PRELIMINARY REPORT OF 060819

last update on Sat Aug 19 16:34:19 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 2006-08-18 00:00:00 to 2006-08-19 16:34:19

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

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	75	8	10	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	40	75	8	10	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	75	8	10	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	75	8	10	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	34	52	31	25	73
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	34	52	31	25	73
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	34	52	31	25	73
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	34	52	31	25	73

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

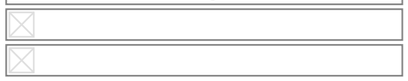
4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

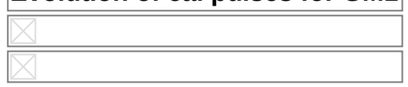
4.1.1 - Evolution for WVS

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	-3.942535	0.009980	-0.005700

7	P1	-3.097327	0.050293	0.043467
11	P1	-4.095580	0.062411	-0.015069
15	P1	-6.197840	0.093082	-0.062465
19	P1	-3.439117	0.010030	-0.073319
22	P1	-4.566048	0.010007	-0.024621
26	P1	-3.920258	0.020249	-0.002849
30	P1	-5.764310	0.009881	-0.008010
3	P1	-16.530684	0.253532	-0.008353
7	P1	-17.048847	0.372272	0.764456
11	P1	-16.910063	0.284057	0.184422
15	P1	-13.024636	0.166057	0.178722
19	P1	-14.502209	0.053962	-0.061978
22	P1	-15.955809	0.457464	0.192644
26	P1	-15.124484	0.224156	-0.071413
30	P1	-17.069731	0.325776	0.115885

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.903372	0.084717	0.098290
7	P2	-21.870953	0.101488	0.052284
11	P2	-15.762293	0.117470	0.040771
15	P2	-7.112130	0.097581	0.027587
19	P2	-9.120292	0.091000	0.024955
22	P2	-18.143854	0.085578	0.013526
26	P2	-16.399578	0.091480	0.007358
30	P2	-19.493879	0.091522	0.047681

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172504	0.003343	0.001023
7	P3	-8.172504	0.003343	0.001023
11	P3	-8.172504	0.003343	0.001023
15	P3	-8.172504	0.003343	0.001023
19	P3	-8.172504	0.003343	0.001023
22	P3	-8.172504	0.003343	0.001023
26	P3	-8.172553	0.003342	0.000814
30	P3	-8.172553	0.003342	0.000814

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	-3.829843	0.021778	-0.014639
7	P1	-2.552340	0.249938	0.142396
11	P1	-2.893763	0.137717	-0.119756
15	P1	-3.630987	0.149943	-0.152500
19	P1	-3.427567	0.025792	0.003756
22	P1	-5.084726	0.020629	-0.013888
26	P1	-5.866574	0.023142	-0.007160
30	P1	-5.195762	0.040494	0.009167
3	P1	-11.624059	0.066860	-0.013715
7	P1	-9.950597	0.167339	0.091564
11	P1	-10.274986	0.081853	-0.102801
15	P1	-10.780966	0.173889	-0.147666
19	P1	-15.553155	0.529022	0.092300
22	P1	-20.939734	1.338481	-0.167180
26	P1	-16.180365	0.401531	0.172864
30	P1	-17.984051	0.428433	-0.070384

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.511600	0.085919	0.152172
7	P2	-22.303354	0.209295	0.175539
11	P2	-10.987932	0.055539	0.142932
15	P2	-4.891328	0.043794	0.027444
19	P2	-6.861843	0.040695	0.006400
22	P2	-8.189012	0.062761	0.009354

26	P2	-24.169107	0.129689	0.019630
30	P2	-21.982111	0.079420	0.054063

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.012040	0.003711	-0.008511
7	P3	-8.011937	0.003709	-0.008434
11	P3	-8.012020	0.003712	-0.008294
15	P3	-8.012104	0.003715	-0.008441
19	P3	-8.011974	0.003722	-0.008687
22	P3	-8.012157	0.003700	-0.008328
26	P3	-8.011984	0.003700	-0.007915
30	P3	-8.012037	0.003711	-0.008142

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	0.000559689
	stdev	1.72901e-07
MEAN Q	mean	0.000534684
	stdev	2.14329e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137228
	stdev	0.00107847
STDEV Q	mean	0.137582
	stdev	0.00109533

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006081[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
ASA_IMM_1PNPDE20060818_004240_000001742050_00245_23345_3639.N1	1	0
ASA_IMM_1PNPDE20060818_005912_000000432050_00246_23346_3640.N1	1	0
ASA_GM1_1PNPDK20060817_181455_000003862050_00242_23342_3005.N1	0	9
ASA_GM1_1PNPDK20060817_195553_000003382050_00243_23343_3010.N1	0	9
ASA_WSM_1PNPDE20060817_020406_000002322050_00232_23332_8255.N1	0	40
ASA_WSM_1PNPDE20060817_235454_000003302050_00245_23345_8396.N1	0	35
ASA_WSM_1PNPDE20060818_131642_000001472050_00253_23353_8484.N1	0	32
ASA_WSM_1PNPDE20060819_015906_000001462050_00261_23361_8584.N1	0	2
ASA_APM_1PNPDE20060818_141716_000000792050_00254_23354_1871.N1	0	19

7 - Doppler Analysis

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

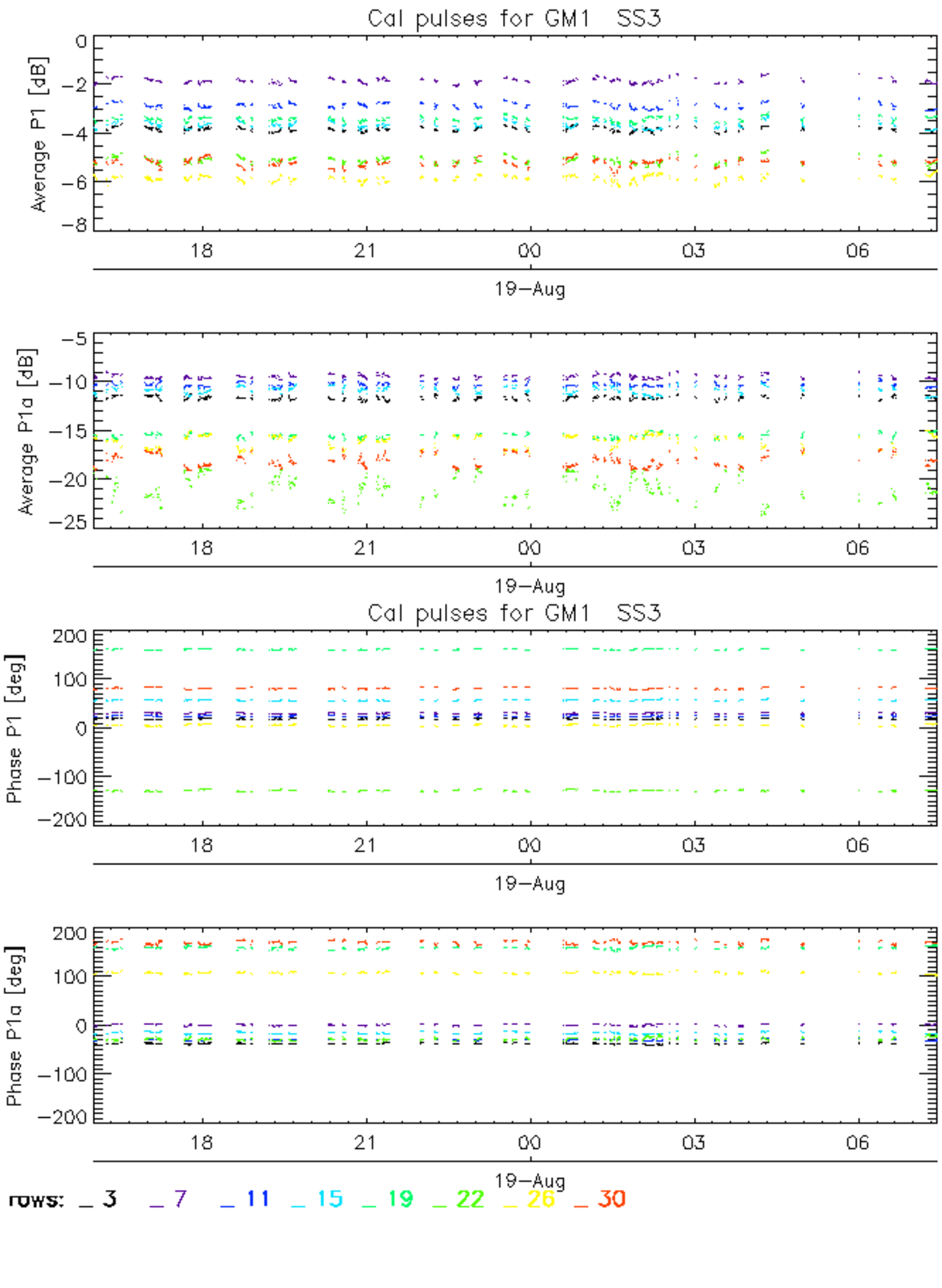
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

