PRELIMINARY REPORT OF 040801

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

last update on Sun Aug 1 13:05:51 GMT 2004

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 - Browse Visual Inspection

2.3 - Data Analysis

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

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

Polarisation	Start Time
V	20040730 055518
H	20040731 084452

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)

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.476761	0.005372	0.021121
7	P1	-3.318687	0.012913	0.023127
11	P1	-4.600896	0.030285	-0.019983
15	P1	-5.722860	0.055528	-0.000243
19	P1	-3.447191	0.004192	-0.012740
22	P1	-4.561604	0.010900	-0.017214
24	P1	-4.947914	0.017350	-0.004248
30	P1	-6.888899	0.026029	-0.034582

3	P1	-16.188259	0.122952	0.006256
7	P1	-13.964006	0.079355	0.018234
11	P1	-20.035496	0.255280	-0.162123
15	P1	-11.789037	0.042662	0.031143
19	P1	-13.843628	0.031305	-0.030858
22	P1	-16.327765	0.345722	-0.016759
24	P1	-14.601670	0.271389	0.008697
30	P1	-17.671642	0.415384	0.018051

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.337168	0.079229	0.067496
7	P2	-22.722134	0.117016	0.089725
11	P2	-15.466585	0.137912	0.110323
15	P2	-7.112086	0.088510	0.062996
19	P2	-9.560357	0.148792	0.048268
22	P2	-17.423155	0.102701	0.127757
24	P2	-20.764973	0.082903	0.027442
30	P2	-19.361246	0.077676	0.107198

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142958	0.001904	-0.002055
7	P3	-8.142962	0.001904	-0.002065
11	P3	-8.142962	0.001904	-0.002081
15	P3	-8.142958	0.001904	-0.002095
19	P3	-8.142950	0.001904	-0.002103
22	P3	-8.142949	0.001904	-0.002112
24	P3	-8.142949	0.001904	-0.002120
30	P3	-8.142930	0.001903	-0.002180

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-2.964858	0.111838	0.462908
7	P1	-2.930001	0.123621	-0.258718
11	P1	-3.832696	0.028978	0.021579
15	P1	-3.902402	0.689976	1.156908
19	P1	-3.413557	0.041056	-0.186627
22	P1	-5.694478	0.050480	0.151451
24	P1	-3.951147	0.065565	0.297990
30	P1	-6.159744	0.079572	-0.121651
3	P1	-10.780764	0.339078	0.657099
7	P1	-9.959081	0.282281	-0.459797
11	P1	-11.934926	0.216065	-0.321938
15	P1	-11.759075	0.260977	0.433591
19	P1	-15.289690	0.593102	-0.964137
22	P1	-22.241957	5.661286	-3.009147
24	P1	-17.494078	0.313077	-0.520051
30	P1	-20.962025	3.521747	2.028417

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.042610	0.078111	0.163036
7	P2	-22.831314	0.236970	0.092248
11	P2	-10.981448	0.192404	-0.244932
15	P2	-4.953990	0.041848	-0.022054
19	P2	-6.850965	0.053879	0.168341
22	P2	-7.538218	0.097920	0.167788
24	P2	-11.027111	0.147524	-0.067759
30	P2	-22.273409	0.126008	0.040028

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

3	P3	-7.983368	0.003614	-0.012277
7	P3	-7.983400	0.003612	-0.012312
11	P3	-7.983358	0.003615	-0.012169
15	P3	-7.983291	0.003621	-0.012143
19	P3	-7.983239	0.003622	-0.012472
22	P3	-7.983399	0.003601	-0.012558
24	P3	-7.983294	0.003636	-0.012440
30	P3	-7.983382	0.003610	-0.012357

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	0.000488729
	stdev	2.17134e-07
MEAN Q	mean	0.000528167
	stdev	2.49589e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128721
	stdev	0.00105967

STDEV Q	mean	0.128972
	stdev	0.00107130

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

Preliminary report.The data is not yet controled

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
Acsending
Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

6.4 - Unbiased Doppler Error for GM1

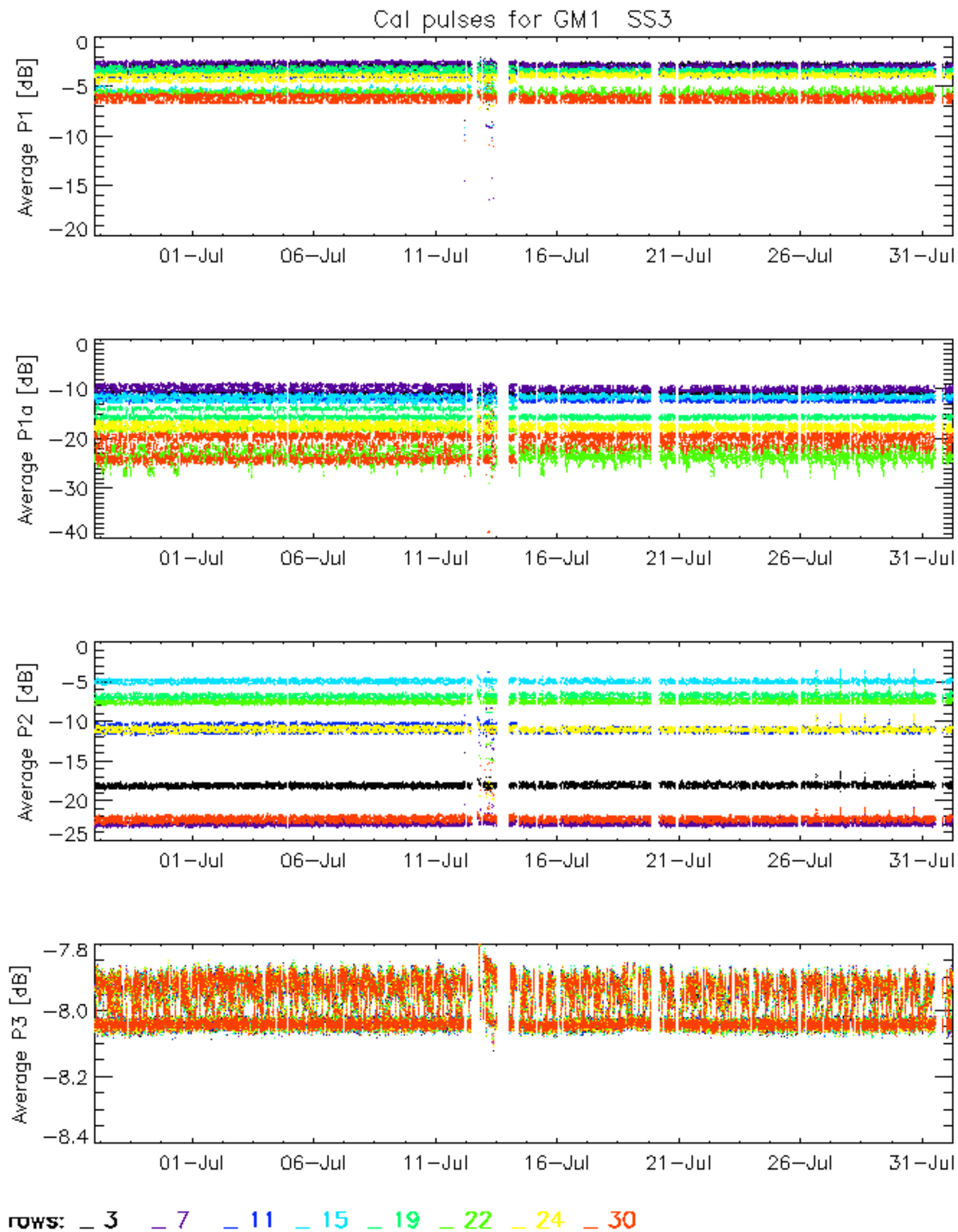
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

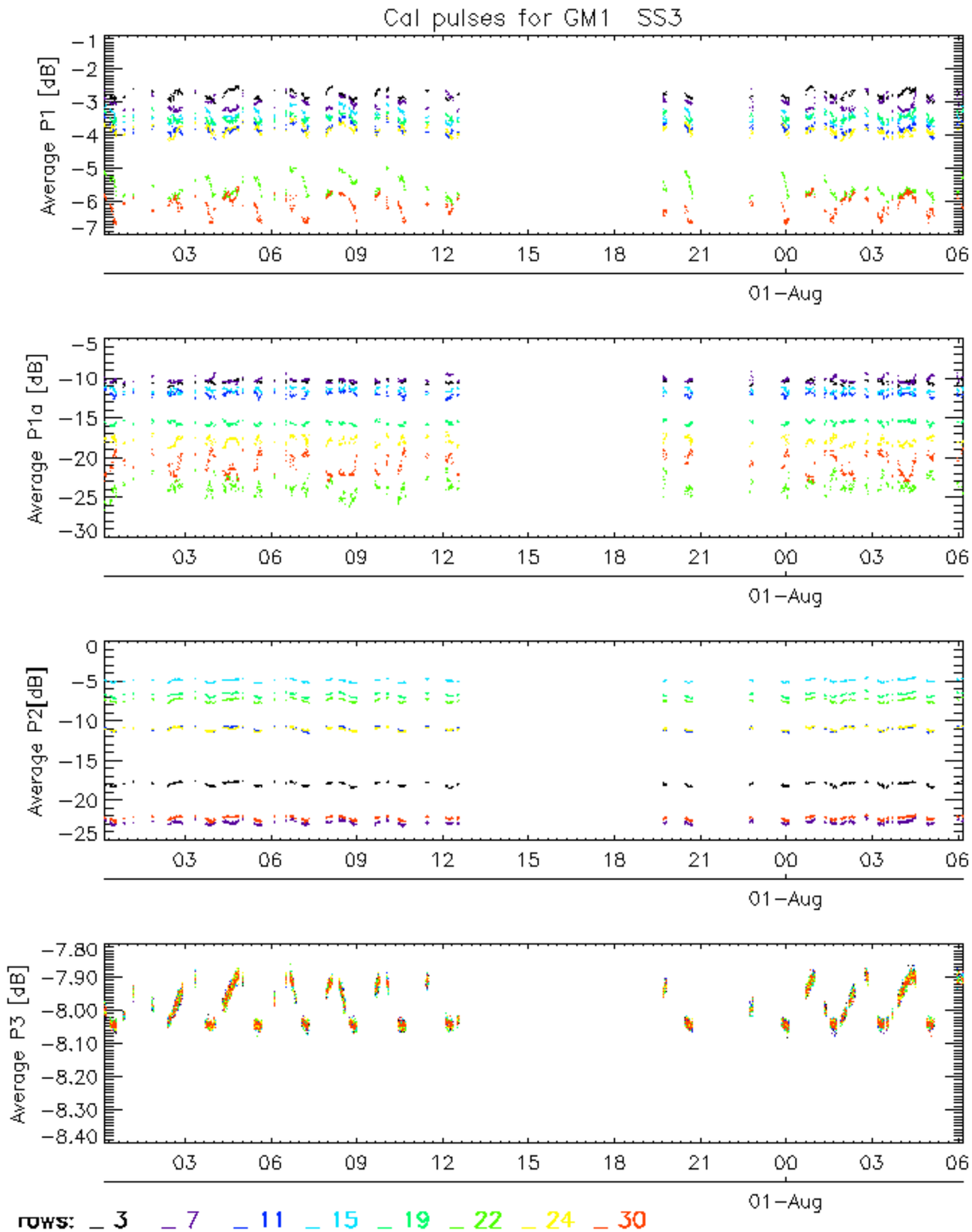
6.5 - Absolute Doppler for GM1

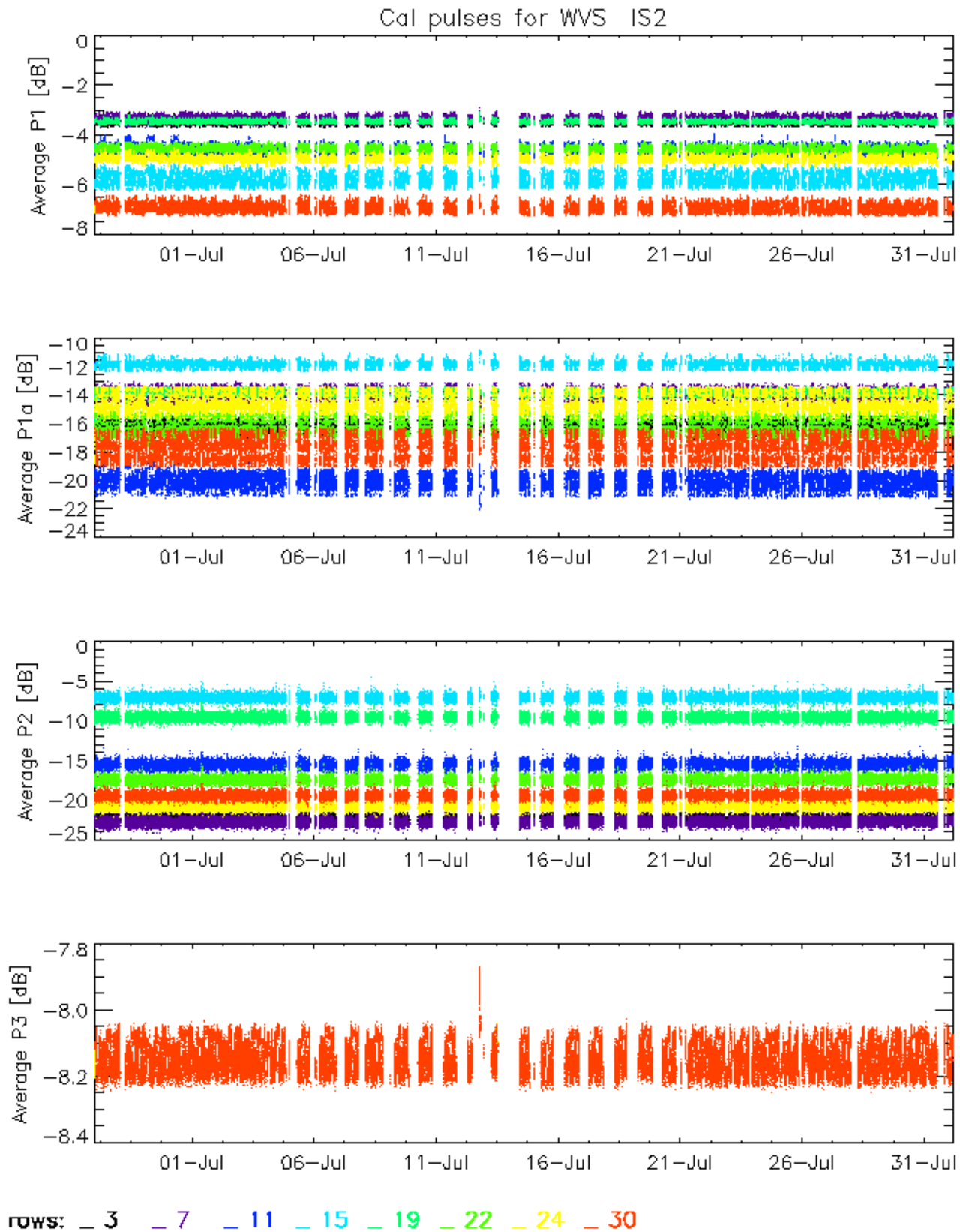
Evolution of Absolute Doppler
Acsending
Descending

