SUMMARY

1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P) products, which are the available few hours after the acquisition, on the high rate browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No ASAR unavailability for the reported period.

Sub-system	Start	Stop	Planned
ASAR	YYYY-MM-DD hh:mm:ss	YYYY-MM-DD hh:mm:ss	---

2.2 - Browse Visual Inspection

No anomalies observed from 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

No MS product on 17-Jul-2003.
Analysis results are the same as in the 16-Jul-2003 report (MS data acquired on 16-Jul-2003, H and V polarization).
No anomalies observed.

Polarisation	Start Time
V	20030716 202902
H	20030716 202722

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

Analysis performed on data acquired from 17-Jul-2003 06:11:55 until 18-Jul-2003 08:10:29.
No anomalies observed on internal calibration pulses.

Stable evolution of the calibration pulses

4.1 - Daily statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.82176	-22.5591	-8.09297
	stdev	0.00581110	0.0671912	0.00269593
10	mean	-6.87807	-19.2947	-8.09179
	stdev	0.0342917	0.0605281	0.00273199

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.88213	-22.5637	-8.10361
	stdev	0.0847800	0.0618510	0.00316887
10	mean	-6.97116	-19.3266	-8.10364
	stdev	0.409001	0.0610683	0.00316619

4.3 - cal pulses monitoring (all rows)

5 - RAW data statistics

No anomalies observed.
Nominal values of I and Q level0 statistics.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000469860
	stdev	3.02449e-07
MEAN Q	mean	0.000307942
	stdev	3.12249e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.113436
	stdev	0.00159044
STDEV Q	mean	0.113531
	stdev	0.00162123

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

No anomalies observed for Doppler evolution.
Doppler analysis performed over the last 60 days

6.1 - Unbiased Doppler Error

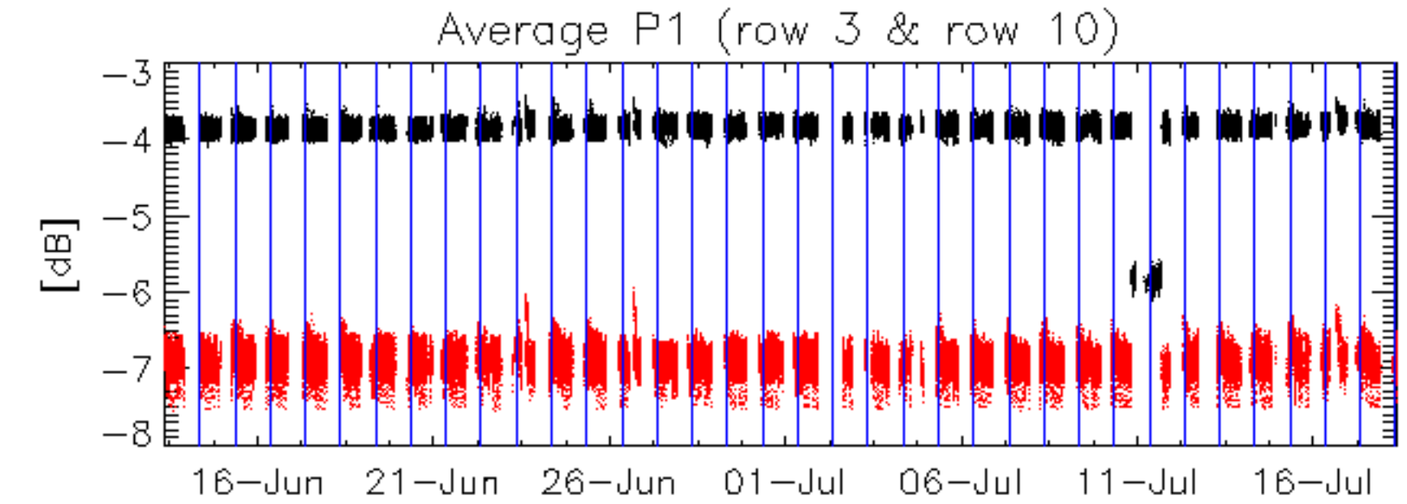
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

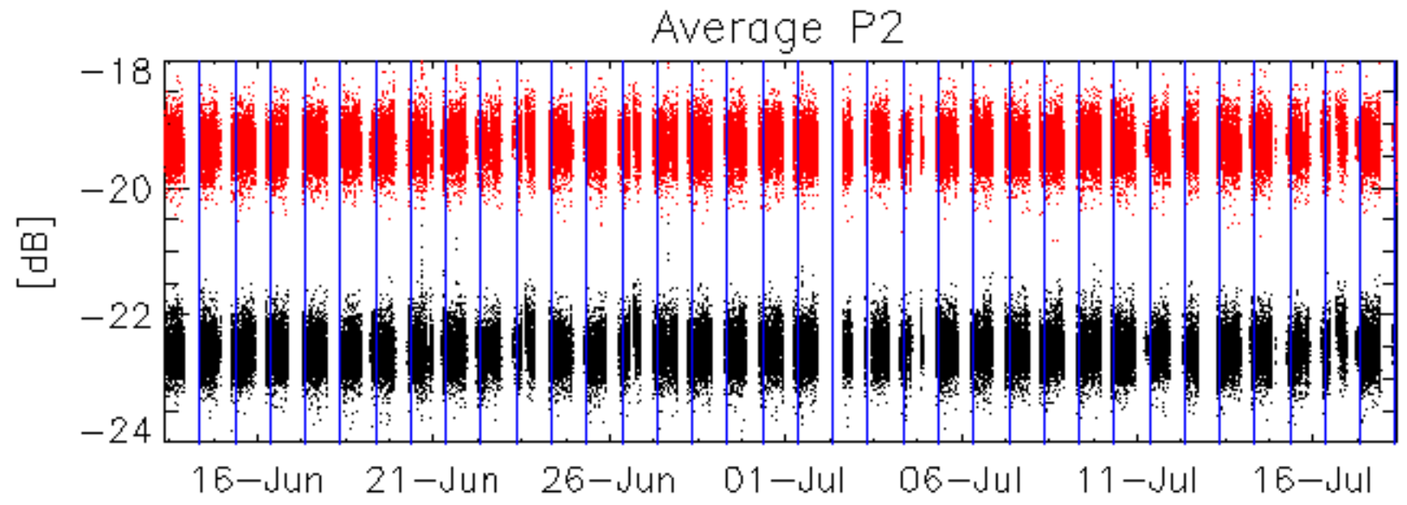
6.2 - Absolute Doppler

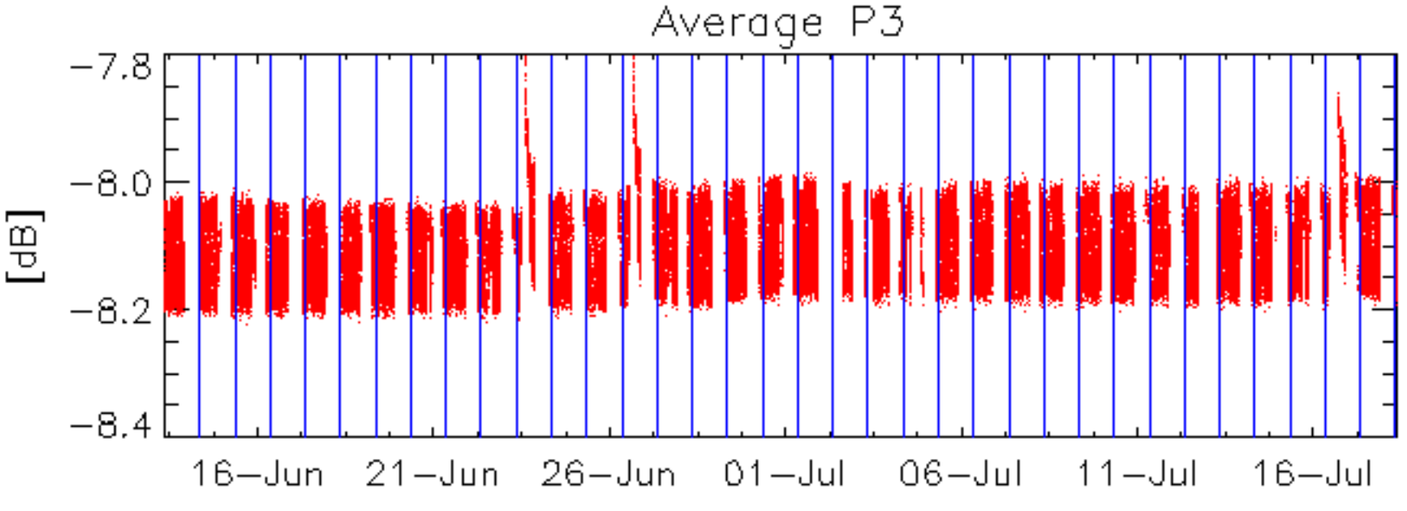
Evolution of Absolute Doppler
Acsending
Descending

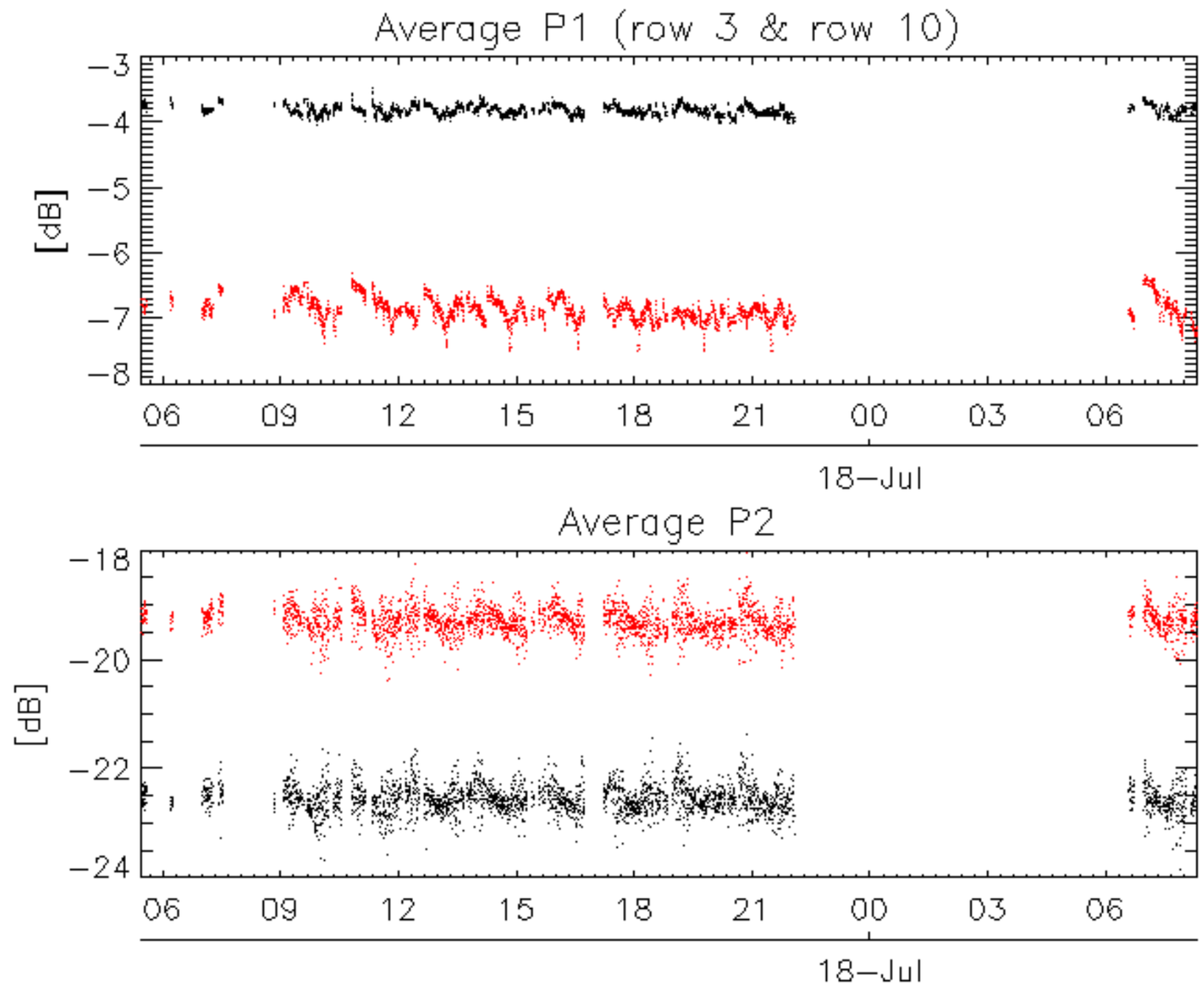
6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

