

PRELIMINARY REPORT OF 060211

last update on Sat Feb 11 16:40:35 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 2006-02-10 00:00:00 to 2006-02-11 16:40:35

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

| | | | | | |
|---|----|---|----|---|----|
| ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000 | 46 | 0 | 12 | 0 | 26 |
| ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000 | 46 | 0 | 12 | 0 | 26 |
| ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000 | 46 | 0 | 12 | 0 | 26 |
| ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000 | 46 | 0 | 12 | 0 | 26 |

| PDHS-E | | | | | |
|---|-----|-----|-----|-----|-----|
| AUXILIARY FILE | WVS | GM1 | IMM | APM | WSM |
| ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000 | 45 | 34 | 45 | 8 | 42 |
| ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000 | 45 | 34 | 45 | 8 | 42 |
| ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000 | 45 | 34 | 45 | 8 | 42 |
| ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000 | 45 | 34 | 45 | 8 | 42 |

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 | 20060210 055505 |
| H | 20060211 084440 |

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 |
|--------------------------|------------------------------|
| <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 | -4.014678 | 0.008296 | 0.041084 |
| 7 | P1 | -3.001531 | 0.012773 | -0.007676 |
| 11 | P1 | -4.093362 | 0.022115 | 0.018986 |
| 15 | P1 | -6.058928 | 0.017991 | 0.006918 |
| 19 | P1 | -3.257027 | 0.006593 | -0.017219 |
| 22 | P1 | -4.474924 | 0.018538 | 0.018835 |
| 26 | P1 | -4.196940 | 0.013214 | 0.046959 |
| 30 | P1 | -5.771674 | 0.010437 | 0.004581 |
| 3 | P1 | -16.909586 | 0.265465 | 0.049868 |
| 7 | P1 | -16.645323 | 0.125297 | -0.116749 |
| 11 | P1 | -16.594027 | 0.300264 | 0.035355 |
| 15 | P1 | -13.175837 | 0.111153 | 0.139387 |
| 19 | P1 | -13.889286 | 0.071332 | -0.032763 |
| 22 | P1 | -15.804845 | 0.561566 | 0.207925 |
| 26 | P1 | -15.763946 | 0.249508 | 0.049270 |
| 30 | P1 | -16.576387 | 0.311424 | 0.054396 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -21.555252 | 0.092694 | 0.162407 |
| 7 | P2 | -22.436178 | 0.096387 | 0.090021 |
| 11 | P2 | -16.273216 | 0.102491 | 0.084800 |
| 15 | P2 | -7.196389 | 0.102987 | 0.042397 |
| 19 | P2 | -9.160179 | 0.097067 | 0.029752 |
| 22 | P2 | -17.941565 | 0.094067 | -0.006925 |
| 26 | P2 | -16.214470 | 0.100732 | 0.011632 |
| 30 | P2 | -19.641731 | 0.084738 | 0.016772 |

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 7 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 11 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 15 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 19 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 22 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 26 | P3 | -8.203704 | 0.007381 | 0.023907 |
| 30 | P3 | -8.203704 | 0.007381 | 0.023907 |

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 | -3.732675 | 0.011379 | -0.036008 |
| 7 | P1 | -2.742772 | 0.007528 | 0.001165 |
| 11 | P1 | -2.879362 | 0.013036 | -0.075302 |
| 15 | P1 | -3.491385 | 0.020639 | -0.093145 |
| 19 | P1 | -3.379473 | 0.012119 | -0.019376 |
| 22 | P1 | -5.138867 | 0.021728 | -0.066500 |
| 26 | P1 | -5.847940 | 0.017651 | 0.022887 |
| 30 | P1 | -5.232948 | 0.027948 | 0.046539 |
| 3 | P1 | -11.540227 | 0.041753 | -0.044637 |
| 7 | P1 | -9.920938 | 0.047747 | -0.044085 |
| 11 | P1 | -10.121717 | 0.054505 | -0.177875 |
| 15 | P1 | -10.662104 | 0.097404 | -0.147698 |
| 19 | P1 | -15.458124 | 0.061903 | 0.039712 |
| 22 | P1 | -20.463385 | 1.251657 | 0.407479 |
| 26 | P1 | -16.647455 | 0.352838 | 0.441844 |
| 30 | P1 | -18.208481 | 0.328850 | -0.156383 |

P2 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|------------|------------|-----------------|
| 3 | P2 | -17.335831 | 0.038087 | 0.231042 |
| 7 | P2 | -22.772715 | 0.070115 | 0.222377 |
| 11 | P2 | -11.378019 | 0.025727 | 0.154480 |
| 15 | P2 | -4.888587 | 0.028385 | 0.065555 |
| 19 | P2 | -6.897494 | 0.025122 | 0.052048 |
| 22 | P2 | -8.182636 | 0.025882 | 0.018630 |
| 26 | P2 | -23.956409 | 0.025800 | 0.020846 |
| 30 | P2 | -22.086561 | 0.019141 | 0.004603 |

P3 Cyclic statistics

| row | pulse | mean (dB) | stdev (dB) | slope(dB/cycle) |
|-----|-------|-----------|------------|-----------------|
| 3 | P3 | -8.040206 | 0.002668 | 0.034869 |
| 7 | P3 | -8.040077 | 0.002676 | 0.034685 |
| 11 | P3 | -8.040107 | 0.002678 | 0.035015 |
| 15 | P3 | -8.040178 | 0.002684 | 0.034674 |
| 19 | P3 | -8.040270 | 0.002679 | 0.034488 |
| 22 | P3 | -8.040248 | 0.002676 | 0.034881 |
| 26 | P3 | -8.040254 | 0.002682 | 0.034712 |
| 30 | P3 | -8.040158 | 0.002689 | 0.035105 |

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 | 0.000567158 |
| | stdev | 1.63495e-07 |
| MEAN Q | mean | 0.000527635 |
| | stdev | 2.09725e-07 |



5.2 - Input stdev I/Q

| channel | stat | DSS-B |
|---------|-------|------------|
| STDEV I | mean | 0.140015 |
| | stdev | 0.00114621 |
| STDEV Q | mean | 0.140376 |
| | stdev | 0.00116574 |



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006021[901]

The assumption 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_1PNPDE20060210_052944_000000042045_00048_20643_2658.N1 | 0 | 248 |
| ASA_IMM_1PNPDE20060210_054350_000000352045_00048_20643_2602.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20060211_005021_000002372045_00059_20654_2678.N1 | 1 | 0 |
| ASA_WVS_1PNPDE20060210_040752_000000002045_00047_20642_0876.N1 | 1 | 0 |







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)

| |
|---|
|  |
| 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 |

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

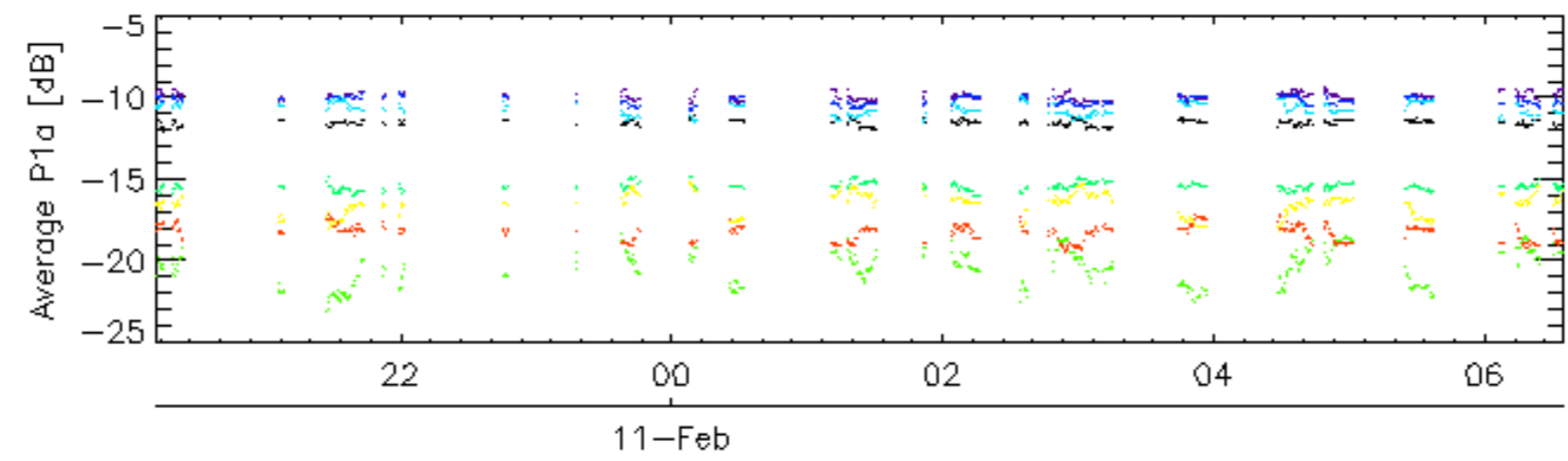
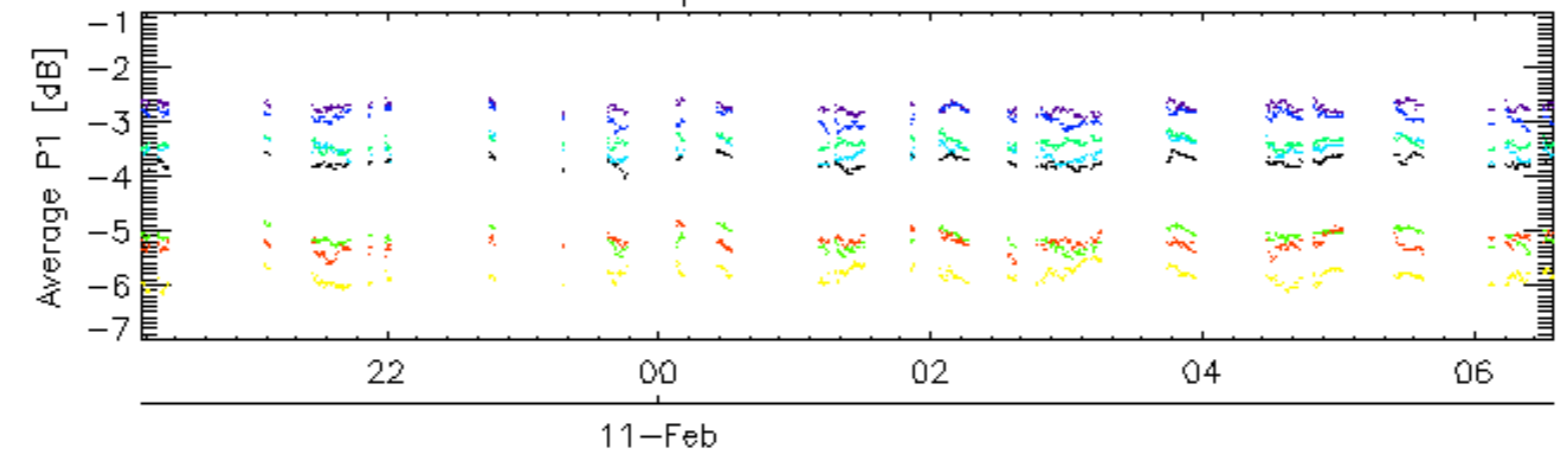
7.5 - Absolute Doppler for GM1

| |
|--------------------------------------|
| Evolution of Absolute Doppler |
| <input type="checkbox"/> |
| Ascending |
| <input type="checkbox"/> |
| Descending |

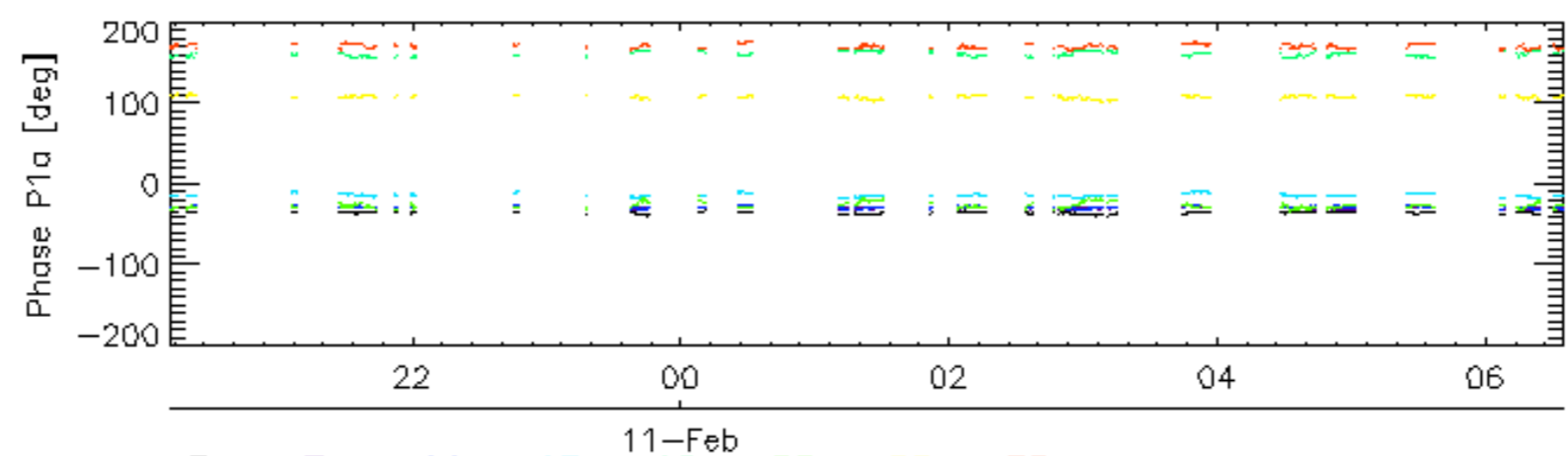
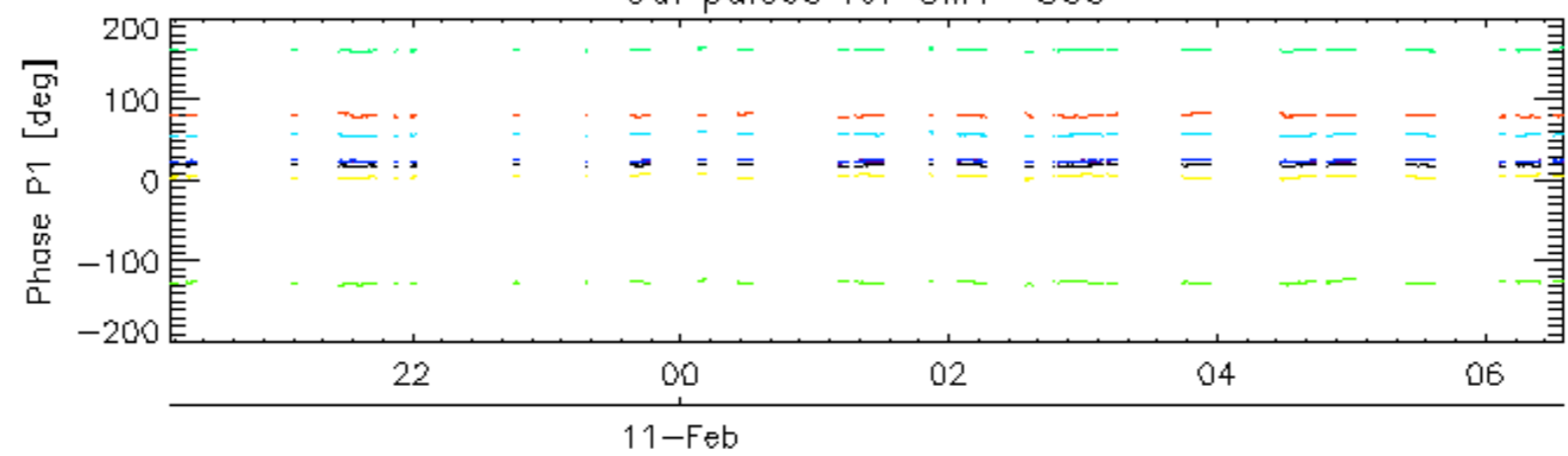
7.6 - Doppler evolution versus ANX for GM1

| |
|---|
| Evolution Doppler error versus ANX |
| <input type="checkbox"/> |

Cal pulses for GM1 SS3

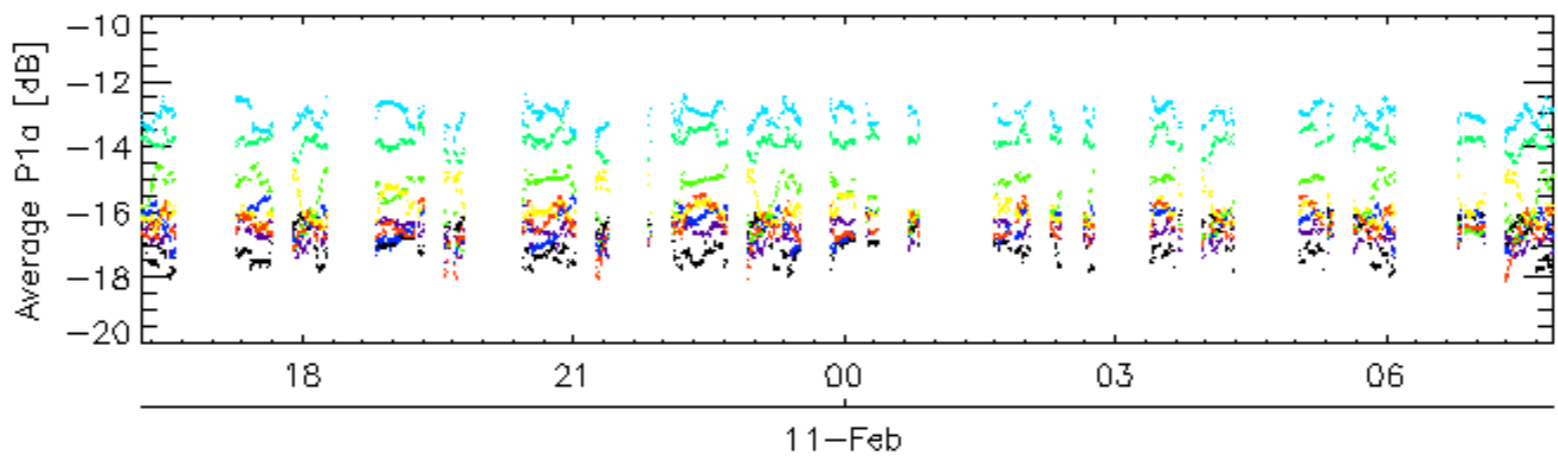
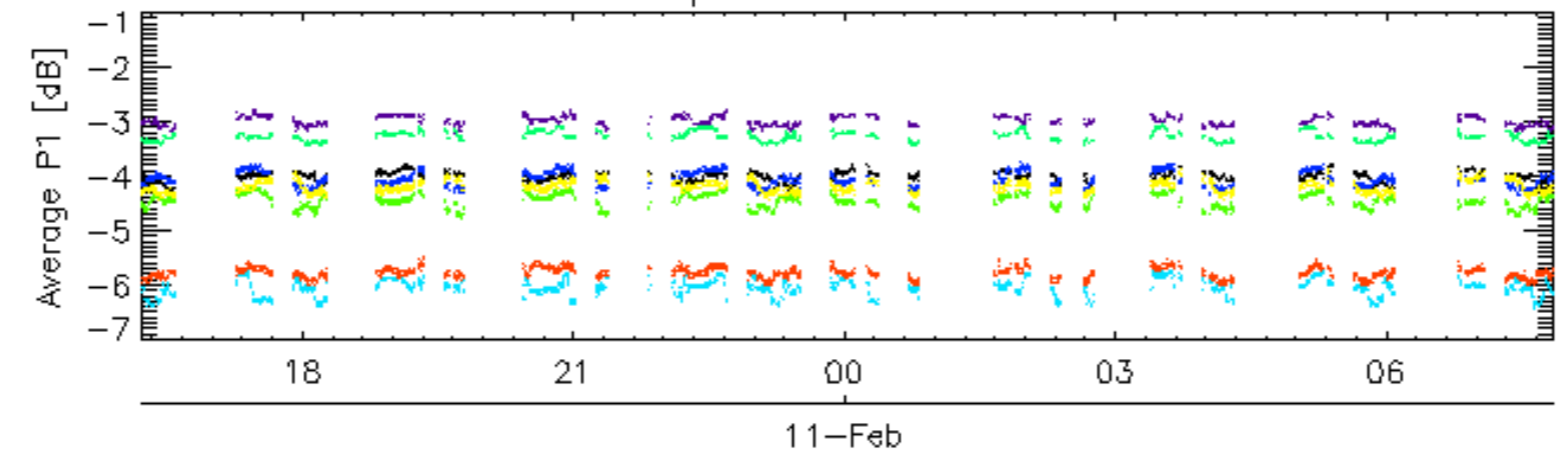


