PRELIMINARY REPORT OF 061113

last update on Mon Nov 13 16:39:27 GMT 2006

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 2006-11-12 00:00:00 to 2006-11-13 16:39:27

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

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	44	39	9	3	10
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	44	39	9	3	10
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	39	9	3	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	39	9	3	10

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	31	45	30	7	35
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	31	45	30	7	35
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	31	45	30	7	35
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	31	45	30	7	35

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20061111 204906
H	20061112 183653

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	-3.955257	0.009007	0.005709
7	P1	-3.127285	0.021378	-0.110744
11	P1	-4.121203	0.024314	-0.053630
15	P1	-6.262166	0.014863	-0.105520
19	P1	-3.604399	0.065072	-0.031395
22	P1	-4.657972	0.130540	-0.025615
26	P1	-3.979985	0.088682	0.054235
30	P1	-5.878076	0.170600	-0.006295
3	P1	-16.528385	0.229846	0.218660
7	P1	-17.212017	0.198121	-0.307217
11	P1	-17.111441	0.433761	-0.187013
15	P1	-12.998635	0.122654	-0.296390
19	P1	-14.855696	0.373370	-0.222442
22	P1	-15.790453	0.504029	-0.468973
26	P1	-15.084173	0.213464	0.056865
30	P1	-17.288759	0.575704	-0.687371

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.844303	0.088534	-0.029788
7	P2	-21.738178	0.093215	0.031460
11	P2	-15.676776	0.104727	0.089410
15	P2	-7.105369	0.106997	-0.087805
19	P2	-9.170915	0.101964	-0.102803
22	P2	-18.202080	0.095060	-0.125631
26	P2	-16.504011	0.108049	-0.176009
30	P2	-19.472366	0.088723	-0.013230

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.224028	0.007814	-0.046503
7	P3	-8.224028	0.007814	-0.046503
11	P3	-8.224028	0.007814	-0.046503
15	P3	-8.224028	0.007814	-0.046503
19	P3	-8.224028	0.007814	-0.046503
22	P3	-8.224028	0.007814	-0.046503
26	P3	-8.224084	0.007831	-0.046138
30	P3	-8.224084	0.007831	-0.046138

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	-3.922645	0.160481	0.061605
7	P1	-2.601652	1.029757	0.338165
11	P1	-2.895305	0.128840	0.133162
15	P1	-3.697673	0.119943	0.082487
19	P1	-3.523672	0.126812	-0.052228
22	P1	-5.065819	0.095498	0.017427
26	P1	-5.999917	0.238910	-0.067992
30	P1	-5.302550	0.161052	-0.087545
3	P1	-11.748527	0.394378	0.159437
7	P1	-10.141509	1.309187	0.369554
11	P1	-10.405435	0.360404	0.321256
15	P1	-10.865452	0.492277	0.437885
19	P1	-15.743060	2.220960	-0.098185
22	P1	-21.184841	1.624464	-0.665092

26	P1	-15.956869	0.434758	-0.374985
30	P1	-17.973606	0.519936	0.253902

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.397711	0.247191	-0.254711
7	P2	-22.073866	1.356490	-0.612547
11	P2	-10.887247	0.219920	-0.221529
15	P2	-4.927263	0.079676	-0.137326
19	P2	-6.911748	0.156977	-0.149297
22	P2	-8.265896	0.449556	0.038538
26	P2	-24.195669	1.019924	-0.508537
30	P2	-21.892097	0.520986	-0.262248

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.071083	0.003266	-0.041670
7	P3	-8.071007	0.003246	-0.041640
11	P3	-8.071016	0.003251	-0.042101
15	P3	-8.070928	0.003247	-0.041587
19	P3	-8.071012	0.003251	-0.041730
22	P3	-8.070883	0.003255	-0.041928
26	P3	-8.070908	0.003243	-0.042456
30	P3	-8.070973	0.003254	-0.042441

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	0.000547757
	stdev	1.75988e-07
MEAN Q	mean	0.000517035
	stdev	2.20951e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136631
	stdev	0.00113157
STDEV Q	mean	0.136993
	stdev	0.00114895

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006111[123]
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
ASA_GM1_1PNPDK20061111_131036_000000782052_00468_24570_8454.N1	0	7
ASA_GM1_1PNPDK20061112_120311_000004412052_00481_24583_8512.N1	0	8
ASA_WSM_1PNPDE20061111_230555_000001032052_00474_24576_0001.N1	0	75
ASA_WSM_1PNPDE20061112_113207_000001582052_00481_24583_0001.N1	0	74
ASA_WSM_1PNPDK20061111_094431_000000862052_00466_24568_9866.N1	0	21

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

Evolution Doppler error versus ANX


7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

7.5 - Absolute Doppler for GM1

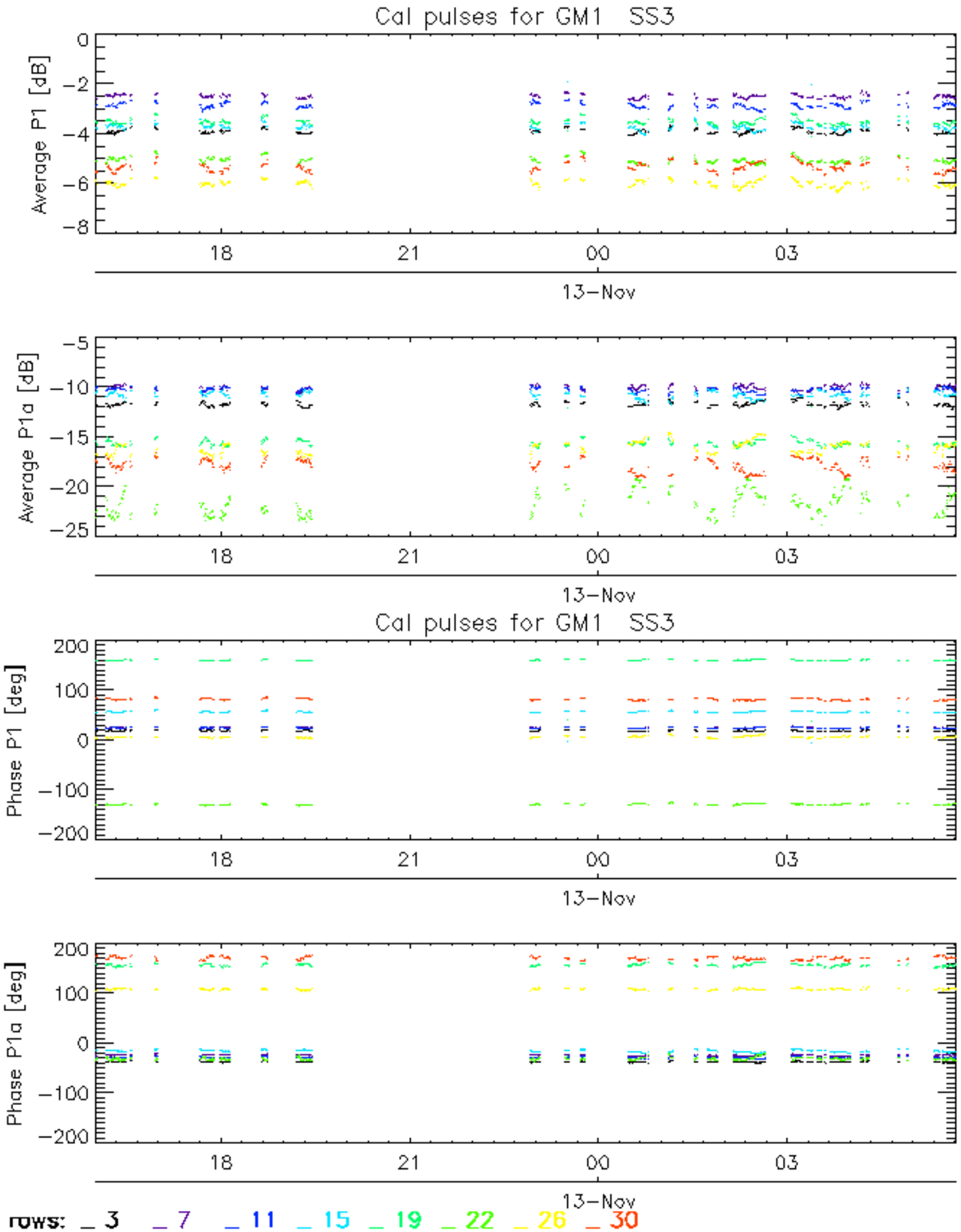
Evolution of Absolute Doppler

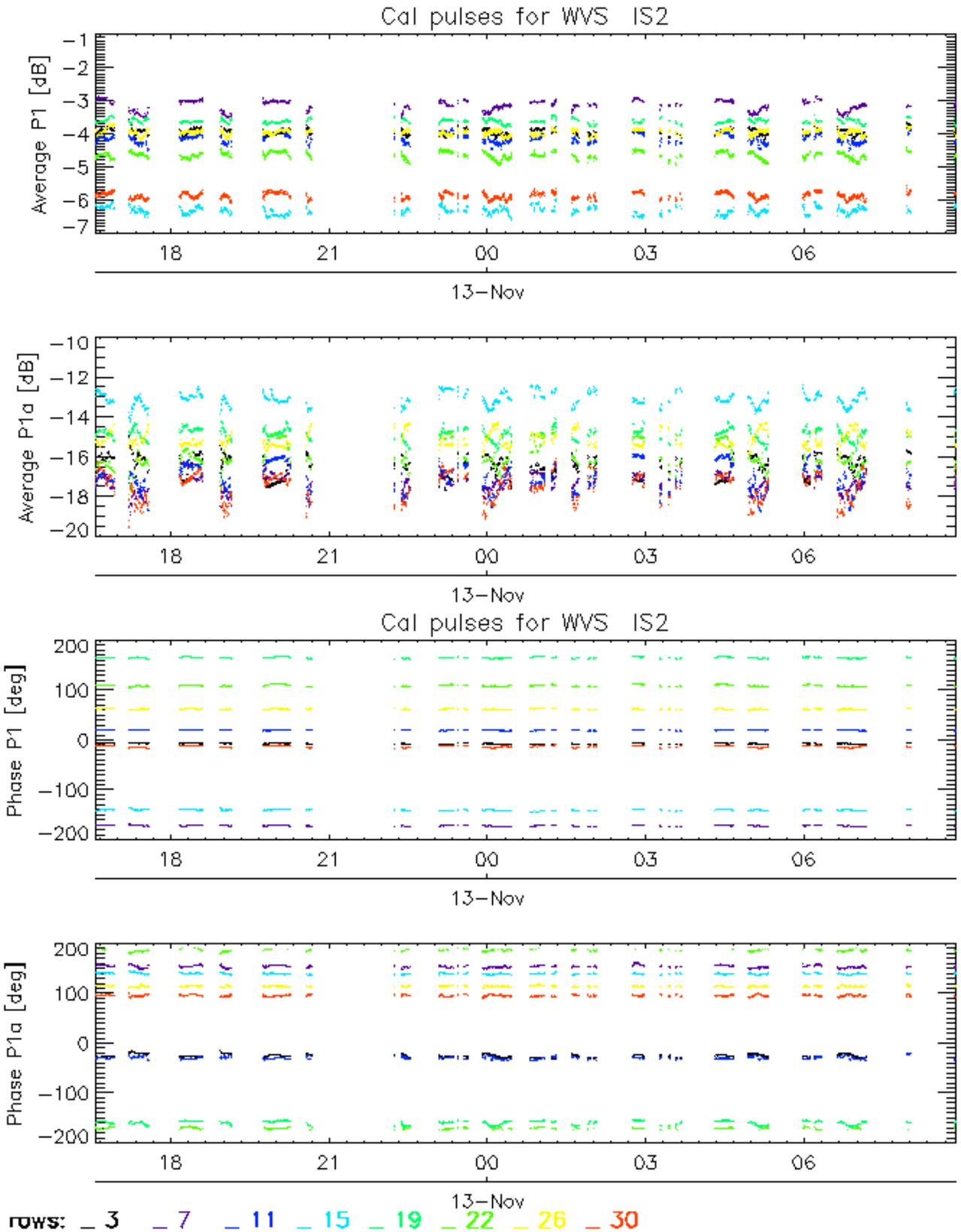
Acsending

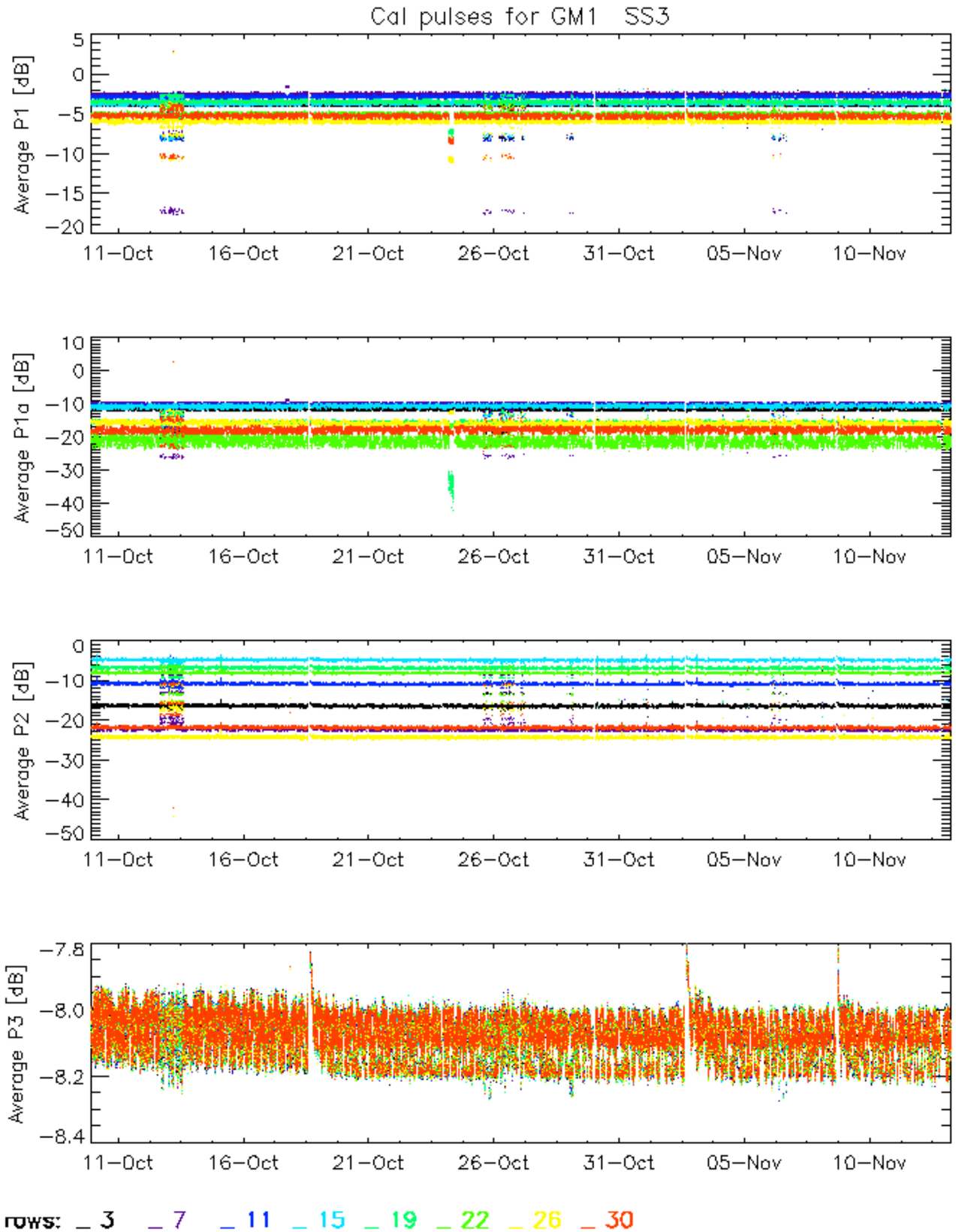
Descending

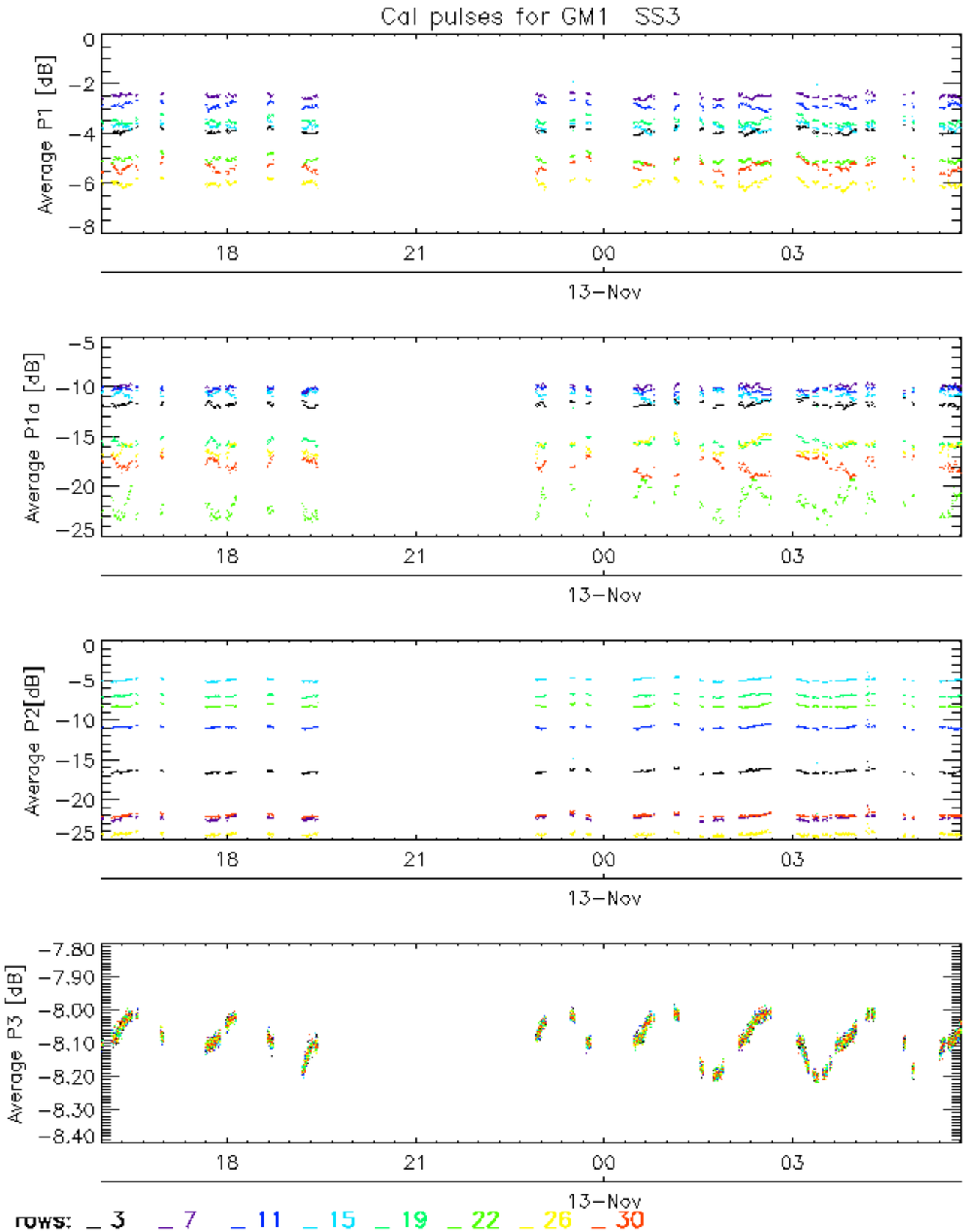
7.6 - Doppler evolution versus ANX for GM1

