PRELIMINARY REPORT OF 040820

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

last update on Fri Aug 20 13:07:39 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

No anomalies observed on available browse products

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	20040818 073843
H	20040819 070706

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

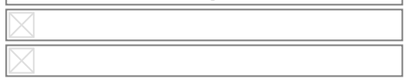
4.1.2 - Evolution for GM1

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	-3.474103	0.051161	0.066320
7	P1	-3.307236	0.056202	0.122808
11	P1	-4.646341	0.112220	-0.054814
15	P1	-5.751330	0.121103	-0.057136
19	P1	-3.458154	0.005197	-0.007799
22	P1	-4.552667	0.011142	0.062120

24	P1	-4.959304	0.018945	0.008913
30	P1	-6.922297	0.024329	-0.090694
3	P1	-15.908282	1.574248	1.586272
7	P1	-14.025028	0.165523	-0.233686
11	P1	-20.104362	0.404396	-0.300457
15	P1	-11.793777	0.164715	-0.058670
19	P1	-13.874830	0.033517	-0.040244
22	P1	-16.256496	0.345501	0.263343
24	P1	-14.569103	0.287897	0.200946
30	P1	-17.737719	0.437945	-0.300136

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.308975	0.079919	0.035523
7	P2	-22.651247	0.129264	0.137610
11	P2	-15.378950	0.159692	0.142337
15	P2	-7.078257	0.093379	0.095424
19	P2	-9.559765	0.176658	0.085364
22	P2	-17.374165	0.111341	0.129905
24	P2	-20.749821	0.085358	0.005451
30	P2	-19.295603	0.079679	0.138461

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.141616	0.002370	0.009273
7	P3	-8.141620	0.002371	0.009340
11	P3	-8.141613	0.002370	0.009296
15	P3	-8.141612	0.002370	0.009256
19	P3	-8.141600	0.002370	0.009214
22	P3	-8.141596	0.002370	0.009180
24	P3	-8.141593	0.002370	0.009161
30	P3	-8.141667	0.002369	0.008547

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	-2.698104	0.270551	0.545154
7	P1	-2.953622	0.220482	0.379909
11	P1	-3.868355	0.169167	-0.067733
15	P1	-3.525680	0.138494	-0.048014
19	P1	-3.479373	0.014576	0.006381
22	P1	-5.665890	0.043710	-0.087905
24	P1	-3.871227	0.016044	-0.105803
30	P1	-6.180404	0.067077	0.053308
3	P1	-10.328208	1.050616	1.126825
7	P1	-10.066789	0.159514	0.215677
11	P1	-12.089355	0.117277	-0.195881
15	P1	-11.623032	0.109786	-0.137641
19	P1	-15.627064	0.050944	0.033476
22	P1	-23.348030	1.178892	-0.150225
24	P1	-17.786152	0.225100	-0.368483
30	P1	-20.349346	1.201869	-0.339966

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.980921	0.058237	0.046110
7	P2	-22.784475	0.052714	0.126075
11	P2	-11.036547	0.073096	0.162818
15	P2	-4.955208	0.039836	0.031211
19	P2	-6.771102	0.058406	0.062535
22	P2	-7.462529	0.048057	0.066335
24	P2	-11.041114	0.053354	0.019696
30	P2	-22.237427	0.046743	0.132559

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.987457	0.003700	0.000872
7	P3	-7.987477	0.003704	0.001441
11	P3	-7.987556	0.003696	0.000803
15	P3	-7.987409	0.003703	0.001063
19	P3	-7.987512	0.003705	0.001078
22	P3	-7.987403	0.003697	0.001398
24	P3	-7.987445	0.003714	0.001290
30	P3	-7.987455	0.003702	0.000958

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	0.000493691
	stdev	2.13527e-07
MEAN Q	mean	0.000540529
	stdev	2.42340e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129271
	stdev	0.00101415
STDEV Q	mean	0.129512
	stdev	0.00102613

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

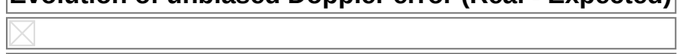
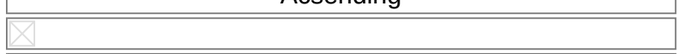
Acsending

Descending

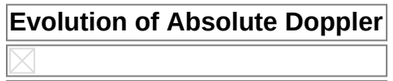
6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

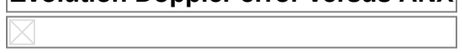
Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

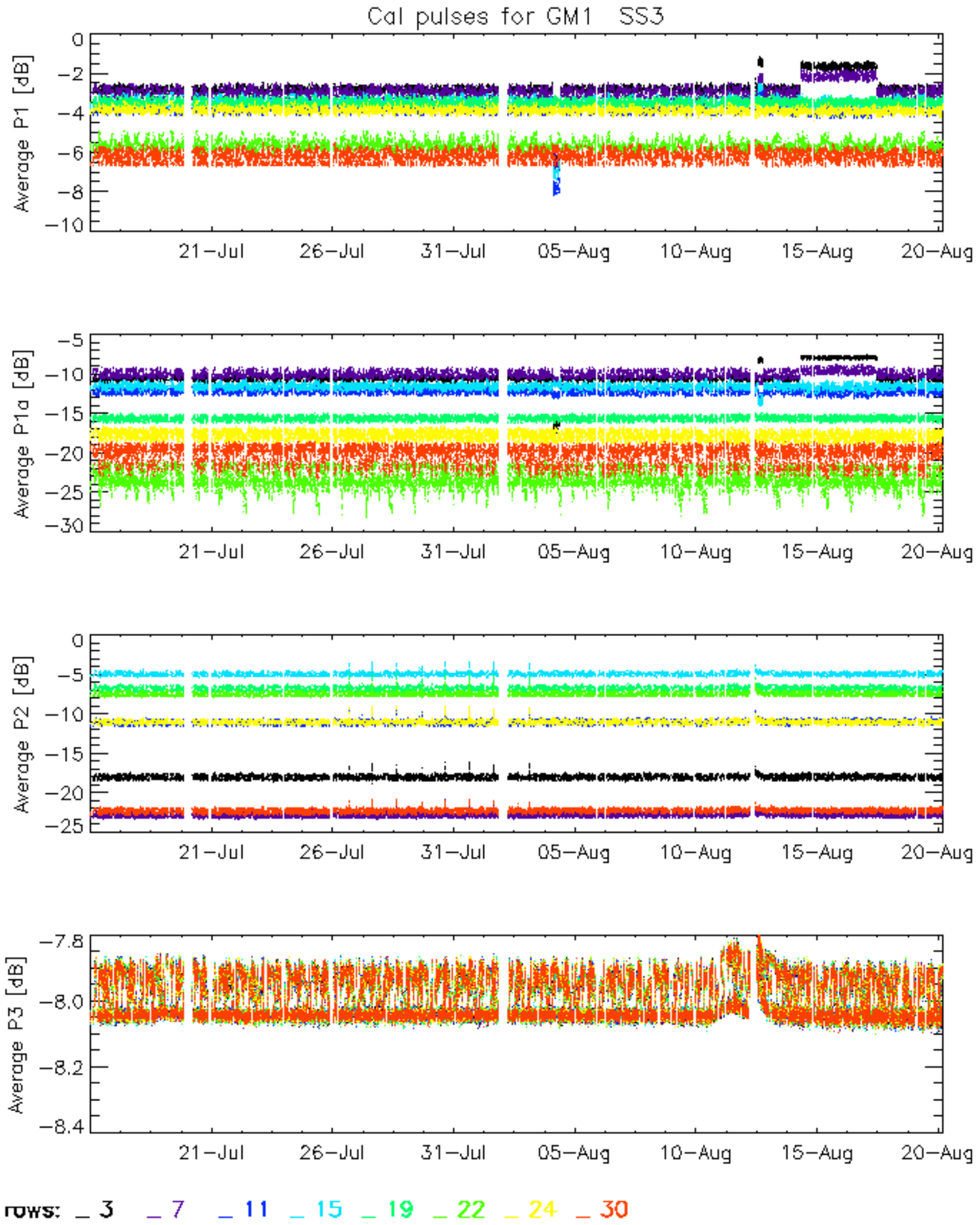
6.5 - Absolute Doppler for GM1

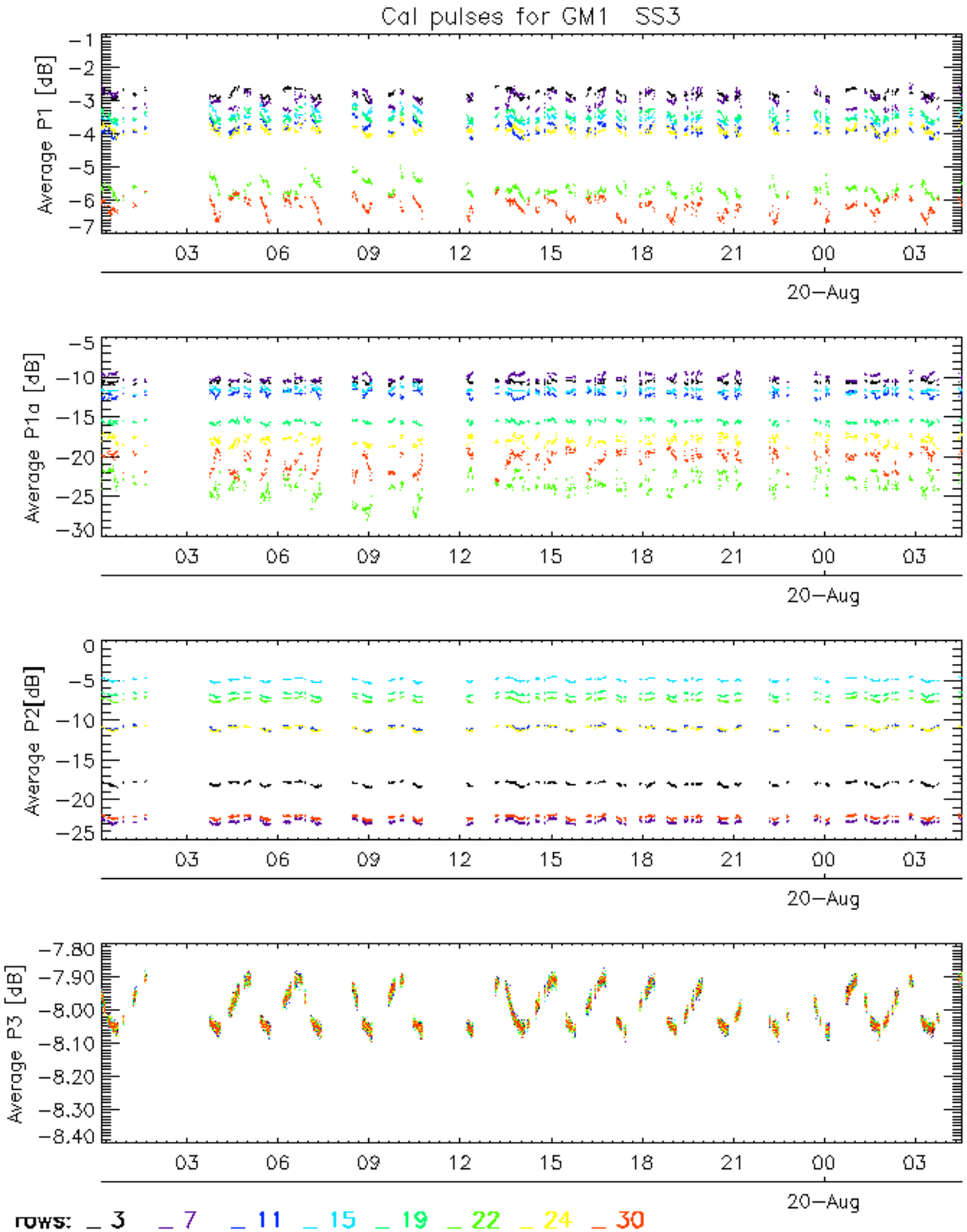
Evolution of Absolute Doppler

Acsending

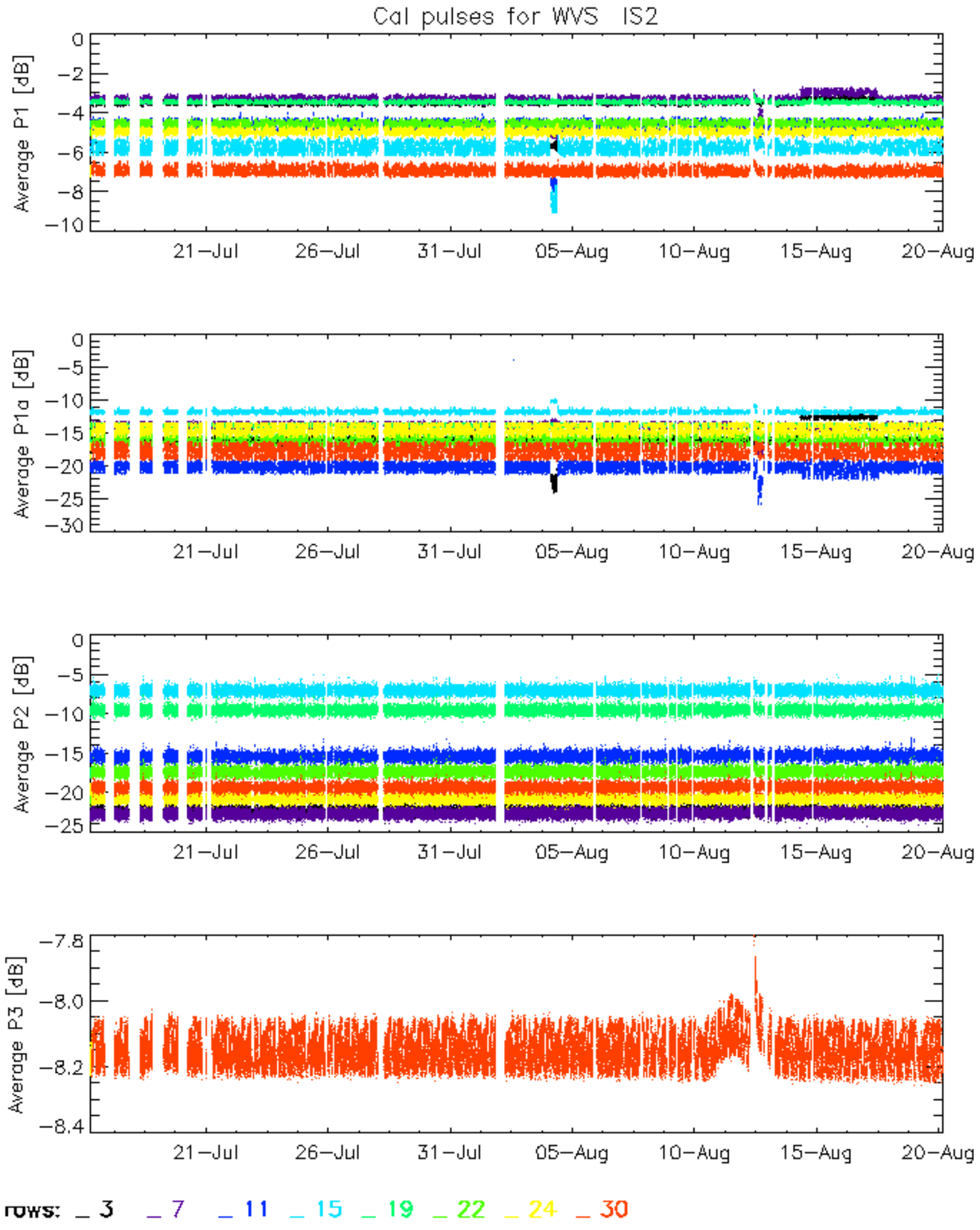
Descending

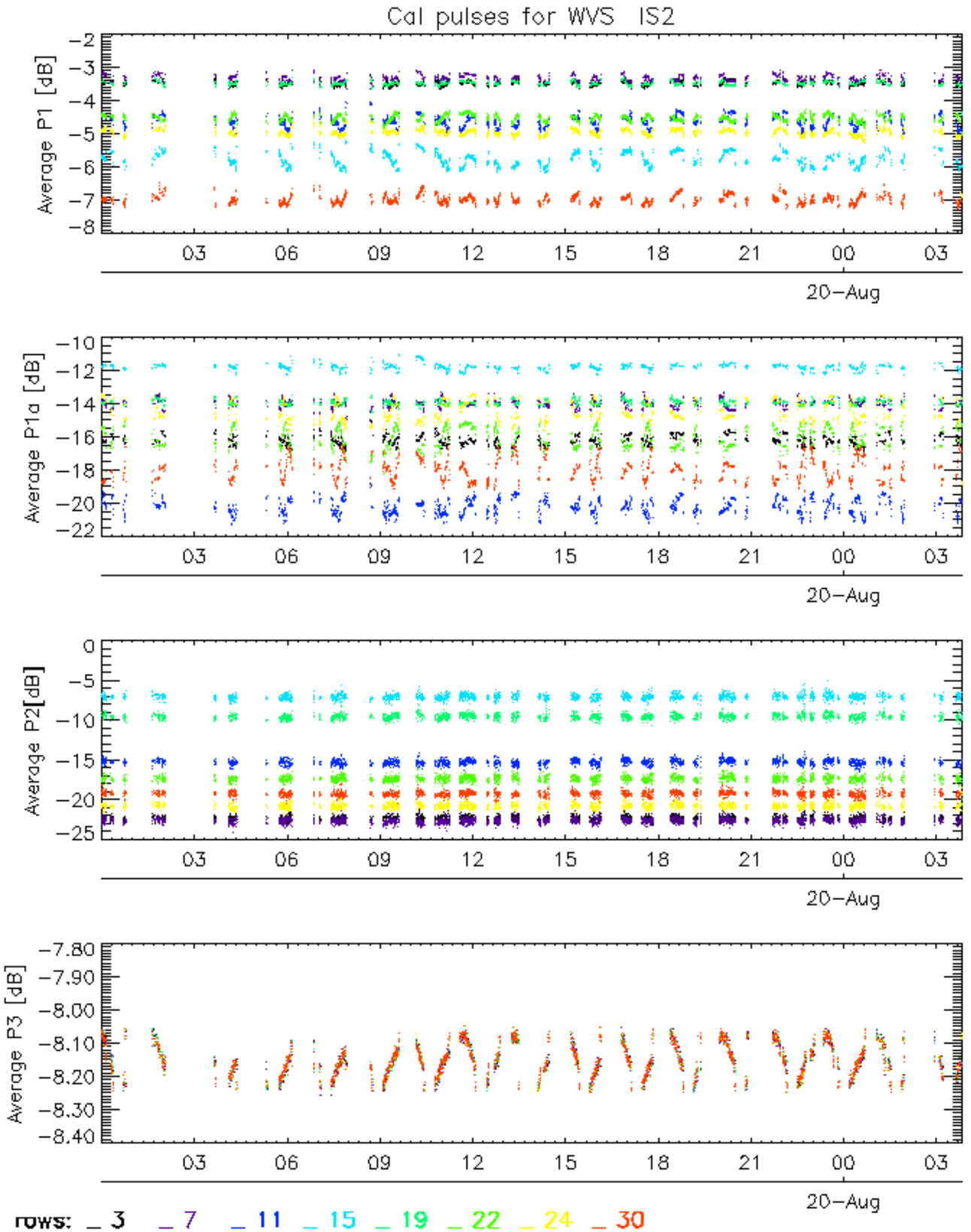
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX



Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

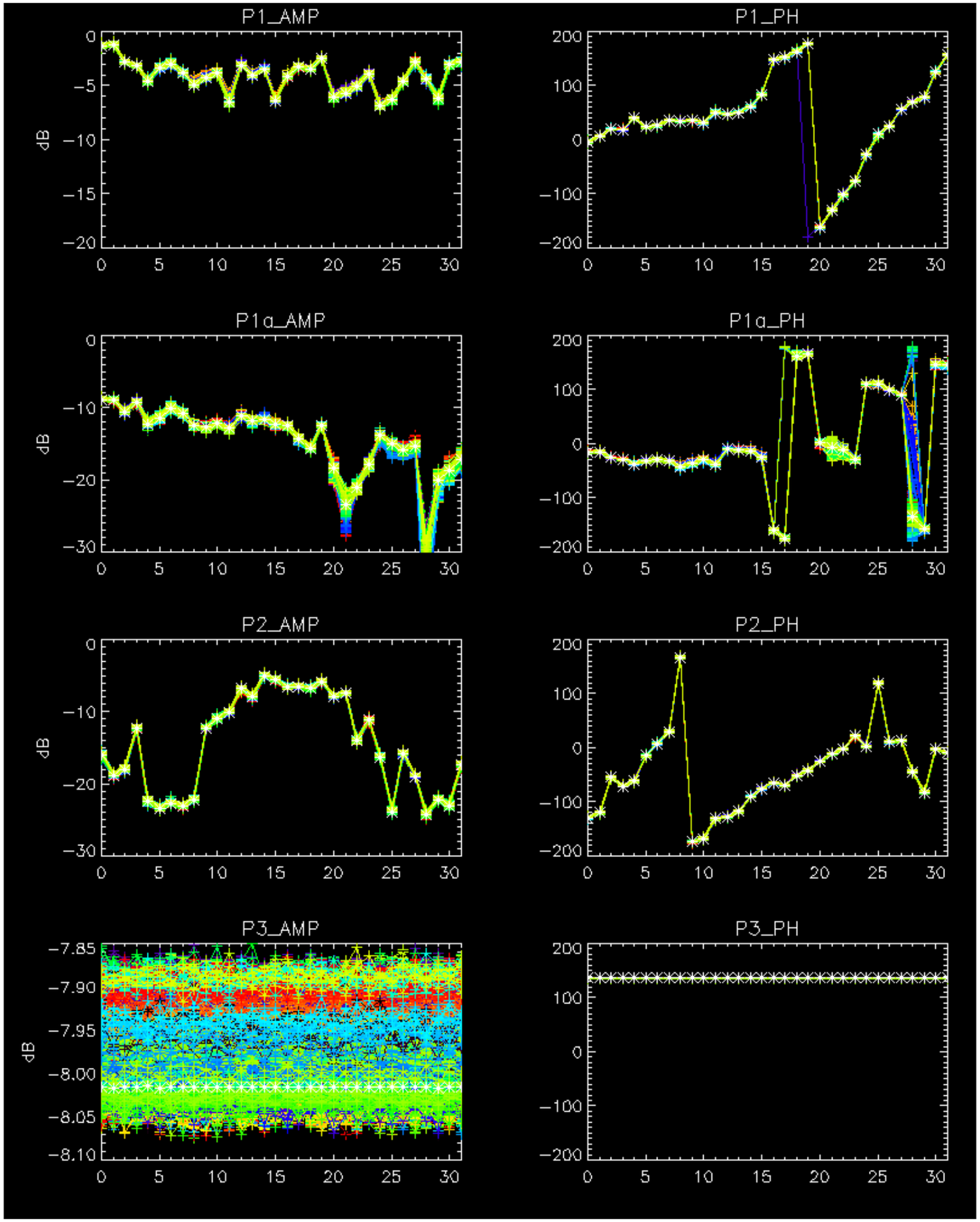

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
20−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
20−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
20−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

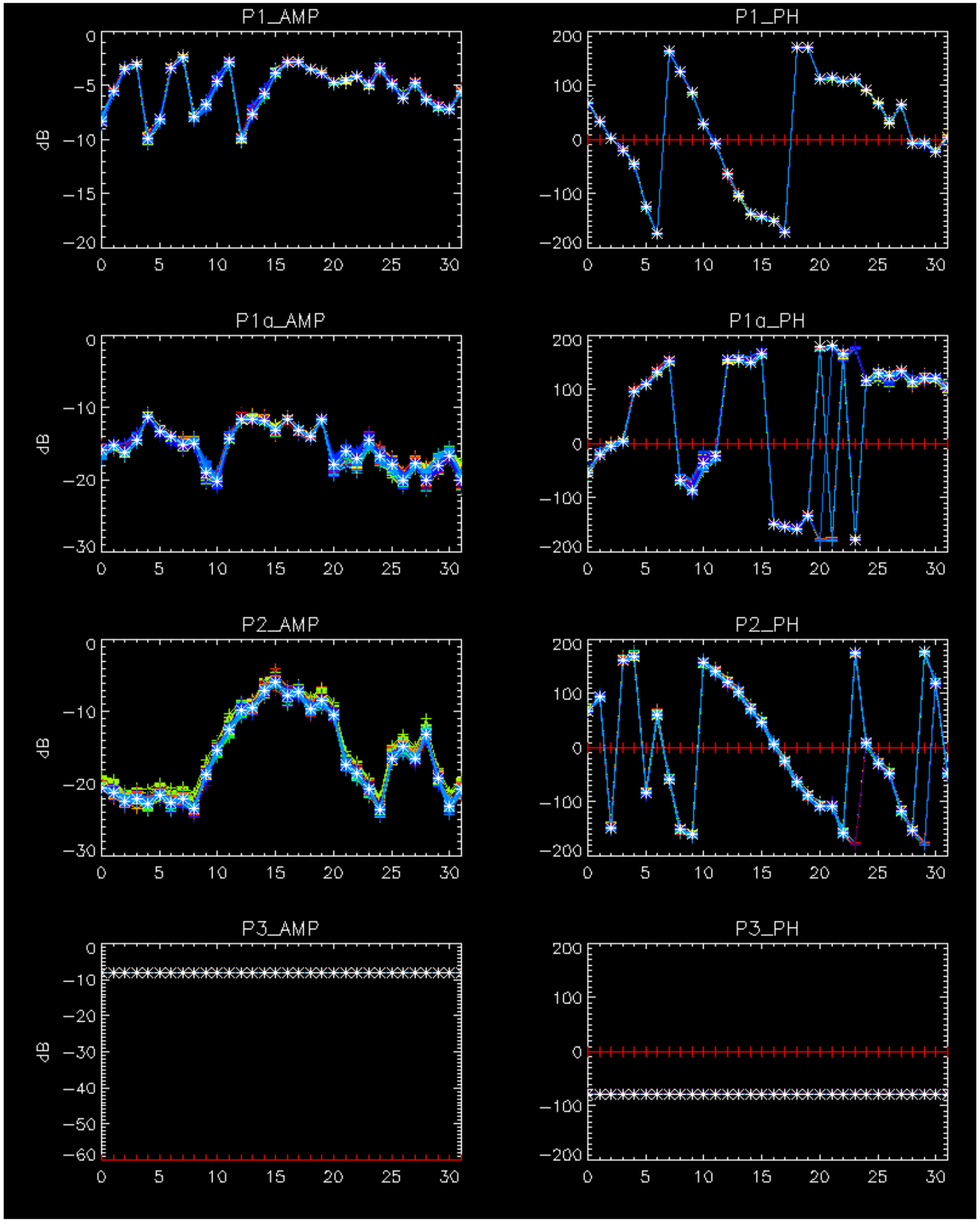

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
Average P1a [dB]
0
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 24 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
20−Aug
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2[dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

No anomalies observed on available browse products

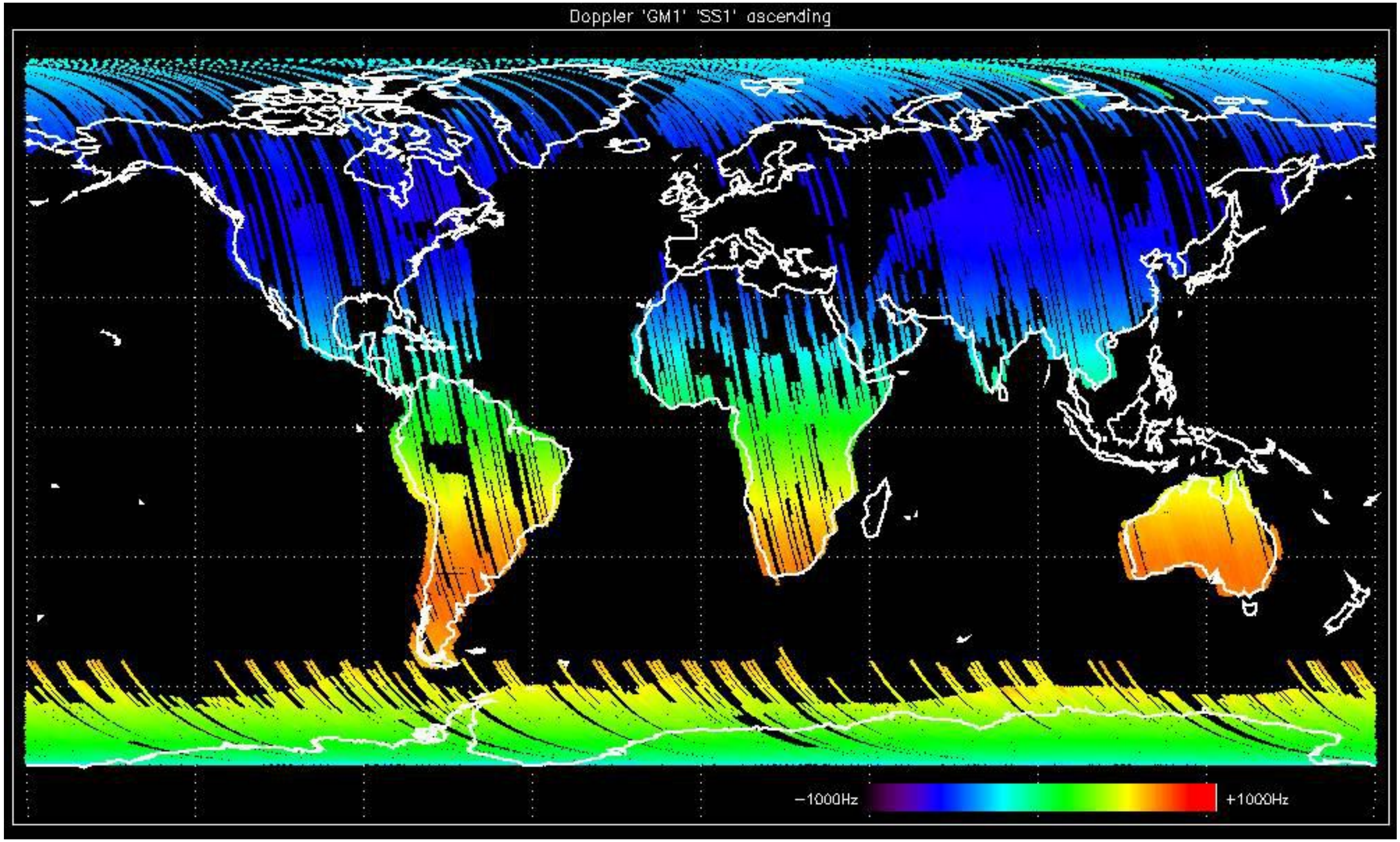
No anomalies observed.