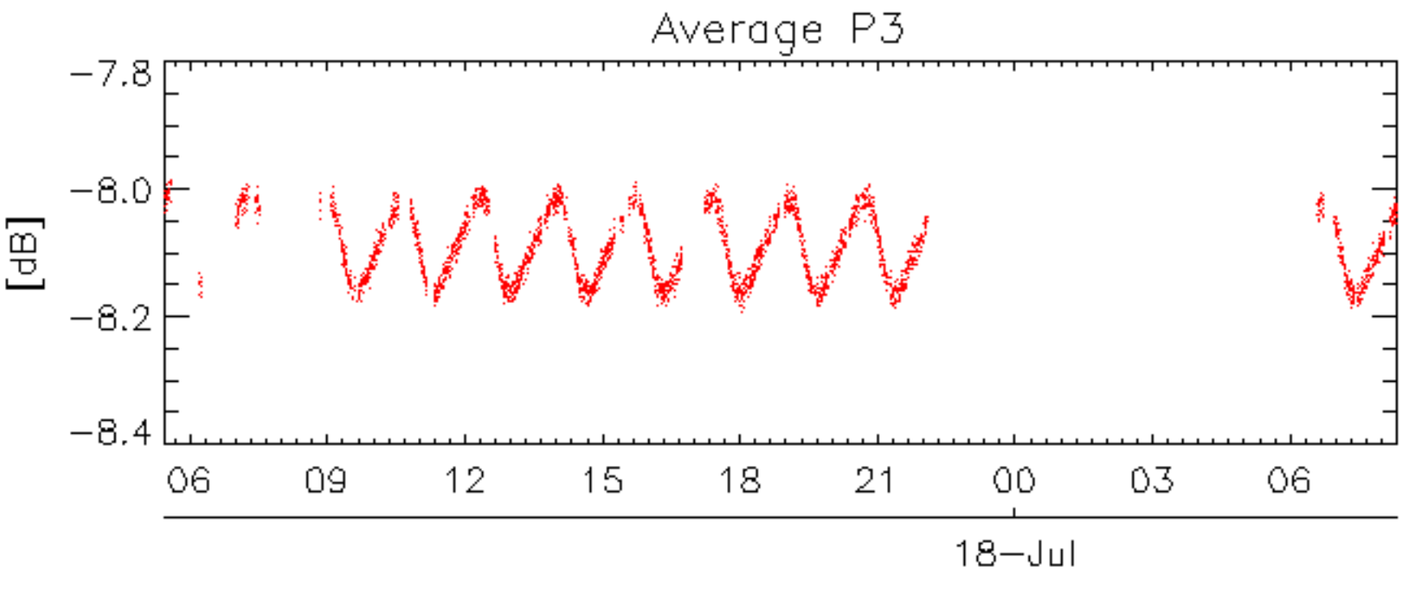


Average P1 (row 3 & row 10)
[dB]
−3
−4
−5
−6
−7
−8
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul


Average P2
[dB]
−18
−20
−22
−24
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul


Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul

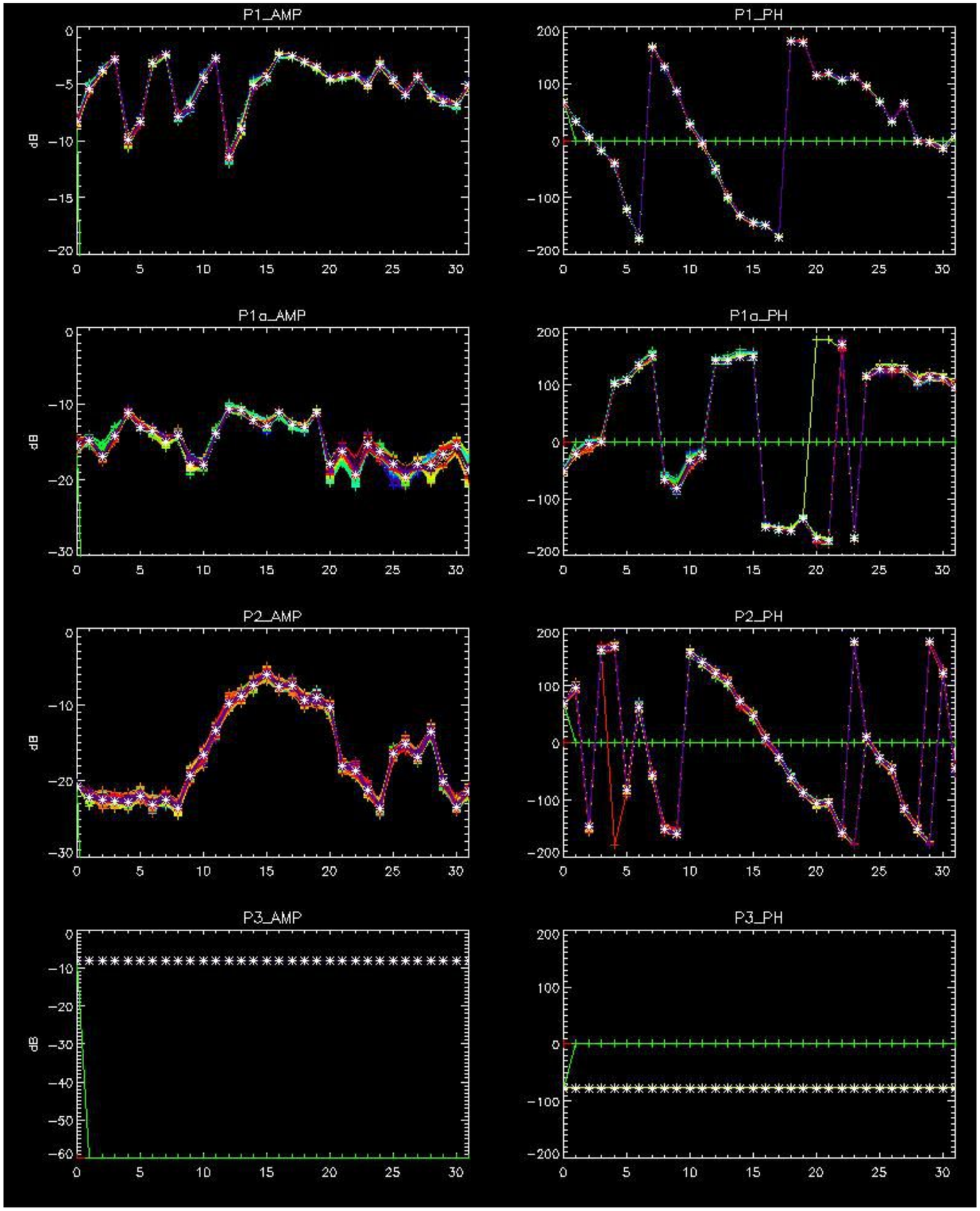

Average P1 (row 3 & row 10)
[dB]
−3
−4
−5
−6
−7
−8
06
09
12
15
18
21
00
03
06
18−Jul

Average P2
[dB]
−18
−20
−22
−24
06
09
12
15
18
21
00
03
06
18−Jul


Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
06
09
12
15
18
21
00
03
06
18−Jul

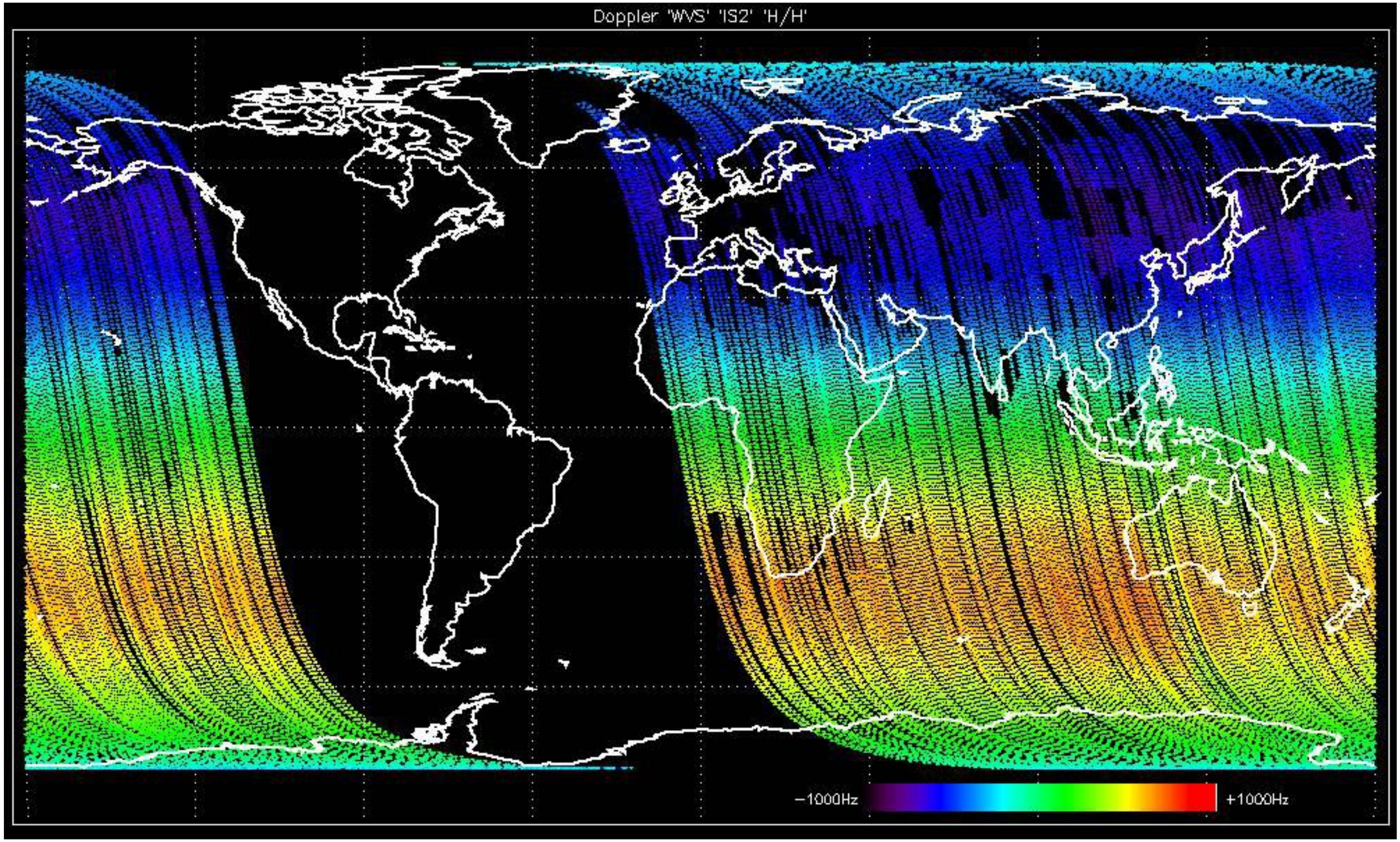
No anomalies observed from browse visual inspection.

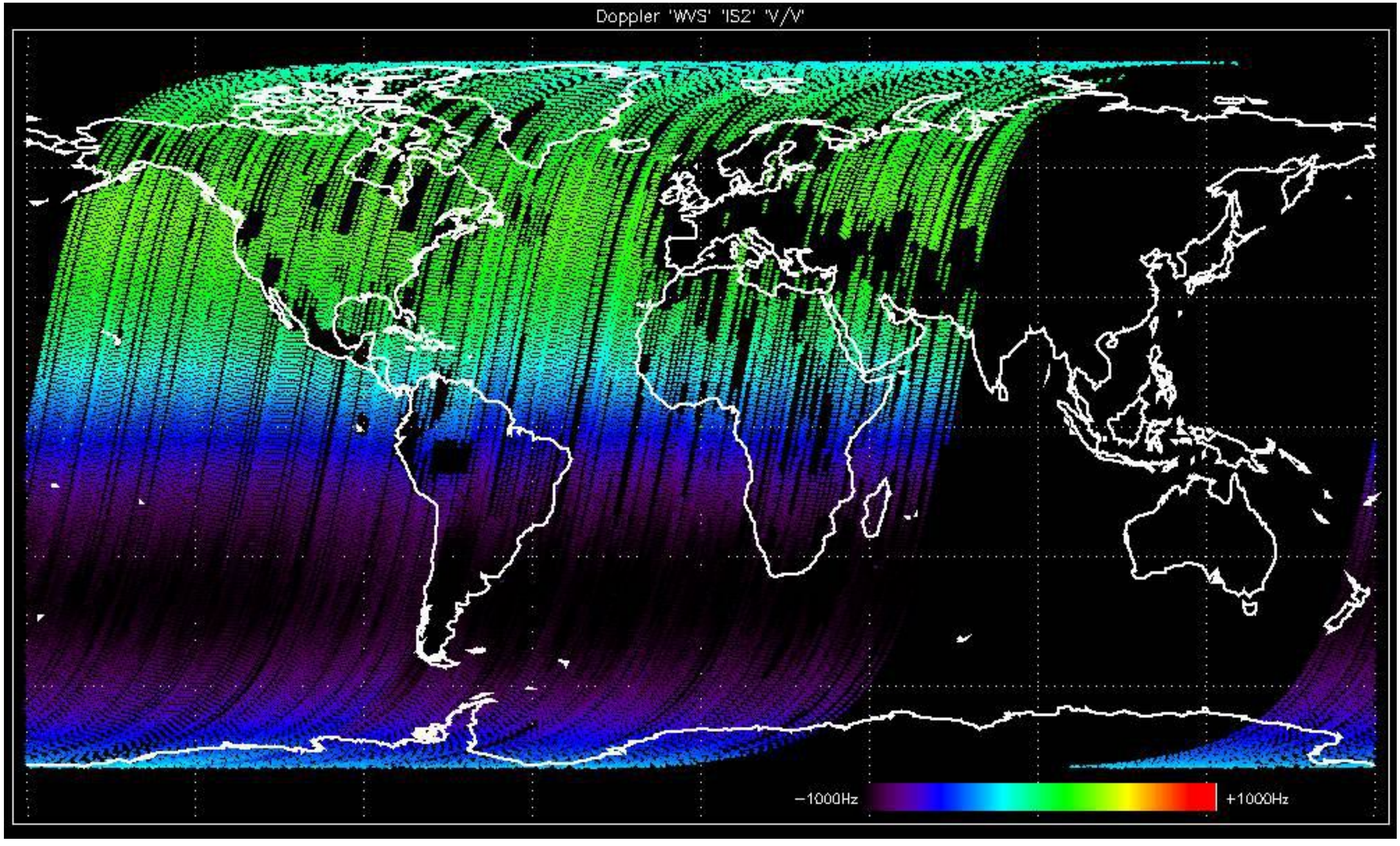
Analysis performed on data acquired from 17-Jul-2003 06:11:55 until 18-Jul-2003 08:10:29.
No anomalies observed on internal calibration pulses.
Stable evolution of the calibration pulses

