

# 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	06JUN2007 05:20:29
Data source version	MIPAS/4.67-P
Processing scope for products	13MAY2007 00:00:00 to 14MAY2007 00:00:00
Start time of first product within scope	13MAY2007 07:42:44
Stop time of last product within scope	13MAY2007 07:46:40
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.

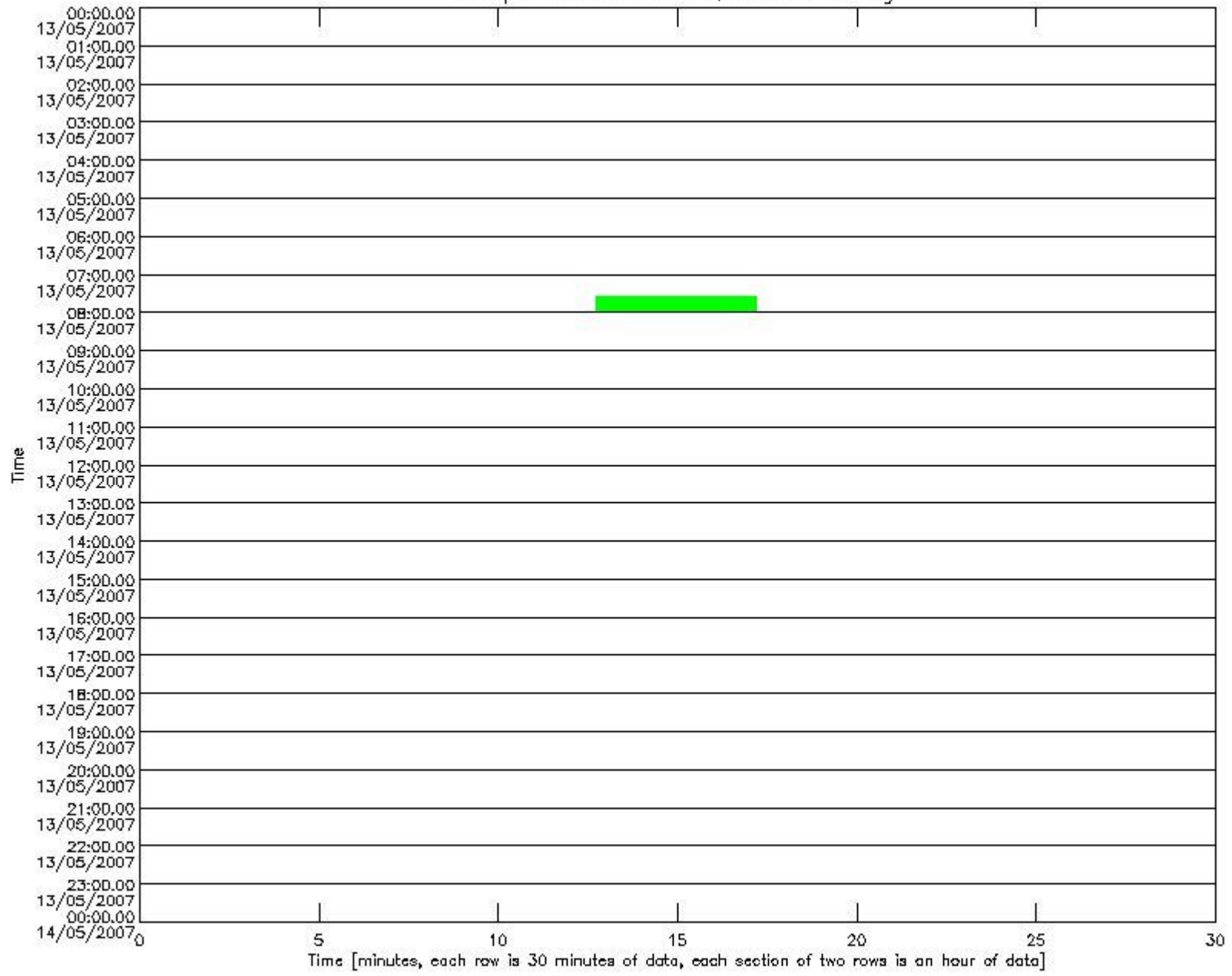
#	Product name	Start time	Stop time	Prod err	Slice position (prod/tot)
0	MIP_NL__1PPDPA20070513_074244_000002372058_00078_27186_4029.N1	13MAY2007 07:42:44	13MAY2007 07:46:40	0	1/1

### 1.2 Product Quality Indicators

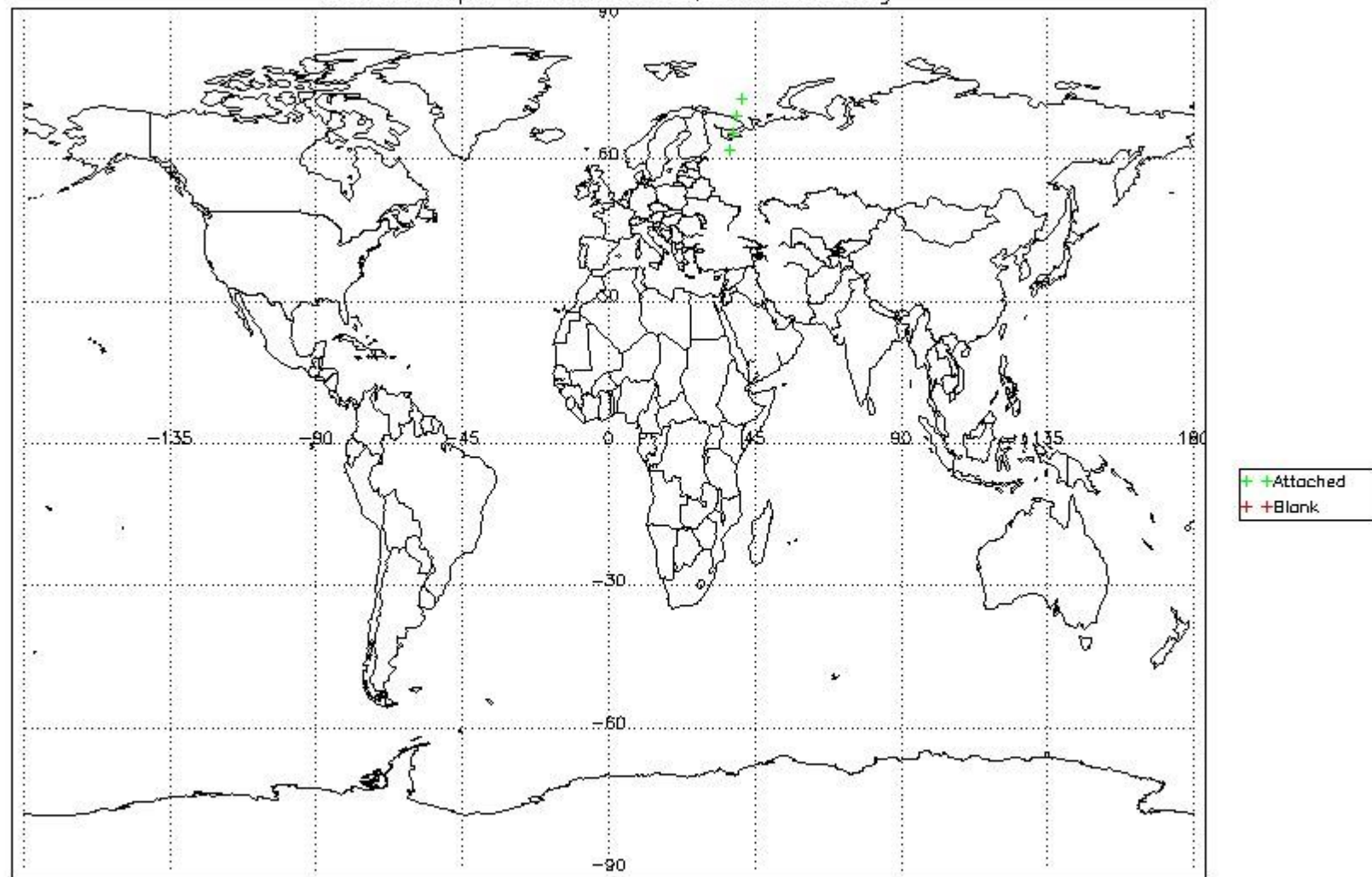
This report contains an analysis on product quality related parameters within the MIP\_NL\_\_1P product.

#### 1.2.1 Trends and geolocation of Summary Quality ADS

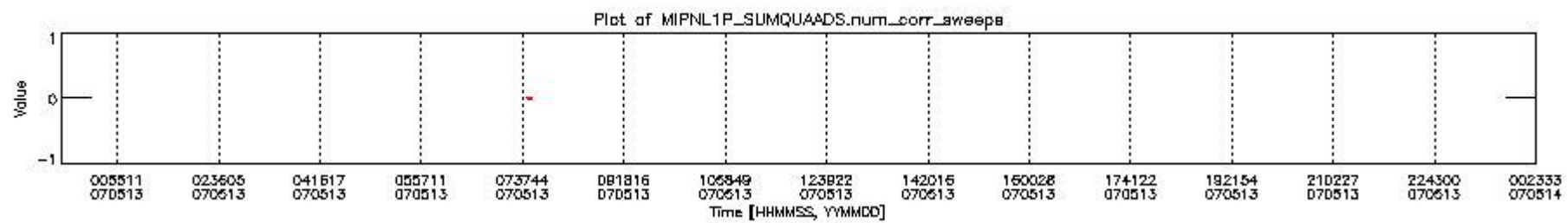
Bar plot of MIPNL1P\_SUMQUAADS.attach\_flag



Geolocation plot of MIPNL1P\_SUMQUAADS.attach\_flag

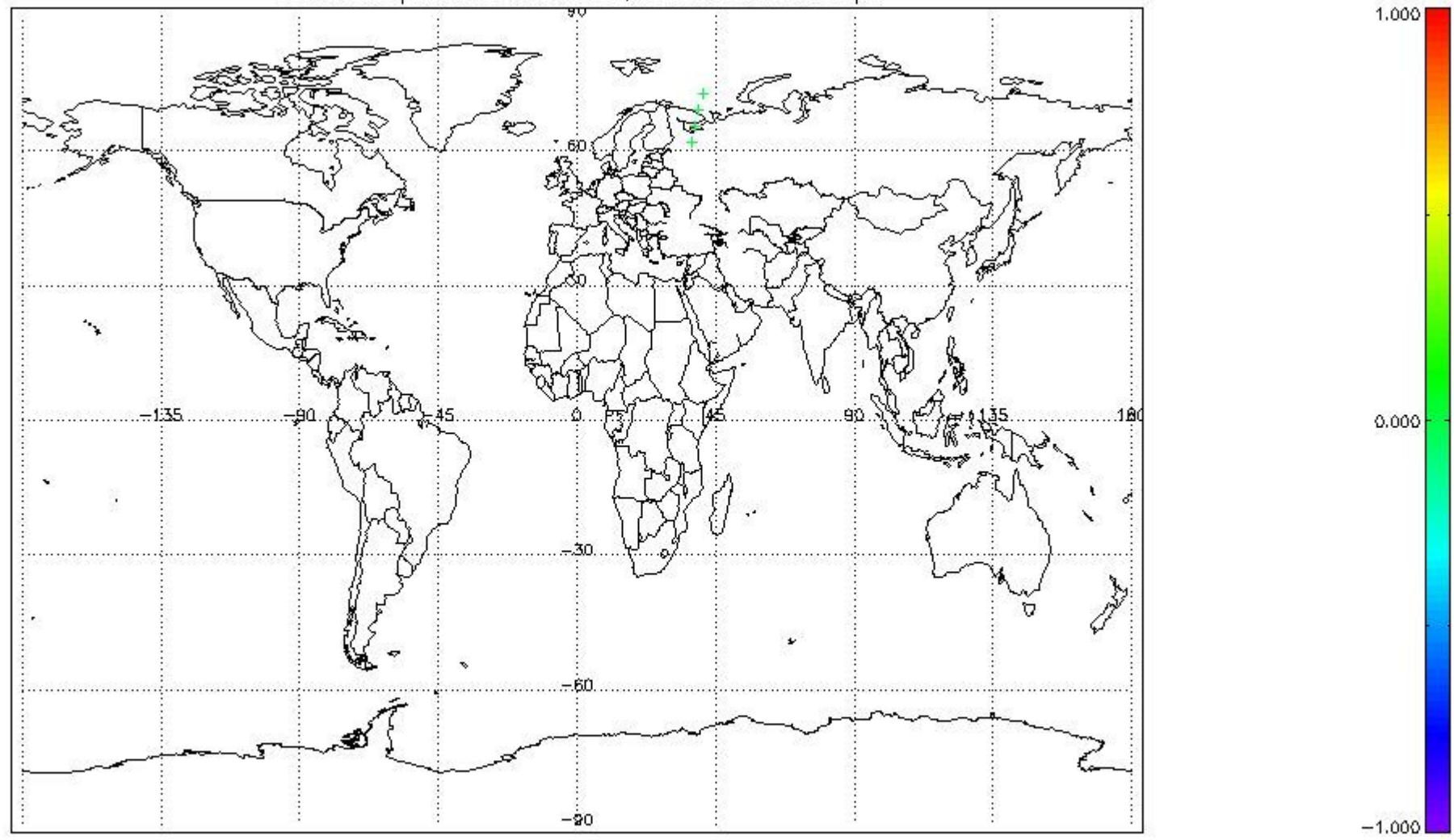


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_1.PNG

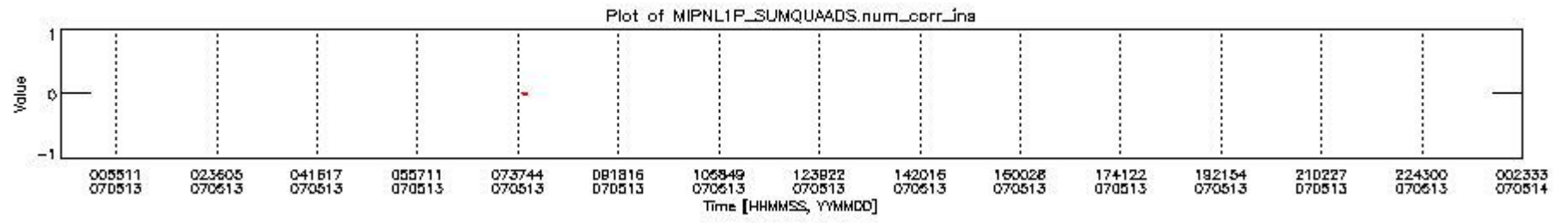


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_2.PNG

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



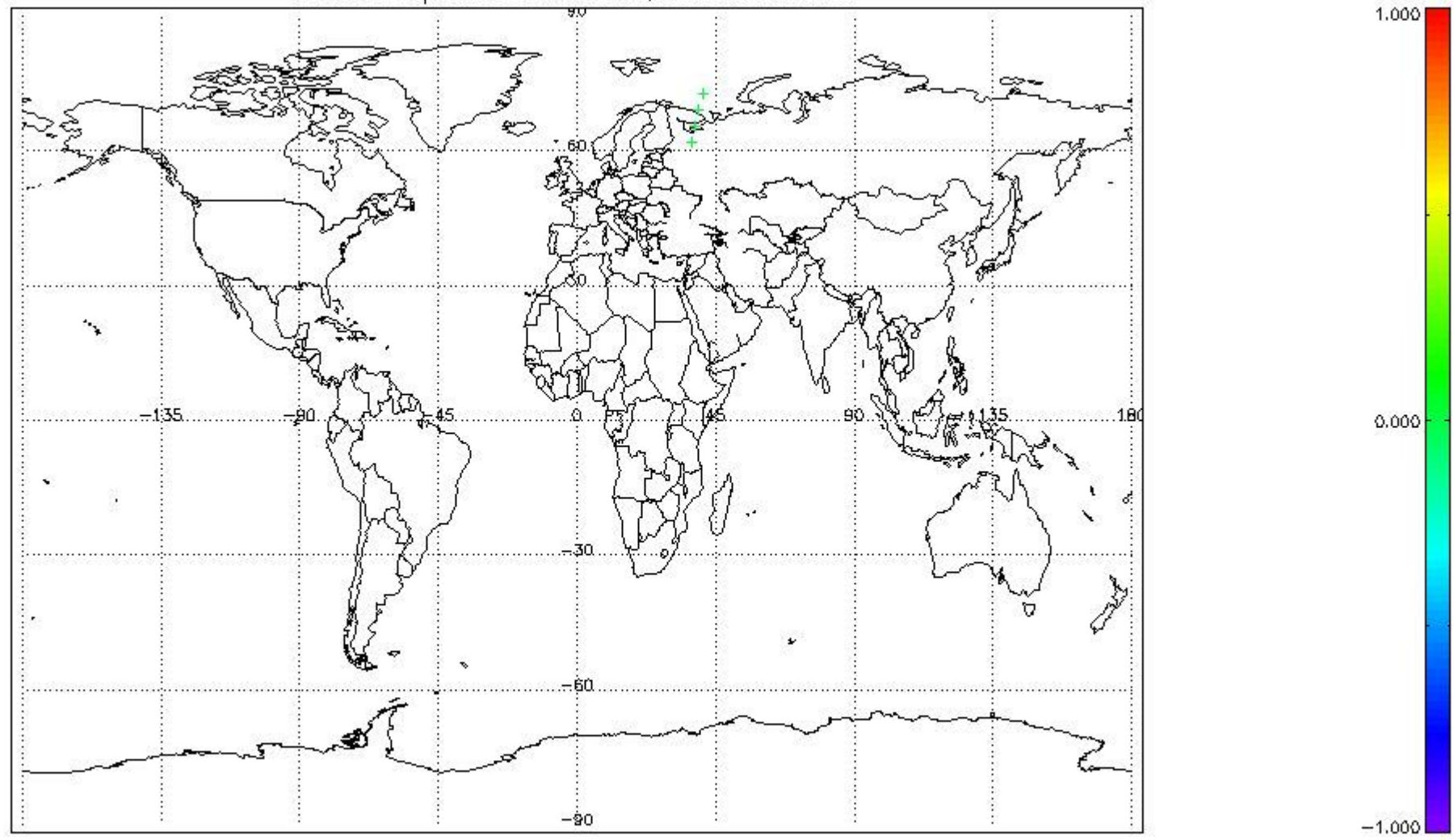
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_3.PNG



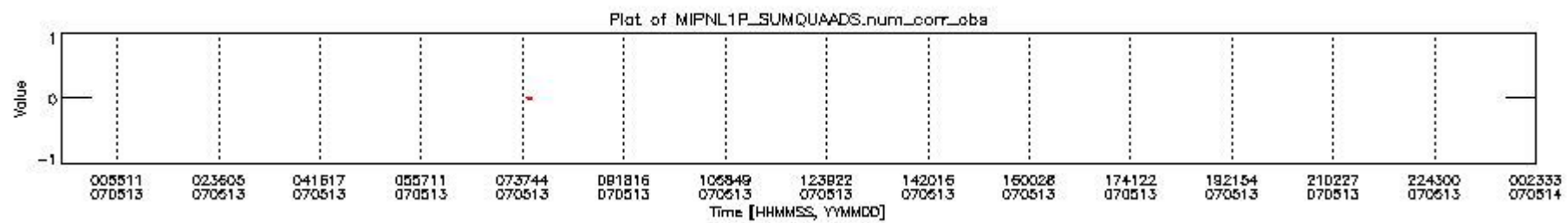
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_4.PNG



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

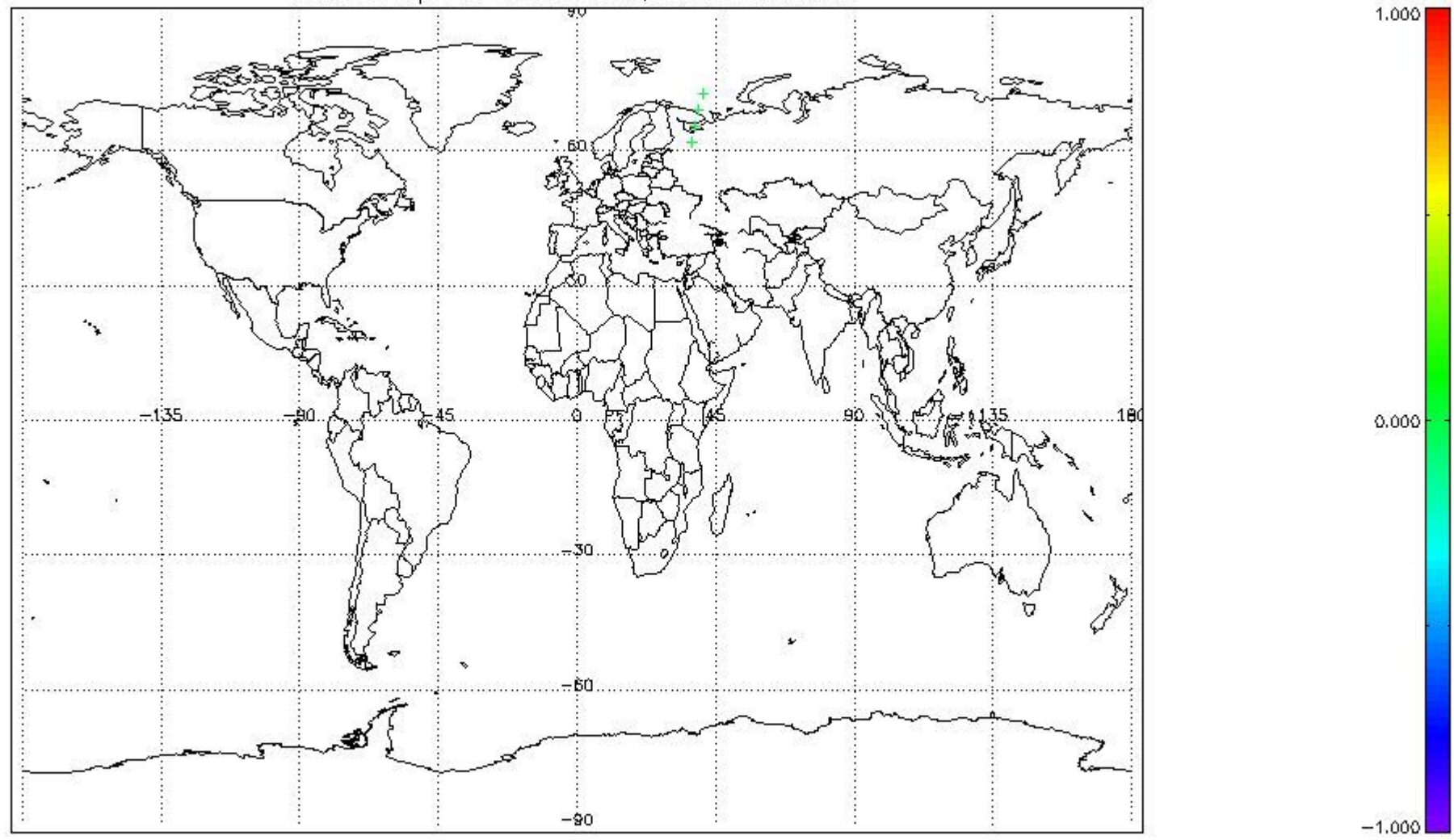


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_5.PNG

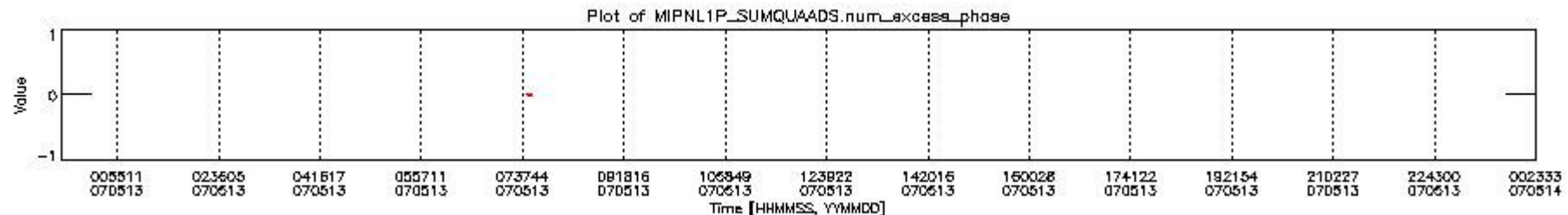


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_6.PNG

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

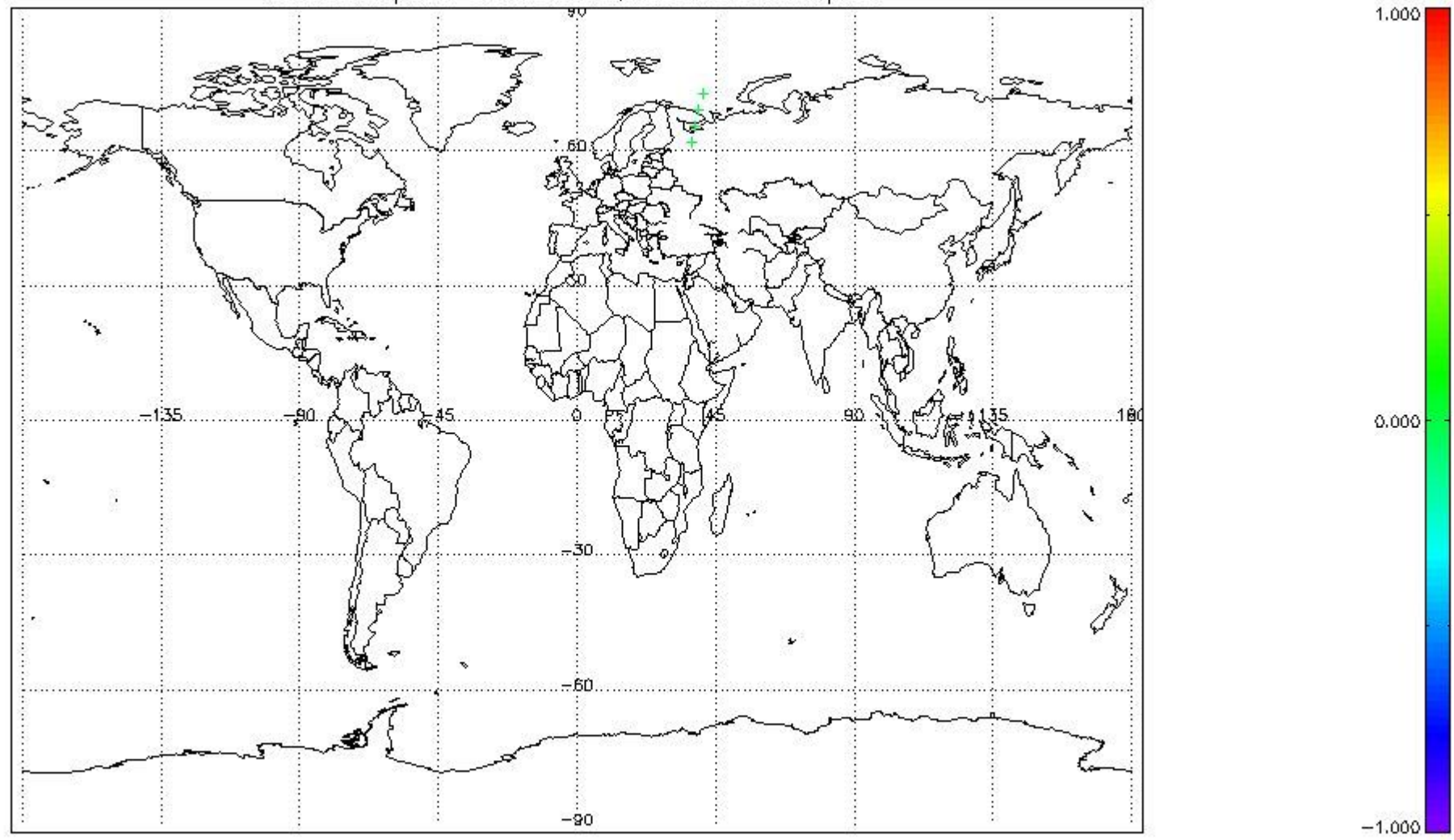


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_7.PNG

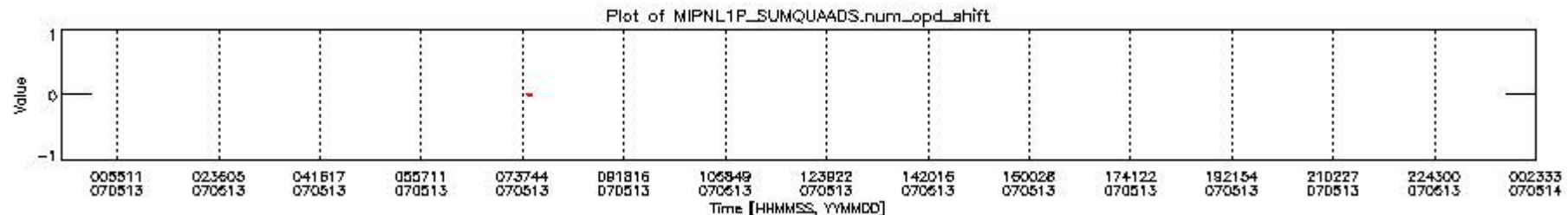


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_8.PNG

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



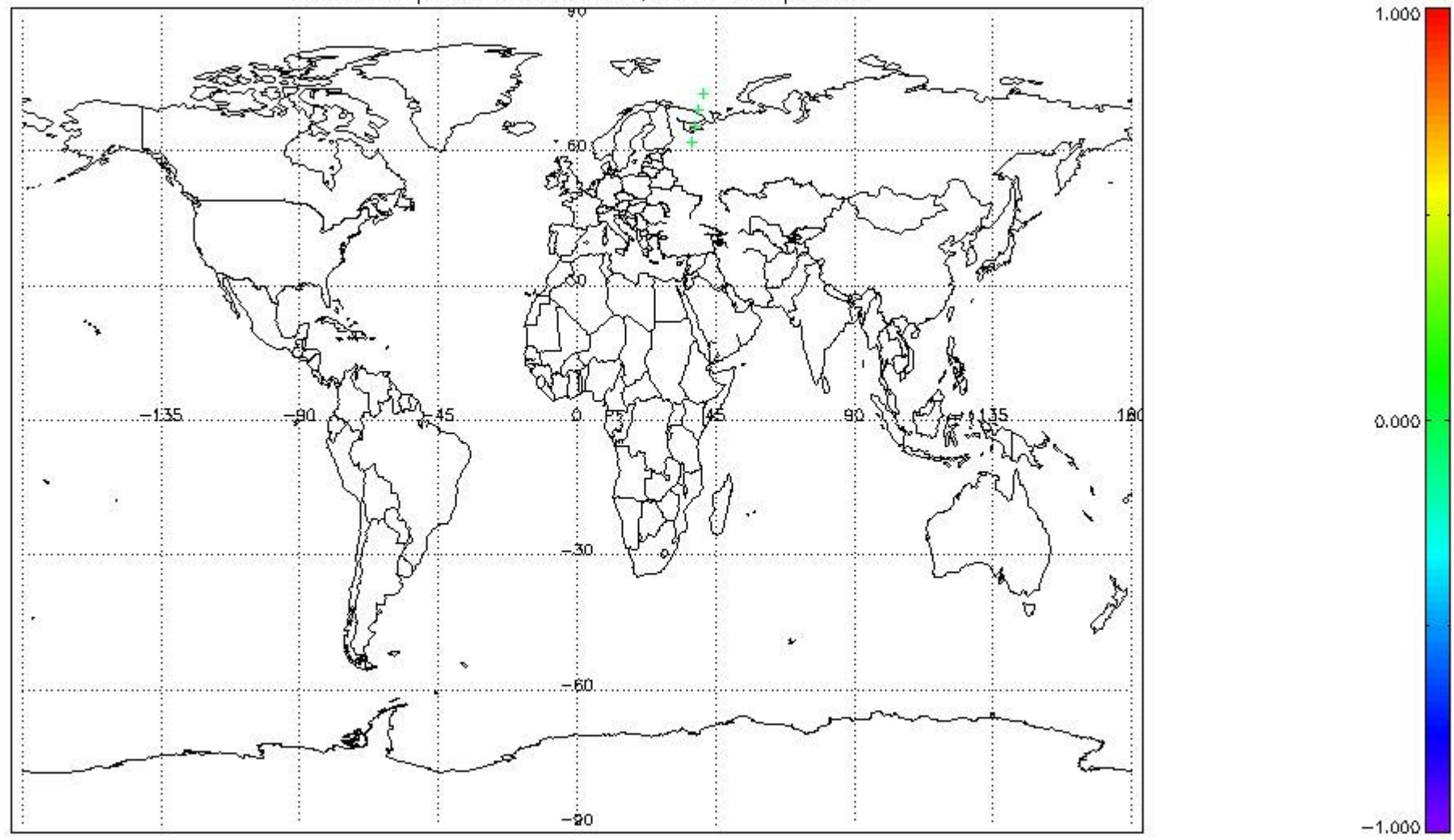
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_9.PNG



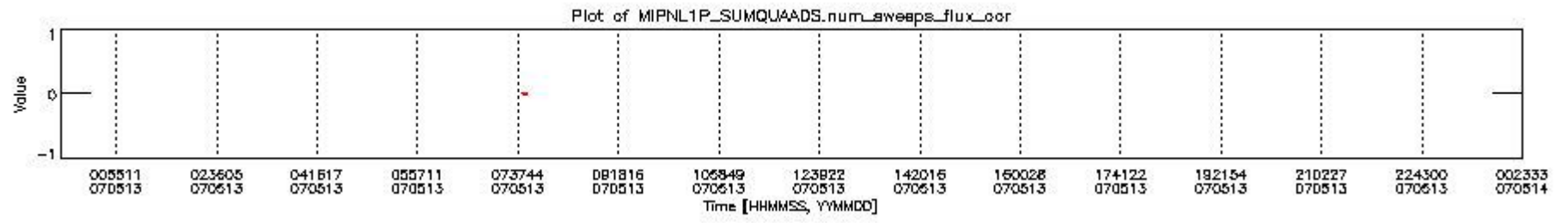
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_10.PNG



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

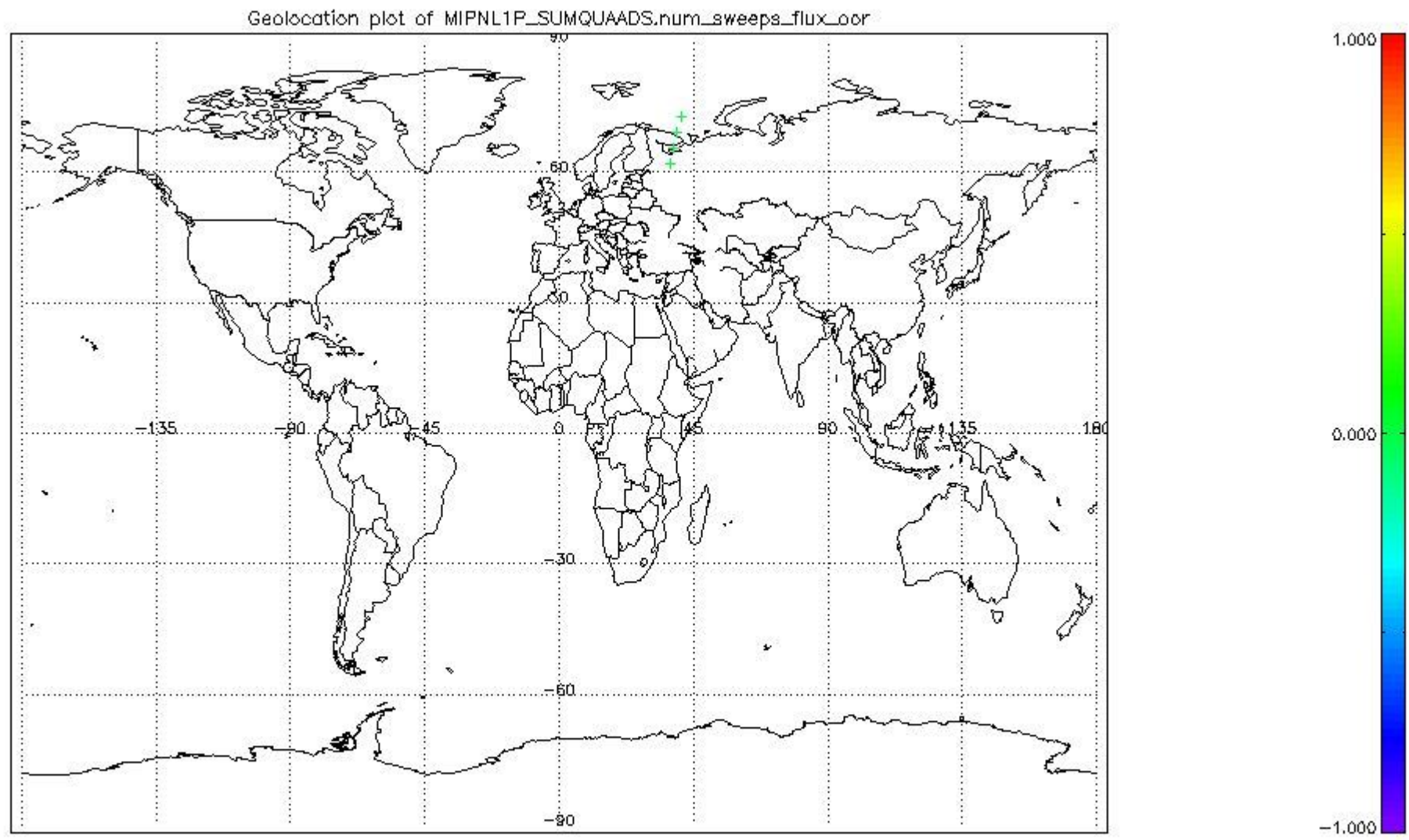


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_11.PNG



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_12.PNG

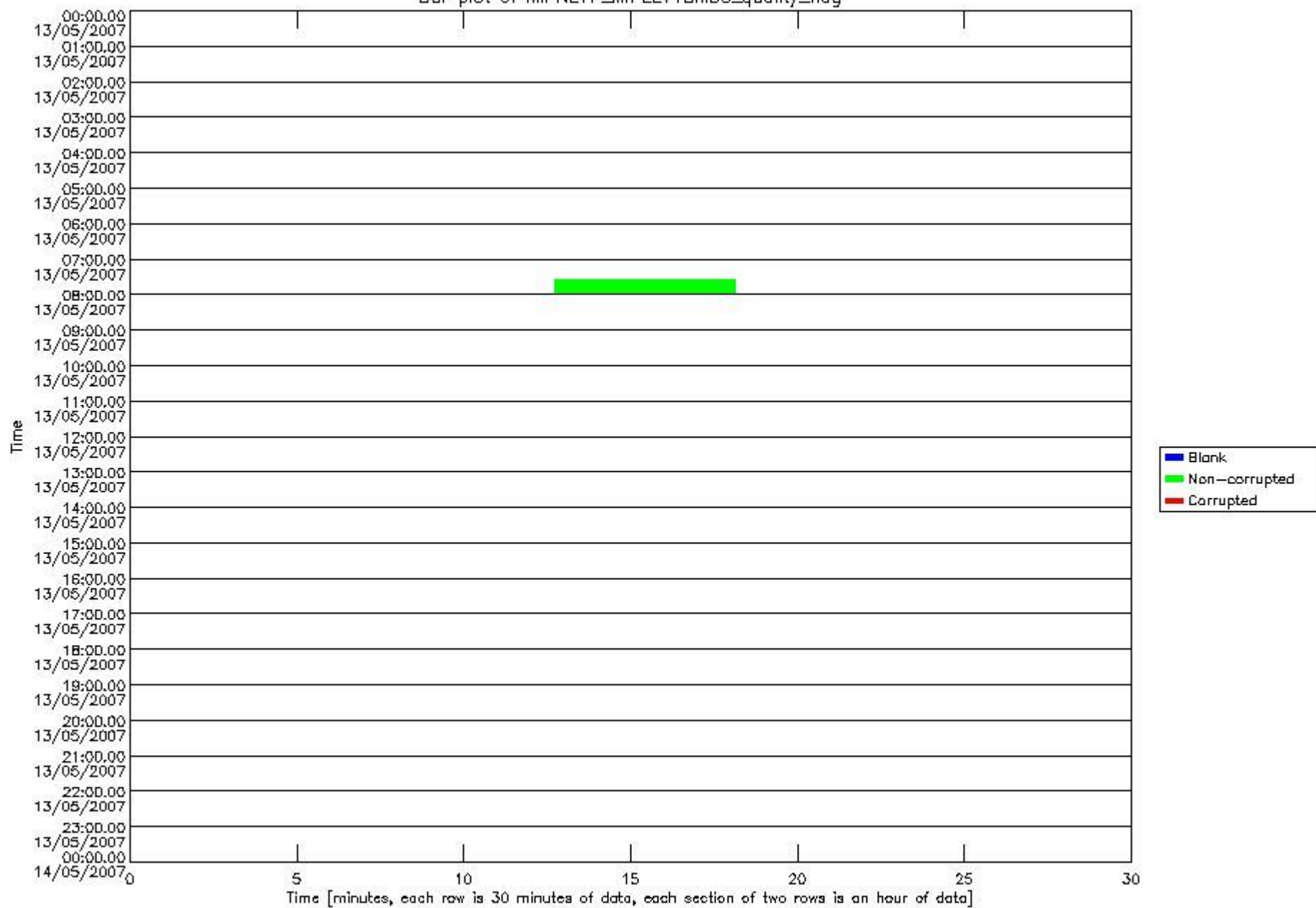




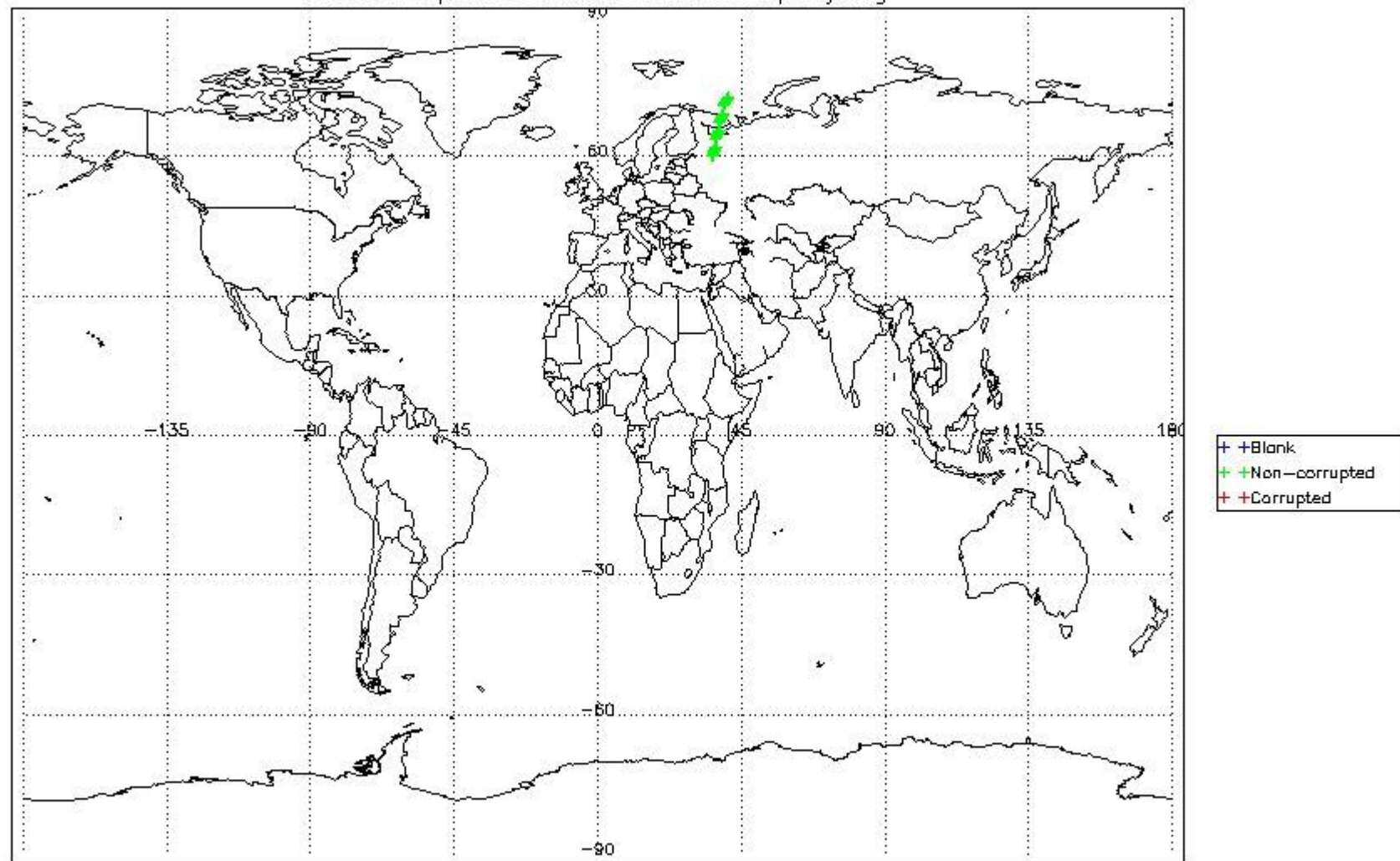
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_13.PNG