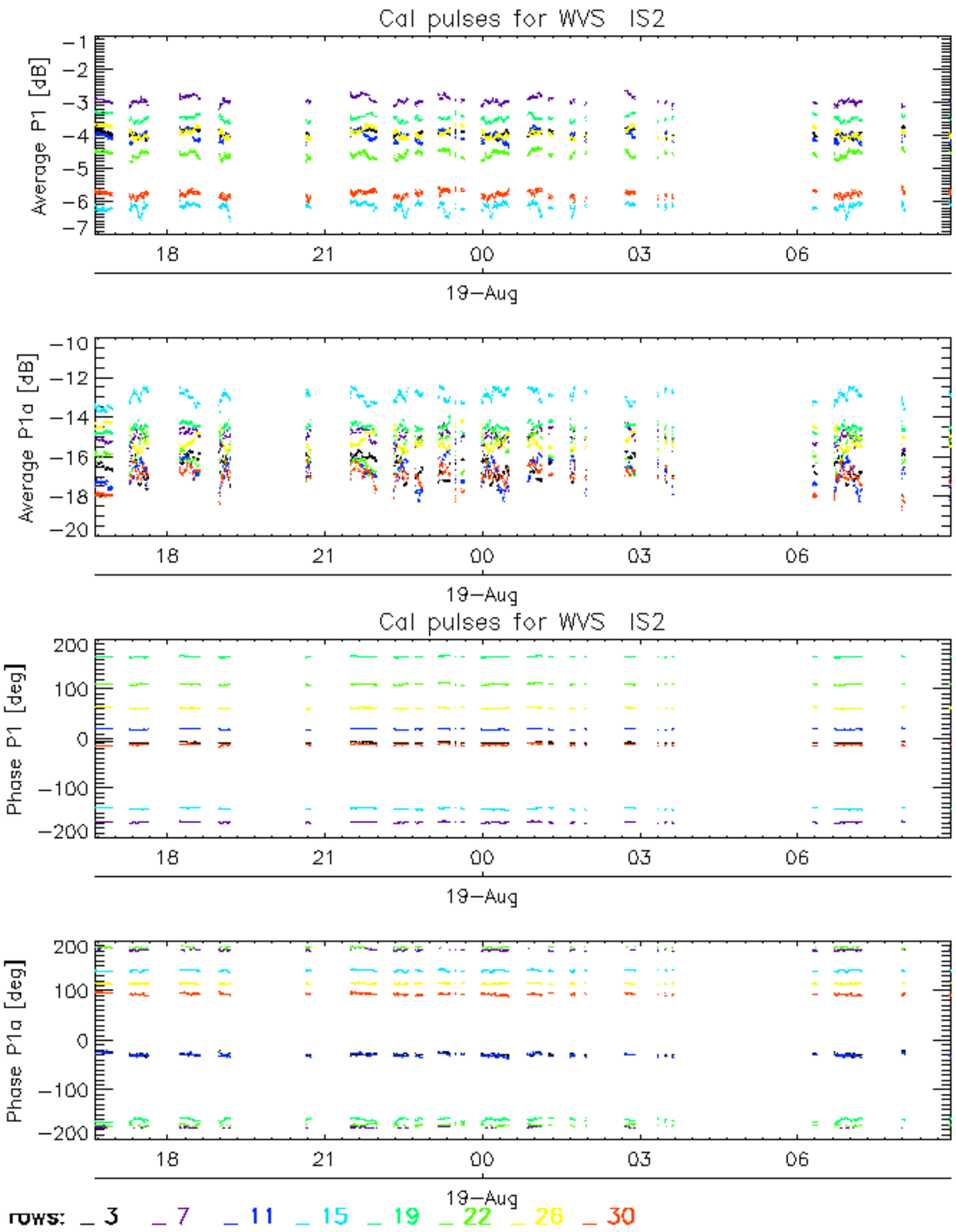
7.5 - Absolute Doppler for GM1

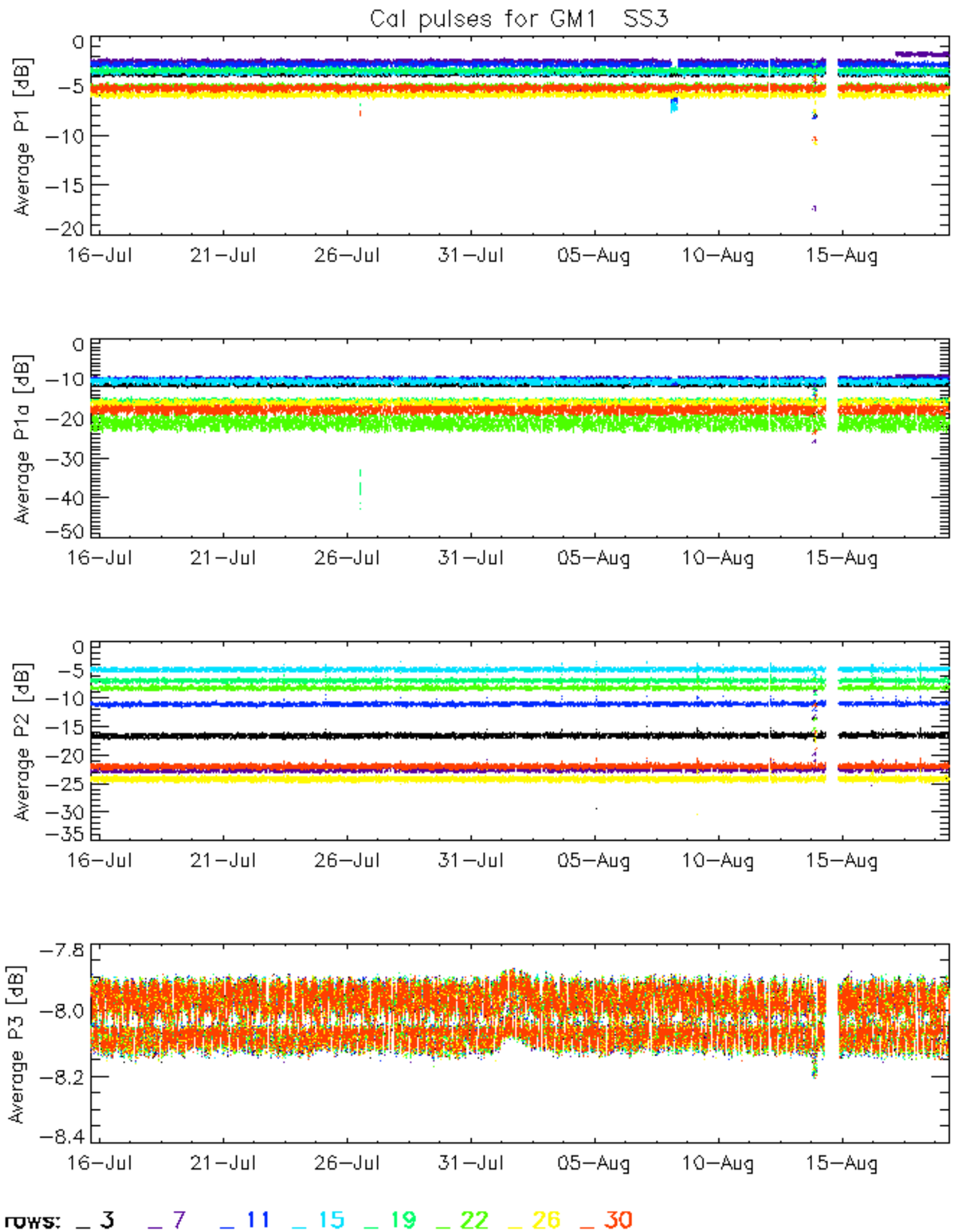
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

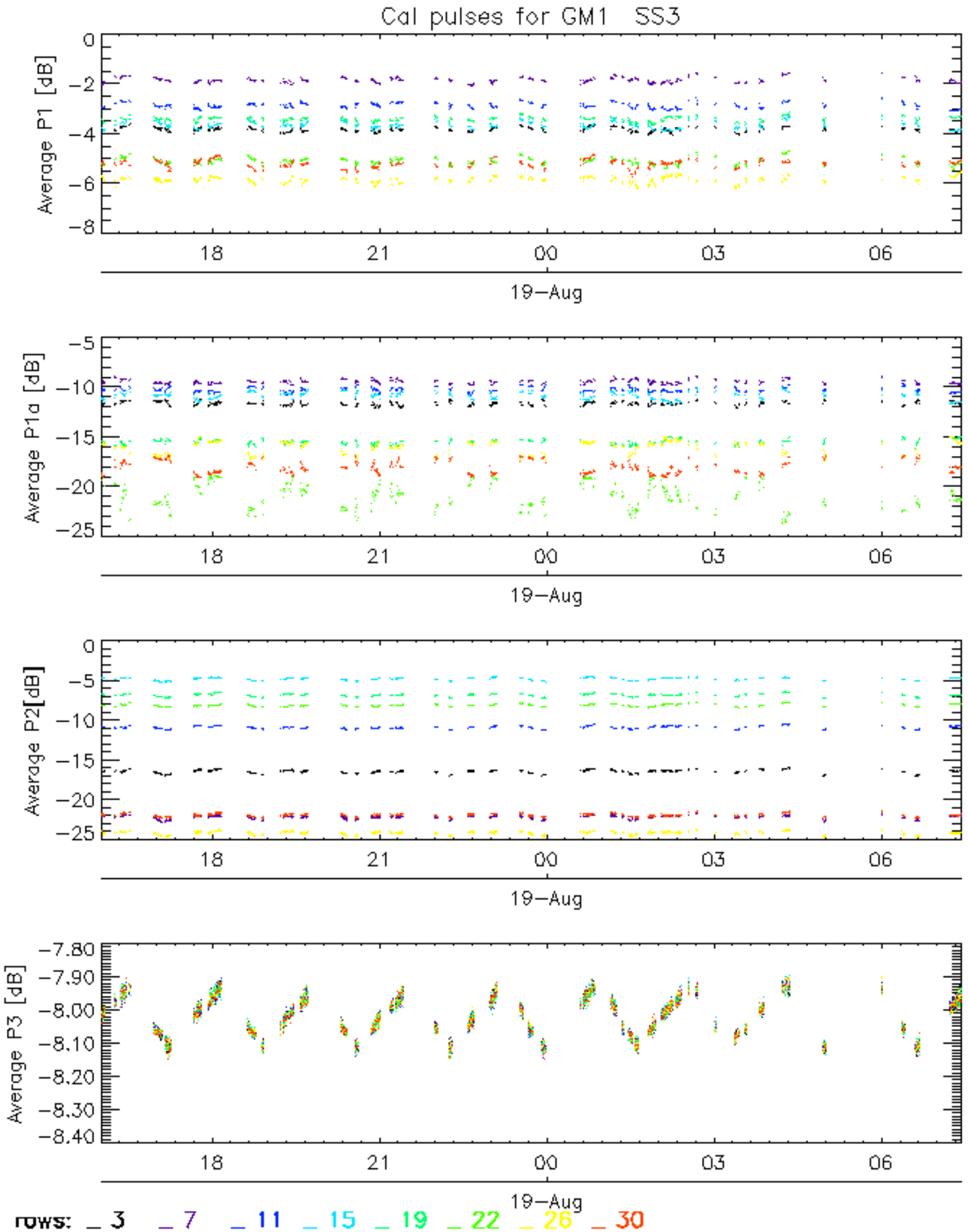
7.6 - Doppler evolution versus ANX for GM1

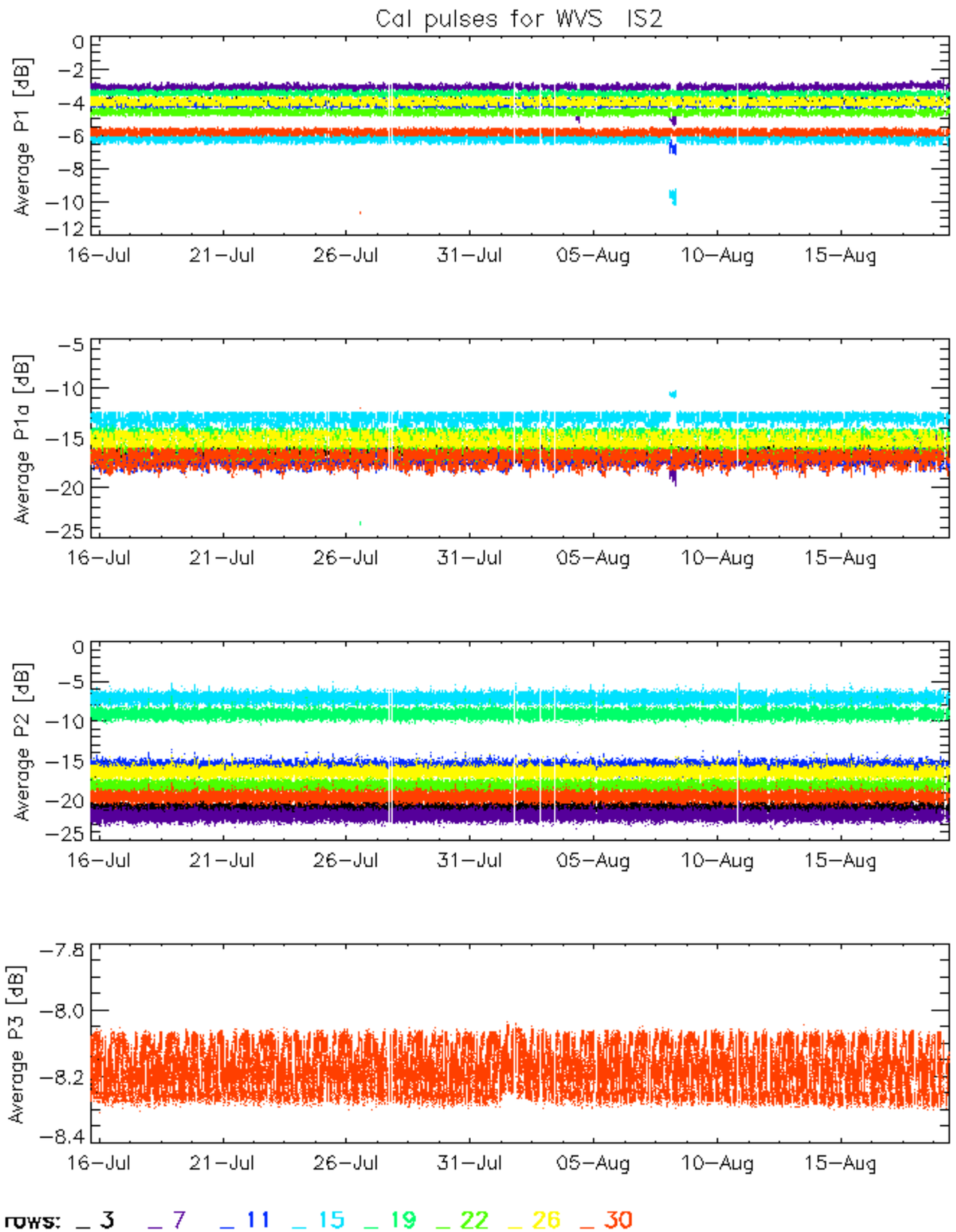
Evolution Doppler error versus ANX
☒

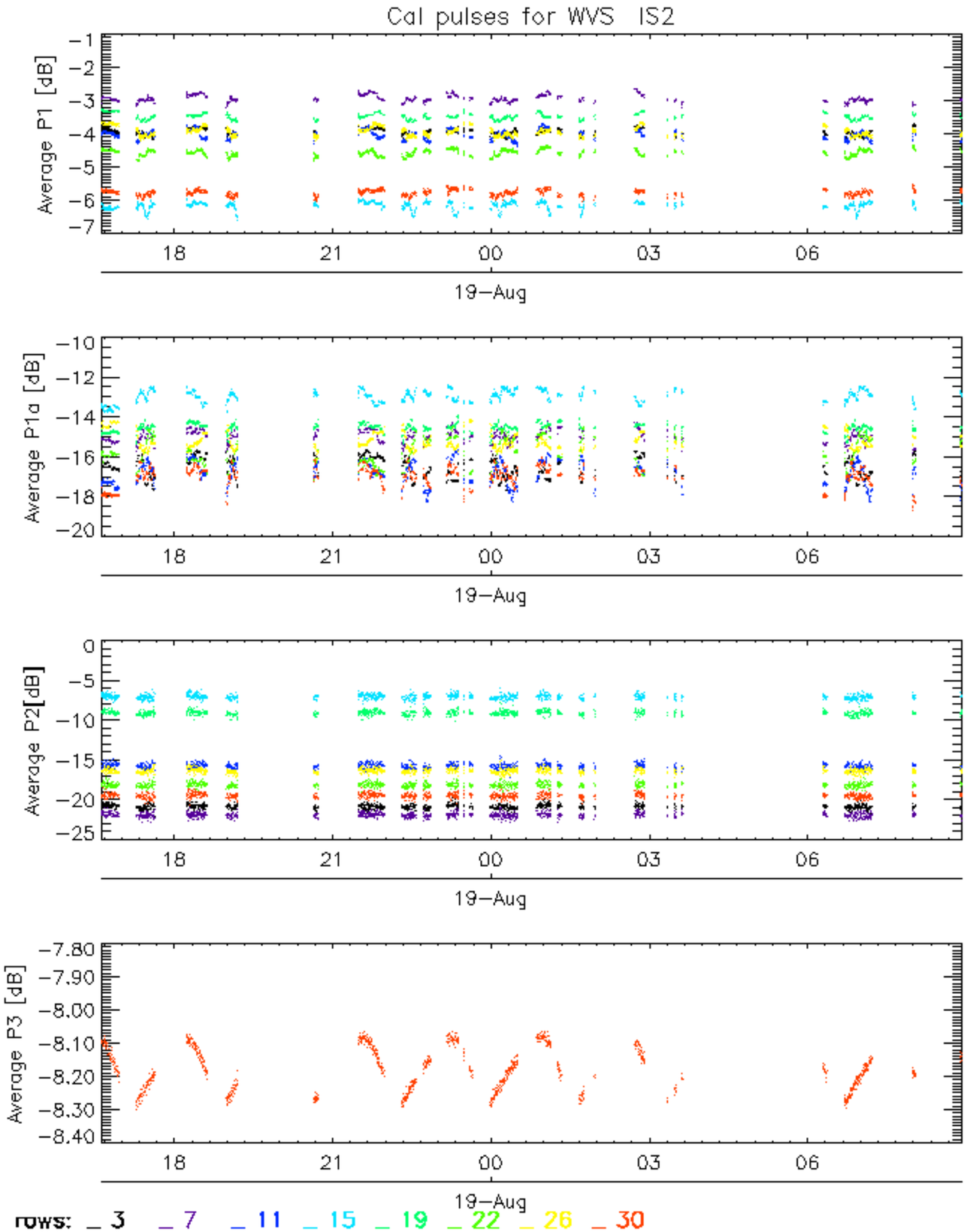

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
06
19−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
Cal pulses for GM1 SS3
Phase P1 [deg]
200
100
0
−100
−200
Phase P1a [deg]
rows: 3 7 11 15 19 22 26 30


