

PRELIMINARY REPORT OF 050804

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Fri Aug 5 09:20:50 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

ASAR was unavailable due to an Antenna Reset caused by and under current level on TILE B3:
From 03-Aug-2005 22:01:30.000 to 22:08:56.000

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-08-04 00:00:00 to 2005-08-05 09:20:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	23	48	10	4	21
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	23	48	10	4	21
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	23	48	10	4	21
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	23	48	10	4	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

Data analysis shows that all the rows of tile B3 in H and V polarisation were affected by a drop in Tx power gain. The anomaly starts on AP at 03-AUG-2005 17:09:54 and has been stopped but the antenna reset.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050803 073845
H	20050802 081022

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
☒
☒

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	-3.309446	0.006372	0.043396
7	P1	-3.140988	0.013917	-0.011120
11	P1	-4.706012	0.032600	-0.023791
15	P1	-5.576985	0.049722	-0.029632
19	P1	-3.789565	0.004149	-0.037550
22	P1	-4.646710	0.131515	-0.075484
26	P1	-4.859662	0.169530	-0.014868
30	P1	-7.248129	0.171198	-0.027753
3	P1	-15.556594	0.076263	0.122433
7	P1	-15.523046	0.092127	0.009552
11	P1	-21.716030	0.255360	-0.201184
15	P1	-11.301782	0.034924	-0.039567
19	P1	-14.480149	0.036817	-0.008210
22	P1	-15.724285	0.348891	0.082072
26	P1	-17.370272	0.206349	0.331079
30	P1	-17.736101	0.458470	-0.024662

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.831621	0.084066	0.076308
7	P2	-21.989504	0.102576	0.139900
11	P2	-13.593130	0.105786	0.218119
15	P2	-7.073997	0.092924	0.028227
19	P2	-9.587836	0.096356	-0.017190
22	P2	-16.843529	0.097842	0.055495
26	P2	-16.505932	0.100214	-0.007033
30	P2	-18.792828	0.088157	-0.029750

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.155932	0.002469	0.001920
7	P3	-8.155932	0.002469	0.001920
11	P3	-8.155932	0.002469	0.001920
15	P3	-8.155932	0.002469	0.001920
19	P3	-8.155932	0.002469	0.001920
22	P3	-8.155932	0.002469	0.001920
26	P3	-8.155932	0.002469	0.001920
30	P3	-8.155932	0.002469	0.001920

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	-2.783692	0.012897	-0.028138
7	P1	-2.955485	0.027735	0.008799
11	P1	-4.003577	0.015341	-0.030883
15	P1	-3.589663	0.022288	-0.065875
19	P1	-3.632444	0.016547	0.043381
22	P1	-5.692057	0.125198	-0.085377
26	P1	-7.406844	0.233311	-0.030956
30	P1	-6.340993	0.110100	-0.012375
3	P1	-10.862691	0.042627	-0.282045
7	P1	-10.466261	0.146580	-0.032958
11	P1	-12.633449	0.103549	-0.044389
15	P1	-11.611583	0.066978	-0.004513

19	P1	-15.520513	0.071465	0.158531
22	P1	-25.651690	3.164203	0.530187
26	P1	-15.329969	0.337156	0.293368
30	P1	-20.024277	1.239826	0.254913

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.572807	0.043348	0.145276
7	P2	-22.031183	0.040272	0.064833
11	P2	-9.632284	0.062719	0.205142
15	P2	-5.112364	0.043402	0.064298
19	P2	-6.895812	0.064540	0.057037
22	P2	-7.065380	0.037106	0.070049
26	P2	-23.971722	0.038363	0.005089
30	P2	-21.951923	0.043734	0.025818

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998015	0.004141	0.010694
7	P3	-7.997876	0.004140	0.011260
11	P3	-7.997819	0.004144	0.010690
15	P3	-7.997833	0.004138	0.011414
19	P3	-7.997942	0.004141	0.011225
22	P3	-7.997920	0.004128	0.011339
26	P3	-7.997942	0.004125	0.010785
30	P3	-7.997781	0.004124	0.011129

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	0.000472277
	stdev	2.15725e-07
MEAN Q	mean	0.000500721
	stdev	2.32935e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128928
	stdev	0.000988308
STDEV Q	mean	0.129189
	stdev	0.000998856



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005080[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_1PNPDK20050802_090138_000007122039_00308_17897_1198.N1	0	15
ASA_WSM_1PNPDE20050802_010559_000000852039_00303_17892_2489.N1	0	19
ASA_WSM_1PNPDE20050802_021824_000003002039_00304_17893_2504.N1	5	0





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

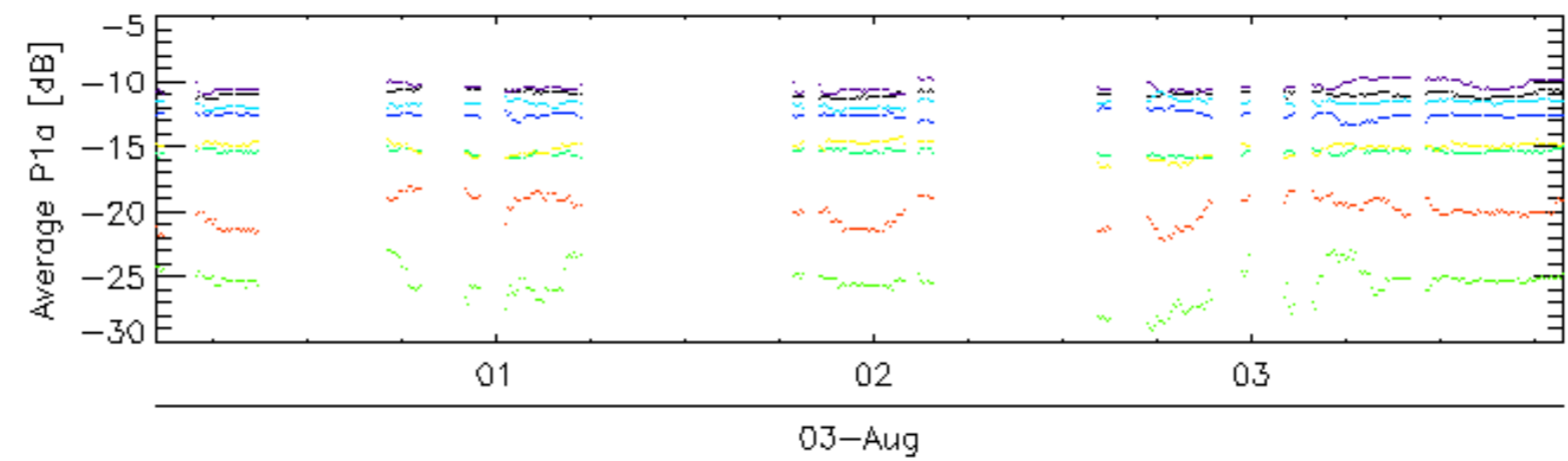
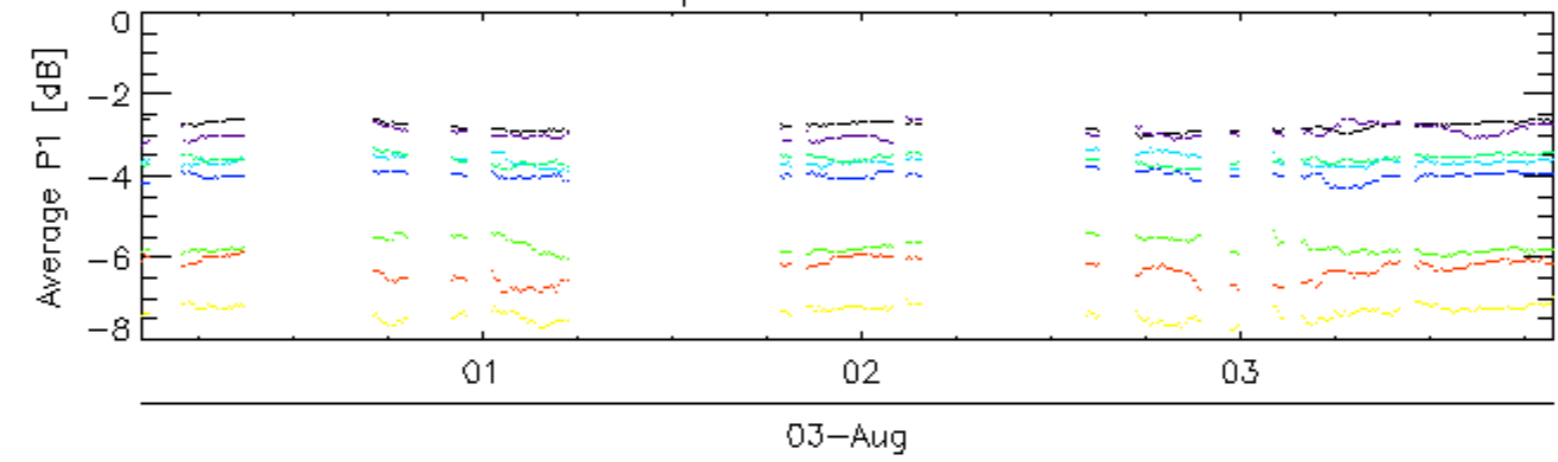
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

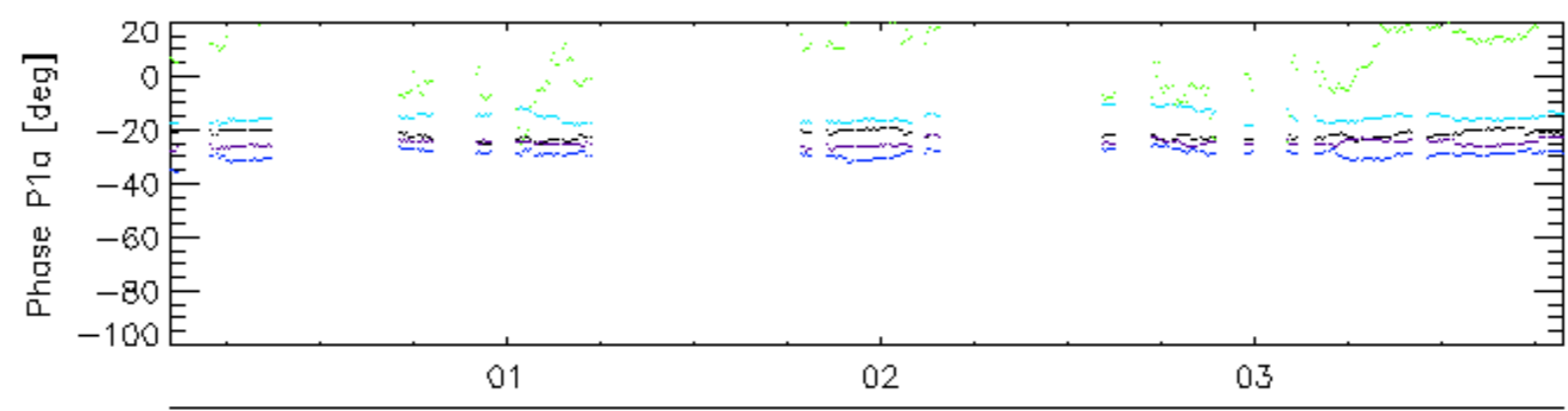
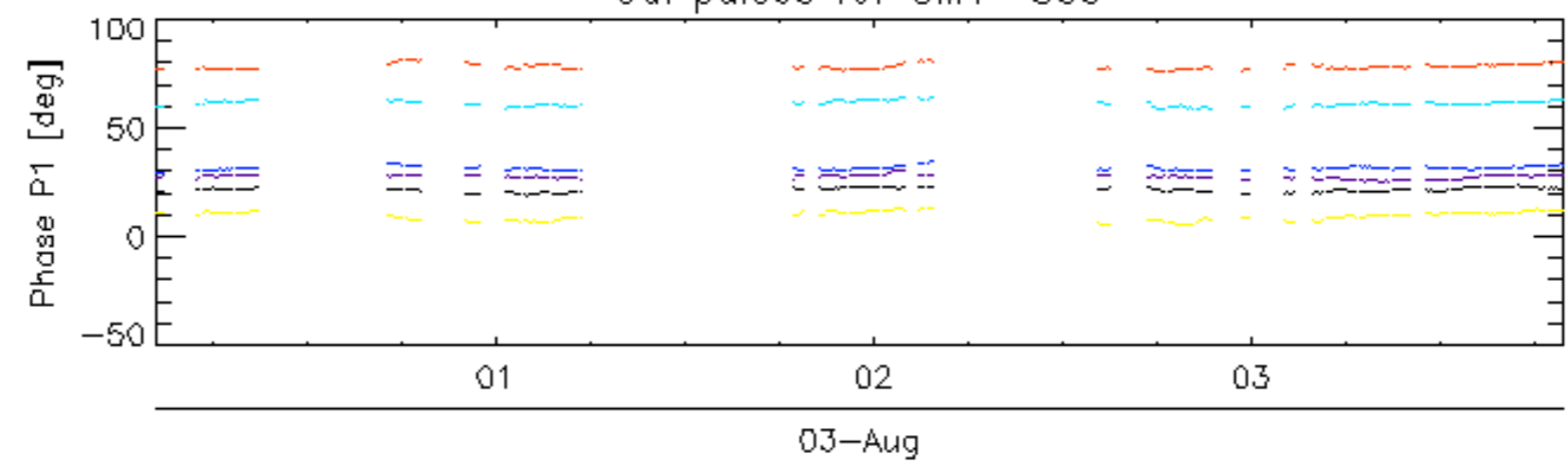
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