### 1.2.2 Trends and geolocation of MIPAS LEVEL 1 MDS

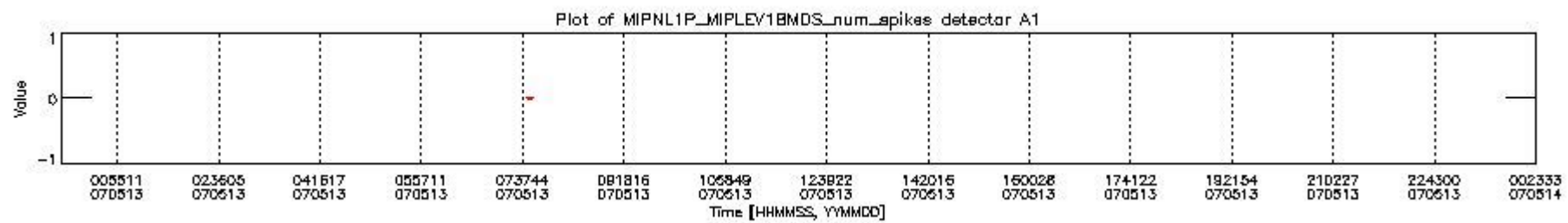
Bar plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag



Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag

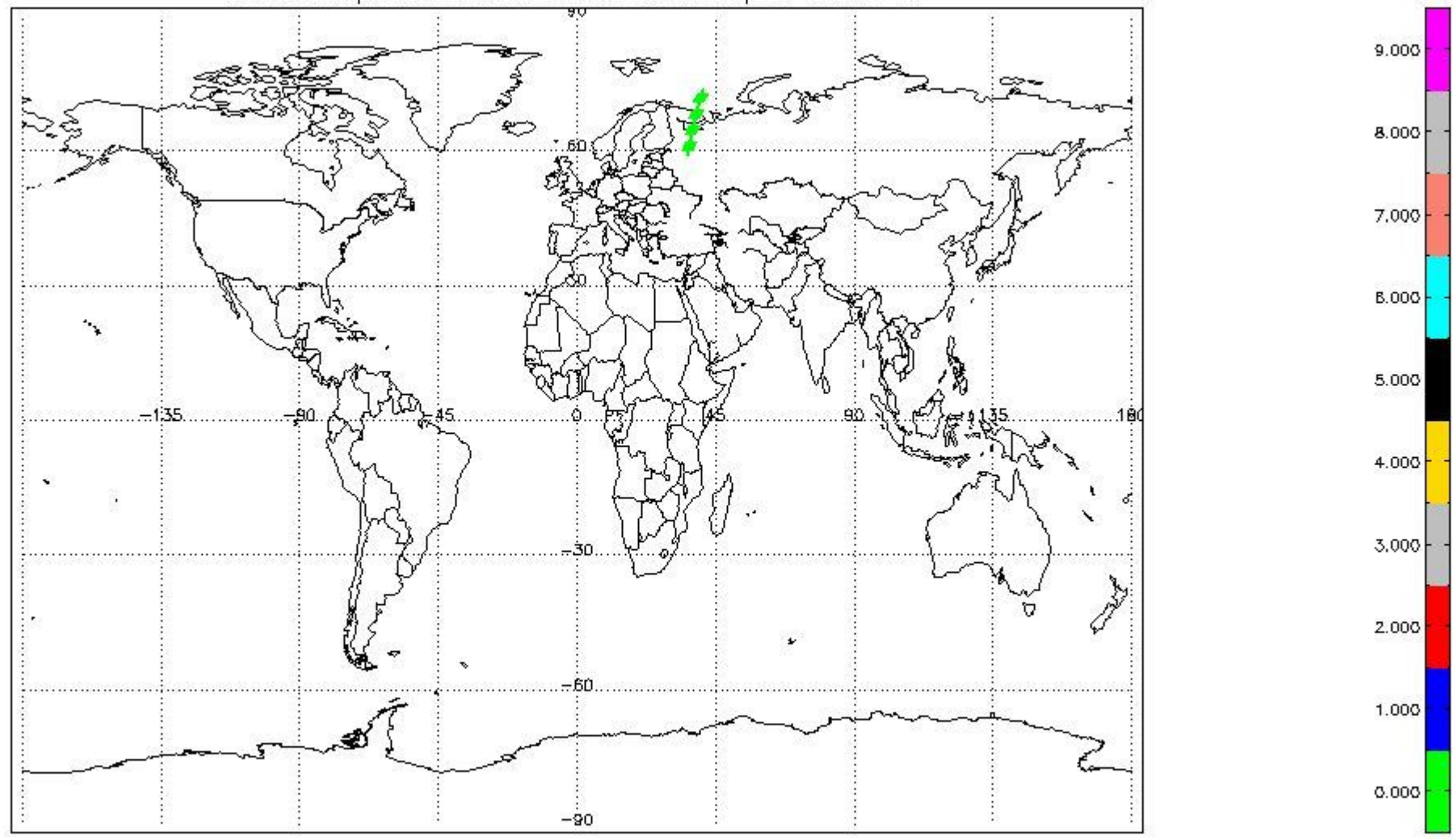


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_15.PNG

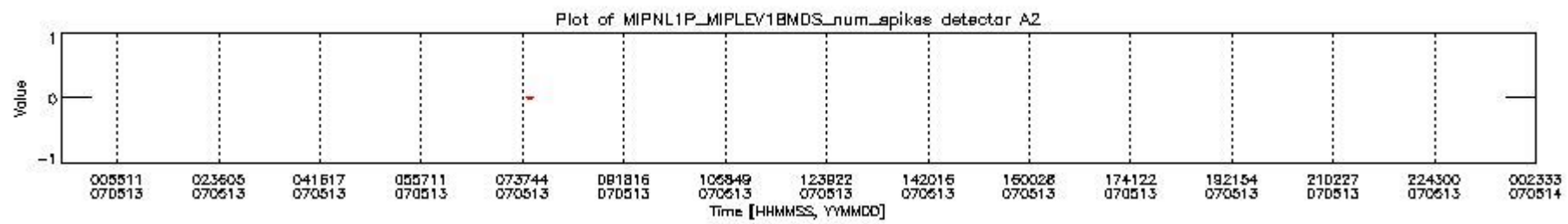


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_16.PNG

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



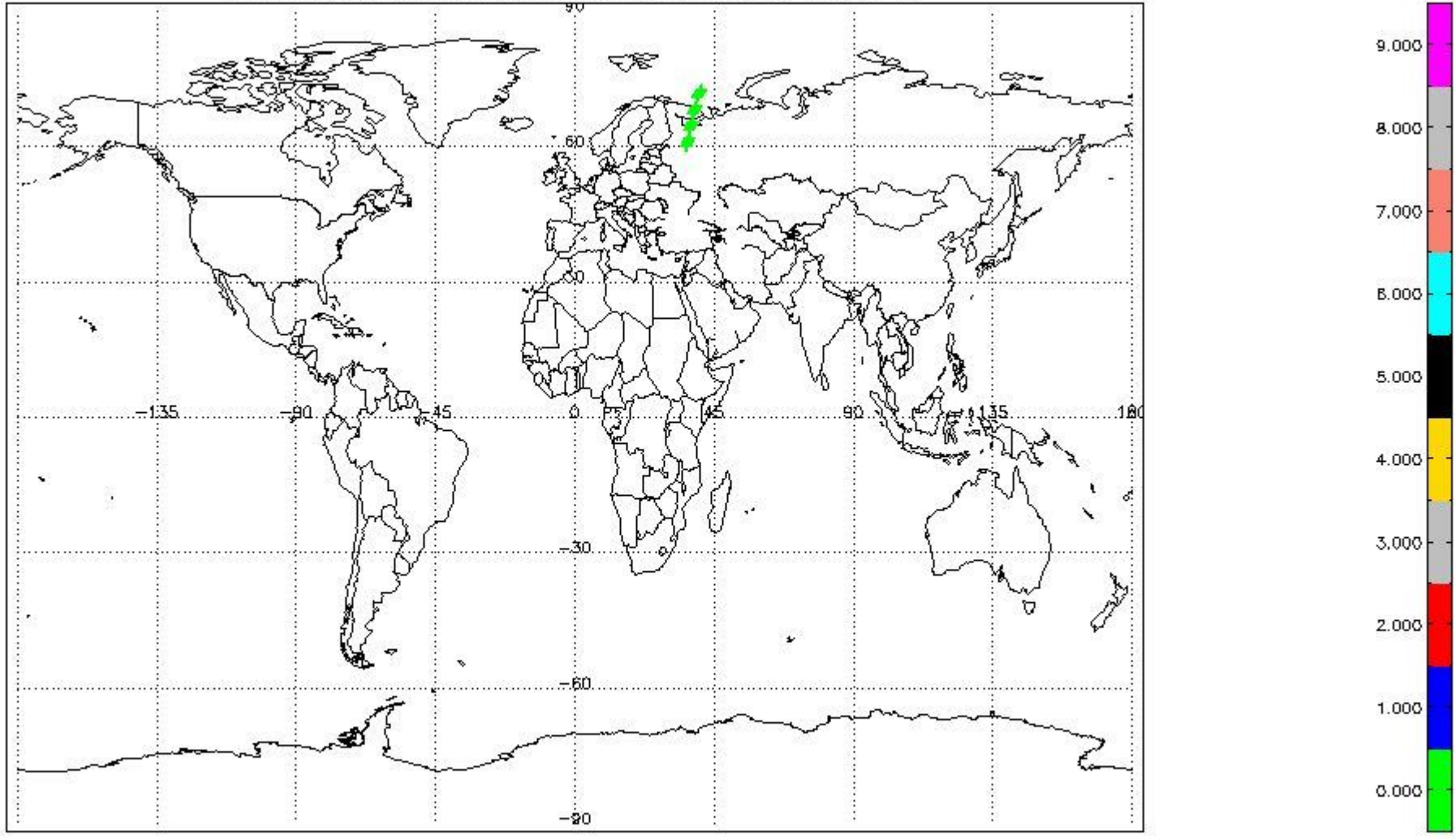
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_17.PNG



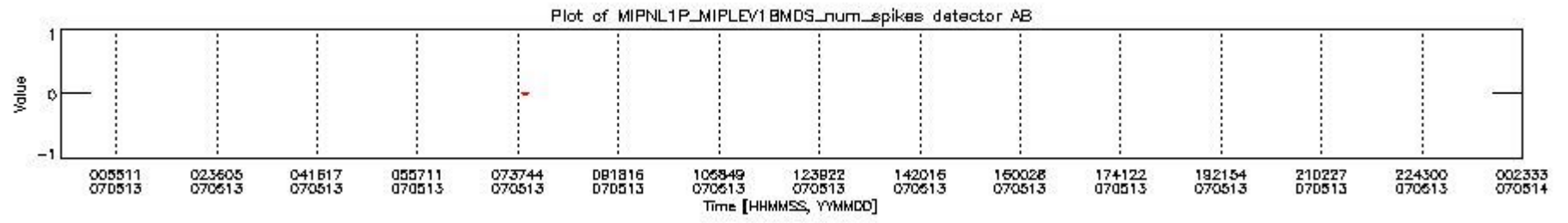
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_18.PNG



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

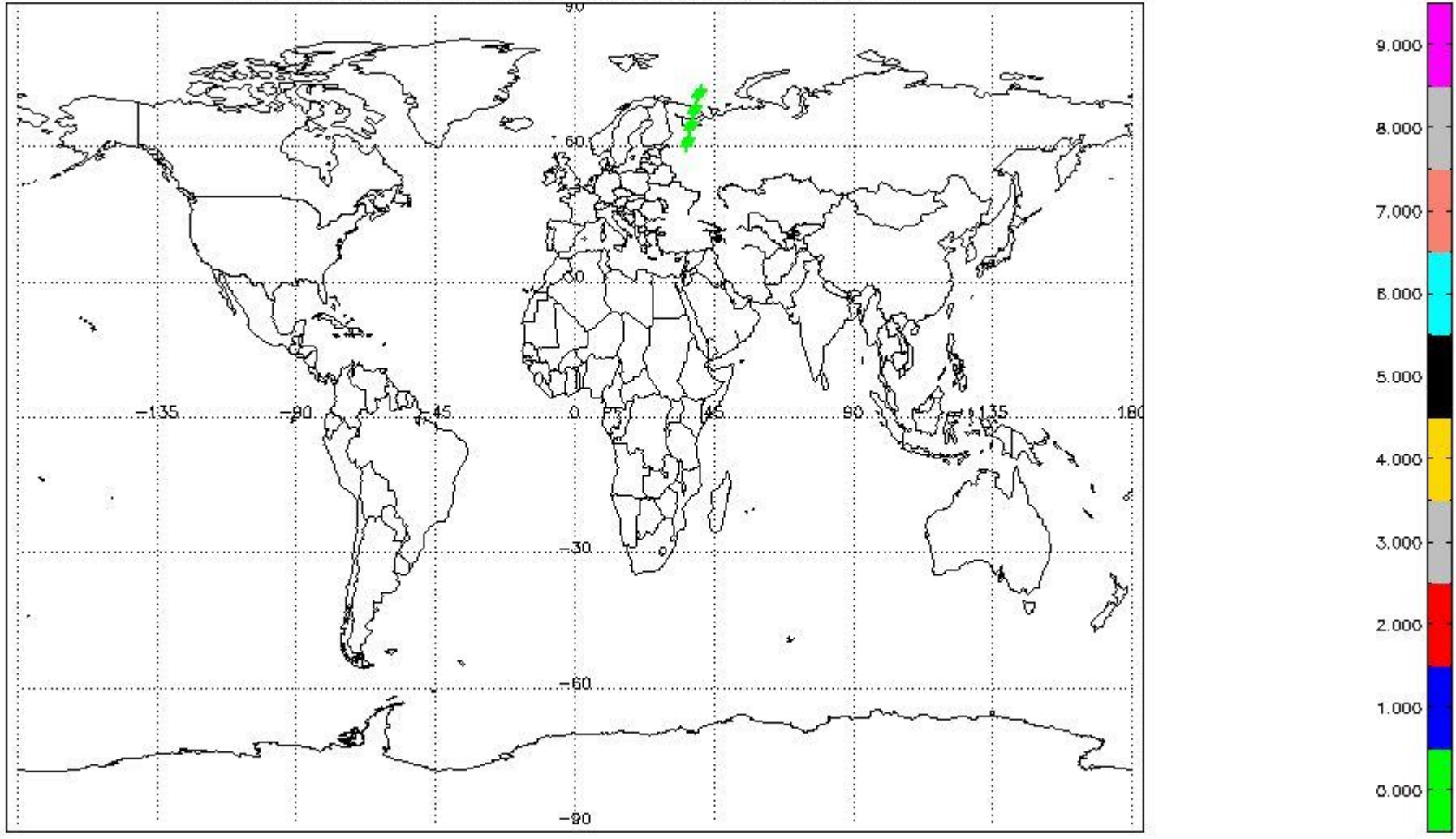


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_19.PNG

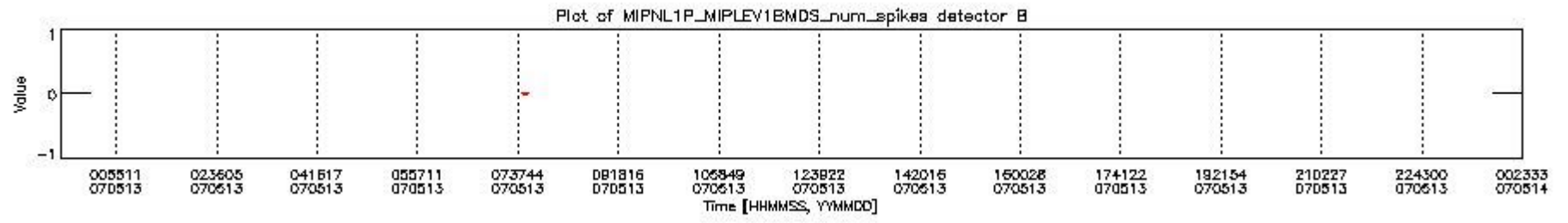


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_20.PNG

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

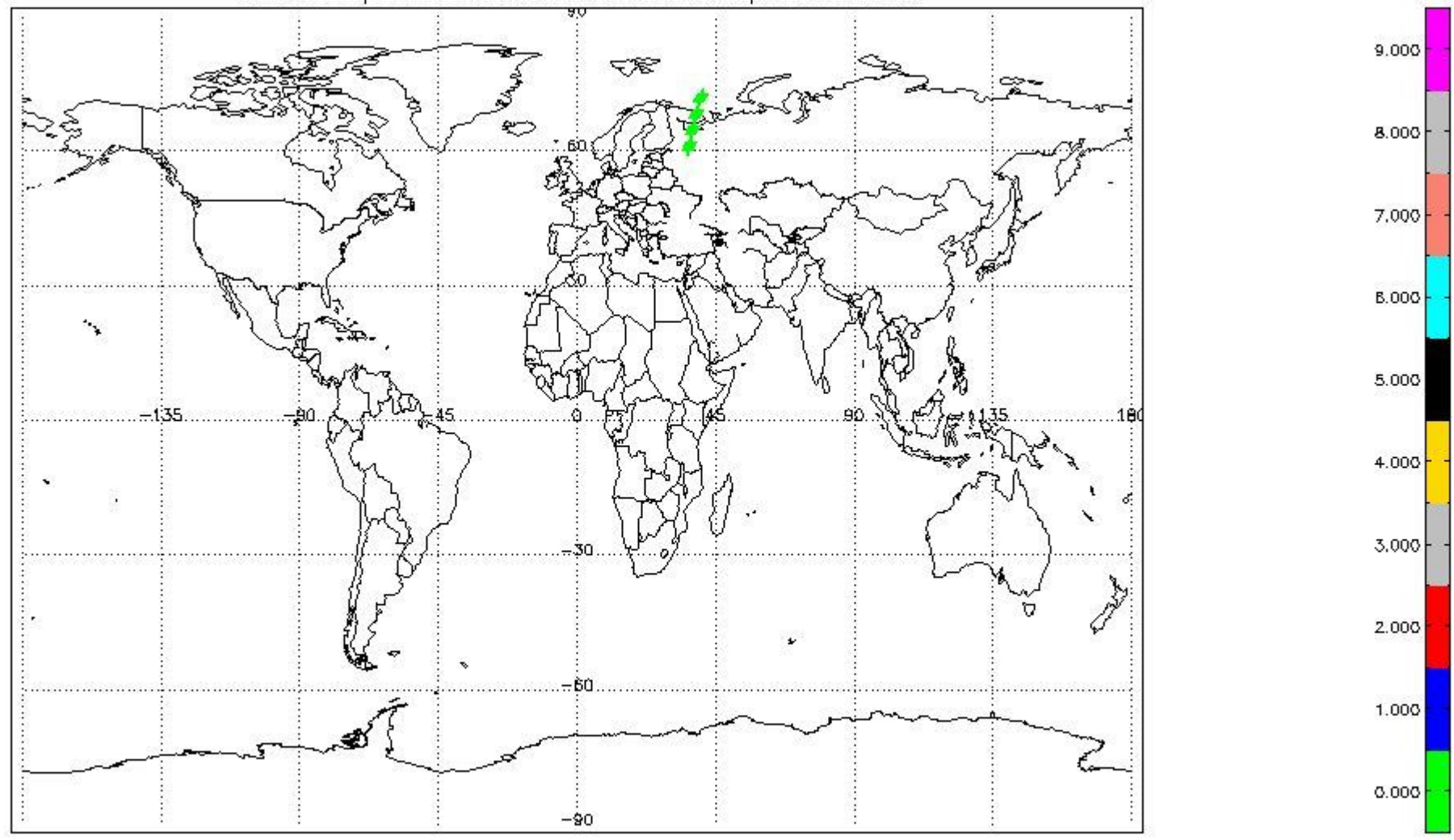


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_21.PNG

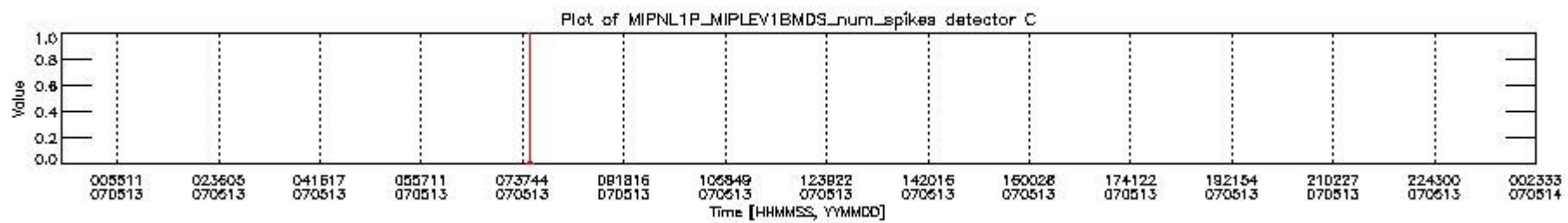


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_22.PNG

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



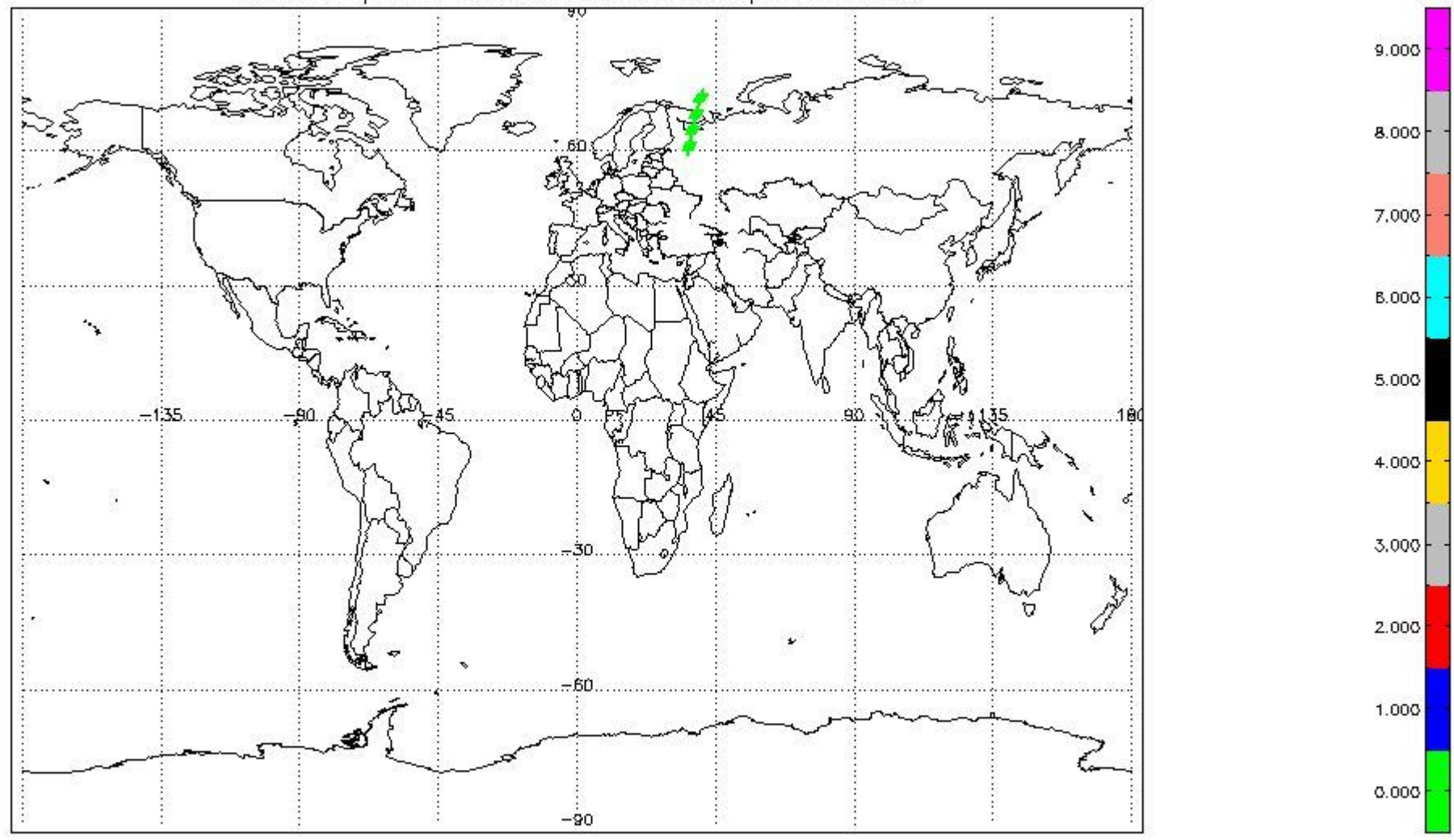
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_23.PNG



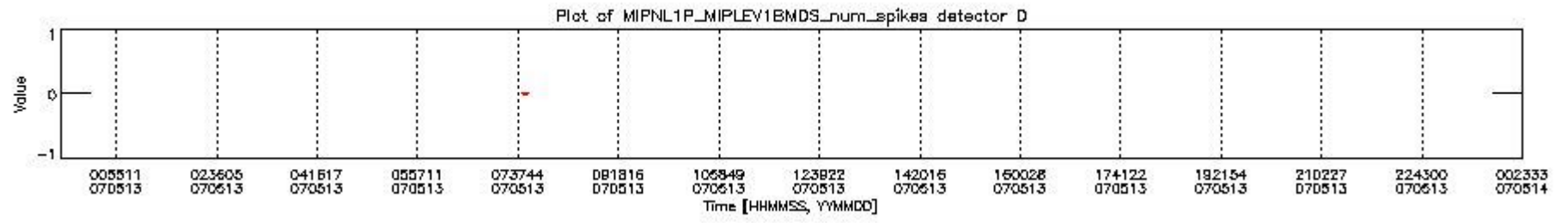
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_24.PNG



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



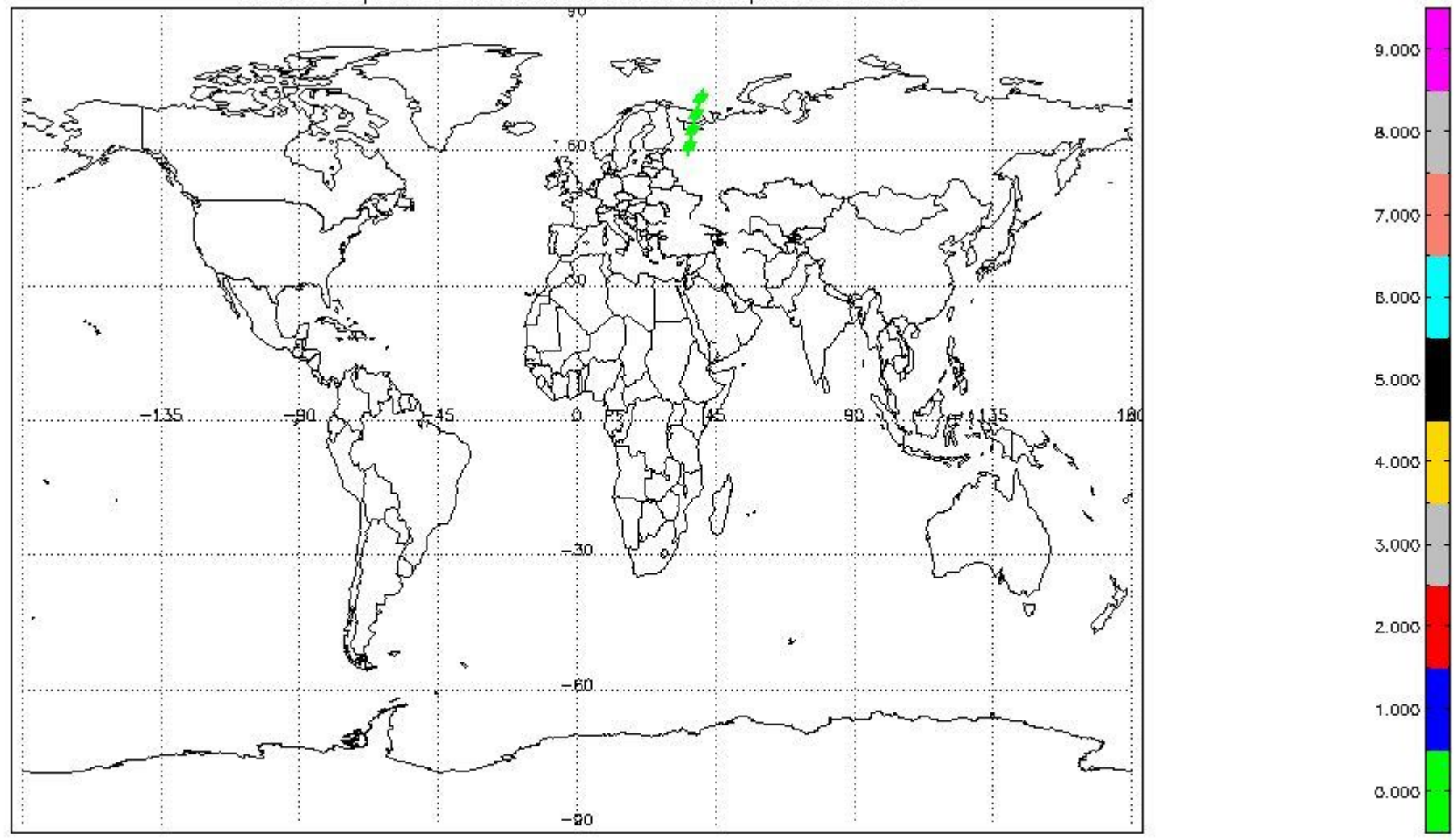
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_25.PNG



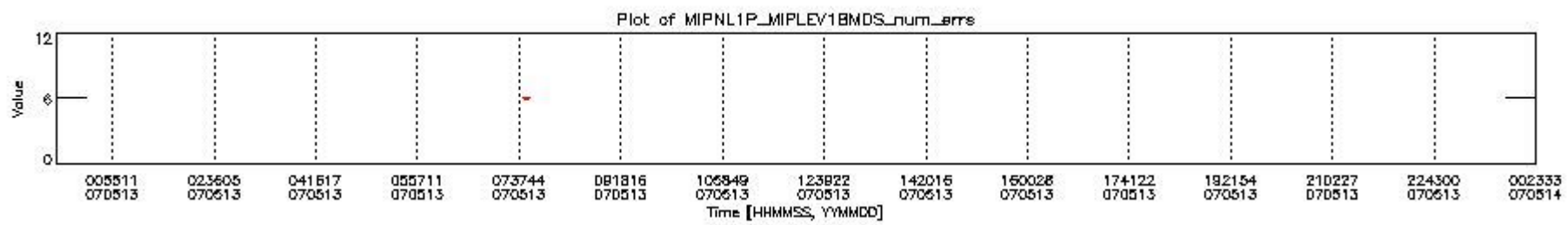
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_26.PNG



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

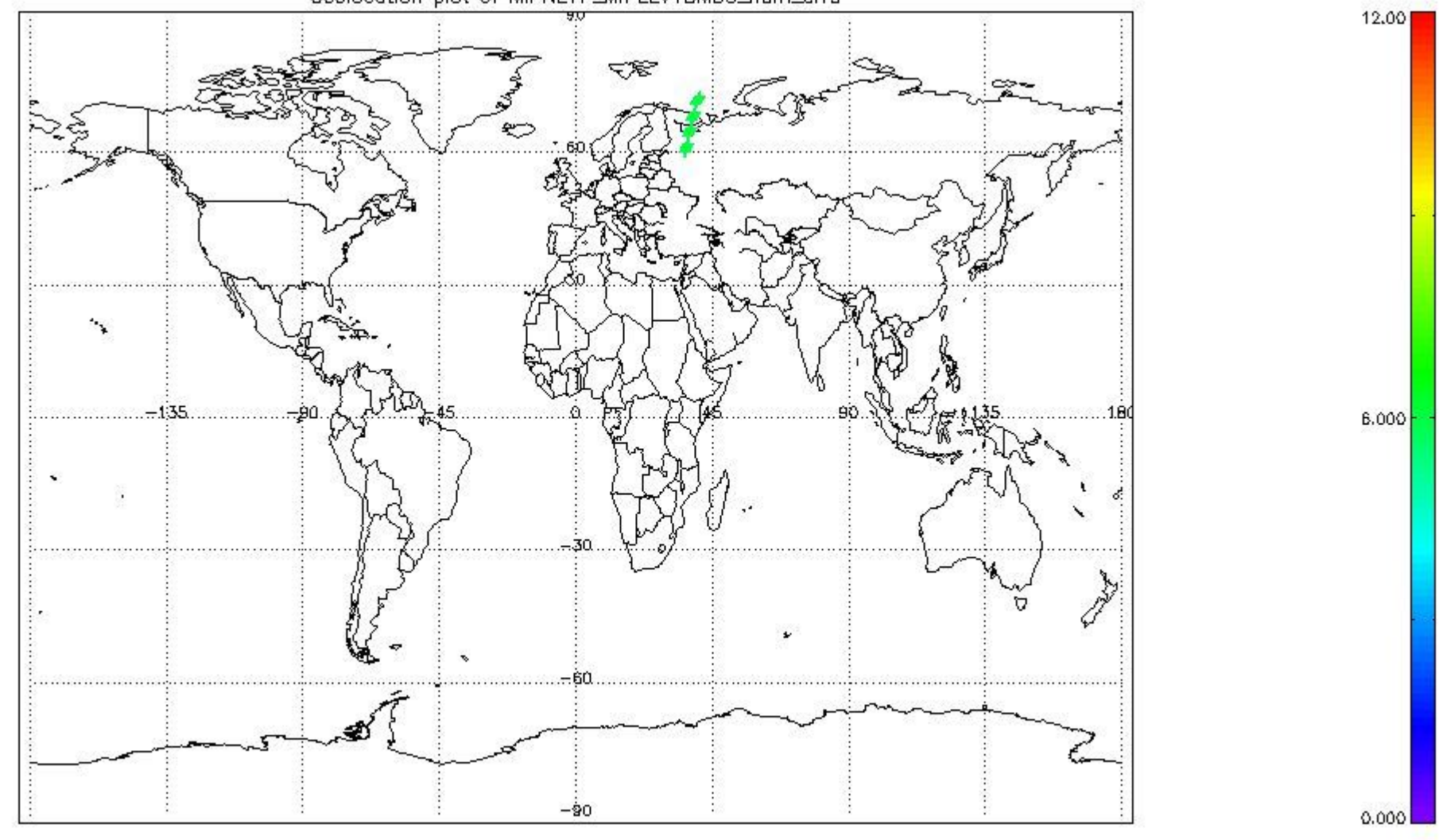


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_27.PNG

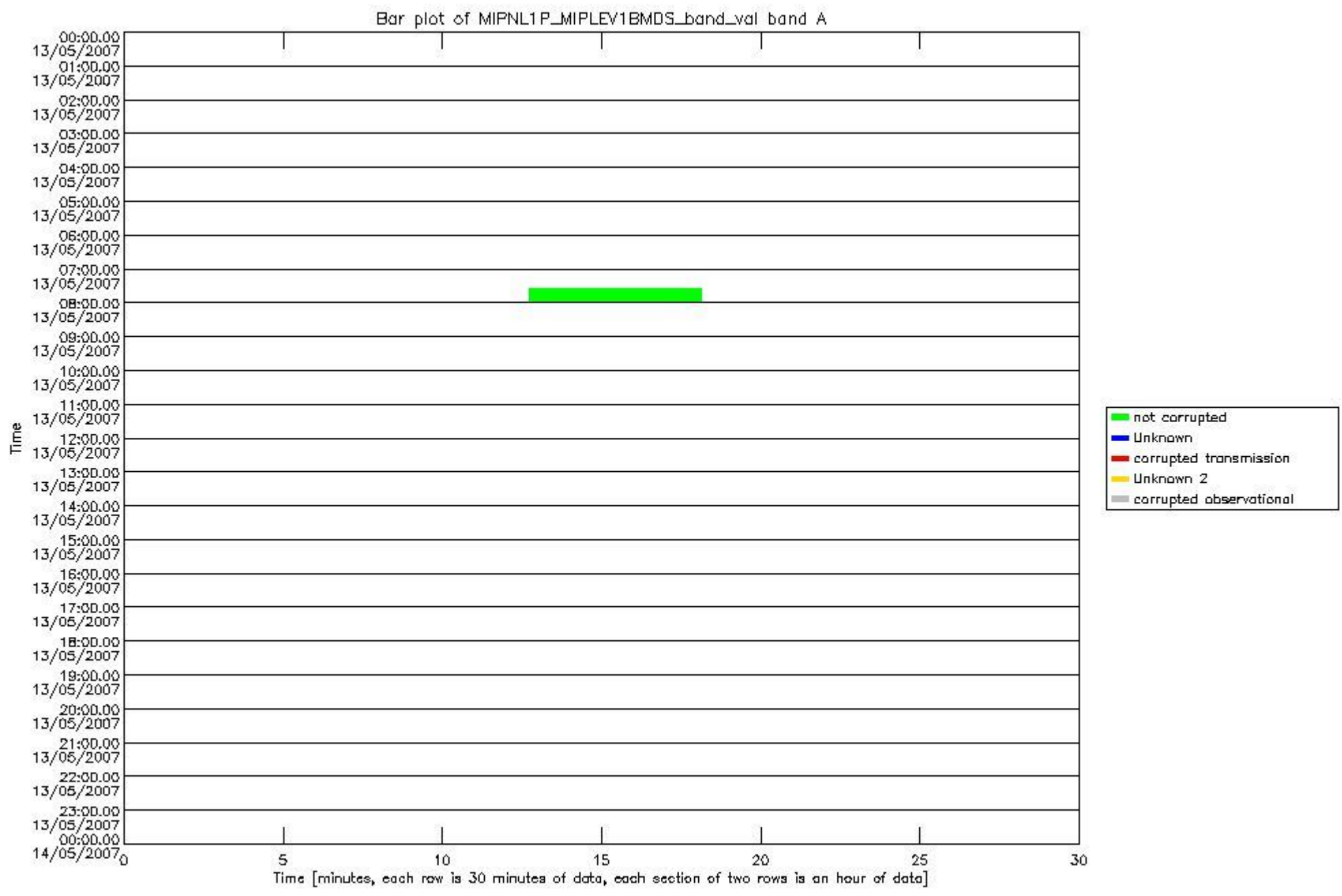


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_28.PNG

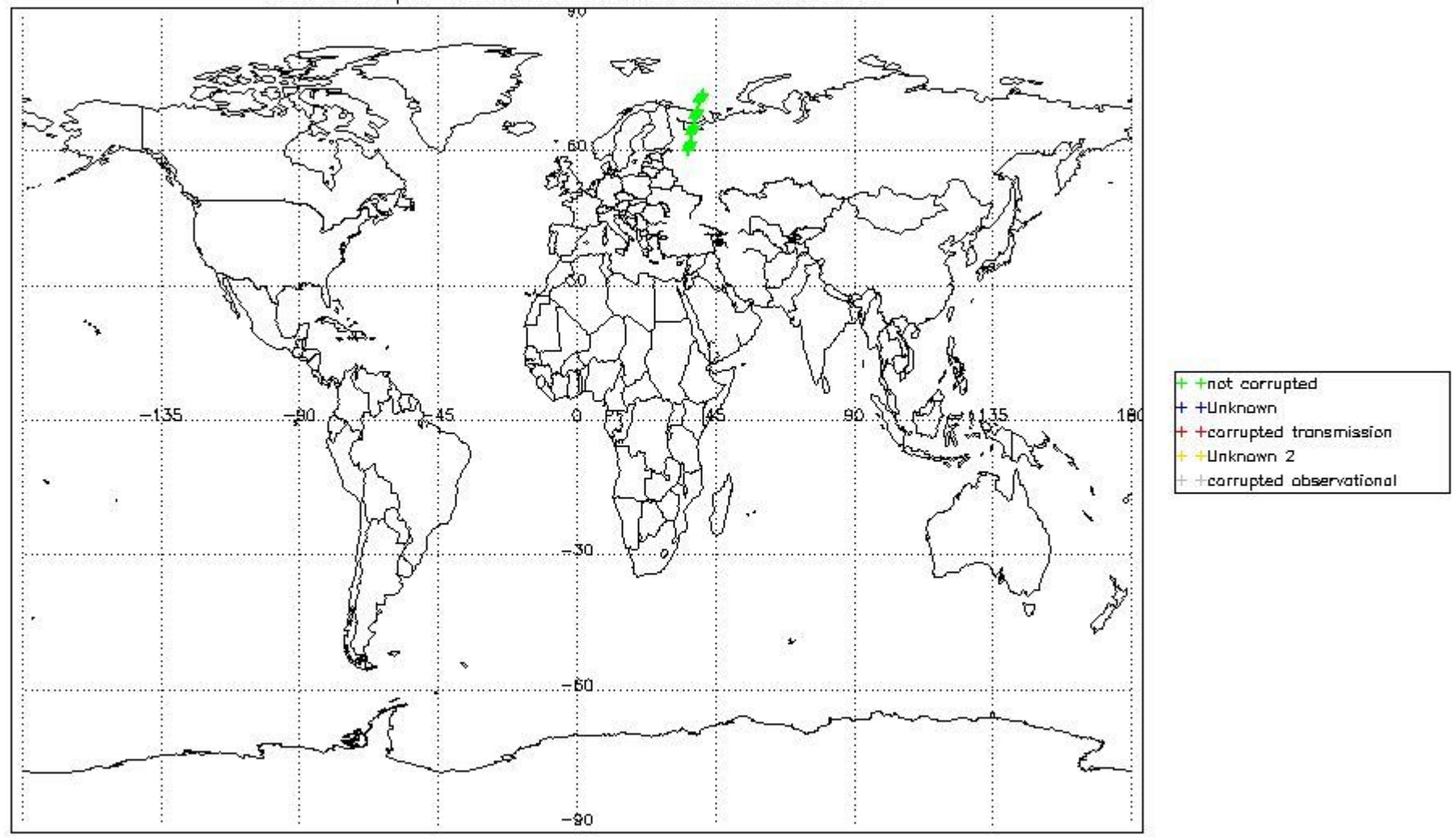
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_29.PNG

