1. MIPAS Daily Report for level 1 products

1.1 General Info

This report contains a daily analysis on parameters extracted from MIPAS level 1 data (The MIP_NL__1P product).

1.1.1 Report summary

The table below shows general chacteristics of the data that are included into this report.

Item	Value
Report version	v1.31 02-08-2006
Time of report generation	03NOV2007 00:12:19
Data source version	MIPAS/4.67-P
Processing scope for products	17OCT2007 00:00:00 to 18OCT2007 00:00:00
Start time of first product within scope	17OCT2007 01:16:43
Stop time of last product within scope	17OCT2007 01:38:48
Total number of level 1 products	2
Number of level 1 products with errors	0

1.1.2 Summary per product

The following table shows a summary for each product used in this report.

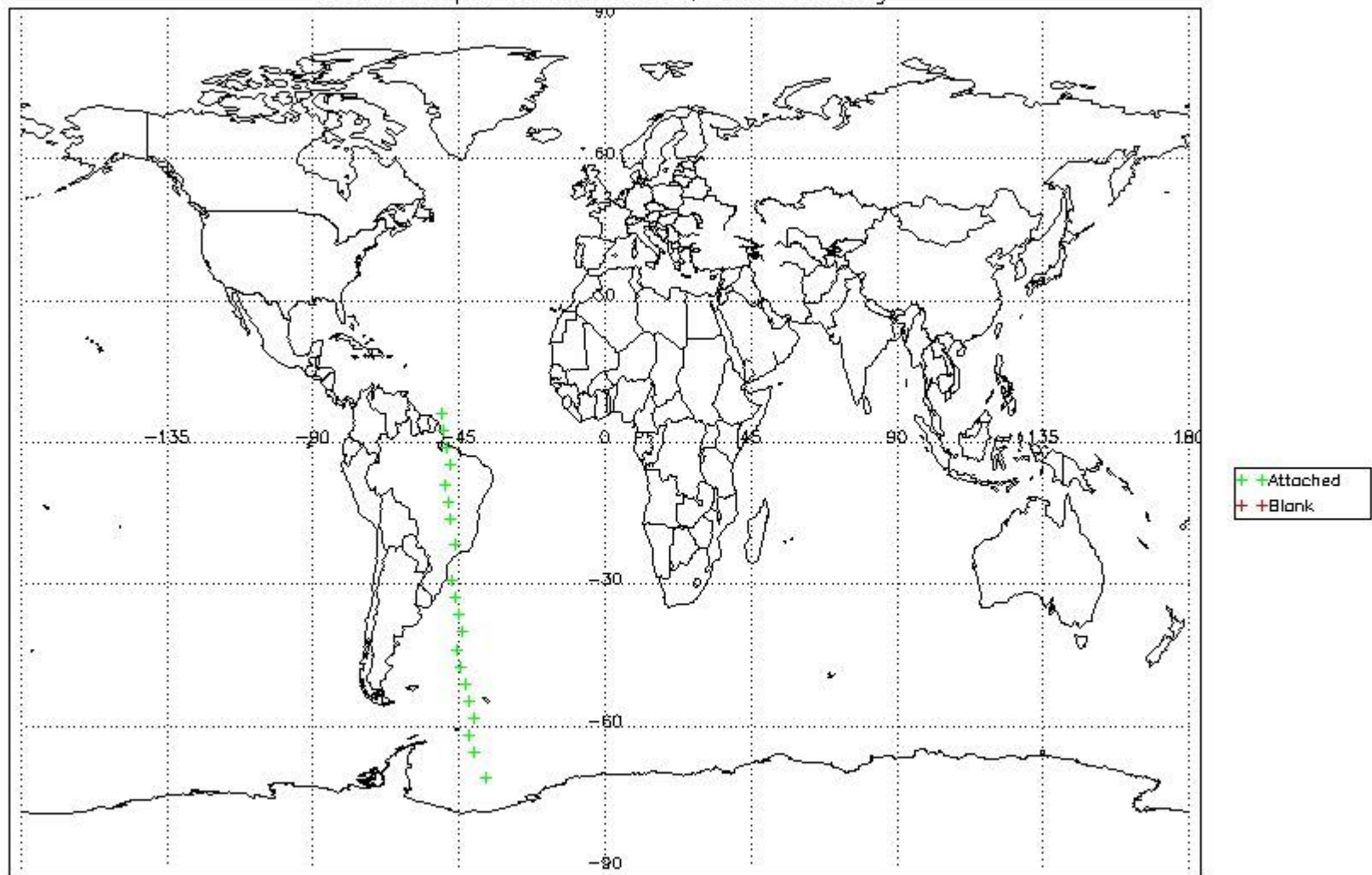| #	Product name	Start time	Stop time	Prod err	Slice position (prod/tot)
0	MIP_NL__1PPDPA20071017_011643_000007512062_00317_29429_3624.N1	17OCT2007 01:16:43	17OCT2007 01:29:13	0	1/1
1	MIP_NL__1PPDPA20071017_013020_000005082062_00318_29430_3625.N1	17OCT2007 01:30:20	17OCT2007 01:38:48	0	1/1

1.2 Product Quality Indicators

This report contains an analysis on product quality related parameters within the MIP_NL__1P product.
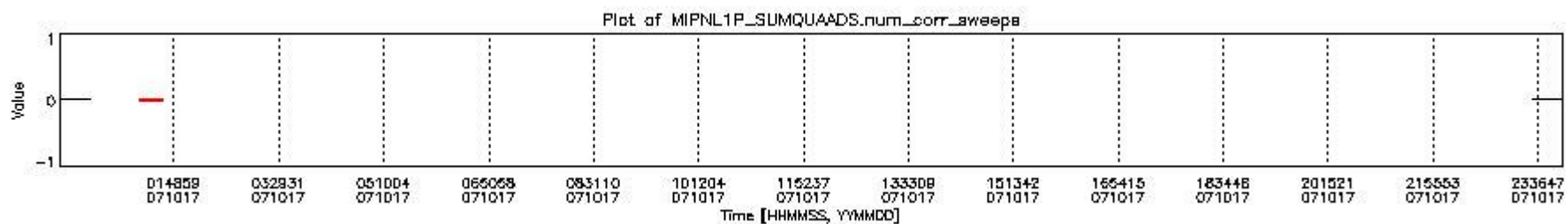
1.2.1 Trends and geolocation of Summary Quality ADS
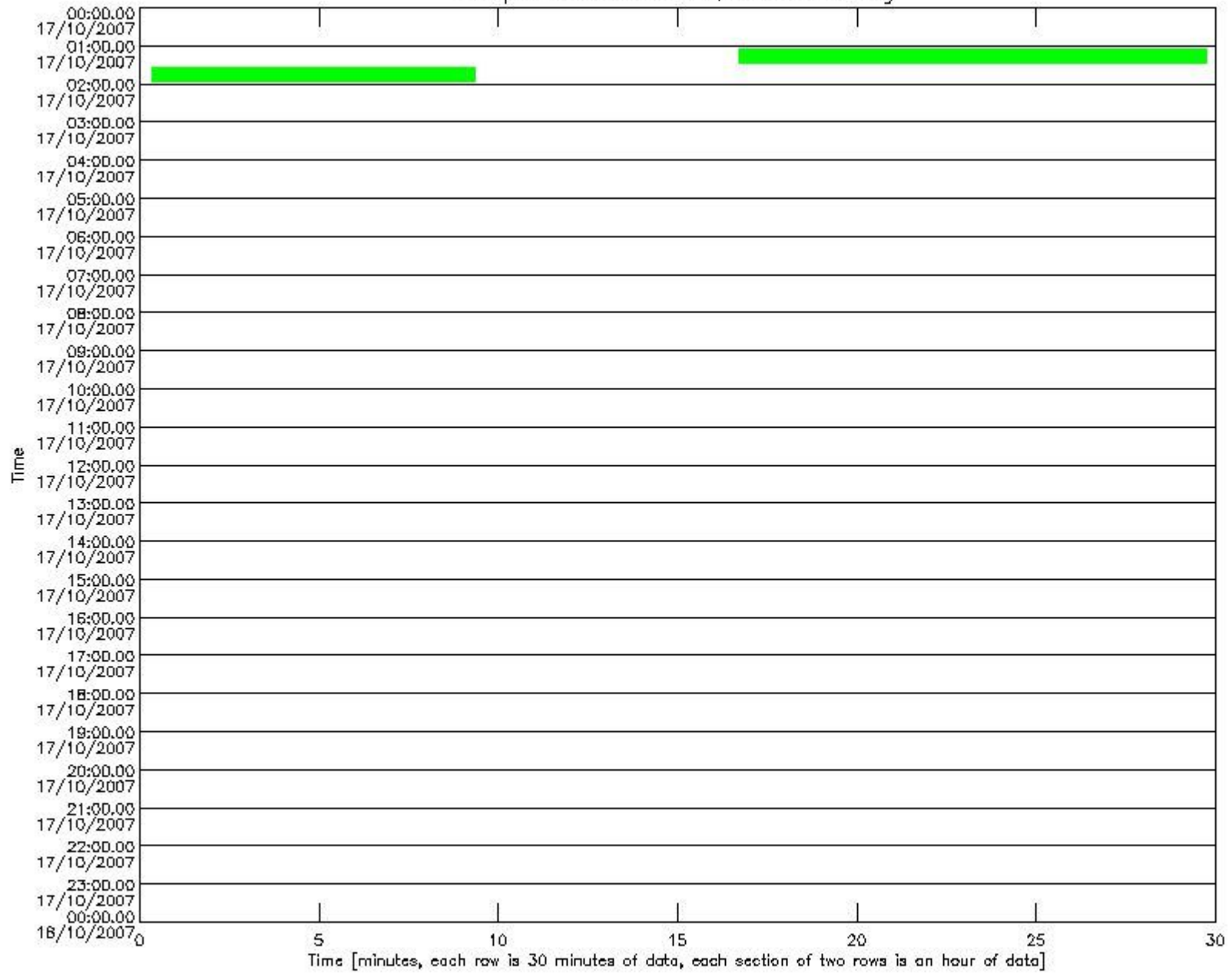
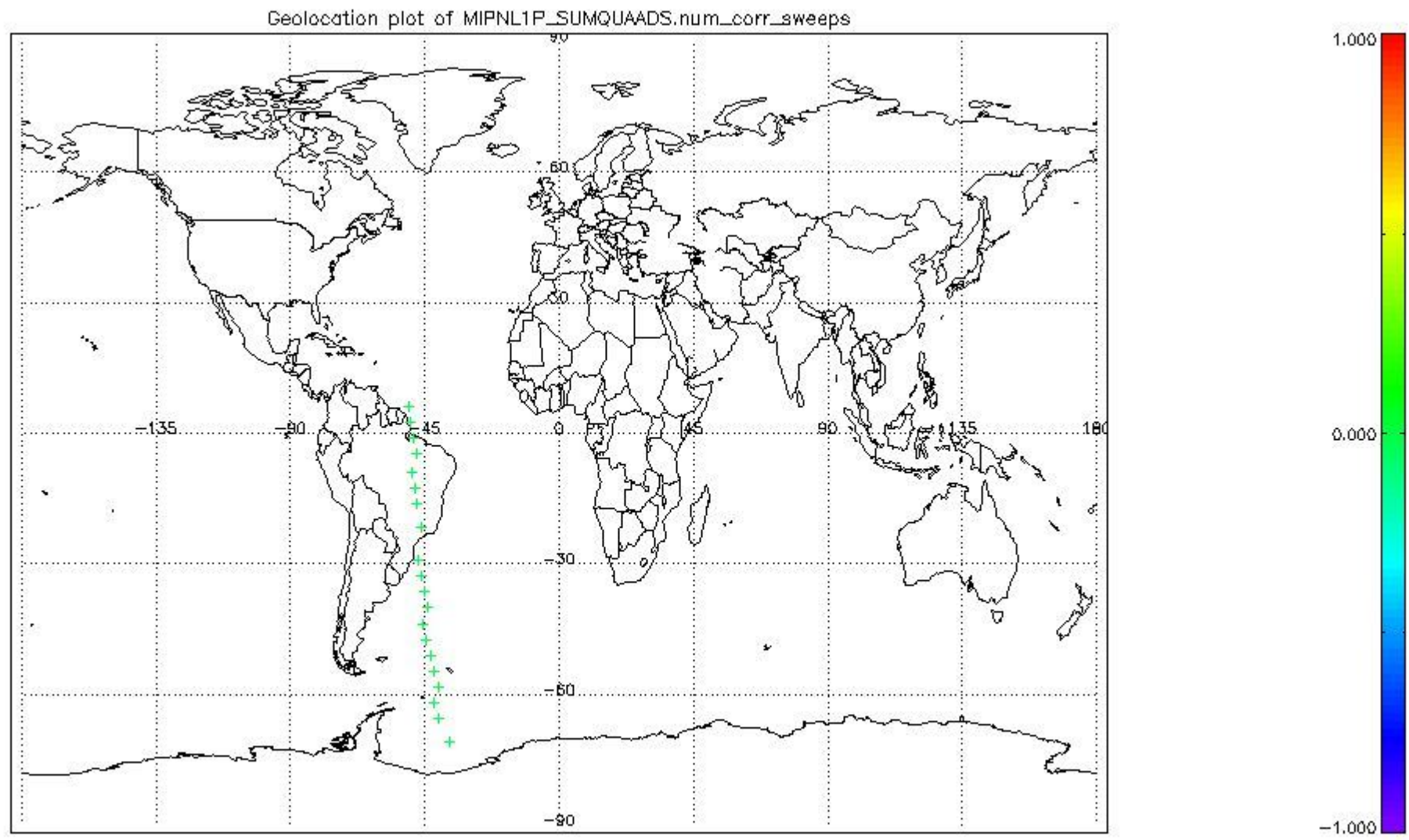Bar plot of MIPNL1P_SUMQUAADS.attach_flag

mipas_daily_report_level1_MIPAS_4_67_P_20071017_0.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.attach_flag

+ +Attached
+ +Blank

mipas_daily_report_level1_MIPAS_4_67_P_20071017_1.PNG

Plot of MIPNL1P_SUMQUAADS.num_corr_sweeps
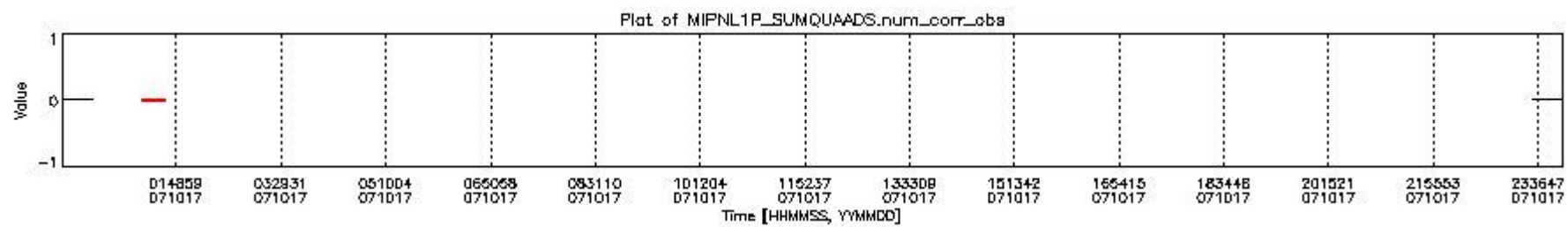

Value

Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_2.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_sweeps

mipas_daily_report_level1_MIPAS_4_67_P_20071017_3.PNG

Plot of MIPNL1P_SUMQUAADS.num_corr_ina
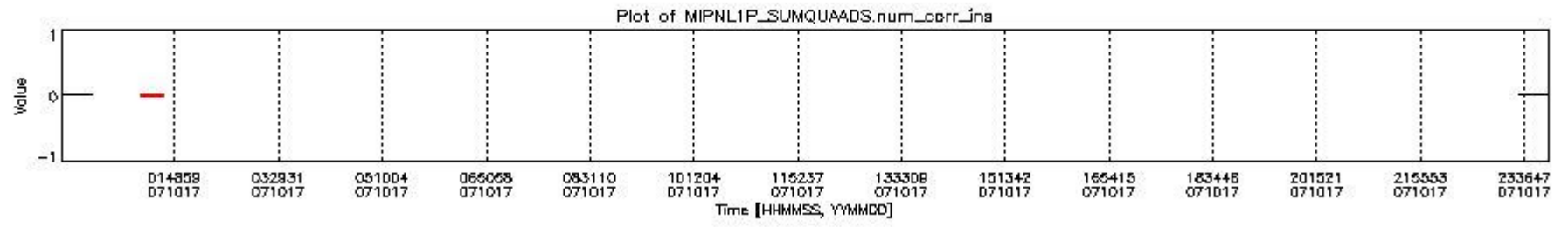
mipas_daily_report_level1_MIPAS_4_67_P_20071017_4.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_ins
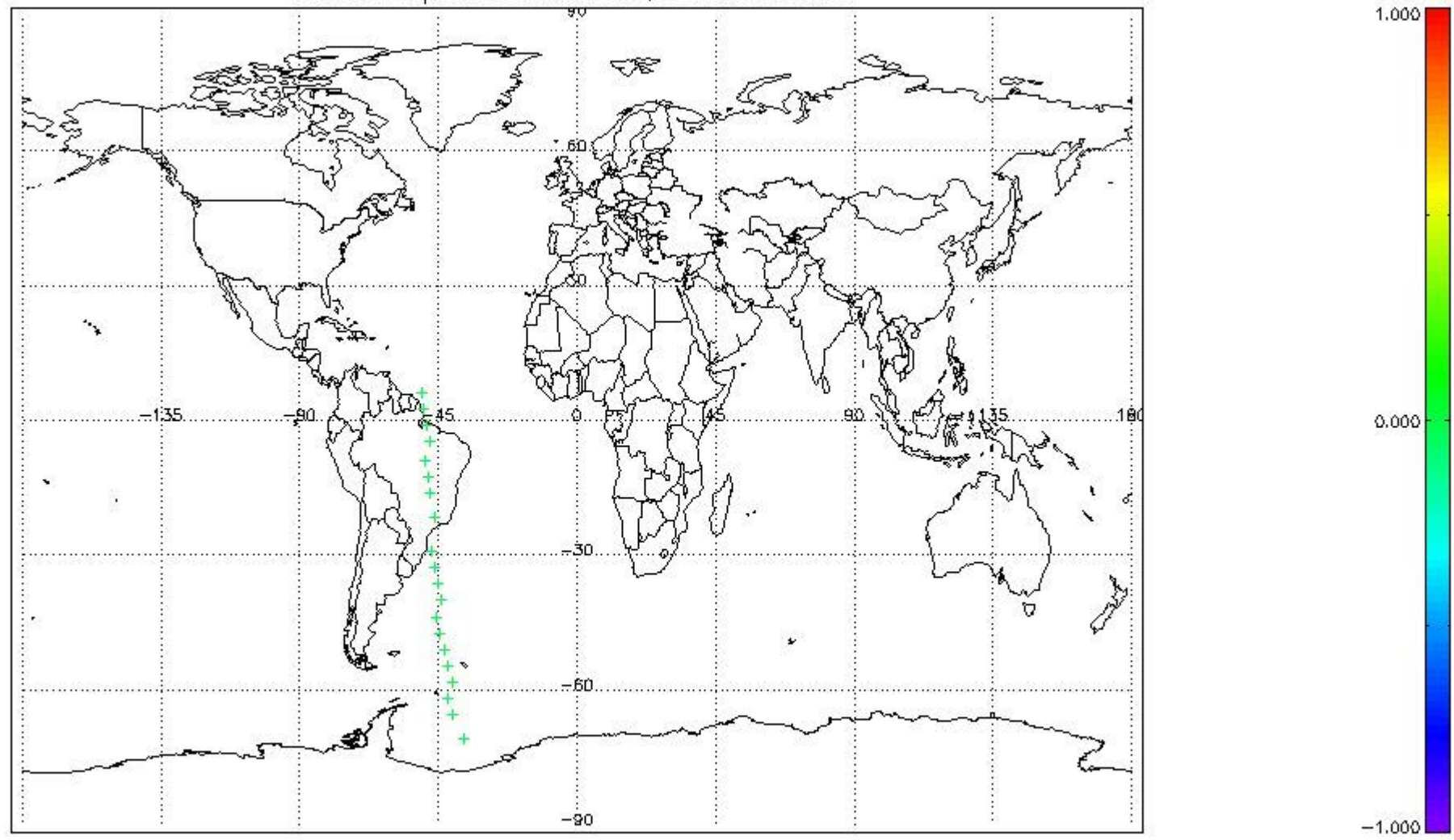
mipas_daily_report_level1_MIPAS_4_67_P_20071017_5.PNG
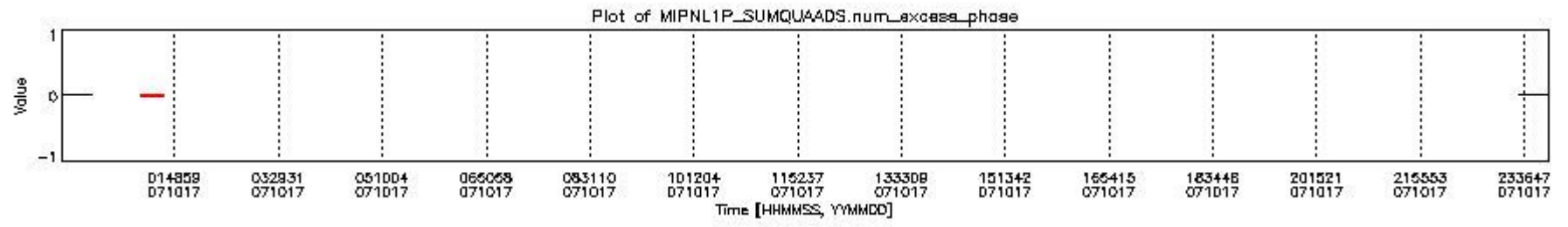
Plot of MIPNL1P_SUMQUAADS.num_corr_obs

mipas_daily_report_level1_MIPAS_4_67_P_20071017_6.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_obs
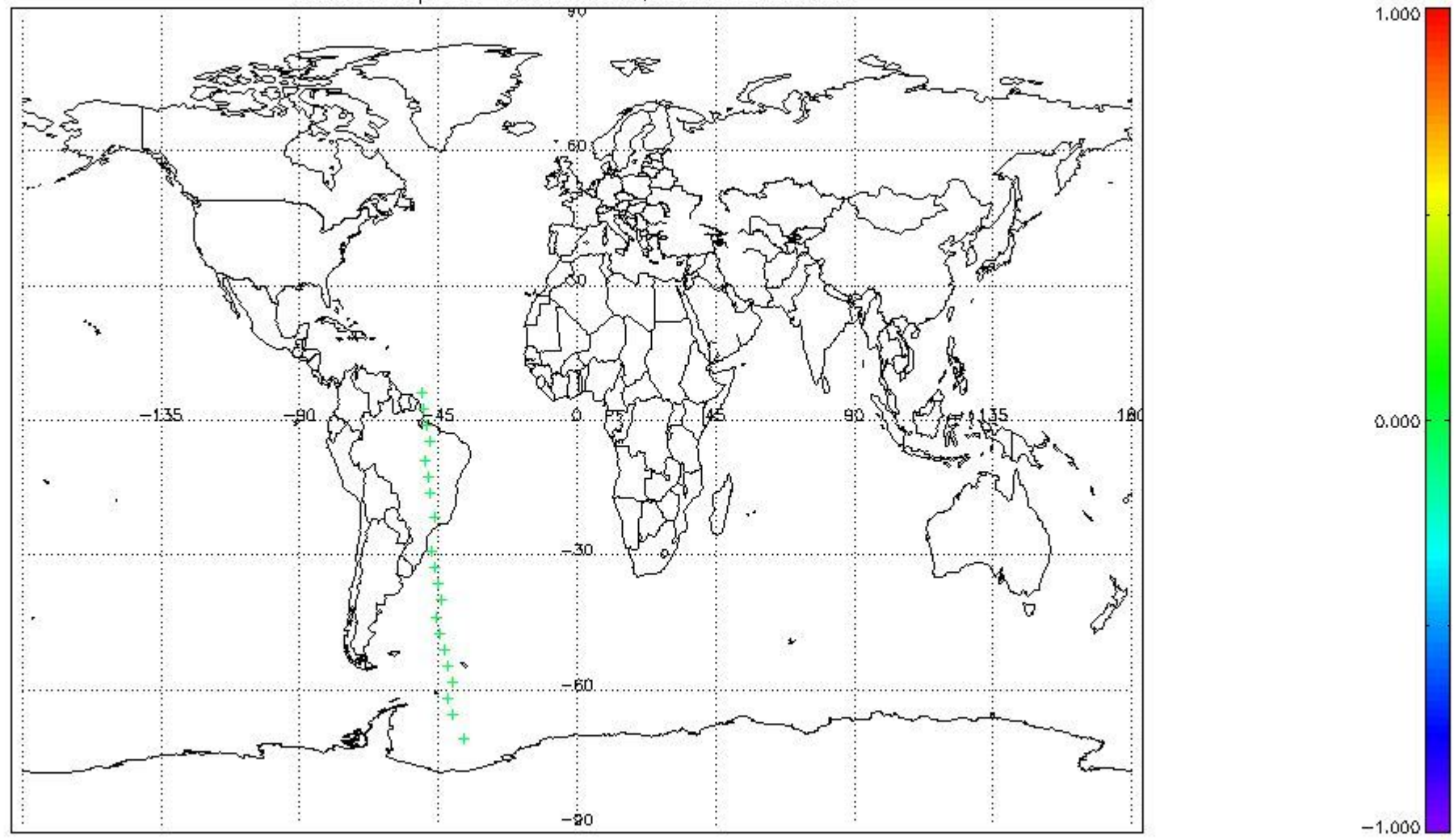
mipas_daily_report_level1_MIPAS_4_67_P_20071017_7.PNG
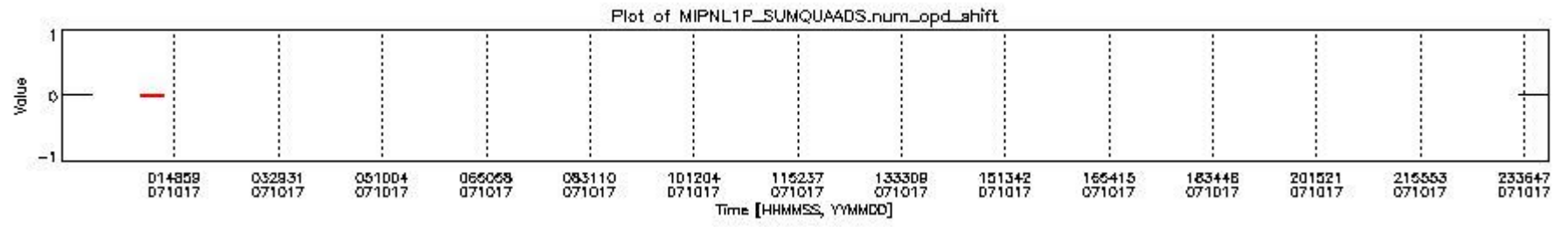
Plot of MIPNL1P_SUMQUAADS.num_excess_phase

mipas_daily_report_level1_MIPAS_4_67_P_20071017_8.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.num_excess_phase
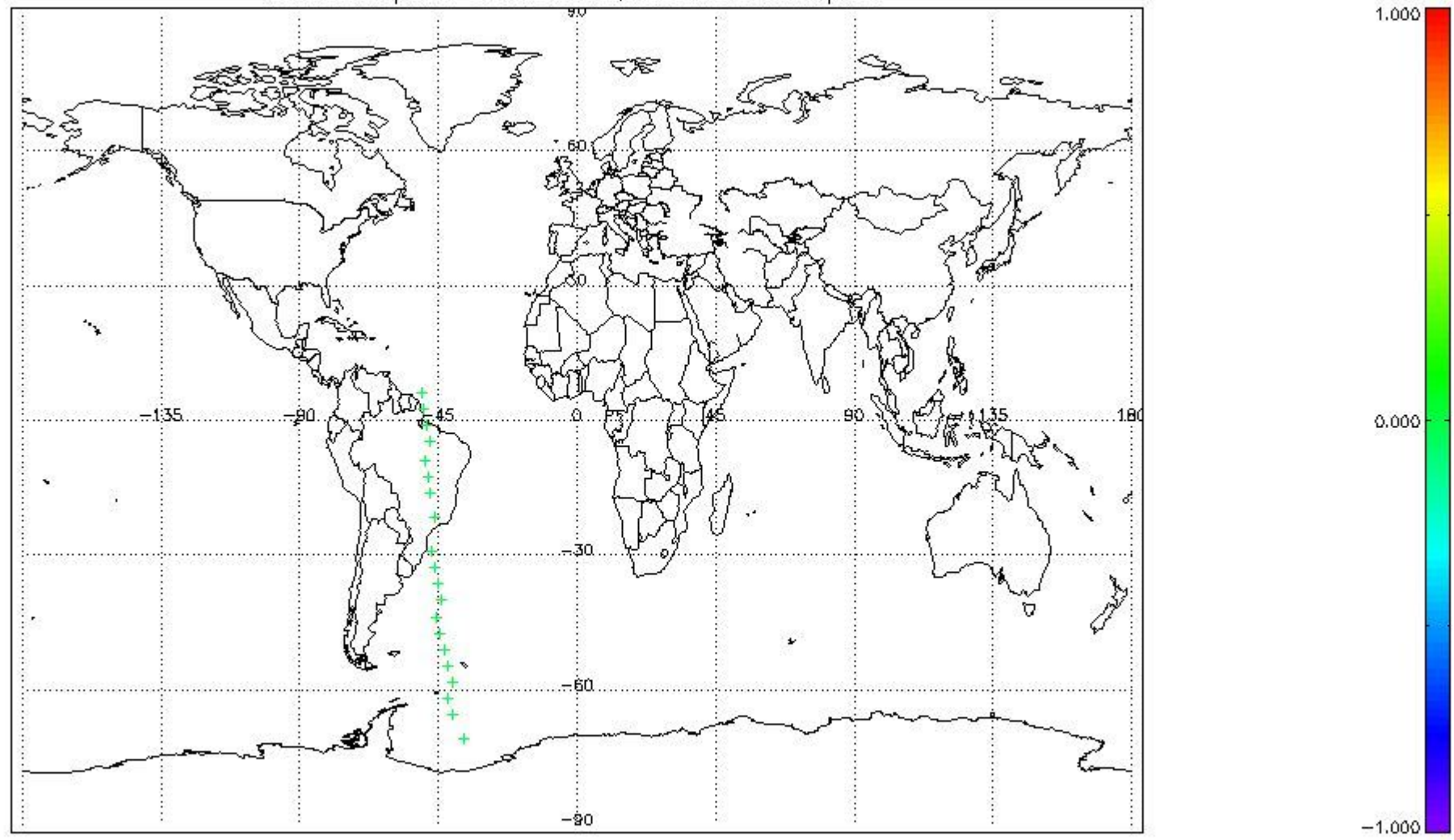
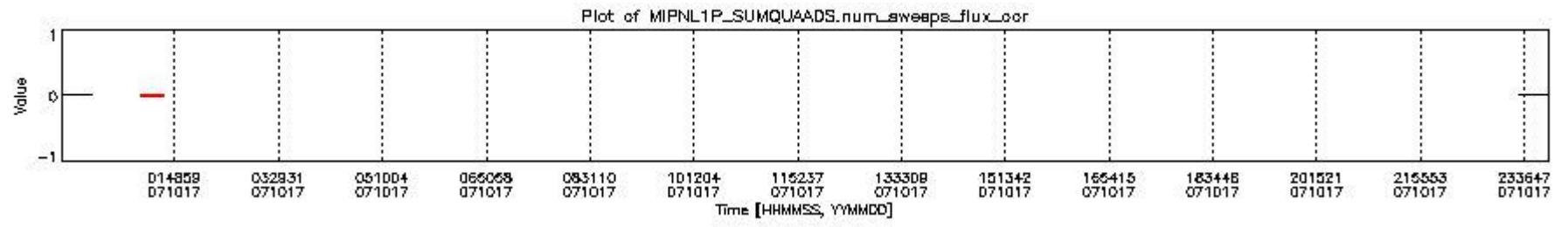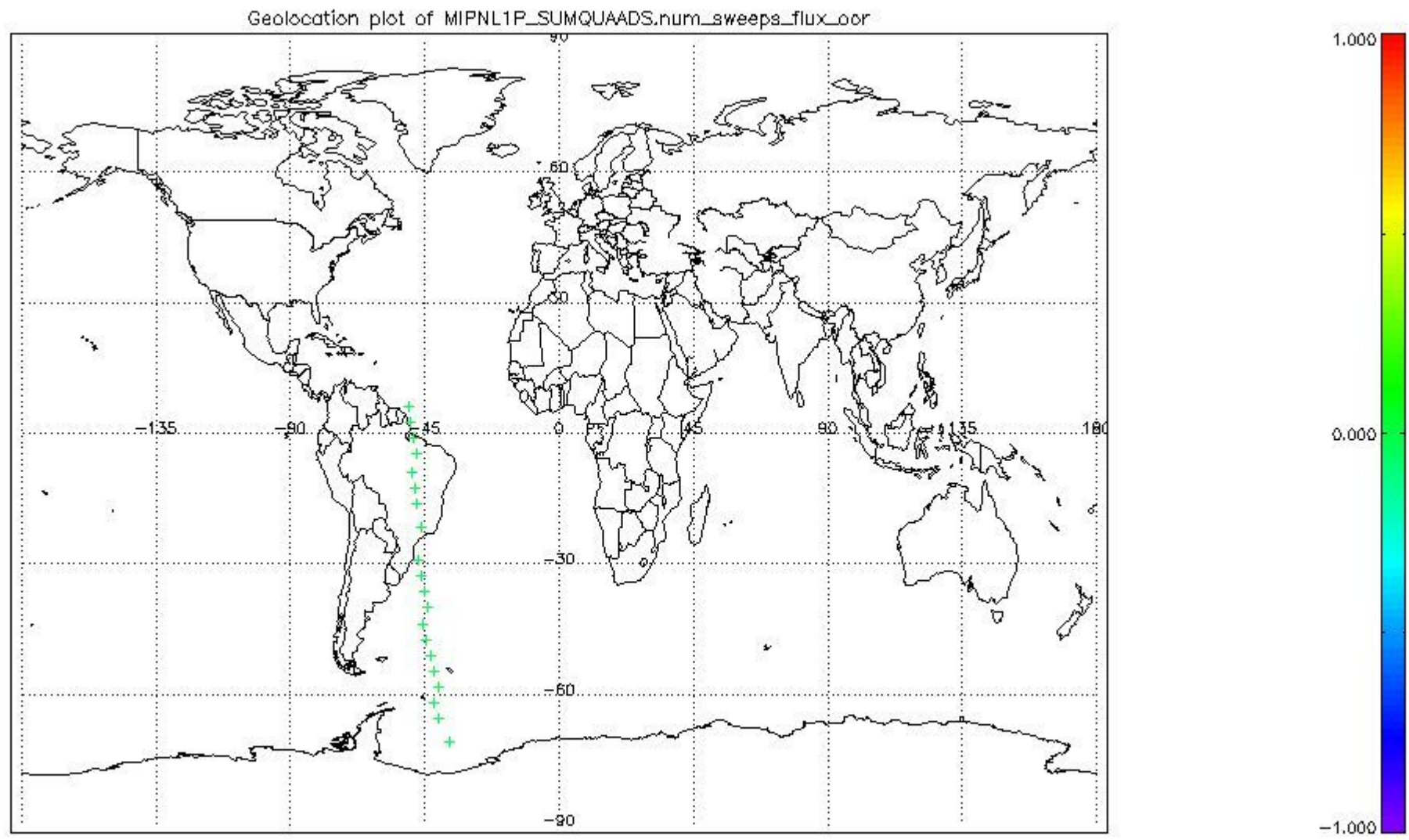**mipas_daily_report_level1_MIPAS_4_67_P_20071017_9.PNG**
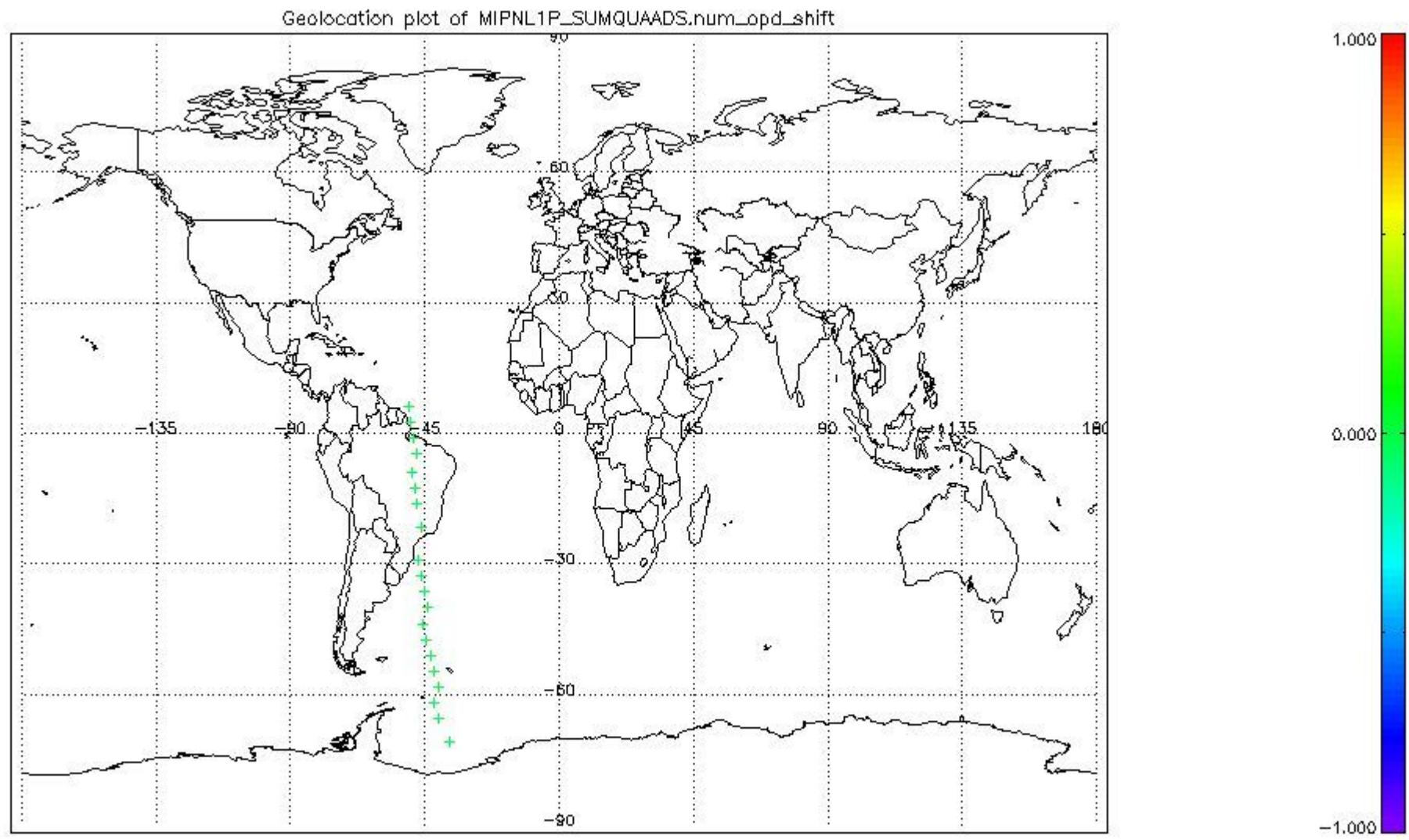
Plot of MIPNL1P_SUMQUAADS.num_opd_shift

Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_10.PNG

Geolocation plot of MIPNL1P_SUMQUAADS.num_opd_shift

mipas_daily_report_level1_MIPAS_4_67_P_20071017_11.PNG

Plot of MIPNL1P_SUMQUAADS.num_sweeps_flux_cor

Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_12.PNG

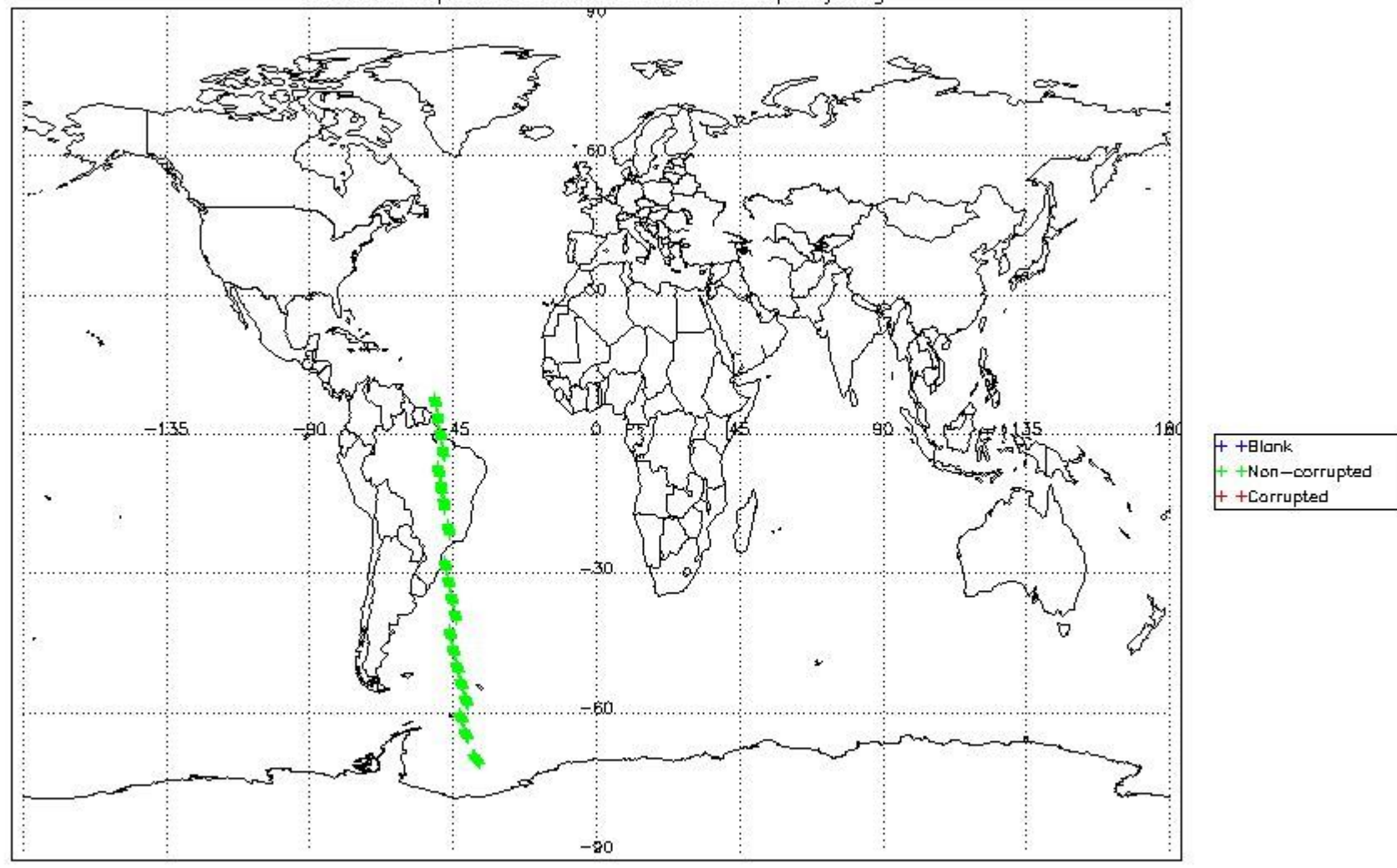Geolocation plot of MIPNL1P_SUMQUAADS.num_sweeps_flux_oor

mipas_daily_report_level1_MIPAS_4_67_P_20071017_13.PNG

1.2.2 Trends and geolocation of MIPAS LEVEL 1 MDS

Bar plot of MIPNL1P_MIPLEV1BMDS_quality_flag

mipas_daily_report_level1_MIPAS_4_67_P_20071017_14.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_quality_flag

+ +Blank
+ +Non-corrupted
+ +Corrupted

mipas_daily_report_level1_MIPAS_4_67_P_20071017_15.PNG

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A1

Value

Time [HHMMSS, YYMMDD]
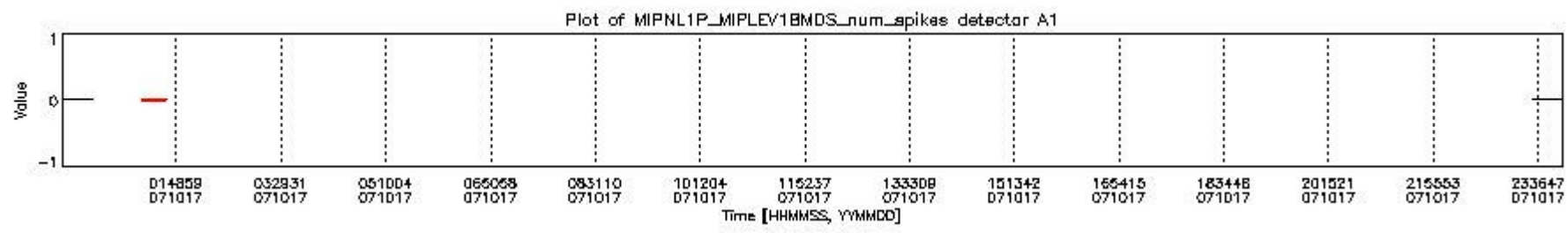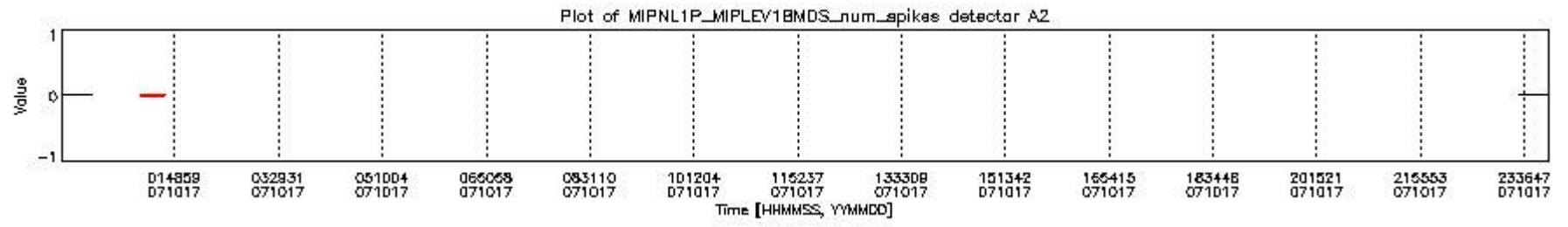
mipas_daily_report_level1_MIPAS_4_67_P_20071017_16.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A1
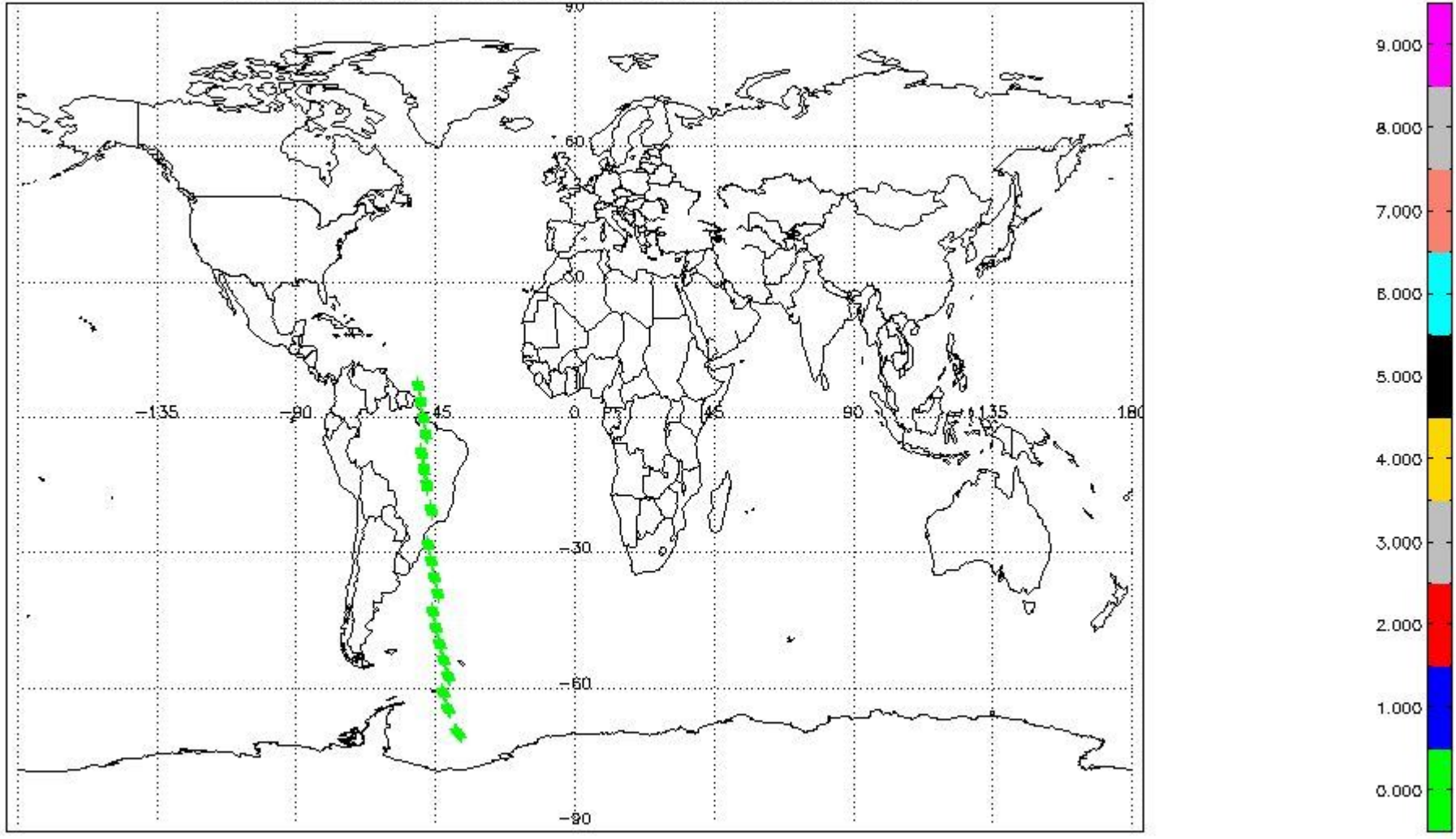
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000

mipas_daily_report_level1_MIPAS_4_67_P_20071017_17.PNG

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A2

Value

1

0

-1

014859   032931   051004   065058   083110   101204   115237   133308   151342   165415   183448   201521   215553   233647
071017   071017   071017   071017   071017   071017   071017   071017   071017   071017   071017   071017   071017   071017
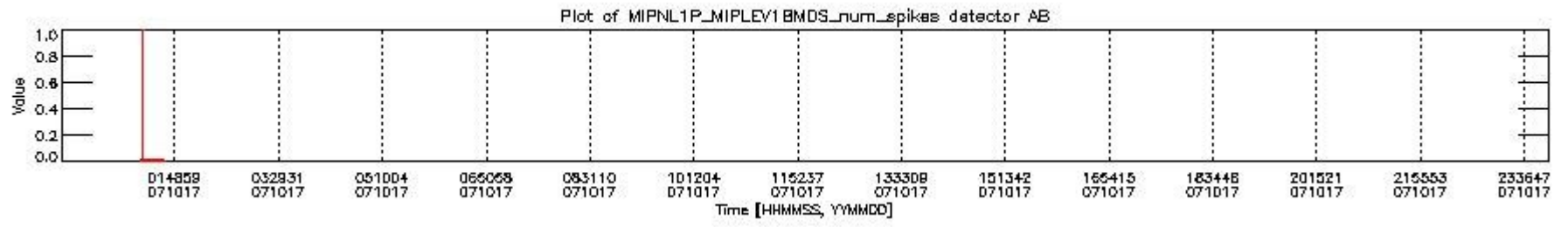
Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_18.PNG

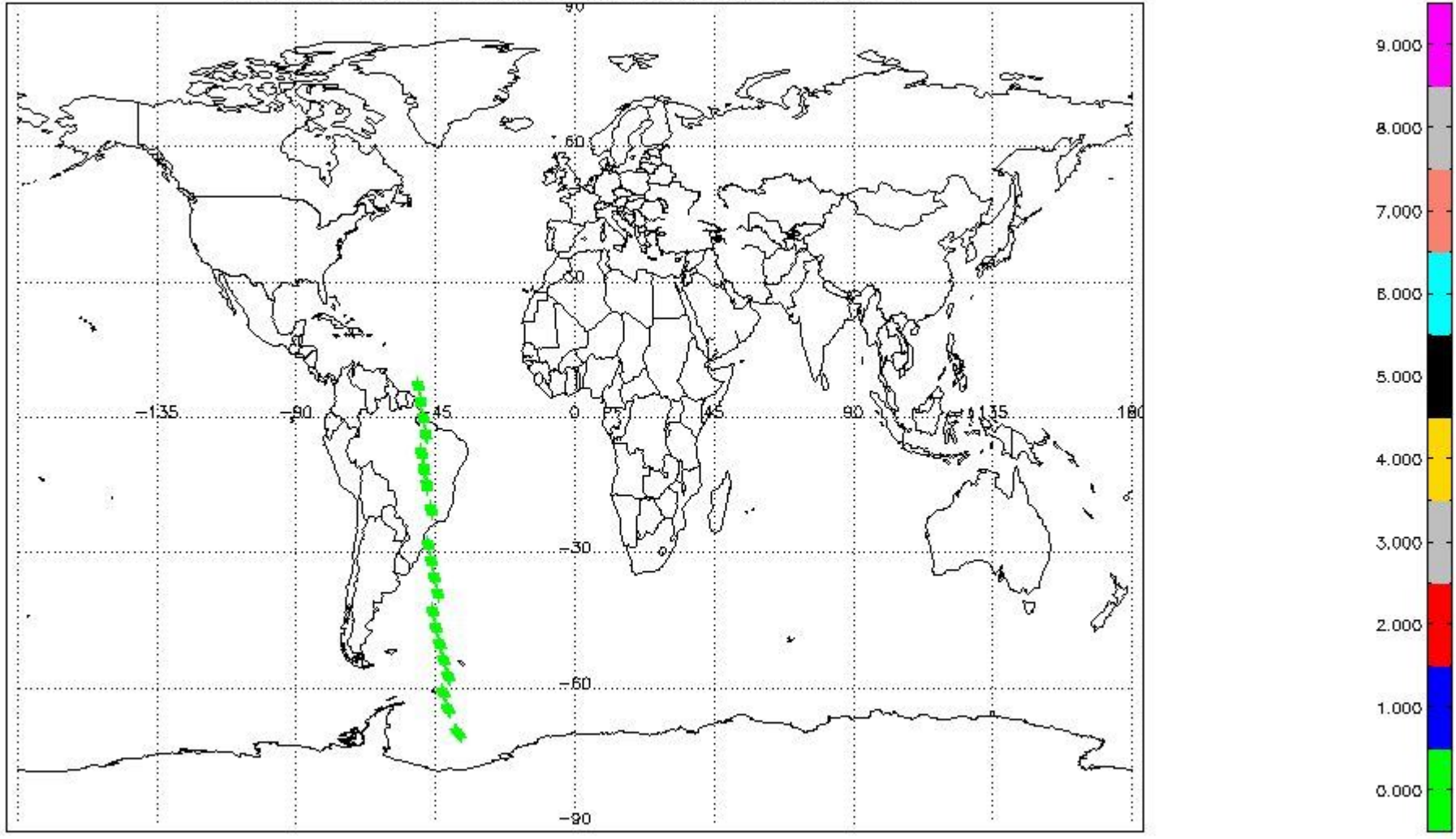Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A2
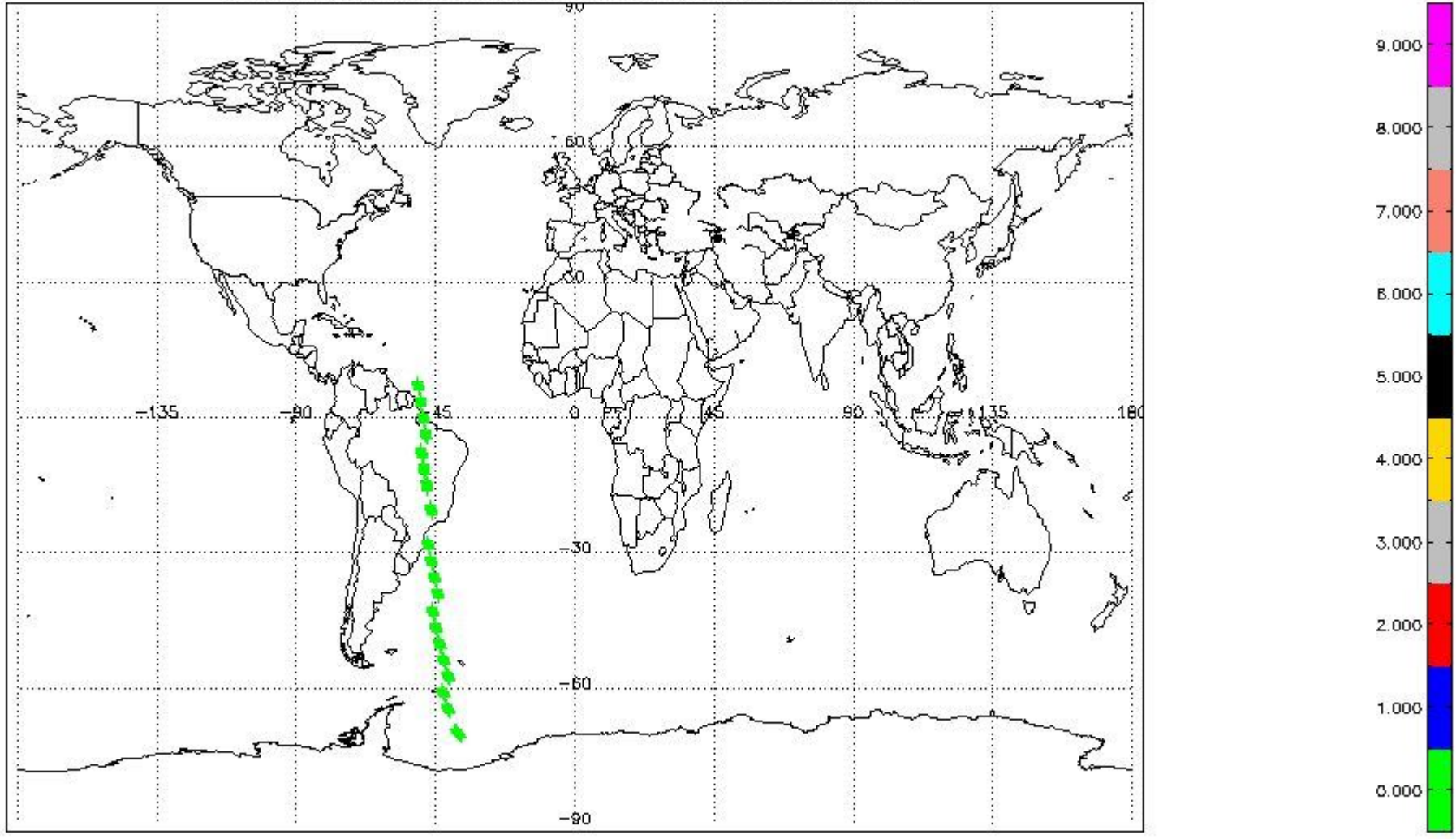
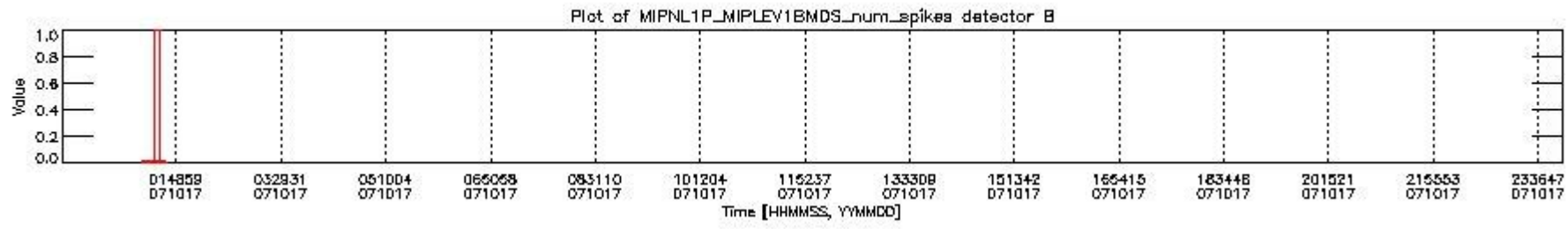mipas_daily_report_level1_MIPAS_4_67_P_20071017_19.PNG

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector AB

mipas_daily_report_level1_MIPAS_4_67_P_20071017_20.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector AB

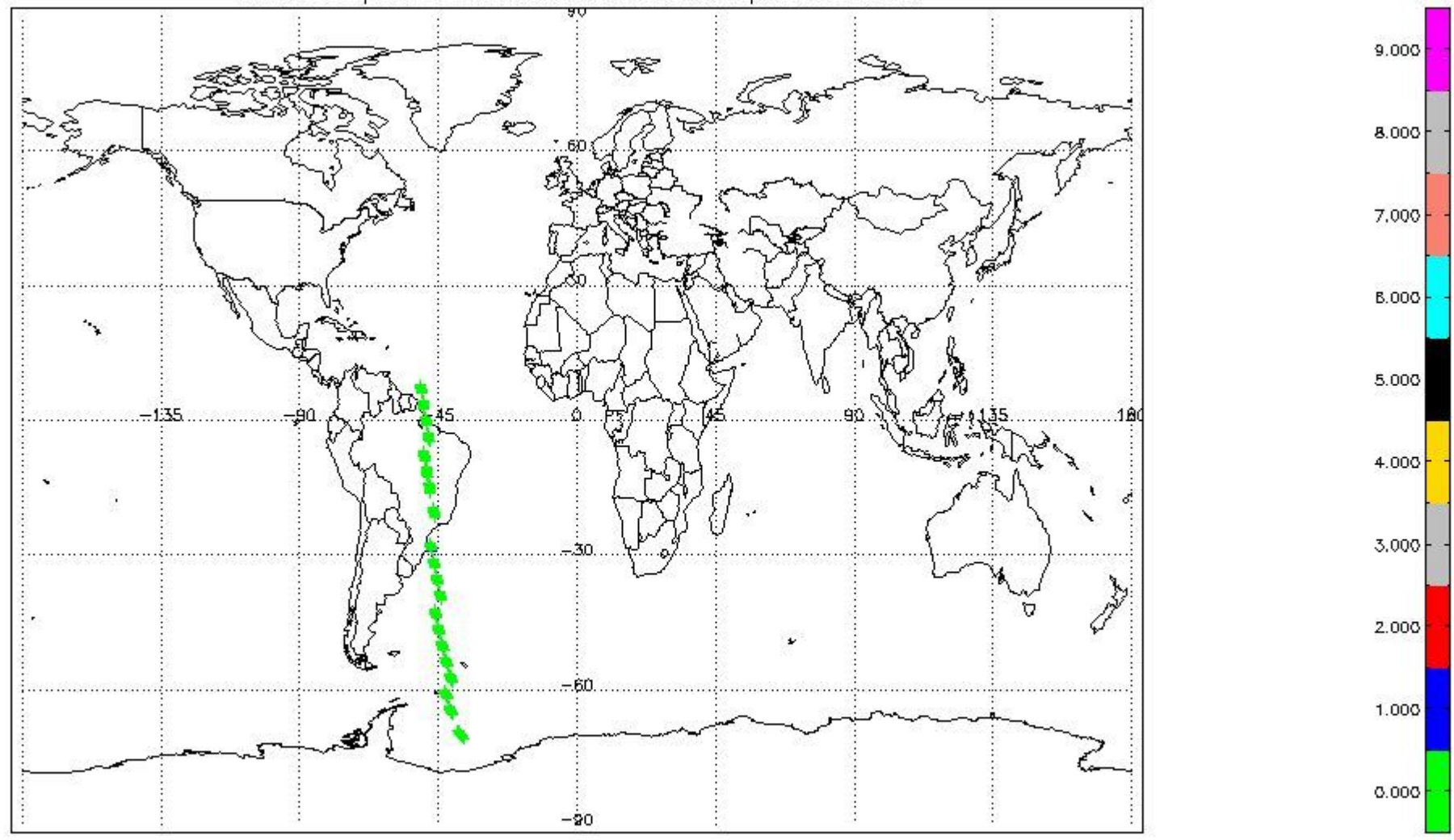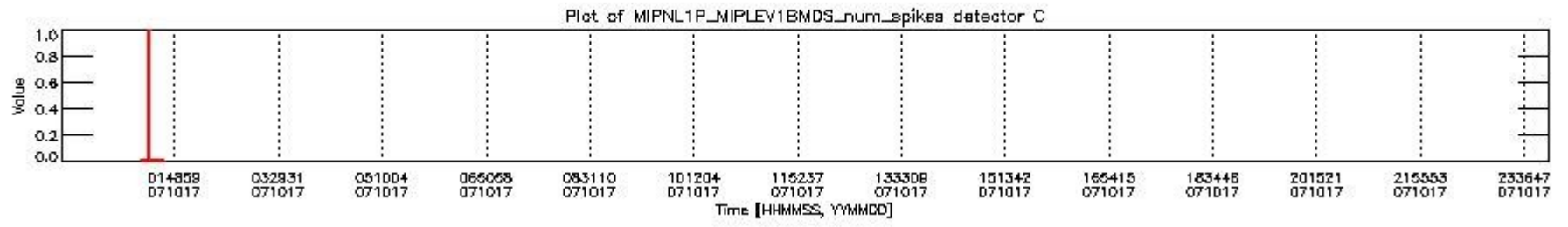mipas_daily_report_level1_MIPAS_4_67_P_20071017_21.PNG

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector B

Value

Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_22.PNG

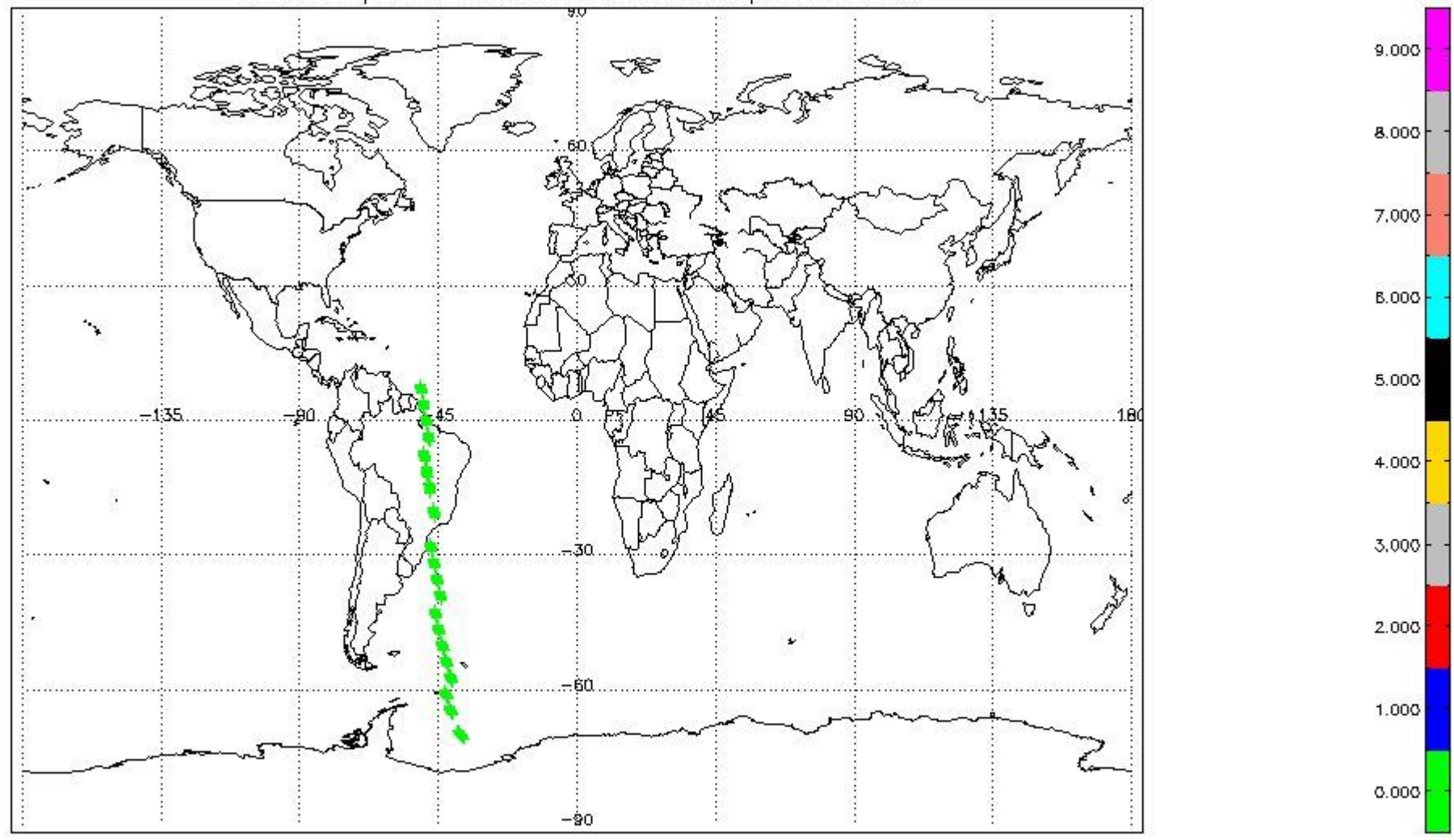**Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector B**

mipas_daily_report_level1_MIPAS_4_67_P_20071017_23.PNG

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector C
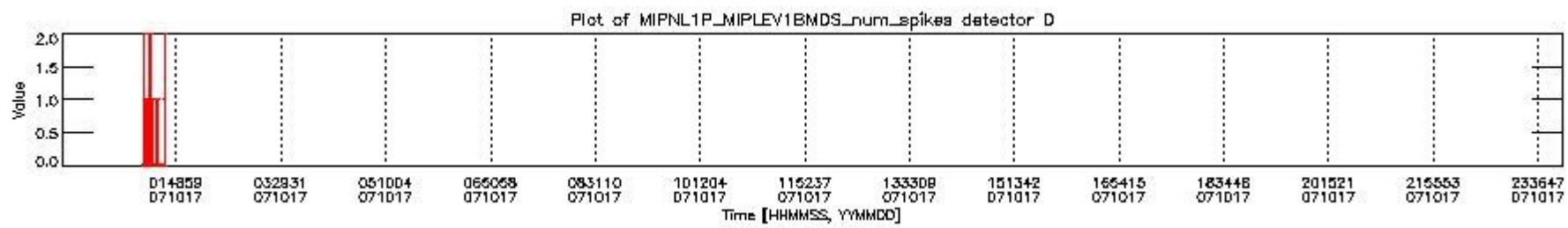
Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_24.PNG

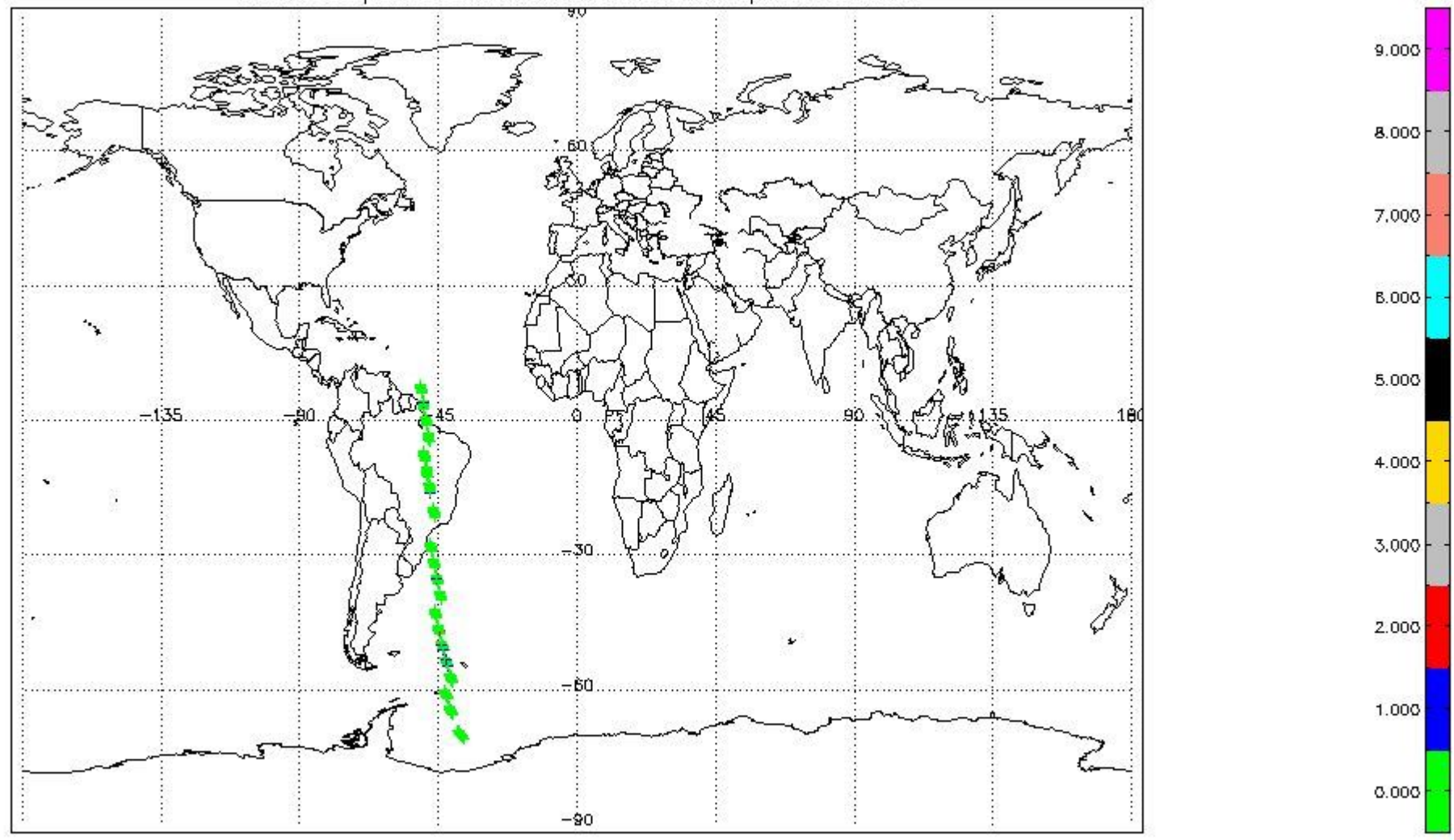Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector C

mipas_daily_report_level1_MIPAS_4_67_P_20071017_25.PNG

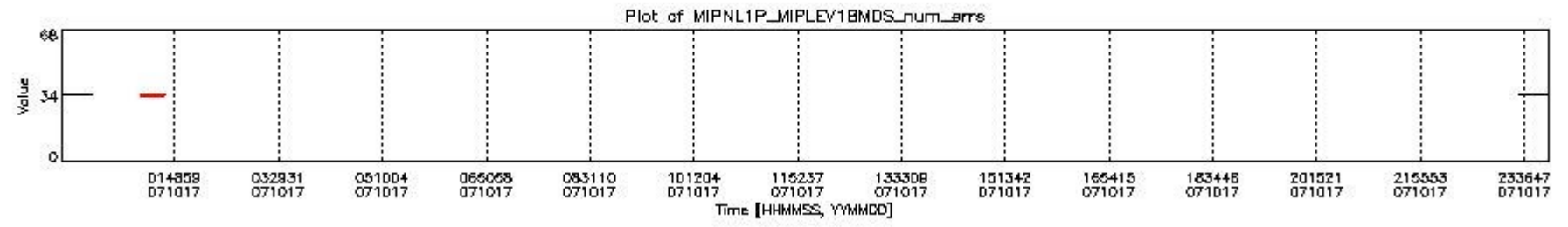Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector D