Cal pulses for GM1 SS3

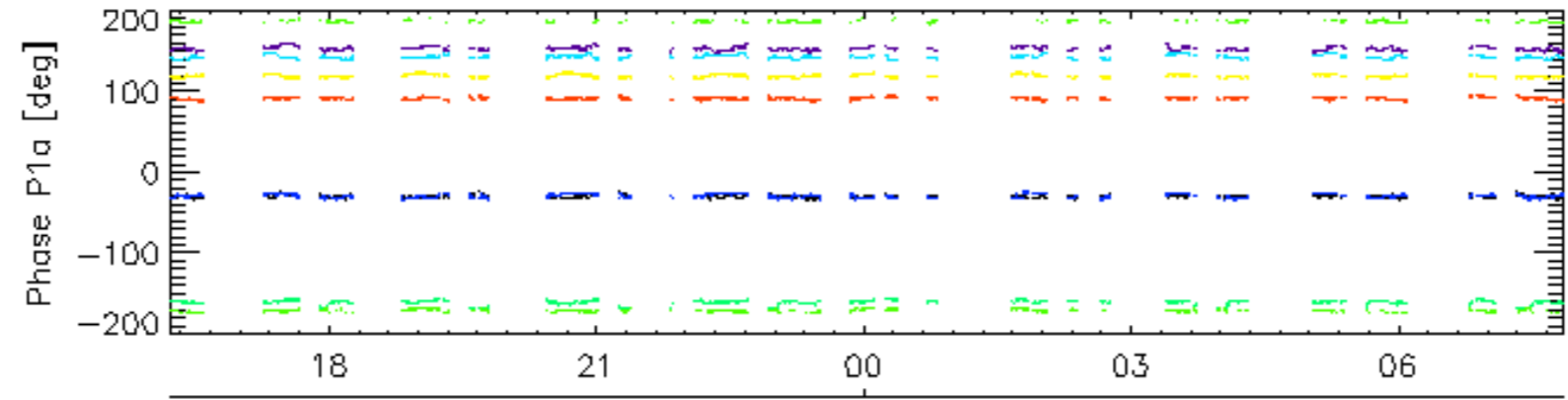
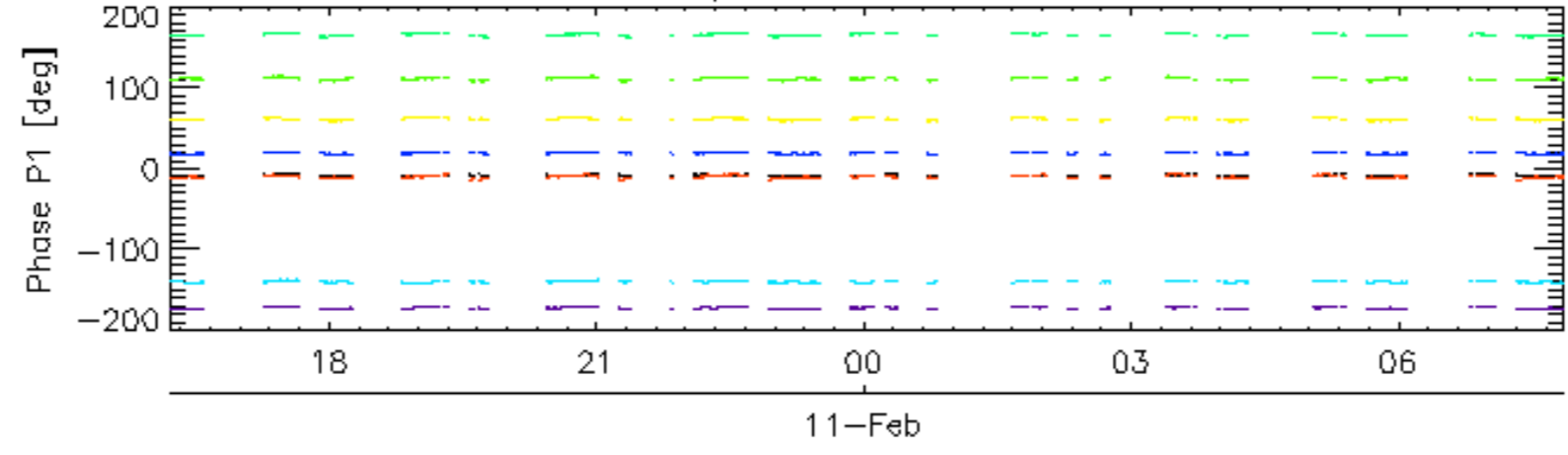


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

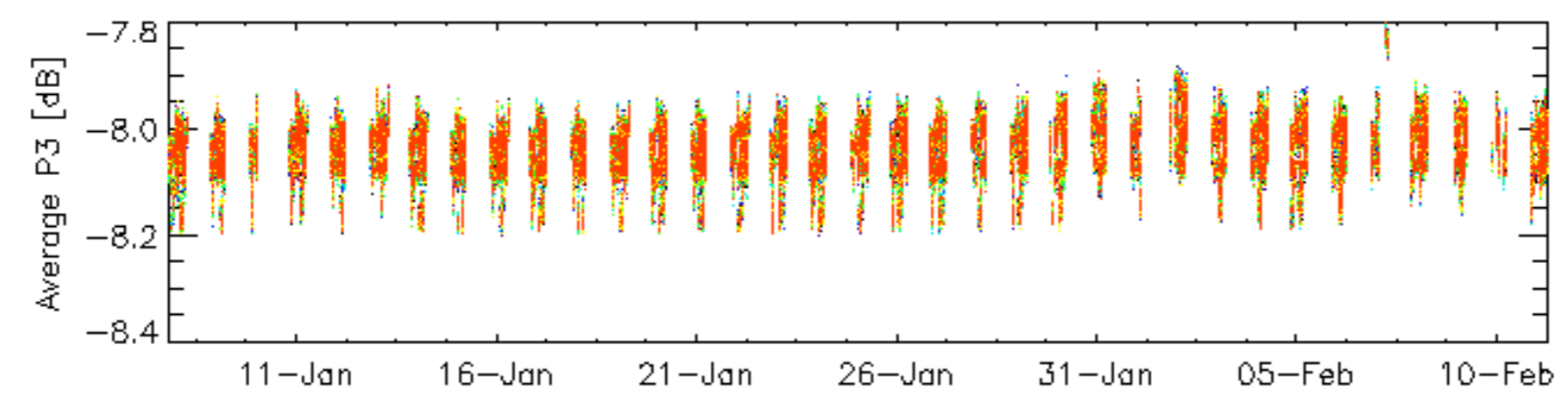
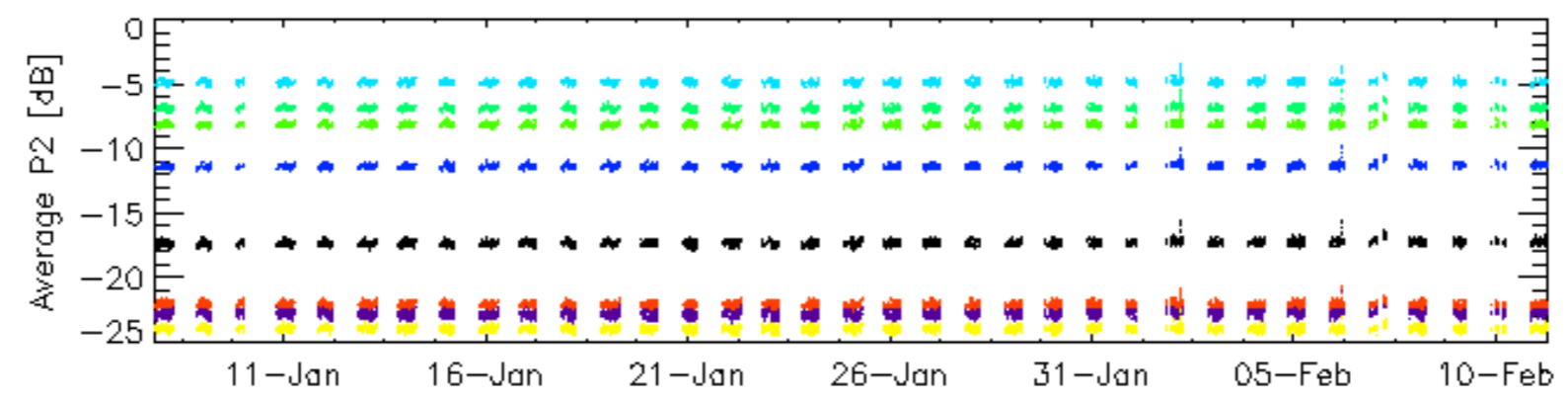
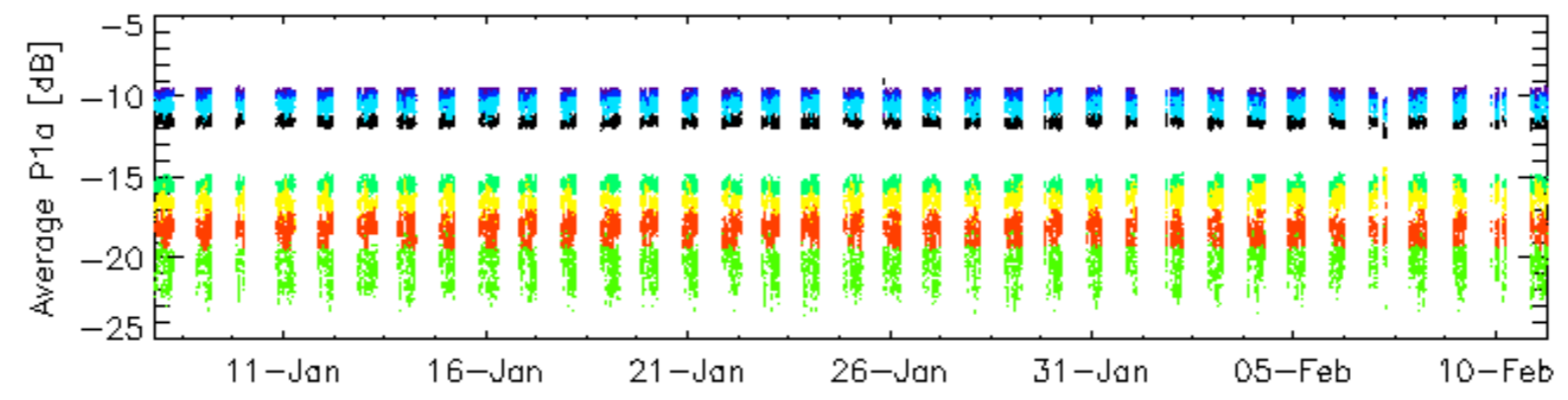
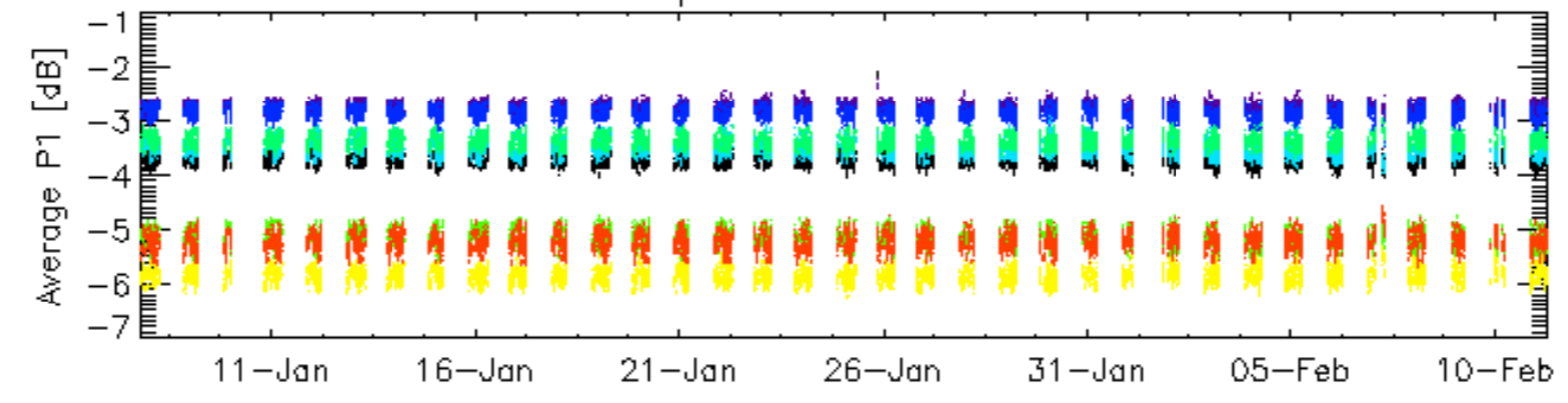


Cal pulses for WVS IS2



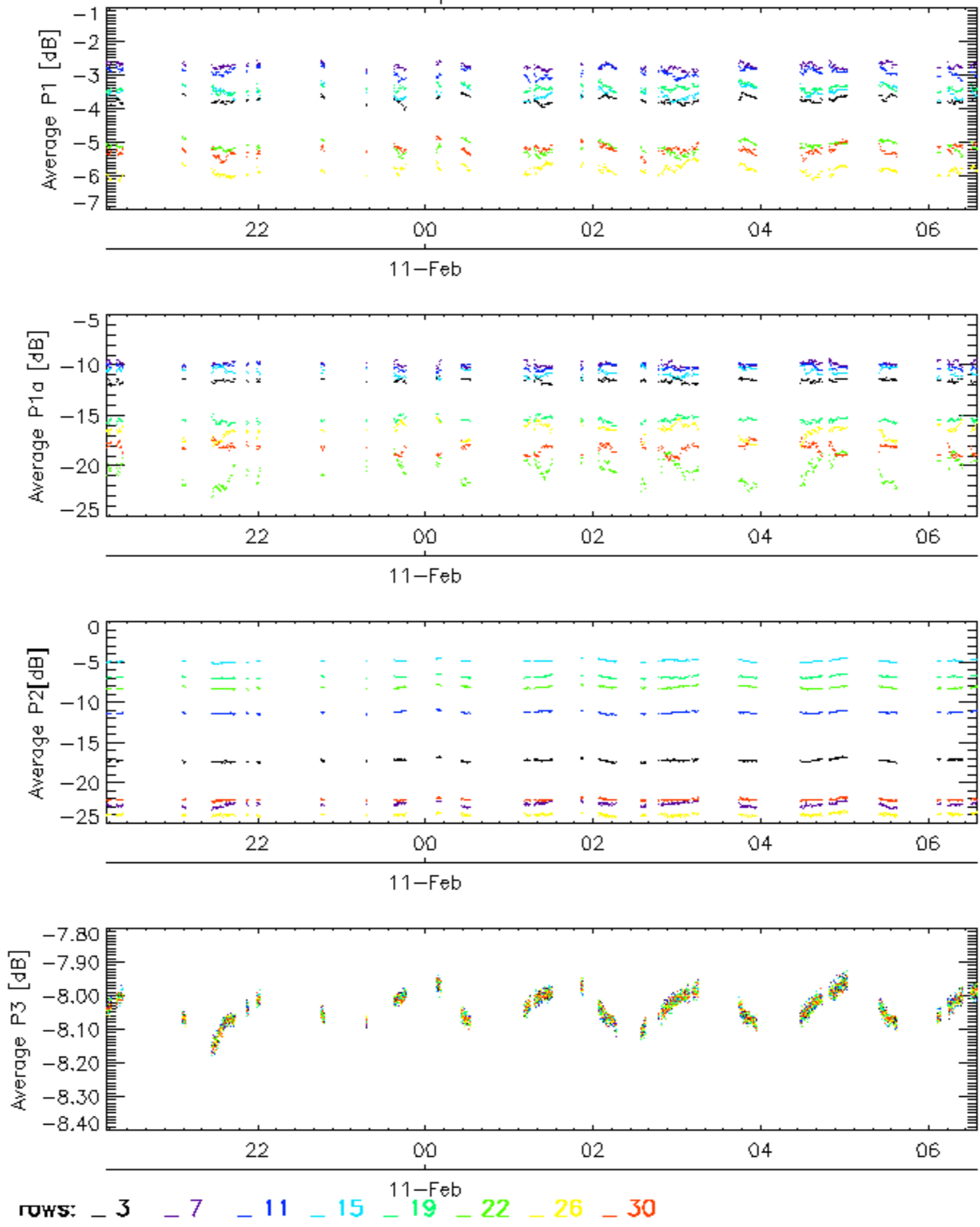
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