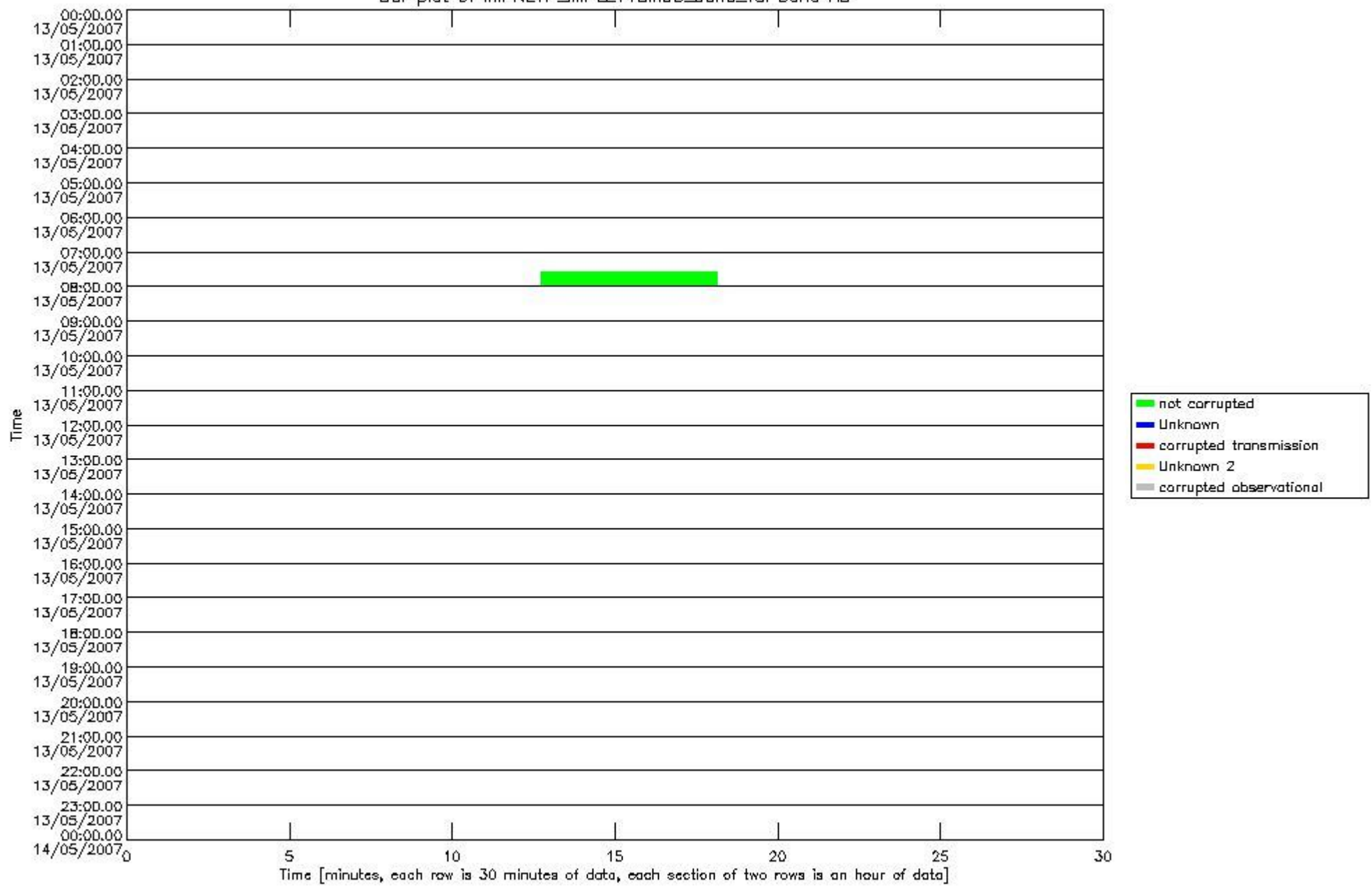


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A

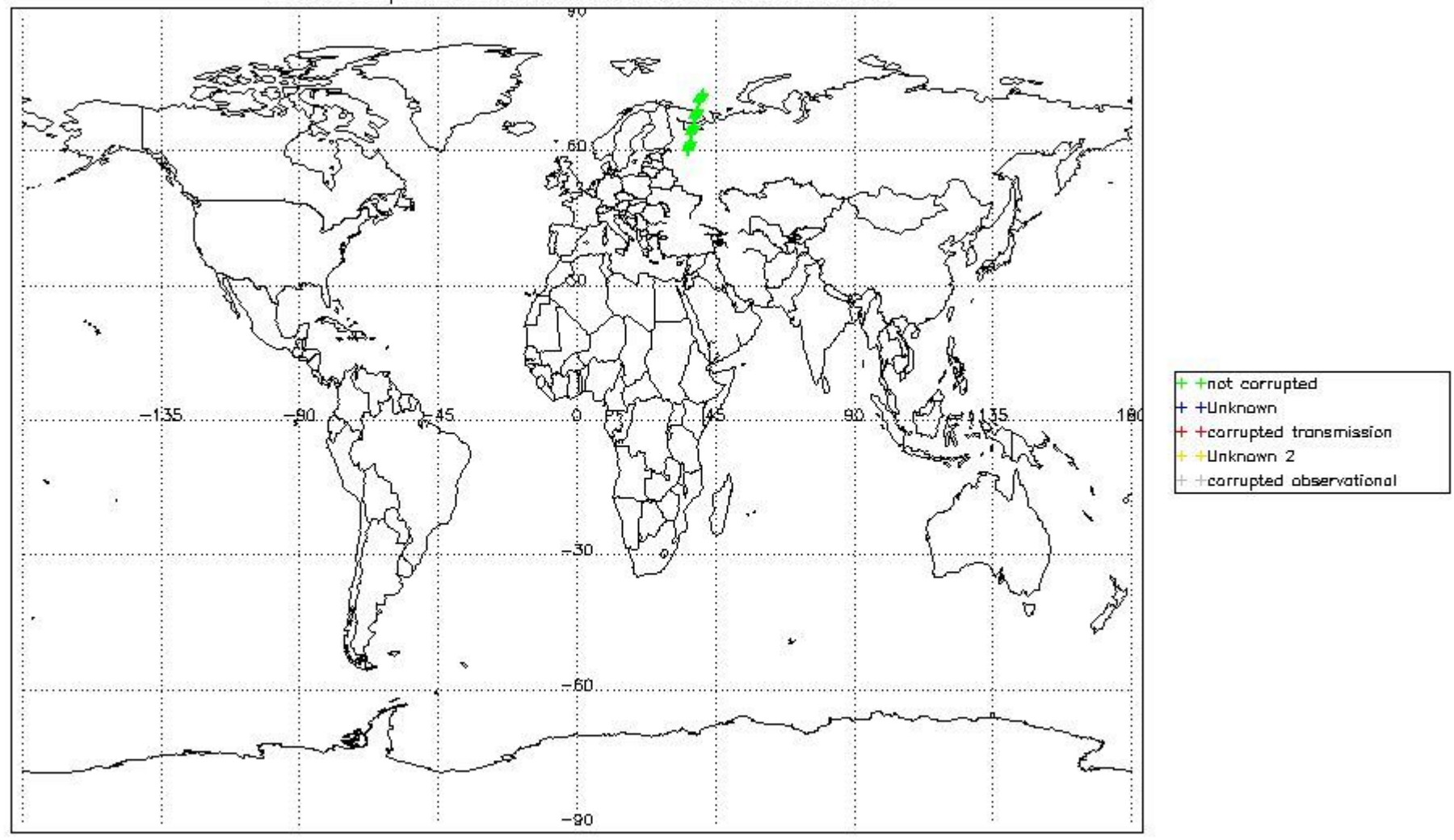


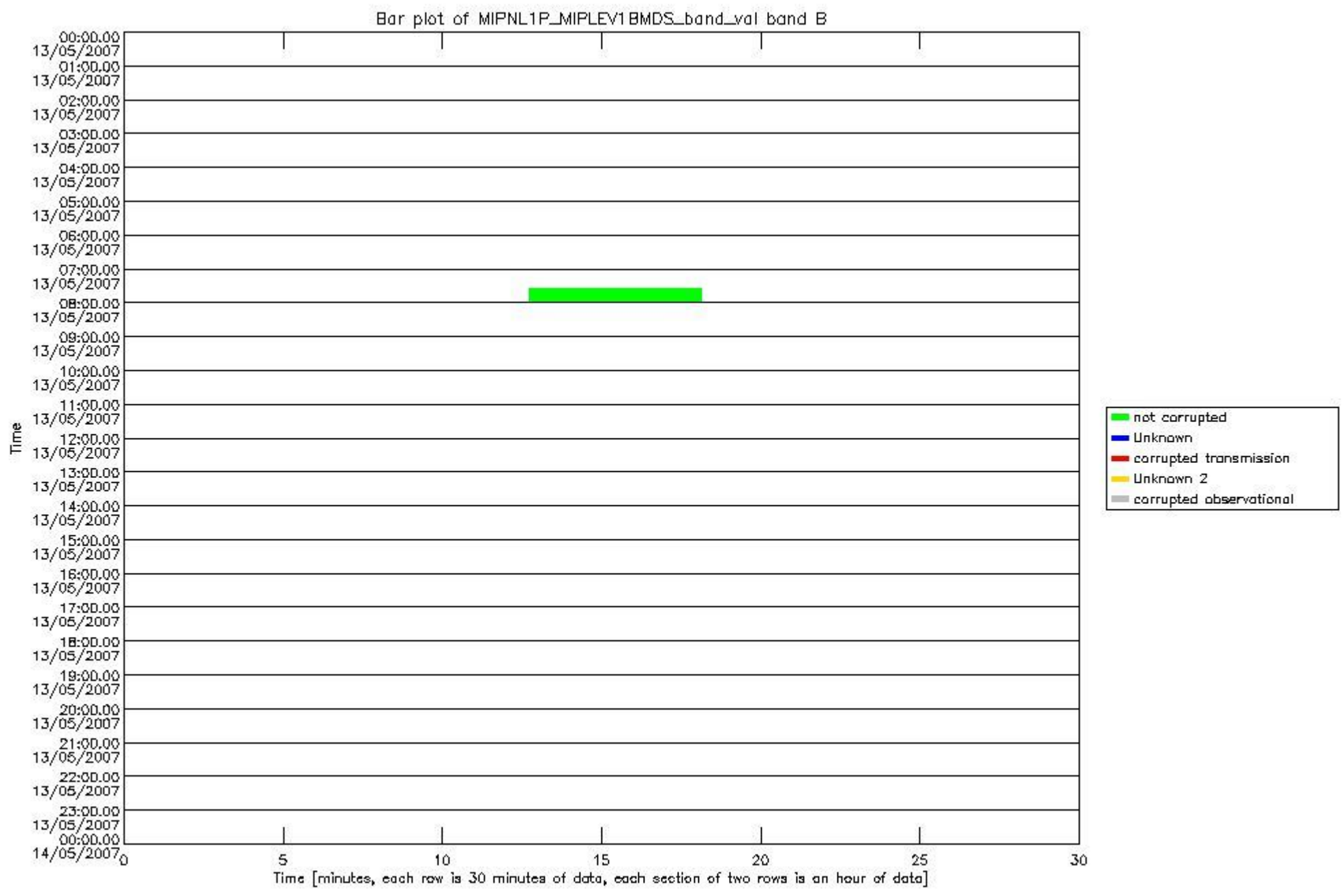


Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB

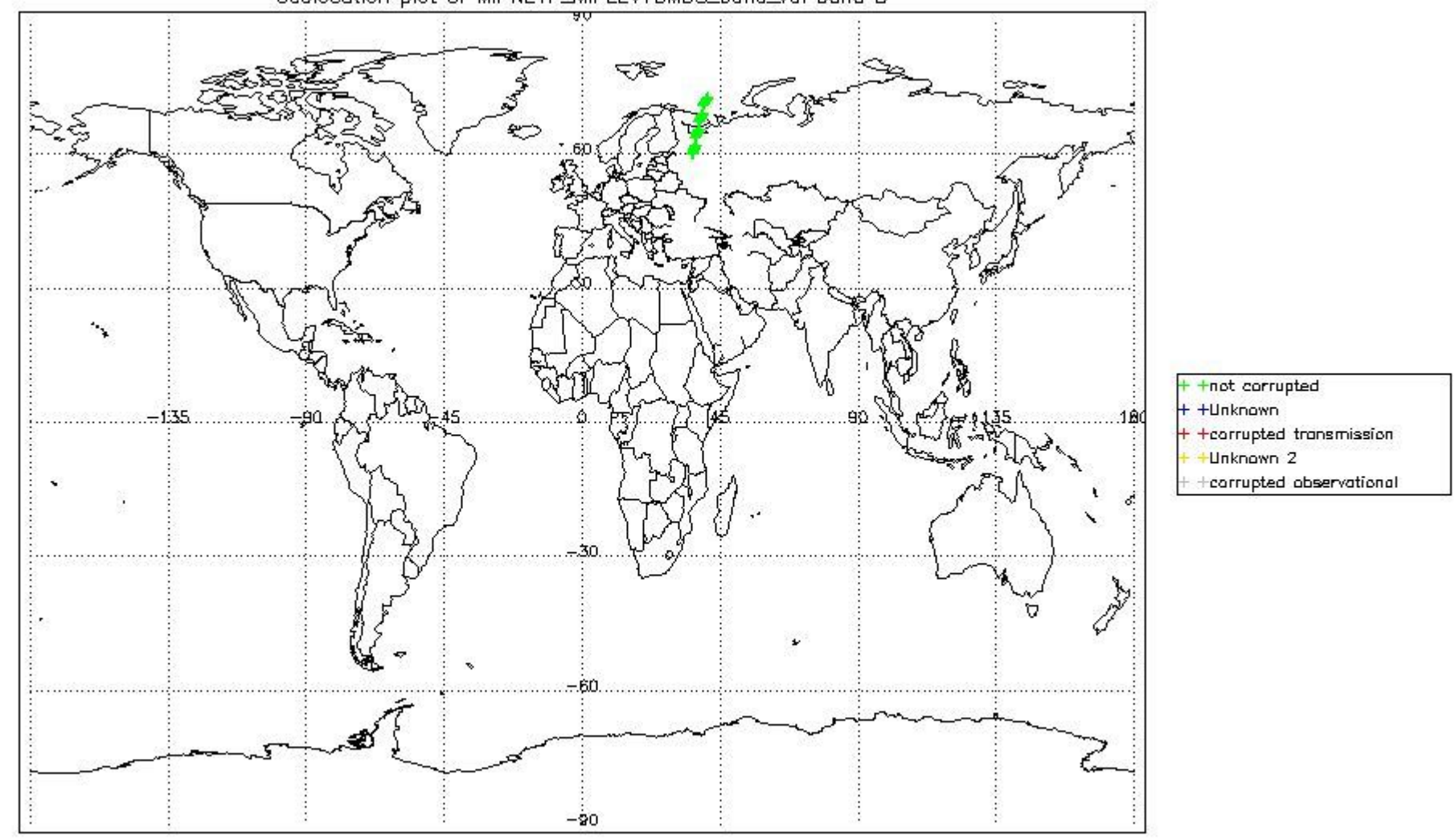


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB

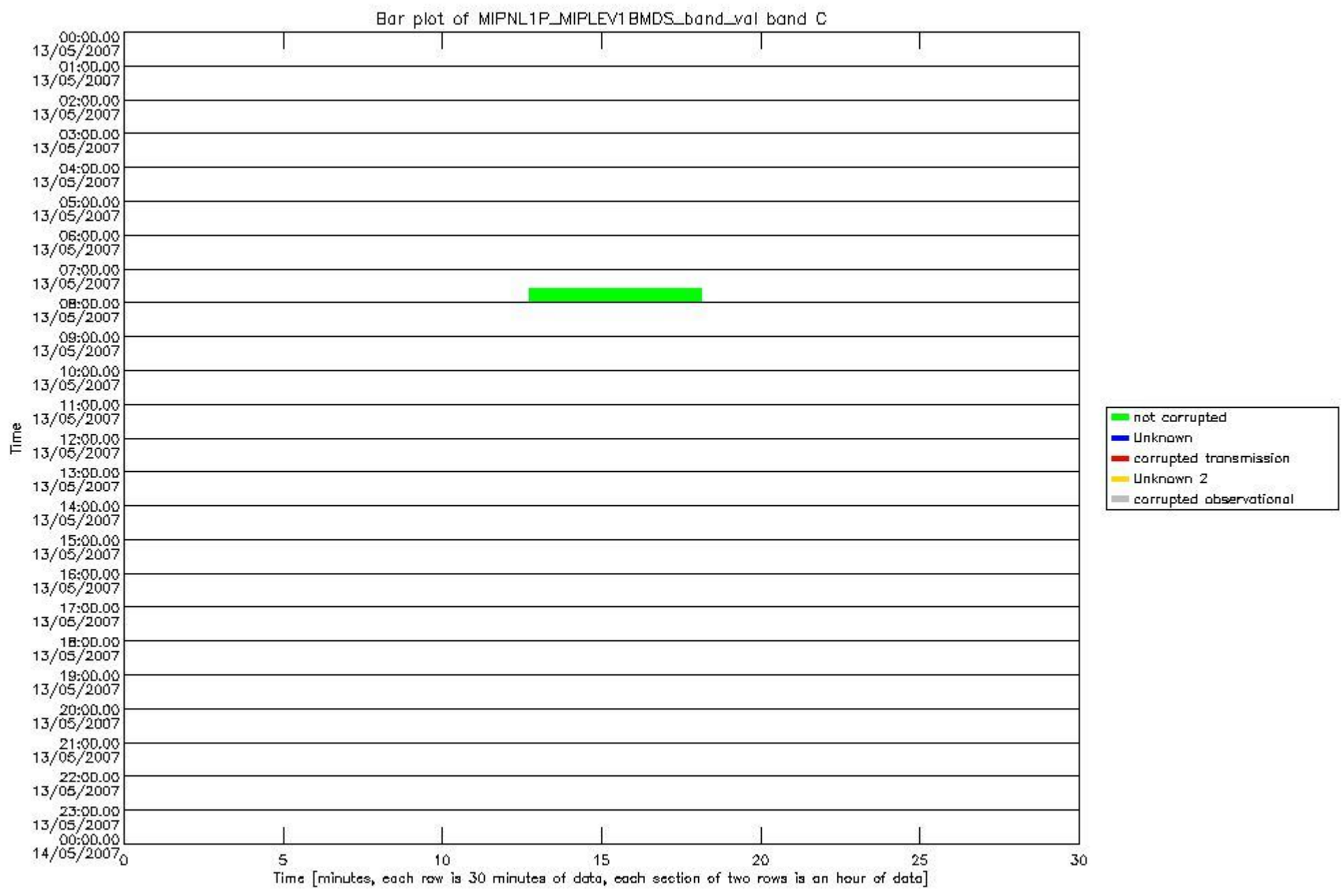




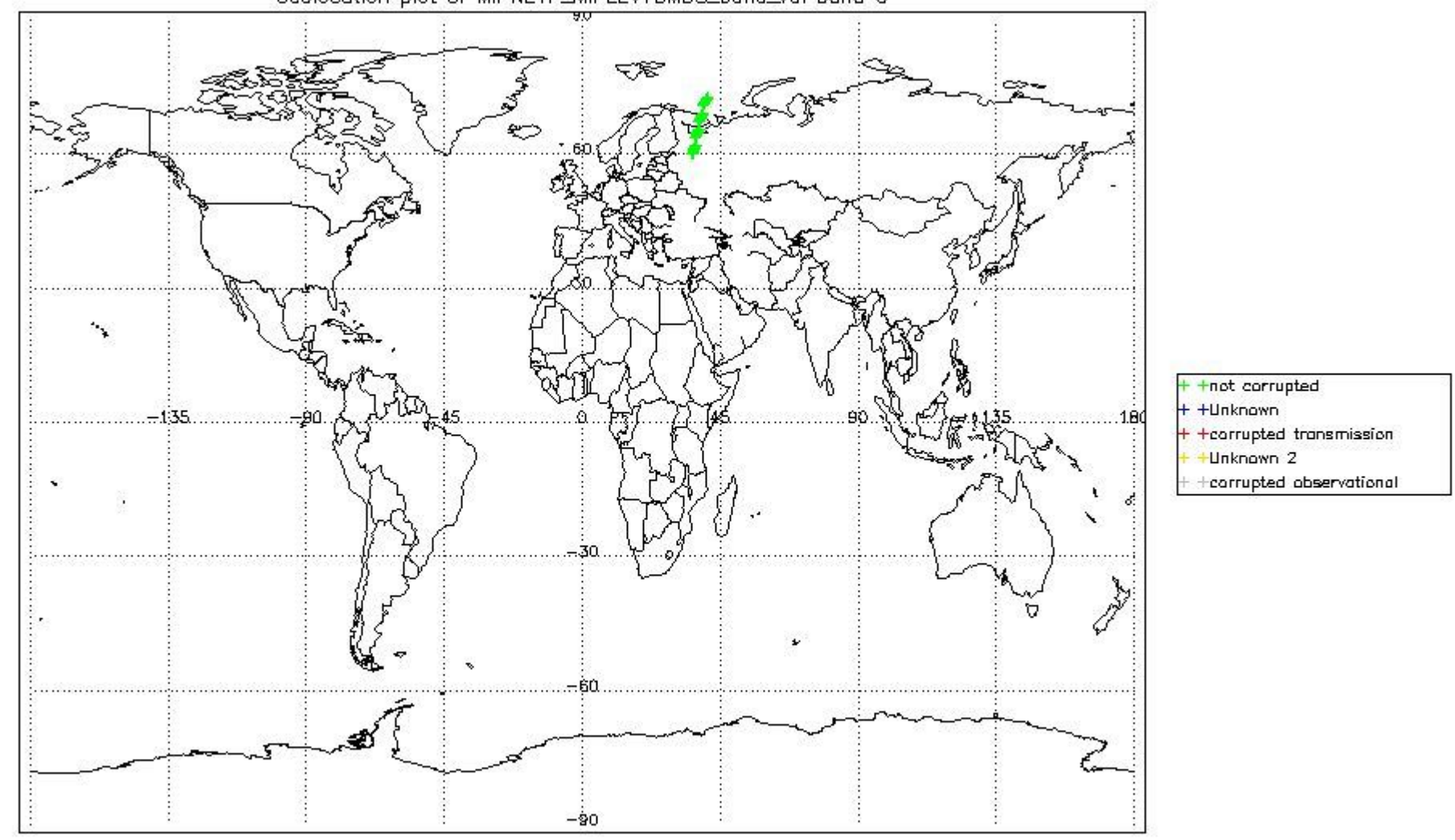
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B

