

# 1. MIPAS Daily Report for level 1 products

## [1.1. General Info](#)

## [1.2 Product Quality Indicators](#)

## [1.3 Physical Quality Indicators](#)

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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	v1.40 14-01-2010
Time of report generation	17SEP2010 02:04:33
Data source version	MIPAS/5.05-R
Processing scope for products	31AUG2010 00:00:00 to 01SEP2010 00:00:00
Start time of first product within scope	30AUG2010 22:40:06
Stop time of last product within scope	31AUG2010 07:03:13
Total number of level 1 products	5
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.

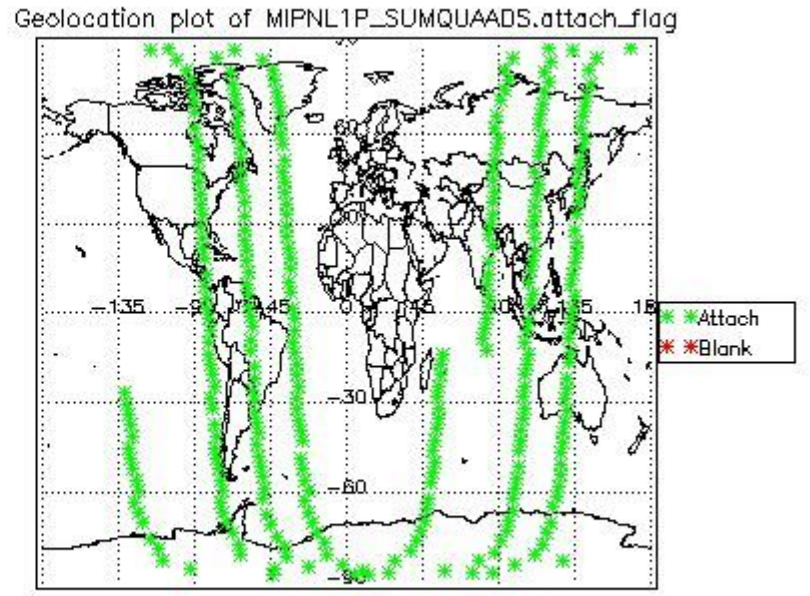
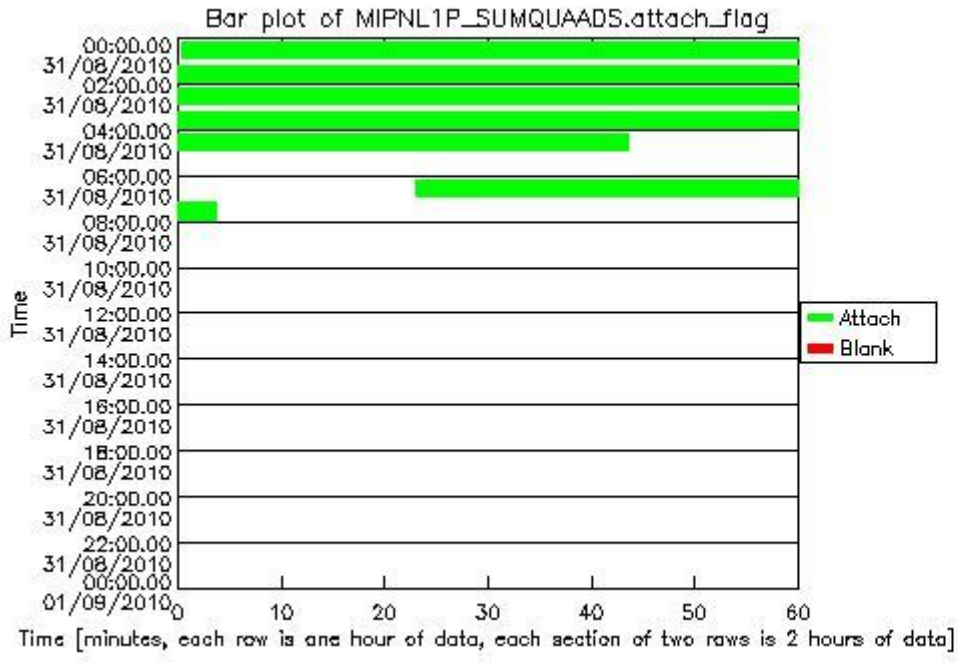
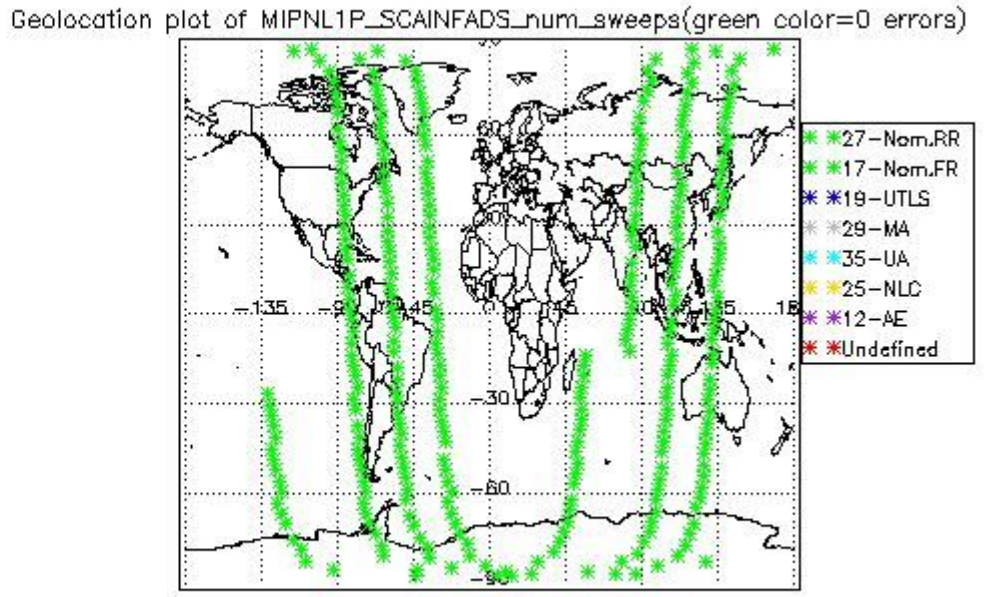
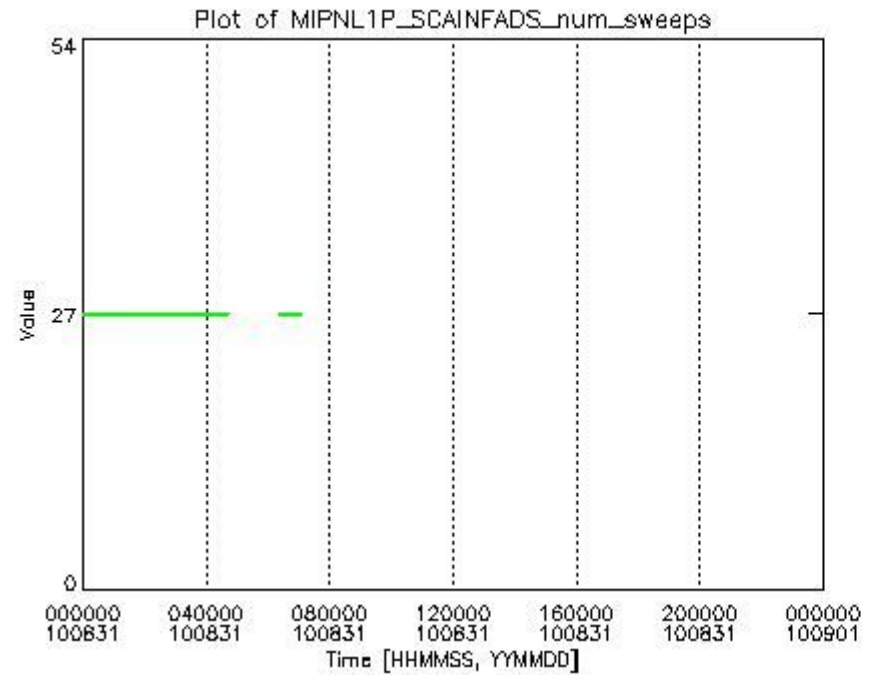
Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

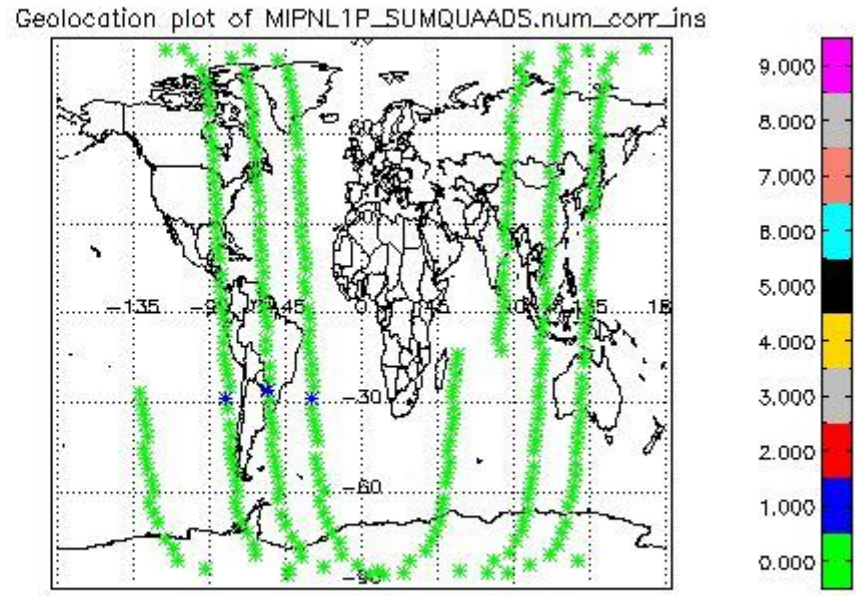
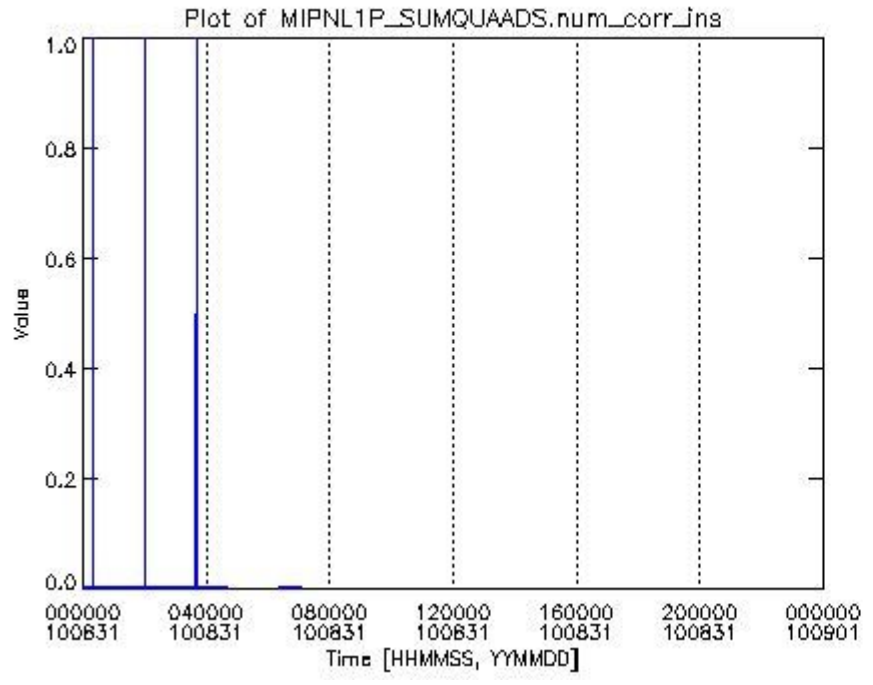
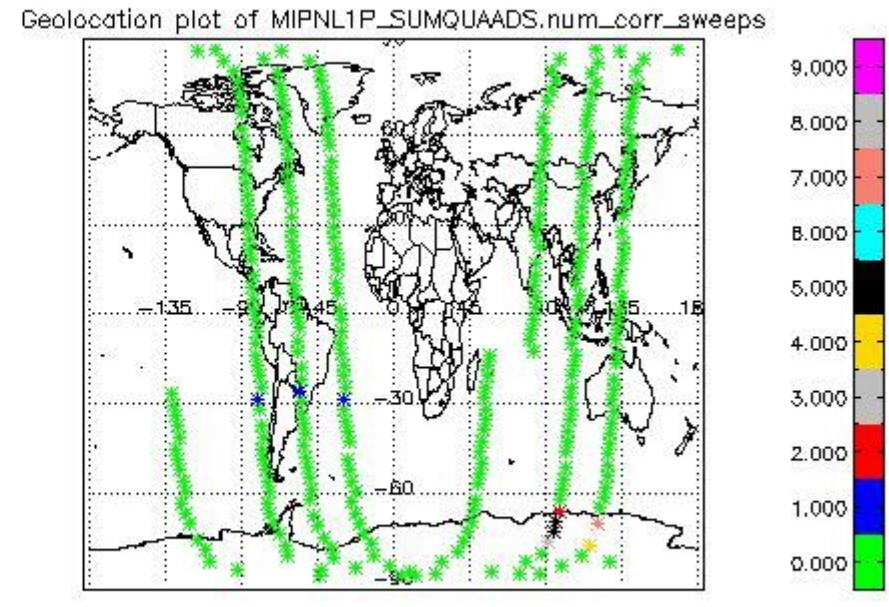
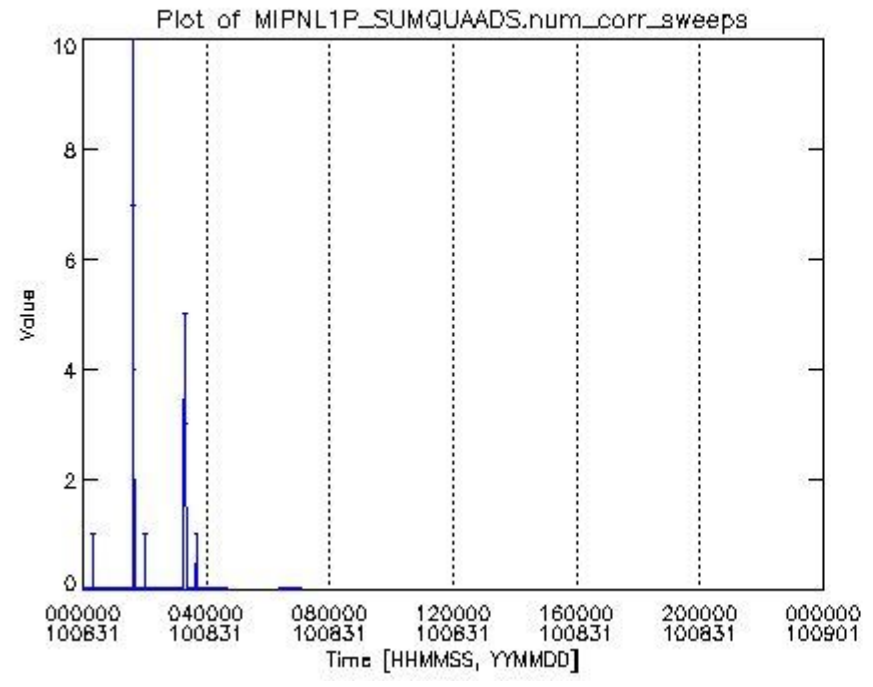
#	Product name	Start time	Stop time	Prod err	Slice position (prod/tot)	#sweeps SPH
0	<a href="#">MIP_NL__1PRDPA20100830_224006_000060152092_00302_44444_4980.N1</a>	30AUG2010 22:40:06	31AUG2010 00:20:21	0	0/0	27
1	<a href="#">MIP_NL__1PRDPA20100831_002027_000060752092_00303_44445_4981.N1</a>	31AUG2010 00:20:27	31AUG2010 02:01:42	0	0/0	27
2	<a href="#">MIP_NL__1PRDPA20100831_020148_000059842092_00304_44446_4982.N1</a>	31AUG2010 02:01:48	31AUG2010 03:41:31	0	0/0	27
3	<a href="#">MIP_NL__1PRDPA20100831_034137_000036862092_00305_44447_4983.N1</a>	31AUG2010 03:41:37	31AUG2010 04:43:02	0	0/0	27
4	<a href="#">MIP_NL__1PRDPA20100831_062258_000024152092_00306_44448_4984.N1</a>	31AUG2010 06:22:58	31AUG2010 07:03:13	0	0/0	27

### 1.2 Product Quality Indicators

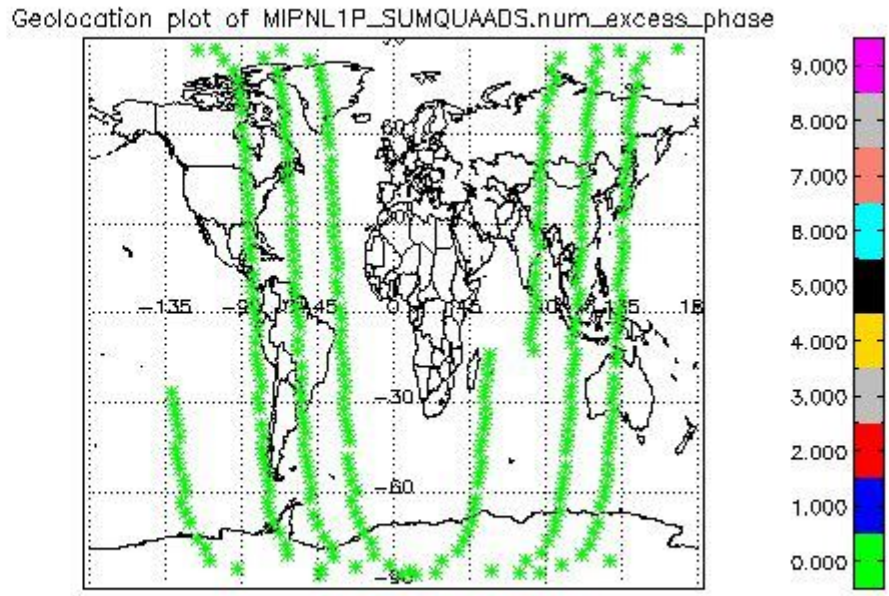
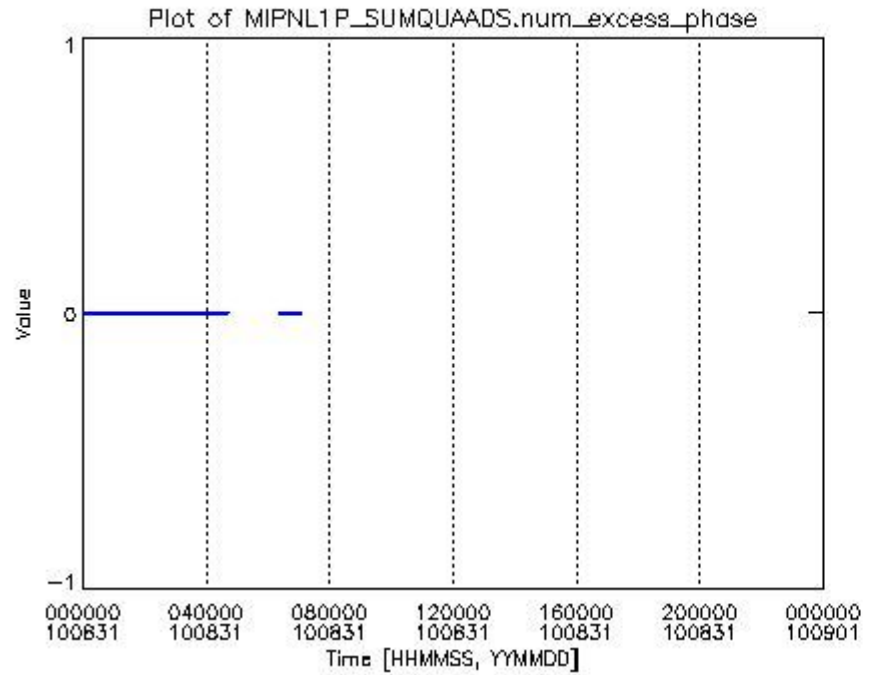
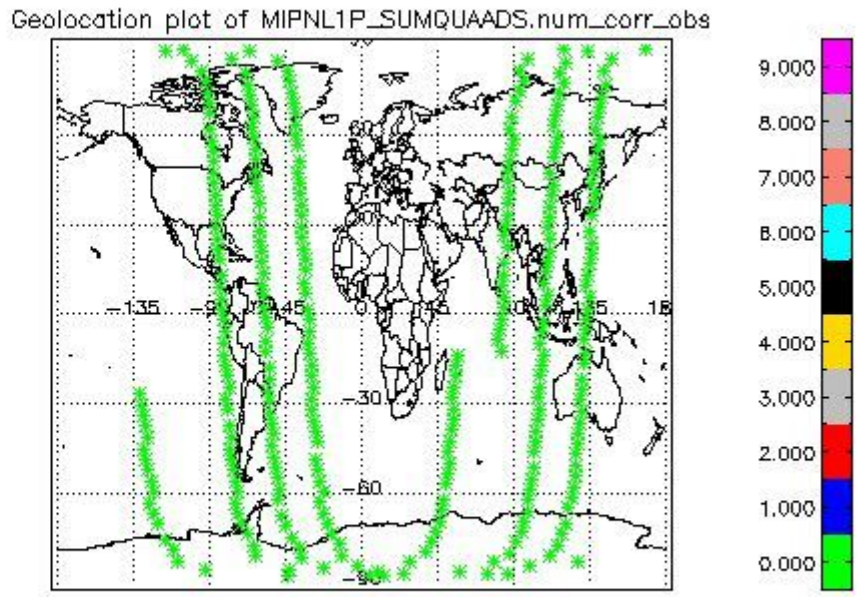
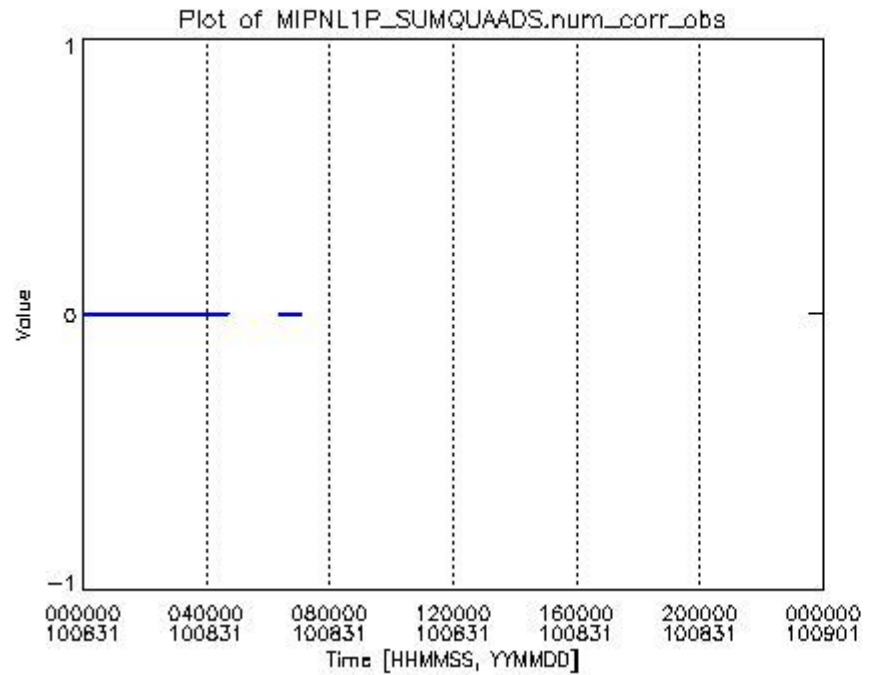
This report contains an analysis on product quality related parameters within the MIP\_NL\_\_1P product.

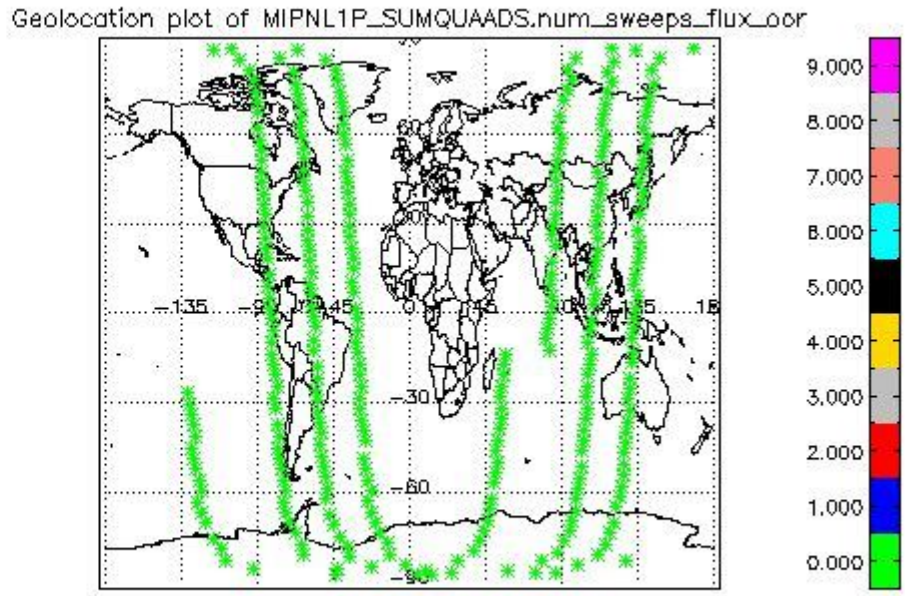
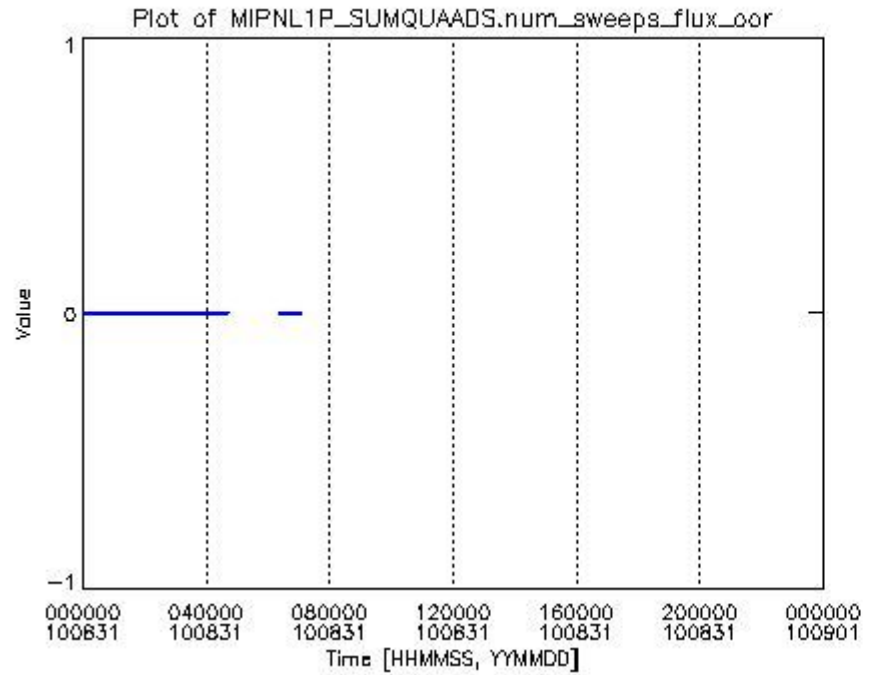
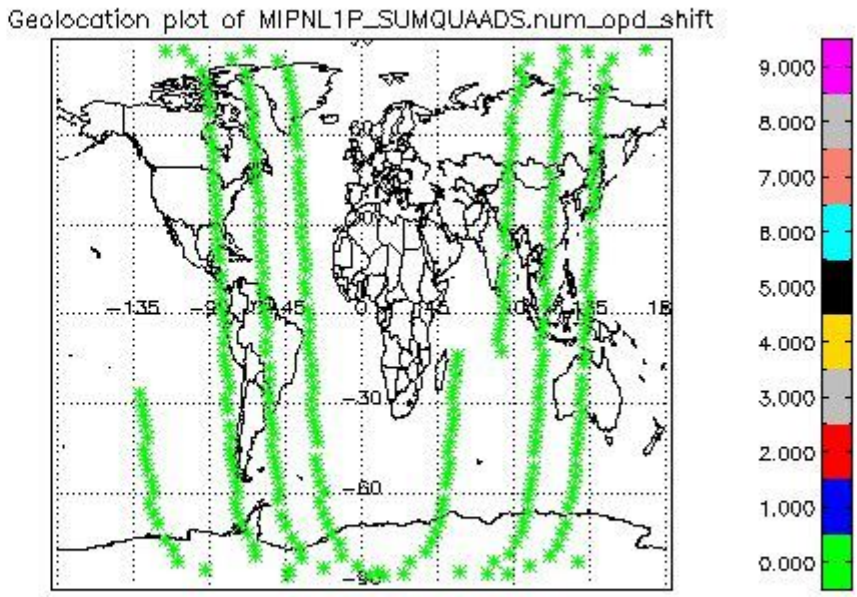
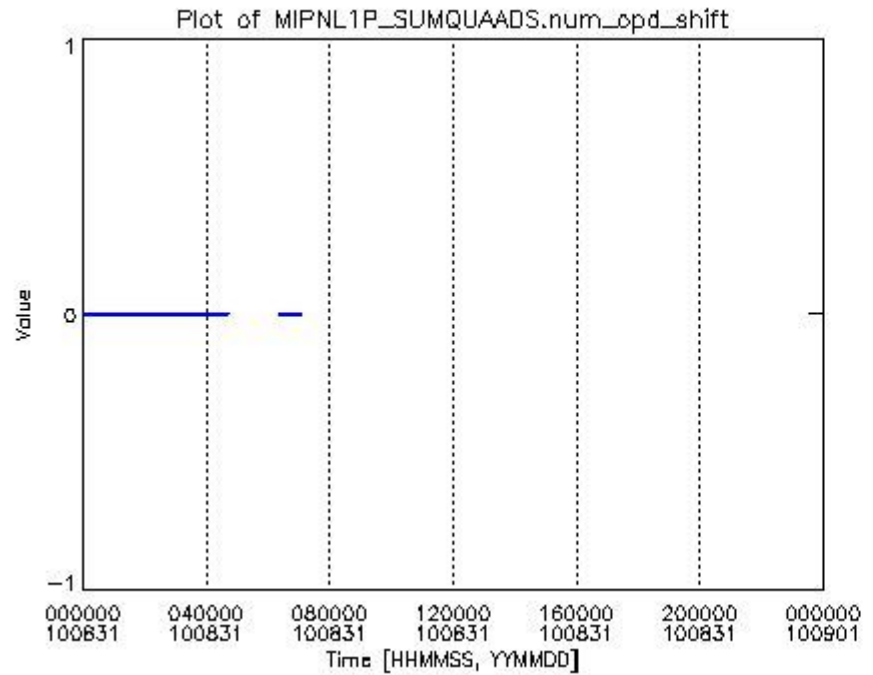
#### 1.2.1 Trends and geolocation of Summary Quality and Scan Information ADS