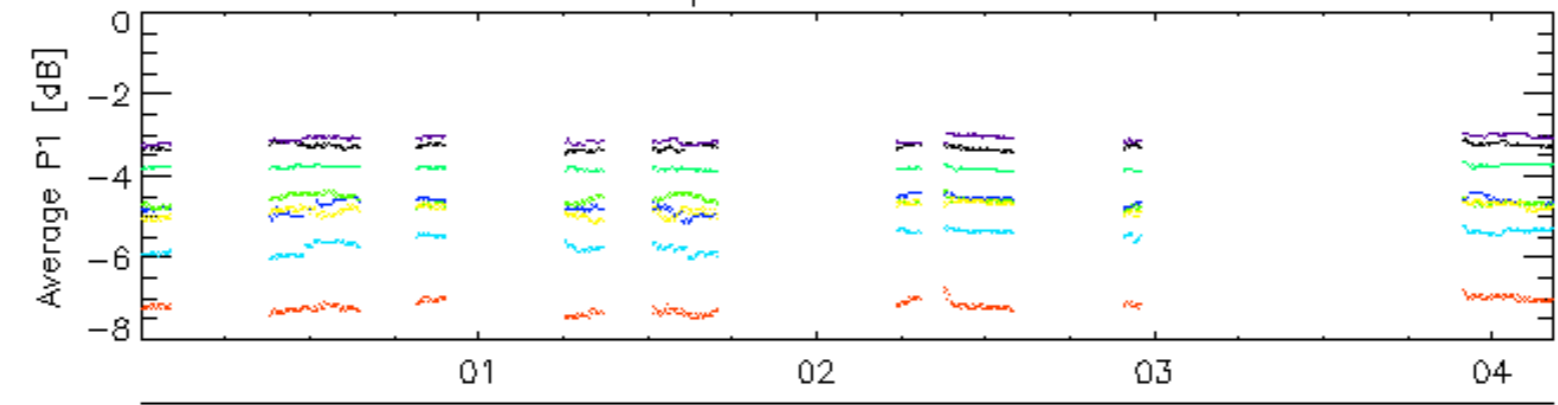


Cal pulses for GM1 SS3

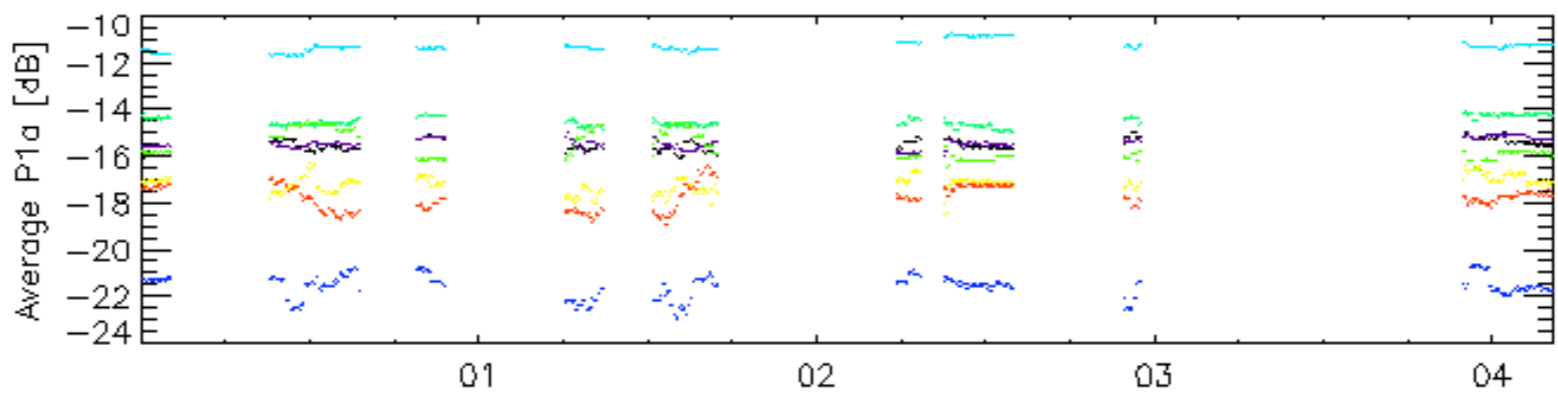


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

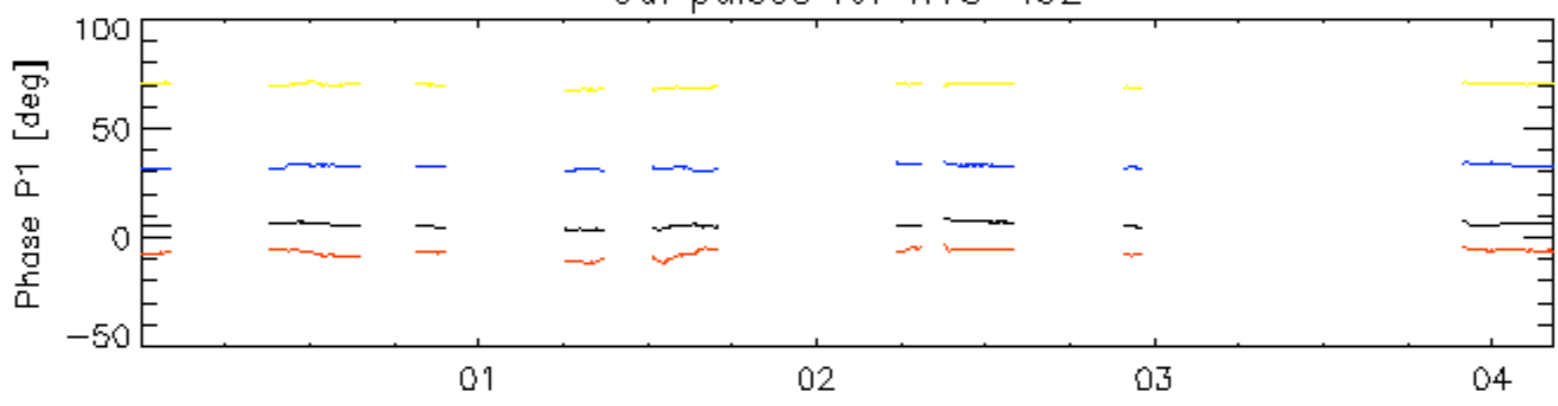


03-Aug

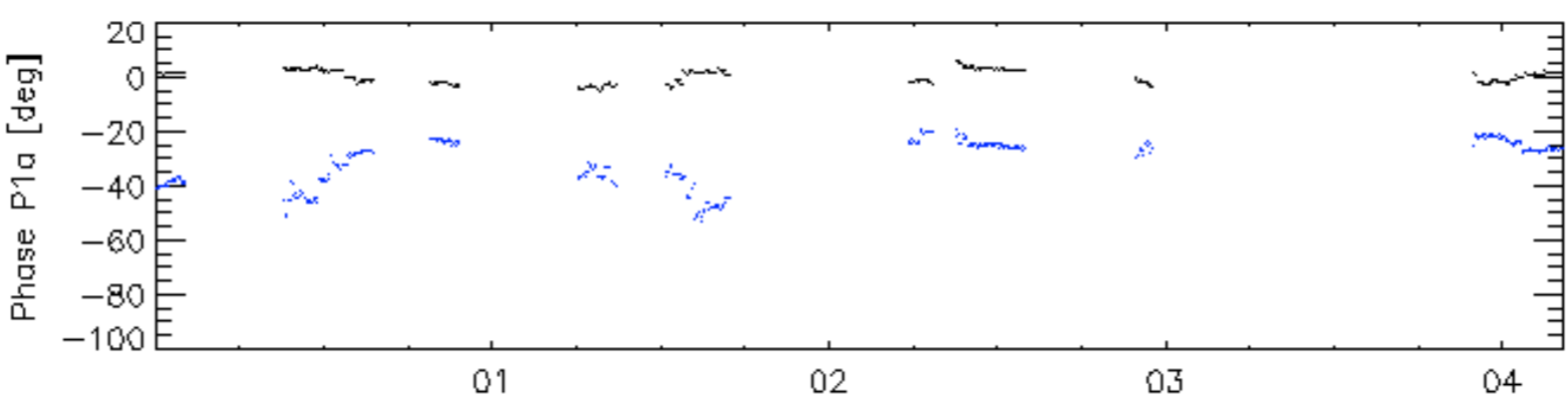


03-Aug

Cal pulses for WVS IS2

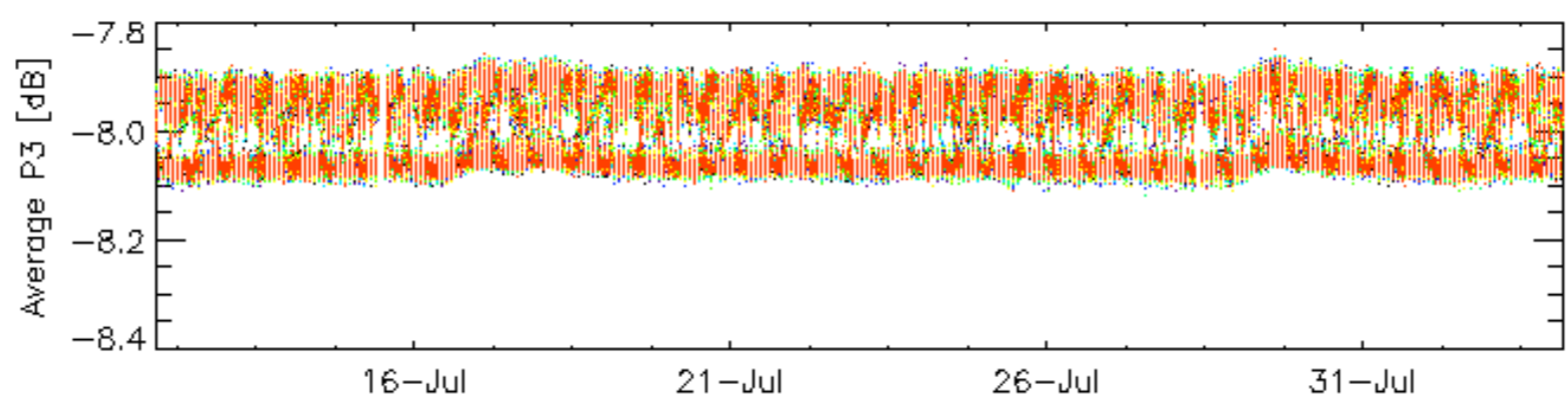
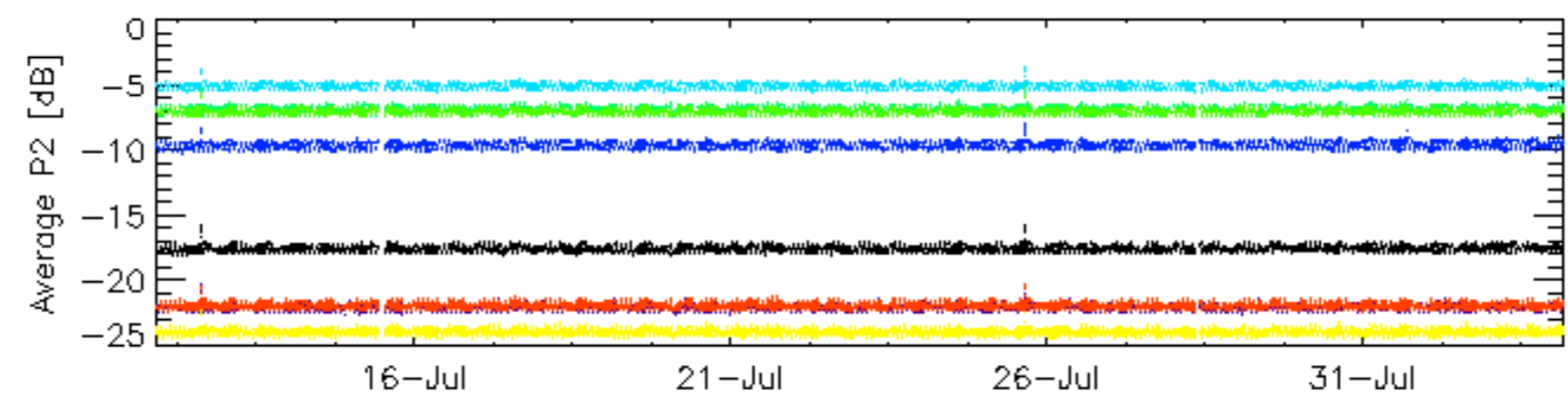
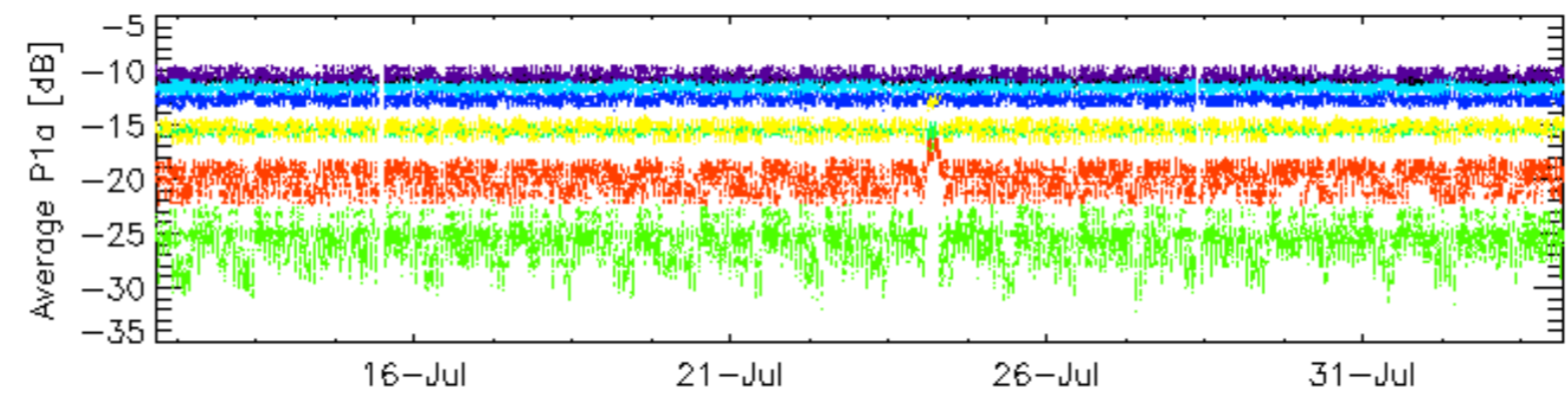
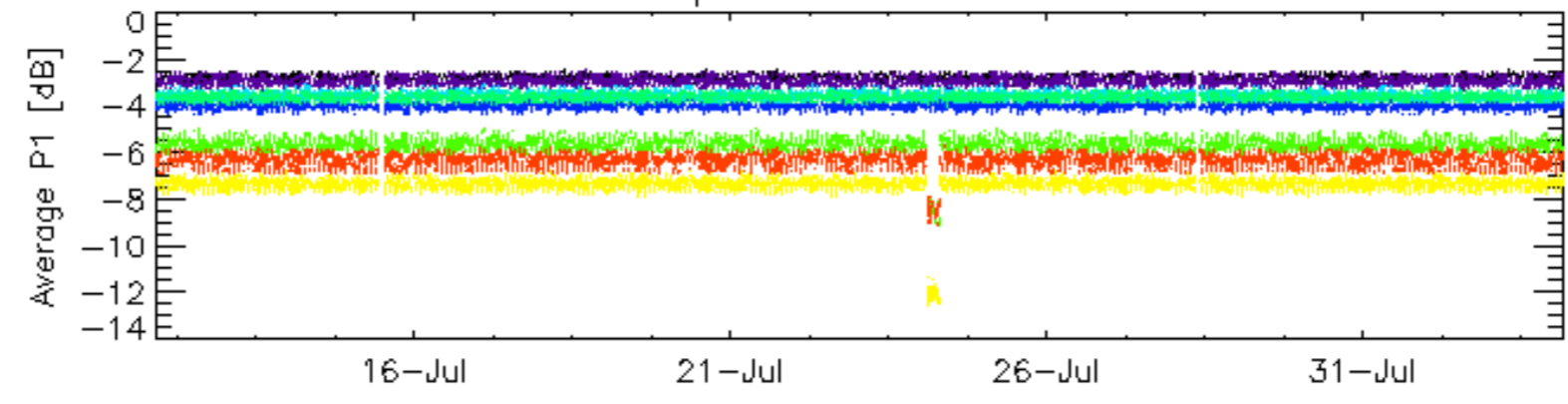


03-Aug



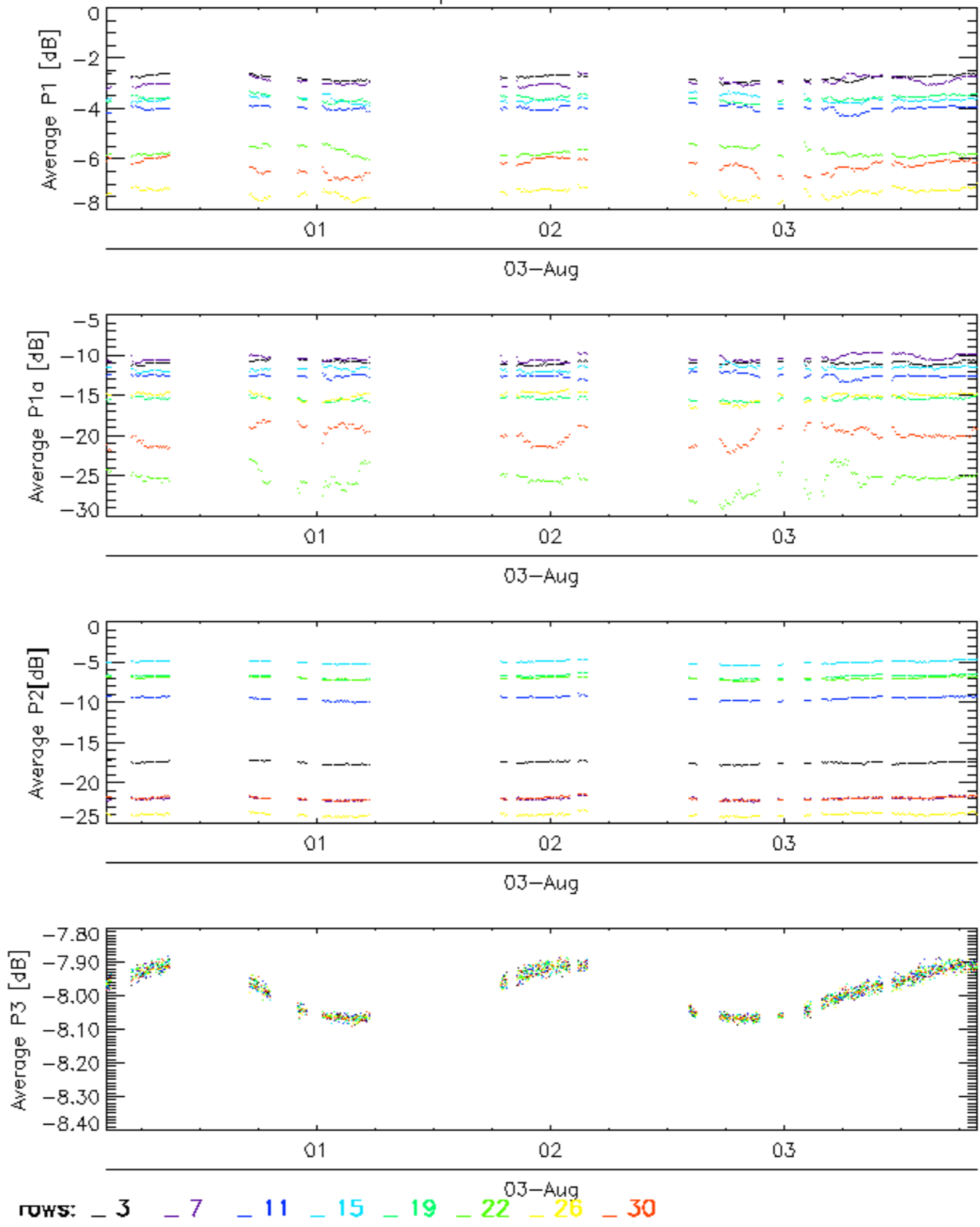
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

