

PRELIMINARY REPORT OF 050805

last update on Fri Aug 5 10:50:01 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 2005-08-04 00:00:00 to 2005-08-05 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	27	56	10	5	21
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	27	56	10	5	21
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	27	56	10	5	21
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	27	56	10	5	21

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	37	65	37	8	49
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	35	62	37	8	46
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	65	37	8	49
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	2	3	0	0	3
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	65	37	8	49

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	20050805 063530
H	20050804 070707

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	-3.323476	0.033098	-0.073552
7	P1	-3.154810	0.032479	-0.114439
11	P1	-4.707685	0.032632	-0.031134
15	P1	-5.585217	0.052543	-0.086116
19	P1	-3.791136	0.004161	-0.041317
22	P1	-4.644151	0.121681	-0.038150
26	P1	-4.856498	0.157305	0.013928
30	P1	-7.246593	0.159055	-0.009114
3	P1	-15.556415	0.076270	0.096308
7	P1	-15.501799	0.167418	0.169250
11	P1	-21.721945	0.257279	-0.201826
15	P1	-11.284255	0.082801	0.102781
19	P1	-14.481708	0.036516	-0.018192
22	P1	-15.718190	0.348080	0.110577
26	P1	-17.365501	0.203106	0.294548
30	P1	-17.745564	0.442054	-0.094186

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.827665	0.083892	0.090027
7	P2	-21.986637	0.101966	0.130654
11	P2	-13.587476	0.105803	0.214365
15	P2	-7.072305	0.092643	0.035359
19	P2	-9.587955	0.096089	-0.014017
22	P2	-16.842215	0.097358	0.053061
26	P2	-16.506481	0.099607	-0.009357
30	P2	-18.794460	0.087979	-0.035750

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.156146	0.002481	0.000035
7	P3	-8.156146	0.002481	0.000035
11	P3	-8.156146	0.002481	0.000035
15	P3	-8.156146	0.002481	0.000035
19	P3	-8.156146	0.002481	0.000035
22	P3	-8.156146	0.002481	0.000035
26	P3	-8.156146	0.002481	0.000035
30	P3	-8.156146	0.002481	0.000035

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	-2.811187	0.116799	-0.235756
7	P1	-2.974308	0.067447	-0.139944
11	P1	-4.005435	0.015651	-0.039776
15	P1	-3.609822	0.072166	-0.209406
19	P1	-3.631688	0.016323	0.039977
22	P1	-5.692380	0.118536	-0.069642
26	P1	-7.403715	0.217092	0.001134
30	P1	-6.335200	0.107033	0.036196
3	P1	-10.877049	0.053761	-0.334426
7	P1	-10.458459	0.172852	0.033064
11	P1	-12.636136	0.103343	-0.058475
15	P1	-11.594083	0.106919	0.131108
19	P1	-15.515458	0.070656	0.164784
22	P1	-25.641739	3.084335	0.502455

26	P1	-15.324399	0.333364	0.277014
30	P1	-20.038967	1.253203	0.085604

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.566462	0.043652	0.164221
7	P2	-22.029675	0.039823	0.062293
11	P2	-9.624212	0.062728	0.224921
15	P2	-5.110905	0.042850	0.062223
19	P2	-6.892707	0.063779	0.069564
22	P2	-7.064126	0.037042	0.064838
26	P2	-23.969666	0.038006	0.020695
30	P2	-21.950909	0.043151	0.028075

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.997878	0.004116	0.009575
7	P3	-7.997746	0.004111	0.009955
11	P3	-7.997673	0.004118	0.009697
15	P3	-7.997653	0.004112	0.010341
19	P3	-7.997772	0.004113	0.010273
22	P3	-7.997738	0.004103	0.010432
26	P3	-7.997798	0.004096	0.009687
30	P3	-7.997638	0.004097	0.009893

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	0.000470806
	stdev	2.16888e-07
MEAN Q	mean	0.000498998
	stdev	2.32011e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128968
	stdev	0.000990676
STDEV Q	mean	0.129229
	stdev	0.00100138



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005080[345]

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_IMM_1PNPDK20050804_125413_000001212039_00339_17928_0953.N1	1	0
ASA_WSM_1PNPDE20050804_200837_000000862039_00343_17932_3001.N1	0	34
ASA_WSM_1PNPDK20050803_081649_000000862039_00322_17911_1095.N1	0	30





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)

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

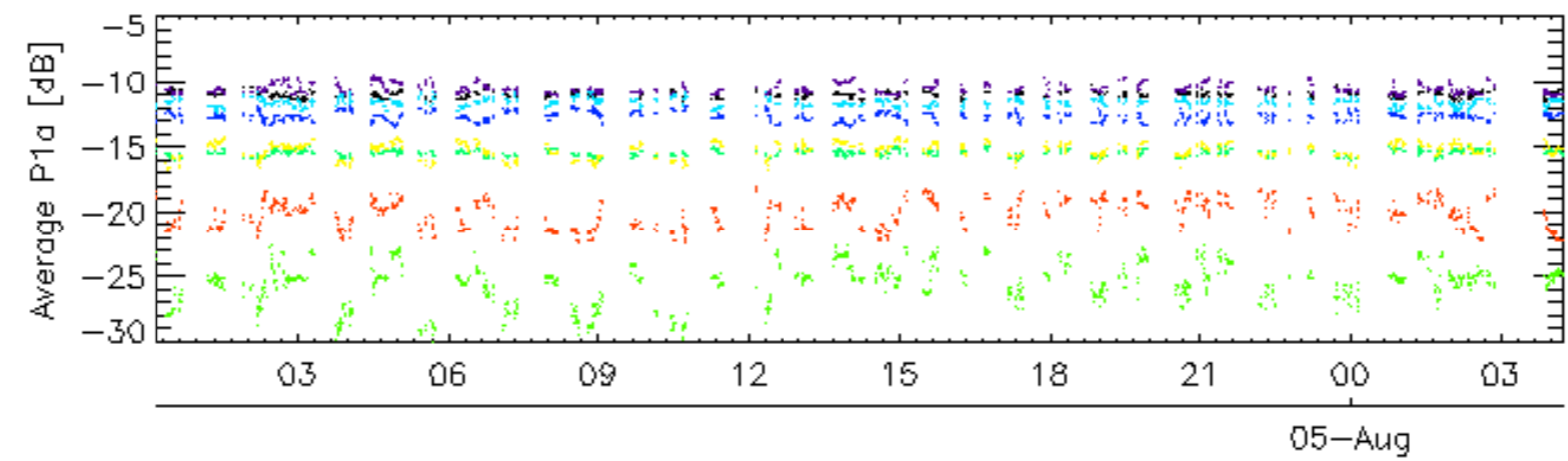
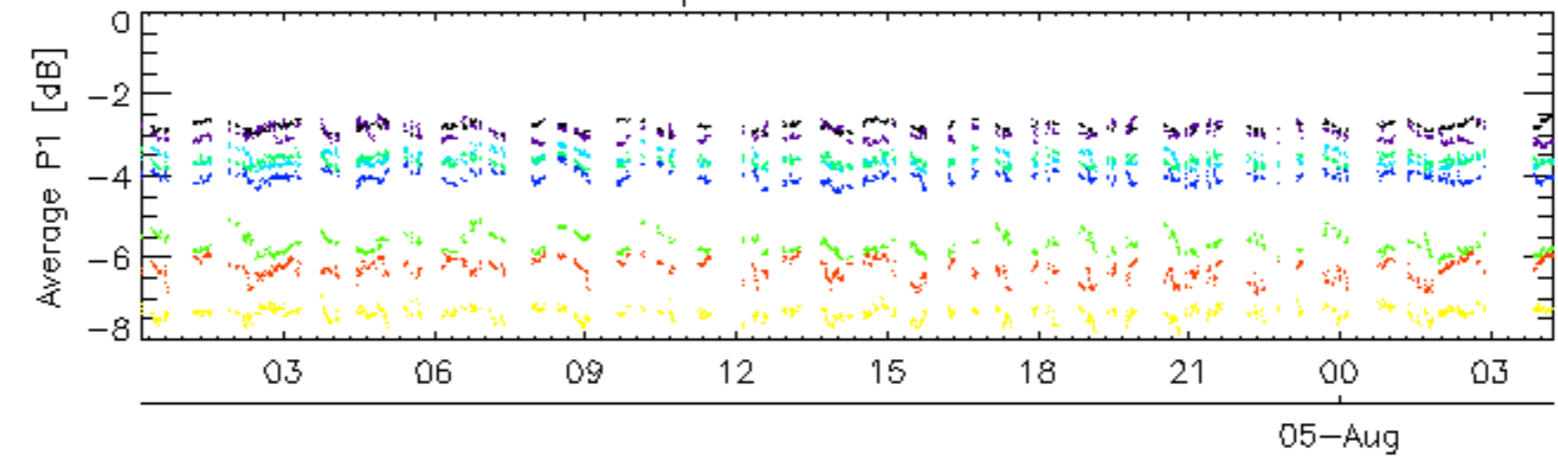
7.5 - Absolute Doppler for GM1

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

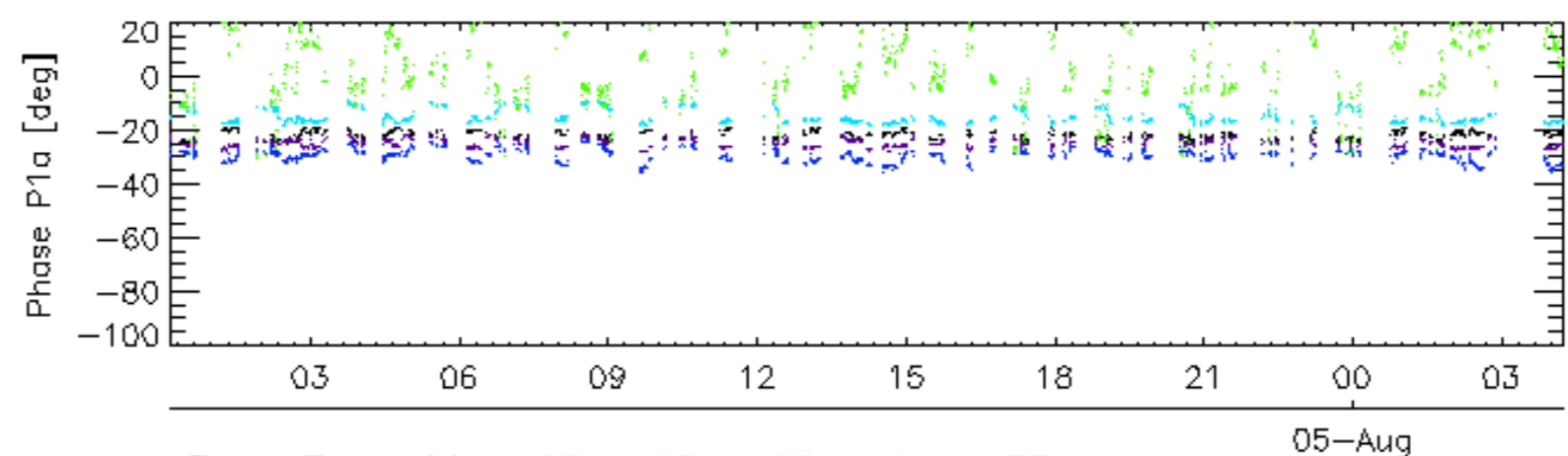
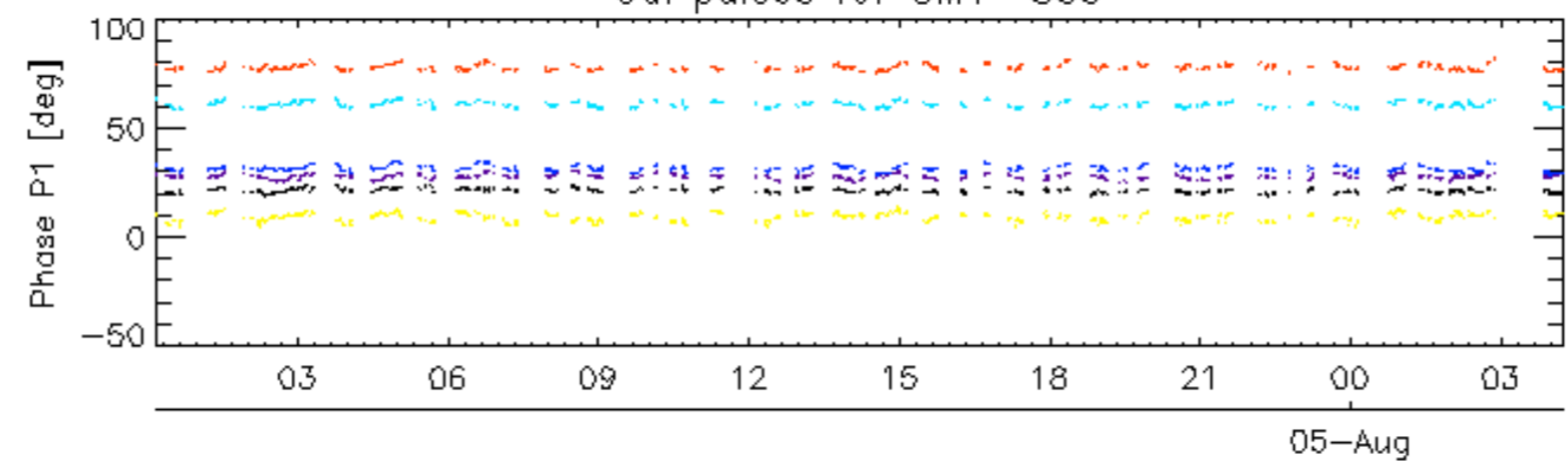
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

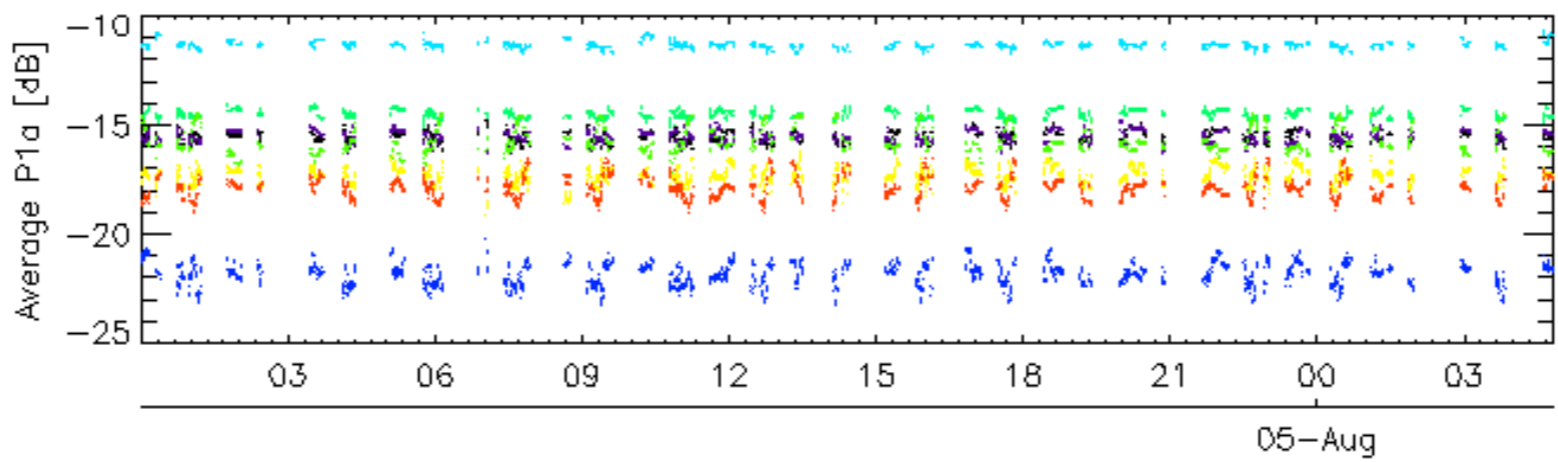
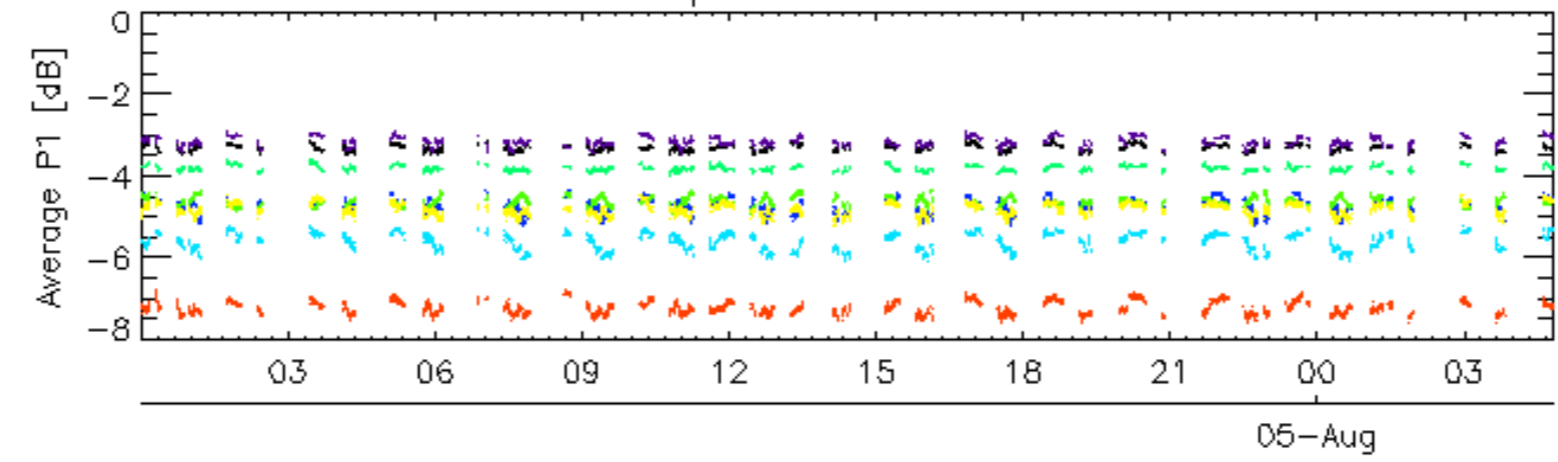


