

PRELIMINARY REPORT OF 051231

last update on Sat Dec 31 16:42:41 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 2005-12-30 00:00:00 to 2005-12-31 16:42:41

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	0	22	0	24
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	38	0	22	0	24
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	0	22	0	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	0	22	0	24

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	44	31	15	41
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	33	44	31	15	41
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	44	31	15	41
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	44	31	15	41

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	20051229 100802
H	20051230 143812

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.681580	0.261148	-1.250548
7	P1	-2.730537	0.132678	-0.861398
11	P1	-4.141503	0.035208	0.083539
15	P1	-5.008081	1.793686	-3.432099
19	P1	-3.030618	0.070314	-0.652577
22	P1	-4.433361	0.024261	-0.196813
26	P1	-4.408936	0.064252	0.586713
30	P1	-5.646804	0.036508	-0.399714
3	P1	-15.672568	2.893234	-4.314695
7	P1	-15.216846	2.829320	-4.269345
11	P1	-16.294262	0.474898	-0.979981
15	P1	-12.645799	0.918132	-2.126591
19	P1	-13.404201	0.391126	-1.504768
22	P1	-15.904813	0.643877	-0.439029
26	P1	-15.010933	1.083756	-2.399538
30	P1	-15.461366	2.553894	-3.817603

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.800087	0.116236	0.357420
7	P2	-22.539997	0.106841	0.040253
11	P2	-16.505194	0.135725	0.460086
15	P2	-7.277102	0.106355	0.091278
19	P2	-9.211430	0.104215	0.006850
22	P2	-17.876043	0.113448	-0.238354
26	P2	-16.389521	0.132516	0.464760
30	P2	-19.798859	0.120481	0.383153

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235460	0.007657	0.019021
7	P3	-8.235460	0.007657	0.019021
11	P3	-8.235460	0.007657	0.019021
15	P3	-8.235460	0.007657	0.019021
19	P3	-8.235460	0.007657	0.019021
22	P3	-8.235460	0.007657	0.019021
26	P3	-8.235460	0.007657	0.019021
30	P3	-8.235460	0.007657	0.019021

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1


P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.710680	0.008545	-0.032972
7	P1	-2.770703	0.007585	0.011569
11	P1	-2.878299	0.009387	0.006371
15	P1	-3.421173	0.016620	-0.048249
19	P1	-3.393425	0.014408	-0.006535
22	P1	-5.125184	0.018820	-0.013147
26	P1	-5.853696	0.016510	-0.019019
30	P1	-5.279135	0.032905	0.012524
3	P1	-11.490120	0.041092	-0.033288
7	P1	-9.965858	0.047068	0.037749
11	P1	-10.056181	0.057275	-0.022348
15	P1	-10.565827	0.071199	-0.060097
19	P1	-15.520964	0.074083	0.019271
22	P1	-20.940704	0.946415	0.350726
26	P1	-17.131783	0.292622	0.291129
30	P1	-18.205166	0.284668	0.192996

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.590128	0.029518	0.129332
7	P2	-23.041796	0.055556	0.120450
11	P2	-11.575870	0.020102	0.177104
15	P2	-4.991390	0.021383	0.044039
19	P2	-6.973310	0.021375	0.009333
22	P2	-8.213193	0.022718	-0.015151
26	P2	-24.049213	0.030299	0.048585
30	P2	-22.135042	0.017395	-0.003896

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.077656	0.002435	0.005426
7	P3	-8.077849	0.002435	0.004564
11	P3	-8.077883	0.002422	0.004671
15	P3	-8.077780	0.002419	0.005366
19	P3	-8.077816	0.002438	0.005090
22	P3	-8.077733	0.002427	0.005267
26	P3	-8.077734	0.002411	0.005755
30	P3	-8.077618	0.002428	0.004825

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	0.000453715
	stdev	2.20989e-07
MEAN Q	mean	0.000464720
	stdev	2.37030e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128841
	stdev	0.00112740
STDEV Q	mean	0.129126
	stdev	0.00114003



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005123[901]

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_1PNPDE20051230_004338_000000602043_00446_20039_5183.N1	1	0
ASA_IMM_1PNPDK20051230_083344_000000502043_00451_20044_9925.N1	0	2



7 - Doppler Analysis

Preliminary report. The data is not yet controlled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

<input checked="" type="checkbox"/>
Ascending
<input checked="" type="checkbox"/>
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input checked="" type="checkbox"/>
Ascending
<input checked="" type="checkbox"/>
Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input checked="" type="checkbox"/>

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input checked="" type="checkbox"/>
Ascending
<input checked="" type="checkbox"/>
Descending

7.5 - Absolute Doppler for GM1

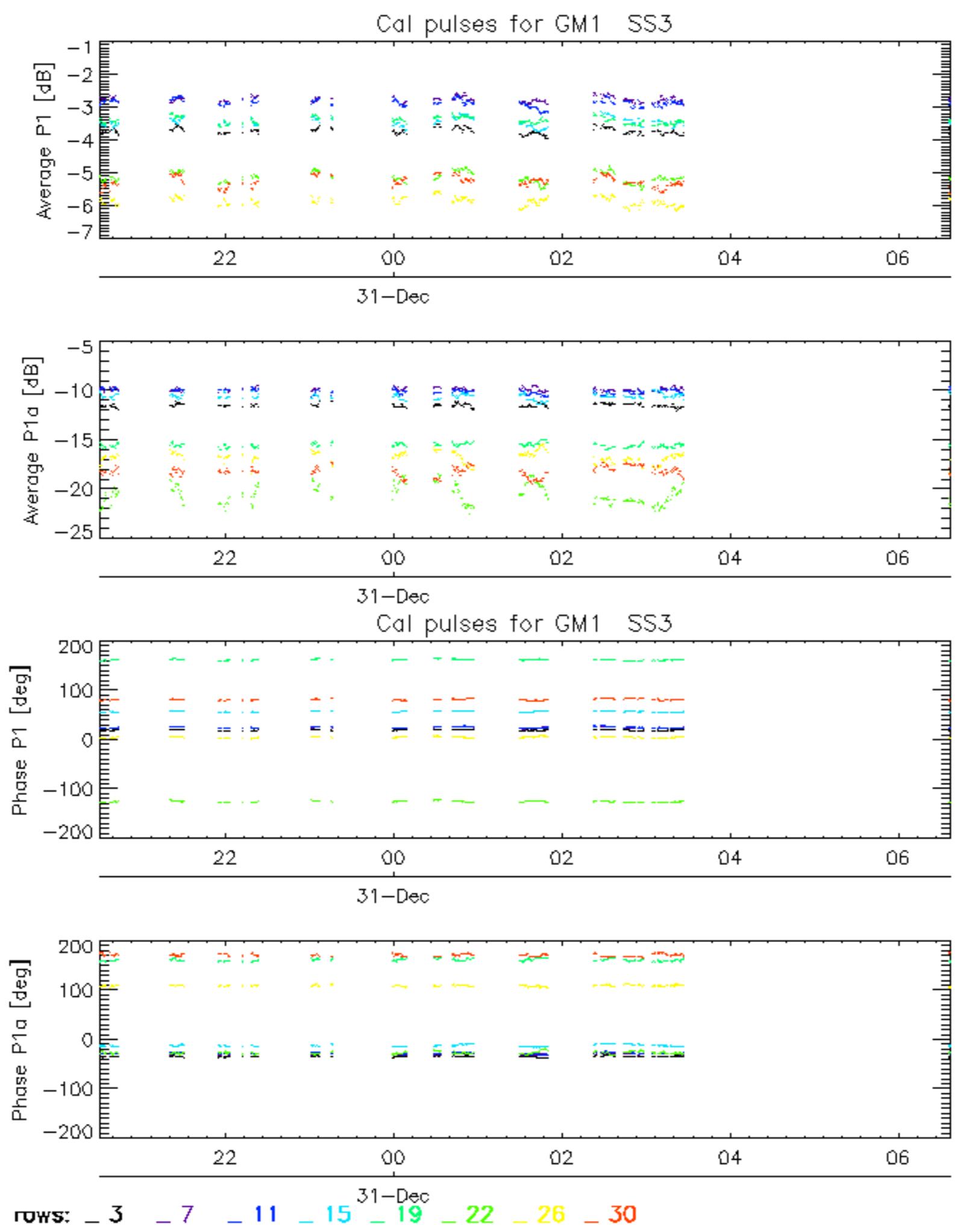
Evolution of Absolute Doppler

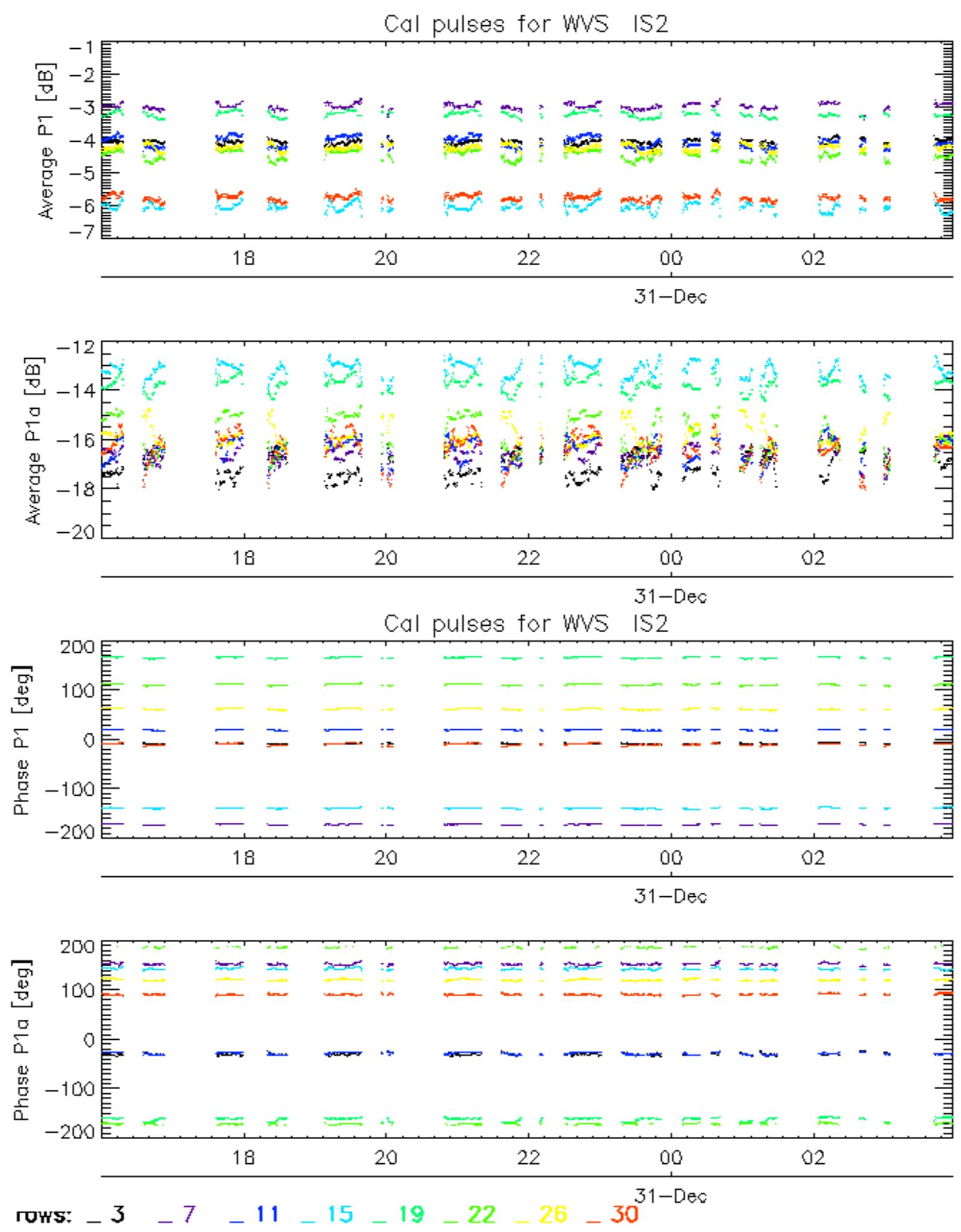
<input checked="" type="checkbox"/>
Ascending
<input checked="" type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

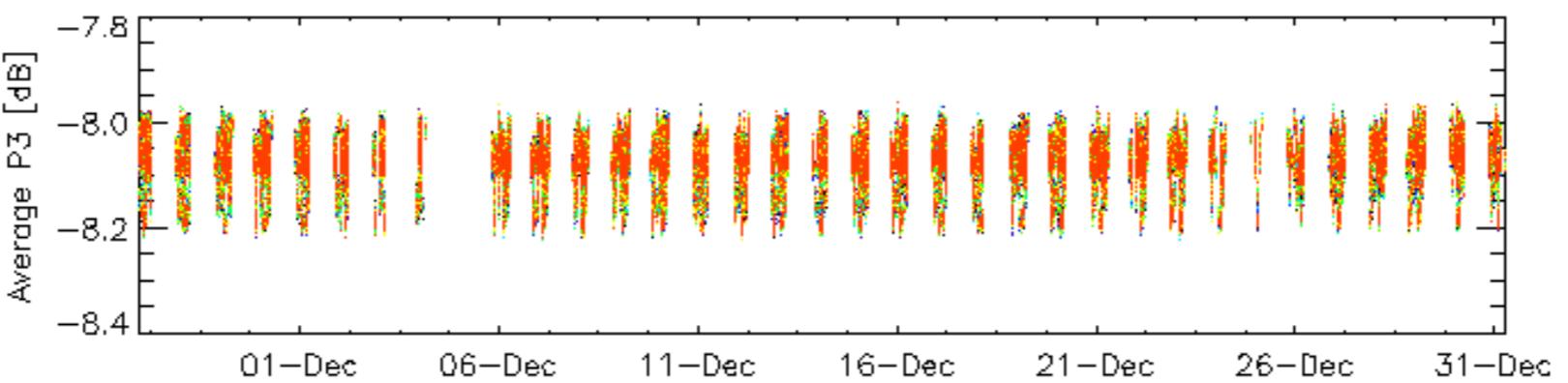
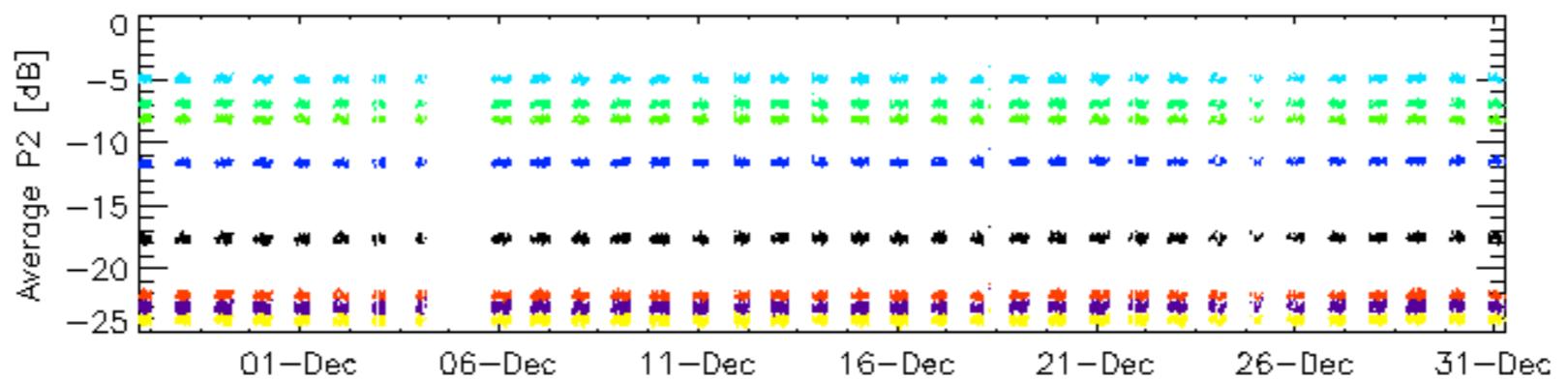
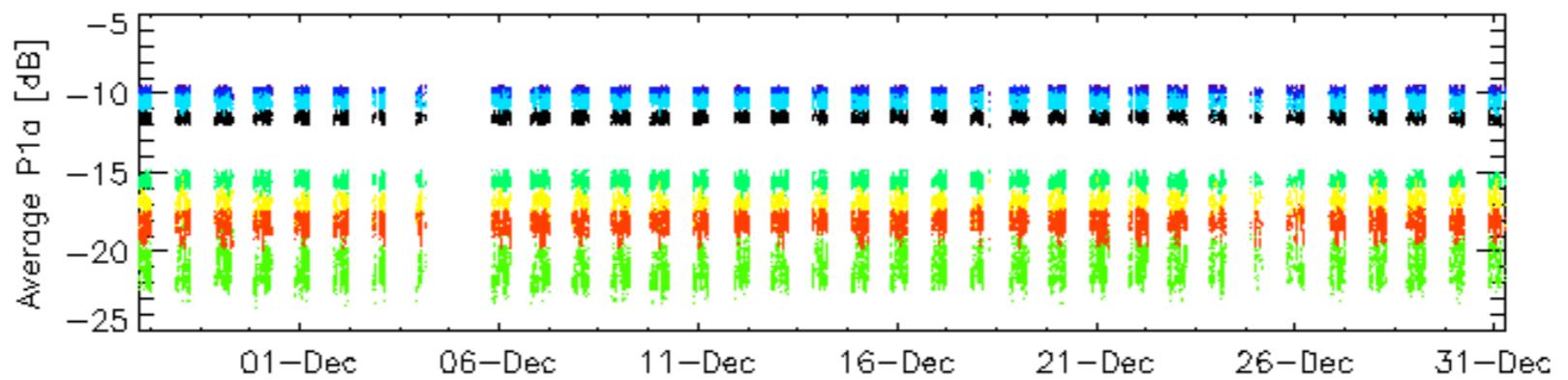
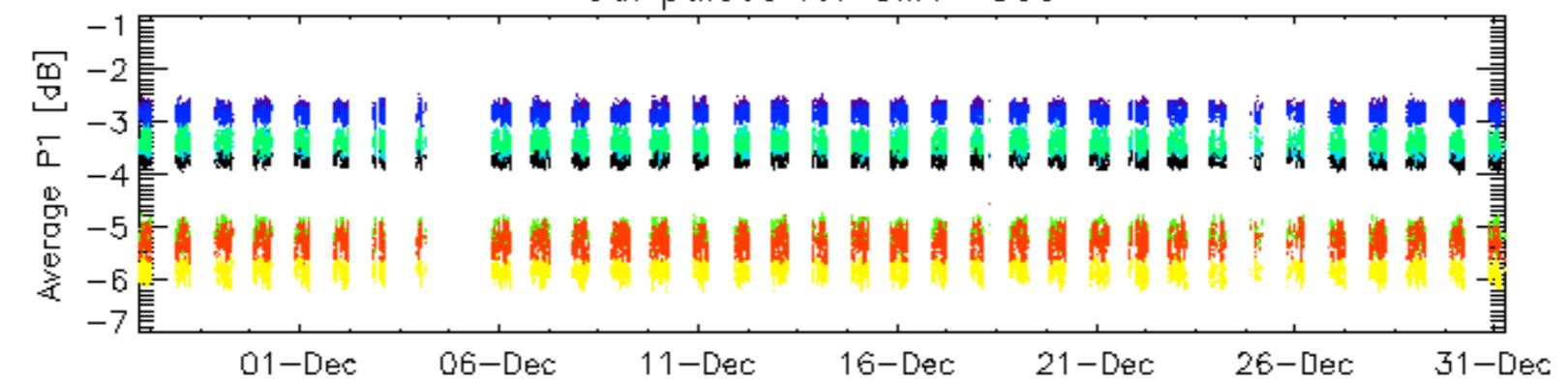
Evolution Doppler error versus ANX