Time [HHMMSS, YYMMDD]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_26.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector D

mipas_daily_report_level1_MIPAS_4_67_P_20071017_27.PNG
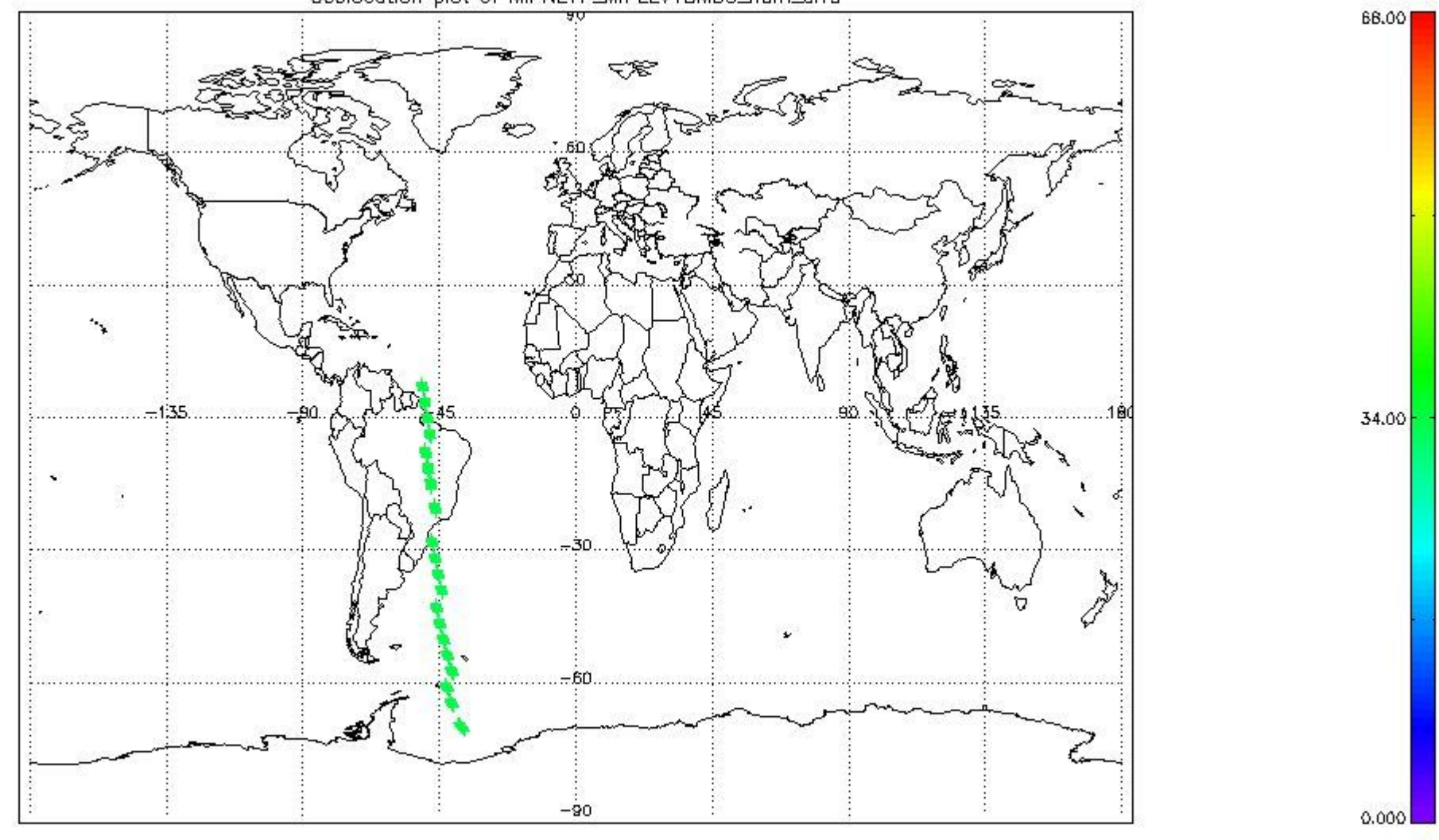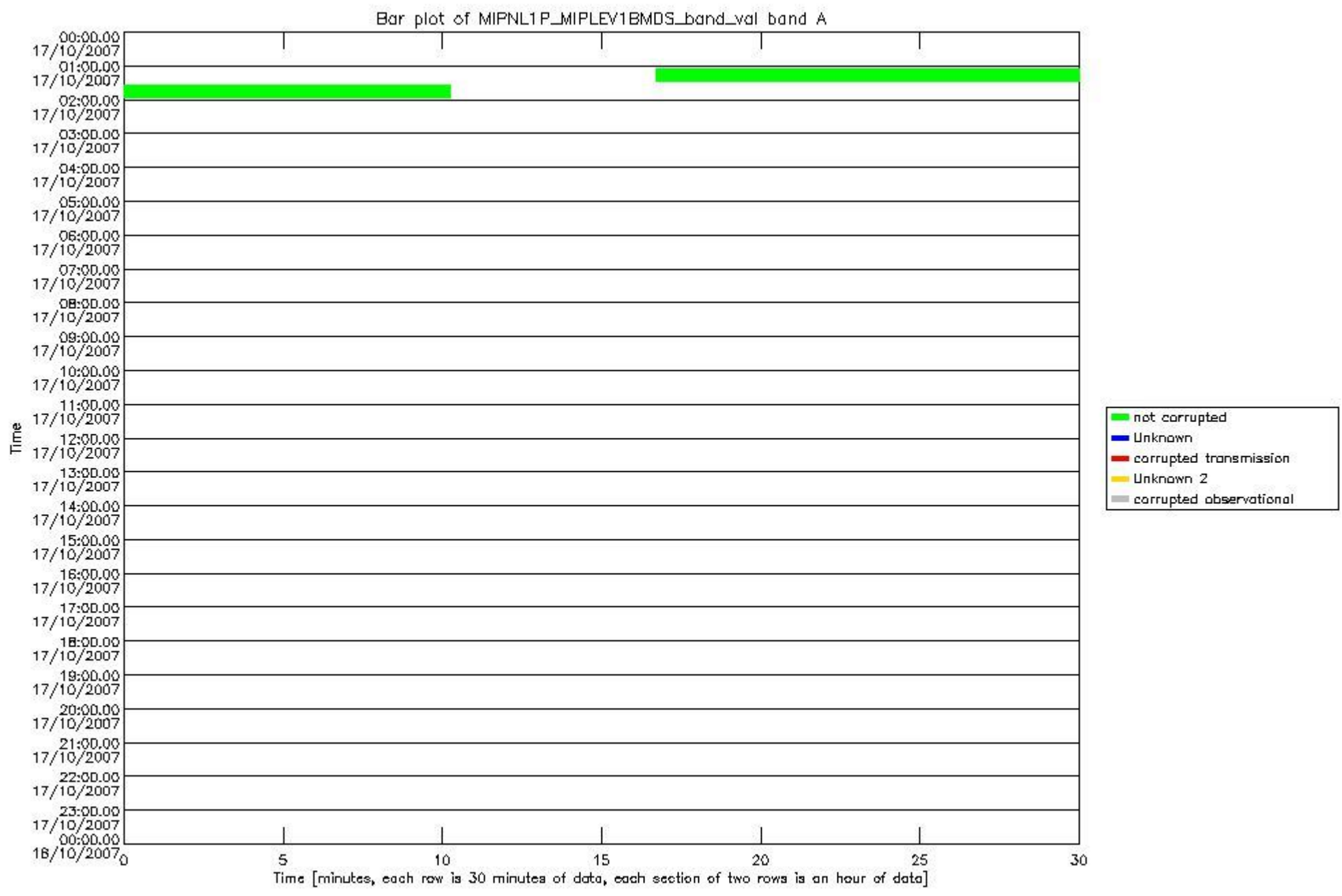

Plot of MIPNL1P_MIPLEV1BMDS_num_errs

mipas_daily_report_level1_MIPAS_4_67_P_20071017_28.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_errs

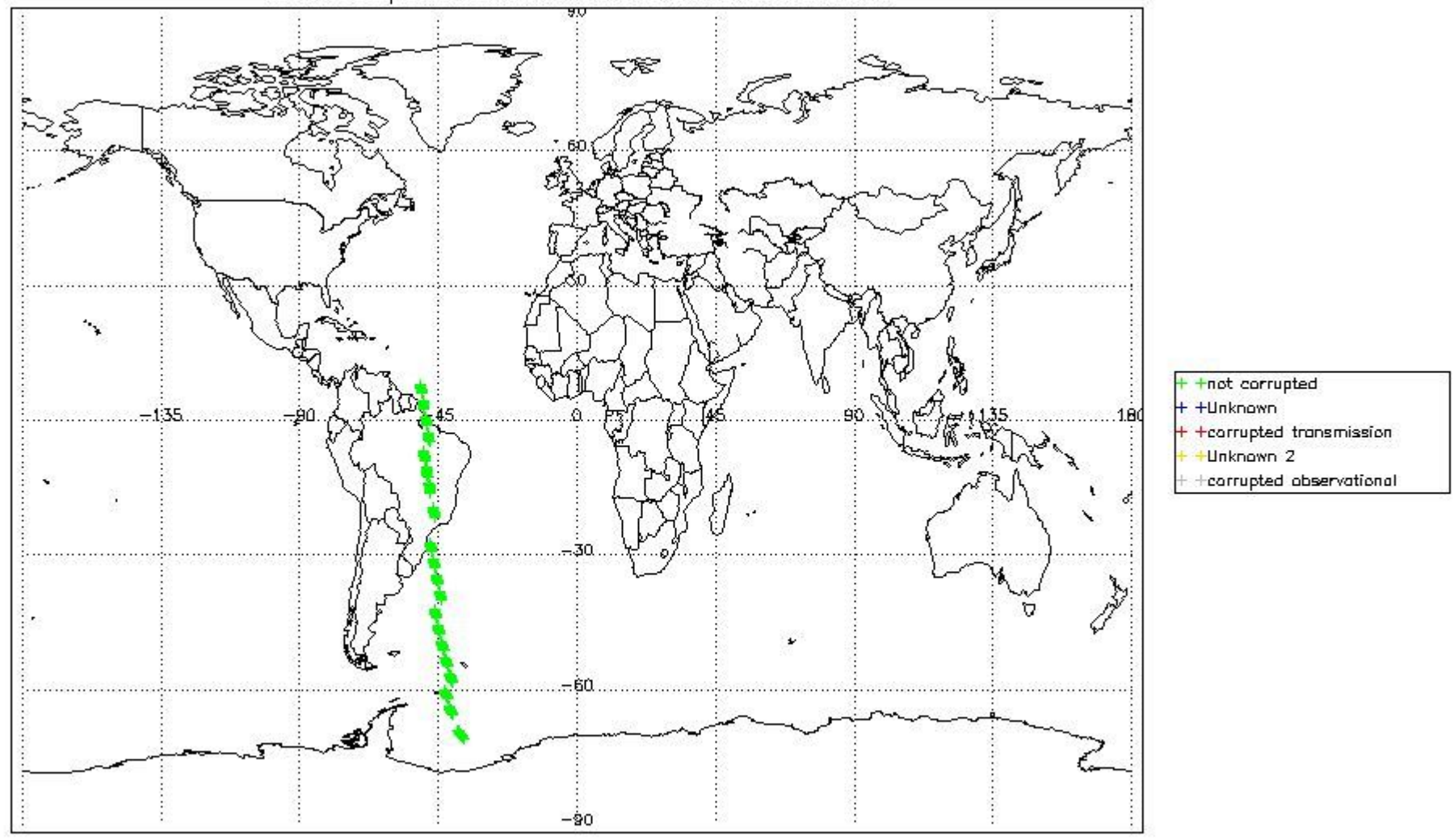mipas_daily_report_level1_MIPAS_4_67_P_20071017_29.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band A

mipas_daily_report_level1_MIPAS_4_67_P_20071017_30.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band A

+	+ not corrupted
+	+ Unknown
+	+ corrupted transmission
+	+ Unknown 2
+	+ corrupted observational

mipas_daily_report_level1_MIPAS_4_67_P_20071017_31.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band AB

not corrupted
Unknown
corrupted transmission
Unknown 2
corrupted observational

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]
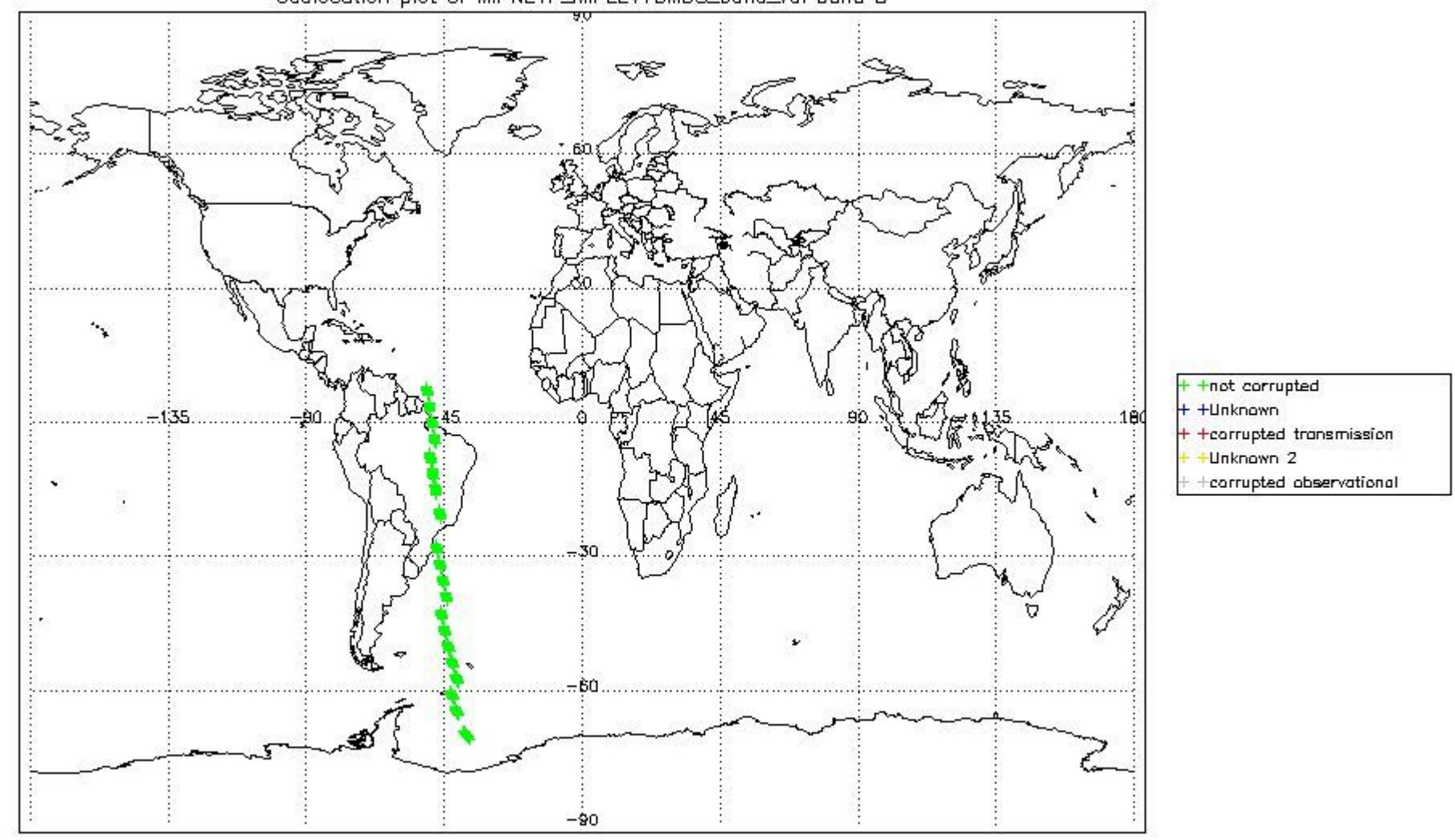
mipas_daily_report_level1_MIPAS_4_67_P_20071017_32.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band AB

+ +not corrupted
+ +Unknown
+ +corrupted transmission
+ +Unknown 2
+ +corrupted observational

mipas_daily_report_level1_MIPAS_4_67_P_20071017_33.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band B

mipas_daily_report_level1_MIPAS_4_67_P_20071017_34.PNG
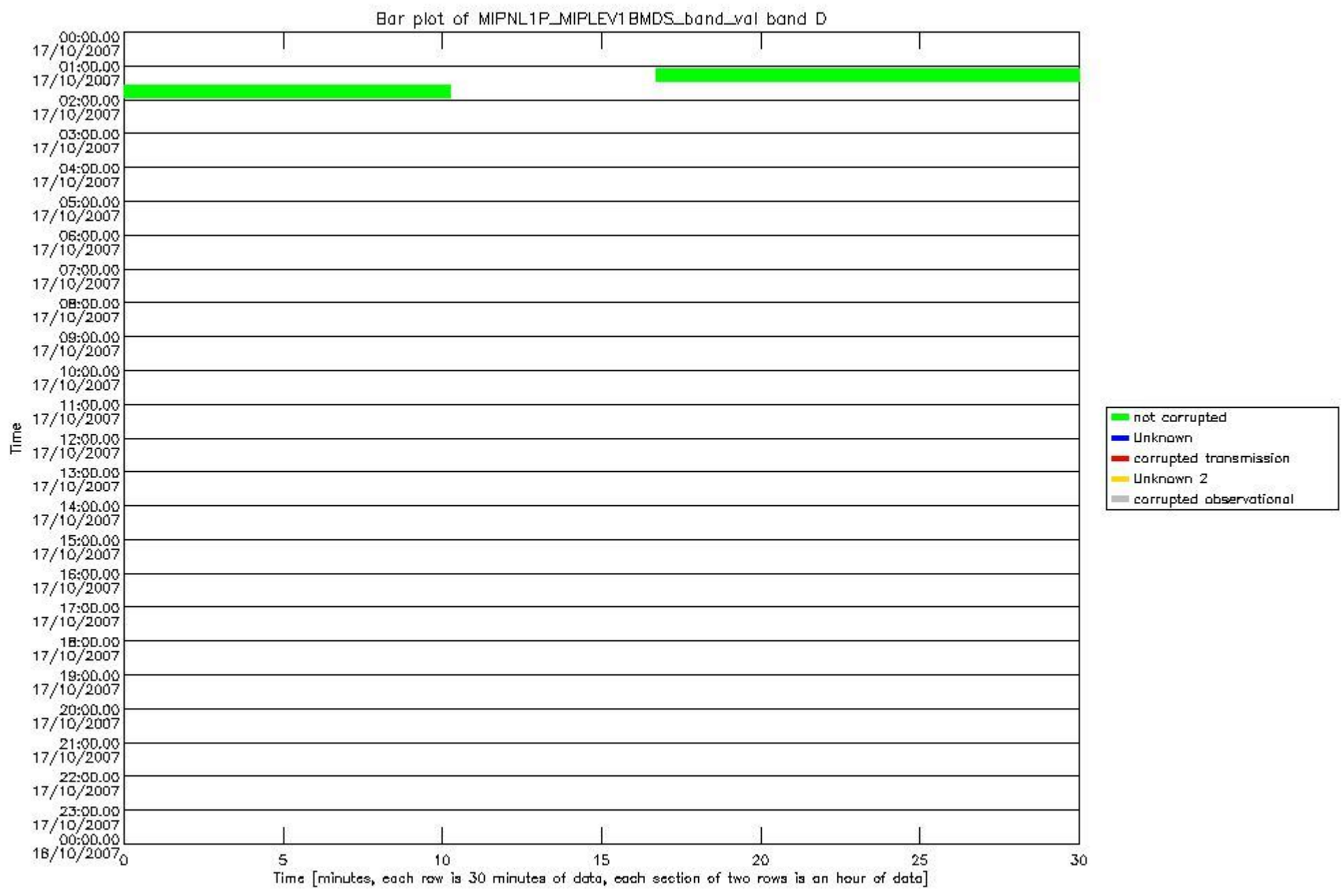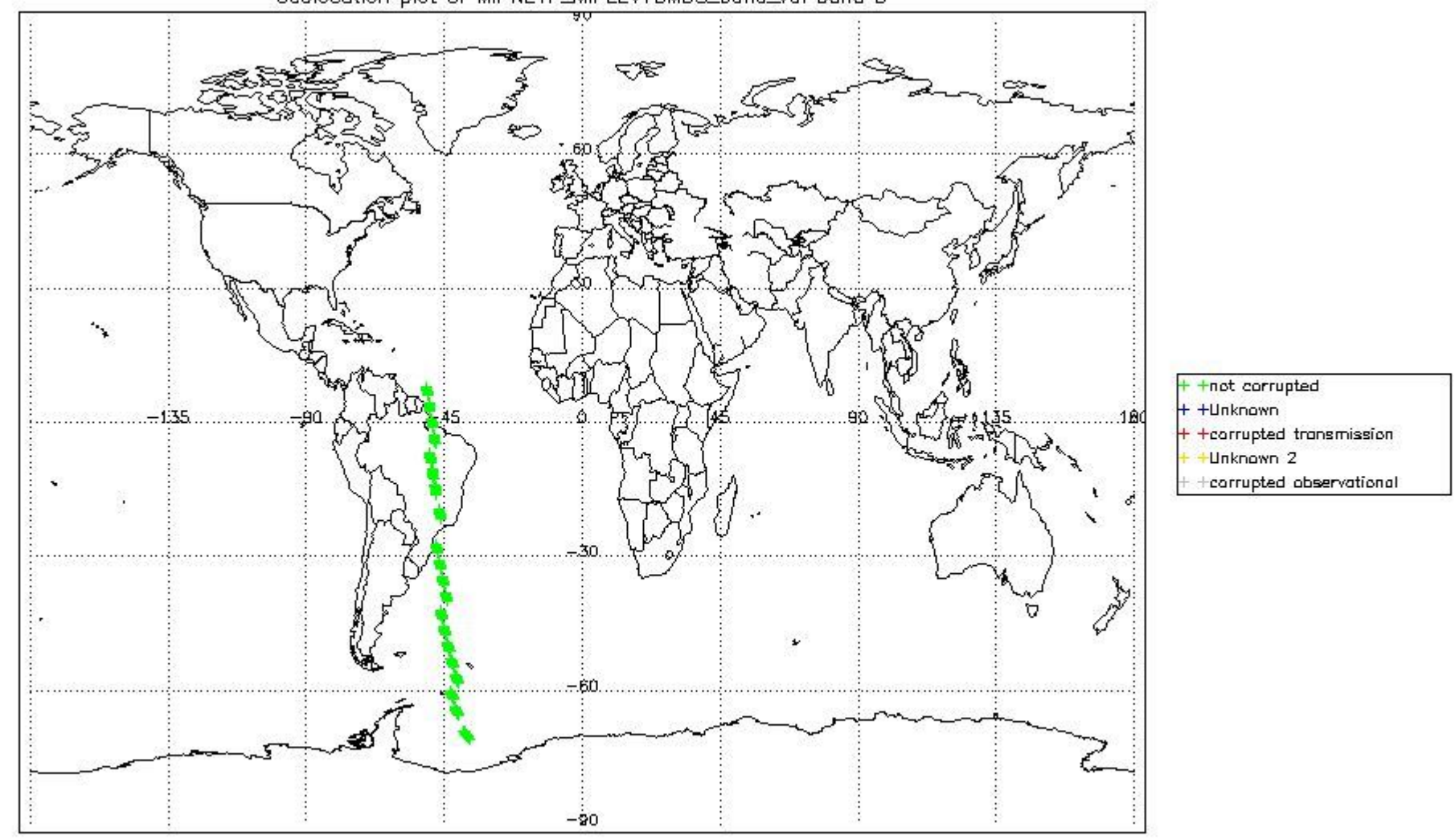
Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band B

+ +not corrupted	
+ +Unknown	
+ +corrupted transmission	
+ +Unknown 2	
+ +corrupted observational	

mipas_daily_report_level1_MIPAS_4_67_P_20071017_35.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band C

not corrupted
Unknown
corrupted transmission
Unknown 2
corrupted observational

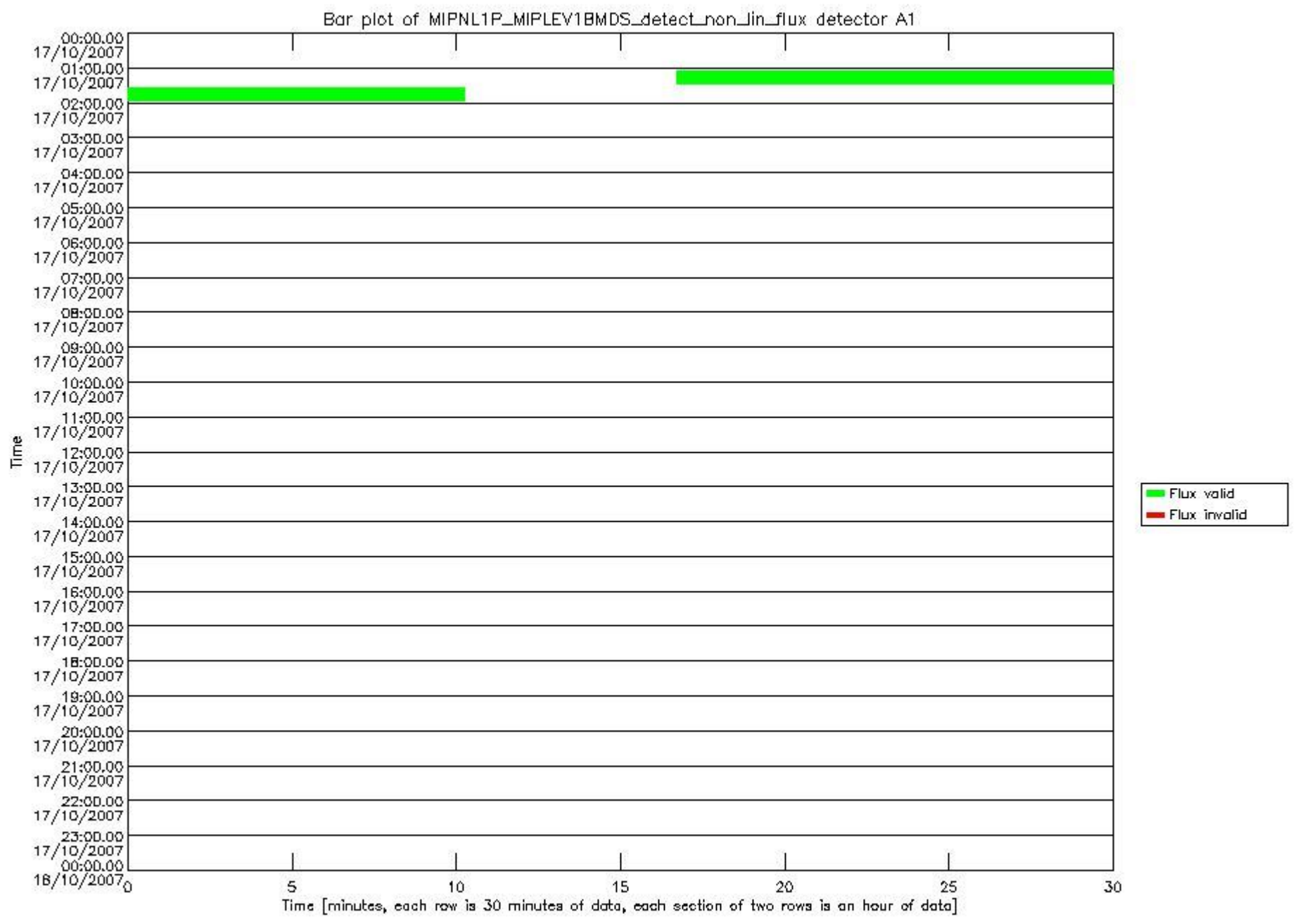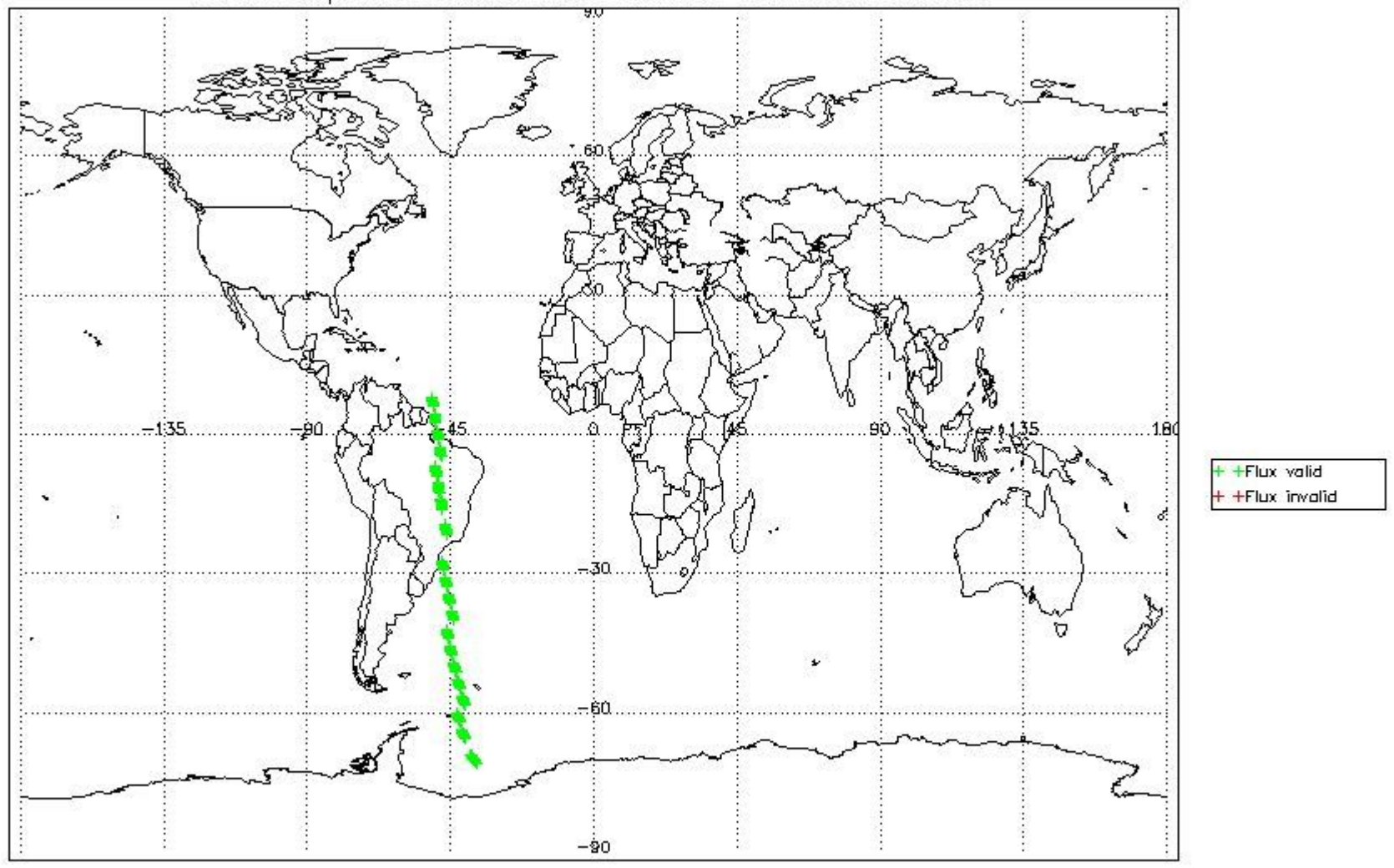**mipas_daily_report_level1_MIPAS_4_67_P_20071017_36.PNG**

