

PRELIMINARY REPORT OF 050105

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

last update on Wed Jan 5 11:00:42 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 2005-01-04 00:00:00 to 2005-01-05 11:00:42

PDHS-K

| AUXILIARY FILE | WVS | GM1 | IMM | APM | WSM |
|---|-----|-----|-----|-----|-----|
| ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000 | 27 | 62 | 5 | 0 | 0 |
| ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000 | 27 | 62 | 5 | 0 | 0 |
| ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000 | 27 | 62 | 5 | 0 | 0 |
| ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000 | 27 | 62 | 5 | 0 | 0 |

PDHS-E

| AUXILIARY FILE | WVS | GM1 | IMM | APM | WSM |
|---|-----|-----|-----|-----|-----|
| ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000 | 48 | 53 | 4 | 5 | 4 |
| ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000 | 48 | 53 | 4 | 5 | 4 |
| ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000 | 48 | 53 | 4 | 5 | 4 |
| ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000 | 48 | 53 | 4 | 5 | 4 |

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

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 |
|--------------|-----------------|
| V | 20050103 084151 |
| H | 20050104 081014 |

MSM in V/V polarisation

| Pre-launch Reference | DDS-B (2003-06-12) reference |
|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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

MSM in H/H polarisation

| | |
|-------------------------------------|-------------------------------------|
| Pre-launch Reference | DDS-B (2003-06-12) reference |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> |

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

| |
|--|
| Evolution of cal pulses for WVS |
| <input type="checkbox"/> |
| <input checked="" type="checkbox"/> |

4.1.2 - Evolution for GM1

| |
|--|
| Evolution of cal pulses for GM1 |
| <input type="checkbox"/> |
| <input checked="" type="checkbox"/> |

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 | -3.451183 | 0.029493 | 0.096300 |
| 7 | P1 | -3.098856 | 0.024238 | 0.059373 |
| 11 | P1 | -4.653022 | 0.045548 | 0.022238 |
| 15 | P1 | -5.662931 | 0.038488 | -0.001009 |
| 19 | P1 | -3.658129 | 0.005790 | -0.007846 |
| 22 | P1 | -4.576216 | 0.016901 | 0.029140 |
| 26 | P1 | -4.939386 | 0.023241 | 0.030974 |
| 30 | P1 | -7.120365 | 0.013490 | -0.032192 |
| 3 | P1 | -15.939770 | 0.109517 | 0.018299 |
| 7 | P1 | -15.506567 | 0.158769 | -0.035804 |
| 11 | P1 | -20.755074 | 0.531615 | -0.288882 |
| 15 | P1 | -11.614836 | 0.095319 | -0.026730 |
| 19 | P1 | -14.165399 | 0.031702 | -0.021703 |
| 22 | P1 | -16.073111 | 0.458015 | 0.239549 |
| 26 | P1 | -17.737669 | 0.256566 | 0.171282 |
| 30 | P1 | -17.878651 | 0.304203 | 0.093826 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -22.342463 | 0.086802 | 0.095721 |
| 7 | P2 | -22.552134 | 0.167578 | 0.117237 |
| 11 | P2 | -14.859193 | 0.175623 | 0.165452 |
| 15 | P2 | -7.159691 | 0.116480 | 0.087471 |
| 19 | P2 | -9.731340 | 0.198689 | 0.095195 |
| 22 | P2 | -17.157417 | 0.100073 | 0.116771 |
| 26 | P2 | -16.532454 | 0.114299 | 0.061598 |

| | | | | |
|----|----|------------|----------|----------|
| 30 | P2 | -18.960981 | 0.083138 | 0.042333 |
|----|----|------------|----------|----------|

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.209945 | 0.007083 | 0.025022 |
| 7 | P3 | -8.209919 | 0.007084 | 0.024871 |
| 11 | P3 | -8.209912 | 0.007085 | 0.024839 |
| 15 | P3 | -8.209915 | 0.007085 | 0.024853 |
| 19 | P3 | -8.209962 | 0.007086 | 0.025113 |
| 22 | P3 | -8.209979 | 0.007086 | 0.025191 |
| 26 | P3 | -8.209966 | 0.007084 | 0.025111 |
| 30 | P3 | -8.209702 | 0.007094 | 0.026466 |

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 | -2.849716 | 0.106222 | 0.119371 |
| 7 | P1 | -2.980001 | 0.062360 | 0.093486 |
| 11 | P1 | -3.950383 | 0.047521 | 0.025976 |
| 15 | P1 | -3.520630 | 0.076731 | 0.070306 |
| 19 | P1 | -3.610942 | 0.012878 | 0.000400 |
| 22 | P1 | -5.622274 | 0.069891 | -0.046500 |
| 26 | P1 | -6.522762 | 0.023885 | -0.039915 |
| 30 | P1 | -6.300031 | 0.044677 | 0.030261 |
| 3 | P1 | -10.738352 | 0.056881 | -0.167557 |
| 7 | P1 | -10.134460 | 0.157867 | -0.069384 |
| 11 | P1 | -12.444415 | 0.197257 | -0.230740 |

| | | | | |
|----|----|------------|----------|-----------|
| 15 | P1 | -11.728372 | 0.094536 | -0.077010 |
| 19 | P1 | -15.647462 | 0.048368 | -0.003956 |
| 22 | P1 | -24.141605 | 2.034988 | 0.229951 |
| 26 | P1 | -15.000708 | 0.387598 | 0.360294 |
| 30 | P1 | -20.134100 | 0.928455 | 0.165685 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -18.020184 | 0.036457 | 0.086120 |
| 7 | P2 | -22.594341 | 0.033085 | 0.132787 |
| 11 | P2 | -10.651546 | 0.036599 | 0.211891 |
| 15 | P2 | -5.058511 | 0.024960 | 0.051091 |
| 19 | P2 | -6.957419 | 0.035966 | 0.074711 |
| 22 | P2 | -7.290970 | 0.027988 | 0.093417 |
| 26 | P2 | -23.960581 | 0.018637 | 0.047893 |
| 30 | P2 | -22.011374 | 0.022936 | 0.090148 |

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.041797 | 0.002854 | 0.020278 |
| 7 | P3 | -8.041866 | 0.002859 | 0.020228 |
| 11 | P3 | -8.041801 | 0.002854 | 0.020346 |
| 15 | P3 | -8.041952 | 0.002857 | 0.019916 |
| 19 | P3 | -8.041852 | 0.002865 | 0.020565 |
| 22 | P3 | -8.041867 | 0.002855 | 0.020105 |
| 26 | P3 | -8.041825 | 0.002858 | 0.020550 |
| 30 | P3 | -8.041744 | 0.002847 | 0.020111 |

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 | 0.000456061 |
| | stdev | 2.29589e-07 |
| MEAN Q | mean | 0.000525797 |
| | stdev | 2.42080e-07 |



5.2 - Input stdev I/Q

| channel | stat | DSS-B |
|---------|-------|-------------|
| STDEV I | mean | 0.127310 |
| | stdev | 0.000978594 |
| STDEV Q | mean | 0.127544 |
| | stdev | 0.000988541 |



5.3 - Gain imbalance I/Q



6 - Doppler Analysis

Preliminary report. The data is not yet controlled

6.1 - Unbiased Doppler Error for WVS

| Evolution of unbiased Doppler error (Real - Expected) |
|---|
| <input checked="" type="checkbox"/> |
| Acsending |
| <input checked="" type="checkbox"/> |

Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

Acsending

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

Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

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

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

Acsending

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

Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

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

Acsending

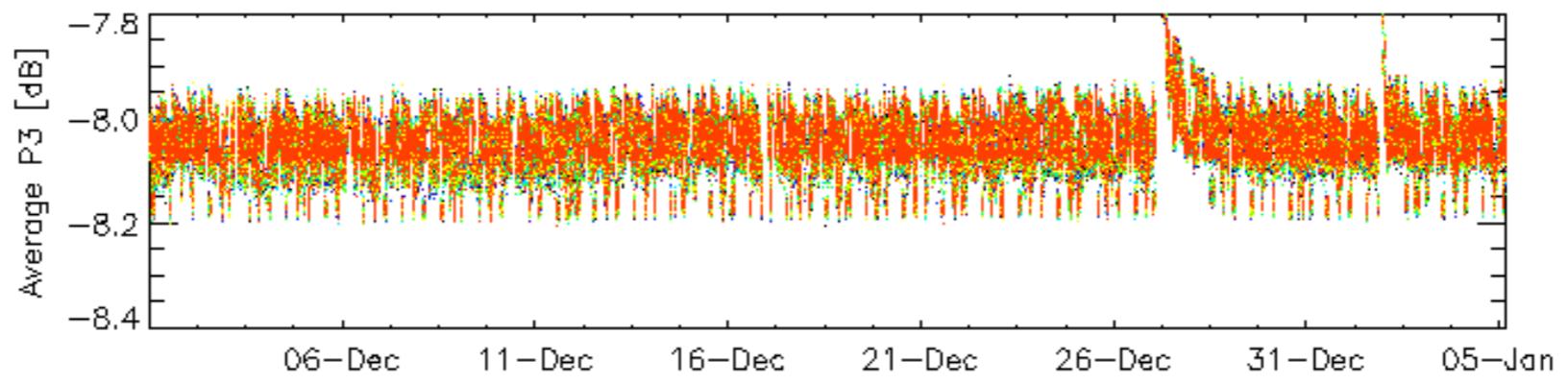
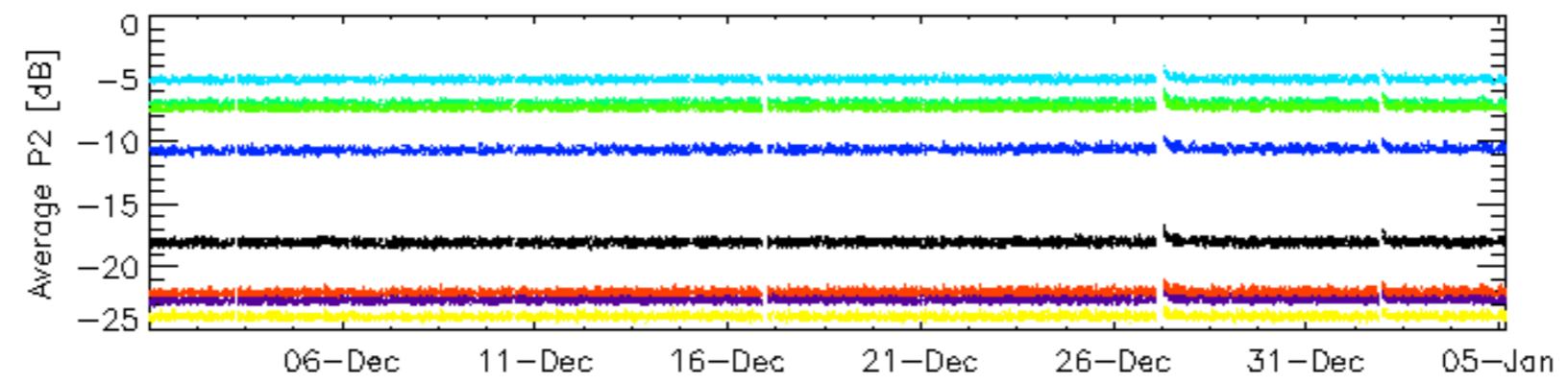
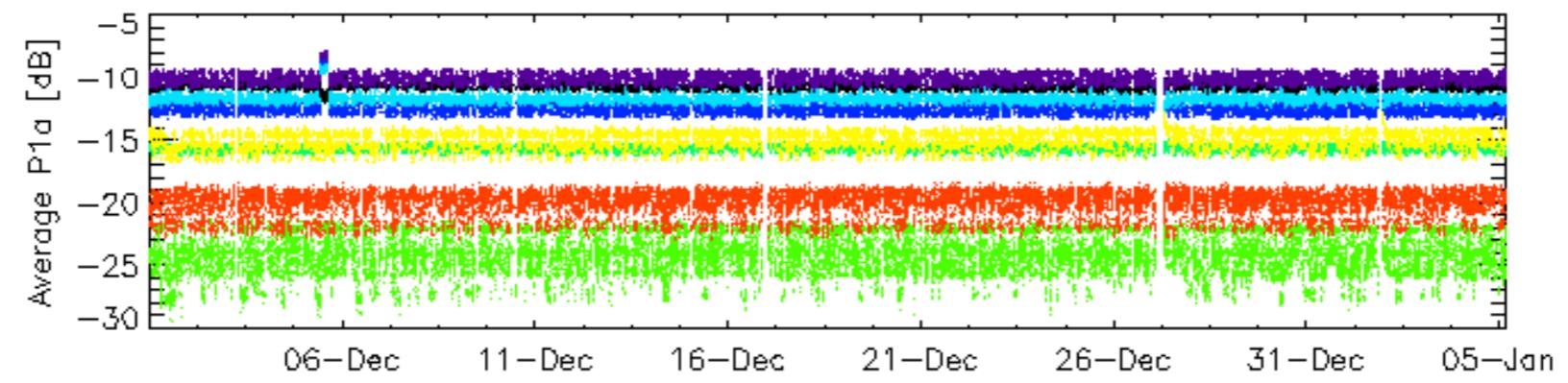
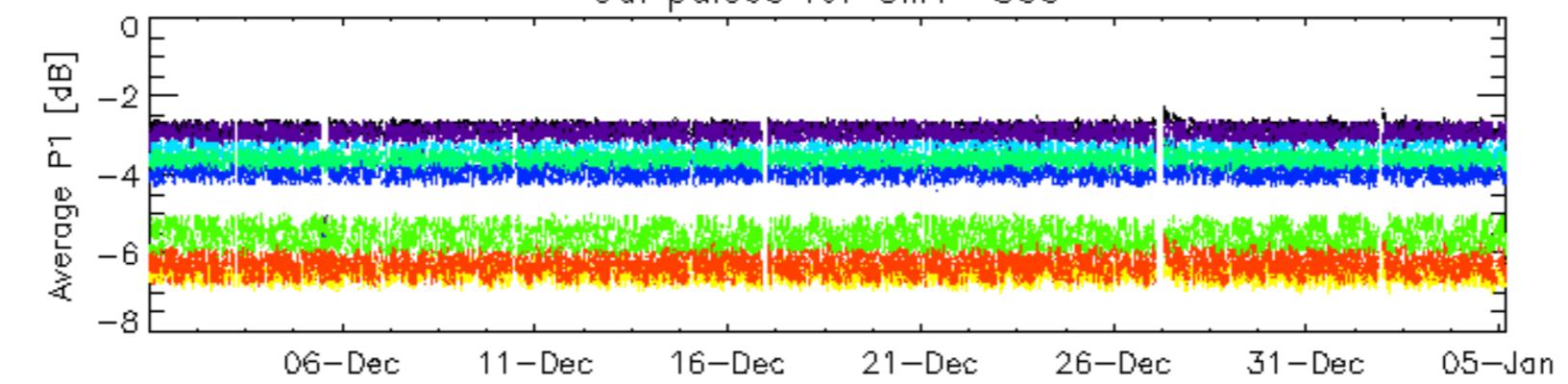
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|-------------------------------------|
| <input checked="" type="checkbox"/> |
| |
| |
| |

