

PRELIMINARY REPORT OF 061126

last update on Sun Nov 26 16:41:55 GMT 2006

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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 2006-11-25 00:00:00 to 2006-11-26 16:41:55

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

| | | | | | |
|---|----|----|---|---|----|
| ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000 | 42 | 69 | 7 | 5 | 35 |
| ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000 | 42 | 69 | 7 | 5 | 35 |
| ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000 | 42 | 69 | 7 | 5 | 35 |
| ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000 | 42 | 69 | 7 | 5 | 35 |

| PDHS-E | | | | | |
|---|-----|-----|-----|-----|-----|
| AUXILIARY FILE | WVS | GM1 | IMM | APM | WSM |
| ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000 | 39 | 60 | 26 | 18 | 60 |
| ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000 | 39 | 60 | 26 | 18 | 60 |
| ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000 | 39 | 60 | 26 | 18 | 60 |
| ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000 | 39 | 60 | 26 | 18 | 60 |

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 | 20061125 064405 |
| H | 20061126 061228 |

MSM in V/V polarisation

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

MSM in H/H polarisation

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

4.1.2 - Evolution for GM1

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

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

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

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 | -3.960384 | 0.008472 | -0.027095 |
| 7 | P1 | -3.152430 | 0.023231 | -0.016384 |
| 11 | P1 | -4.132159 | 0.024606 | 0.003154 |
| 15 | P1 | -6.295609 | 0.014394 | -0.055081 |
| 19 | P1 | -3.626221 | 0.062730 | 0.041556 |
| 22 | P1 | -4.672408 | 0.128146 | 0.130195 |
| 26 | P1 | -3.972273 | 0.085442 | 0.123137 |
| 30 | P1 | -5.894898 | 0.164516 | 0.132019 |
| 3 | P1 | -16.511366 | 0.236157 | -0.134895 |
| 7 | P1 | -17.278629 | 0.173631 | -0.037755 |
| 11 | P1 | -17.162592 | 0.456760 | -0.124361 |
| 15 | P1 | -13.067135 | 0.131188 | -0.021678 |
| 19 | P1 | -14.936492 | 0.369359 | 0.063898 |
| 22 | P1 | -15.854212 | 0.519035 | 0.071893 |
| 26 | P1 | -15.060587 | 0.197956 | 0.060453 |
| 30 | P1 | -17.432991 | 0.608983 | -0.286005 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -20.845373 | 0.090668 | 0.026152 |
| 7 | P2 | -21.733105 | 0.093971 | -0.012292 |
| 11 | P2 | -15.656069 | 0.102318 | 0.010799 |
| 15 | P2 | -7.125228 | 0.106066 | -0.008018 |
| 19 | P2 | -9.192227 | 0.103746 | 0.000447 |
| 22 | P2 | -18.232662 | 0.095868 | -0.030948 |
| 26 | P2 | -16.550524 | 0.109932 | -0.052396 |
| 30 | P2 | -19.477392 | 0.088203 | 0.000954 |

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 7 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 11 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 15 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 19 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 22 | P3 | -8.241218 | 0.008327 | -0.033125 |
| 26 | P3 | -8.241228 | 0.008339 | -0.033243 |
| 30 | P3 | -8.241228 | 0.008339 | -0.033243 |

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 | -3.912109 | 0.056575 | 0.002211 |
| 7 | P1 | -2.524829 | 0.333744 | 0.106746 |
| 11 | P1 | -2.862963 | 0.051183 | 0.037236 |
| 15 | P1 | -3.682380 | 0.058019 | -0.017295 |
| 19 | P1 | -3.545170 | 0.114138 | 0.093936 |
| 22 | P1 | -5.057146 | 0.089517 | 0.122066 |
| 26 | P1 | -6.030859 | 0.186501 | 0.131563 |
| 30 | P1 | -5.337815 | 0.113700 | 0.067615 |
| 3 | P1 | -11.723742 | 0.138648 | -0.031331 |
| 7 | P1 | -10.065195 | 0.439051 | 0.068291 |
| 11 | P1 | -10.332256 | 0.160734 | 0.039456 |
| 15 | P1 | -10.756878 | 0.217941 | 0.097585 |
| 19 | P1 | -15.800833 | 2.165404 | 0.539203 |
| 22 | P1 | -21.411034 | 1.585289 | -0.411537 |
| 26 | P1 | -16.047272 | 0.398194 | -0.070511 |
| 30 | P1 | -17.901712 | 0.417976 | 0.025612 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -16.457727 | 0.133021 | -0.037978 |
| 7 | P2 | -22.212004 | 0.475150 | -0.096384 |
| 11 | P2 | -10.938912 | 0.140420 | -0.044824 |
| 15 | P2 | -4.968757 | 0.174160 | -0.049418 |
| 19 | P2 | -6.951567 | 0.205546 | -0.033540 |
| 22 | P2 | -8.262193 | 0.212901 | 0.002731 |
| 26 | P2 | -24.310490 | 0.356299 | -0.107456 |
| 30 | P2 | -21.943266 | 0.226602 | -0.028789 |

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.087510 | 0.003295 | -0.031446 |
| 7 | P3 | -8.087502 | 0.003282 | -0.031414 |
| 11 | P3 | -8.087547 | 0.003291 | -0.031615 |
| 15 | P3 | -8.087472 | 0.003288 | -0.031456 |
| 19 | P3 | -8.087537 | 0.003293 | -0.031537 |
| 22 | P3 | -8.087439 | 0.003292 | -0.031697 |
| 26 | P3 | -8.087557 | 0.003287 | -0.031606 |
| 30 | P3 | -8.087640 | 0.003290 | -0.031469 |

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 | 0.000543989 |
| | stdev | 1.79475e-07 |
| MEAN Q | mean | 0.000520502 |
| | stdev | 2.20621e-07 |



5.2 - Input stdev I/Q

| channel | stat | DSS-B |
|---------|-------|------------|
| STDEV I | mean | 0.136059 |
| | stdev | 0.00111227 |
| STDEV Q | mean | 0.136418 |
| | stdev | 0.00112918 |



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[456]

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_1PNPDE20061124_042634_000000782053_00147_24750_6576.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20061124_201746_000000362053_00157_24760_7594.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20061126_004059_000000622053_00174_24777_9130.N1 | 1 | 0 |
| ASA_GM1_1PNPDK20061124_153848_000006402053_00154_24757_9246.N1 | 0 | 32 |
| ASA_WSM_1PNPDE20061125_112341_000001162053_00166_24769_8610.N1 | 0 | 14 |
| ASA_WSM_1PNPDE20061125_144649_000000672053_00168_24771_8672.N1 | 0 | 34 |
| ASA_WSM_1PNPDE20061125_144649_000004462053_00168_24771_8706.N1 | 0 | 34 |
| ASA_APM_1PNPDE20061124_143627_000000872053_00154_24757_7416.N1 | 0 | 10 |



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 type="checkbox"/> |
| Acsending |
| <input type="checkbox"/> |
| Descending |

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

| |
|--------------------------|
| <input type="checkbox"/> |
| Acsending |
| <input type="checkbox"/> |
| Descending |

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

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

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

| |
|--------------------------|
| <input type="checkbox"/> |
| Acsending |
| <input type="checkbox"/> |
| Descending |

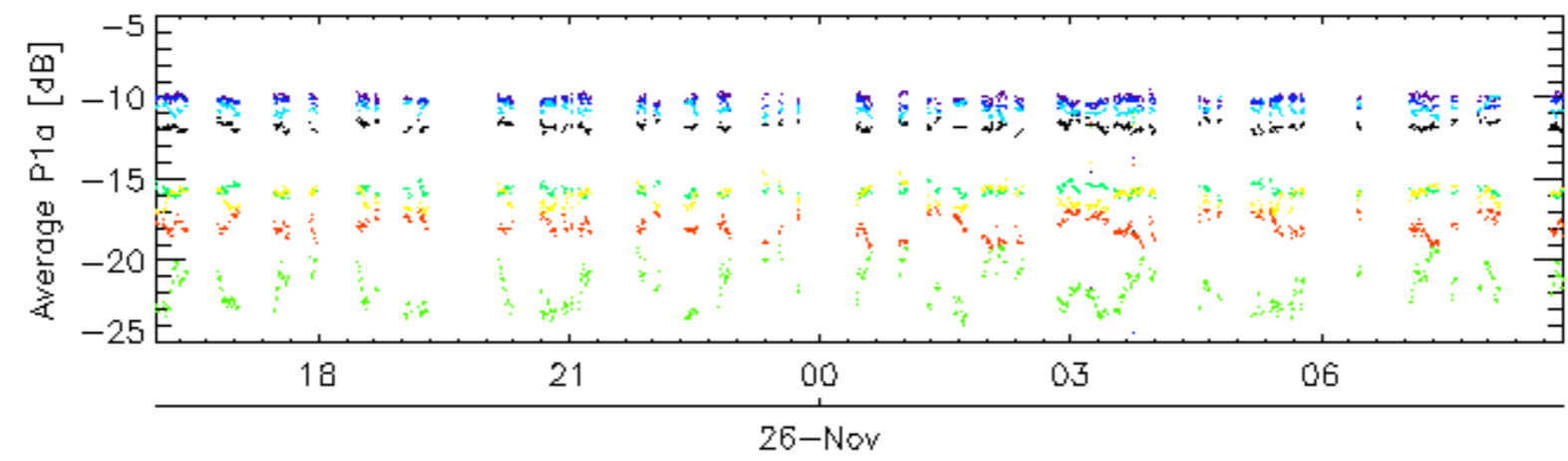
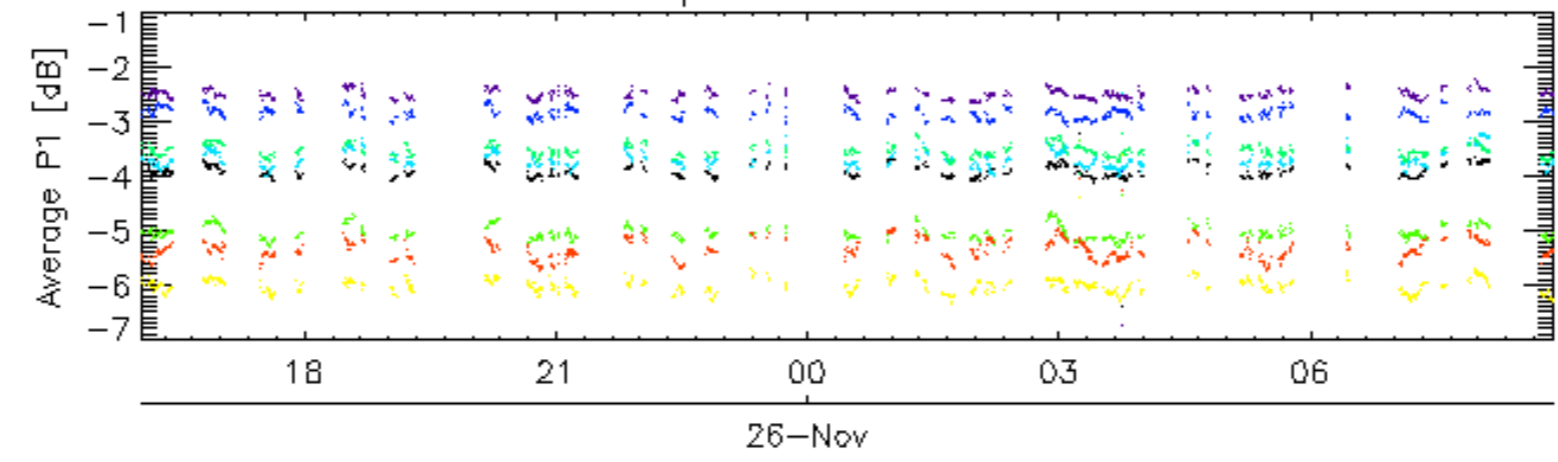
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

| |
|--------------------------|
| <input type="checkbox"/> |
| Acsending |
| <input type="checkbox"/> |
| Descending |

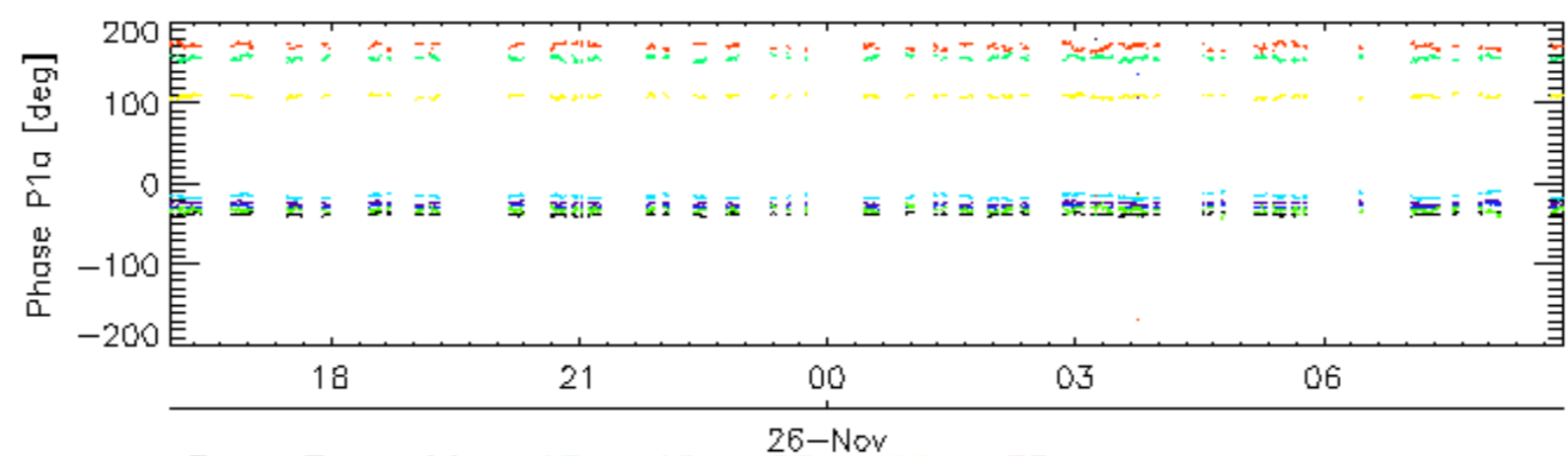
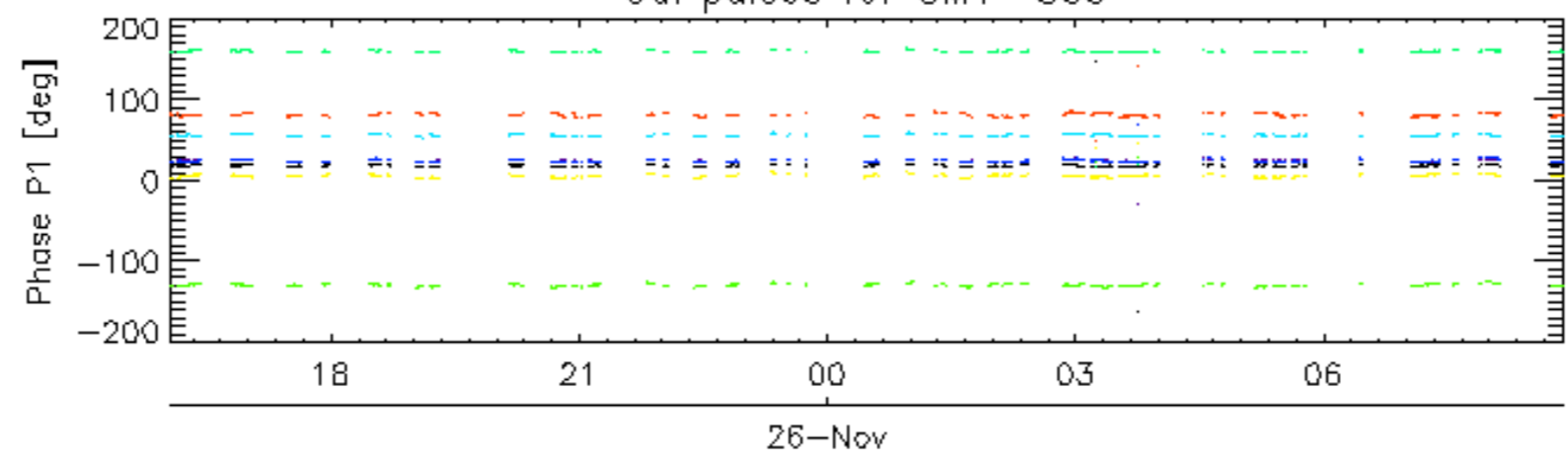
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

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

Cal pulses for GM1 SS3

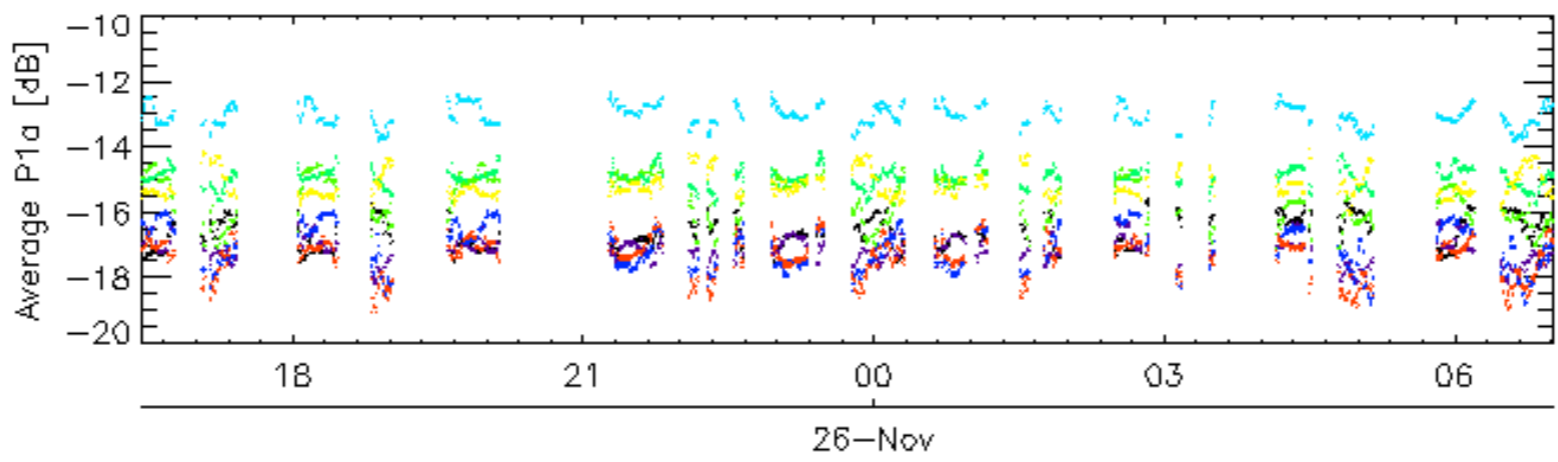
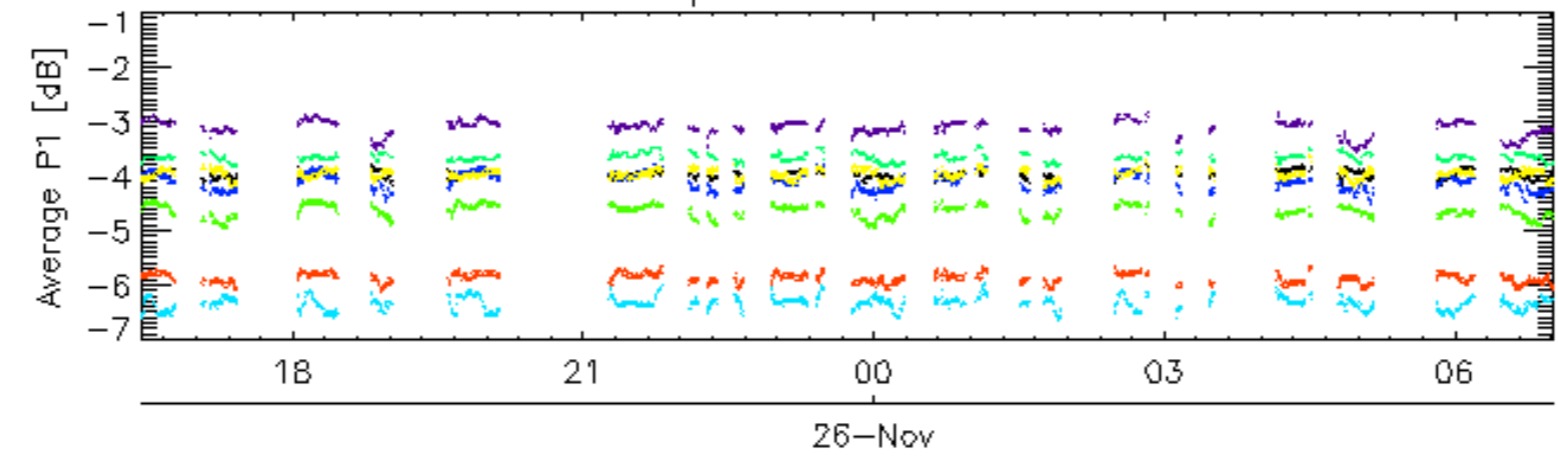