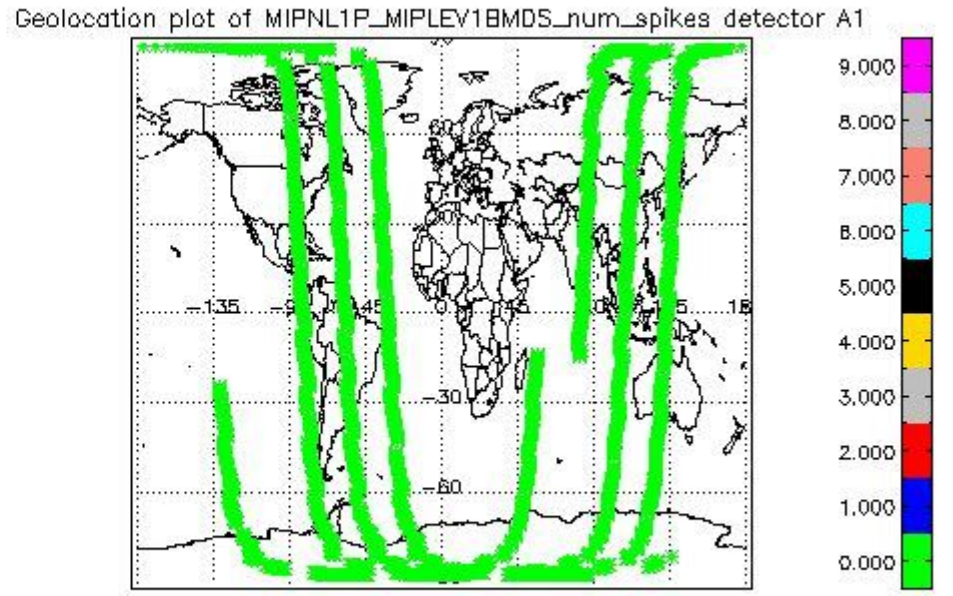
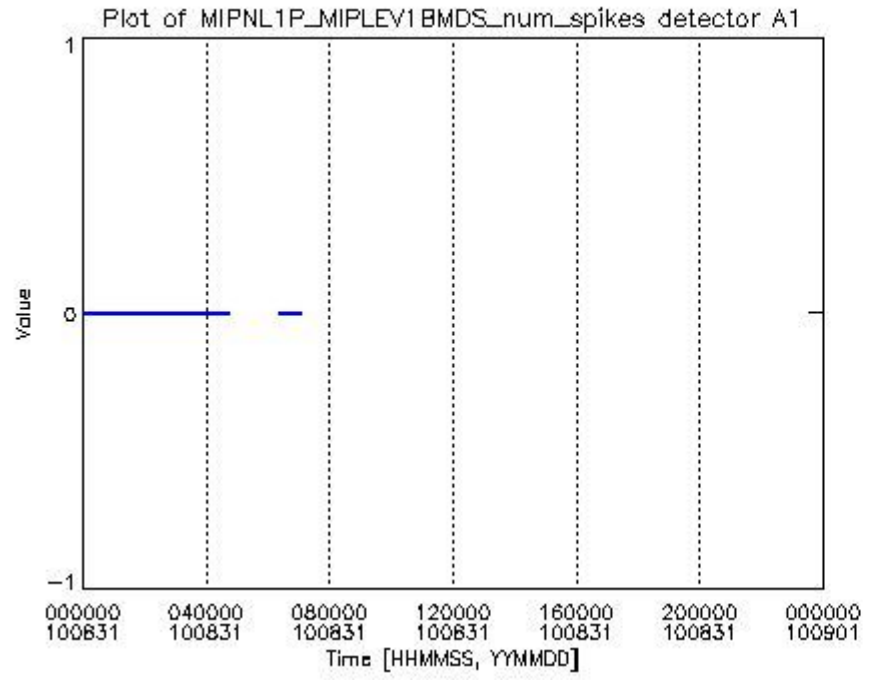
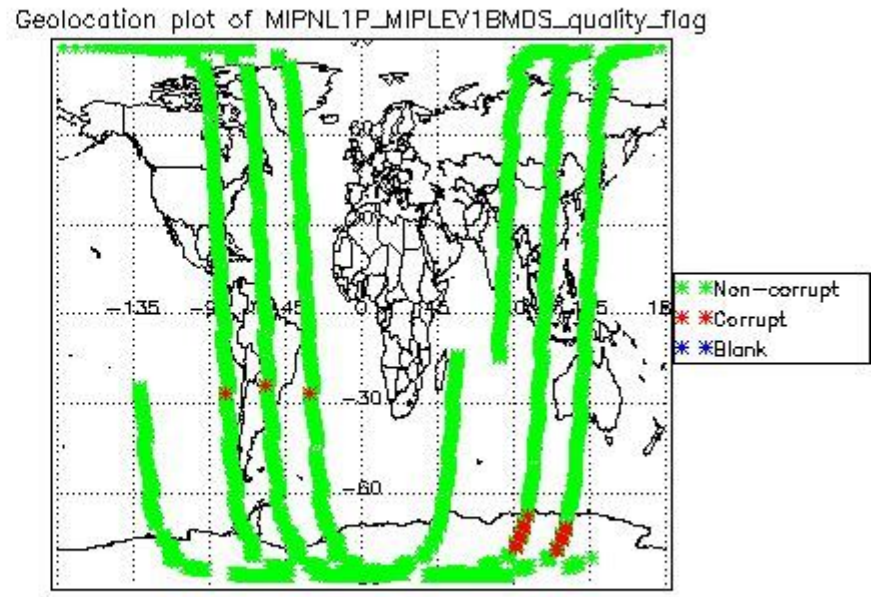
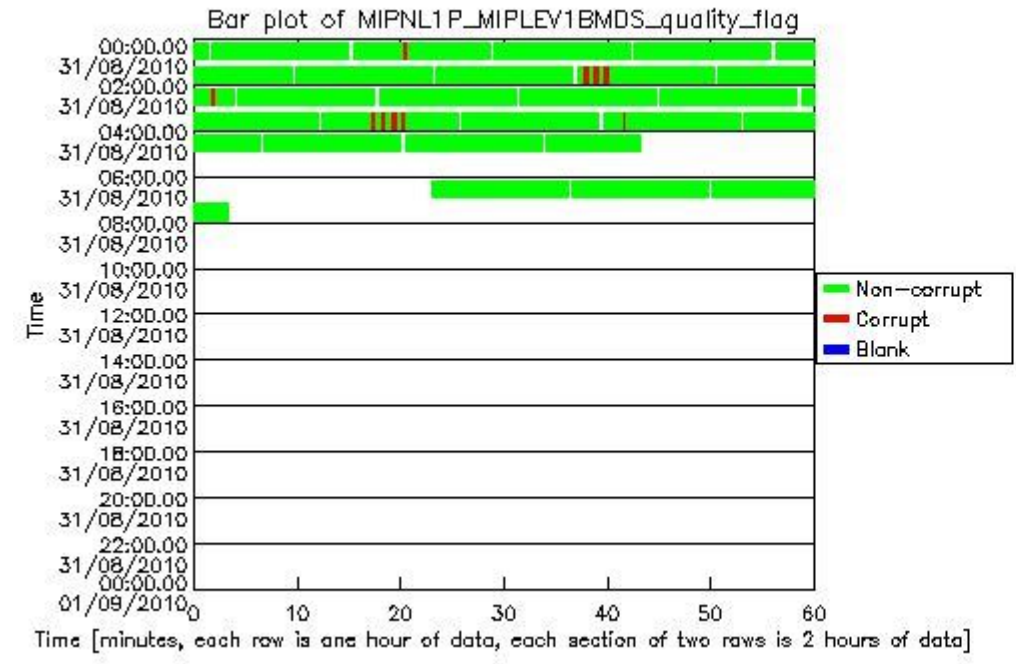


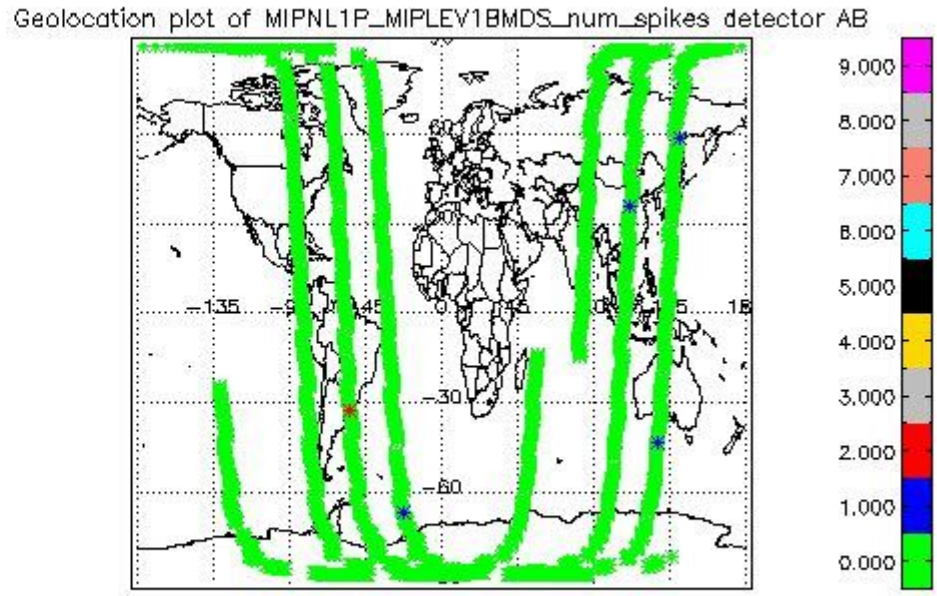
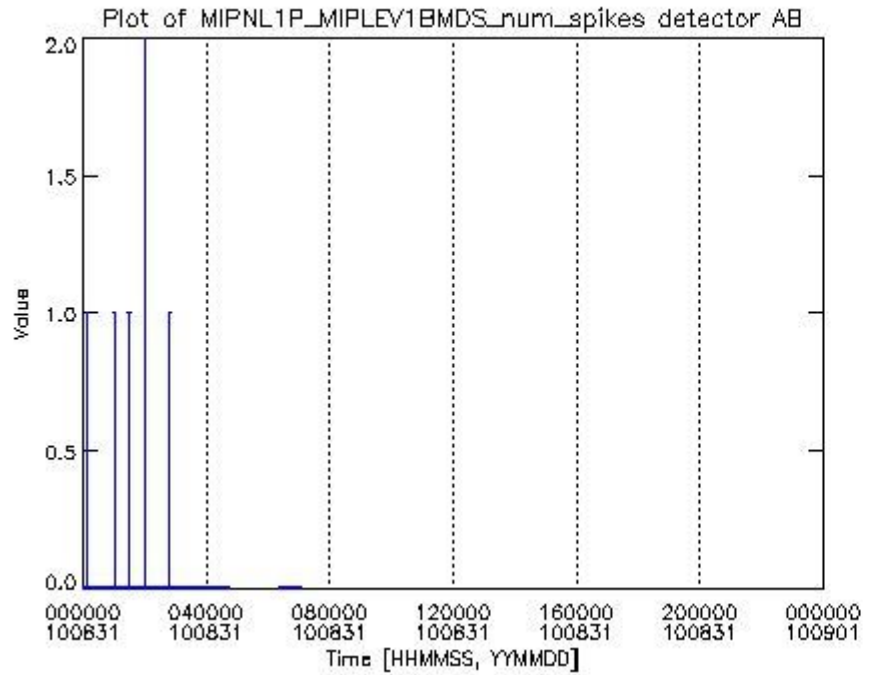
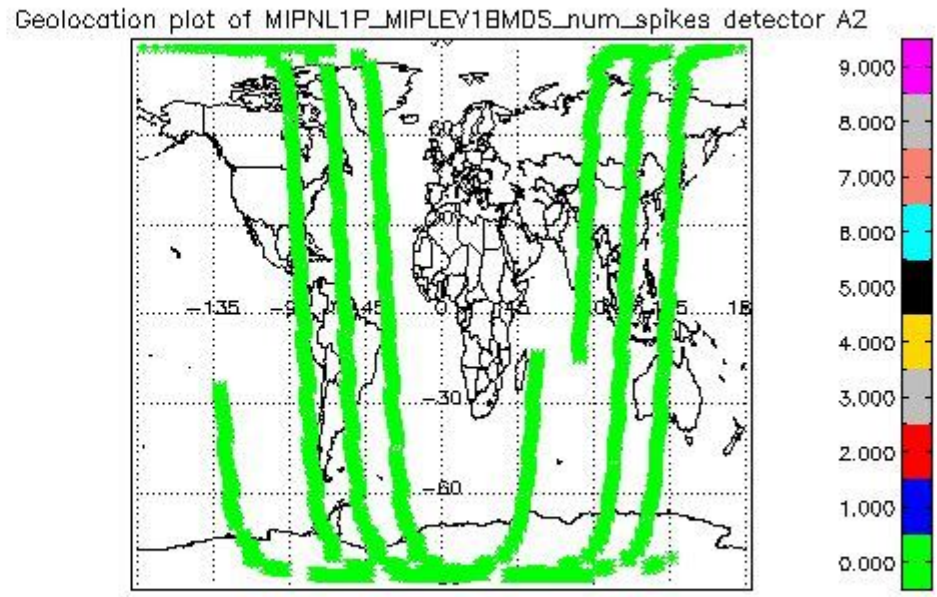
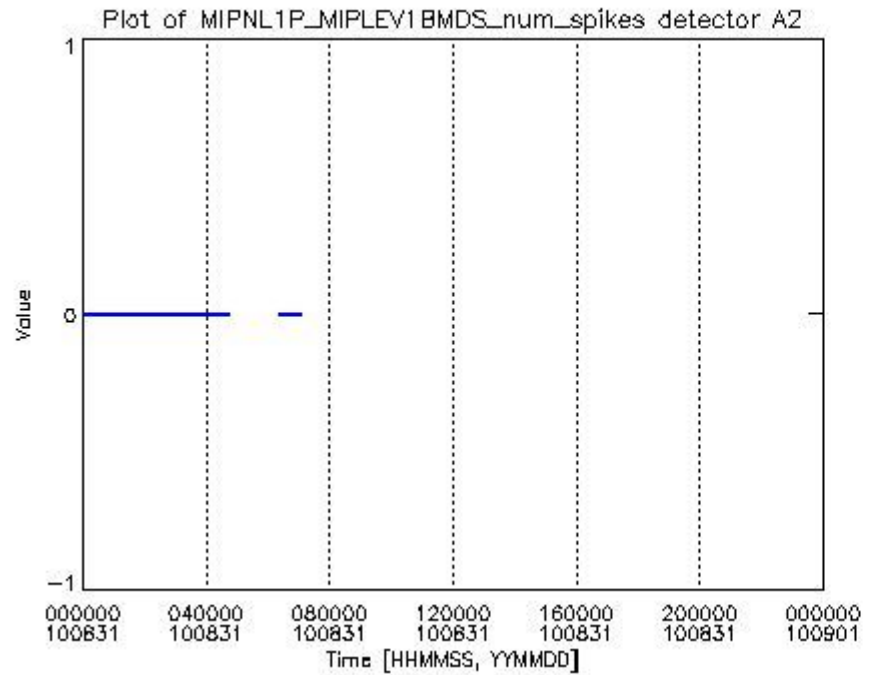




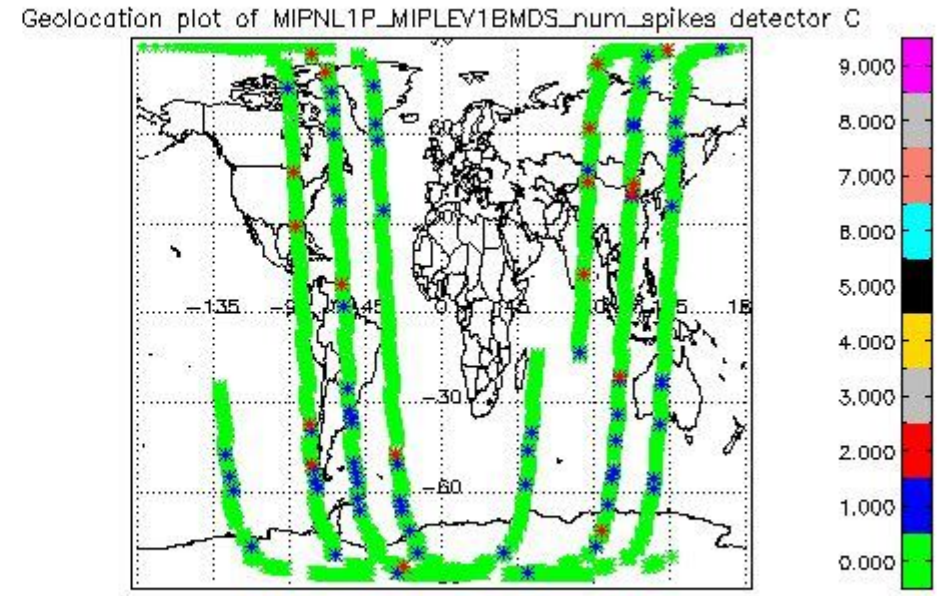
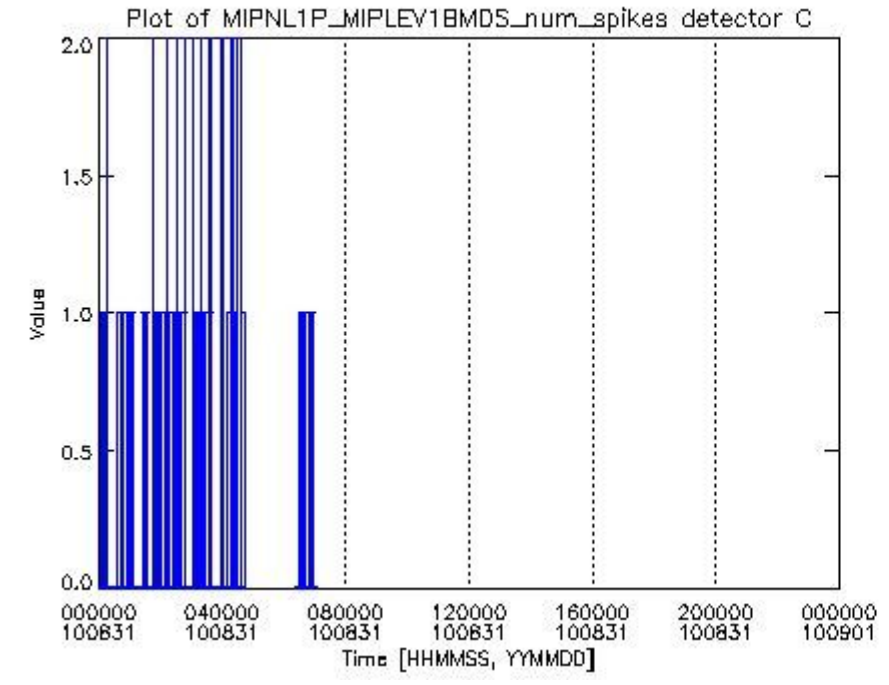
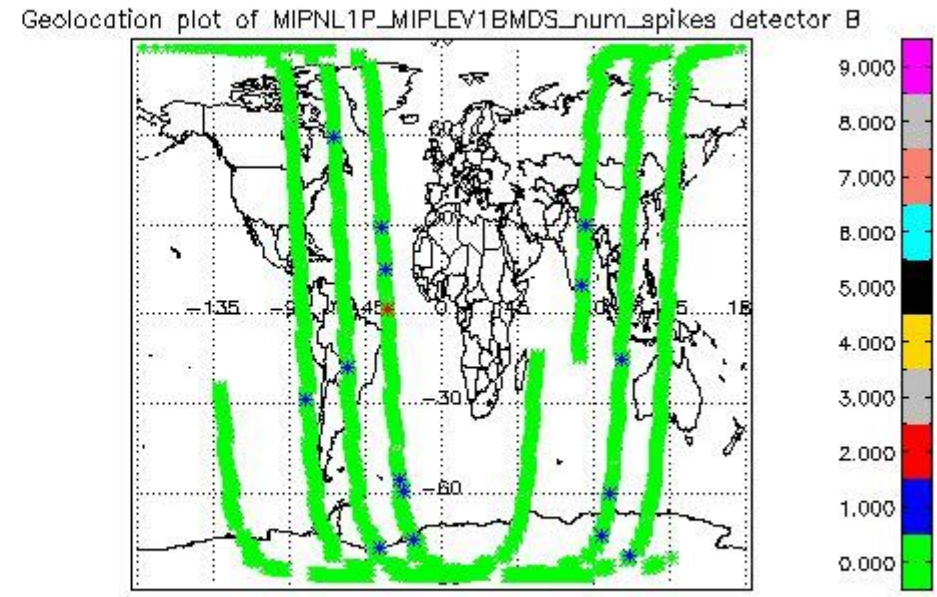
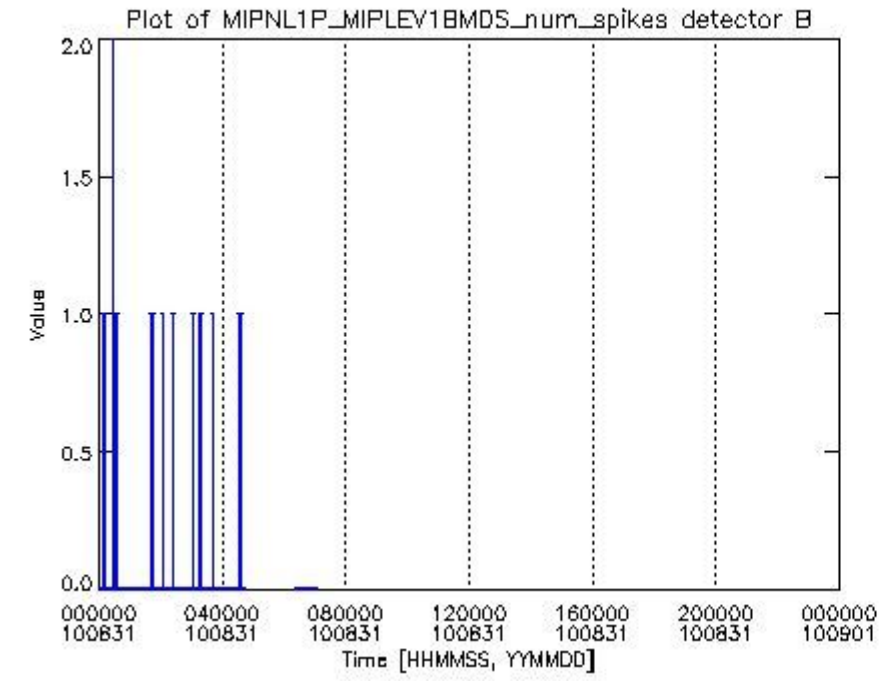
1.2.2 Trends and geolocation of MIPAS LEVEL 1 MDS



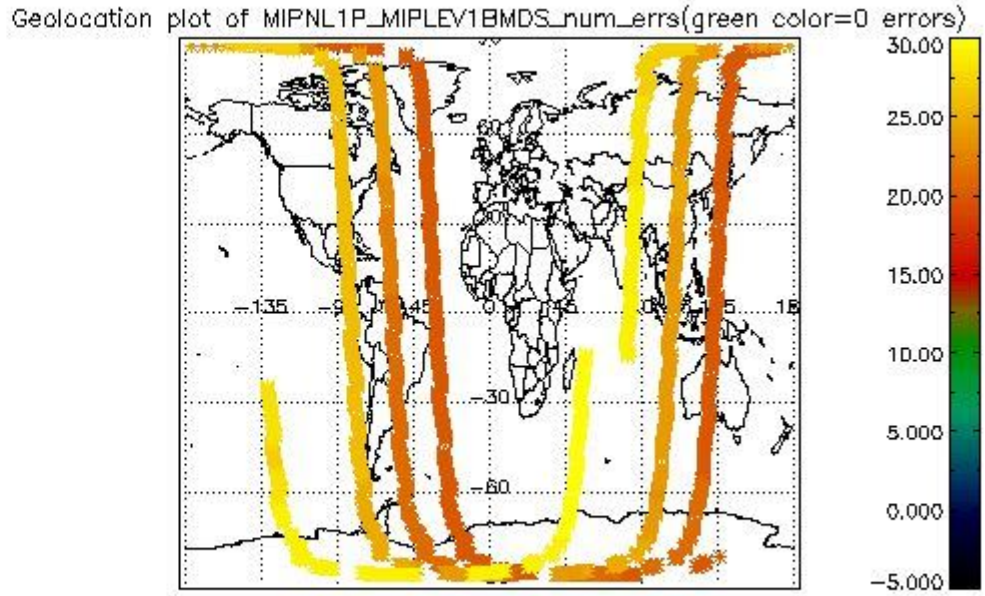
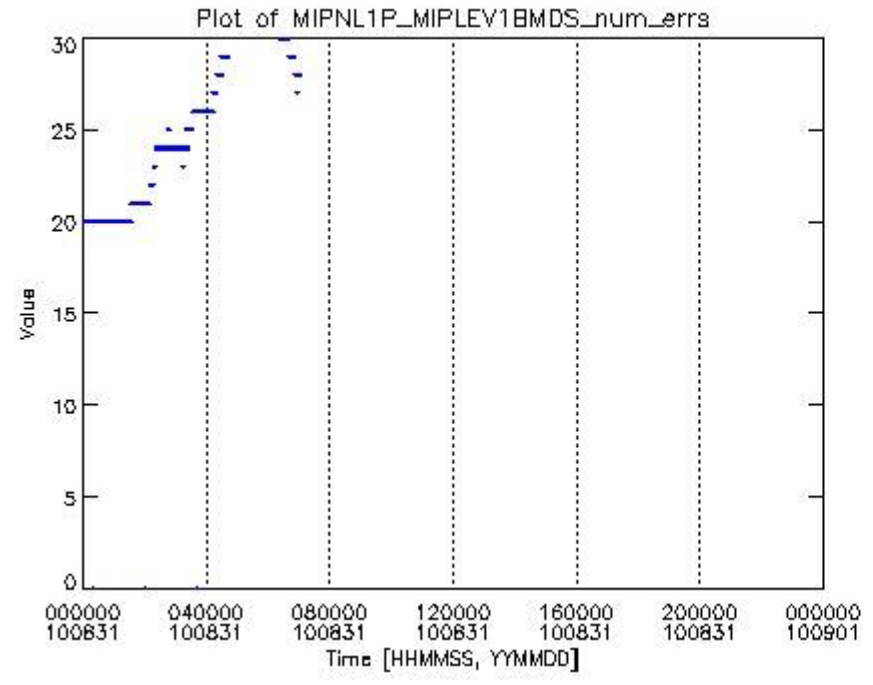
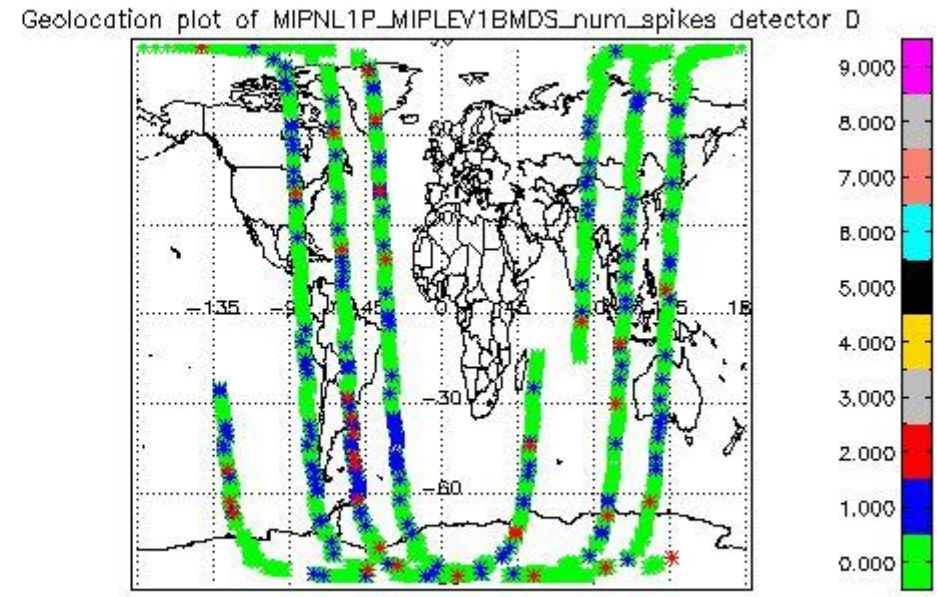
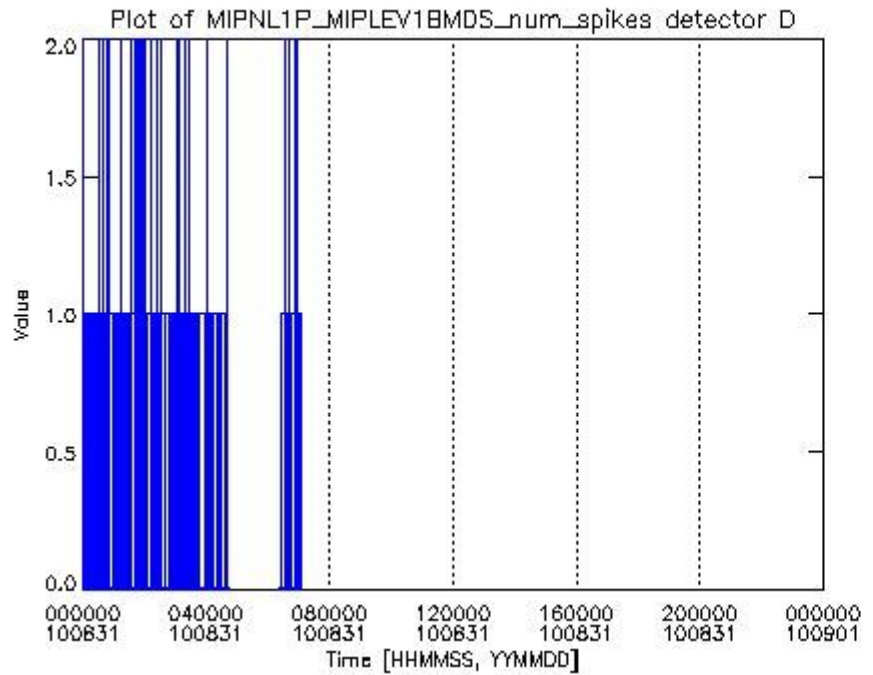