Descending

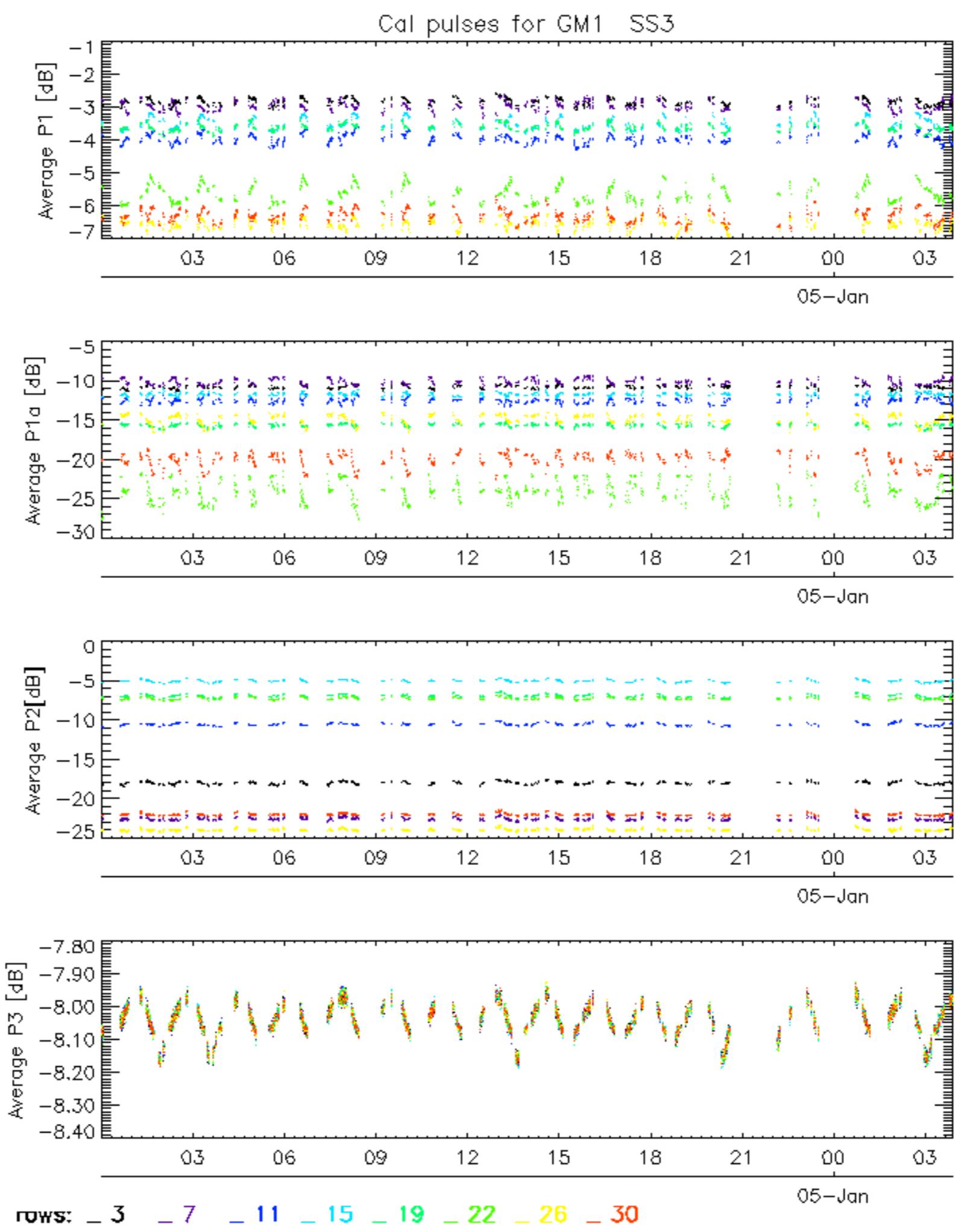
6.6 - Doppler evolution versus ANX for GM1

| Evolution Doppler error versus ANX |
|------------------------------------|
| |

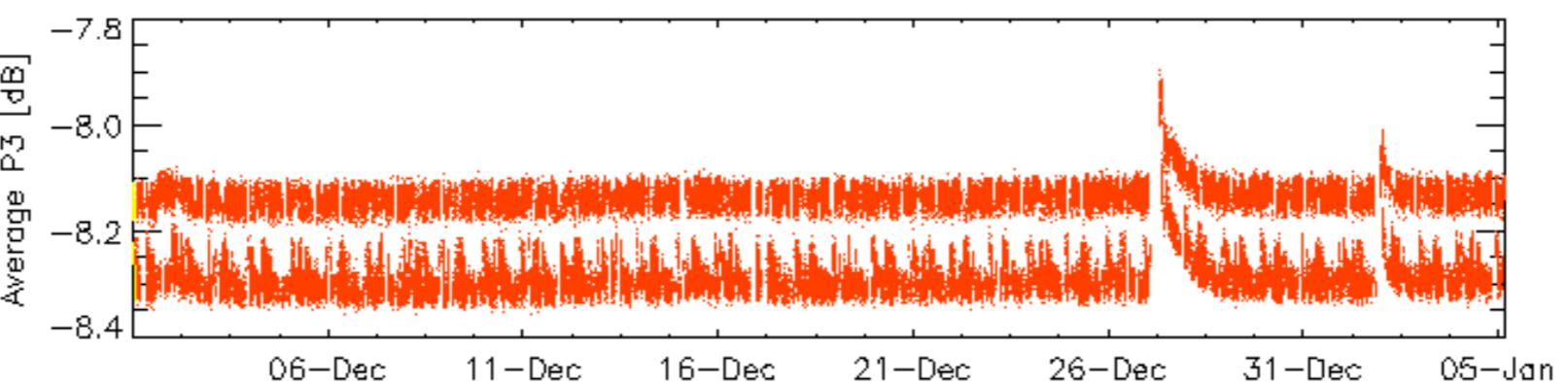
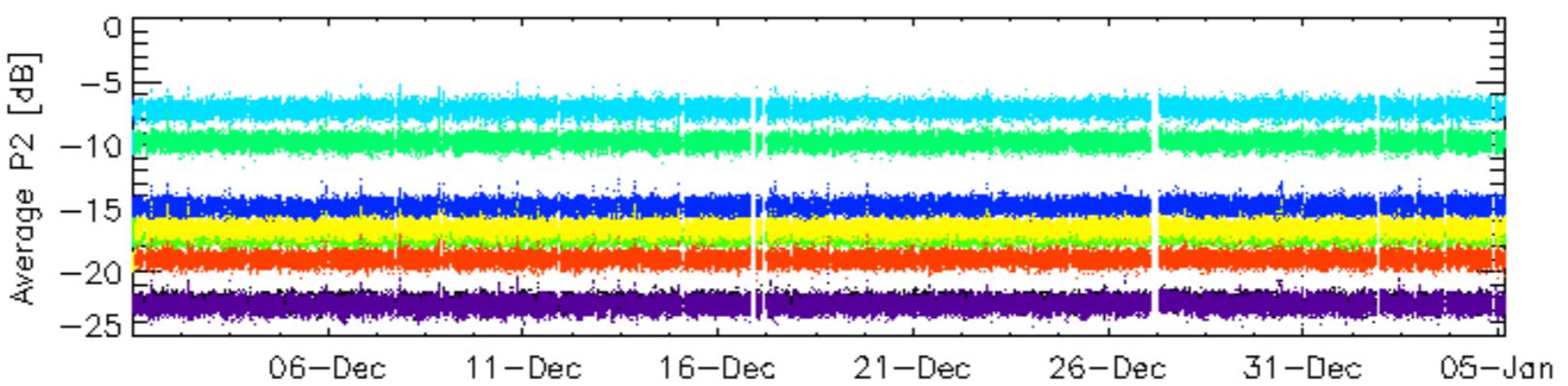
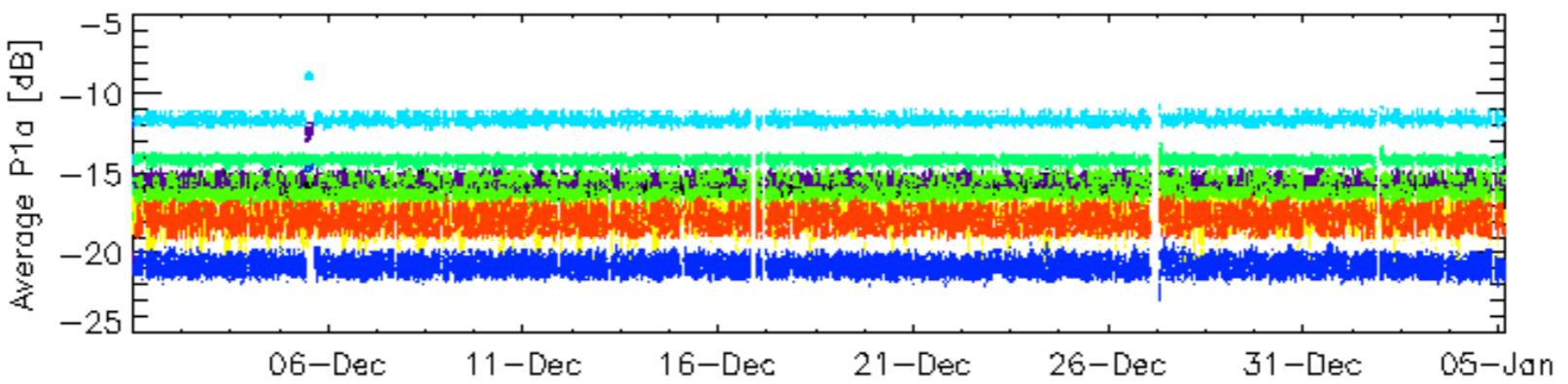
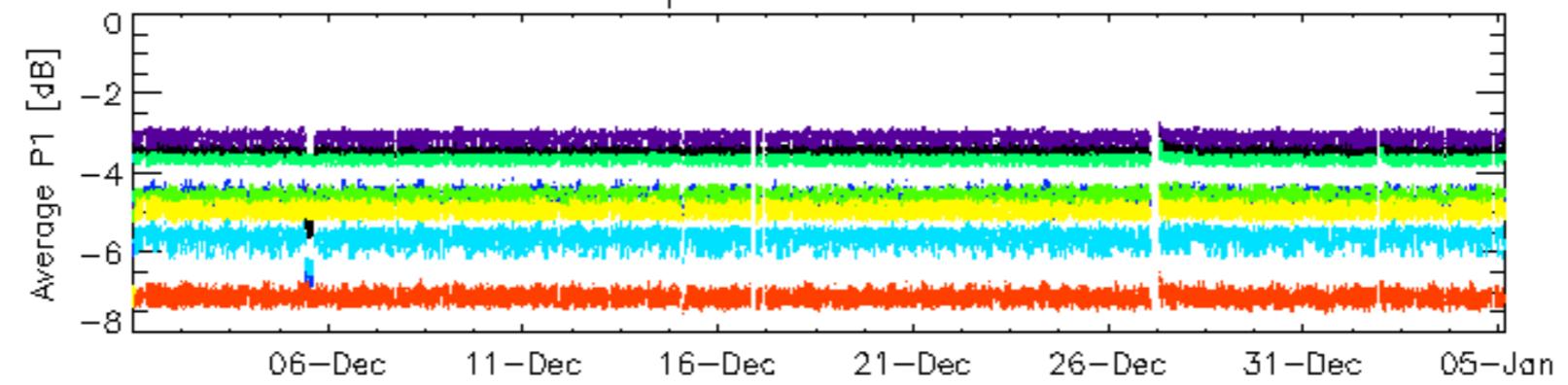
Cal pulses for GM1 SS3



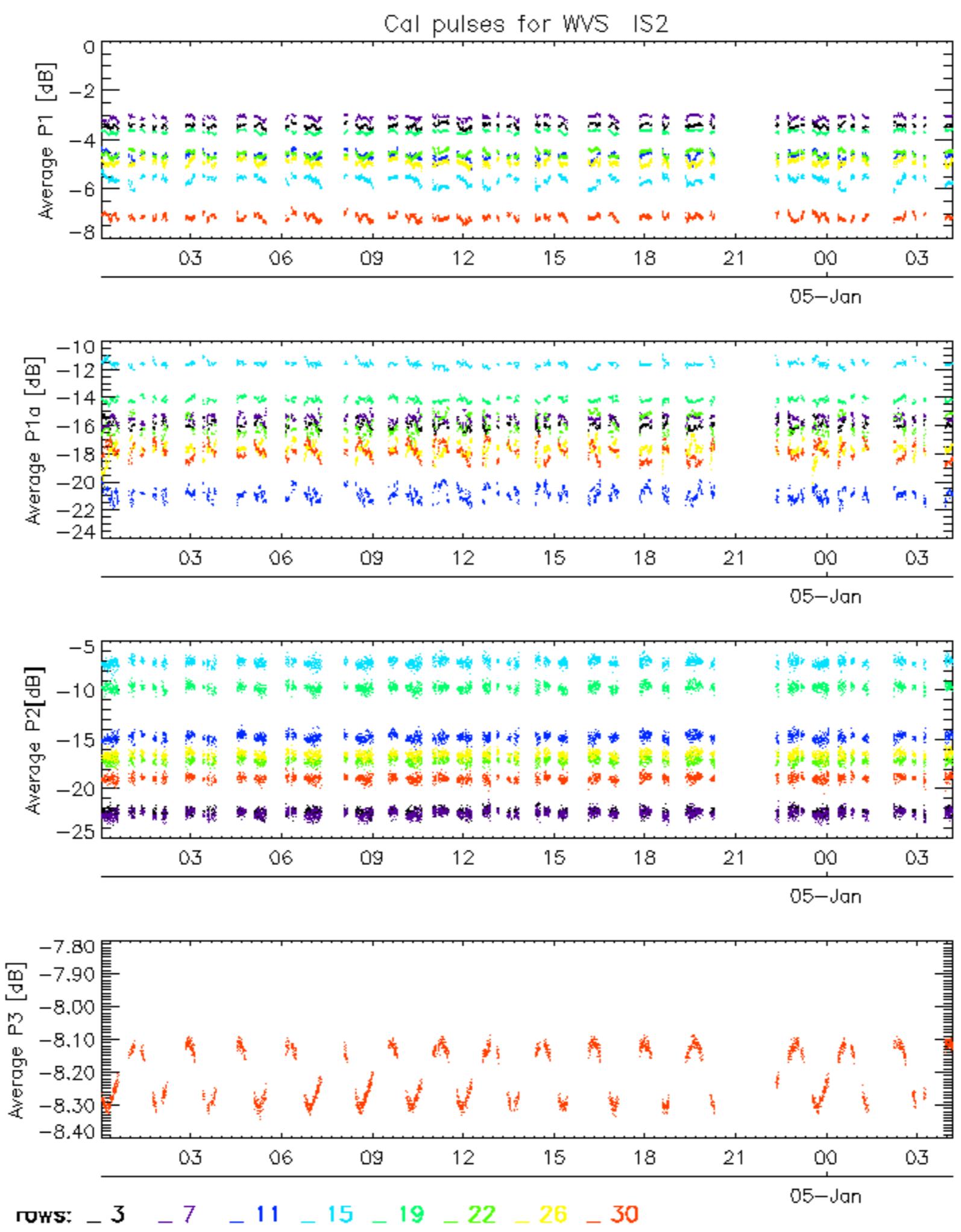
ROWS: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