Cal pulses for GM1 SS3

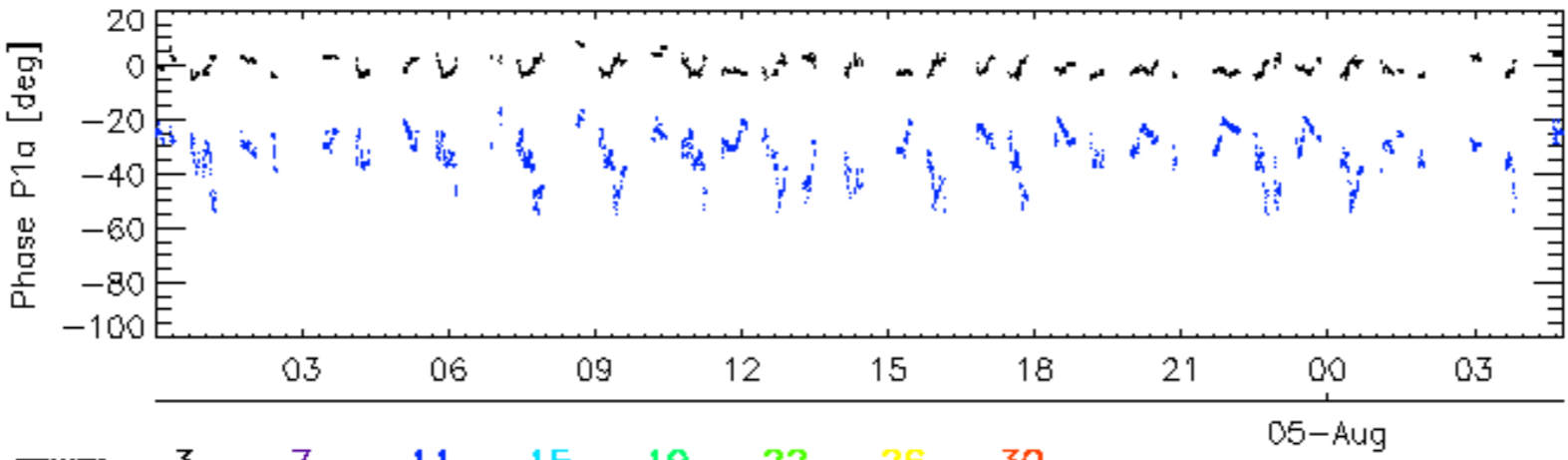
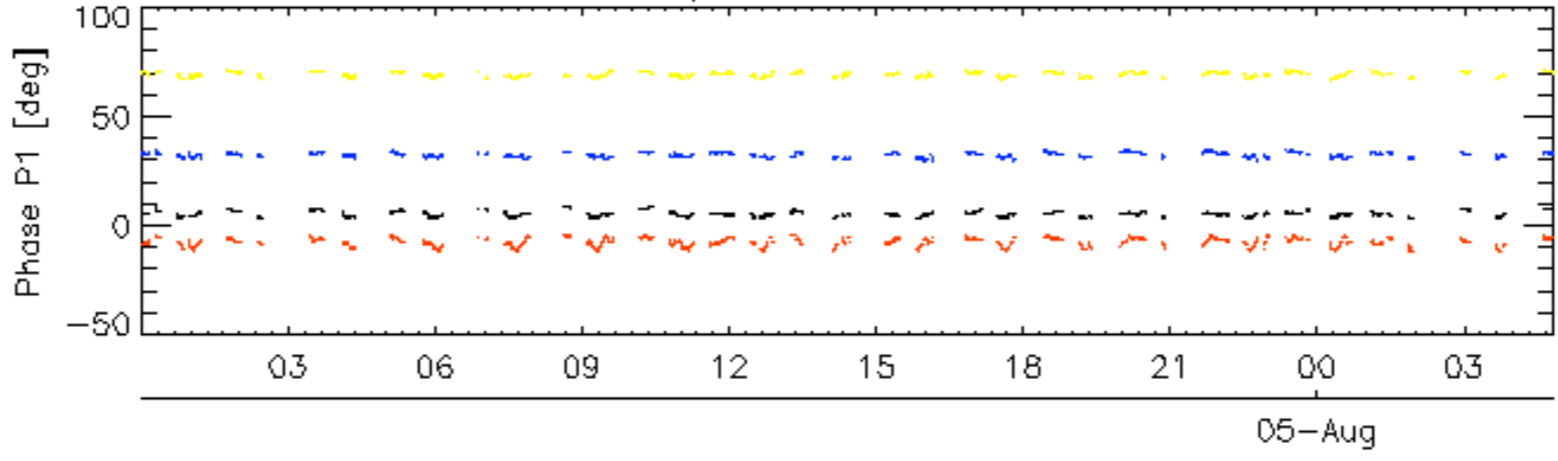


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

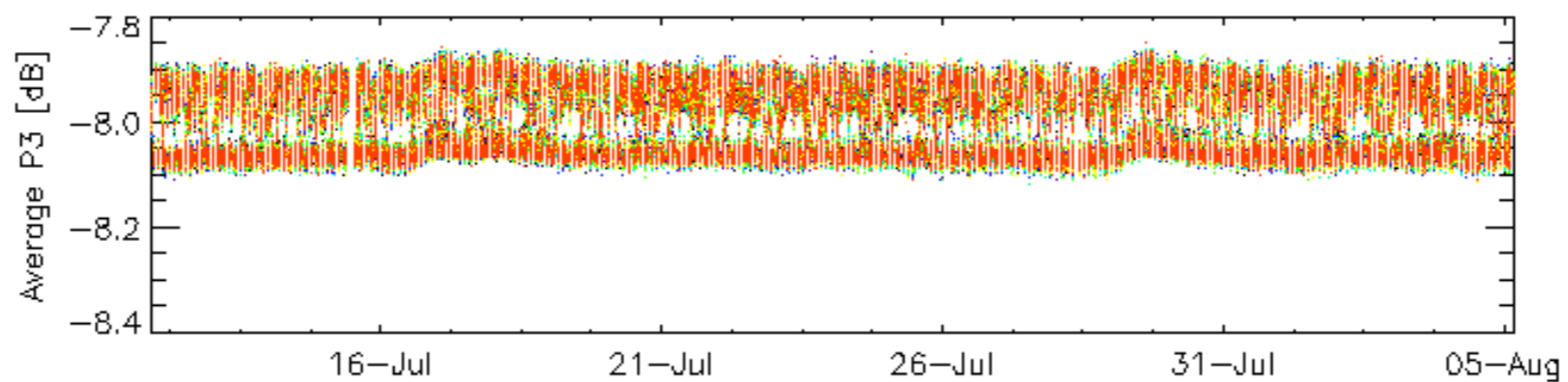
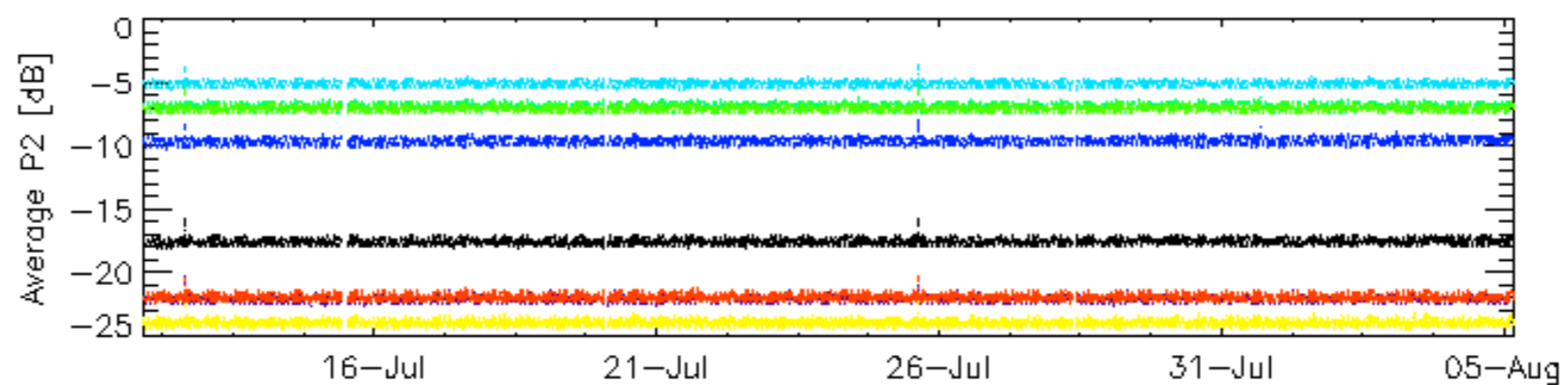
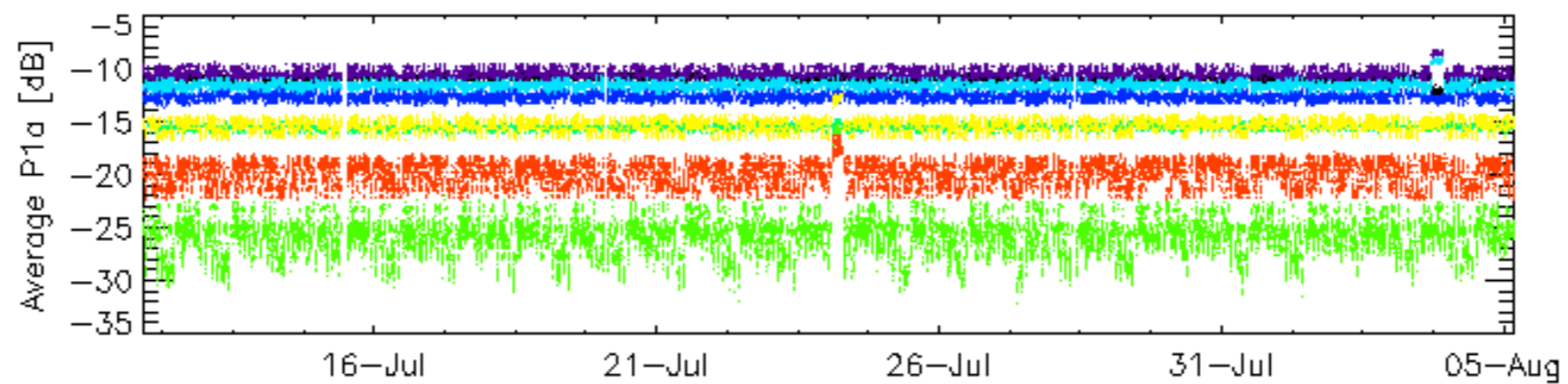
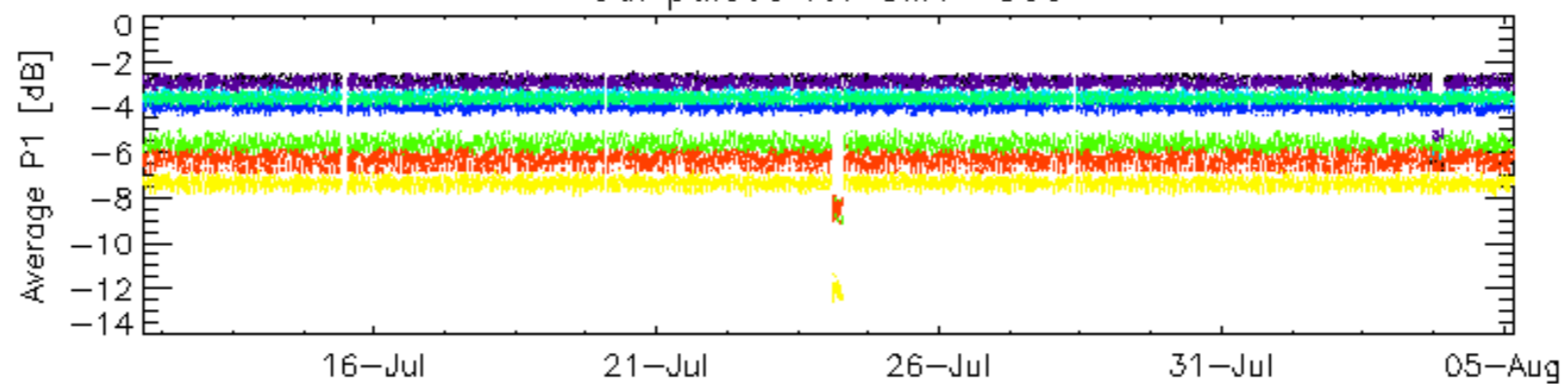


Cal pulses for WVS IS2



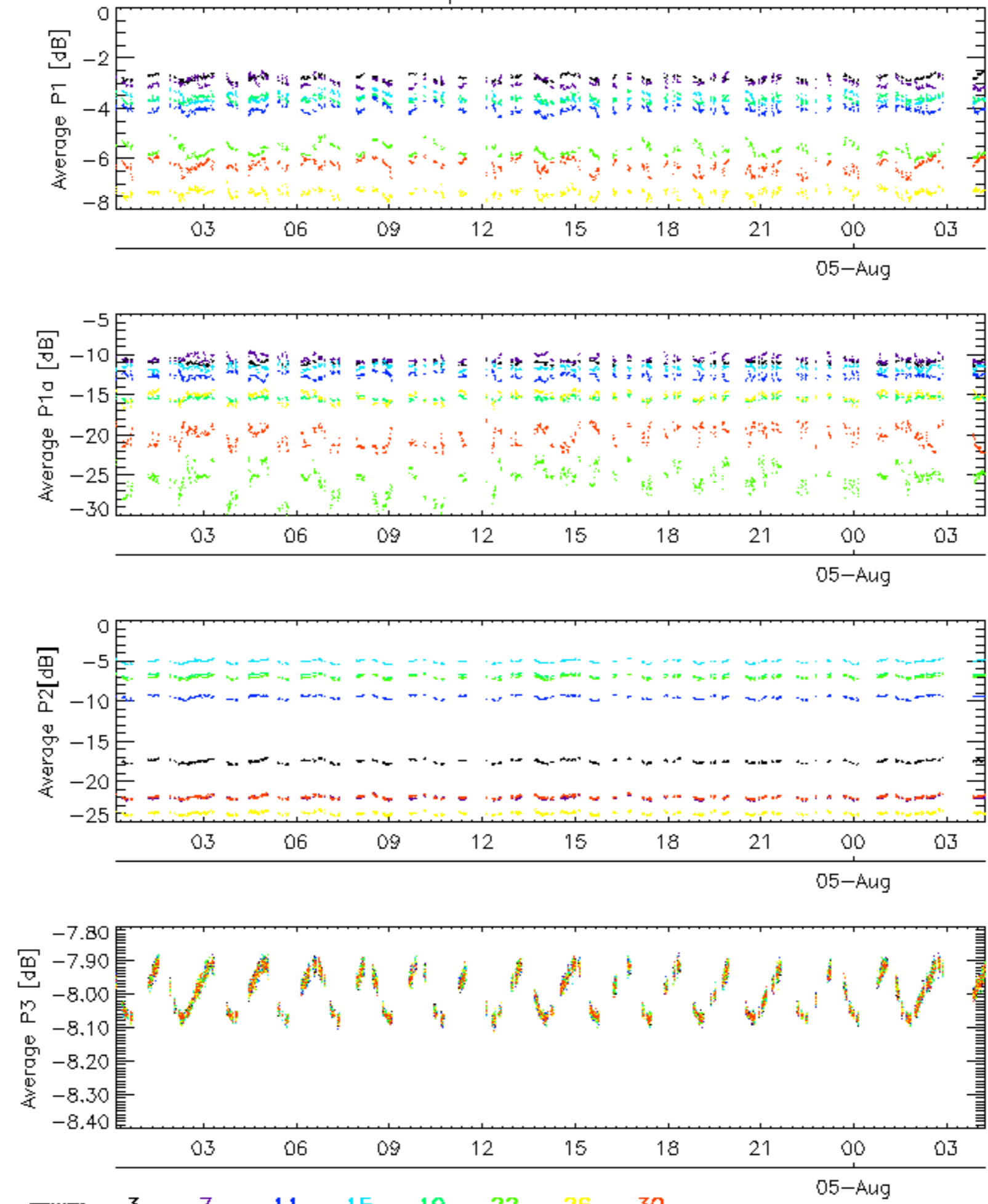
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