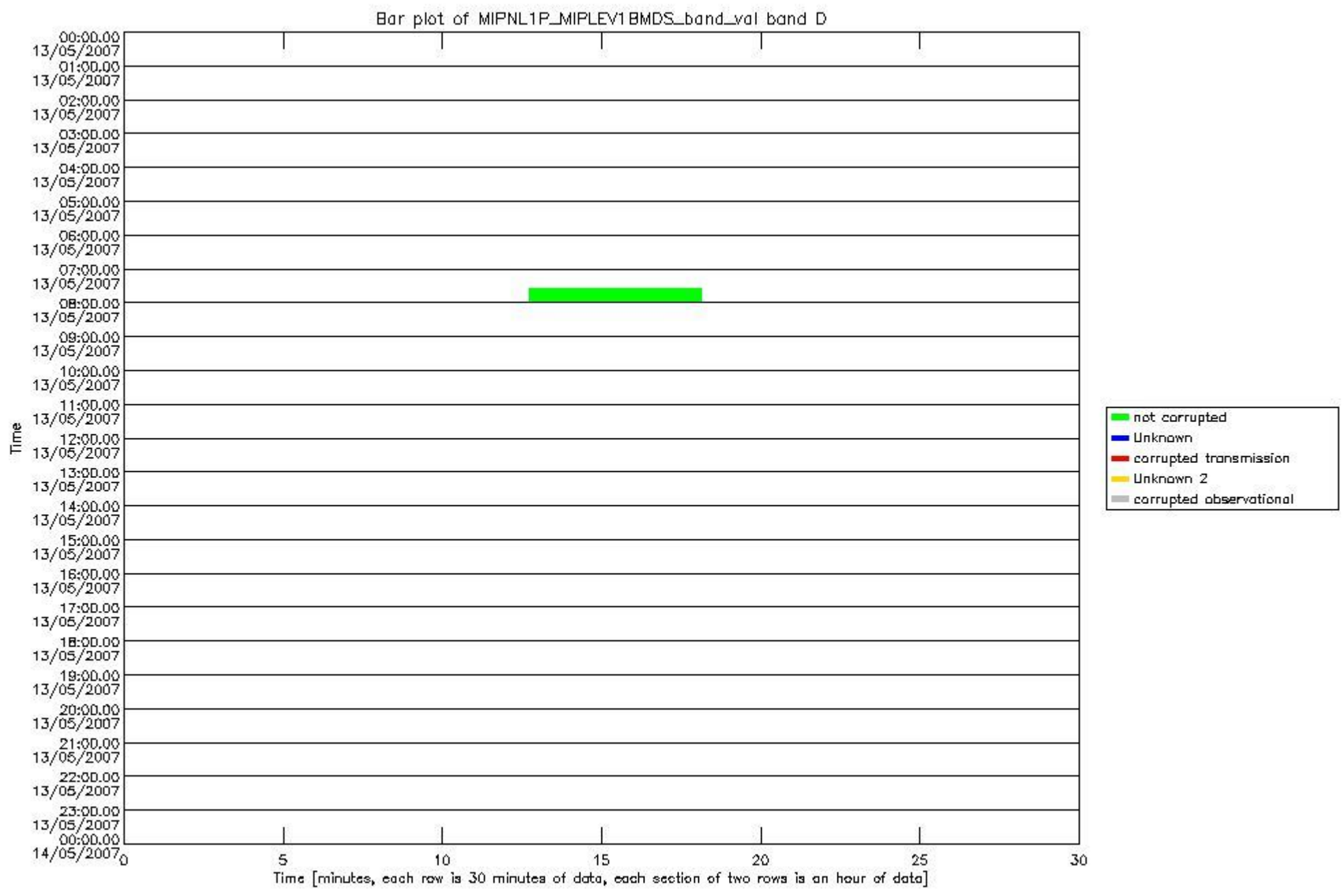




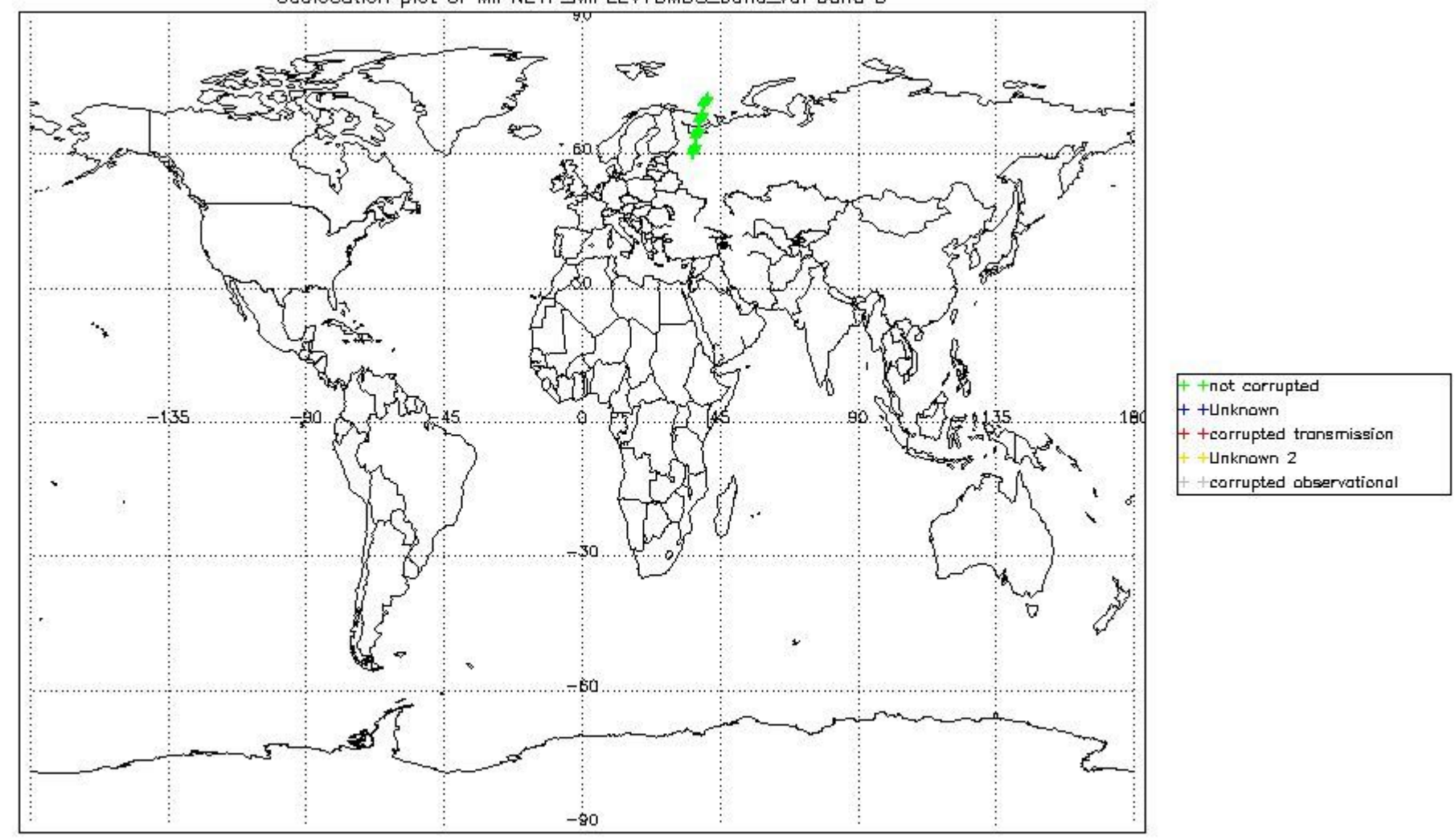


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band C



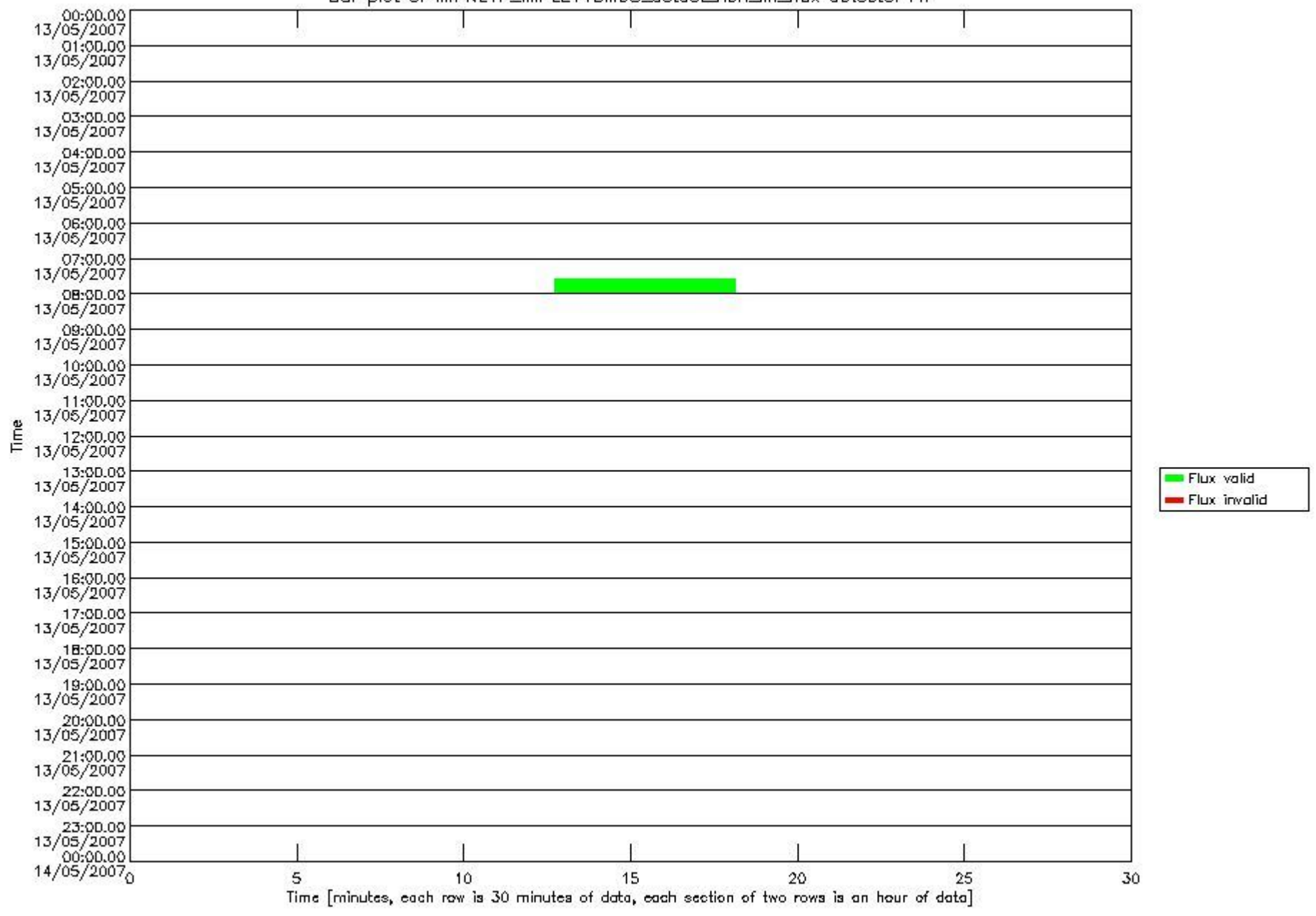


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band D

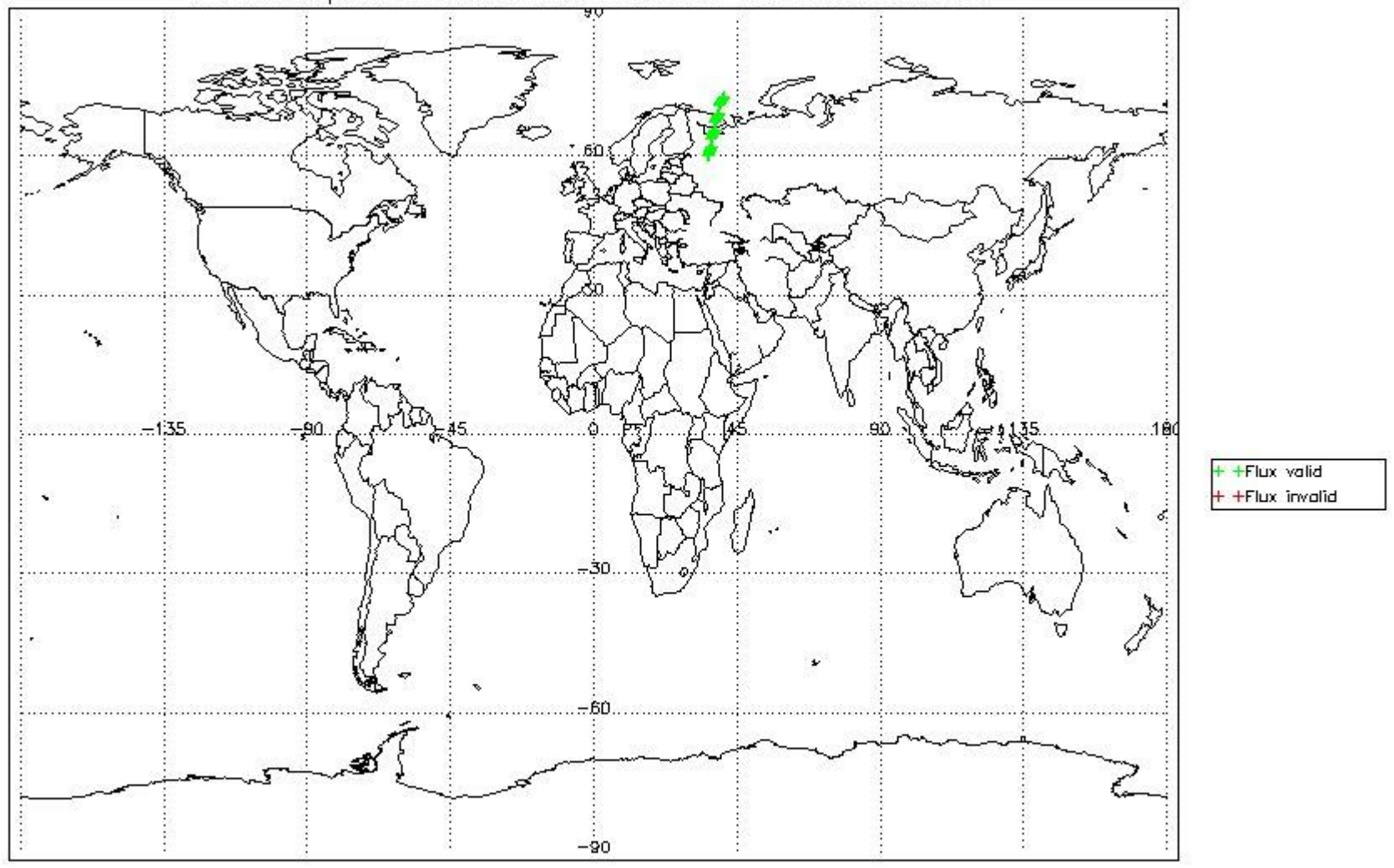




Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_jin\_flux detector A1

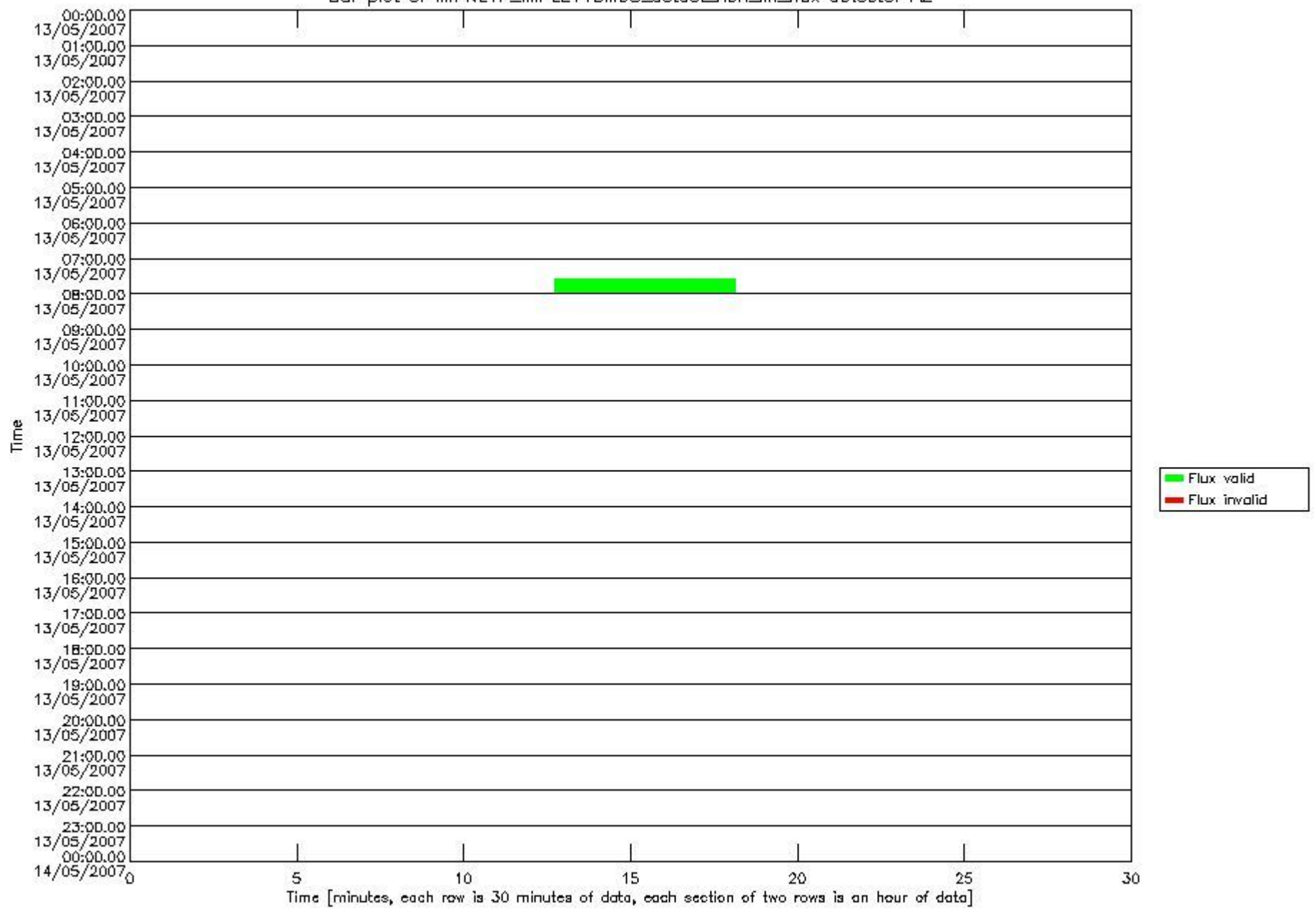


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A1

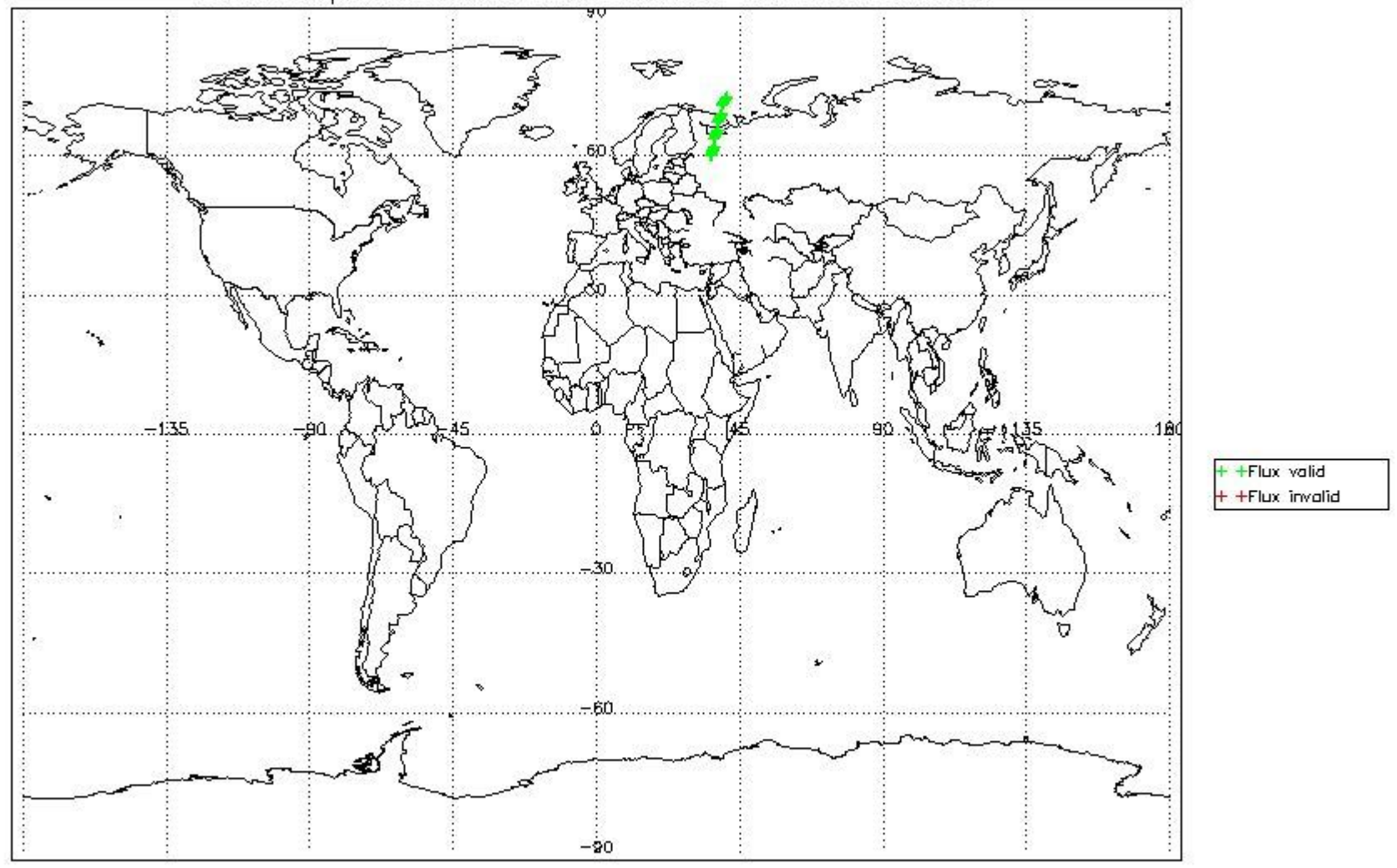


mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_41.PNG

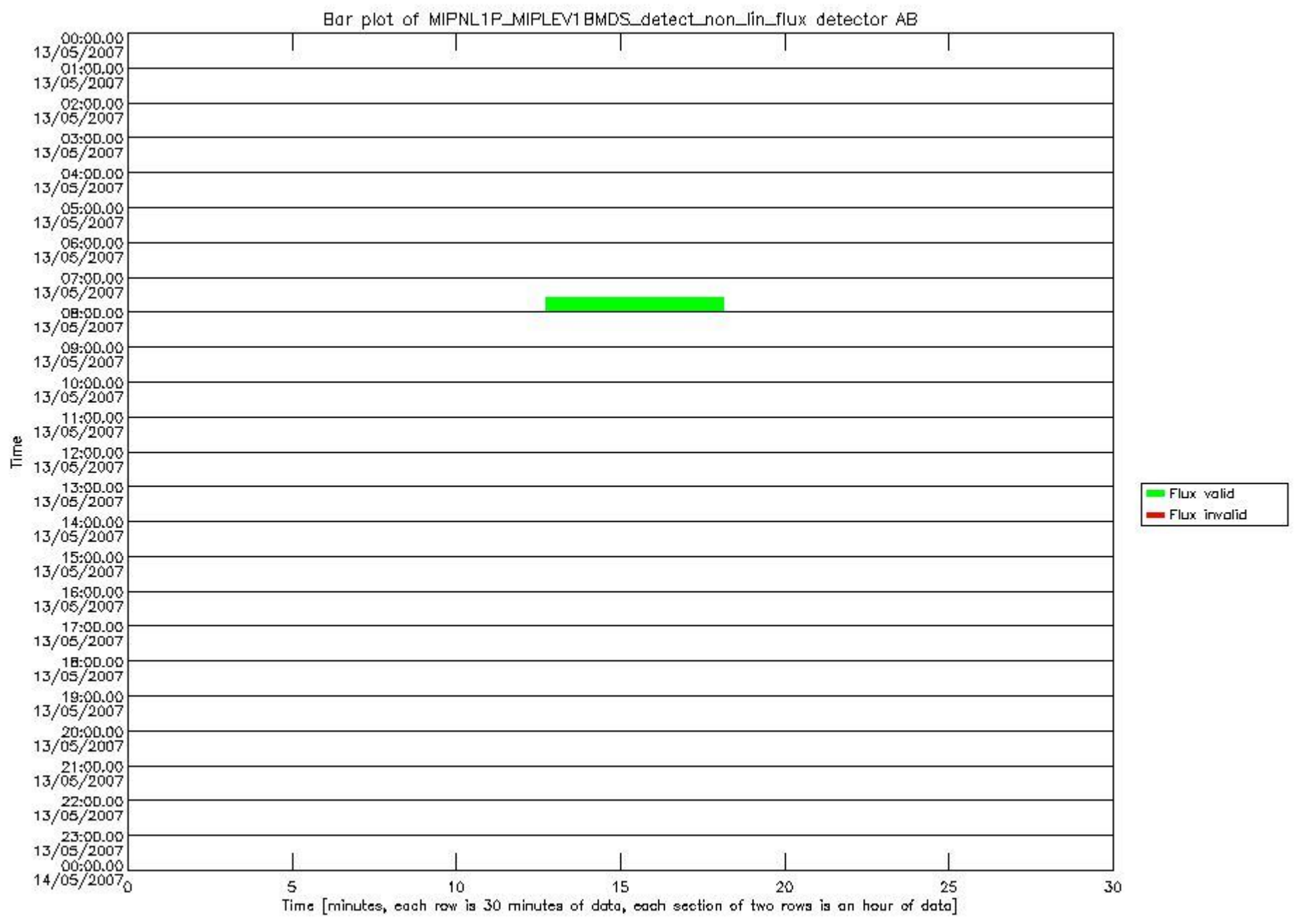
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_jin\_flux detector A2



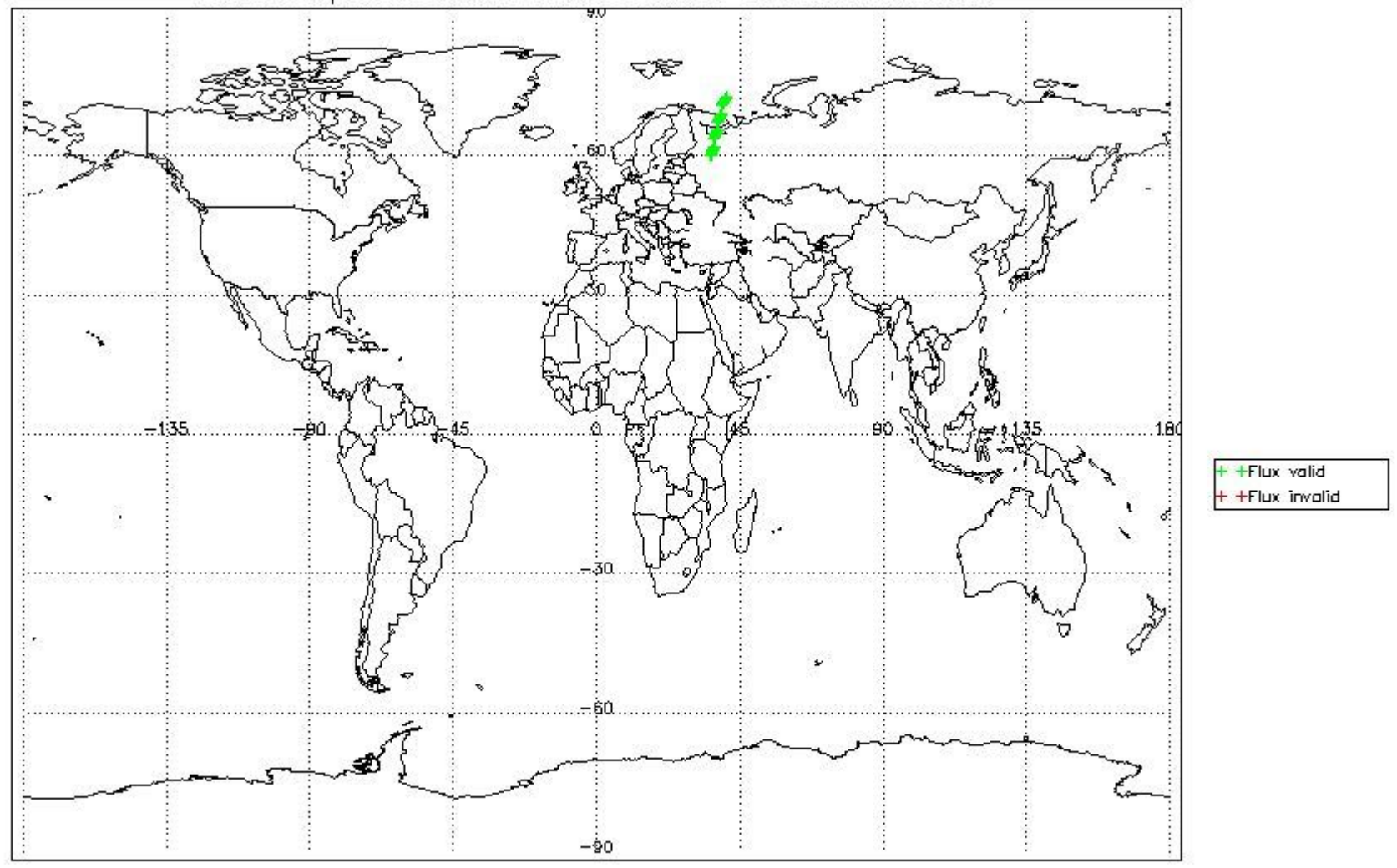
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A2



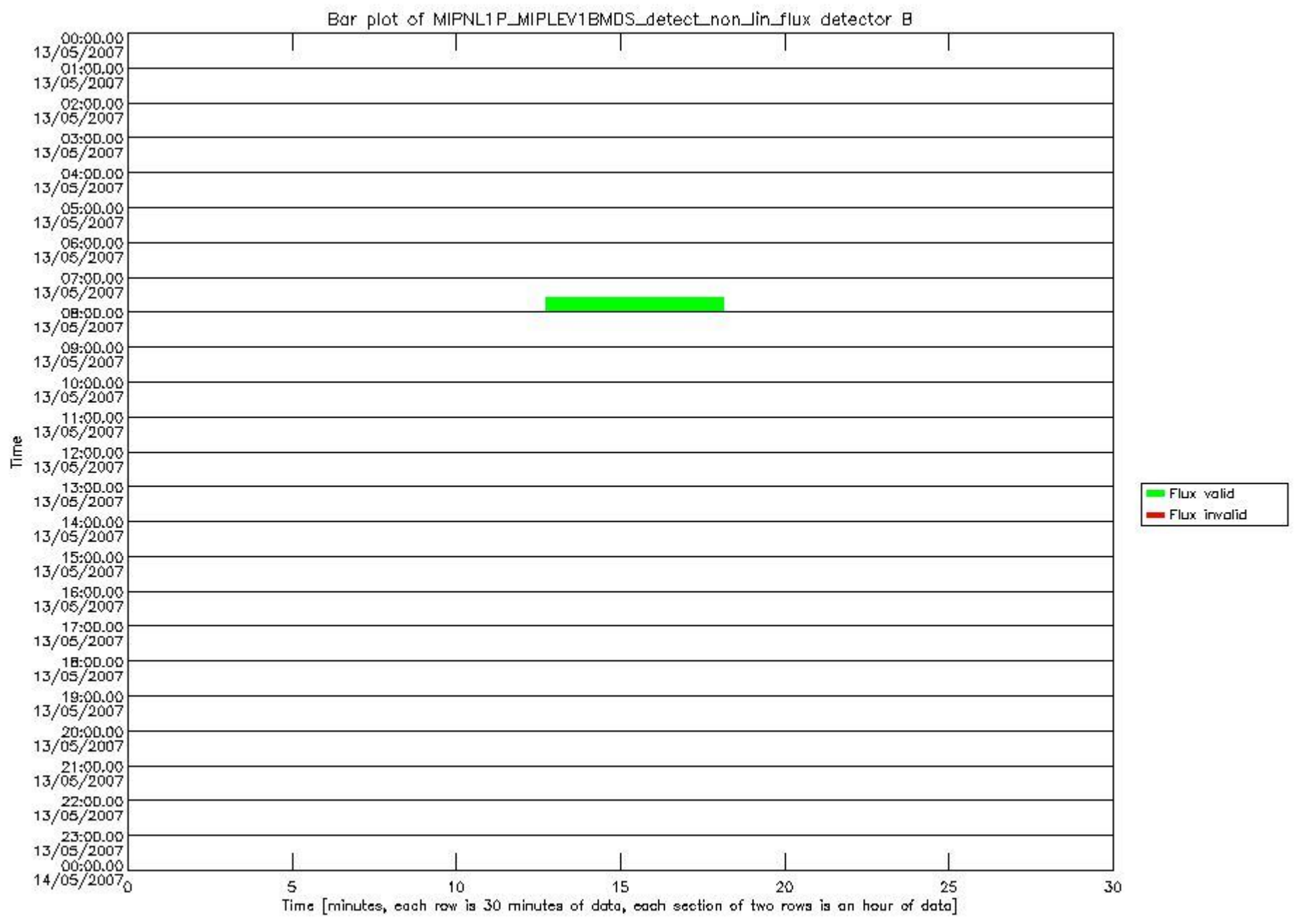


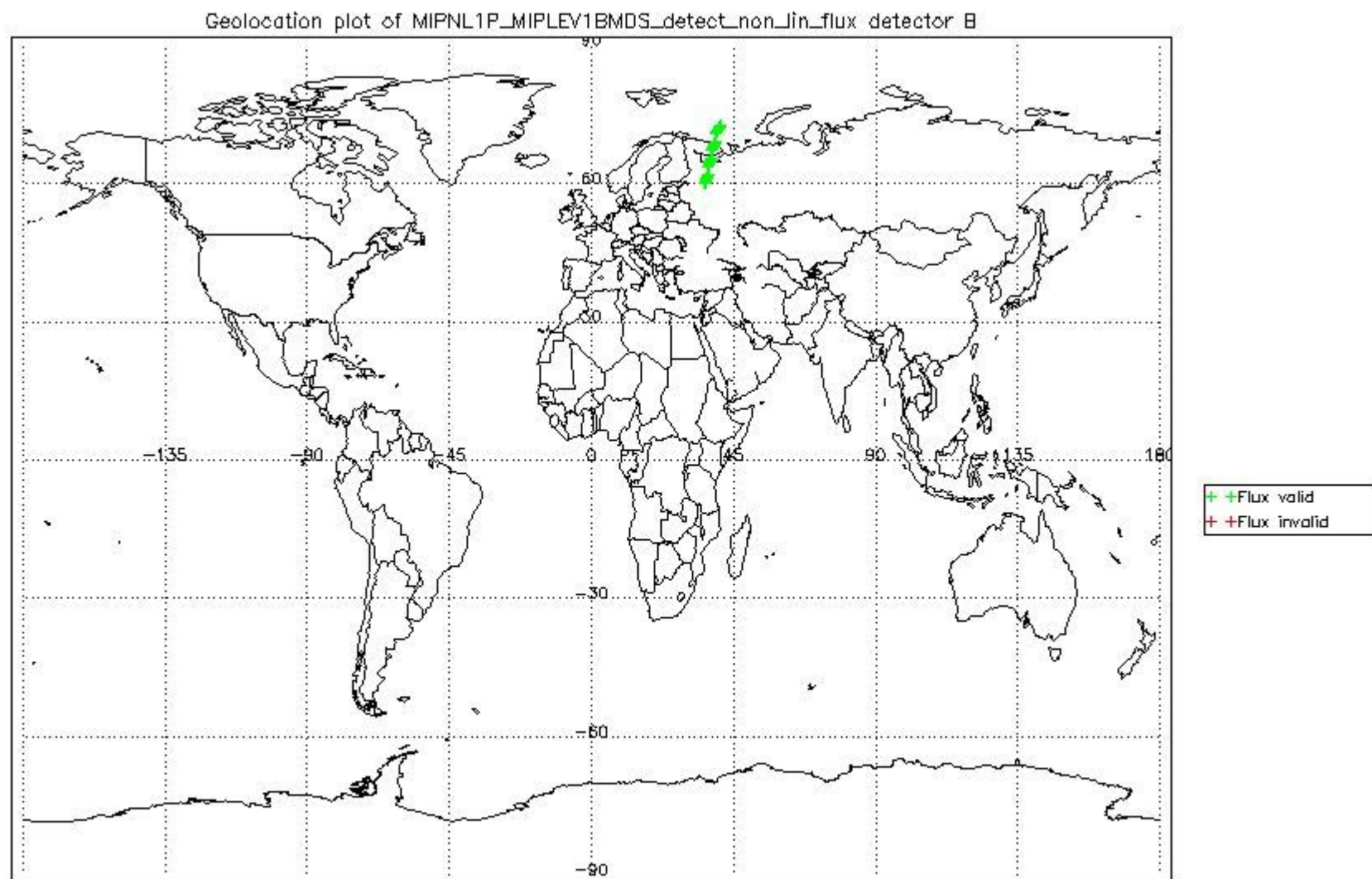


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_45.PNG





mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_47.PNG

### 1.2.3 Scan information ADS

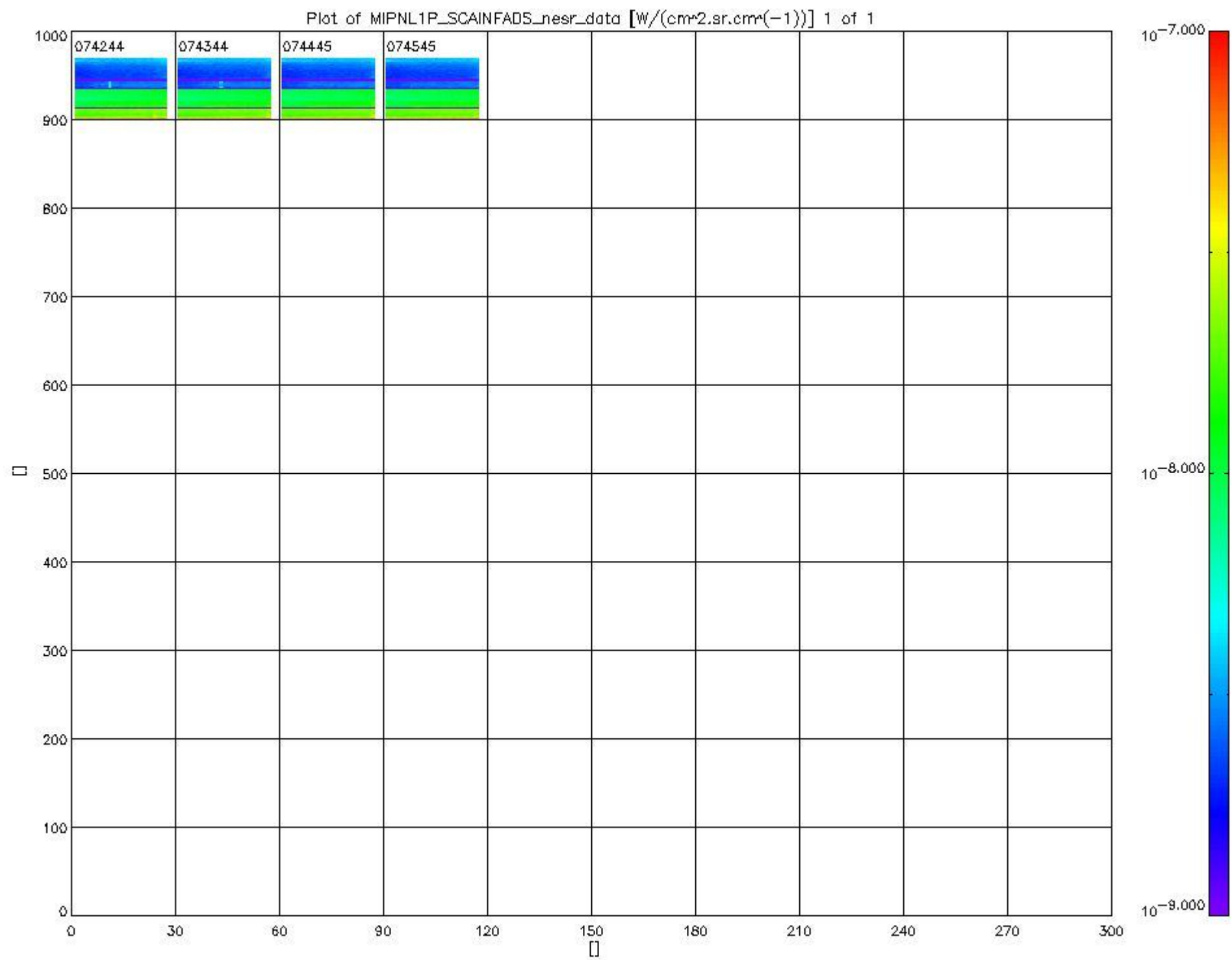
The following plots each contain 100 squares. Each square contains one NESR-scan (from MIPNL1P\_SCAINFADS\_nesr\_data).

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.



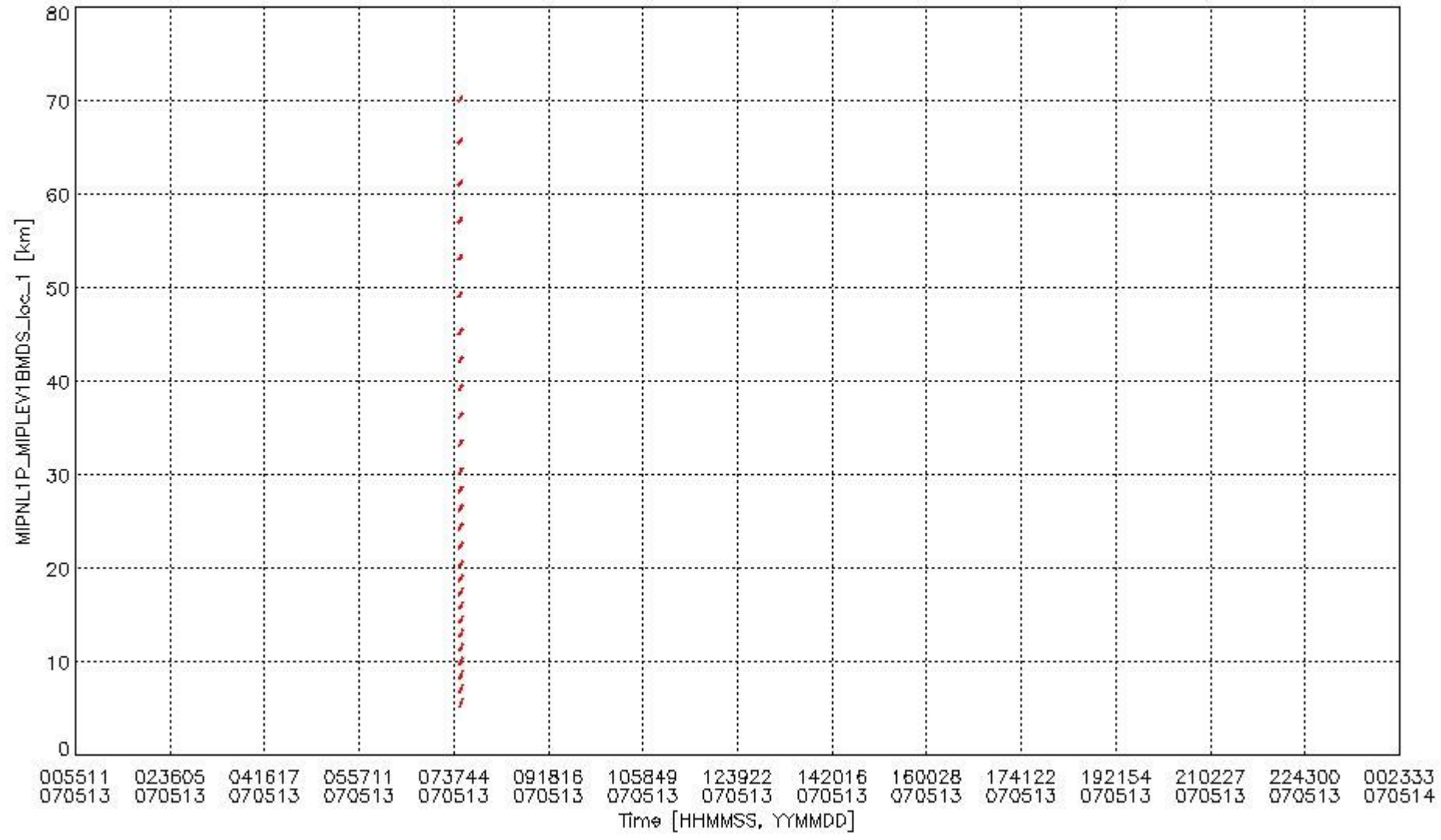


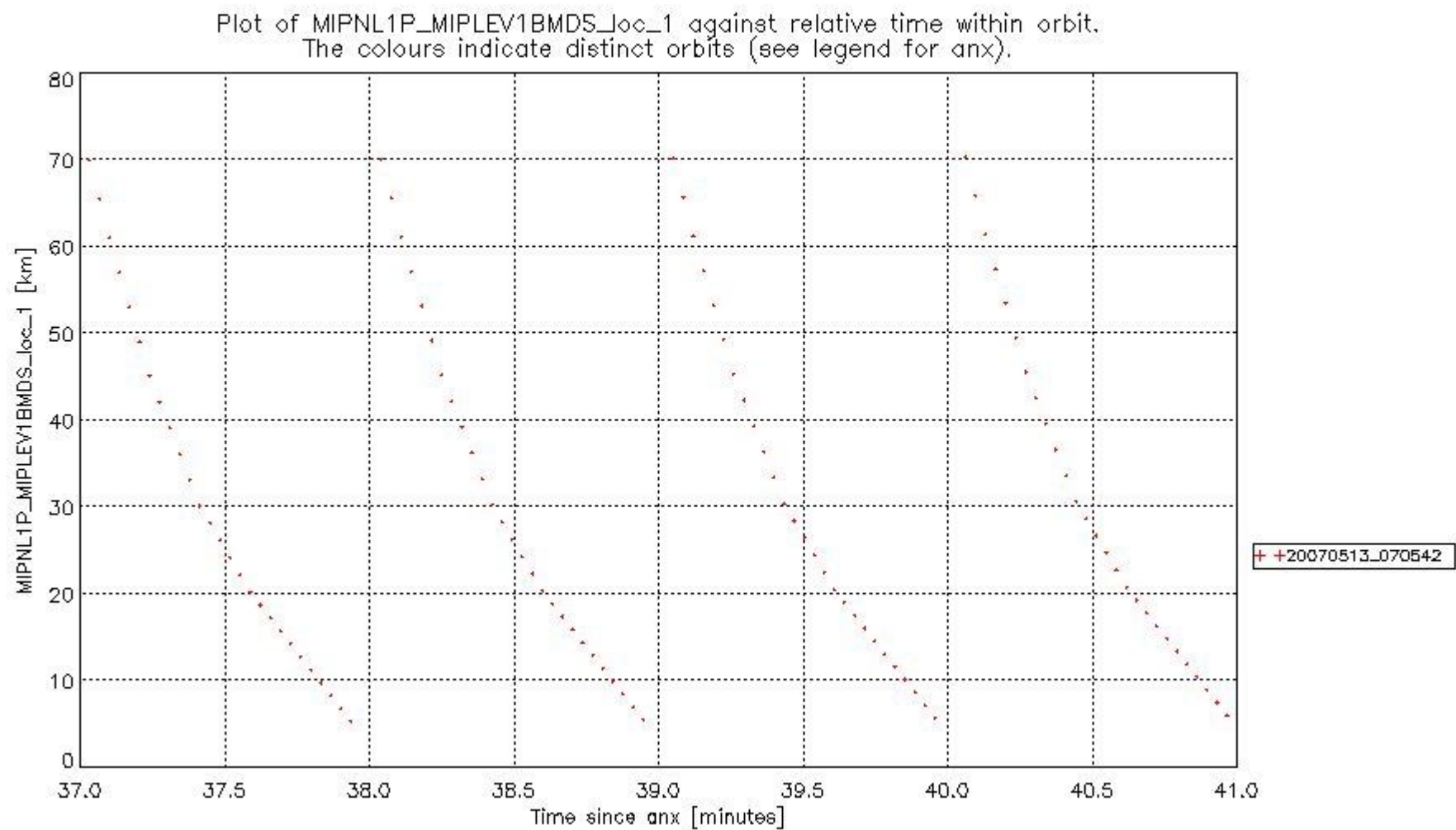
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_48.PNG

### 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\_20070513\_50.PNG

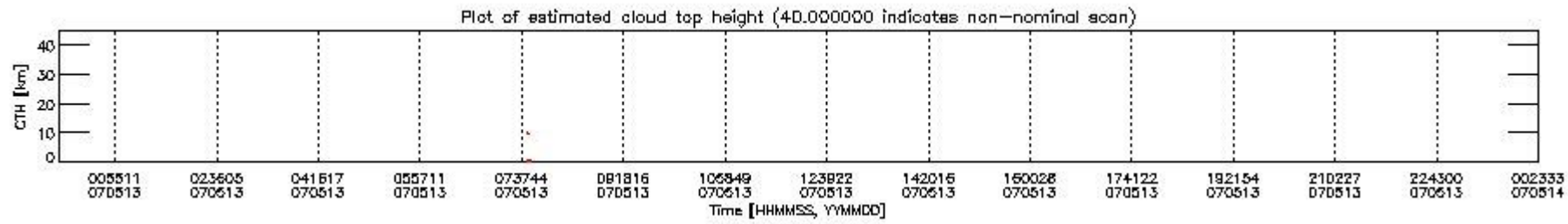
### 1.3.2 Cloud top height

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)

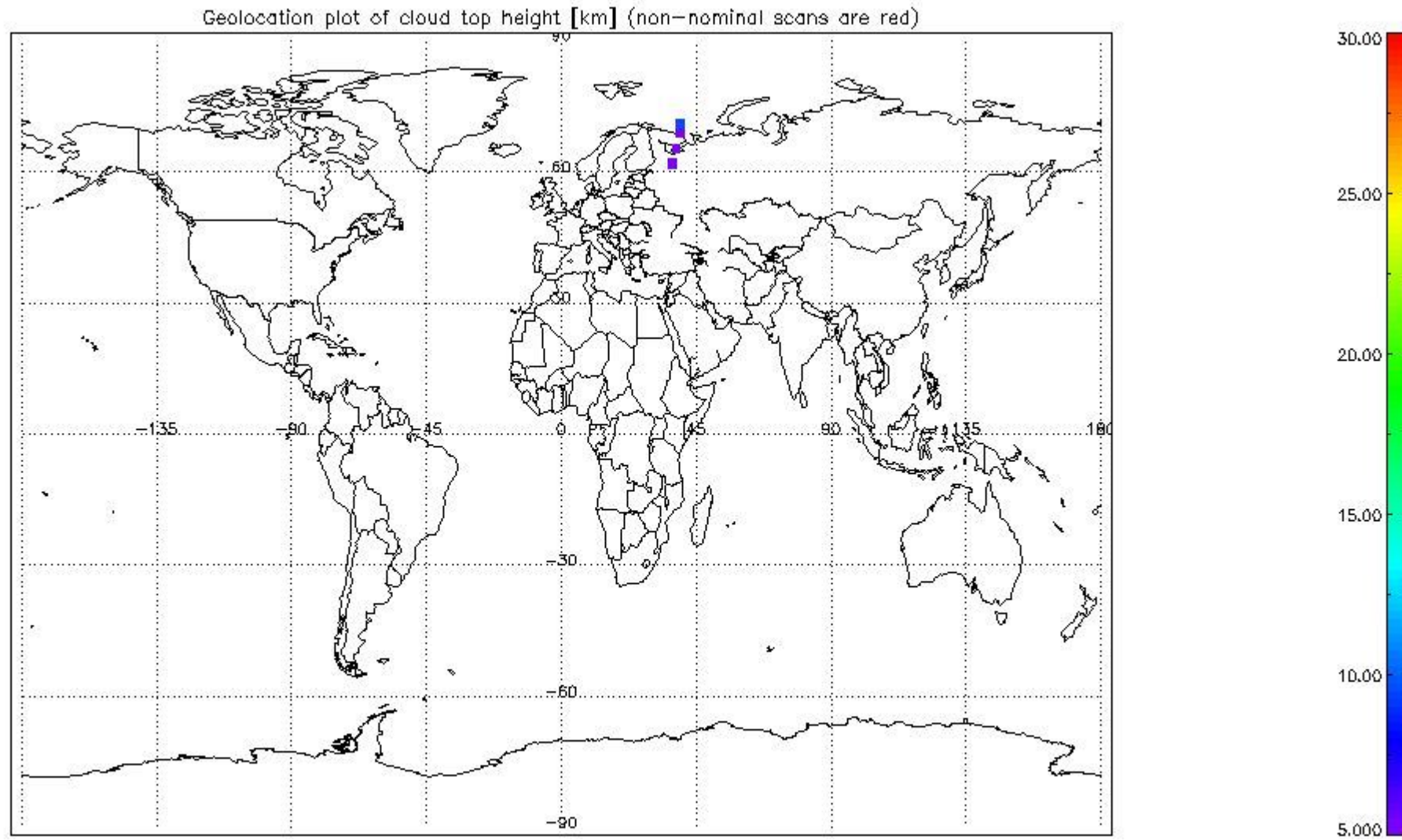
The non-nominal scans mentioned in the plots are scans that are rejected by the cloud top height algorithm for several reasons:

- 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



mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_51.PNG



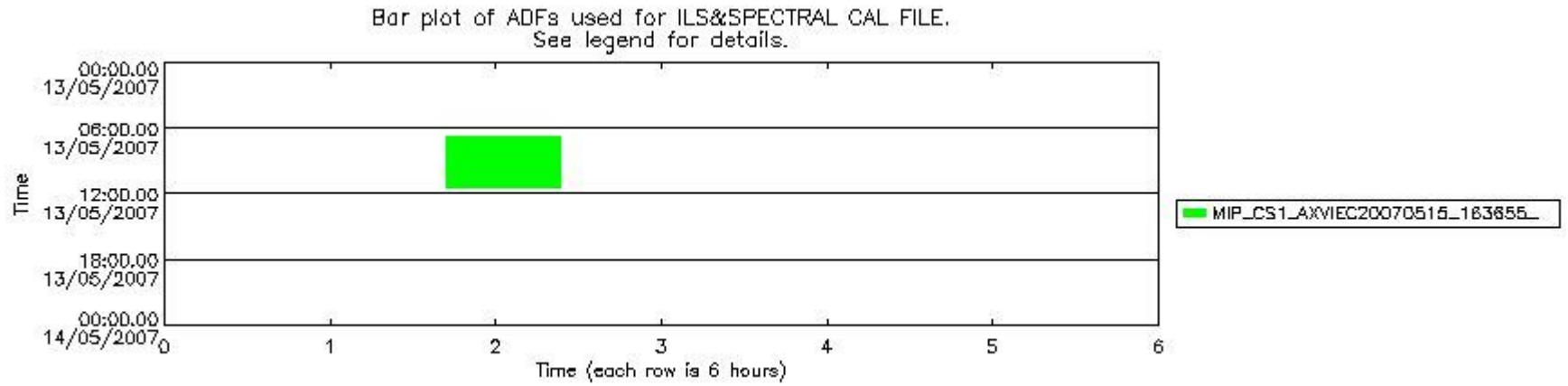
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_52.PNG

## 1.4 ADF monitoring

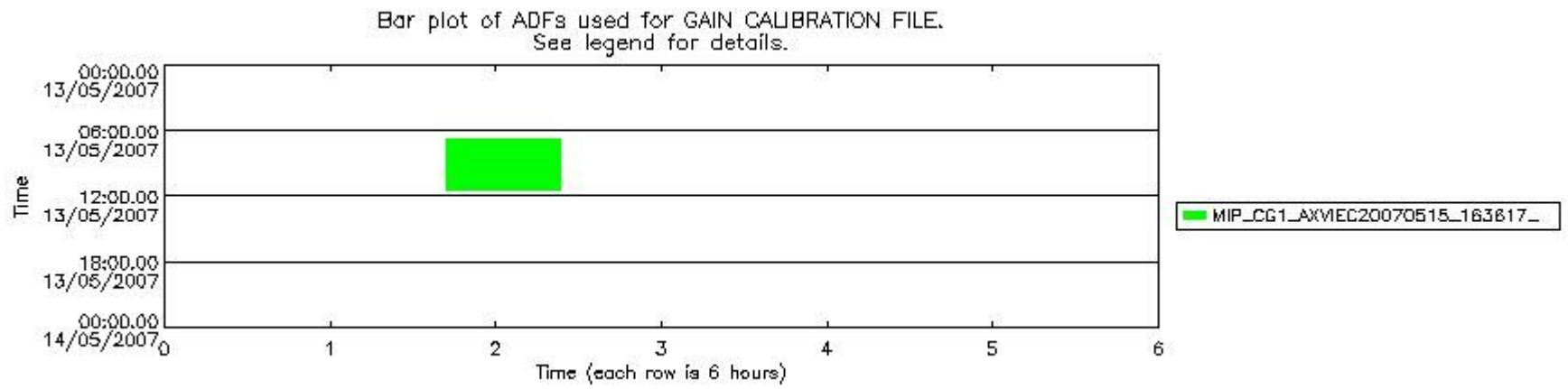
Number	ADF
0	AUX_FRO_AXVPDS20070515_224112_20070512_221000_20070515_005000
1	MIP_CA1_AXVIEC20050627_094412_20040809_000000_20090809_000000
2	MIP_CG1_AXVIEC20070515_163617_20070510_000000_20120510_000000
3	MIP_CL1_AXVIEC20050420_152028_20050420_095747_20100420_095747
4	MIP_CO1_AXVIEC20070515_163501_20070510_000000_20120510_000000
5	MIP_CS1_AXVIEC20070515_163655_20070510_000000_20120510_000000
6	MIP_MW1_AXVIEC20050627_094928_20040809_000000_20090809_000000



