PRELIMINARY REPORT OF 050829

last update on Mon Aug 29 11:00:52 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

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-08-28 00:00:00 to 2005-08-29 11:00:52

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

2.3 - Browse Visual Inspection

2.4 - Data Analysis

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

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050827 064406
H	20050828 061229

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	-3.313265	0.033173	0.053986

7	P1	-3.171305	0.030093	-0.036174
11	P1	-4.719547	0.033262	-0.034225
15	P1	-5.610079	0.049541	-0.071553
19	P1	-3.809105	0.004106	-0.042226
22	P1	-4.619975	0.011767	0.006063
26	P1	-4.824069	0.022449	-0.016710
30	P1	-7.230583	0.026943	-0.061962
3	P1	-15.536894	0.078608	0.003145
7	P1	-15.537815	0.162835	-0.181480
11	P1	-21.791958	0.285598	-0.170581
15	P1	-11.293823	0.075804	-0.041649
19	P1	-14.505914	0.035539	-0.068845
22	P1	-15.642490	0.334233	0.314710
26	P1	-17.305904	0.183677	0.166683
30	P1	-17.826494	0.272615	-0.094908

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.786057	0.085022	0.152351
7	P2	-21.933075	0.100400	0.193599
11	P2	-13.510938	0.107057	0.203616
15	P2	-7.057819	0.090754	0.065535
19	P2	-9.589206	0.095294	0.005194
22	P2	-16.824535	0.098046	0.071356
26	P2	-16.509462	0.097772	0.011066
30	P2	-18.803144	0.086134	0.000586

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.157439	0.002842	0.002637
7	P3	-8.157439	0.002842	0.002637
11	P3	-8.157439	0.002842	0.002637
15	P3	-8.157439	0.002842	0.002637
19	P3	-8.157439	0.002842	0.002637
22	P3	-8.157439	0.002842	0.002637
26	P3	-8.157451	0.002843	0.002560
30	P3	-8.157451	0.002843	0.002560

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	-2.808633	0.104282	0.085007
7	P1	-2.971567	0.070961	0.070316
11	P1	-4.019306	0.026499	0.006004
15	P1	-3.627601	0.069506	0.027997
19	P1	-3.630548	0.014476	-0.015212
22	P1	-5.693915	0.043024	-0.069180
26	P1	-7.363838	0.029280	-0.003009
30	P1	-6.303718	0.071598	0.035470
3	P1	-10.939821	0.052230	0.004022
7	P1	-10.481070	0.171910	-0.040901
11	P1	-12.645076	0.100214	0.013176
15	P1	-11.622680	0.127939	-0.193336
19	P1	-15.477421	0.059603	0.057609
22	P1	-25.546242	2.164159	0.555775
26	P1	-15.254008	0.254660	0.224340
30	P1	-20.084221	1.304429	-0.092358

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.494539	0.047917	0.199764
7	P2	-22.004662	0.037305	0.069325
11	P2	-9.543950	0.066933	0.185808
15	P2	-5.091358	0.040009	0.056225
19	P2	-6.866590	0.061389	0.074018
22	P2	-7.040227	0.040350	0.069443

26	P2	-23.960850	0.037667	0.040440
30	P2	-21.937973	0.043259	0.051682

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998121	0.004195	0.001226
7	P3	-7.998150	0.004183	0.000696
11	P3	-7.998049	0.004189	0.000863
15	P3	-7.998015	0.004192	0.000546
19	P3	-7.998110	0.004190	0.001039
22	P3	-7.998023	0.004190	0.000982
26	P3	-7.998029	0.004184	0.001486
30	P3	-7.997998	0.004176	0.000970

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	0.000440939
	stdev	2.28588e-07
MEAN Q	mean	0.000472234
	stdev	2.37912e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126866
	stdev	0.000995348
STDEV Q	mean	0.127118
	stdev	0.00100488

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005082[789]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines

7 - Doppler Analysis

Preliminary report.The data is not yet controled

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

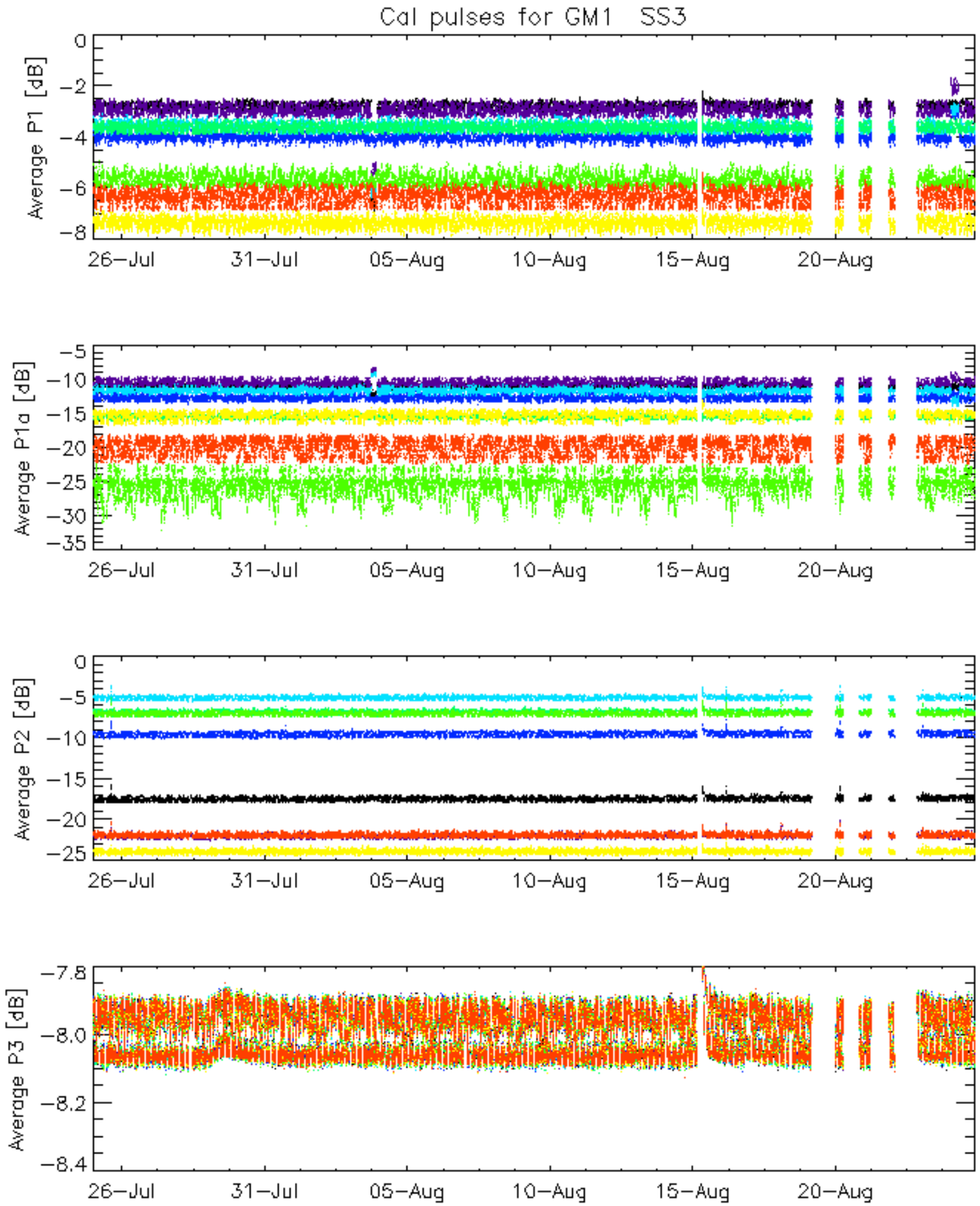
7.4 - Unbiased Doppler Error for GM1

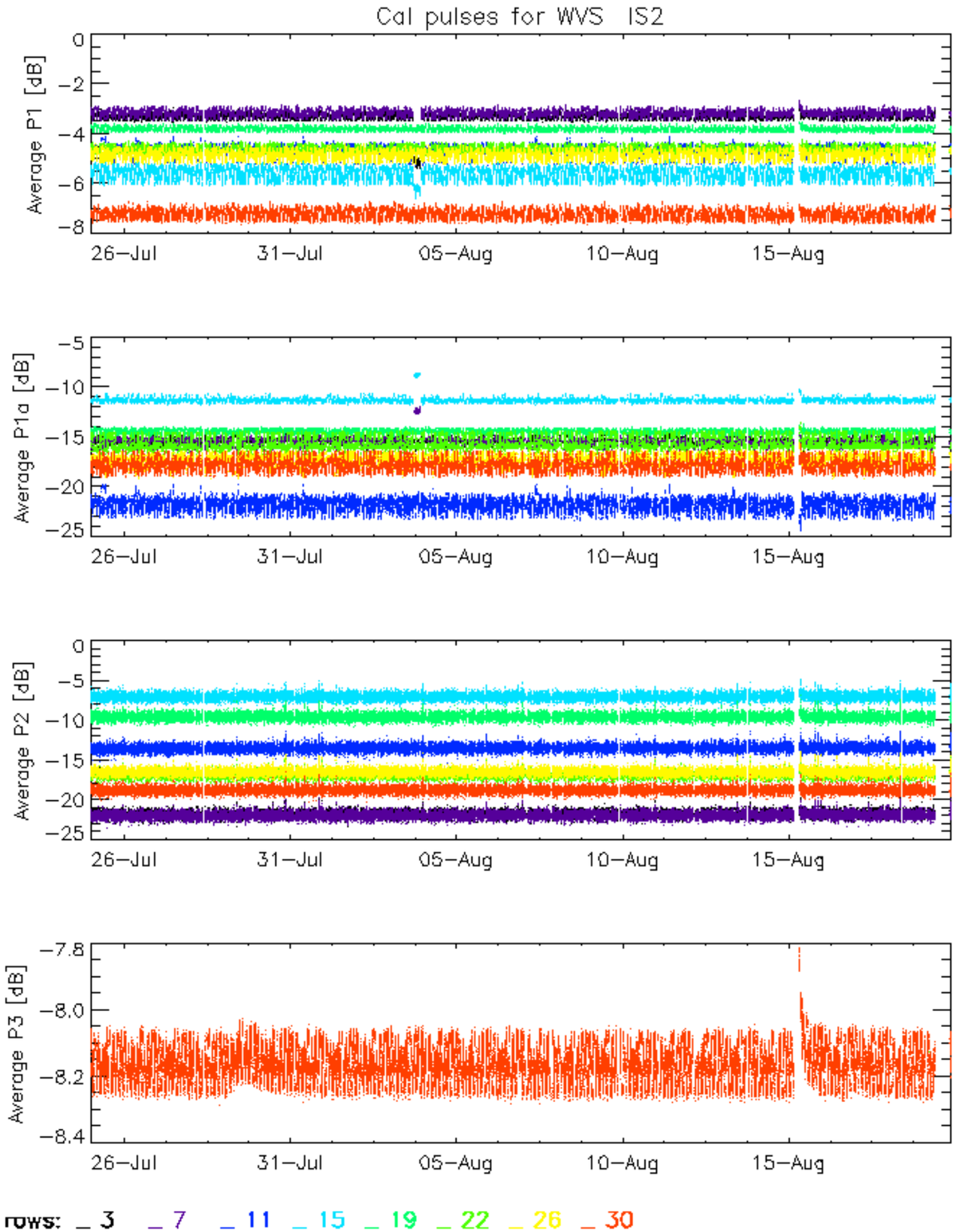
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