<input checked="" type="checkbox"/>

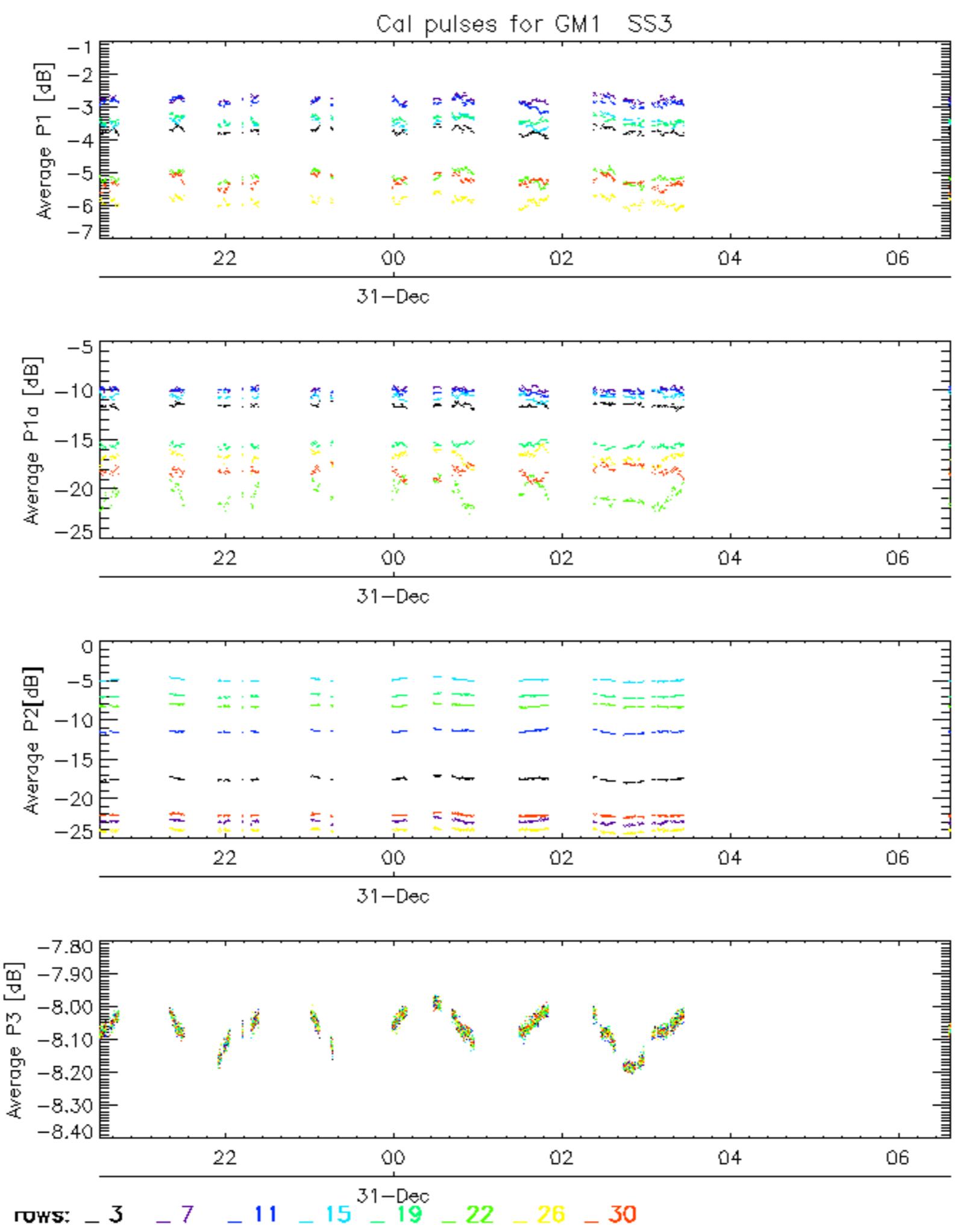




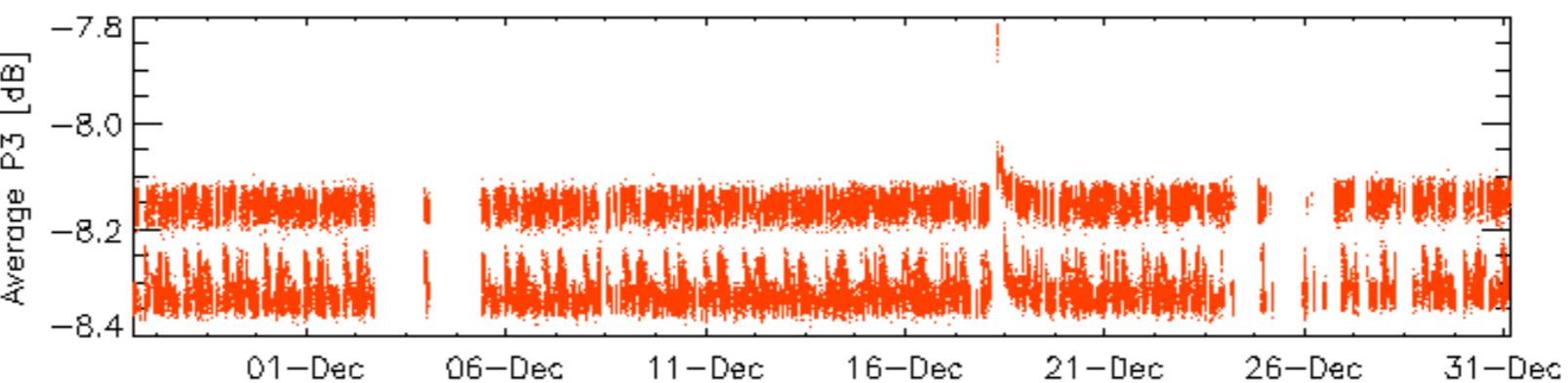
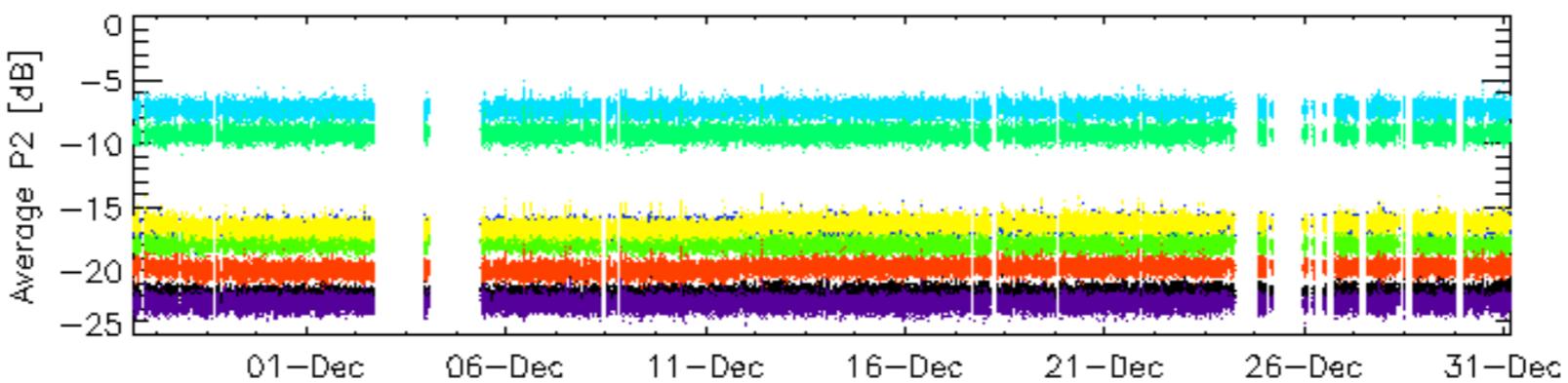
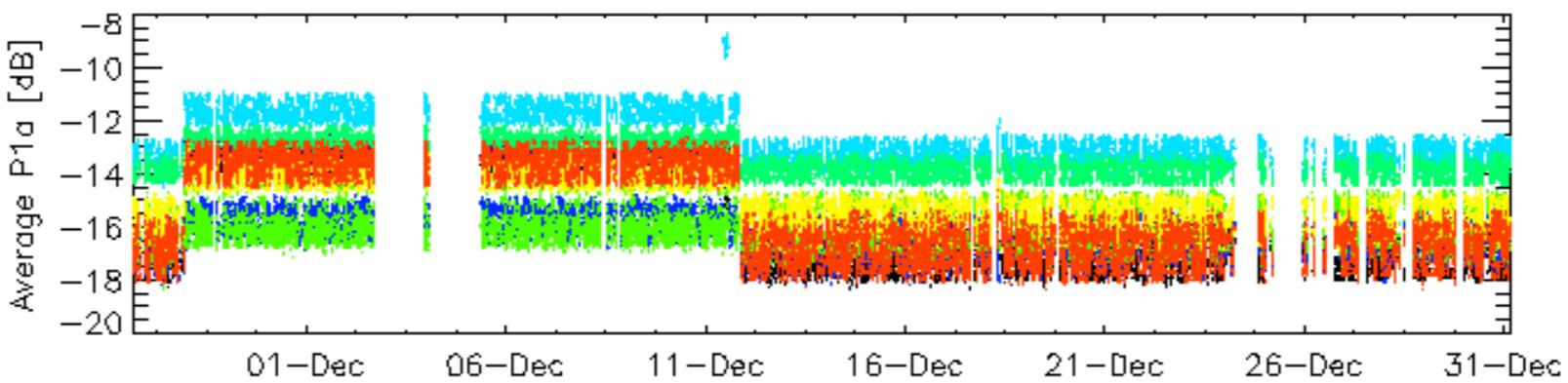
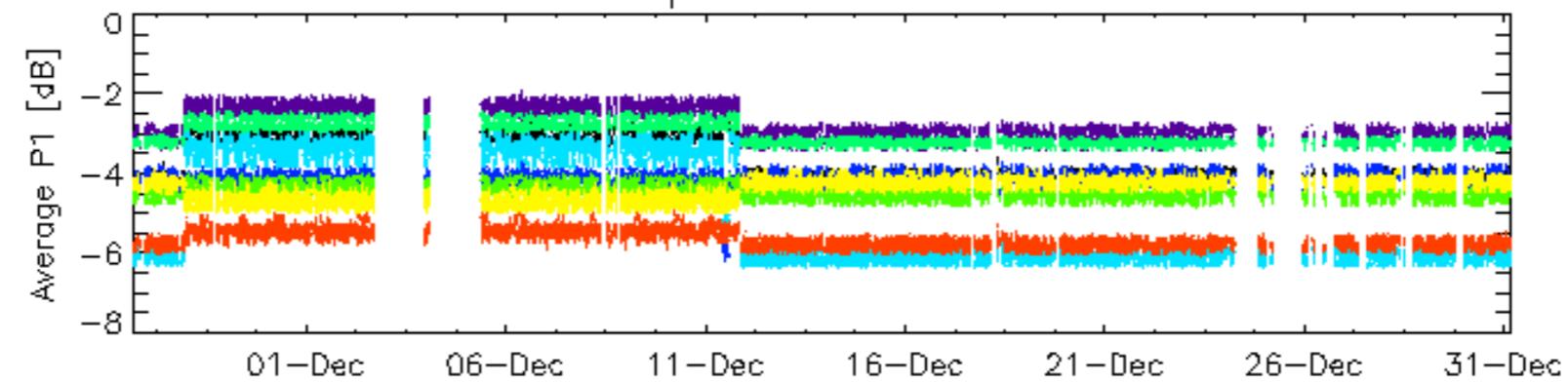
Cal pulses for GM1 SS3