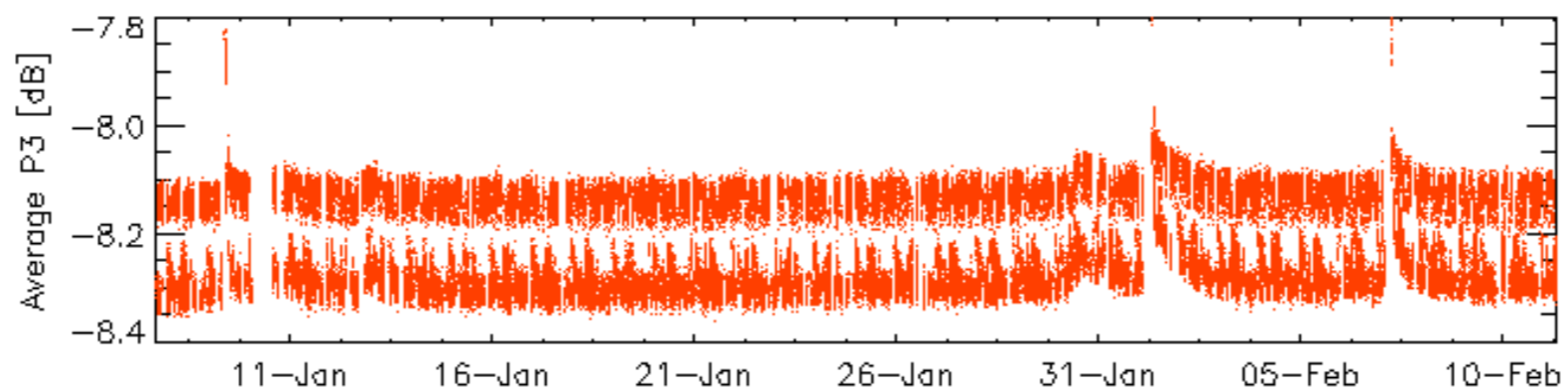
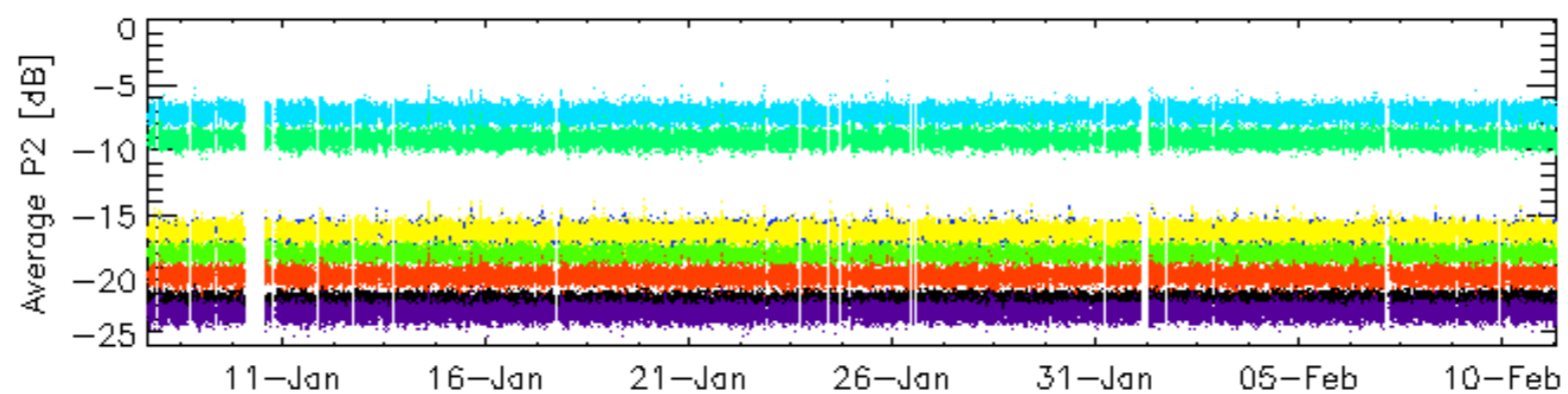
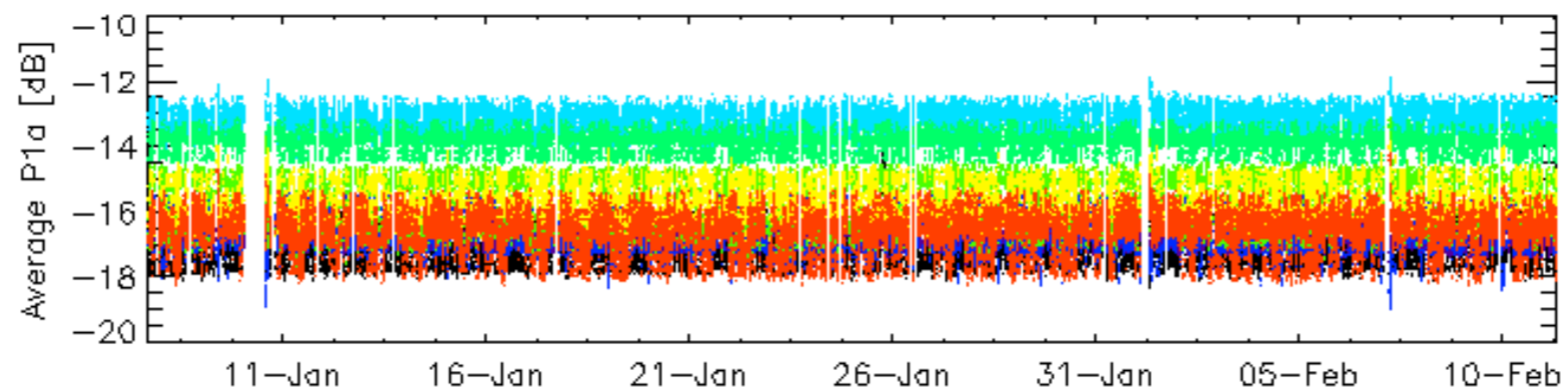
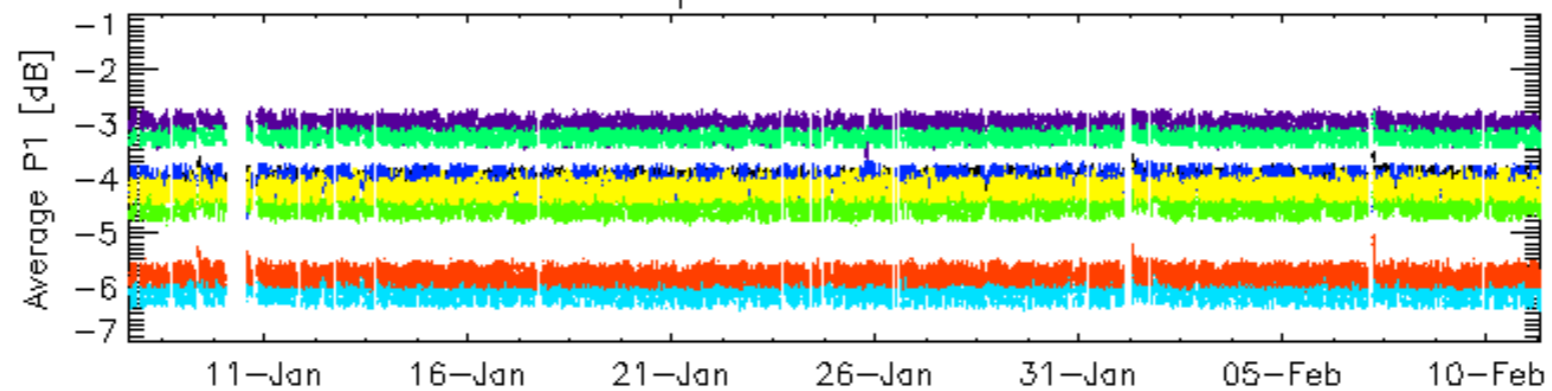


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

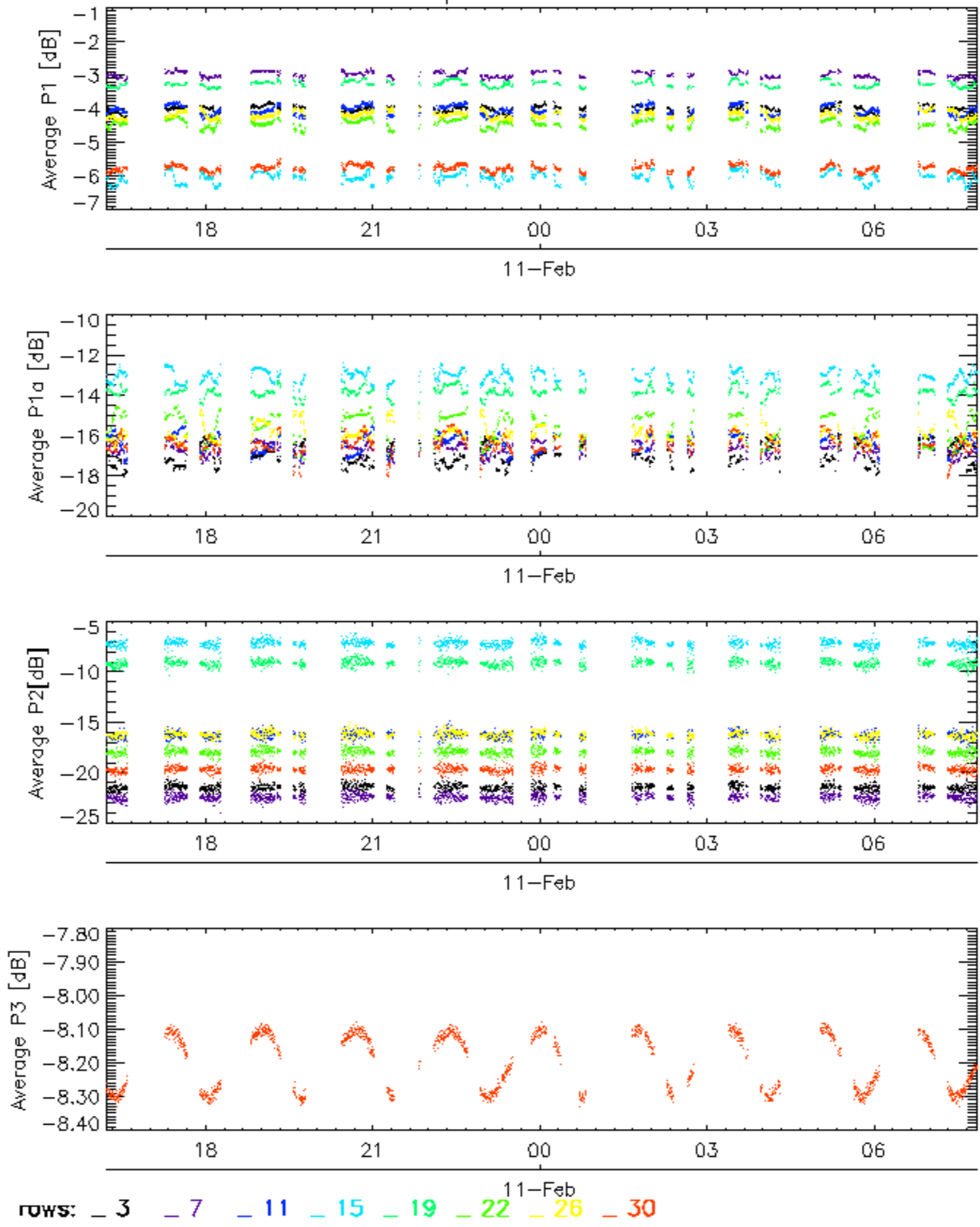


Cal pulses for WVS IS2

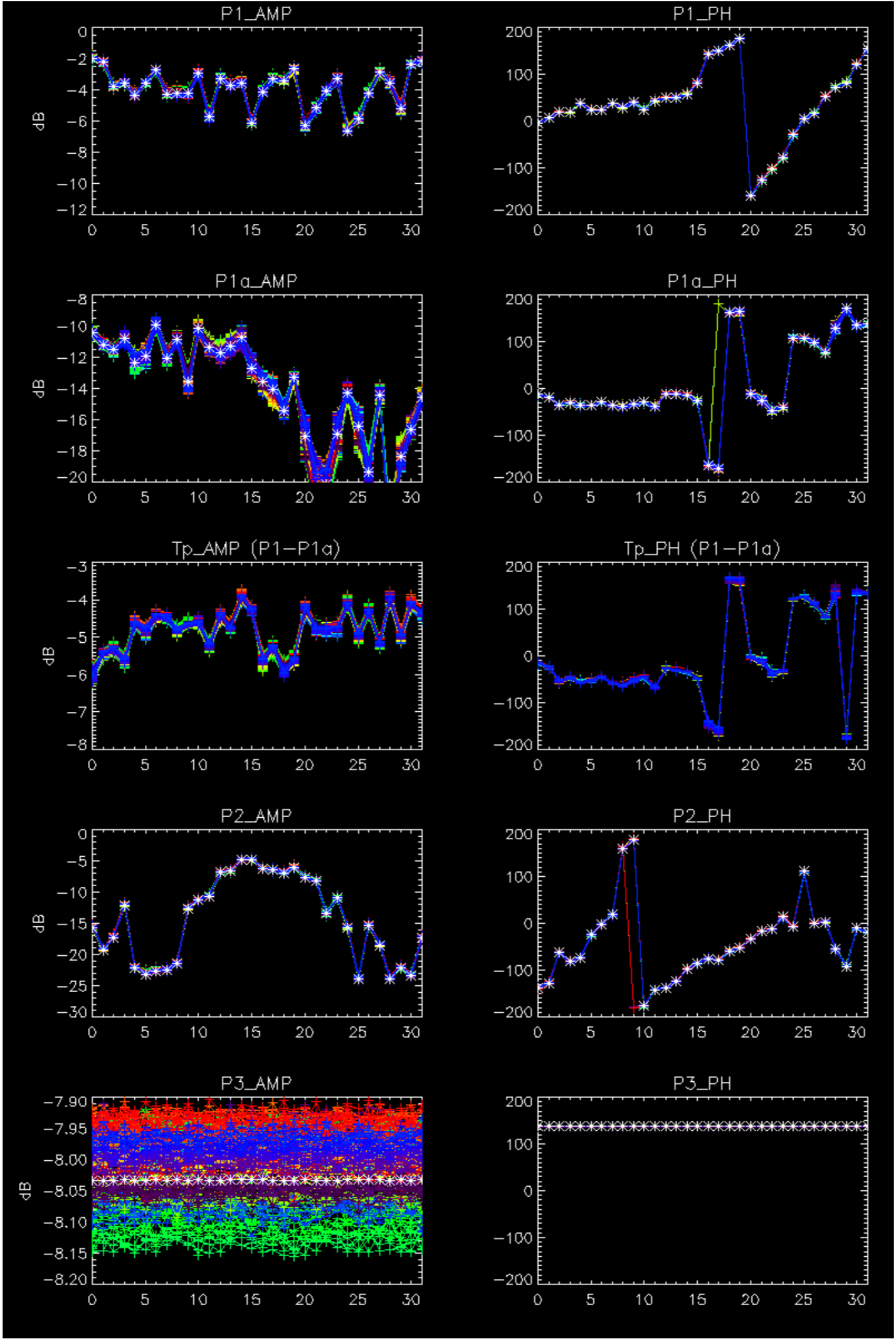


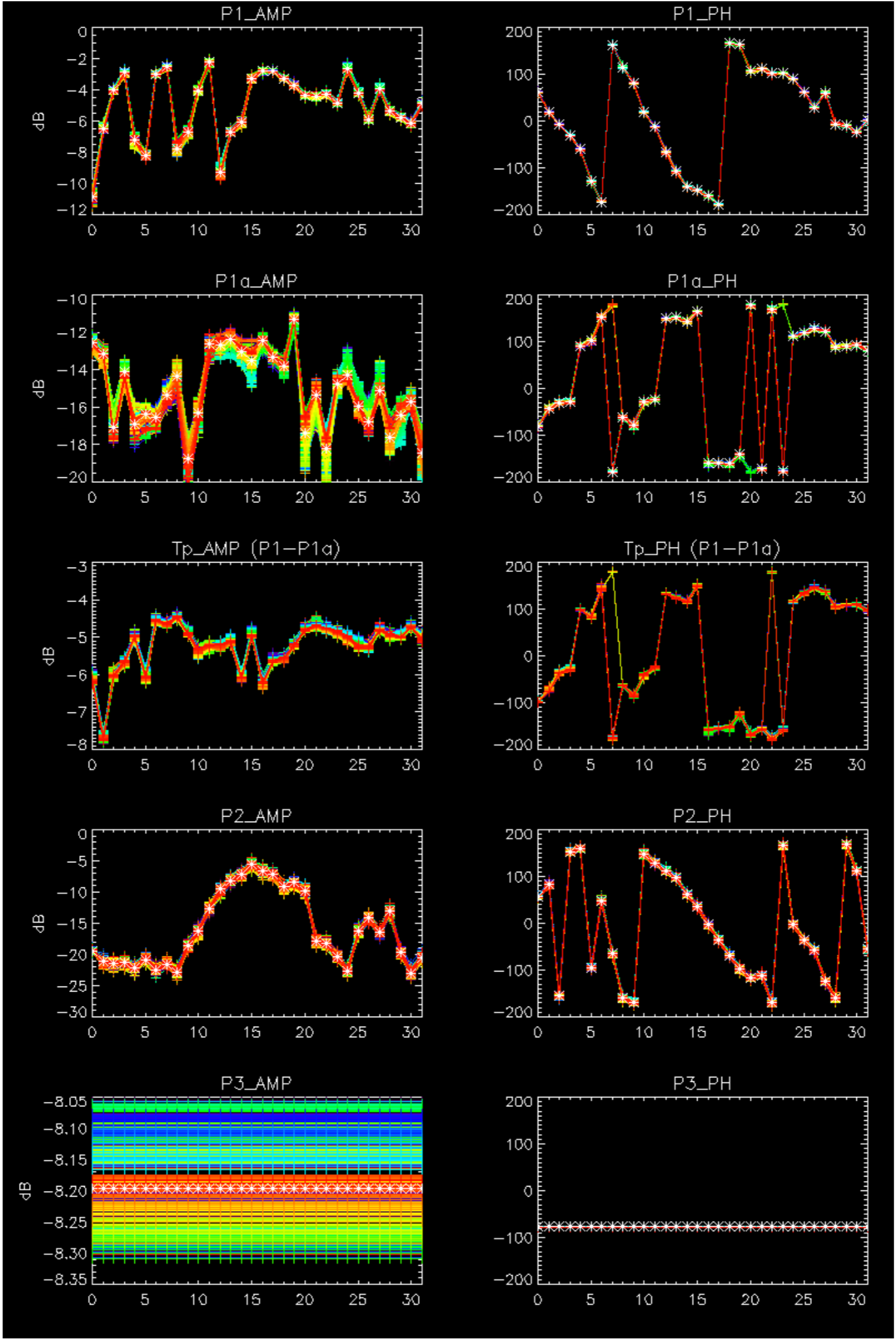
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



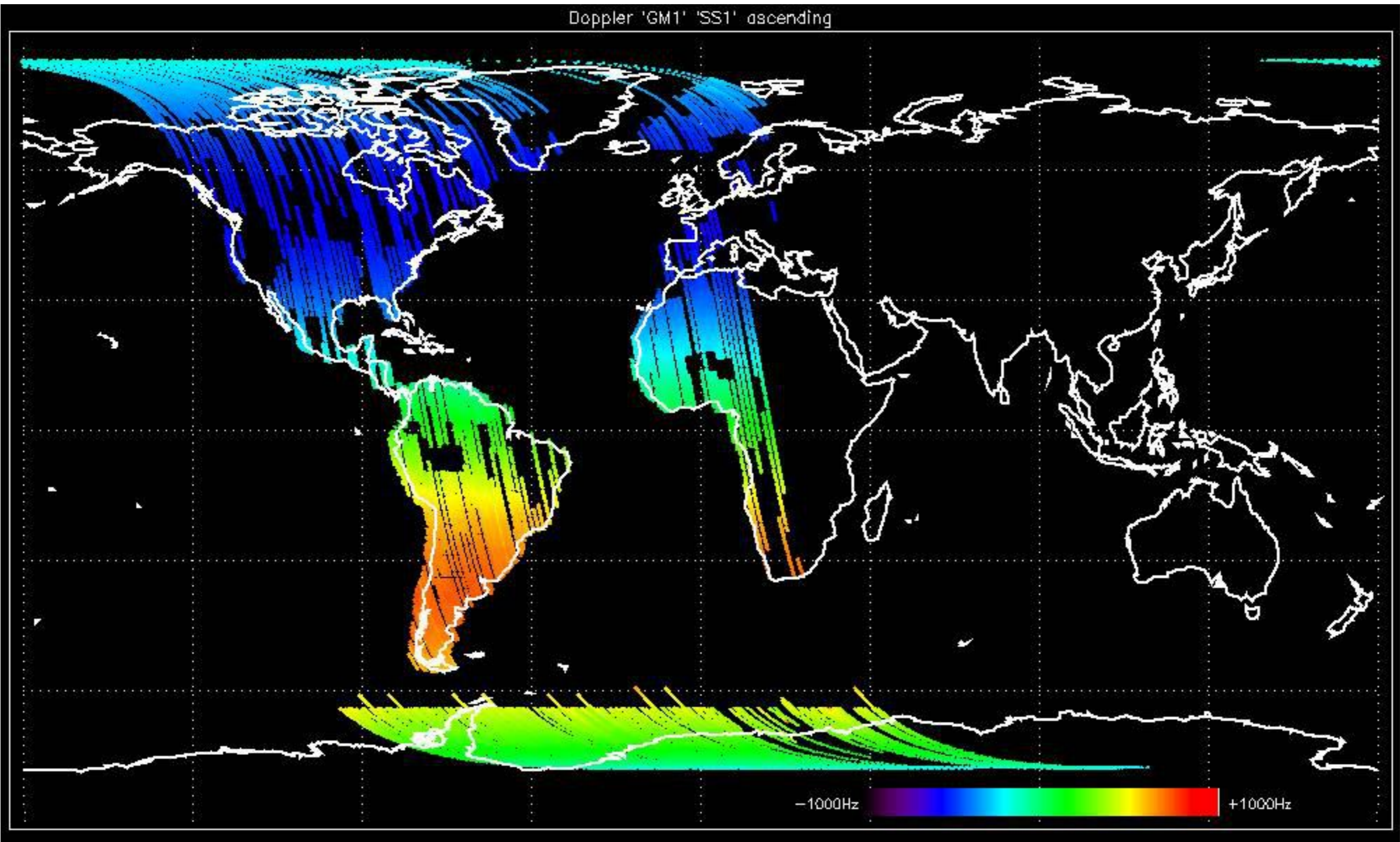
No anomalies observed.