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

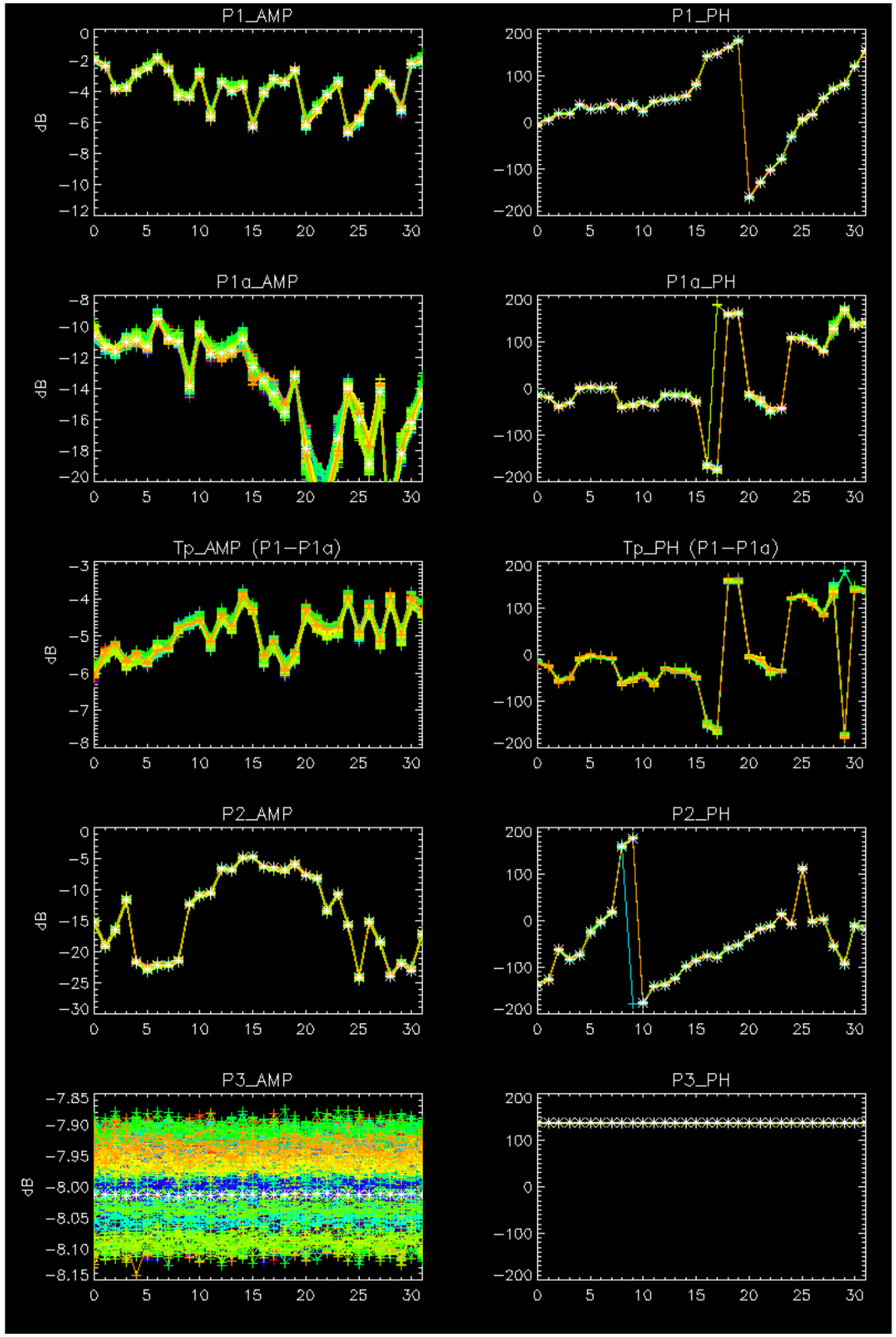

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
Average P1a [dB]
0
−10
−20
−30
−40
−50
Average P2 [dB]
0
−5
−10
−15
−20
−25
−30
−35
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

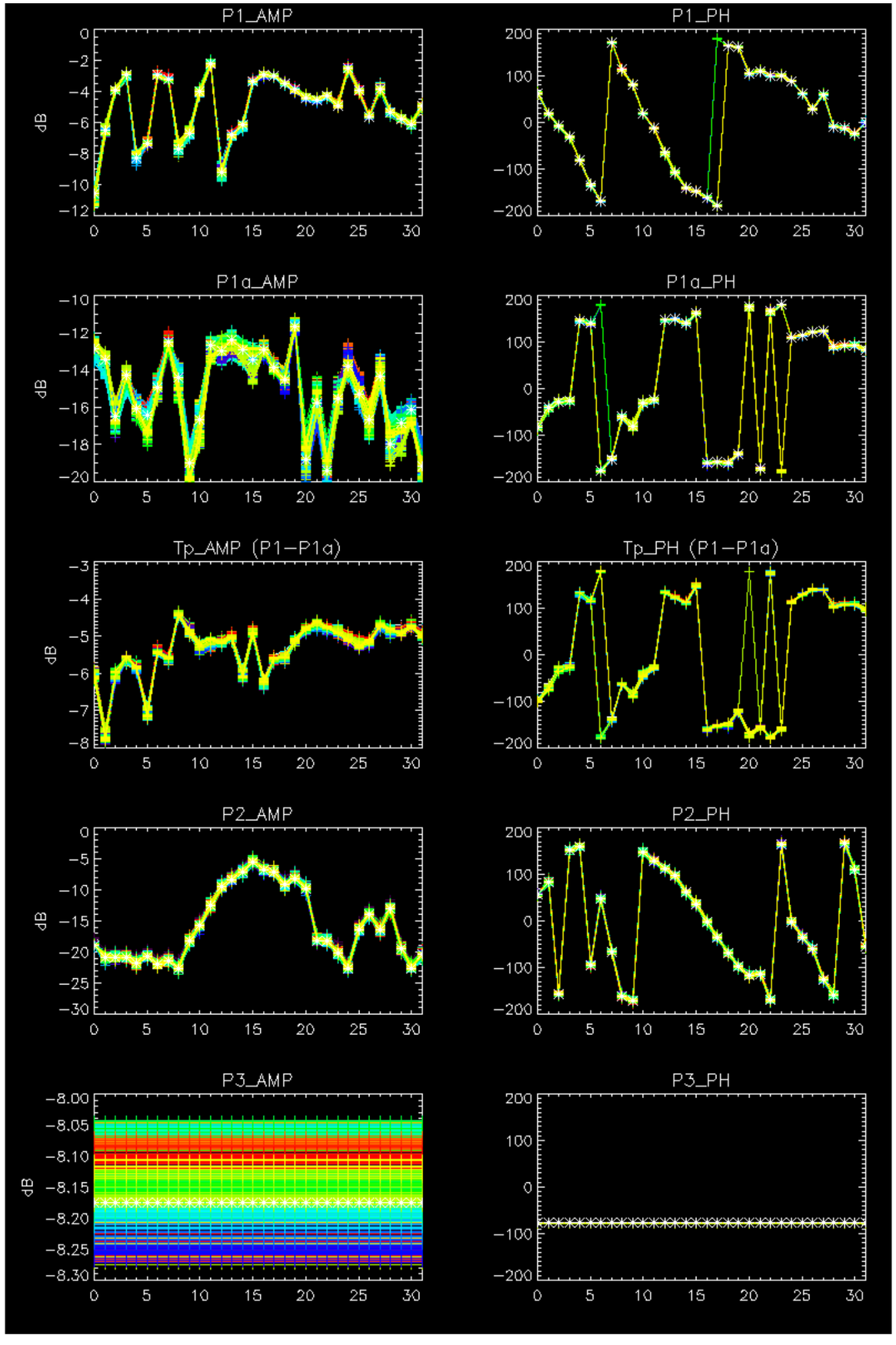

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
18
21
00
03
06
19−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
06
19−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
18
21
00
03
06
19−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
19−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
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 26 30


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

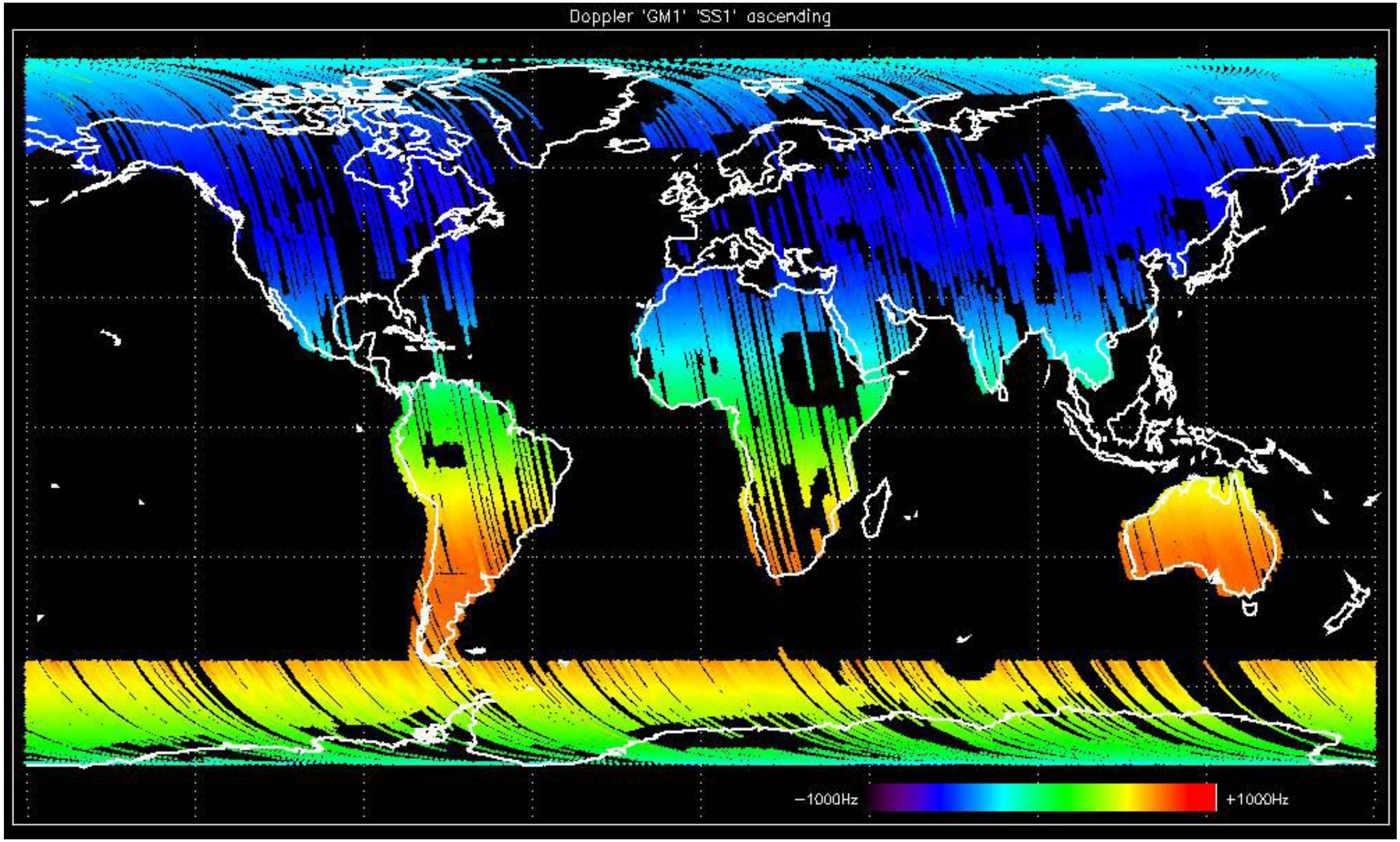
No anomalies observed.