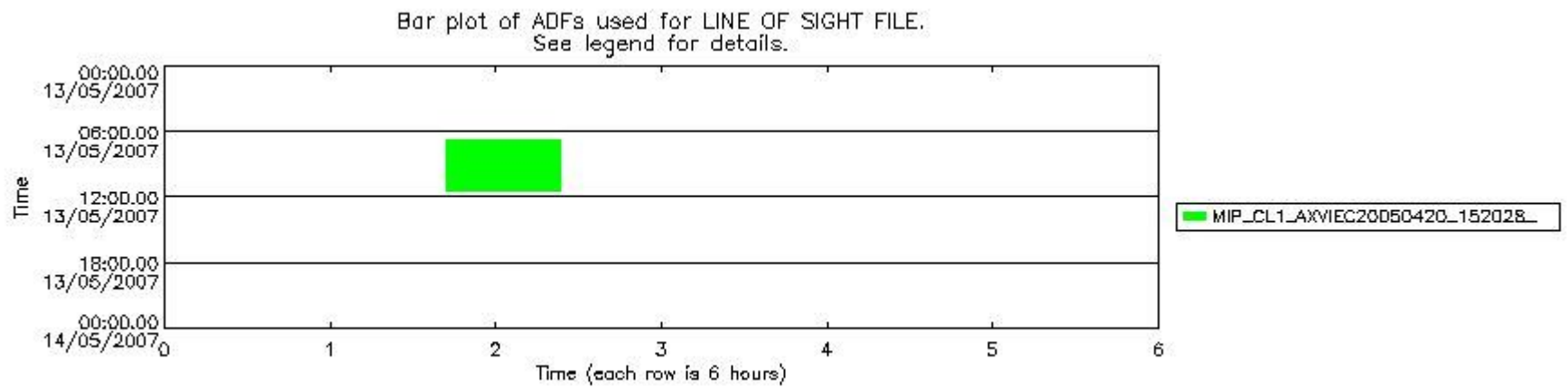
Number	Product name	#CS1	#CG1	#CL1	#CA1	#CO1	#MW1	#PS1	#FPO
0	MIP_NL_1PPDPA20070513_074244_000002372058_00078_27186_4029.N1	5	2	3	1	4	6	7	0



mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_53.PNG

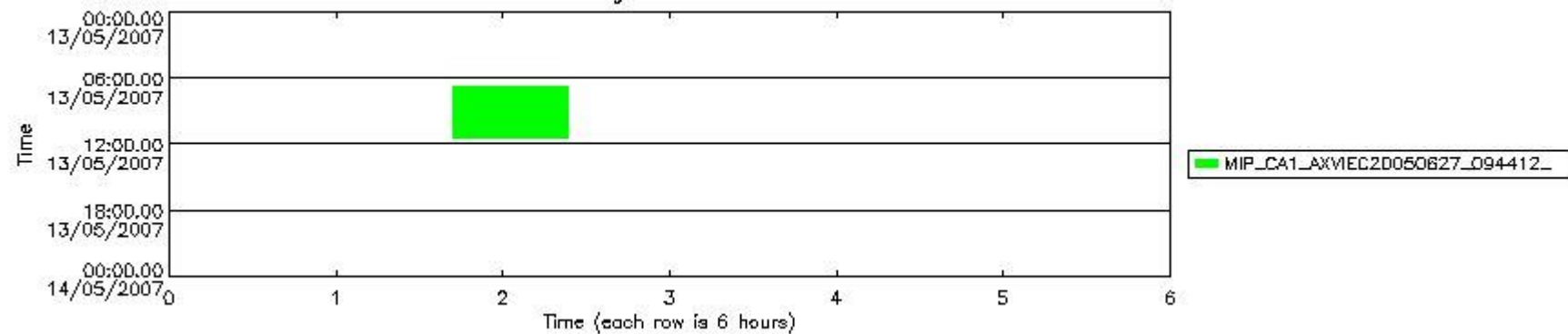


mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_54.PNG



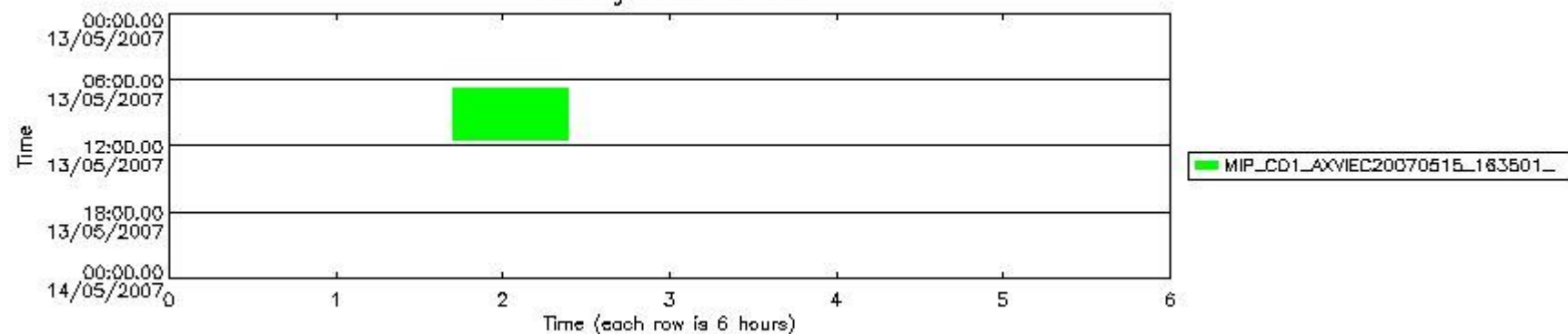
mipas\_daily\_report\_level1\_OFI\_MIPAS\_4\_67\_P\_20070513\_55.PNG

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



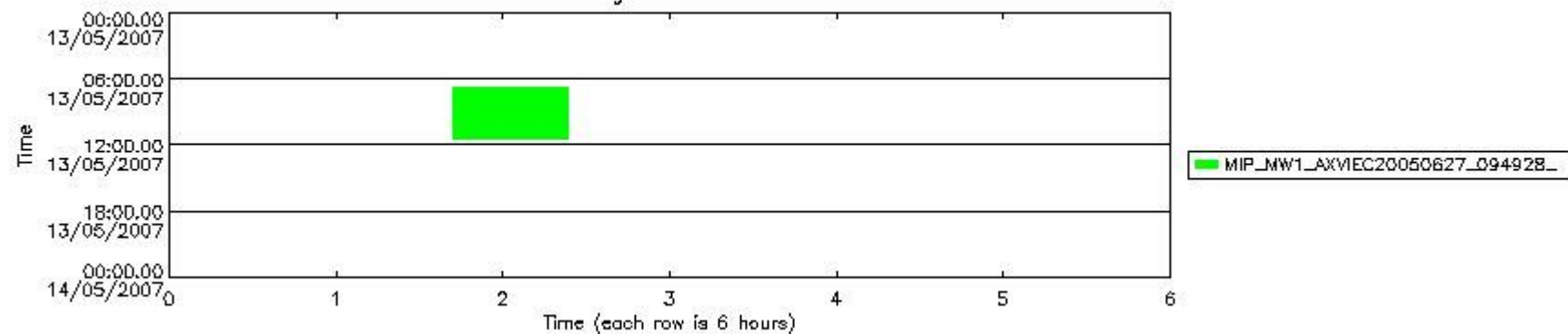
mipas\_daily\_report\_level1\_OFL\_MIPAS\_4\_67\_P\_20070513\_56.PNG

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



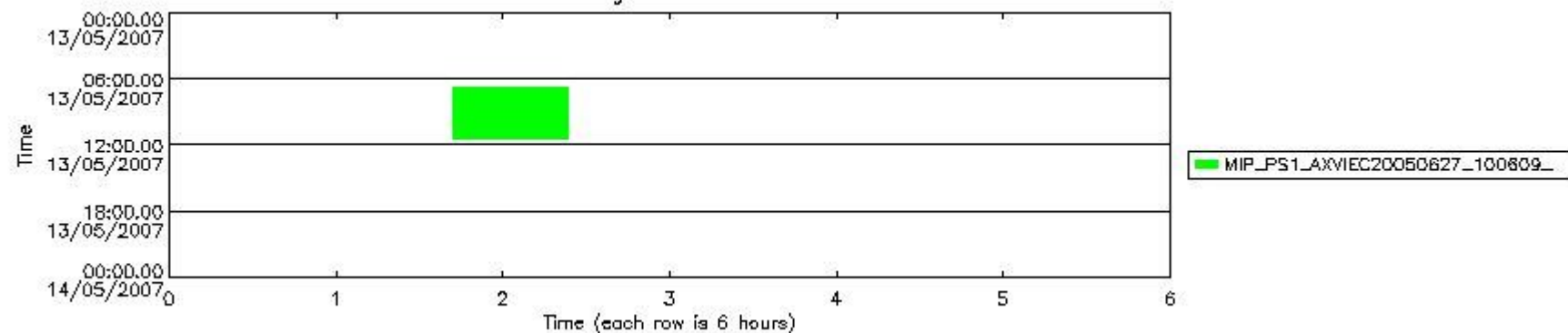
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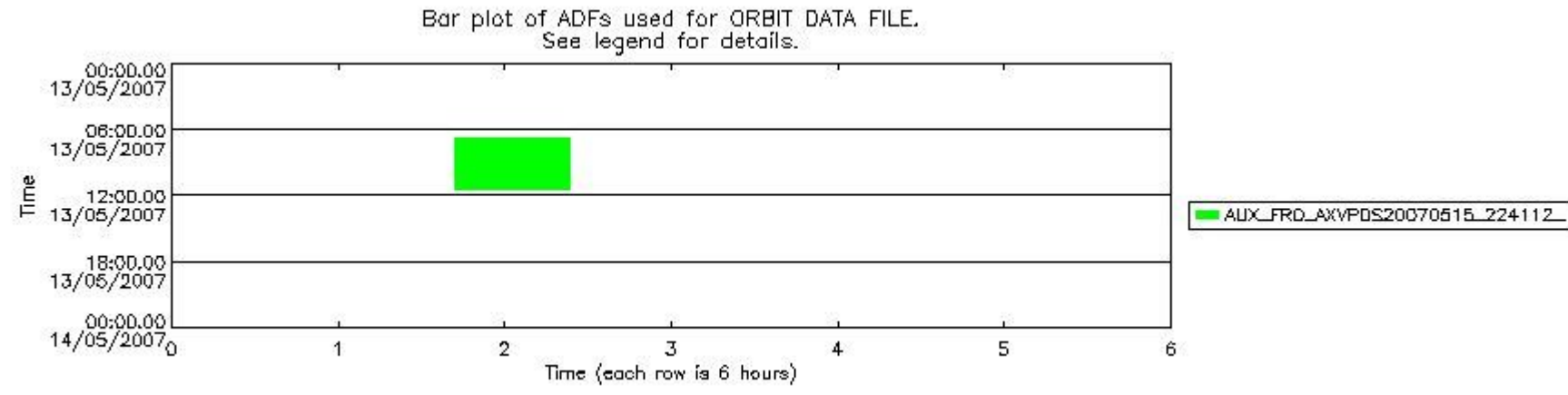
Bar plot of ADFs used for MICROWINDOWS FILE.  
See legend for details.



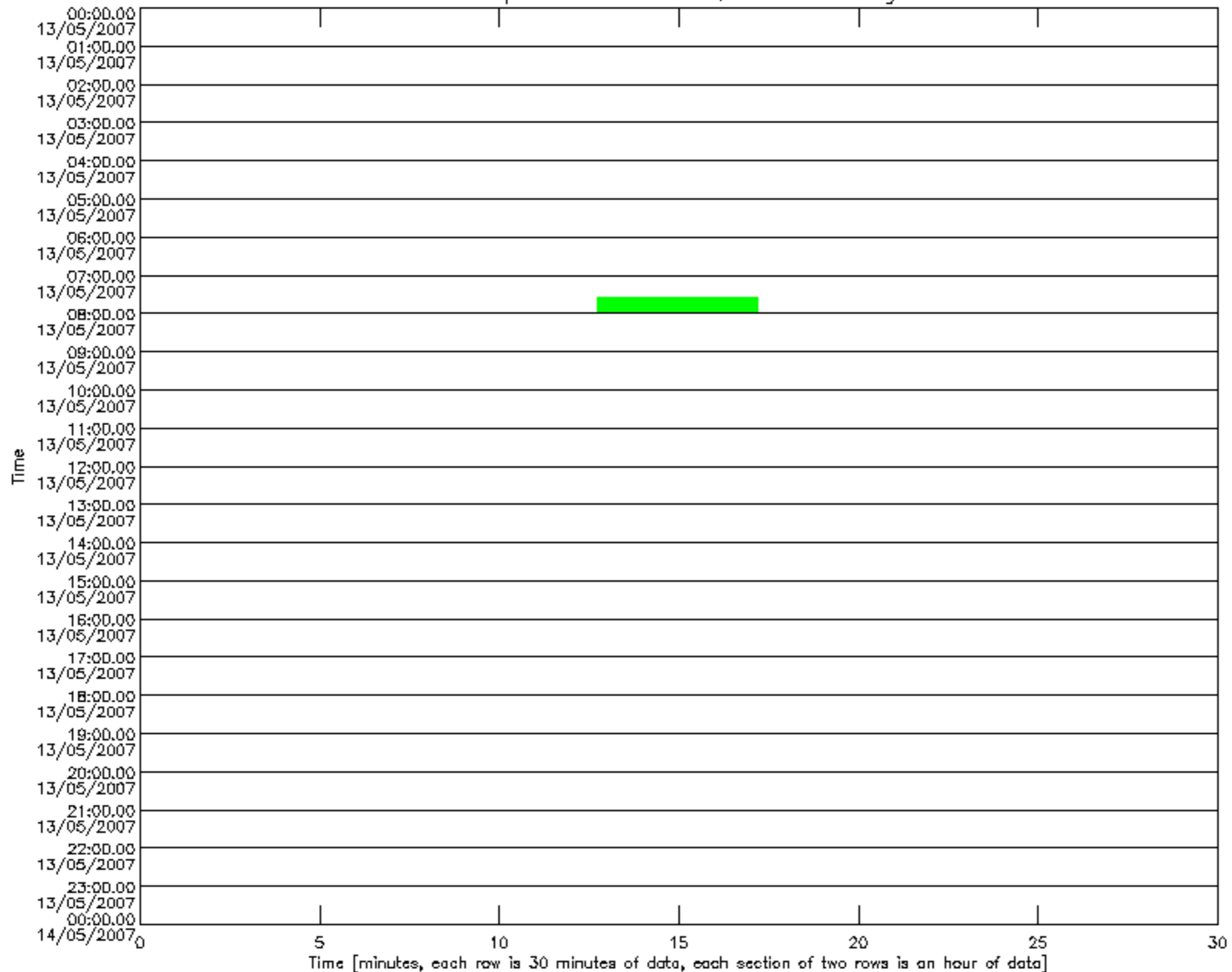
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Bar plot of ADFs used for PROCESS PARAMETERS FILE.  
See legend for details.



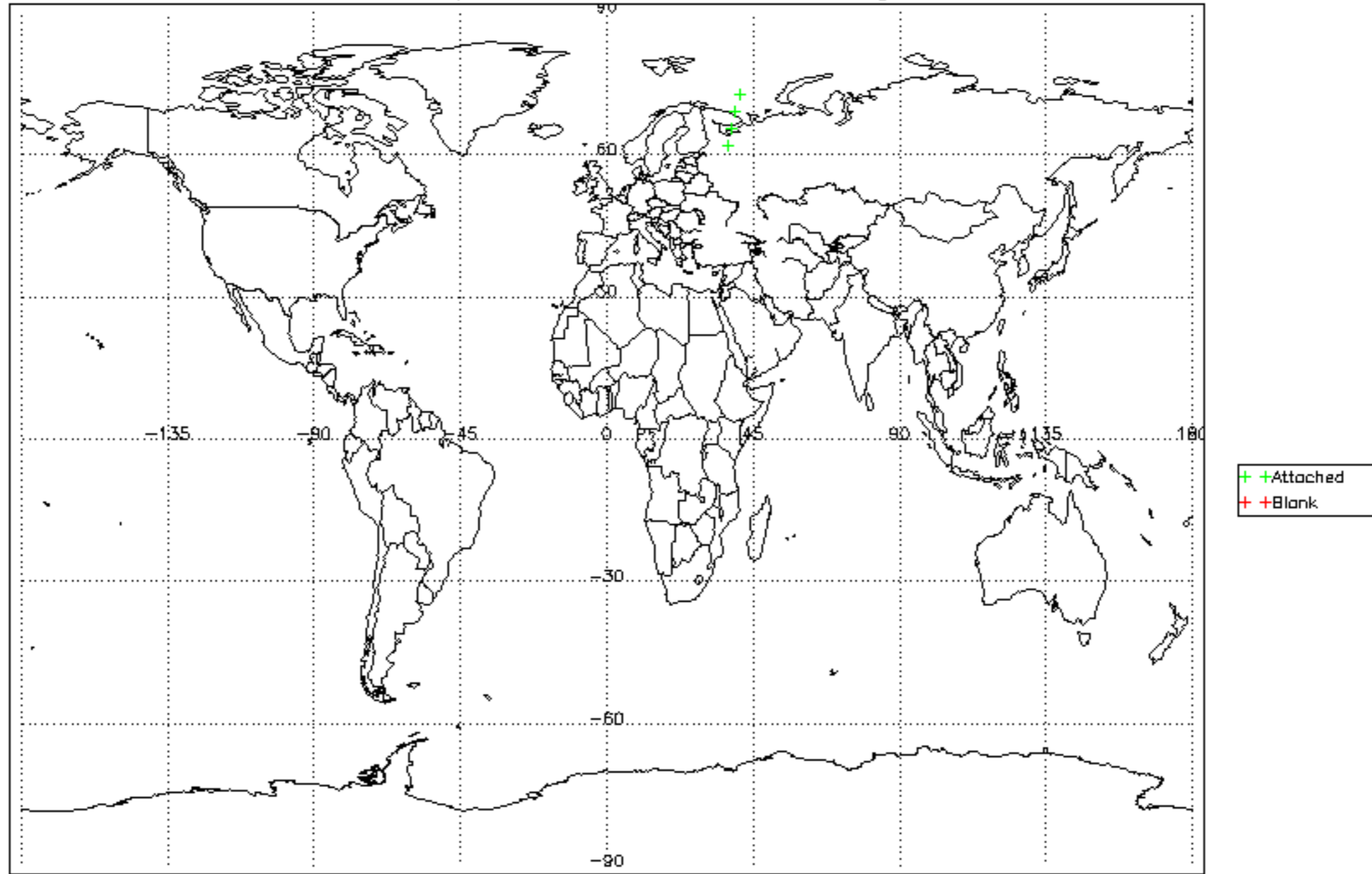


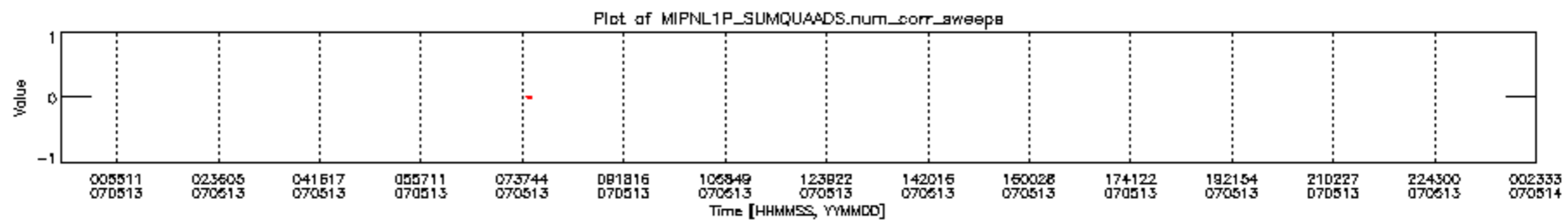
Bar plot of MIPNL1P\_SUMQUAADS.attach\_flag



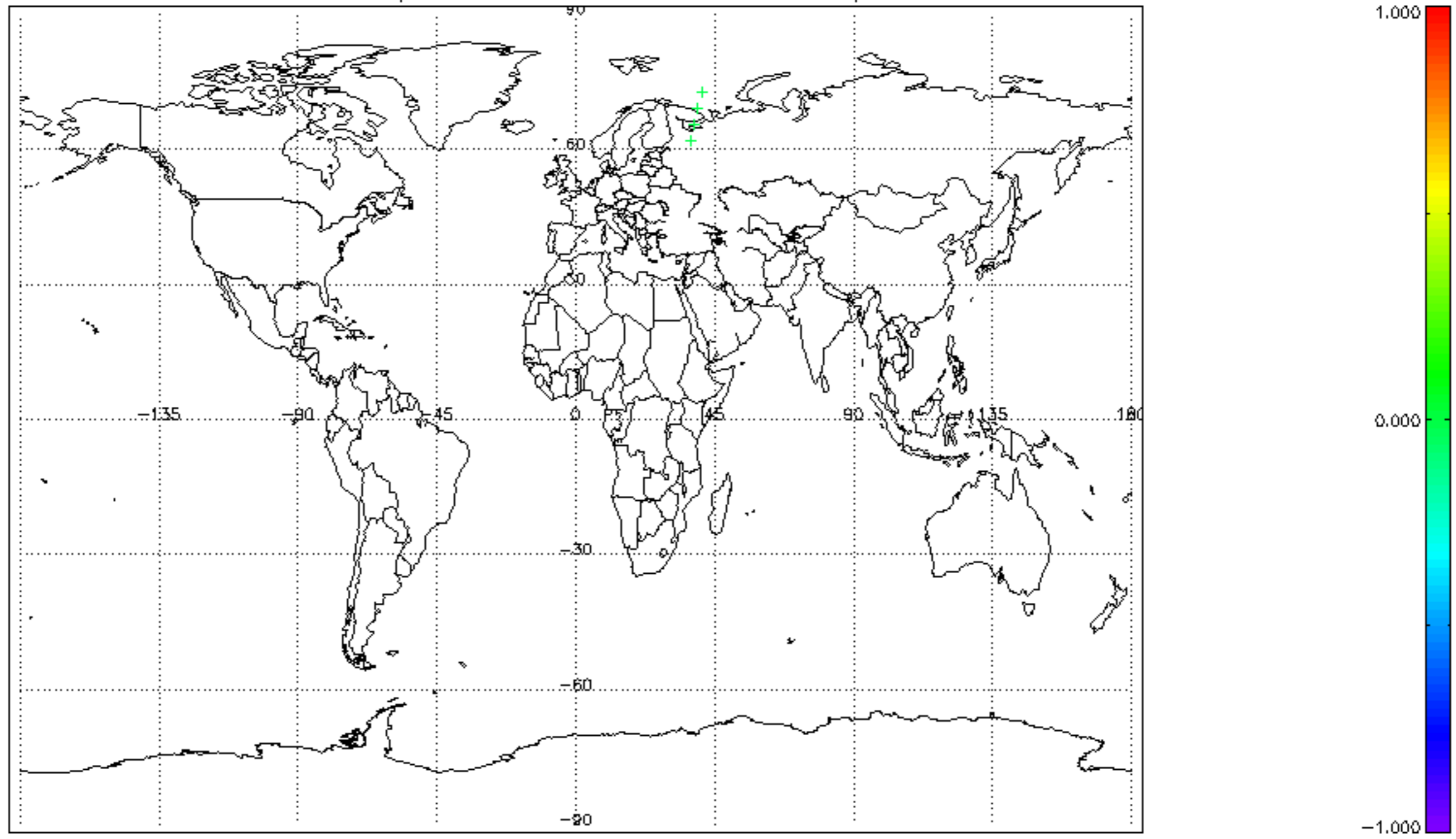


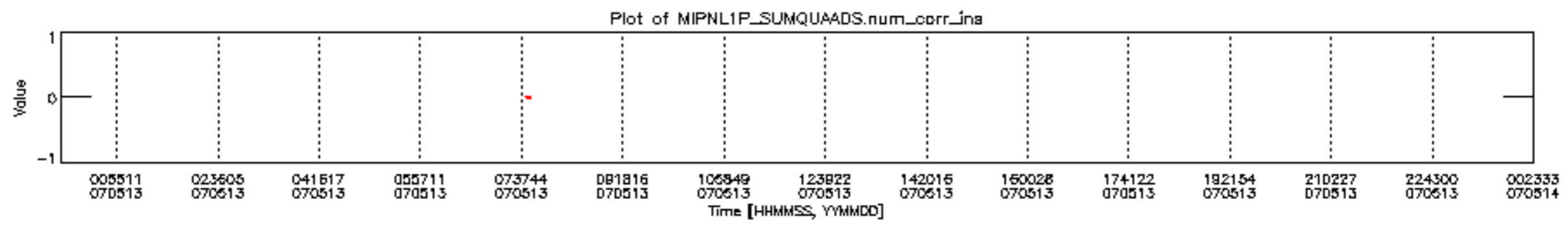
Geolocation plot of MIPNL1P\_SUMQUAADS.attach\_flag





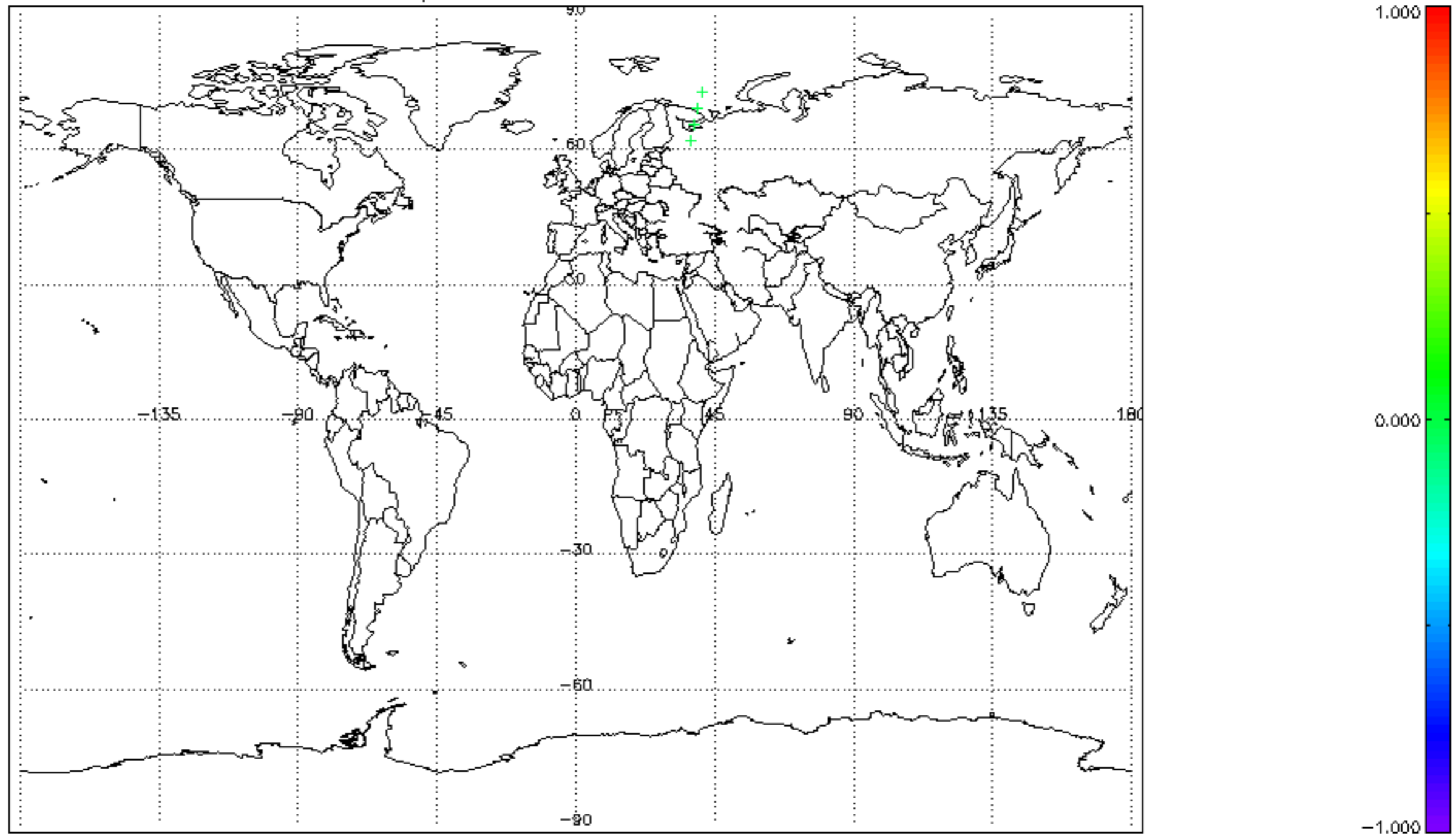
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_sweeps

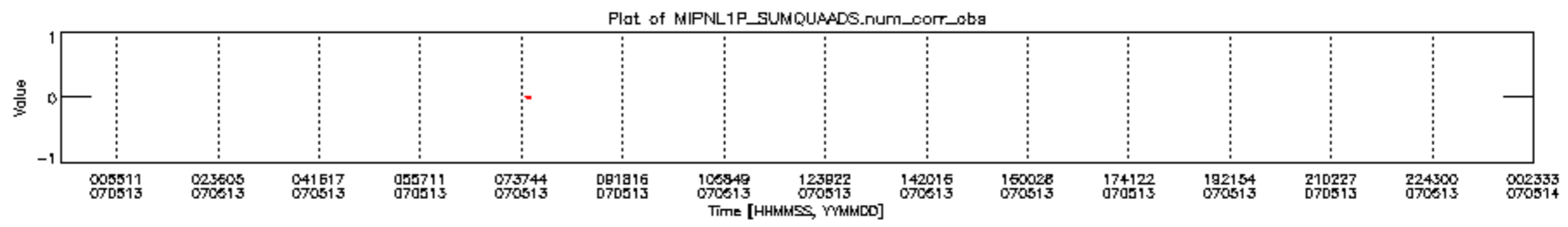




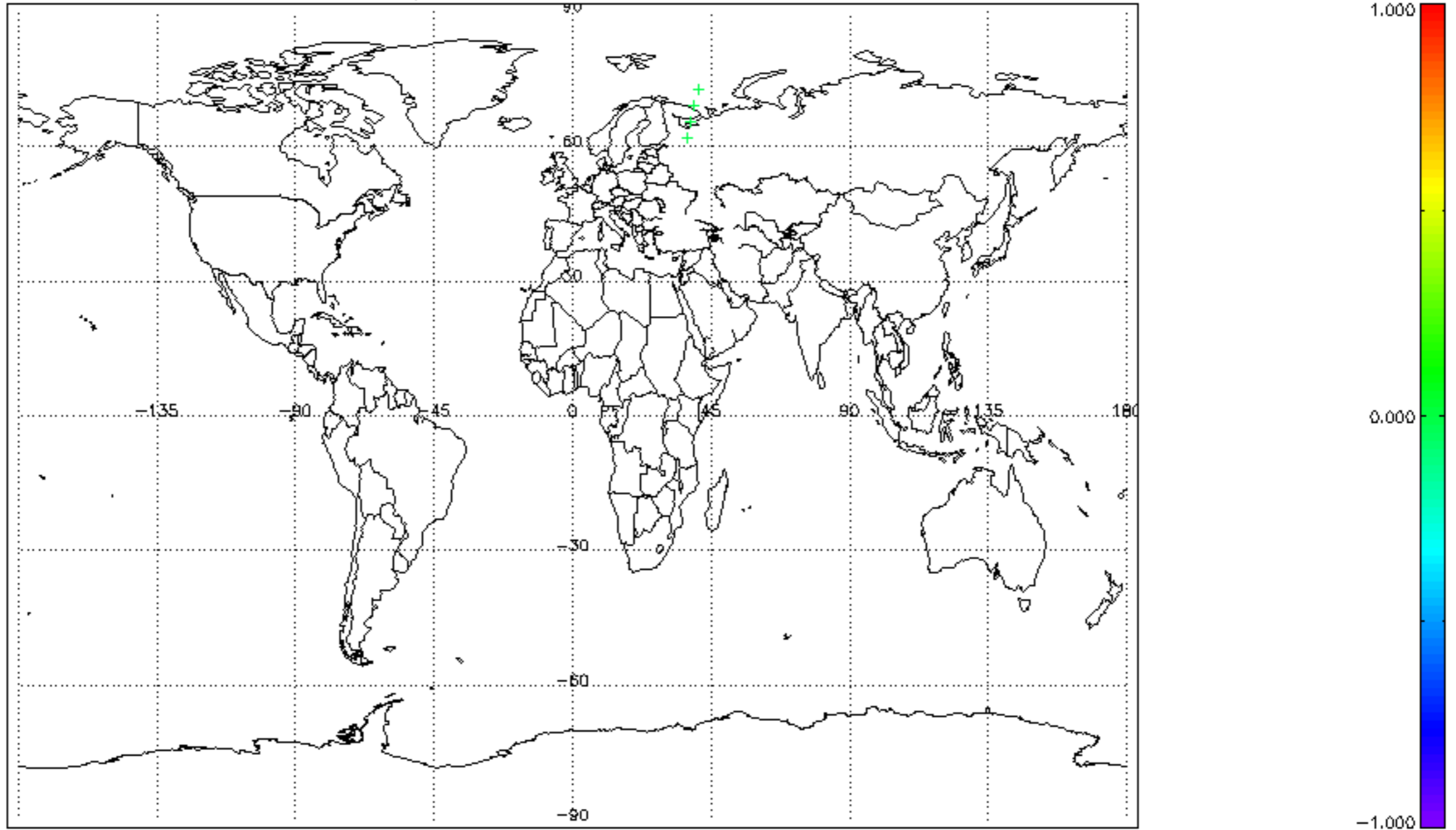


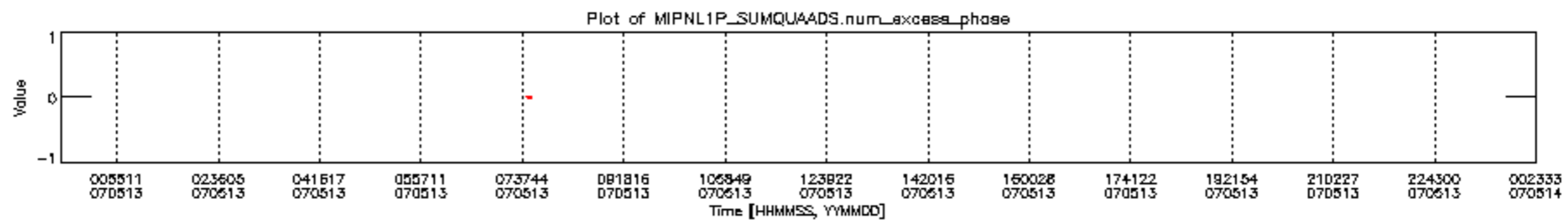
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_ins





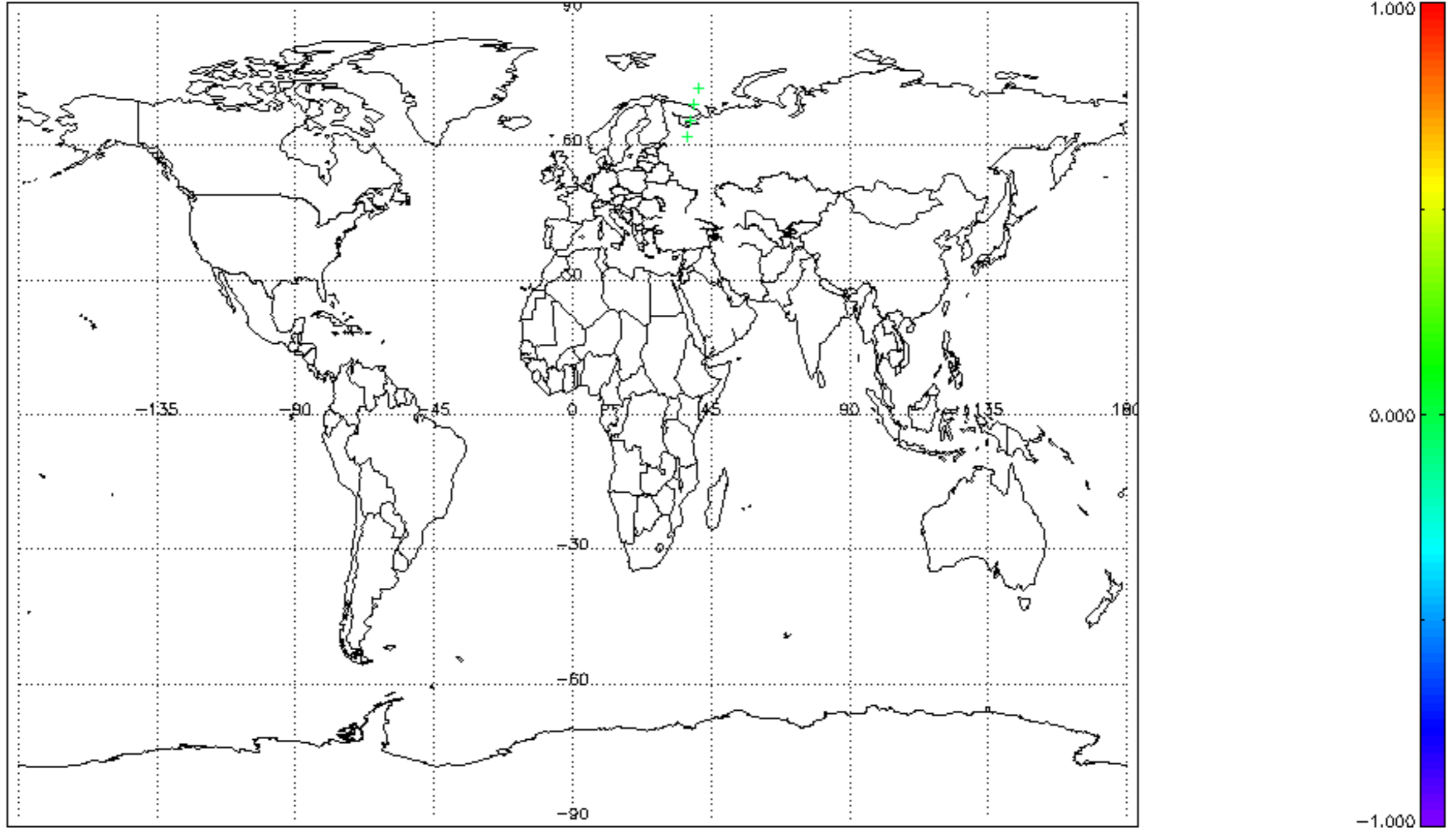
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_obs

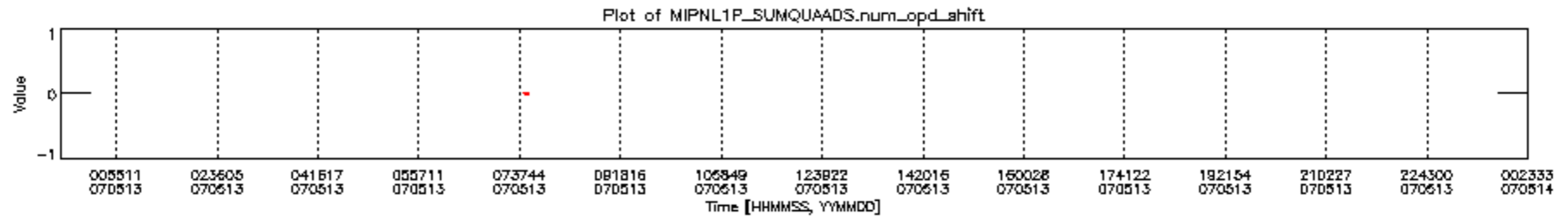




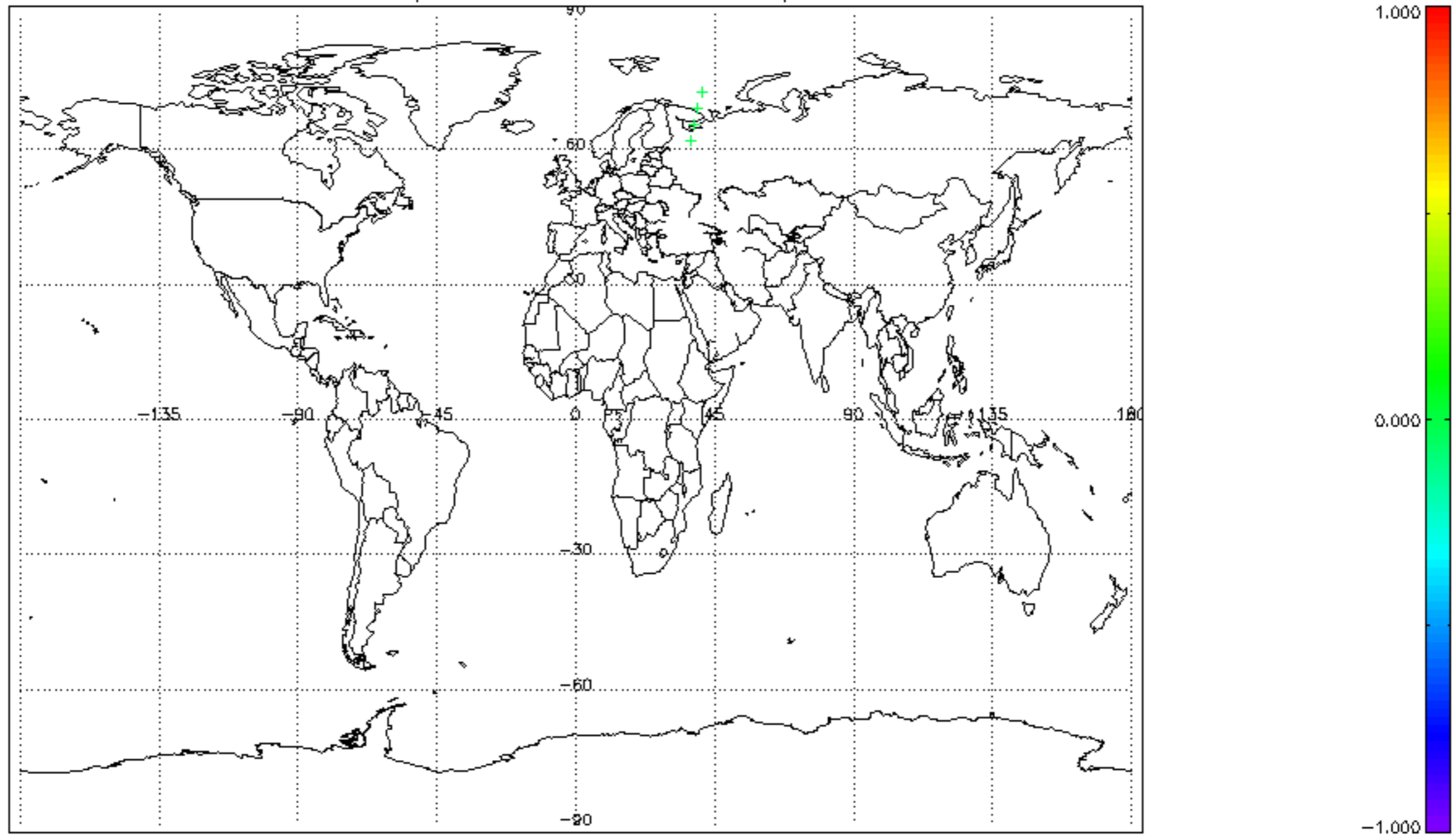


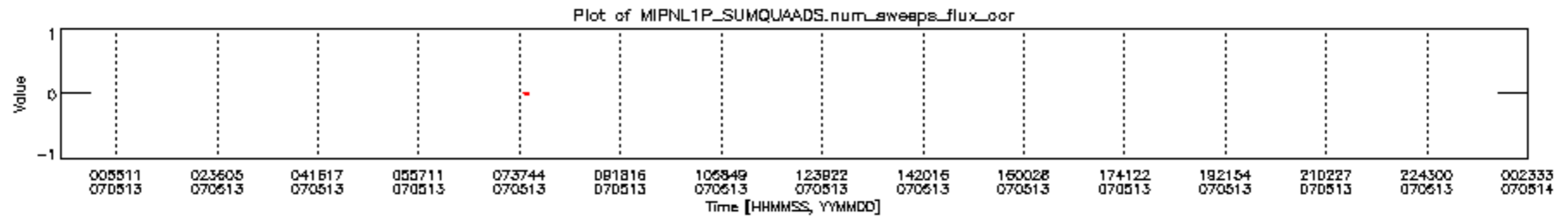
Geolocation plot of MIPNL1P\_SUMQUAADS.num\_excess\_phase



