

# 1. MIPAS Daily Report for level 1 products

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### 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 characteristics of the data that are included into this report.

| Item                                     | Value                                    |
|--|--|
| Report version                           | v1.31 02-08-2006                         |
| Time of report generation                | 07NOV2006 02:32:09                       |
| Data source version                      | MIPAS/4.67-P                             |
| Processing scope for products            | 06OCT2006 00:00:00 to 07OCT2006 00:00:00 |
| Start time of first product within scope | 06OCT2006 06:49:02                       |
| Stop time of last product within scope   | 06OCT2006 08:29:32                       |
| Total number of level 1 products         | 1  |
| 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.

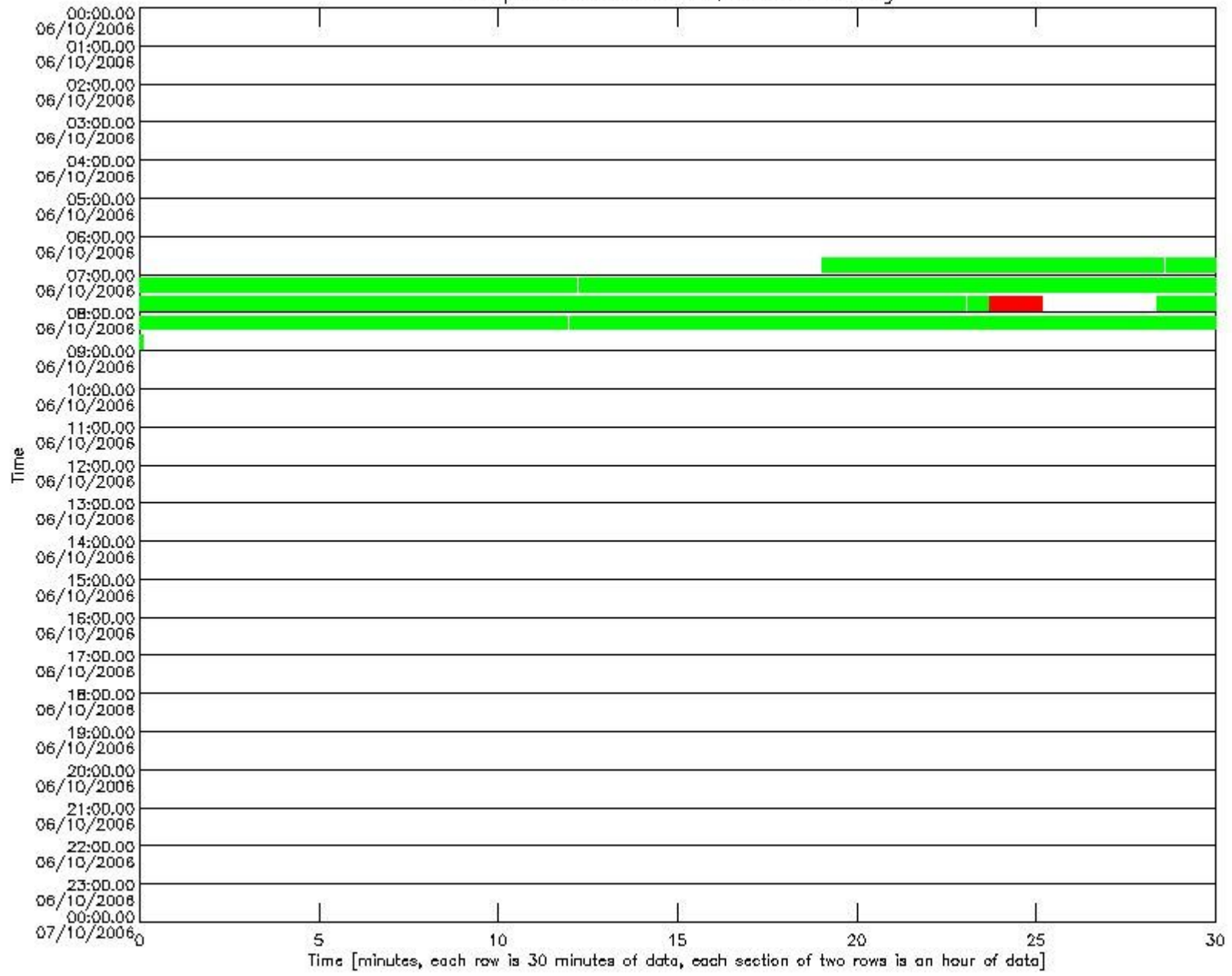
| # | Product name   | Start time         | Stop time          | Prod err | Slice position (prod/tot) |
|---|--|--------------------|--------------------|----------|---------------------------|
| 0 | MIP_NL__1PPDPA20061006_064902_000060302051_00450_24051_0898.N1 | 06OCT2006 06:49:02 | 06OCT2006 08:29:32 | 0        | 0/0                       |

## 1.2 Product Quality Indicators

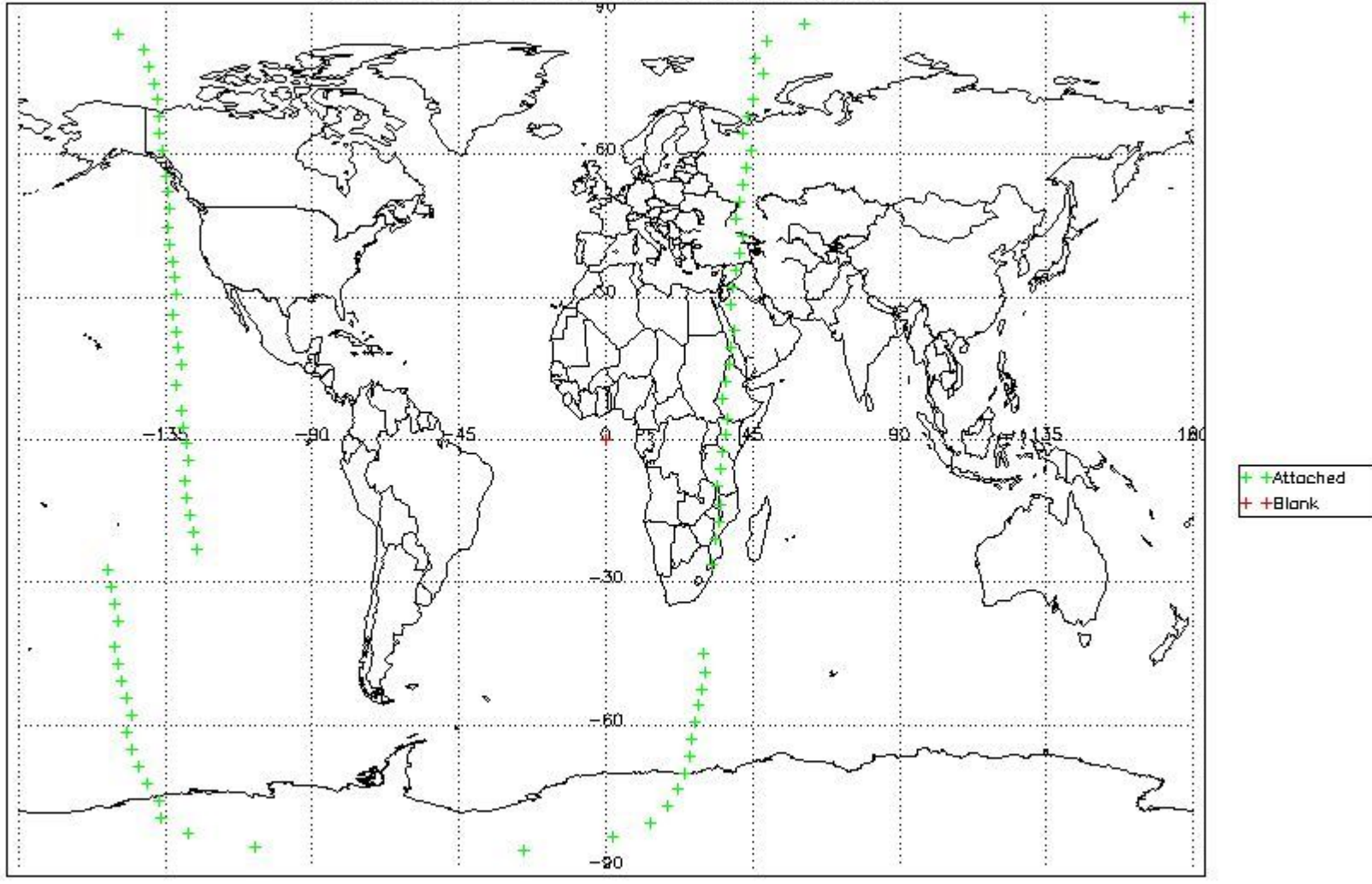
This report contains an analysis on product quality related parameters within the MIP\_NL\_\_1P product.

### 1.2.1 Trends and geolocation of Summary Quality ADS

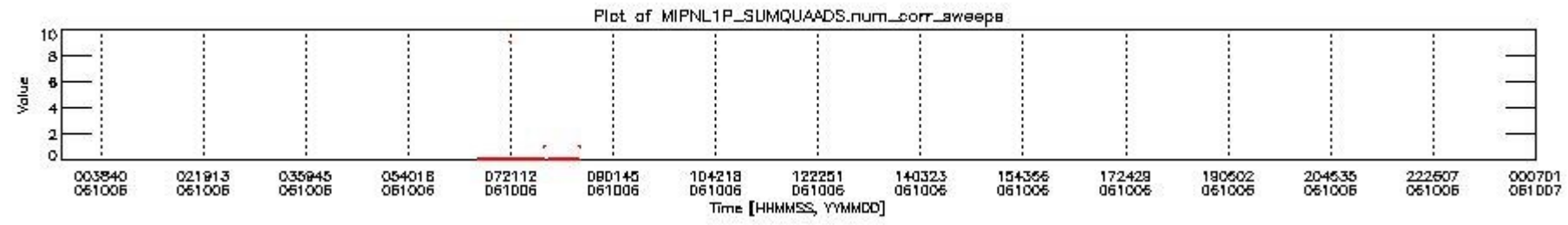
Bar plot of MIPNL1P\_SUMQUAADS.attach\_flag



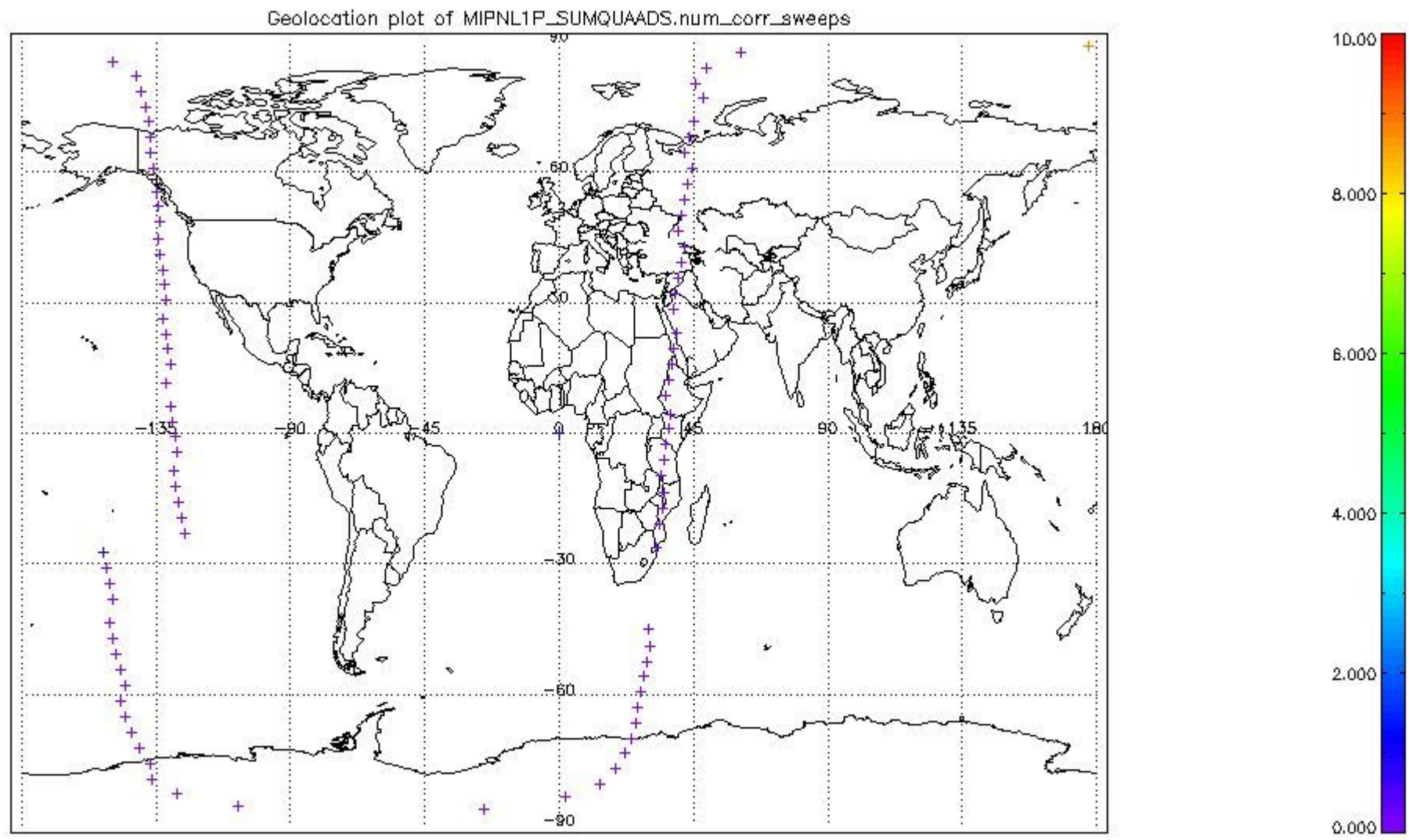
Geolocation plot of MIPNL1P\_SUMQUADS.attach\_flag



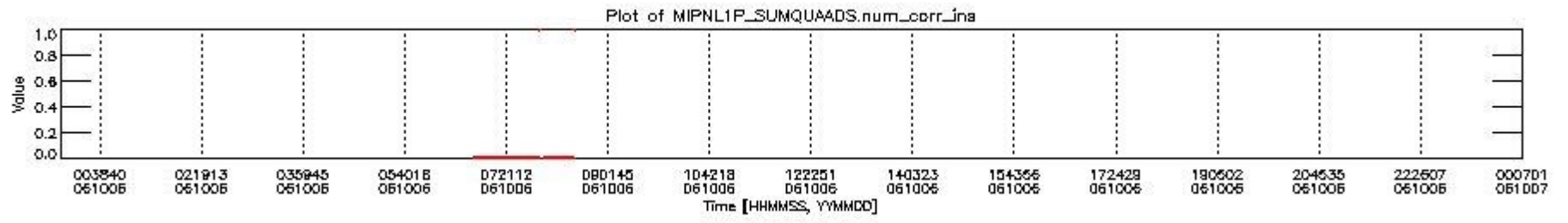
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_1.PNG



mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_2.PNG

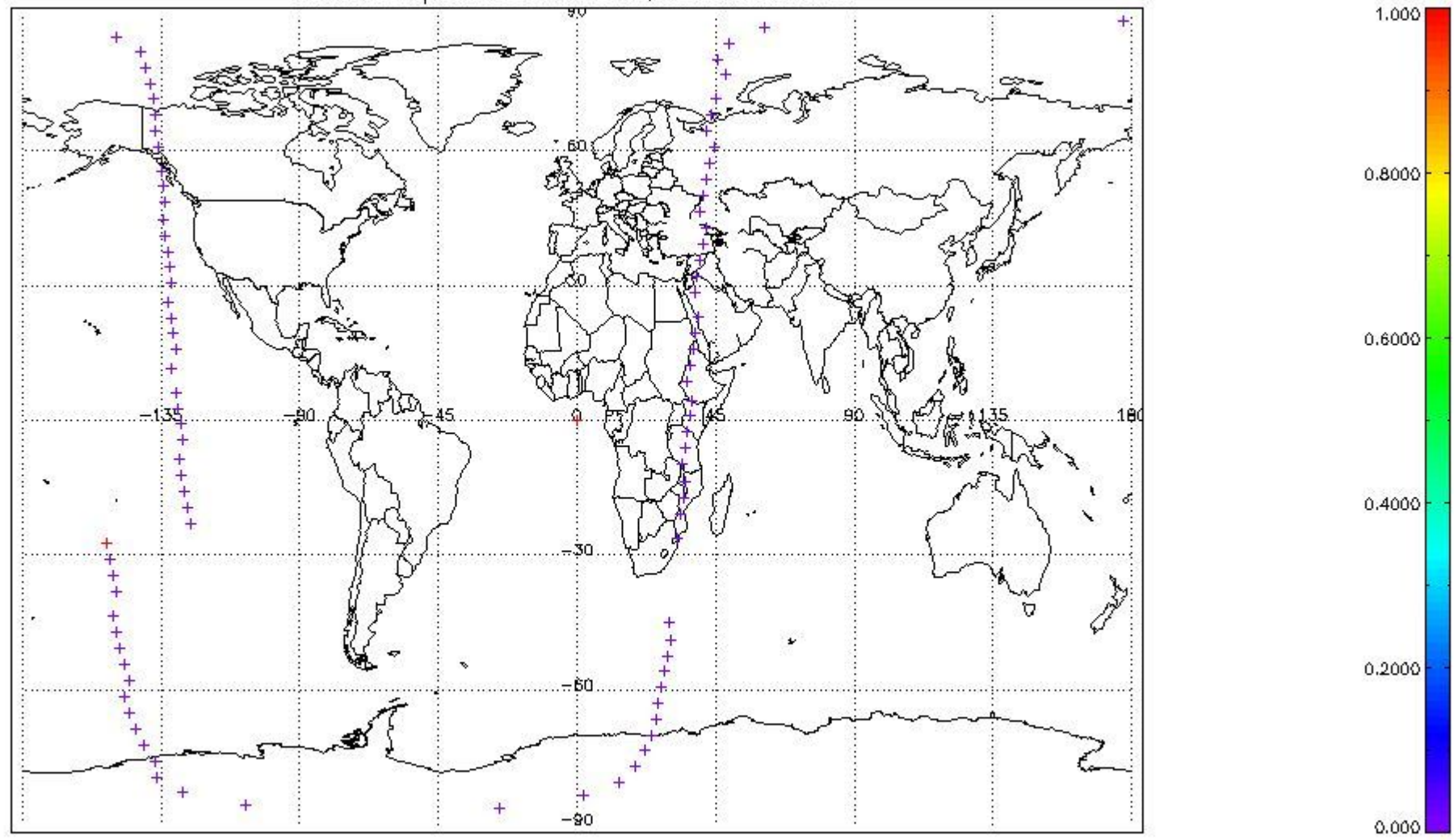


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_3.PNG

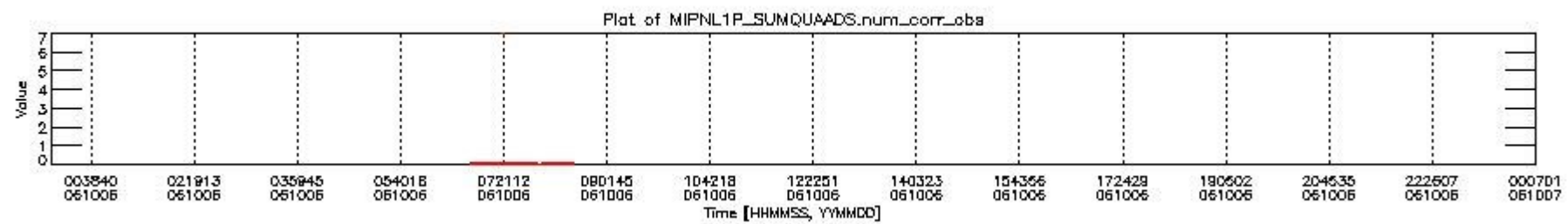


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_4.PNG

Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_ins

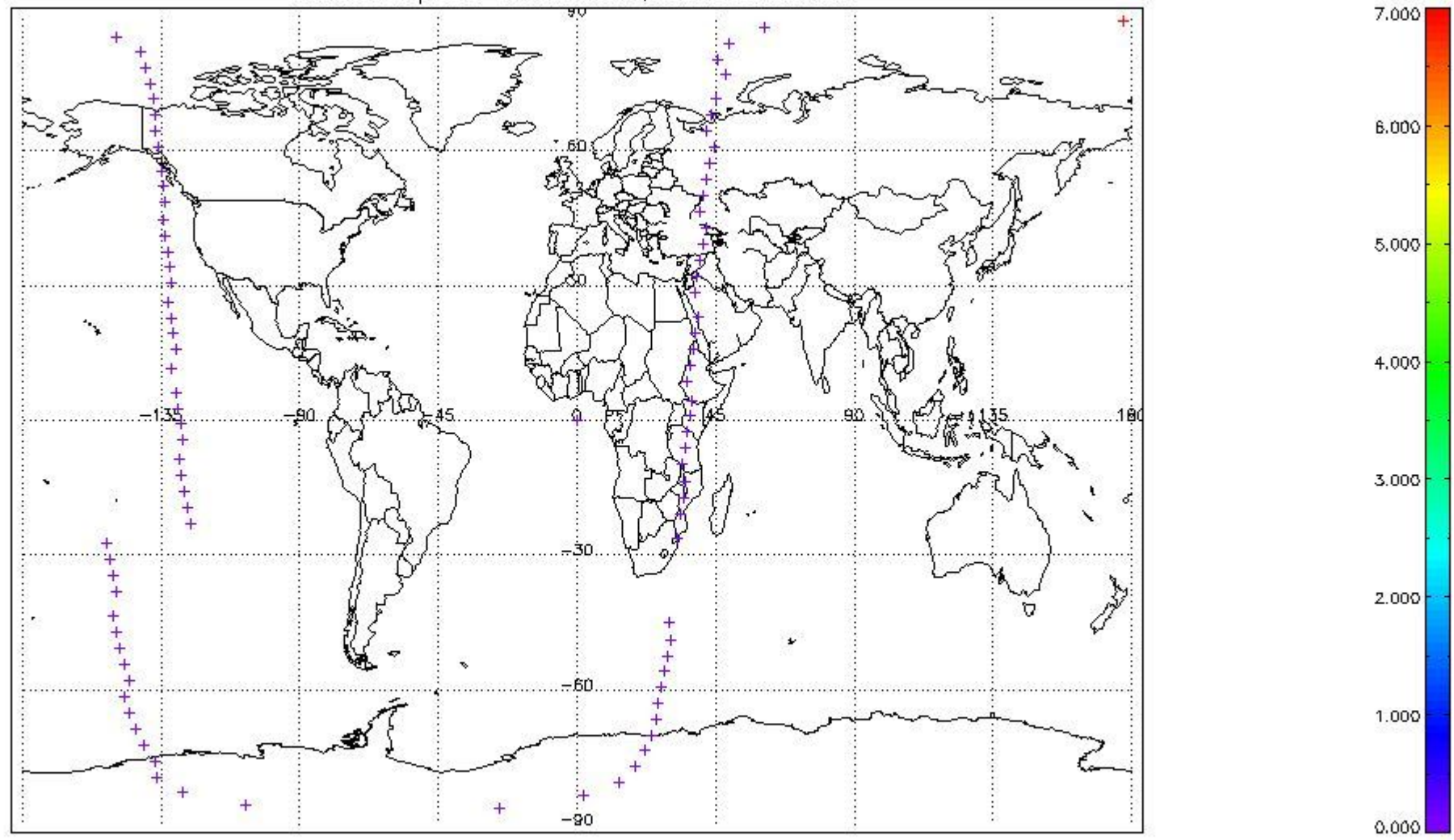


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_5.PNG

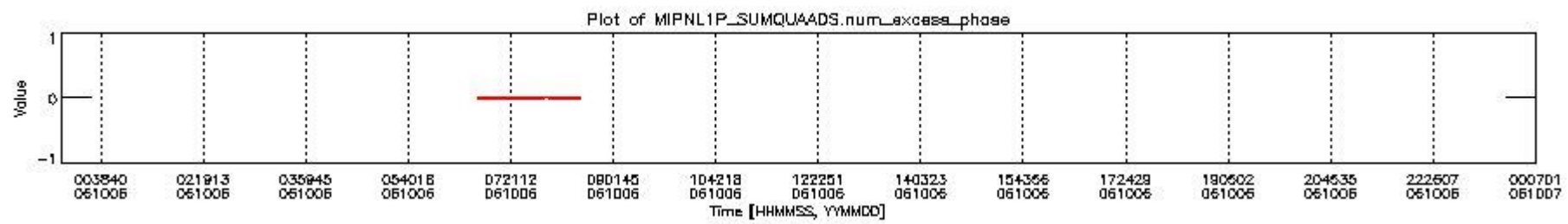


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_6.PNG

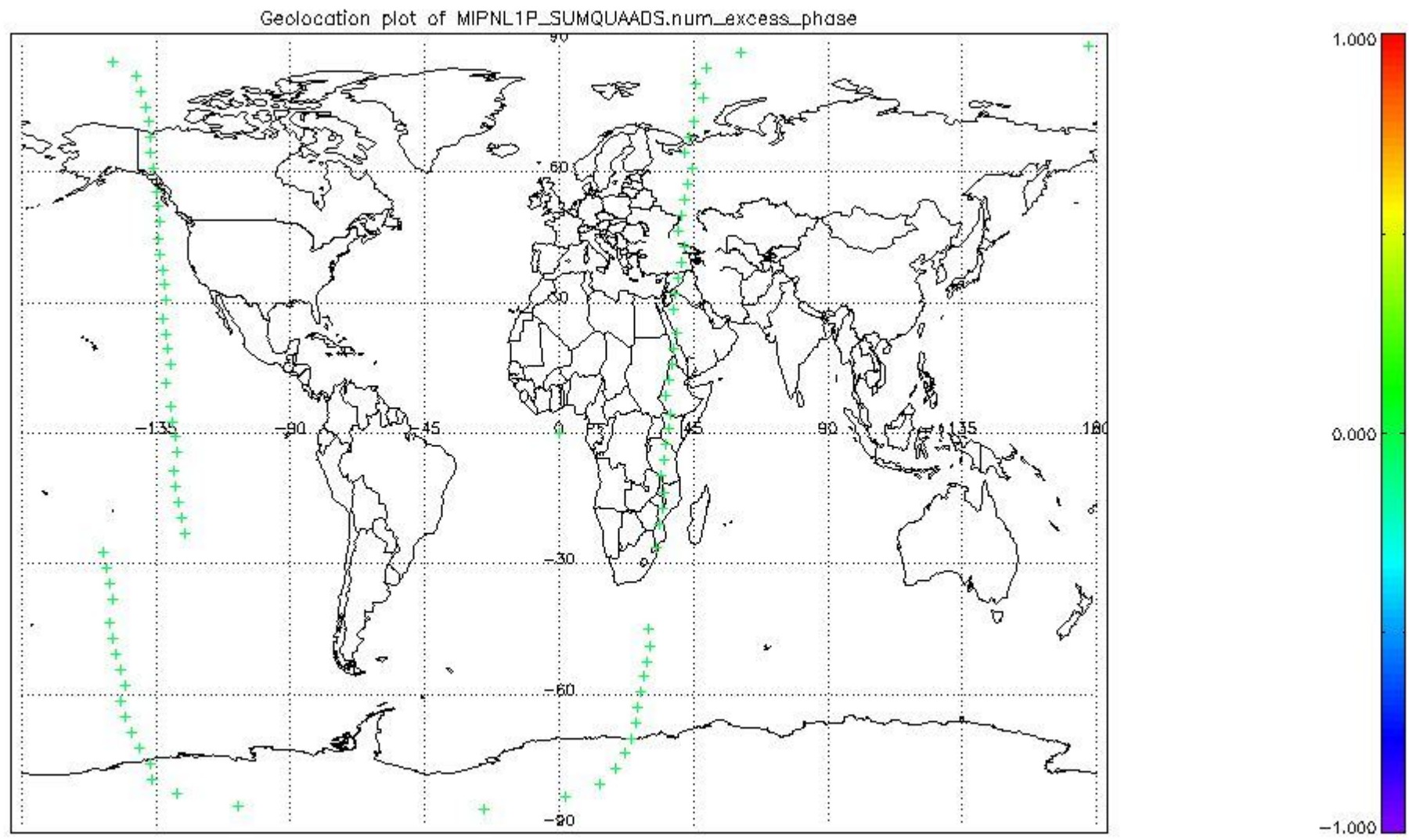
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_obs



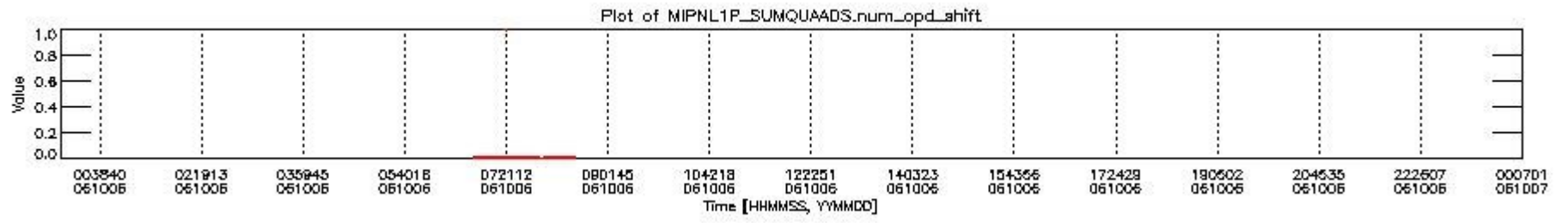
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_7.PNG



mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_8.PNG

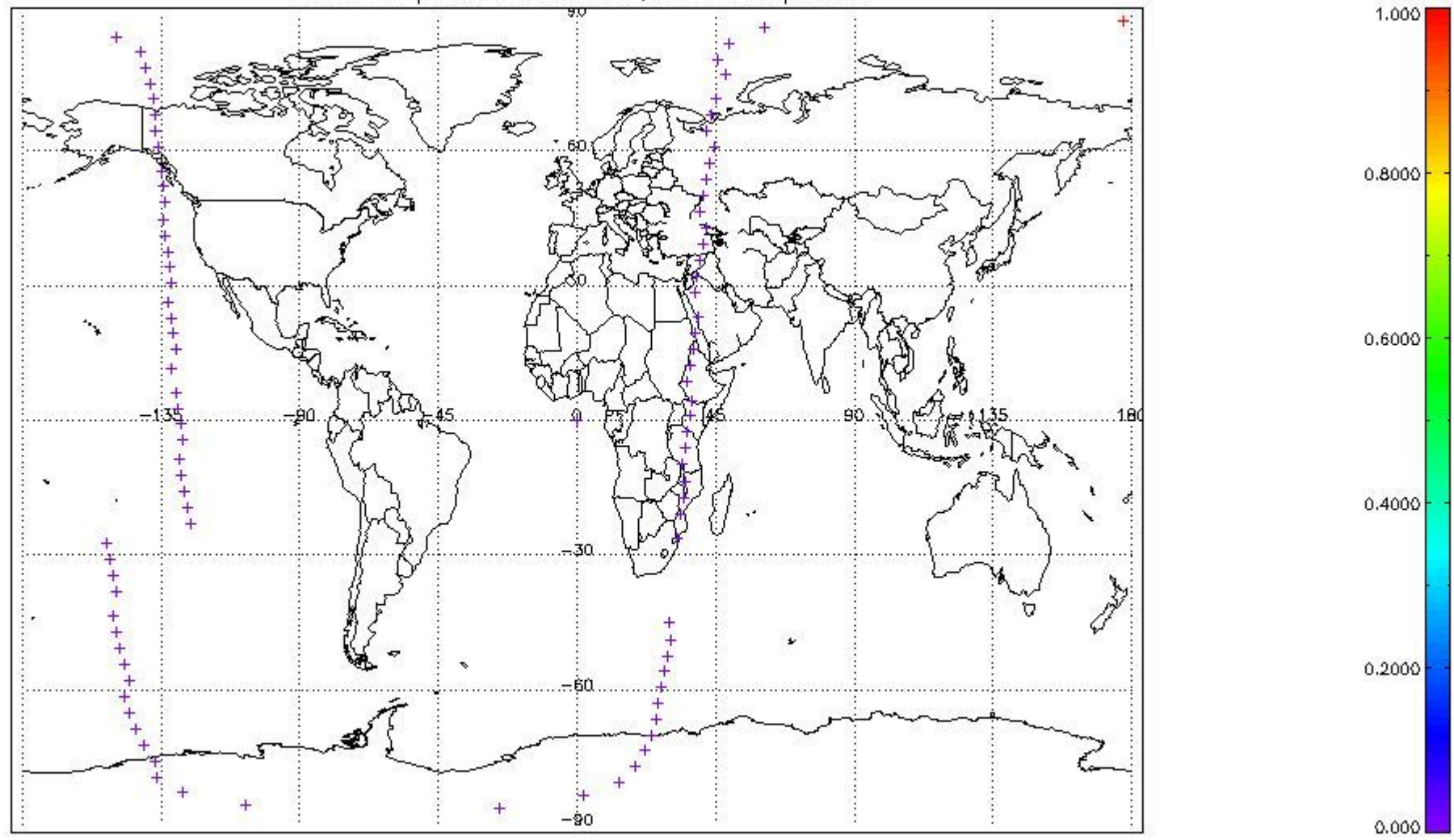


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_9.PNG

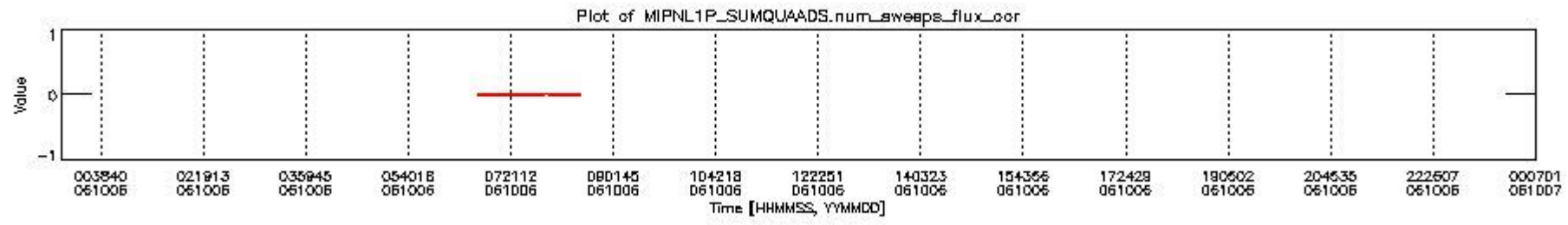


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_10.PNG

Geolocation plot of MIPNL1P\_SUMQUAADS.num\_opd\_shift

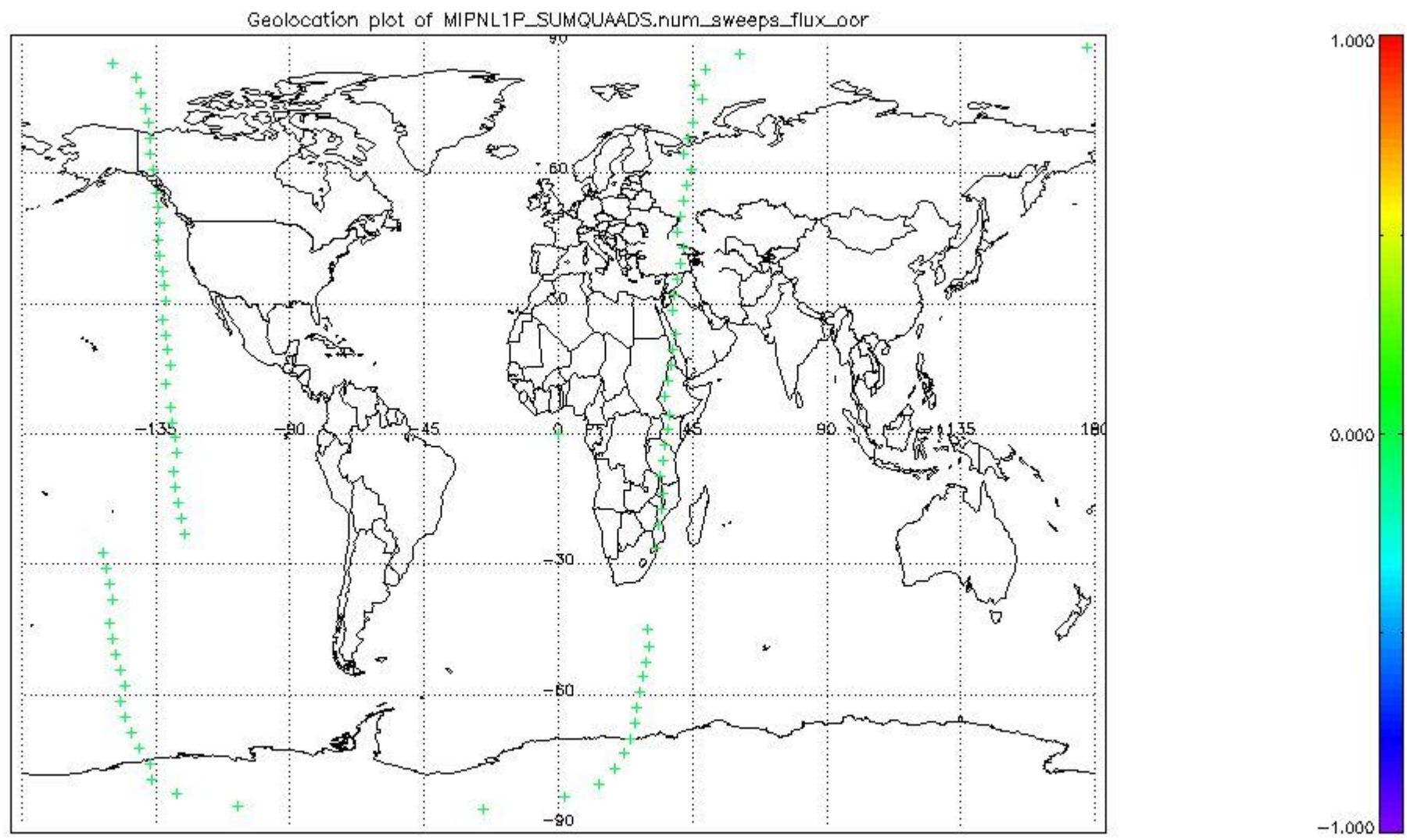


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_11.PNG



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_12.PNG

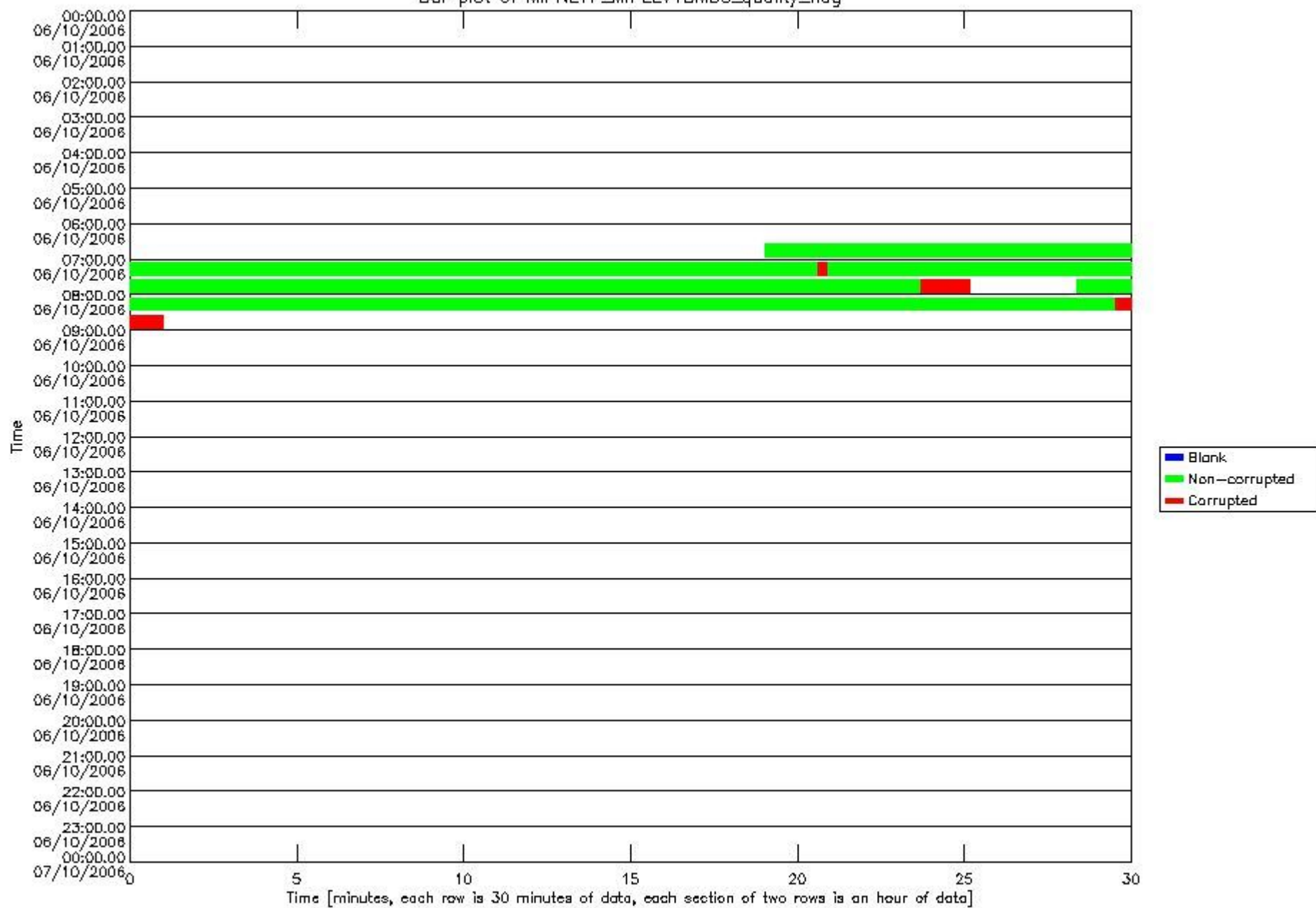




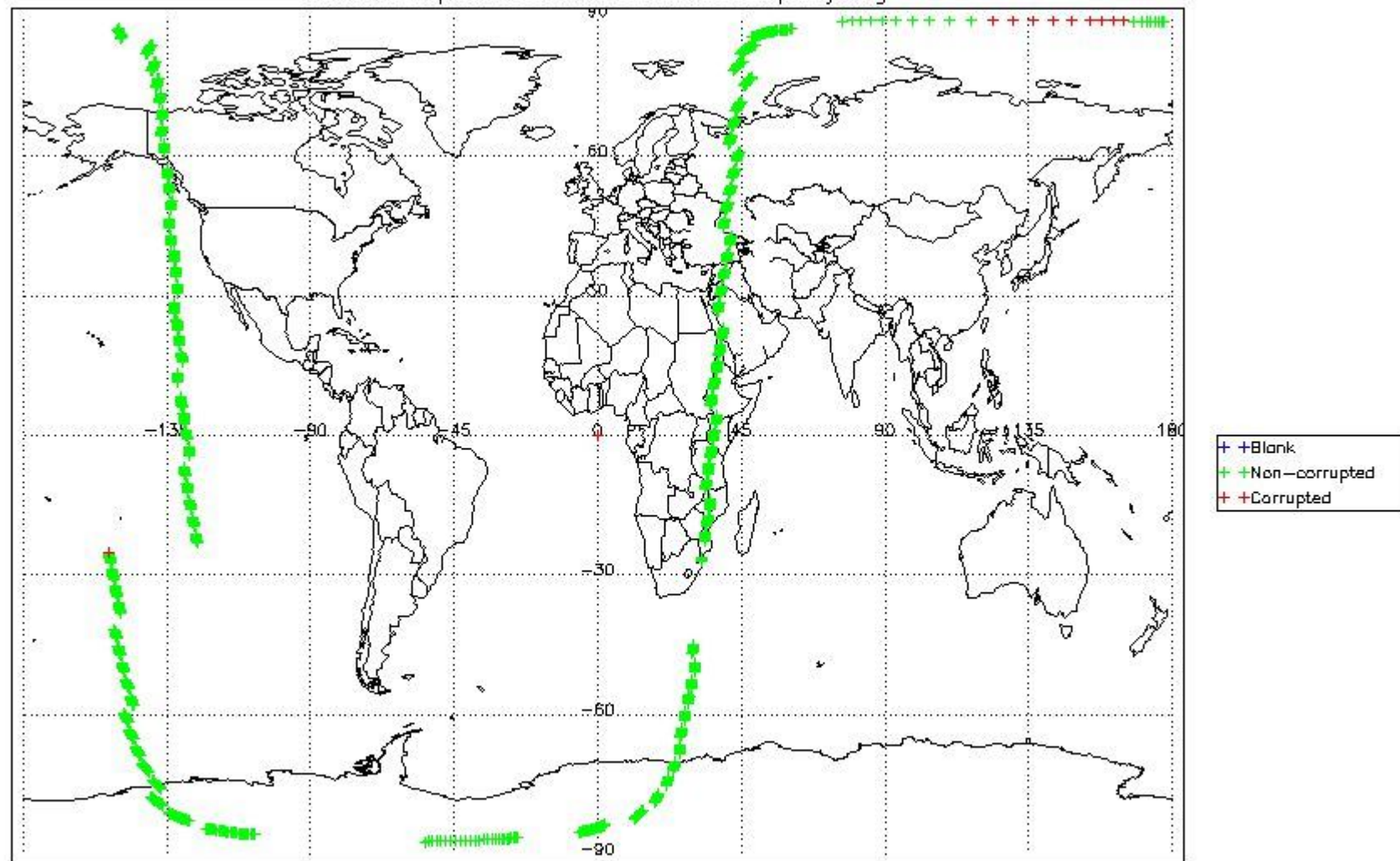
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_13.PNG