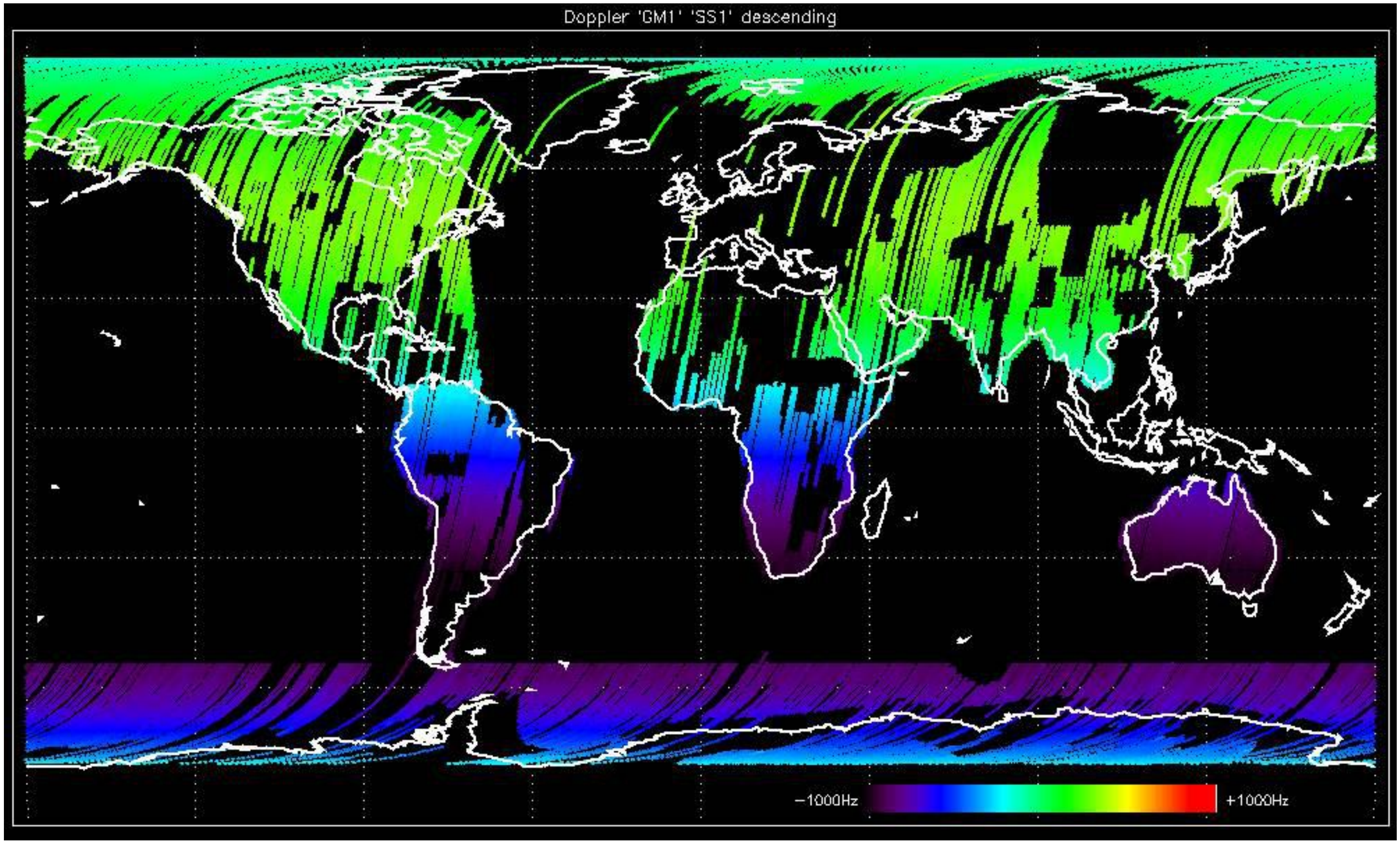

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

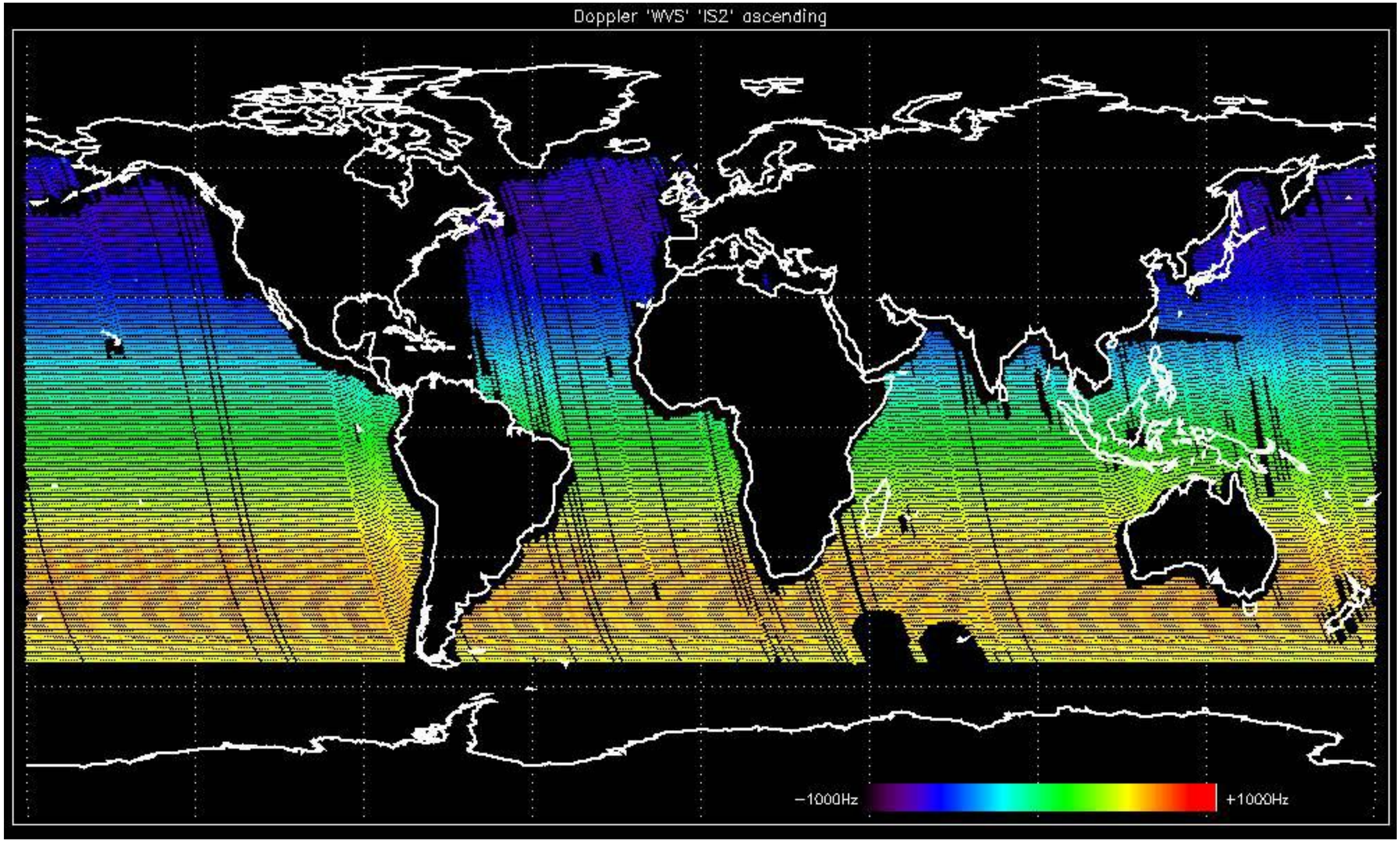

P1_AMP
P1_PH
P1a_AMP
P1a_PH
Tp_AMP (P1−P1a)
Tp_PH (P1−P1a)
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

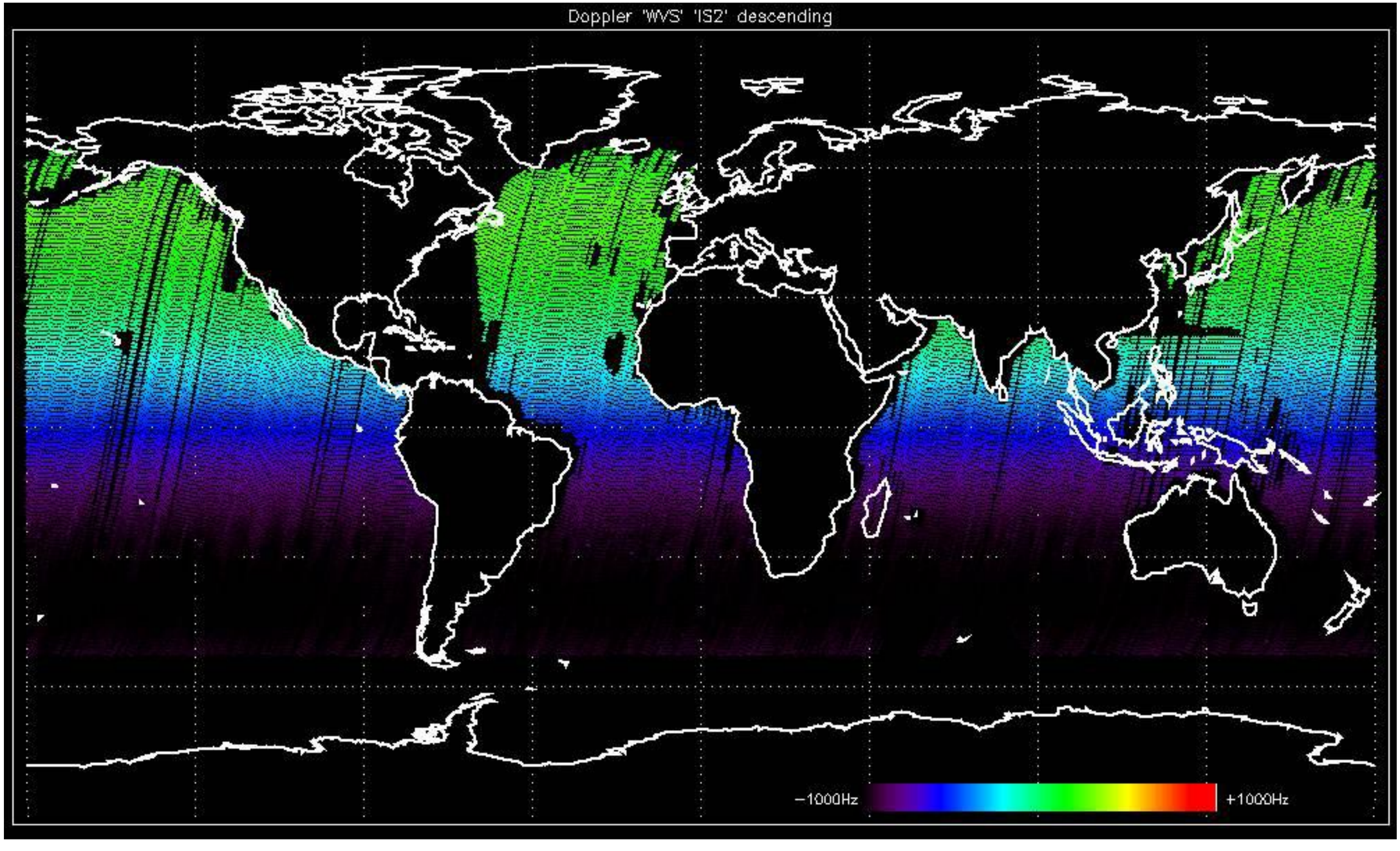
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

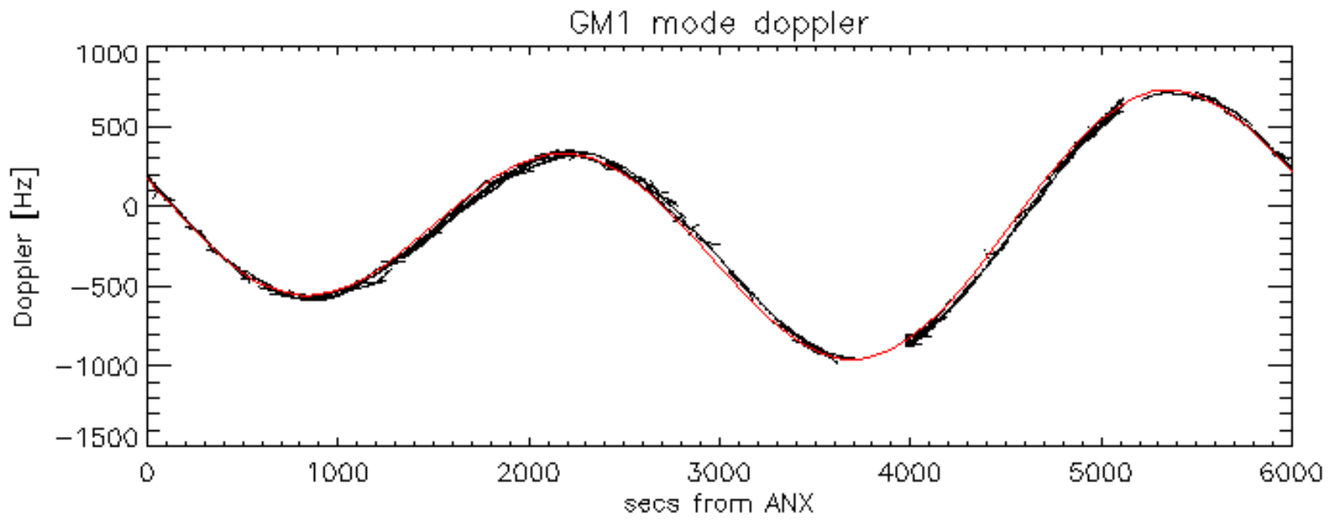
Preliminary report.The data is not yet controled