Cal pulses for WVS IS2

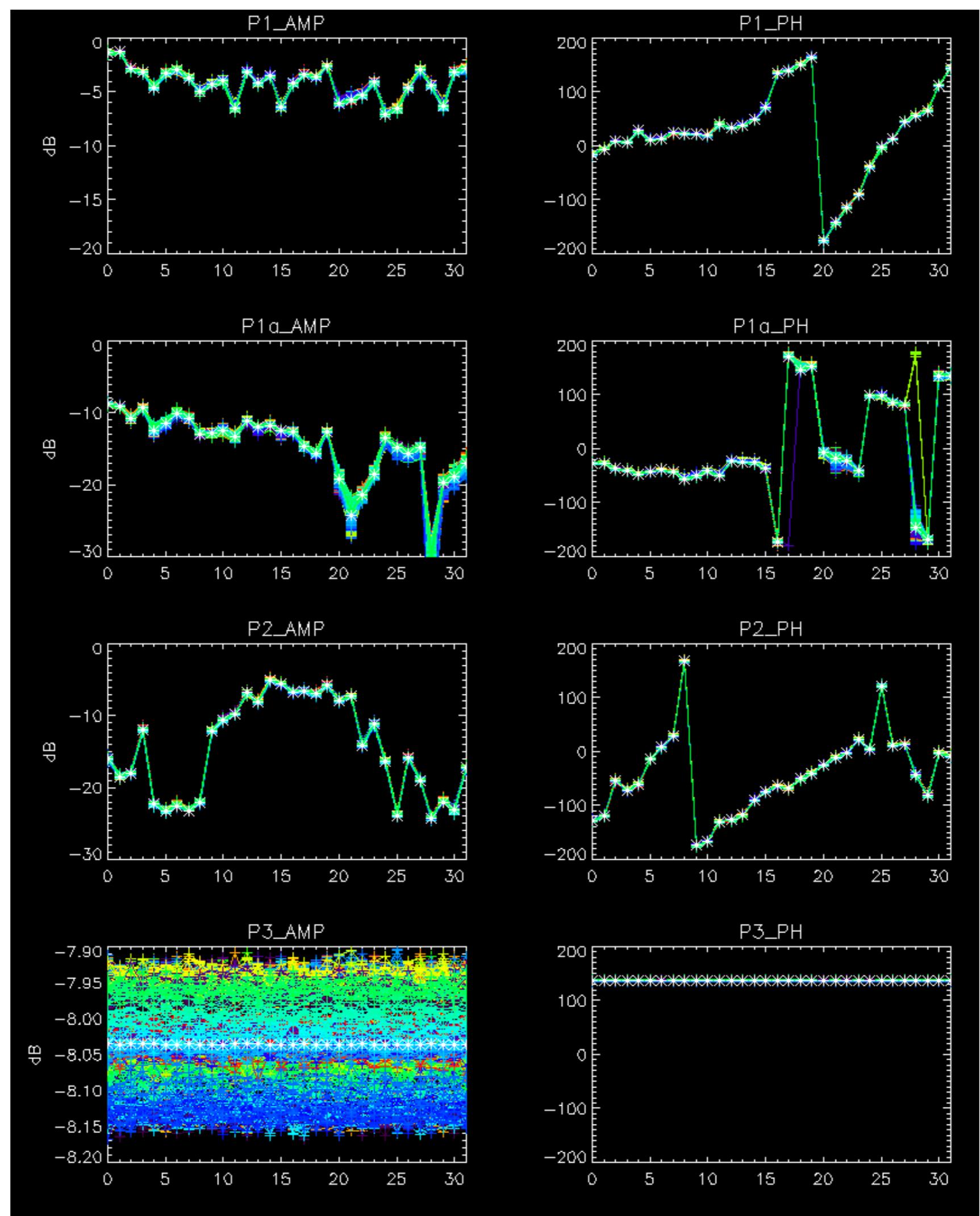


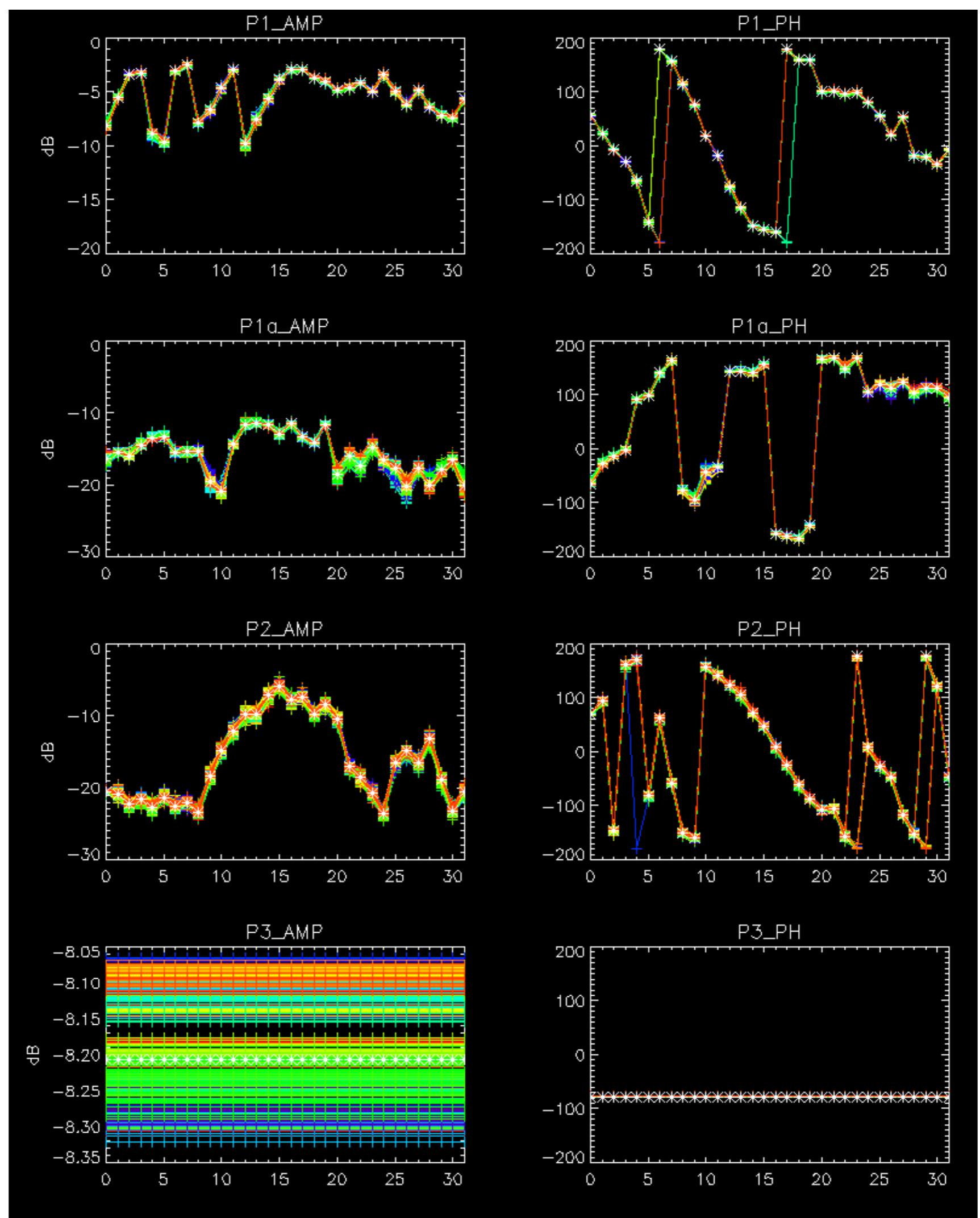
ROWS: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



No anomalies observed.