1.2.2 Trends and geolocation of MIPAS LEVEL 1 MDS

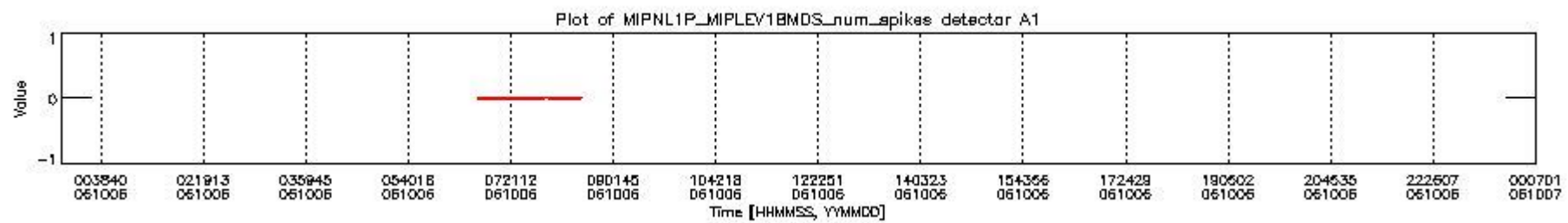
Bar plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag



Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag

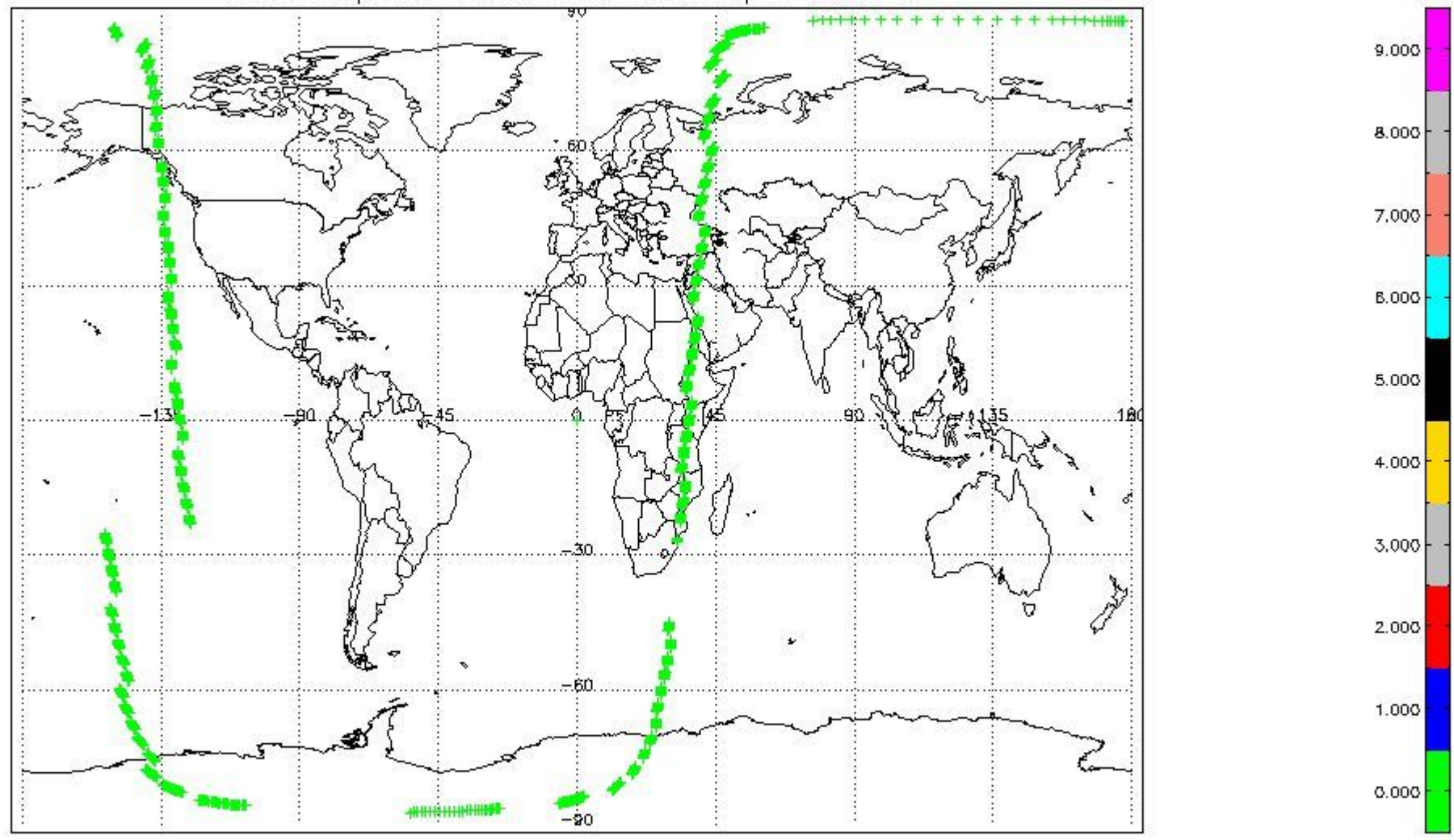


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_15.PNG

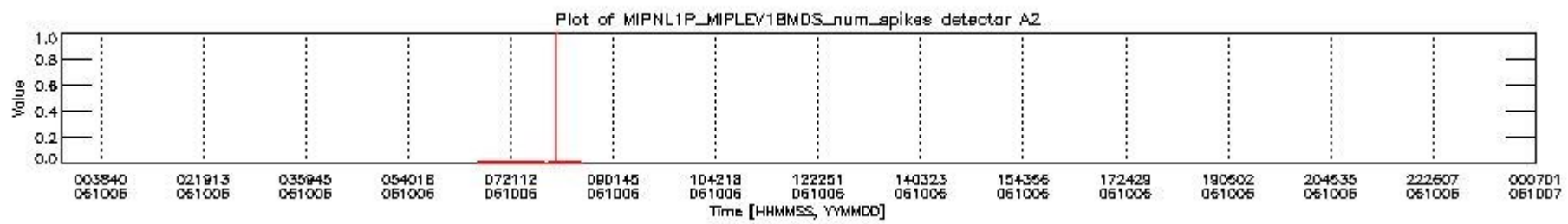


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_16.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A1

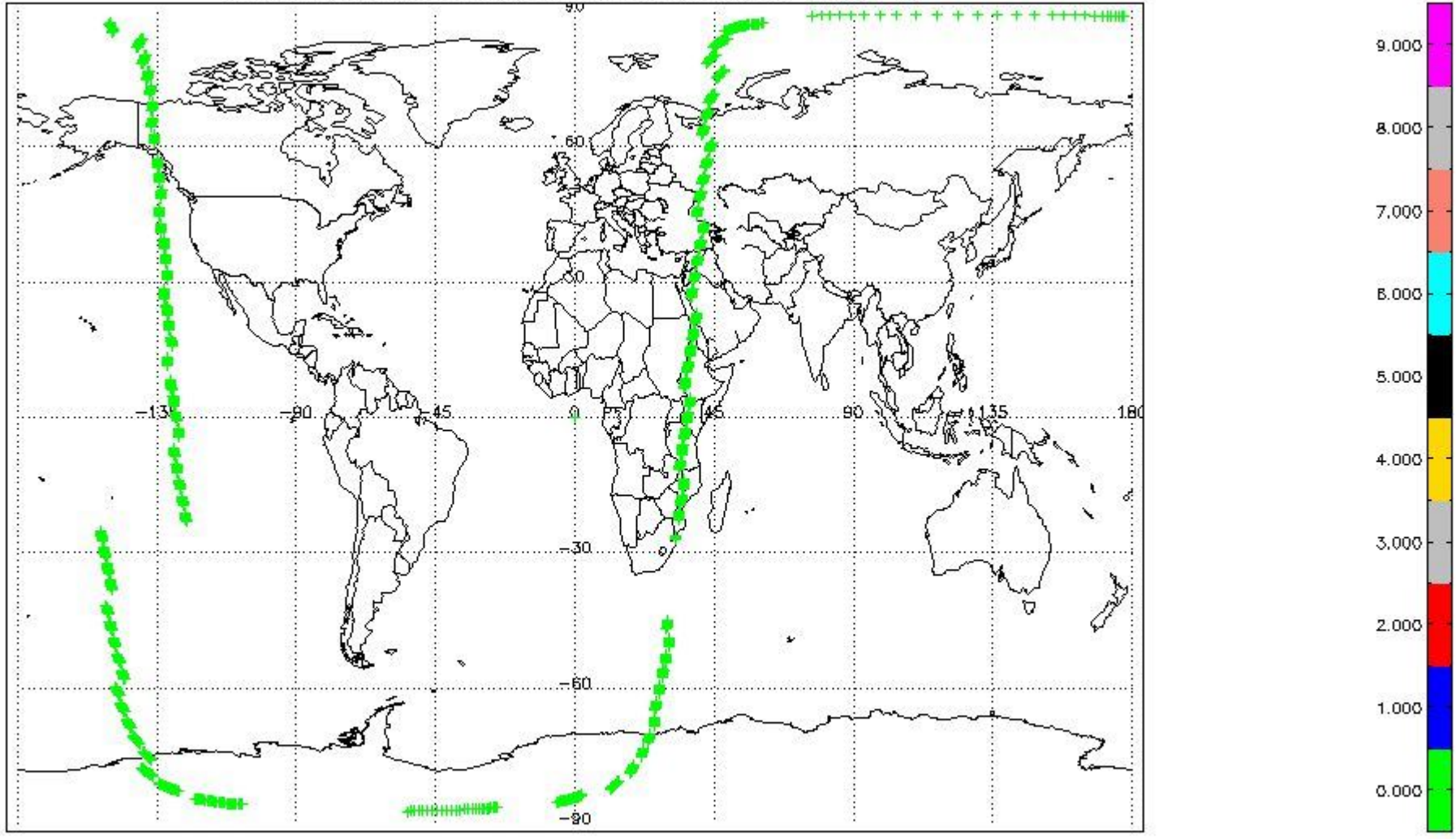


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_17.PNG

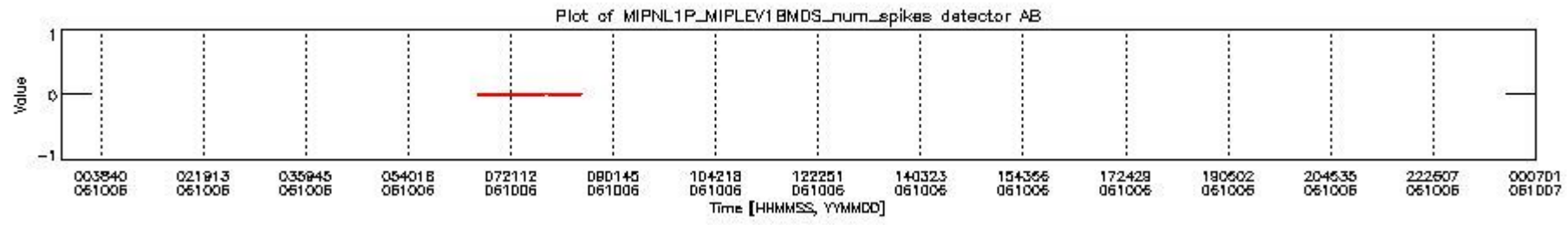


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_18.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A2

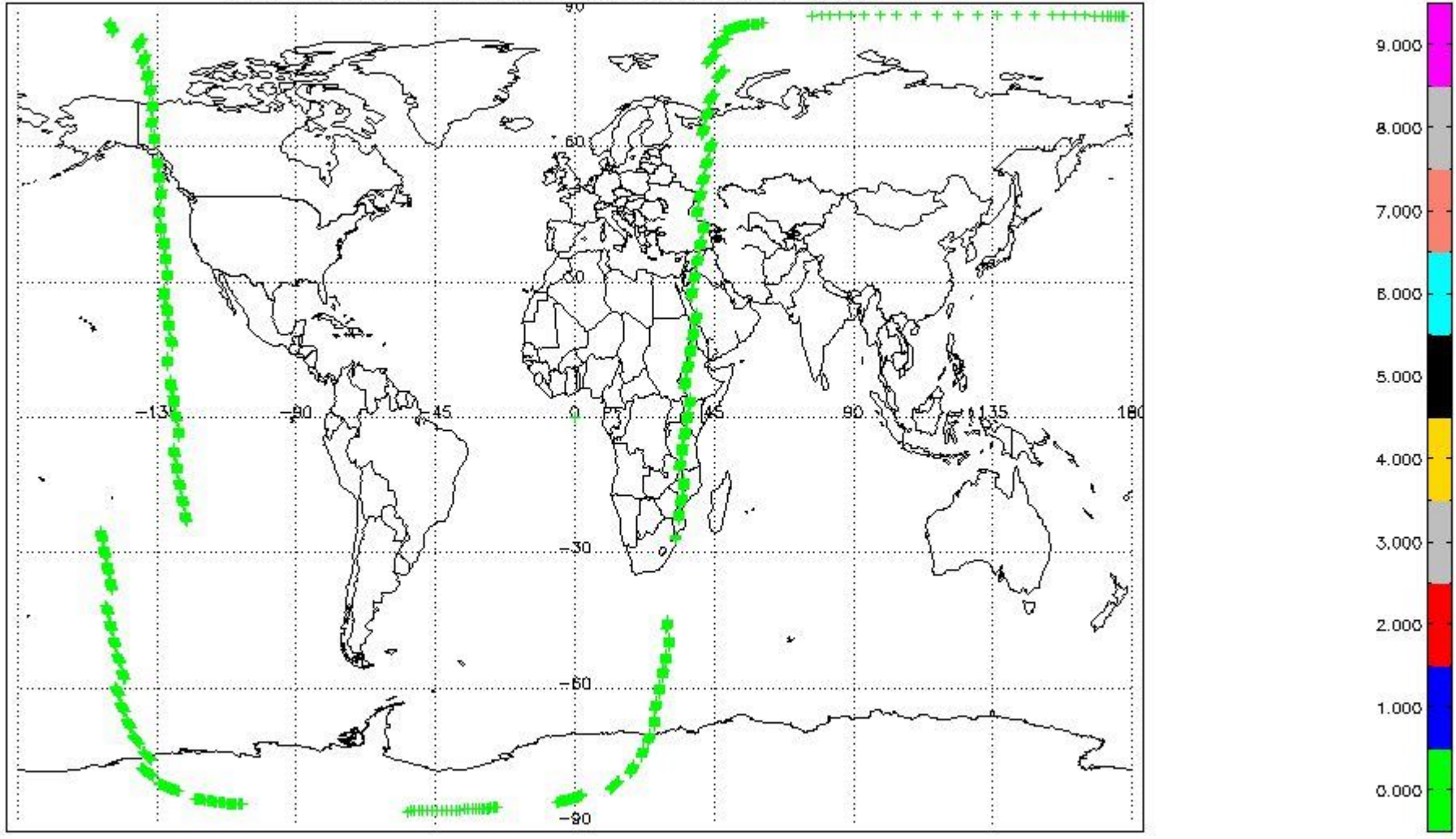


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_19.PNG

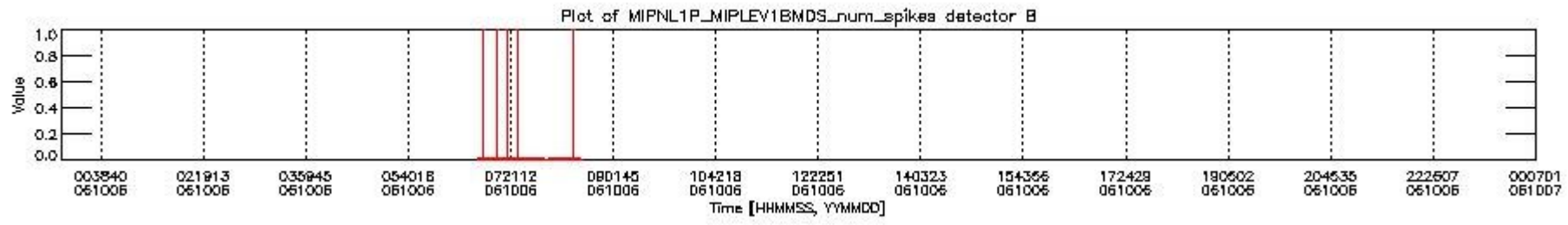


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_20.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector AB

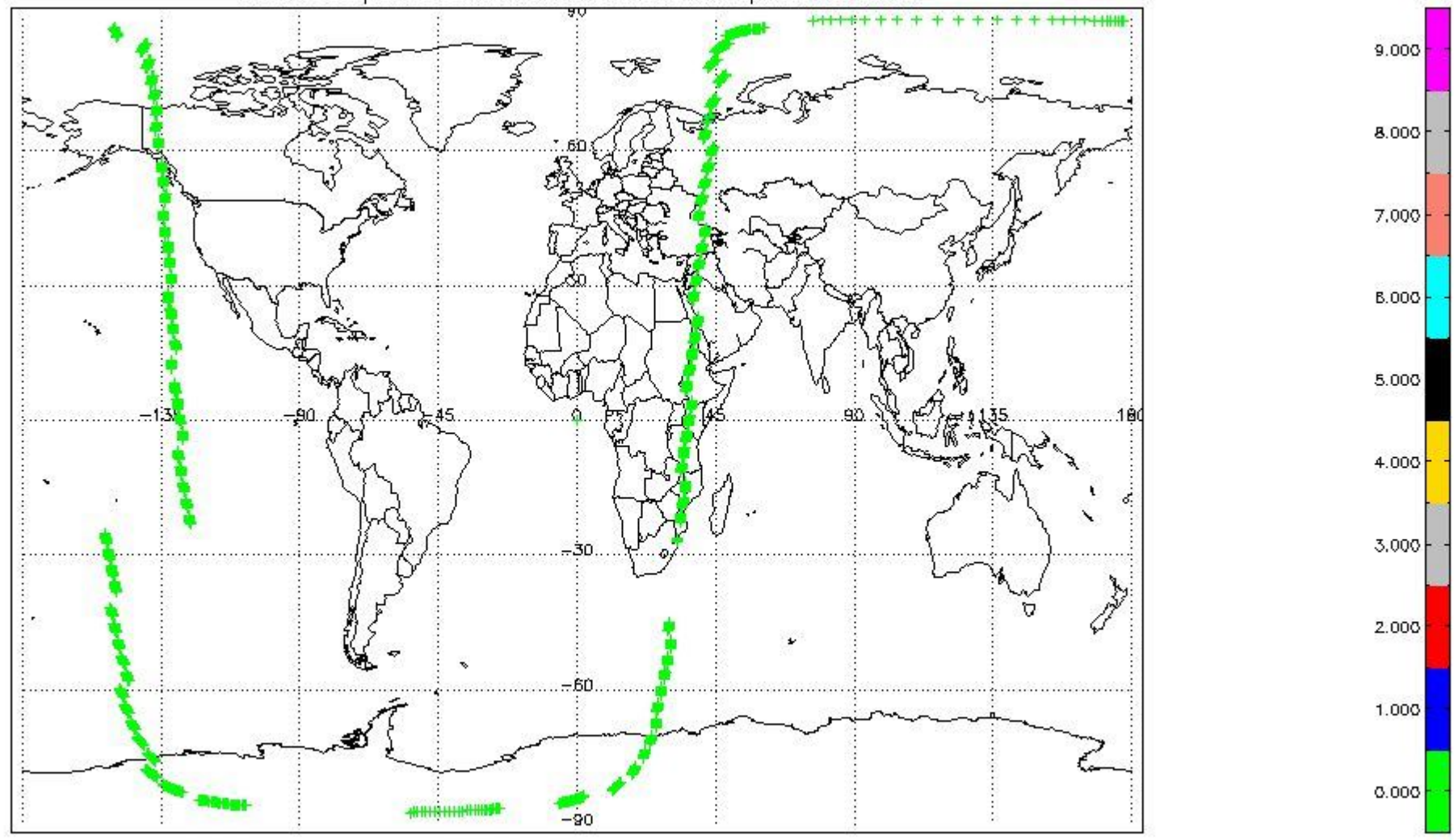


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_21.PNG

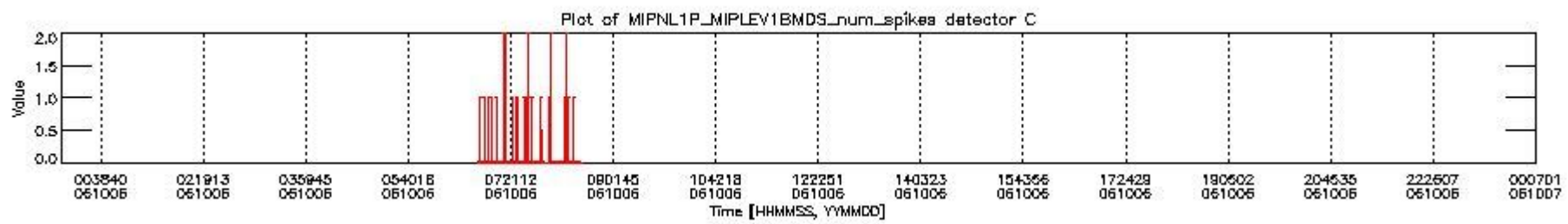


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_22.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector B

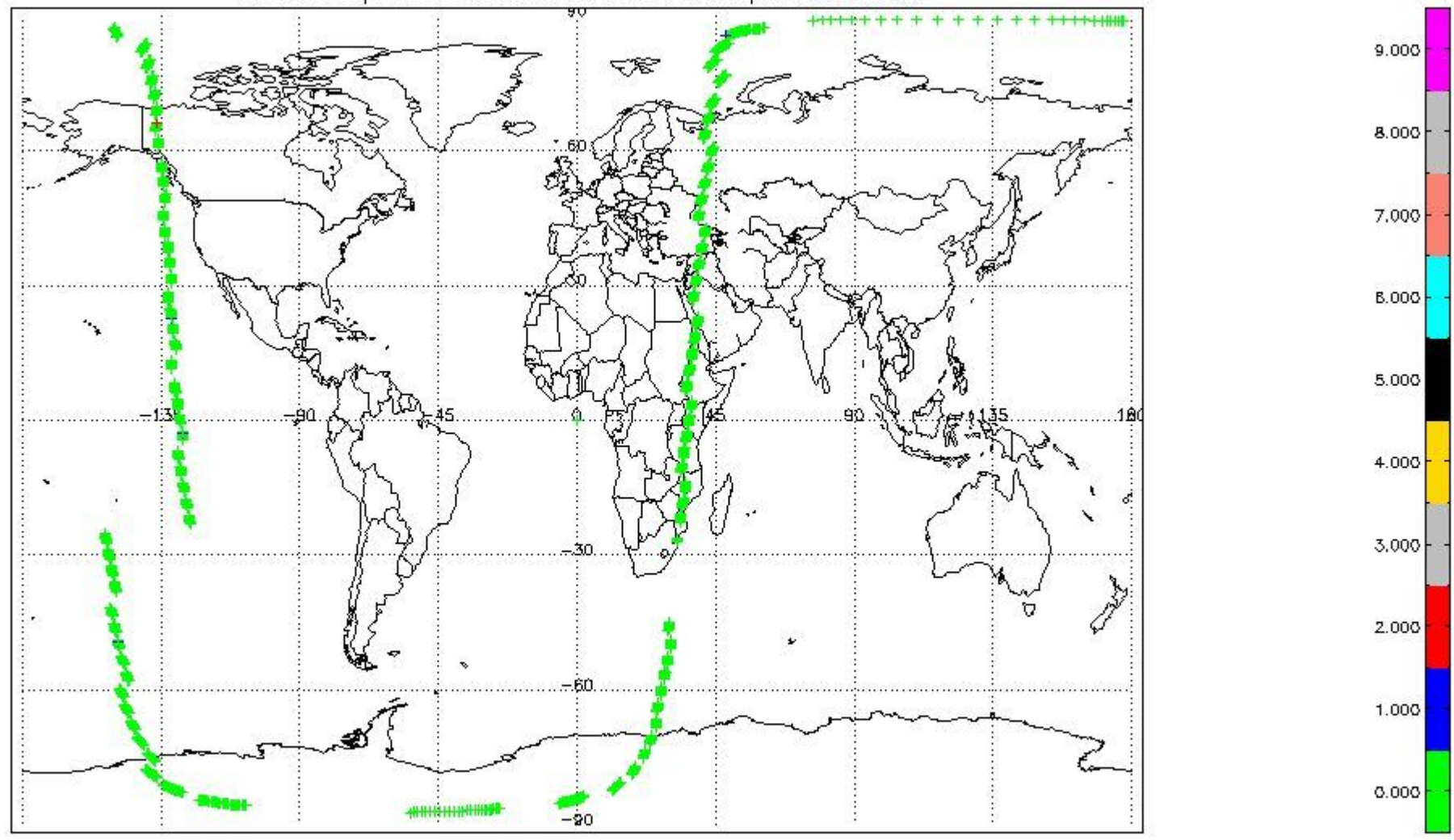


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_23.PNG

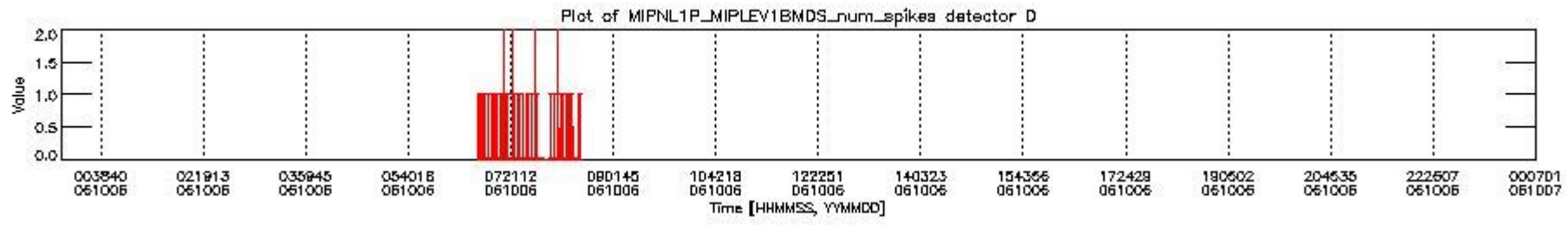


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_24.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector C



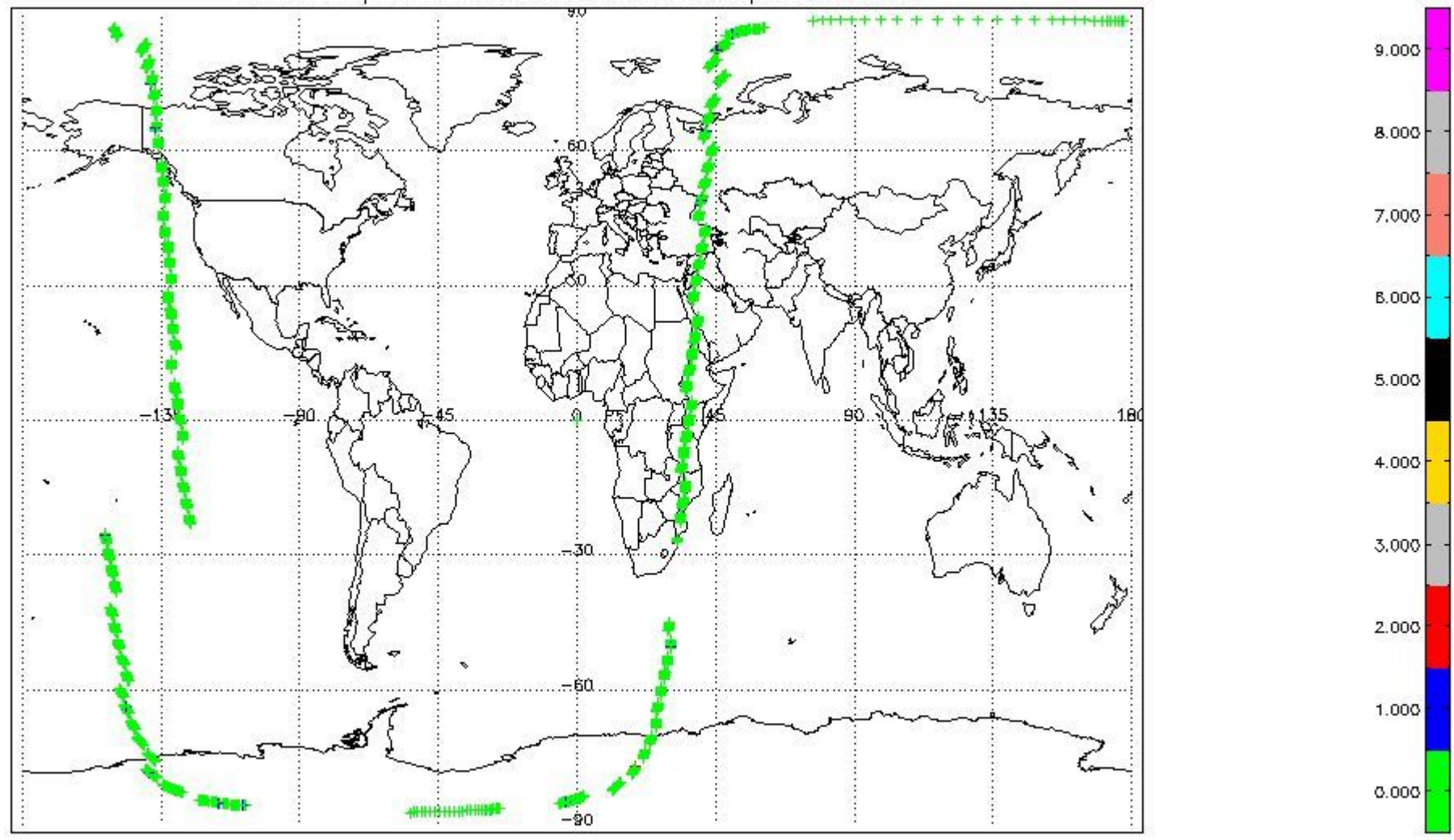
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_25.PNG



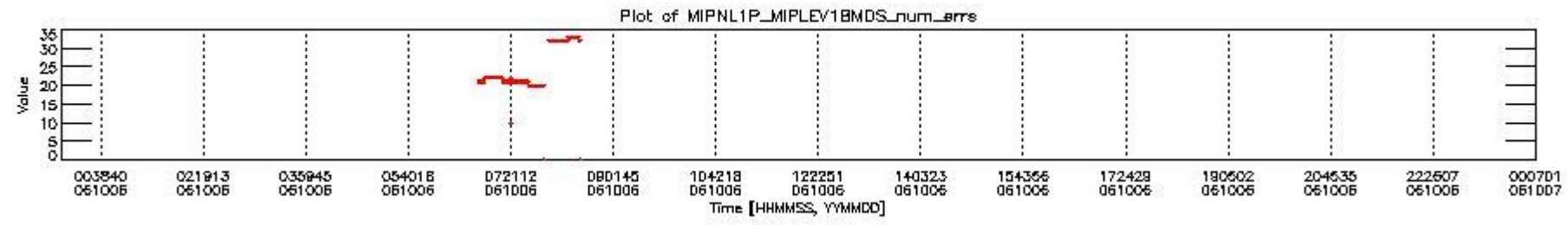
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_26.PNG



Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector D

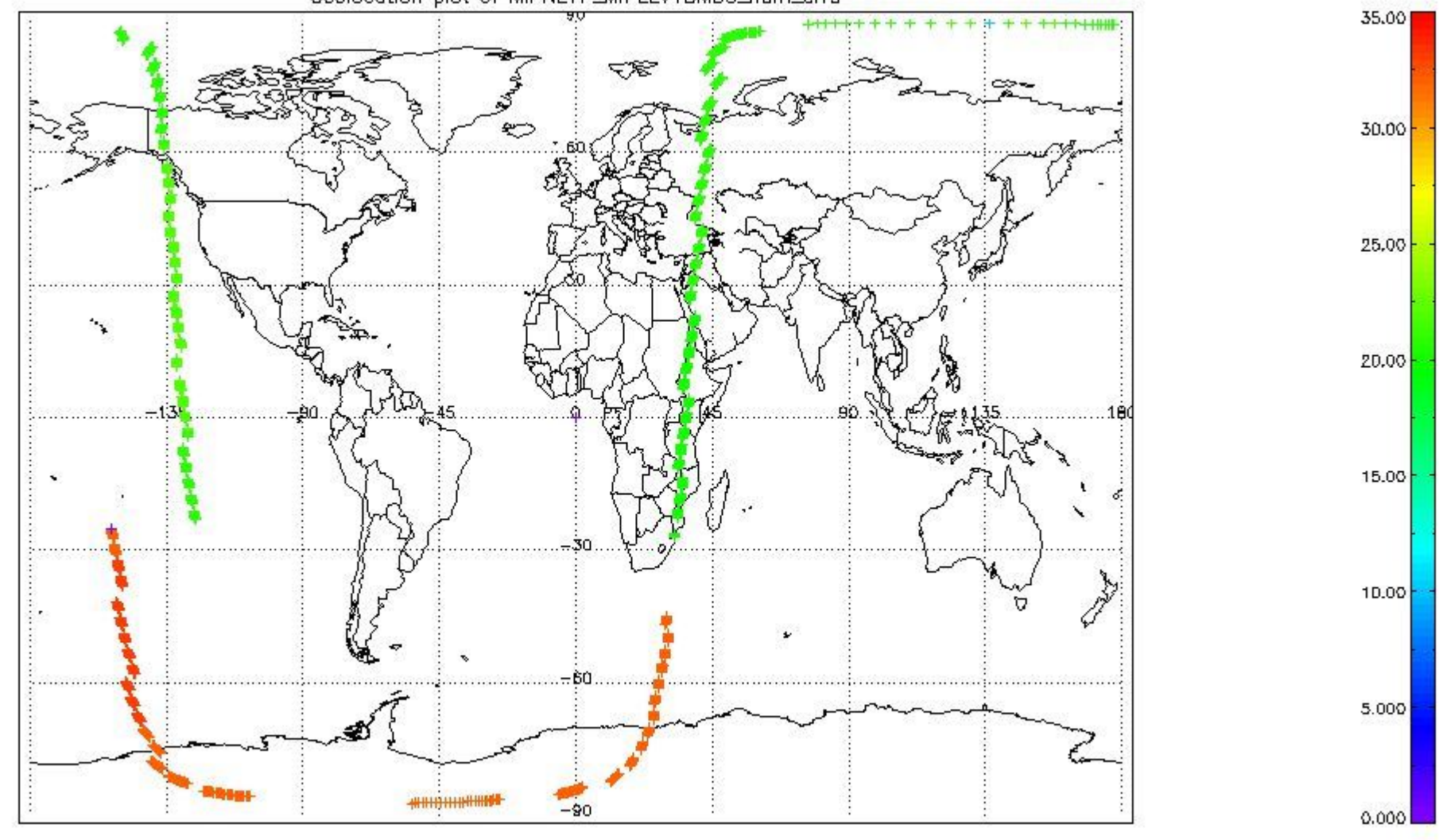


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_27.PNG

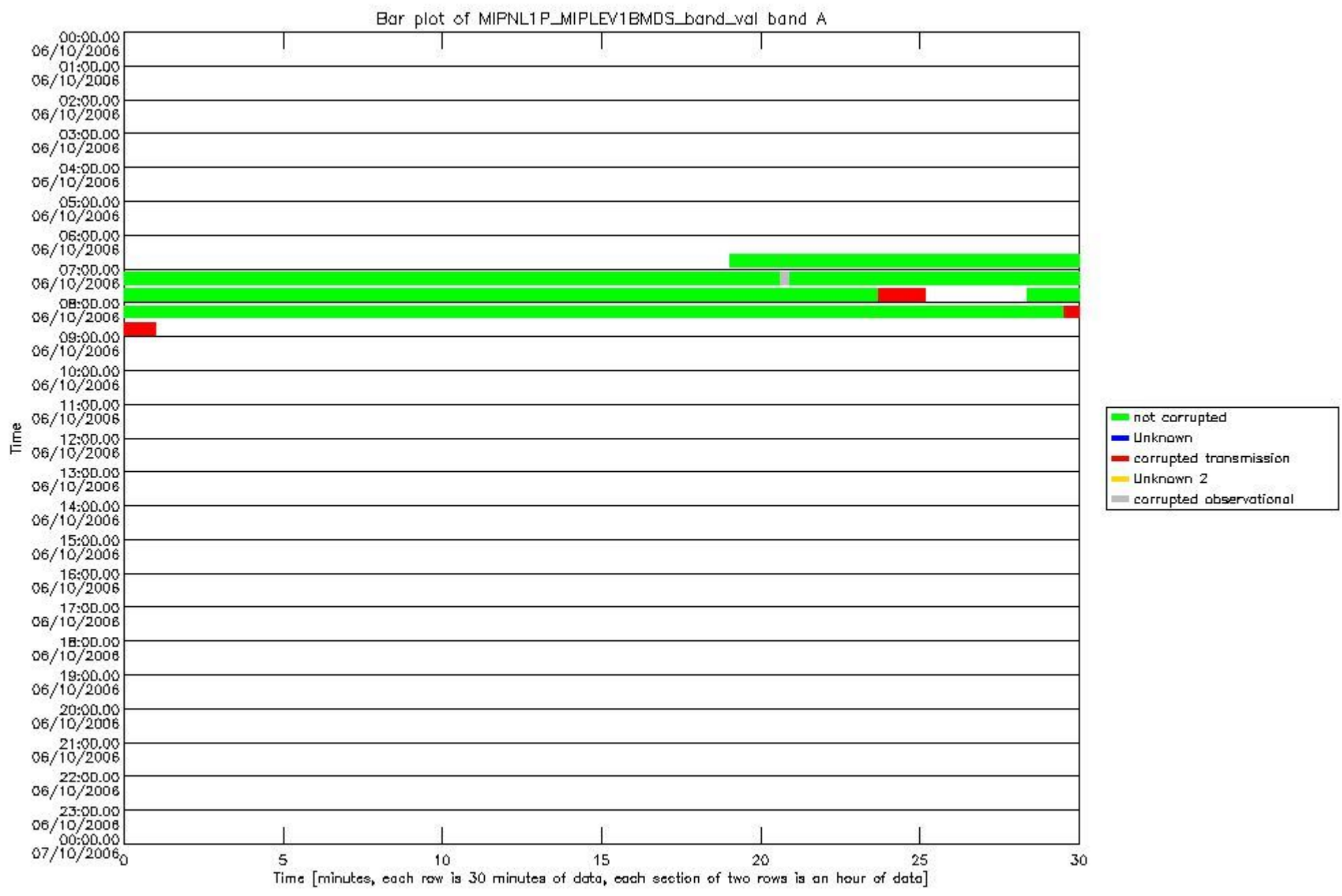


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_28.PNG

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs

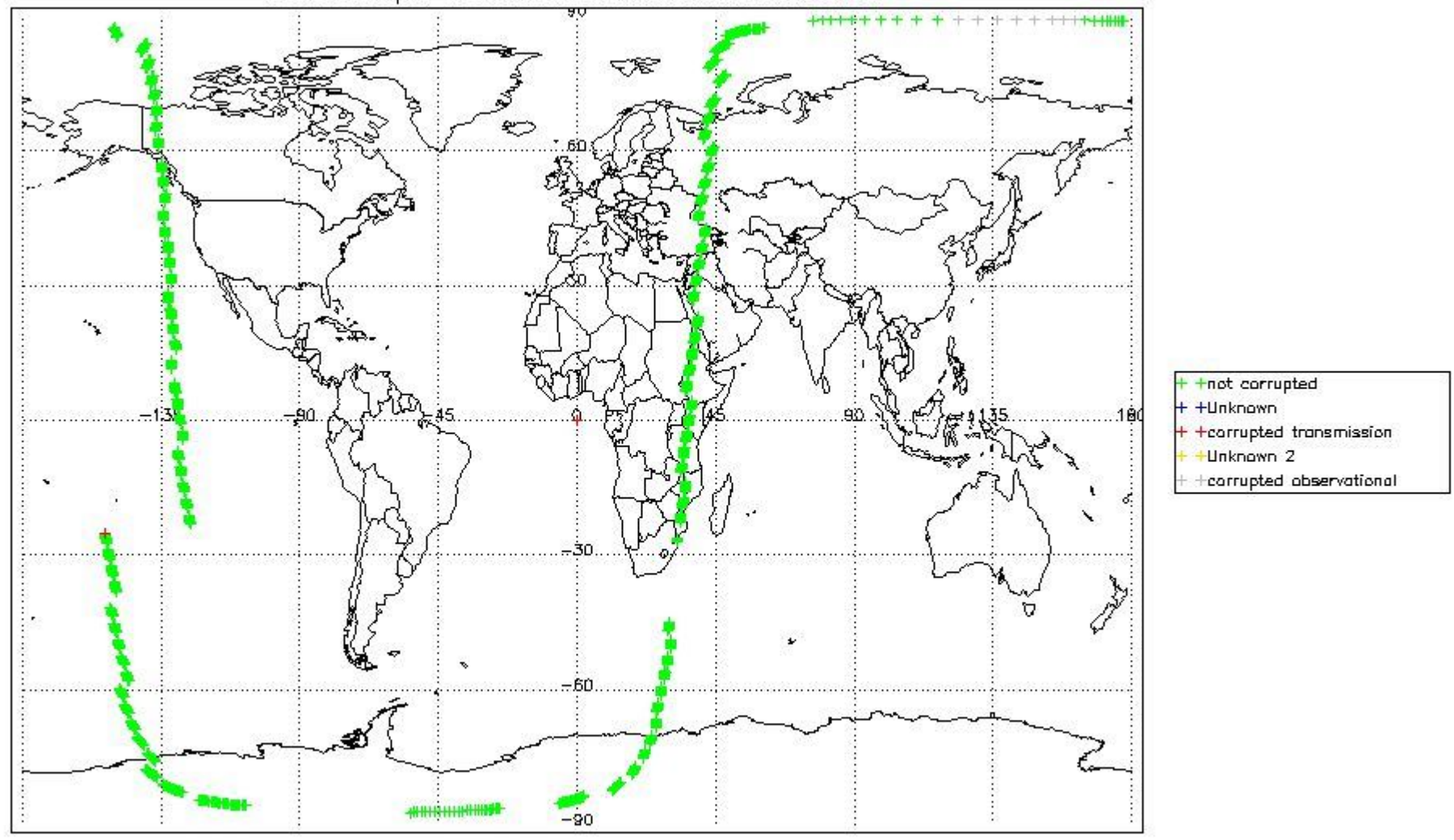


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_29.PNG

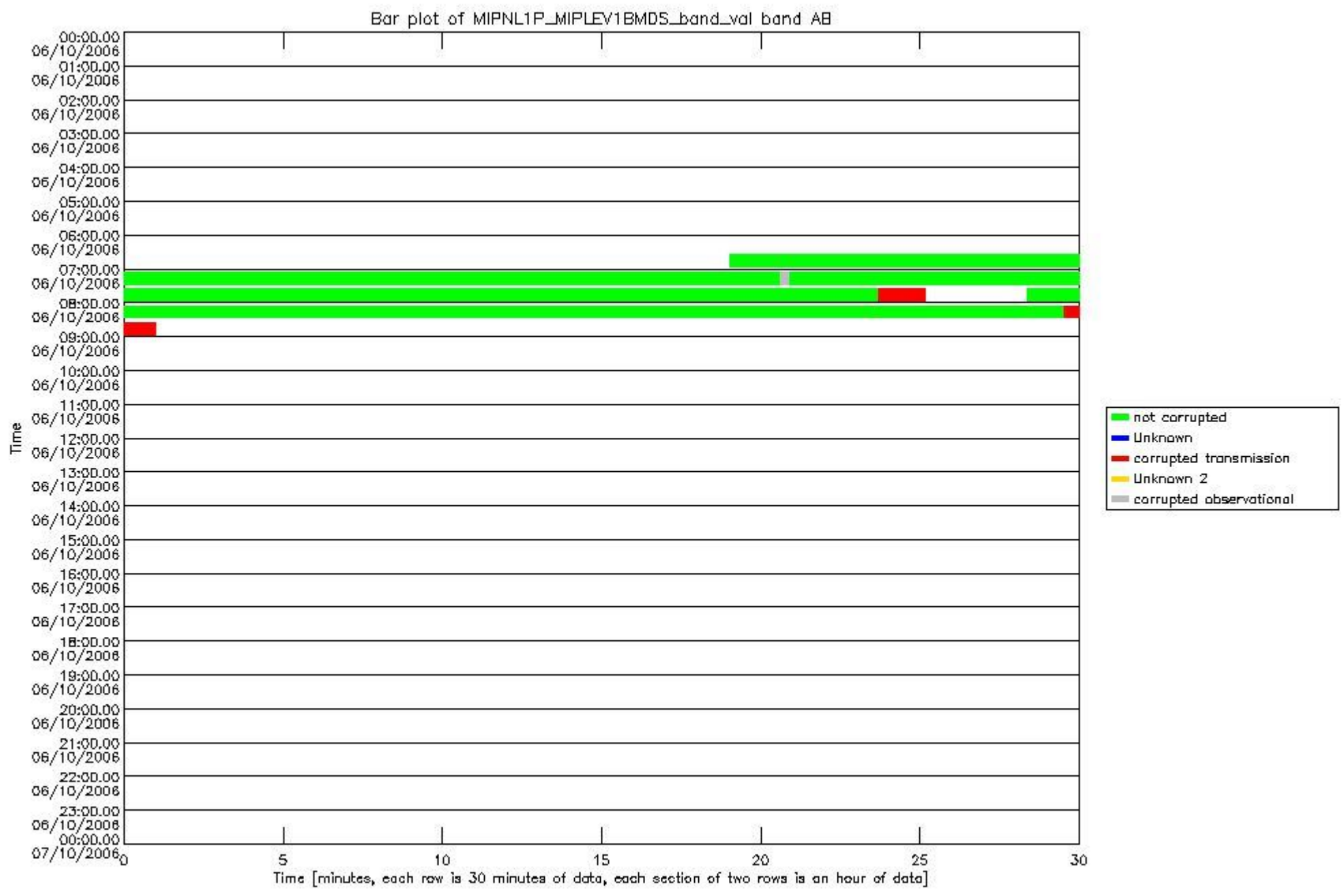


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_30.PNG

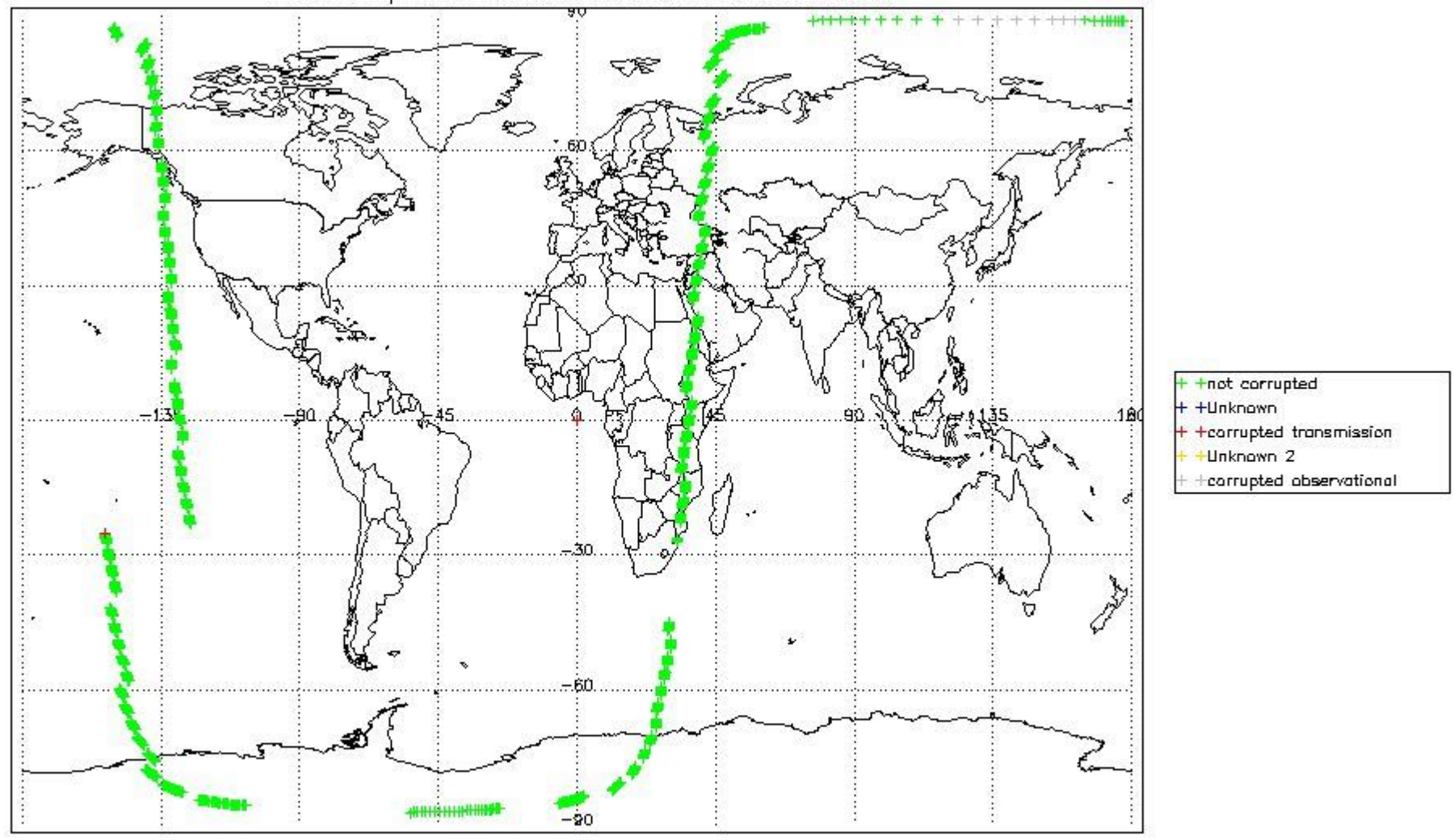
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A



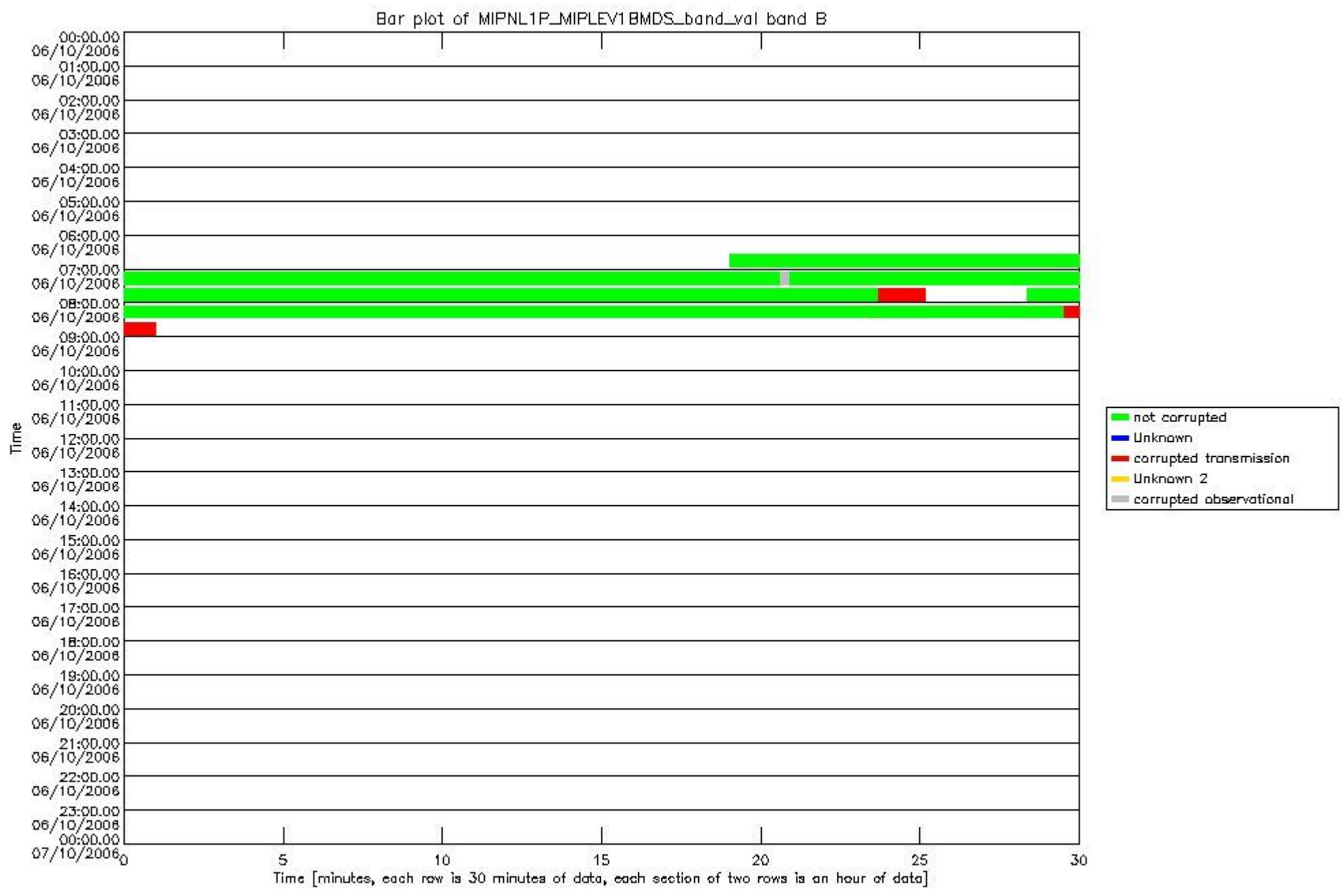
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_31.PNG



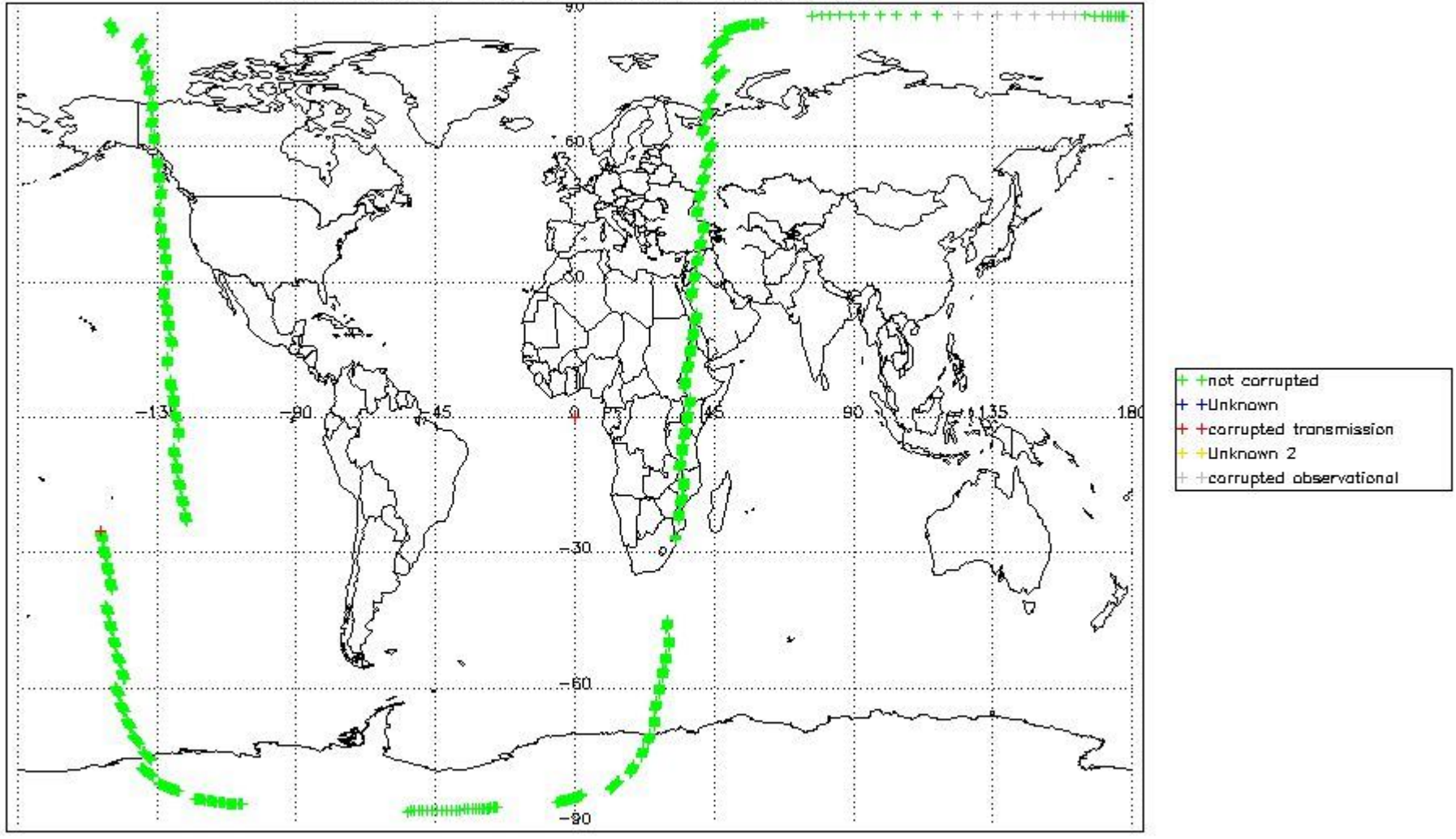
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB



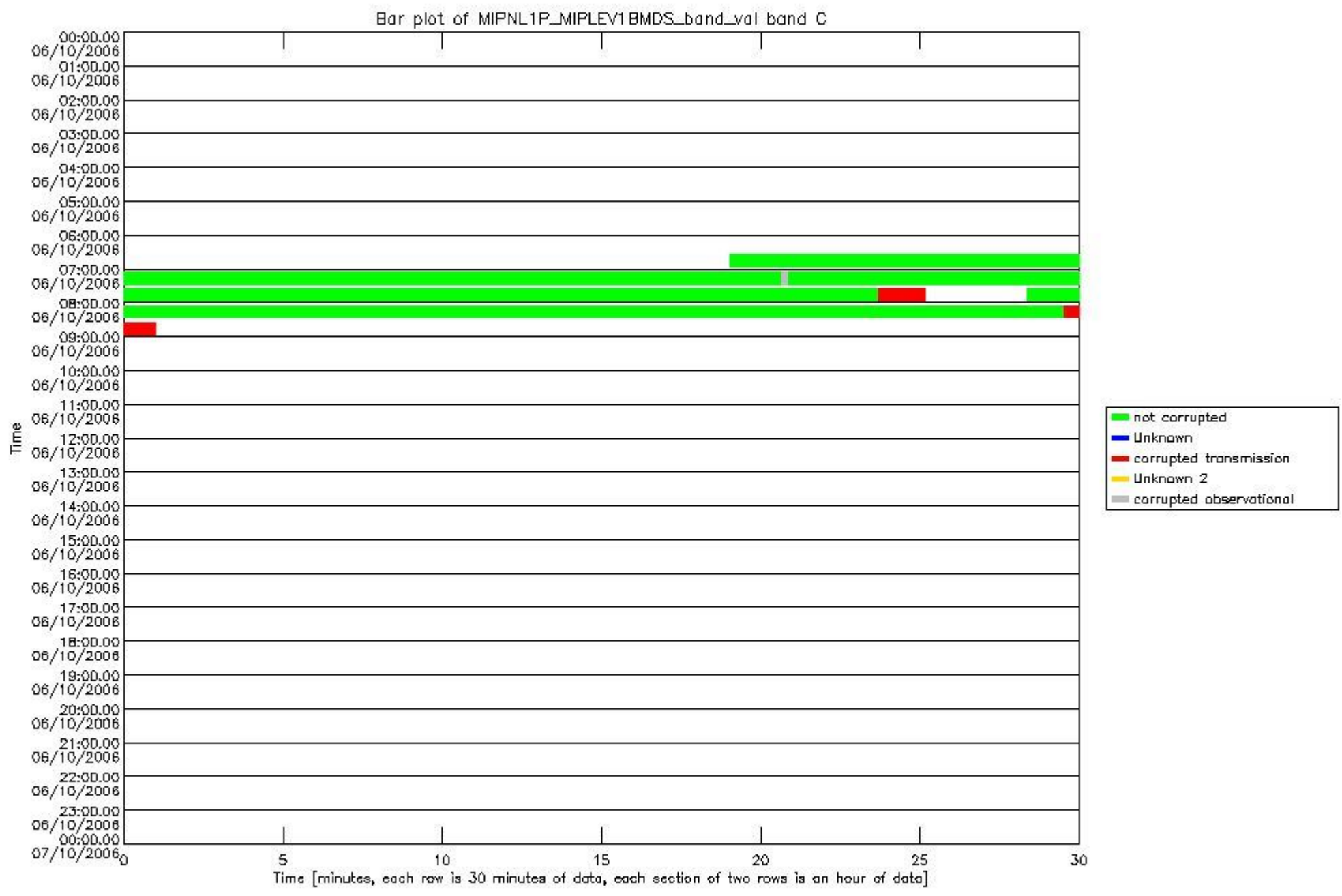
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_33.PNG



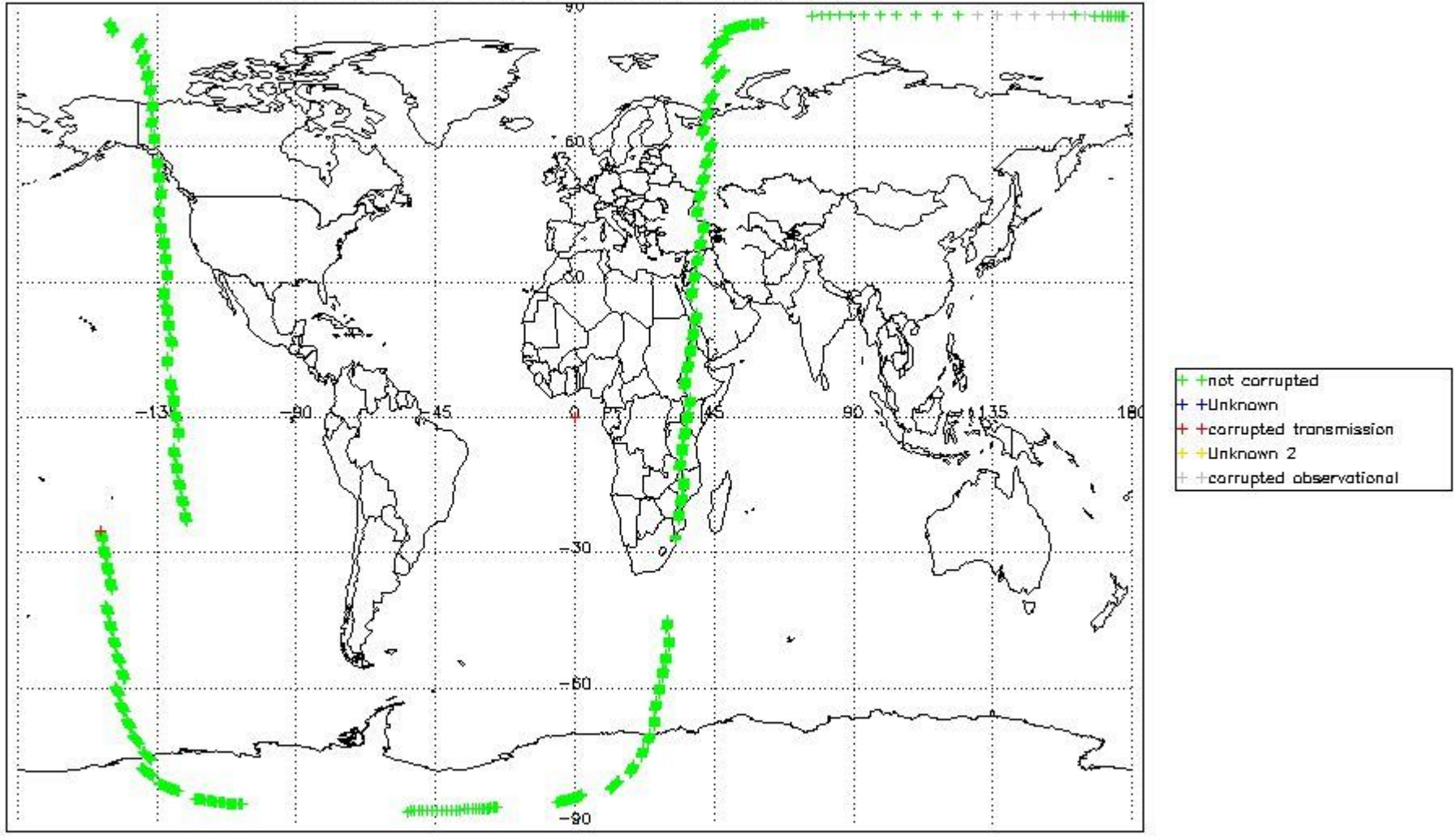
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B



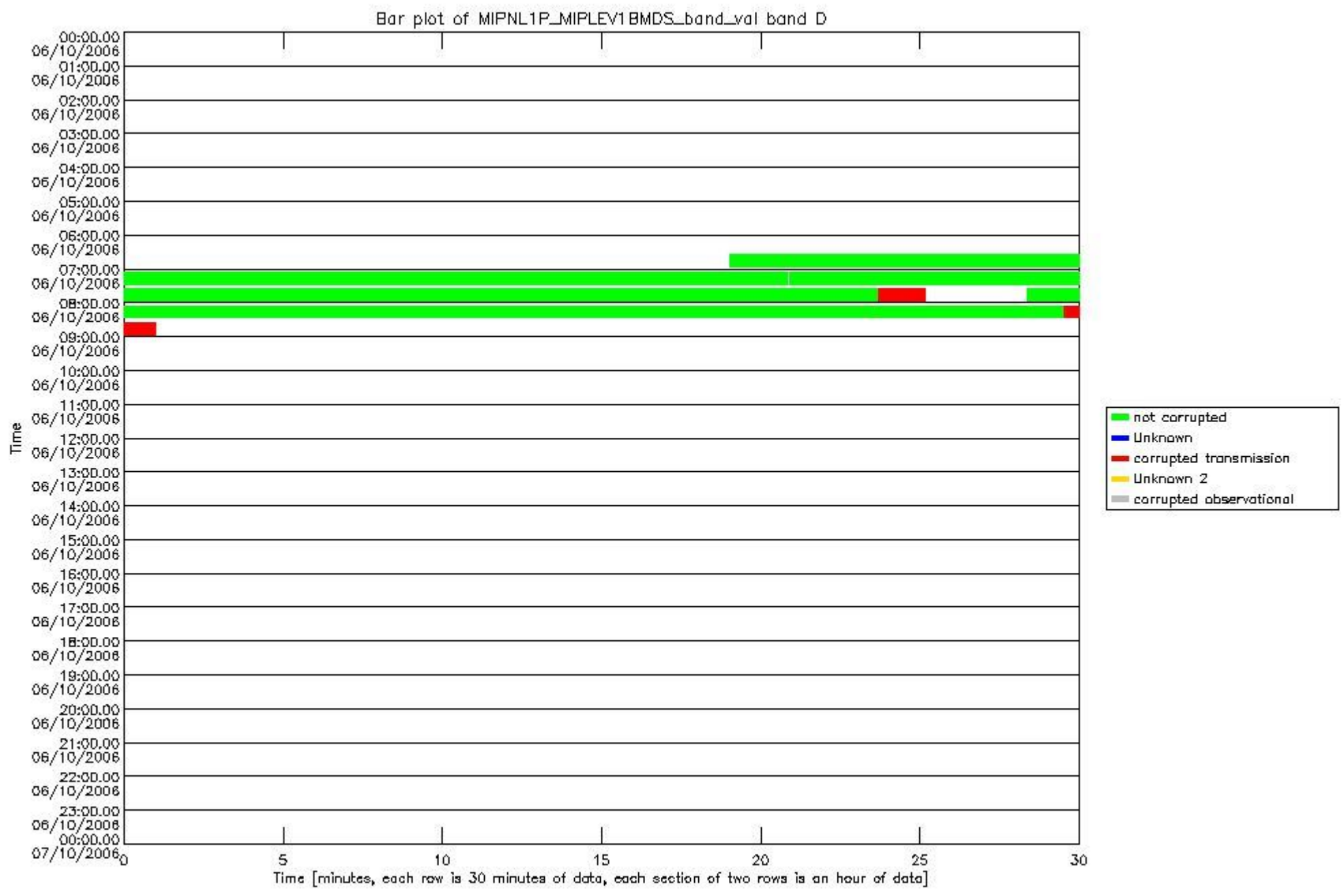




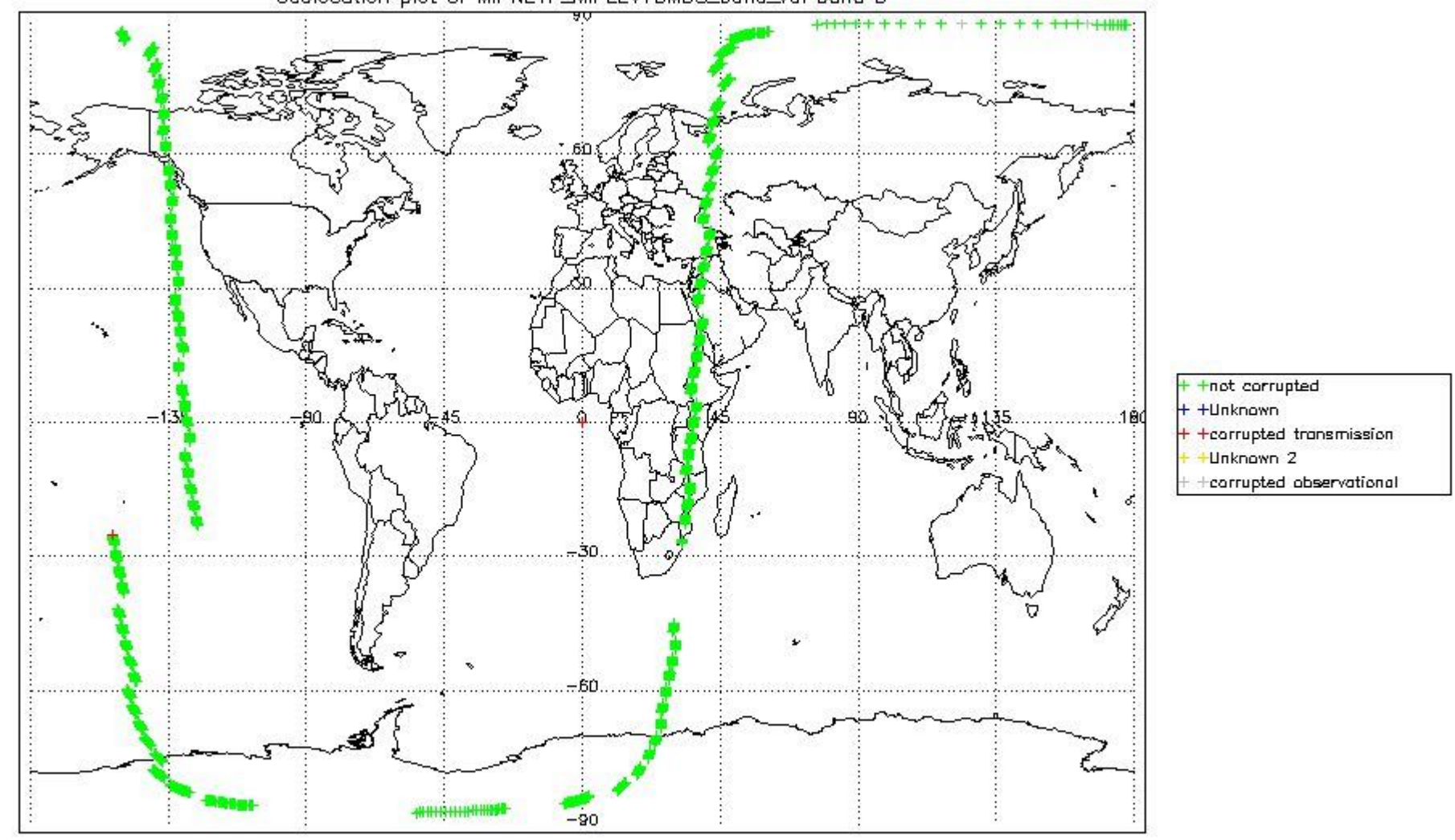
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band C



mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20061006\_37.PNG

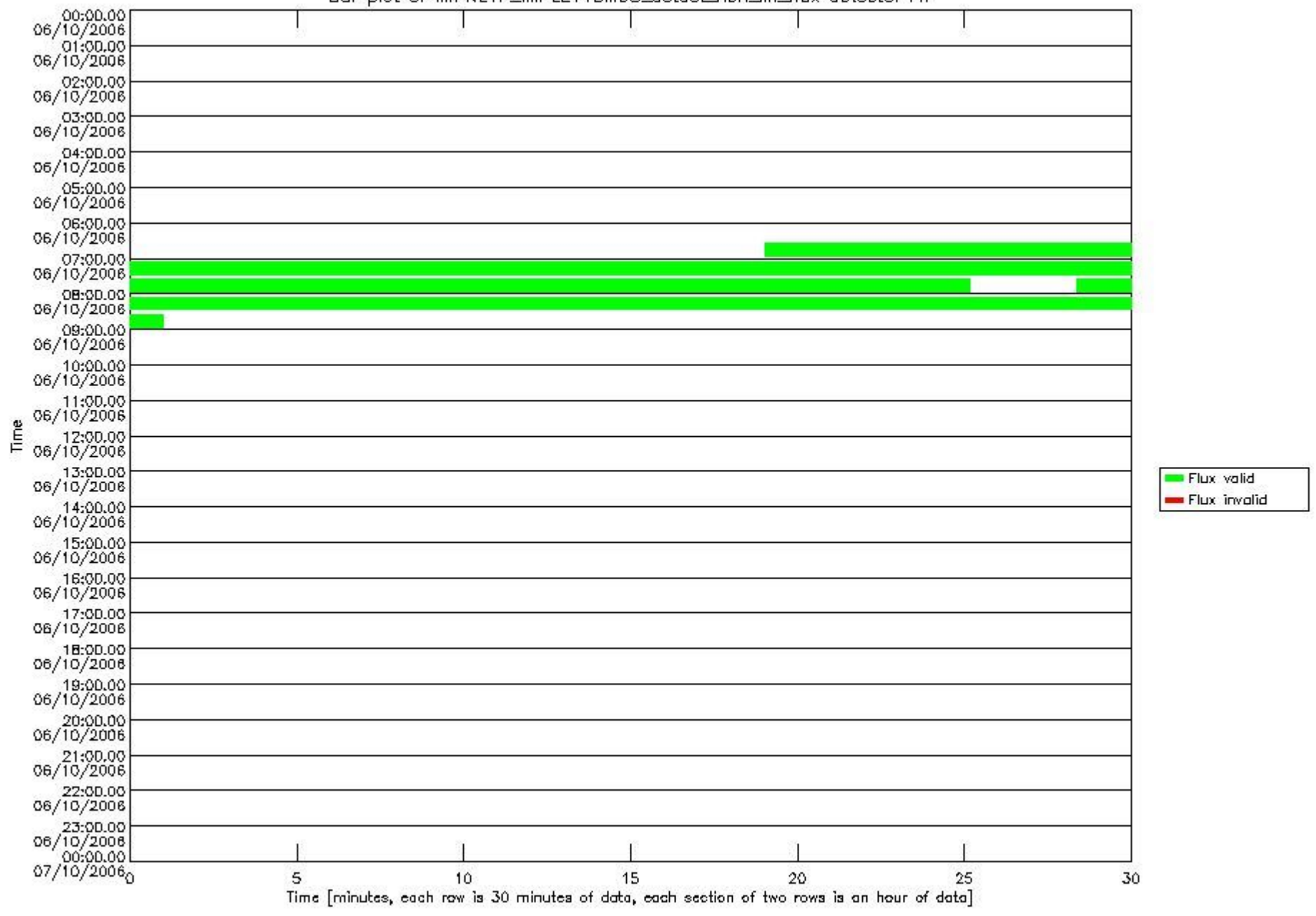


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band D

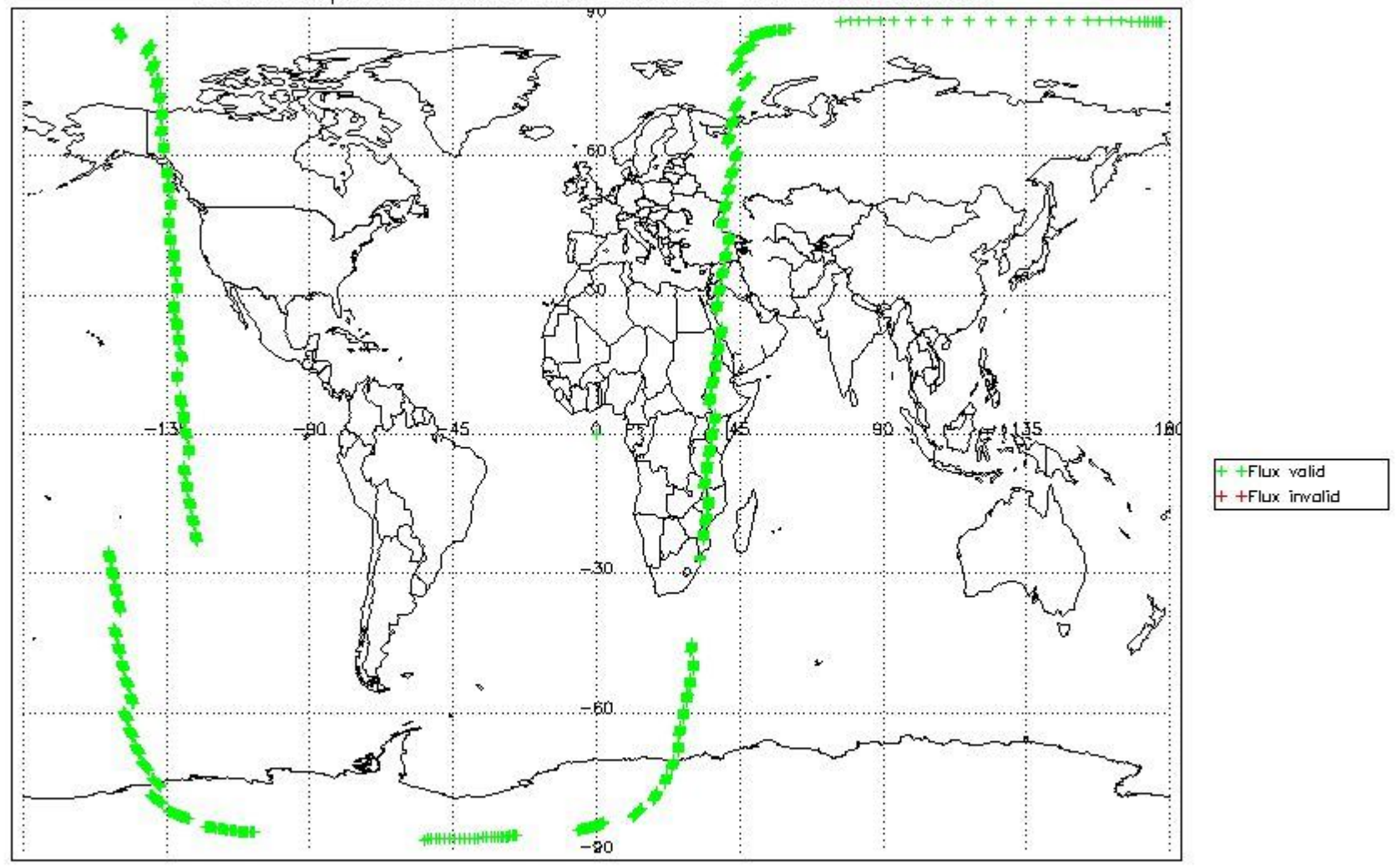


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_39.PNG

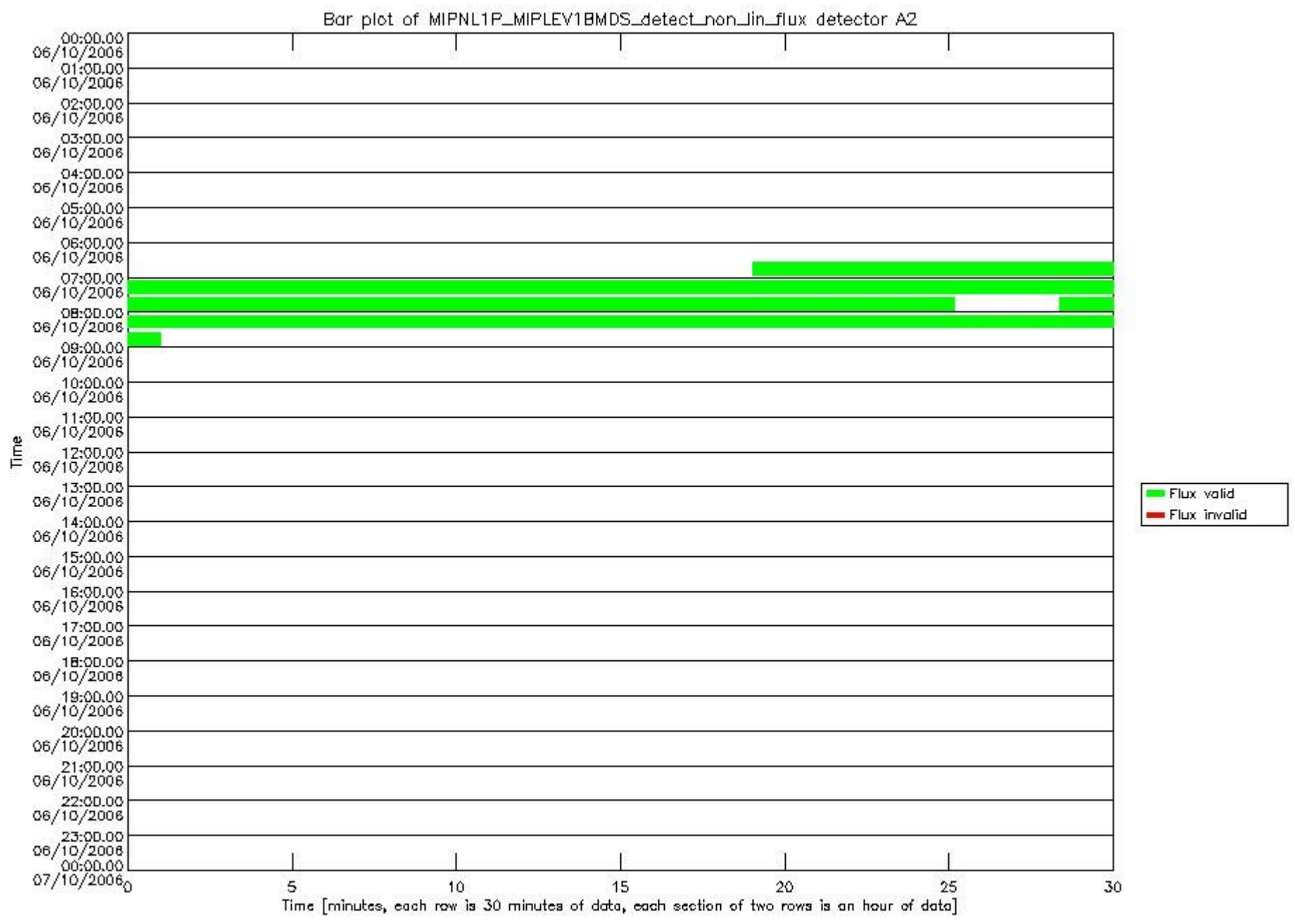
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_jin\_flux detector A1