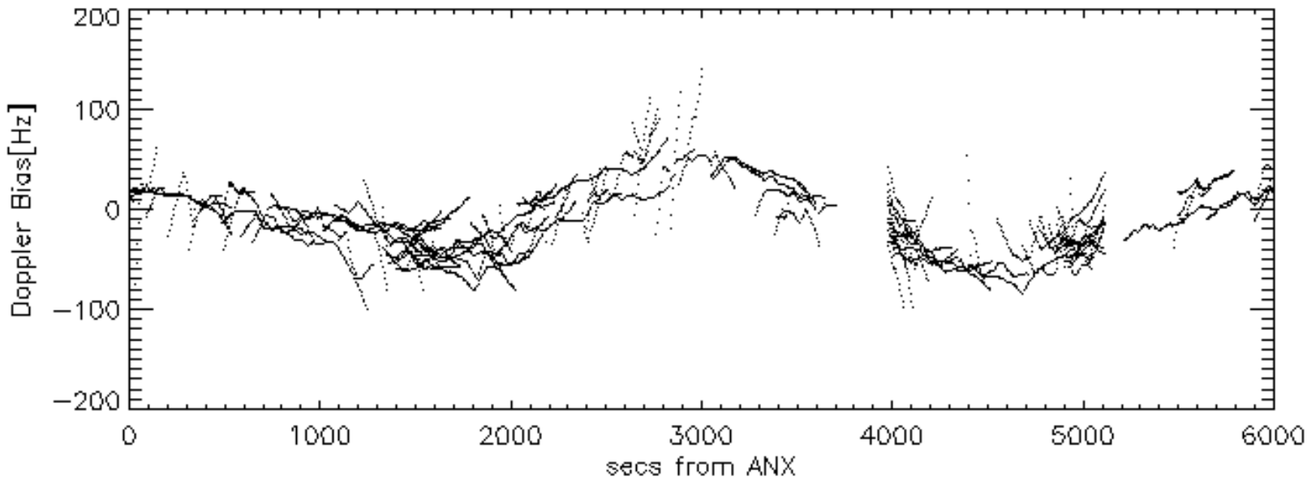

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

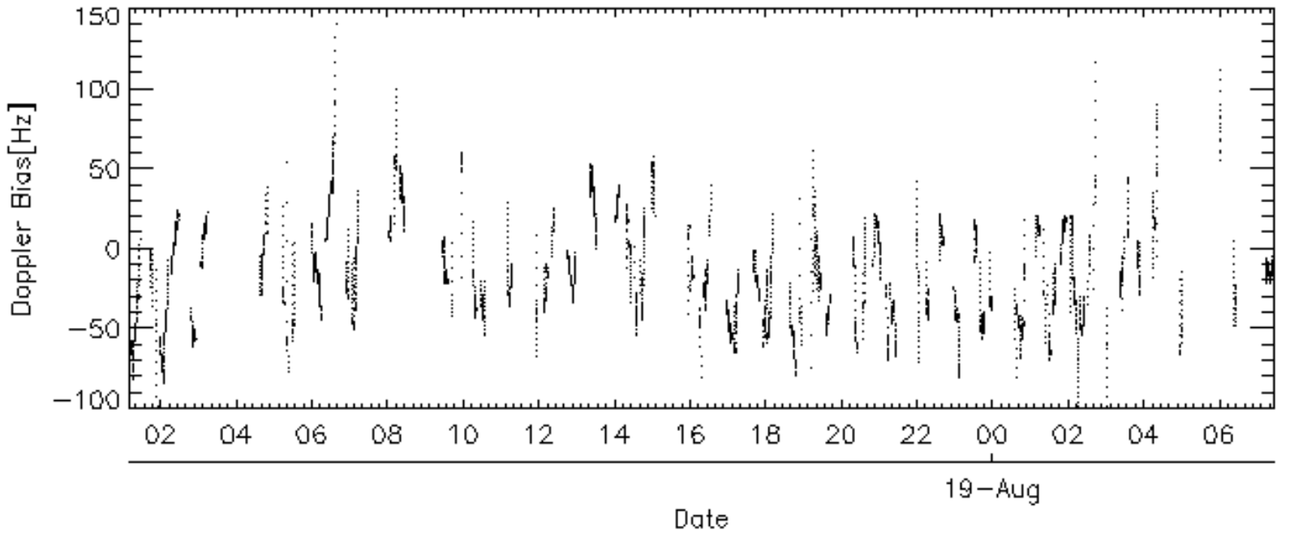

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

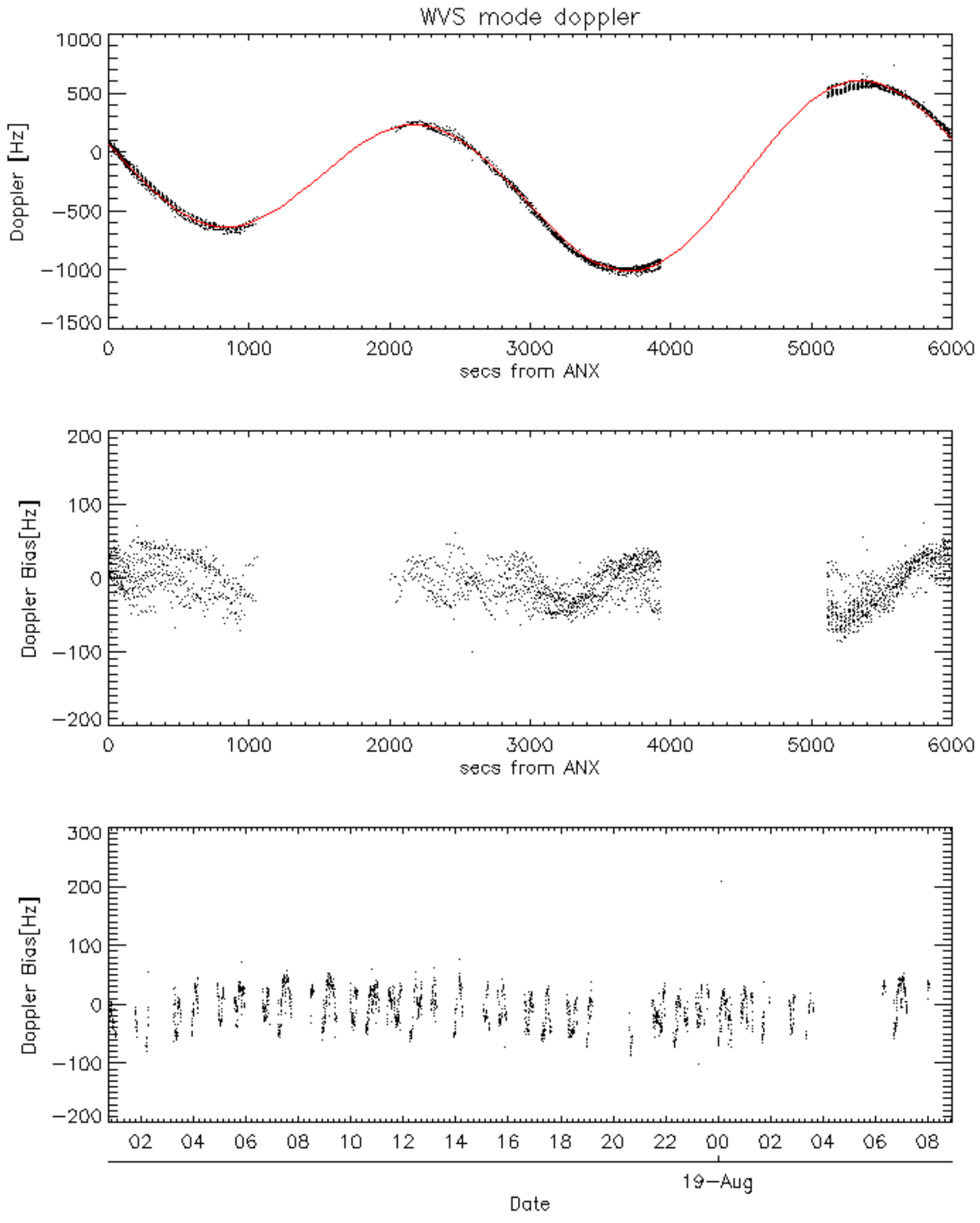

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

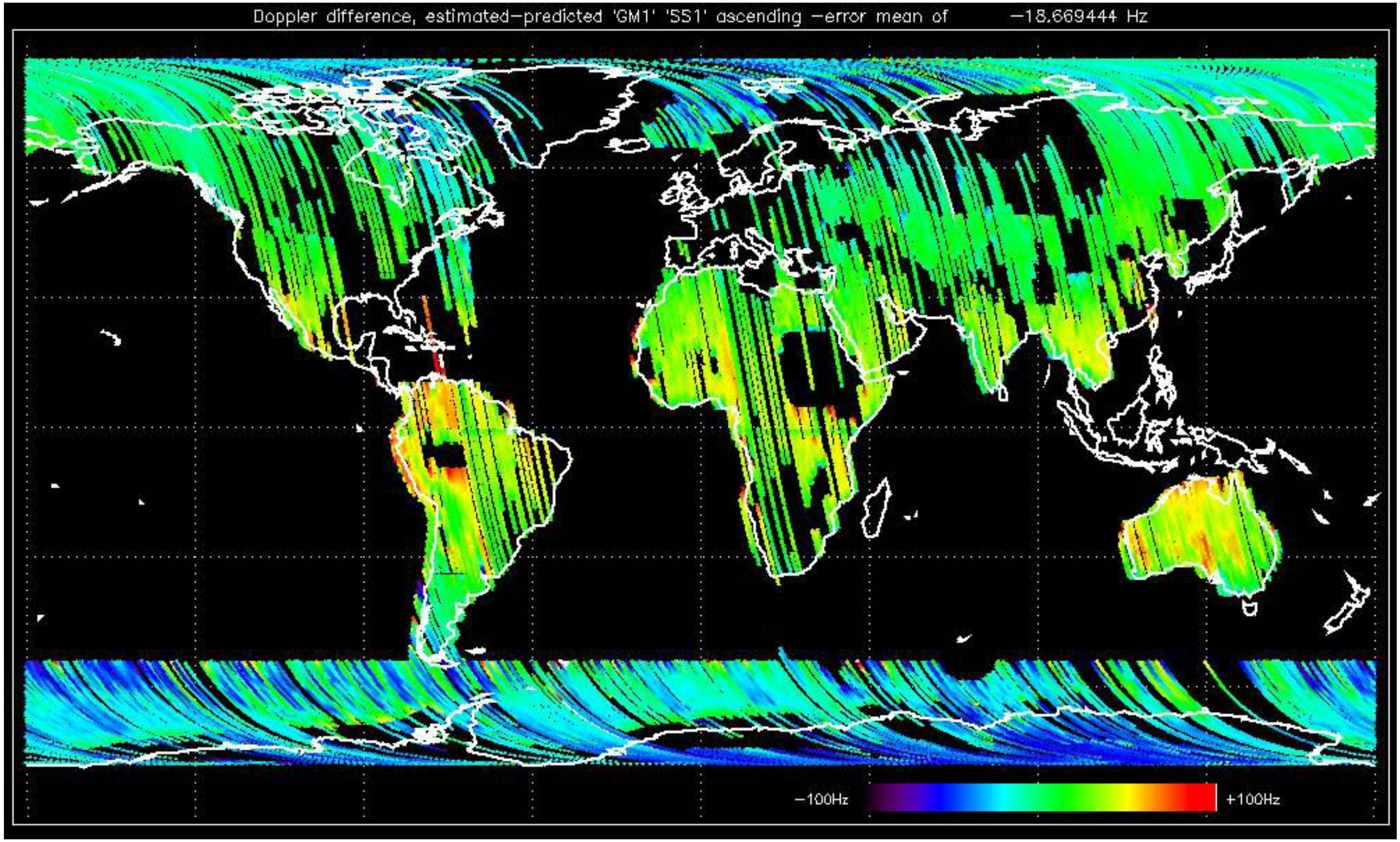

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

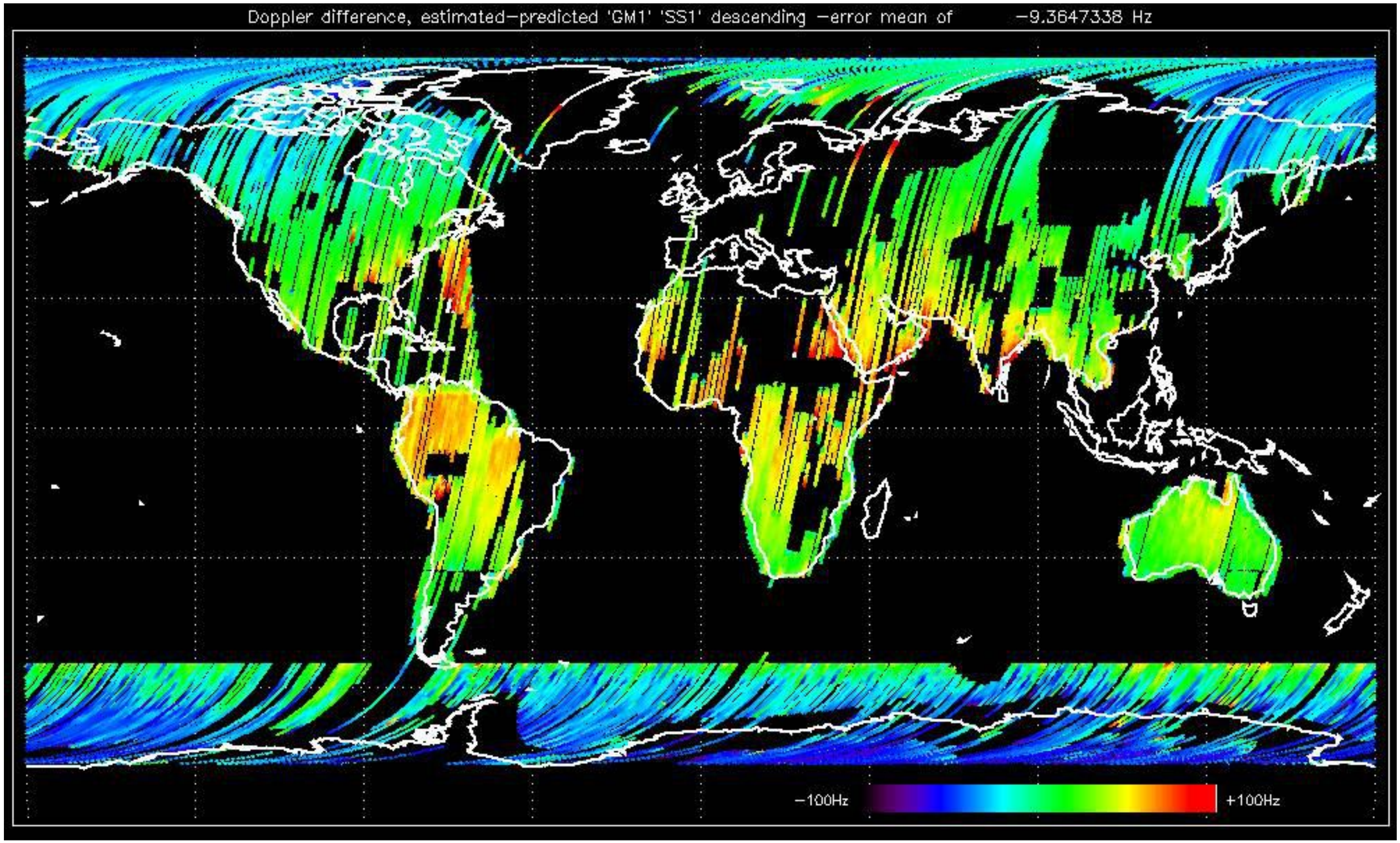

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

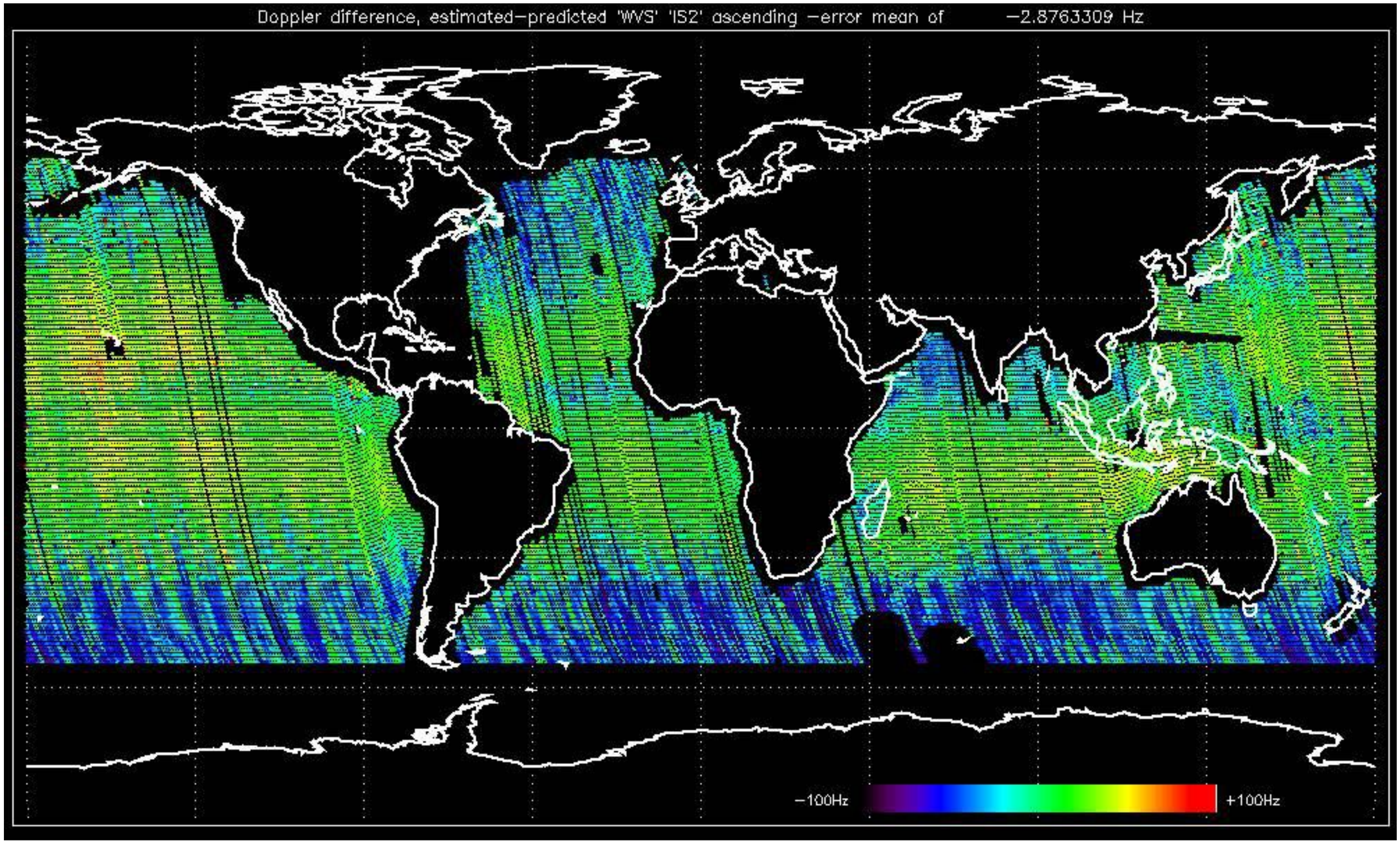

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

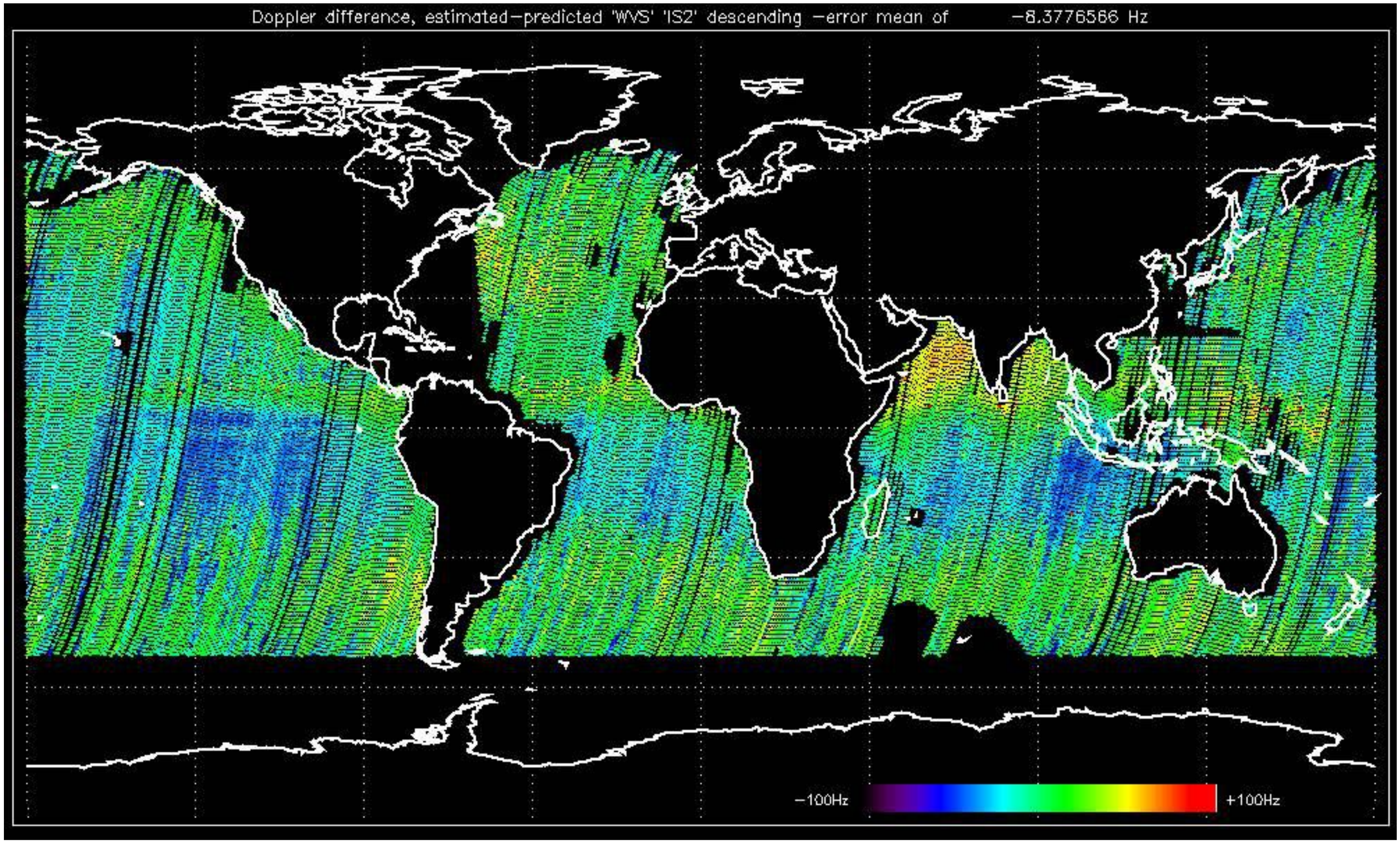

Doppler Bias[Hz]
150
100
50
0
−50
−100