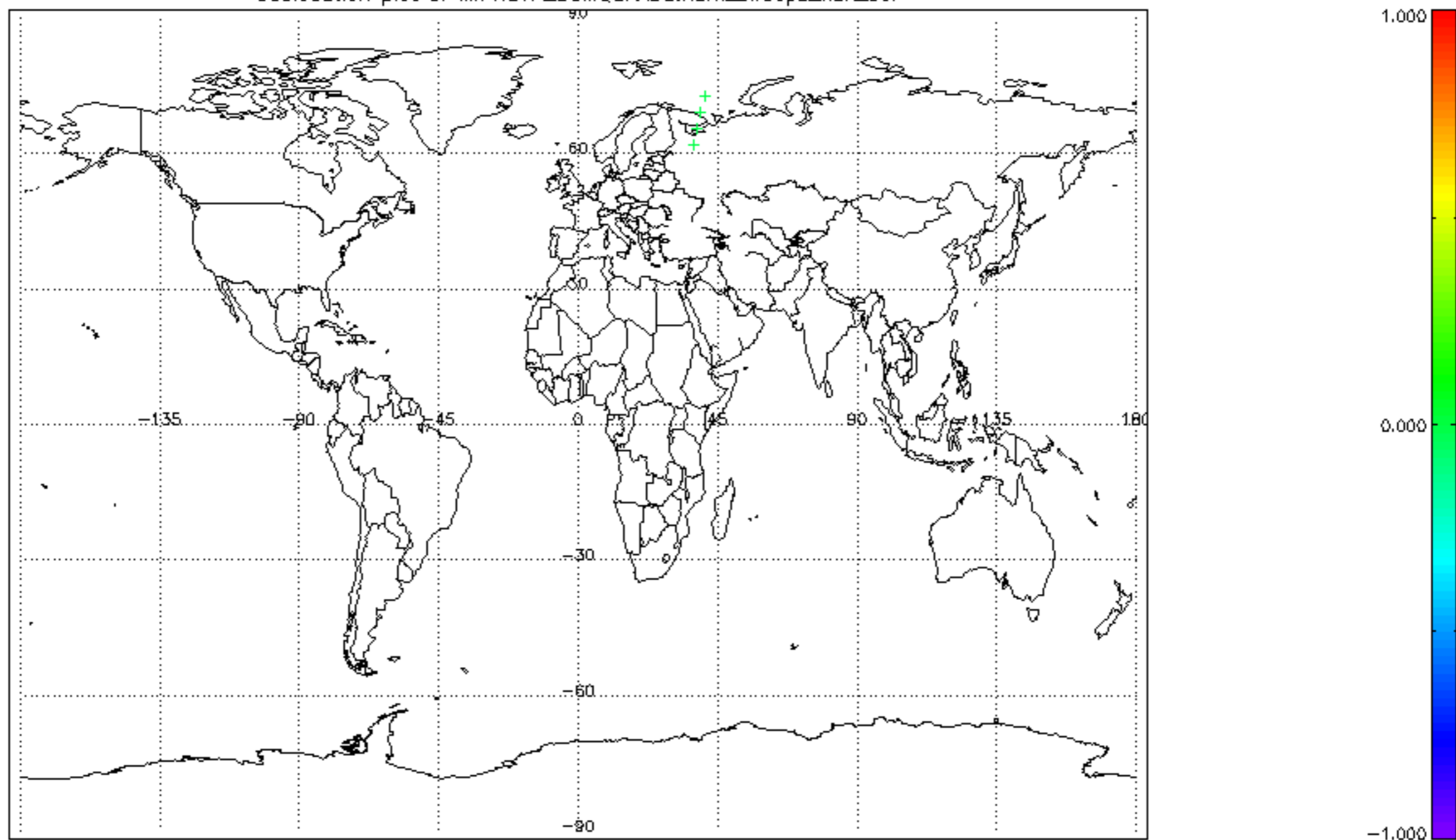


Geolocation plot of MIPNL1P\_SUMQUAADS.num\_opd\_shift



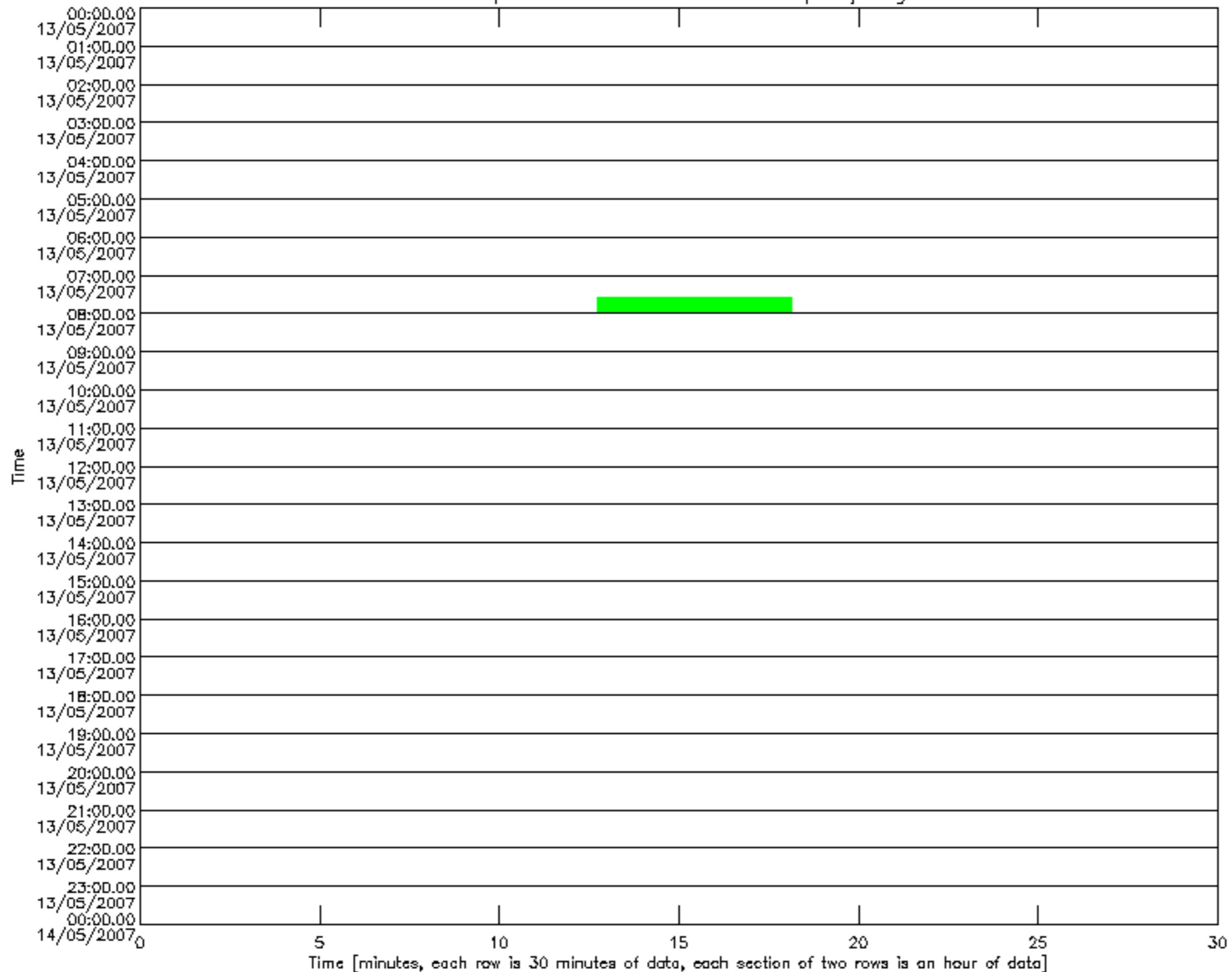


Geolocation plot of MIPNL1P\_SUMQUADS.num\_sweeps\_flux\_oor

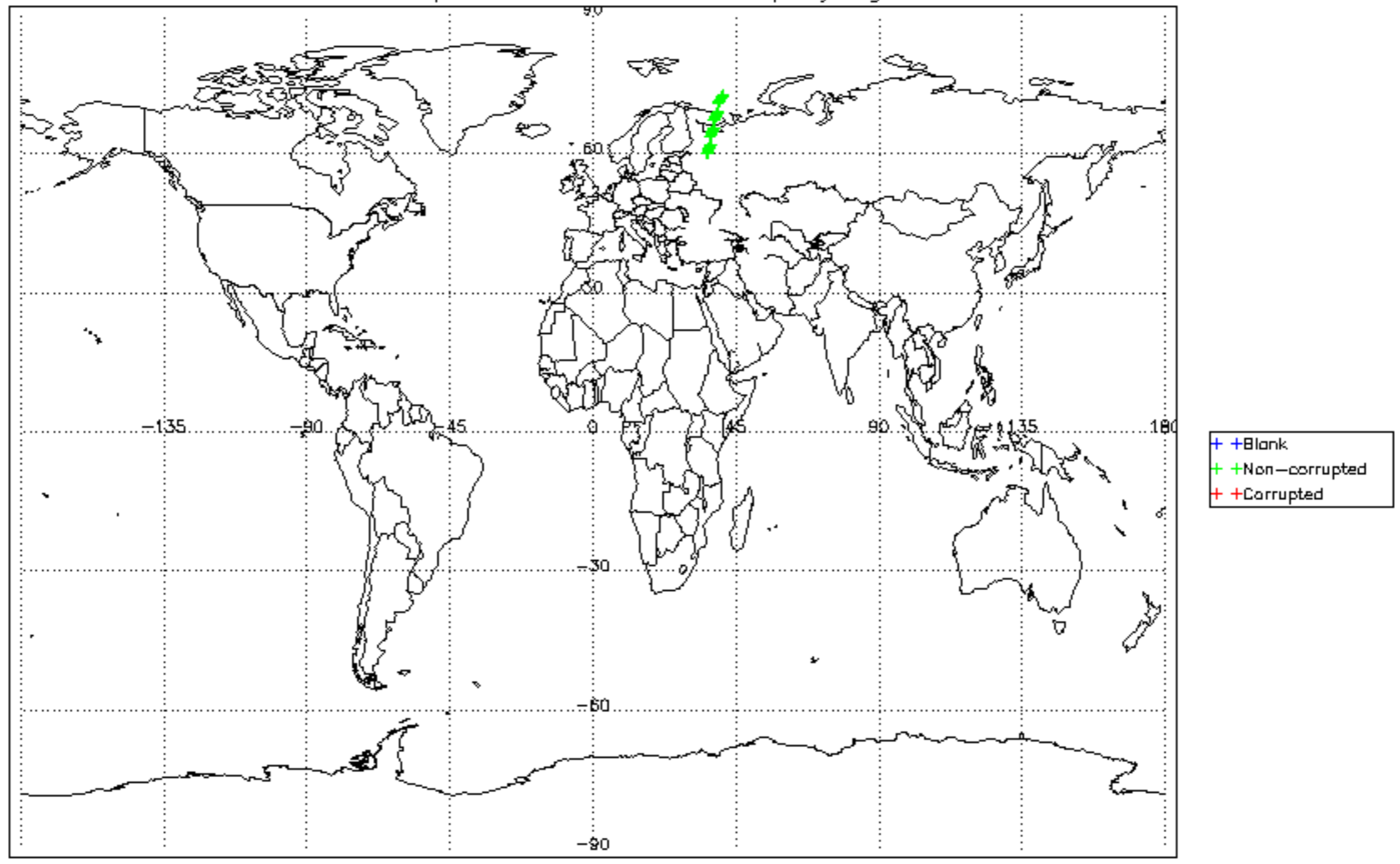


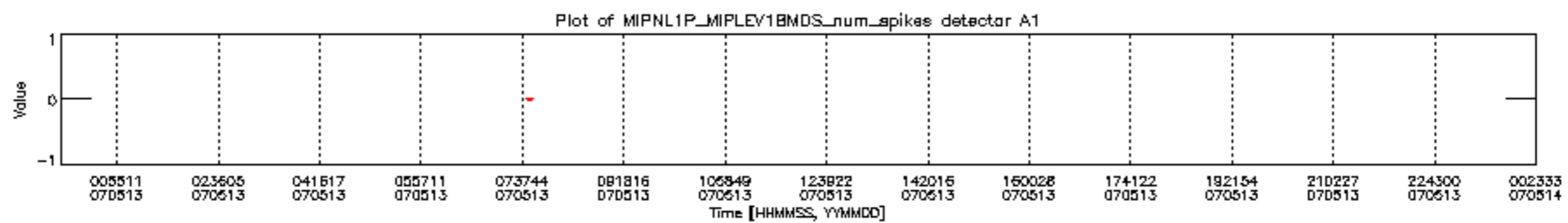


Bar plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag

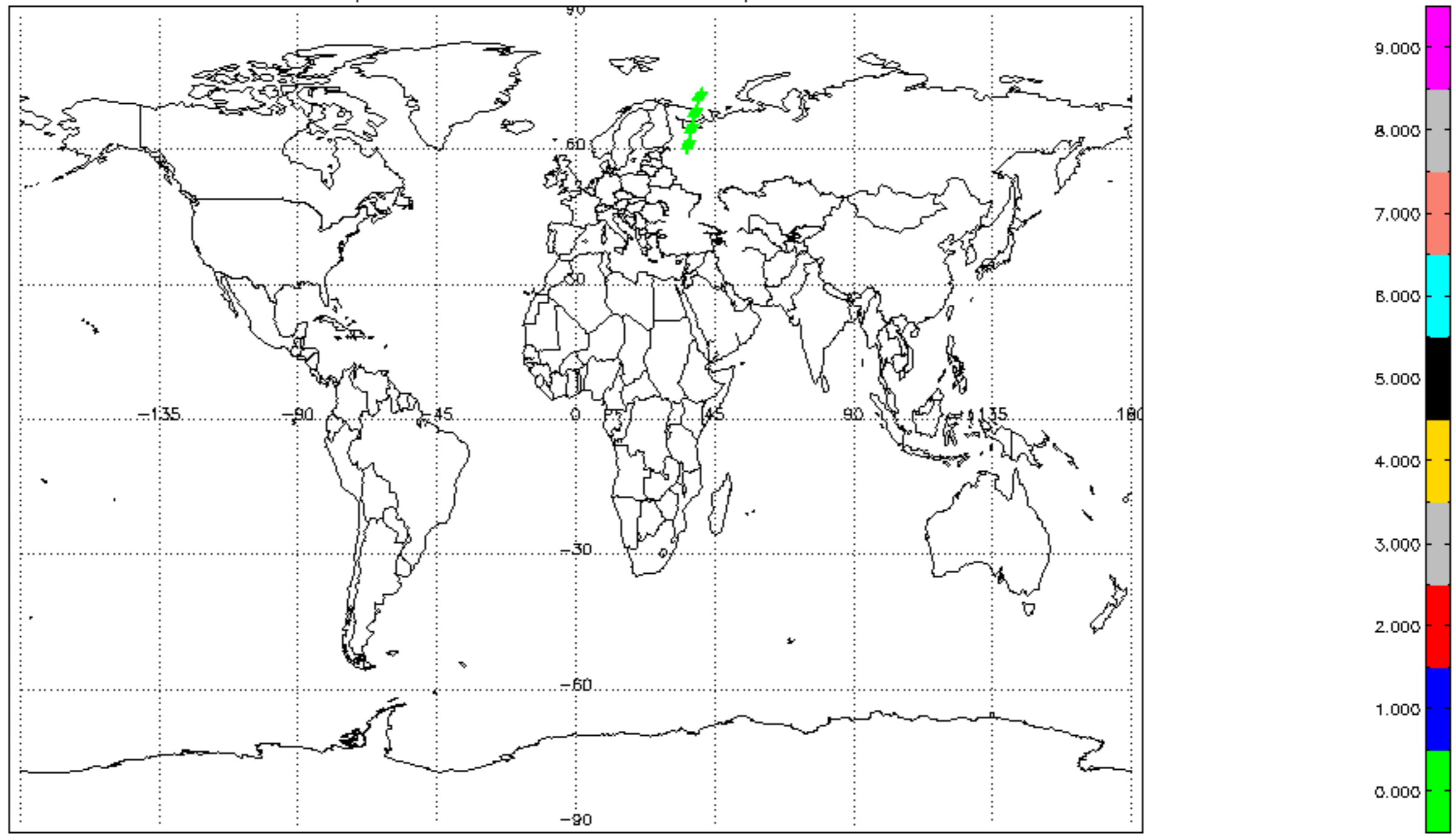


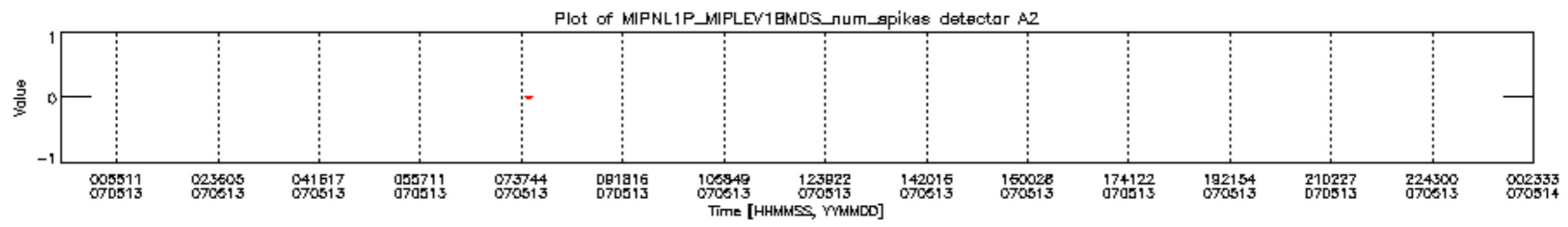
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag





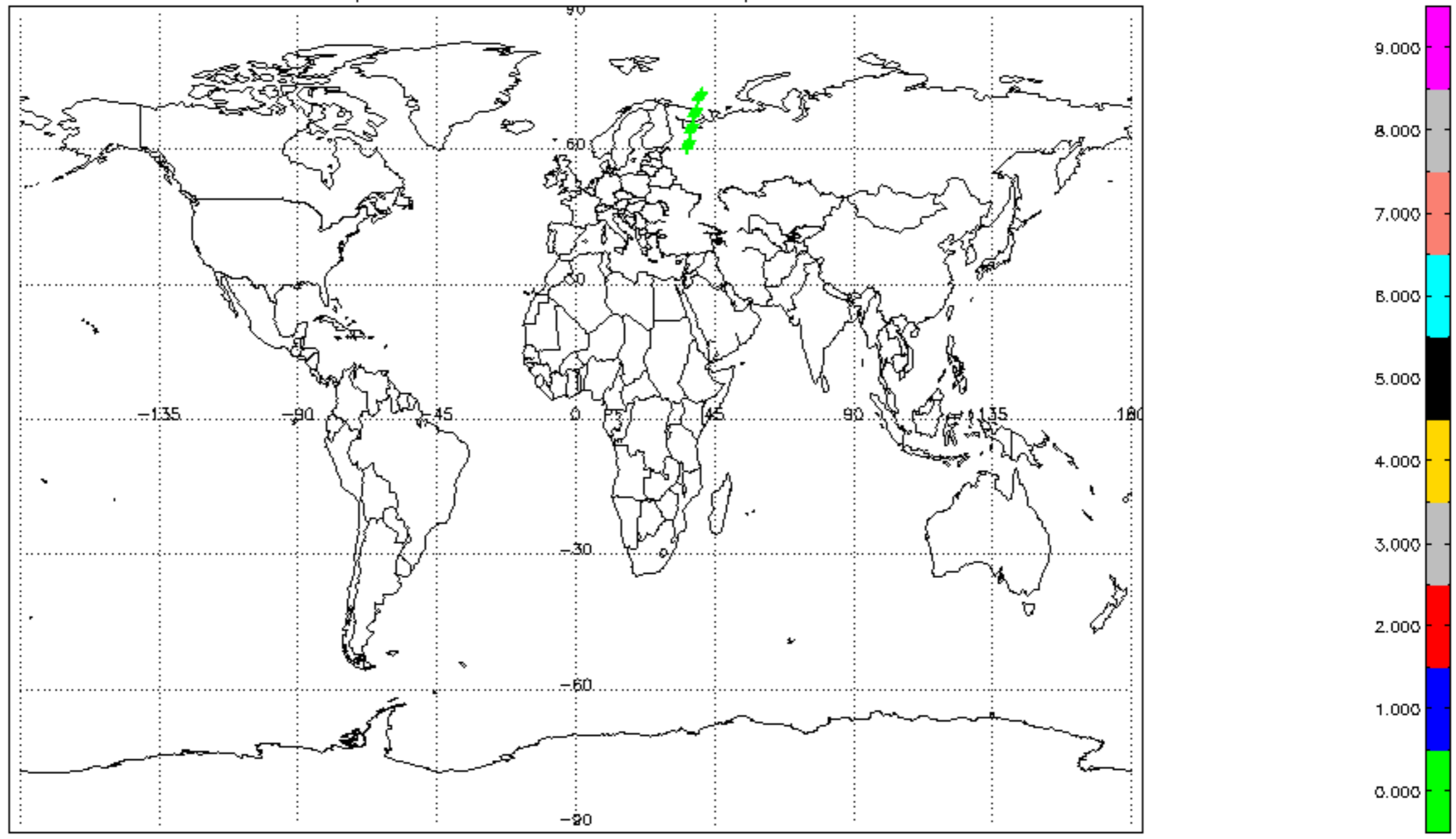
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A1

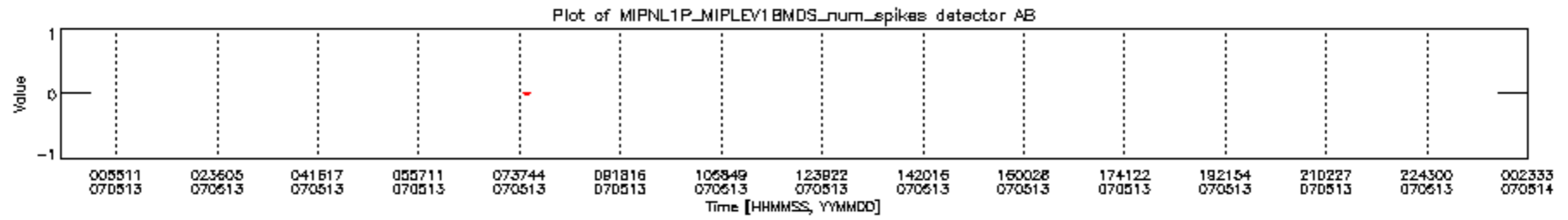




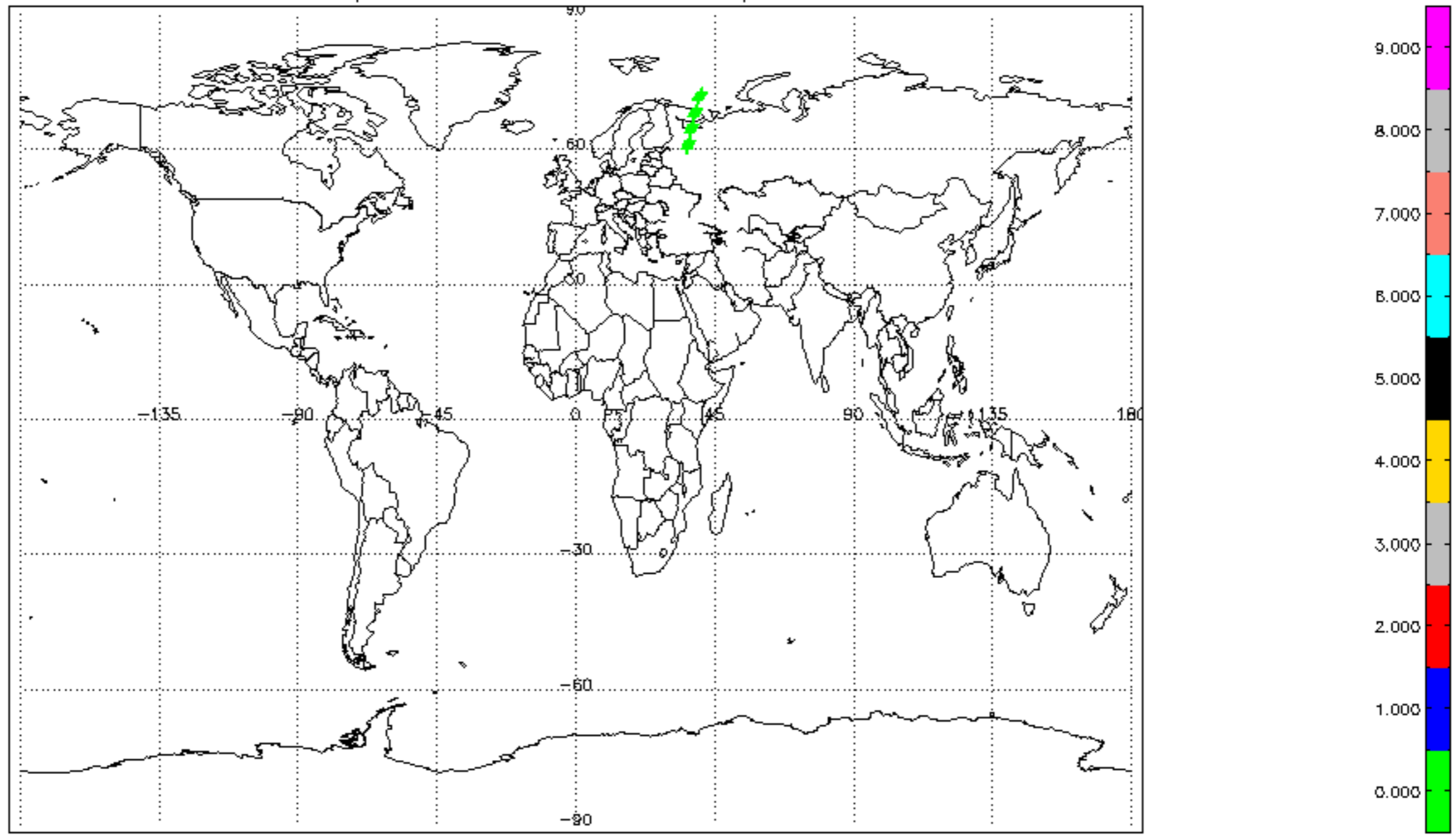


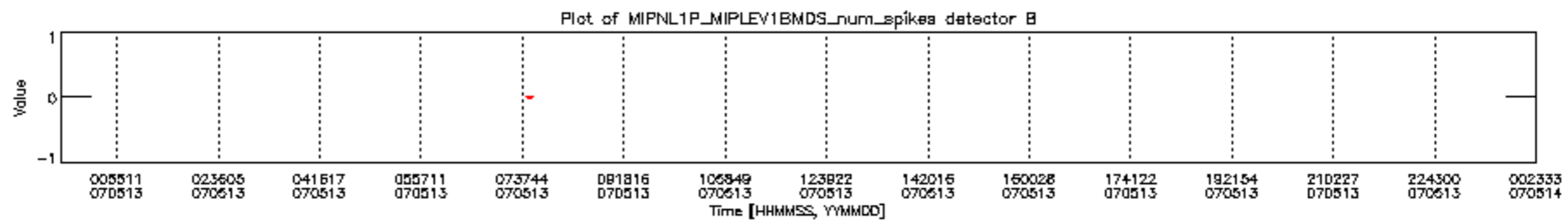
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A2



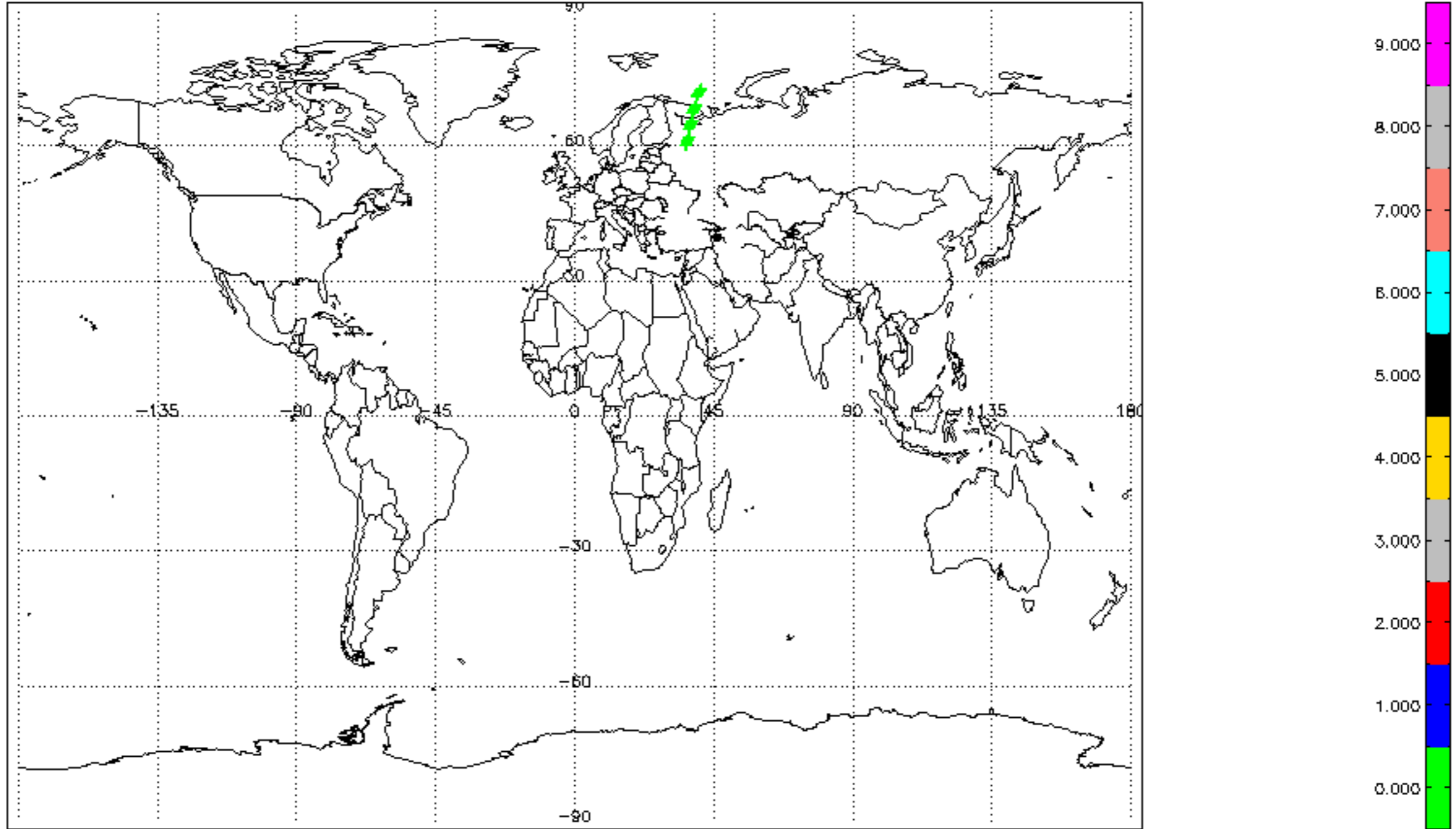


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector AB

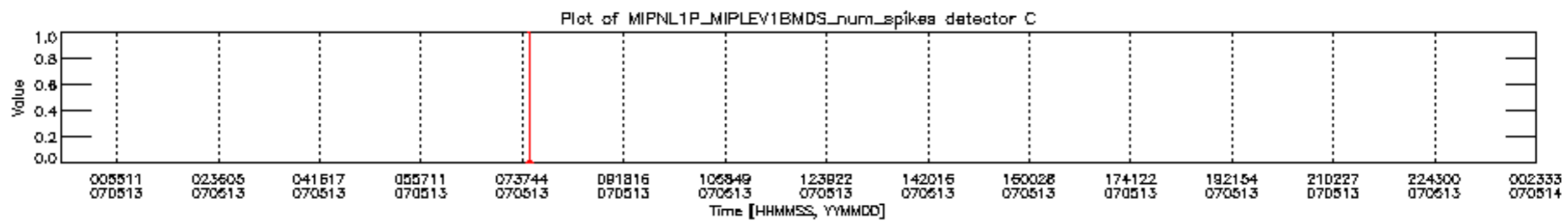




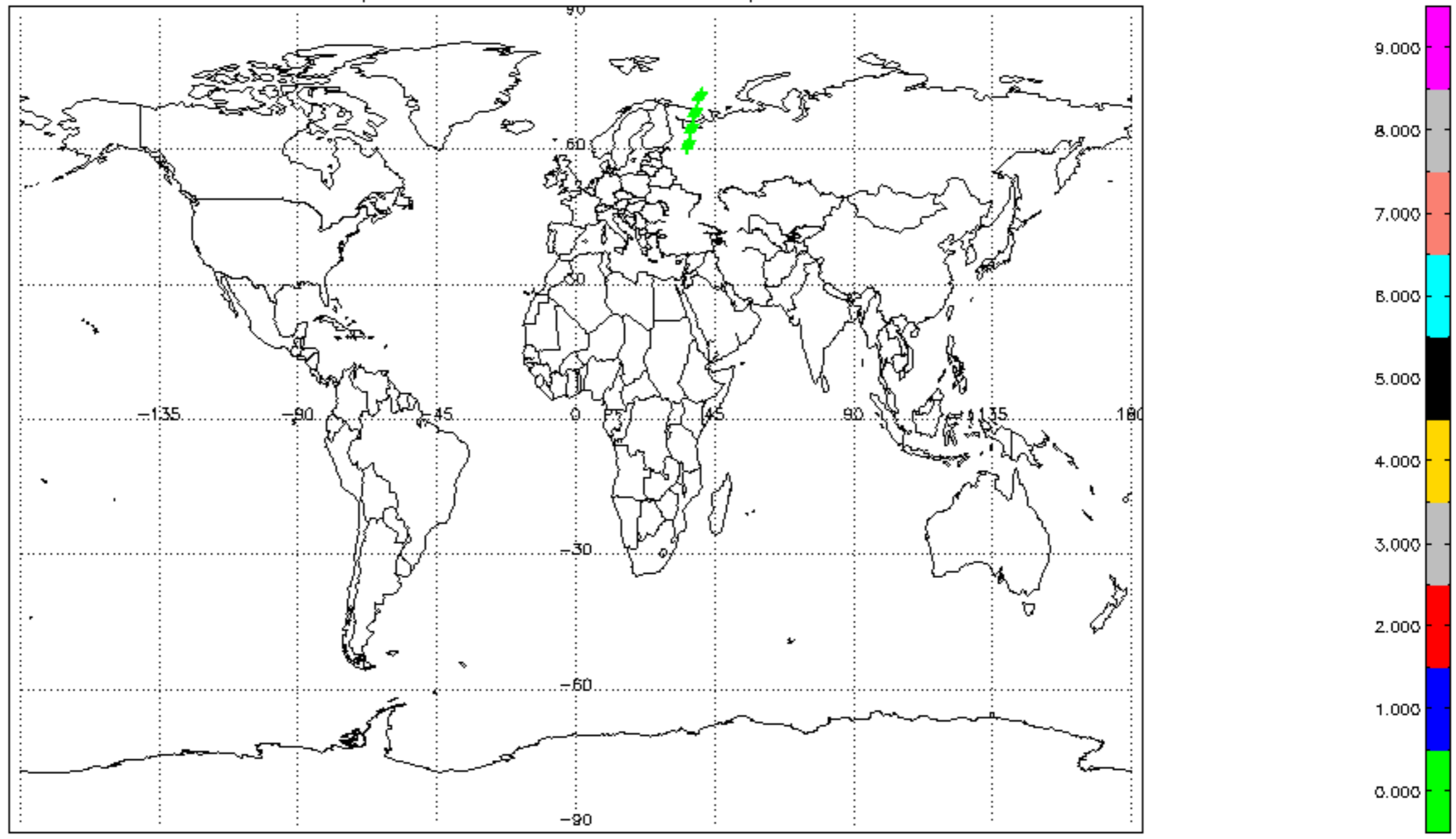
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector B

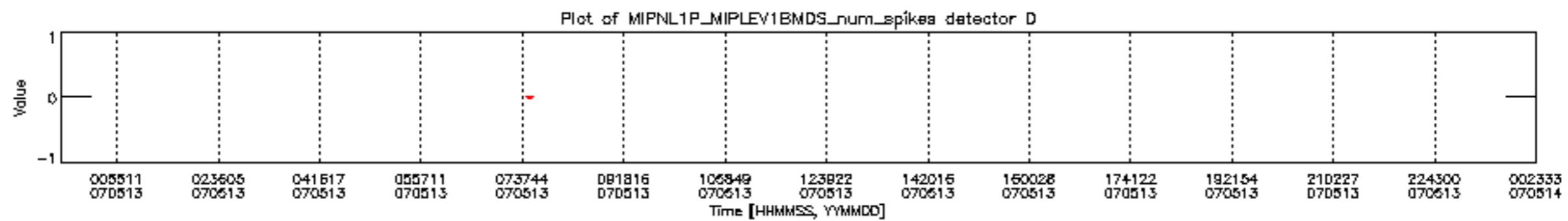




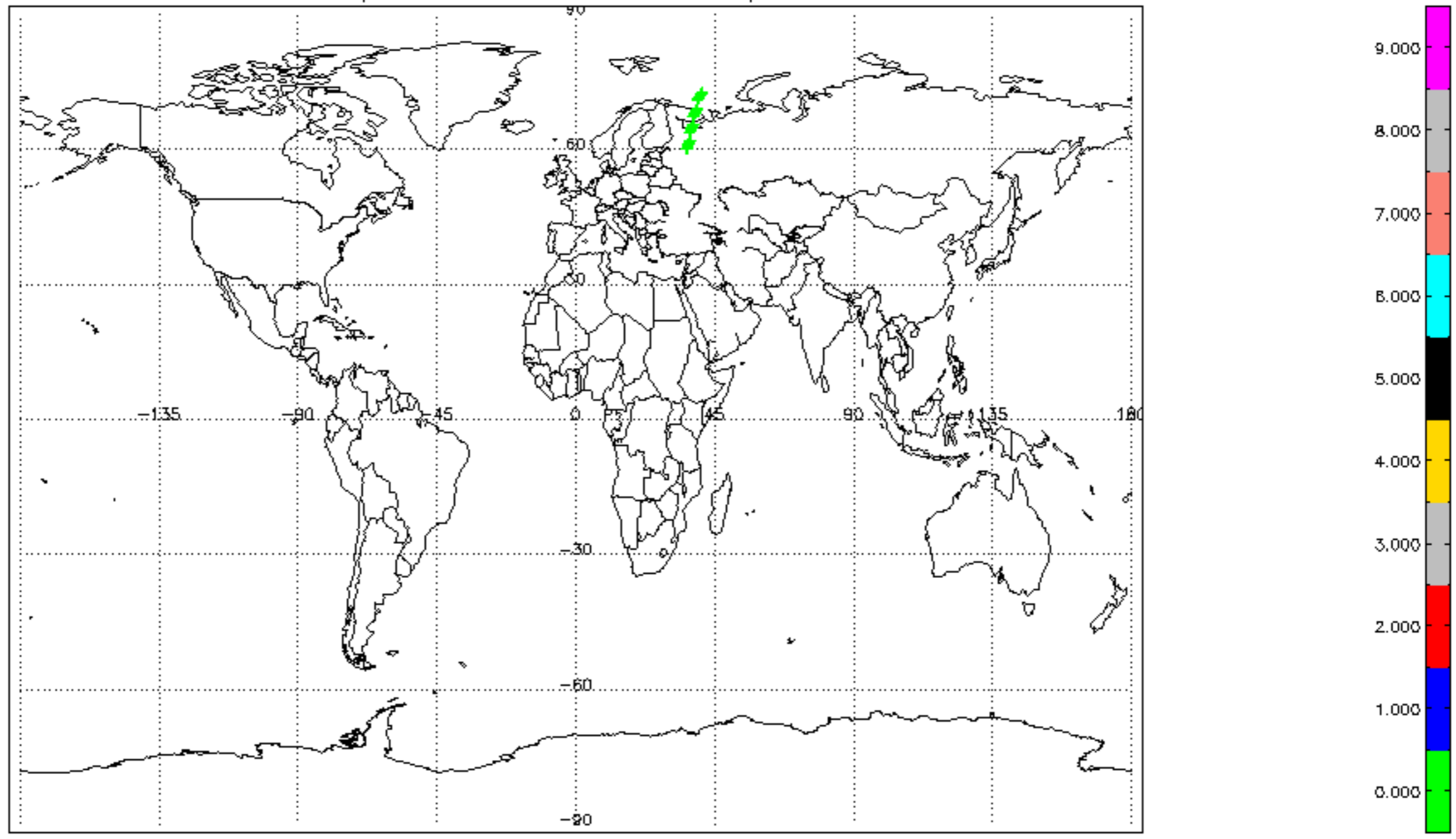


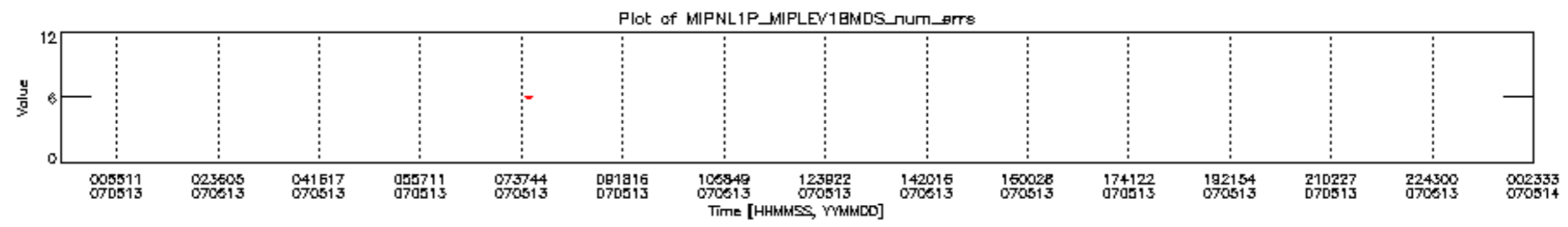
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector C





