PRELIMINARY REPORT OF 040722

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

last update on Thu Jul 22 12:58:48 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	20040717 060310
H	20040716 063447

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	-3.484445	0.006877	0.020695
7	P1	-3.327688	0.013735	0.022879
11	P1	-4.577709	0.034524	-0.090552
15	P1	-5.709431	0.056863	-0.072918
19	P1	-3.442656	0.004665	-0.006107
22	P1	-4.556935	0.011166	-0.003455

24	P1	-4.934626	0.018510	-0.039560
30	P1	-6.875431	0.024817	-0.040851
3	P1	-16.158890	0.156428	-0.163737
7	P1	-13.980899	0.091925	0.067995
11	P1	-19.977938	0.281281	-0.198518
15	P1	-11.785380	0.045792	0.009563
19	P1	-13.836666	0.033590	-0.012066
22	P1	-16.375494	0.371701	0.257190
24	P1	-14.619366	0.287270	0.106081
30	P1	-17.687258	0.402923	0.112526

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.366827	0.081031	0.111291
7	P2	-22.769487	0.124817	0.151583
11	P2	-15.518447	0.144216	0.147013
15	P2	-7.140717	0.093300	0.114466
19	P2	-9.565028	0.160897	0.056234
22	P2	-17.467031	0.106230	0.163413
24	P2	-20.793188	0.085246	0.107292
30	P2	-19.392910	0.077407	0.066419

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143332	0.001913	0.002640
7	P3	-8.143334	0.001913	0.002673
11	P3	-8.143330	0.001913	0.002657
15	P3	-8.143331	0.001913	0.002638
19	P3	-8.143328	0.001913	0.002613
22	P3	-8.143318	0.001913	0.002602
24	P3	-8.143313	0.001913	0.002588
30	P3	-8.143254	0.001910	0.002135

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	-3.059113	0.137218	0.320834
7	P1	-2.874403	0.135007	-0.230204
11	P1	-3.828897	0.031293	-0.045434
15	P1	-4.123541	0.908567	0.745381
19	P1	-3.379410	0.048939	-0.100298
22	P1	-5.718442	0.047736	0.079974
24	P1	-4.009144	0.079807	0.218009
30	P1	-6.131476	0.078065	-0.110077
3	P1	-10.917267	0.420794	0.420900
7	P1	-9.864171	0.315445	-0.365323
11	P1	-11.865465	0.238592	-0.335512
15	P1	-11.838307	0.303523	0.201542
19	P1	-15.110002	0.769202	-0.607500
22	P1	-21.694151	7.260696	-1.571803
24	P1	-17.404053	0.322533	-0.164862
30	P1	-21.377668	4.249238	1.610139

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.083858	0.074799	0.196403
7	P2	-22.857649	0.240389	0.185131
11	P2	-10.953749	0.232396	-0.045325
15	P2	-4.959925	0.042546	0.054222
19	P2	-6.887486	0.046890	0.148540
22	P2	-7.586639	0.092951	0.168140
24	P2	-11.027831	0.156222	0.012417
30	P2	-22.295704	0.138561	0.150836

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.982129	0.003590	0.004322
7	P3	-7.982211	0.003582	0.003849
11	P3	-7.982113	0.003592	0.003960
15	P3	-7.982133	0.003600	0.004120
19	P3	-7.982081	0.003599	0.004091
22	P3	-7.982140	0.003581	0.004221
24	P3	-7.982054	0.003621	0.004014
30	P3	-7.982165	0.003592	0.003872

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	0.000497450
	stdev	2.11514e-07
MEAN Q	mean	0.000542451
	stdev	2.40316e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129744
	stdev	0.00105224
STDEV Q	mean	0.129997
	stdev	0.00106446

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

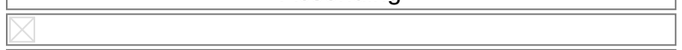
Descending

6.3 - Doppler evolution versus ANX for WVS

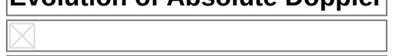
Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

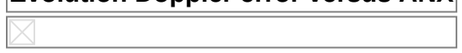
Acsending

Descending

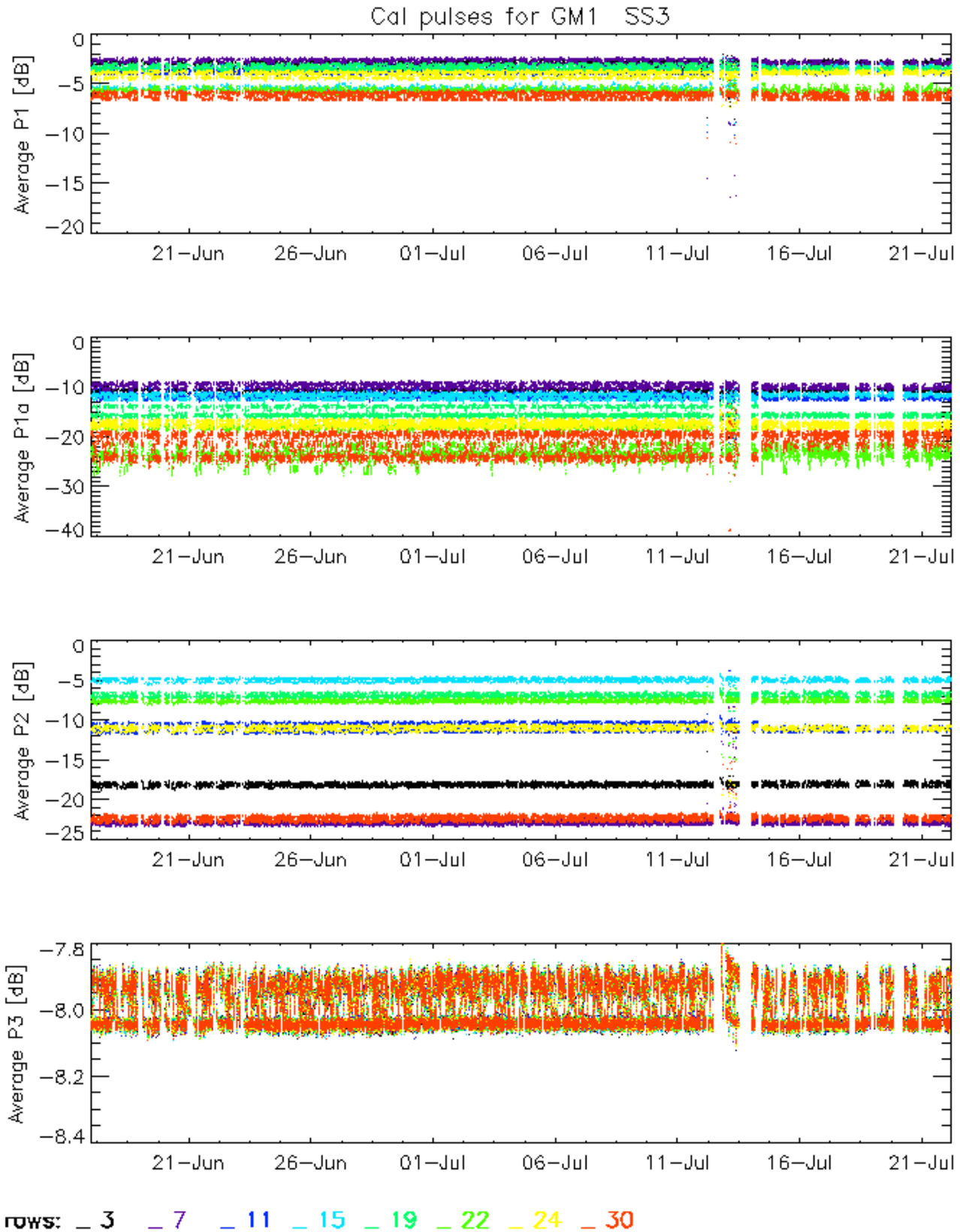
6.5 - Absolute Doppler for GM1

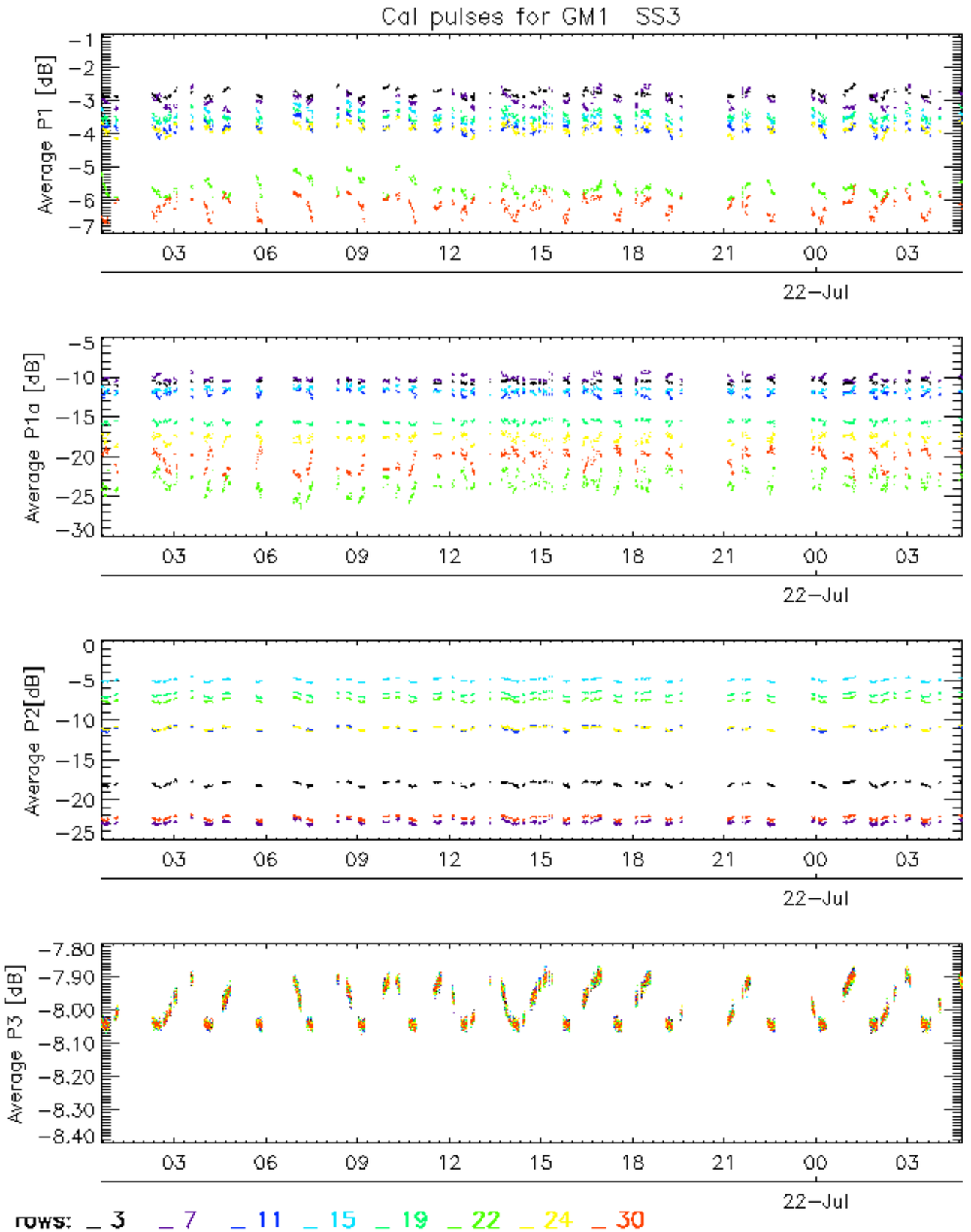
Evolution of Absolute Doppler

Acsending

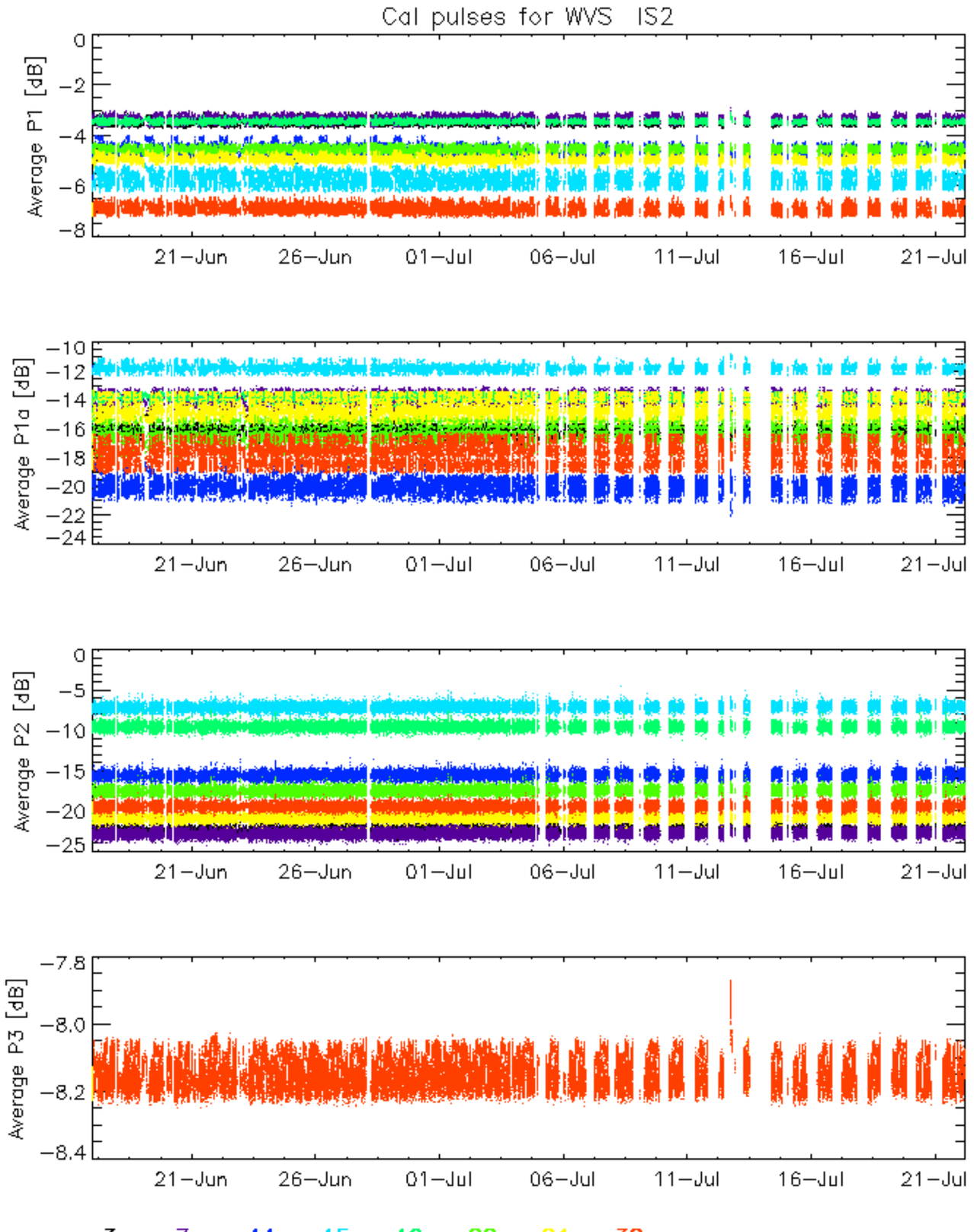
Descending

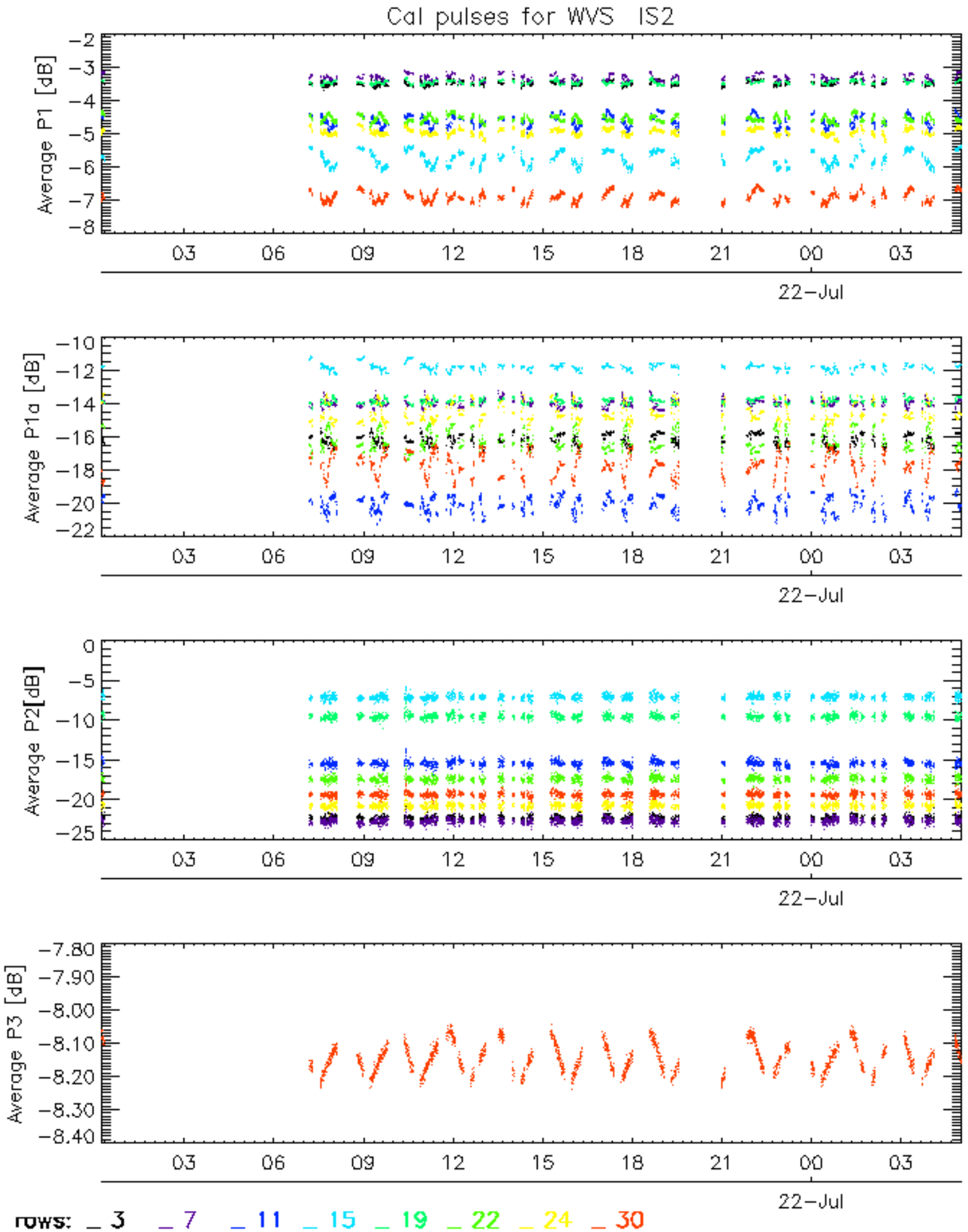
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX



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

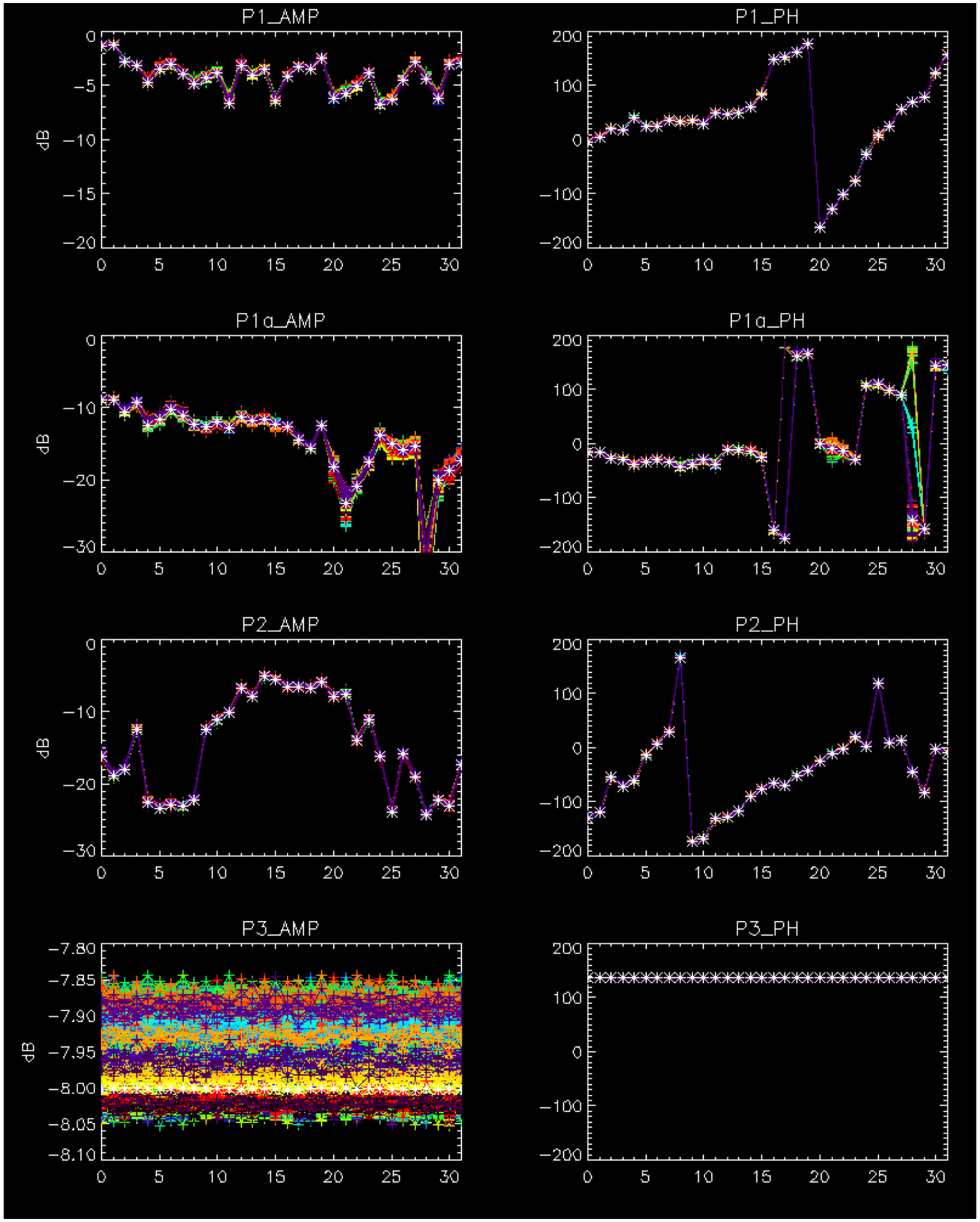

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
22−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
22−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
22−Jul
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

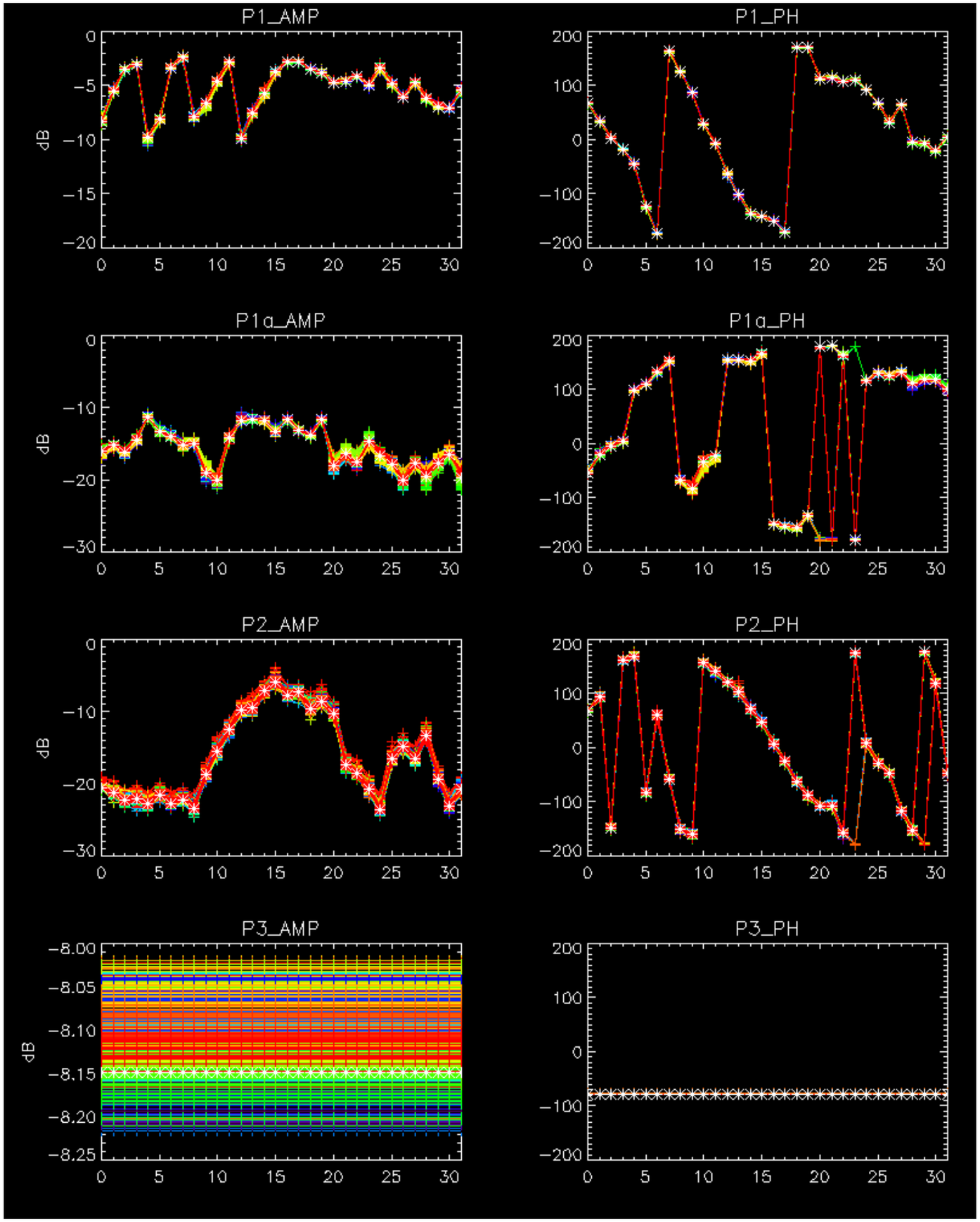

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
22−Jul
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

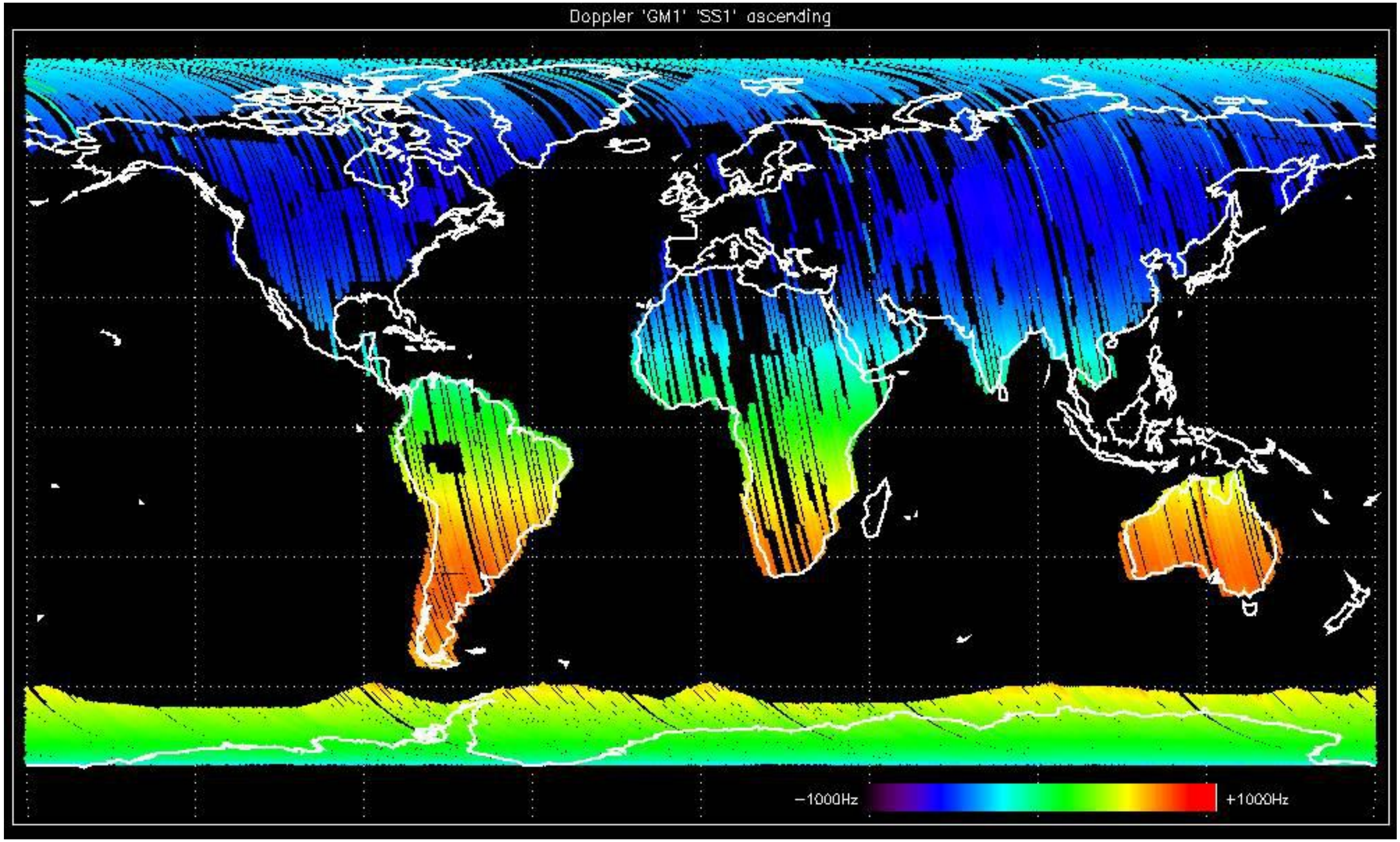
No anomalies observed.

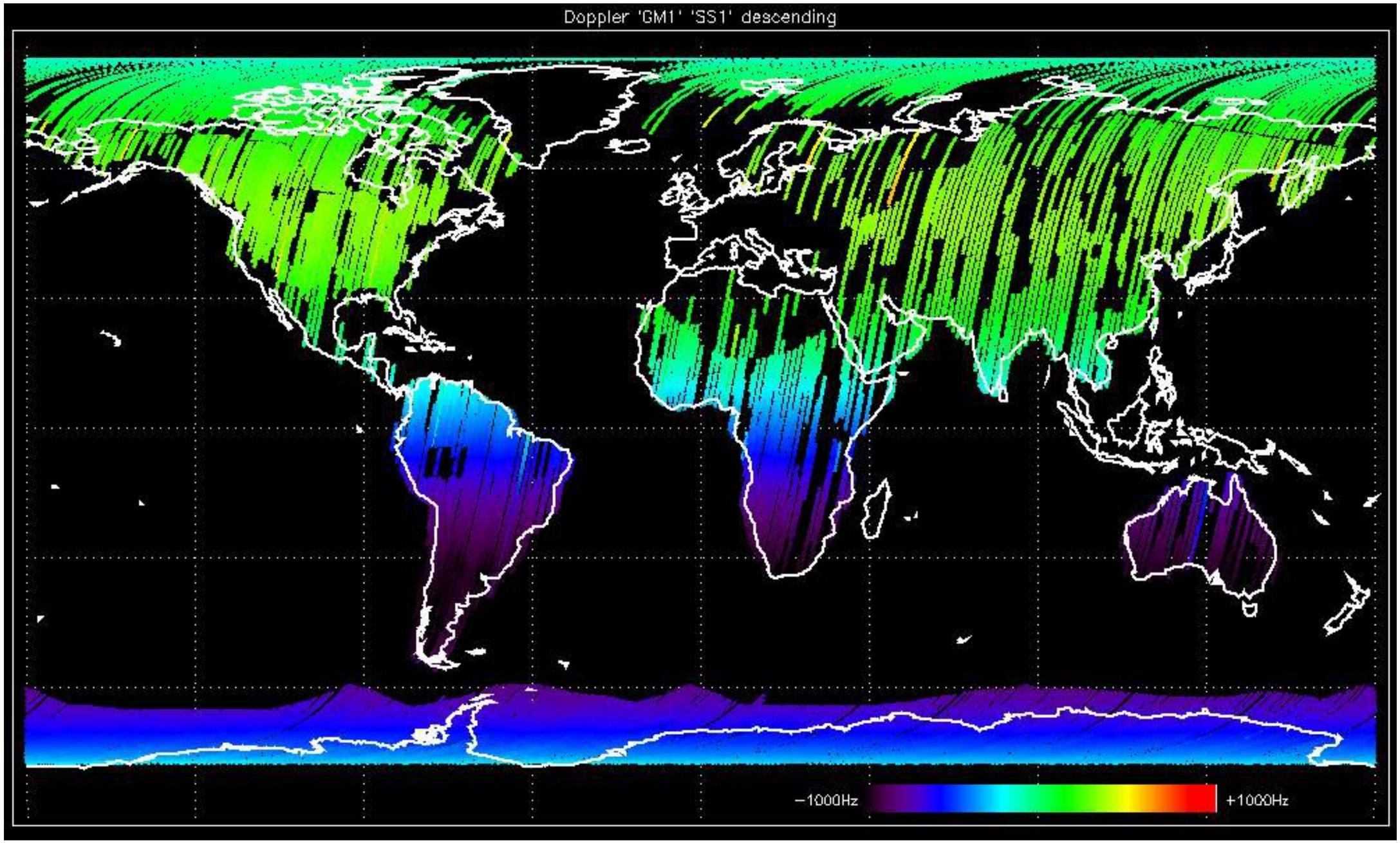

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95
−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