Cal pulses for GM1 SS3

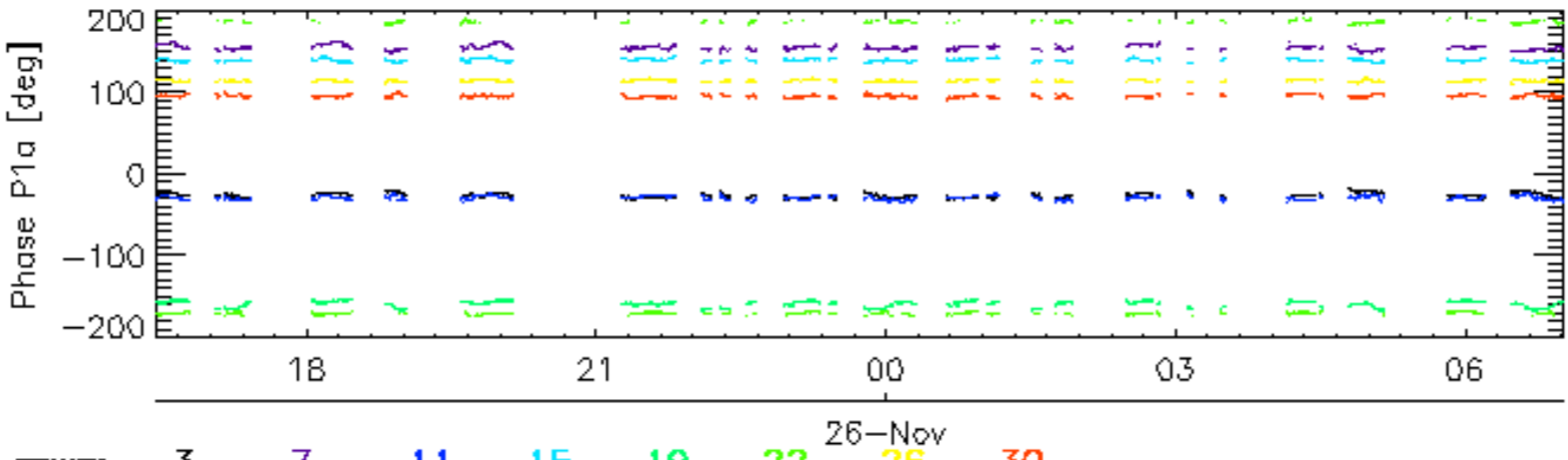
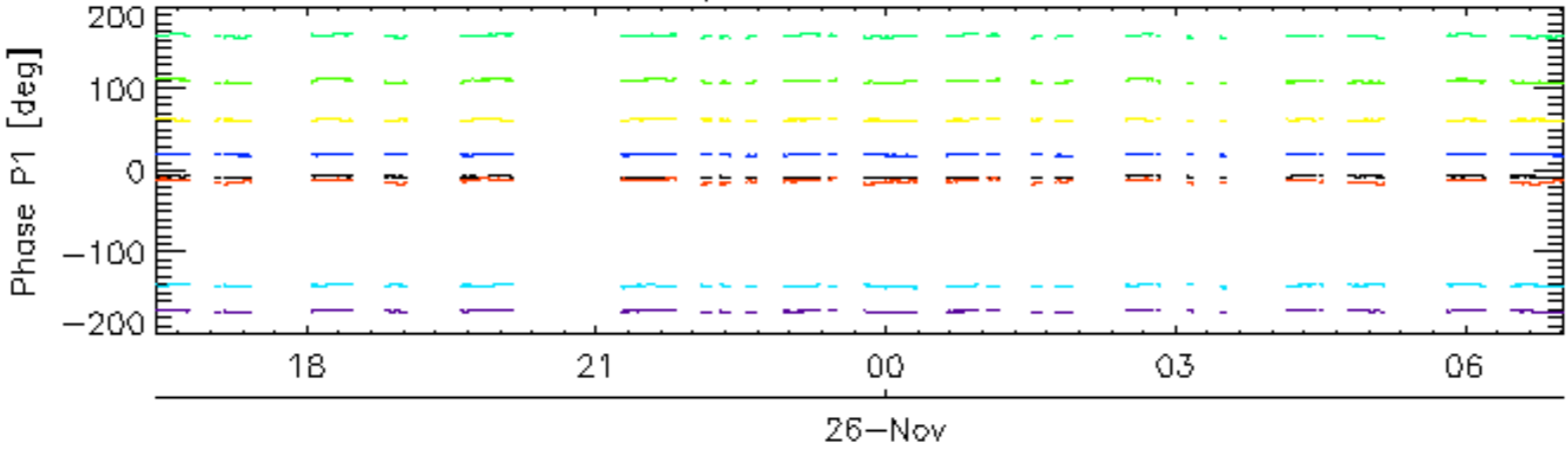


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

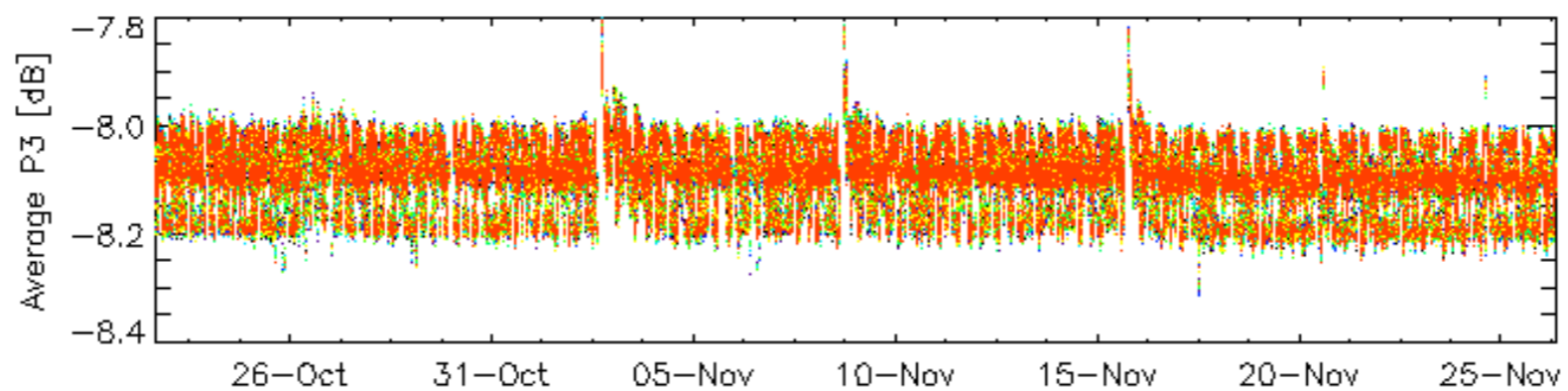
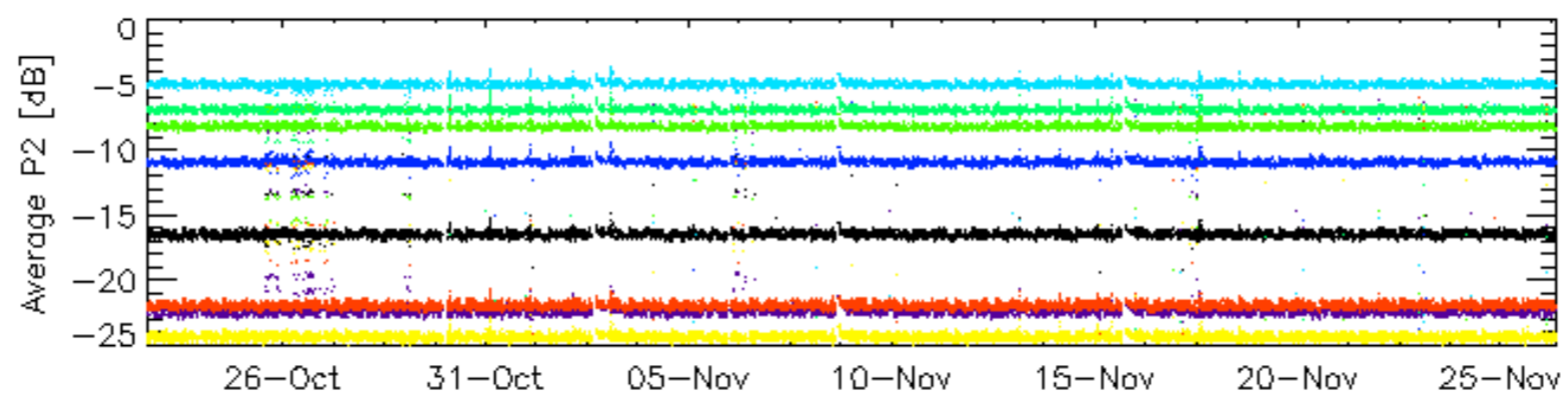
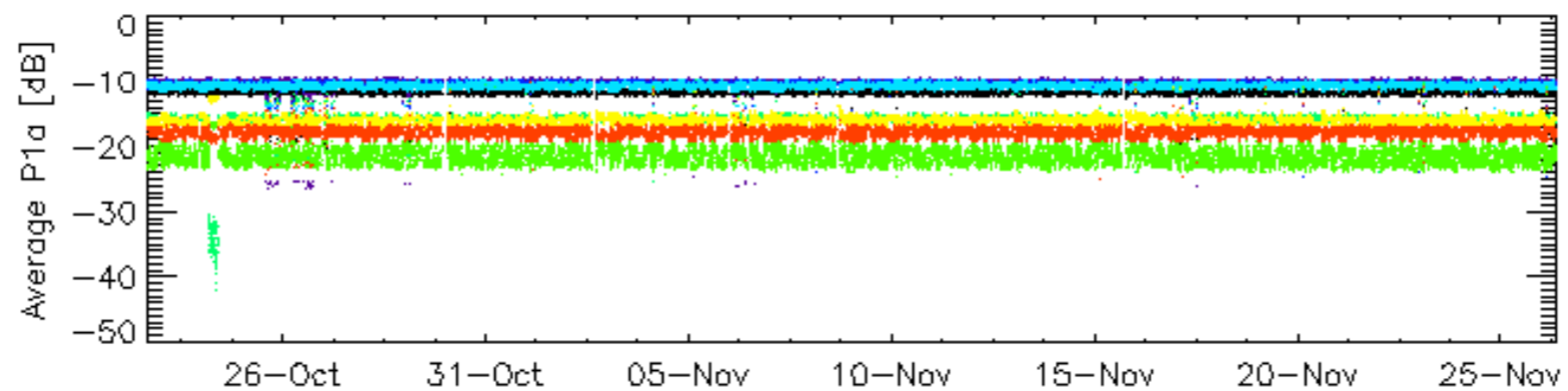
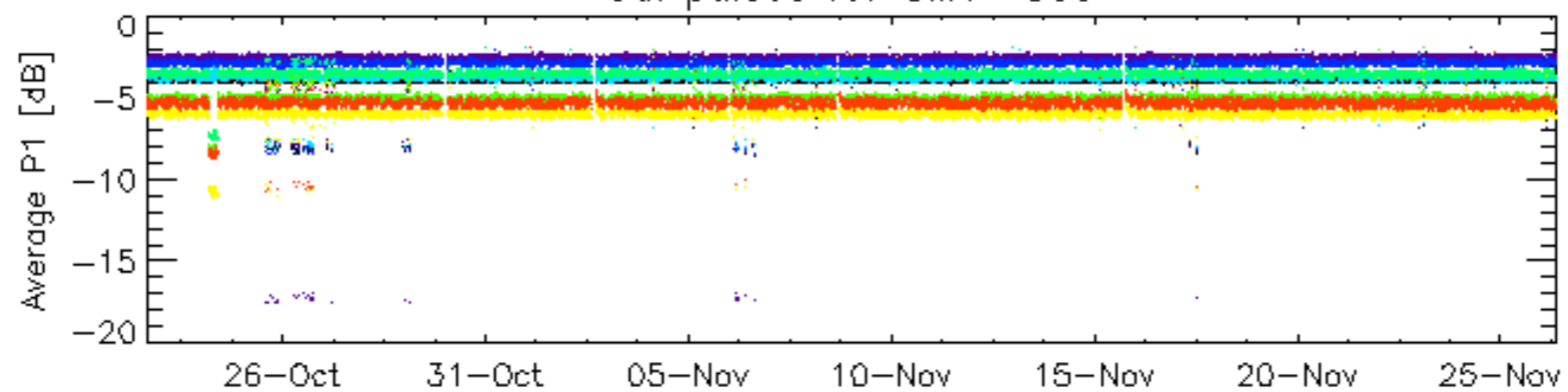


Cal pulses for WVS IS2



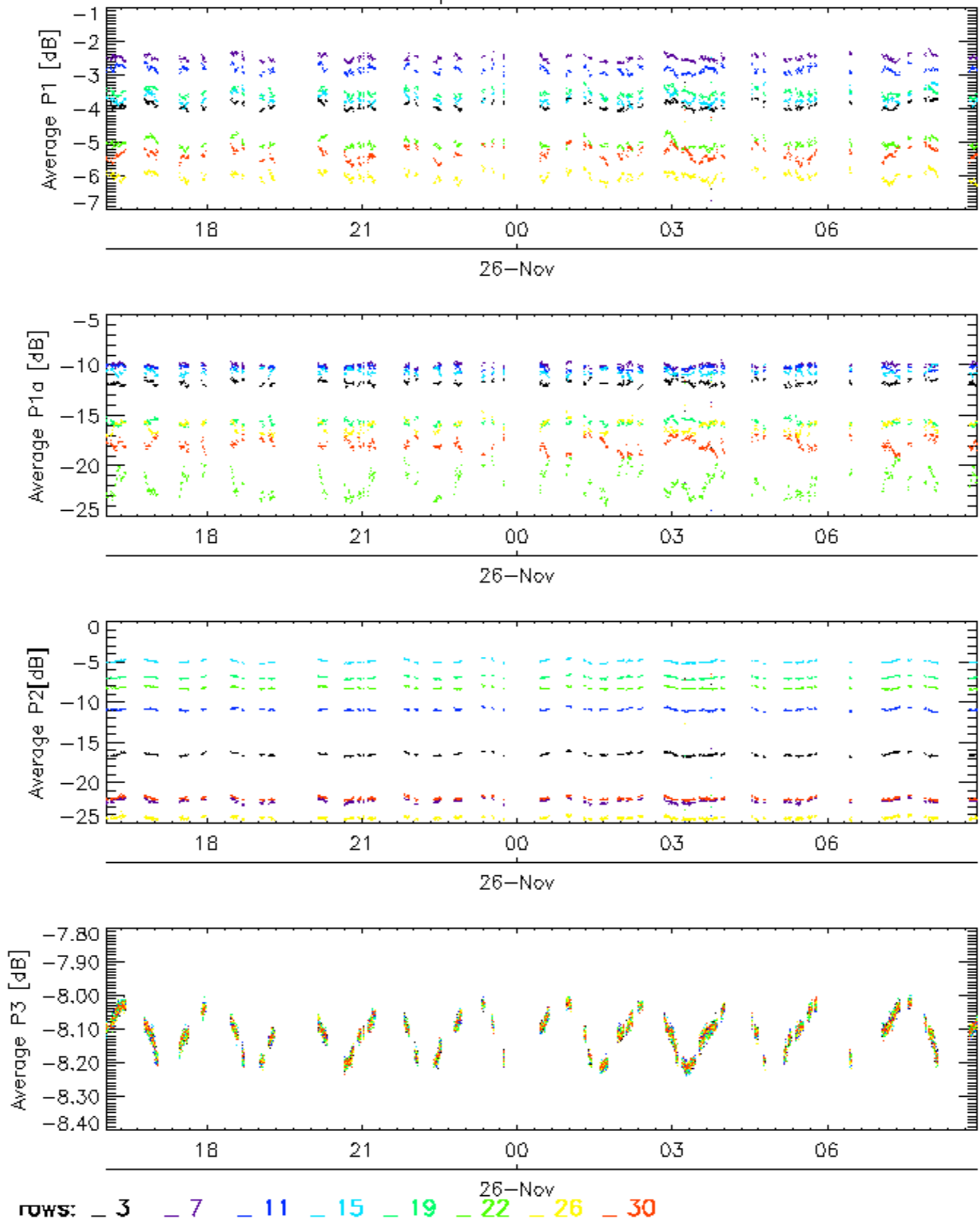
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