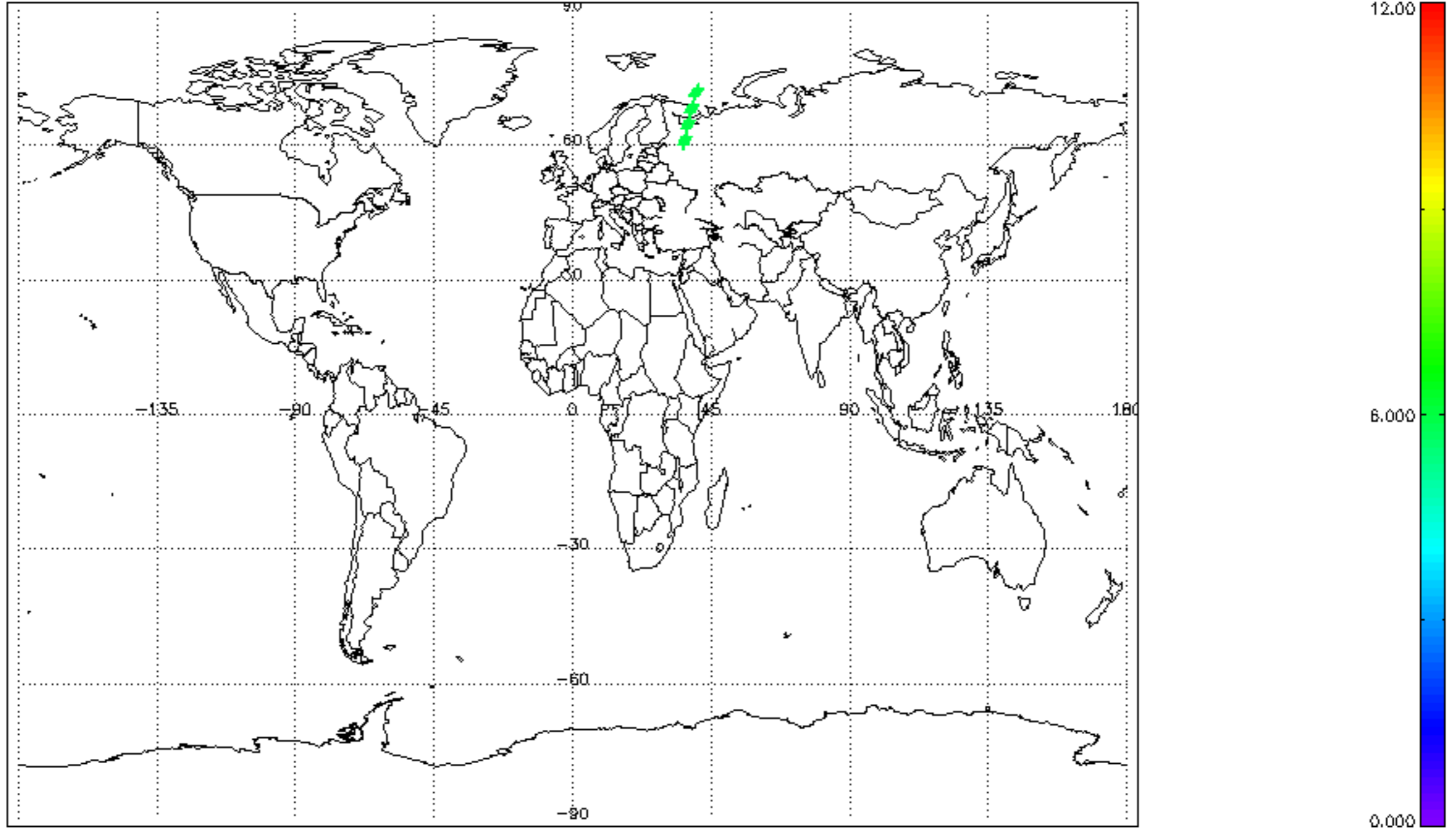
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector D



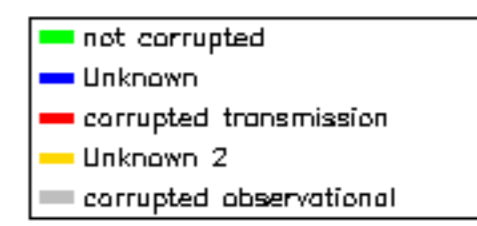
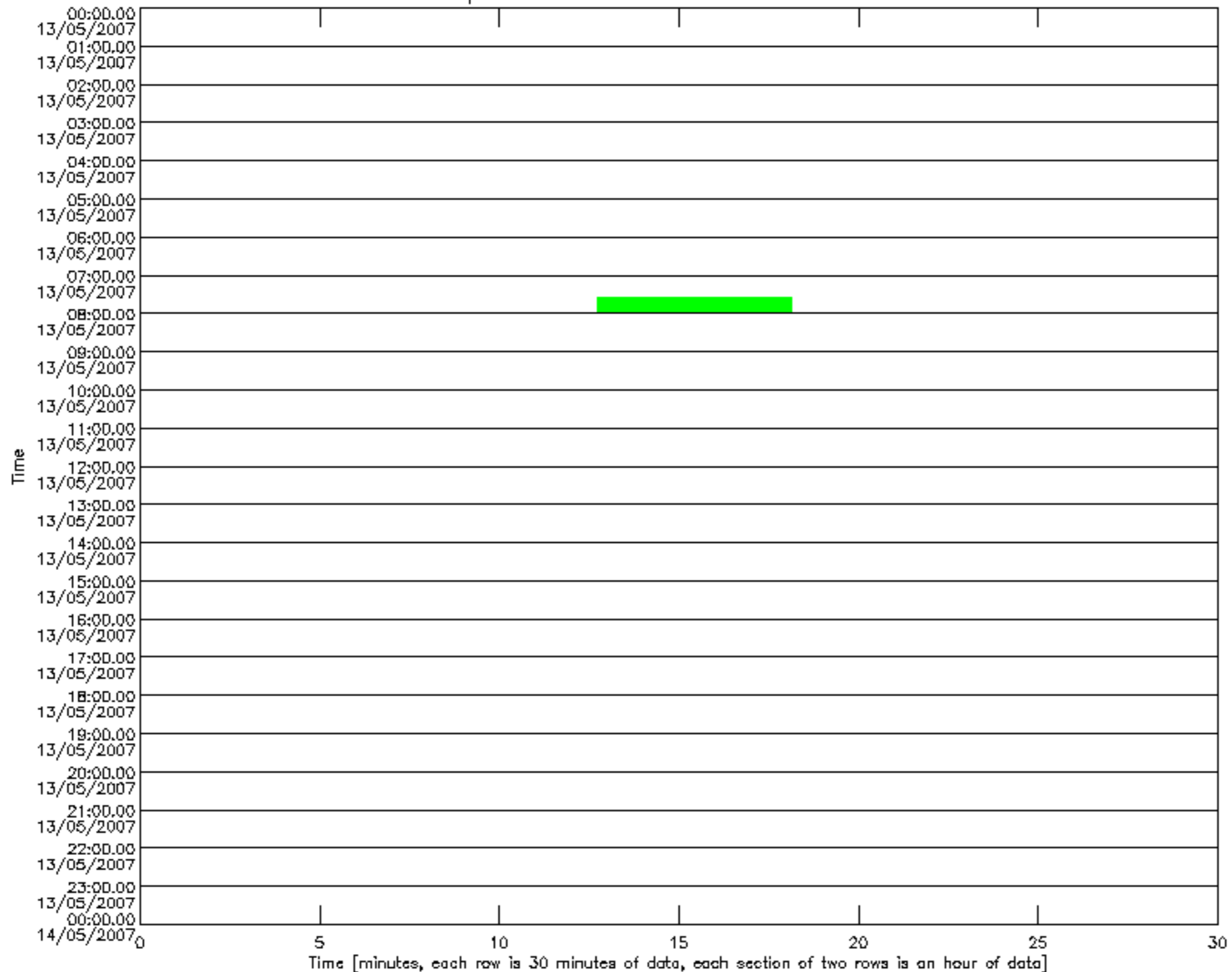




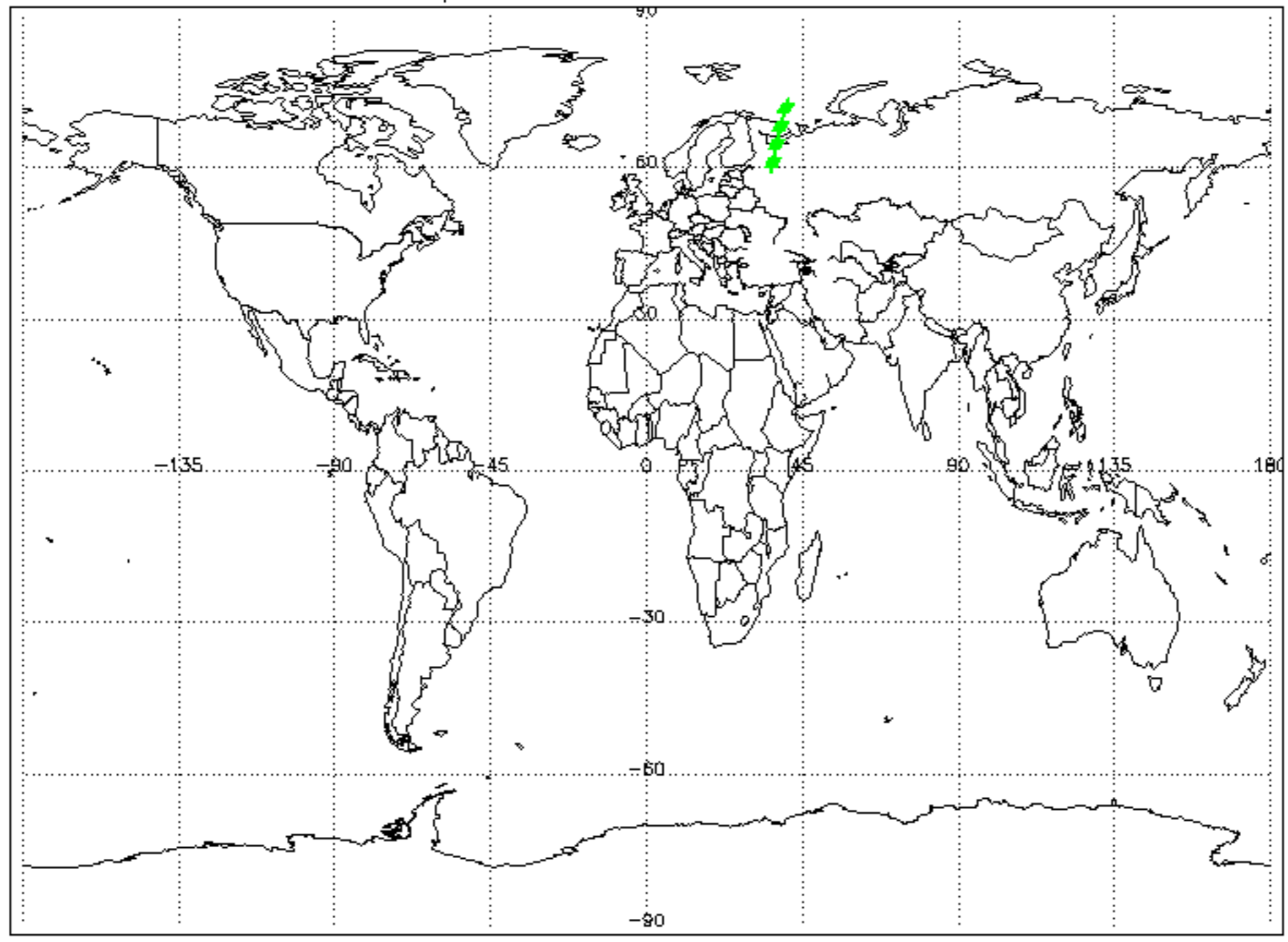
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs



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

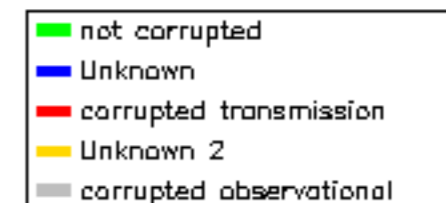
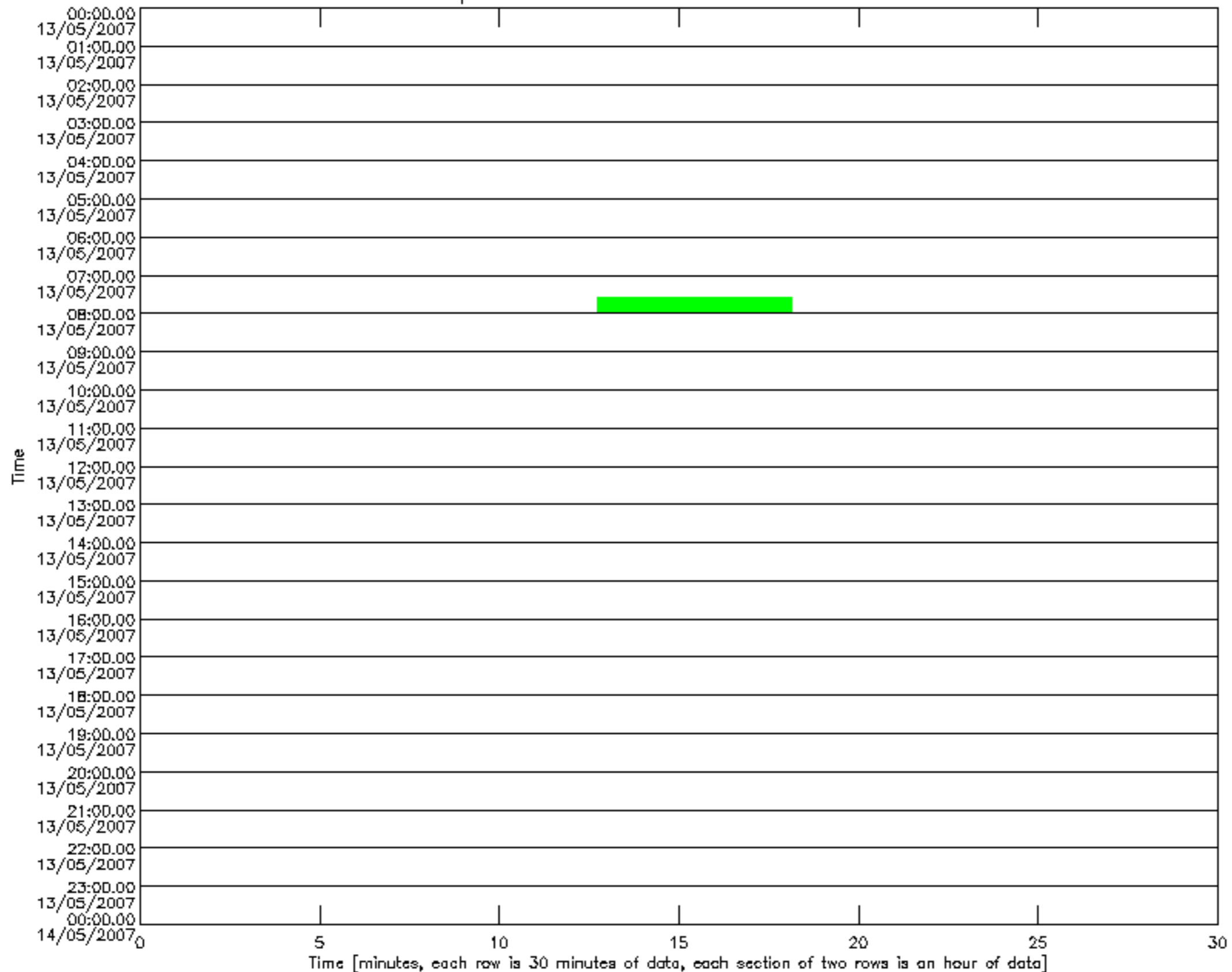


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A

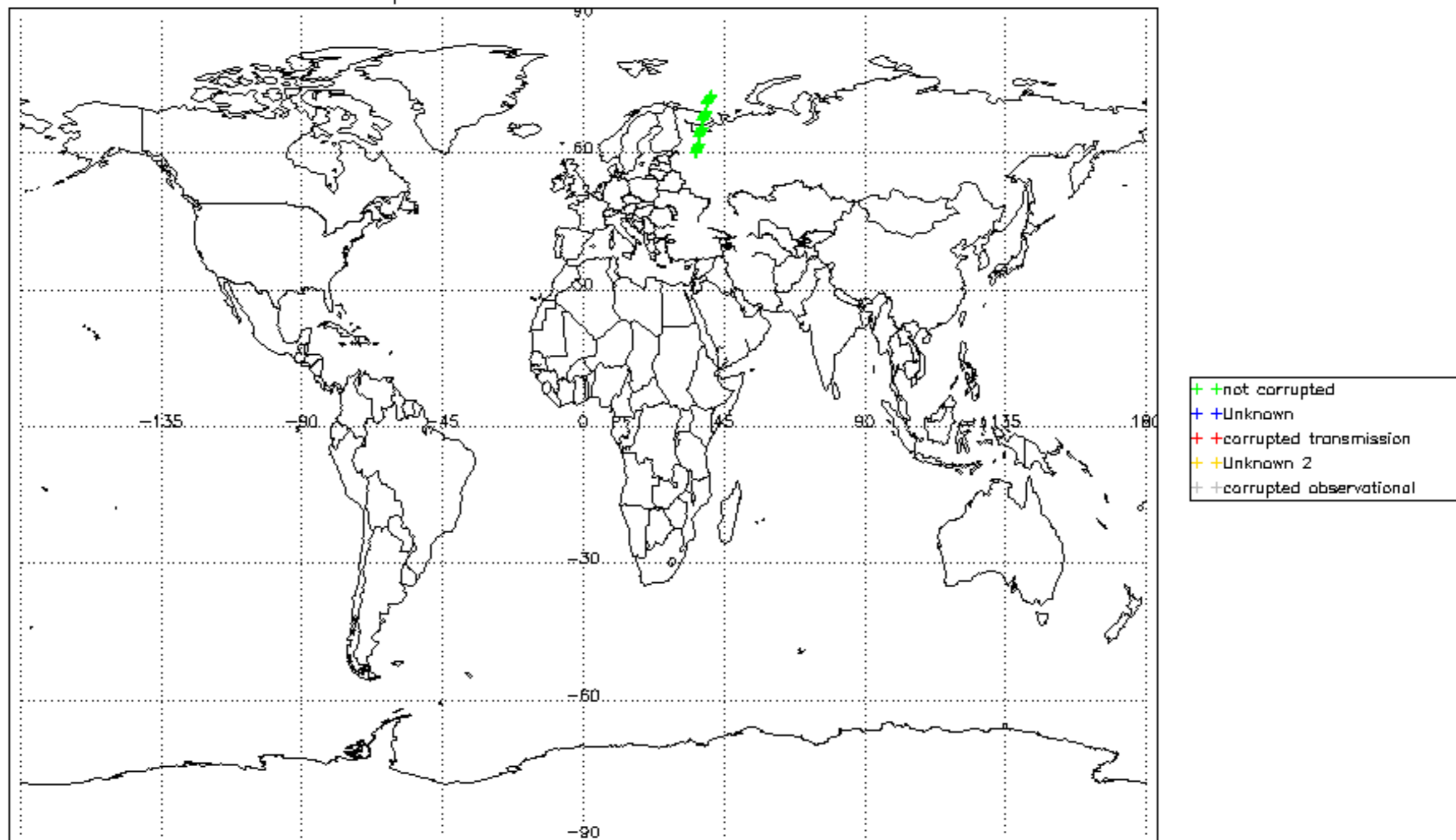


- + not corrupted
- + Unknown
- + corrupted transmission
- + Unknown 2
- + corrupted observational

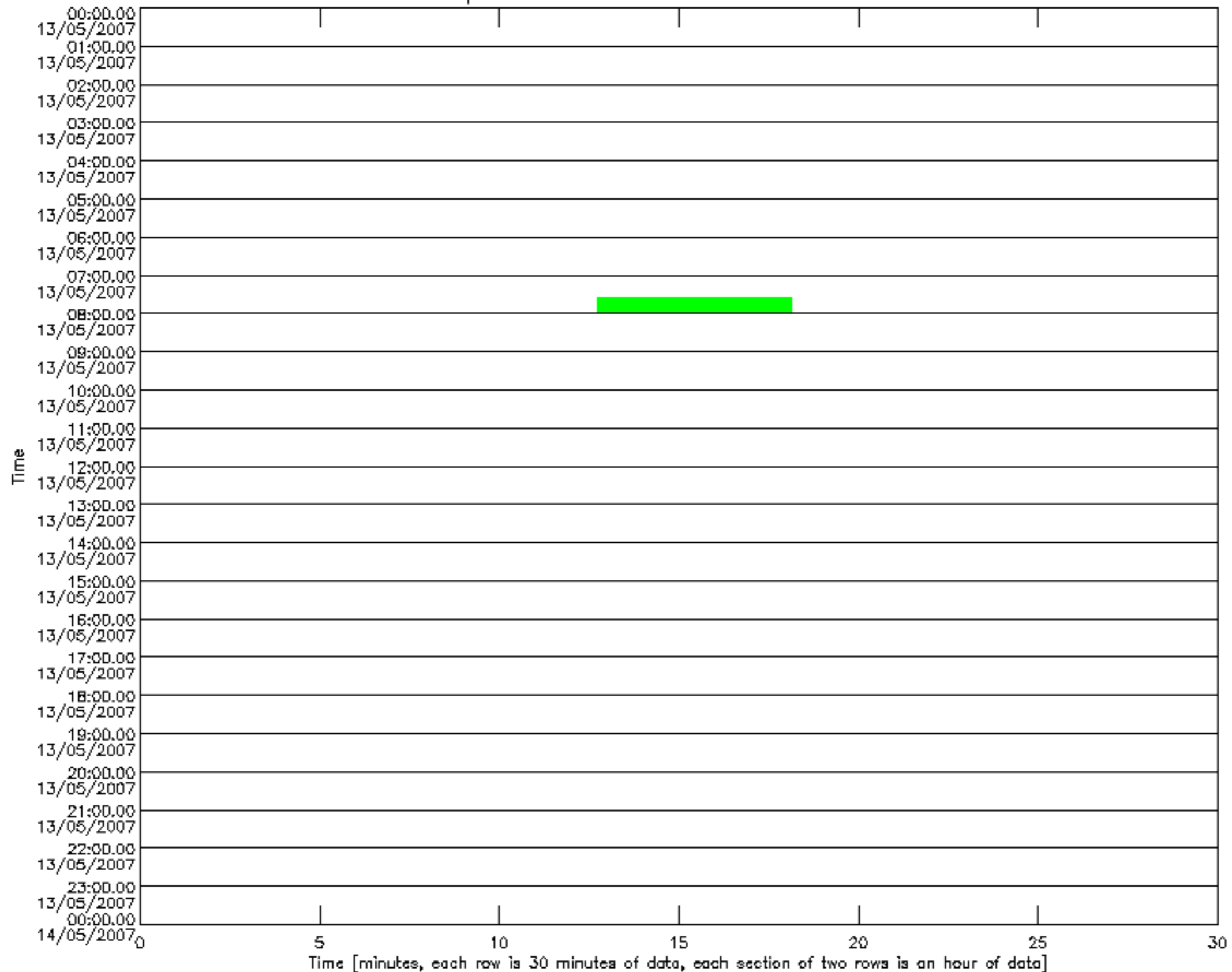
Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB



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

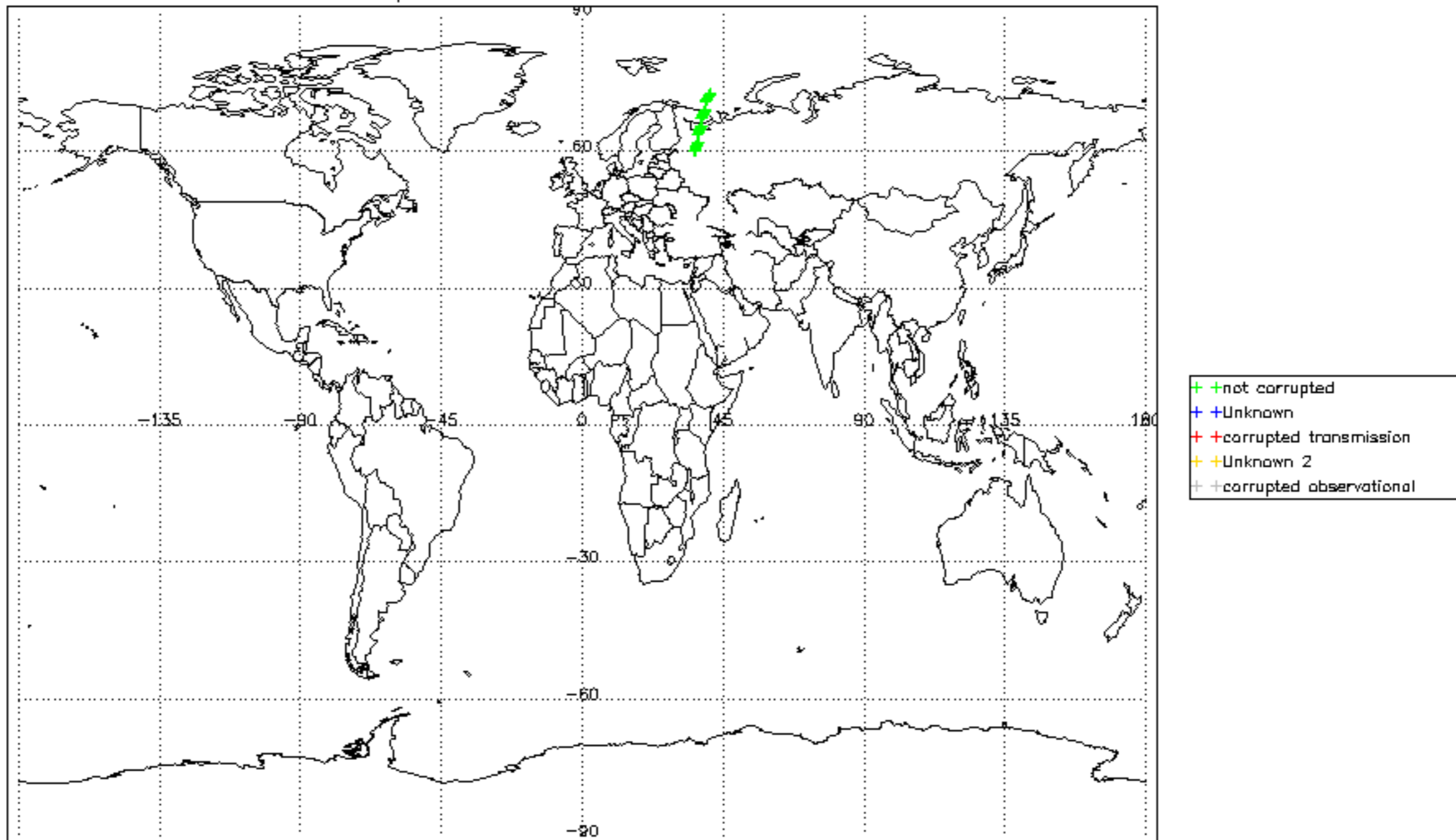


Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B

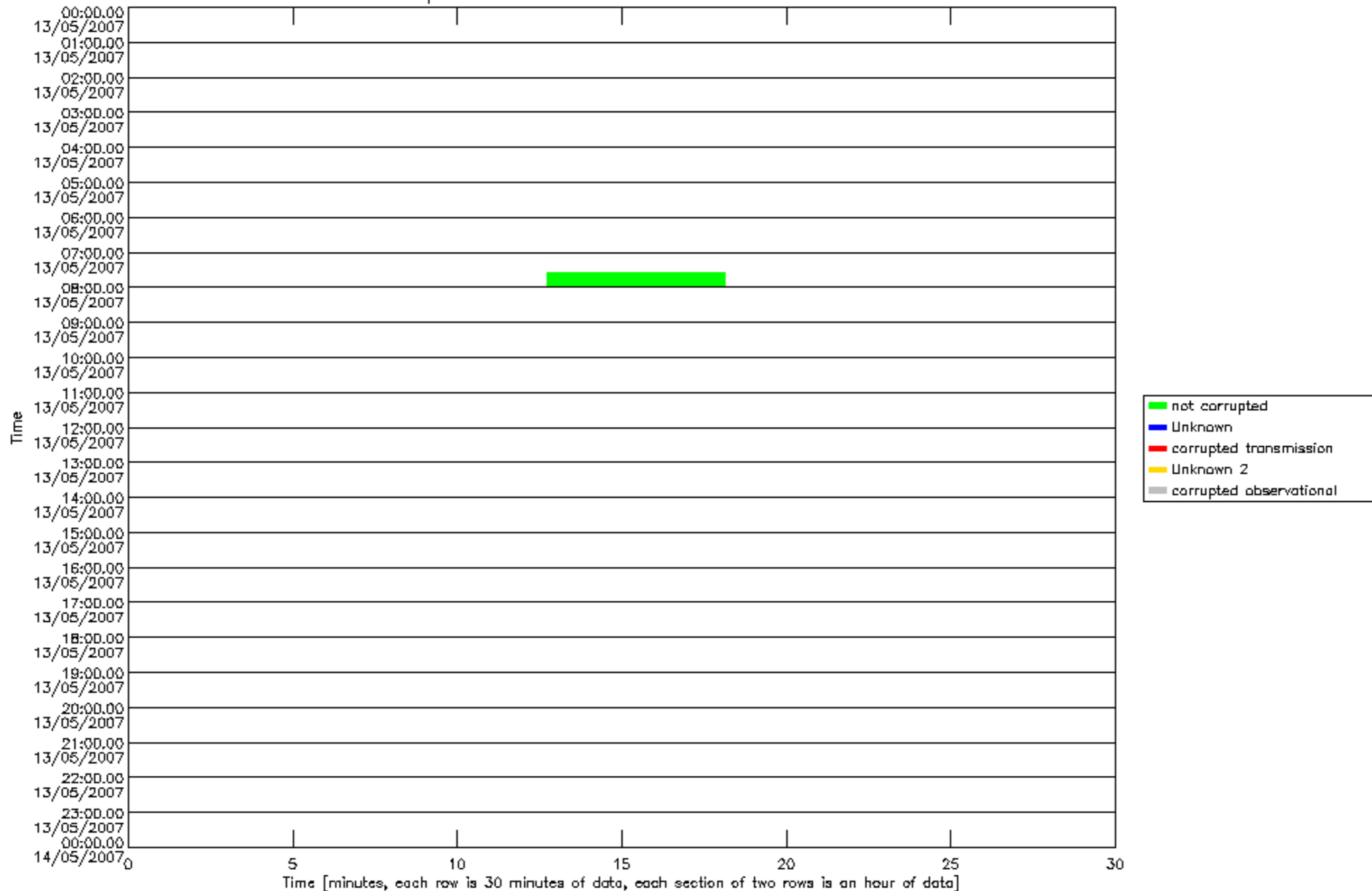




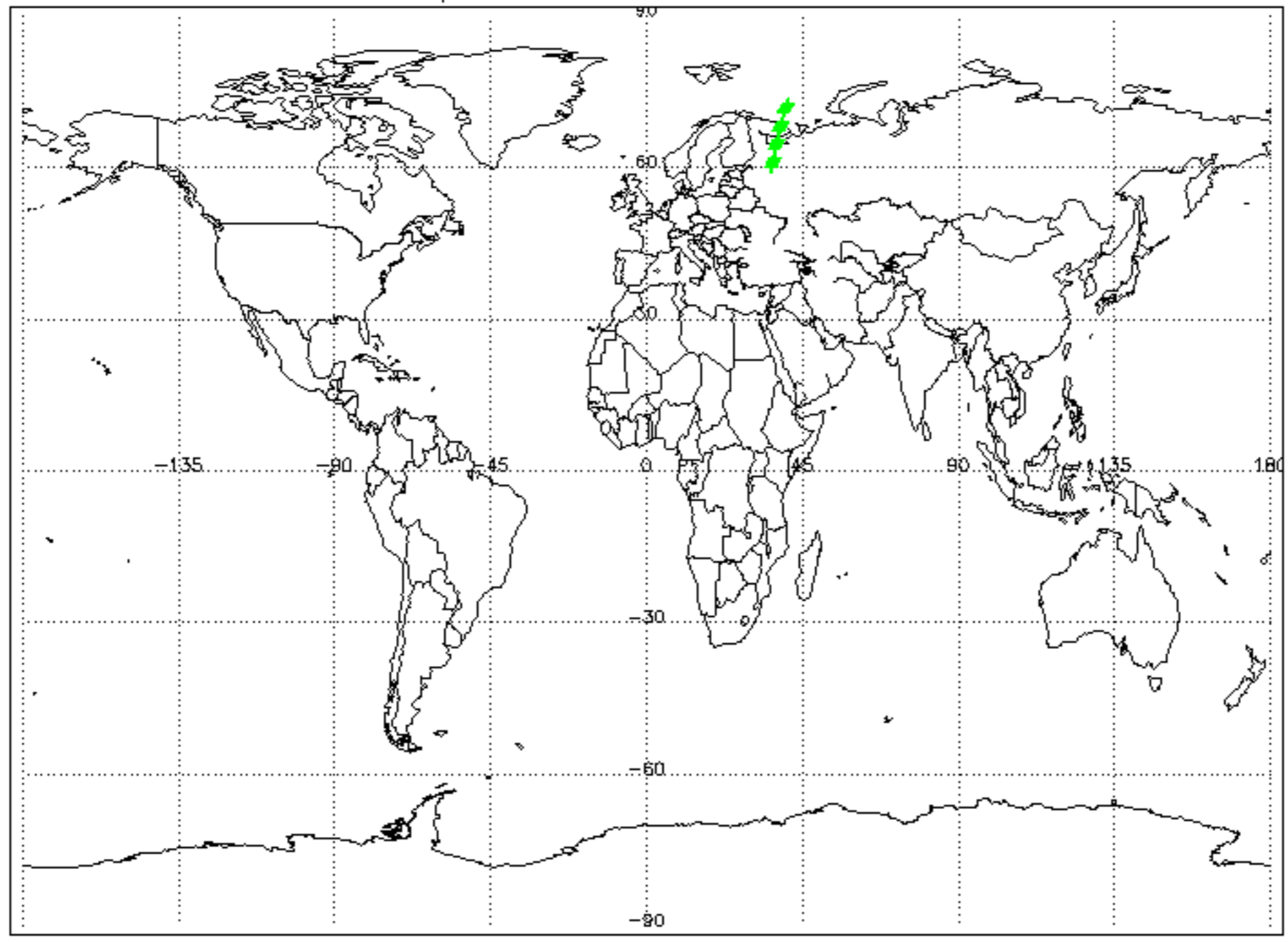
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B



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

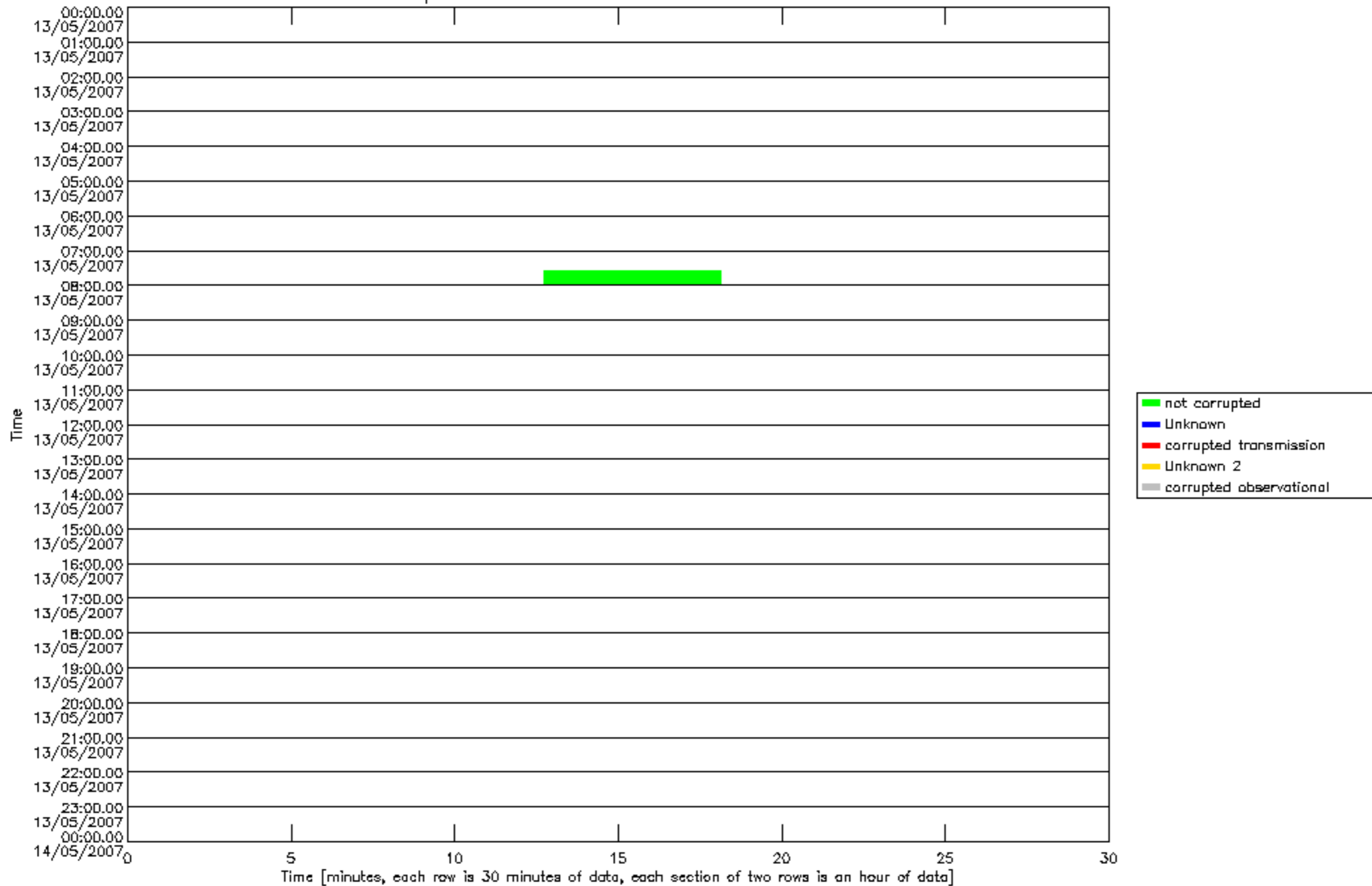


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band C

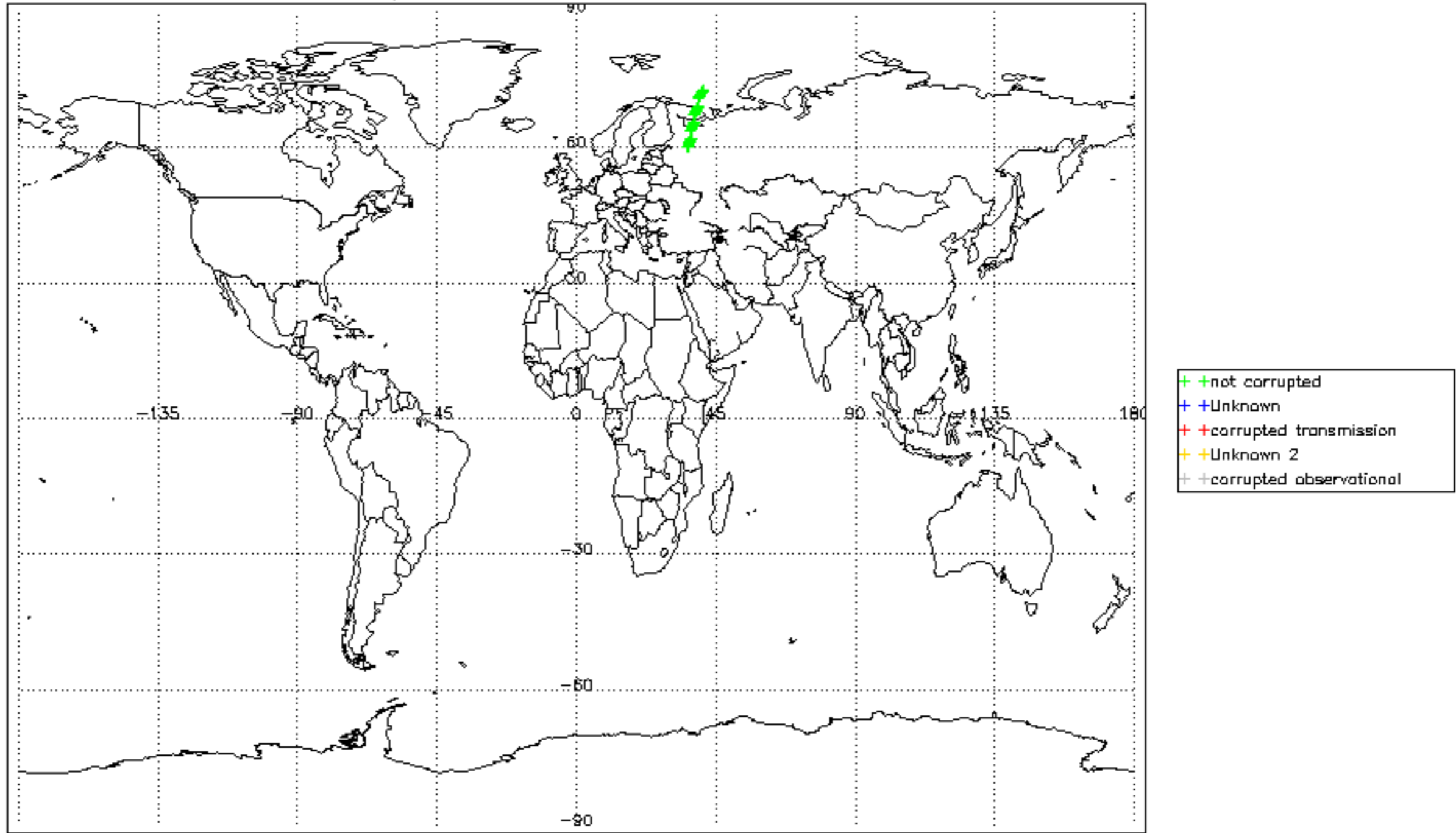


- + not corrupted
- + Unknown
- + corrupted transmission
- + Unknown 2
- + corrupted observational