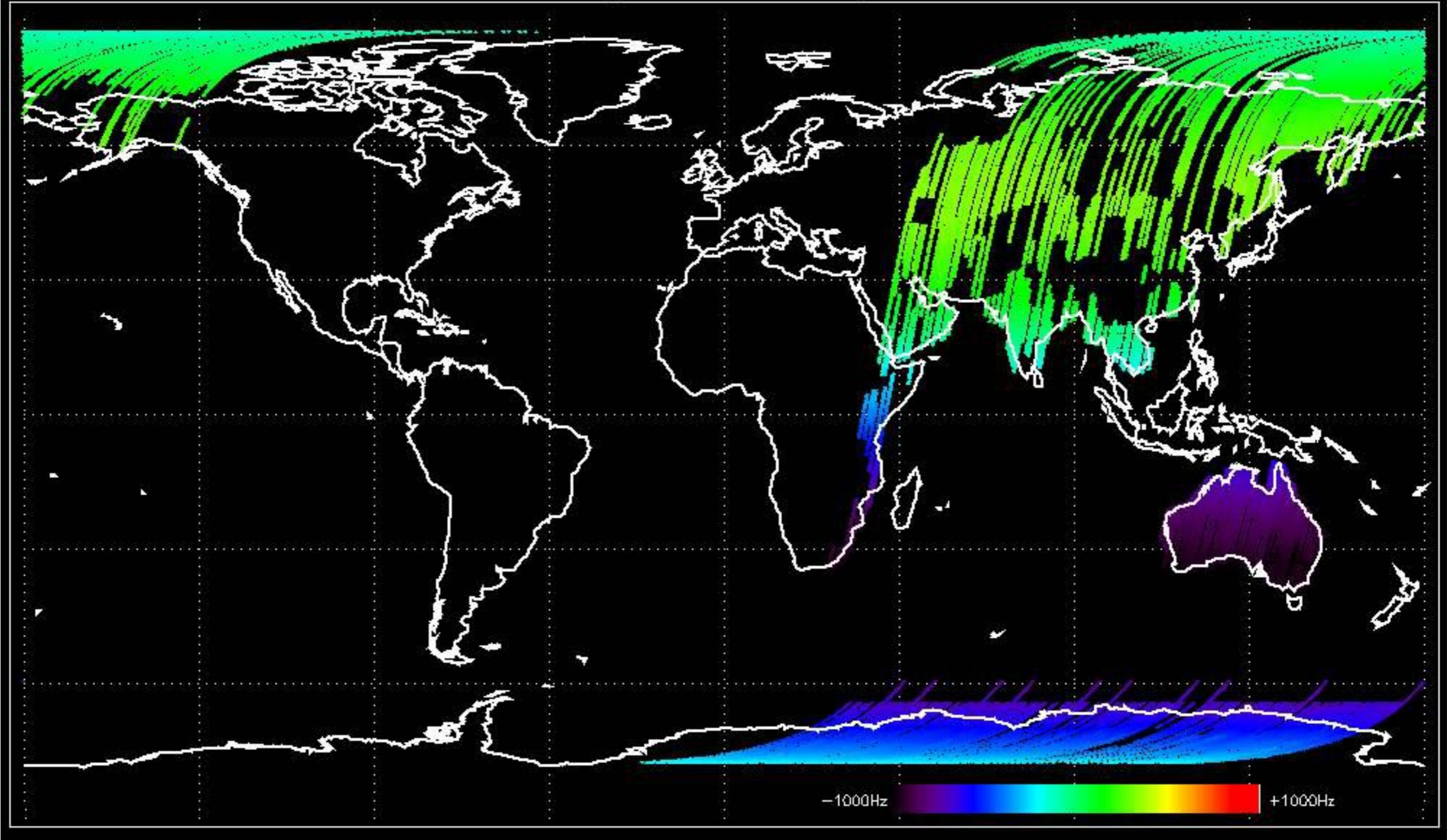


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

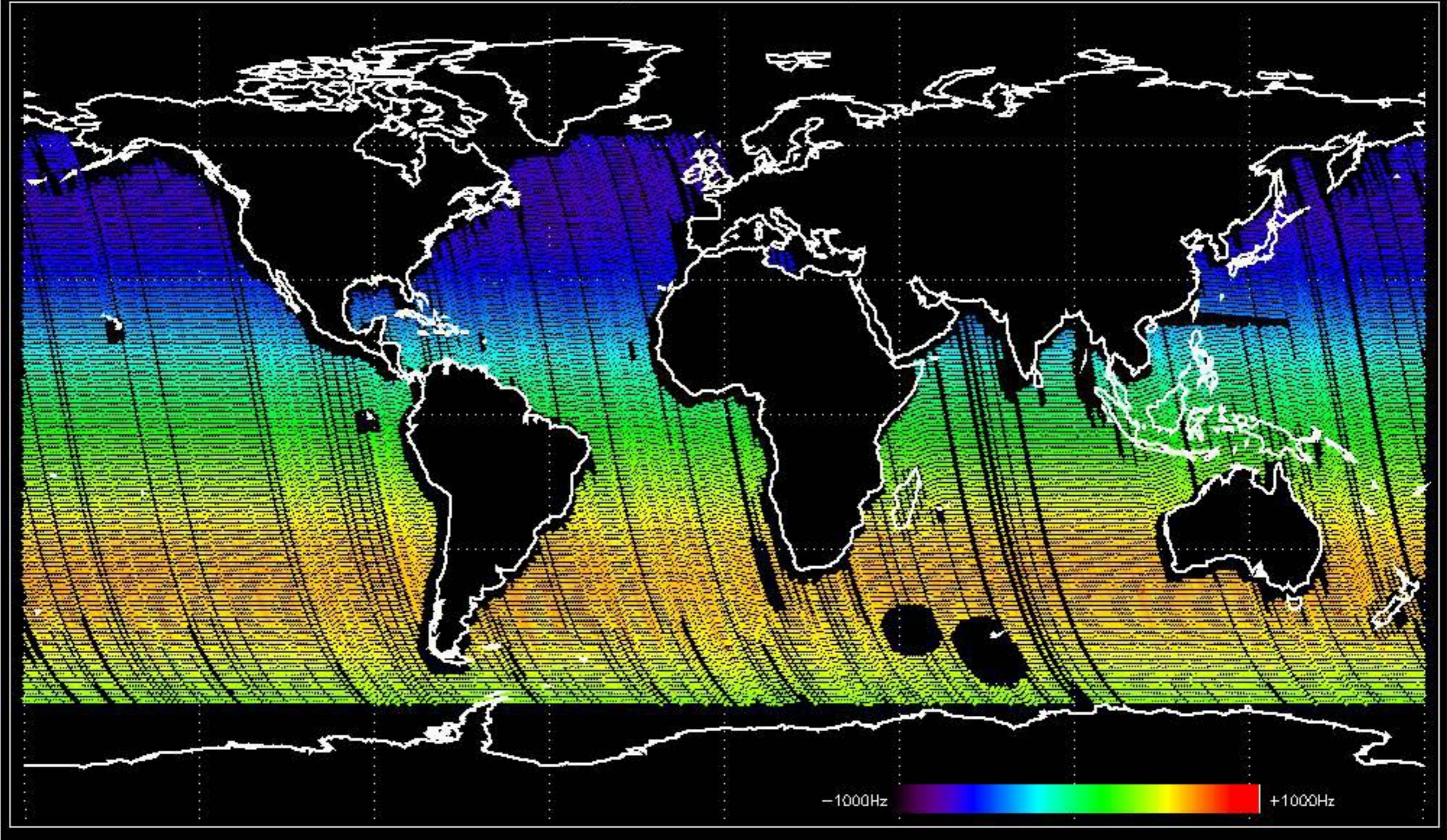
Doppler 'GM1' 'SS1' ascending



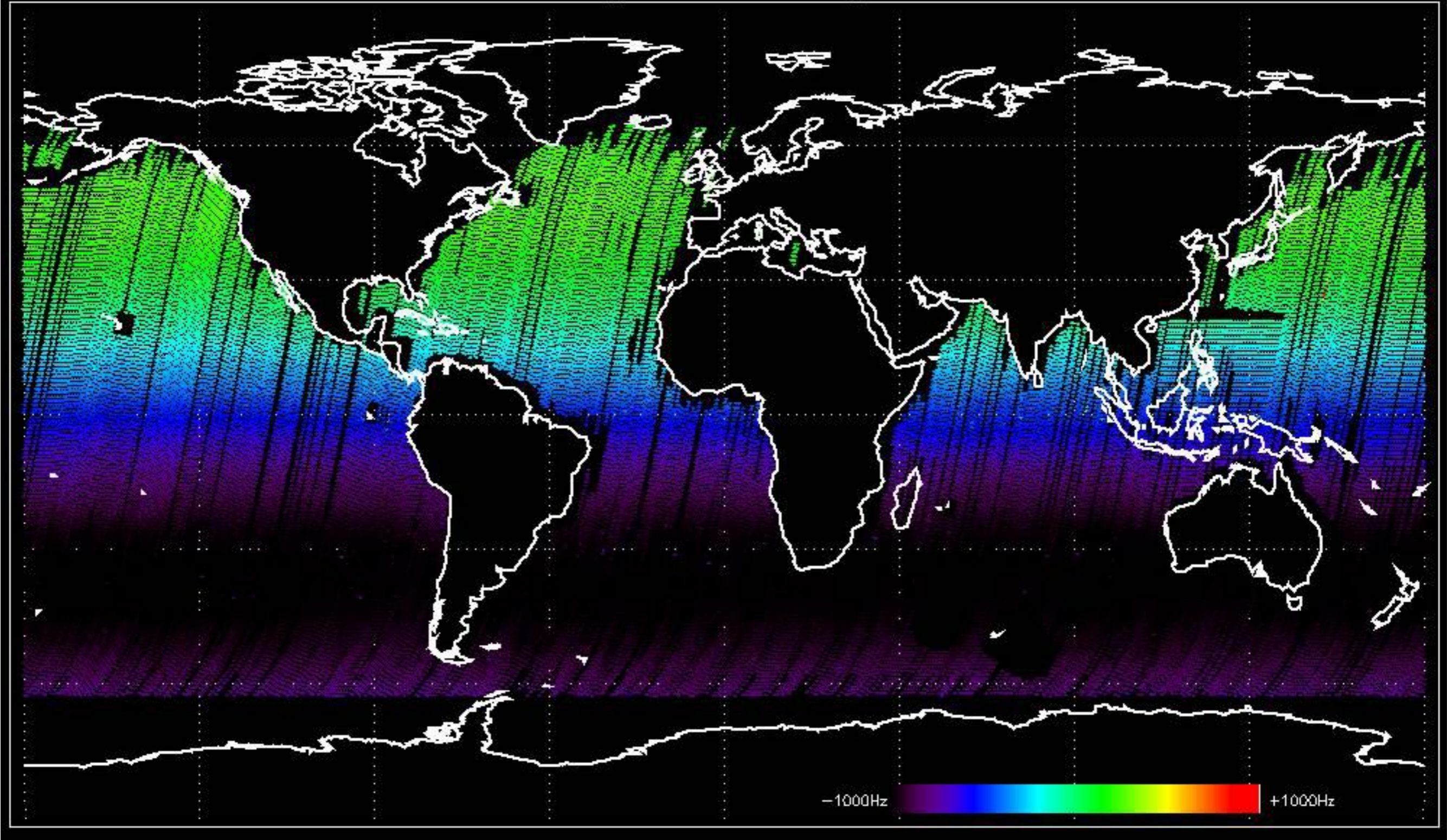
Doppler 'GM1' 'SS1' descending



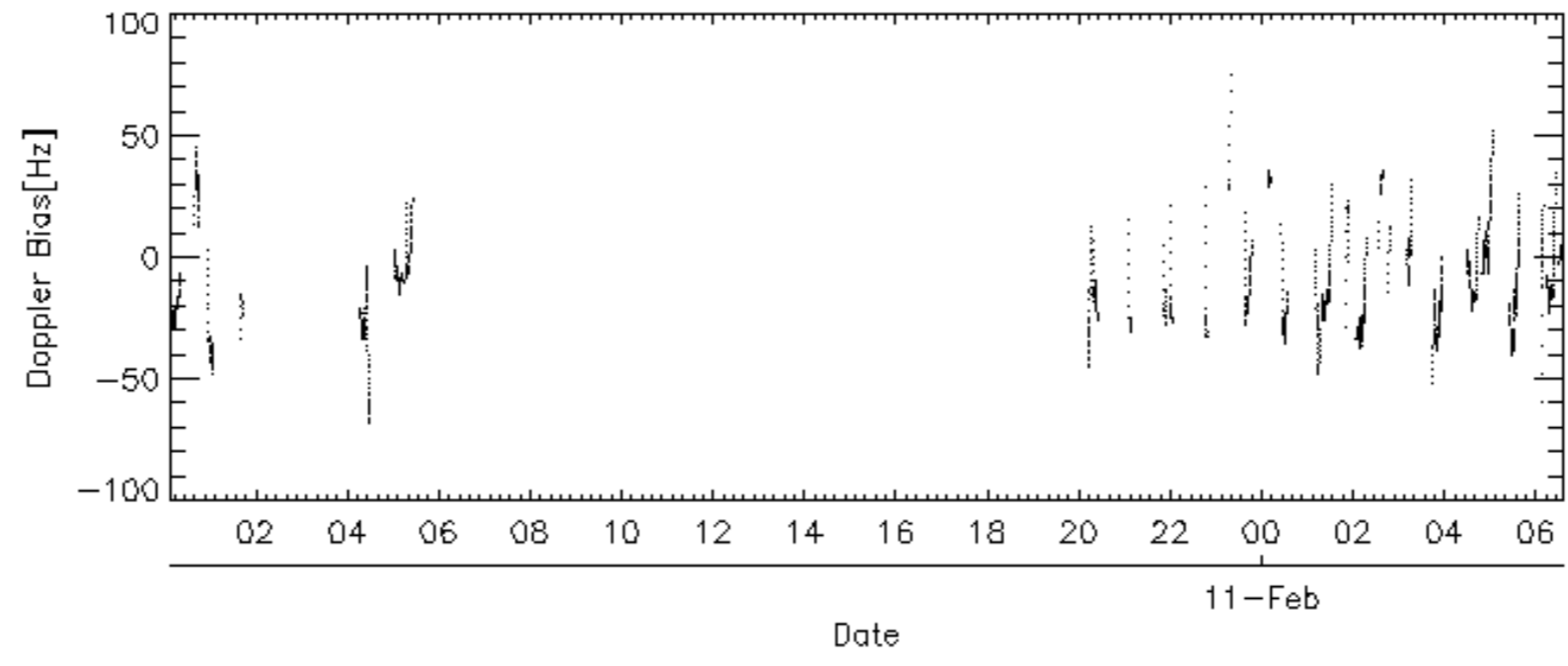
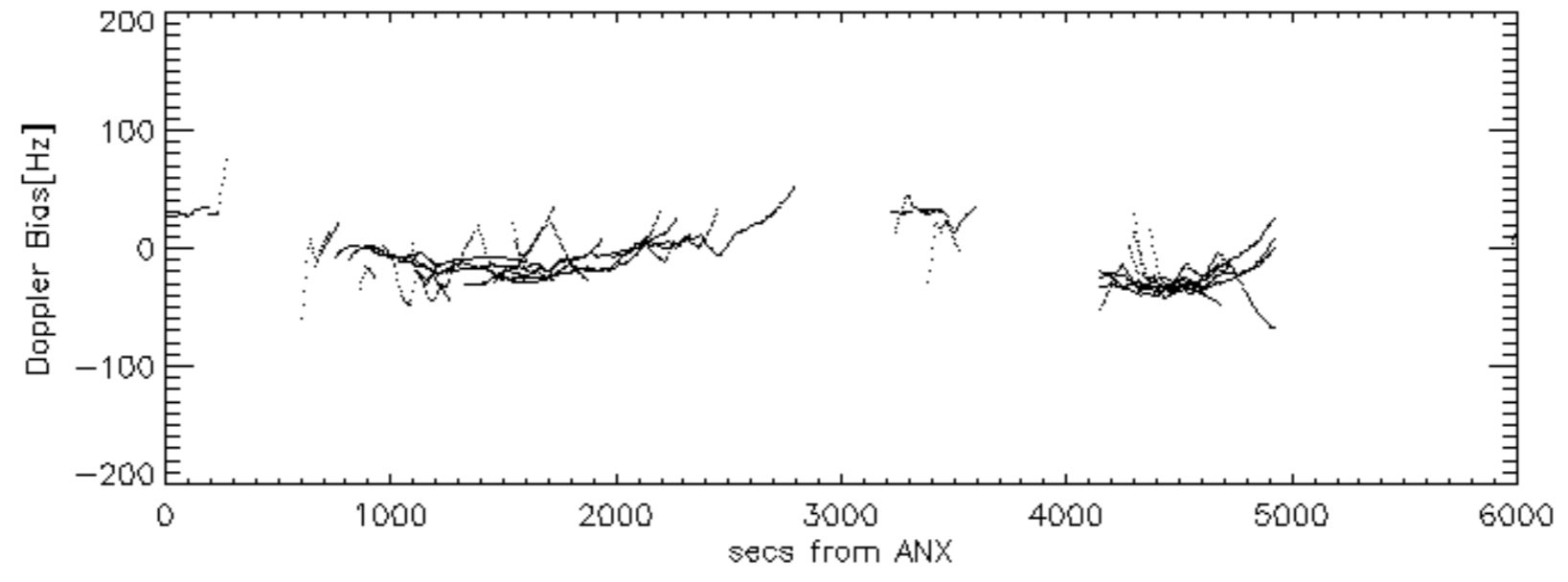
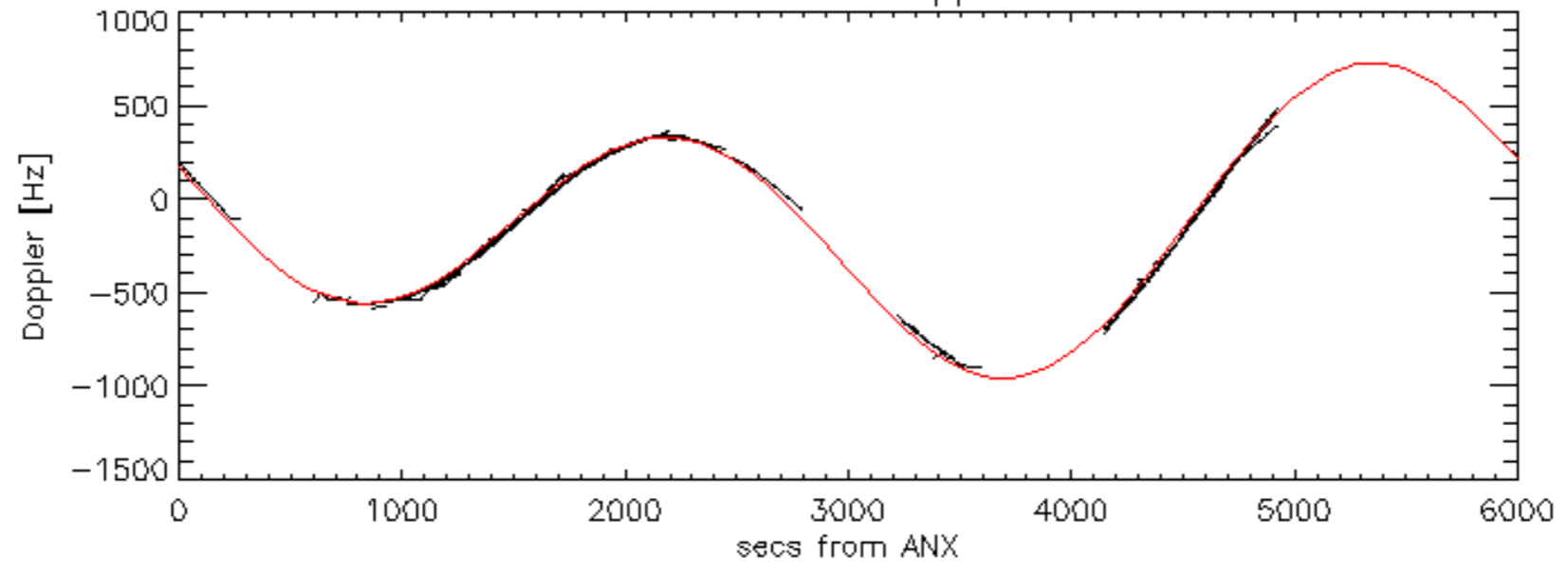
Doppler 'WVS' 'IS2' ascending