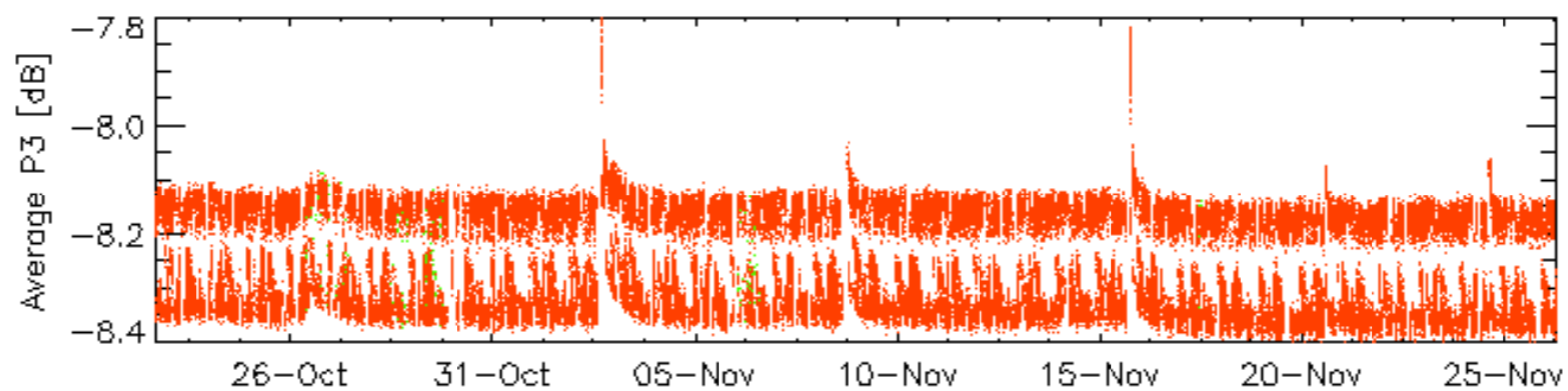
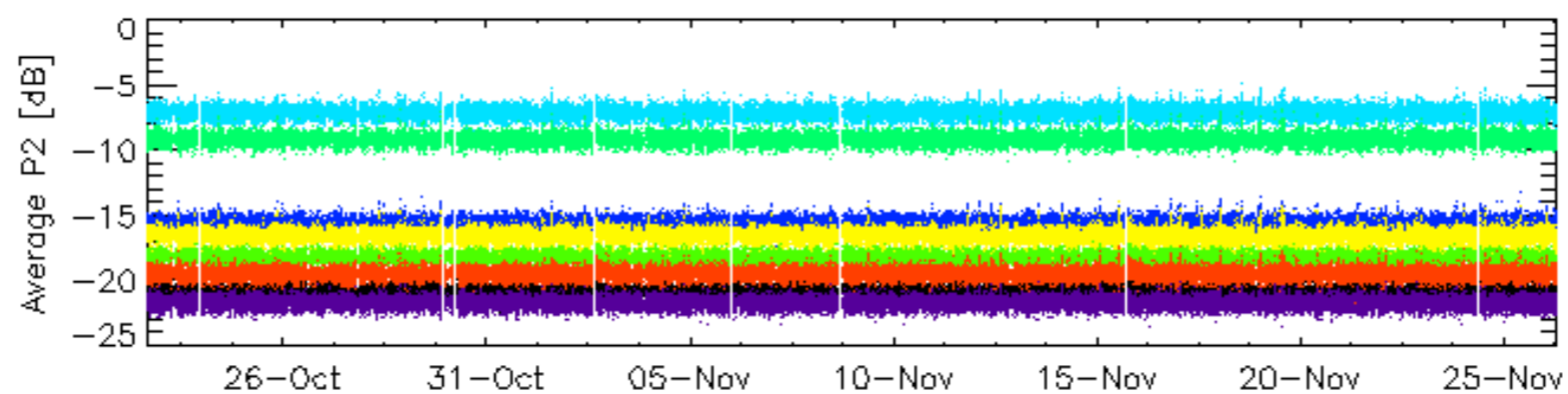
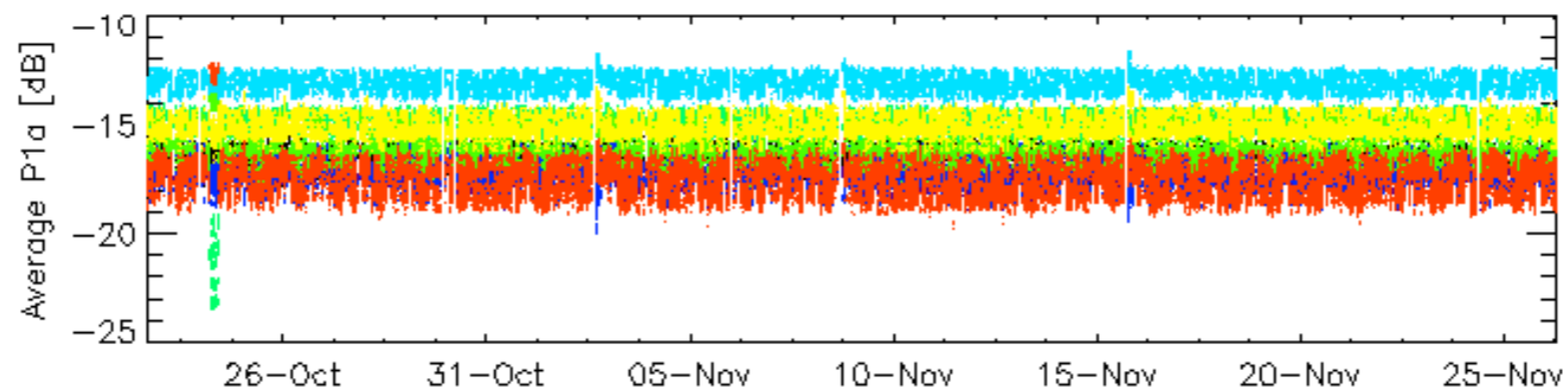
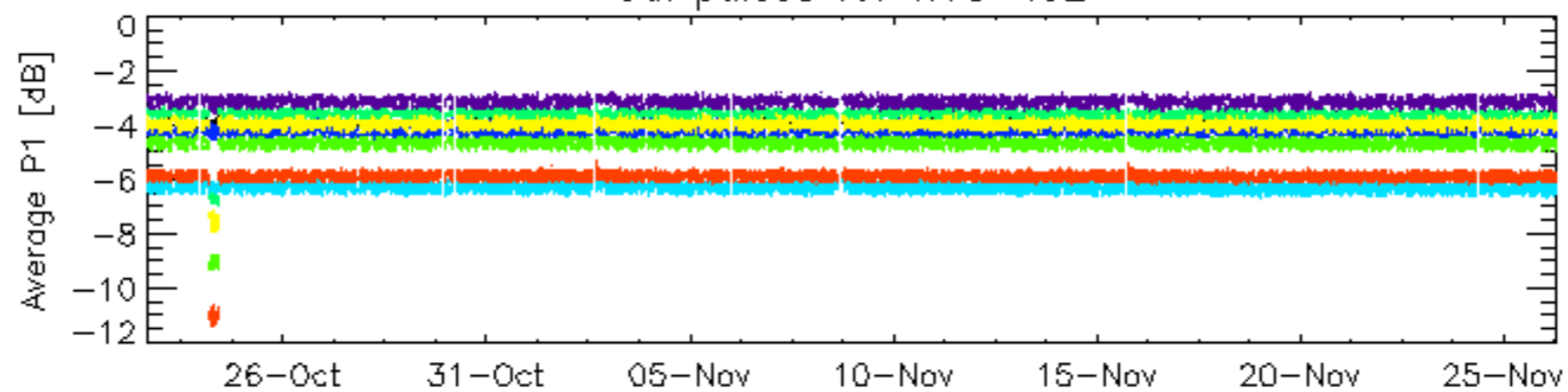


rows: [_ 3](#) [_ 7](#) [_ 11](#) [_ 15](#) [_ 19](#) [_ 22](#) [_ 26](#) [_ 30](#)

Cal pulses for GM1 SS3

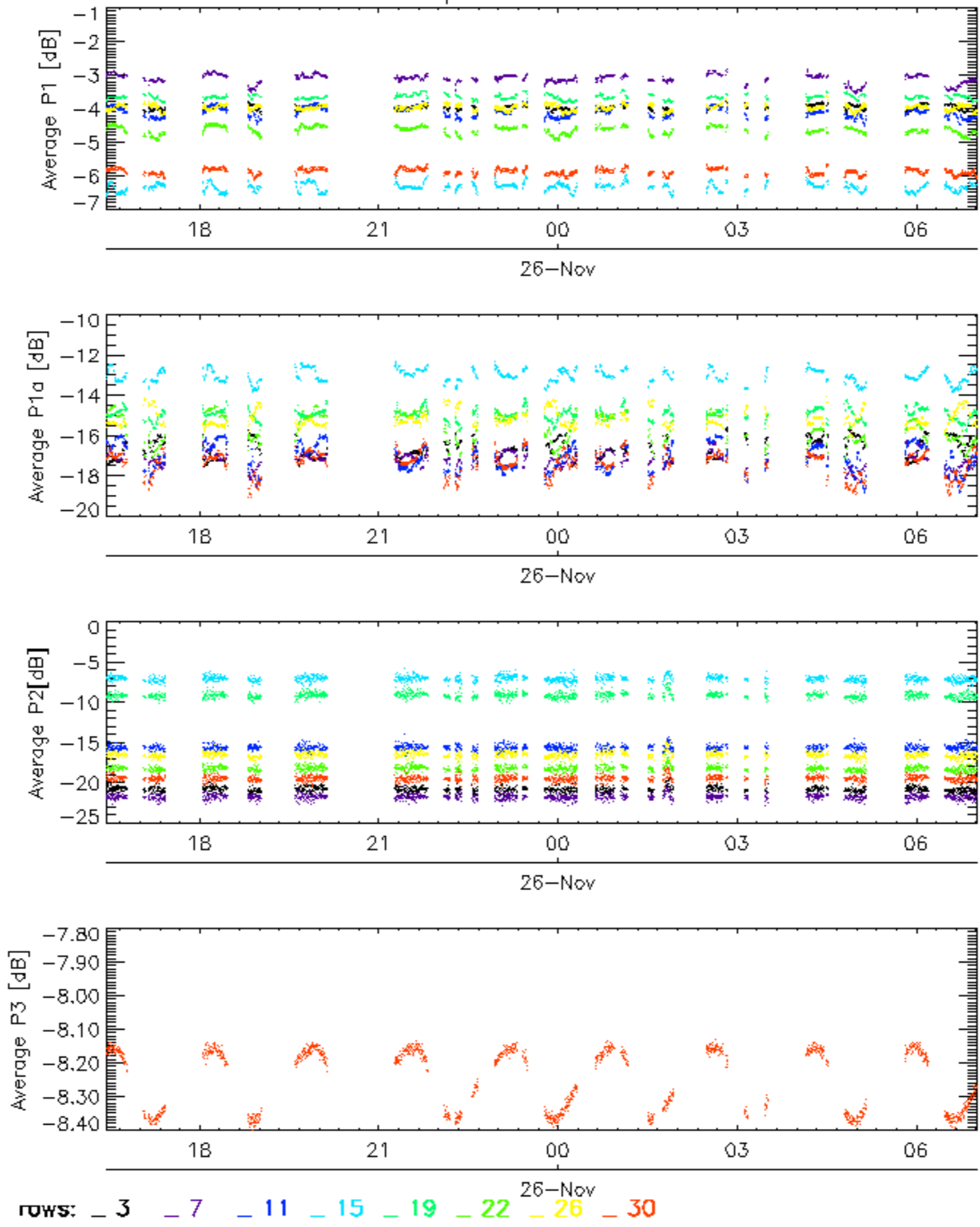


Cal pulses for WVS IS2

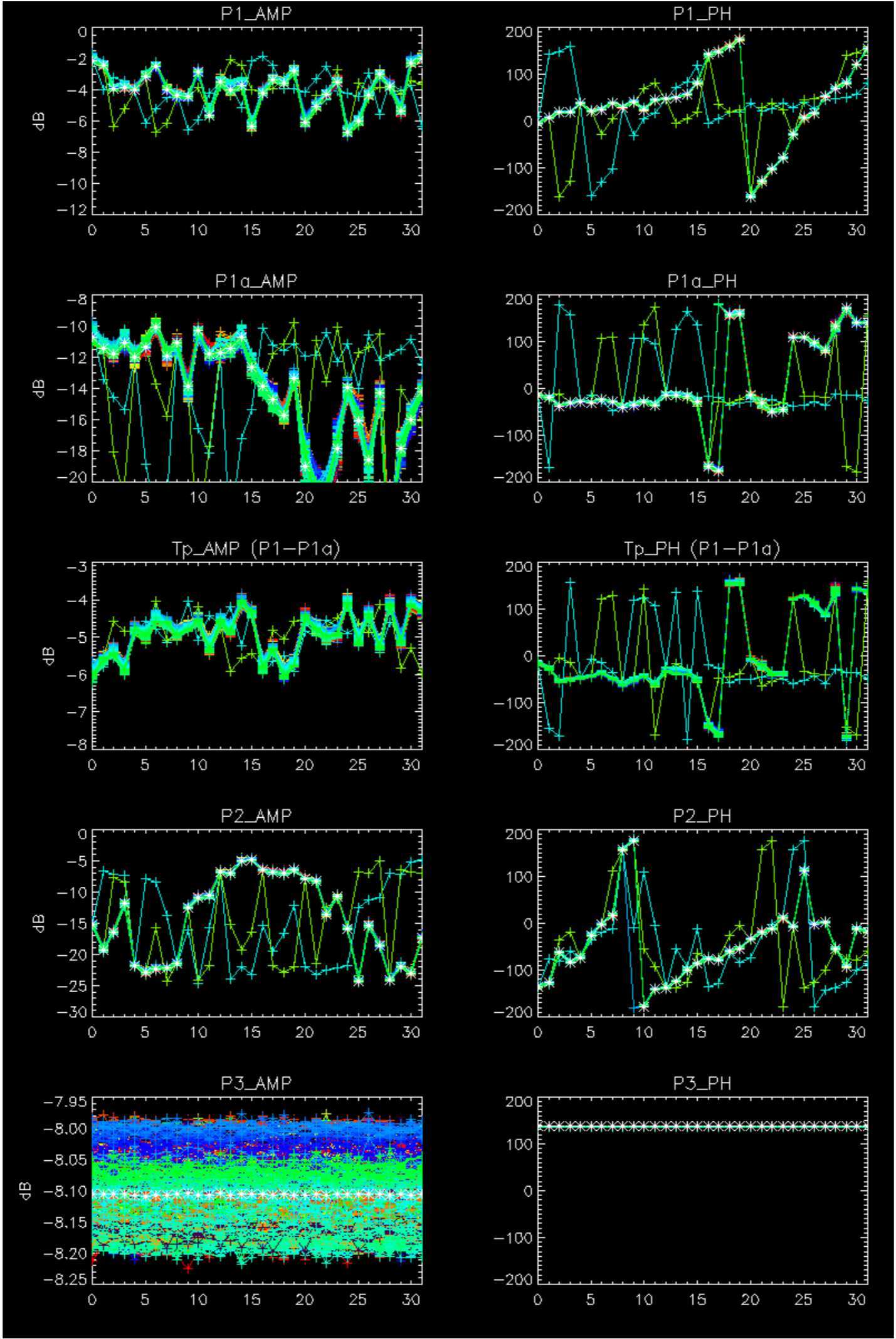


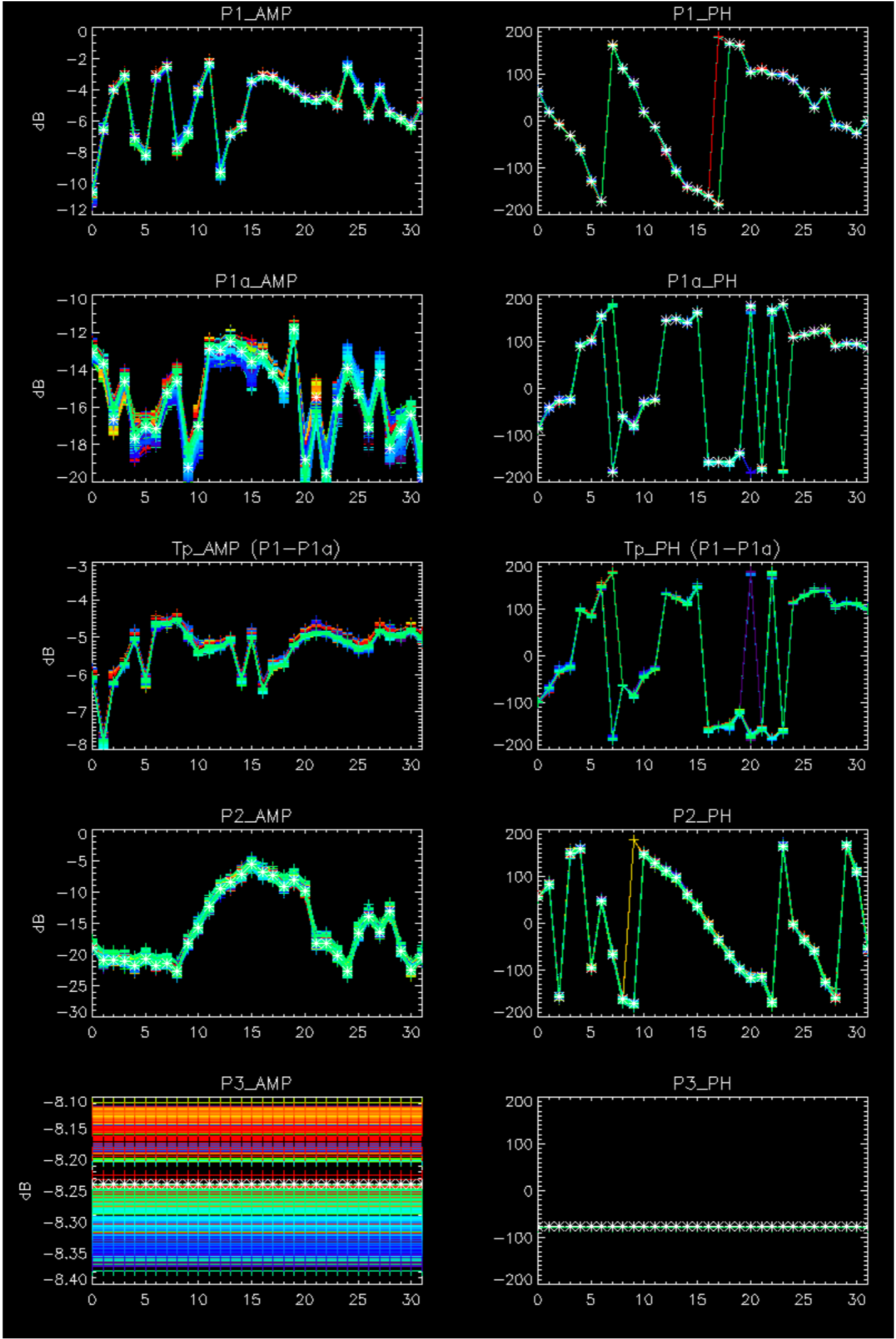
rows: [_ 3](#) [_ 7](#) [_ 11](#) [_ 15](#) [_ 19](#) [_ 22](#) [_ 26](#) [_ 30](#)

Cal pulses for WVS IS2



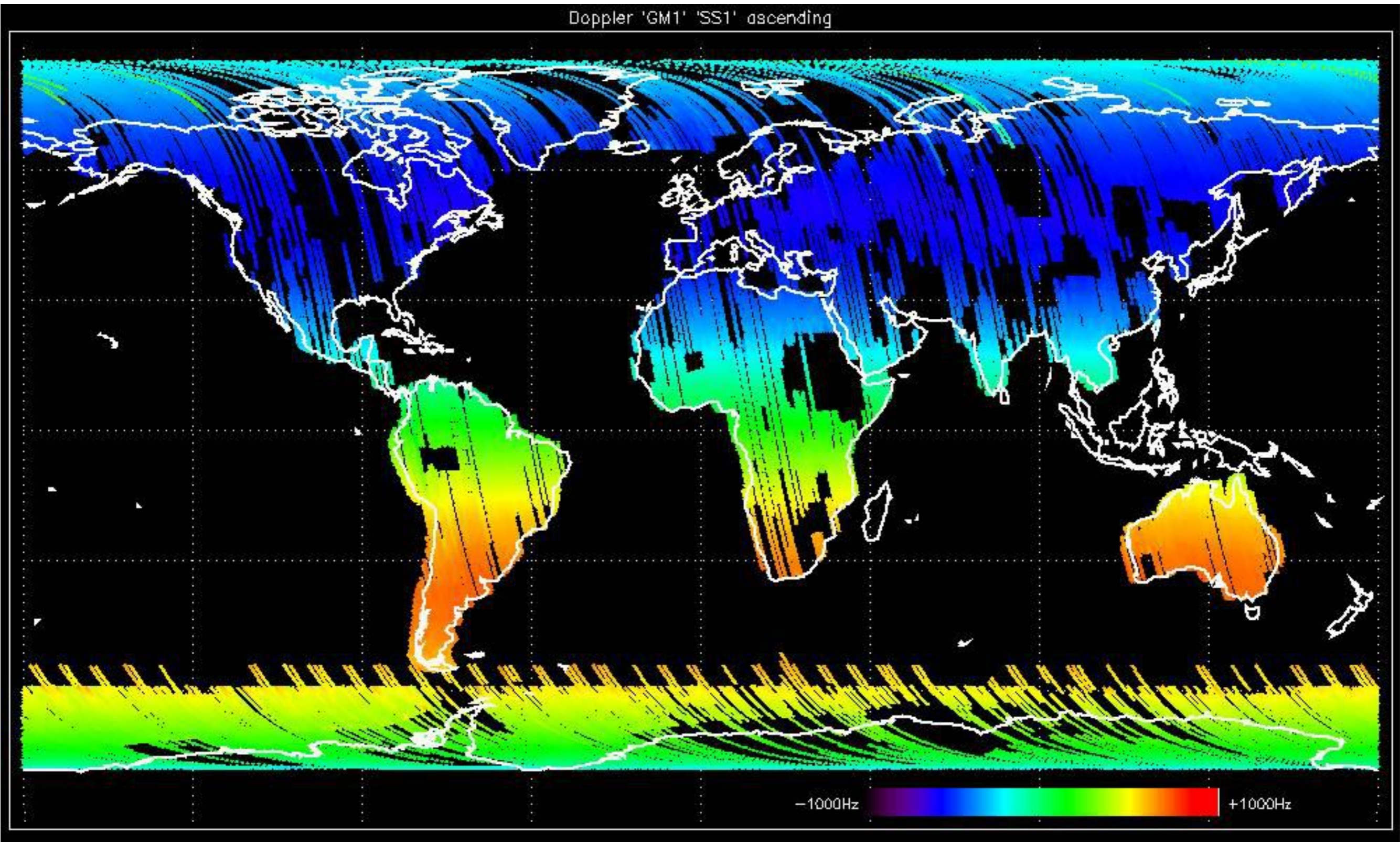
No anomalies observed.