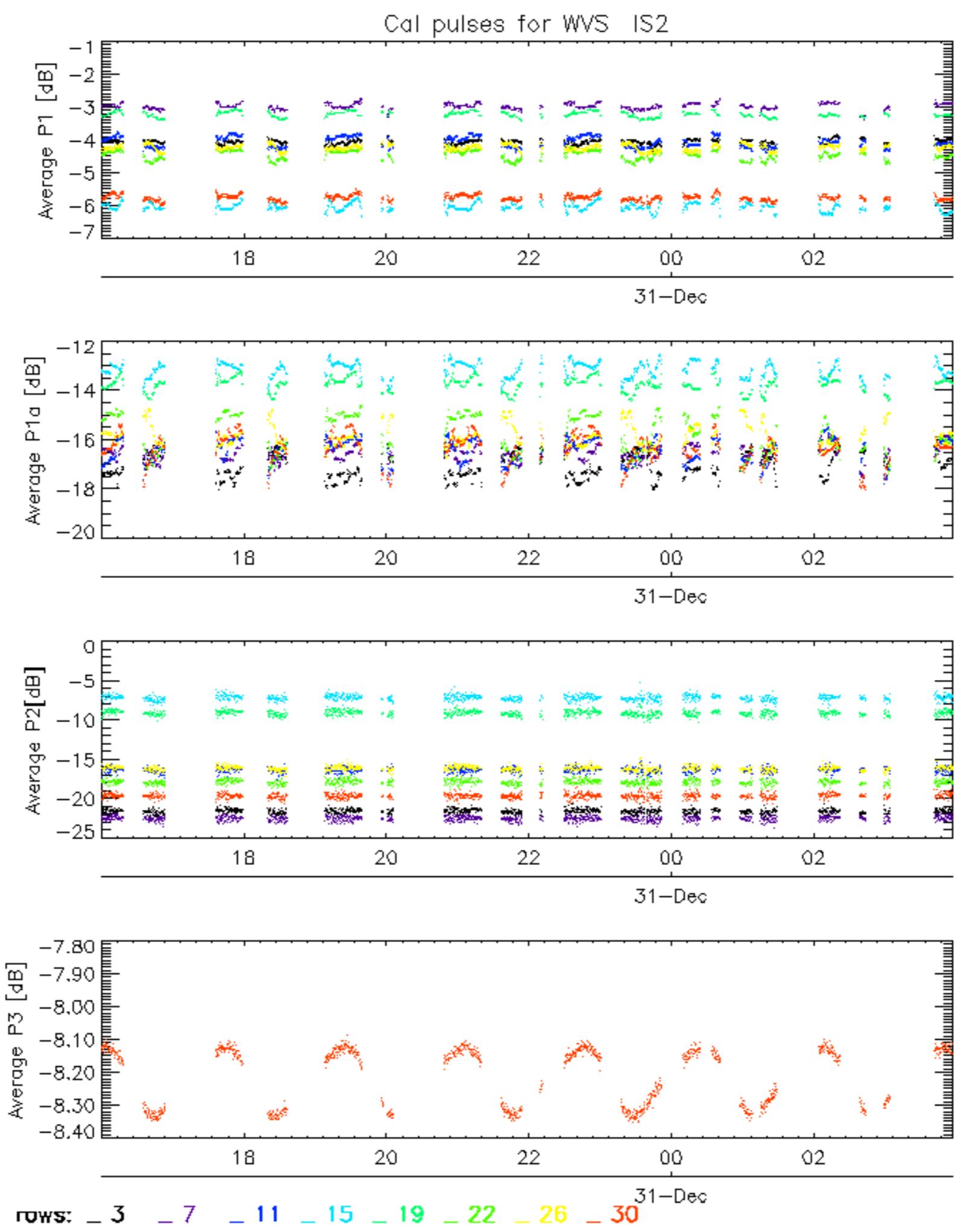
ROWS: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



Cal pulses for WVS IS2

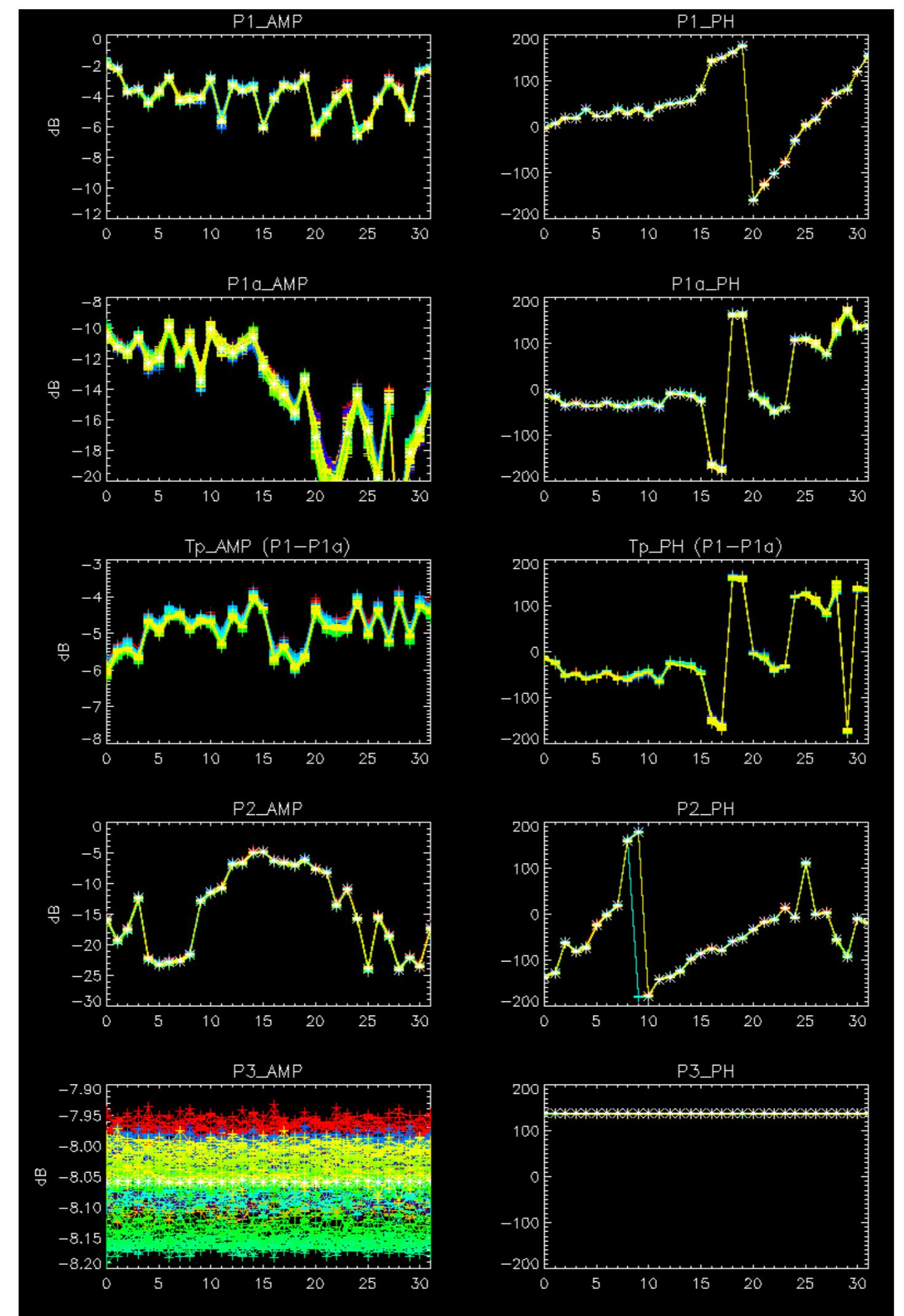


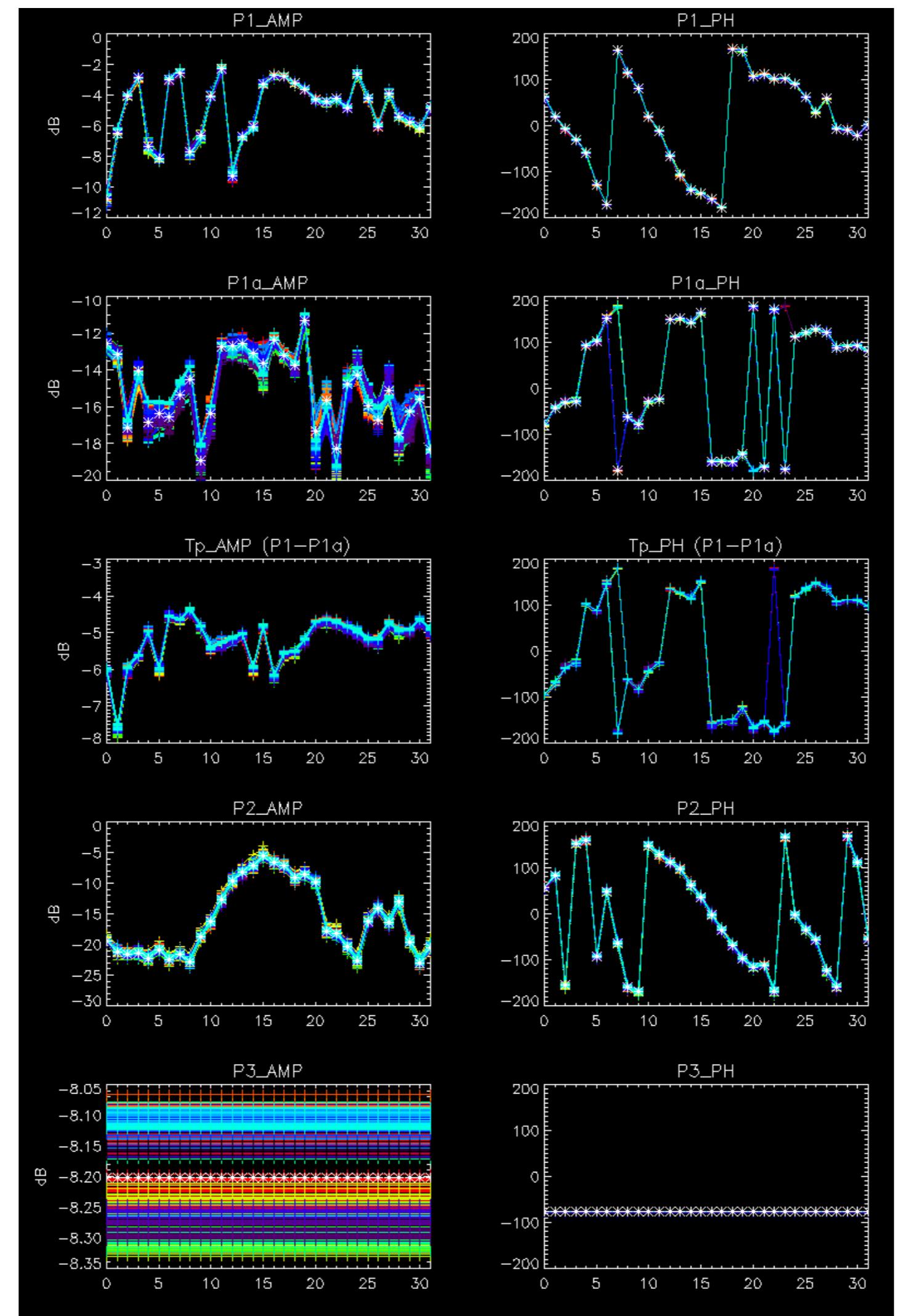
ROWS: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



No anomalies observed.