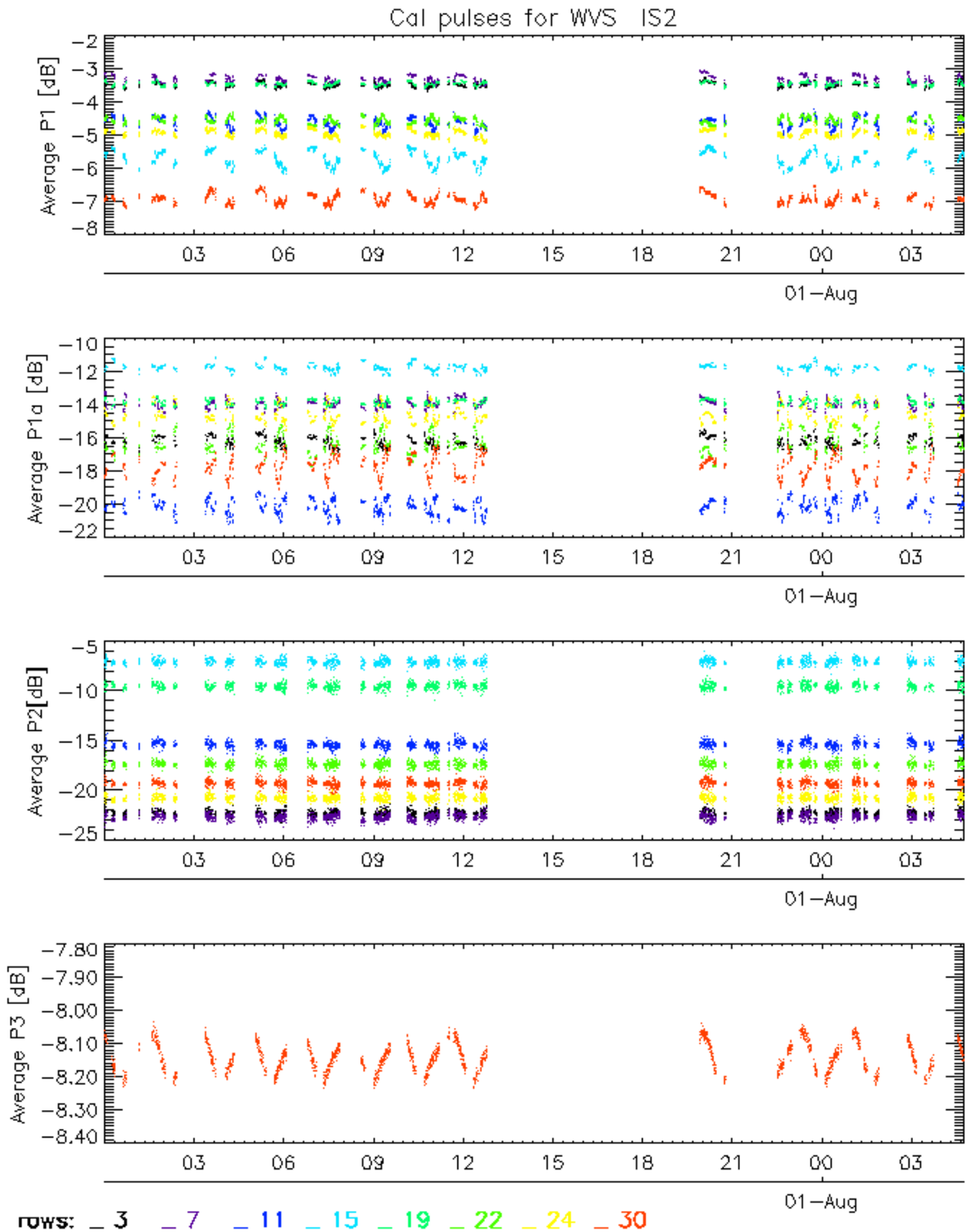
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

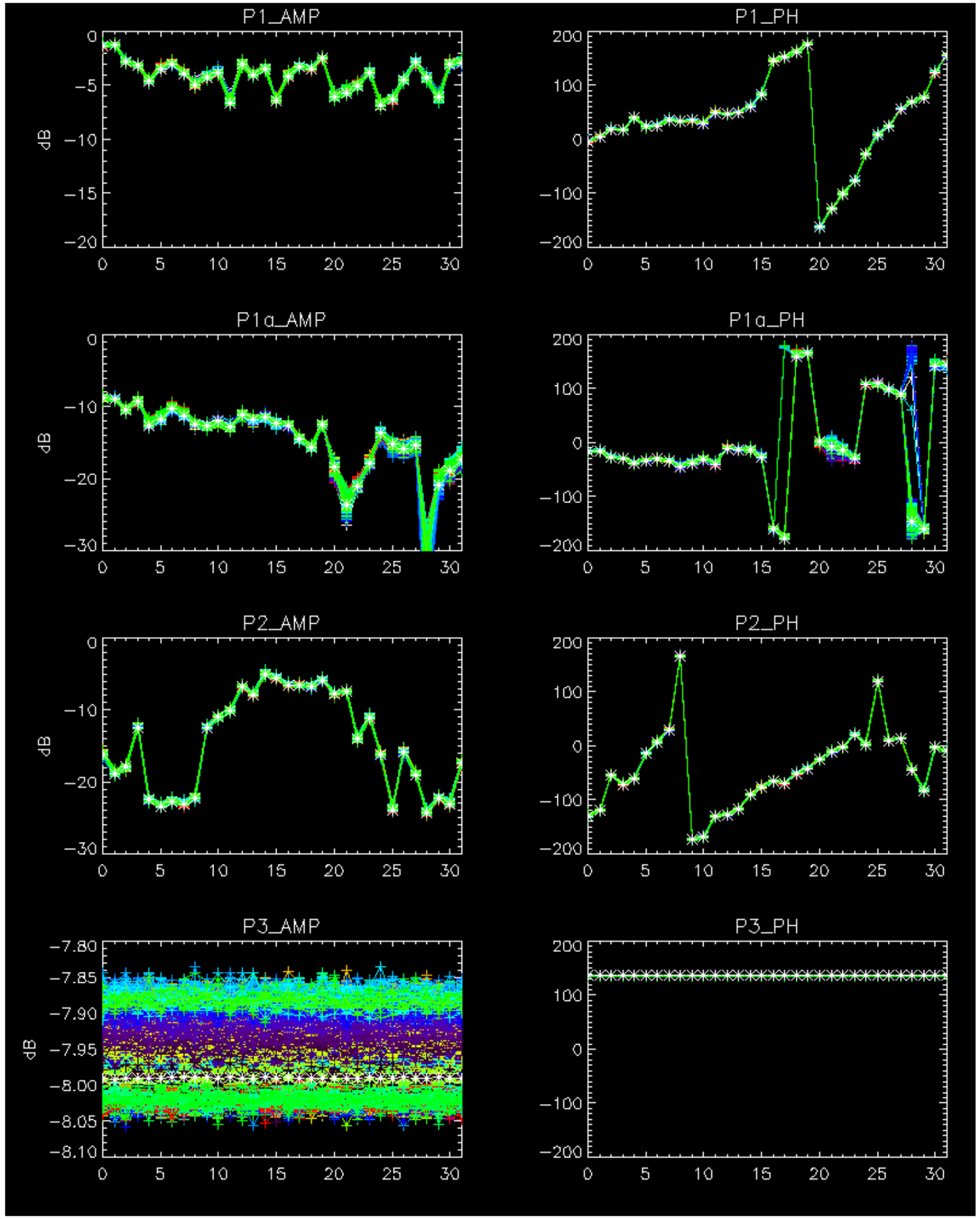

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
rows: 3 7 11 15 19 22 24 30

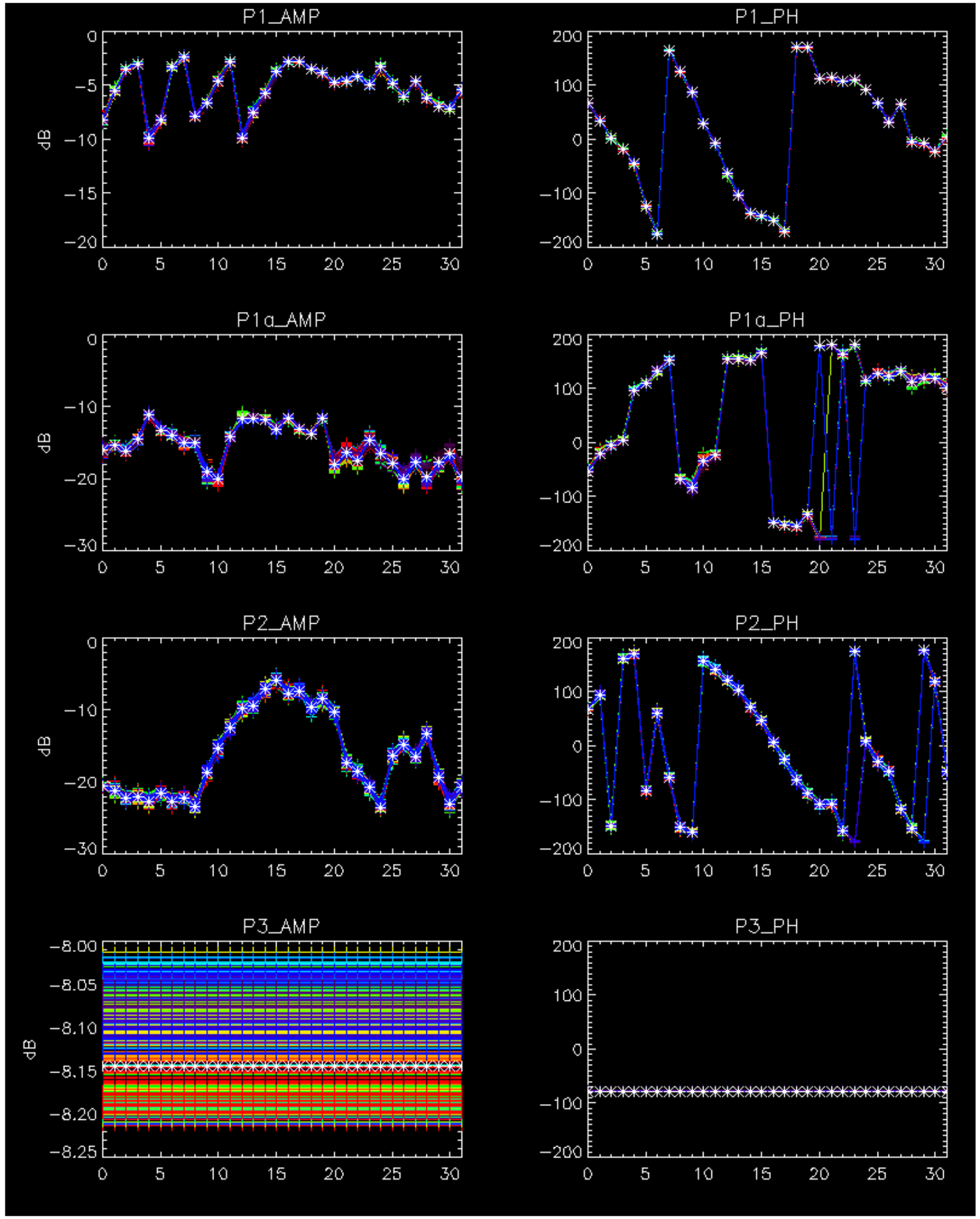

Cal pulses for GM1 SS3
Average P1 [dB]
Average P1a [dB]
Average P2[dB]
Average P3 [dB]
03 06 09 12 15 18 21 00 03 06
01-Aug
rows: 3 7 11 15 19 22 24 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 24 30

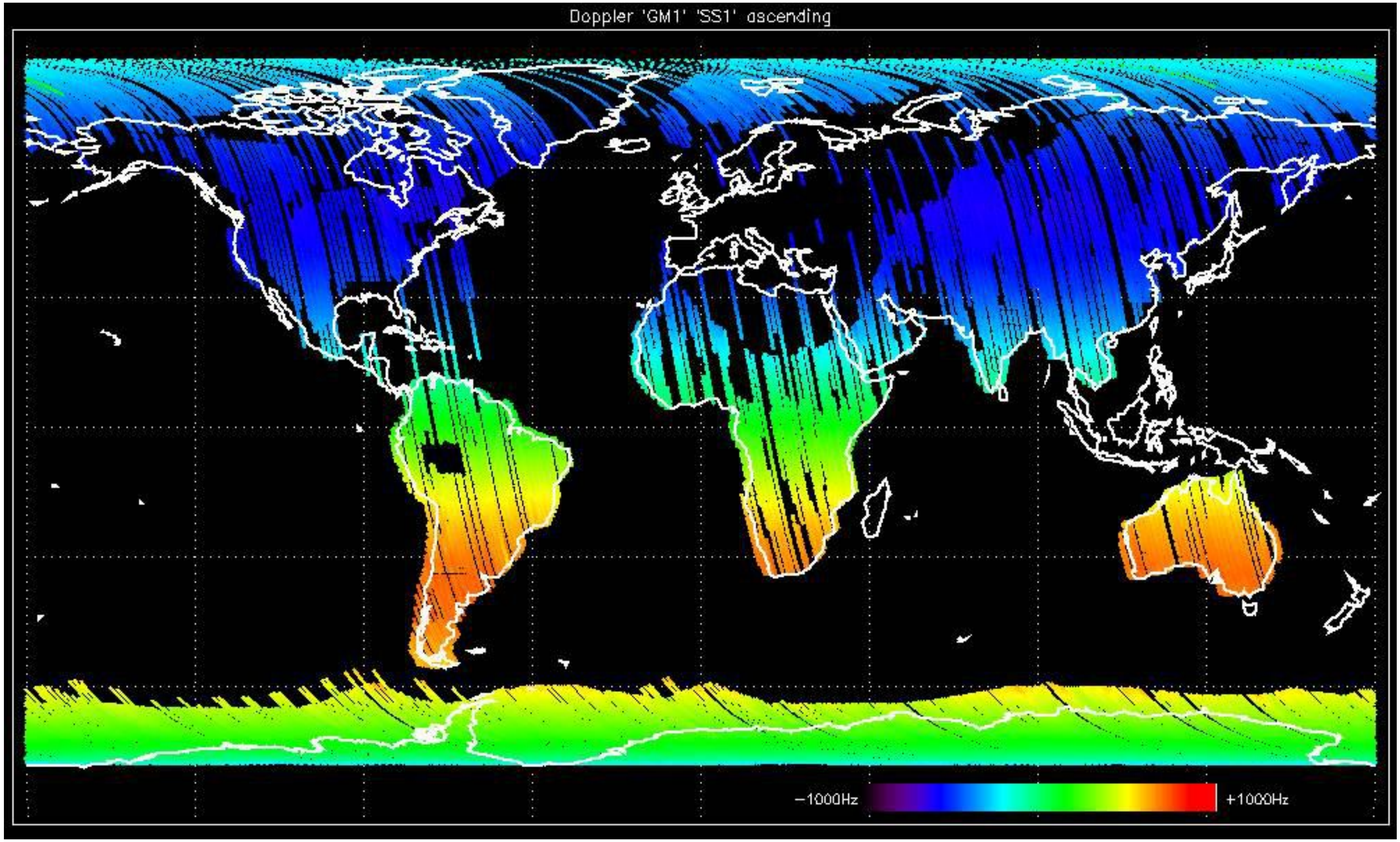

Cal pulses for WVS IS2
Average P1 [dB]
Average P1a [dB]
Average P2[dB]
Average P3 [dB]
03
06
09
12
15
18
21
00
03
01–Aug
rows: 3 7 11 15 19 22 24 30

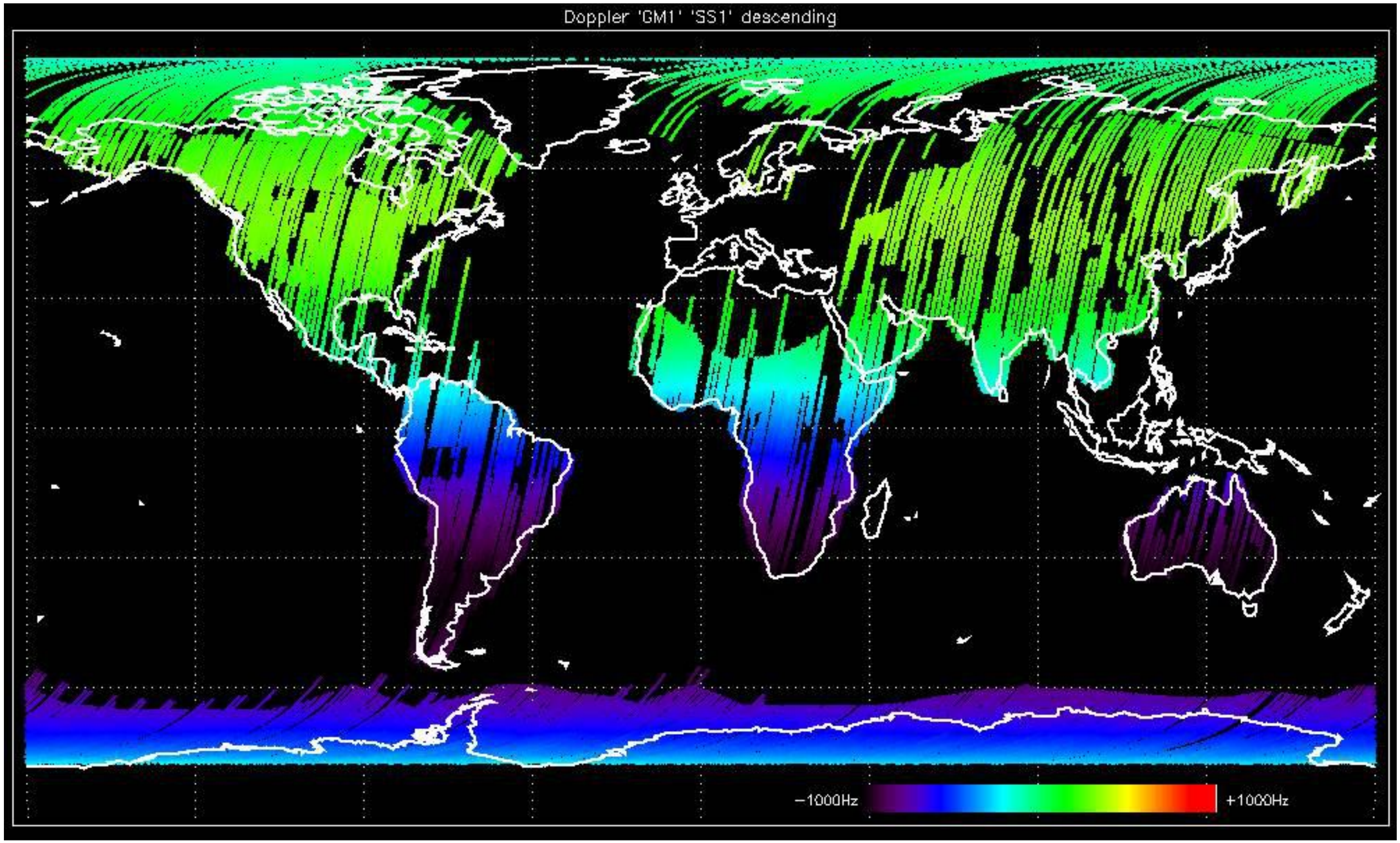
No anomalies observed.