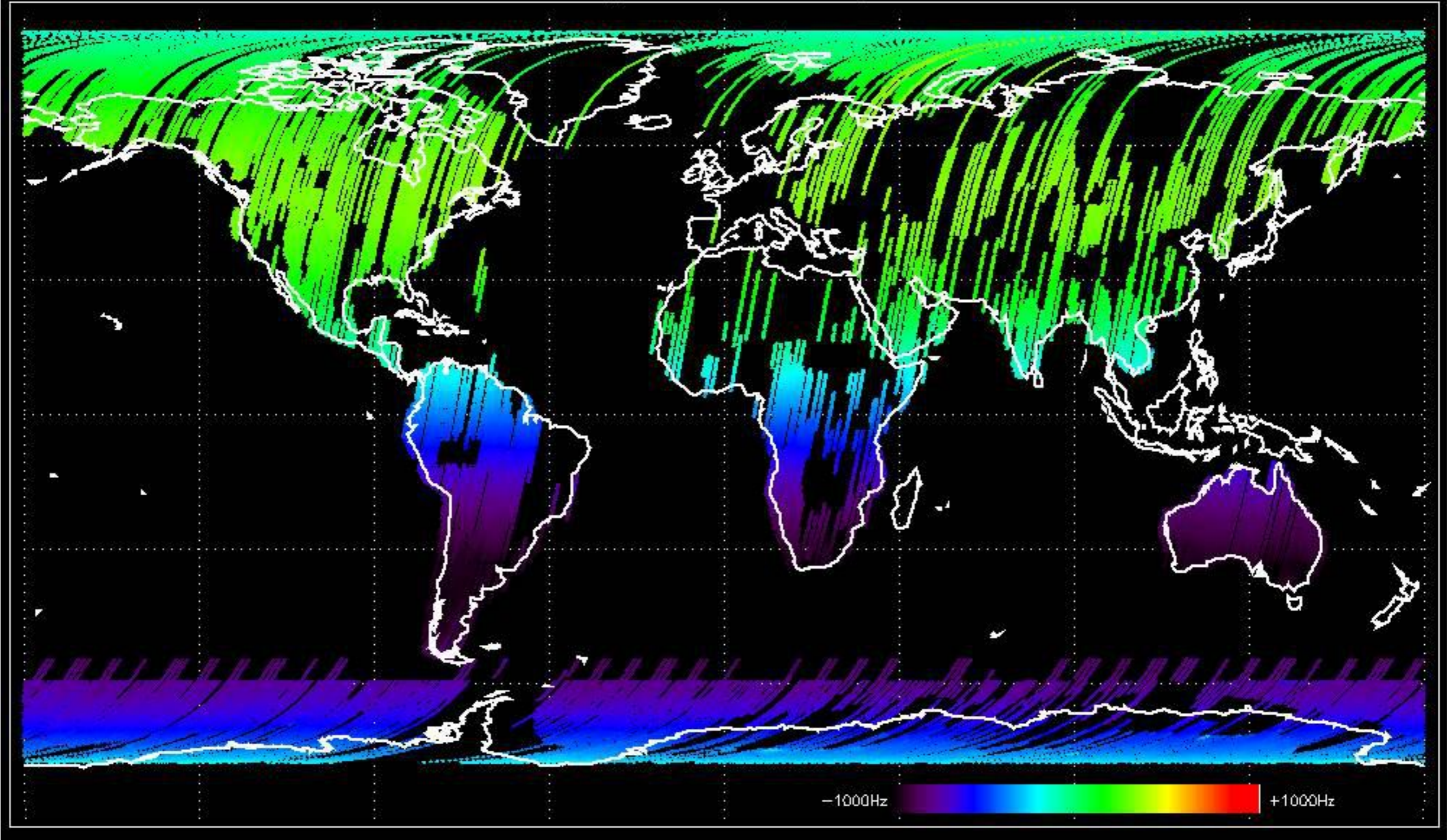


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

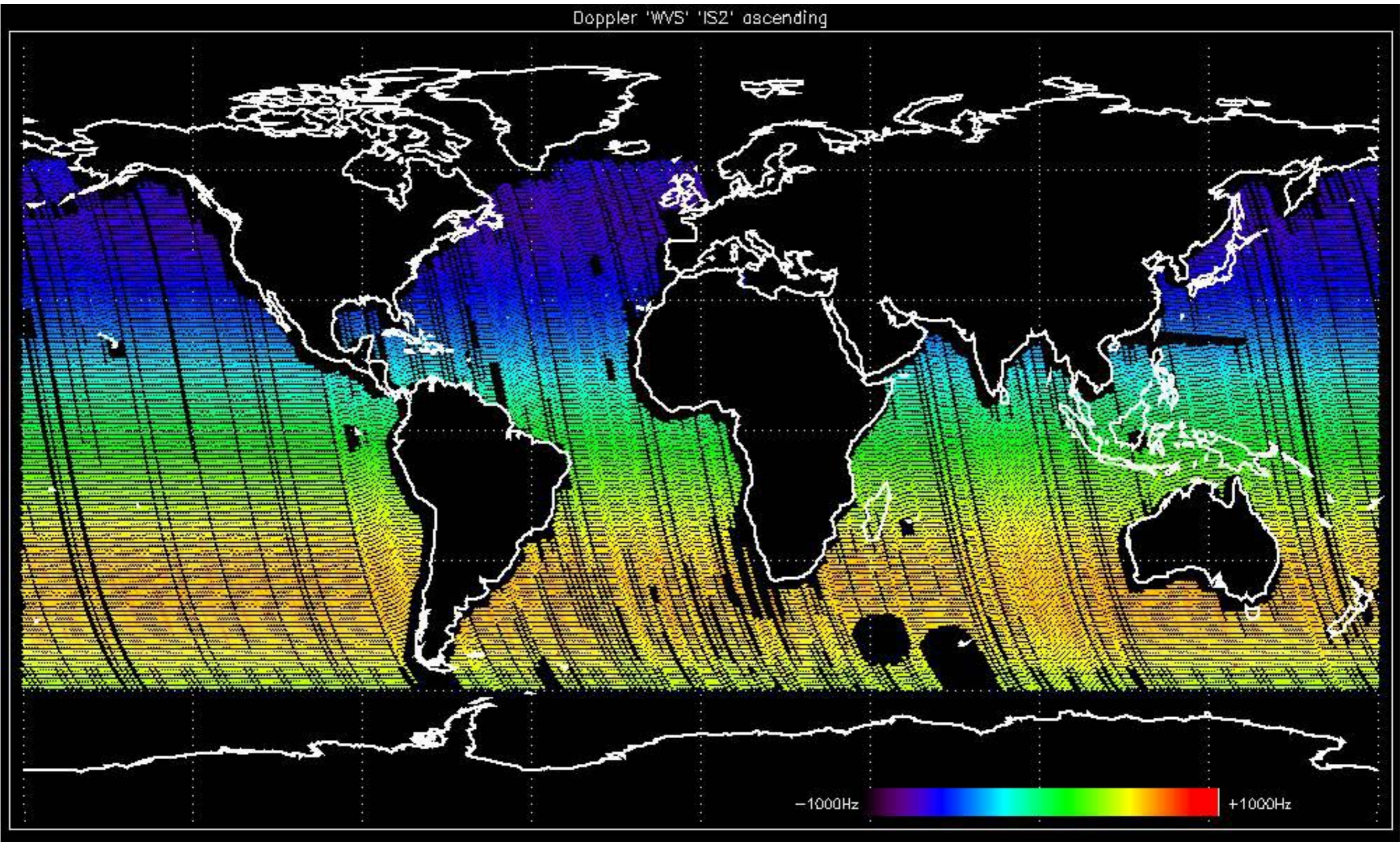
Doppler 'GM1' 'SS1' ascending



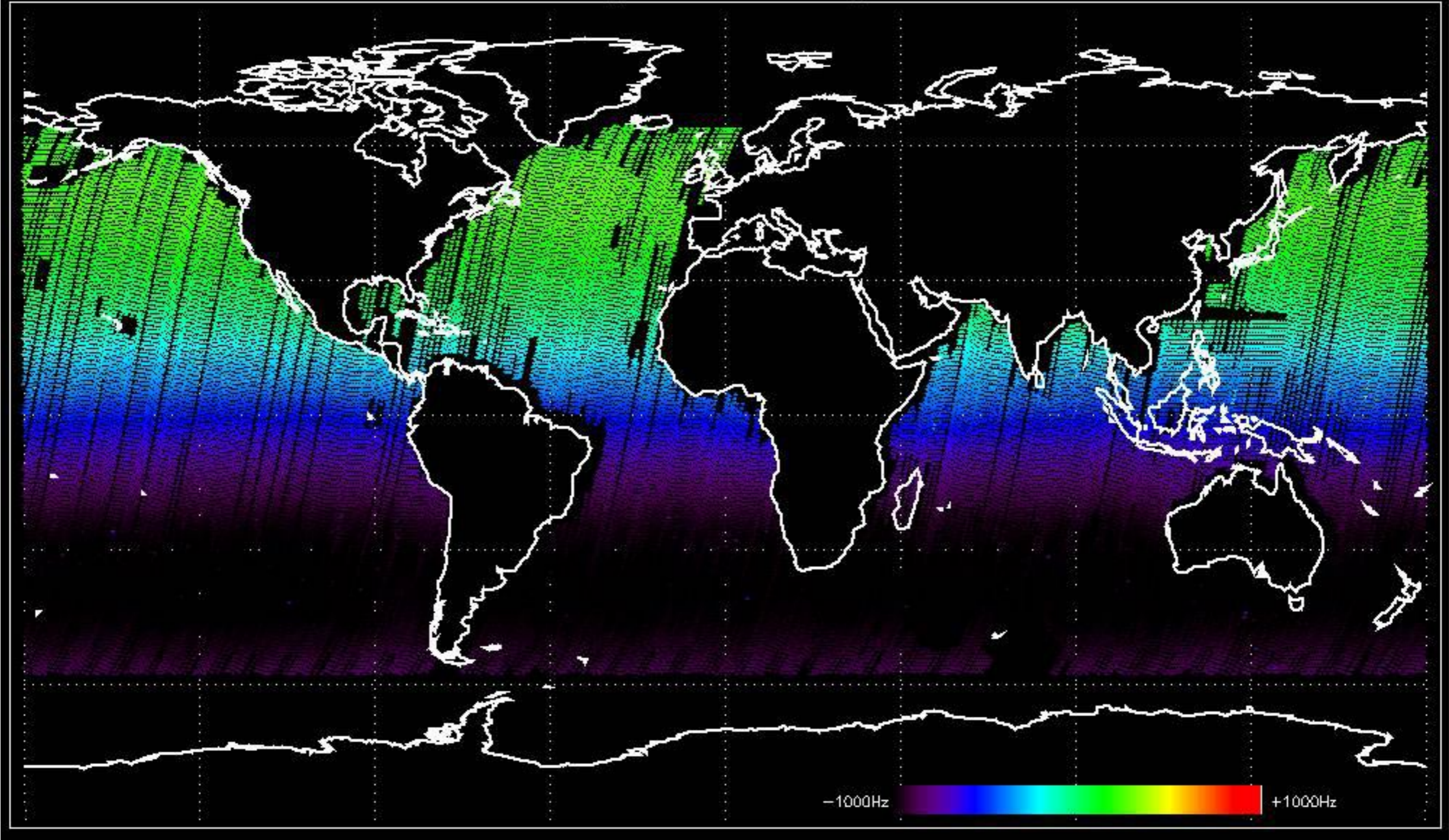
Doppler 'GM1' 'SS1' descending



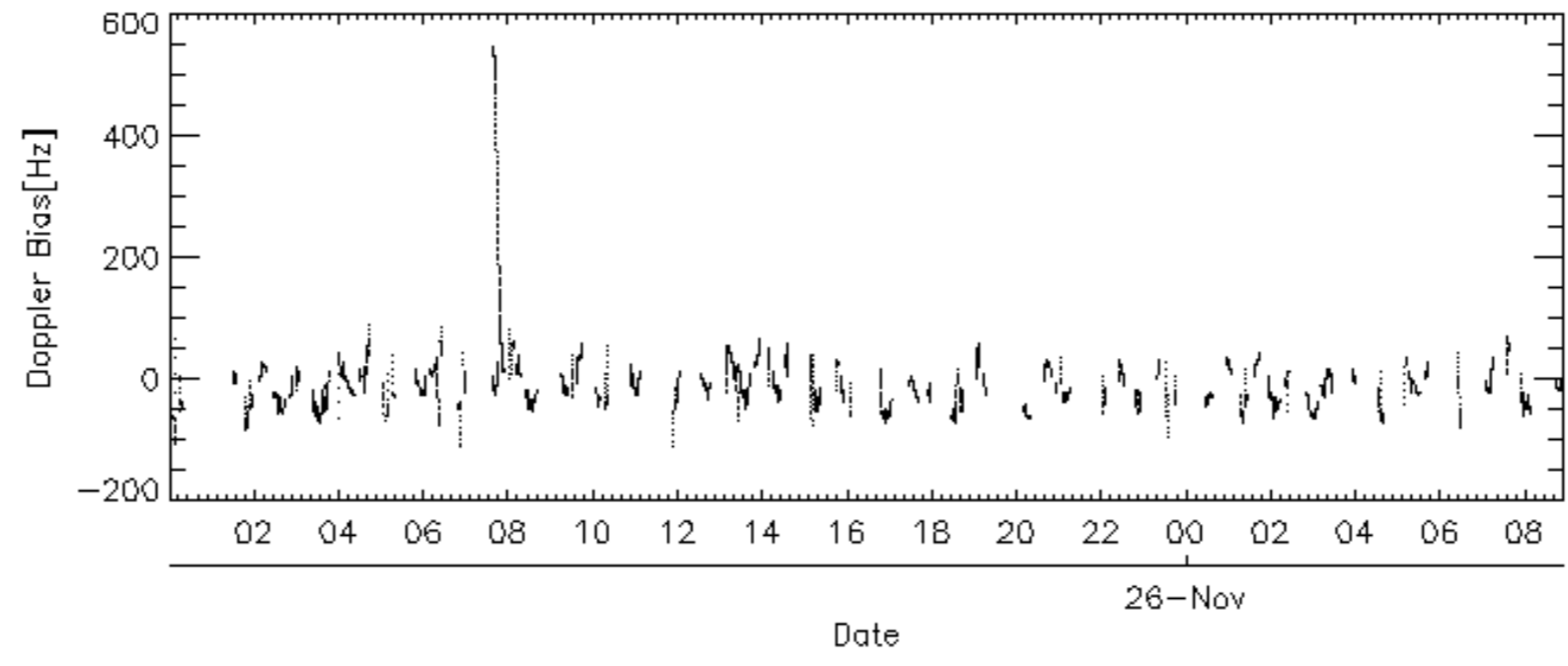
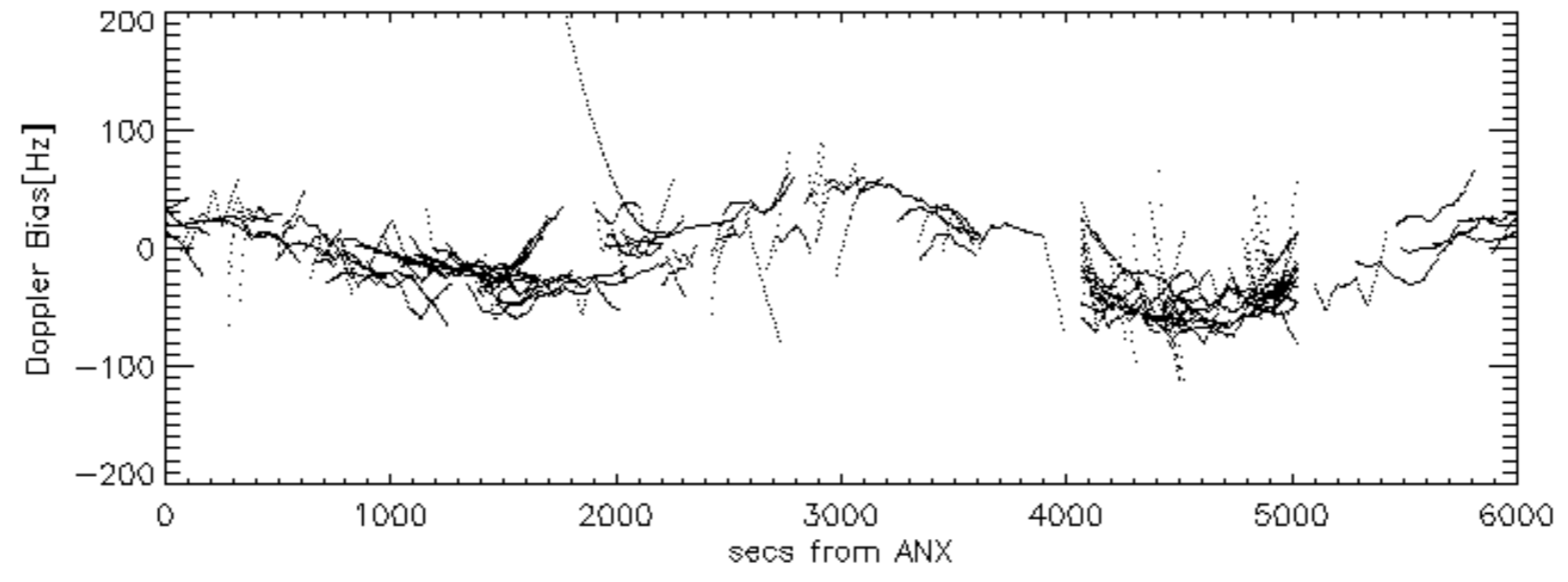
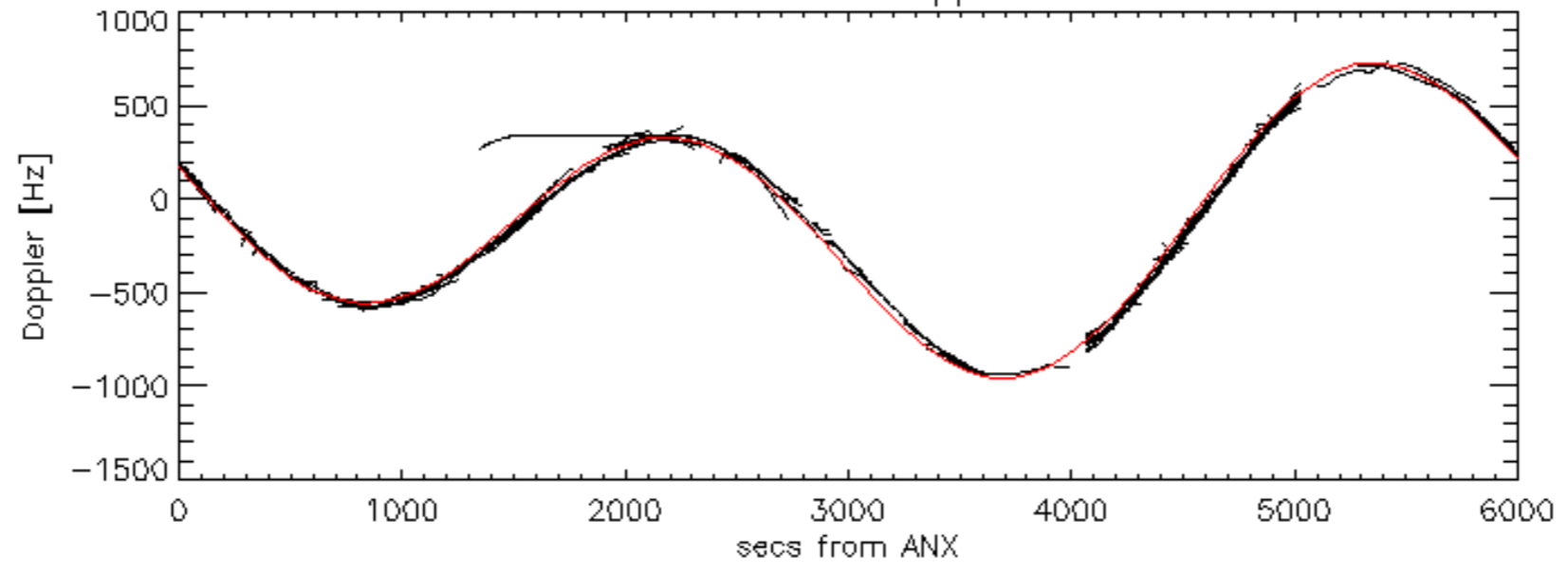
Doppler 'WVS' 'IS2' ascending

