

PRELIMINARY REPORT OF 061122

last update on Wed Nov 22 16:44:35 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 2006-11-21 00:00:00 to 2006-11-22 16:44:35

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	37	64	4	3	23
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	64	4	3	23
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	64	4	3	23
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	64	4	3	23

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	49	64	29	9	53
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	49	64	29	9	53
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	49	64	29	9	53
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	64	29	9	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	20061121 085033
H	20061122 081856

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	-3.957686	0.008804	-0.019487
7	P1	-3.149307	0.022898	-0.040755
11	P1	-4.132443	0.024398	-0.011901
15	P1	-6.286619	0.014470	-0.071262
19	P1	-3.618684	0.063780	0.016186
22	P1	-4.670716	0.129489	0.087413
26	P1	-3.972284	0.086778	0.097744
30	P1	-5.890513	0.166906	0.086372
3	P1	-16.500521	0.235422	-0.076708
7	P1	-17.271505	0.170378	-0.076359
11	P1	-17.152479	0.452085	-0.113161
15	P1	-13.056404	0.131025	-0.087293
19	P1	-14.916549	0.372896	0.001328
22	P1	-15.868688	0.508663	-0.012416
26	P1	-15.060122	0.203381	0.053538
30	P1	-17.411329	0.610863	-0.371939

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.846375	0.090842	0.012627
7	P2	-21.732349	0.093998	0.001792
11	P2	-15.659116	0.103016	0.019937
15	P2	-7.121798	0.106524	-0.024378
19	P2	-9.188802	0.104040	-0.028754
22	P2	-18.226877	0.096508	-0.052201
26	P2	-16.540791	0.110016	-0.081596
30	P2	-19.474827	0.088893	-0.011562

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.236784	0.008331	-0.037054
7	P3	-8.236784	0.008331	-0.037054
11	P3	-8.236784	0.008331	-0.037054
15	P3	-8.236784	0.008331	-0.037054
19	P3	-8.236784	0.008331	-0.037054
22	P3	-8.236784	0.008331	-0.037054
26	P3	-8.236807	0.008343	-0.037162
30	P3	-8.236807	0.008343	-0.037162

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	-3.907965	0.055281	-0.015001
7	P1	-2.525512	0.326850	0.062381
11	P1	-2.863975	0.049785	0.022772
15	P1	-3.678387	0.057759	-0.032422
19	P1	-3.539597	0.112351	0.060322
22	P1	-5.060720	0.087658	0.094056
26	P1	-6.023060	0.183957	0.076194
30	P1	-5.328663	0.111277	0.030879
3	P1	-11.715497	0.134523	-0.049416
7	P1	-10.059582	0.421579	-0.003202
11	P1	-10.333978	0.145663	0.033922
15	P1	-10.763058	0.216022	0.063080
19	P1	-15.789869	2.128568	0.402400
22	P1	-21.366713	1.538246	-0.442927
26	P1	-16.041986	0.395638	-0.083194
30	P1	-17.908957	0.414528	0.054337

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.454554	0.118040	-0.041319
7	P2	-22.208286	0.445722	-0.084284
11	P2	-10.936979	0.115135	-0.041246
15	P2	-4.959456	0.123954	-0.053457
19	P2	-6.942118	0.173271	-0.057310
22	P2	-8.256680	0.190285	-0.021220
26	P2	-24.304453	0.315743	-0.103015
30	P2	-21.947506	0.191297	-0.026815

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.083058	0.003293	-0.029467
7	P3	-8.083076	0.003275	-0.029843
11	P3	-8.083136	0.003276	-0.029853
15	P3	-8.083031	0.003277	-0.029776
19	P3	-8.083037	0.003289	-0.029821
22	P3	-8.082989	0.003285	-0.029861
26	P3	-8.083015	0.003279	-0.029554
30	P3	-8.083054	0.003287	-0.029710

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	0.000543641
	stdev	1.79441e-07
MEAN Q	mean	0.000519969
	stdev	2.21113e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135991
	stdev	0.00111173
STDEV Q	mean	0.136349
	stdev	0.00112851



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[012]

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_1PNPDK20061121_175710_000004892053_00113_24716_9089.N1	0	23
ASA_WSM_1PNPDE20061120_140442_000002022053_00096_24699_0001.N1	0	34
ASA_WSM_1PNPDE20061120_182348_000001652053_00099_24702_0001.N1	0	18
ASA_WSM_1PNPDE20061121_133205_000001592053_00110_24713_3226.N1	0	34







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

<input type="checkbox"/>
Descending

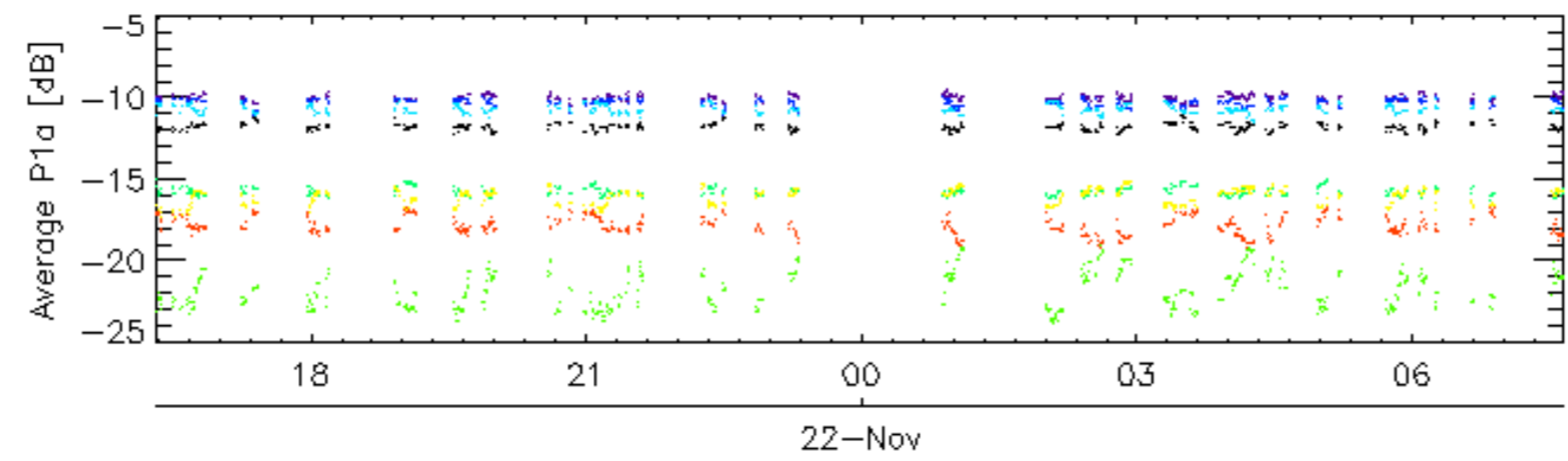
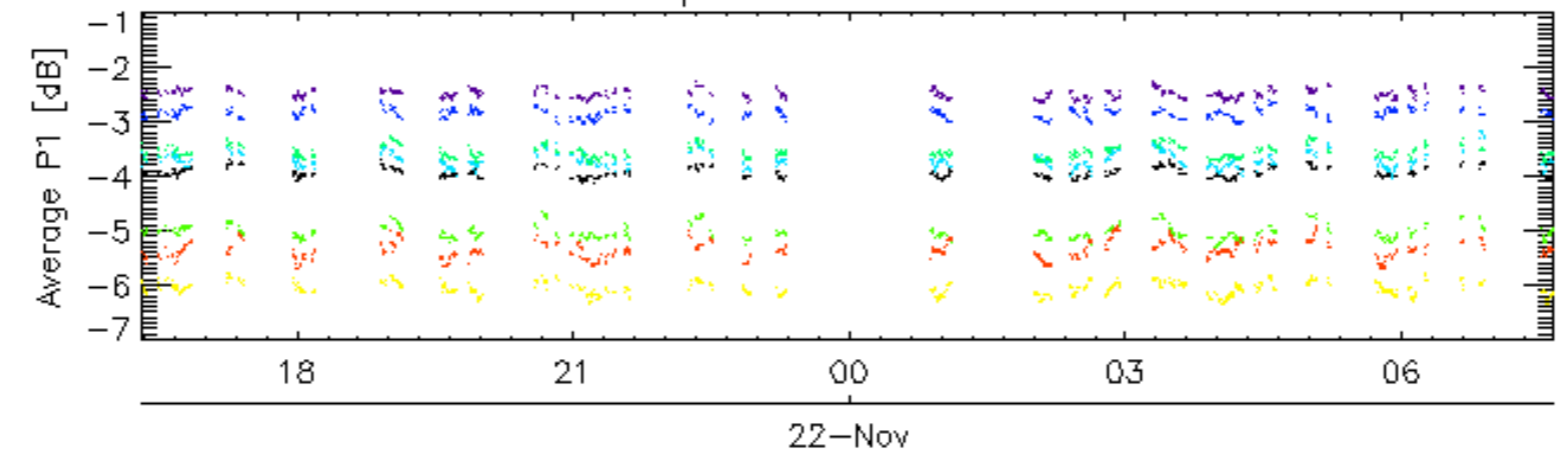
7.5 - Absolute Doppler for GM1

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

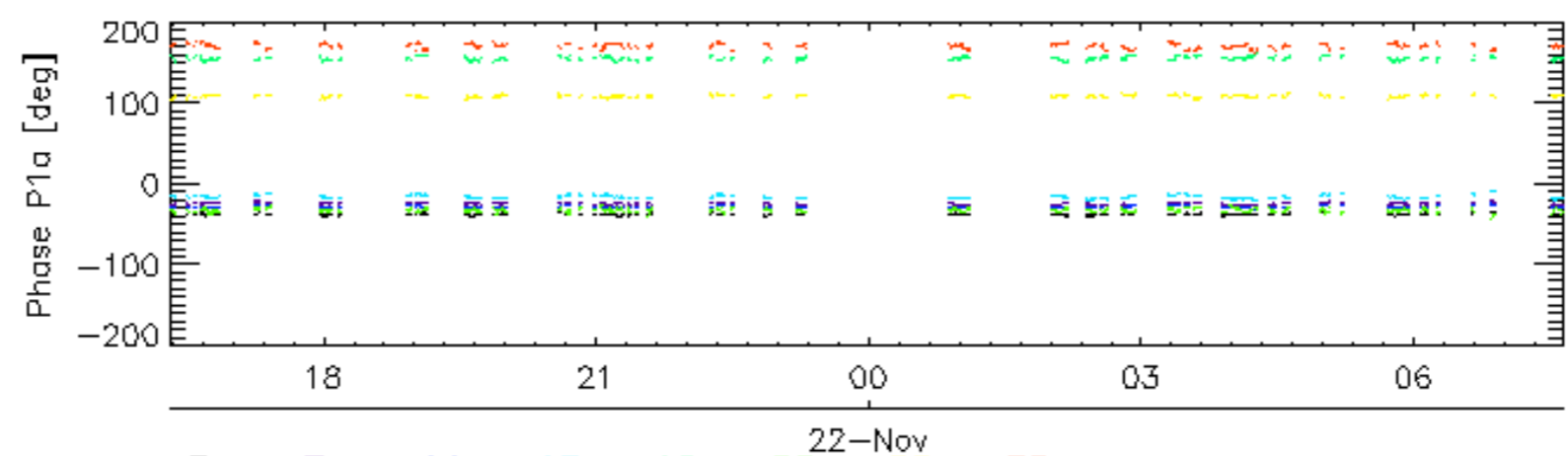
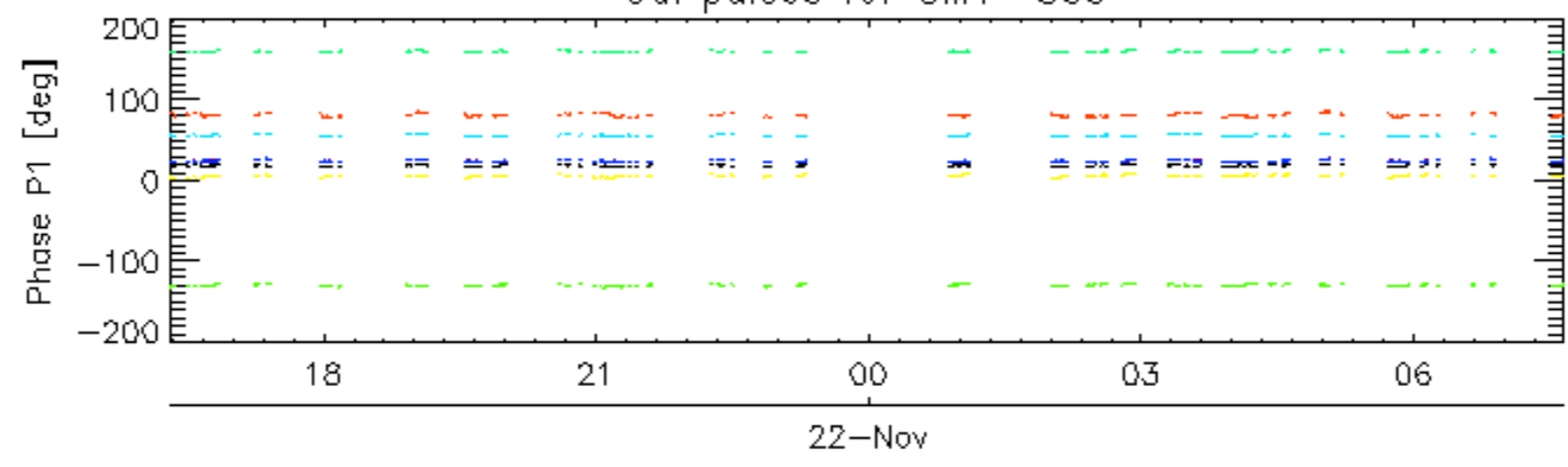
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

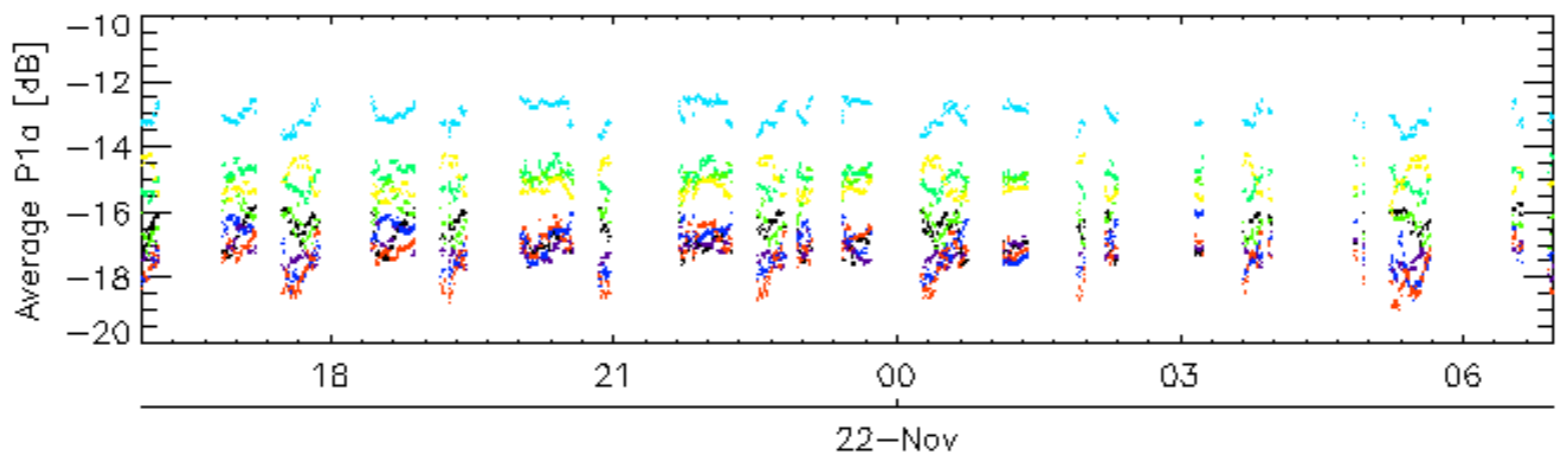
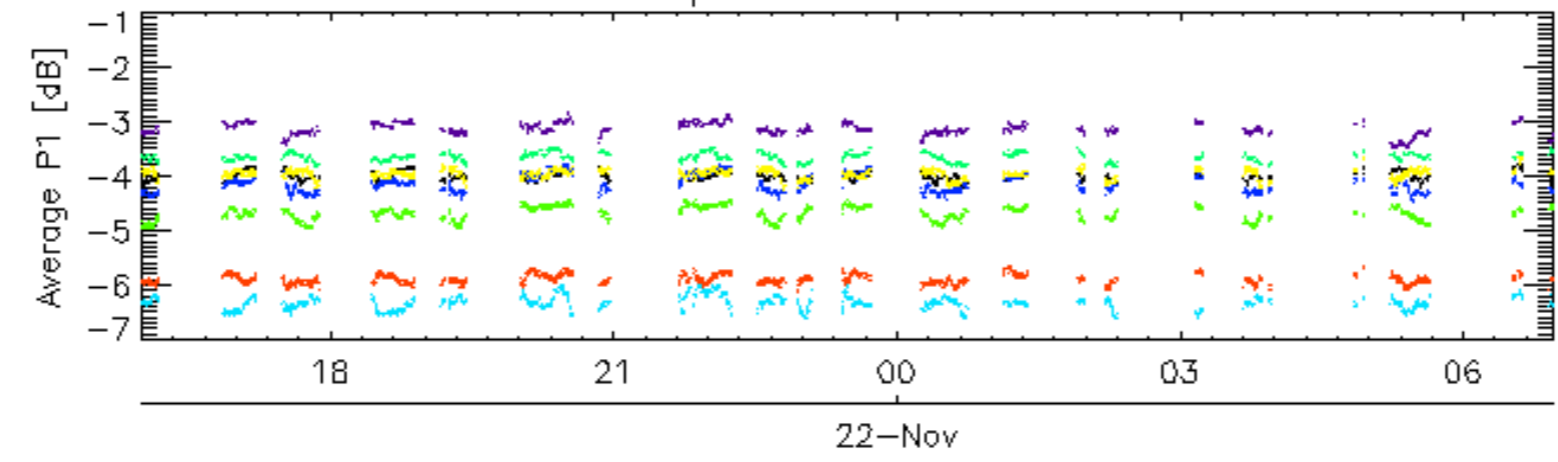


Cal pulses for GM1 SS3

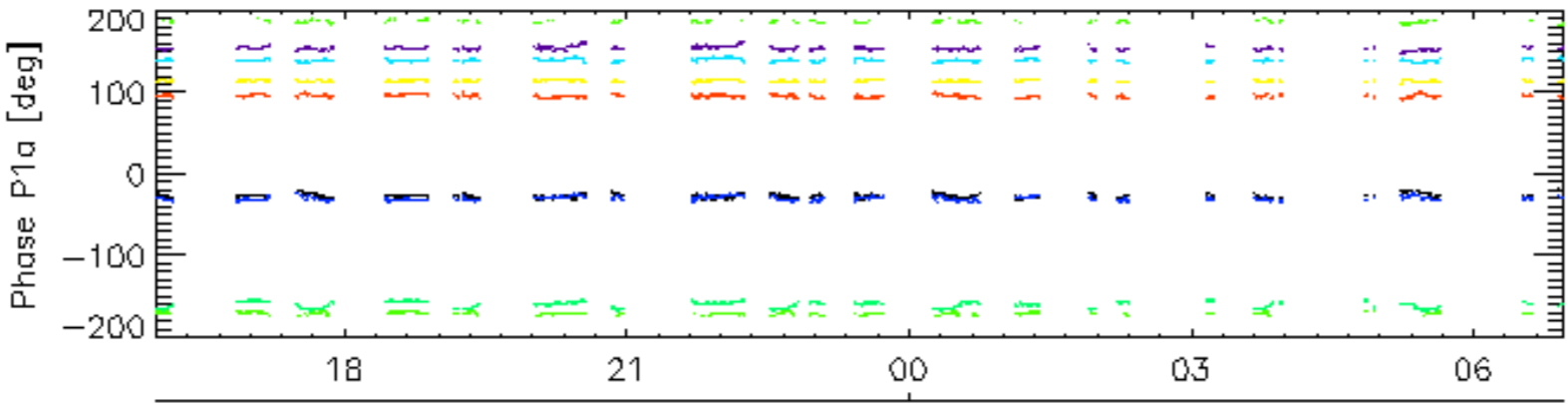
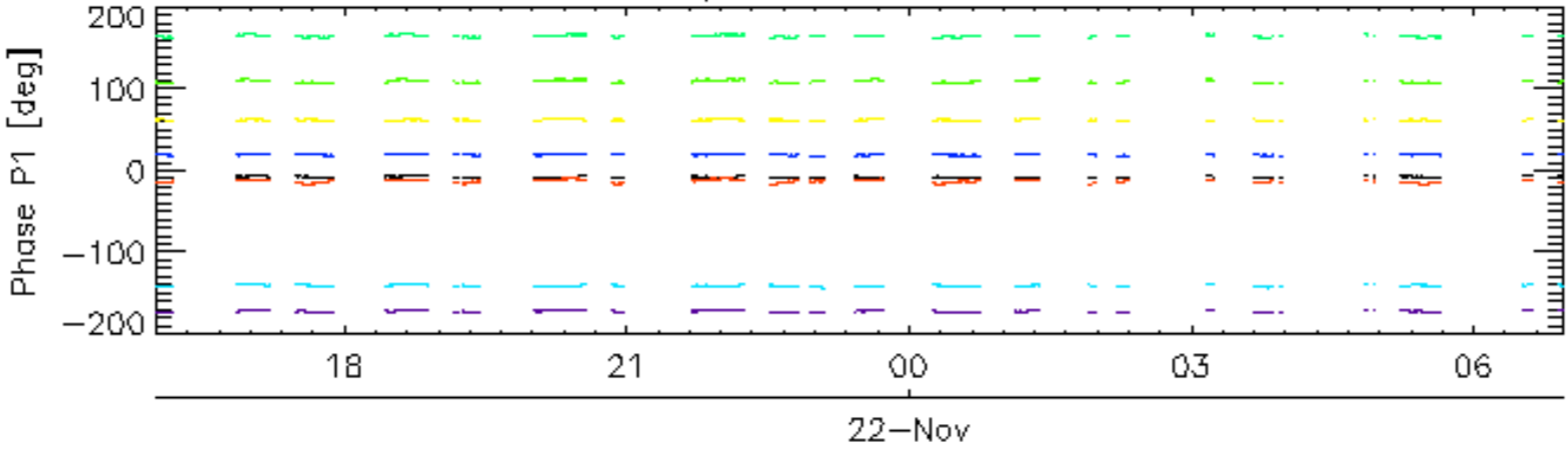


