PRELIMINARY REPORT OF 040918

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Sat Sep 18 12:37:18 GMT 2004

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 - 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

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
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

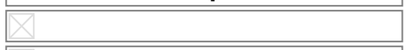
4.1.2 - Evolution for GM1

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	-3.453334	0.024218	-0.120742
7	P1	-3.301472	0.035618	-0.223768
11	P1	-4.645489	0.043103	-0.038289
15	P1	-5.758644	0.086169	-0.095721
19	P1	-3.506284	0.078714	-0.124506
22	P1	-4.558301	0.107137	-0.095704
24	P1	-4.997600	0.124698	-0.104138
30	P1	-7.017542	0.148725	-0.213468
3	P1	-15.879547	1.560483	-1.980568
7	P1	-14.034105	0.081336	0.140010
11	P1	-20.241320	0.286320	-0.027991
15	P1	-11.775708	0.042179	0.035847
19	P1	-14.017144	1.095004	-0.415184
22	P1	-16.084557	0.347383	0.180549
24	P1	-14.479794	0.314730	0.126812
30	P1	-17.913206	0.629339	-0.107457

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.307842	0.084562	-0.024008
7	P2	-22.601233	0.124489	-0.056851
11	P2	-15.247818	0.150328	0.116455
15	P2	-7.060682	0.097516	-0.009853
19	P2	-9.567014	0.159664	0.024443
22	P2	-17.326584	0.111753	0.057336
24	P2	-20.753775	0.090009	-0.039717
30	P2	-19.196928	0.083396	0.127046

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.150934	0.002728	-0.023102
7	P3	-8.150927	0.002728	-0.023125
11	P3	-8.150924	0.002728	-0.023141
15	P3	-8.150921	0.002727	-0.023160
19	P3	-8.150917	0.002727	-0.023176
22	P3	-8.150909	0.002727	-0.023197
24	P3	-8.150908	0.002727	-0.023208
30	P3	-8.150840	0.002727	-0.023027

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	-2.719814	0.164150	-0.685590
7	P1	-2.950287	0.141043	-0.482615
11	P1	-3.890272	0.062985	-0.057233

15	P1	-3.539565	0.078052	-0.066105
19	P1	-3.514871	0.096137	-0.116328
22	P1	-5.728217	0.120394	-0.087341
24	P1	-3.949639	0.052888	-0.098023
30	P1	-6.209179	0.097482	-0.095627
3	P1	-10.519548	0.830352	-1.763643
7	P1	-10.065027	0.160811	-0.267394
11	P1	-12.169305	0.113812	0.000148
15	P1	-11.678232	0.077516	-0.033719
19	P1	-15.743278	2.007077	-0.476460
22	P1	-23.346836	1.552745	0.244117
24	P1	-17.936422	0.346179	0.020767
30	P1	-20.411720	1.268593	0.150383

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.985992	0.050605	-0.022550
7	P2	-22.744751	0.040236	0.020305
11	P2	-10.946821	0.060502	0.091080
15	P2	-4.961418	0.030847	-0.012032
19	P2	-6.772166	0.046132	-0.022177
22	P2	-7.433863	0.038411	0.042790
24	P2	-11.058478	0.043956	-0.024687
30	P2	-22.163210	0.029664	0.091686

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.002432	0.003090	-0.020812
7	P3	-8.002374	0.003092	-0.021101
11	P3	-8.002447	0.003090	-0.020603
15	P3	-8.002414	0.003080	-0.021112
19	P3	-8.002395	0.003097	-0.020842
22	P3	-8.002408	0.003088	-0.020962
24	P3	-8.002460	0.003109	-0.021214
30	P3	-8.002371	0.003091	-0.020796

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	0.000467577
	stdev	2.21145e-07
MEAN Q	mean	0.000537282
	stdev	2.37422e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127310
	stdev	0.000958083
STDEV Q	mean	0.127529
	stdev	0.000967715

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

Preliminary report.The data is not yet controled

6.1 - Unbiased Doppler Error for WVS

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

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX
☒

6.4 - Unbiased Doppler Error for GM1

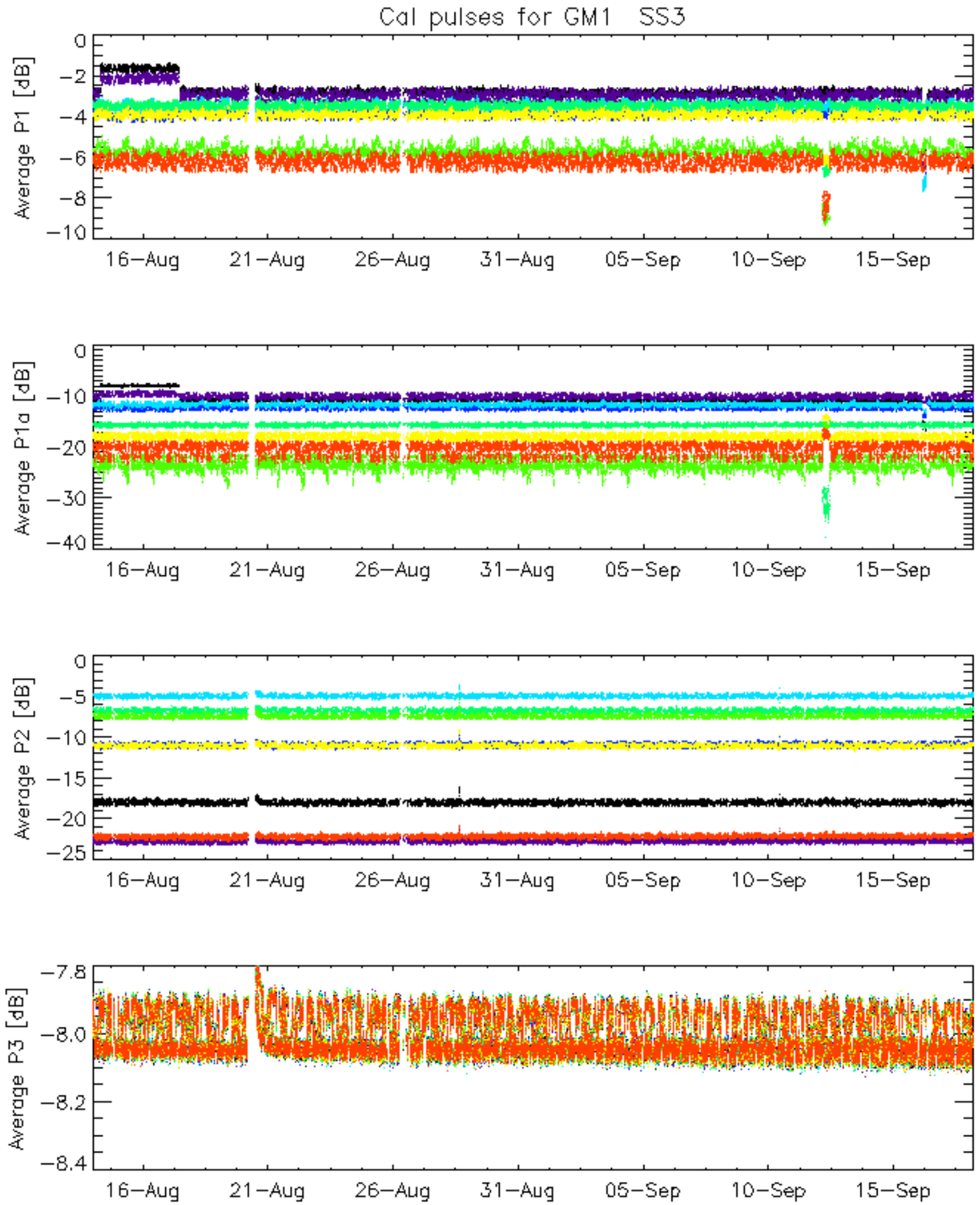
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

