

PRELIMINARY REPORT OF 061114

last update on Tue Nov 14 16:38:40 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 2006-11-13 00:00:00 to 2006-11-14 16:38:40

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	41	75	13	12	27
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	41	75	13	12	27
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	75	13	12	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	75	13	12	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	27	42	12	4	40
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	27	42	12	4	40
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	27	42	12	4	40
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	27	42	12	4	40

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20061113 180516
H	20061112 183653

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

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	-3.955635	0.008991	0.004727
7	P1	-3.130222	0.021710	-0.104265
11	P1	-4.123036	0.024184	-0.047179
15	P1	-6.265374	0.014719	-0.105445
19	P1	-3.605599	0.064619	-0.026182
22	P1	-4.659708	0.129703	-0.013242
26	P1	-3.978947	0.088081	0.060923
30	P1	-5.879401	0.169340	0.005559
3	P1	-16.523001	0.230499	0.188117
7	P1	-17.218569	0.199422	-0.286203
11	P1	-17.117809	0.434698	-0.163885
15	P1	-13.006525	0.123202	-0.281444
19	P1	-14.862892	0.372501	-0.199305
22	P1	-15.804352	0.502227	-0.429454
26	P1	-15.080608	0.212060	0.054357
30	P1	-17.307365	0.581111	-0.667961

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.845509	0.088815	-0.026326
7	P2	-21.737123	0.093208	0.028844
11	P2	-15.674401	0.104212	0.083452
15	P2	-7.107655	0.106578	-0.077942
19	P2	-9.173725	0.101920	-0.096549
22	P2	-18.206007	0.095010	-0.119730
26	P2	-16.509369	0.107914	-0.168883
30	P2	-19.472597	0.088323	-0.016233

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.225500	0.007845	-0.044857
7	P3	-8.225500	0.007845	-0.044857
11	P3	-8.225500	0.007845	-0.044857
15	P3	-8.225500	0.007845	-0.044857
19	P3	-8.225500	0.007845	-0.044857
22	P3	-8.225500	0.007845	-0.044857
26	P3	-8.225616	0.007862	-0.044493
30	P3	-8.225616	0.007862	-0.044493

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	-3.923044	0.159126	0.068740
7	P1	-2.599330	1.021632	0.358731
11	P1	-2.893036	0.127704	0.134005
15	P1	-3.696074	0.119160	0.074417
19	P1	-3.525697	0.125712	-0.039875
22	P1	-5.063764	0.094723	0.014056
26	P1	-6.003909	0.236095	-0.043412
30	P1	-5.306900	0.159723	-0.071357
3	P1	-11.748932	0.391182	0.171844
7	P1	-10.139630	1.299036	0.390434
11	P1	-10.401115	0.358083	0.327100
15	P1	-10.857049	0.488098	0.421481
19	P1	-15.748221	2.200948	-0.045109
22	P1	-21.199570	1.628143	-0.684090

26	P1	-15.967176	0.431119	-0.344251
30	P1	-17.967882	0.518692	0.225750

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.402798	0.245281	-0.252687
7	P2	-22.081175	1.346043	-0.621750
11	P2	-10.892123	0.217746	-0.211791
15	P2	-4.931461	0.078667	-0.121554
19	P2	-6.916407	0.154799	-0.132758
22	P2	-8.269580	0.444934	0.064891
26	P2	-24.201653	1.011803	-0.522639
30	P2	-21.894669	0.516634	-0.272722

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.072521	0.003239	-0.038846
7	P3	-8.072406	0.003218	-0.038891
11	P3	-8.072432	0.003222	-0.039305
15	P3	-8.072320	0.003218	-0.038935
19	P3	-8.072433	0.003223	-0.038913
22	P3	-8.072285	0.003228	-0.039182
26	P3	-8.072371	0.003213	-0.039508
30	P3	-8.072435	0.003225	-0.039704

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	0.000546279
	stdev	1.76776e-07
MEAN Q	mean	0.000517013
	stdev	2.20986e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136535
	stdev	0.00113015
STDEV Q	mean	0.136895
	stdev	0.00114752



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006111[234]

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_1PNPDK20061112_120311_000004412052_00481_24583_8512.N1	0	8
ASA_WSM_1PNPDE20061112_113207_000001582052_00481_24583_0001.N1	0	74
ASA_WSM_1PNPDE20061113_015825_000001292052_00490_24592_0001.N1	0	19
ASA_WSM_1PNPDK20061113_133931_000002452052_00497_24599_0002.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)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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)

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

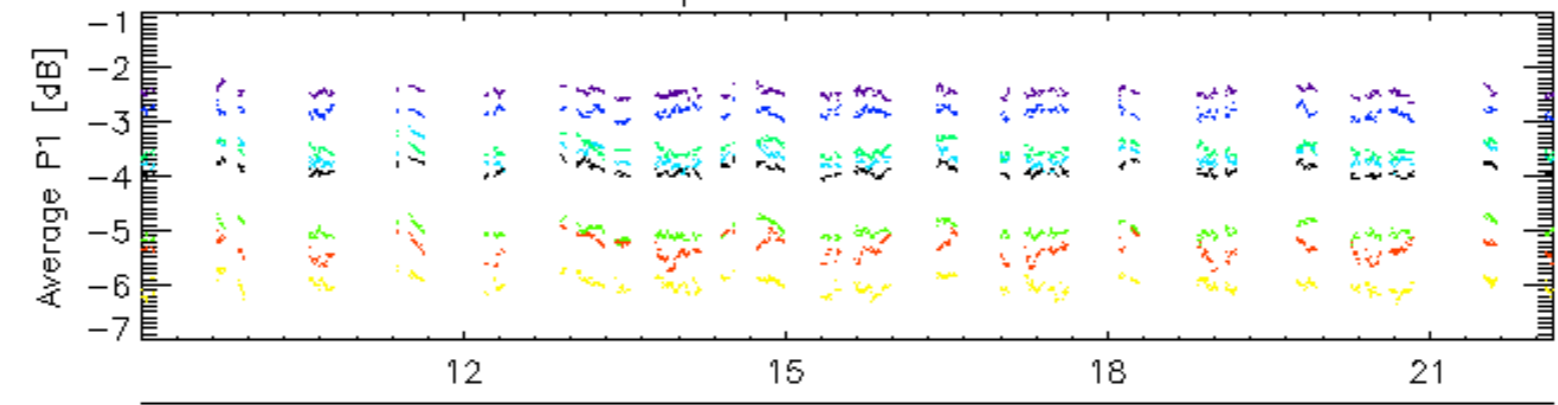
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

<input type="checkbox"/>
Acsending
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Descending

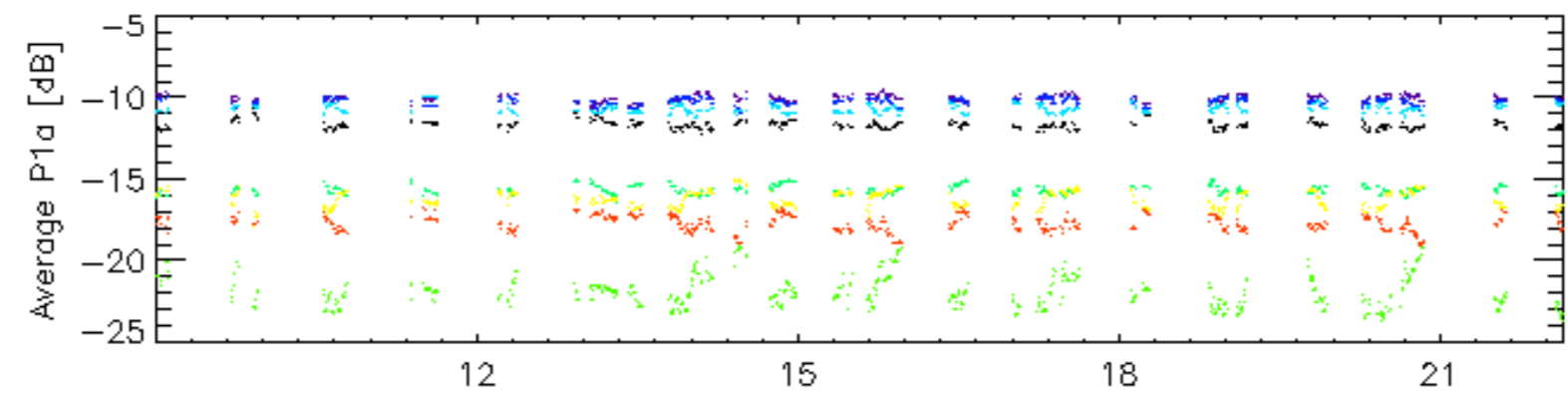
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

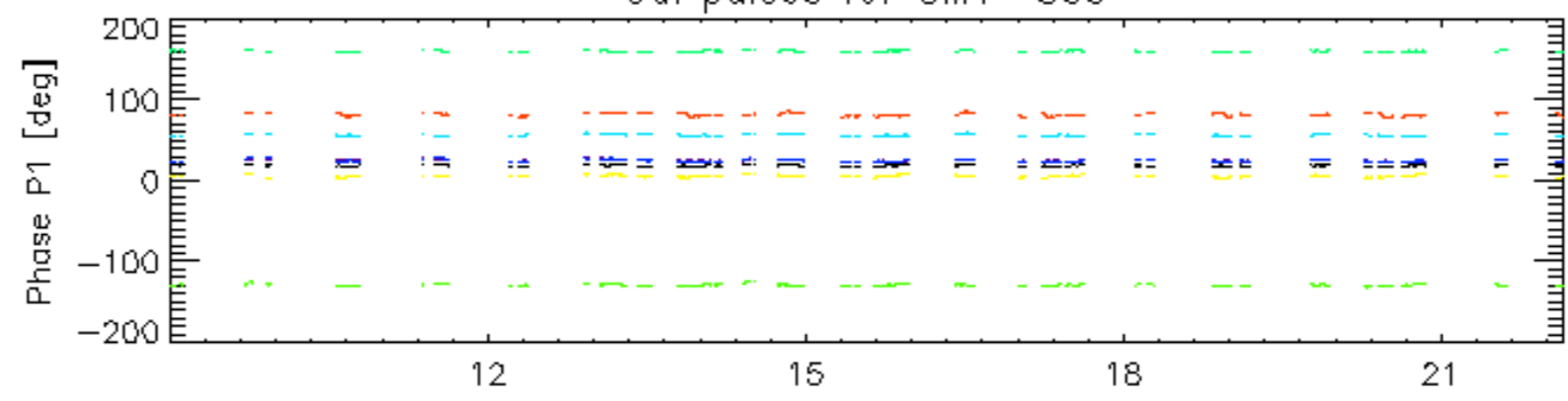


13-Nov

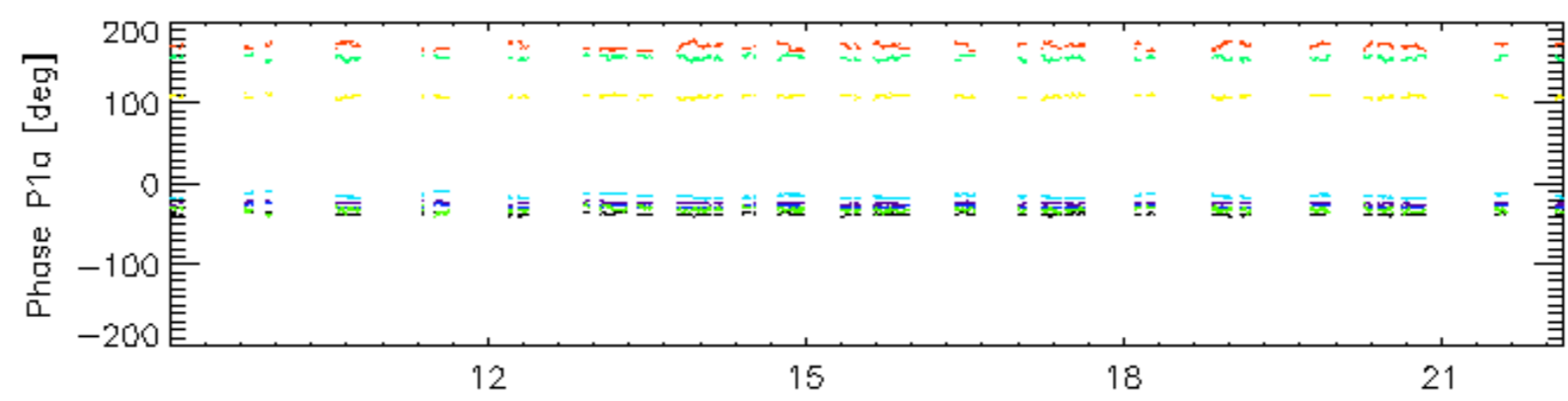


13-Nov

Cal pulses for GM1 SS3

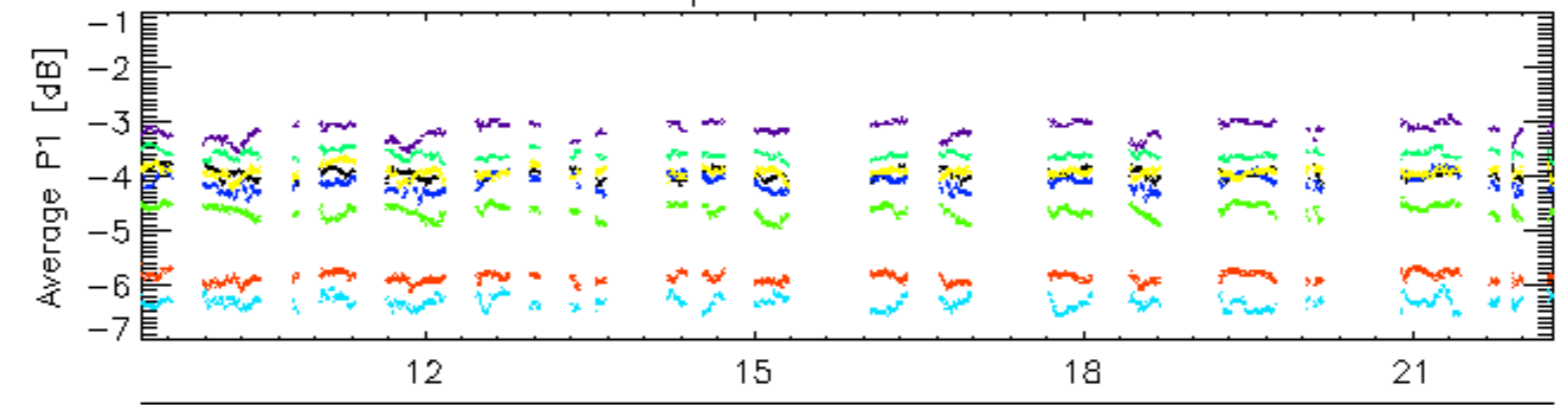


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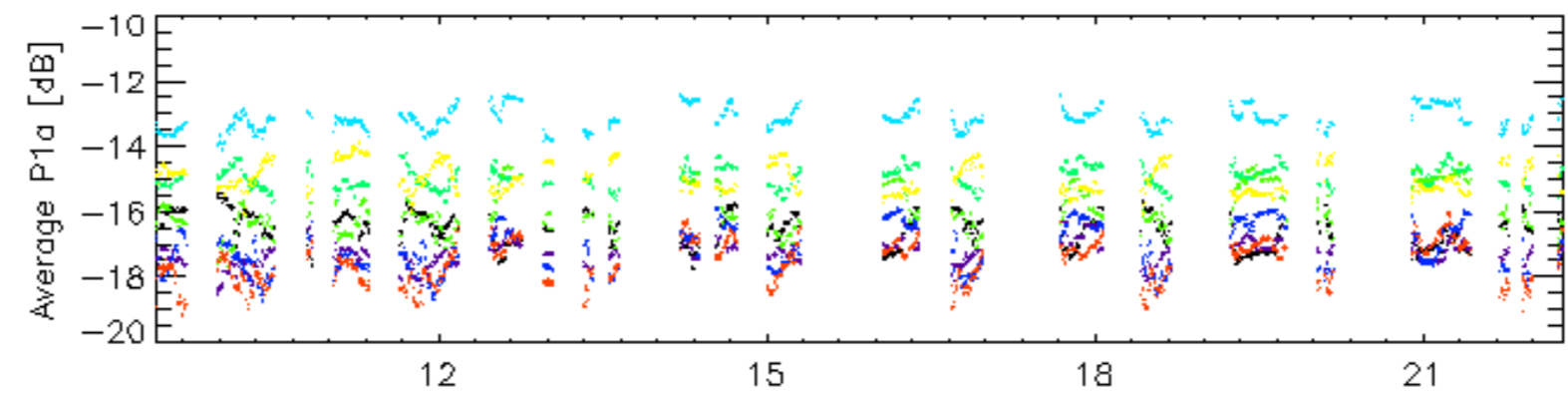