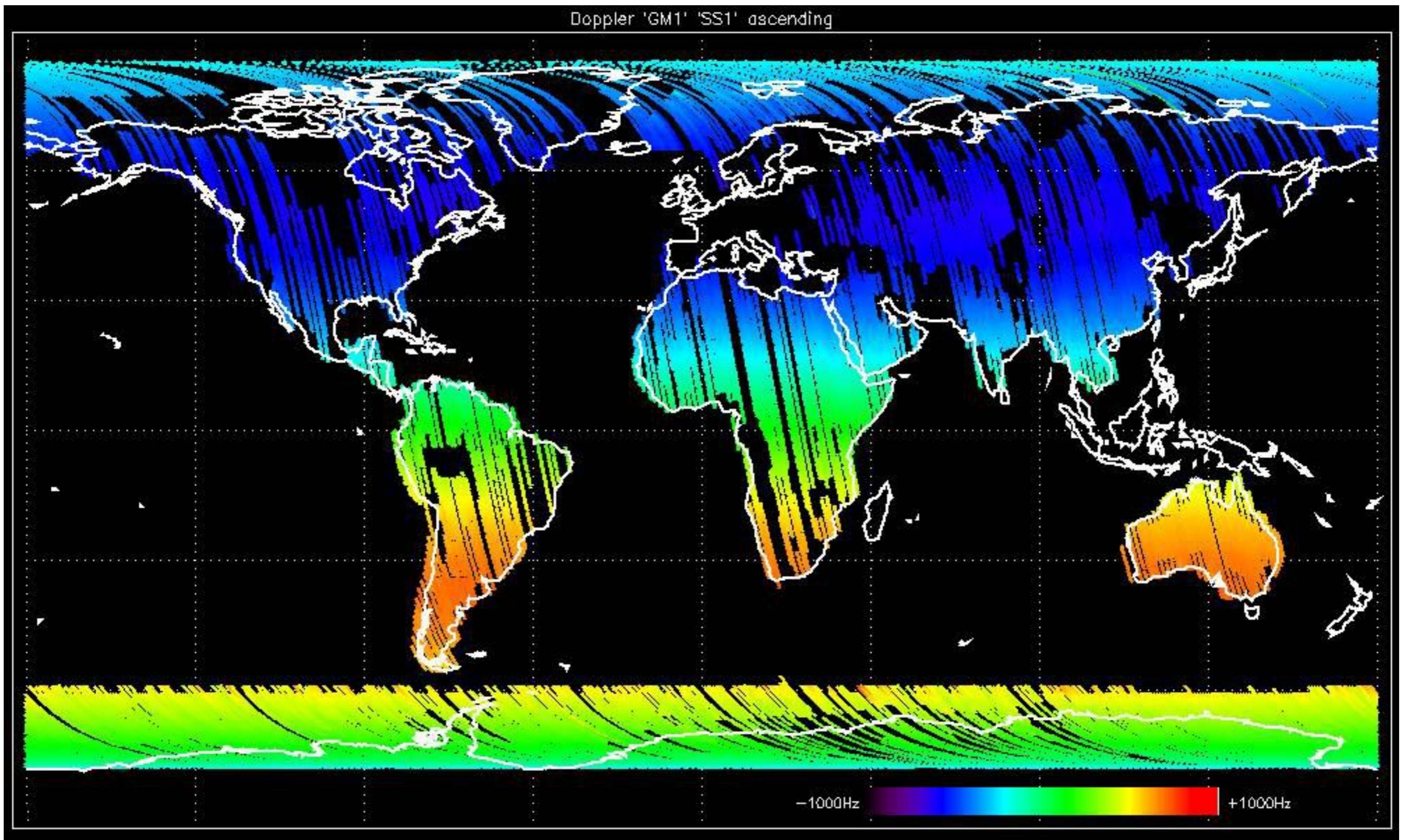


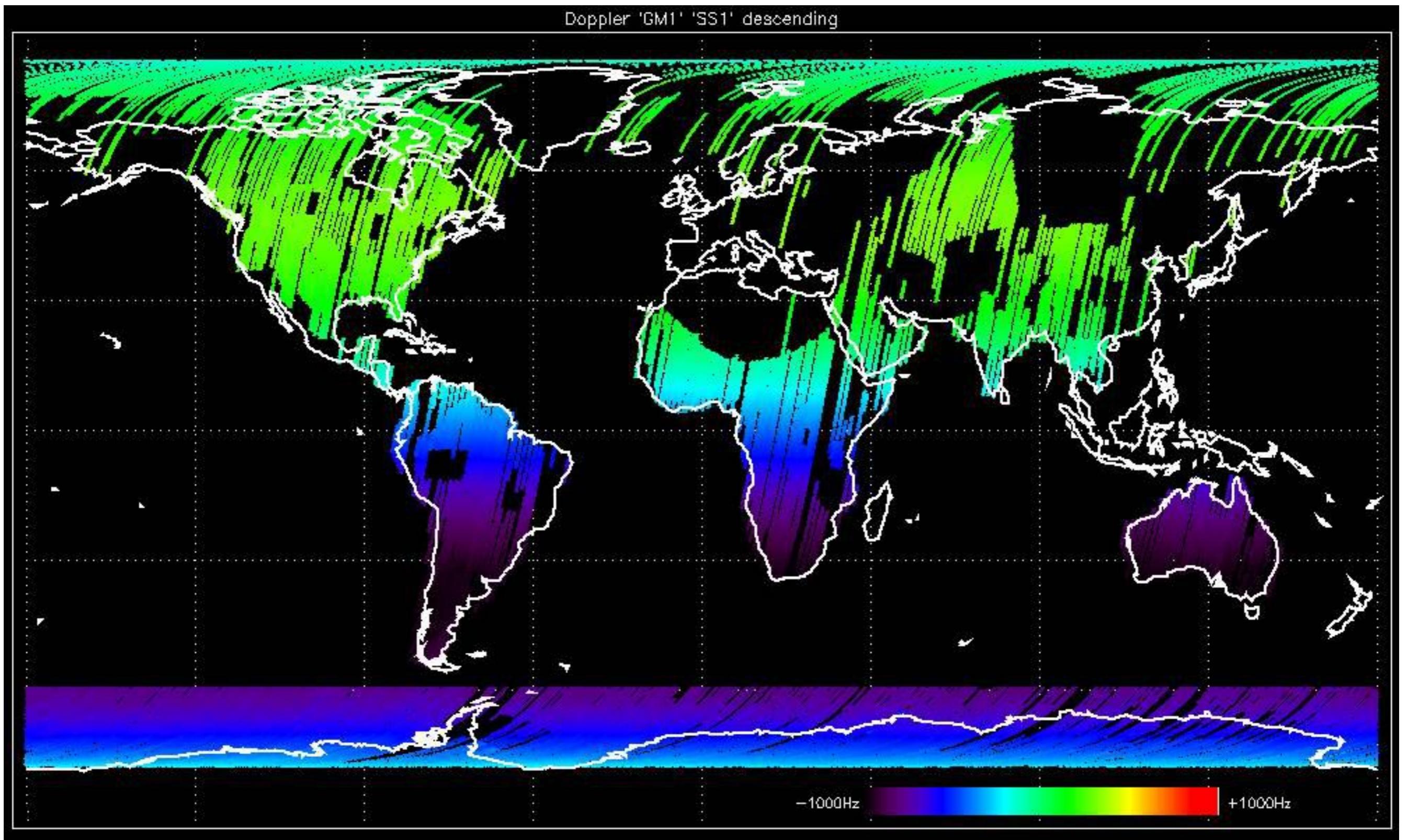


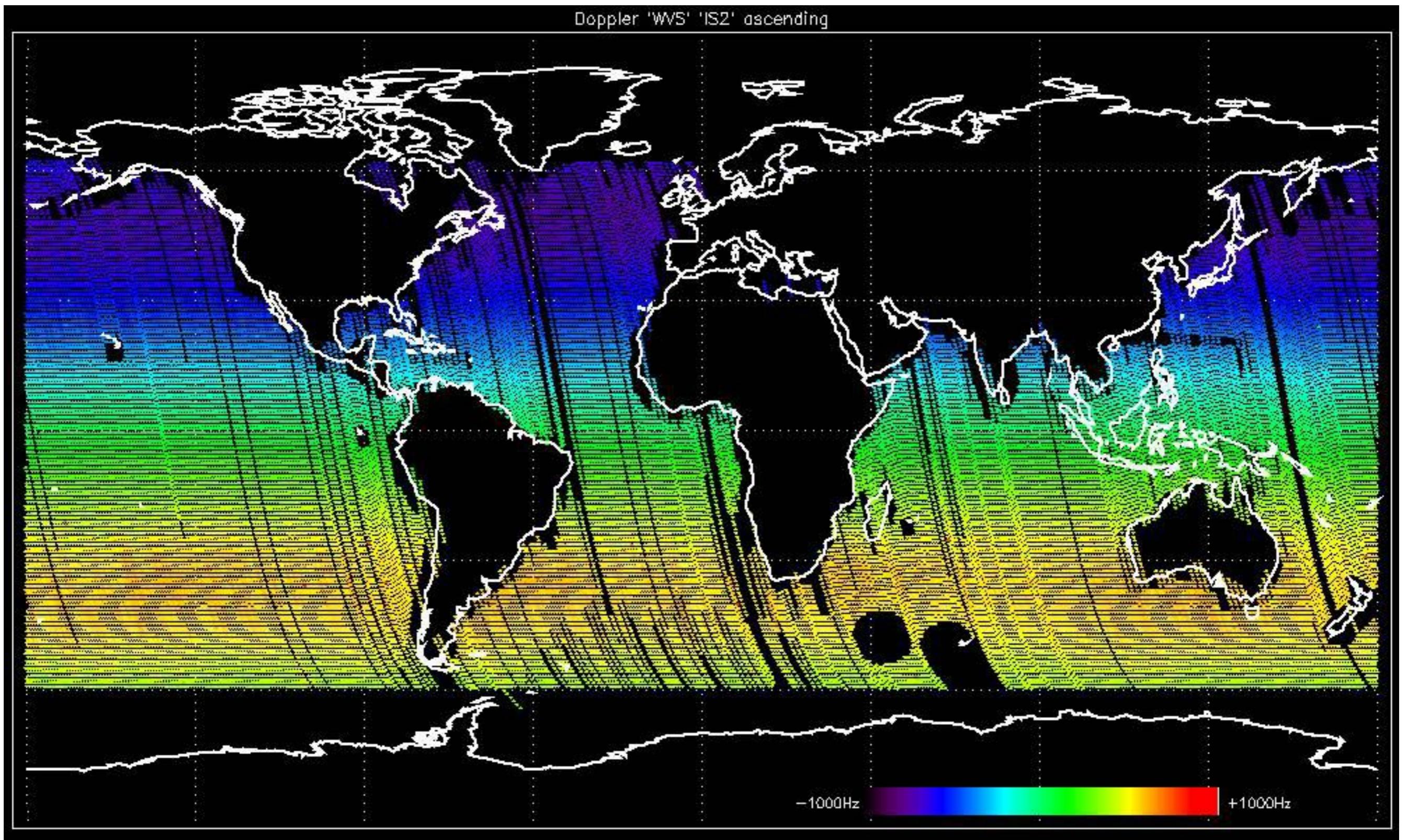


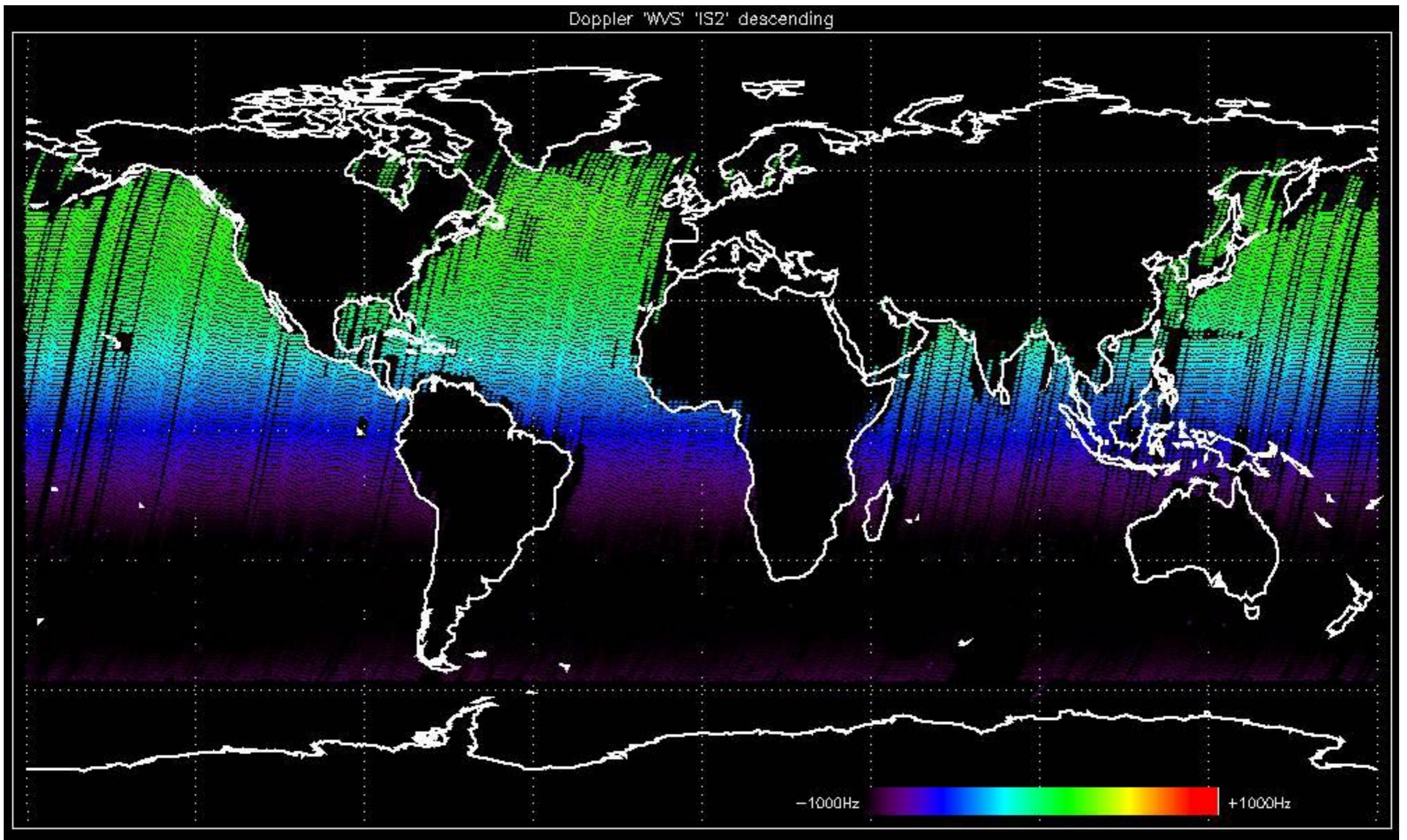
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