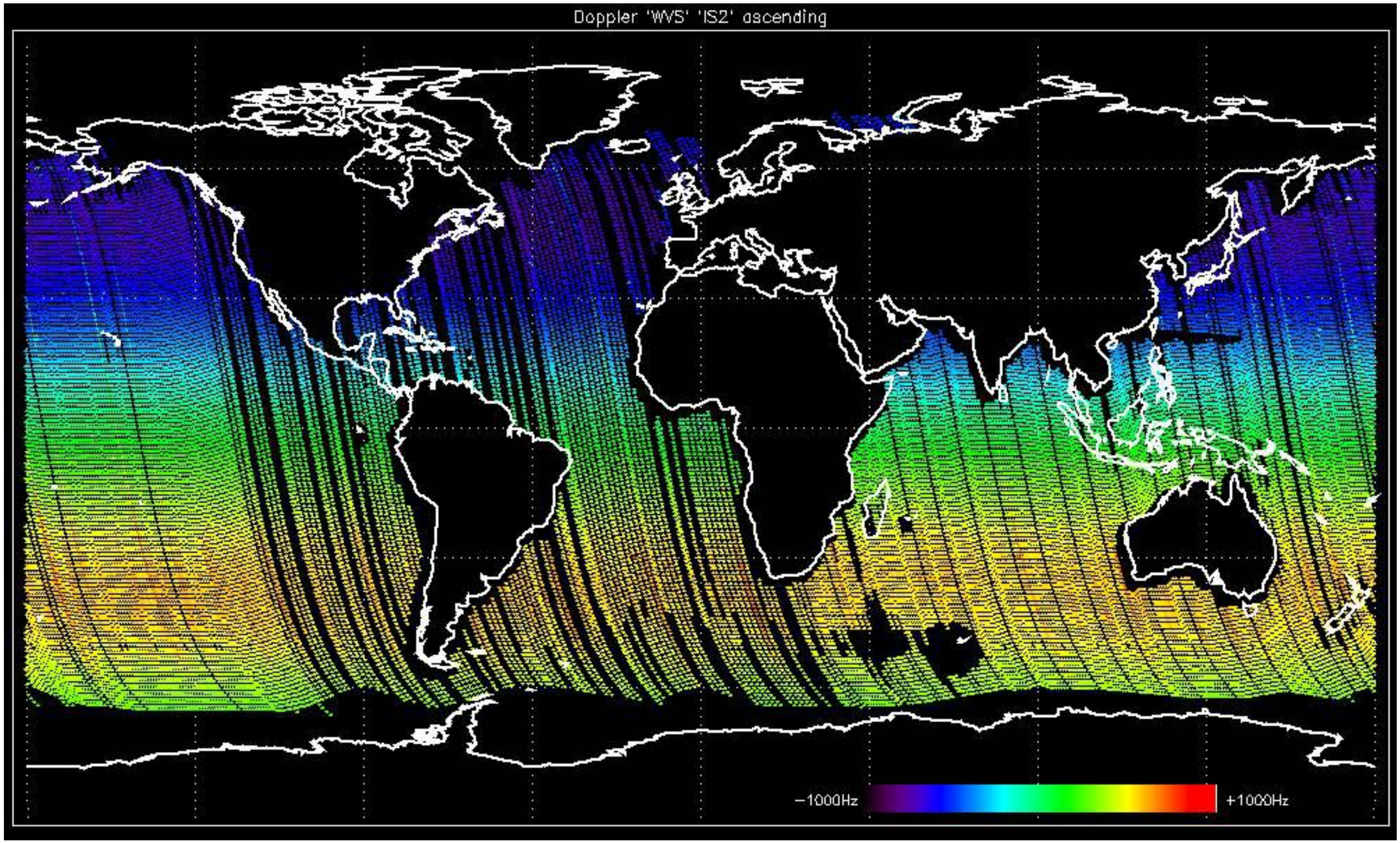

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

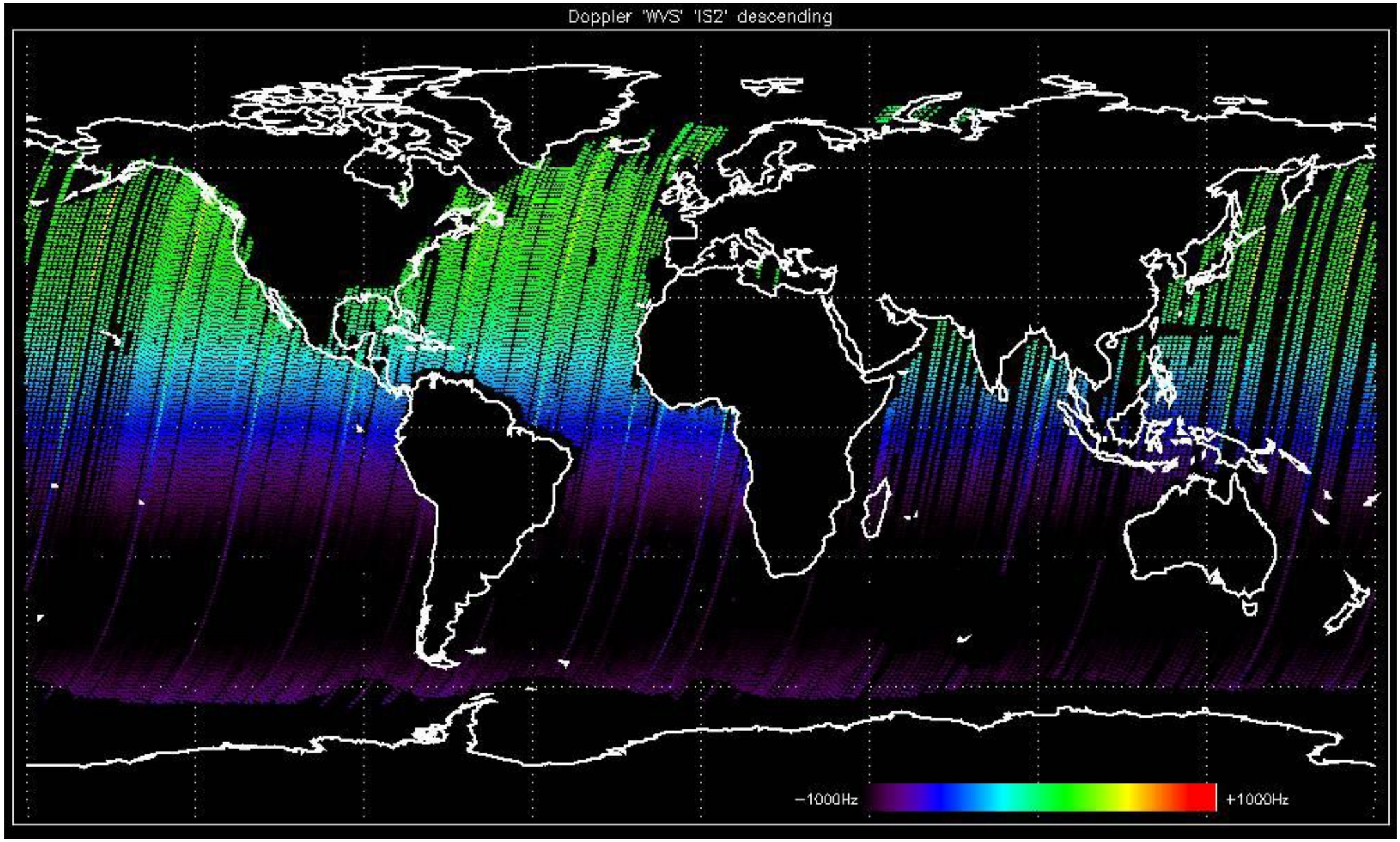
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

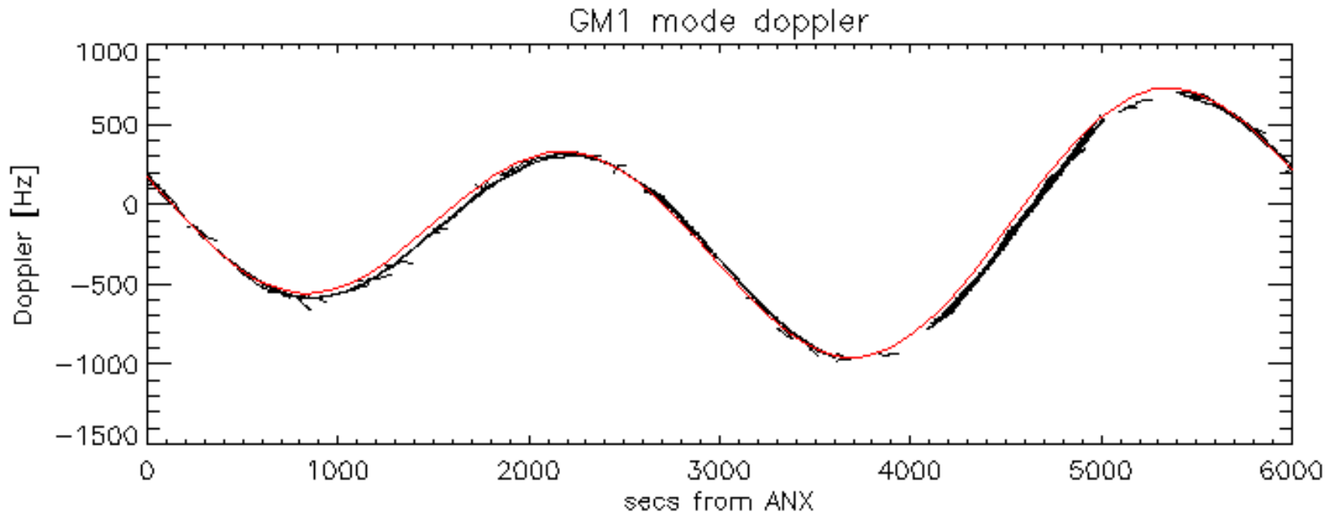
Preliminary report.The data is not yet controled