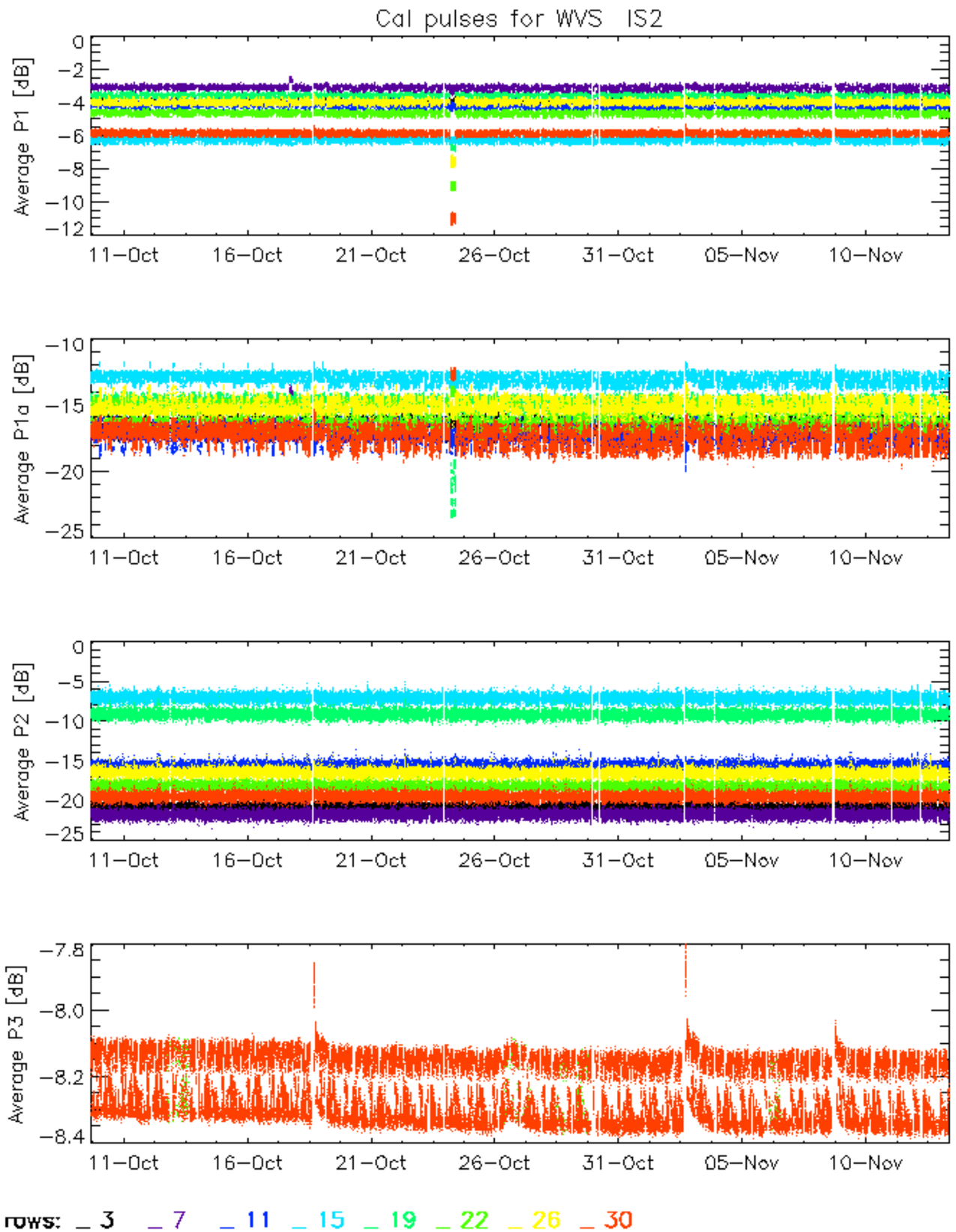
Evolution Doppler error versus ANX

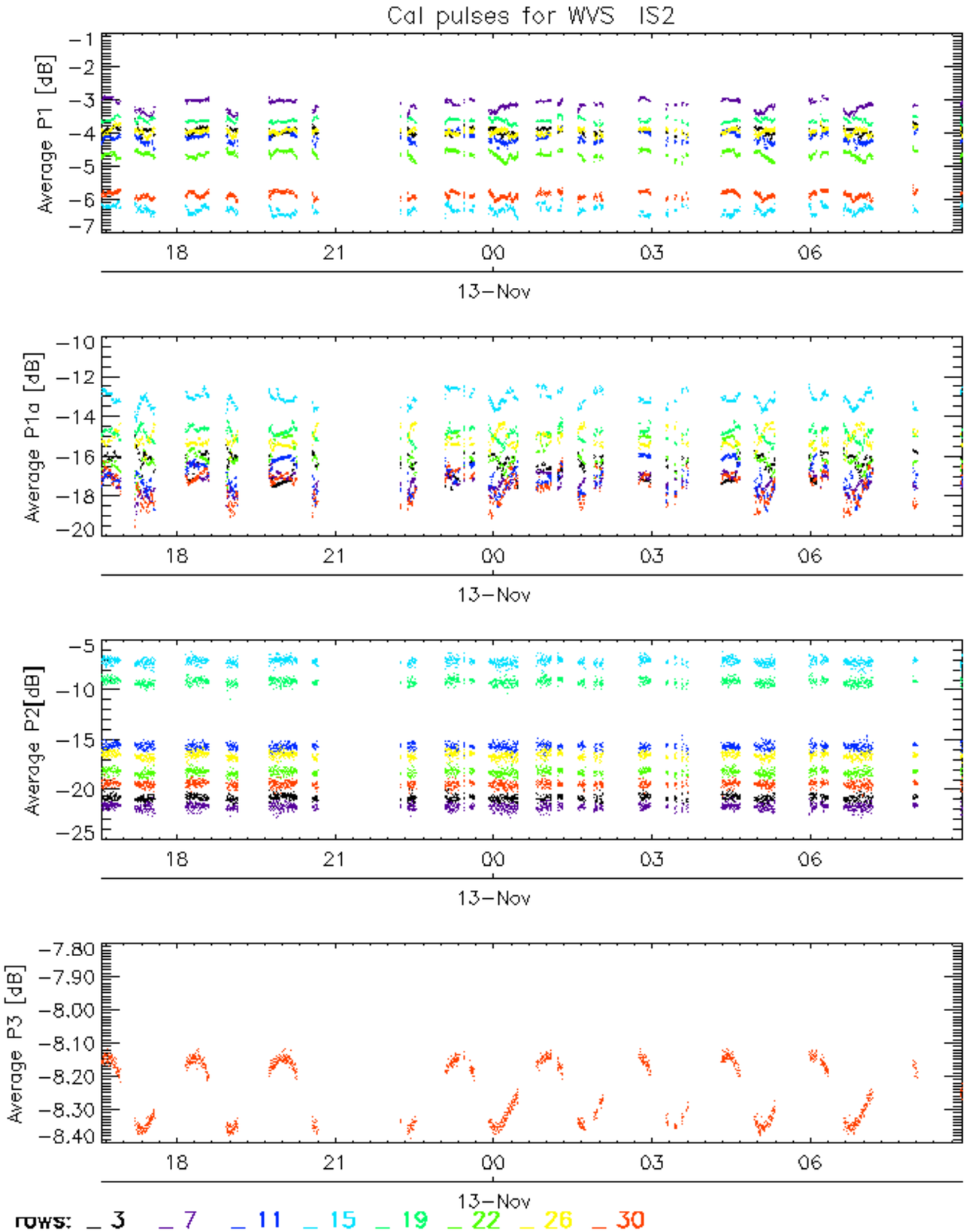


Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
13−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
13−Nov
Cal pulses for GM1 SS3
Phase P1 [deg]
200
100
0
−100
−200
18
21
00
03
13−Nov
Phase P1a [deg]
200
100
0
−100
−200
18
21
00
03
13−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
18
21
00
03
06
13−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
18
21
00
03
06
13−Nov
Cal pulses for WVS IS2
Phase P1 [deg]
200
100
0
−100
−200
18
21
00
03
06
13−Nov
Phase P1a [deg]
200
100
0
−100
−200
18
21
00
03
06
13−Nov
rows: 3 7 11 15 19 22 26 30


Cal pulses for GM1 SS3
Average P1 [dB]
5
0
−5
−10
−15
−20
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
Average P1a [dB]
10
0
−10
−20
−30
−40
−50
Average P2 [dB]
0
−10
−20
−30
−40
−50
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

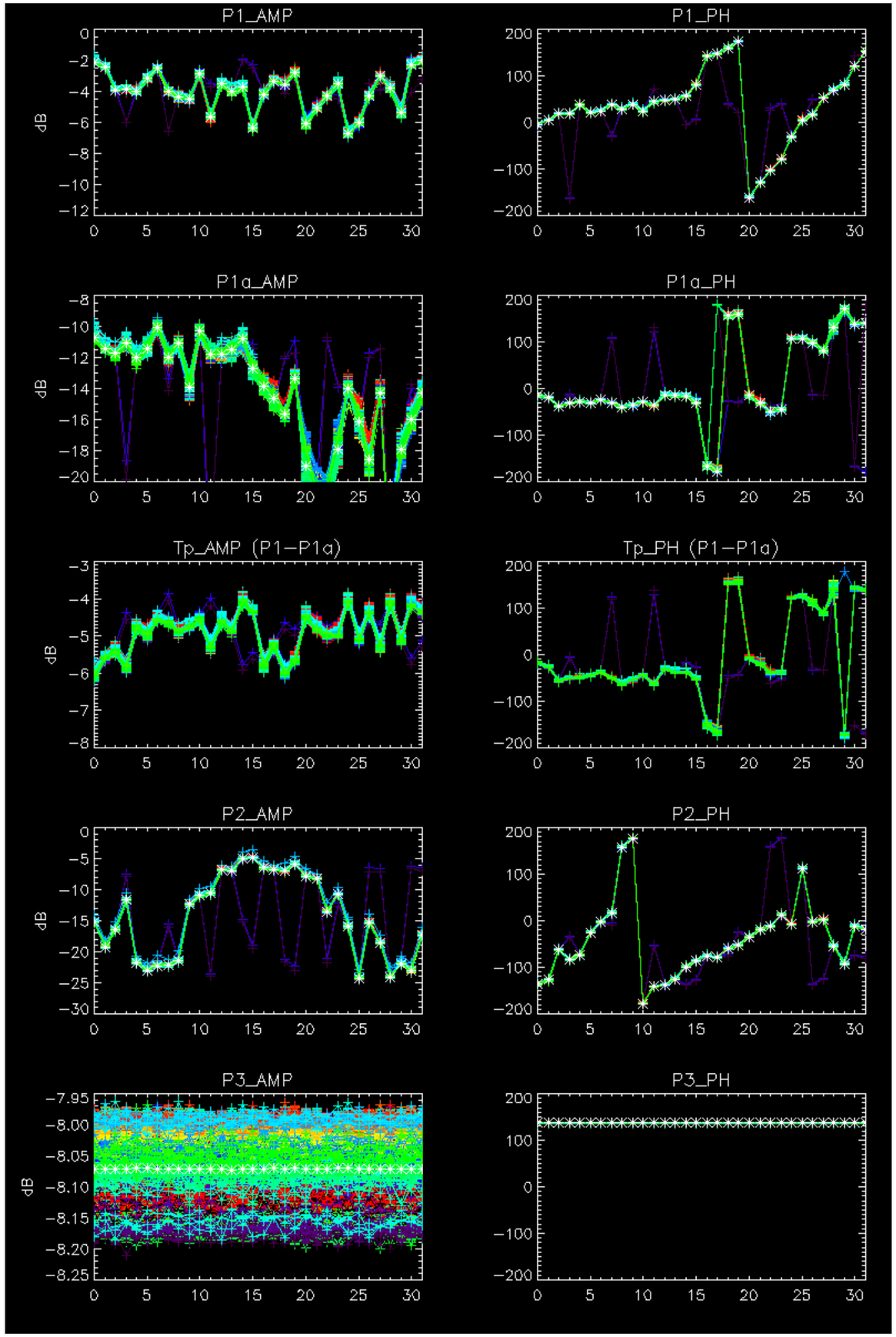

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
13−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
13−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
18
21
00
03
13−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
13−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

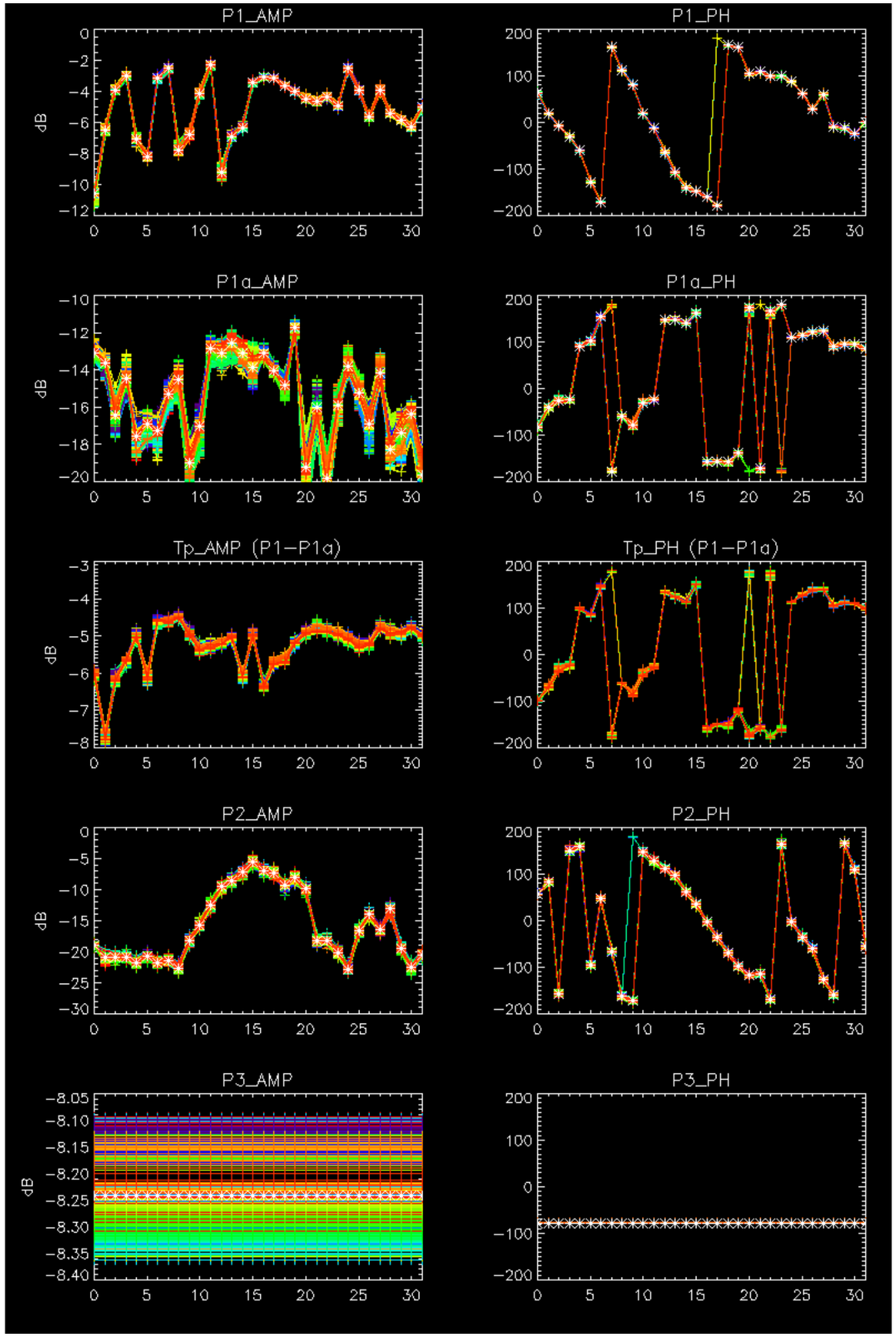

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
Average P1a [dB]
−10
−15
−20
−25
Average P2 [dB]
−5
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
18
21
00
03
06
13−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
18
21
00
03
06
13−Nov
Average P2[dB]
−5
−10
−15
−20
−25
18
21
00
03
06
13−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
13−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed on available browse products

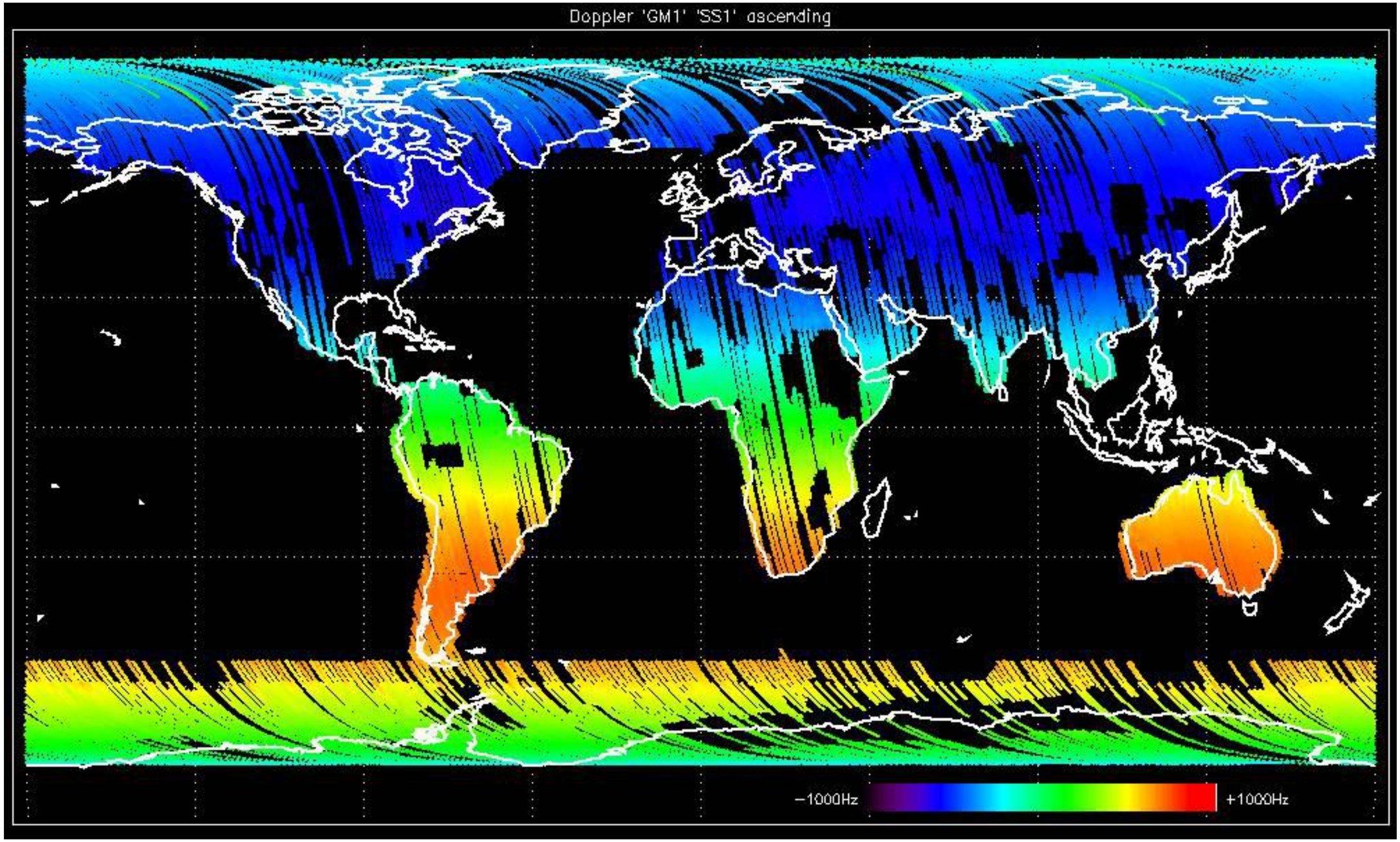
No anomalies observed.