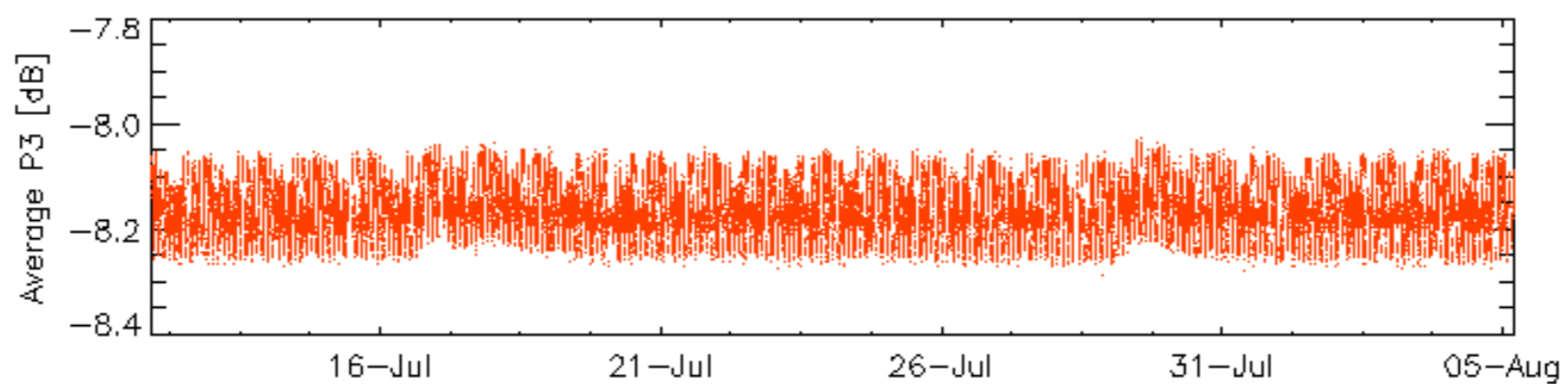
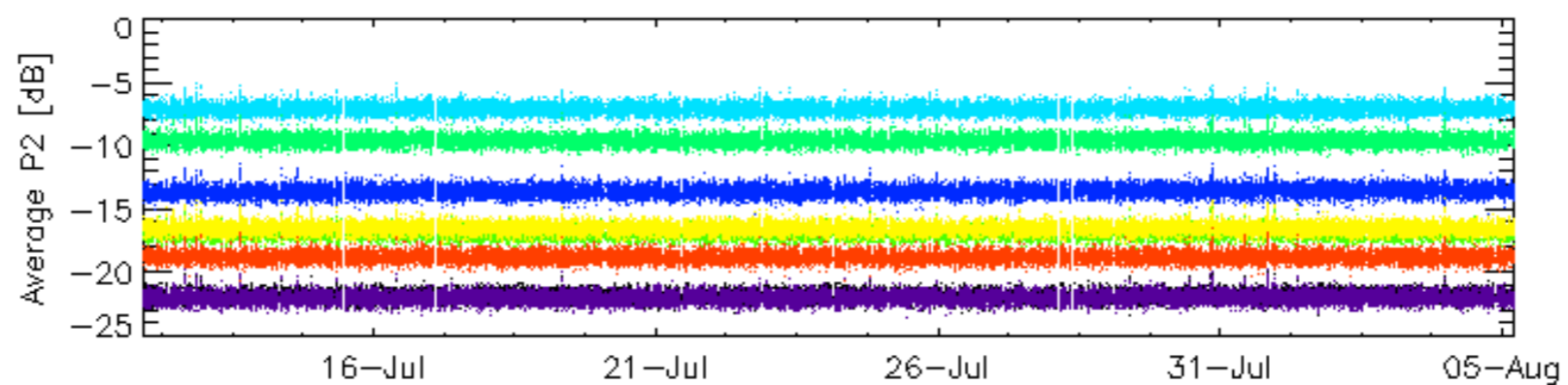
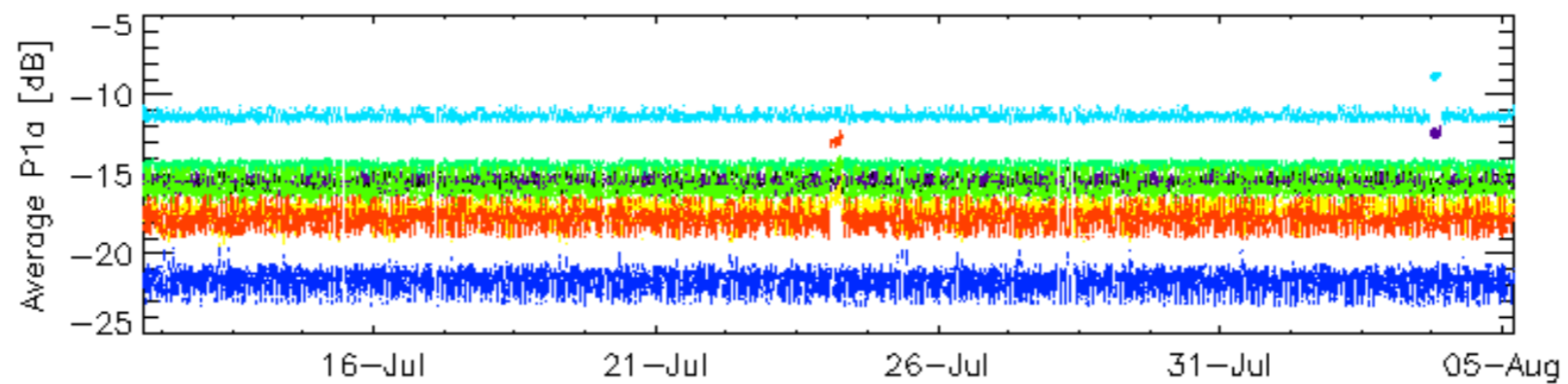
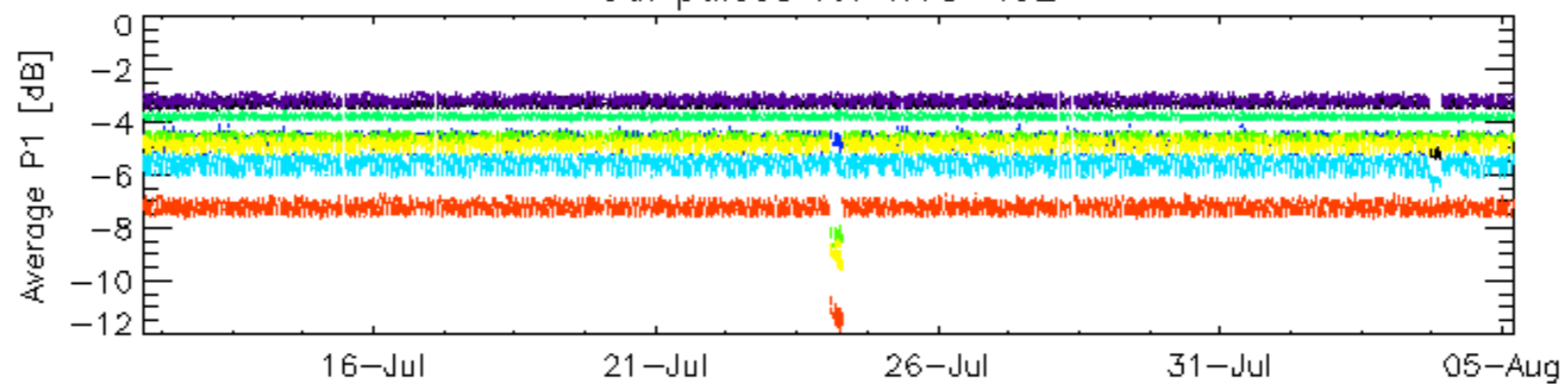
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



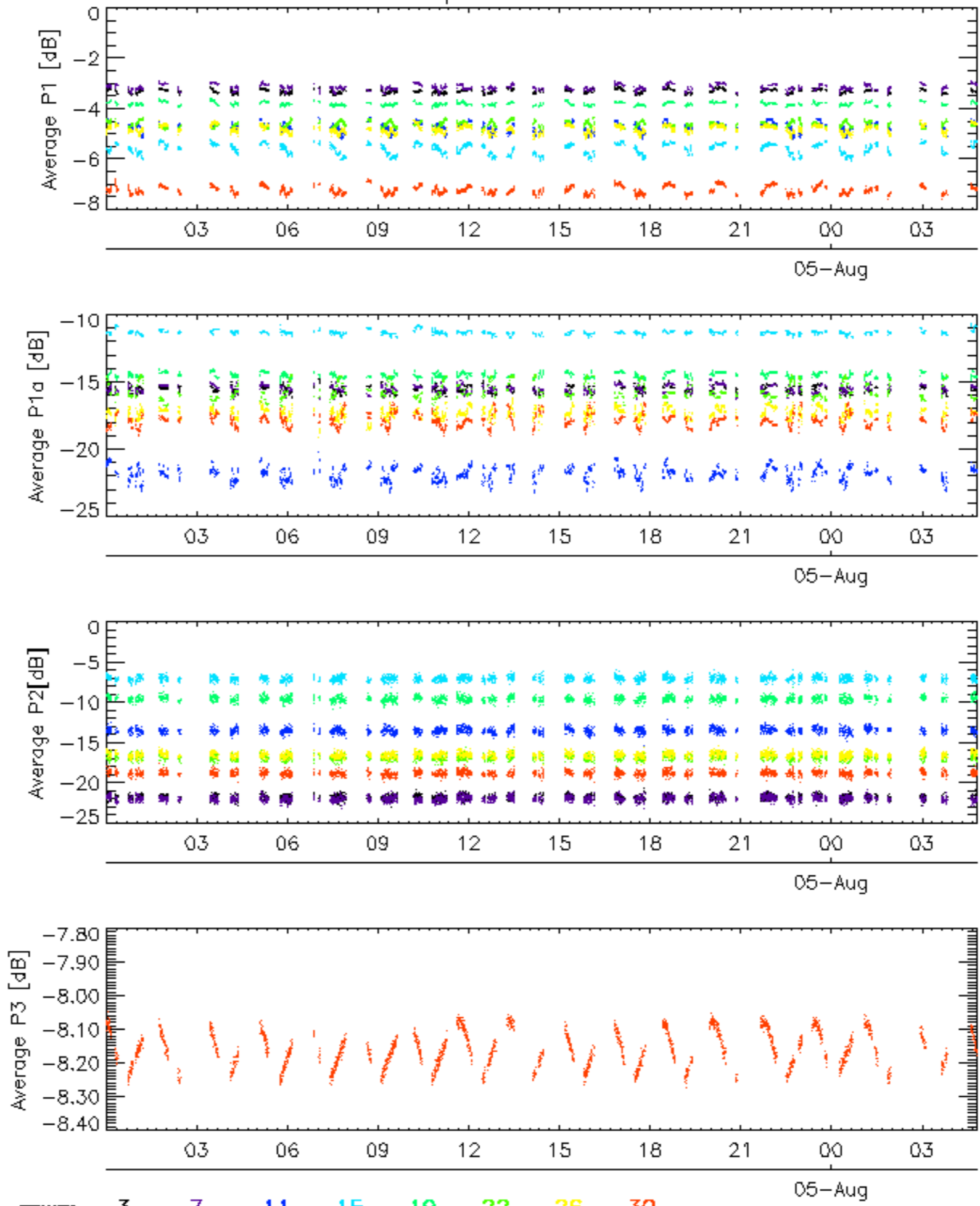
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

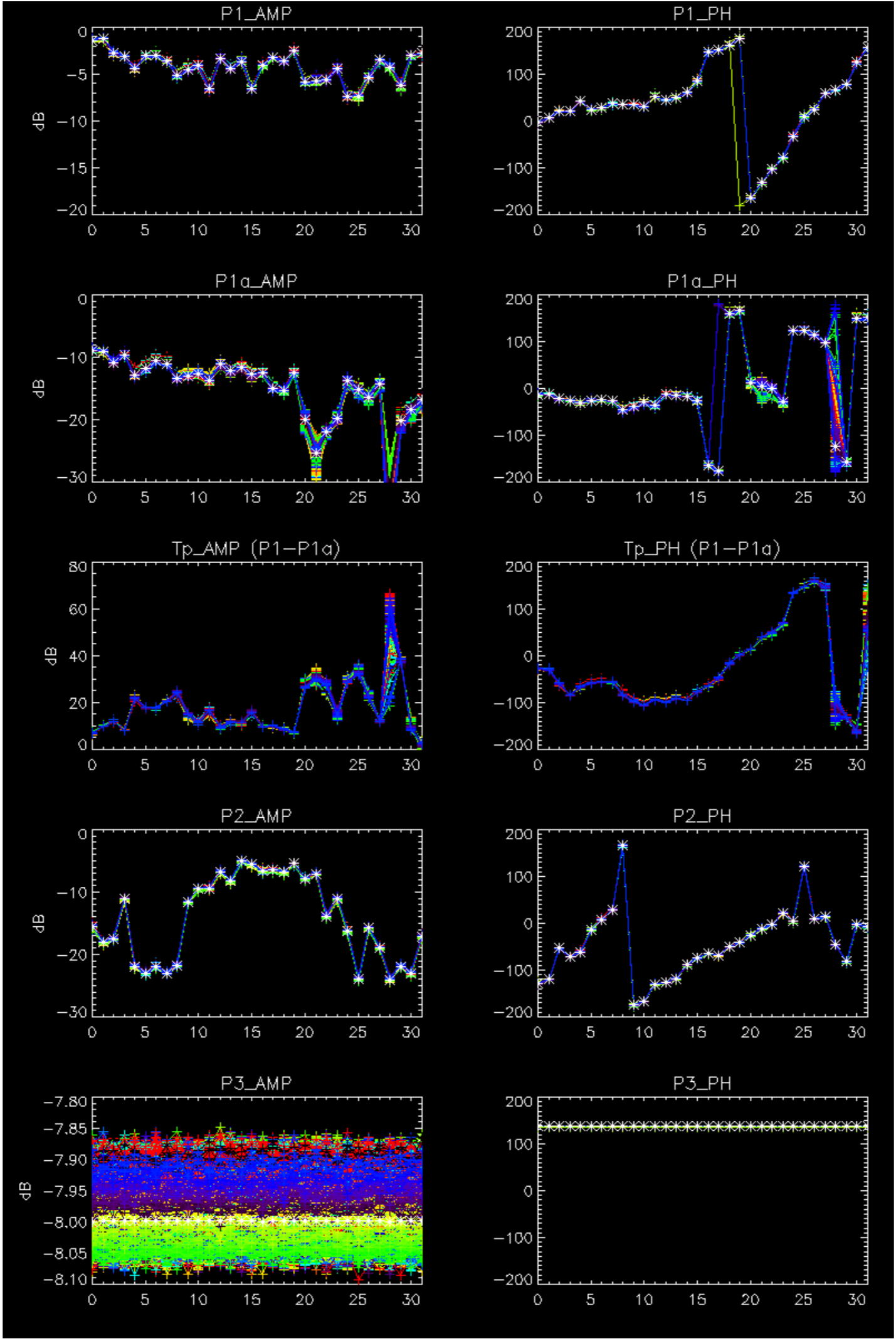


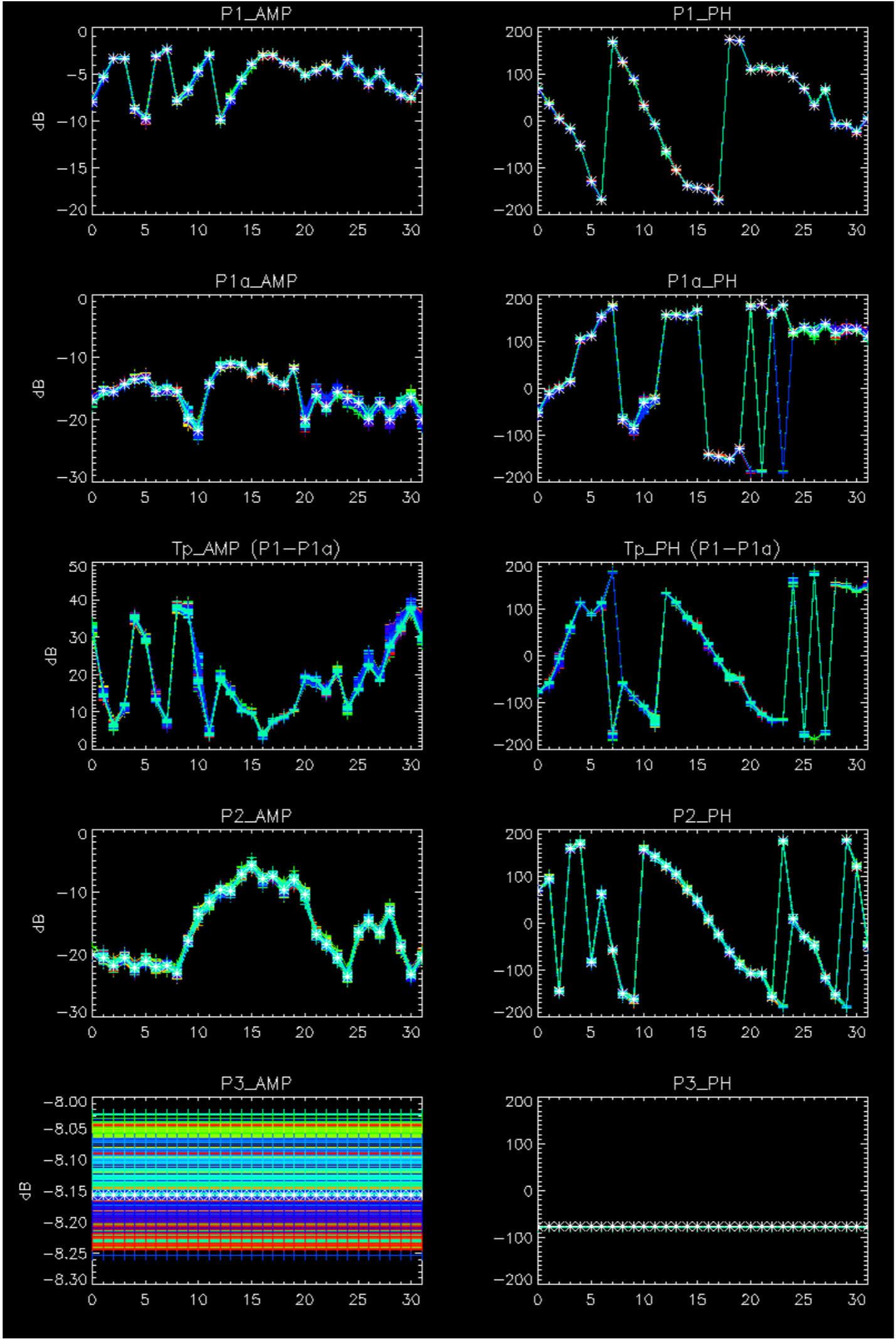
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



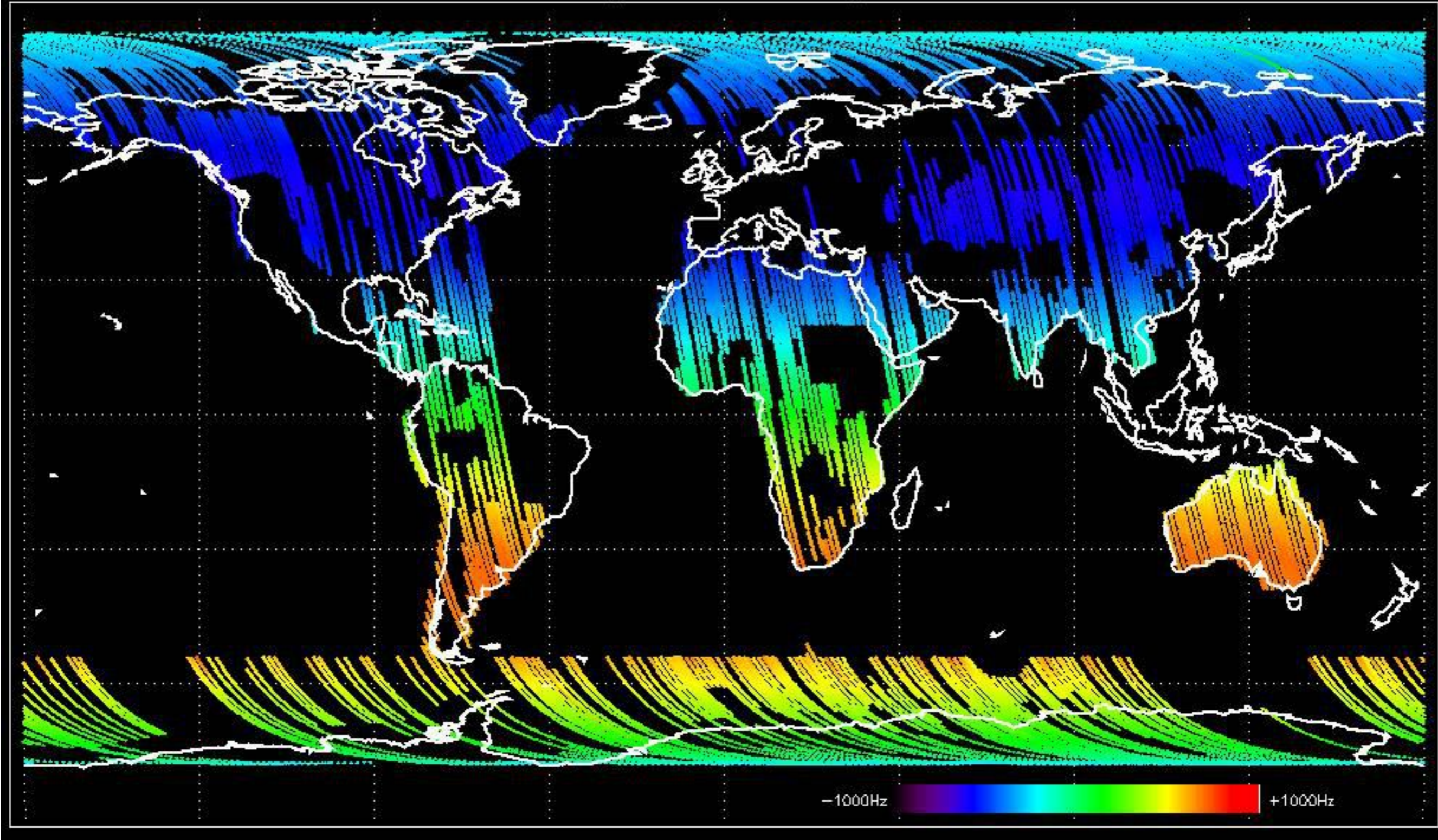
No anomalies observed.