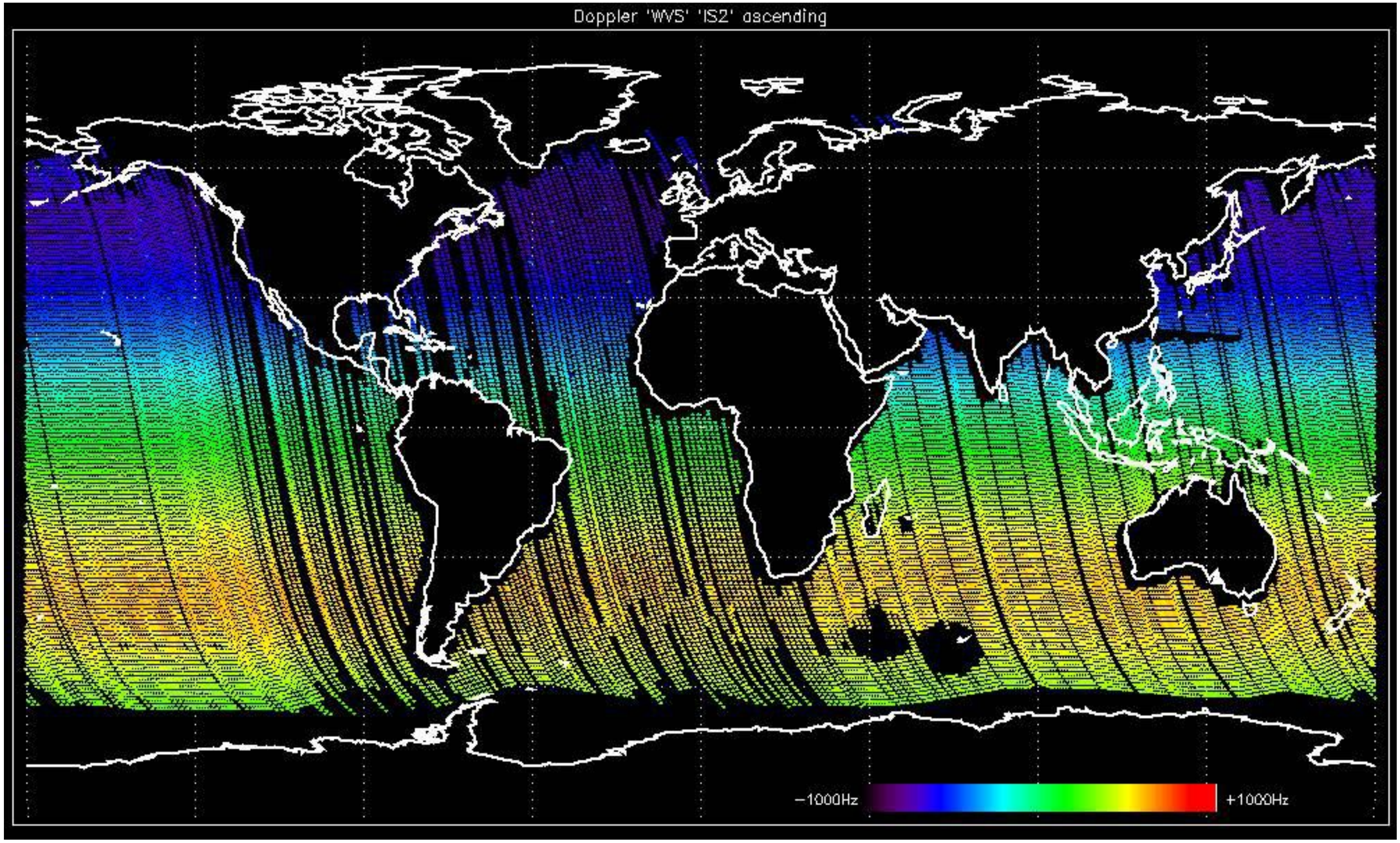

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

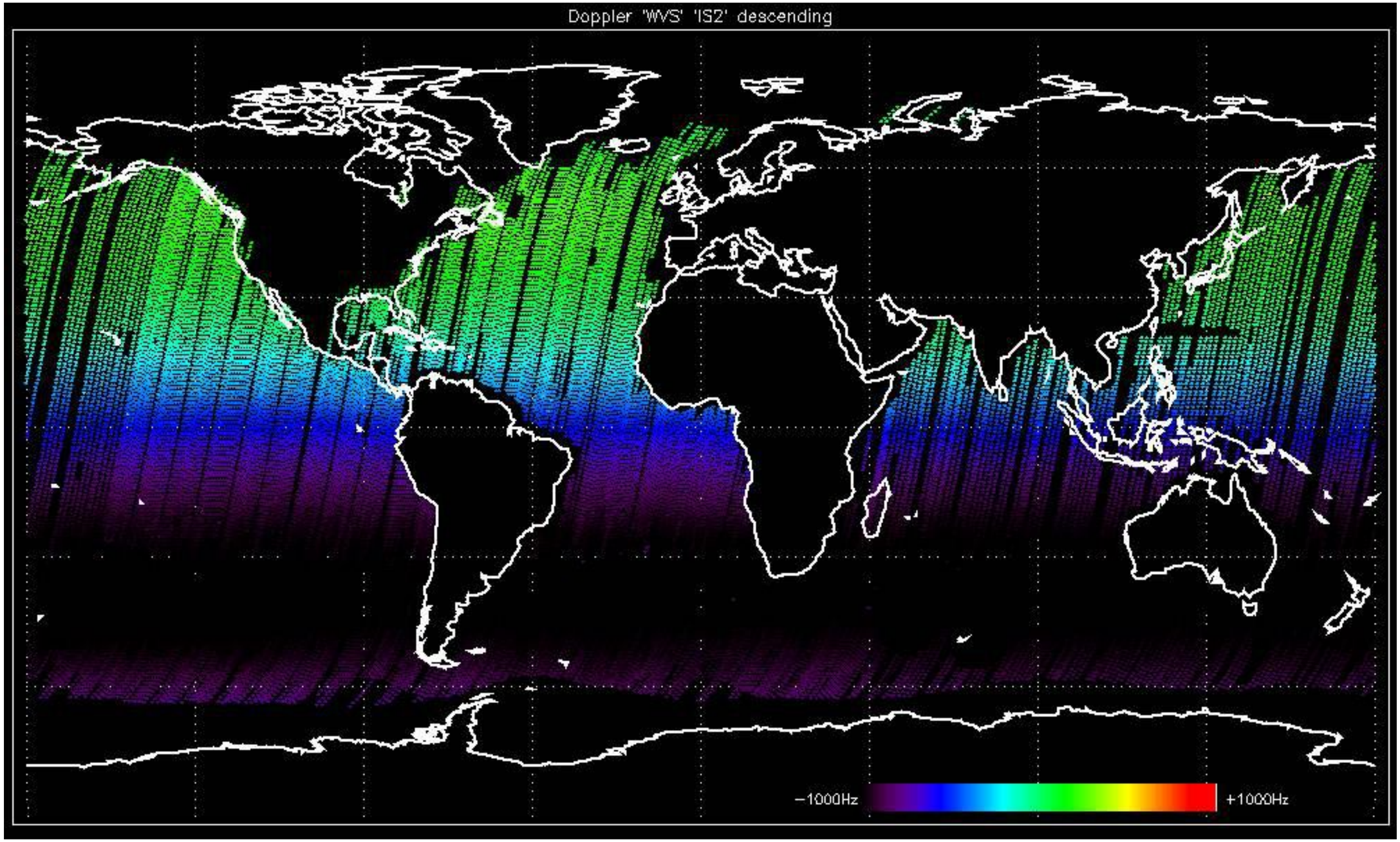

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

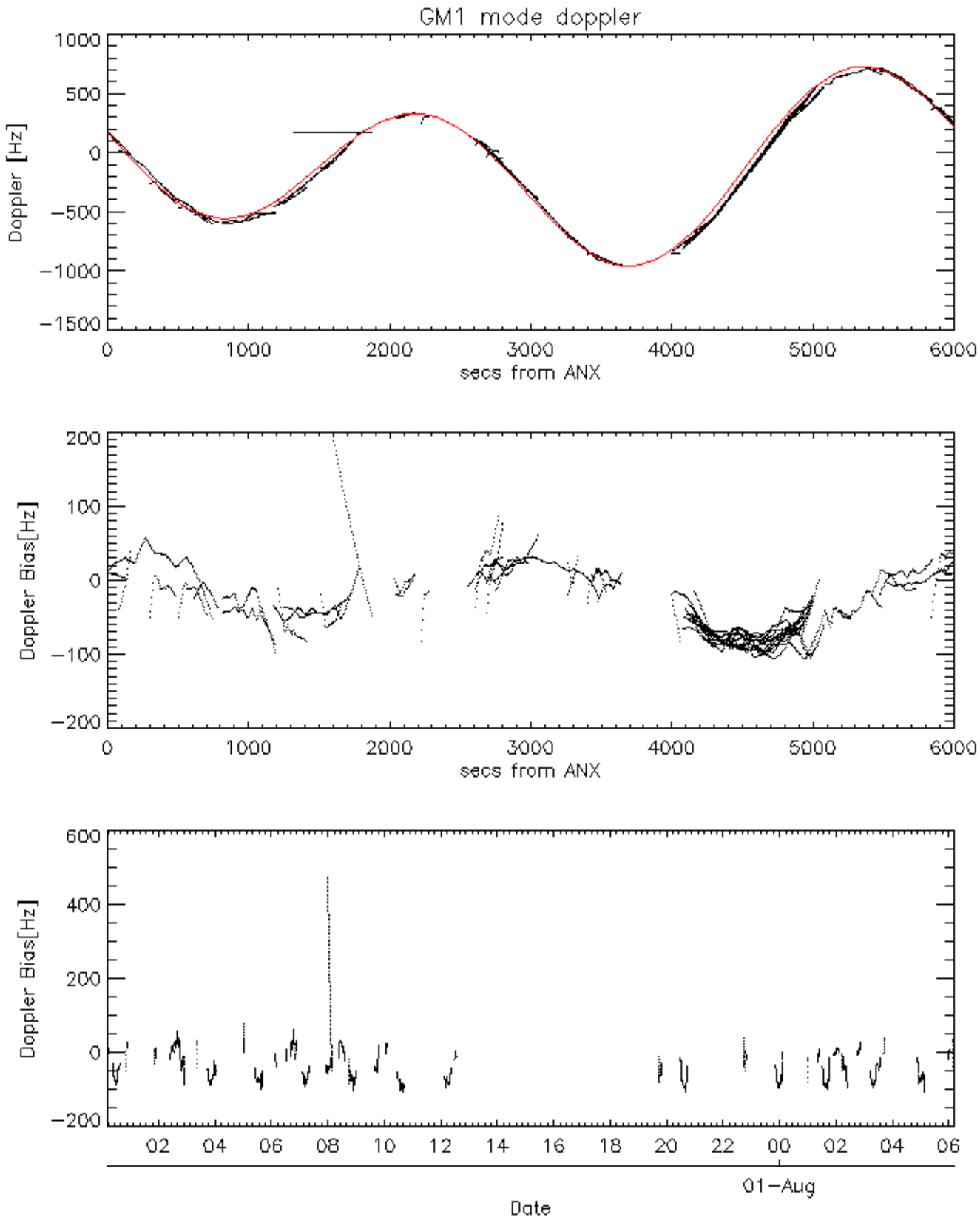
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