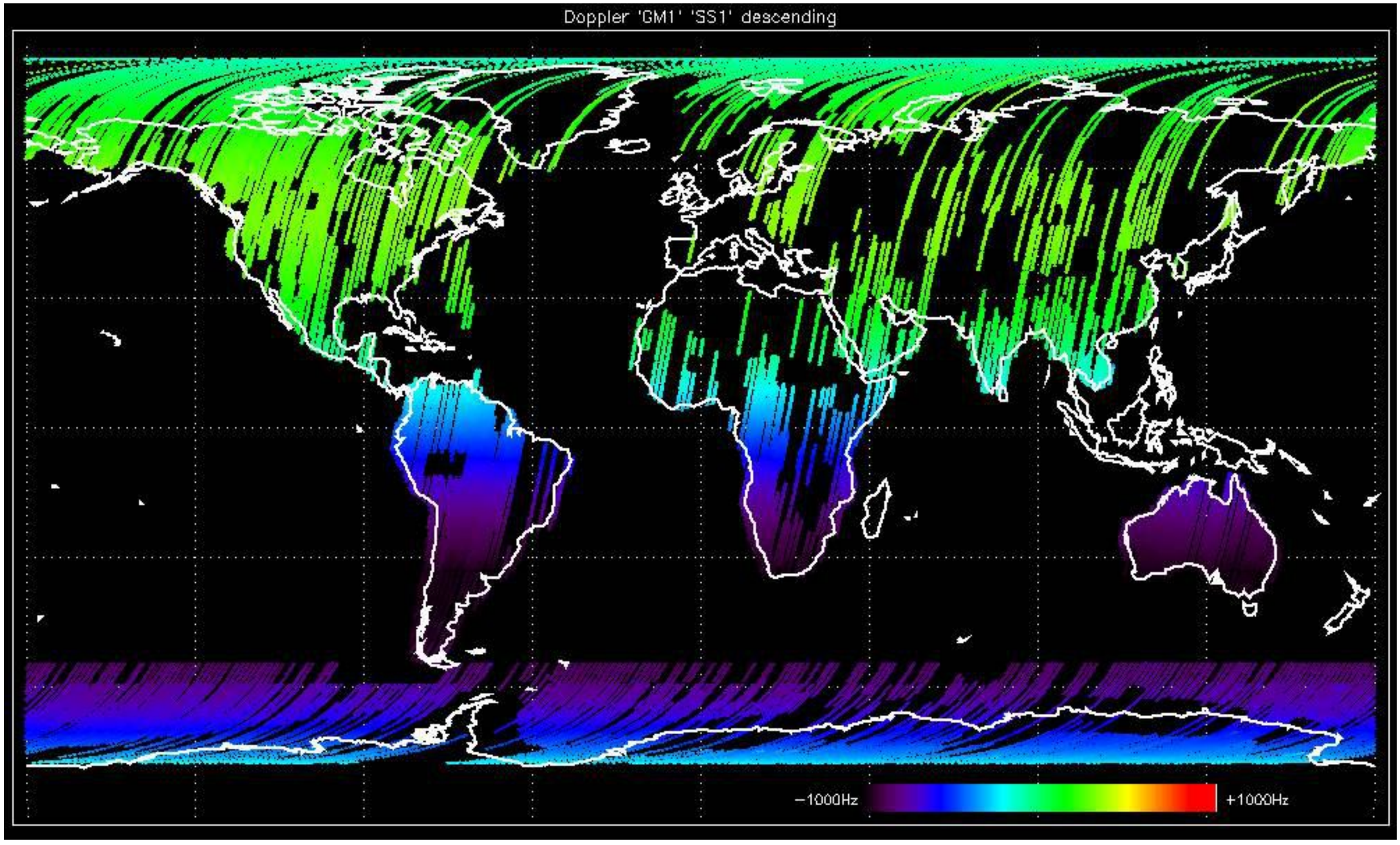

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

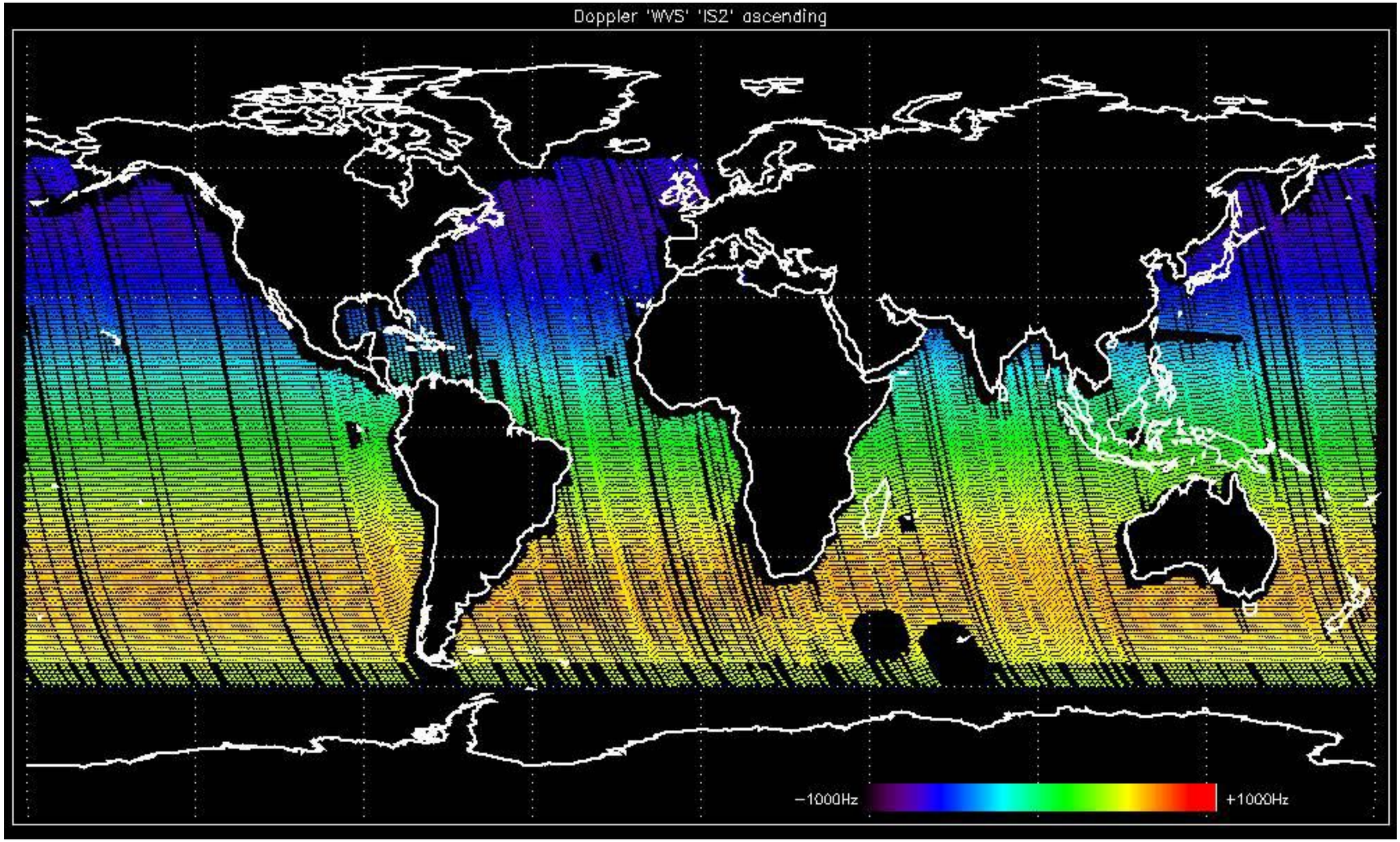

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

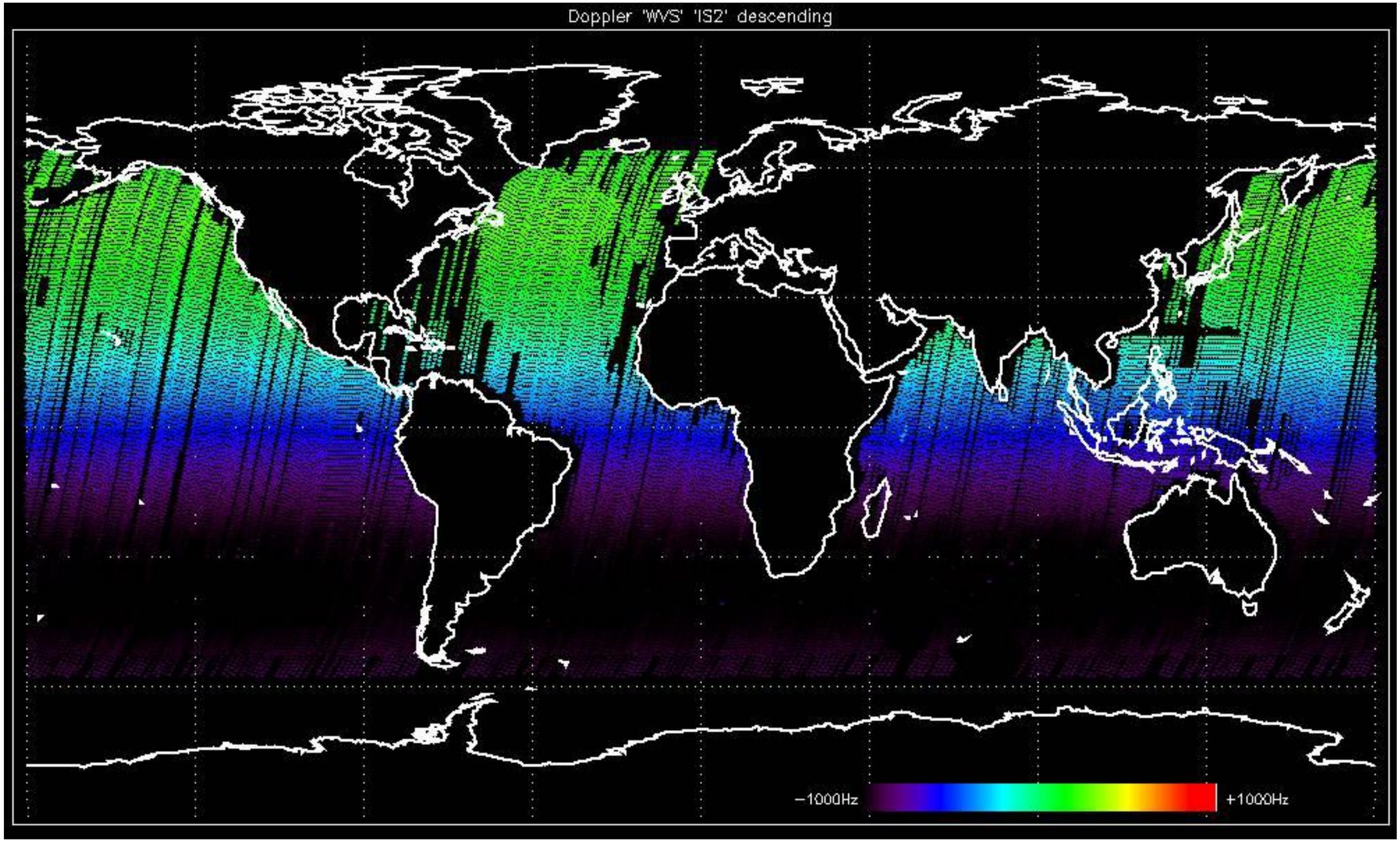
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

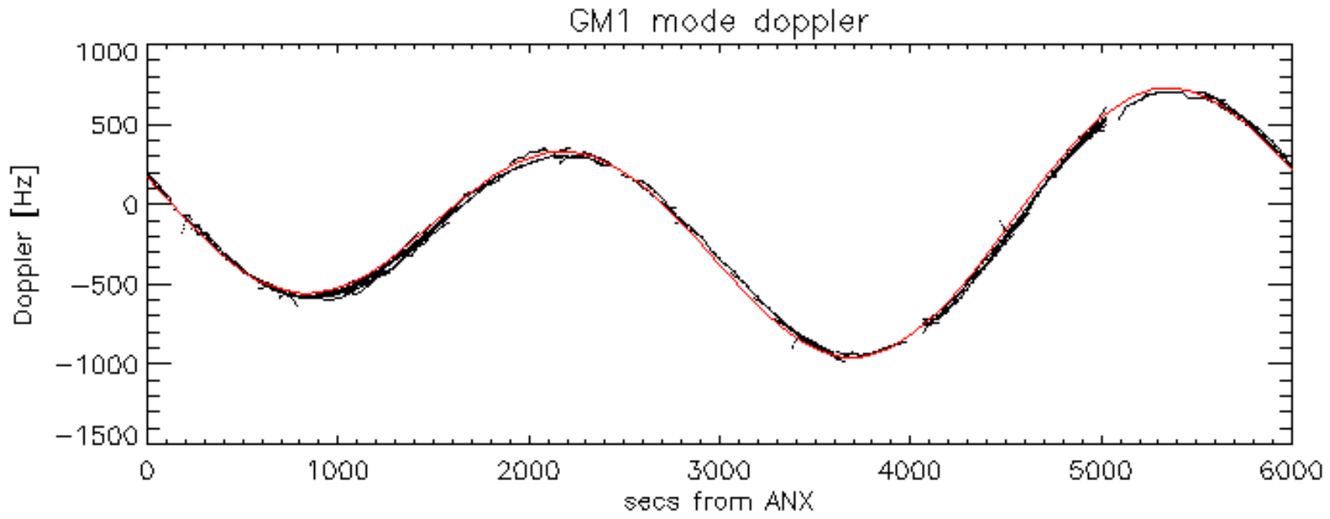
Preliminary report.The data is not yet controled