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

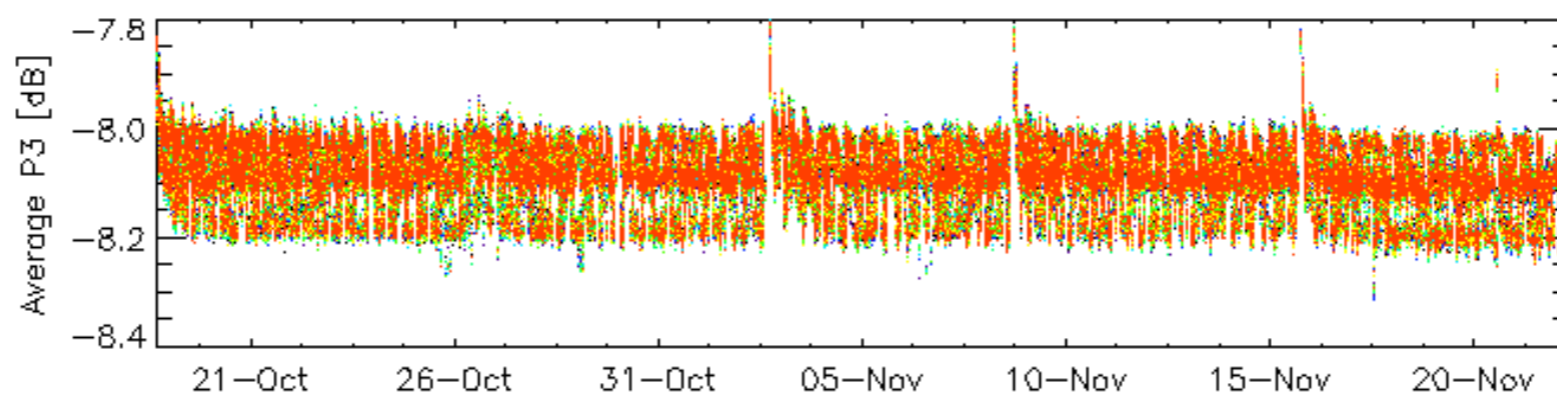
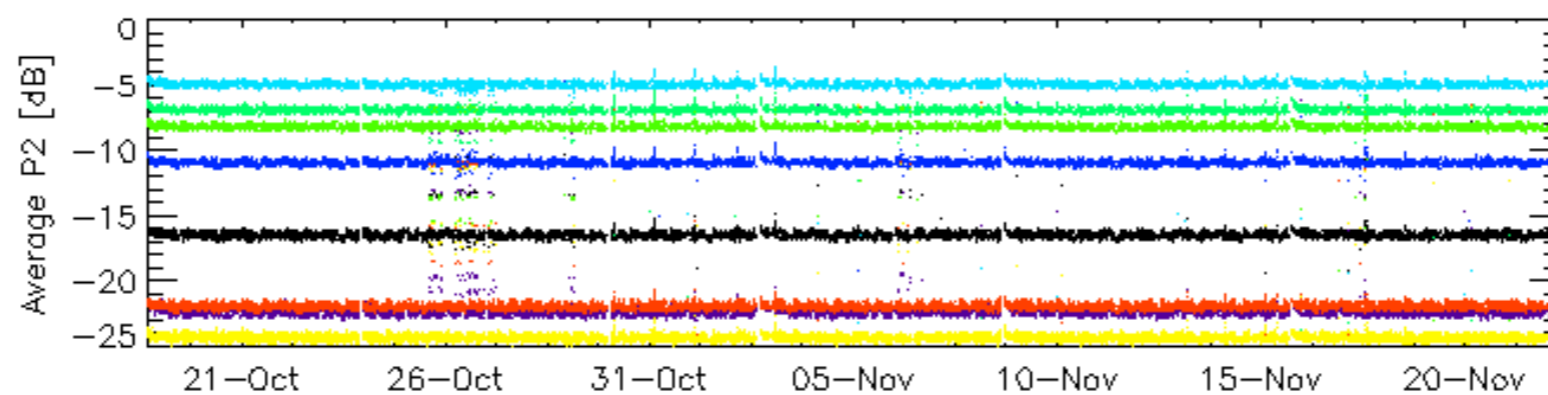
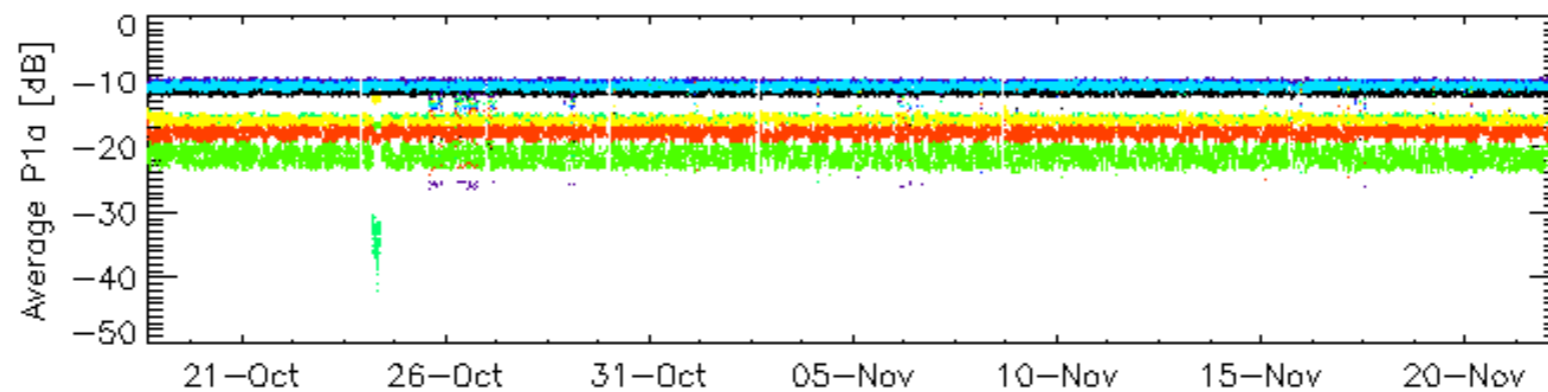
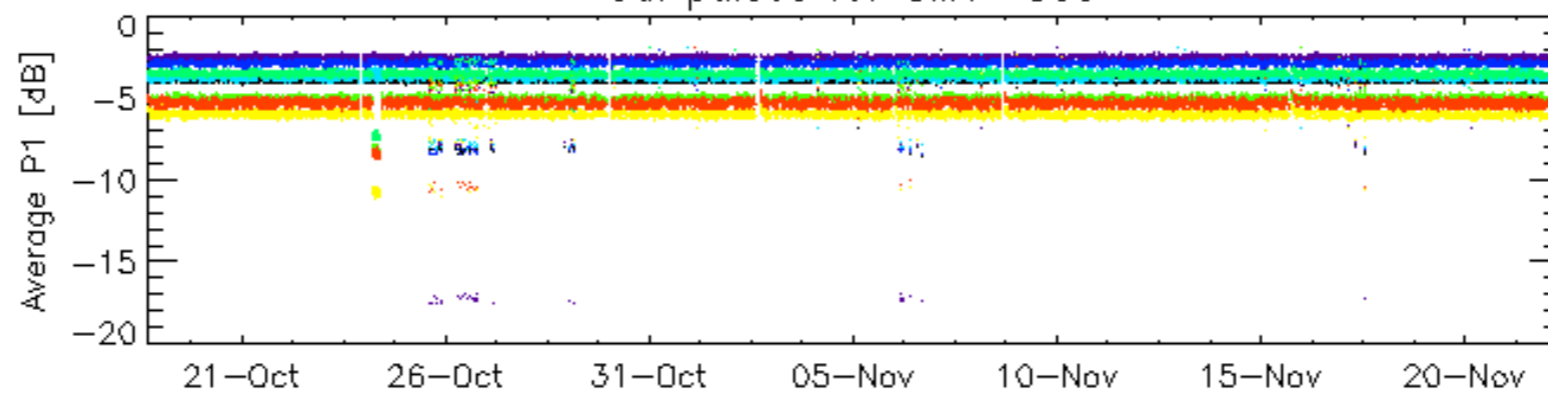


Cal pulses for WVS IS2



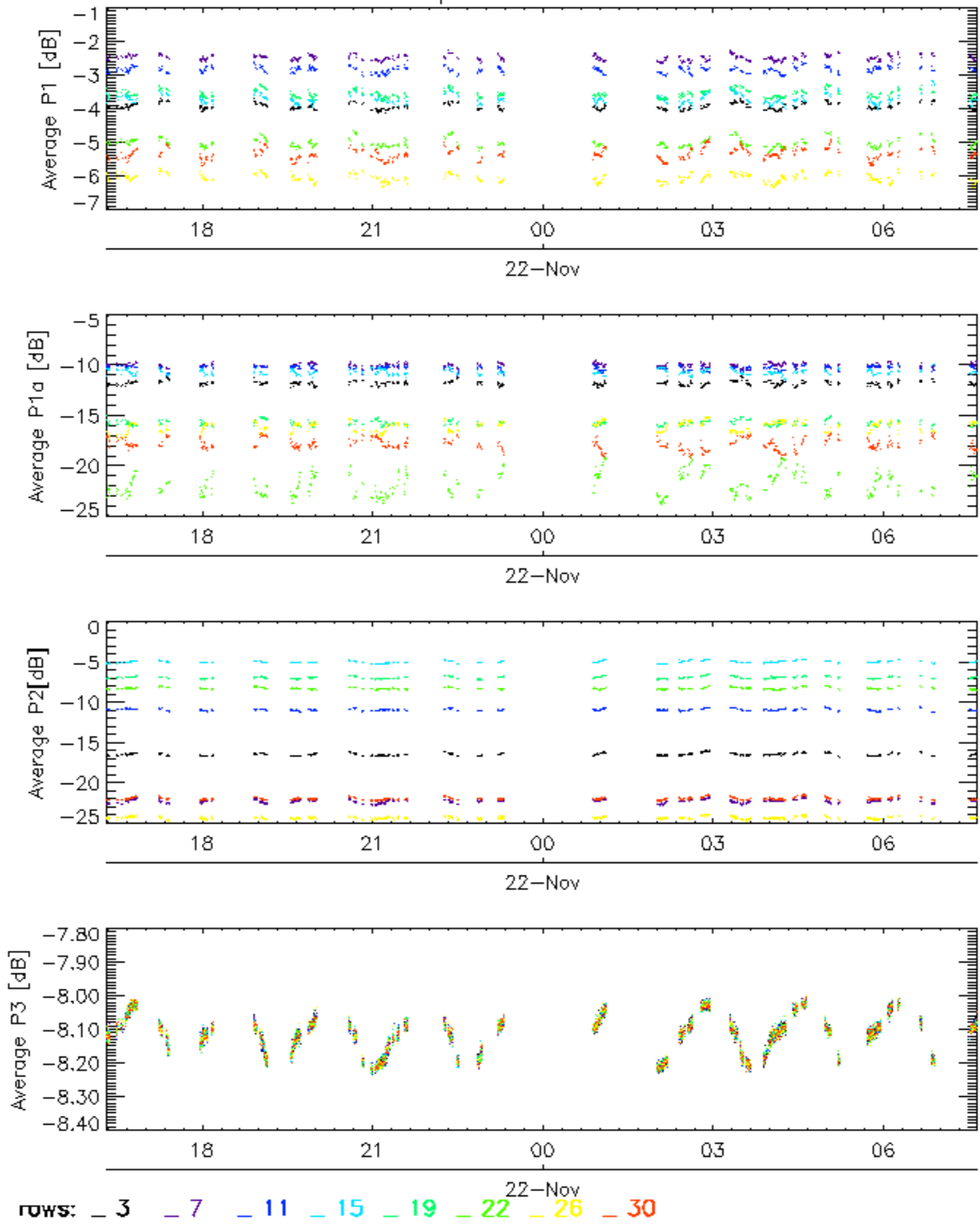
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



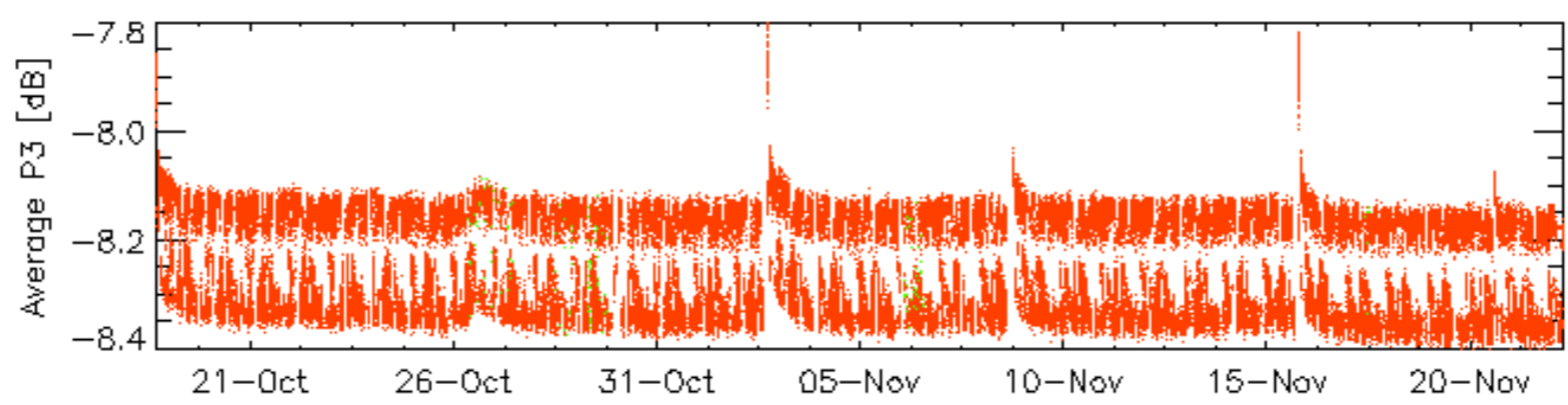
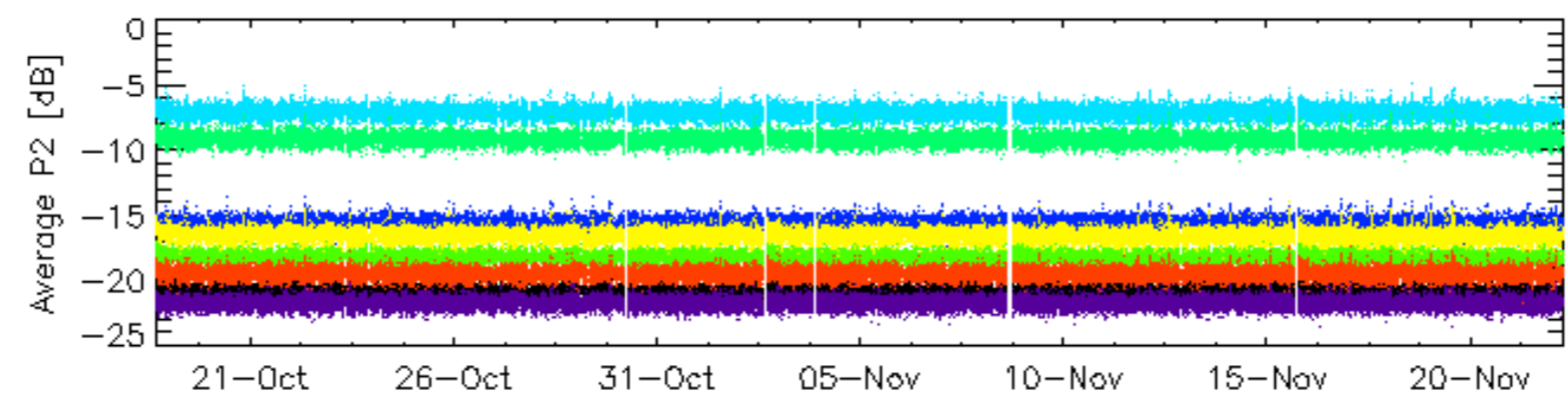
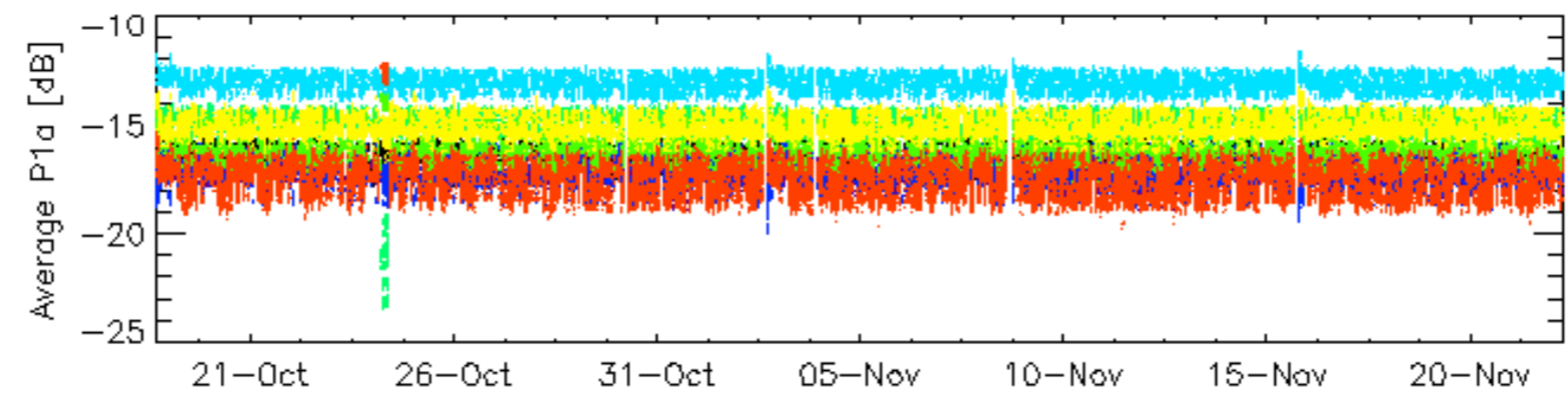
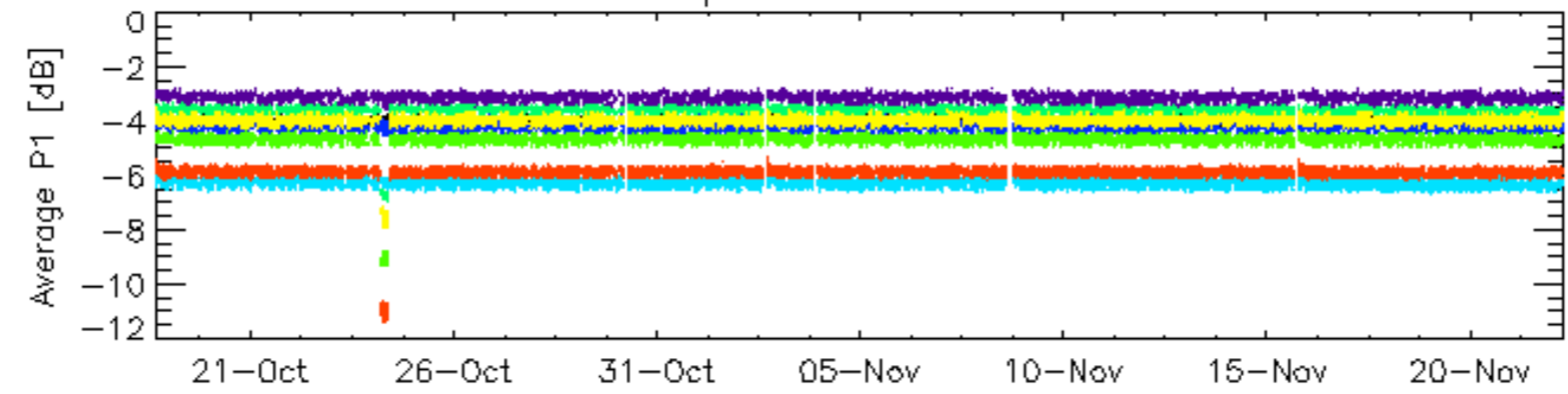
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Cal pulses for GM1 SS3