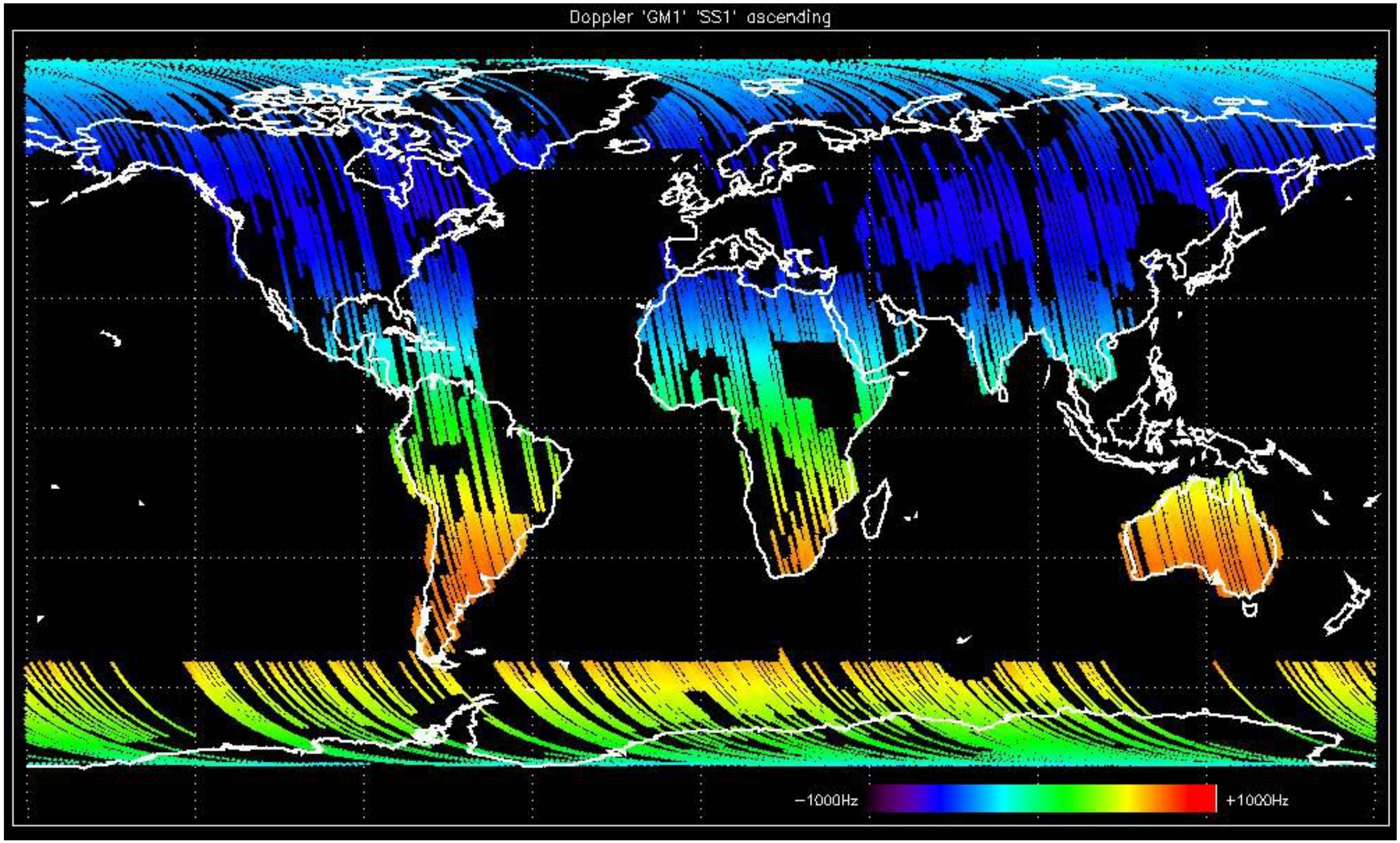

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−5
−10
−15
−20
−25
−30
−35
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

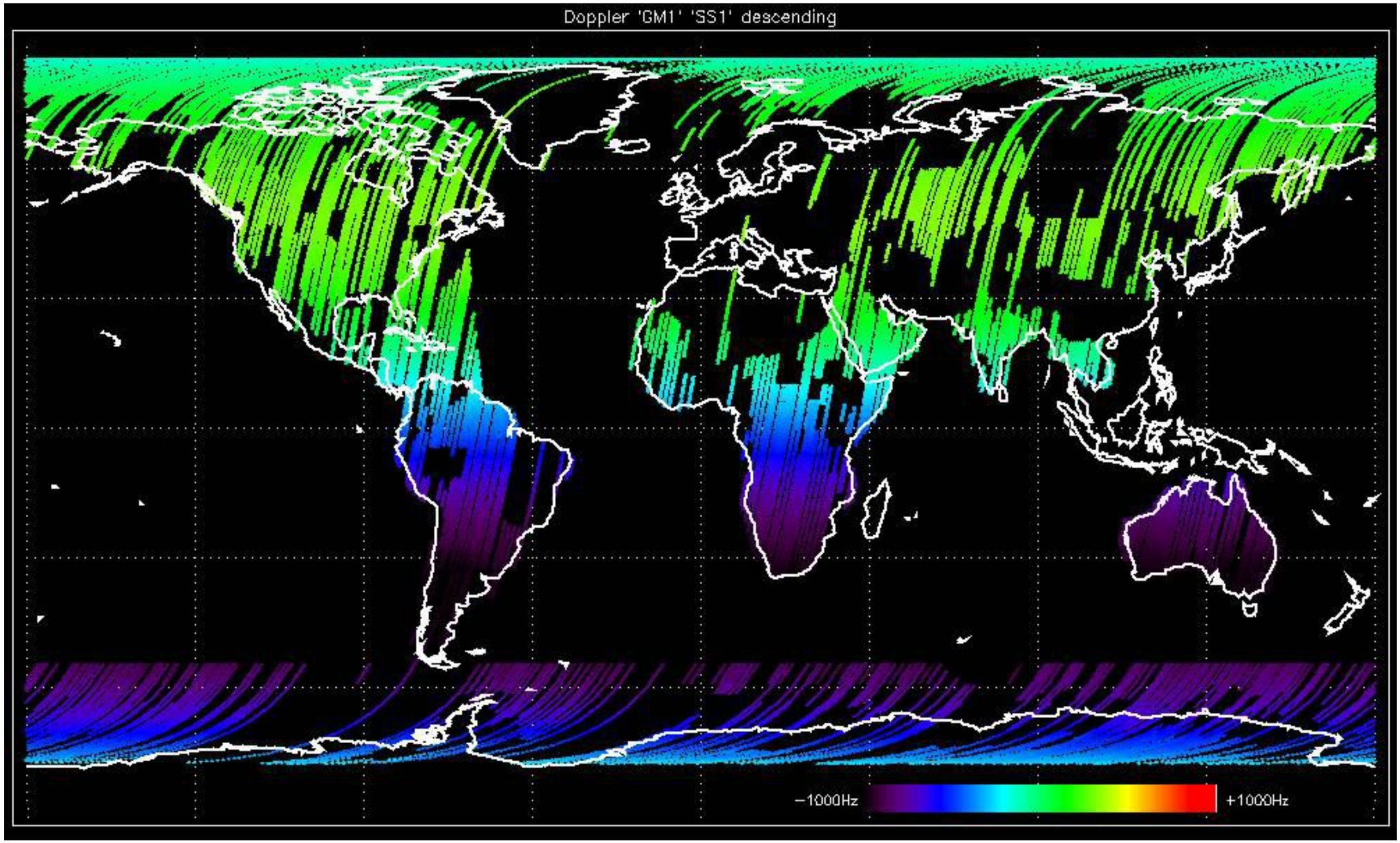

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

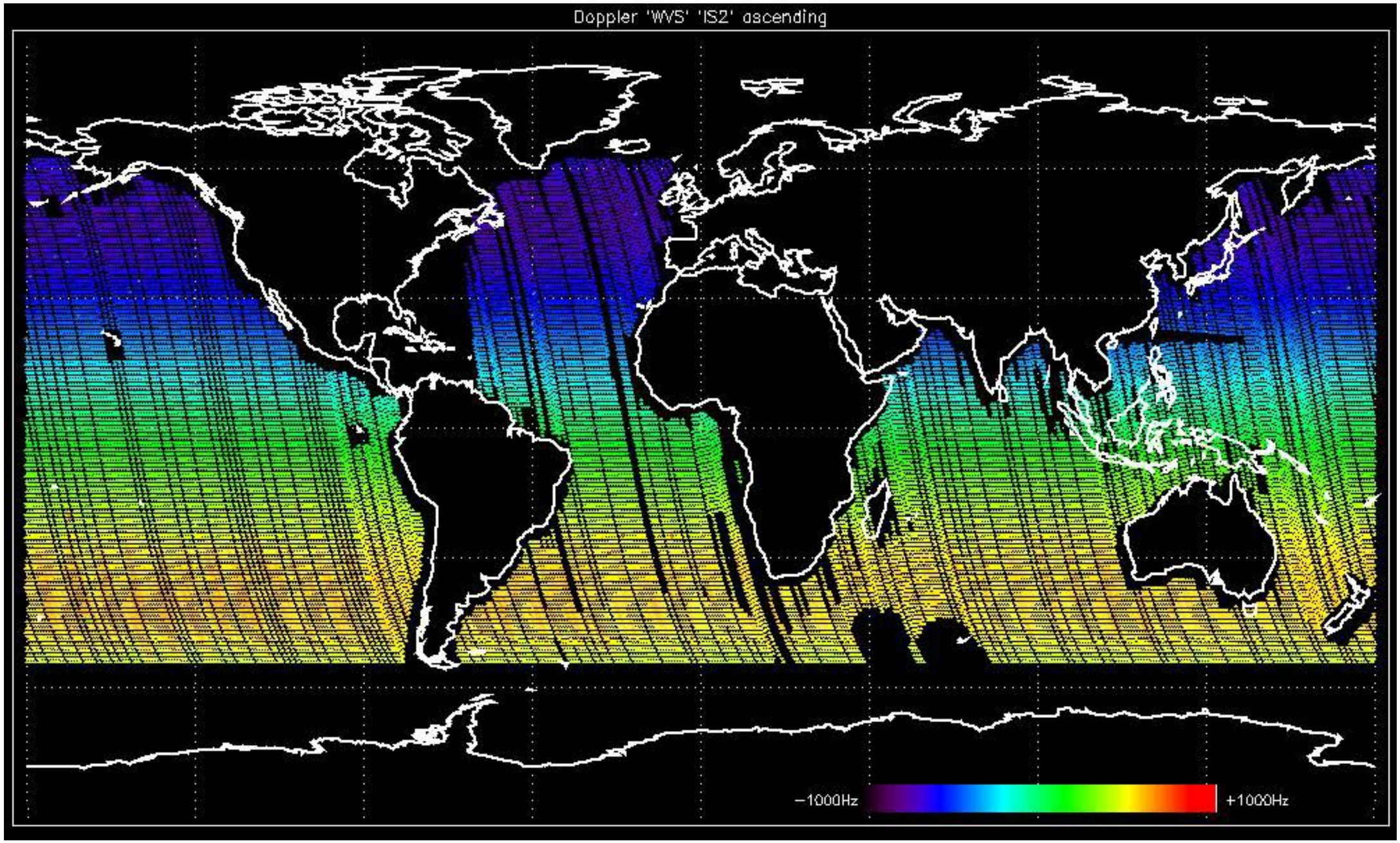
No anomalies observed.

