

PRELIMINARY REPORT OF 060101

last update on Sun Jan 1 16:43:11 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 2005-12-31 00:00:00 to 2006-01-01 16:43:11

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	23	0	13	0	16
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	23	0	13	0	16
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	23	0	13	0	16
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	23	0	13	0	16

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	25	25	17	9	27
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	25	25	17	9	27
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	25	25	17	9	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	25	25	17	9	27

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	20051231 204859
H	20051230 143812

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	-3.680690	0.260680	-1.403087
7	P1	-2.729624	0.132154	-0.974740
11	P1	-4.139354	0.035445	0.090438
15	P1	-5.006757	1.793261	-3.854958
19	P1	-3.031184	0.070644	-0.728615
22	P1	-4.432222	0.024269	-0.220920
26	P1	-4.408333	0.064576	0.656801
30	P1	-5.646003	0.036397	-0.449483
3	P1	-15.675938	2.907187	-4.820016
7	P1	-15.217319	2.833141	-4.810957
11	P1	-16.290291	0.472067	-1.119560
15	P1	-12.639352	0.909213	-2.415648
19	P1	-13.404248	0.391900	-1.683145
22	P1	-15.888932	0.640931	-0.550161
26	P1	-15.010935	1.084979	-2.703927
30	P1	-15.455758	2.543755	-4.299211

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.793242	0.117042	0.377392
7	P2	-22.538376	0.106913	0.044616
11	P2	-16.498358	0.136895	0.492879
15	P2	-7.275461	0.106653	0.100402
19	P2	-9.208536	0.104362	0.002899
22	P2	-17.874958	0.113441	-0.264883
26	P2	-16.388350	0.133289	0.525311
30	P2	-19.798578	0.120938	0.427160

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.234412	0.007662	0.019946
7	P3	-8.234412	0.007662	0.019946
11	P3	-8.234412	0.007662	0.019946
15	P3	-8.234412	0.007662	0.019946
19	P3	-8.234412	0.007662	0.019946
22	P3	-8.234412	0.007662	0.019946
26	P3	-8.234412	0.007662	0.019946
30	P3	-8.234412	0.007662	0.019946

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.710823	0.008568	-0.035007
7	P1	-2.770183	0.007612	0.009172
11	P1	-2.878168	0.009344	0.006092
15	P1	-3.421310	0.016646	-0.051707
19	P1	-3.393127	0.014474	-0.009066
22	P1	-5.124865	0.018911	-0.016397
26	P1	-5.853741	0.016454	-0.020448
30	P1	-5.278603	0.033009	0.010159
3	P1	-11.490660	0.041133	-0.032803
7	P1	-9.966495	0.047234	0.045411
11	P1	-10.055881	0.056711	-0.026480
15	P1	-10.566346	0.071254	-0.062198
19	P1	-15.520001	0.074707	0.014759
22	P1	-20.943846	0.946211	0.403649
26	P1	-17.130779	0.293429	0.311030
30	P1	-18.200651	0.285156	0.180566

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.588631	0.029267	0.131111
7	P2	-23.041893	0.055515	0.131782
11	P2	-11.573148	0.019838	0.175216
15	P2	-4.991721	0.021249	0.050218
19	P2	-6.973465	0.021347	0.011266
22	P2	-8.213335	0.022666	-0.015625
26	P2	-24.049162	0.030103	0.052597
30	P2	-22.135662	0.017278	-0.000091

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.077800	0.002428	0.006868
7	P3	-8.078029	0.002428	0.006165
11	P3	-8.078039	0.002412	0.006092
15	P3	-8.077925	0.002409	0.006831
19	P3	-8.077987	0.002427	0.006624
22	P3	-8.077903	0.002416	0.006853
26	P3	-8.077889	0.002401	0.007272
30	P3	-8.077782	0.002417	0.006348

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	0.000454001
	stdev	2.21371e-07
MEAN Q	mean	0.000462742
	stdev	2.37472e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128956
	stdev	0.00113682
STDEV Q	mean	0.129243
	stdev	0.00114959



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005123[011]

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_1PNPDE20051230_004338_00000602043_00446_20039_5183.N1	1	0
ASA_IMM_1PNPDK20051230_083344_00000502043_00451_20044_9925.N1	0	2
ASA_WSM_1PNPDE20051231_162359_00000912043_00470_20063_6512.N1	0	39







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

✕

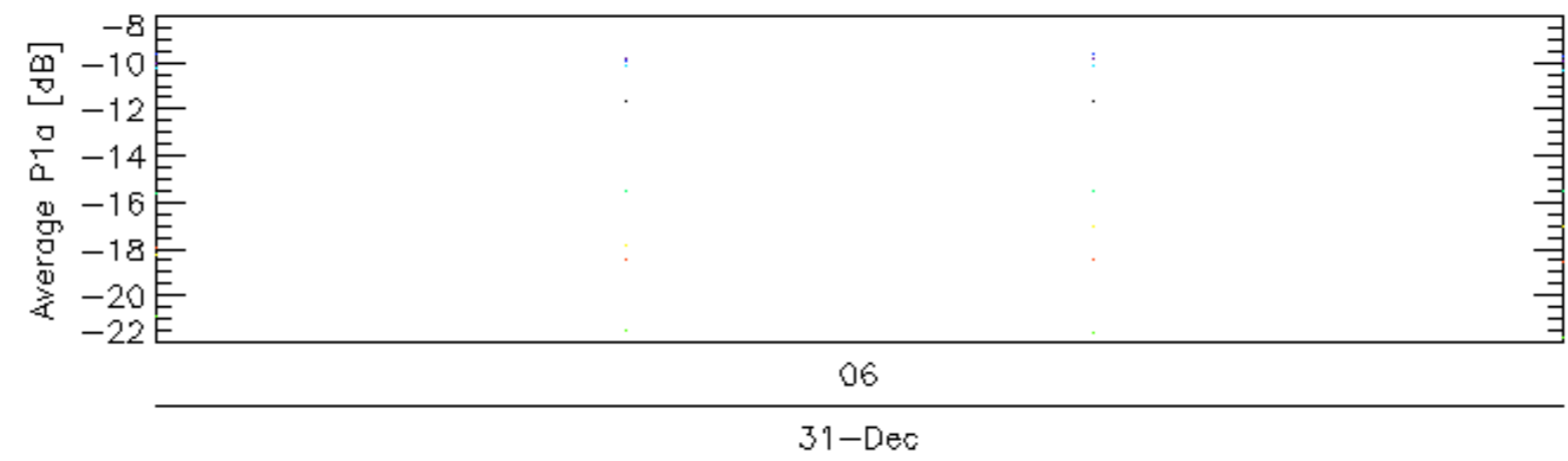
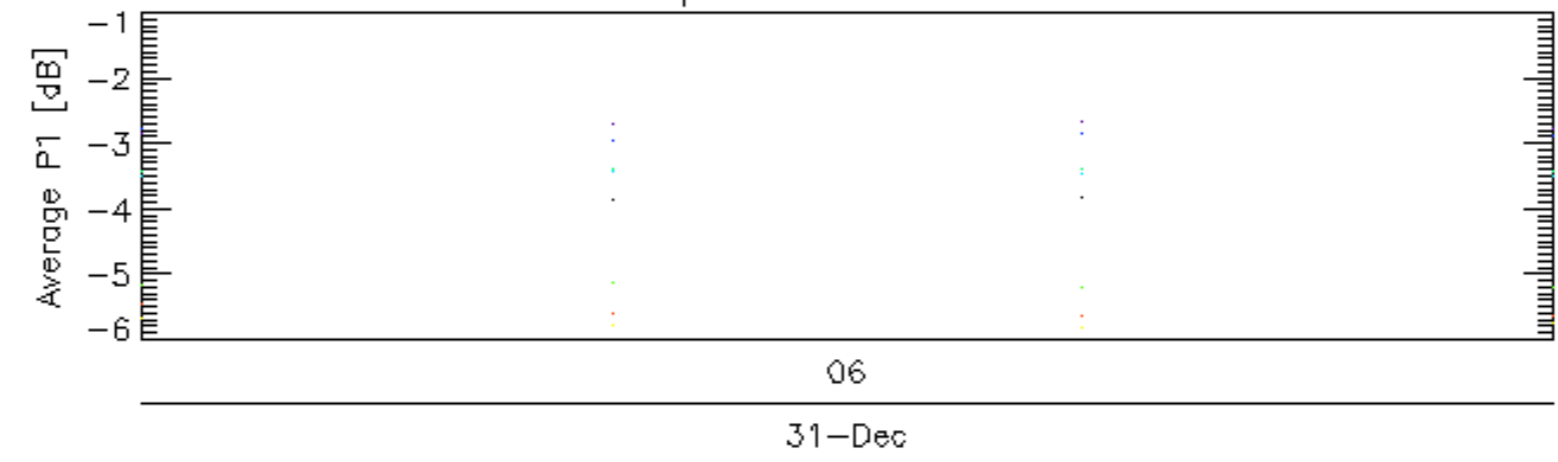
Descending

7.6 - Doppler evolution versus ANX for GM1

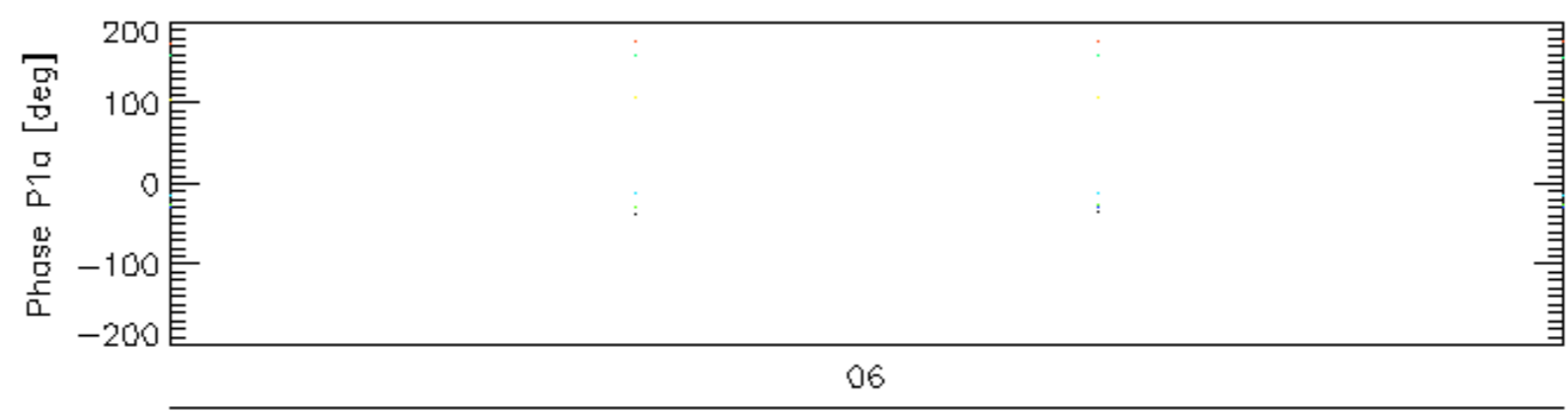
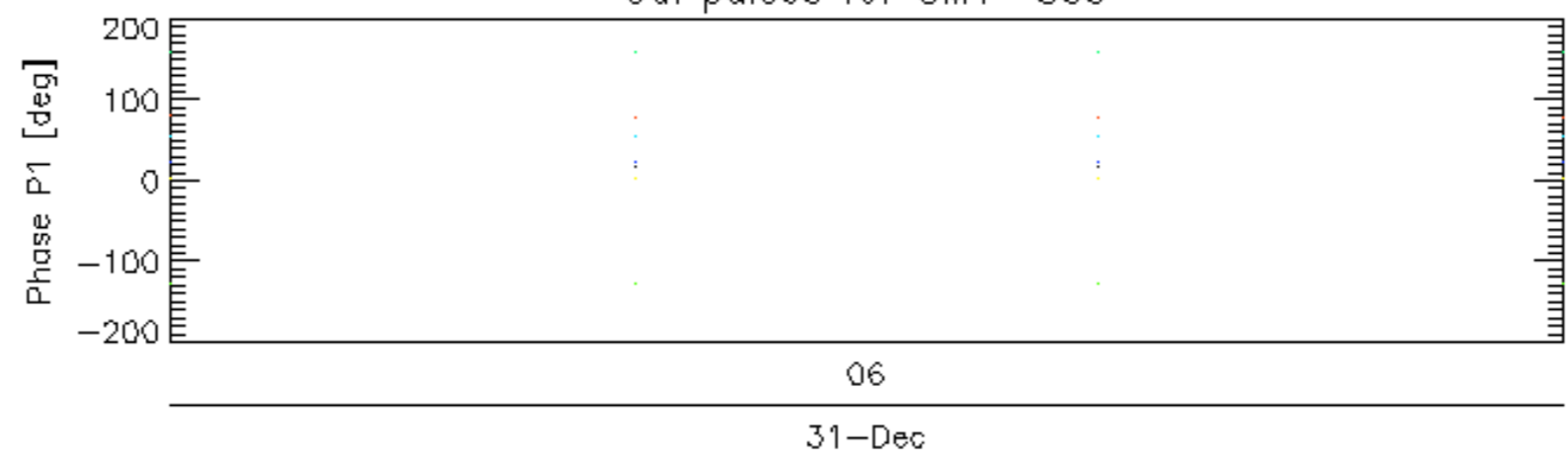
Evolution Doppler error versus ANX

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Cal pulses for GM1 SS3

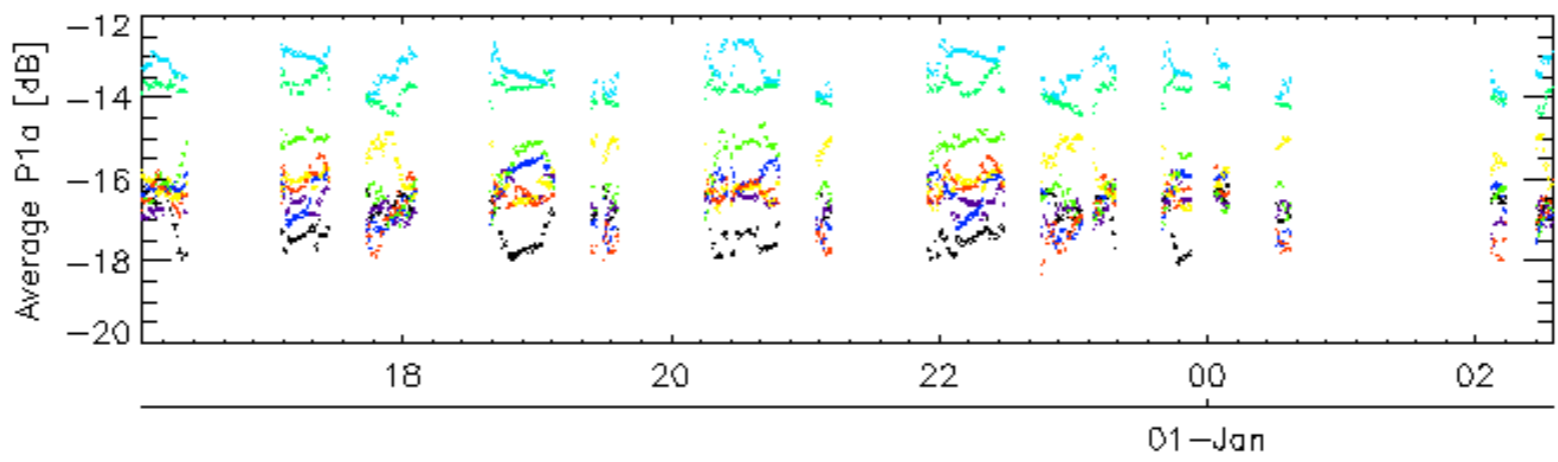
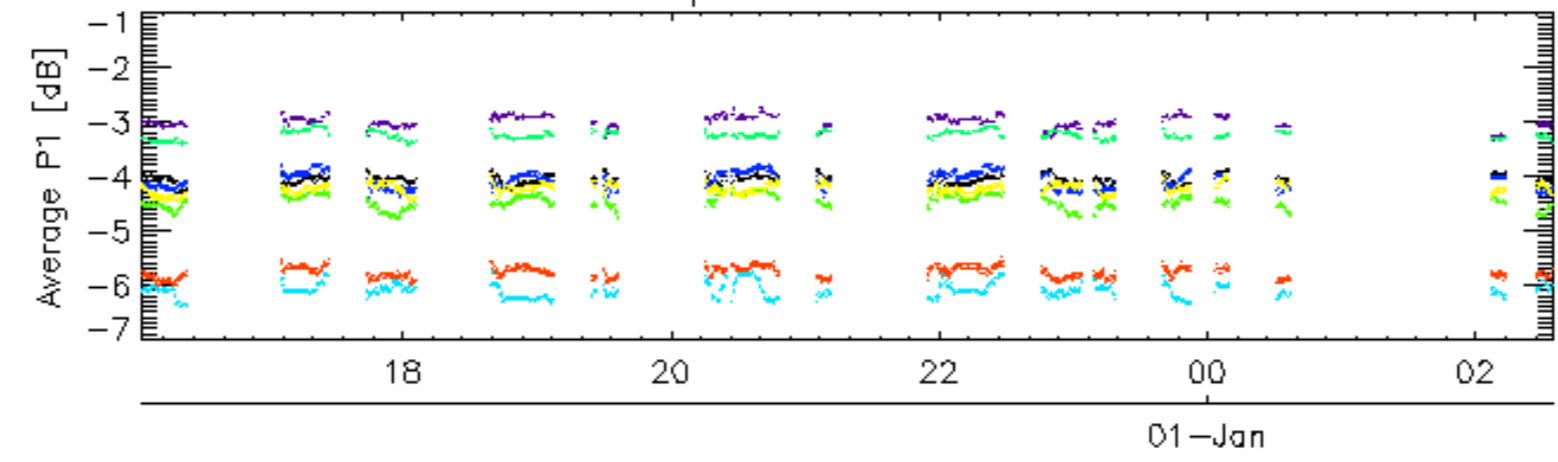