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 13-Nov

Cal pulses for WVS IS2

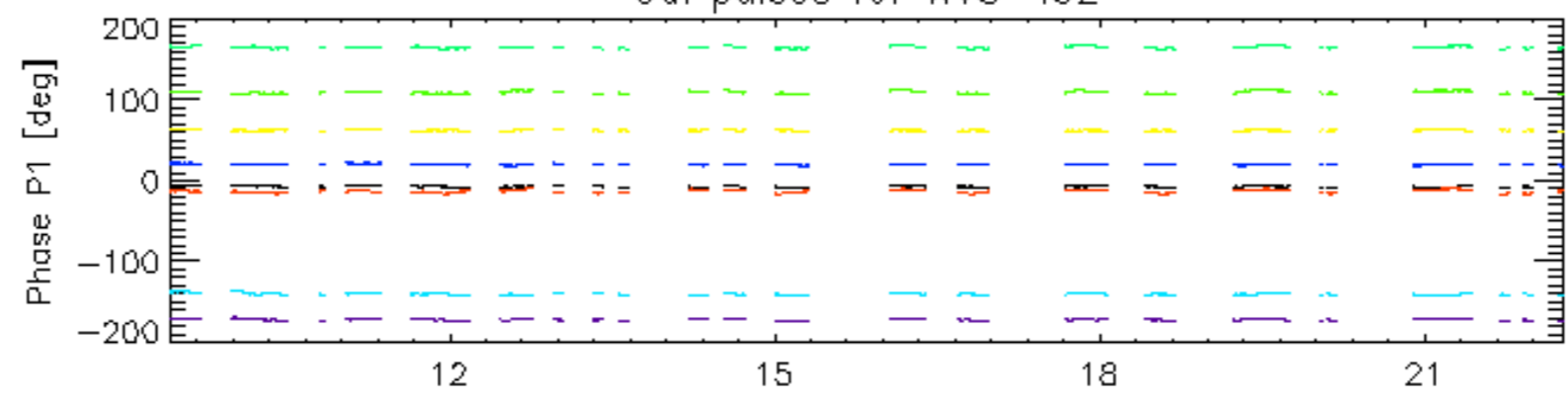


13-Nov

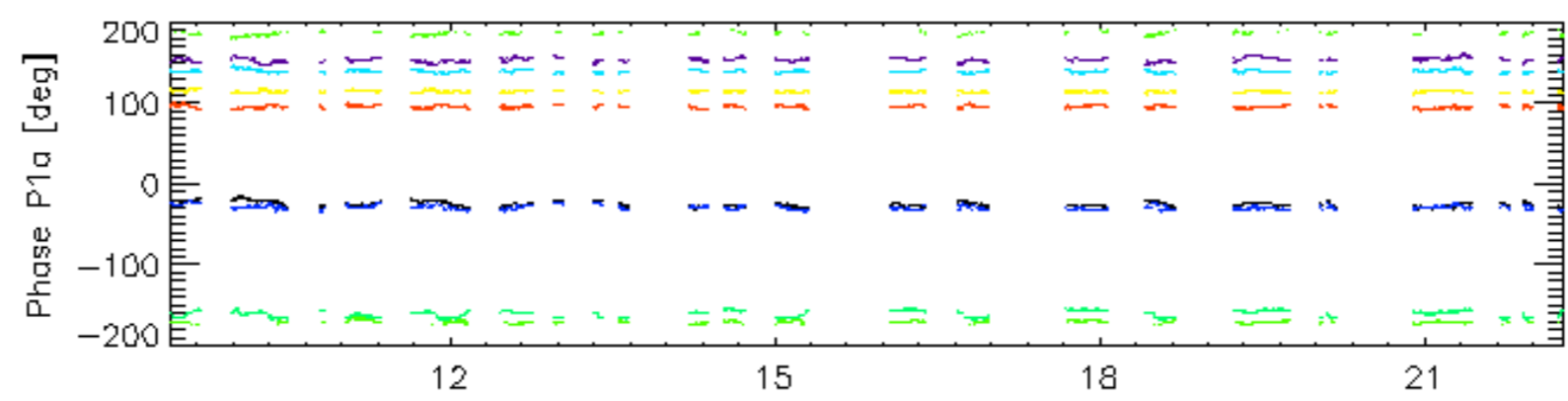


13-Nov

Cal pulses for WVS IS2

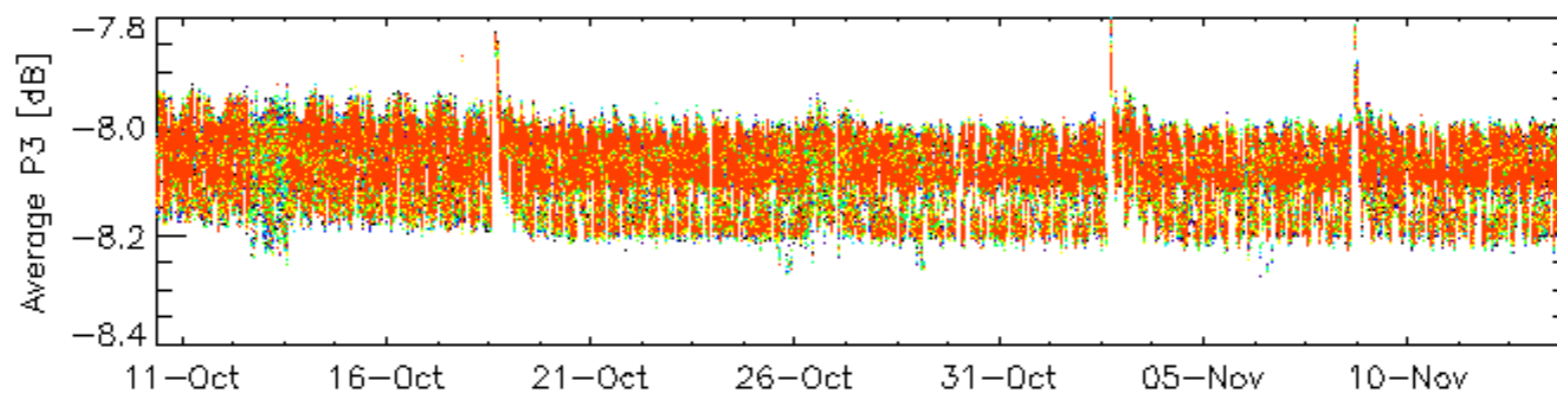
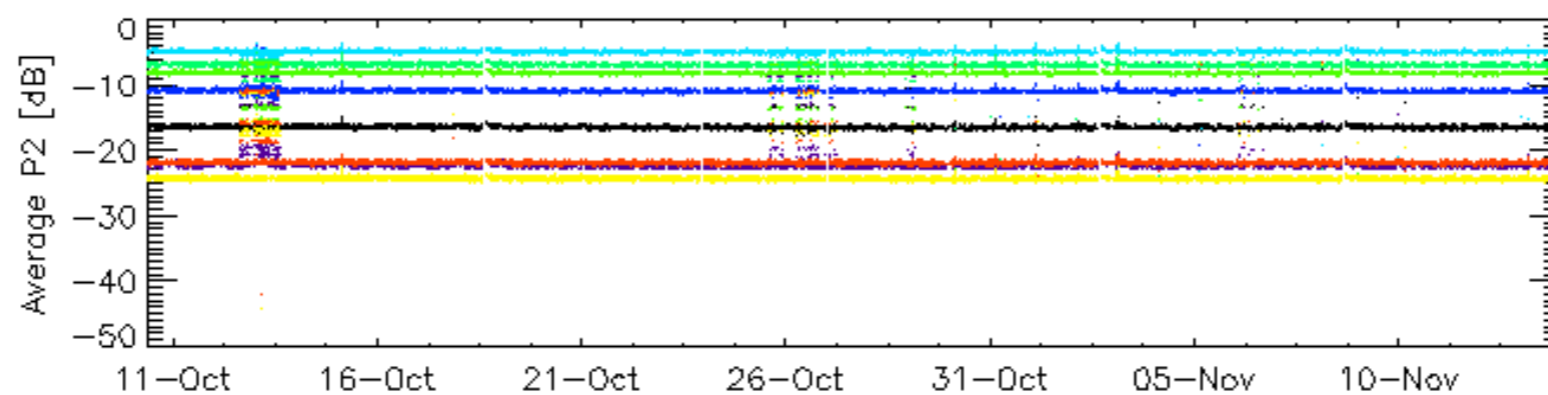
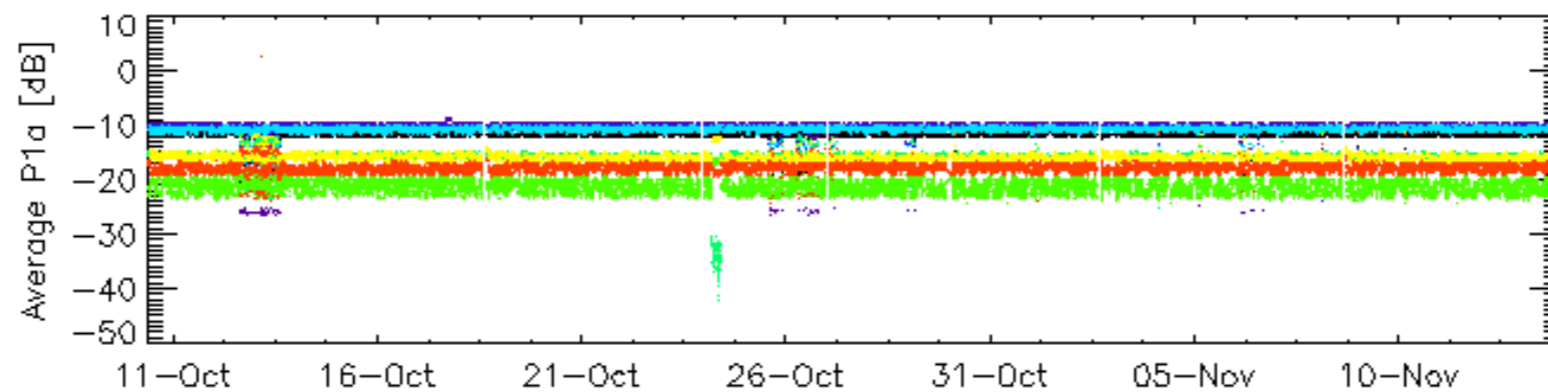
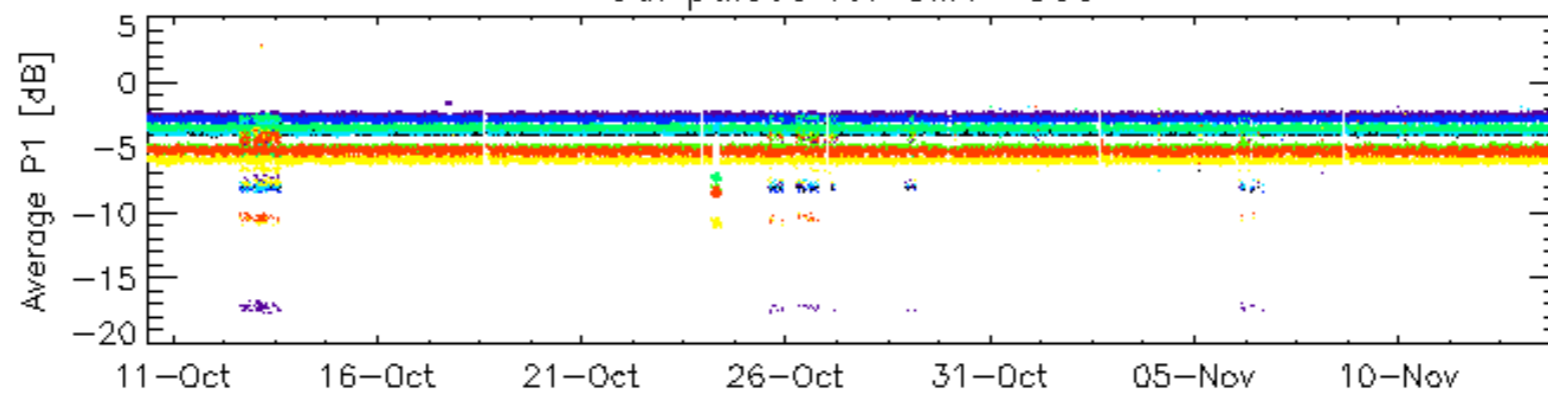


13-Nov



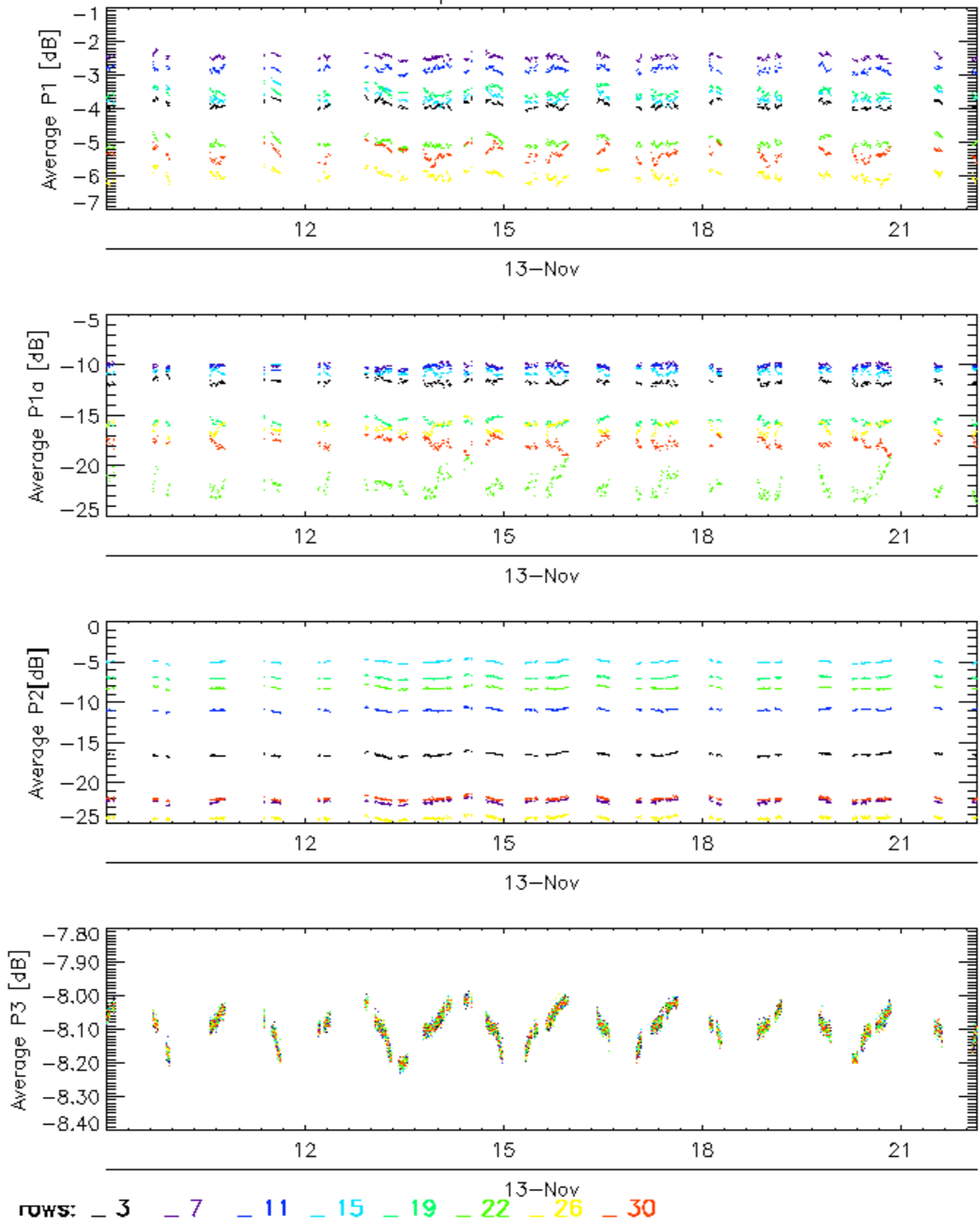
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 ^{13-Nov}

Cal pulses for GM1 SS3

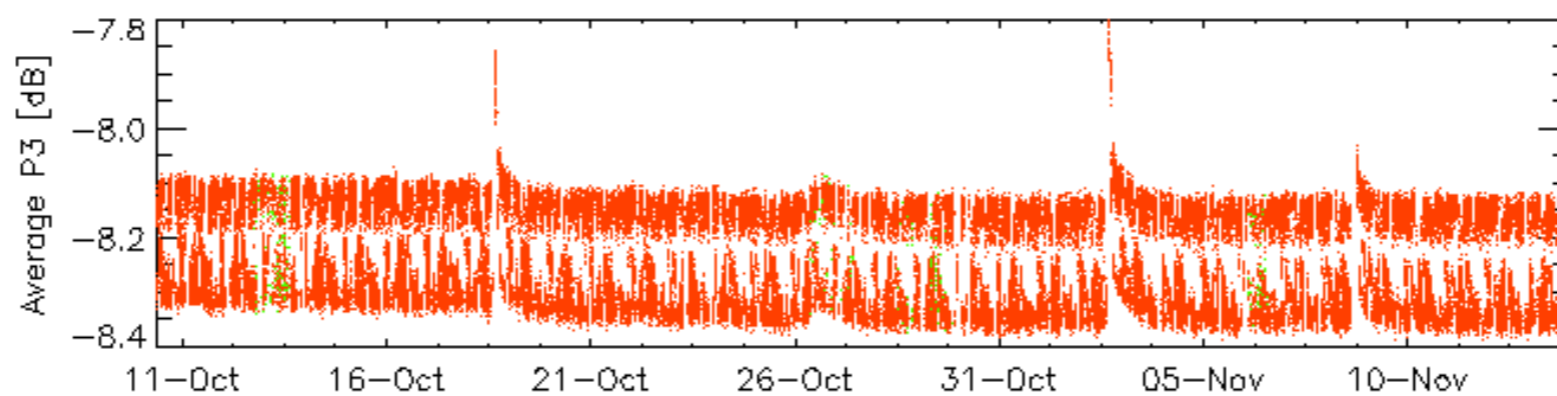
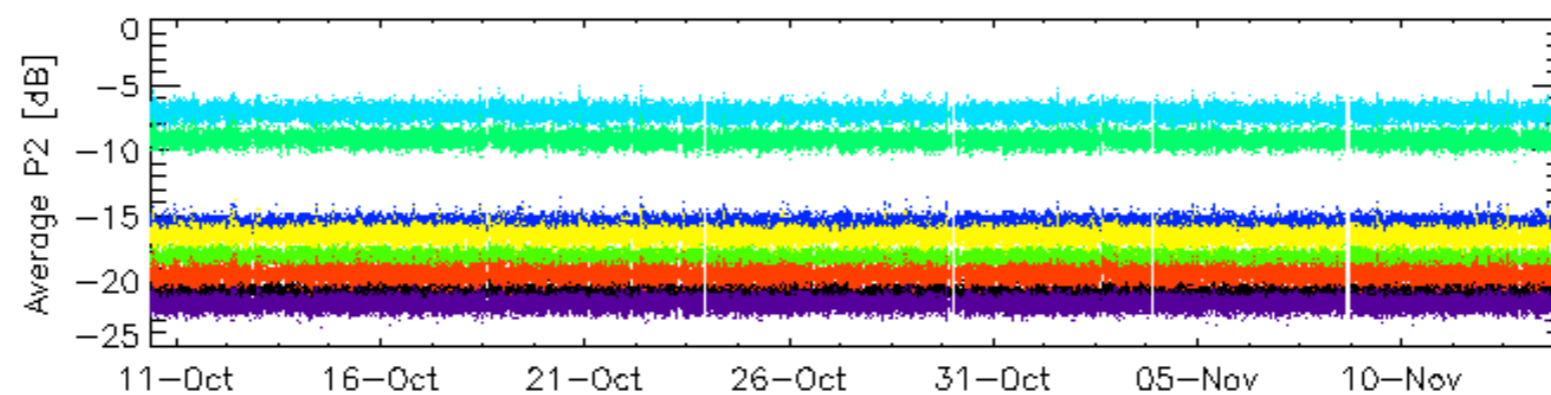
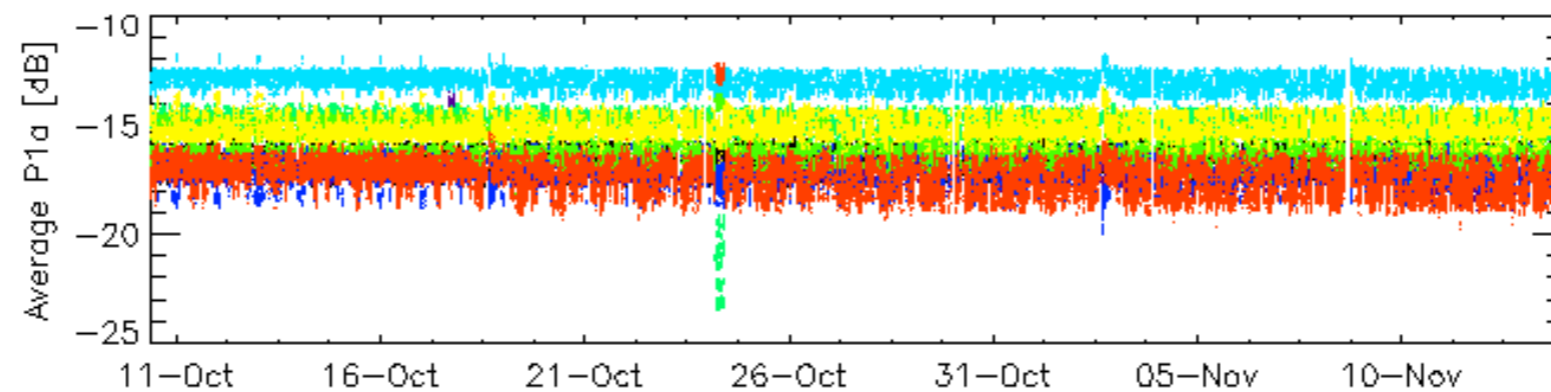
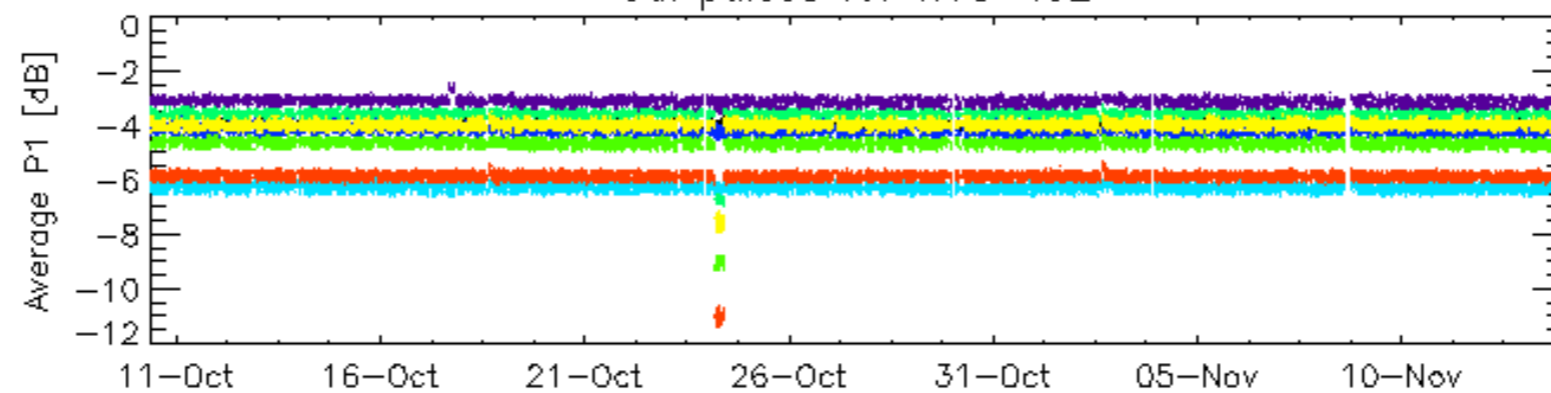