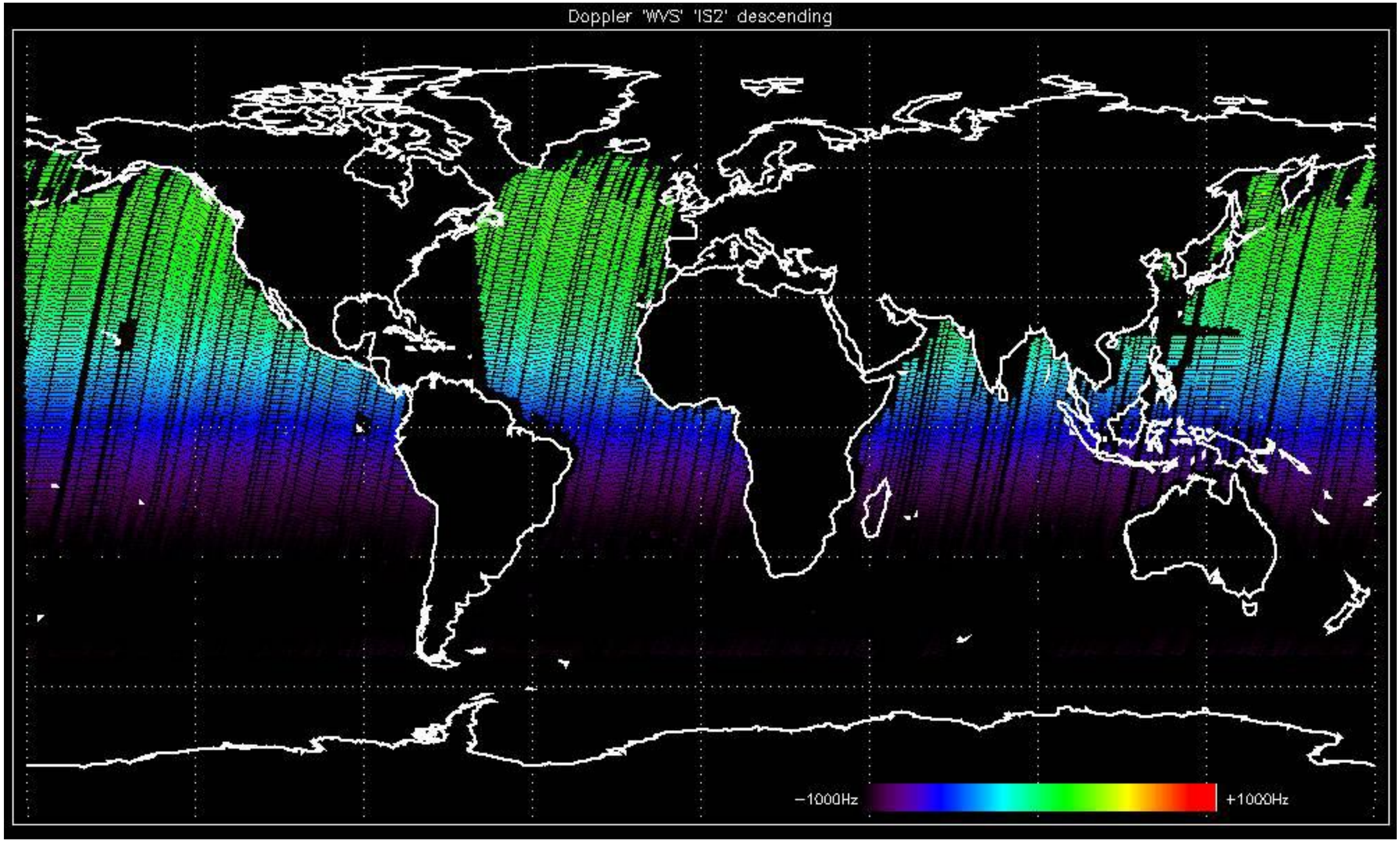
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

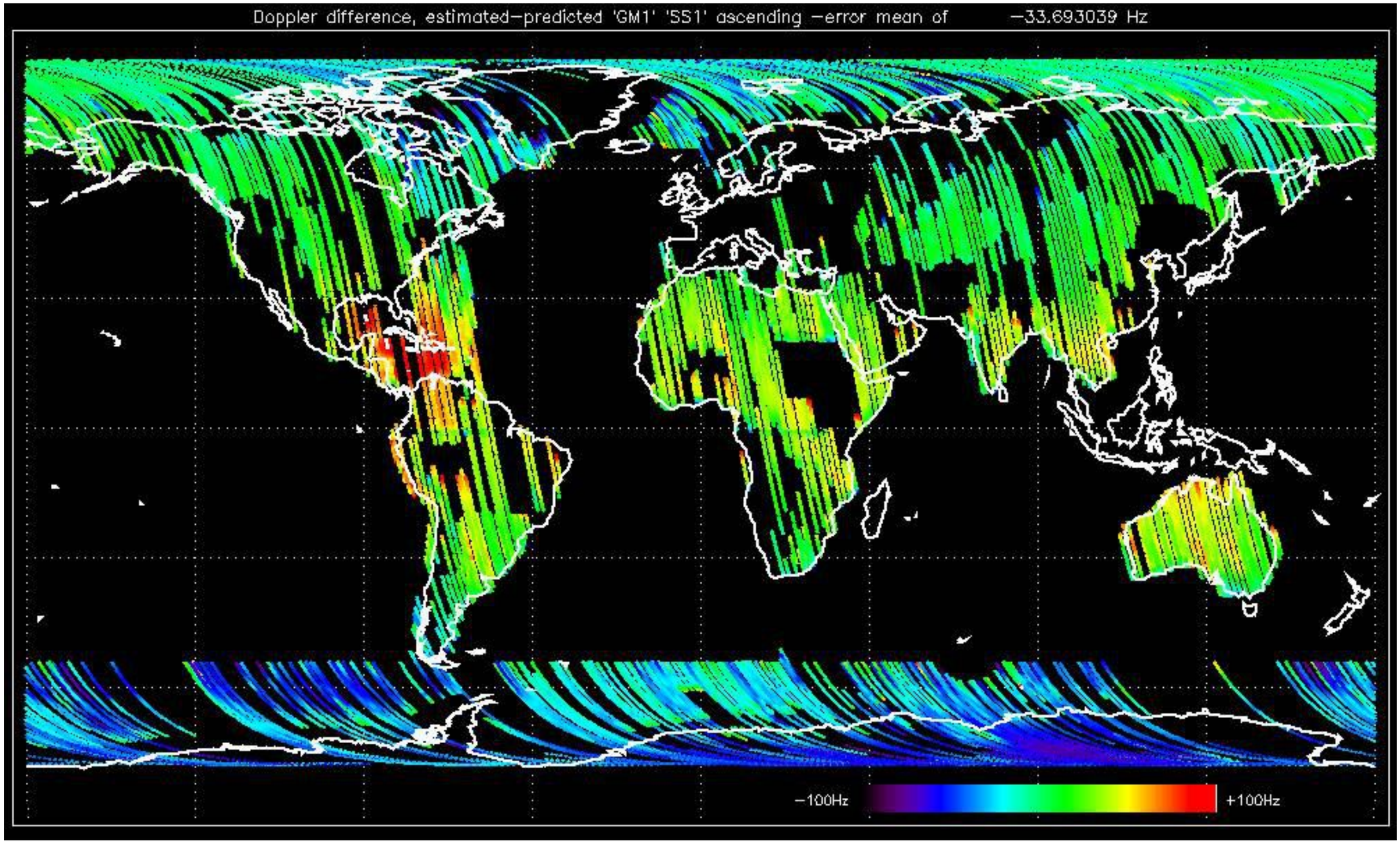
Preliminary report.The data is not yet controled