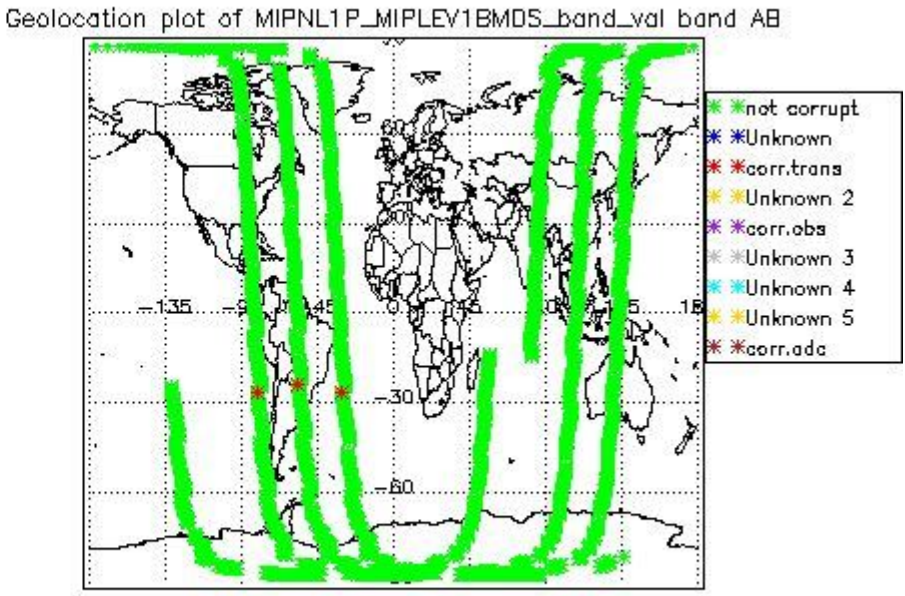
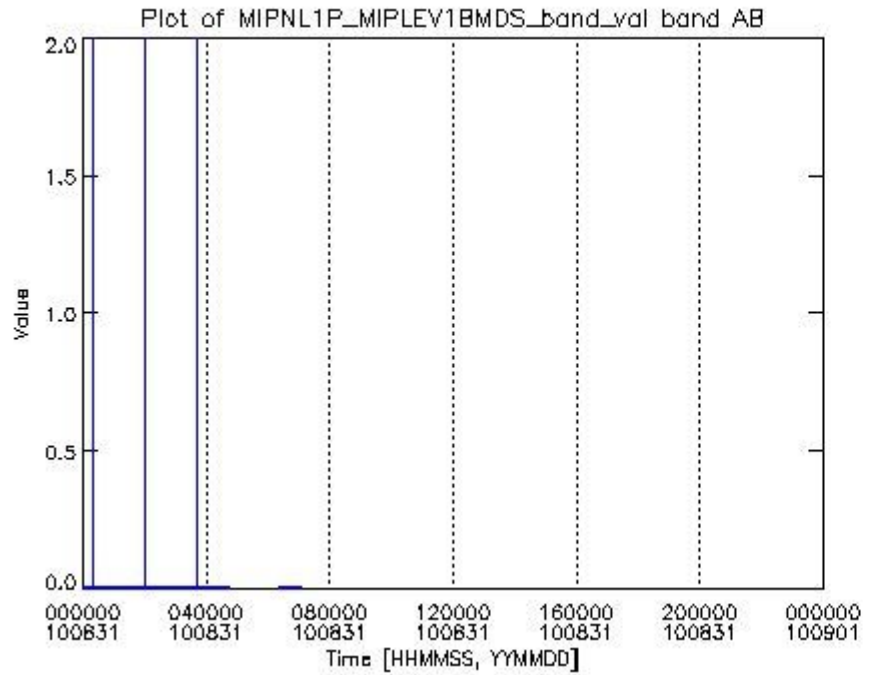
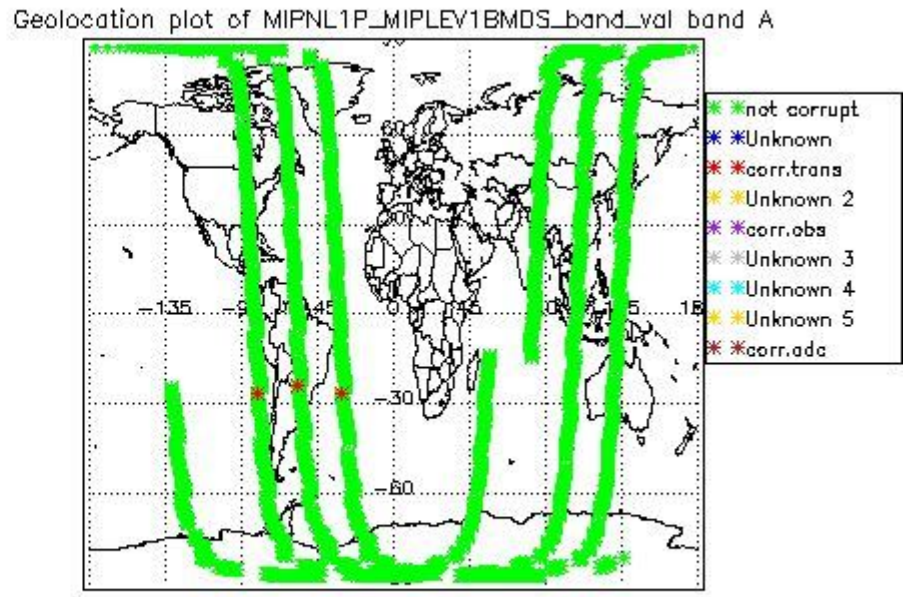
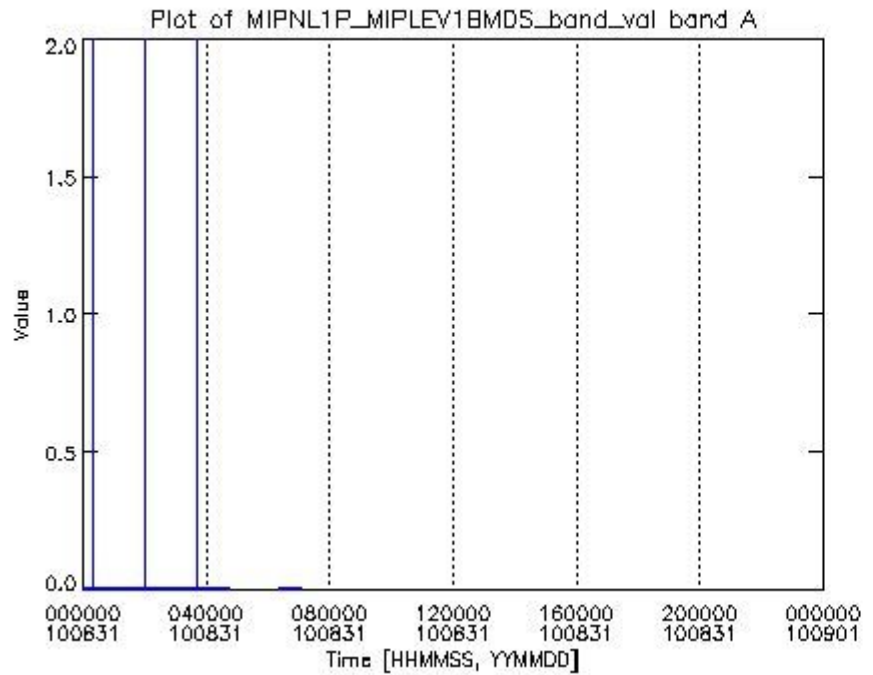




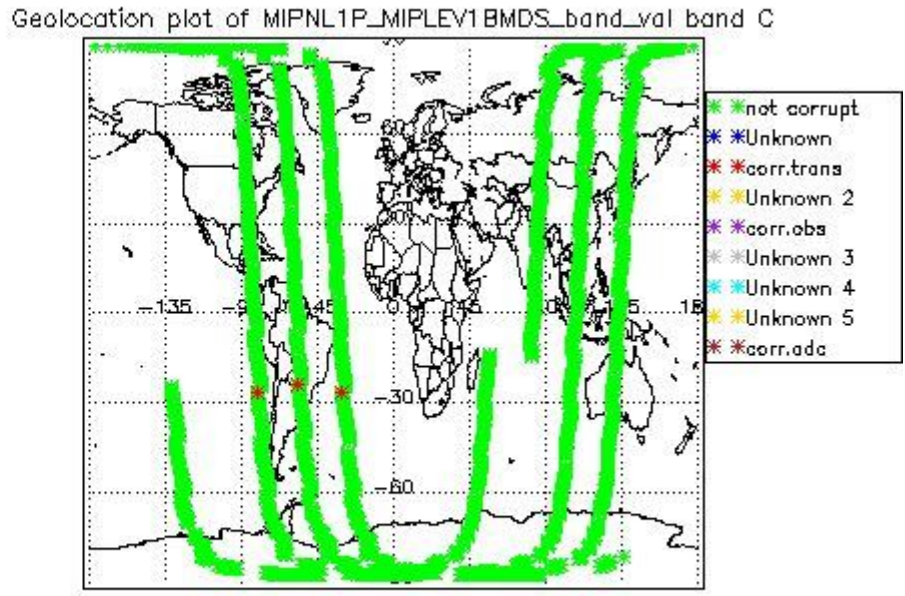
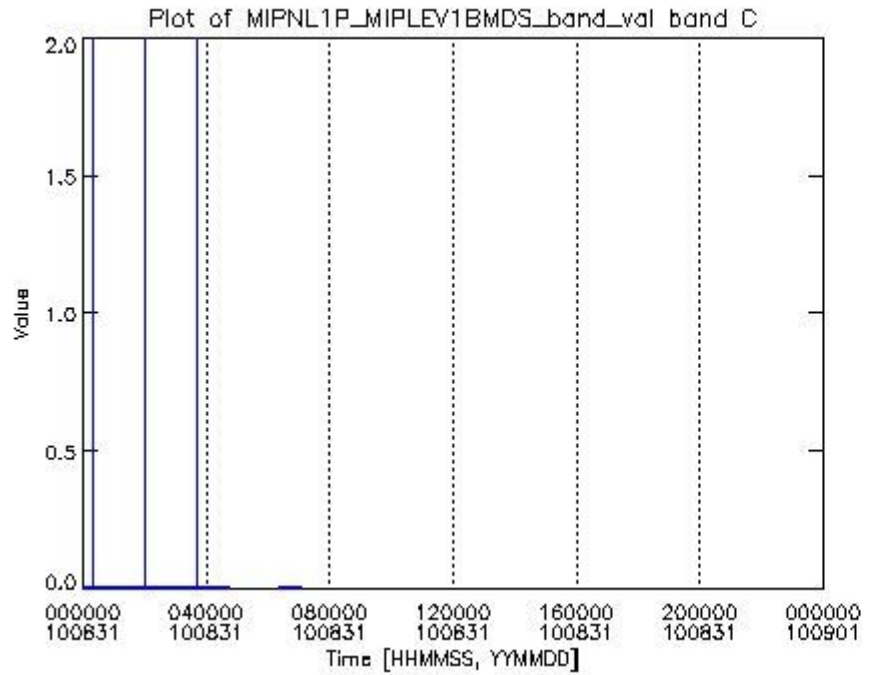
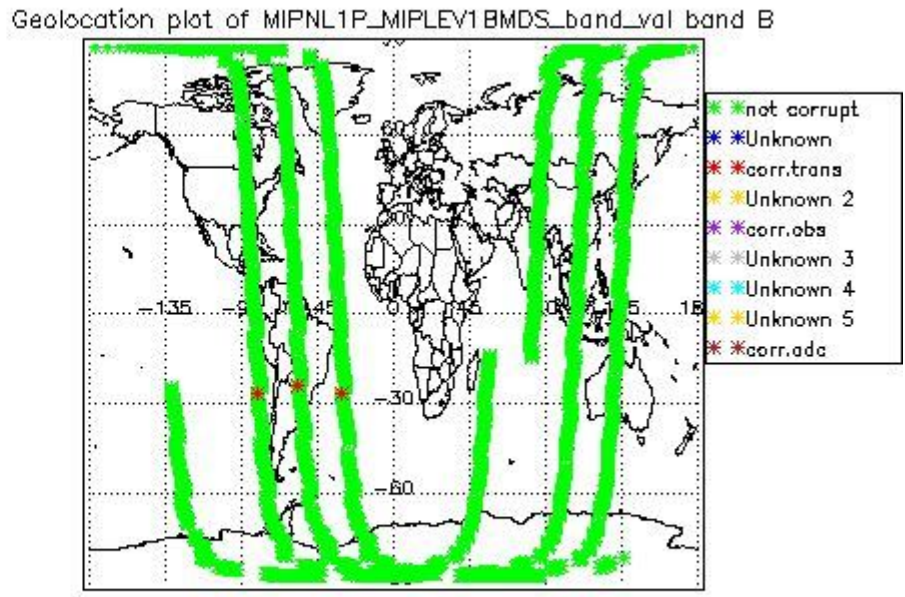
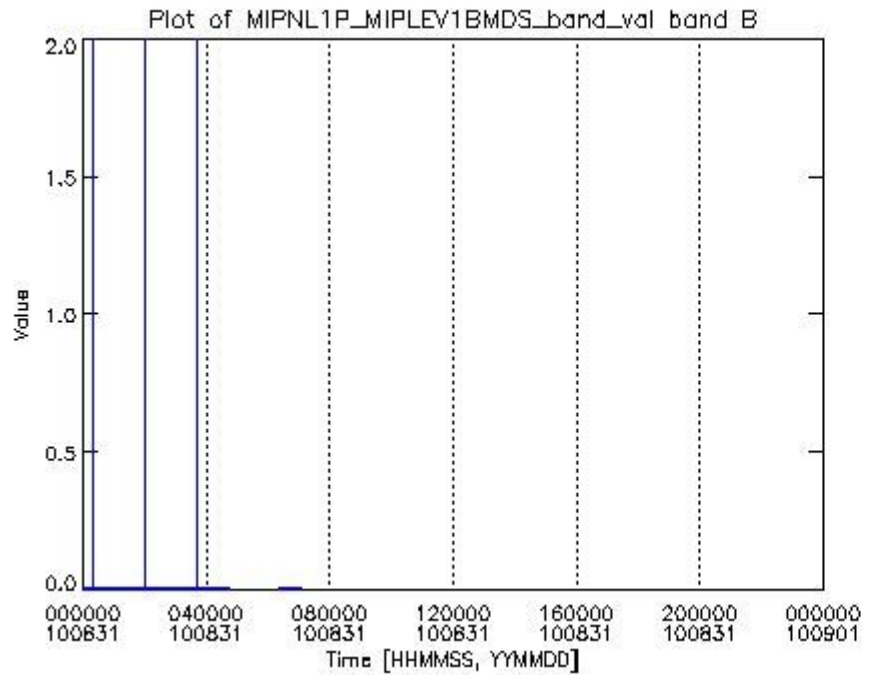


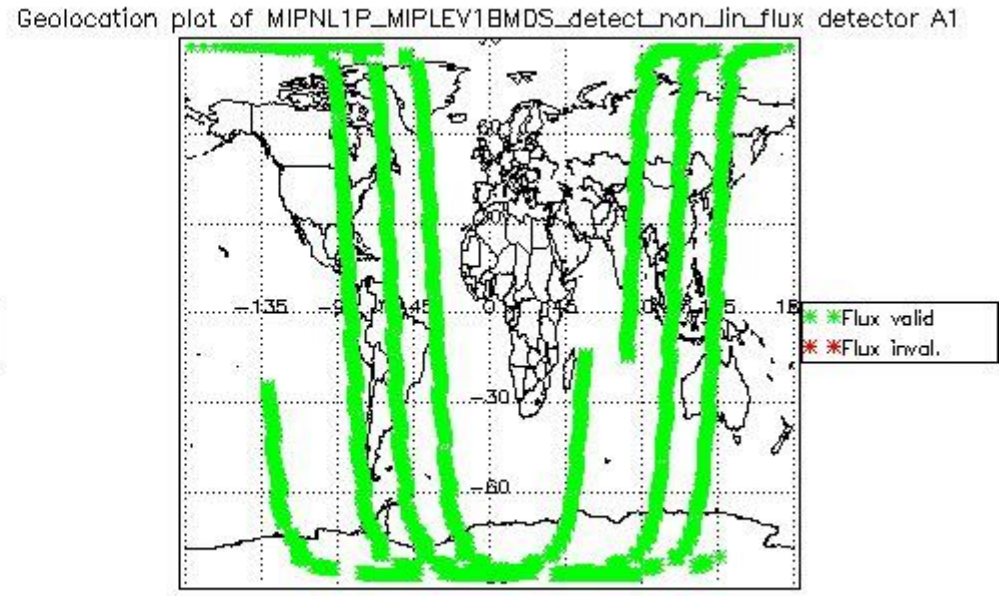
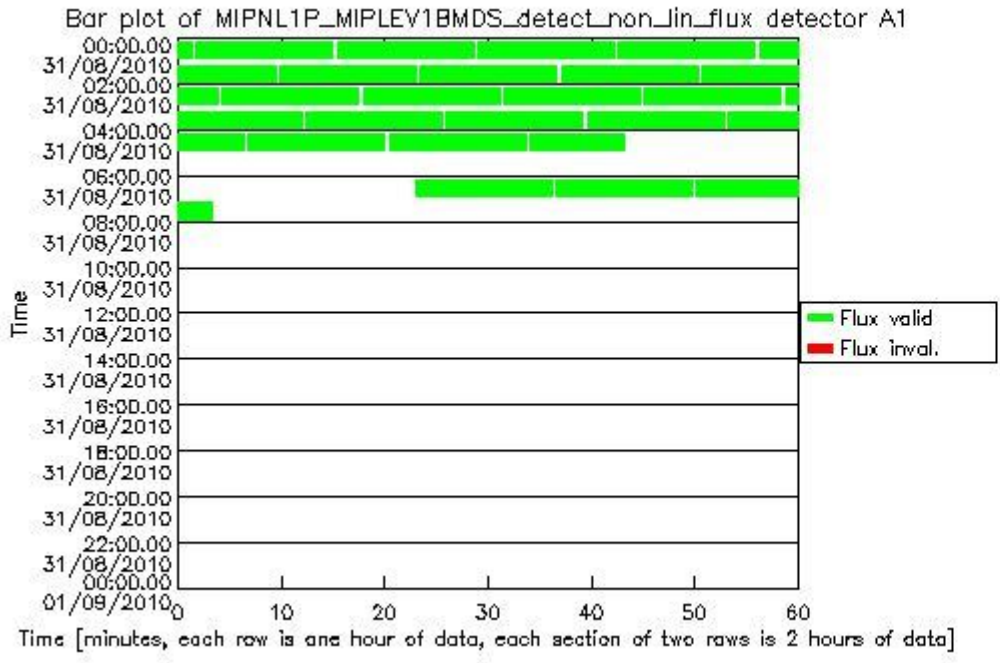
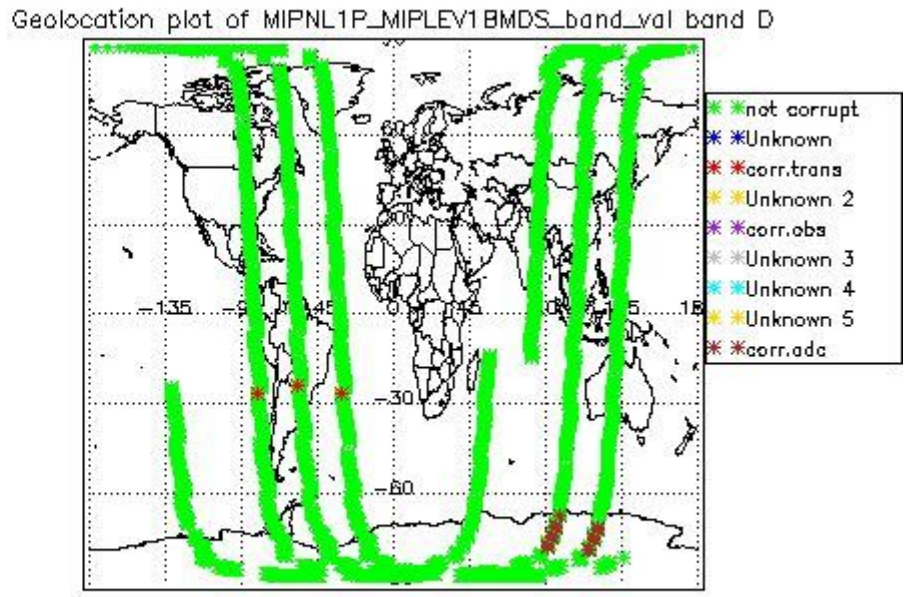
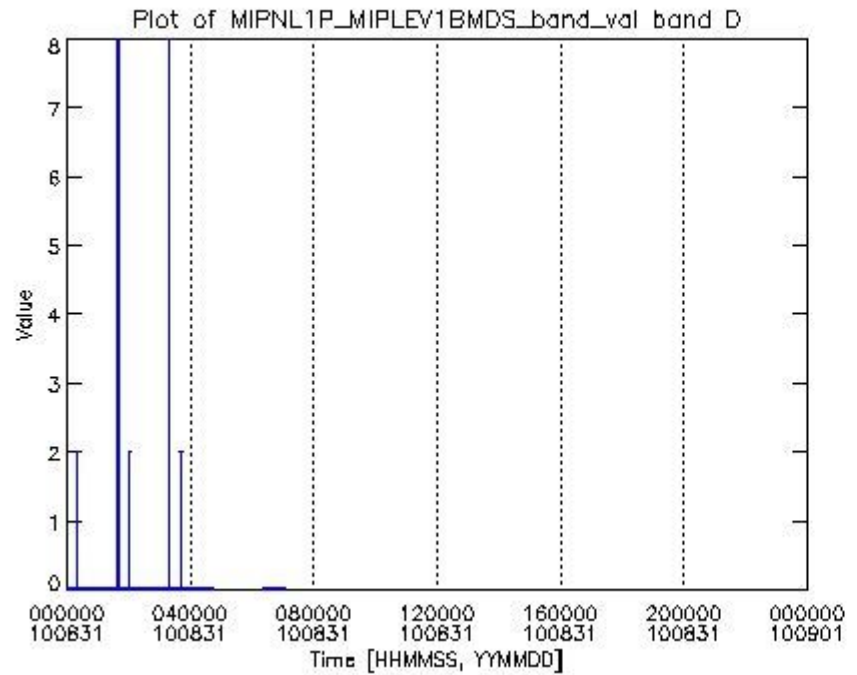






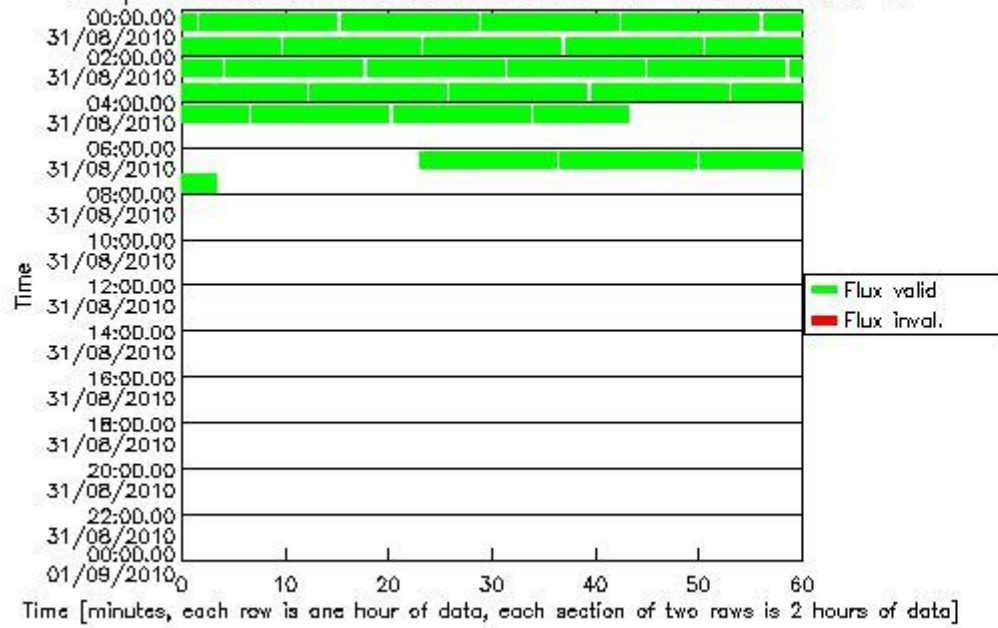




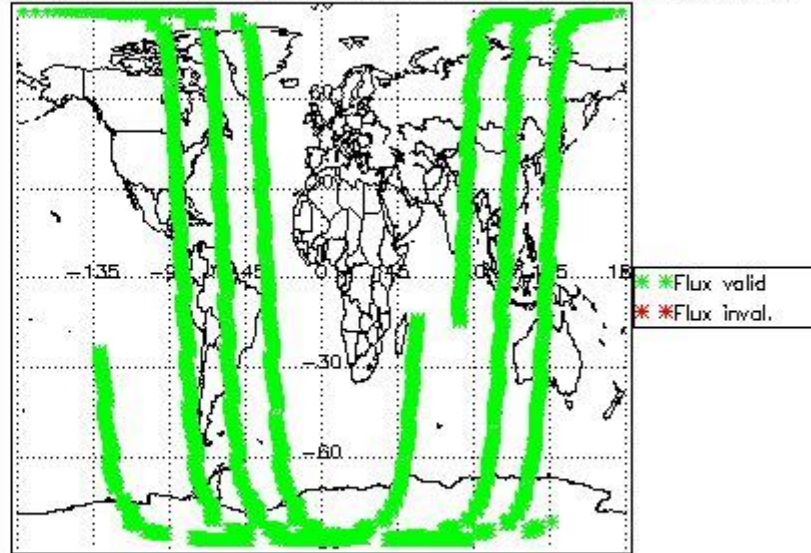




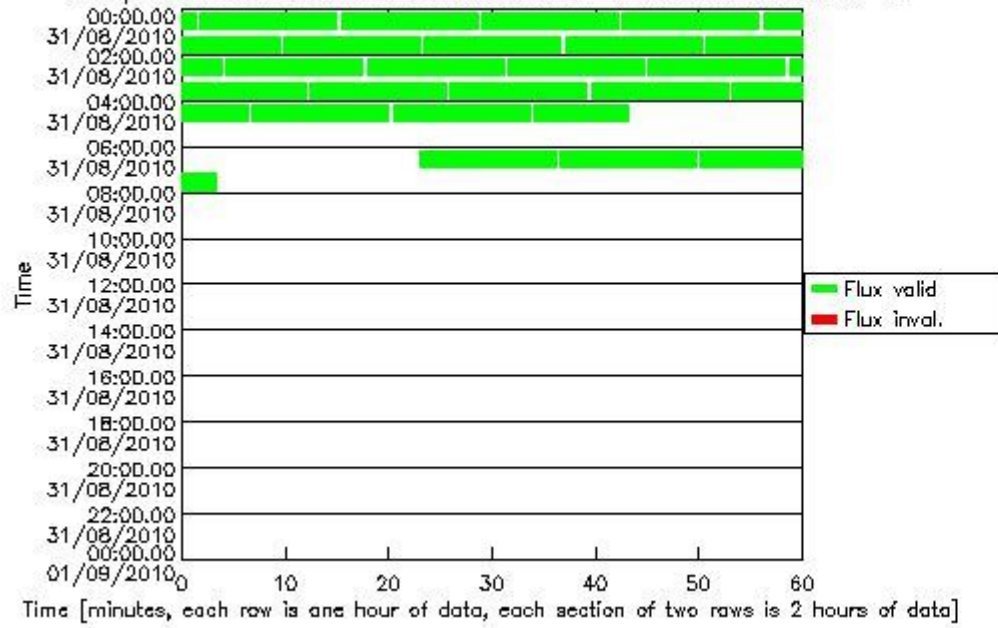
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2



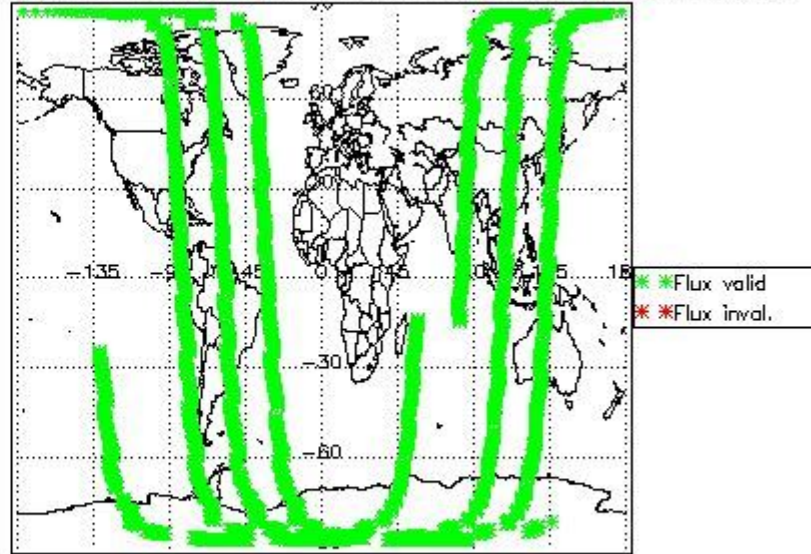
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2