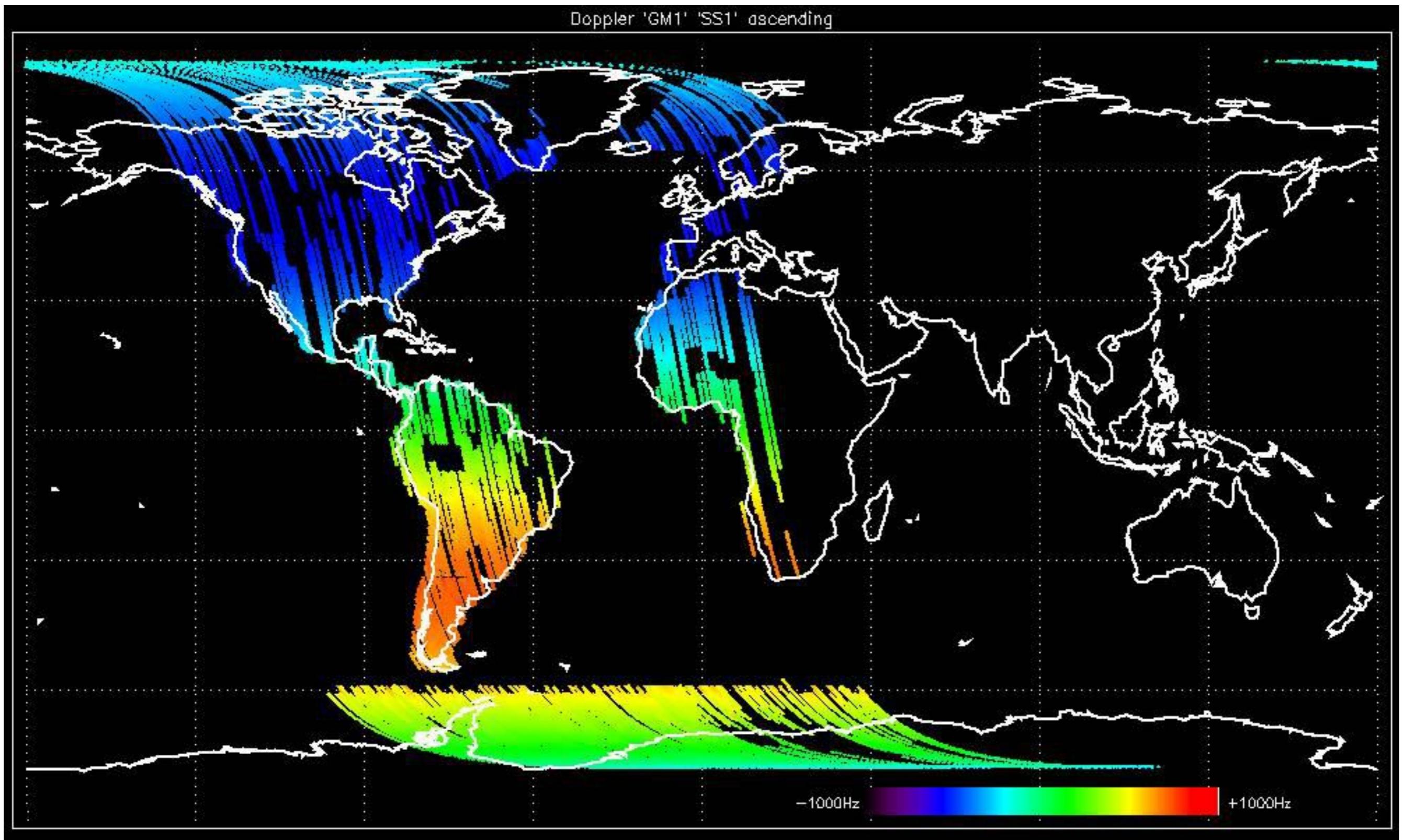


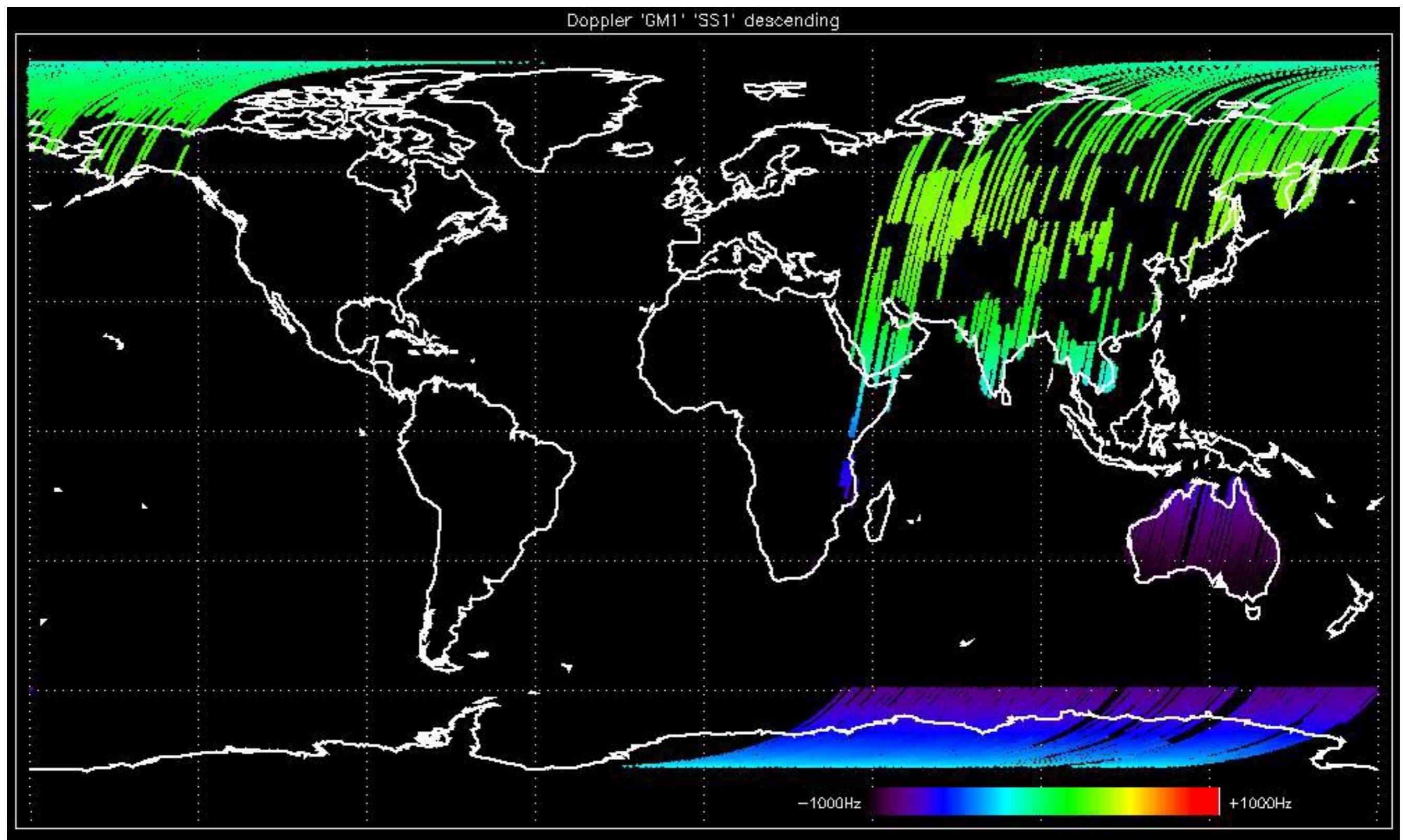


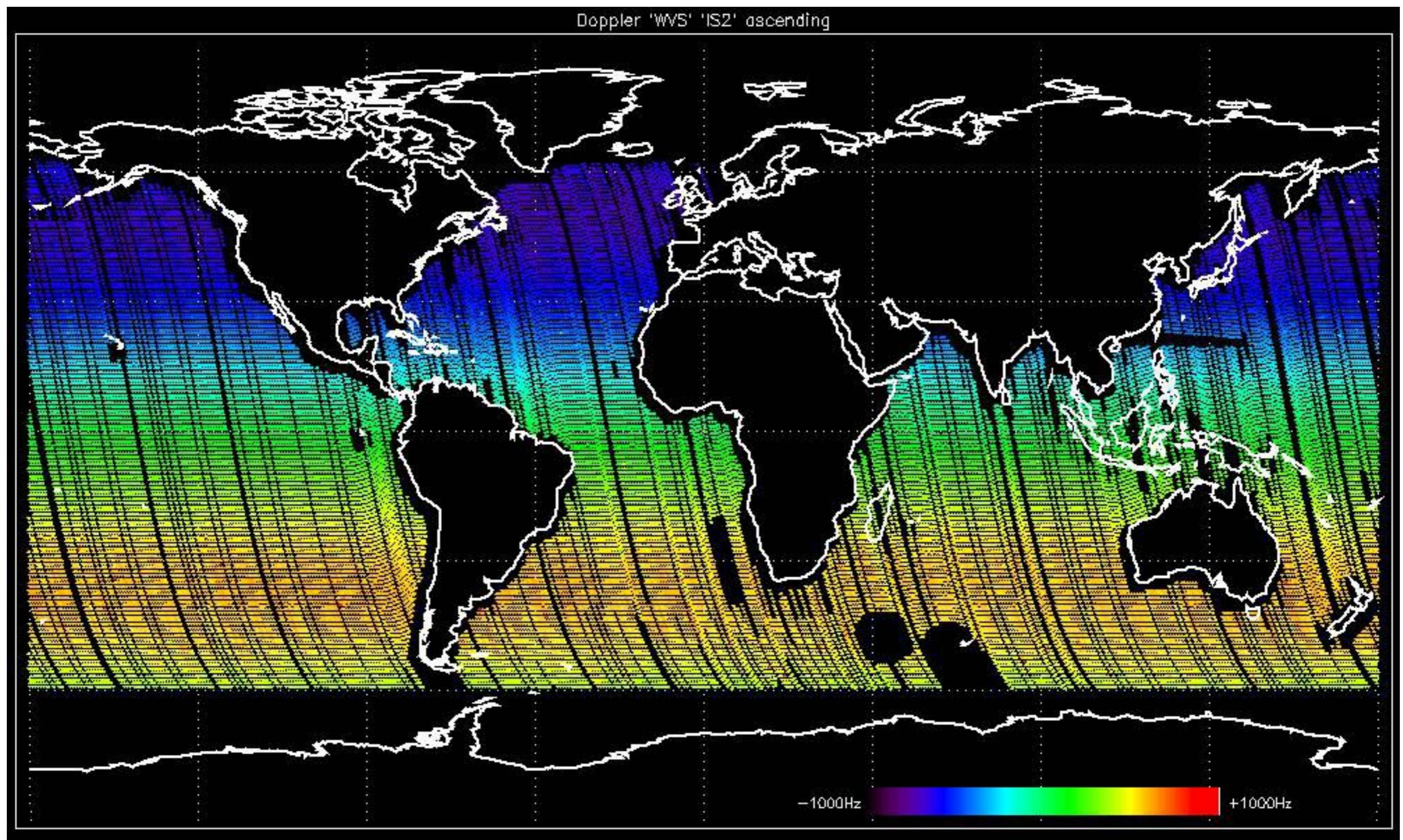


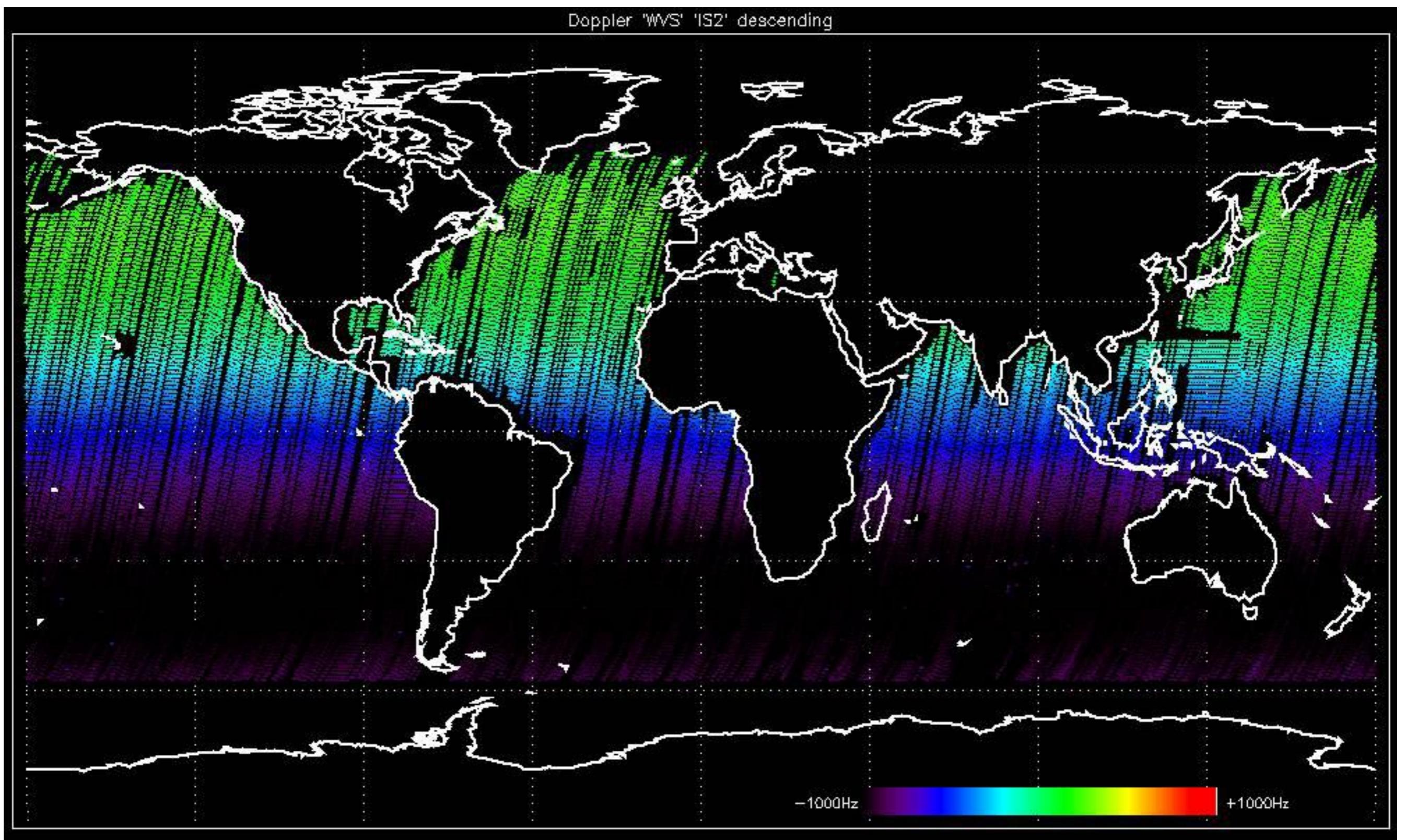
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