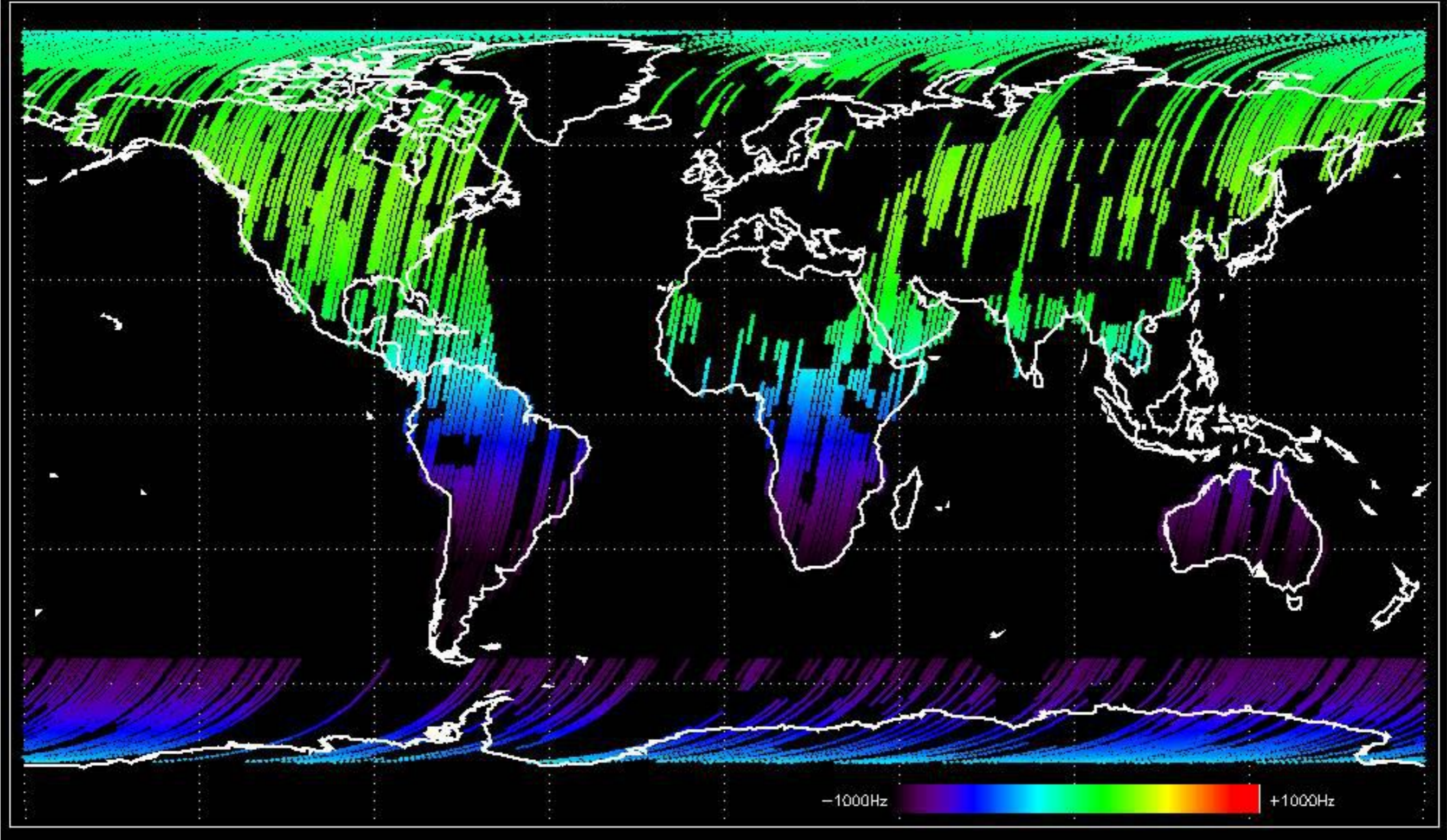


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

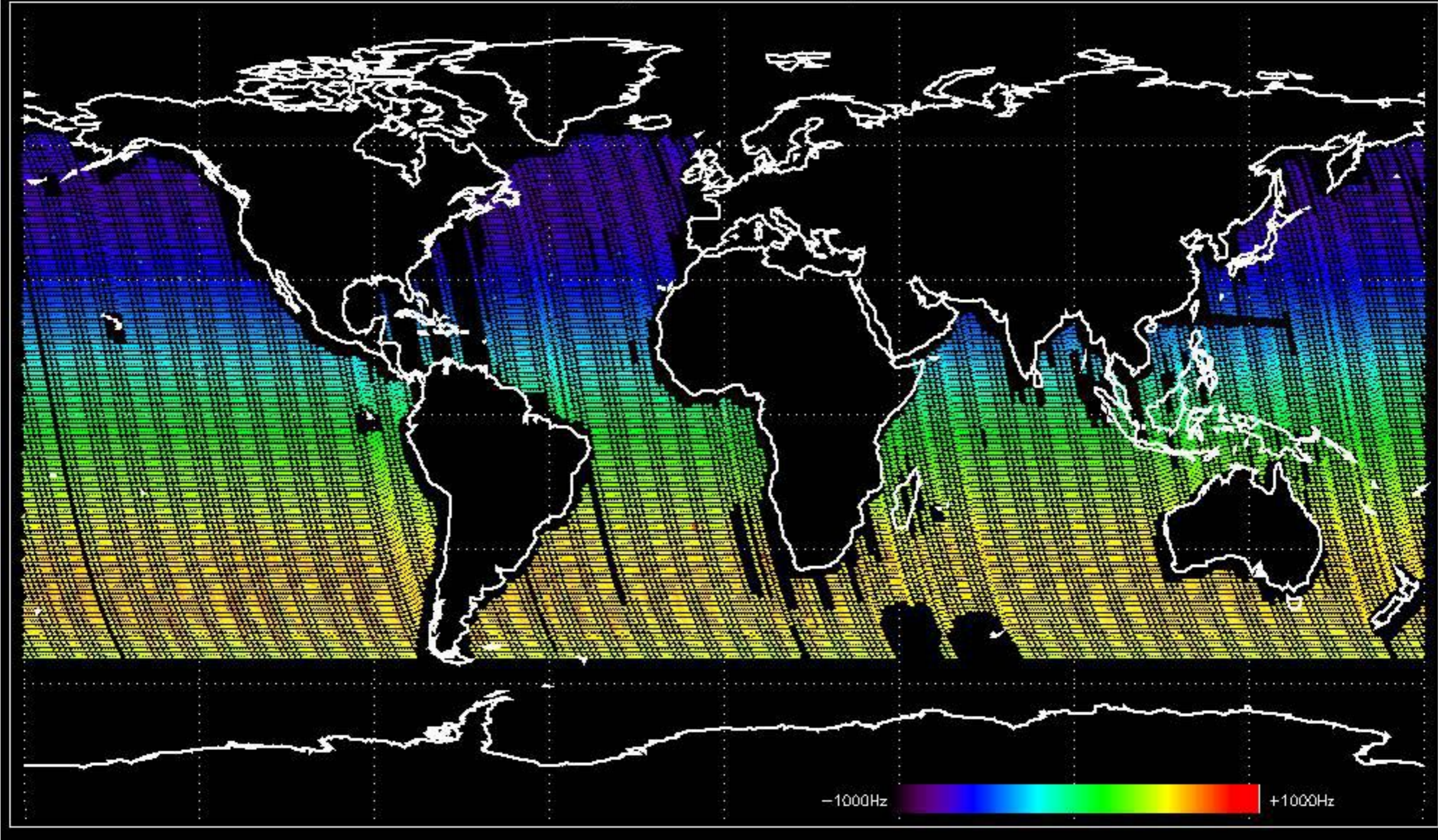
Doppler 'GM1' 'SS1' ascending



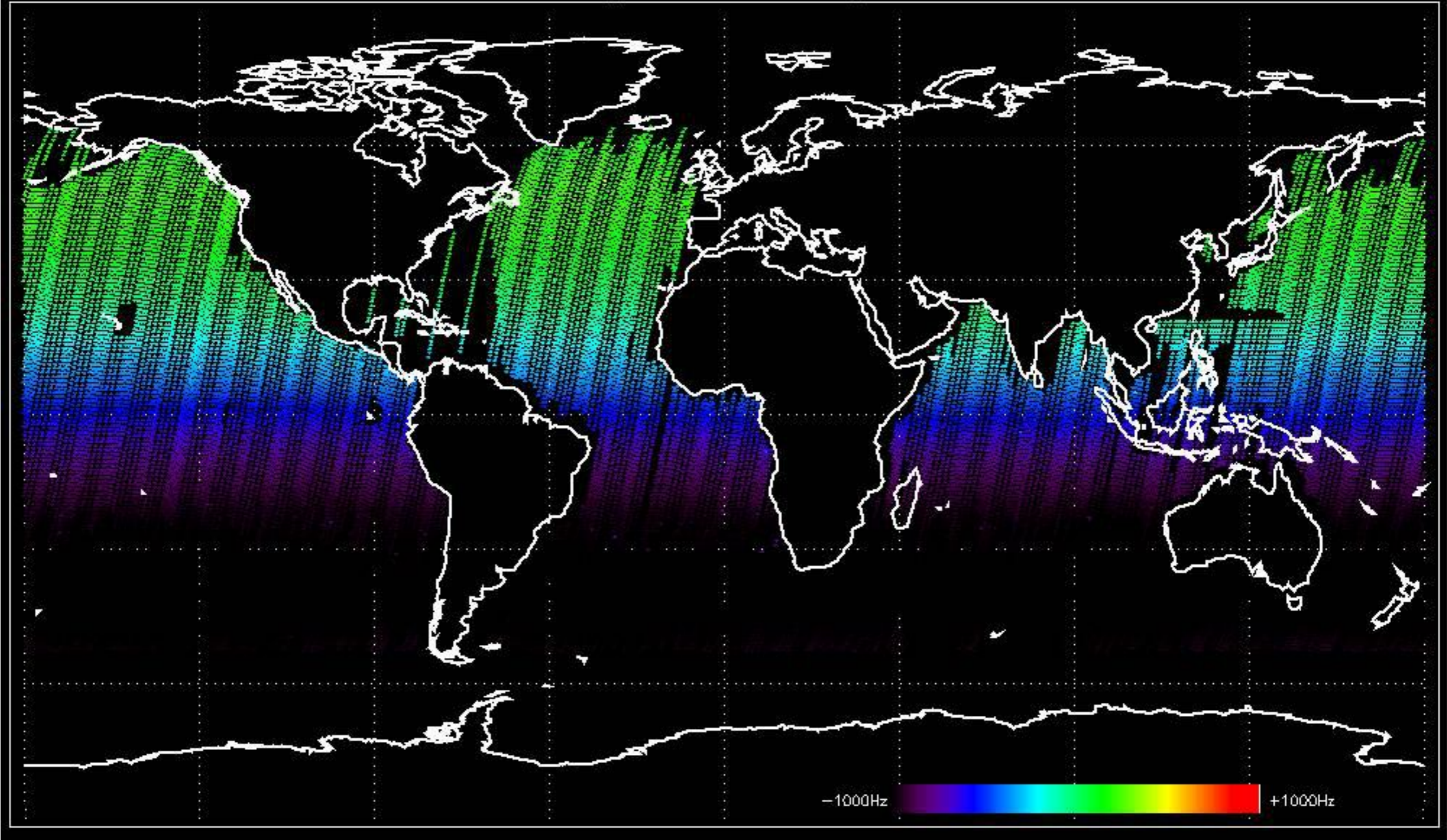
Doppler 'GM1' 'SS1' descending



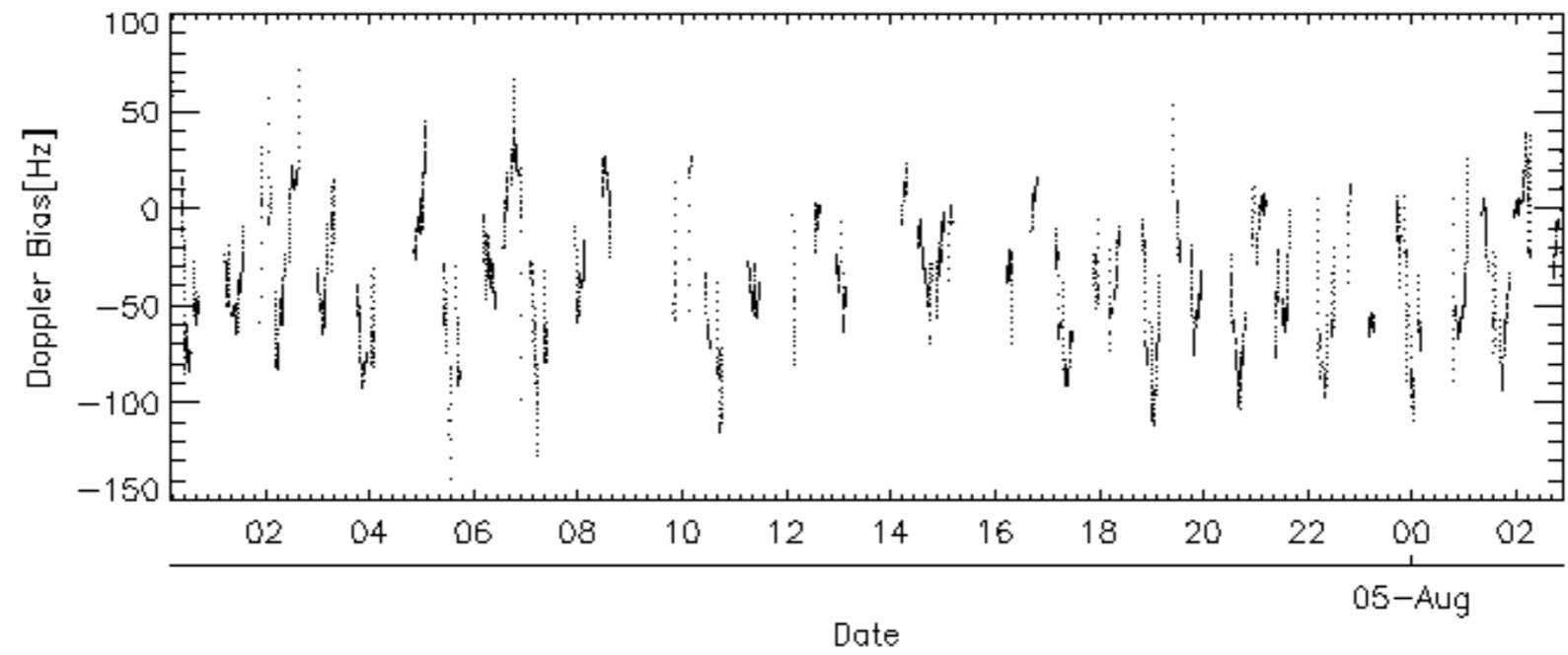
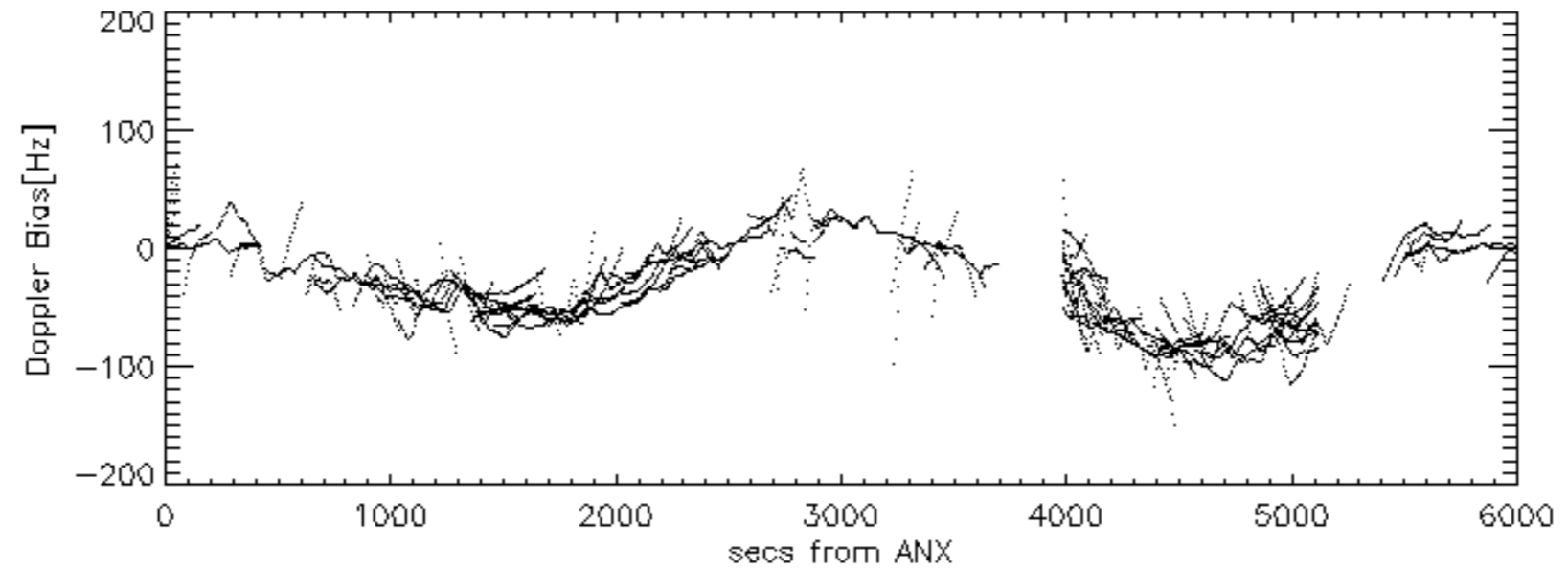
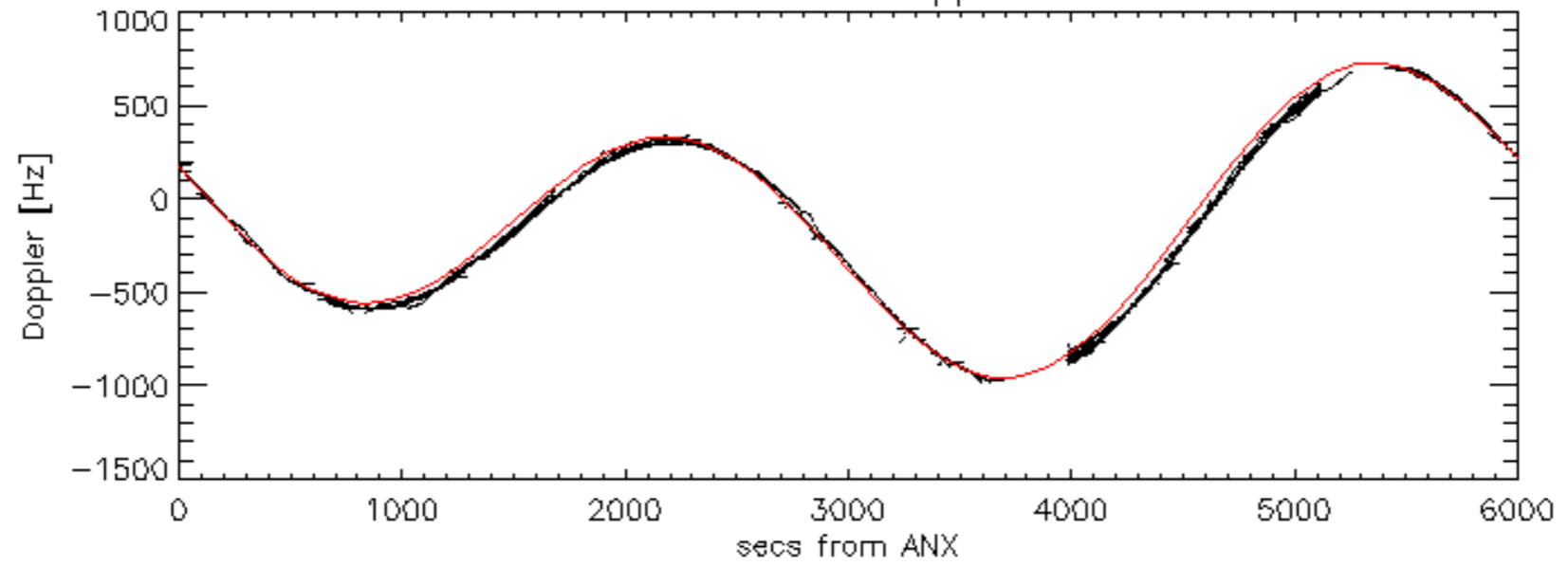
Doppler 'WVS' 'IS2' ascending