02
04
06
08
10
12
14
16
18
20
22
00
02
04
06
19−Aug
Date


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
19−Aug
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −18.669444 Hz
−100Hz
+100Hz

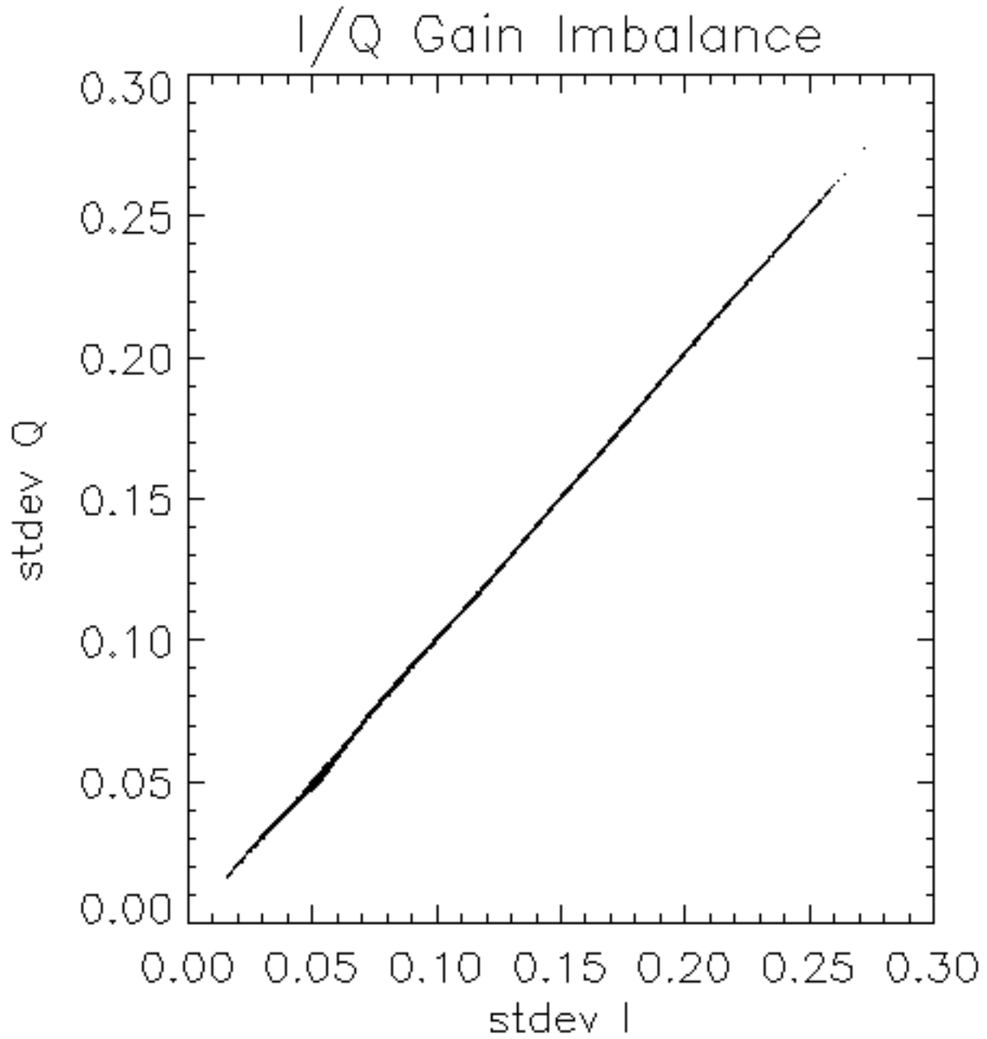

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −9.3647338 Hz
−100Hz
+100Hz

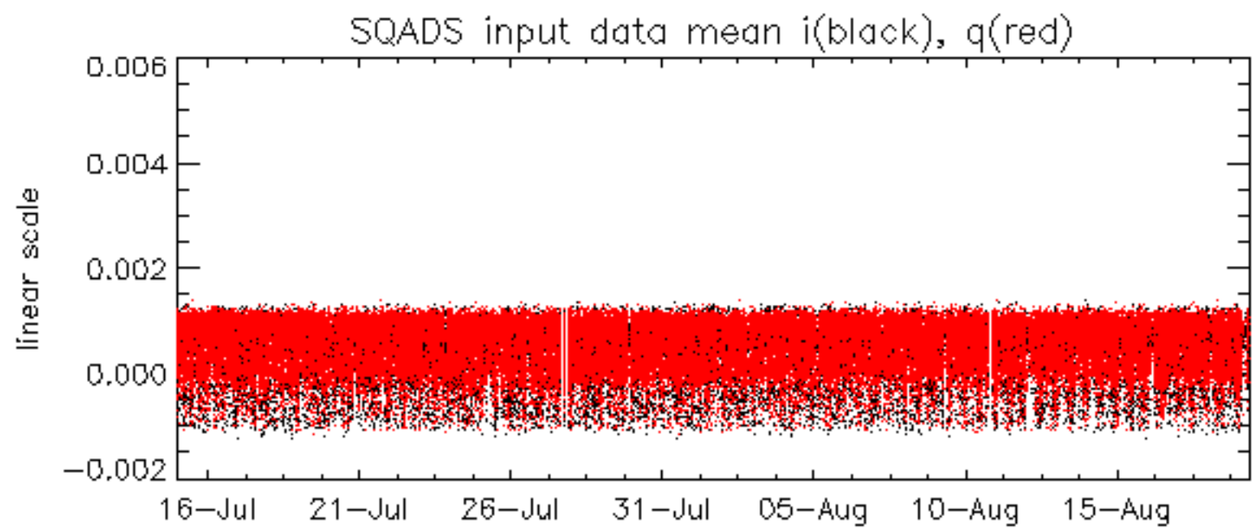

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −2.8763309 Hz
−100Hz
+100Hz

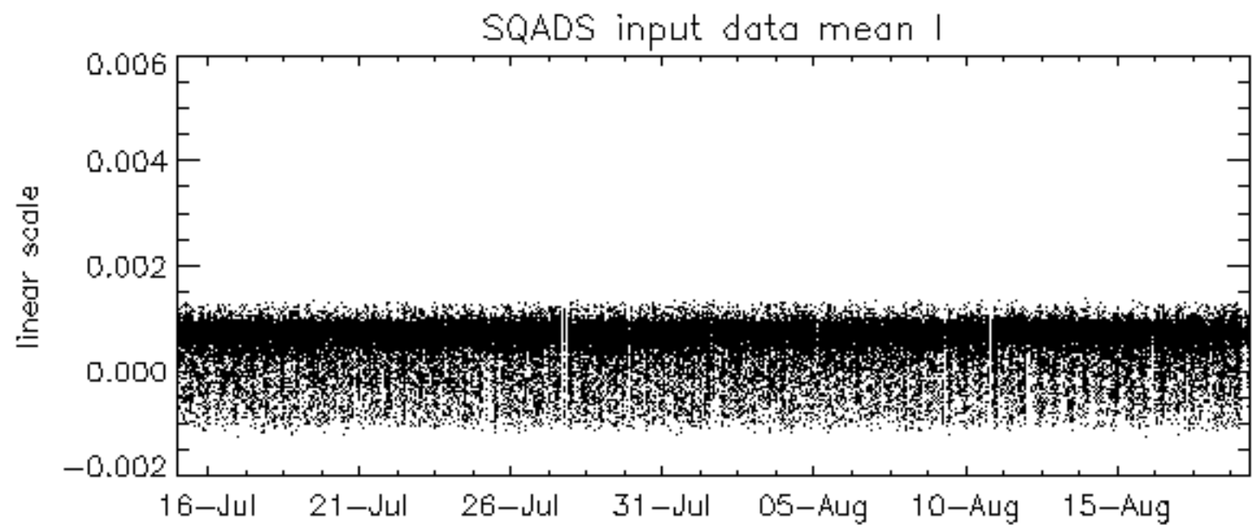

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −8.3776566 Hz
−100Hz
+100Hz

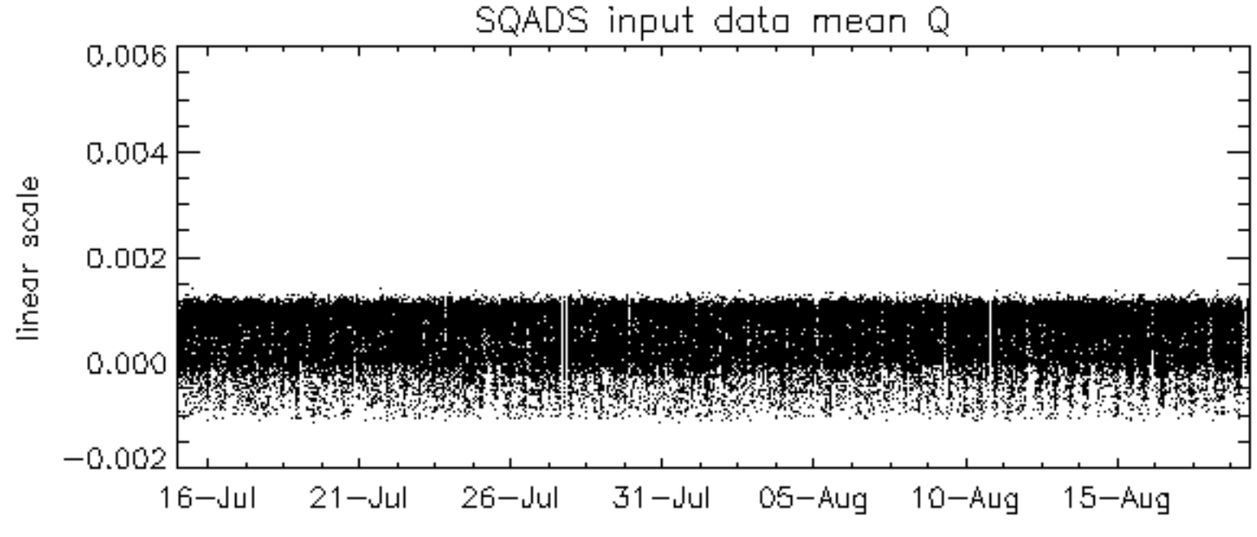
No anomalies observed on available MS products:

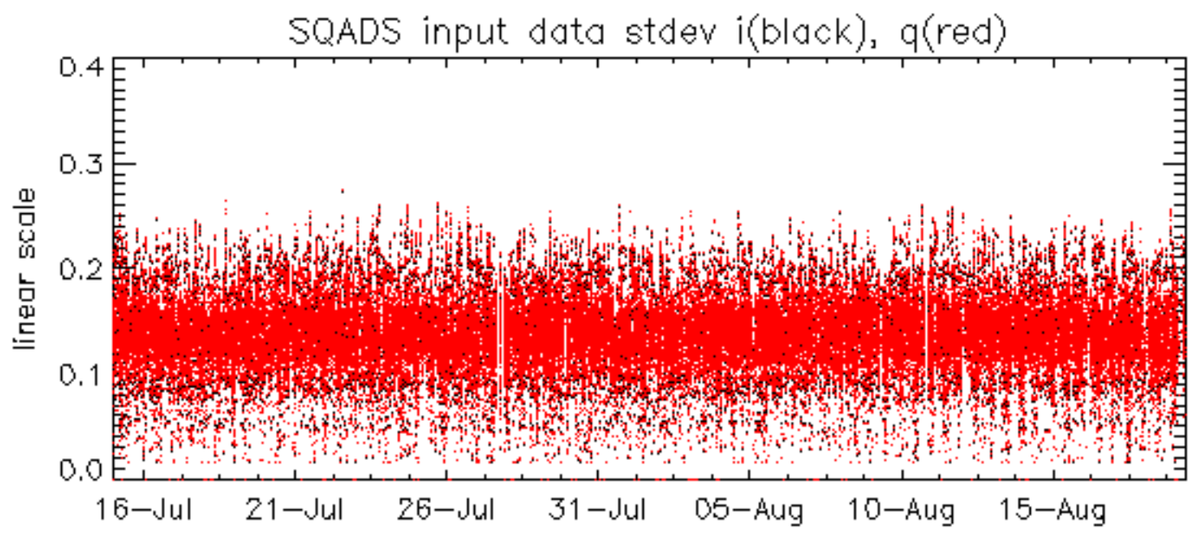
No anomalies observed.