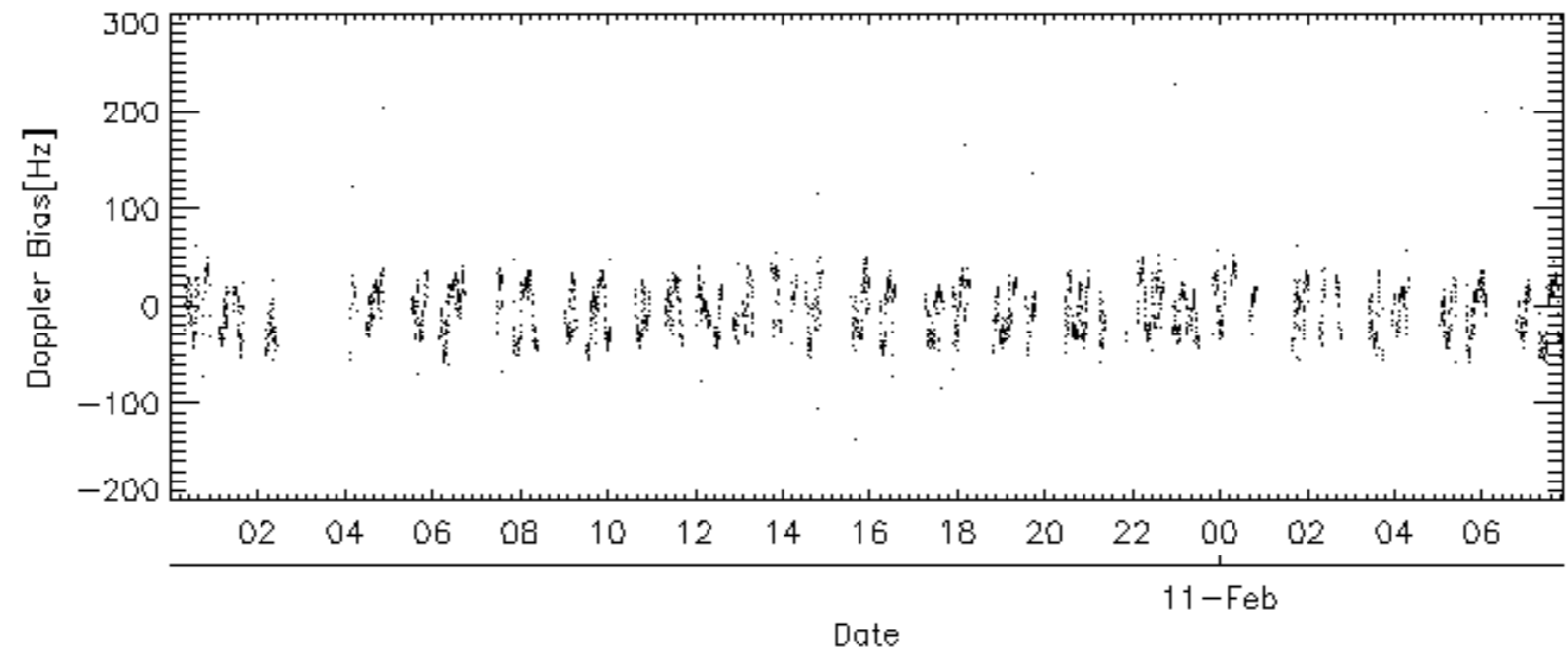
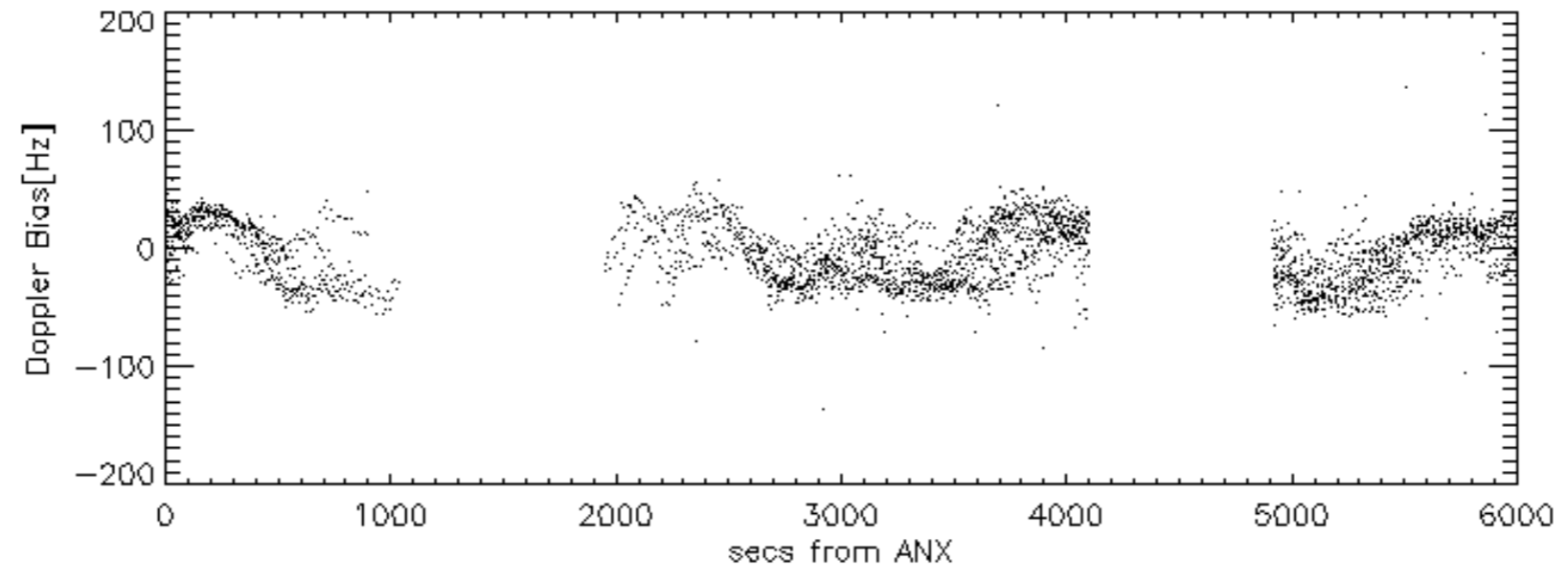
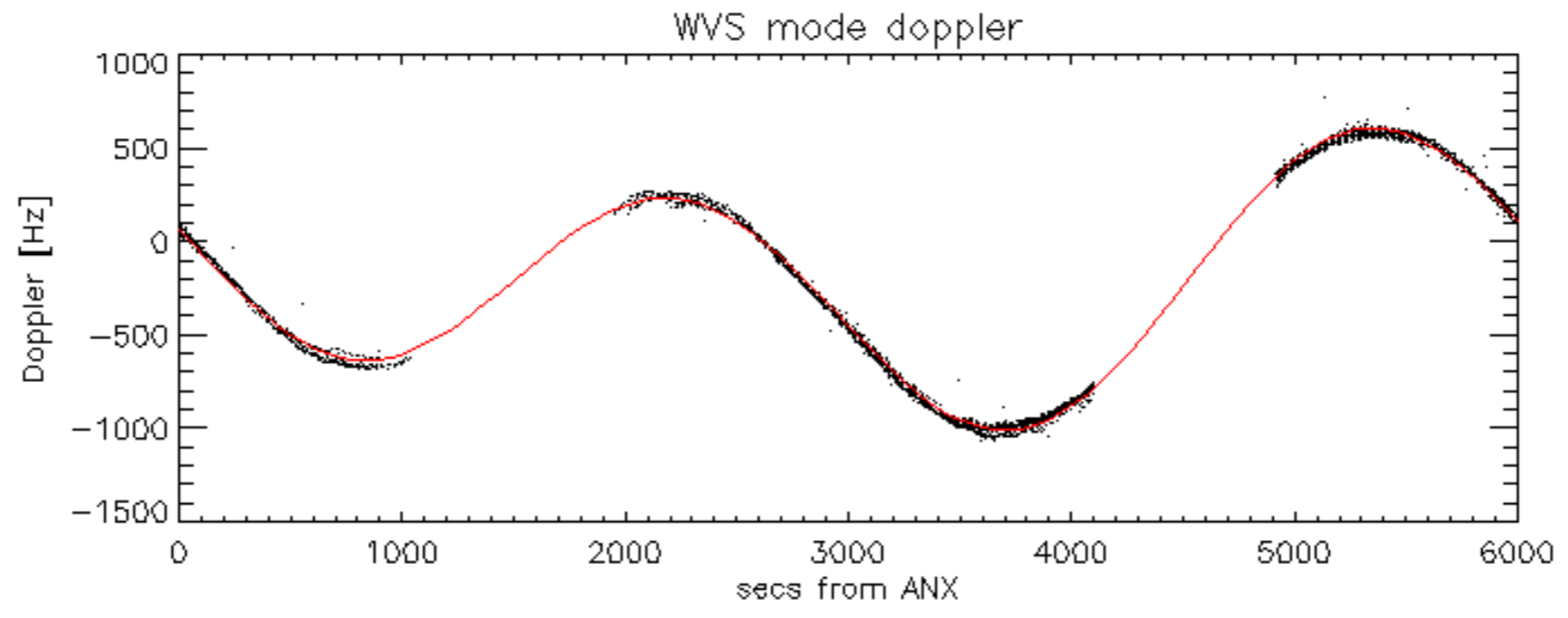