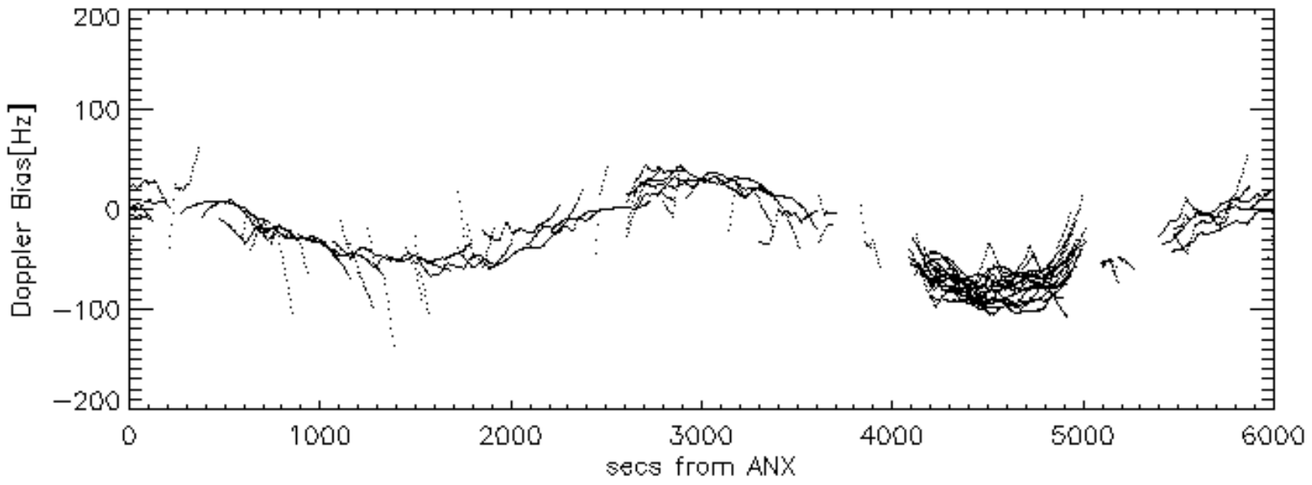

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

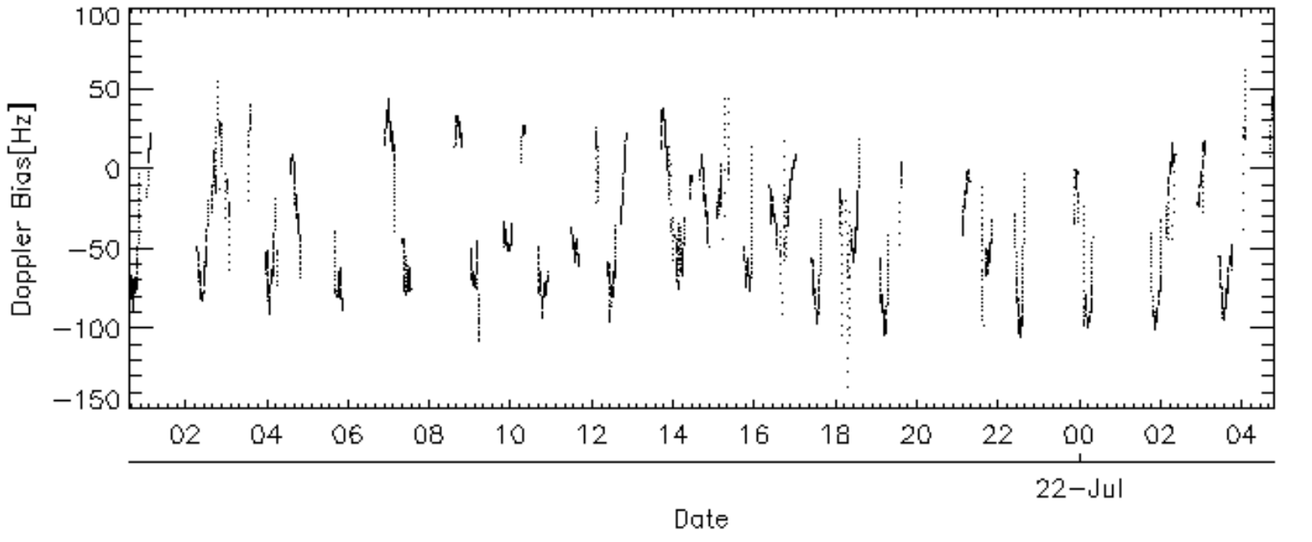

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

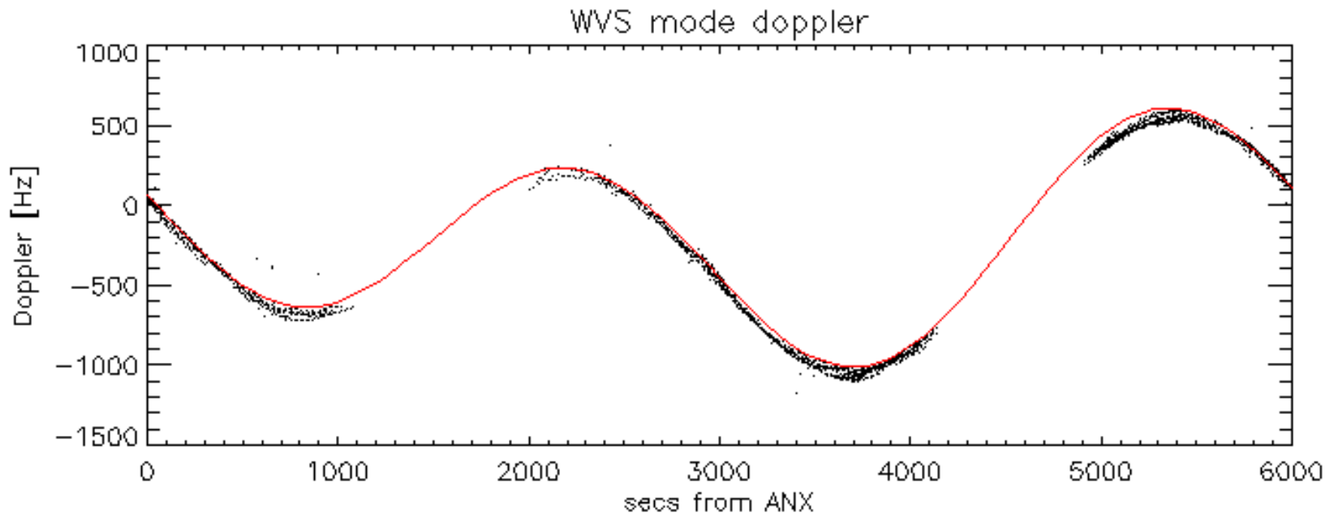

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

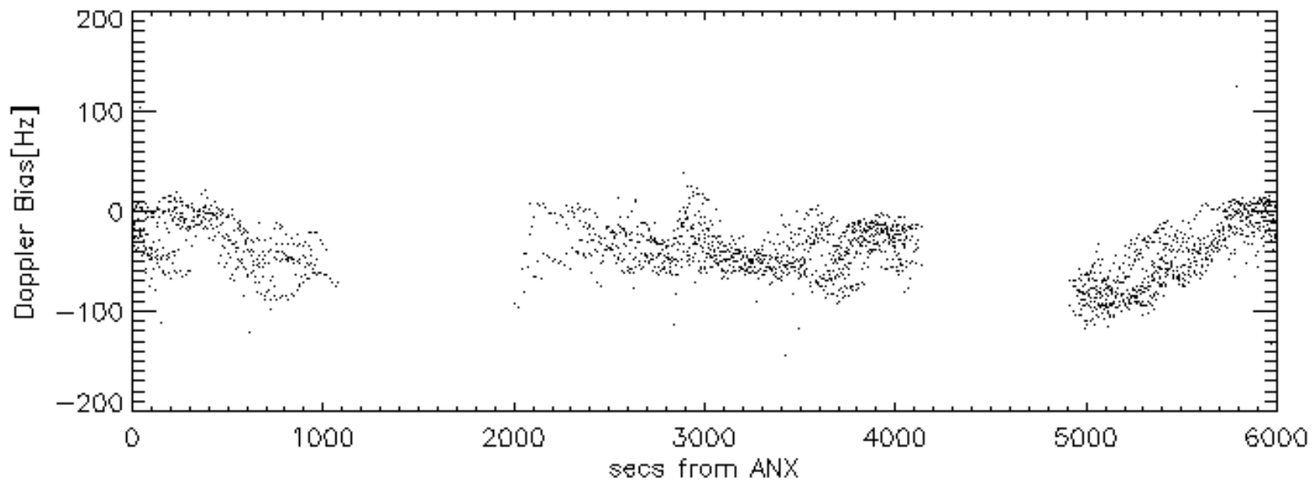

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

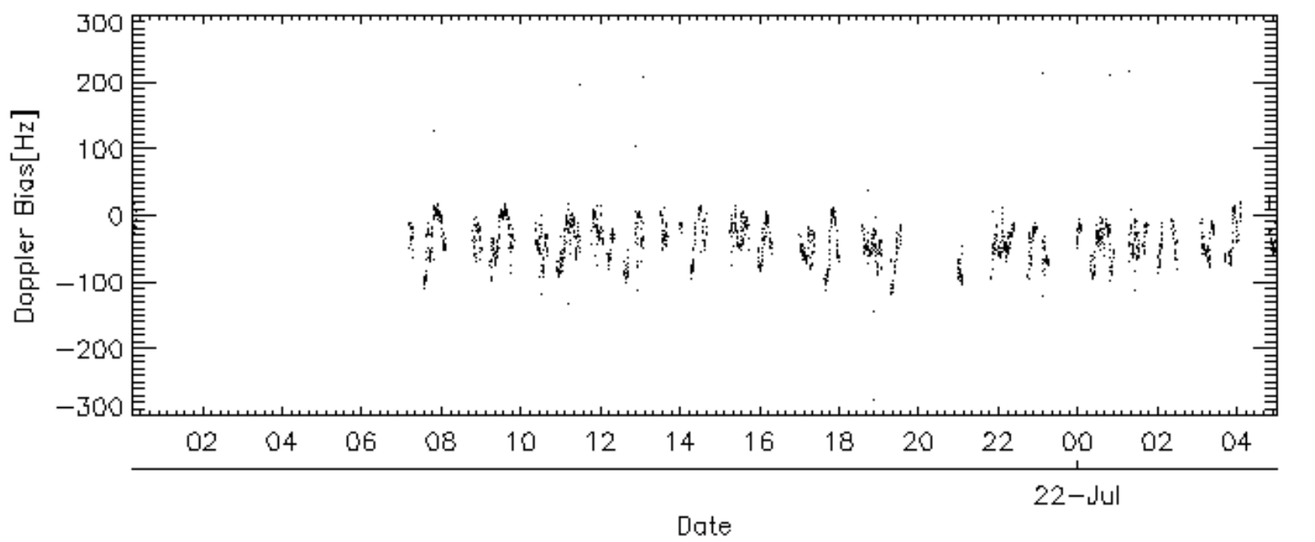

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

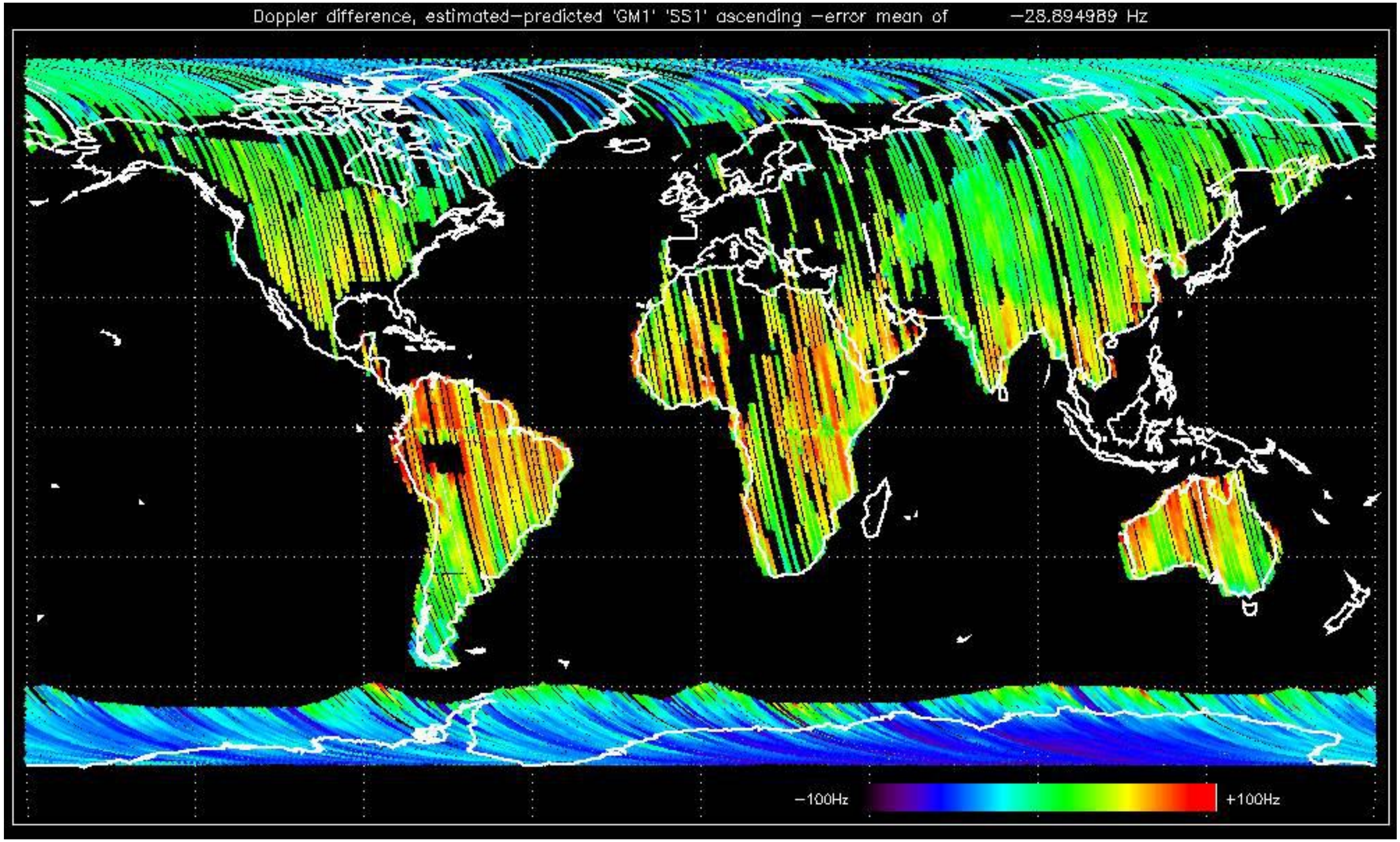

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

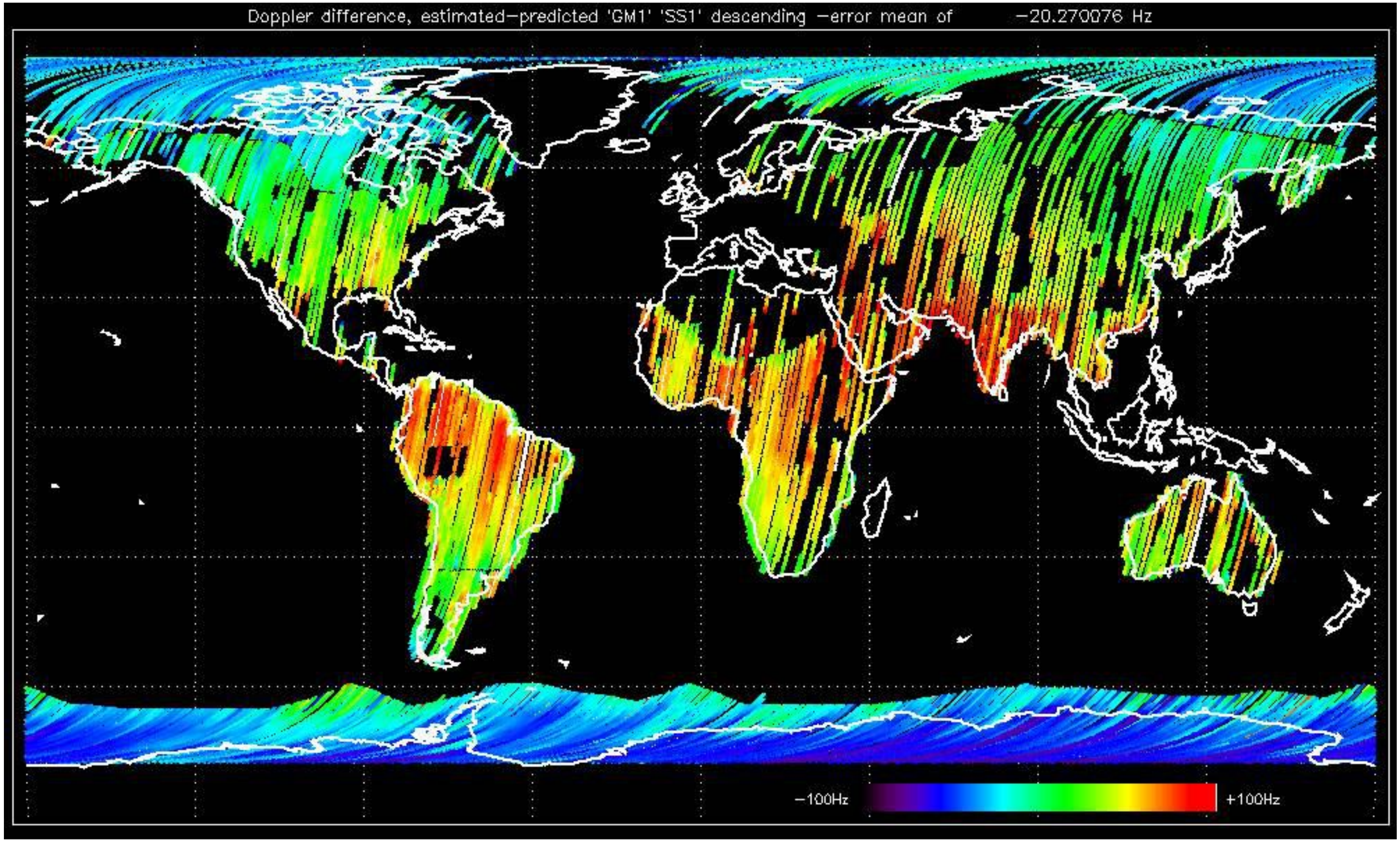

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
22−Jul
Date

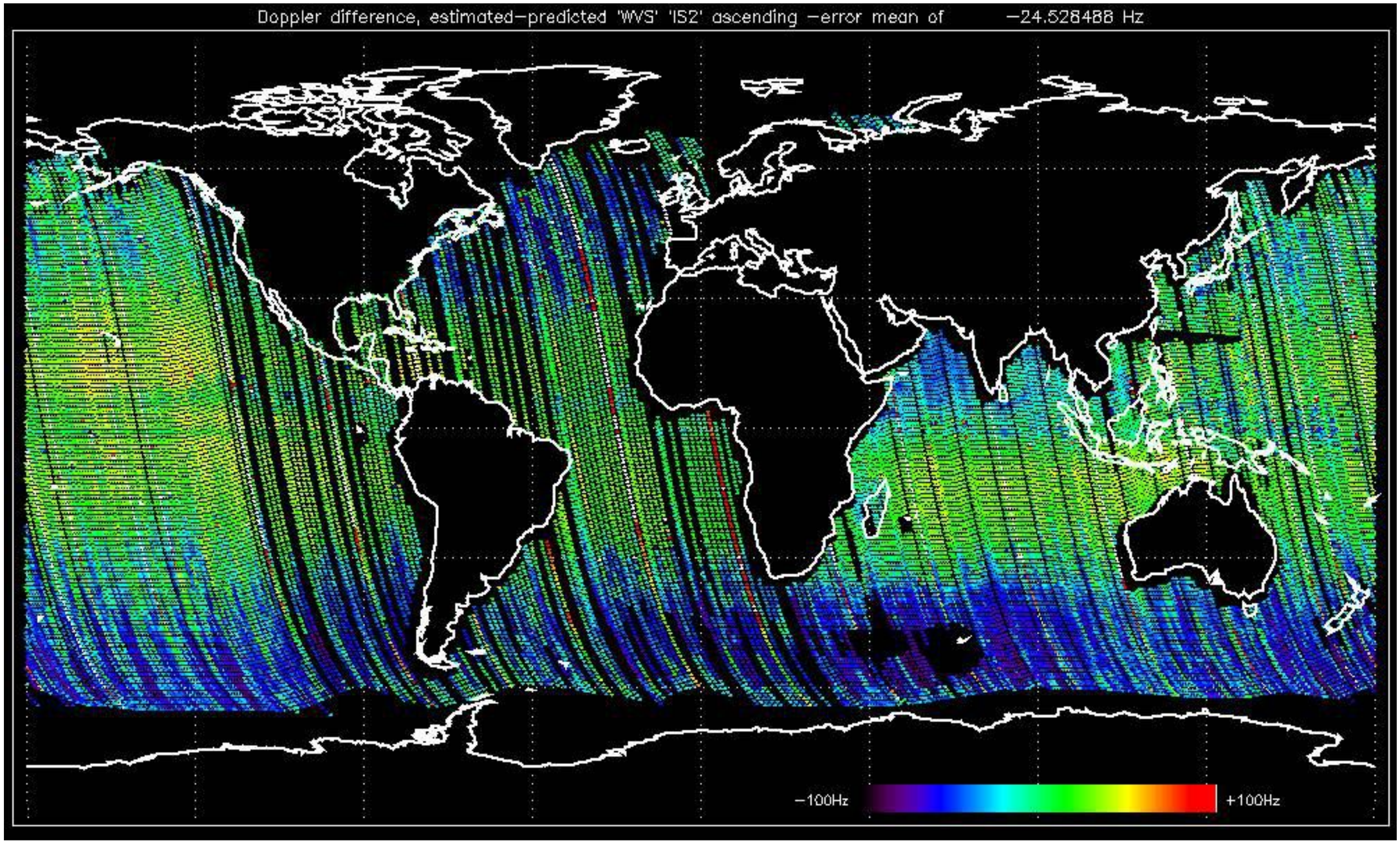

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

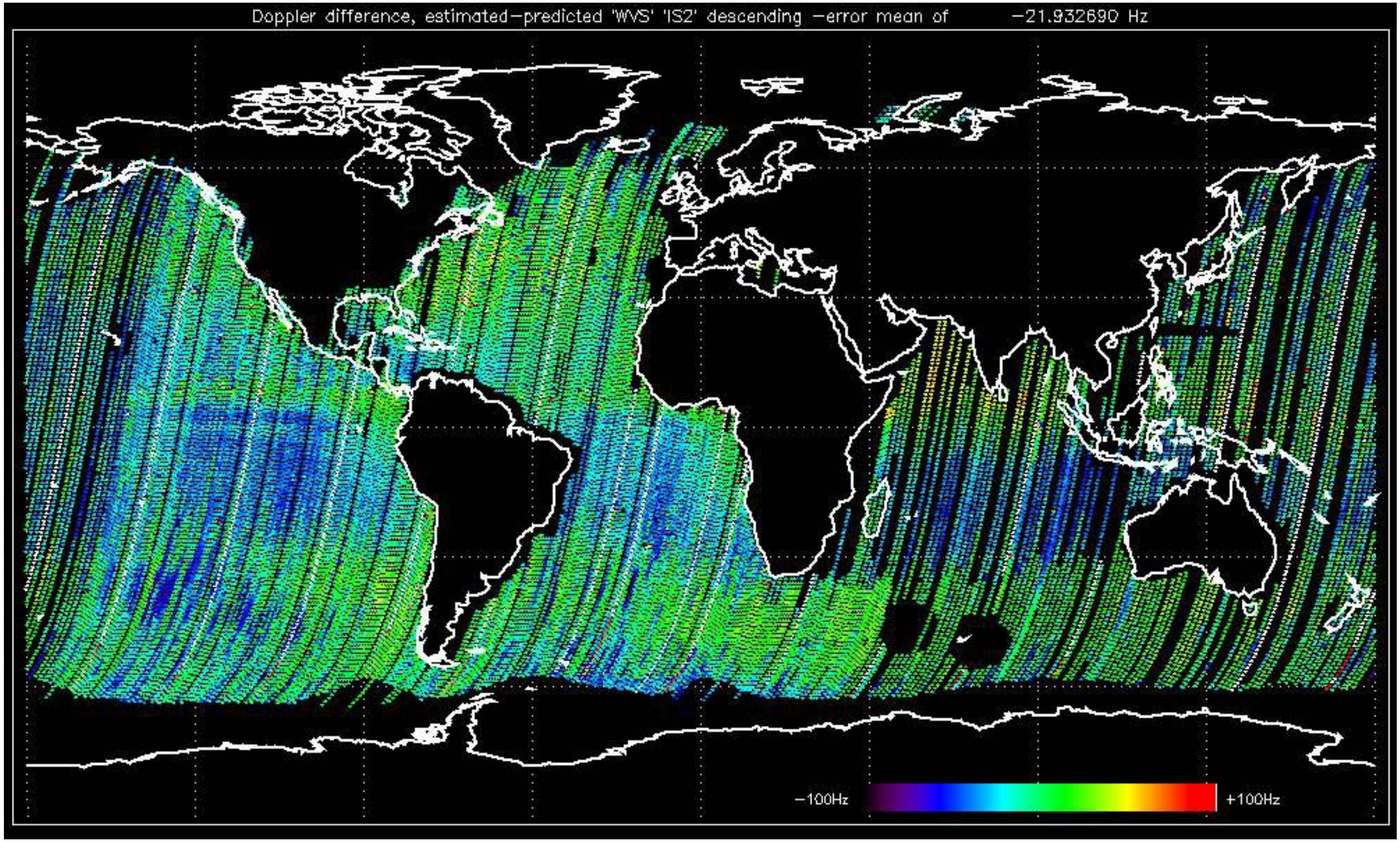

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
300
200
100
0
−100
−200
−300
02
04
06
08
10
12
14
16
18
20
22
00
02
04
22−Jul
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −28.894989 Hz
−100Hz
+100Hz