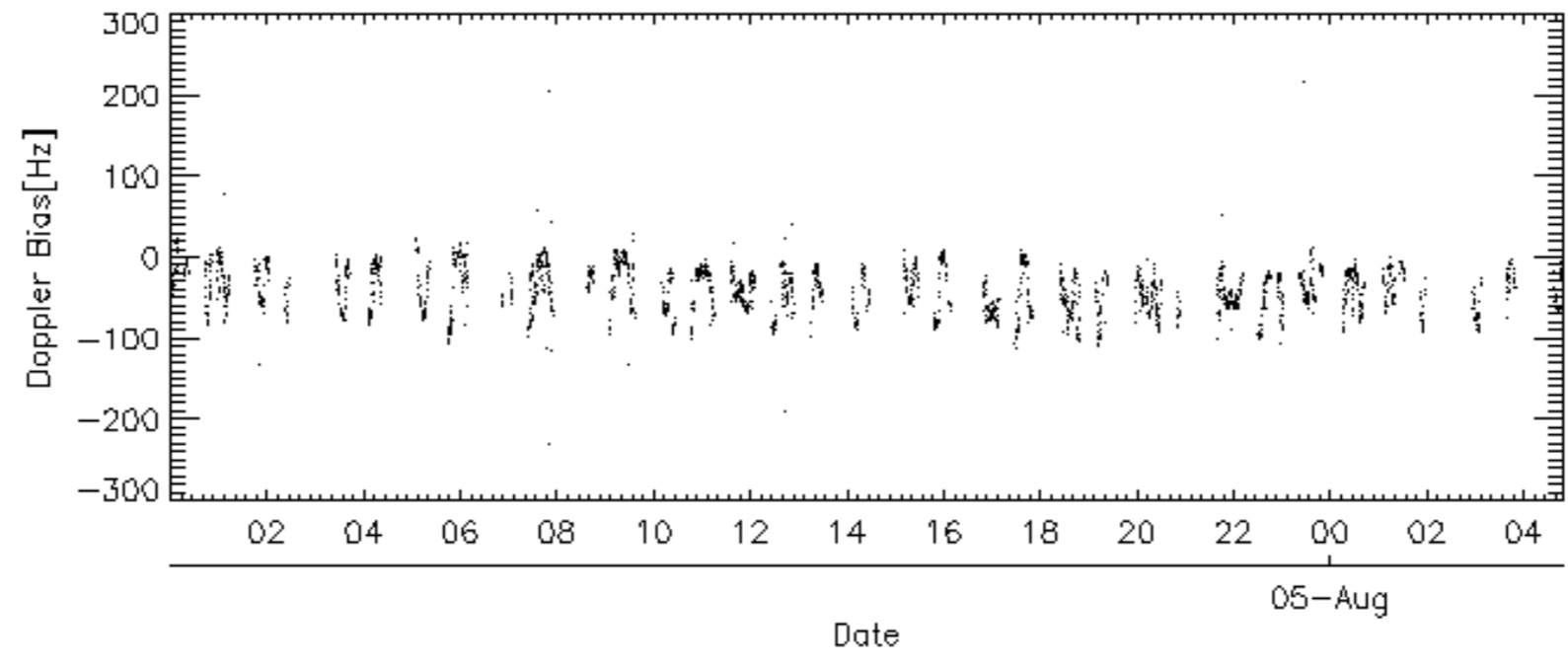
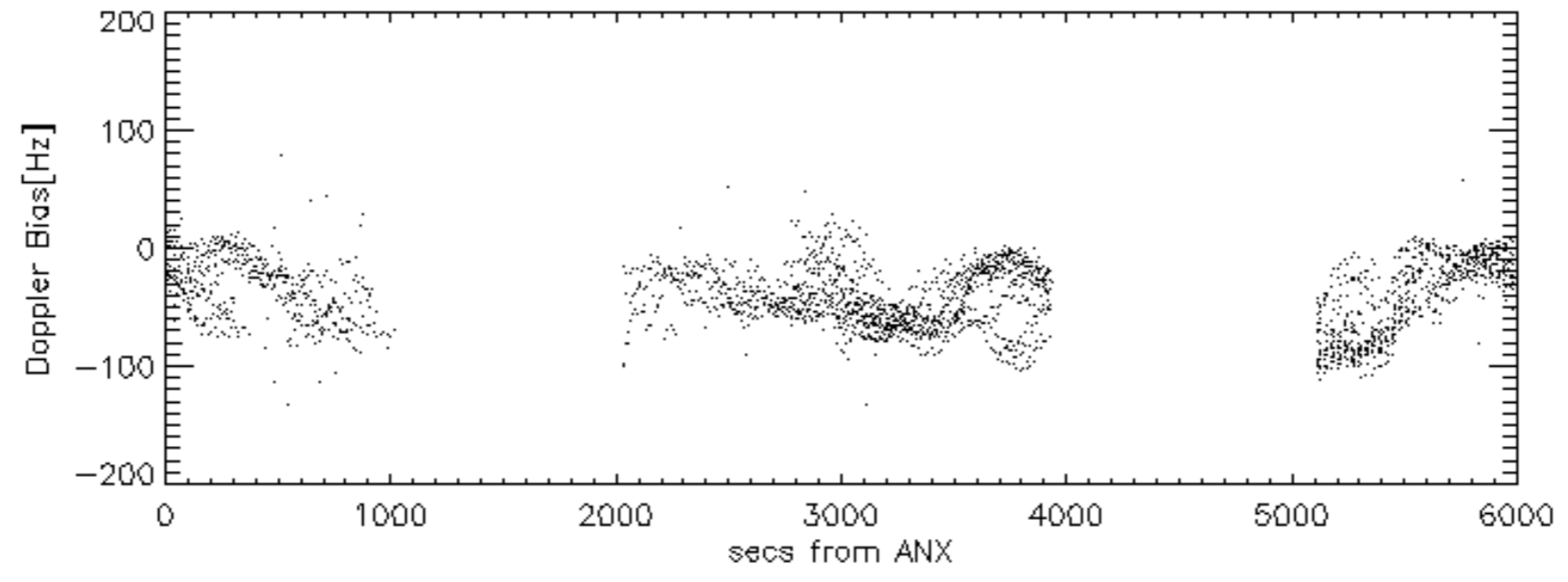
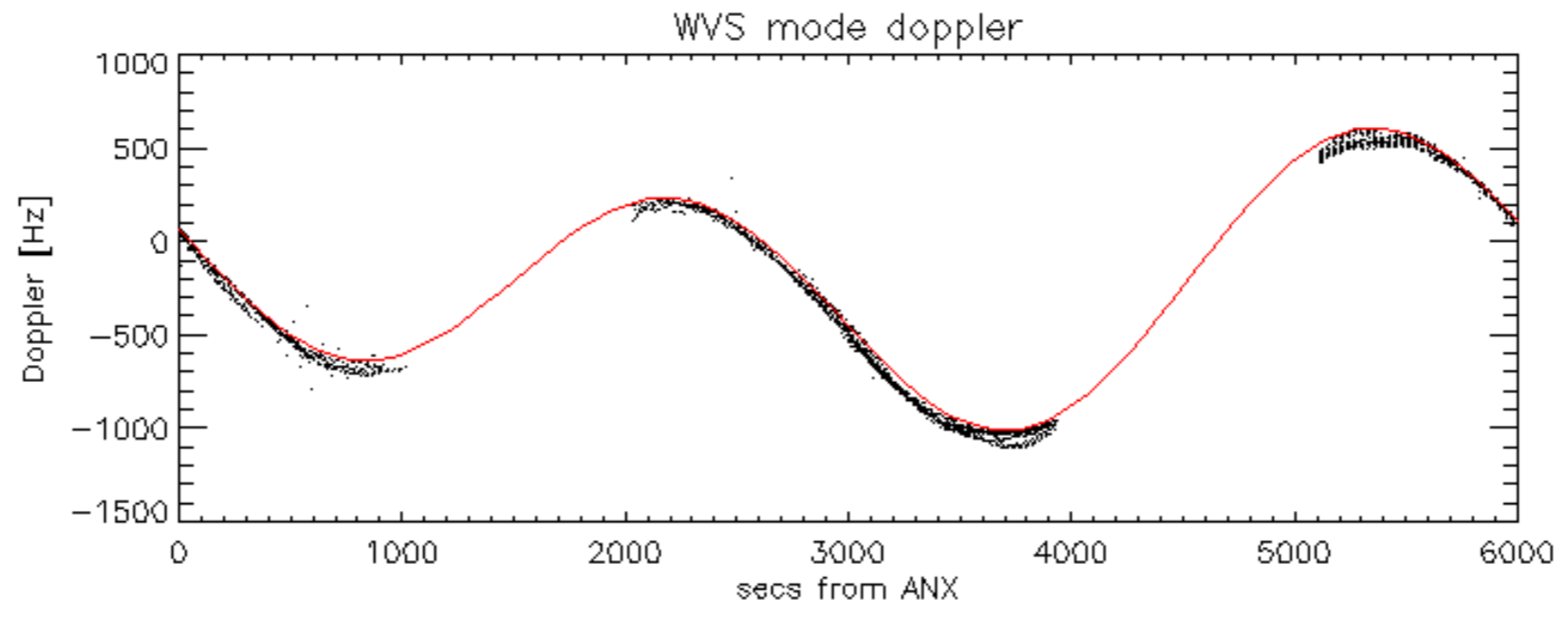