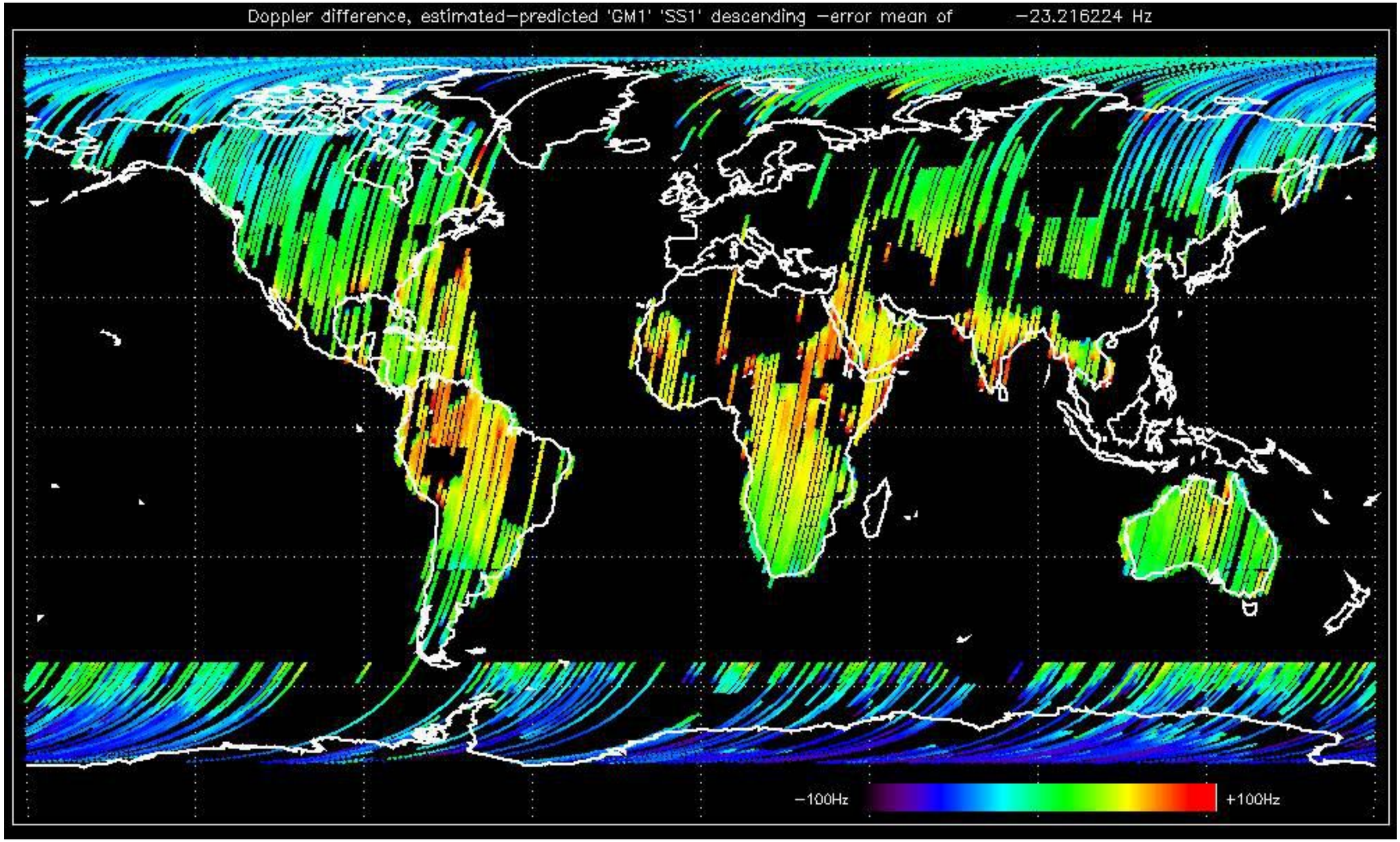

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

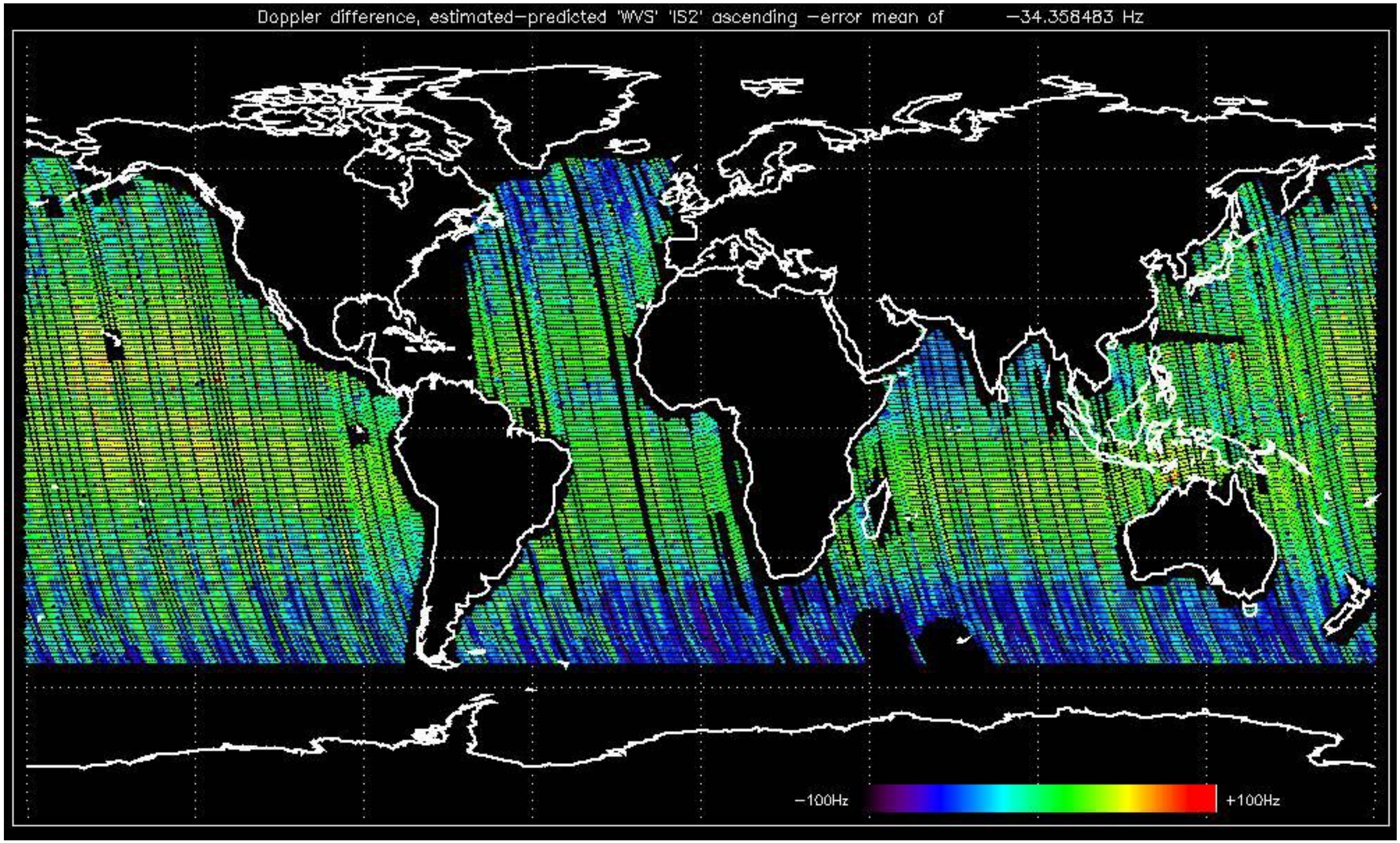

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

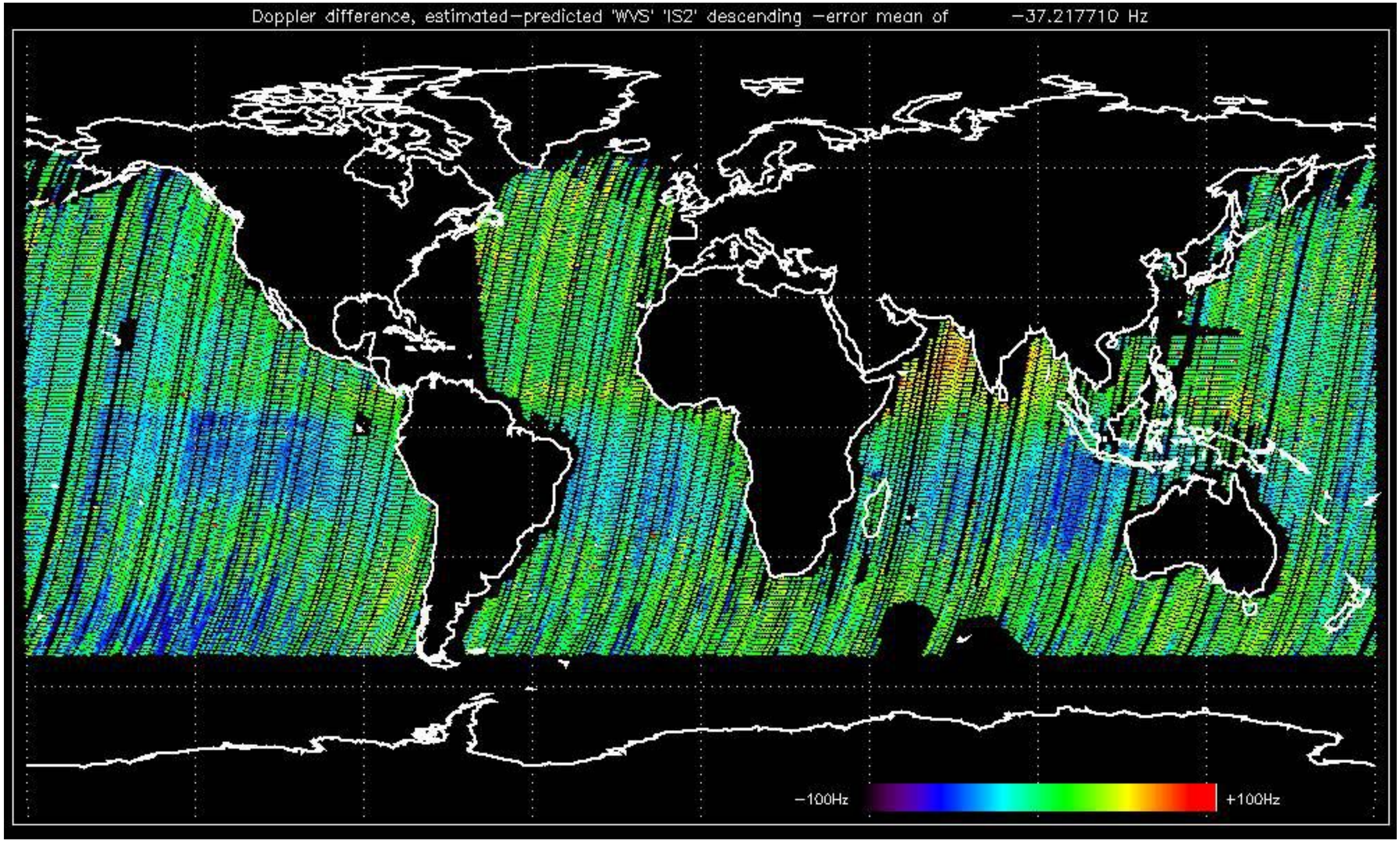

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −33.693039 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.216224 Hz
−100Hz
+100Hz

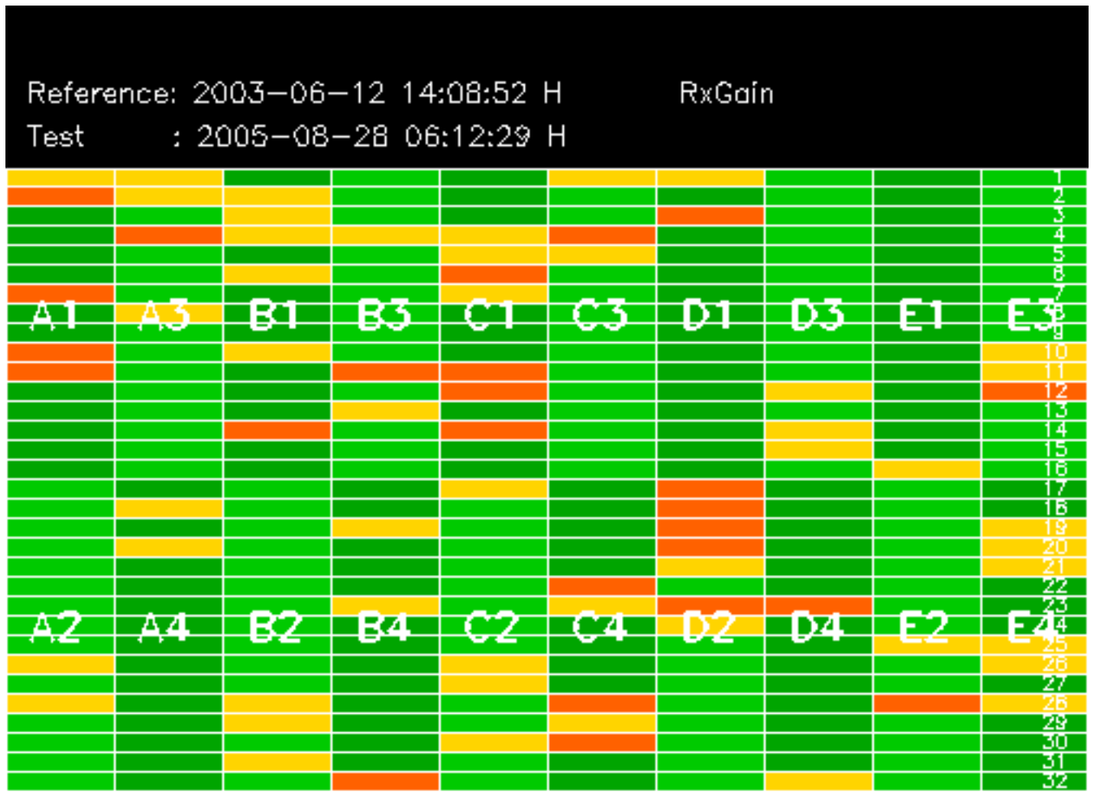

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −34.358483 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −37.217710 Hz
−100Hz
+100Hz