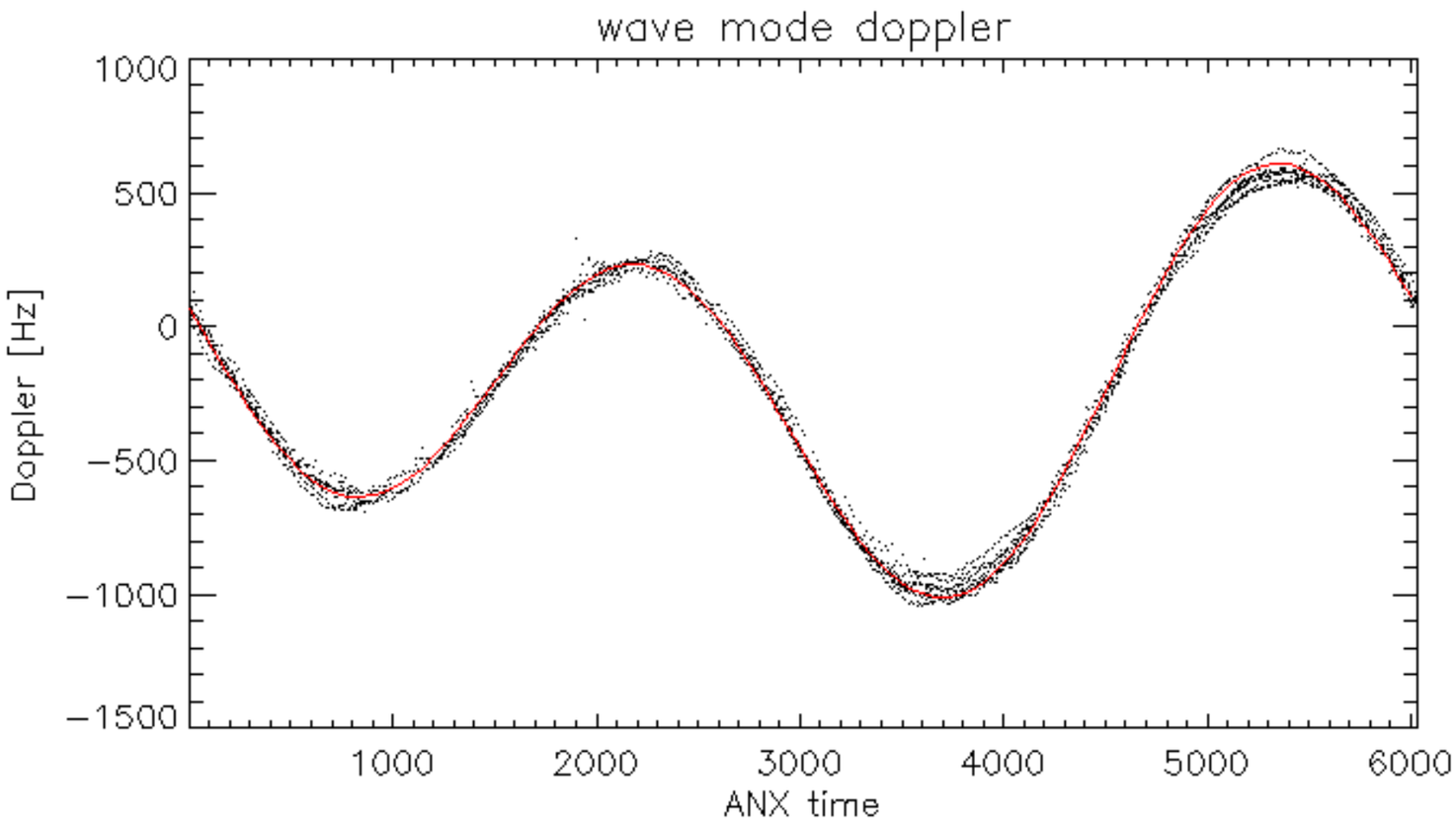

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

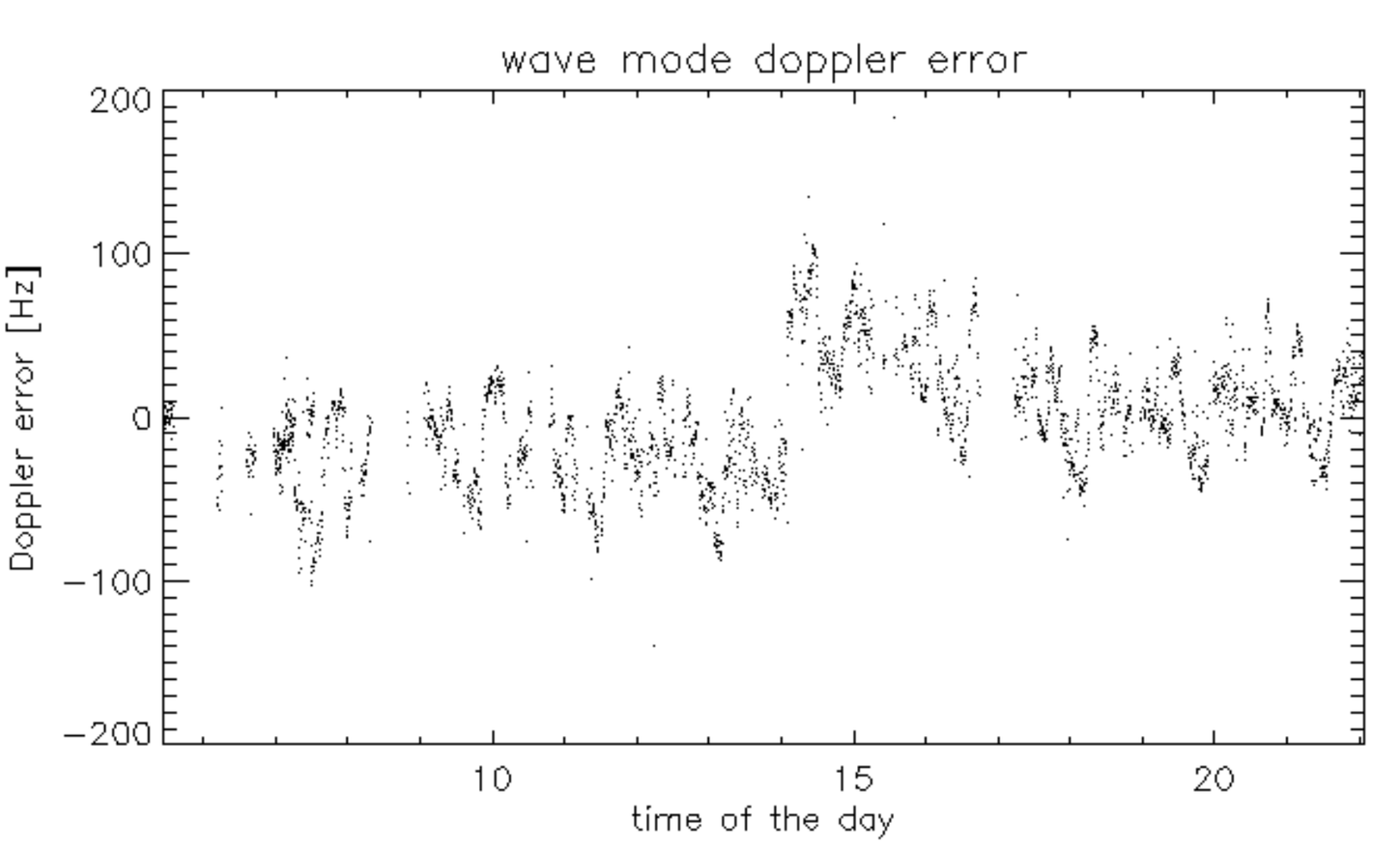
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

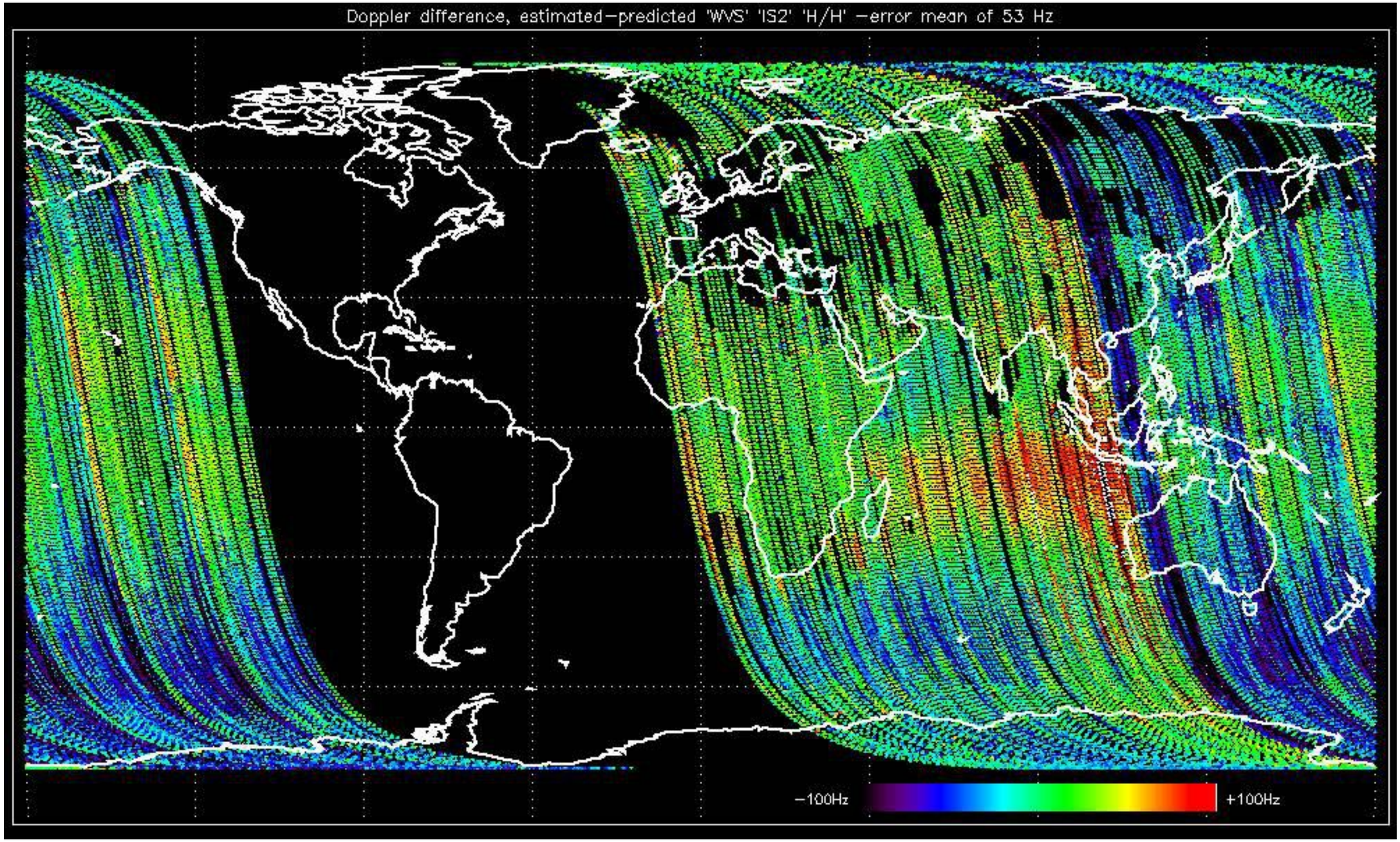
No anomalies observed for Doppler evolution.
Doppler analysis performed over the last 60 days