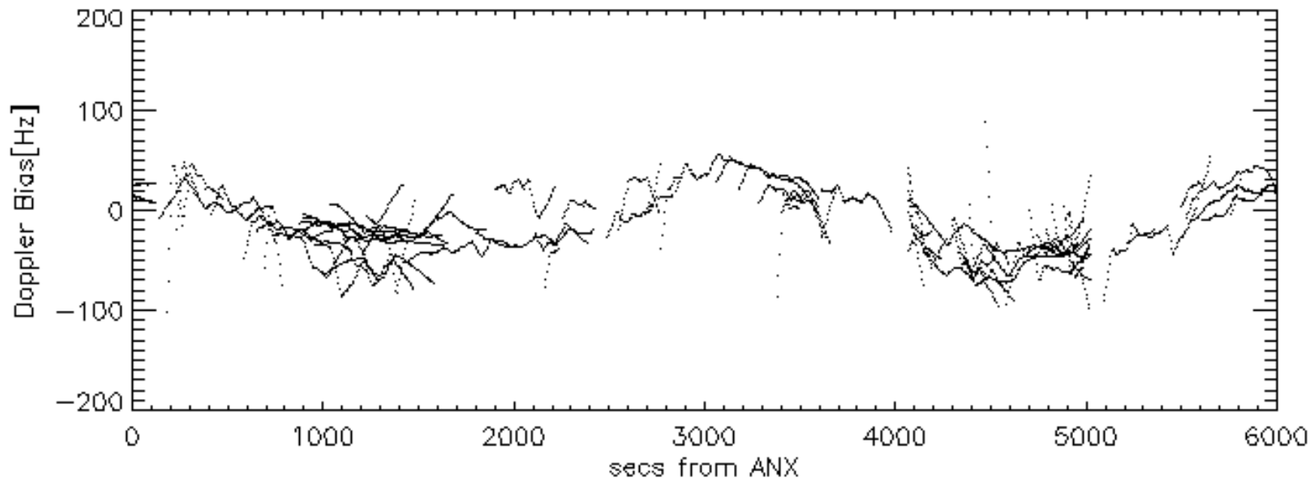

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

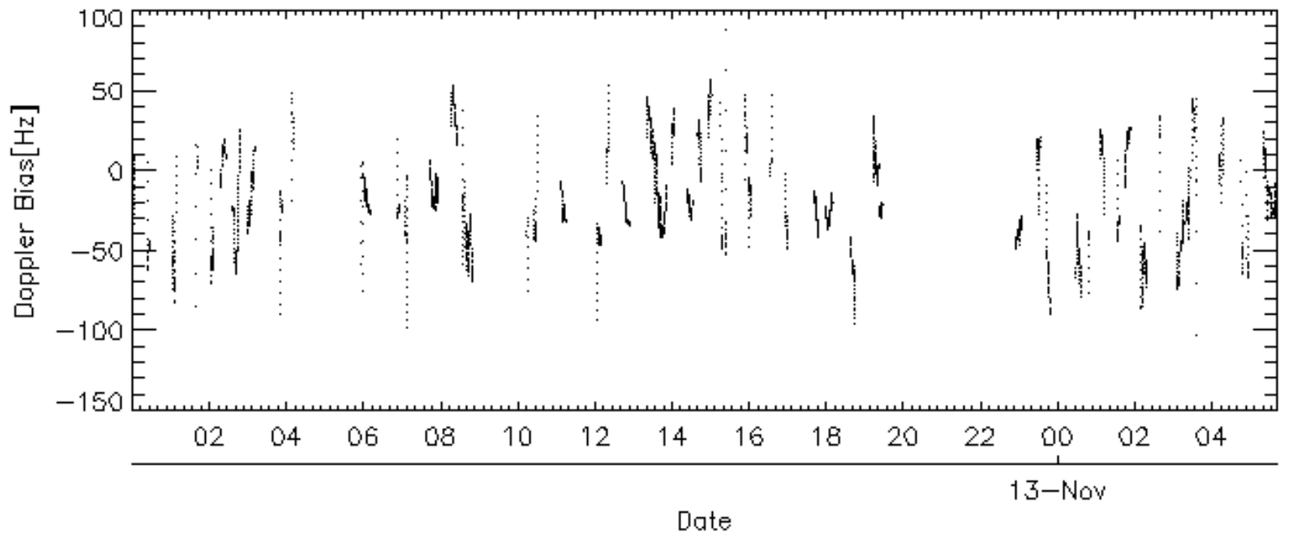

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

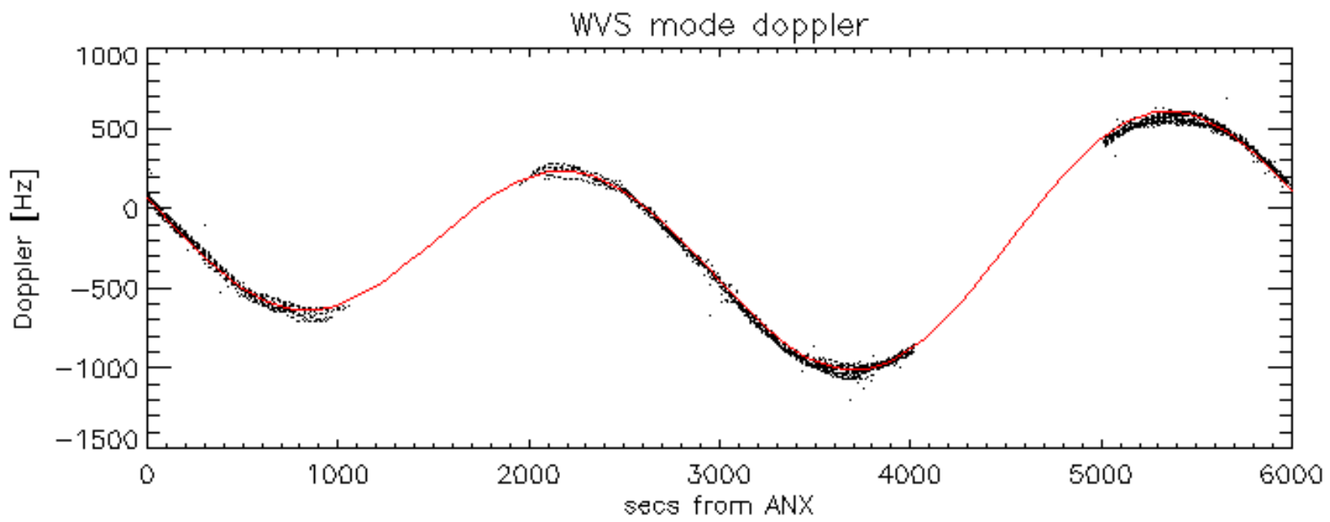

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

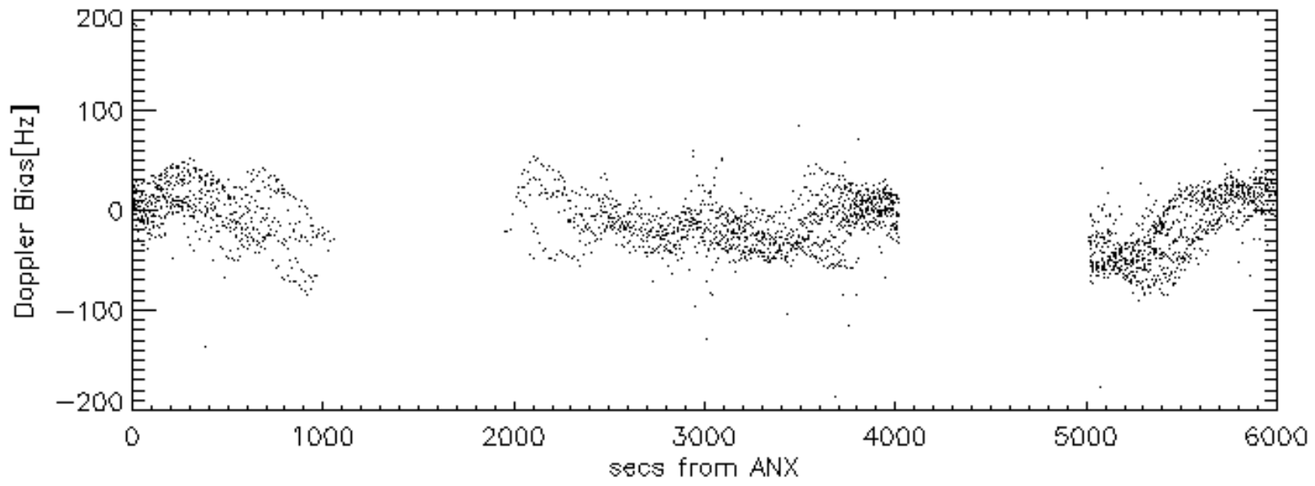

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

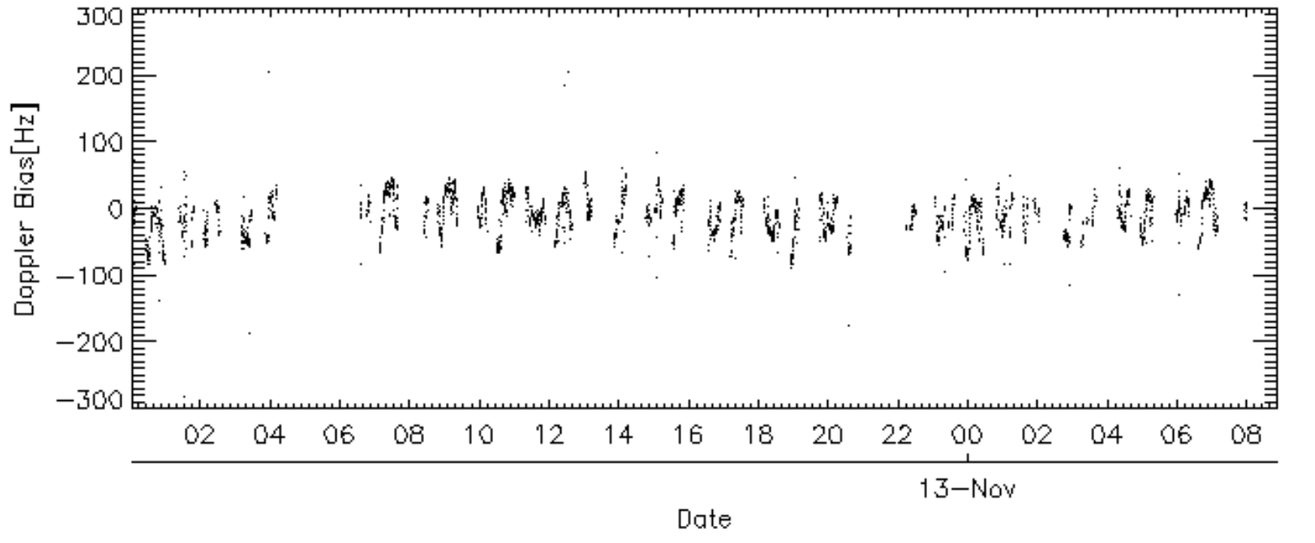

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

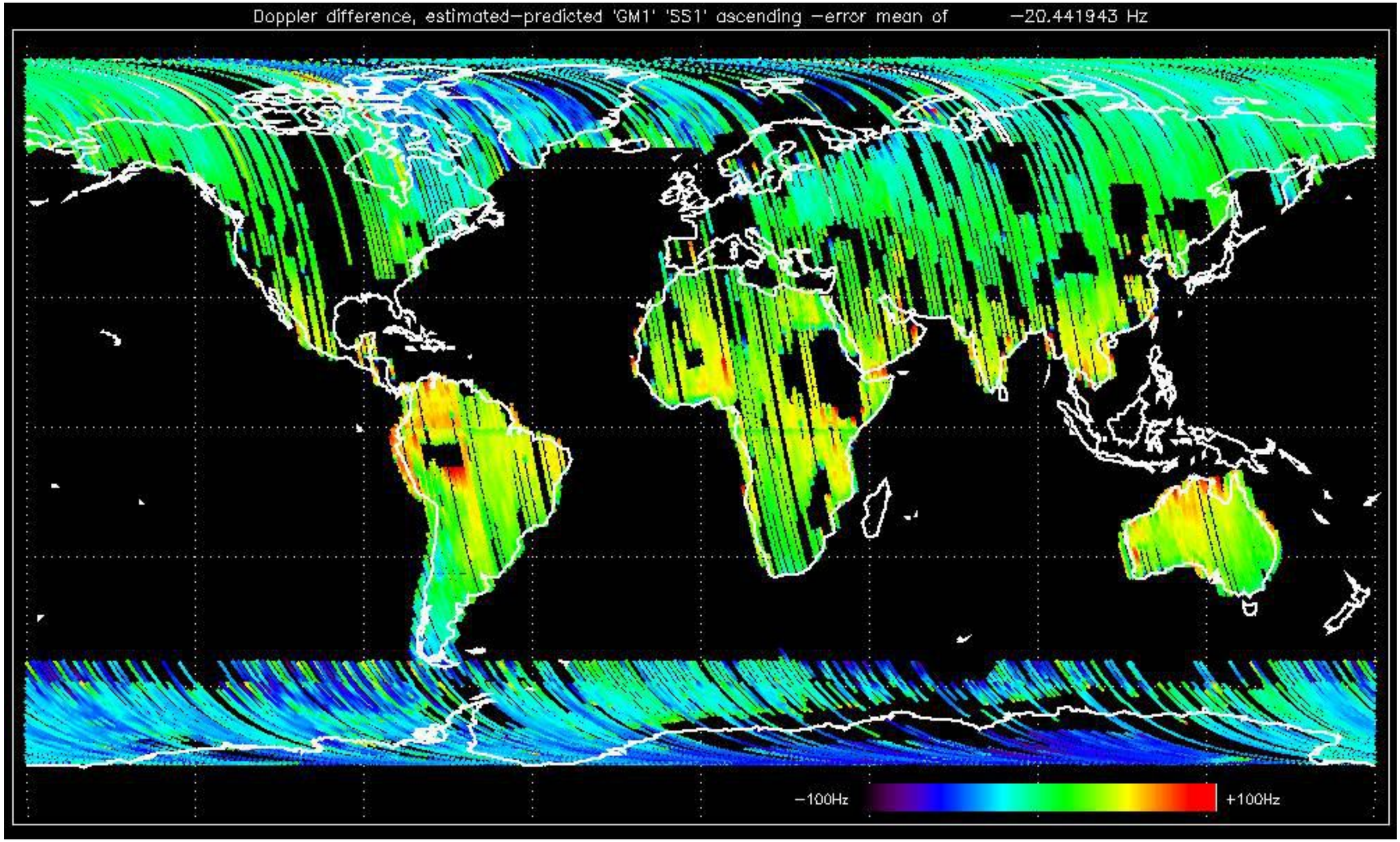

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

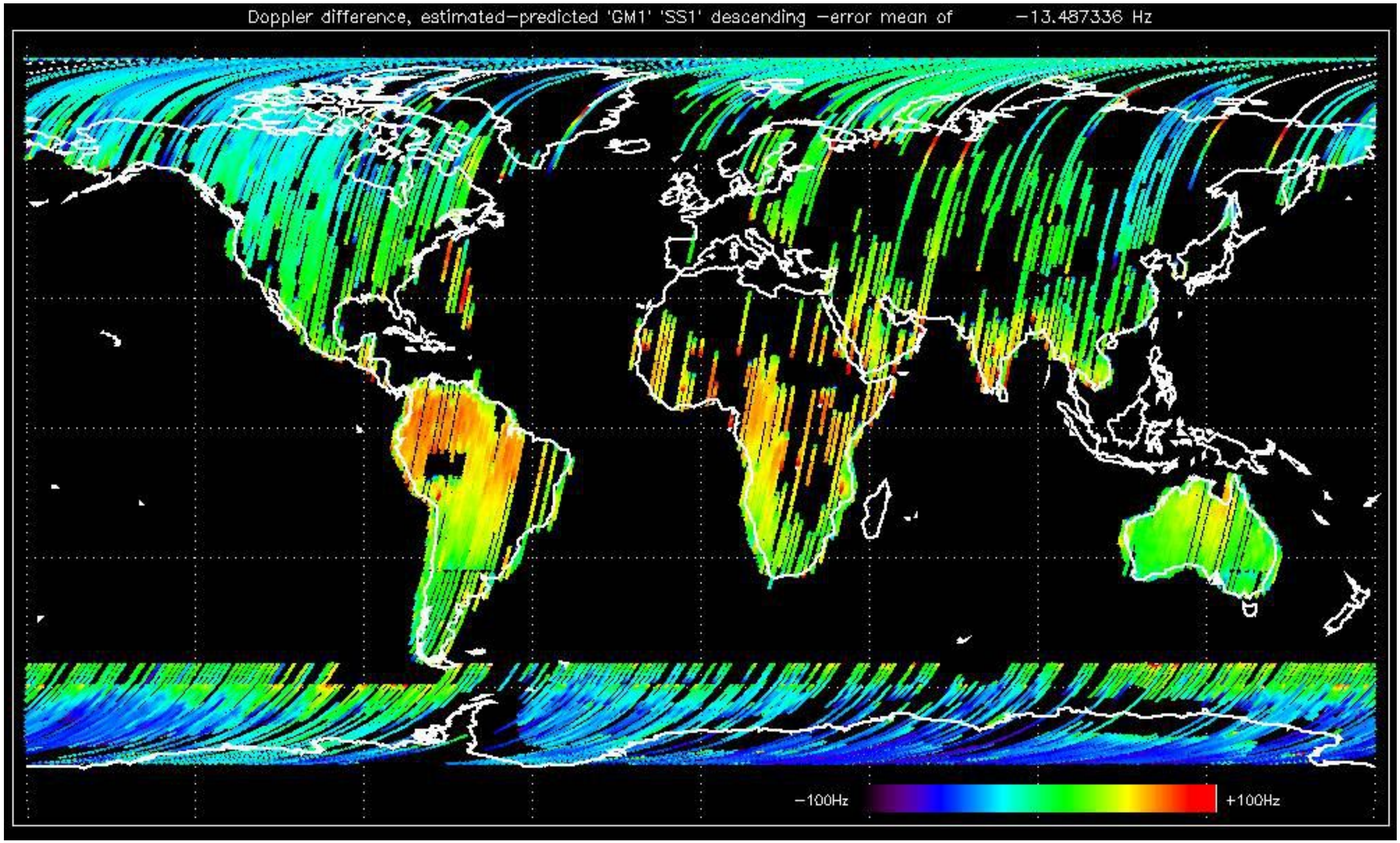

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
13−Nov
Date

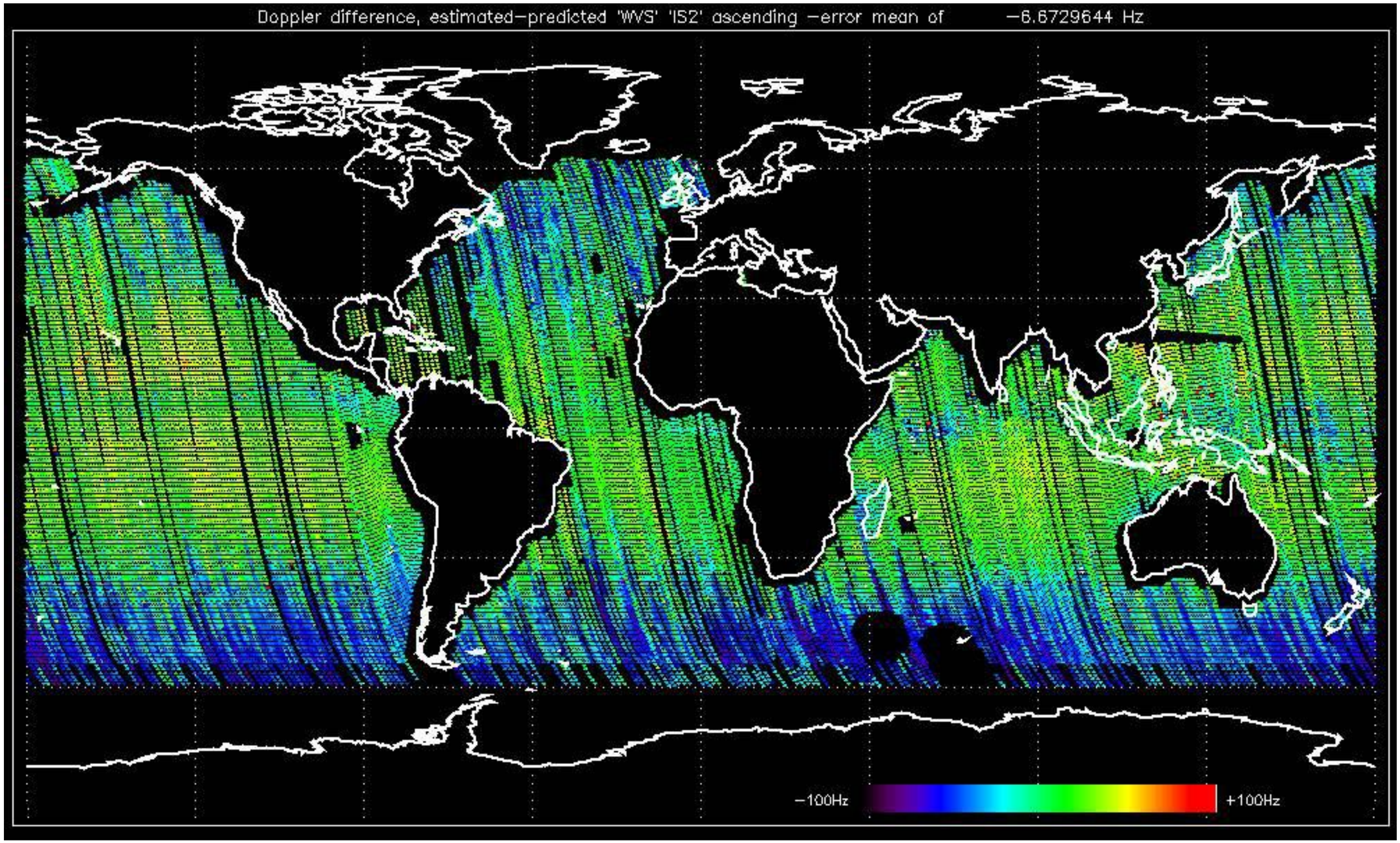

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

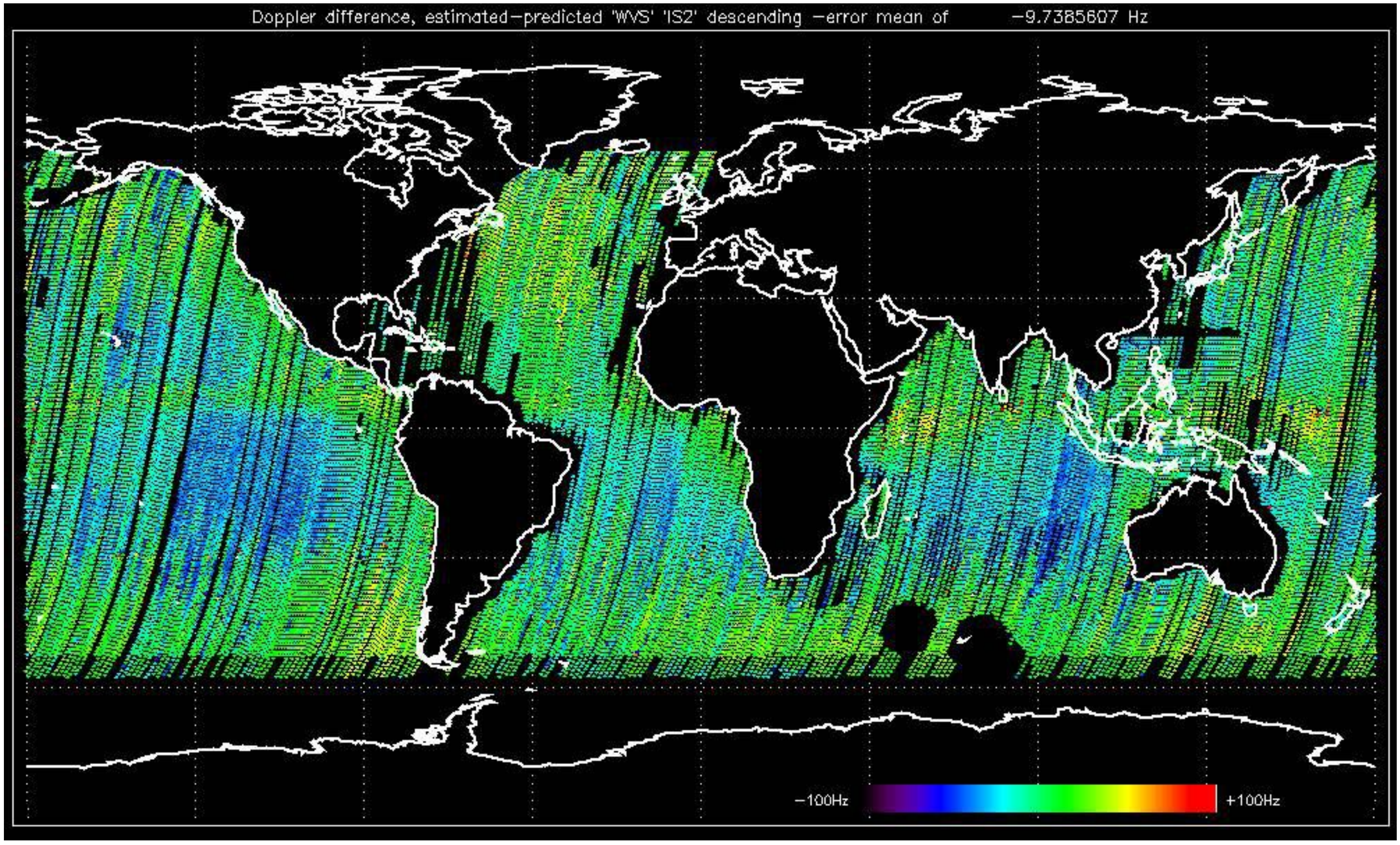

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −20.441943 Hz
−100Hz
+100Hz

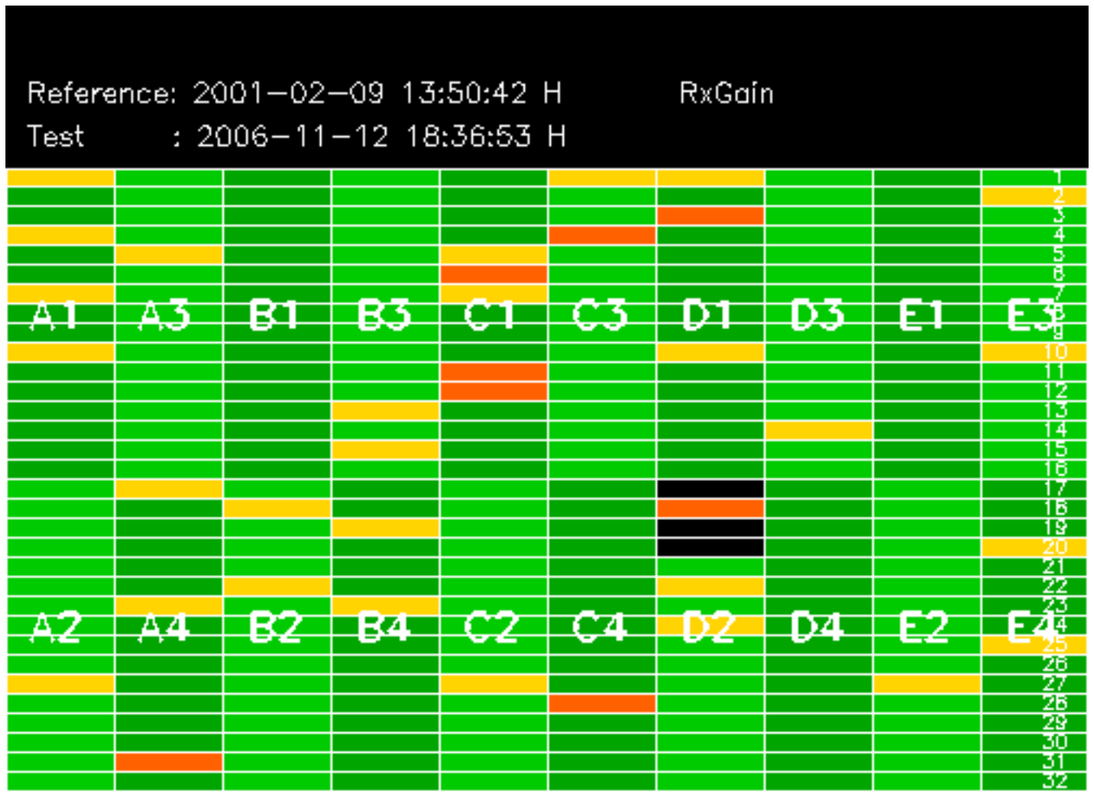

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −13.487336 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −6.6729644 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −9.7385607 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-11-12 18:36:53 H