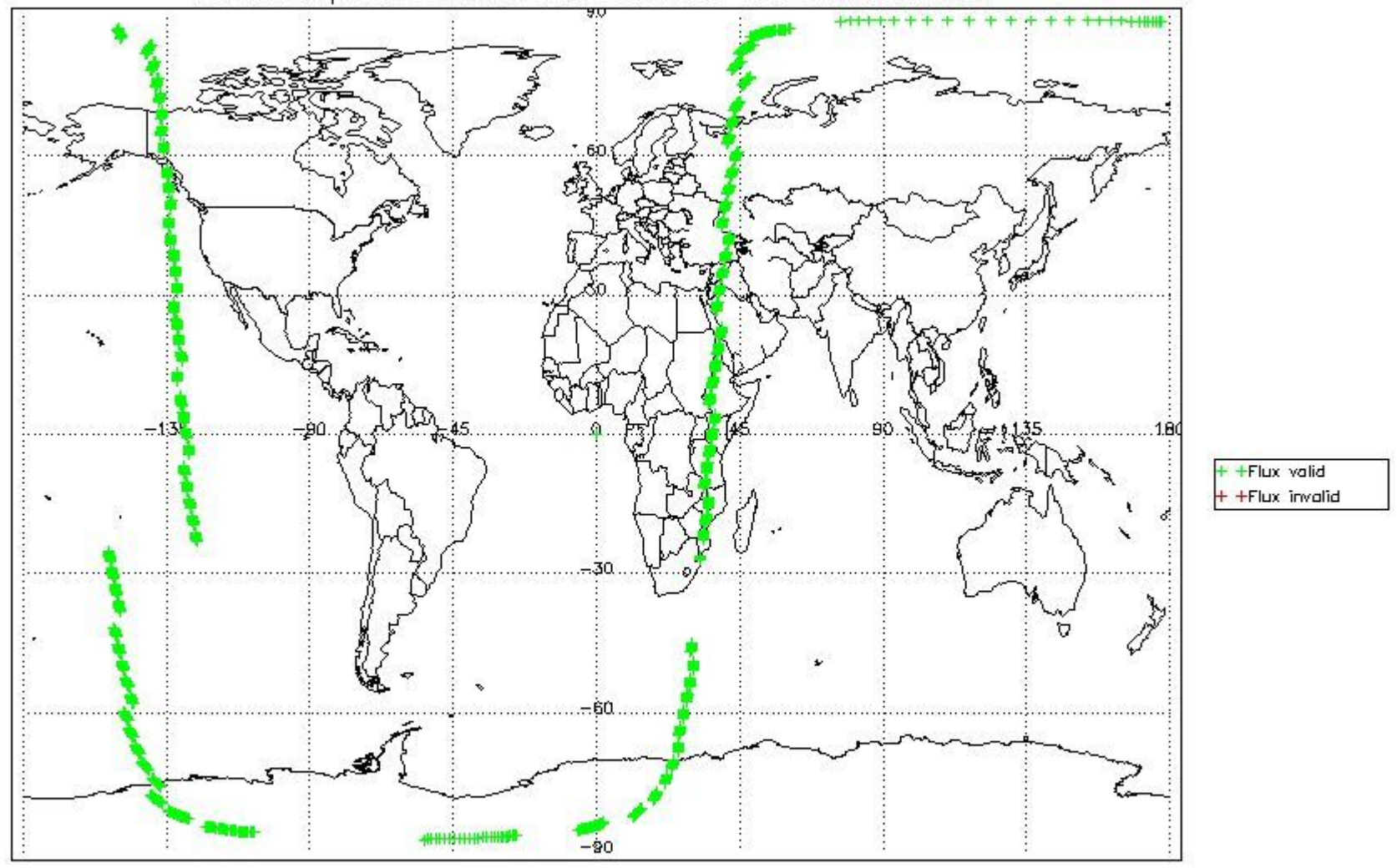
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A1



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_41.PNG

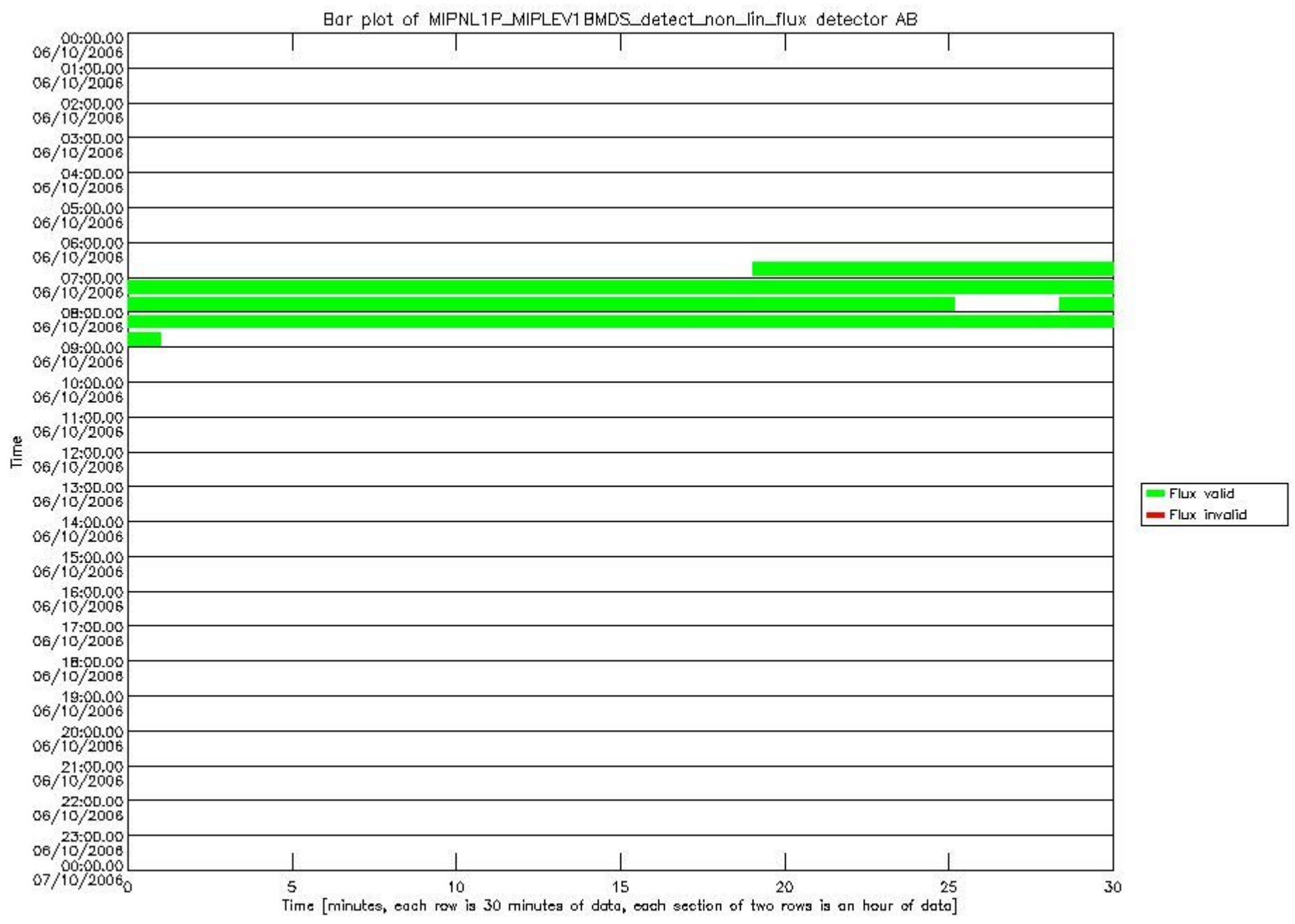


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A2

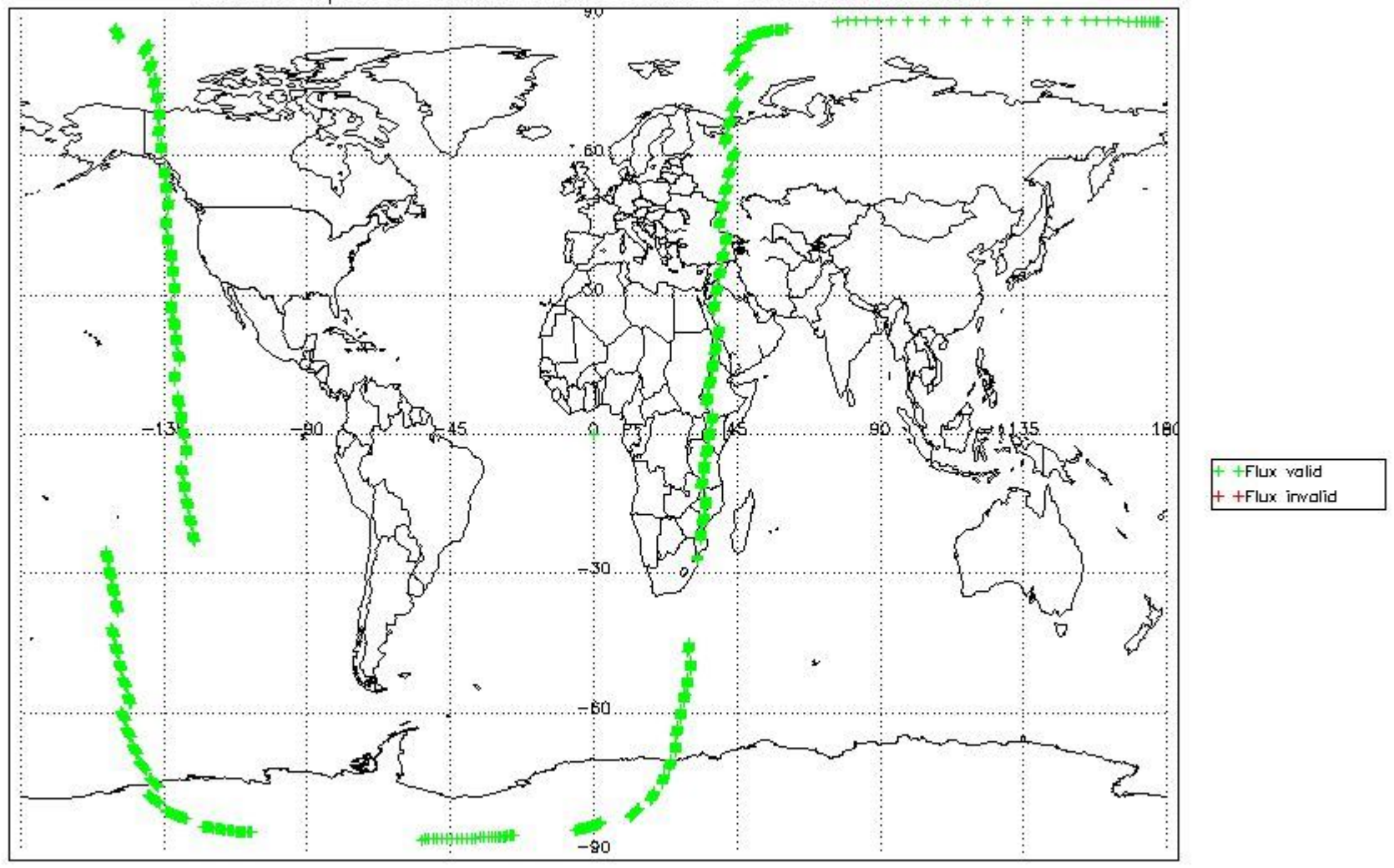


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_43.PNG

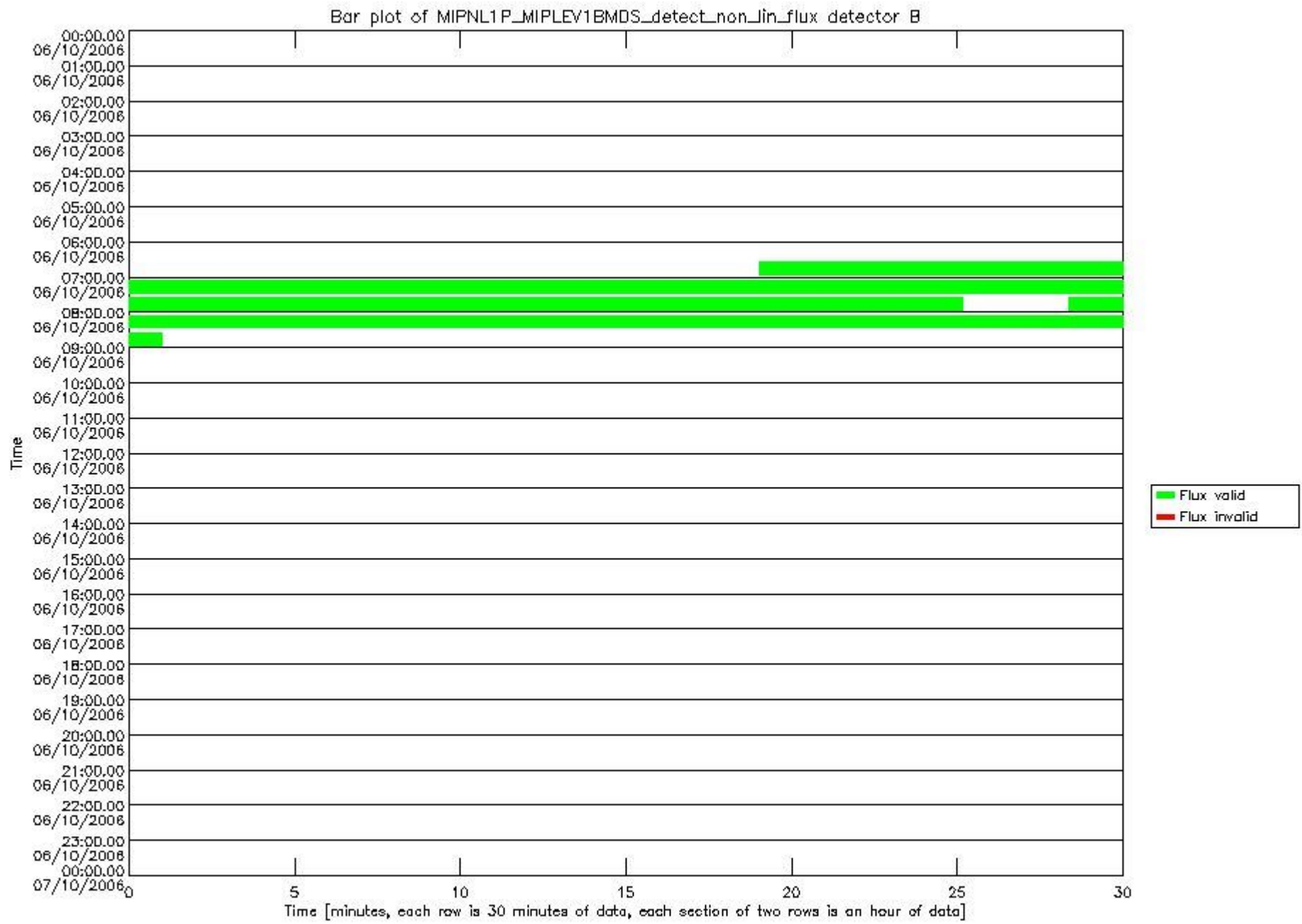


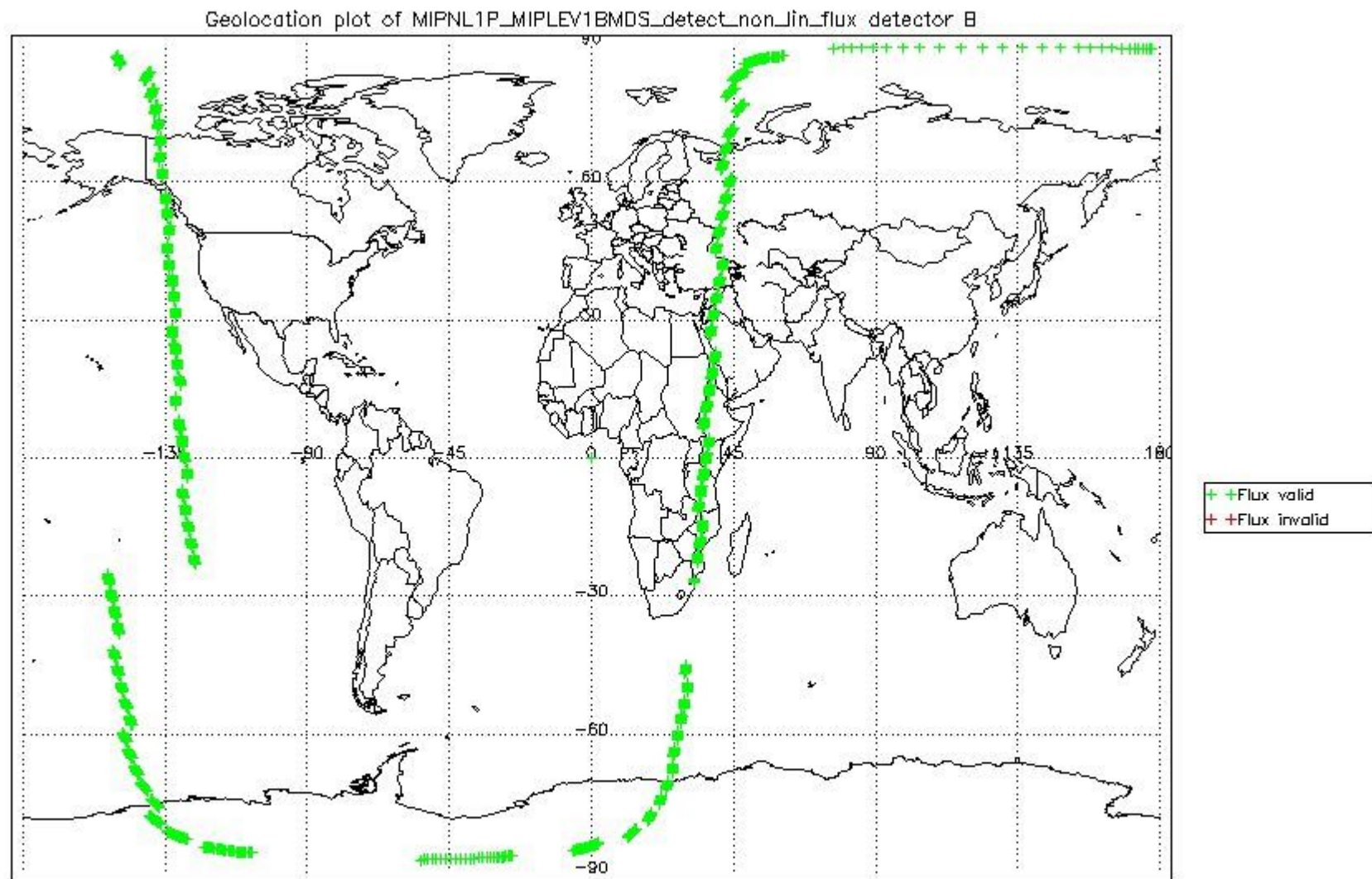


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_45.PNG





mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_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.

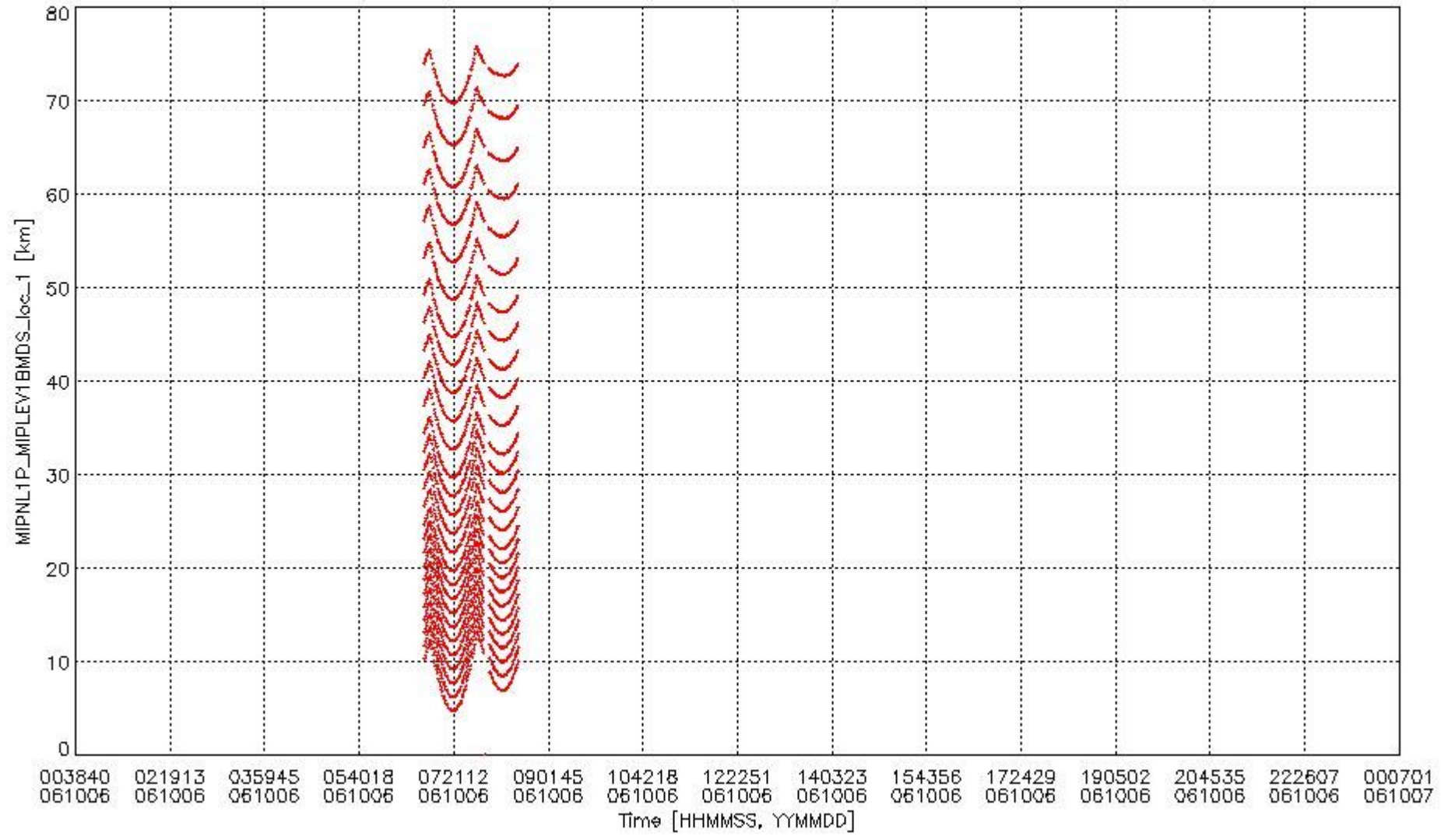


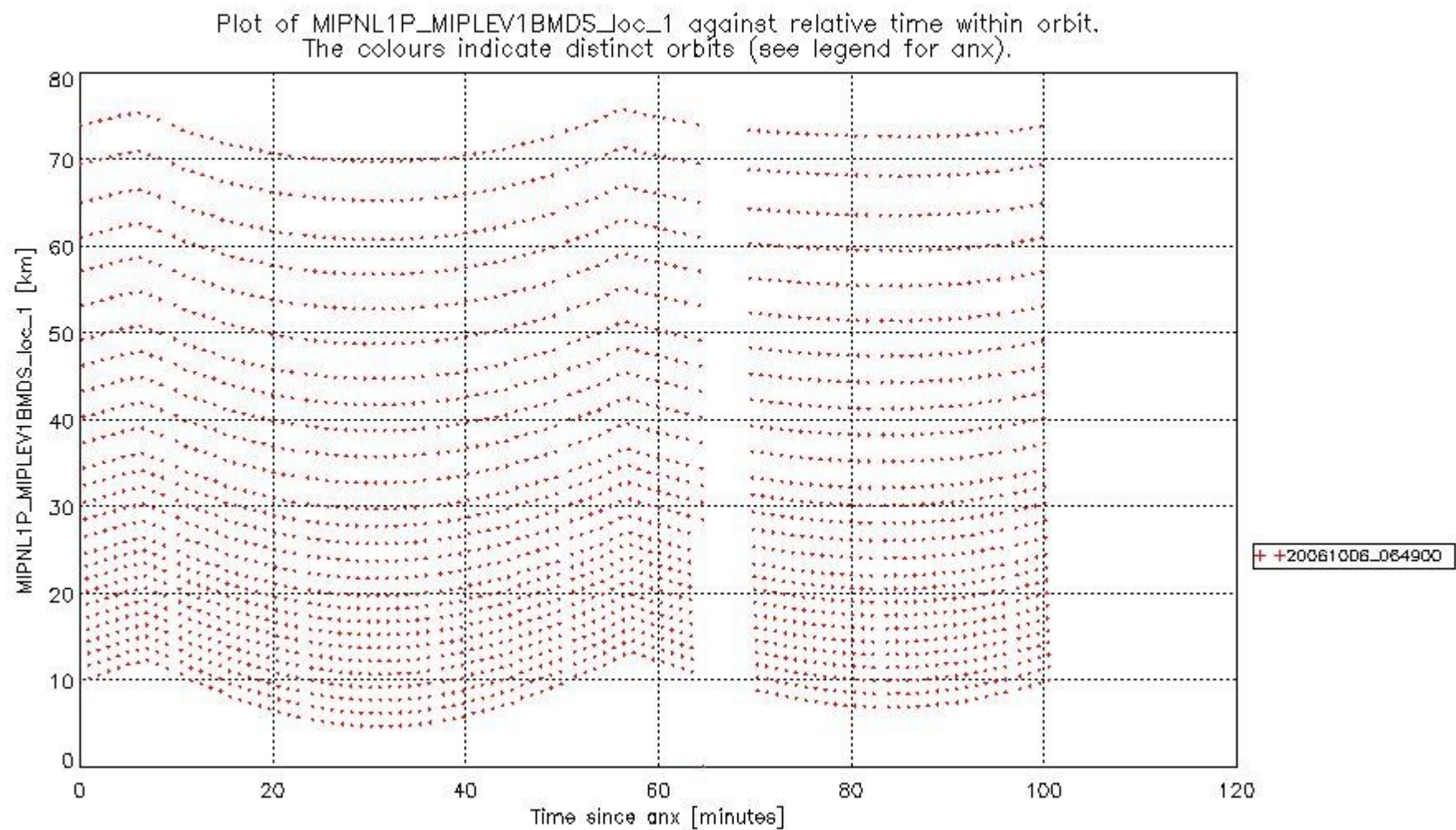
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_48.PNG

### 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\_OFL\_MIPAS\_4\_67\_P\_20061006\_50.PNG

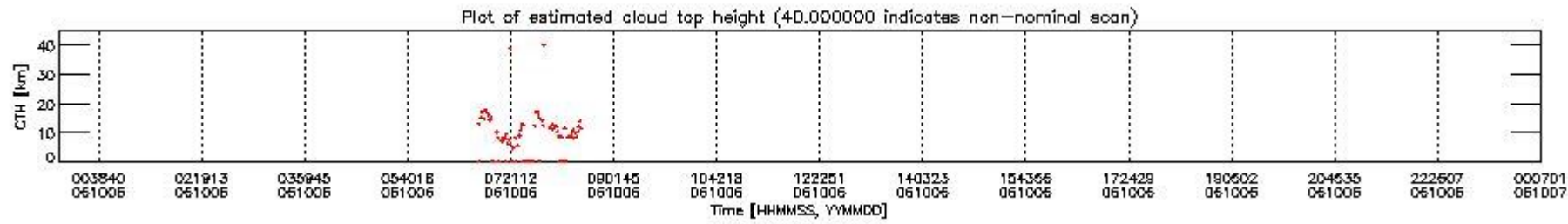
### 1.3.2 Cloud top height

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)

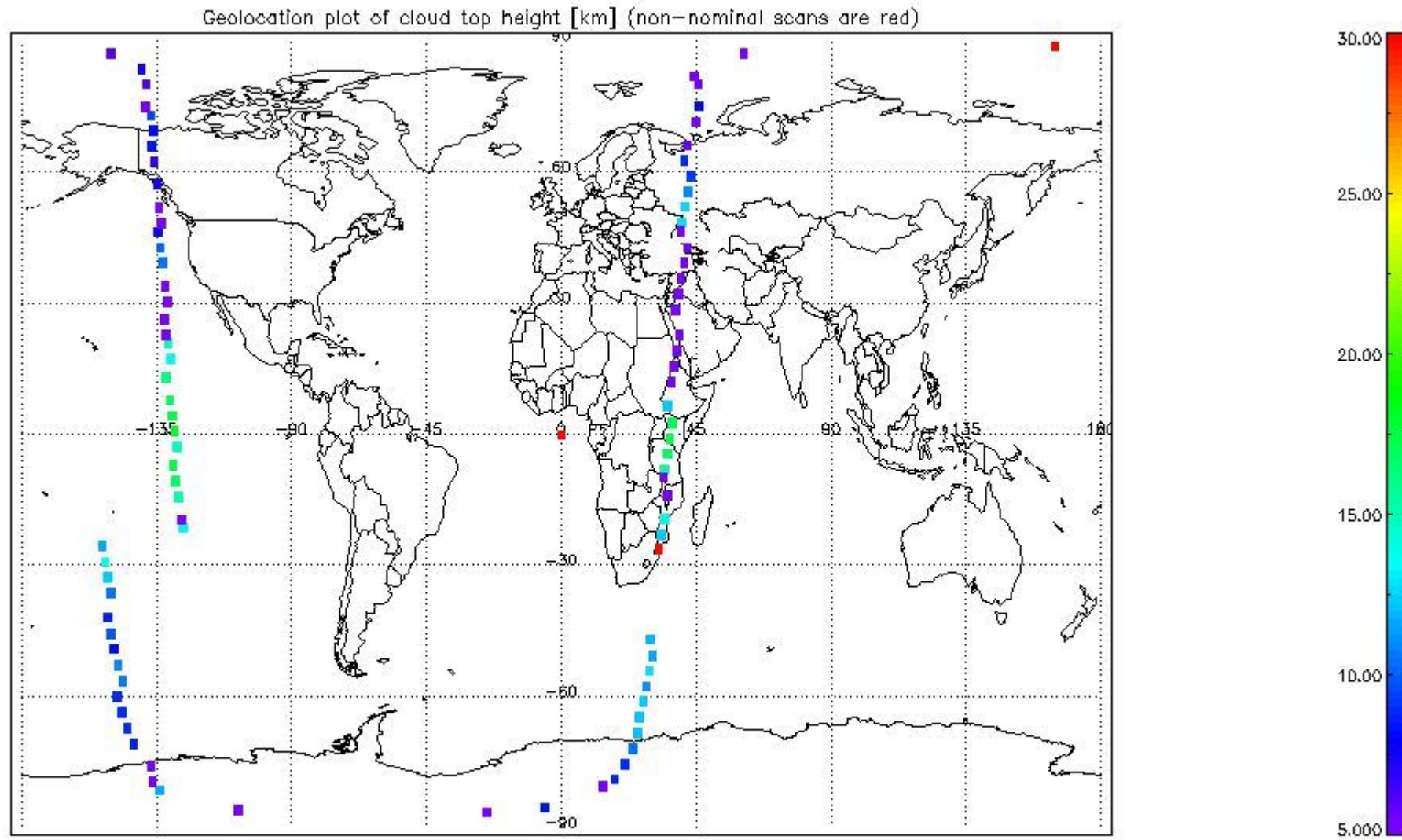
The non-nominal scans mentioned in the plots are scans that are rejected by the cloud top height algorithm for several reasons:

- 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 1651-1680 |
| Microwindow 2 description       | Average of band A pixels 2357-2390 |
| cloud index threshold (mw1/mw2) | 1.8000000                          |
| Tangent height limit            | 40.000000                          |



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_51.PNG



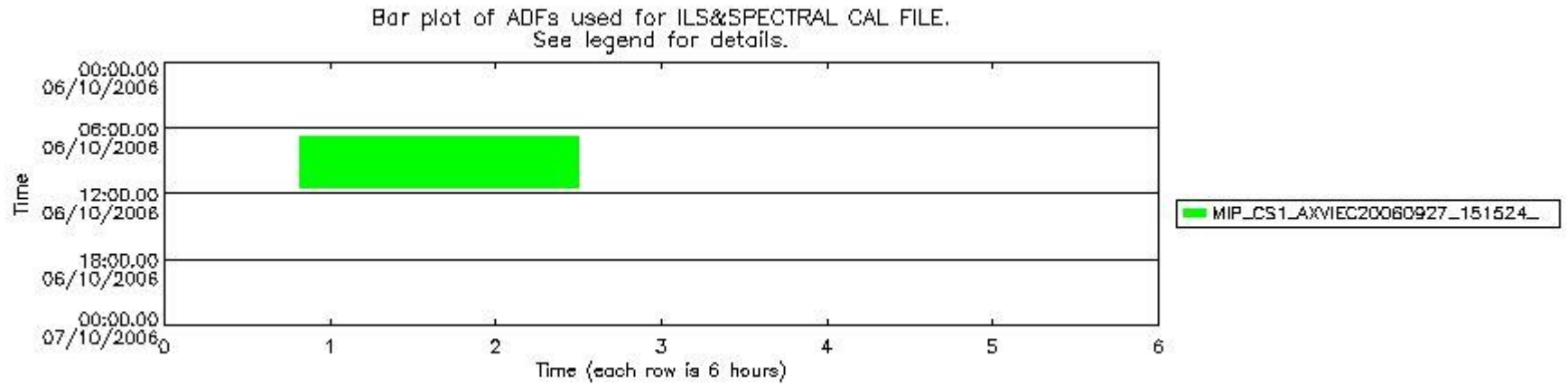
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_52.PNG

### 1.4 ADF monitoring

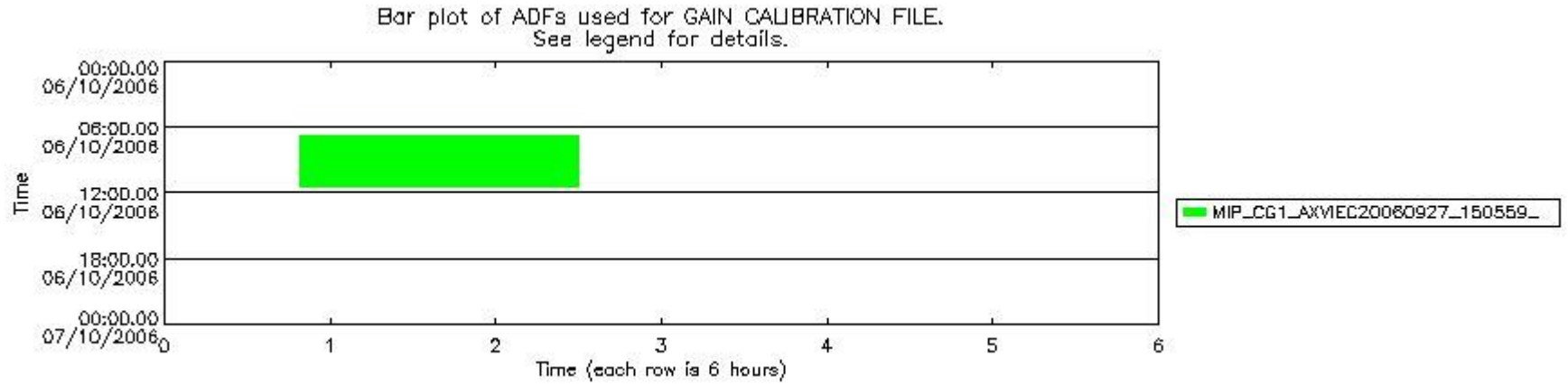
| Number | ADF   |
|--------|---|
| 0      | AUX_FRO_AXVPDS20061009_002848_20061005_221000_20061008_005000 |
| 1      | MIP_CA1_AXVIEC20050627_094412_20040809_000000_20090809_000000 |
| 2      | MIP_CG1_AXVIEC20060927_150559_20060925_000000_20110925_000000 |
| 3      | MIP_CL1_AXVIEC20050420_152028_20050420_095747_20100420_095747 |
| 4      | MIP_CO1_AXVIEC20060927_150102_20060925_000000_20110925_000000 |
| 5      | MIP_CS1_AXVIEC20060927_151524_20060925_000000_20110925_000000 |
| 6      | MIP_MW1_AXVIEC20050627_094928_20040809_000000_20090809_000000 |



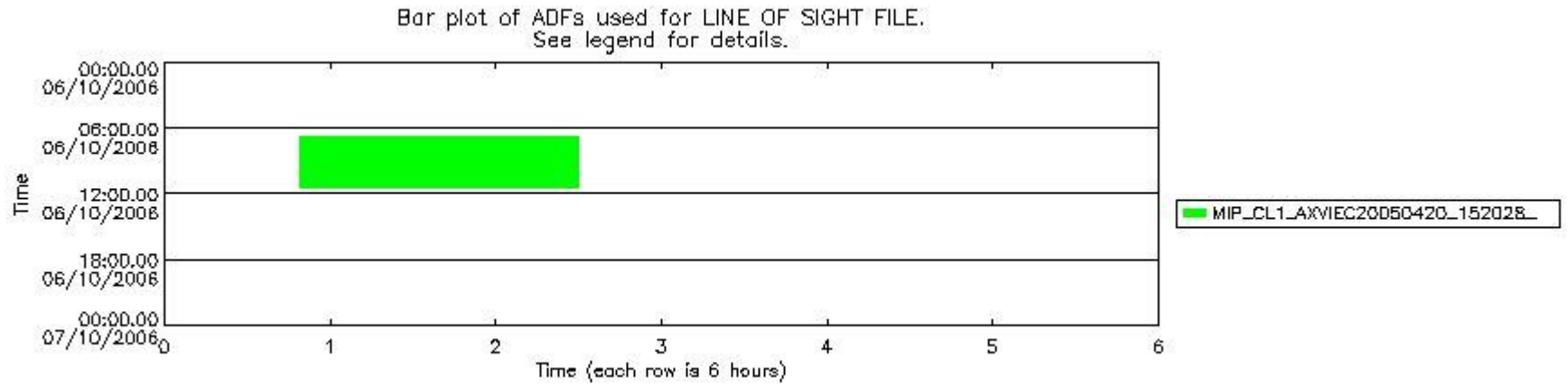
| Number | Product name   | #CS1 | #CG1 | #CL1 | #CA1 | #CO1 | #MW1 | #PS1 | #FPO |
|--------|--|------|------|------|------|------|------|------|------|
| 0      | MIP_NL__1PPDPA20061006_064902_000060302051_00450_24051_0898.N1 | 5    | 2    | 3    | 1    | 4    | 6    | 7    | 0    |



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_53.PNG

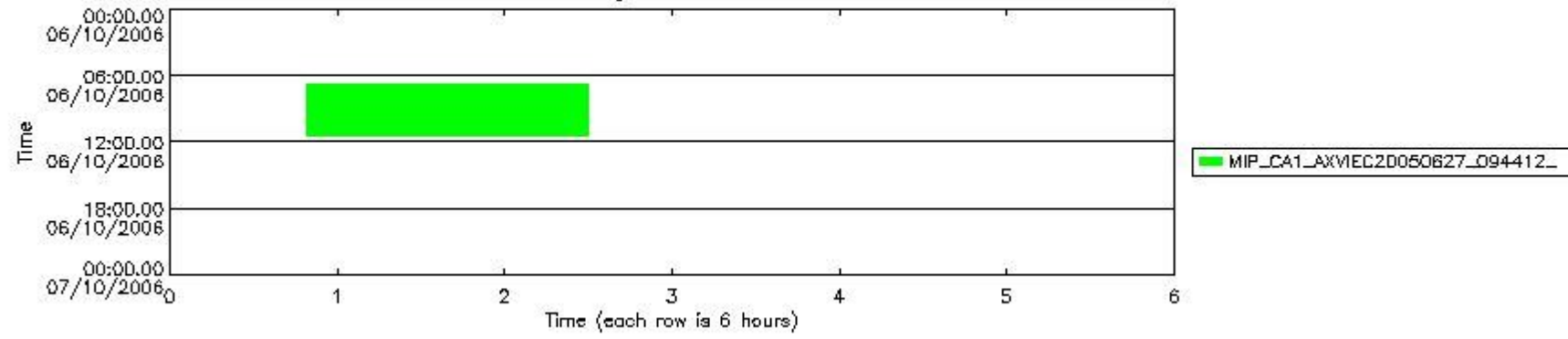


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_54.PNG



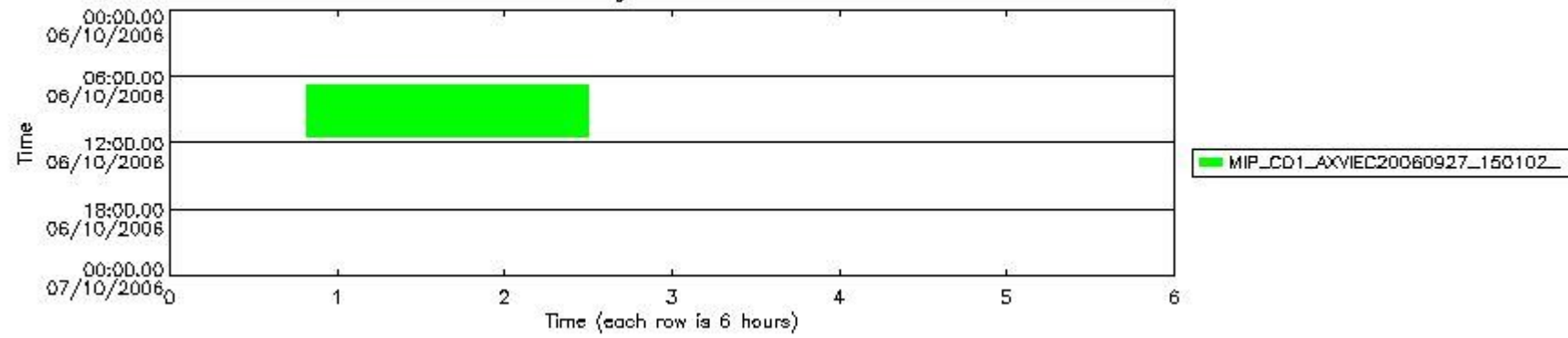
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Bar plot of ADFs used for INSTRUMENT CHAR FILE.  
See legend for details.