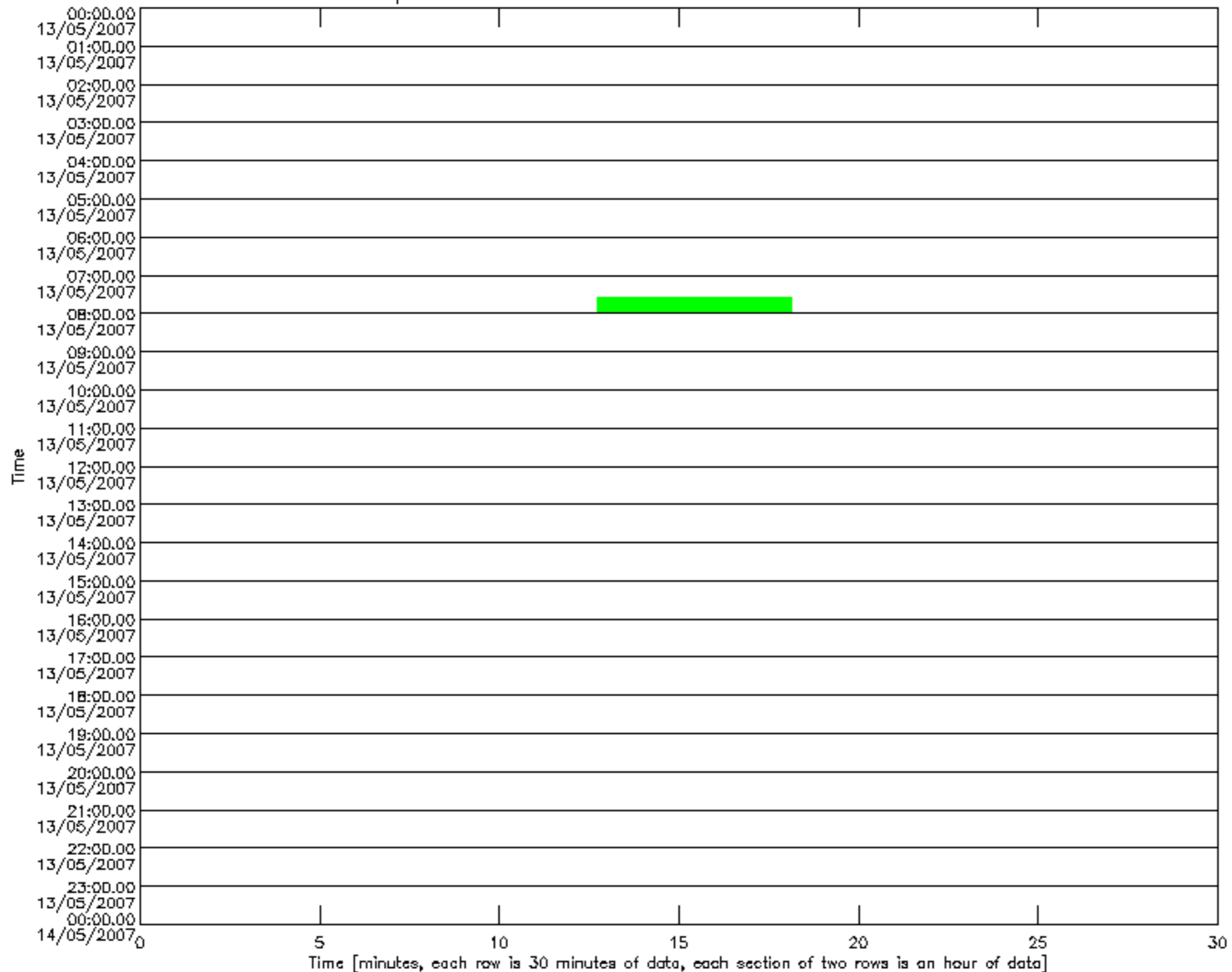
Bar plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band D



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

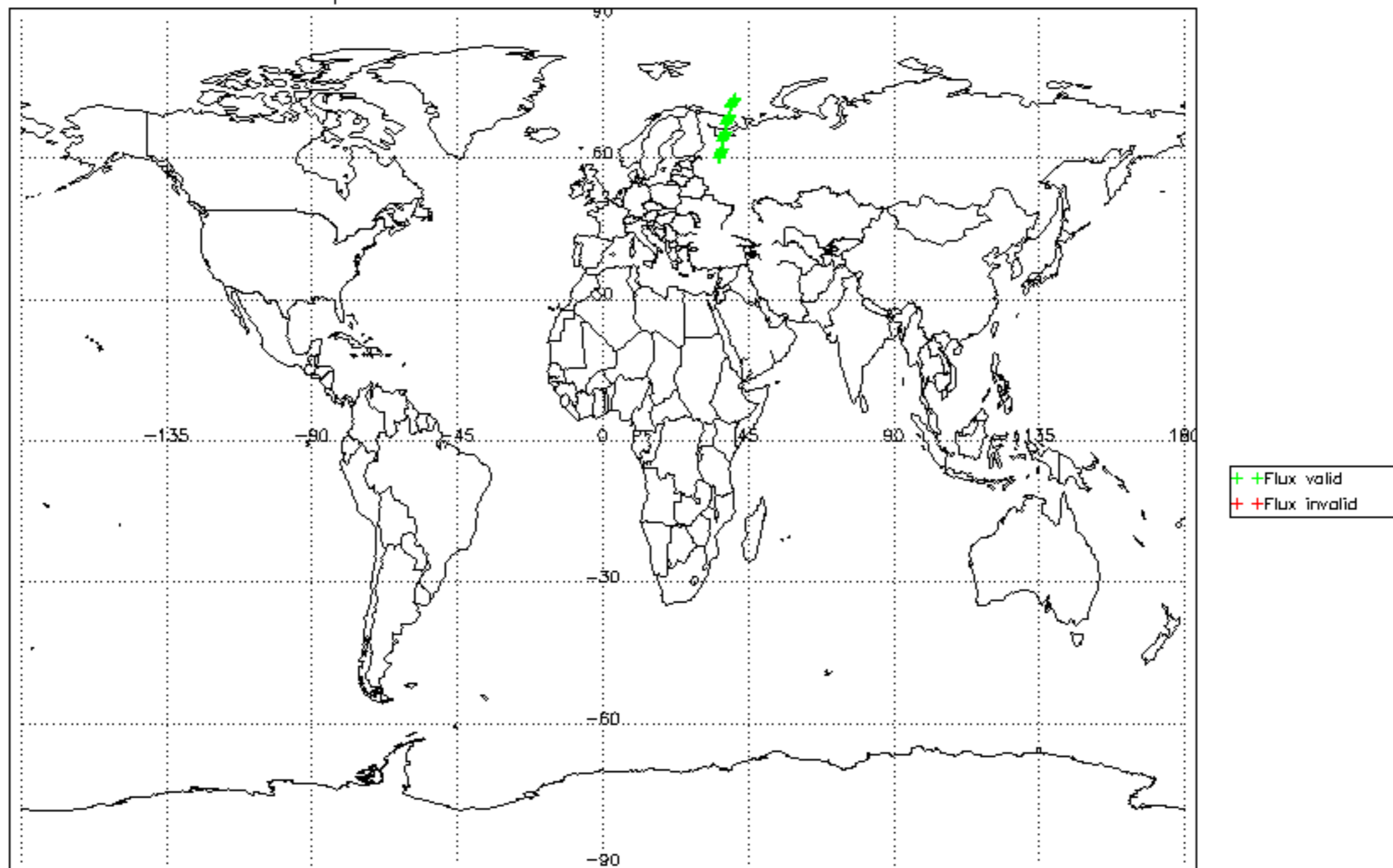


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1

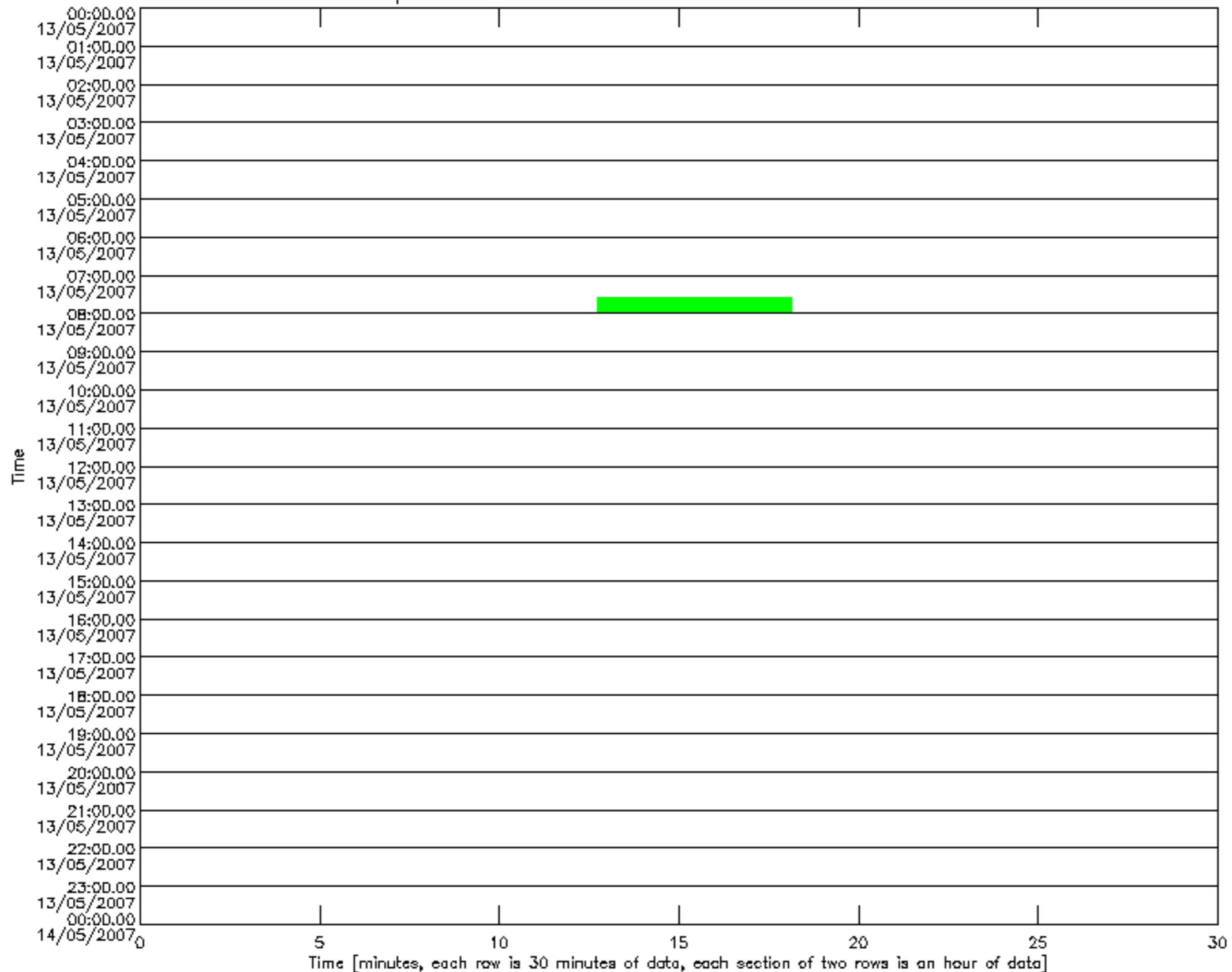




Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A1

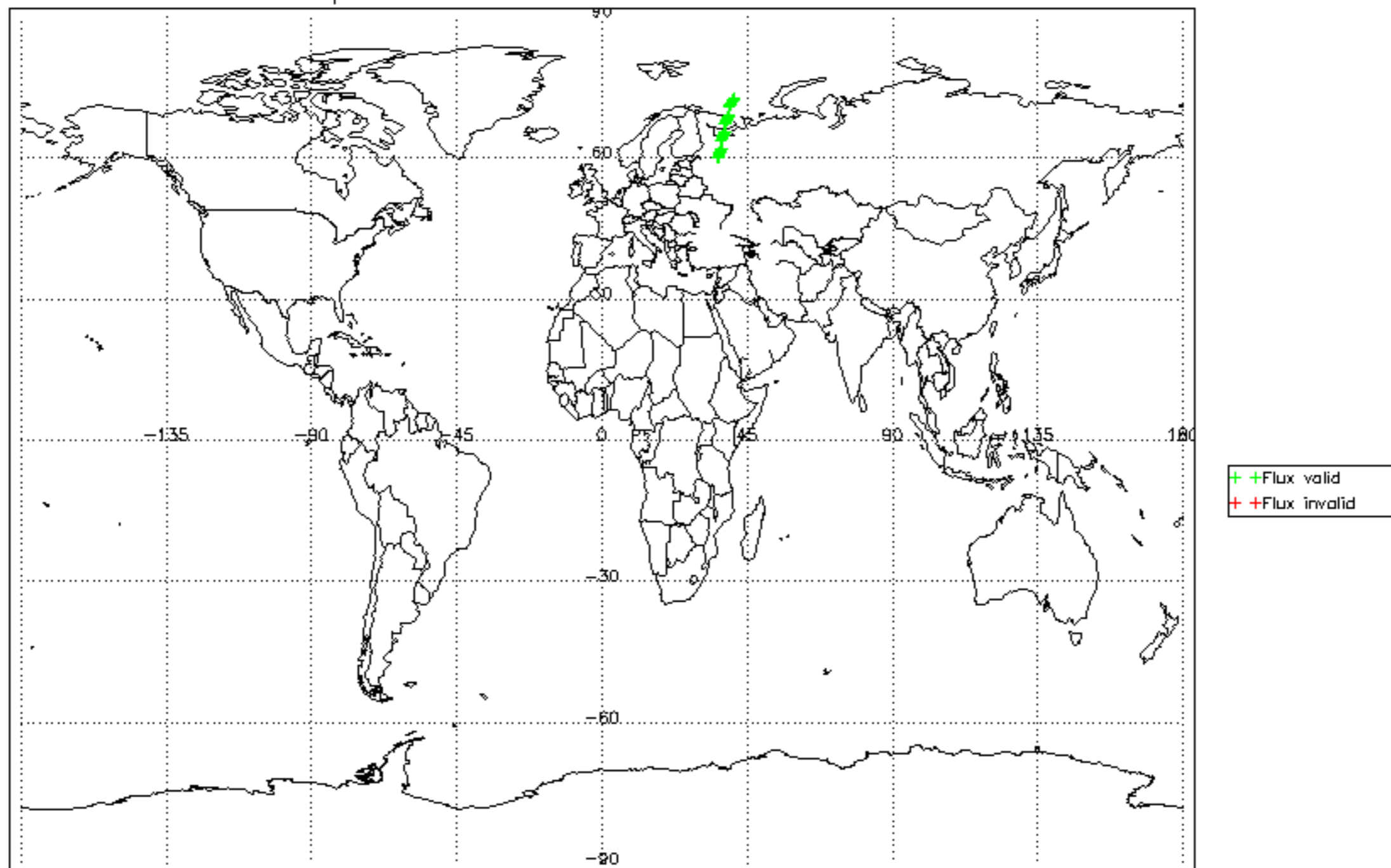


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2

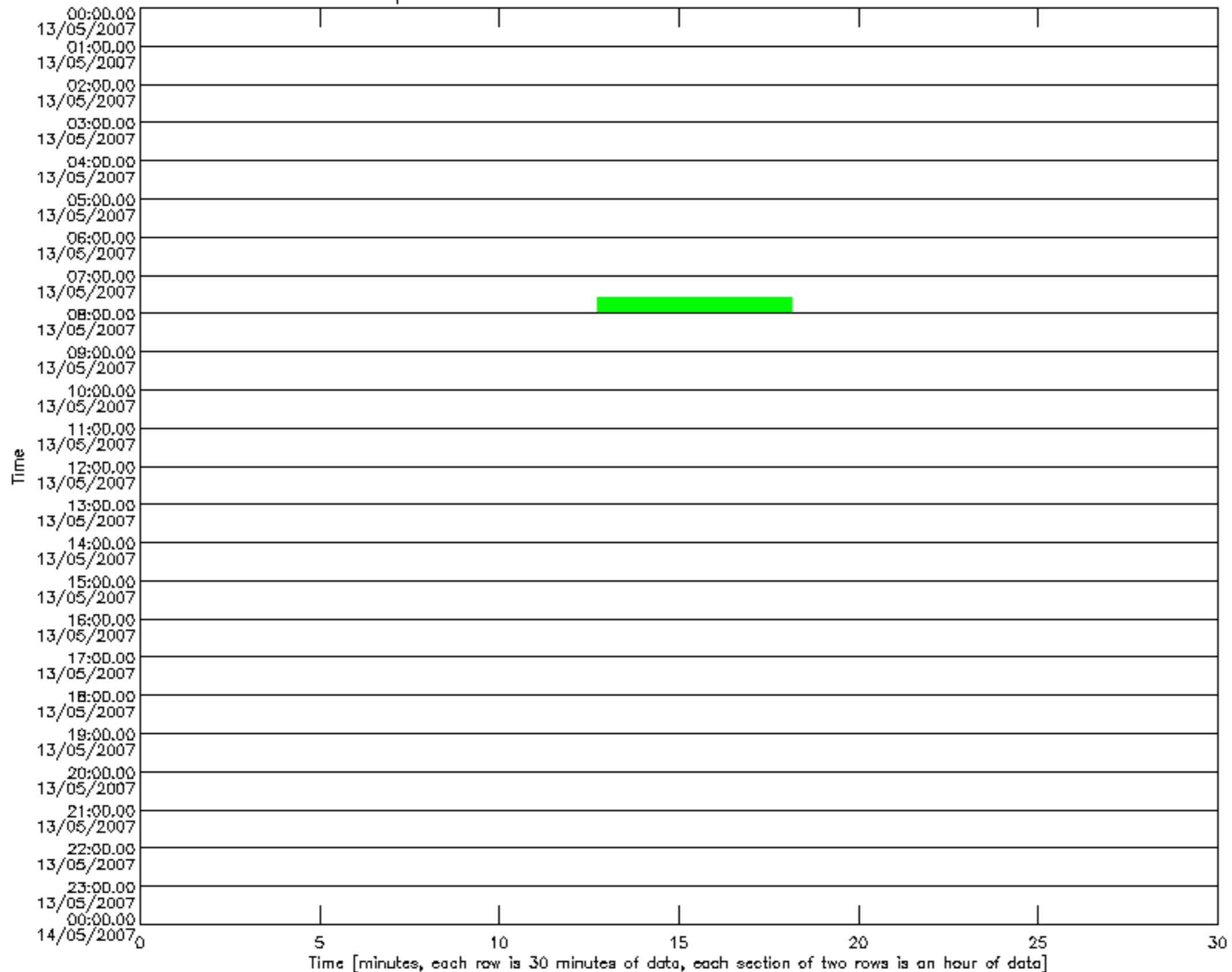


■ Flux valid  
■ Flux invalid

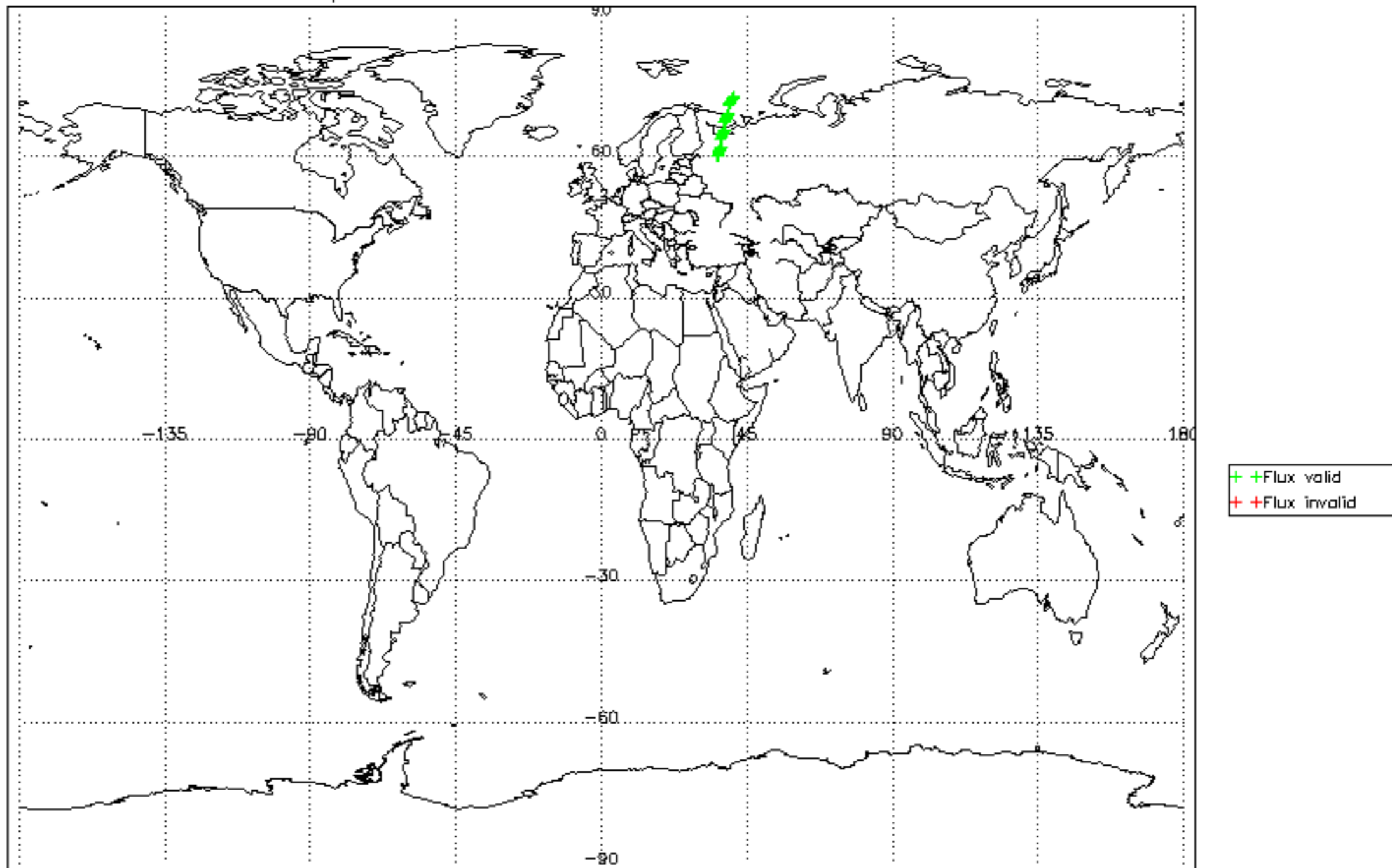
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_in\_flux detector A2



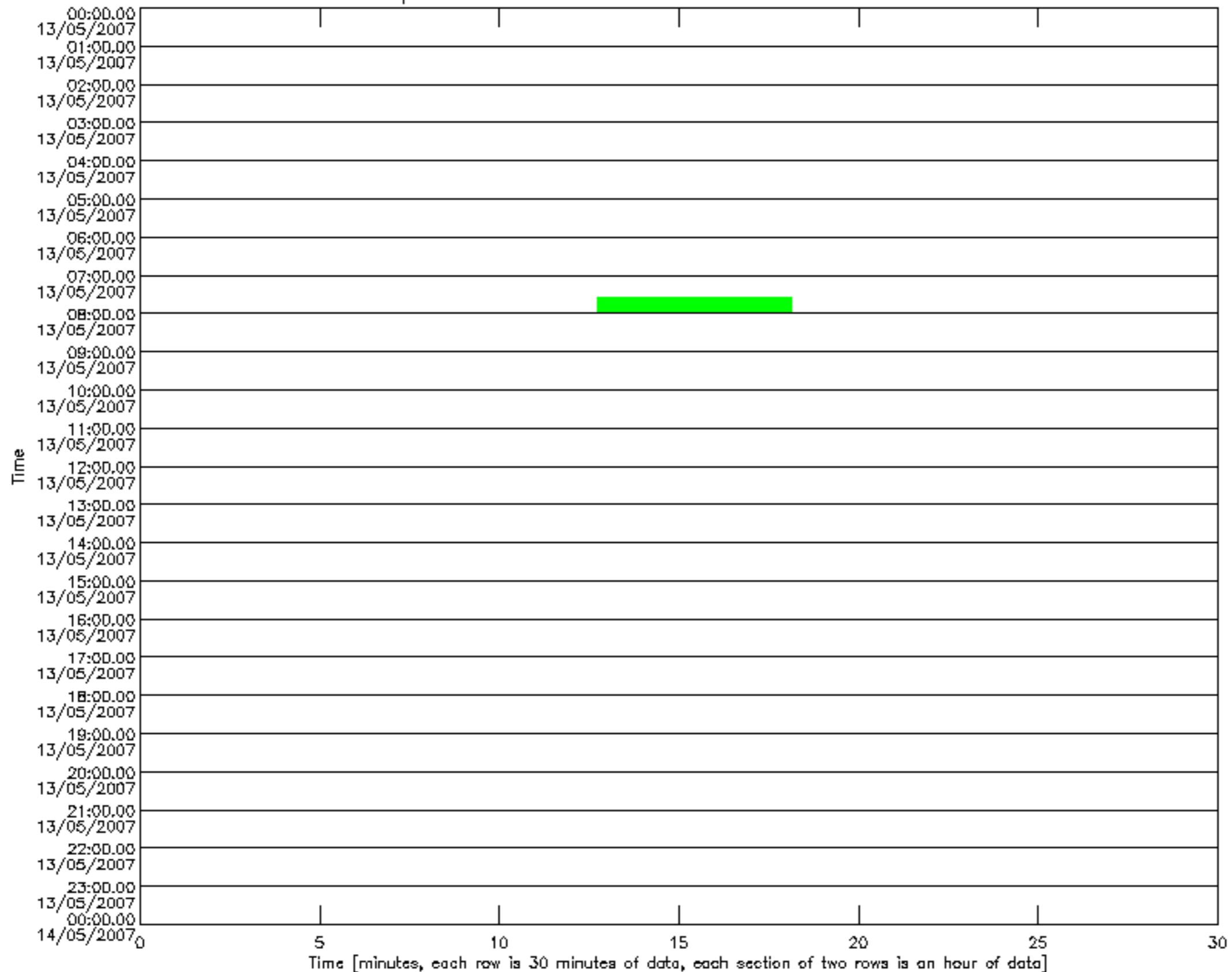
Bar plot of MIPNL1P\_MIPLEV1 BMDS\_detect\_non\_lin\_flux detector AB



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



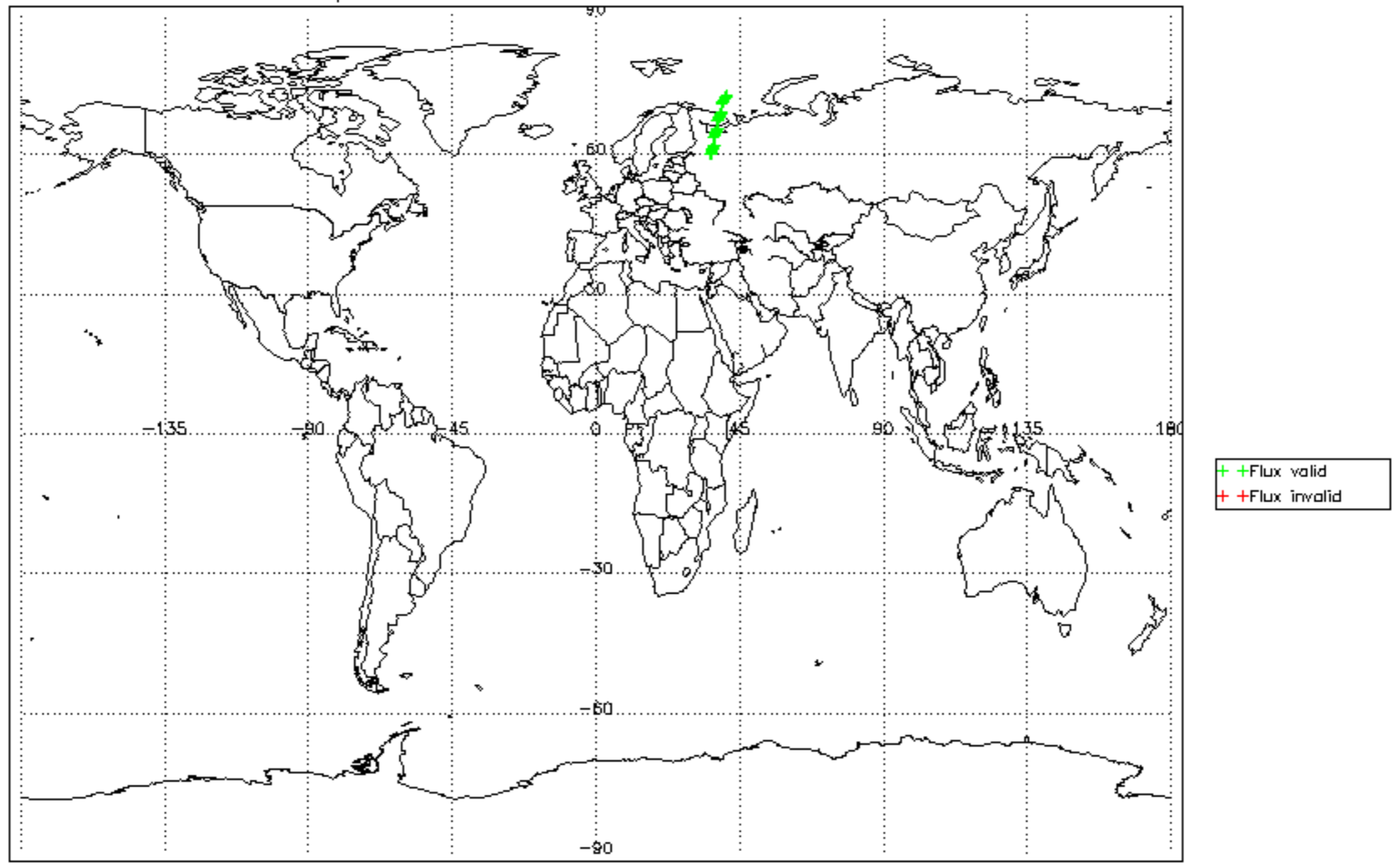
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector B



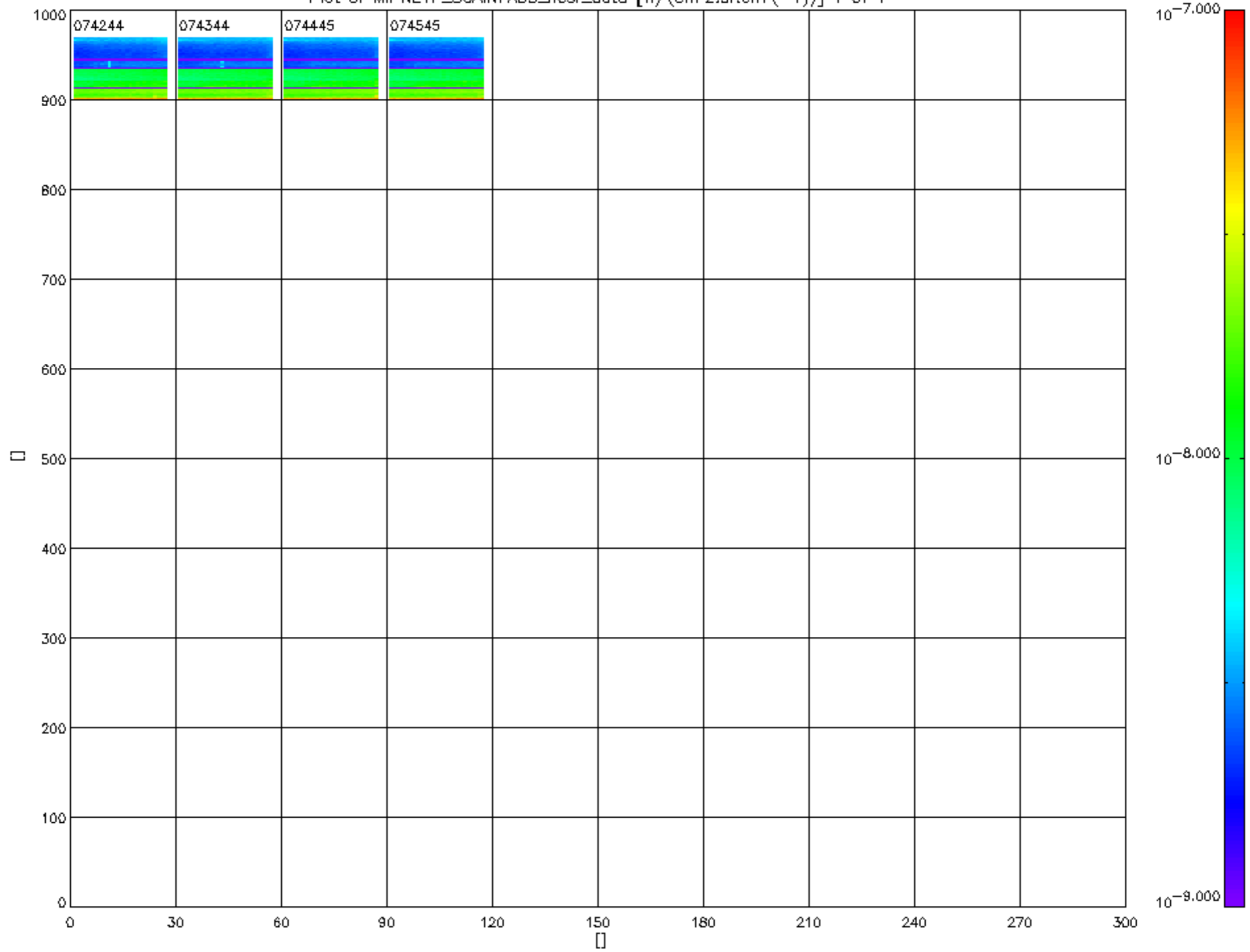
■ Flux valid  
■ Flux invalid



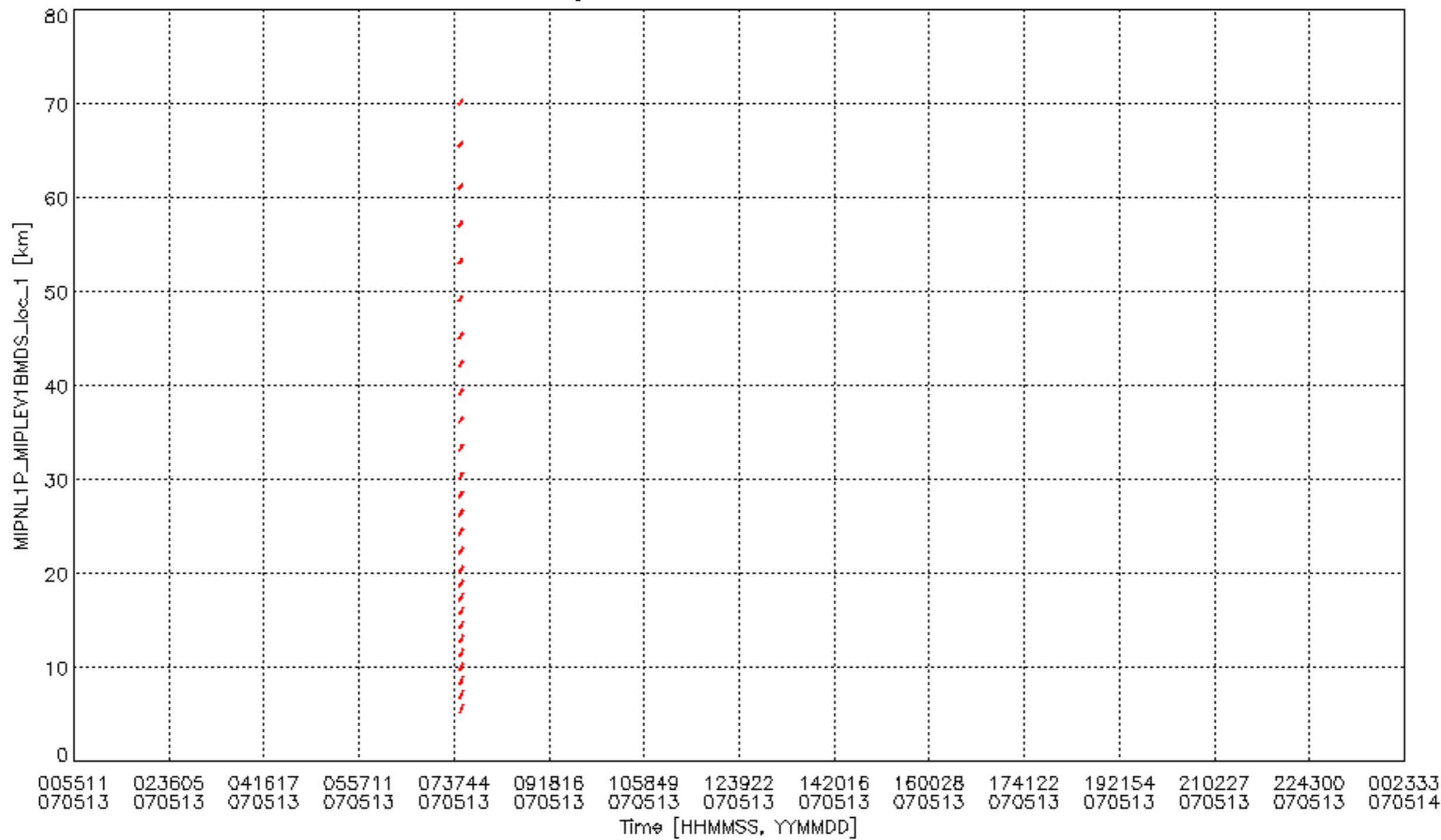
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_Jin\_flux detector B



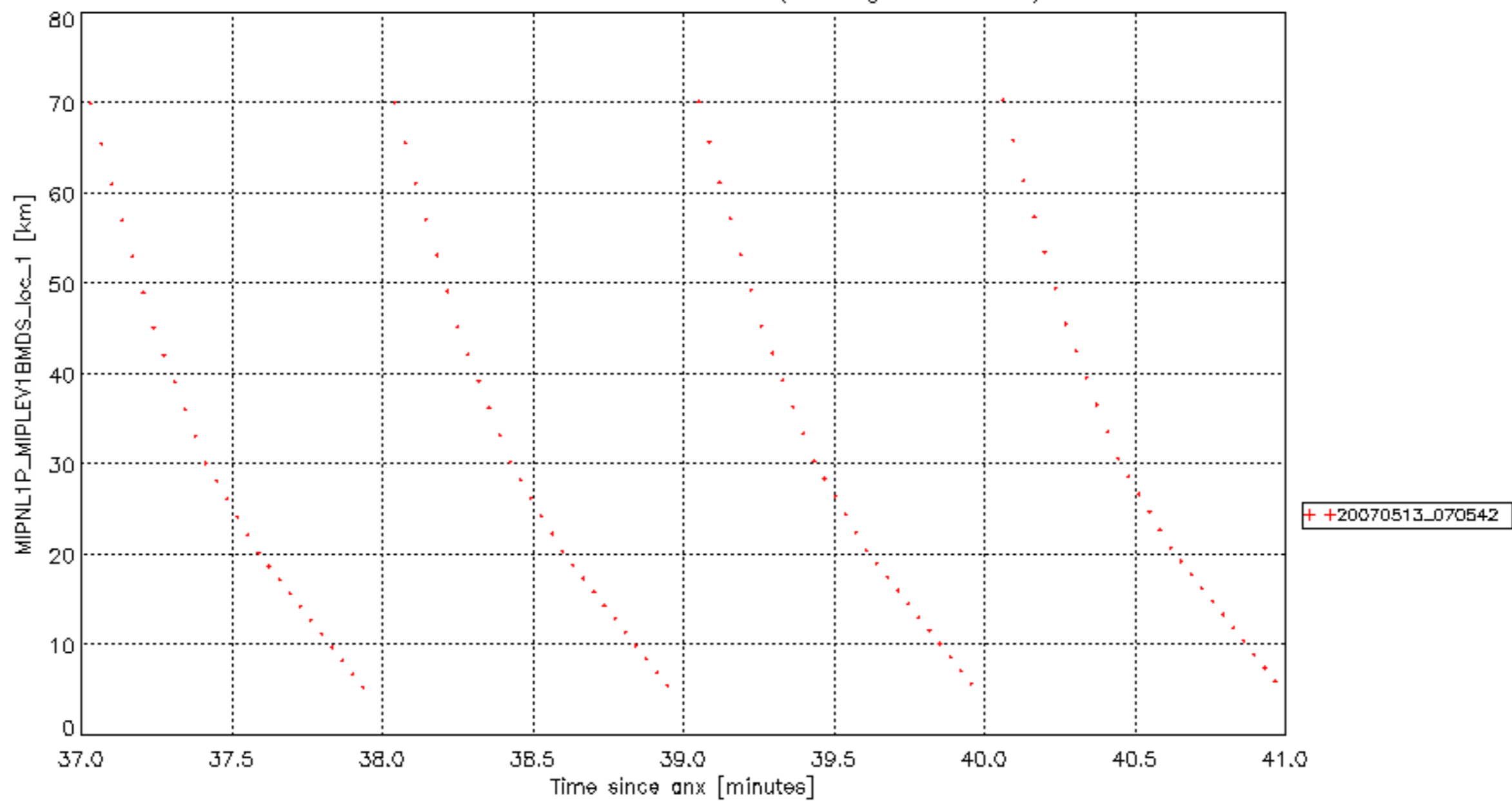
Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 1 of 1

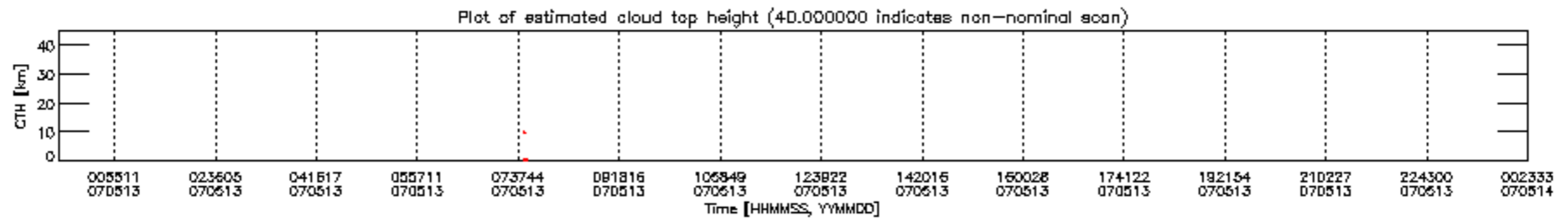


Plot of MIPNL1P\_MIPLEV1BMDS\_loc\_1 against time.  
The vertical grid lines indicate estimated anx events.



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)

