PRELIMINARY REPORT OF 060820

last update on Sun Aug 20 16:34:11 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 2006-08-19 00:00:00 to 2006-08-20 16:34:11

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

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	69	8	7	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	41	69	8	7	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	69	8	7	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	69	8	7	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	35	48	51	26	45
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	35	48	51	26	45
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	35	48	51	26	45
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	48	51	26	45

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**

MSM in V/V polarisation

MSM in H/H polarisation

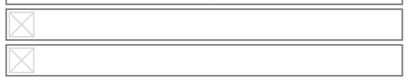
4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

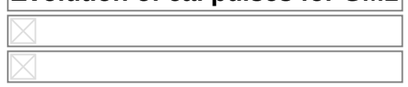
4.1.1 - Evolution for WVS

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	-3.943345	0.009957	-0.003923

7	P1	-3.092778	0.050743	0.071215
11	P1	-4.093851	0.062453	0.000488
15	P1	-6.198573	0.092965	-0.052232
19	P1	-3.441810	0.010072	-0.079124
22	P1	-4.566288	0.009980	-0.023552
26	P1	-3.921476	0.020200	-0.010084
30	P1	-5.765193	0.009904	-0.010015
3	P1	-16.534000	0.254246	-0.003432
7	P1	-16.978170	0.501796	1.117830
11	P1	-16.904165	0.288376	0.226321
15	P1	-13.019029	0.164840	0.182753
19	P1	-14.503822	0.053802	-0.055328
22	P1	-15.942623	0.457866	0.197944
26	P1	-15.128777	0.222728	-0.104685
30	P1	-17.064939	0.322656	0.132143

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.899902	0.084722	0.096747
7	P2	-21.870970	0.101066	0.040586
11	P2	-15.761827	0.117111	0.038851
15	P2	-7.110657	0.097212	0.027890
19	P2	-9.120258	0.090676	0.022378
22	P2	-18.143343	0.085461	0.015842
26	P2	-16.399712	0.091507	0.005107
30	P2	-19.493521	0.091497	0.044979

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172777	0.003367	0.000122
7	P3	-8.172777	0.003367	0.000122
11	P3	-8.172777	0.003367	0.000122
15	P3	-8.172777	0.003367	0.000122
19	P3	-8.172777	0.003367	0.000122
22	P3	-8.172777	0.003367	0.000122
26	P3	-8.172822	0.003366	-0.000069
30	P3	-8.172822	0.003366	-0.000069

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	-3.830192	0.021749	-0.015242
7	P1	-2.530476	0.265019	0.267966
11	P1	-2.895286	0.137649	-0.111734
15	P1	-3.633315	0.149616	-0.141035
19	P1	-3.427639	0.025728	0.001078
22	P1	-5.085674	0.020687	-0.017769
26	P1	-5.866496	0.023327	-0.008203
30	P1	-5.195381	0.040357	0.007211
3	P1	-11.623027	0.066847	-0.022820
7	P1	-9.935953	0.175005	0.181572
11	P1	-10.278131	0.081819	-0.103986
15	P1	-10.786014	0.172856	-0.141234
19	P1	-15.551461	0.529067	0.090190
22	P1	-20.942953	1.340707	-0.117116
26	P1	-16.175680	0.403685	0.184220
30	P1	-17.986731	0.429205	-0.089860

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.508579	0.085536	0.144866
7	P2	-22.298878	0.207772	0.177401
11	P2	-10.983987	0.055404	0.142109
15	P2	-4.890666	0.043675	0.027820
19	P2	-6.862201	0.040529	0.004577
22	P2	-8.188465	0.062750	0.005301

26	P2	-24.170376	0.129619	0.015915
30	P2	-21.981325	0.079190	0.048859

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.012437	0.003707	-0.009845
7	P3	-8.012295	0.003703	-0.009603
11	P3	-8.012393	0.003705	-0.009602
15	P3	-8.012436	0.003707	-0.009904
19	P3	-8.012362	0.003715	-0.009886
22	P3	-8.012506	0.003695	-0.009736
26	P3	-8.012357	0.003691	-0.009083
30	P3	-8.012422	0.003704	-0.009586

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	0.000556834
	stdev	1.74805e-07
MEAN Q	mean	0.000533595
	stdev	2.15112e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136952
	stdev	0.00107862
STDEV Q	mean	0.137305
	stdev	0.00109532

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006081[890]
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_IMM_1PNPDE20060818_004240_000001742050_00245_23345_3639.N1	1	0
ASA_IMM_1PNPDE20060818_005912_000000432050_00246_23346_3640.N1	1	0
ASA_GM1_1PNPDK20060810_101808_000007182050_00137_23237_2553.N1	0	15
ASA_WSM_1PNPDE20060818_131642_000001472050_00253_23353_8484.N1	0	32
ASA_WSM_1PNPDE20060819_015906_000001462050_00261_23361_8584.N1	0	2
ASA_WSM_1PNPDE20060819_015908_000001282050_00261_23361_8640.N1	0	2
ASA_APM_1PNPDE20060818_141716_000000792050_00254_23354_1871.N1	0	19

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

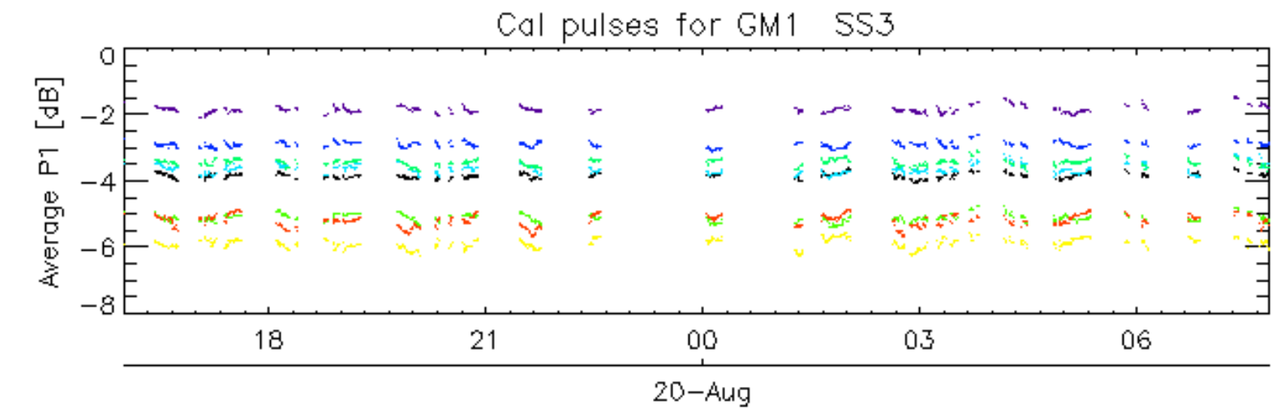
Descending

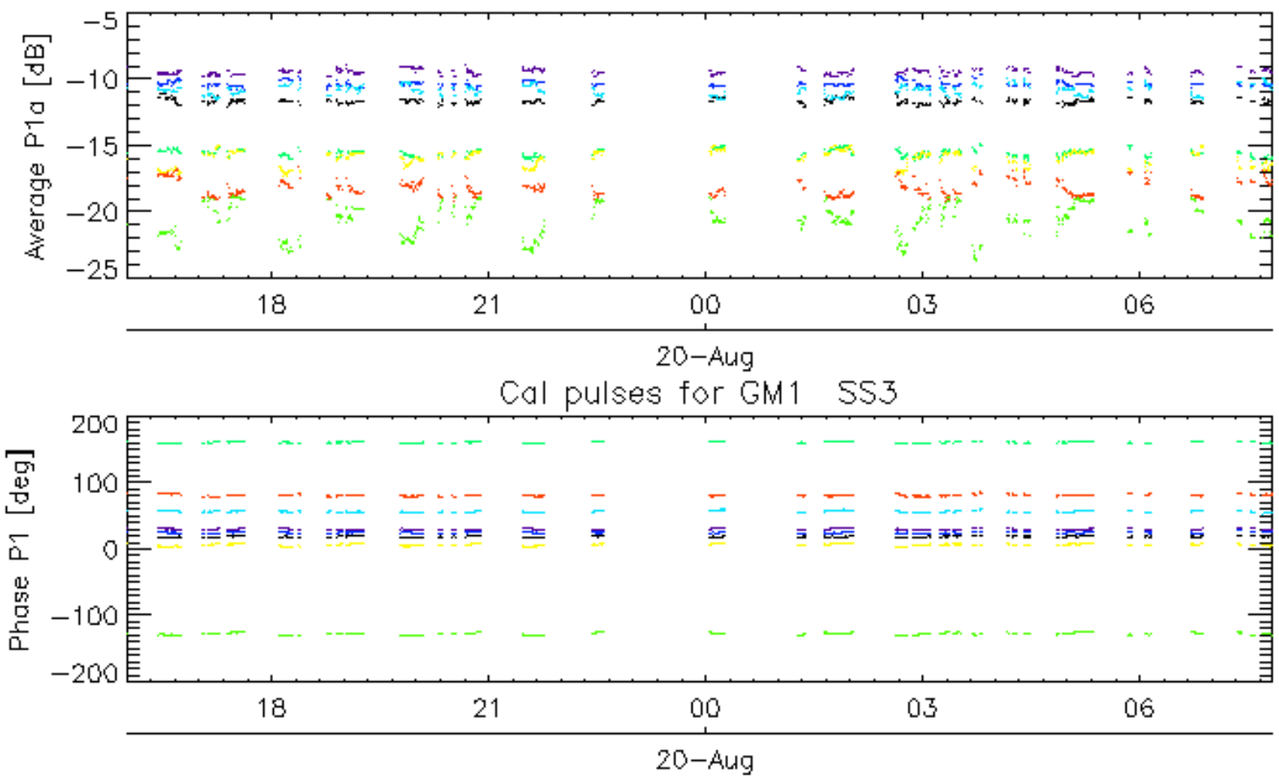
7.5 - Absolute Doppler for GM1

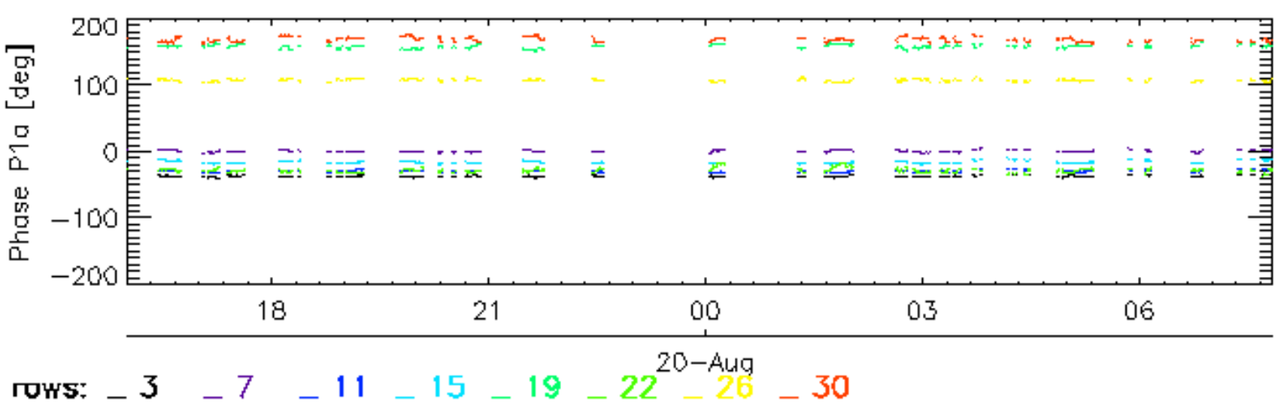
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

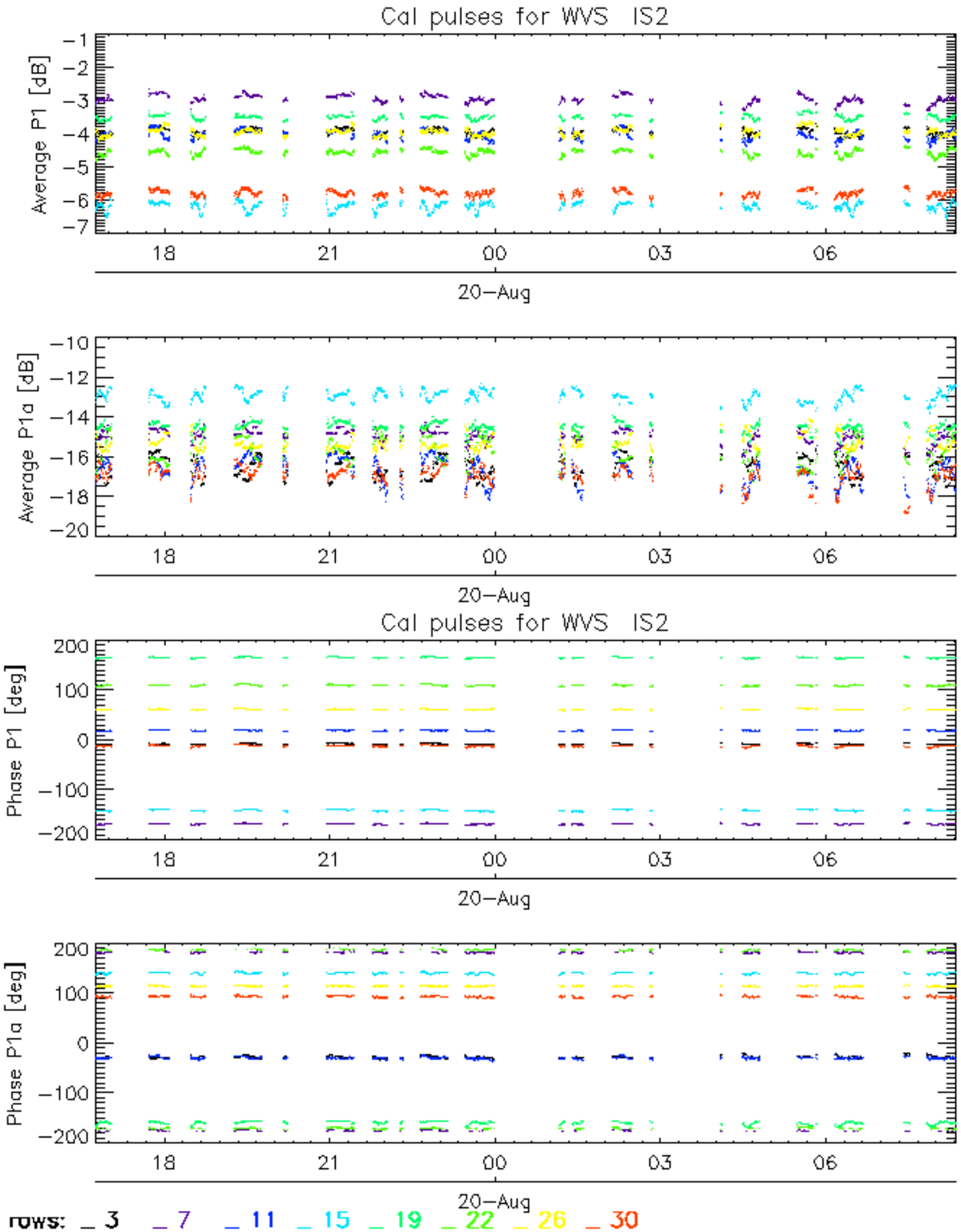
7.6 - Doppler evolution versus ANX for GM1