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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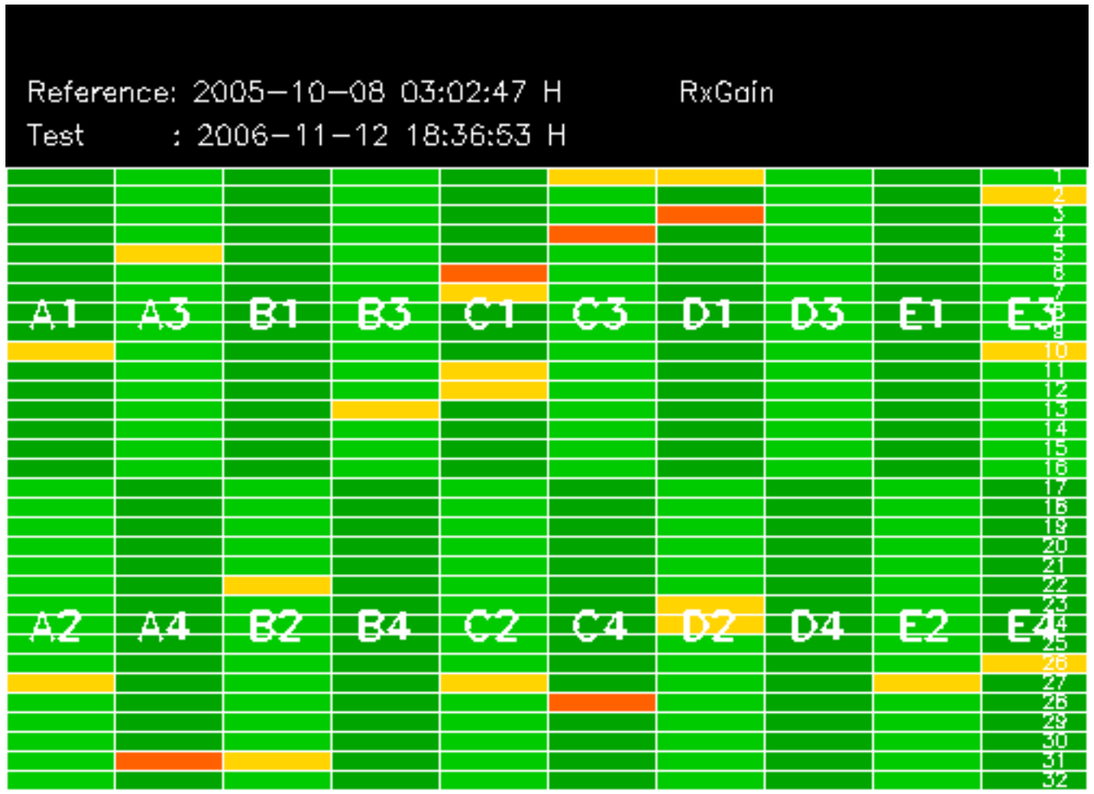
Reference: 2005-10-08 03:02:47 H
Test : 2006-11-12 18:36:53 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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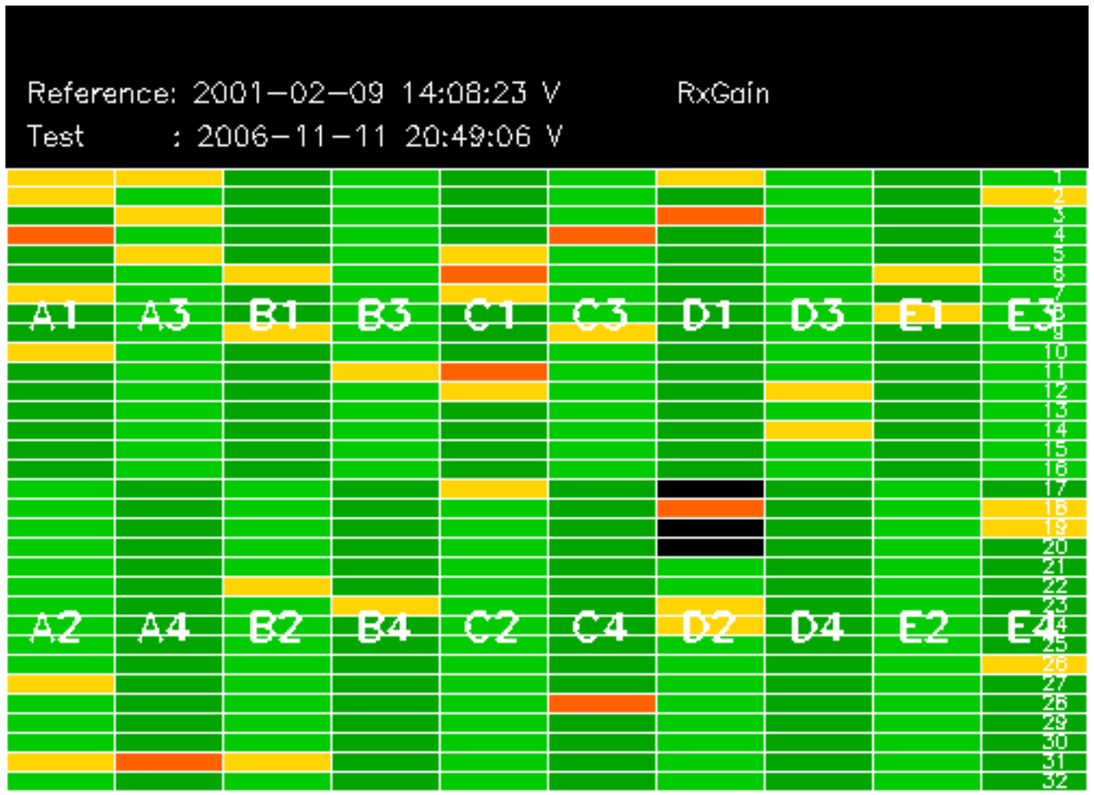
Reference: 2001-02-09 14:08:23 V
Test : 2006-11-11 20:49:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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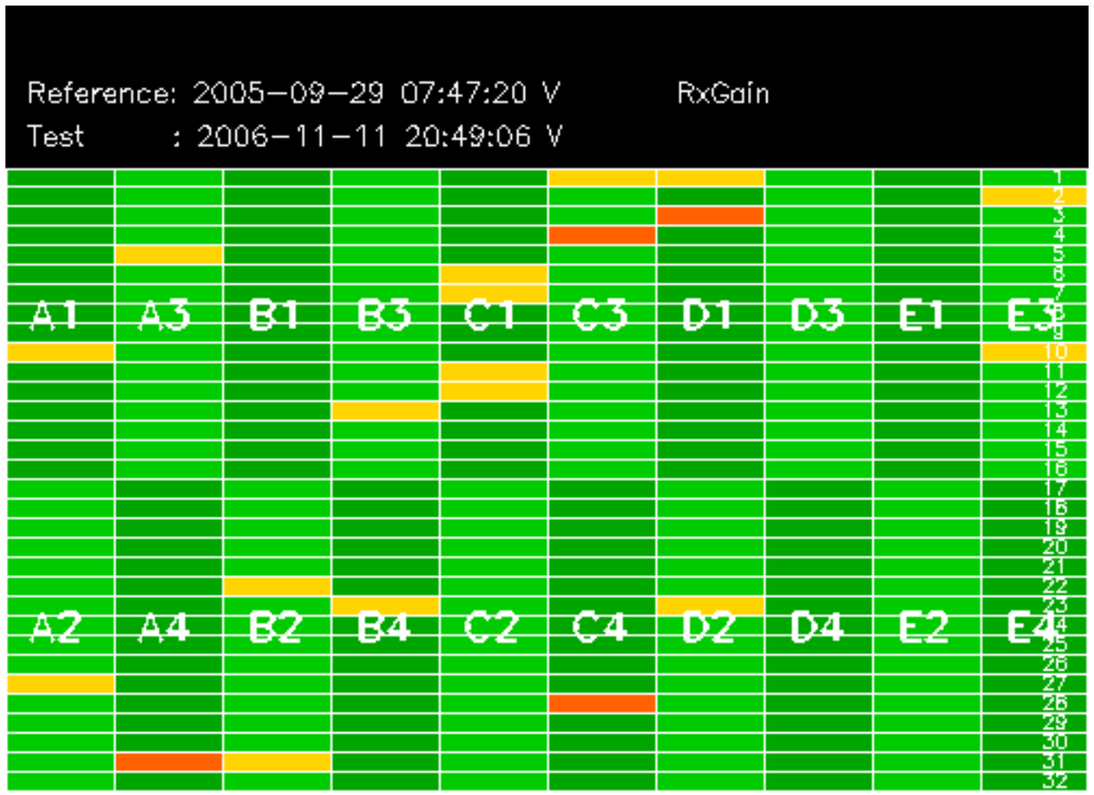
Reference: 2005-09-29 07:47:20 V
Test : 2006-11-11 20:49:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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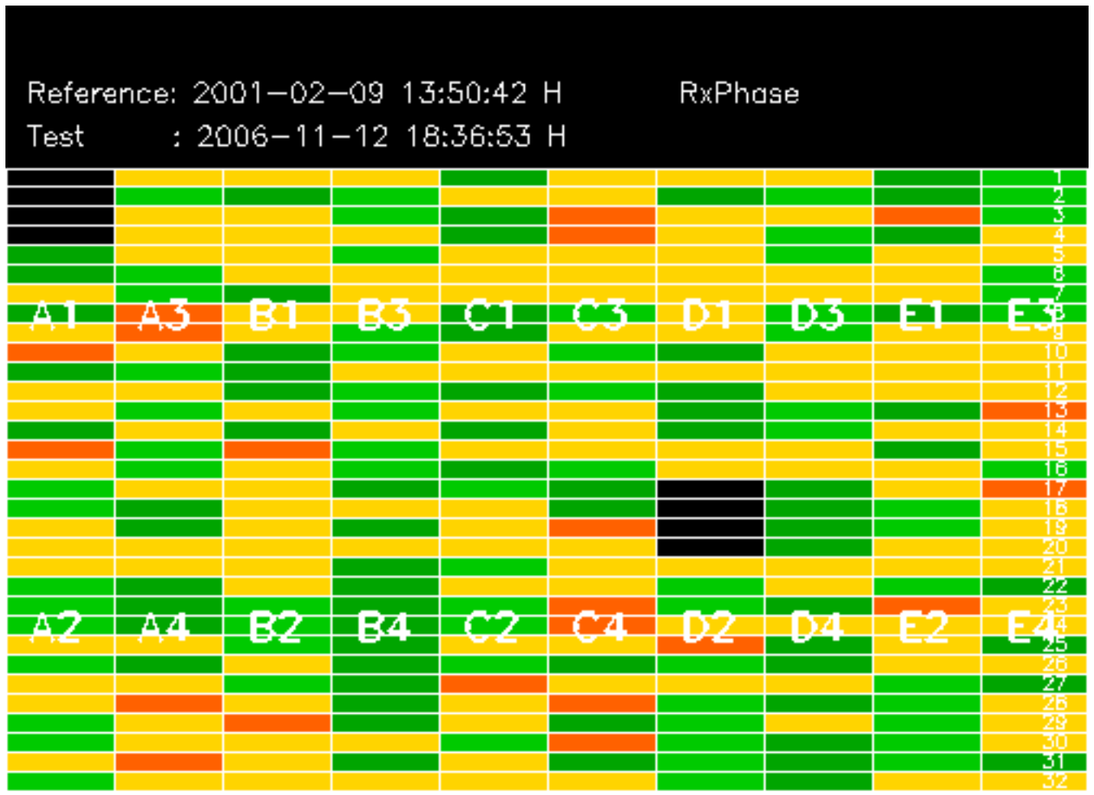
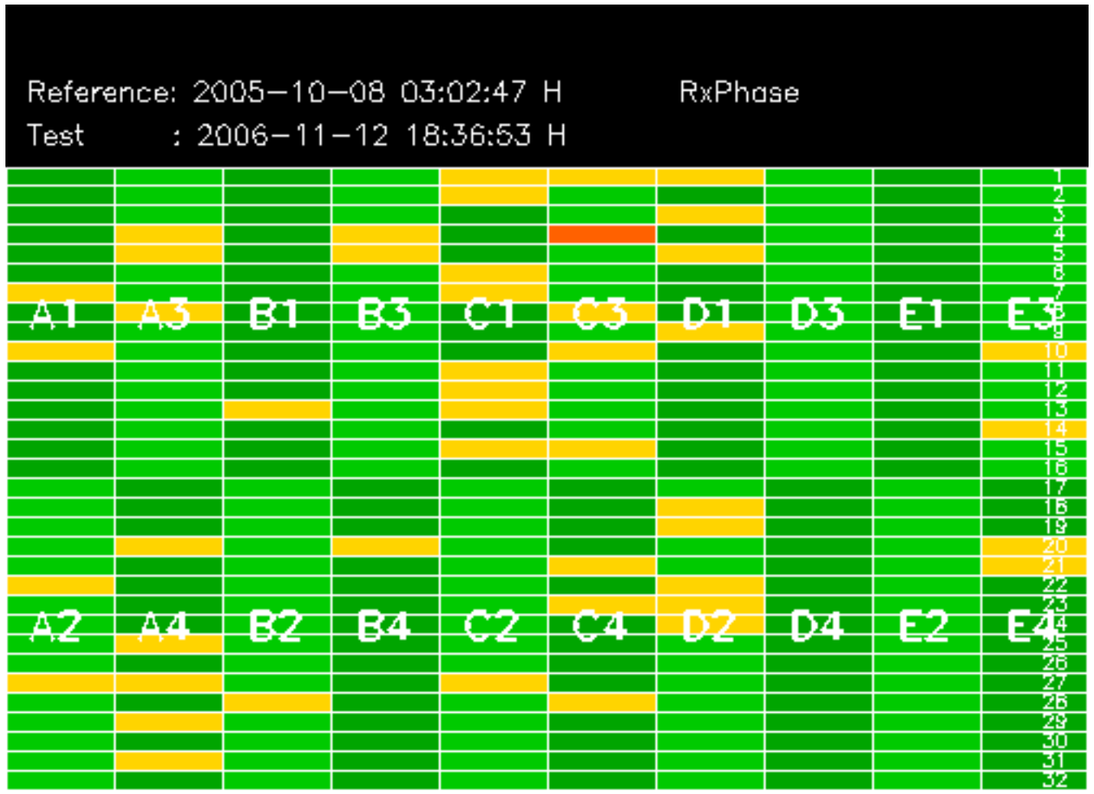

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-11-12 18:36:53 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
RxPhase
Test : 2006-11-12 18:36:53 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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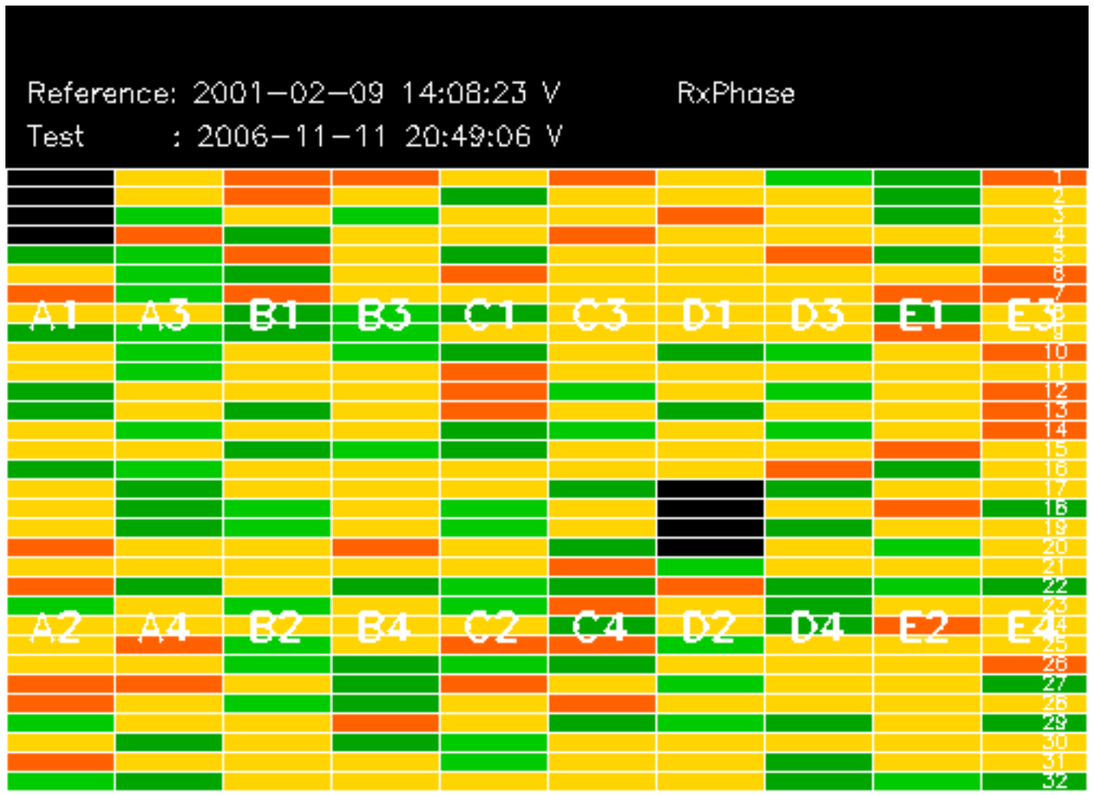
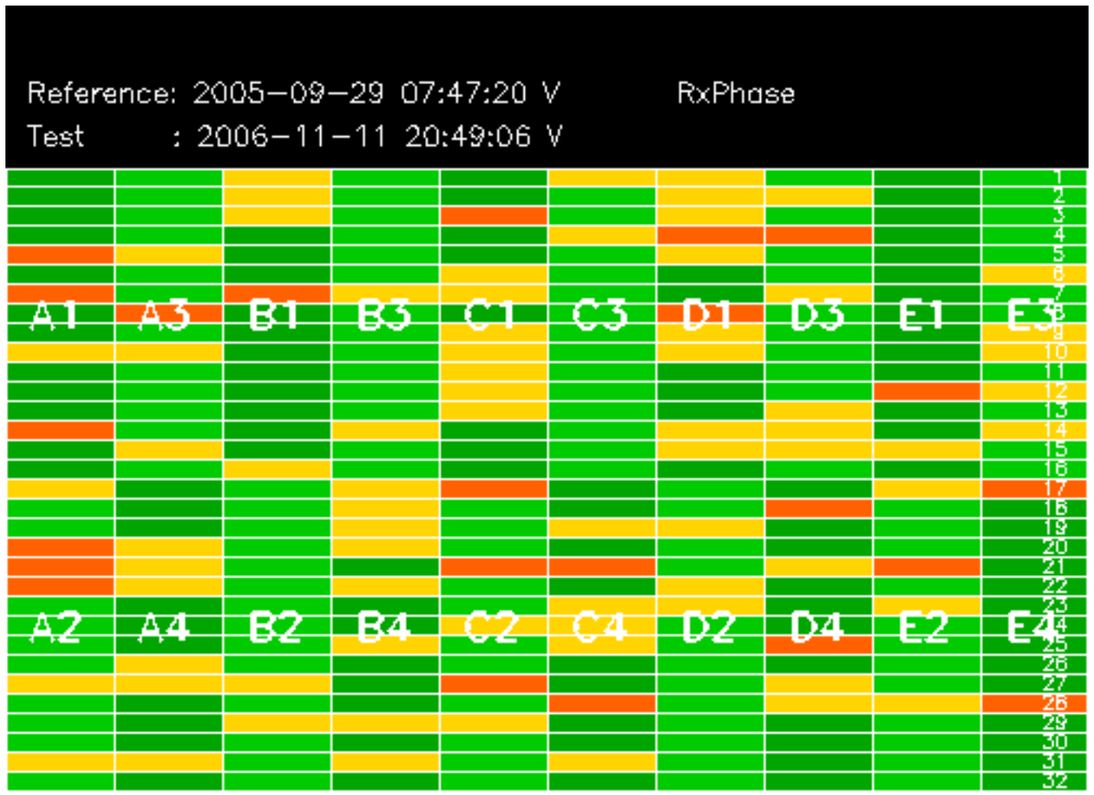