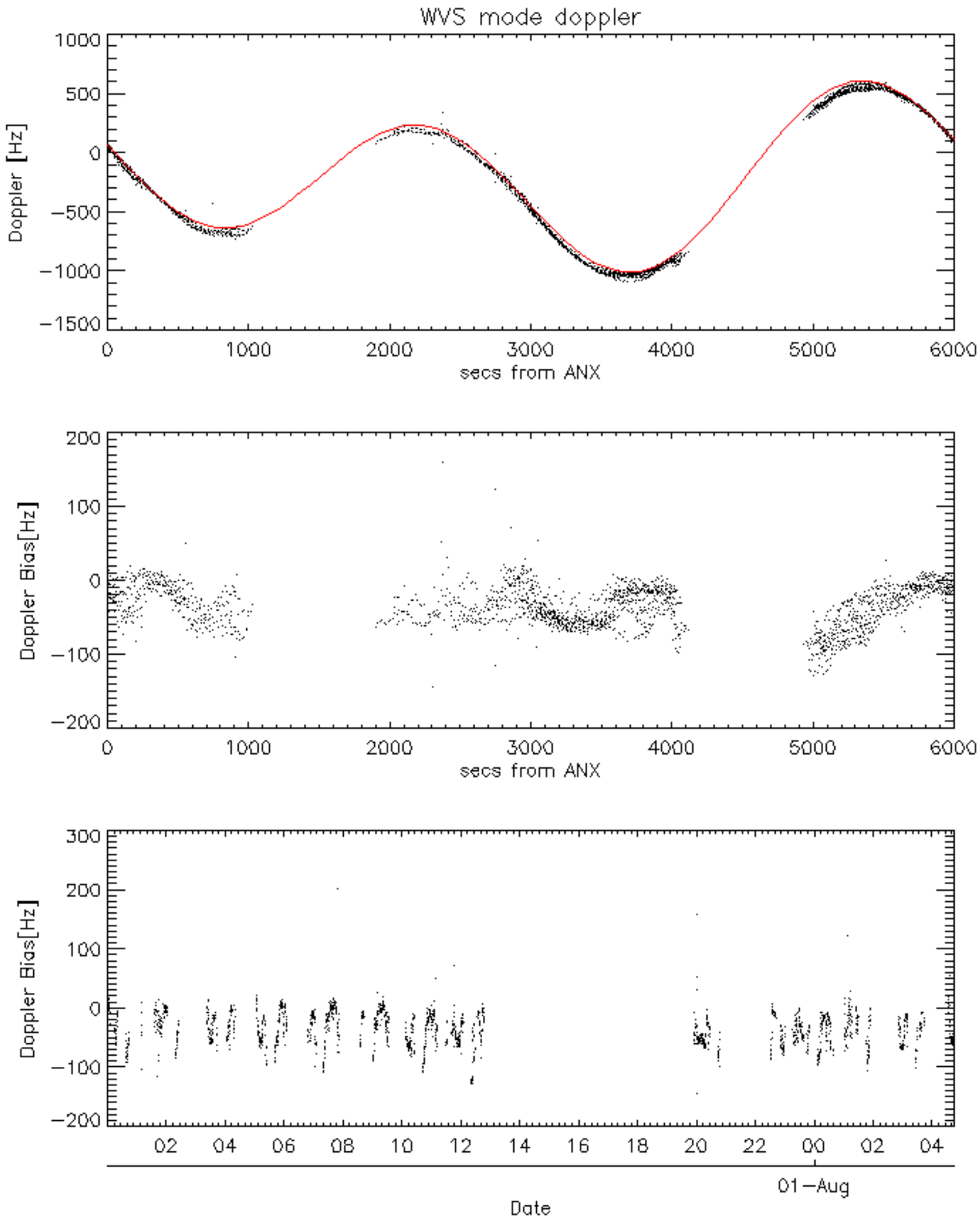

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

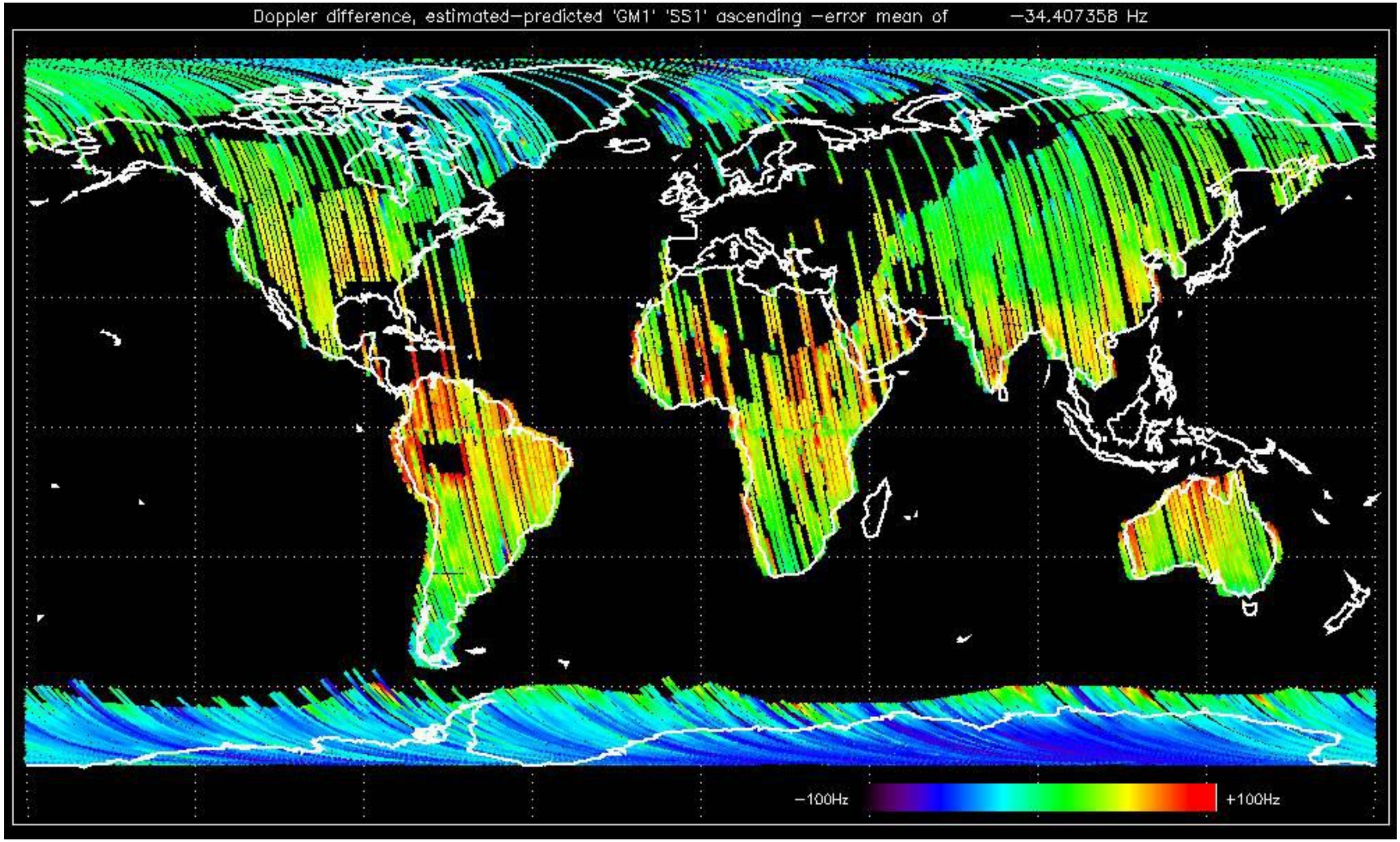

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

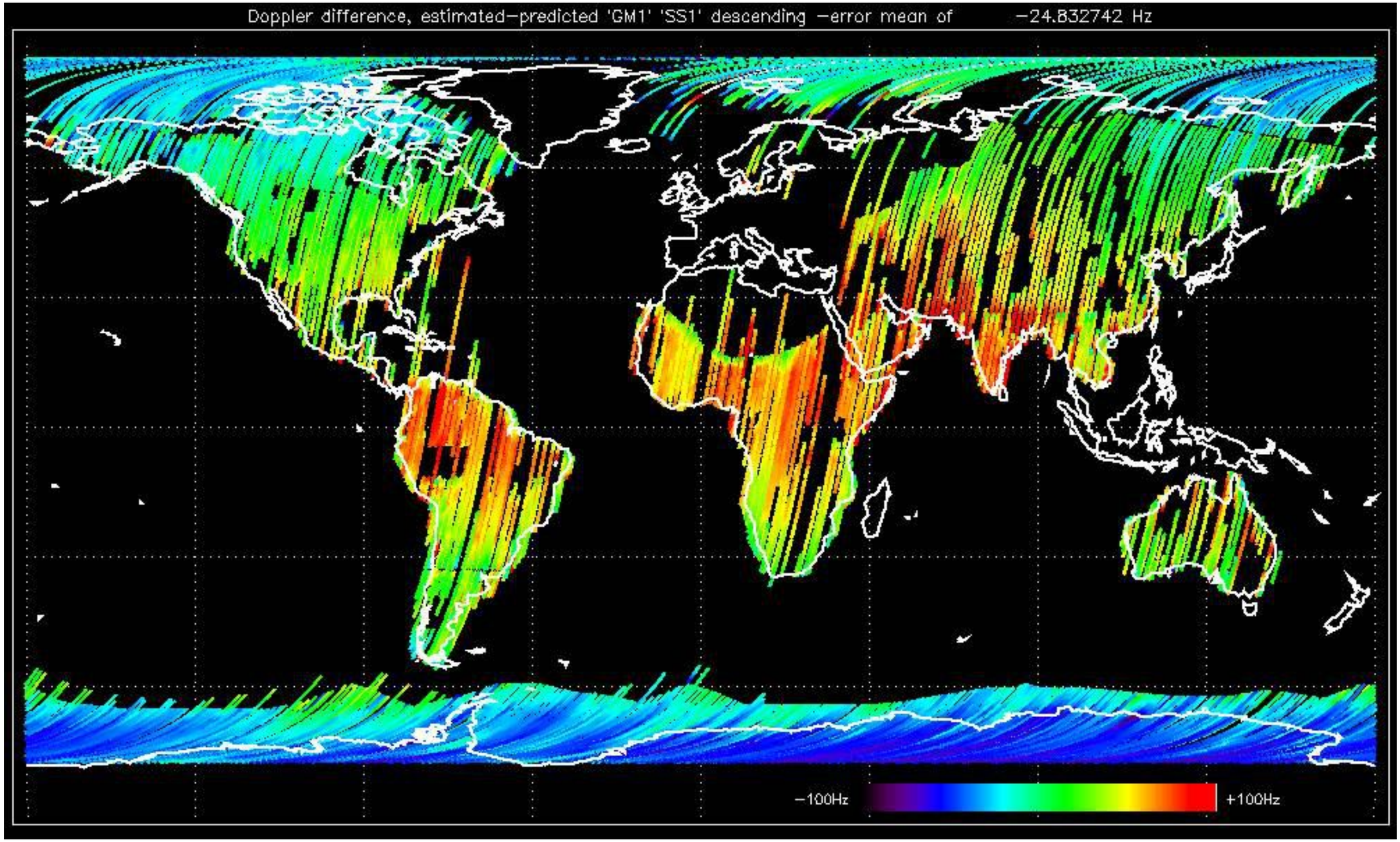

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

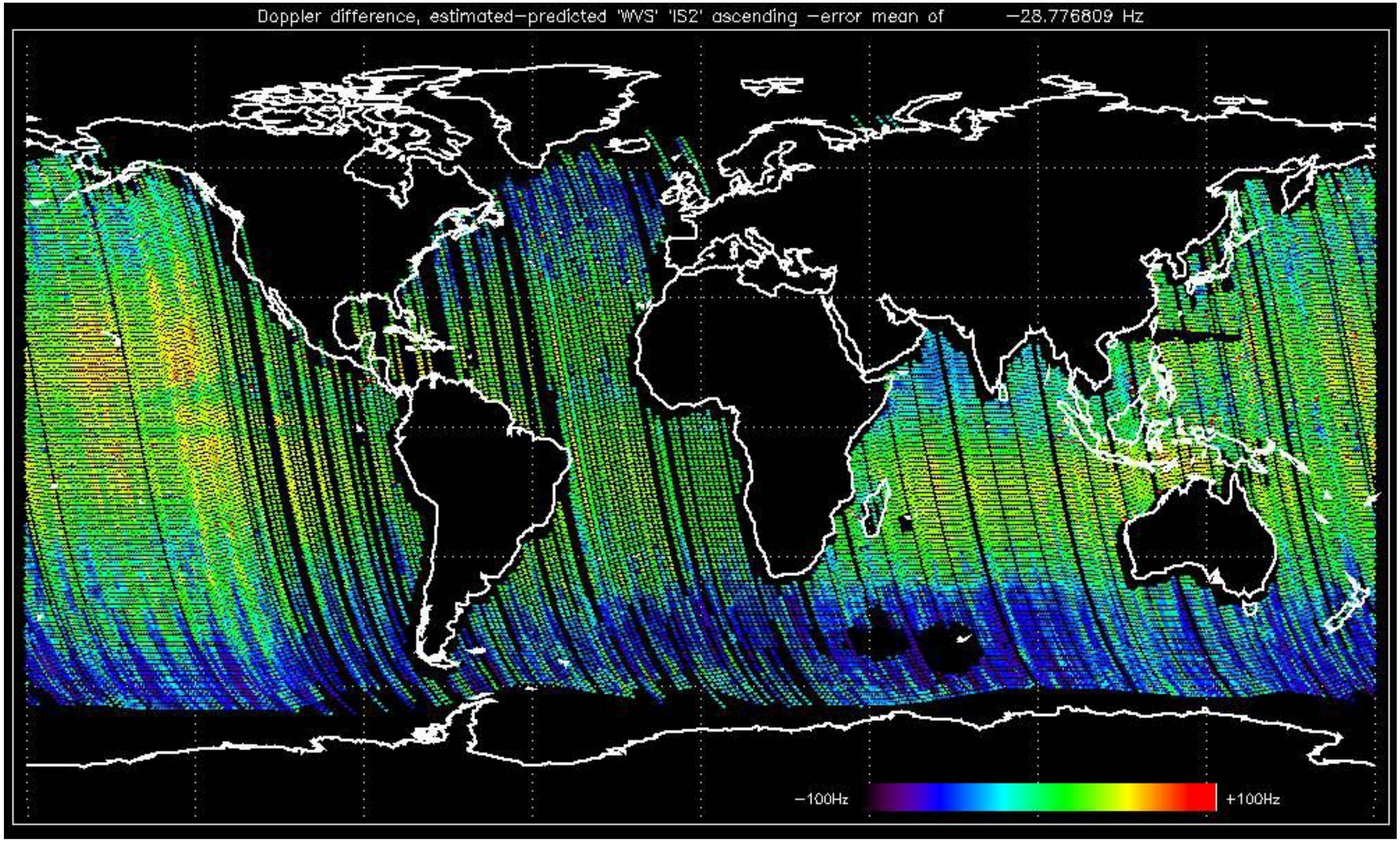

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

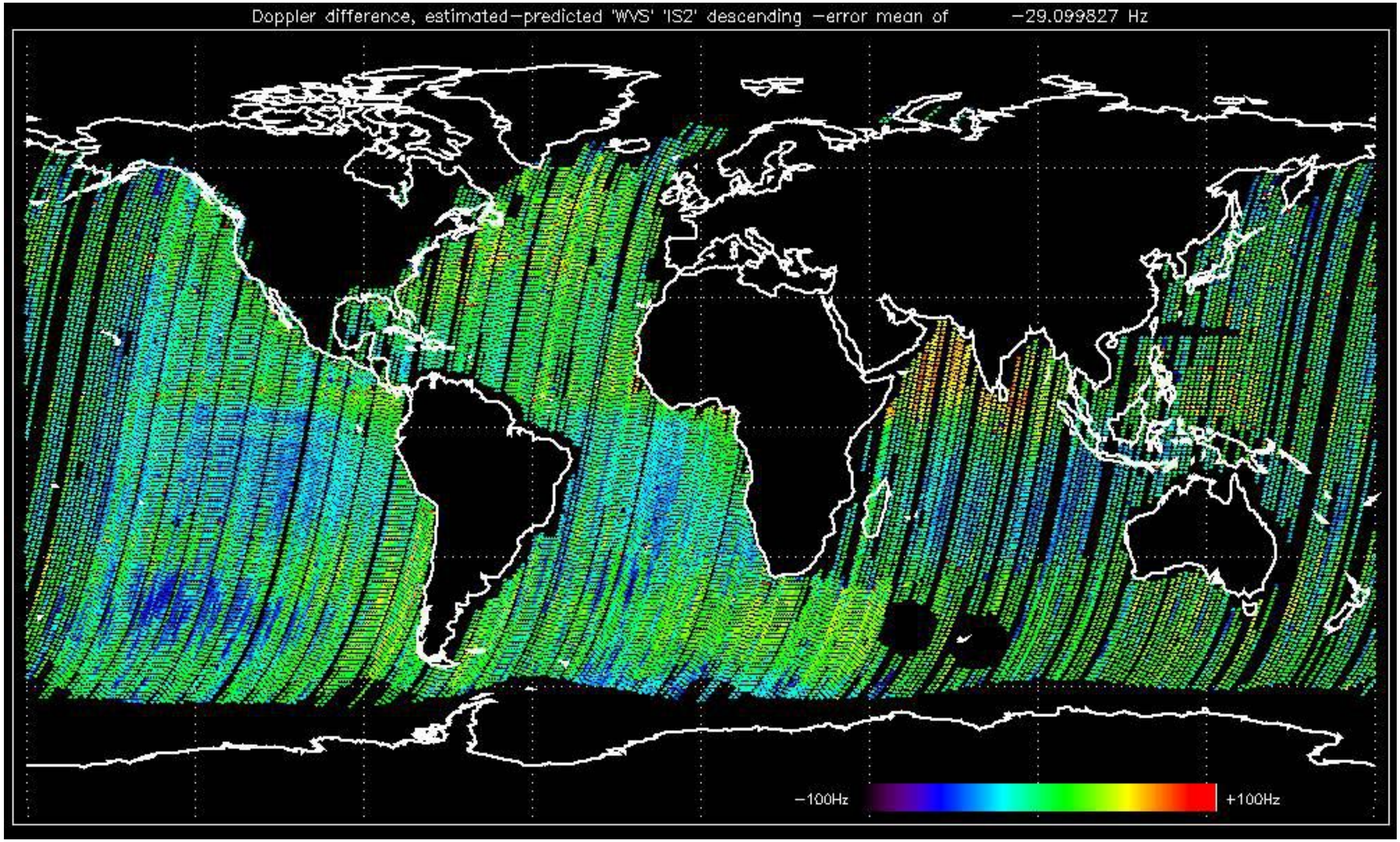

GM1 mode doppler
Doppler [Hz]
secs from ANX
Doppler Bias[Hz]
secs from ANX
Doppler Bias[Hz]
01-Aug
Date


WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX
Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX
Doppler Bias[Hz]
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
01−Aug
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.407358 Hz
−100Hz
+100Hz