Doppler 'WVS' 'IS2' descending

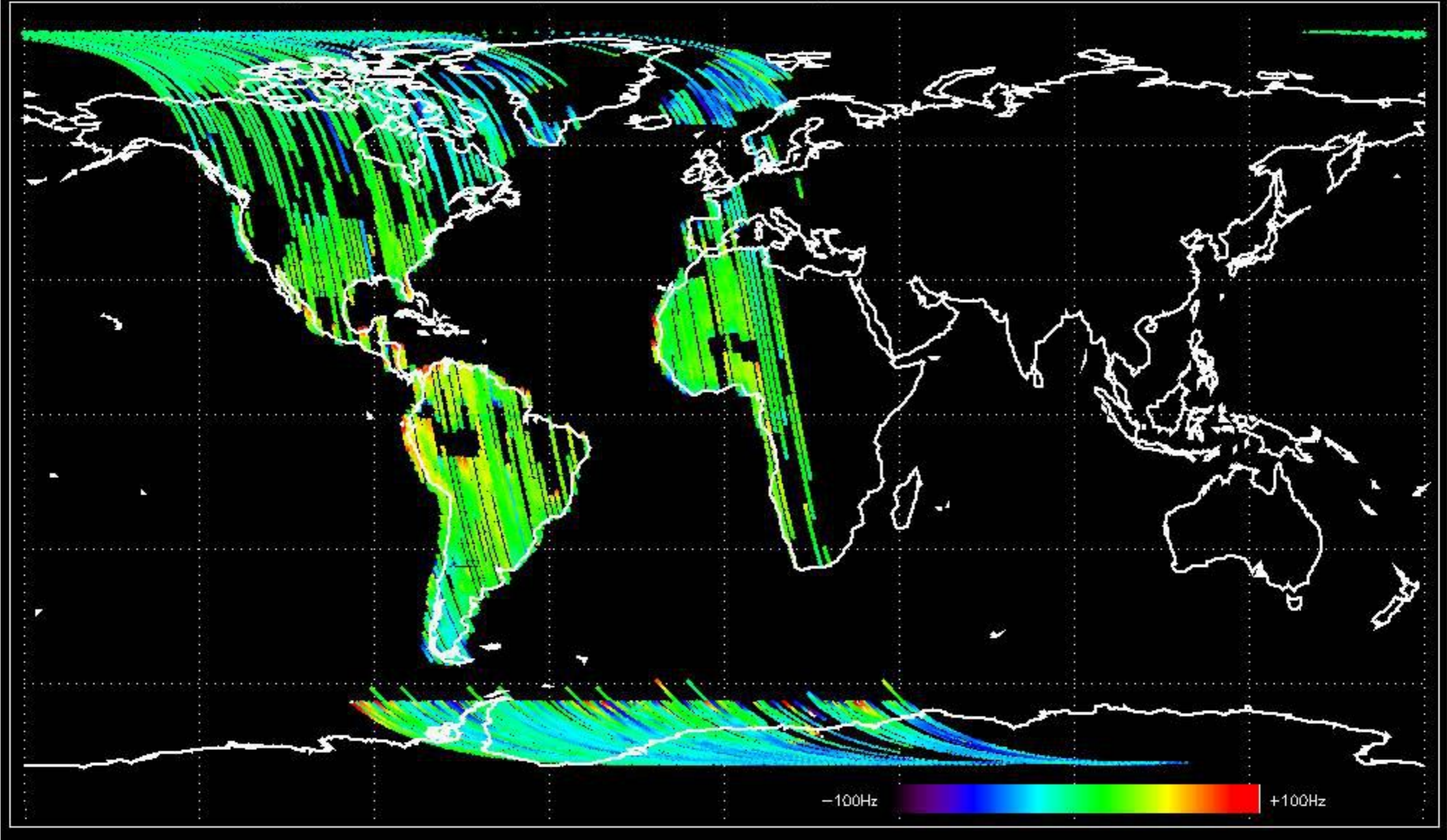


GM1 mode doppler

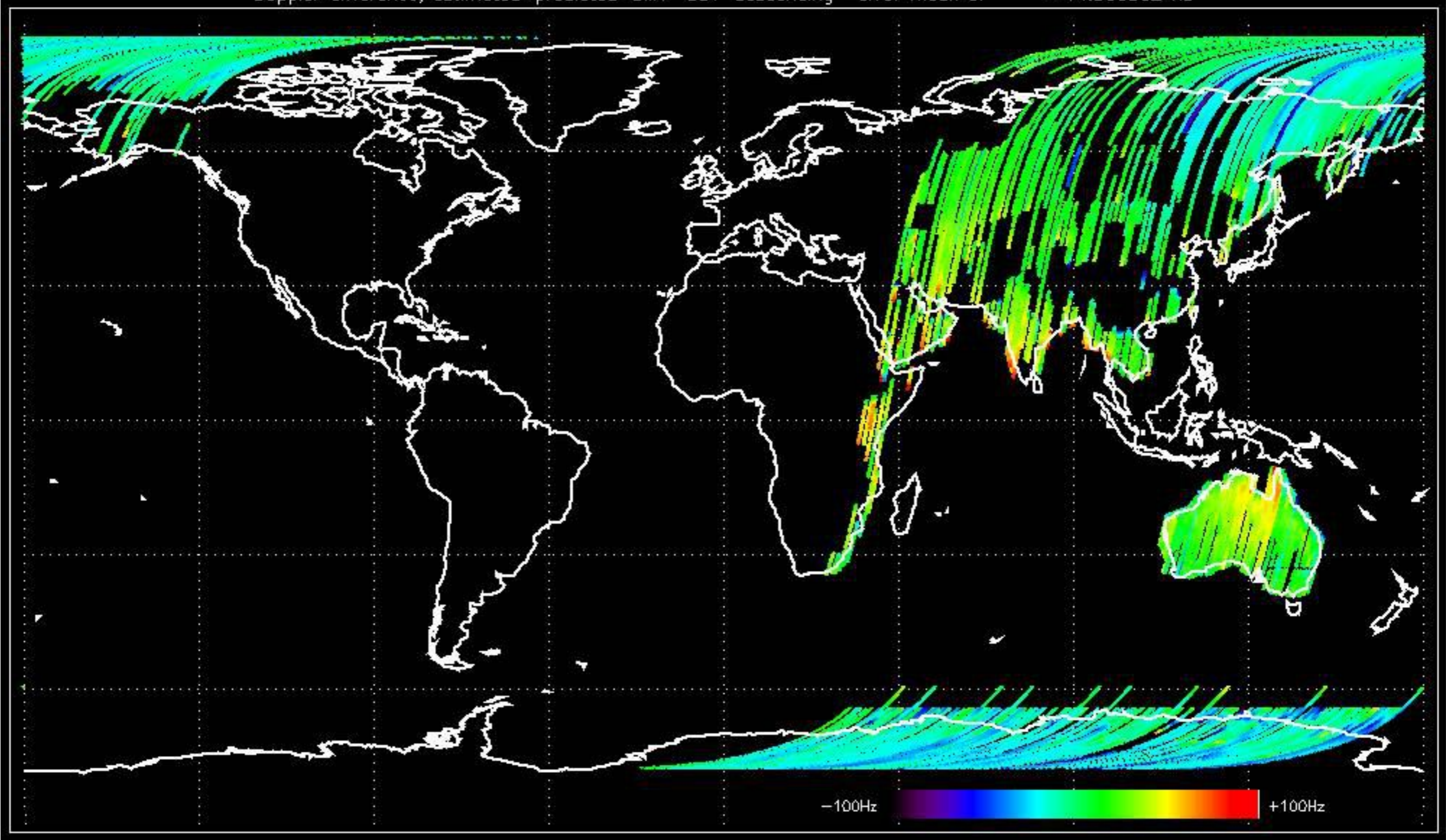




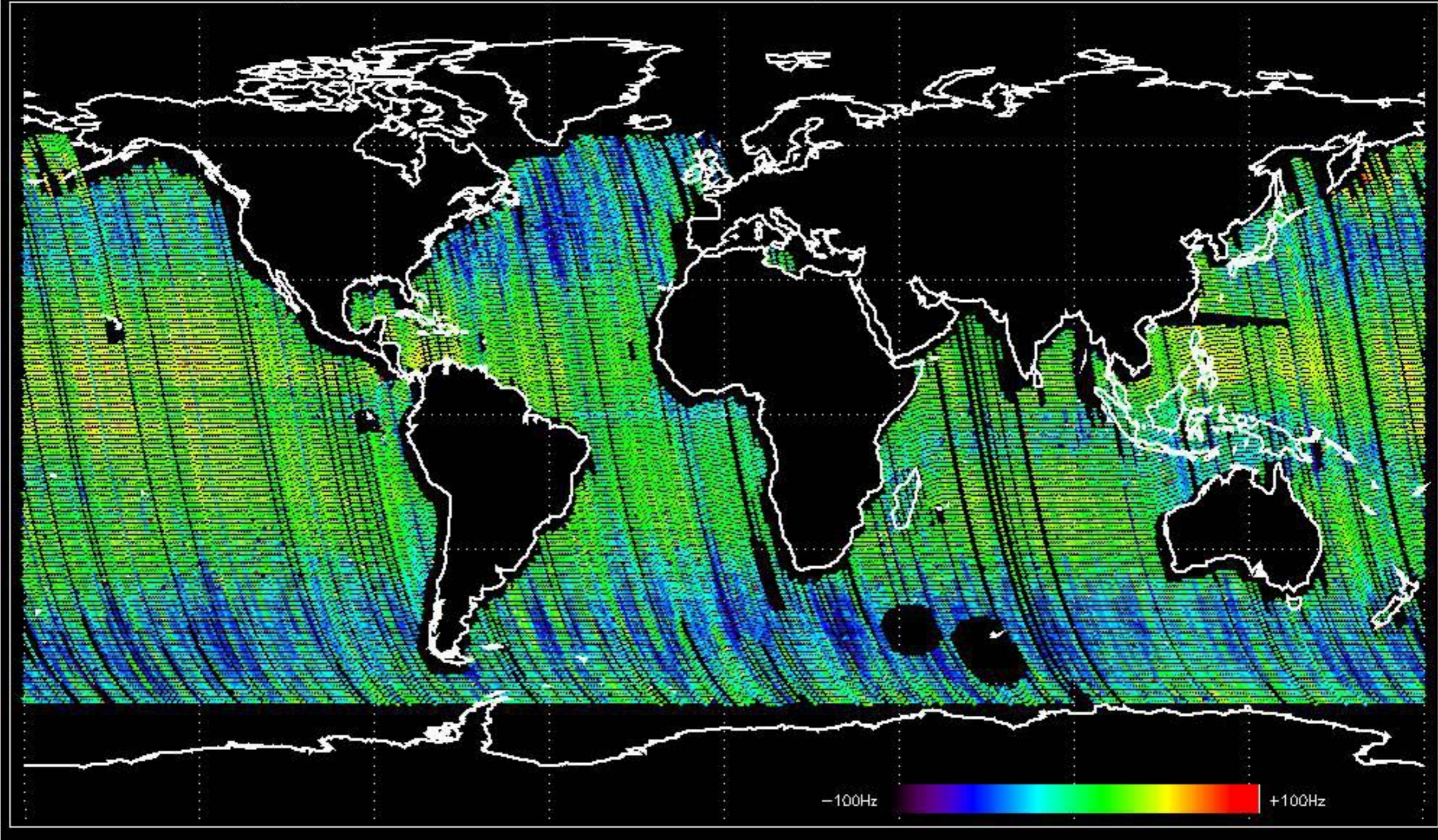
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.064221 Hz



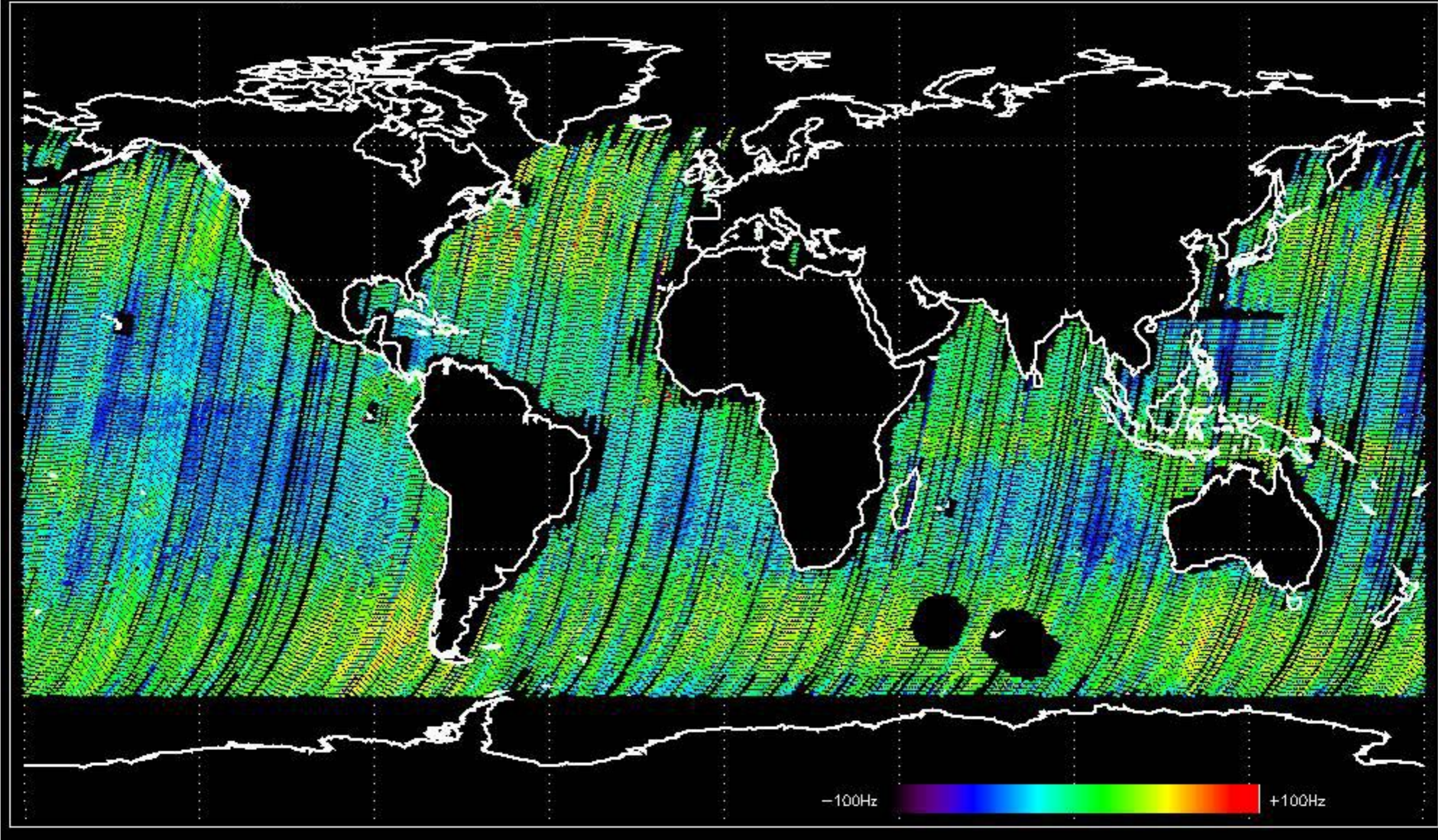
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.500862 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.1360452 Hz

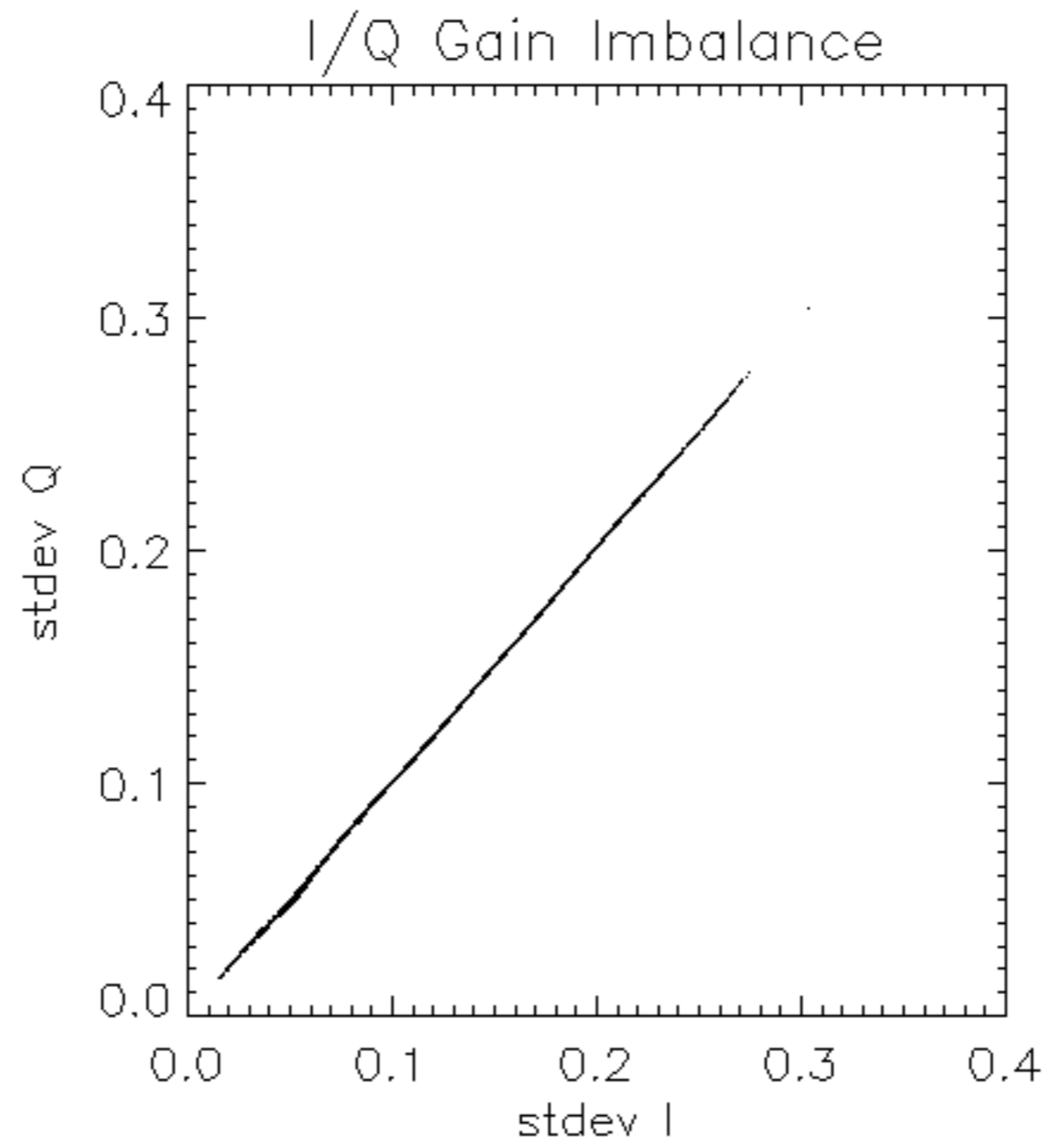


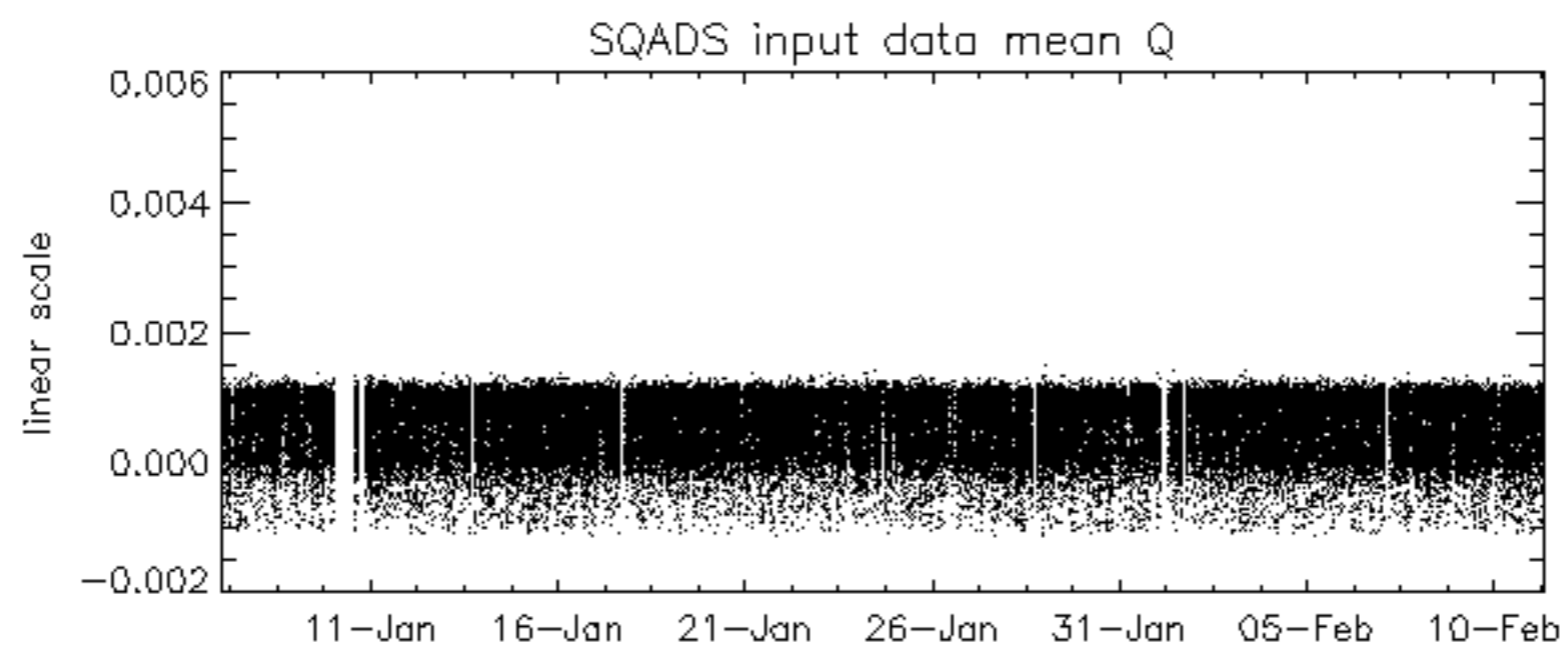
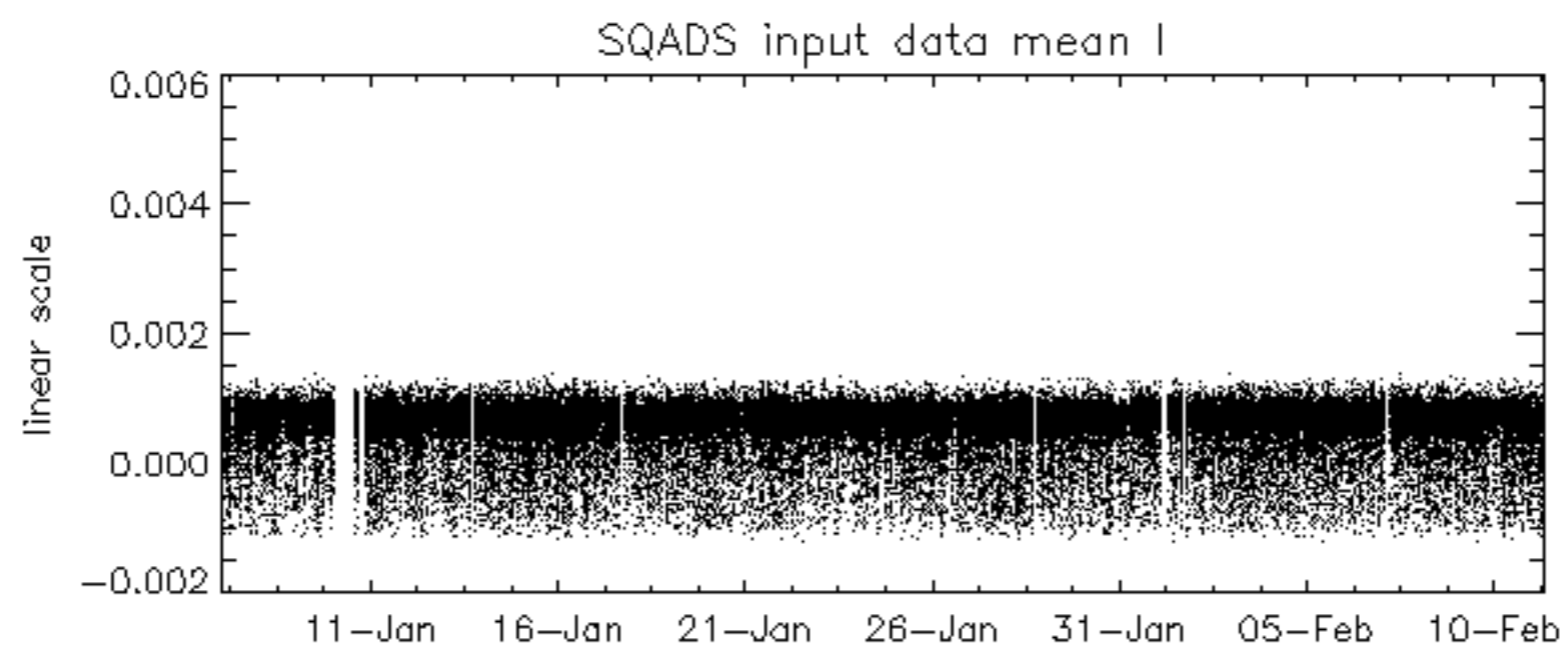
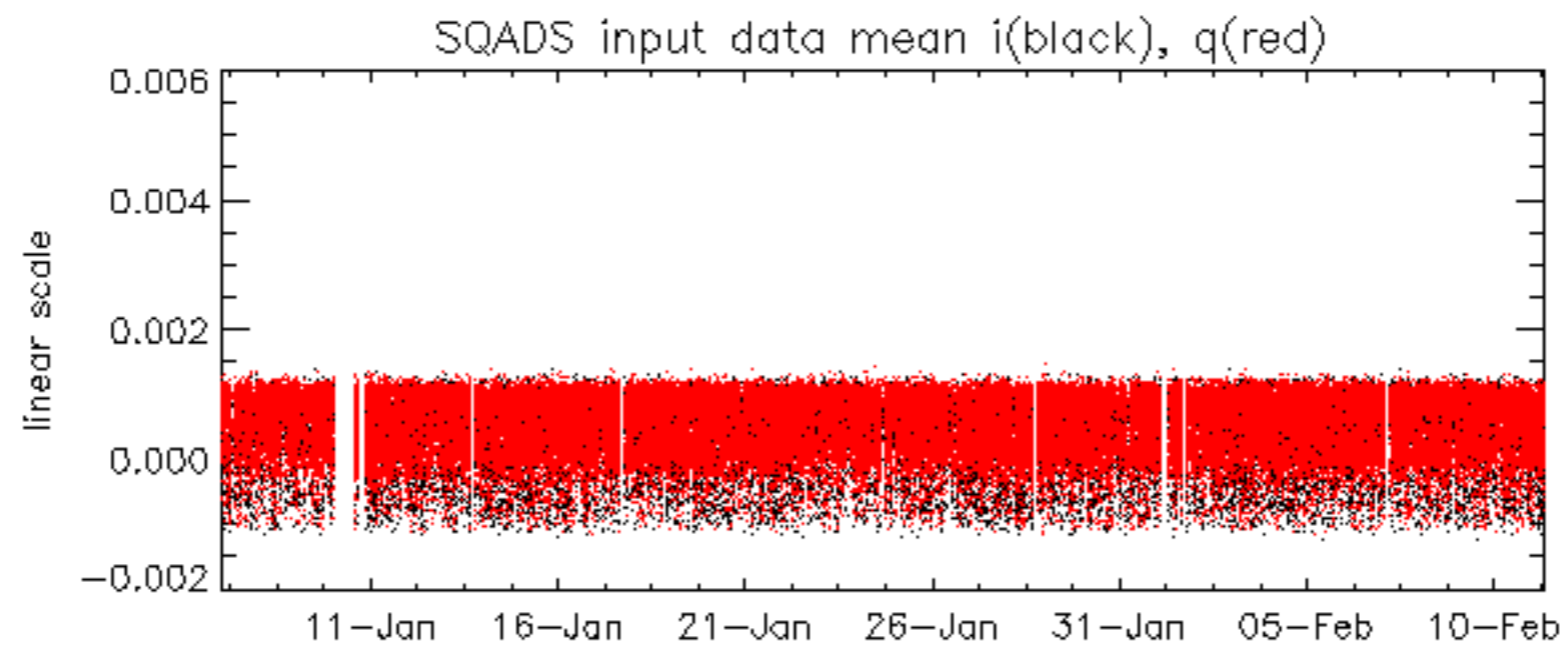
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.174034 Hz