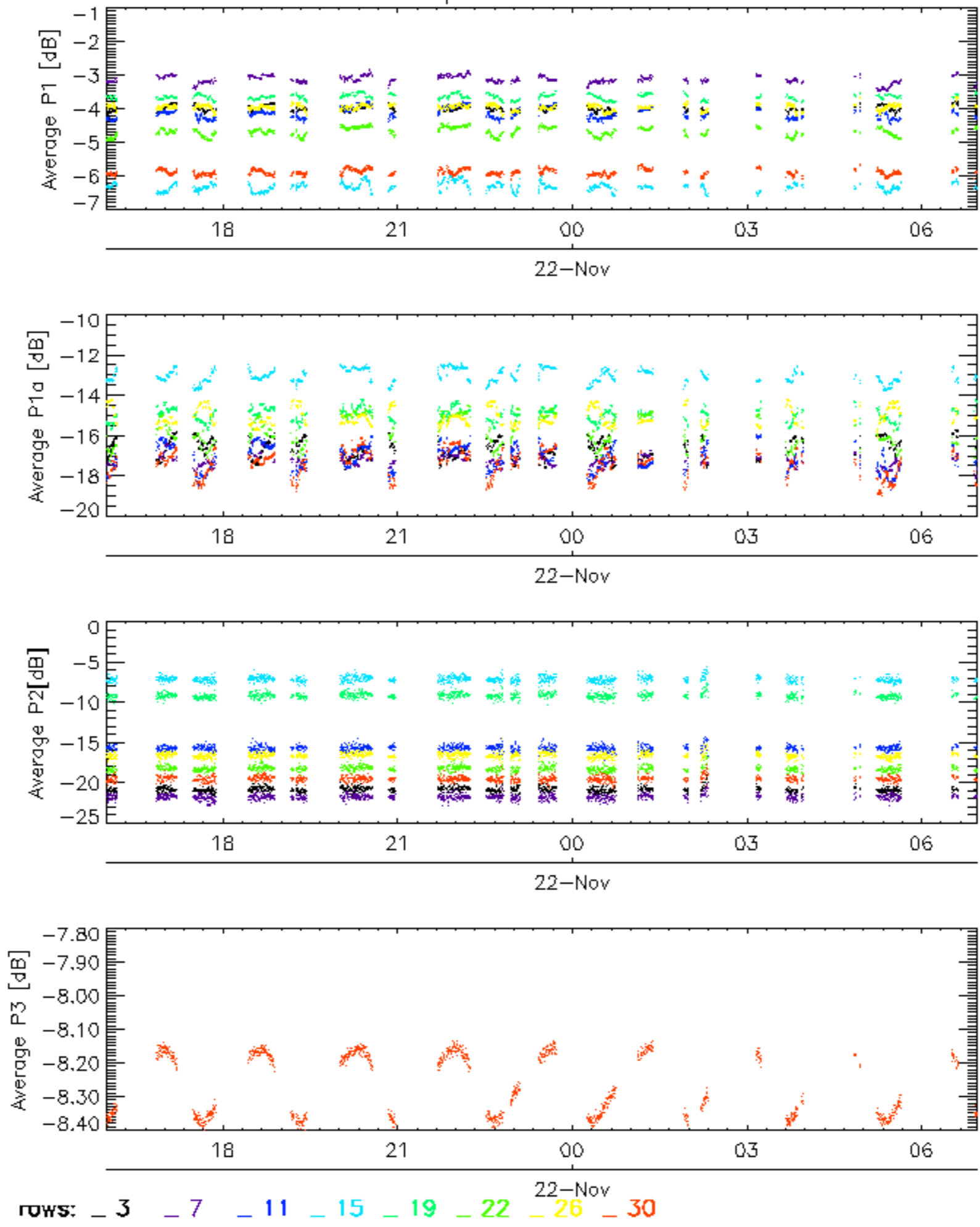
rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

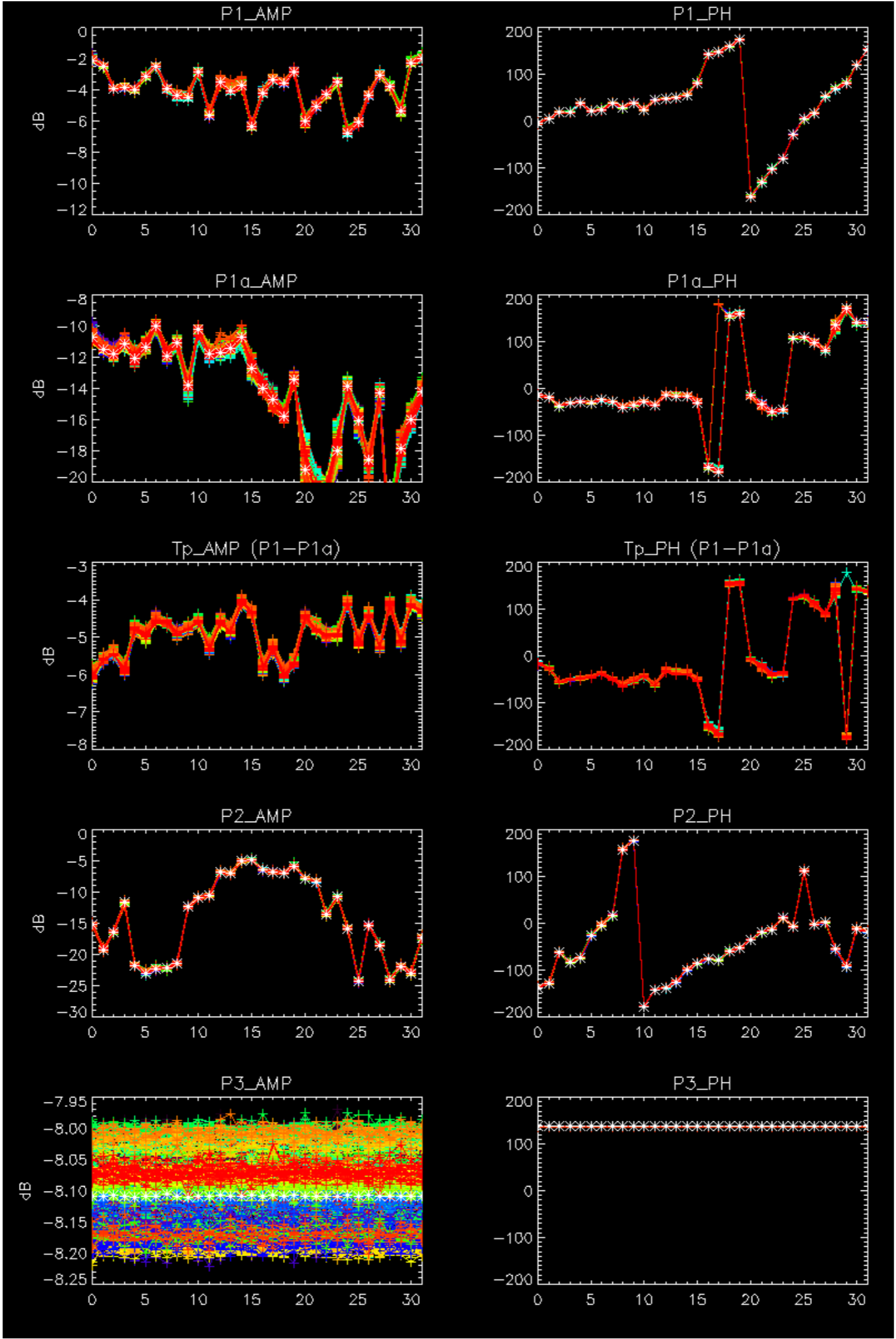


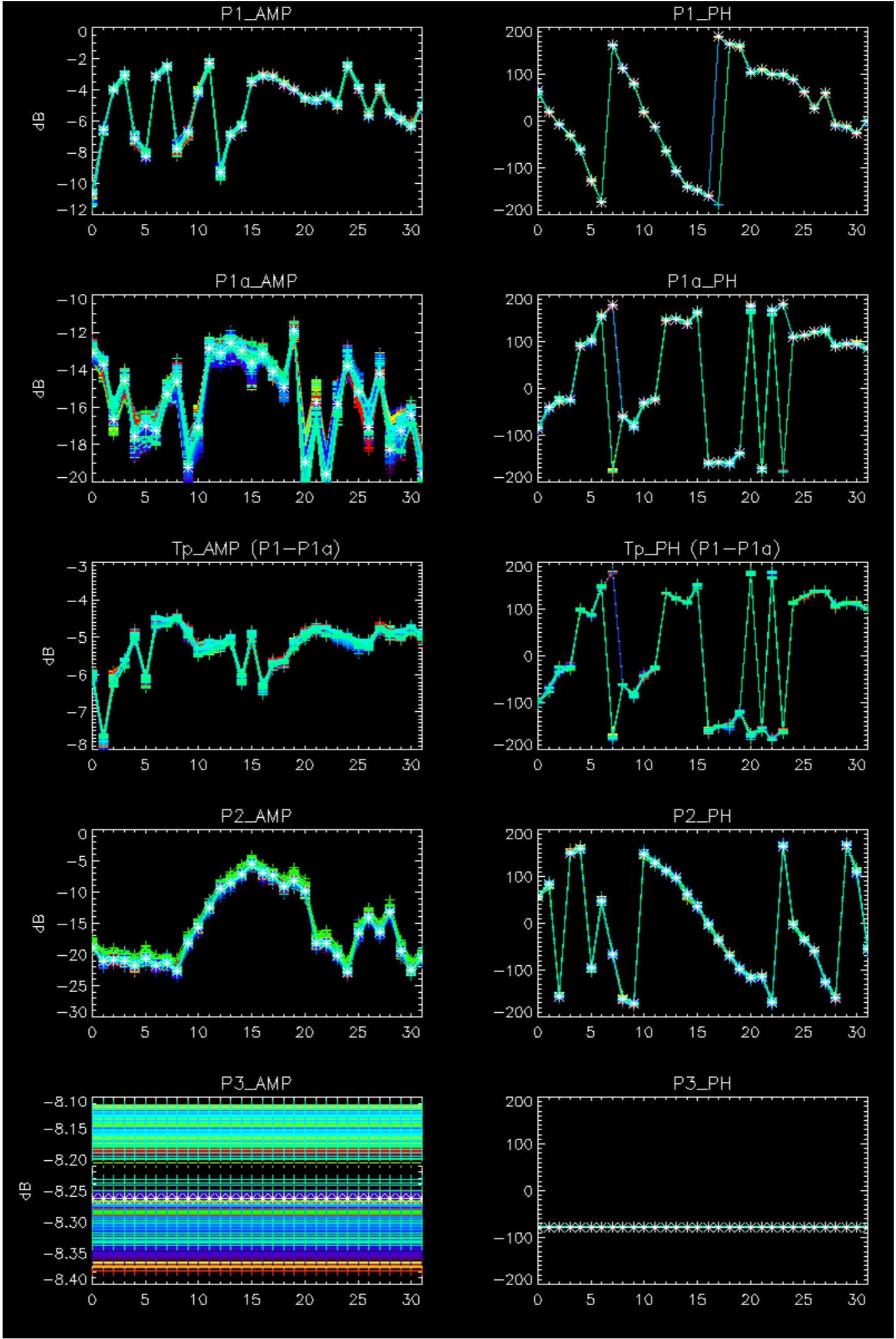
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



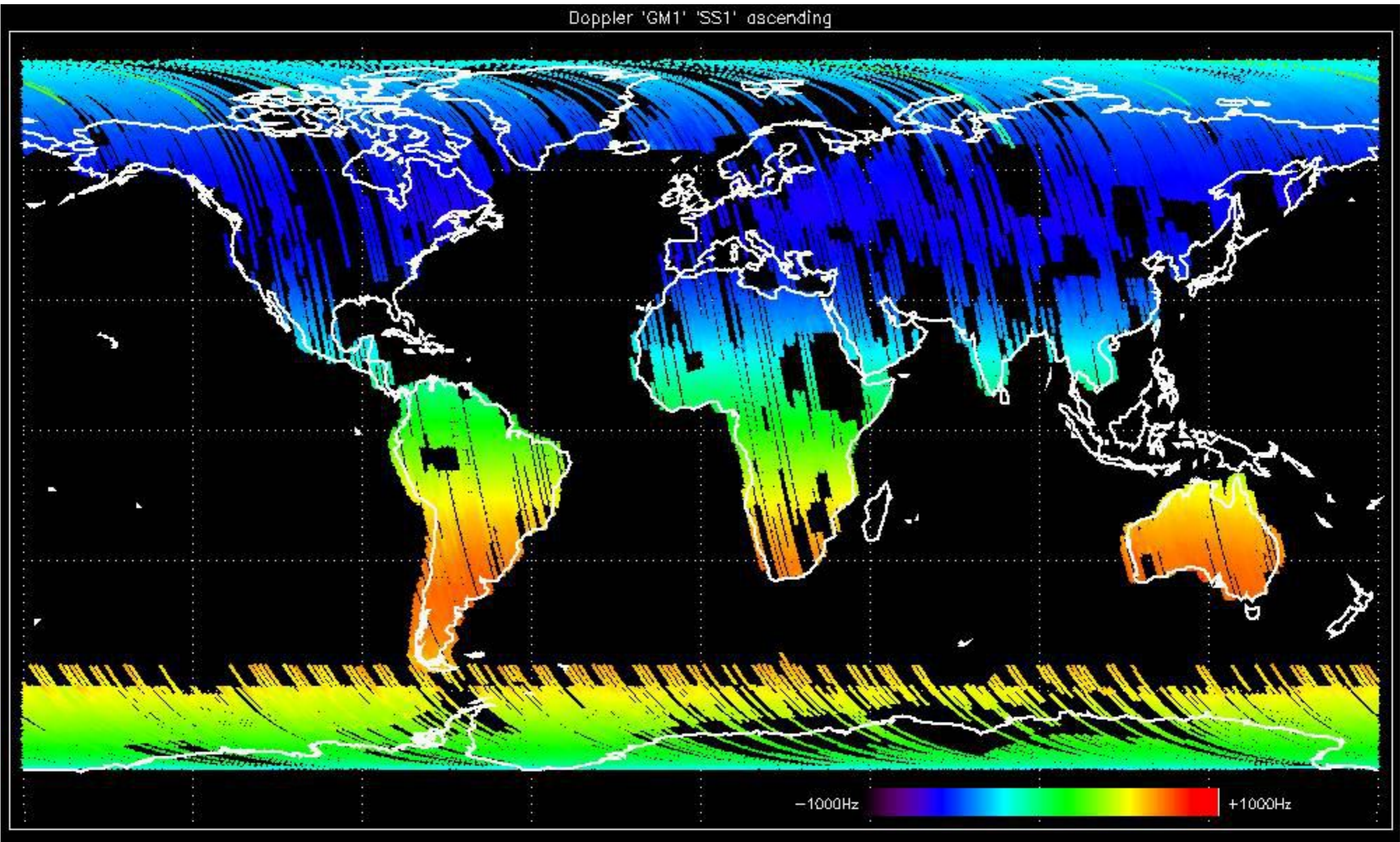
No anomalies observed.