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band C

mipas_daily_report_level1_MIPAS_4_67_P_20071017_37.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band D

mipas_daily_report_level1_MIPAS_4_67_P_20071017_38.PNG

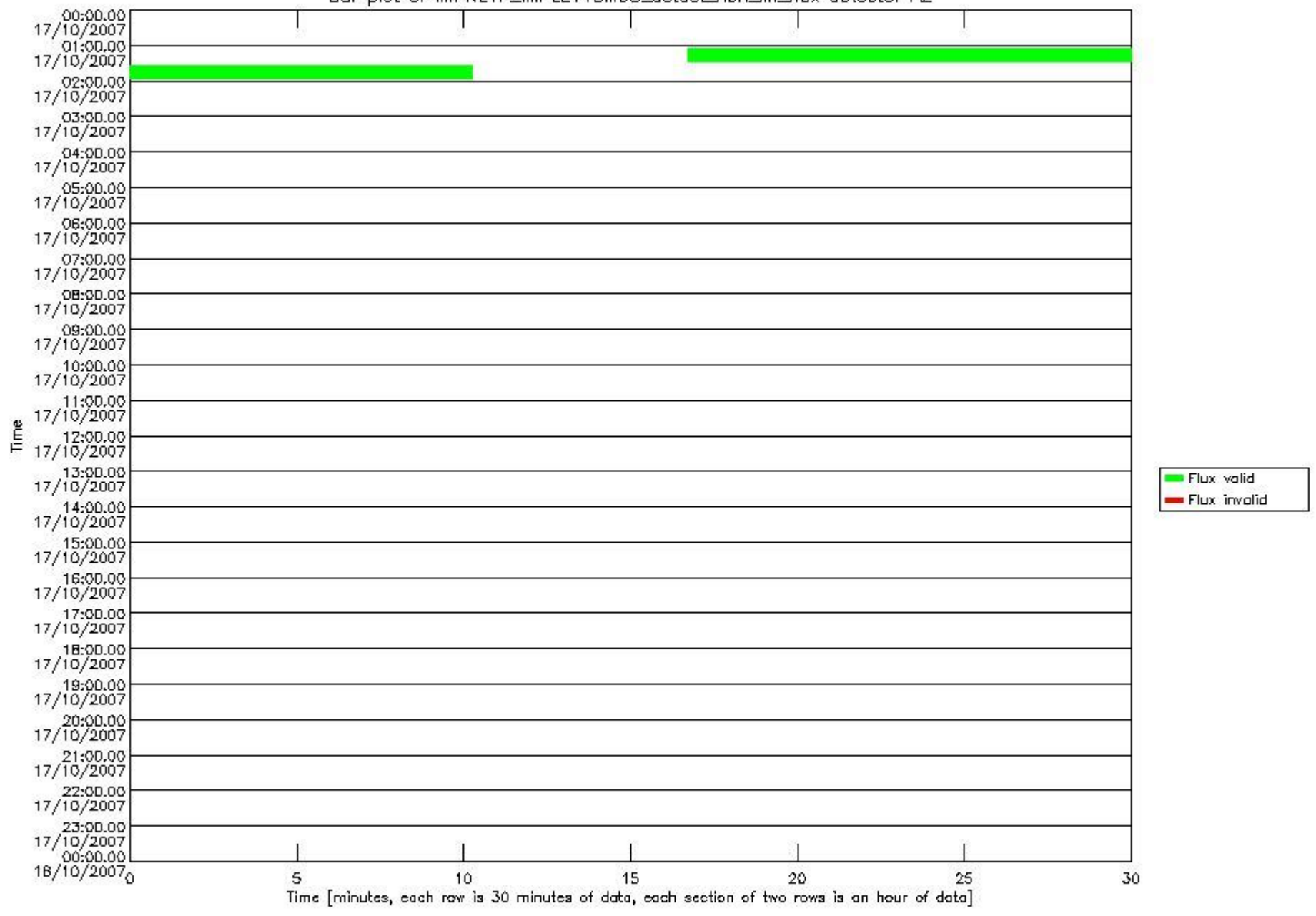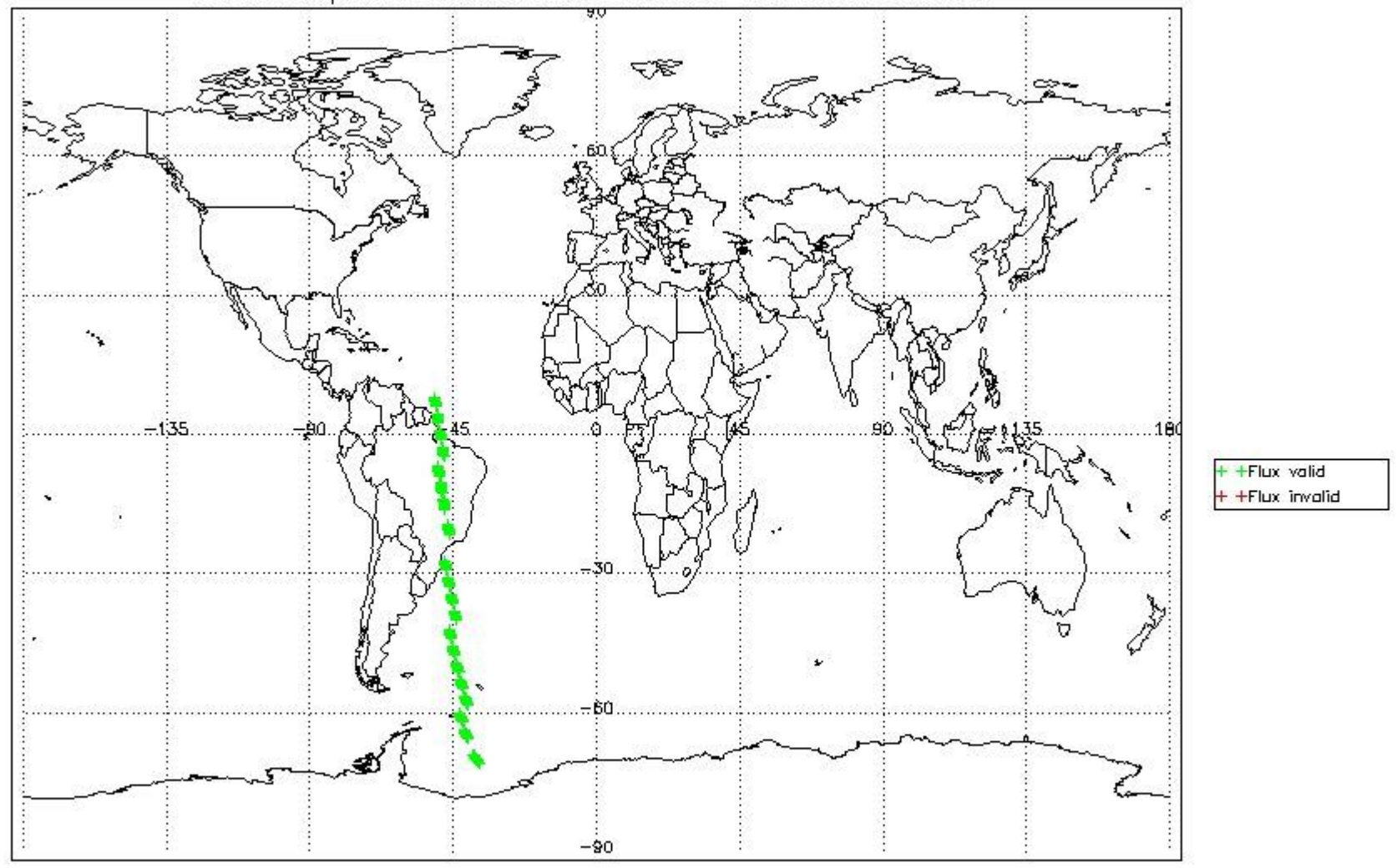Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band D

mipas_daily_report_level1_MIPAS_4_67_P_20071017_39.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A1

mipas_daily_report_level1_MIPAS_4_67_P_20071017_40.PNG

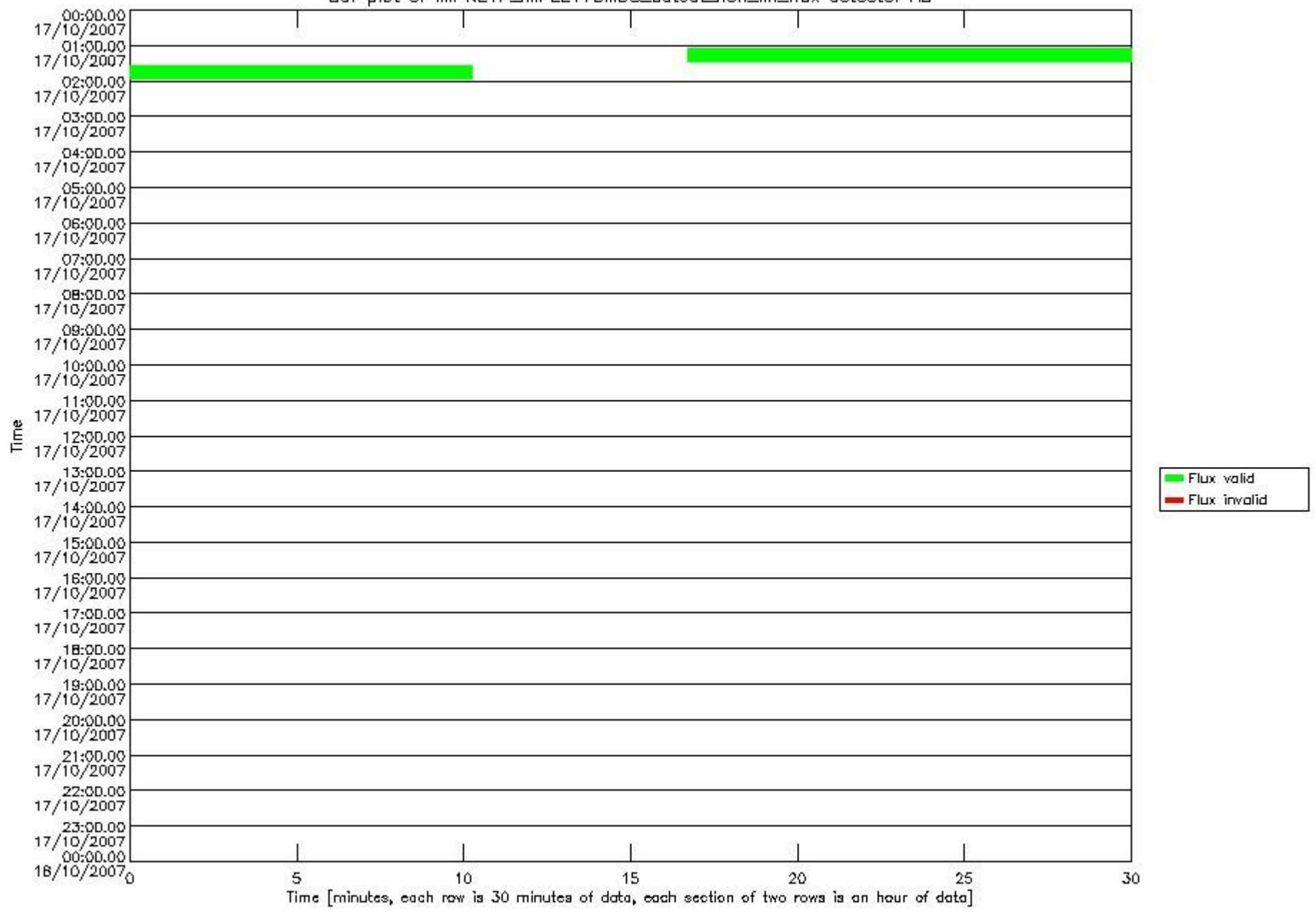Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A1

+ +Flux valid
+ +Flux invalid

mipas_daily_report_level1_MIPAS_4_67_P_20071017_41.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A2

mipas_daily_report_level1_MIPAS_4_67_P_20071017_42.PNG

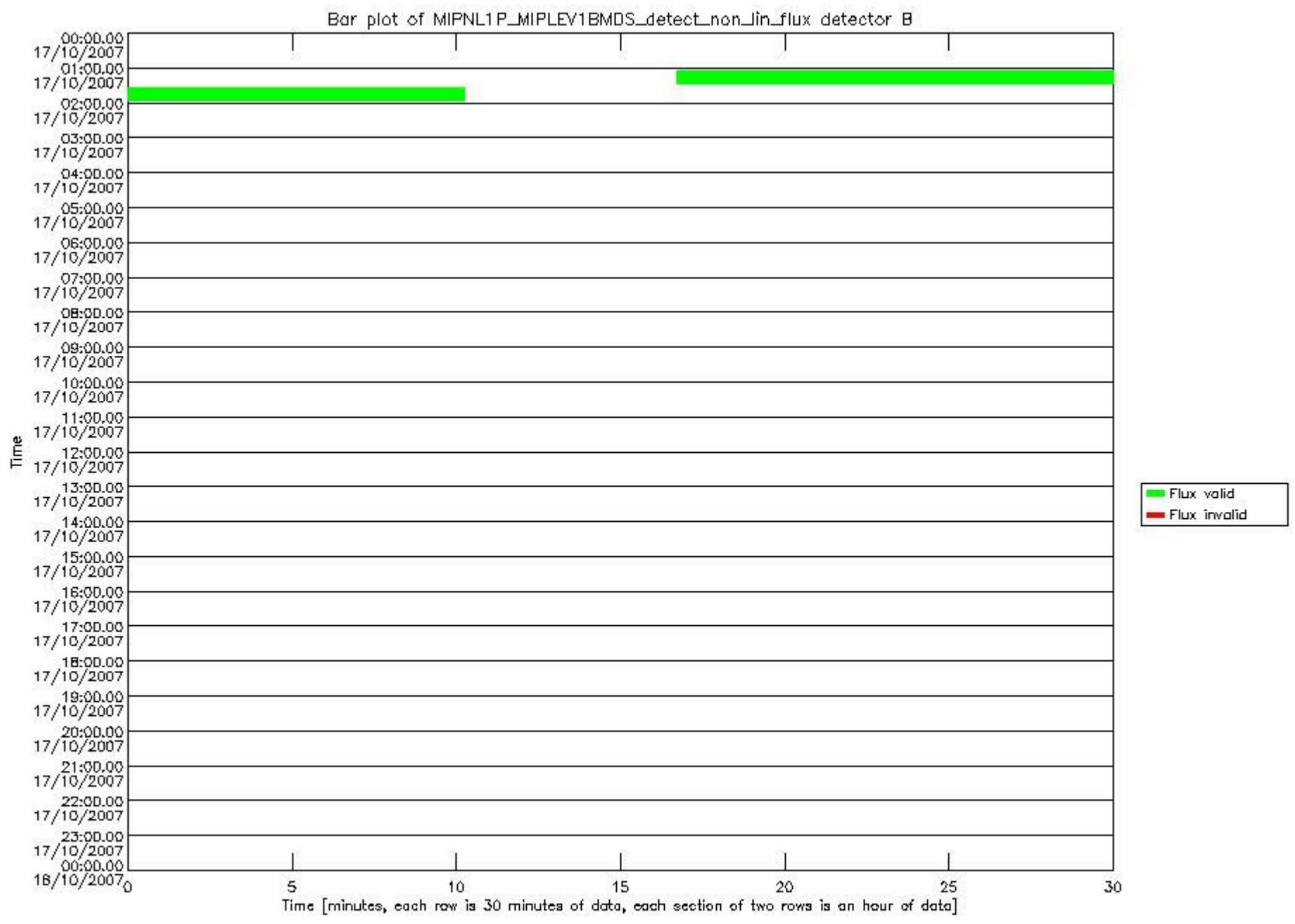Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A2

Flux valid
Flux invalid

mipas_daily_report_level1_MIPAS_4_67_P_20071017_43.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector AB

mipas_daily_report_level1_MIPAS_4_67_P_20071017_44.PNG

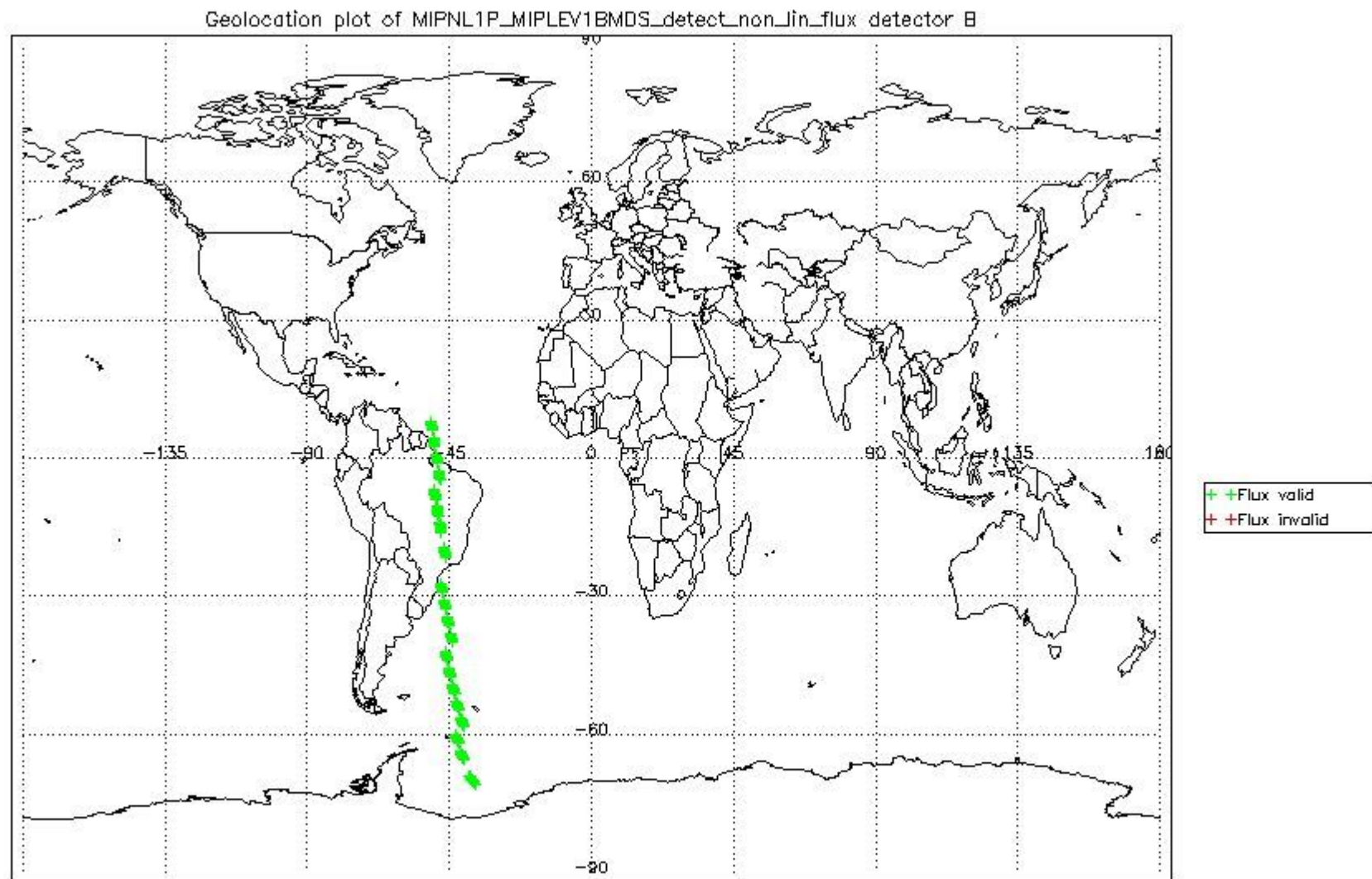Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector AB

Flux valid
Flux invalid

mipas_daily_report_level1_MIPAS_4_67_P_20071017_45.PNG

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector B

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]

mipas_daily_report_level1_MIPAS_4_67_P_20071017_46.PNG

Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector B

+ +Flux valid
+ +Flux invalid
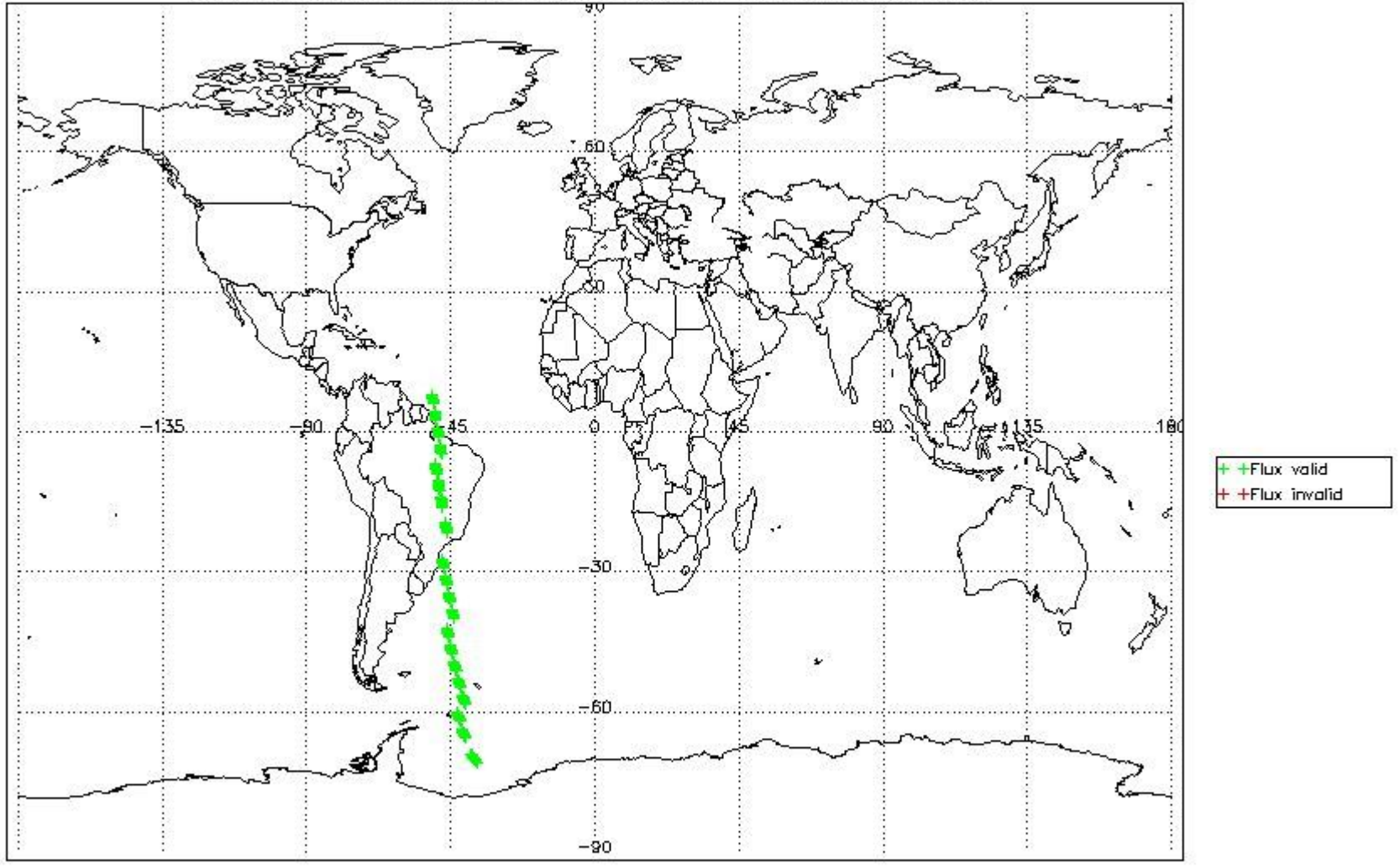
mipas_daily_report_level1_MIPAS_4_67_P_20071017_47.PNG

1.2.3 Scan information ADS

The following plots each contain 100 squares. Each square contains one NESR-scan (from MIPNL1P_SCAINFADS_nesr_data).

The horizontal axis represents the sweep ID (starts at 1). A maximum of 19 sweeps per scan can be displayed.
The vertical axis shows the NESR data point index (starts at 0), which relates to wavenumber. A maximum of 200 wavenumber-points per NESR-measurement can be displayed.
The data values themselves are indicated by colours (as indicated on the right of the plot). Please refer to the plot header for data units.
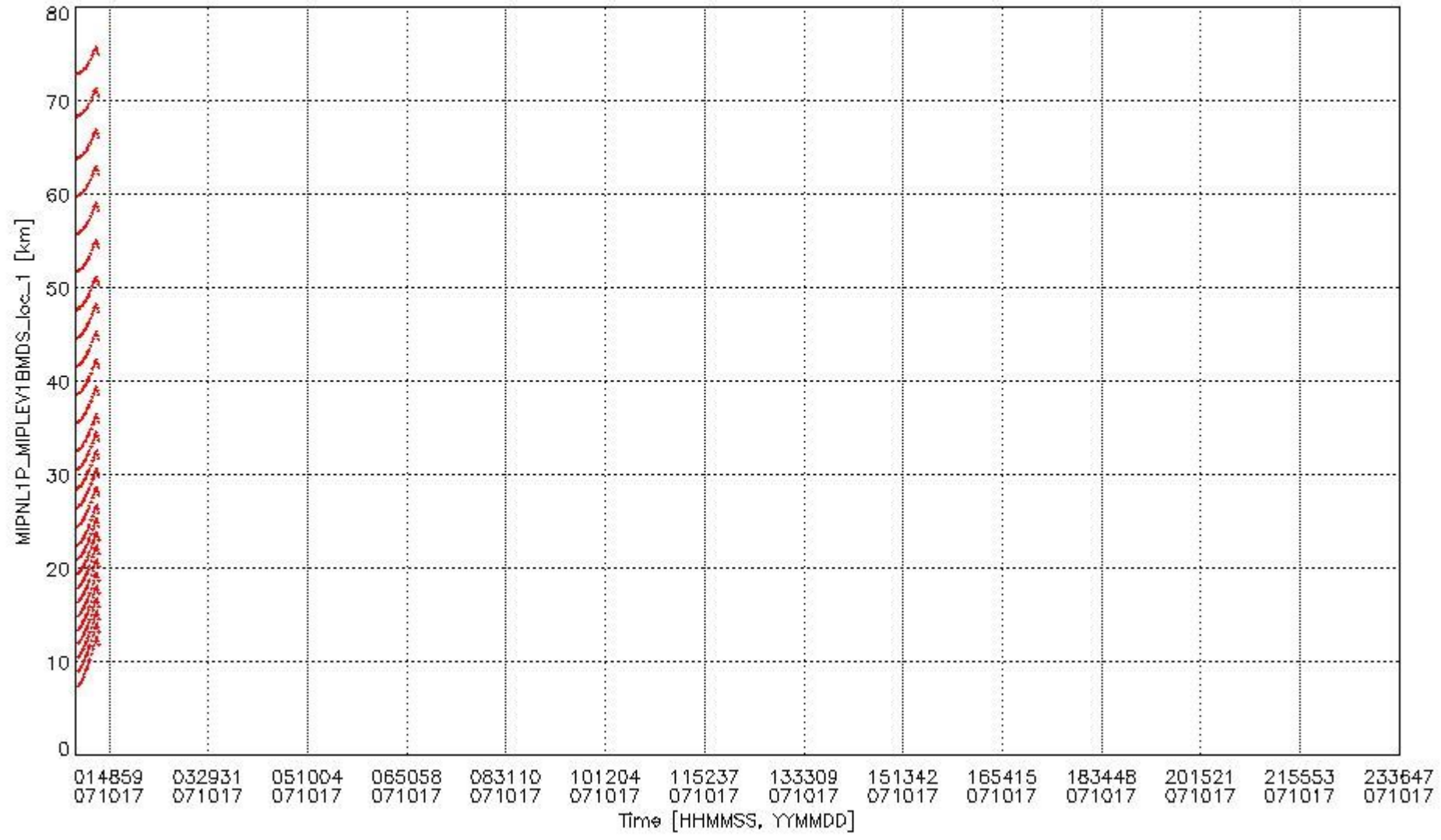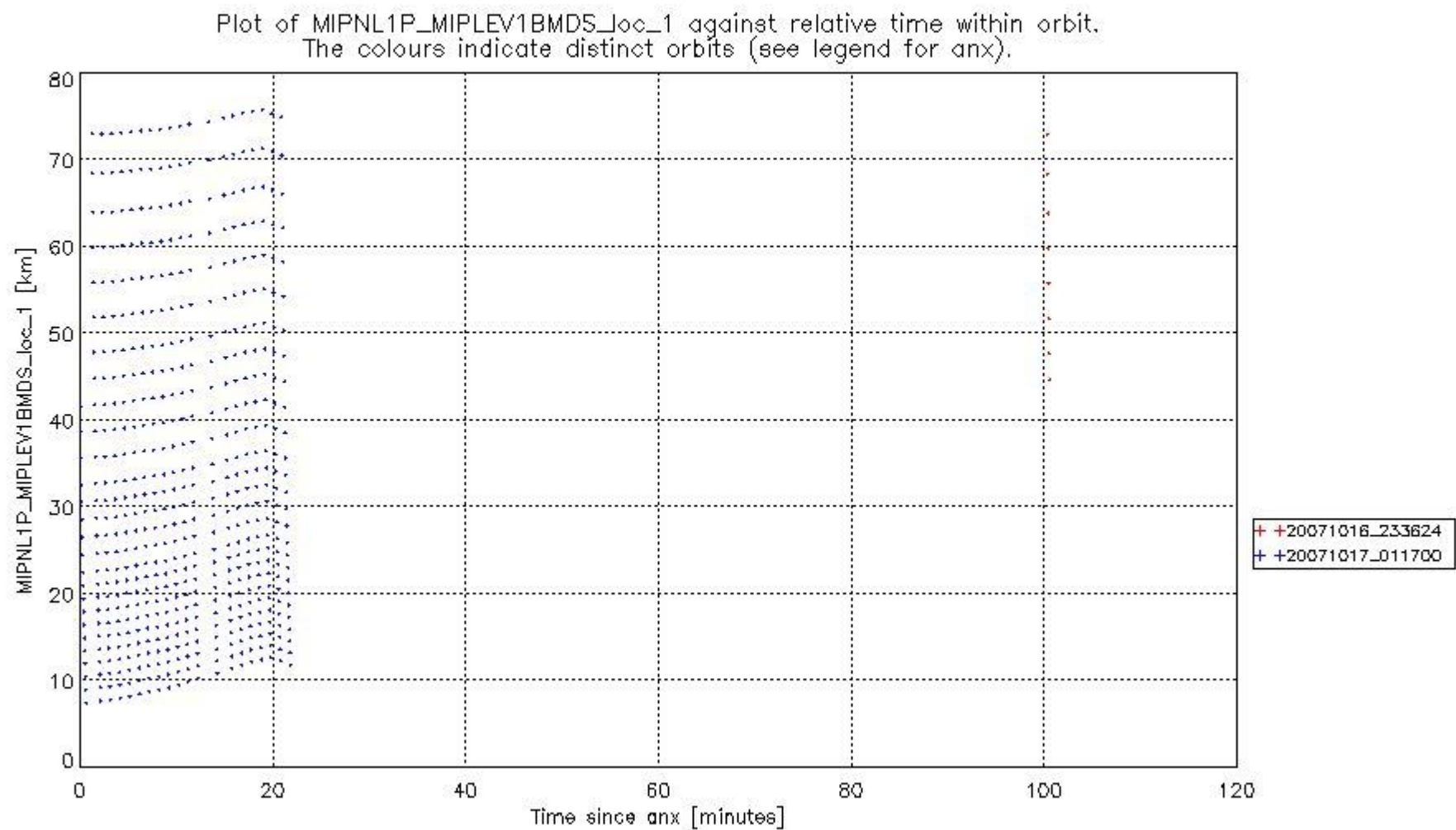
Plot of MIPNL1P_SCAINFADS_nesr_data [W/(cm^2.sr.cm^(-1))] 1 of 1
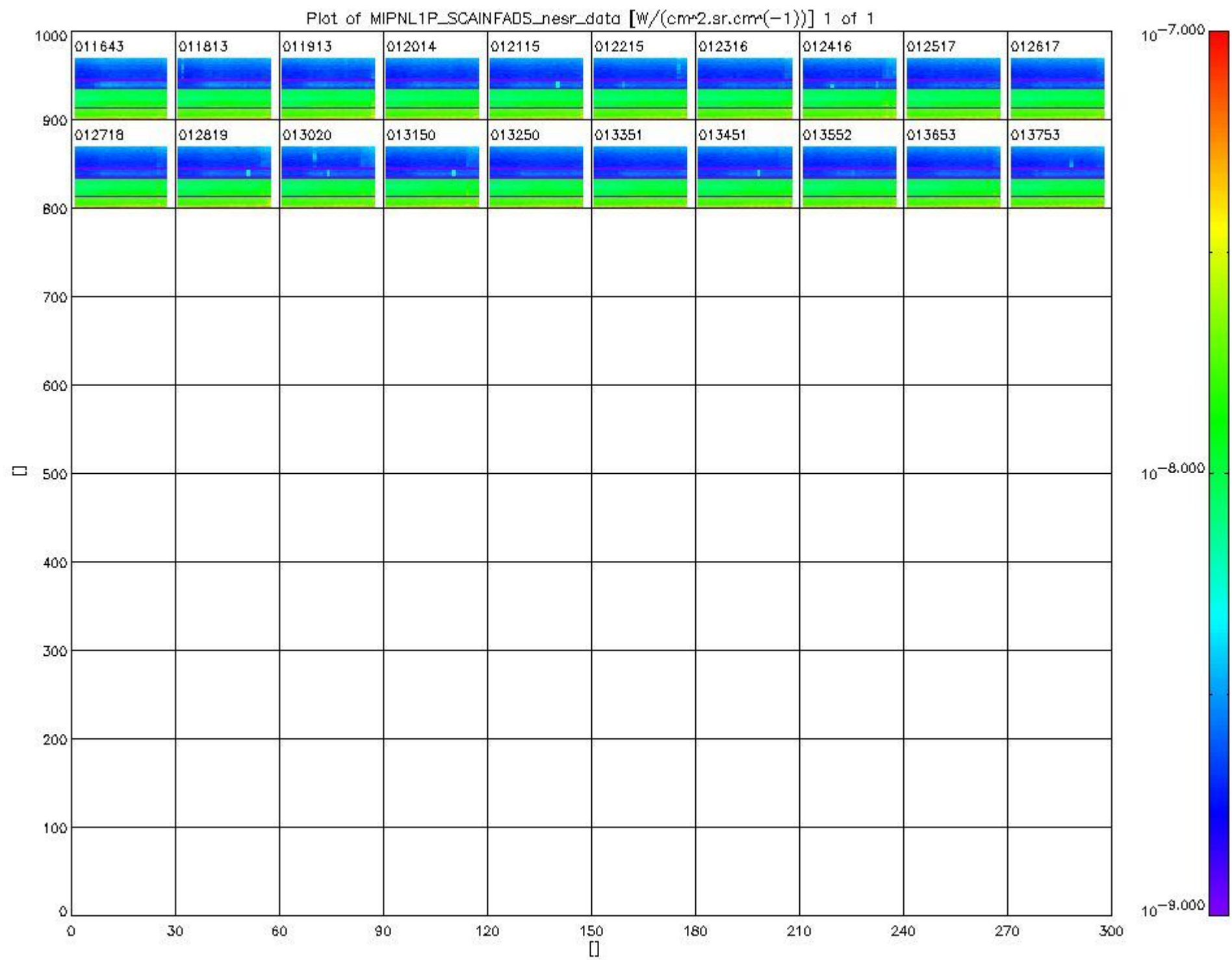
mipas_daily_report_level1_MIPAS_4_67_P_20071017_48.PNG

1.3 Physical Quality Indicators

1.3.1 Tangent altitude

Plot of MIPNL1P_MIPLEV1BMDS_loc_1 against time.
The vertical grid lines indicate estimated anx events.

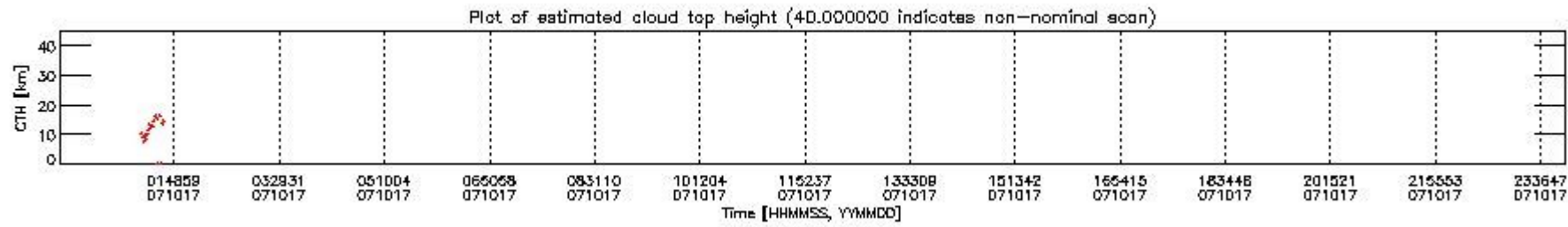mipas_daily_report_level1_MIPAS_4_67_P_20071017_49.PNG

Plot of MIPNL1P_MIPLEV1BMDS_loc_1 against relative time within orbit.
The colours indicate distinct orbits (see legend for anx).

mipas_daily_report_level1_MIPAS_4_67_P_20071017_50.PNG

1.3.2 Cloud top height

The following plots show an estimation of cloud top height, based on the ratio of two microwindows. Reference: R. Spang, J.J. Remedios and M.P. Barkley, "Colour indices for the detection and differentiation of cloud types in infra-red limb emission spectra", Adv Space Res, 33:1041-1047, (2004)

The non-nominal scans mentioned in the plots are scans that are rejected by the cloud top height algorithm for several reasons:

- Unconsidered instrument mode. The algorithm only considers nominal (39169) and special event (39172) instrument modes.
- Incomplete scan (missing sweeps)

Item	Value
Microwindow 1 description	Average of band A pixels for cloud top detection 1
Microwindow 2 description	Average of band A pixels cloud top detection 2
cloud index threshold (mw1/mw2)	1.8000000
Tangent height limit	40.000000

Plot of estimated cloud top height (40.000000 indicates non-nominal scan)

mipas_daily_report_level1_MIPAS_4_67_P_20071017_51.PNG

Geolocation plot of cloud top height [km] (non-nominal scans are red)
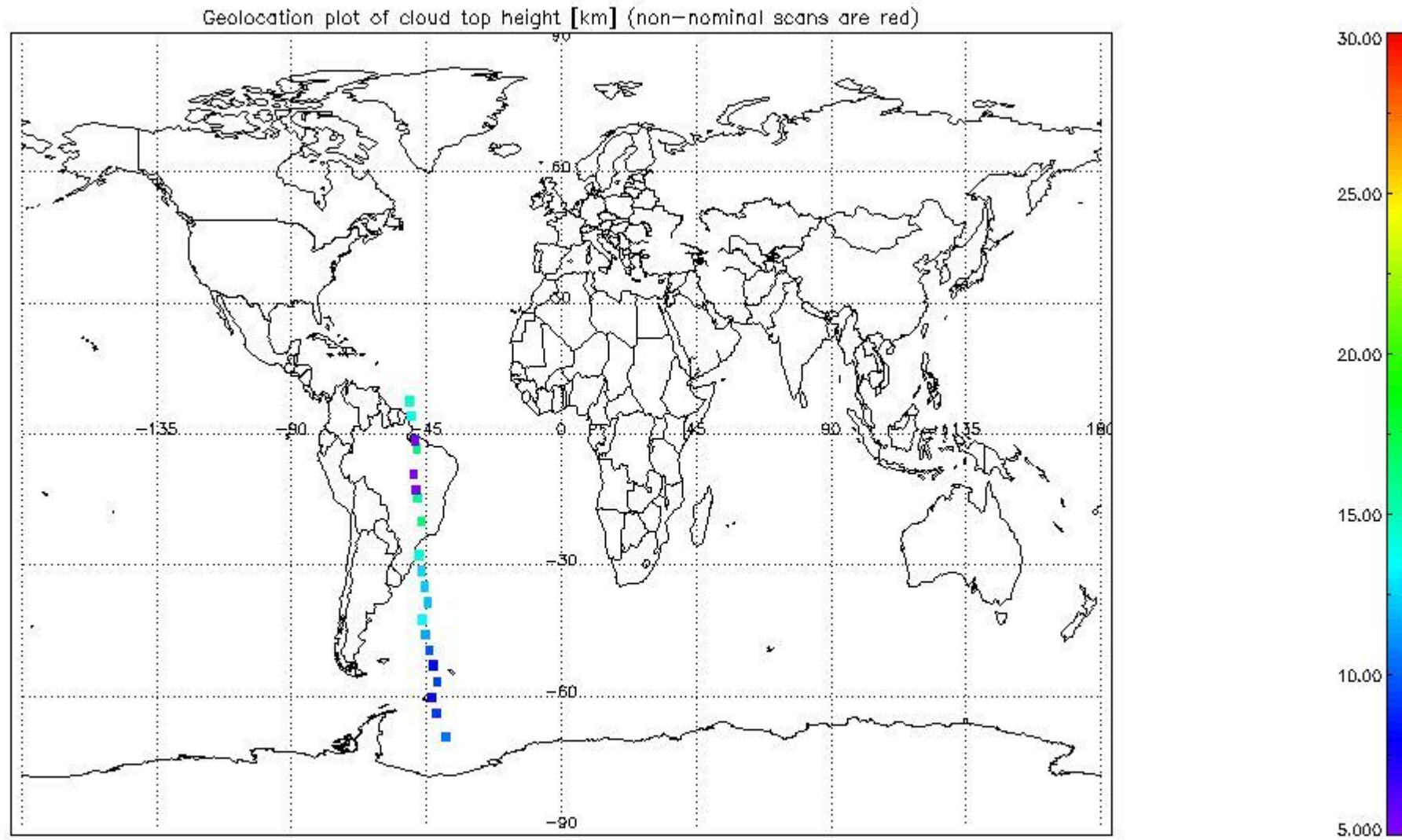
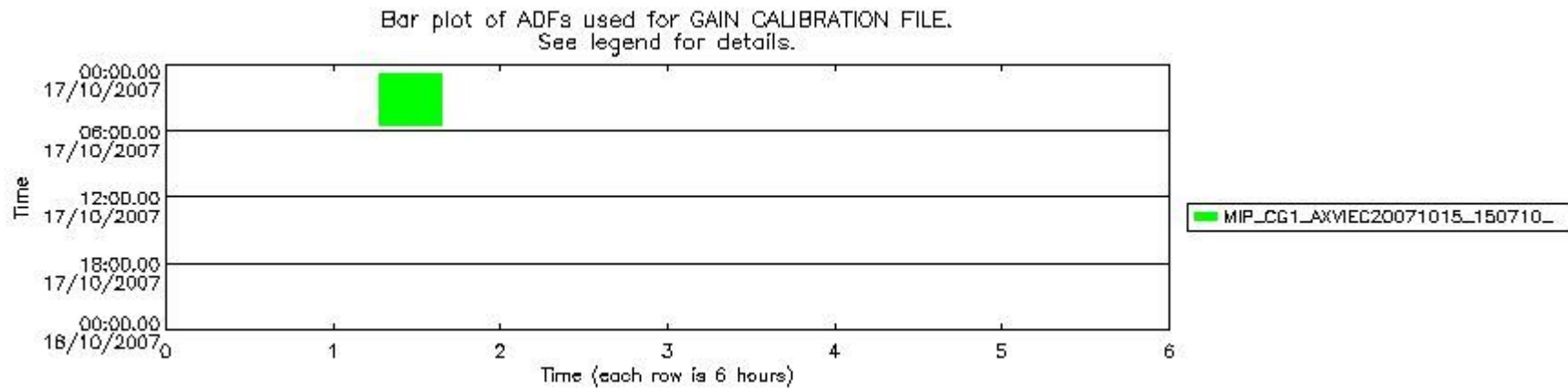mipas_daily_report_level1_MIPAS_4_67_P_20071017_52.PNG