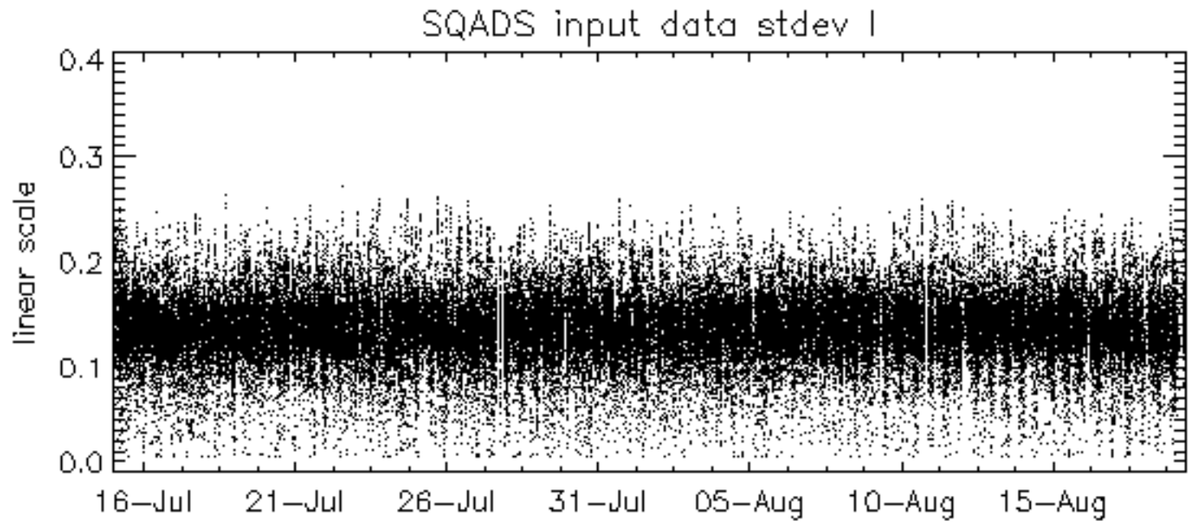

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

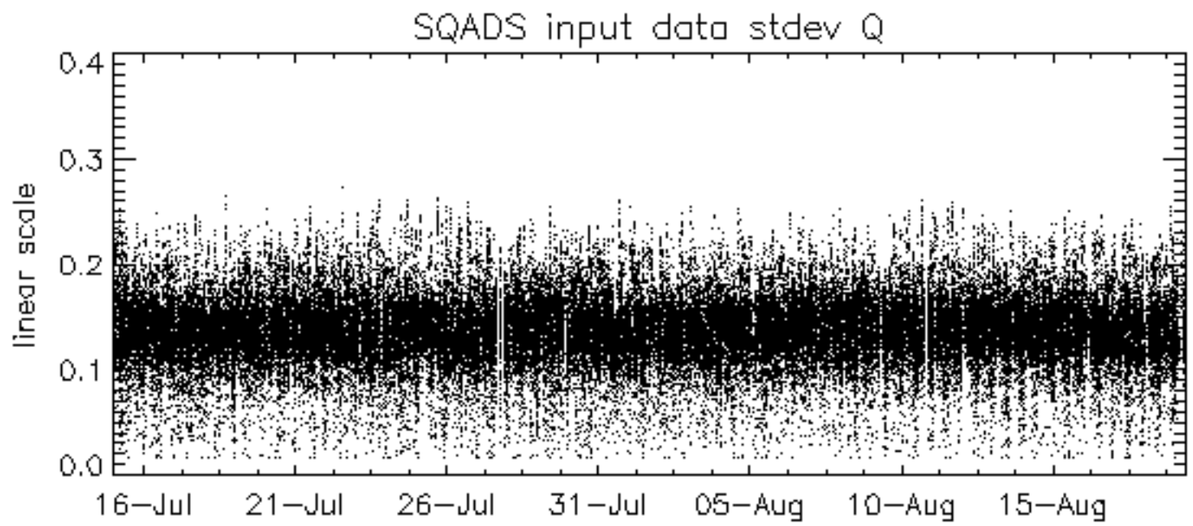

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug


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

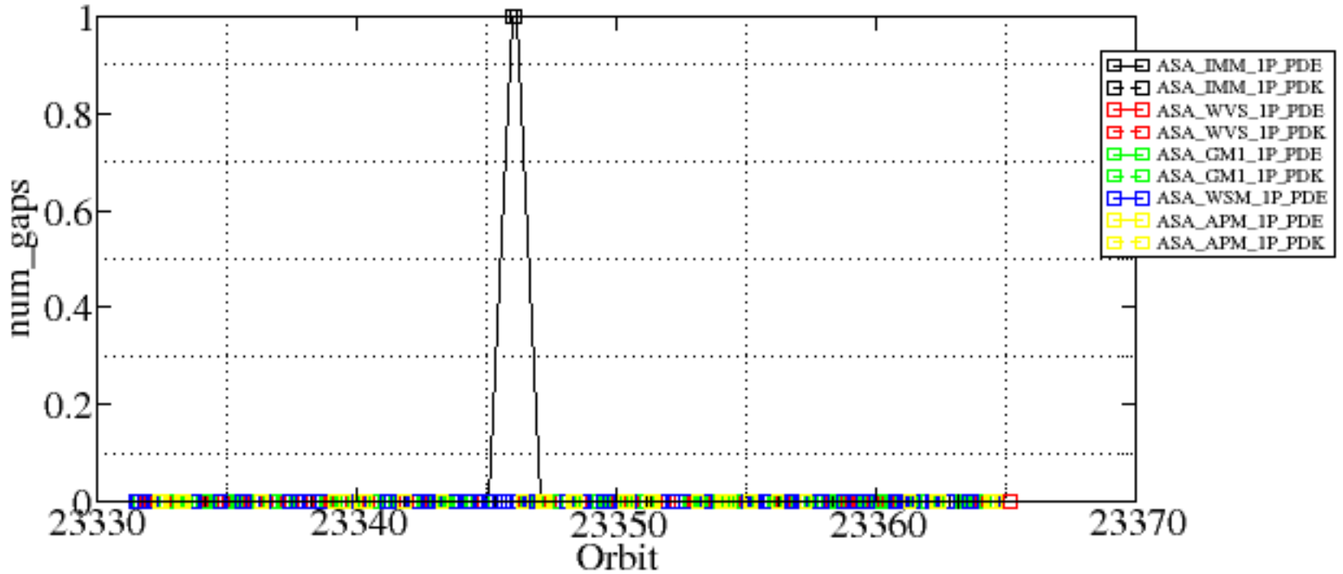

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug

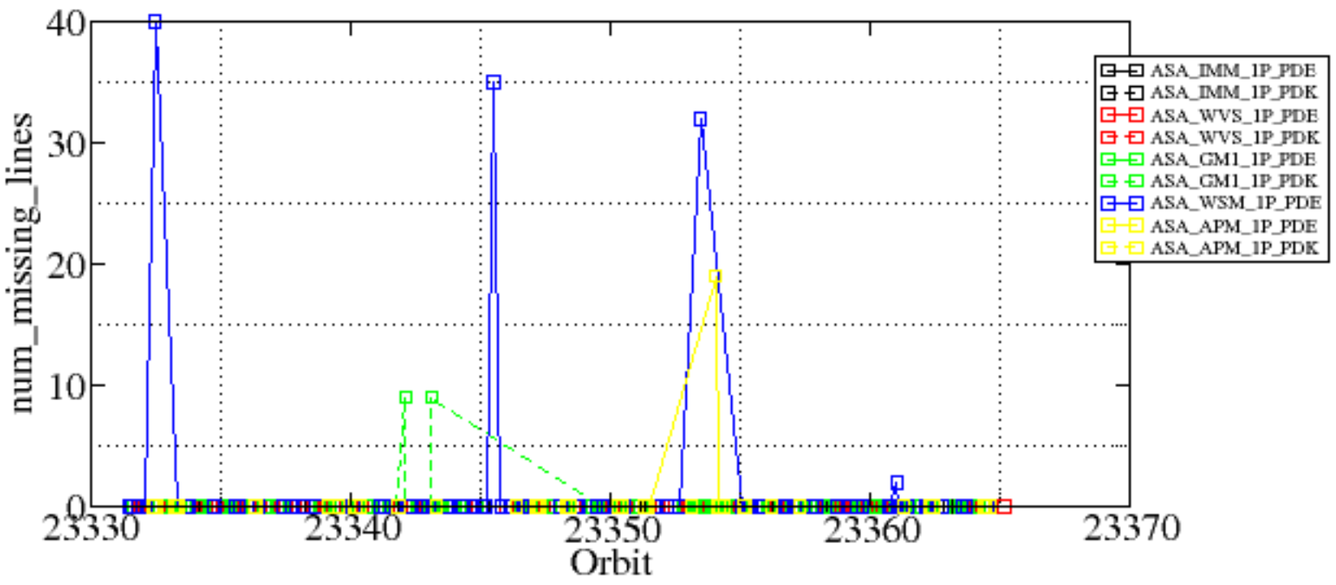

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug

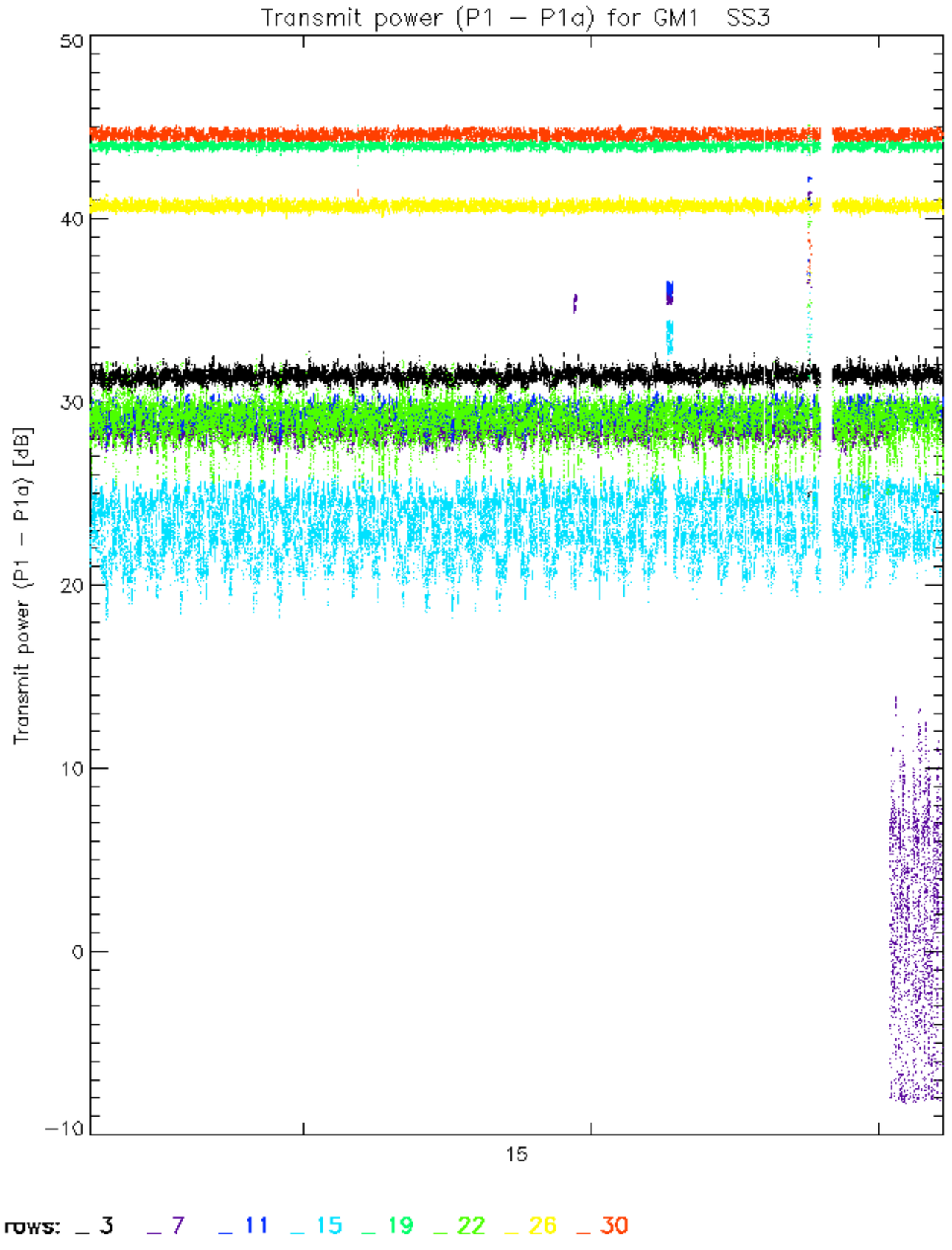

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug

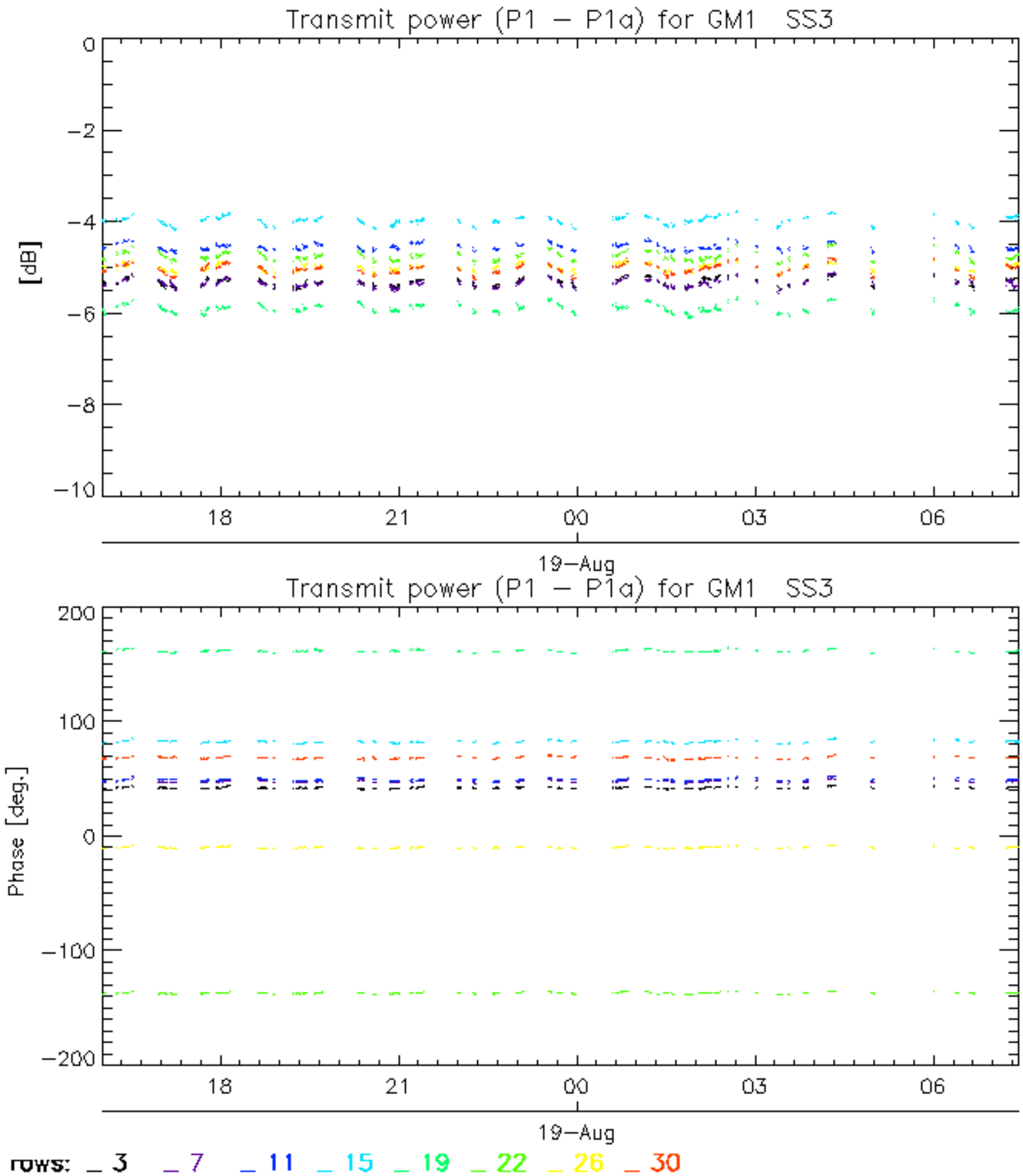

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug

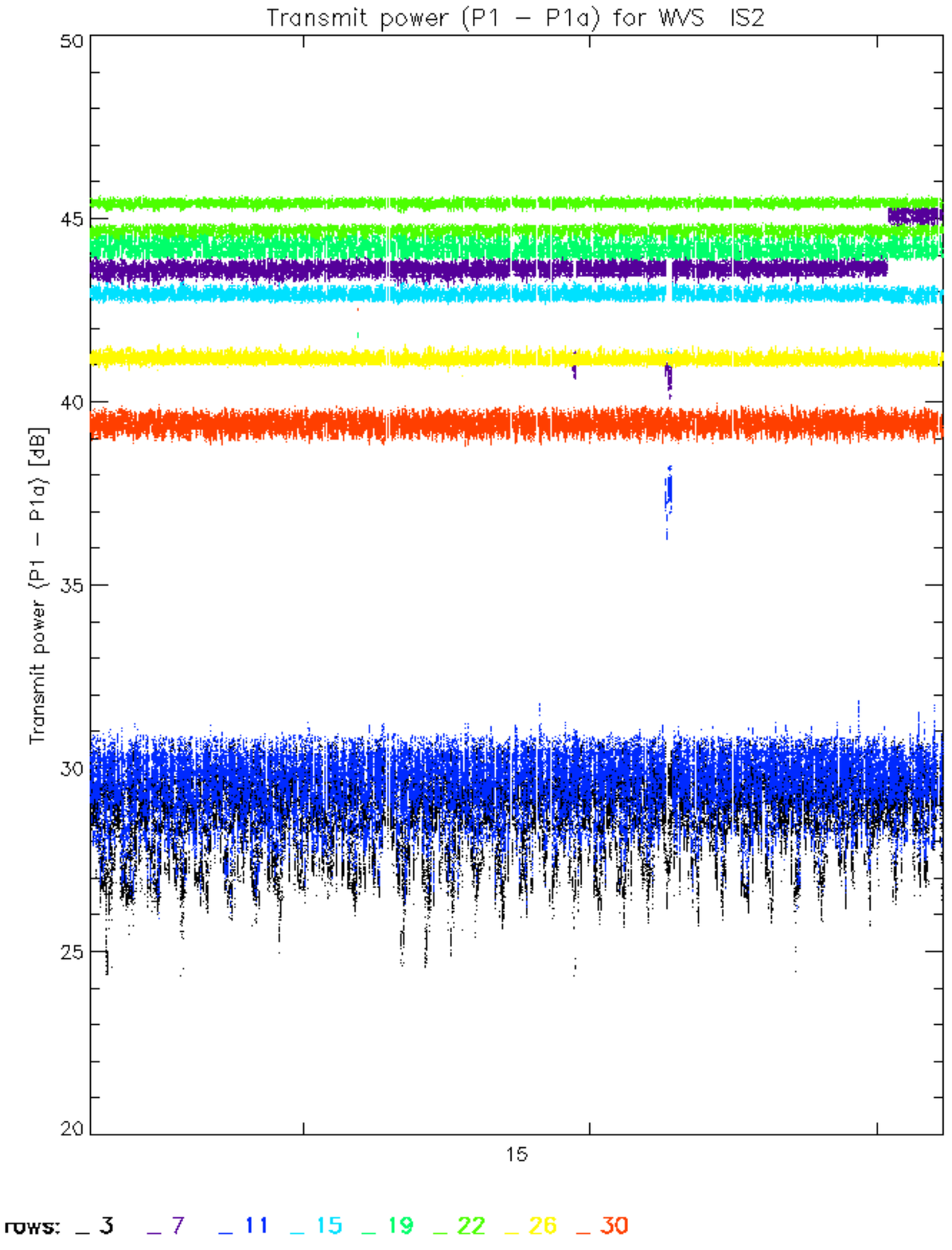
Summary of analysis for the last 3 days 2006081[789]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_IMM_1PNPDE20060818_004240_000001742050_00245_23345_3639.N1 </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_1PNPDK20060817_181455_000003862050_00242_23342_3005.N1 </td> <td>0 </td> <td>9 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20060817_195553_000003382050_00243_23343_3010.N1 </td> <td>0 </td> <td>9 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20060817_020406_000002322050_00232_23332_8255.N1 </td> <td>0 </td> <td>40 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20060817_235454_000003302050_00245_23345_8396.N1 </td> <td>0 </td> <td>35 </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_APM_1PNPDE20060818_141716_000000792050_00254_23354_1871.N1 </td> <td>0 </td> <td>19 </td></tr>
</table>

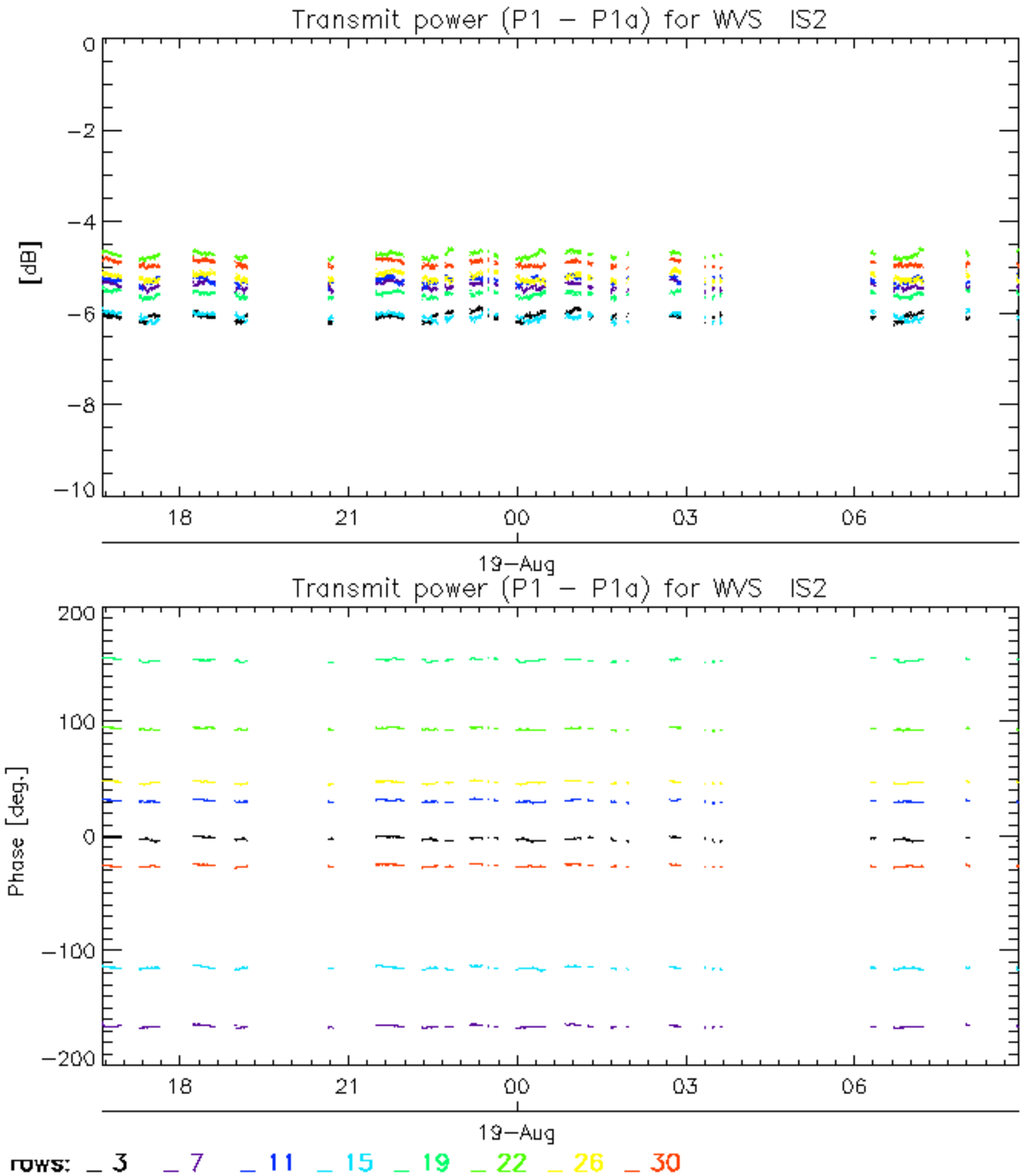

num_gaps
1
0.8
0.6
0.4
0.2
0
23330
23340
23350
23360
23370
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
40
30
20
10
0
23330
23340
23350
23360
23370
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_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
15
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
19–Aug
Transmit power (P1 – P1a) for GM1 SS3
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
19–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
15
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
19–Aug
Transmit power (P1 – P1a) for WVS IS2
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
19–Aug
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.