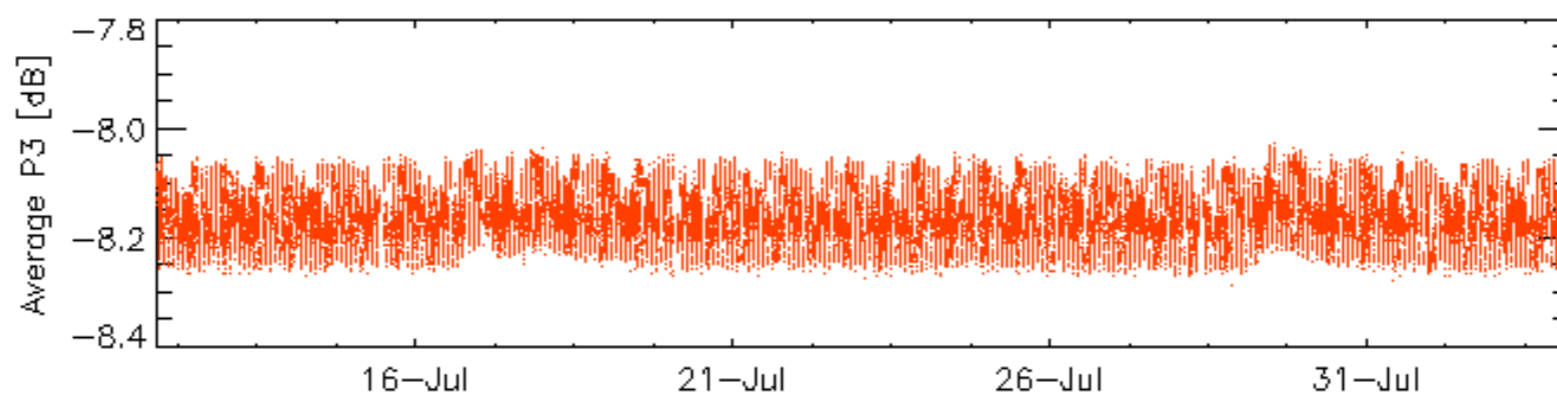
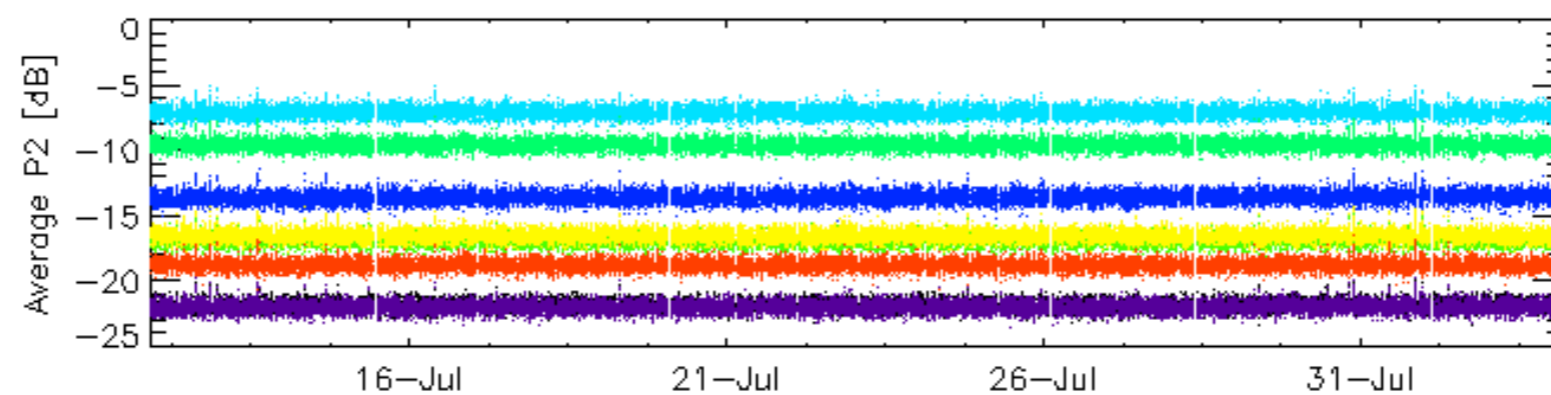
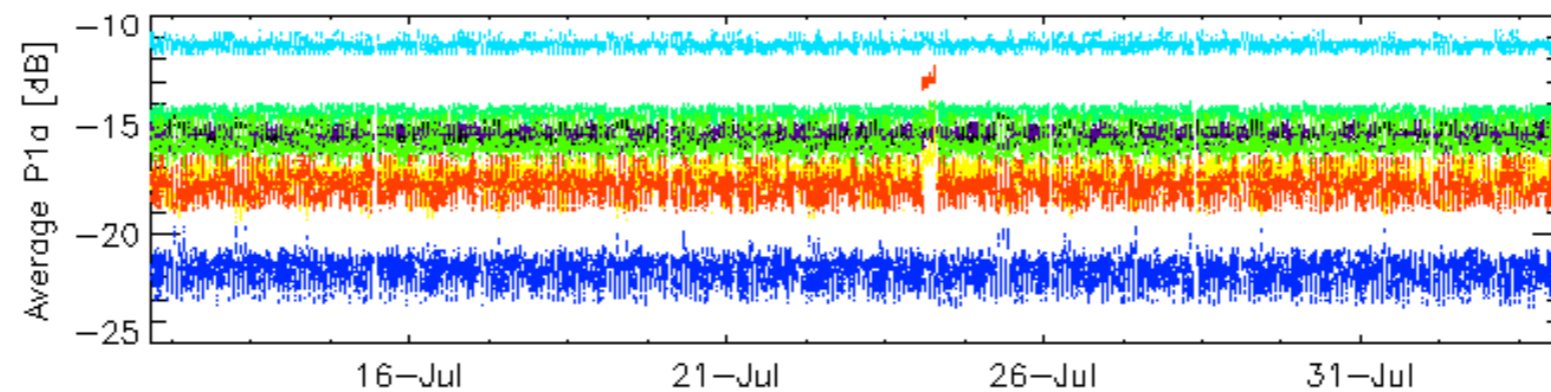
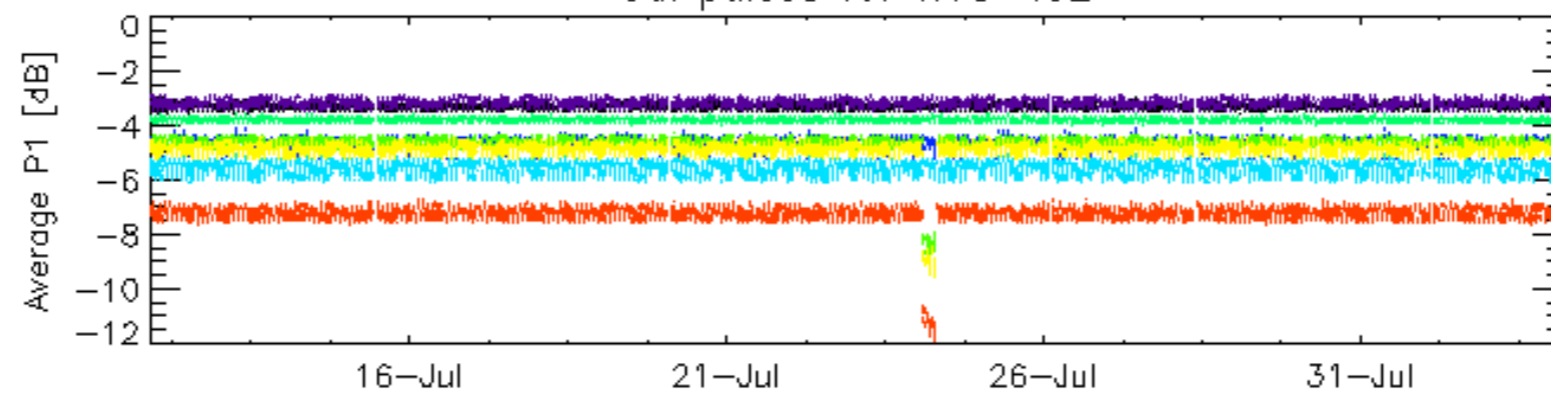