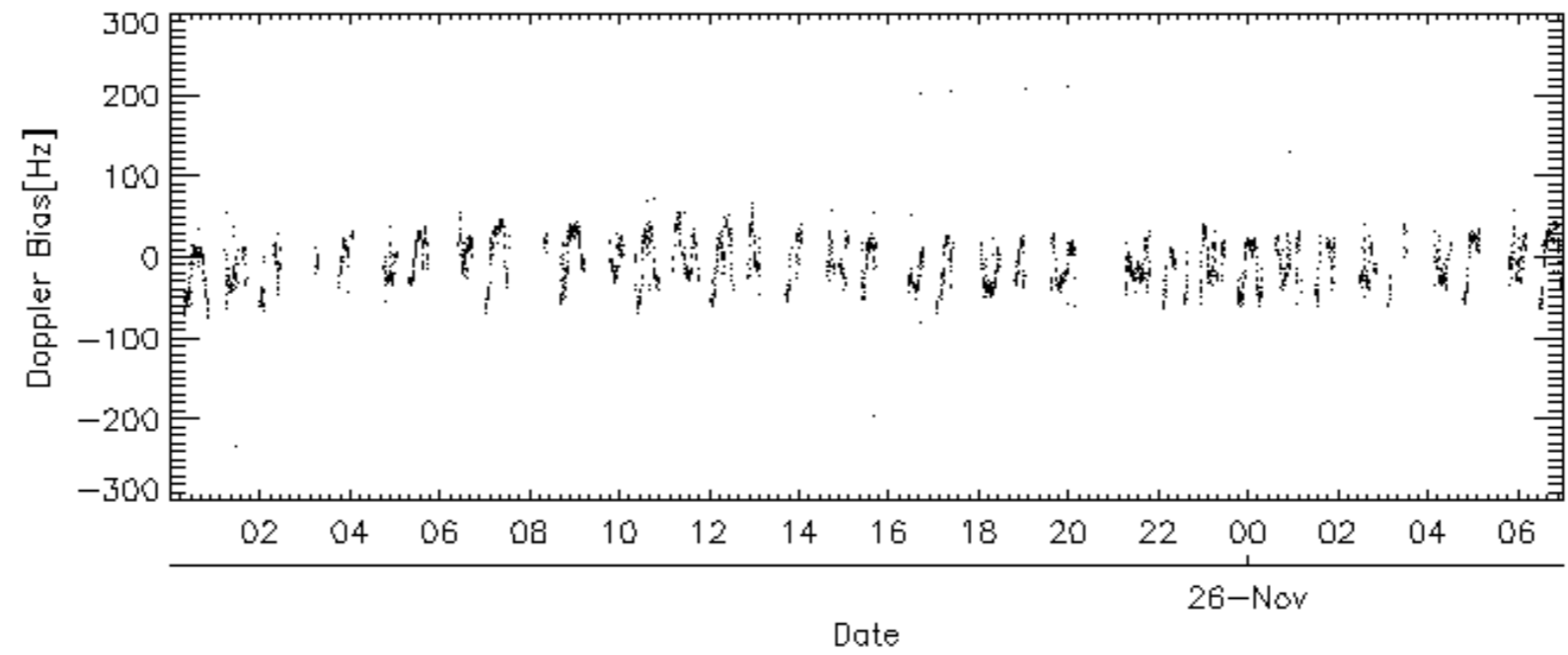
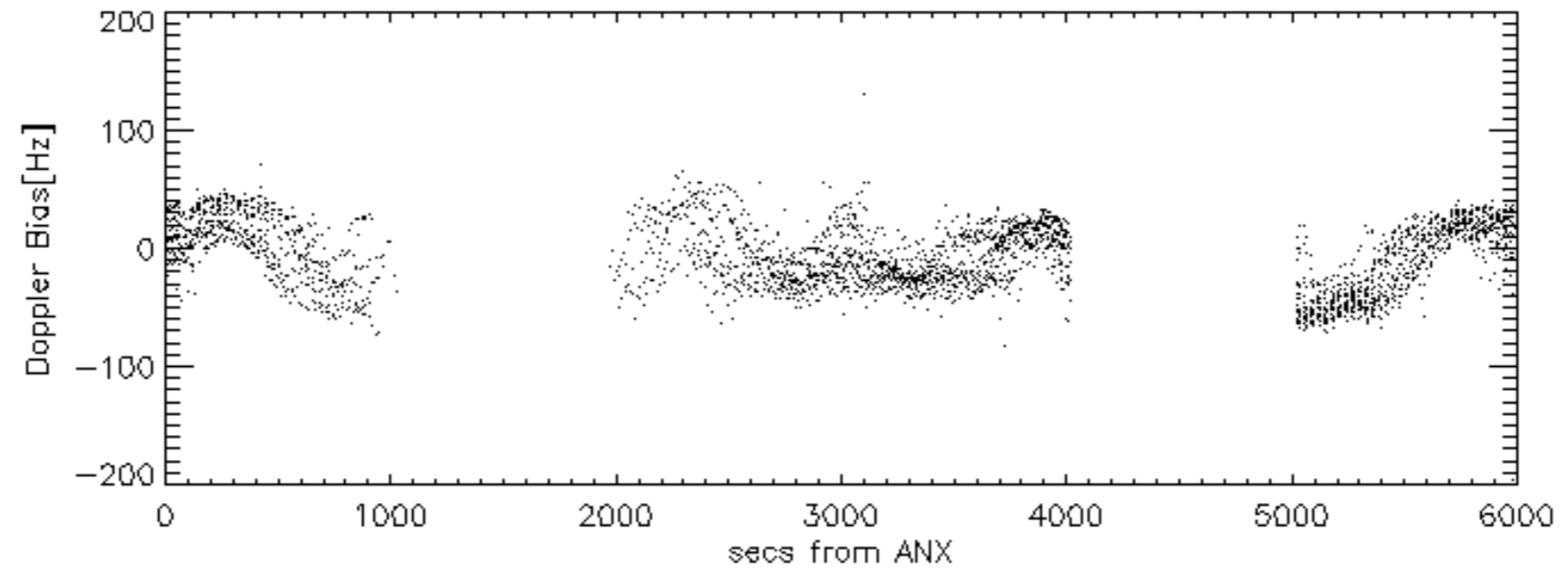
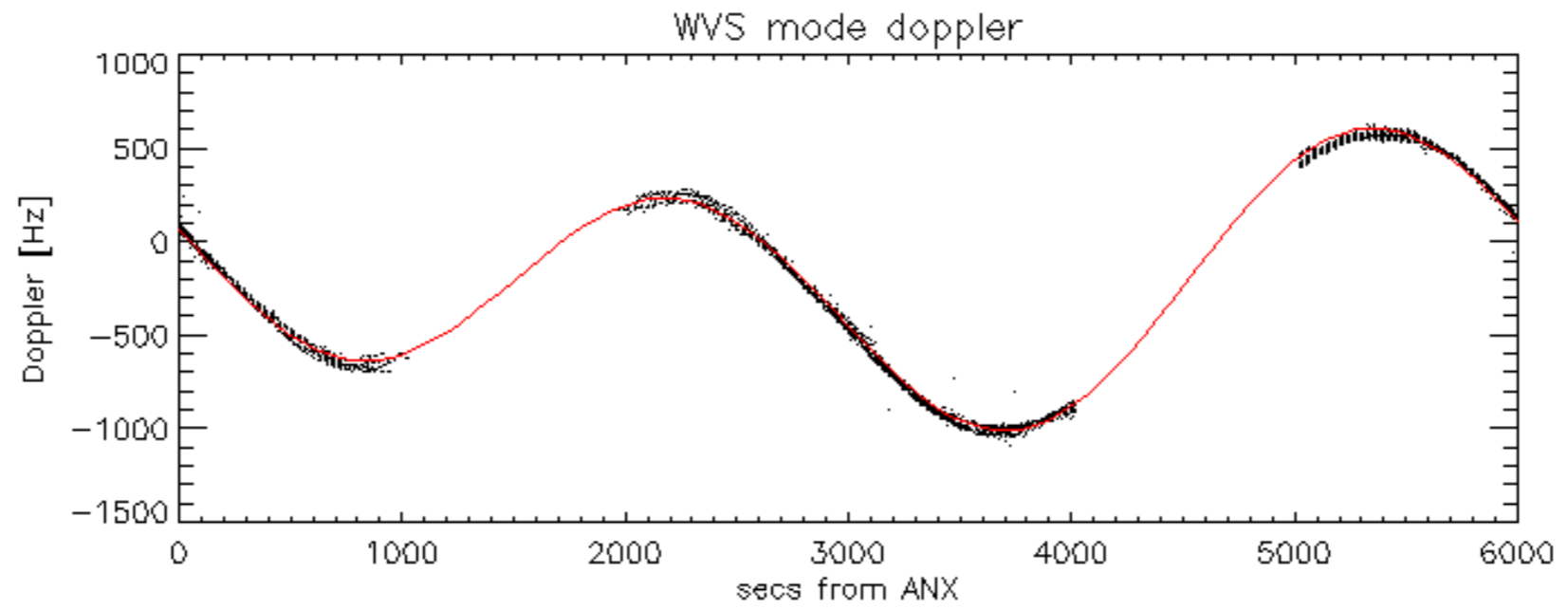


Doppler 'WVS' 'IS2' descending

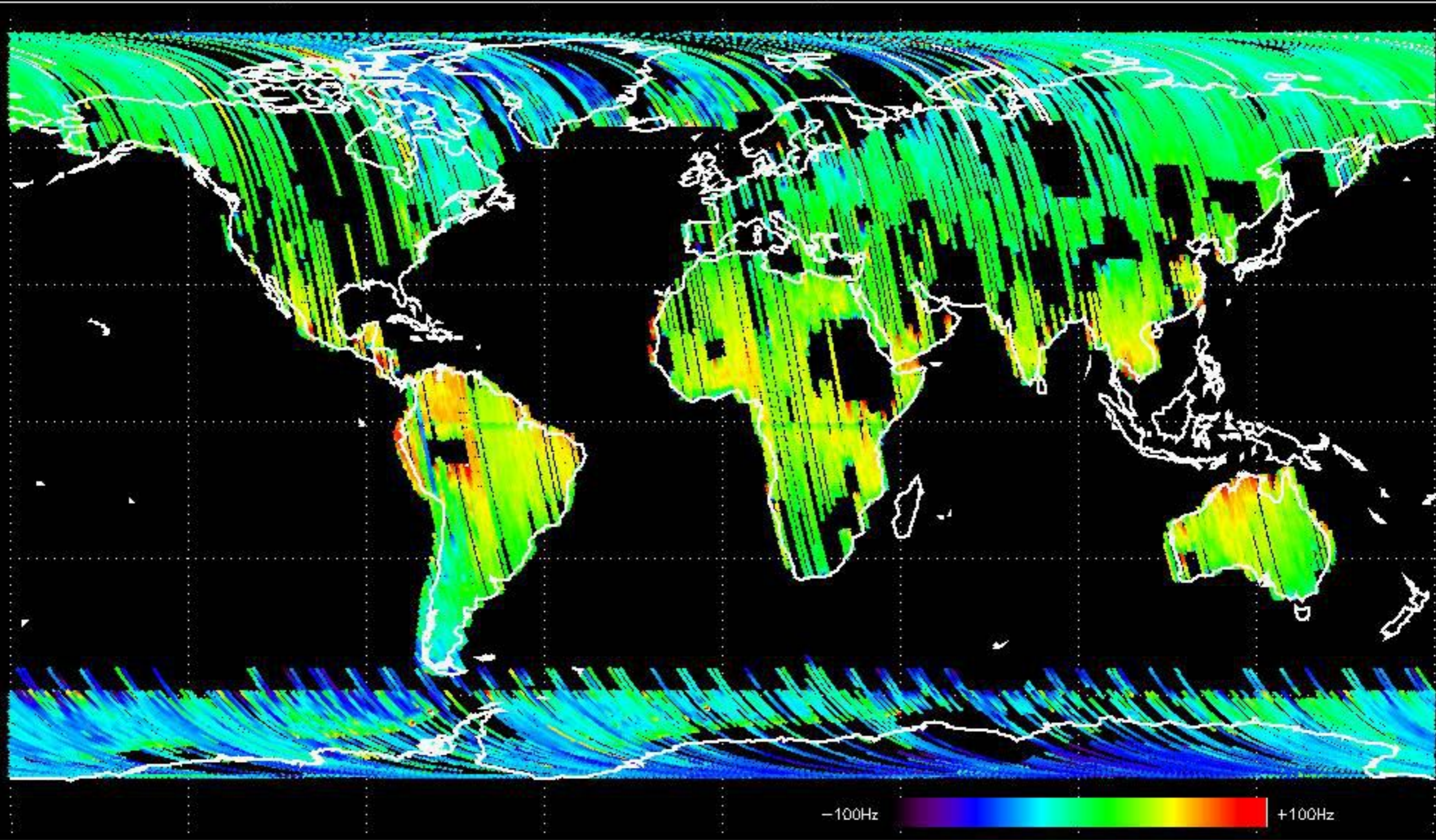


GM1 mode doppler

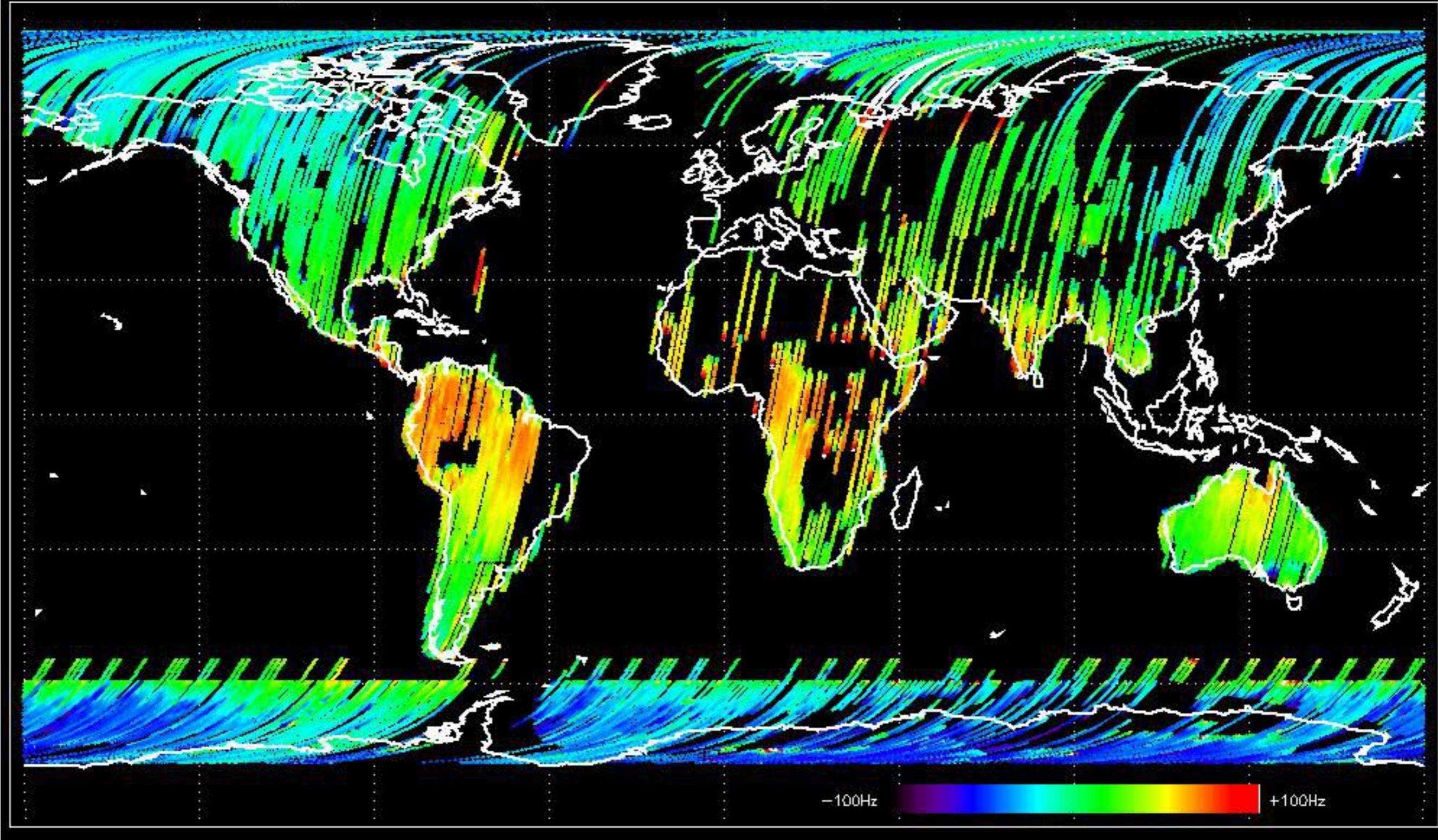




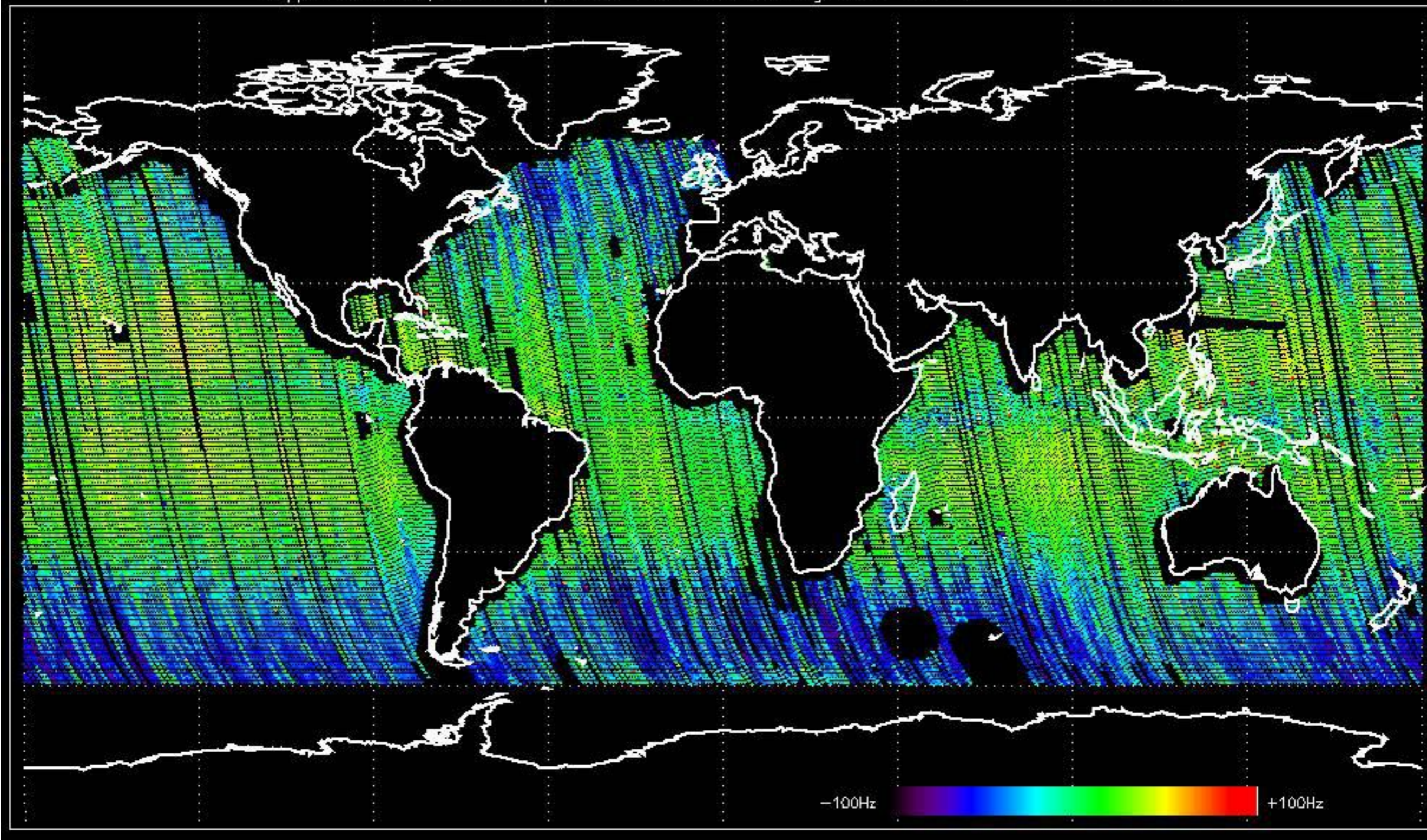
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.370704 Hz