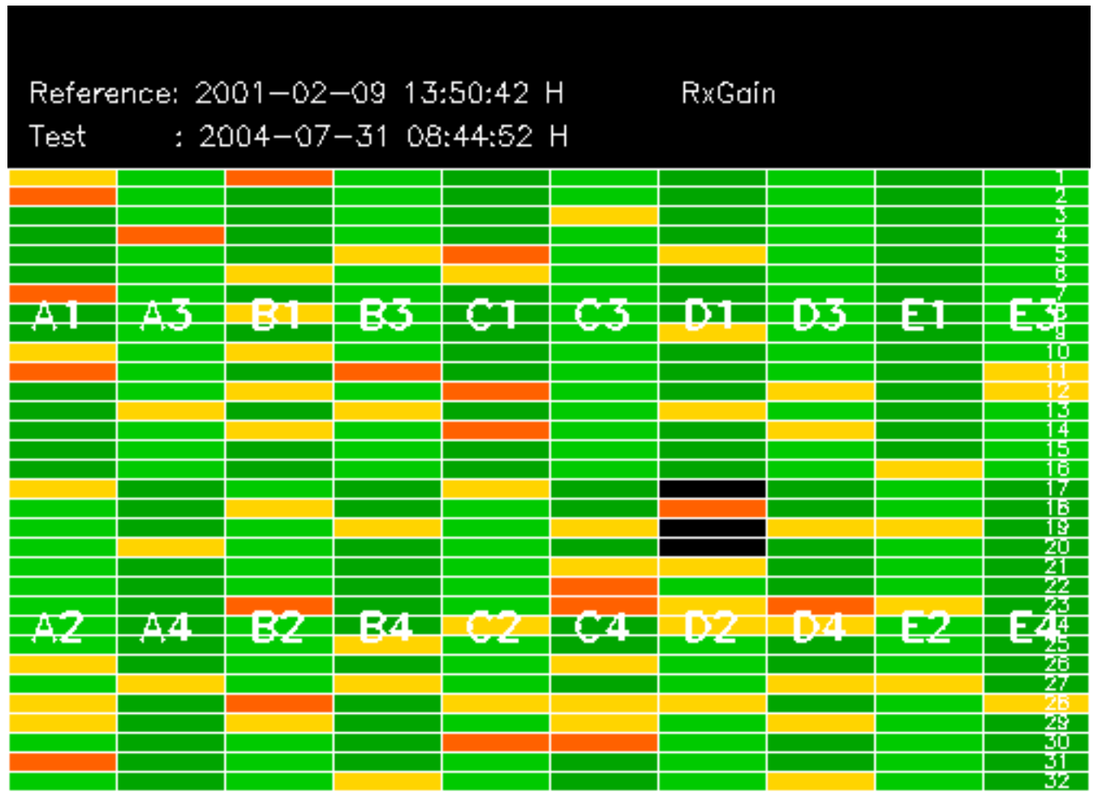

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.832742 Hz
-100Hz
+100Hz

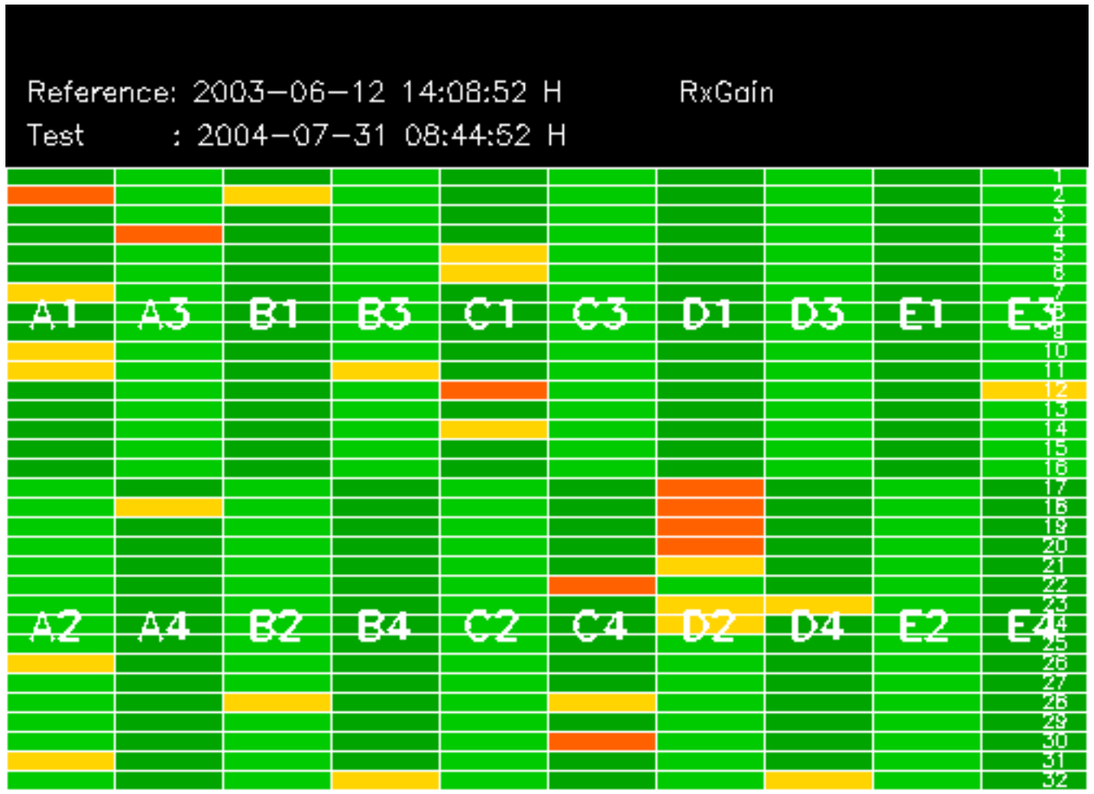

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.776809 Hz
−100Hz
+100Hz

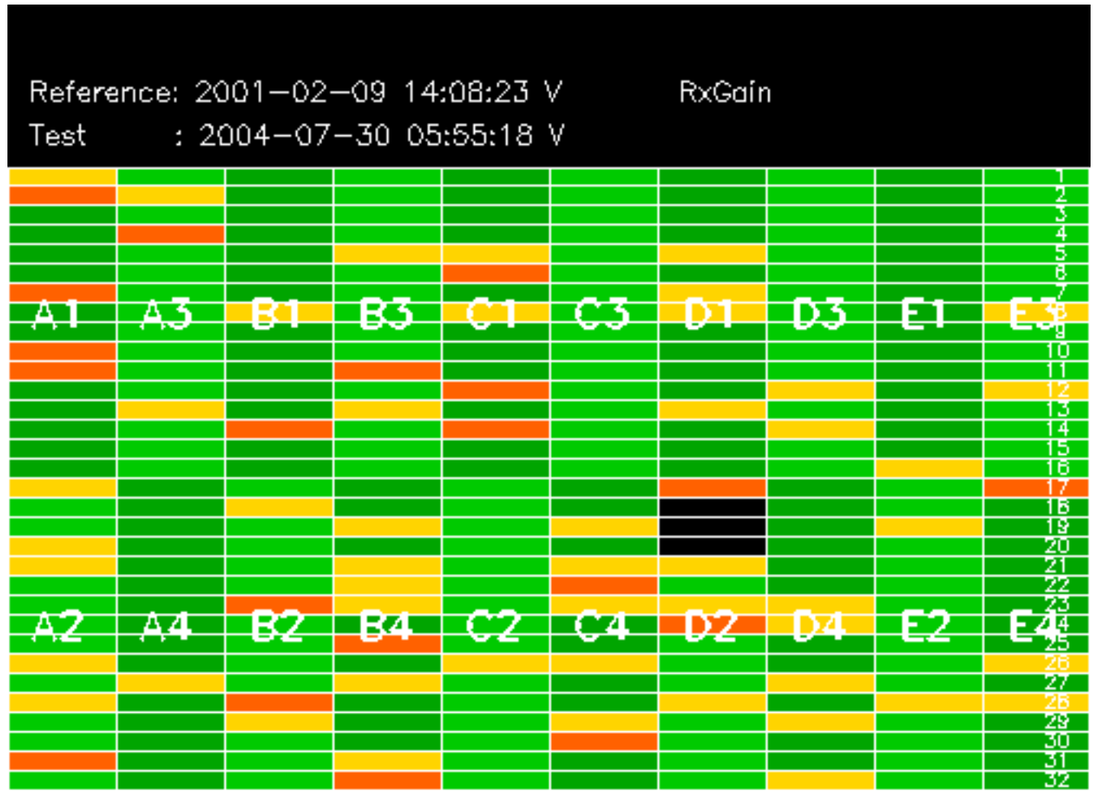

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.099827 Hz
−100Hz
+100Hz

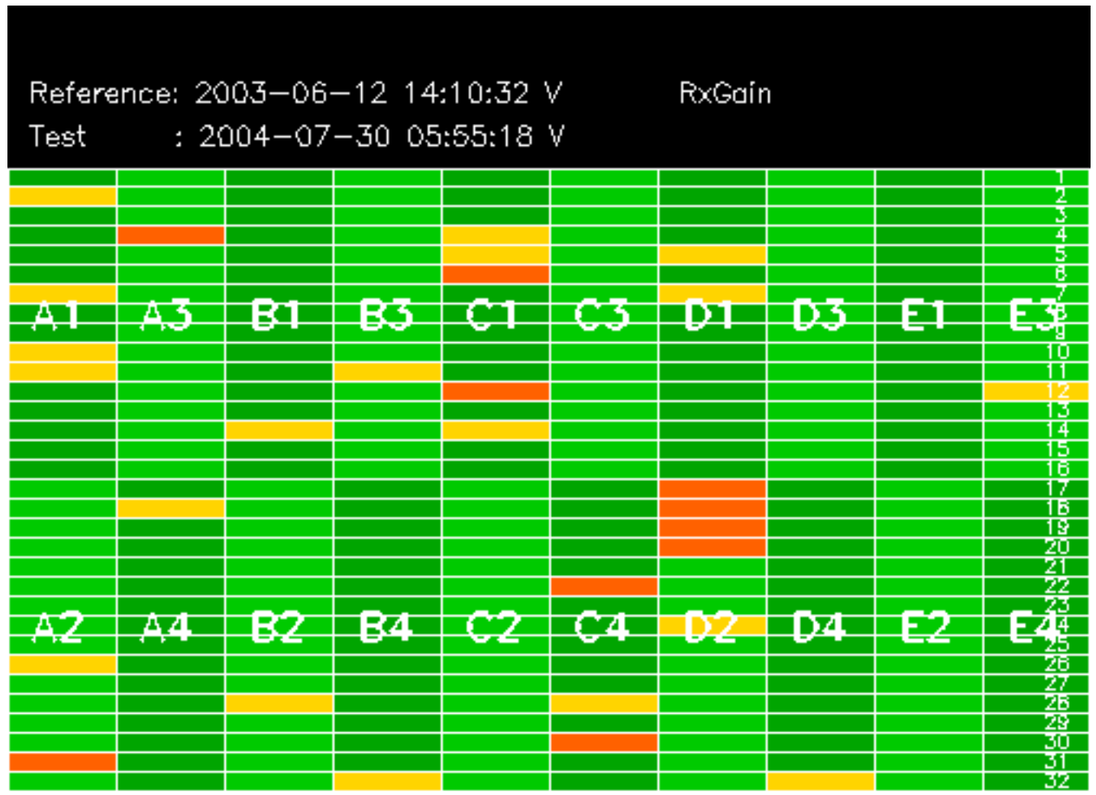
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

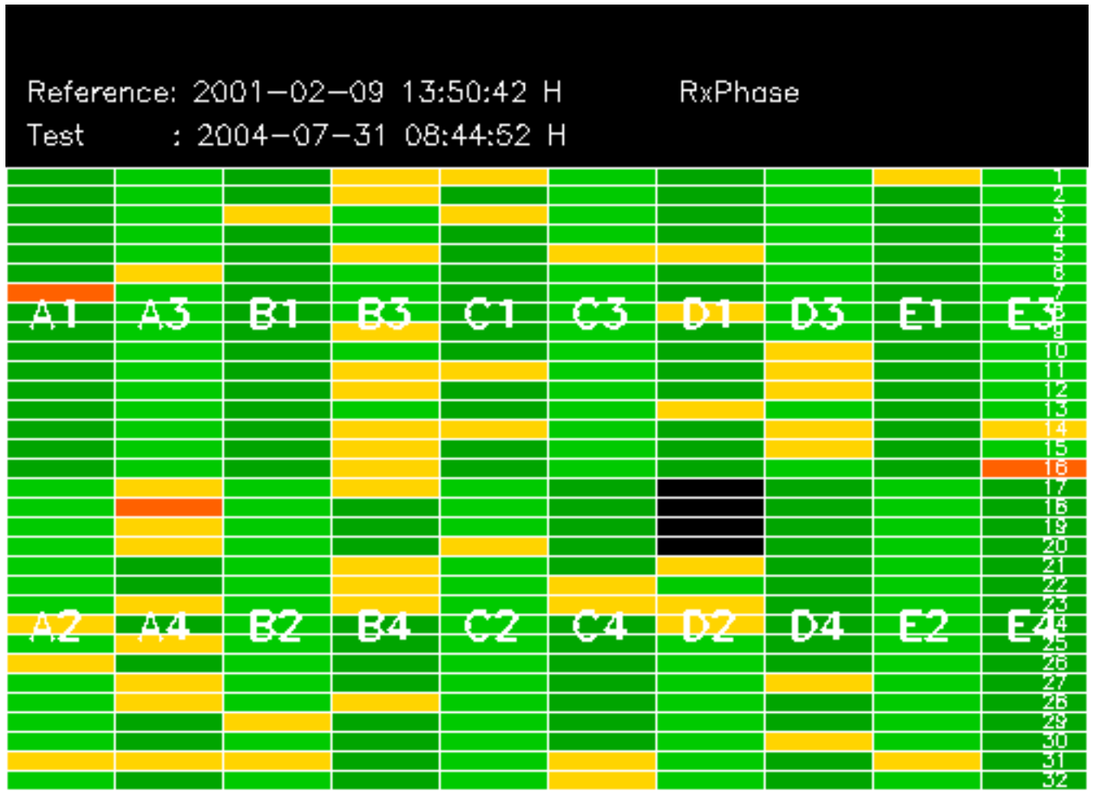
No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

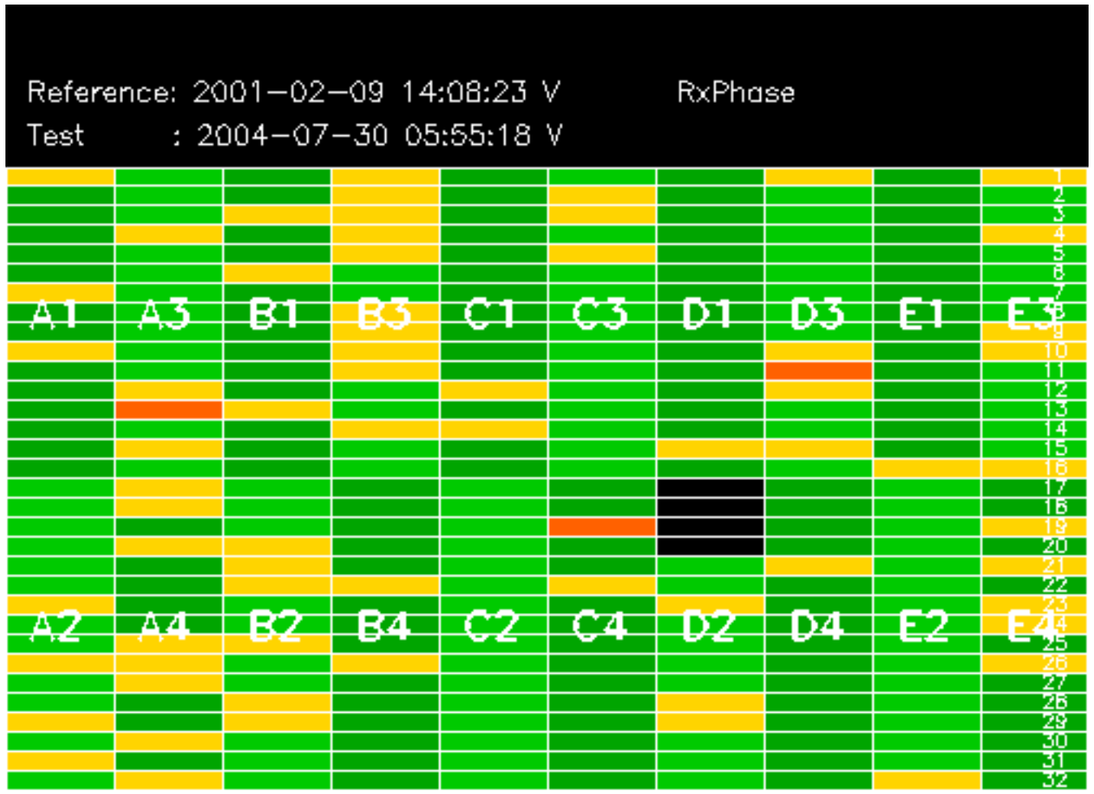

Reference: 2003-06-12 14:08:52 H
RxGain
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

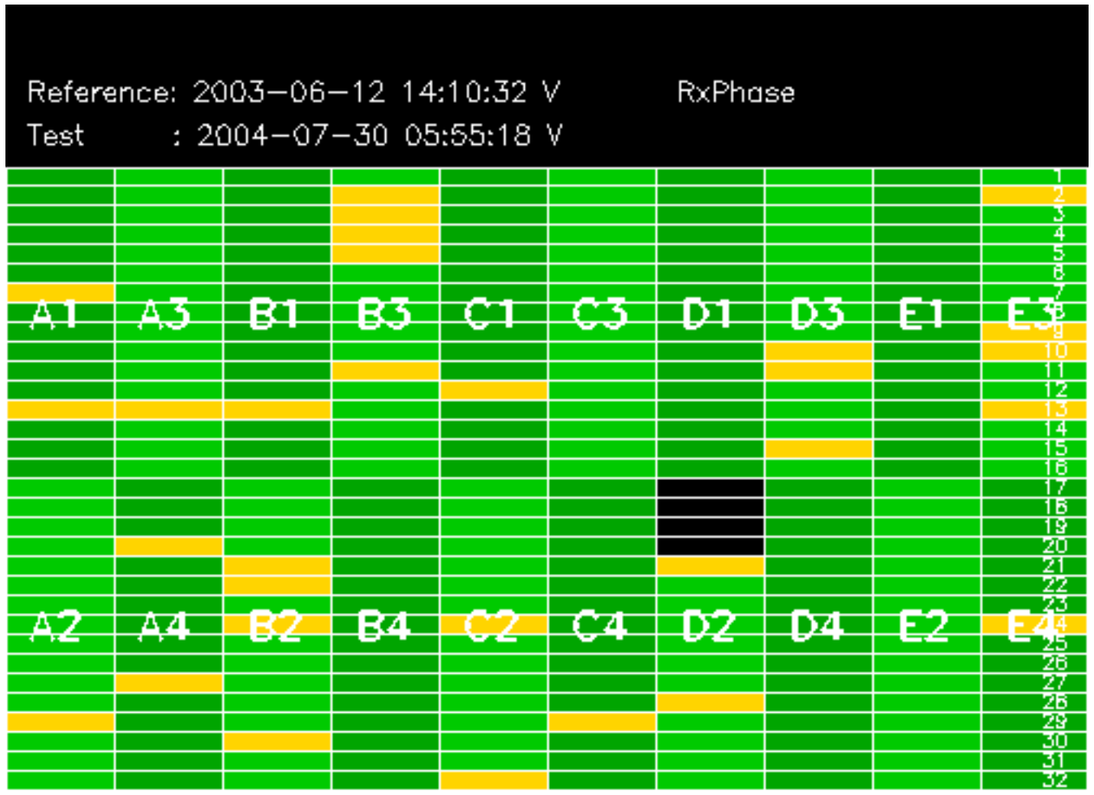

Reference: 2001-02-09 14:08:23 V
RxGain
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