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

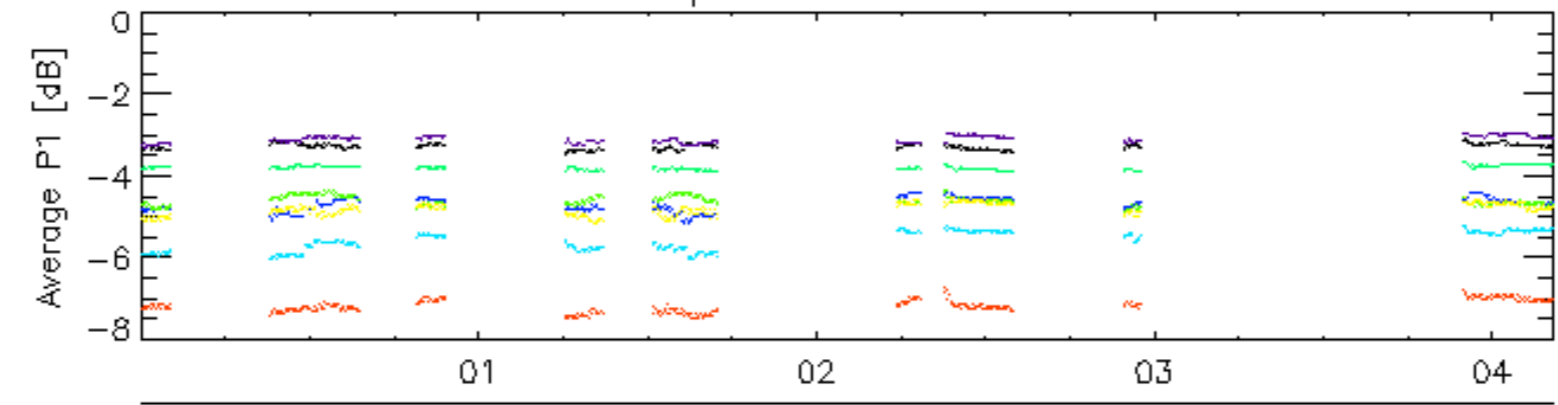


Cal pulses for WVS IS2

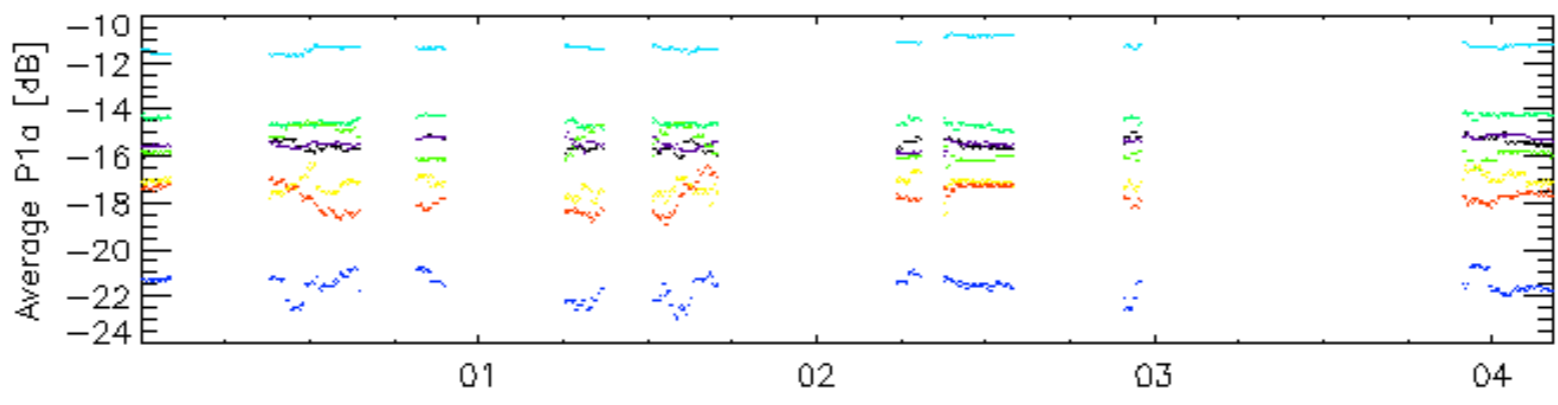


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

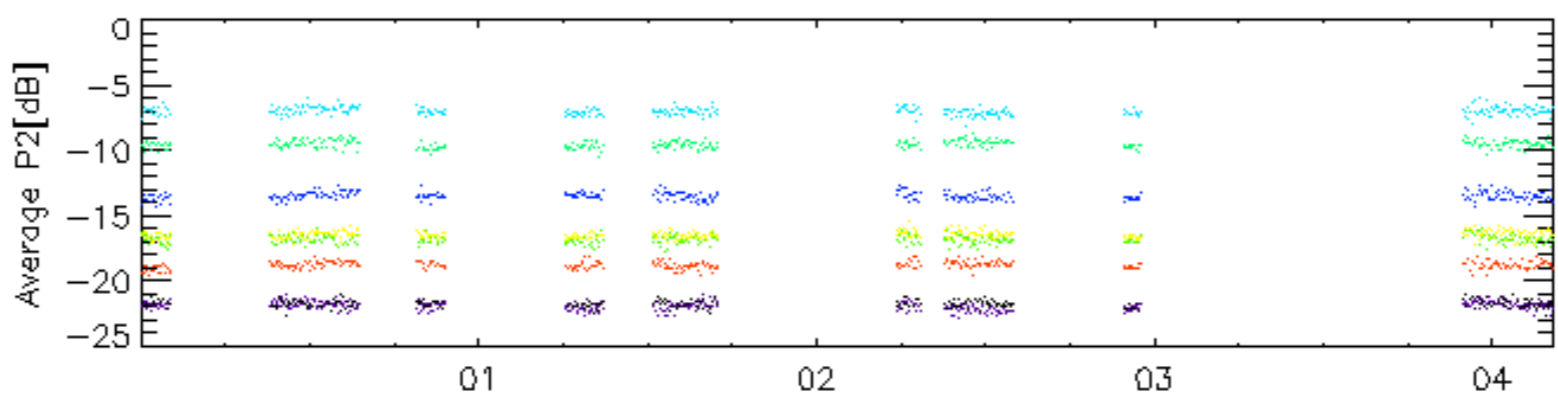
Cal pulses for WVS IS2



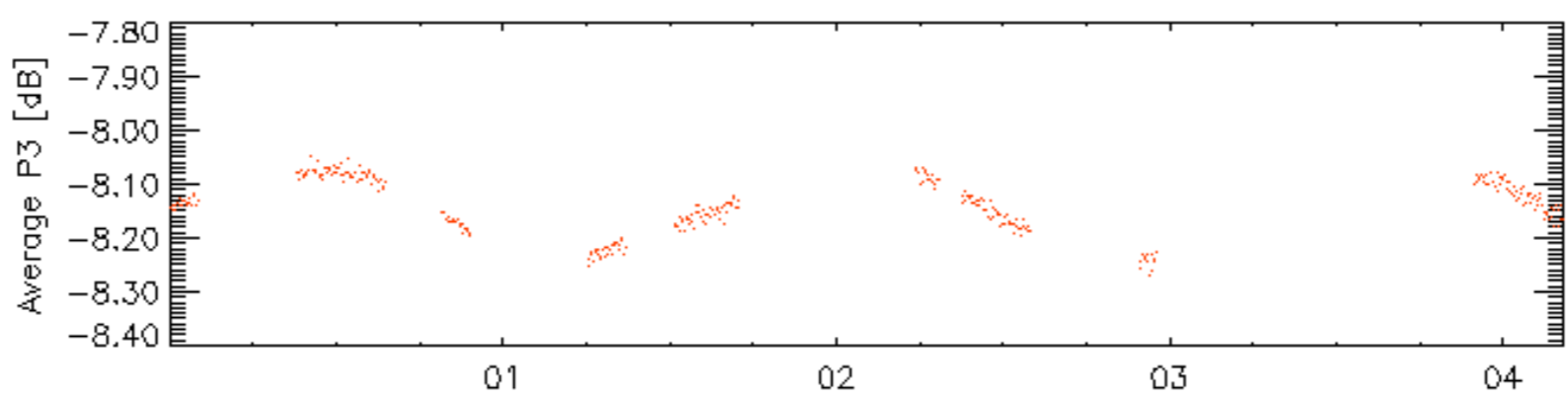
03-Aug



03-Aug



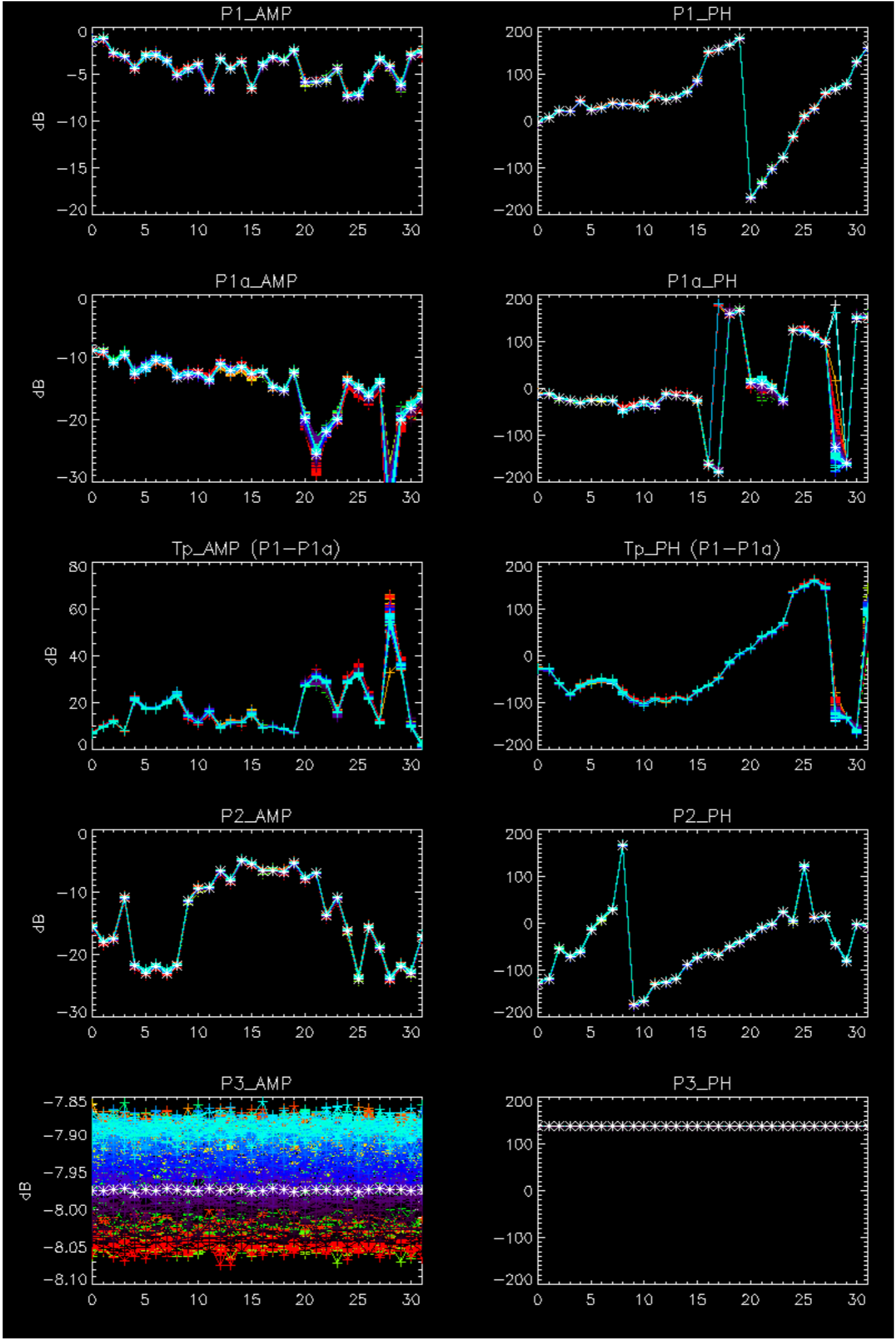
03-Aug

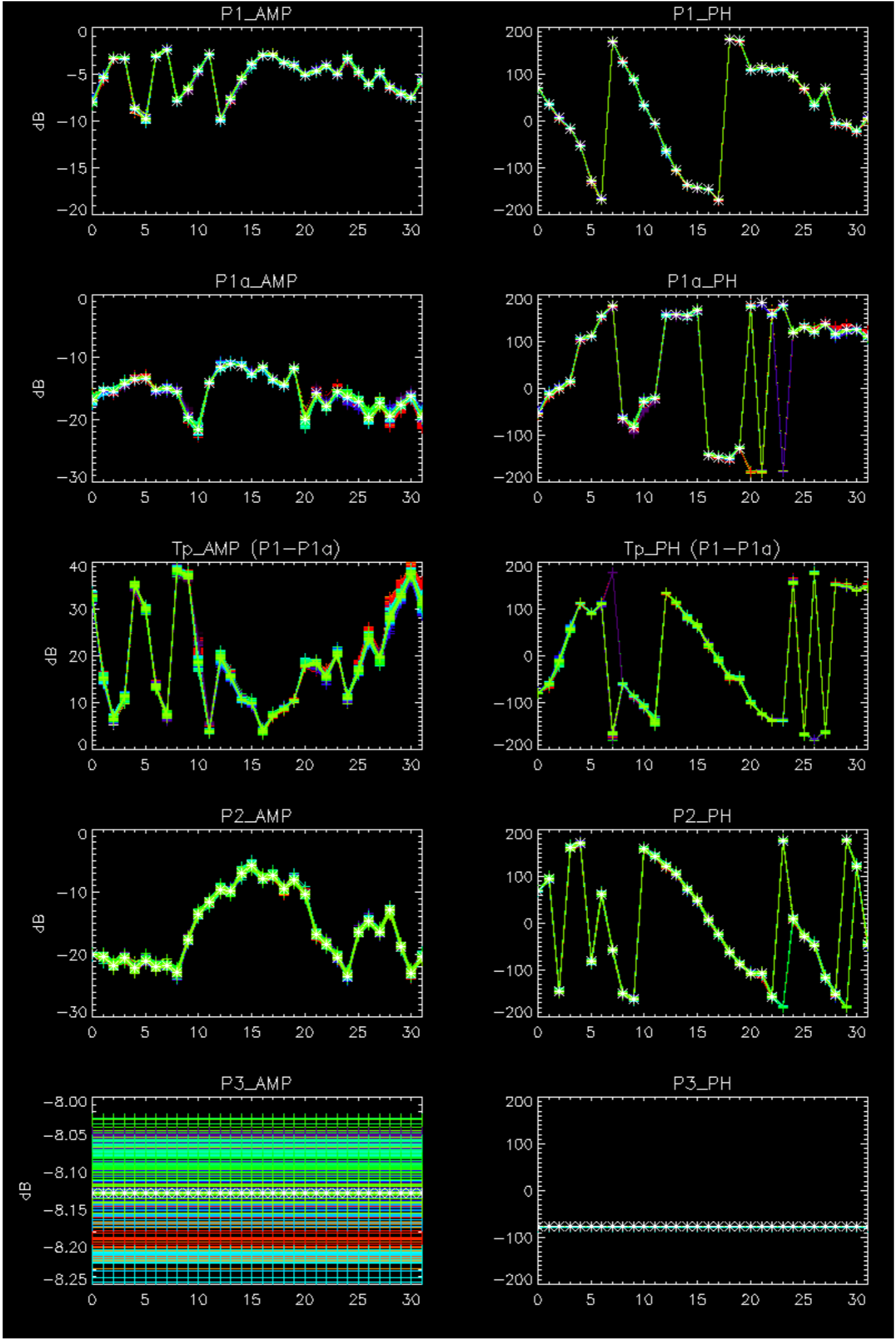


03-Aug

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

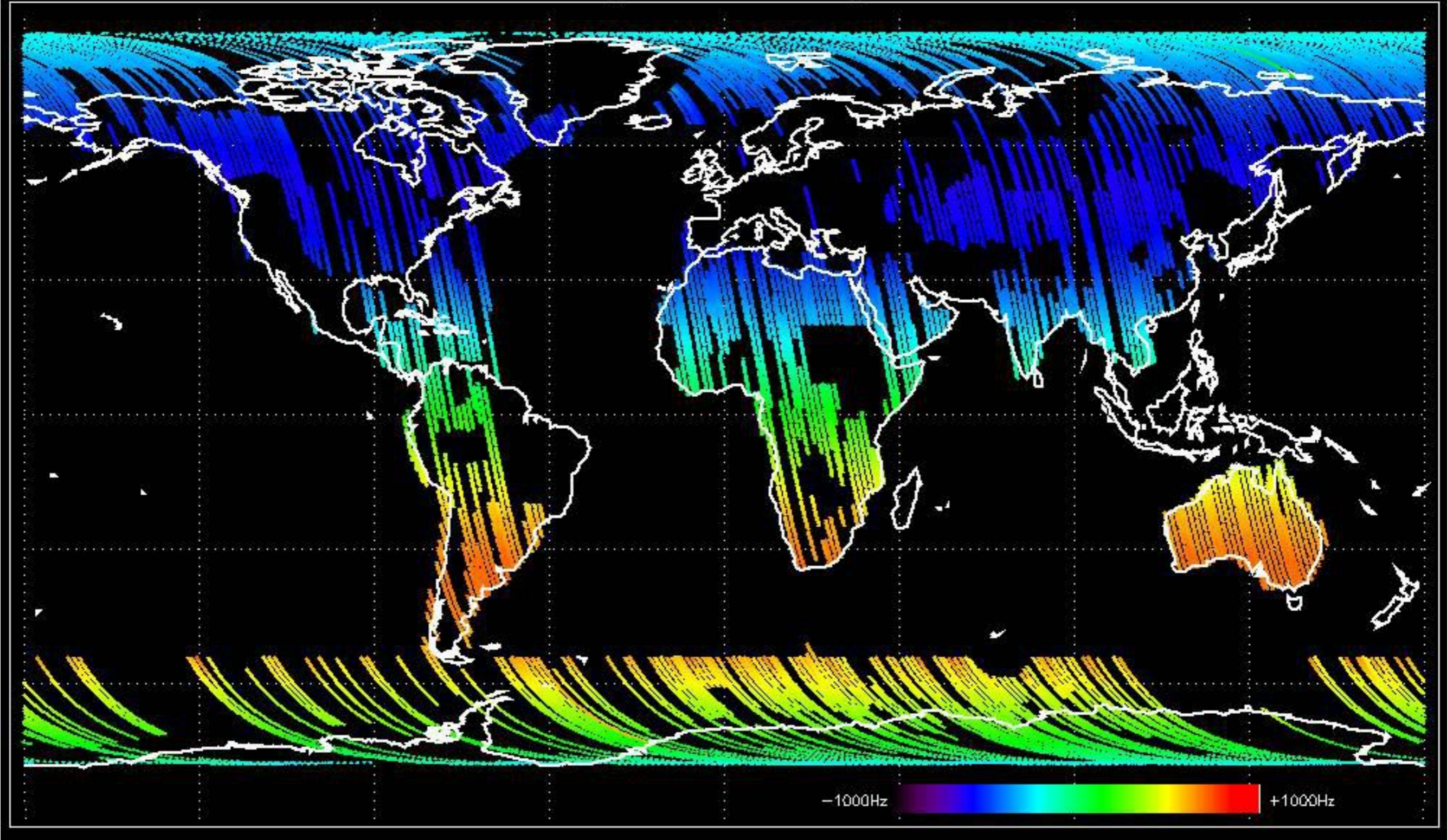
No anomalies observed.



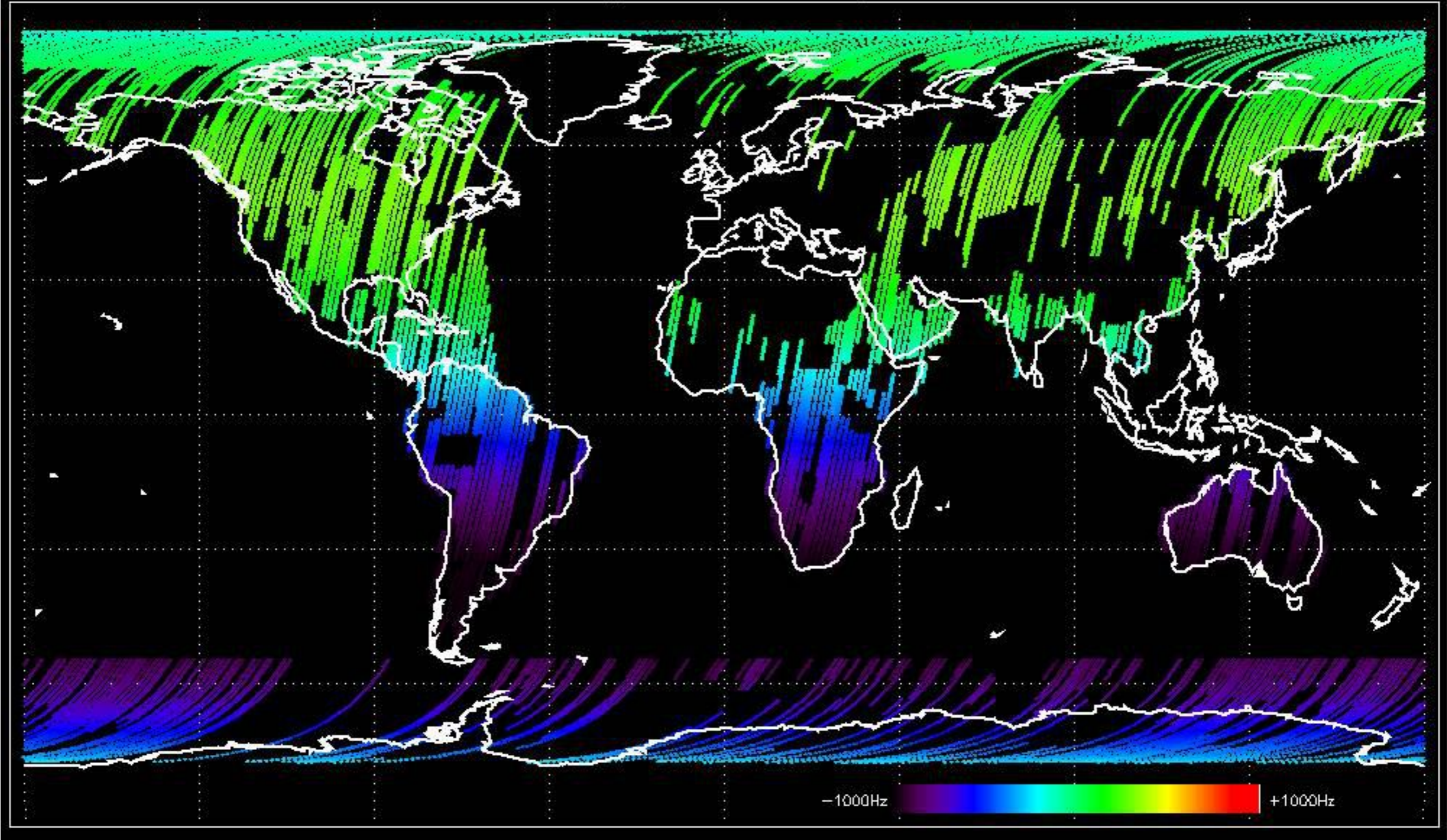


Data analysis shows that all the rows of tile B3 in H and V polarisation were affected by a drop in Tx power gain. The anomaly starts on AP at 03-AUG-2005 17:09:54 and has been stopped but the antenna reset.