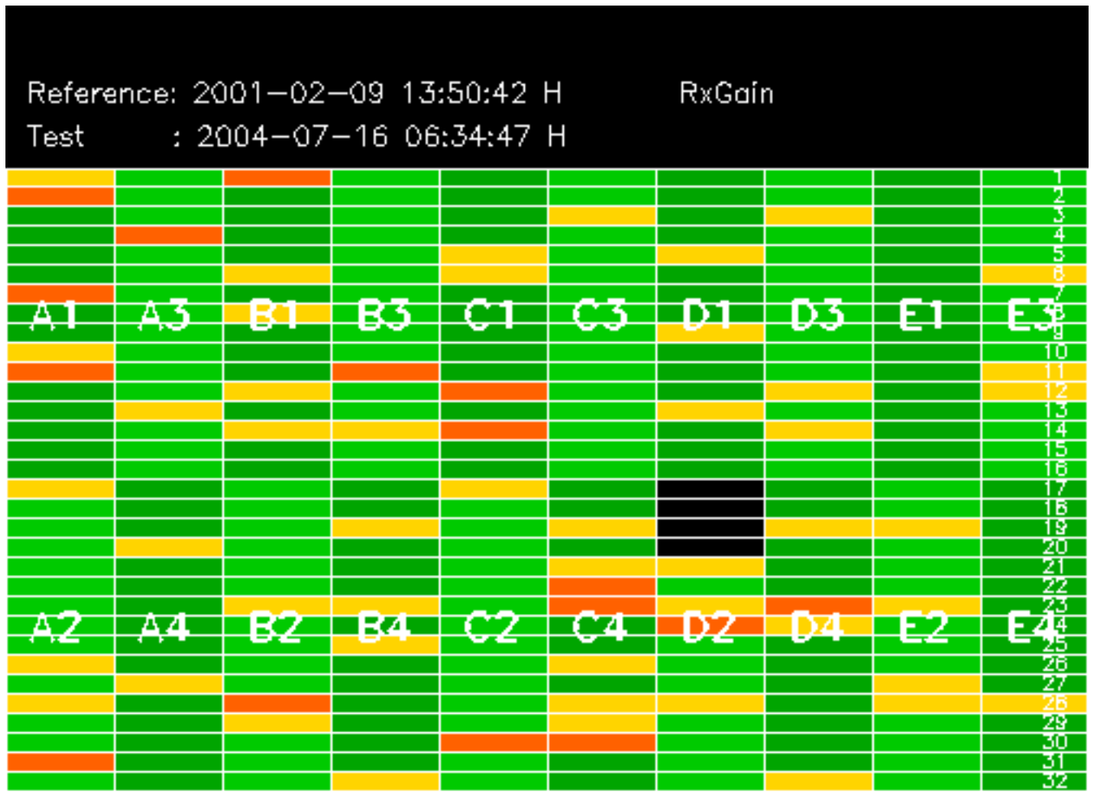

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −20.270076 Hz
−100Hz
+100Hz

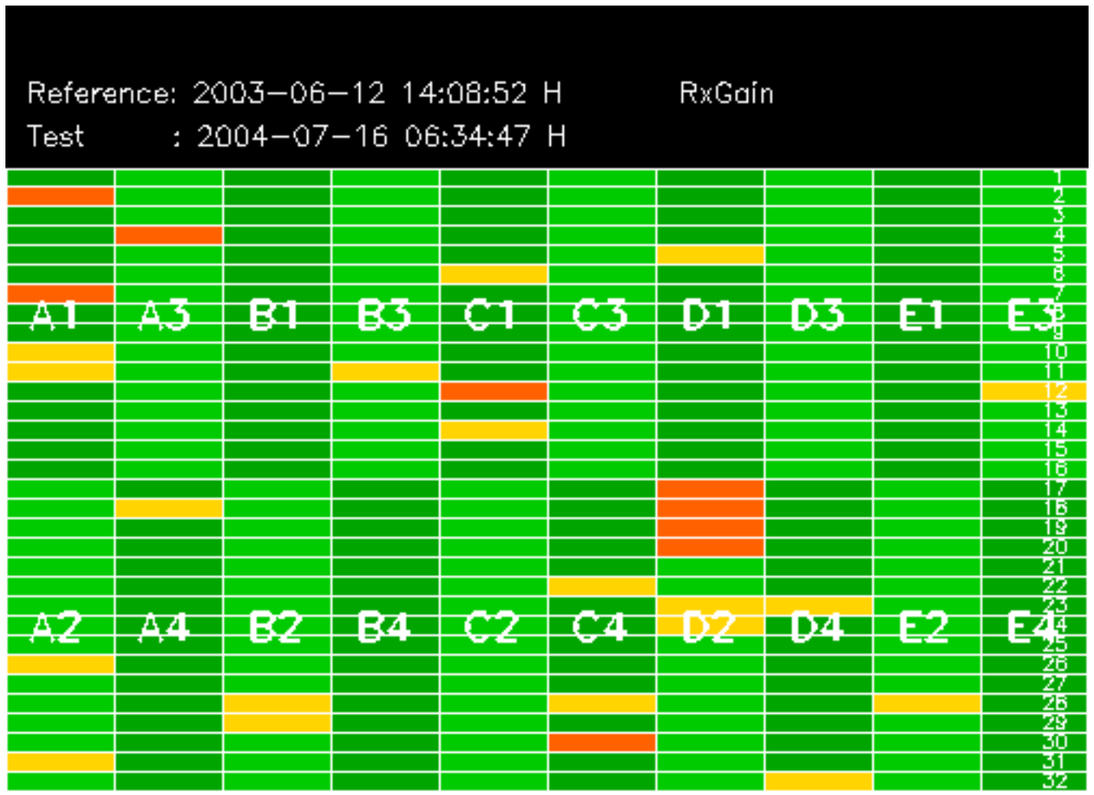

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −24.528488 Hz
−100Hz
+100Hz

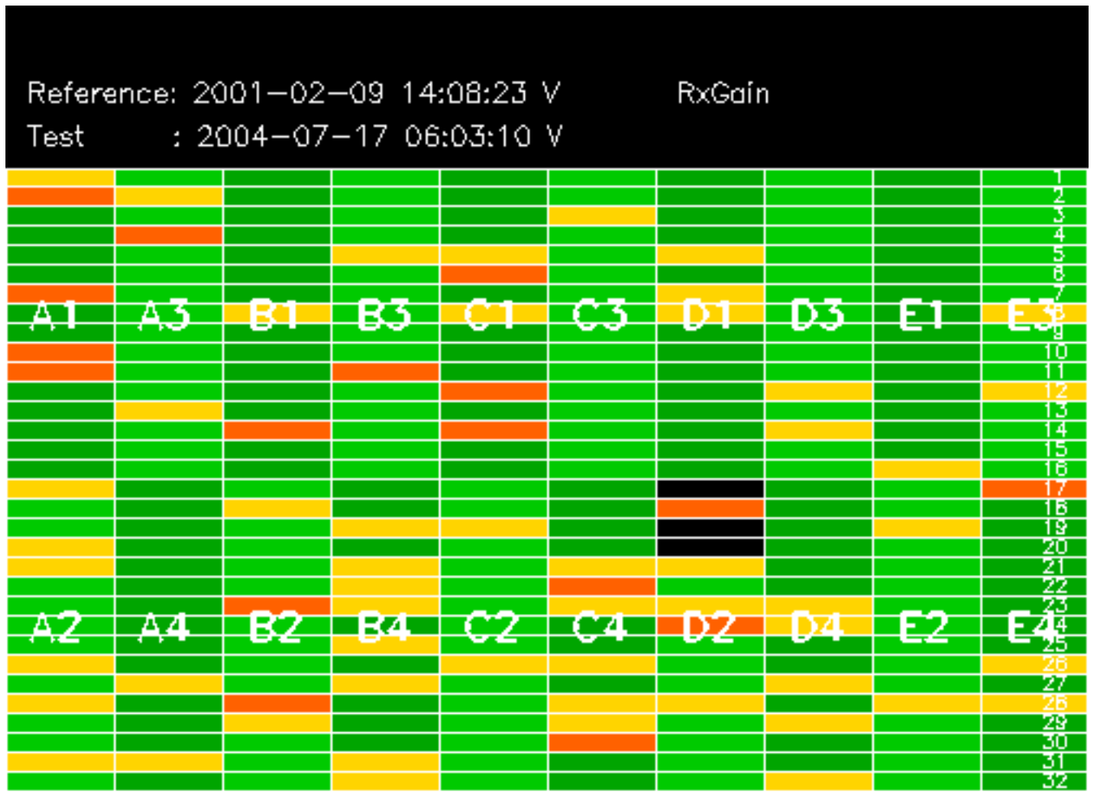

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −21.932690 Hz
−100Hz
+100Hz

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
Test : 2004-07-16 06:34:47 H
RxGain
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 : 2004-07-16 06:34:47 H
RxGain
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 : 2004-07-17 06:03:10 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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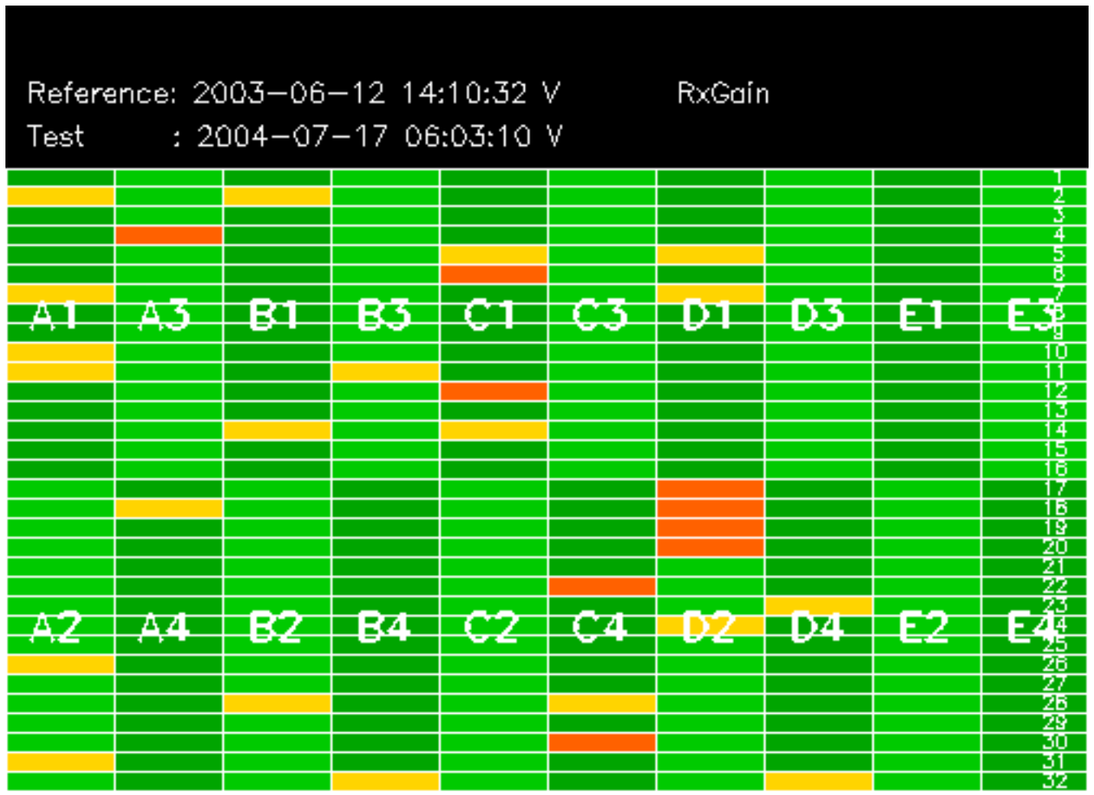
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-17 06:03:10 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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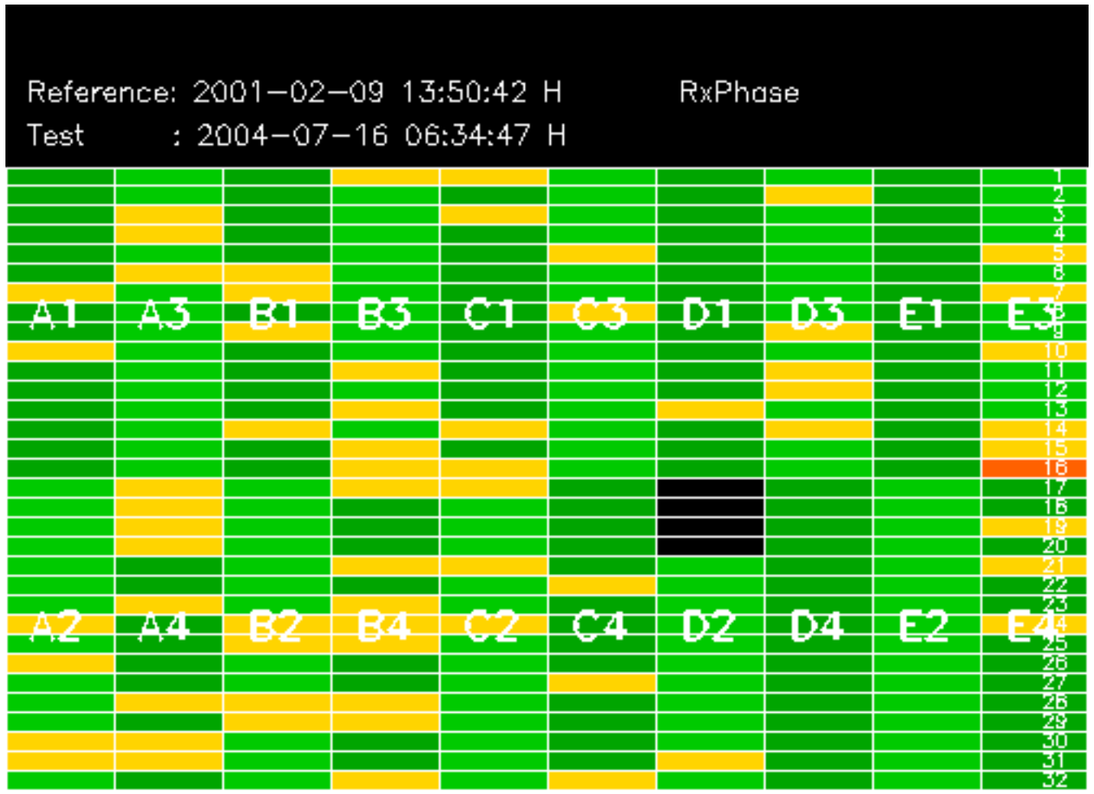
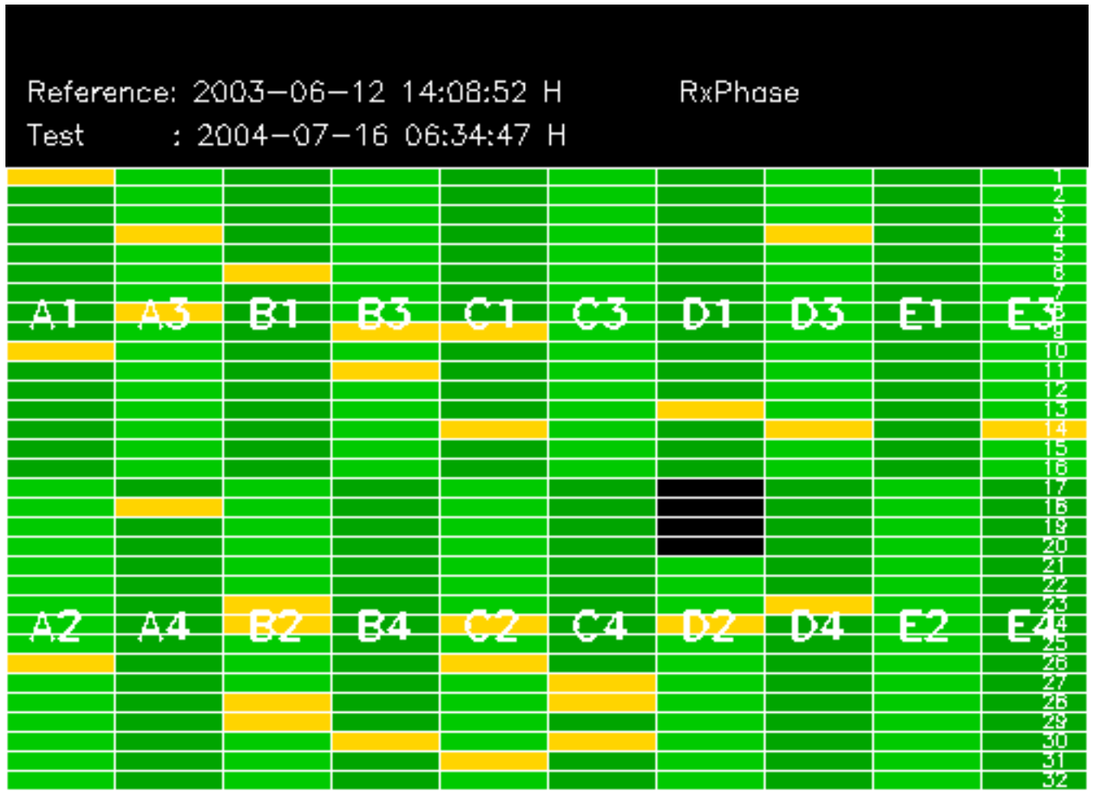