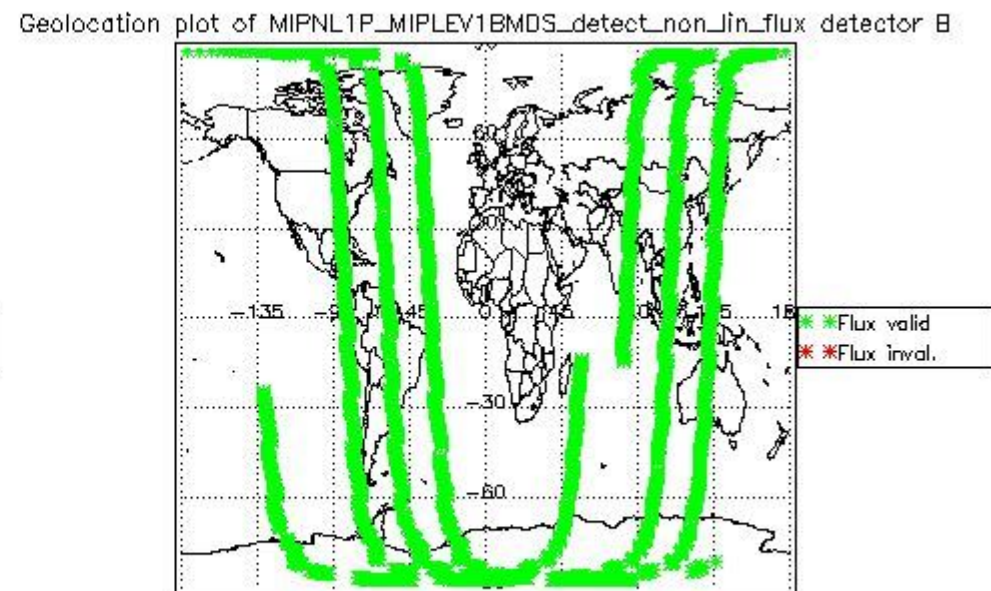
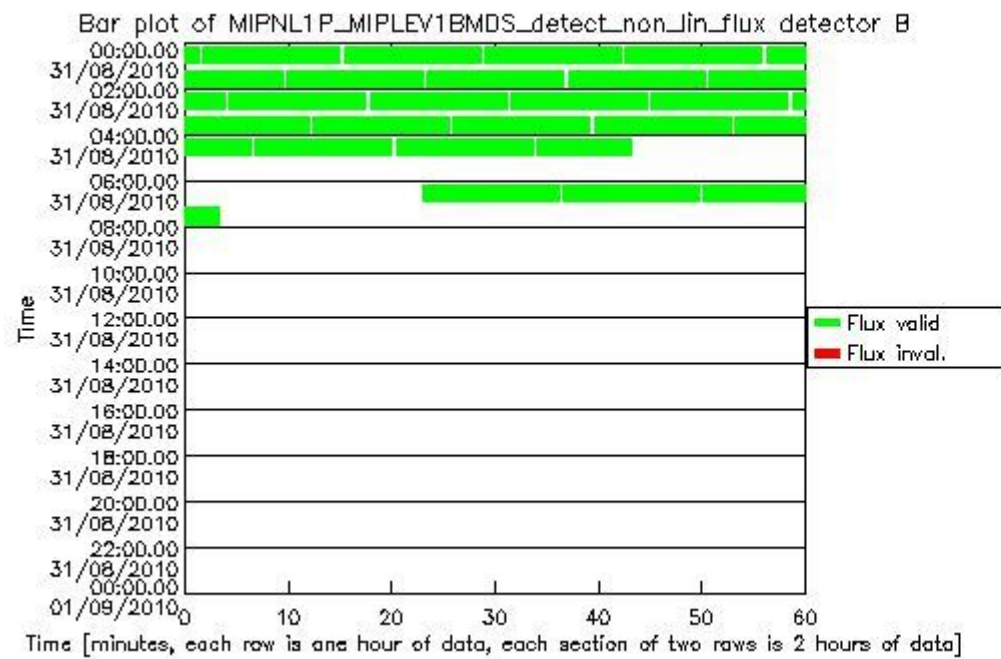


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB



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





### 1.2.3 Scan information ADS

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

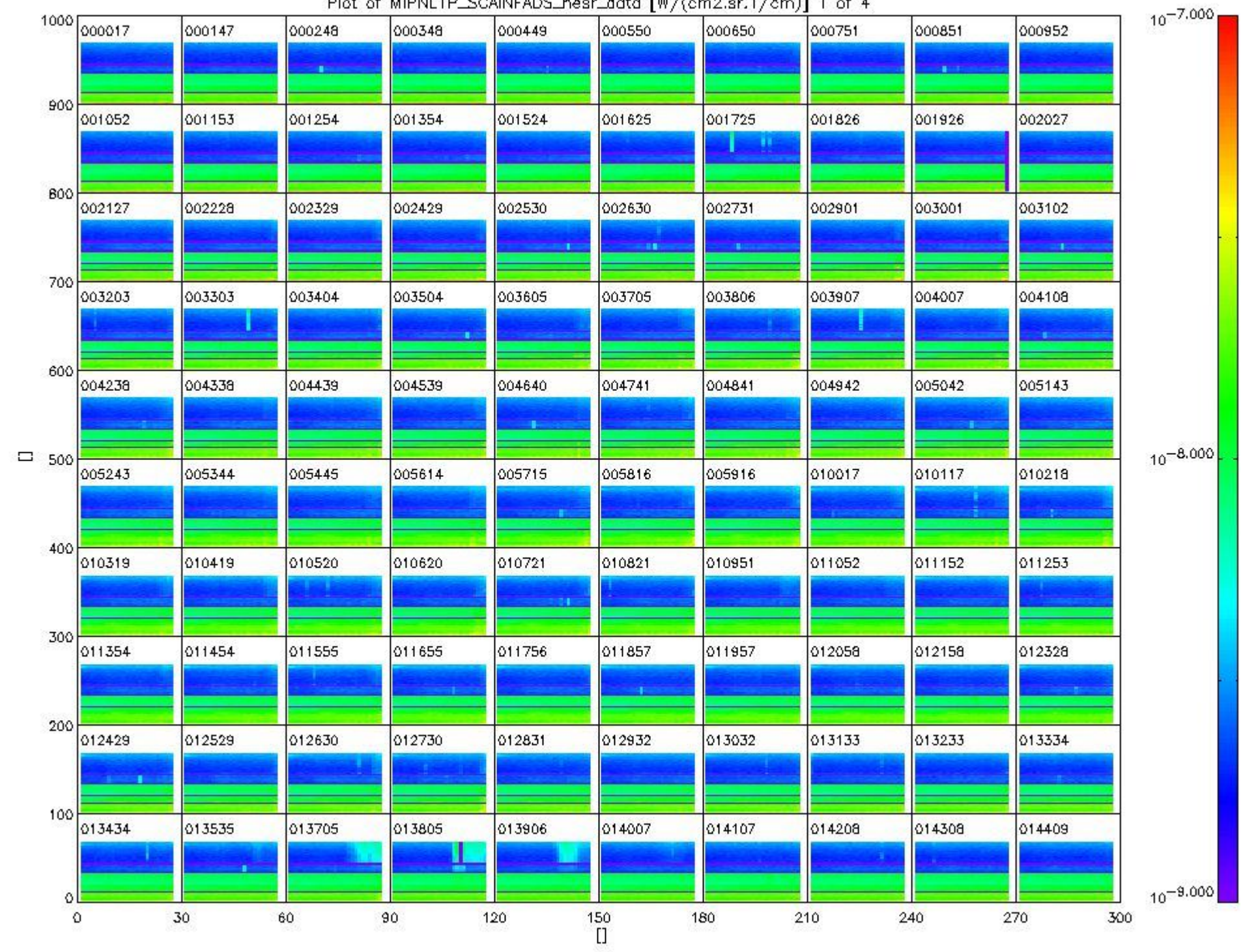
The horizontal axis represents the sweep ID (starts at 1).

The vertical axis shows the NESR data point index (starts at 0), which relates to wavenumber.

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\_near\_data [W/(cm<sup>2</sup>.sr.1/cm)] 1 of 4

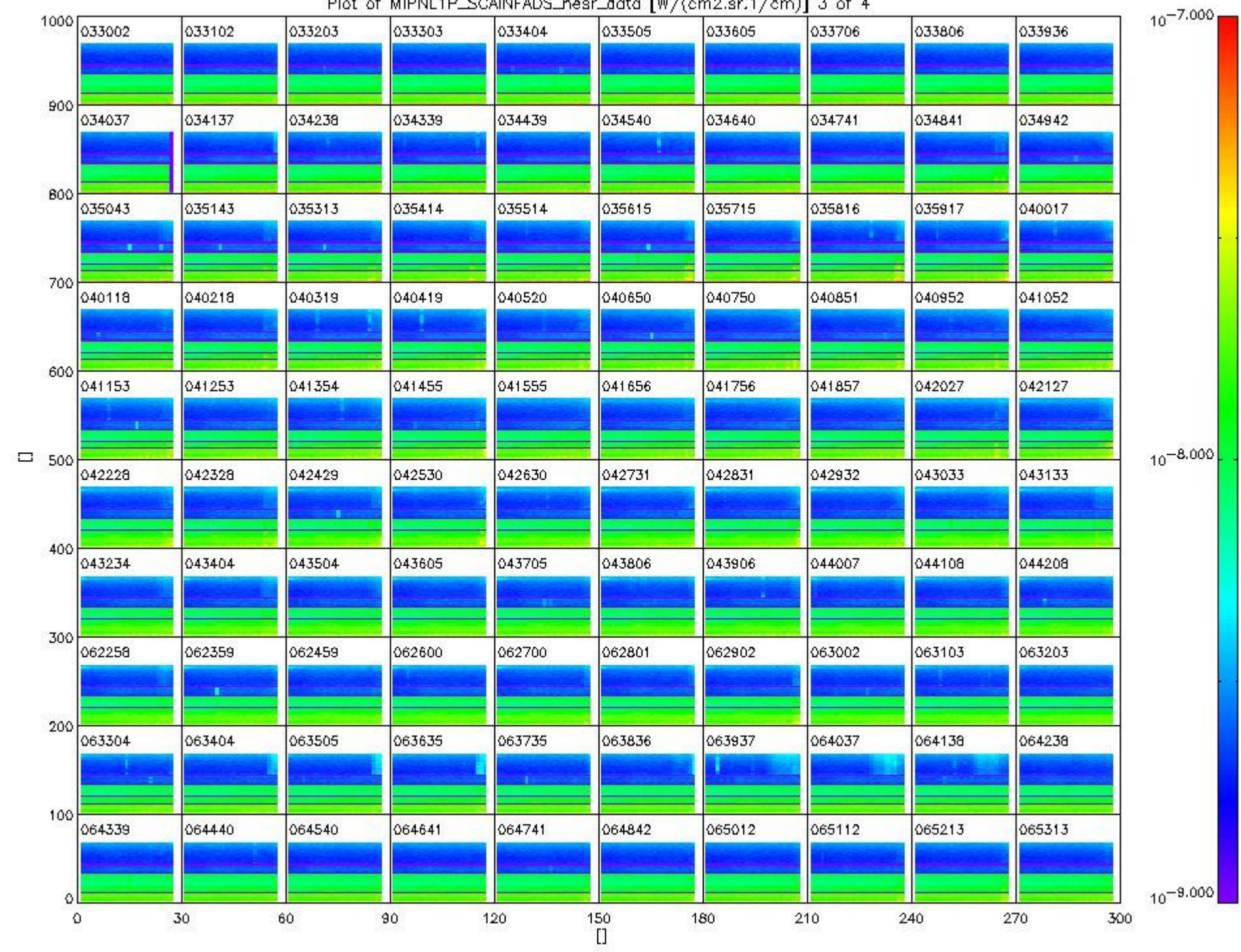


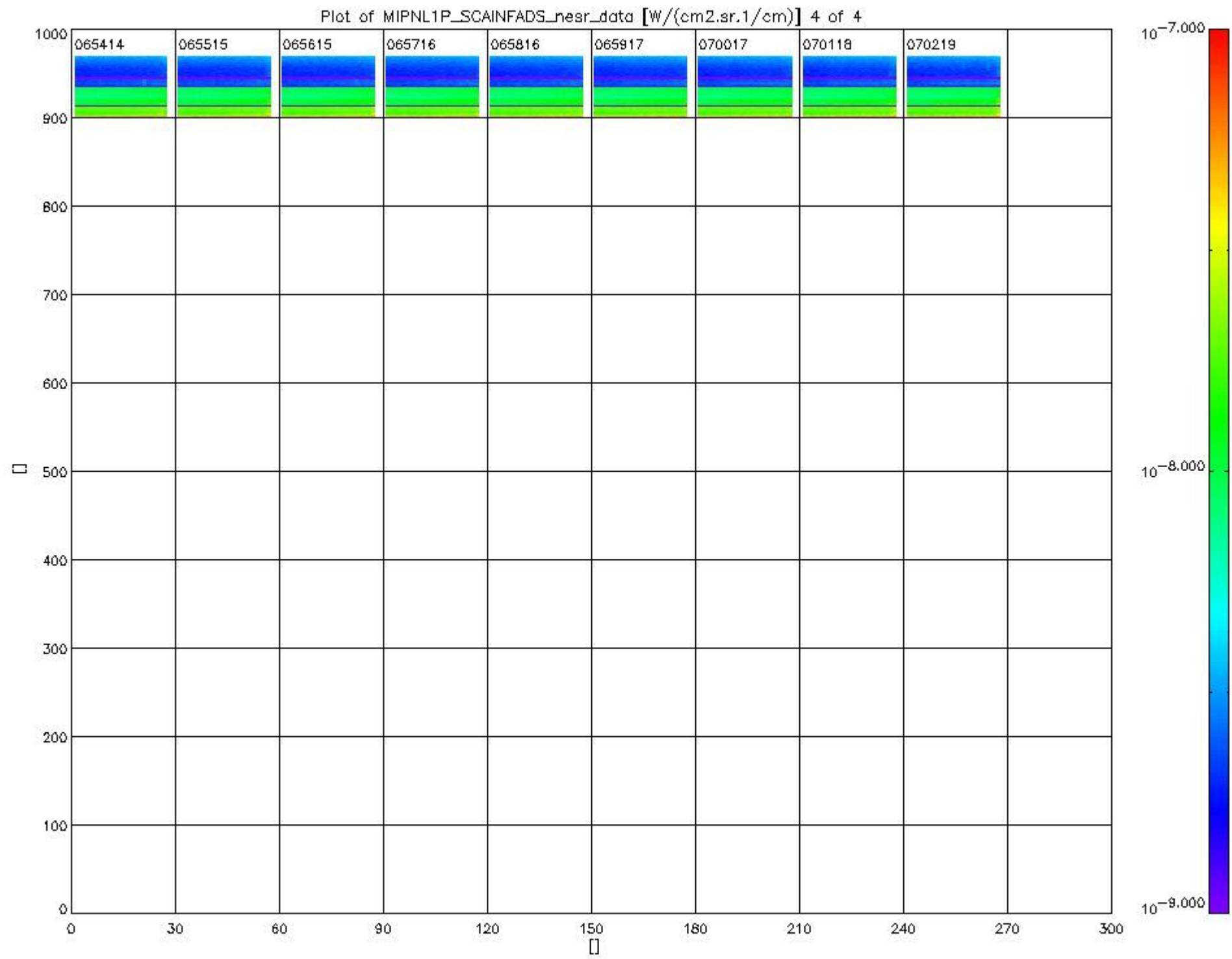






Plot of MIPNL1P\_SCAINFADS\_near\_data [W/(cm<sup>2</sup>.sr.1/cm)] 3 of 4



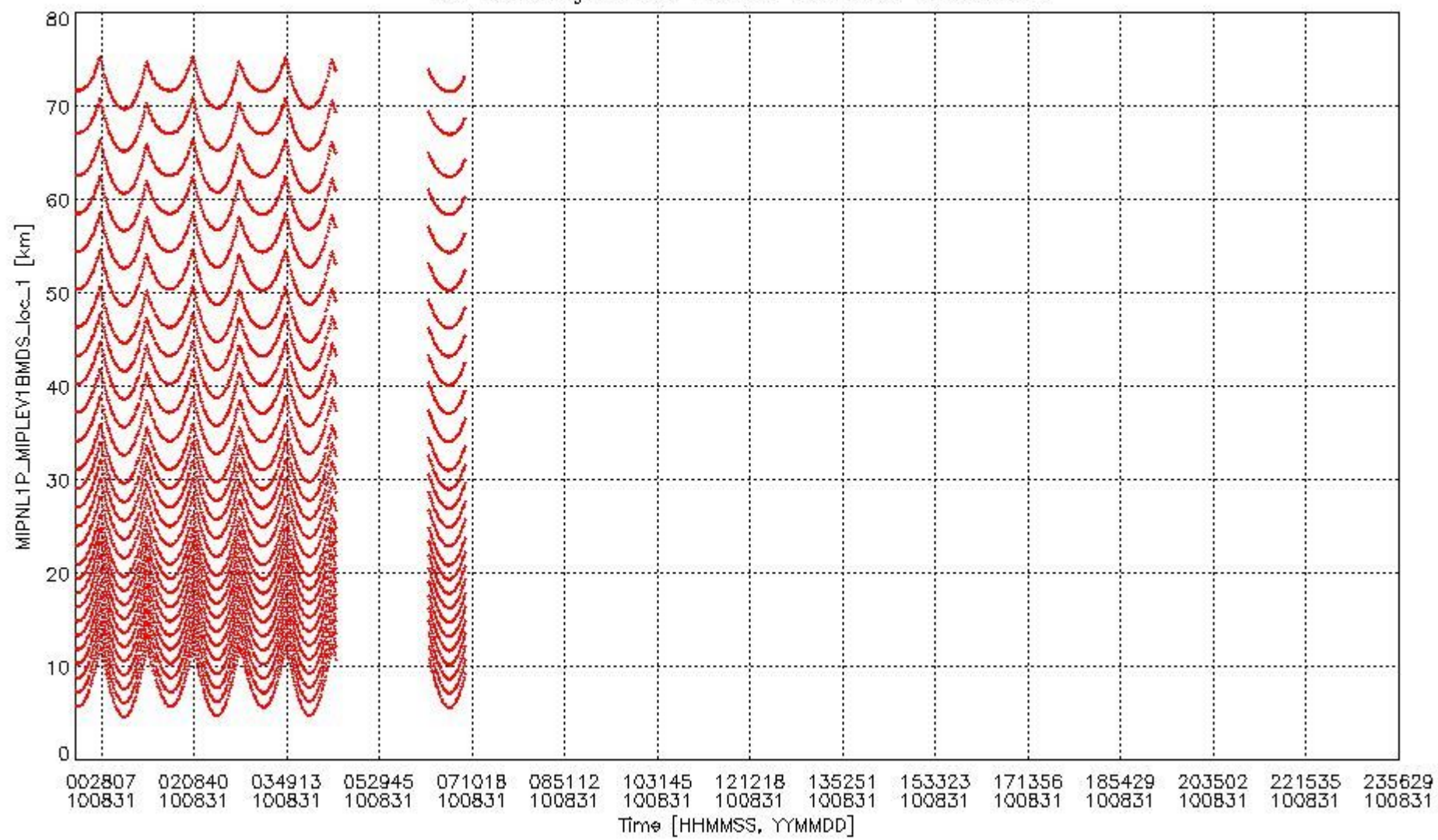


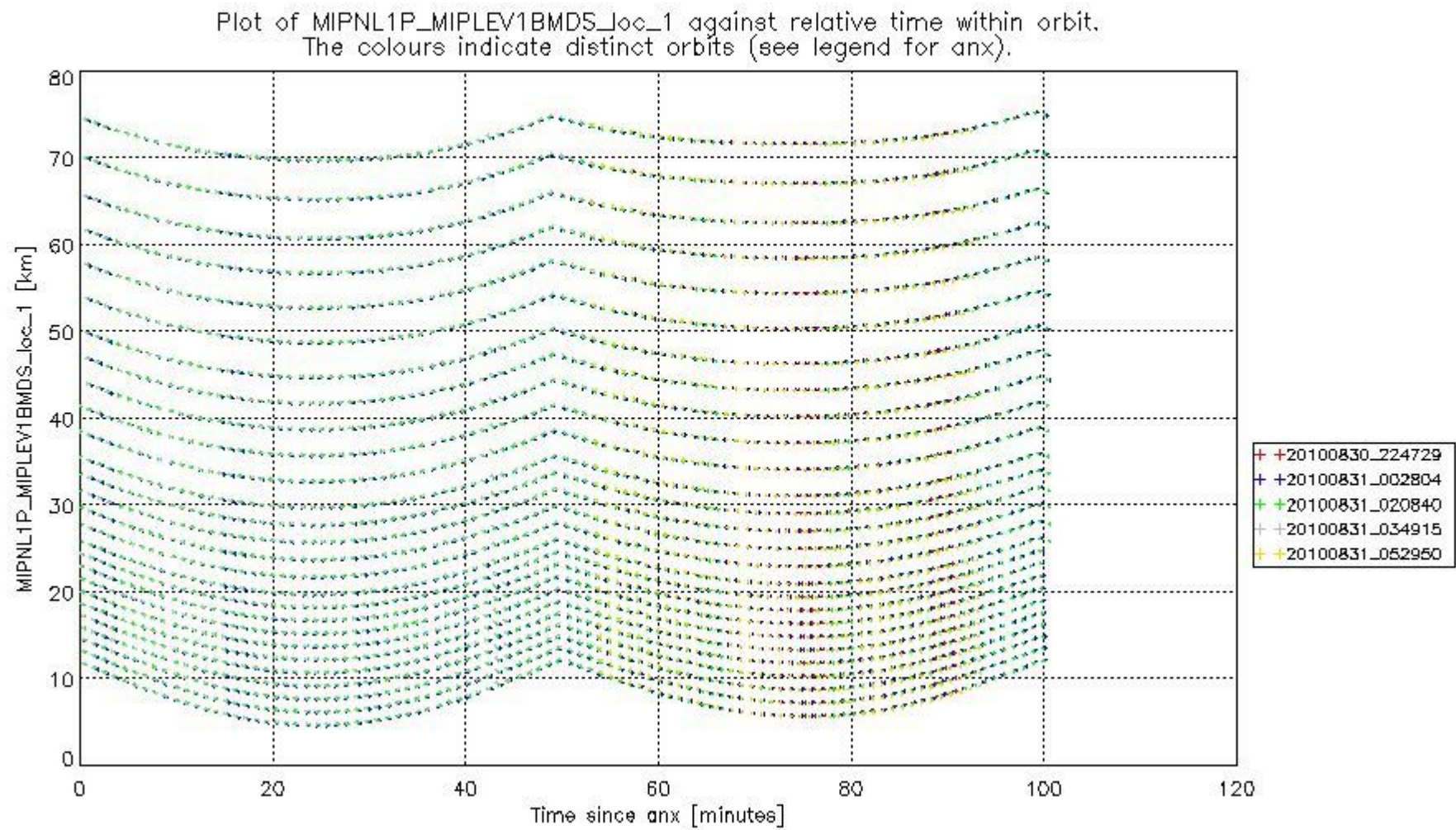
### 1.3 Physical Quality Indicators

#### 1.3.1 Tangent altitude



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





### 1.3.2 Cloud top height

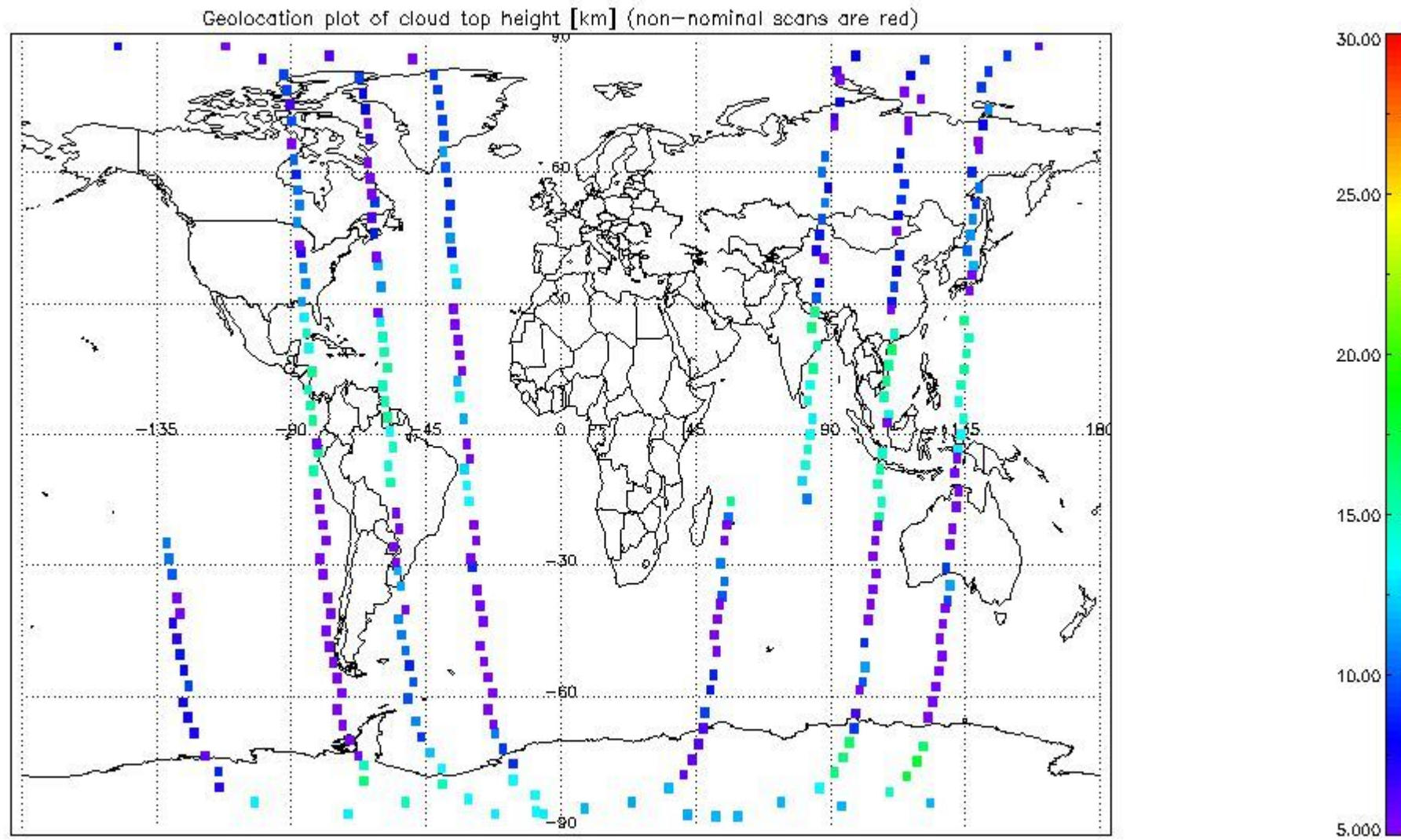
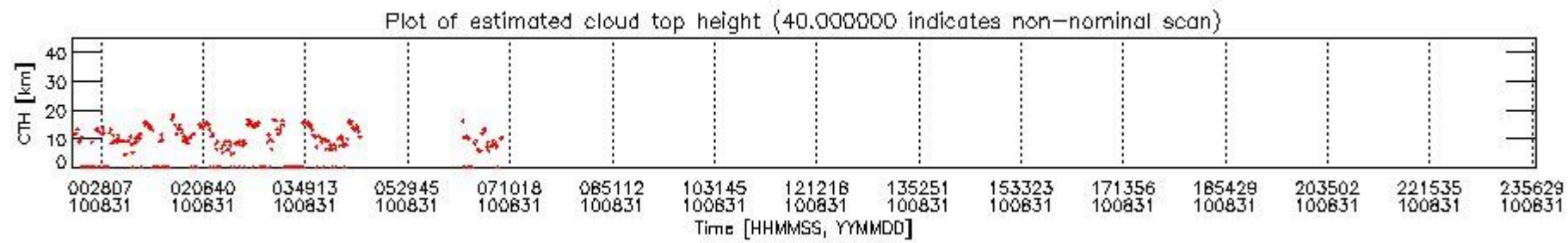
The following plots show an estimation of cloud top height, based on the ratio of two microwindows. Reference: R. Spang, J.J. Remedios and M.P. Barkley, "Colour indices for the detection and differentiation of cloud types in infra-red limb emission spectra", Adv Space Res, 33:1041-1047, (2004)

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



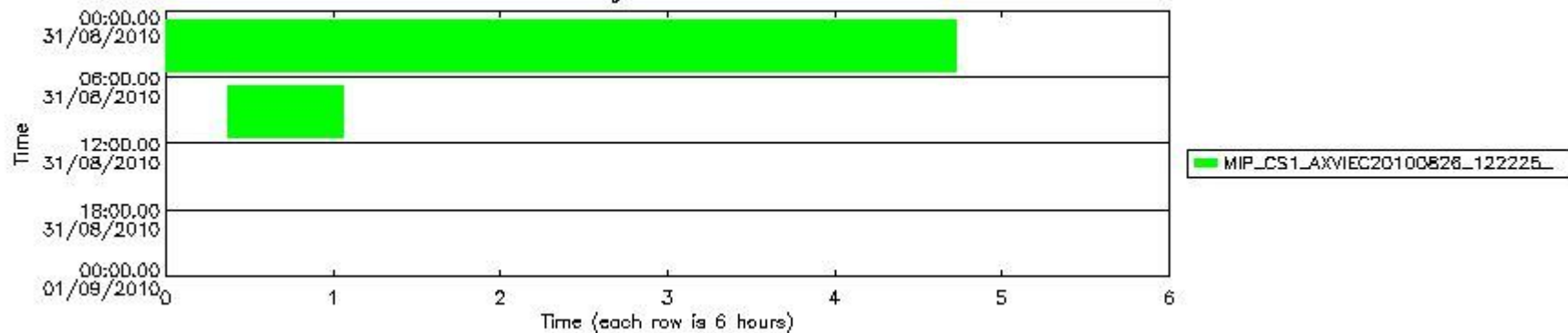


## 1.4 ADF monitoring

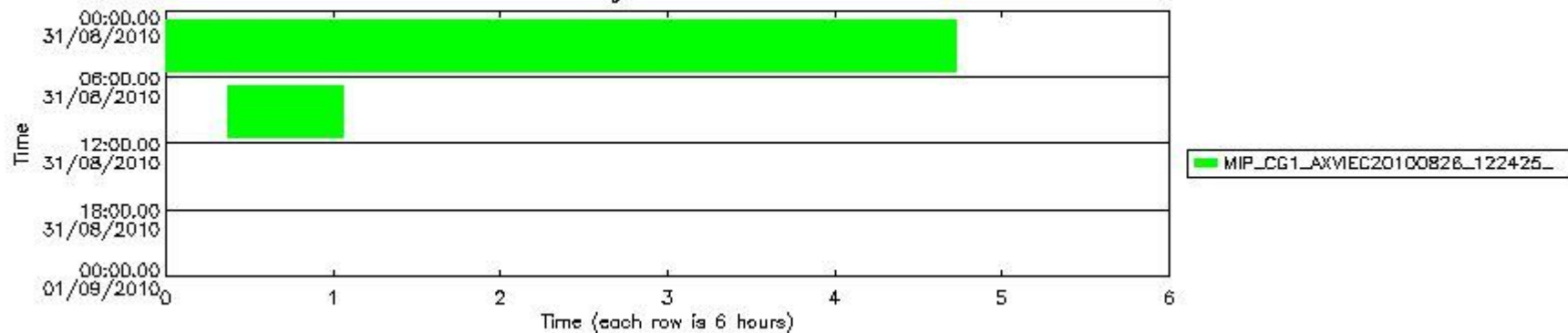
Number	ADF
0	AUX_FRO_AXVPDS20100902_092113_20100829_221000_20100901_005000
1	MIP_CA1_AXNIEC20100125_145055_20100122_000000_20150122_000000
2	MIP_CG1_AXVIEC20100826_122425_20100826_000000_20150826_000000
3	MIP_CL1_AXNIEC20100125_145256_20100122_000000_20150122_000000
4	MIP_CO1_AXVIEC20100826_122852_20100826_000000_20150826_000000
5	MIP_CS1_AXVIEC20100826_122225_20100826_000000_20150826_000000
6	MIP_MW1_AXNIEC20100125_145445_20100122_000000_20150122_000000
7	MIP_PS1_AXNIEC20100125_145601_20100122_000000_20150122_000000

Number	Product name	#CS1	#CG1	#CL1	#CA1	#CO1	#MW1	#PS1	#FPO
0	MIP_NL__1PRDPA20100830_224006_000060152092_00302_44444_4980.N1	5	2	3	1	4	6	7	0
1	MIP_NL__1PRDPA20100831_002027_000060752092_00303_44445_4981.N1	5	2	3	1	4	6	7	0
2	MIP_NL__1PRDPA20100831_020148_000059842092_00304_44446_4982.N1	5	2	3	1	4	6	7	0
3	MIP_NL__1PRDPA20100831_034137_000036862092_00305_44447_4983.N1	5	2	3	1	4	6	7	0
4	MIP_NL__1PRDPA20100831_062258_000024152092_00306_44448_4984.N1	5	2	3	1	4	6	7	0

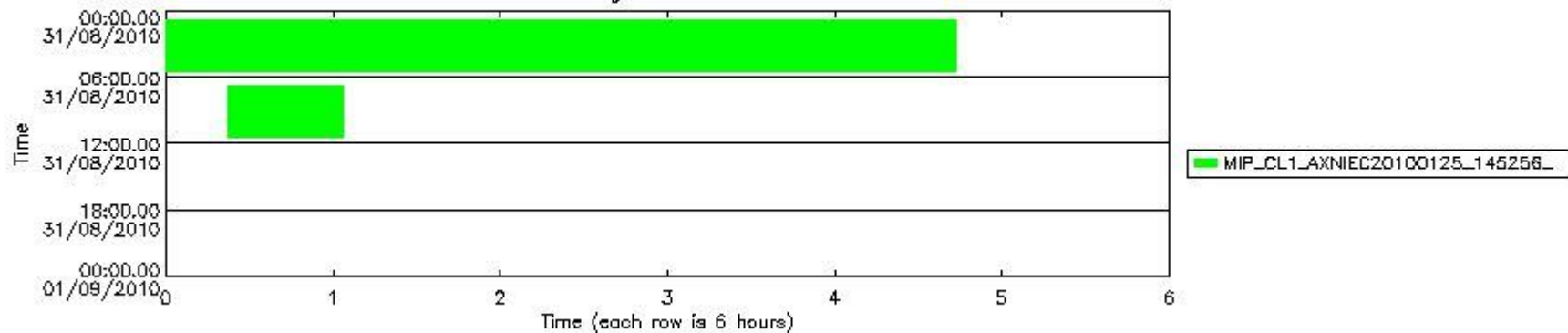
Bar plot of ADFs used for ILS&SPECTRAL CAL FILE.  
See legend for details.