Cal pulses for GM1 SS3

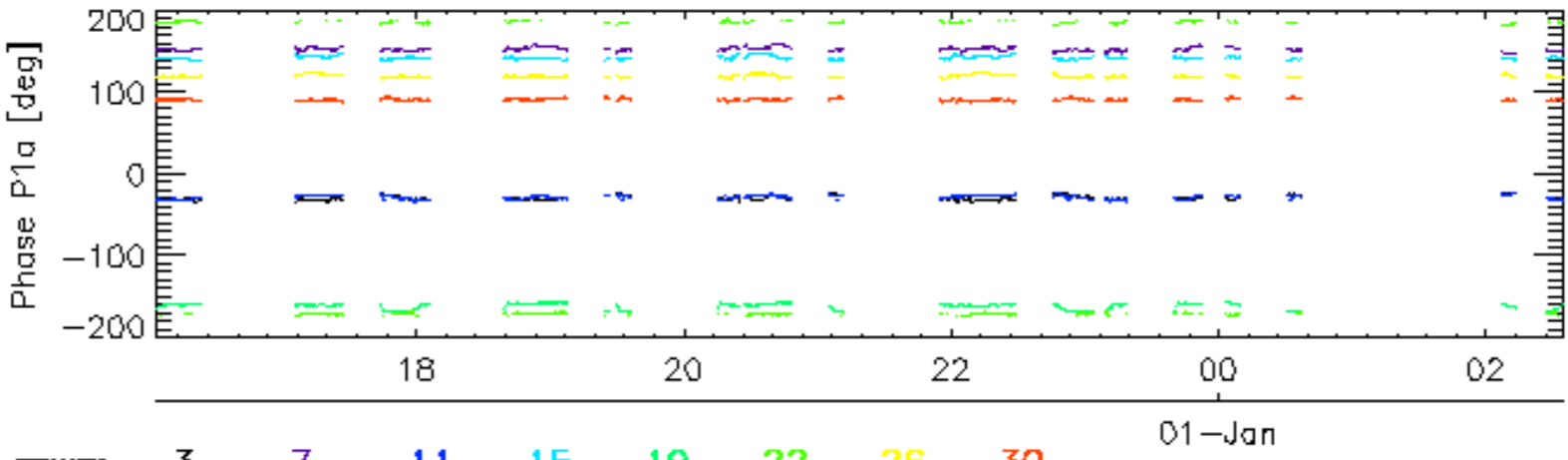
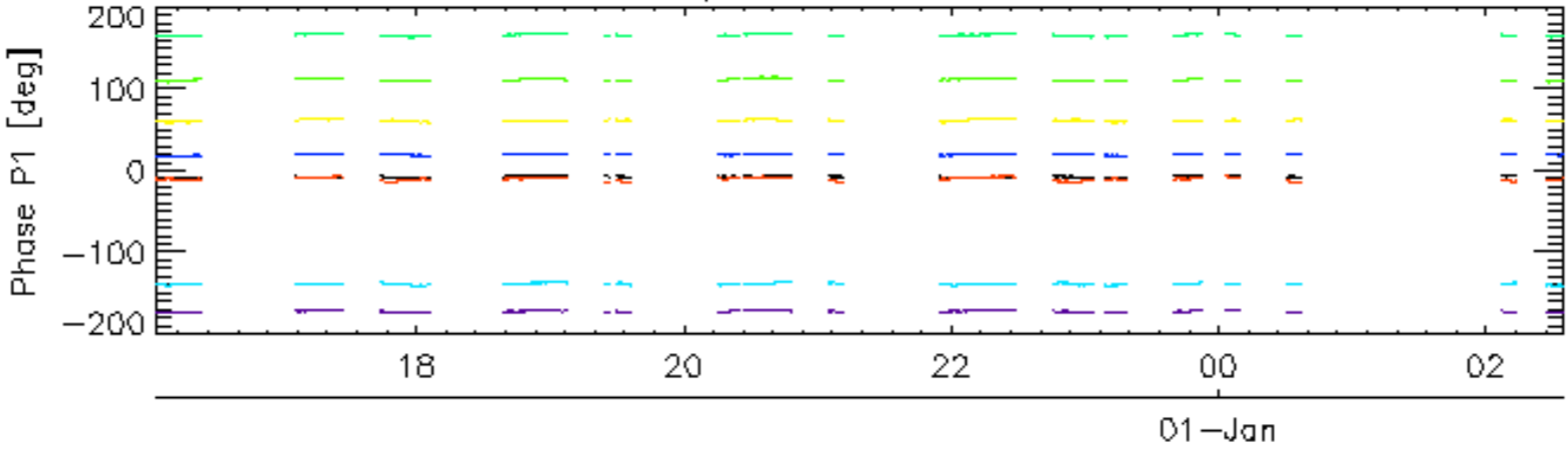


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 ^{31-Dec} _ 26 _ 30

Cal pulses for WVS IS2

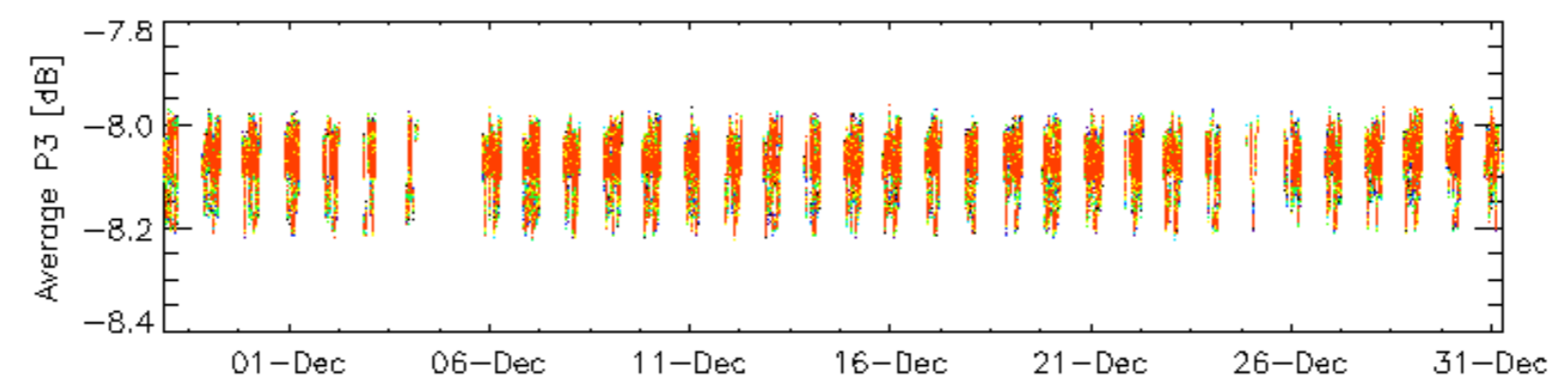
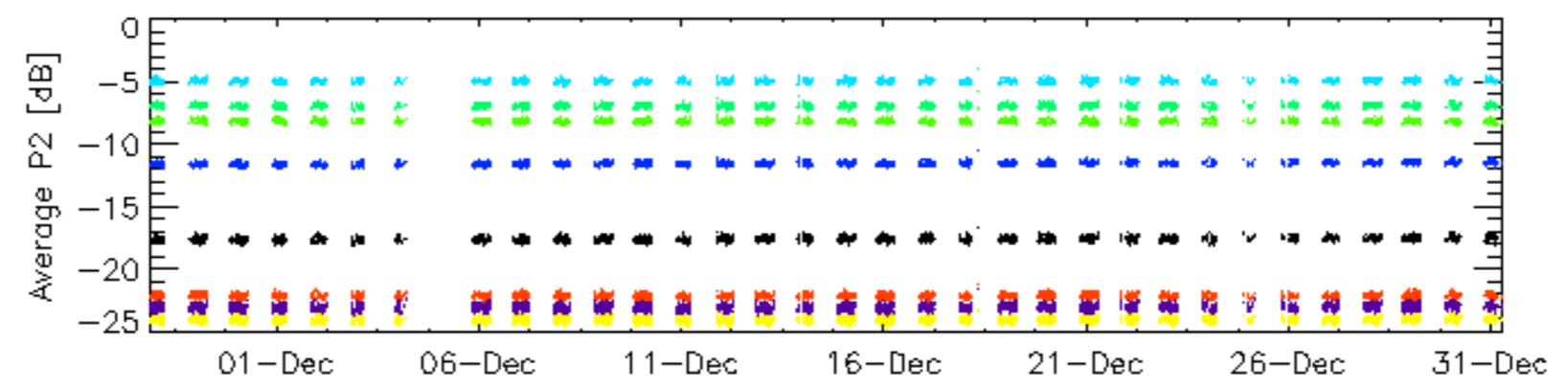
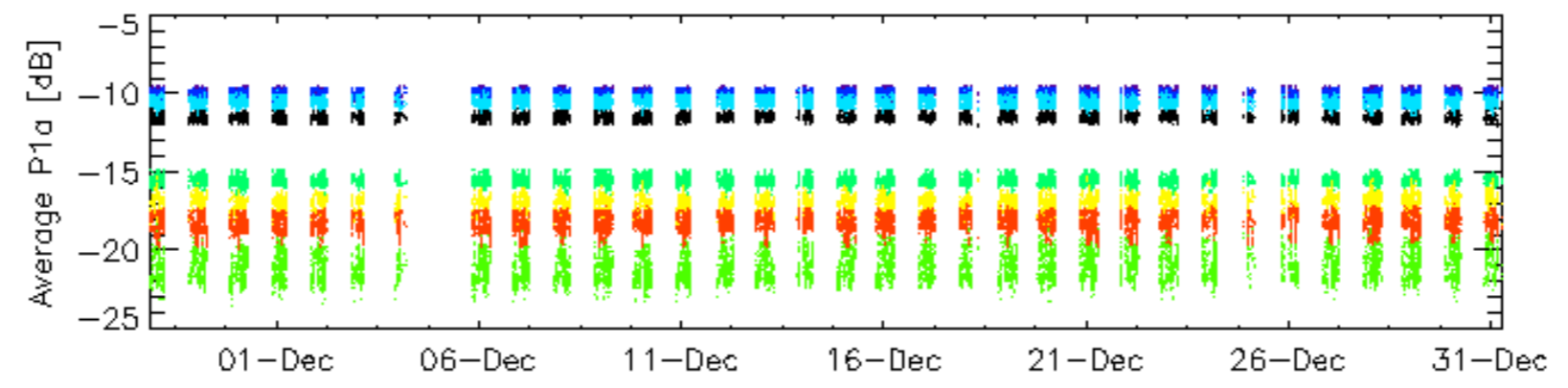
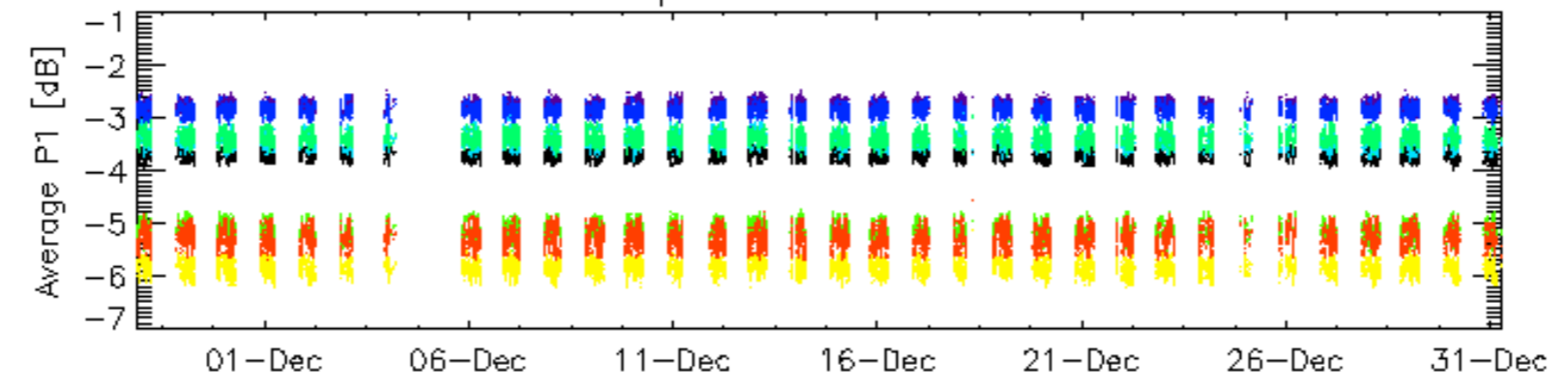


Cal pulses for WVS IS2



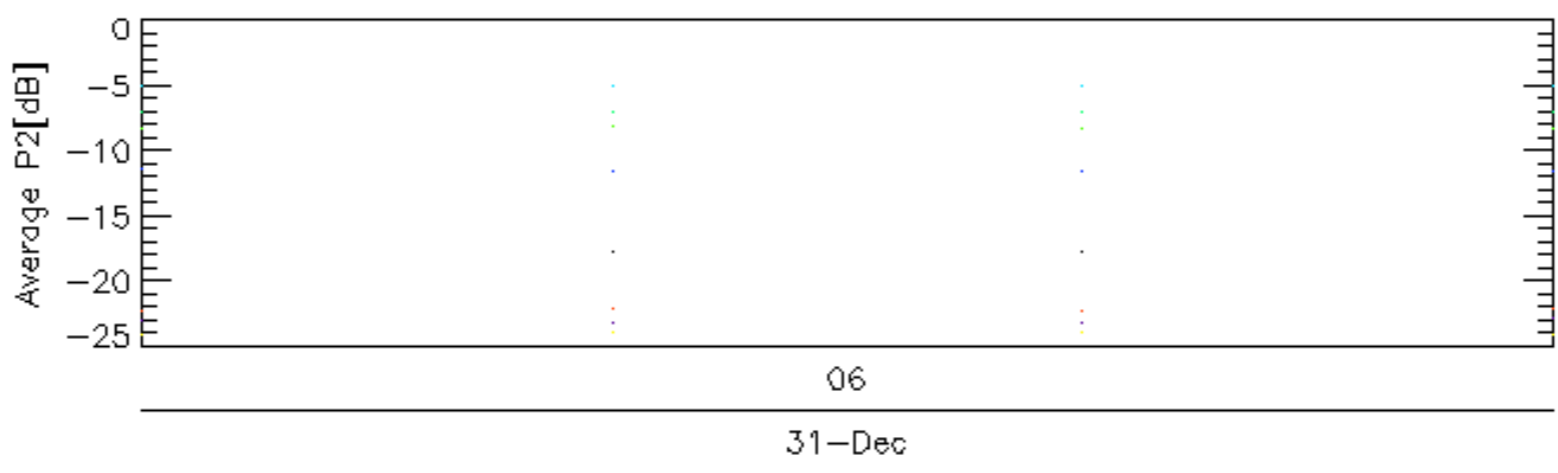
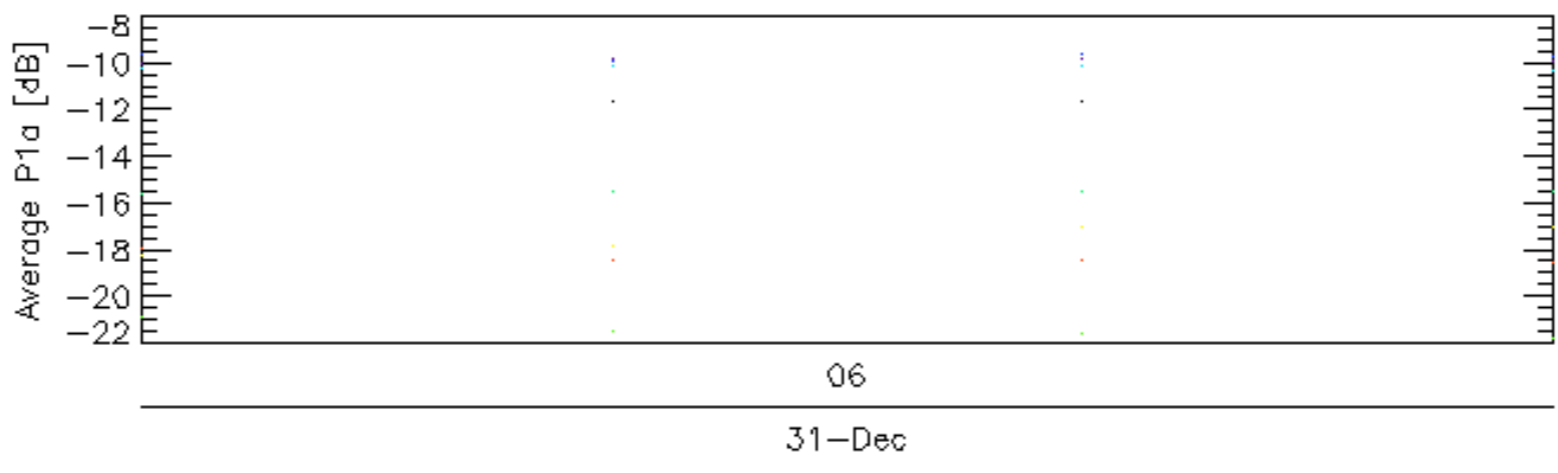
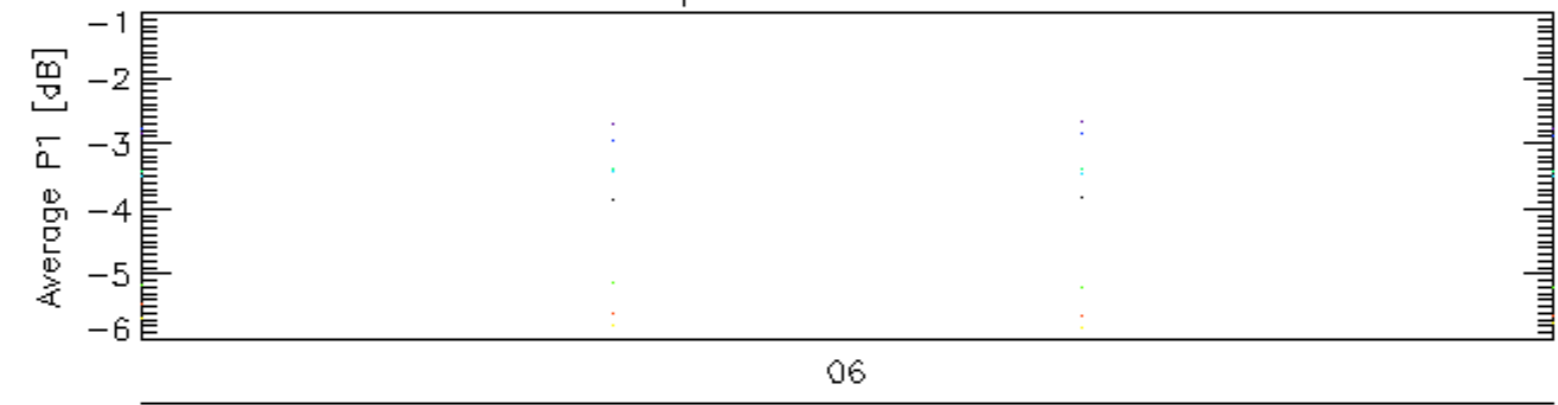
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