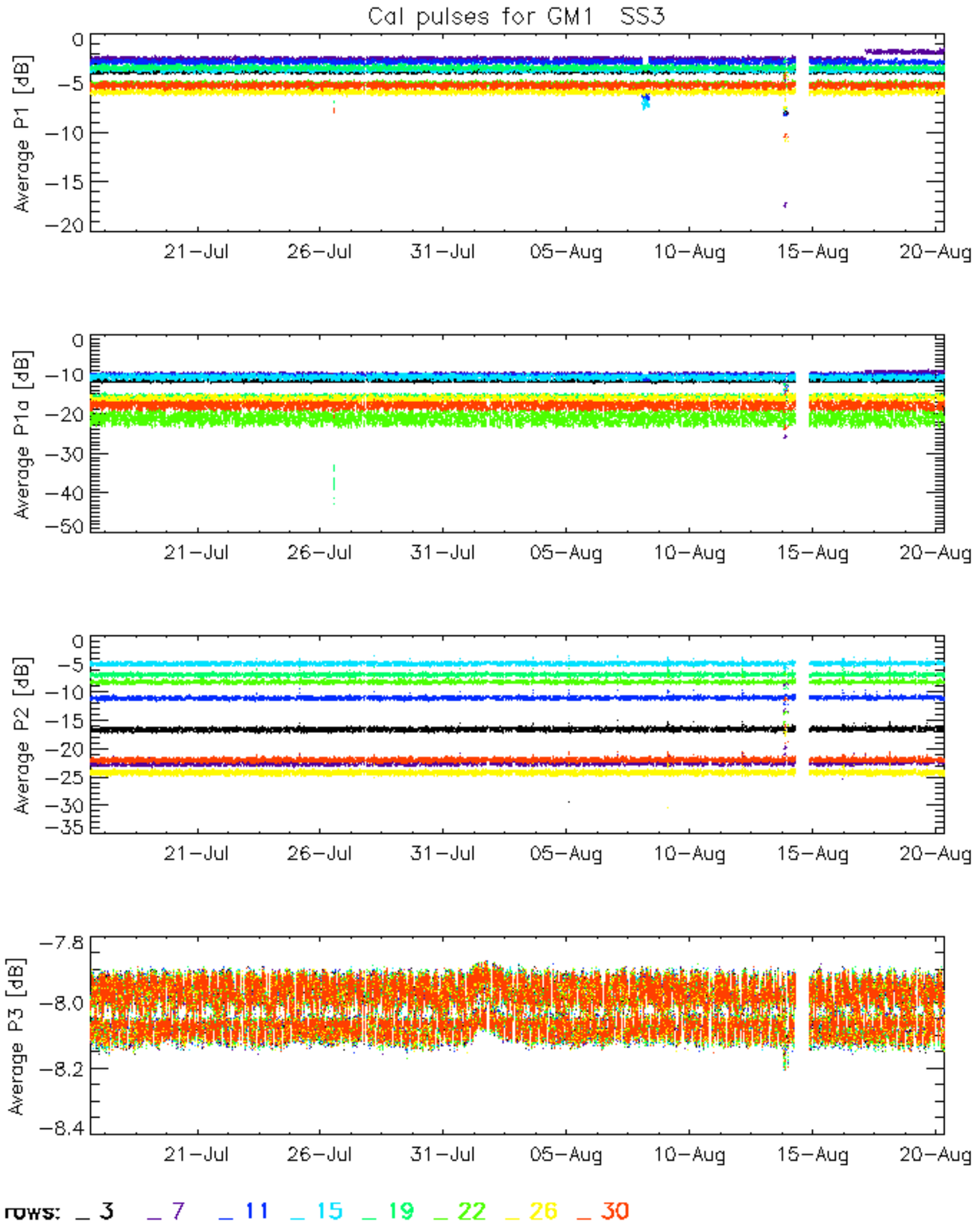
Evolution Doppler error versus ANX
☒

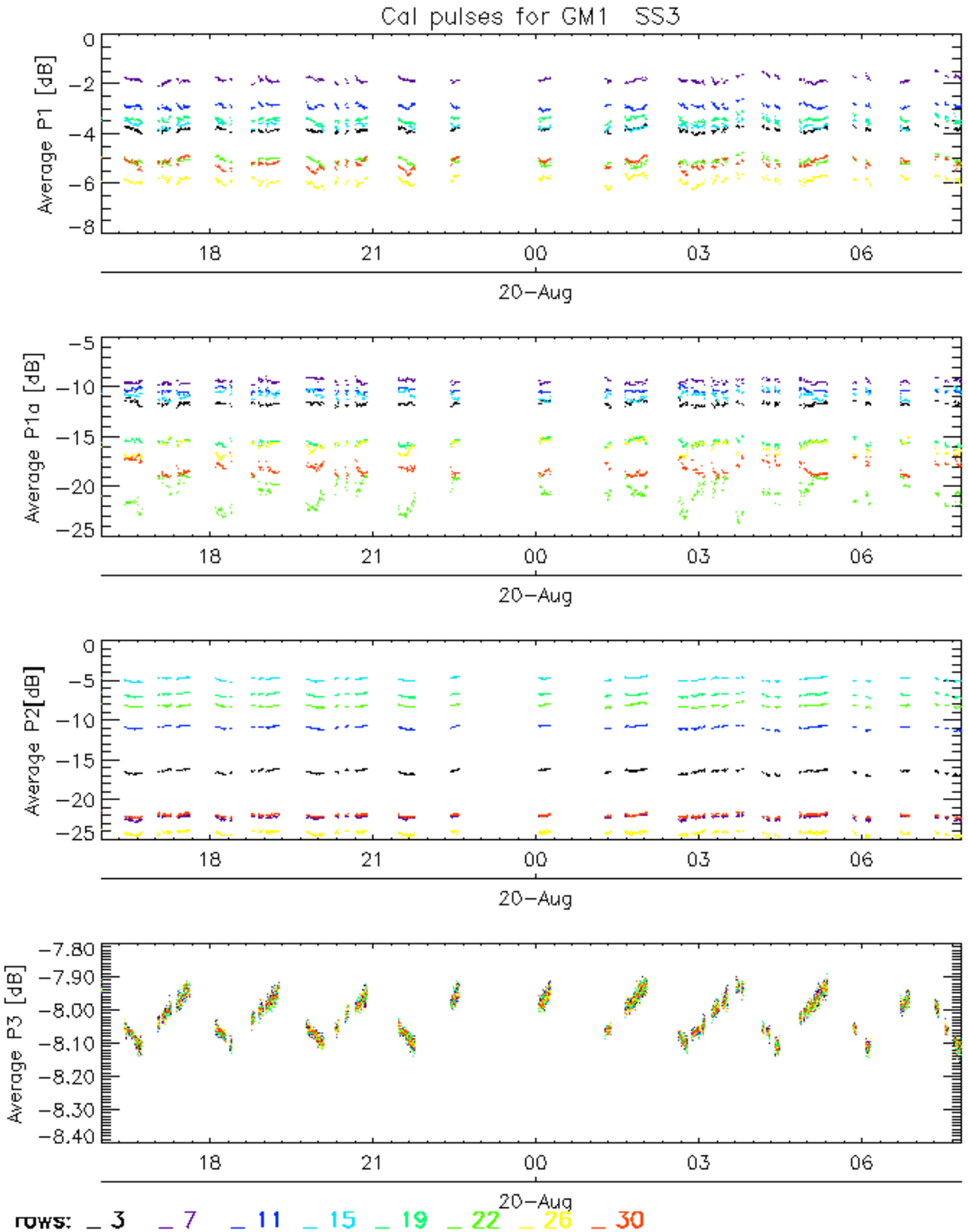

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
06
20−Aug

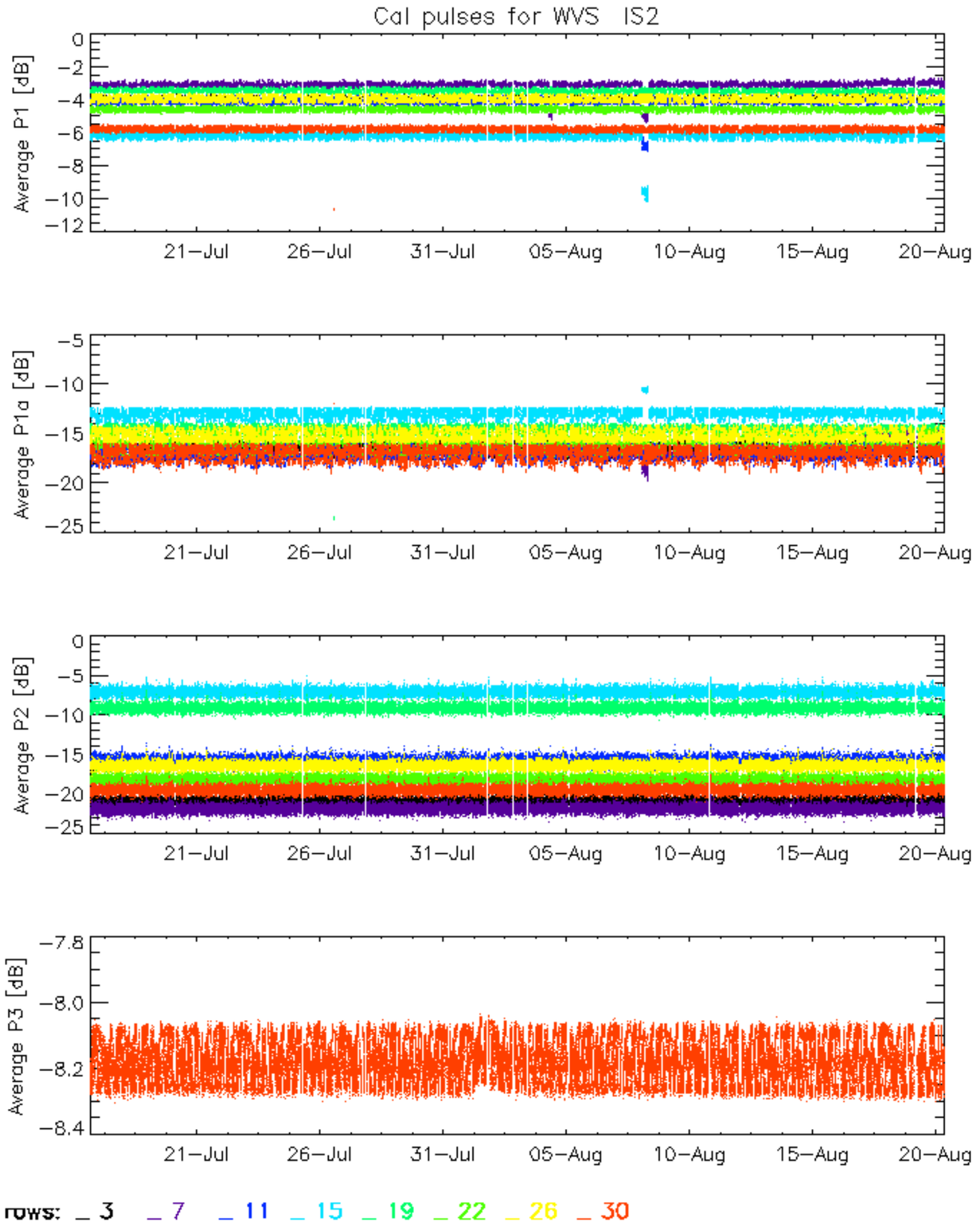

Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
06
20−Aug
Cal pulses for GM1 SS3
Phase P1 [deg]
200
100
0
−100
−200
18
21
00
03
06
20−Aug

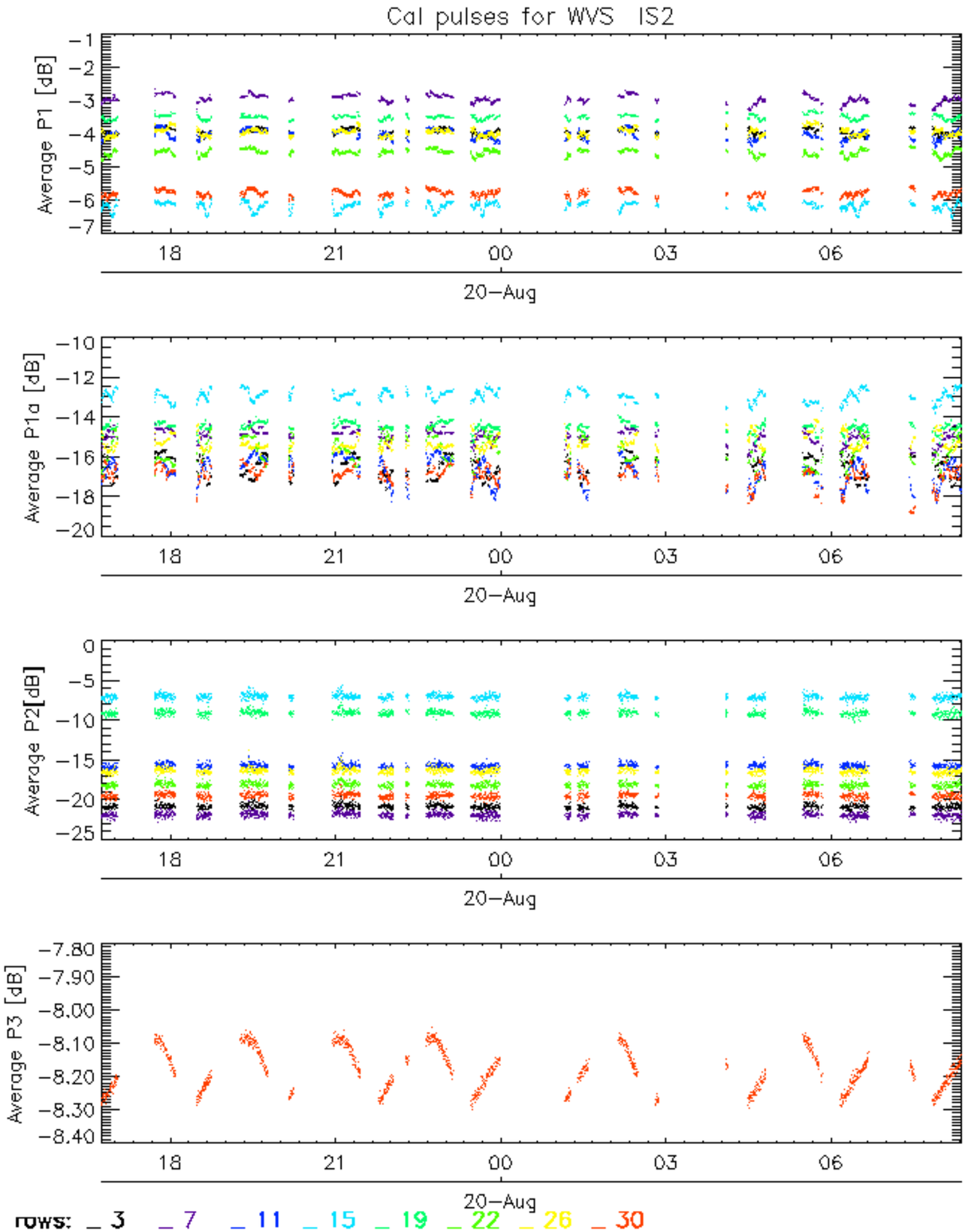

Phase P1a [deg]
200
100
0
−100
−200
18
21
00
03
06
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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