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

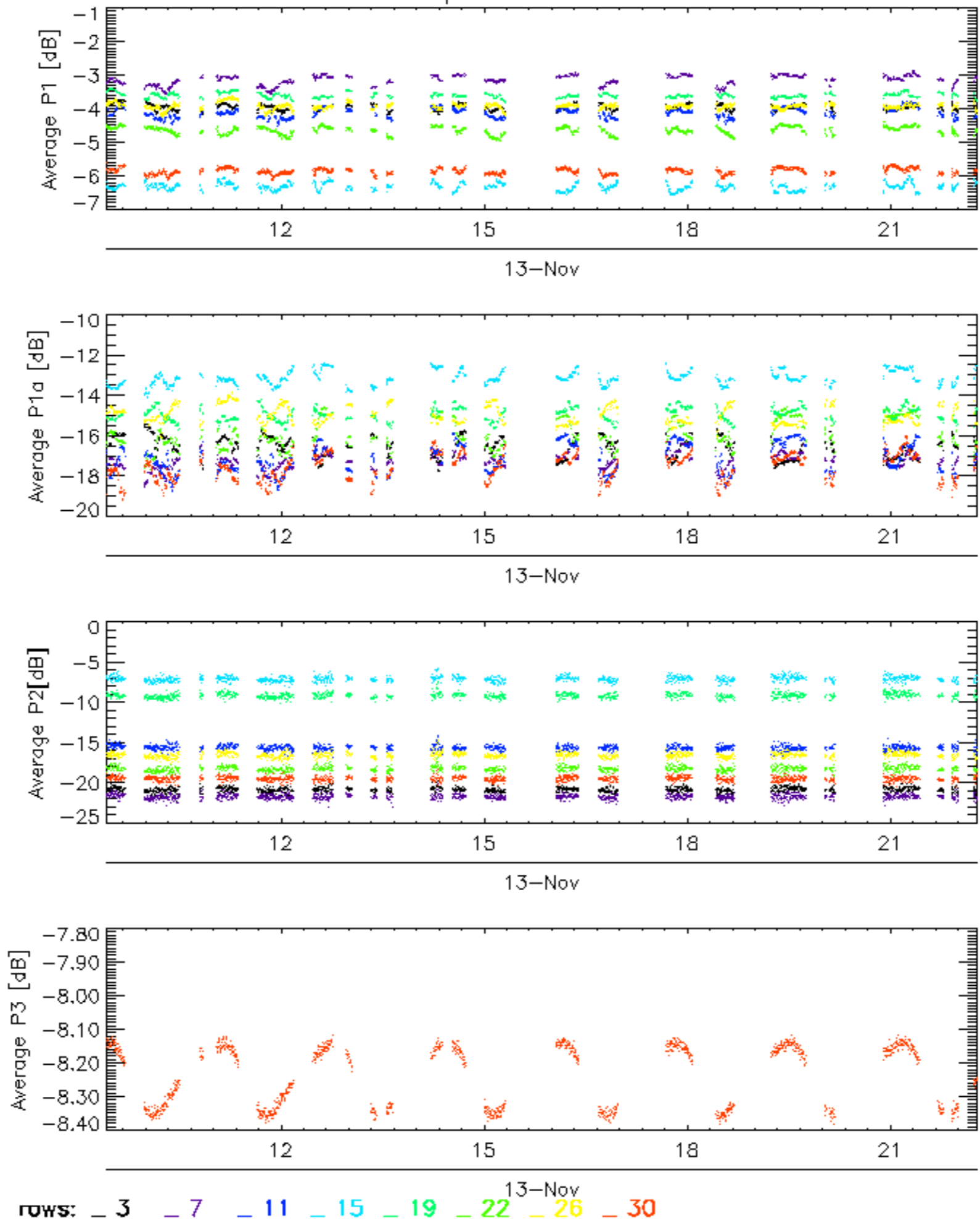


Cal pulses for WVS IS2



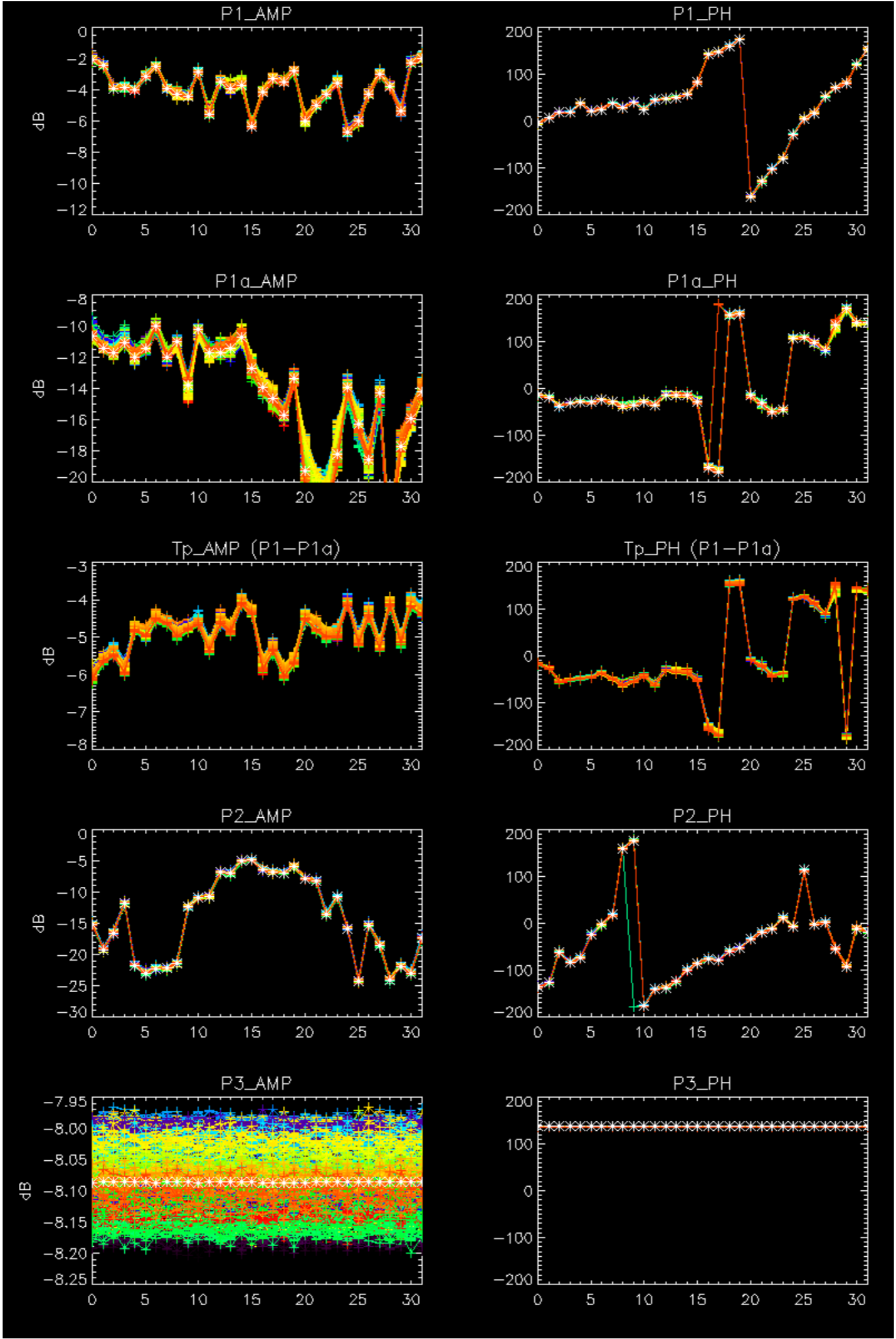
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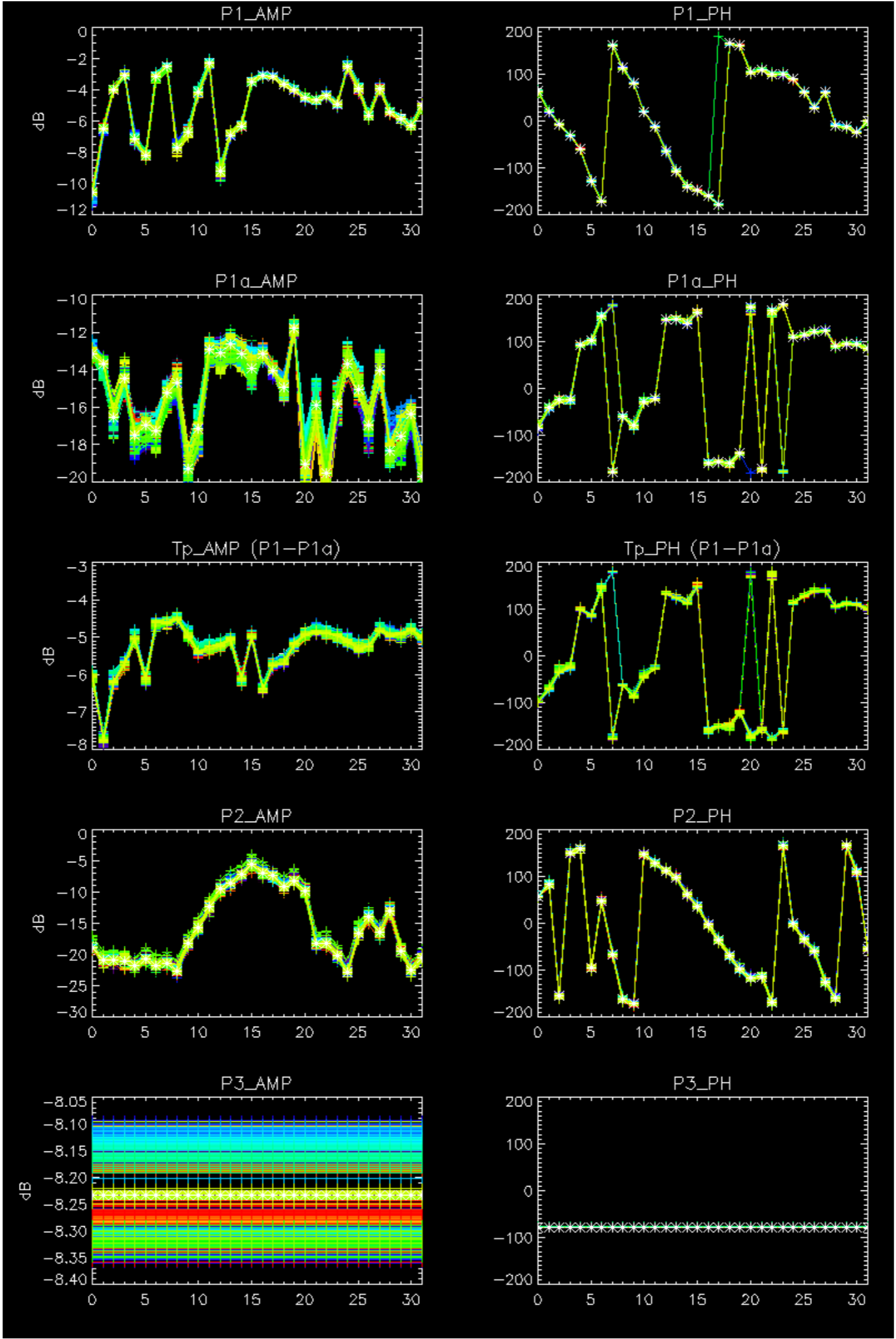
Cal pulses for WVS IS2



No anomalies observed on available browse products

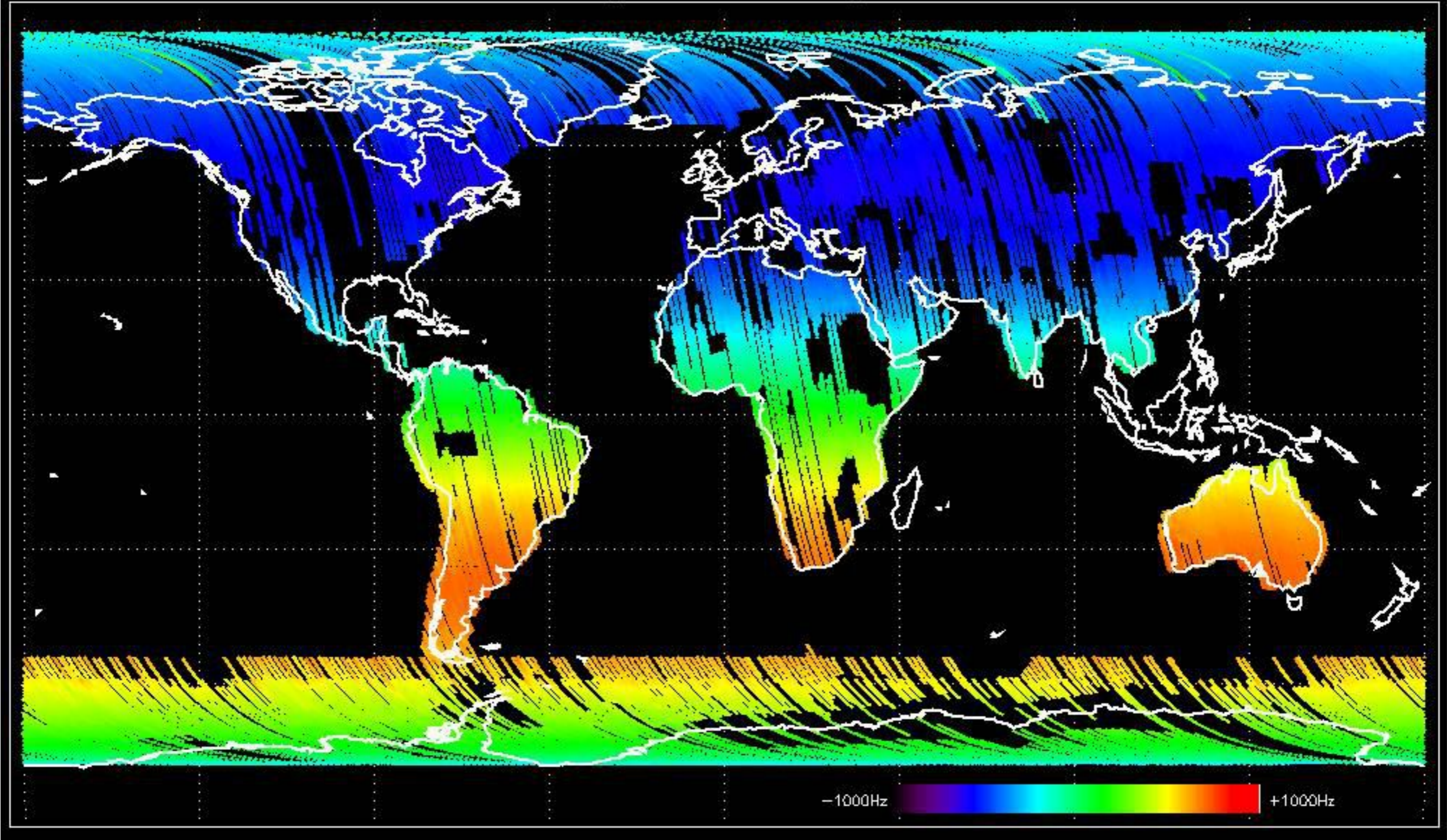
No anomalies observed.