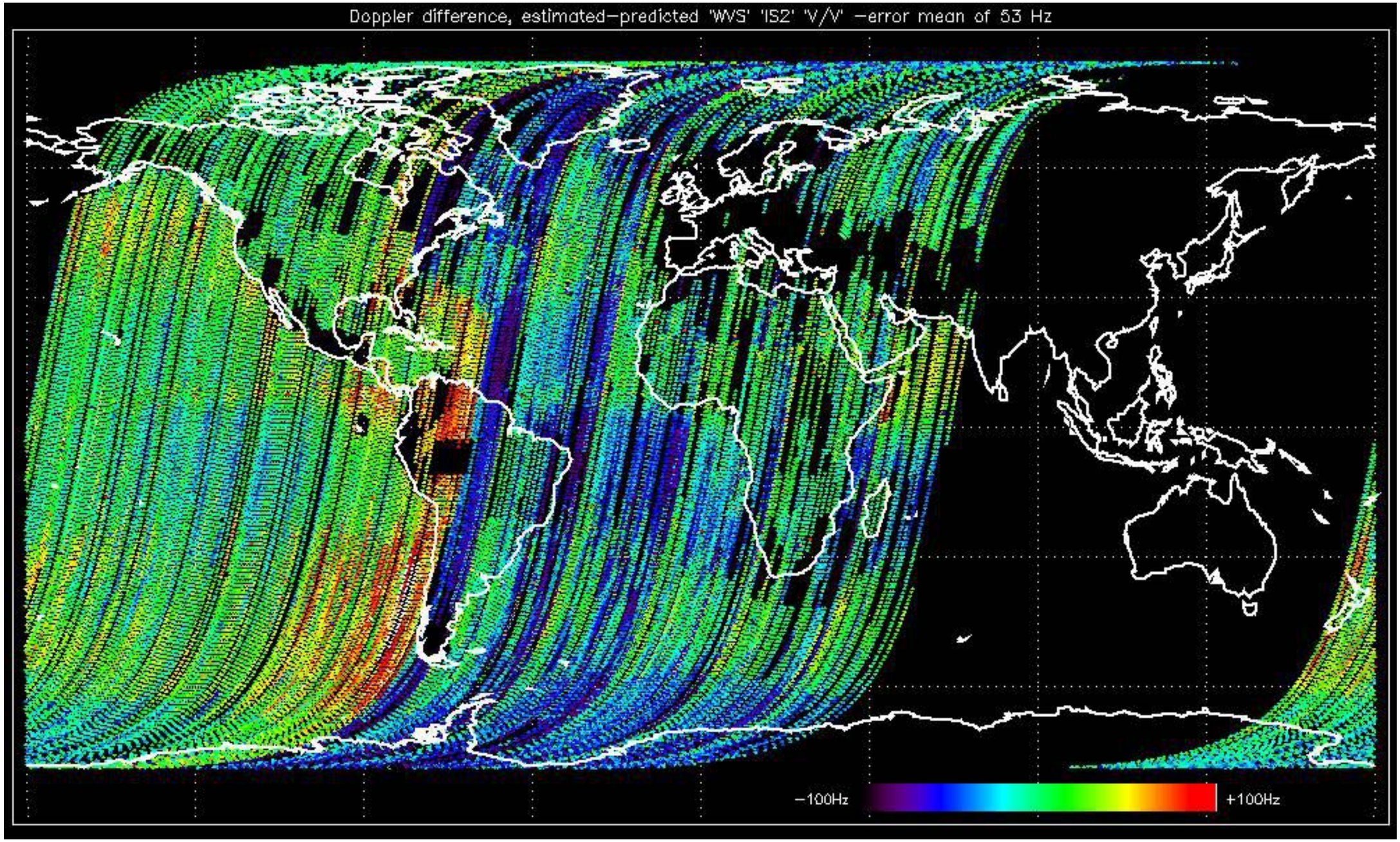

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


Doppler 'WVS' 'IS2' 'V/V'
−1000Hz
+1000Hz


wave mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
1000
2000
3000
4000
5000
6000
ANX time

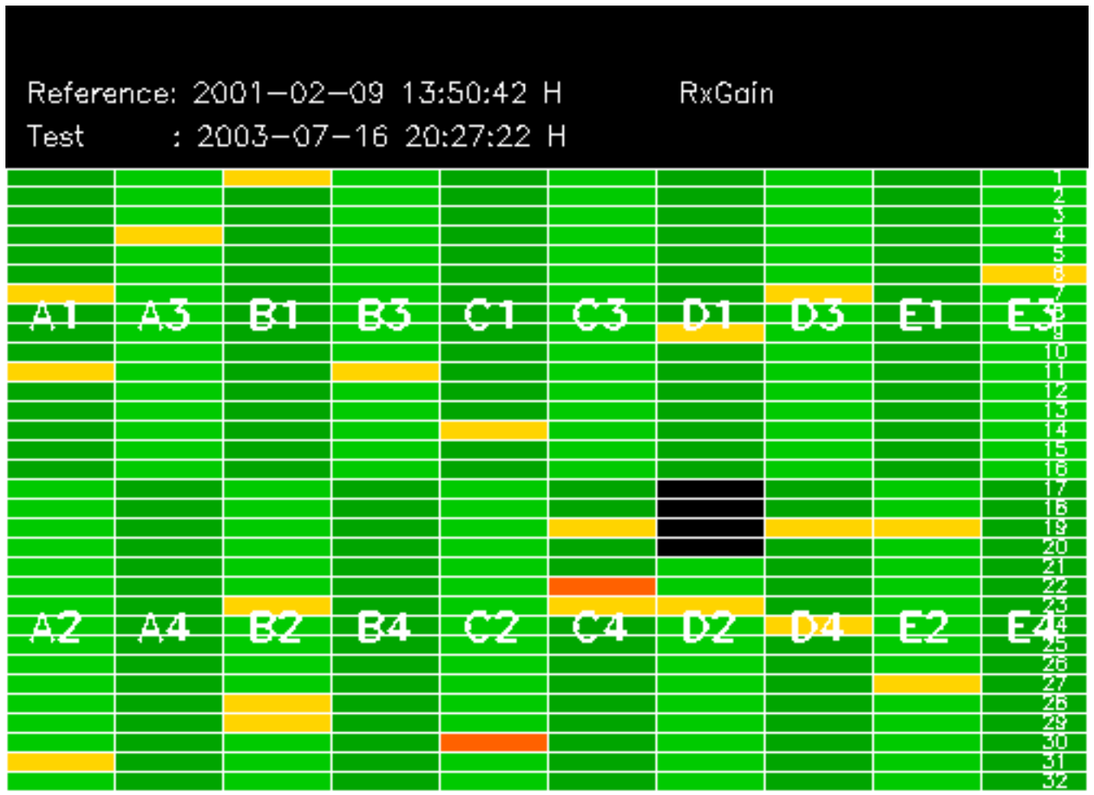

wave mode doppler error
Doppler error [Hz]
200
100
0
−100
−200
10
15
20
time of the day

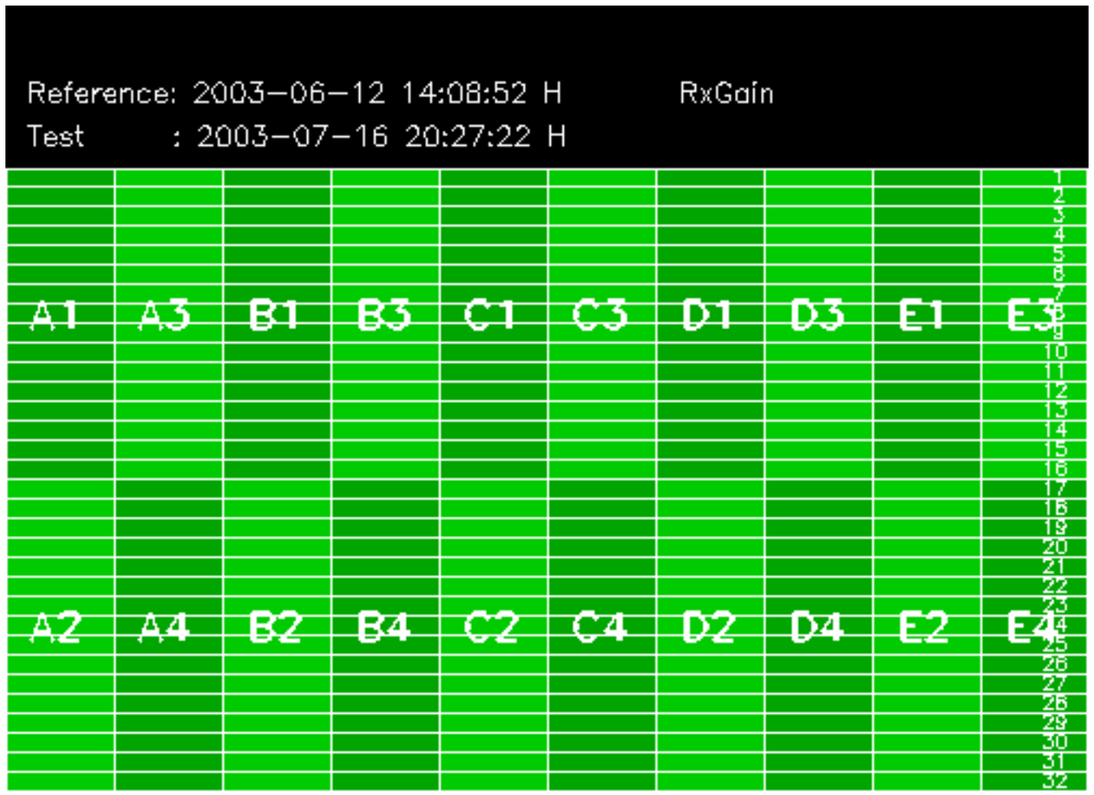

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of 53 Hz
−100Hz
+100Hz

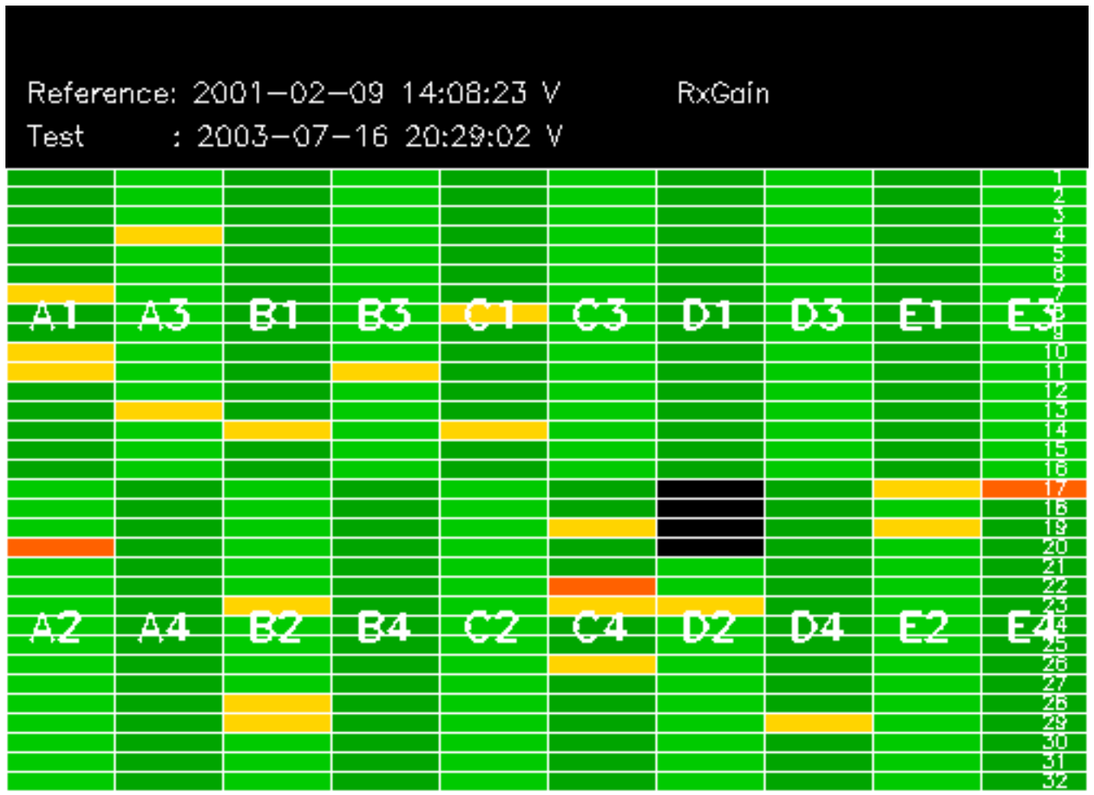

Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of 53 Hz
−100Hz
+100Hz

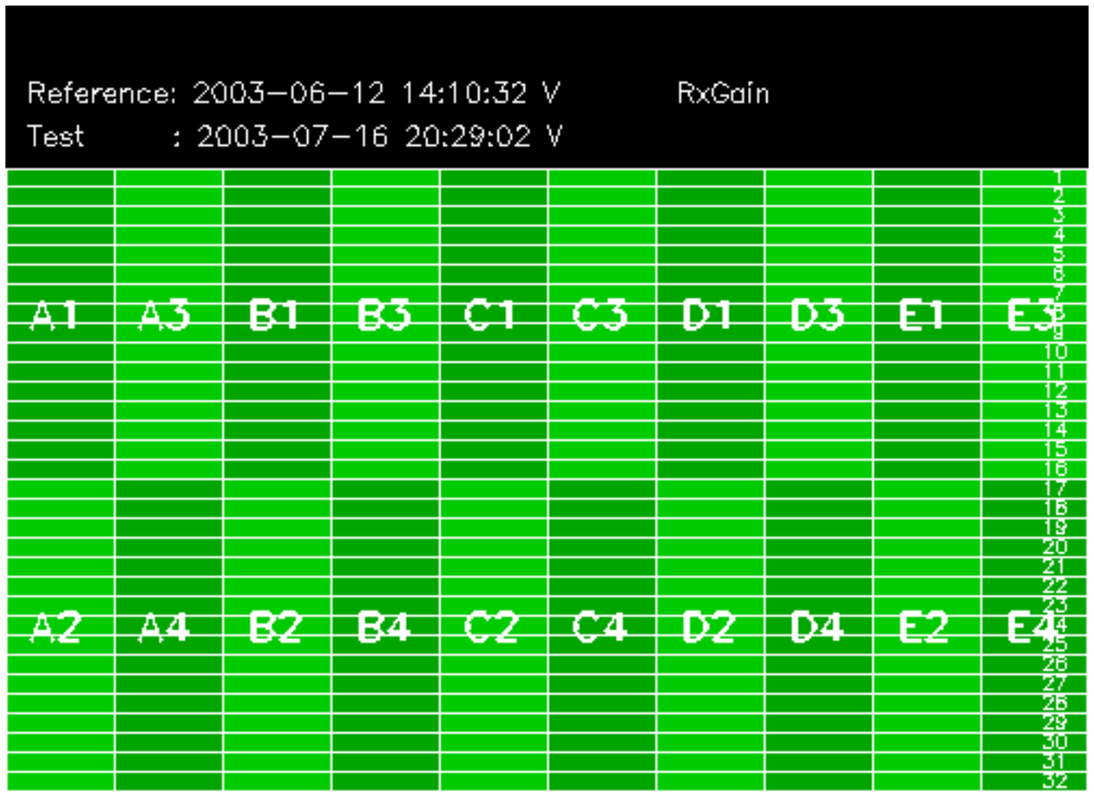
No MS product on 17-Jul-2003.
Analysis results are the same as in the 16-Jul-2003 report (MS data acquired on 16-Jul-2003, H and V polarization).
No anomalies observed.