Reference: 2001-02-09 14:08:23 V
Test : 2006-11-11 20:49:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-11 20:49:06 V
RxPhase
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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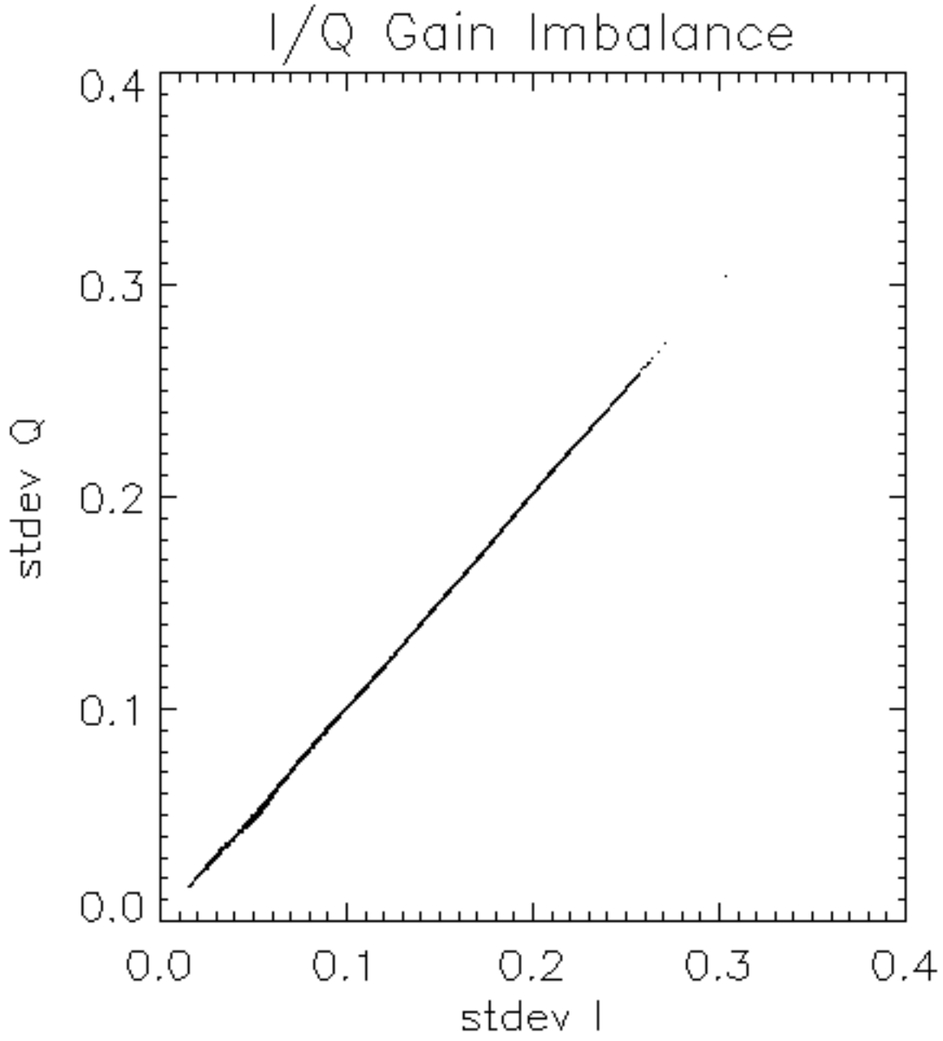
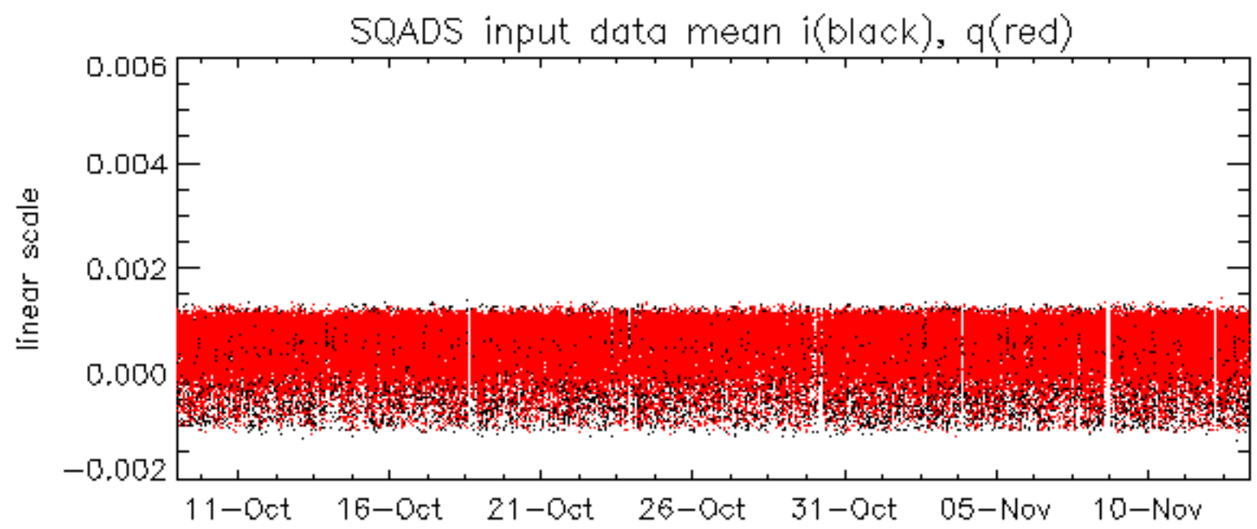
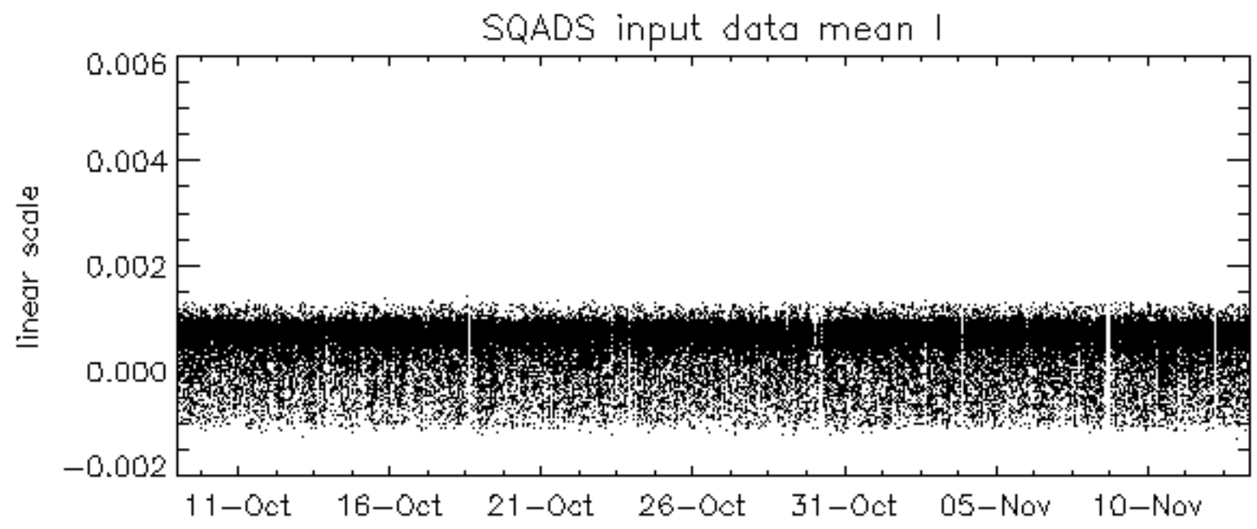
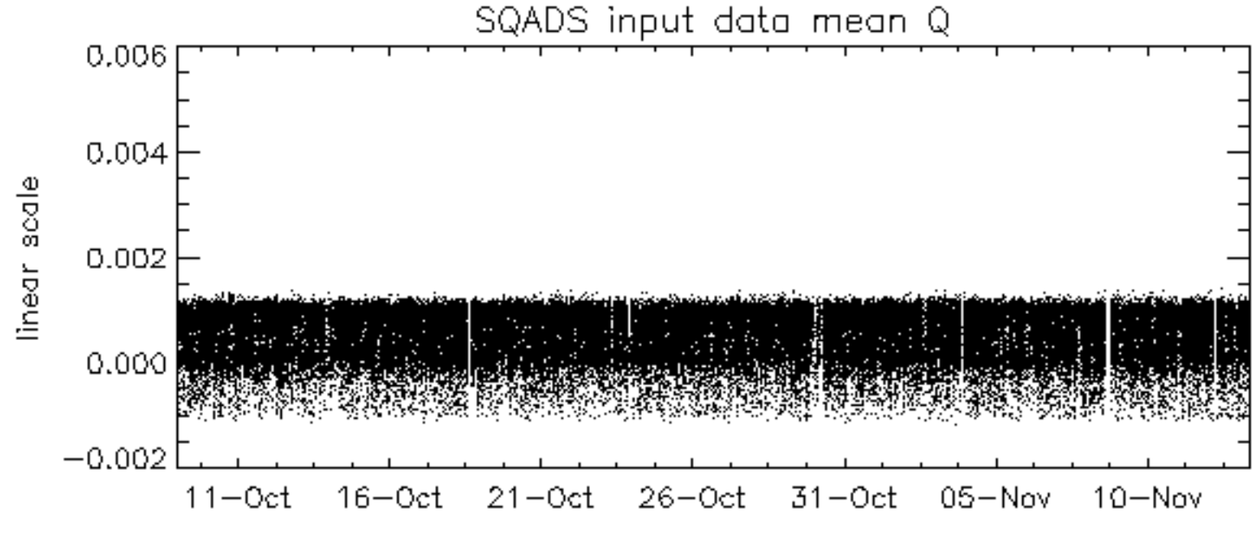
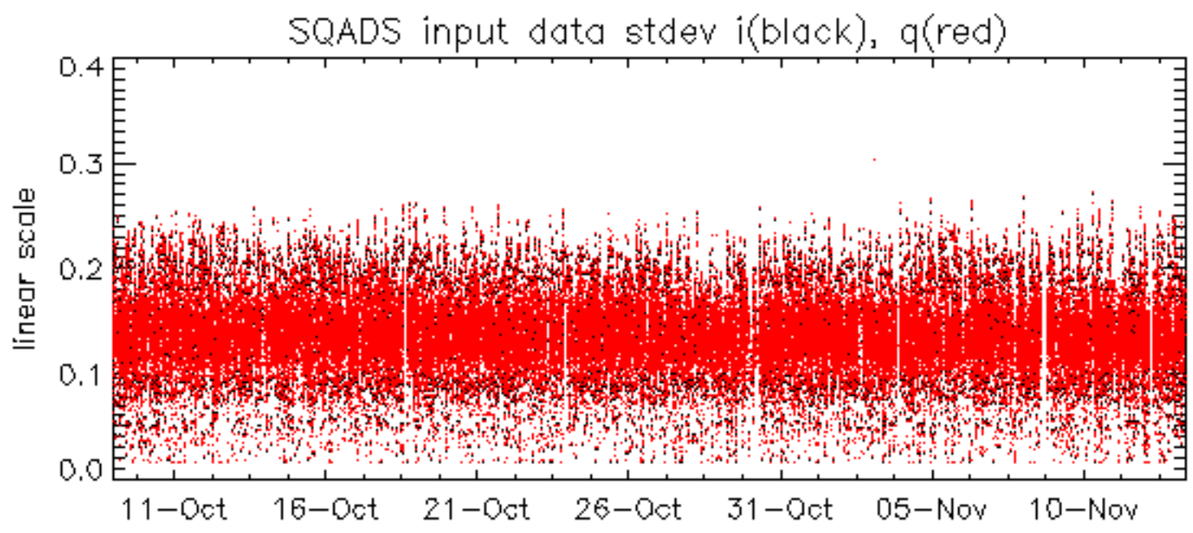
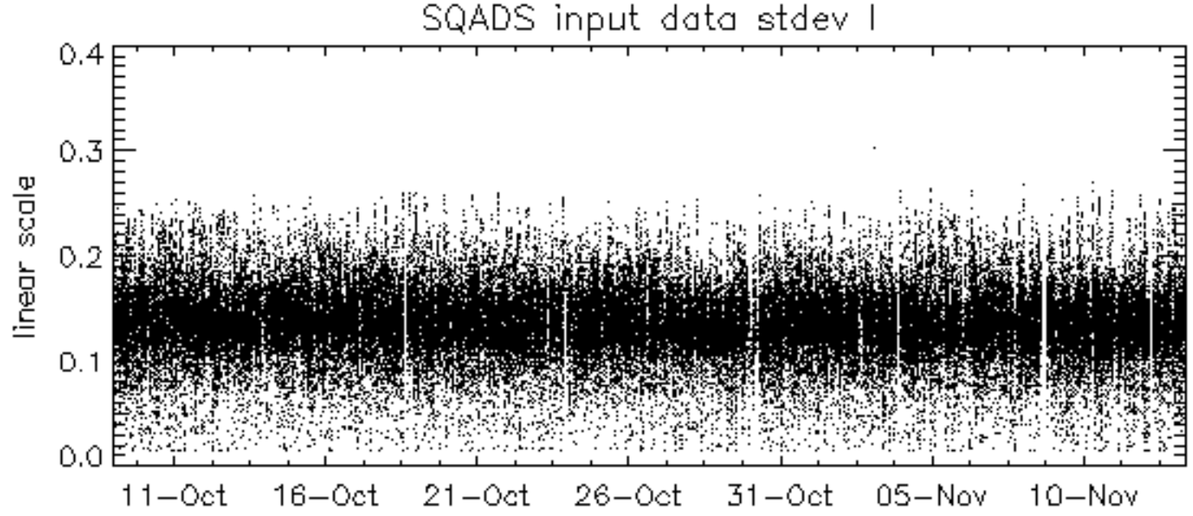