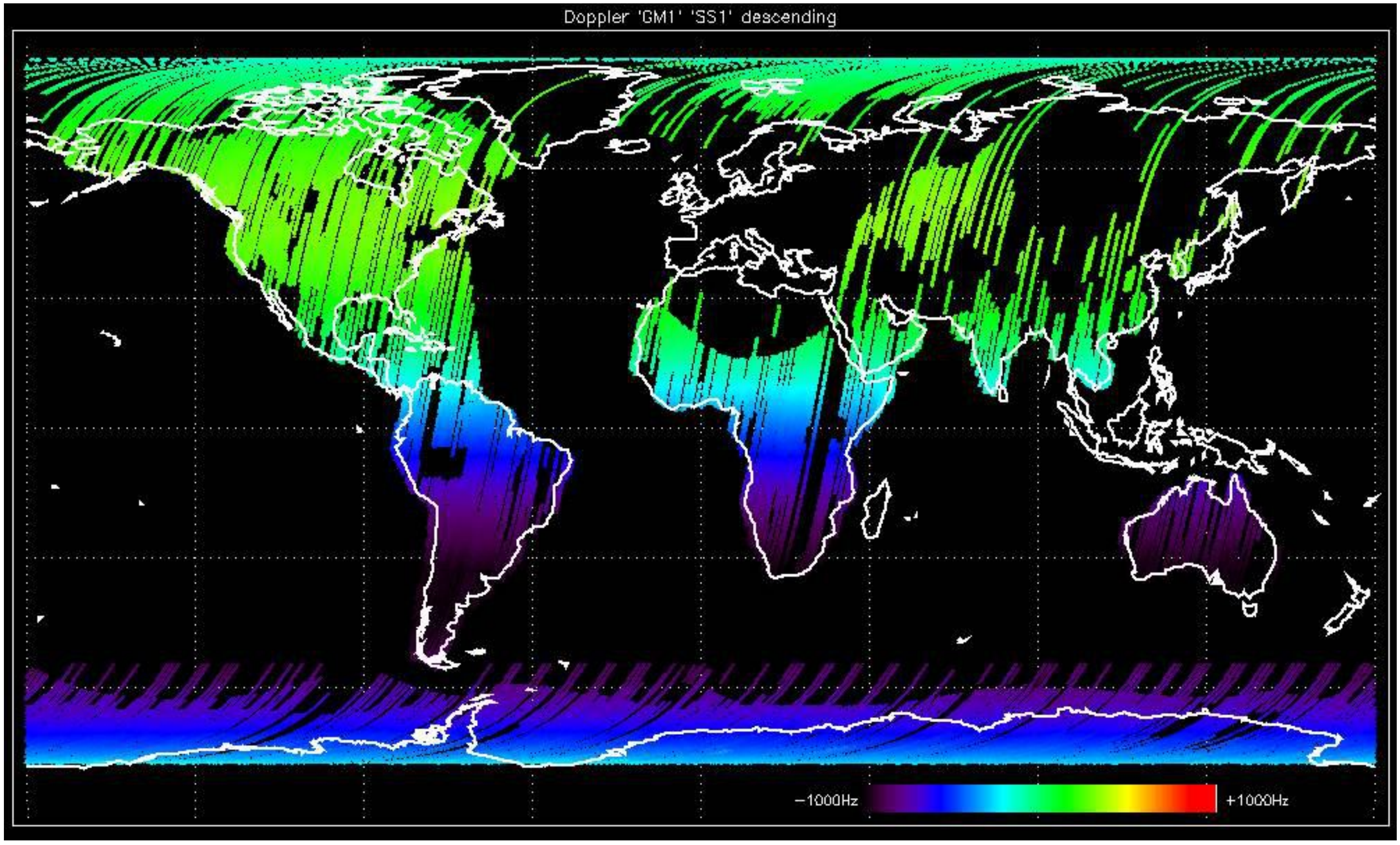

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

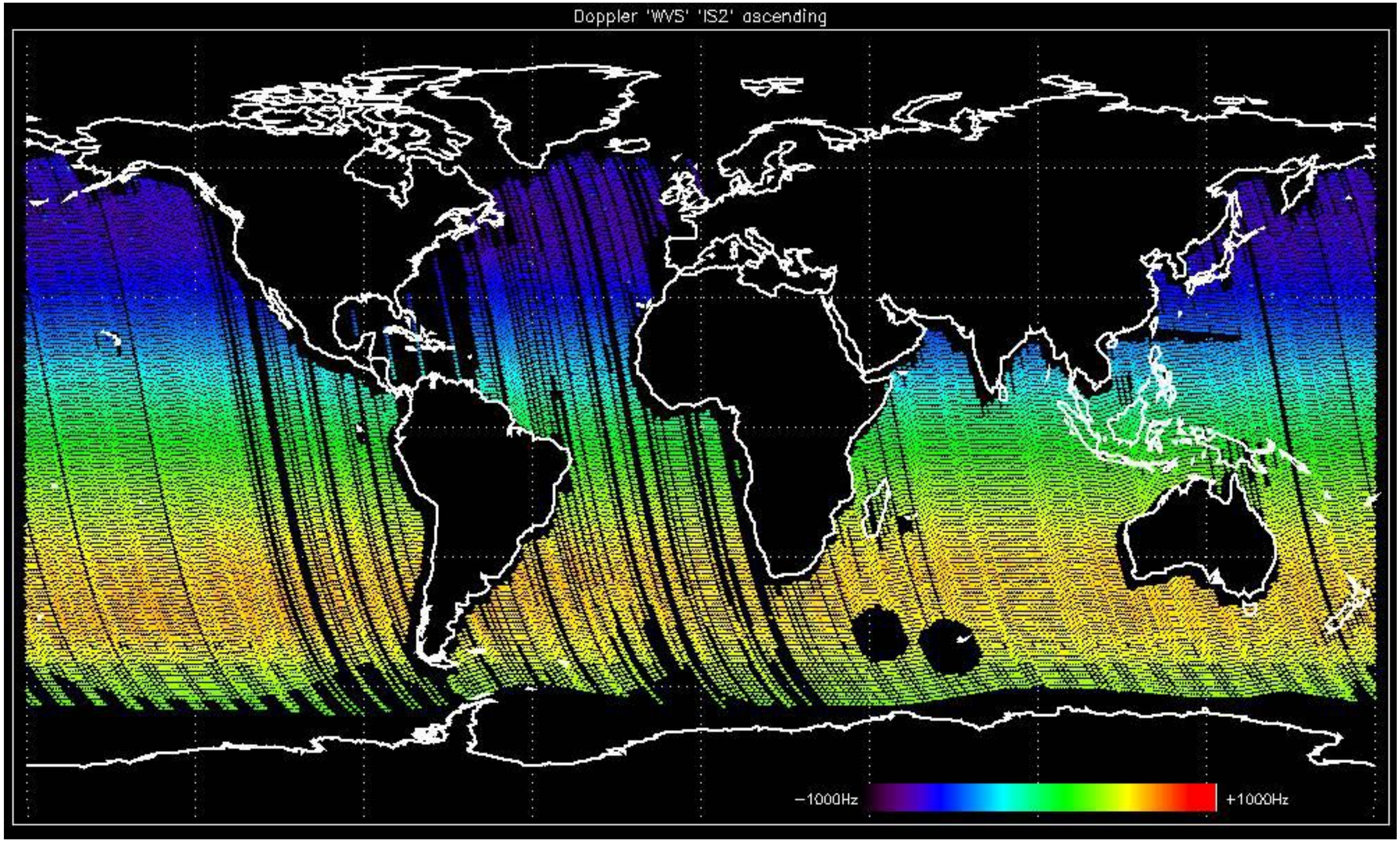

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
0
−10
−20
−30
−40
−50
−60
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

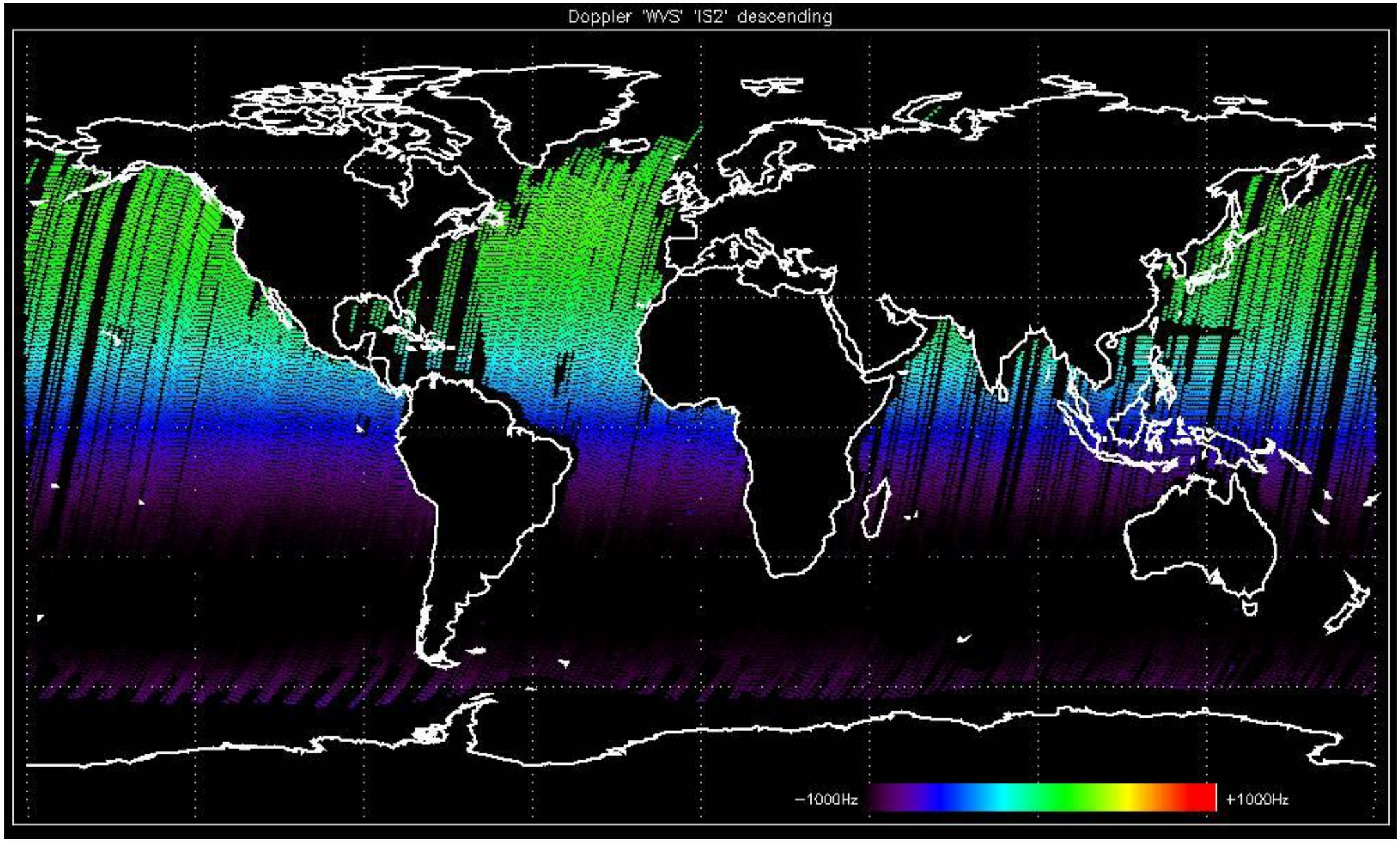
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

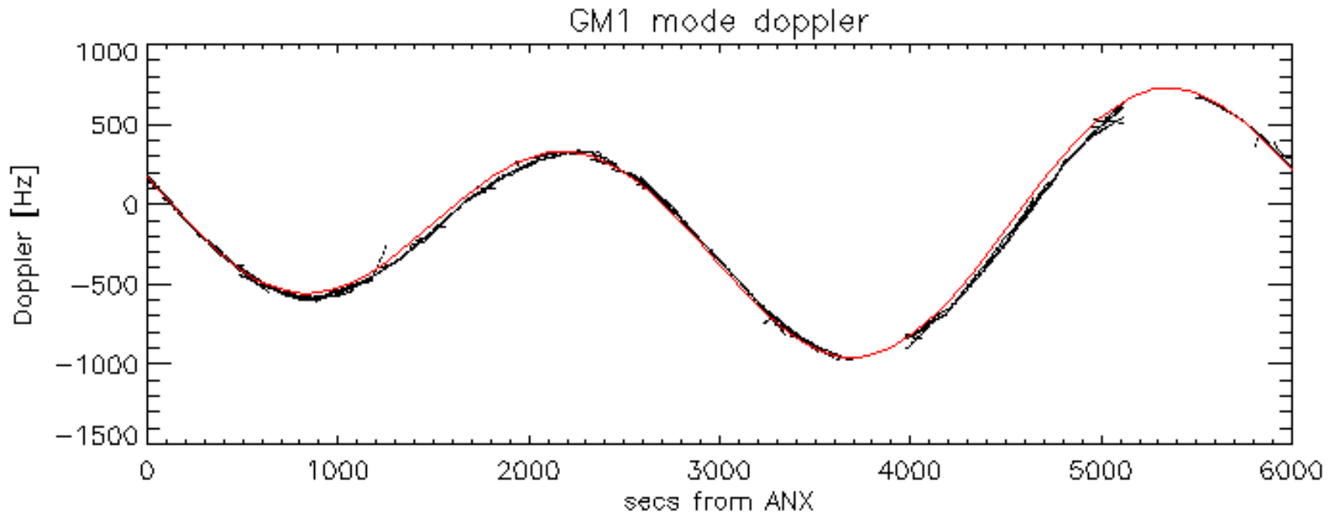
Preliminary report.The data is not yet controled