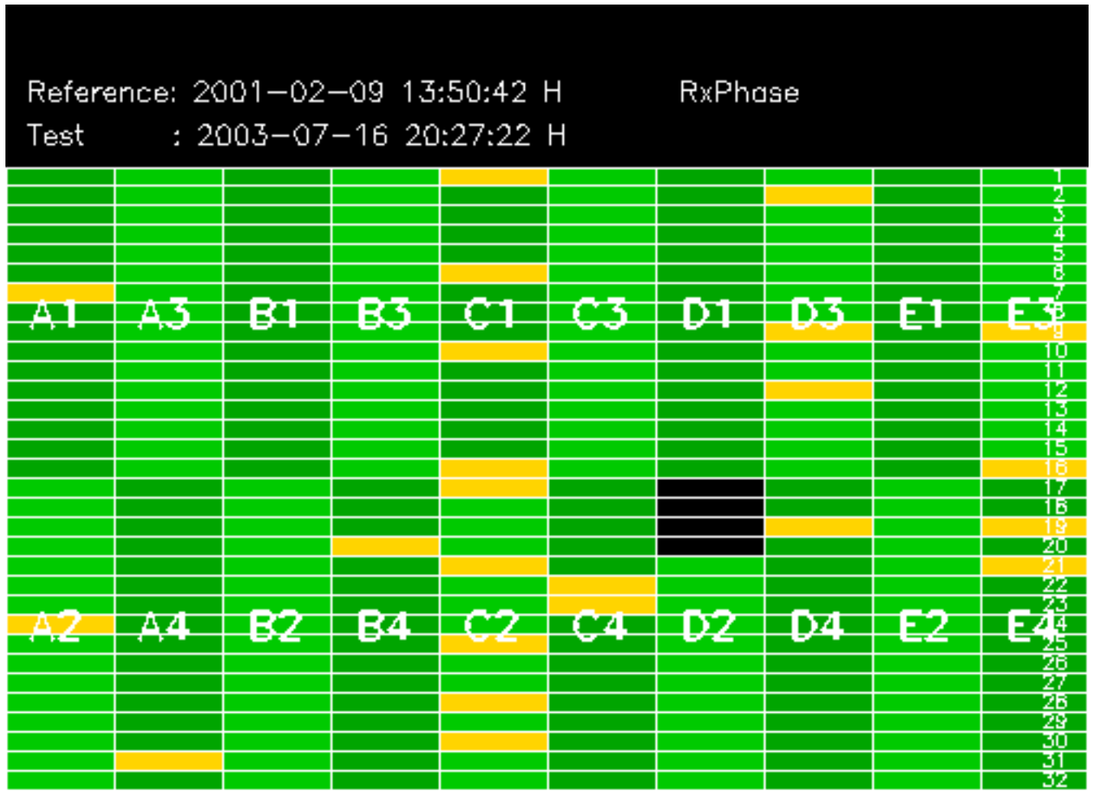
No anomalies observed.
Nominal values of I and Q level0 statistics.

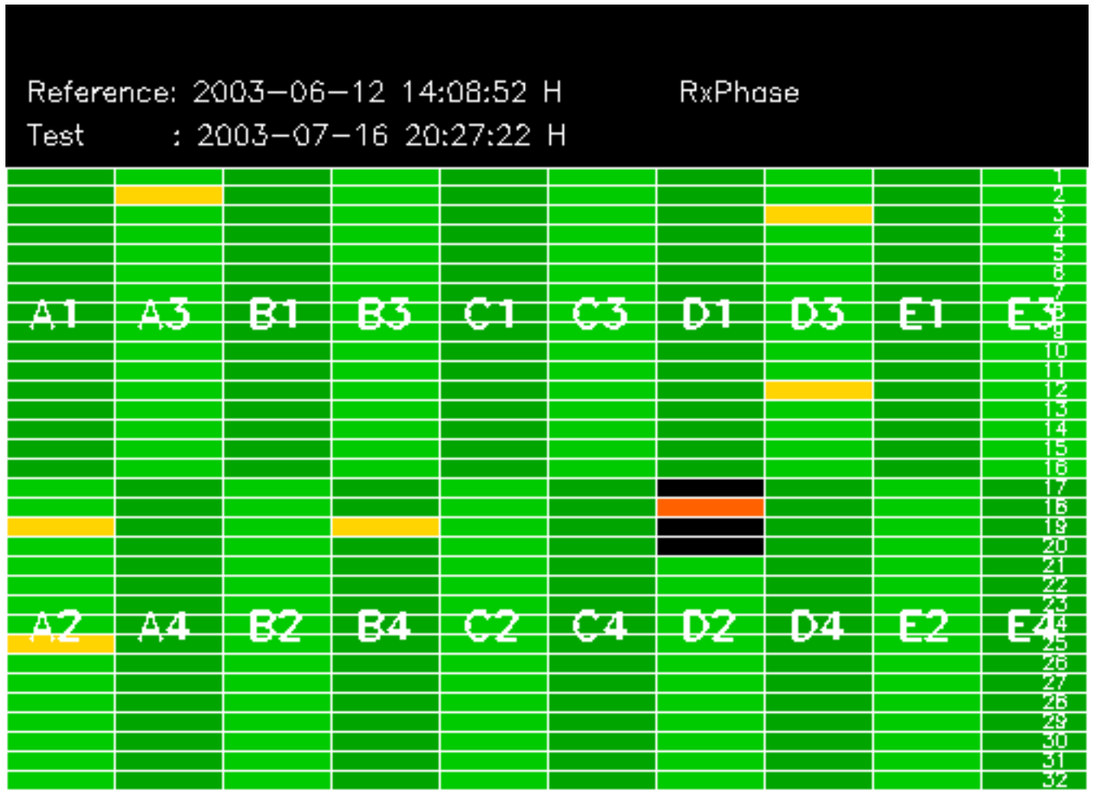

Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2003-07-16 20:27:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

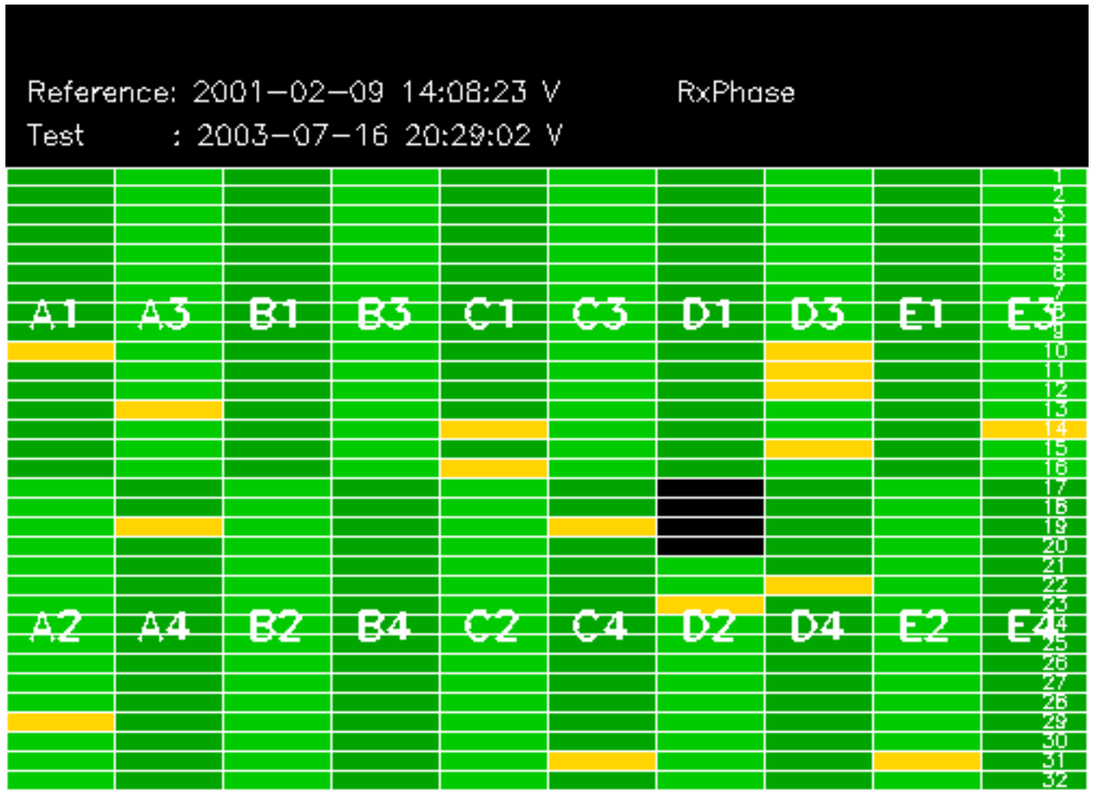

Reference: 2003-06-12 14:08:52 H
Test : 2003-07-16 20:27:22 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

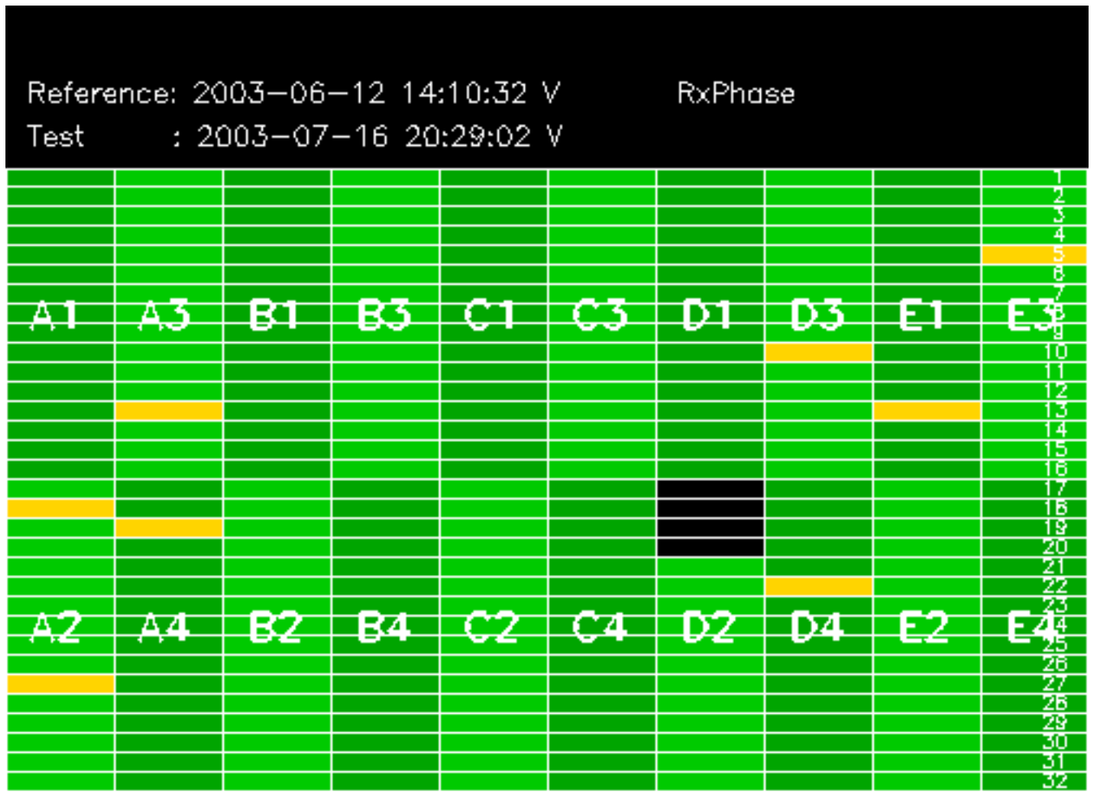

Reference: 2001-02-09 14:08:23 V
Test : 2003-07-16 20:29:02 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