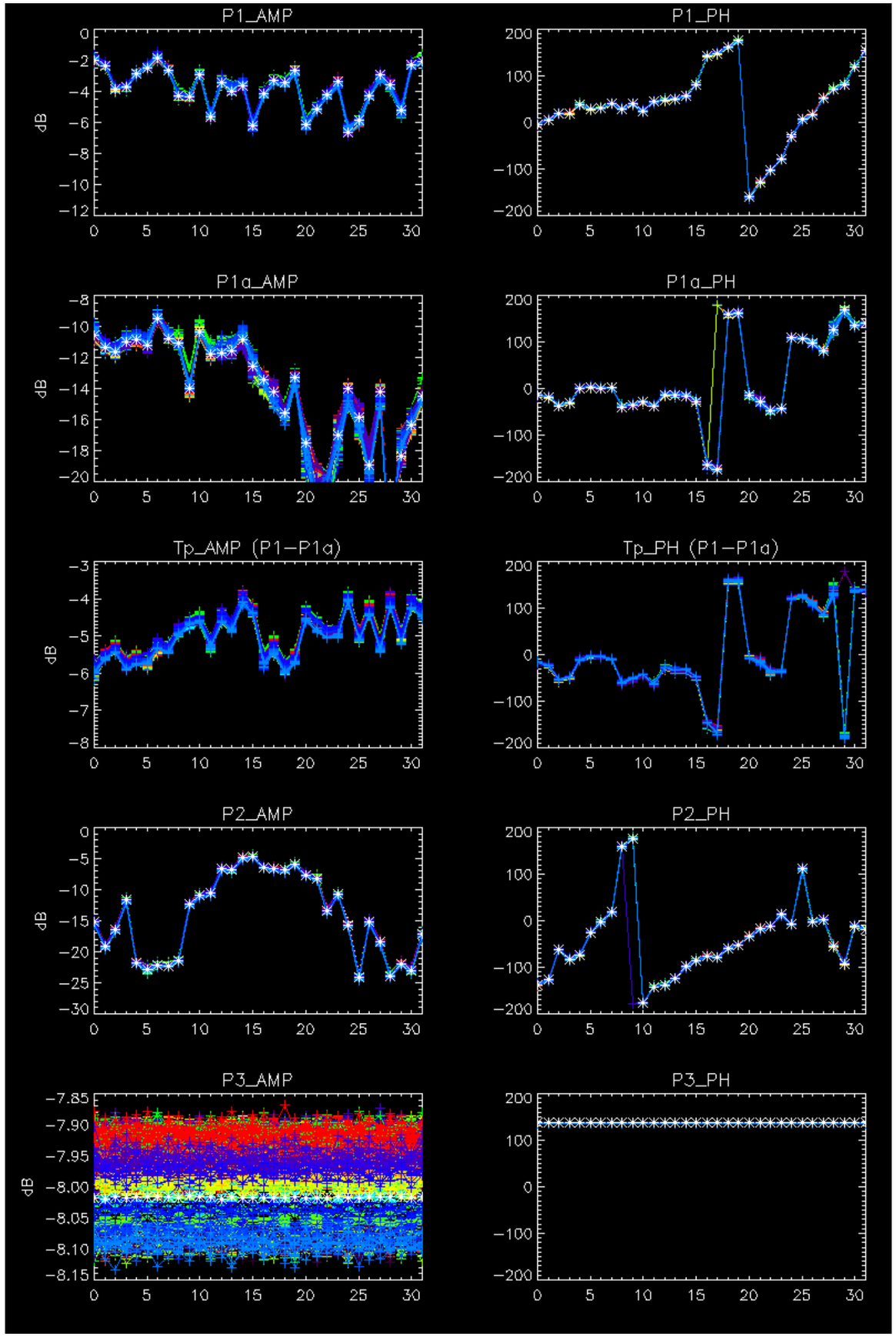

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
Average P1a [dB]
0
−10
−20
−30
−40
−50
Average P2 [dB]
0
−5
−10
−15
−20
−25
−30
−35
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

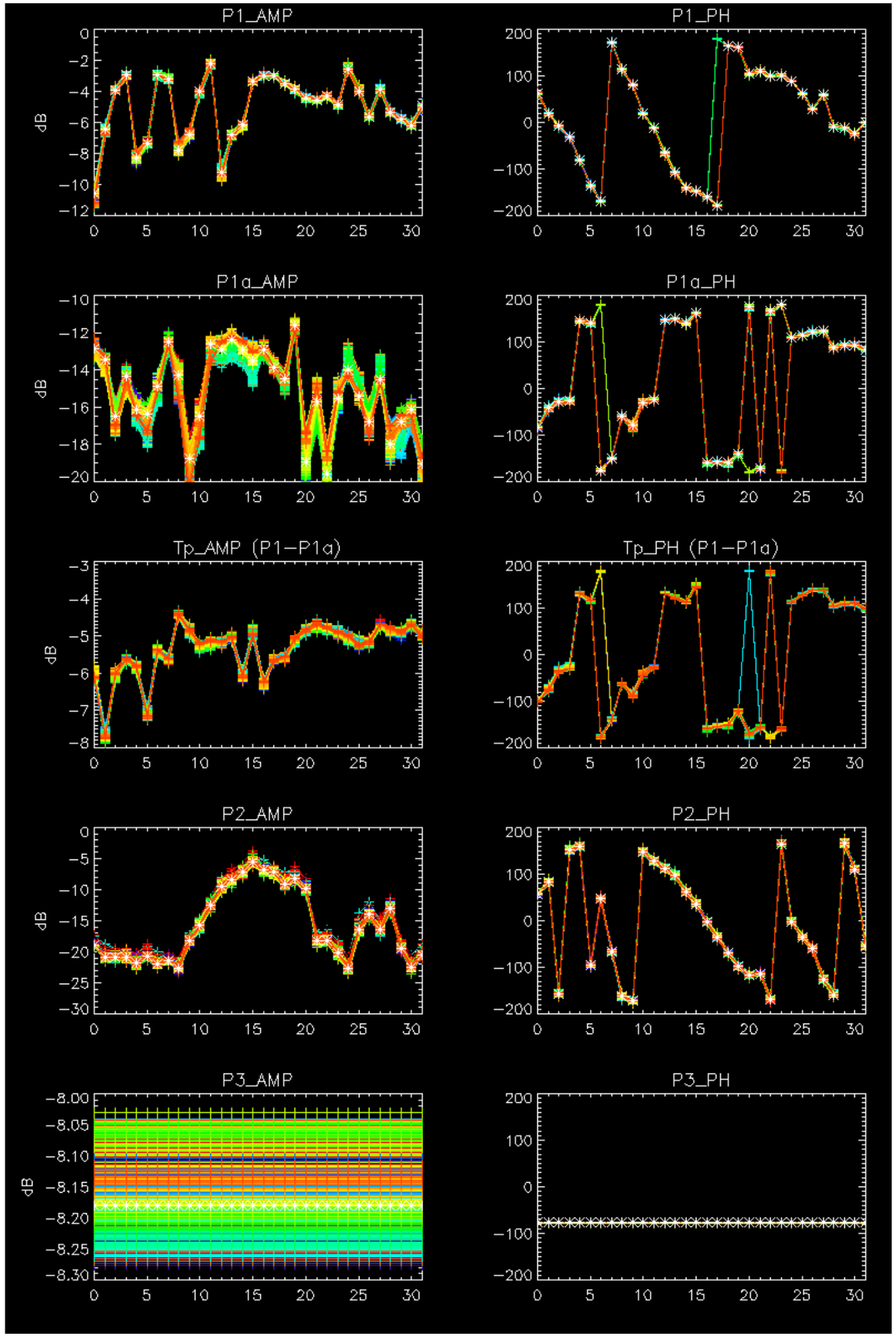

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
06
20−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
06
20−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
18
21
00
03
06
20−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−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


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
18
21
00
03
06
20−Aug
Average P1a [dB]
−10
−12
−14
−16
−18
−20
18
21
00
03
06
20−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
18
21
00
03
06
20−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
20−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

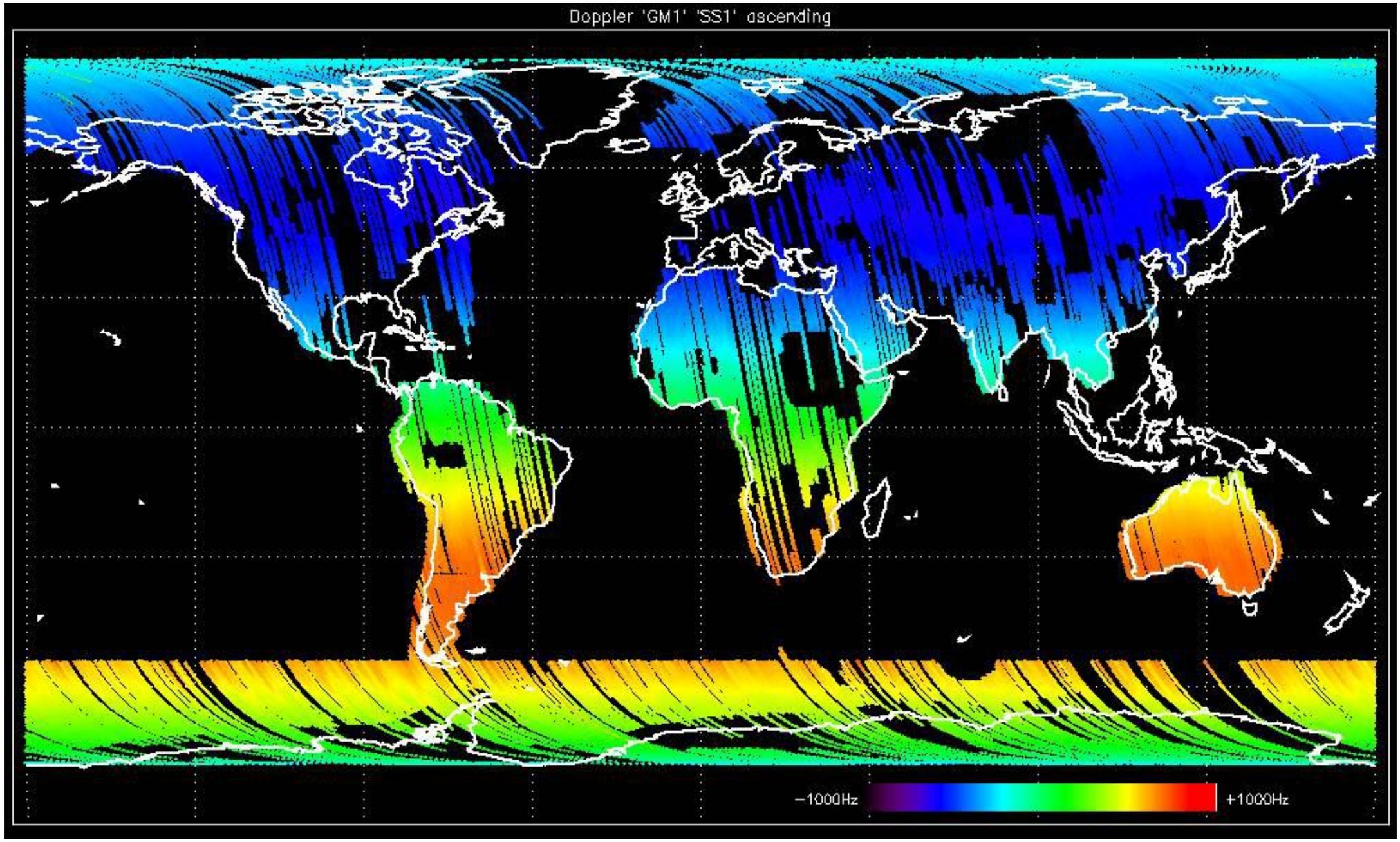
No anomalies observed.