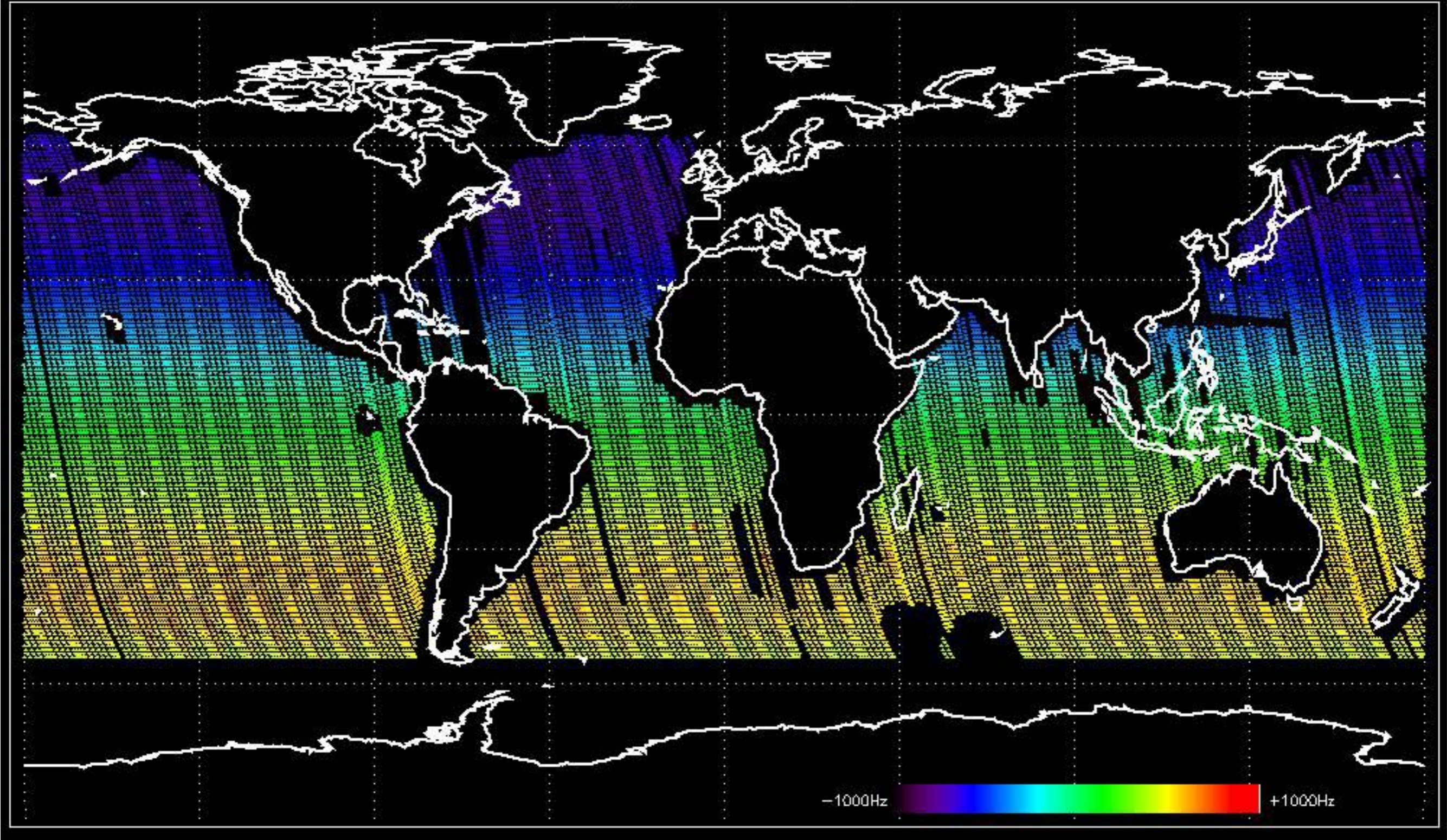
Doppler 'GM1' 'SS1' ascending



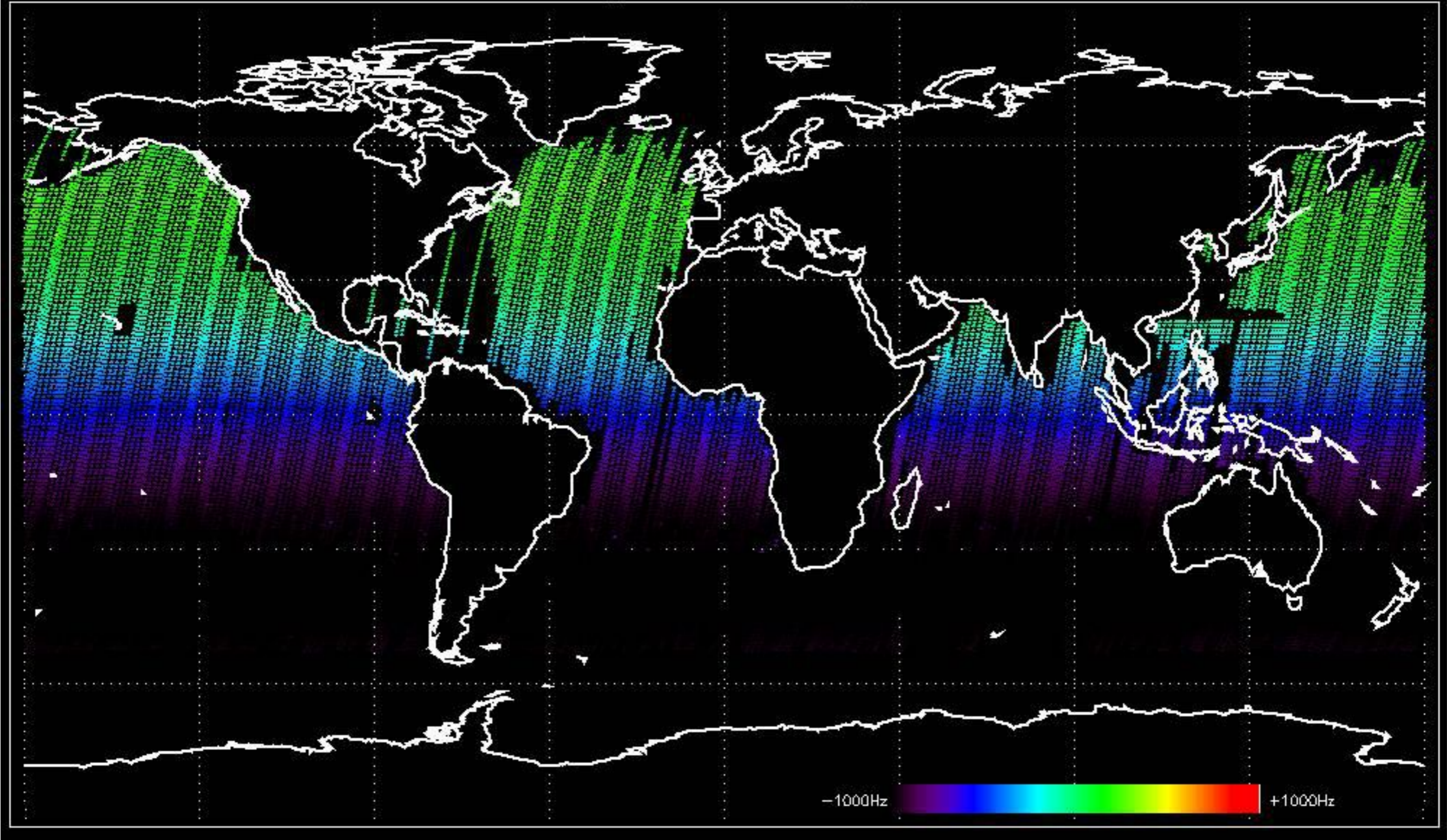
Doppler 'GM1' 'SS1' descending



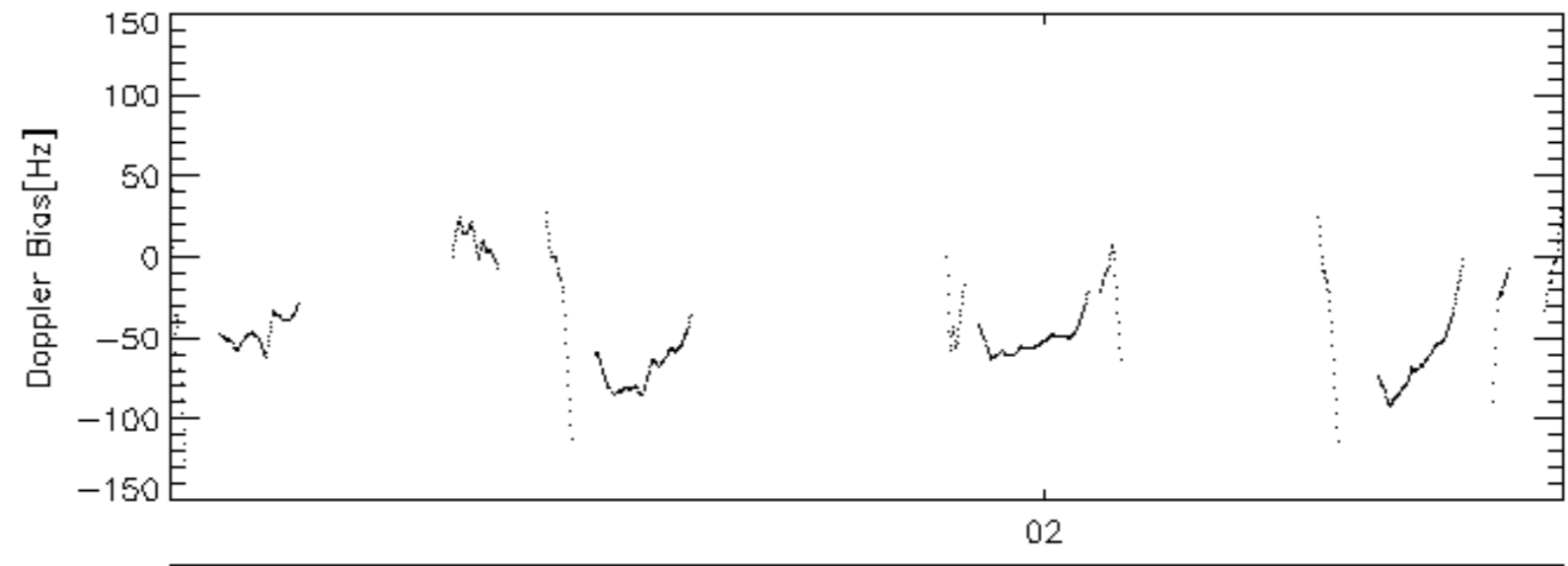
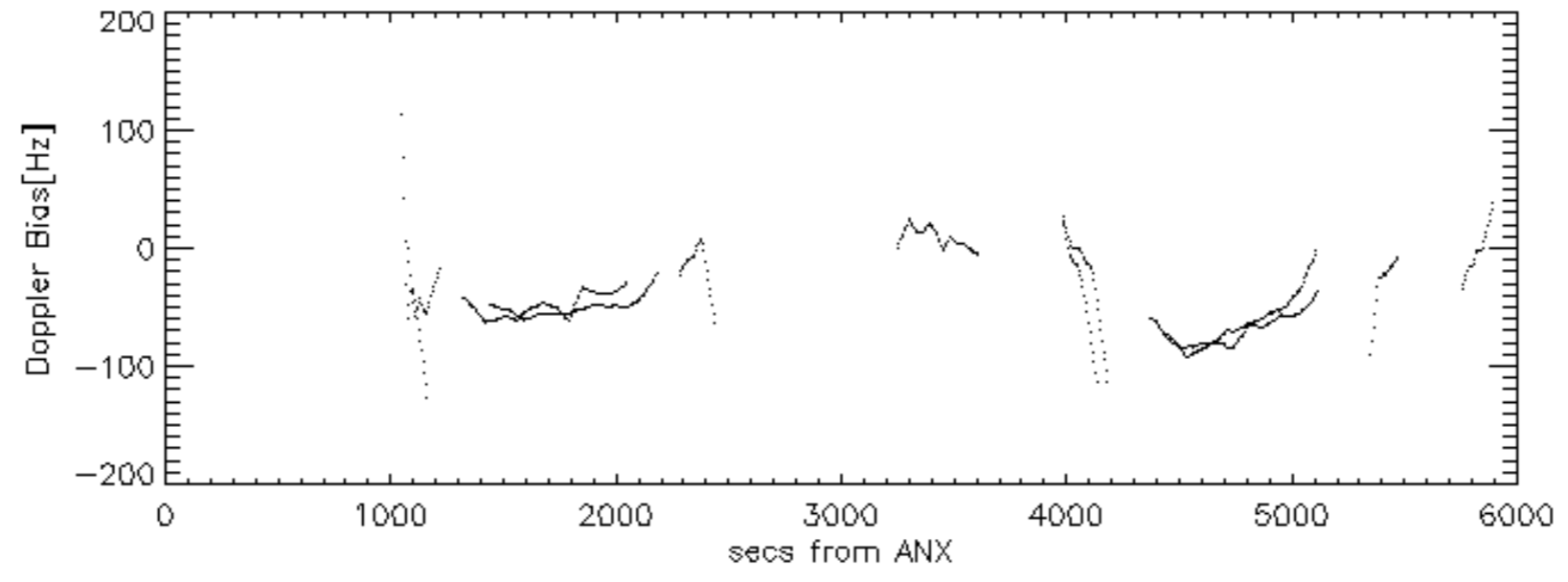
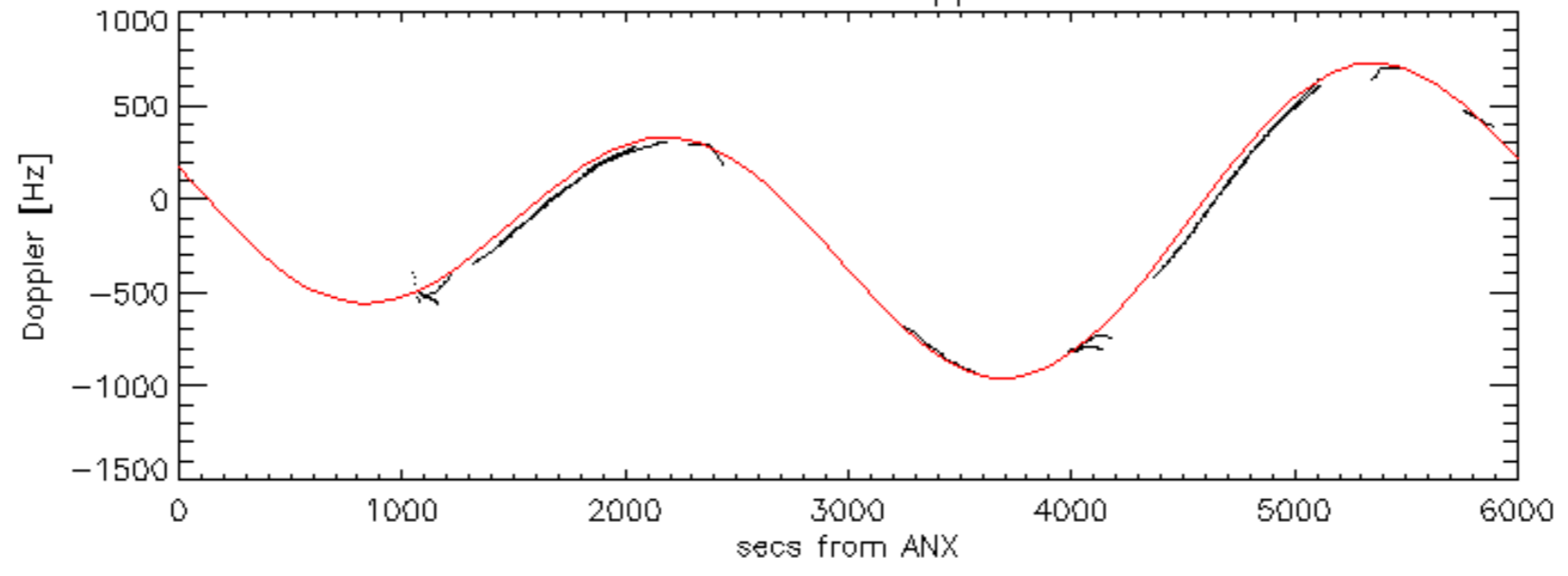
Doppler 'WVS' 'IS2' ascending



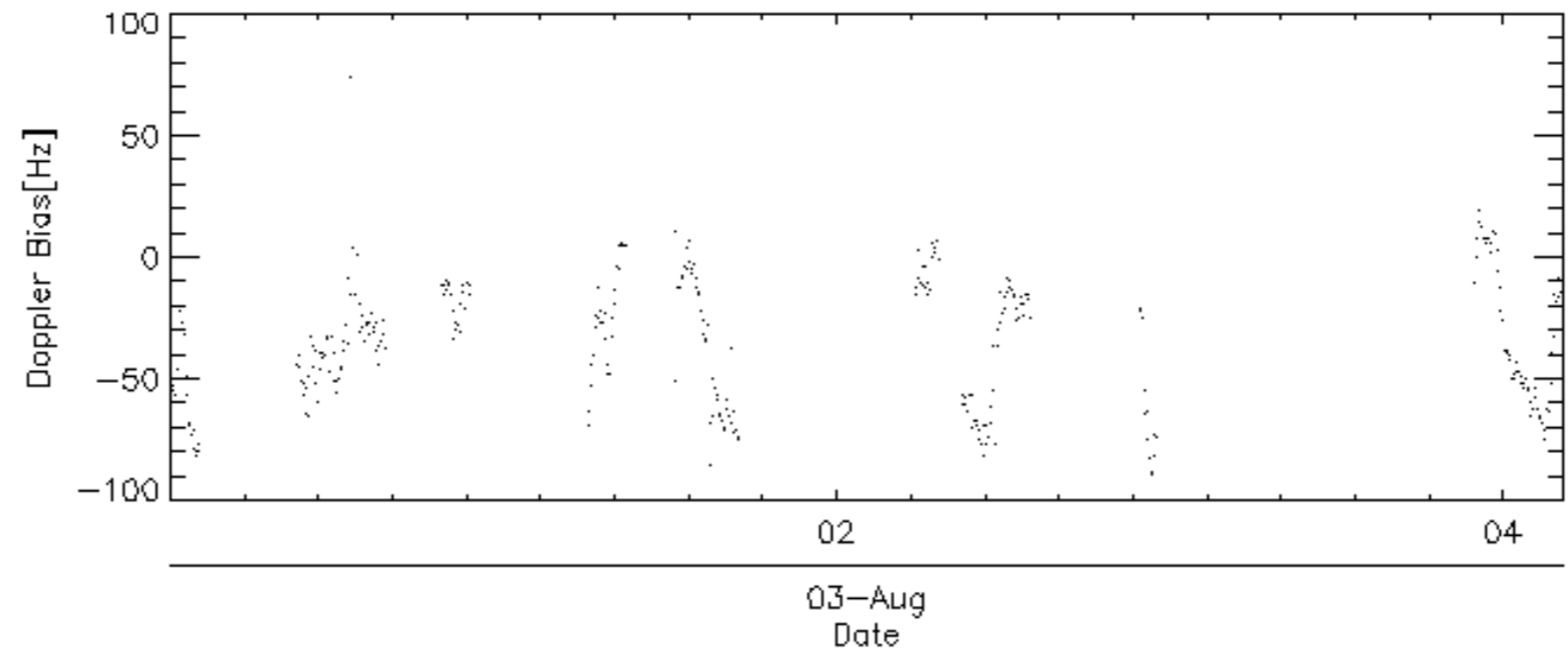
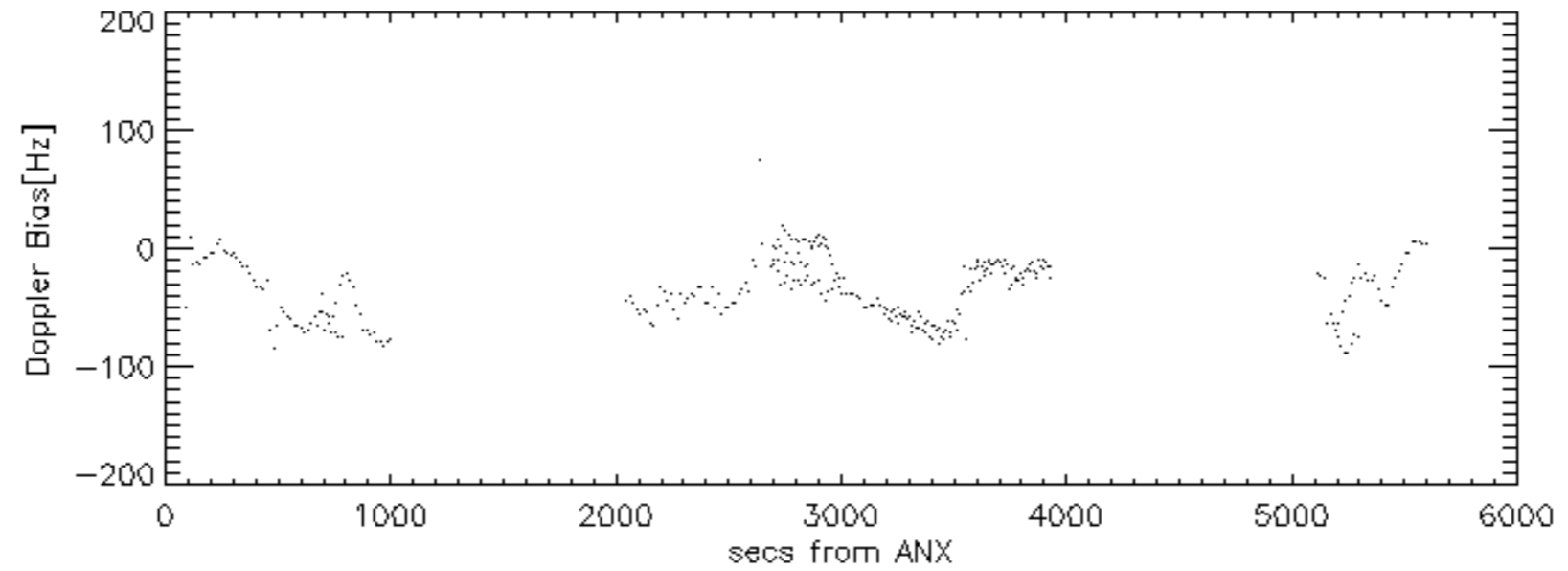
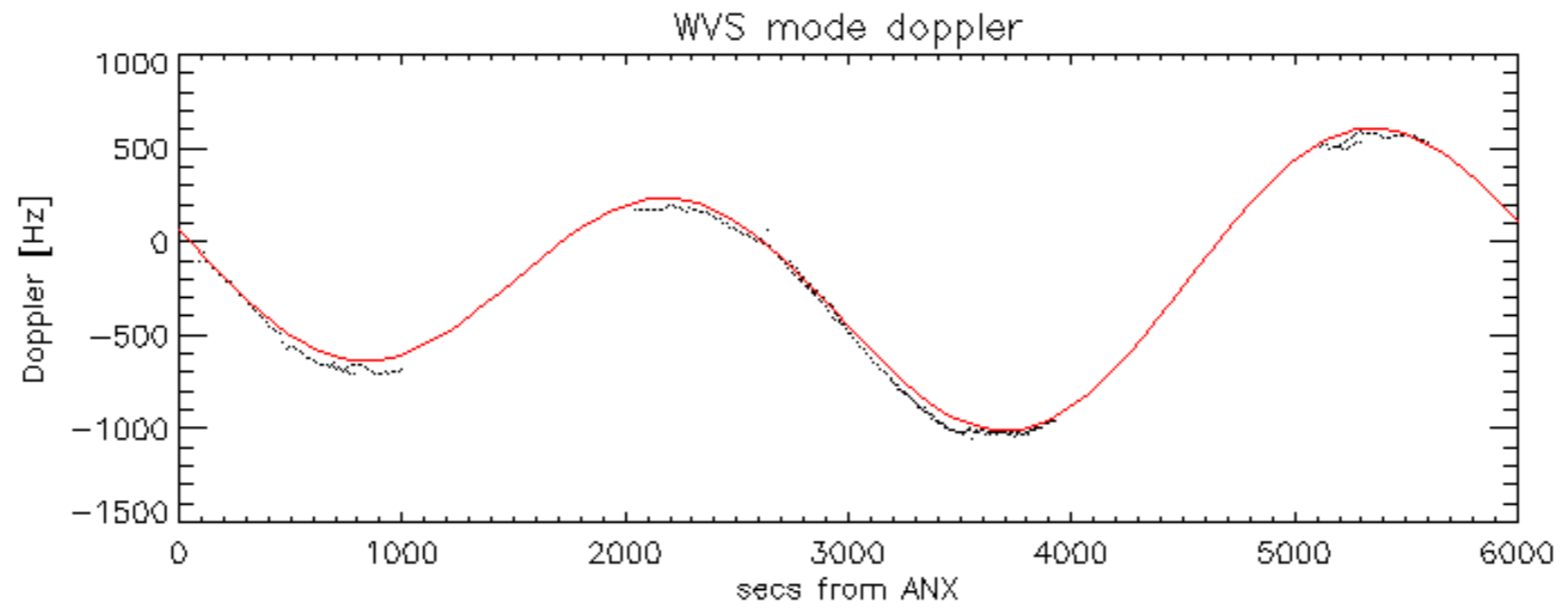
Doppler 'WVS' 'IS2' descending