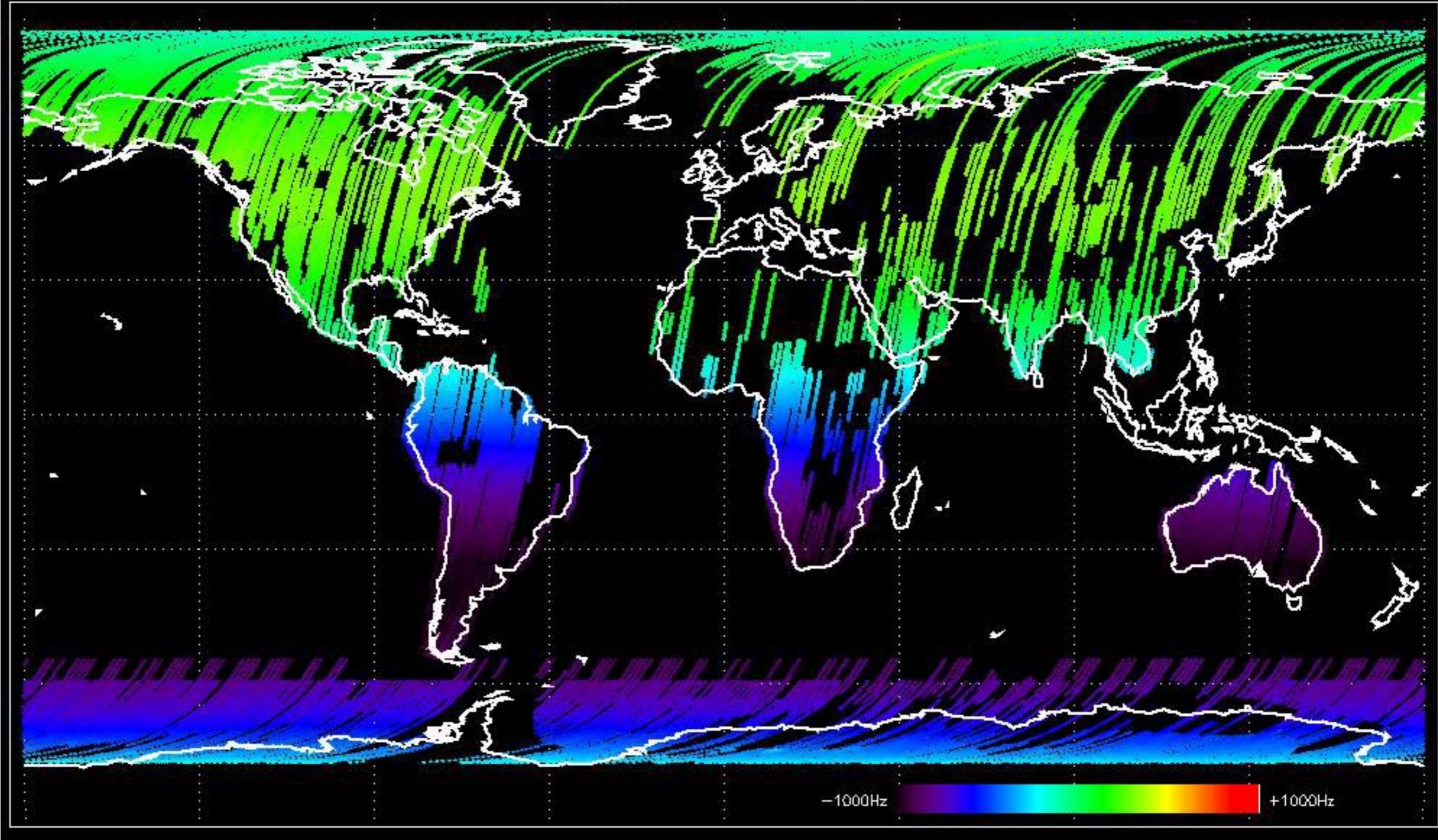


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

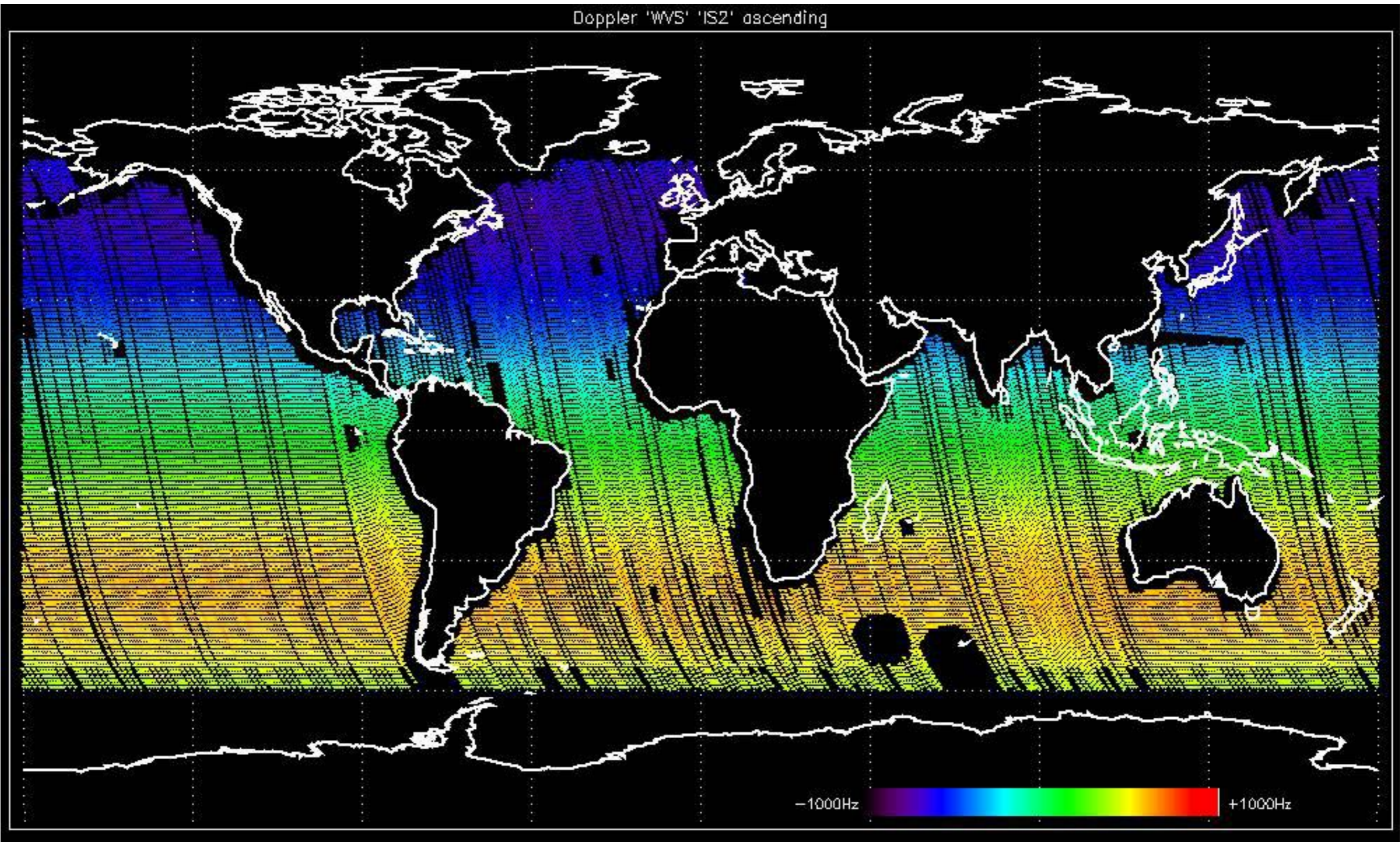
Doppler 'GM1' 'SS1' ascending



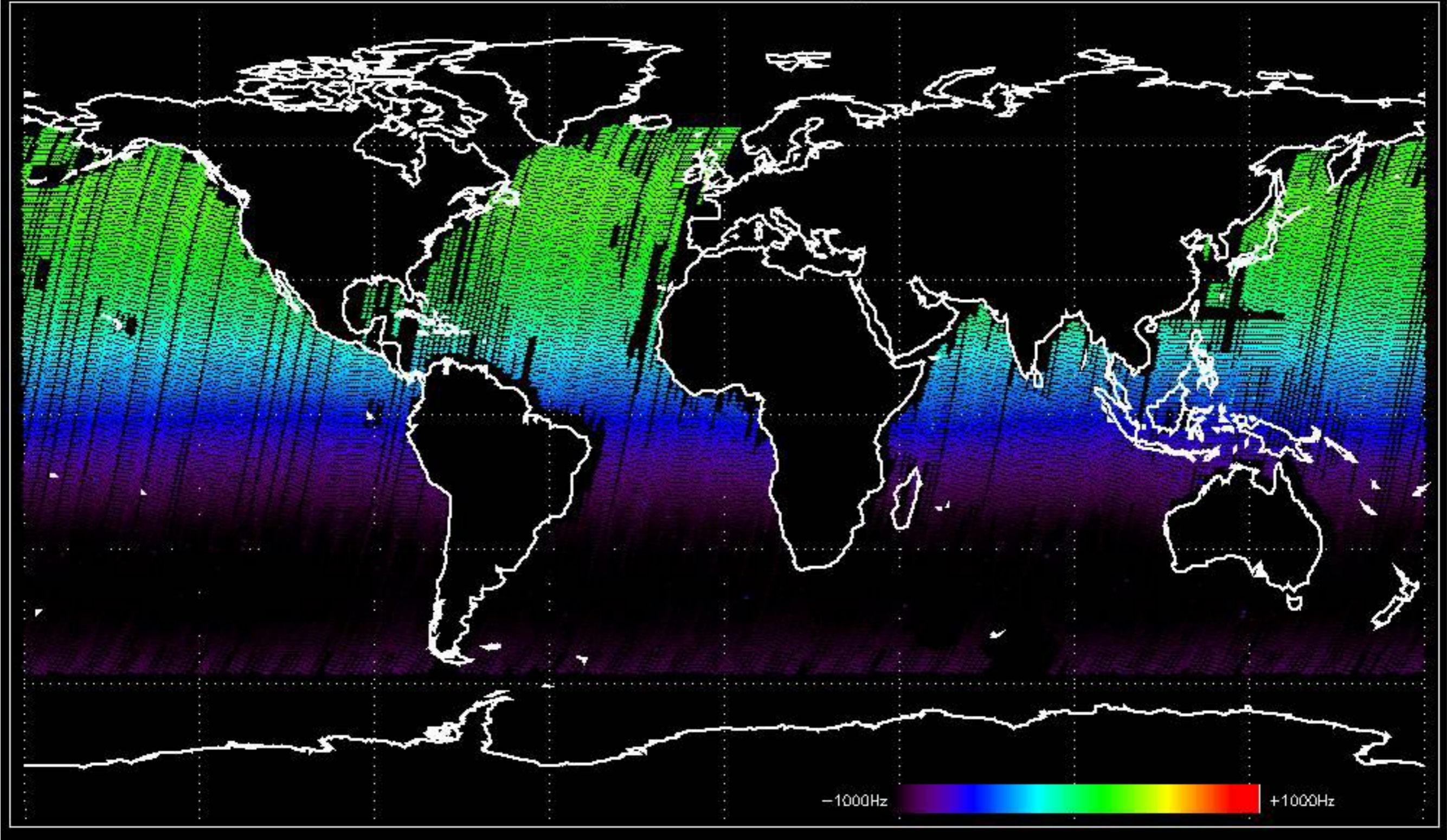
Doppler 'GM1' 'SS1' descending



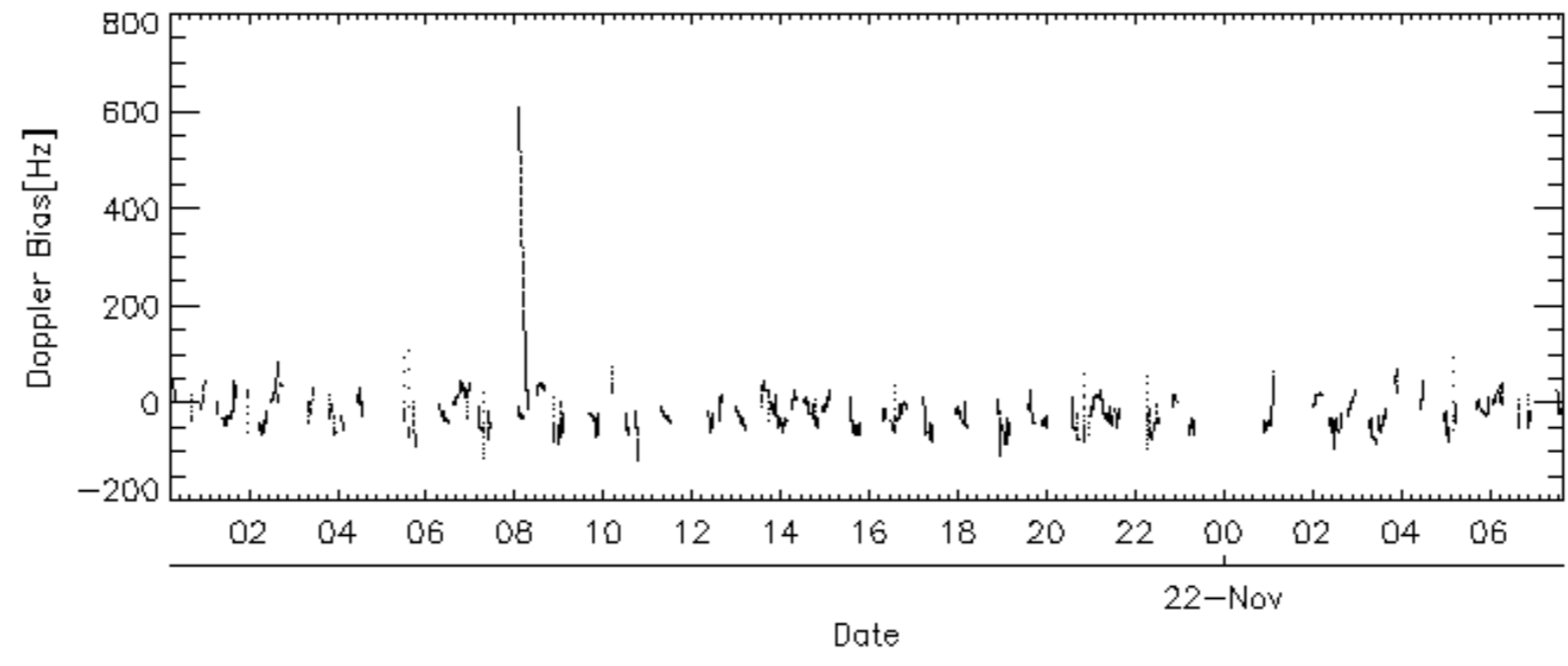
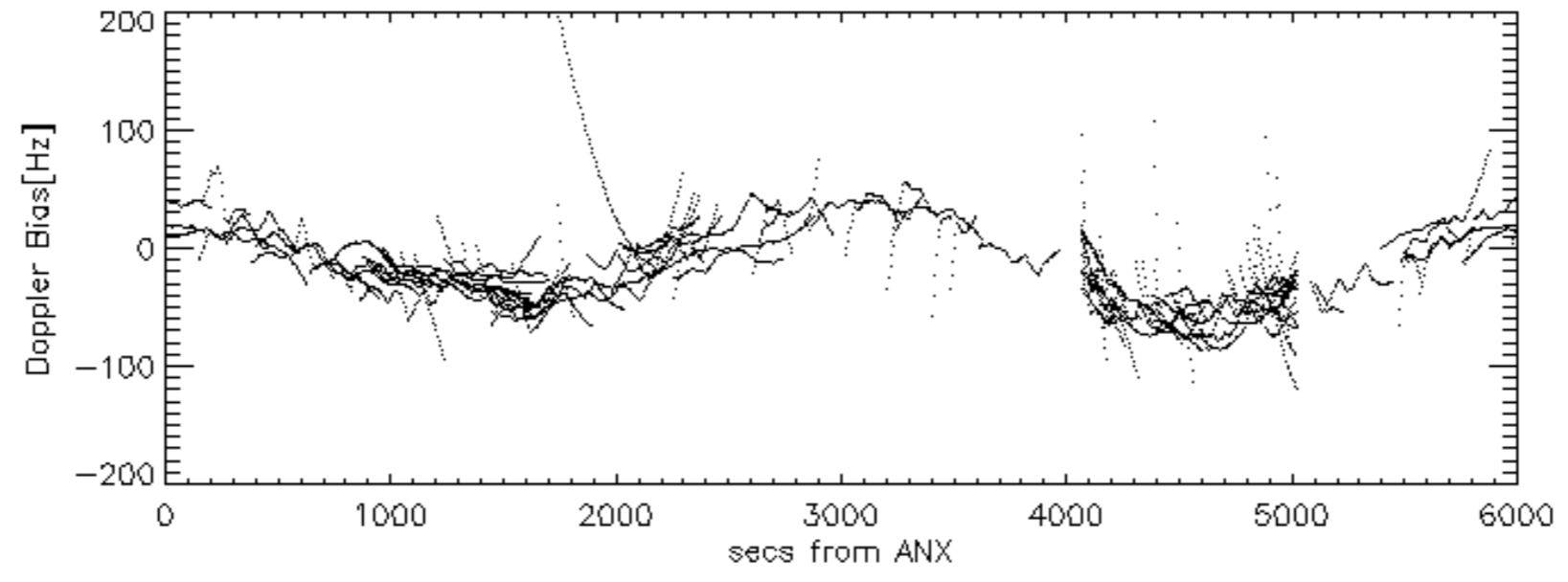
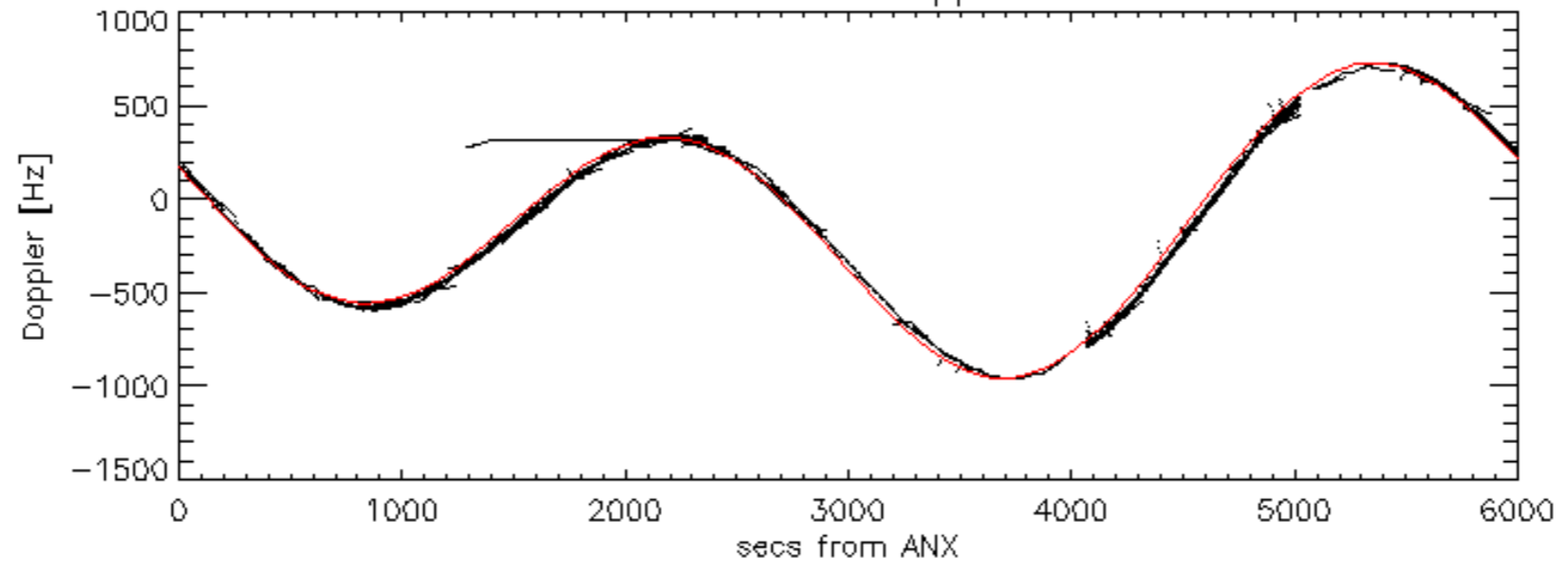
Doppler 'WVS' 'IS2' ascending

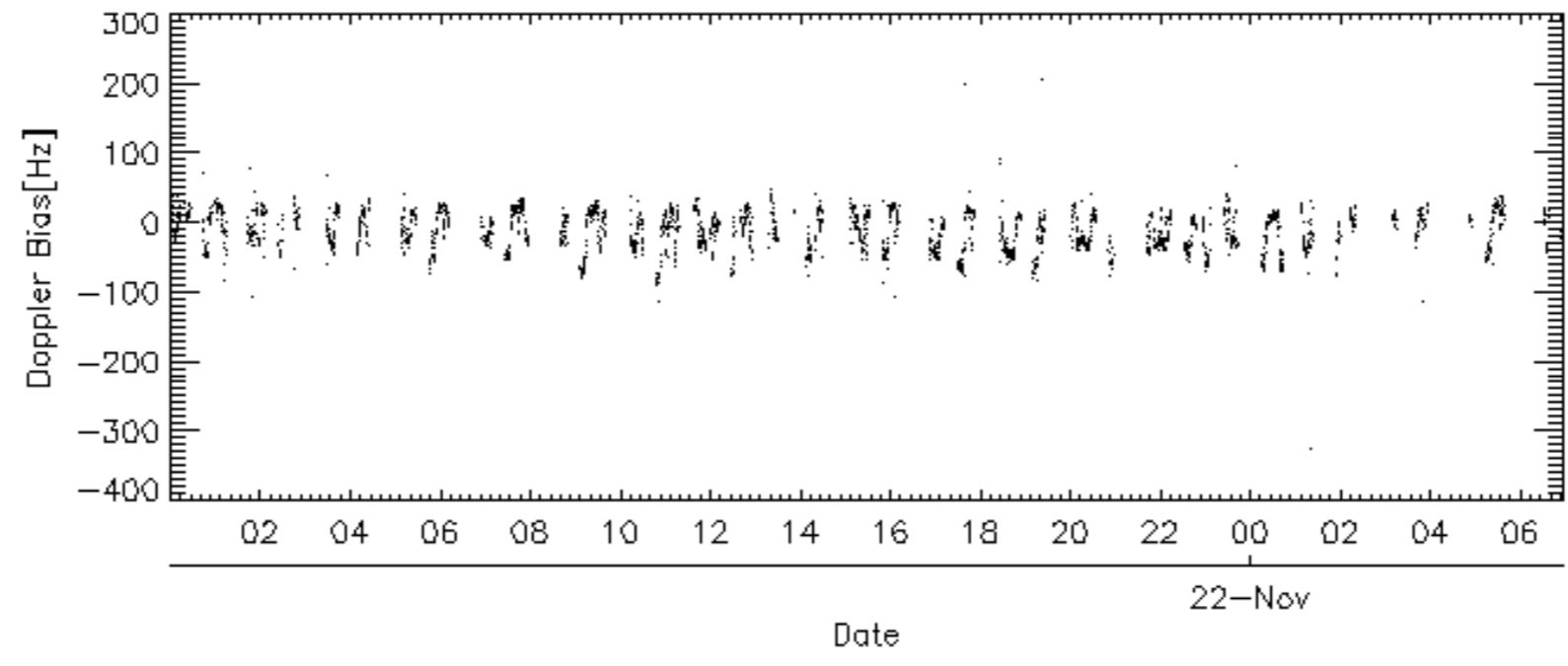
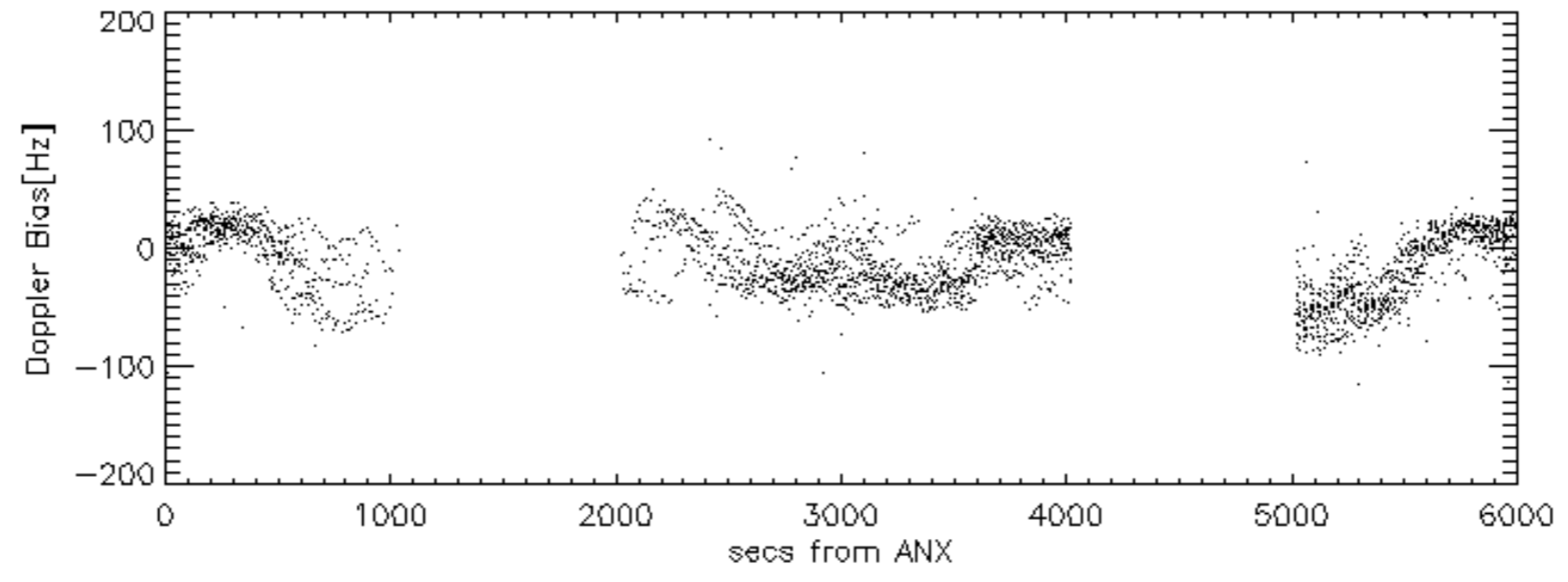
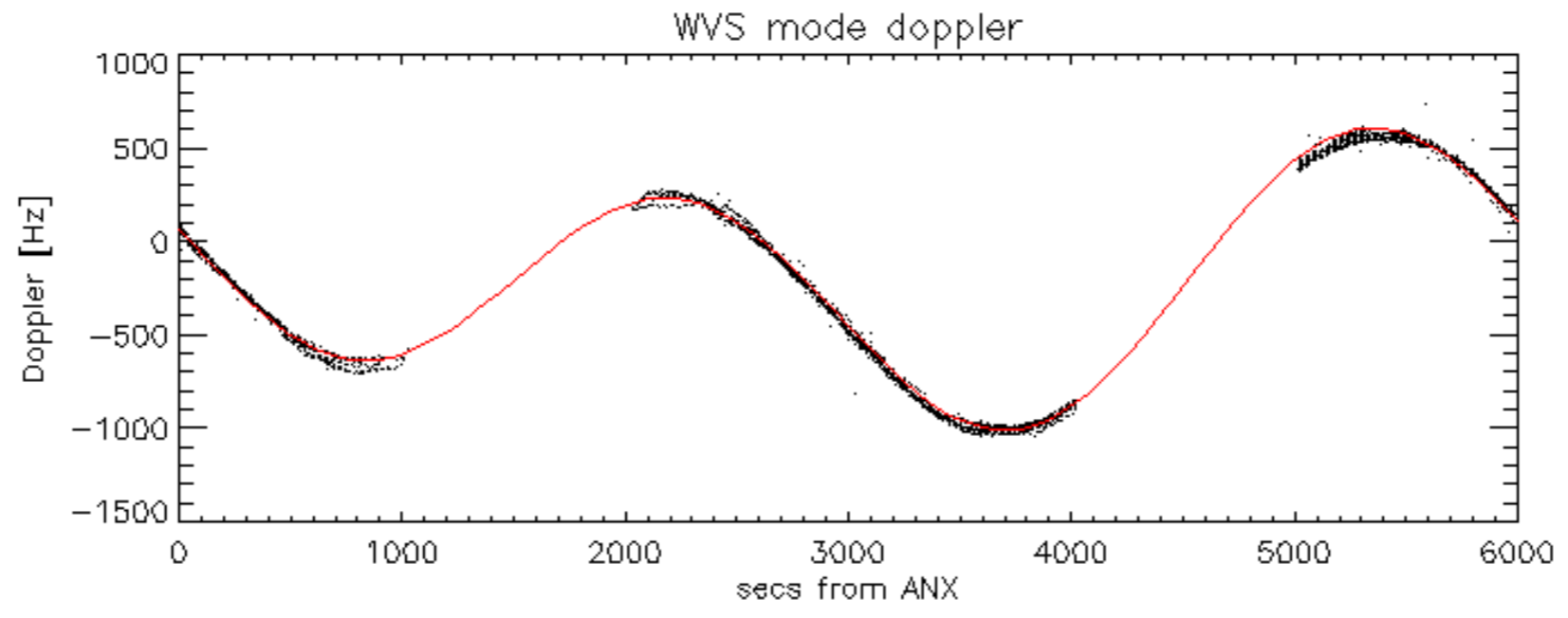