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

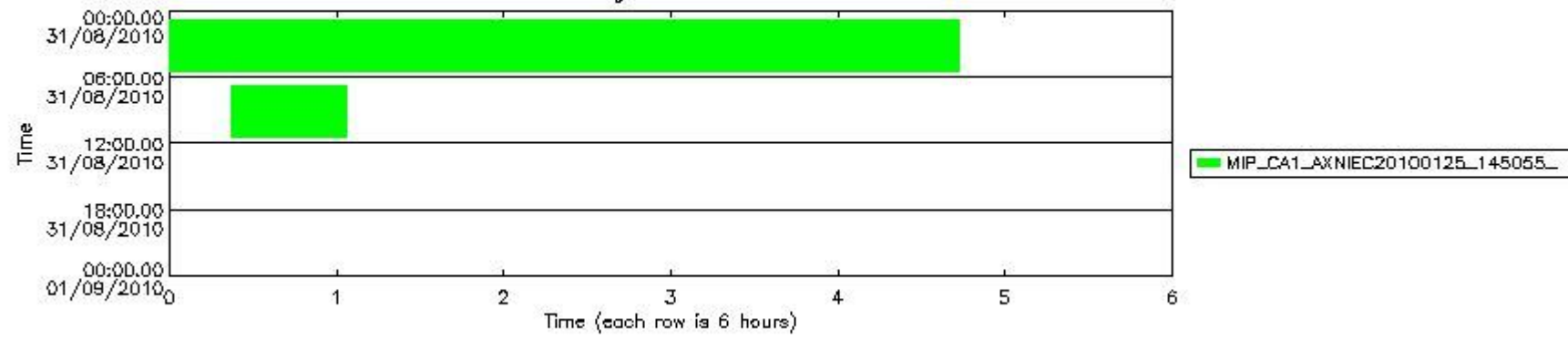


Bar plot of ADFs used for LINE OF SIGHT FILE.  
See legend for details.

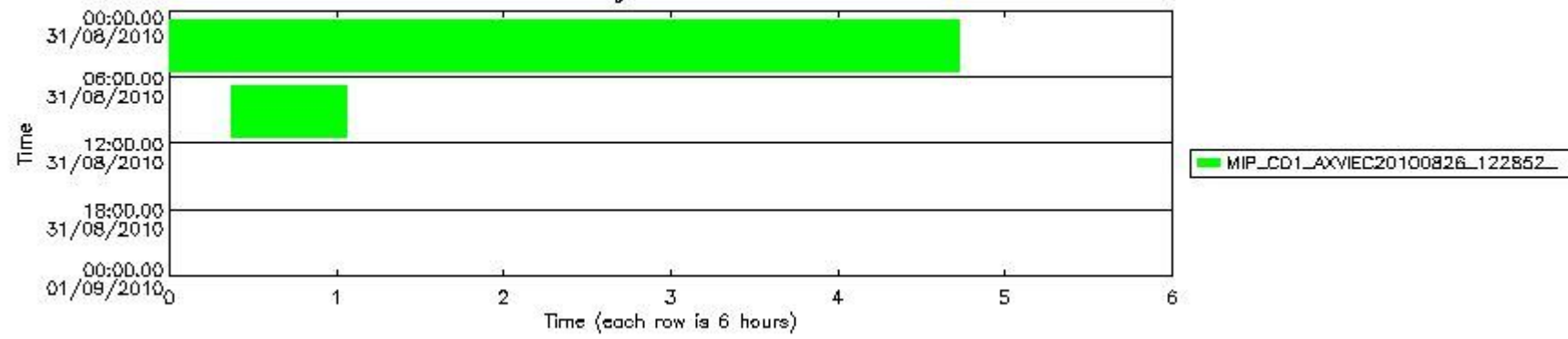




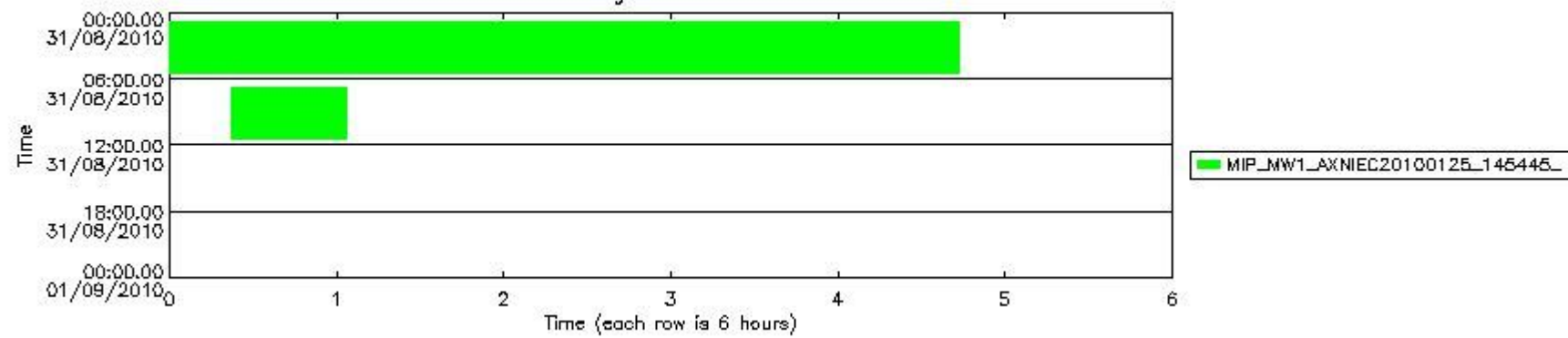
Bar plot of ADFs used for INSTRUMENT CHAR FILE.  
See legend for details.



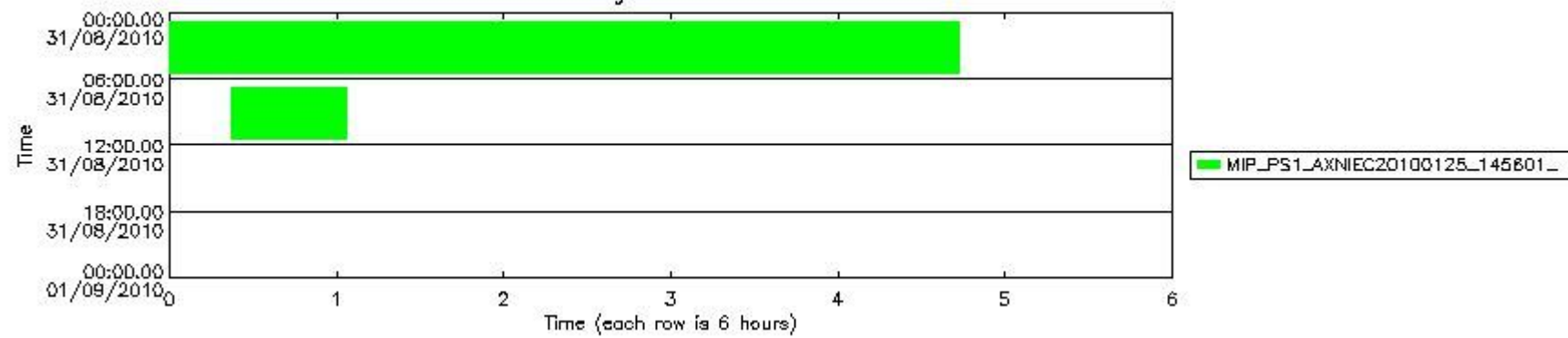
Bar plot of ADFs used for OFFSET VALIDATION FILE.  
See legend for details.



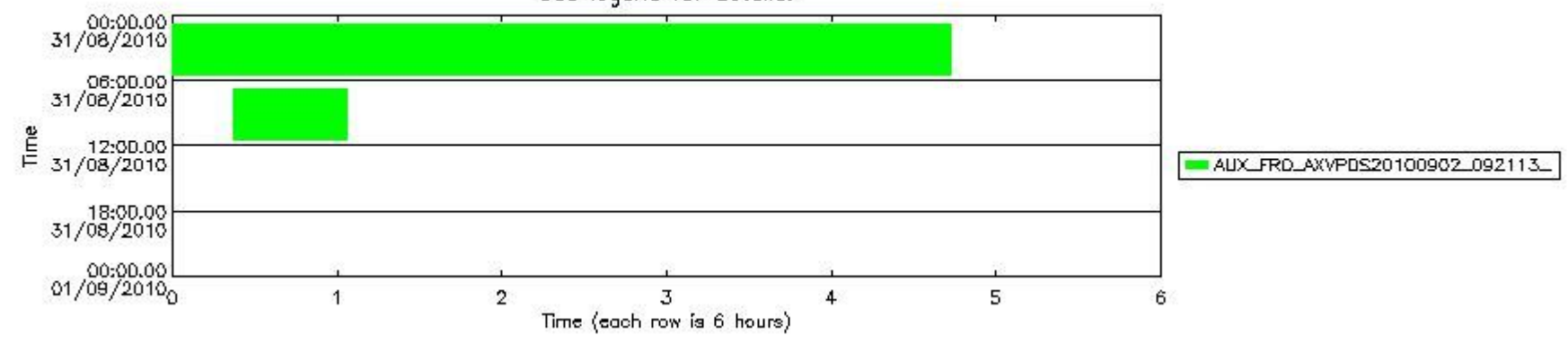
Bar plot of ADFs used for MICROWINDOWS FILE.  
See legend for details.



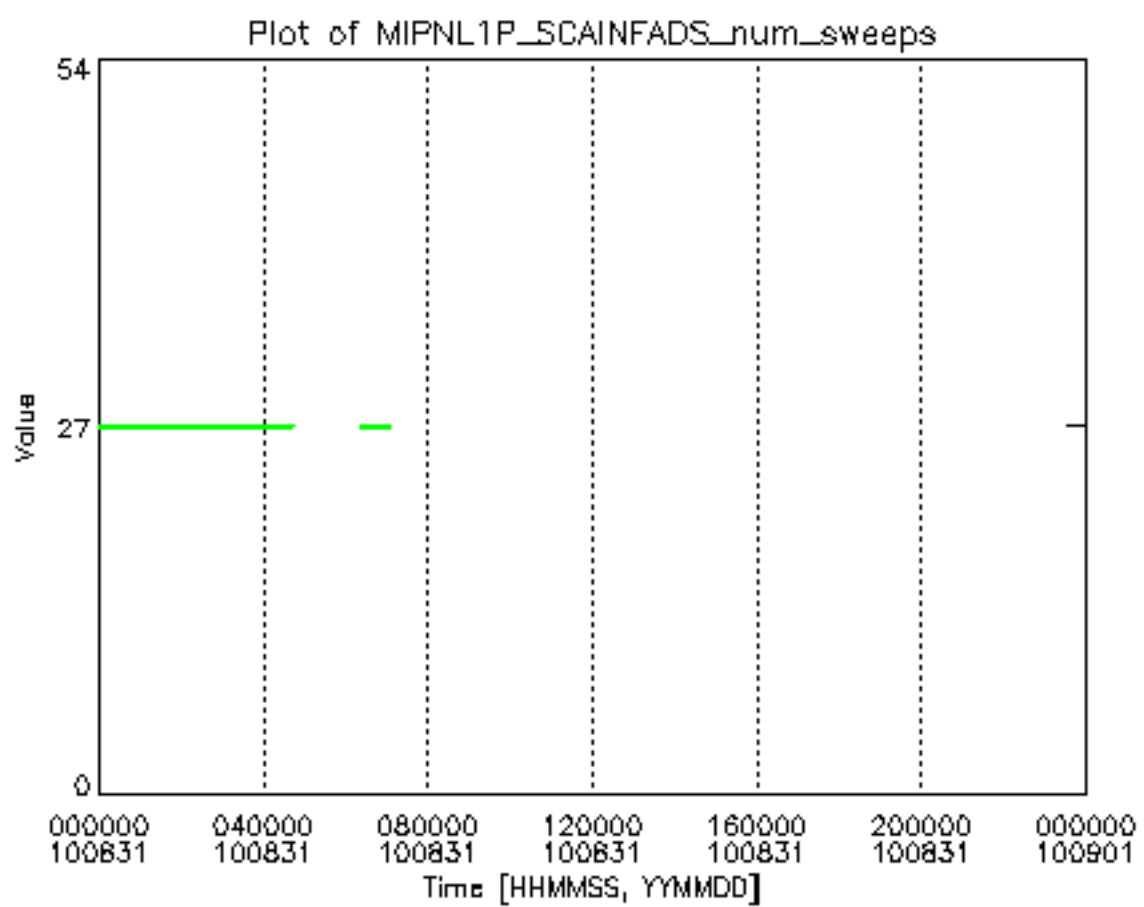
Bar plot of ADFs used for PROCESS PARAMETERS FILE.  
See legend for details.



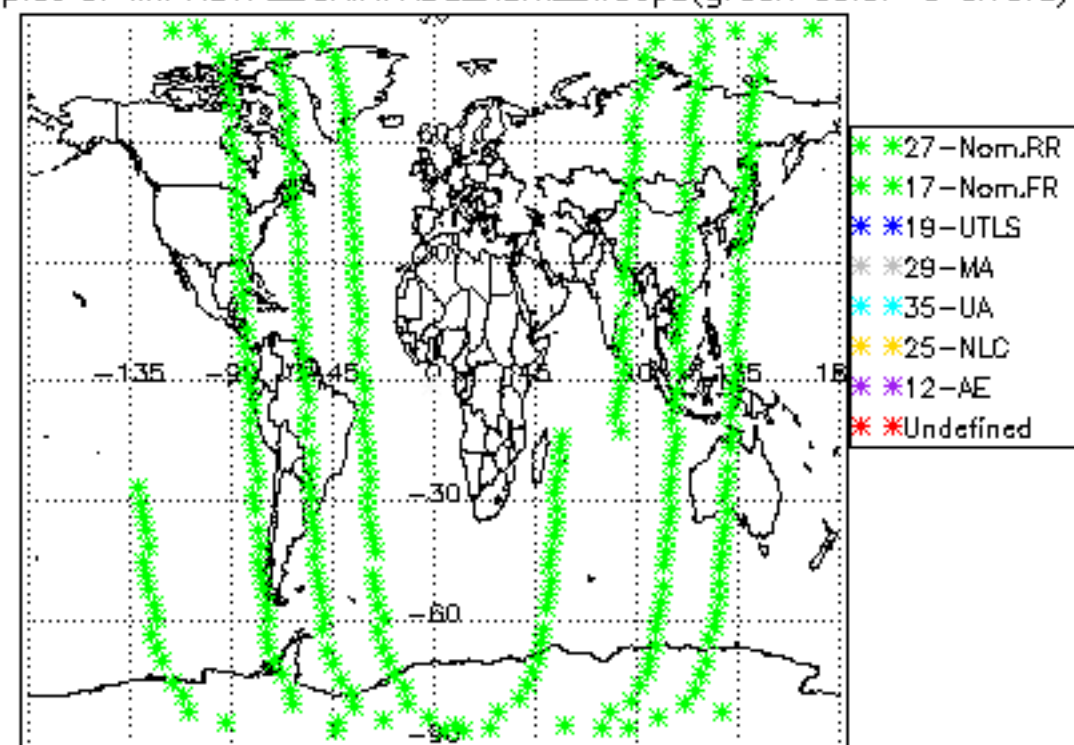
Bar plot of ADFs used for ORBIT DATA FILE.  
See legend for details.

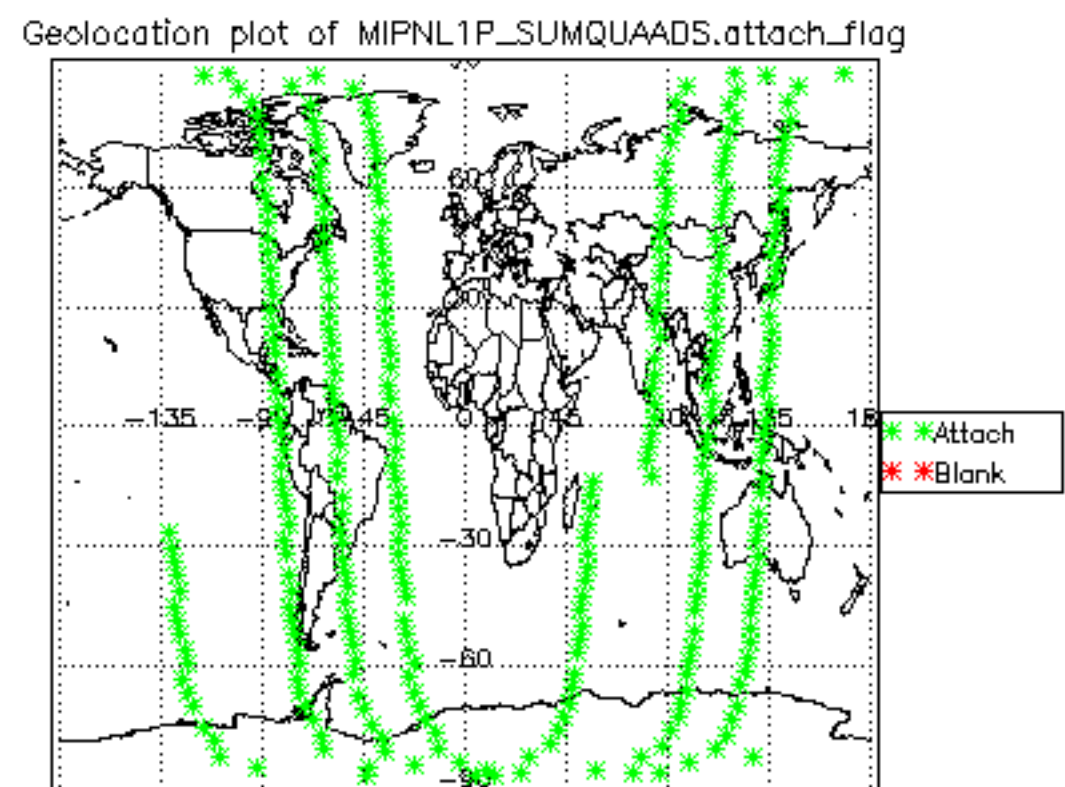
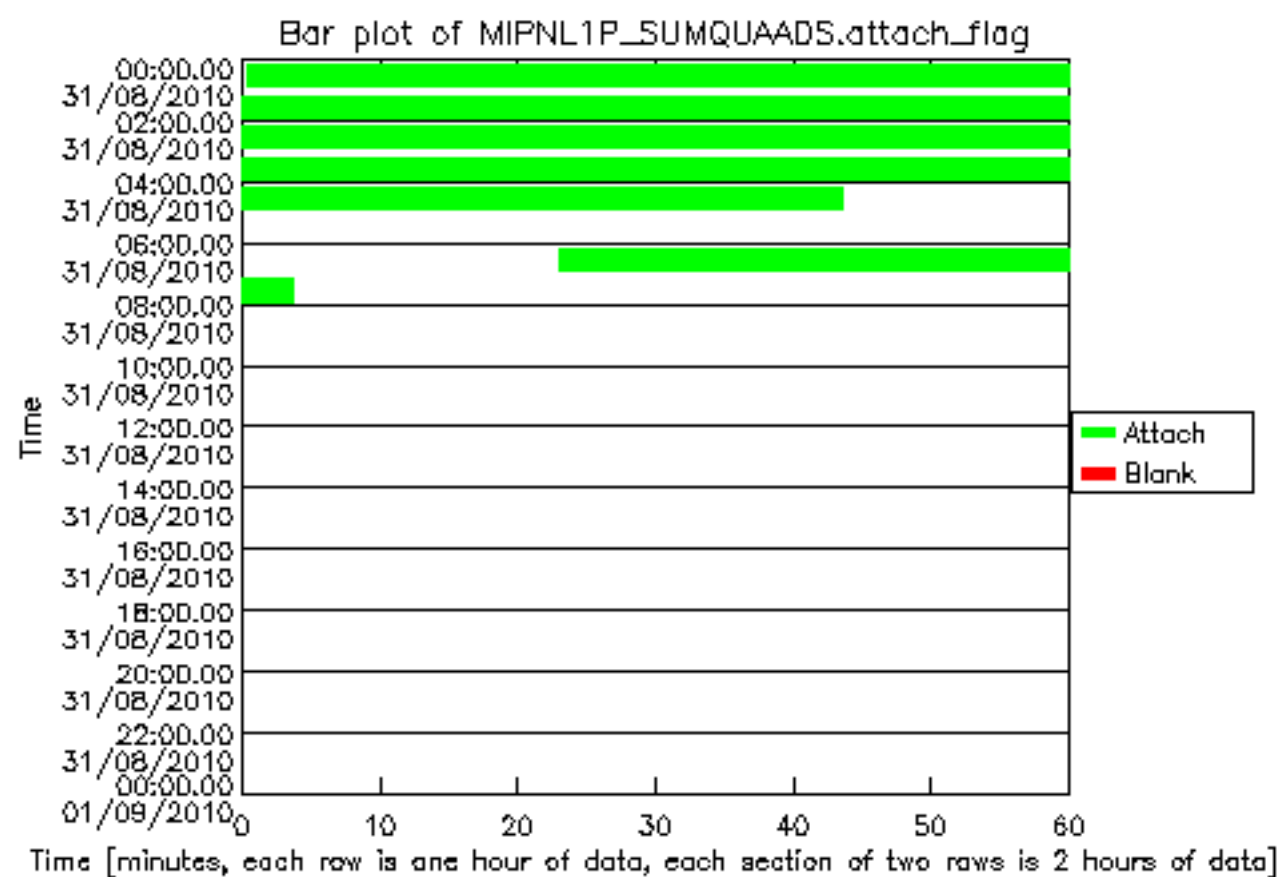




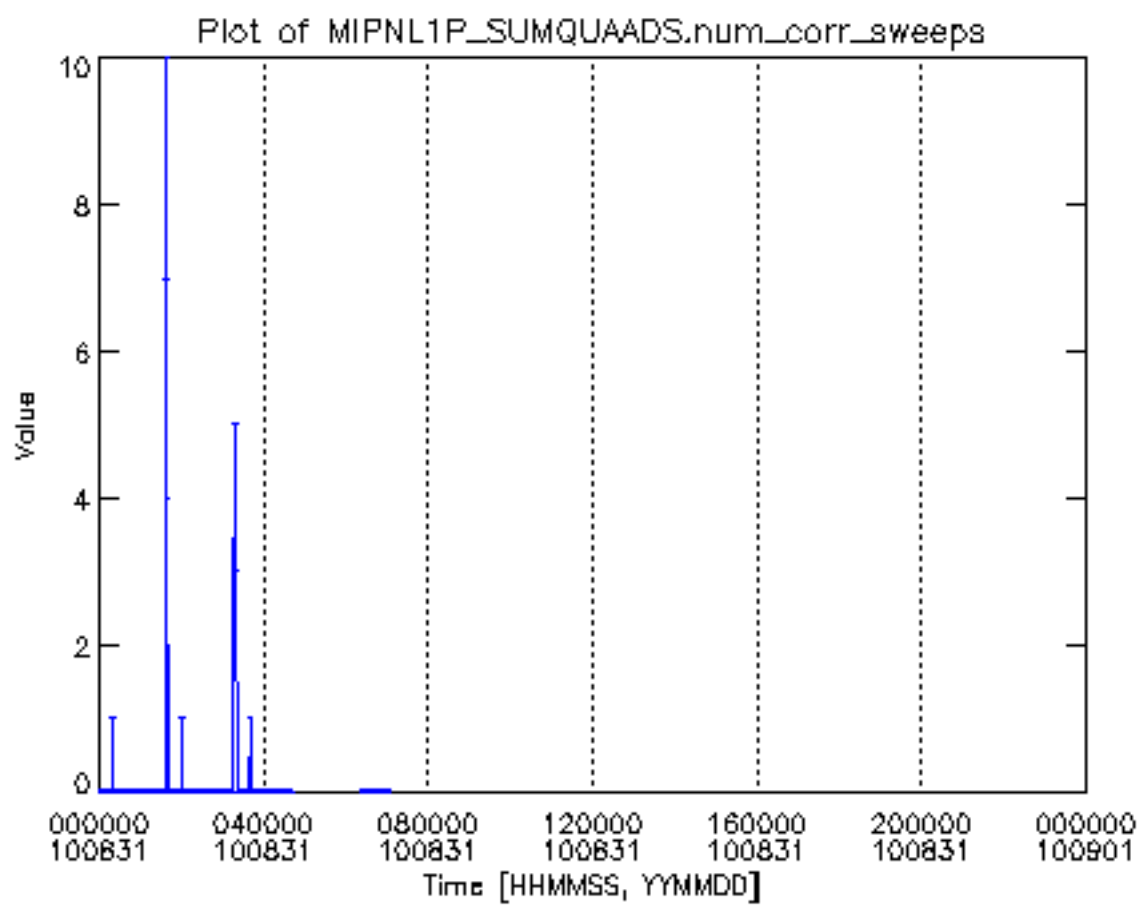


Geolocation plot of MIPNL1P\_SCAINFADS\_num\_sweeps (green color=0 errors)