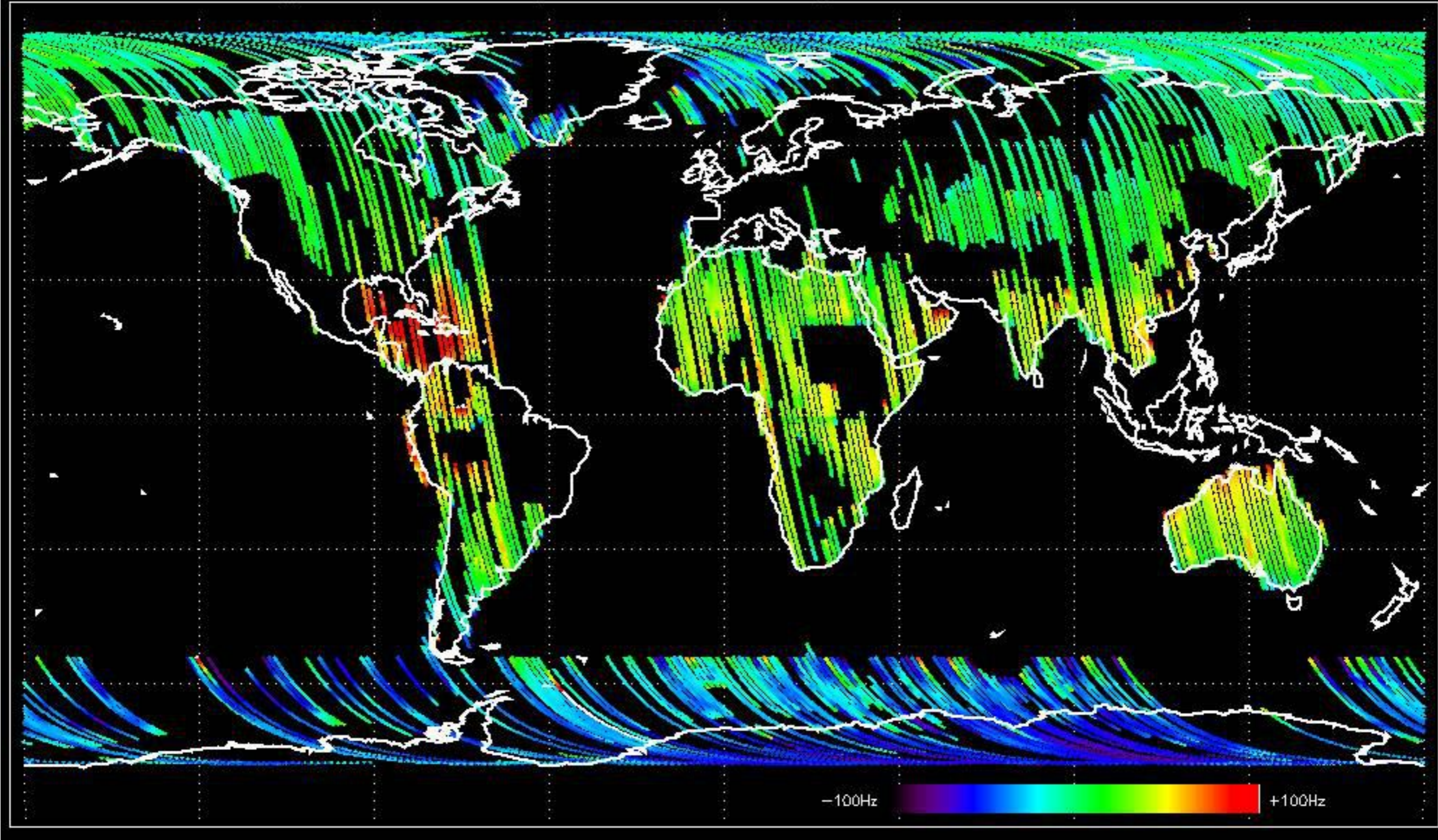
GM1 mode doppler



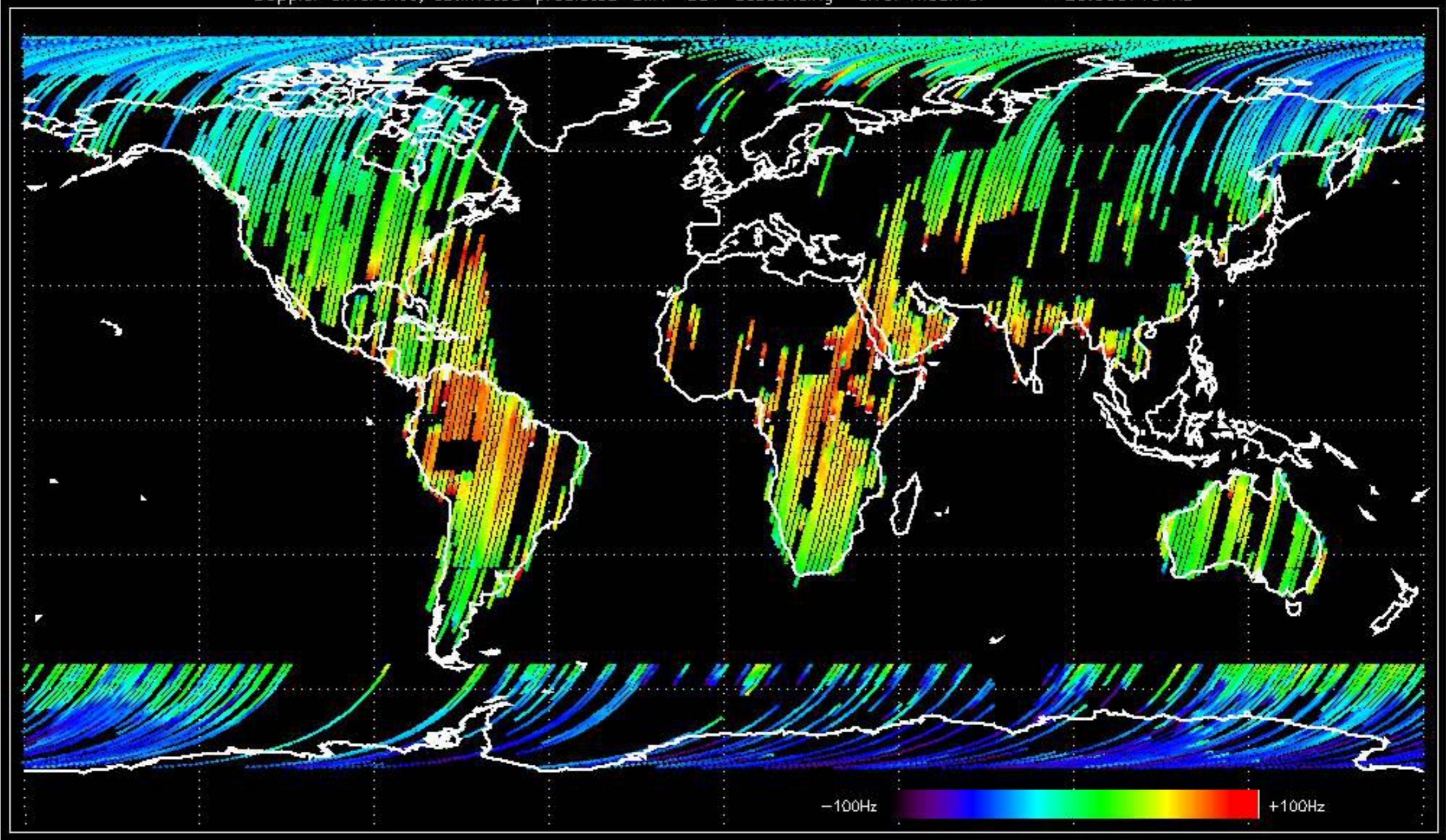
03-Aug
Date



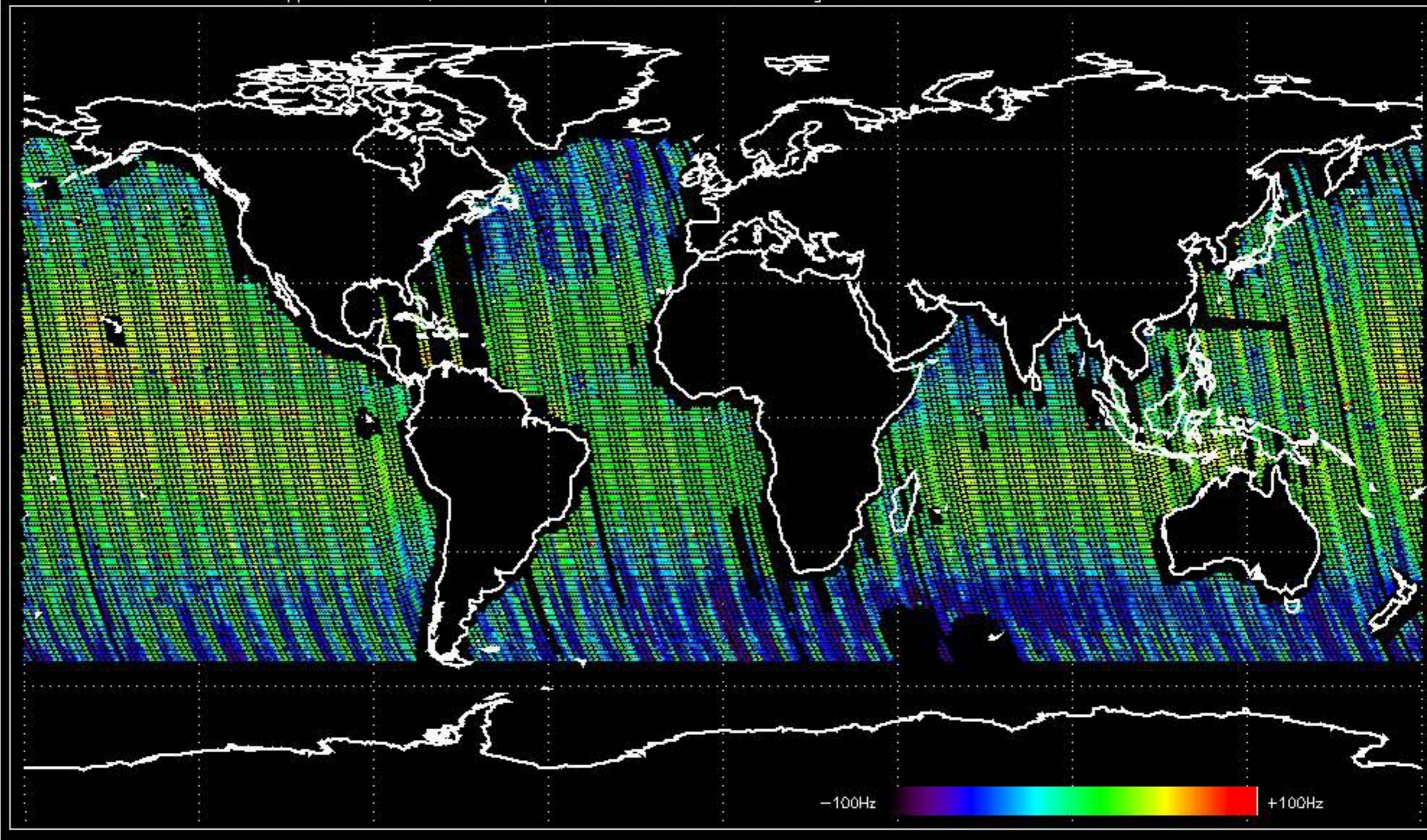
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.492836 Hz



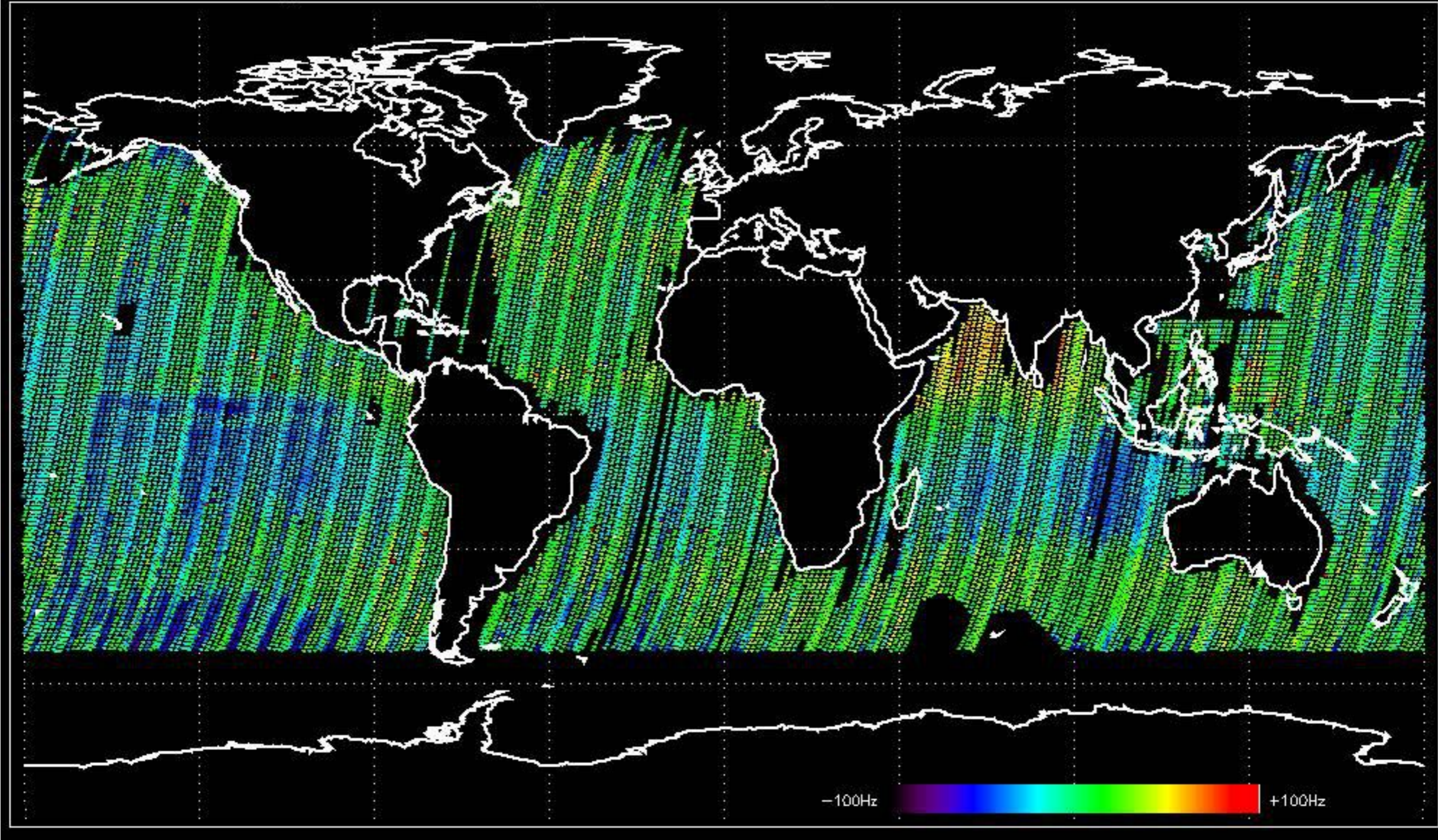
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -26.006710 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.115931 Hz