1.4 ADF monitoring

Number	ADF
0	AUX_FRO_AXVPDS20071020_010111_20071016_221000_20071019_005000
1	MIP_CA1_AXVIEC20050627_094412_20040809_000000_20090809_000000
2	MIP_CG1_AXVIEC20071015_150710_20071009_000000_20121009_000000
3	MIP_CL1_AXVIEC20050420_152028_20050420_095747_20100420_095747
4	MIP_CO1_AXVIEC20071015_150132_20071009_000000_20121009_000000
5	MIP_CS1_AXVIEC20071015_151535_20071009_000000_20121009_000000
6	MIP_MW1_AXVIEC20050627_094928_20040809_000000_20090809_000000

Number	Product name	#CS1	#CG1	#CL1	#CA1	#CO1	#MW1	#PS1	#FPO
0	MIP_NL__1PPDPA20071017_011643_000007512062_00317_29429_3624.N1	5	2	3	1	4	6	7	0
1	MIP_NL__1PPDPA20071017_013020_000005082062_00318_29430_3625.N1	5	2	3	1	4	6	7	0
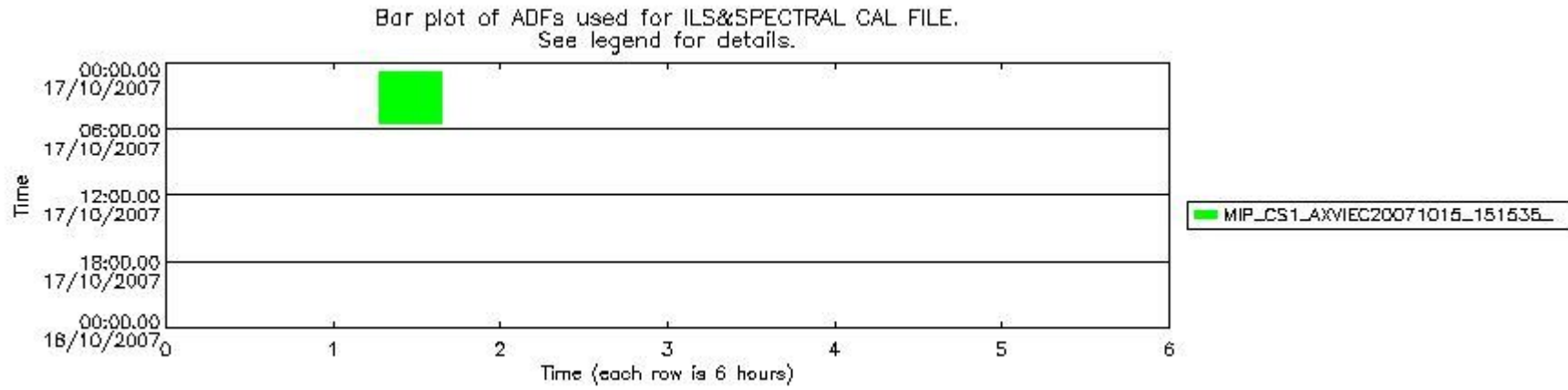
mipas_daily_report_level1_MIPAS_4_67_P_20071017_53.PNG

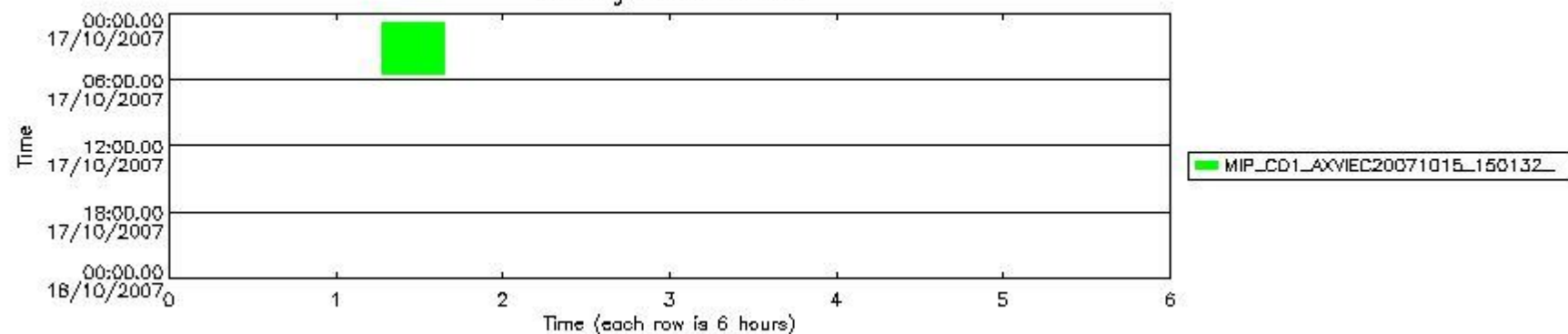
mipas_daily_report_level1_MIPAS_4_67_P_20071017_54.PNG
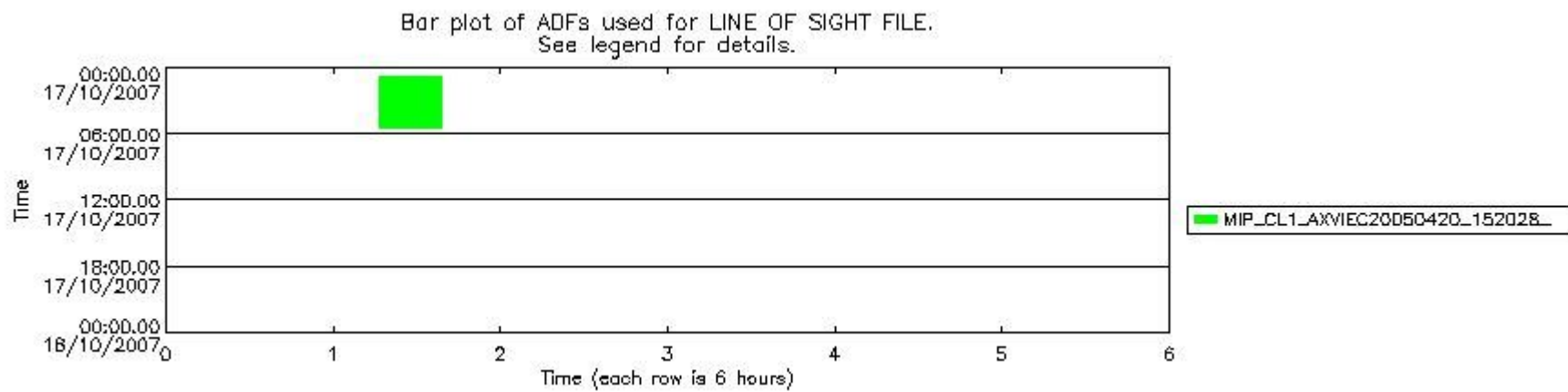
mipas_daily_report_level1_MIPAS_4_67_P_20071017_55.PNG

Bar plot of ADFs used for INSTRUMENT CHAR FILE.
See legend for details.

MIP_CA1_AXVIEC2D050627_094412_
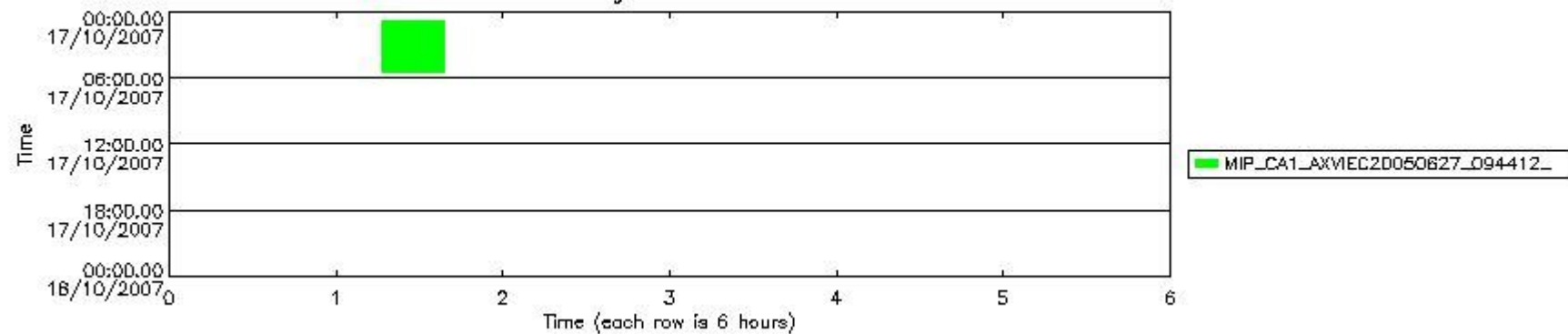
mipas_daily_report_level1_MIPAS_4_67_P_20071017_56.PNG

Bar plot of ADFs used for OFFSET VALIDATION FILE.
See legend for details.

MIP_CD1_AXVIEC20071015_150132_

mipas_daily_report_level1_MIPAS_4_67_P_20071017_57.PNG

Bar plot of ADFs used for MICROWINDOWS FILE.
See legend for details.

MIP_MW1_AXVIEC20050627_094928_
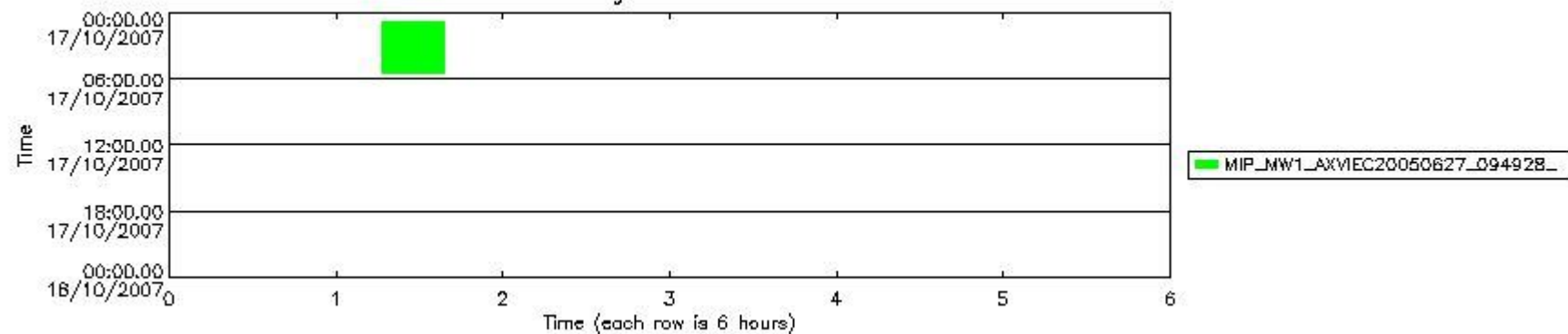
mipas_daily_report_level1_MIPAS_4_67_P_20071017_58.PNG

Bar plot of ADFs used for PROCESS PARAMETERS FILE.
See legend for details.

MIP_PS1_AXVIEC20050627_100609_

Bar plot of ADFs used for ORBIT DATA FILE.
See legend for details.

AUX_FRO_AXVPDS20071020_010111_

Time (each row is 6 hours)
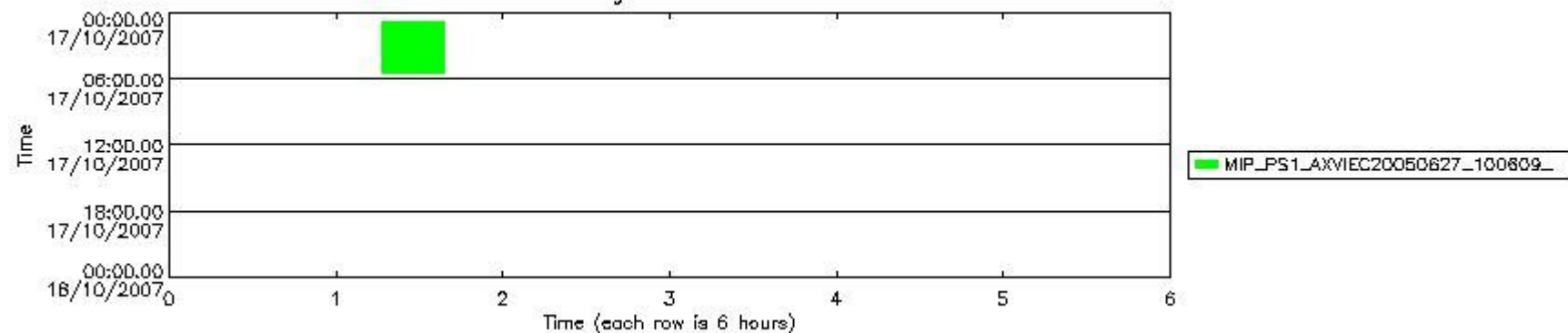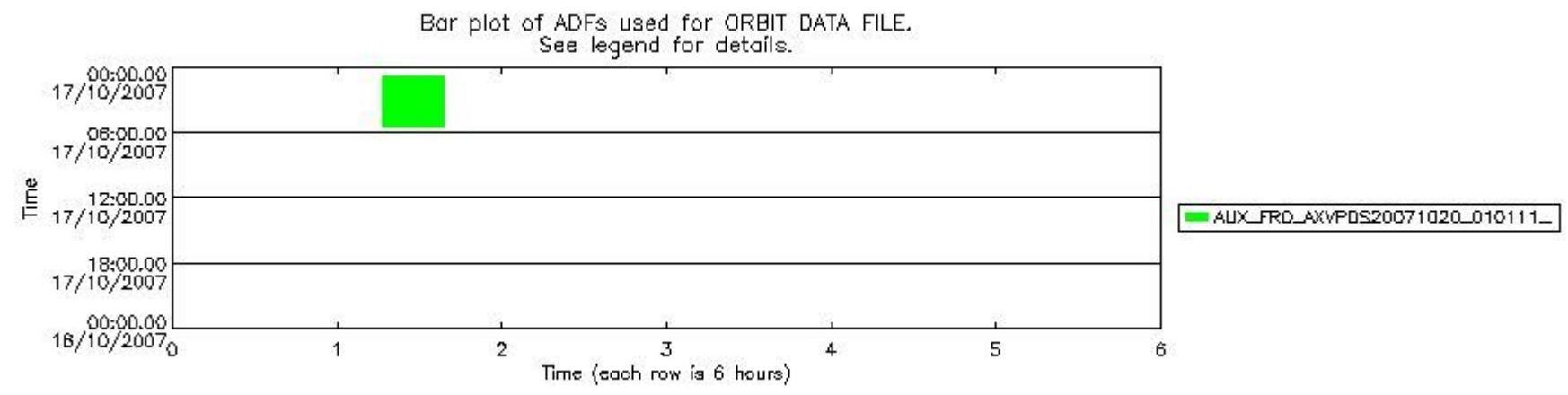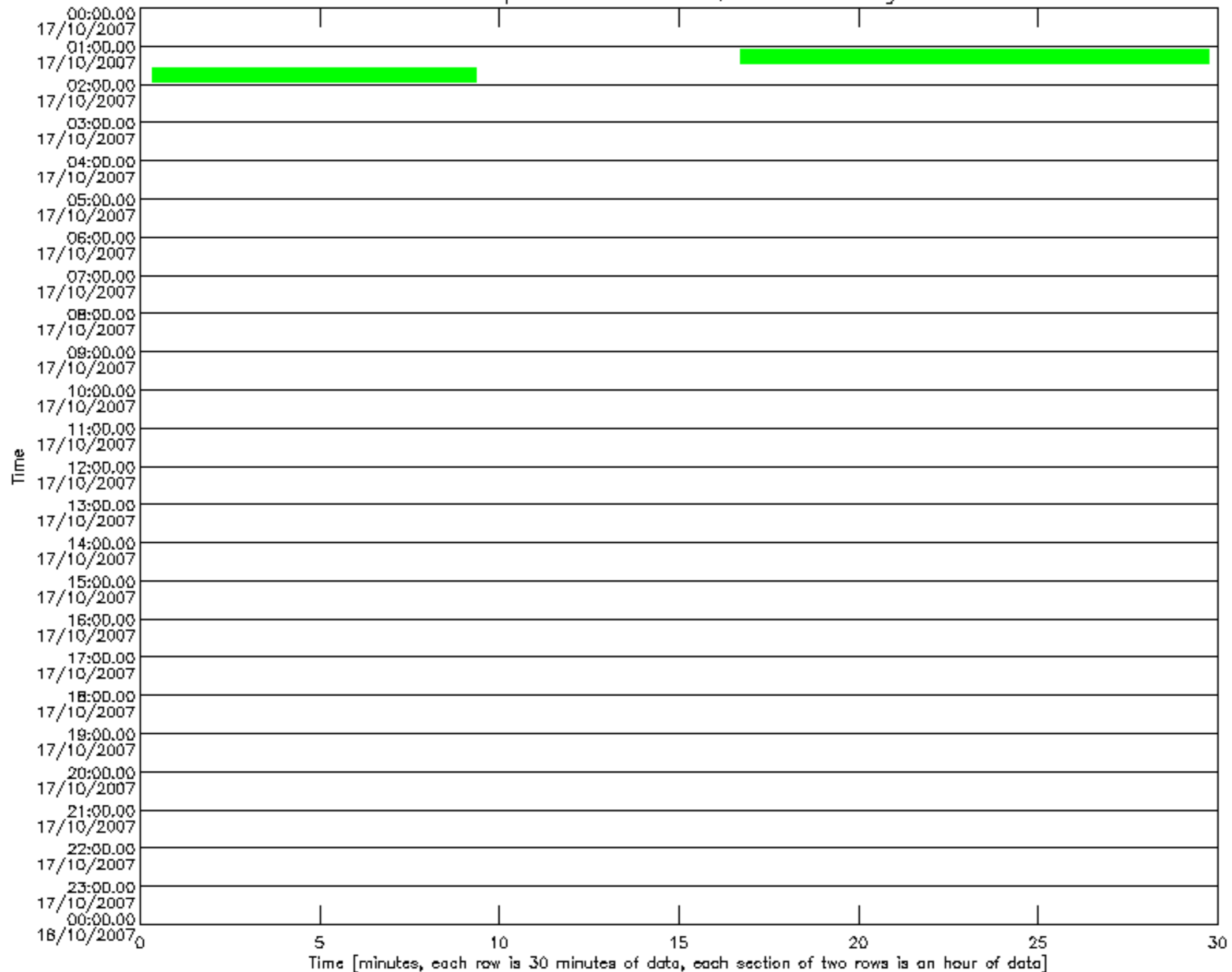
Bar plot of MIPNL1P_SUMQUAADS.attach_flag

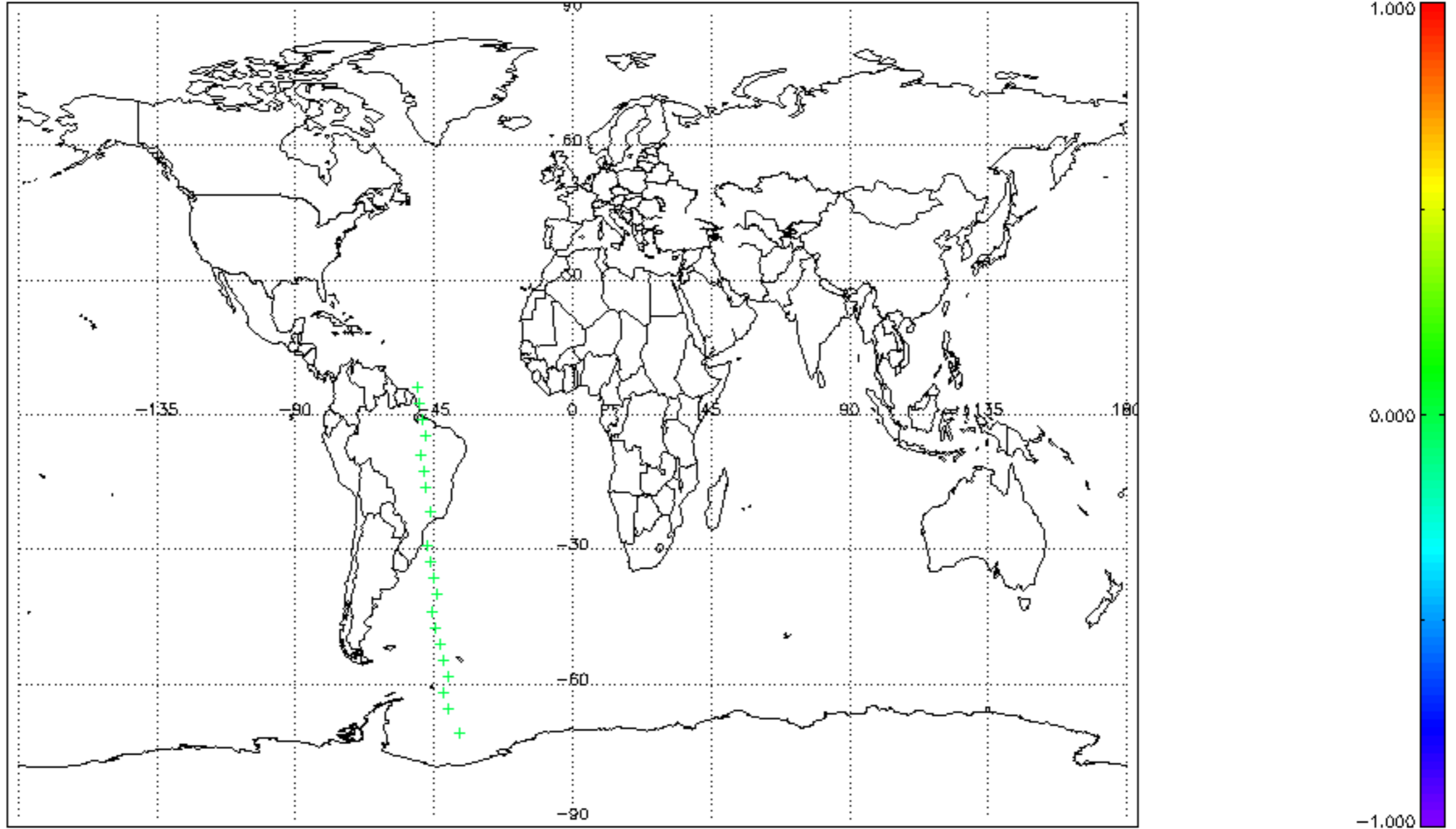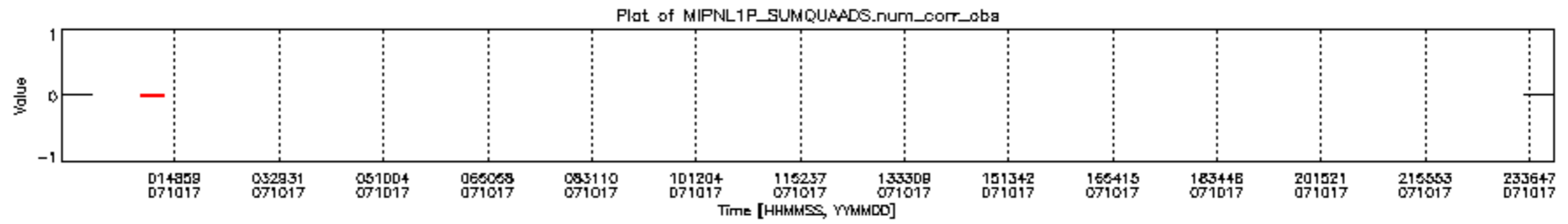Geolocation plot of MIPNL1P_SUMQUAADS.attach_flag
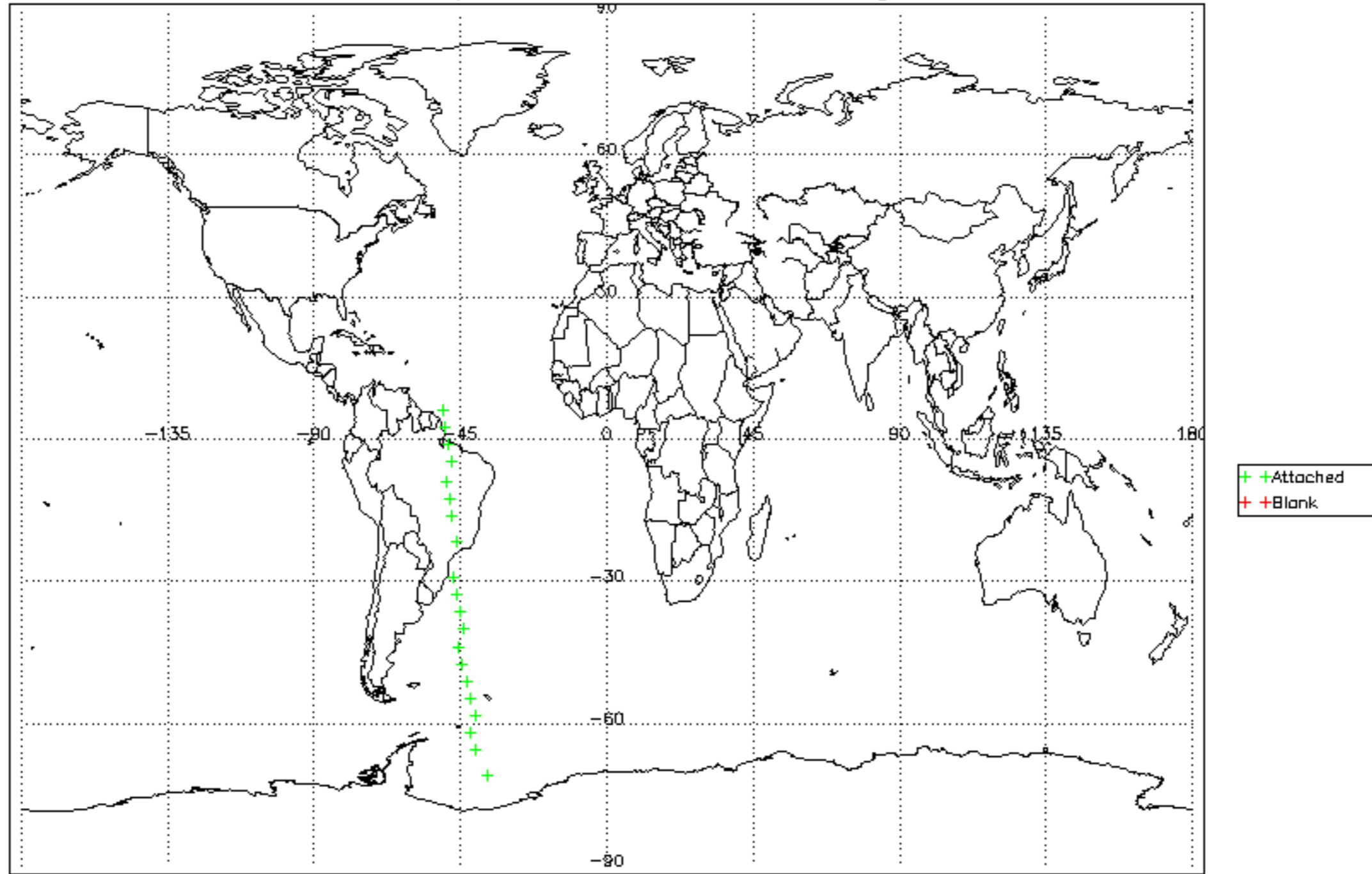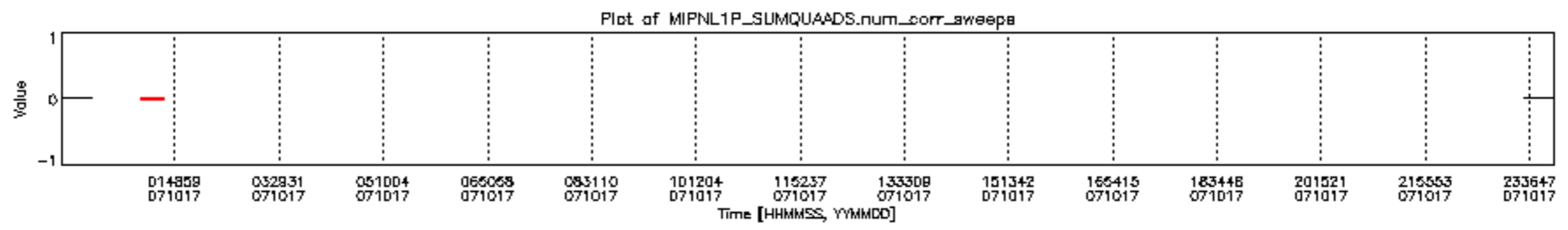
Plot of MIPNL1P_SUMQUADS.num_corr_sweeps

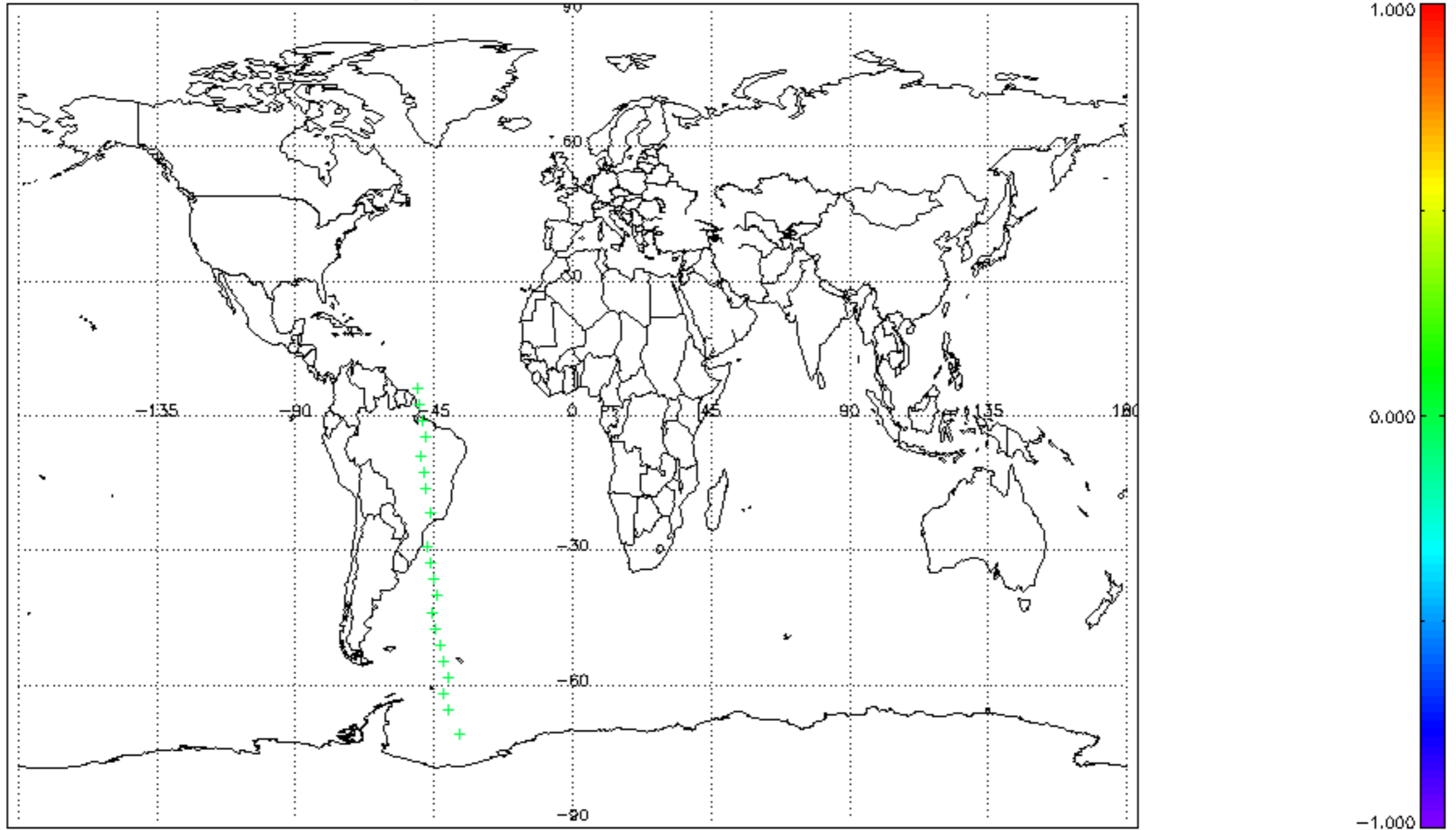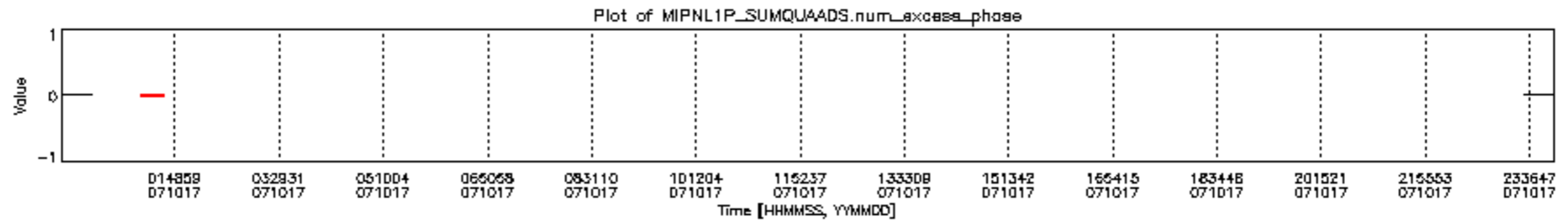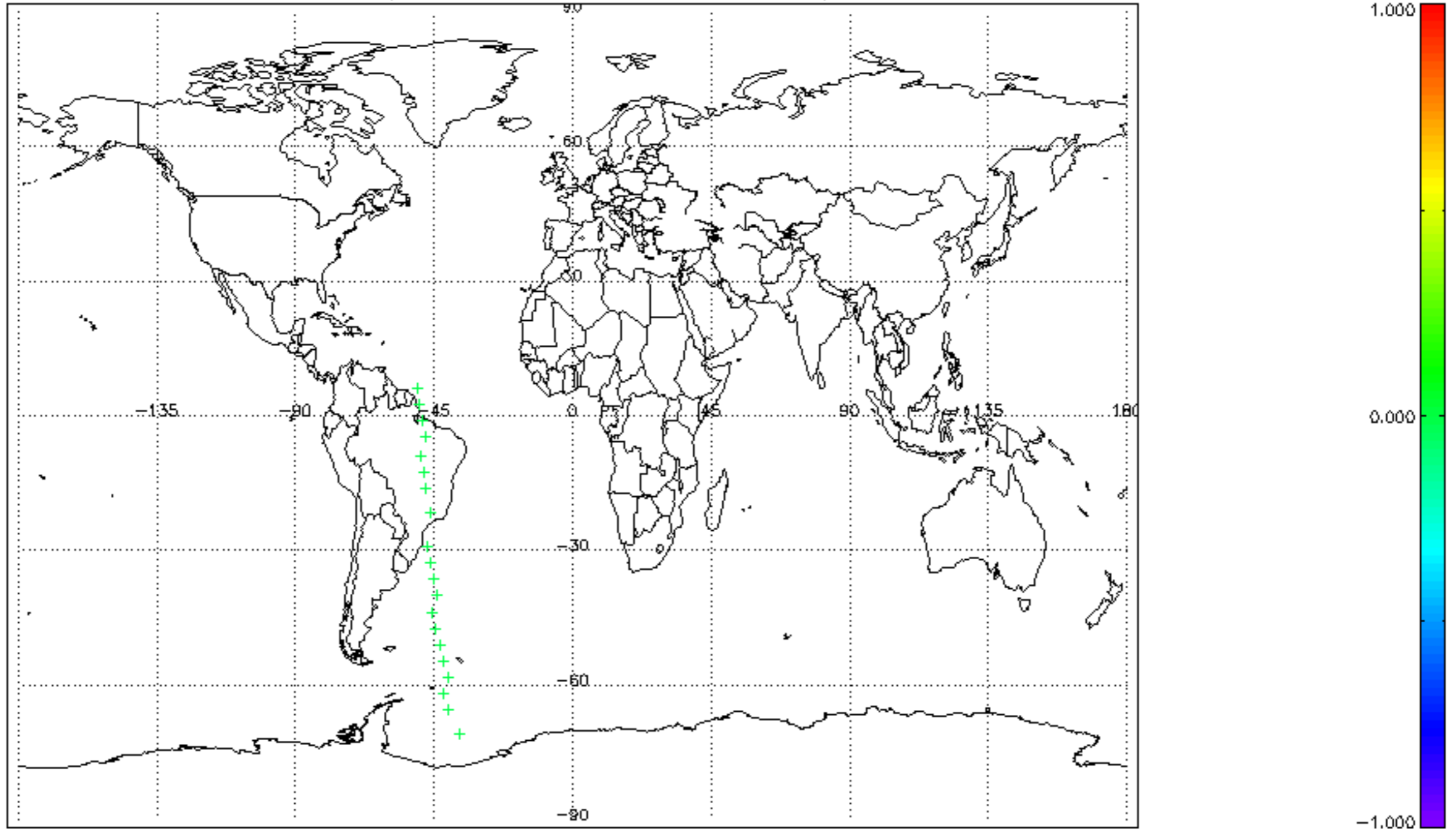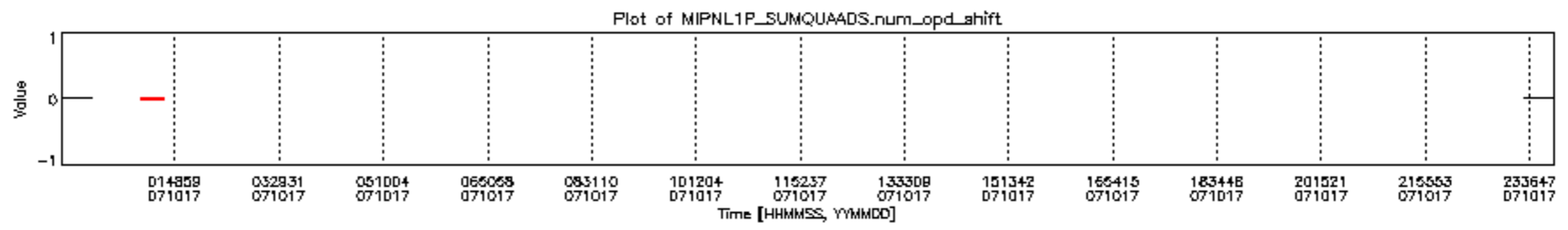Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_sweeps
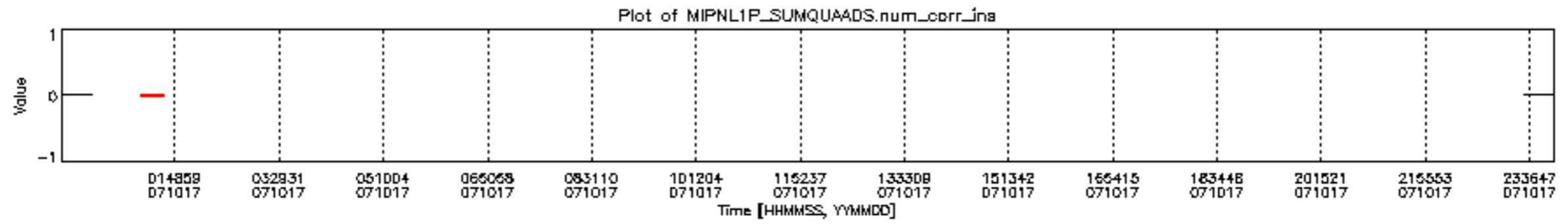
Plot of MIPNL1P_SUMQUAADS.num_corr_ins

Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_ins

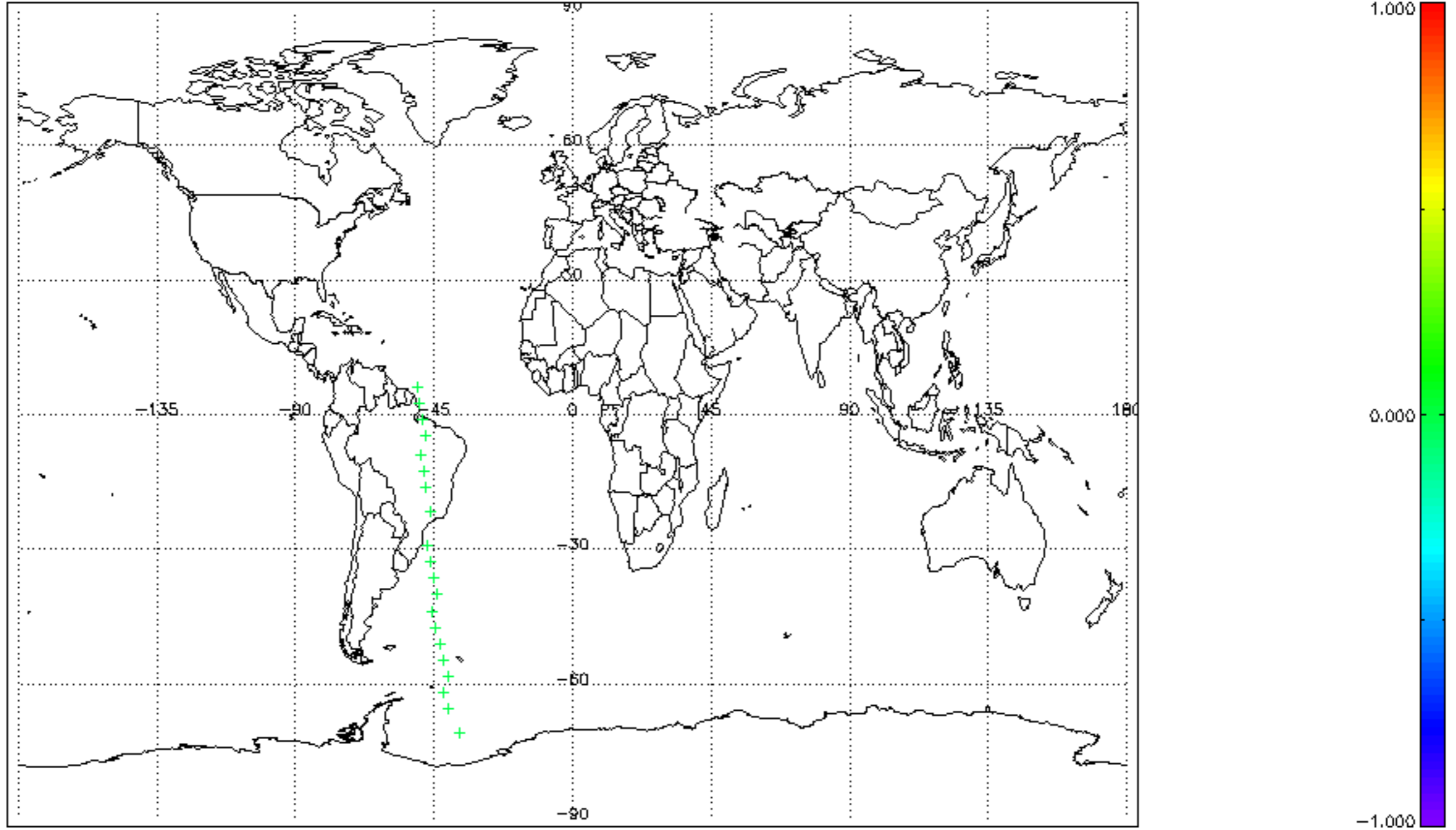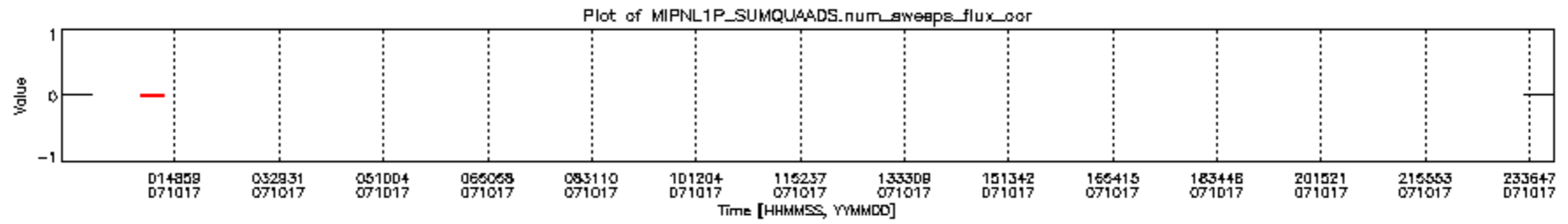Plot of MIPNL1P_SUMQUAADS.num_corr_oba

Geolocation plot of MIPNL1P_SUMQUAADS.num_corr_obs

Plot of MIPNL1P_SUMQUAADS.num_excess_phase

Geolocation plot of MIPNL1P_SUMQUAADS.num_excess_phase

Plot of MIPNL1P_SUMQUAADS.num_opd_shift

Value

1

0

-1

| 014859 | 032931 | 051004 | 065058 | 083110 | 101204 | 115237 | 133308 | 151342 | 165415 | 183448 | 201521 | 215553 | 233647 |
| 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 |

Time [HHMMSS, YYMMDD]

Geolocation plot of MIPNL1P_SUMQUAADS.num_opd_shift
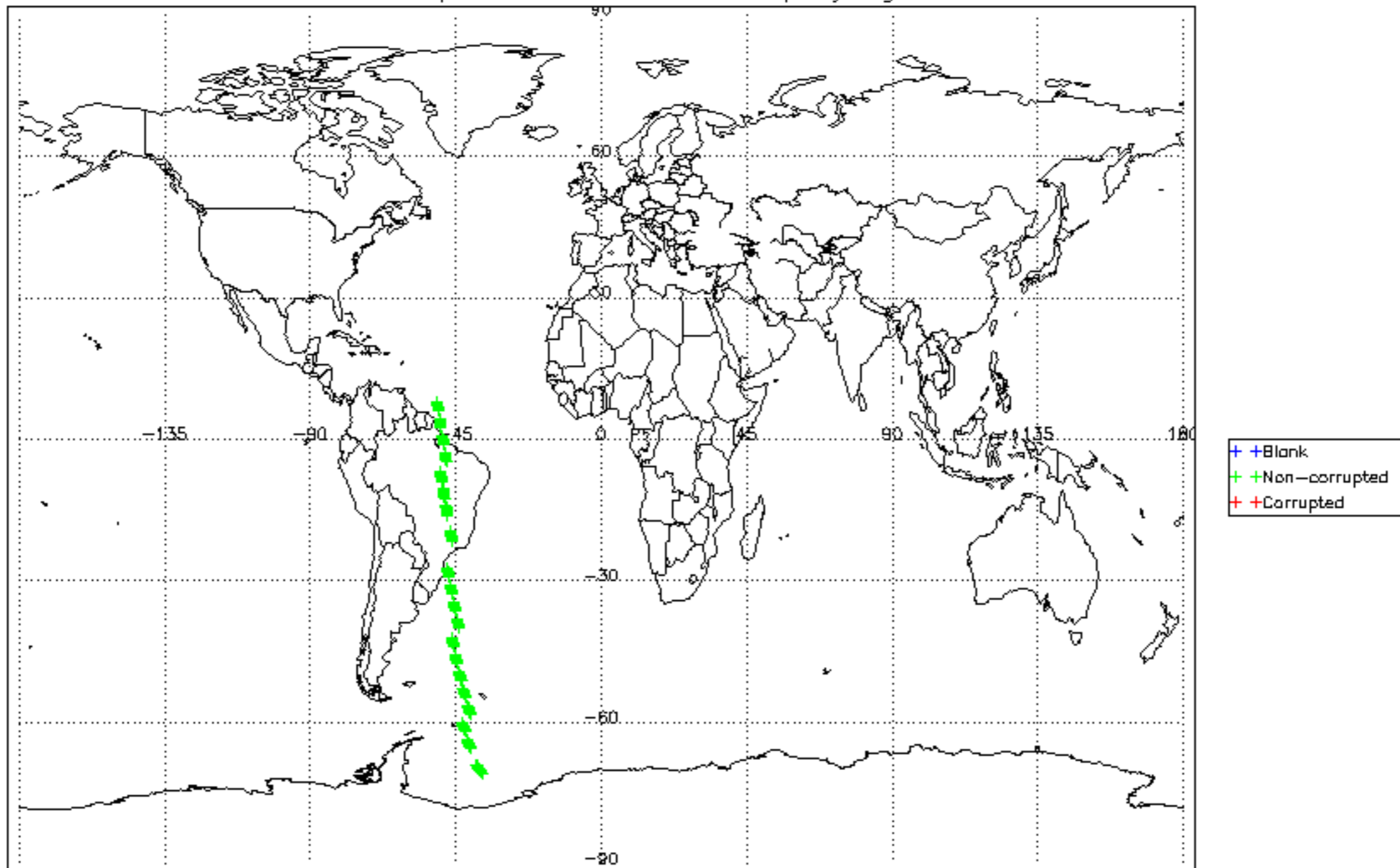
Plot of MIPNL1P_SUMQUAADS.num_sweeps_flux_cor

Geolocation plot of MIPNL1P_SUMQUAADS.num_sweeps_flux_oor

Bar plot of MIPNL1P_MIPLEV1BMDS_quality_flag

Time

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]
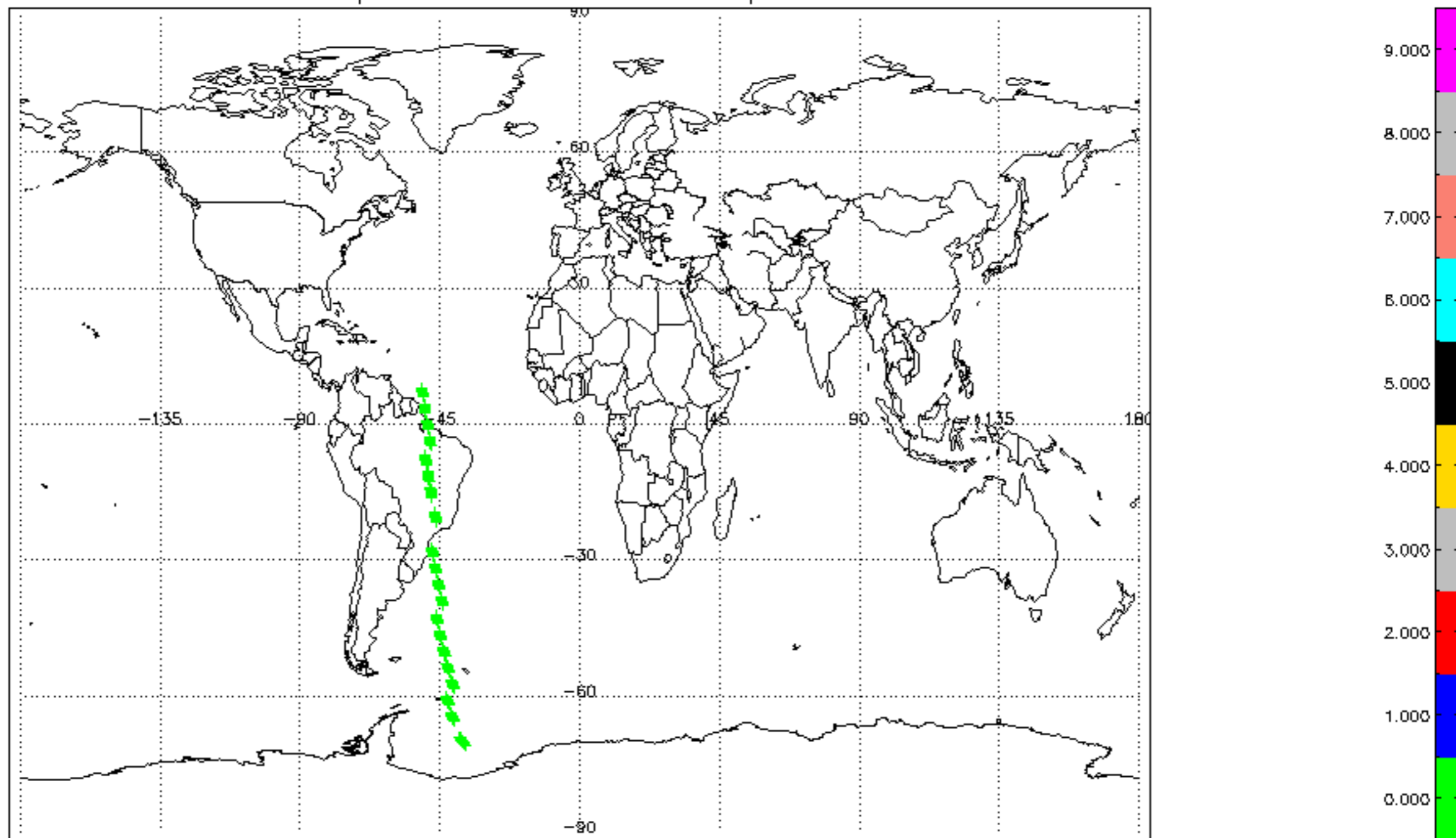
Blank
Non-corrupted
Corrupted

Geolocation plot of MIPNL1P_MIPLEV1BMDS_quality_flag

+ +Blank
+ +Non-corrupted
+ +Corrupted
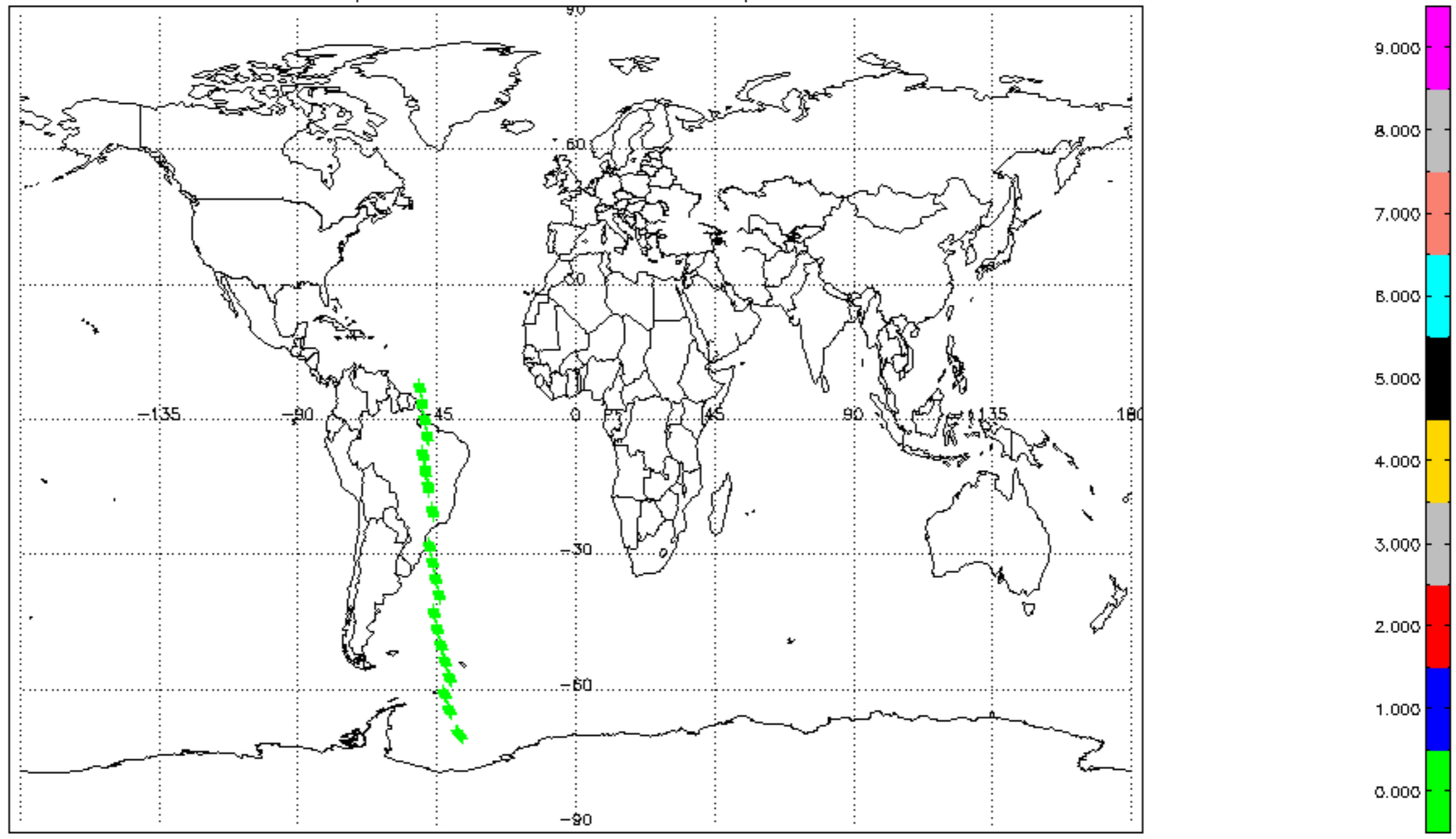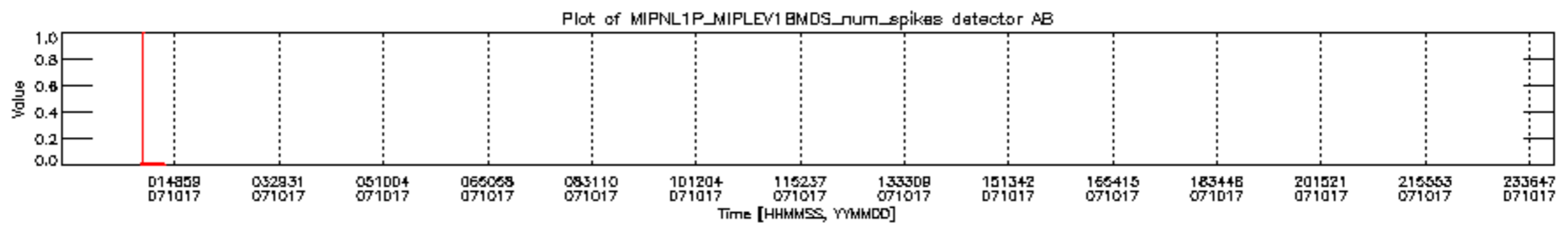
Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A1

Value

1

0

-1

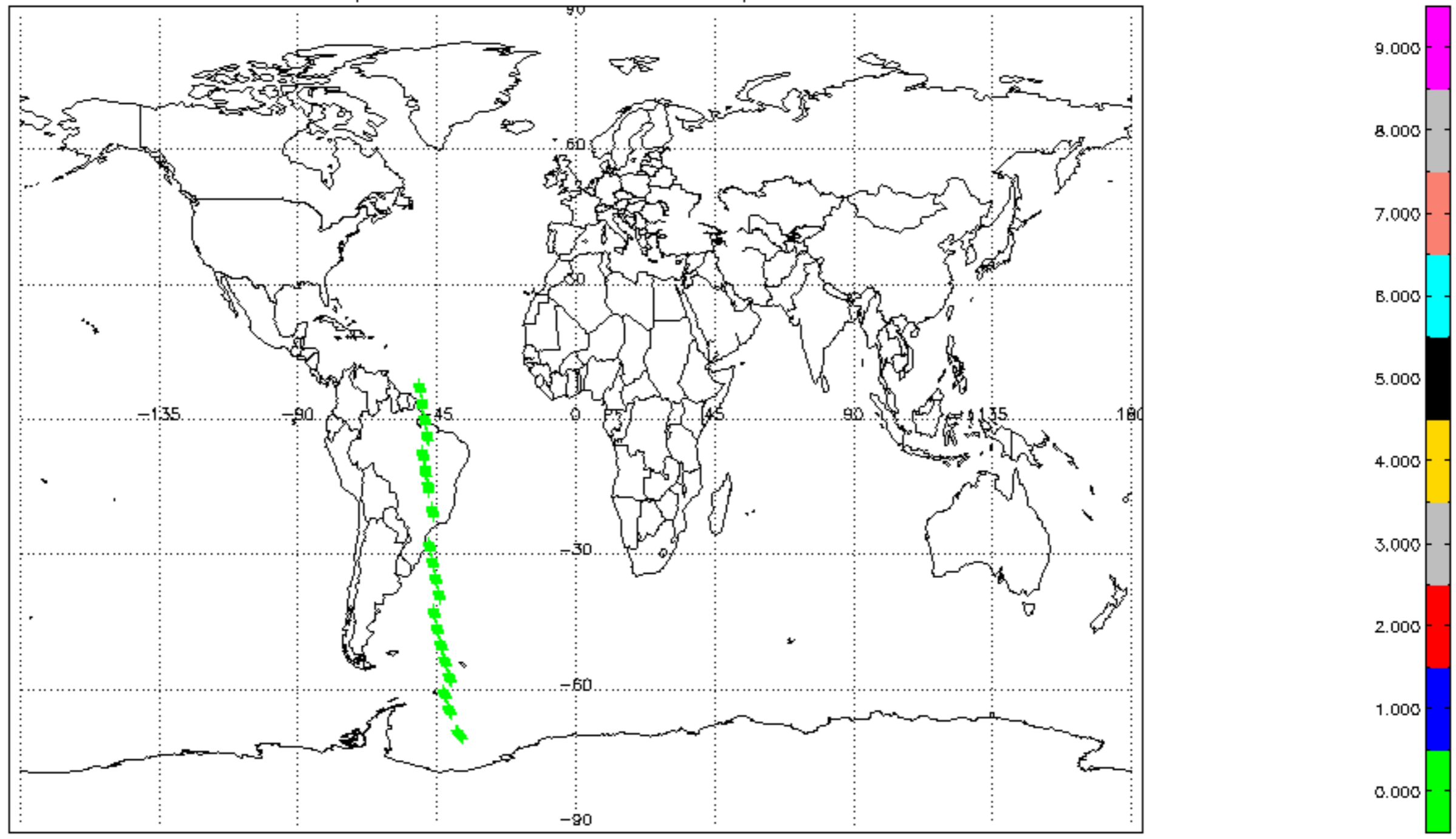| 014859 | 032931 | 051004 | 065056 | 083110 | 101204 | 115237 | 133308 | 151342 | 165415 | 183448 | 201521 | 215553 | 233647 |
| 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 |

Time [HHMMSS, YYMMDD]

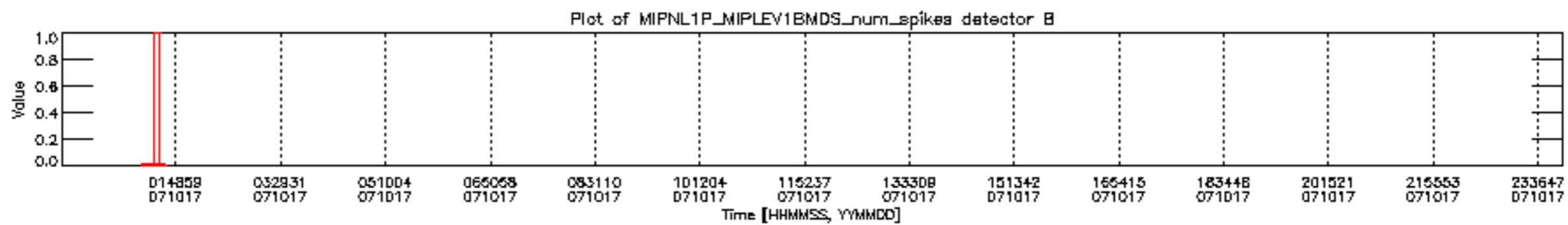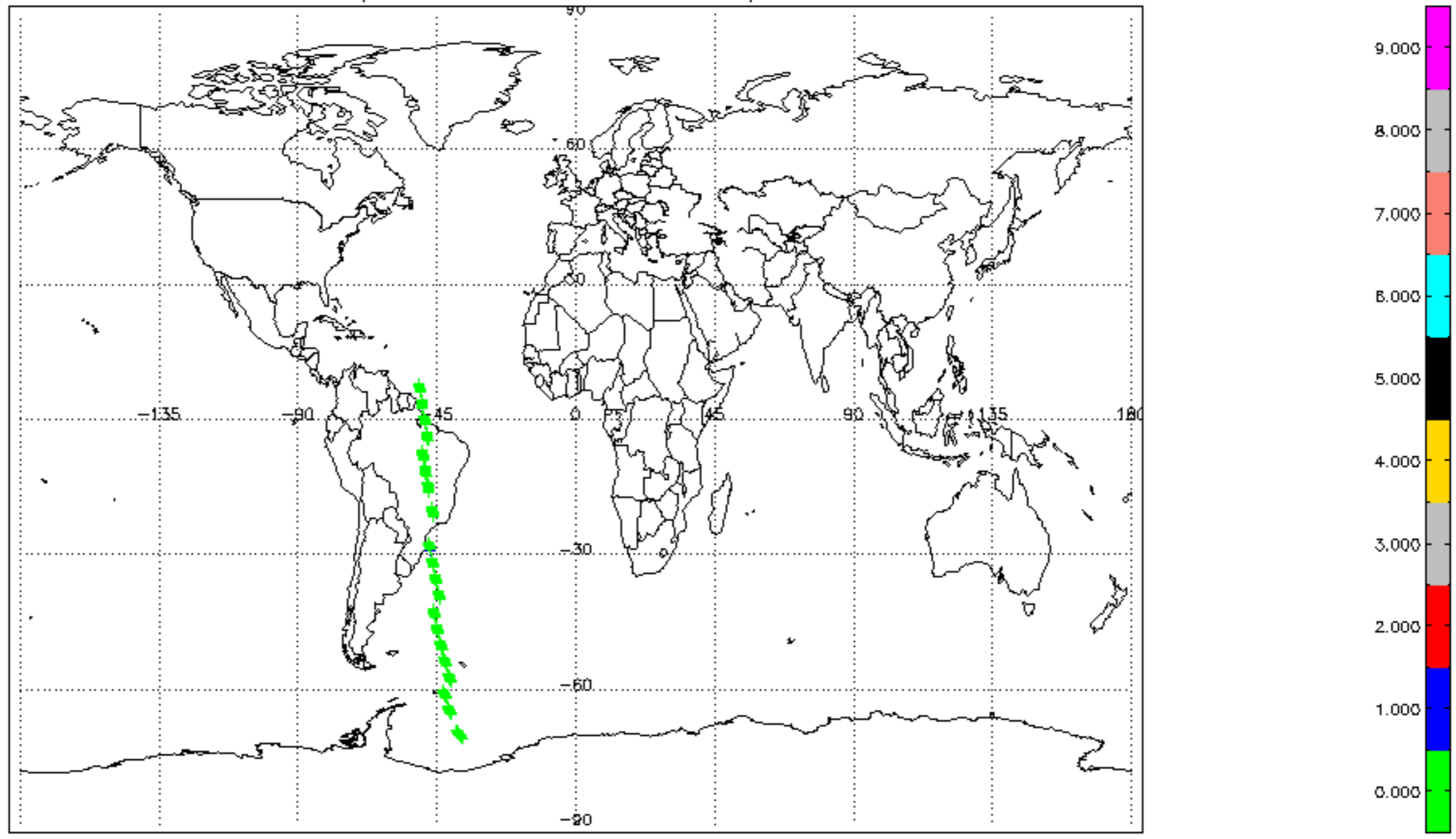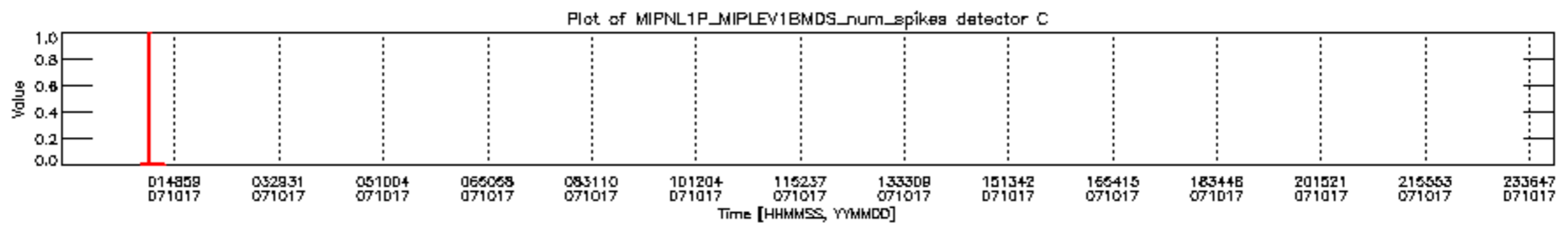Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A1

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A2

Value

1

0

−1

| 014859 071017 | 032931 071017 | 051004 071017 | 065058 071017 | 083110 071017 | 101204 071017 | 115237 071017 | 133308 071017 | 151342 071017 | 165415 071017 | 183448 071017 | 201521 071017 | 215553 071017 | 233647 071017 |

Time [HHMMSS, YYMMDD]

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector A2
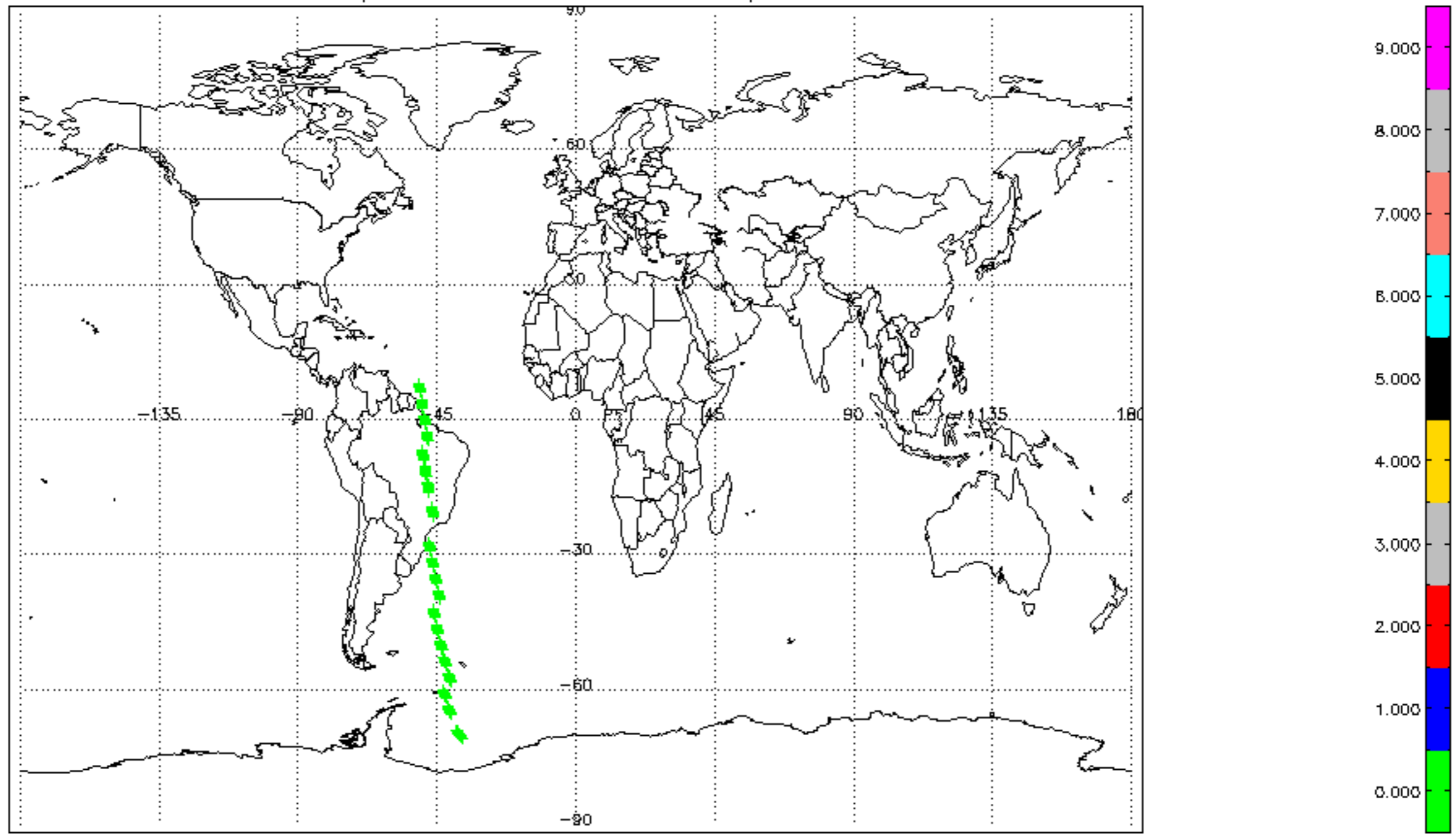
Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector AB

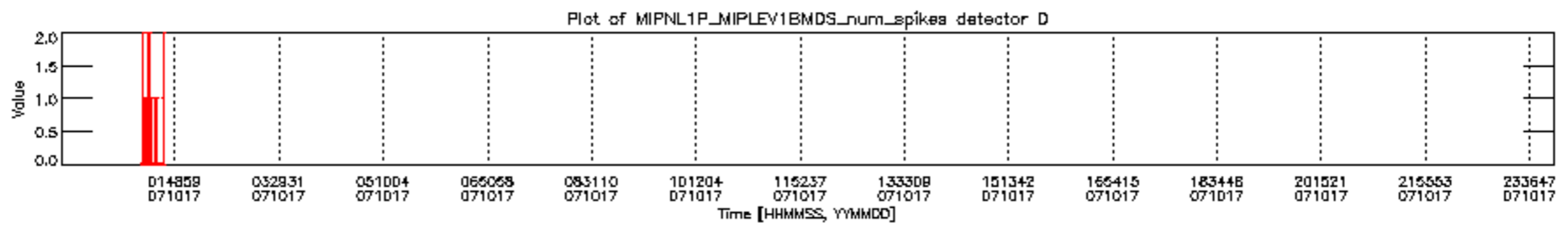Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector AB

Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector B

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector B
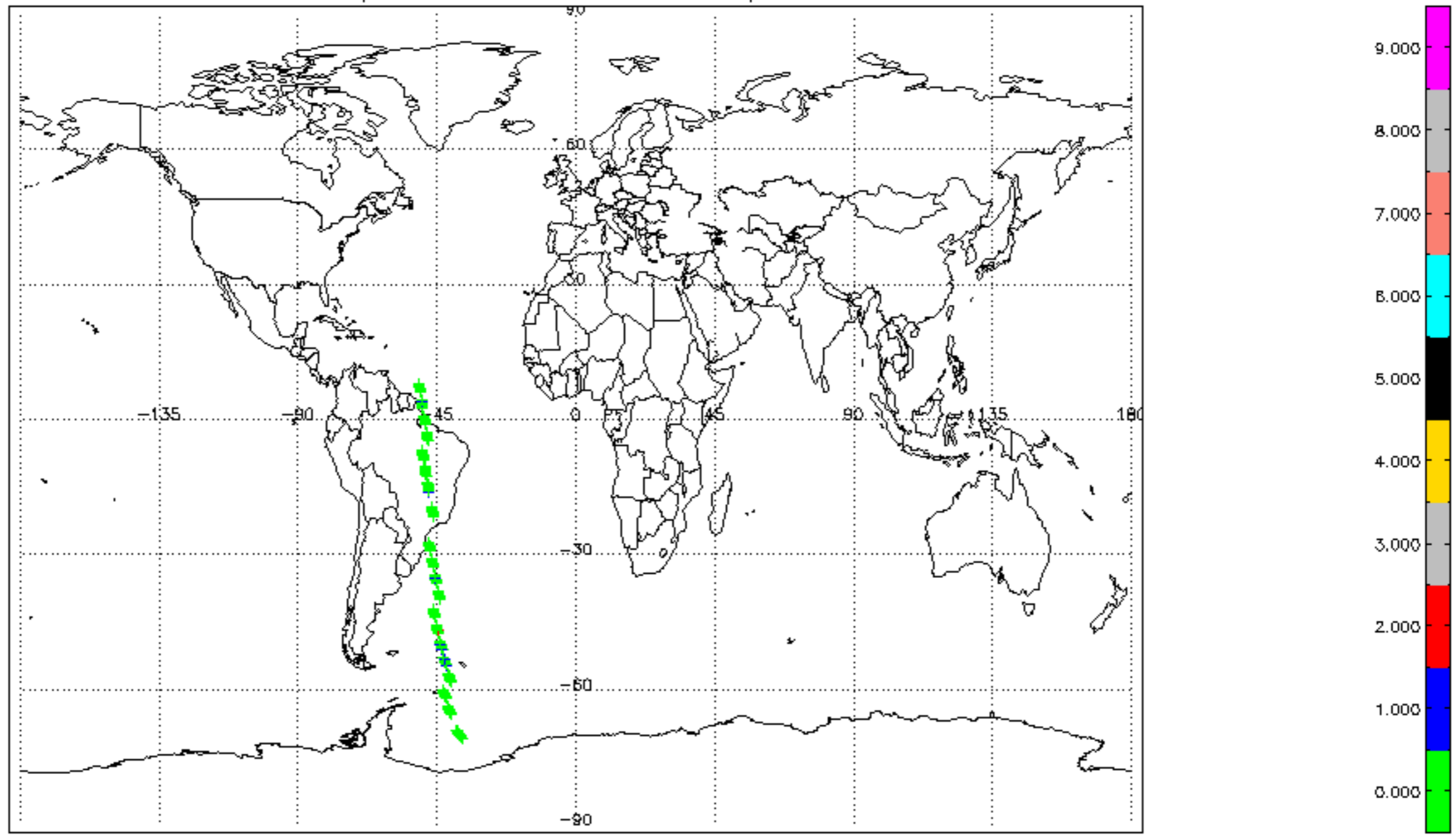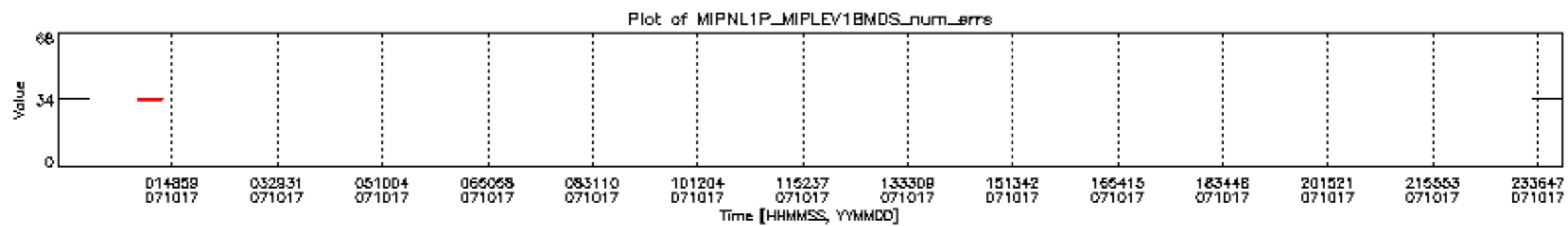
Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector C

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector C
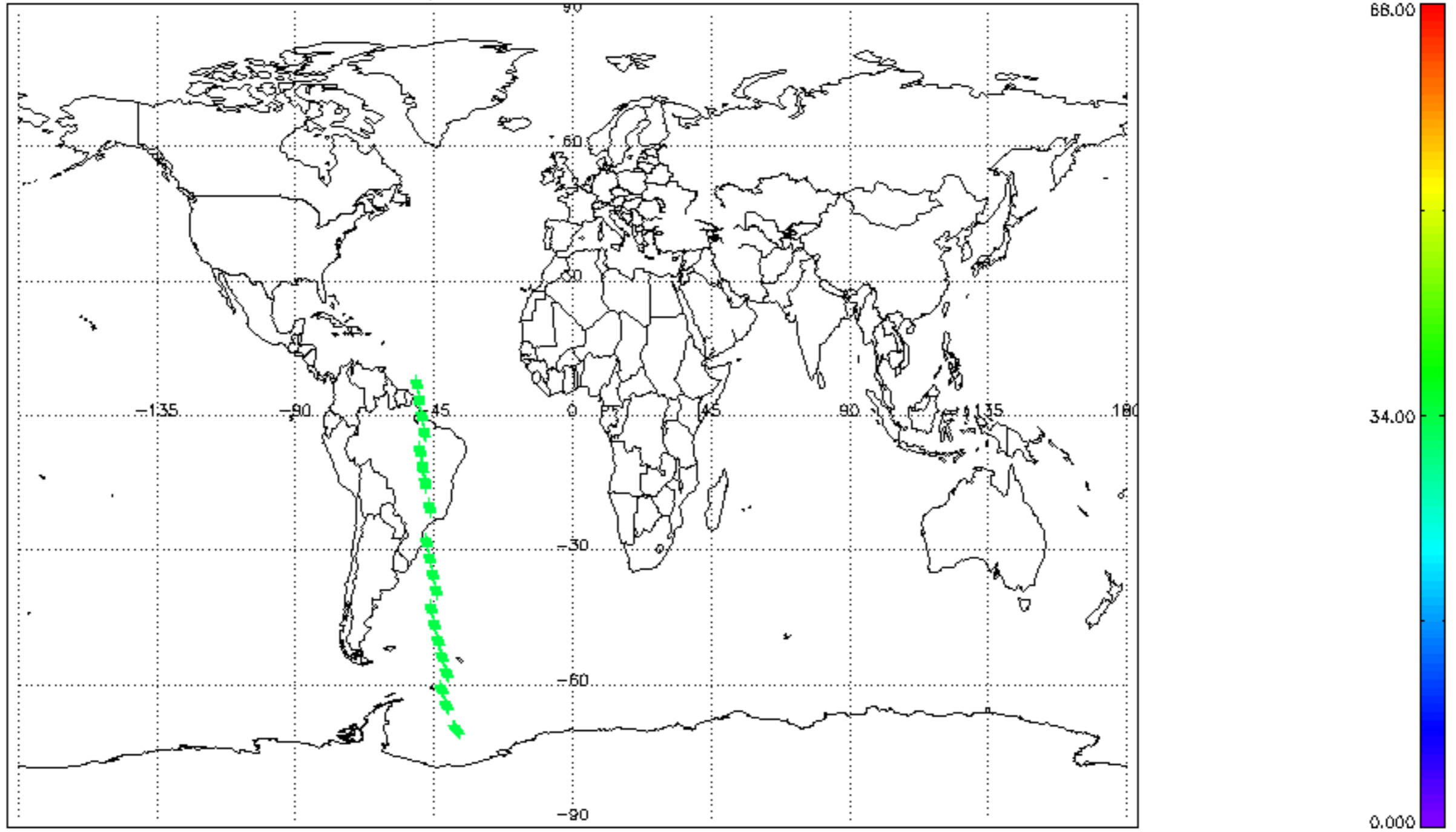
Plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector D

Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_spikes detector D

Plot of MIPNL1P_MIPLEV1BMDS_num_errs

Value

68

34

0

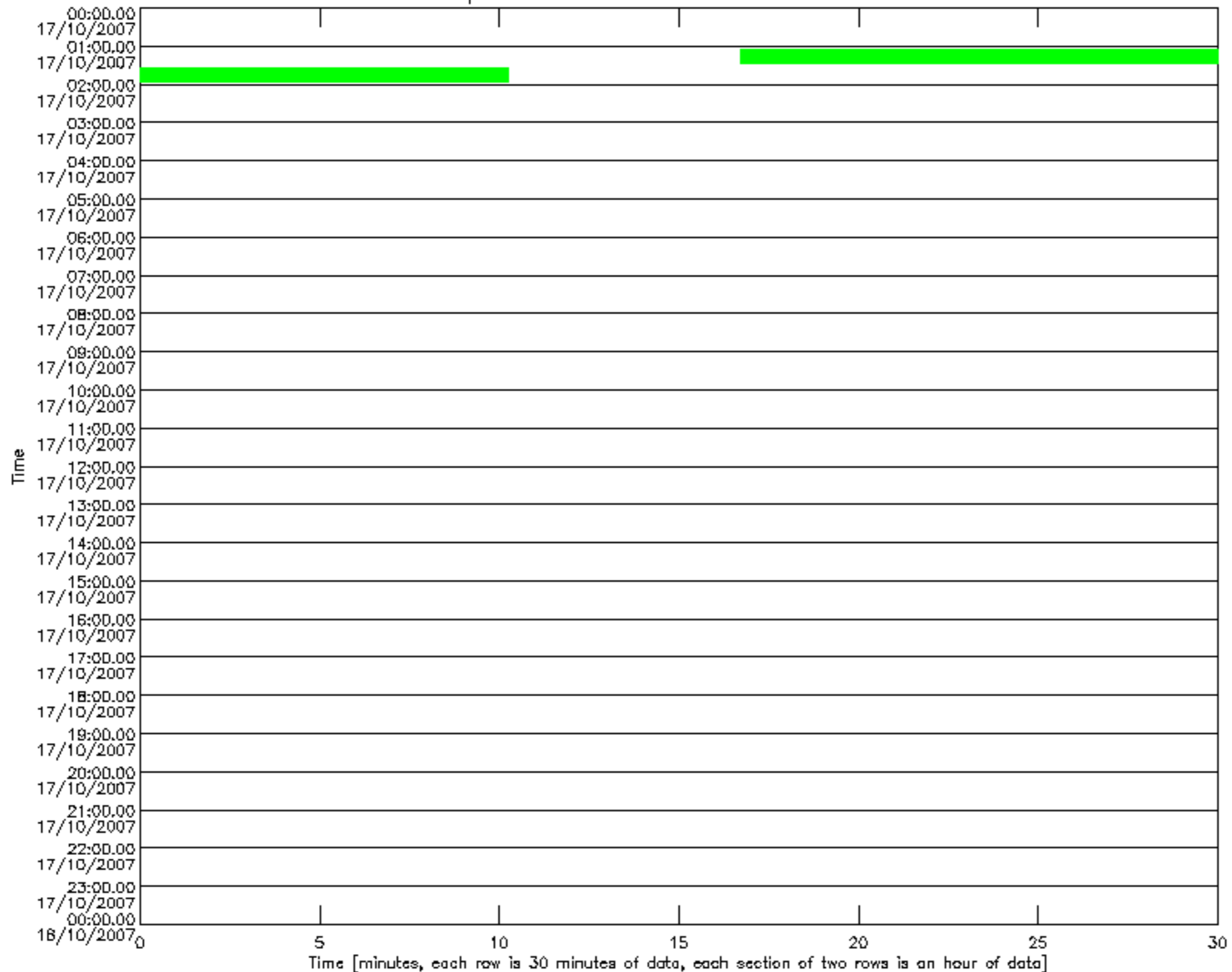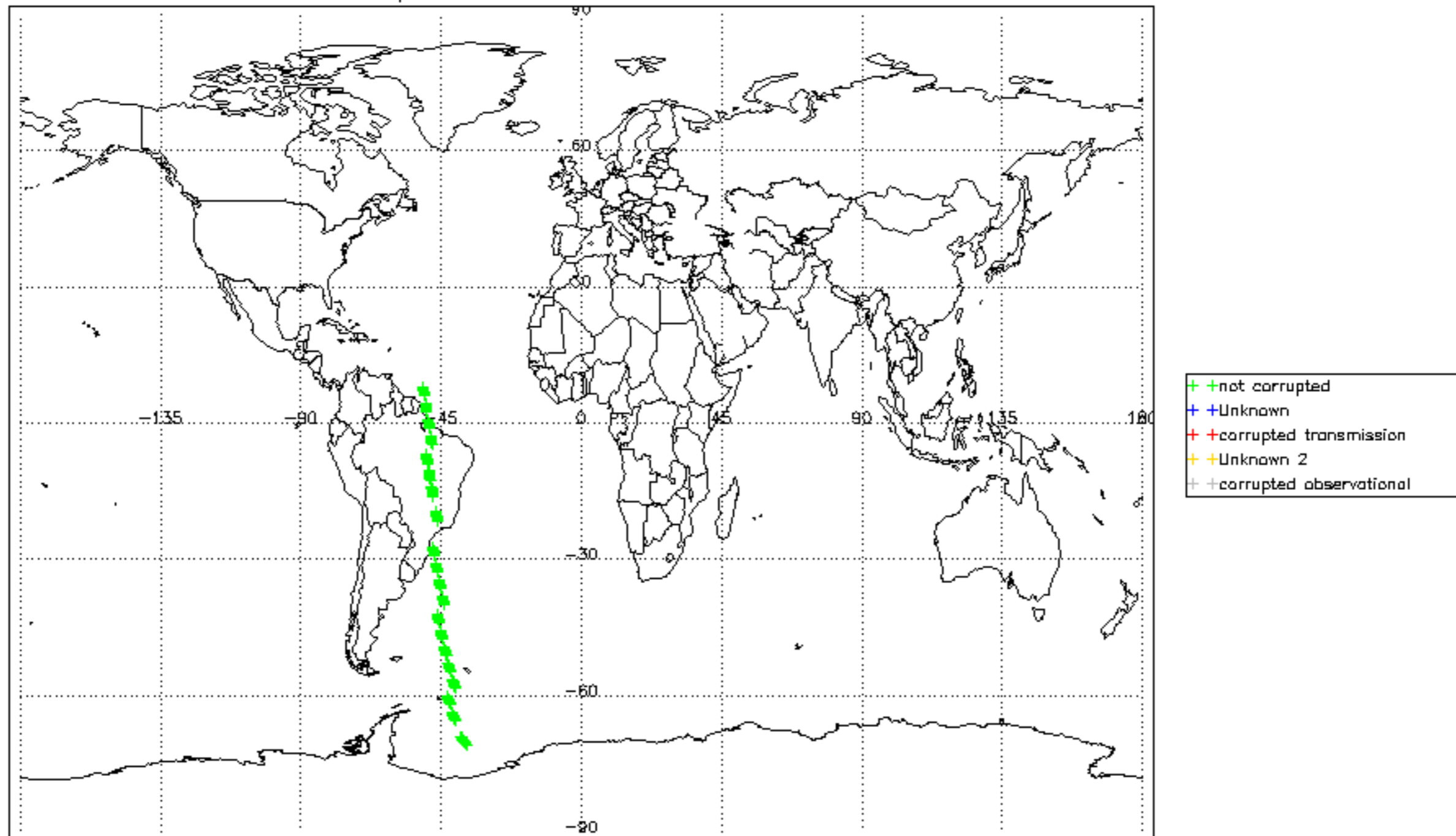| 014859 | 032931 | 051004 | 065058 | 083110 | 101204 | 115237 | 133308 | 151342 | 165415 | 183448 | 201521 | 215553 | 233647 |
| 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 | 071017 |

Time [HHMMSS, YYMMDD]

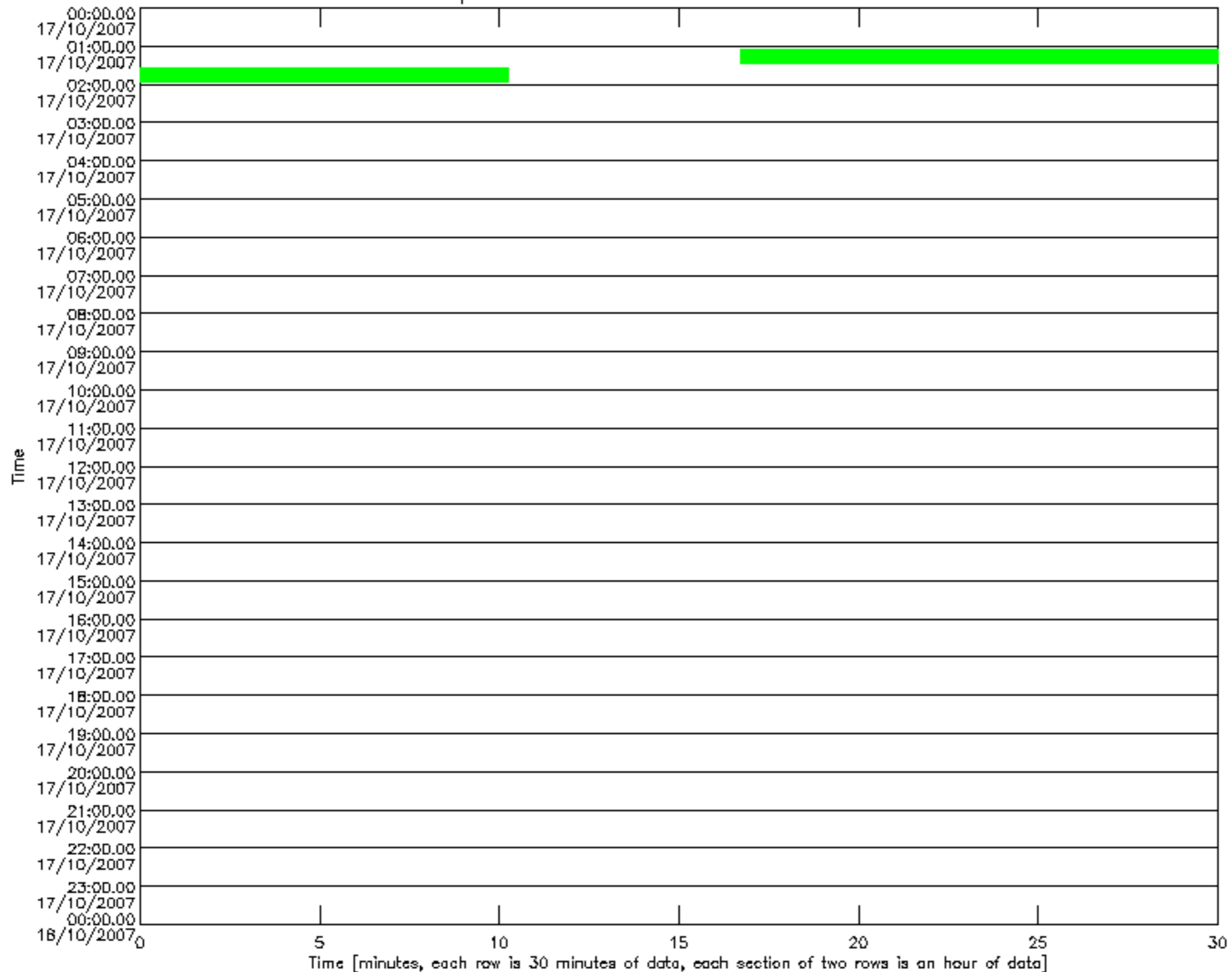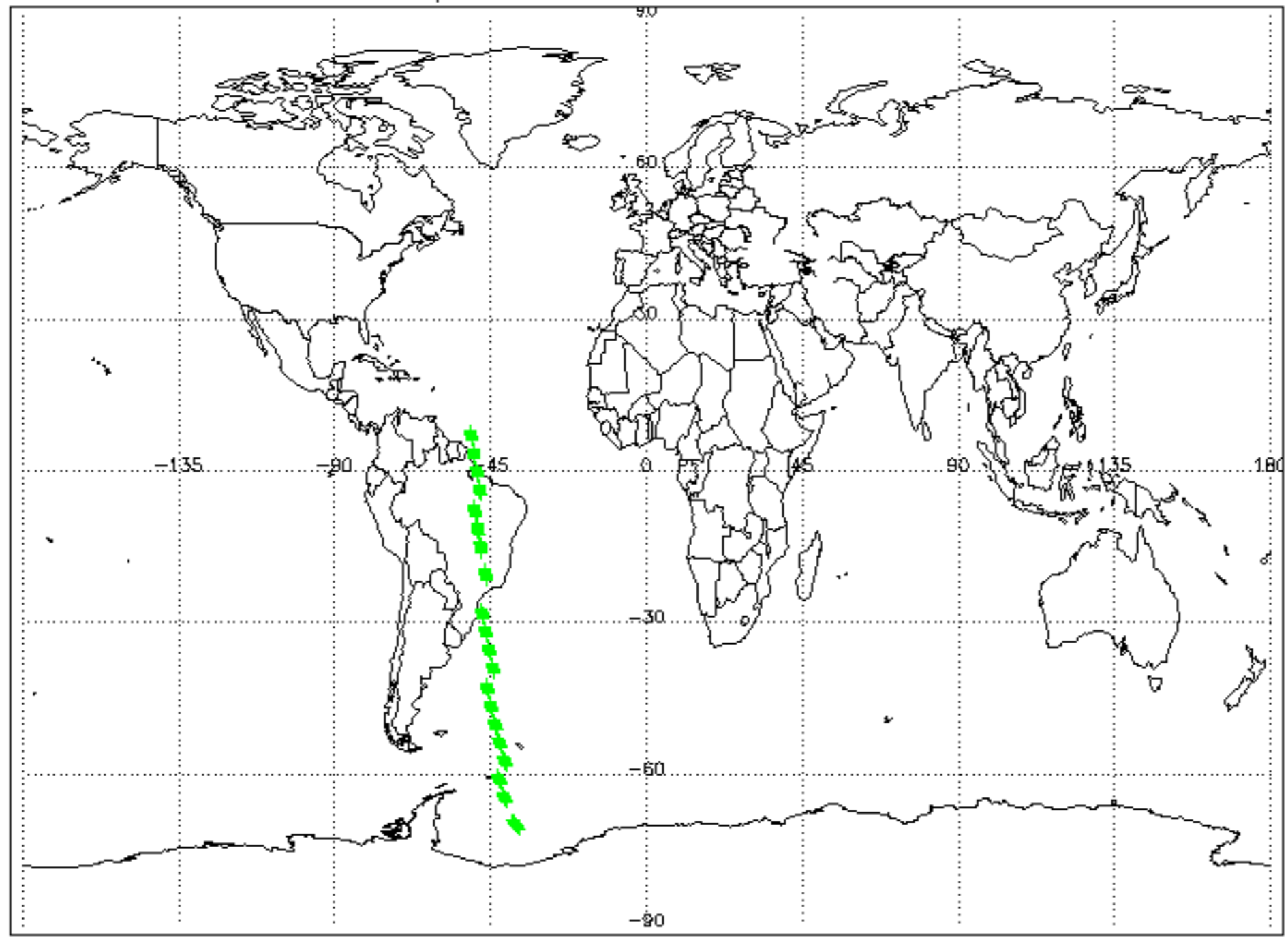Geolocation plot of MIPNL1P_MIPLEV1BMDS_num_errs

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band A

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band A
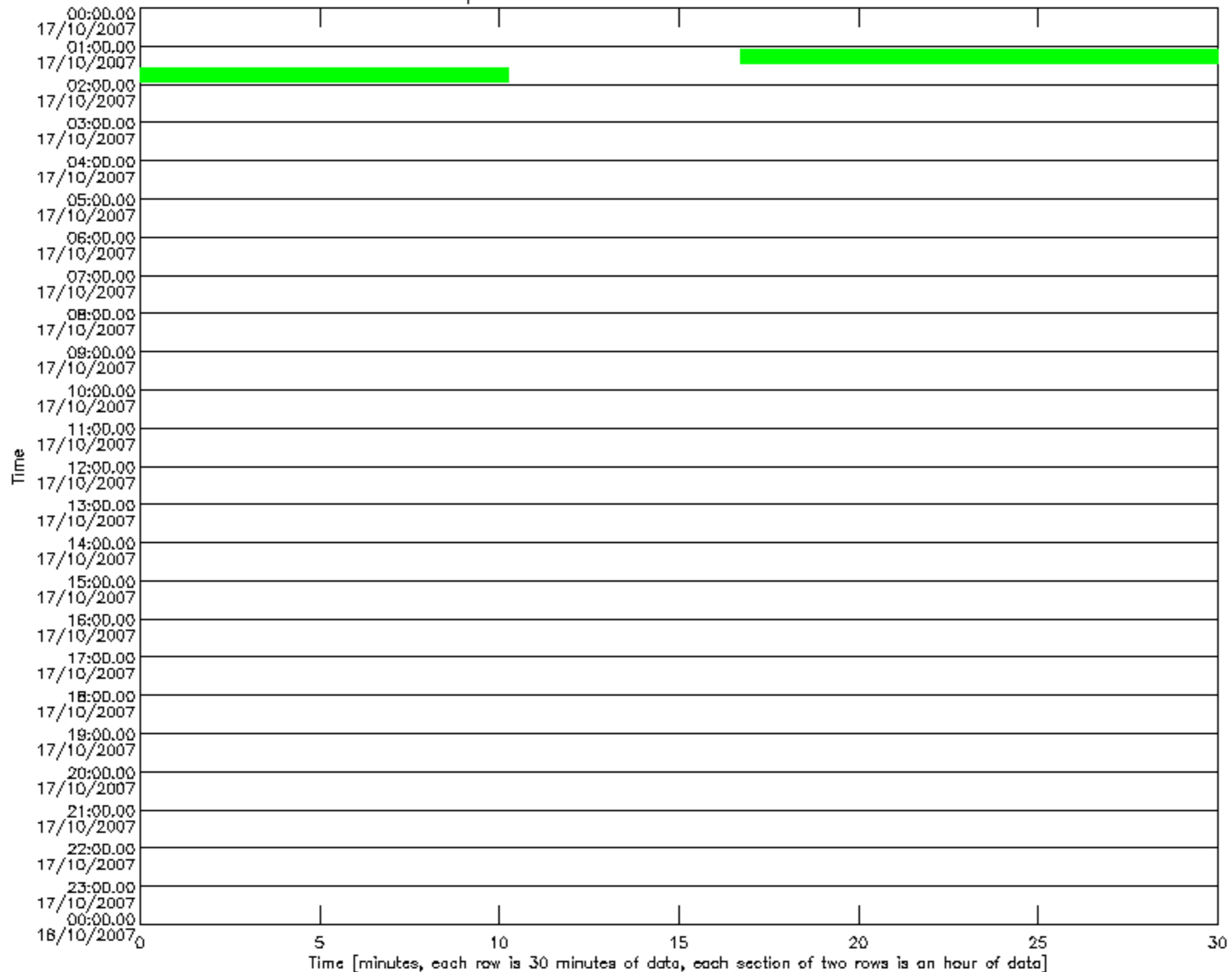
Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band AB

Time

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]

not corrupted
Unknown
corrupted transmission
Unknown 2
corrupted observational

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band AB

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band B
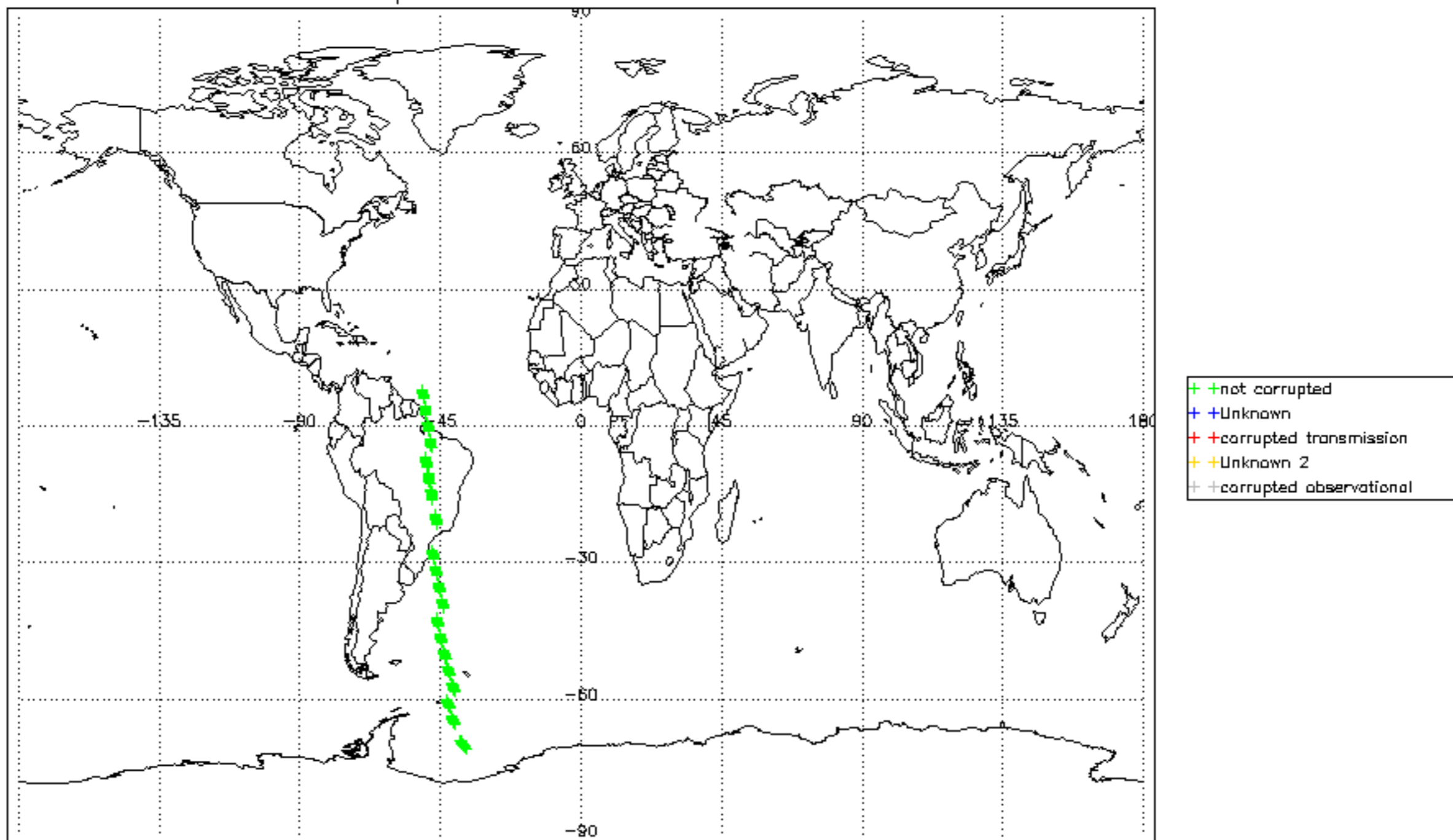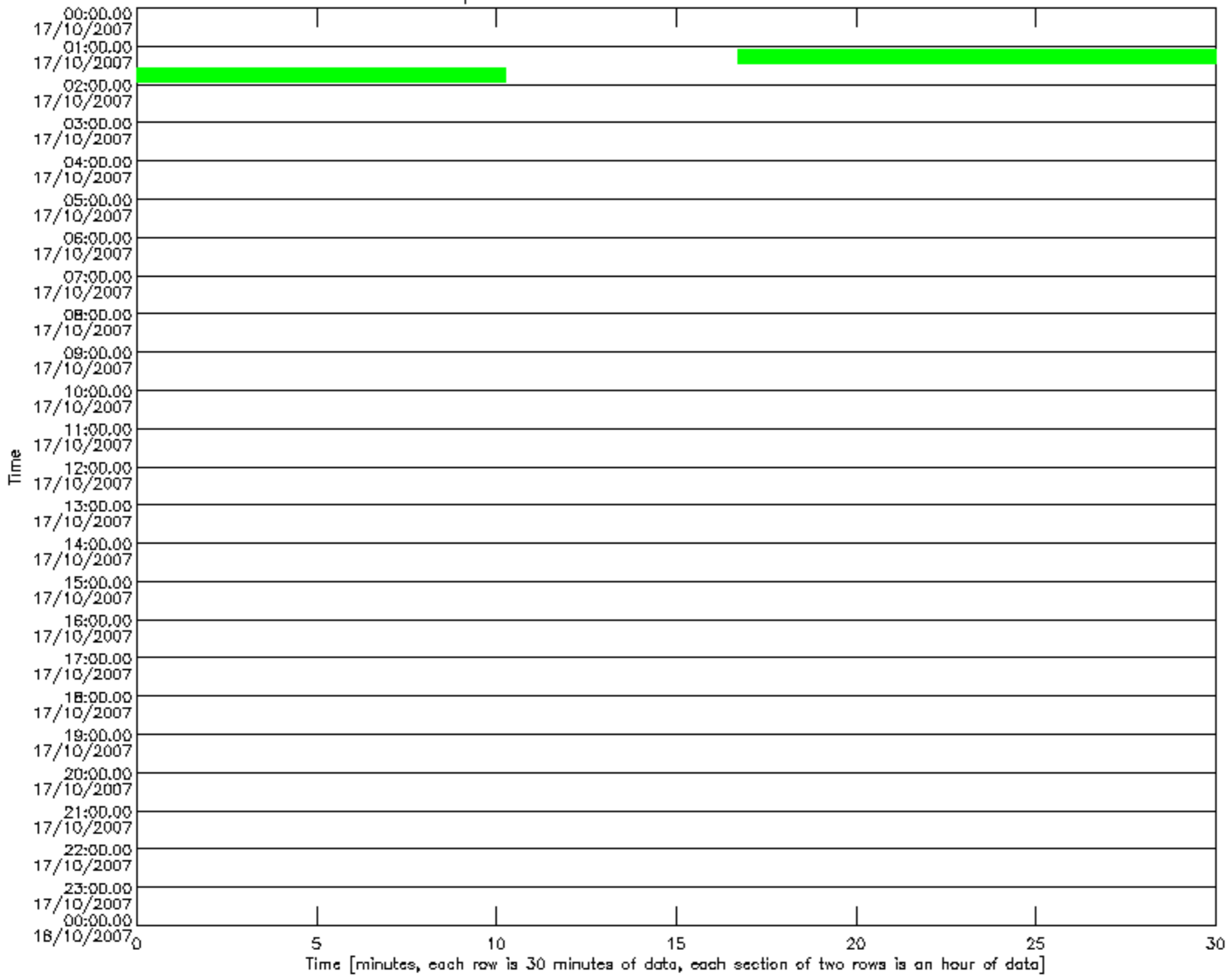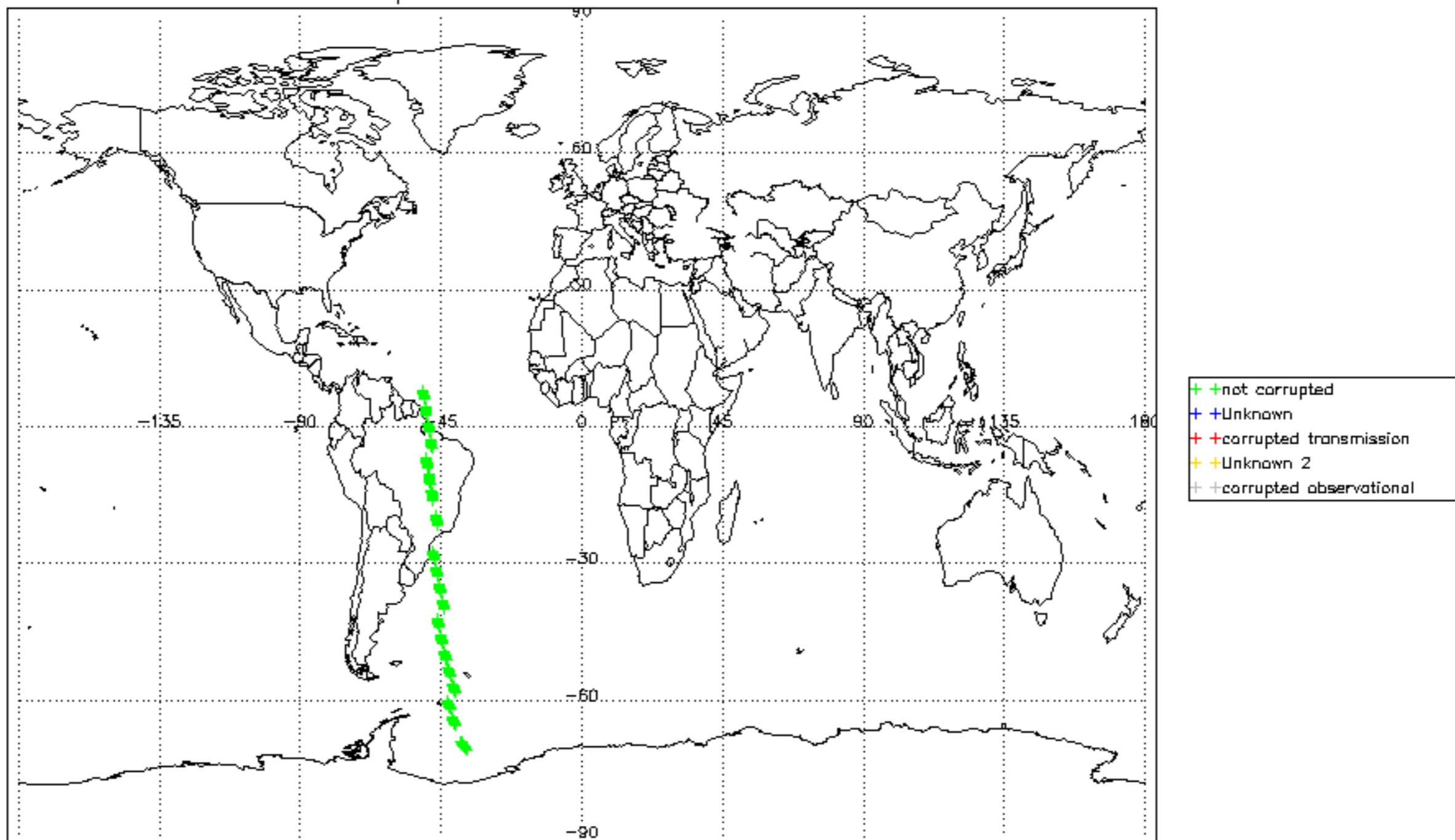
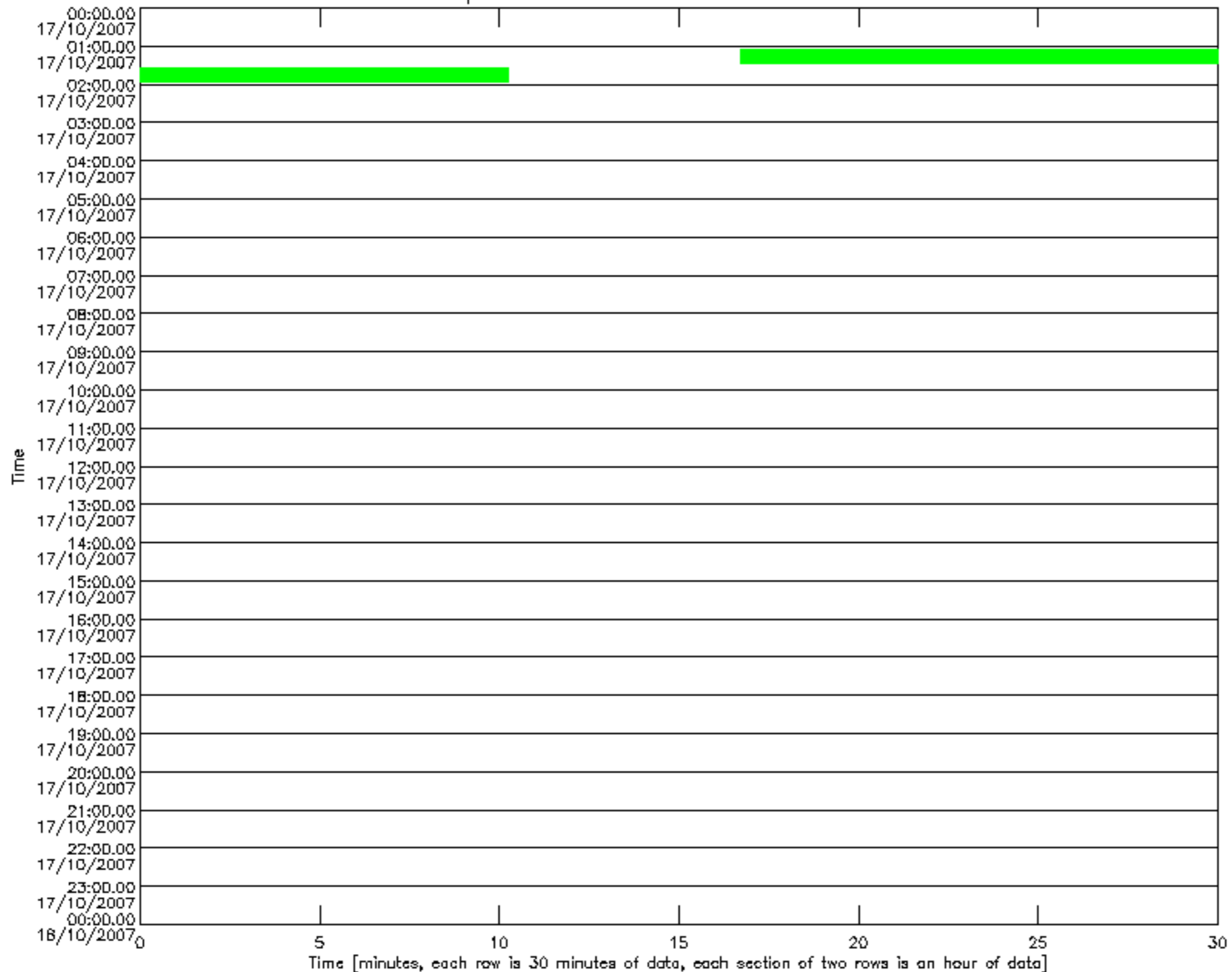Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band B
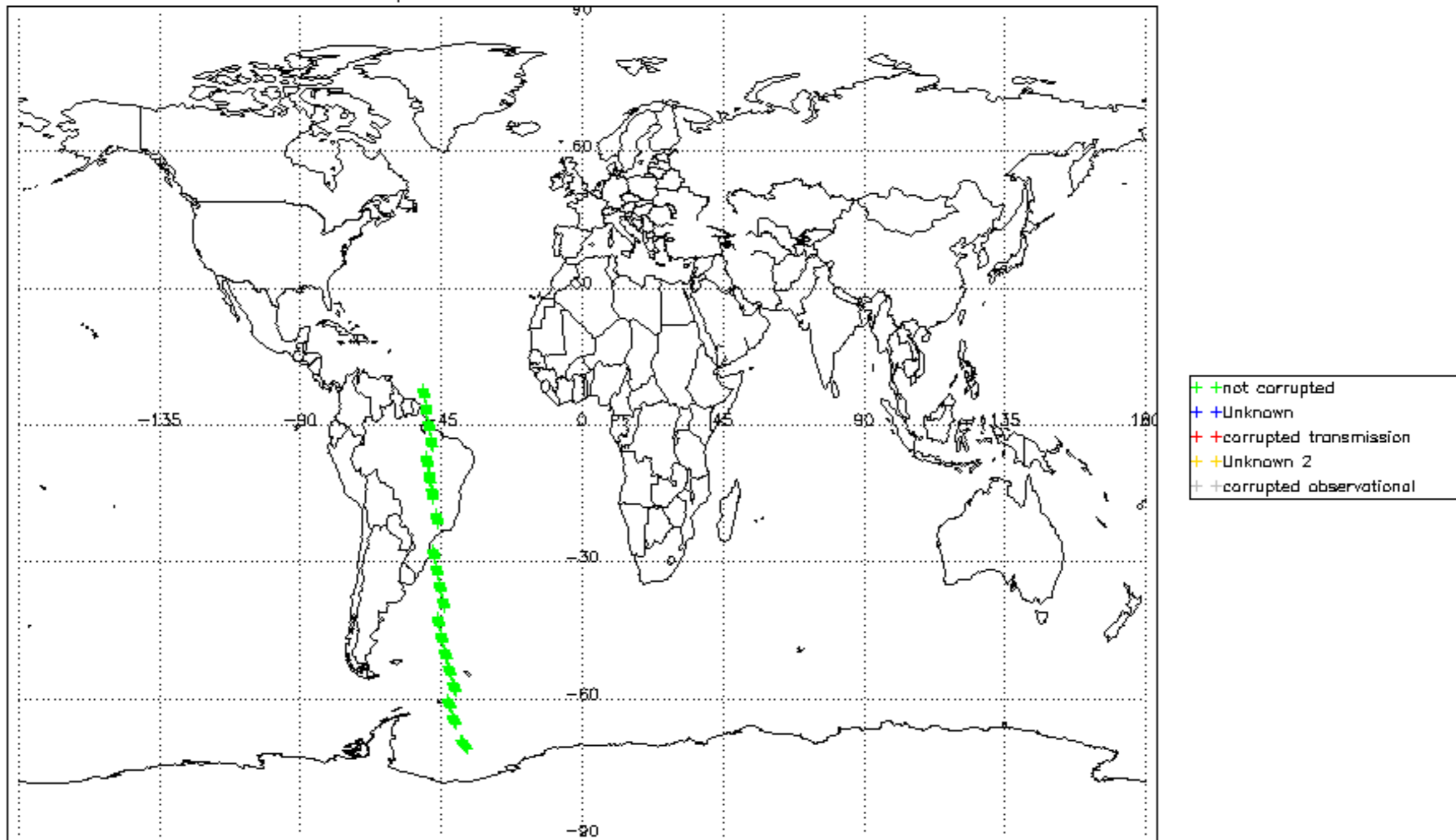
Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band C