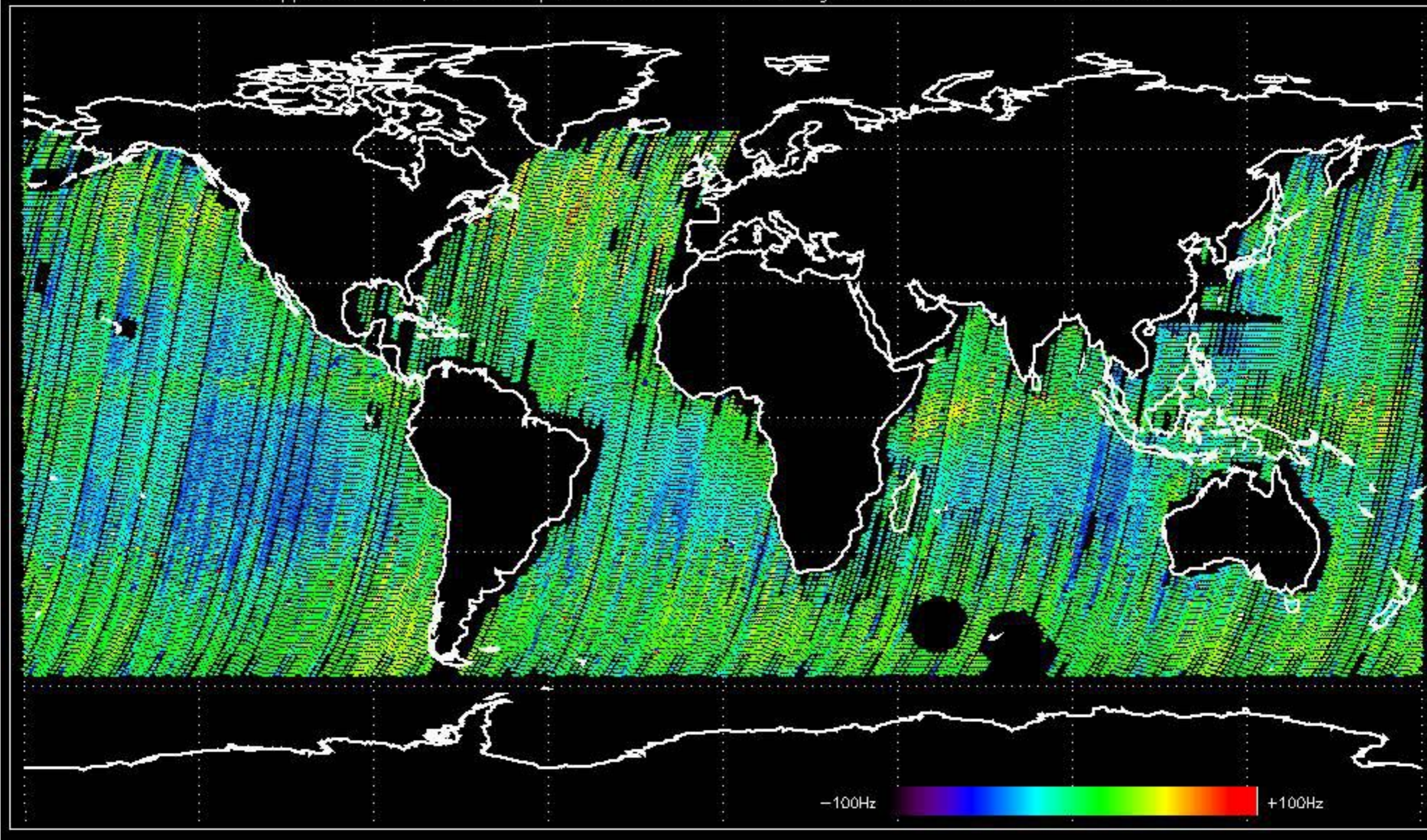
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.458859 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.5552376 Hz

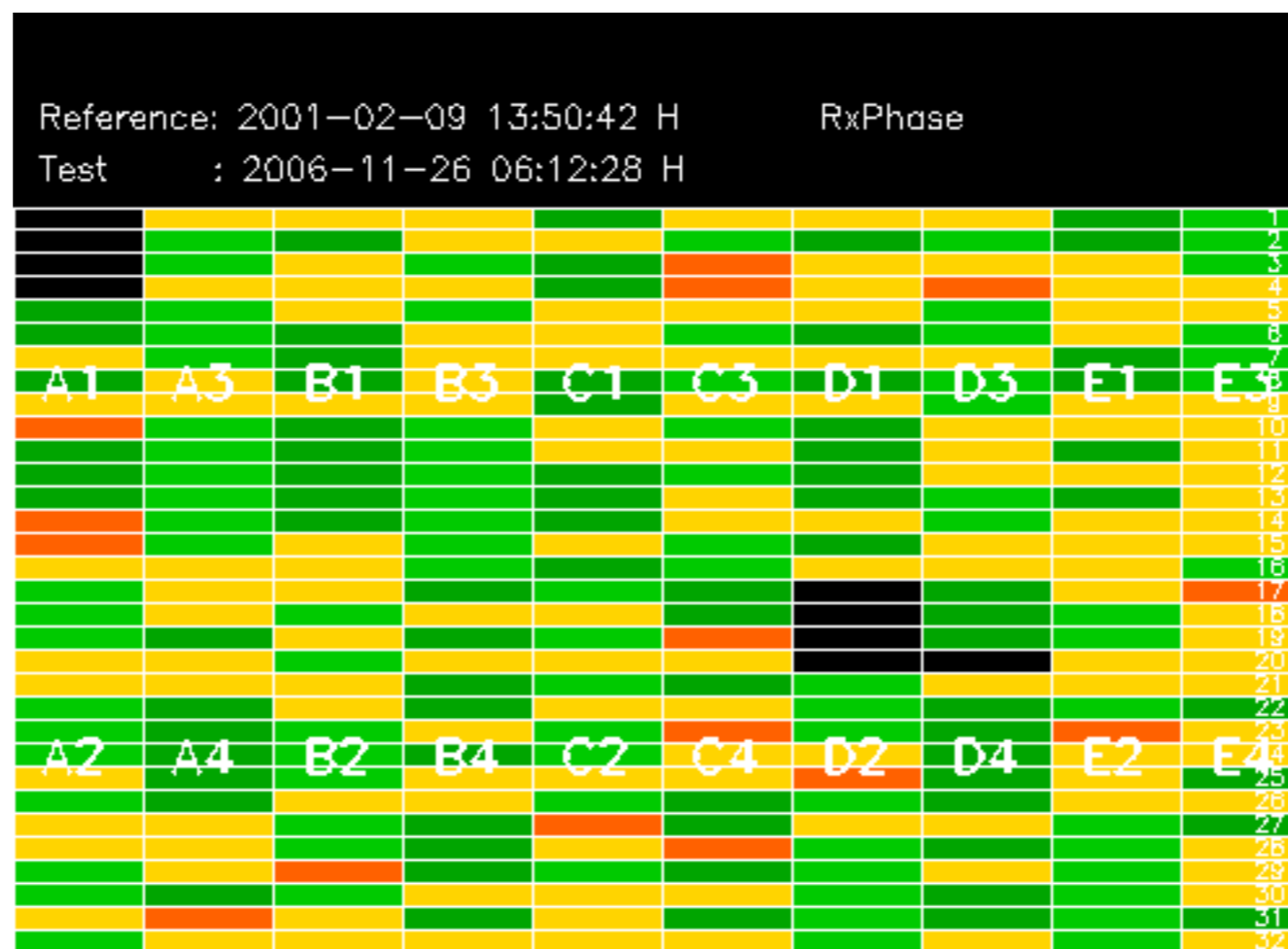


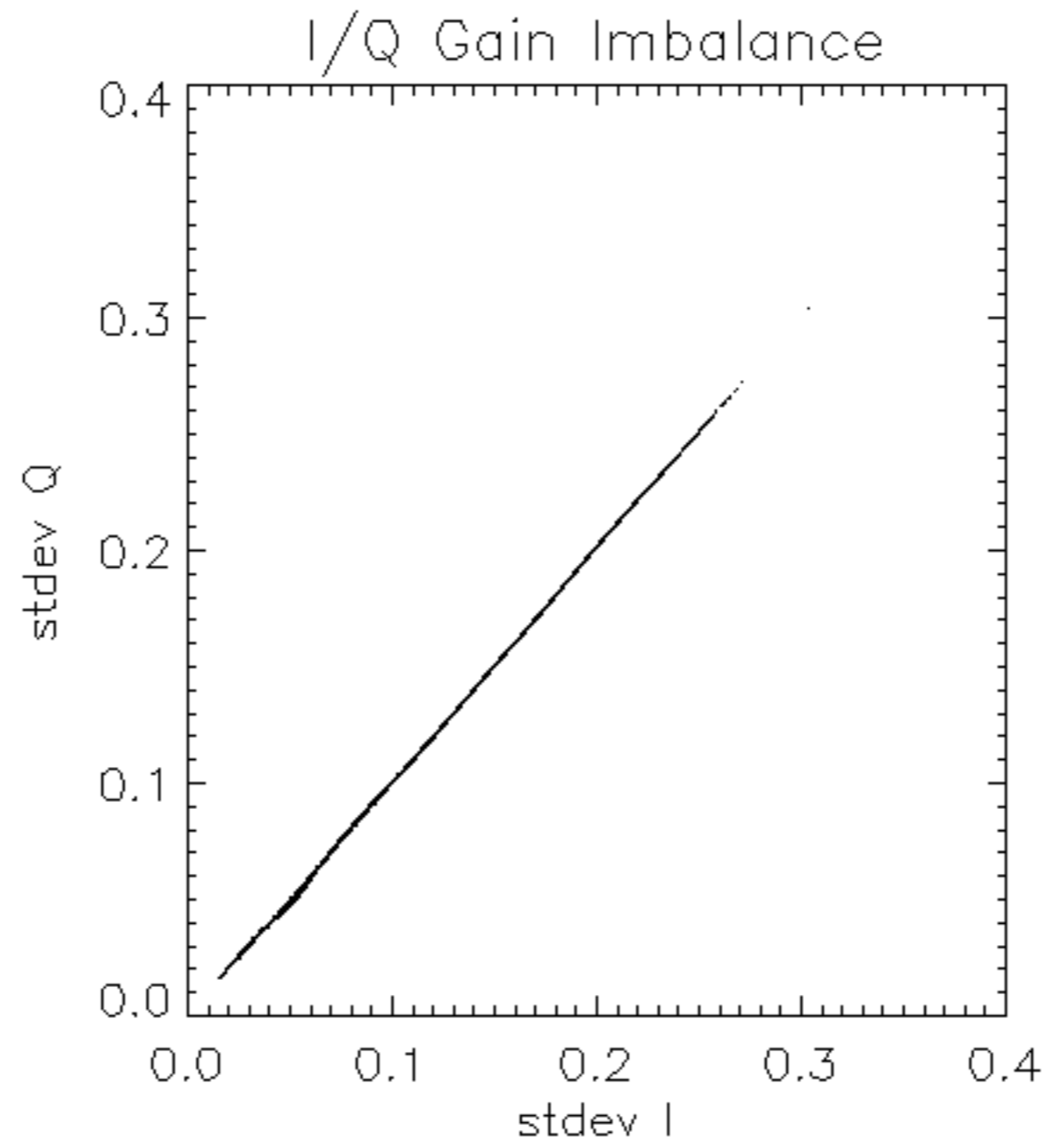
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.6763074 Hz

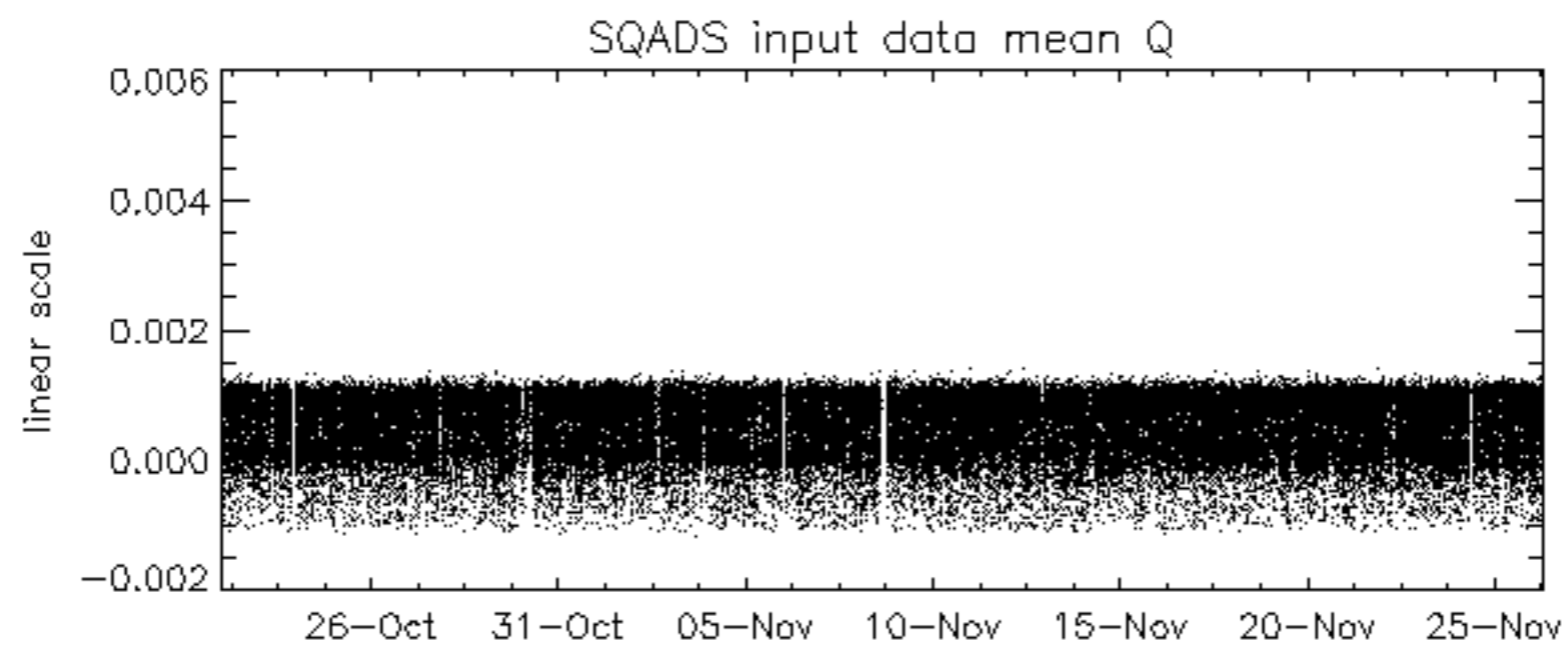
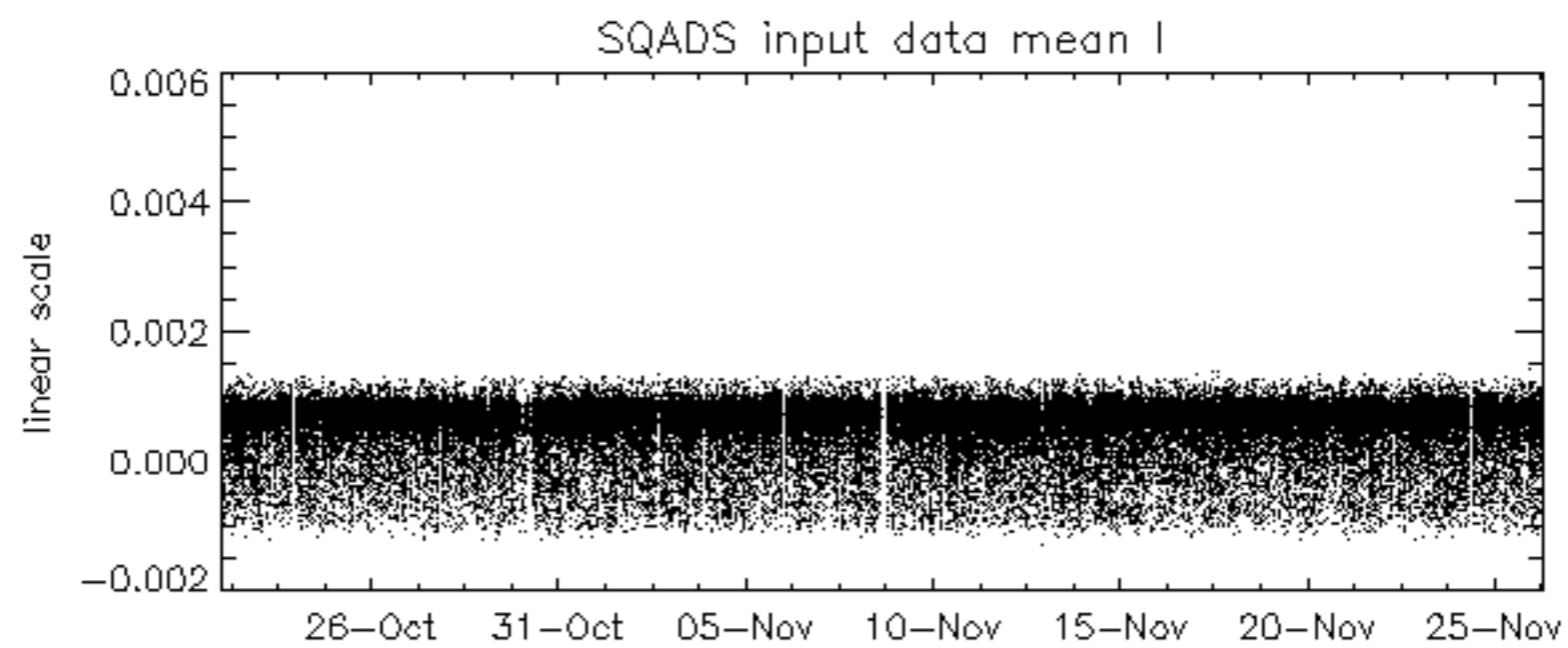
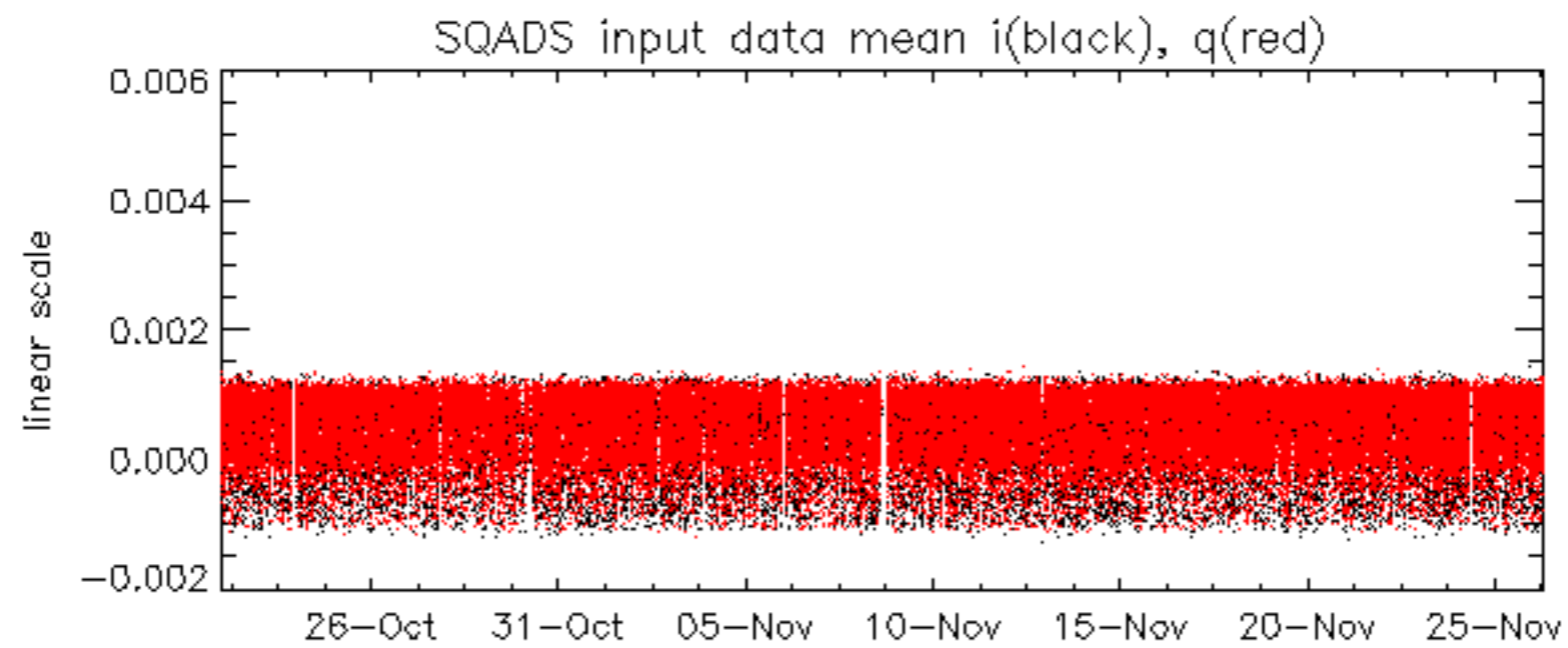