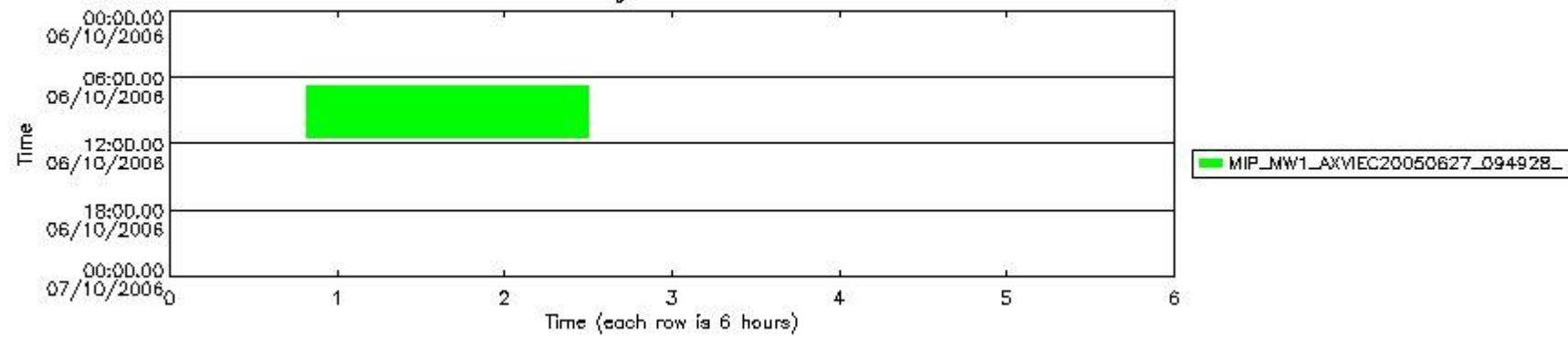
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Bar plot of ADFs used for OFFSET VALIDATION FILE.  
See legend for details.



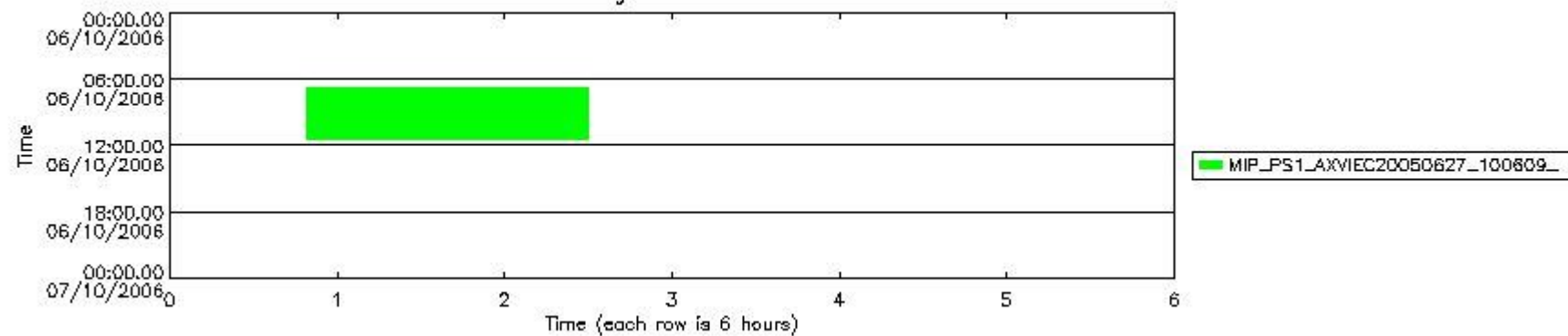
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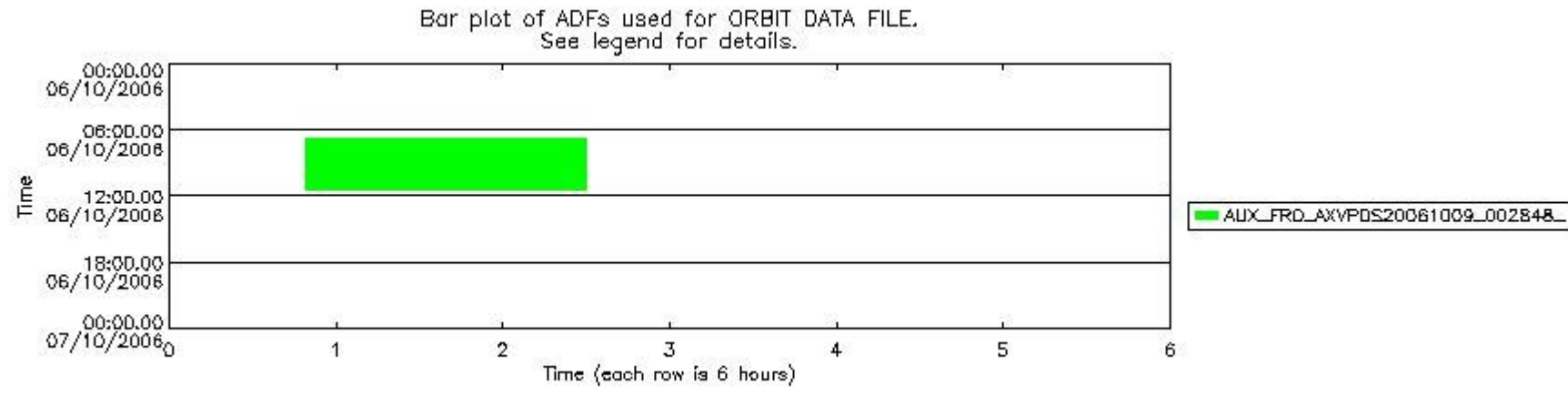
Bar plot of ADFs used for MICROWINDOWS FILE.  
See legend for details.



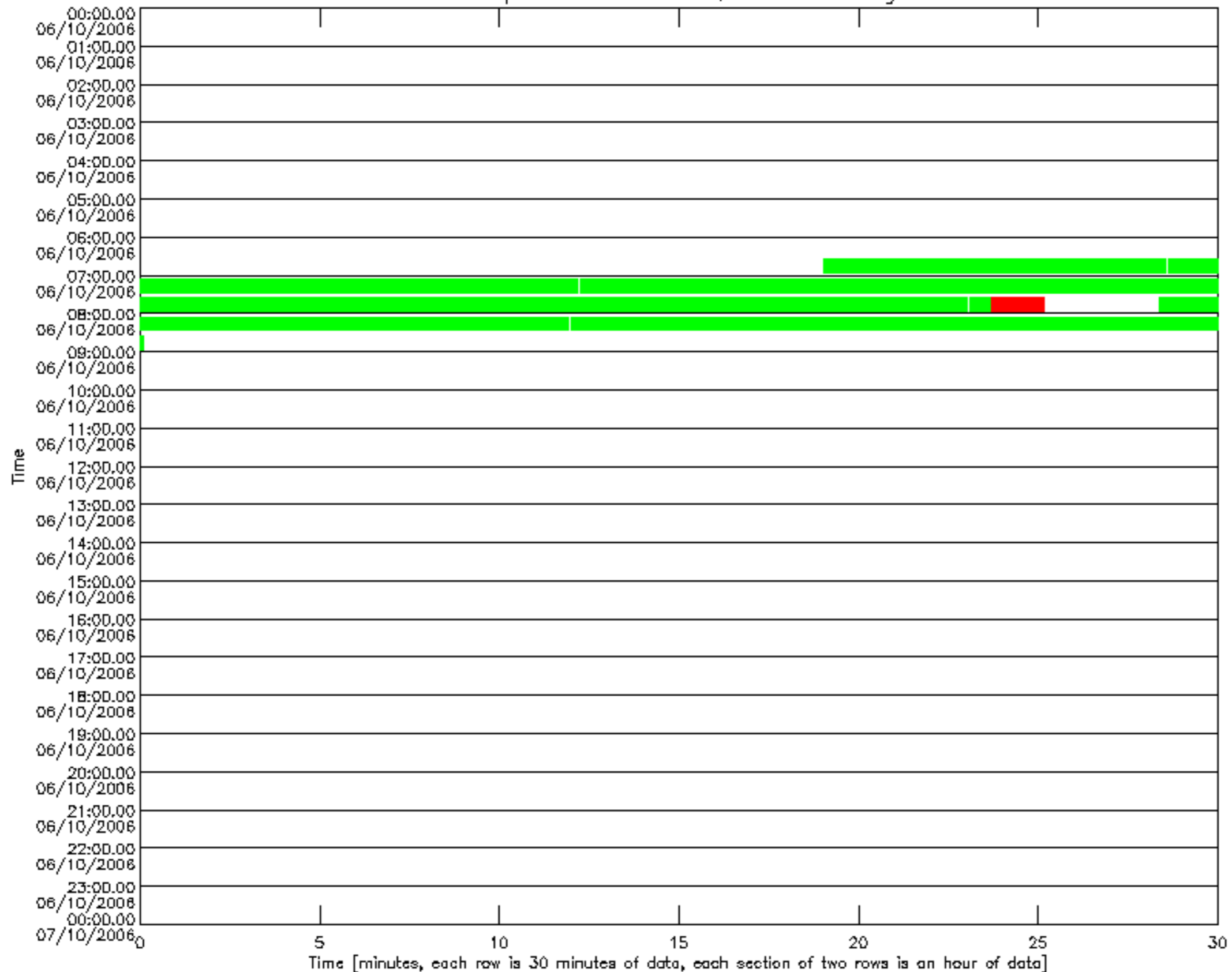
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20061006\_58.PNG

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

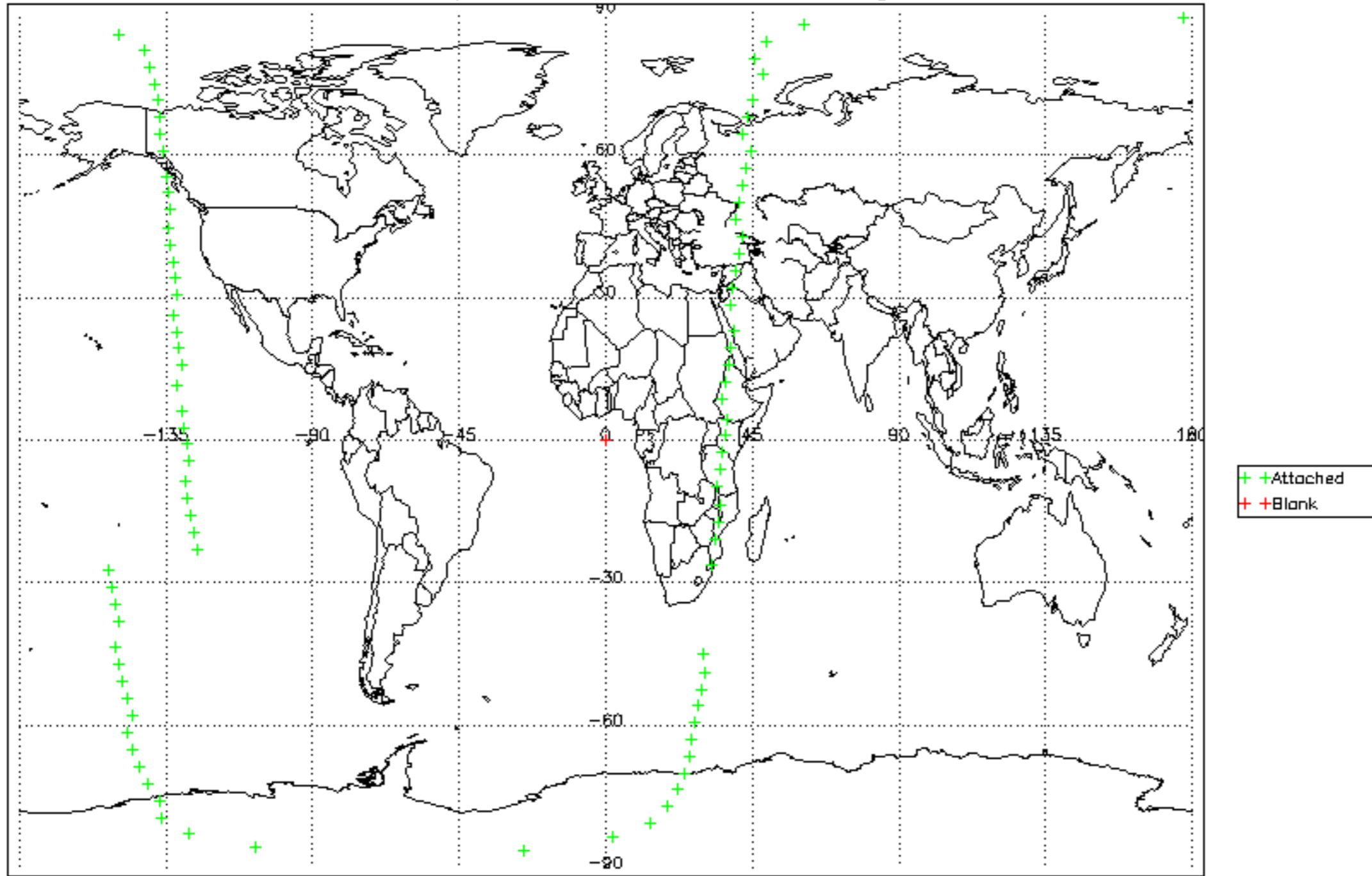


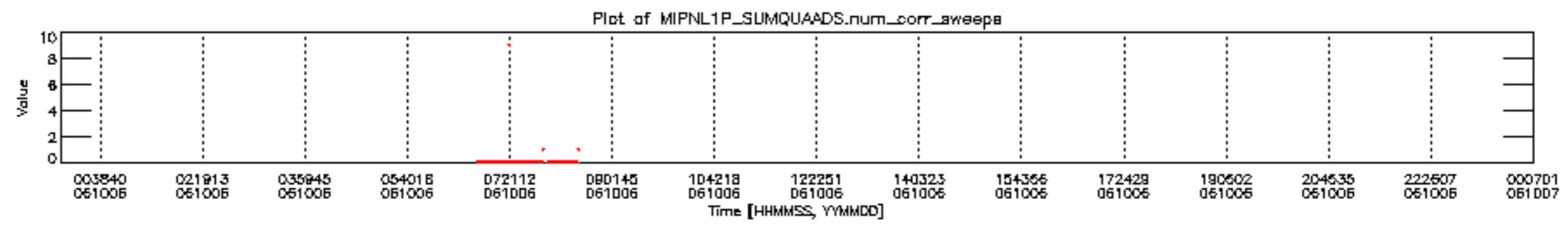


Bar plot of MIPNL1P\_SUMQUAADS.attach\_flag

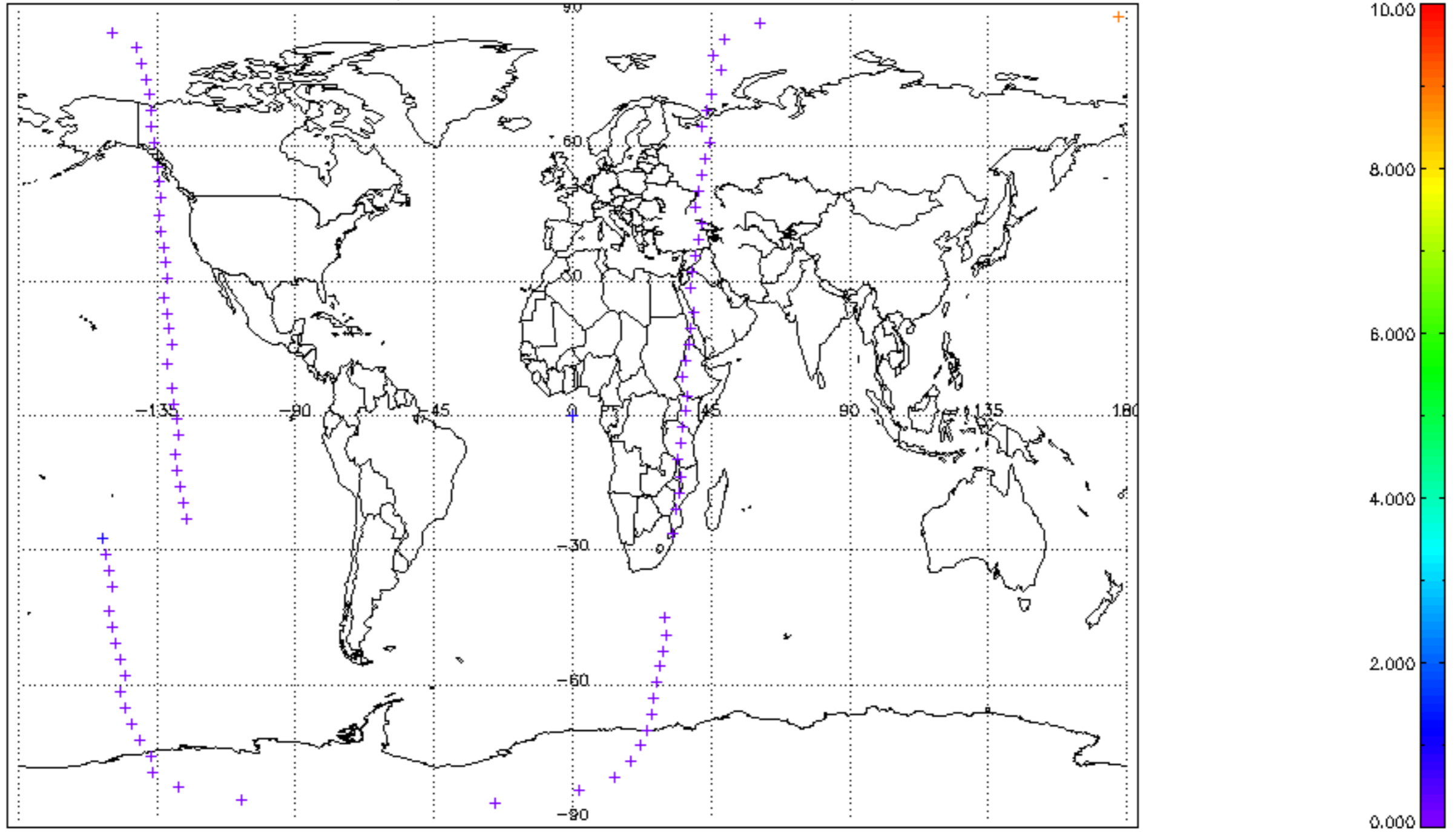


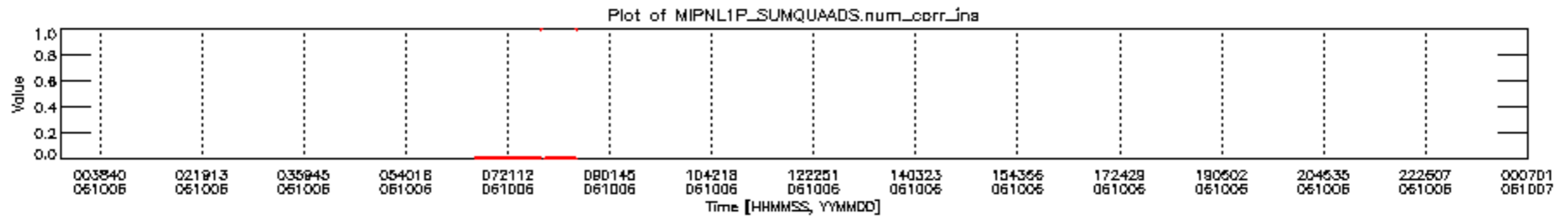
Geolocation plot of MIPNL1P\_SUMQUAADS.attach\_flag





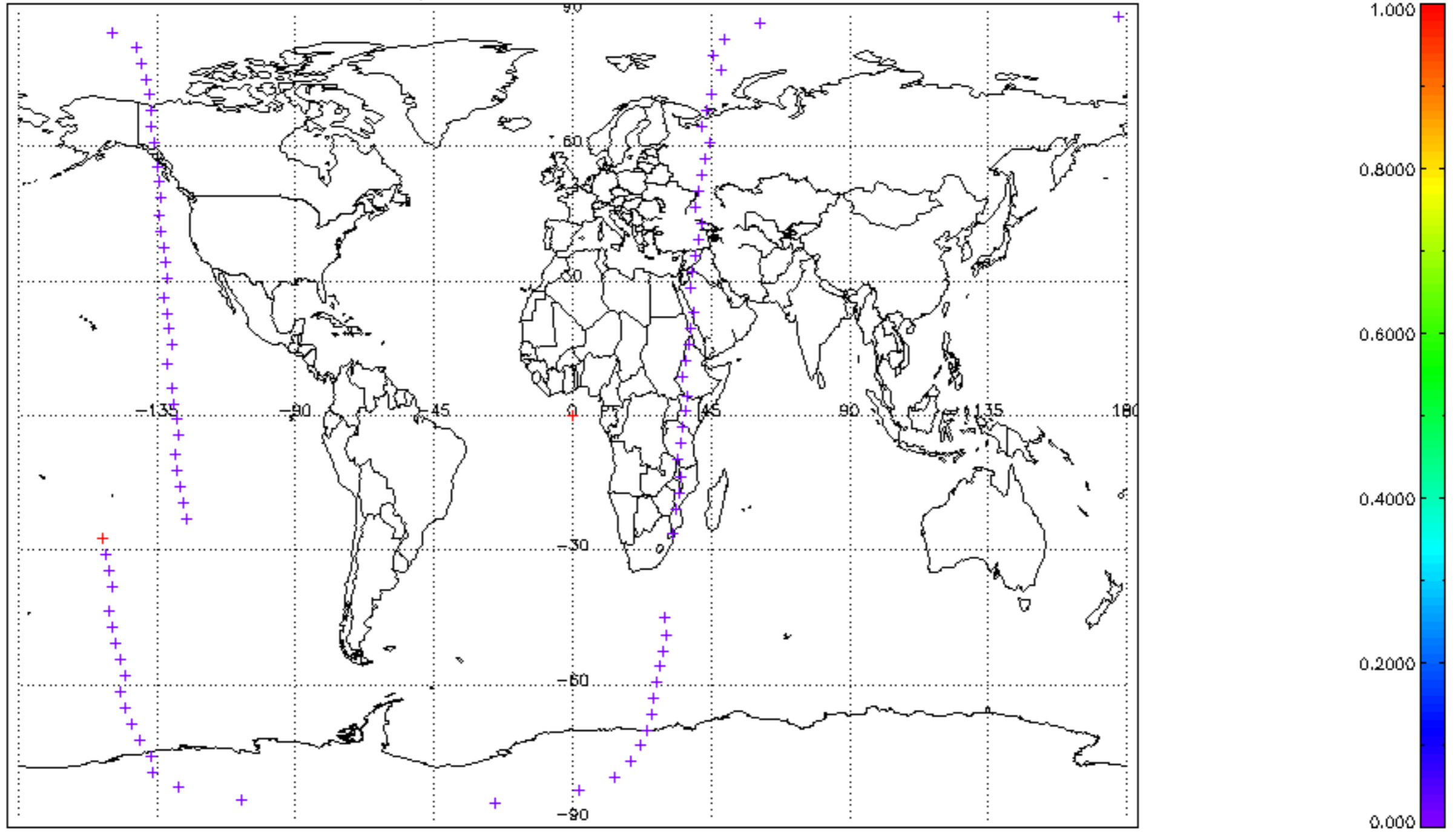
Geolocation plot of MIPNL1P\_SUMQUADS.num\_corr\_sweeps

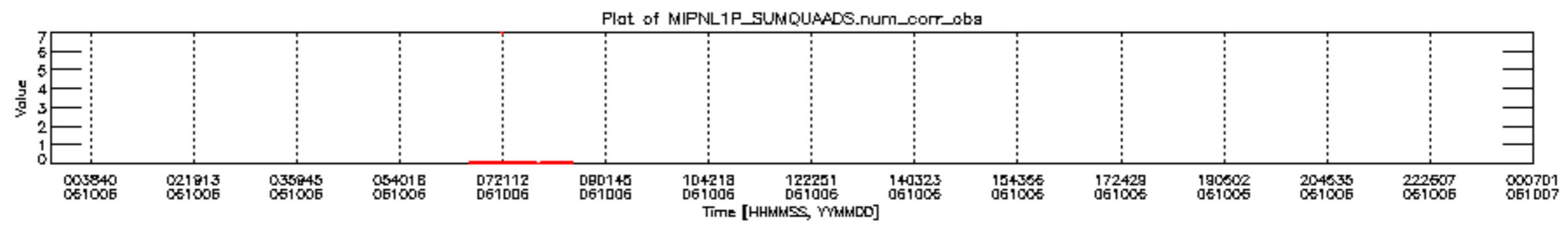




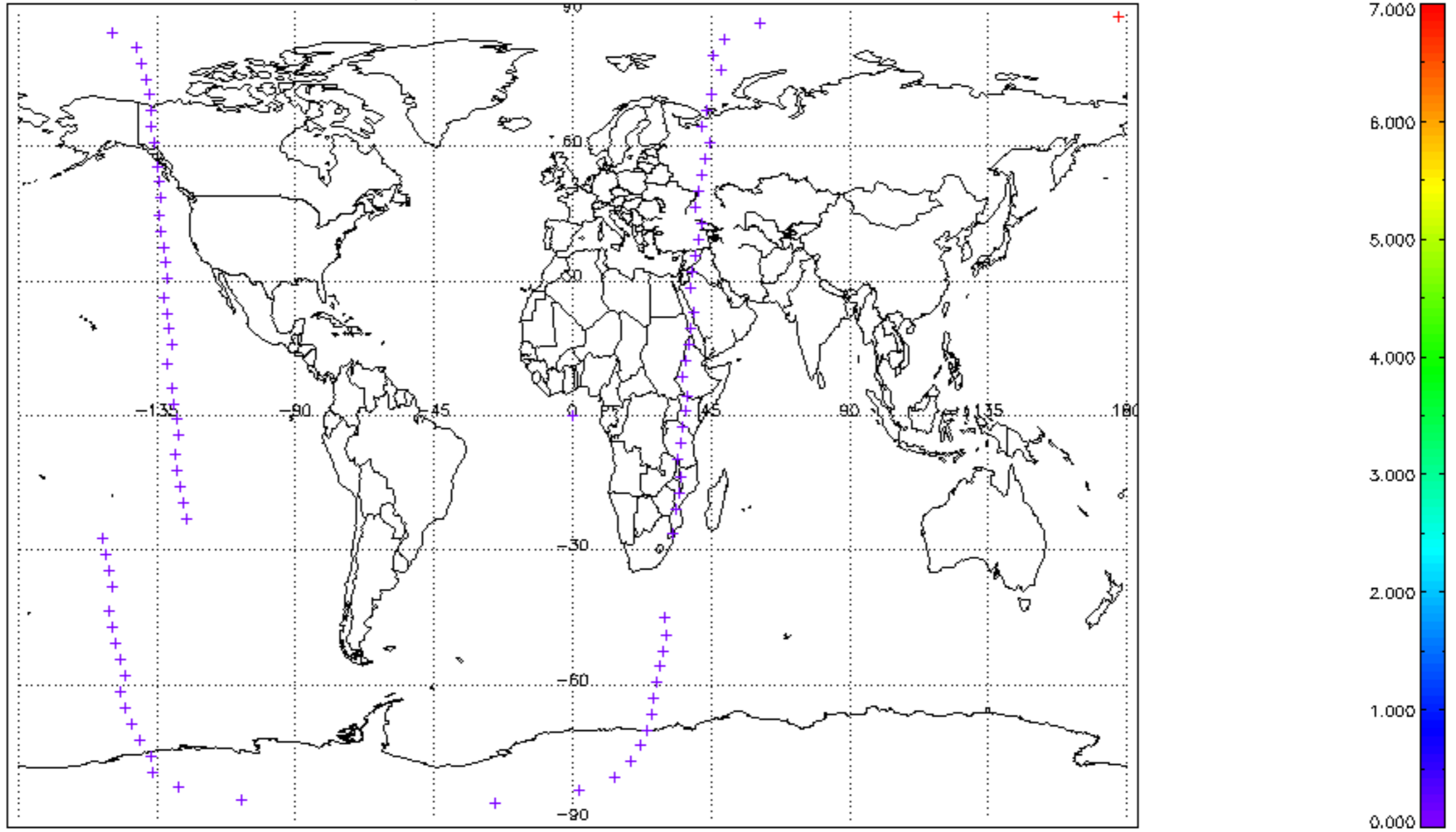


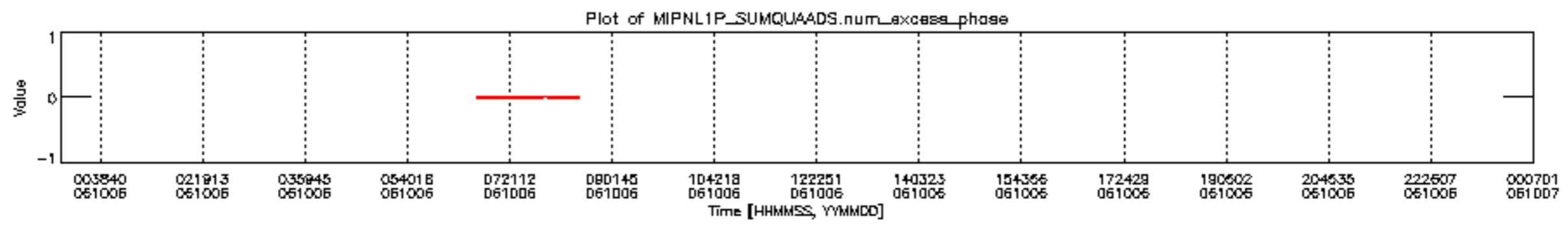
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_ins



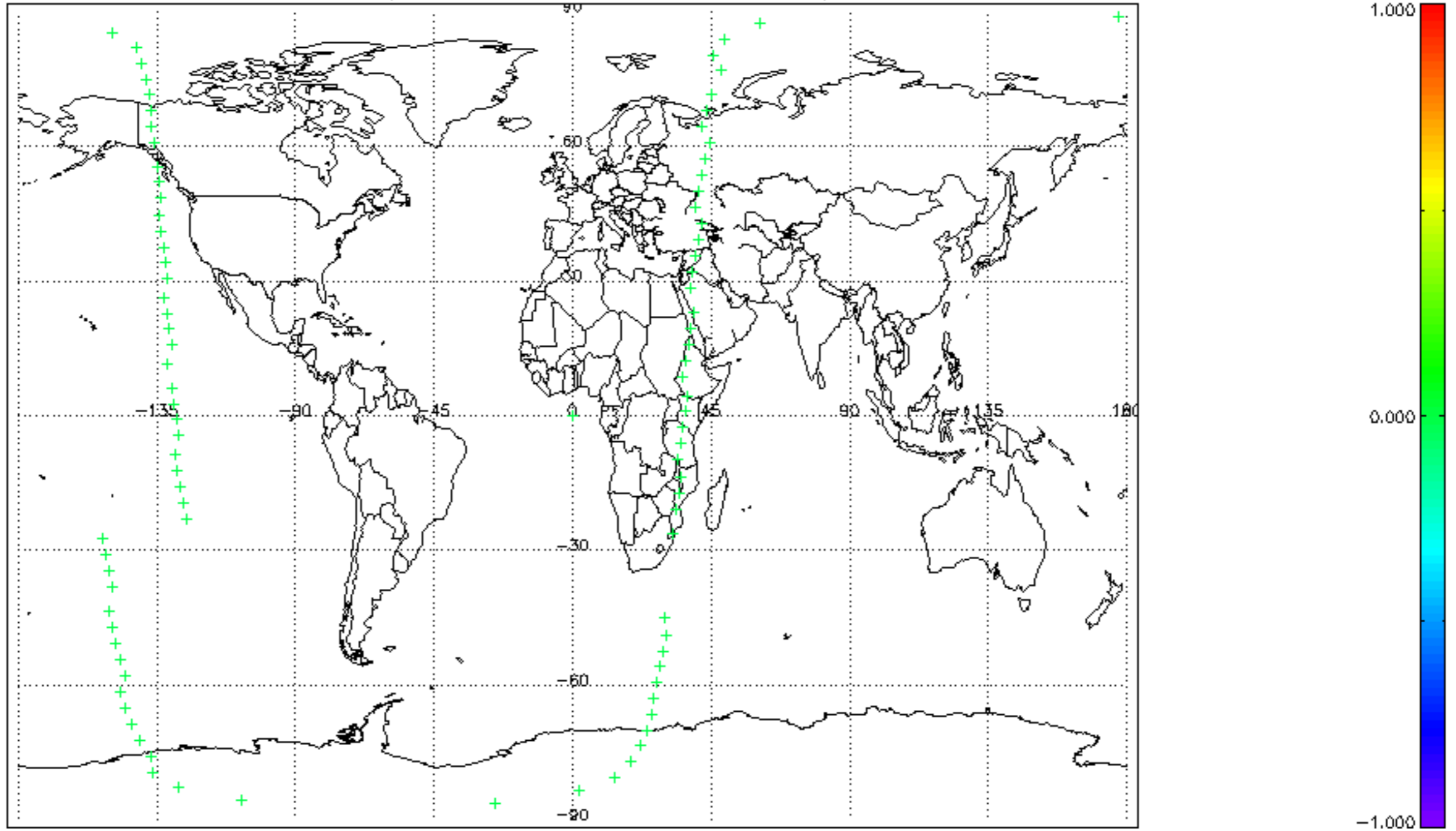


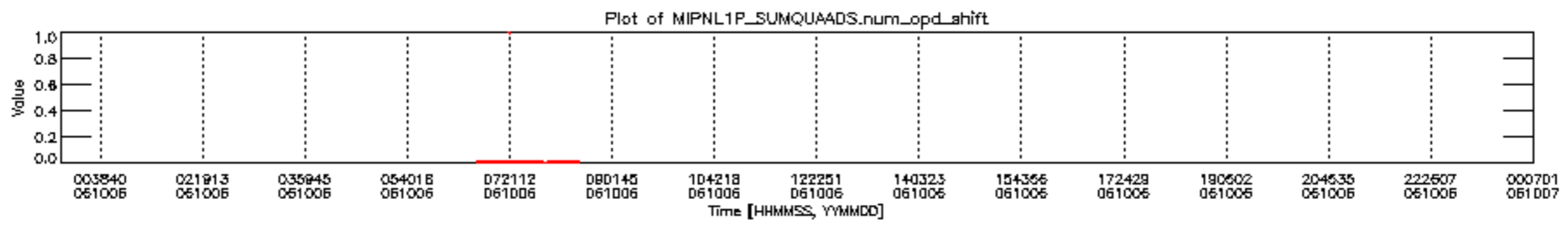
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_obs



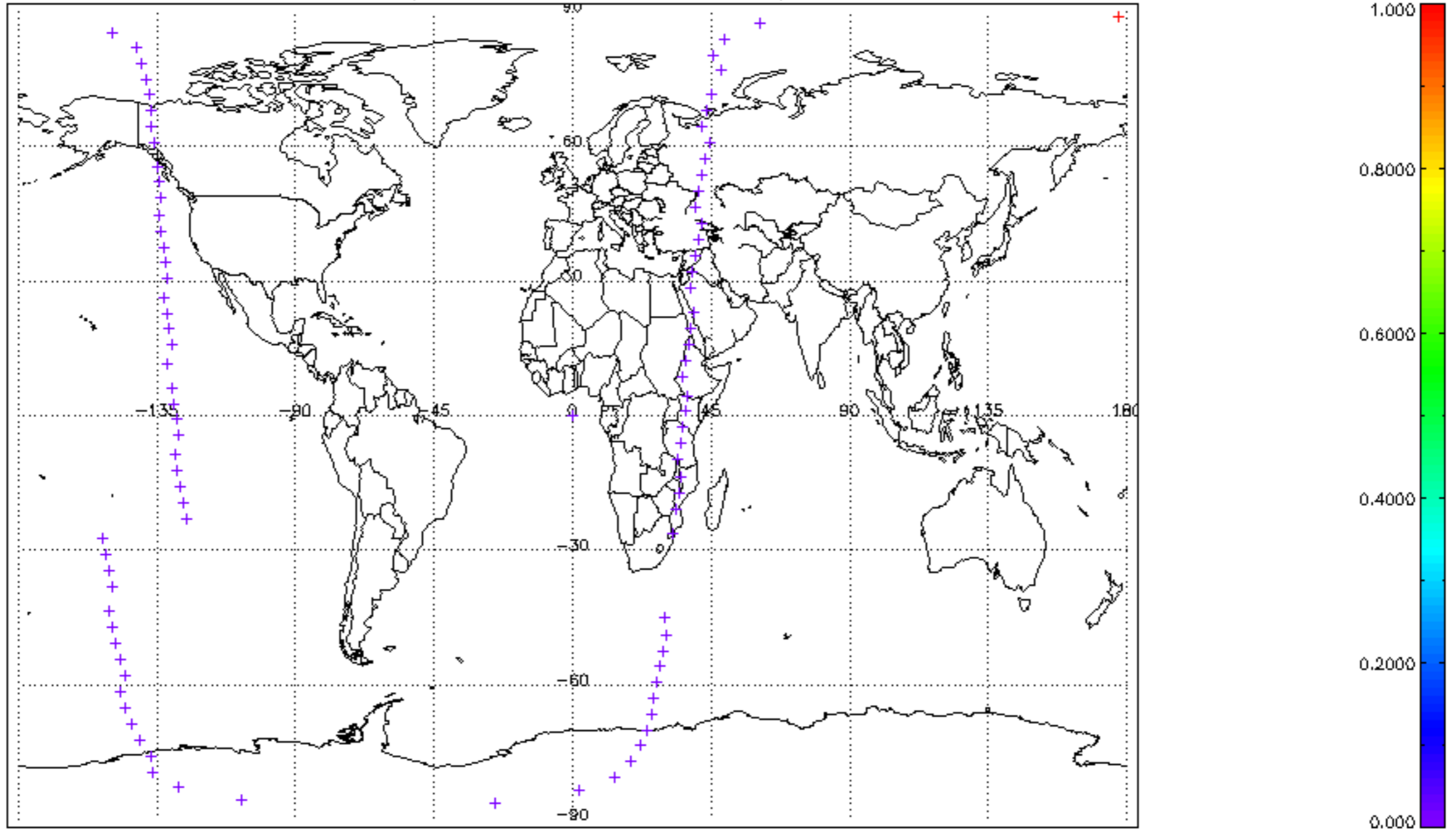


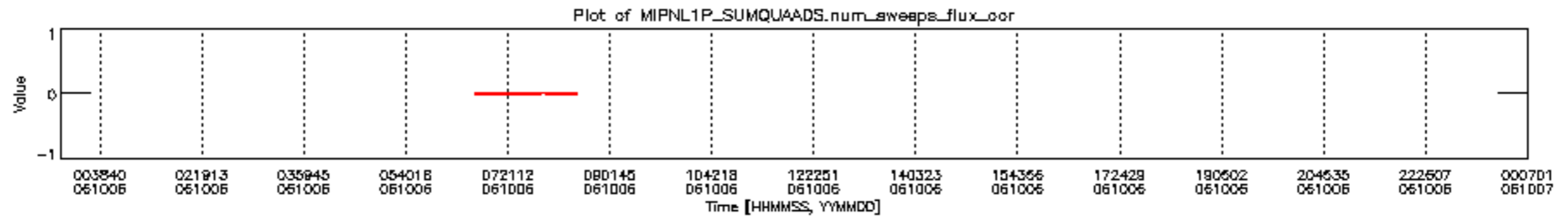
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_excess\_phase