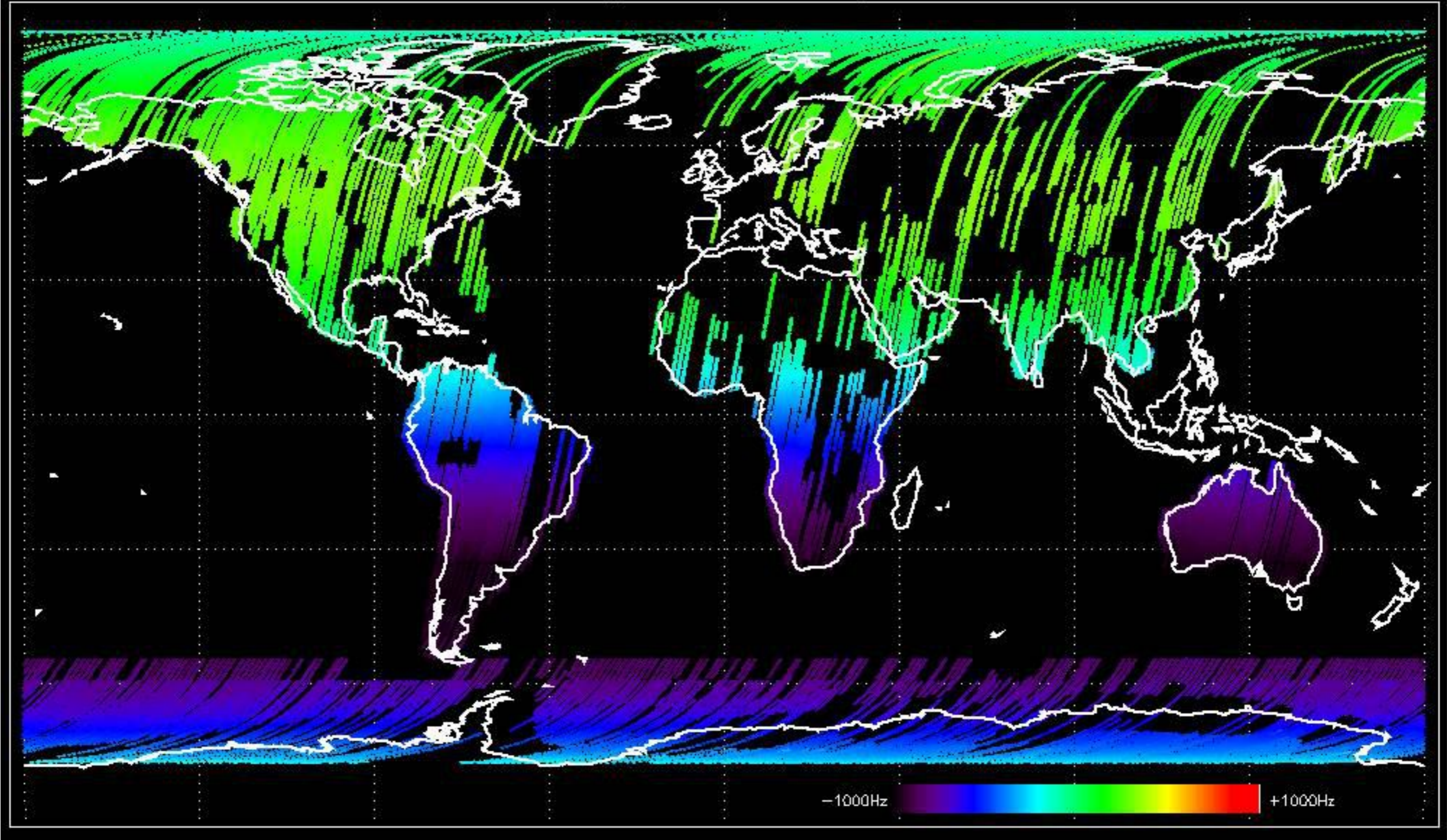


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

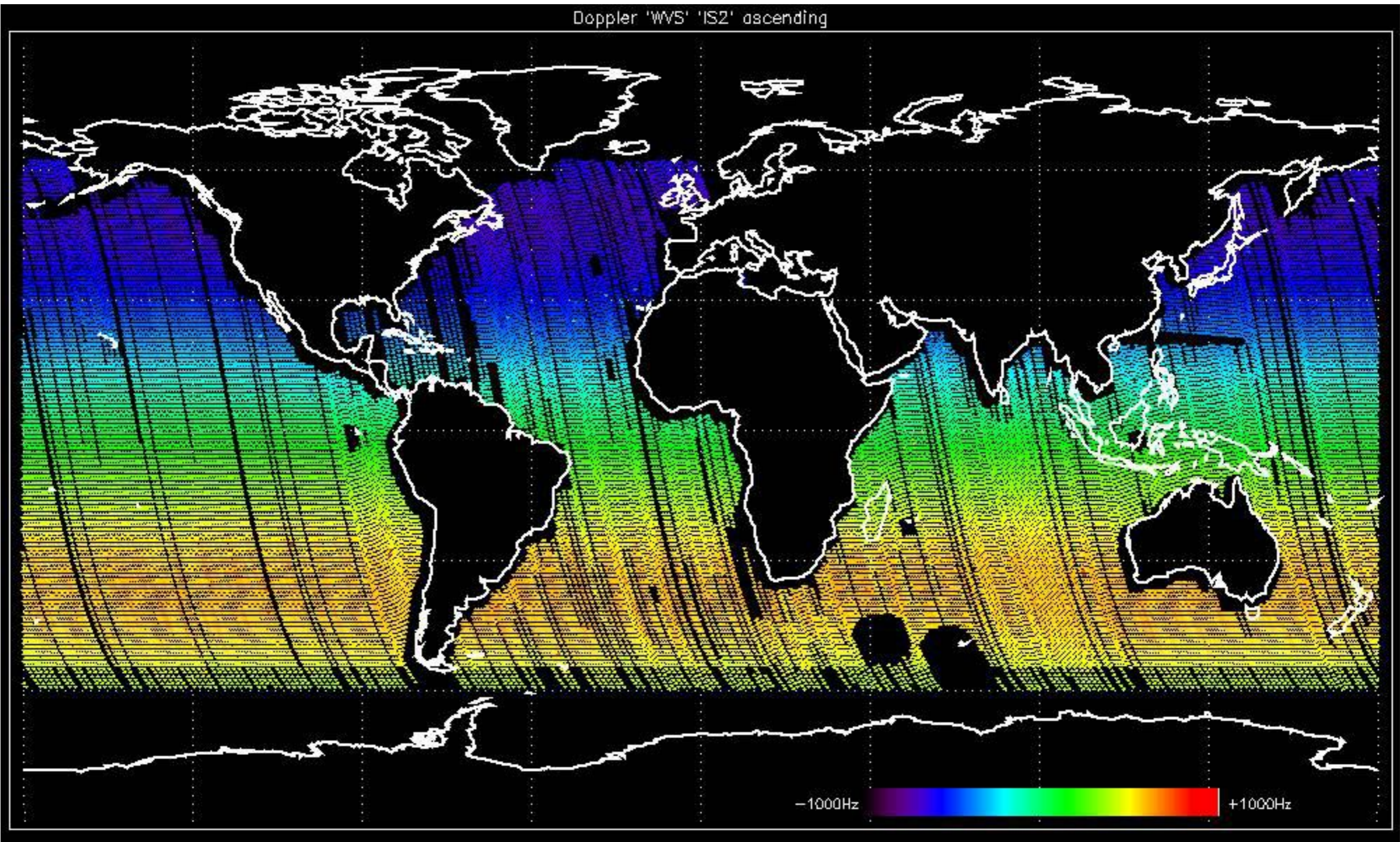
Doppler 'GM1' 'SS1' ascending



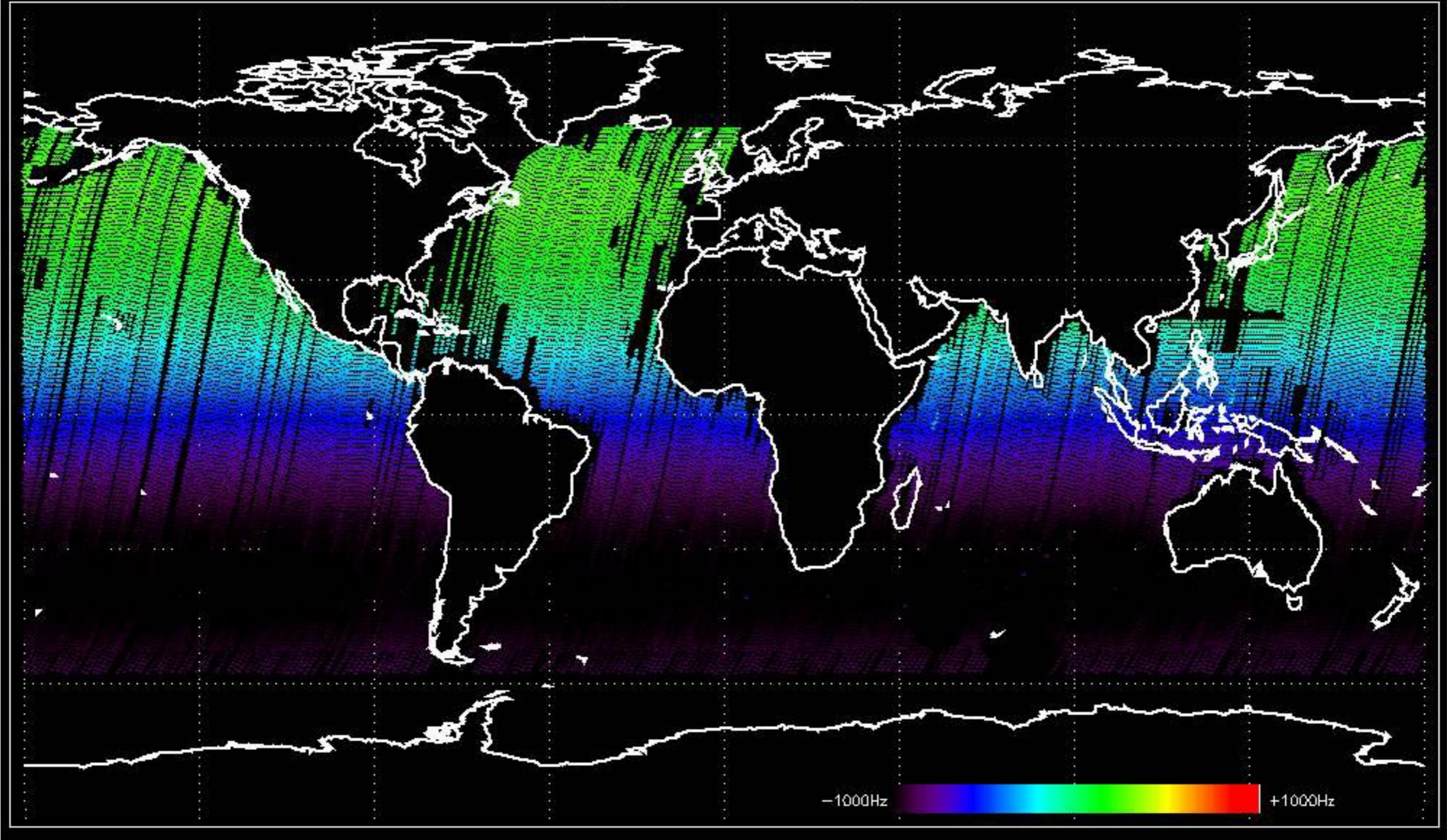
Doppler 'GM1' 'SS1' descending

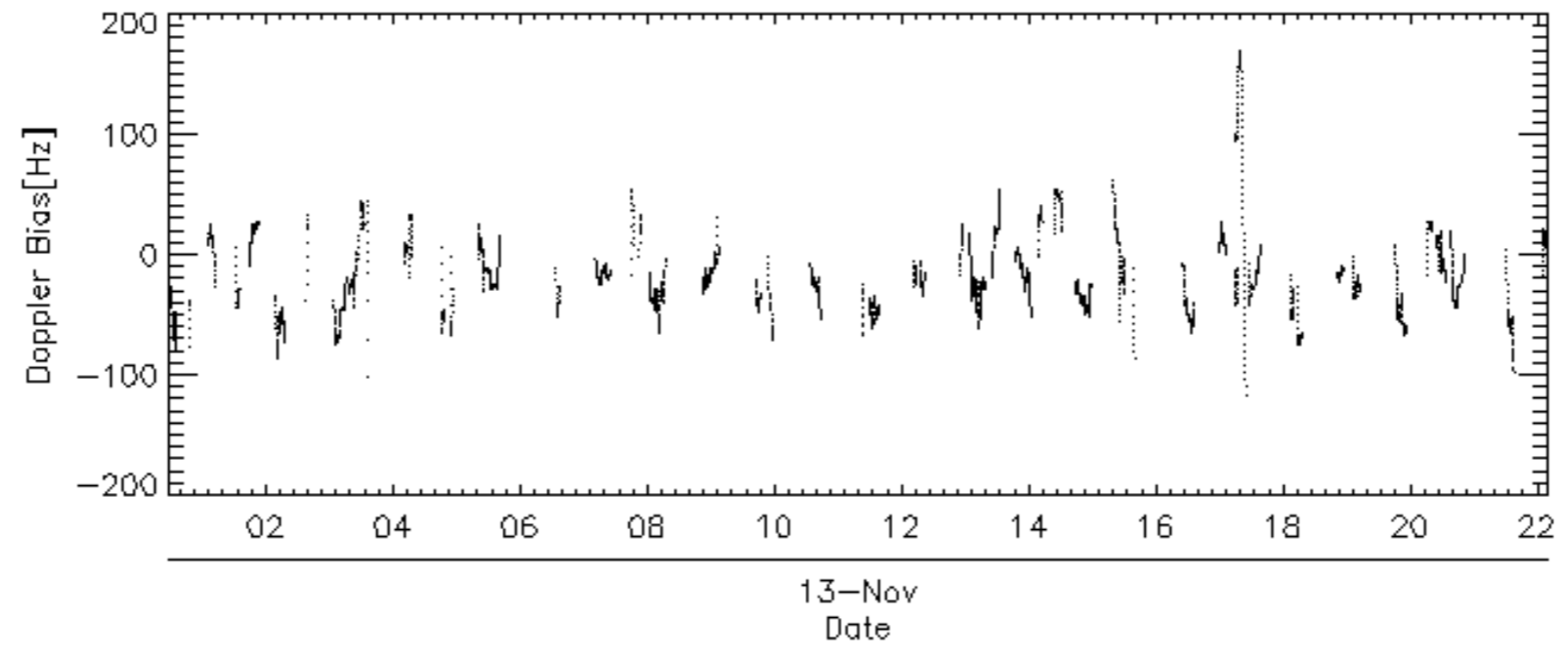
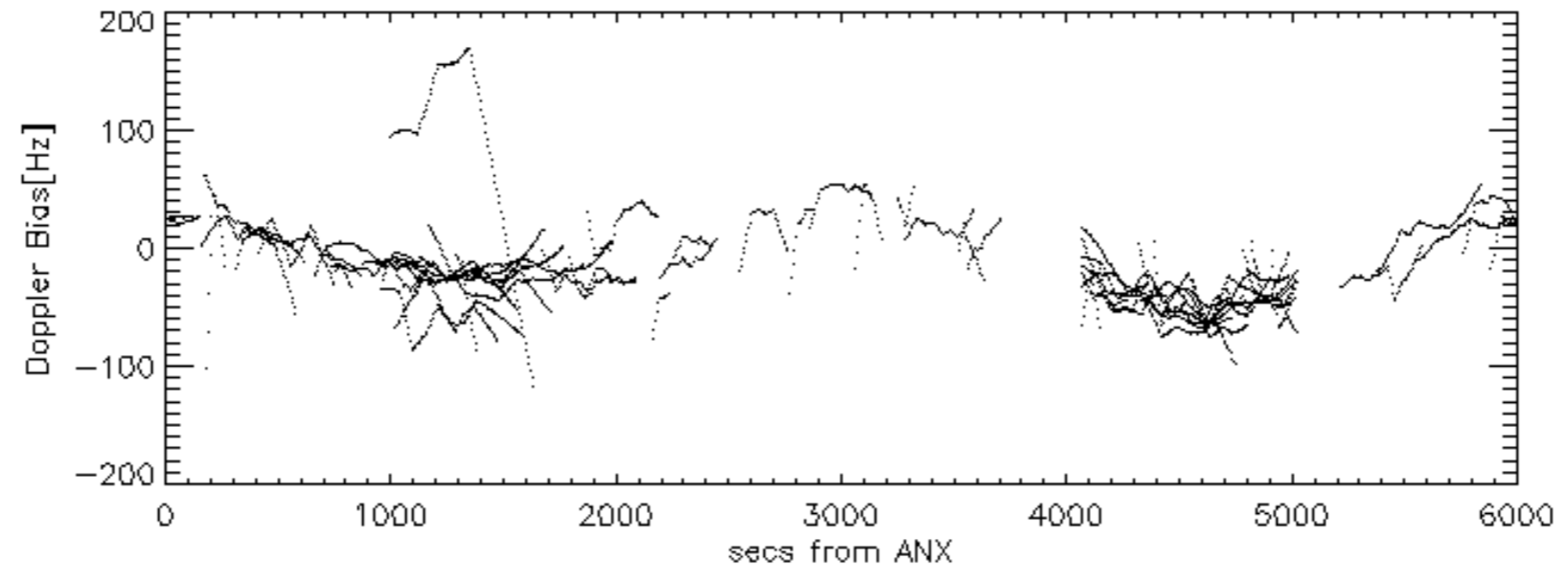
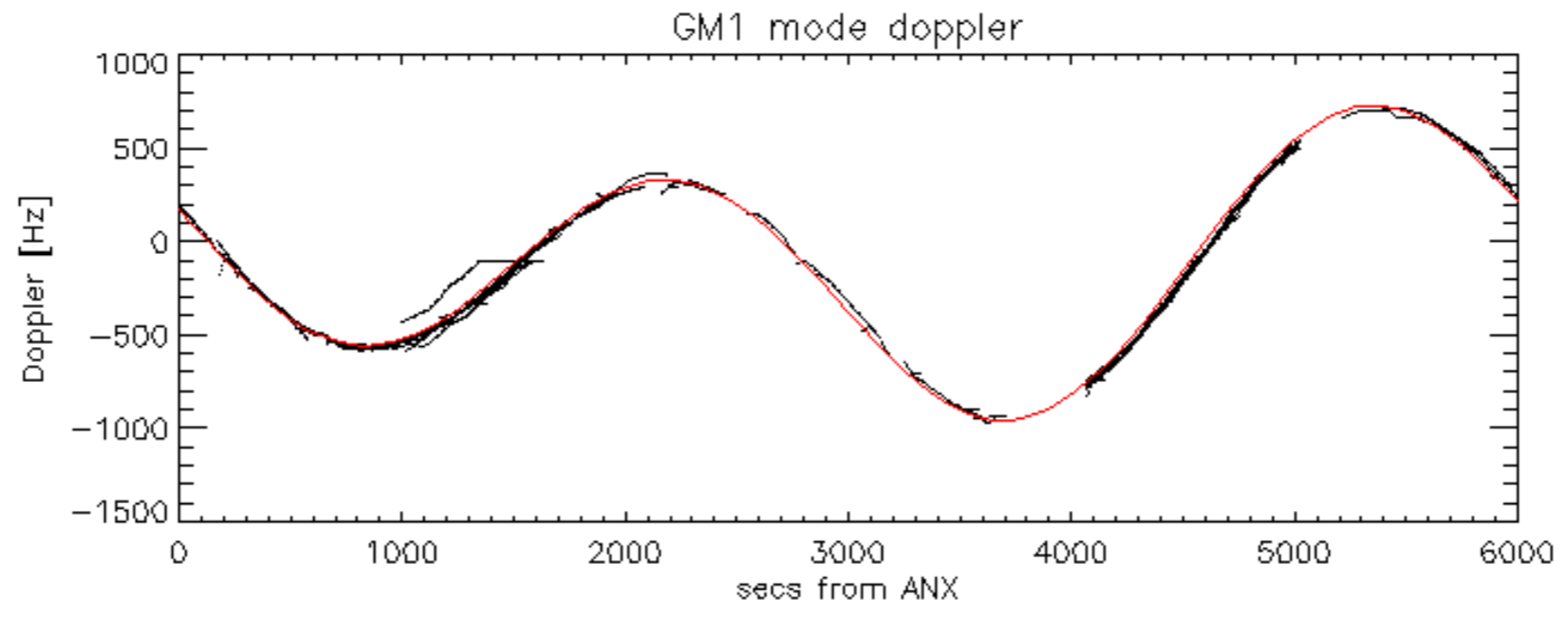