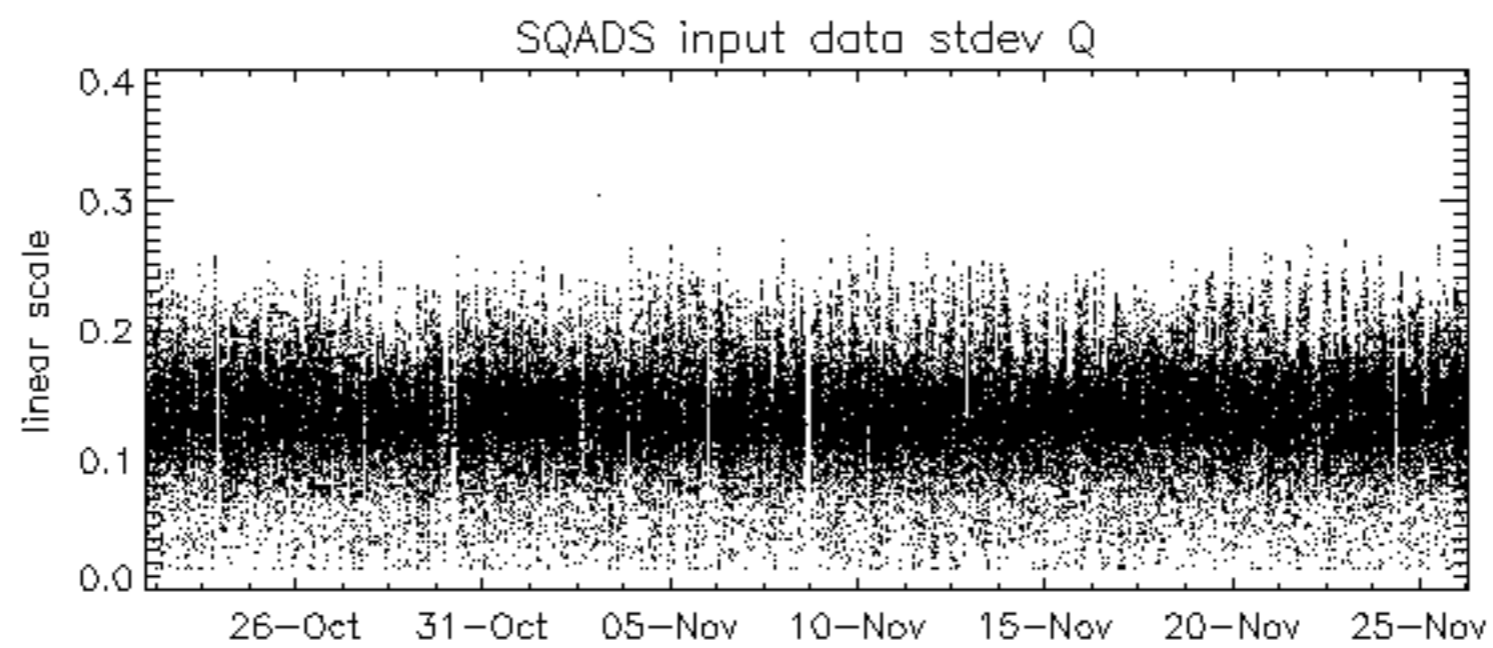
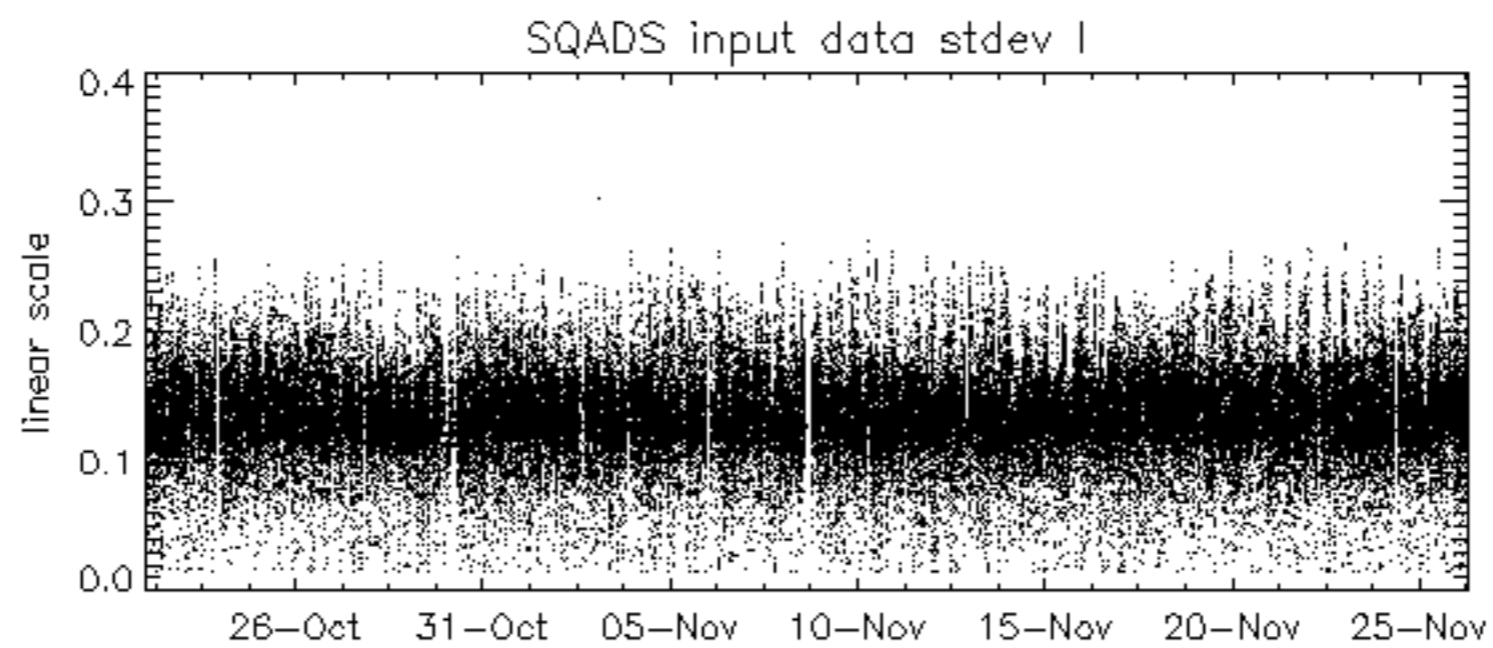
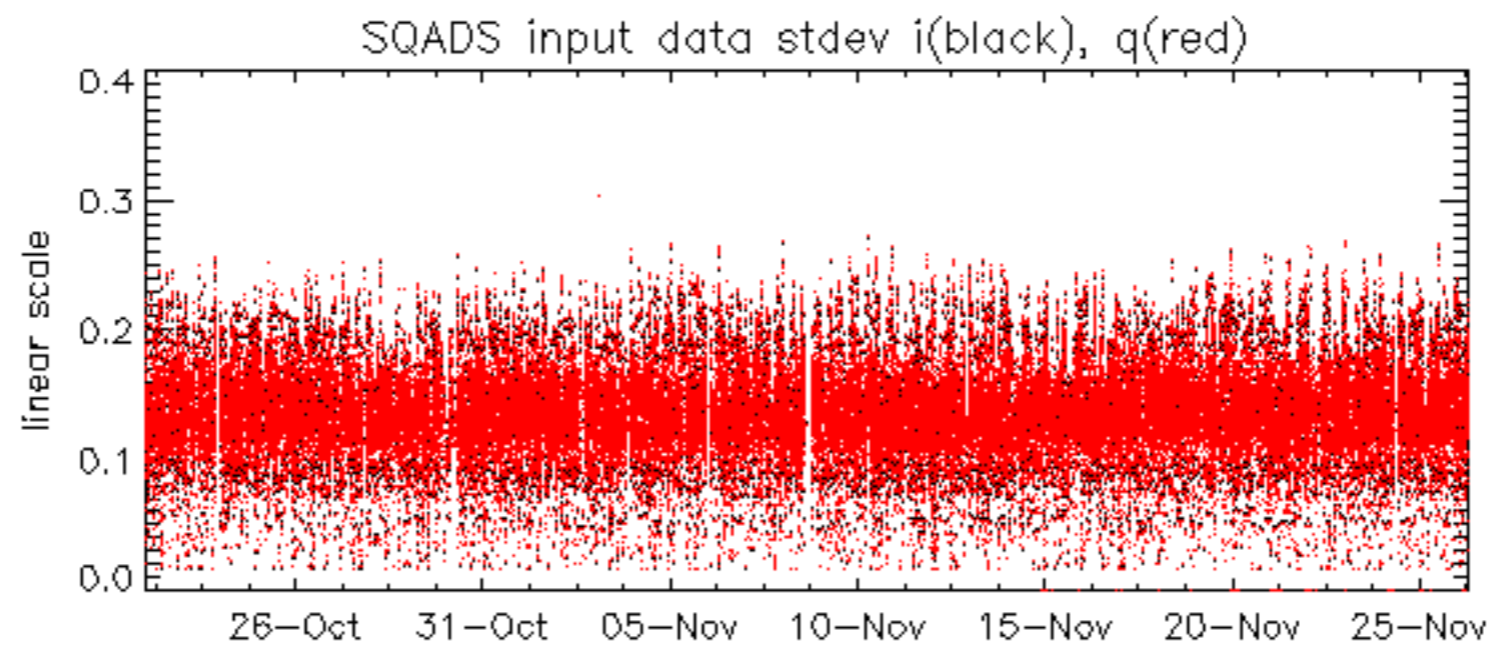
No anomalies observed on available MS products:

No anomalies observed.





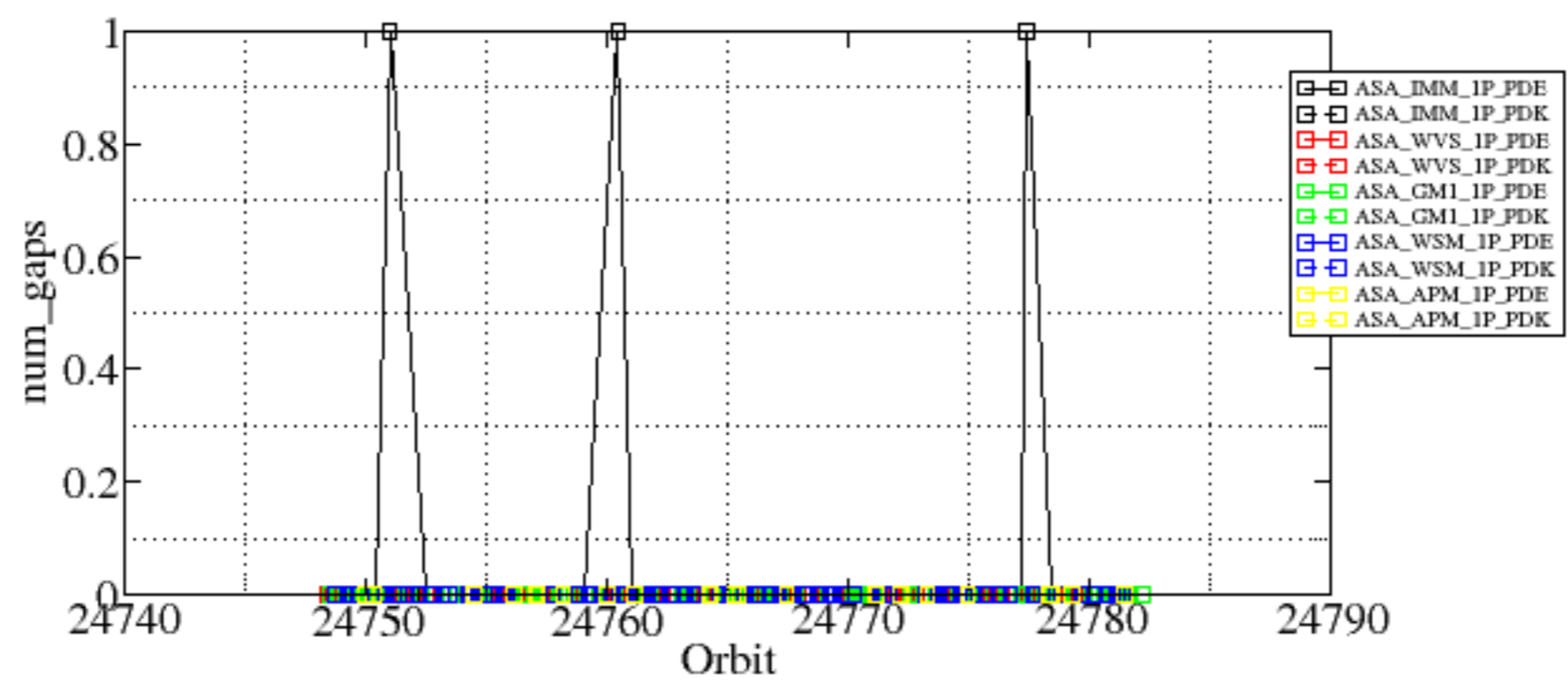


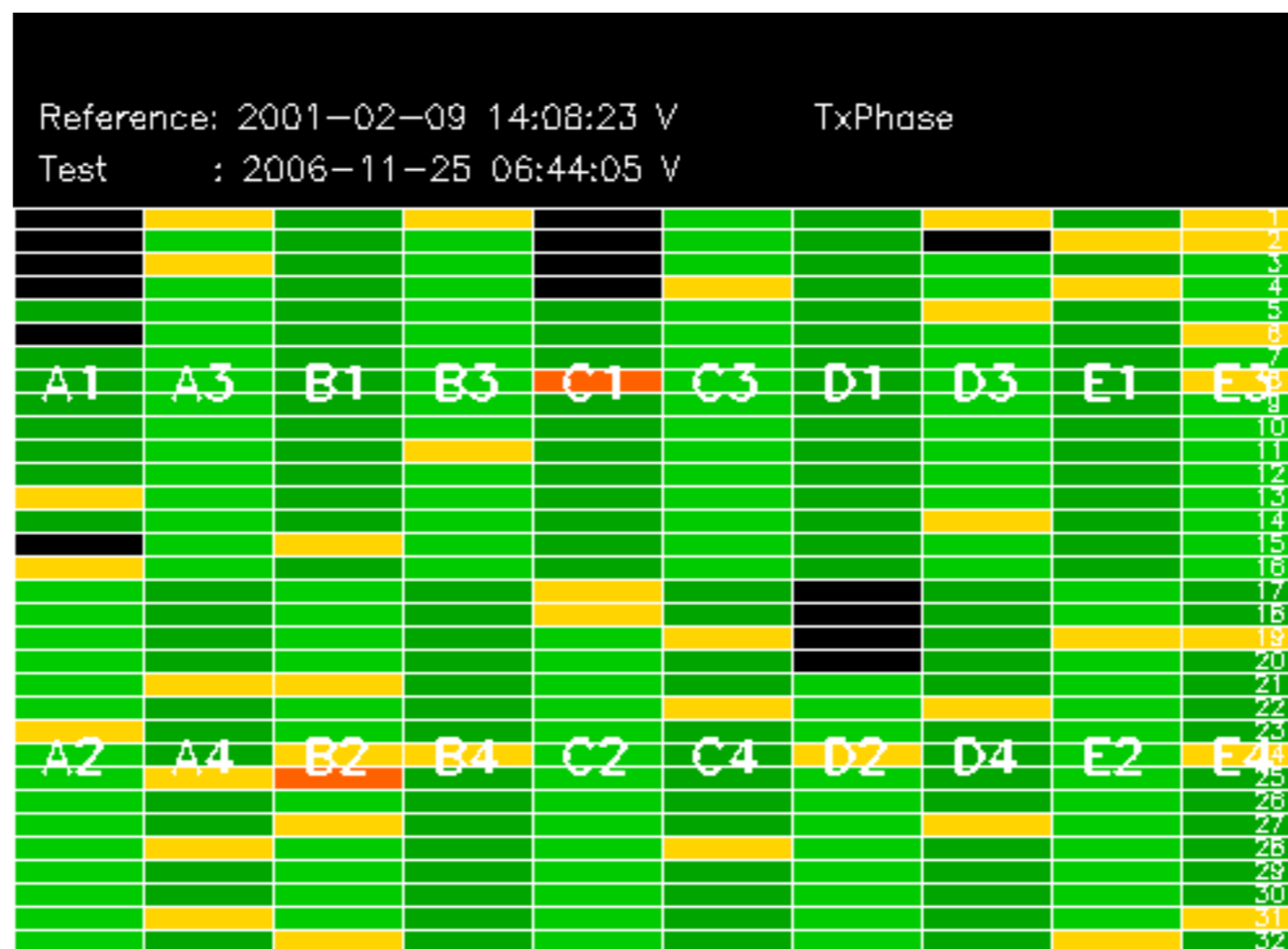


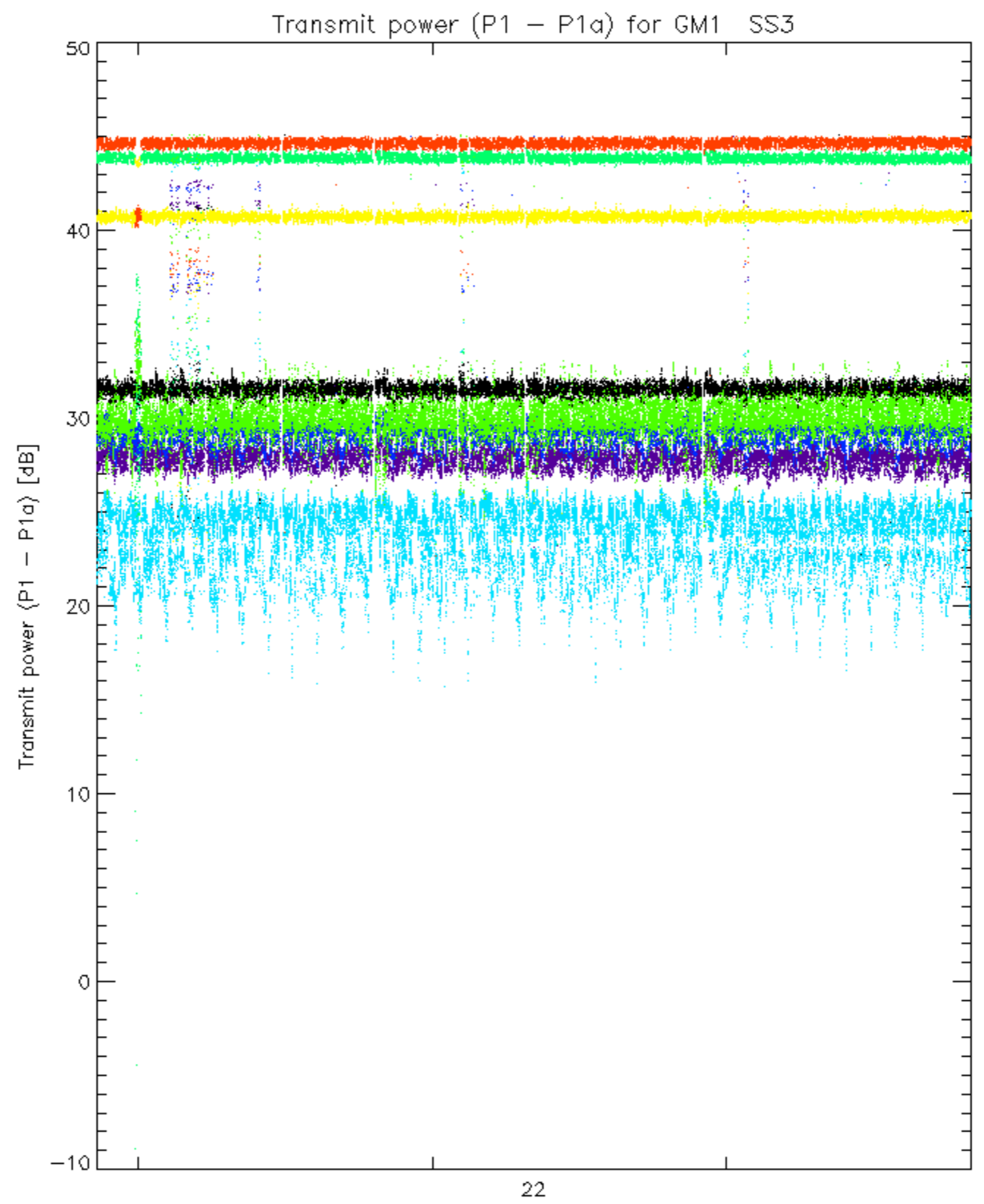
Summary of analysis for the last 3 days 2006112[456]