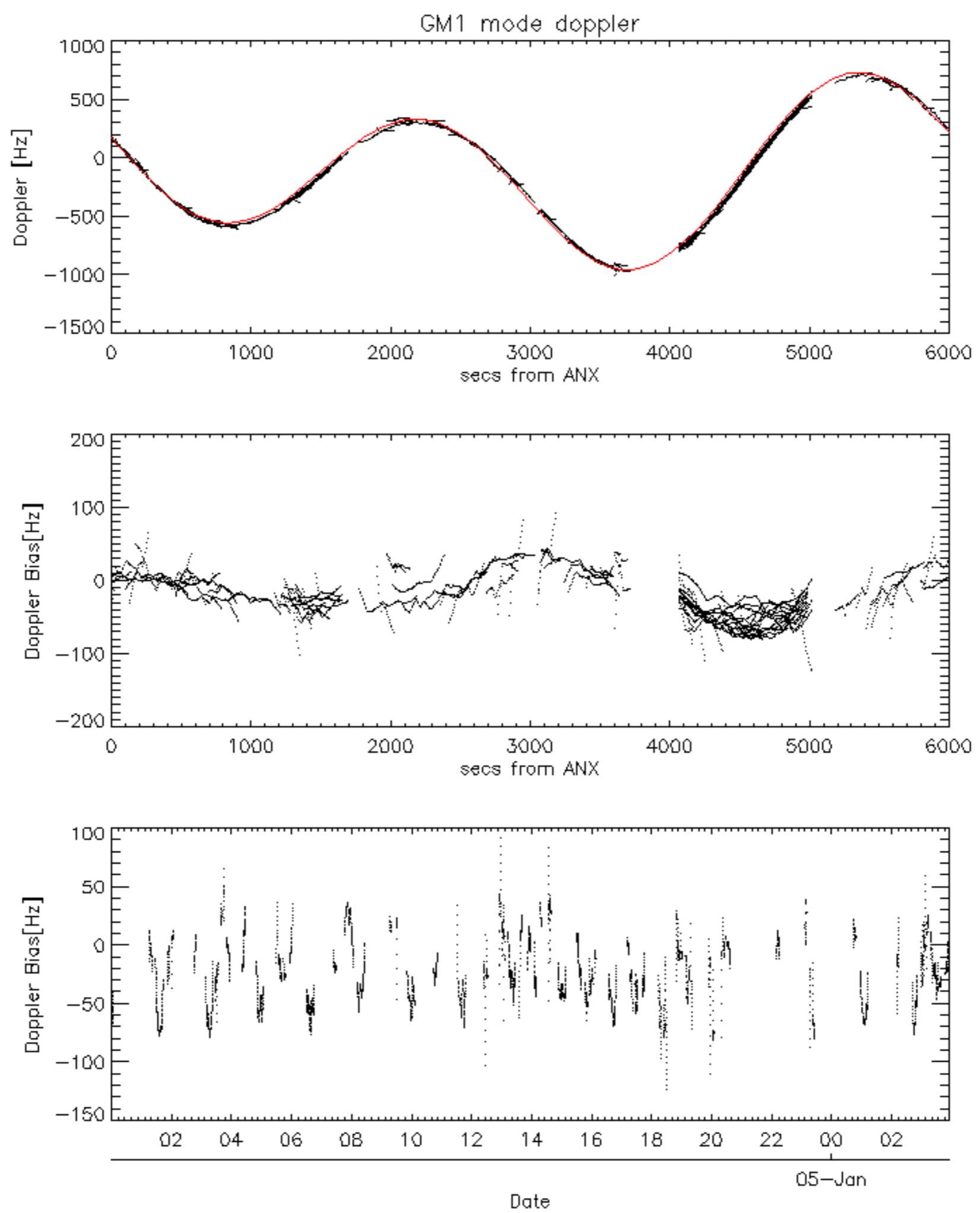


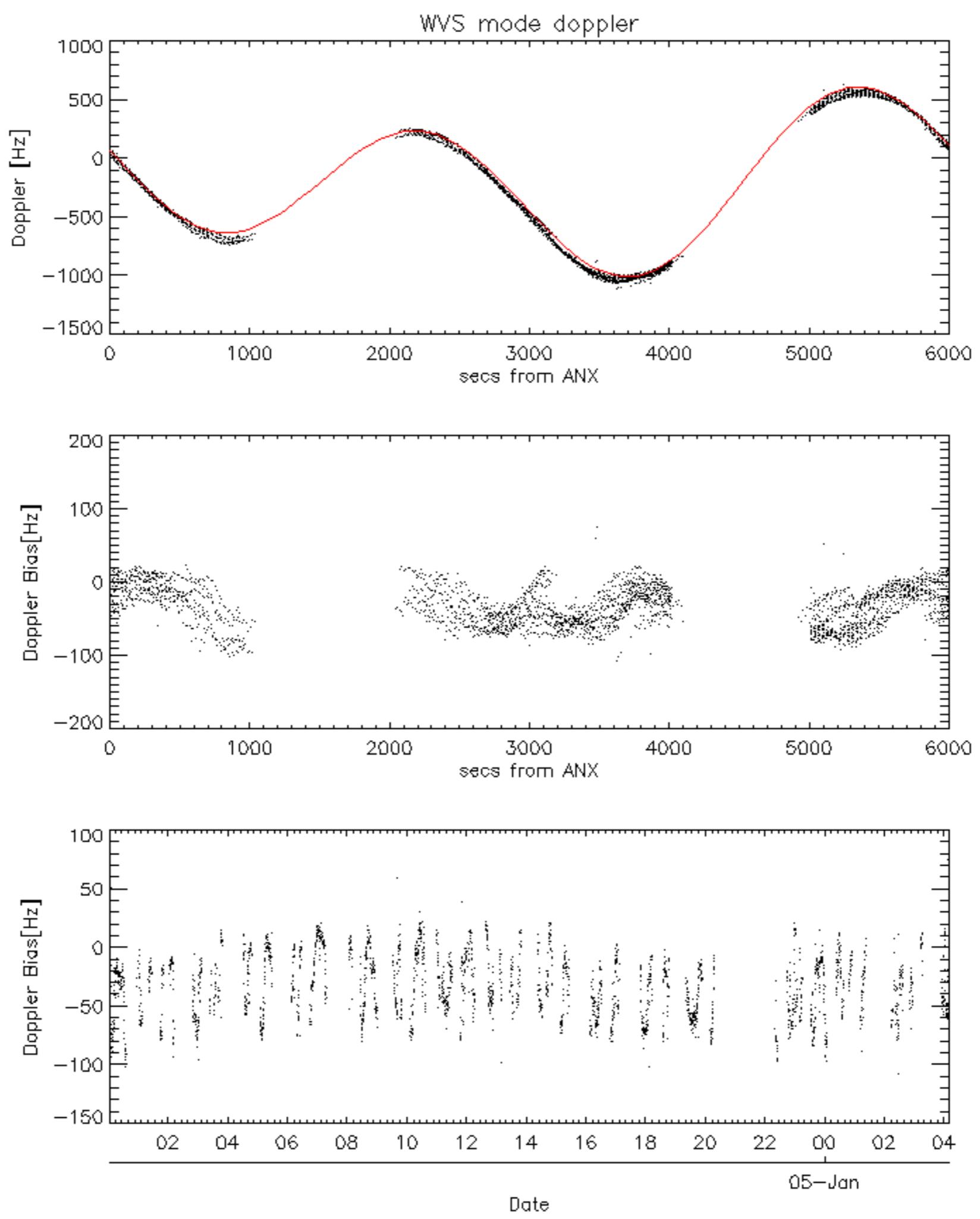


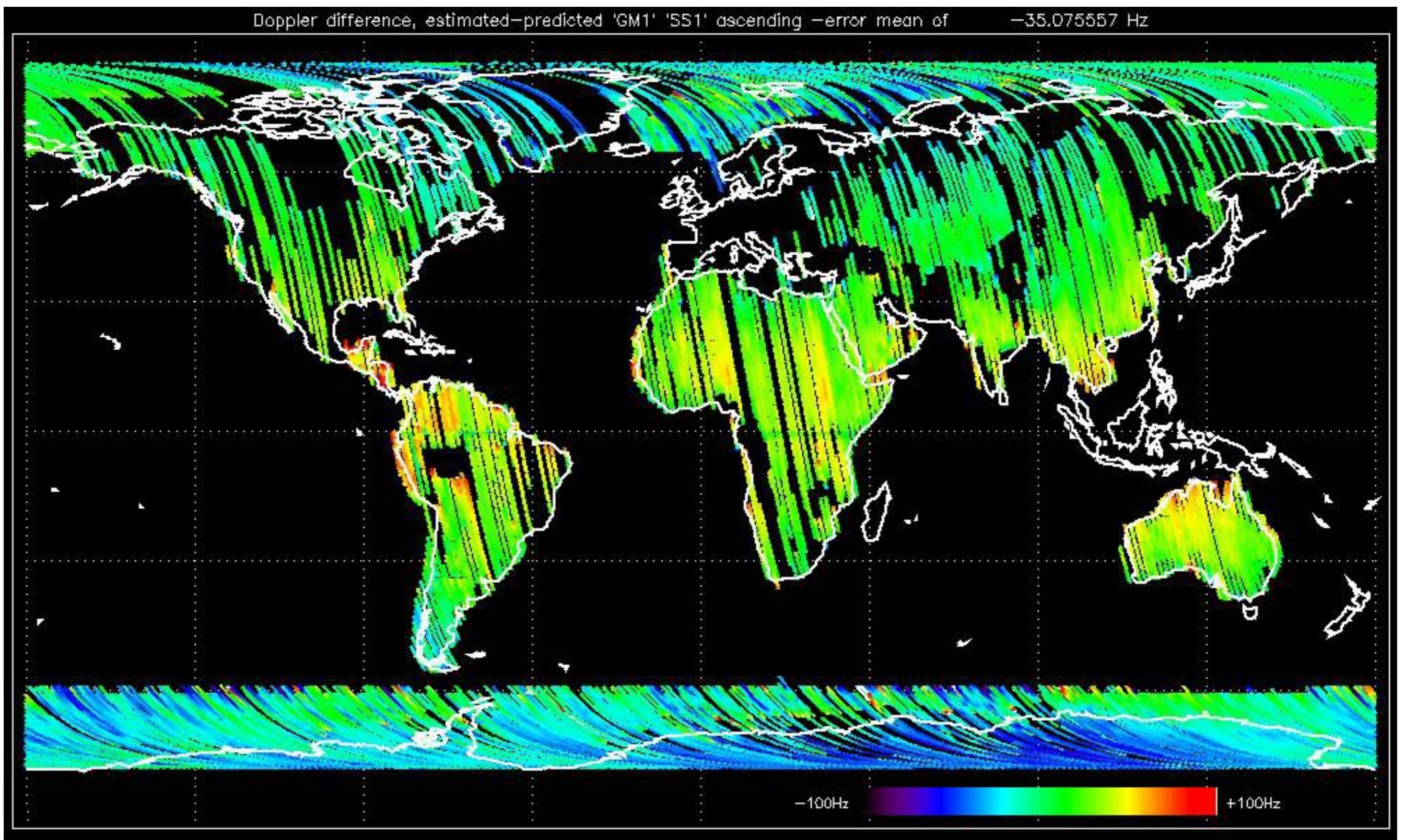


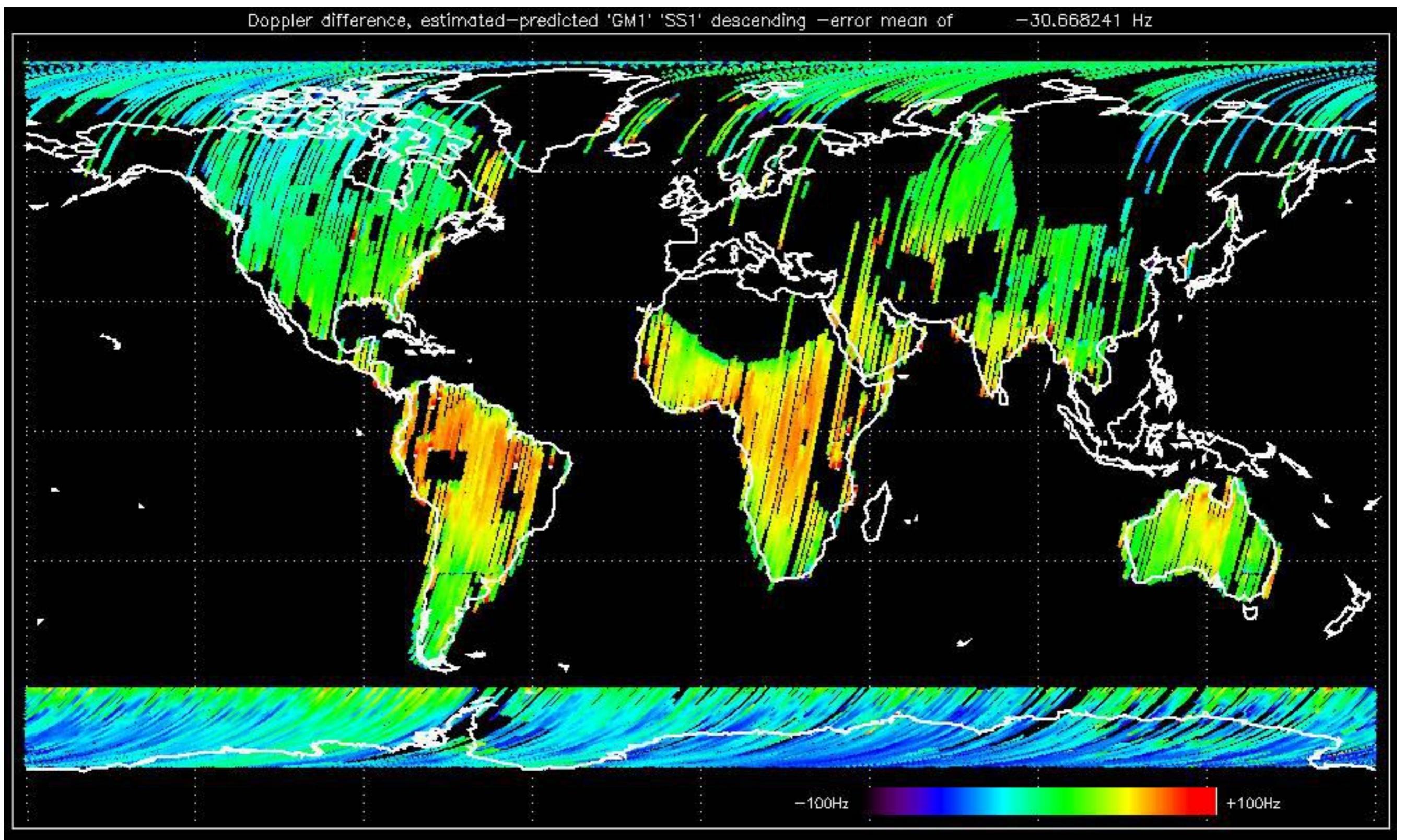


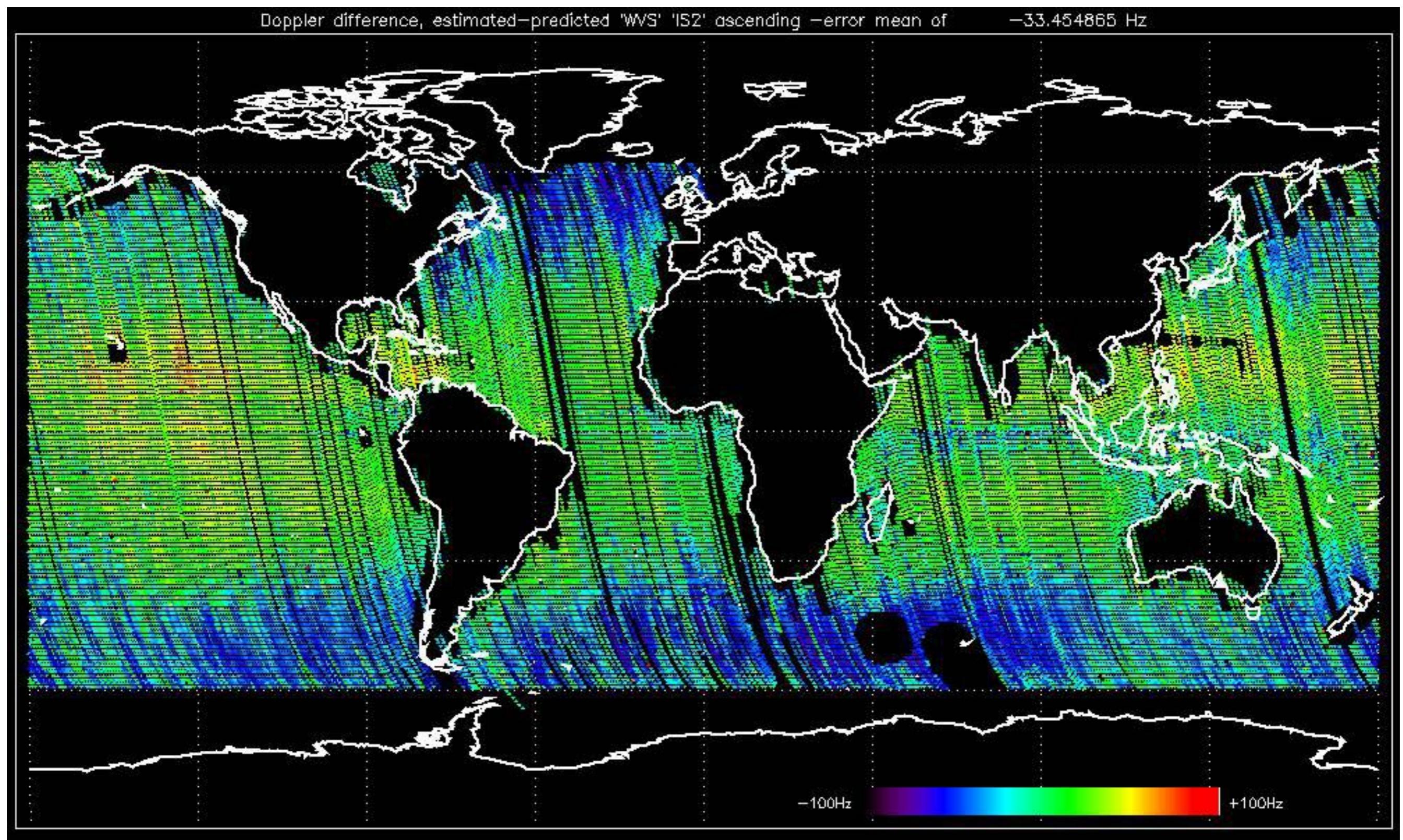