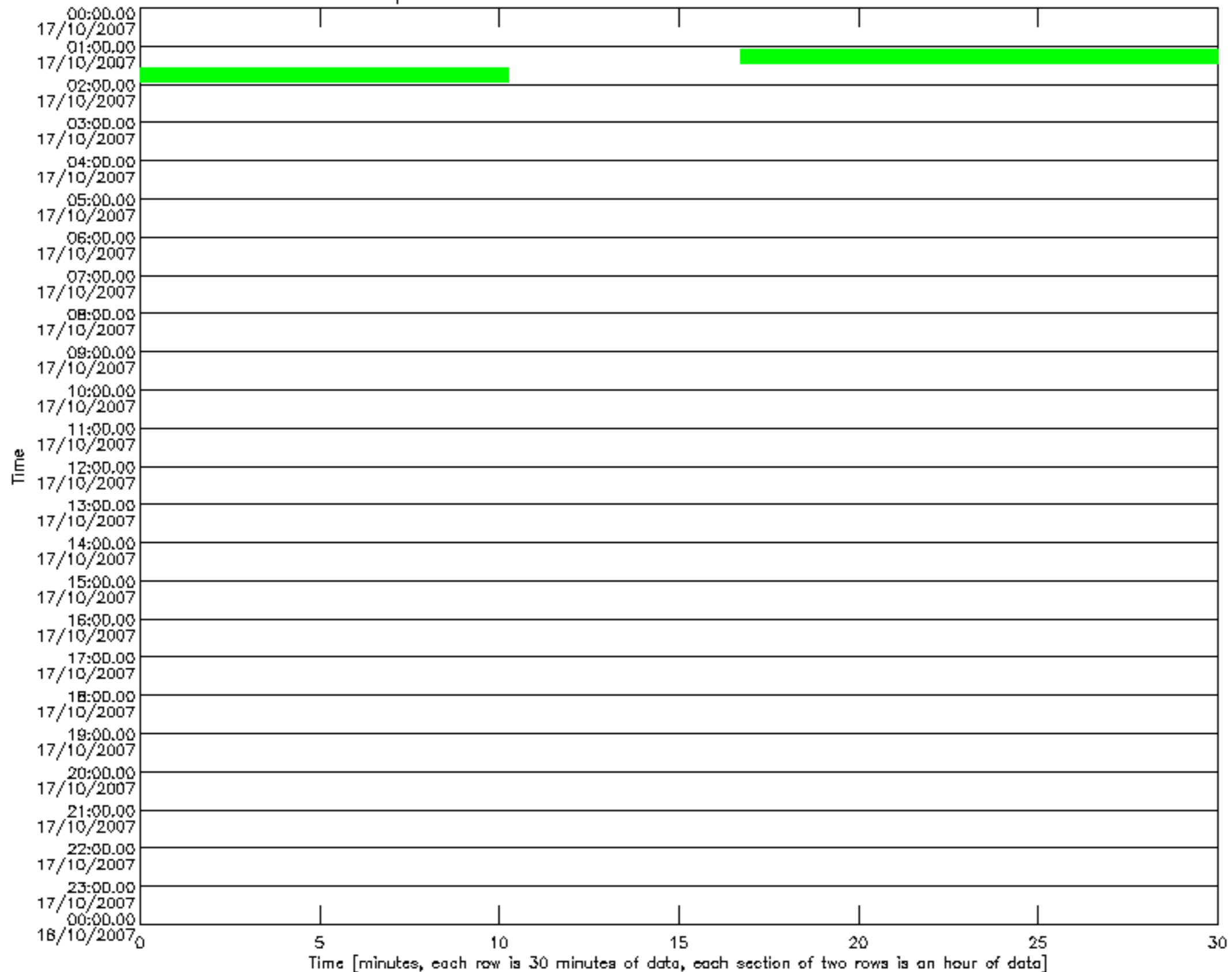Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band C

Bar plot of MIPNL1P_MIPLEV1BMDS_band_val band D

Geolocation plot of MIPNL1P_MIPLEV1BMDS_band_val band D

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A1

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]

Flux valid
Flux invalid

Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A1

Flux valid
Flux invalid

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A2

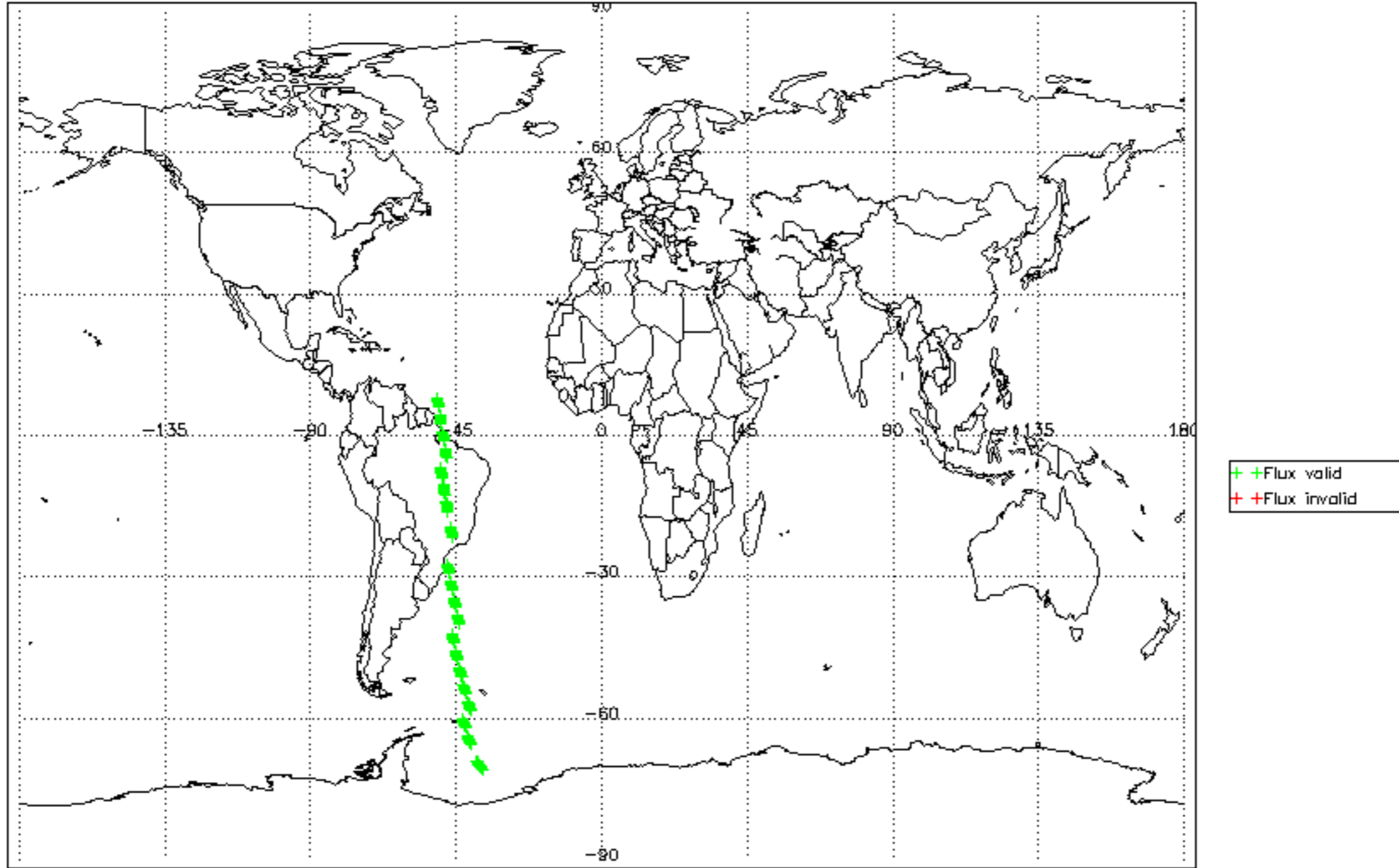Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector A2

+ +Flux valid
+ +Flux invalid

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector AB

Time [minutes, each row is 30 minutes of data, each section of two rows is an hour of data]

Flux valid
Flux invalid

Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector AB
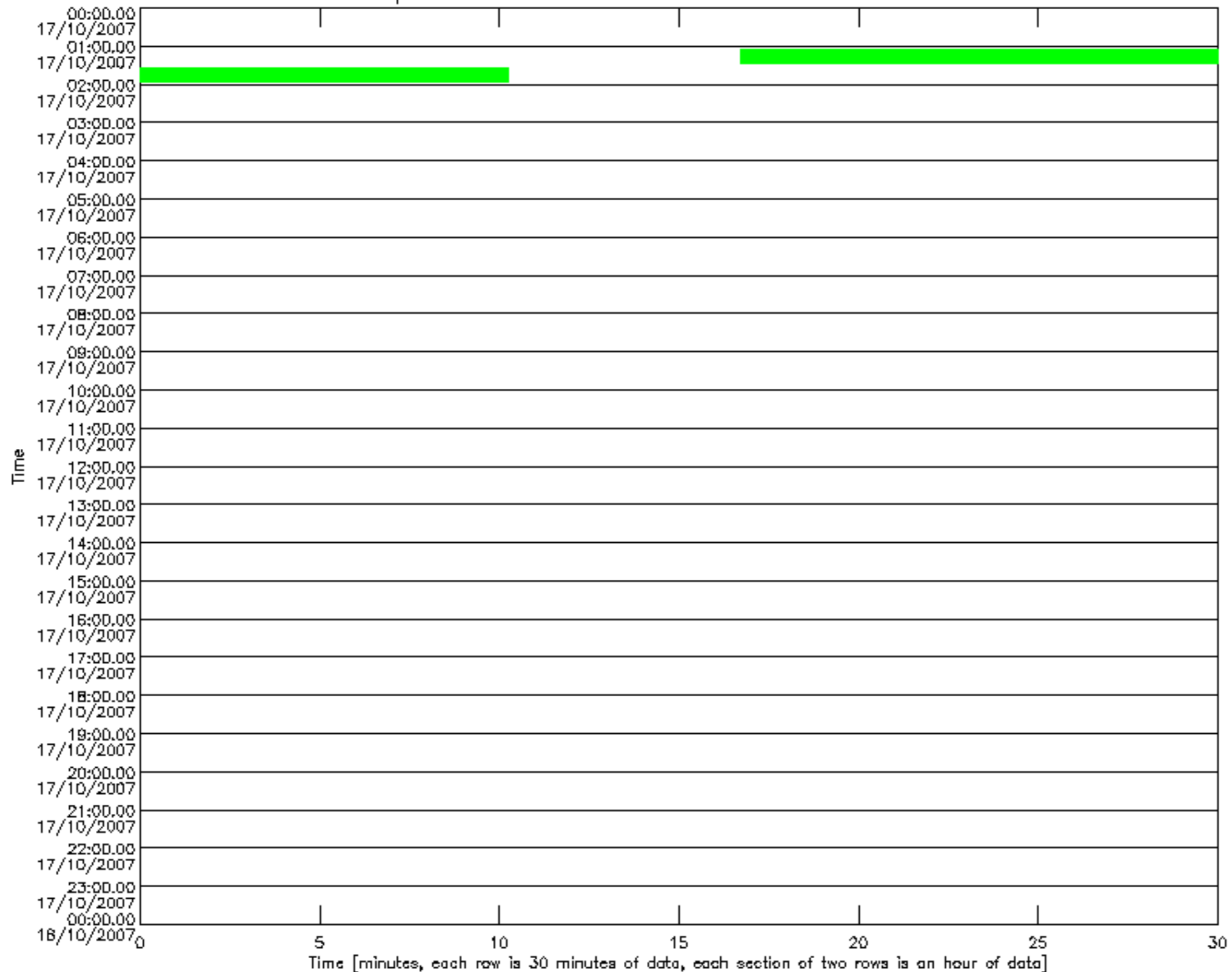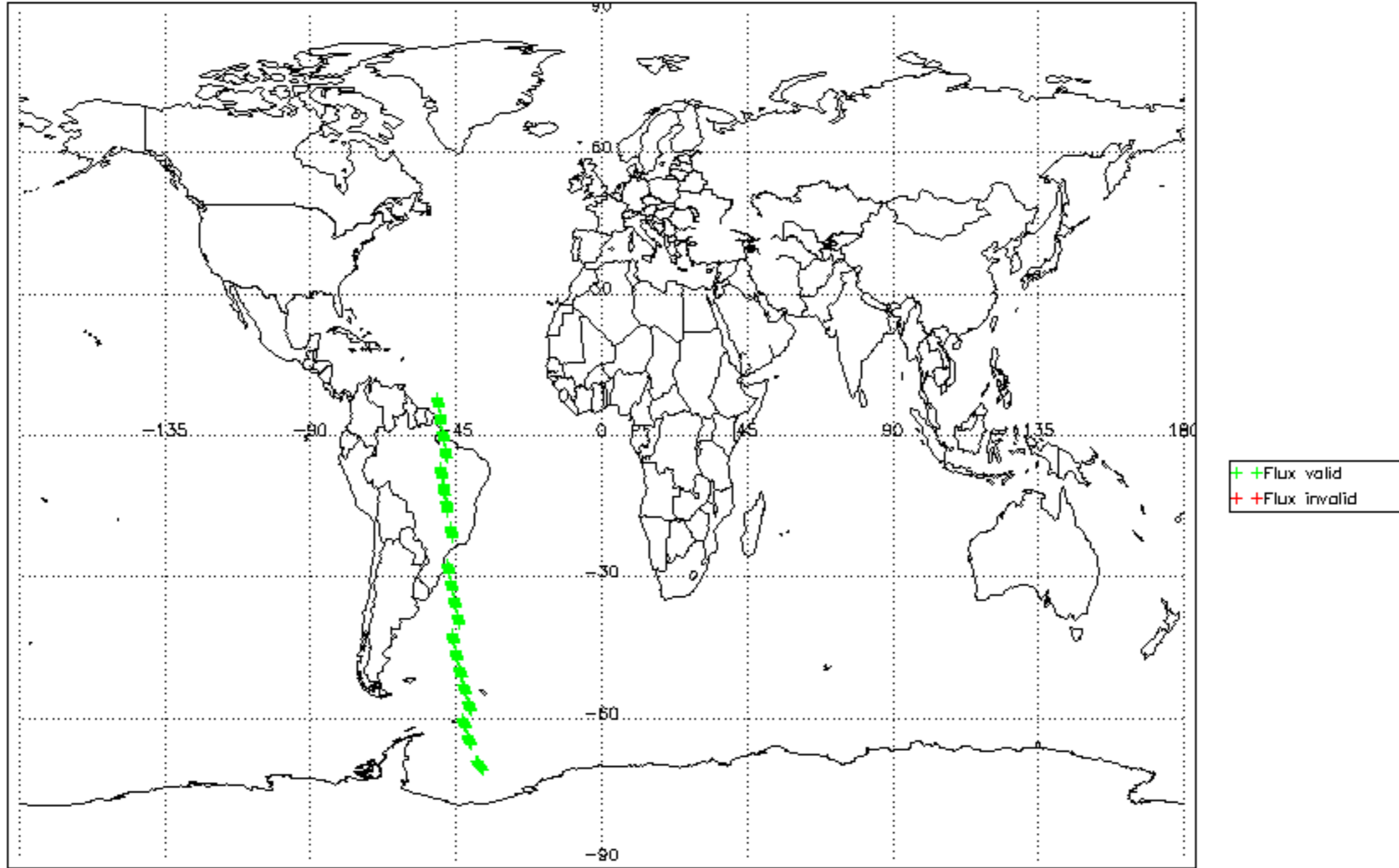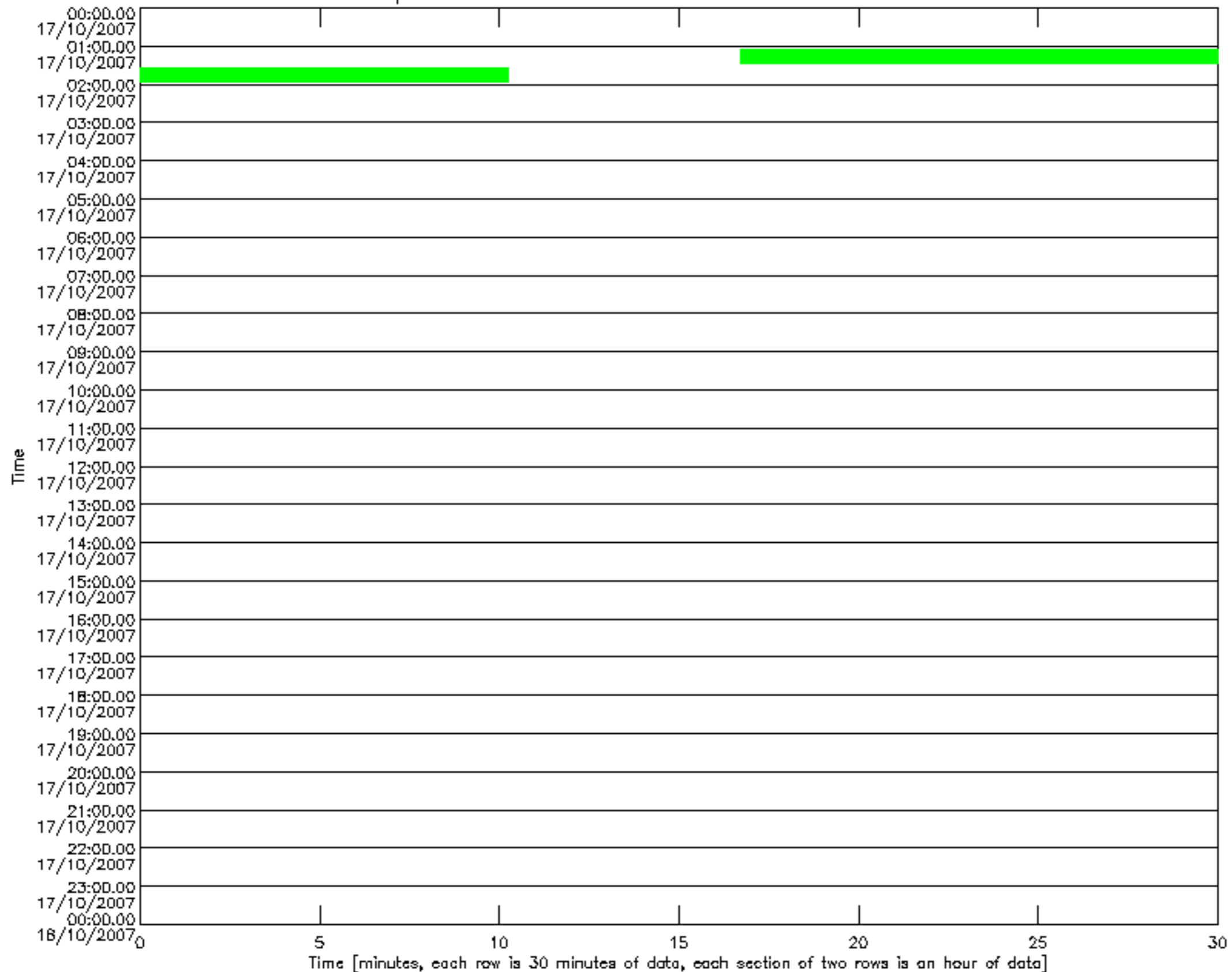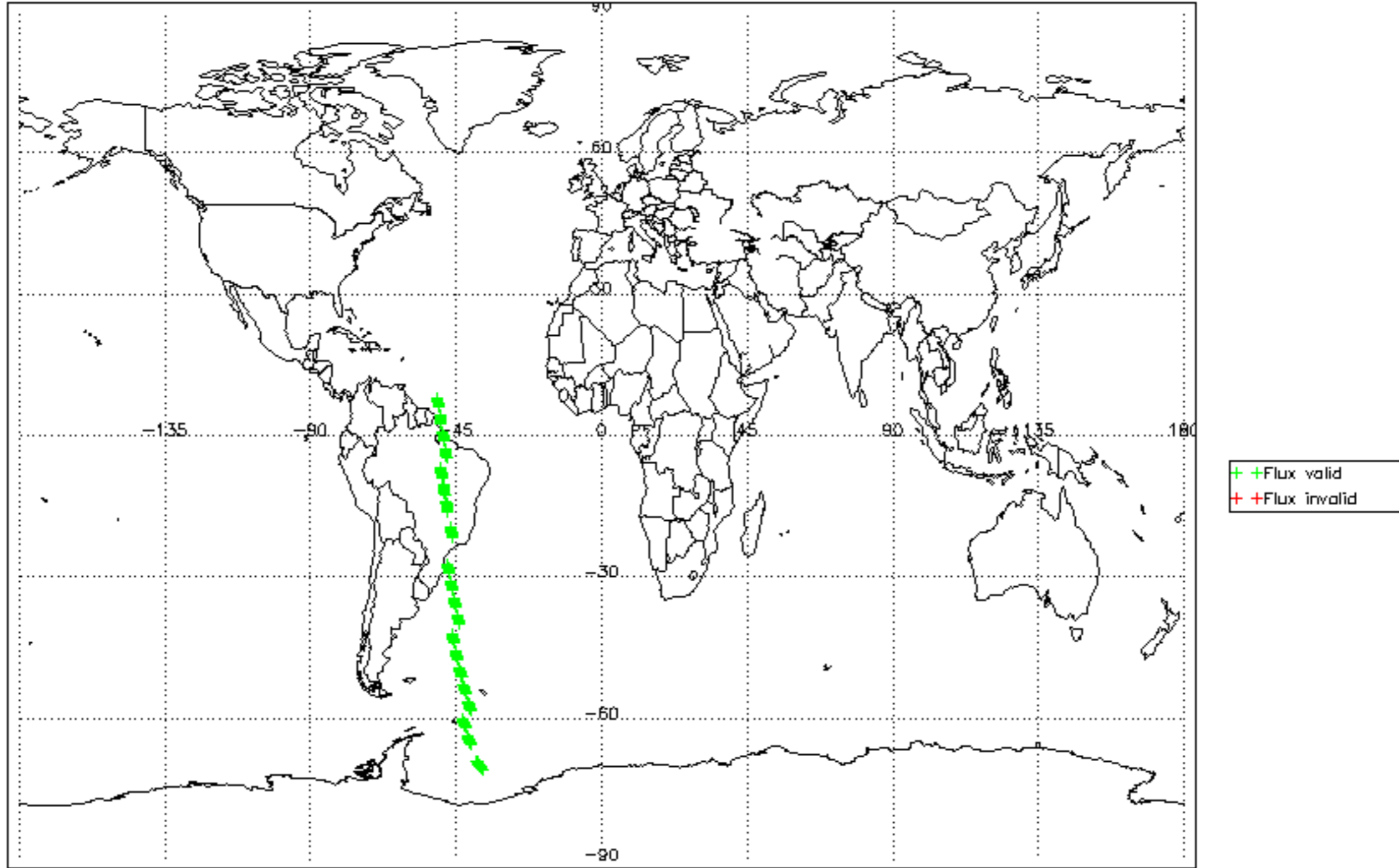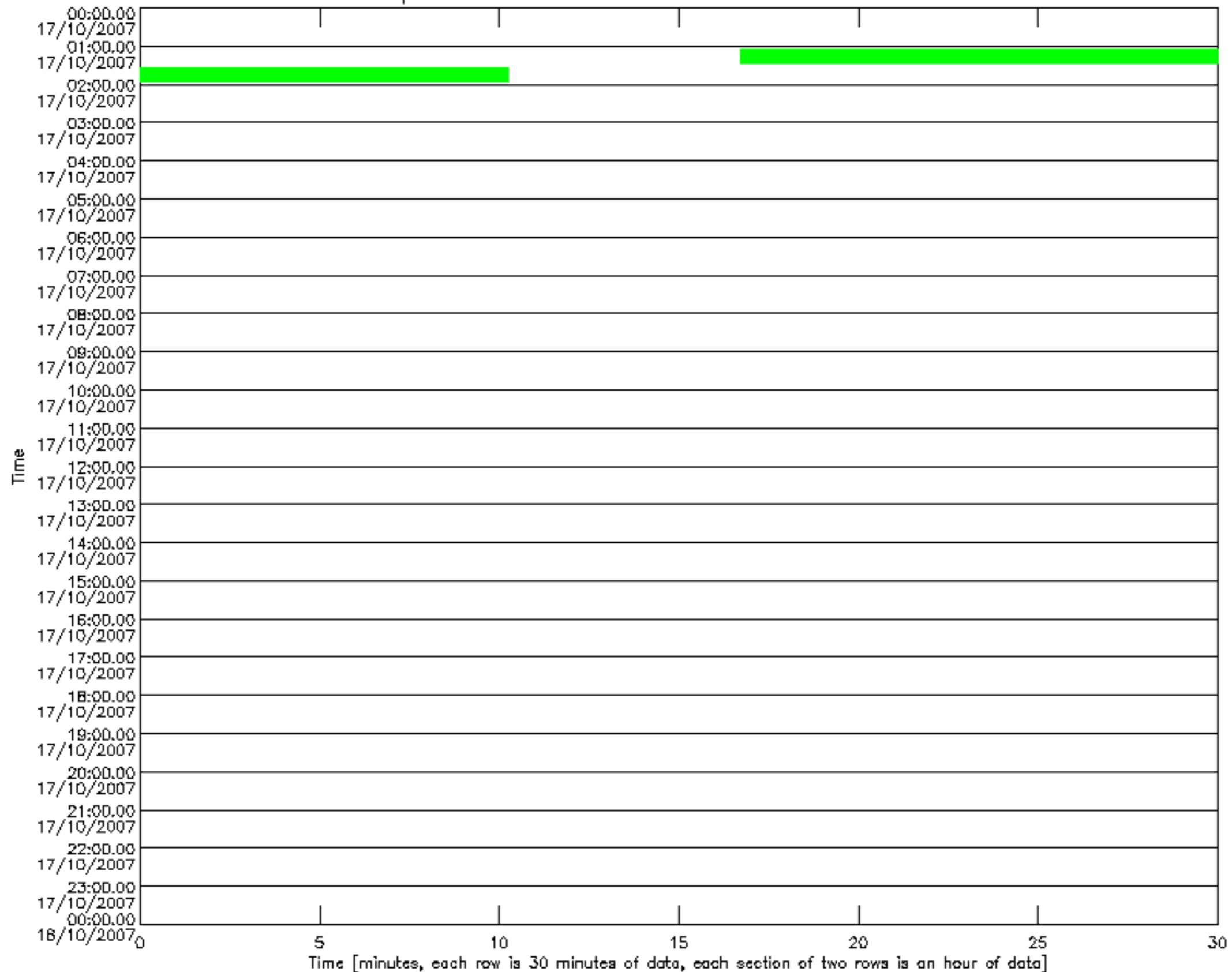

+ +Flux valid
+ +Flux invalid

Bar plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector B

Geolocation plot of MIPNL1P_MIPLEV1BMDS_detect_non_lin_flux detector B

Plot of MIPNL1P_SCAINFADS_nesr_data [W/(cm^2.sr.cm^(-1))] 1 of 1

Plot of MIPNL1P_MIPLEV1BMDS_loc_1 against time.
The vertical grid lines indicate estimated anx events.

Plot of MIPNL1P_MIPLEV1BMDS_loc_1 against relative time within orbit.
The colours indicate distinct orbits (see legend for anx).

Plot of estimated cloud top height (40.000000 indicates non-nominal scan)

Geolocation plot of cloud top height [km] (non-nominal scans are red)

Bar plot of ADFs used for ILS&SPECTRAL CAL FILE.
See legend for details.

Bar plot of ADFs used for GAIN CALIBRATION FILE.
See legend for details.

Time (each row is 6 hours)

MIP_CG1_AXVIEC20071015_150710_

Bar plot of ADFs used for LINE OF SIGHT FILE.
See legend for details.

Bar plot of ADFs used for INSTRUMENT CHAR FILE.
See legend for details.

MIP_CA1_AXVIEC2D050627_094412_

Bar plot of ADFs used for OFFSET VALIDATION FILE.
See legend for details.

Time (each row is 6 hours)

MIP_CD1_AXVIEC20071015_150132_

Bar plot of ADFs used for MICROWINDOWS FILE.
See legend for details.

MIP_MW1_AXVIEC20050627_094928_

Bar plot of ADFs used for PROCESS PARAMETERS FILE.
See legend for details.

MIP_PS1_AXVIEC20050627_100609_

Bar plot of ADFs used for ORBIT DATA FILE.
See legend for details.

Time (each row is 6 hours)

AUX_FRO_AXVPDS20071020_010111_