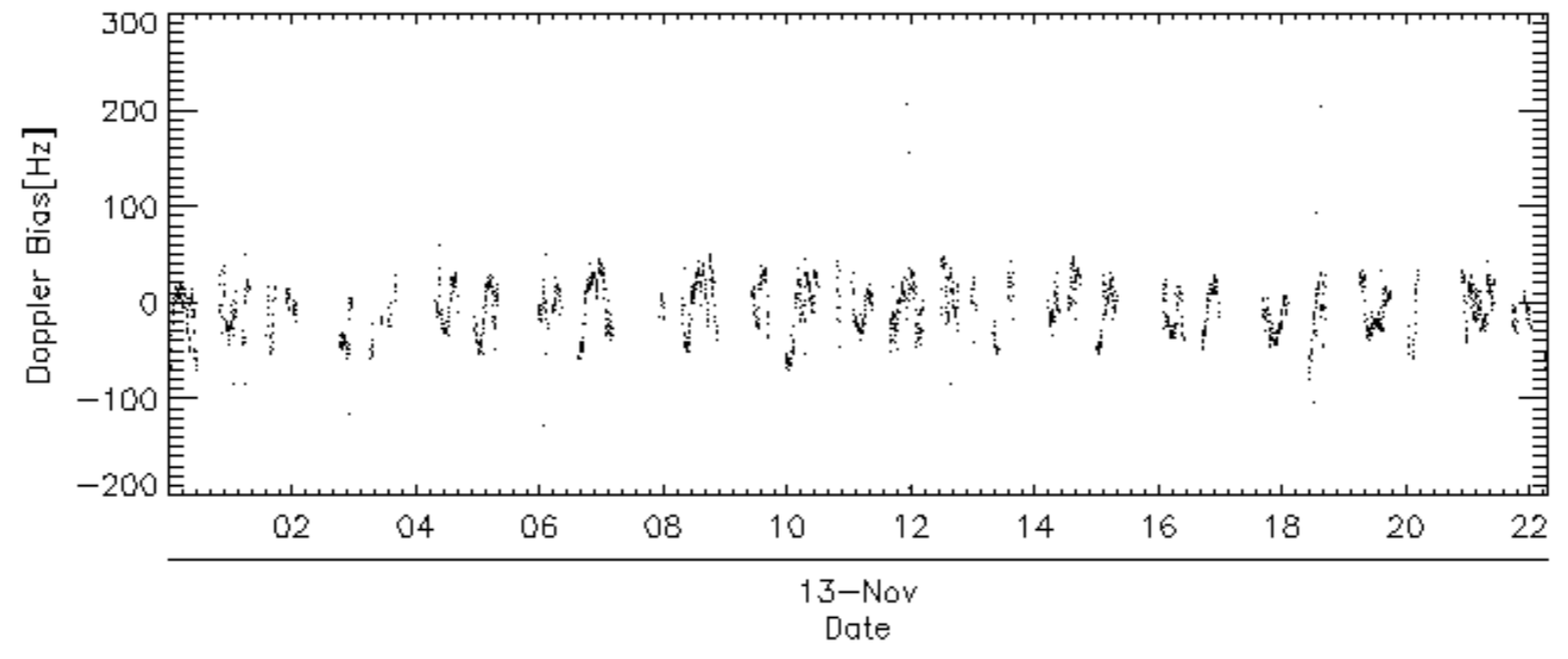
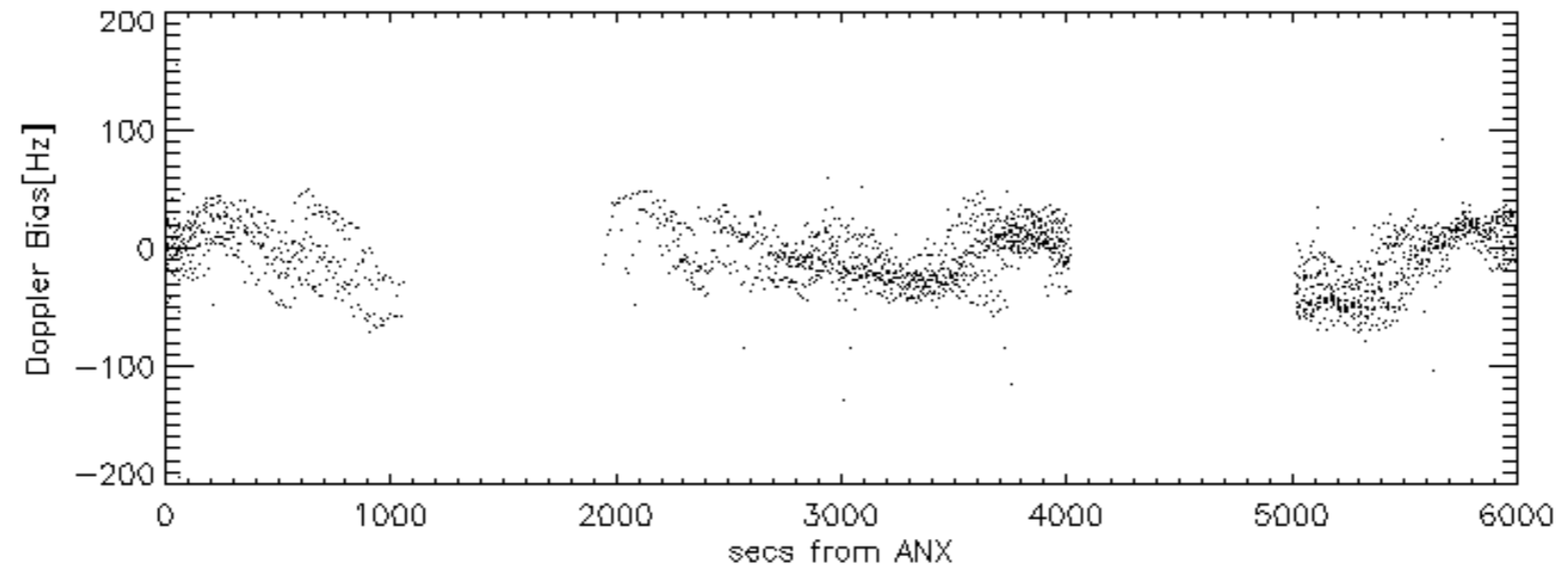
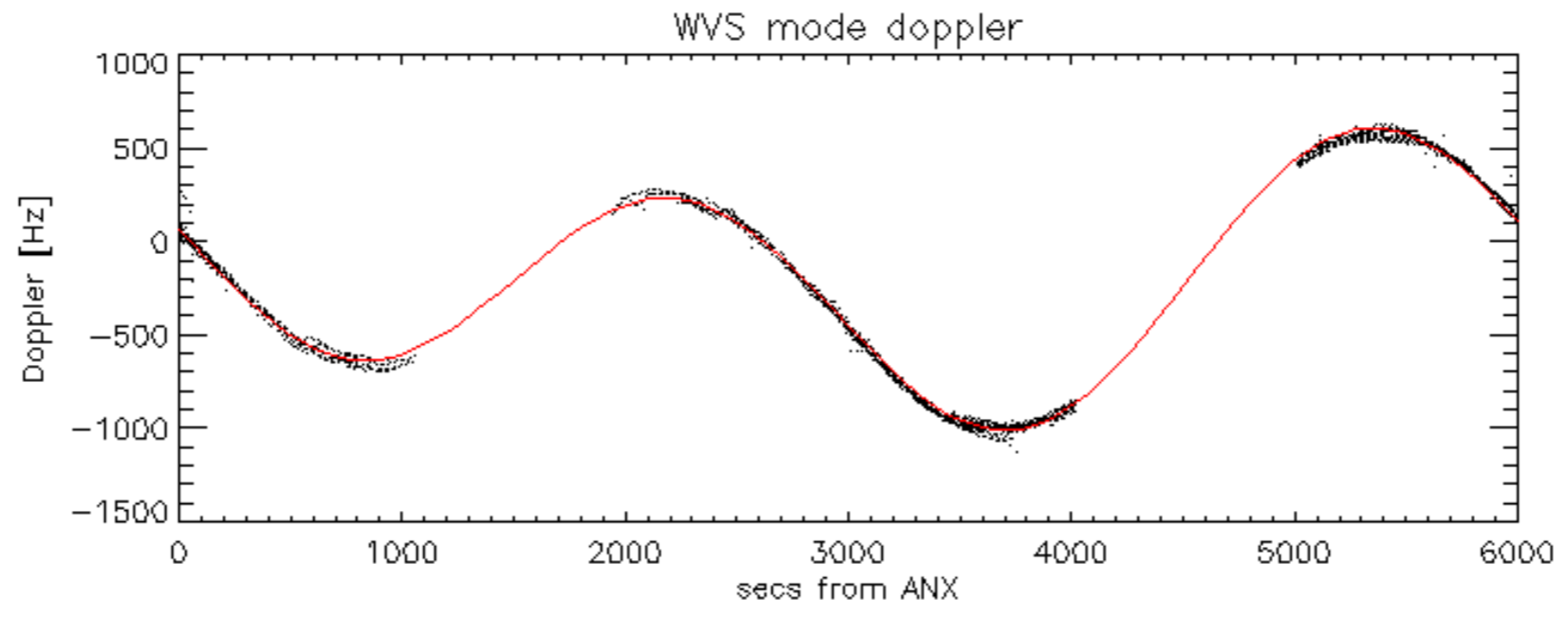
Doppler 'WVS' 'IS2' ascending