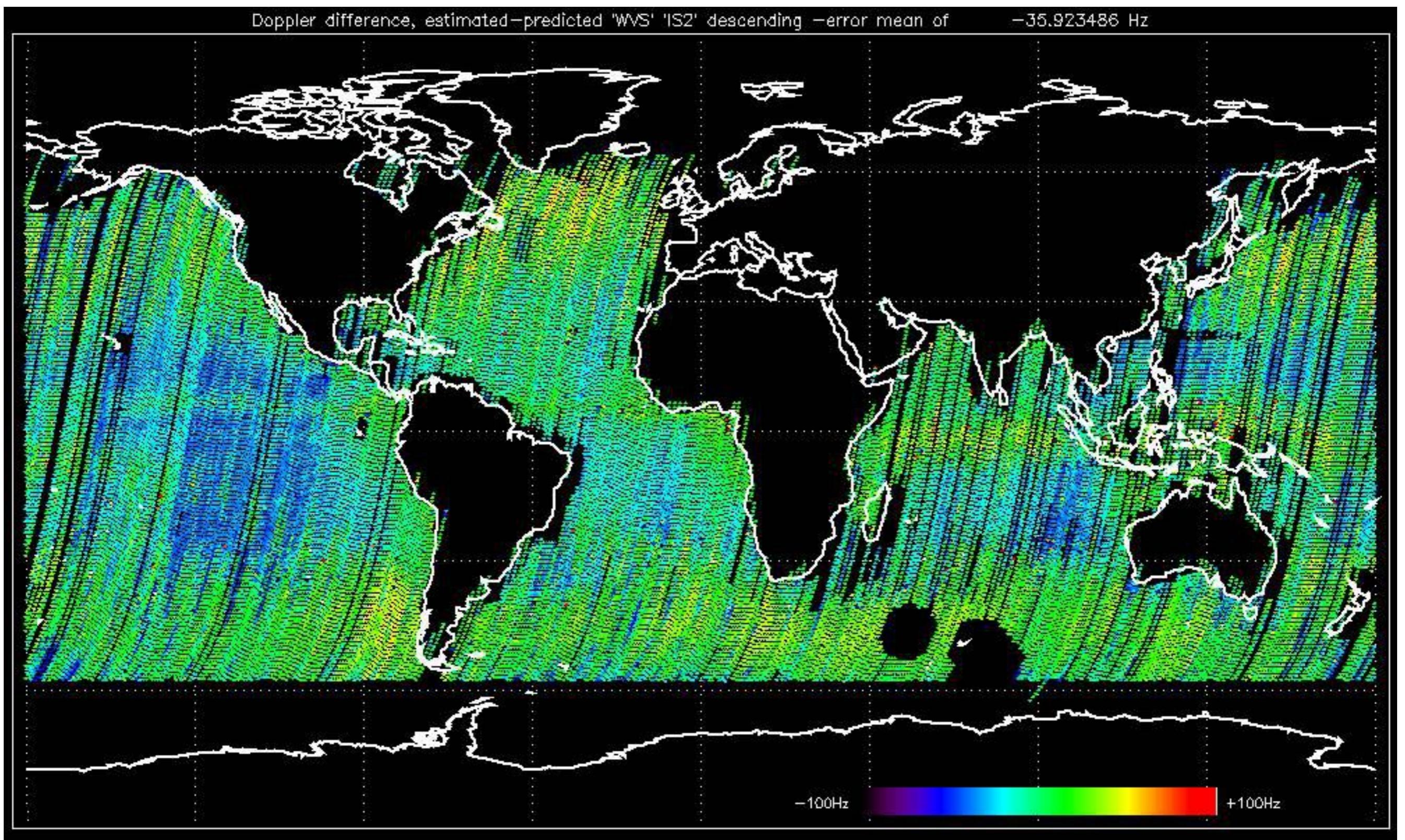








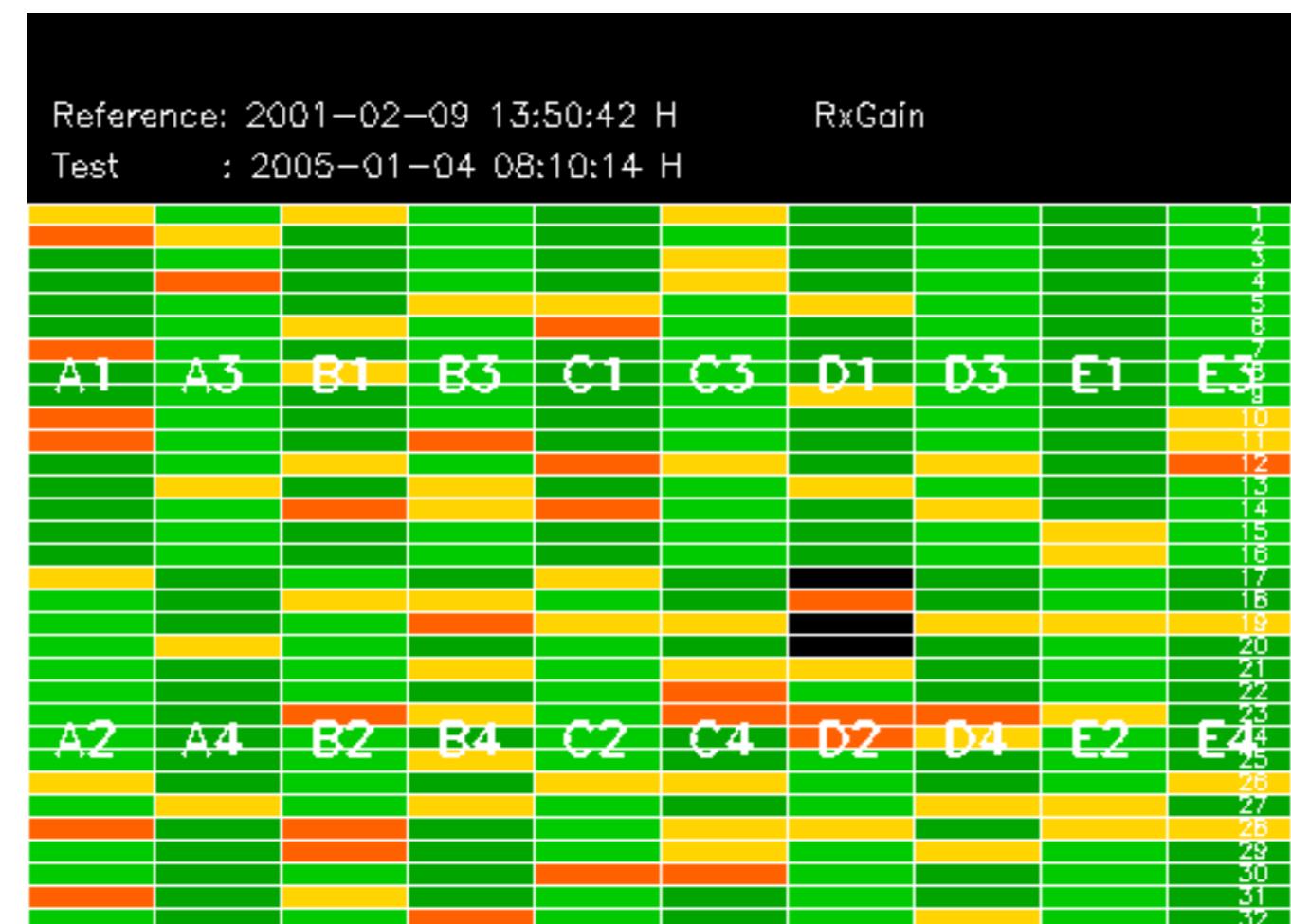


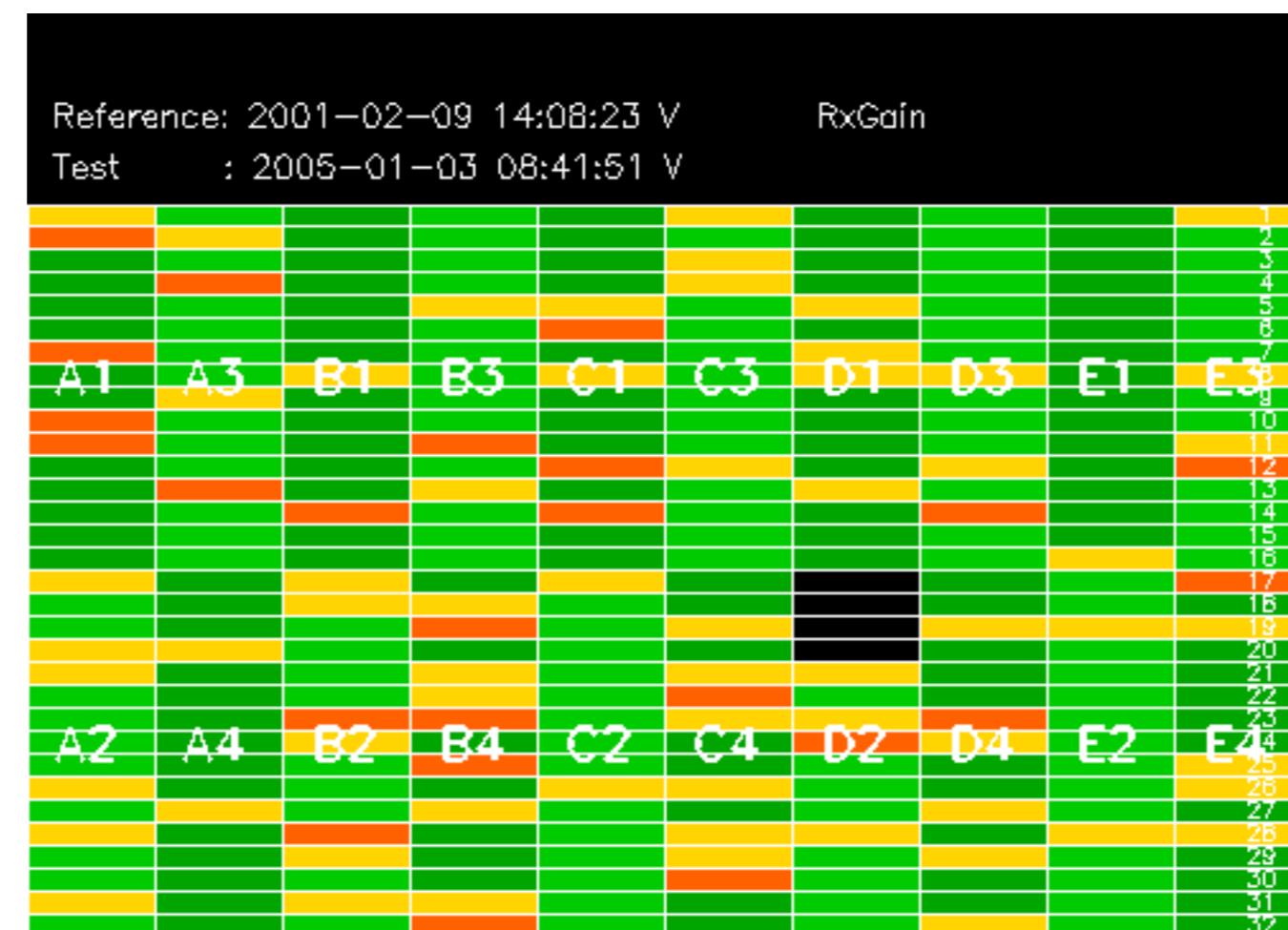


The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

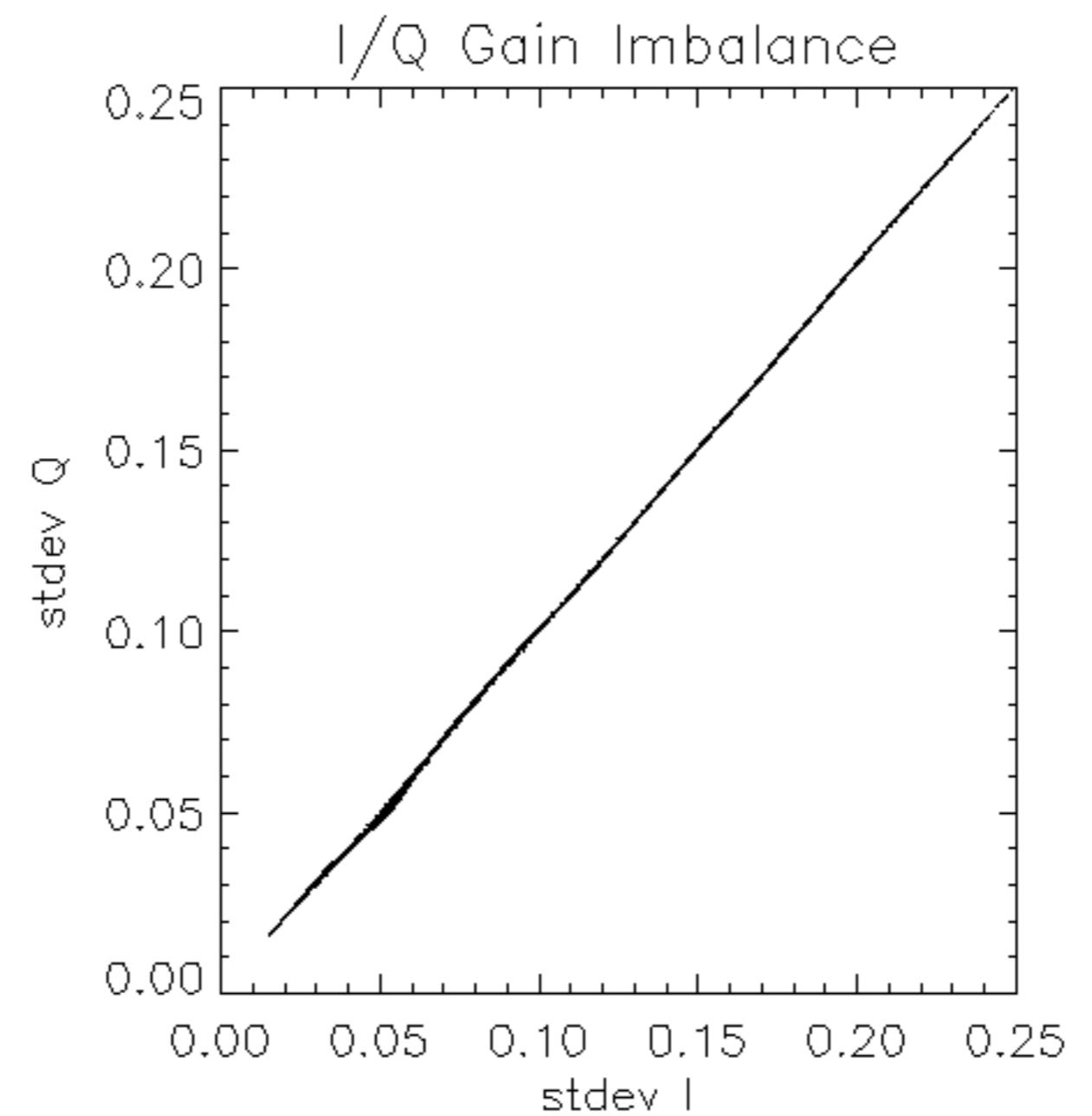
No anomalies observed.