Doppler 'WVS' 'IS2' descending

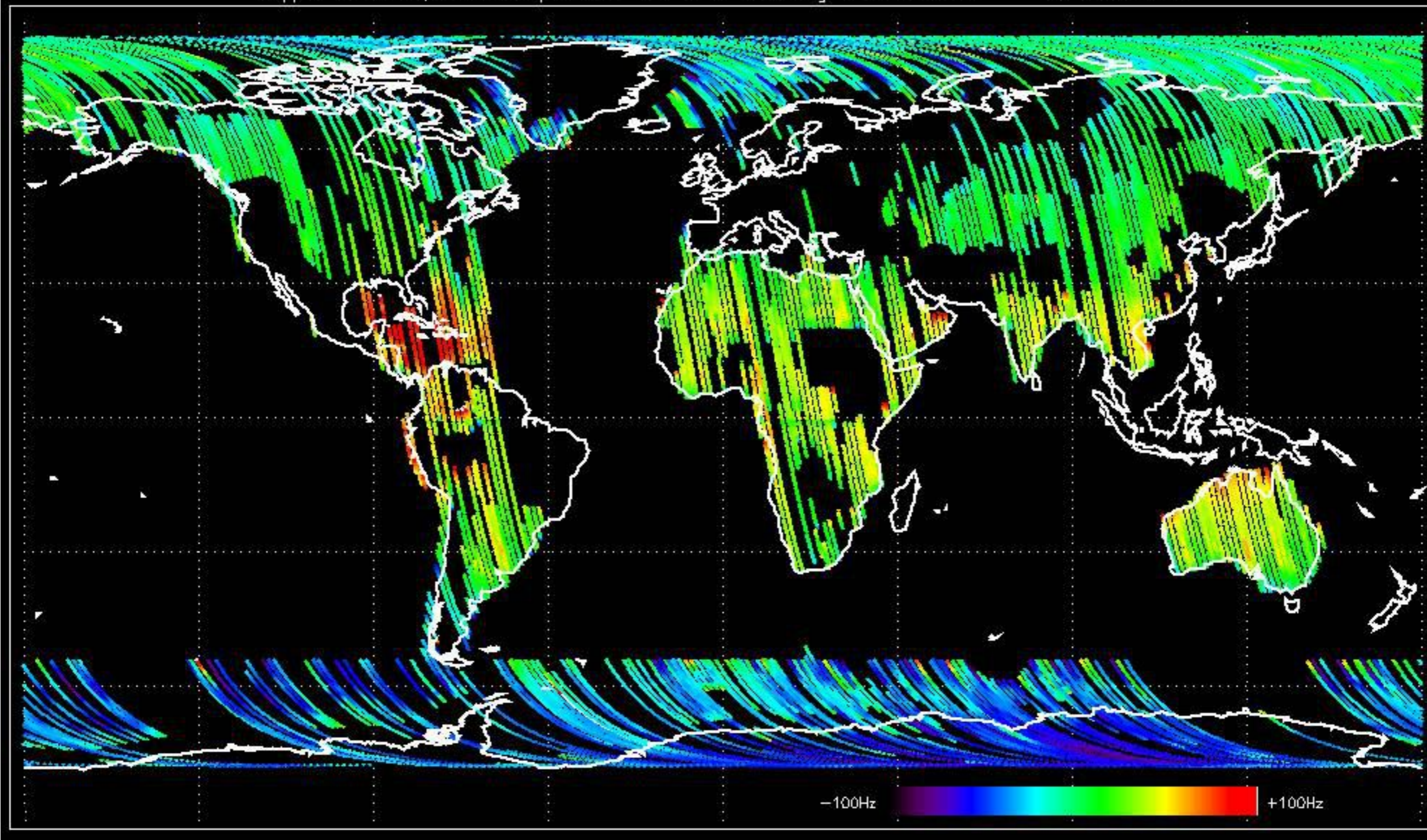


GM1 mode doppler

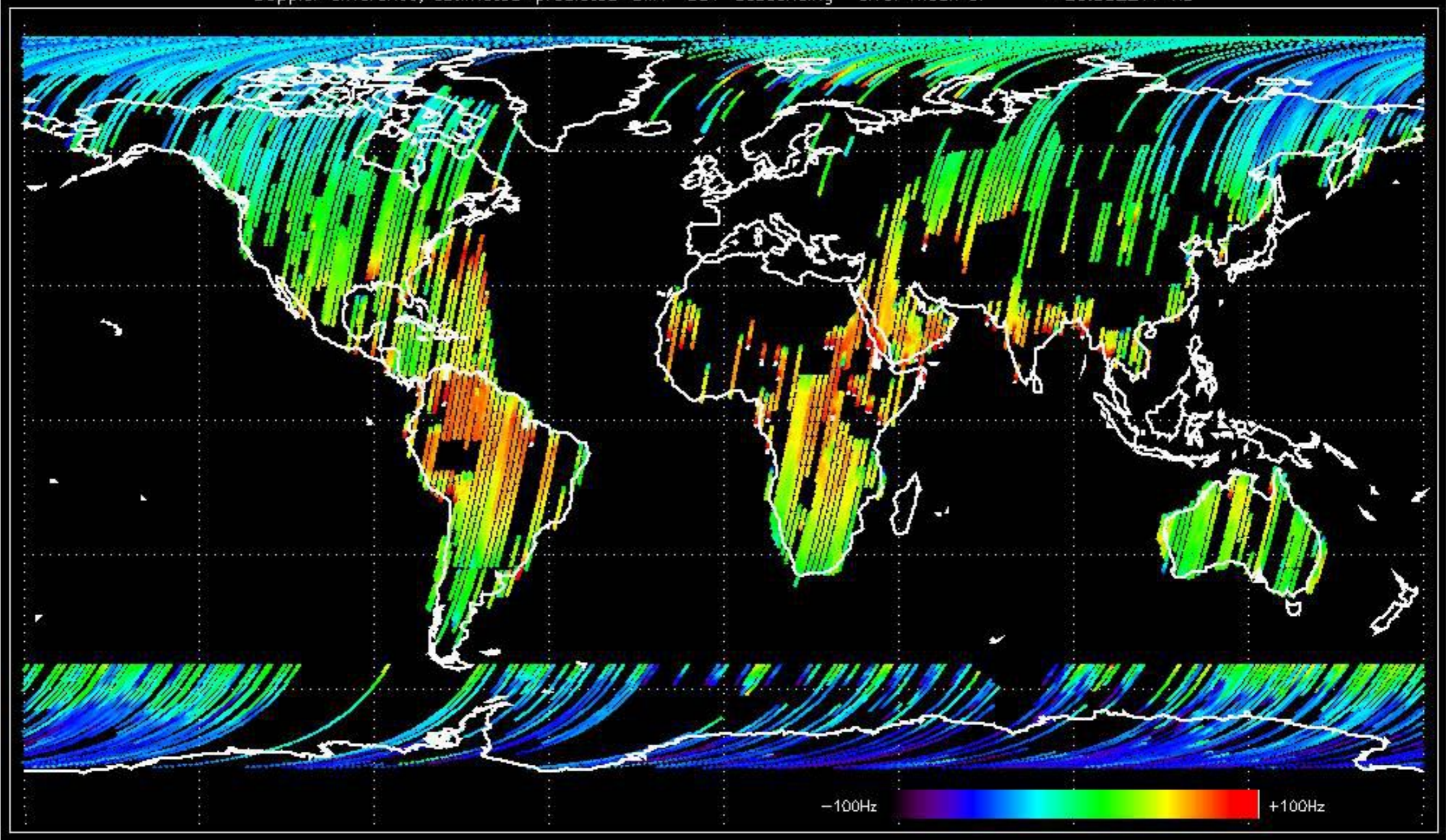




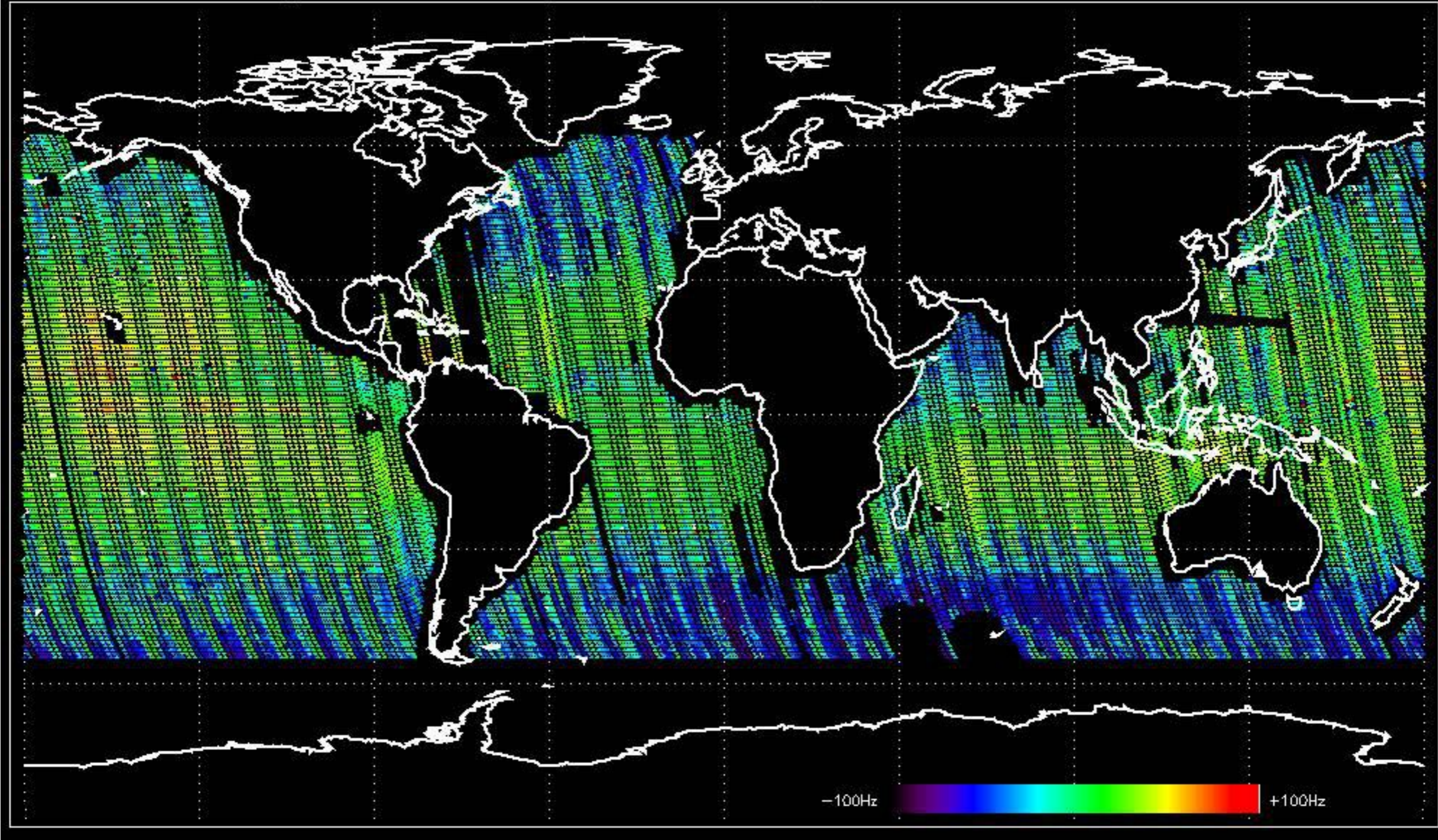
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.811384 Hz



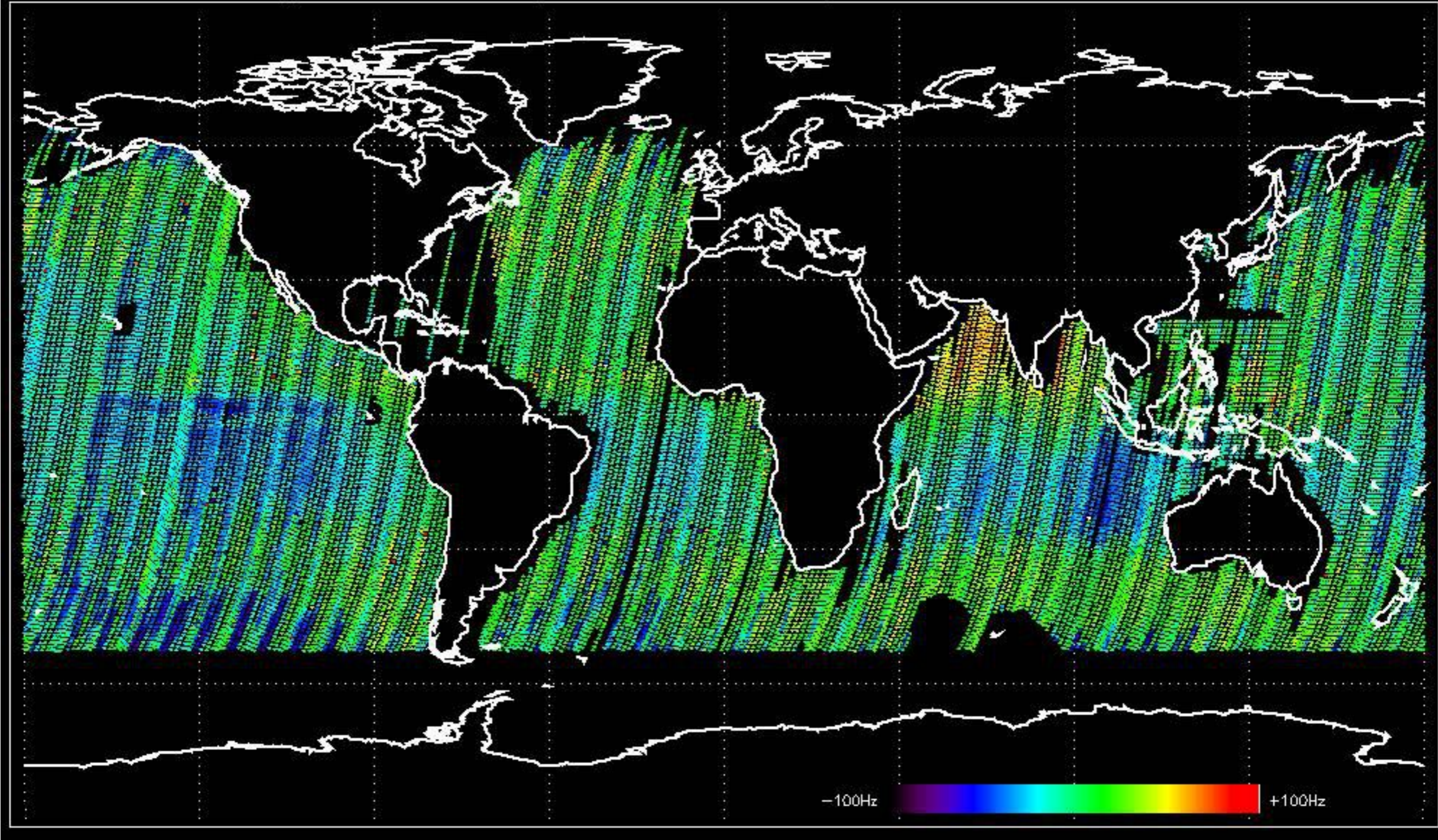
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -26.332217 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.148498 Hz

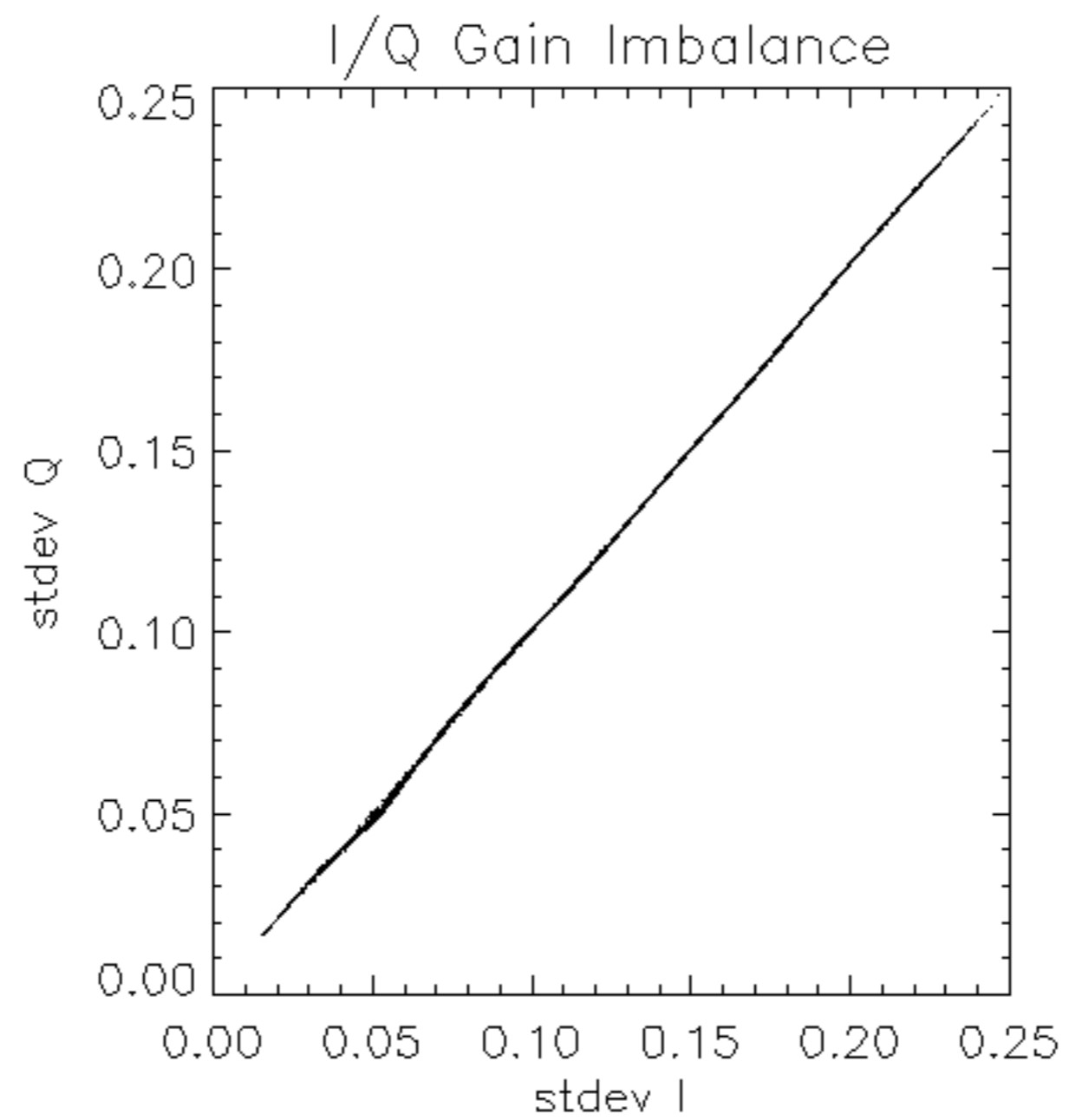


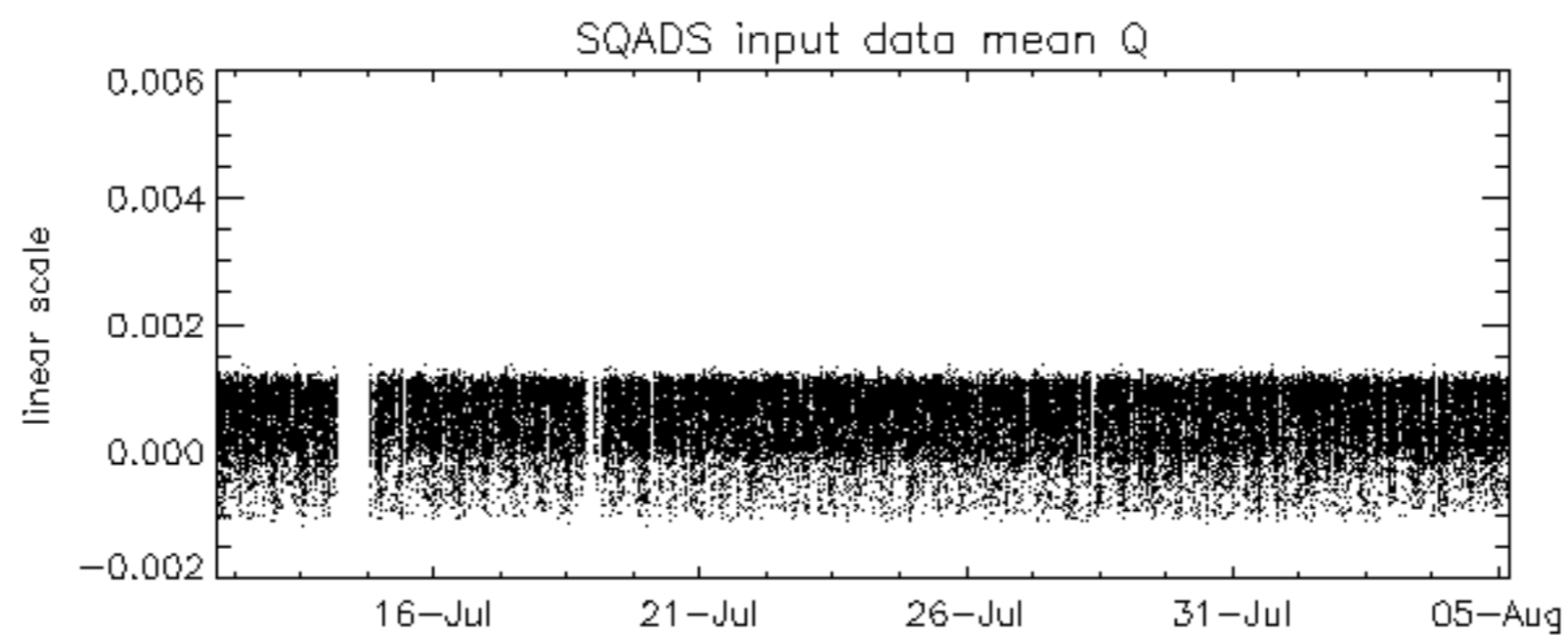
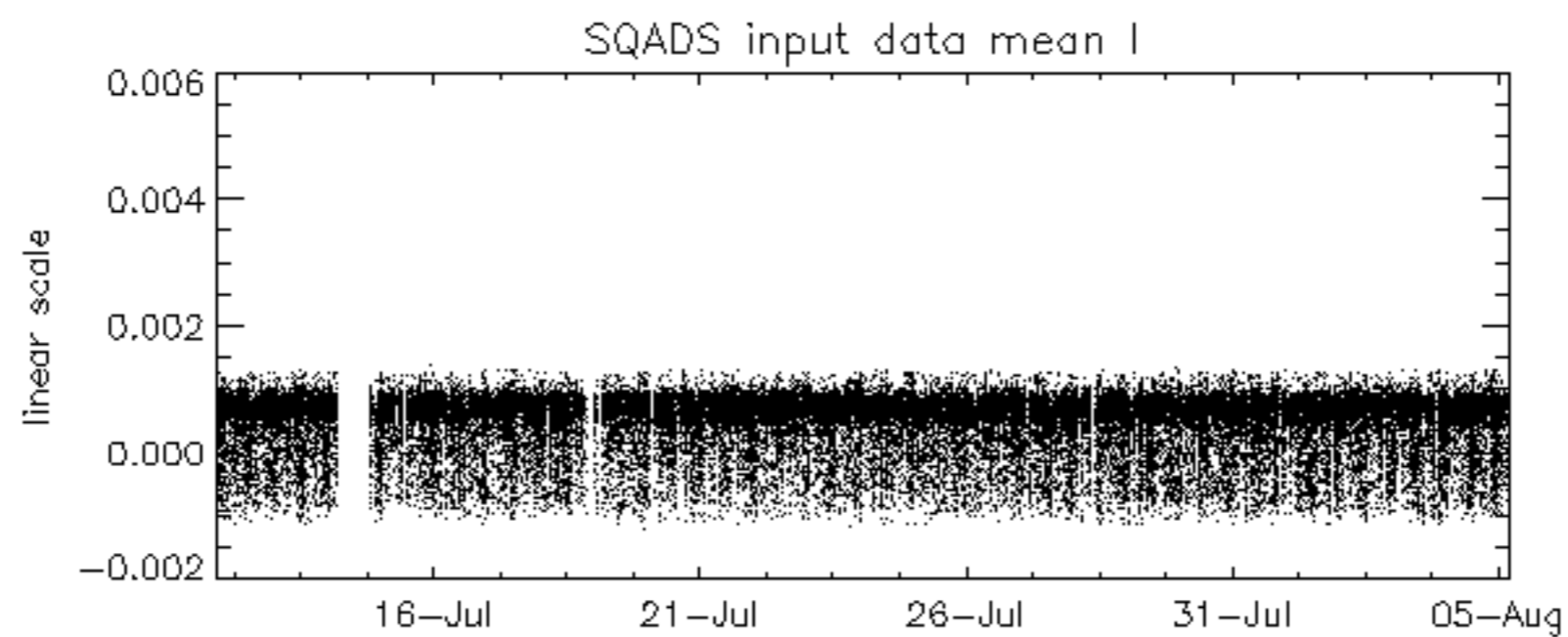
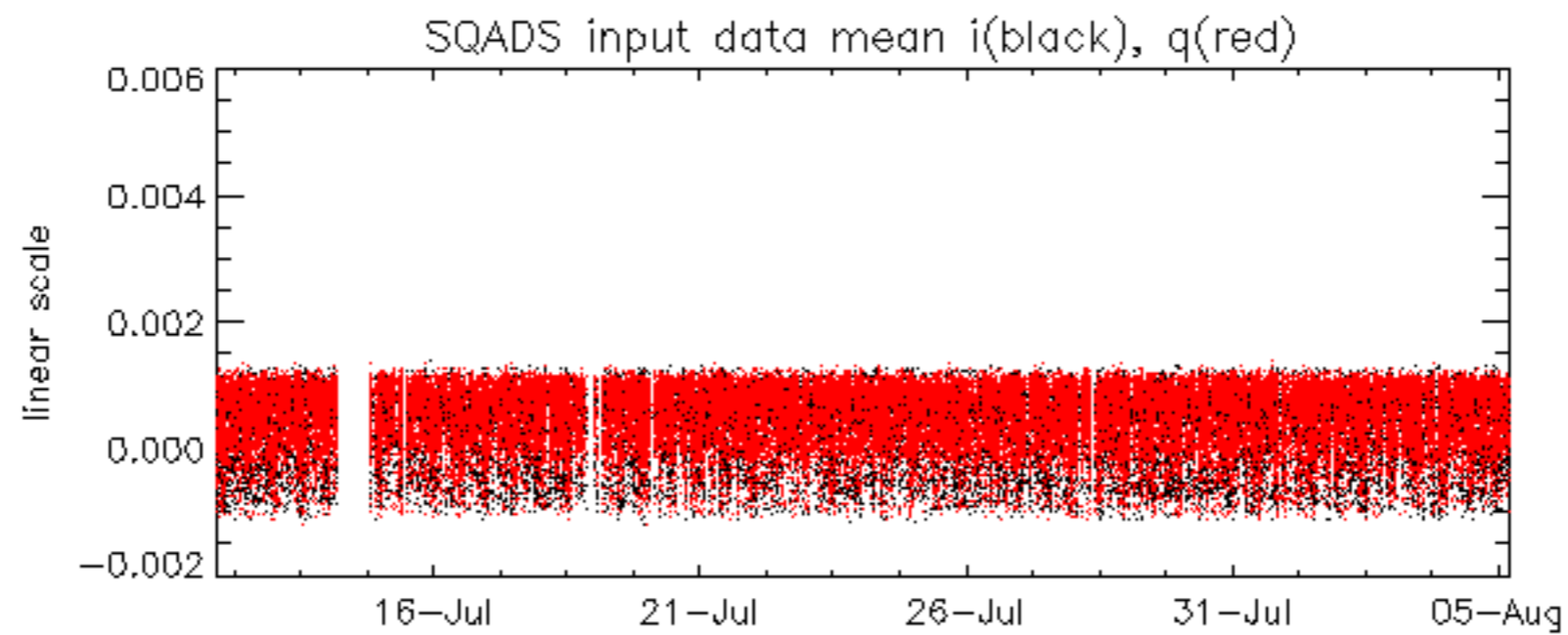
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.332613 Hz