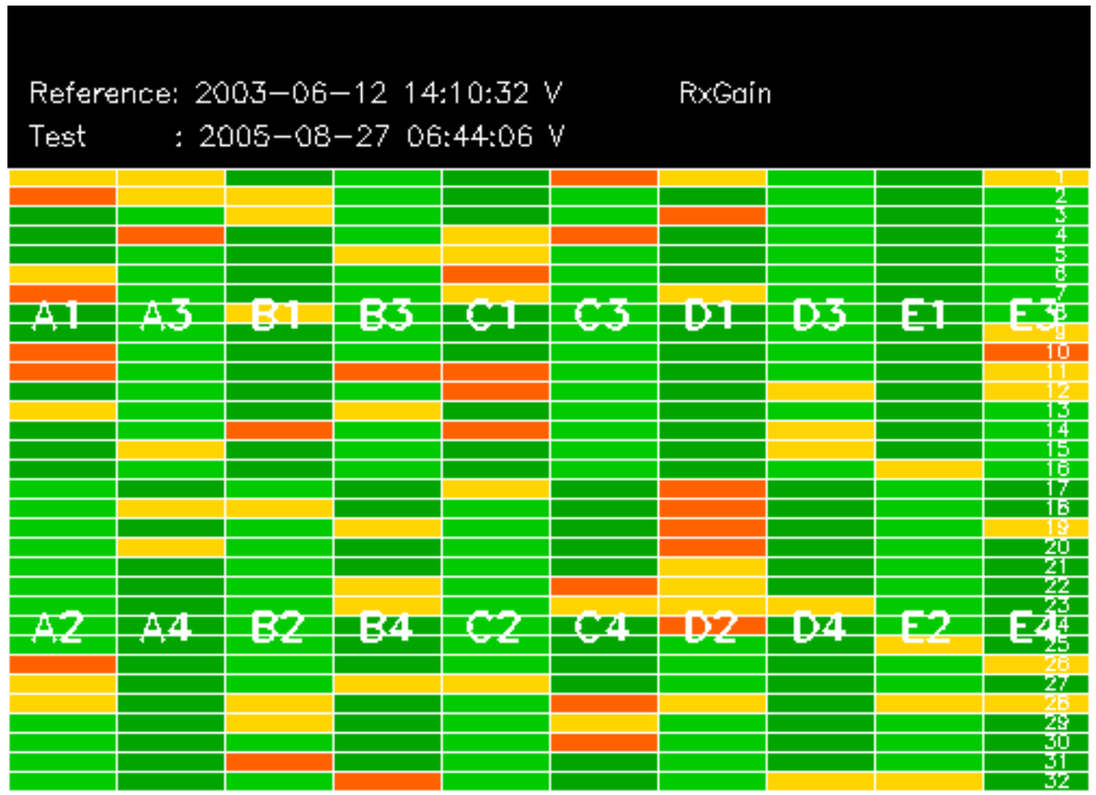
No anomalies observed on available MS products:

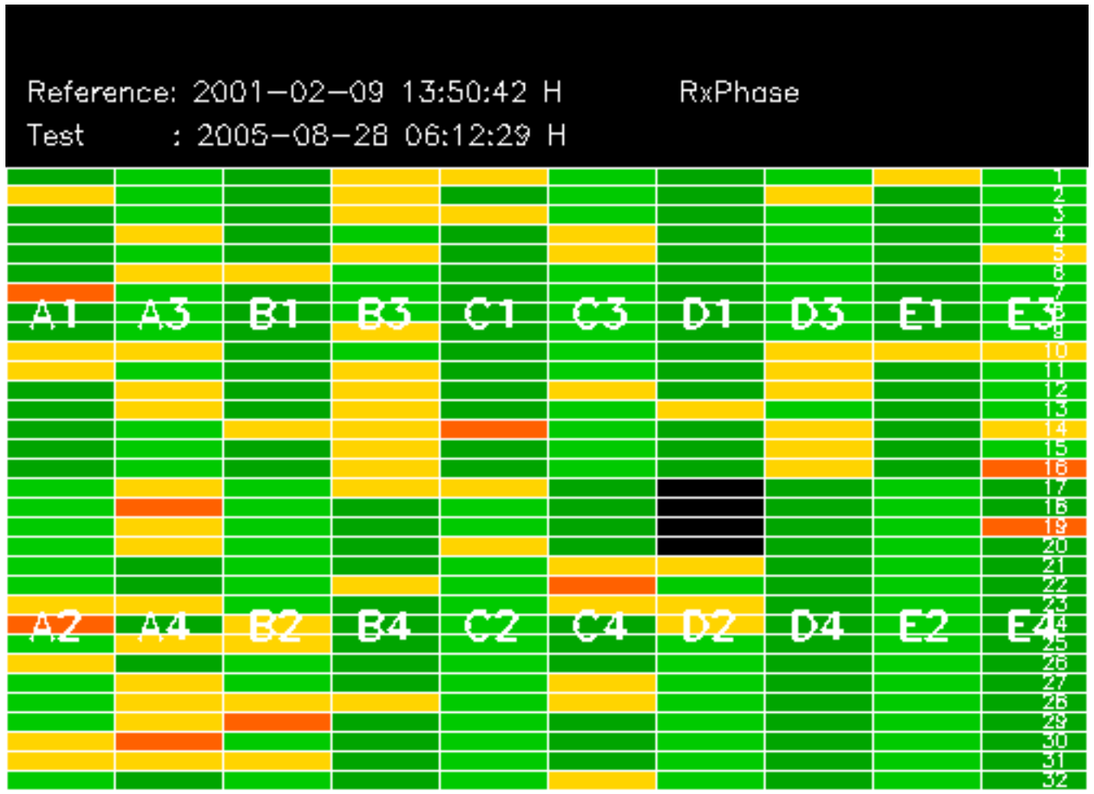
No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2005-08-28 06:12:29 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 : 2005-08-28 06:12:29 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 : 2005-08-27 06:44:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

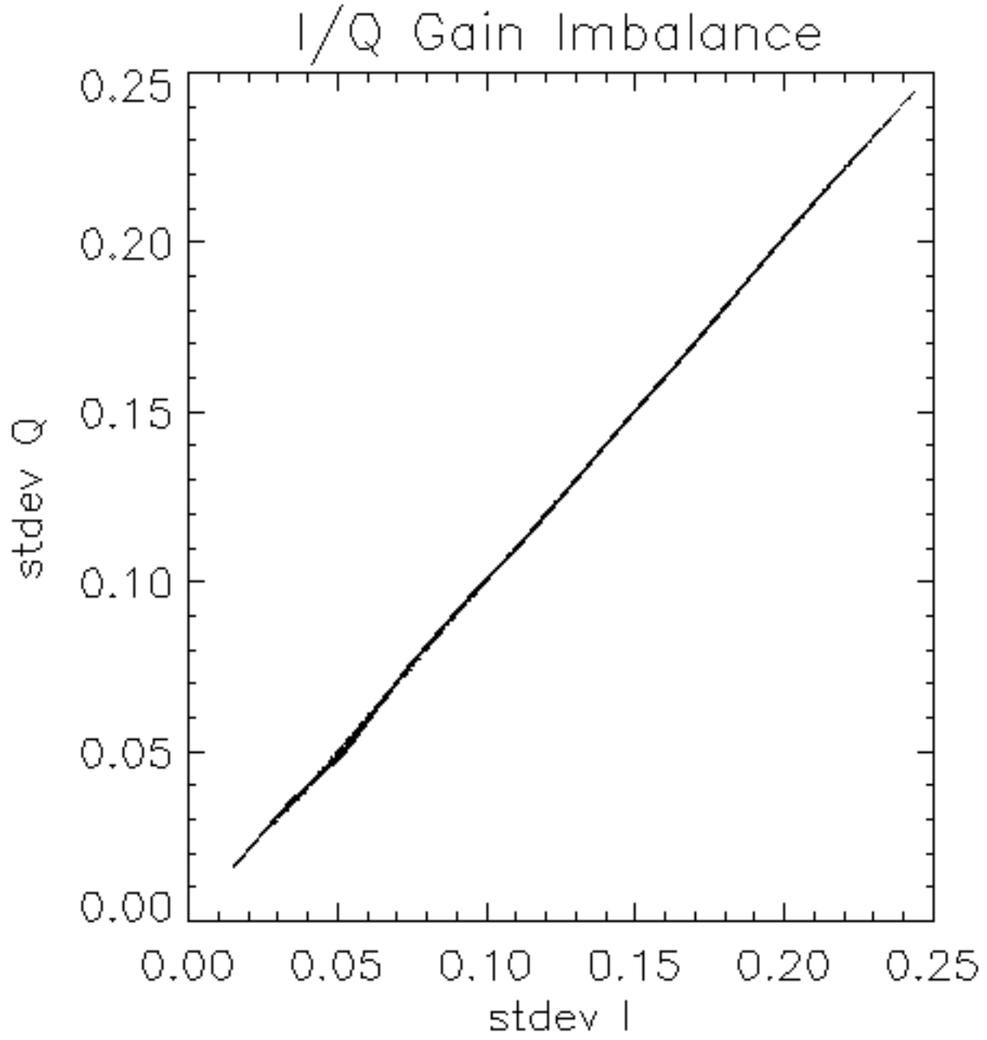

Reference: 2003-06-12 14:10:32 V
Test : 2005-08-27 06:44:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

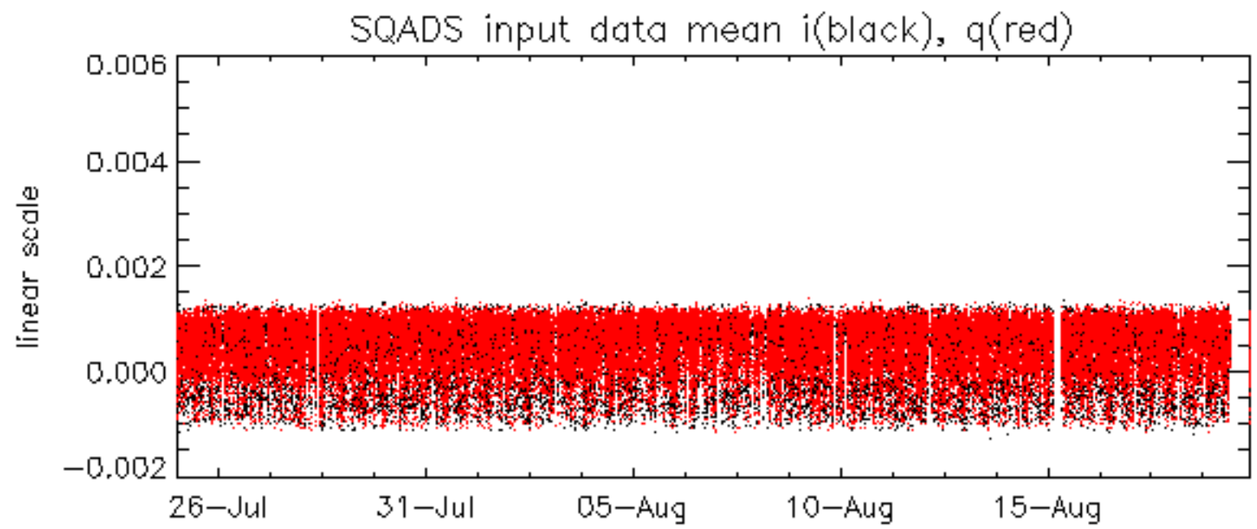

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-08-28 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

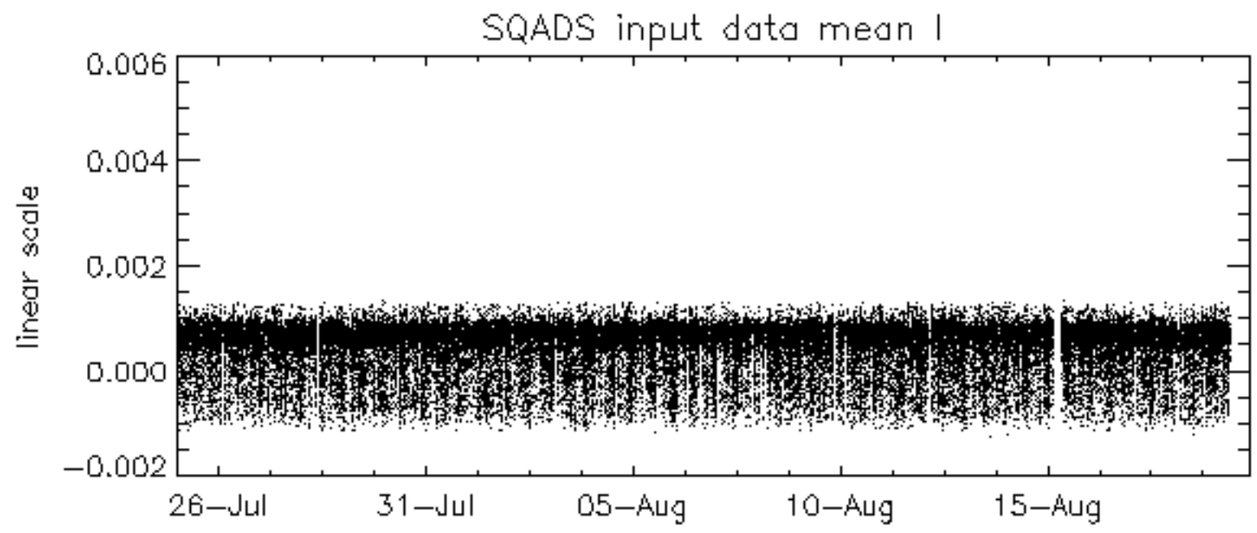

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2005-08-28 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