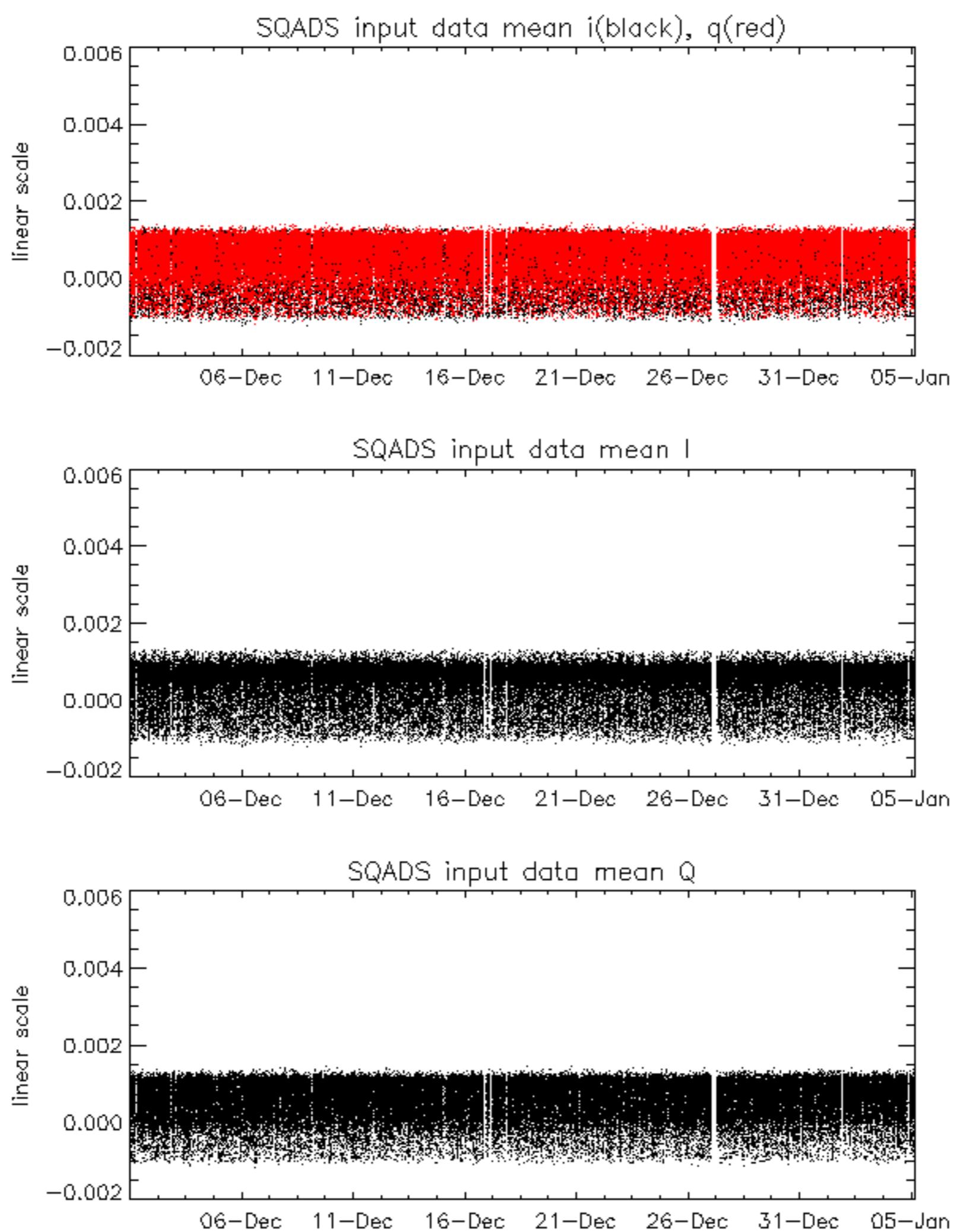


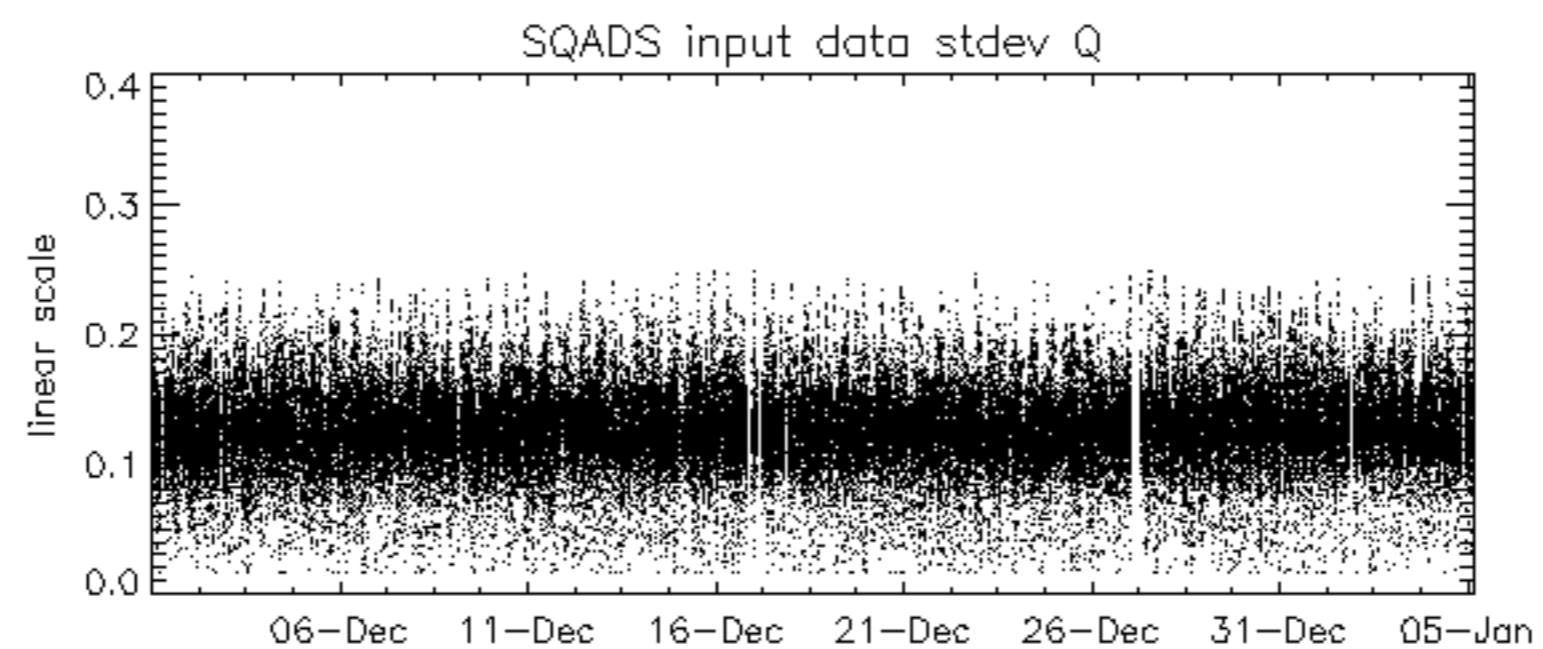
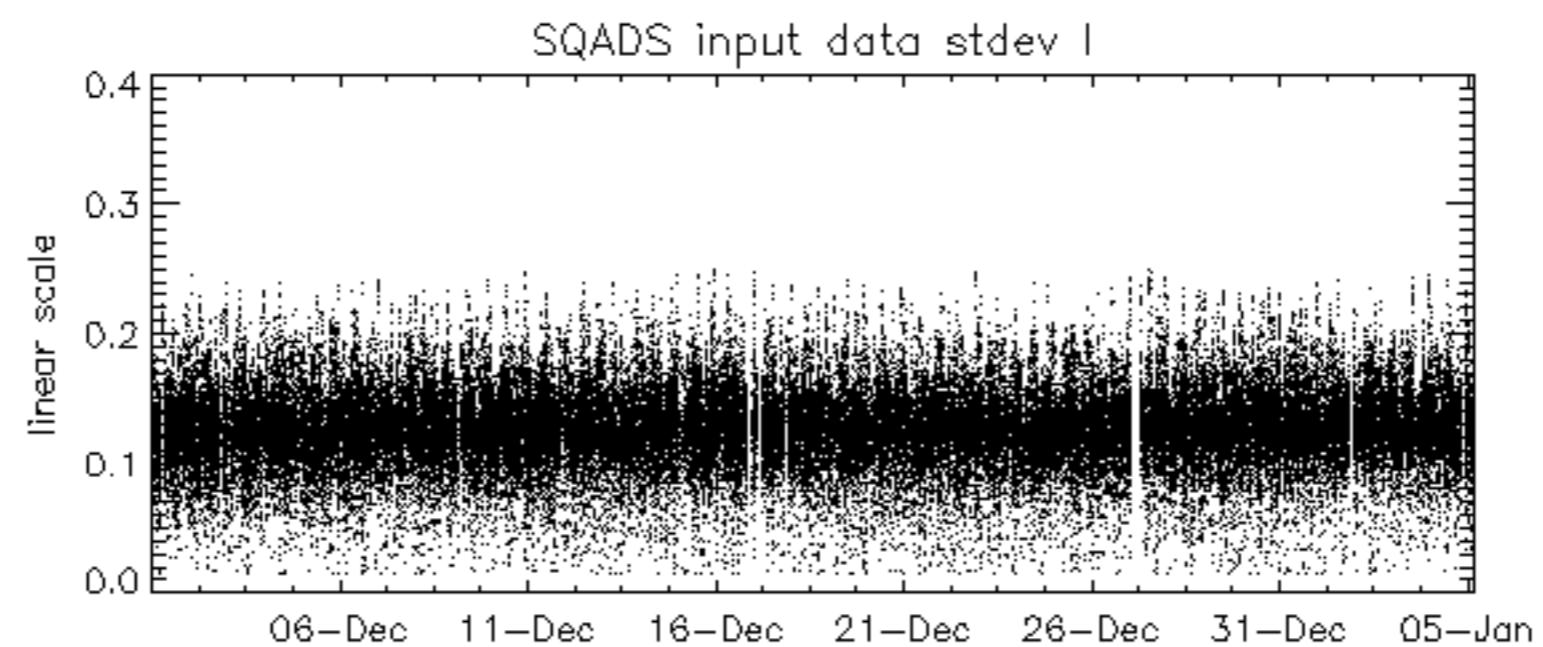
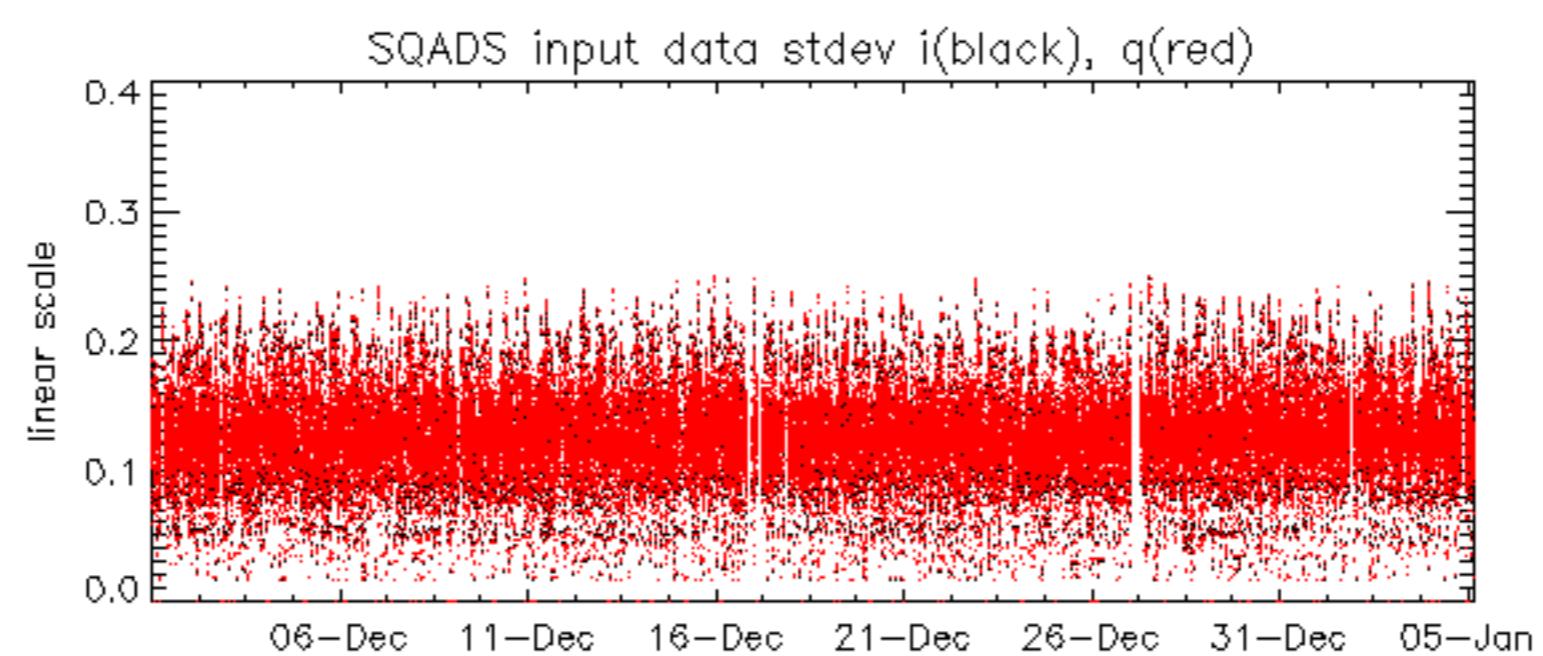