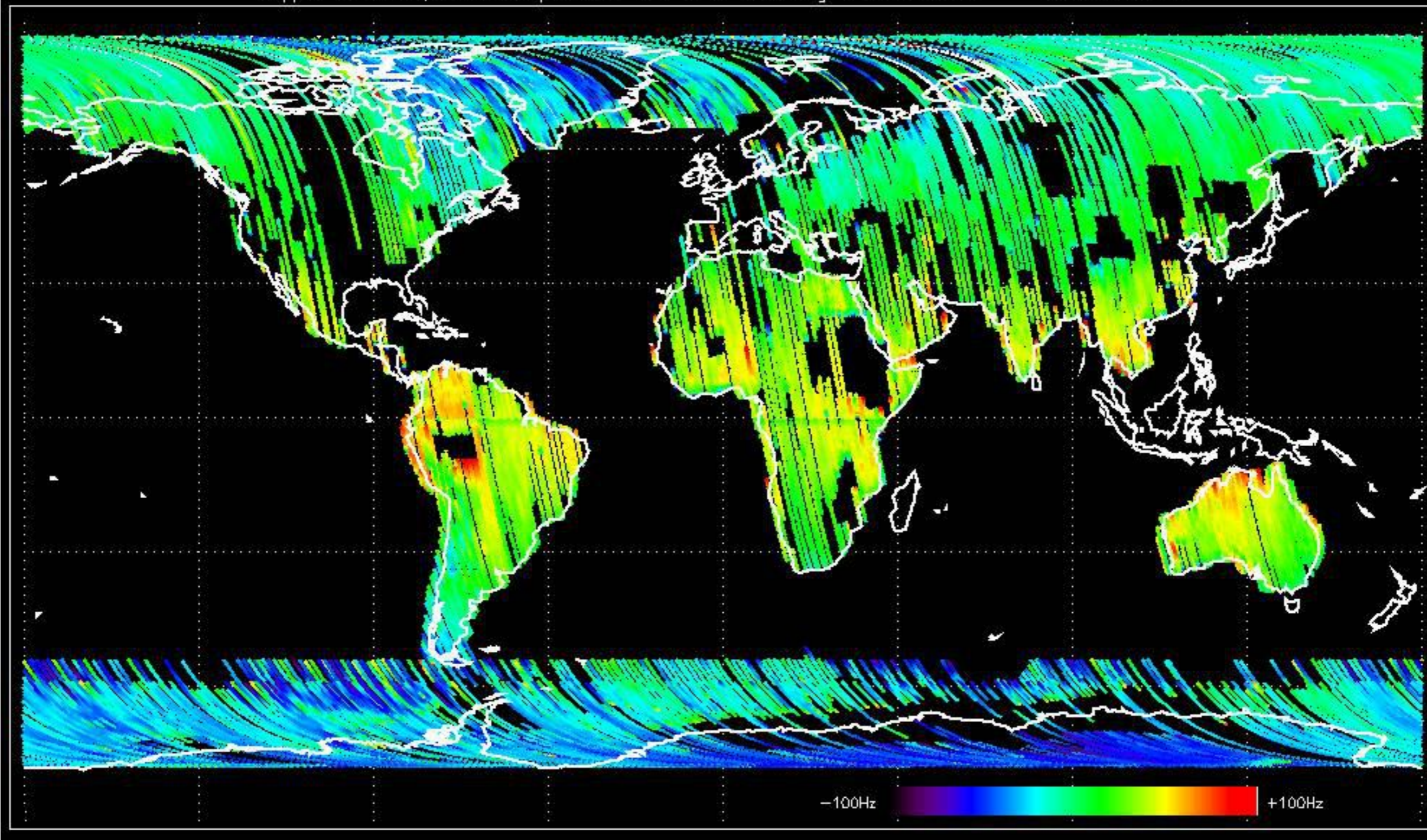
Doppler 'WVS' 'IS2' descending



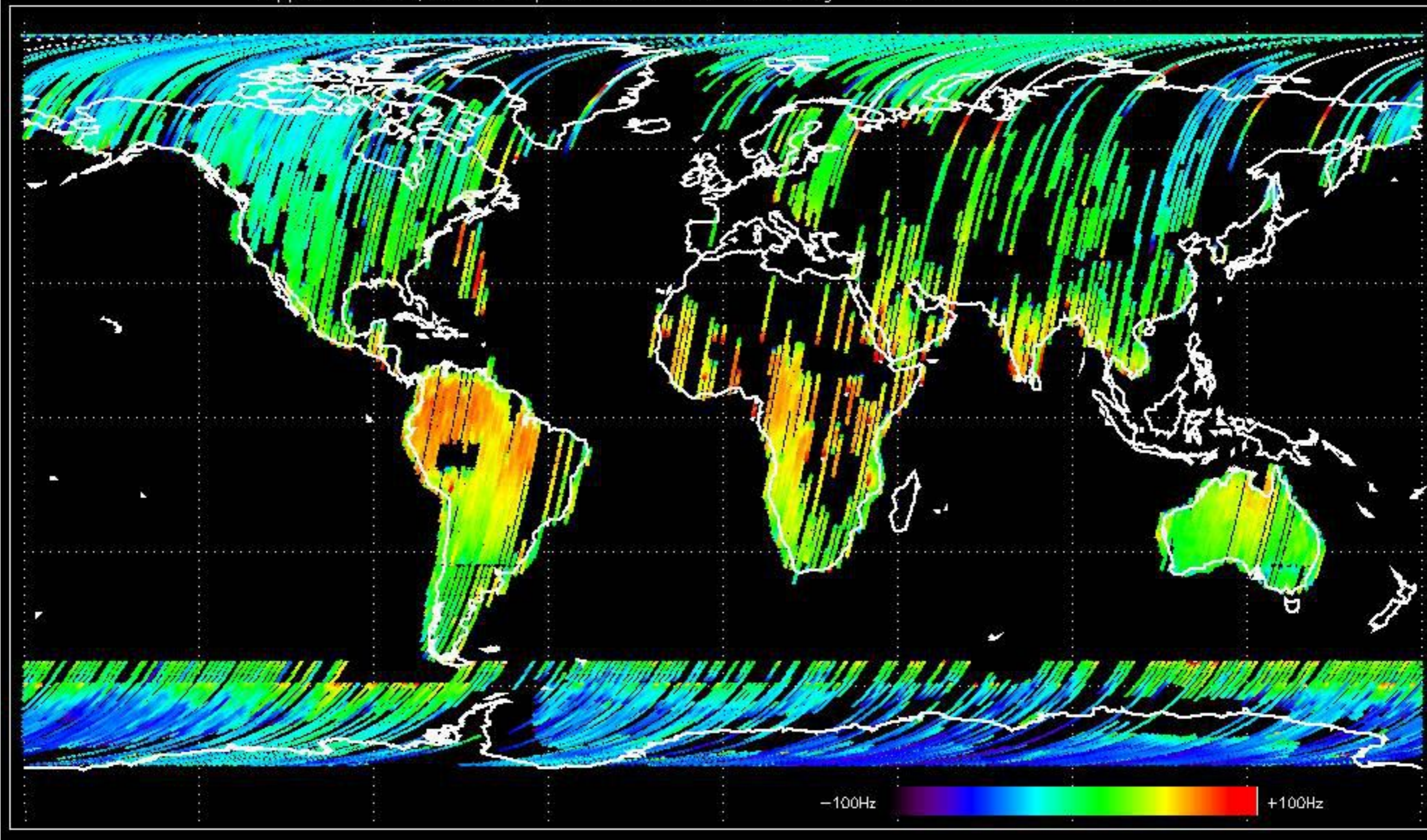




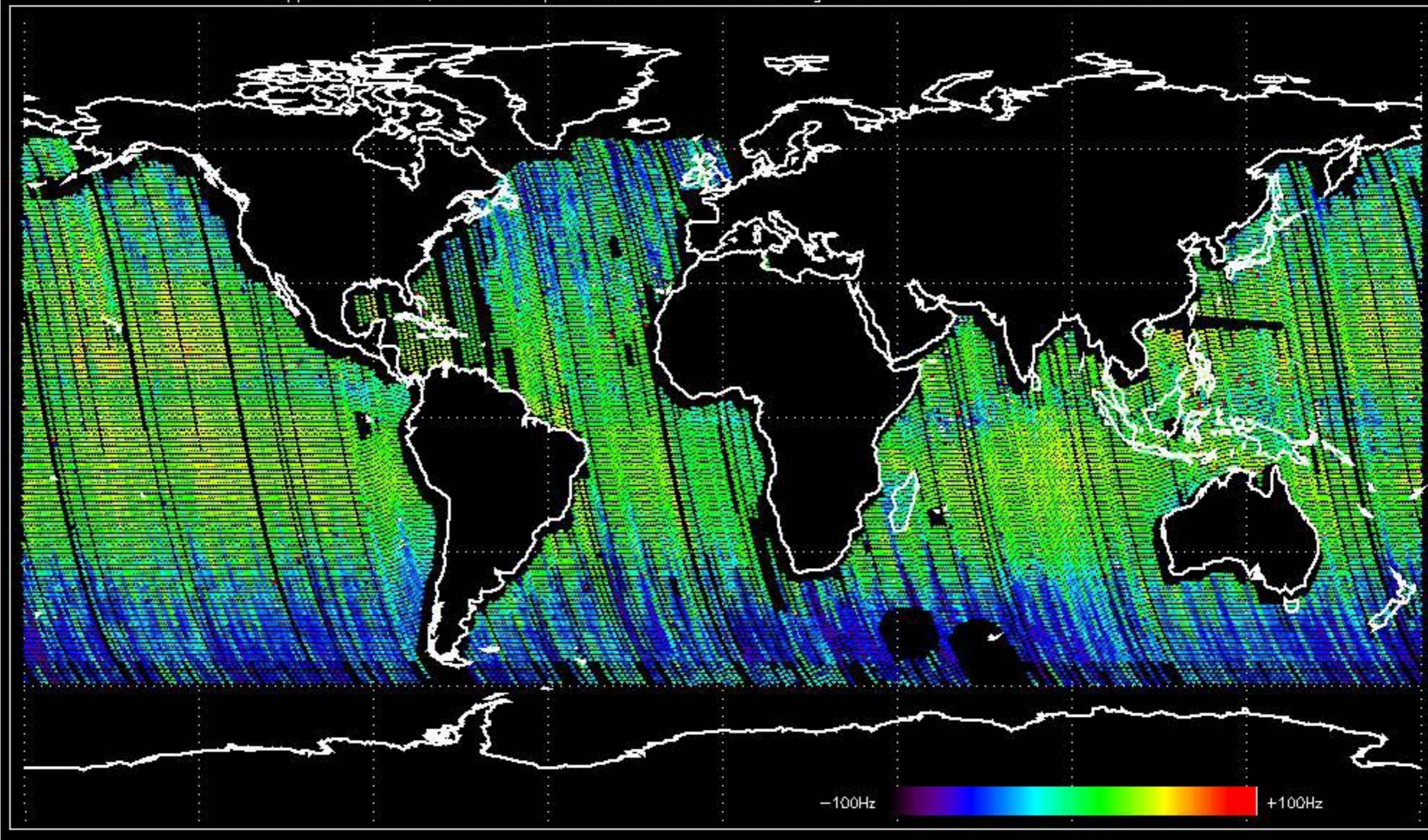
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.399912 Hz



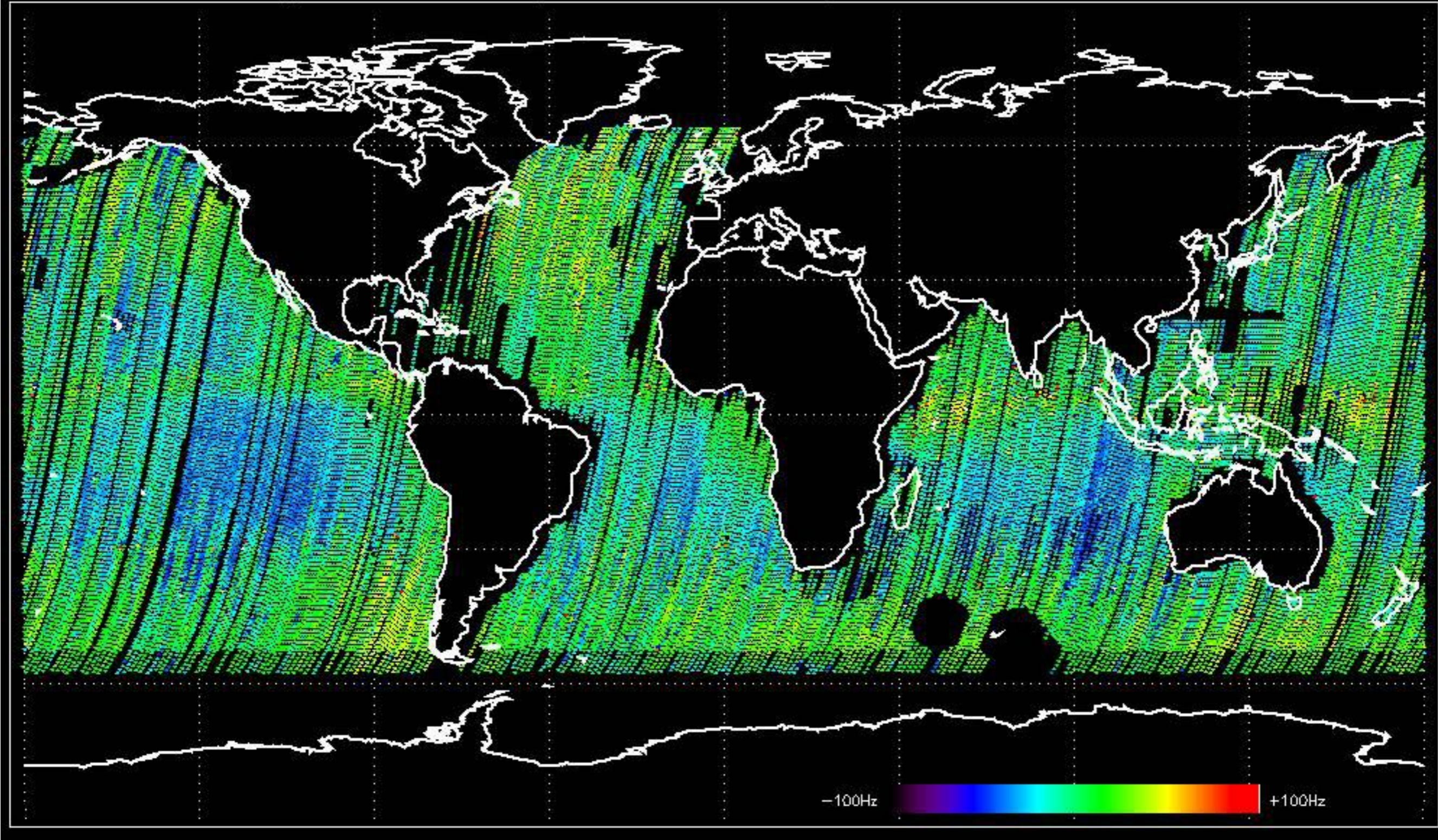
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.613772 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.6536652 Hz

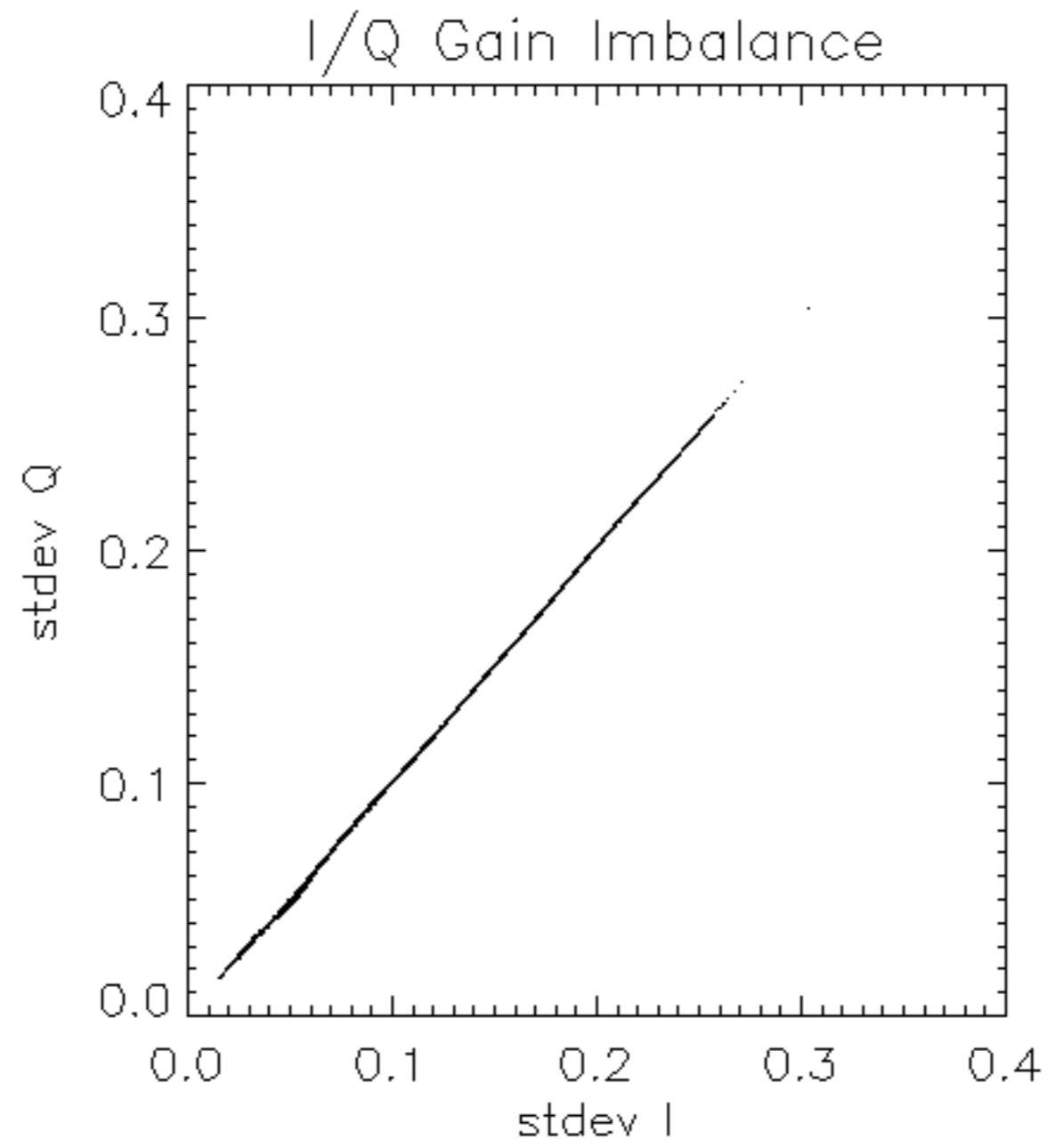


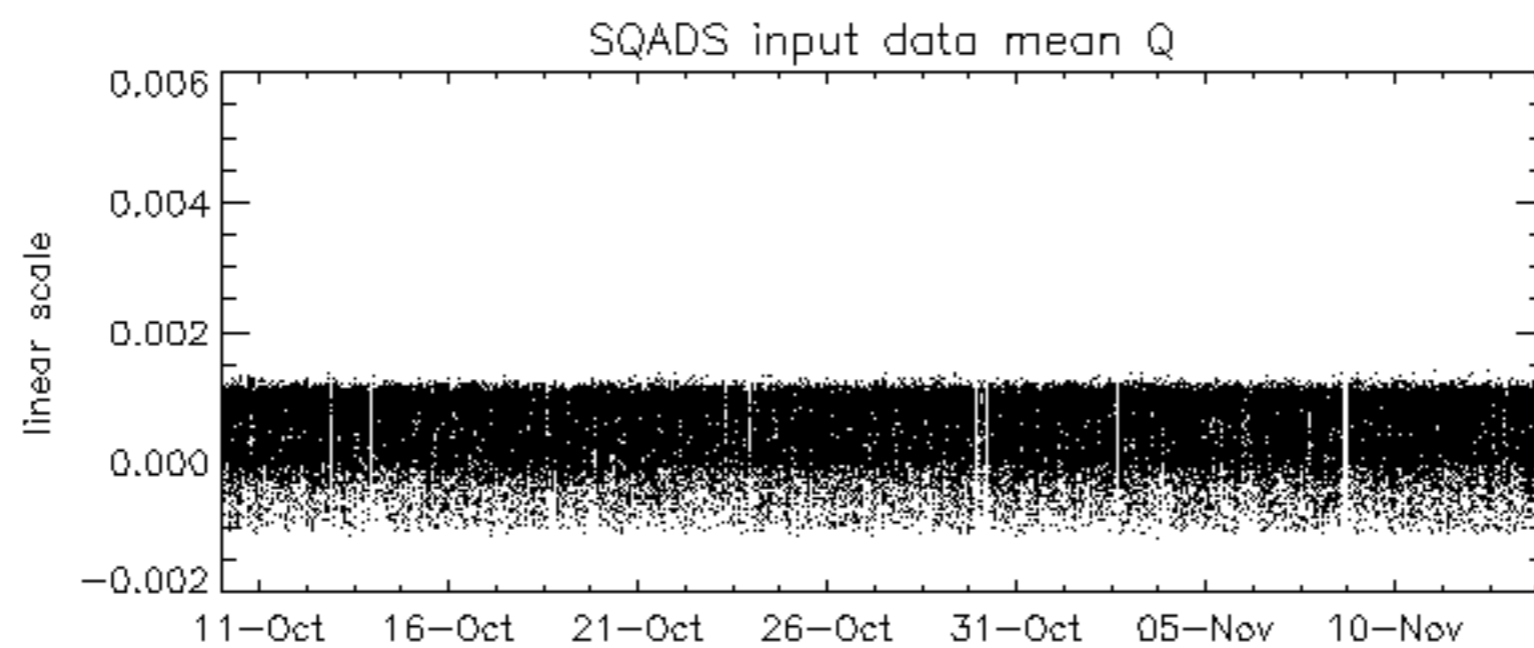
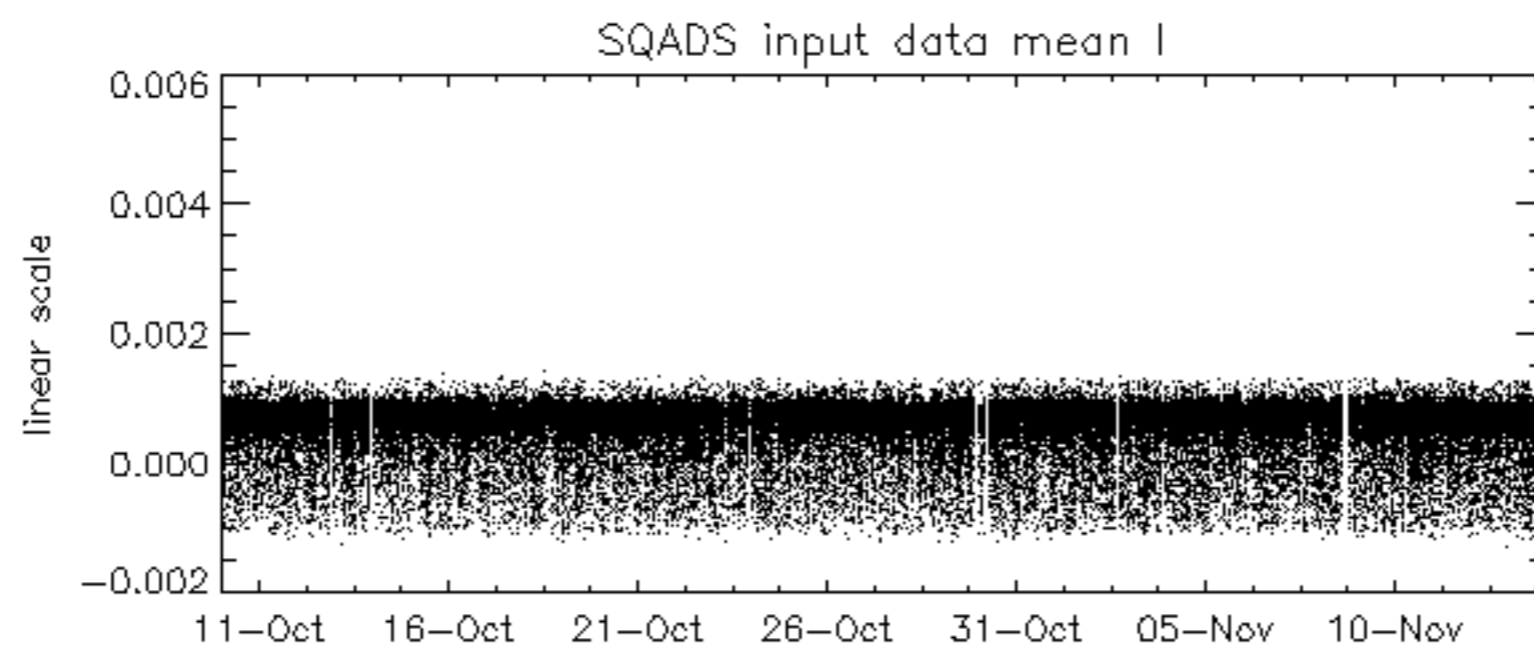
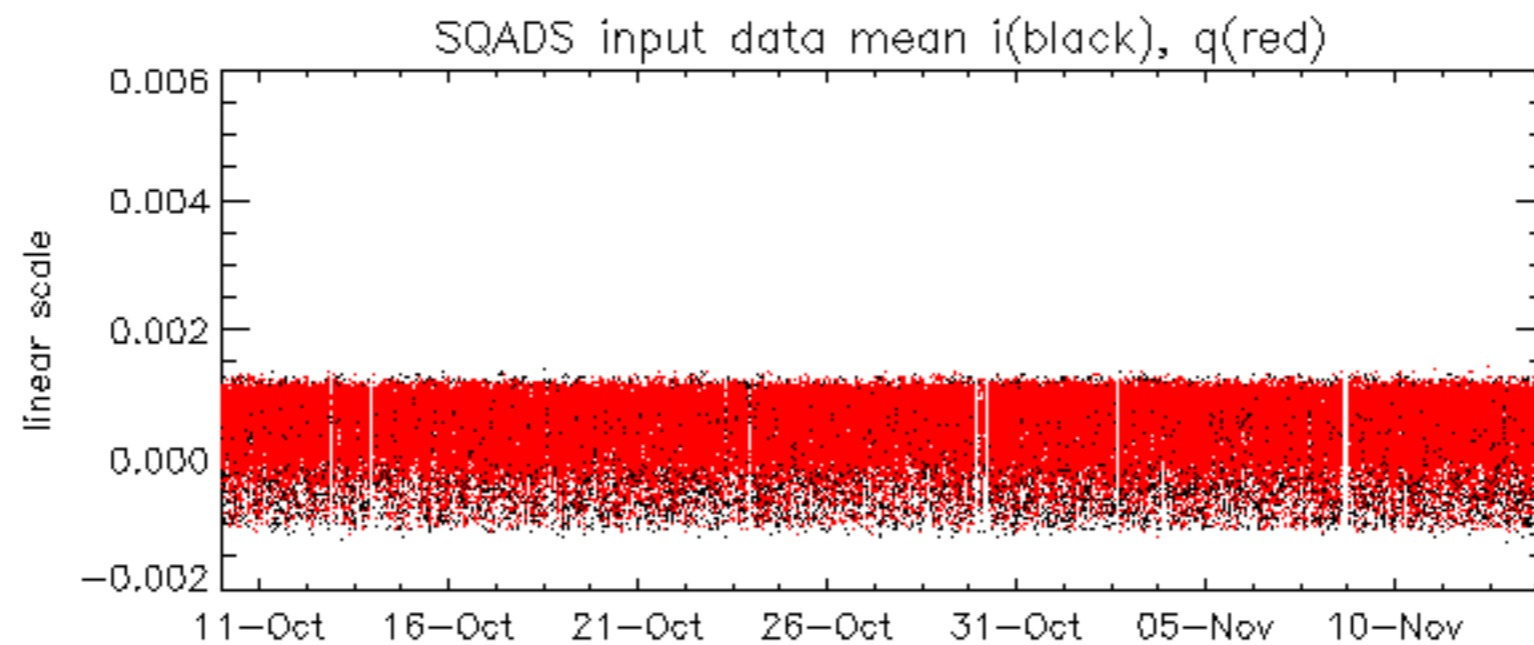
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.7580666 Hz