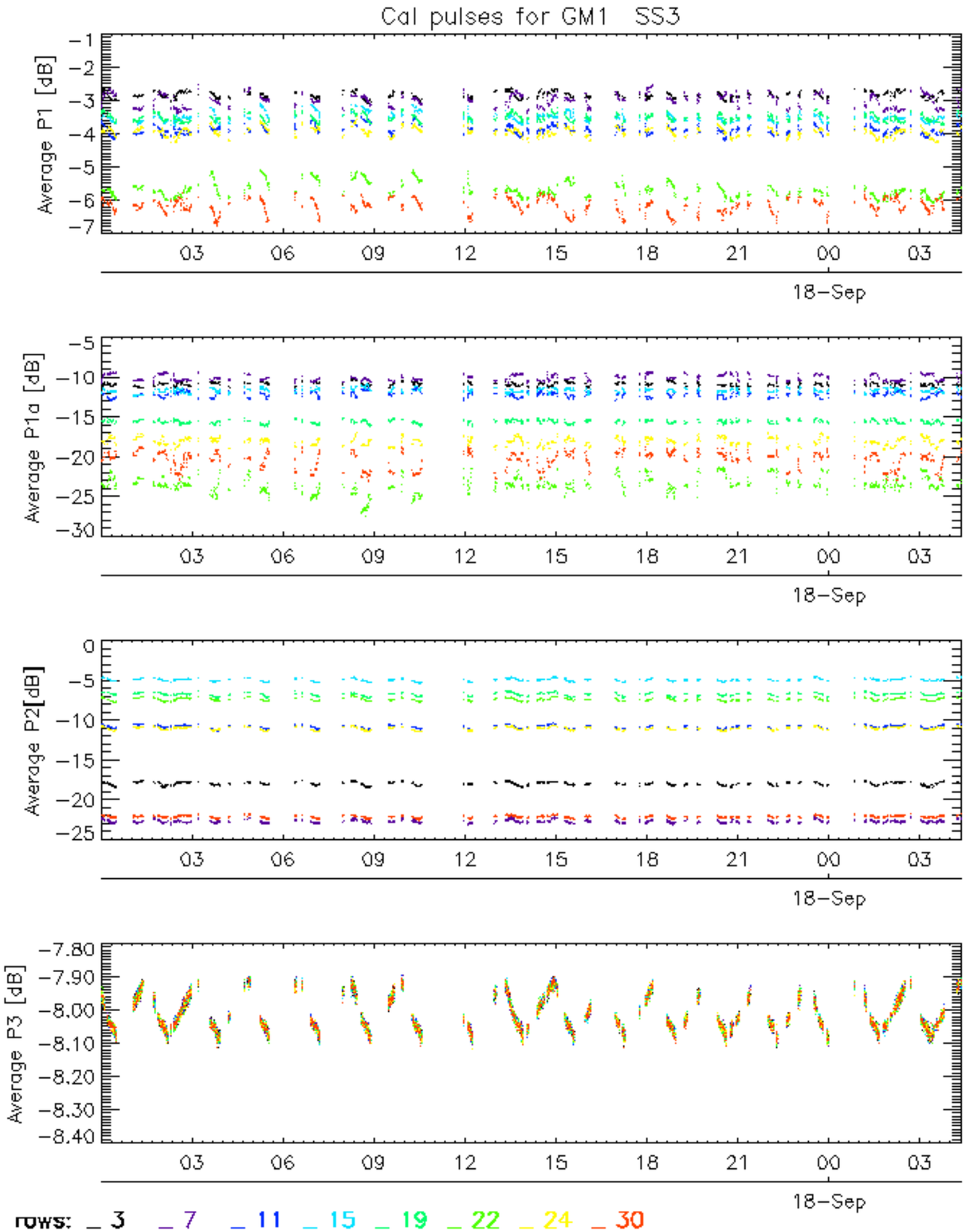
6.5 - Absolute Doppler for GM1

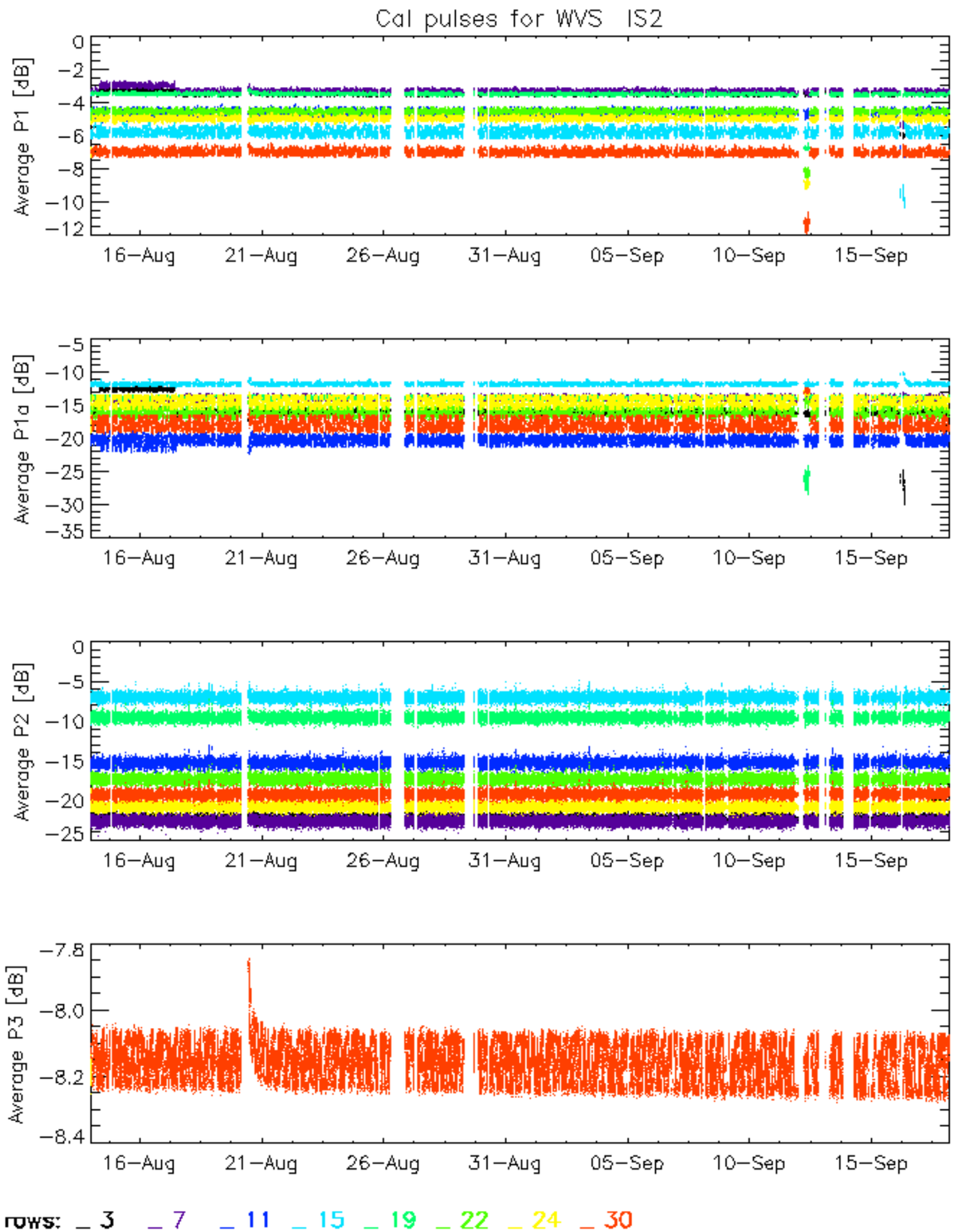
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