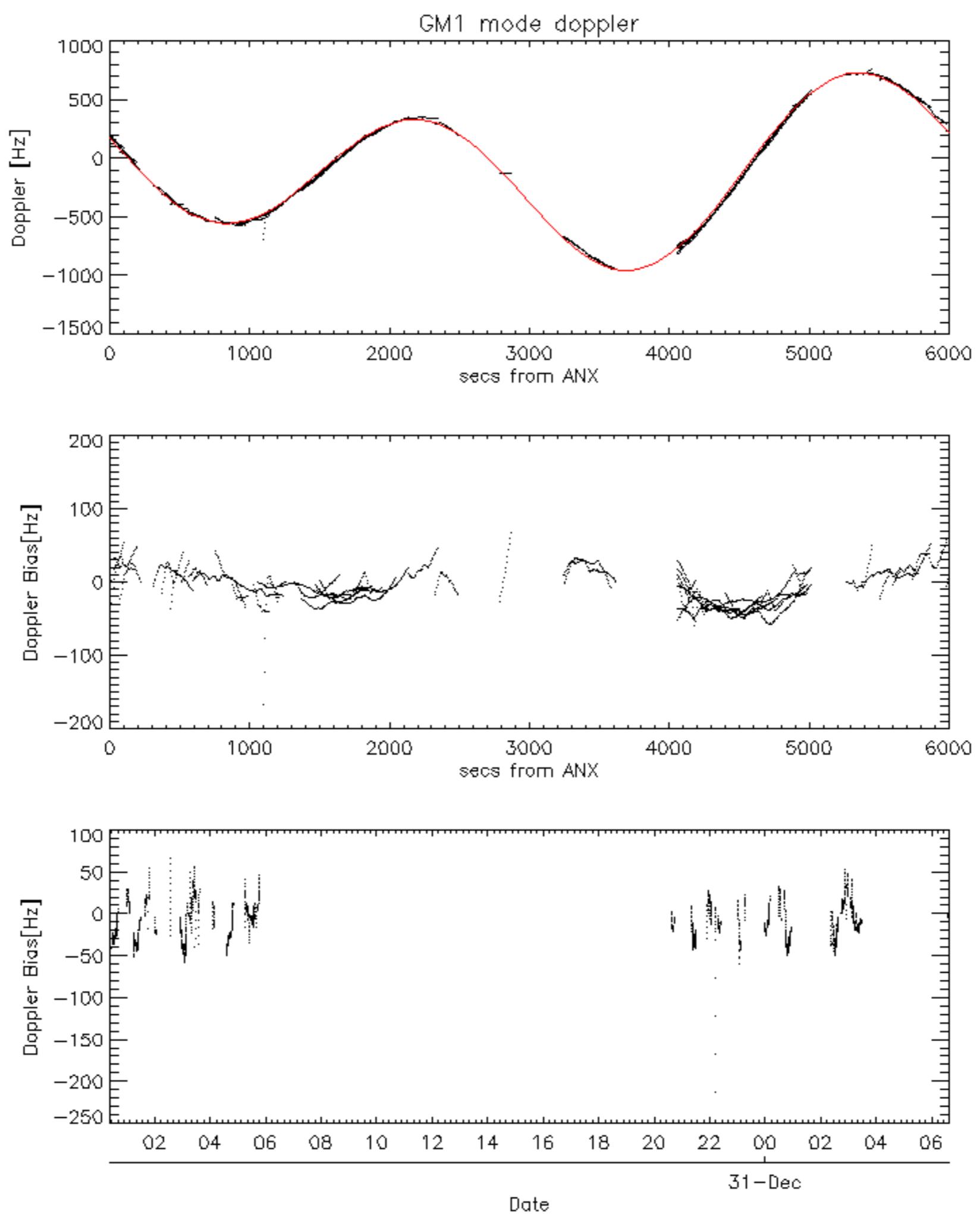


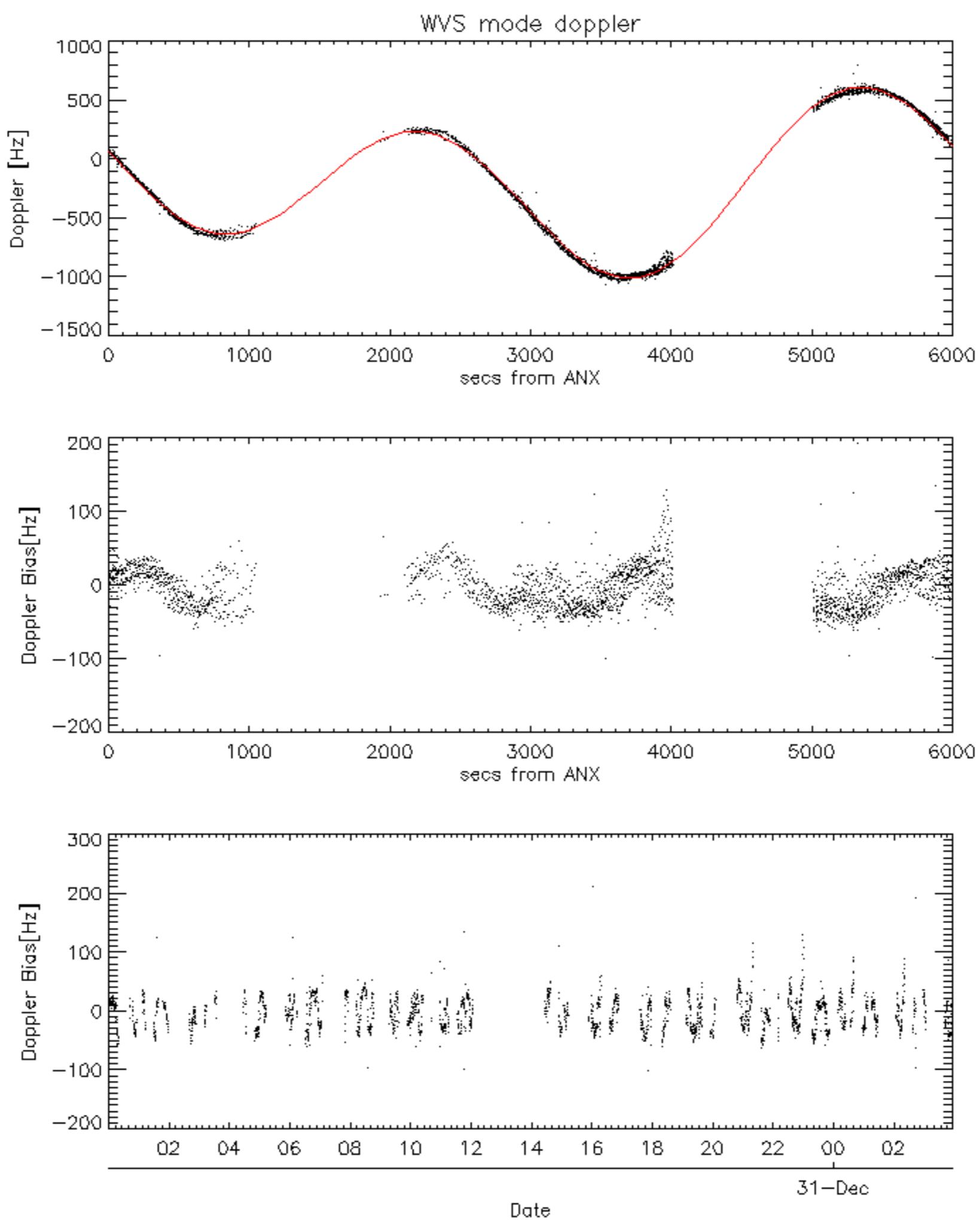


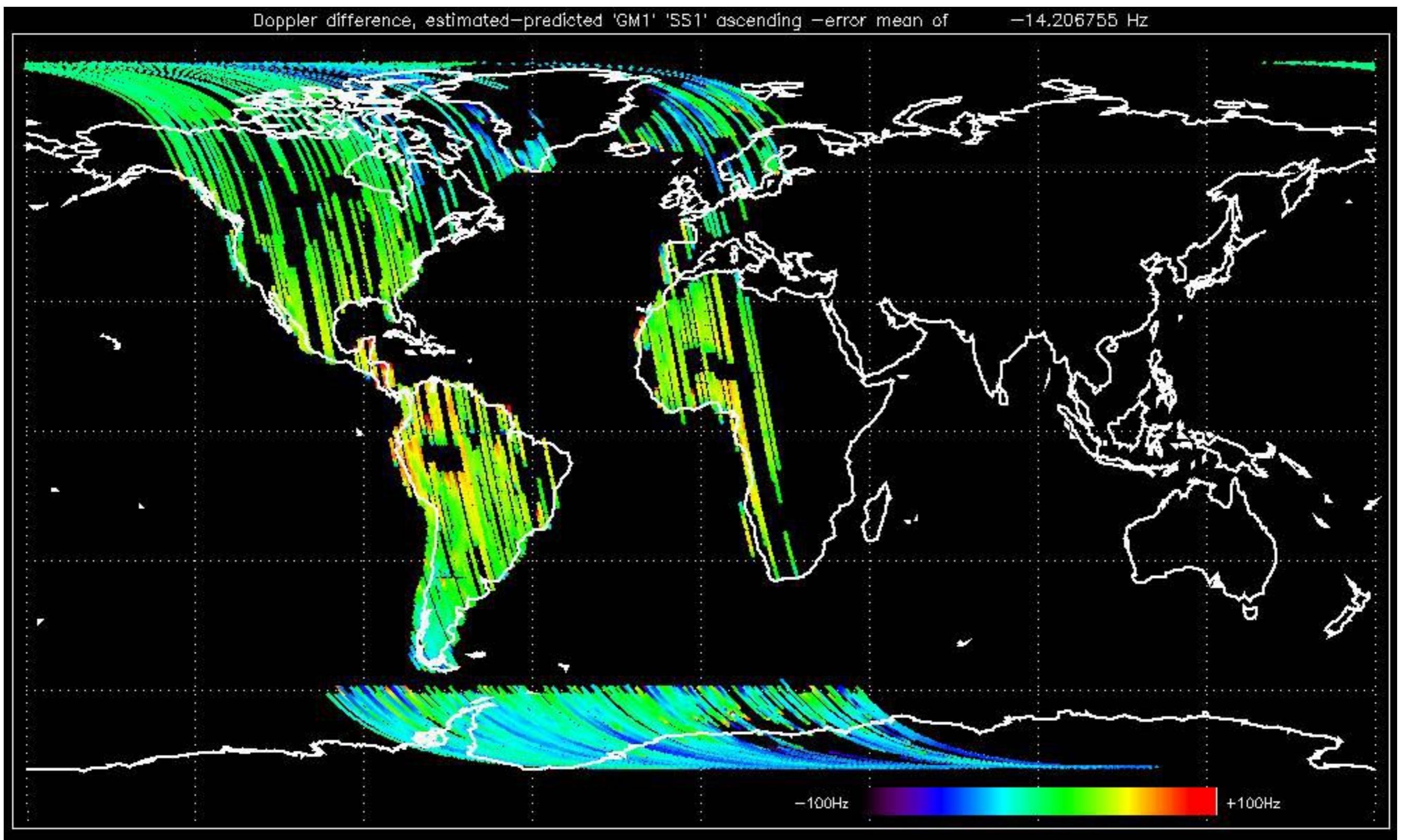


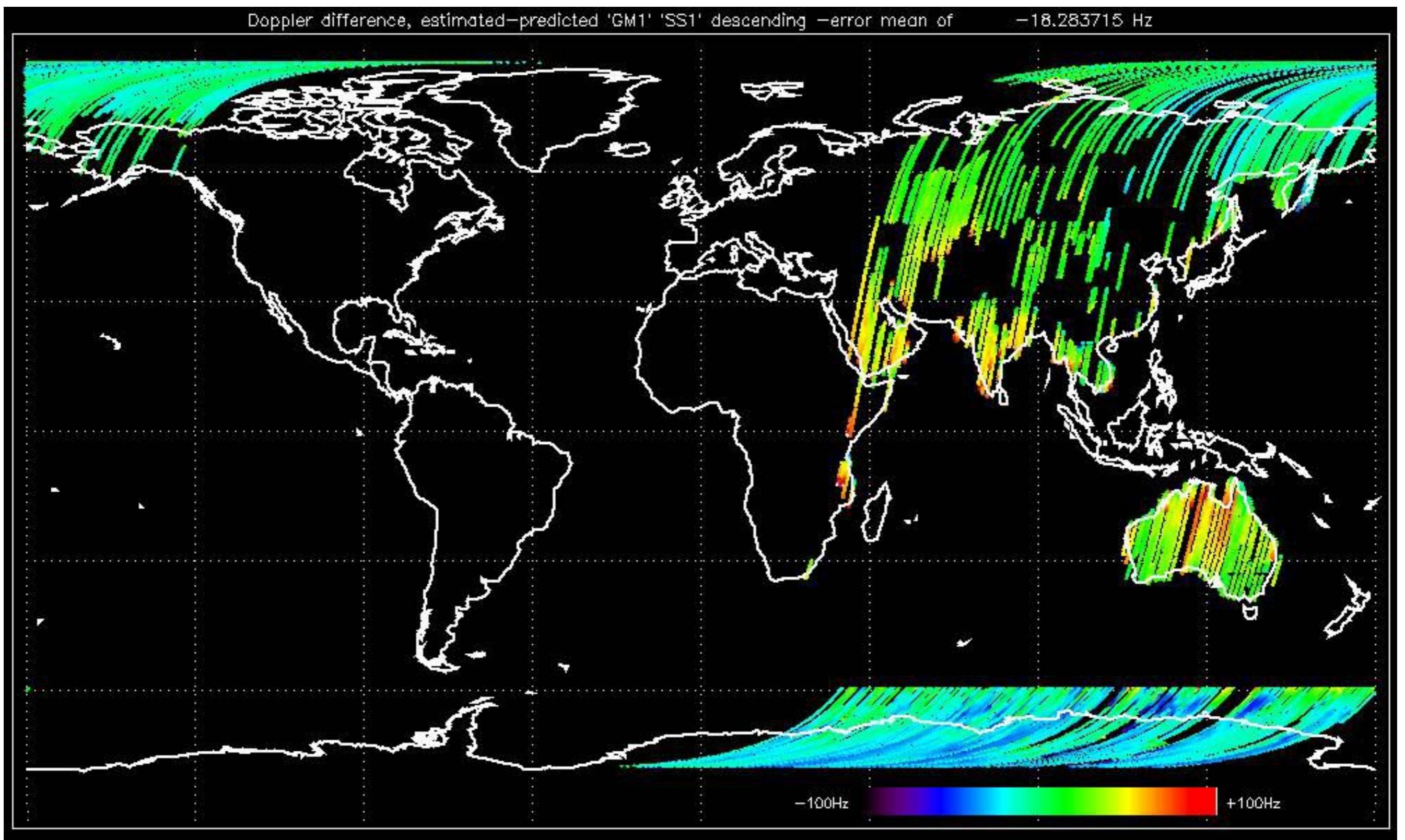


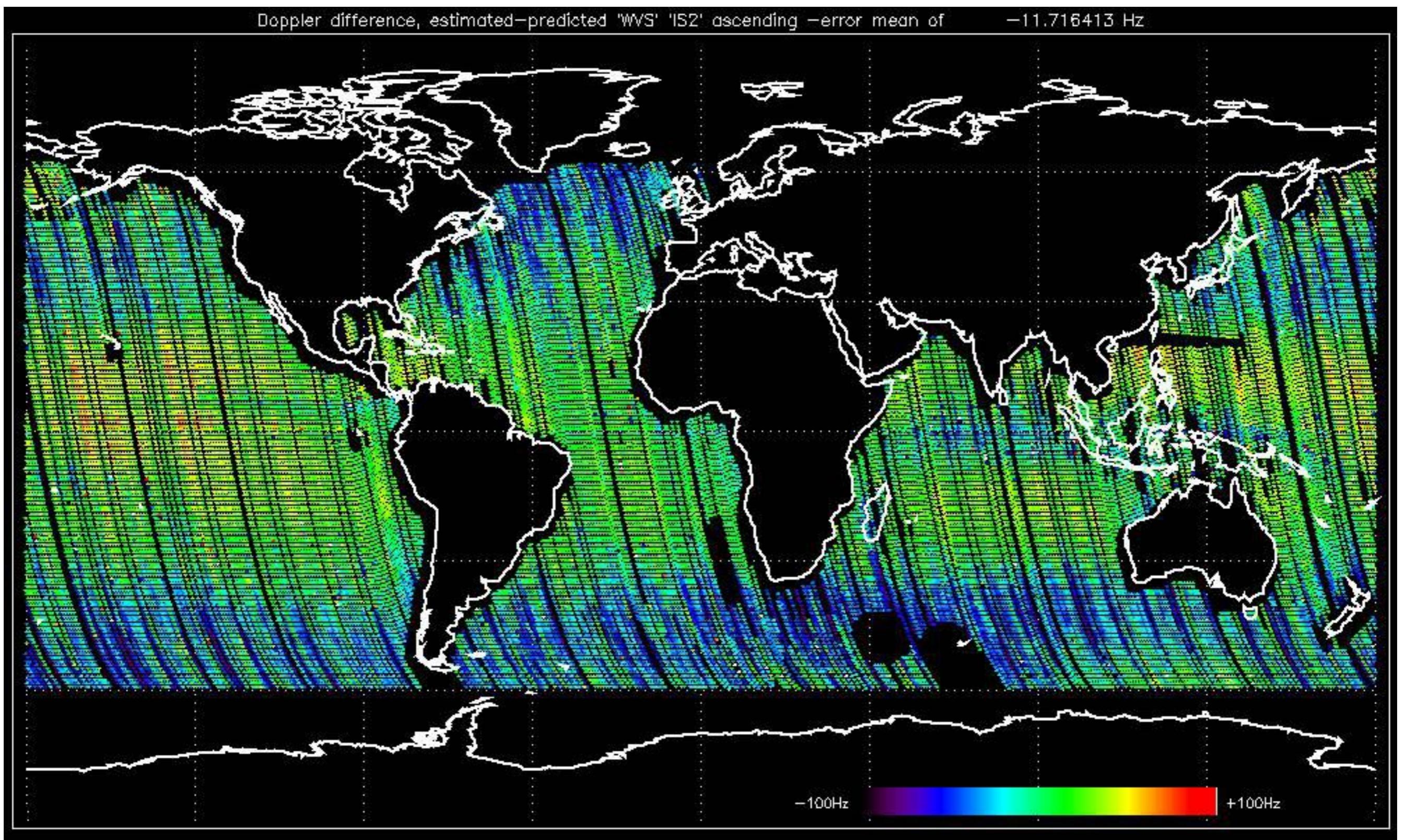


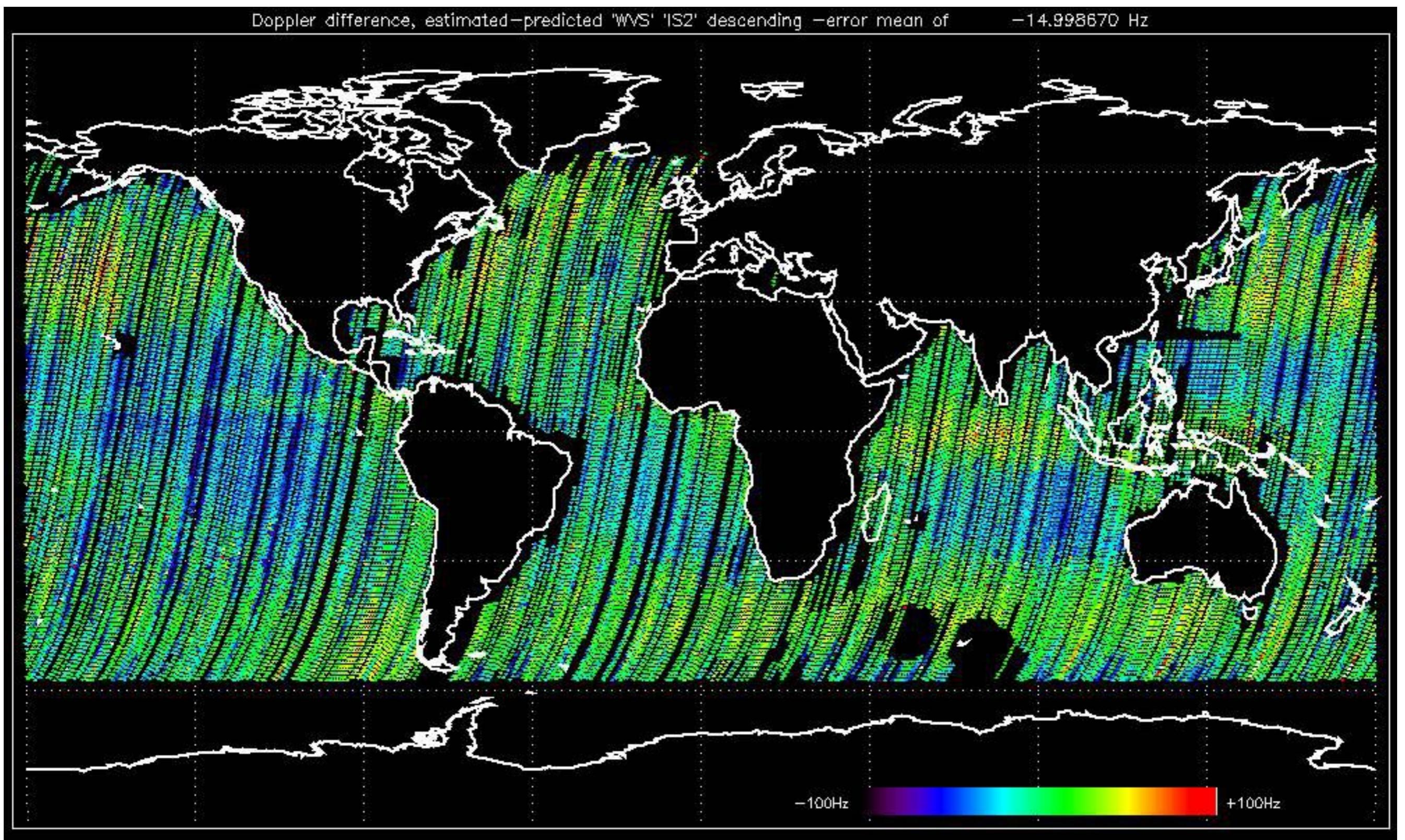












No anomalies observed on available MS products:



No anomalies observed.