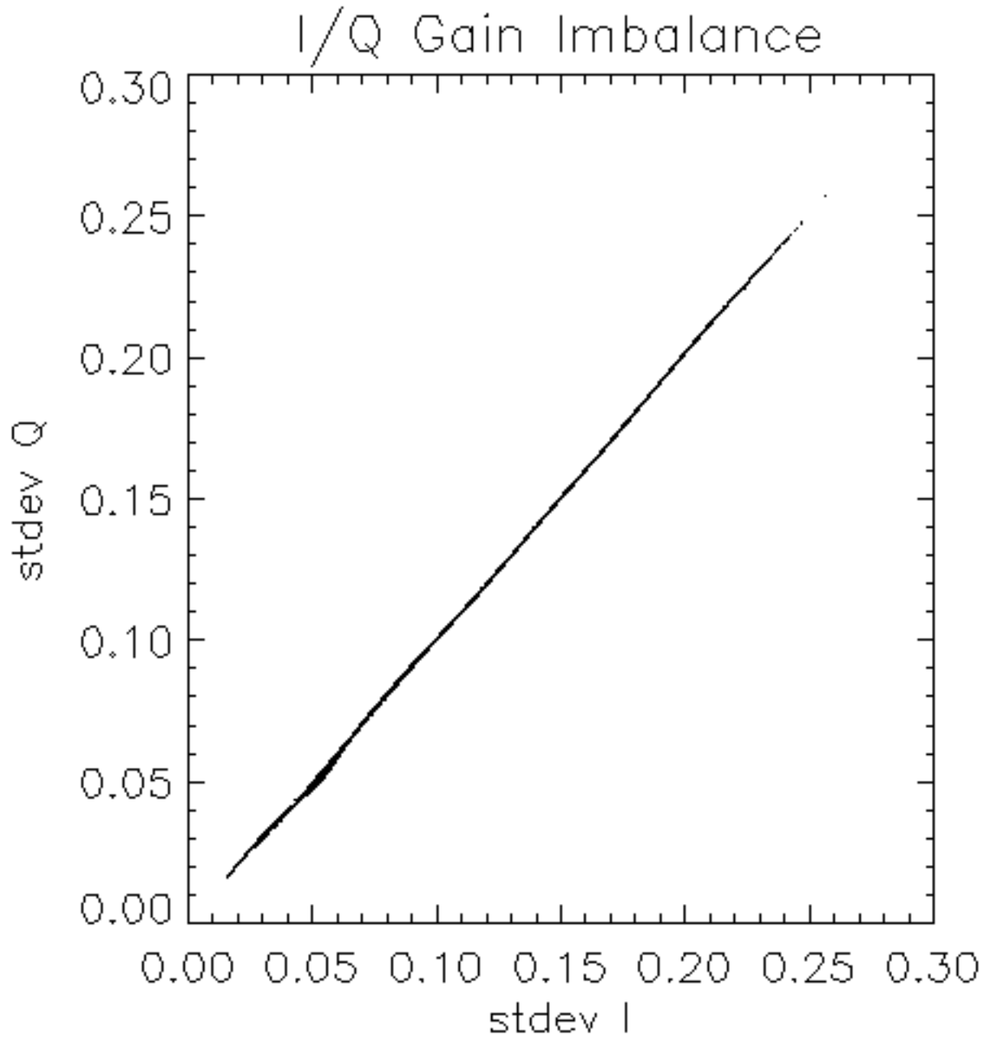

Reference: 2003-06-12 14:10:32 V
RxGain
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

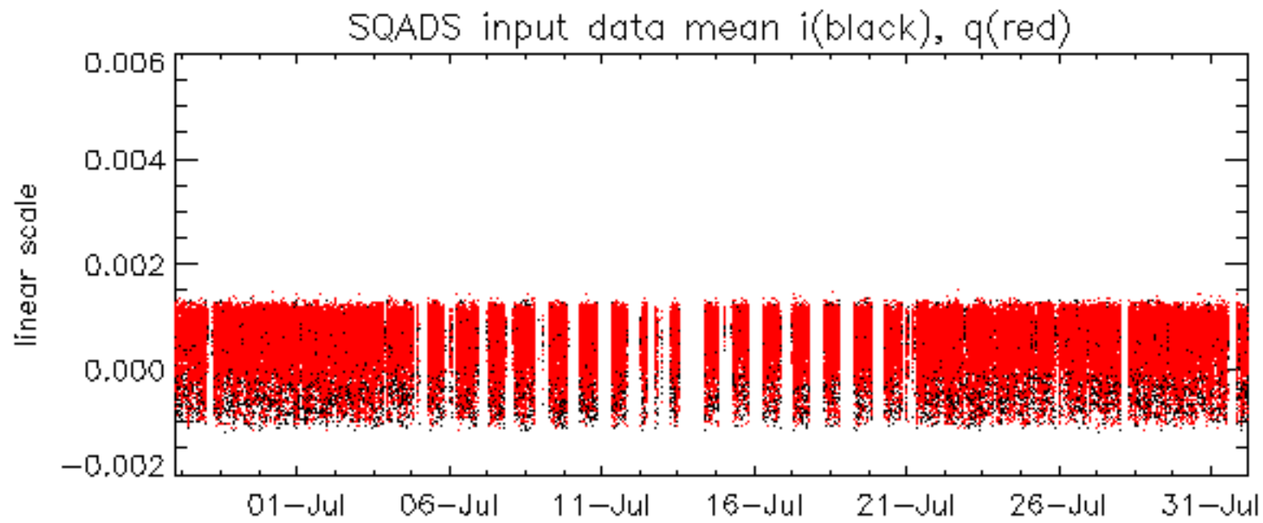

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

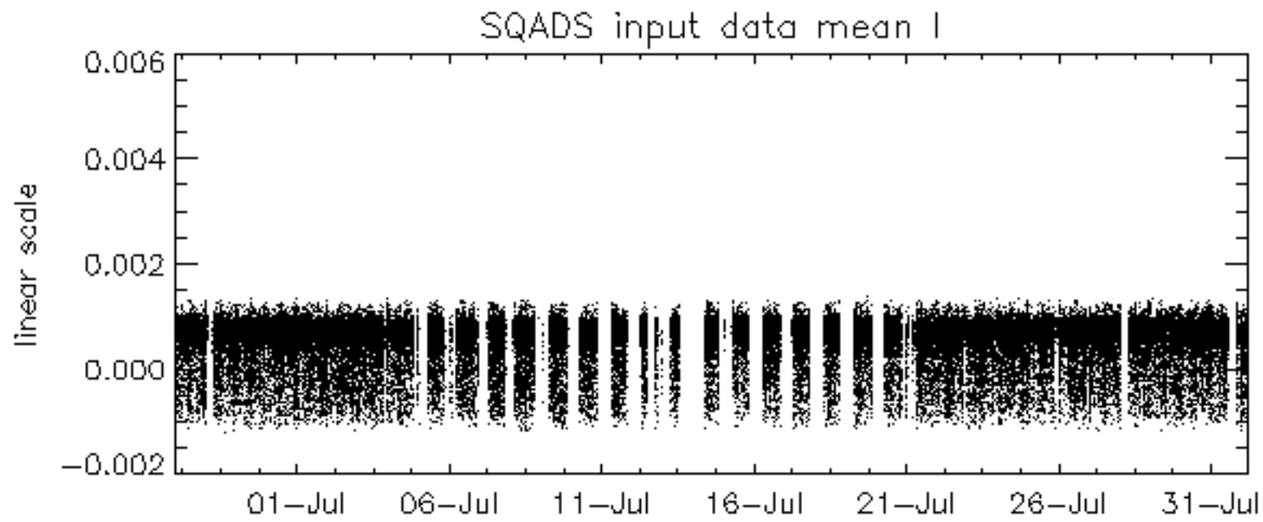

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

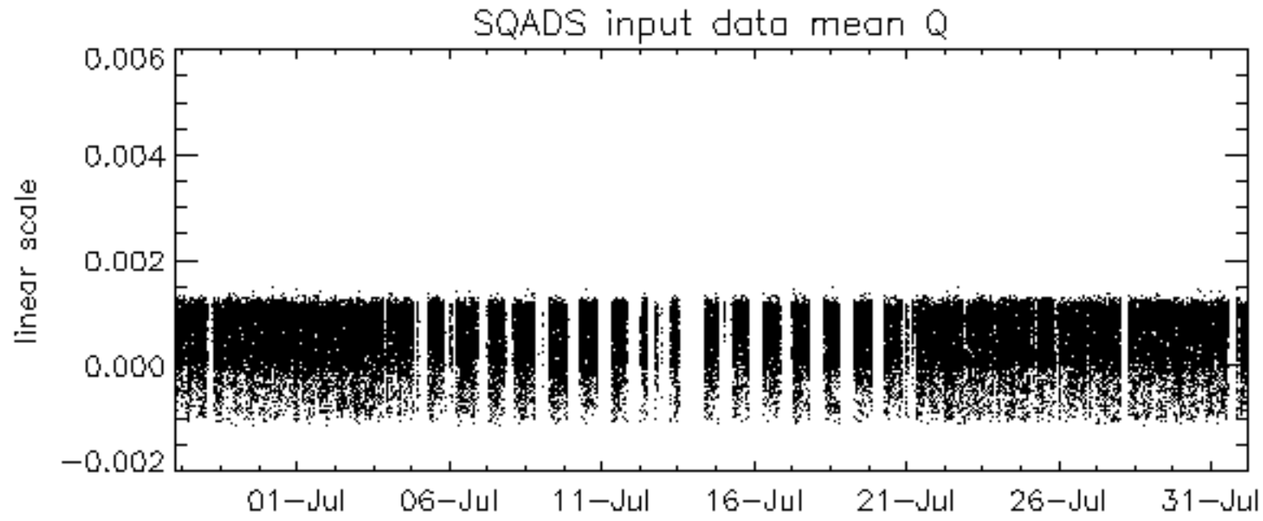

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

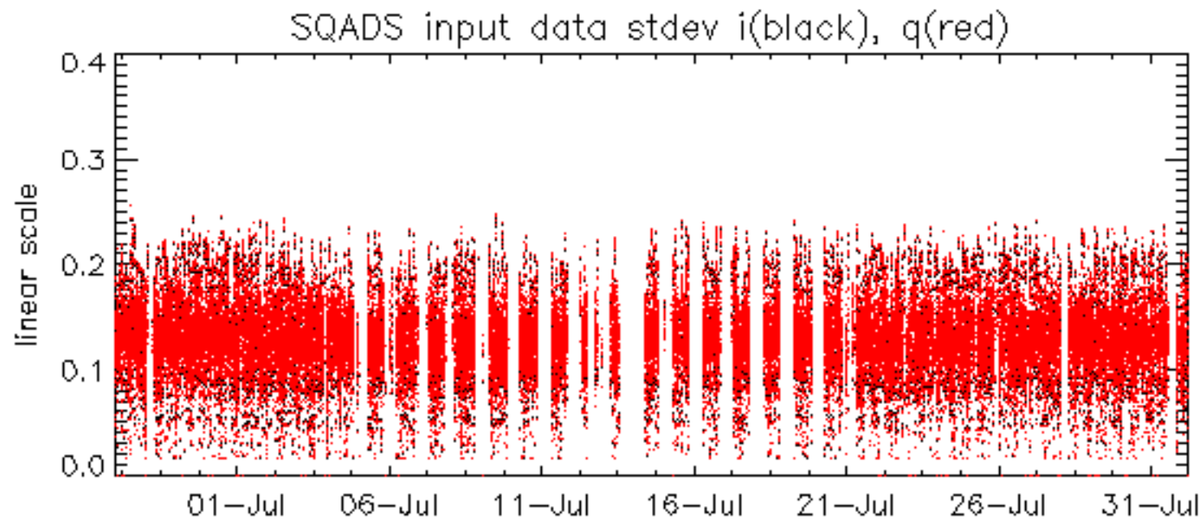

Reference: 2003-06-12 14:10:32 V
RxPhase
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