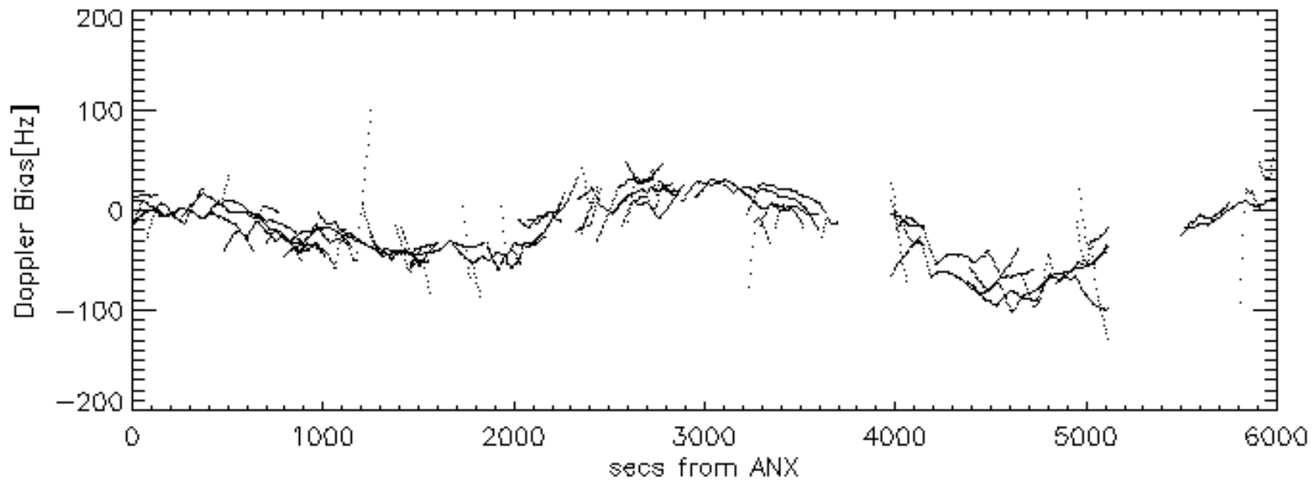

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

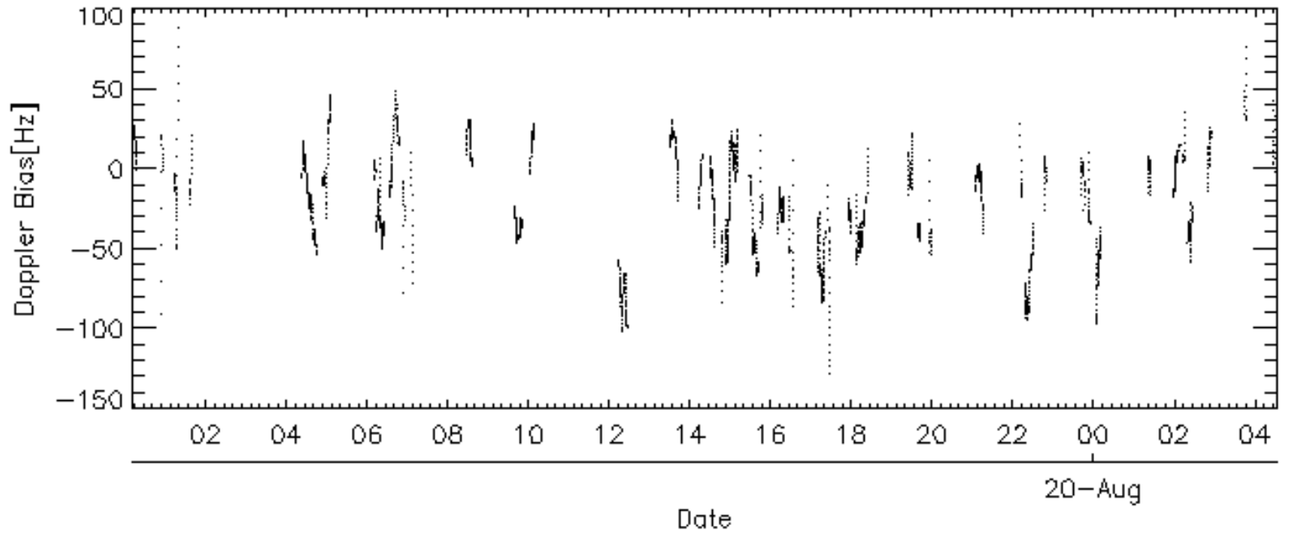

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

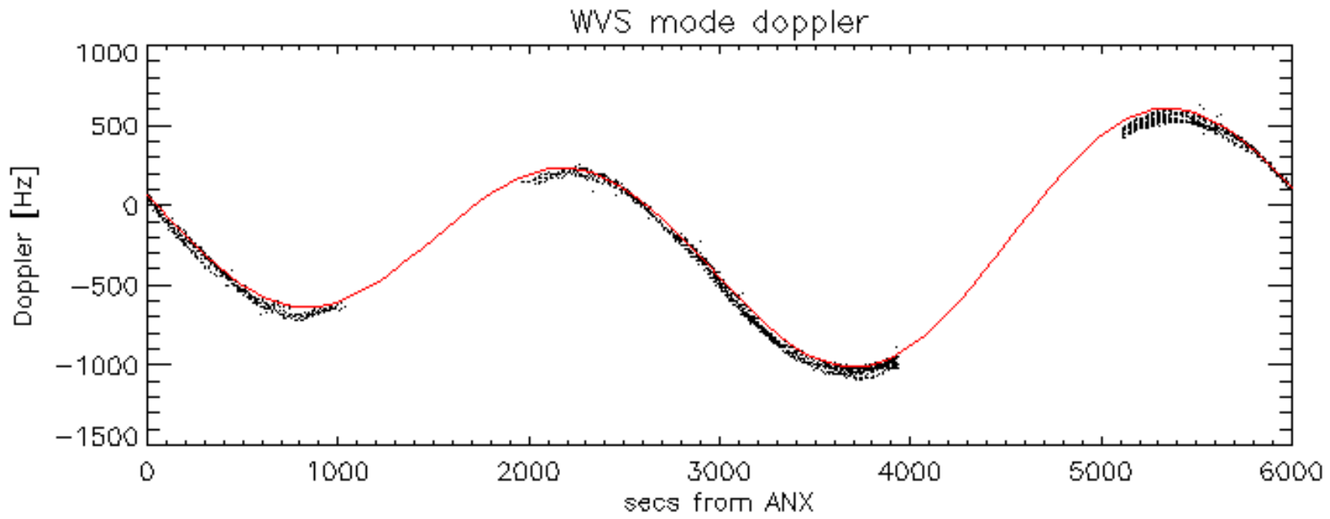

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

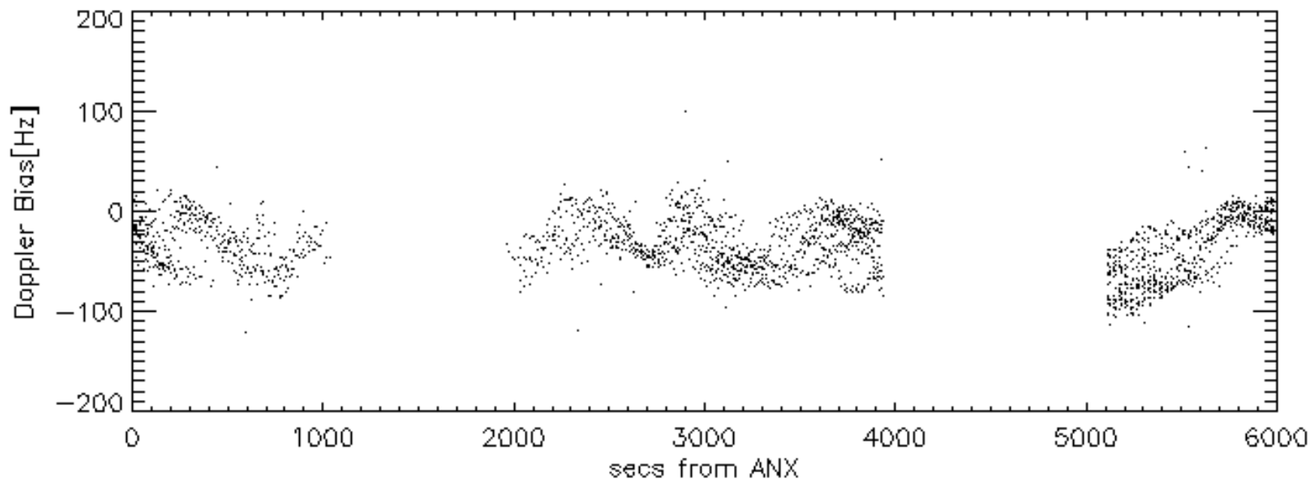

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

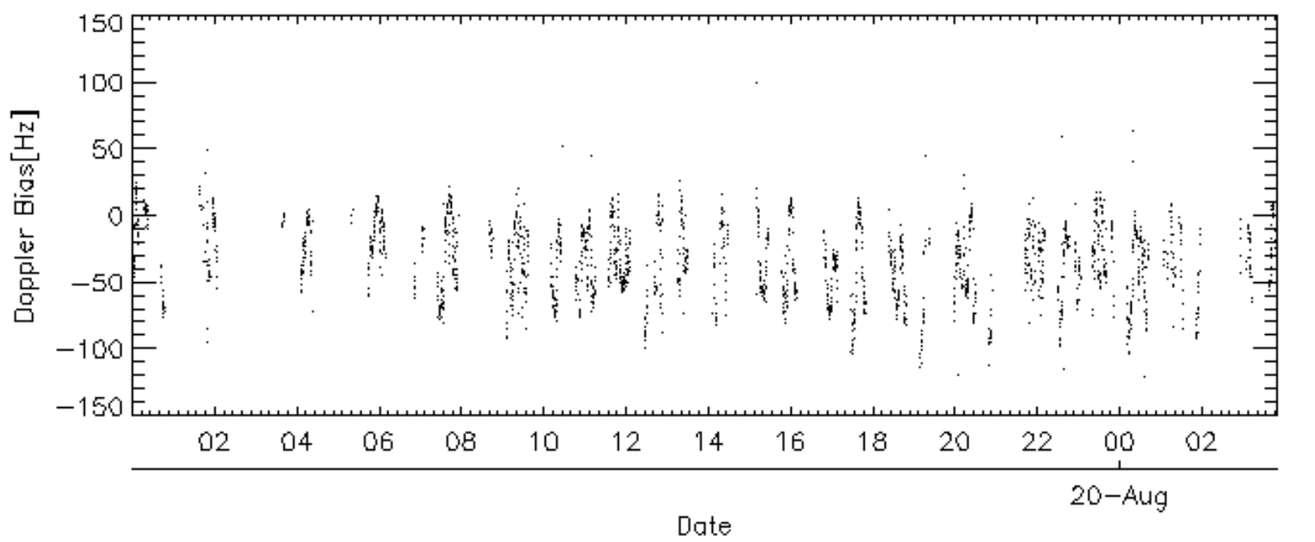

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

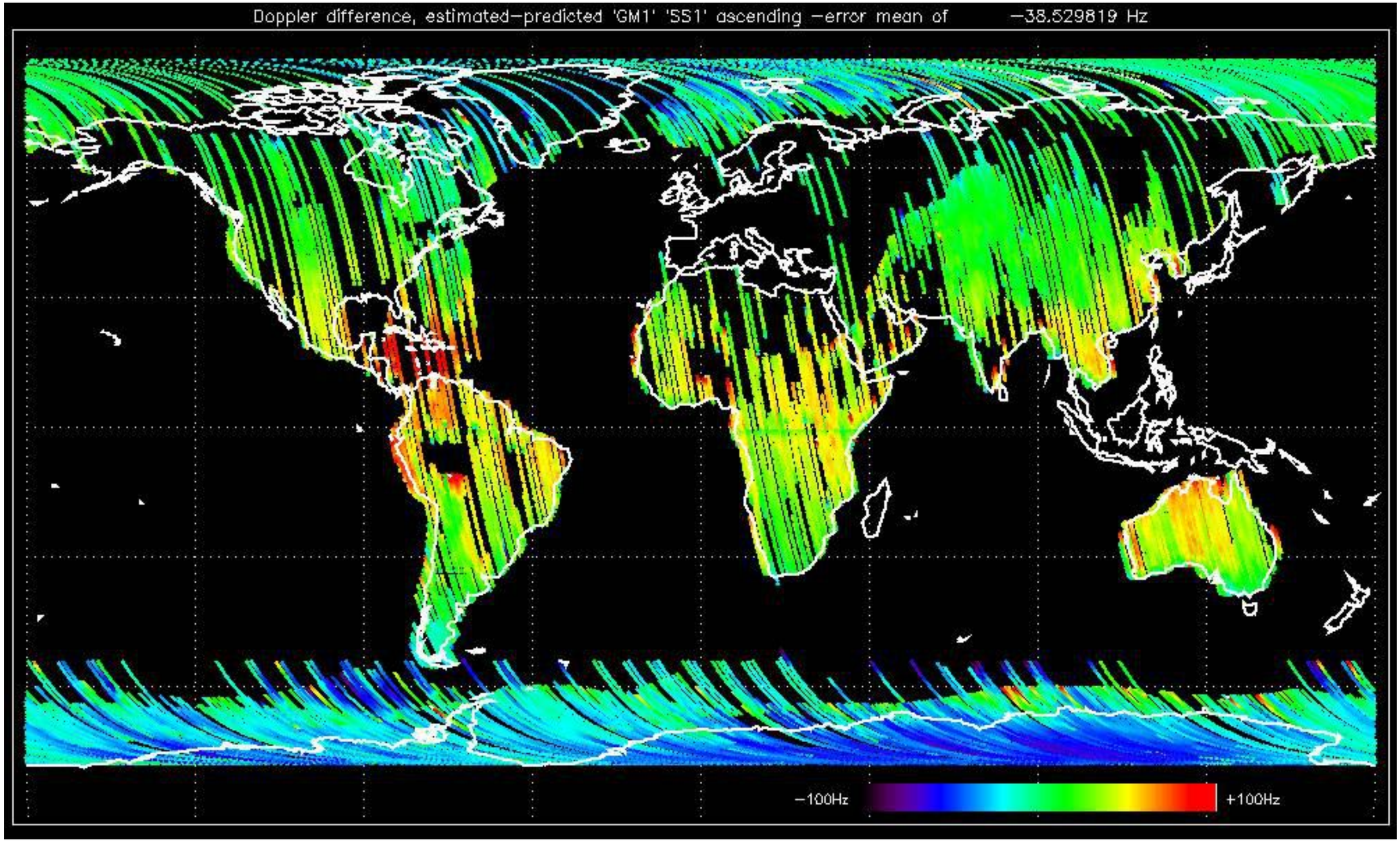

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

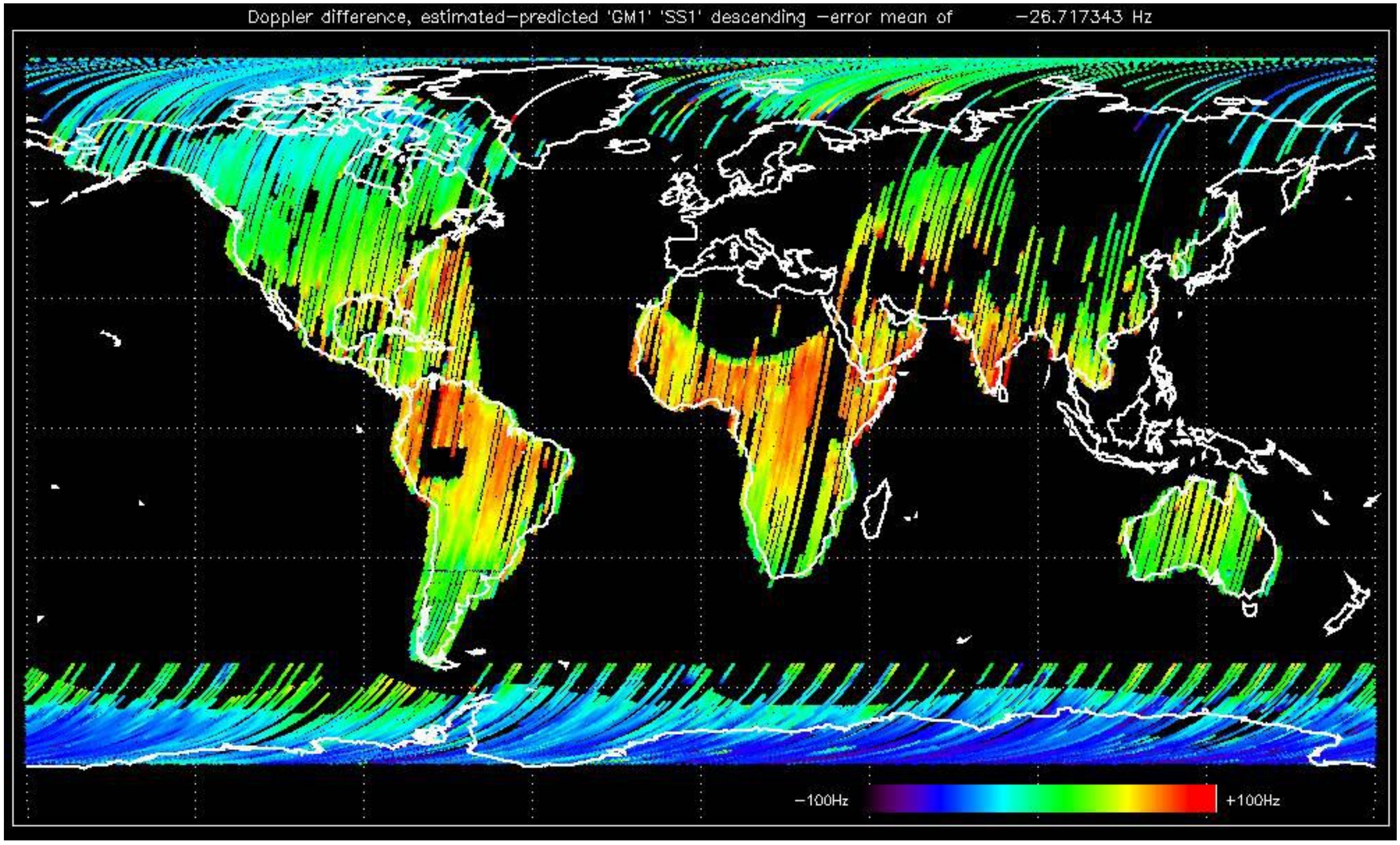

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
20−Aug
Date

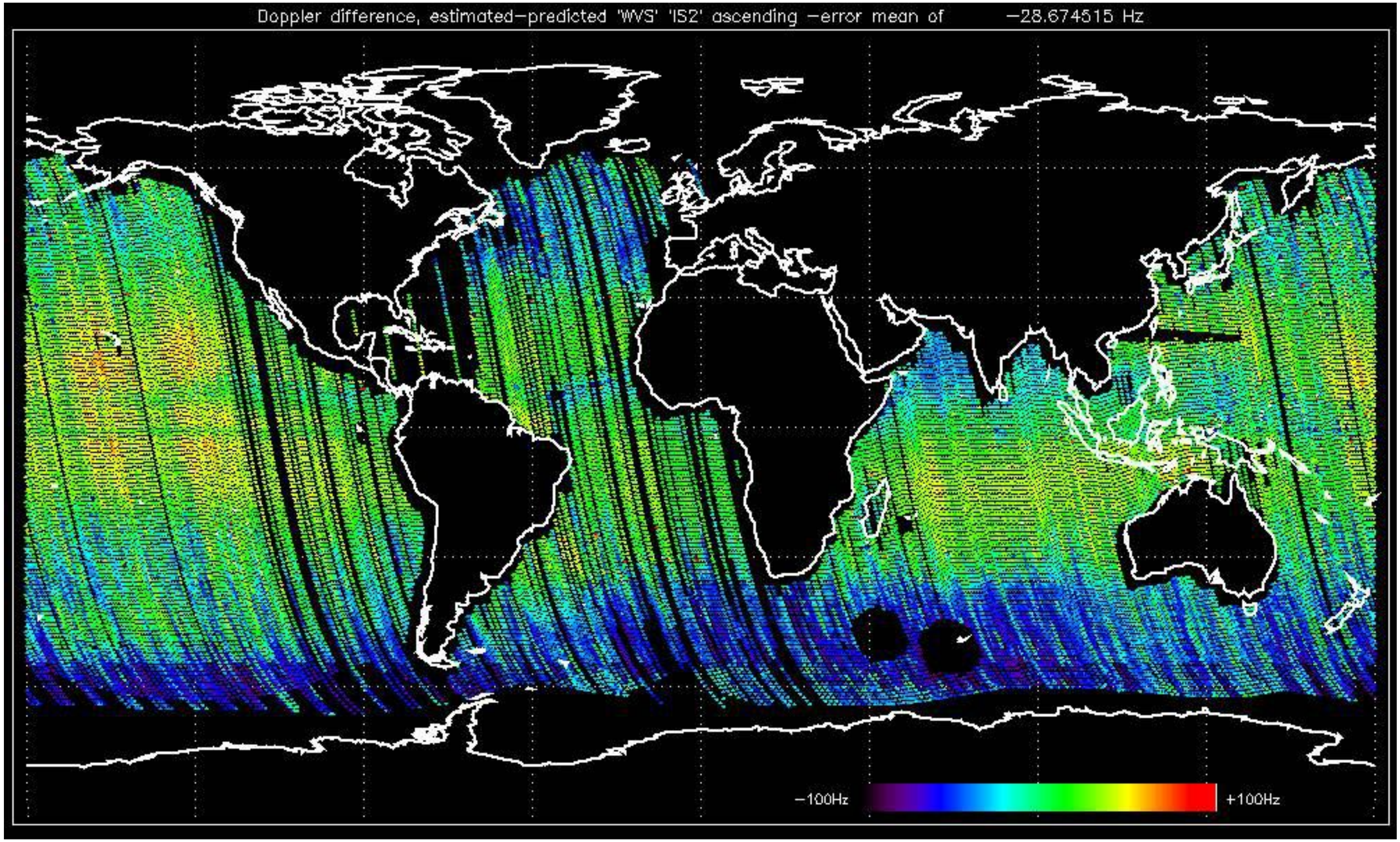

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

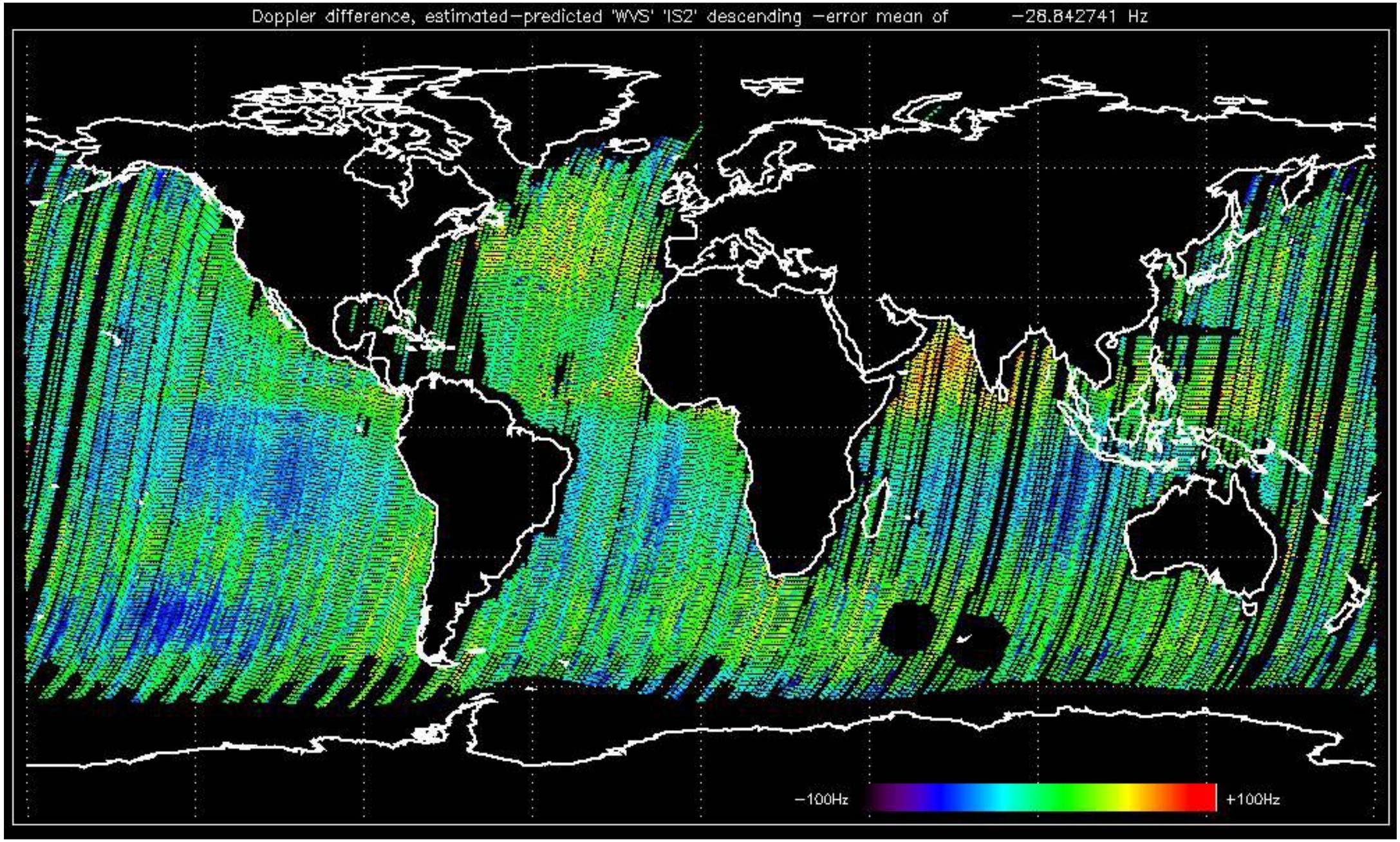

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
20−Aug
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.529819 Hz
−100Hz
+100Hz