Reference: 2001-02-09 13:50:42 H RxGain

Test : 2005-12-30 14:38:12 H

Reference: 2001-02-09 14:08:23 V RxGain

Test : 2005-12-29 10:08:02 V

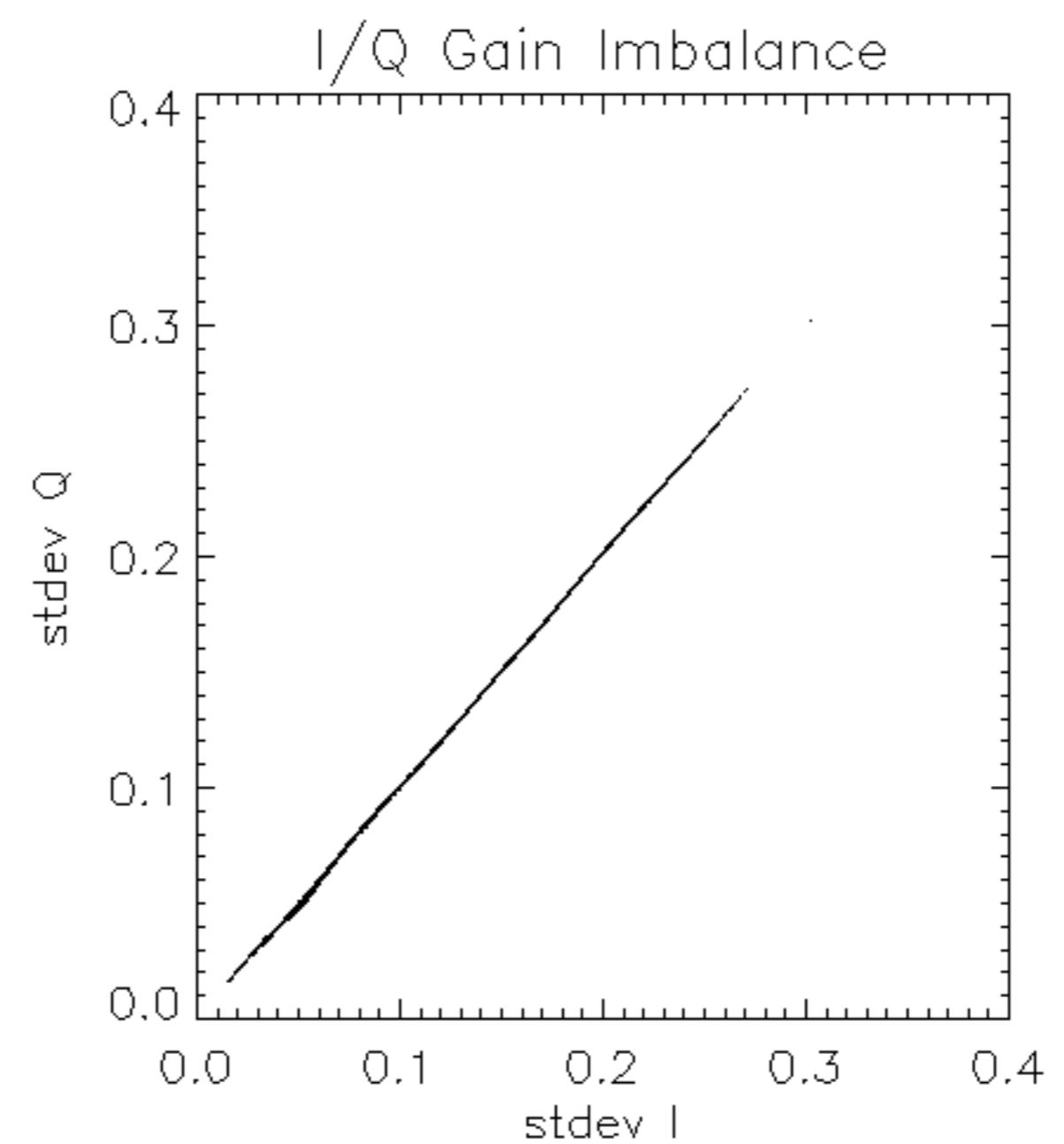
A1 A3 B1 B3 C1 C3 D1 D3 E1 E3

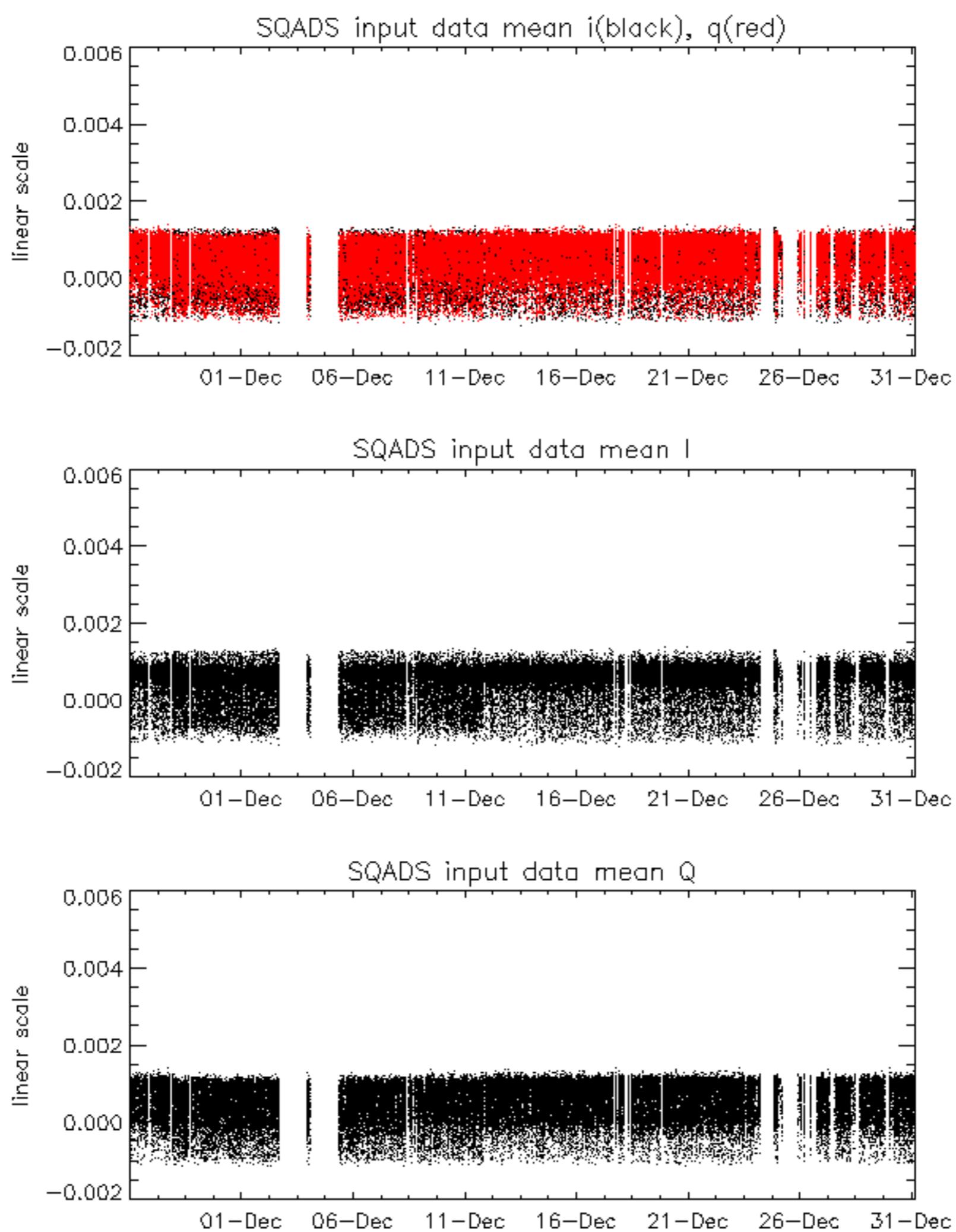
A2 A4 B2 B4 C2 C4 D2 D4 E2 E4

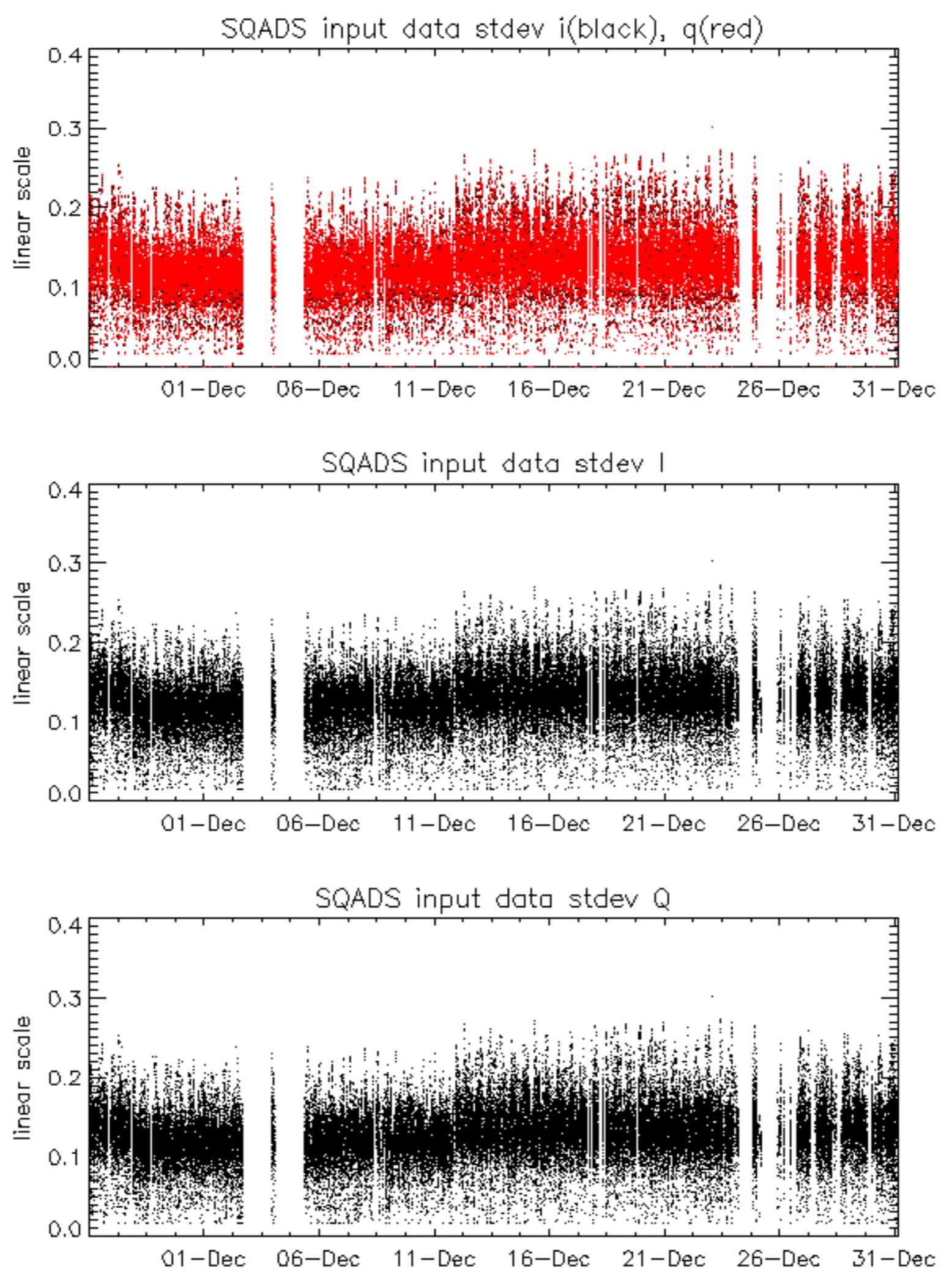
1
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32

Reference:	2005-09-29 07:47:20	V	RxGain
Test	: 2005-12-29 10:08:02	V	
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	: 2005-12-30 14:38:12 H	
		1
		2
		3
		4
		5
		6
		7
A1	A3	B1
B3	C1	C3
D1	D3	E1
		E3
		8
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
A2	A4	B2
B4	C2	C4
D2	D4	E2
		E4
		24
		25
		26
		27
		28
		29
		30
		31
		32







Reference:	2001-02-09 13:50:42 H	TxGain
Test	: 2005-12-30 14:38:12 H	
		1
		2
		3
		4
		5
		6
		7
A1	A3	B1
B3	C1	C3
D1	D3	E1
E3		8
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
A2	A4	B2
B4	C2	C4
D2	D4	E2
E4		24
		25
		26
		27
		28
		29
		30
		31
		32