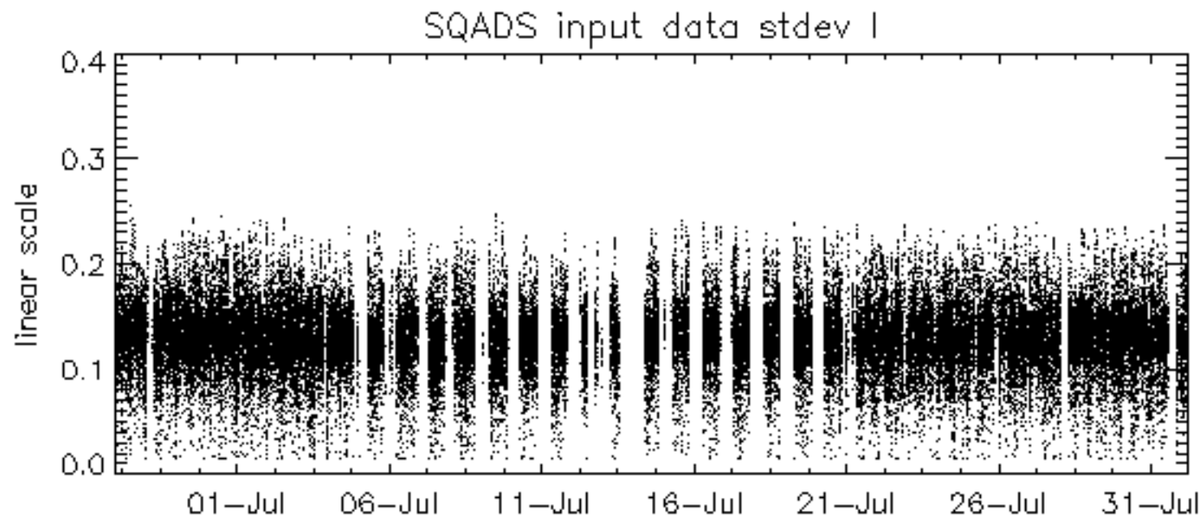

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

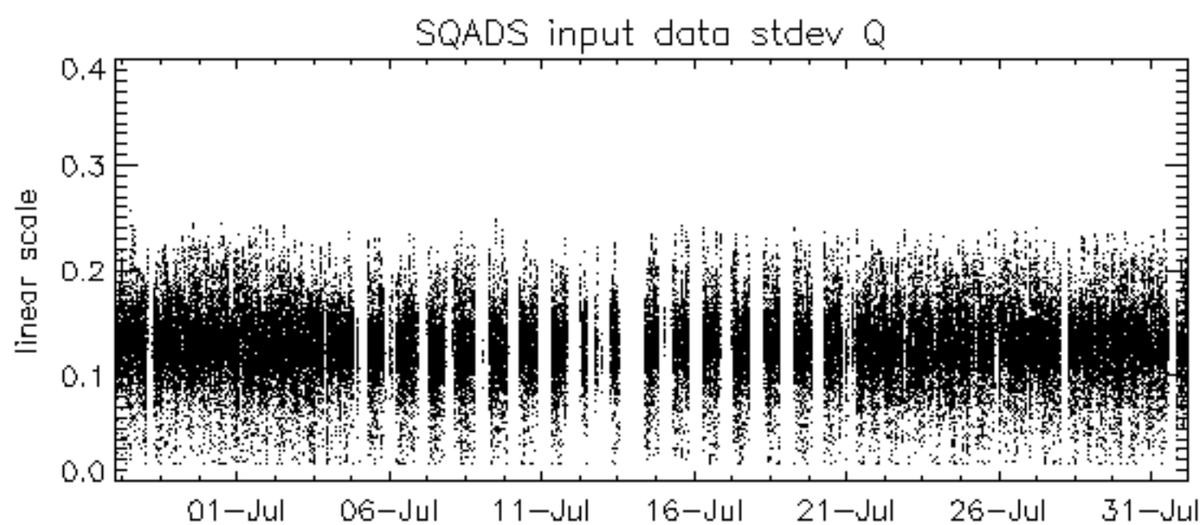

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

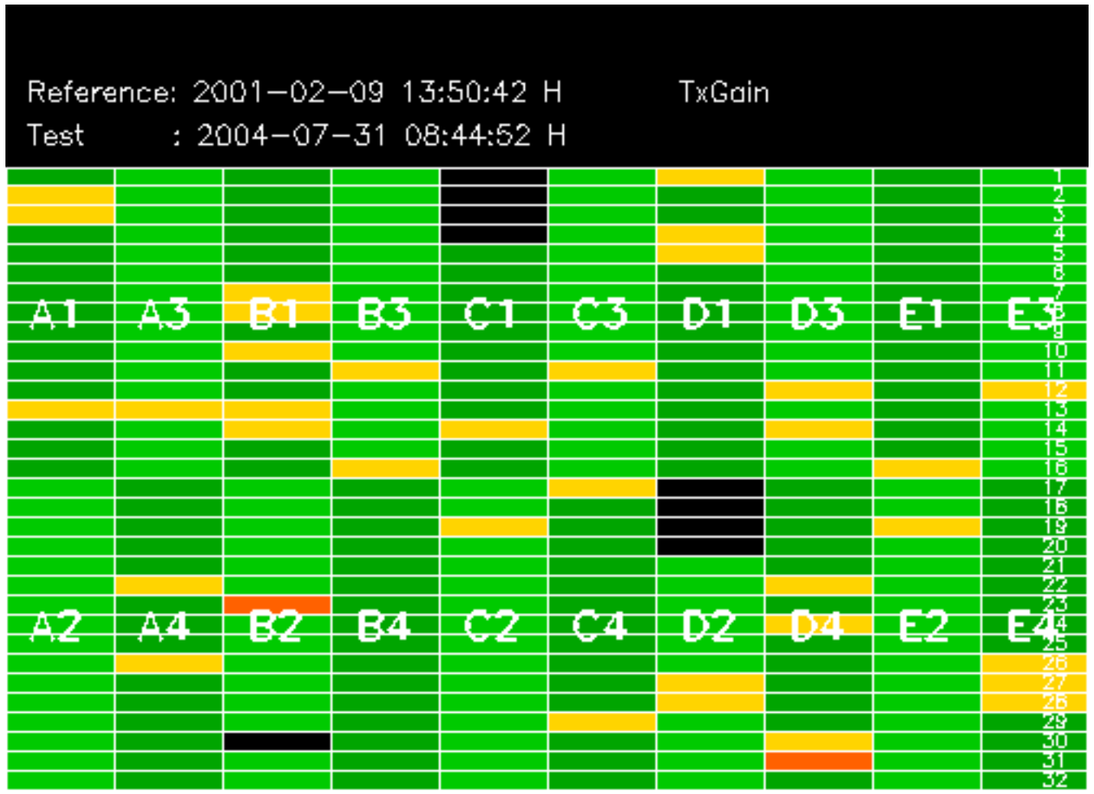

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

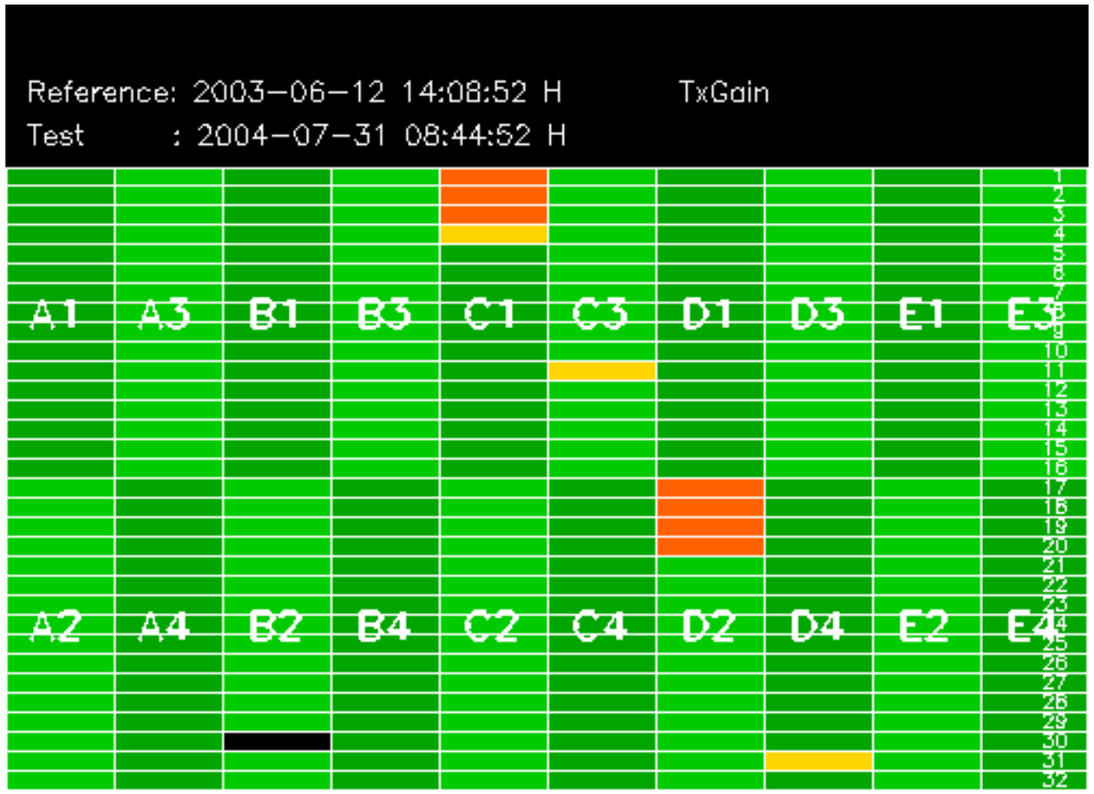

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

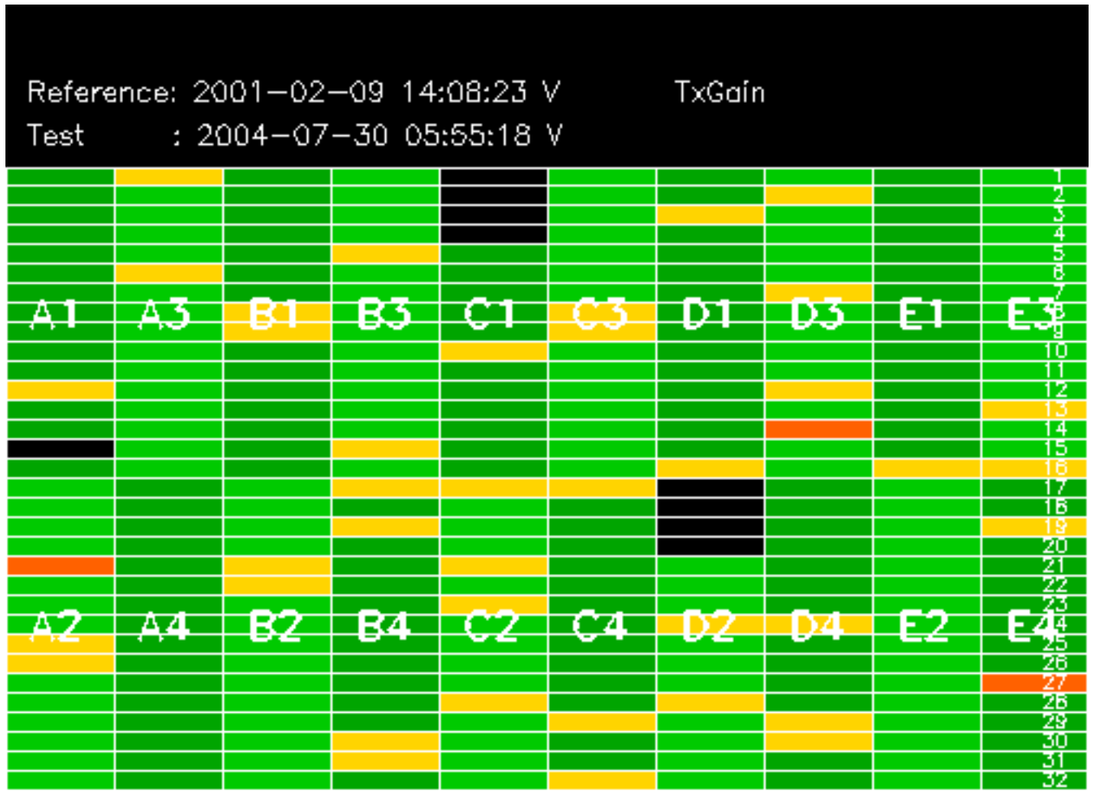

SQADS input data stdev i(black), q(red)
linear scale
0.0
0.1
0.2
0.3
0.4
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul

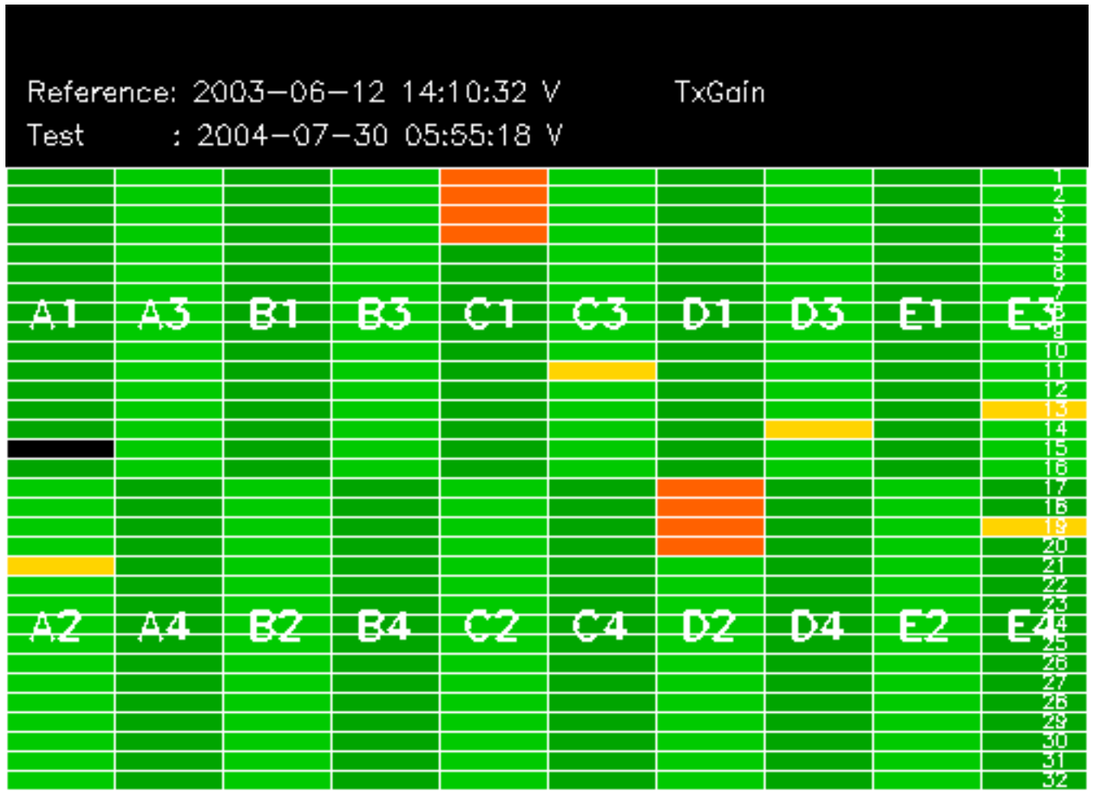

SQADS input data stdev I
linear scale
0.0
0.1
0.2
0.3
0.4
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul

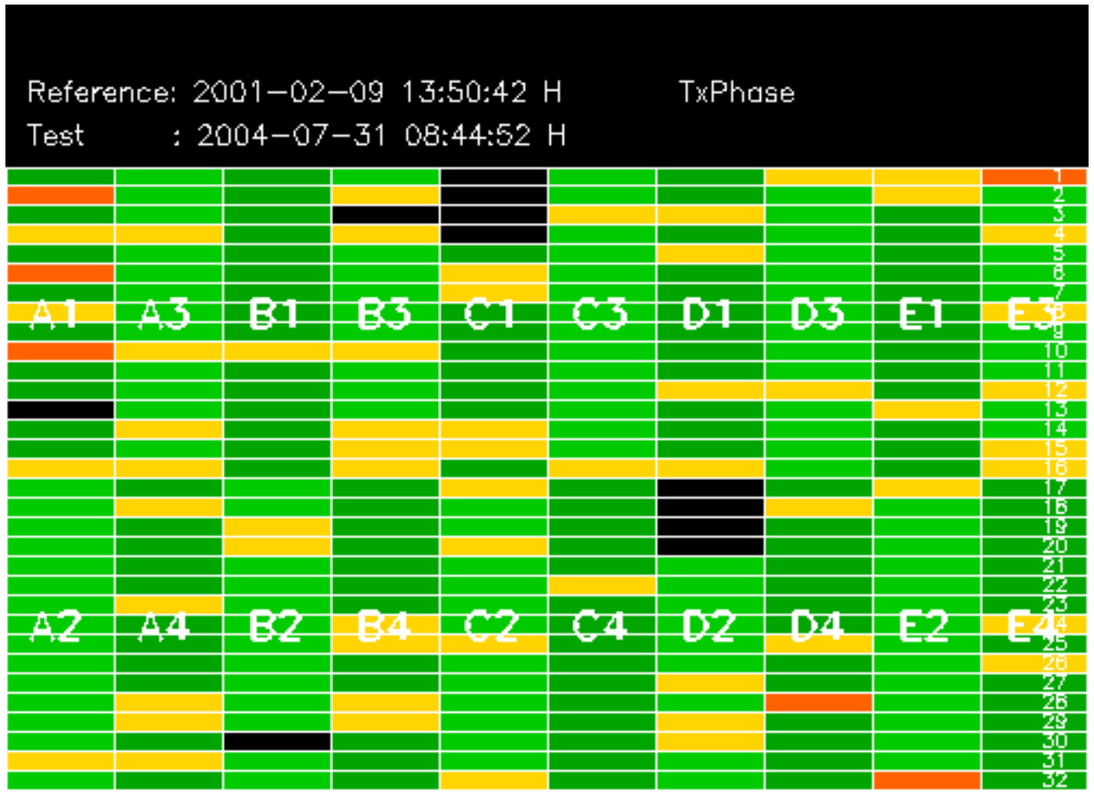

SQADS input data stdev Q
linear scale
0.0
0.1
0.2
0.3
0.4
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul

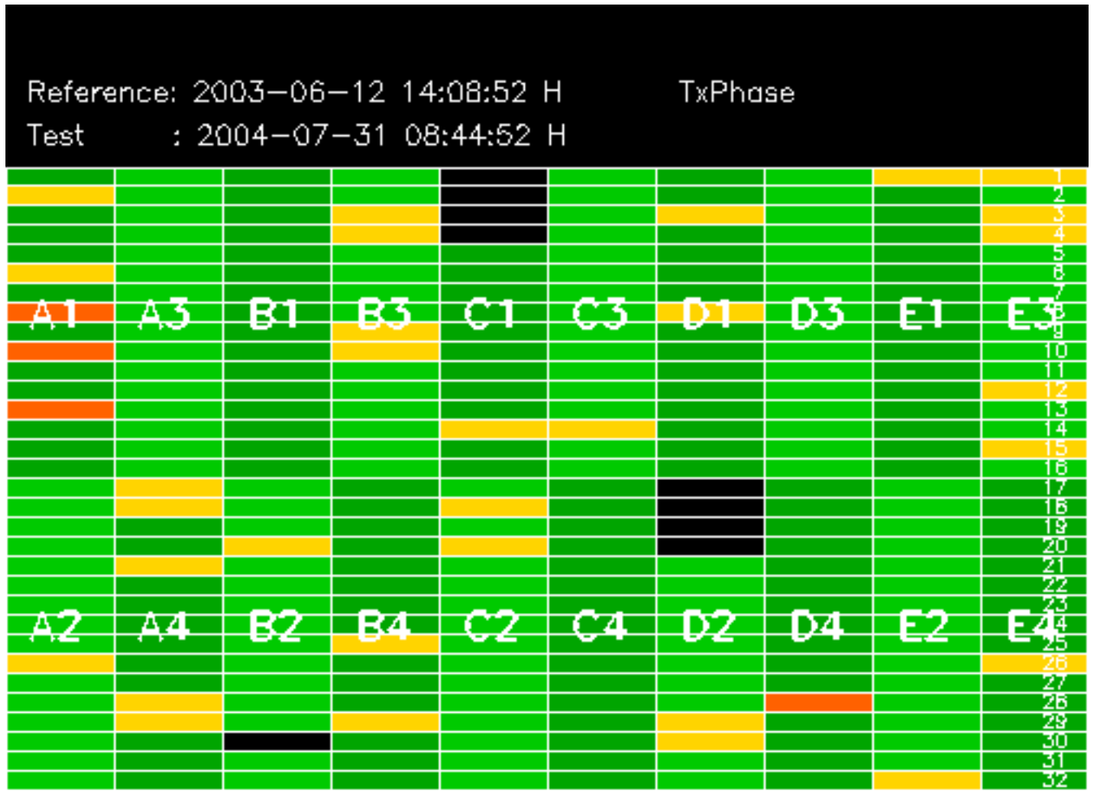

Reference: 2001-02-09 13:50:42 H
TxGain
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