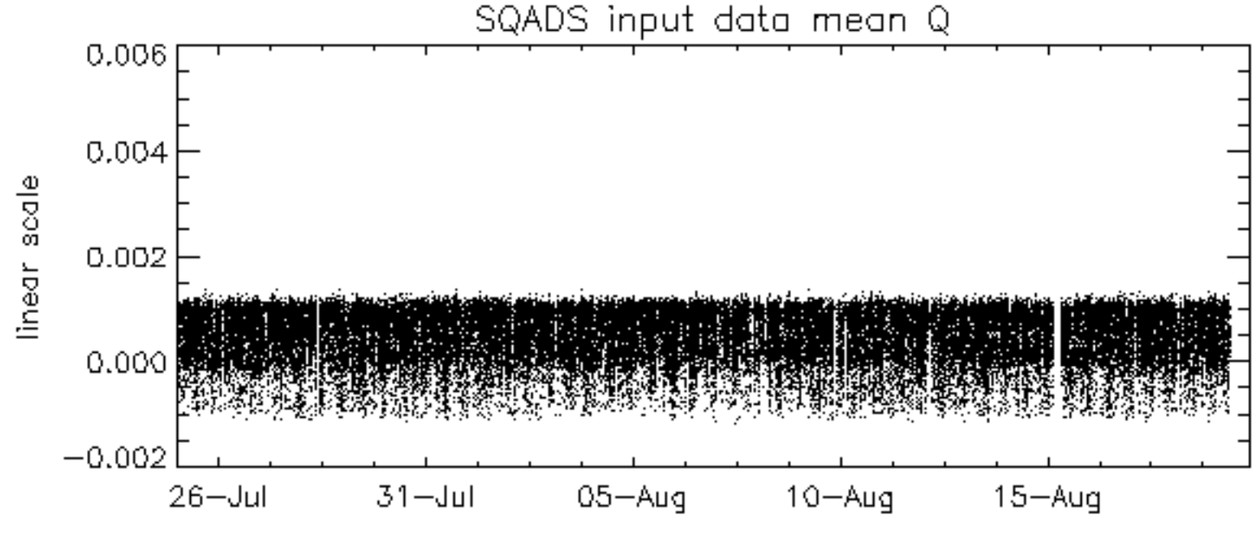

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2005-08-27 06:44:06 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

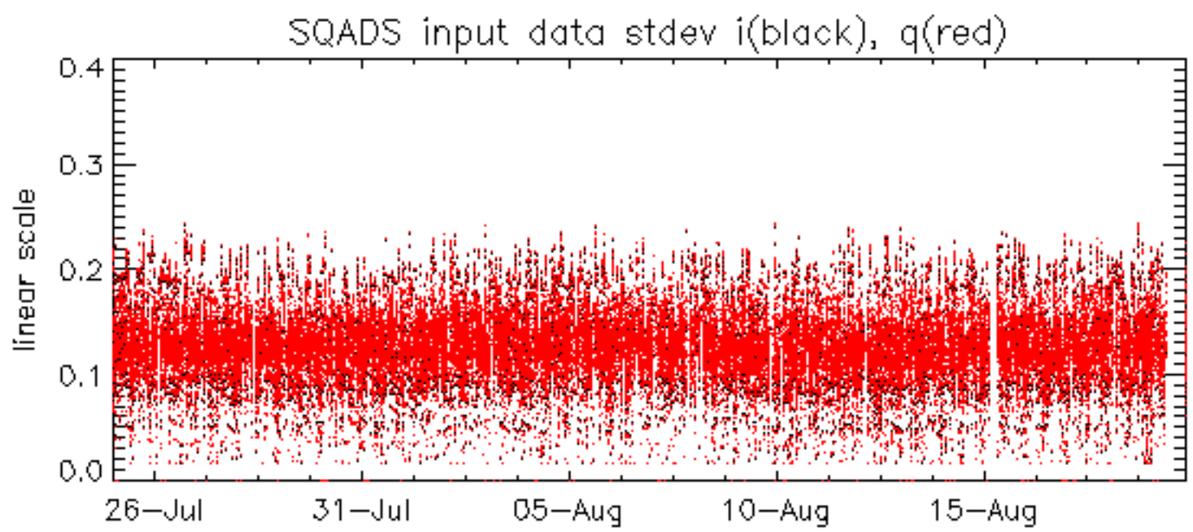

Reference: 2003-06-12 14:10:32 V
Test : 2005-08-27 06:44:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