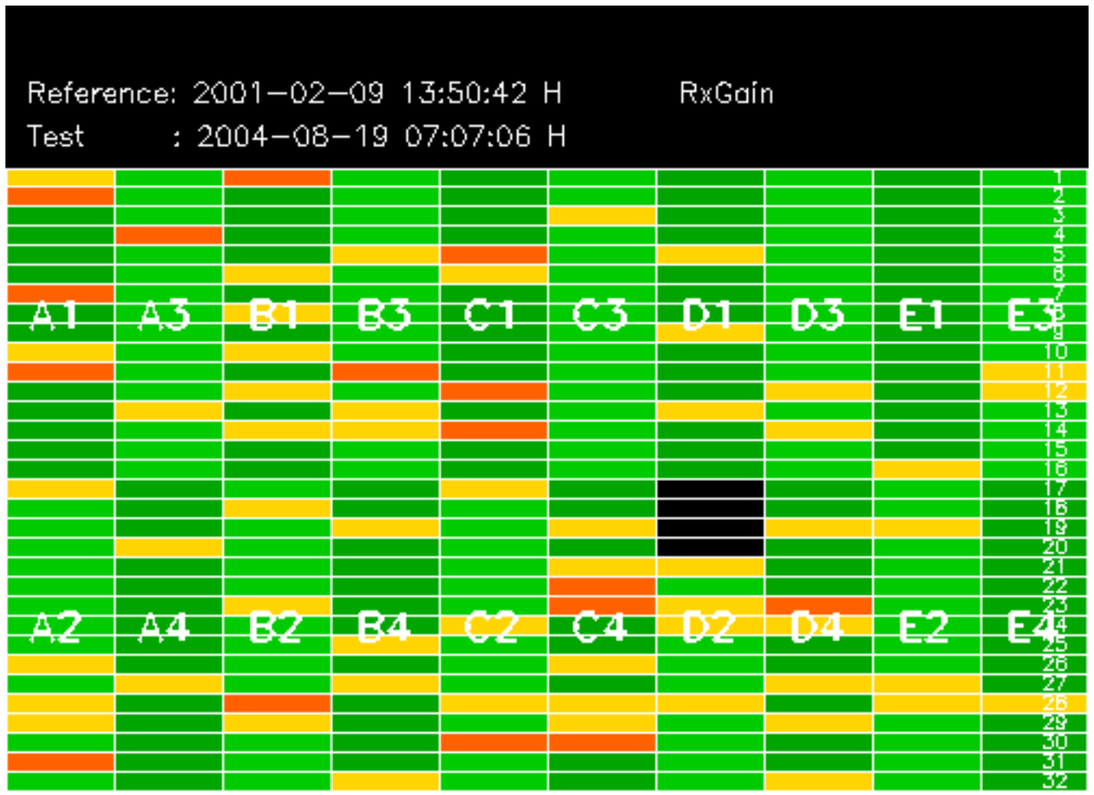

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −26.717343 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.674515 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −28.842741 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 : 2004-08-19 07:07:06 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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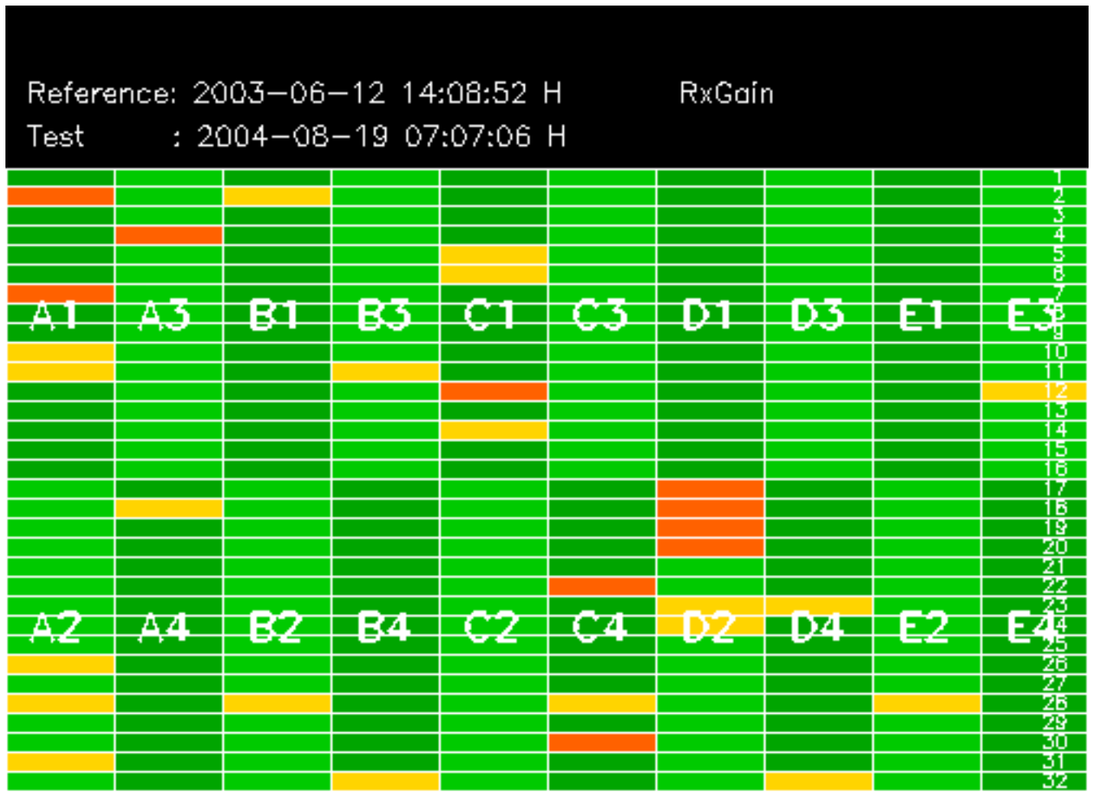
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-19 07:07:06 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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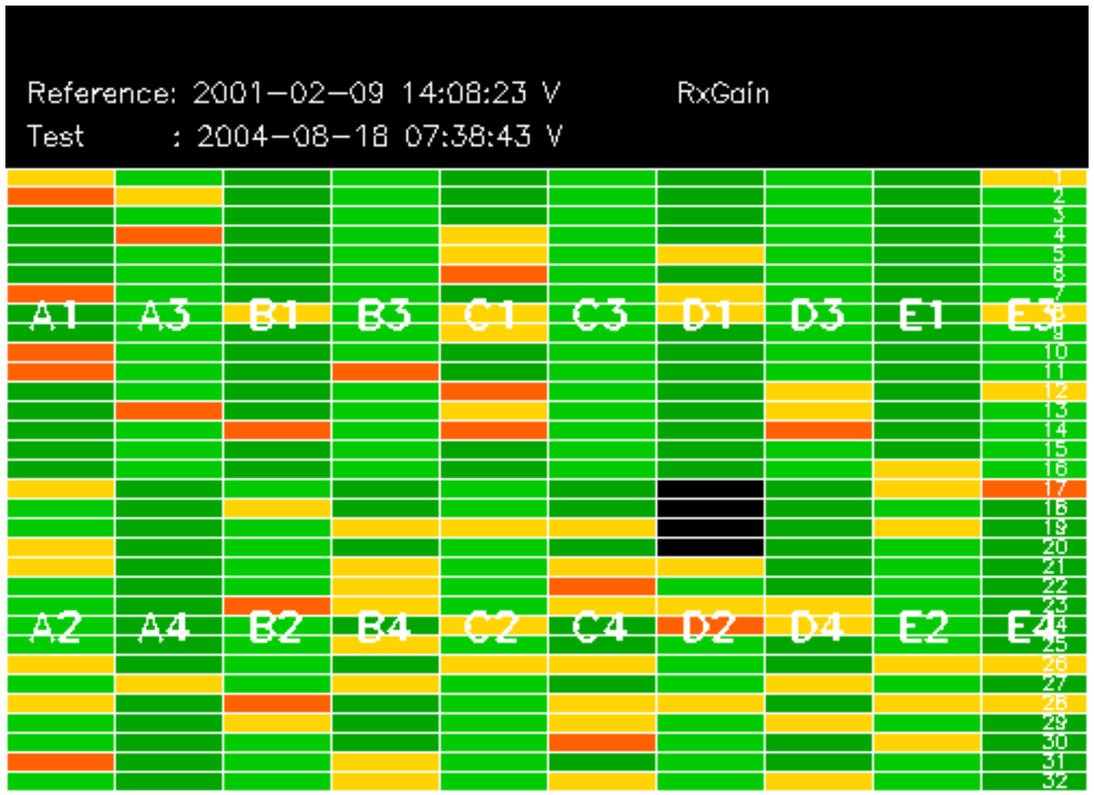
Reference: 2001-02-09 14:08:23 V
Test : 2004-08-18 07:38:43 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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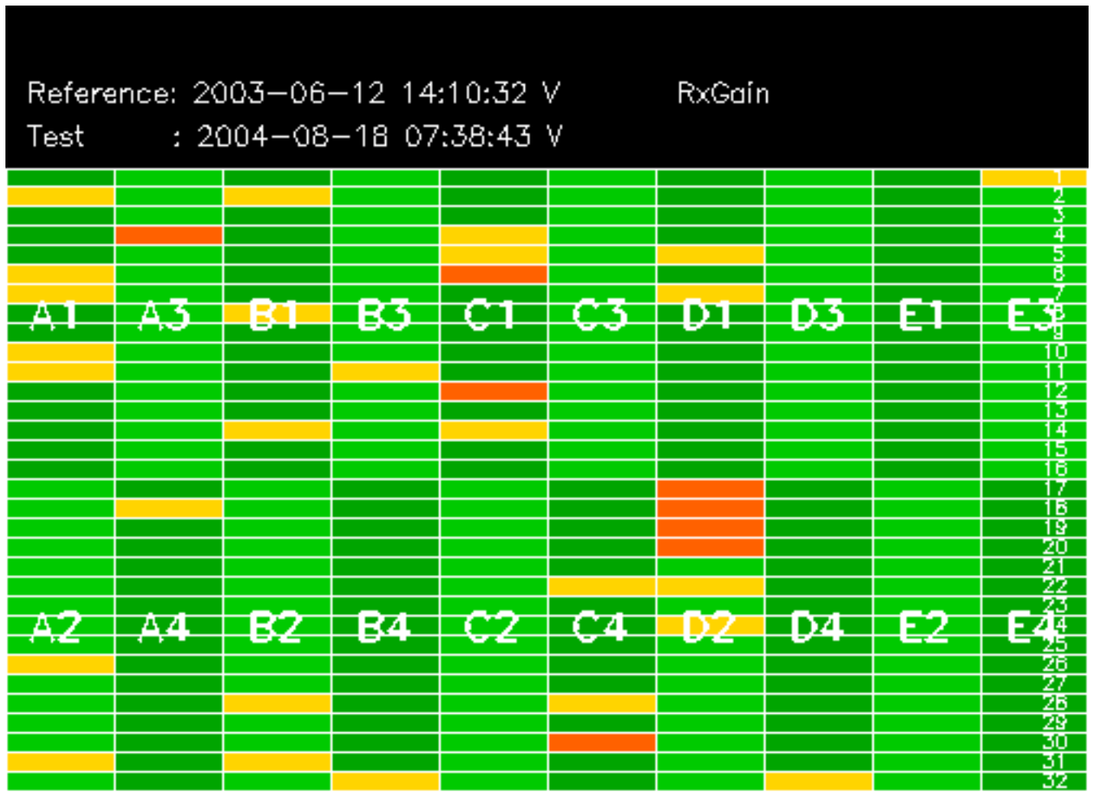
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-18 07:38:43 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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9
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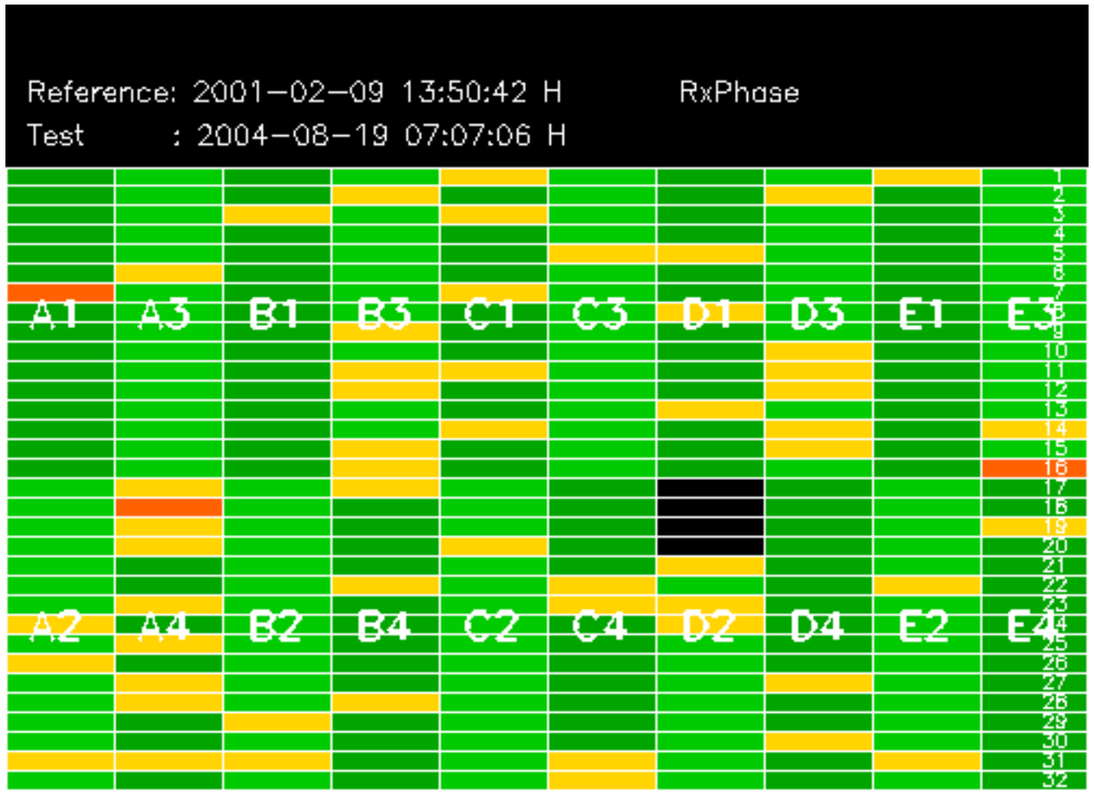
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-19 07:07:06 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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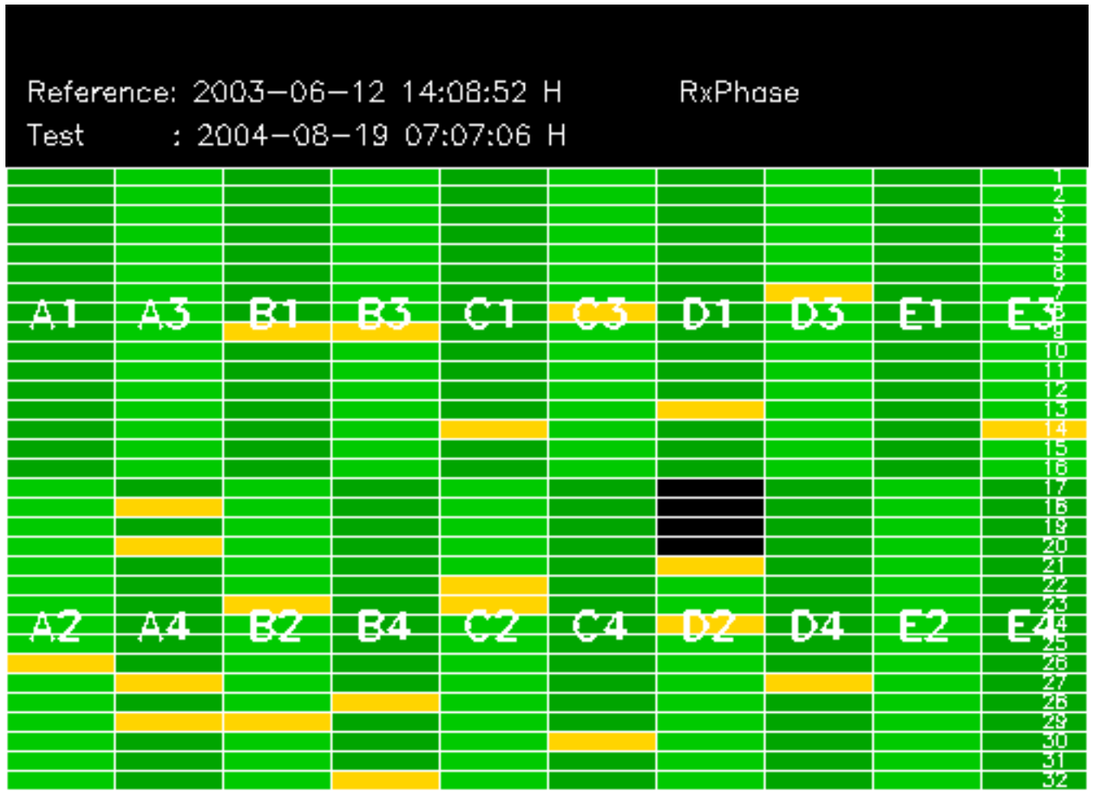
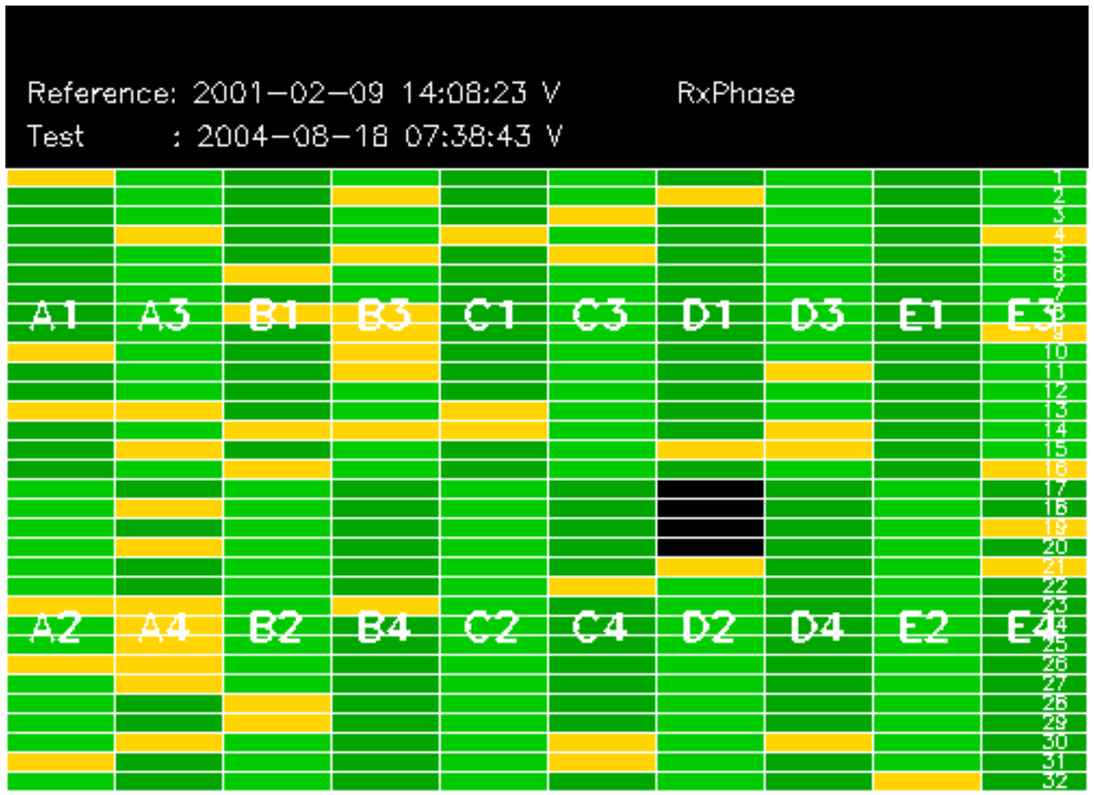
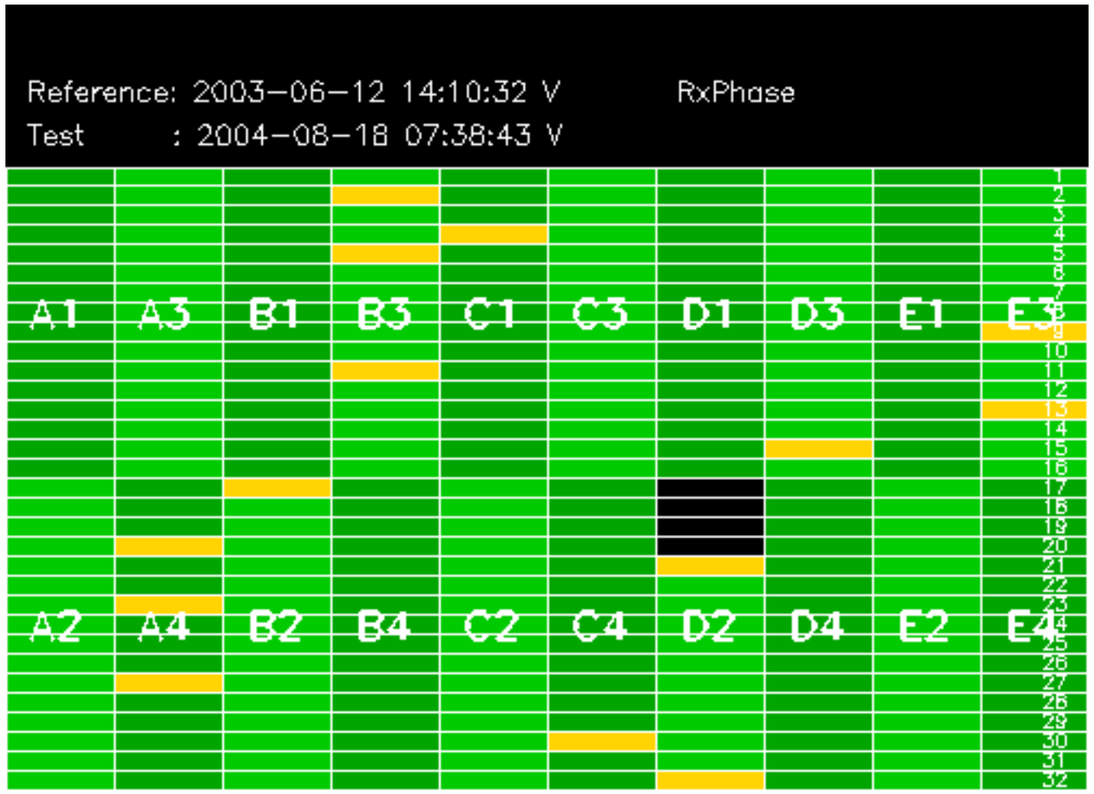
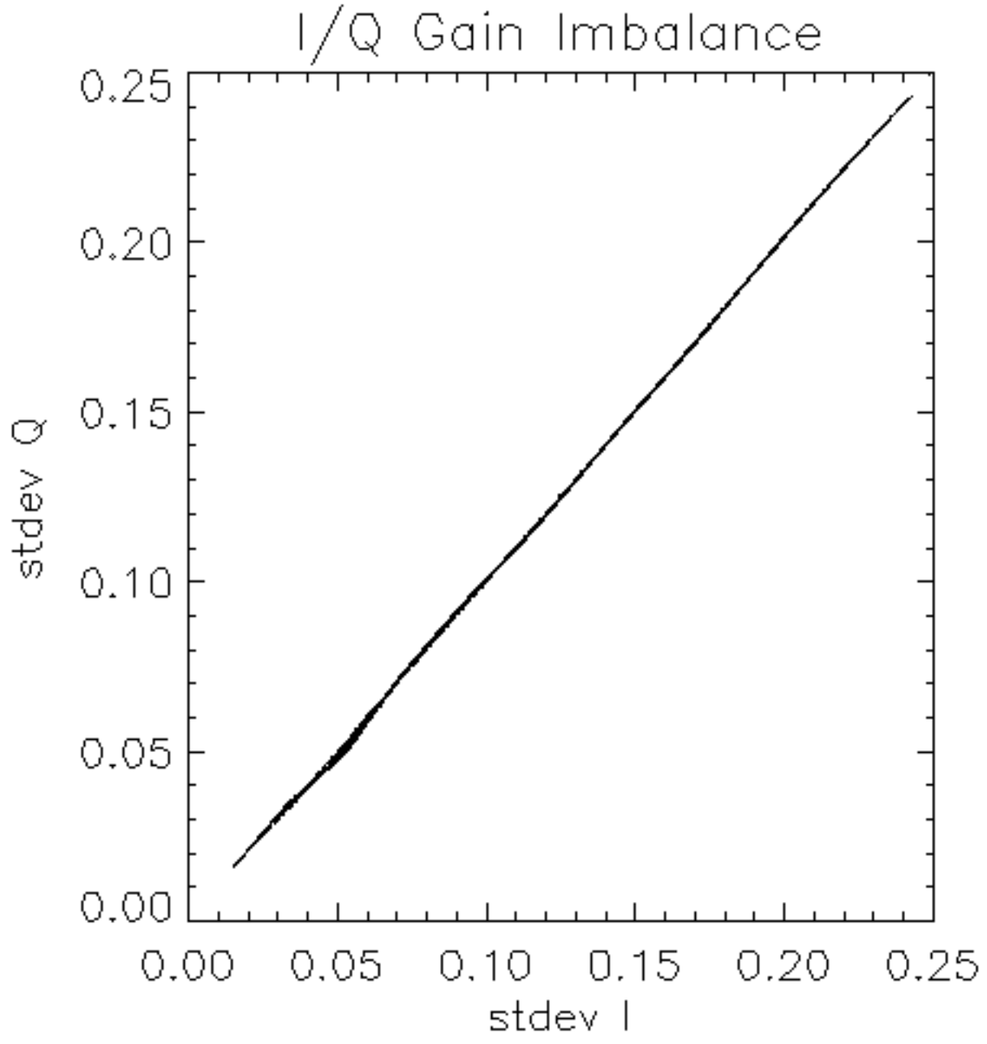
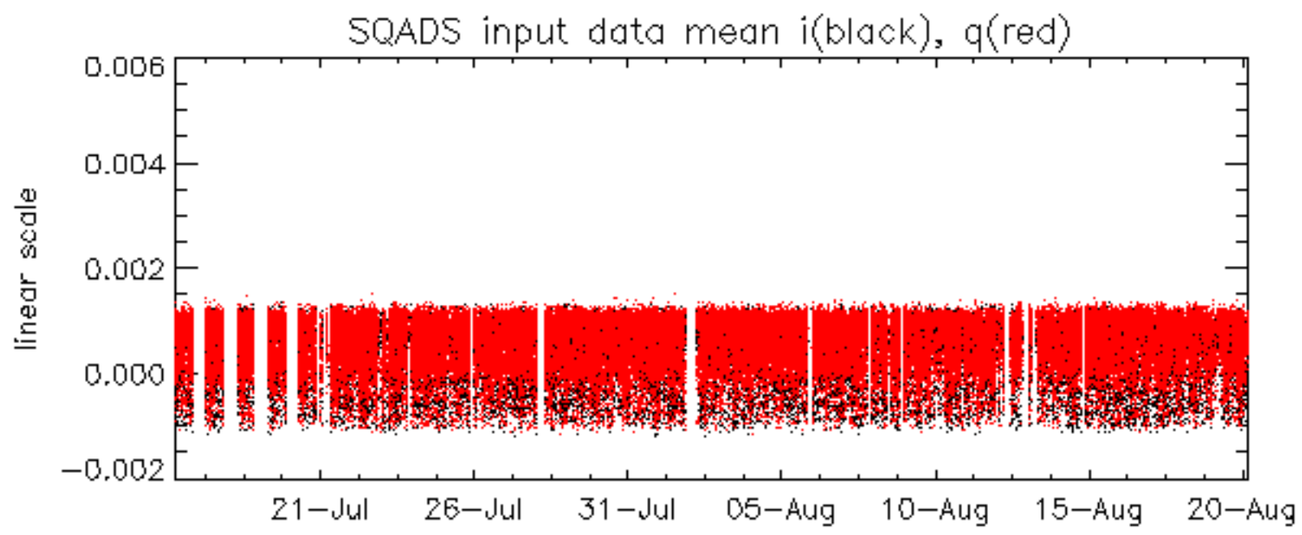
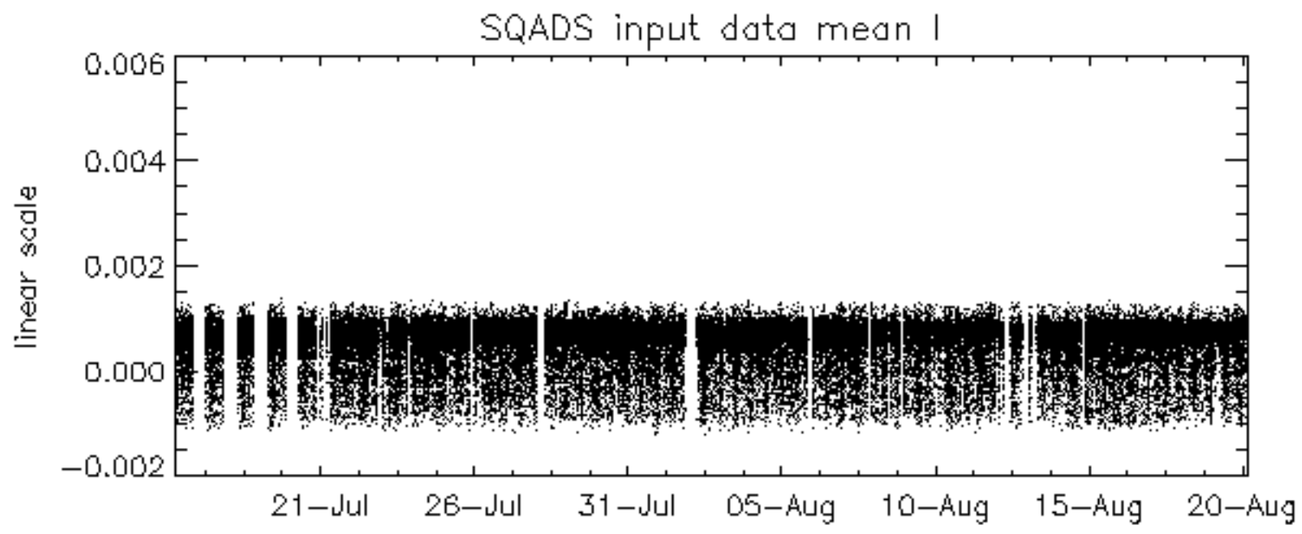