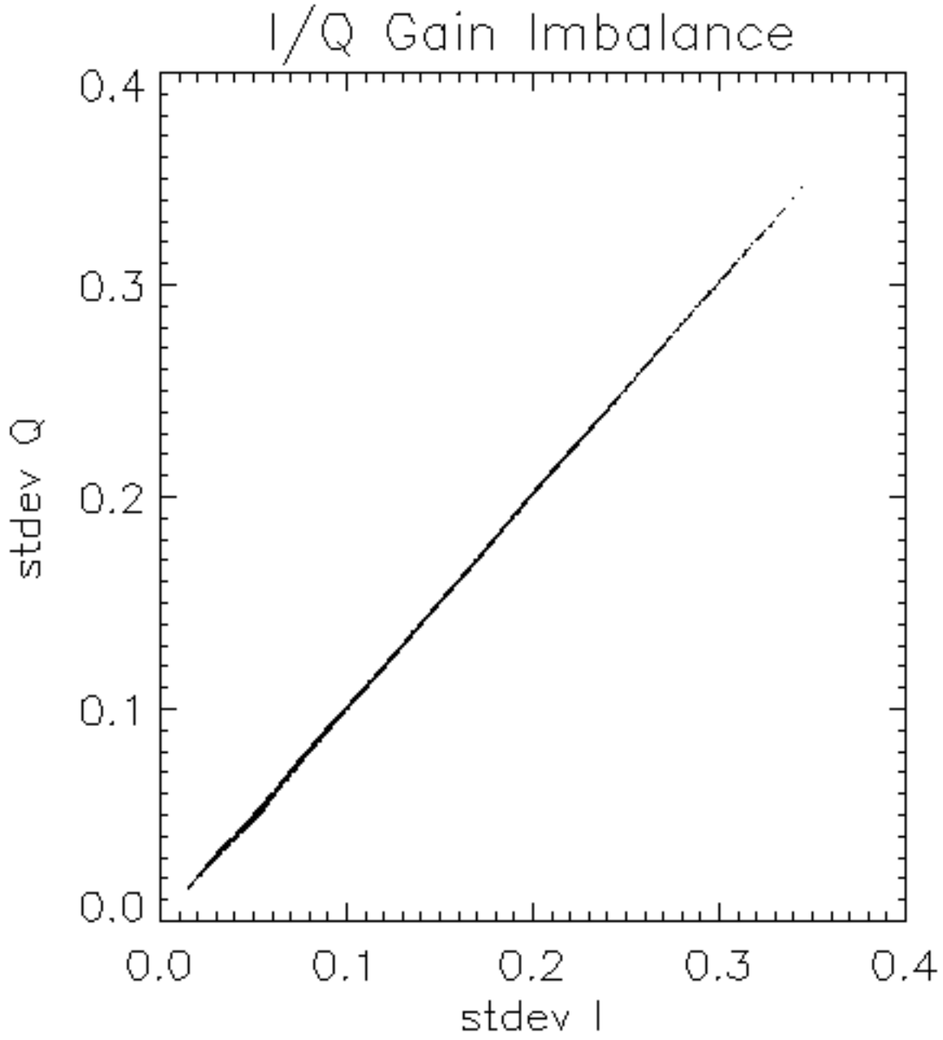

Reference: 2003-06-12 14:10:32 V
Test : 2003-07-16 20:29:02 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

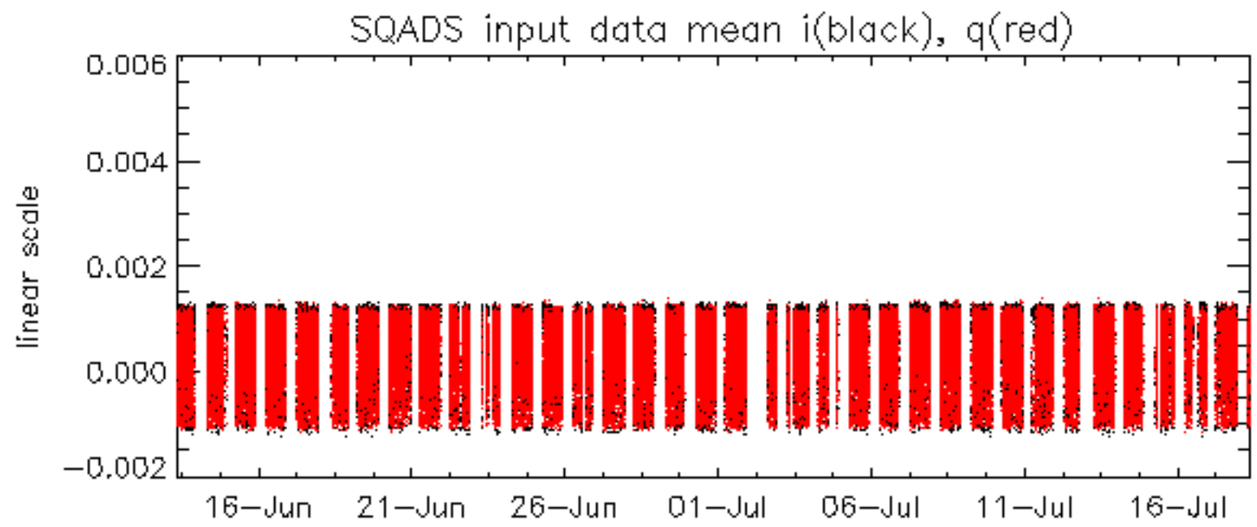

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2003-07-16 20:27:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

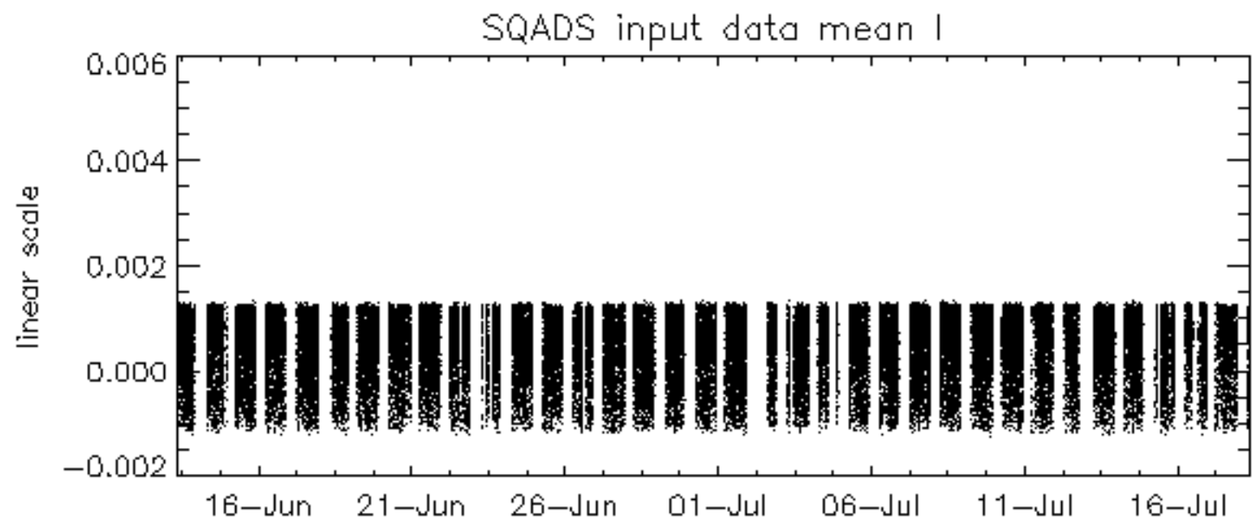

Reference: 2003-06-12 14:08:52 H
Test : 2003-07-16 20:27:22 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

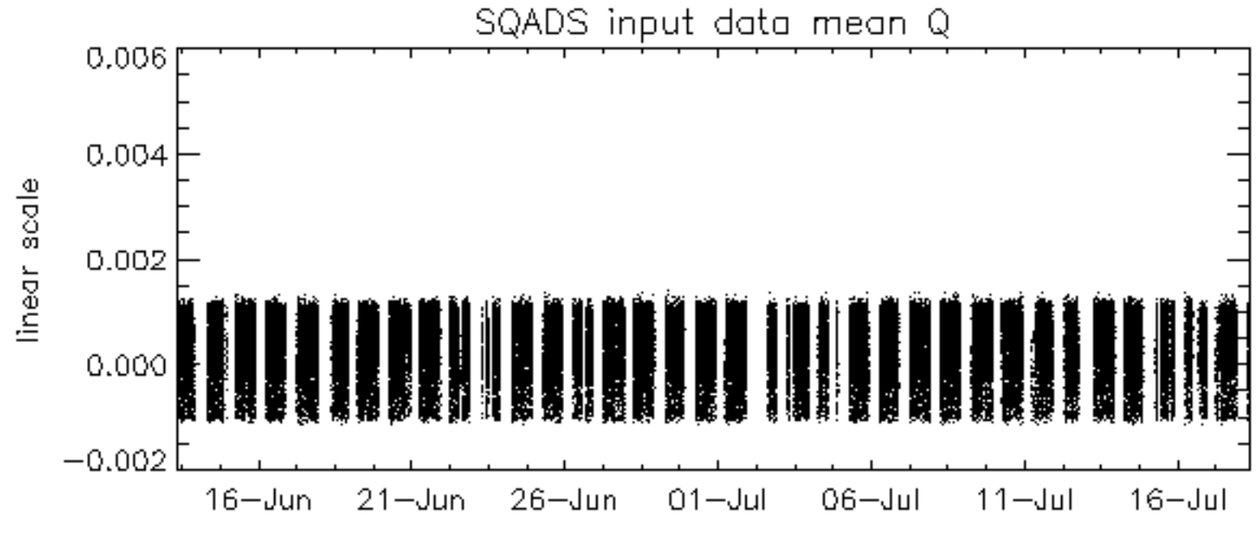

Reference: 2001-02-09 14:08:23 V
Test : 2003-07-16 20:29:02 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

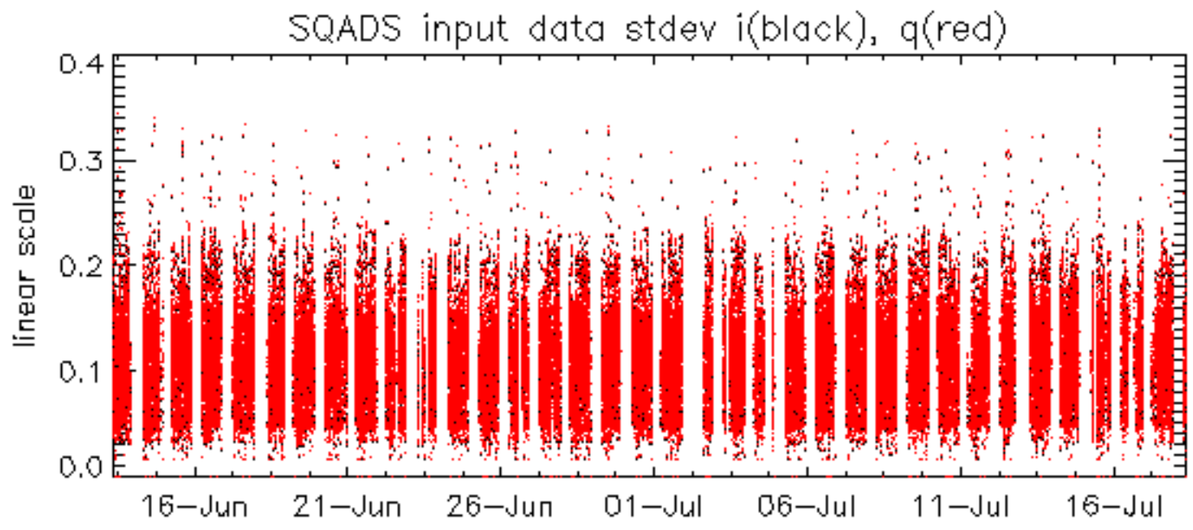

Reference: 2003-06-12 14:10:32 V
Test : 2003-07-16 20:29:02 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