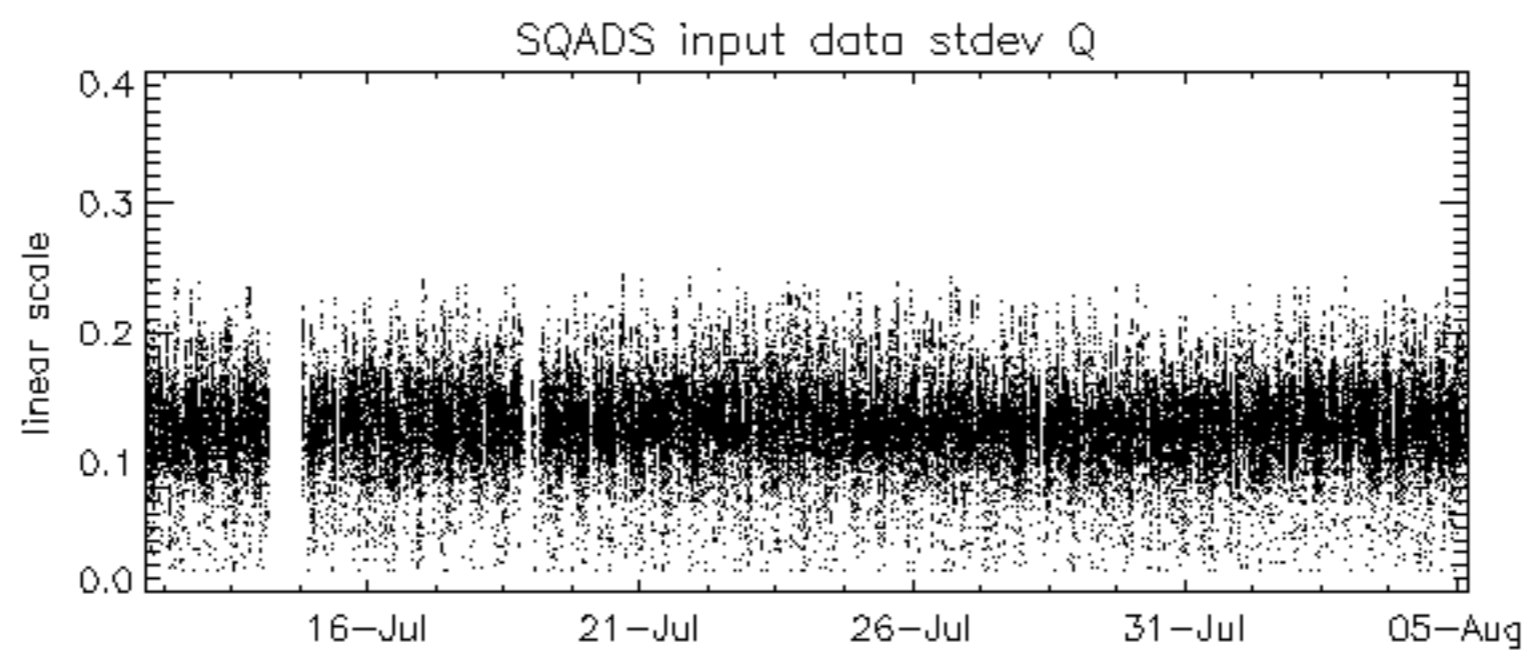
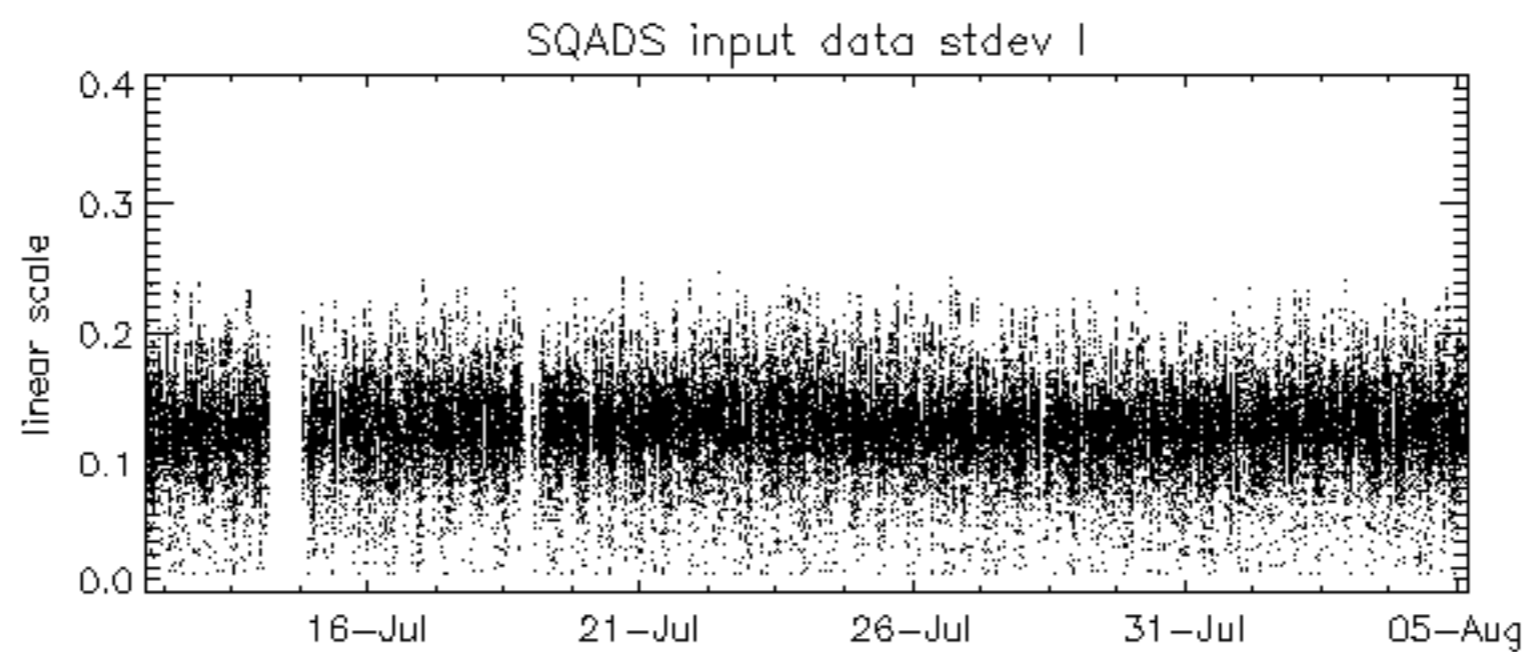
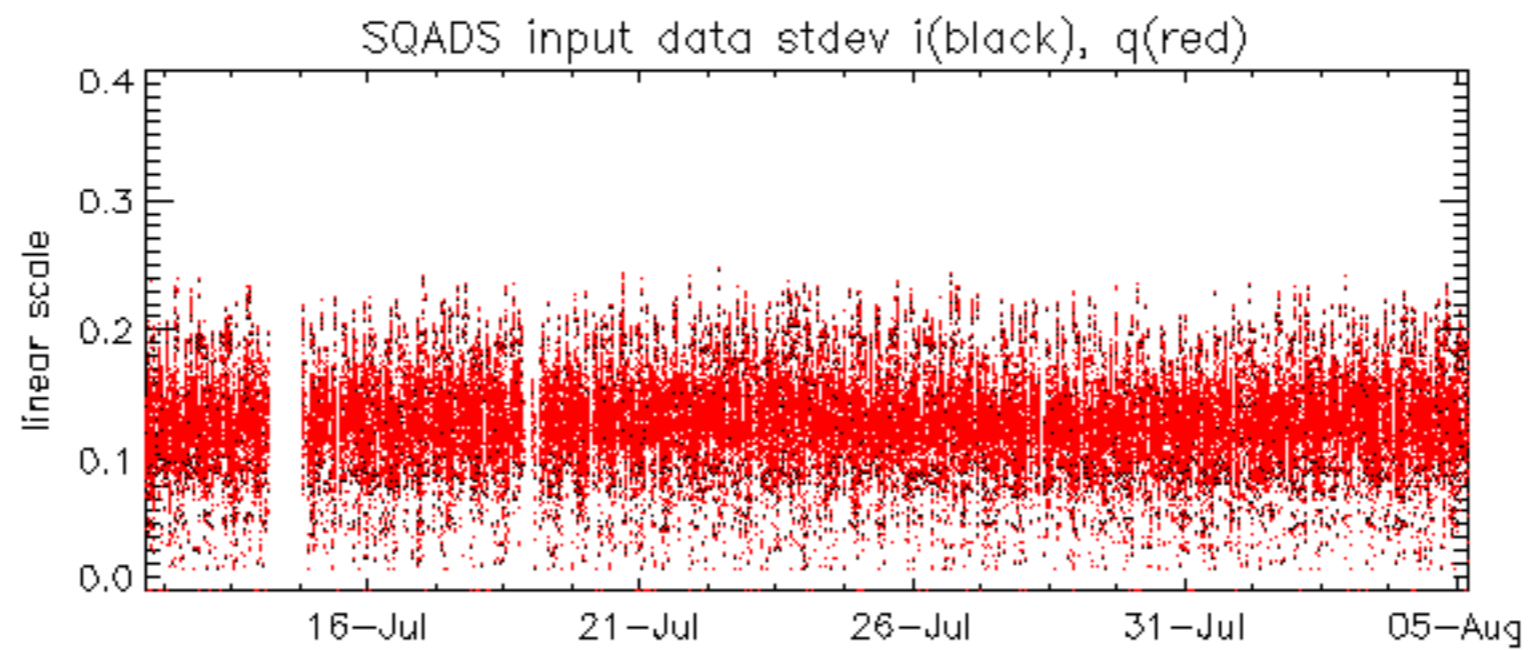


No anomalies observed on available MS products:

No anomalies observed.