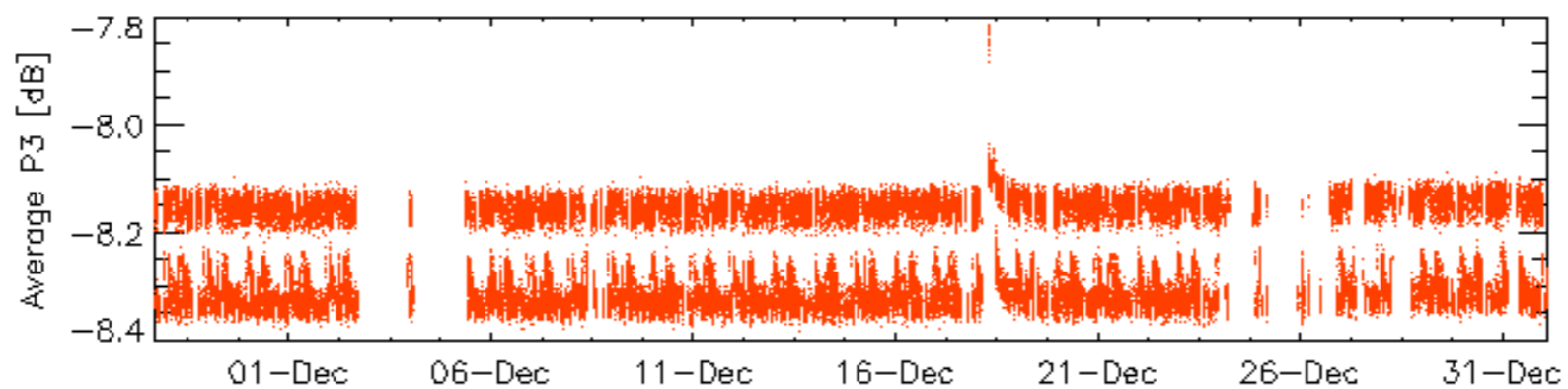
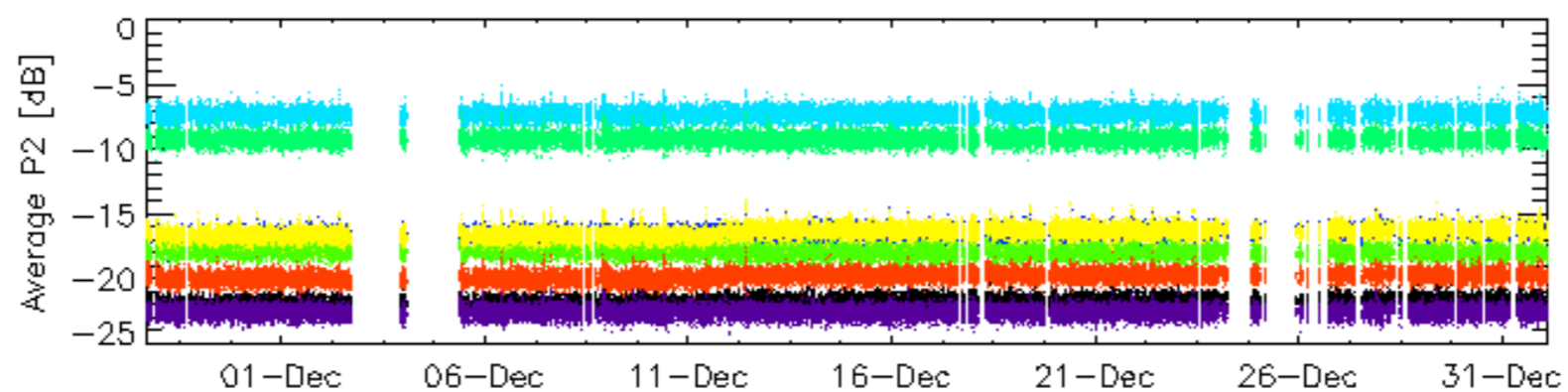
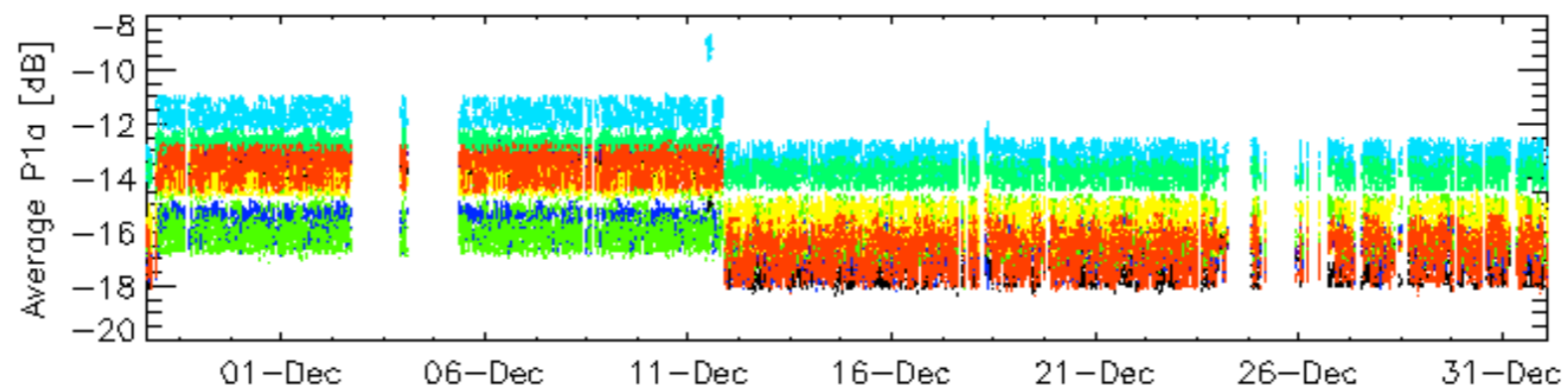
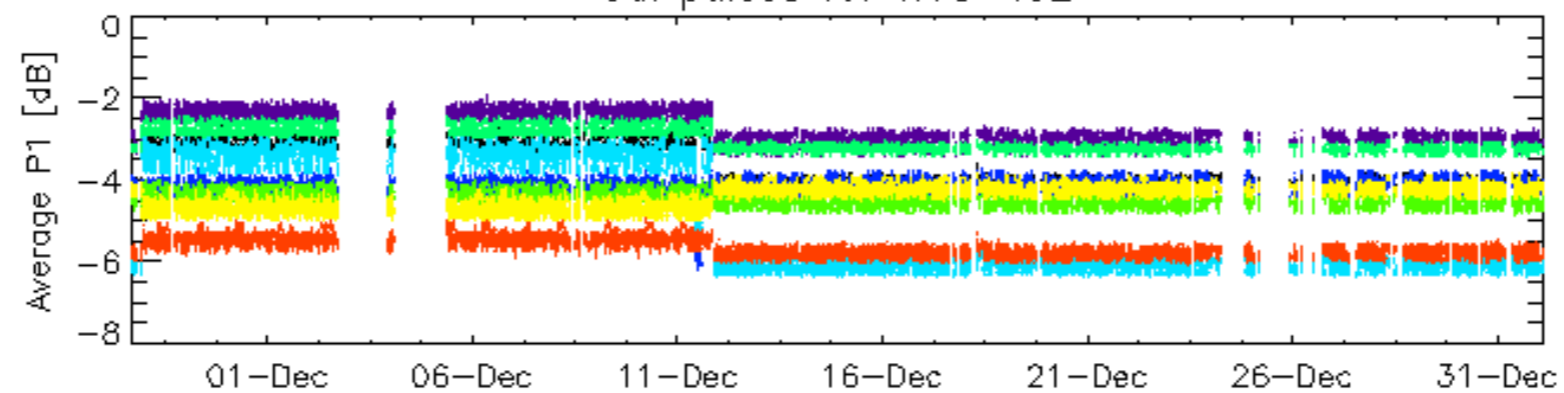
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



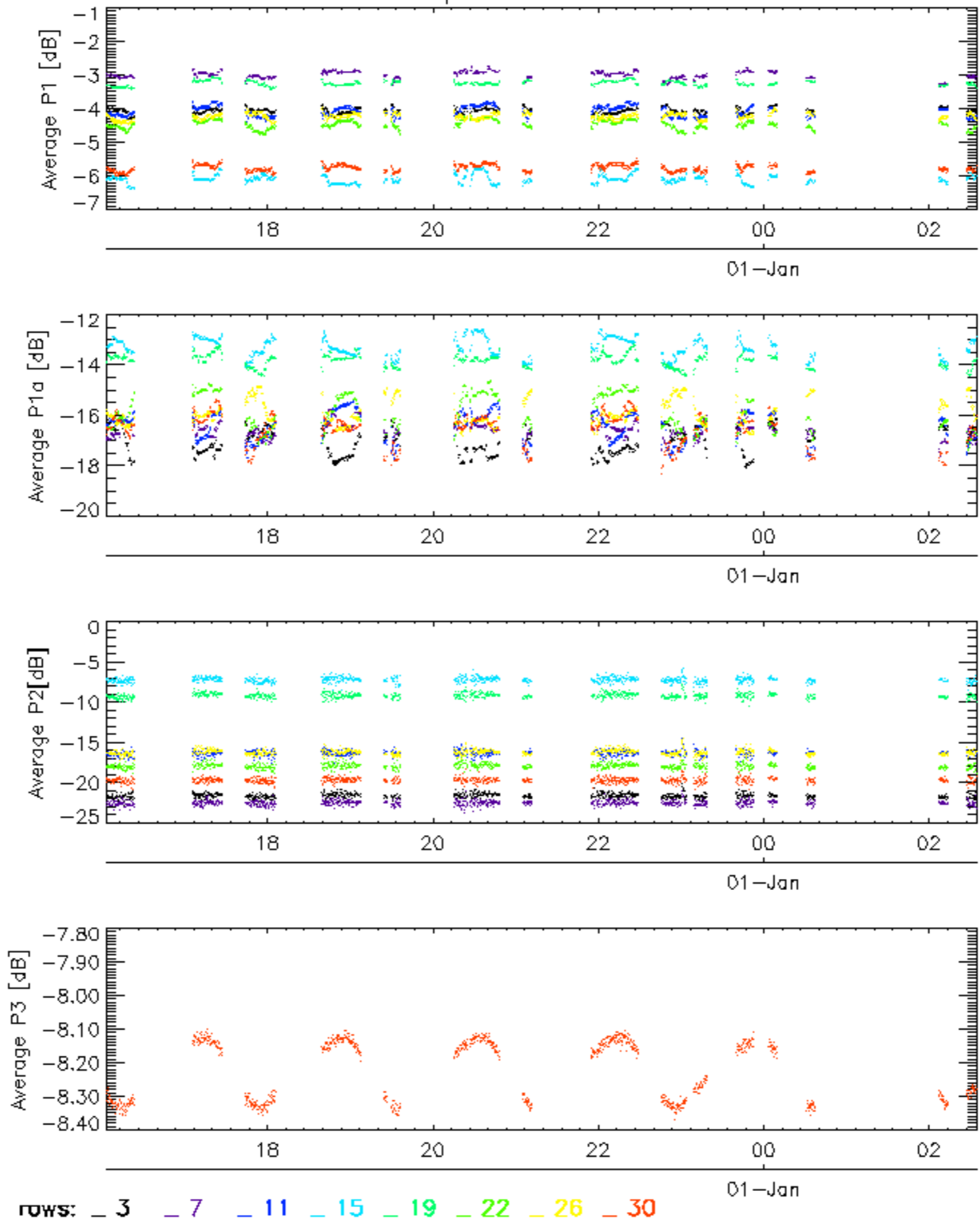
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 ^{31-Dec} _ 26 _ 30

Cal pulses for WVS IS2

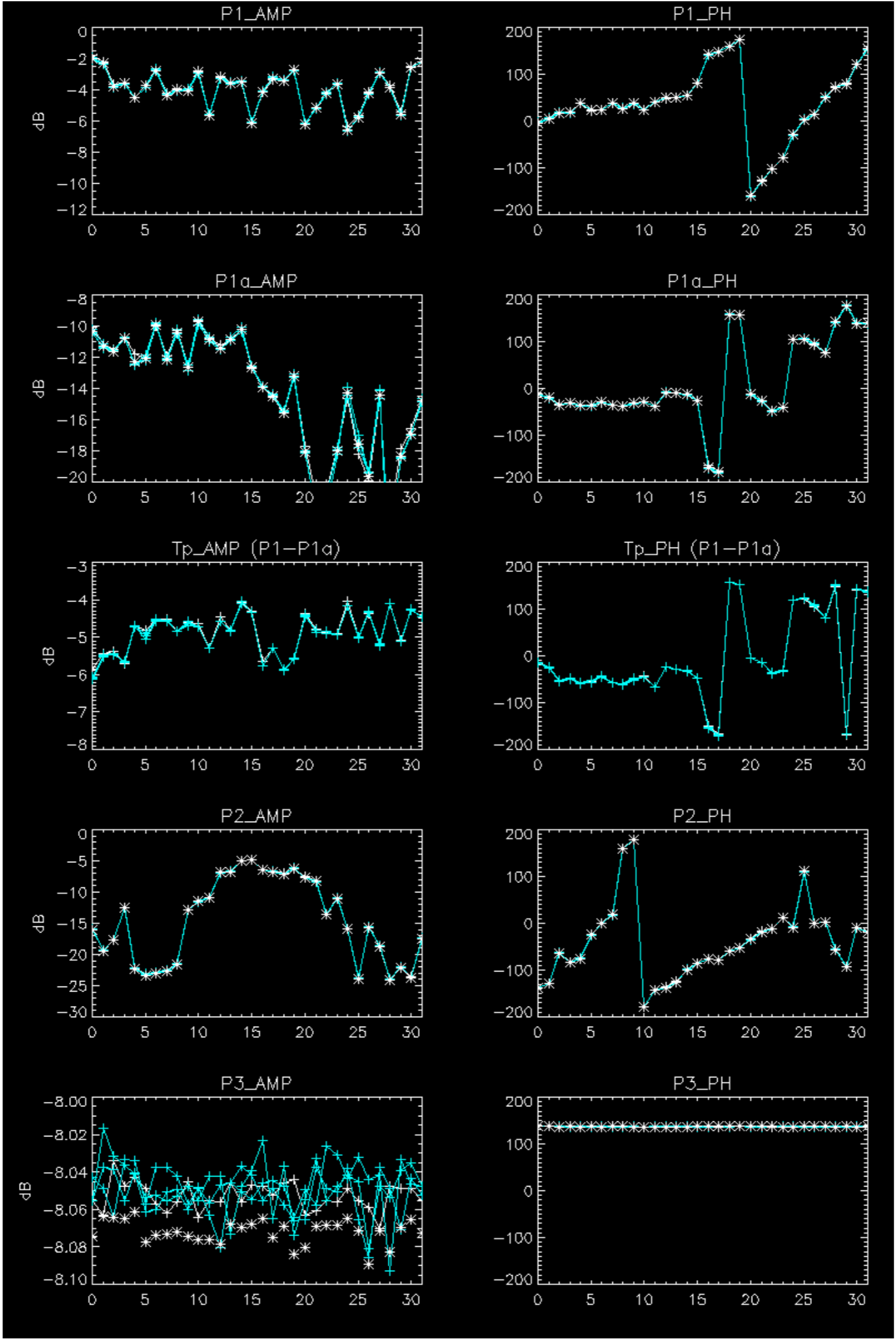


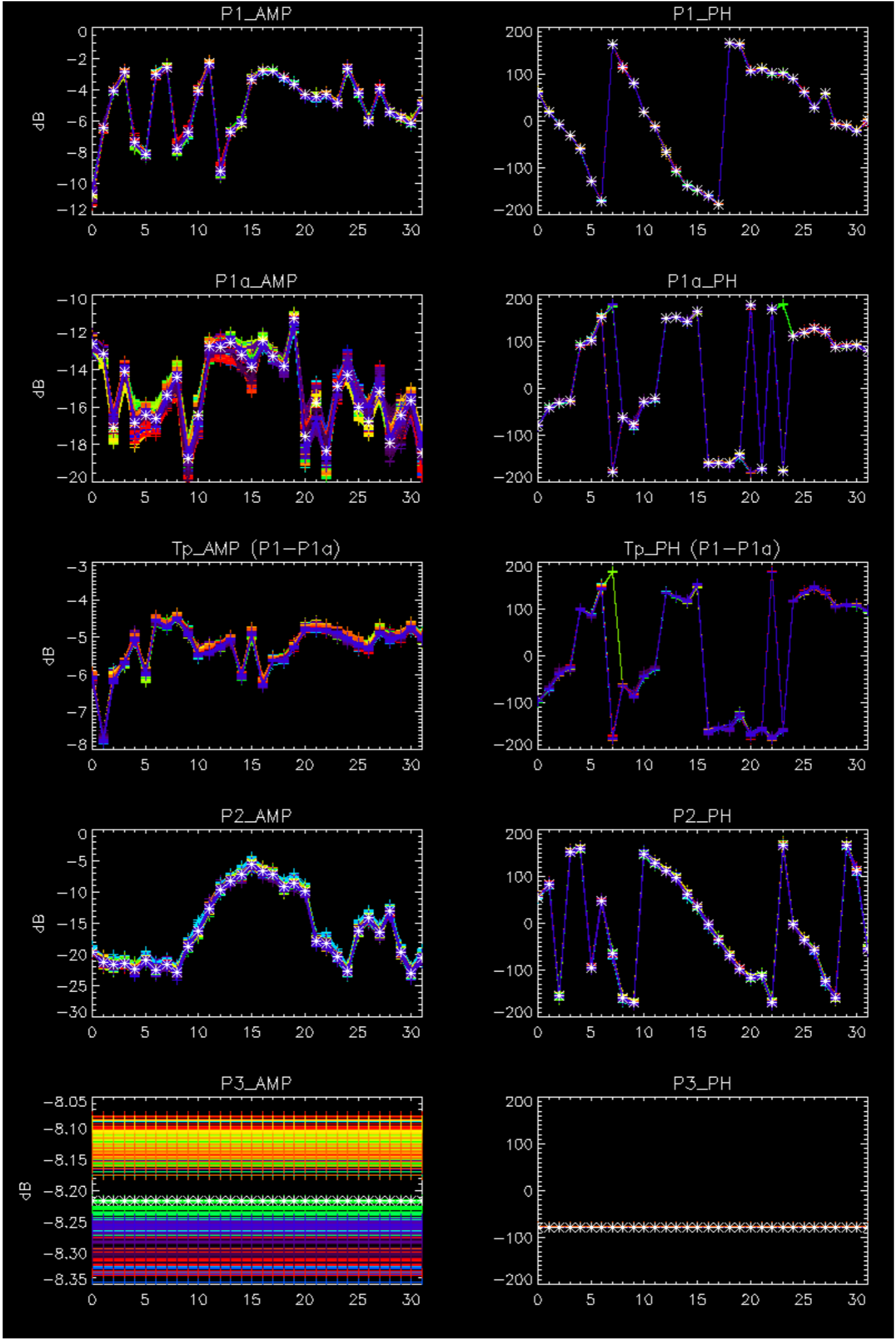
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