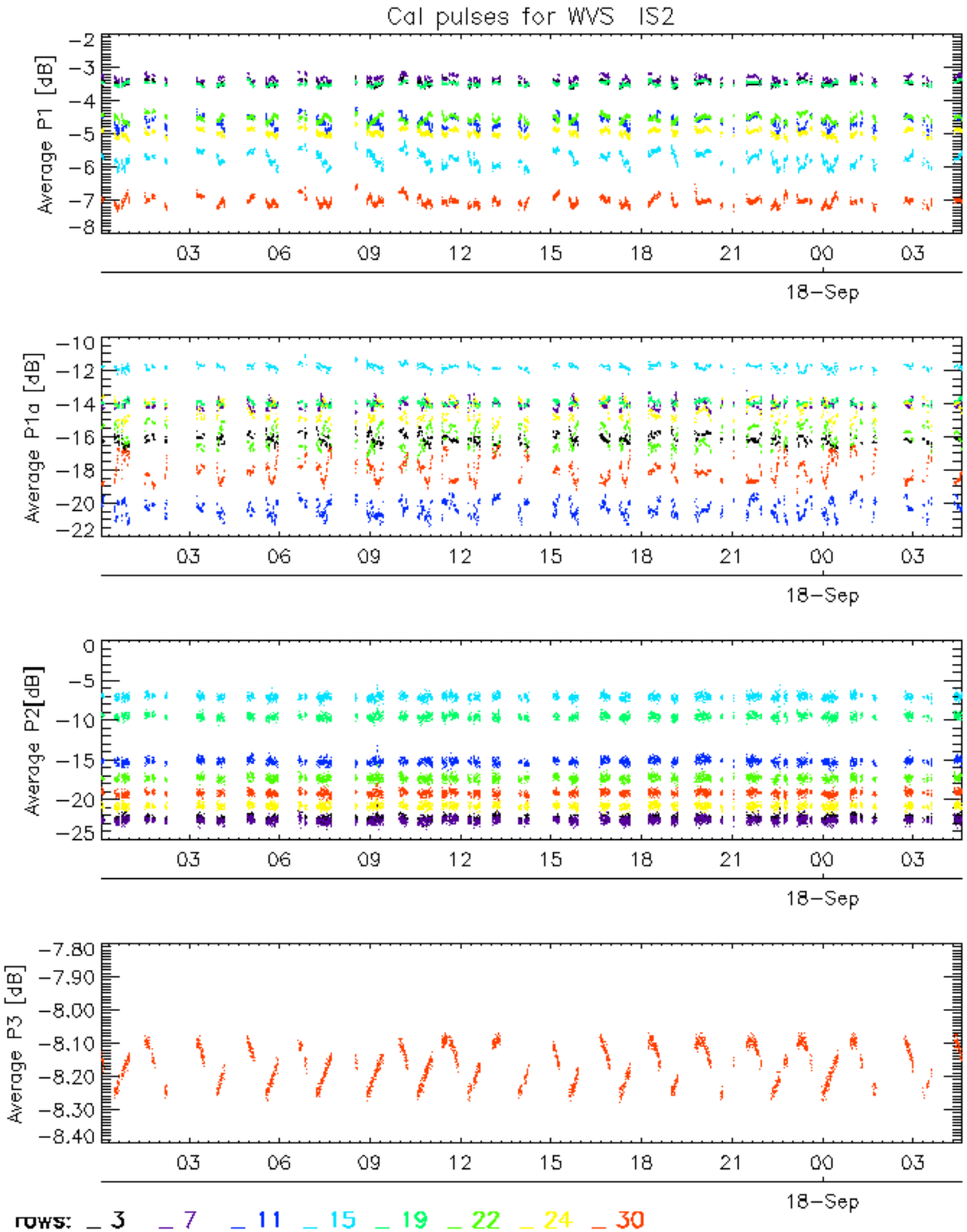
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

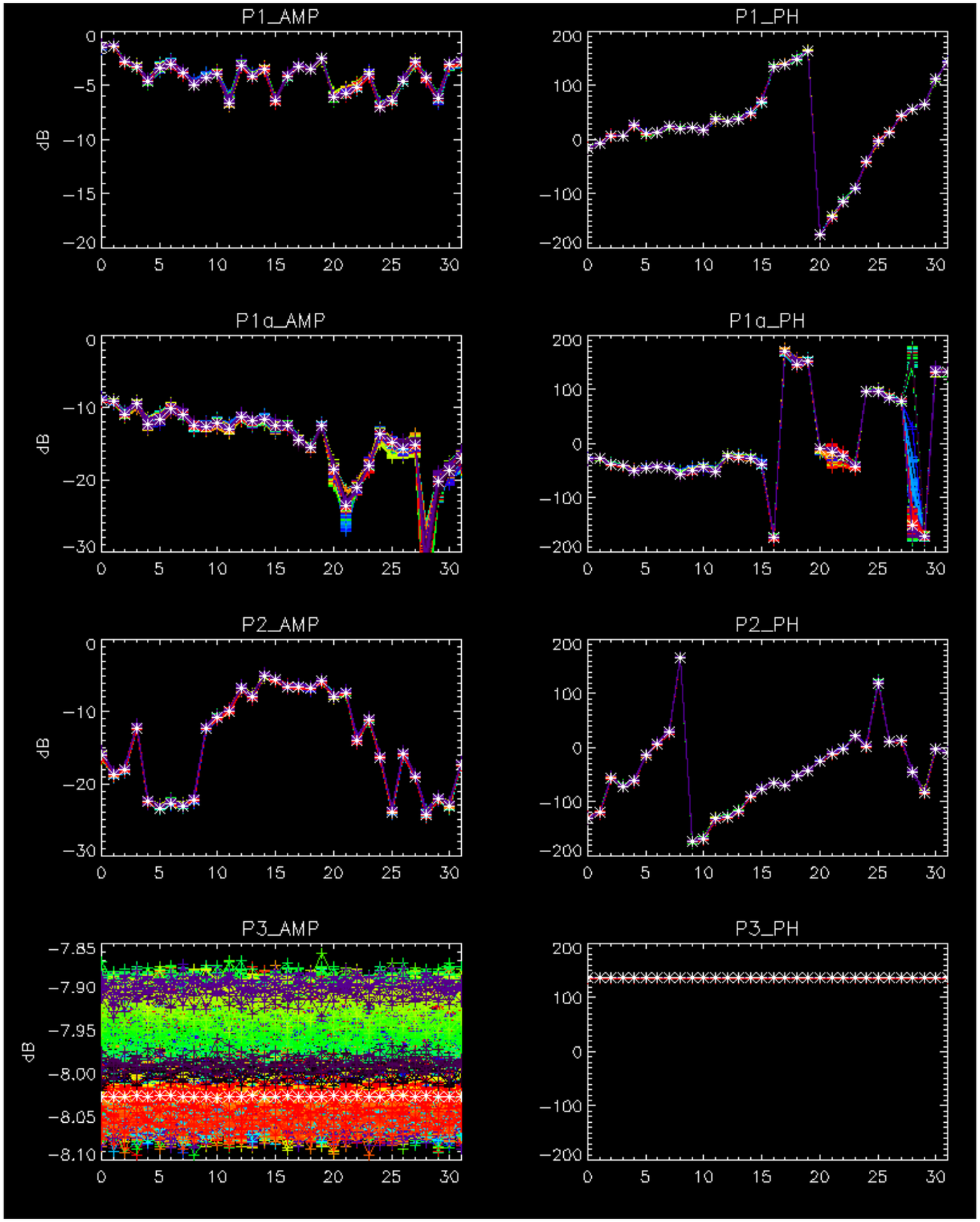

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

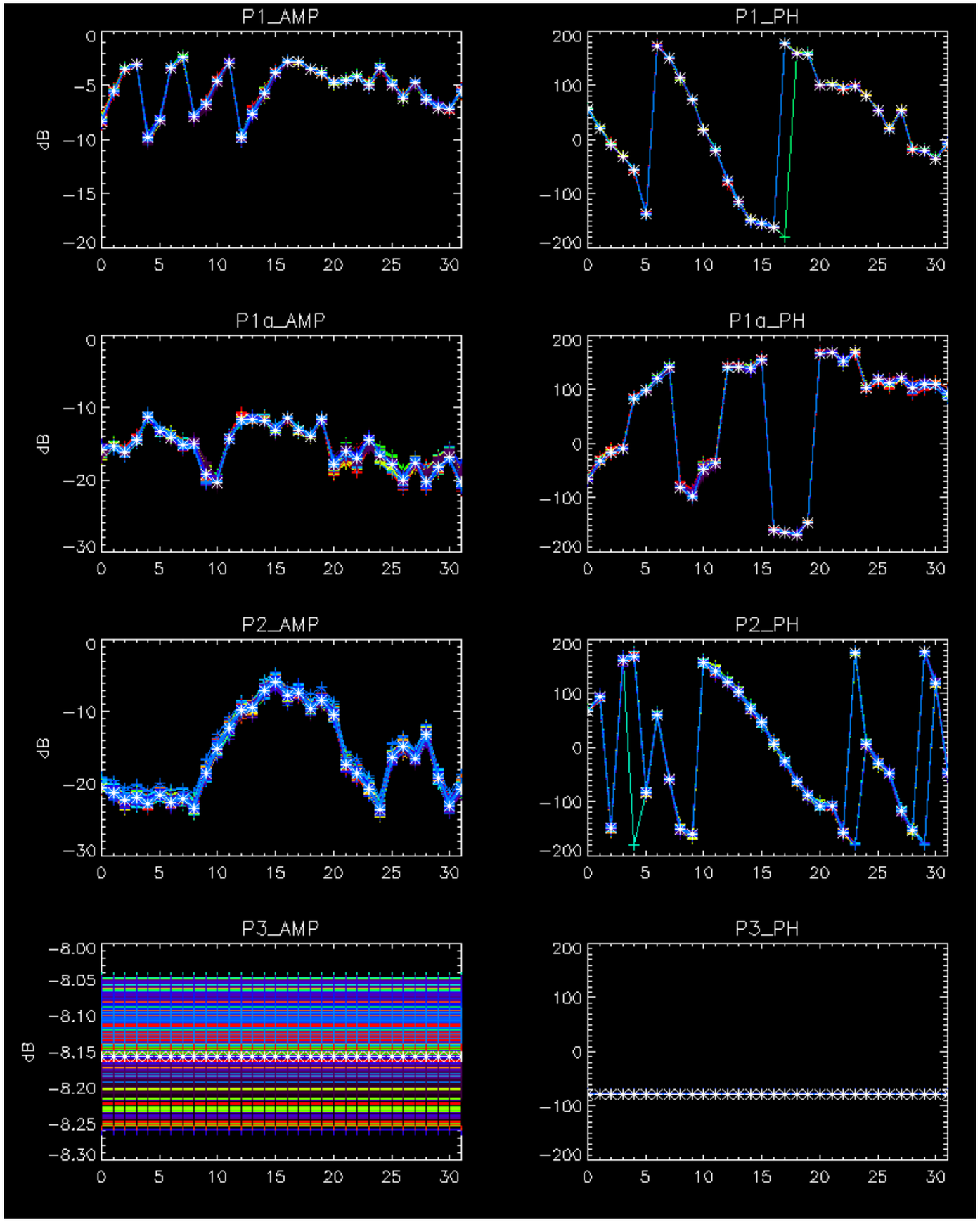

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
18−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
18−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
18−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
18−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
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
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
18−Sep
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
18−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
18−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
18−Sep
rows: 3 7 11 15 19 22 24 30