The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

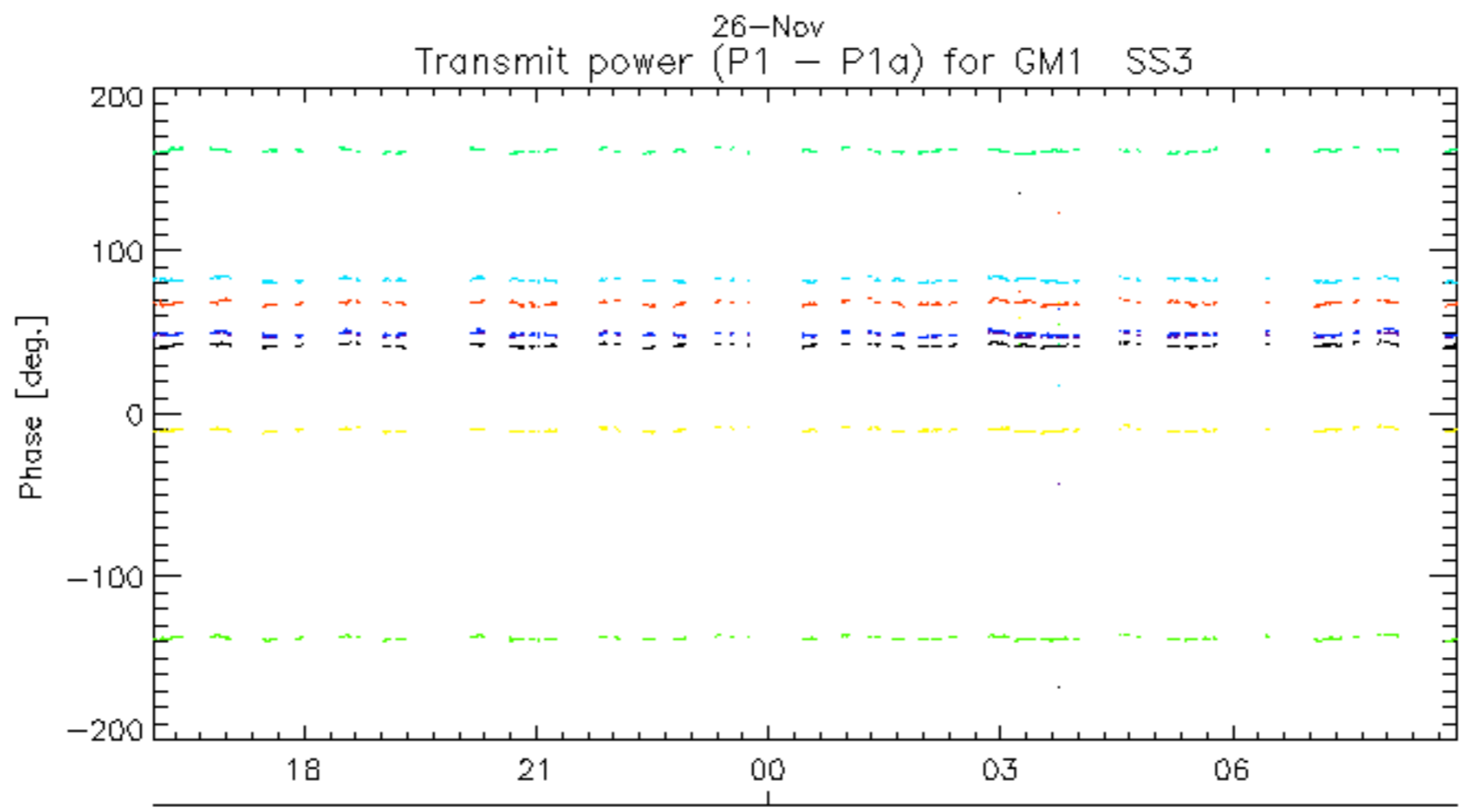
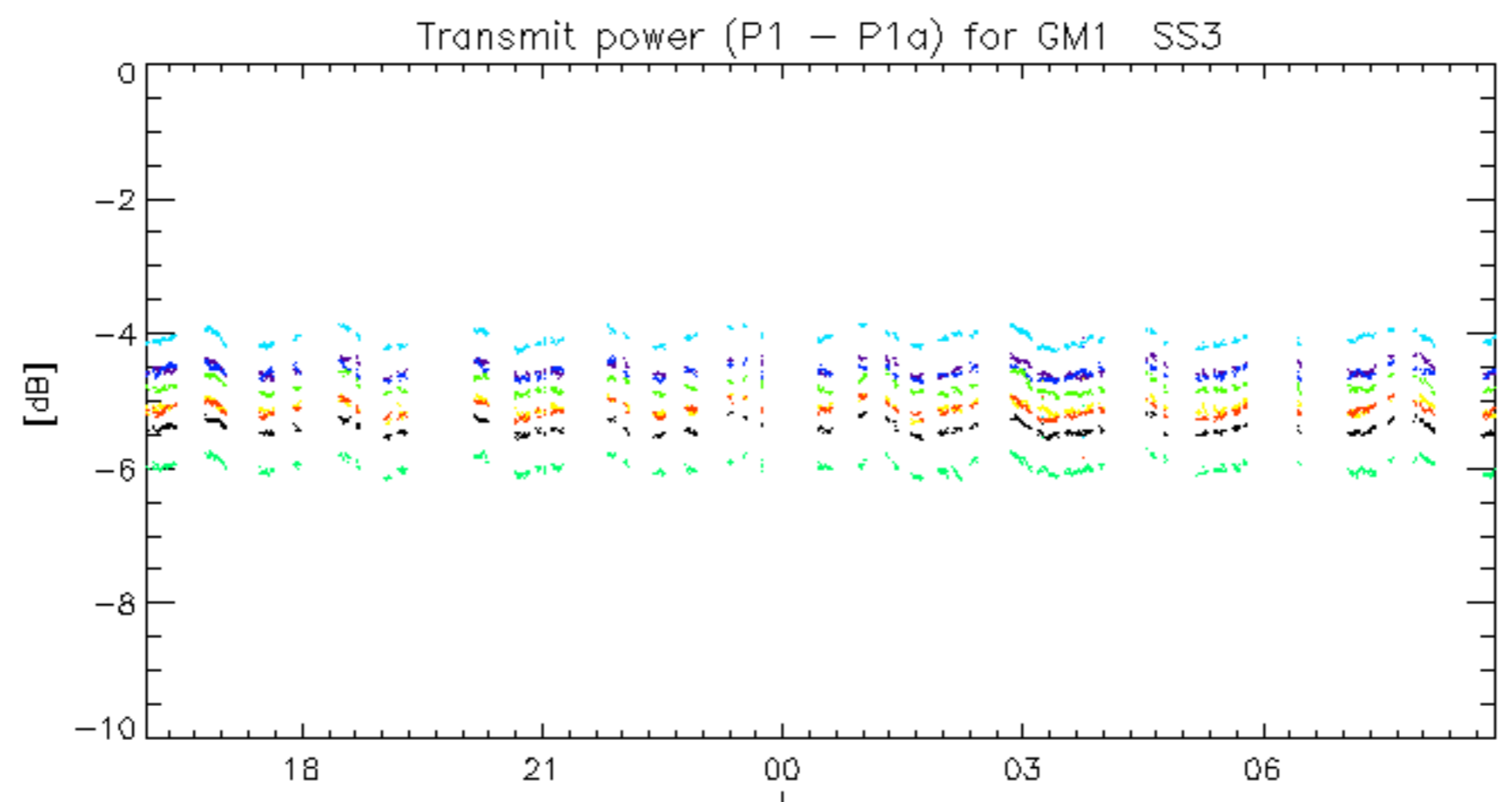
| Filename | num_gaps | num_missing_lines |
|---|----------|-------------------|
| ASA_IMM_1PNPDE20061124_042634_000000782053_00147_24750_6576.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20061124_201746_000000362053_00157_24760_7594.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20061126_004059_000000622053_00174_24777_9130.N1 | 1 | 0 |
| ASA_GM1_1PNPDK20061124_153848_0000006402053_00154_24757_9246.N1 | 0 | 32 |
| ASA_WSM_1PNPDE20061125_112341_0000001162053_00166_24769_8610.N1 | 0 | 14 |
| ASA_WSM_1PNPDE20061125_144649_000000672053_00168_24771_8672.N1 | 0 | 34 |
| ASA_WSM_1PNPDE20061125_144649_0000004462053_00168_24771_8706.N1 | 0 | 34 |
| ASA_APM_1PNPDE20061124_143627_000000872053_00154_24757_7416.N1 | 0 | 10 |



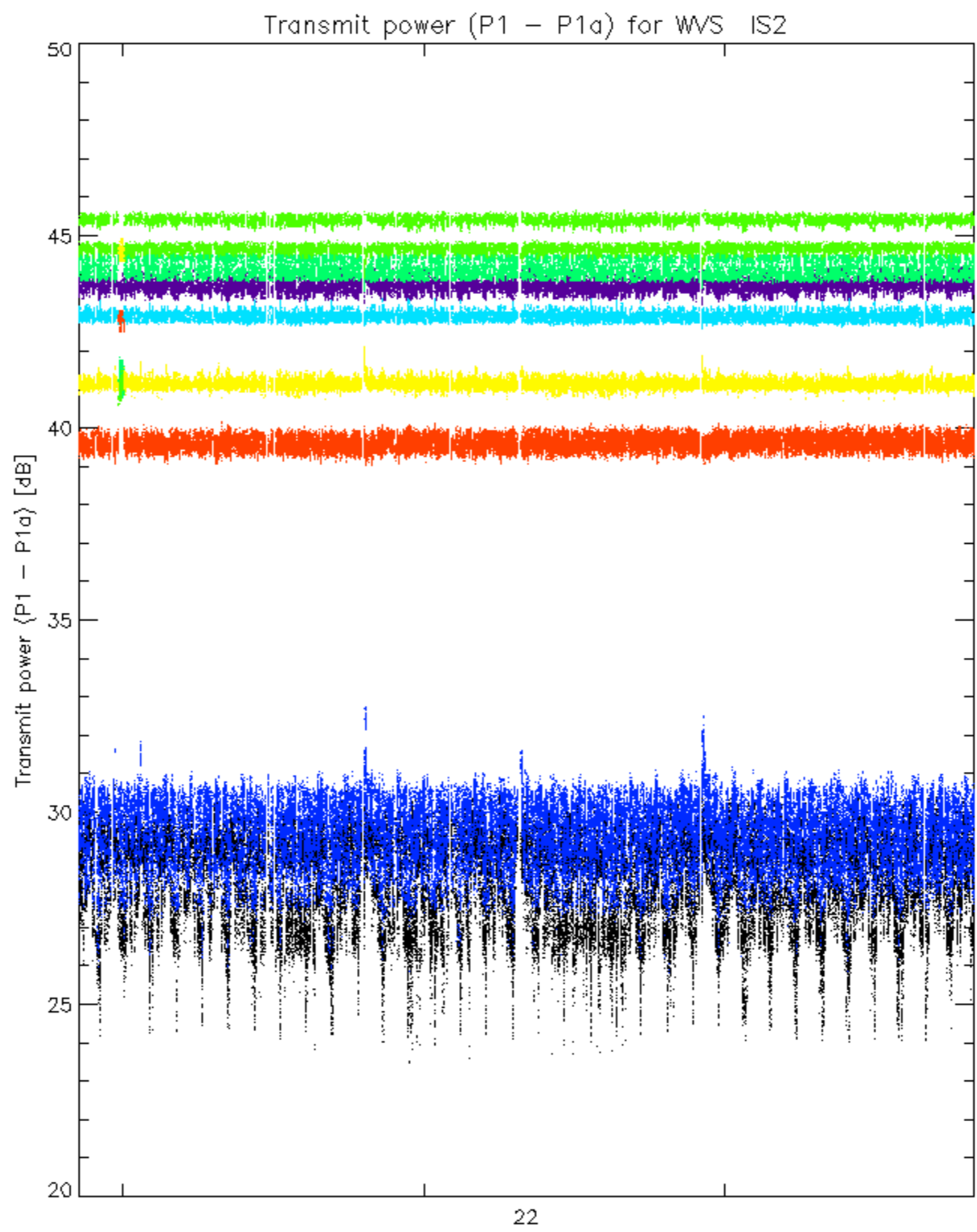




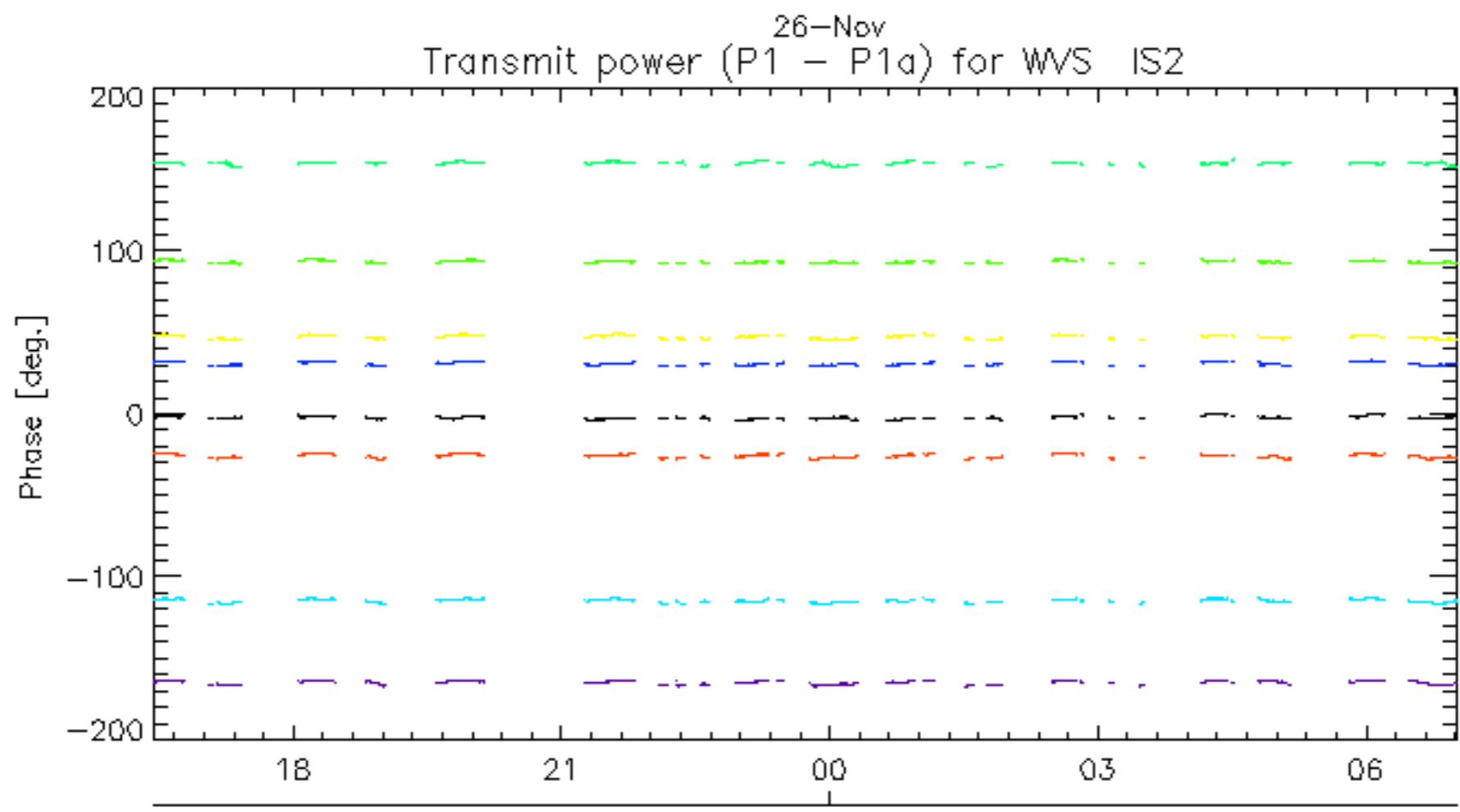
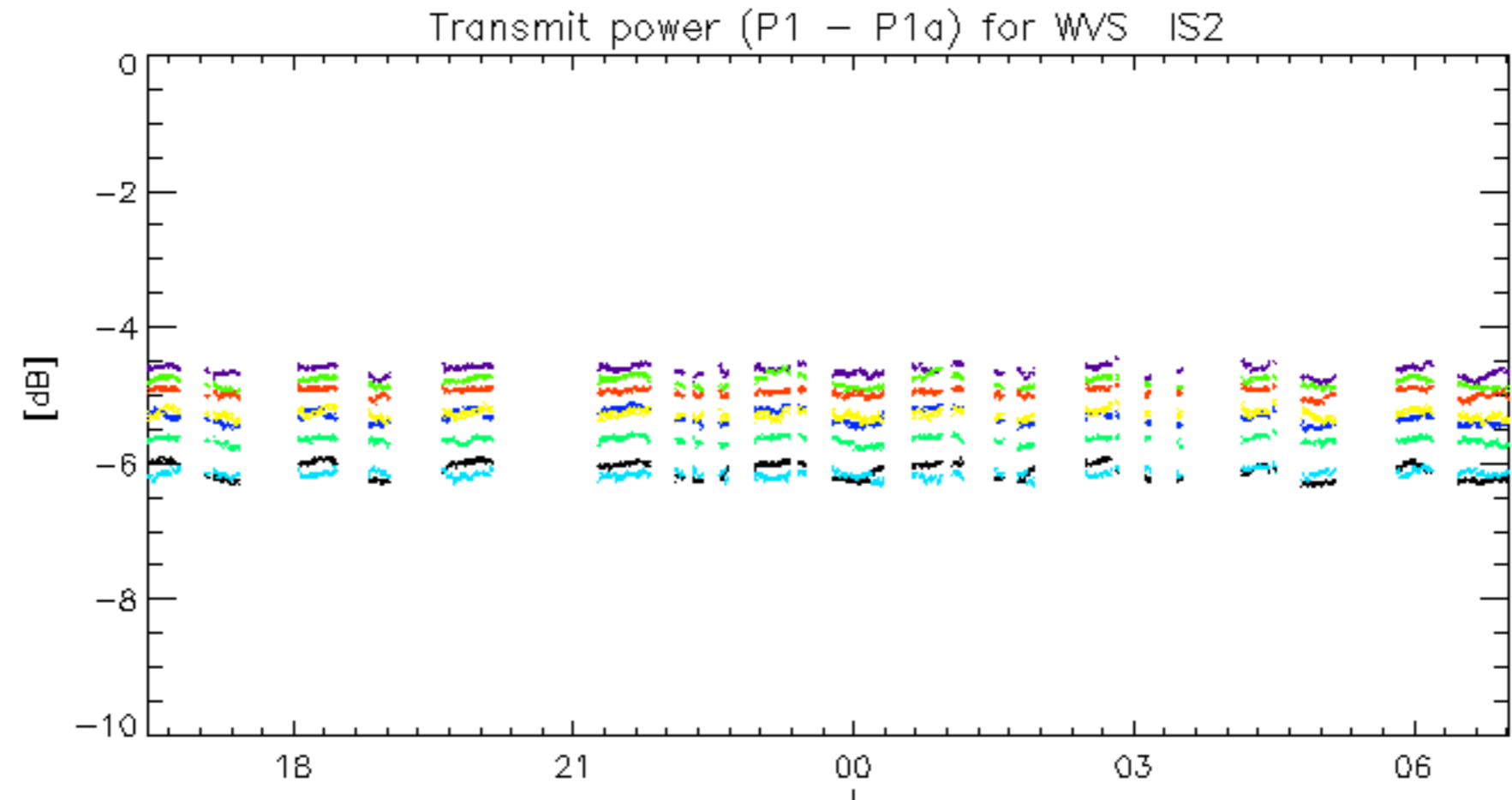
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.