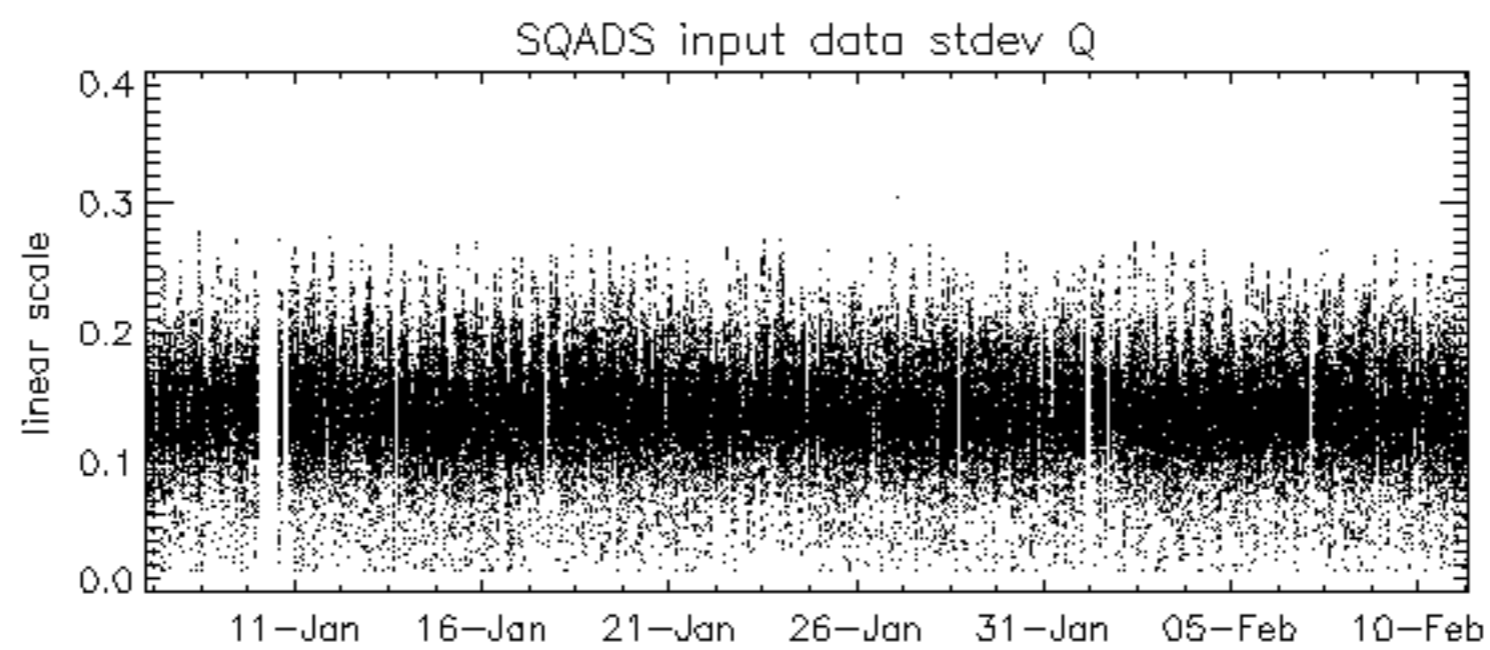
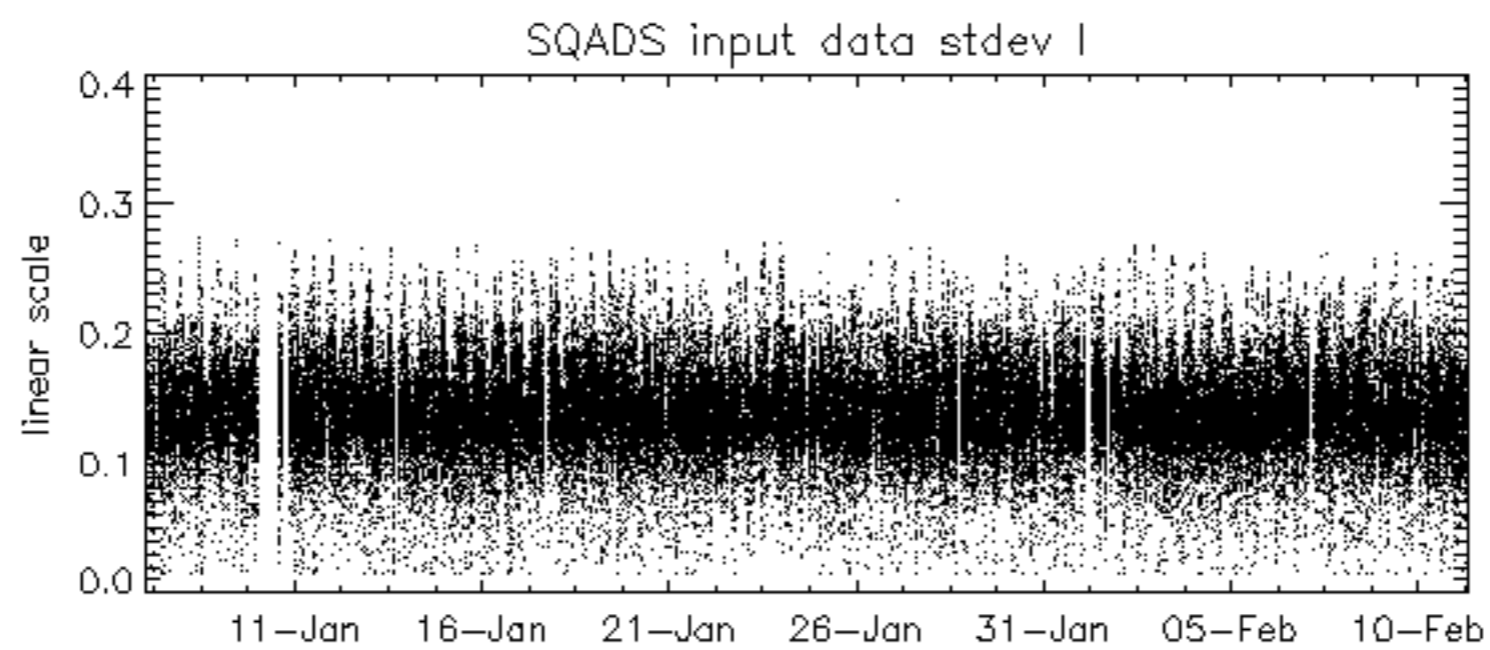
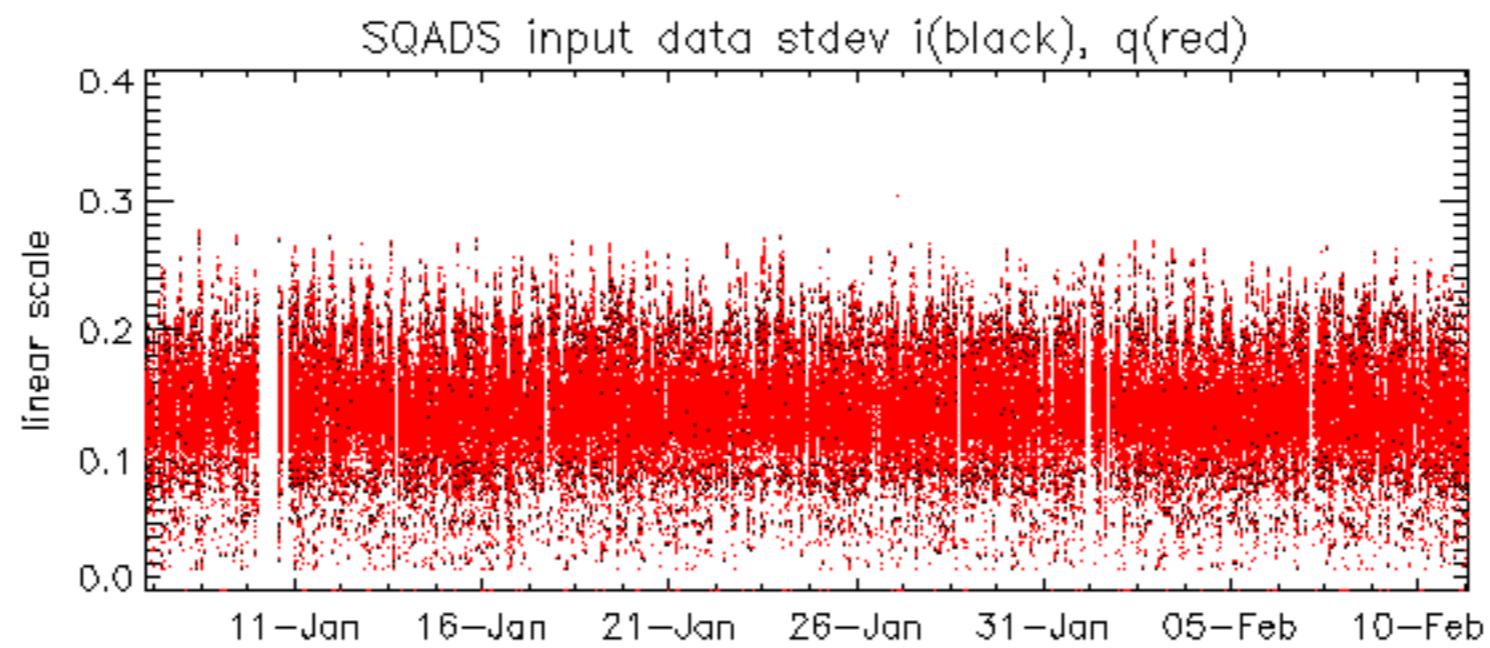


No anomalies observed on available MS products:

No anomalies observed.



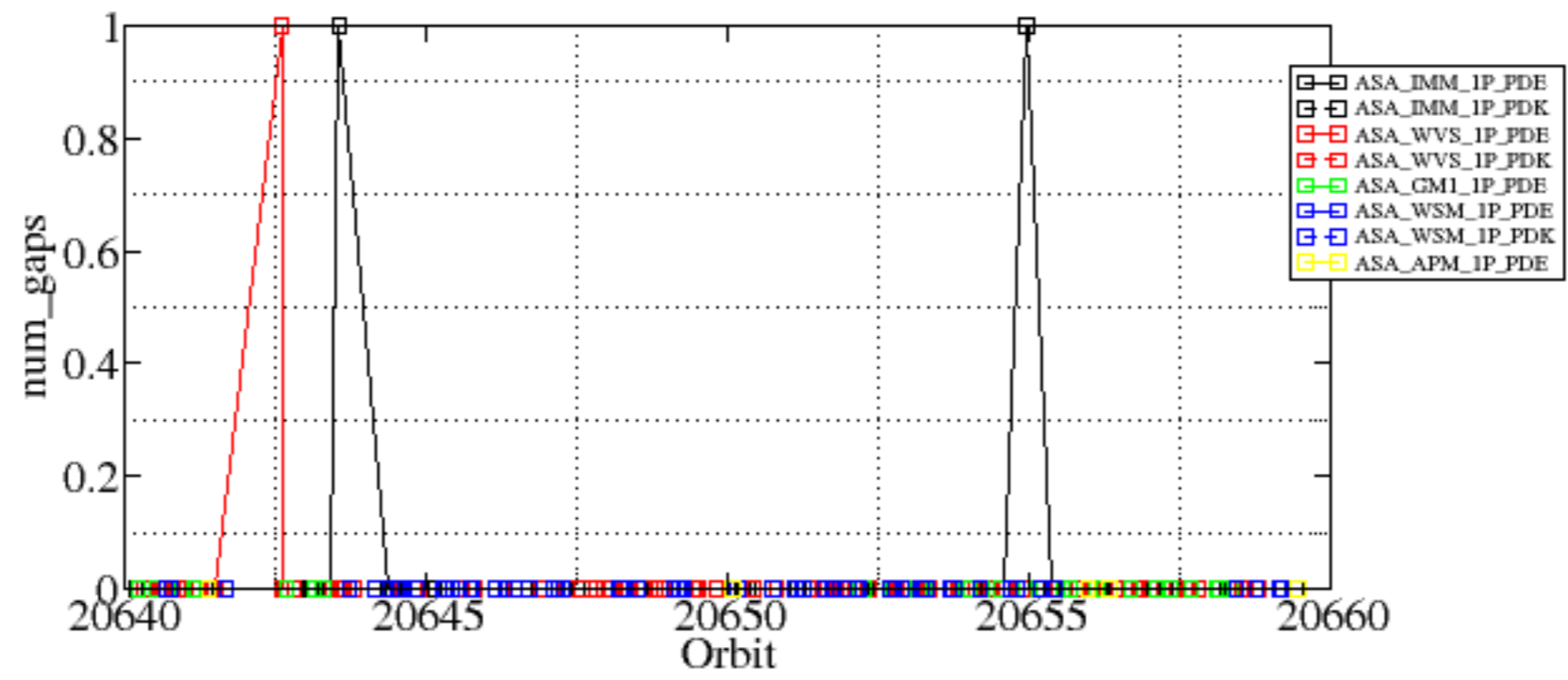




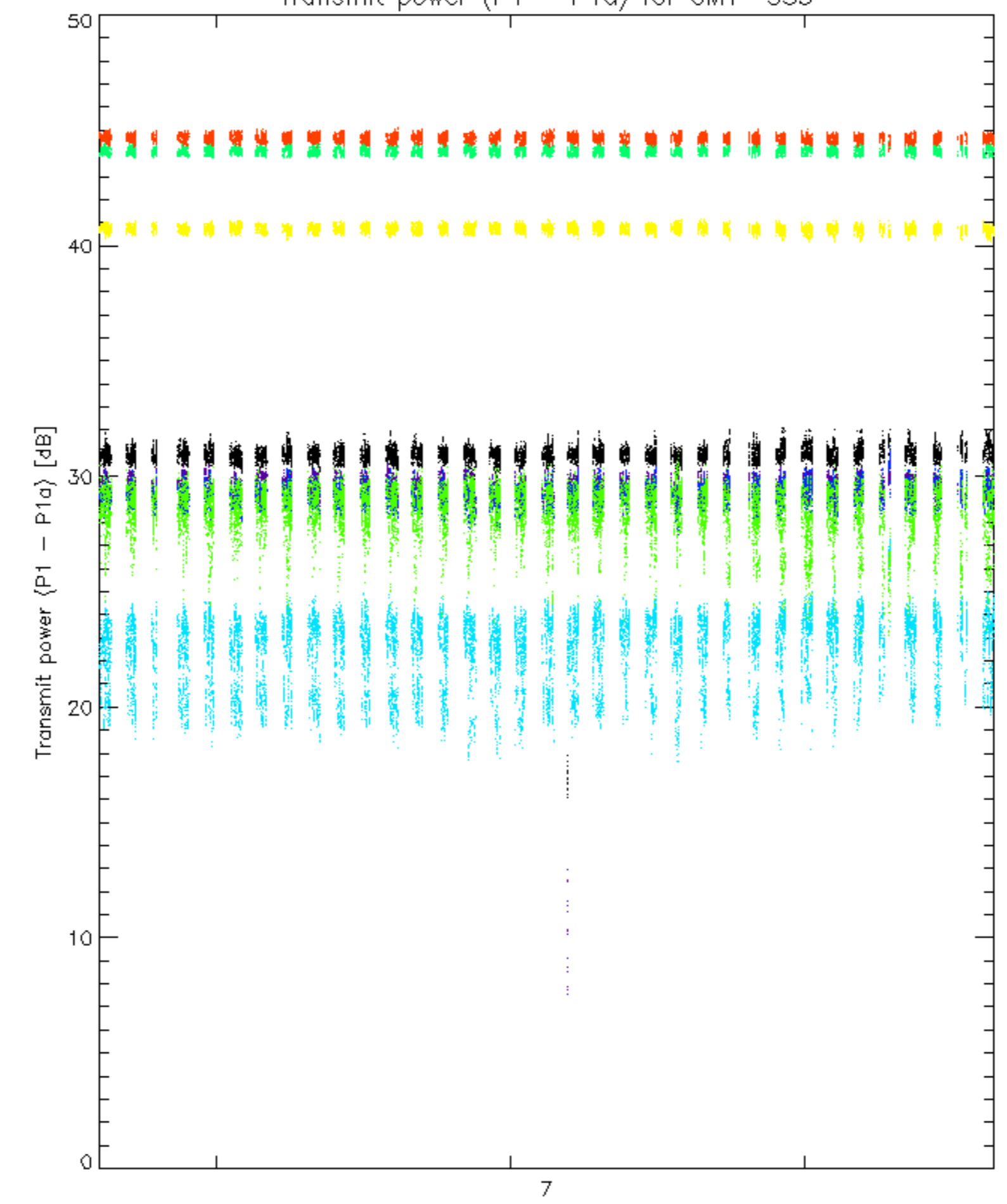
Summary of analysis for the last 3 days 2006021[901]