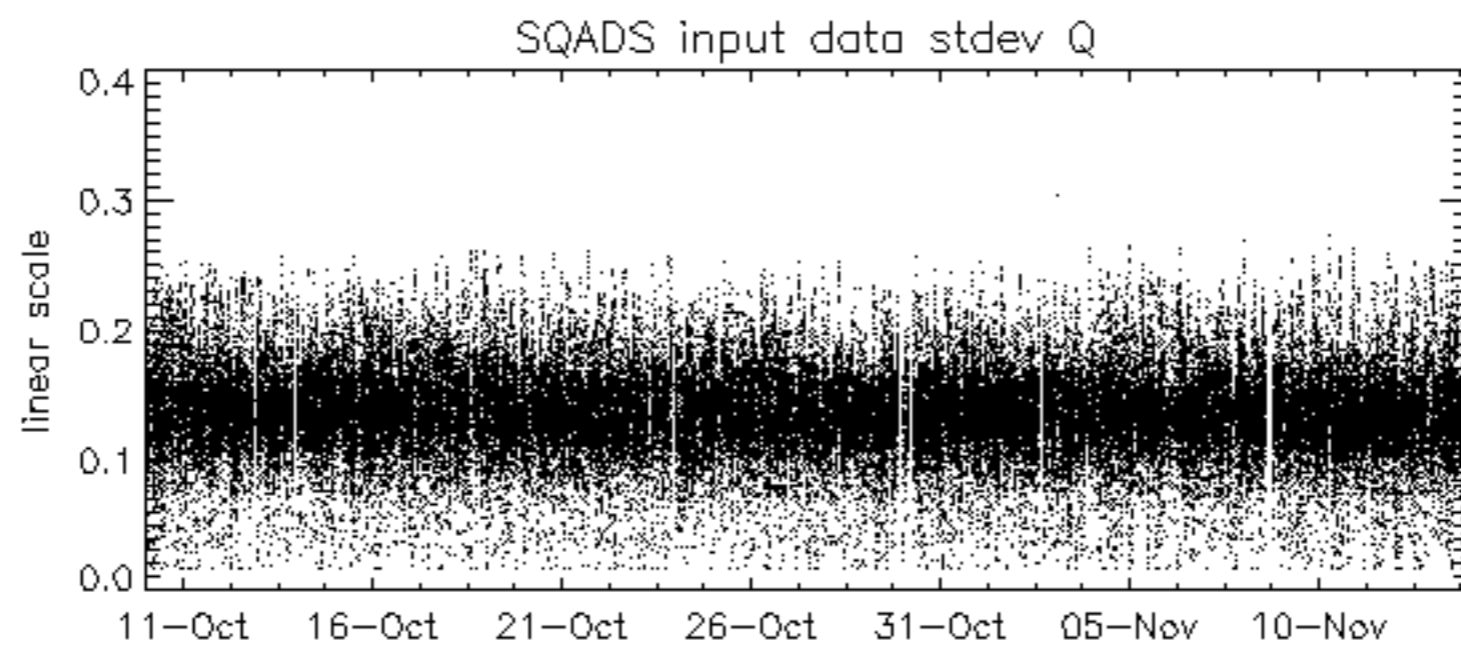
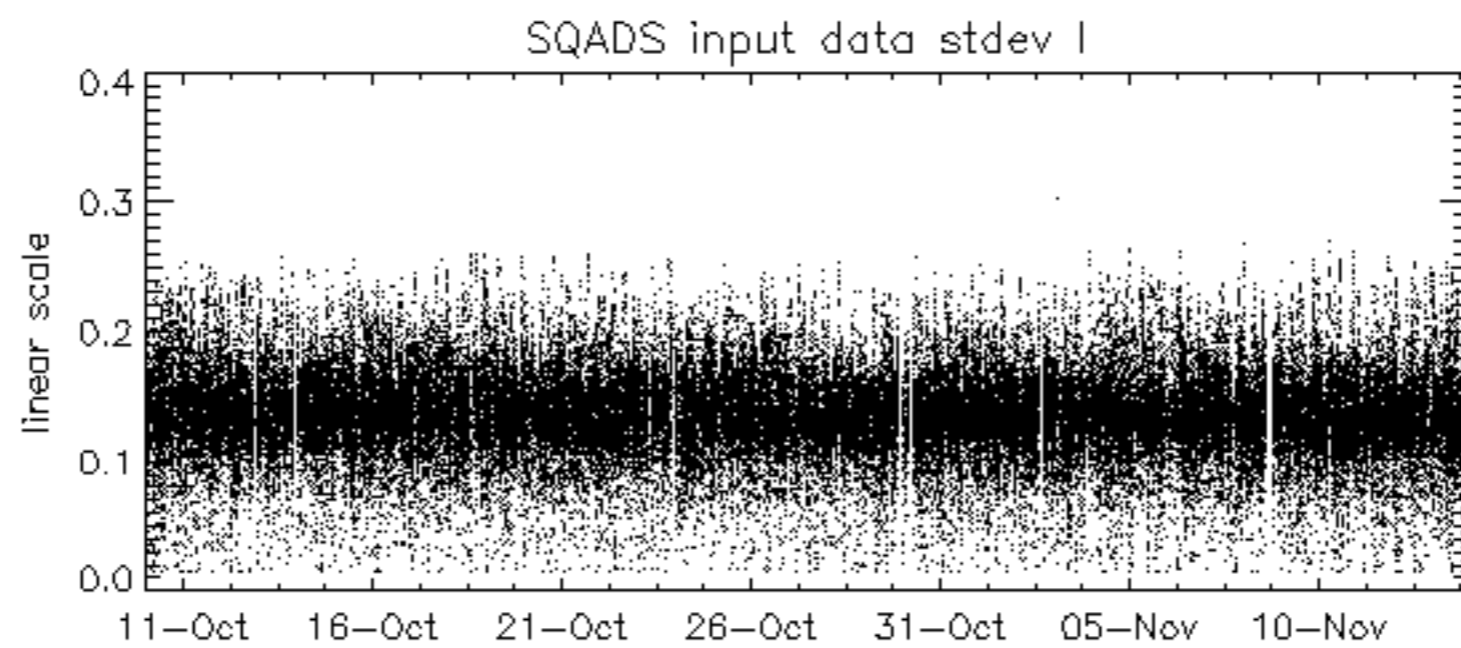
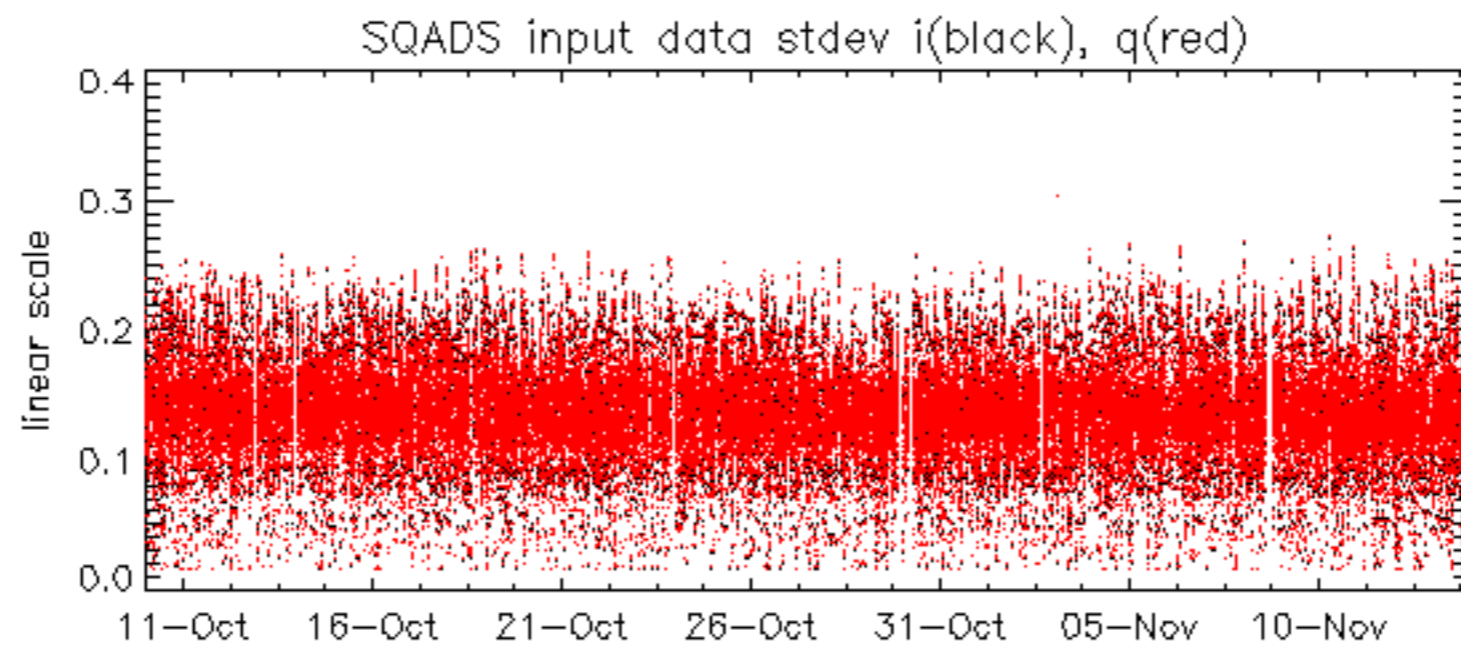


No anomalies observed on available MS products:

No anomalies observed.



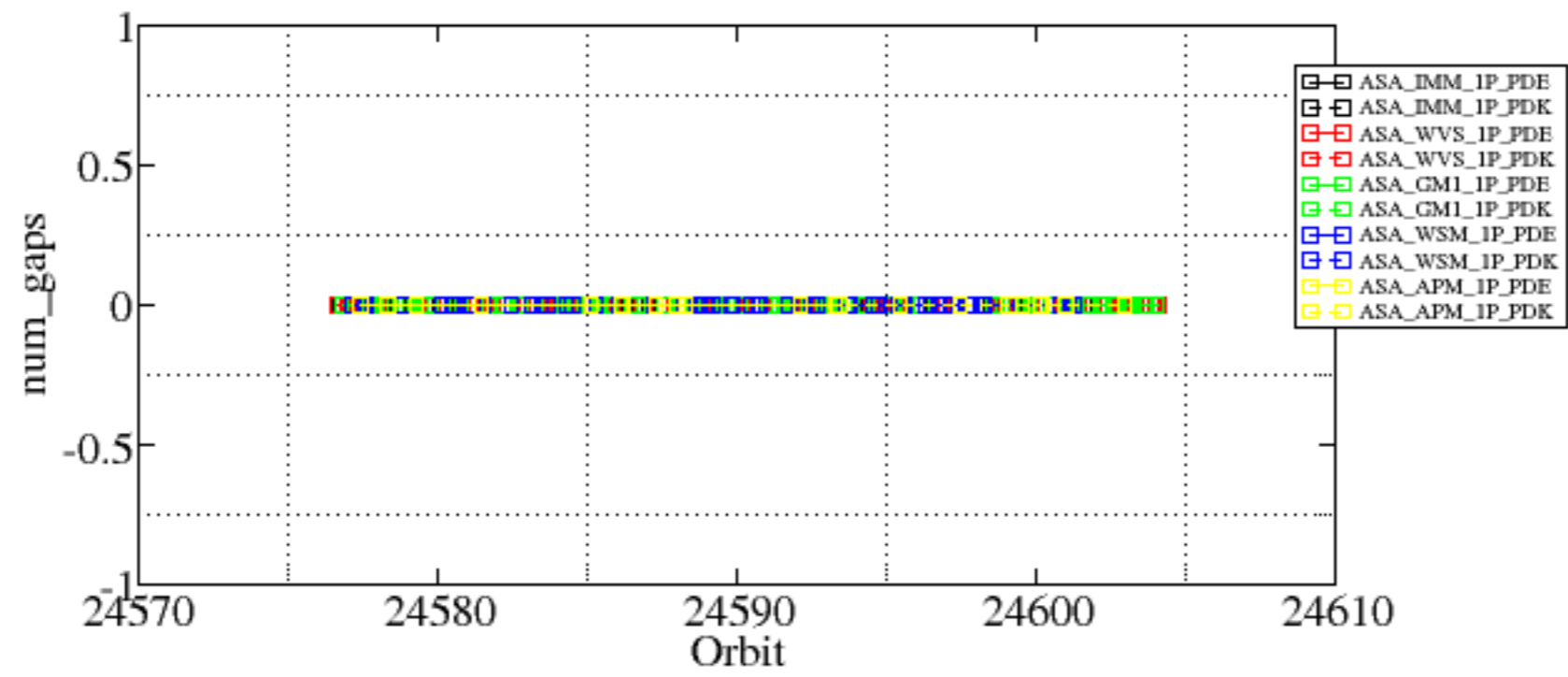




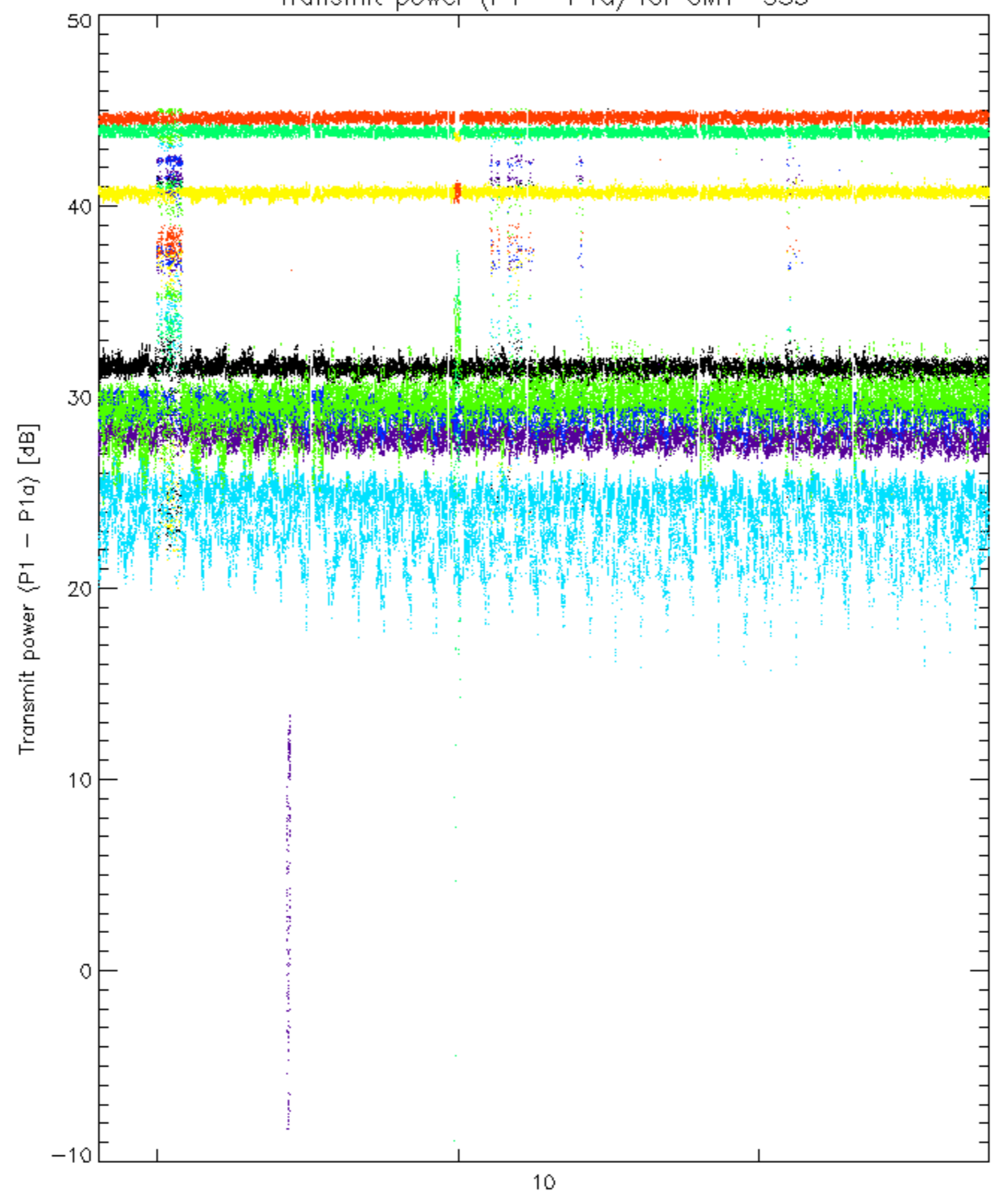
Summary of analysis for the last 3 days 2006111[234]