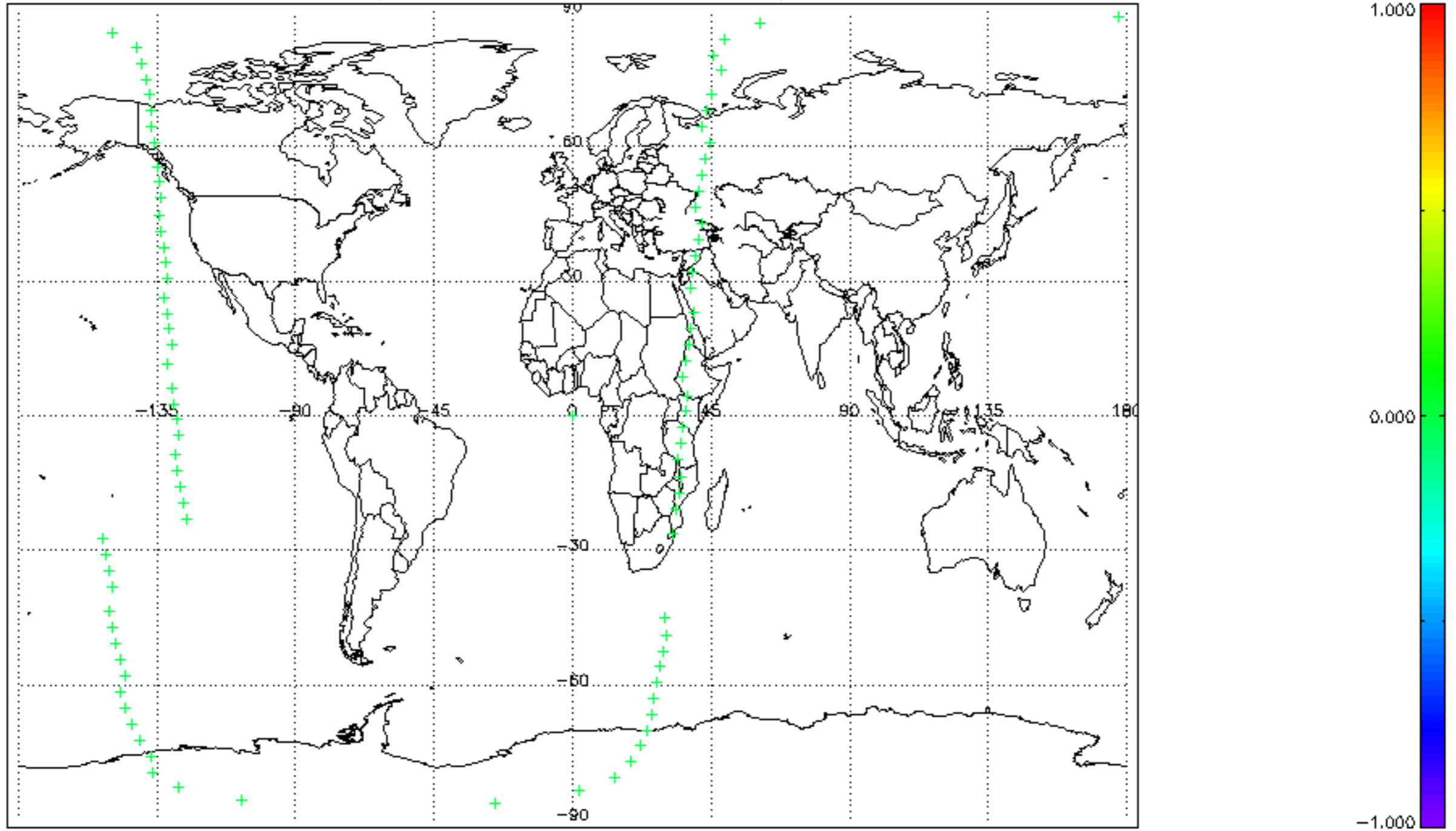
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_opd\_shift



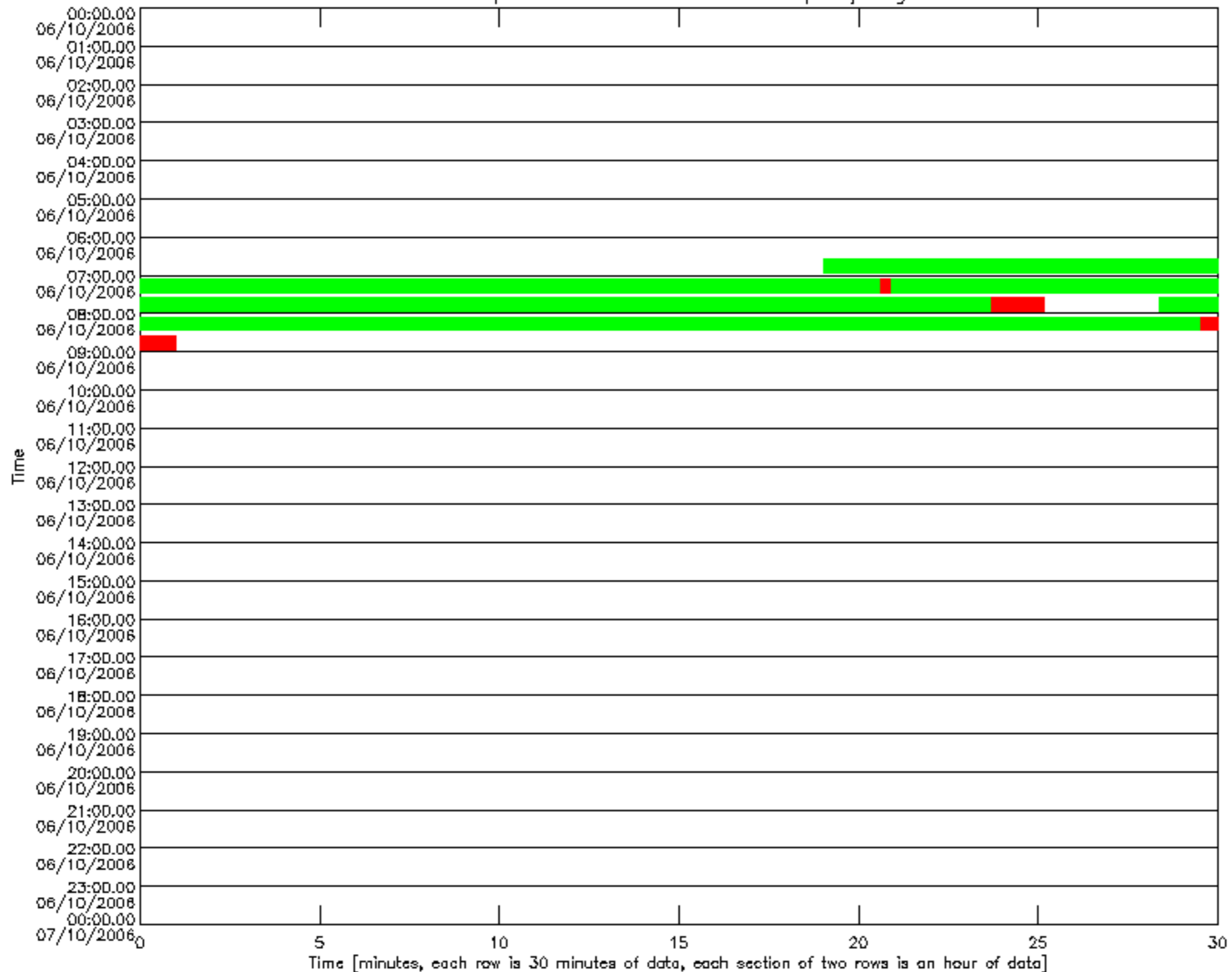




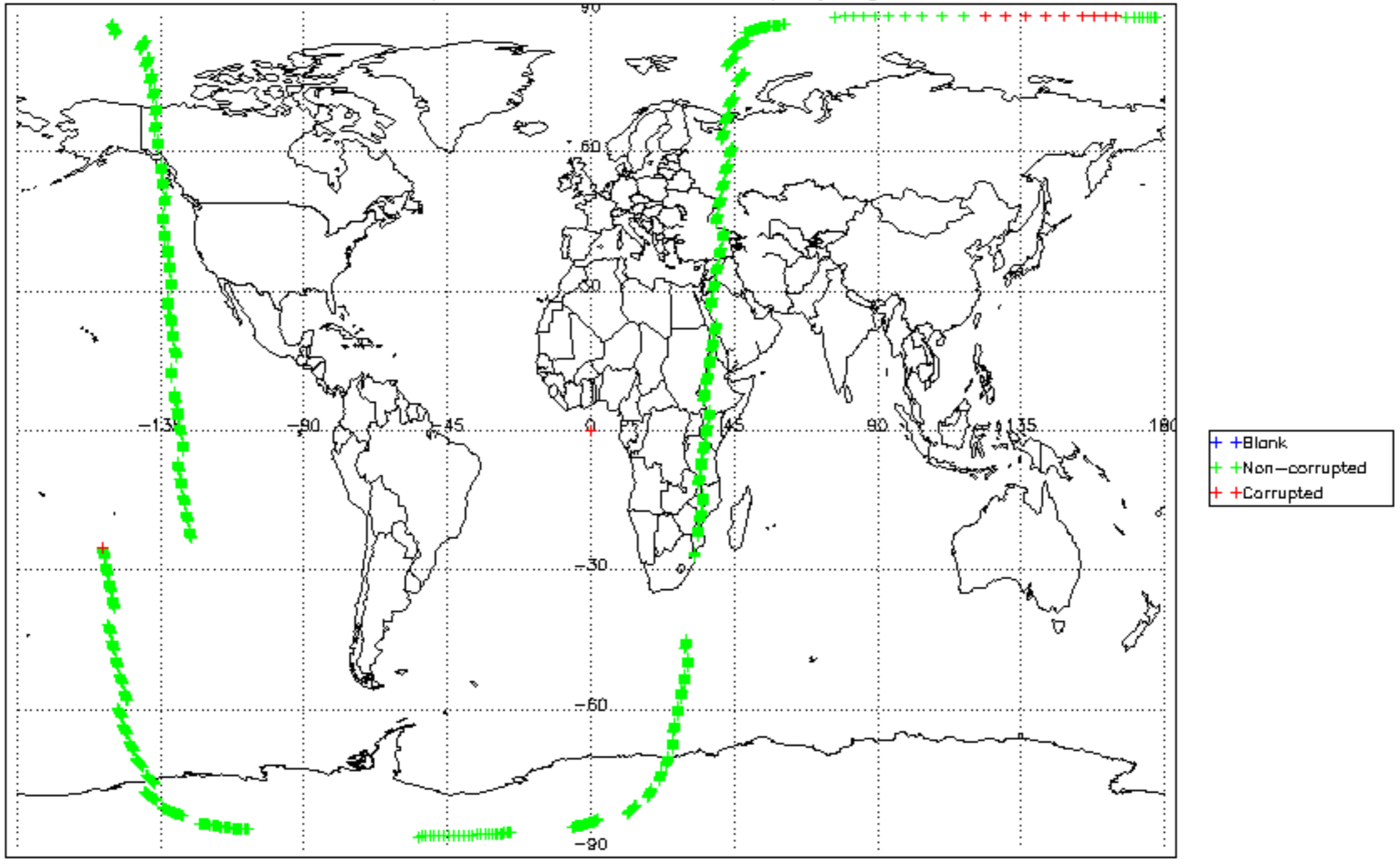
Geolocation plot of MIPNL1P\_SUMQUADS.num\_sweeps\_flux\_oor

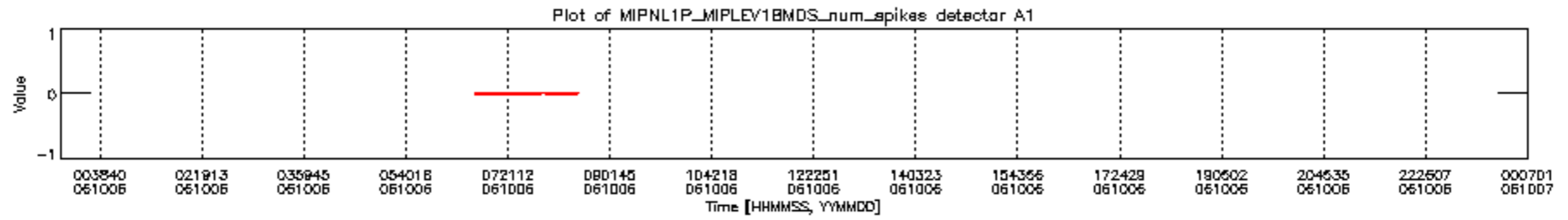


Bar plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag

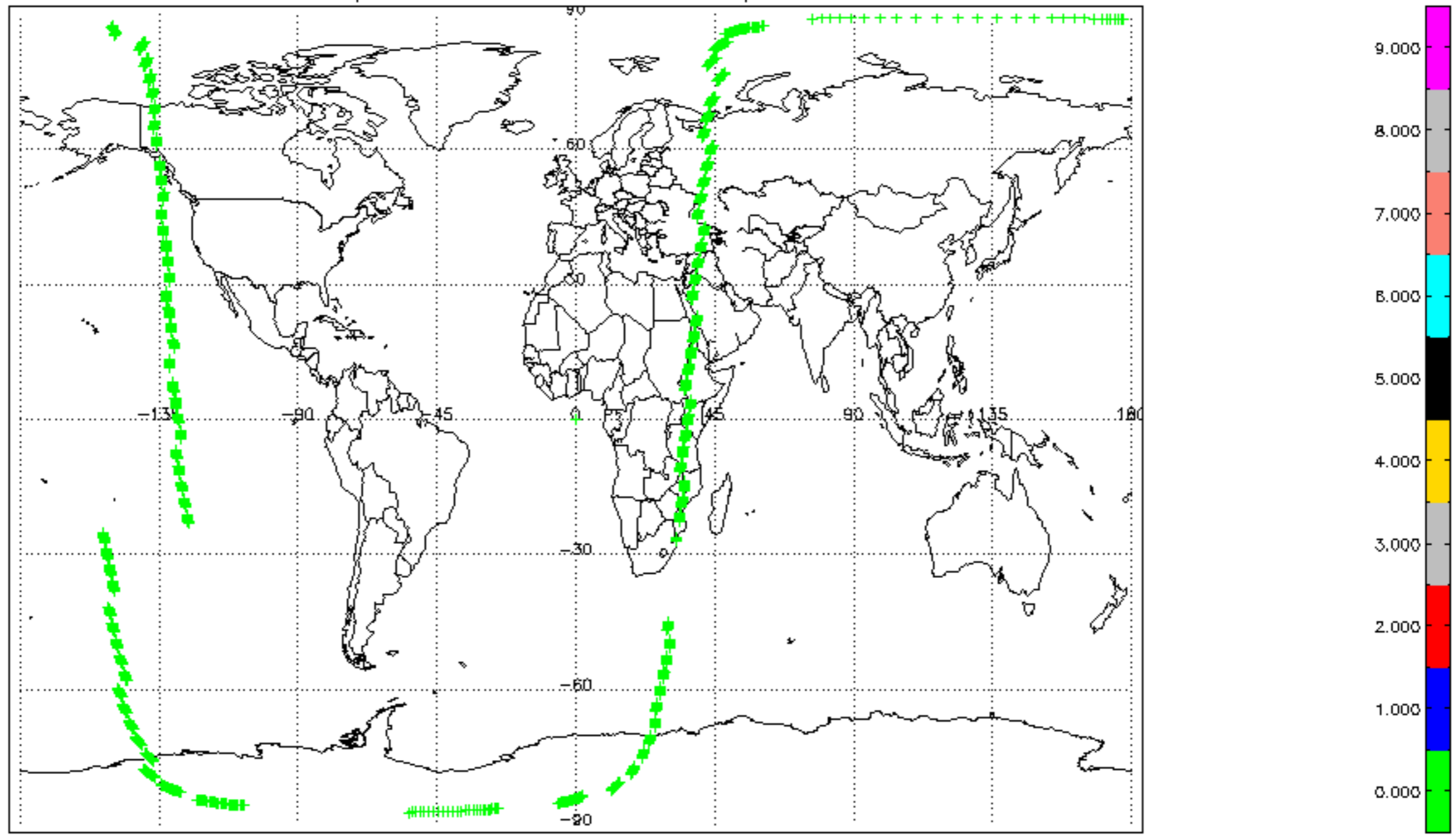


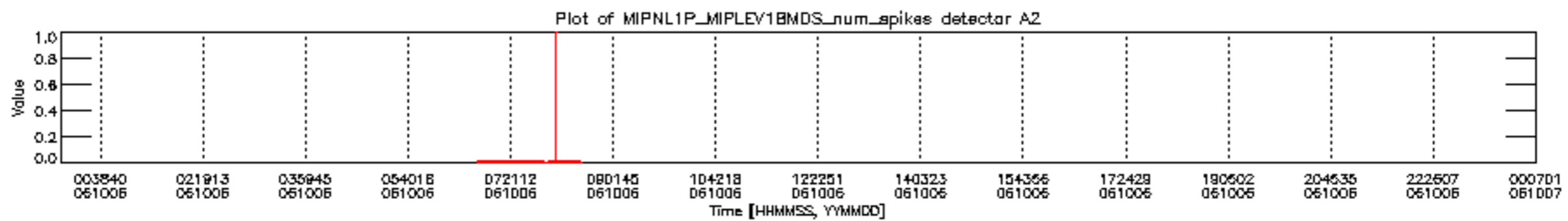
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag



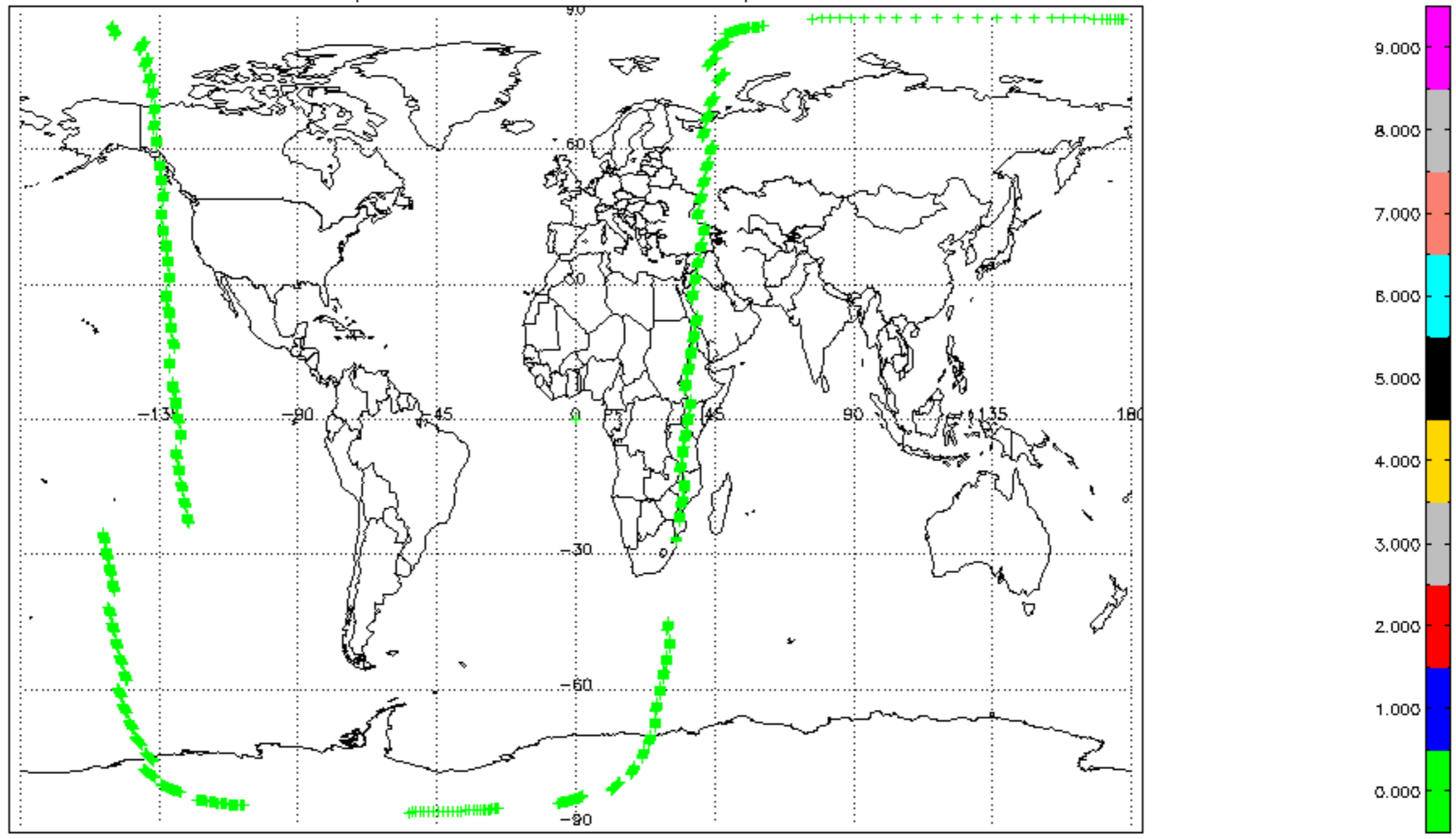


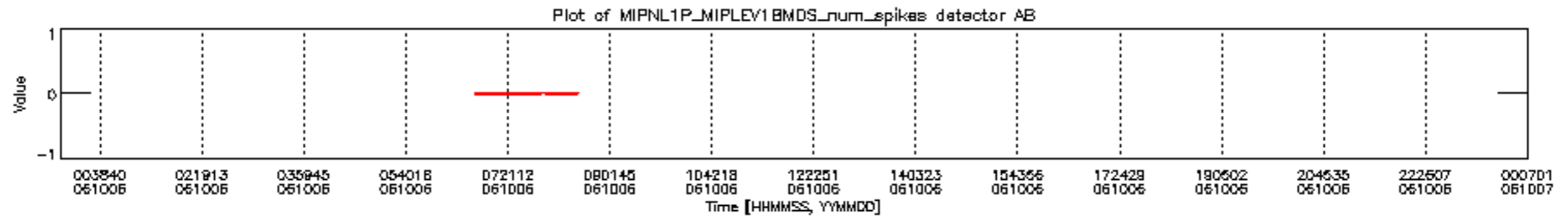
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A1





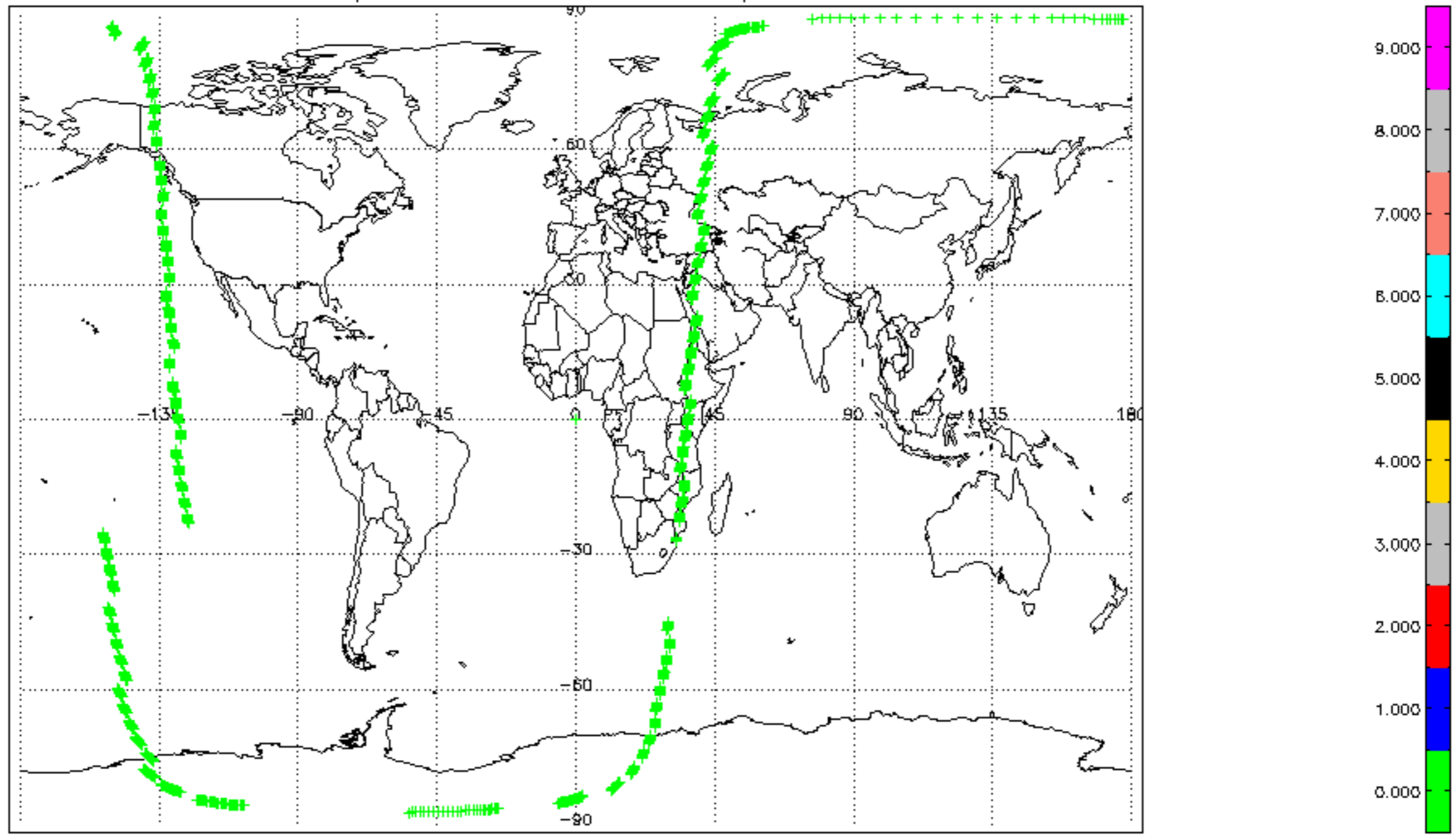
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A2

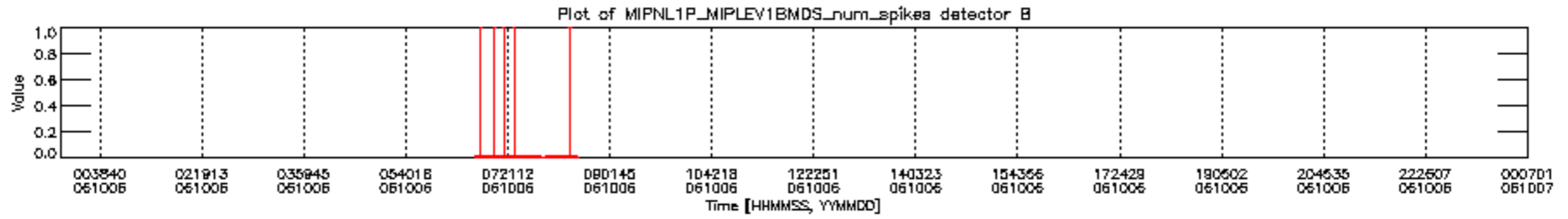




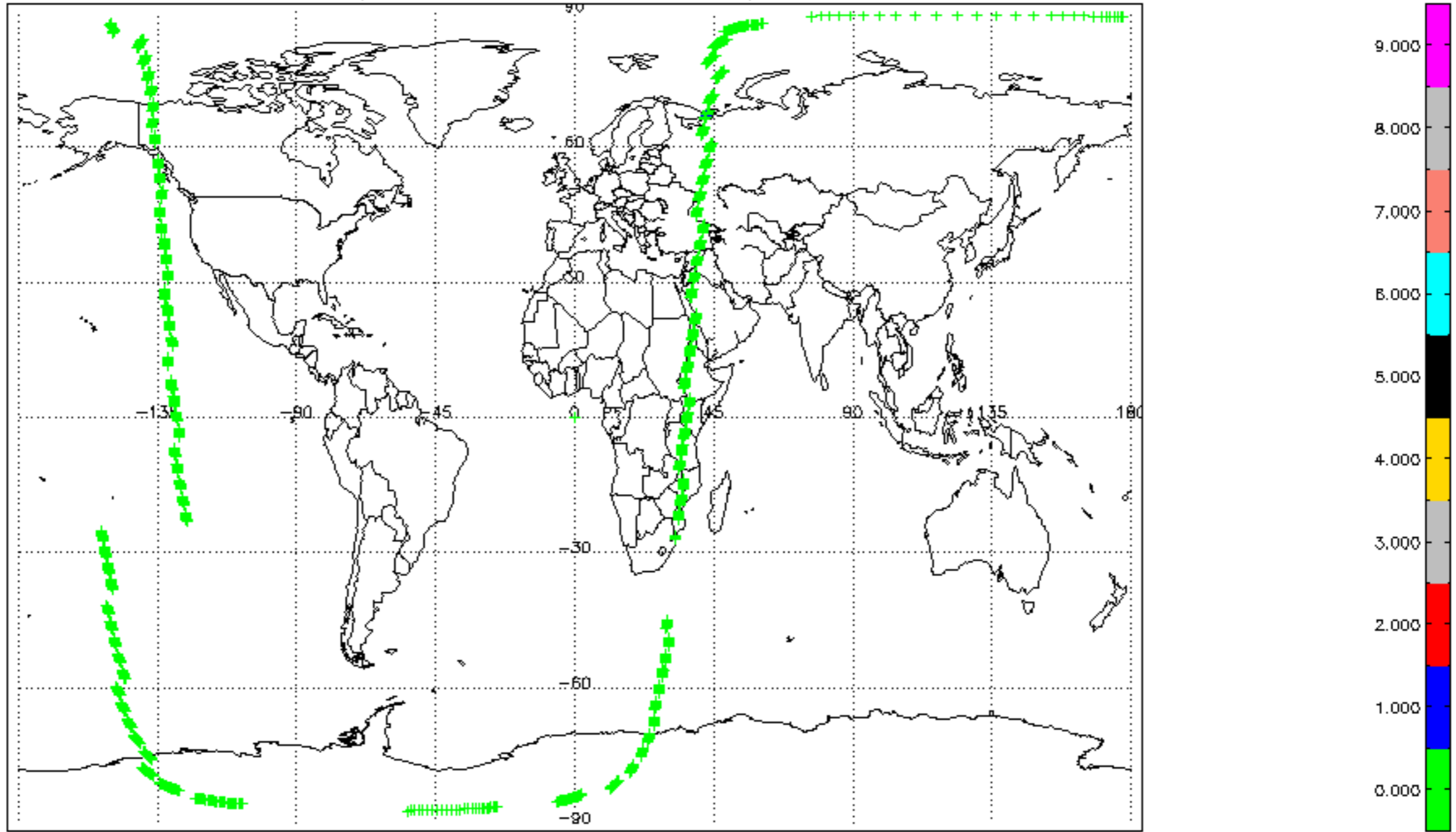


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector AB



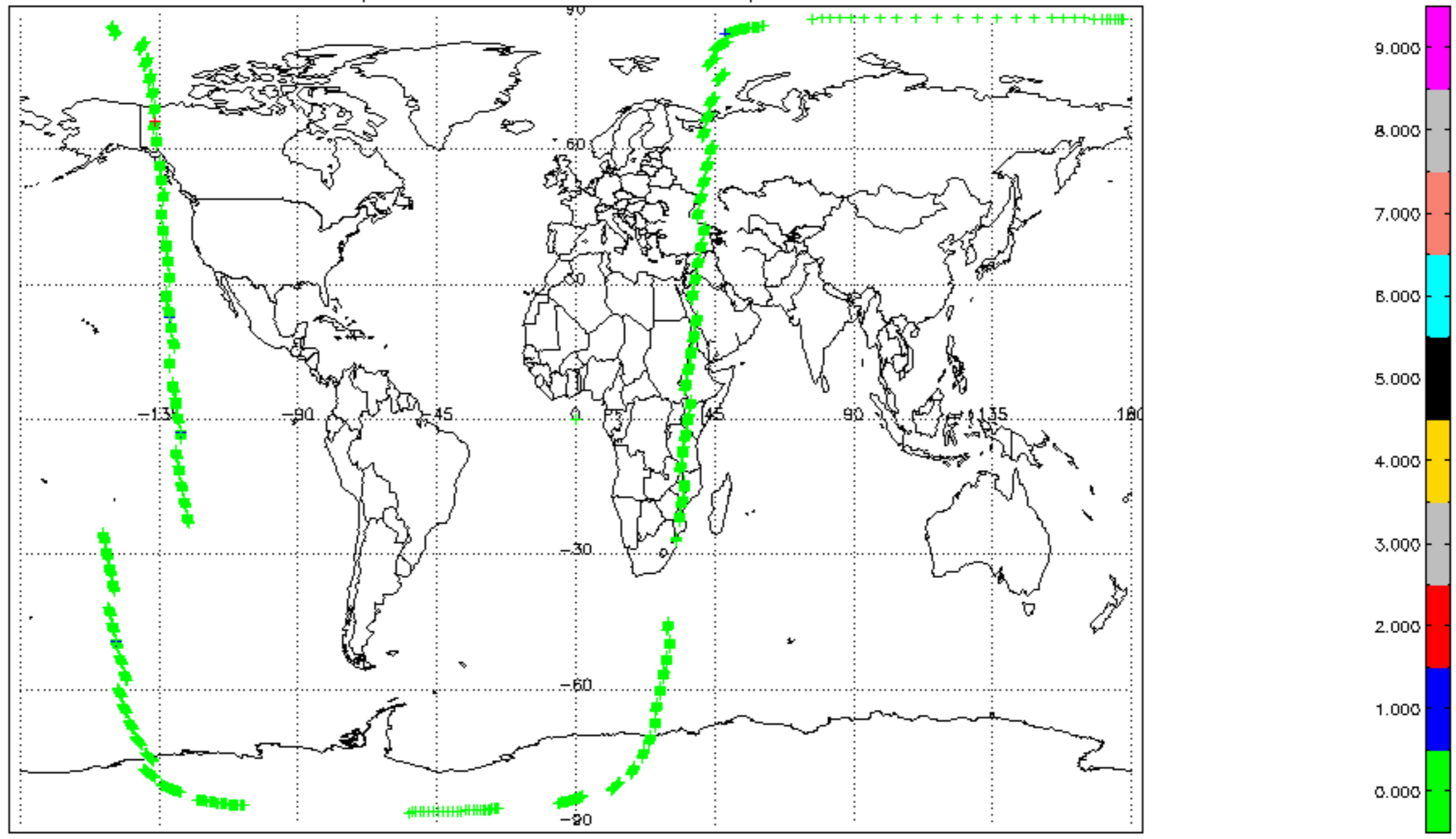


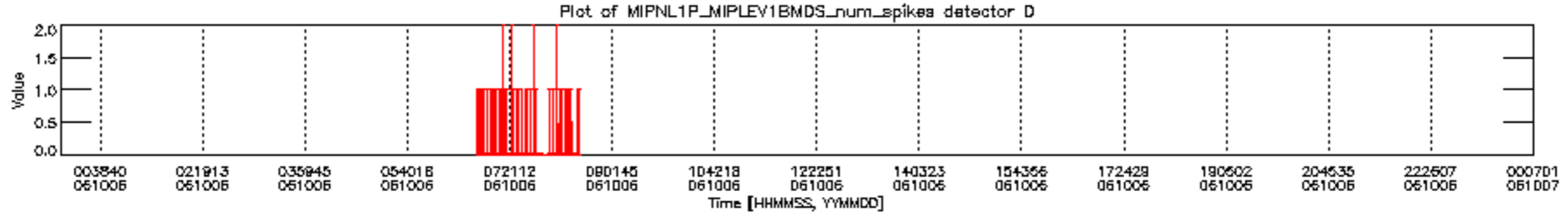
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector B



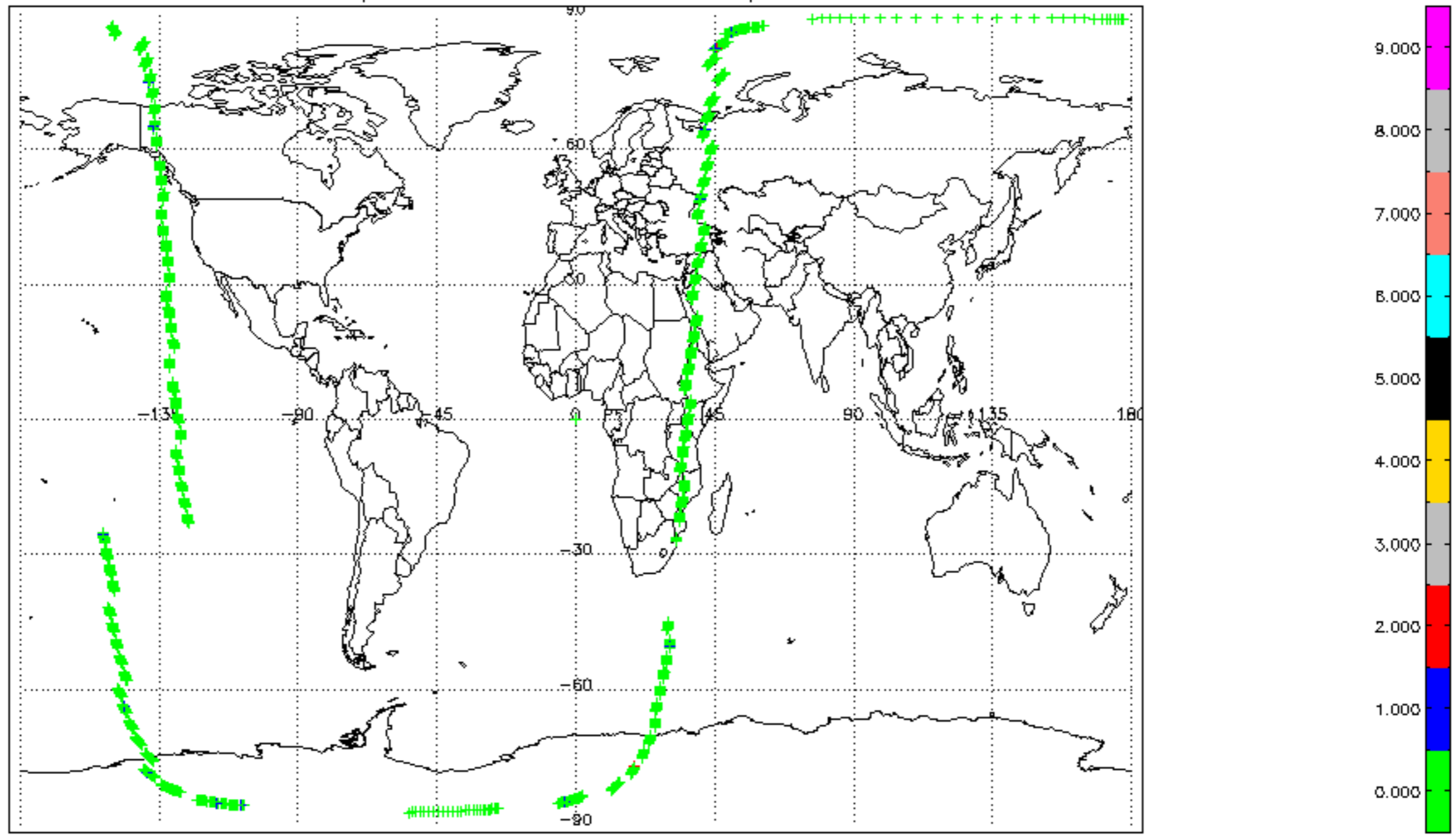


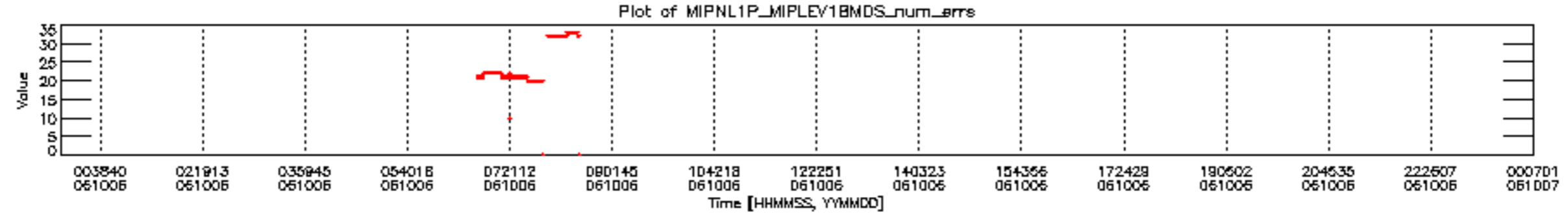
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector C