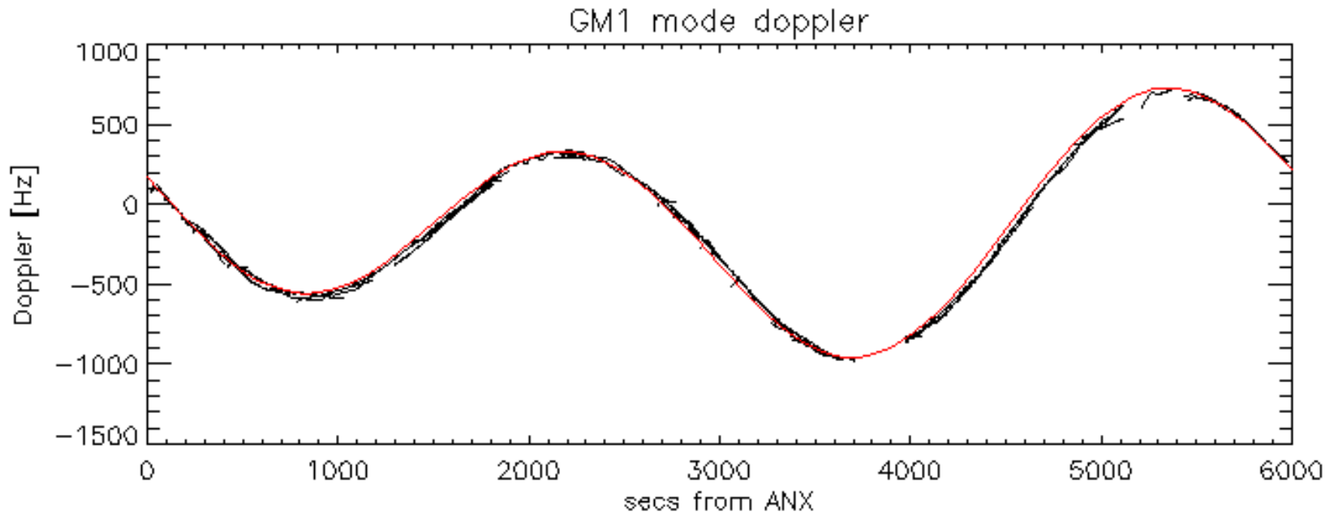
No anomalies observed.