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-16 06:34:47 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-07-16 06:34:47 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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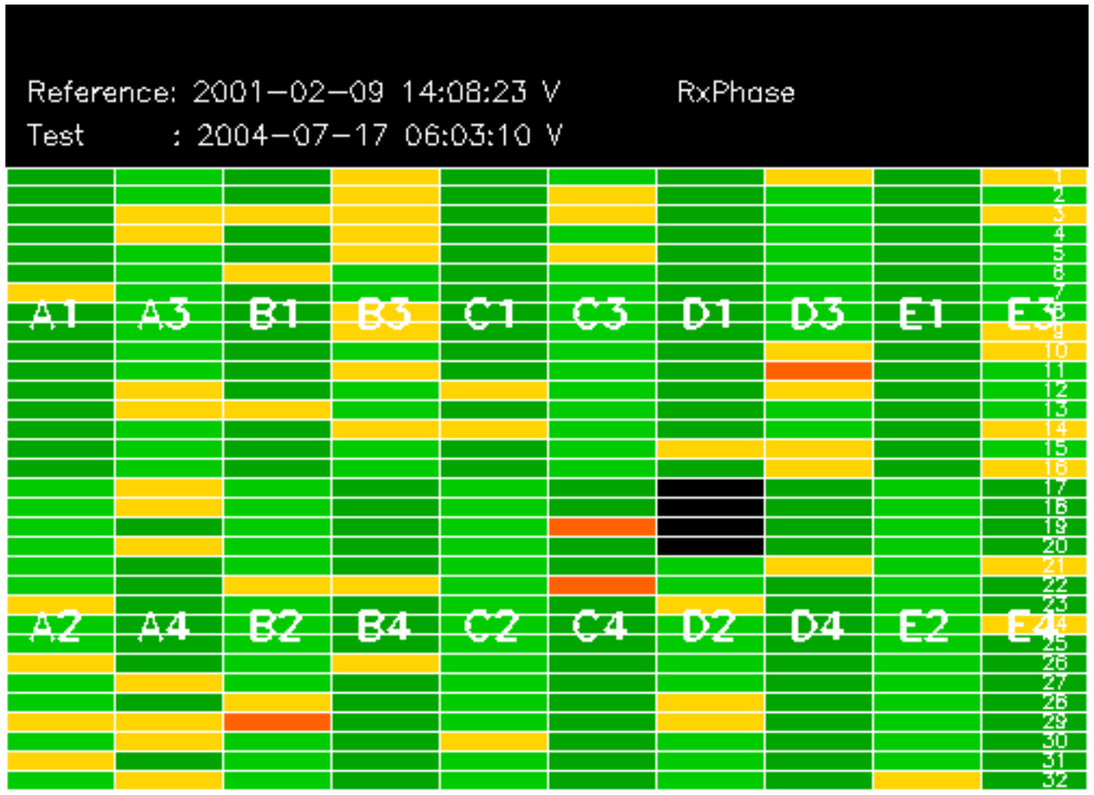
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-17 06:03:10 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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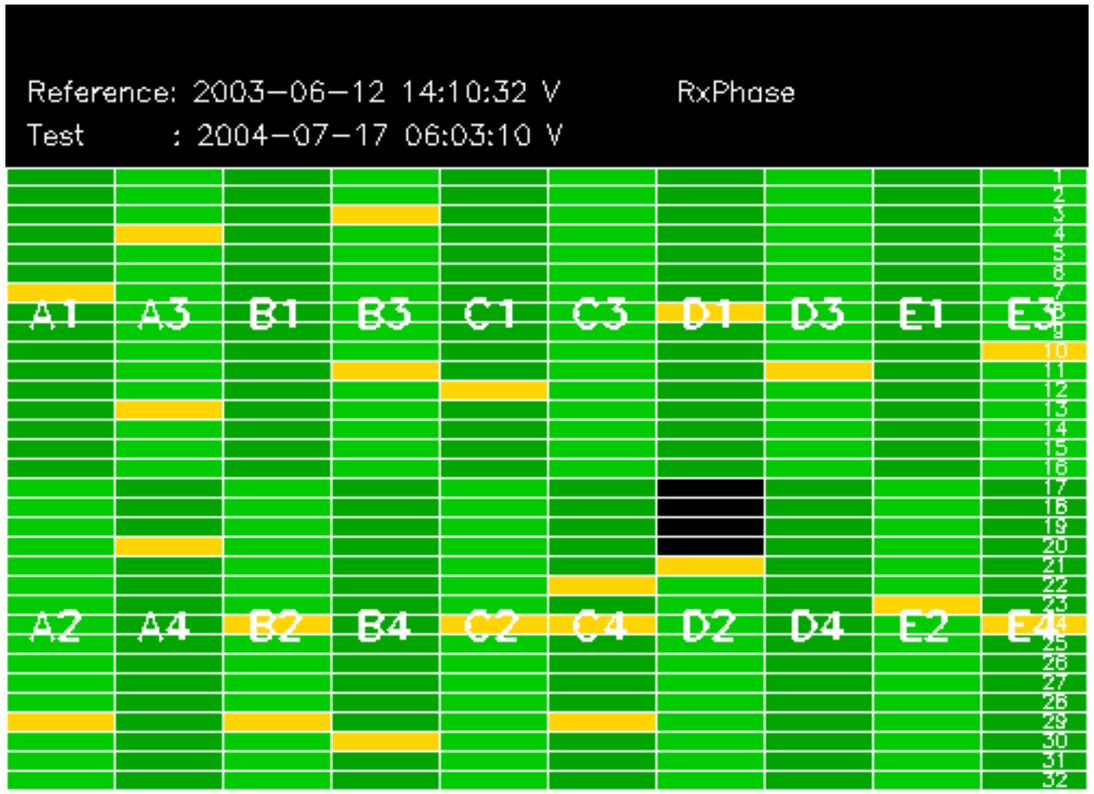
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-17 06:03:10 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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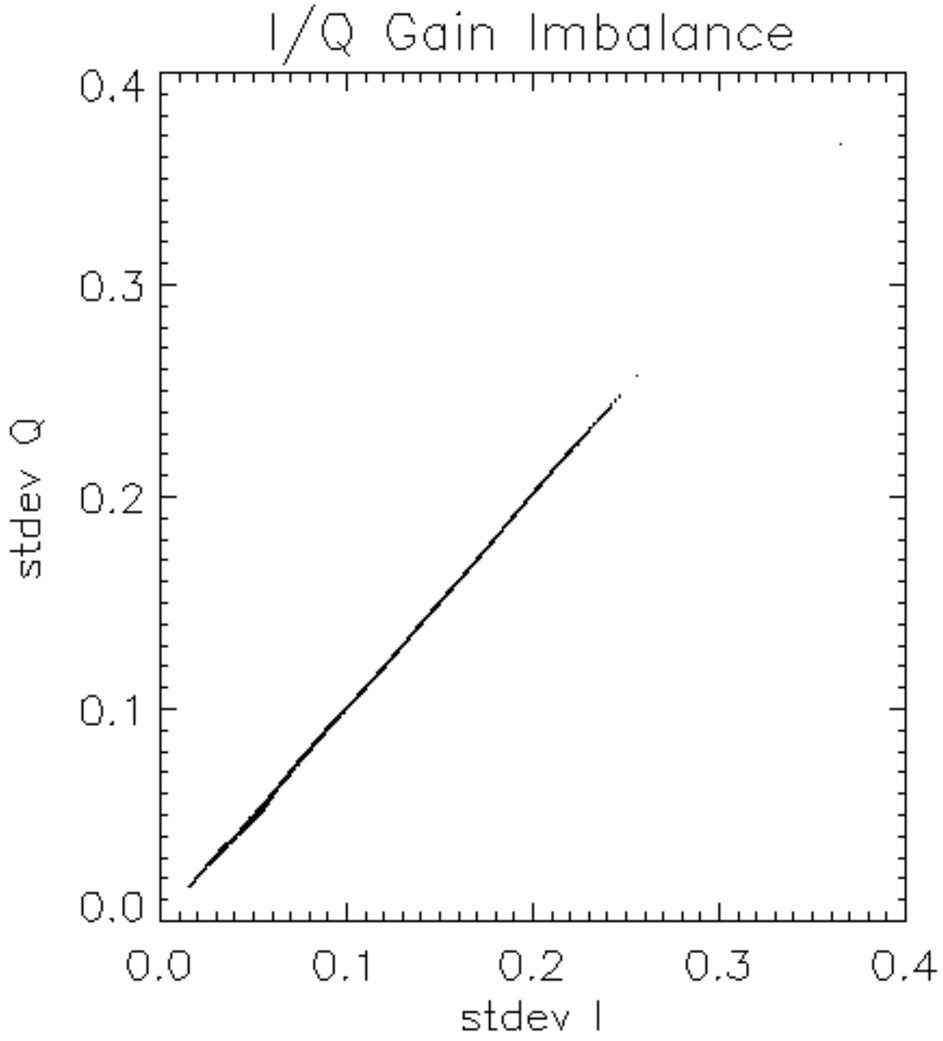
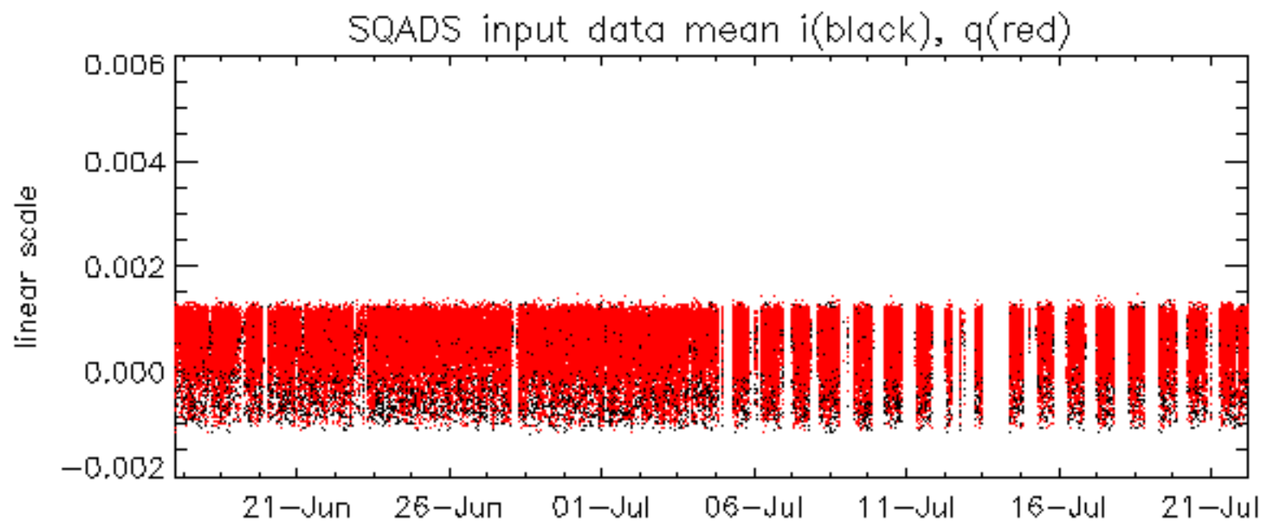
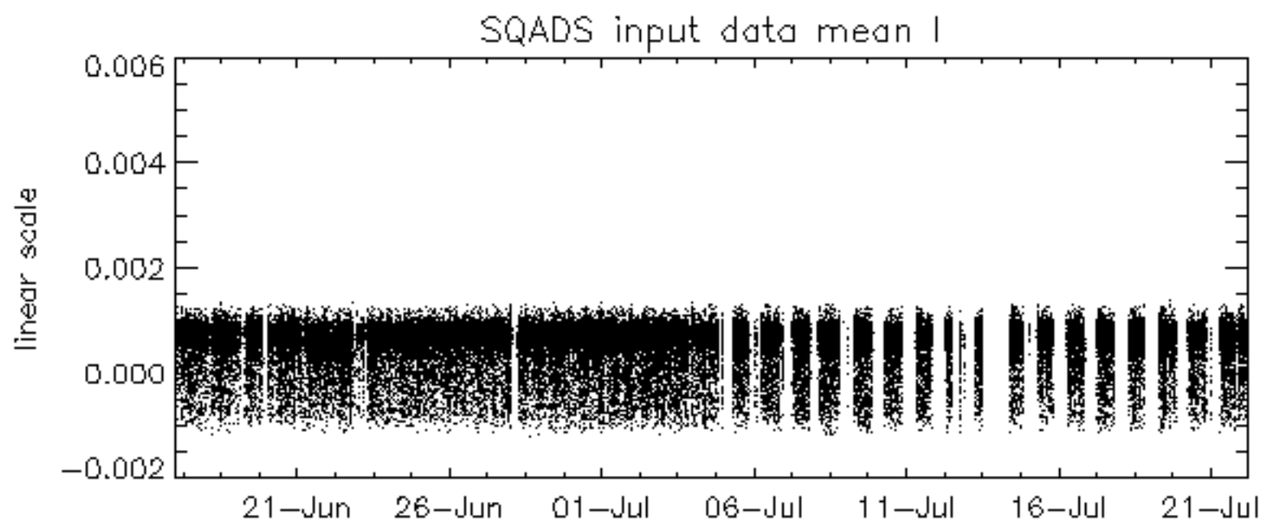
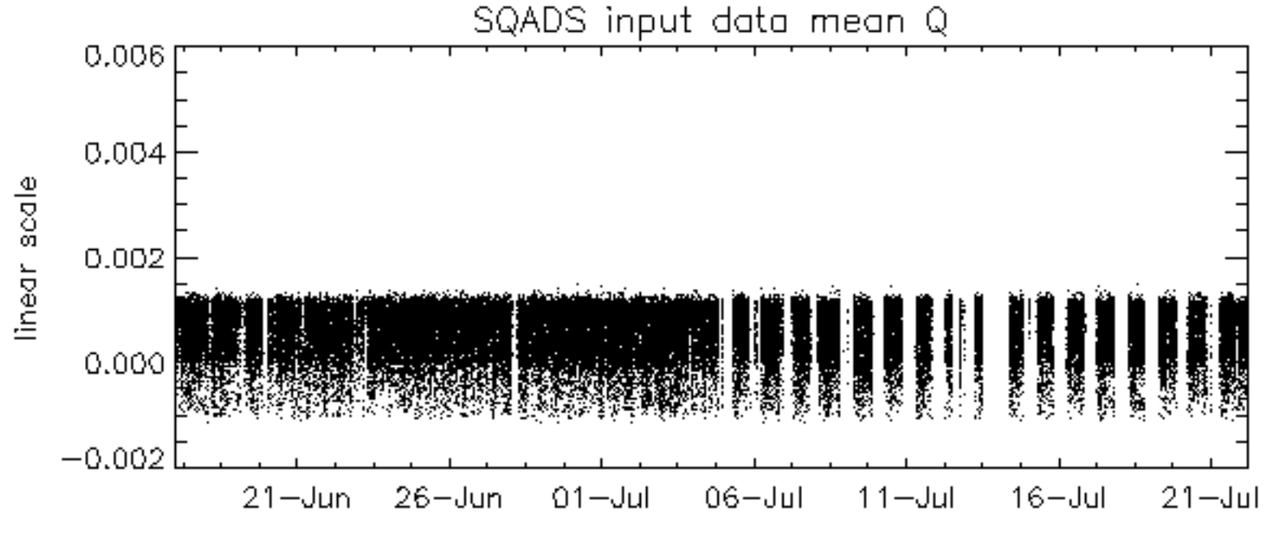
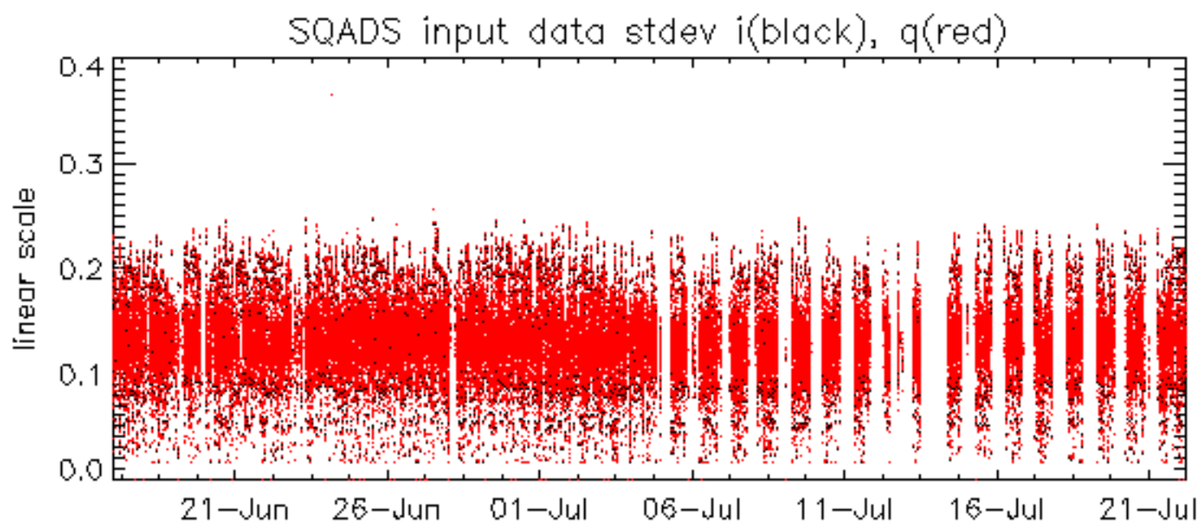
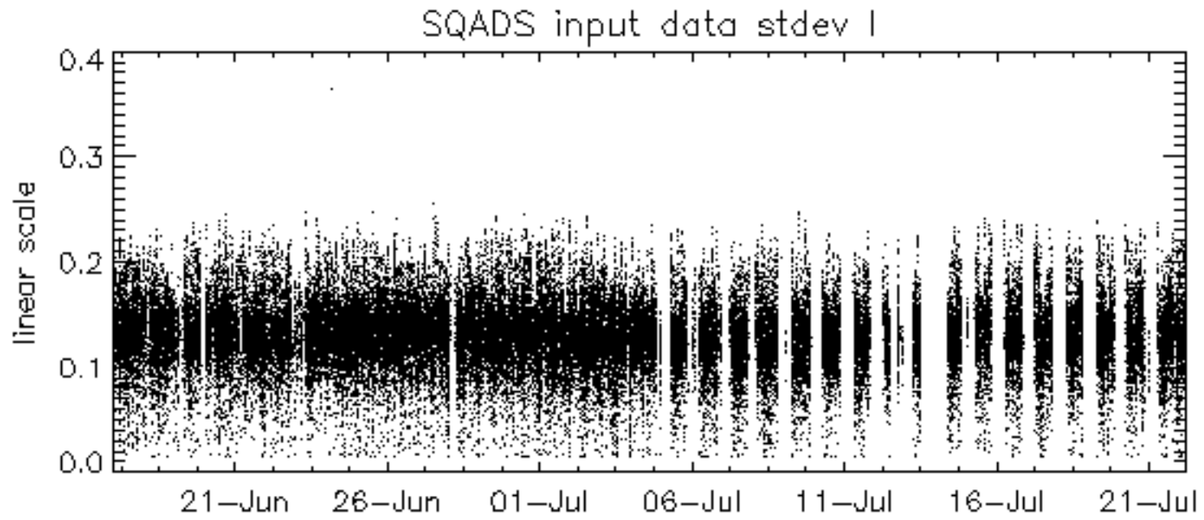