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-19 07:07:06 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

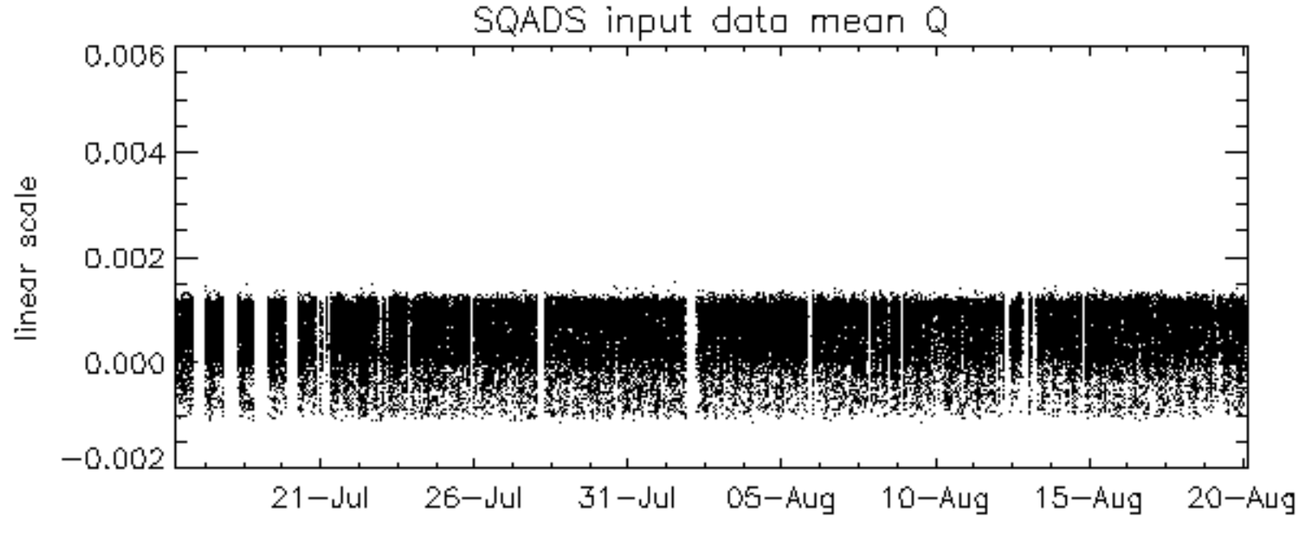

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-18 07:38:43 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

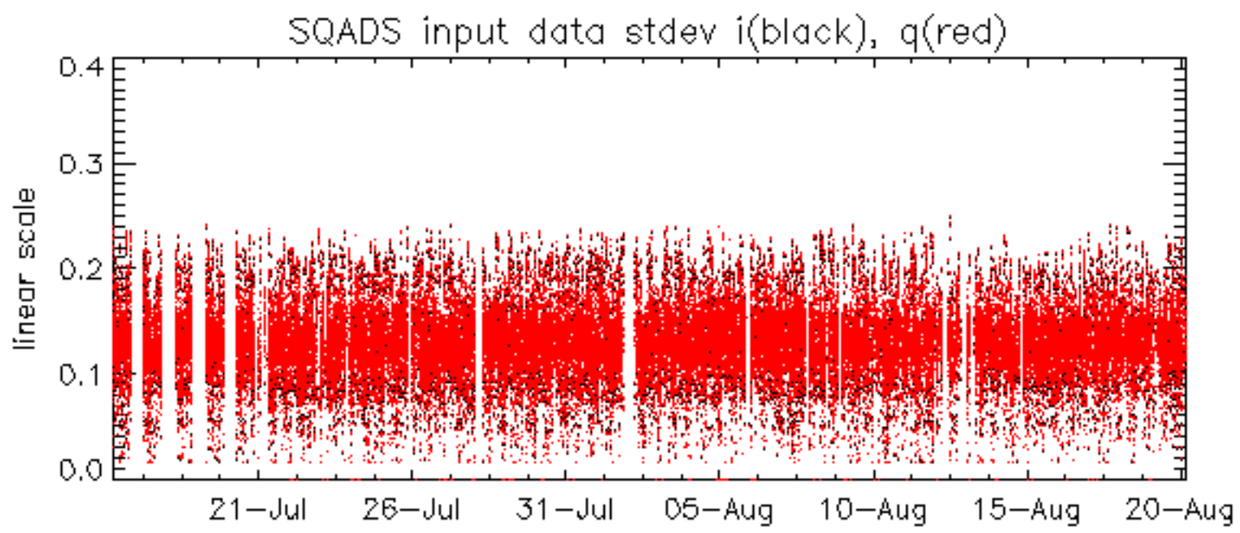

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-18 07:38:43 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