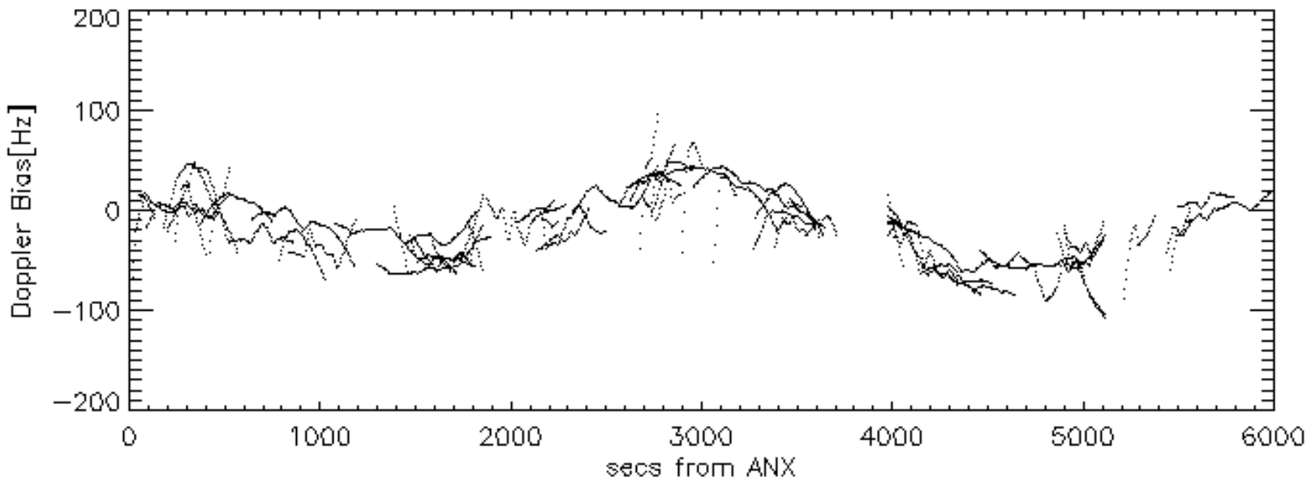

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

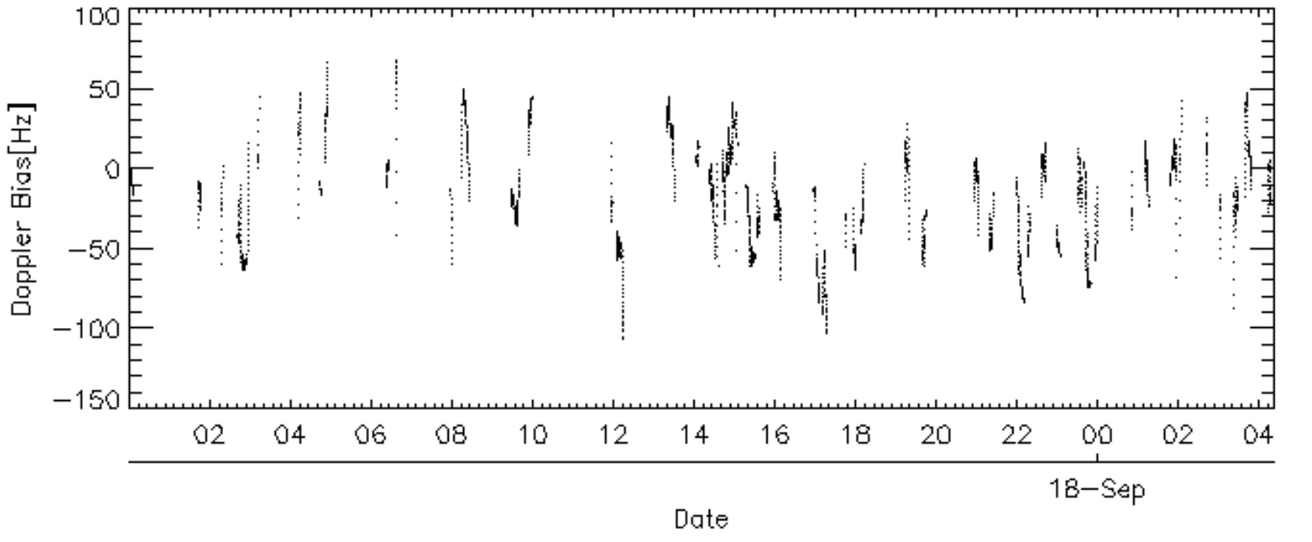

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

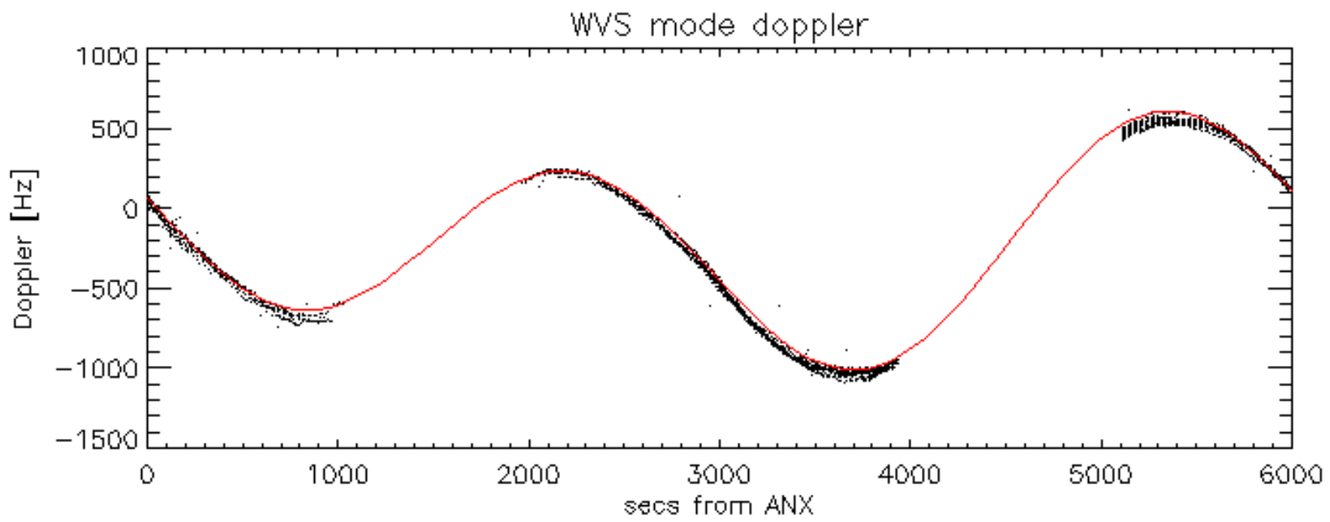
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

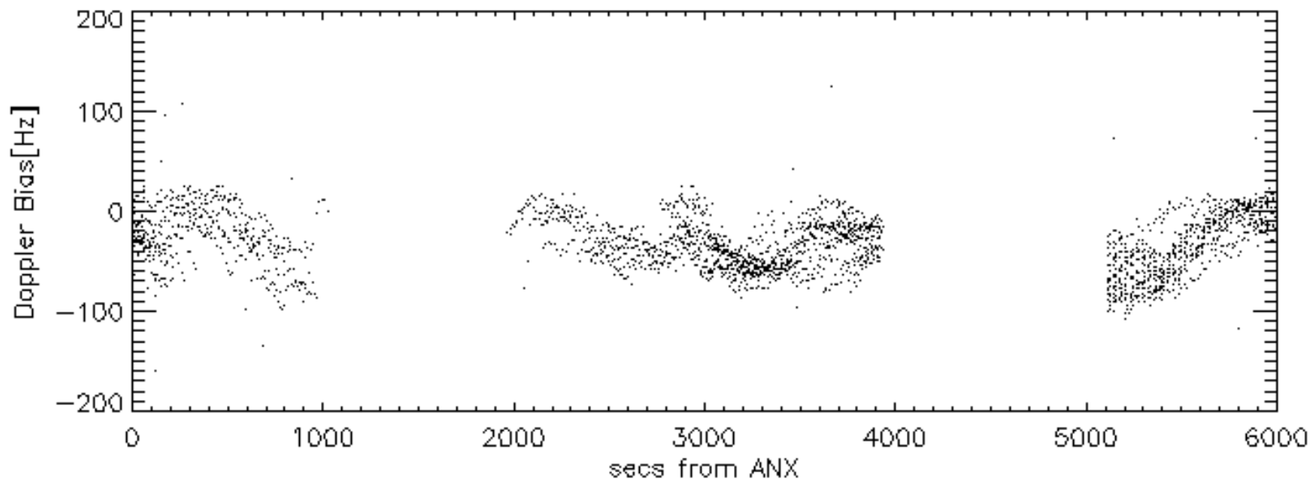
Preliminary report.The data is not yet controled