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

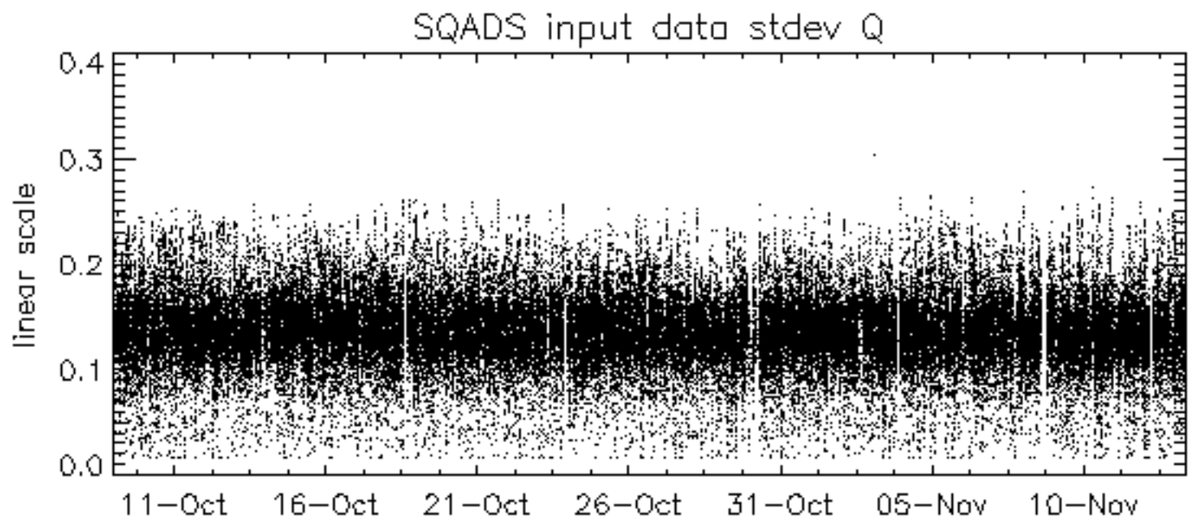

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

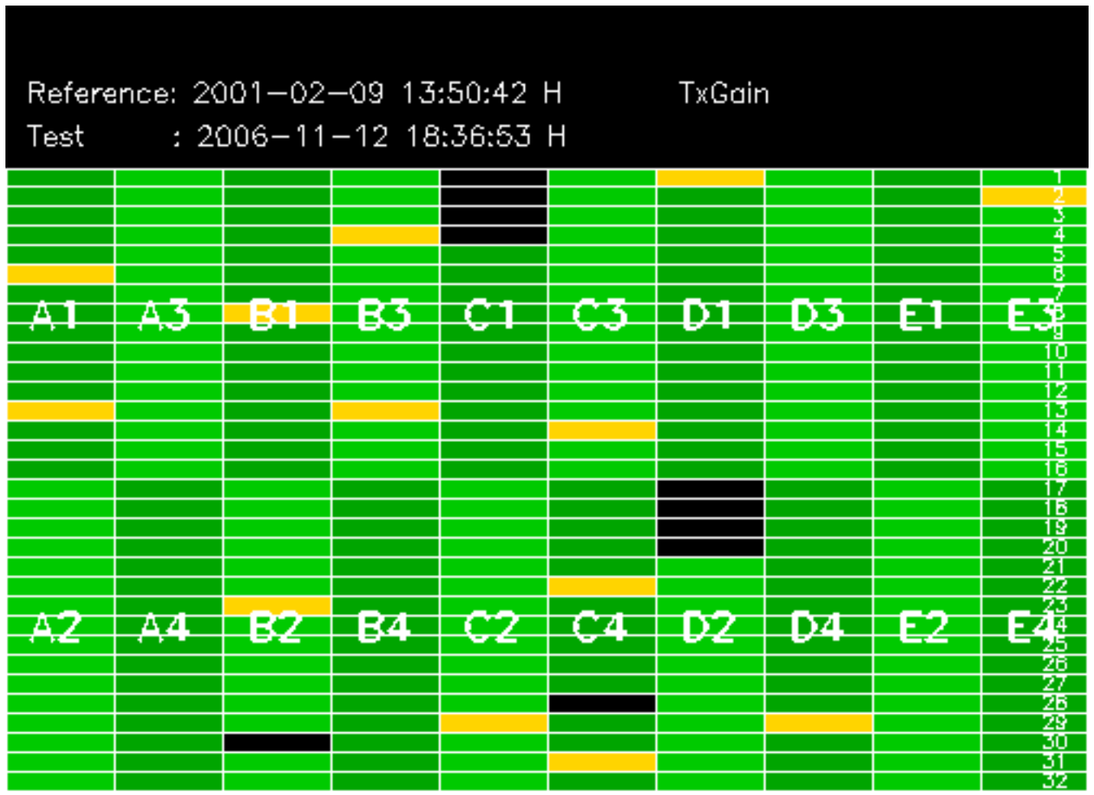

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2006-11-12 18:36:53 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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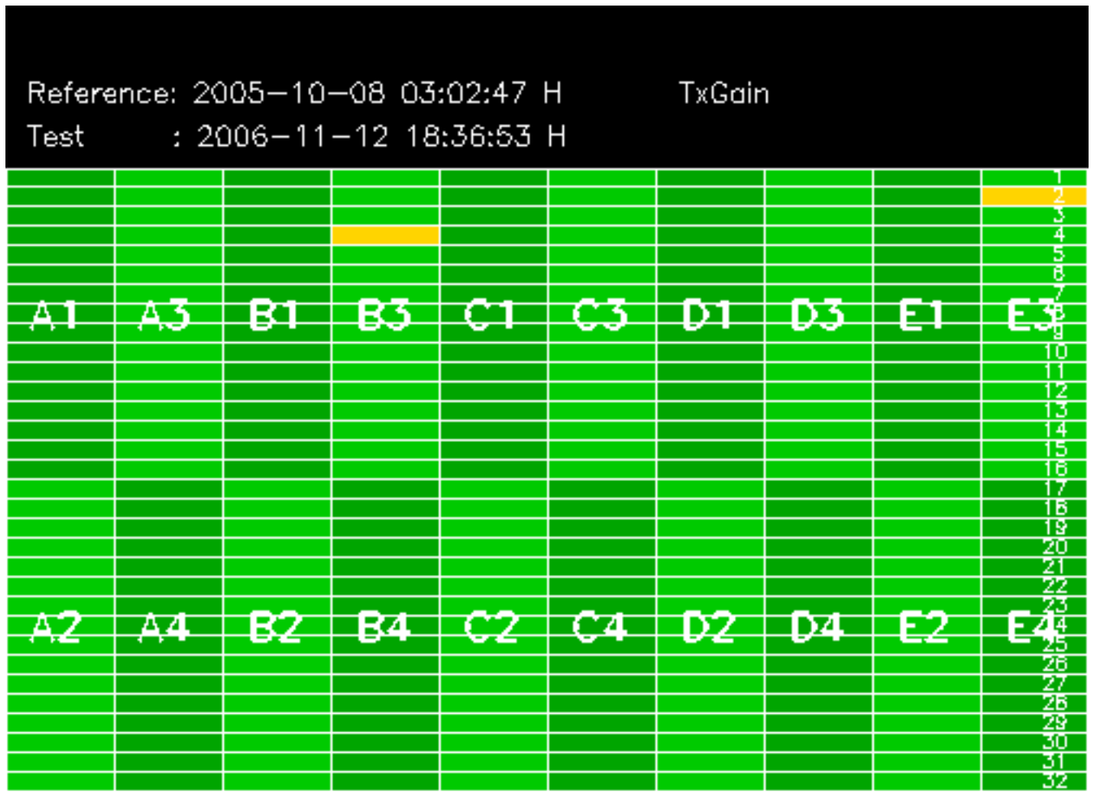
Reference: 2005-10-08 03:02:47 H
Test : 2006-11-12 18:36:53 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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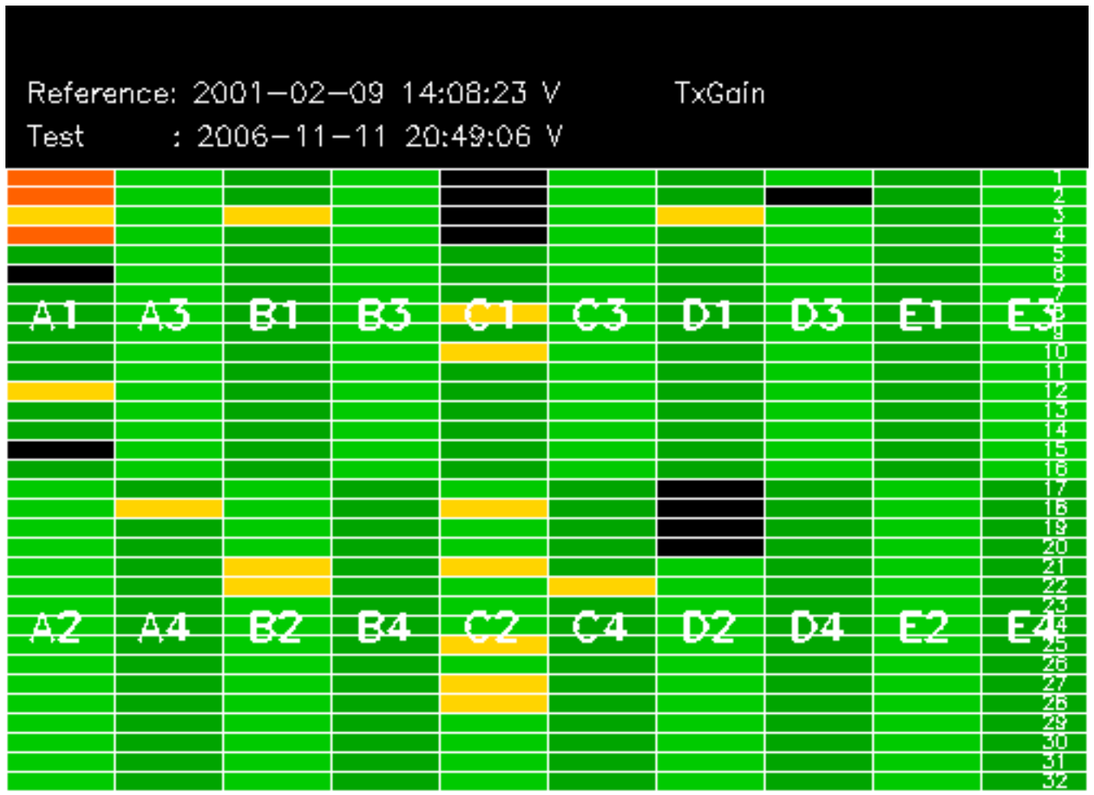
Reference: 2001-02-09 14:08:23 V
Test : 2006-11-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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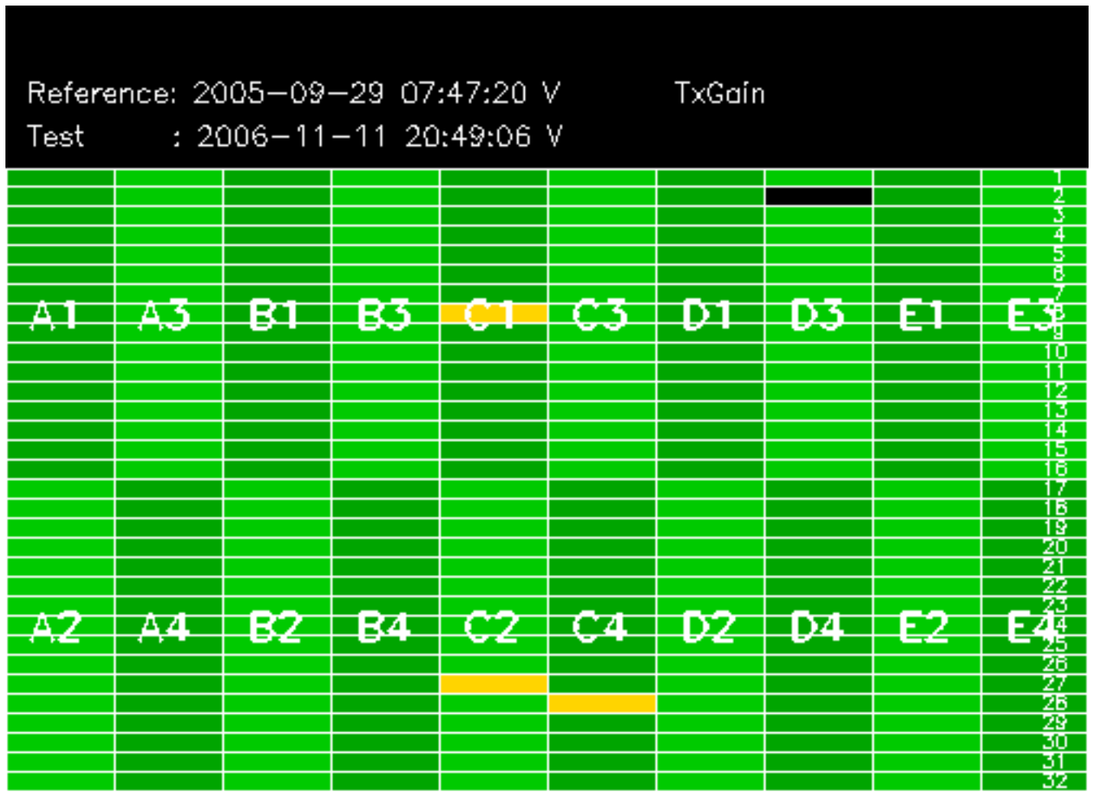
Reference: 2005-09-29 07:47:20 V
Test : 2006-11-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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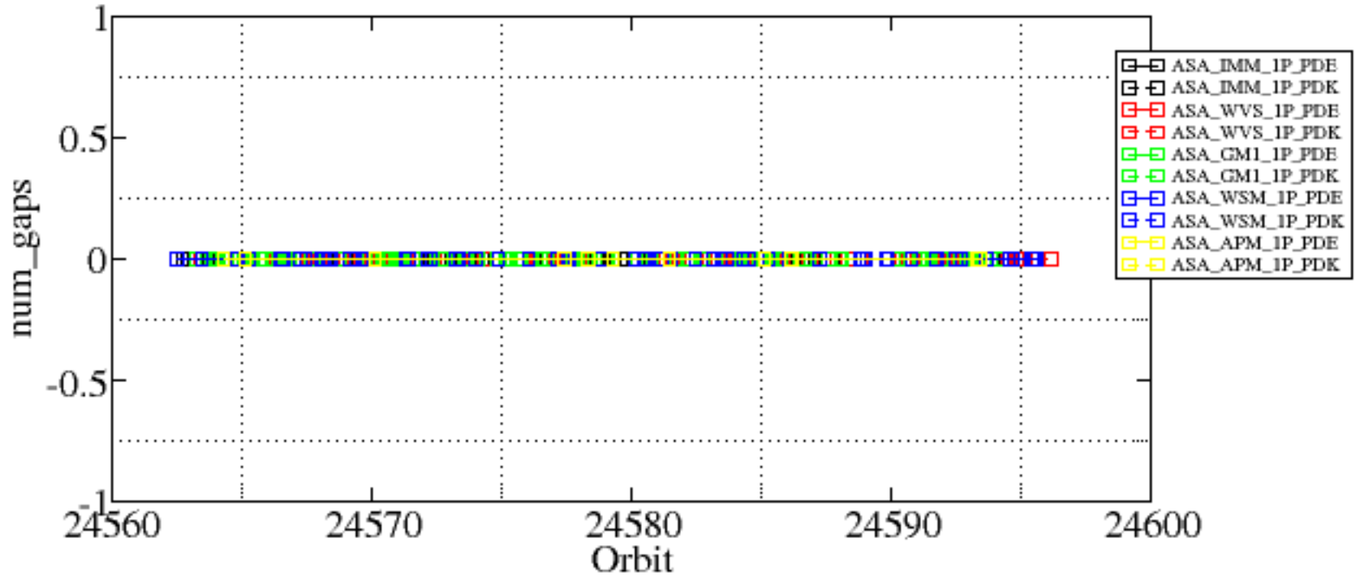
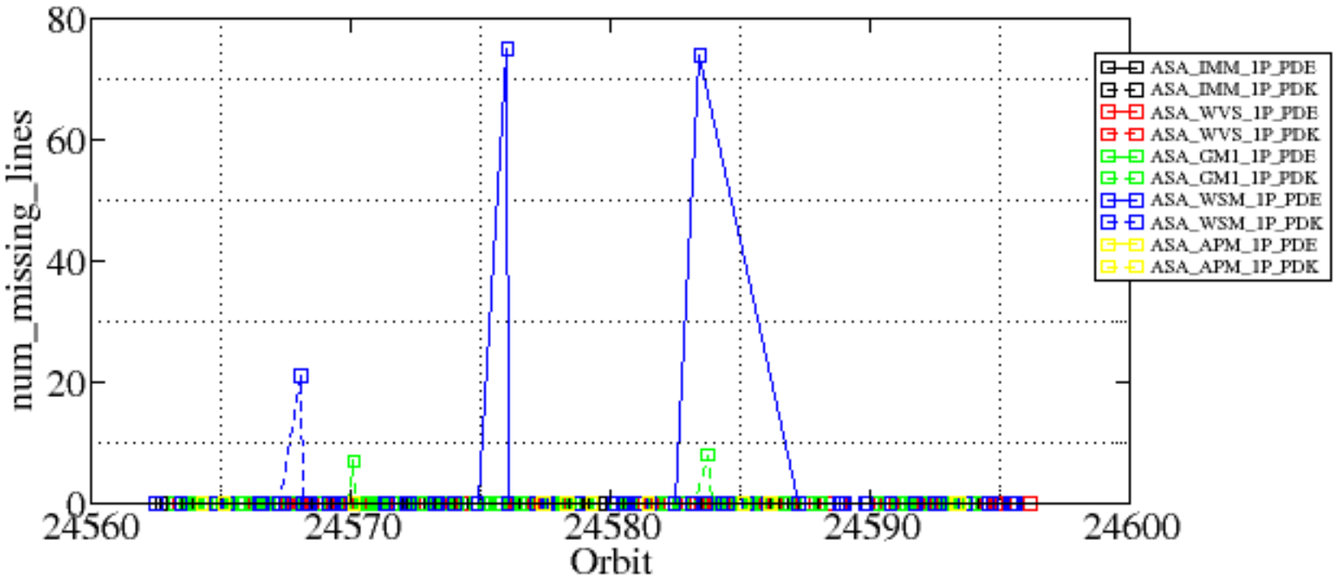
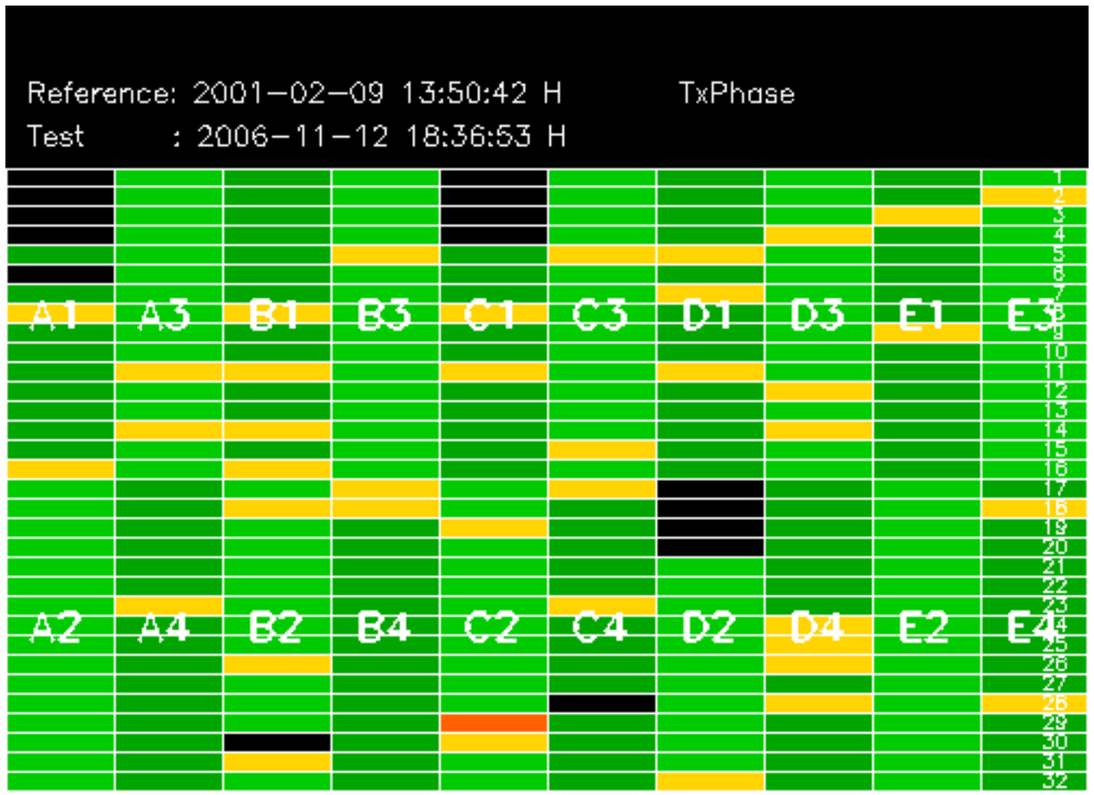
Summary of analysis for the last 3 days 2006111[123]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_GM1_1PNPDK20061111_131036_000000782052_00468_24570_8454.N1 </td> <td>0 </td> <td>7 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20061112_120311_000004412052_00481_24583_8512.N1 </td> <td>0 </td> <td>8 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061111_230555_000001032052_00474_24576_0001.N1 </td> <td>0 </td> <td>75 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061112_113207_000001582052_00481_24583_0001.N1 </td> <td>0 </td> <td>74 </td></tr>
<tr> <td>ASA_WSM_1PNPDK20061111_094431_000000862052_00466_24568_9866.N1 </td> <td>0 </td> <td>21 </td></tr>
</table>