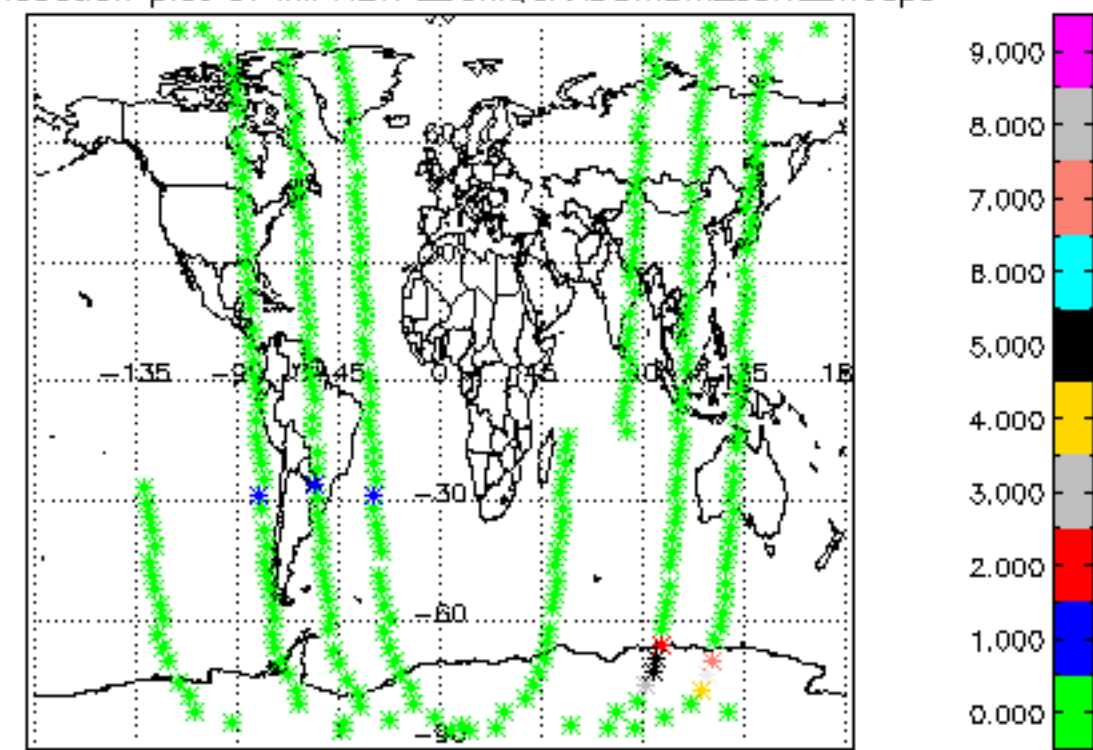


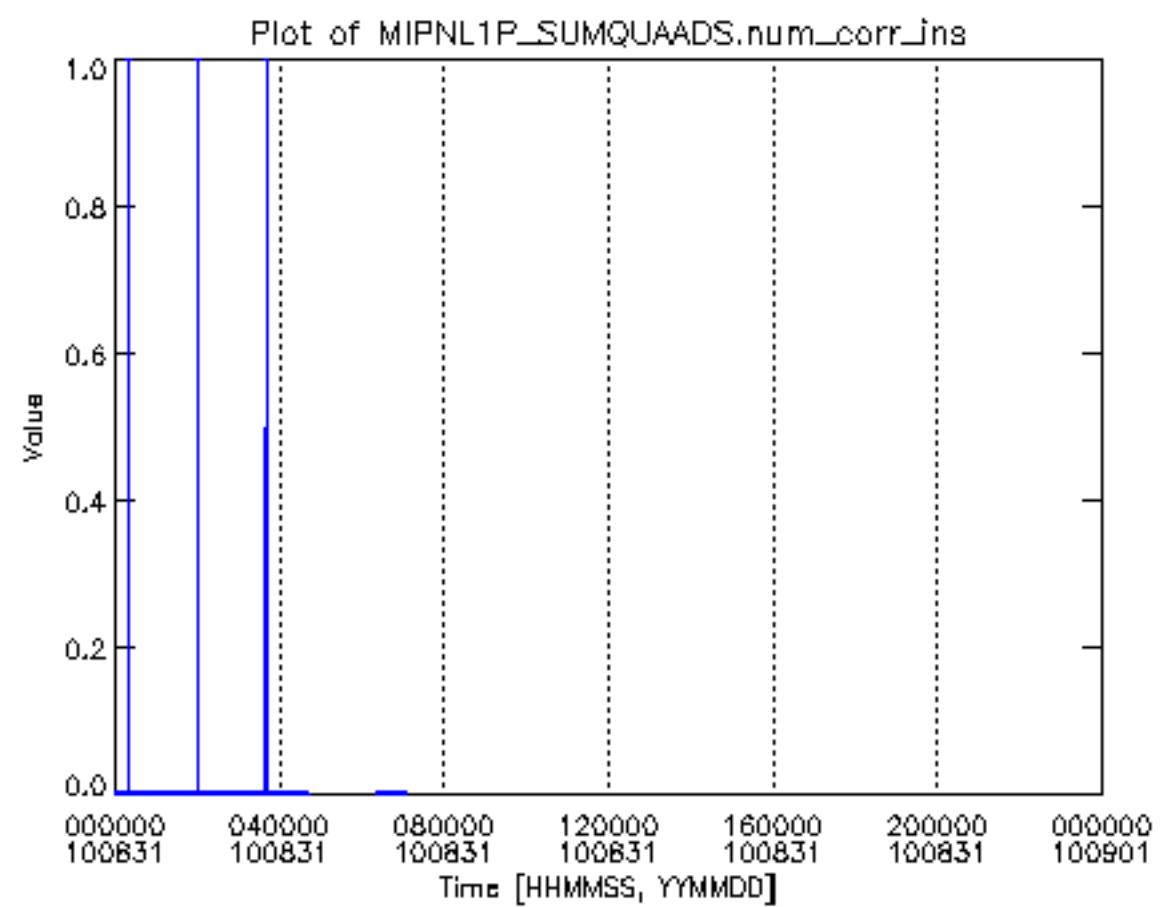




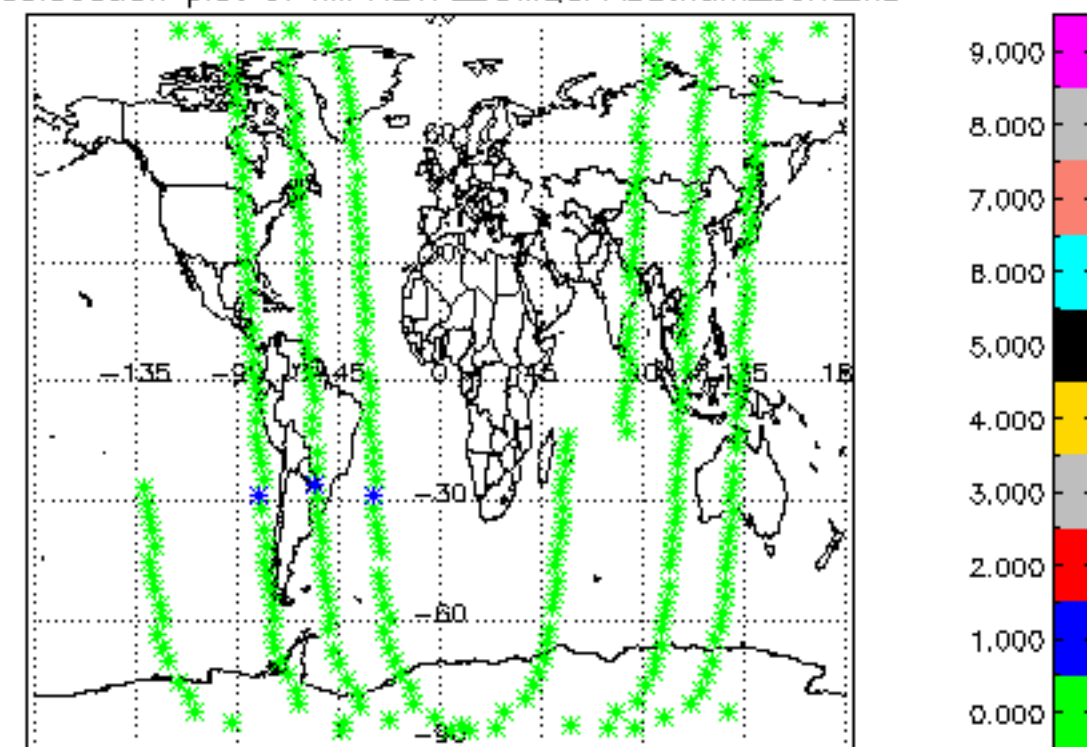


Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_sweeps

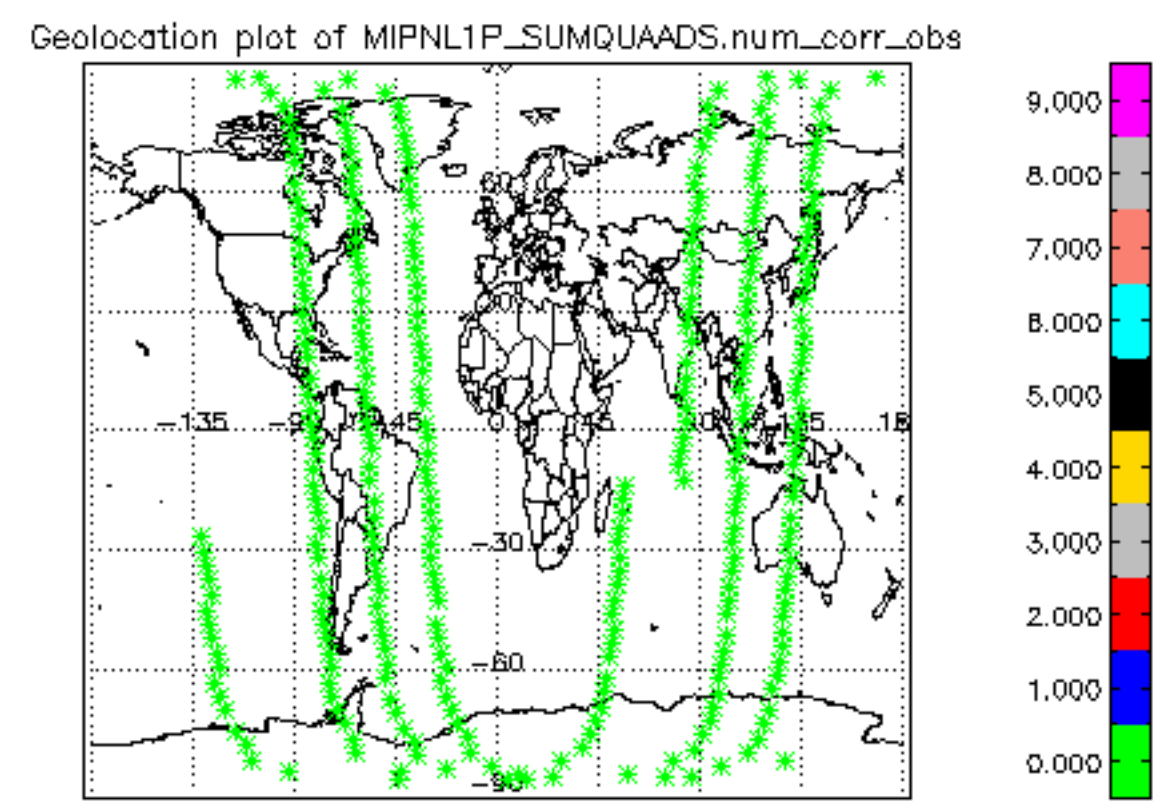
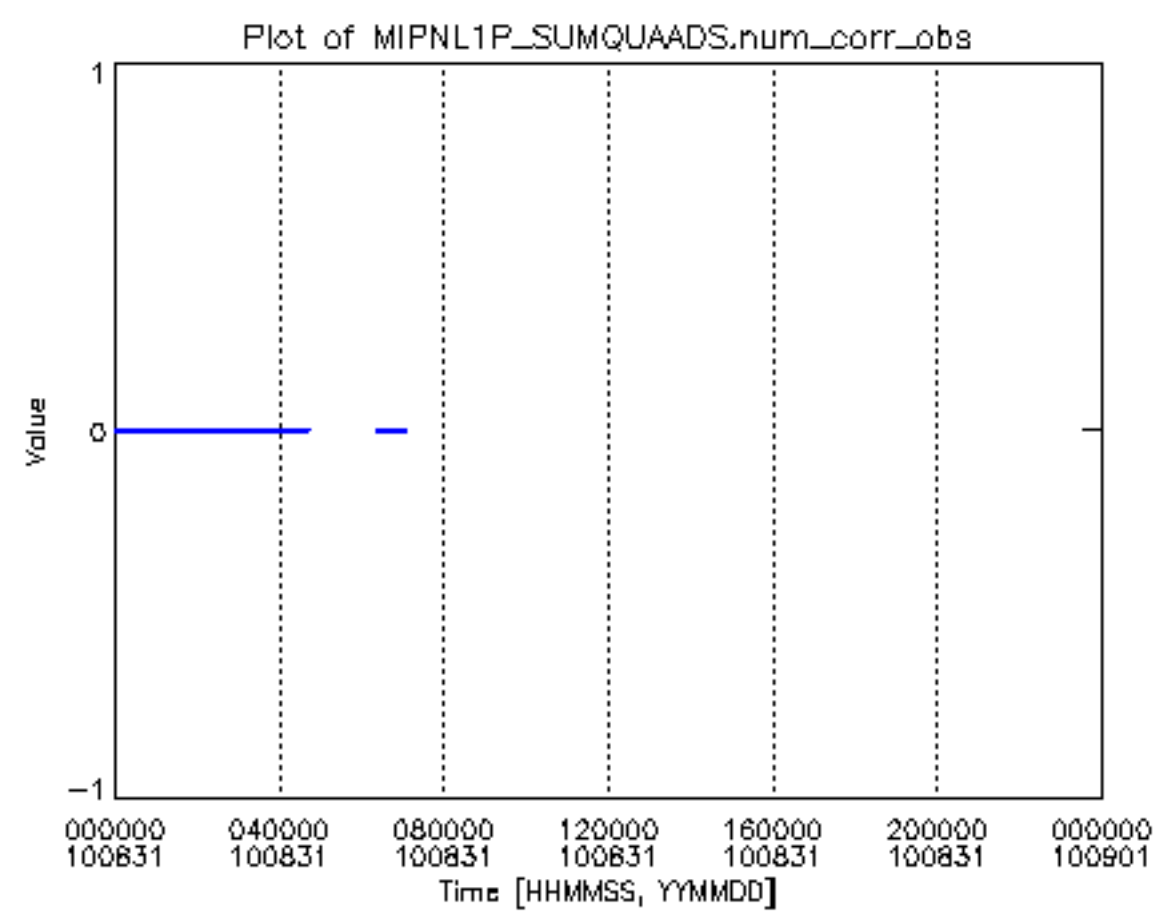


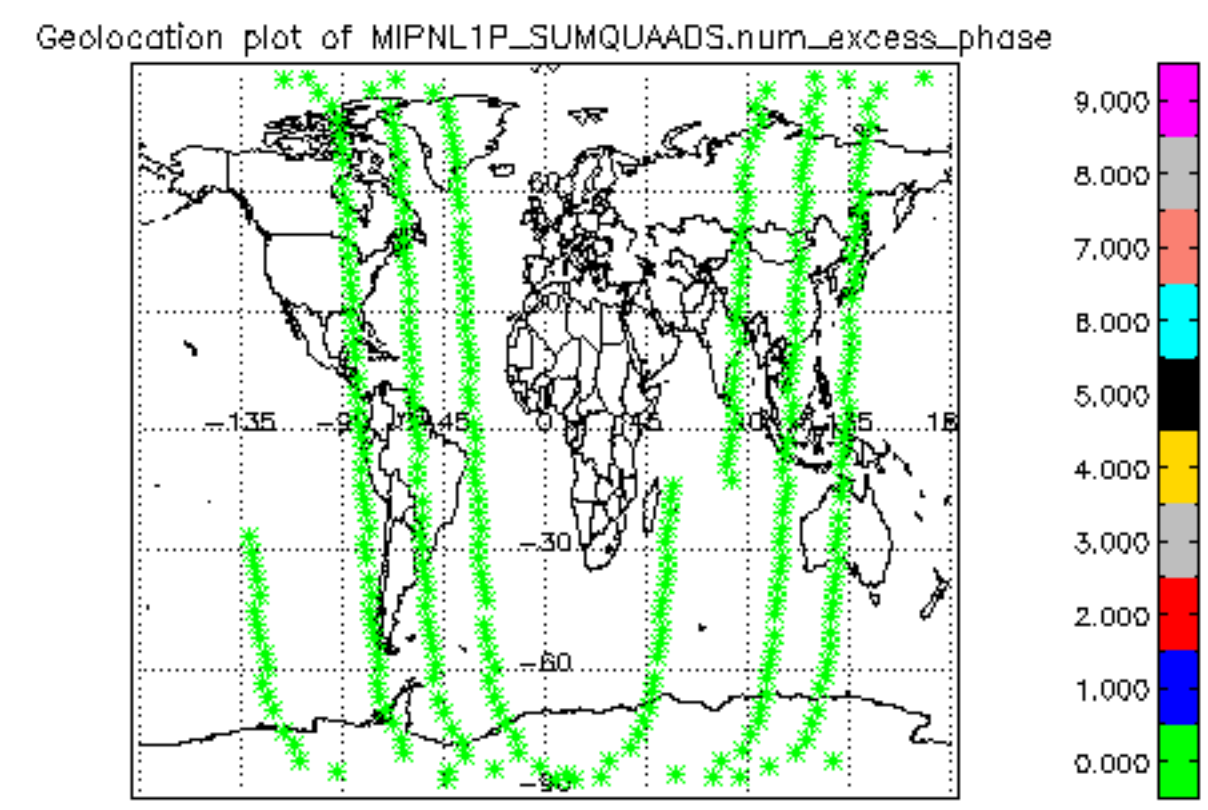
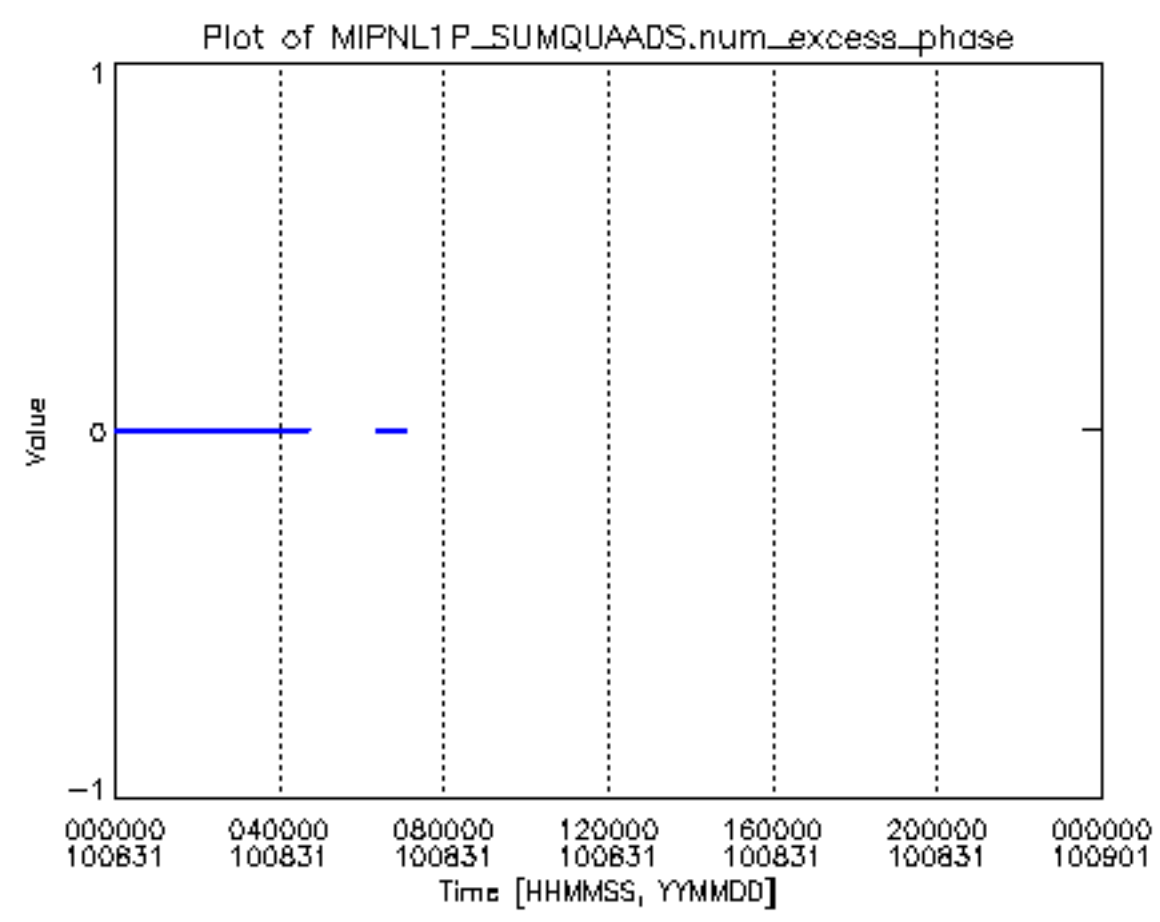


Geolocation plot of MIPNL1P\_SUMQUAADS.num\_corr\_ins

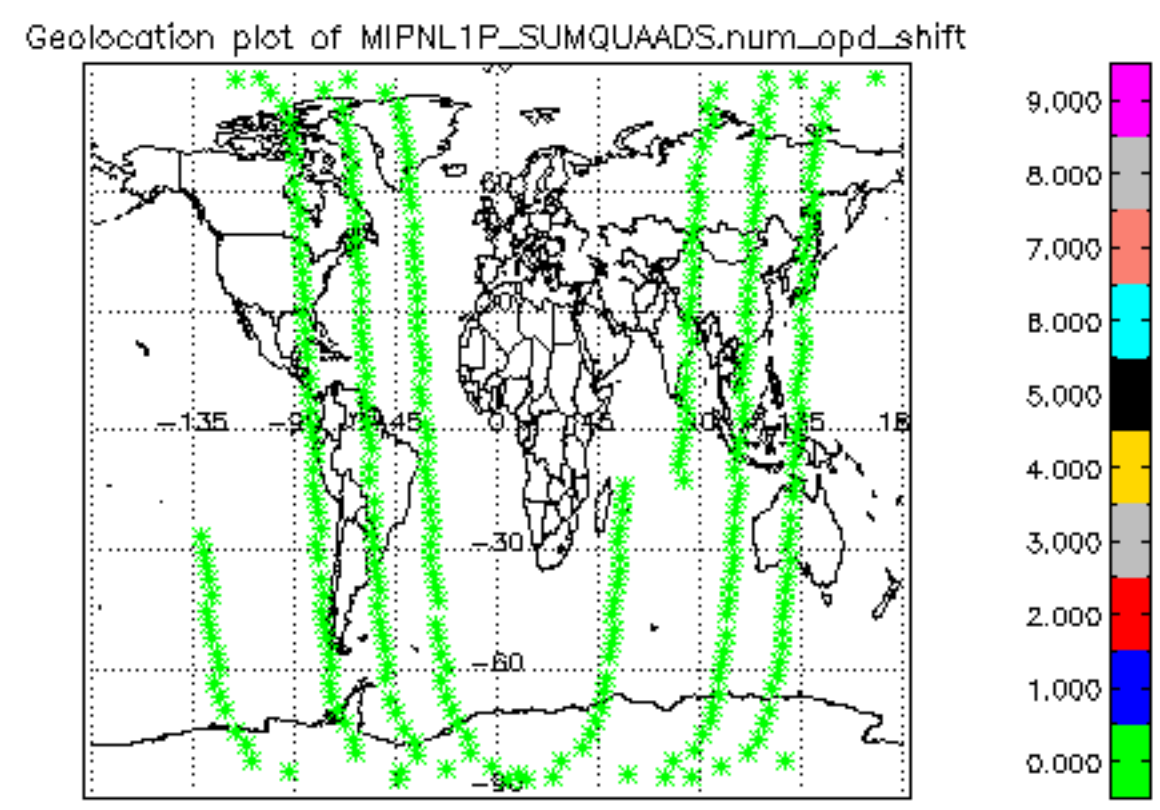
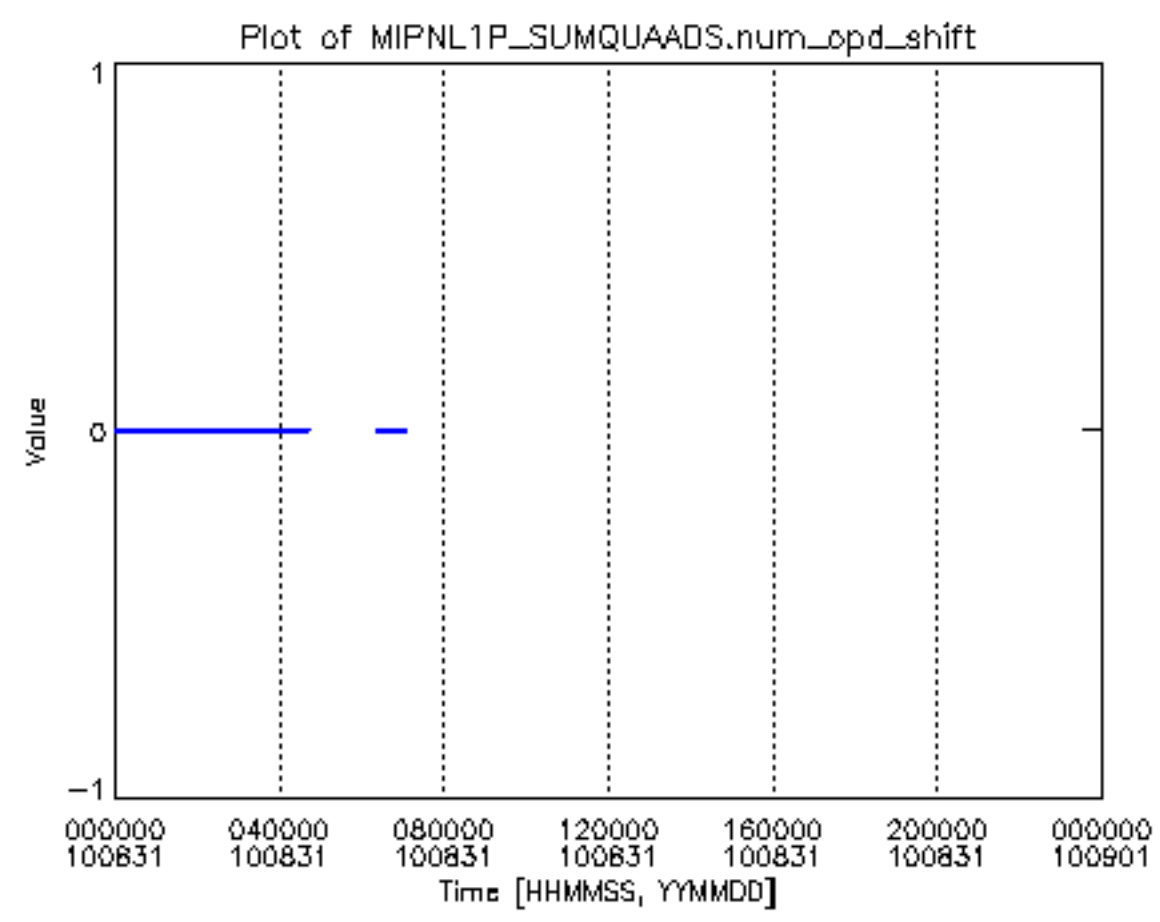


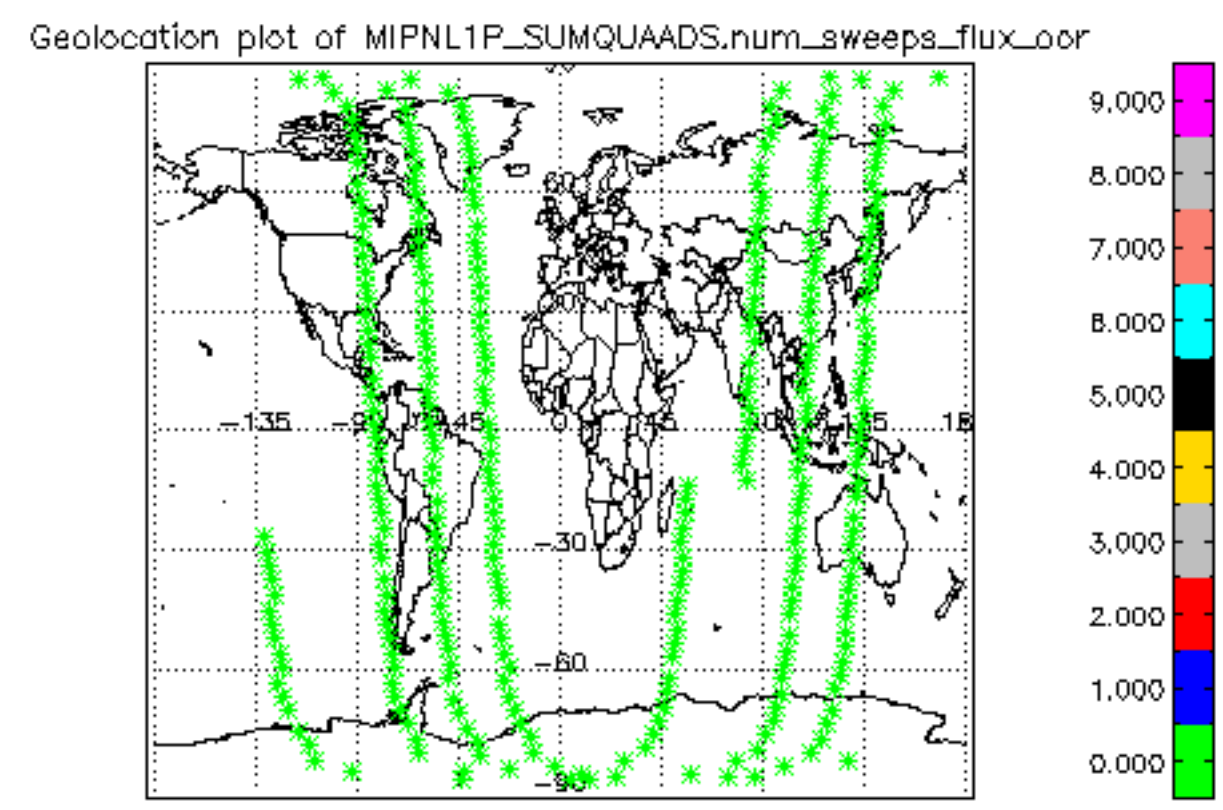
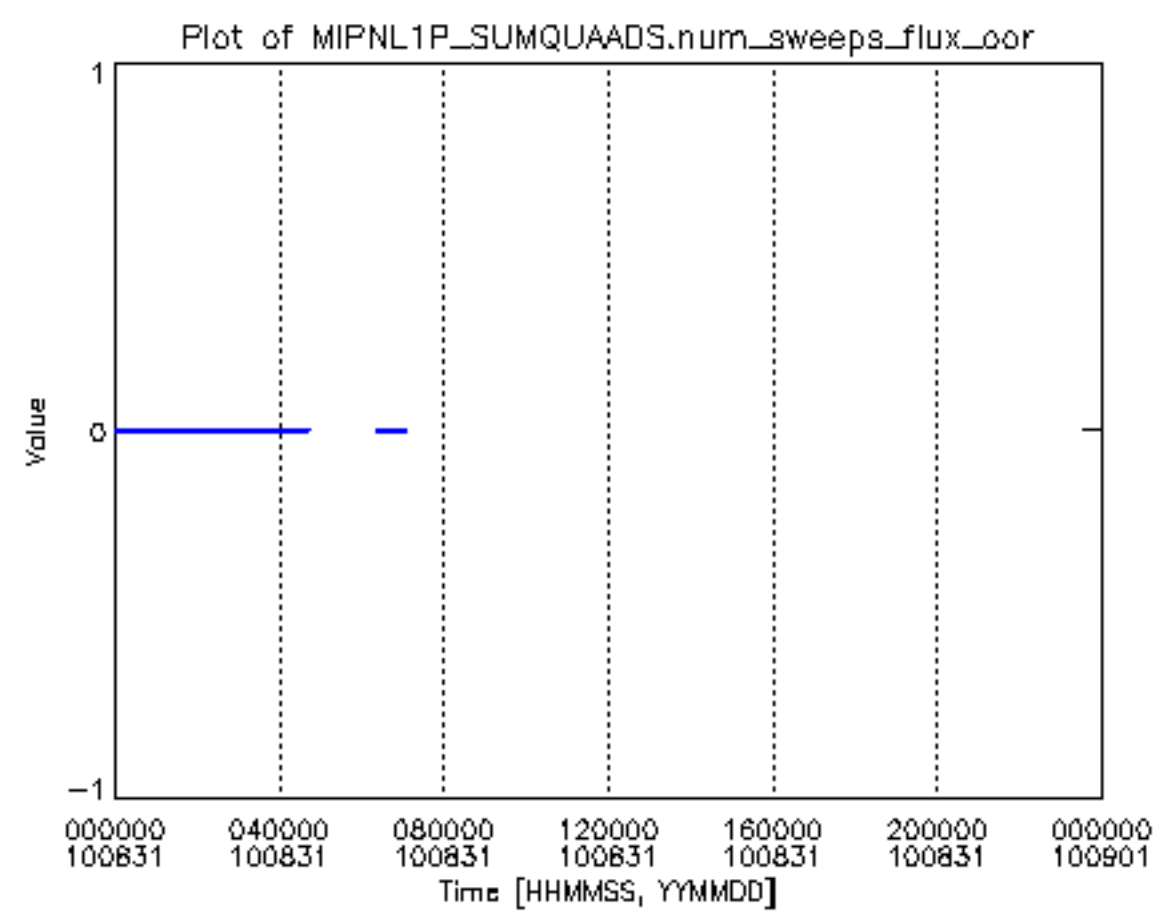