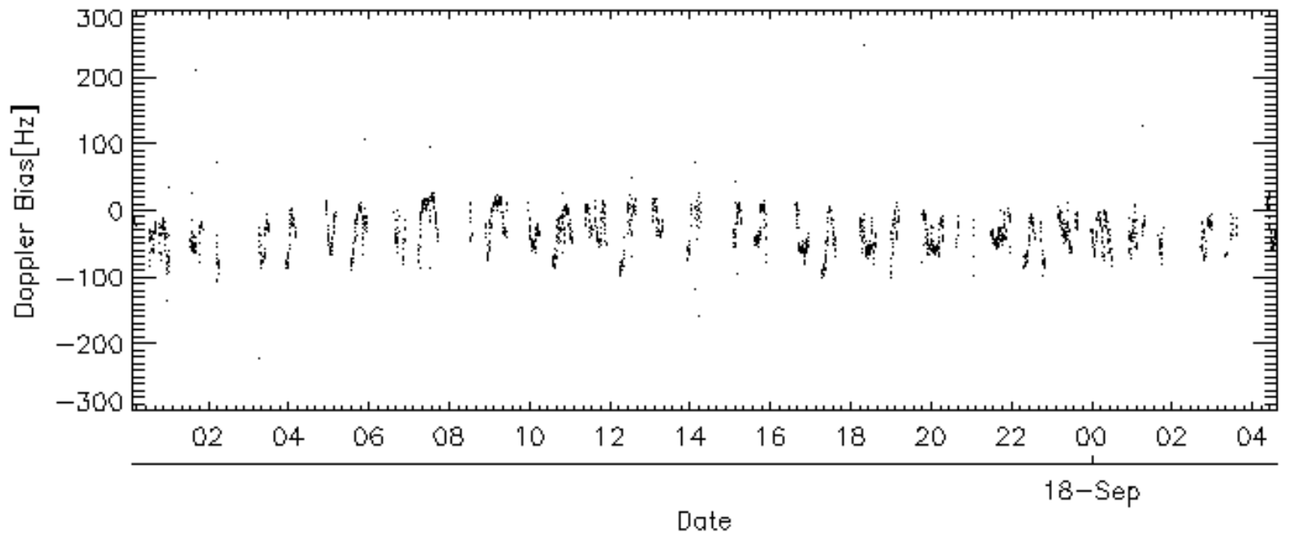

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX


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
18−Sep
Date

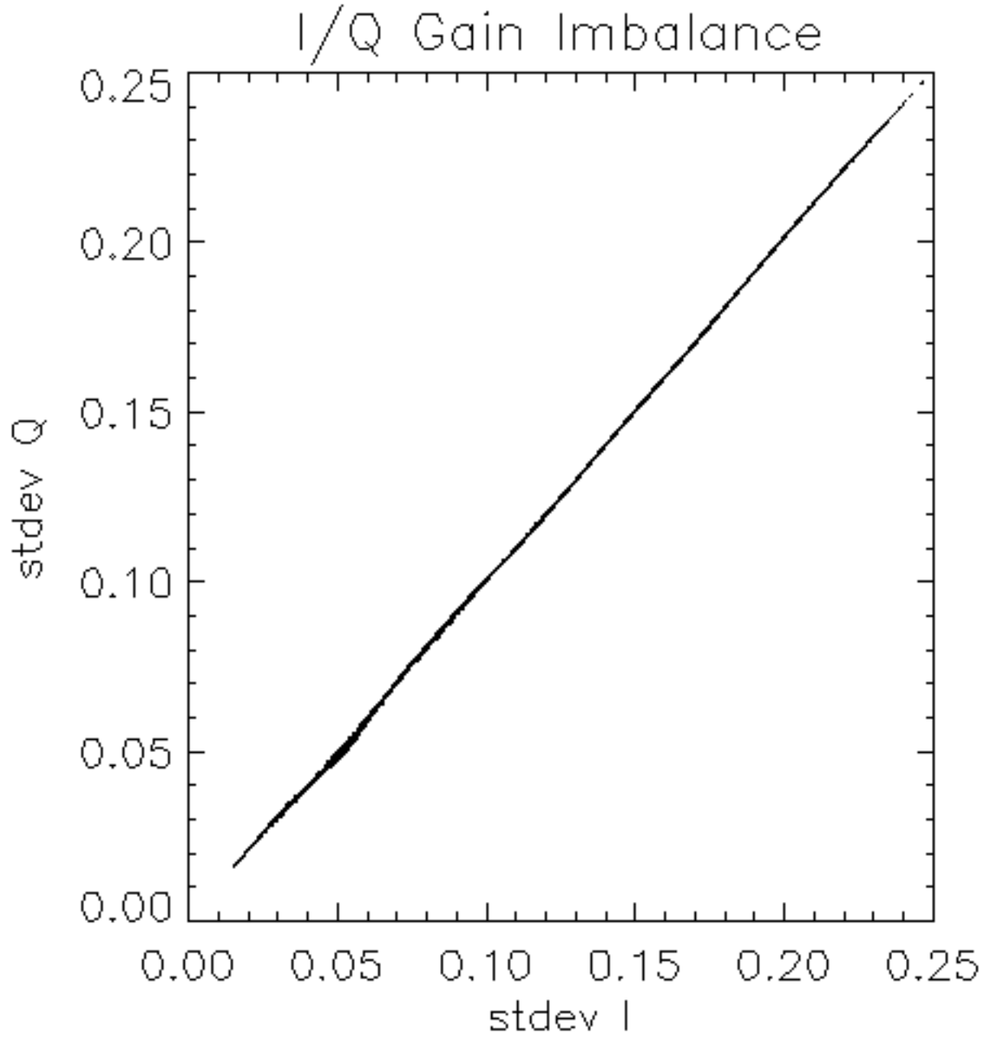

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

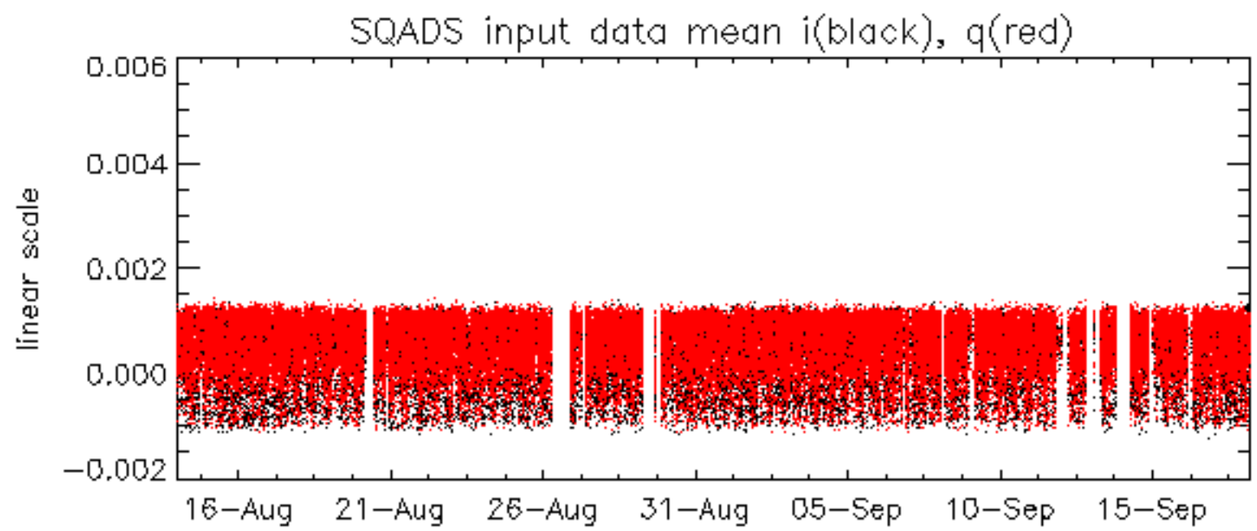

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

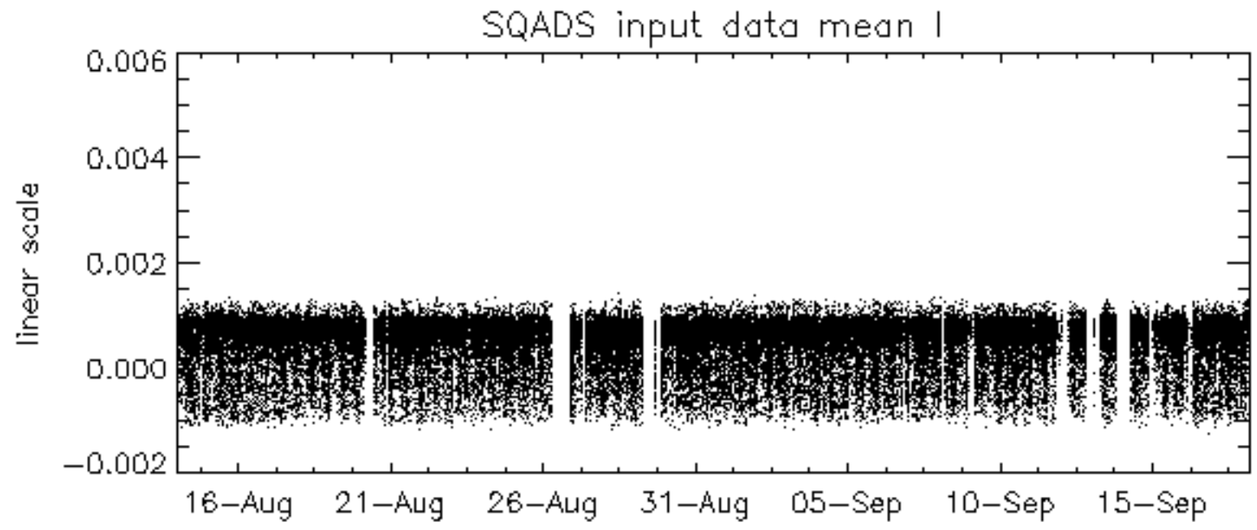

Doppler Bias[Hz]
300
200
100
0
−100
−200
−300
02
04
06
08
10
12
14
16
18
20
22
00
02
04
18−Sep
Date

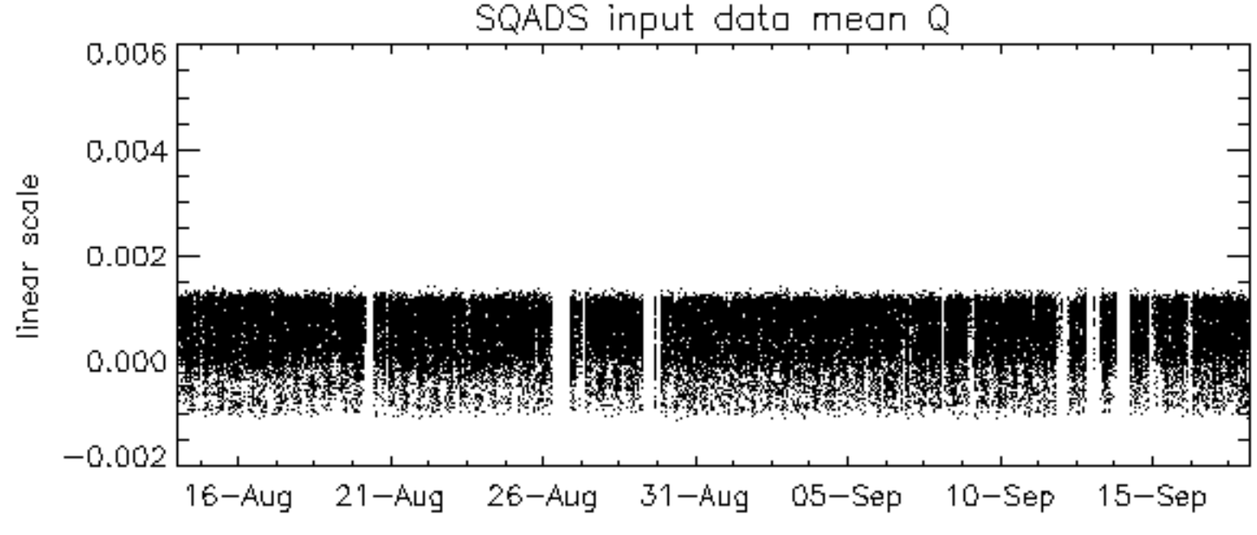
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

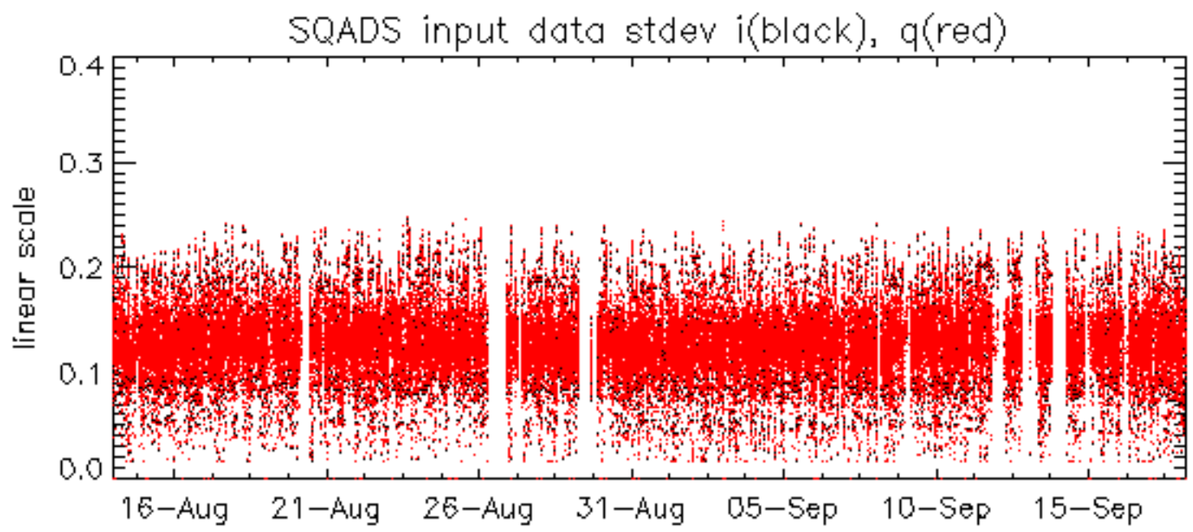
No anomalies observed.