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

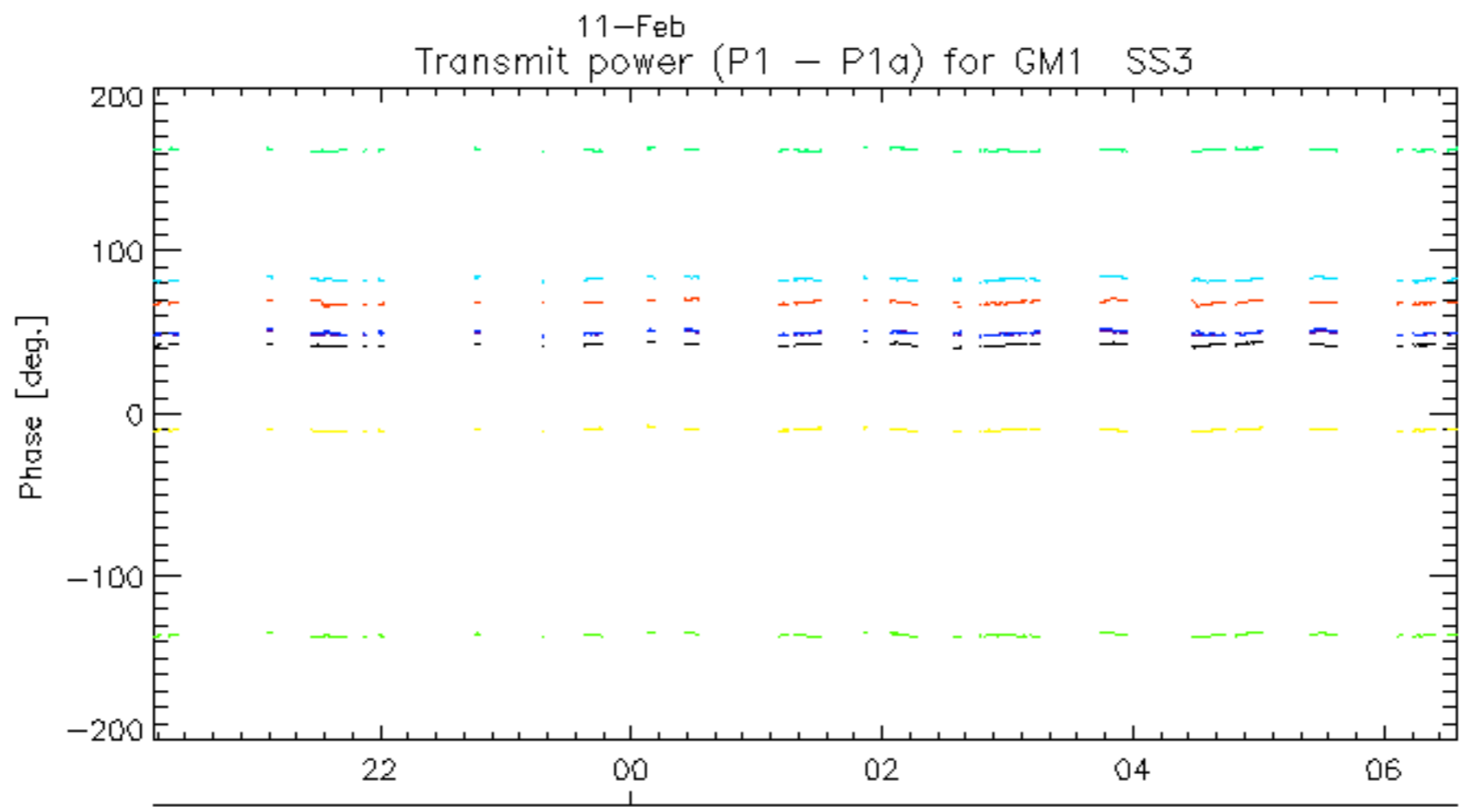
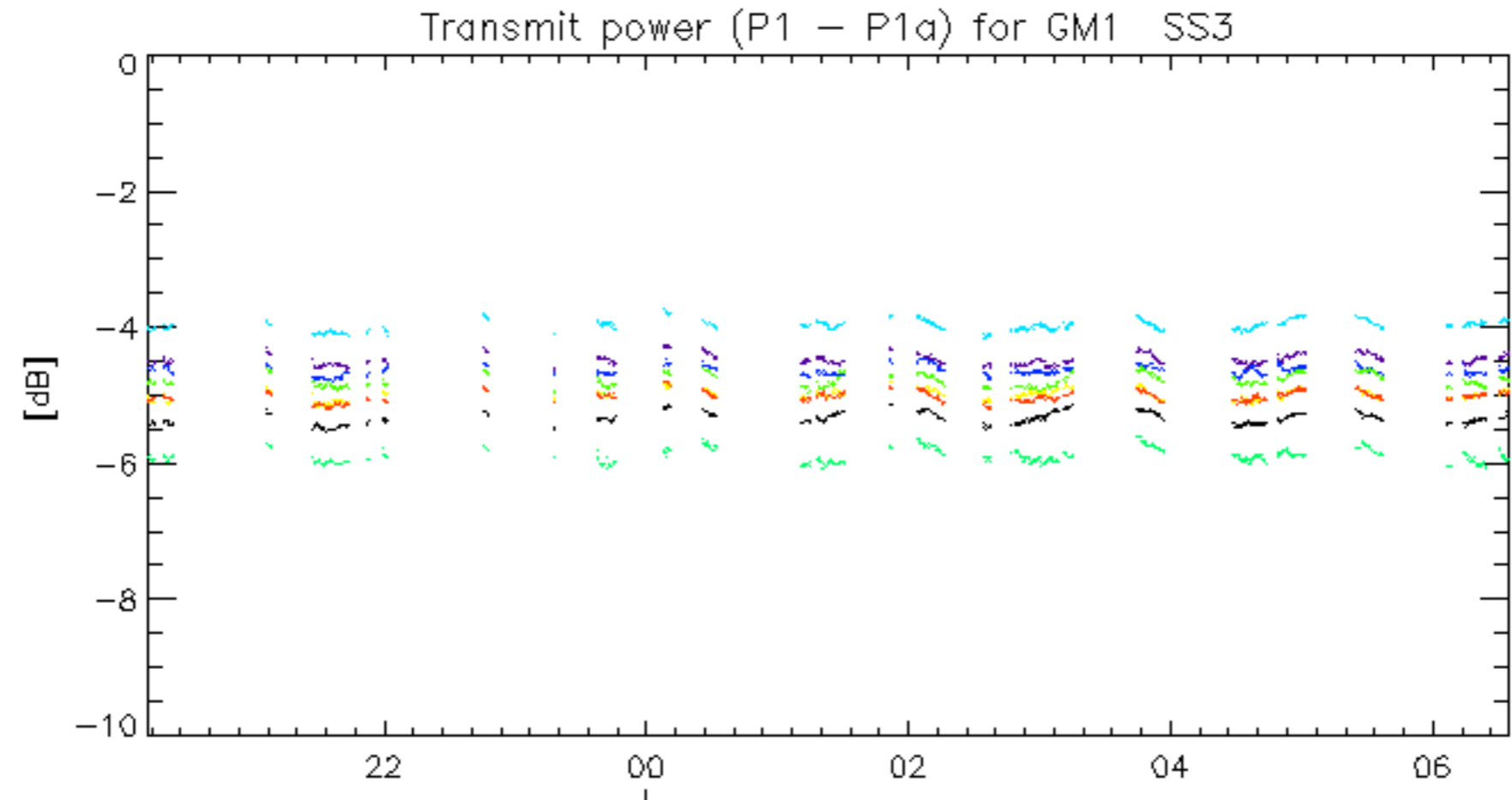
| Filename | num_gaps | num_missing_lines |
|--|----------|-------------------|
| ASA_IMM_1PNPDE20060210_052944_00000042045_00048_20643_2658.N1 | 0 | 248 |
| ASA_IMM_1PNPDE20060210_054350_000000352045_00048_20643_2602.N1 | 1 | 0 |
| ASA_IMM_1PNPDE20060211_005021_000002372045_00059_20654_2678.N1 | 1 | 0 |
| ASA_WVS_1PNPDE20060210_040752_00000002045_00047_20642_0876.N1 | 1 | 0 |



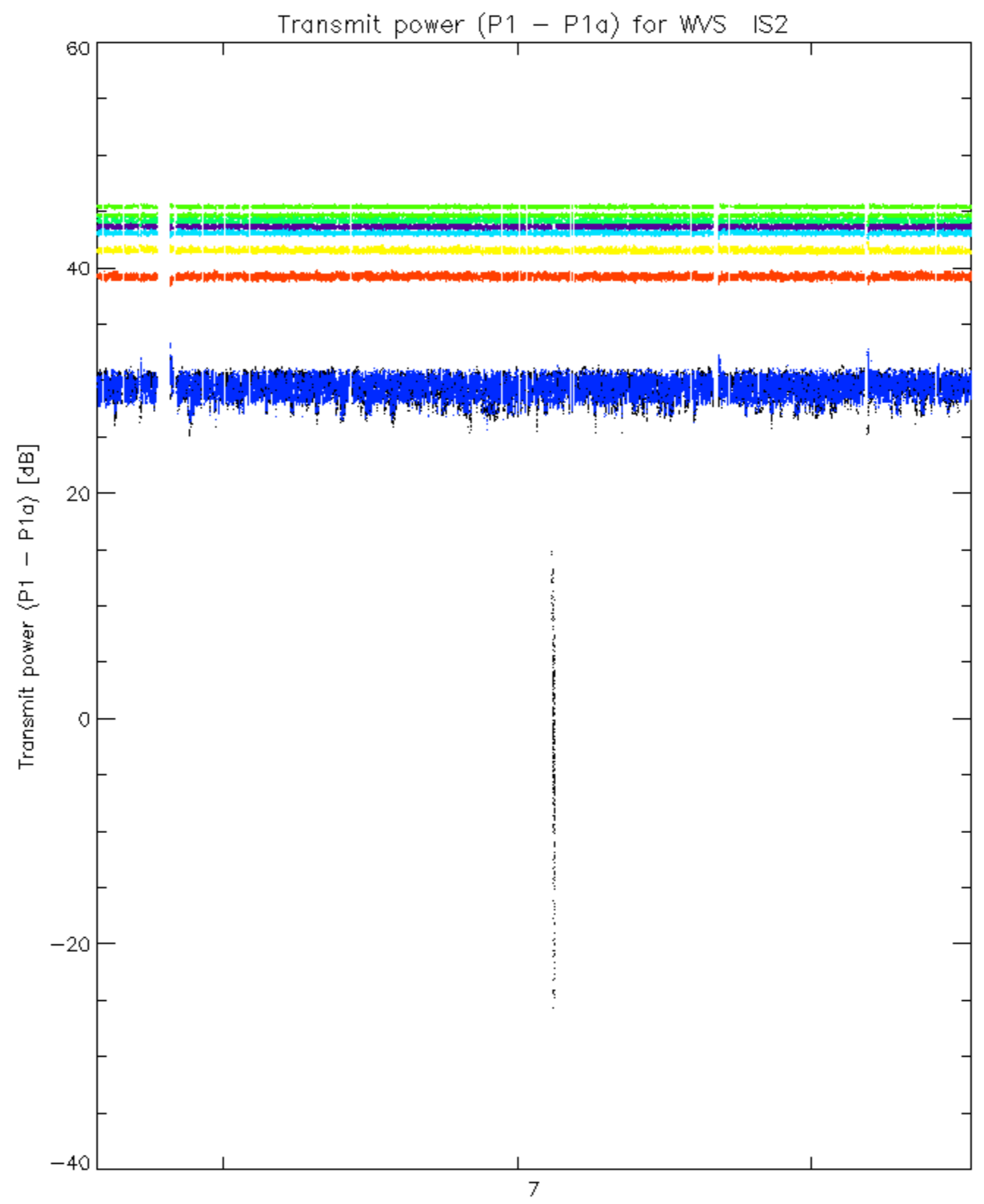
Transmit power (P1 - P1a) for GM1 SS3



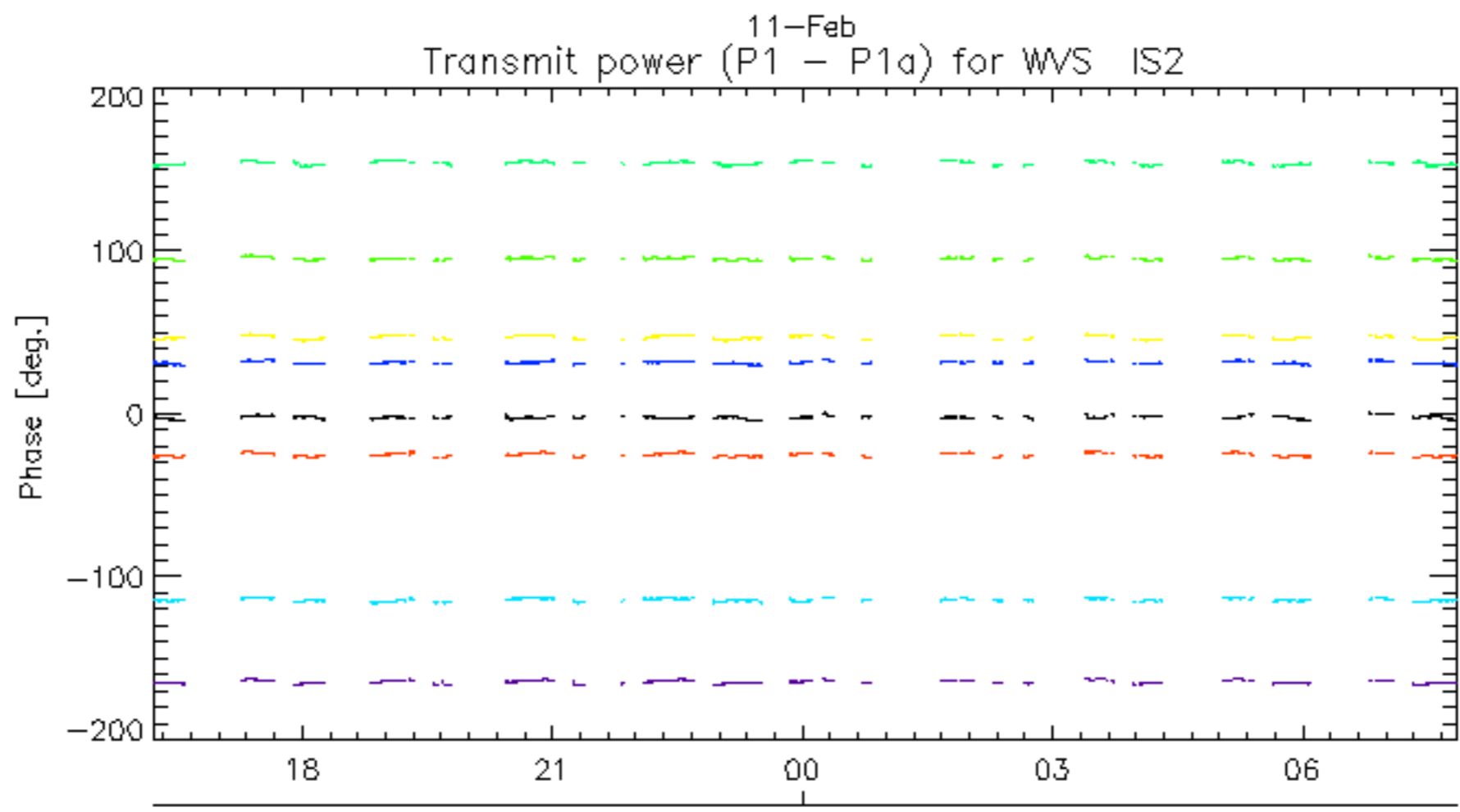
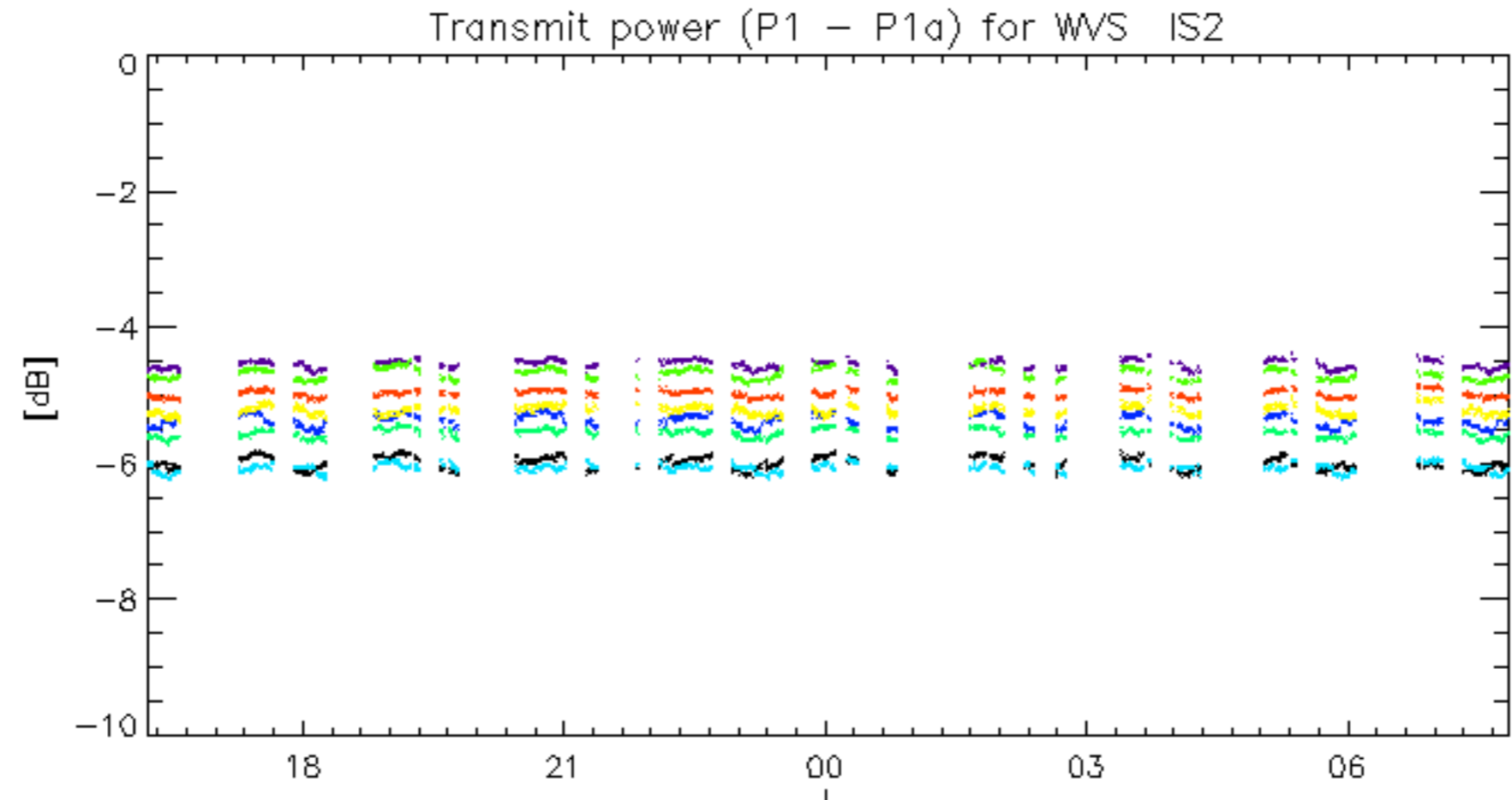
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



11-Feb
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.