Doppler 'WVS' 'IS2' descending

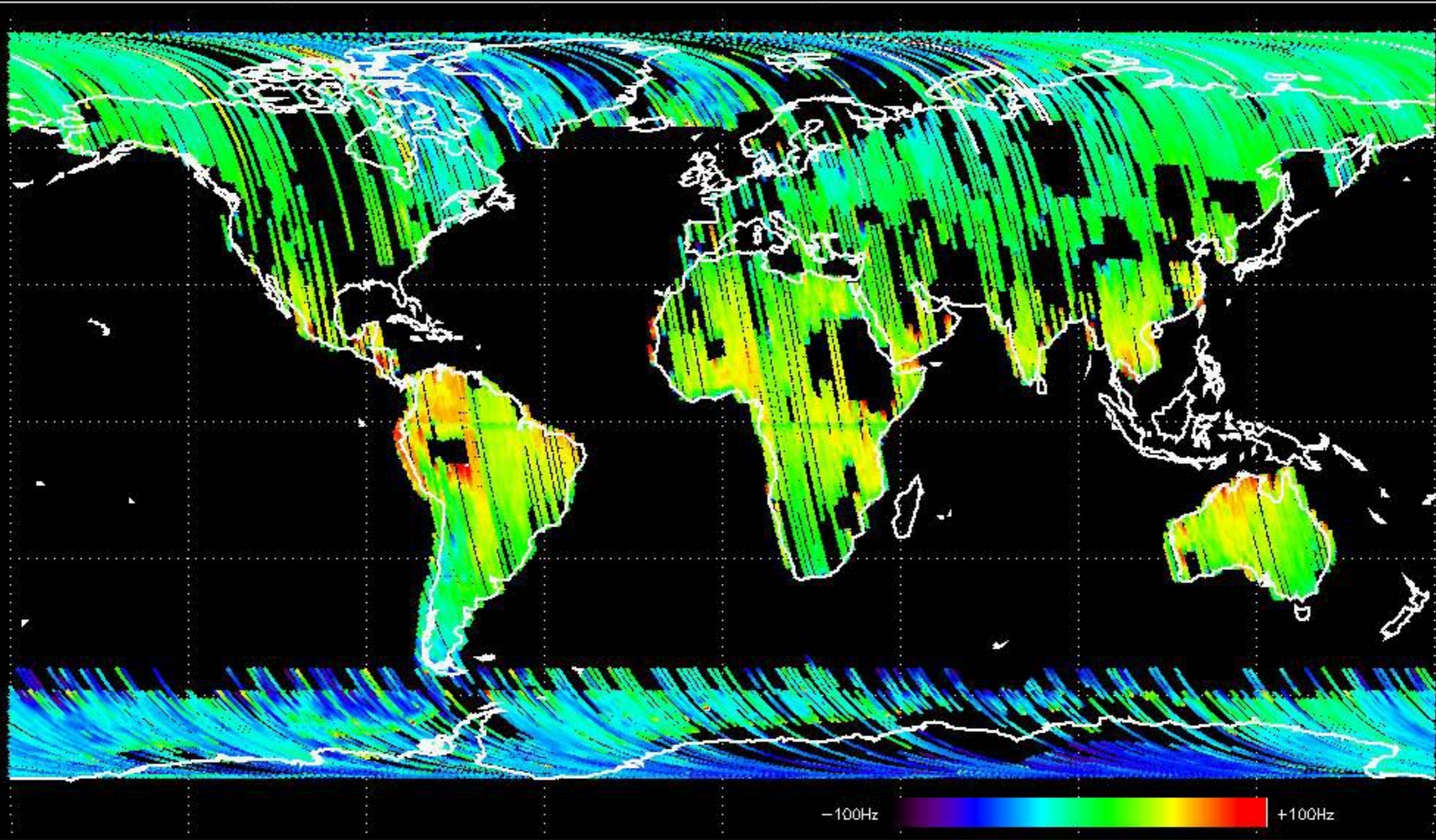


GM1 mode doppler

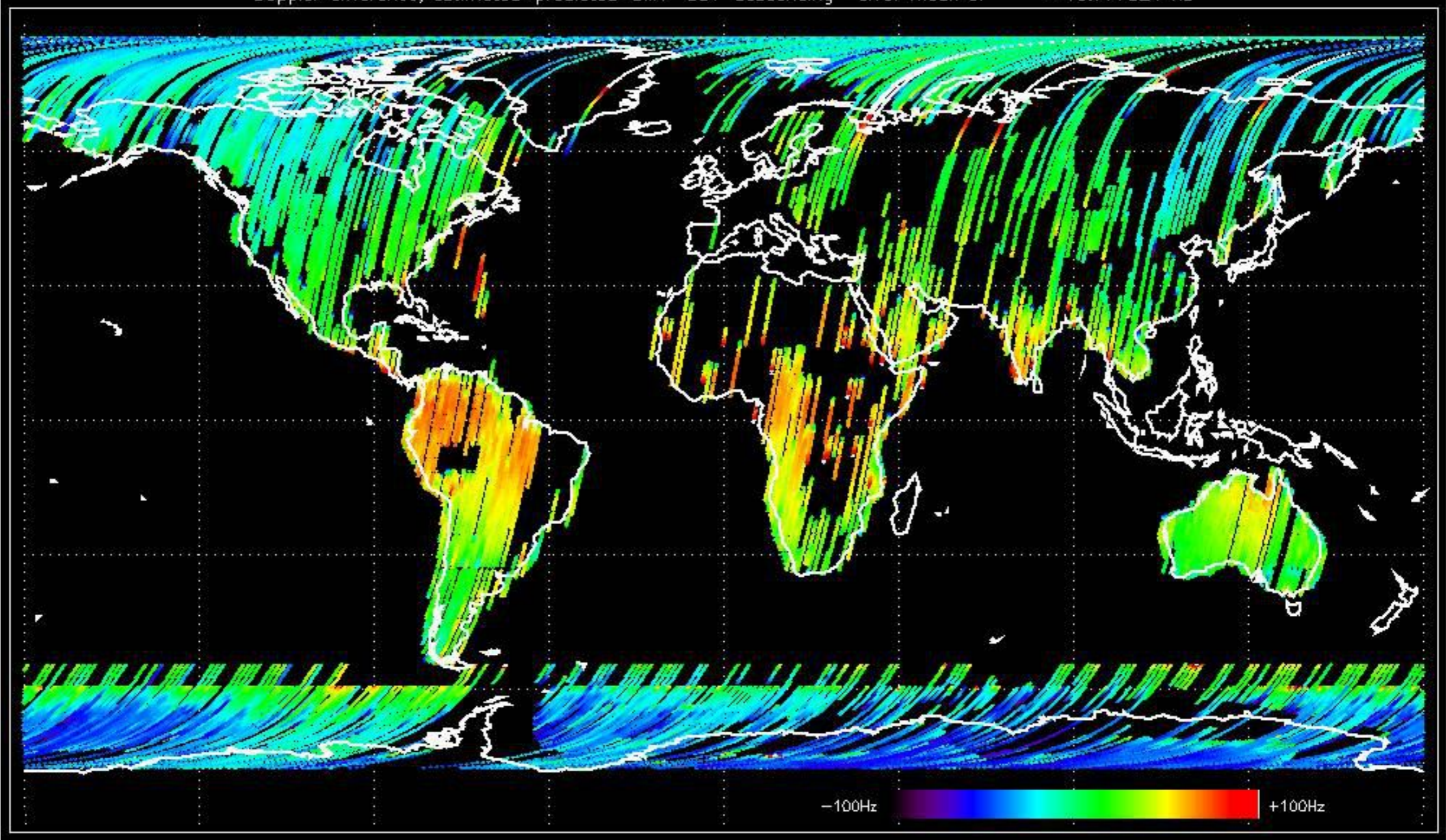




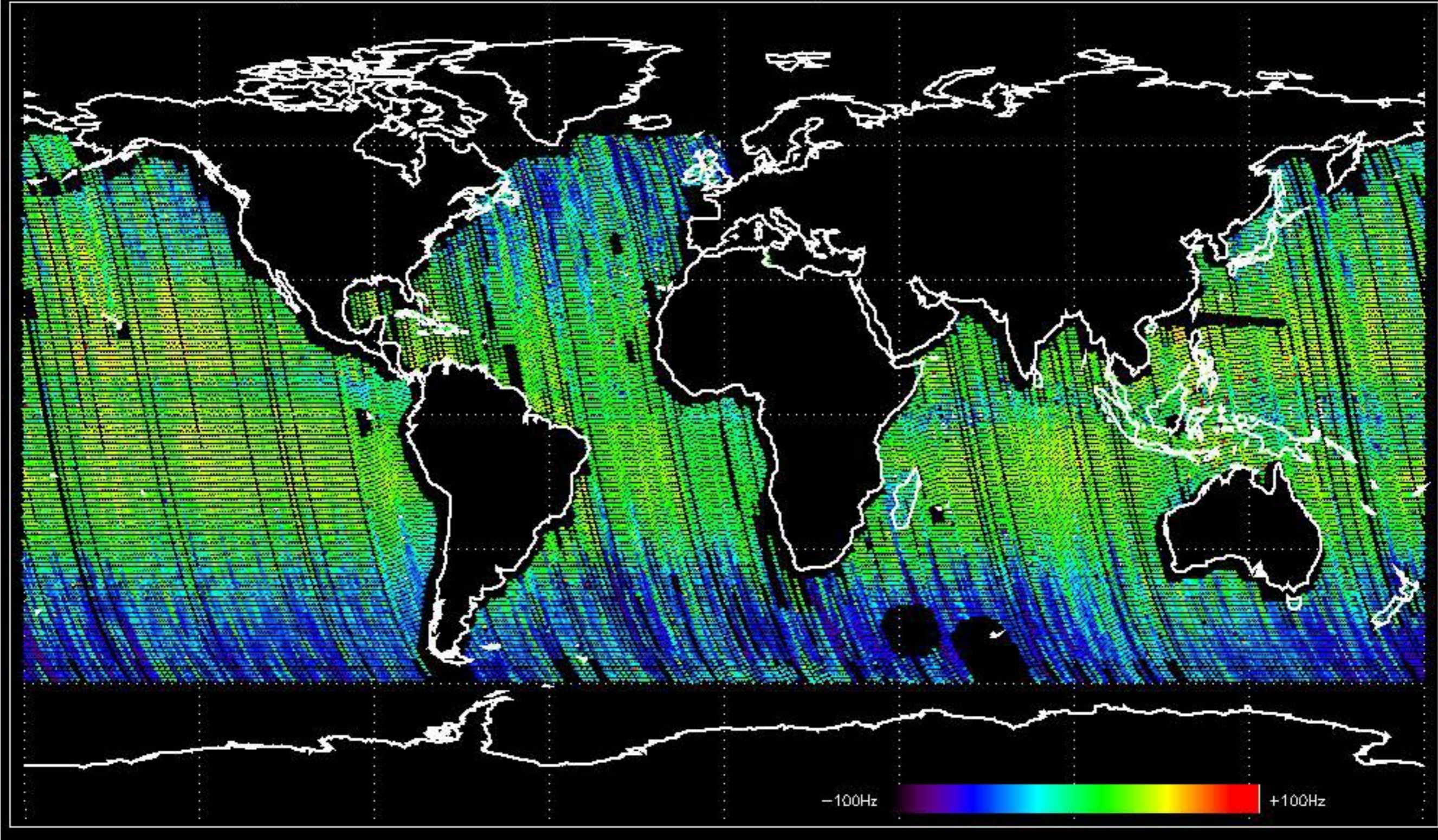
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.680998 Hz



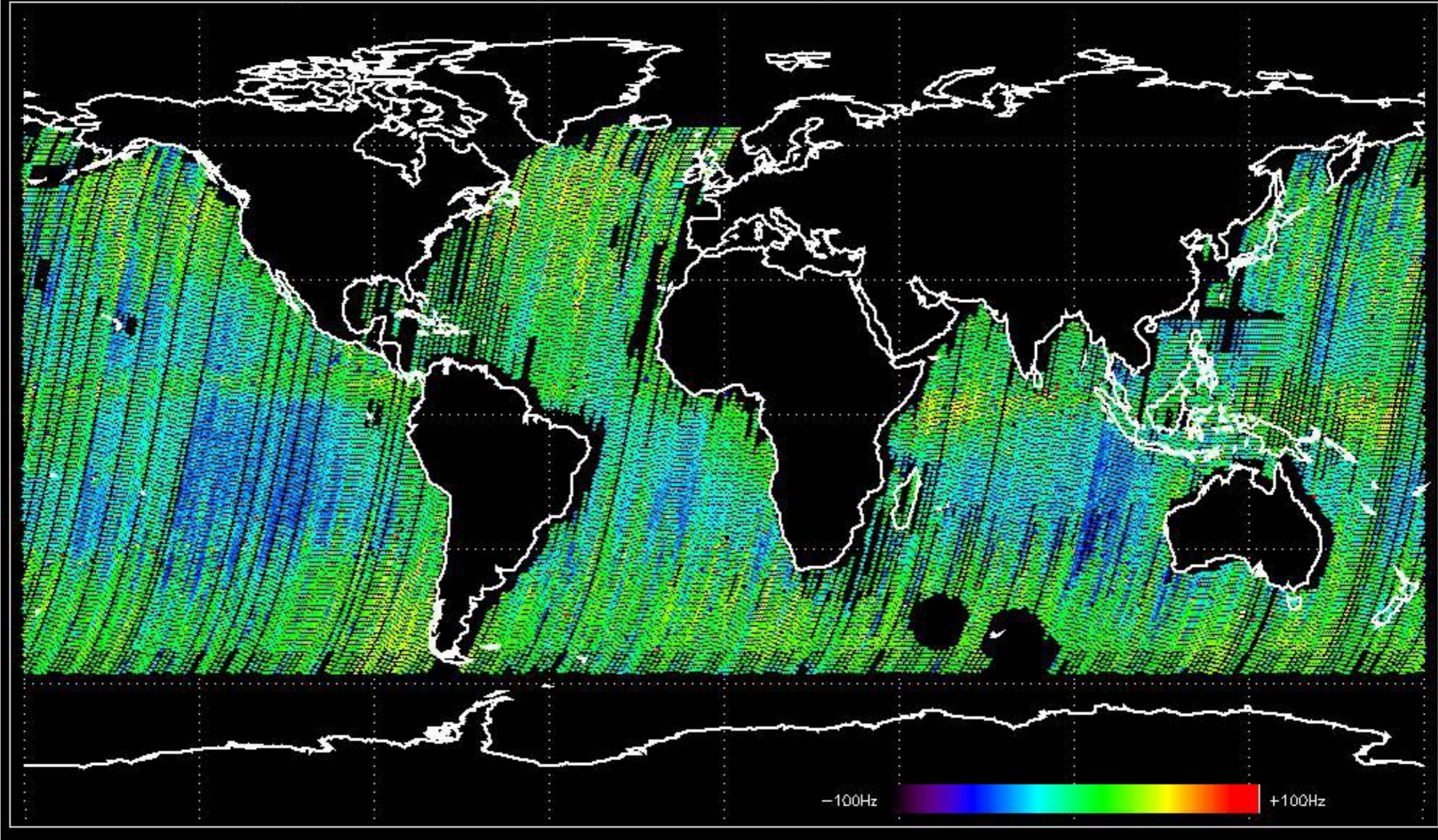
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.777524 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.3767511 Hz