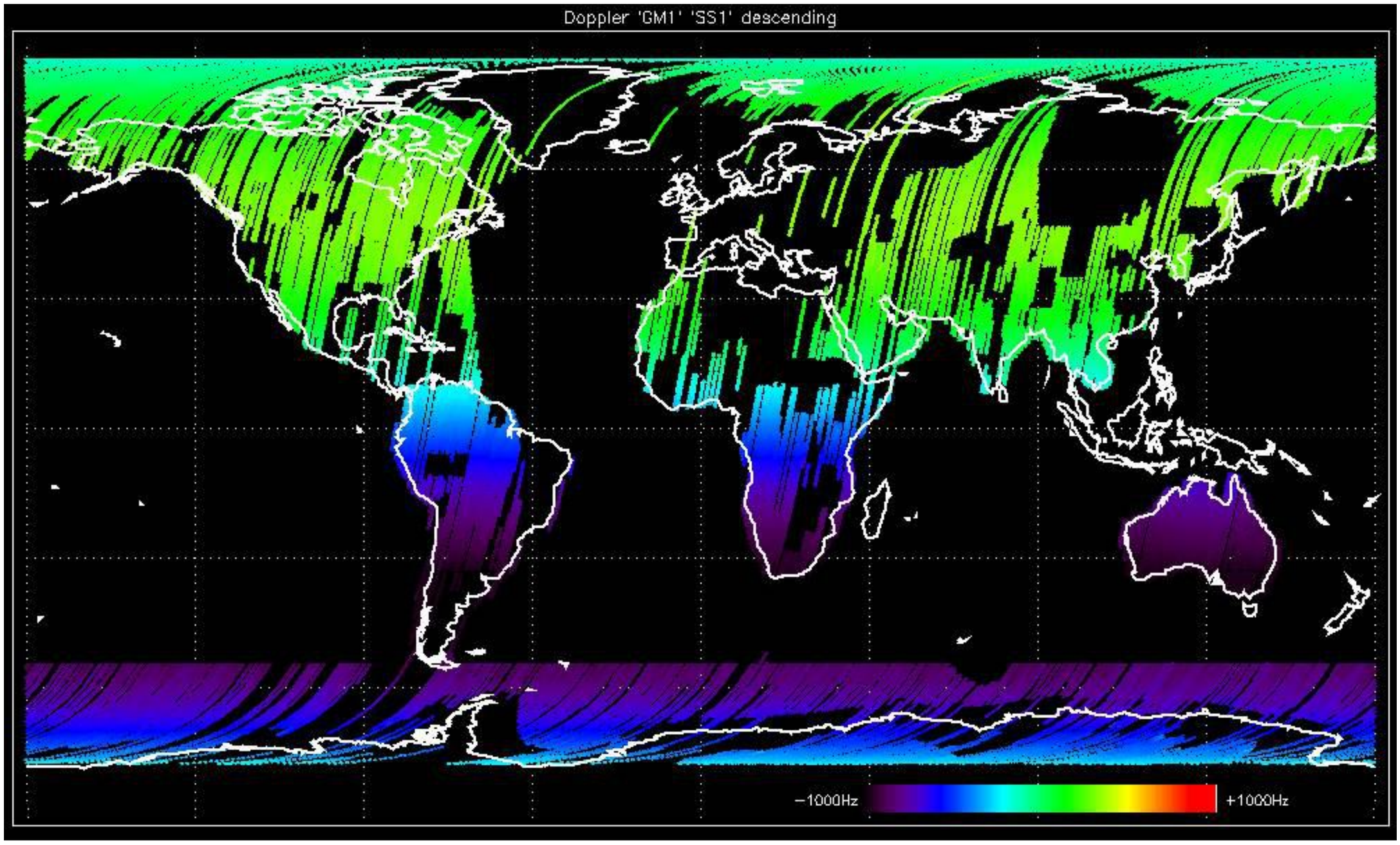

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

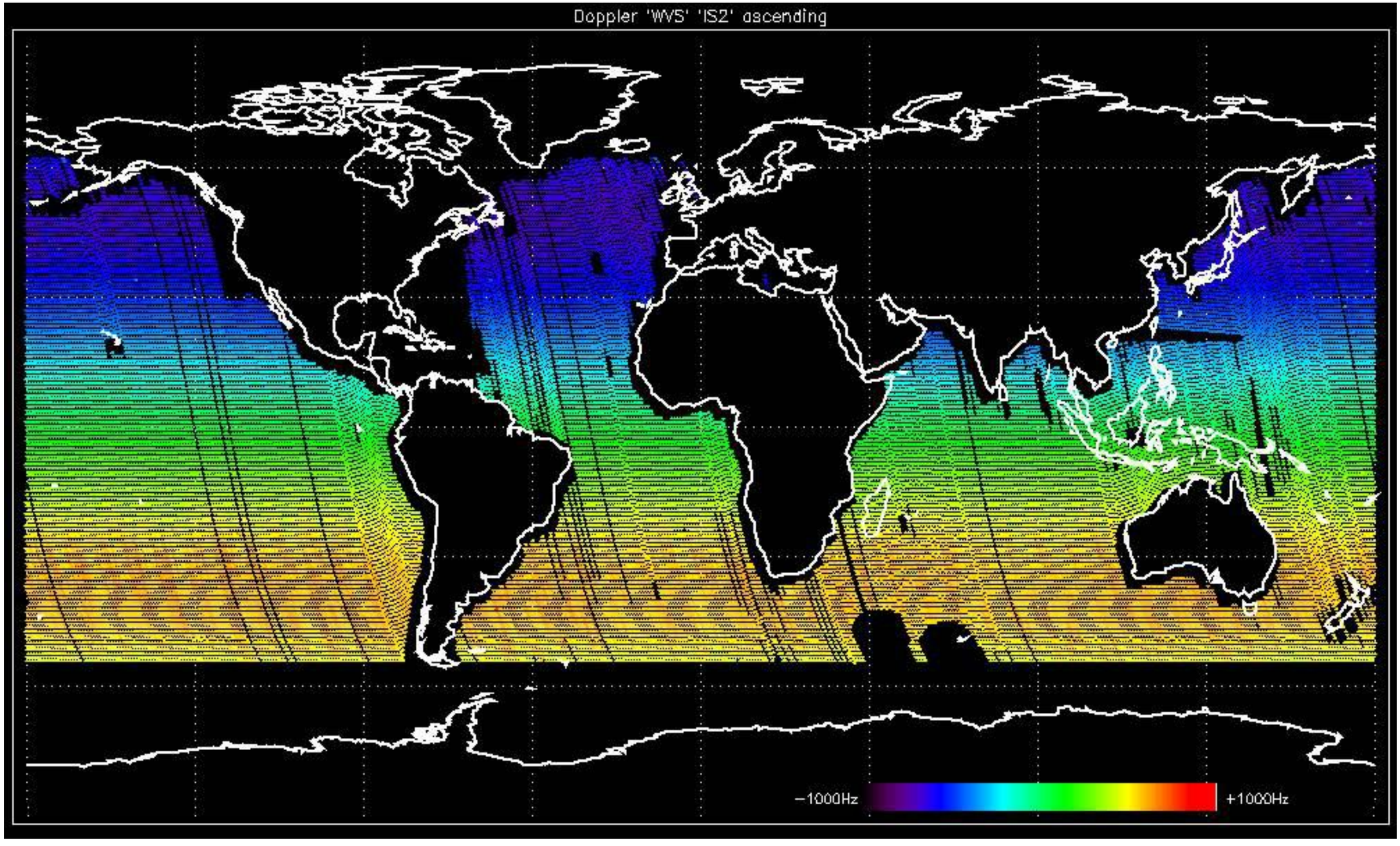

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

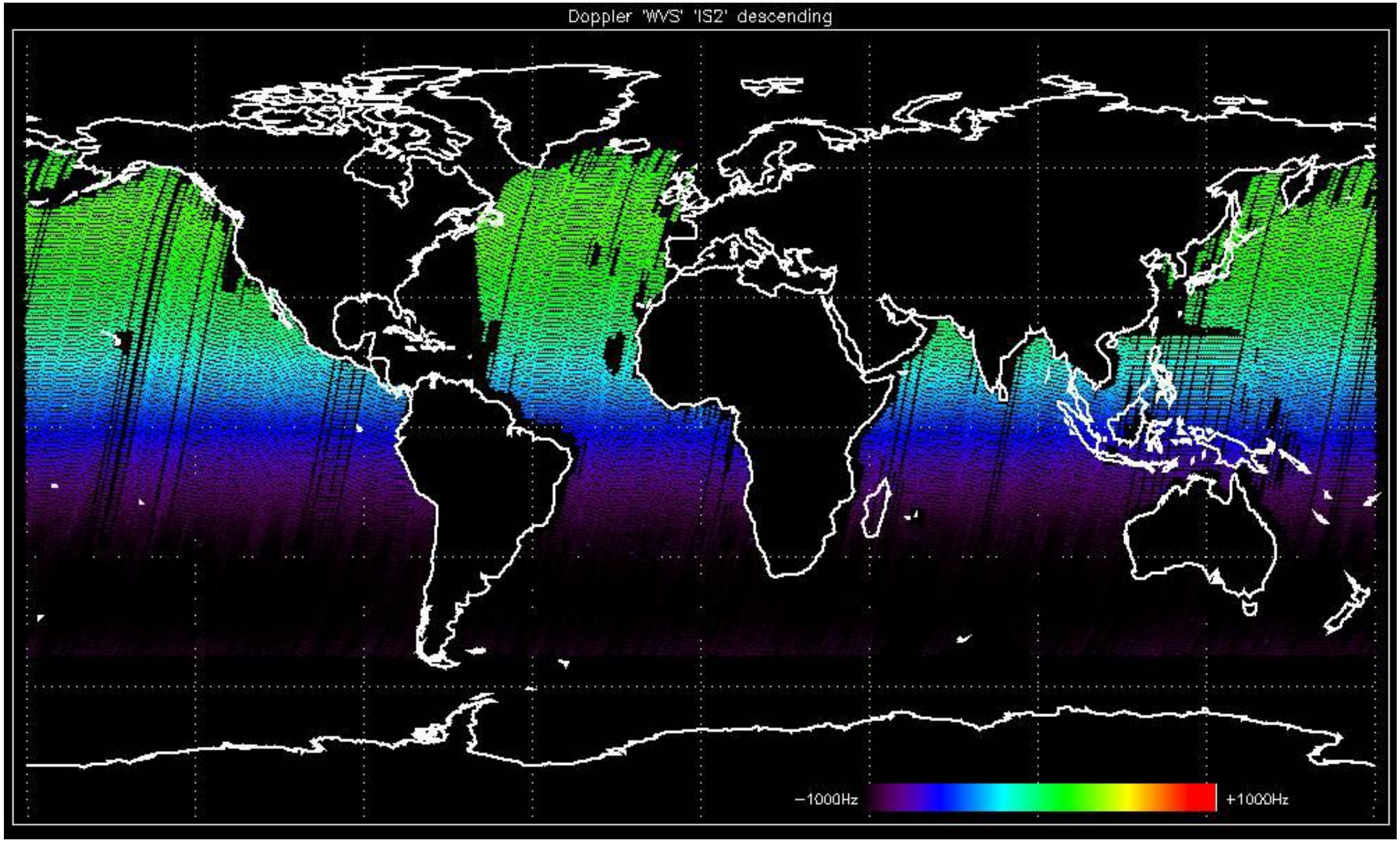
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

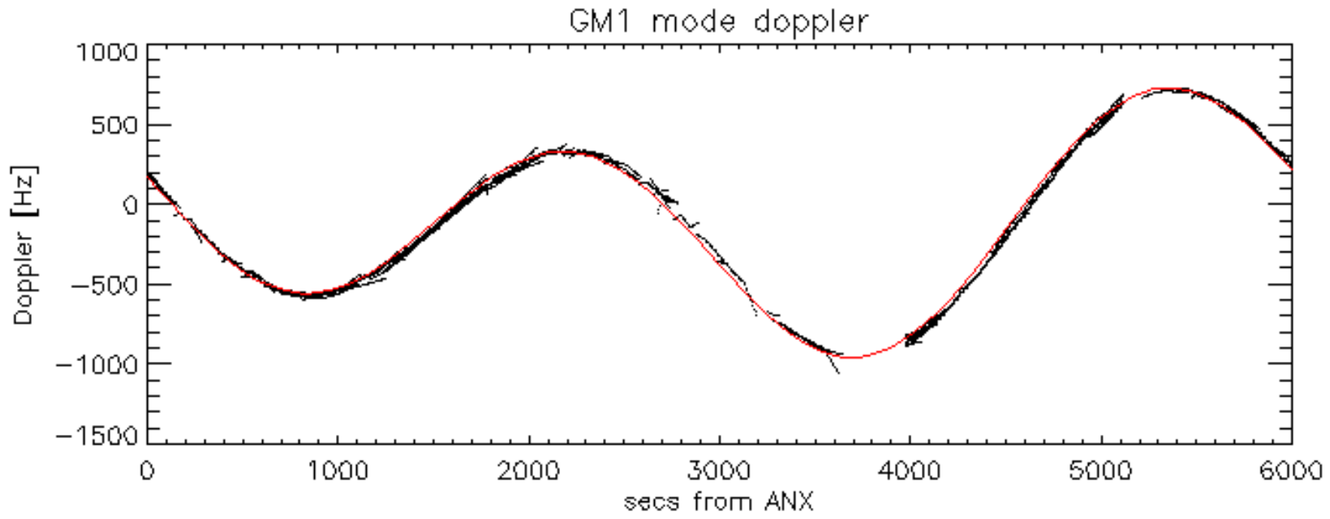
Preliminary report.The data is not yet controled