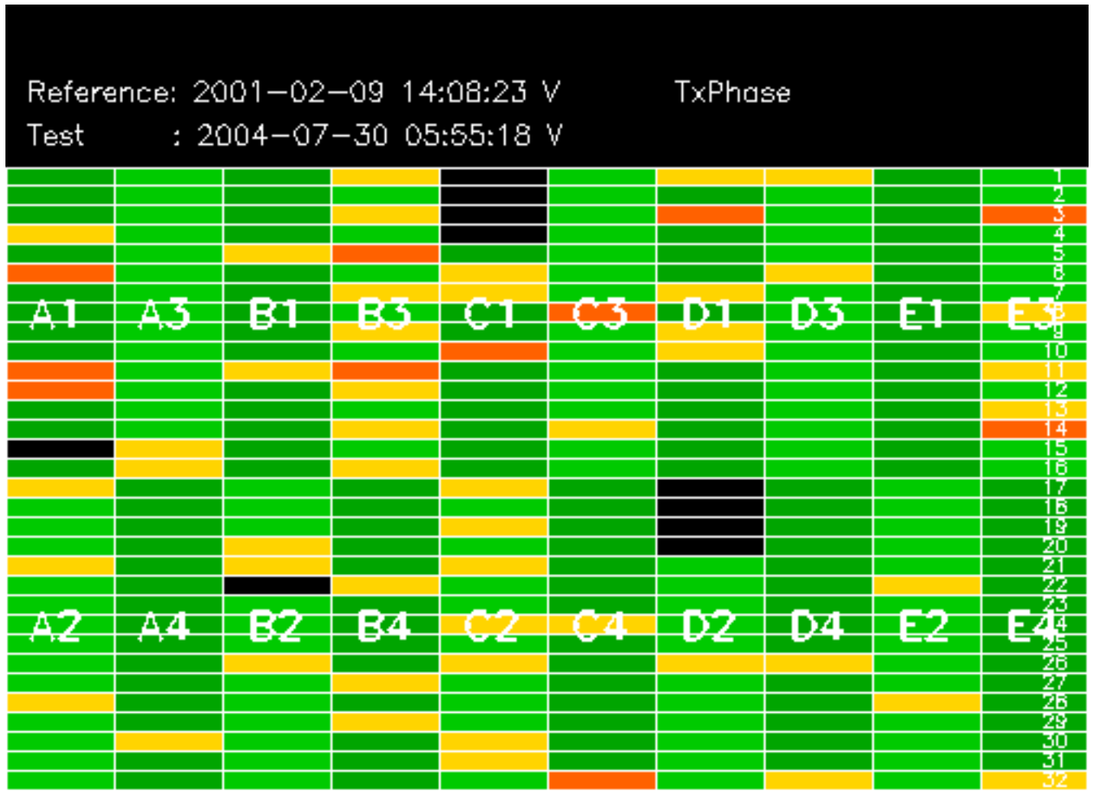

Reference: 2003-06-12 14:08:52 H
TxGain
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

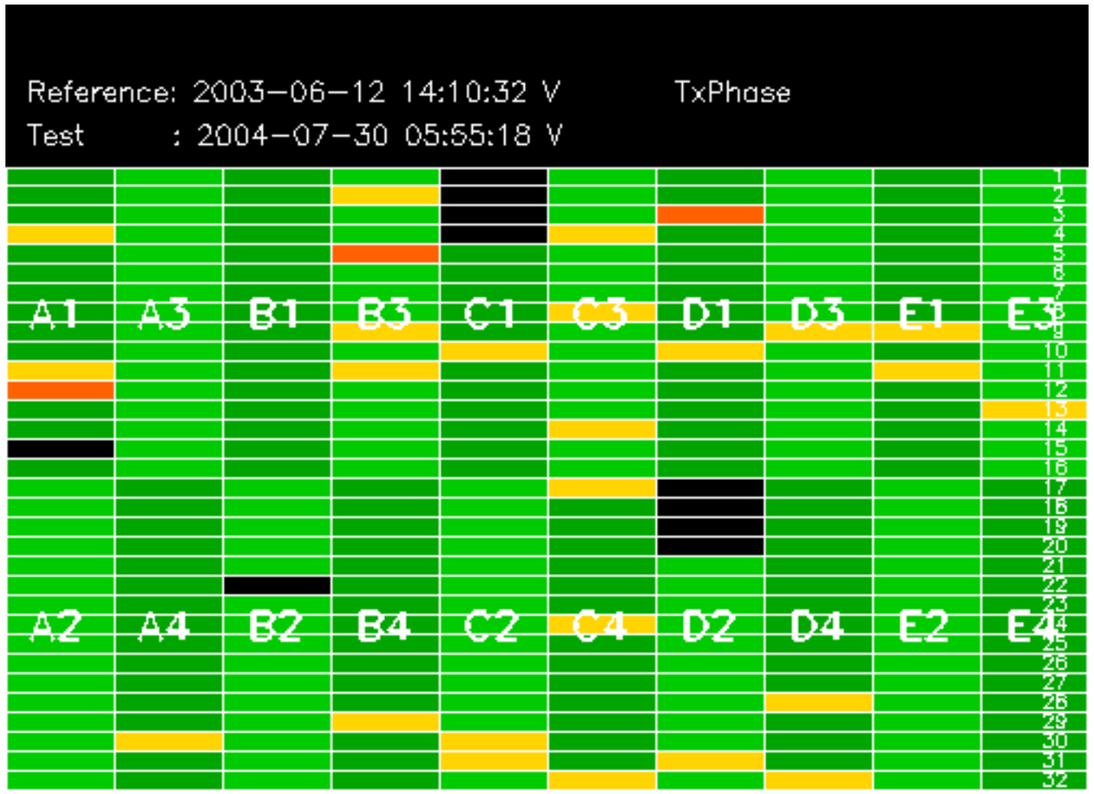

Reference: 2001-02-09 14:08:23 V
TxGain
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

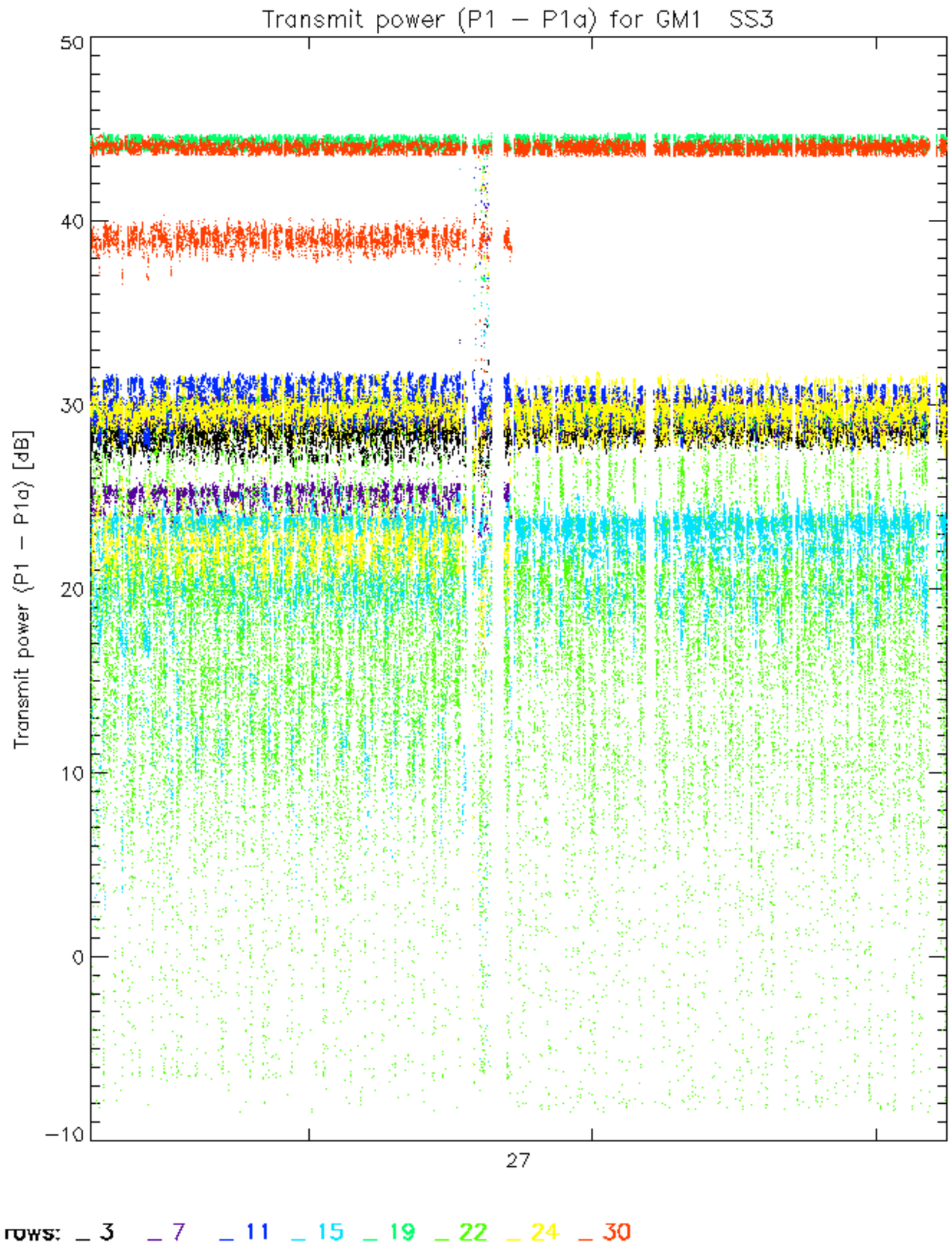

Reference: 2003-06-12 14:10:32 V
TxGain
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

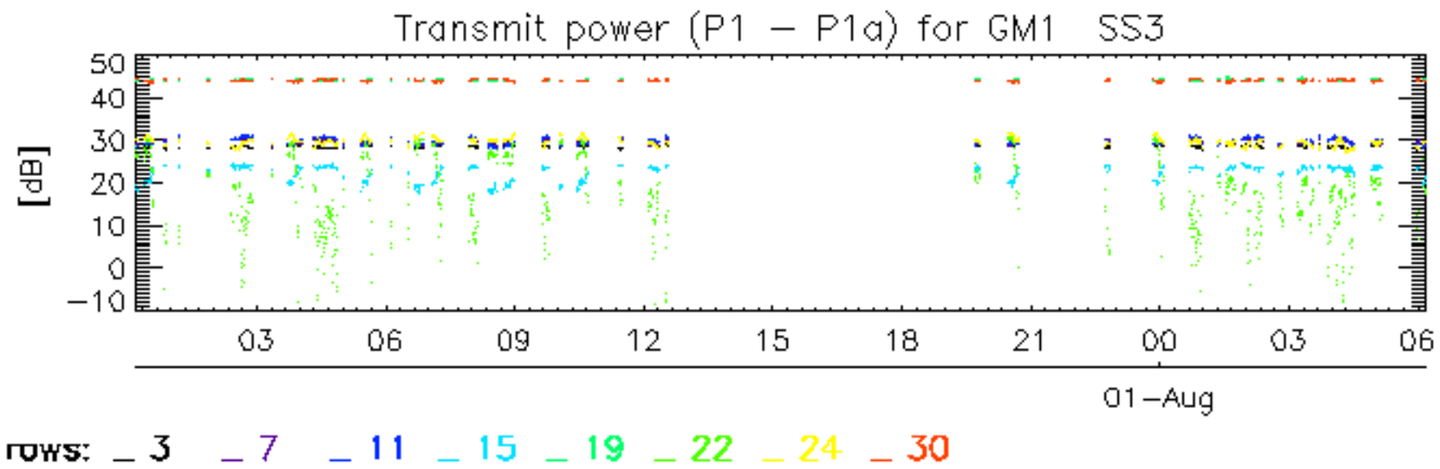

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

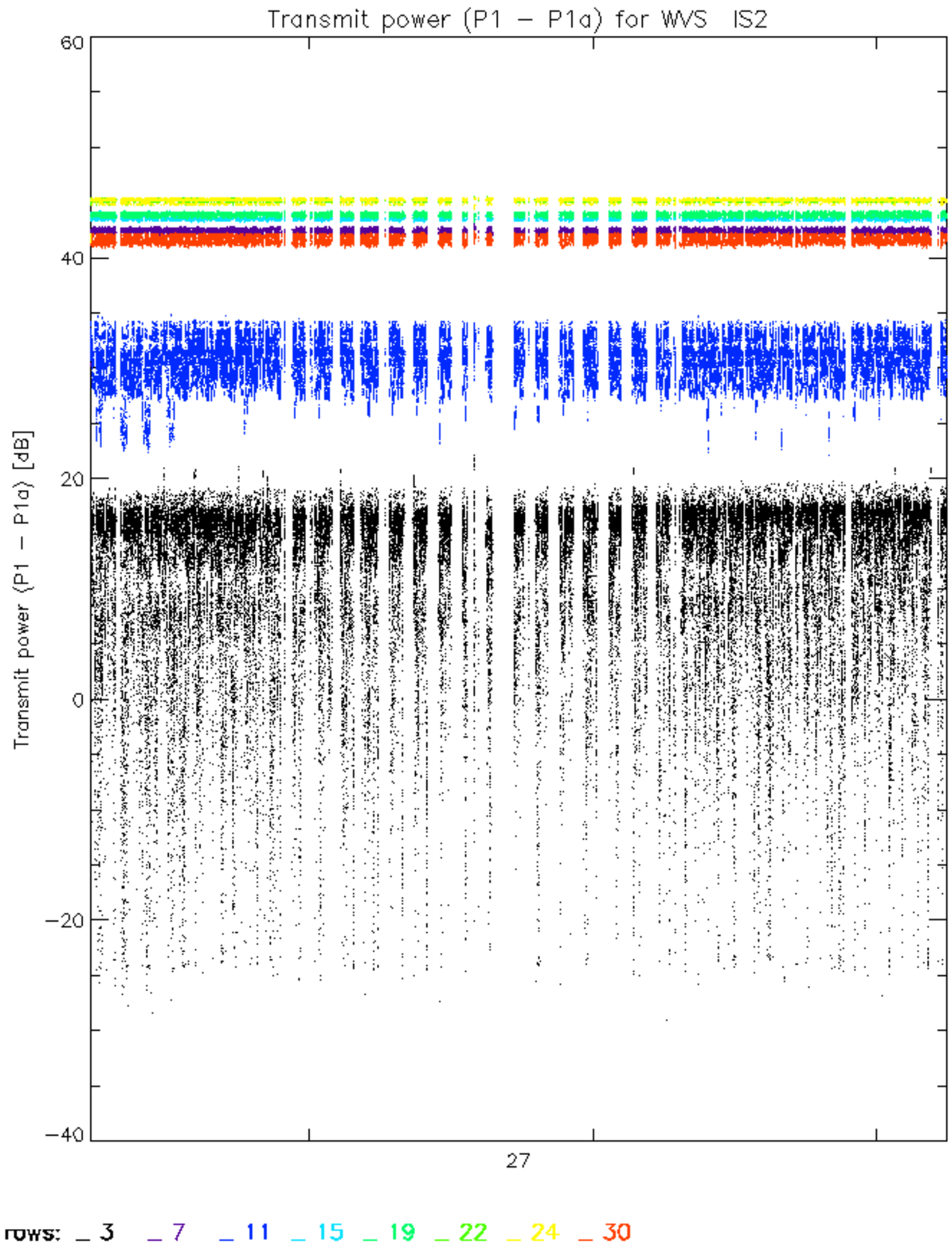

Reference: 2003-06-12 14:08:52 H
TxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

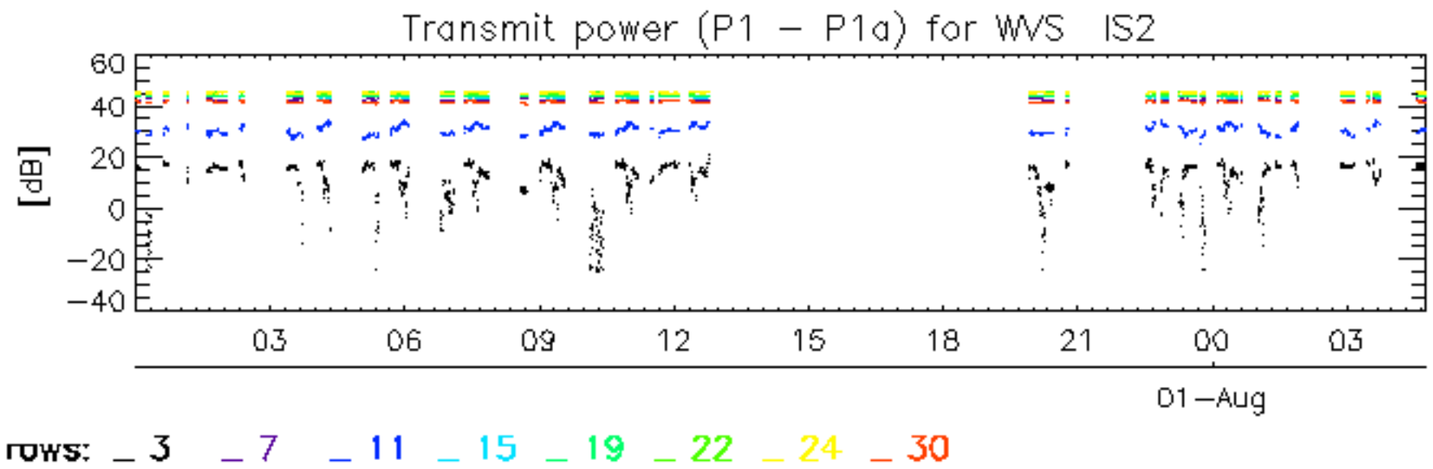

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
TxPhase
Test : 2004-07-30 05:55:18 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
27
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
06
01–Aug
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 − P1a) for WVS IS2
Transmit power (P1 − P1a) [dB]
60
40
20
0
−20
−40
27
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 − P1a) for WVS IS2
[dB]
60
40
20
0
−20
−40
03
06
09
12
15
18
21
00
03
01−Aug
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.