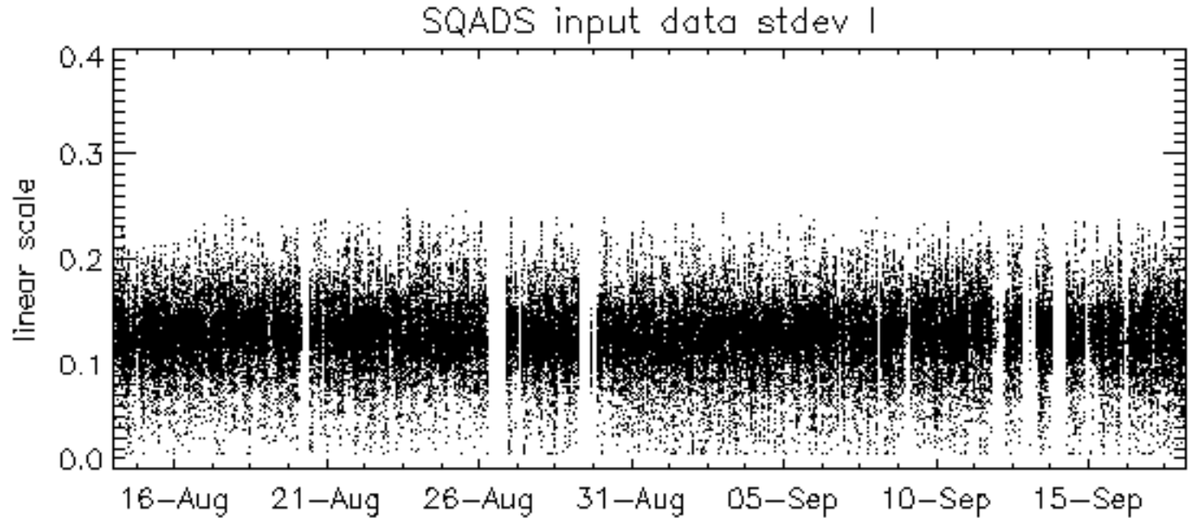

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

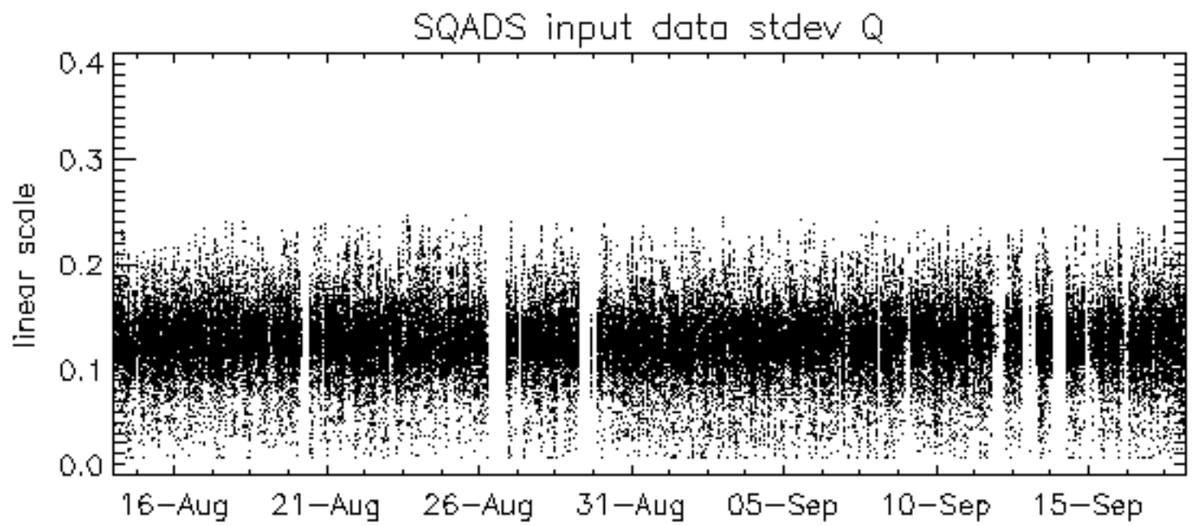

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep

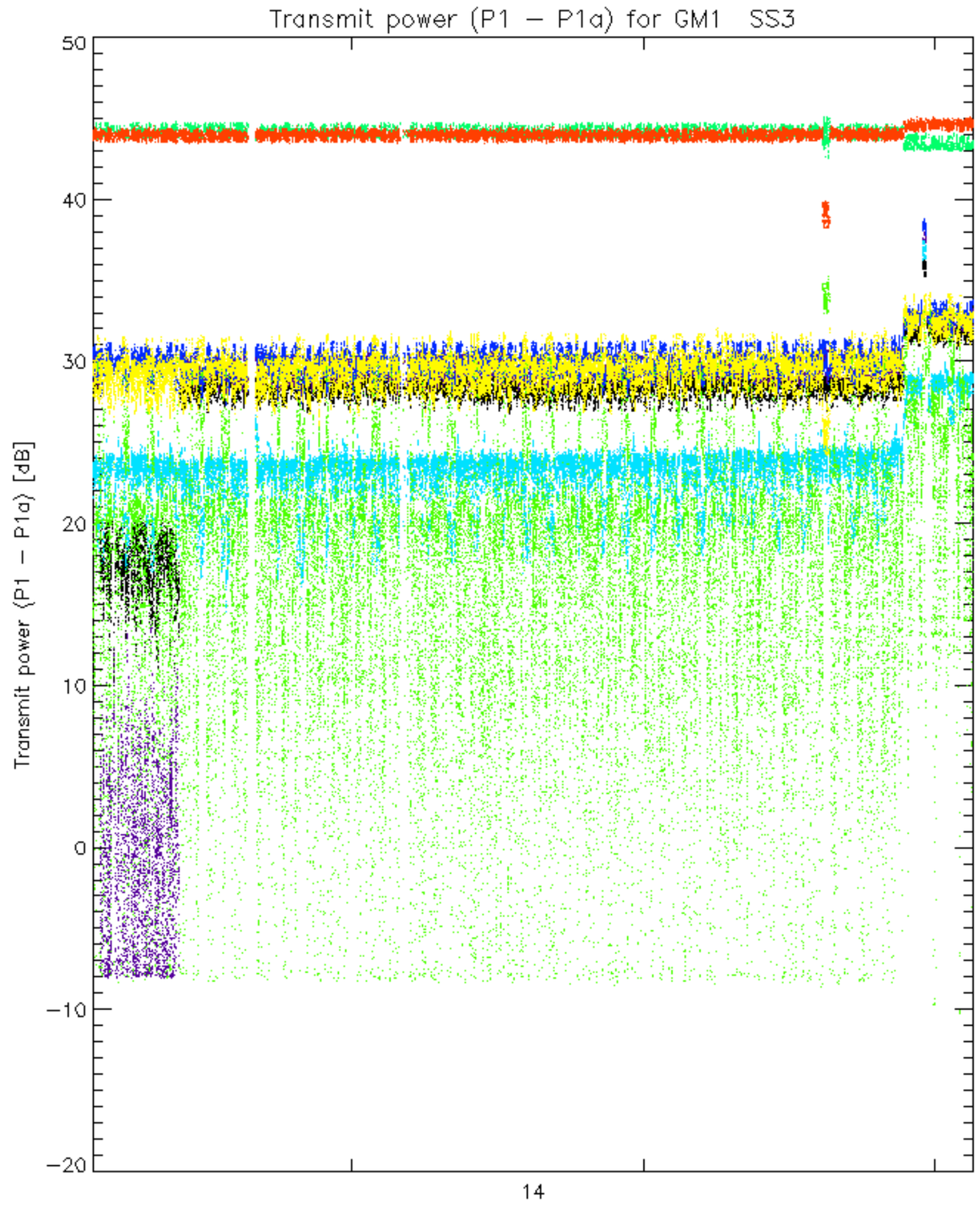

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep

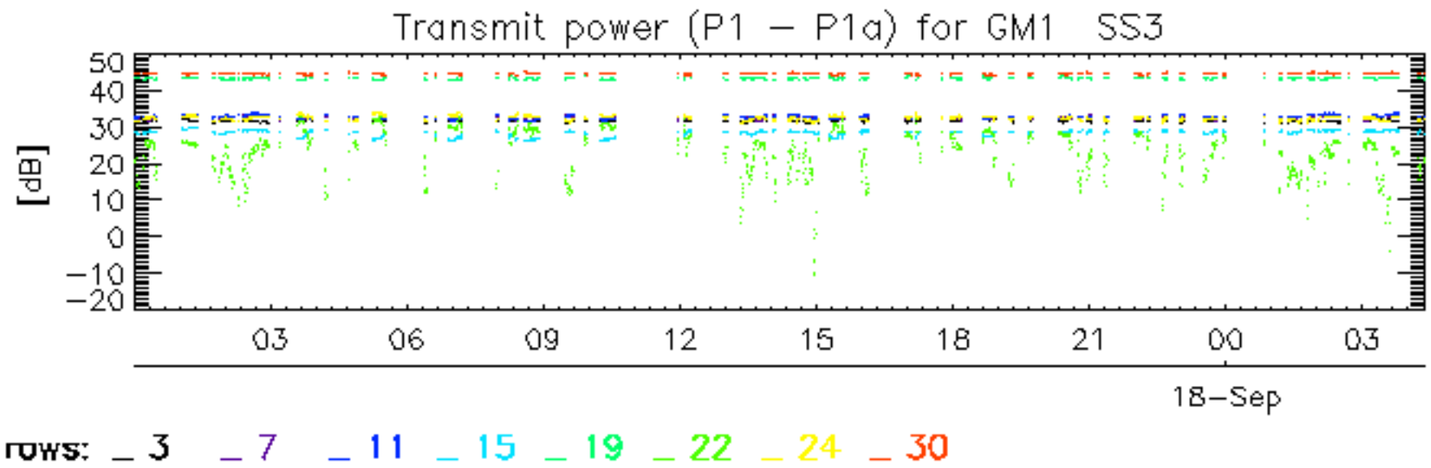

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep

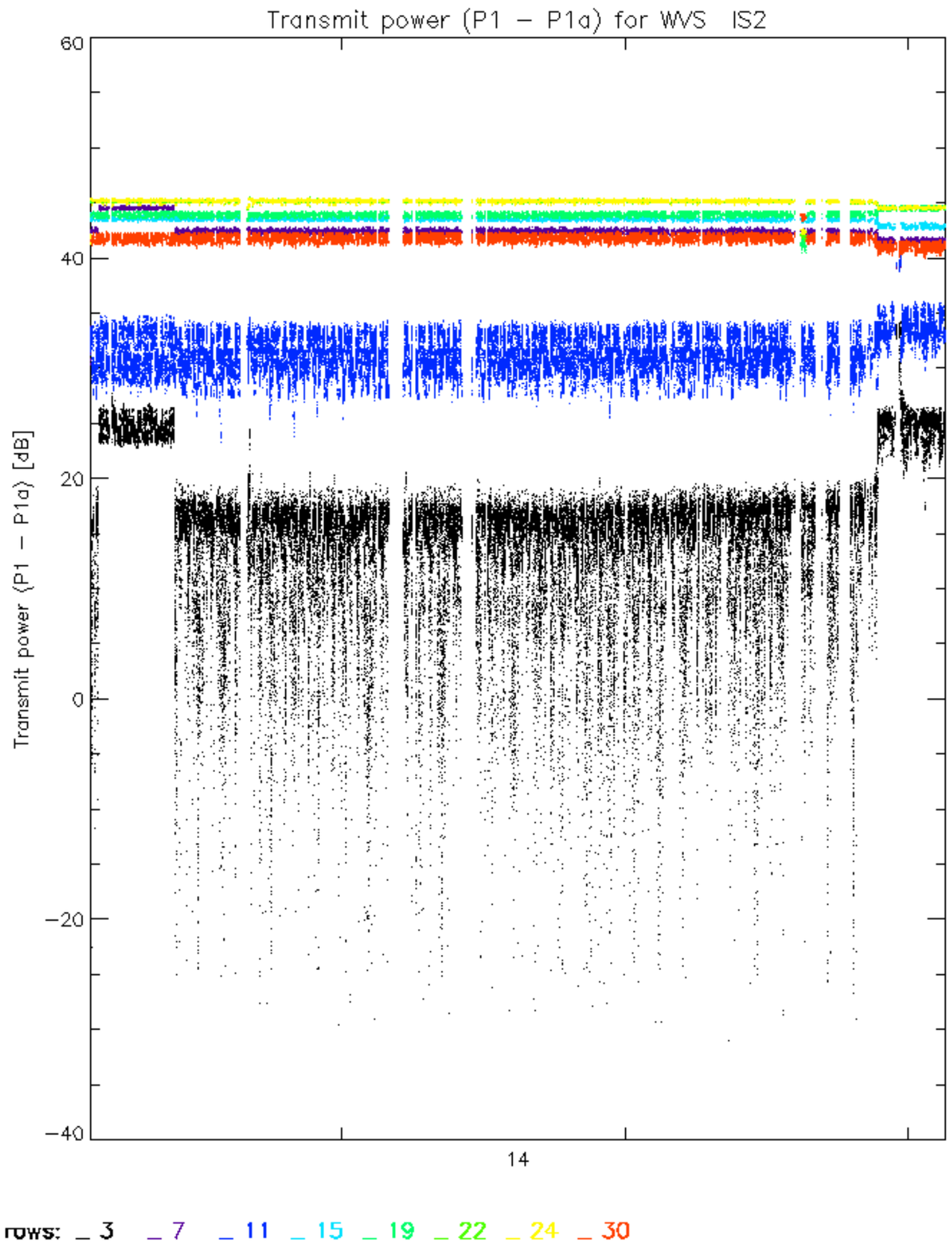

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep

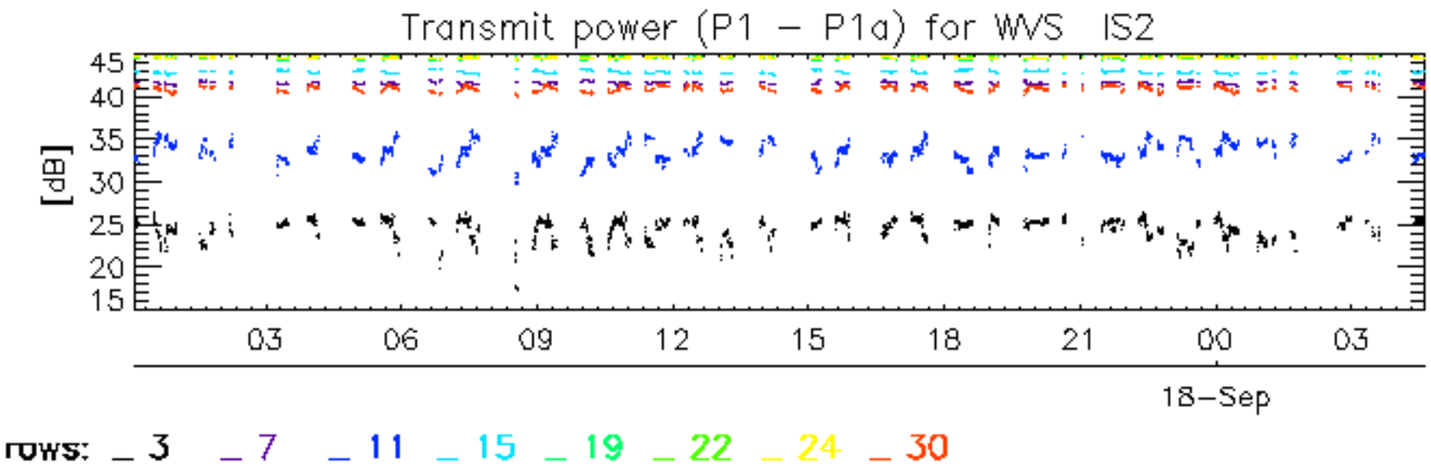

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep


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


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
14
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
−20
03
06
09
12
15
18
21
00
03
18–Sep
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power (P1 – P1a) [dB]
14
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
45
40
35
30
25
20
15
03
06
09
12
15
18
21
00
03
18–Sep
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.