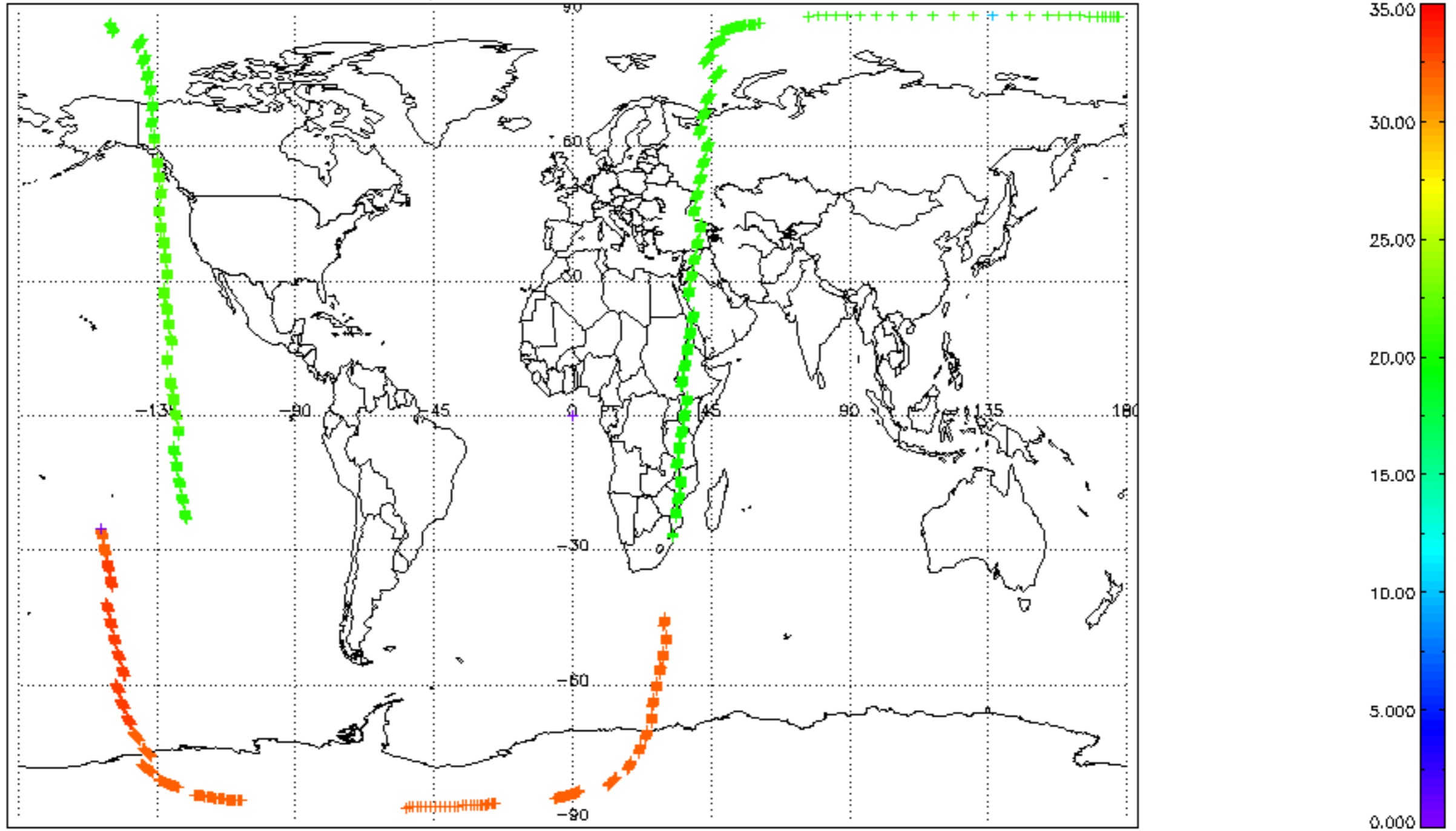
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector D



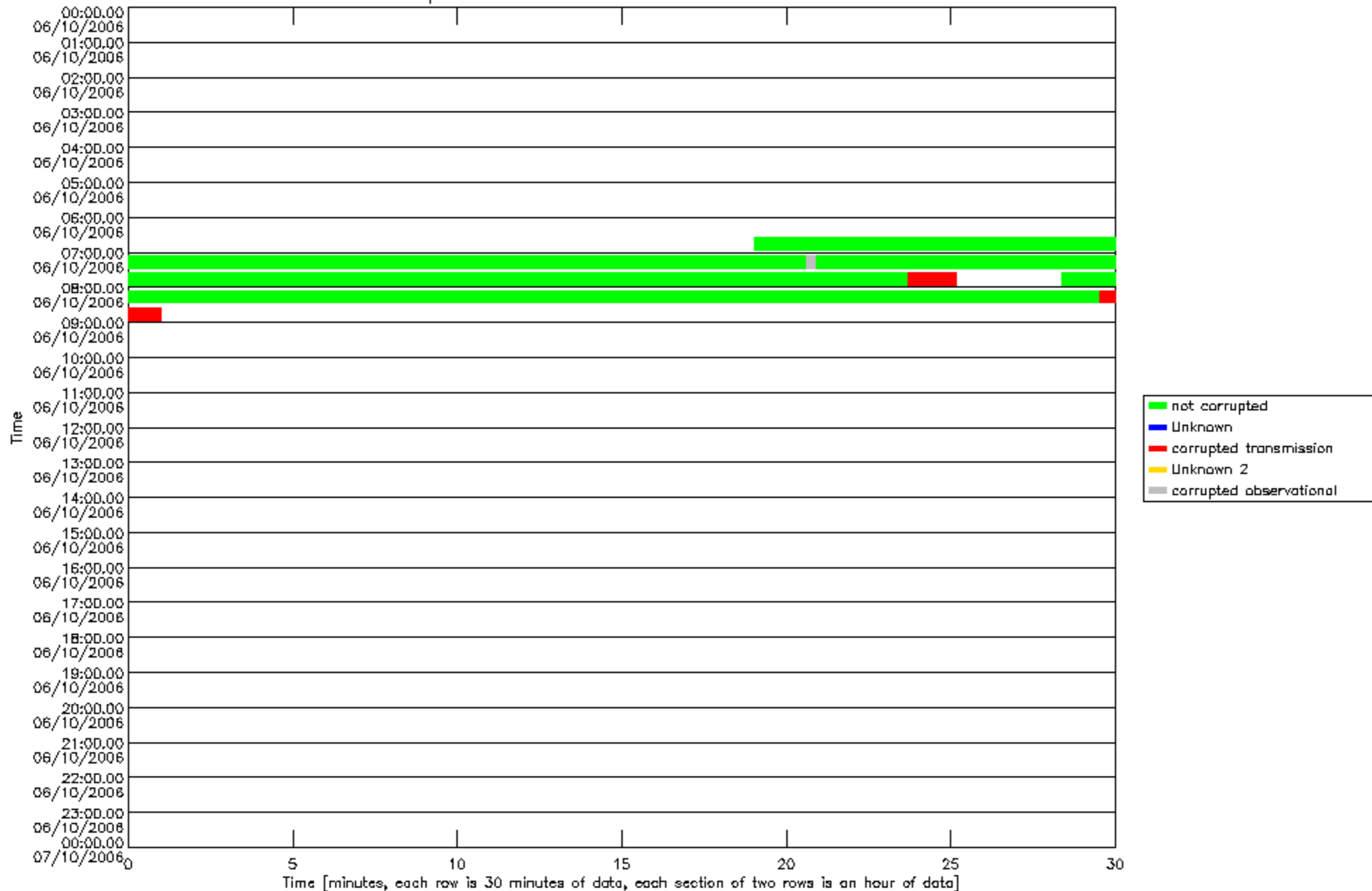




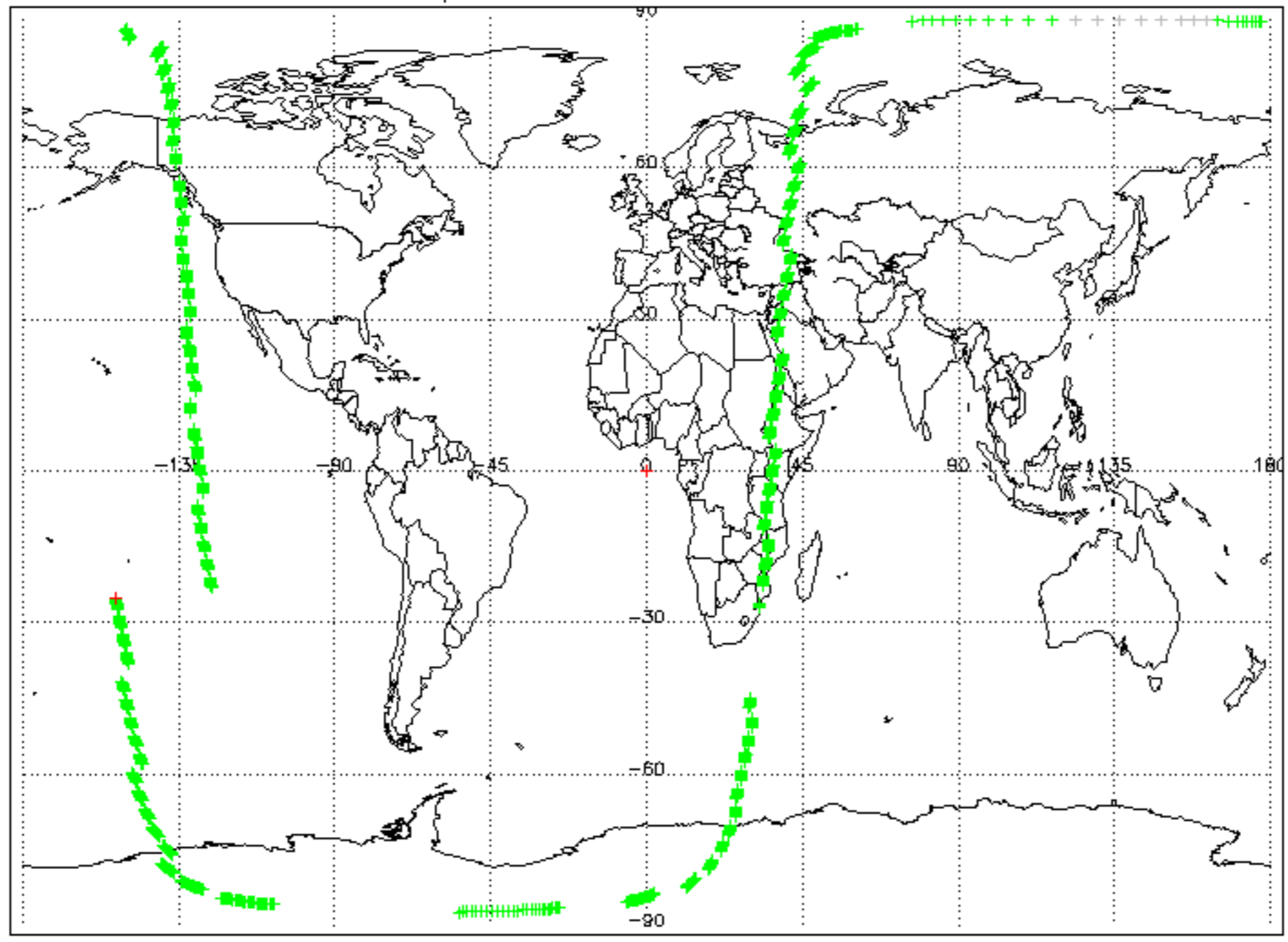
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs



Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A

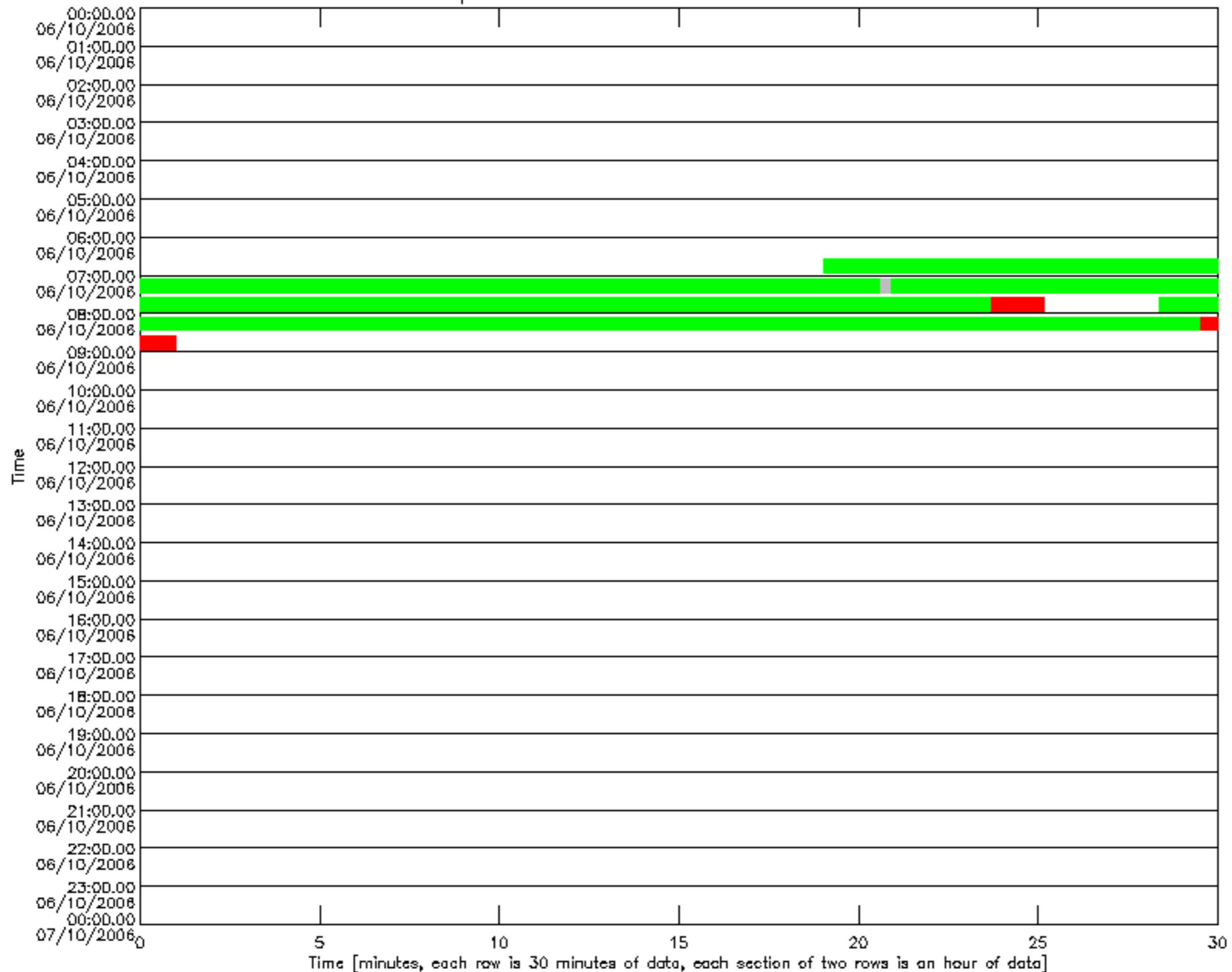


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A

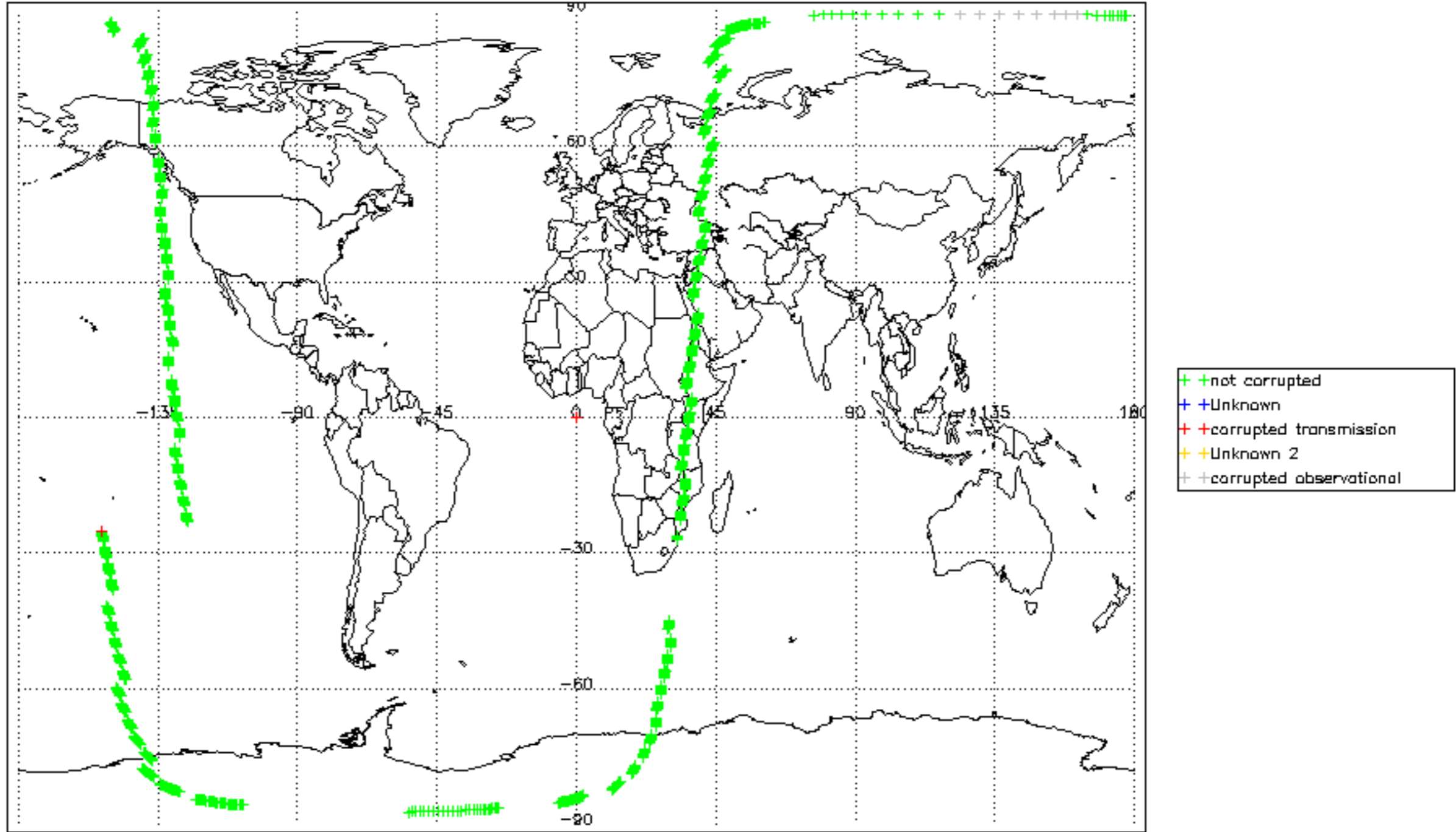


- + not corrupted
- + Unknown
- + corrupted transmission
- + Unknown 2
- + corrupted observational

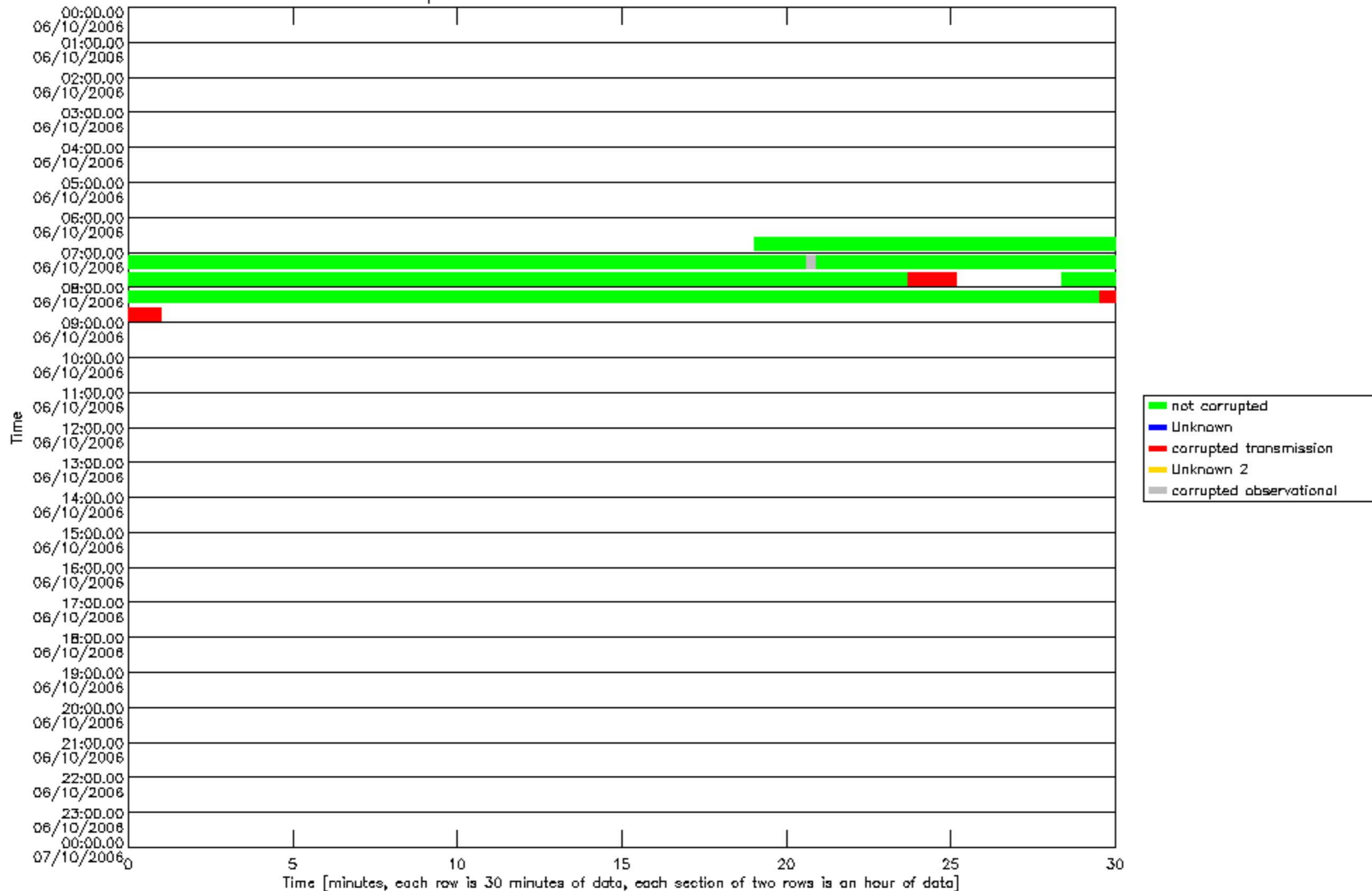
Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB



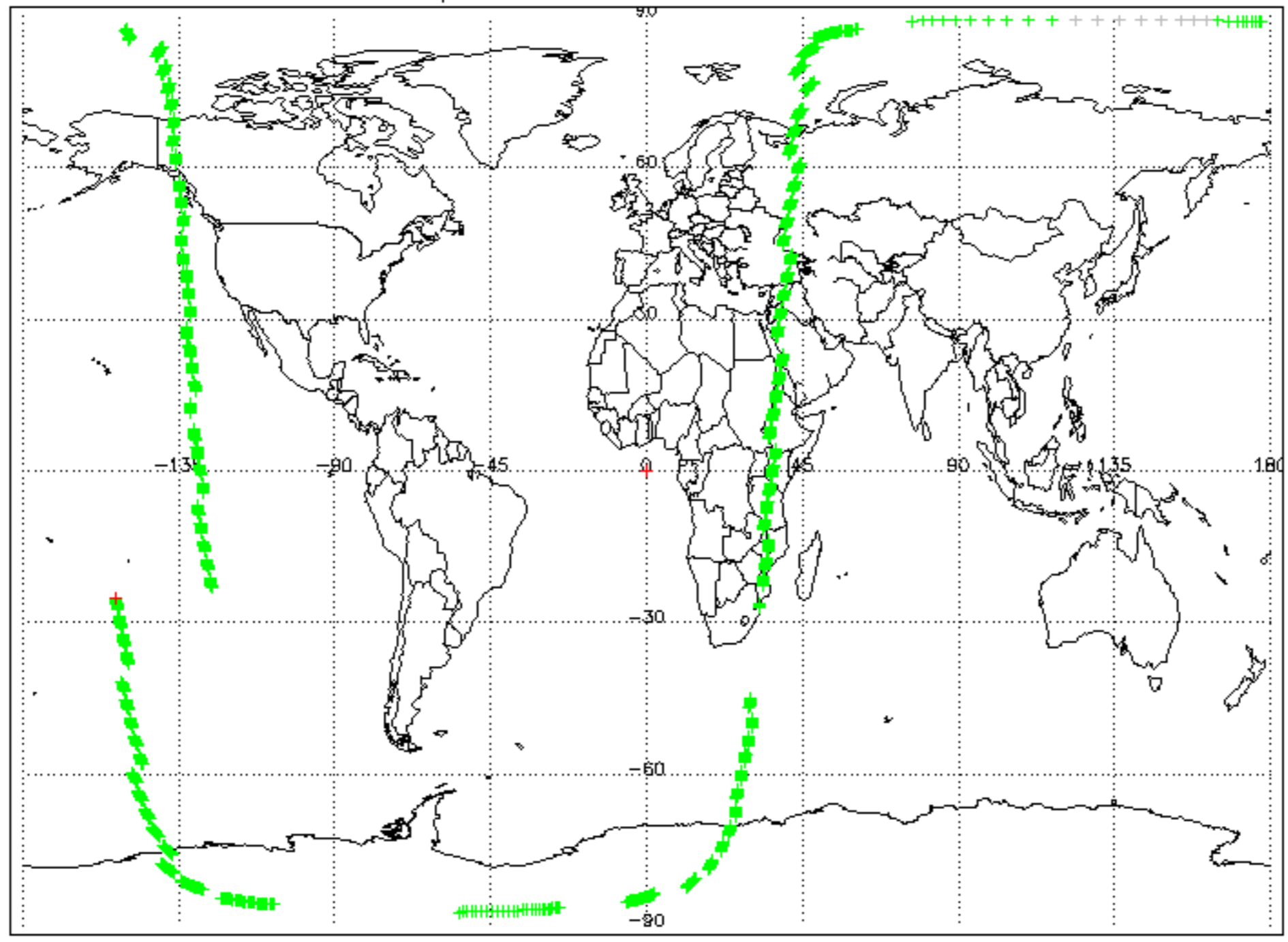
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB



Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B

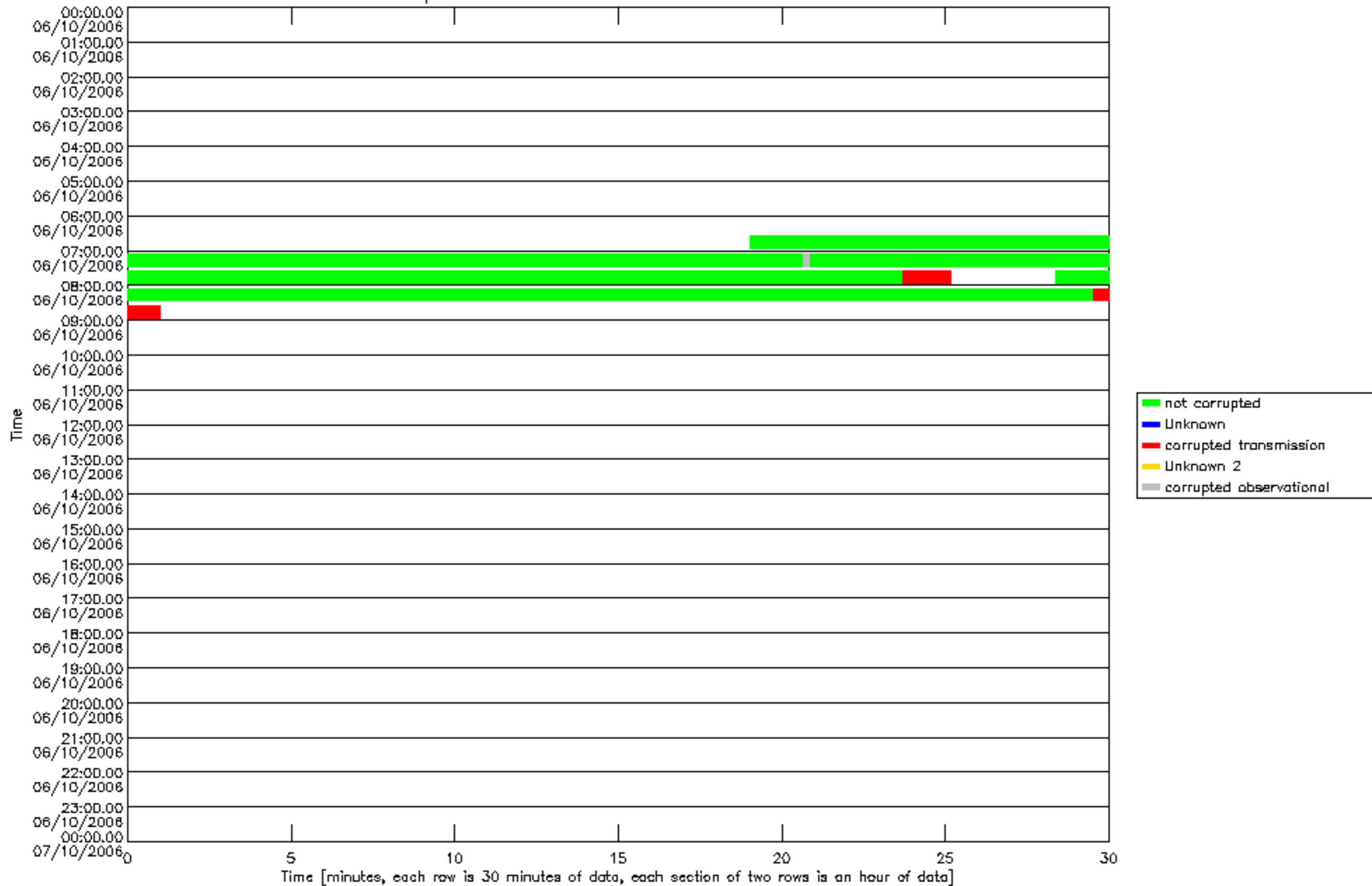


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B



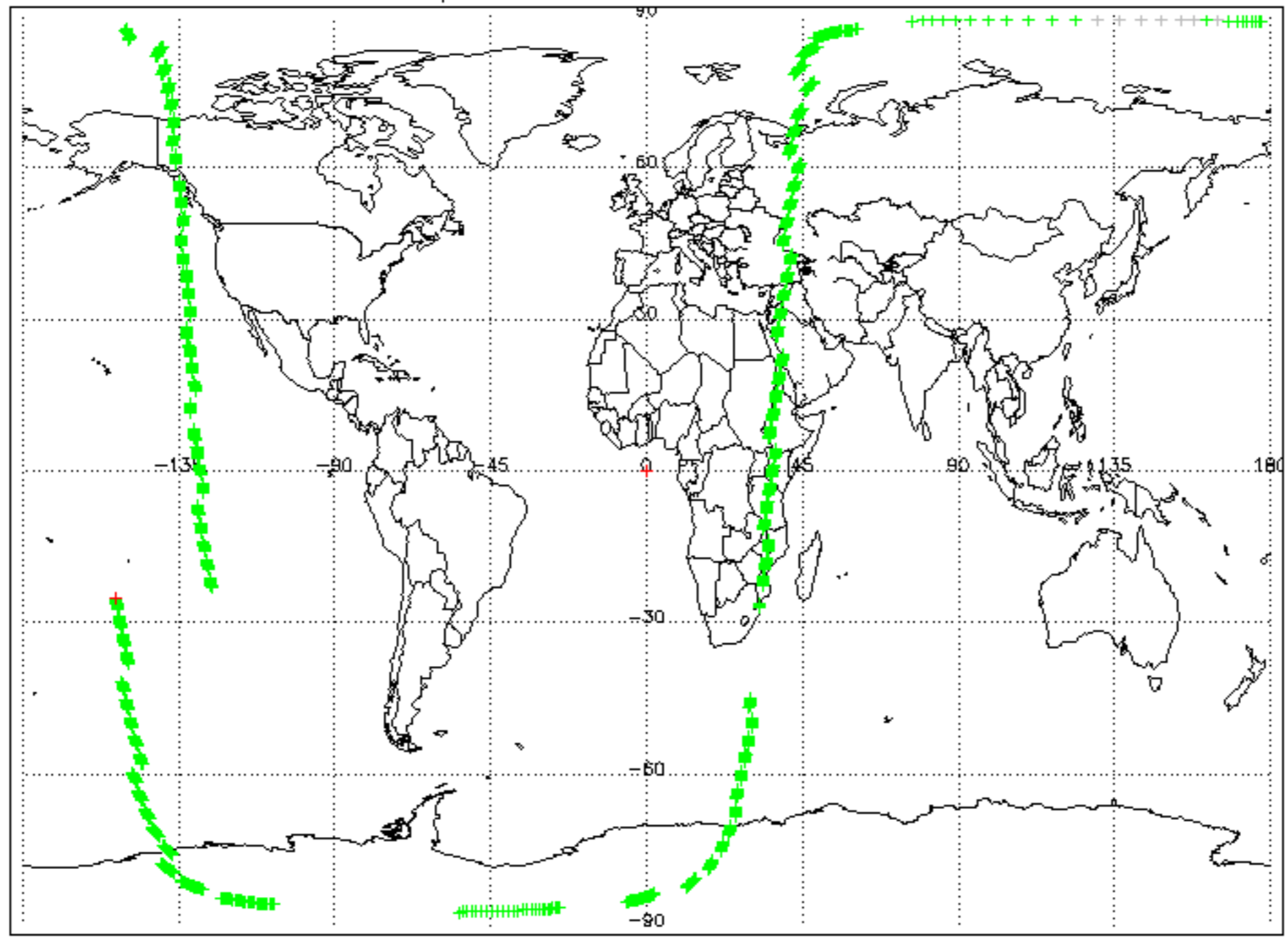
- + not corrupted
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- + Unknown 2
- + corrupted observational

Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band C



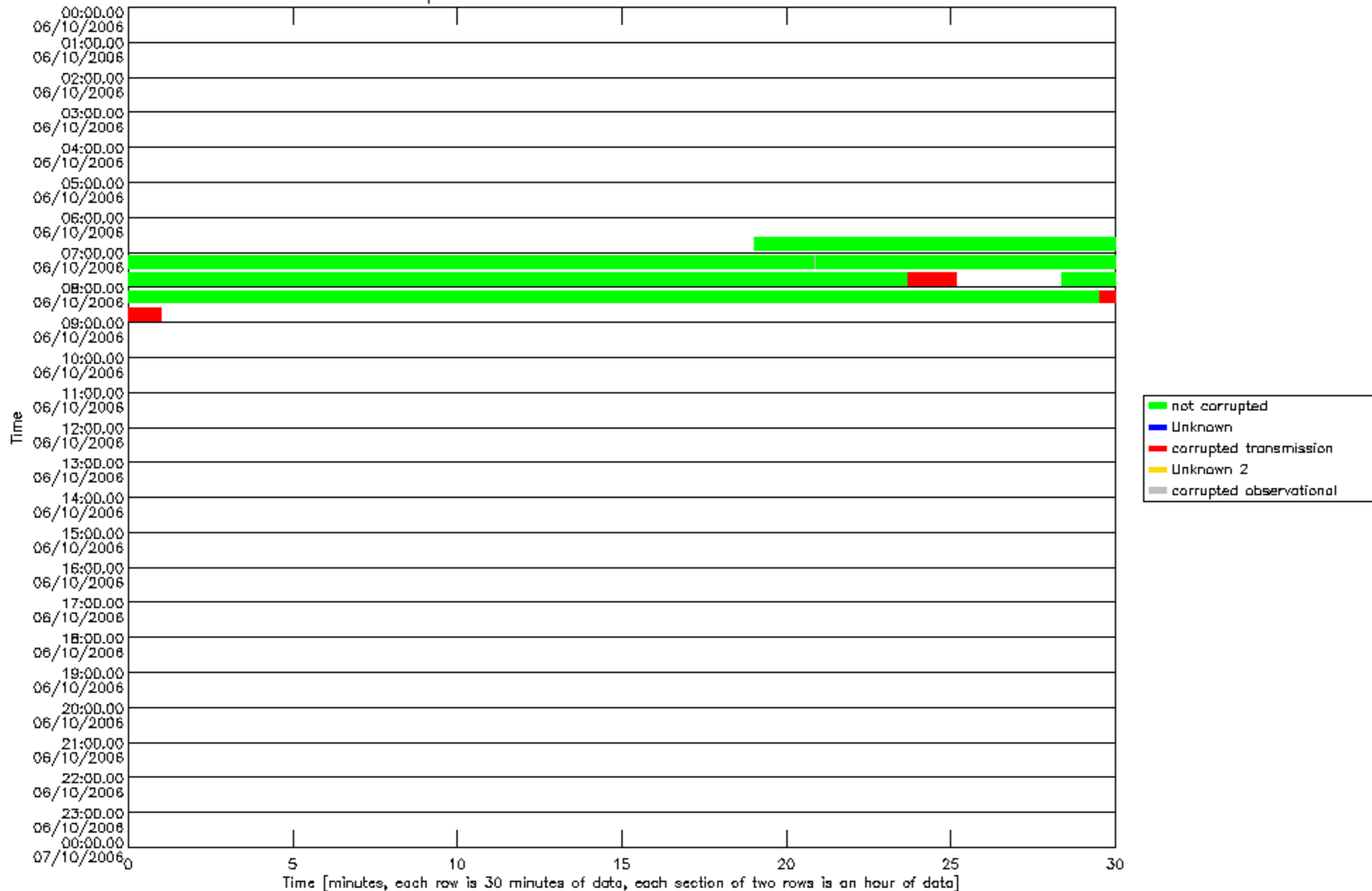


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band C

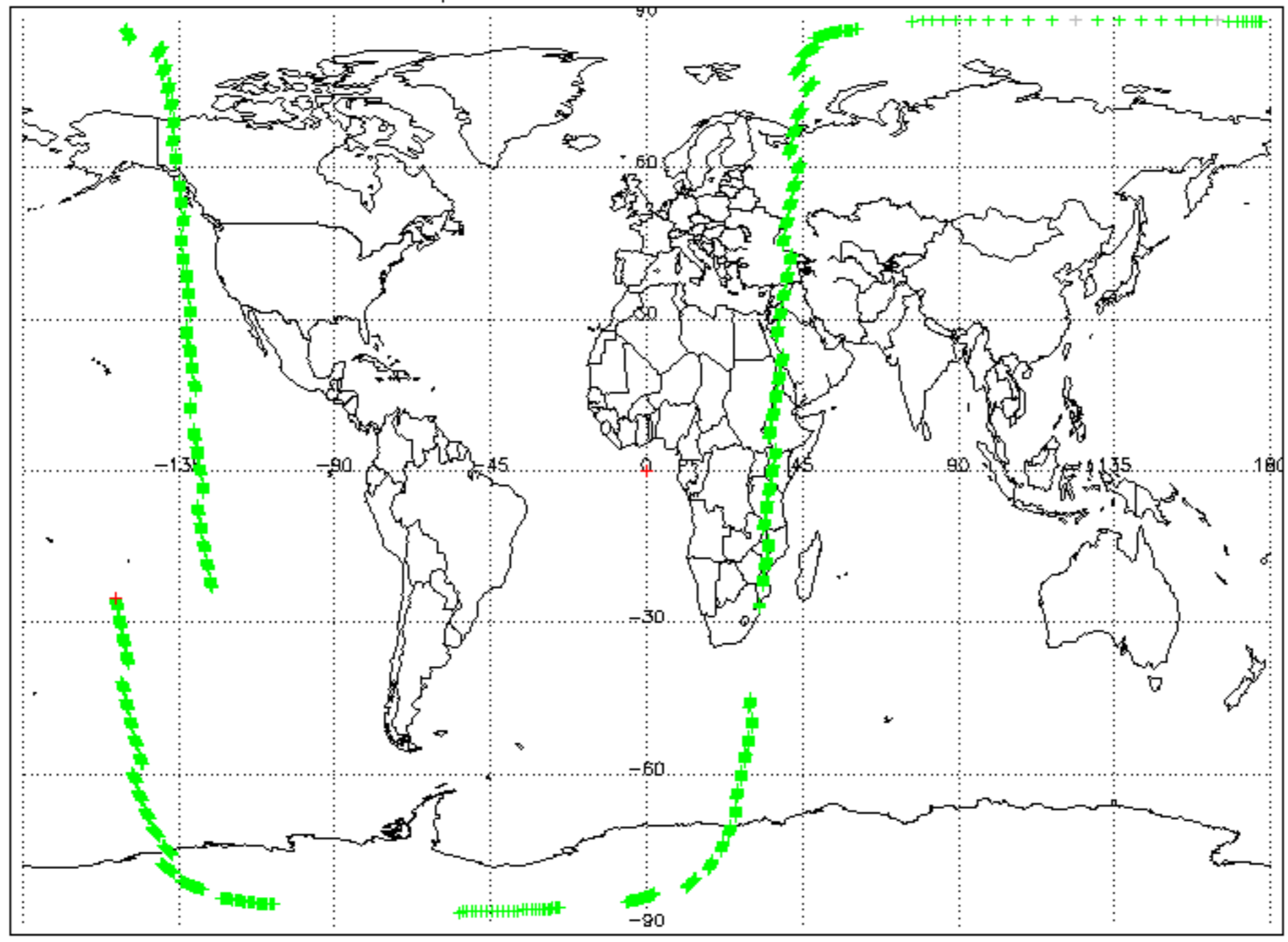


- + not corrupted
- + Unknown
- + corrupted transmission
- + Unknown 2
- + corrupted observational

Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band D

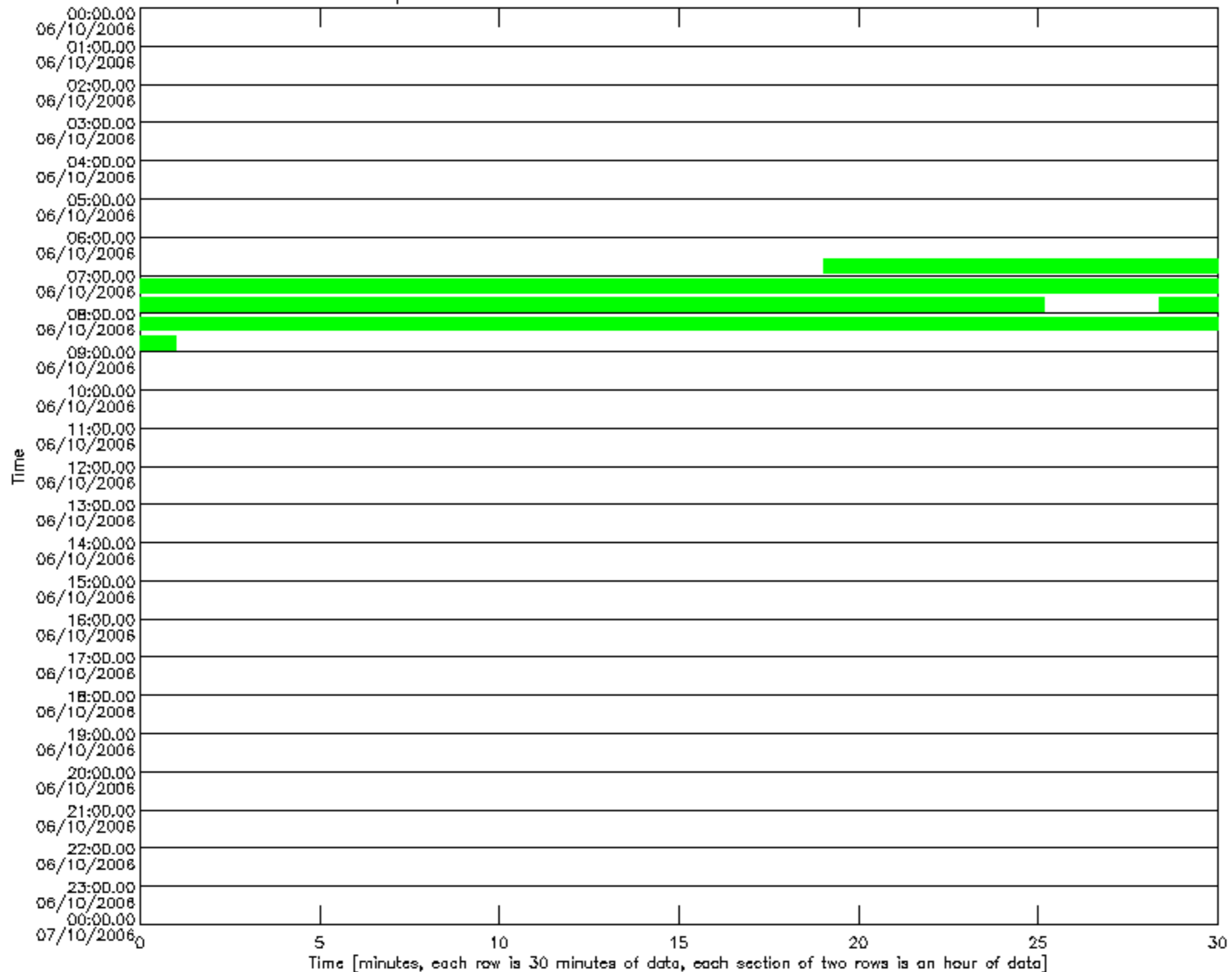


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band D



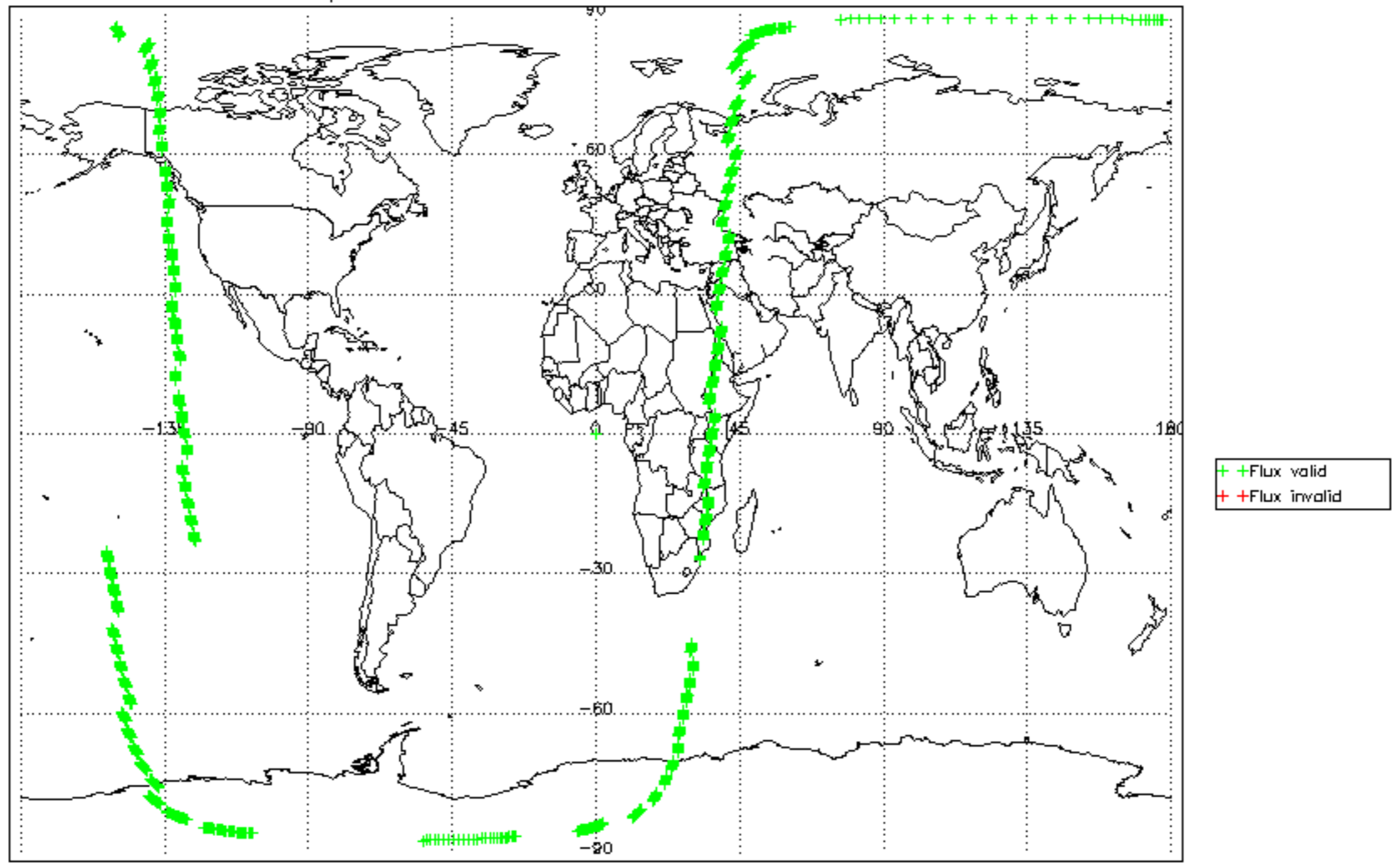
- + not corrupted
- + Unknown
- + corrupted transmission
- + Unknown 2
- + corrupted observational

Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1

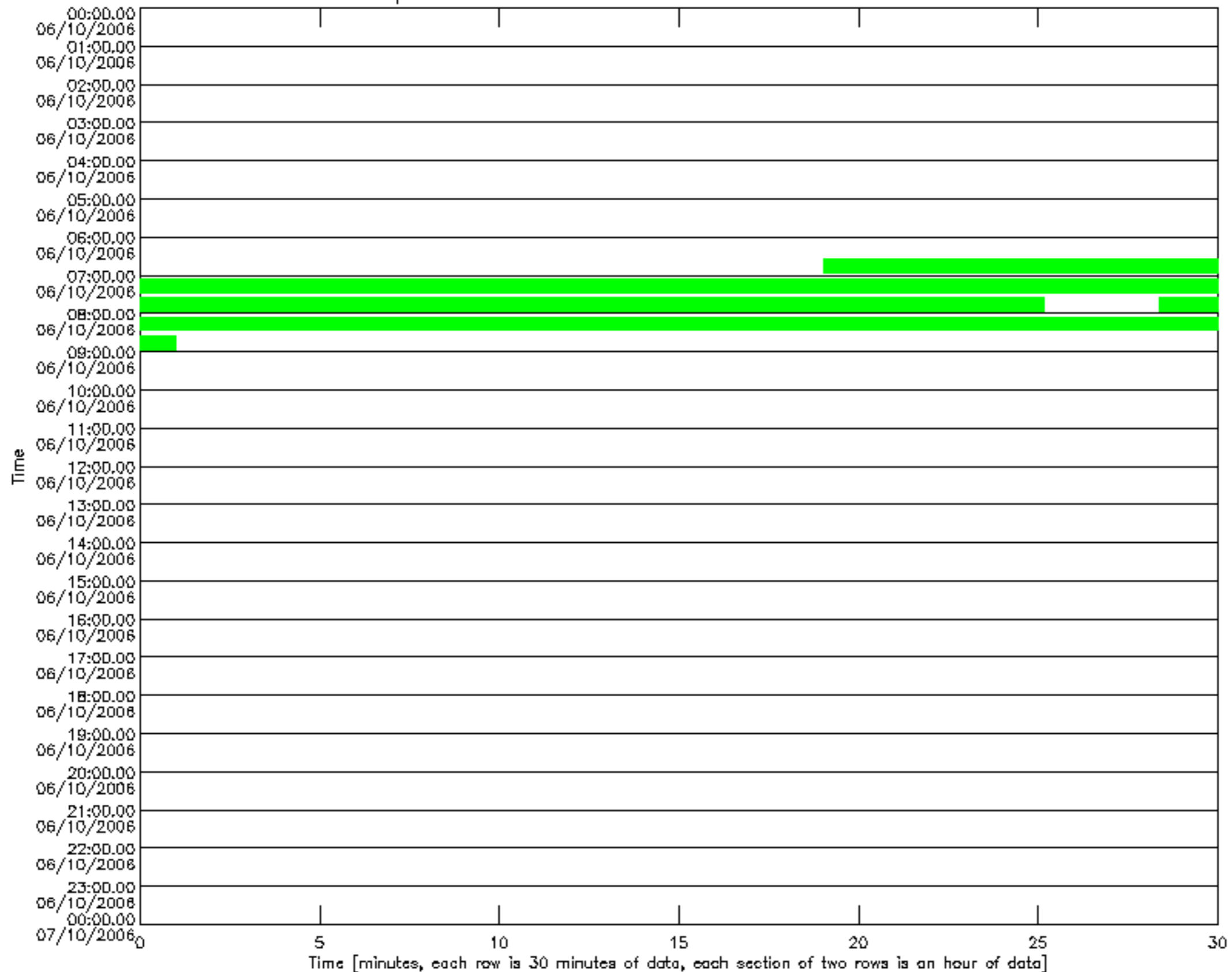


█ Flux valid  
█ Flux invalid

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A1

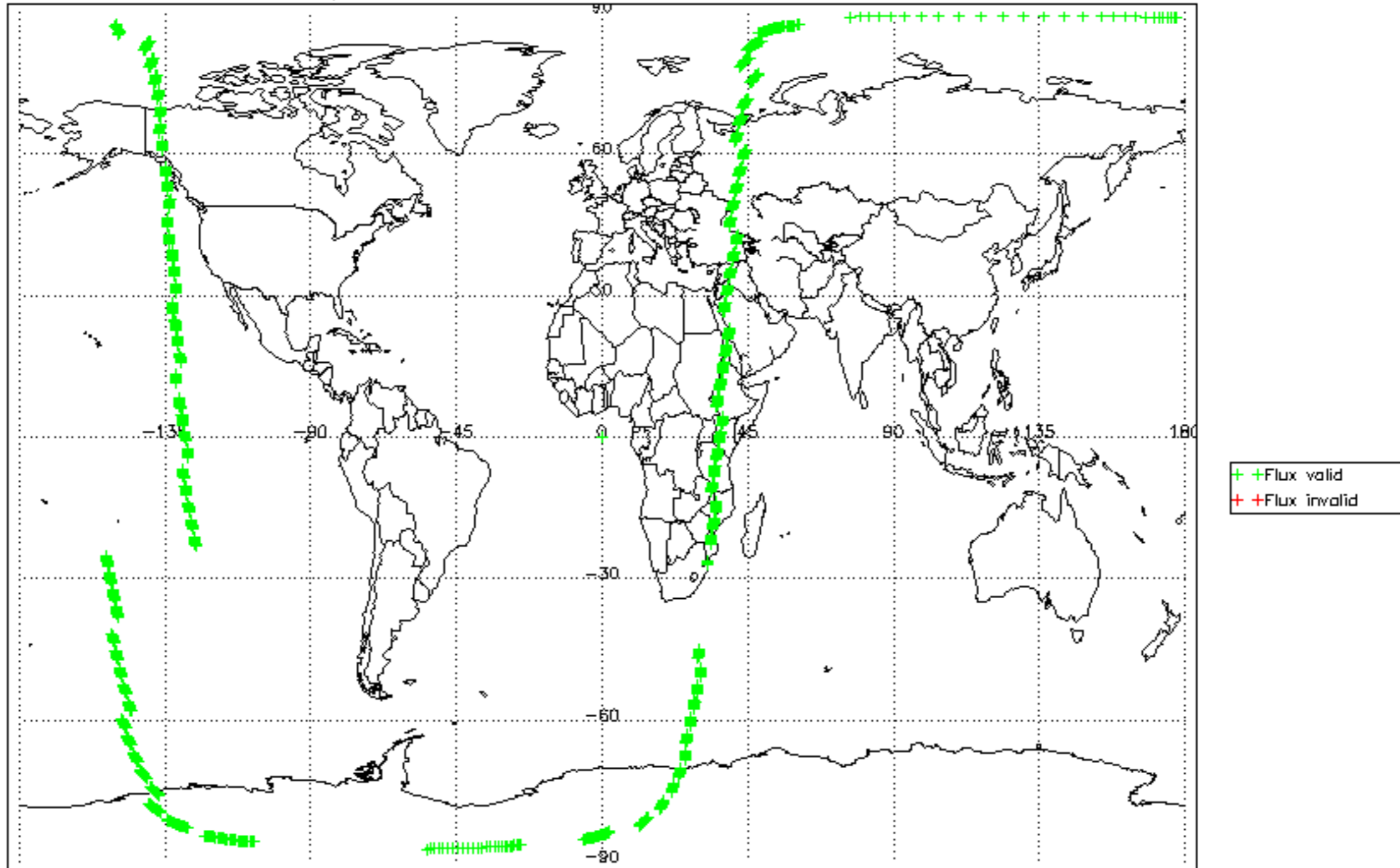


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2

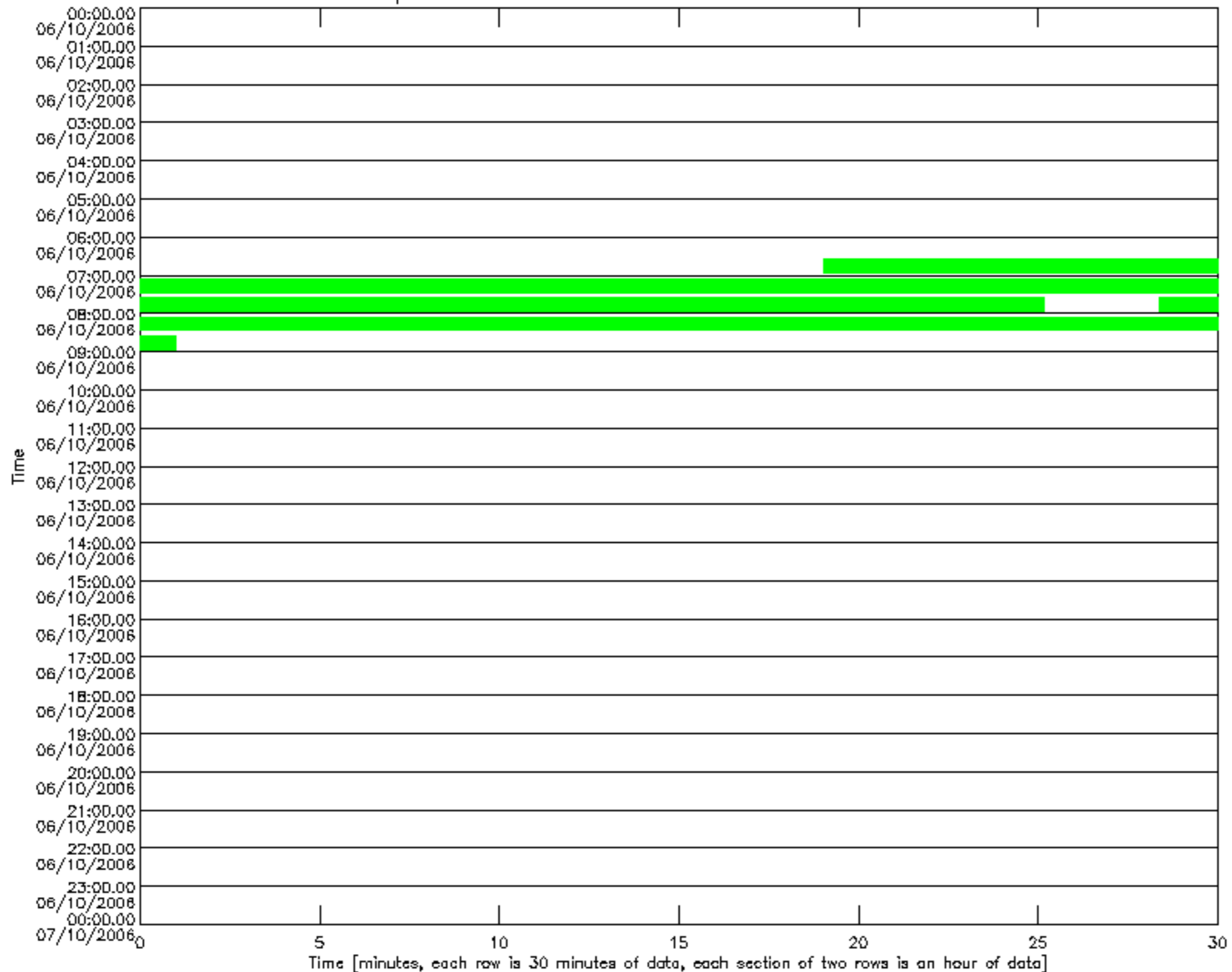


█ Flux valid  
█ Flux invalid

Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_jin\_flux detector A2



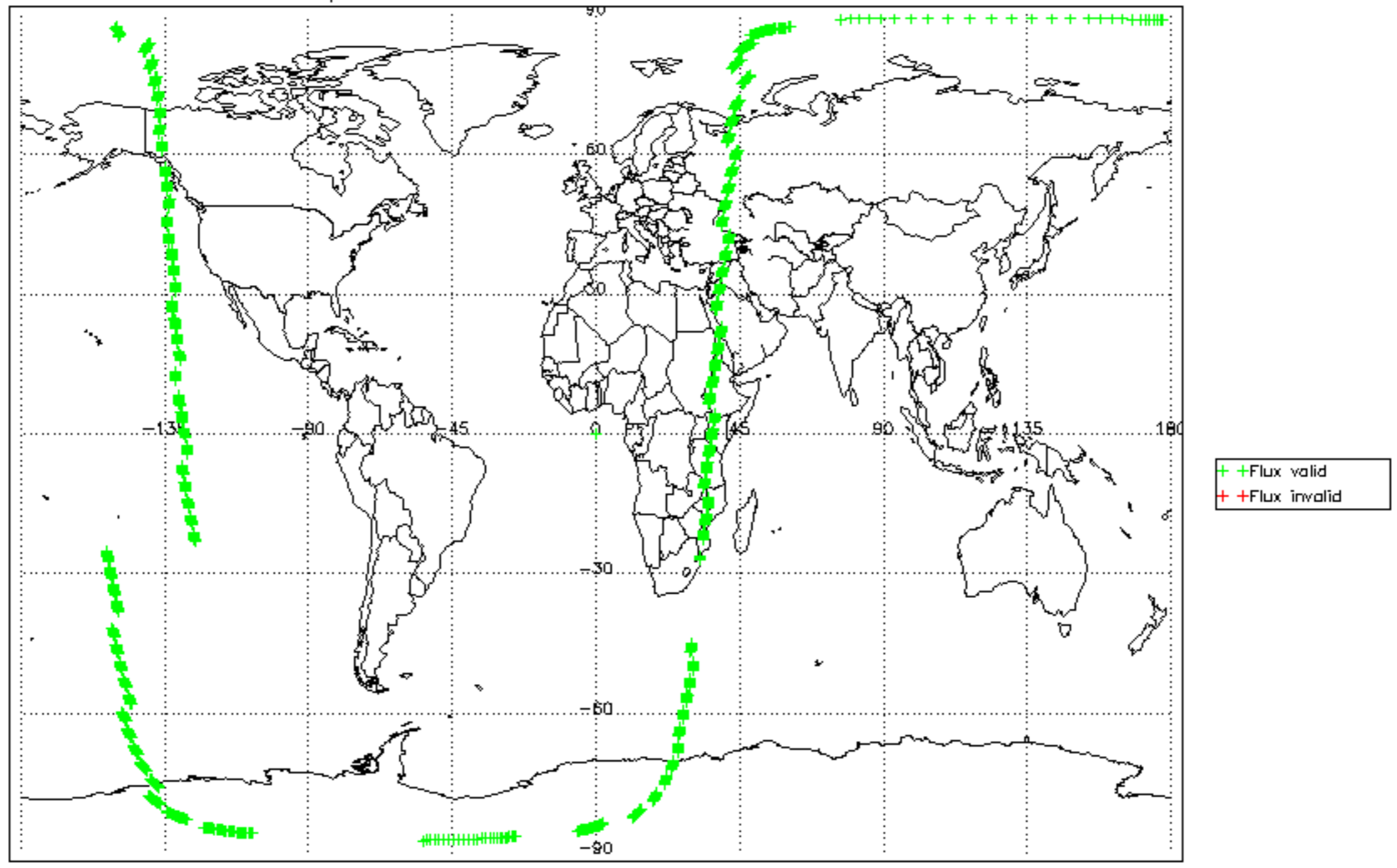
Bar plot of MIPNL1P\_MIPLEV1 BMDS\_detect\_non\_lin\_flux detector AB



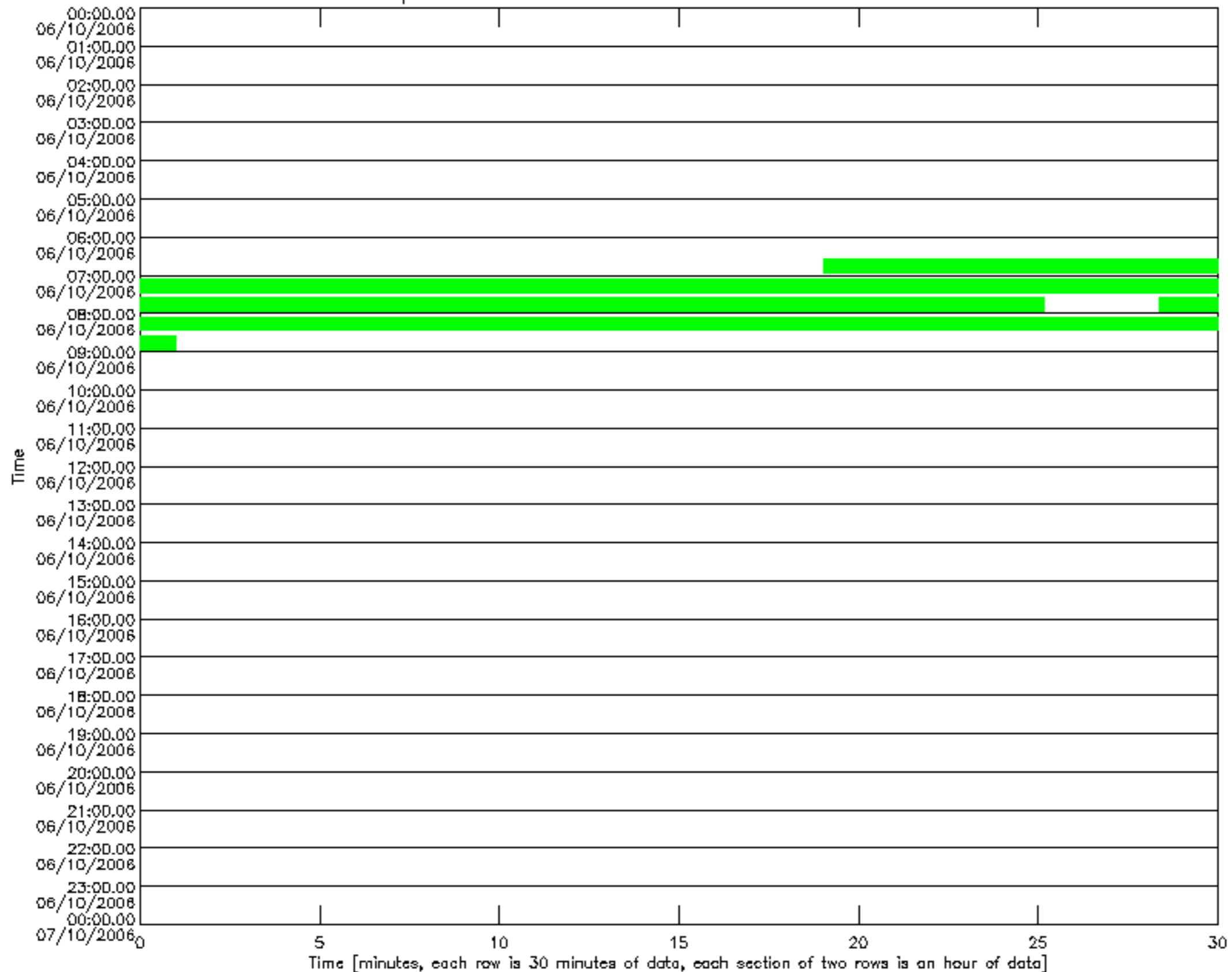
■ Flux valid  
■ Flux invalid



Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB

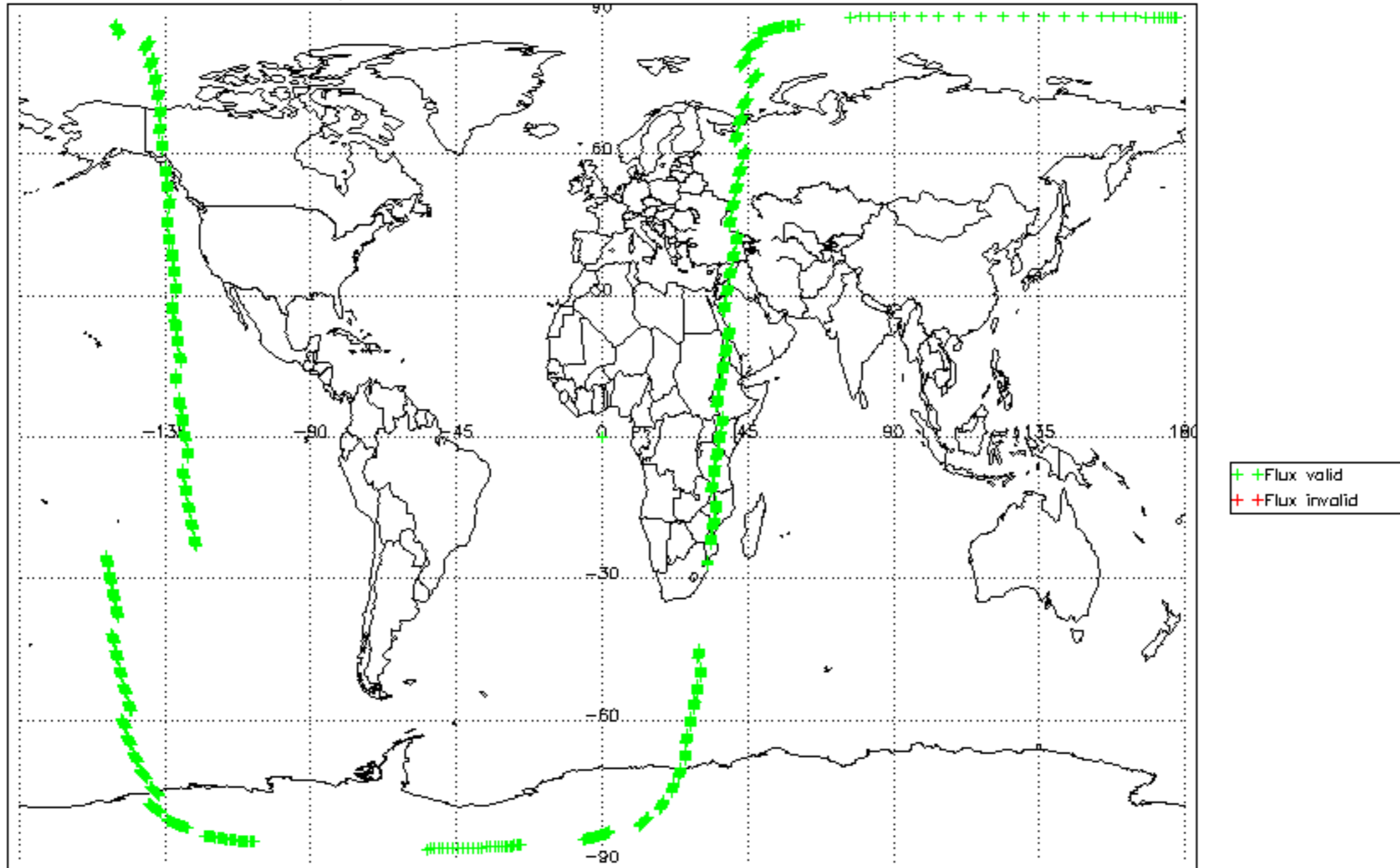


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector B

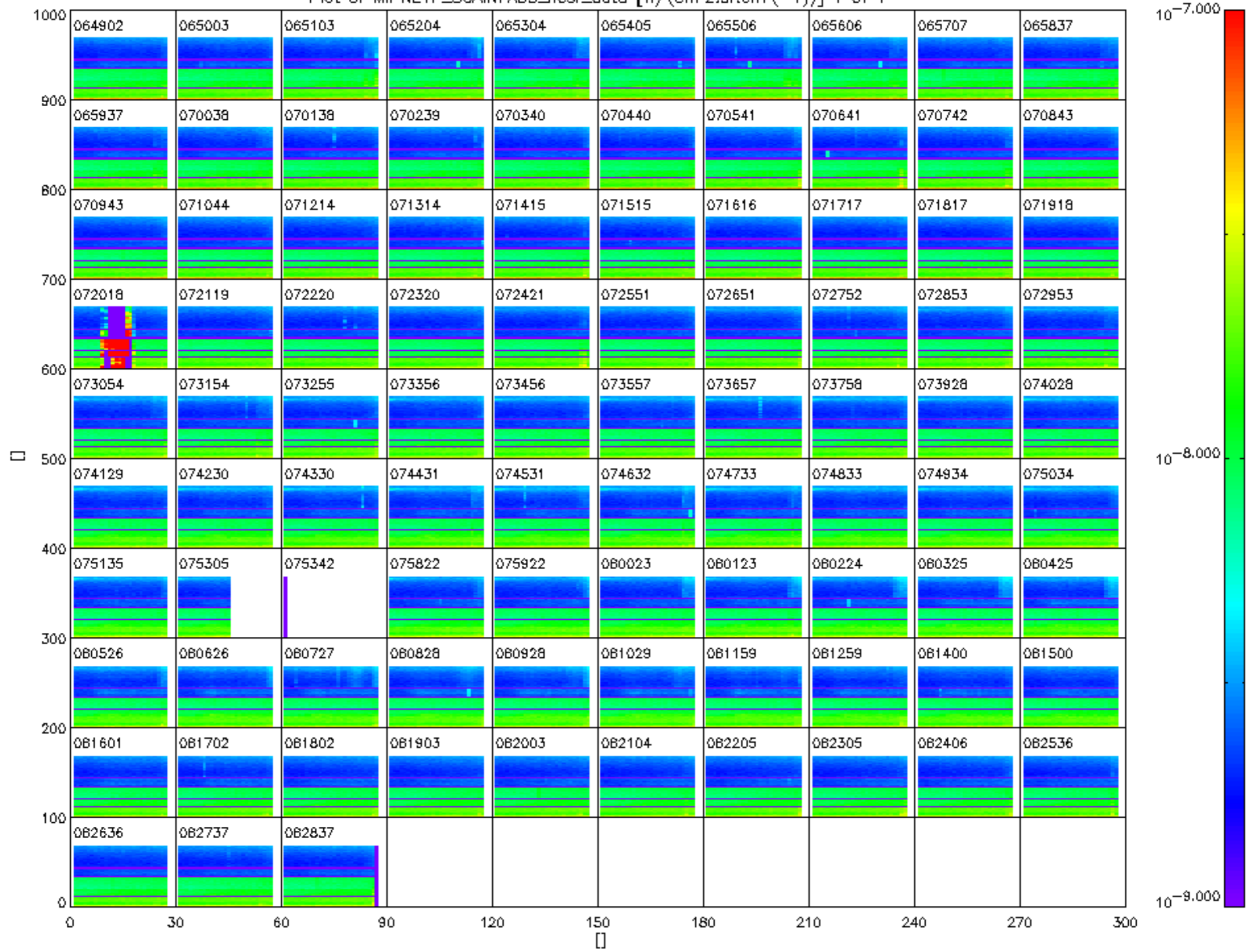


█ Flux valid  
█ Flux invalid

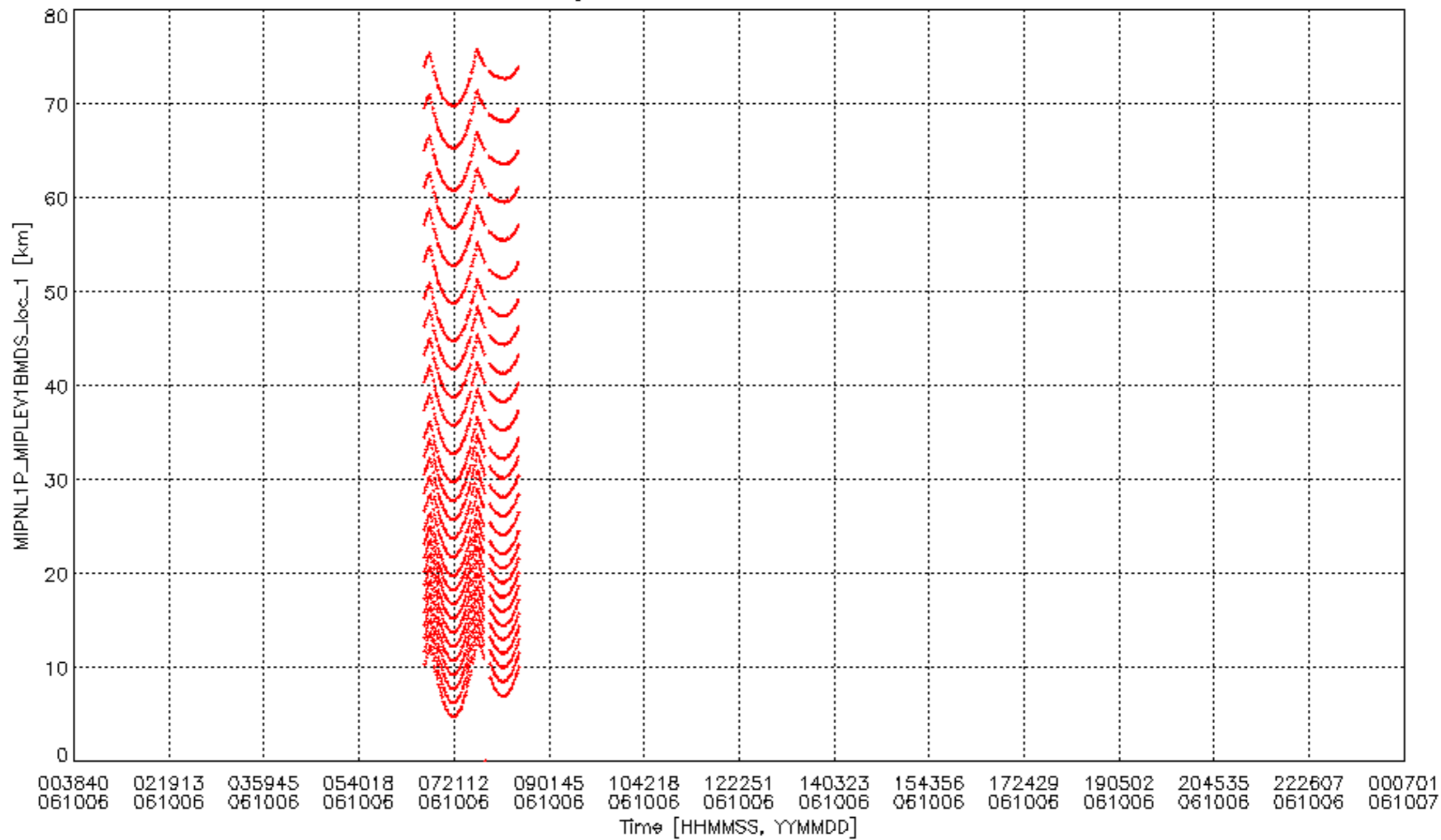
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_Jin\_flux detector B



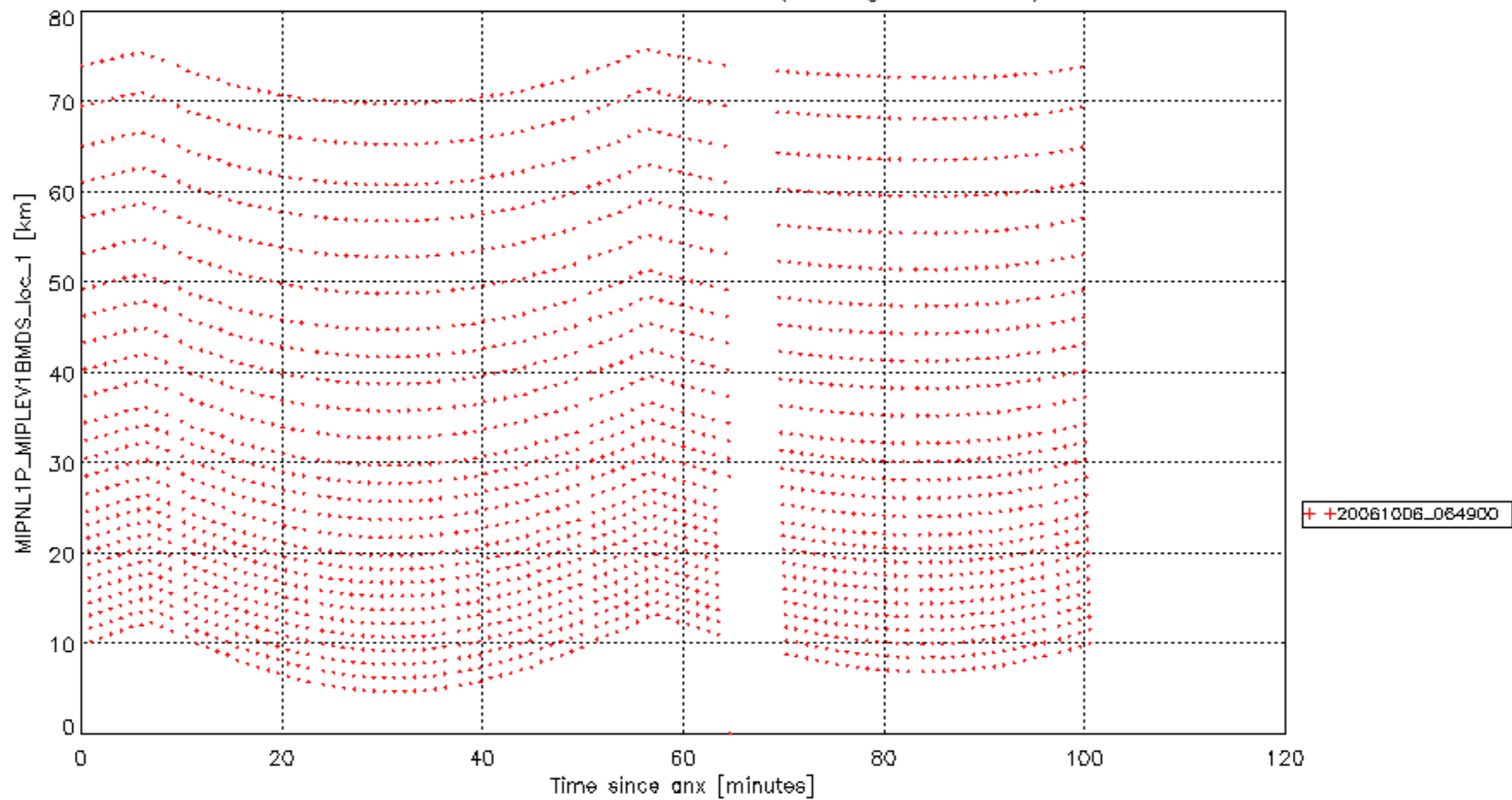
Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 1 of 1

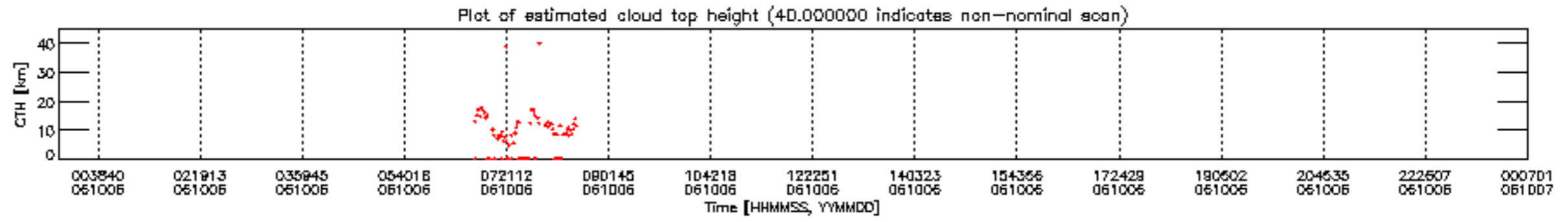


Plot of MIPNL1P\_MIPLEV1BMDS\_loc\_1 against time.  
The vertical grid lines indicate estimated anx events.



Plot of MIPNL1P\_MIPLEV1BMDS\_Joc\_1 against relative time within orbit.  
 The colours indicate distinct orbits (see legend for anx).





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