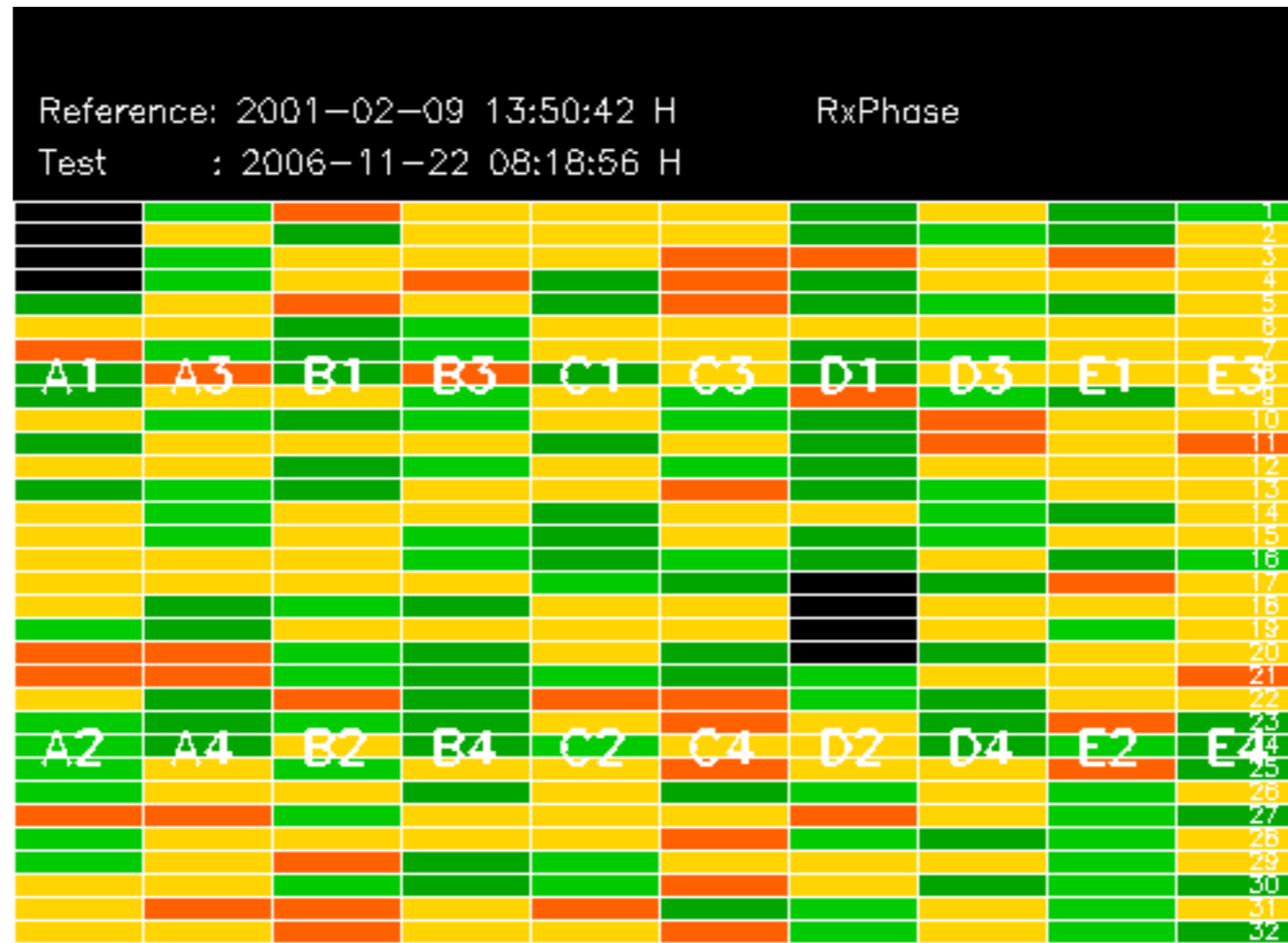


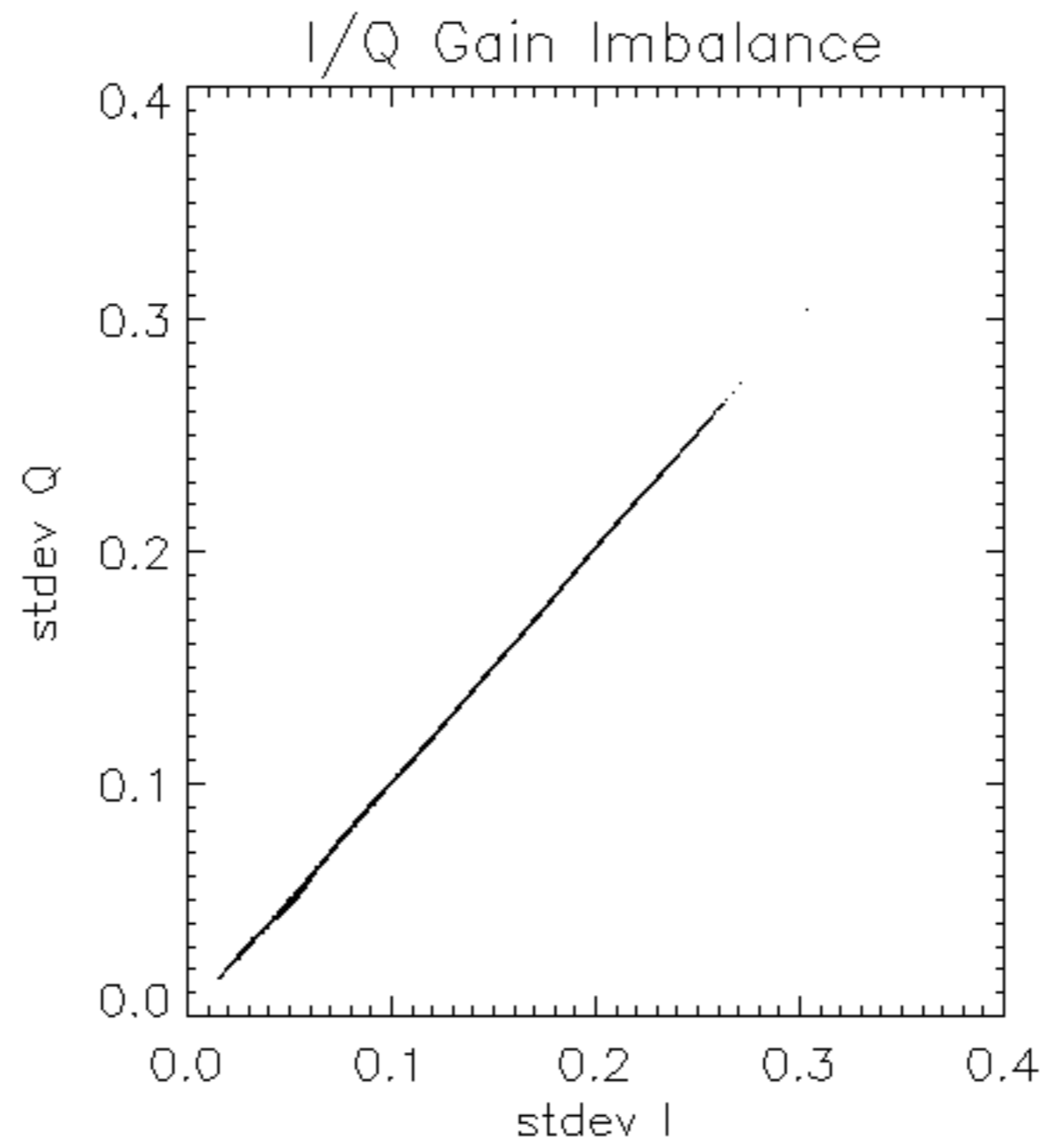
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.3245754 Hz

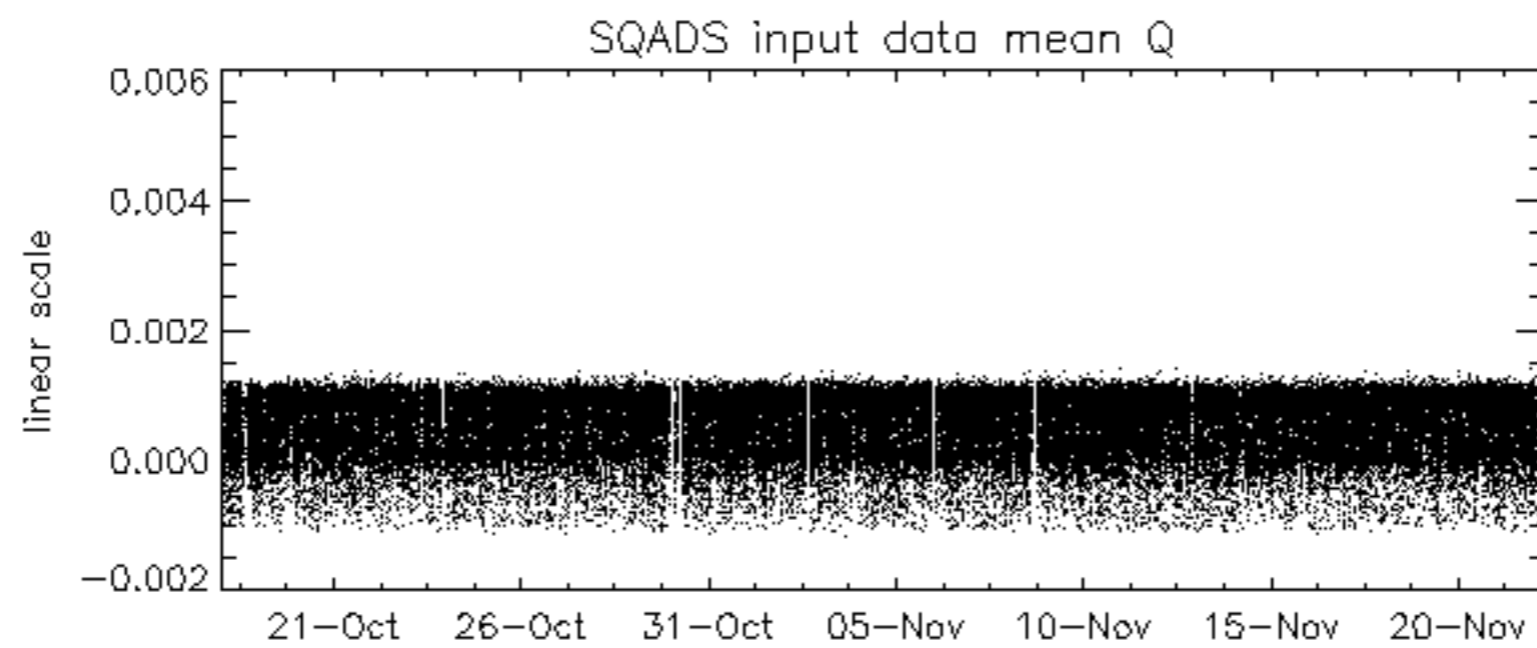
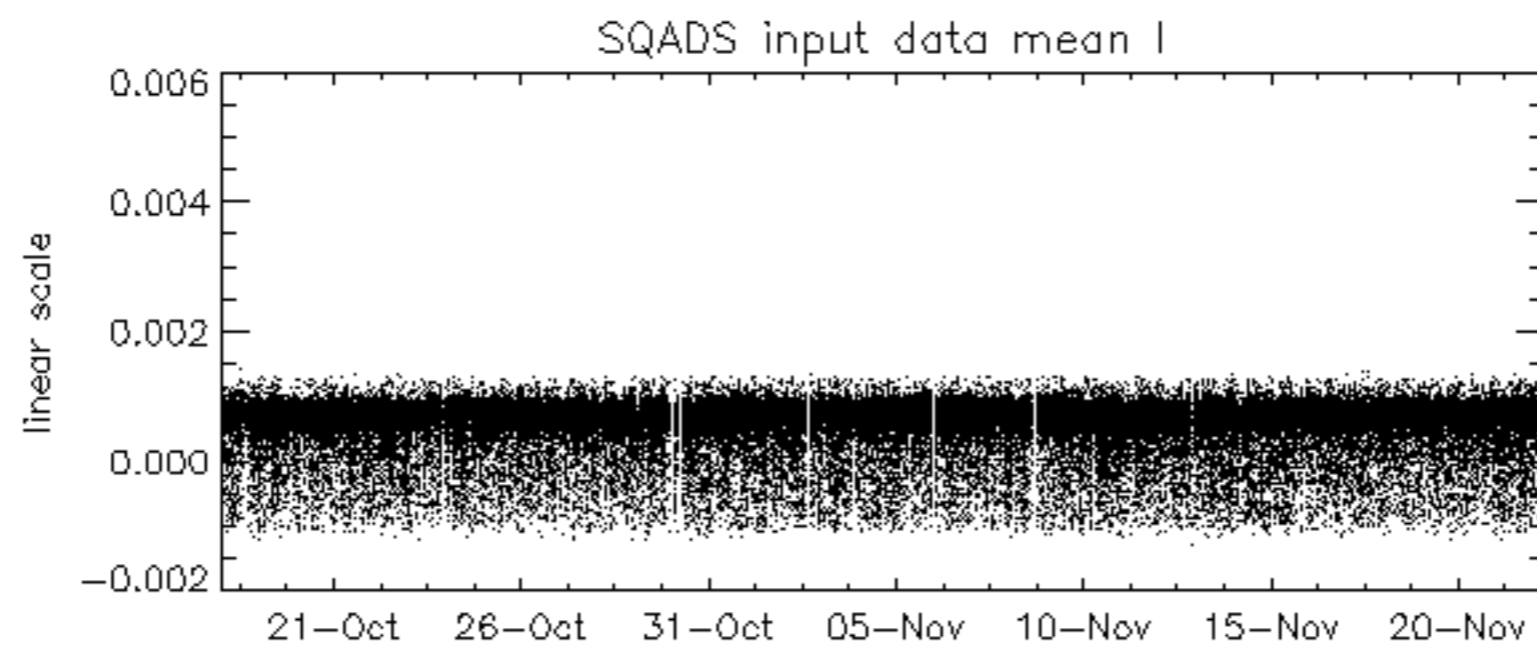
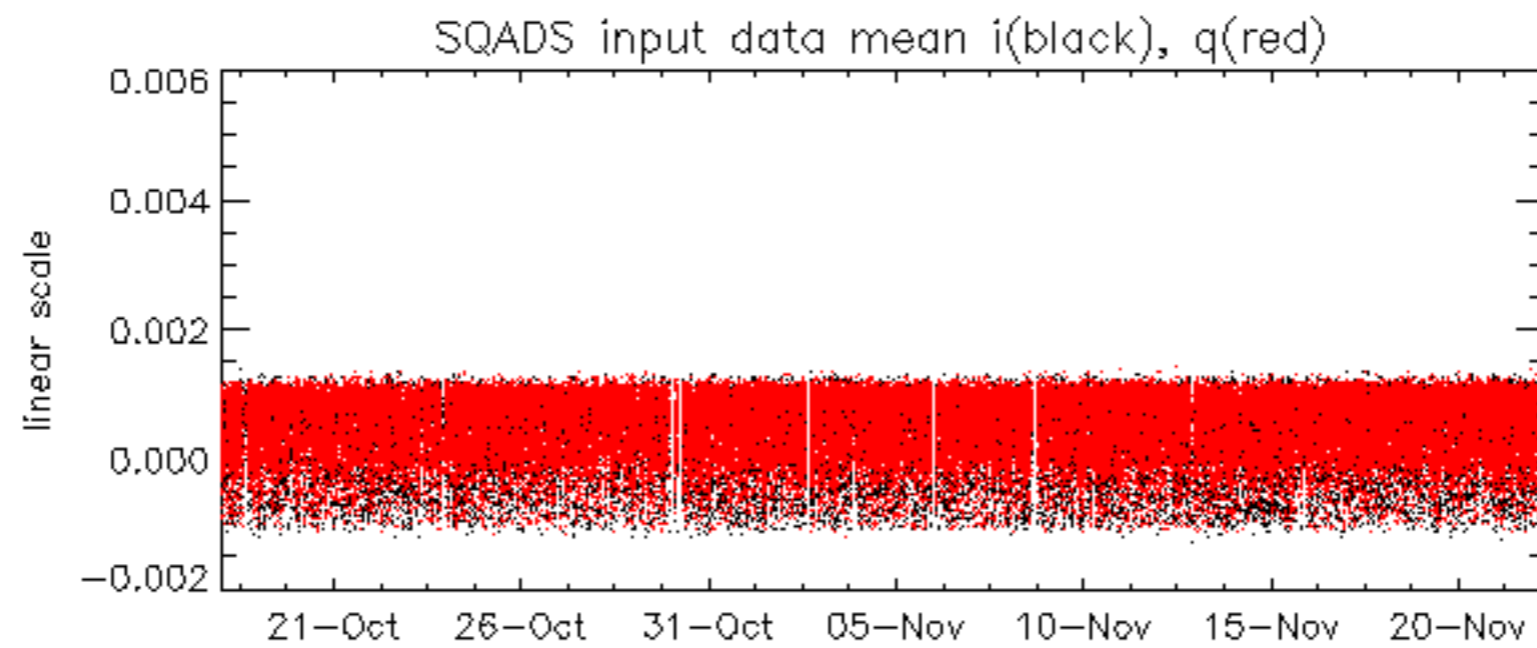


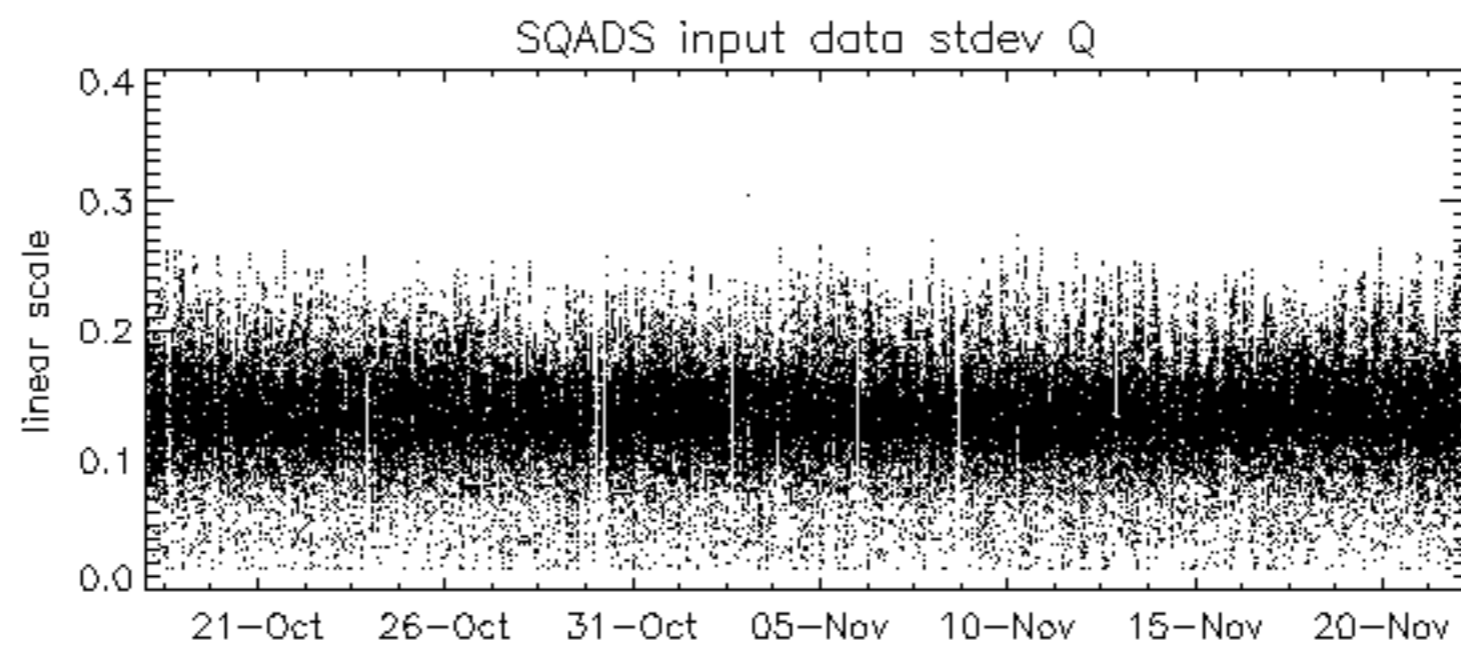
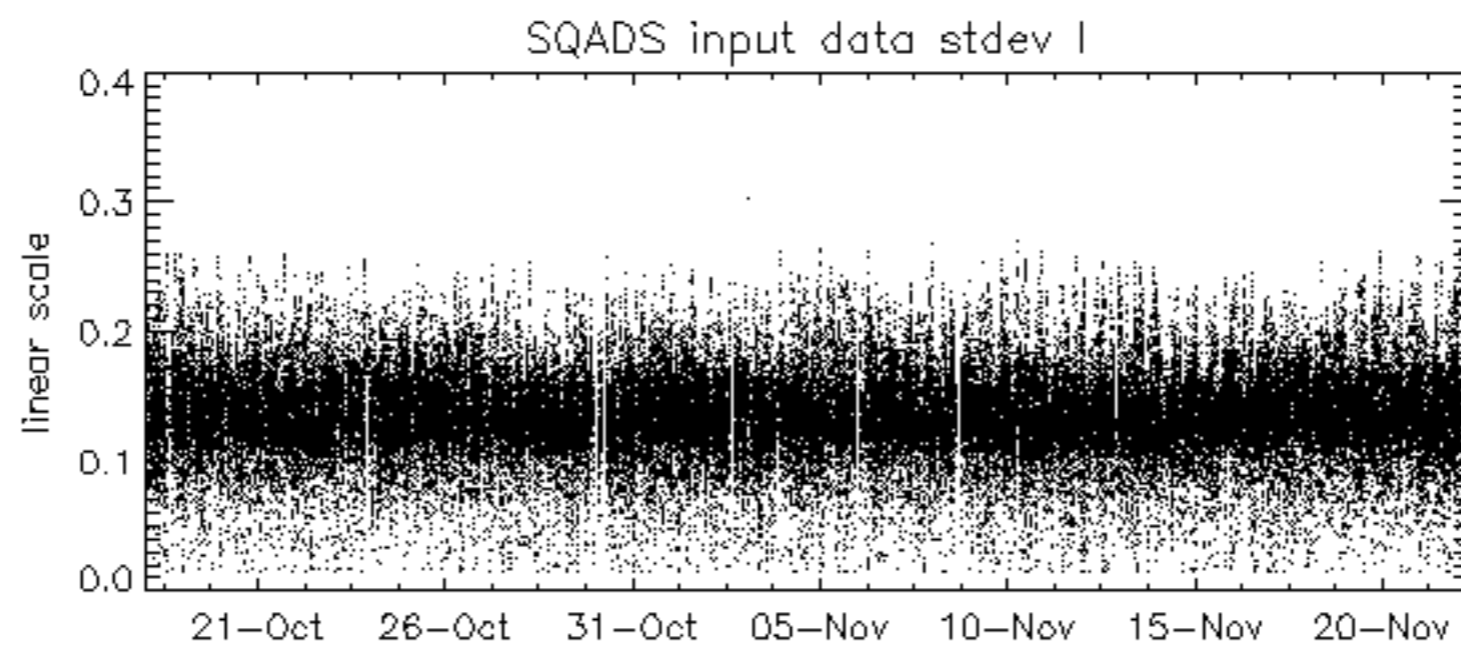
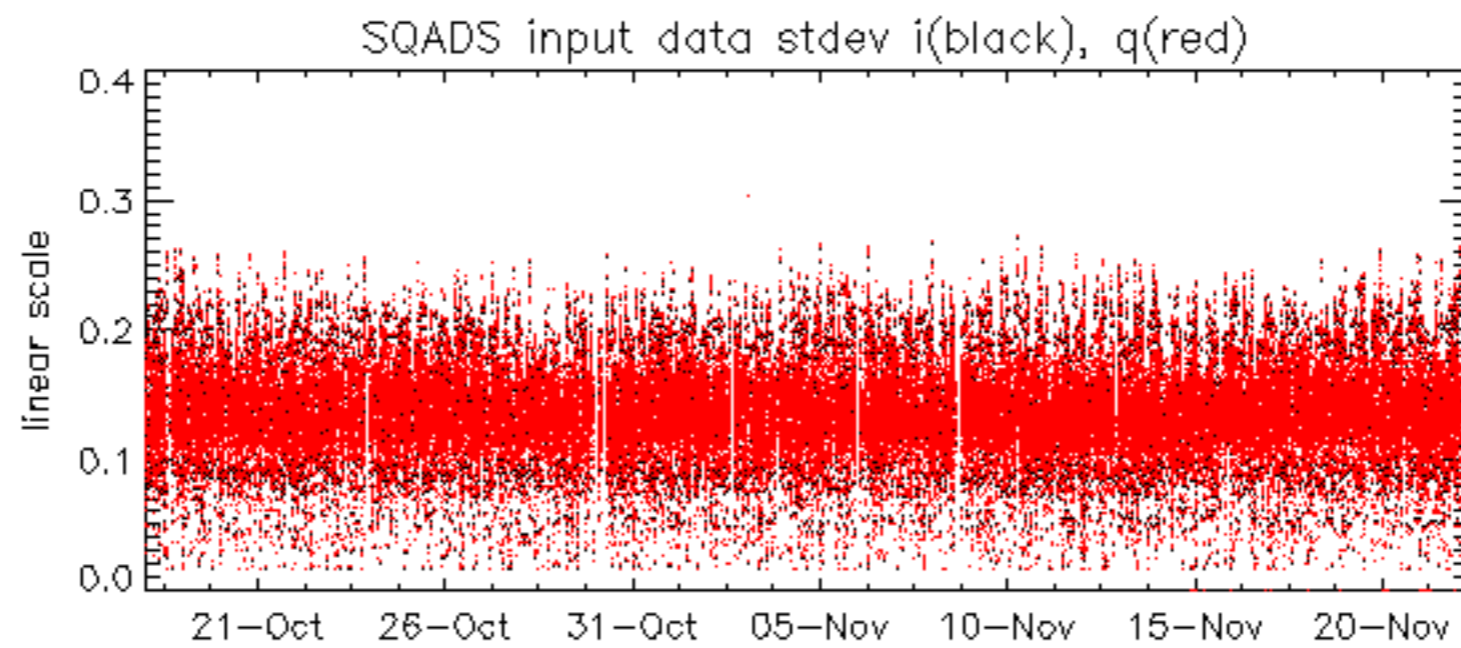
No anomalies observed on available MS products:

No anomalies observed.





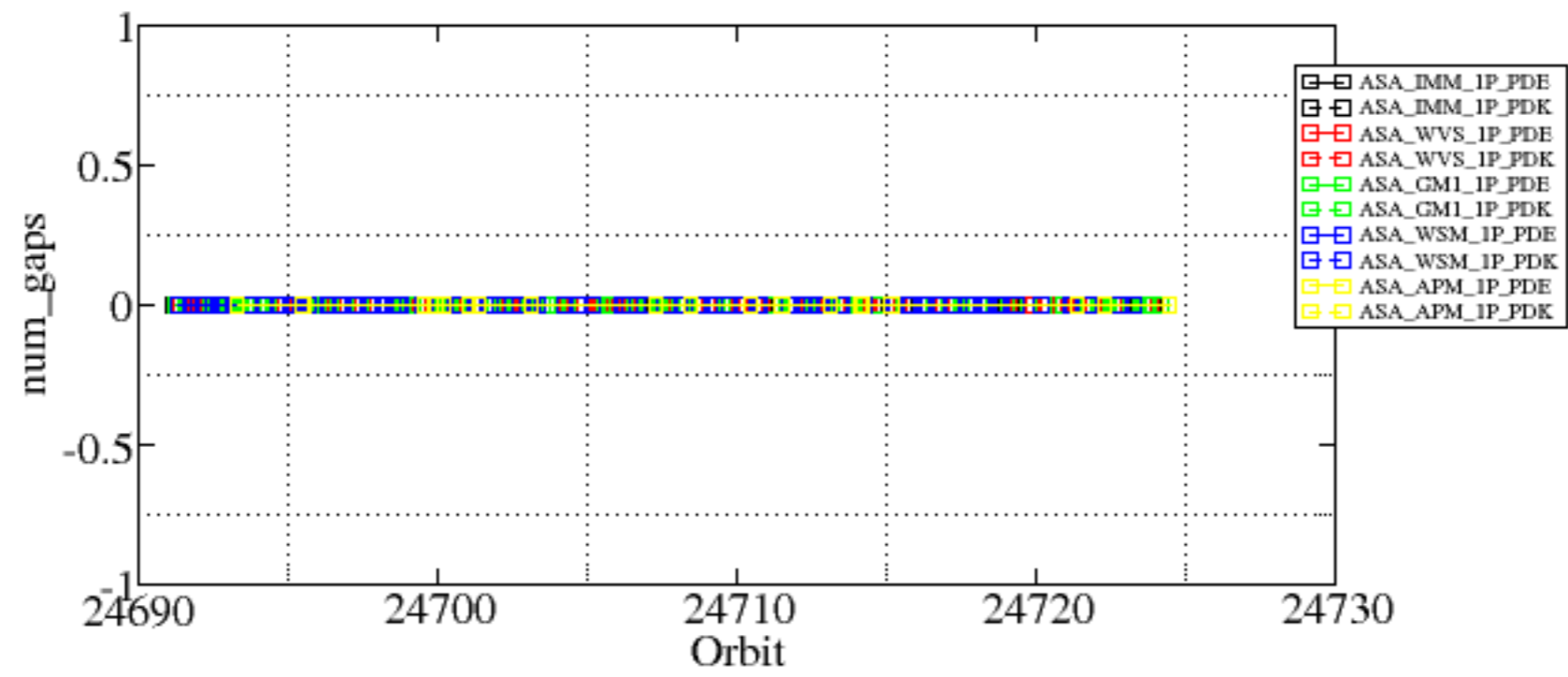


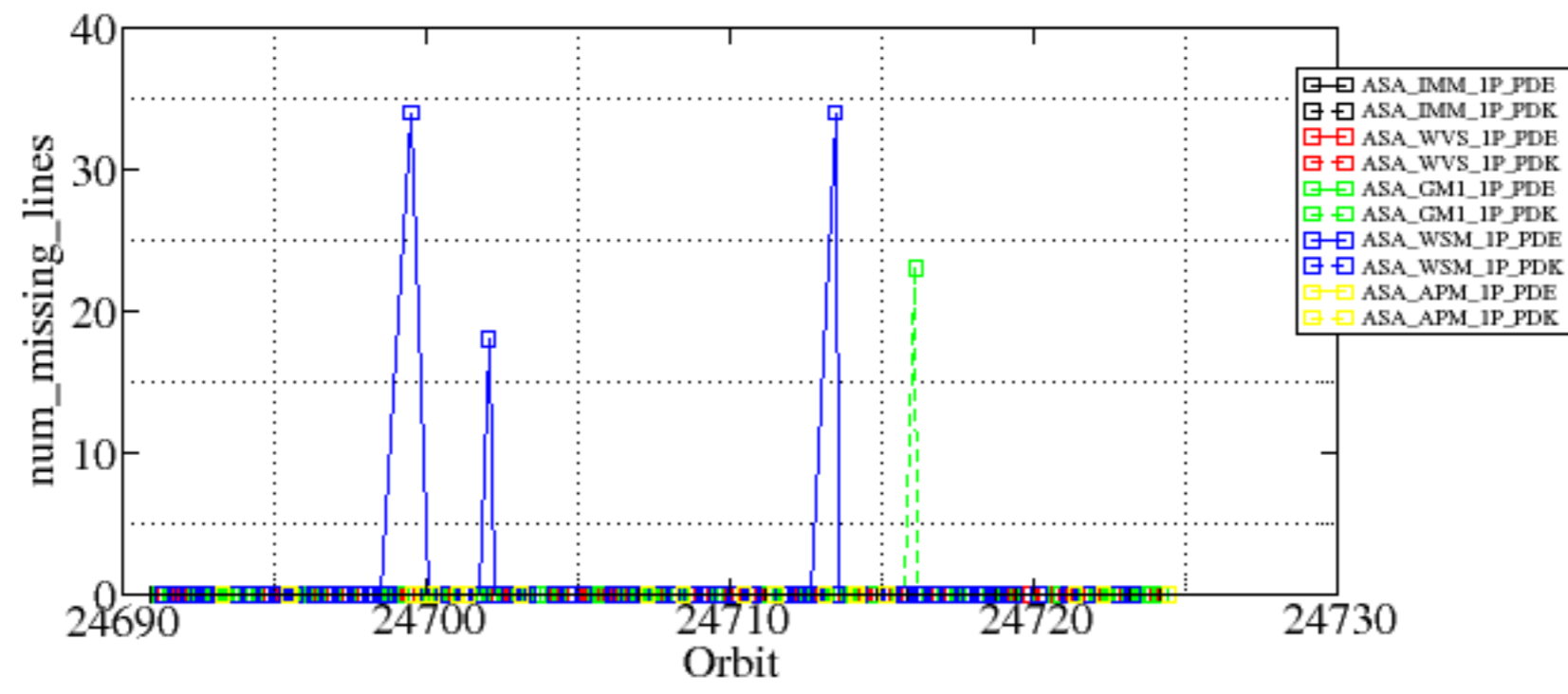


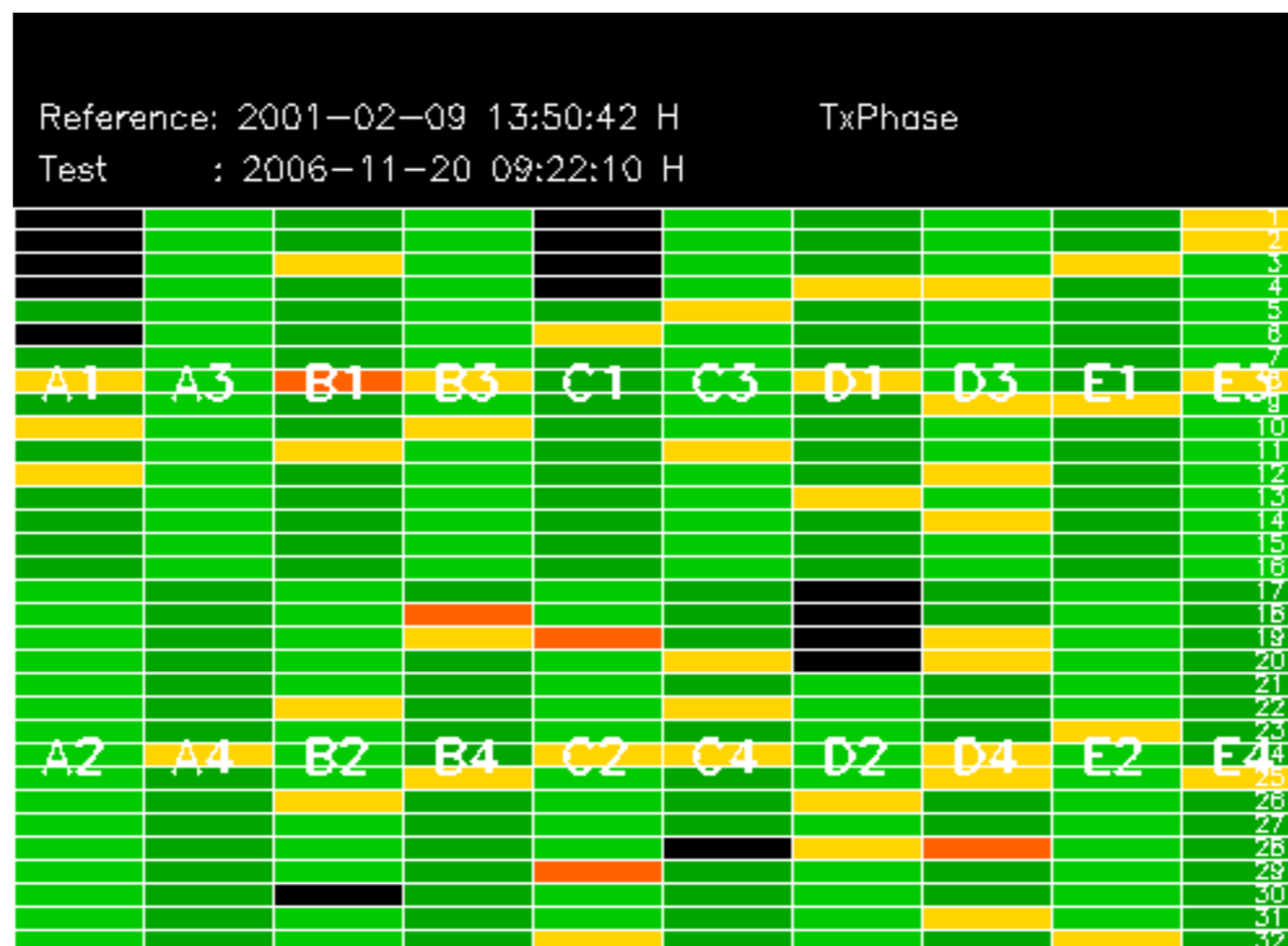
Summary of analysis for the last 3 days 2006112[012]

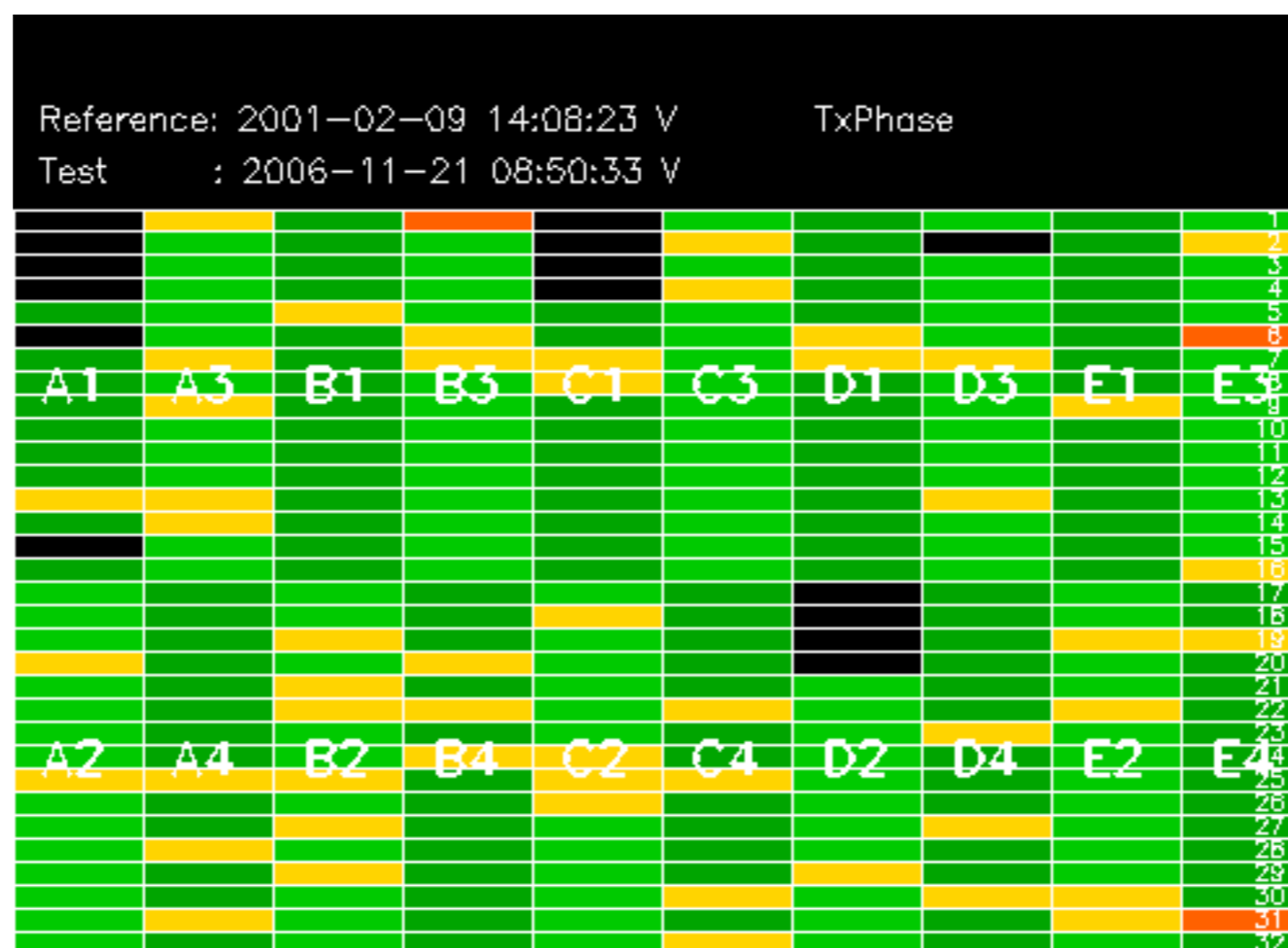
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

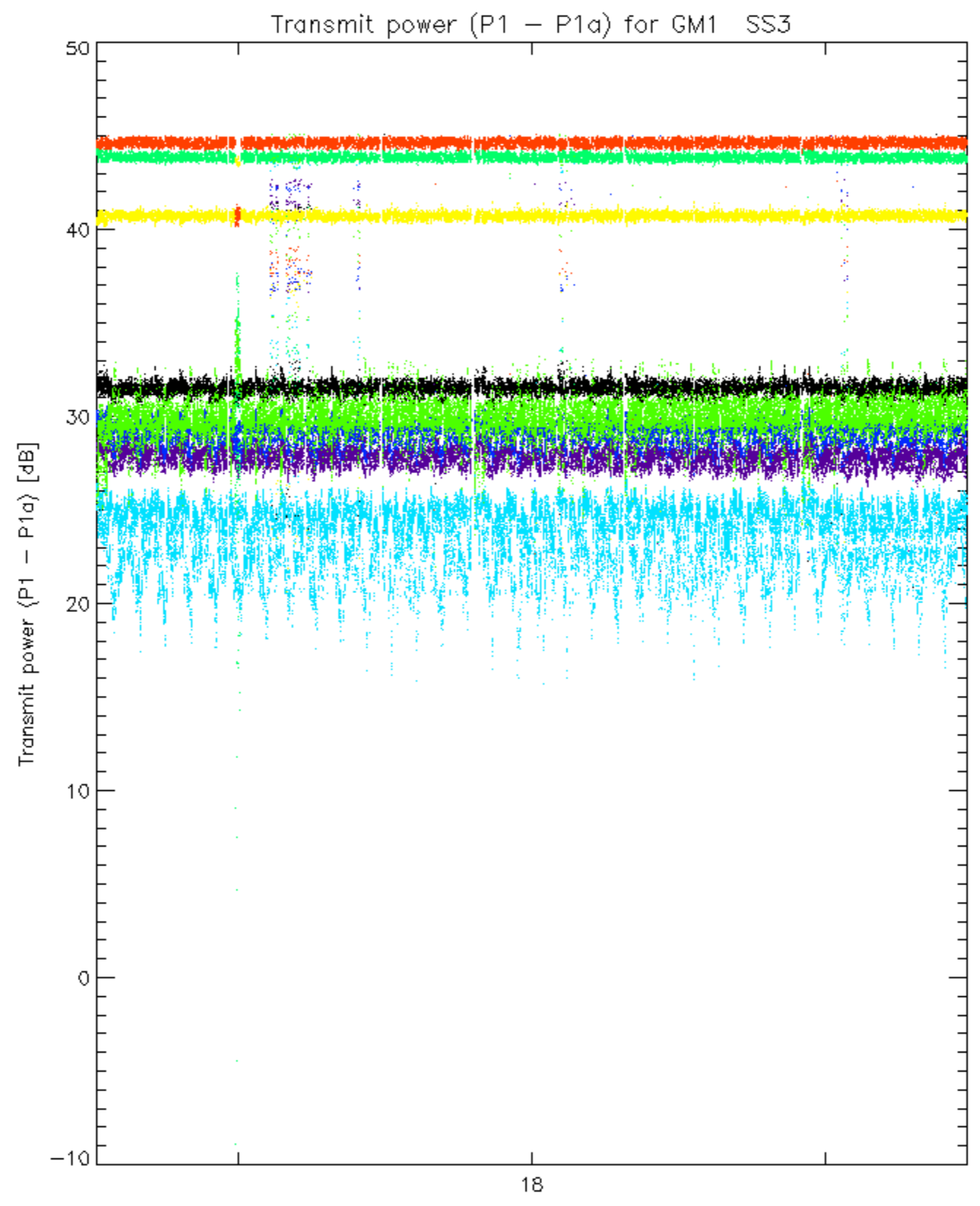
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20061121_175710_000004892053_00113_24716_9089.N1	0	23
ASA_WSM_1PNPDE20061120_140442_000002022053_00096_24699_0001.N1	0	34
ASA_WSM_1PNPDE20061120_182348_000001652053_00099_24702_0001.N1	0	18
ASA_WSM_1PNPDE20061121_133205_000001592053_00110_24713_3226.N1	0	34