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

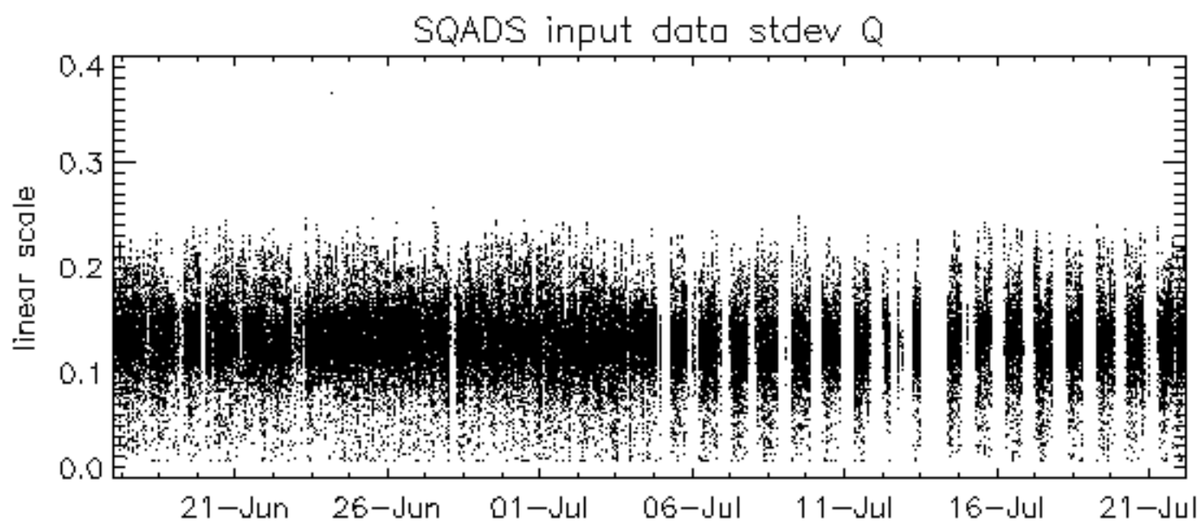

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul

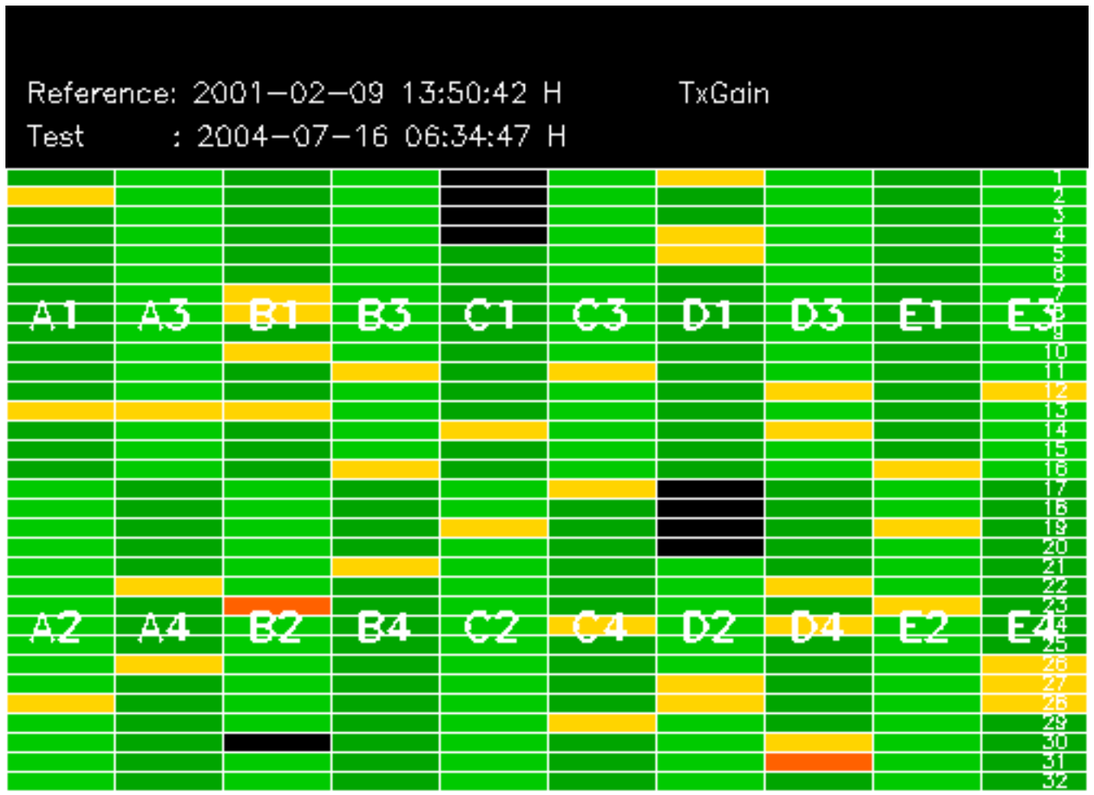

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul

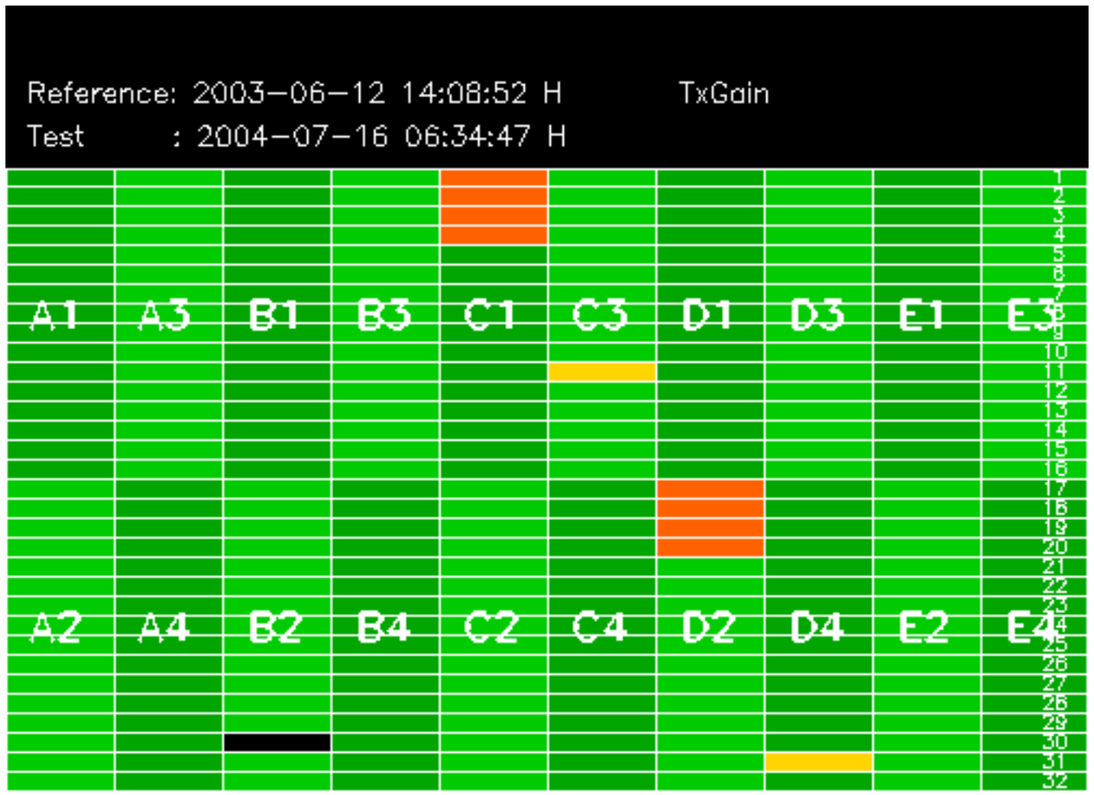

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-16 06:34:47 H
TxGain
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 : 2004-07-16 06:34:47 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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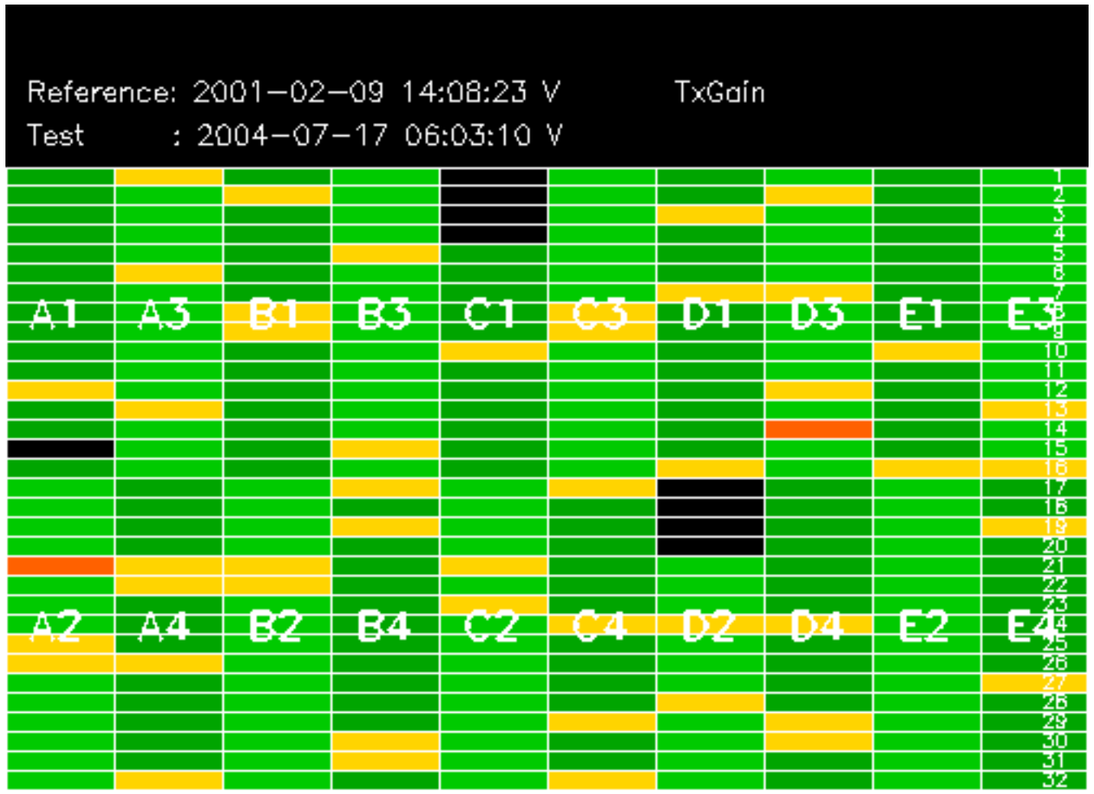
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-17 06:03:10 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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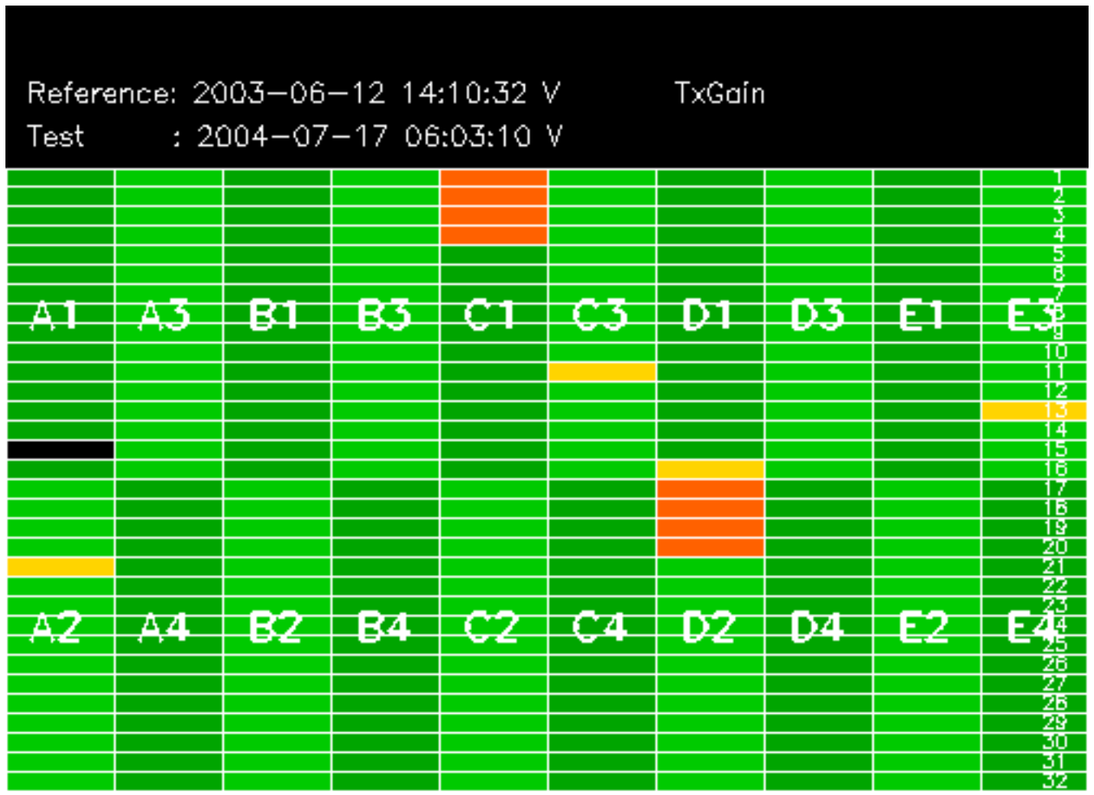
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-17 06:03:10 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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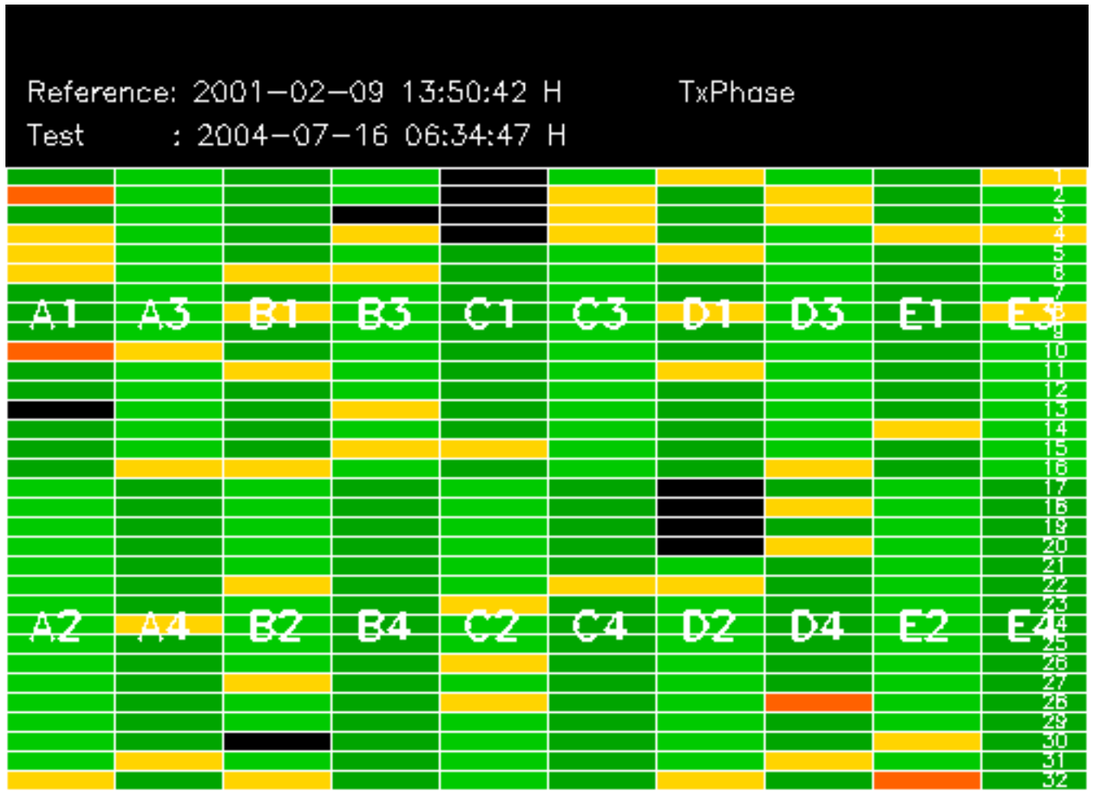
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-07-16 06:34:47 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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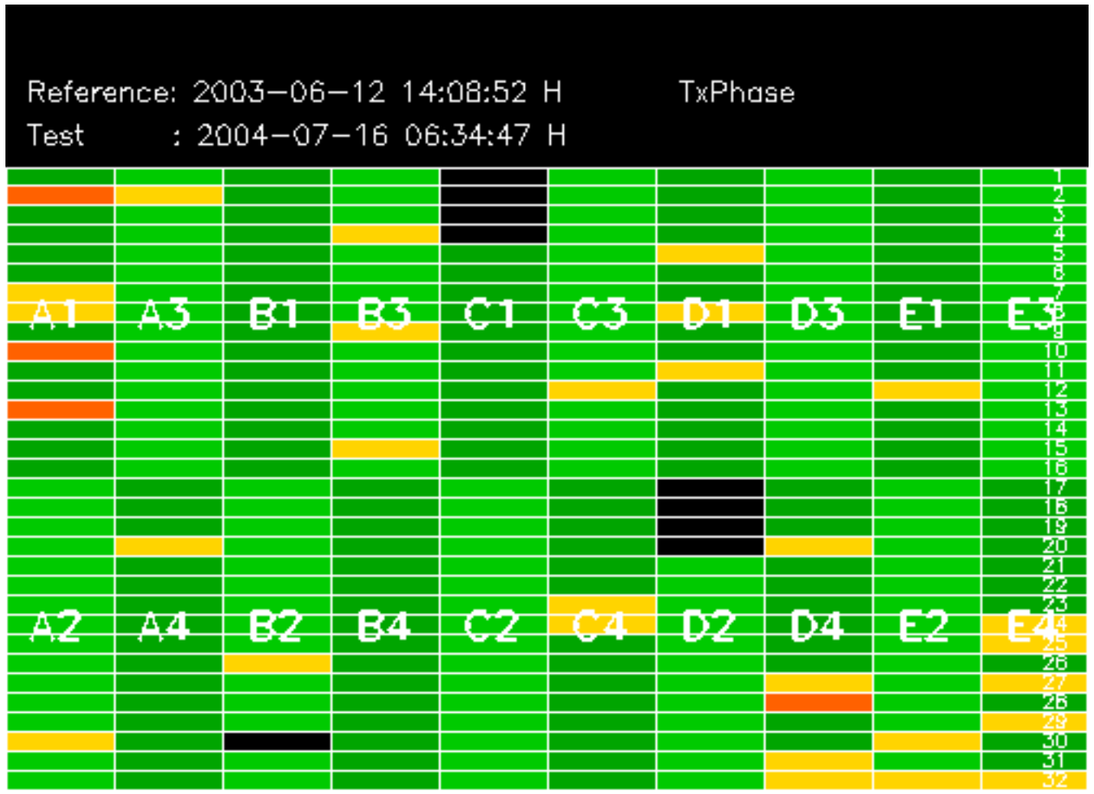