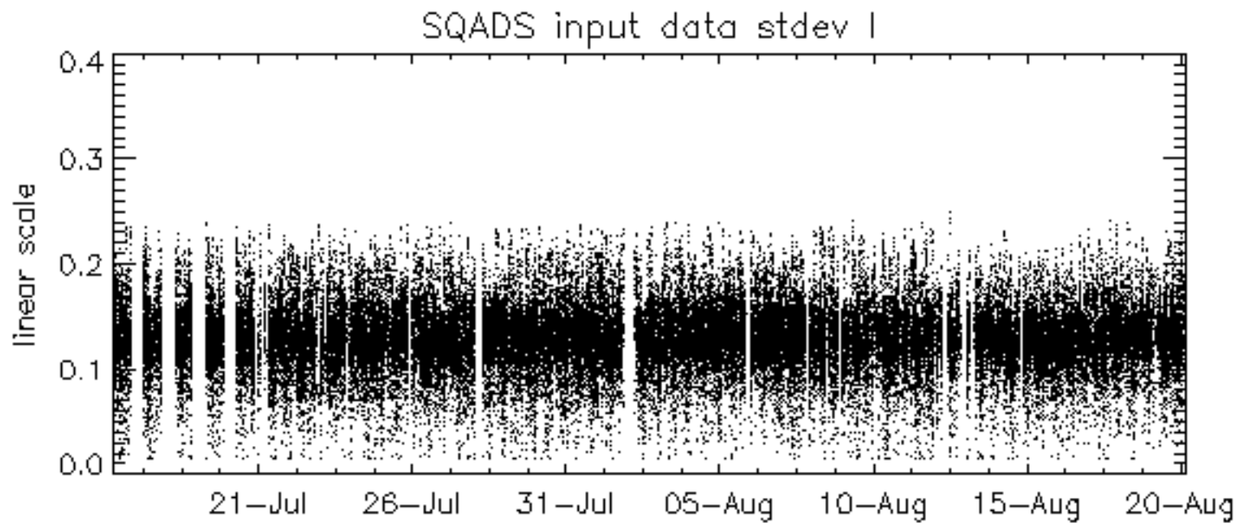

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

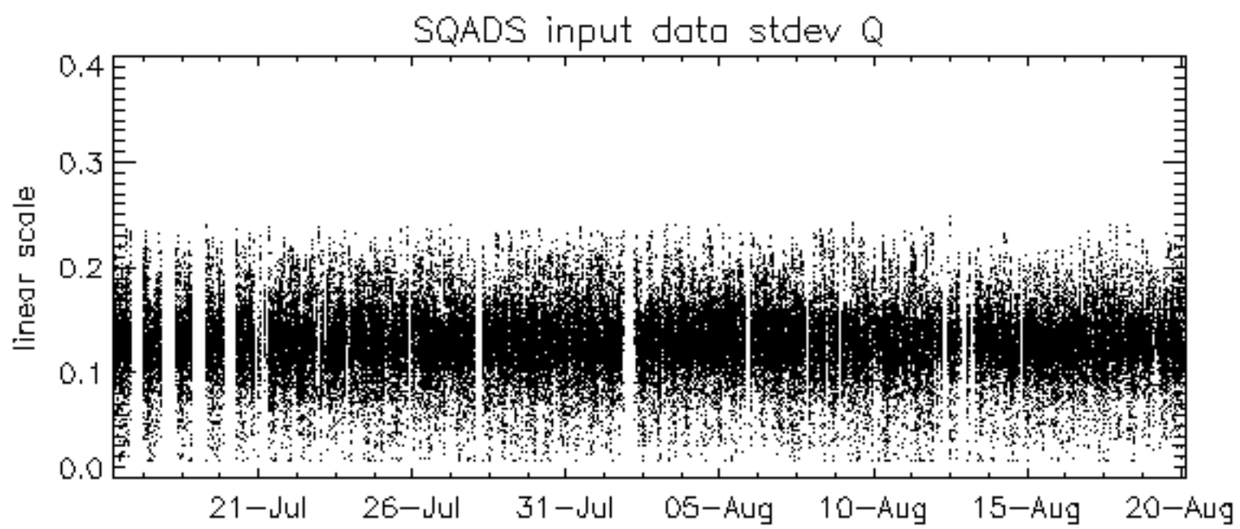

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug

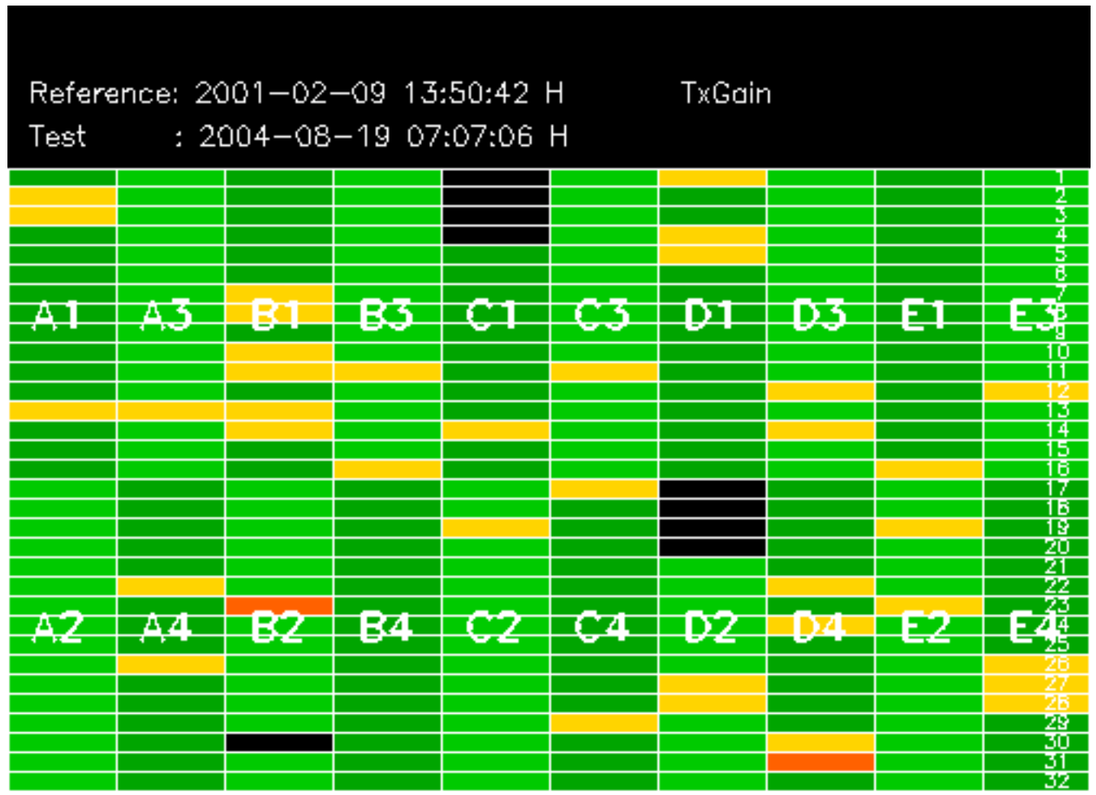

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug


SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-19 07:07:06 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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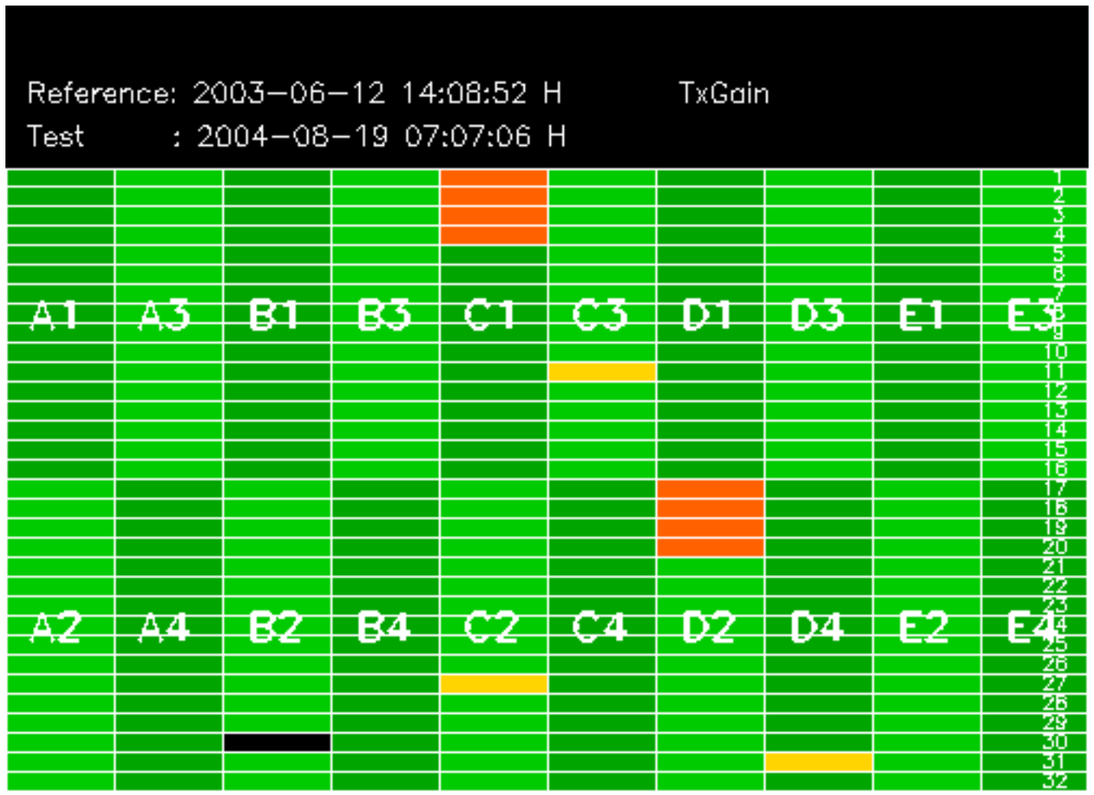
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-19 07:07:06 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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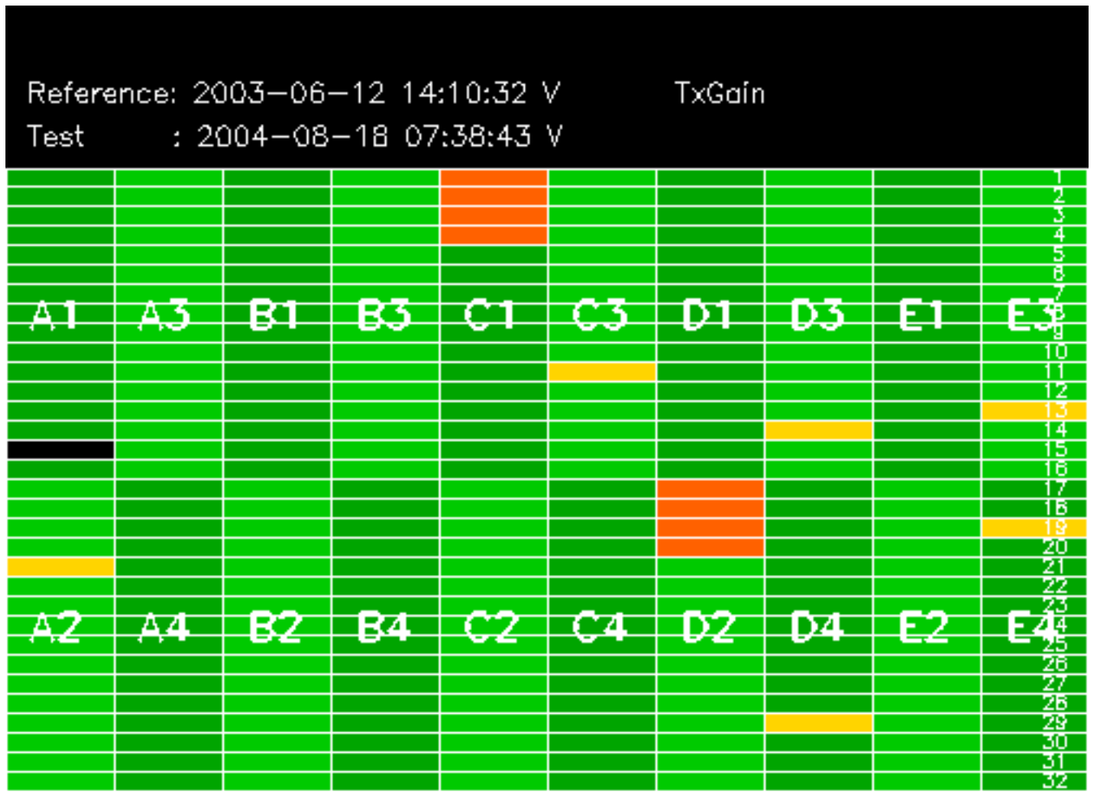
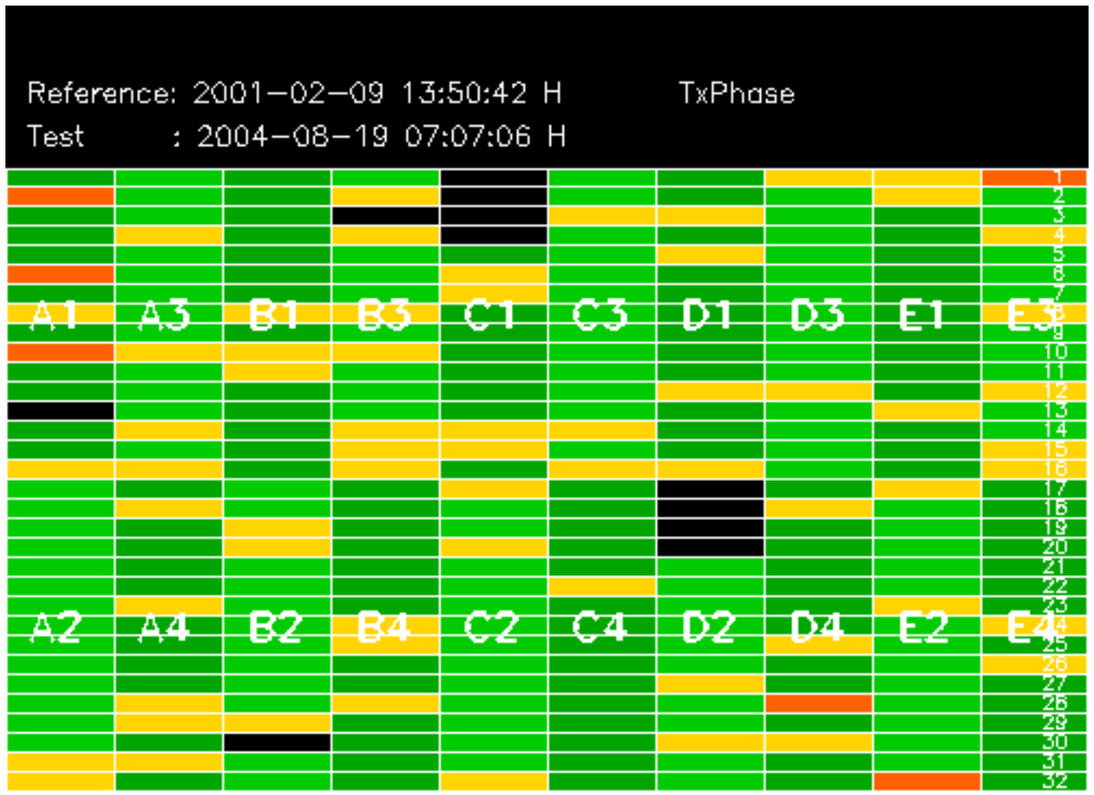
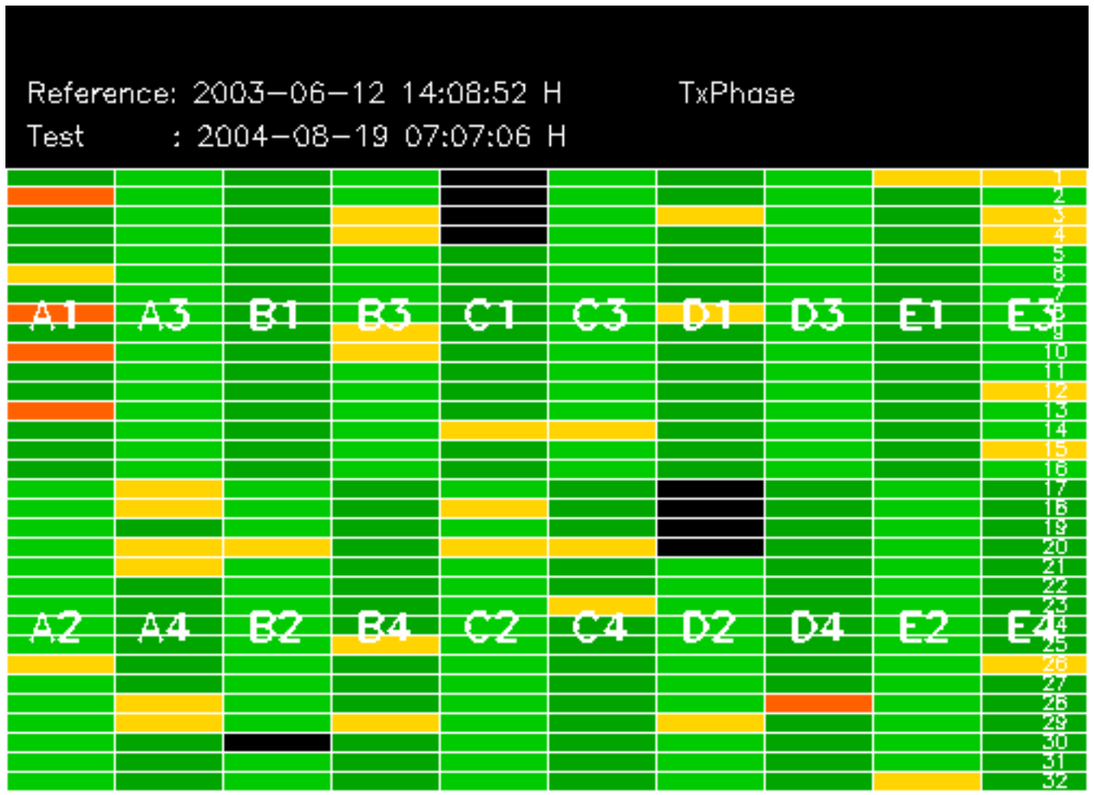
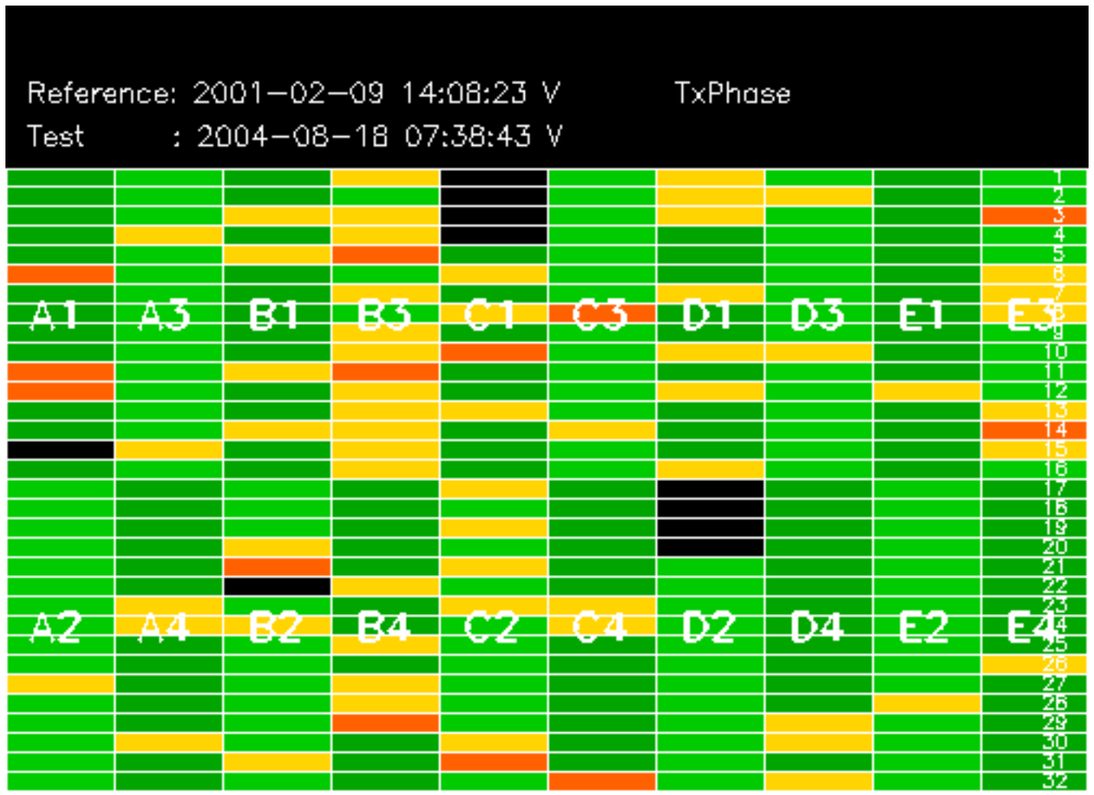
Reference: 2001-02-09 14:08:23 V
TxGain
Test : 2004-08-18 07:38:43 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-18 07:38:43 V
TxGain