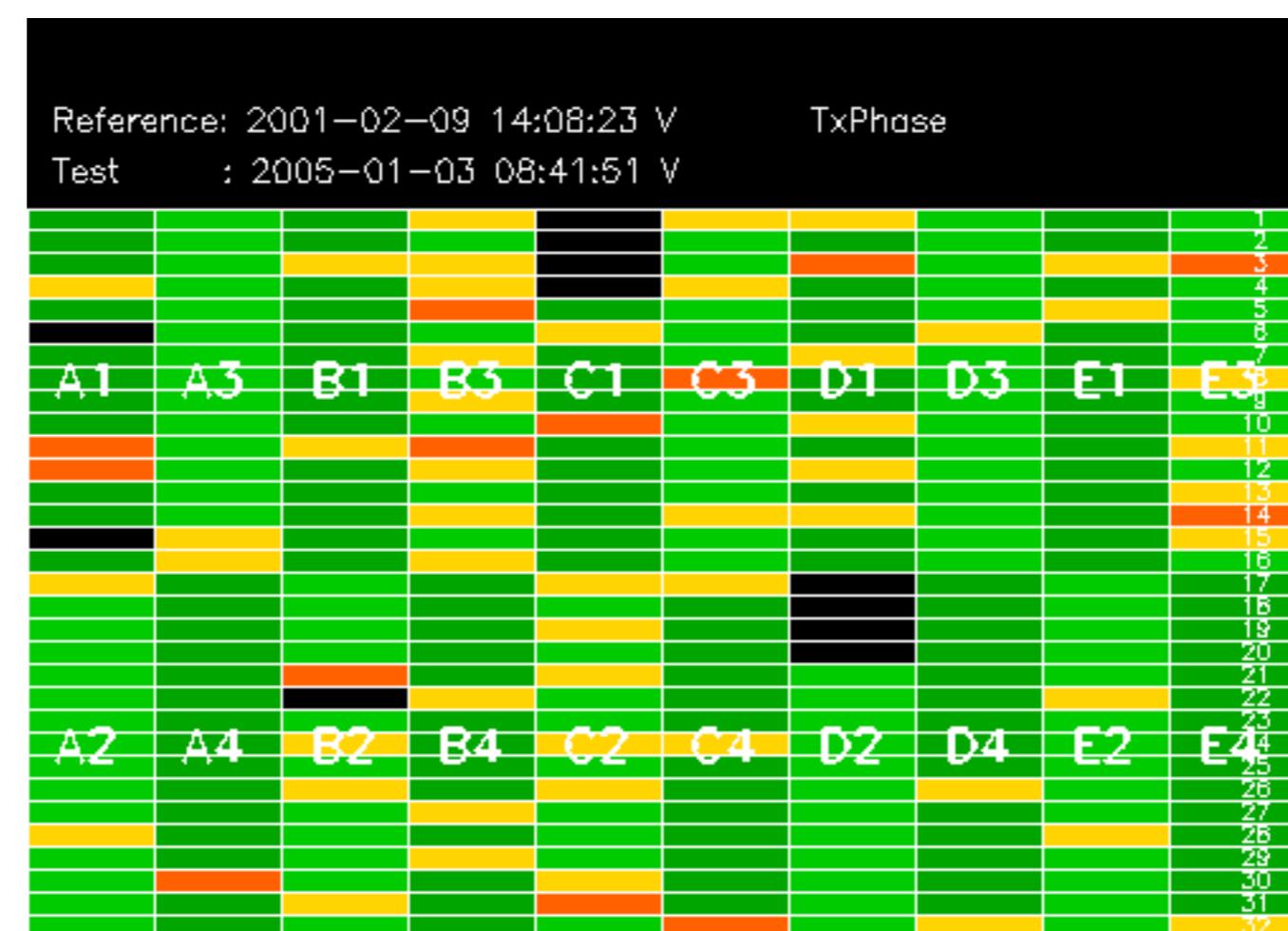


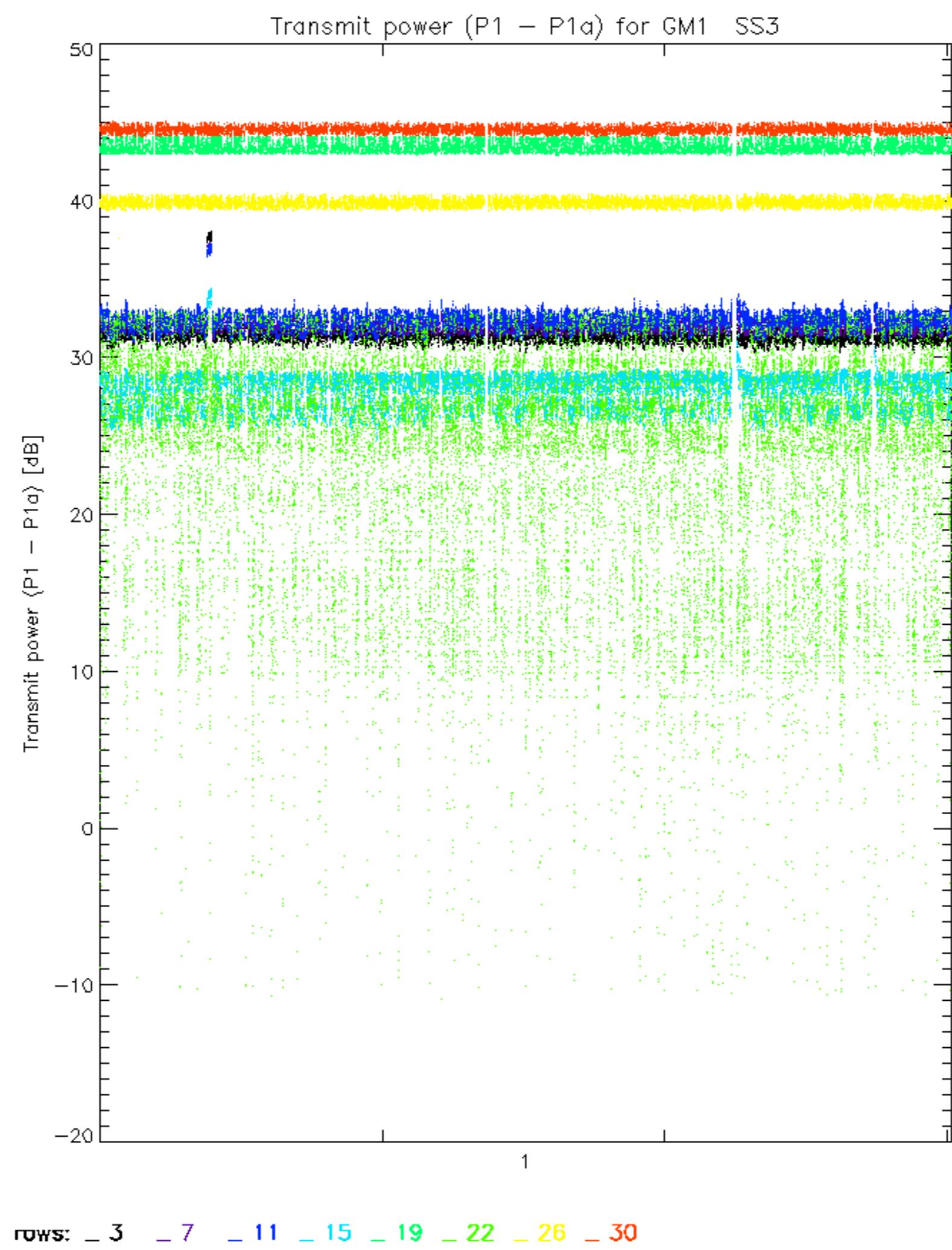


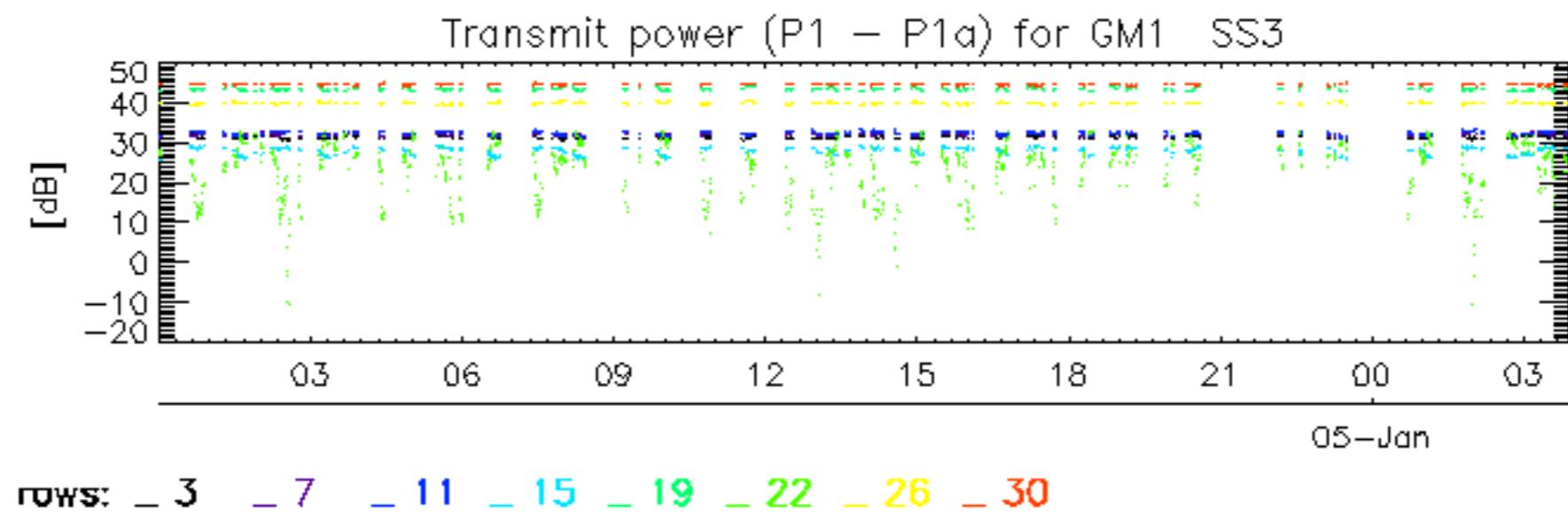


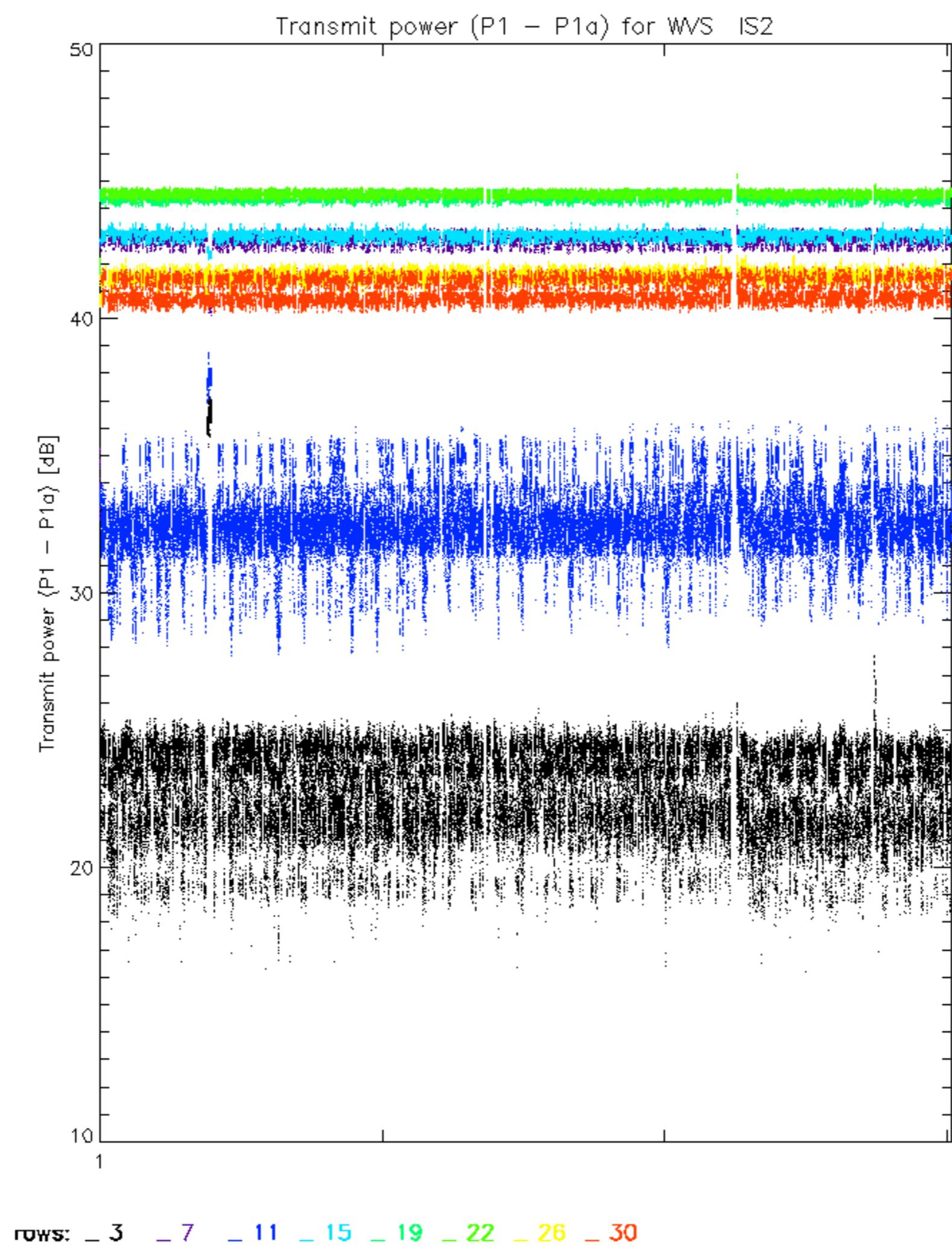


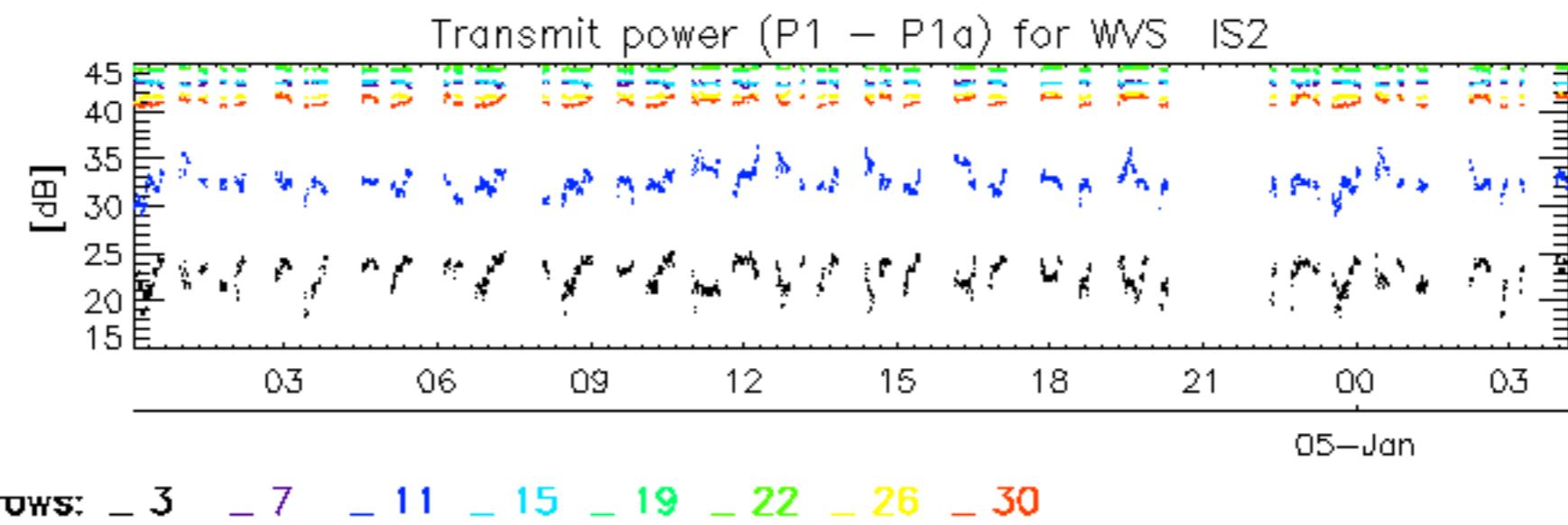
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| | | 2 |
| | | 3 |
| | | 4 |
| | | 5 |
| | | 6 |
| | | 7 |
| A1 | A3 | B1 |
| | | B3 |
| C1 | C3 | D1 |
| D3 | E1 | E3 |
| | | 8 |
| | | 9 |
| | | 10 |
| | | 11 |
| | | 12 |
| | | 13 |
| | | 14 |
| | | 15 |
| | | 16 |
| | | 17 |
| | | 18 |
| | | 19 |
| | | 20 |
| | | 21 |
| | | 22 |
| | | 23 |
| A2 | A4 | B2 |
| | | B4 |
| C2 | C4 | D2 |
| D4 | E2 | E4 |
| | | 24 |
| | | 25 |
| | | 26 |
| | | 27 |
| | | 28 |
| | | 29 |
| | | 30 |
| | | 31 |
| | | 32 |











No unavailabilities during the reported period.