Reference: 2005-10-08 03:02:47 H

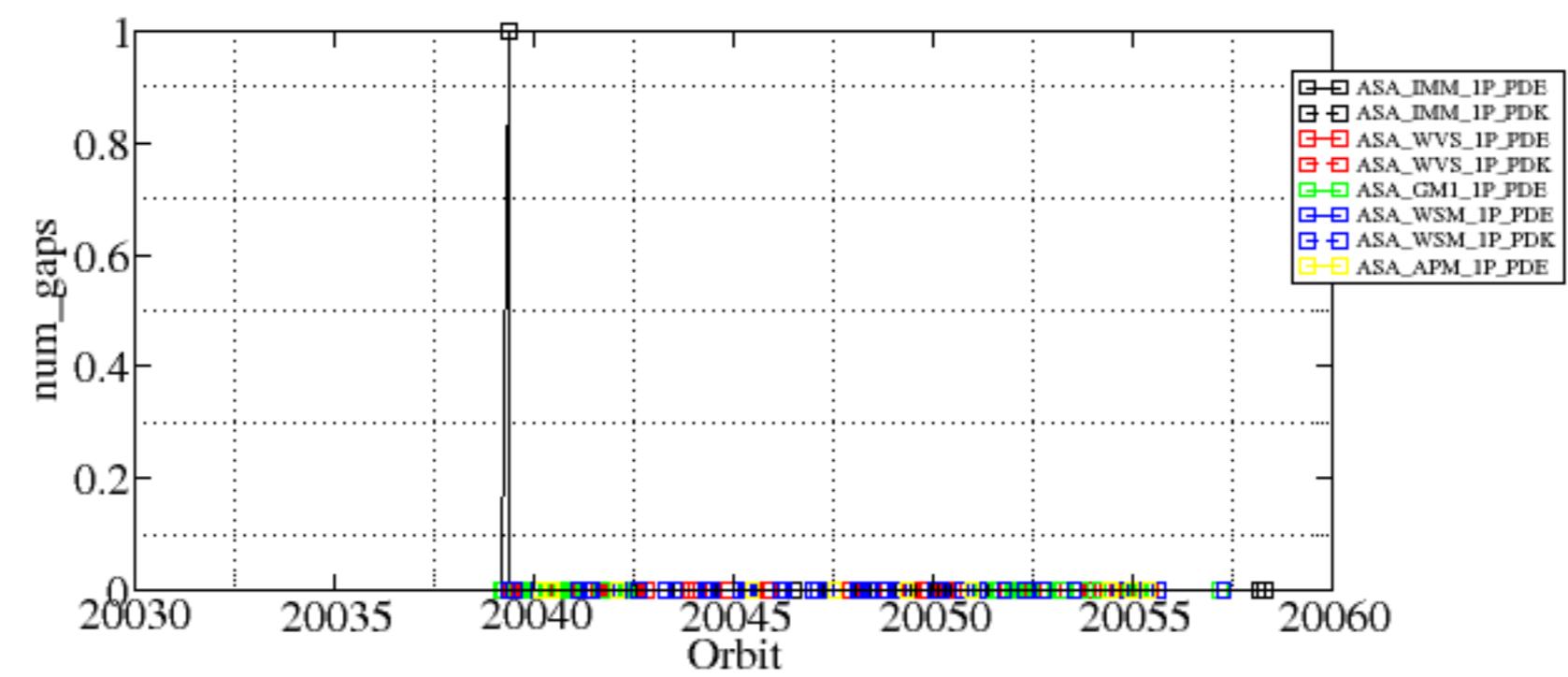
Test : 2005-12-30 14:38:12 H

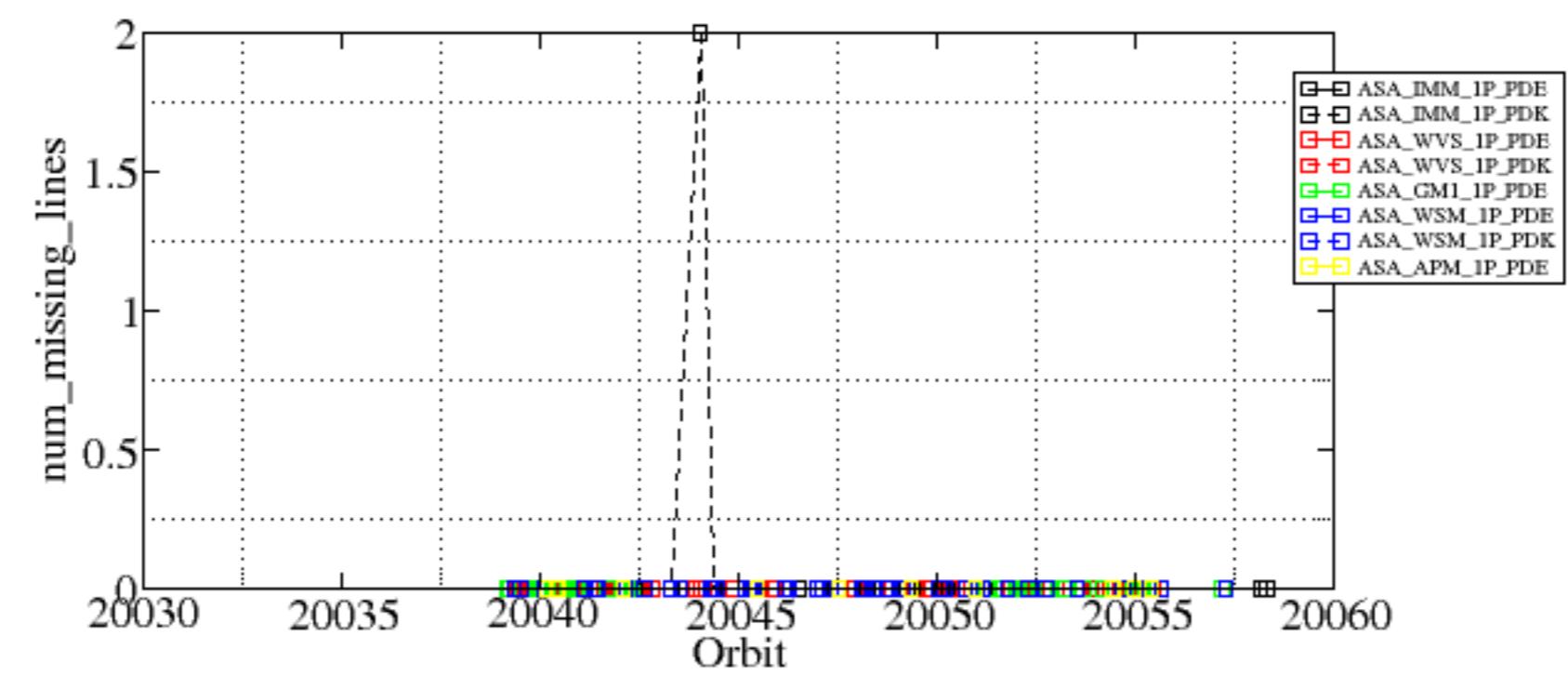
Reference:	2005-09-29 07:47:20	V	TxGain
Test	: 2005-12-29 10:08:02	V	
A1	A3	B1	B3
C1	C3	D1	D3
E1	E3		
A2	A4	B2	B4
C2	C4	D2	D4
E2	E4		

Summary of analysis for the last 3 days 2005123[901]

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_1PNPDE20051230_004338_000000602043_00446_20039_5183.N1	1	0
ASA_IMM_1PNPDK20051230_083344_000000502043_00451_20044_9925.N1	0	2

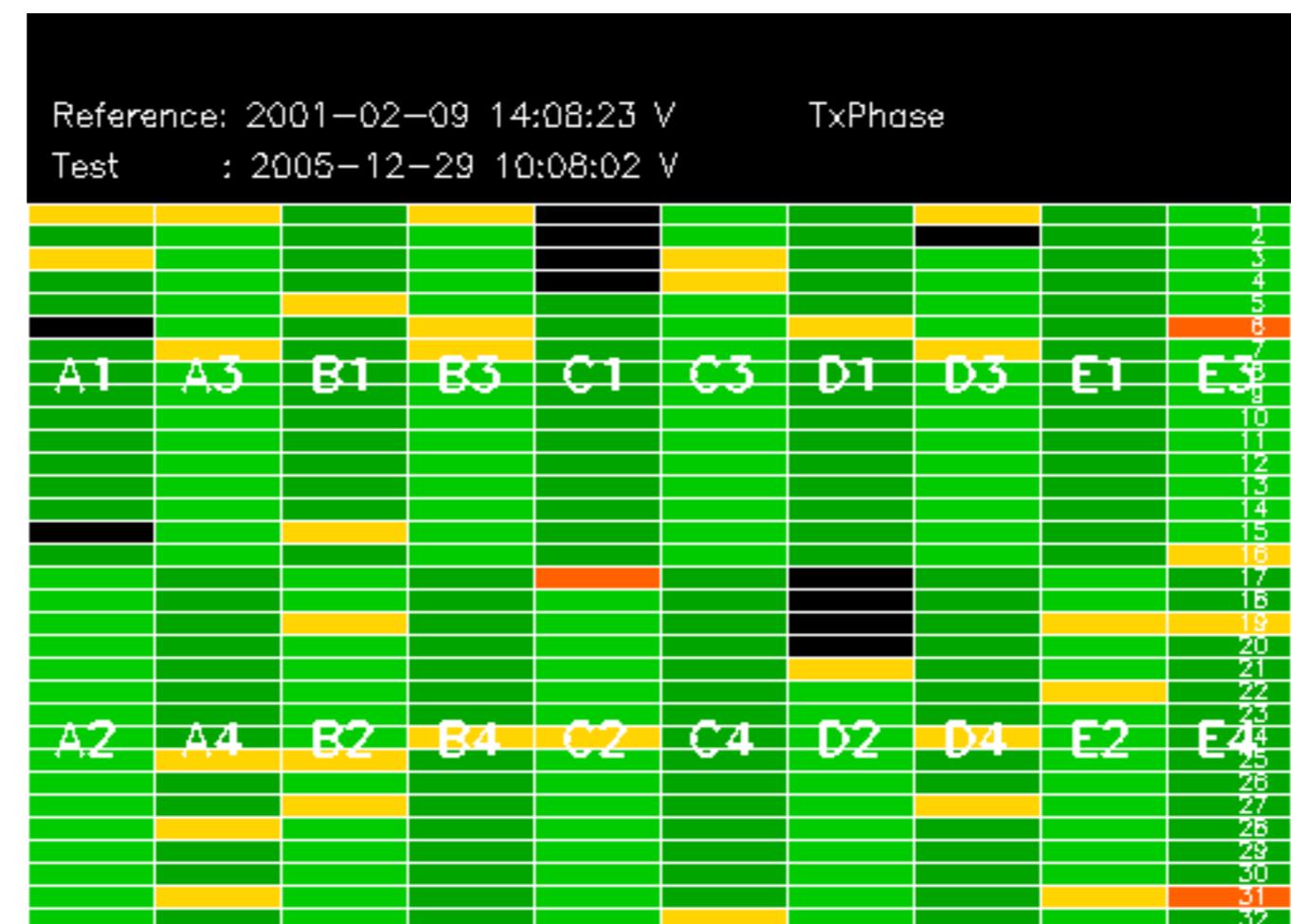




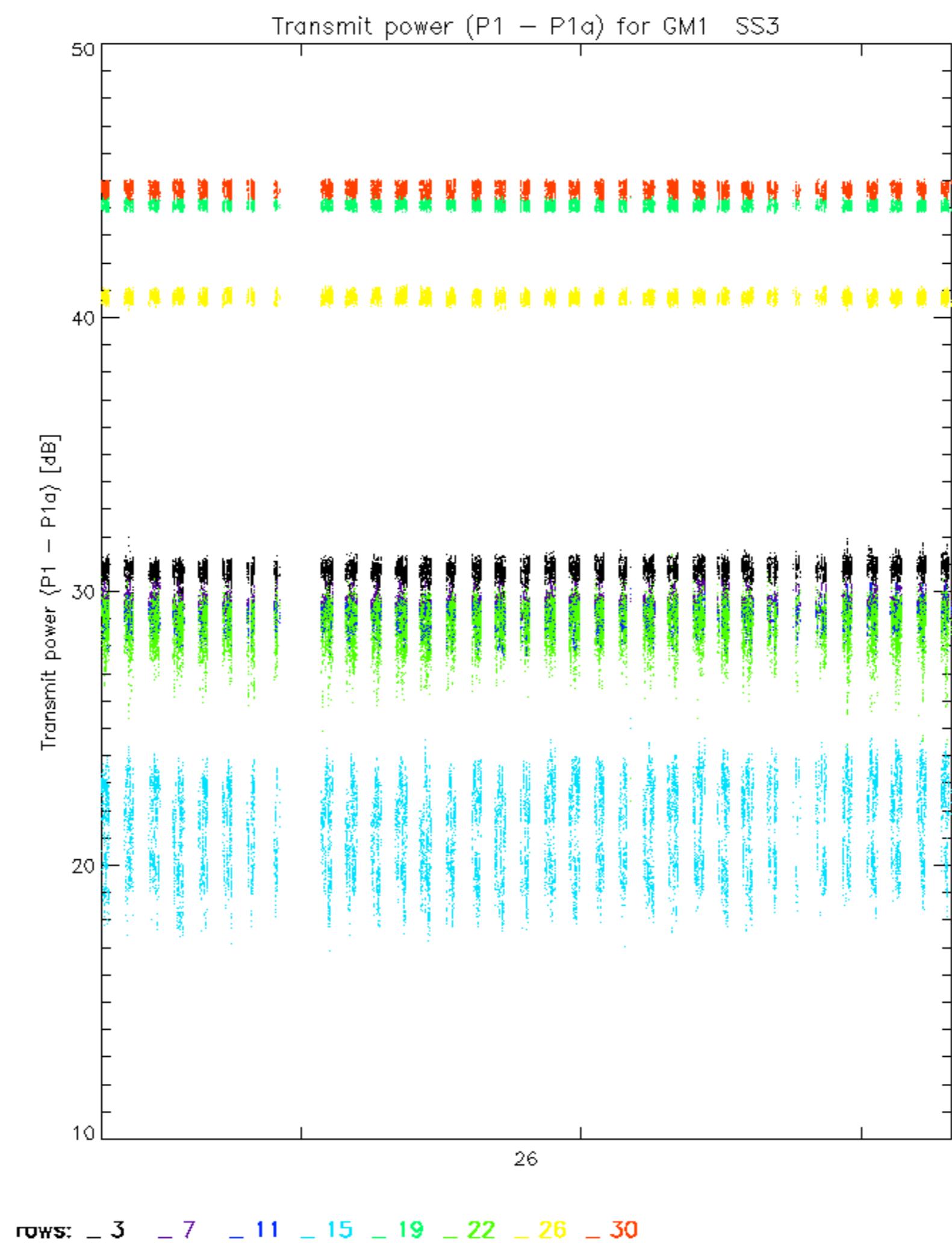
Reference: 2001-02-09 13:50:42 H TxPhase
Test : 2005-12-30 14:38:12 H