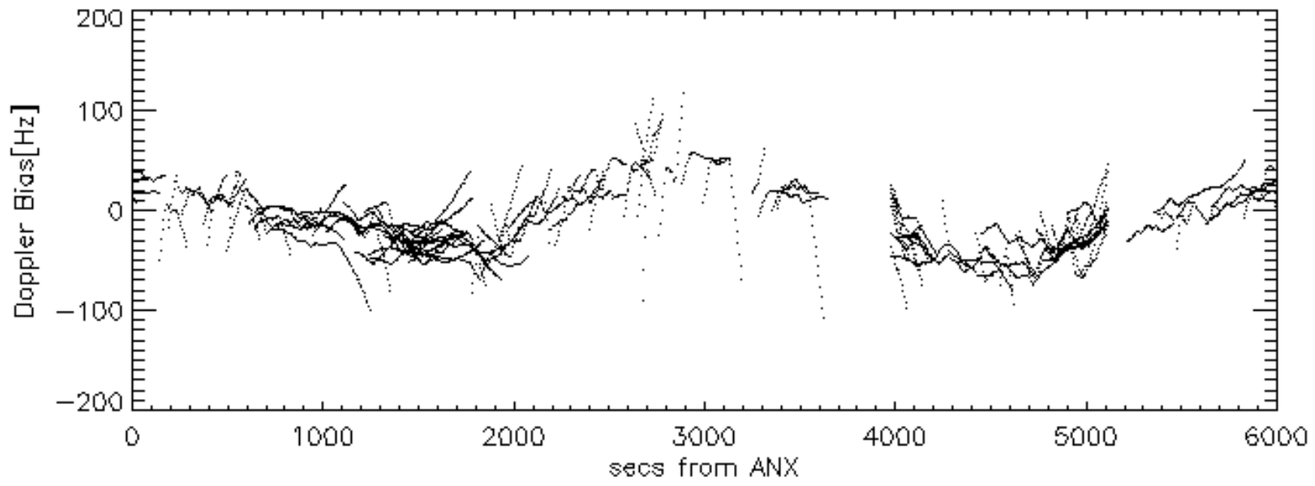

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

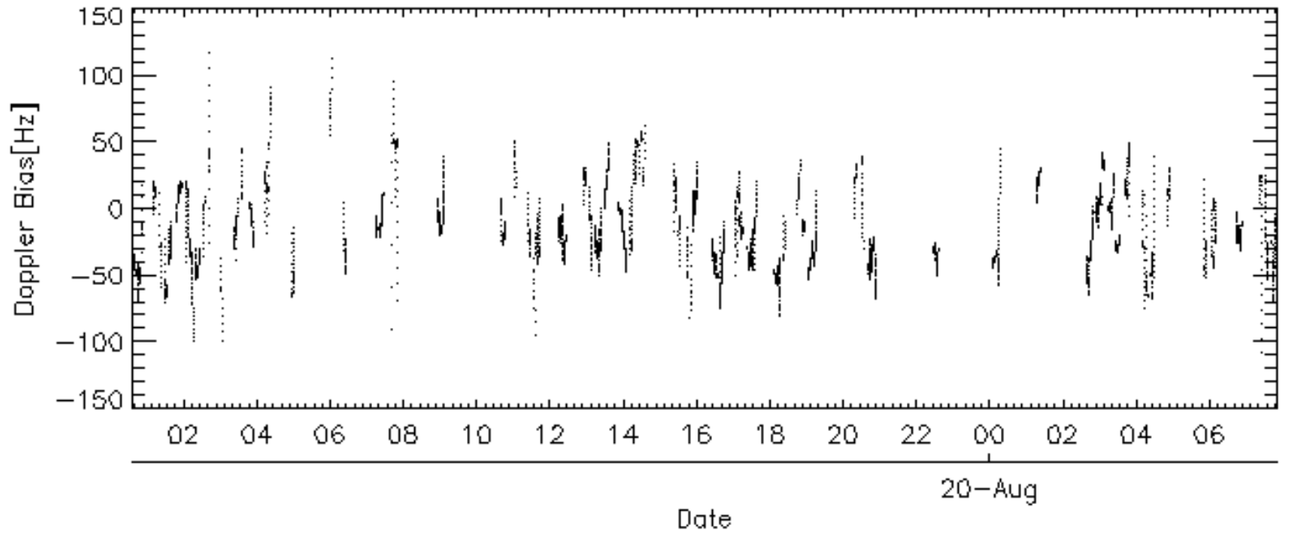

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

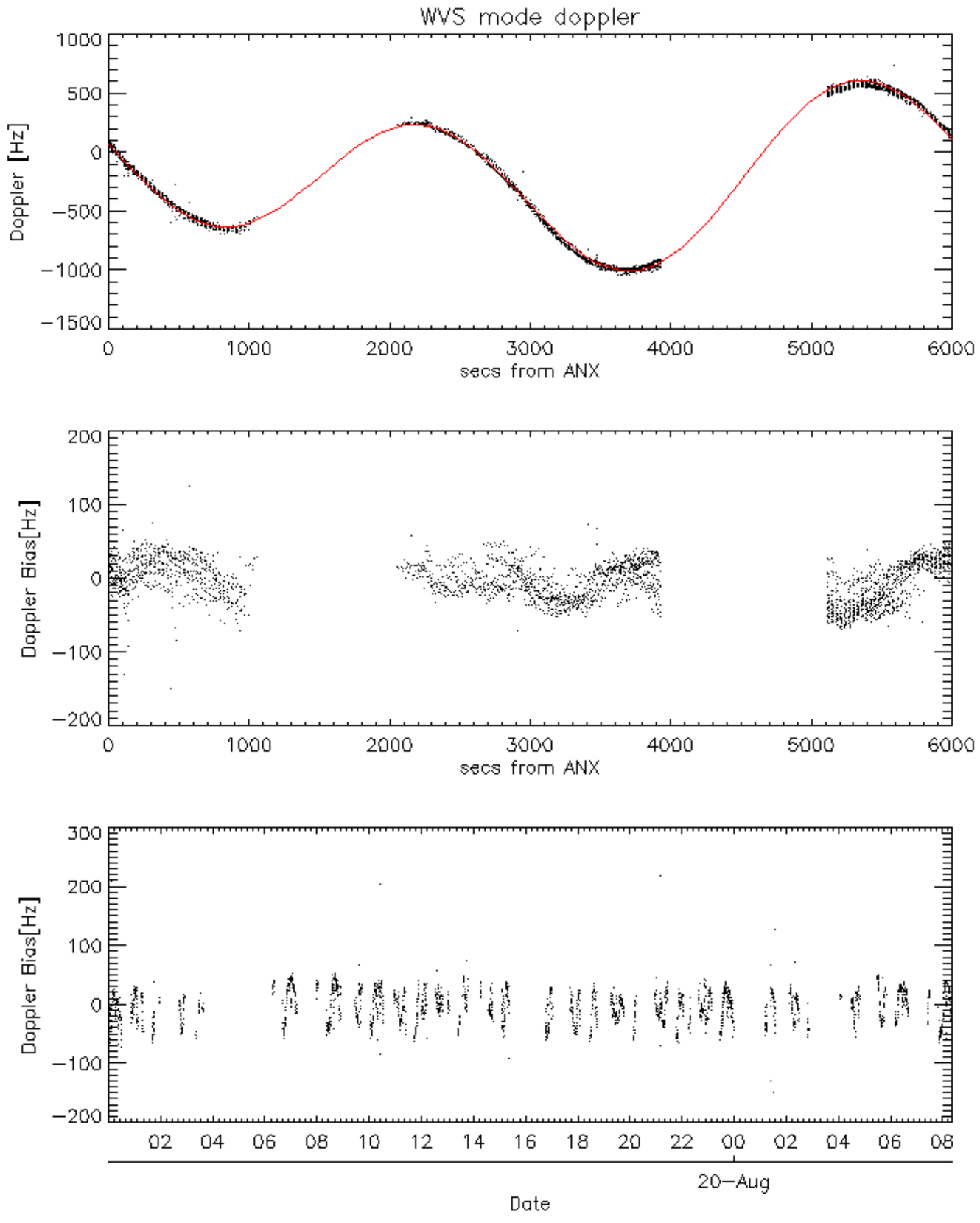

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

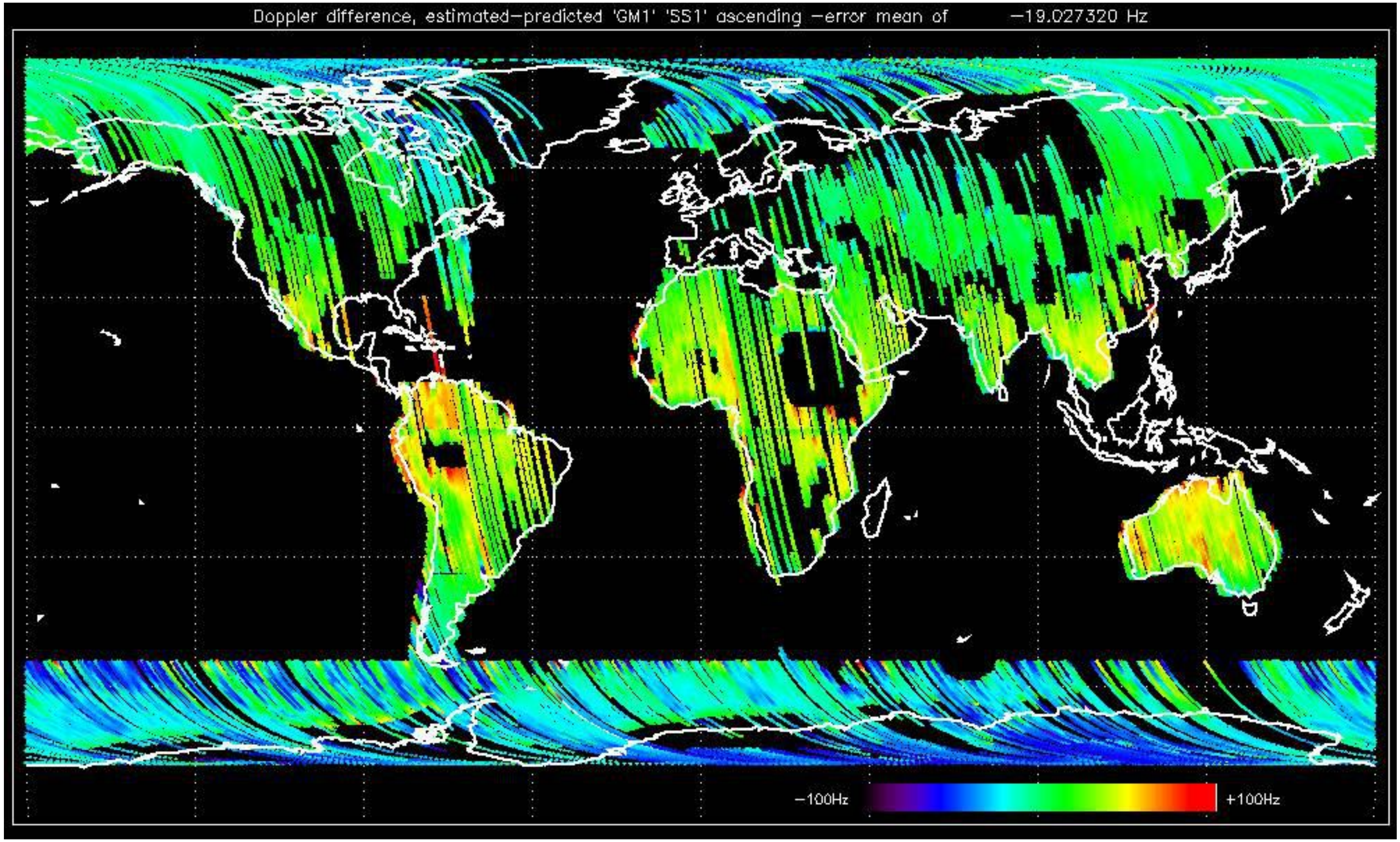

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

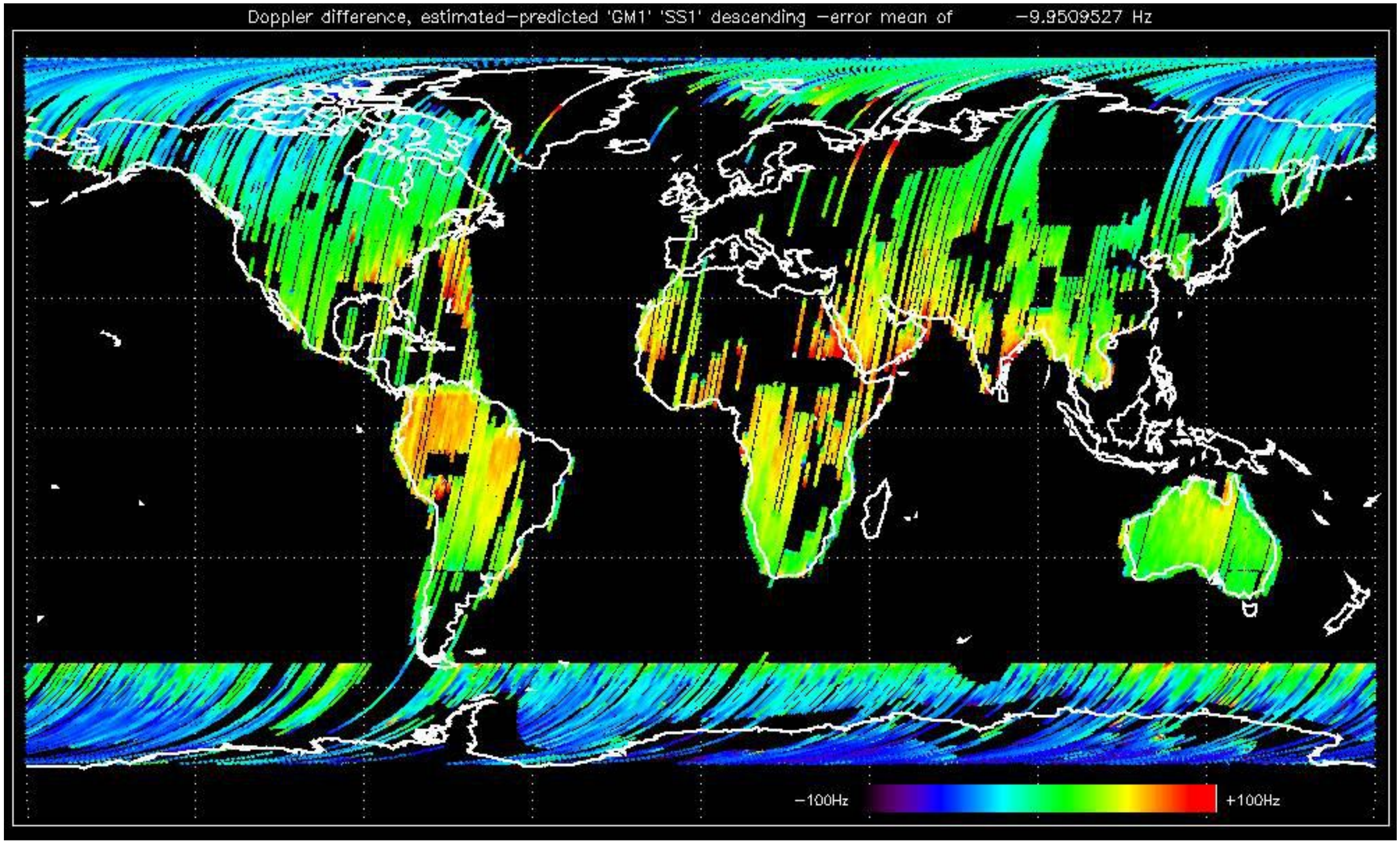

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

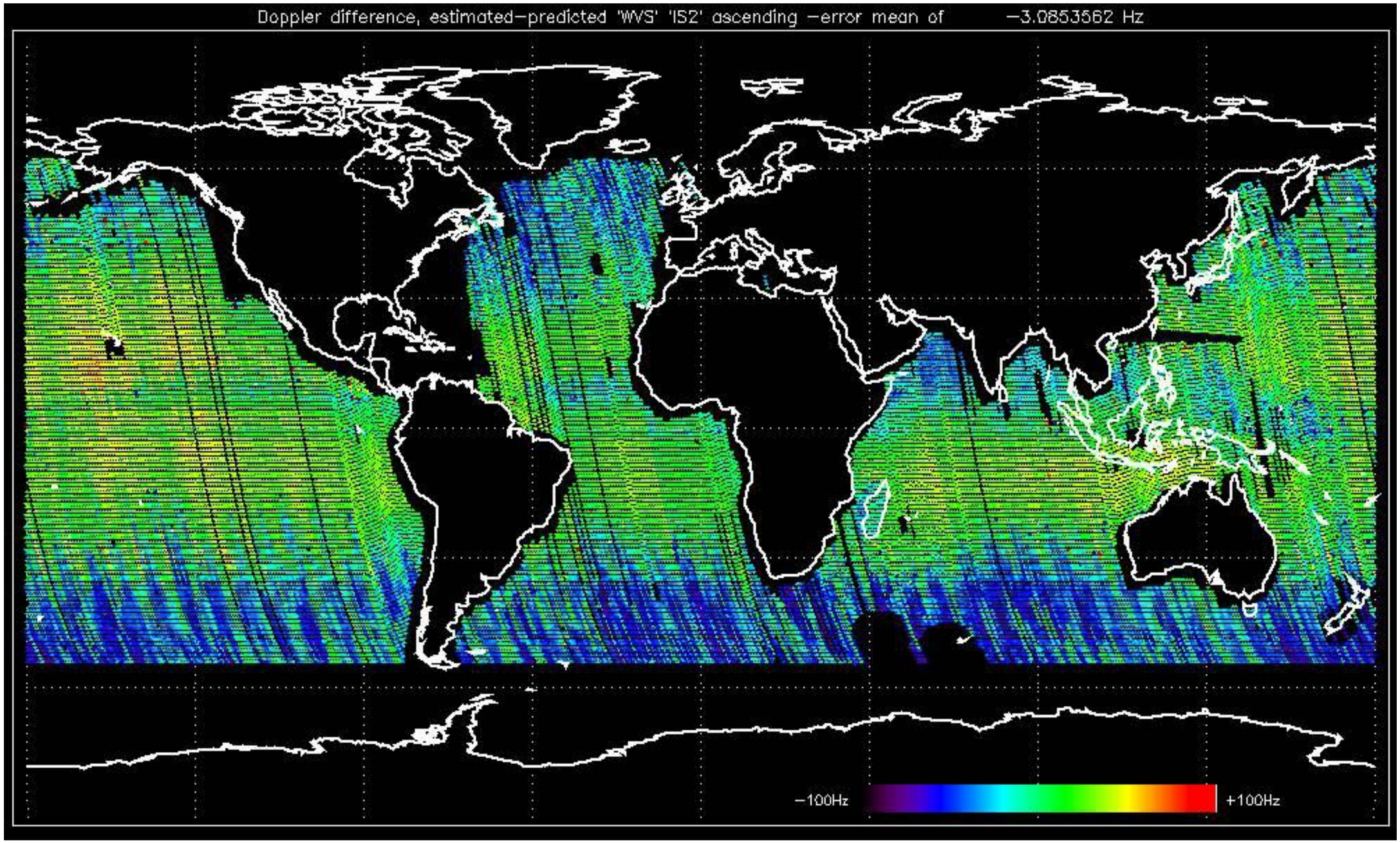

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

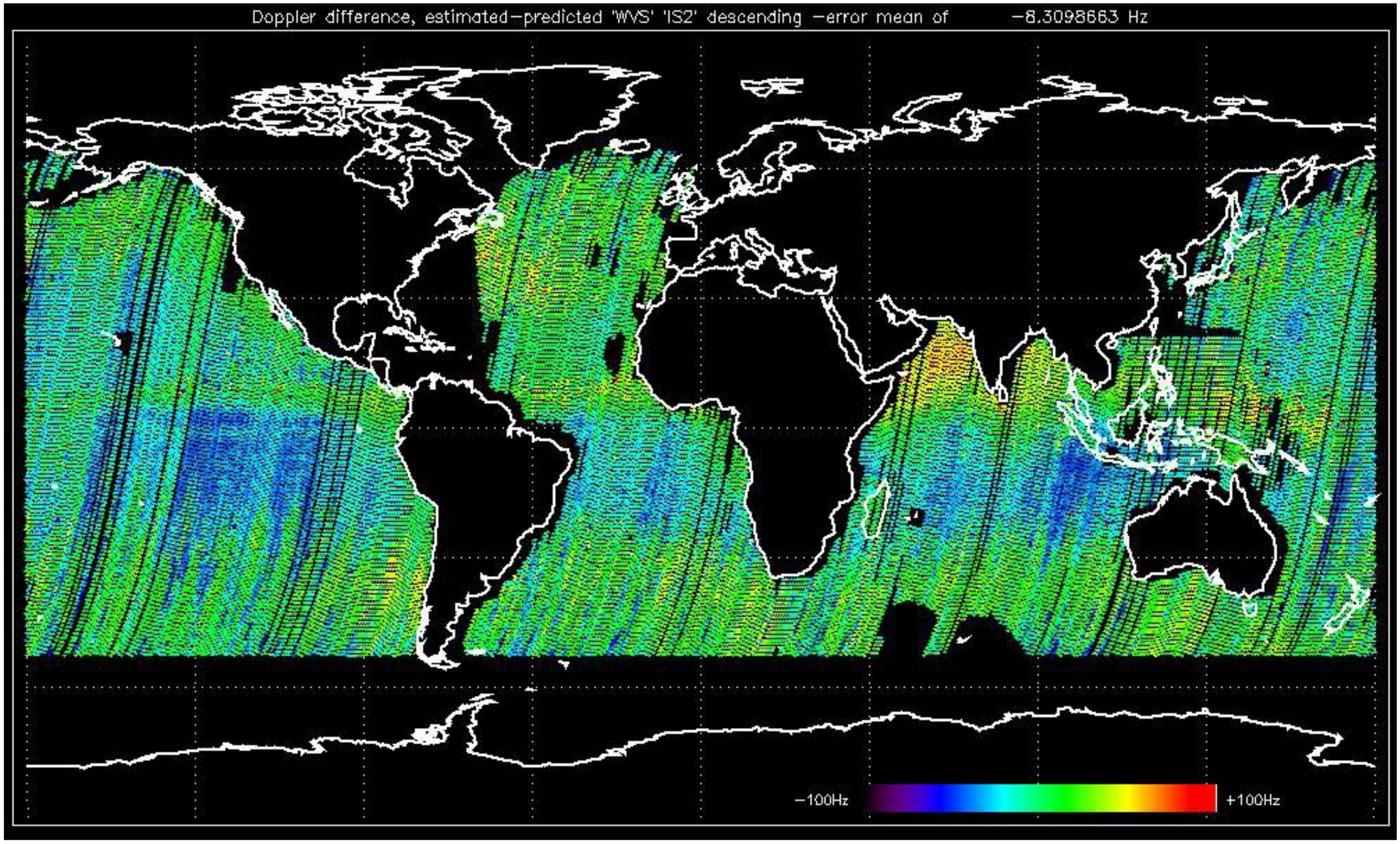

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
06