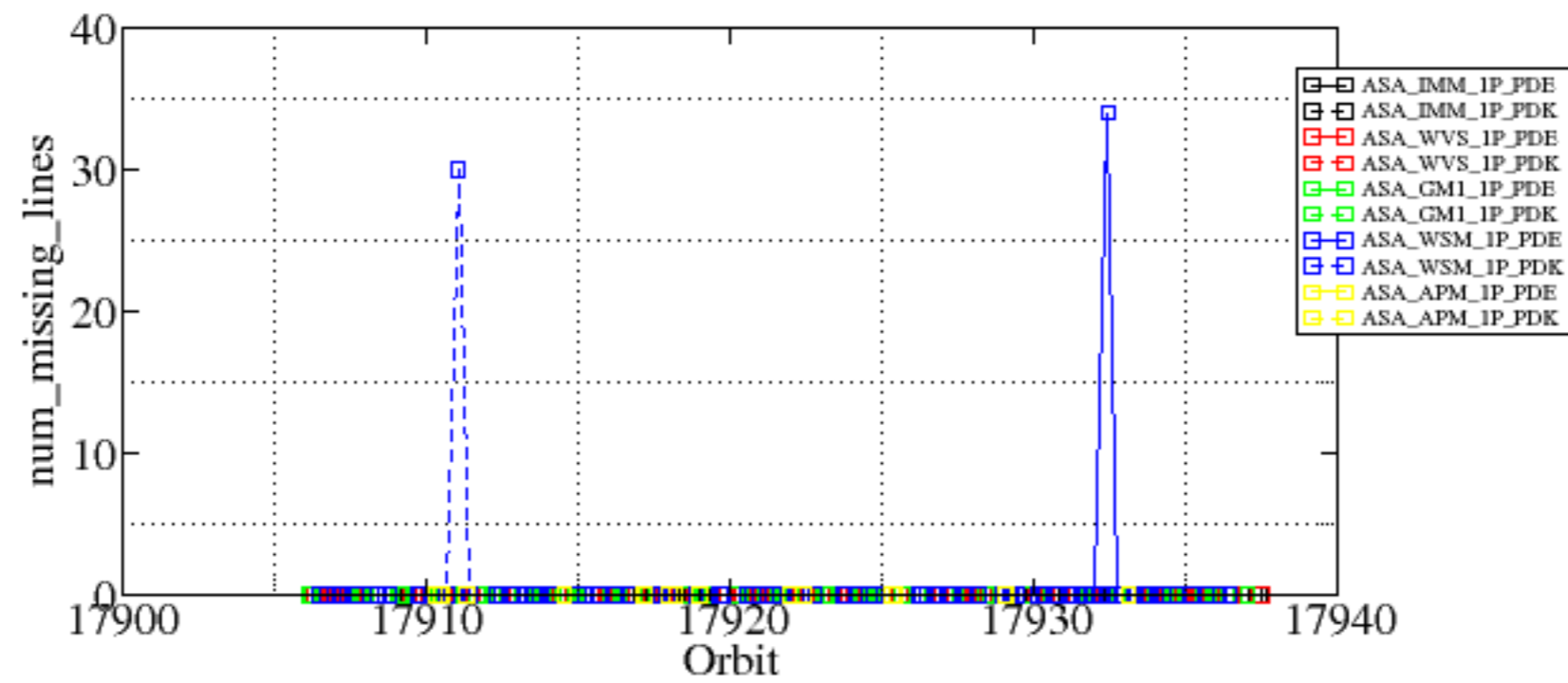


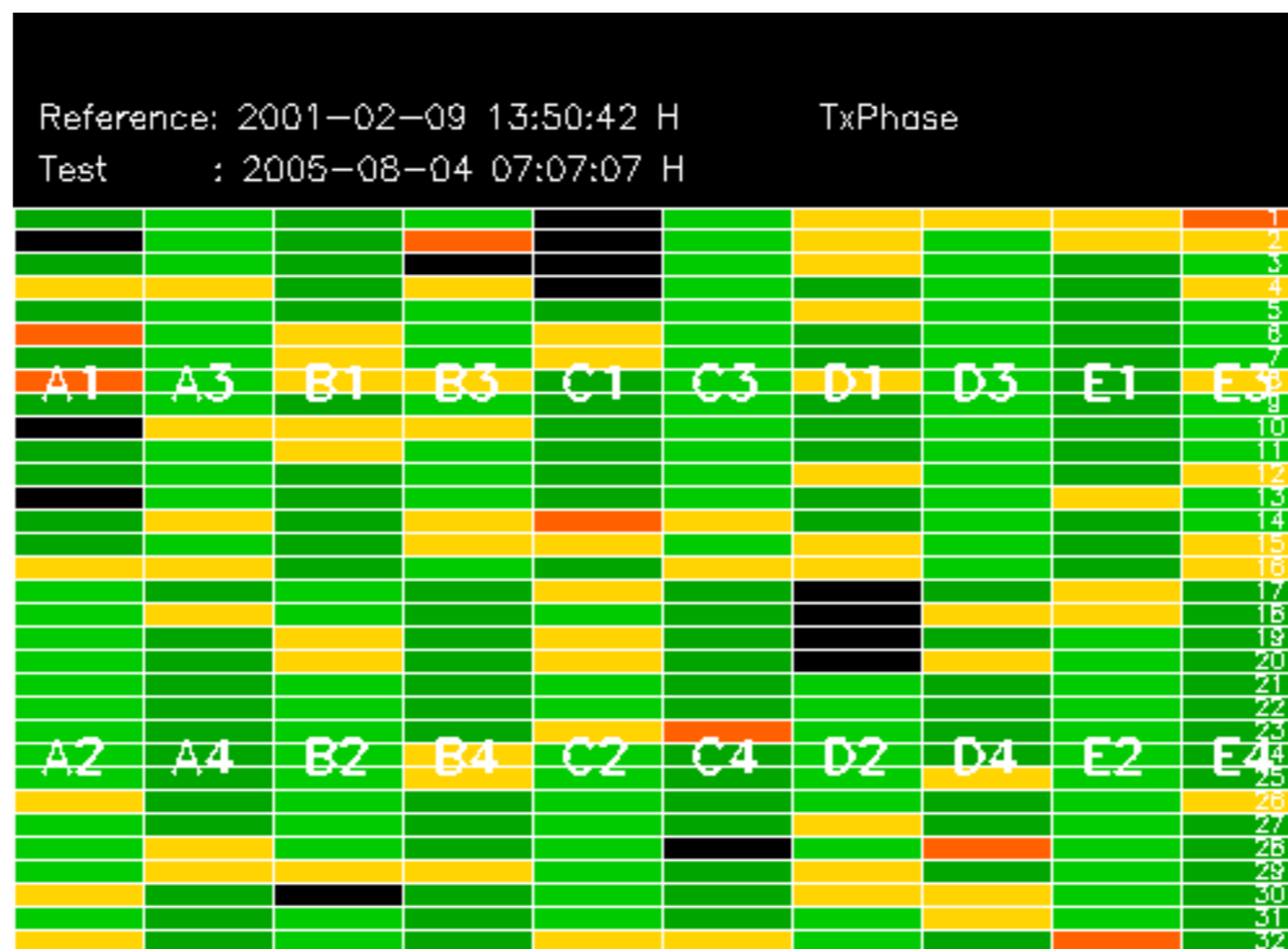


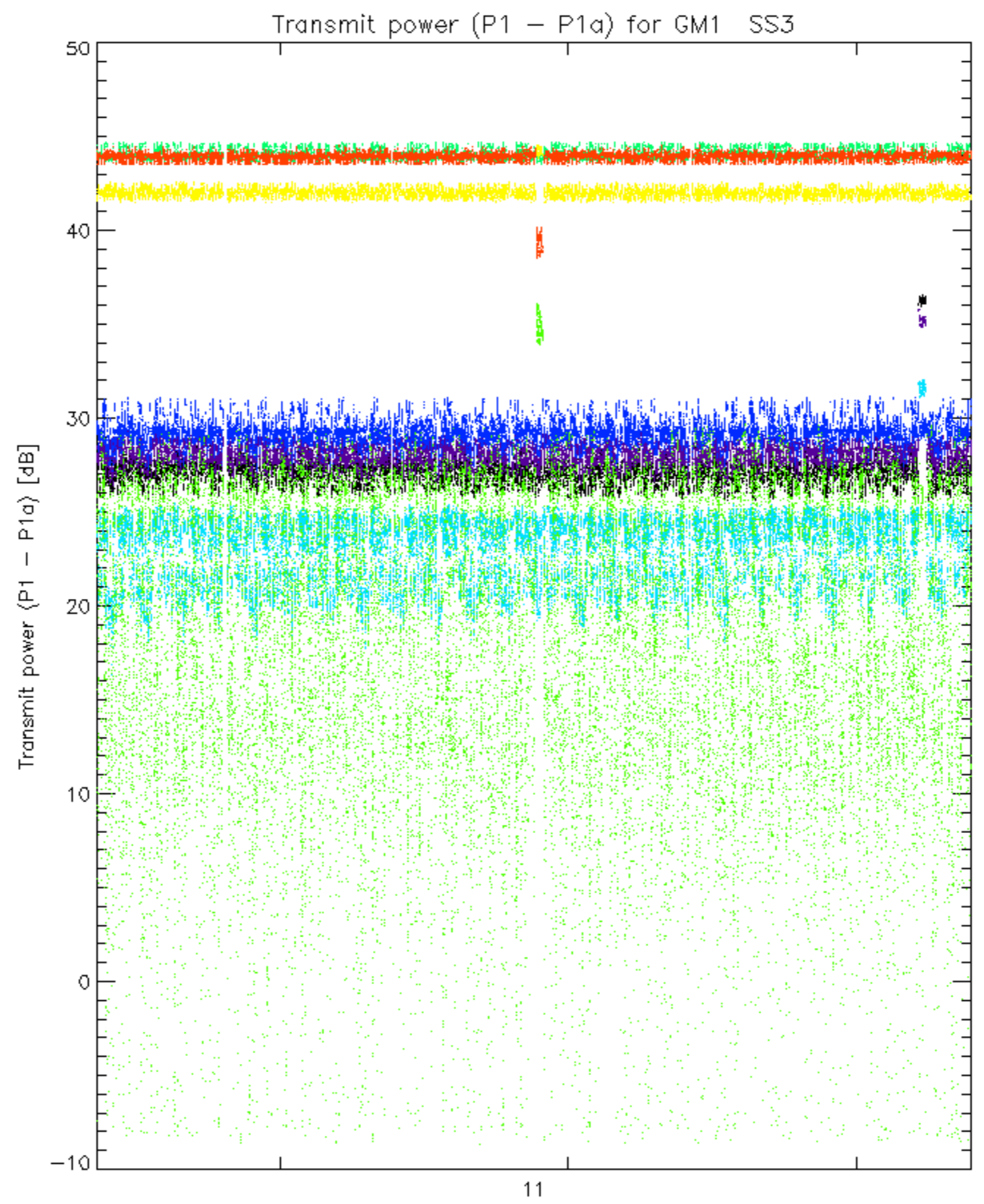
Summary of analysis for the last 3 days 2005080[345]

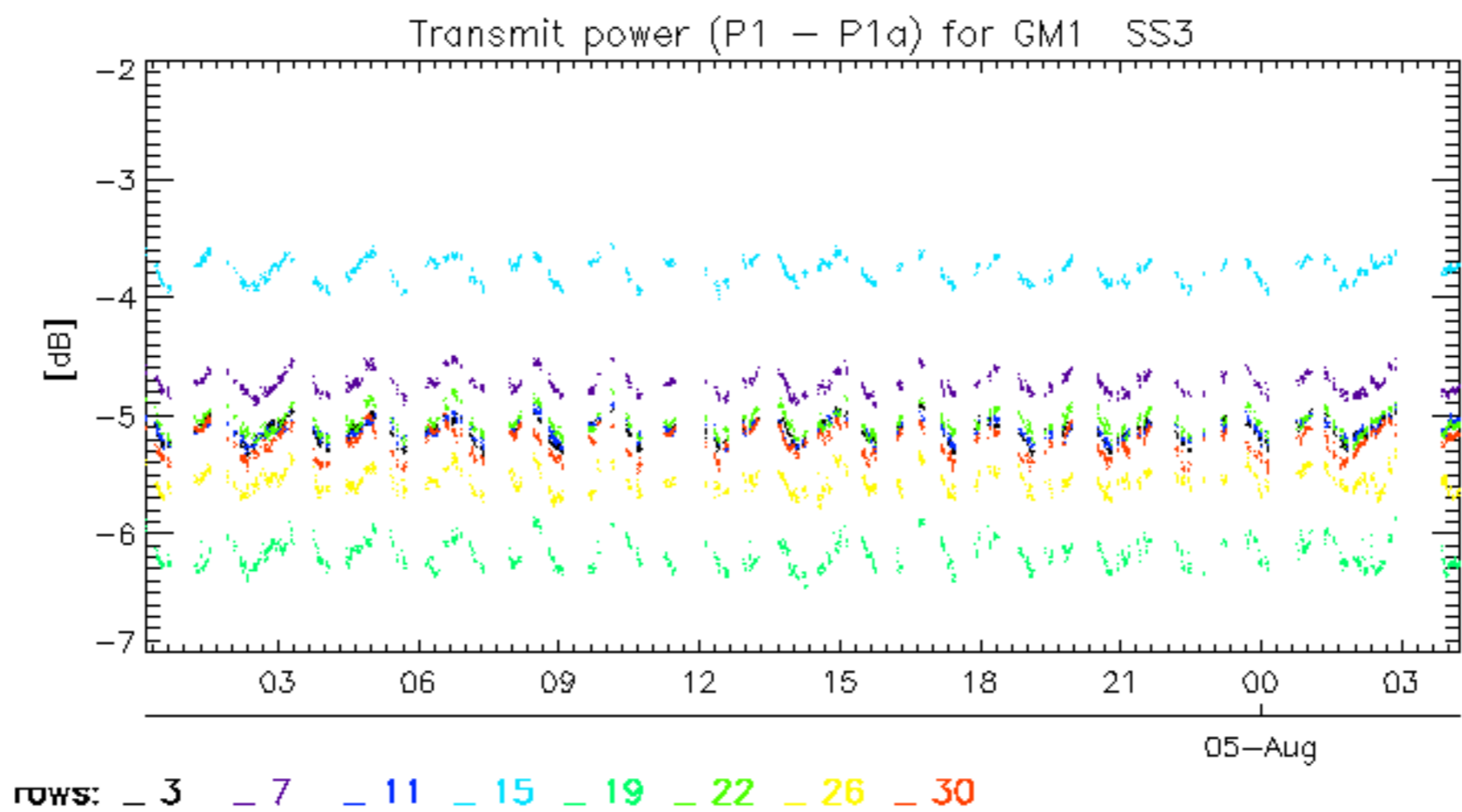
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

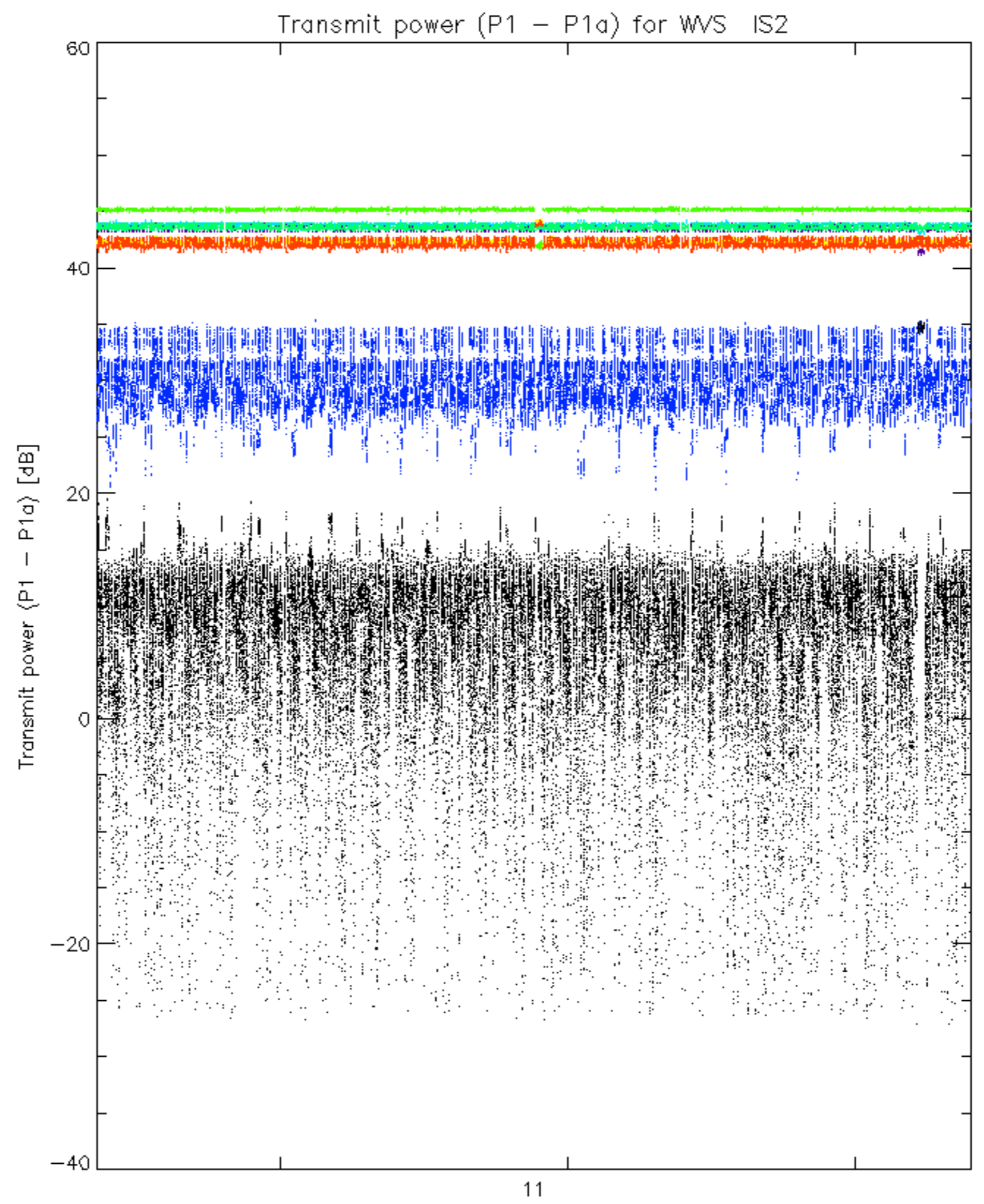
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050804_125413_000001212039_00339_17928_0953.N1	1	0
ASA_WSM_1PNPDE20050804_200837_000000862039_00343_17932_3001.N1	0	34
ASA_WSM_1PNPDK20050803_081649_000000862039_00322_17911_1095.N1	0	30



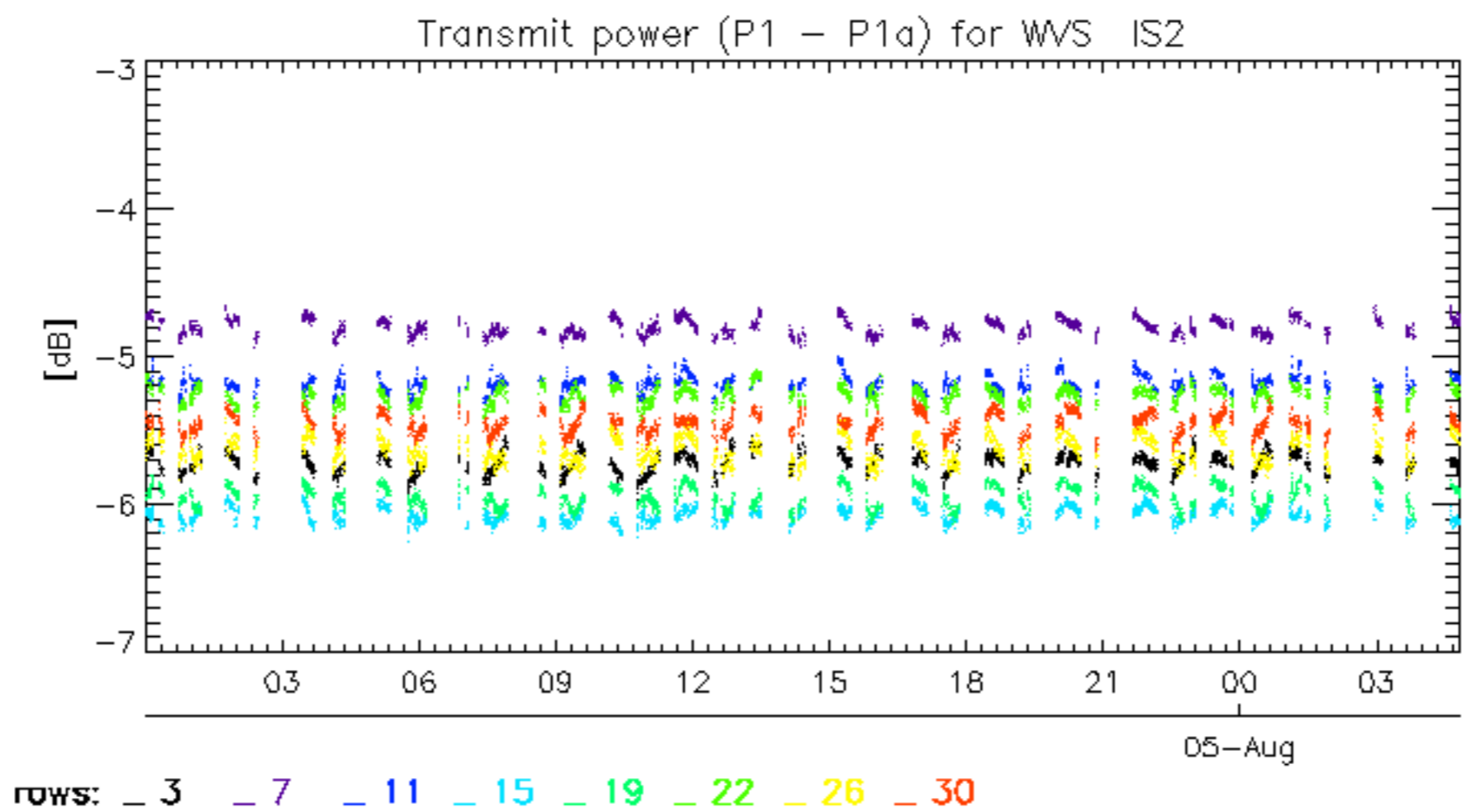








rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



No unavailabilities during the reported period.