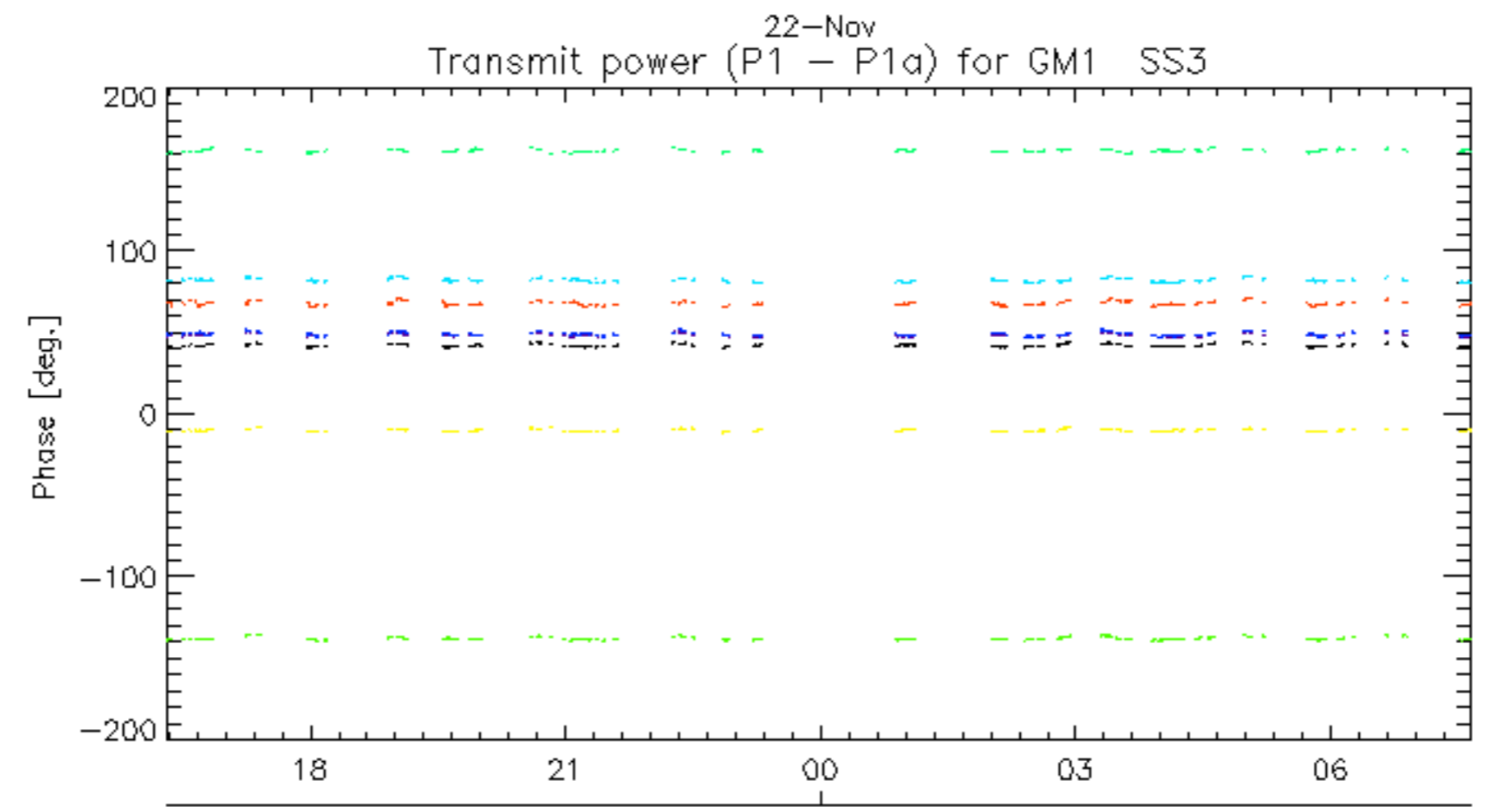
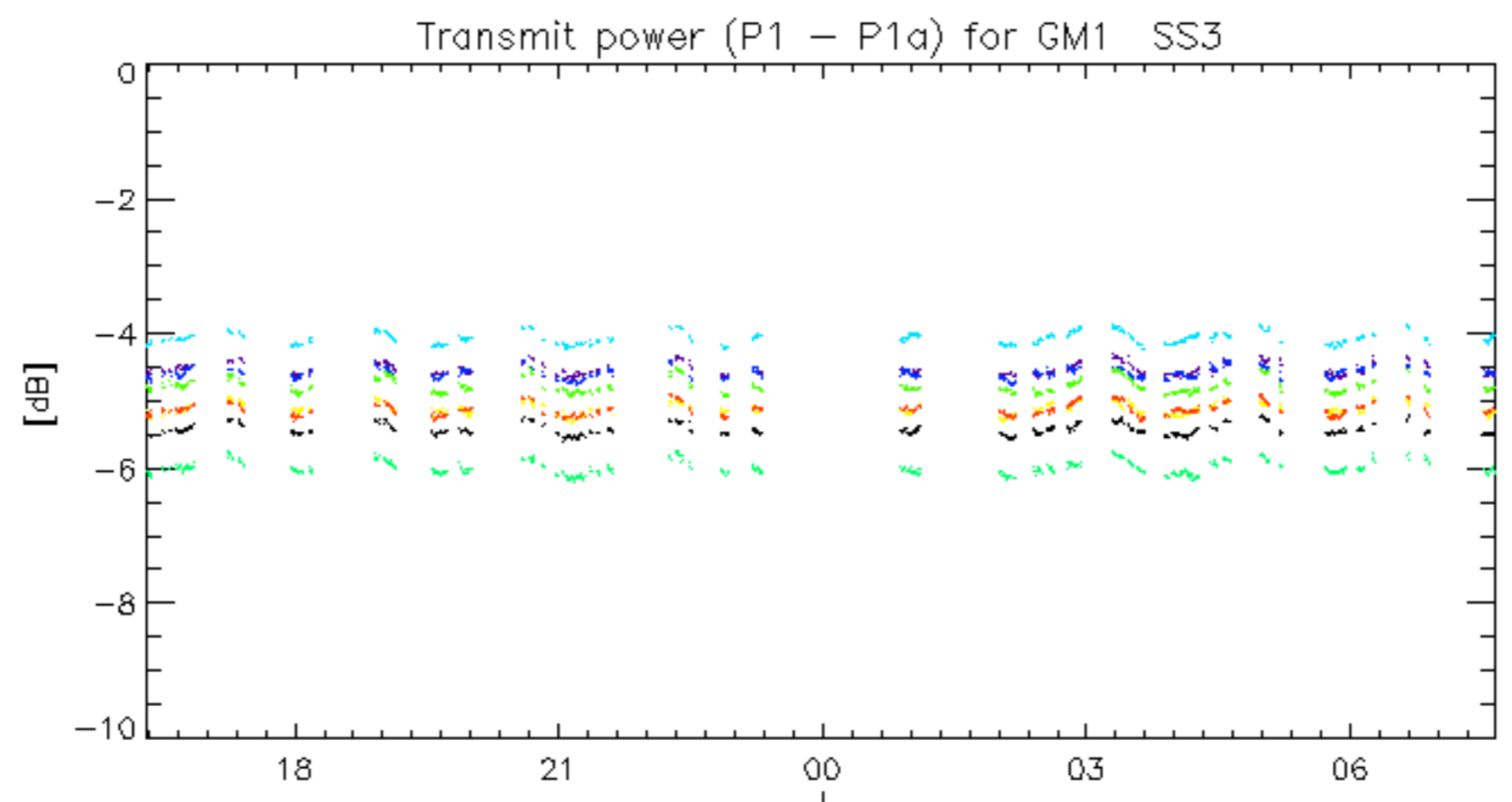






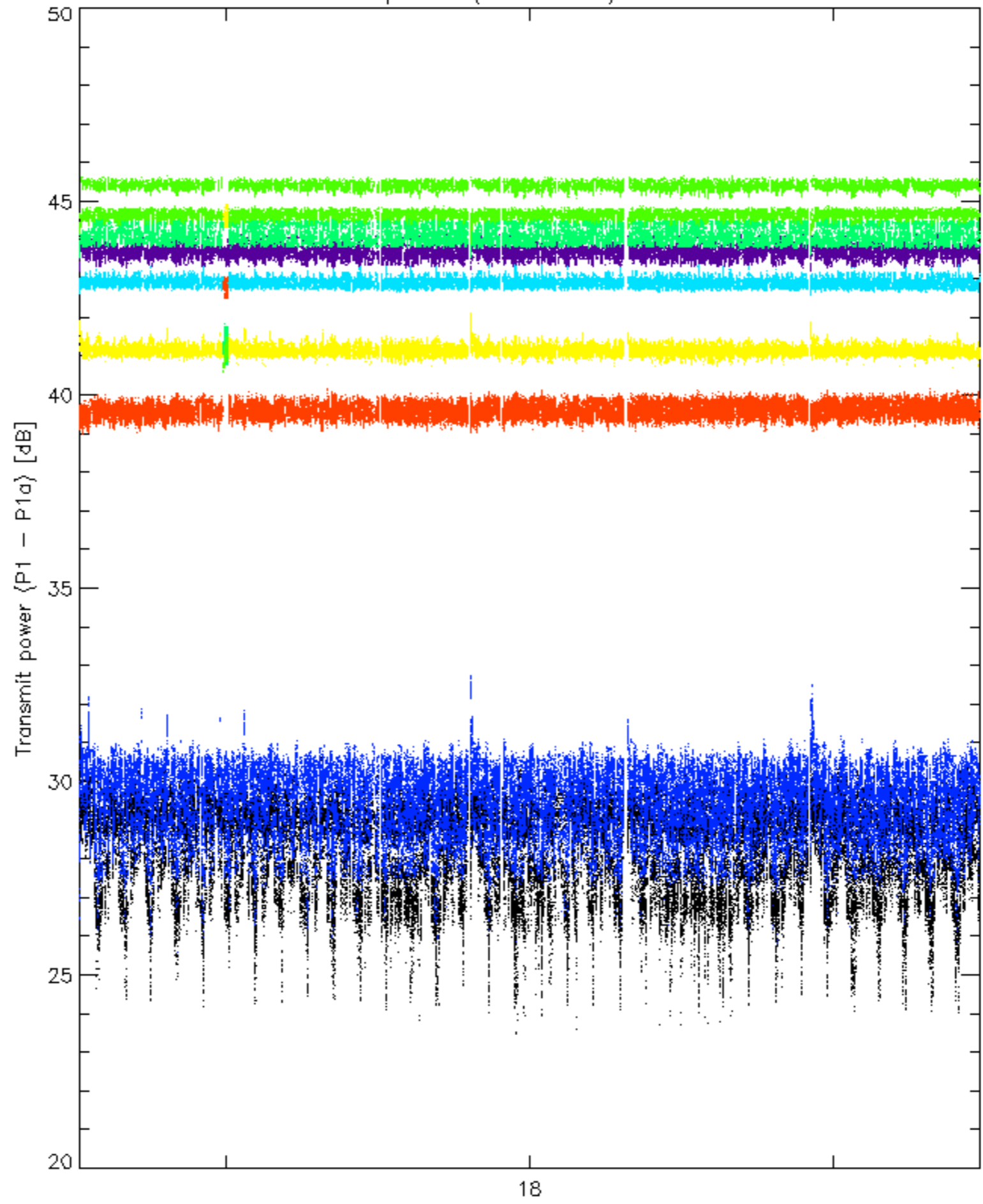


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

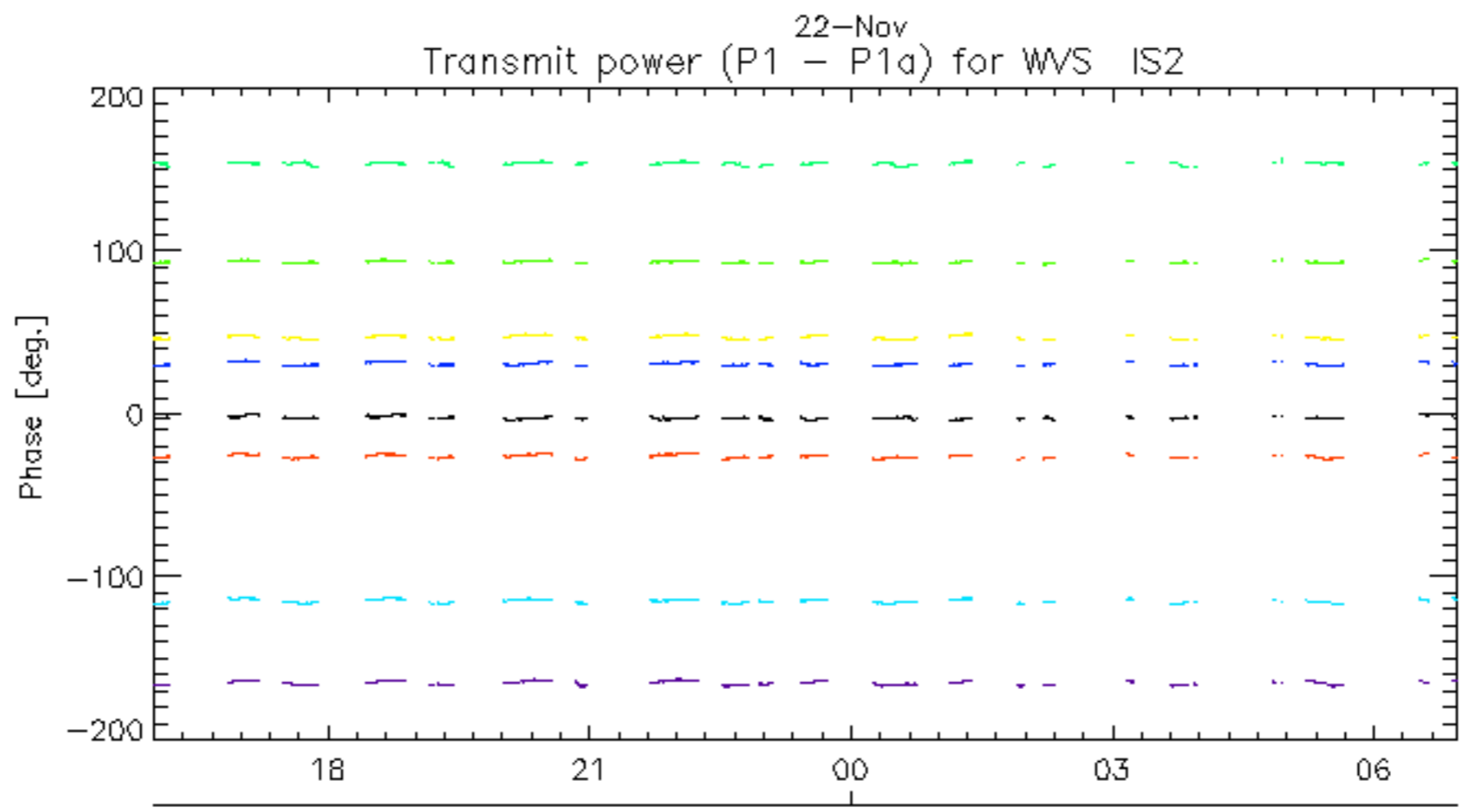
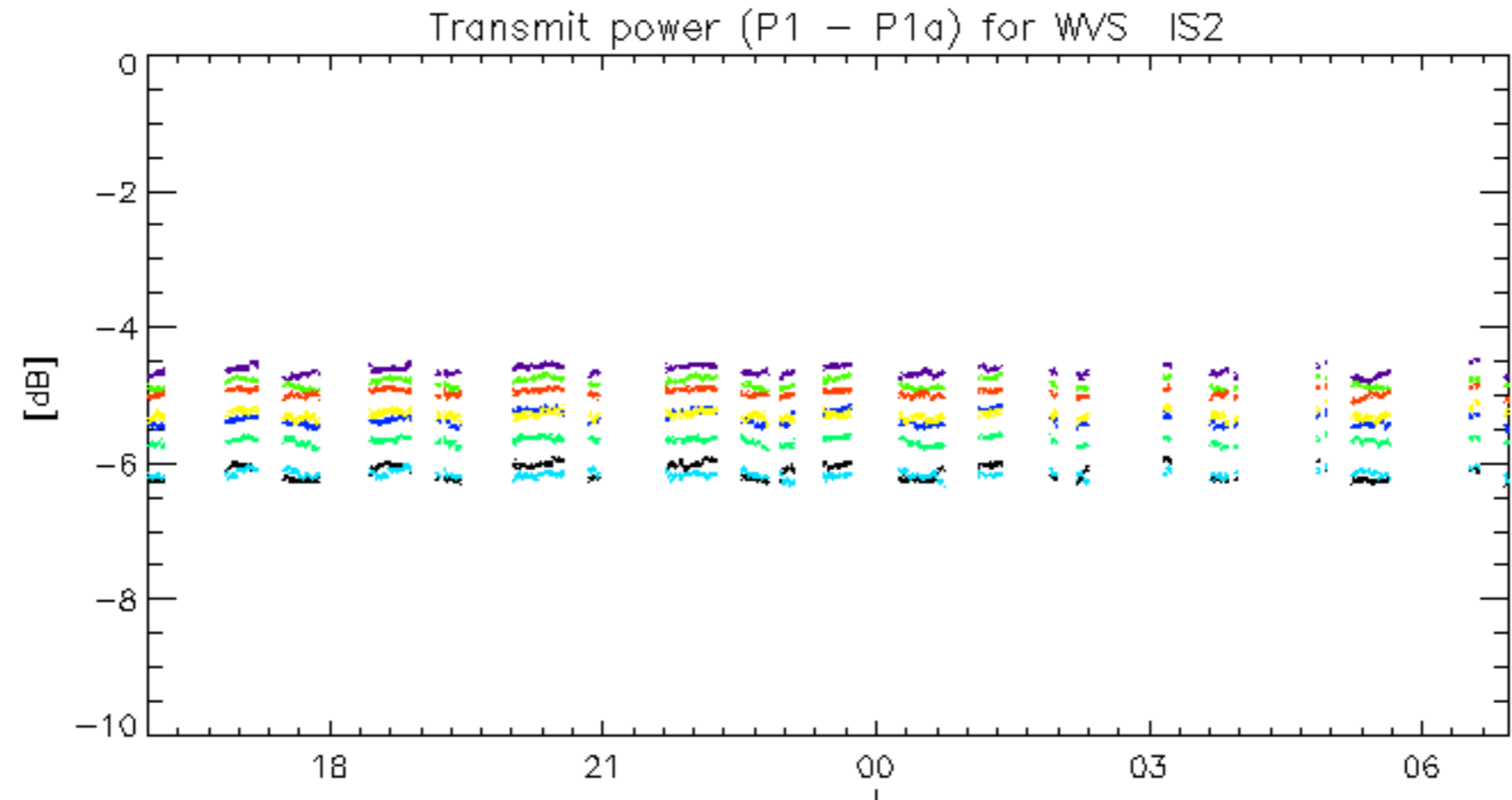


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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

No unavailabilities during the reported period.