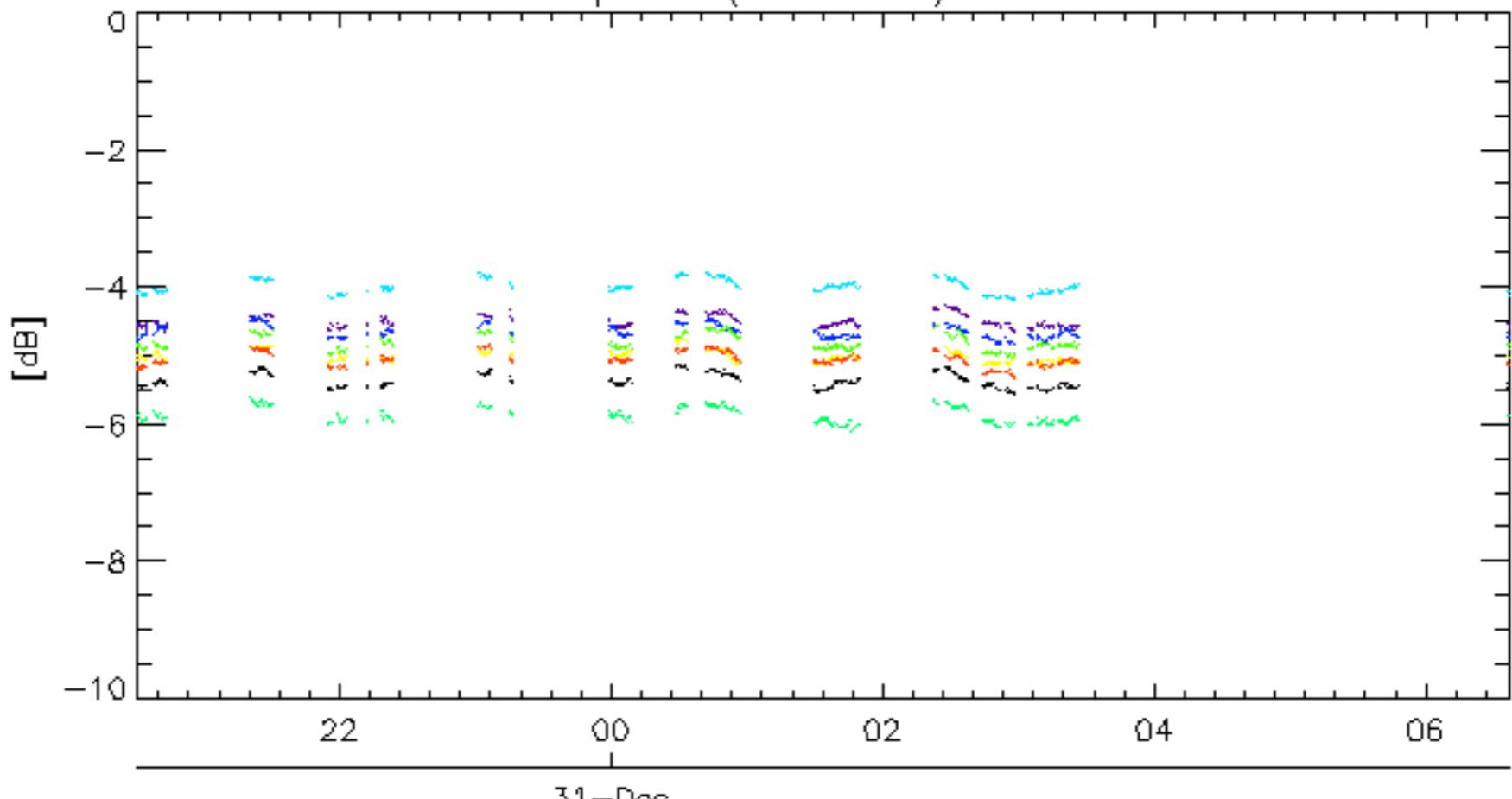
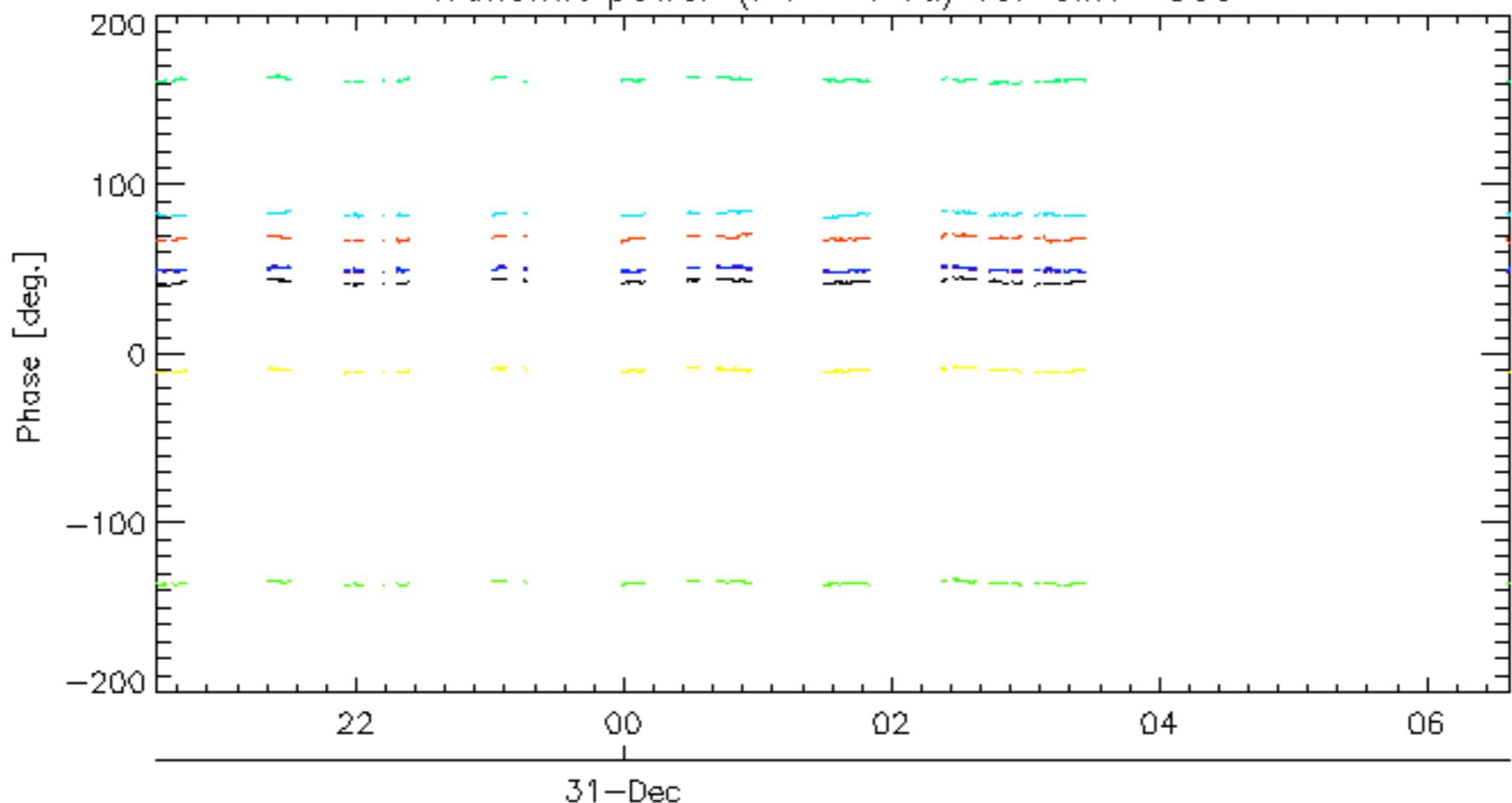
<img alt="A 10x30 grid of colored cells representing a matrix. The columns are labeled A1 through E3 and the rows are labeled 1 through 32. Yellow cells are located at various positions, including (A1, 1), (A3, 1), (B1, 1), (B3, 1), (C1, 1), (C3, 1), (D1, 1), (D3, 1), (E1, 1), (E3, 1), (A2, 2), (A4, 2), (B2, 2), (B4, 2), (C2, 2), (C4, 2), (D2, 2), (D4, 2), (E2, 2), (E4, 2), (A1, 3), (A3, 3), (B1, 3), (B3, 3), (C1, 3), (C3, 3), (D1, 3), (D3, 3), (E1, 3), (E3, 3), (A1, 4), (A3, 4), (B1, 4), (B3, 4), (C1, 4), (C3, 4), (D1, 4), (D3, 4), (E1, 4), (E3, 4), (A1, 5), (A3, 5), (B1, 5), (B3, 5), (C1, 5), (C3, 5), (D1, 5), (D3, 5), (E1, 5), (E3, 5), (A1, 6), (A3, 6), (B1, 6), (B3, 6), (C1, 6), (C3, 6), (D1, 6), (D3, 6), (E1, 6), (E3, 6), (A1, 7), (A3, 7), (B1, 7), (B3, 7), (C1, 7), (C3, 7), (D1, 7), (D3, 7), (E1, 7), (E3, 7), (A1, 8), (A3, 8), (B1, 8), (B3, 8), (C1, 8), (C3, 8), (D1, 8), (D3, 8), (E1, 8), (E3, 8), (A1, 9), (A3, 9), (B1, 9), (B3, 9), (C1, 9), (C3, 9), (D1, 9), (D3, 9), (E1, 9), (E3, 9), (A1, 10), (A3, 10), (B1, 10), (B3, 10), (C1, 10), (C3, 10), (D1, 10), (D3, 10), (E1, 10), (E3, 10), (A1, 11), (A3, 11), (B1, 11), (B3, 11), (C1, 11), (C3, 11), (D1, 11), (D3, 11), (E1, 11), (E3, 11), (A1, 12), (A3, 12), (B1, 12), (B3, 12), (C1, 12), (C3, 12), (D1, 12), (D3, 12), (E1, 12), (E3, 12), (A1, 13), (A3, 13), (B1, 13), (B3, 13), (C1, 13), (C3, 13), (D1, 13), (D3, 13), (E1, 13), (E3, 13), (A1, 14), (A3, 14), (B1, 14), (B3, 14), (C1, 14), (C3, 14), (D1, 14), (D3, 14), (E1, 14), (E3, 14), (A1, 15), (A3, 15), (B1, 15), (B3, 15), (C1, 15), (C3, 15), (D1, 15), (D3, 15), (E1, 15), (E3, 15), (A1, 16), (A3, 16), (B1, 16), (B3, 16), (C1, 16), (C3, 16), (D1, 16), (D3, 16), (E1, 16), (E3, 16), (A1, 17), (A3, 17), (B1, 17), (B3, 17), (C1, 17), (C3, 17), (D1, 17), (D3, 17), (E1, 17), (E3, 17), (A1, 18), (A3, 18), (B1, 18), (B3, 18), (C1, 18), (C3, 18), (D1, 18), (D3, 18), (E1, 18), (E3, 18), (A1, 19), (A3, 19), (B1, 19), (B3, 19), (C1, 19), (C3, 19), (D1, 19), (D3, 19), (E1, 19), (E3, 19), (A1, 20), (A3, 20), (B1, 20), (B3, 20), (C1, 20), (C3, 20), (D1, 20), (D3, 20), (E1, 20), (E3, 20), (A1, 21), (A3, 21), (B1, 21), (B3, 21), (C1, 21), (C3, 21), (D1, 21), (D3, 21), (E1, 21), (E3, 21), (A1, 22), (A3, 22), (B1, 22), (B3, 22), (C1, 22), (C3, 22), (D1, 22), (D3, 22), (E1, 22), (E3, 22), (A1, 23), (A3, 23), (B1, 23), (B3, 23), (C1, 23), (C3, 23), (D1, 23), (D3, 23), (E1, 23), (E3, 23), (A1, 24), (A3, 24), (B1, 24), (B3, 24), (C1, 24), (C3, 24), (D1, 24), (D3, 24), (E1, 24), (E3, 24), (A1, 25), (A3, 25), (B1, 25), (B3, 25), (C1, 25), (C3, 25), (D1, 25), (D3, 25), (E1, 25), (E3, 25), (A1, 26), (A3, 26), (B1, 26), (B3, 26), (C1, 26), (C3, 26), (D1, 26), (D3, 26), (E1, 26), (E3, 26), (A1, 27), (A3, 27), (B1, 27), (B3, 27), (C1, 27), (C3, 27), (D1, 27), (D3, 27), (E1, 27), (E3, 27), (A1, 28), (A3, 28), (B1, 28), (B3, 28), (C1, 28), (C3, 28), (D1, 28), (D3, 28), (E1, 28), (E3, 28), (A1, 29), (A3, 29), (B1, 29), (B3, 29), (C1, 29), (C3, 29), (D1, 29), (D3, 29), (E1, 29), (E3, 29), (A1, 30), (A3, 30), (B1, 30), (B3, 30), (C1, 30), (C3, 30), (D1, 30), (D3, 30), (E1, 30), (E3, 30), (A1, 31), (A3, 31), (B1, 31), (B3, 31), (C1, 31), (C3, 31), (D1, 31), (D3, 31), (E1, 31), (E3, 31), (A1, 32), (A3, 32), (B1, 32), (B3, 32), (C1, 32), (C3, 32), (D1, 32), (D3, 32), (E1, 32), (E3, 32)</p>

Reference:	2005-10-08 03:02:47 H	TxPhase							
Test	: 2005-12-30 14:38:12 H								
A1	A3	B1	B3	C1	C3	D1	D3	E1	E3
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								
A2	A4	B2	B4	C2	C4	D2	D4	E2	E4
26	27	28	29	30	31	32			

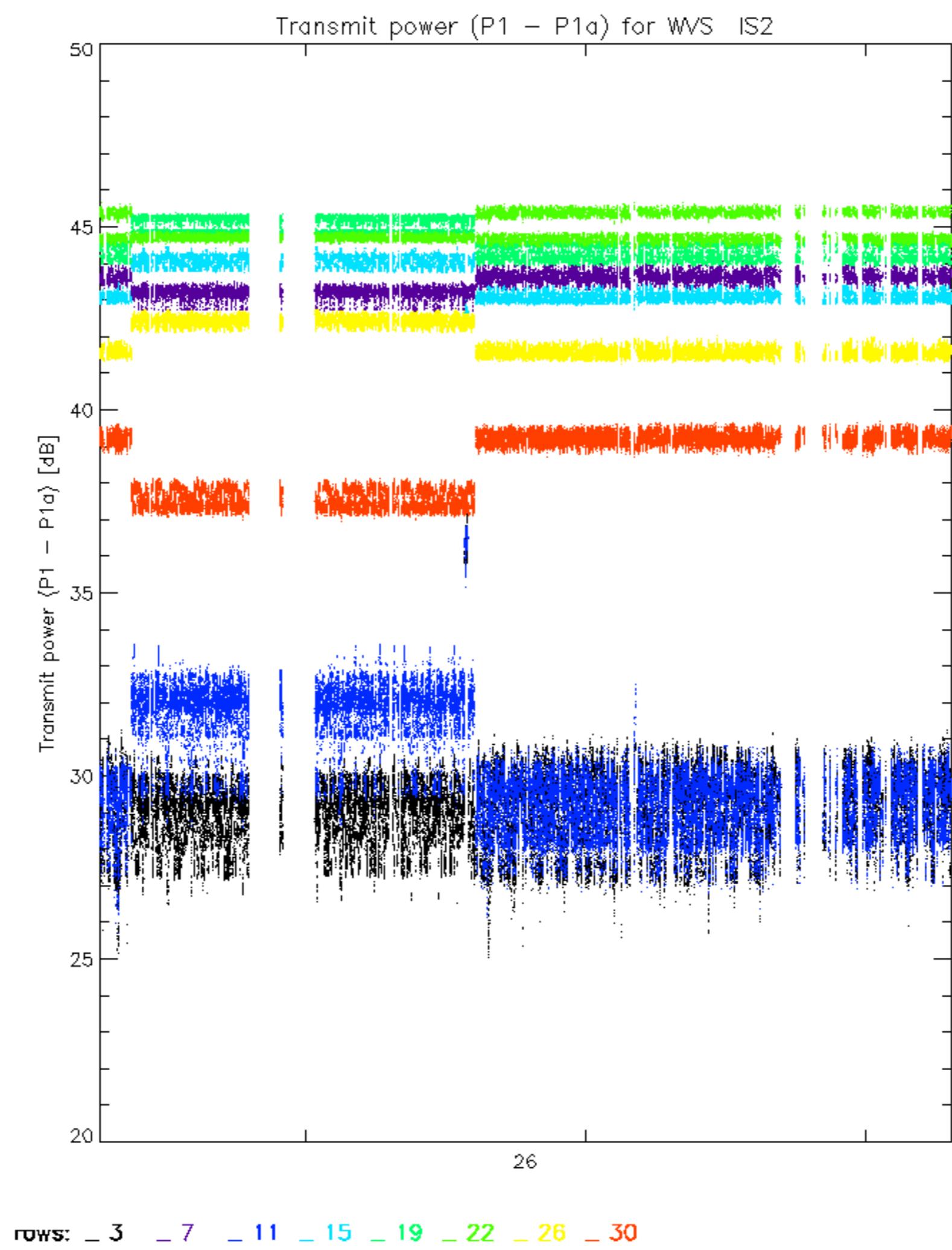


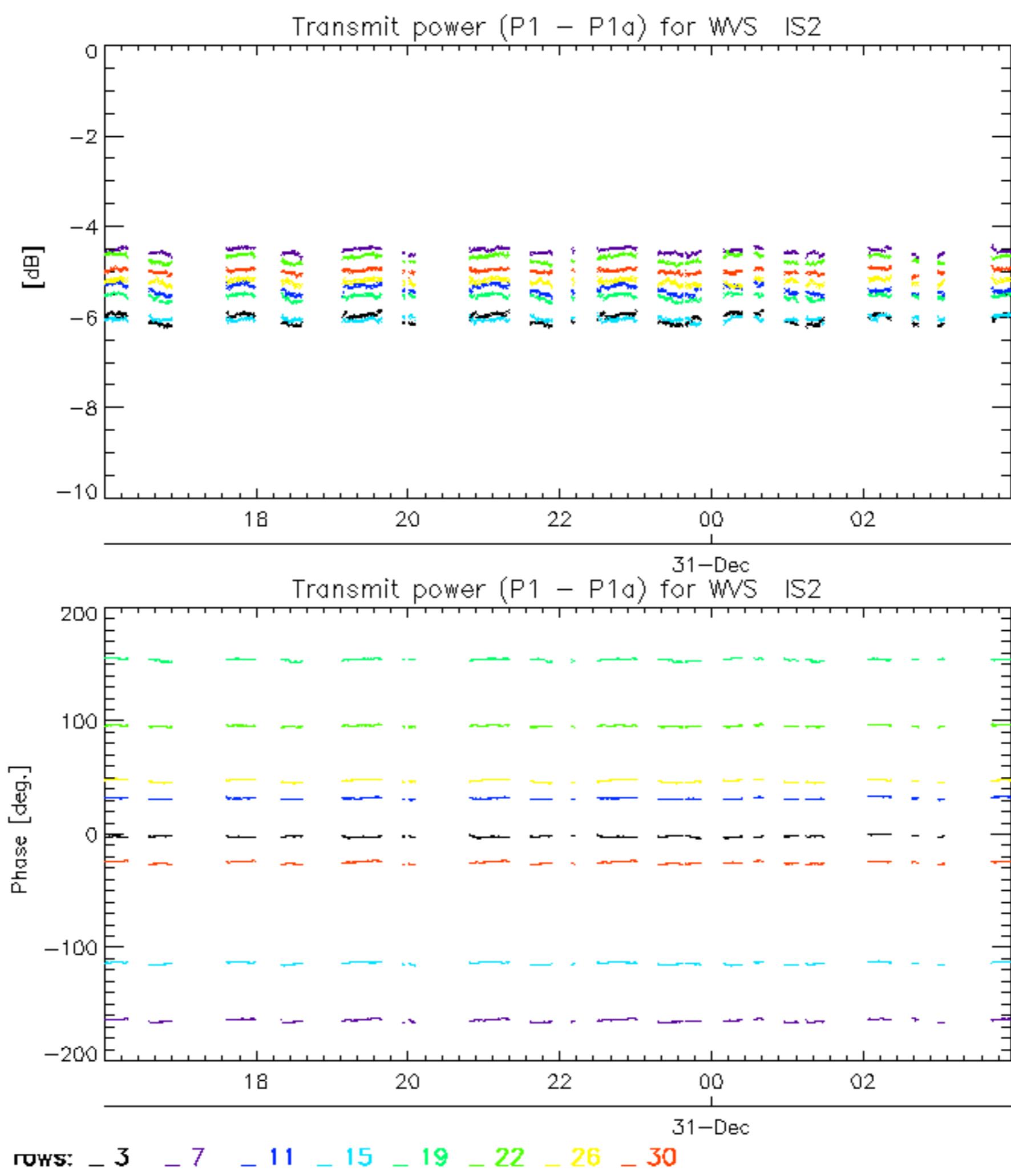
Reference:	2005-09-29 07:47:20 V	TxPhase
Test	: 2005-12-29 10:08:02 V	
		1
		2
		3
		4
		5
		6
		7
A1	A3	B1
B3	C1	C3
D1	D3	E1
E3		8
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
A2	A4	B2
B4	C2	C4
D2	D4	E2
E4		24
		25
		26
		27
		28
		29
		30
		31
		32



Transmit power ($P_1 - P_{1a}$) for GM1 SS331-Dec
Transmit power ($P_1 - P_{1a}$) for GM1 SS3

rows: -3 -7 -11 -15 -19 -22 -26 -30





No unavailabilities during the reported period.