num_gaps
1
0.5
0
-0.5
-1
24560
24570
24580
24590
24600
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
80
60
40
20
0
24560
24570
24580
24590
24600
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2006-11-12 18:36:53 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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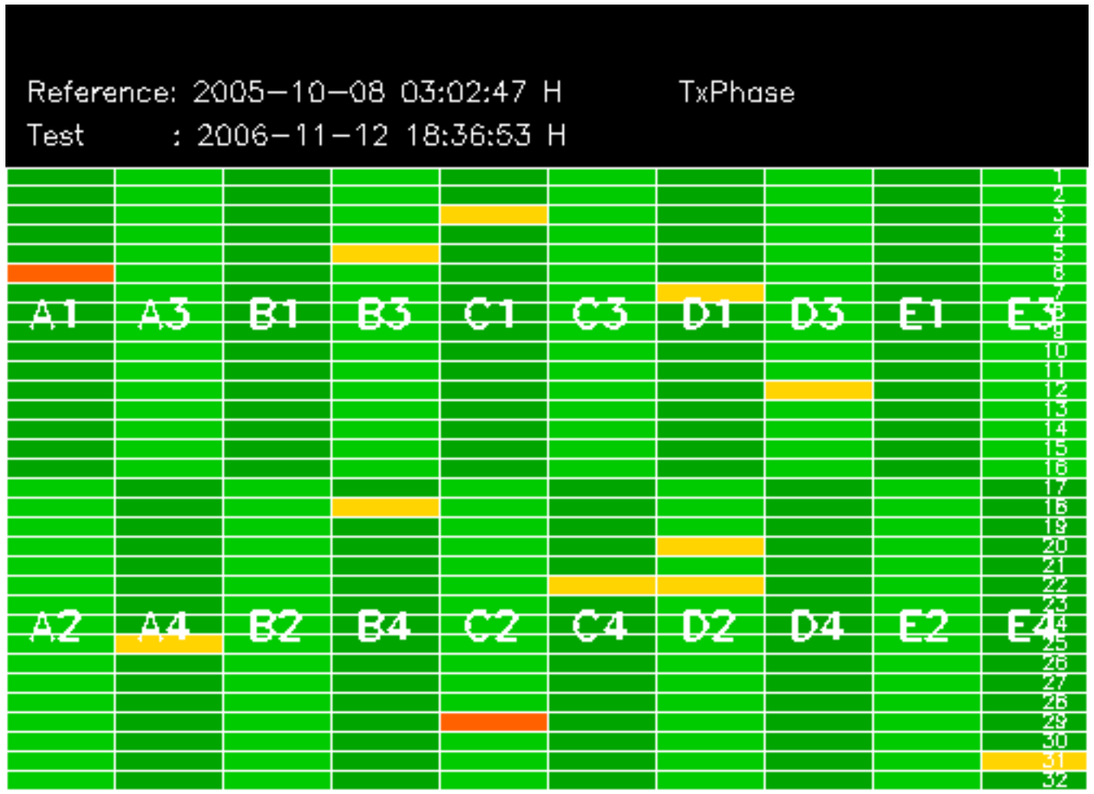
Reference: 2005-10-08 03:02:47 H
Test : 2006-11-12 18:36:53 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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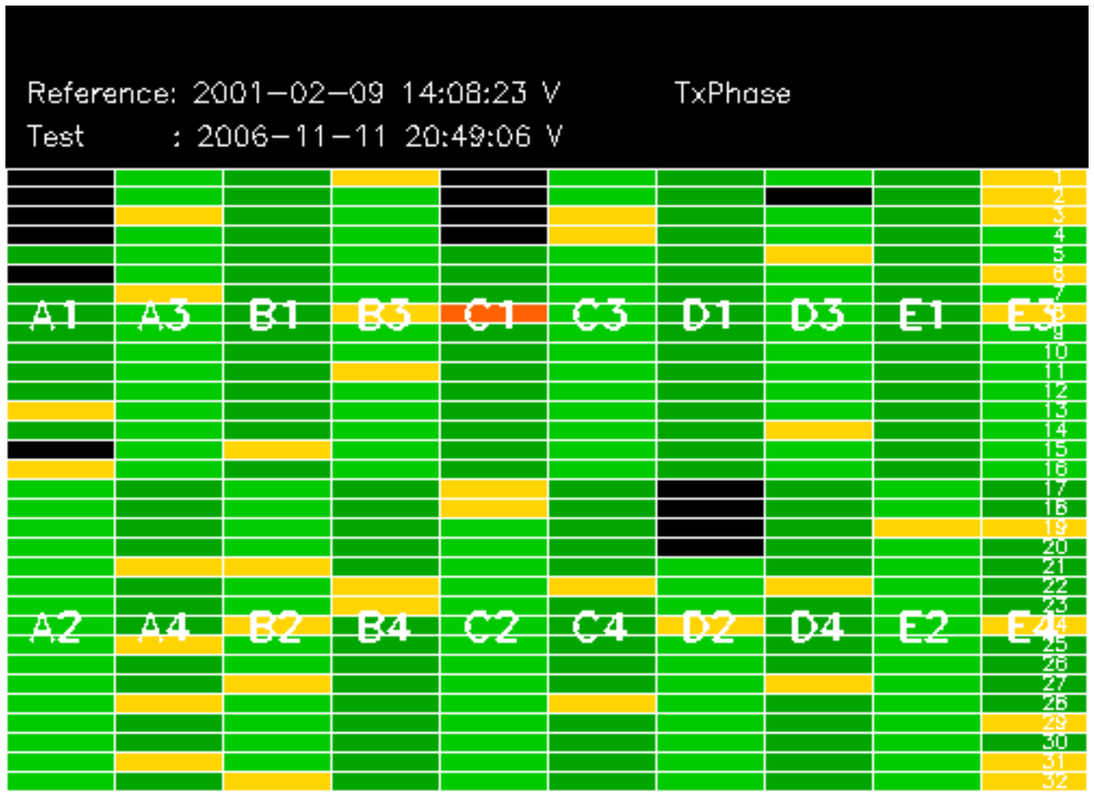
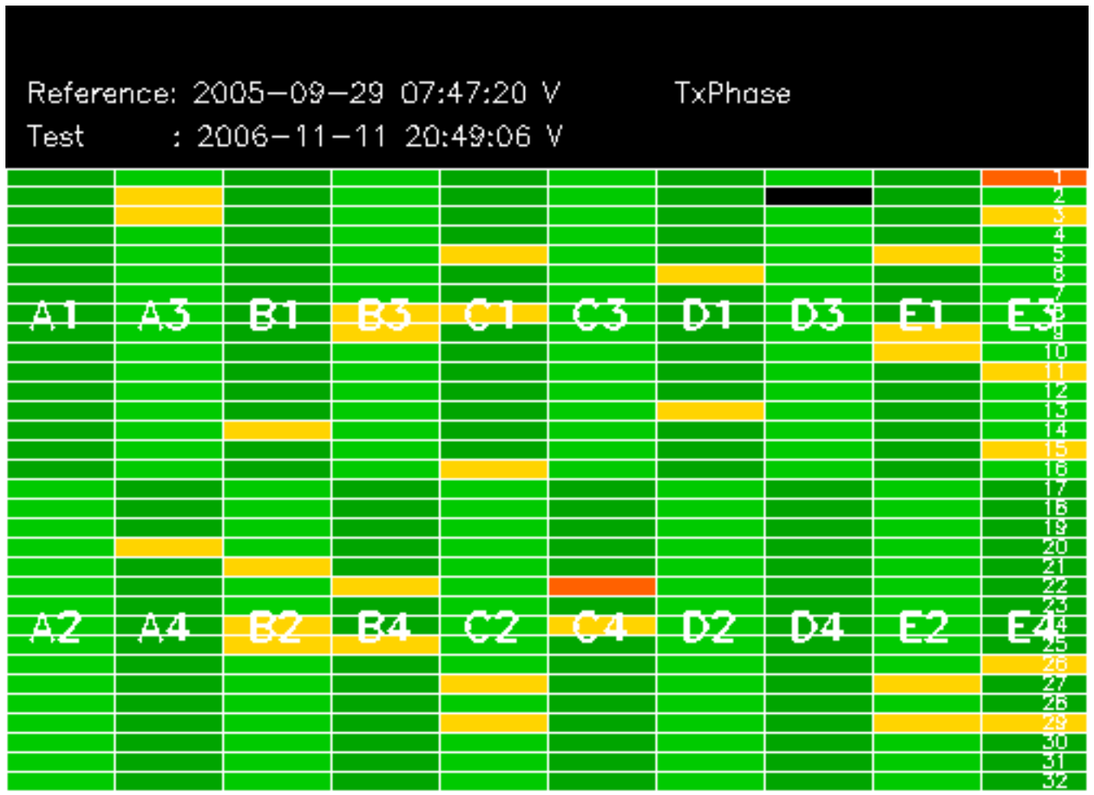

Reference: 2001-02-09 14:08:23 V
Test : 2006-11-11 20:49:06 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-11 20:49:06 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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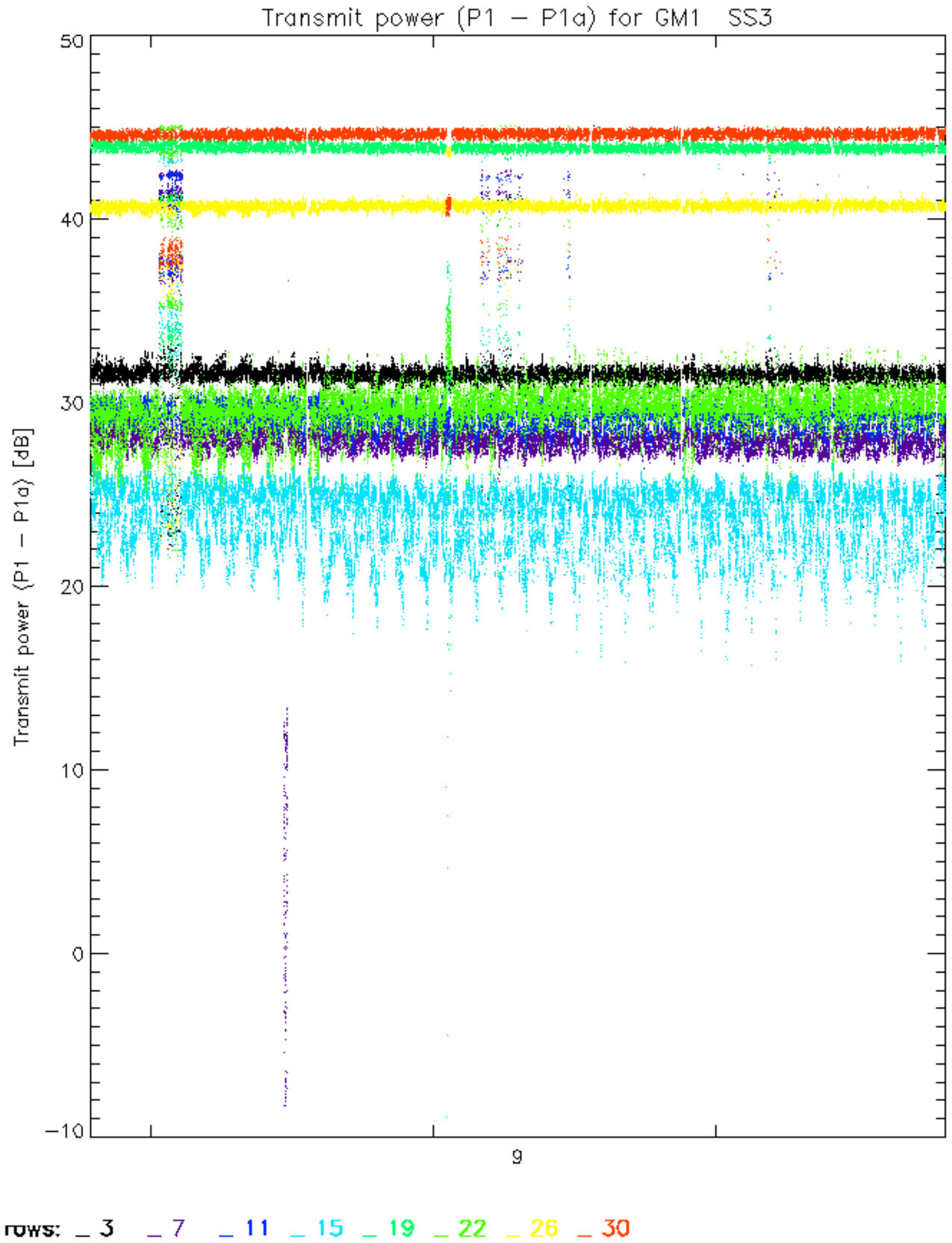
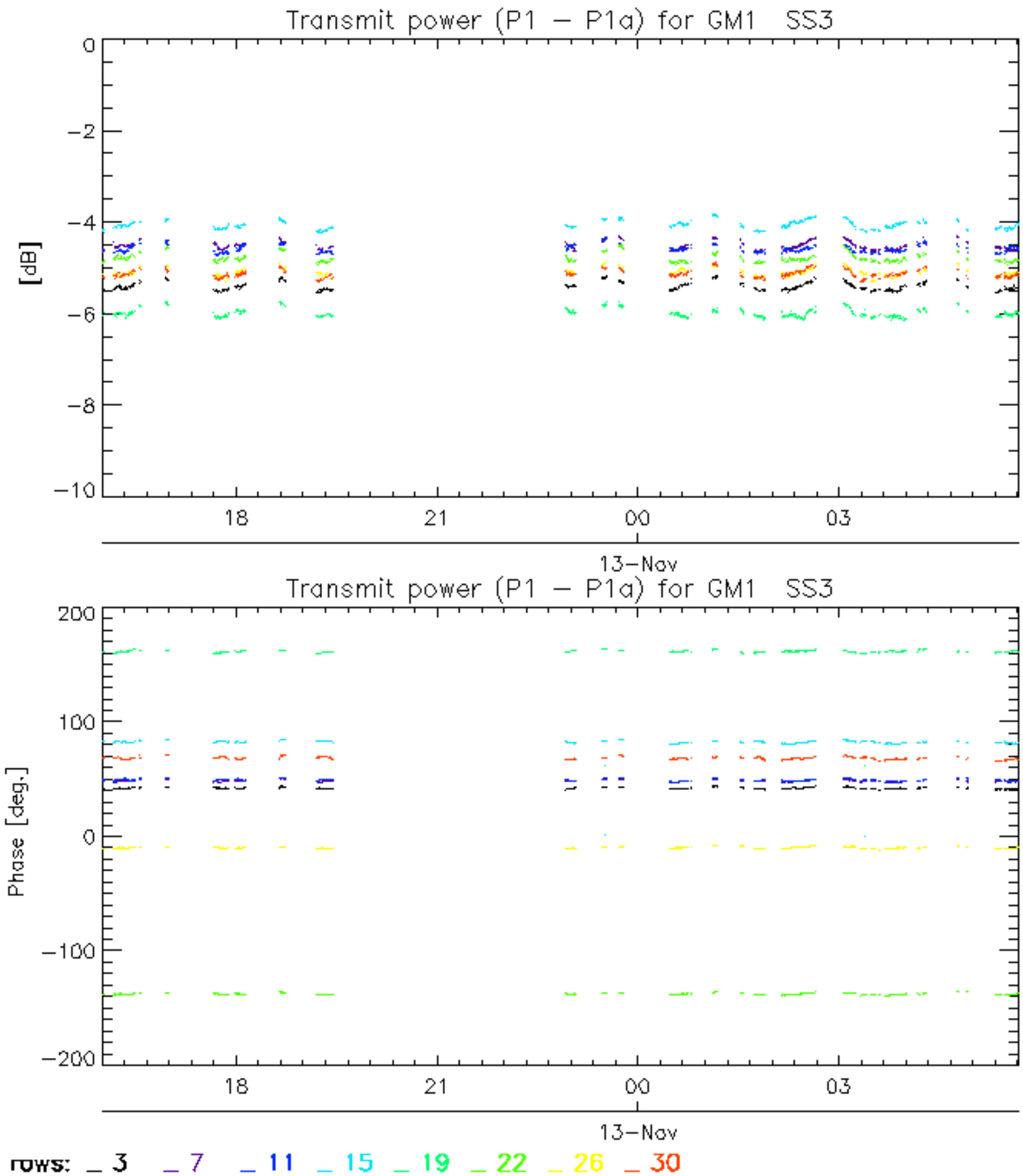
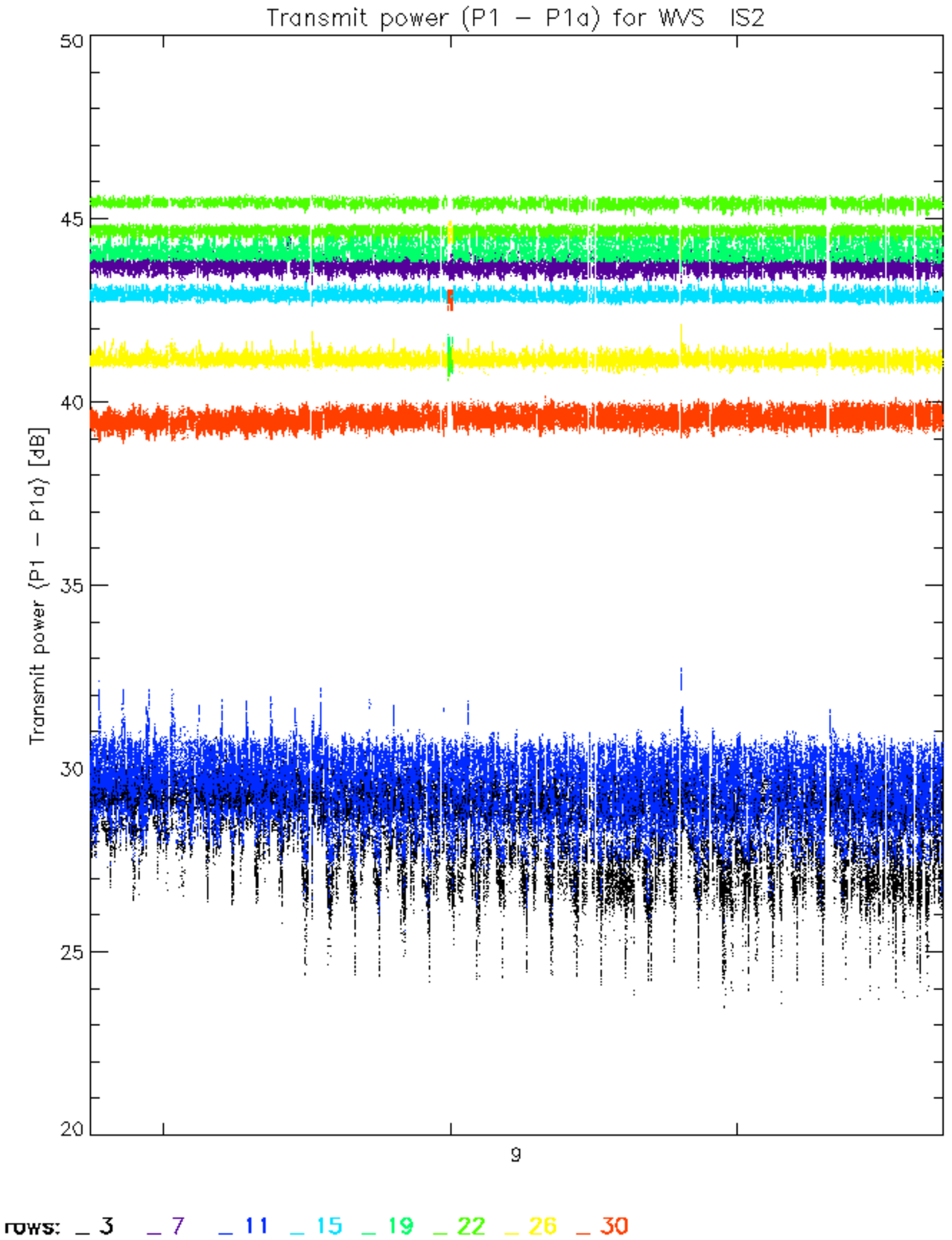
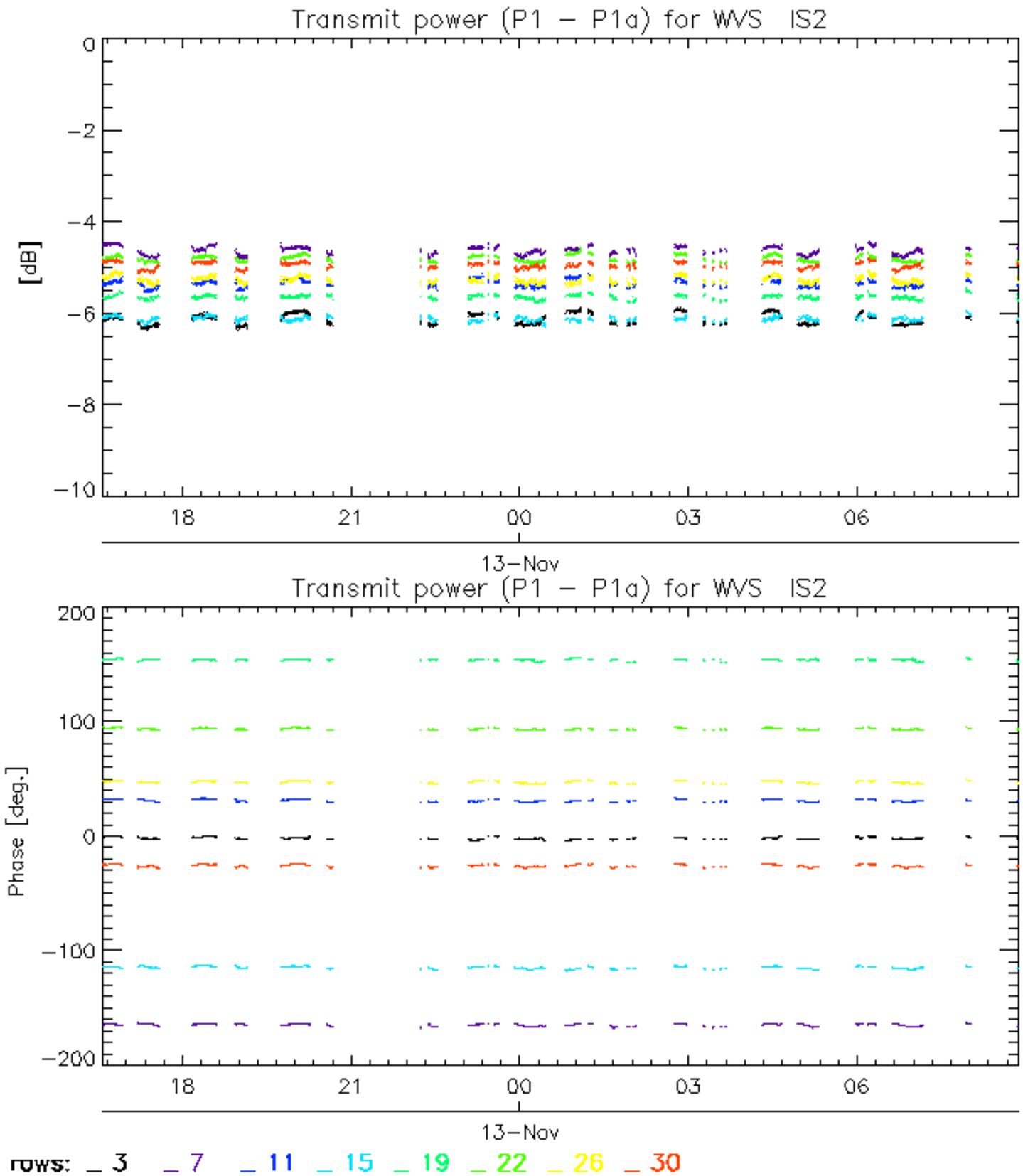

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
9
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
0
−2
−4
−6
−8
−10
[dB]
18
21
00
03
13−Nov
Transmit power (P1 – P1a) for GM1 SS3
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
13−Nov
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
9
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
0
−2
−4
−6
−8
−10
[dB]
18
21
00
03
06
13−Nov
Transmit power (P1 – P1a) for WVS IS2
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
13−Nov
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.