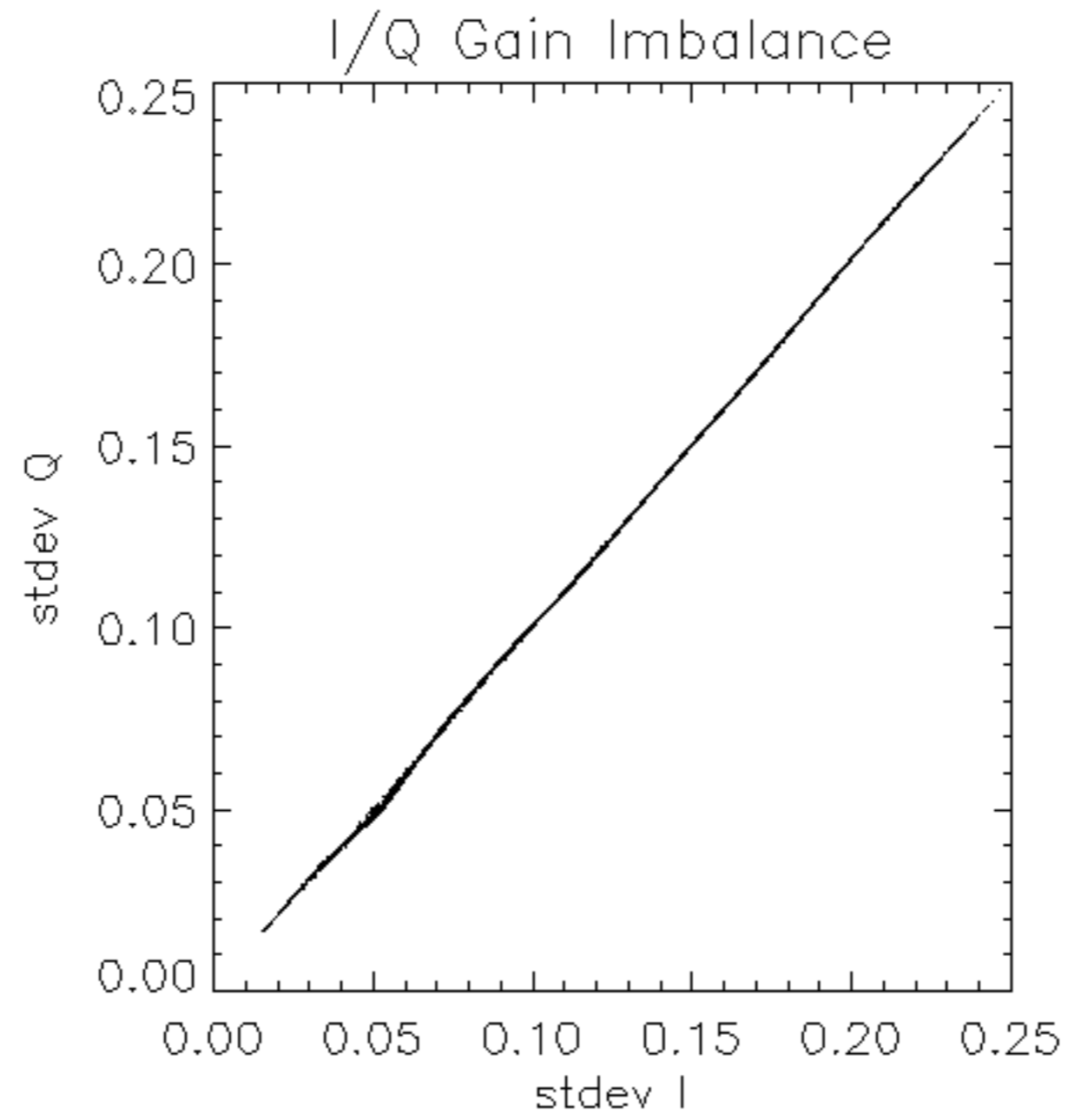


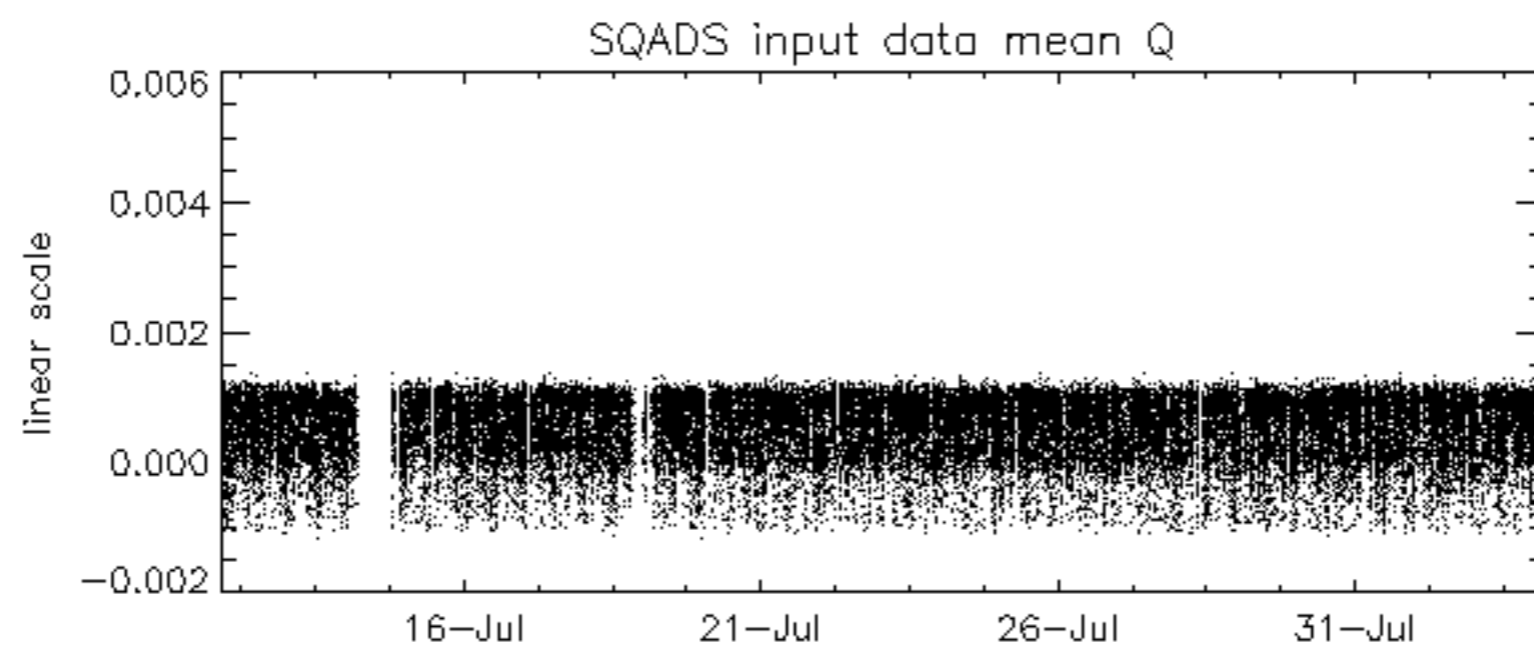
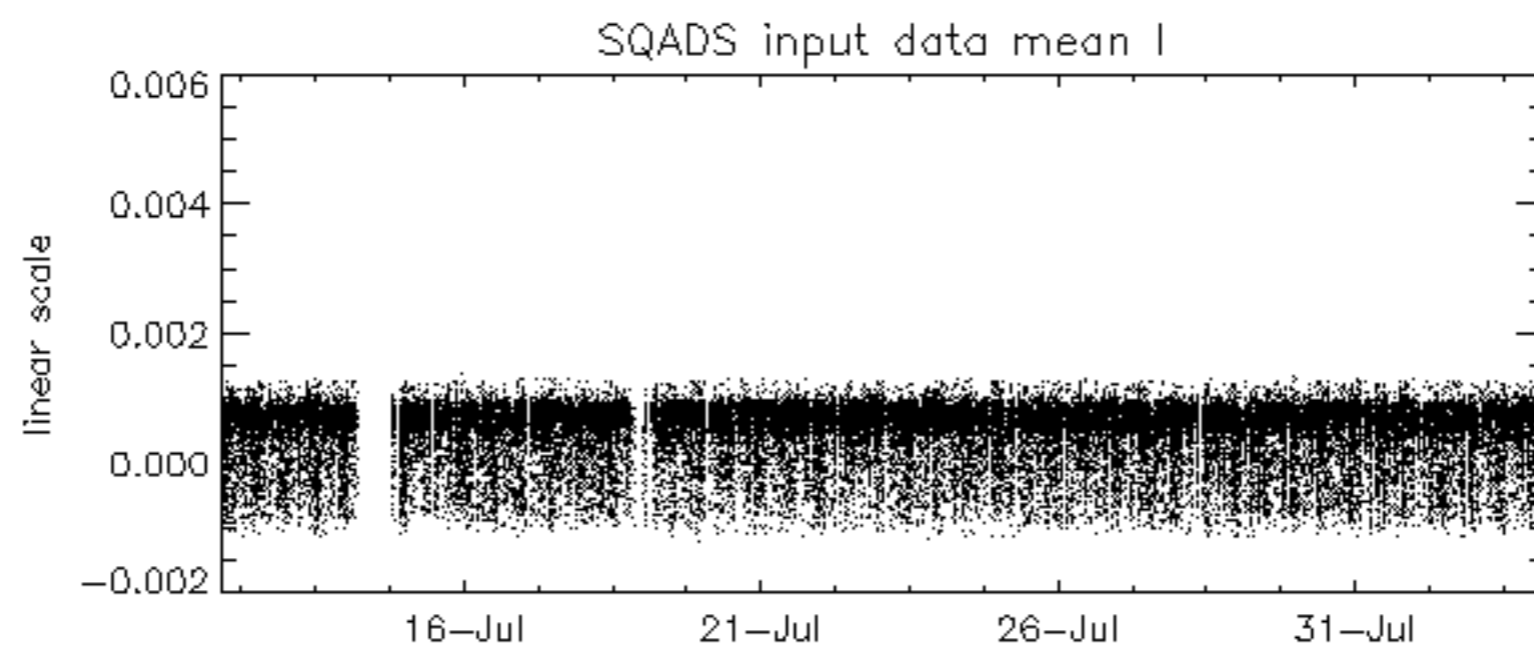
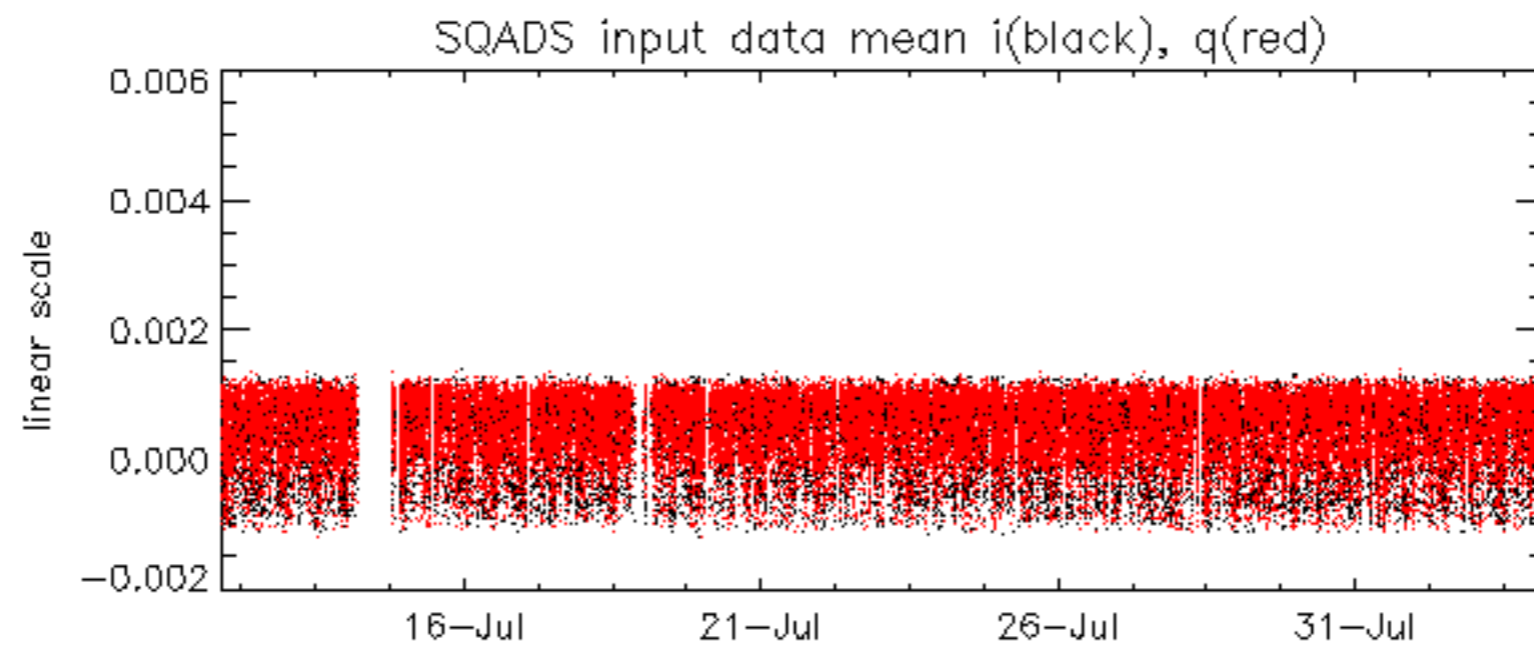
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.210150 Hz

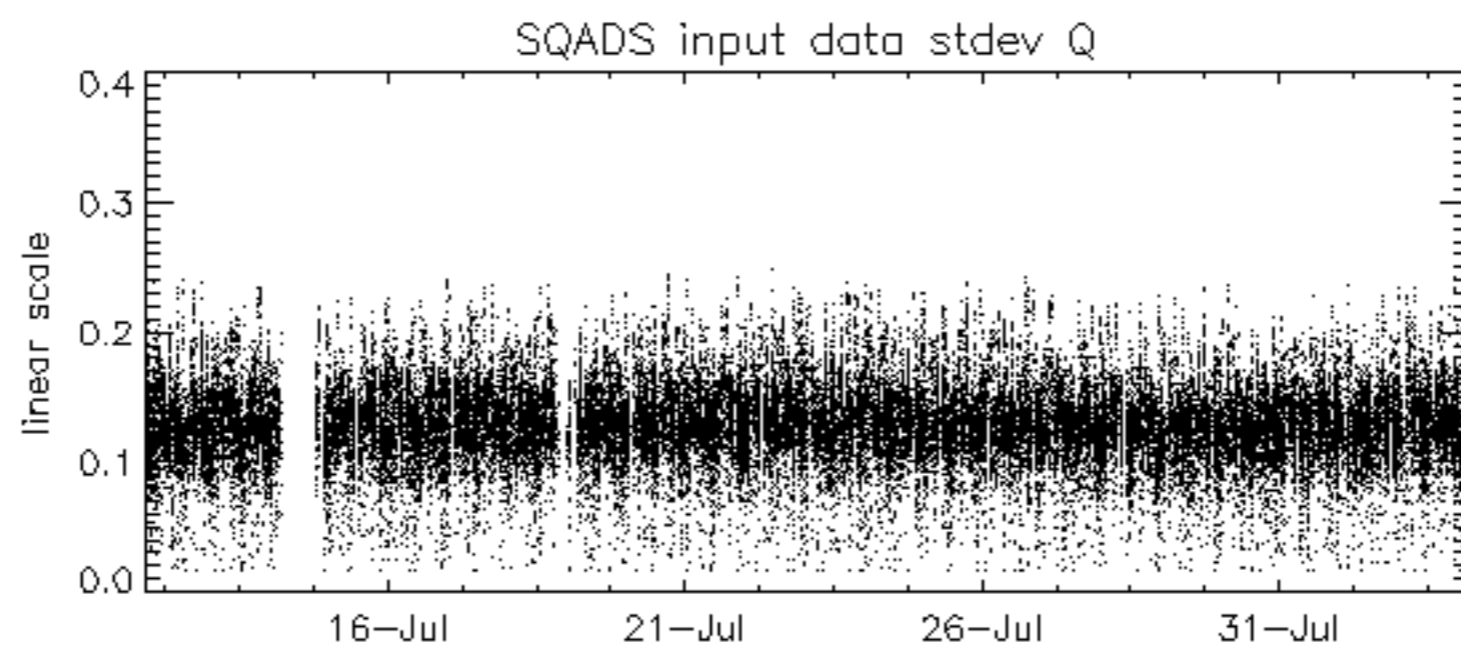
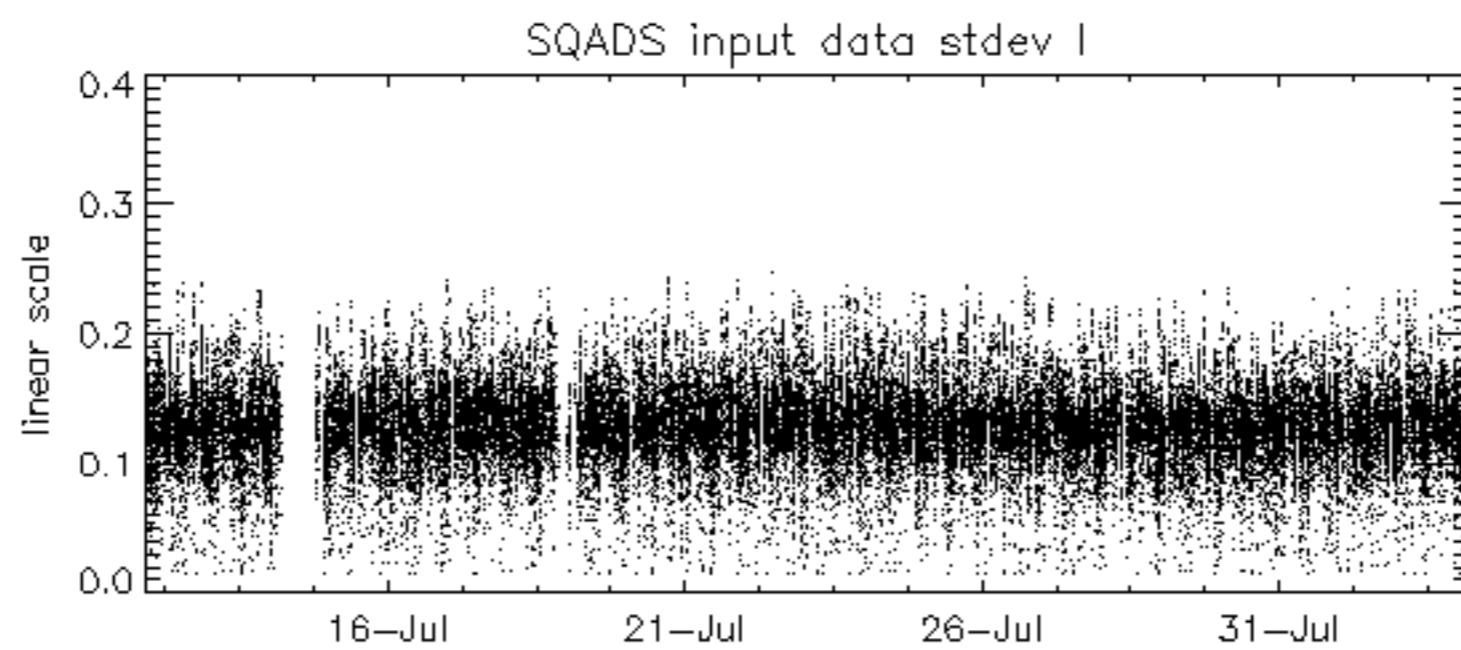
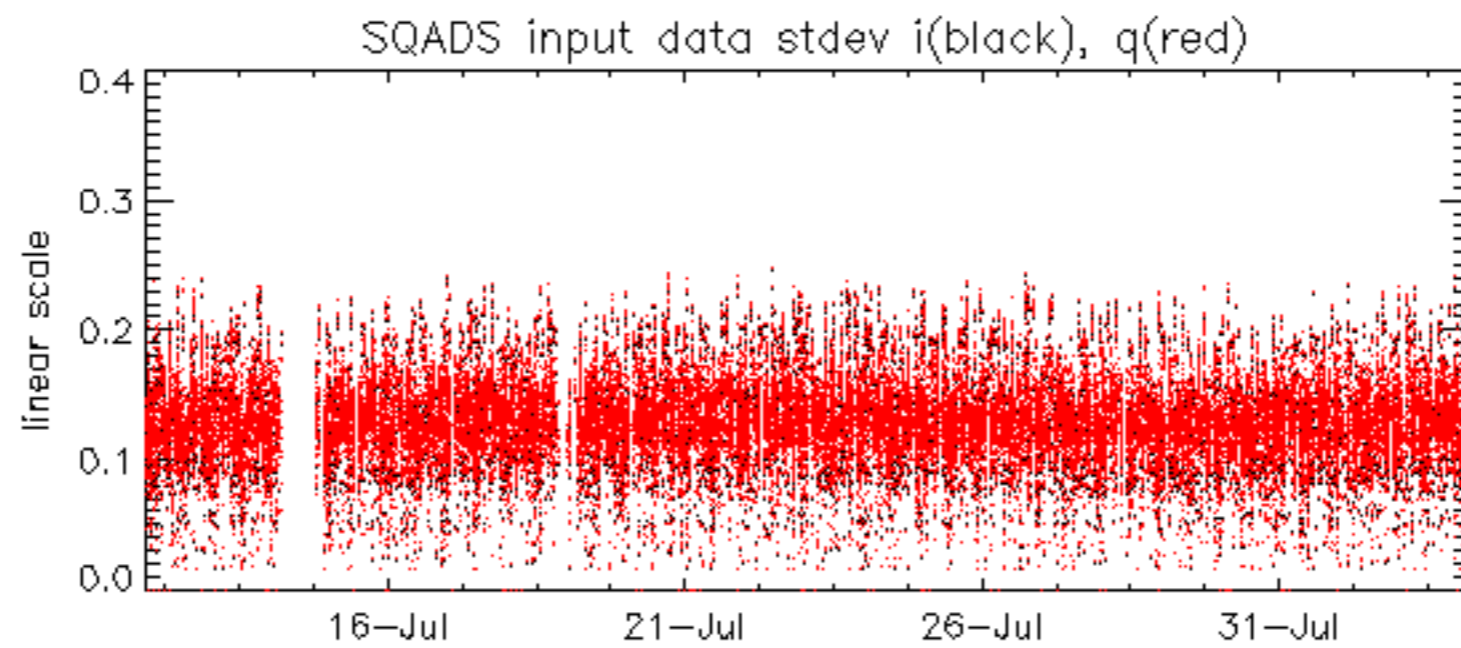


No anomalies observed on available MS products:

No anomalies observed.