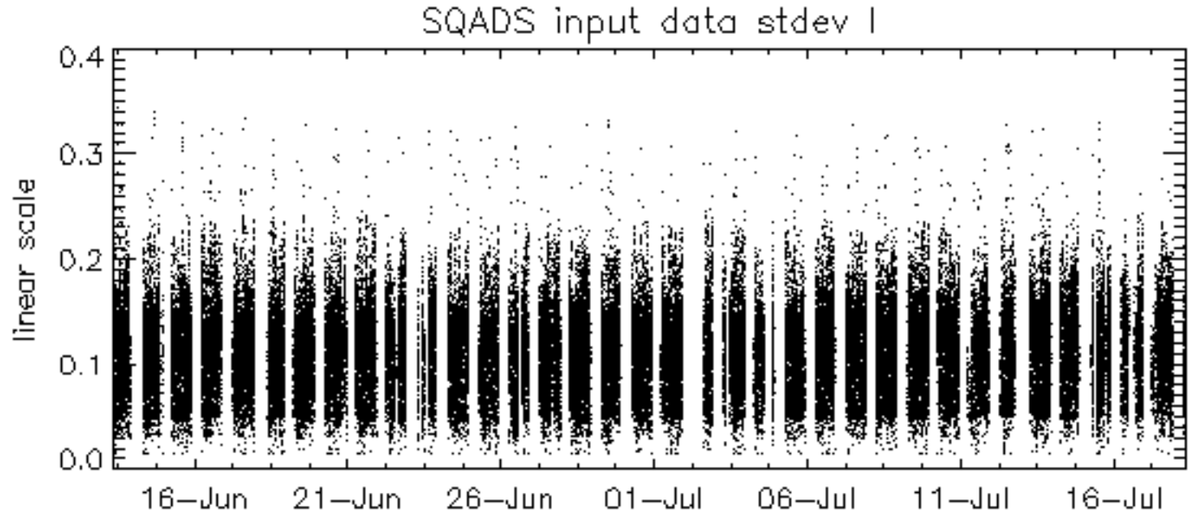

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

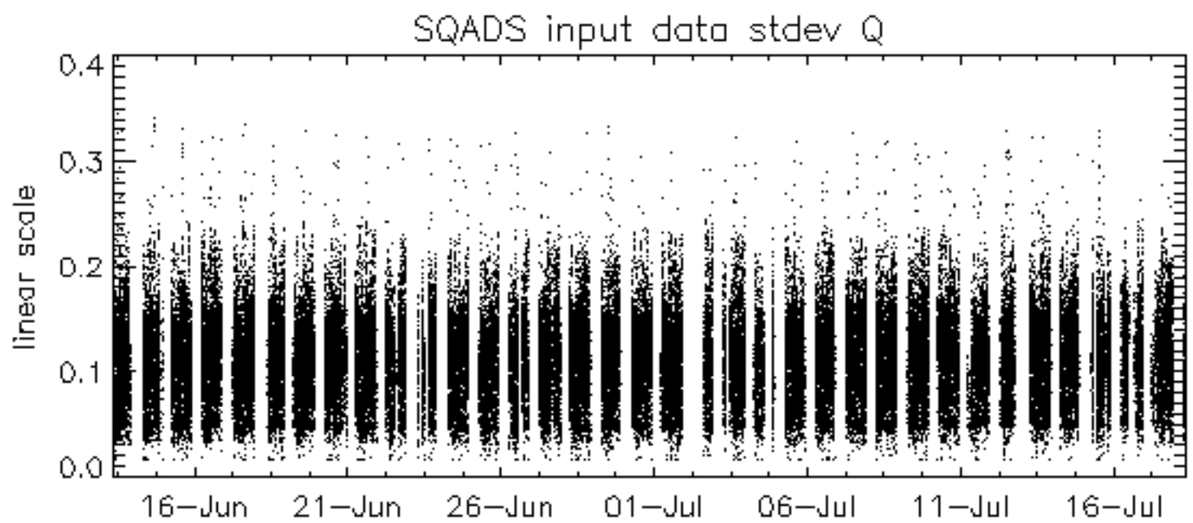

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul

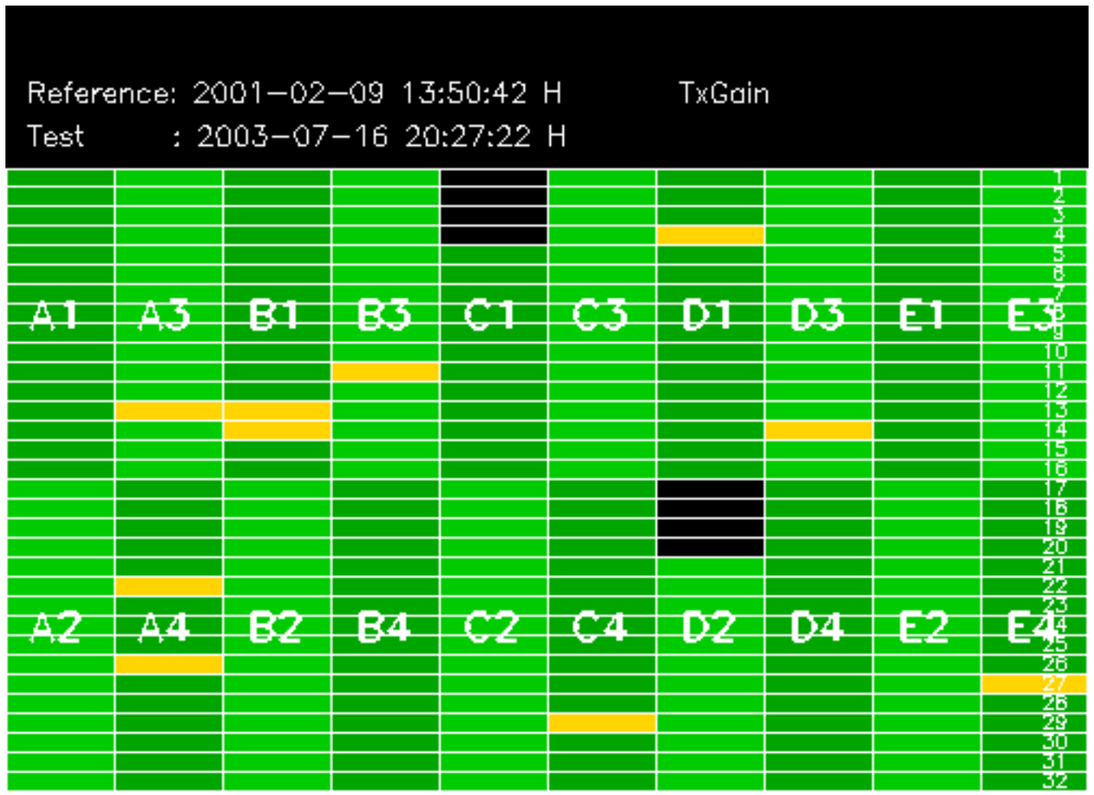

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul

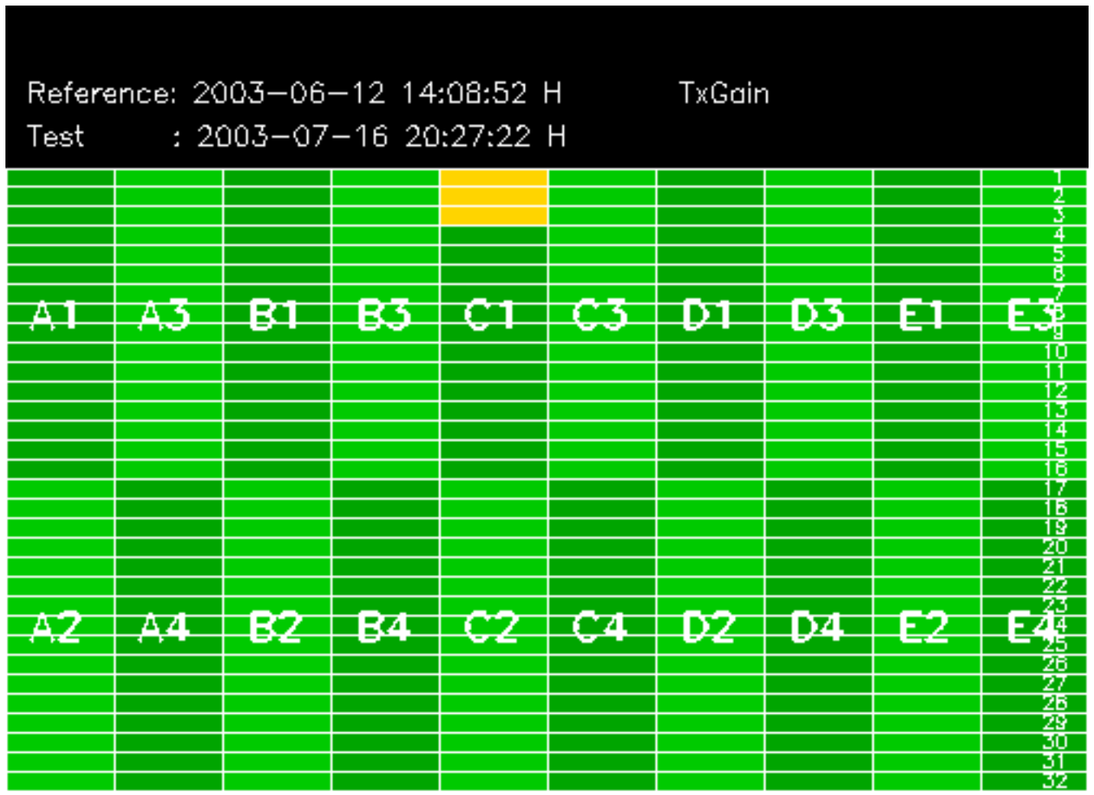

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul

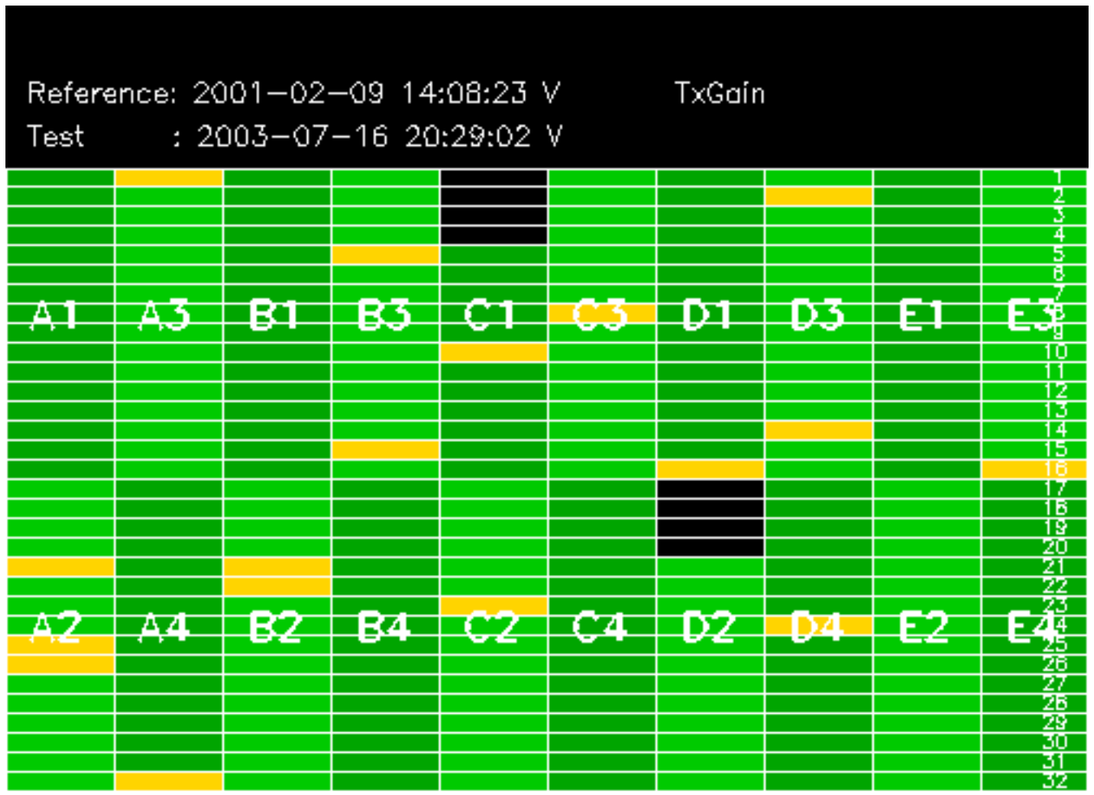

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jun
21–Jun
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul

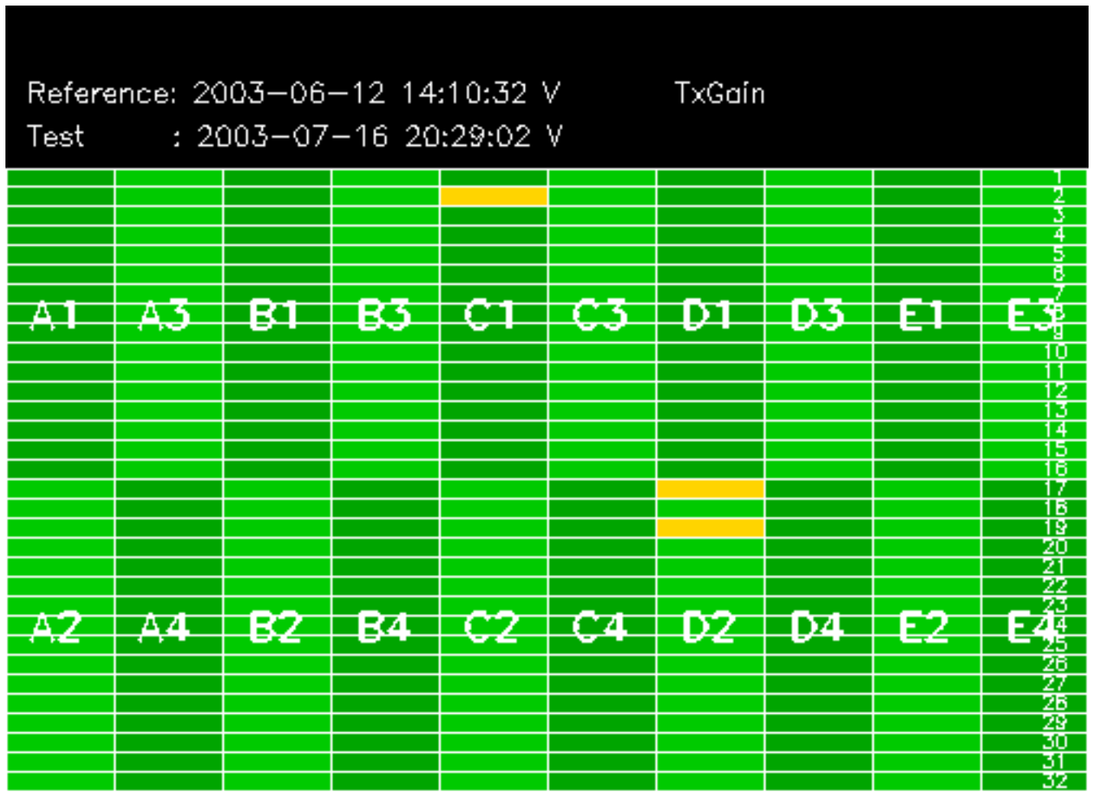

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jun
21–Jun
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul

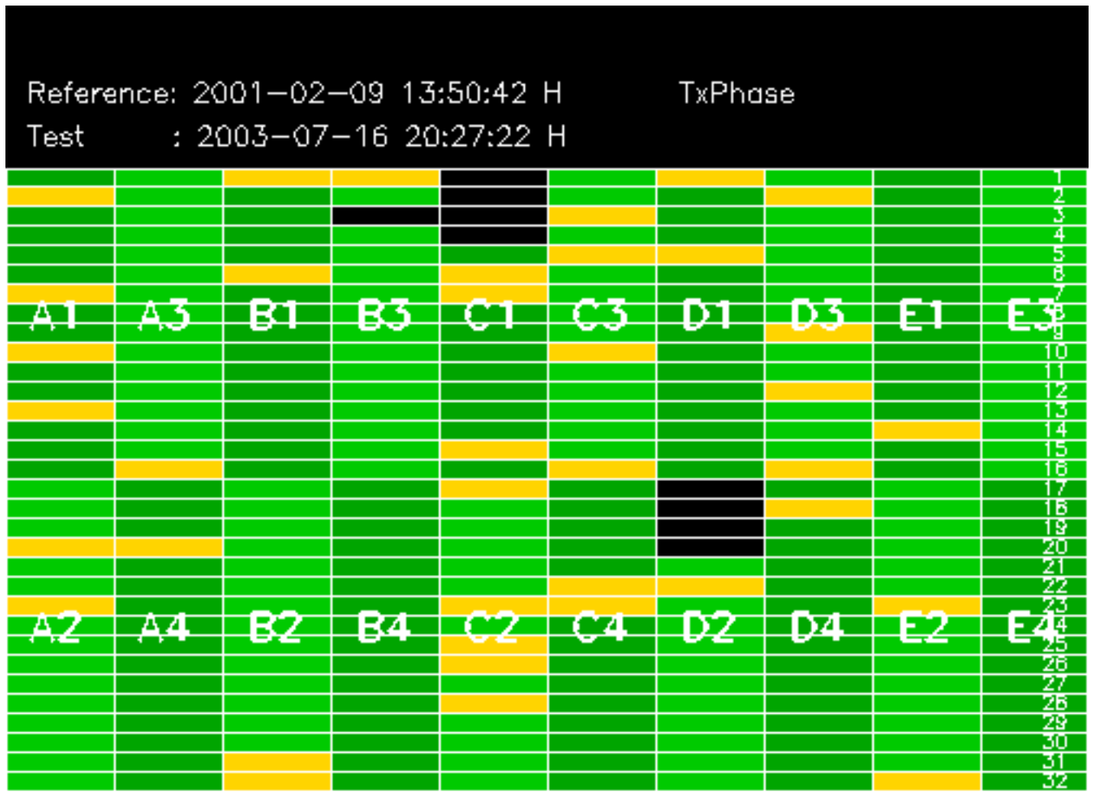

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jun
21–Jun
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul

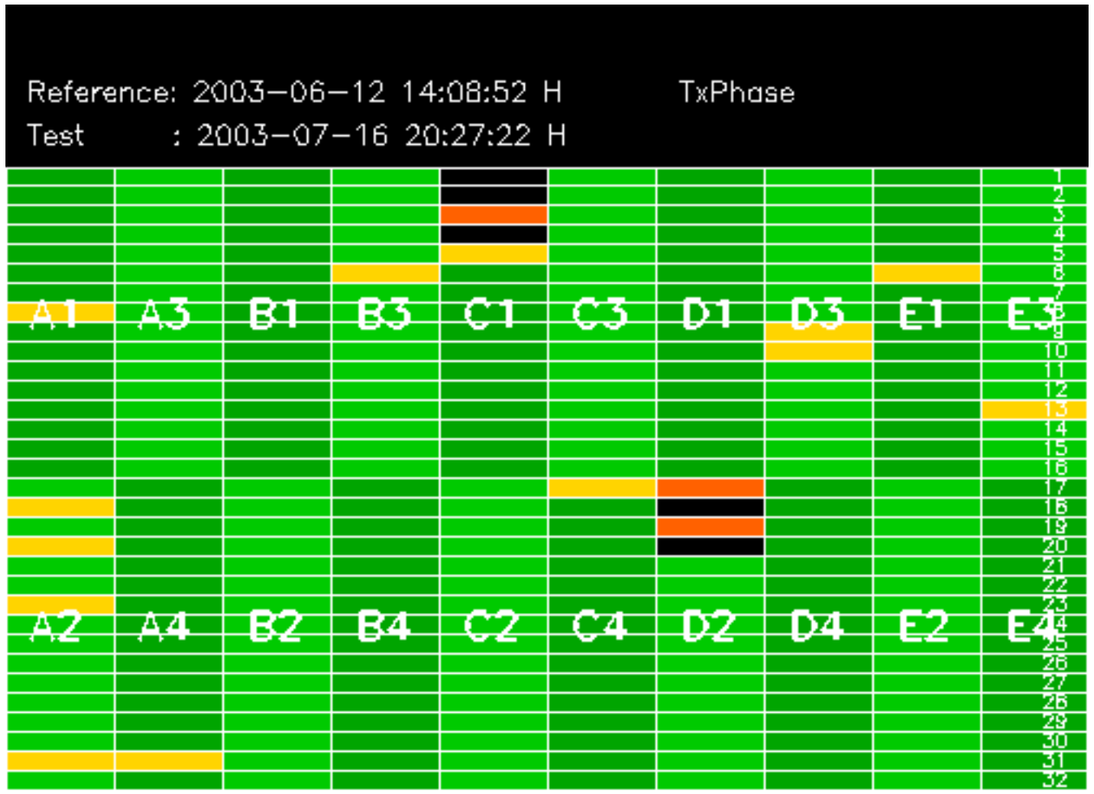

Reference: 2001-02-09 13:50:42 H
Test : 2003-07-16 20:27:22 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

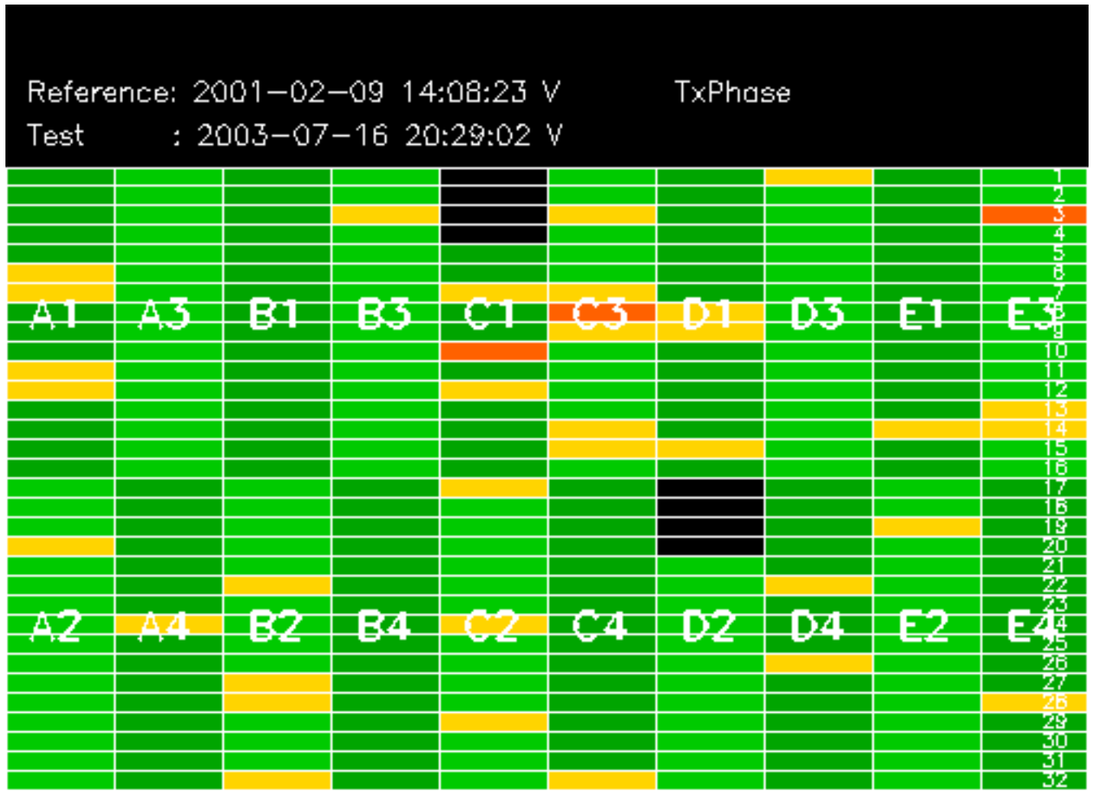

Reference: 2003-06-12 14:08:52 H
Test : 2003-07-16 20:27:22 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

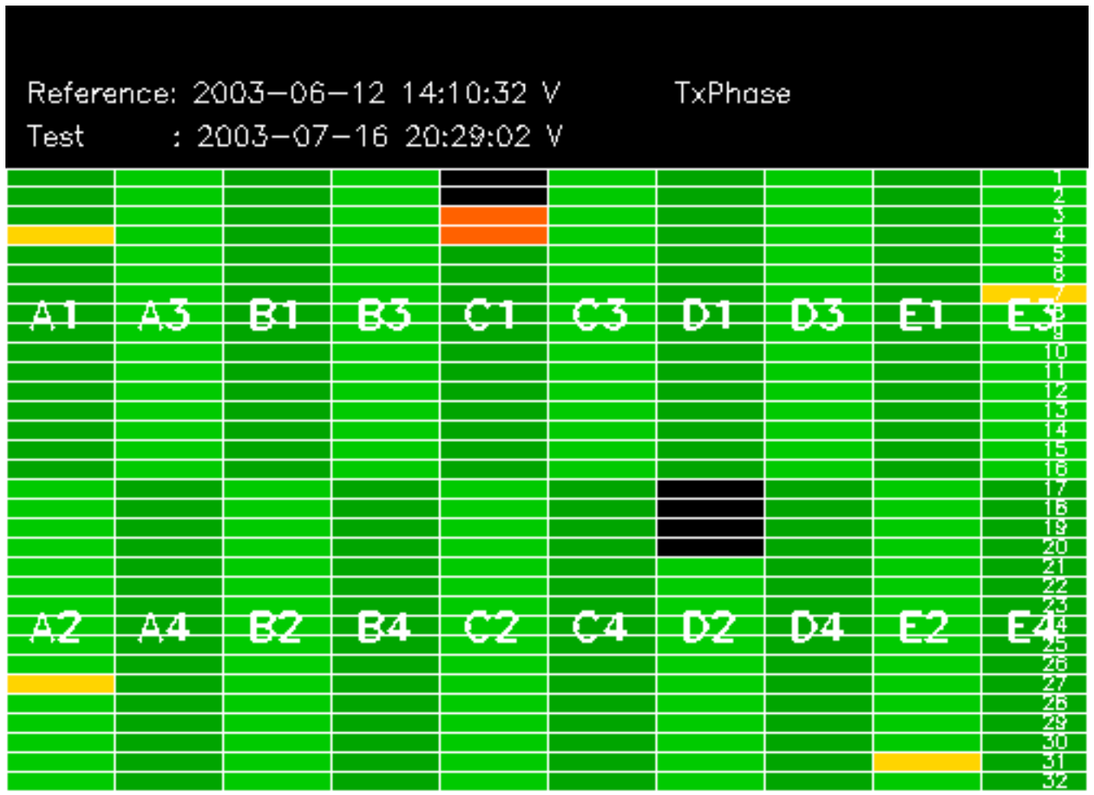

Reference: 2001-02-09 14:08:23 V
Test : 2003-07-16 20:29:02 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2003-07-16 20:29:02 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2003-07-16 20:27:22 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 : 2003-07-16 20:27:22 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2003-07-16 20:29:02 V
TxPhase
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 : 2003-07-16 20:29:02 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

No ASAR unavailability for the reported period.