20−Aug
Date


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]
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
06
08
20−Aug
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −19.027320 Hz
−100Hz
+100Hz

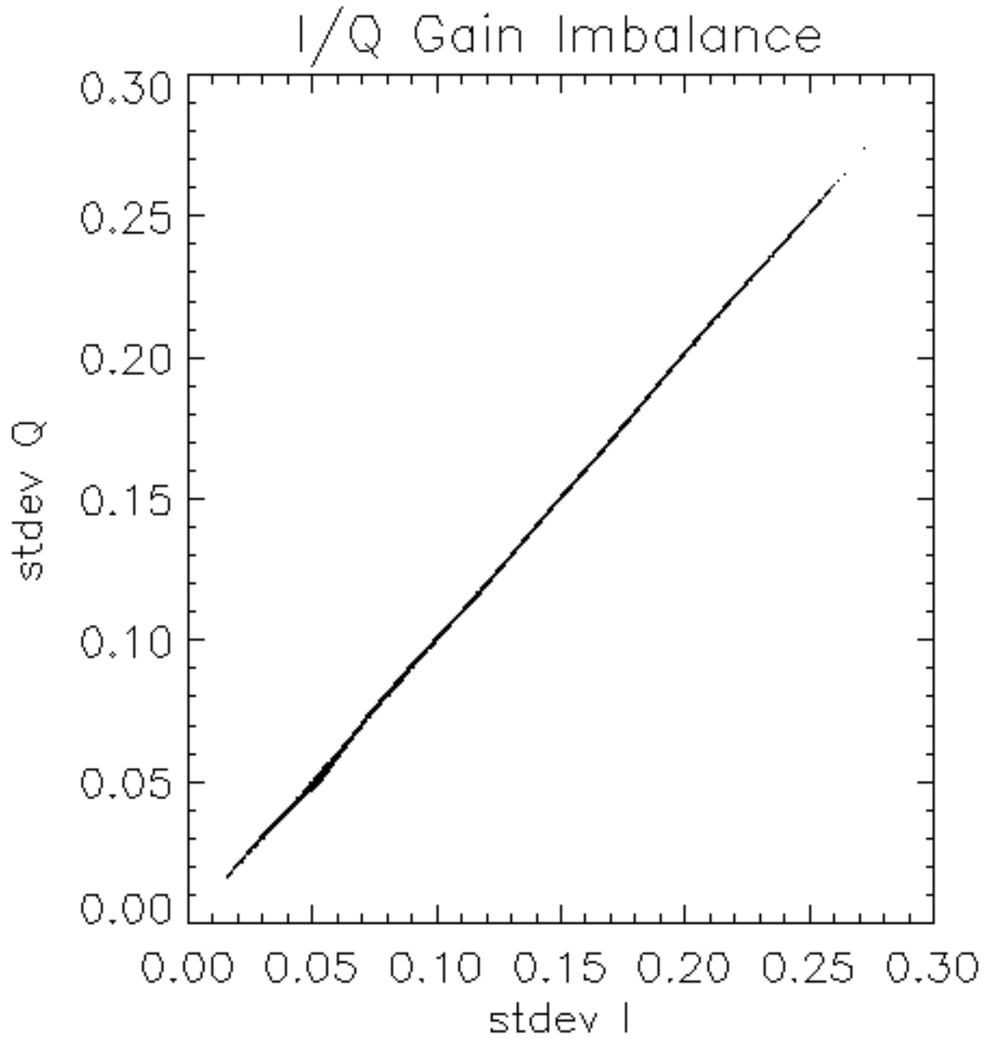

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −9.9509527 Hz
−100Hz
+100Hz

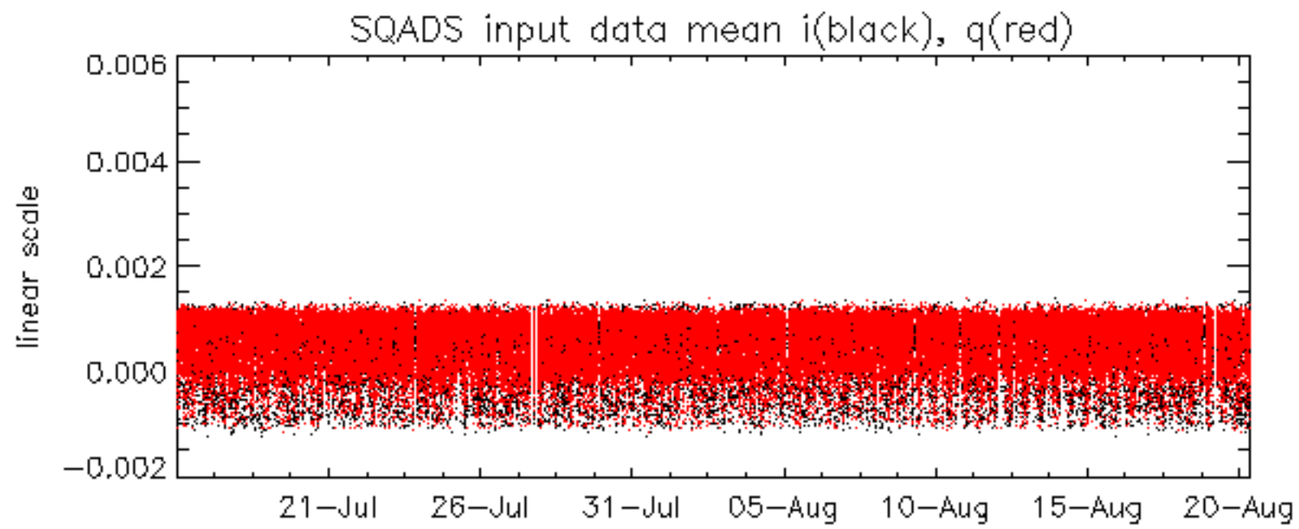

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −3.0853562 Hz
−100Hz
+100Hz

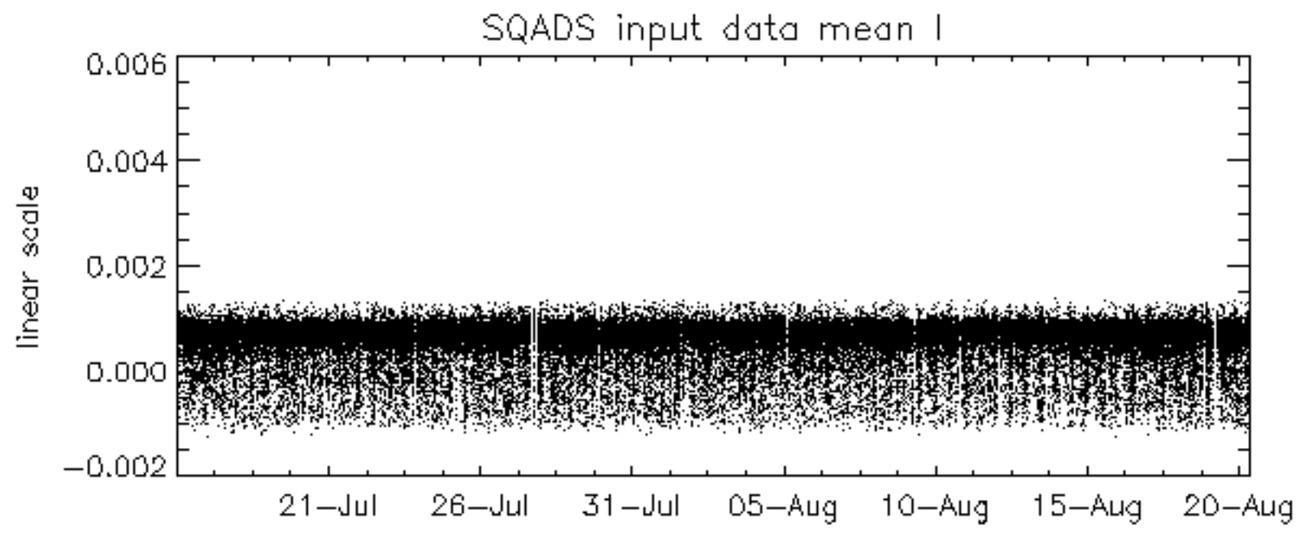

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −8.3098663 Hz
−100Hz
+100Hz

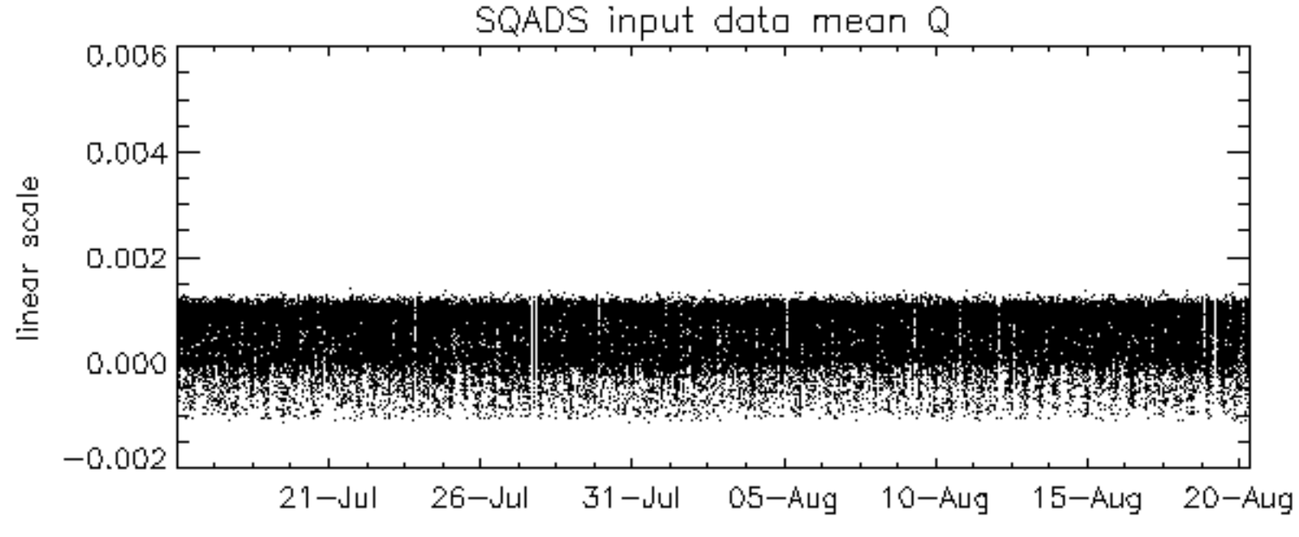
No anomalies observed on available MS products:

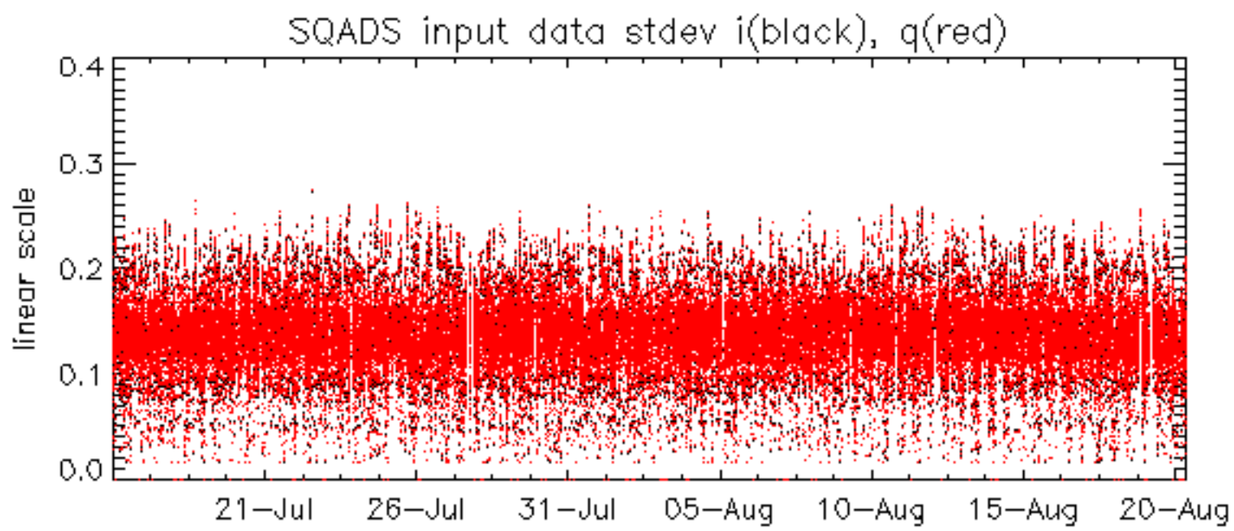
No anomalies observed.