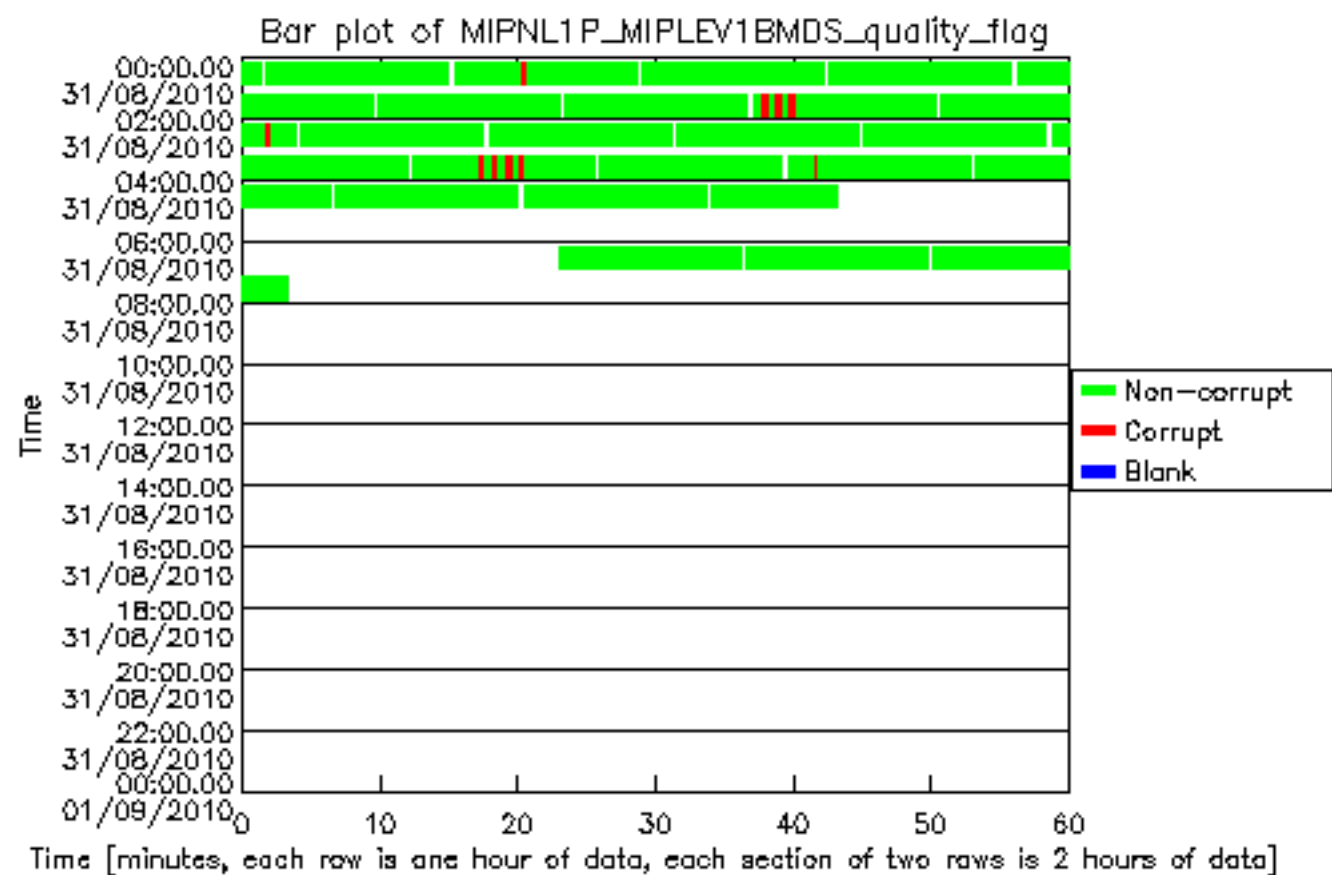




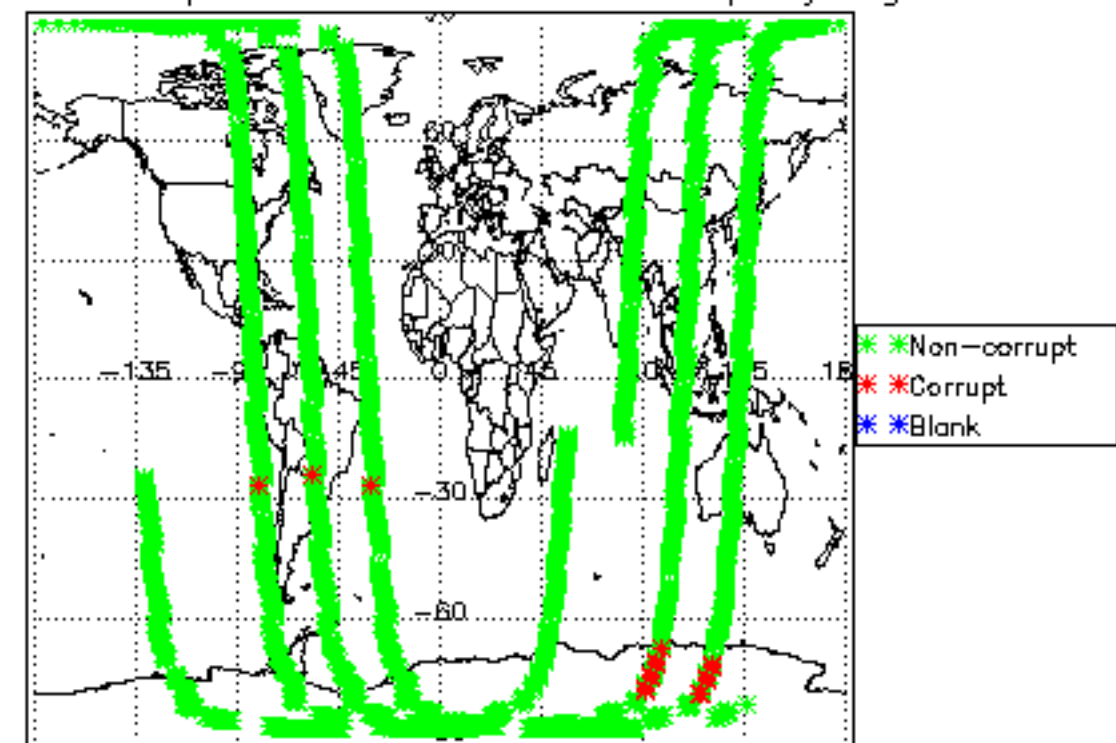


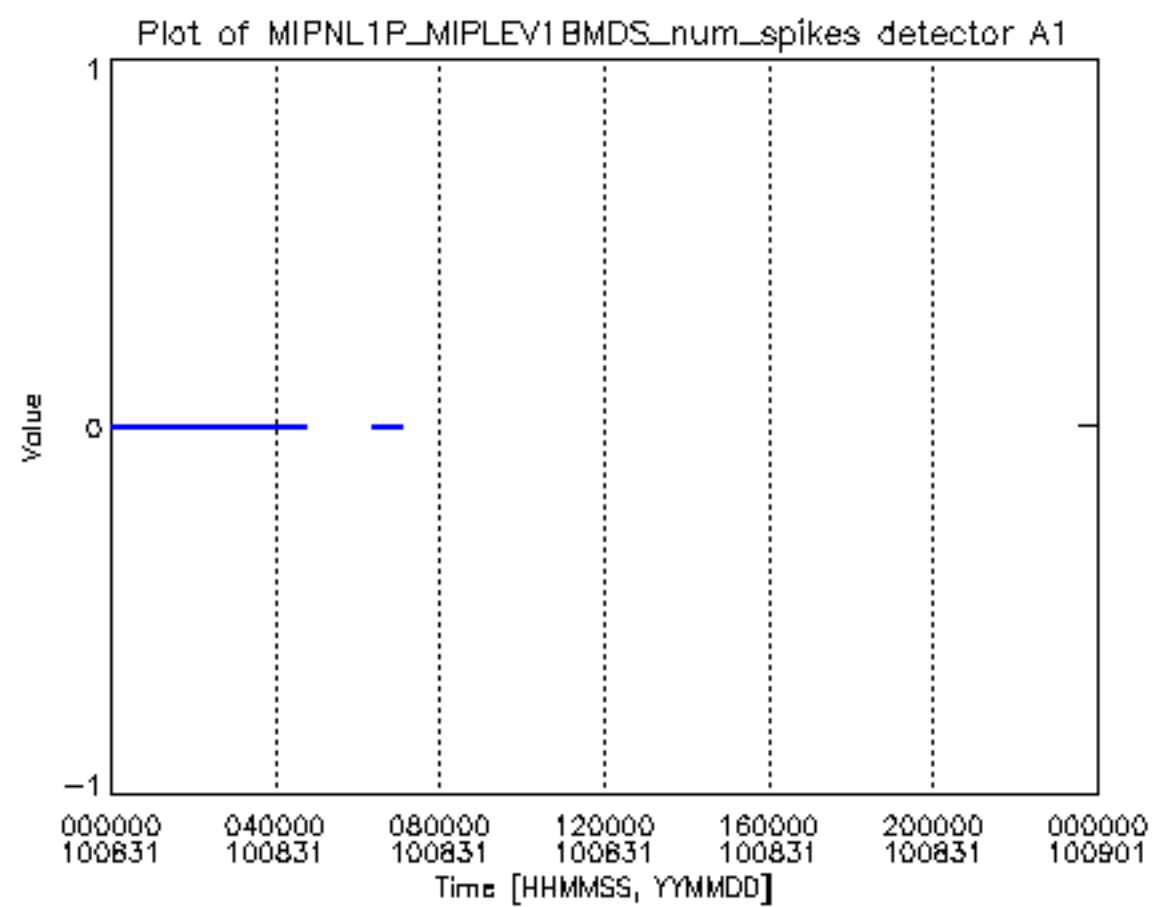




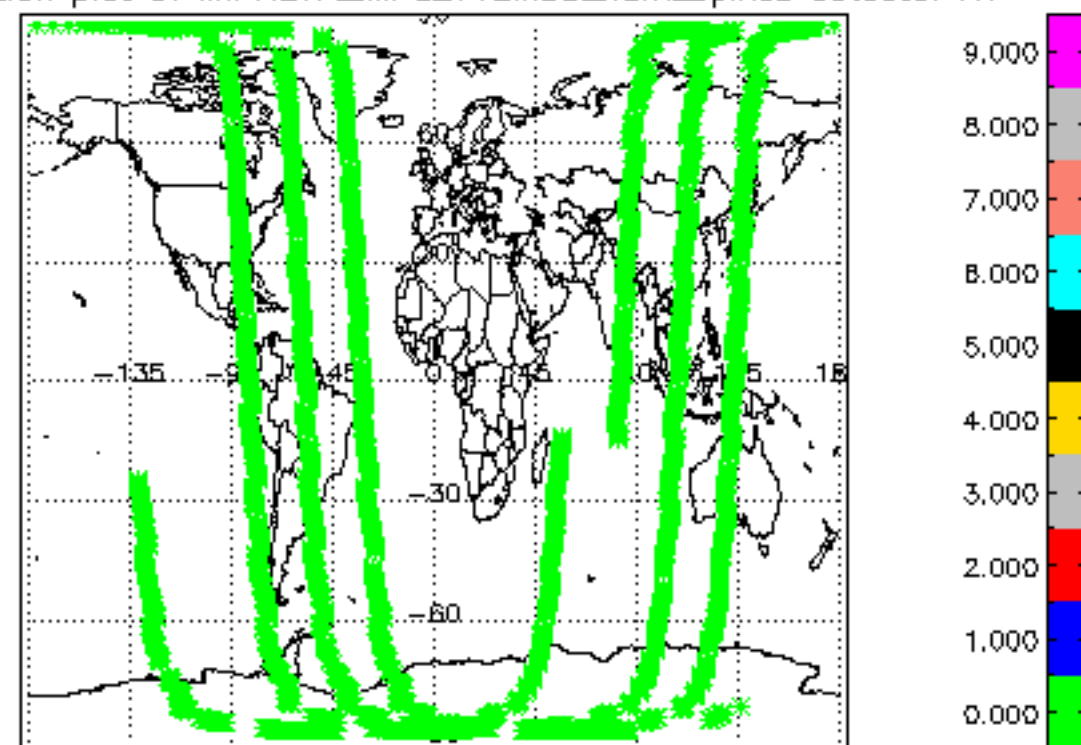


### Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_quality\_flag

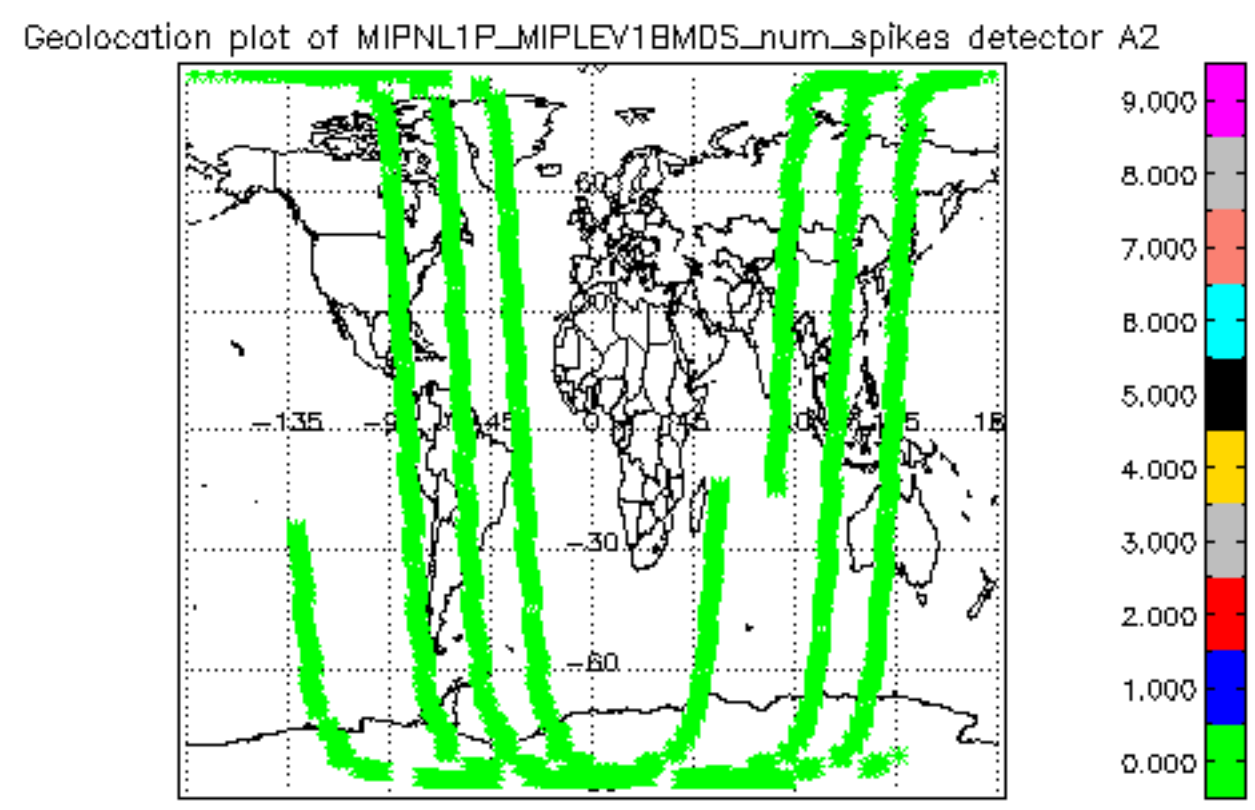
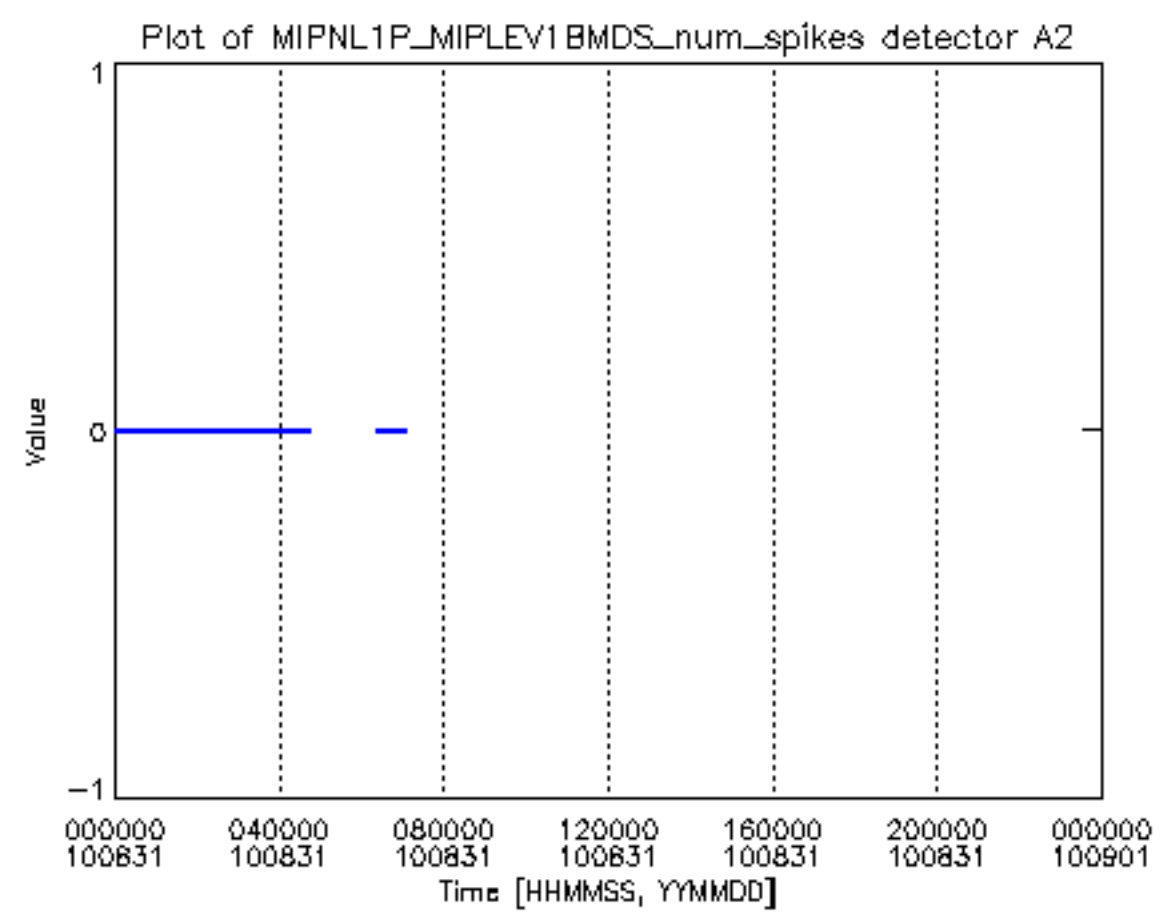


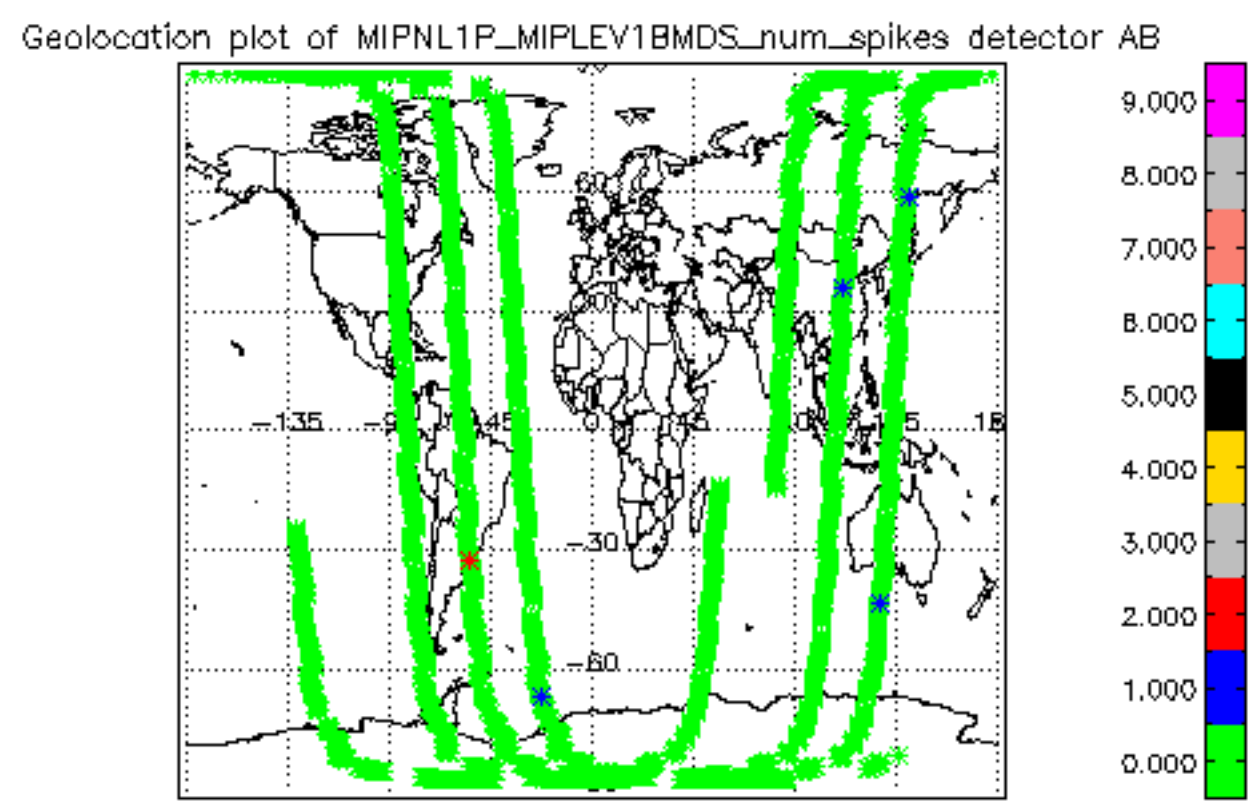
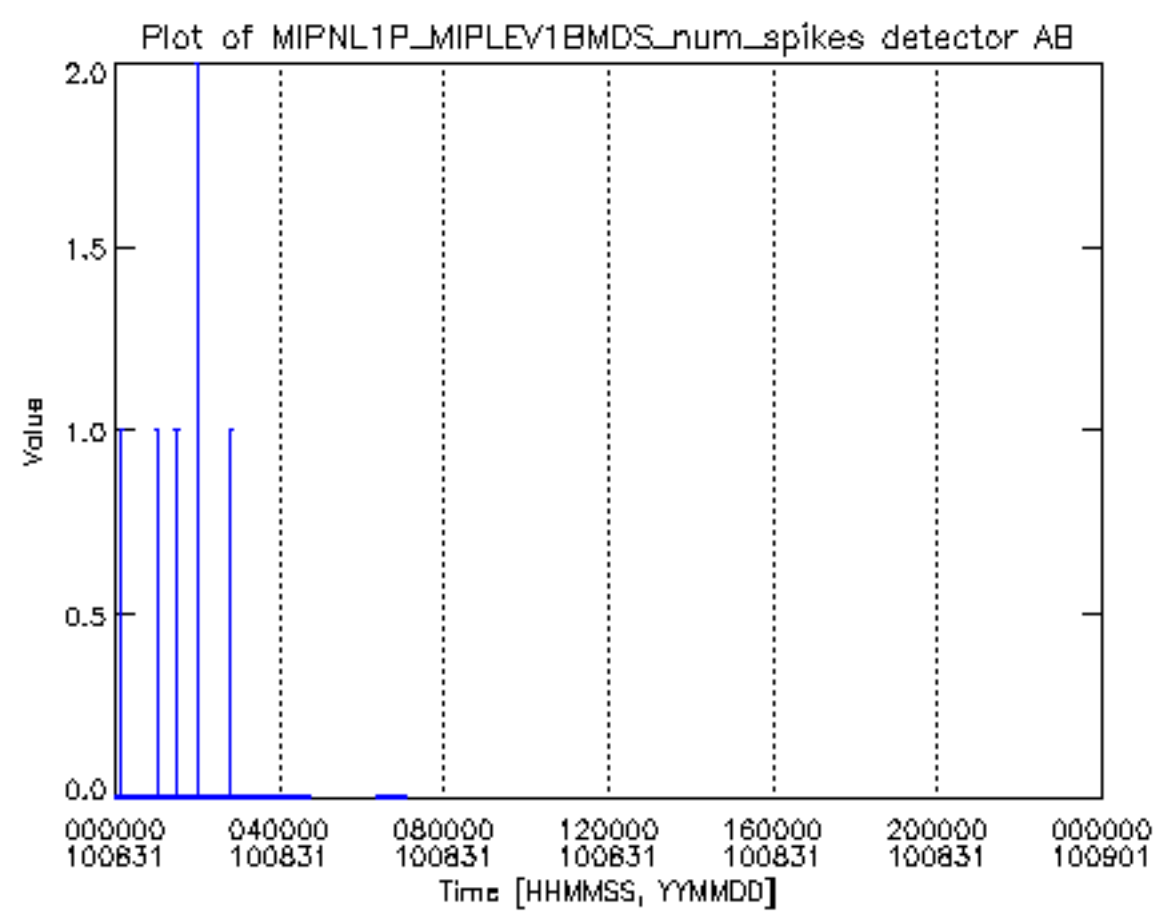