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

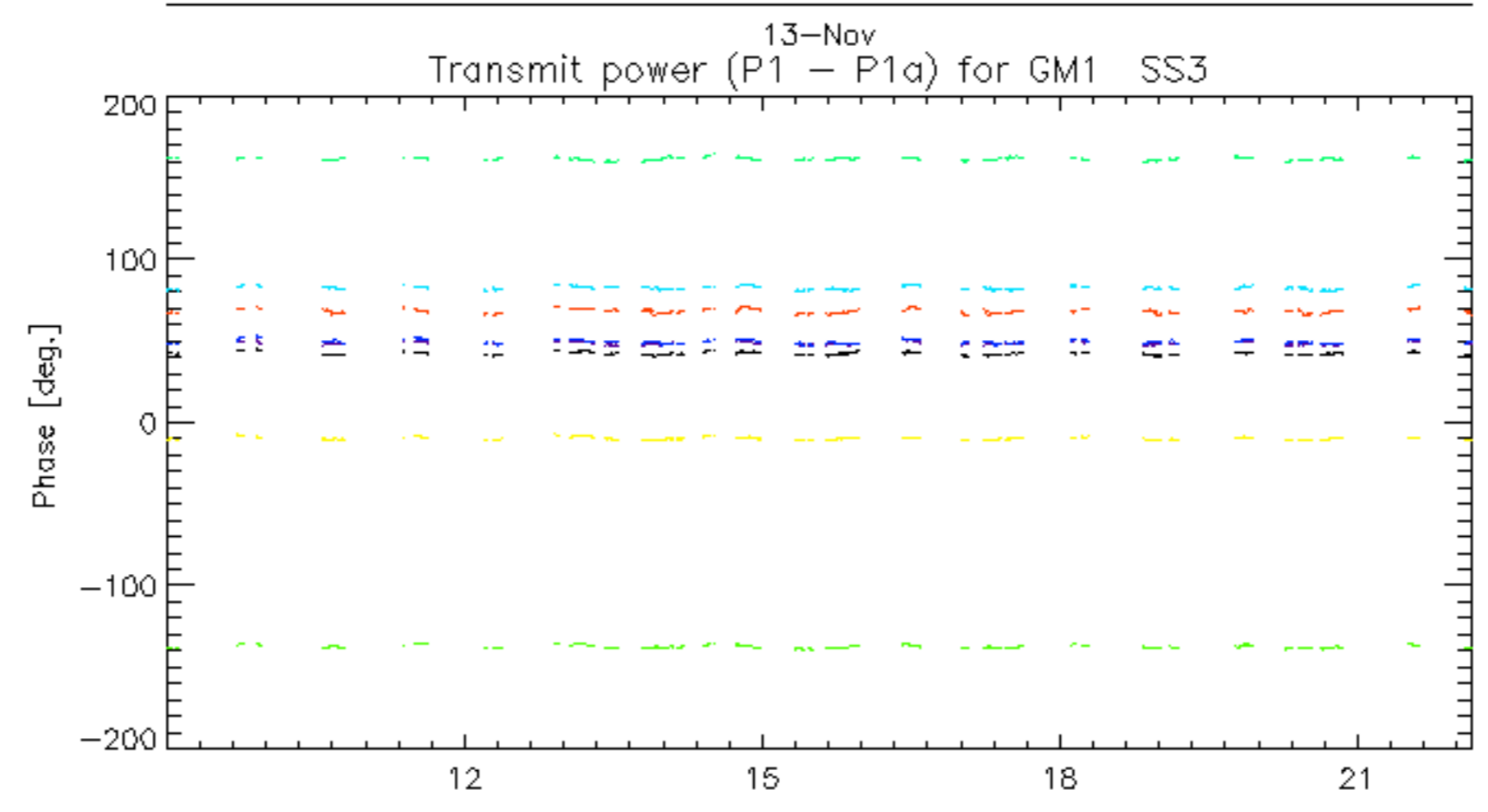
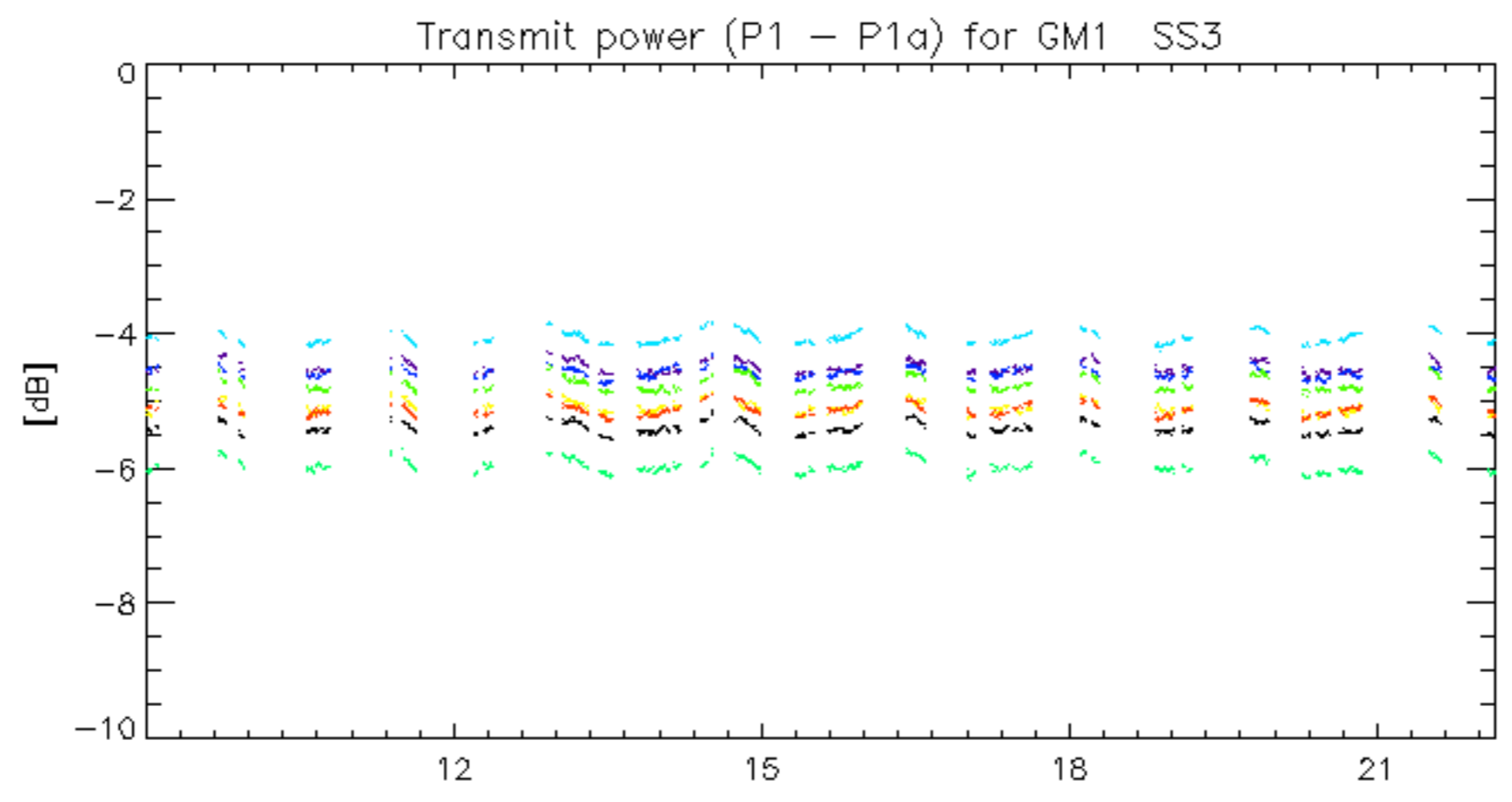
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20061112_120311_000004412052_00481_24583_8512.N1	0	8
ASA_WSM_1PNPDE20061112_113207_000001582052_00481_24583_0001.N1	0	74
ASA_WSM_1PNPDE20061113_015825_000001292052_00490_24592_0001.N1	0	19
ASA_WSM_1PNPDK20061113_133931_000002452052_00497_24599_0002.N1	0	39



Transmit power (P1 - P1a) for GM1 SS3

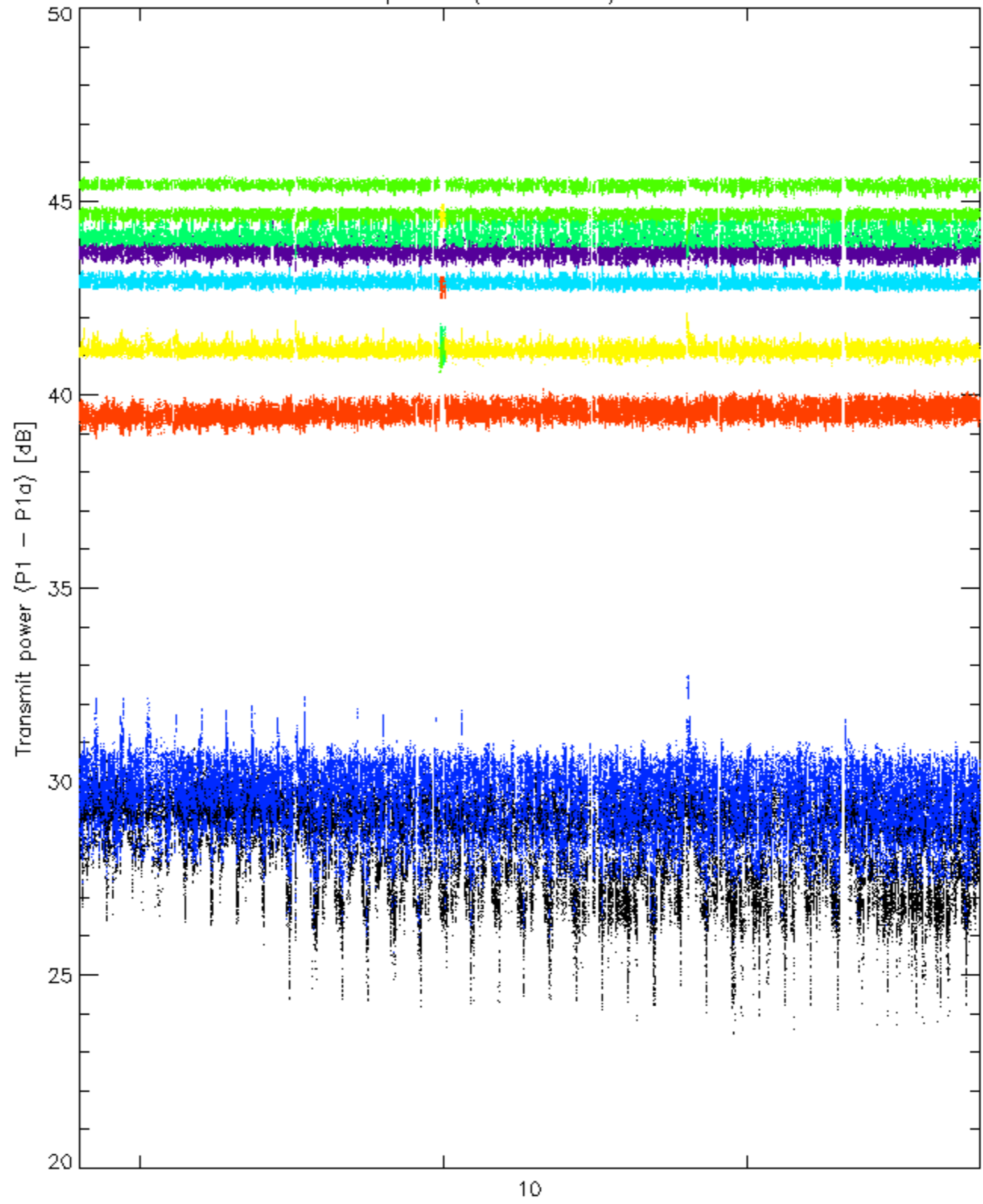


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

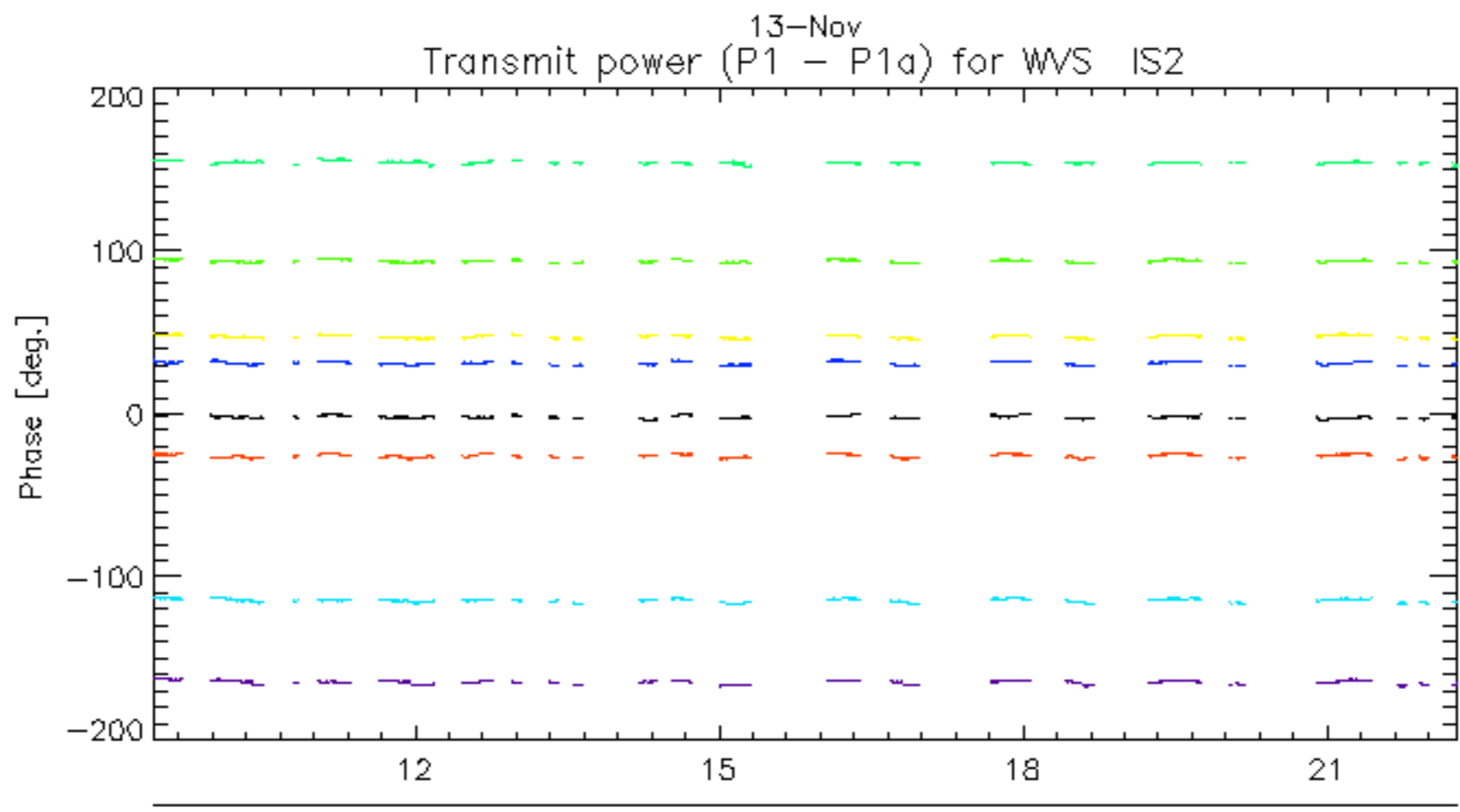
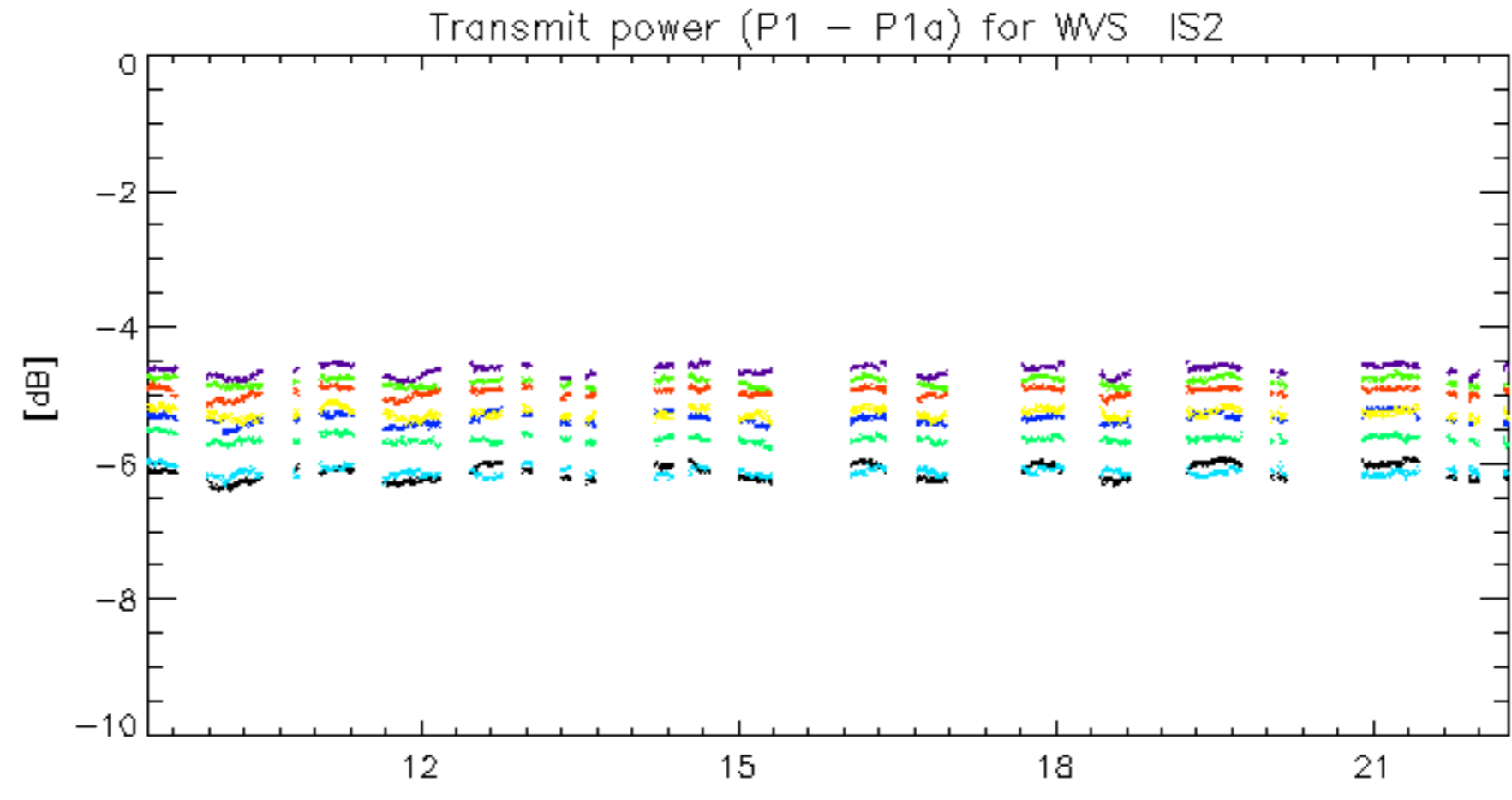


13-Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



13-Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.