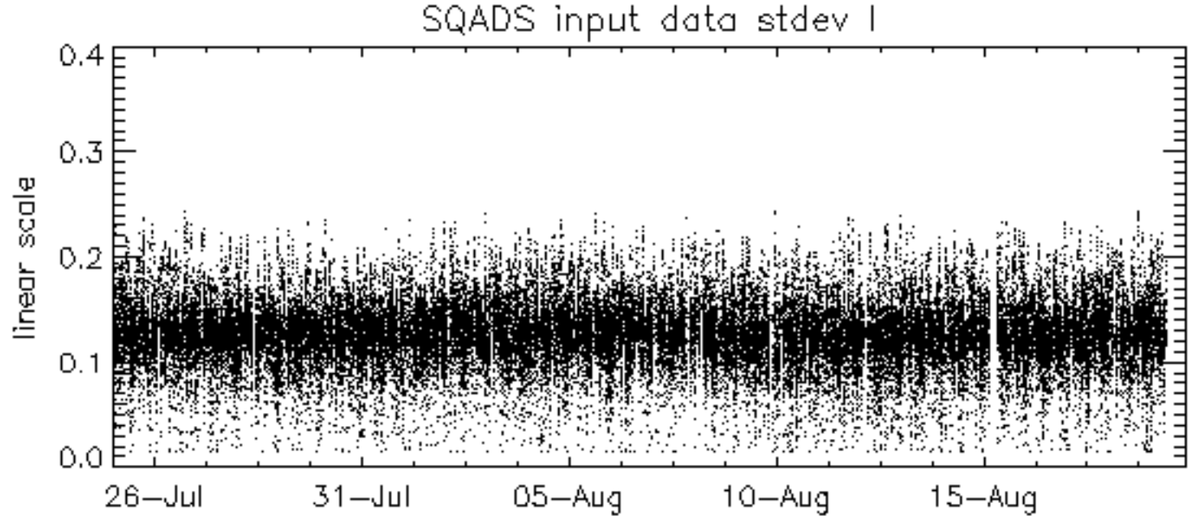

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

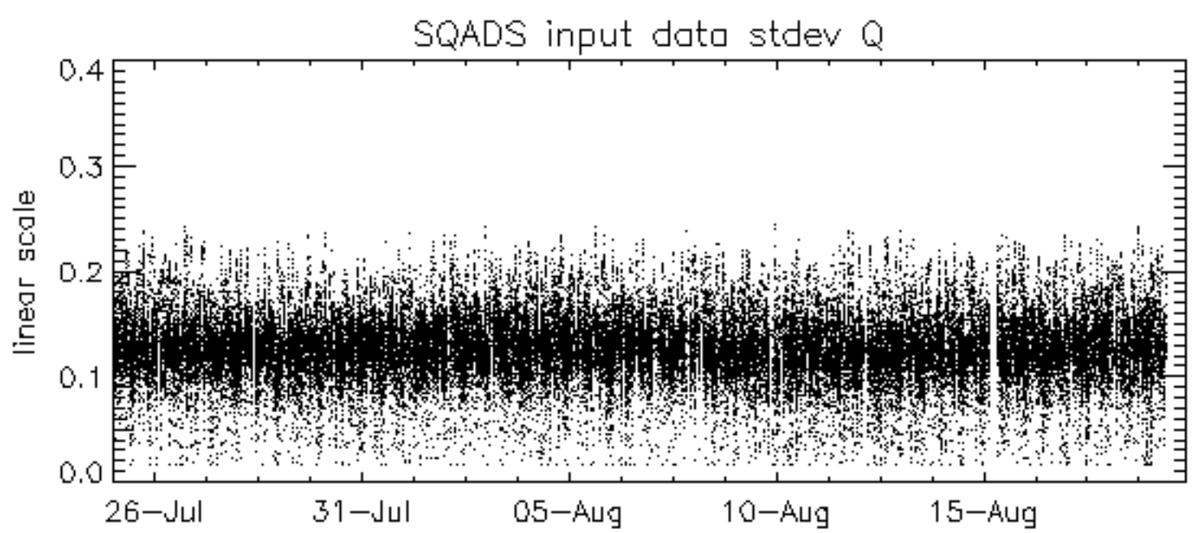

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug

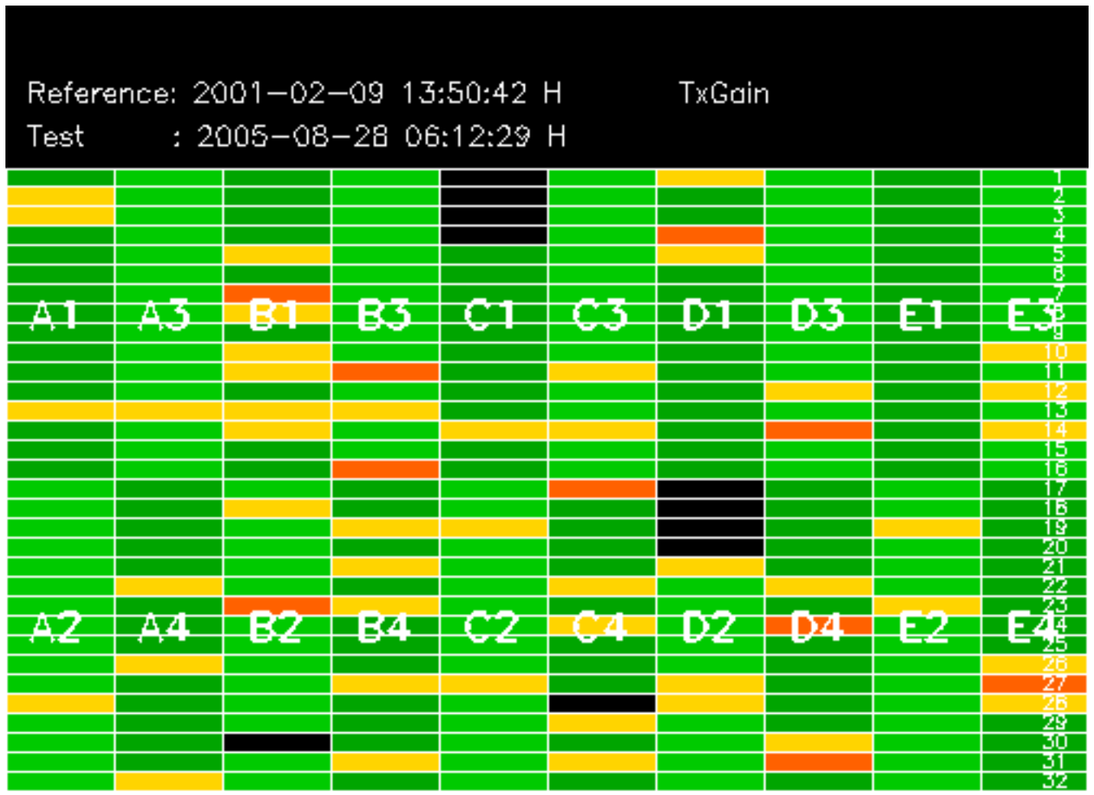

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2005-08-28 06:12:29 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
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22
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24
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26
27
28
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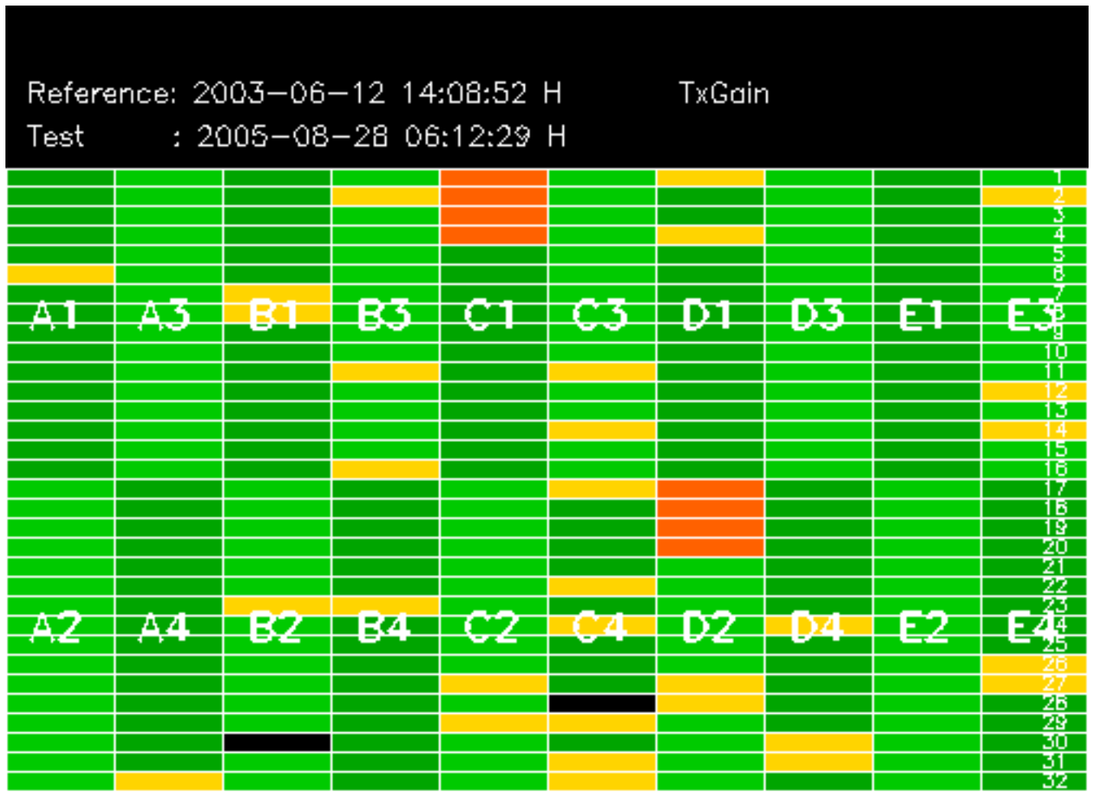
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-08-28 06:12:29 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
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14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
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32


Reference: 2001-02-09 14:08:23 V
Test : 2005-08-27 06:44:06 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
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26
27
28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2005-08-27 06:44:06 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
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8
9
10
11
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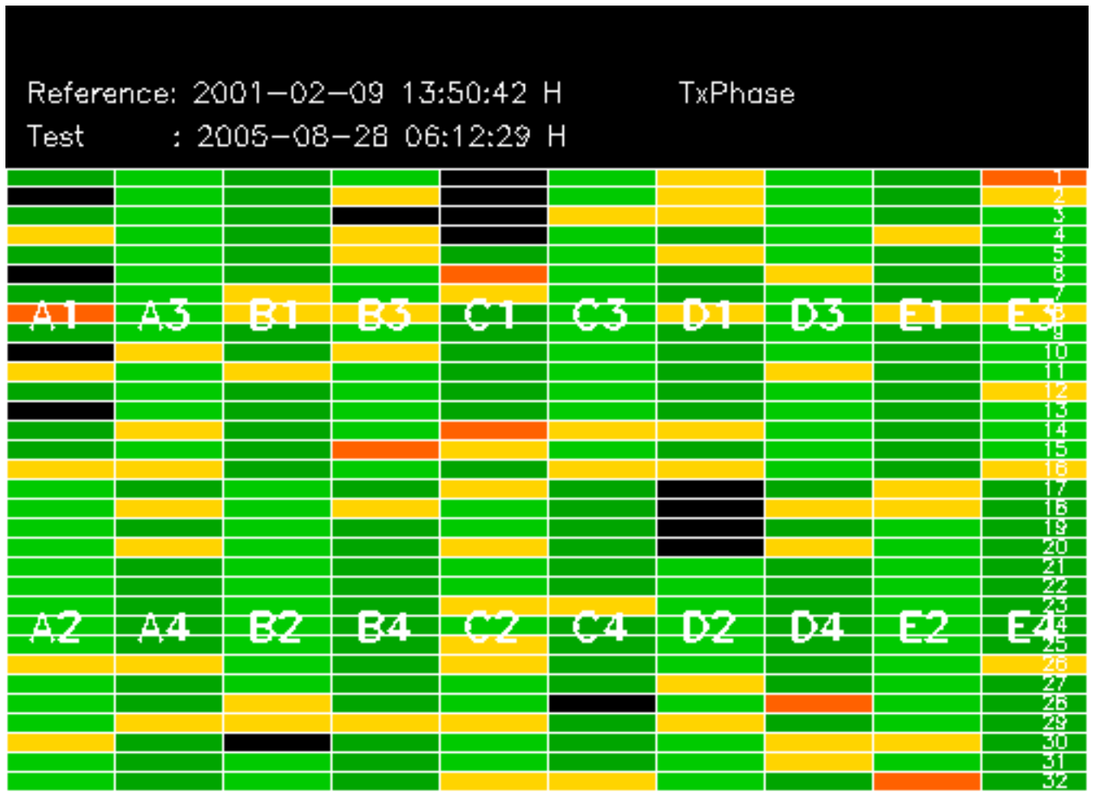
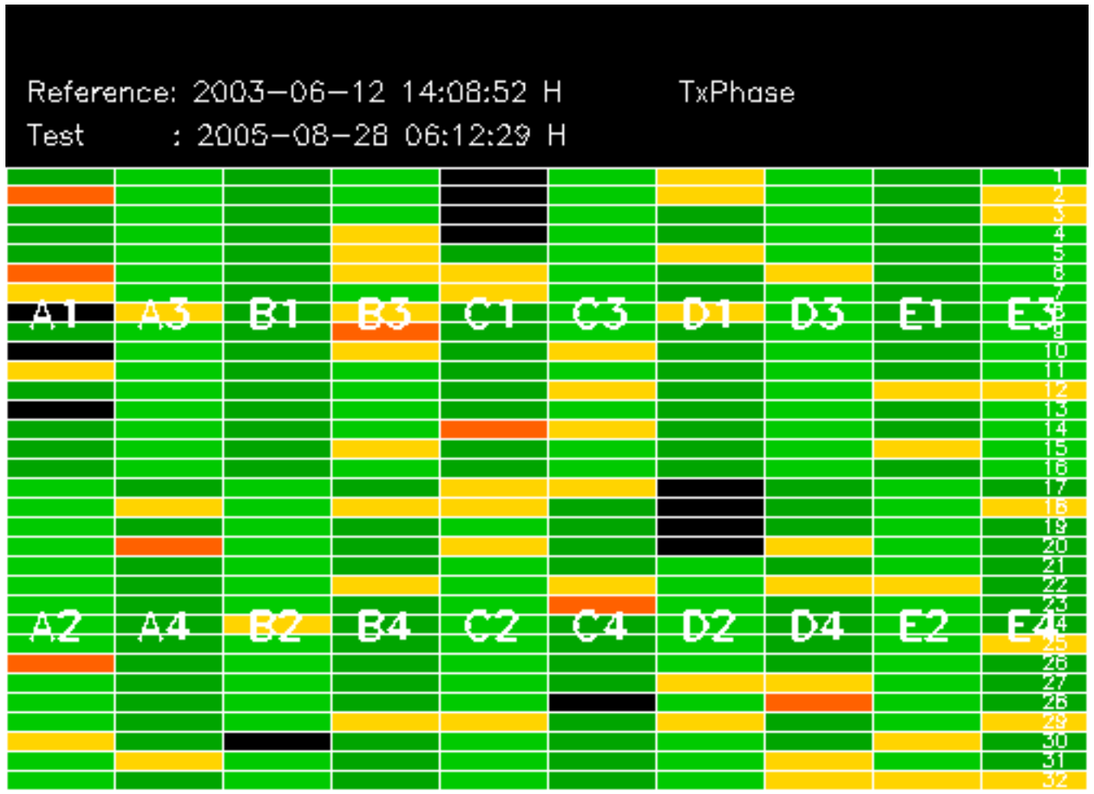
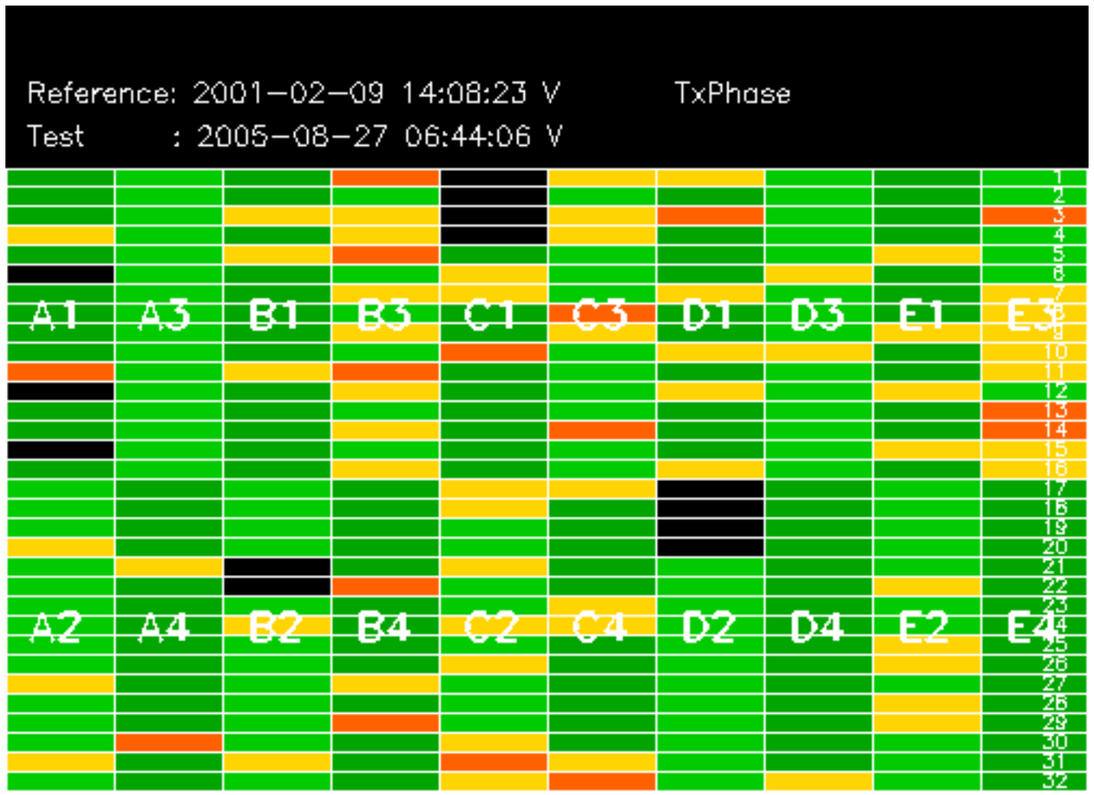
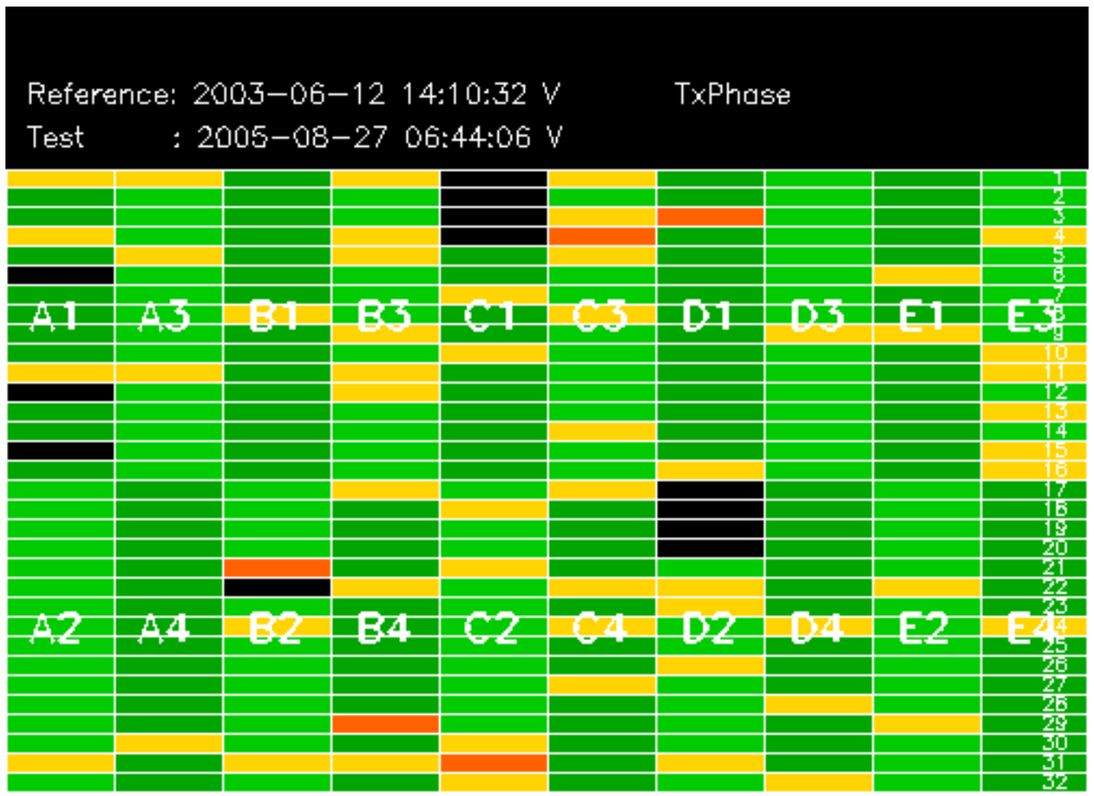
Summary of analysis for the last 3 days 2005082[789]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
</table>