Reference: 2003-06-12 14:08:52 H
Test : 2004-07-16 06:34:47 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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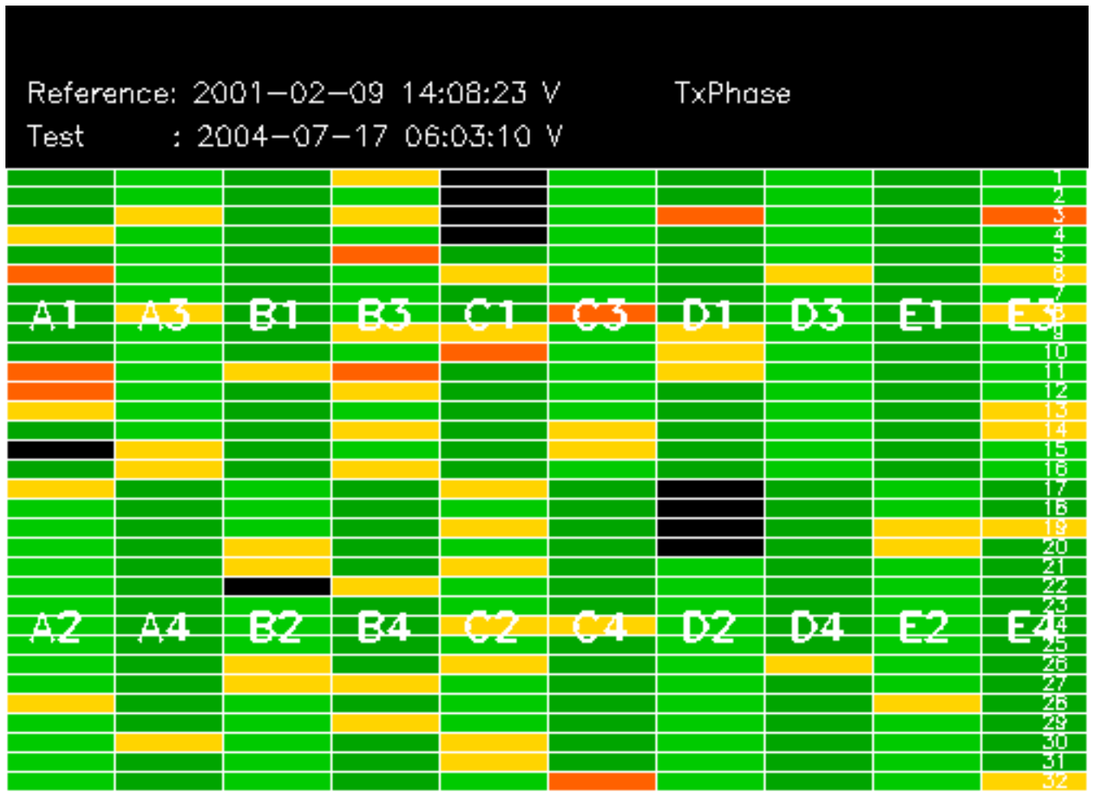
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-17 06:03:10 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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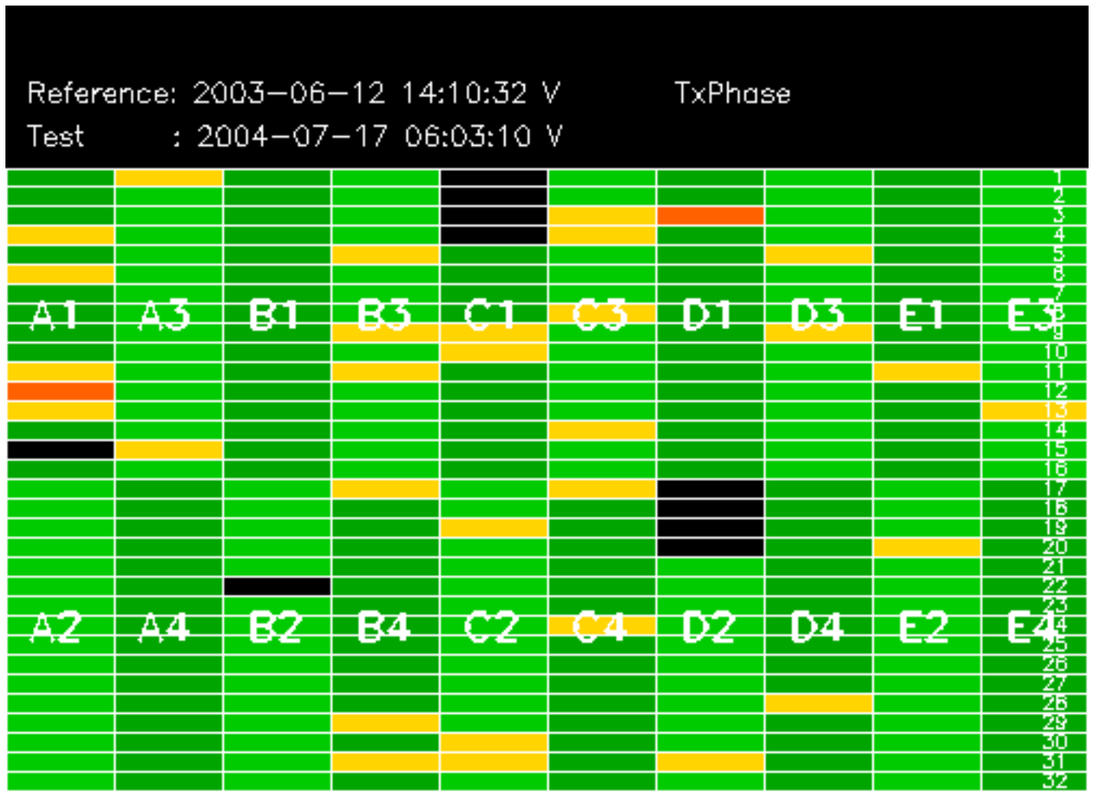
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-17 06:03:10 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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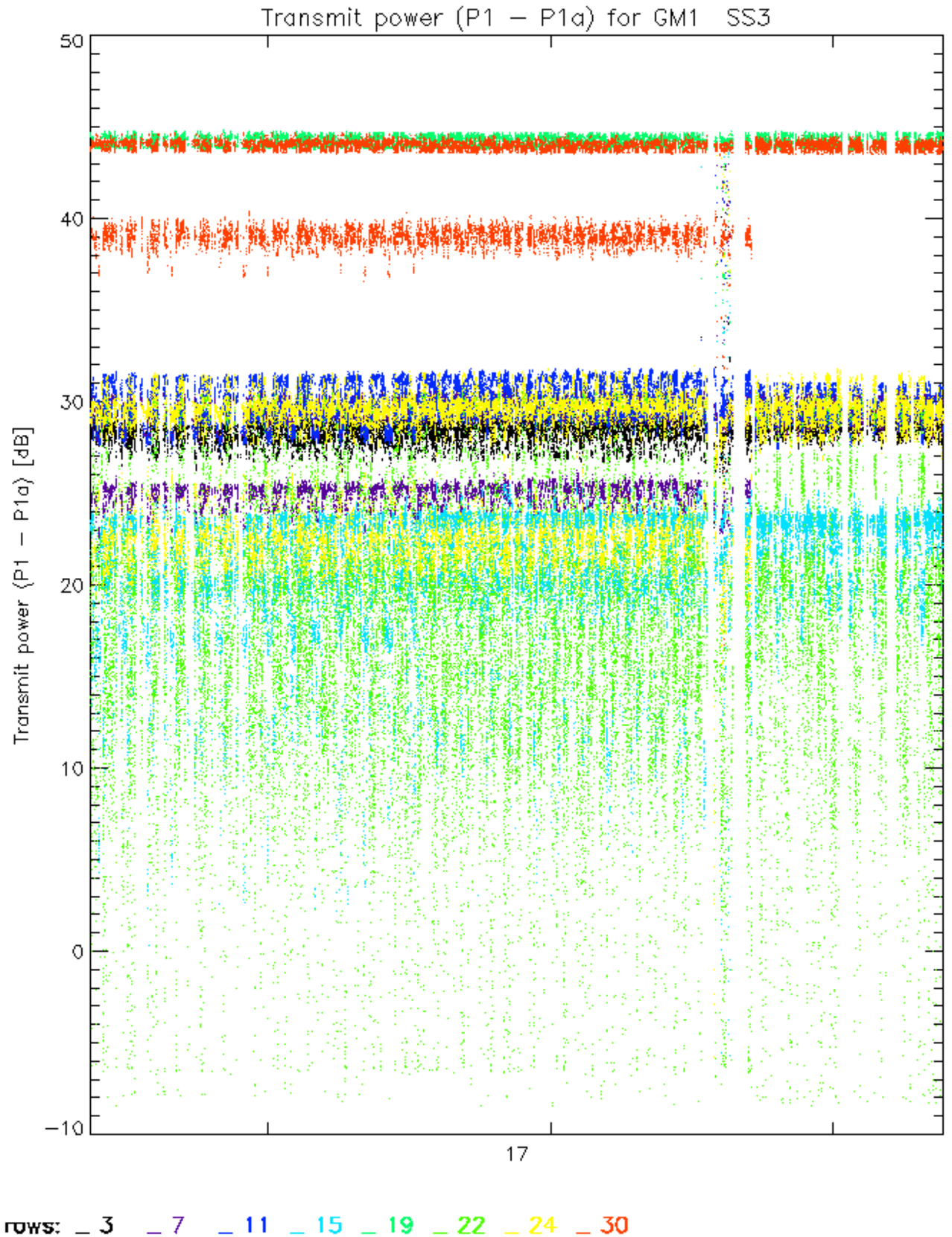
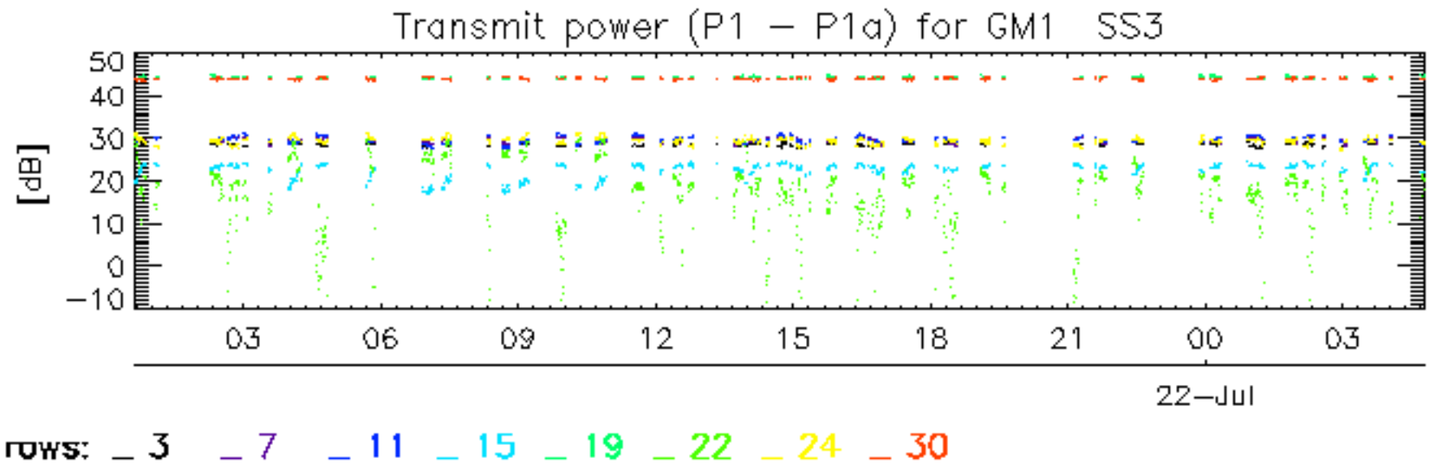
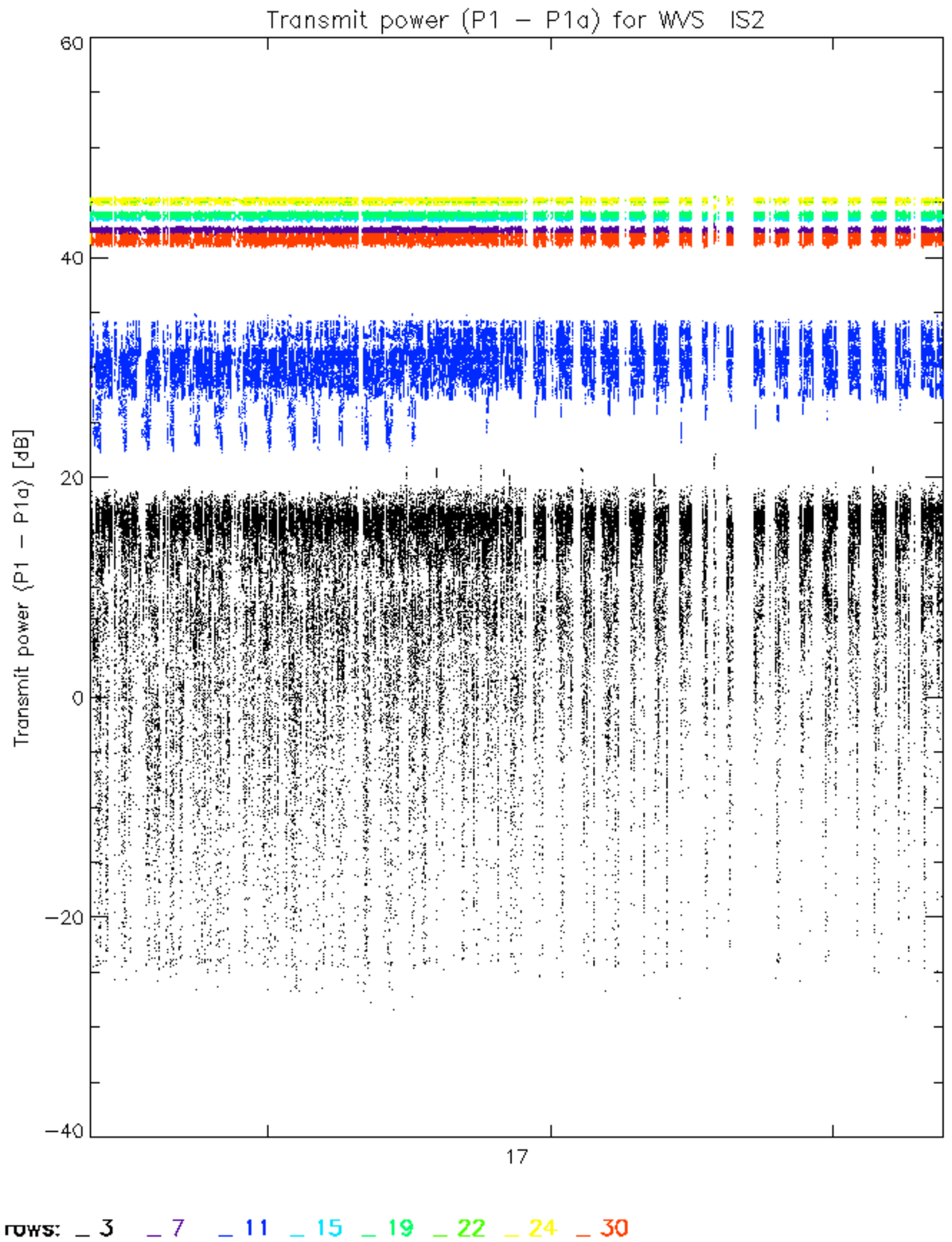
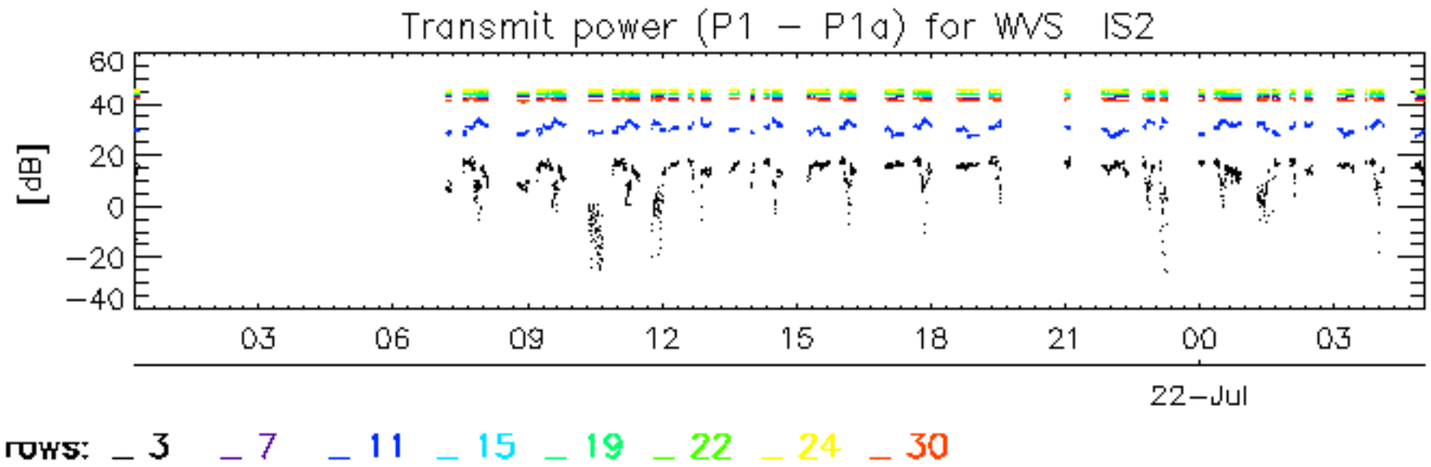

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
17
rows: 3 7 11 15 19 22 24 30


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


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power (P1 – P1a) [dB]
17
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
22–Jul
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.