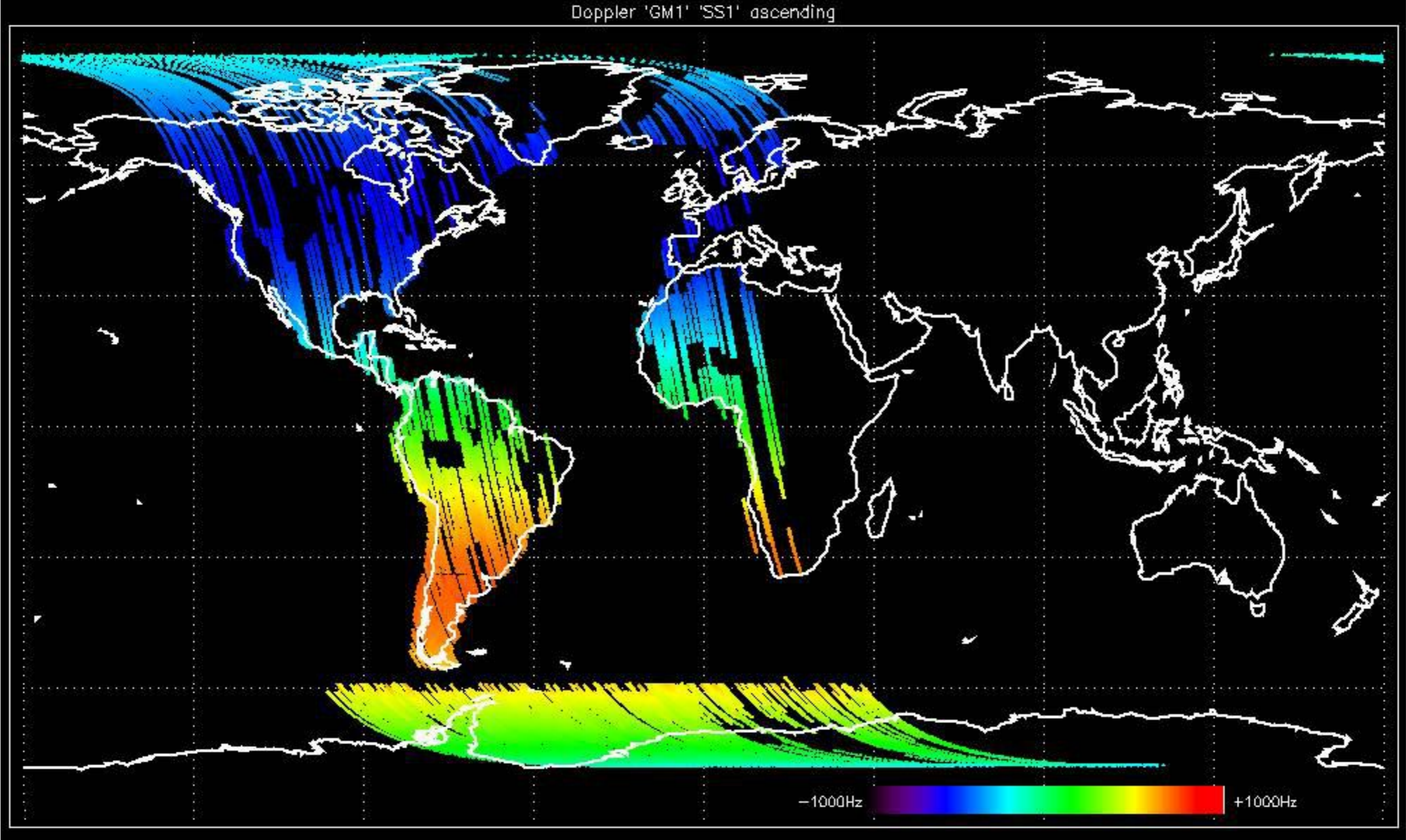
No anomalies observed.