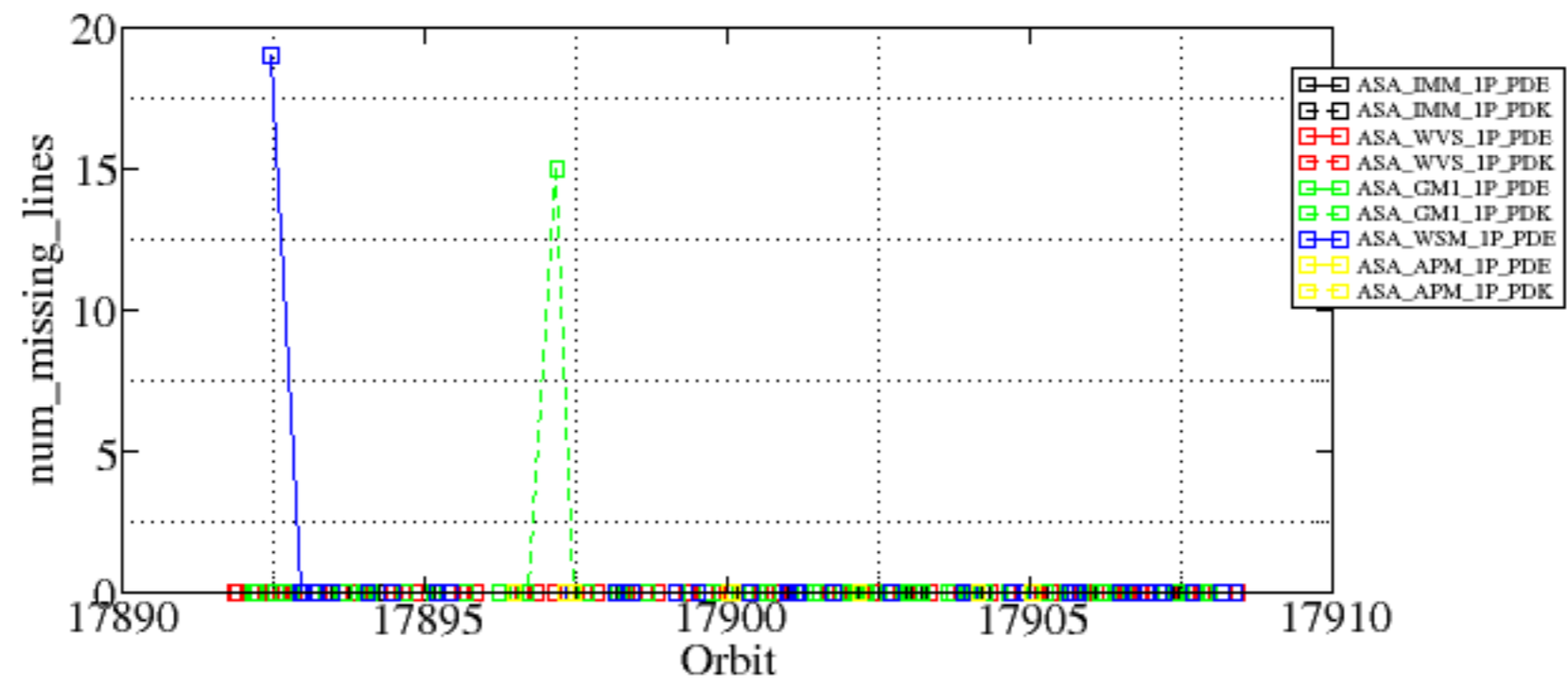


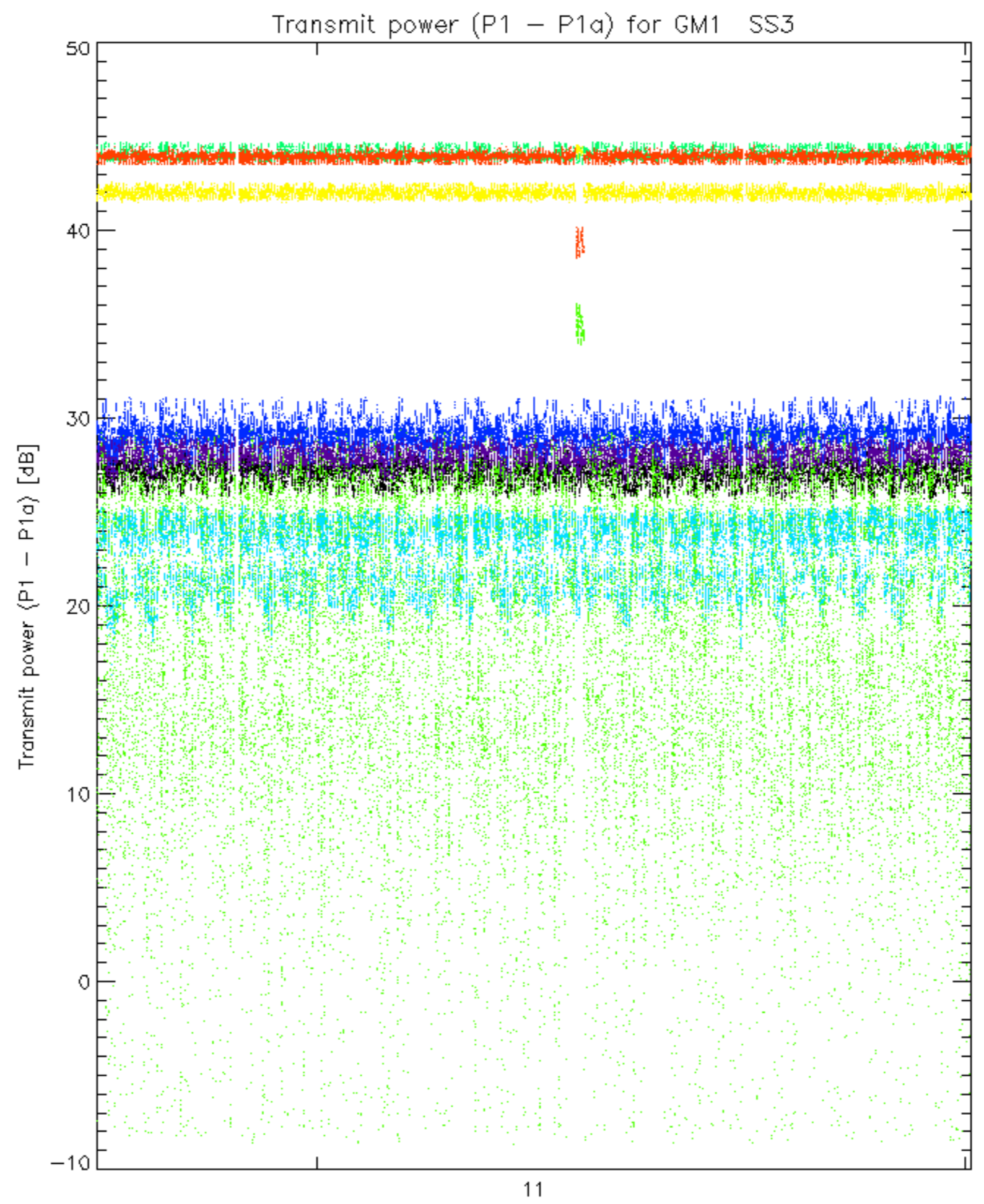


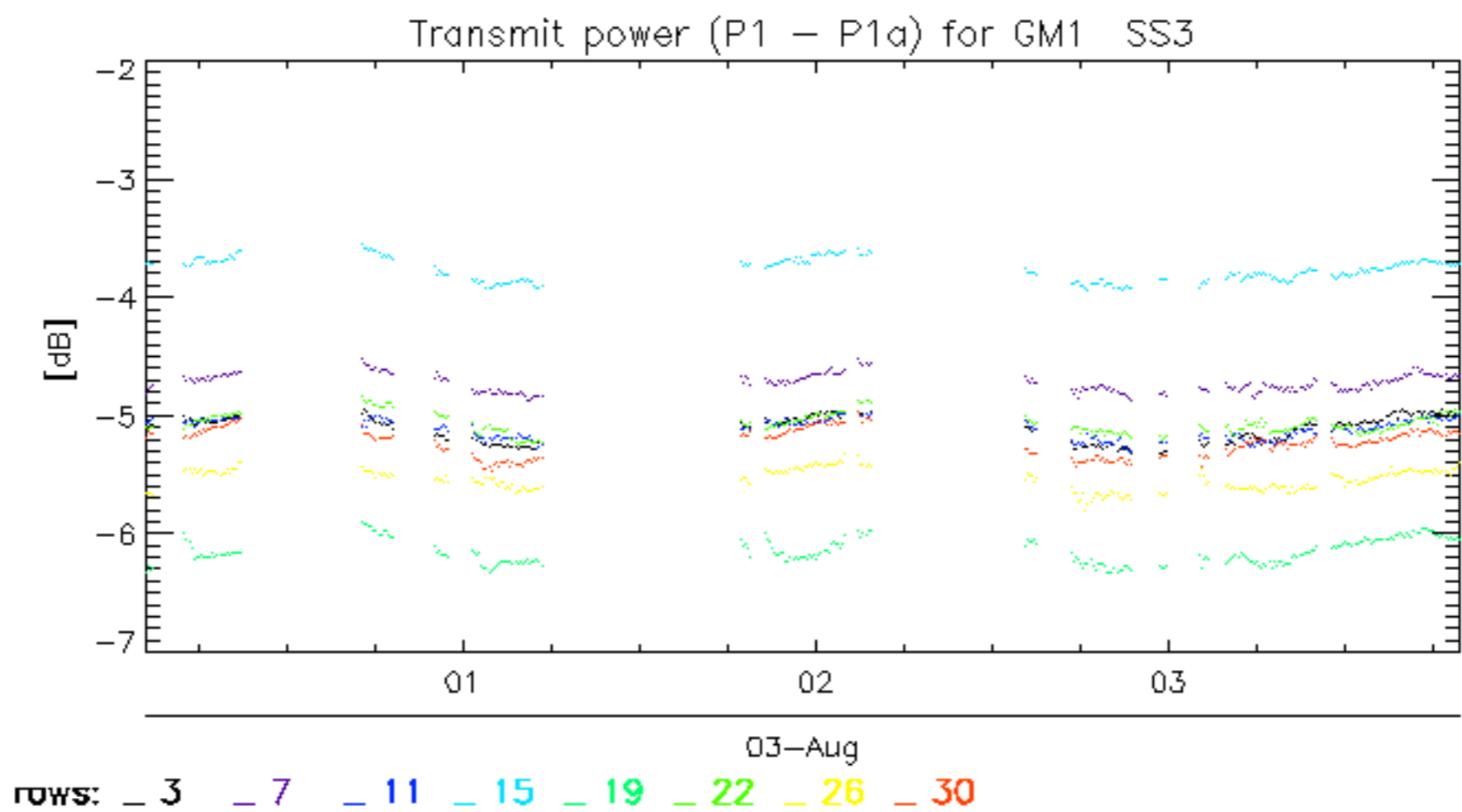
Summary of analysis for the last 3 days 2005080[234]

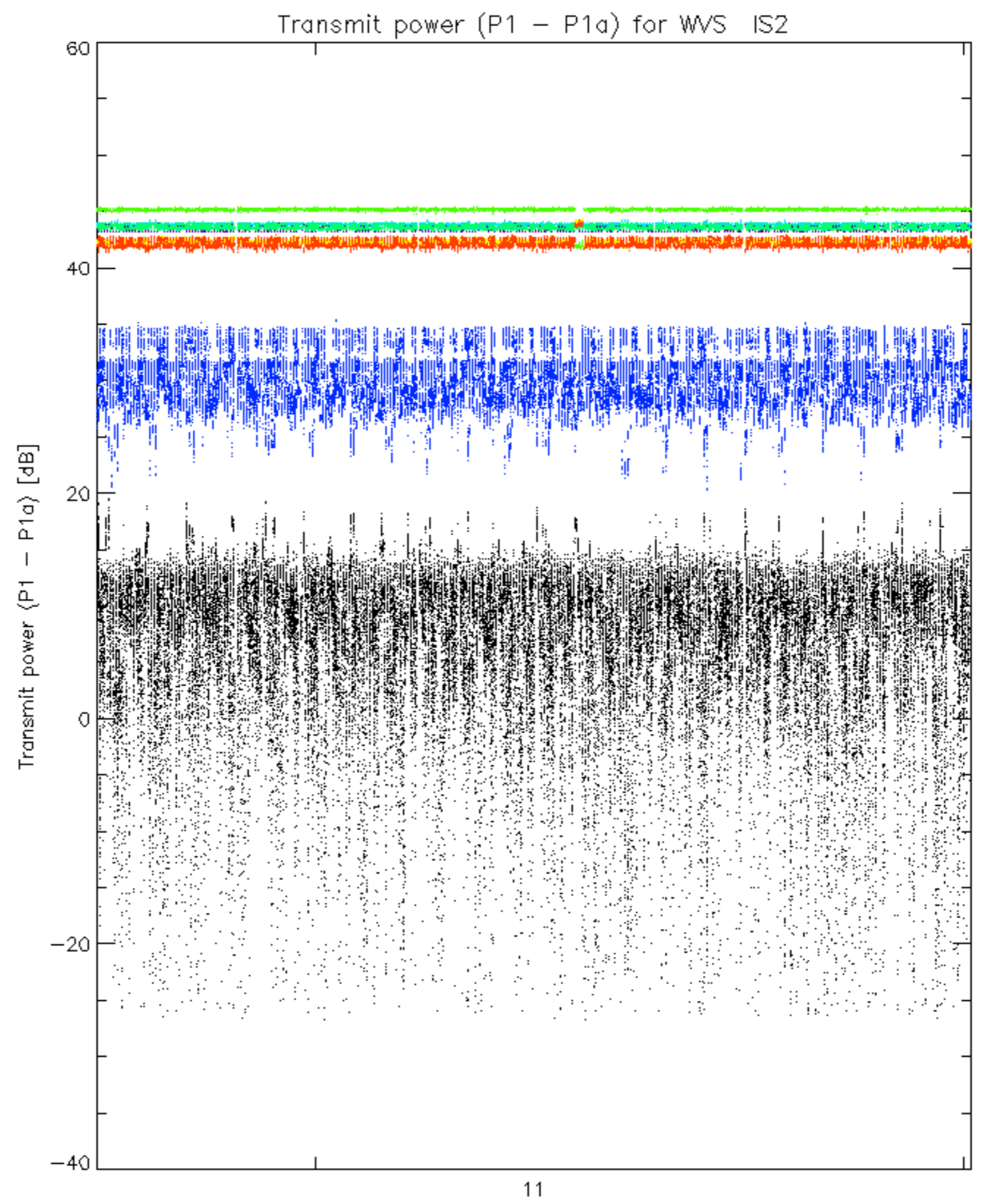
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20050802_090138_000007122039_00308_17897_1198.N1	0	15
ASA_WSM_1PNPDE20050802_010559_00000852039_00303_17892_2489.N1	0	19
ASA_WSM_1PNPDE20050802_021824_000003002039_00304_17893_2504.N1	5	0

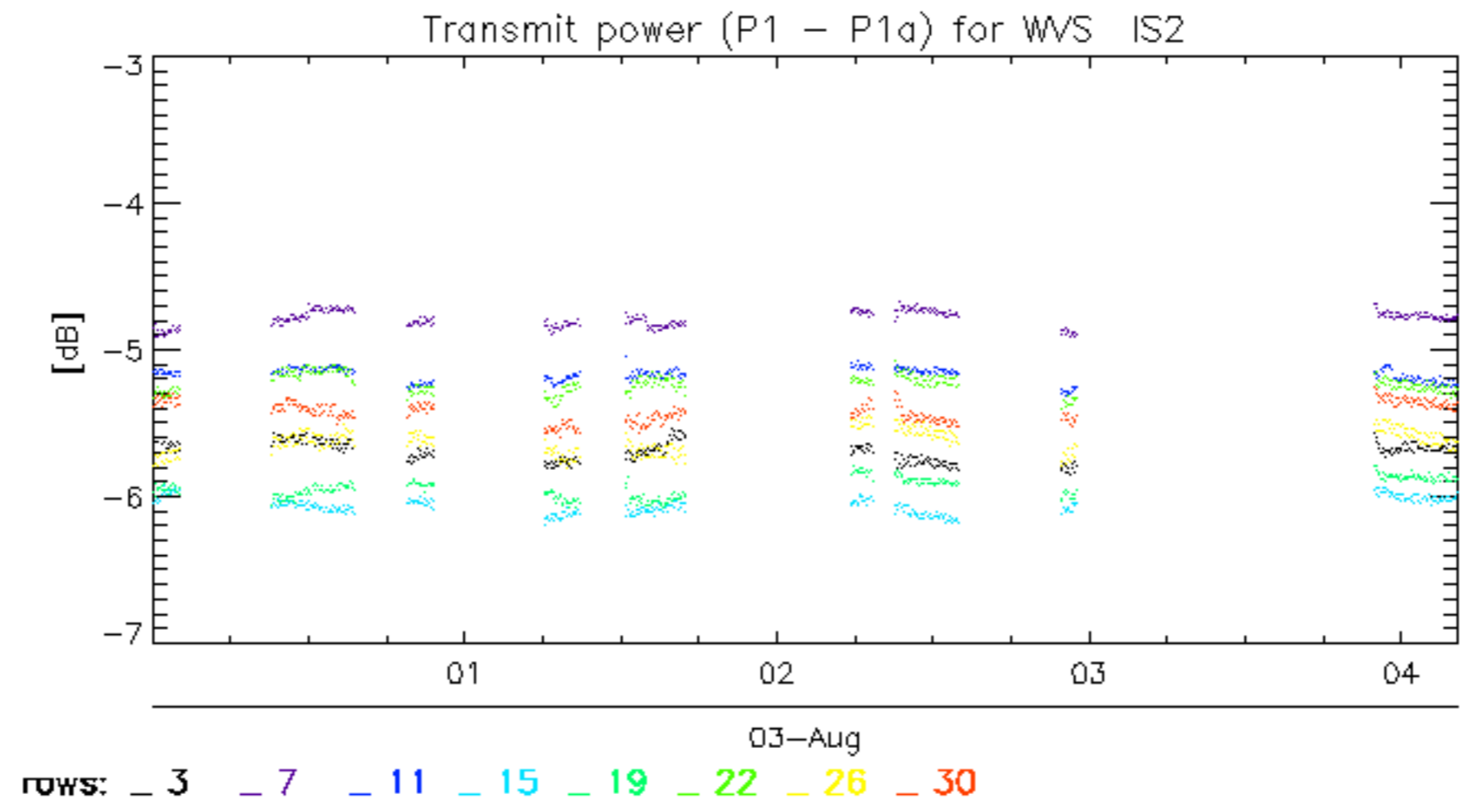








rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



ASAR was unavailable due to an Antenna Reset caused by and under current level on TILE B3:
From 03-Aug-2005 22:01:30.000 to 22:08:56.000