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 : 2004-08-19 07:07:06 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
Test : 2004-08-19 07:07:06 H
TxPhase
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
Test : 2004-08-18 07:38:43 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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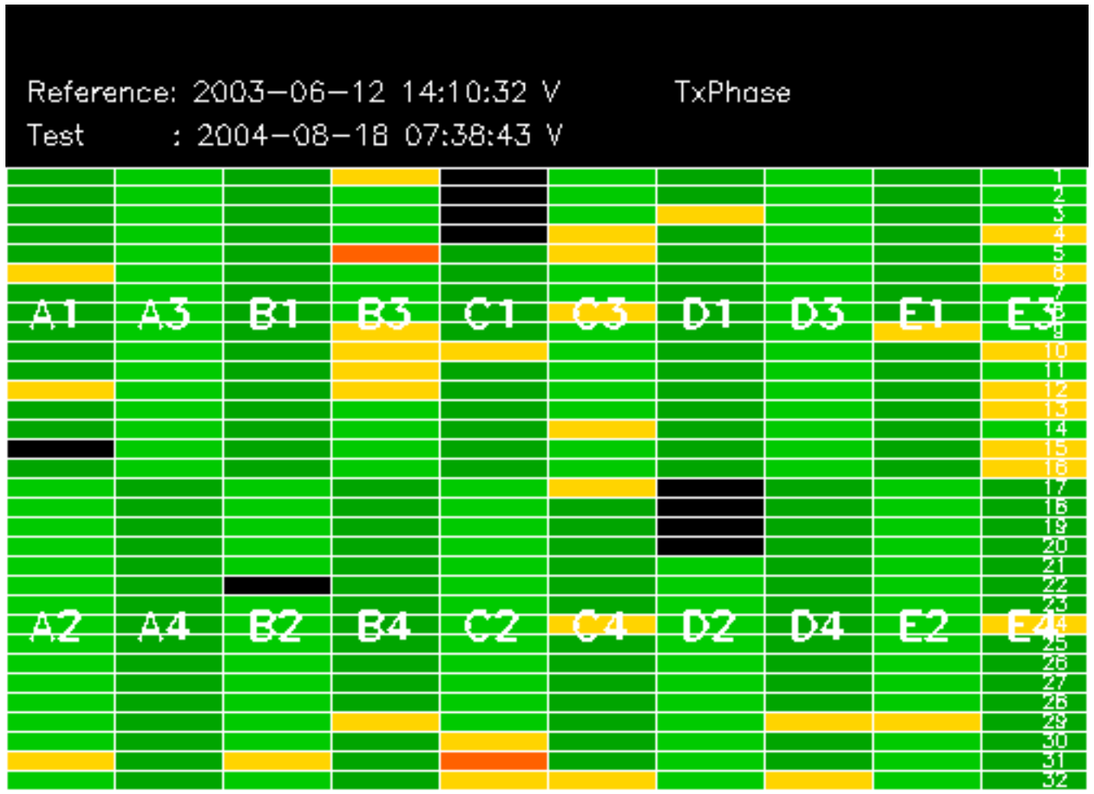
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-18 07:38:43 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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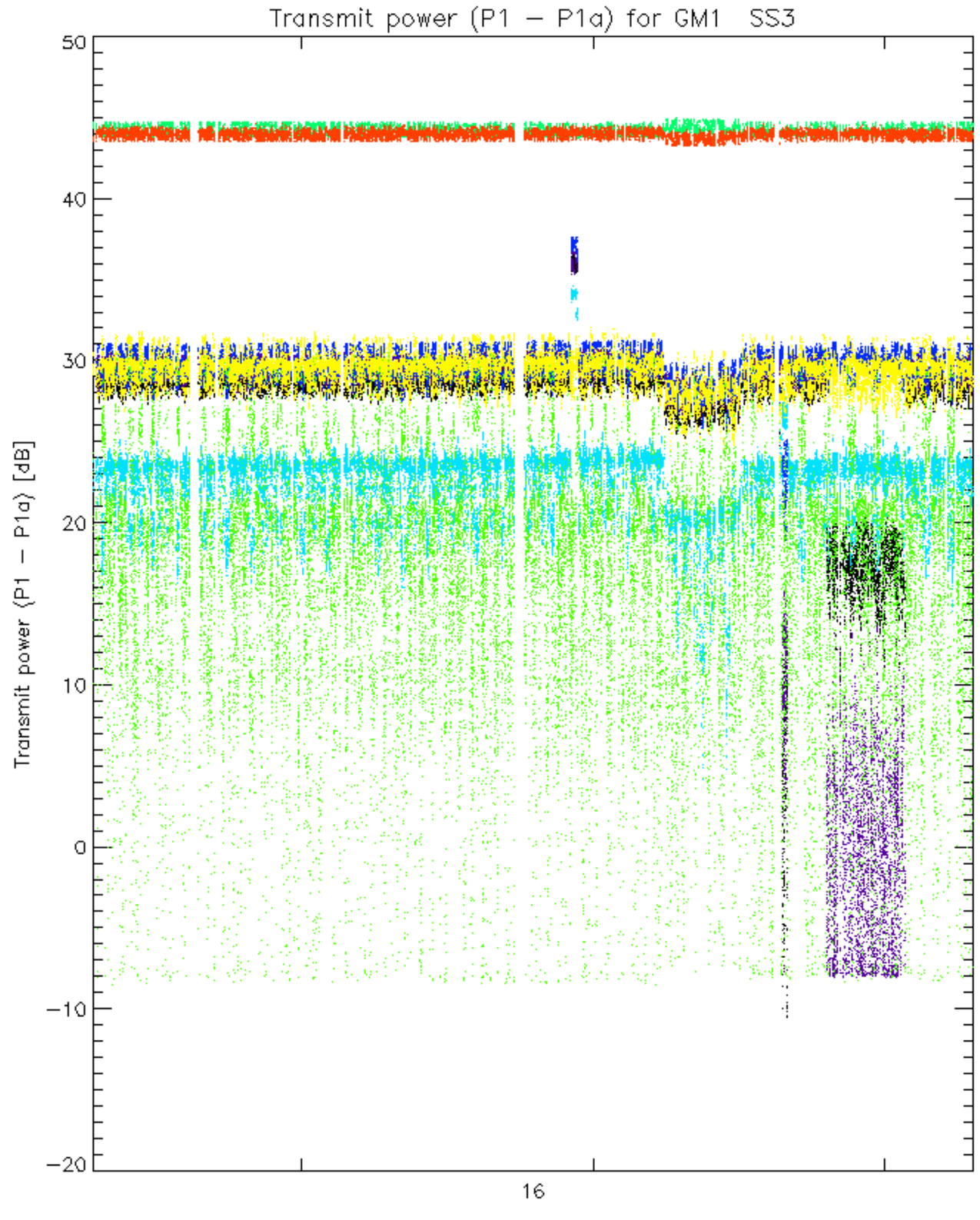
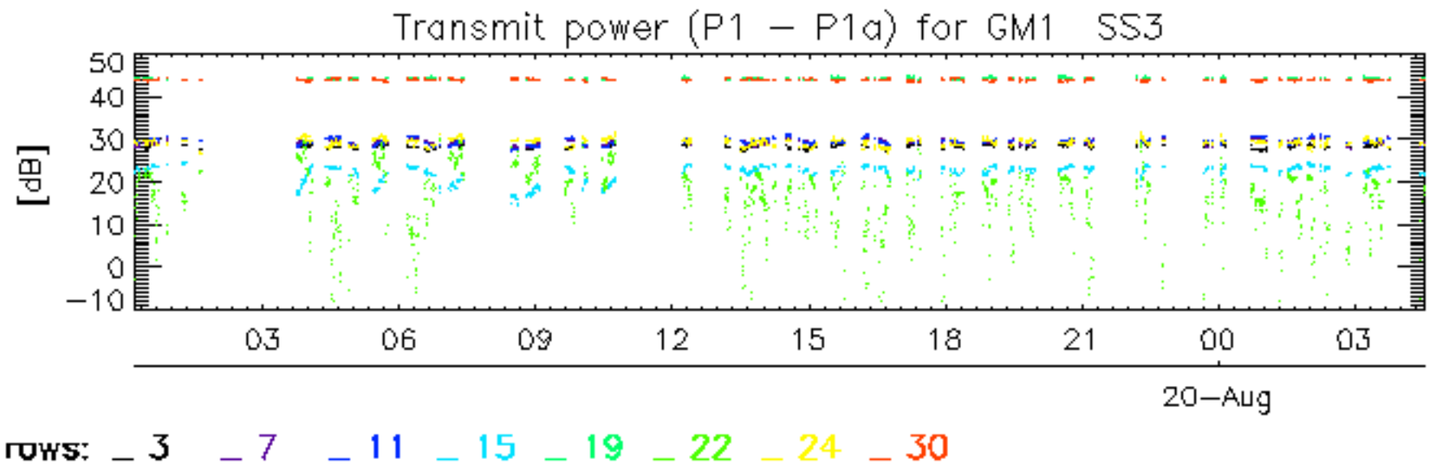
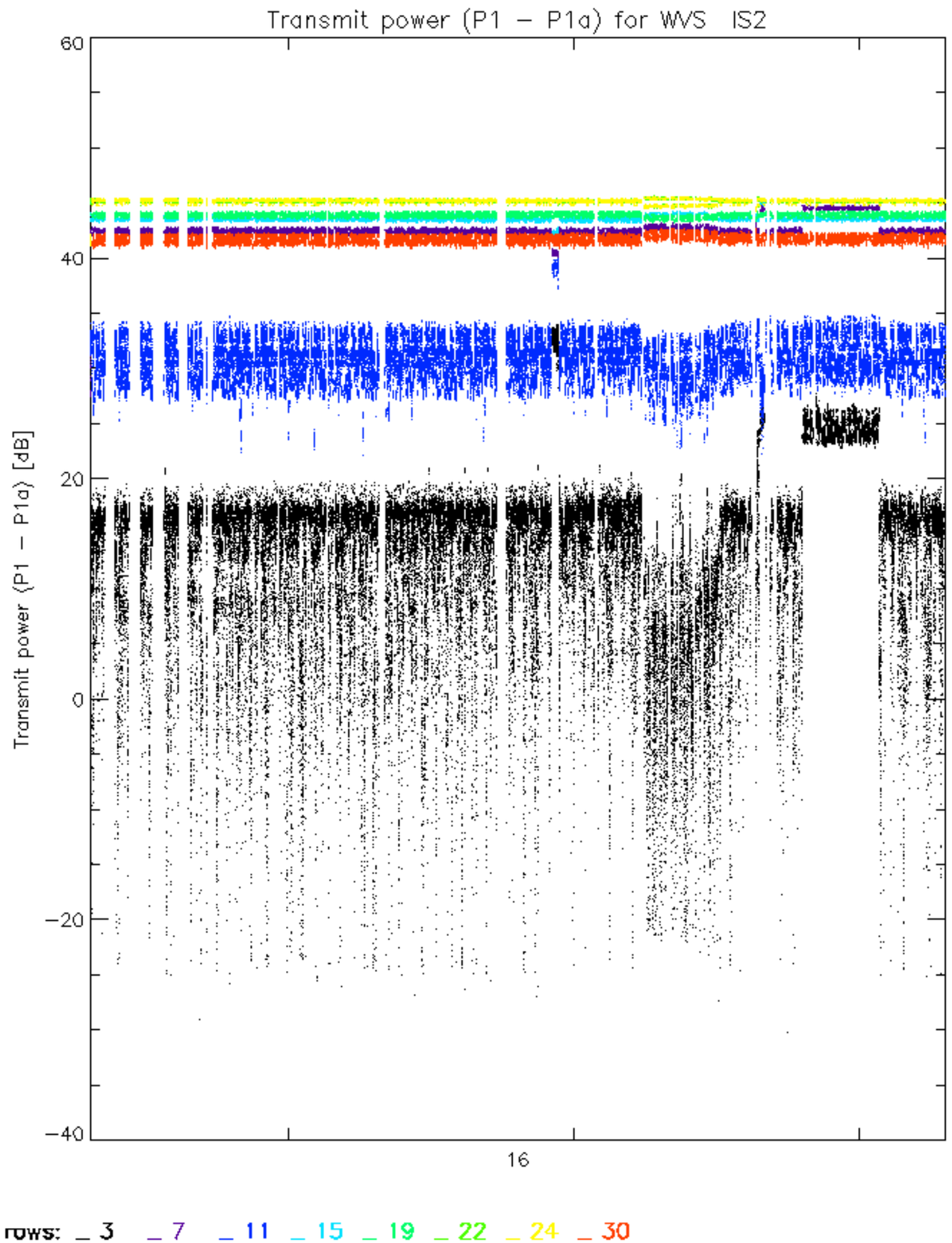
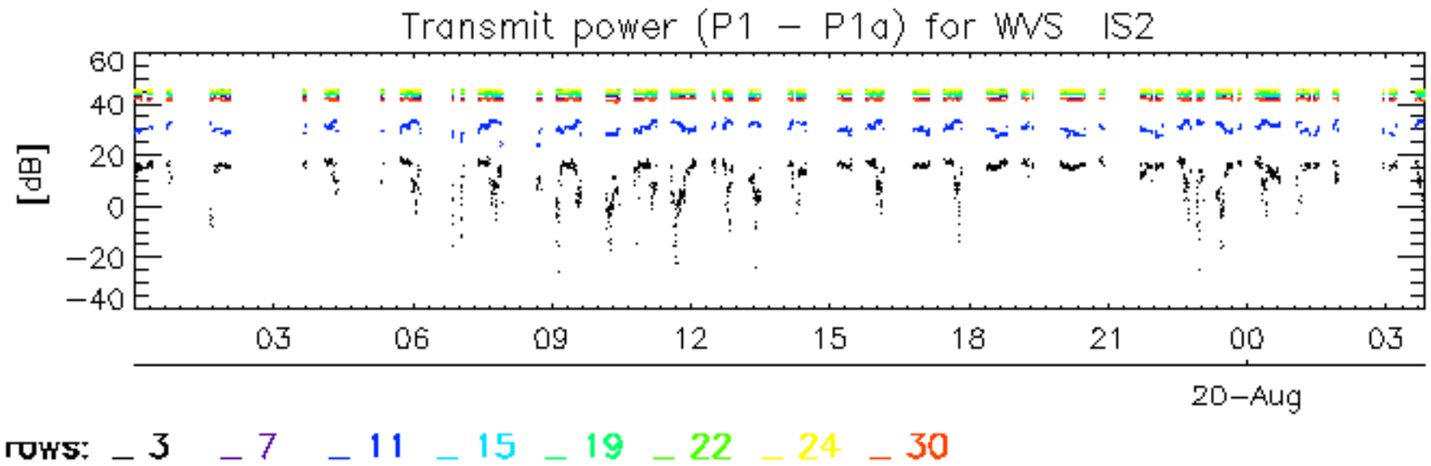

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
16
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
20–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
16
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
20–Aug
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.