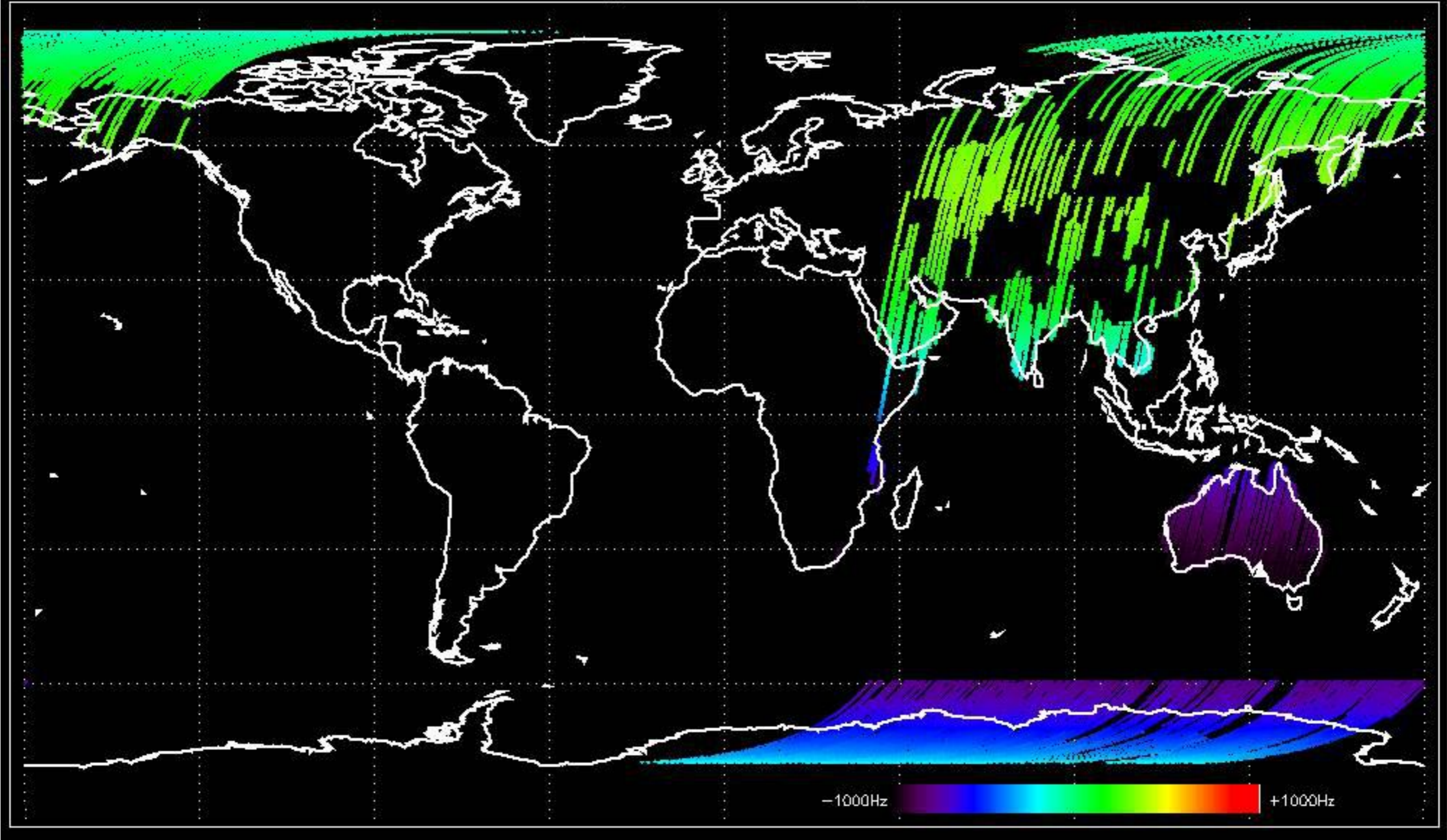


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

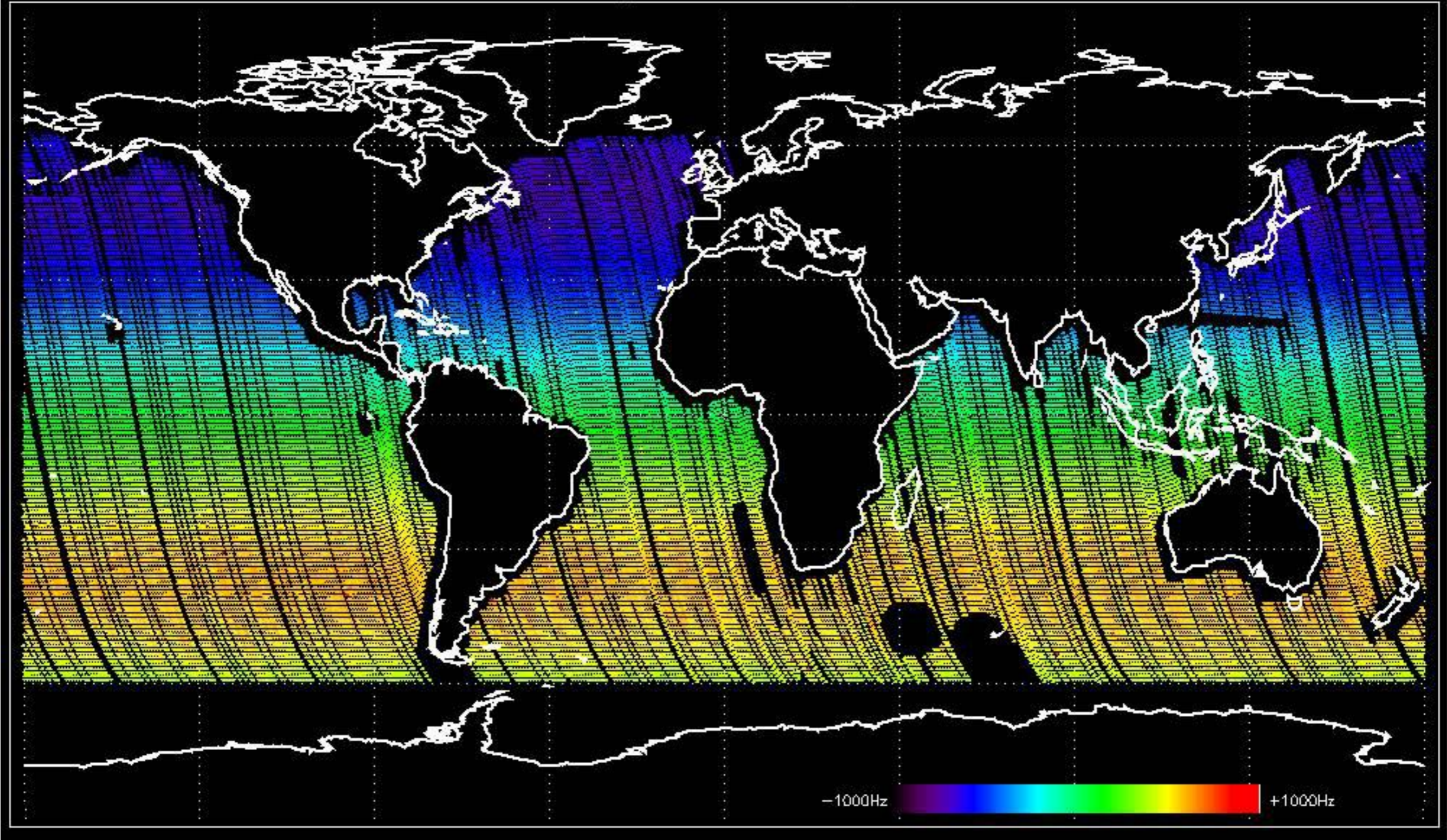
Doppler 'GM1' 'SS1' ascending



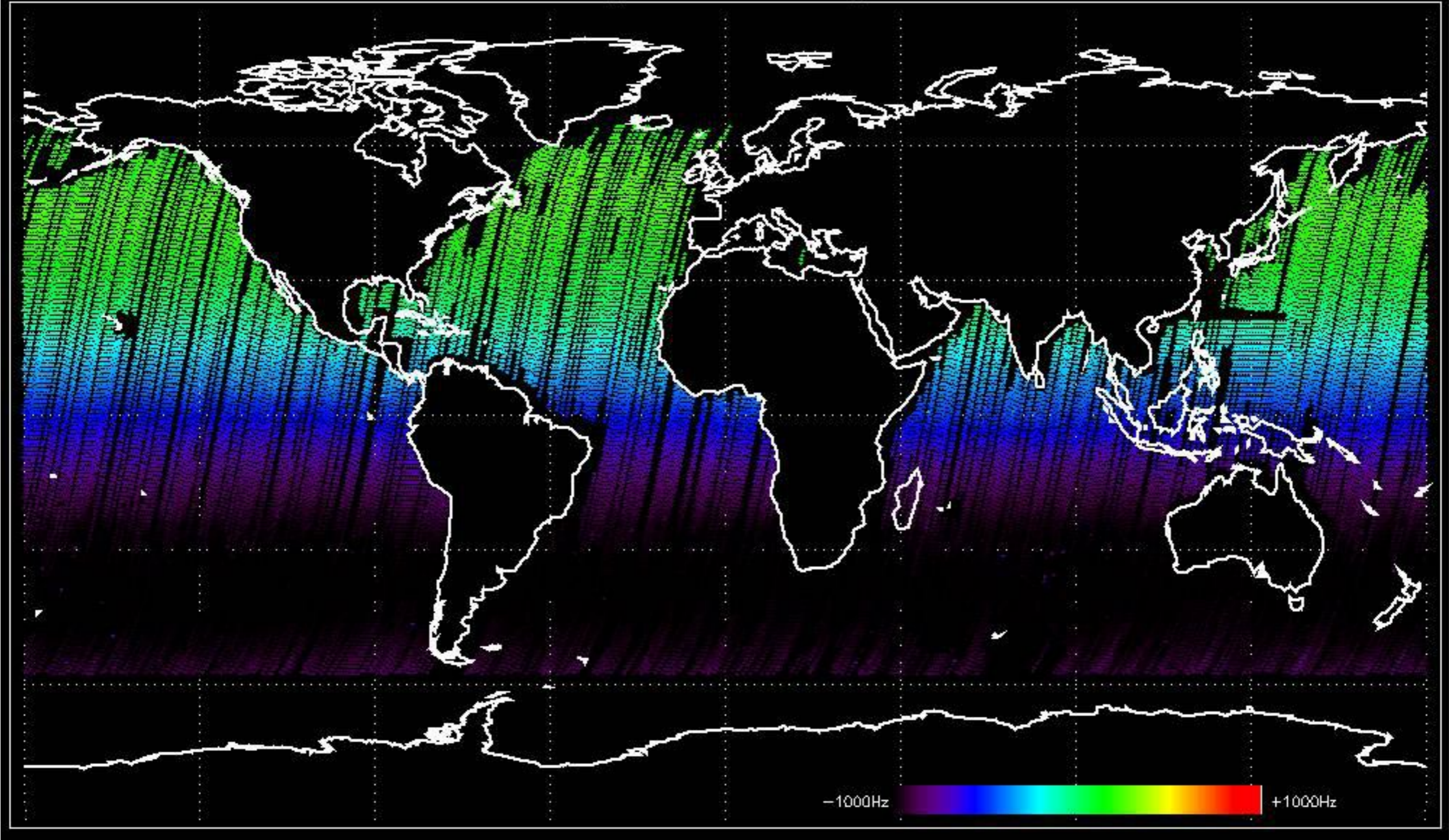
Doppler 'GM1' 'SS1' descending



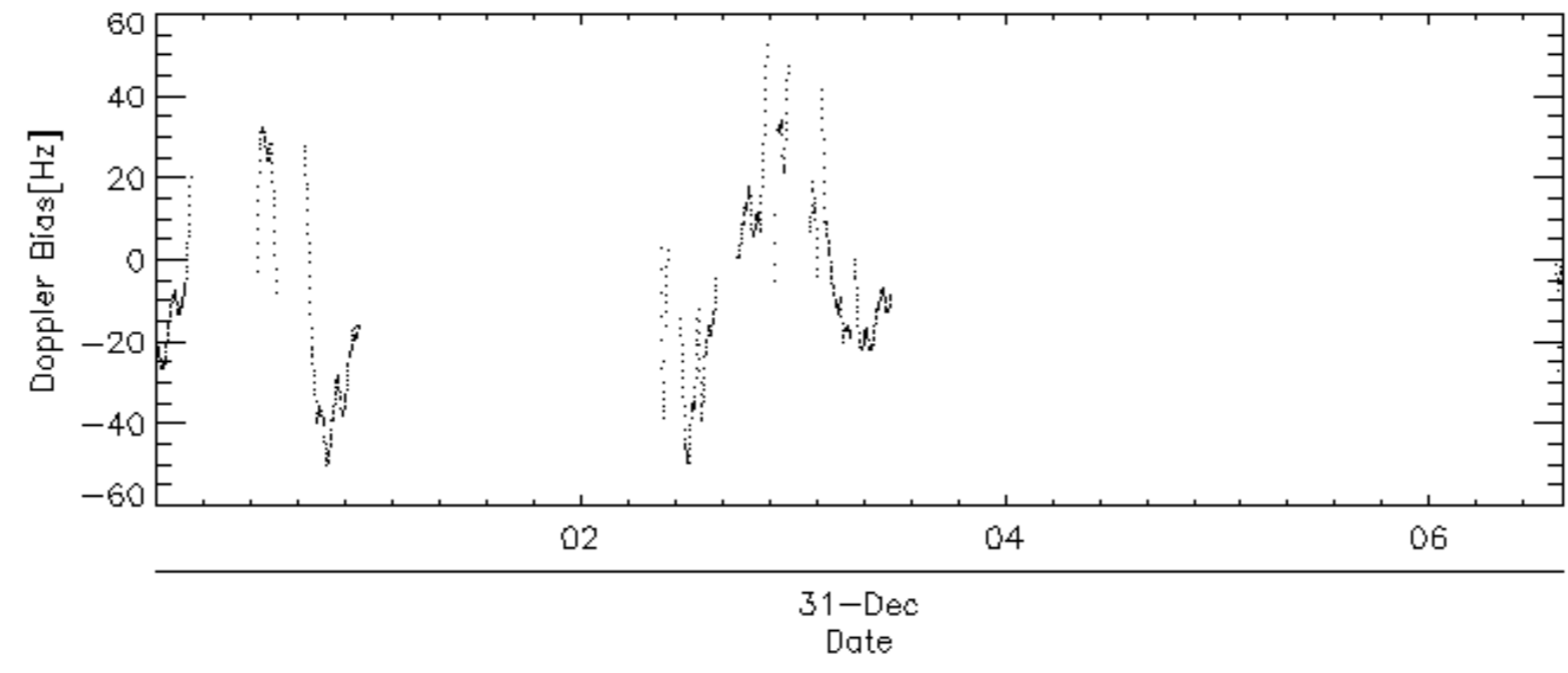
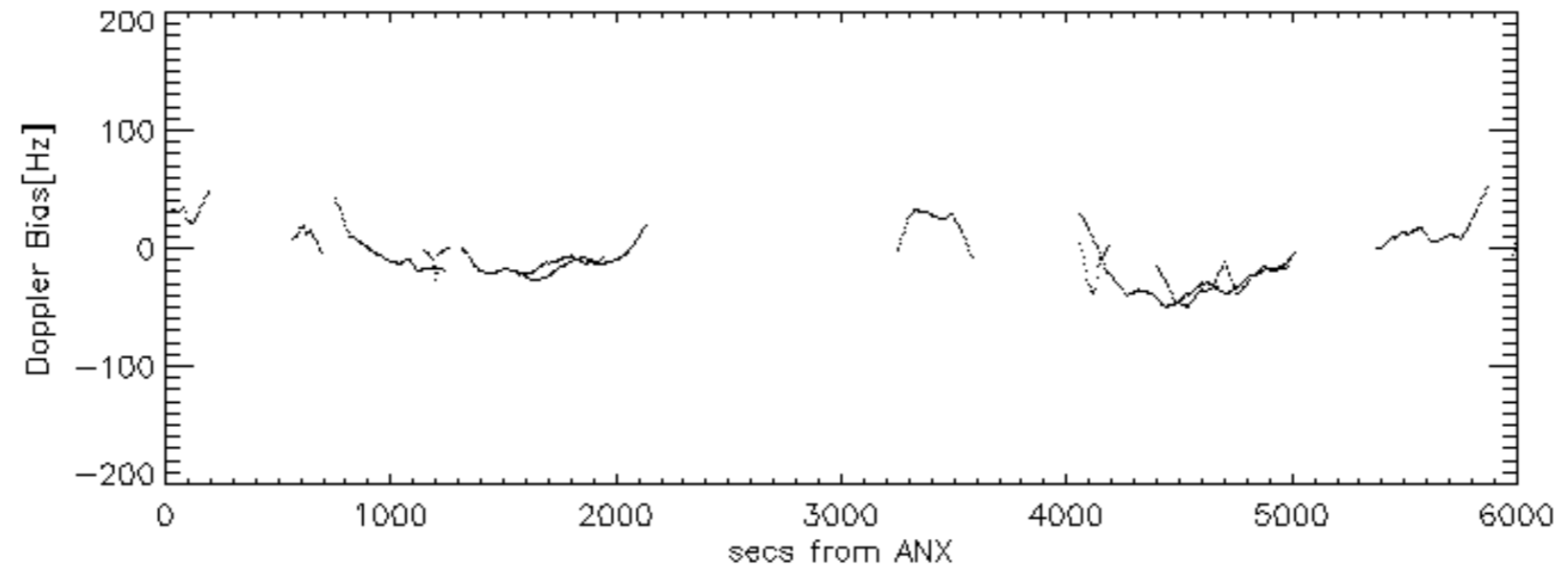
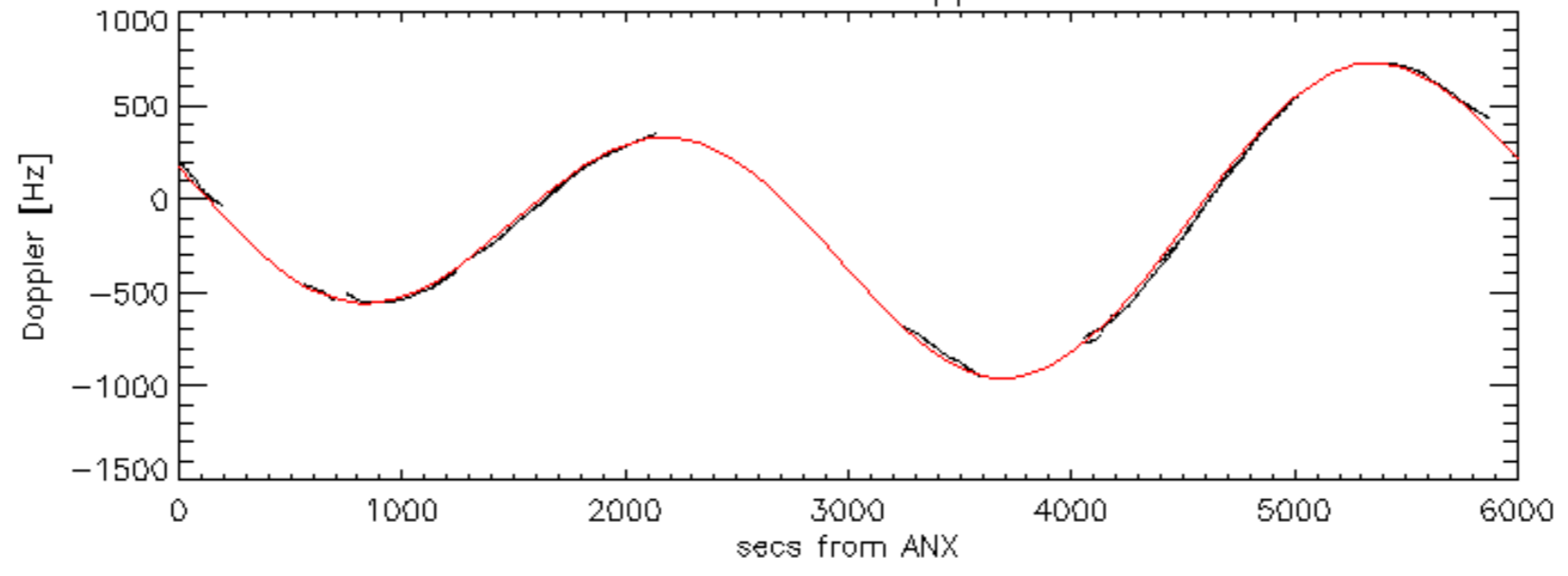
Doppler 'WVS' 'IS2' ascending

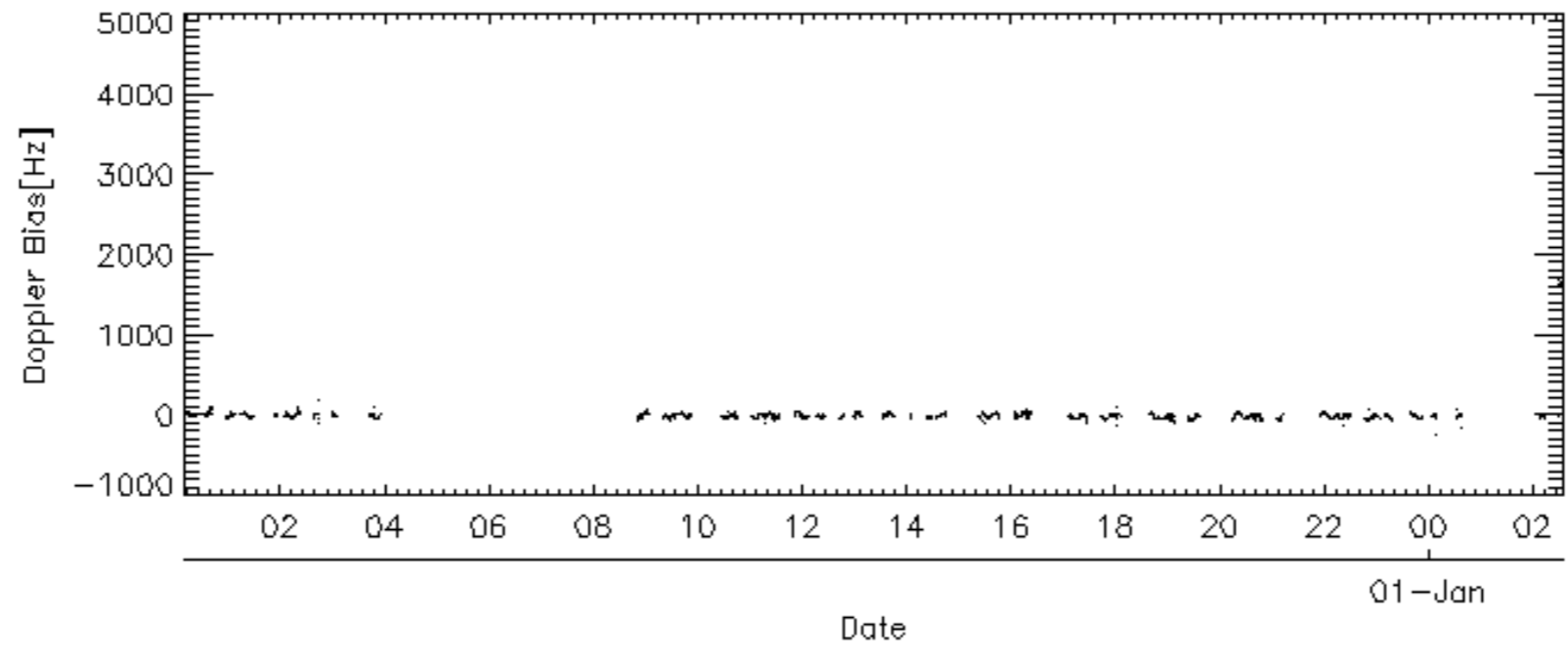
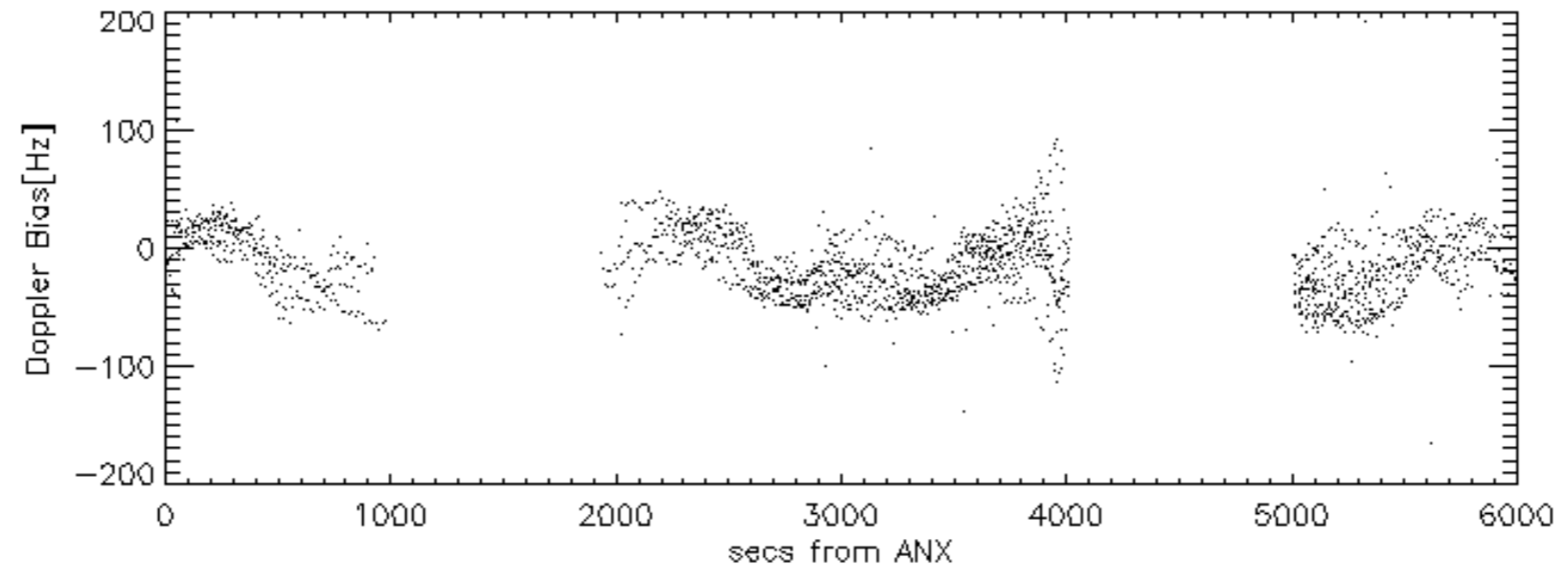
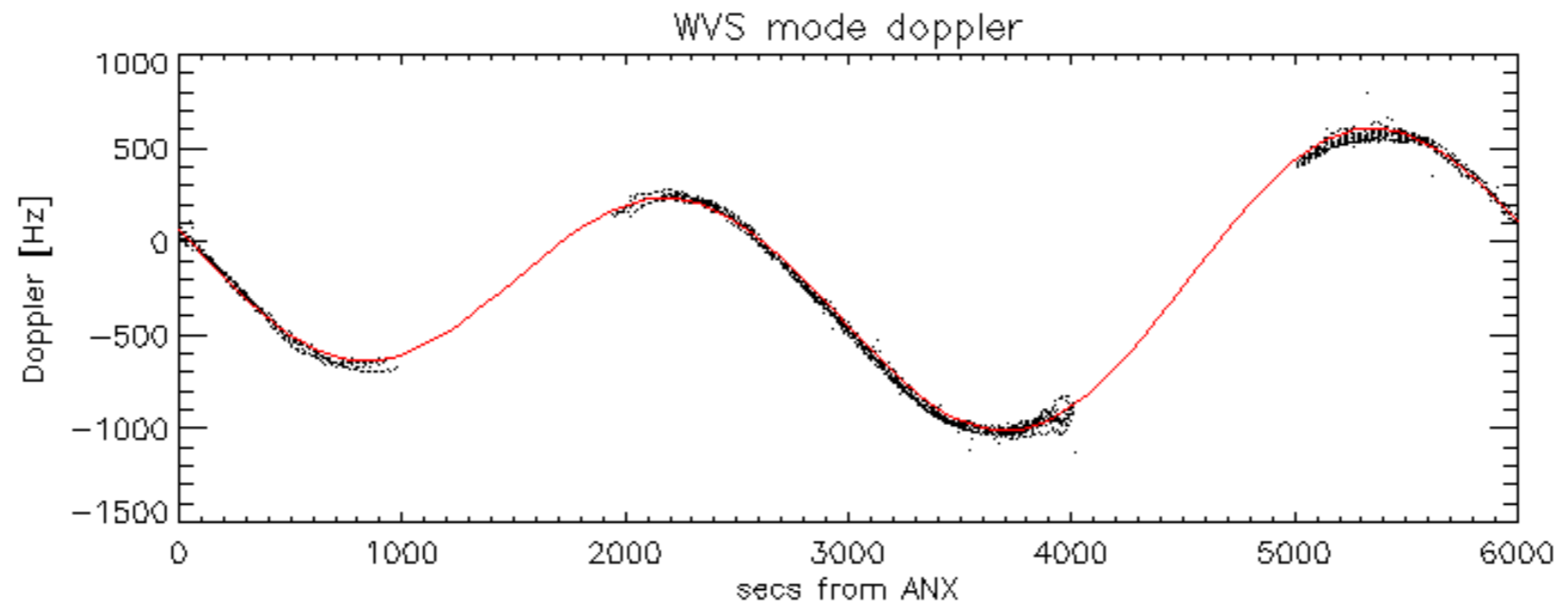