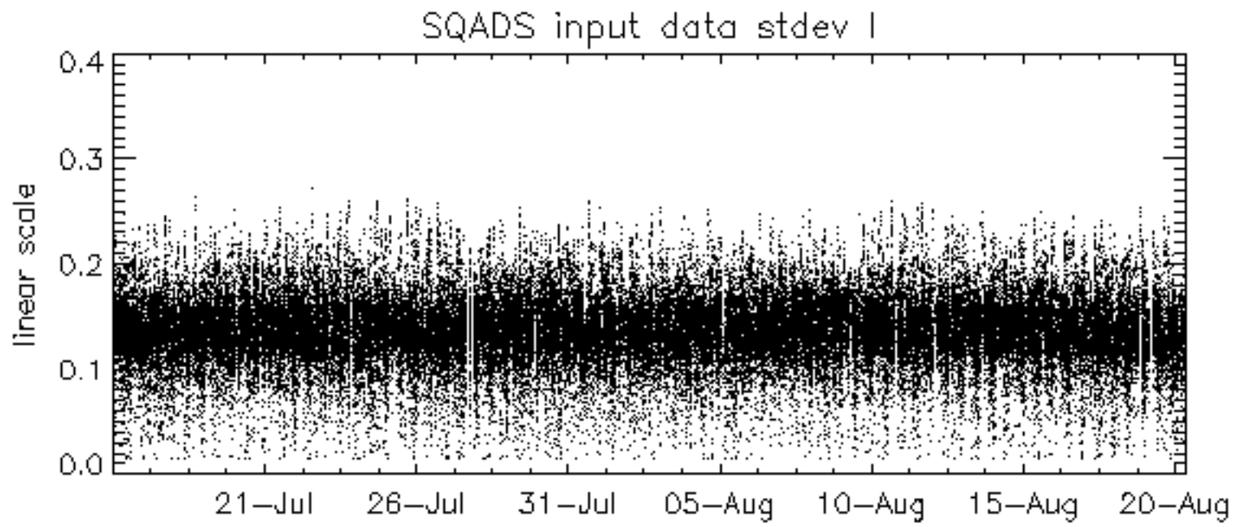

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

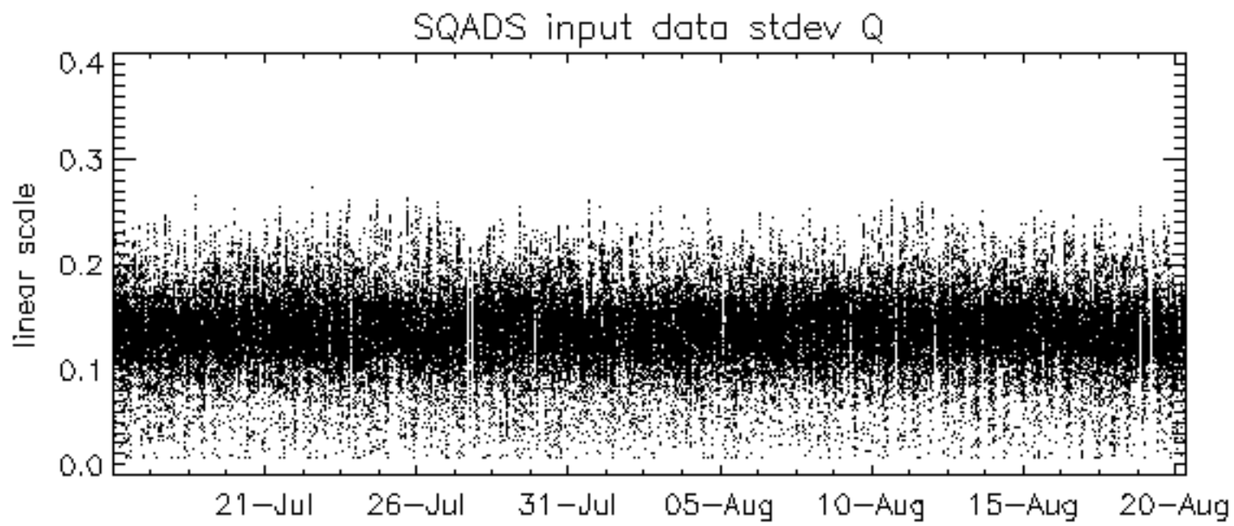

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug


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

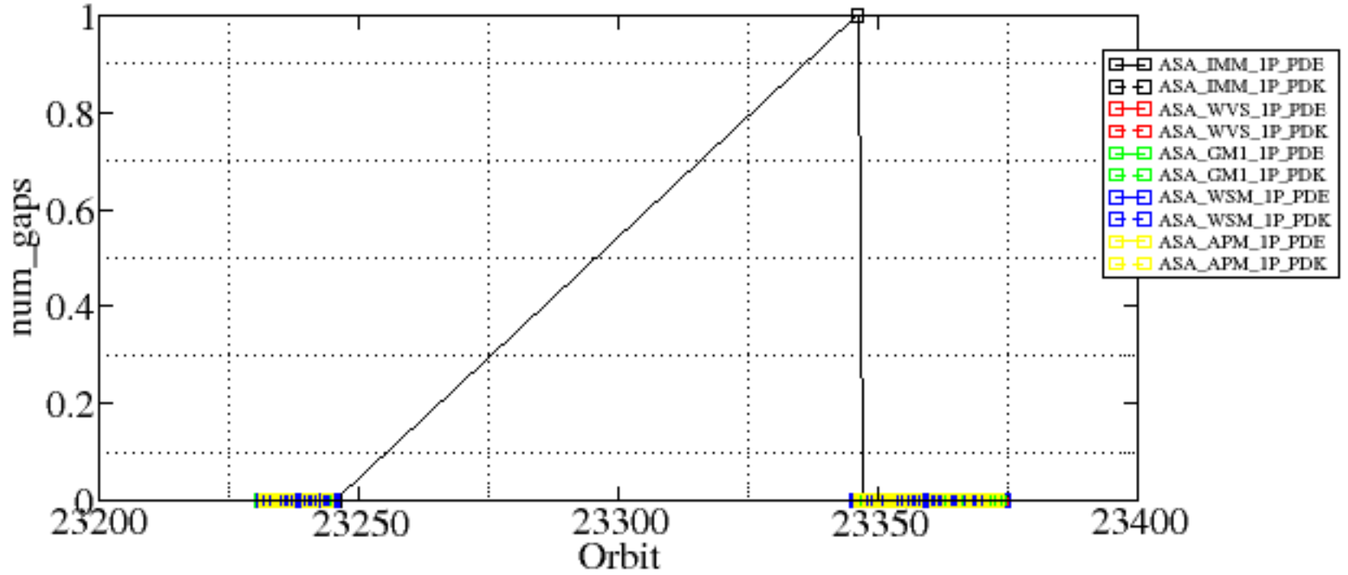

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug

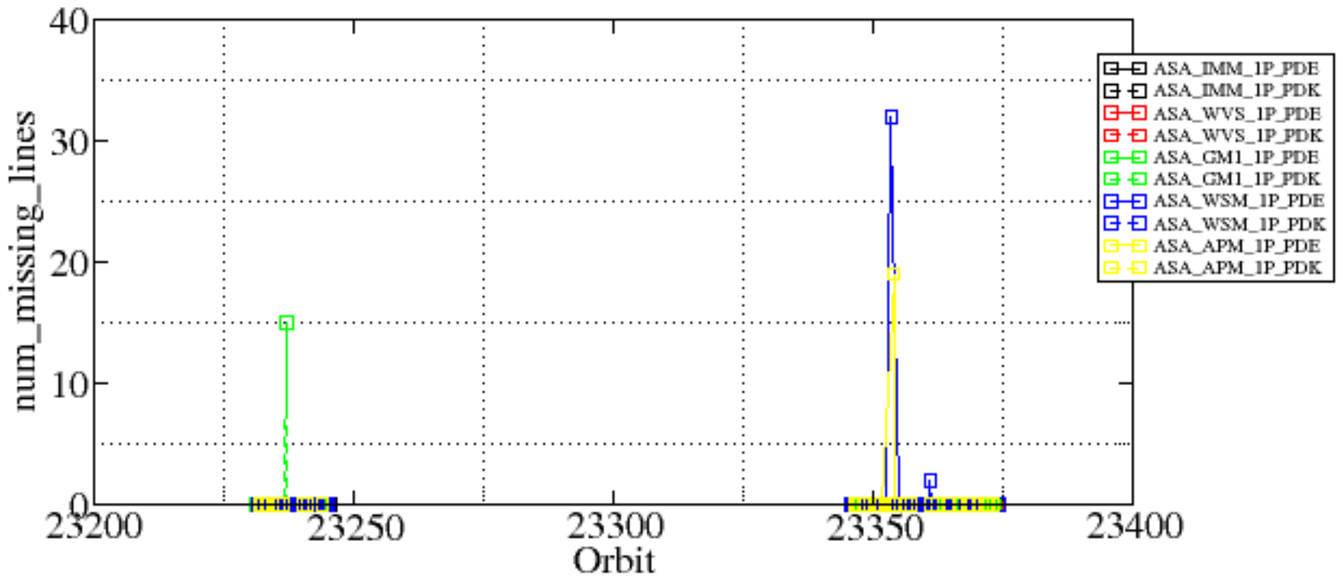

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug

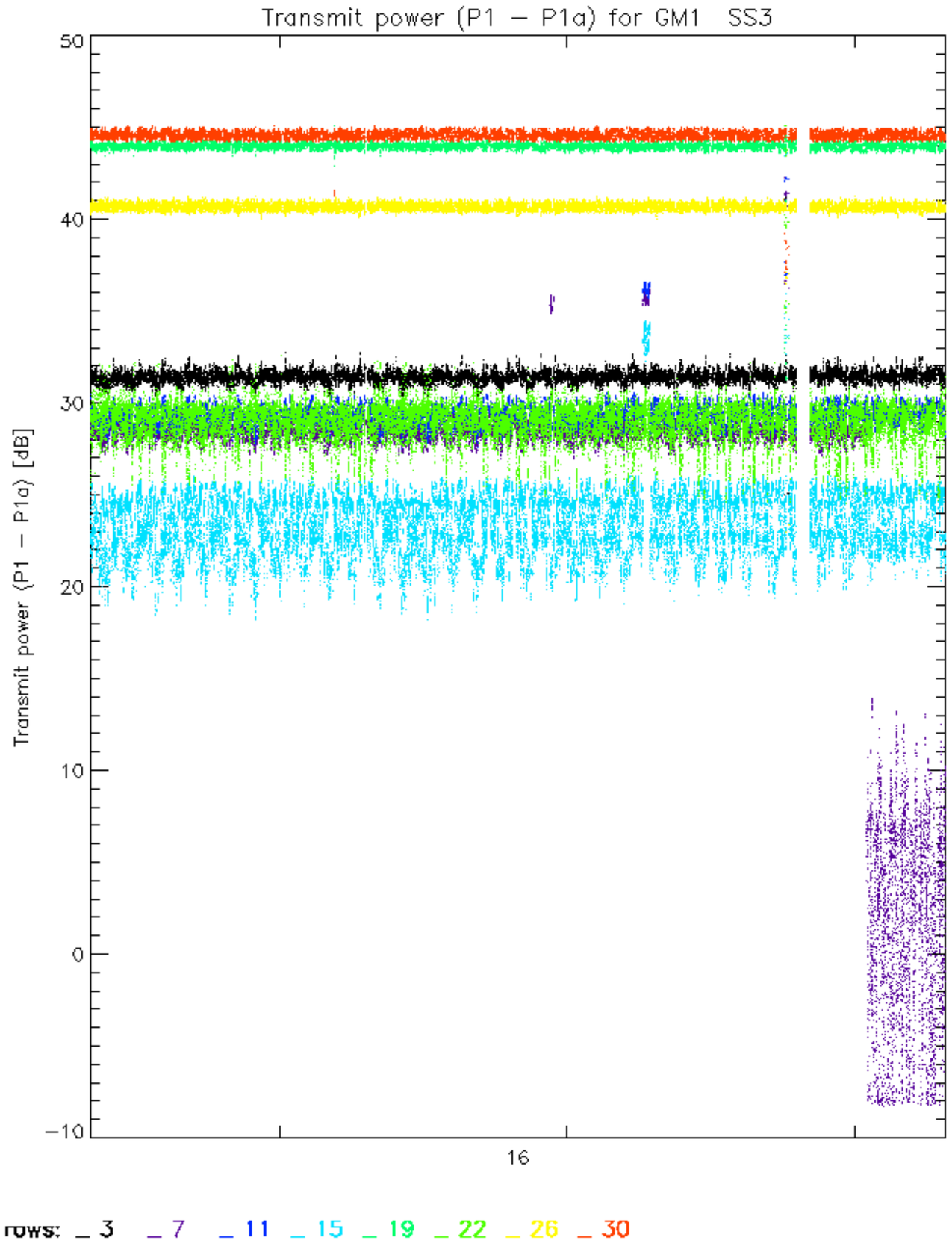

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug

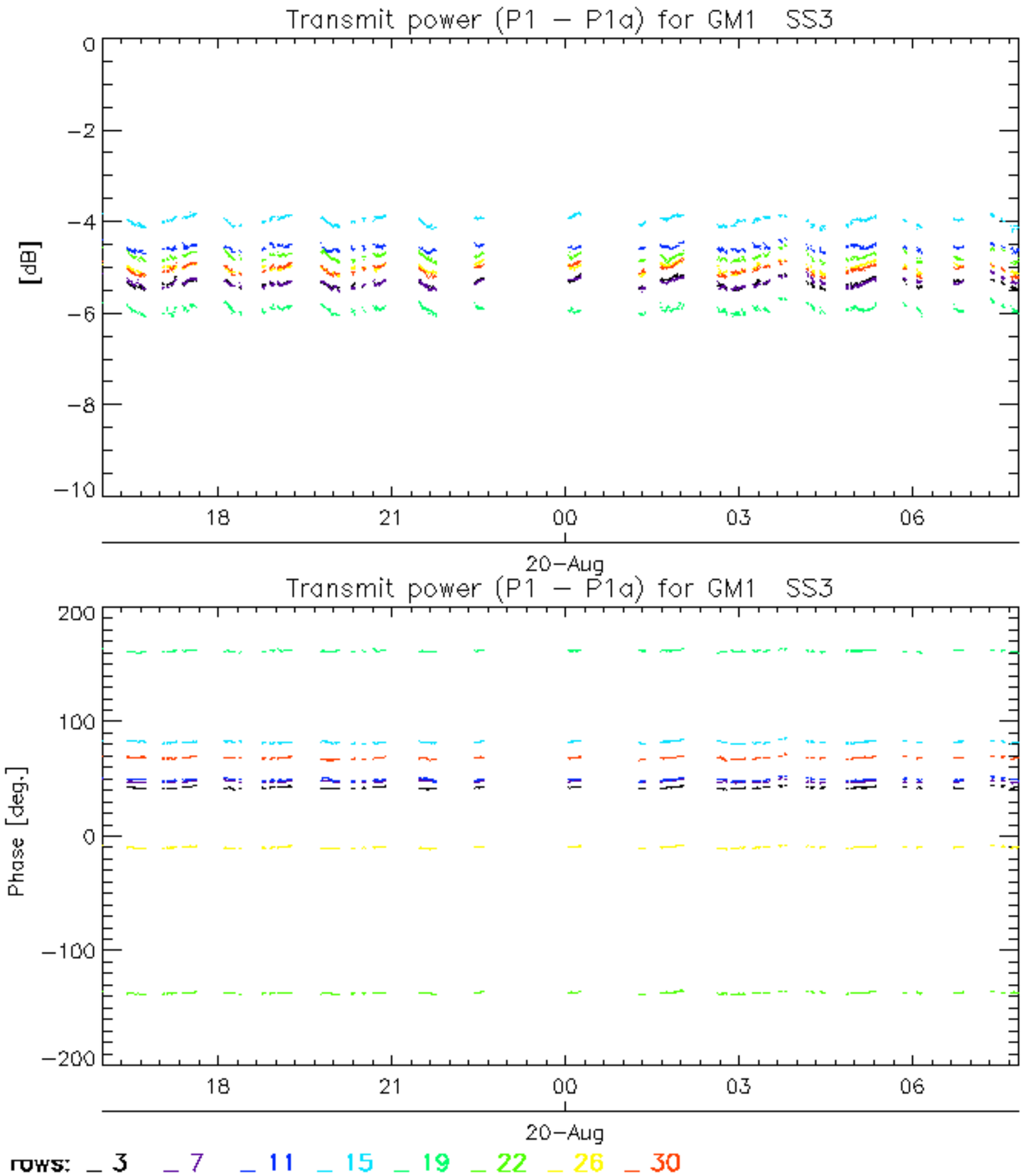
Summary of analysis for the last 3 days 2006081[890]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

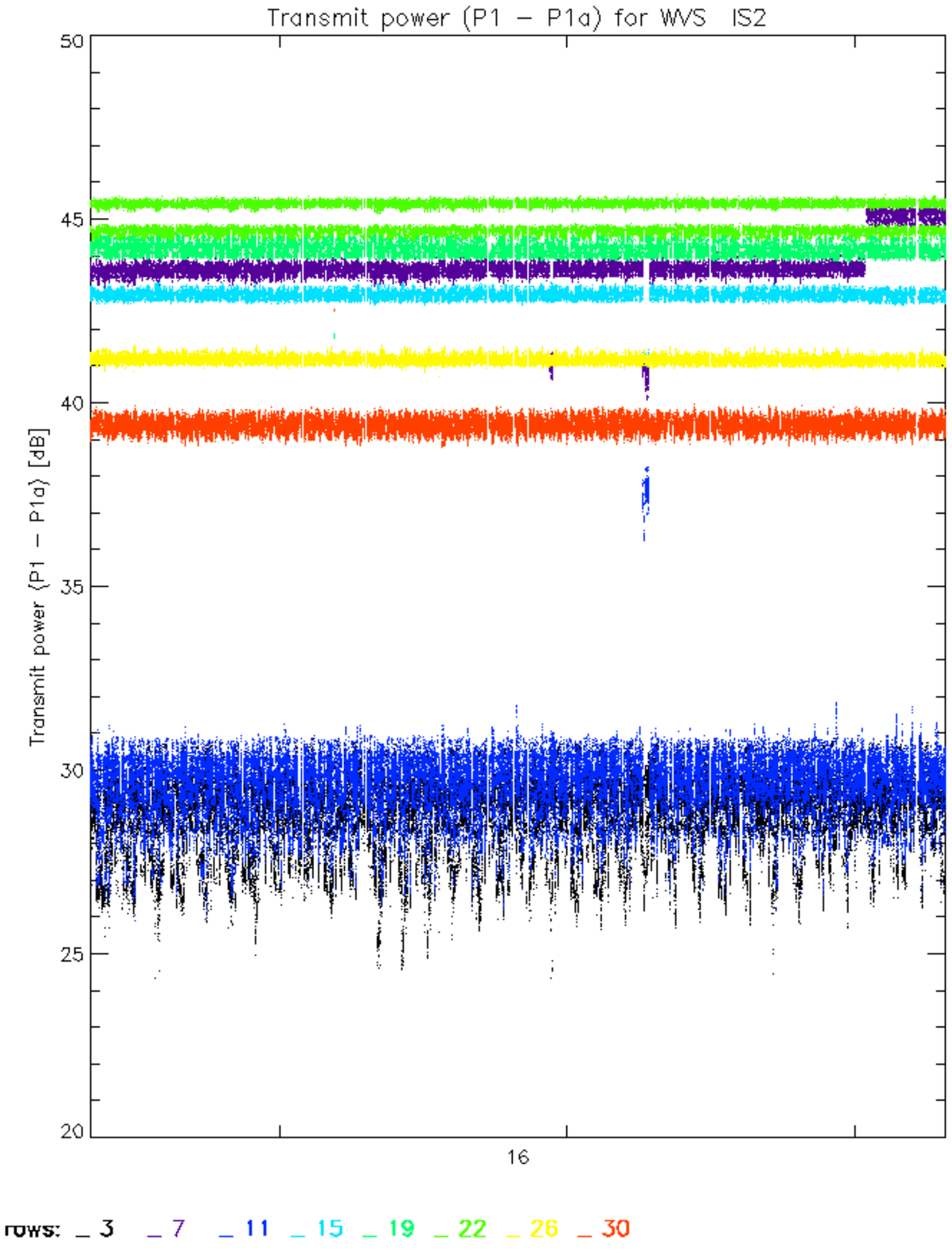
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_IMM_1PNPDE20060818_004240_000001742050_00245_23345_3639.N1 </td> <td>1 </td> <td>0 </td></tr>
<tr> <td>ASA_IMM_1PNPDE20060818_005912_000000432050_00246_23346_3640.N1 </td> <td>1 </td> <td>0 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20060810_101808_000007182050_00137_23237_2553.N1 </td> <td>0 </td> <td>15 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20060818_131642_000001472050_00253_23353_8484.N1 </td> <td>0 </td> <td>32 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20060819_015906_000001462050_00261_23361_8584.N1 </td> <td>0 </td> <td>2 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20060819_015908_000001282050_00261_23361_8640.N1 </td> <td>0 </td> <td>2 </td></tr>
<tr> <td>ASA_APM_1PNPDE20060818_141716_000000792050_00254_23354_1871.N1 </td> <td>0 </td> <td>19 </td></tr>
</table>

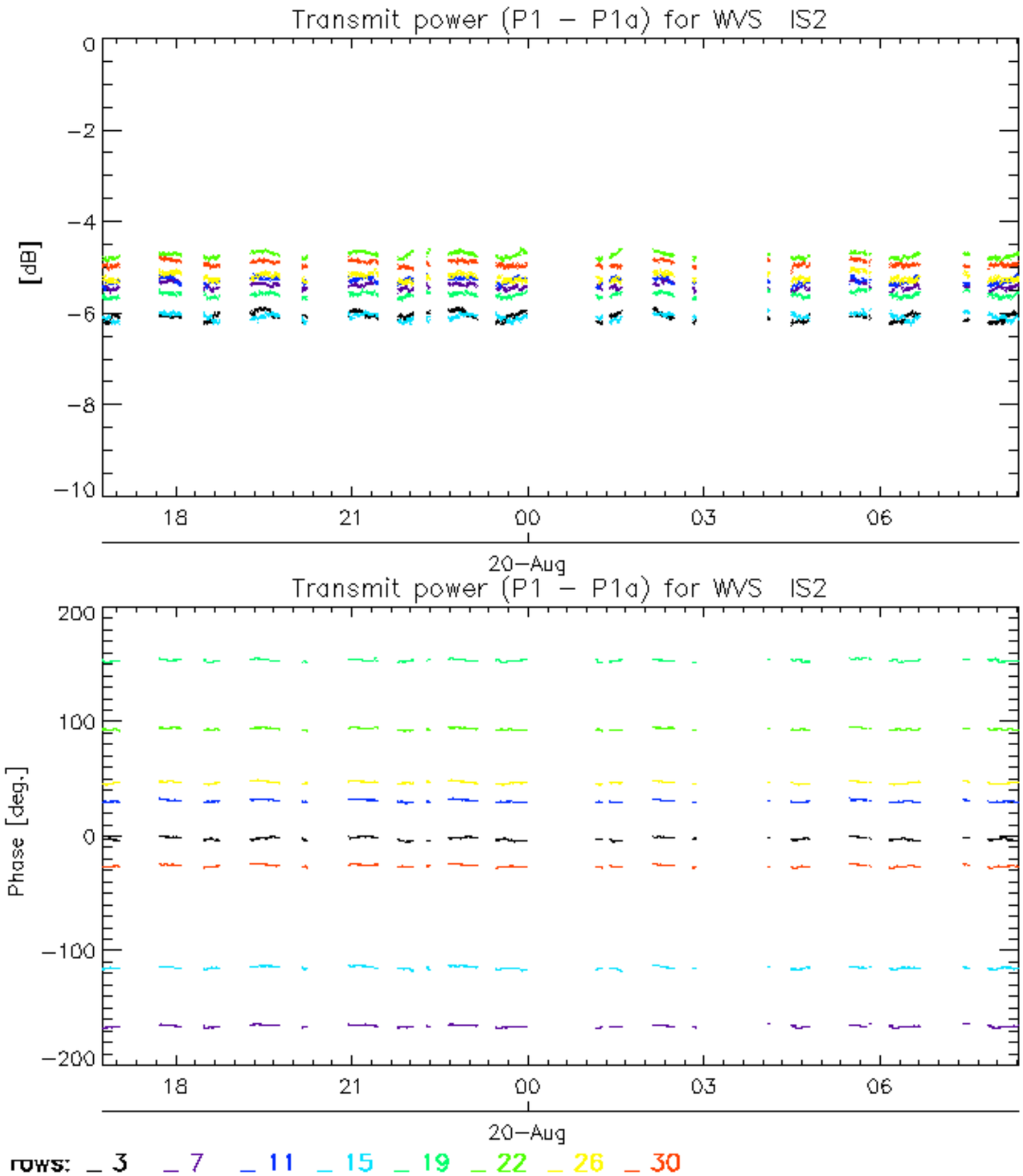

num_gaps
1
0.8
0.6
0.4
0.2
0
23200
23250
23300
23350
23400
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
40
30
20
10
0
23200
23250
23300
23350
23400
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


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
16
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
06
20–Aug
Transmit power (P1 – P1a) for GM1 SS3
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
20–Aug
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
16
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
20–Aug
Transmit power (P1 – P1a) for WVS IS2
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
20–Aug
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.