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2005-08-28 06:12:29 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 : 2005-08-28 06:12:29 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 : 2005-08-27 06:44:06 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 : 2005-08-27 06:44:06 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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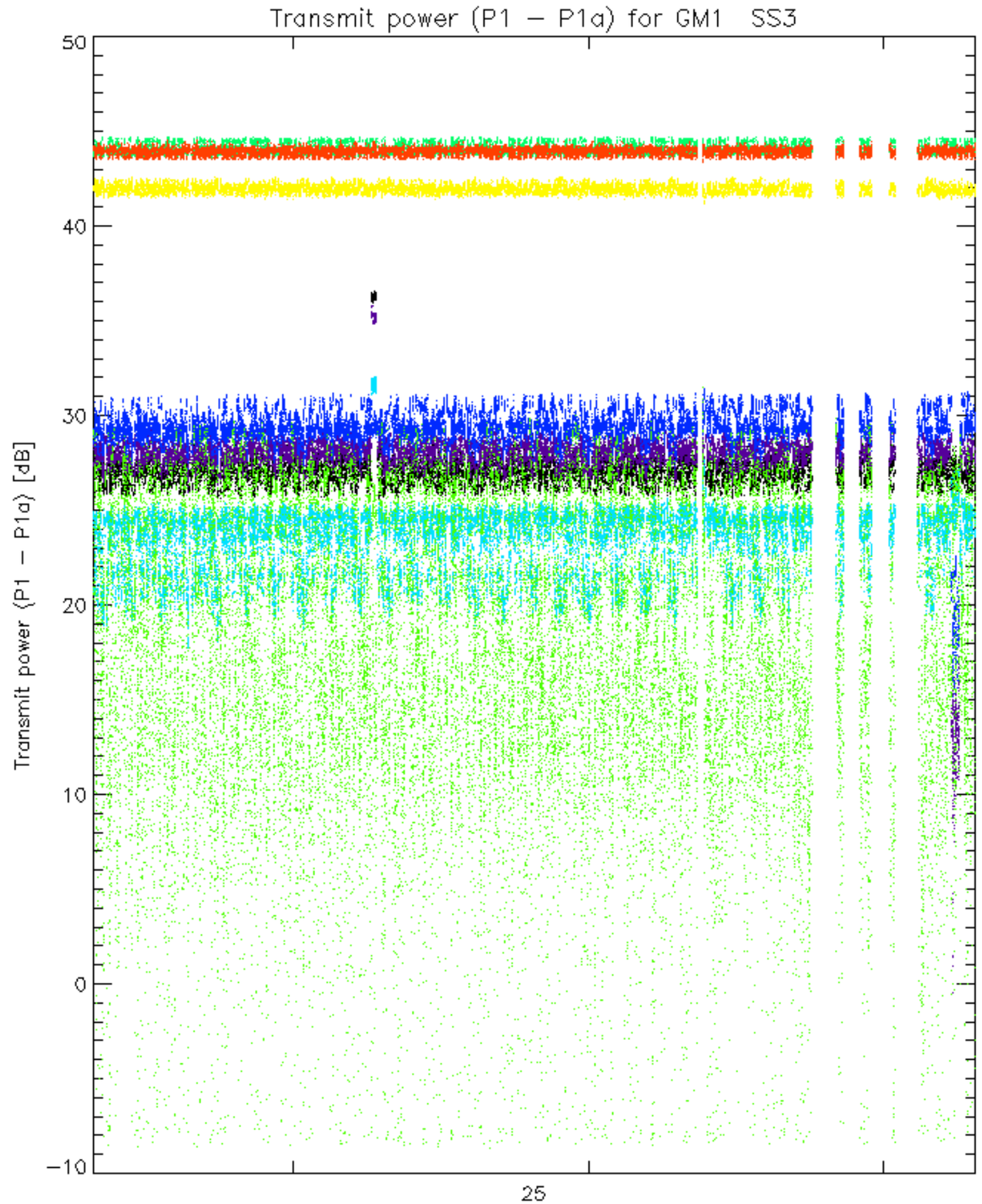
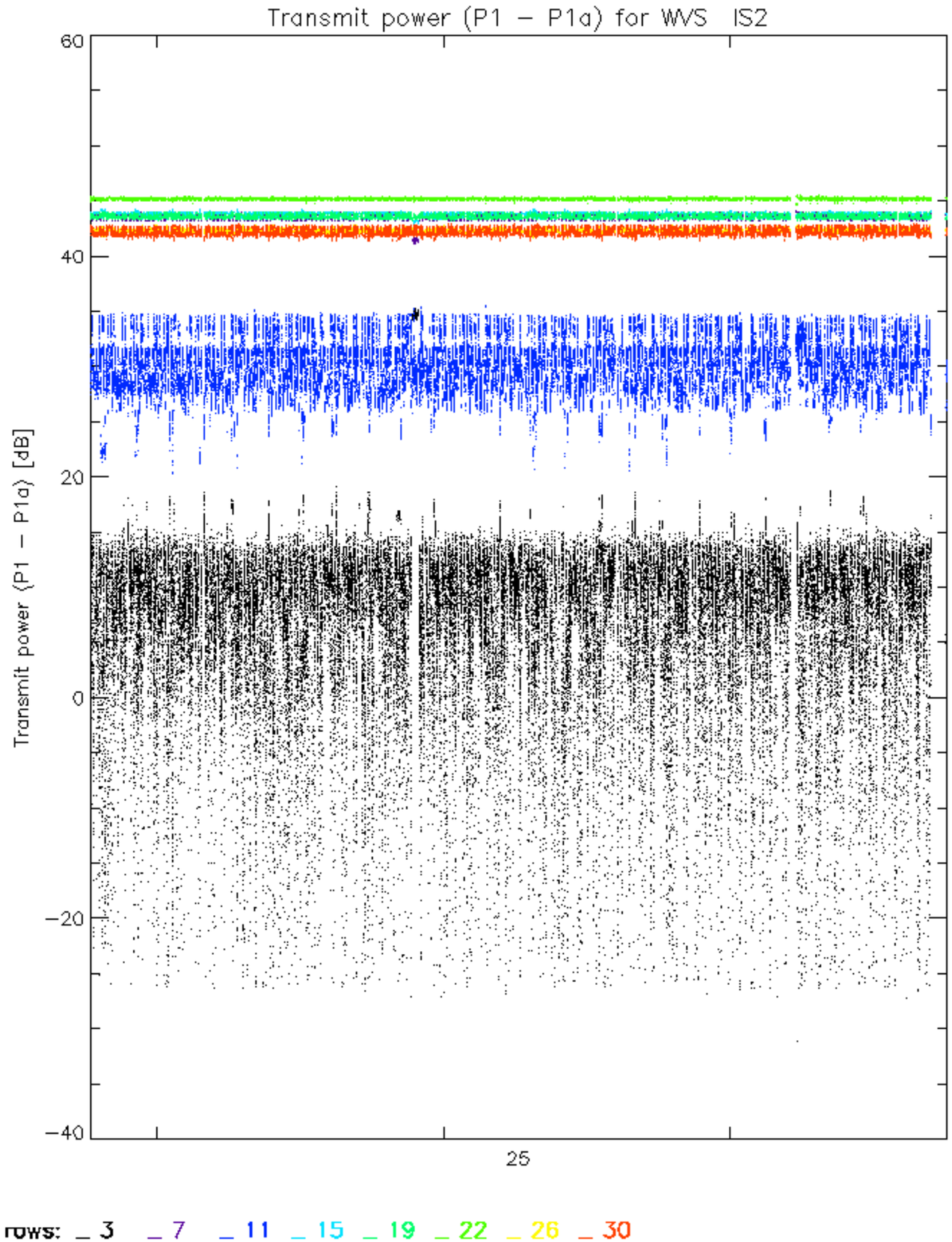

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
25
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power ⟨P1 – P1a⟩ [dB]
60
40
20
0
−20
−40
25
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.