Doppler 'WVS' 'IS2' descending

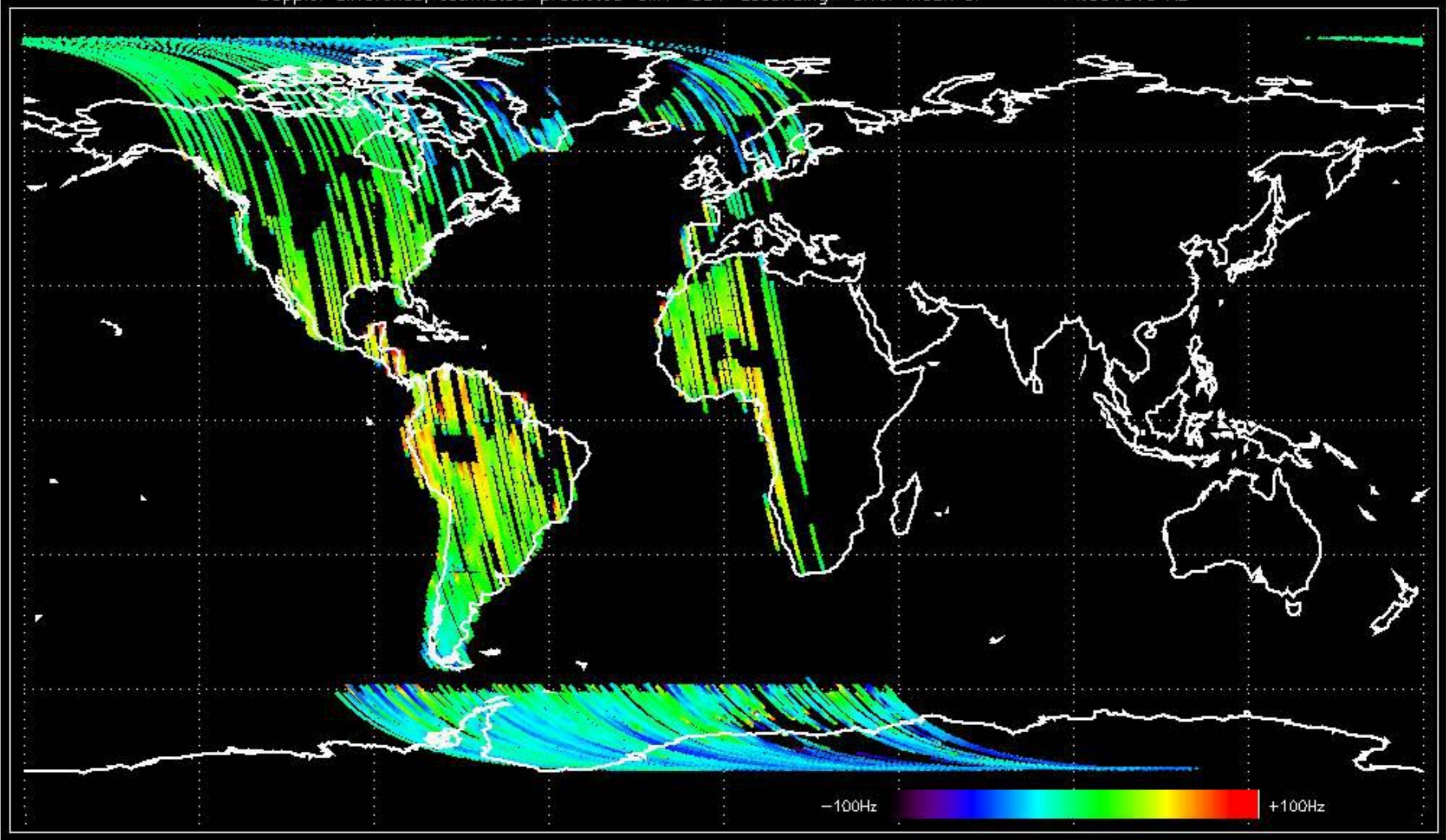


GM1 mode doppler

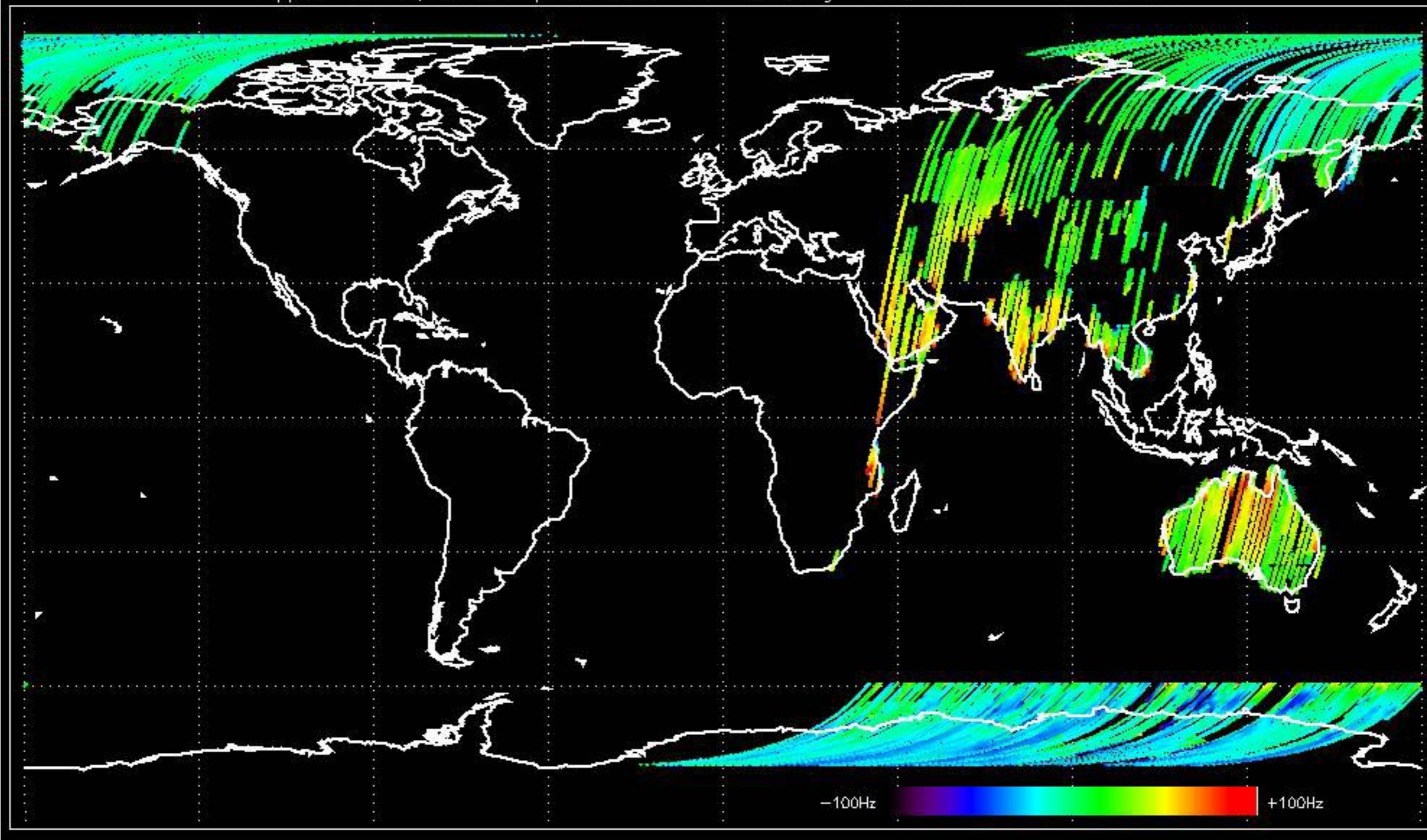




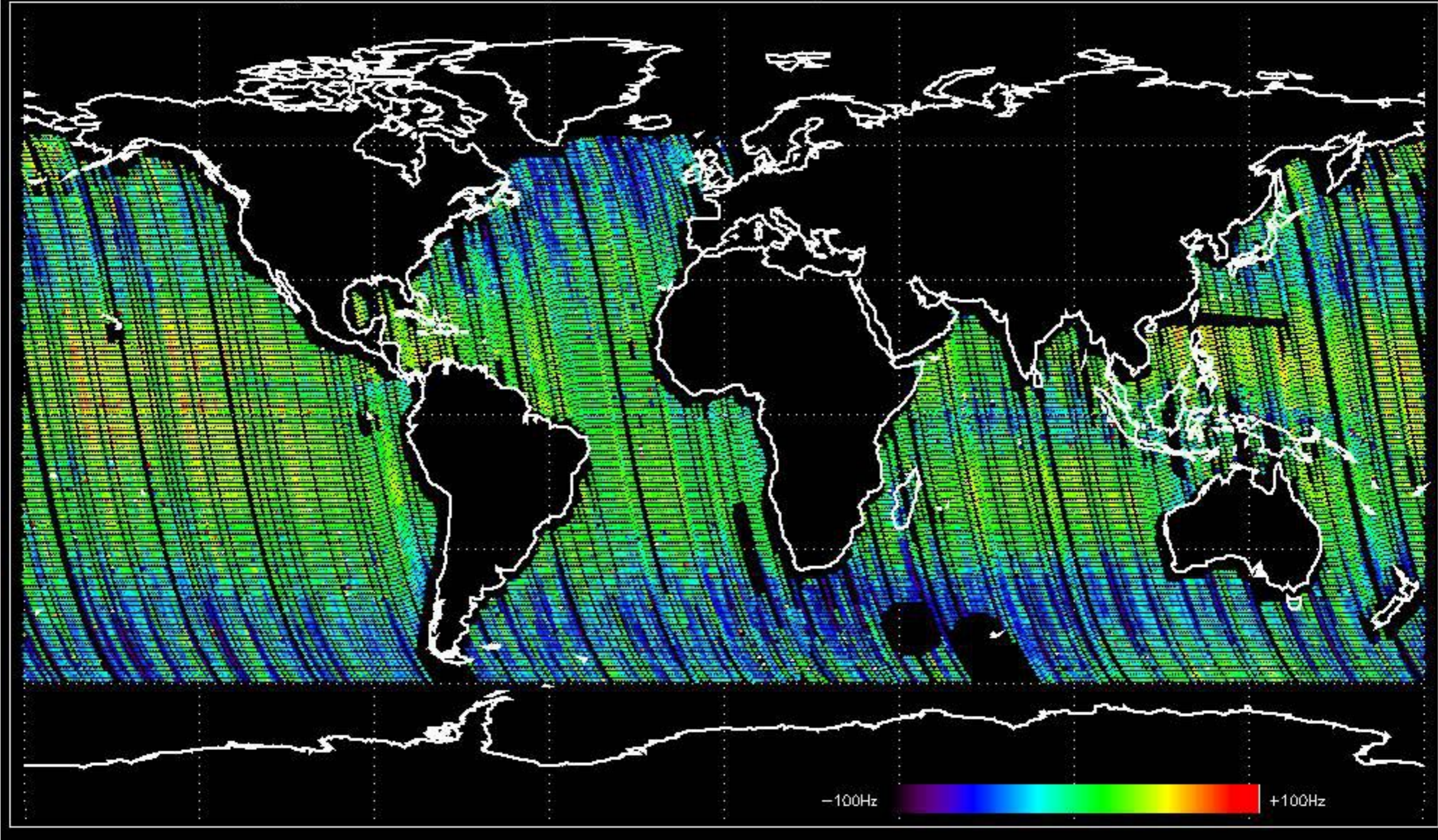
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.301610 Hz



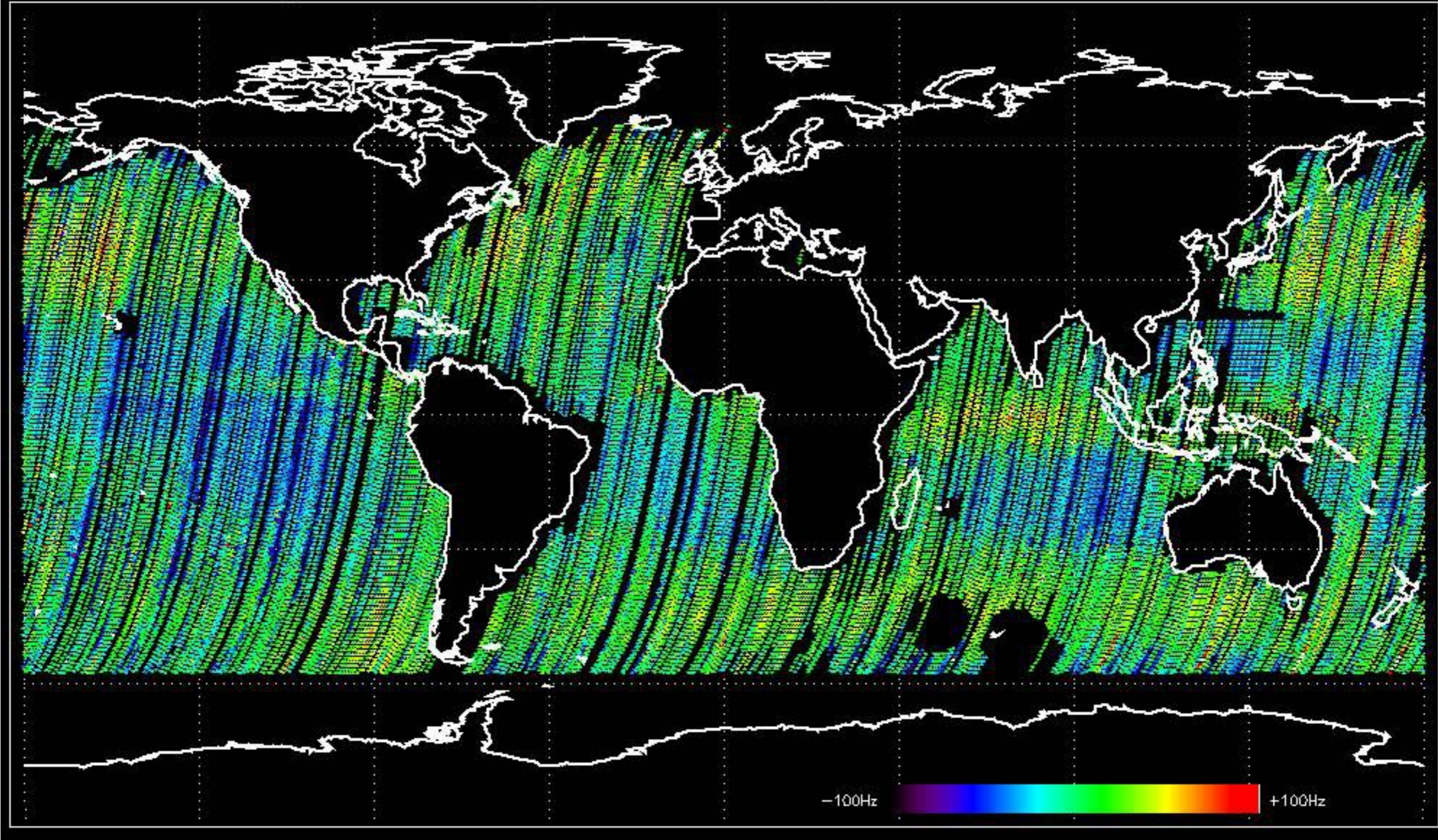
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.458713 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.164582 Hz

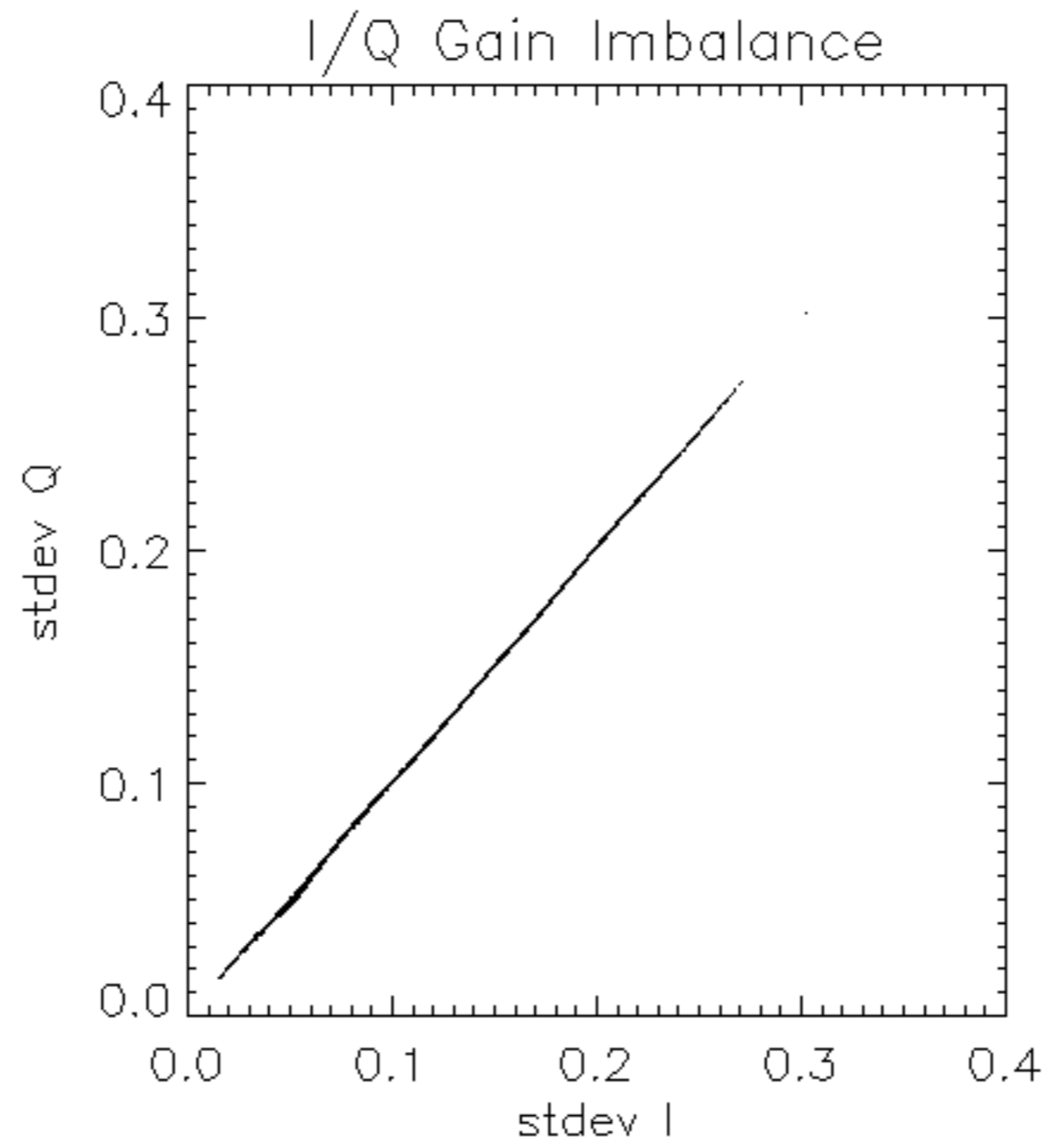


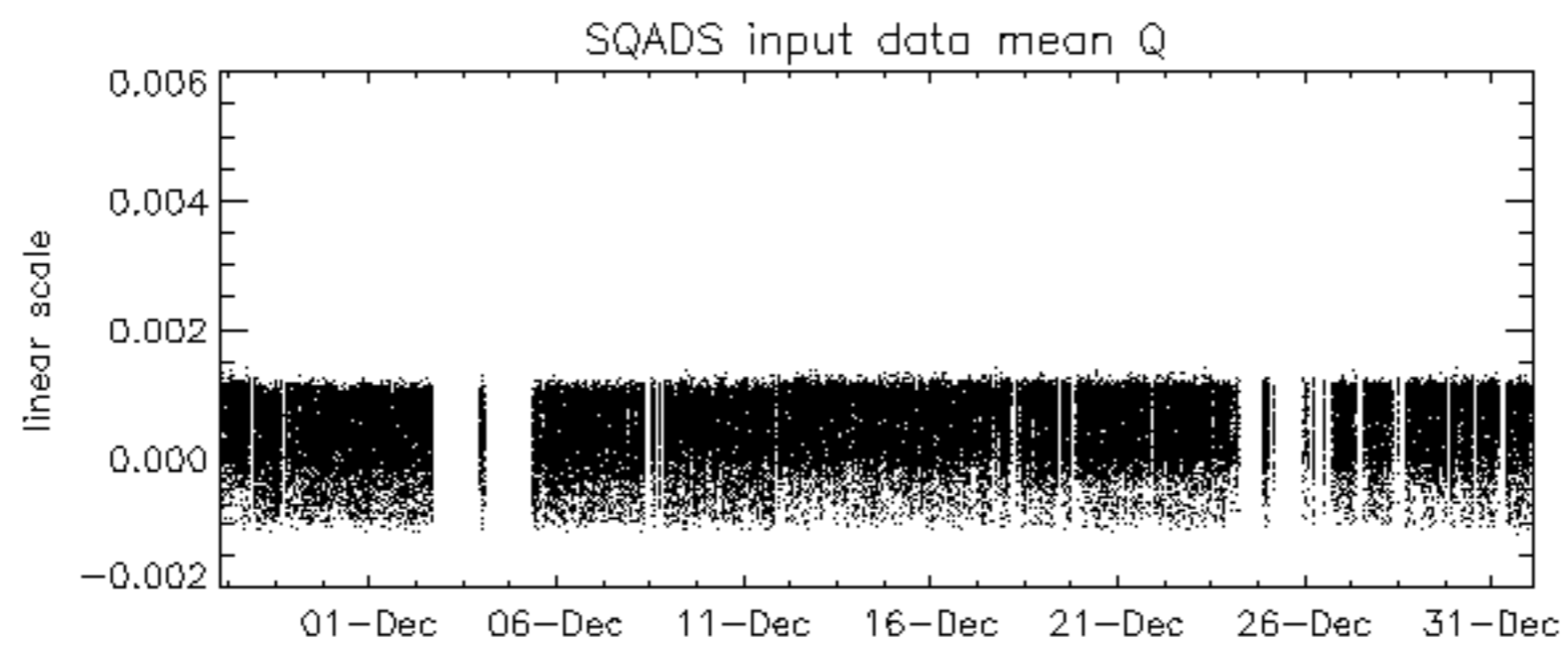
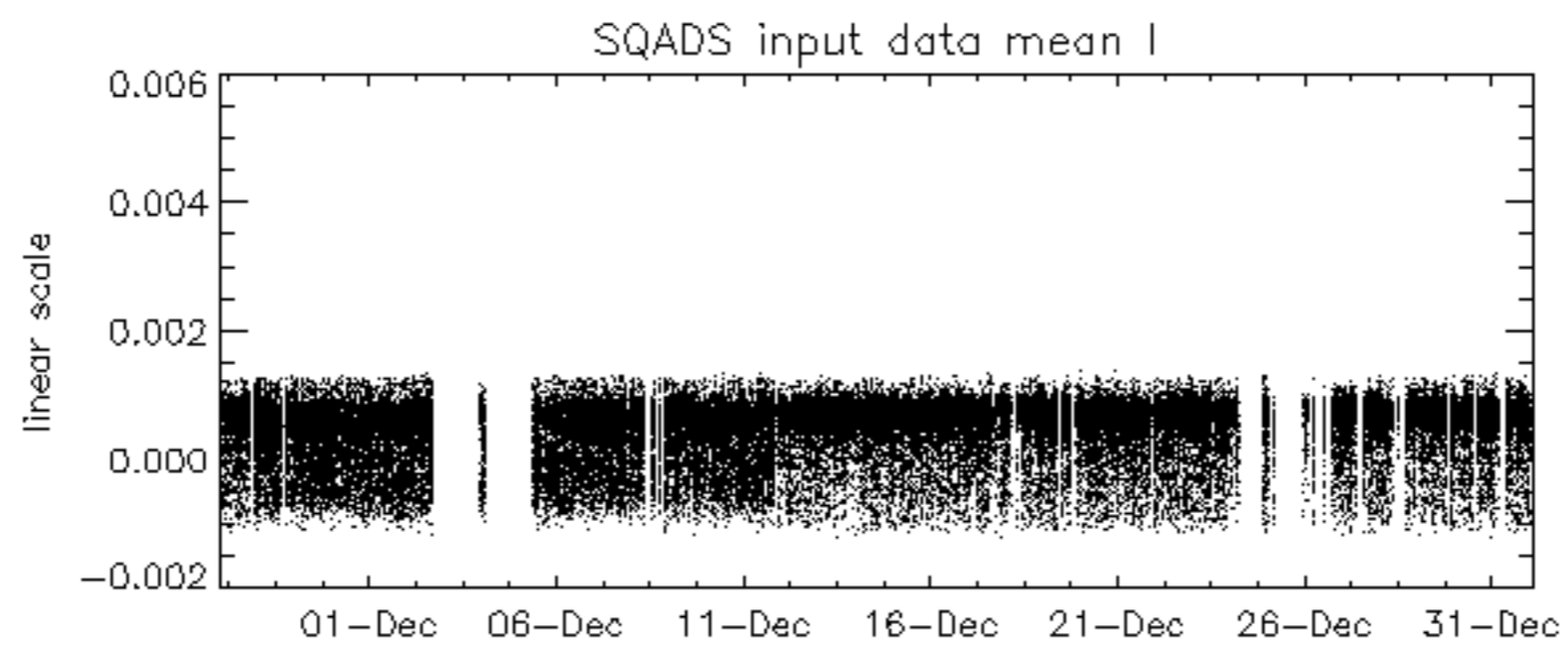
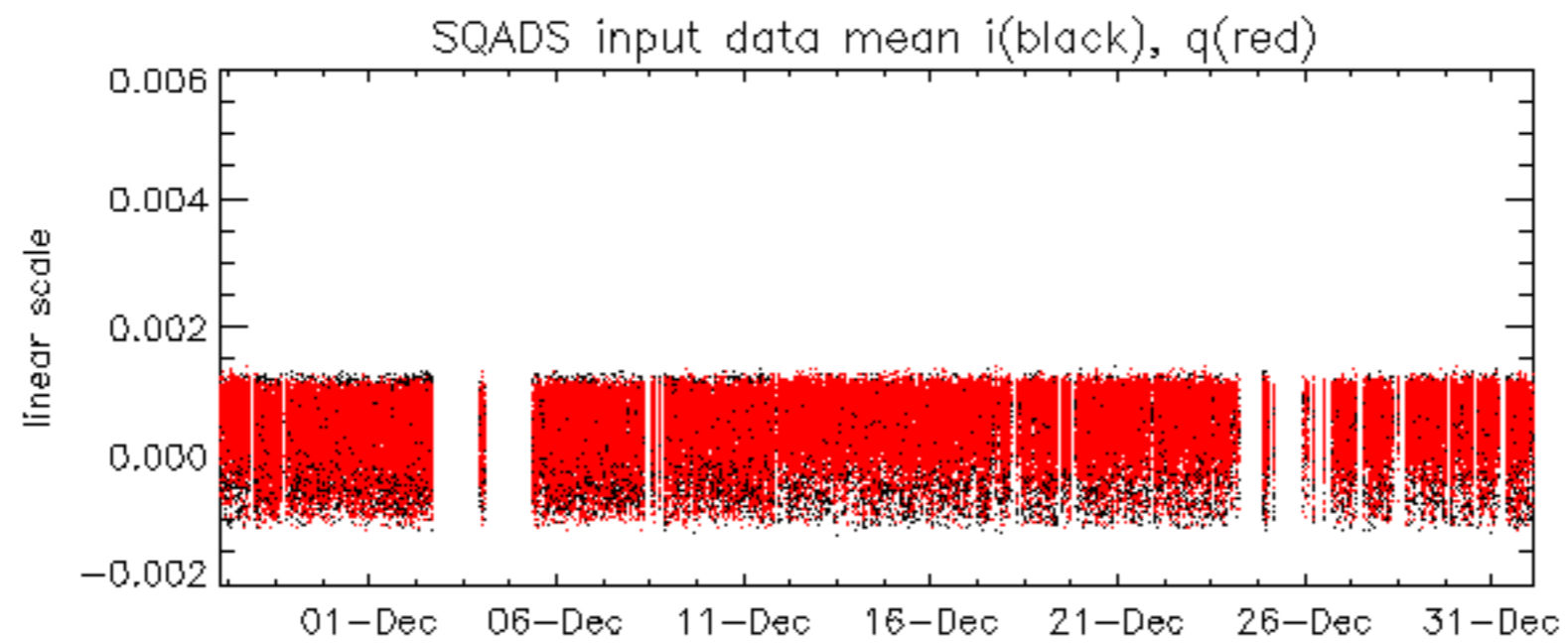
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -15.051984 Hz

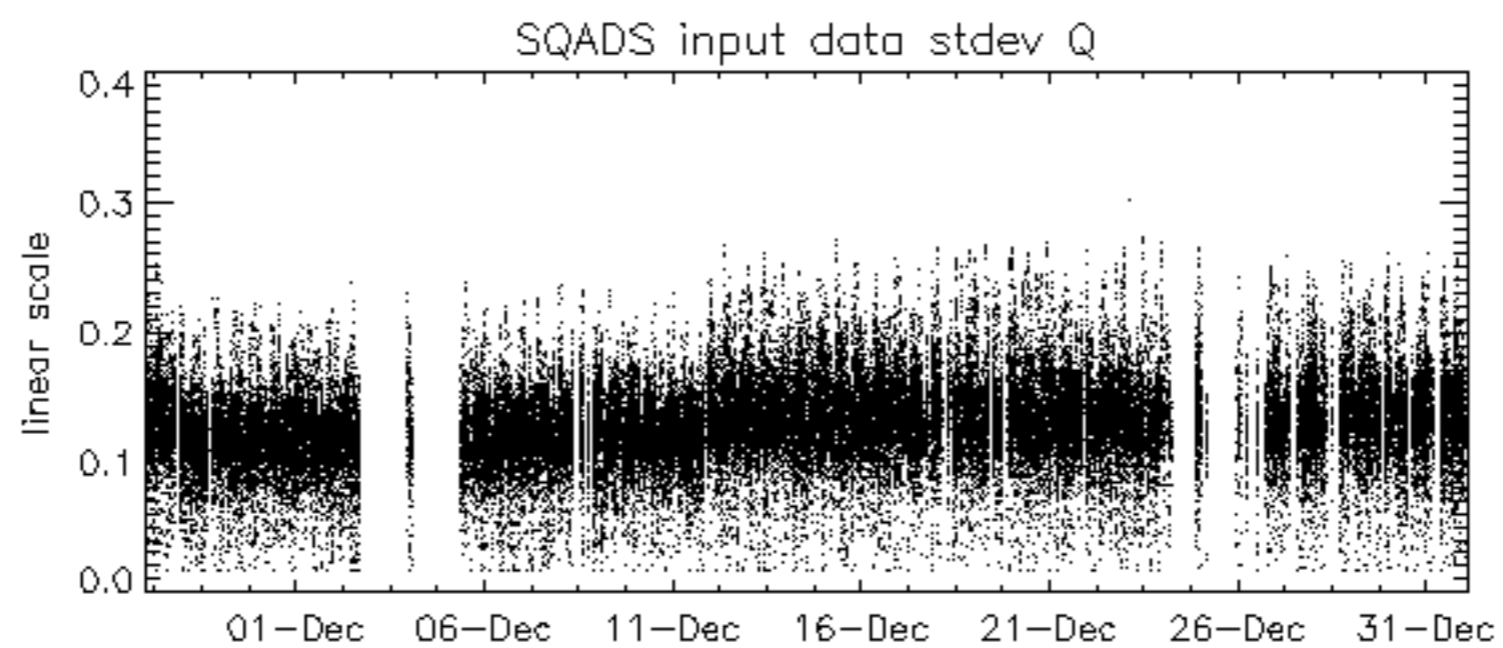
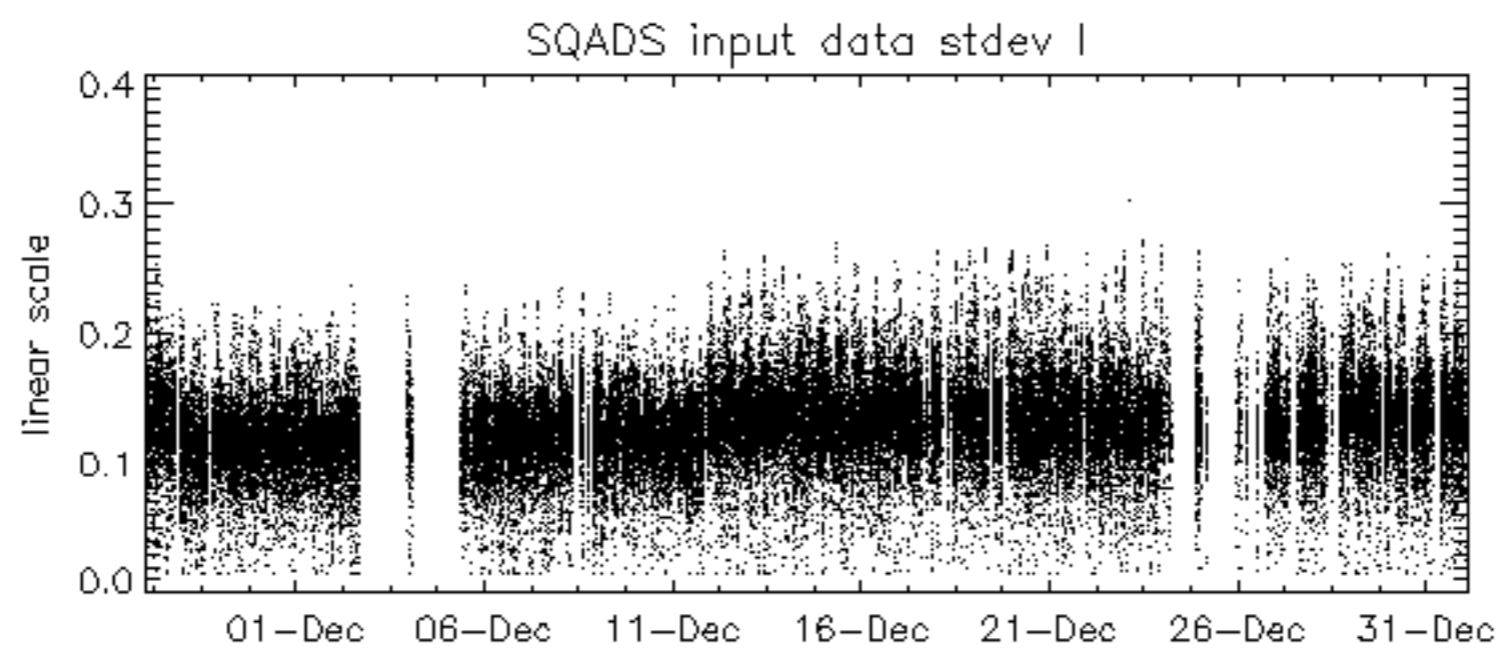
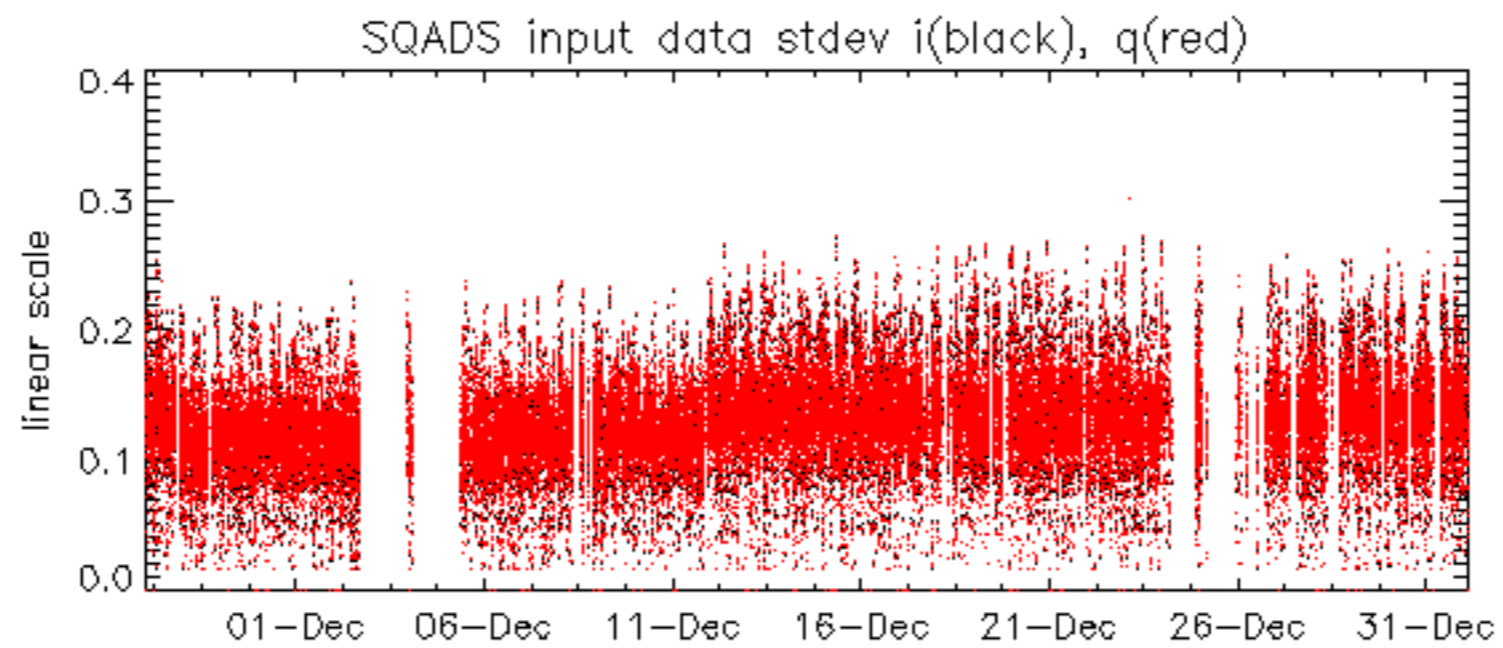


No anomalies observed on available MS products:

No anomalies observed.





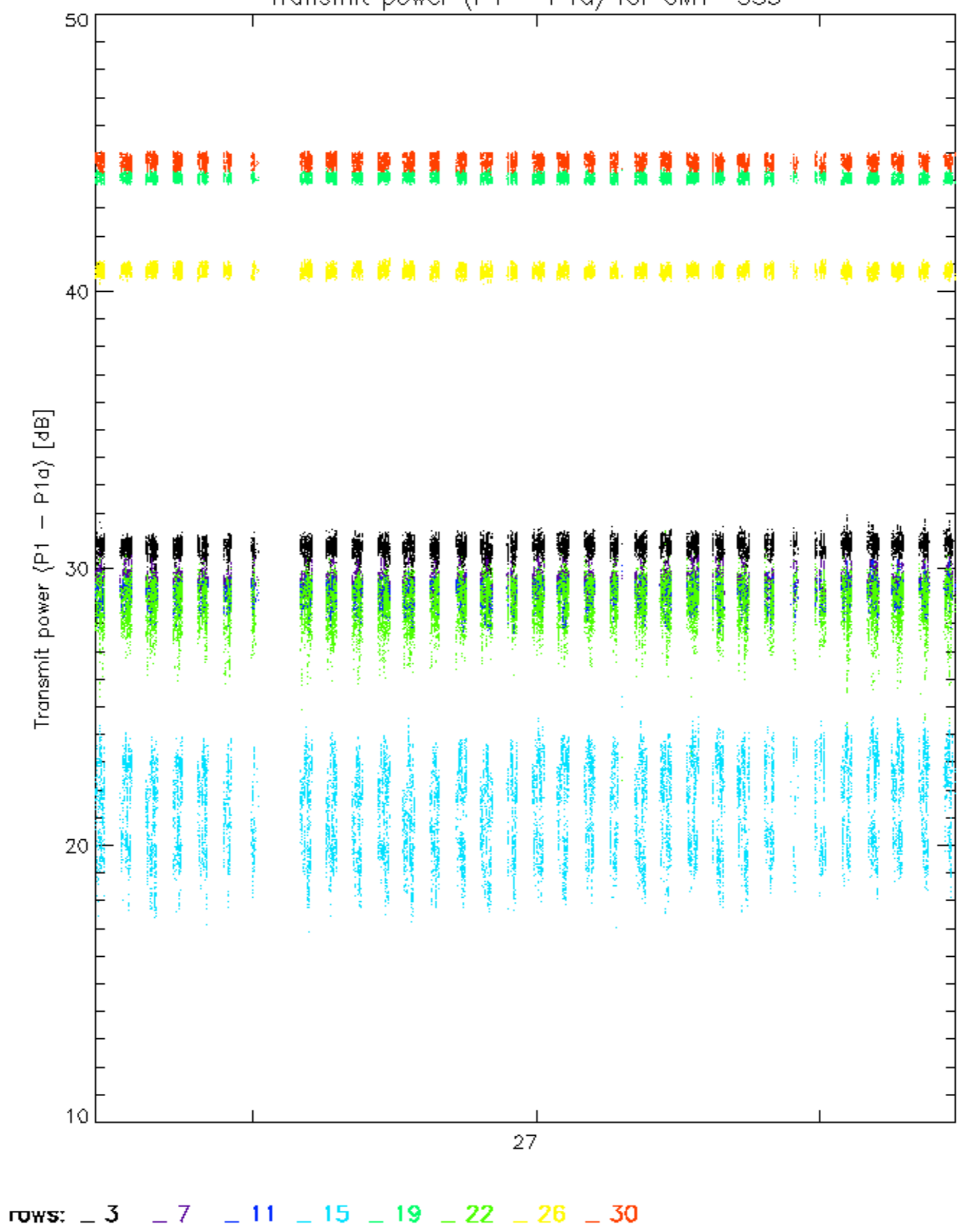


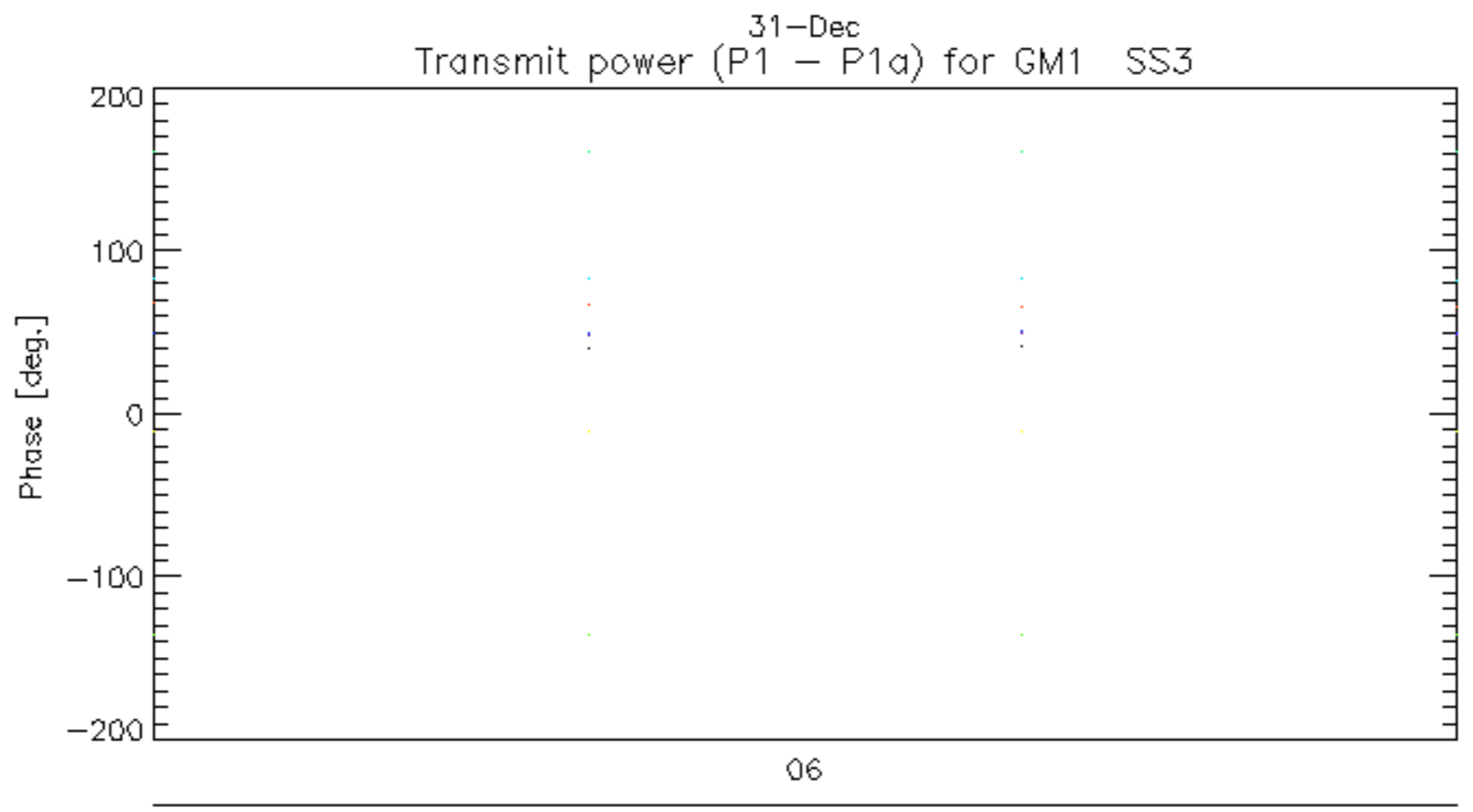
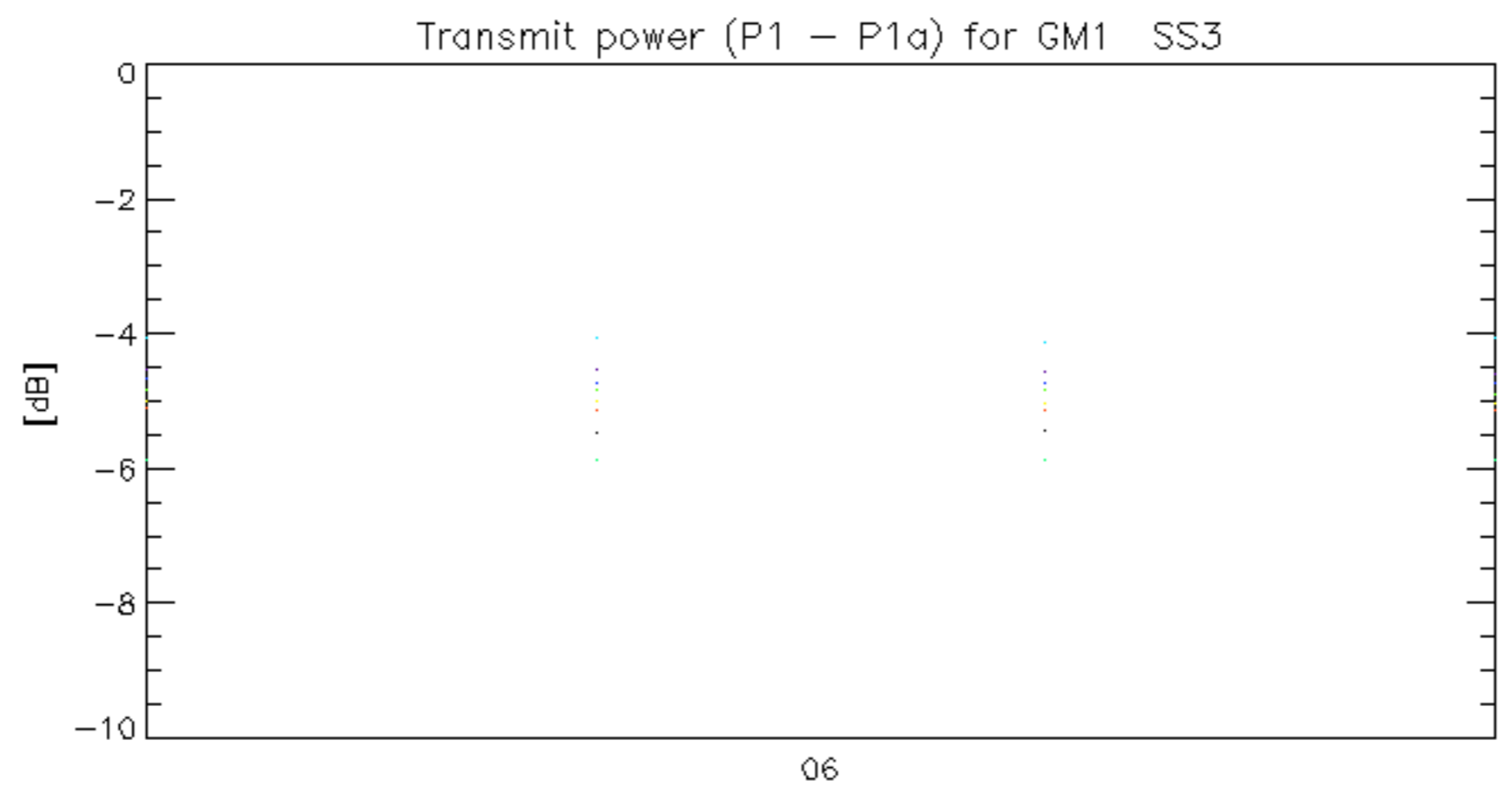
Summary of analysis for the last 3 days 2005123[011]

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

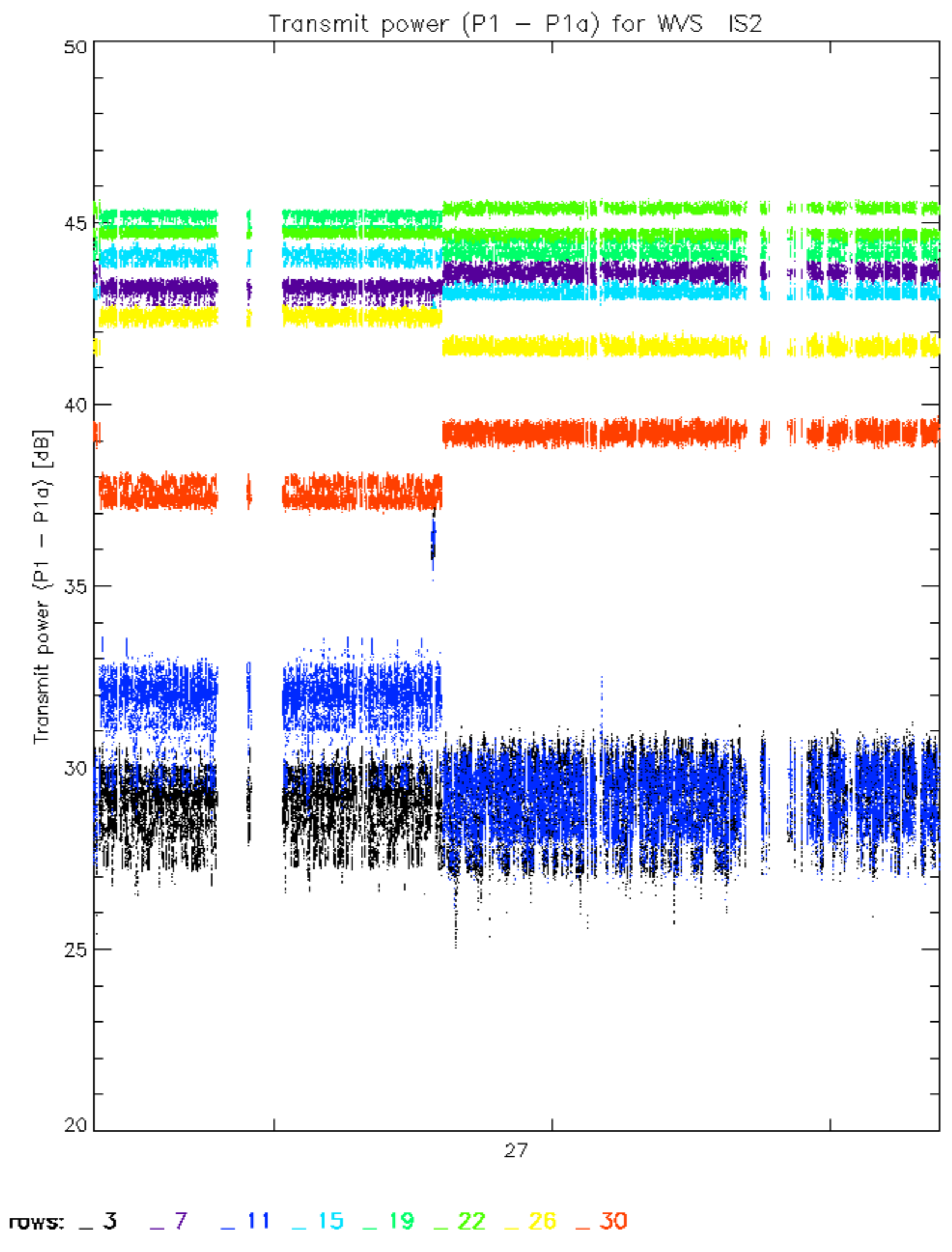
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051230_004338_000000602043_00446_20039_5183.N1	1	0
ASA_IMM_1PNPDK20051230_083344_000000502043_00451_20044_9925.N1	0	2
ASA_WSM_1PNPDE20051231_162359_000000912043_00470_20063_6512.N1	0	39

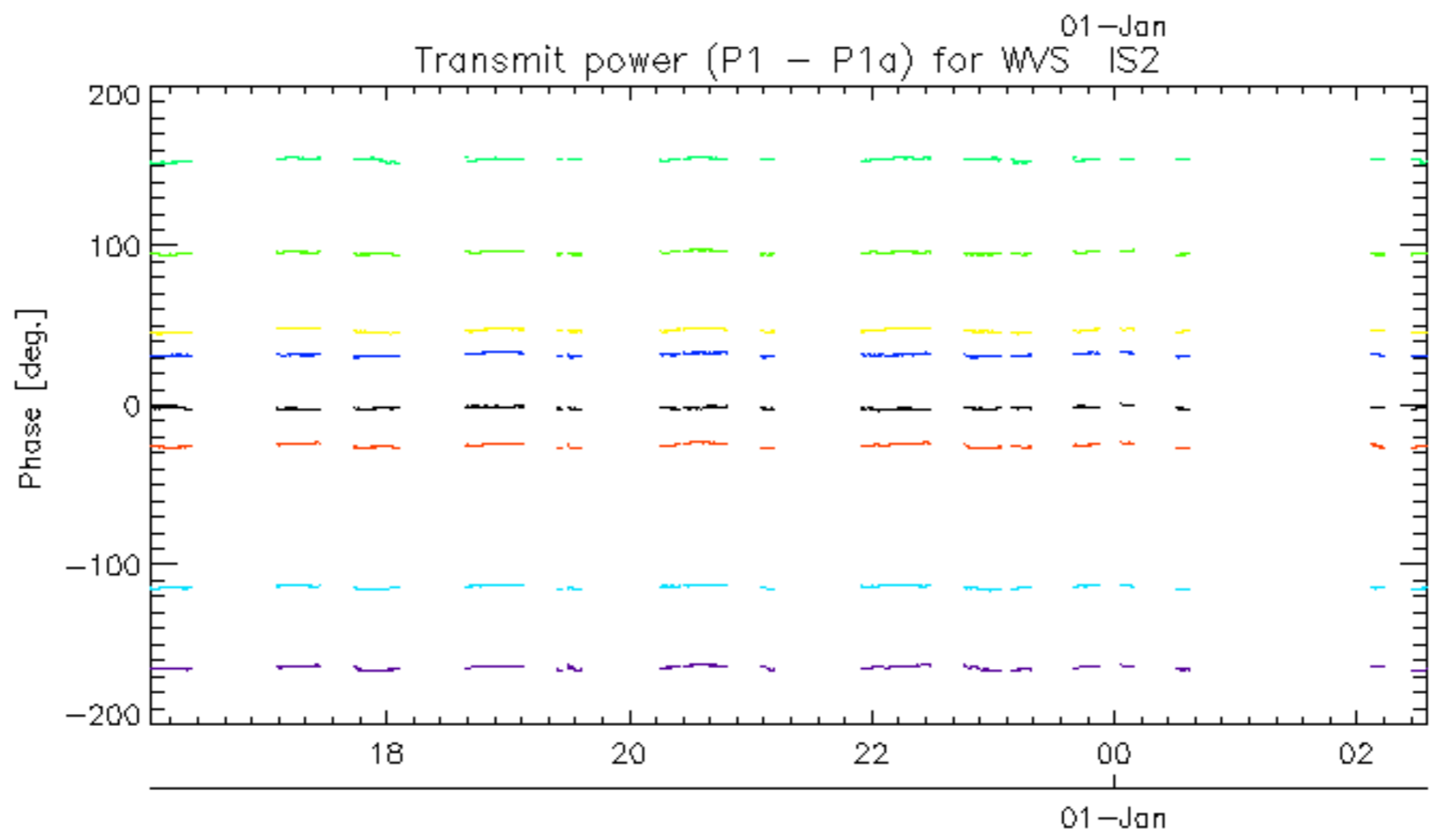
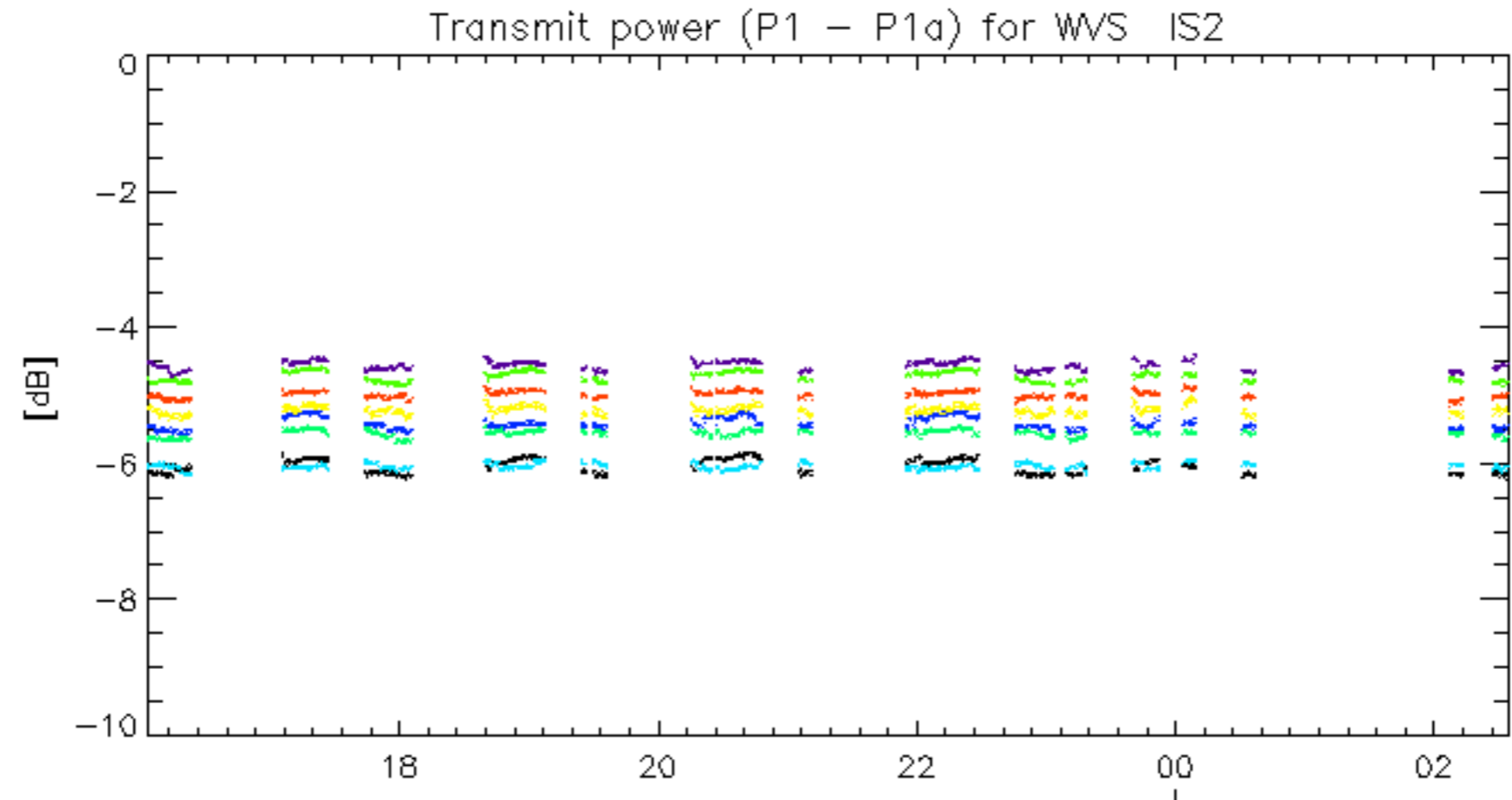
Transmit power (P1 - P1a) for GM1 SS3





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





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

No unavailabilities during the reported period.