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A1

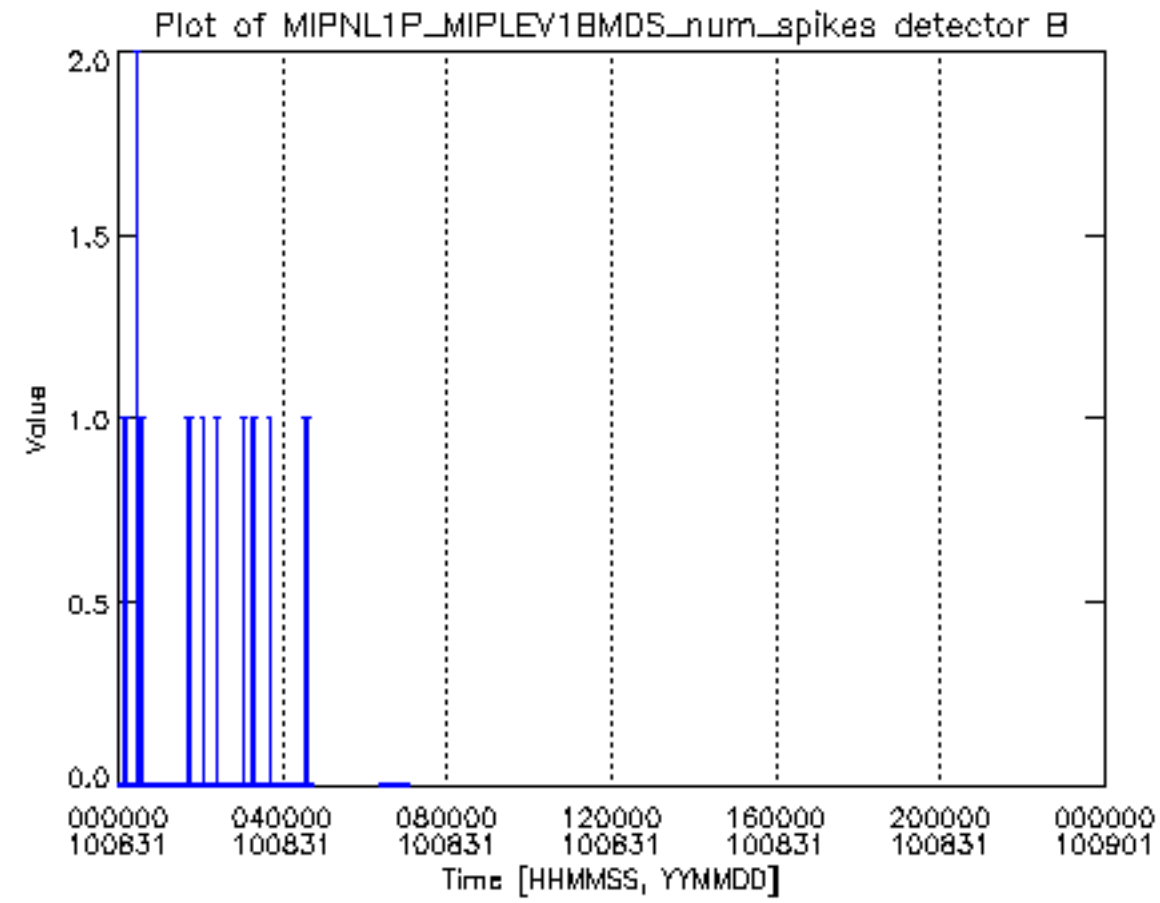




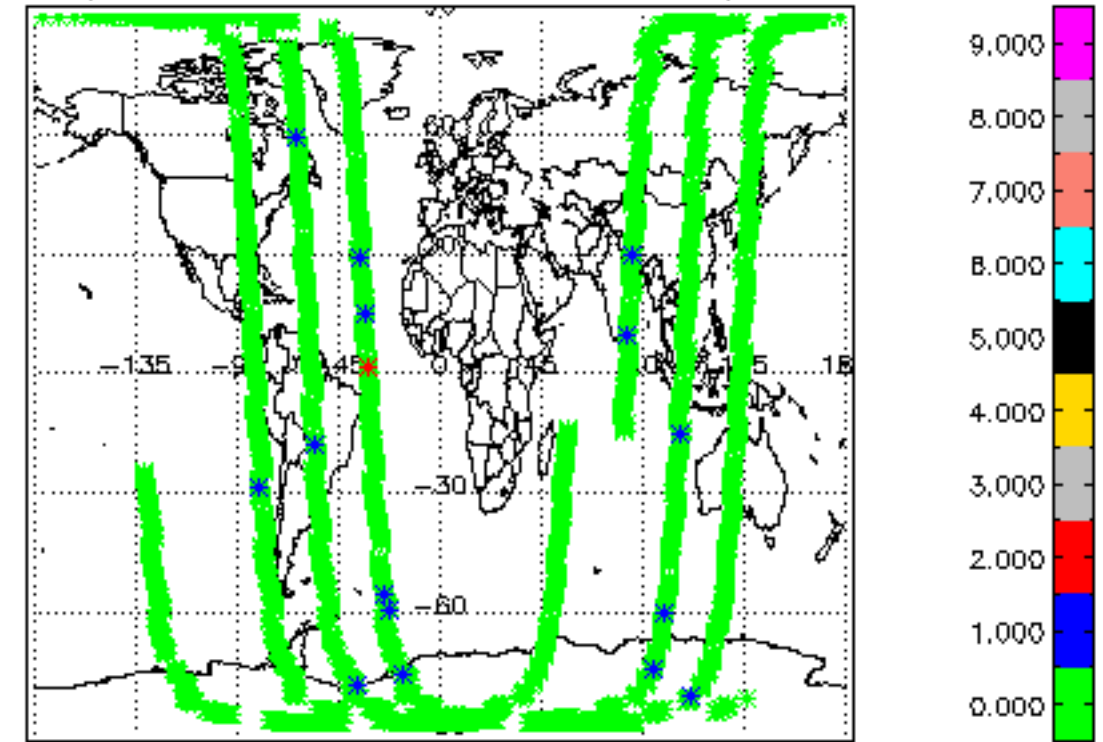


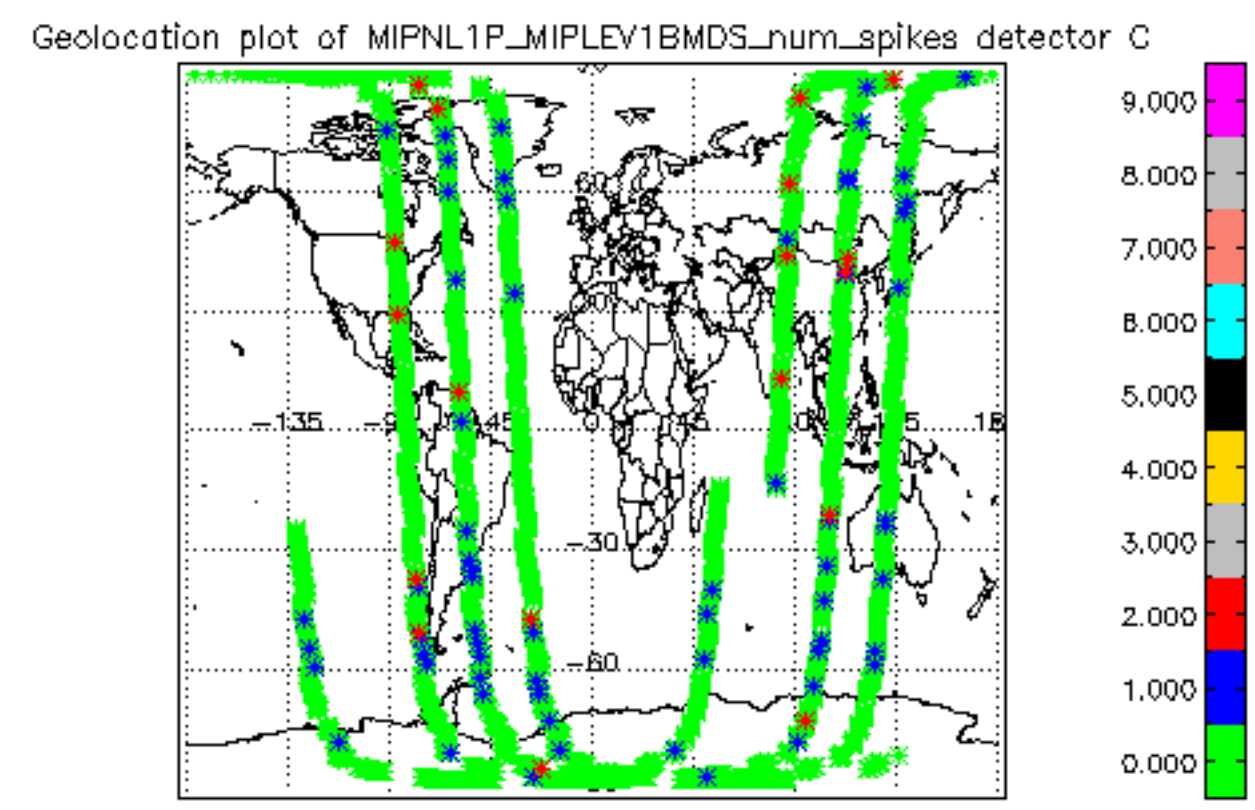
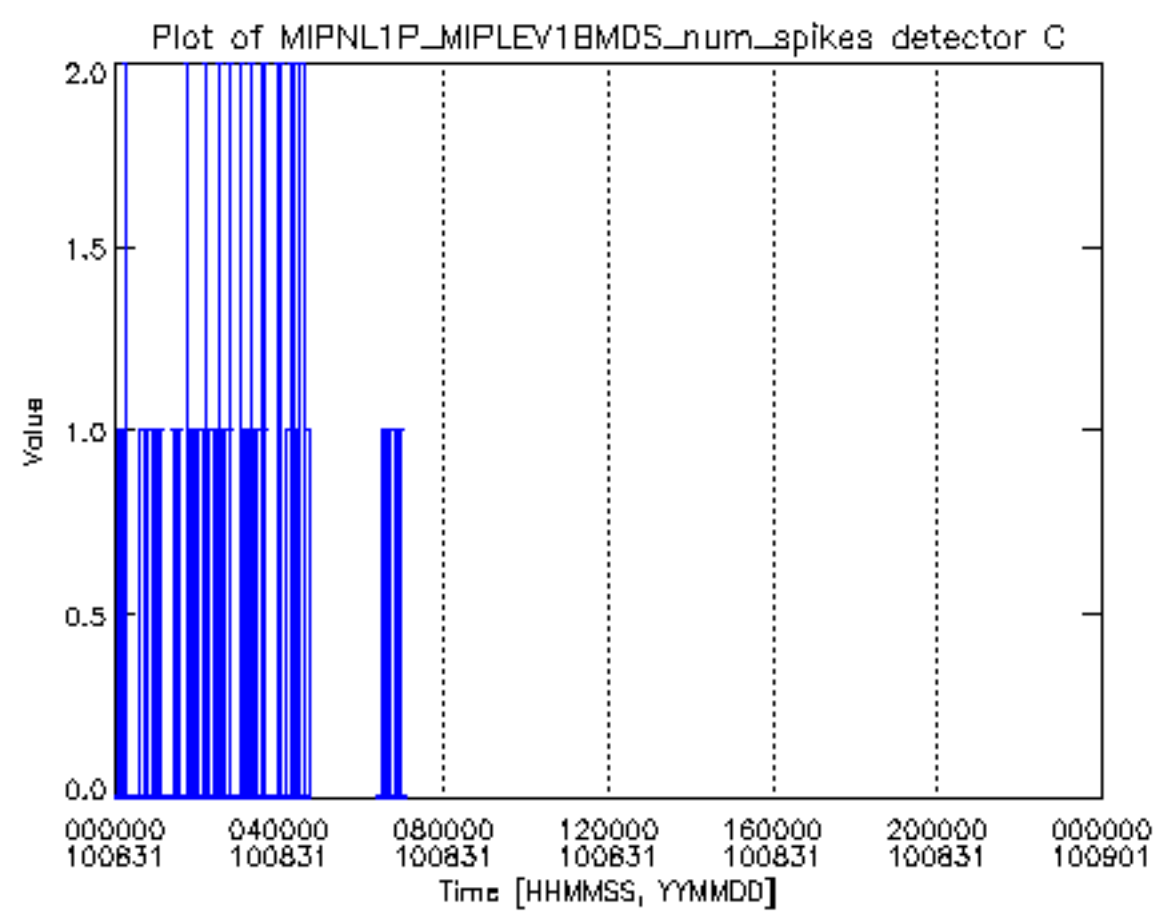


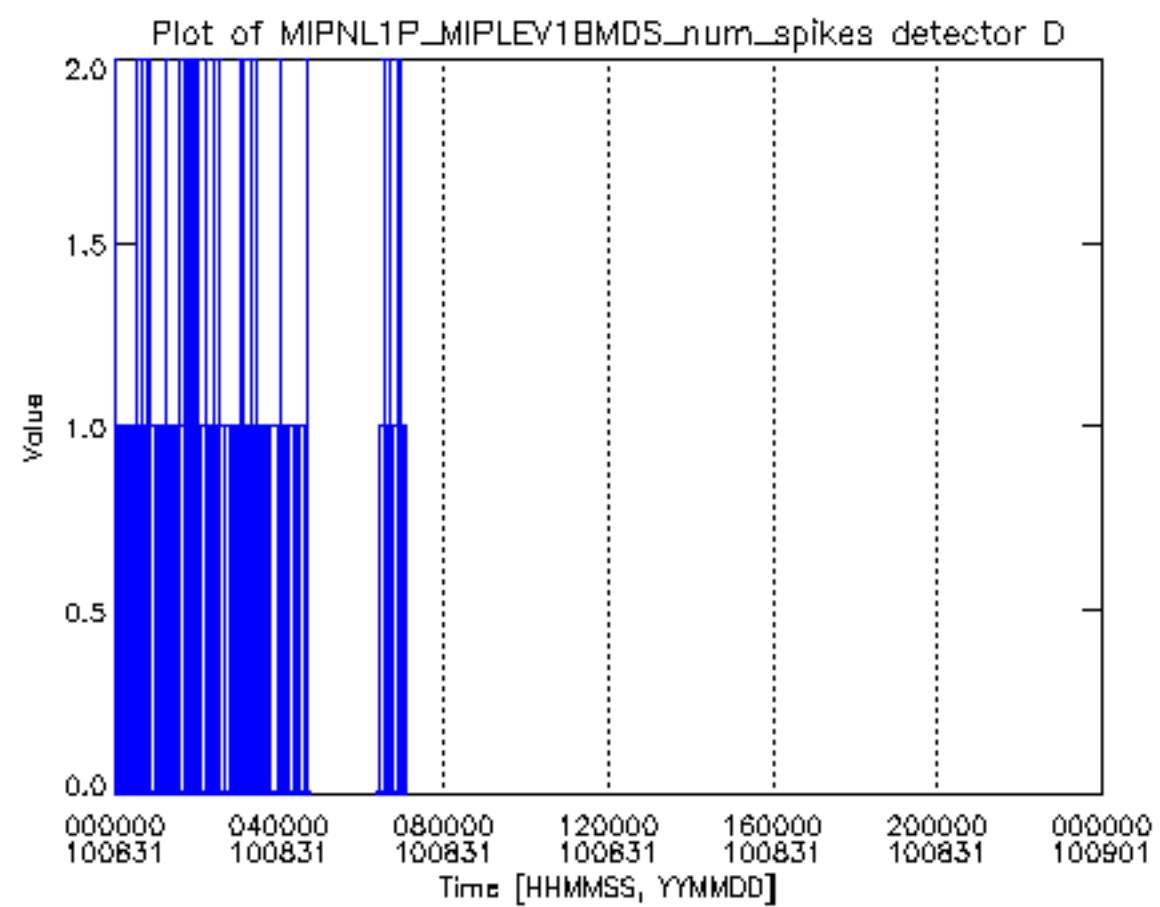




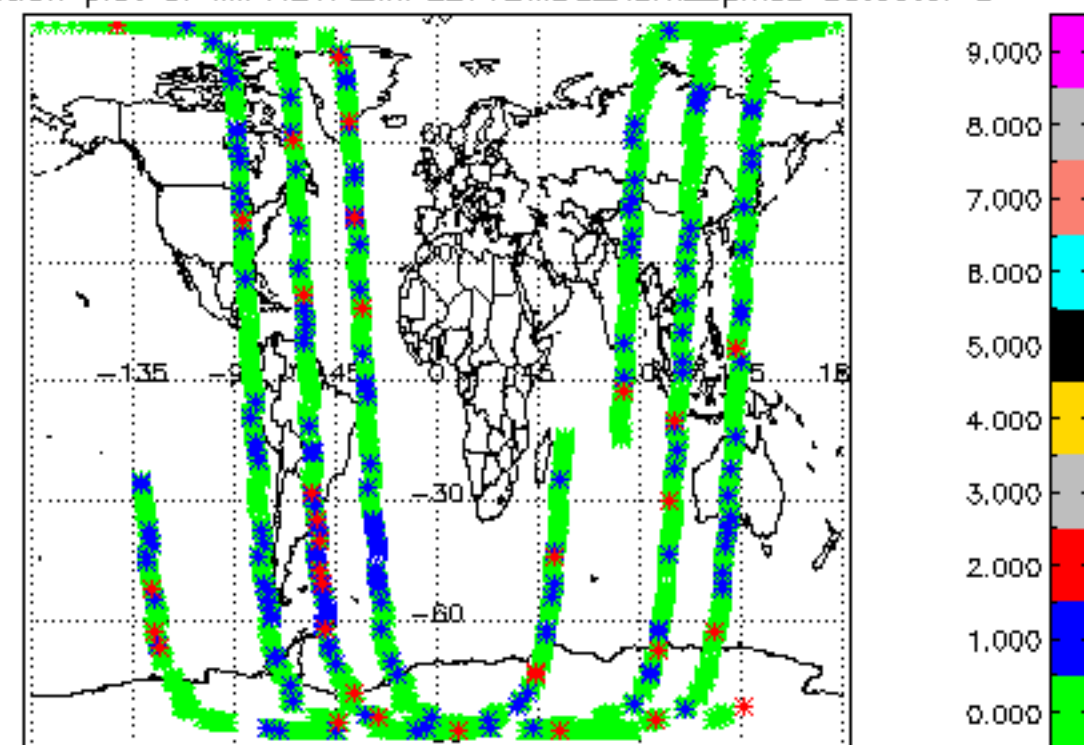
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector B



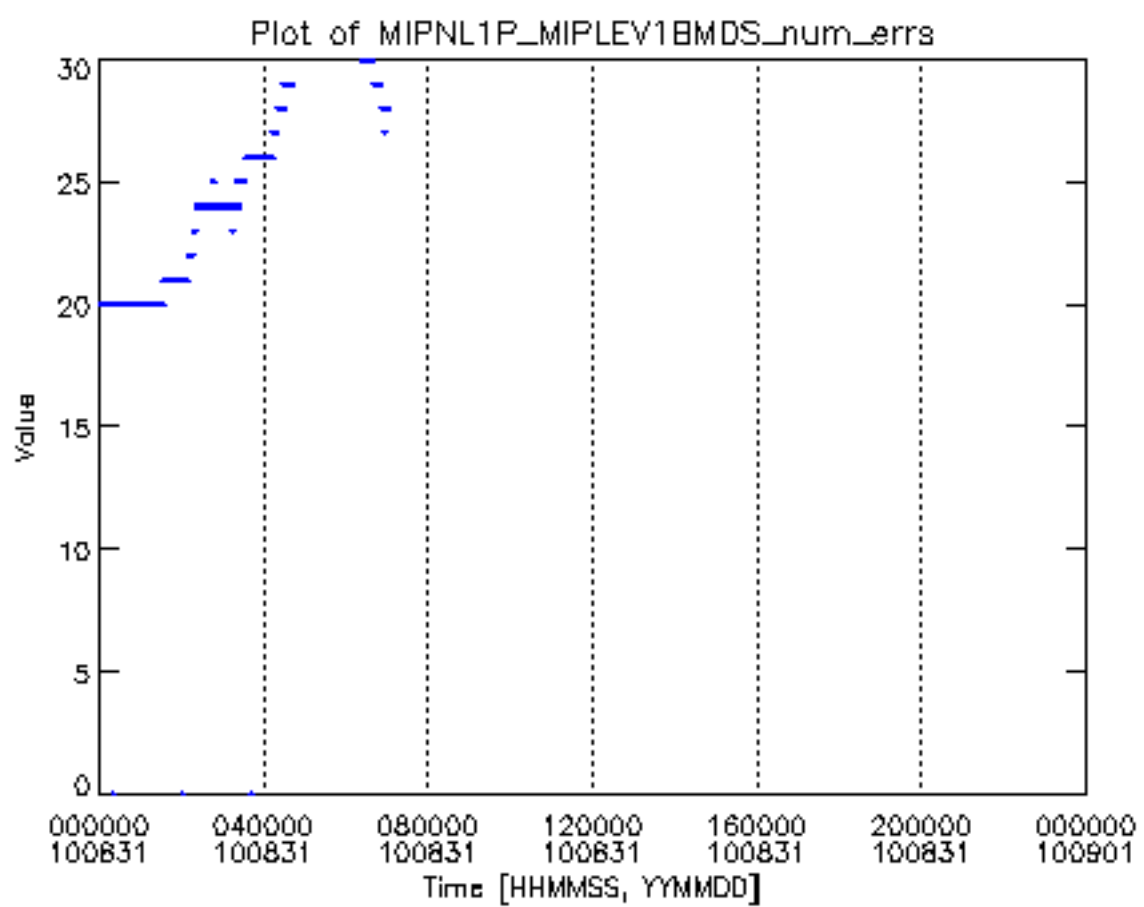




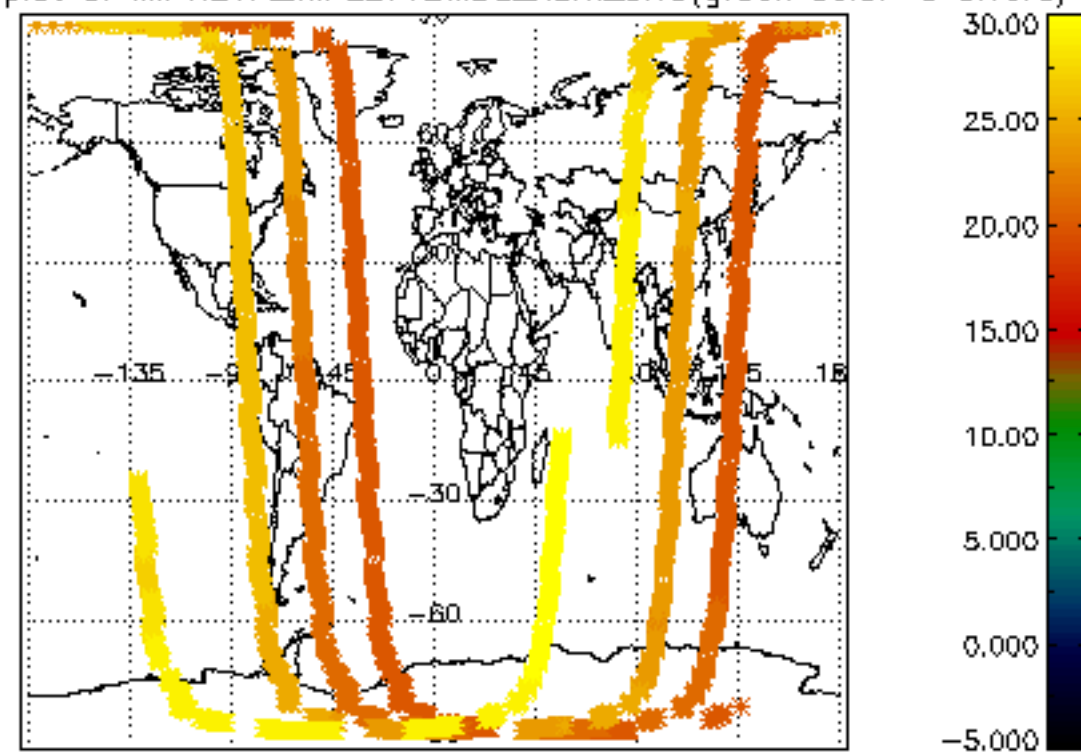
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector D

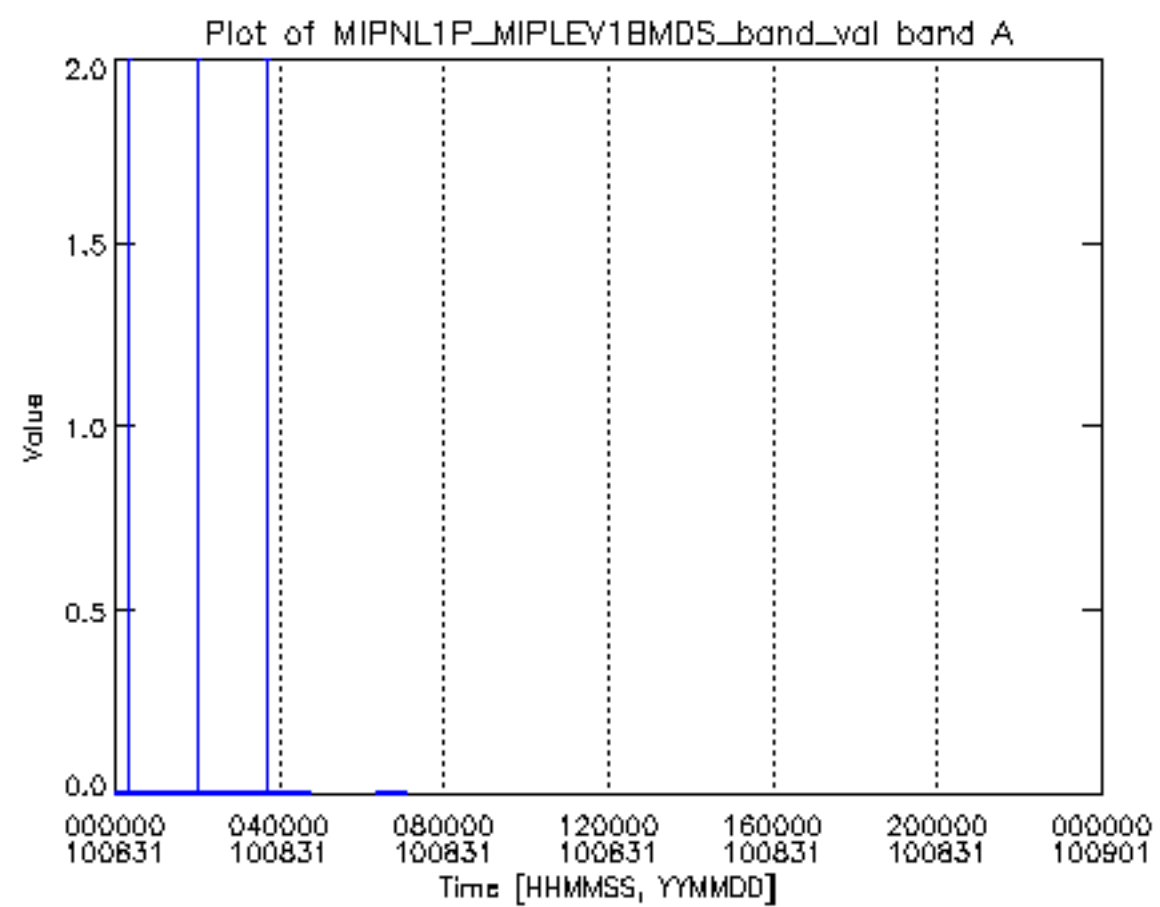




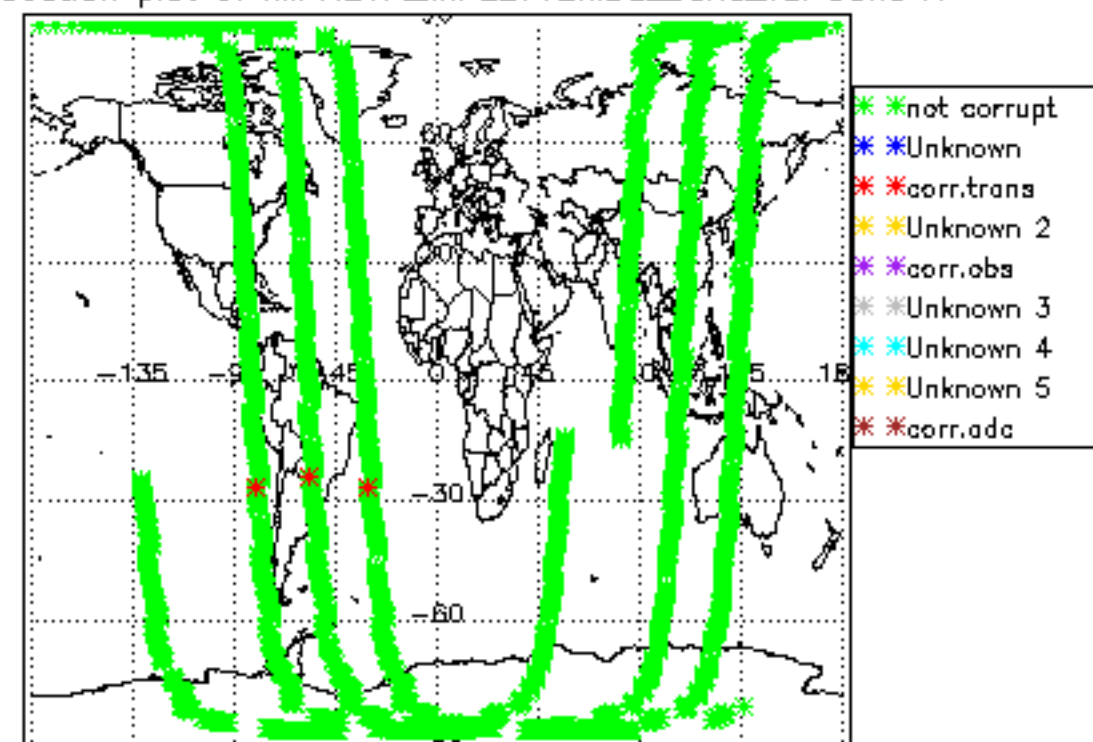


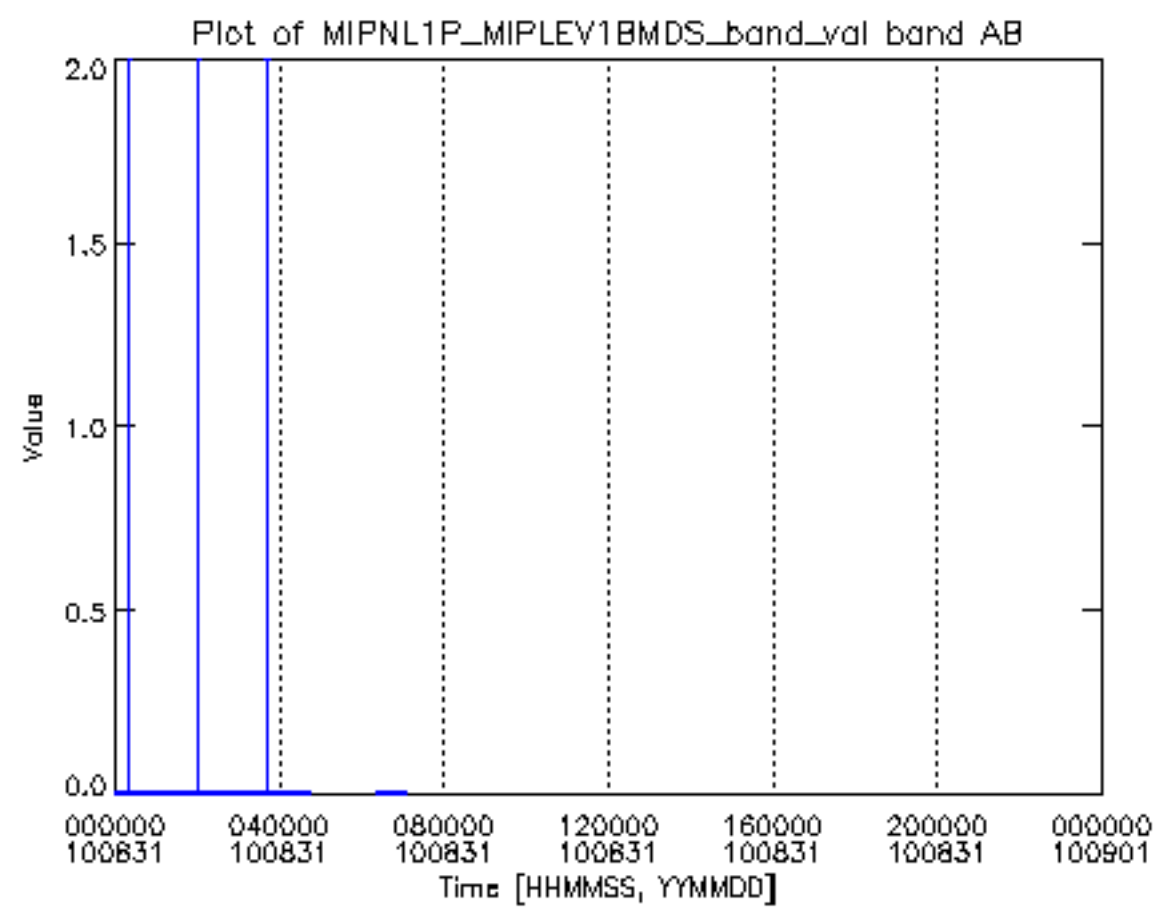
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs (green color=0 errors)



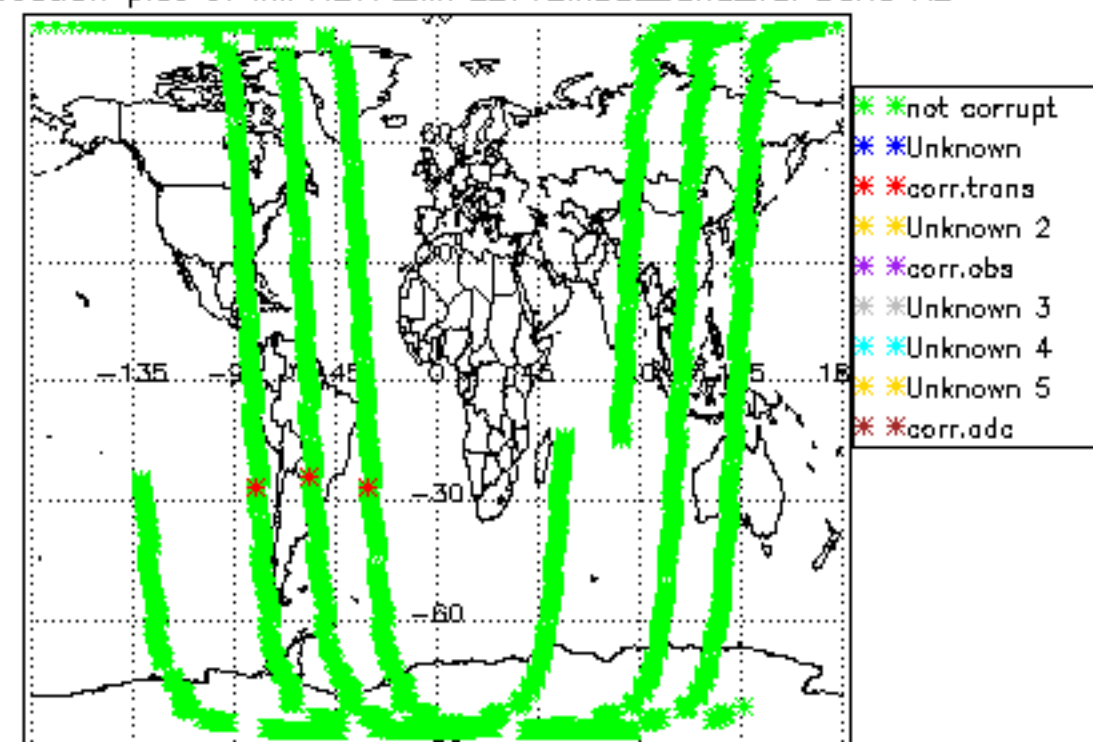


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band A

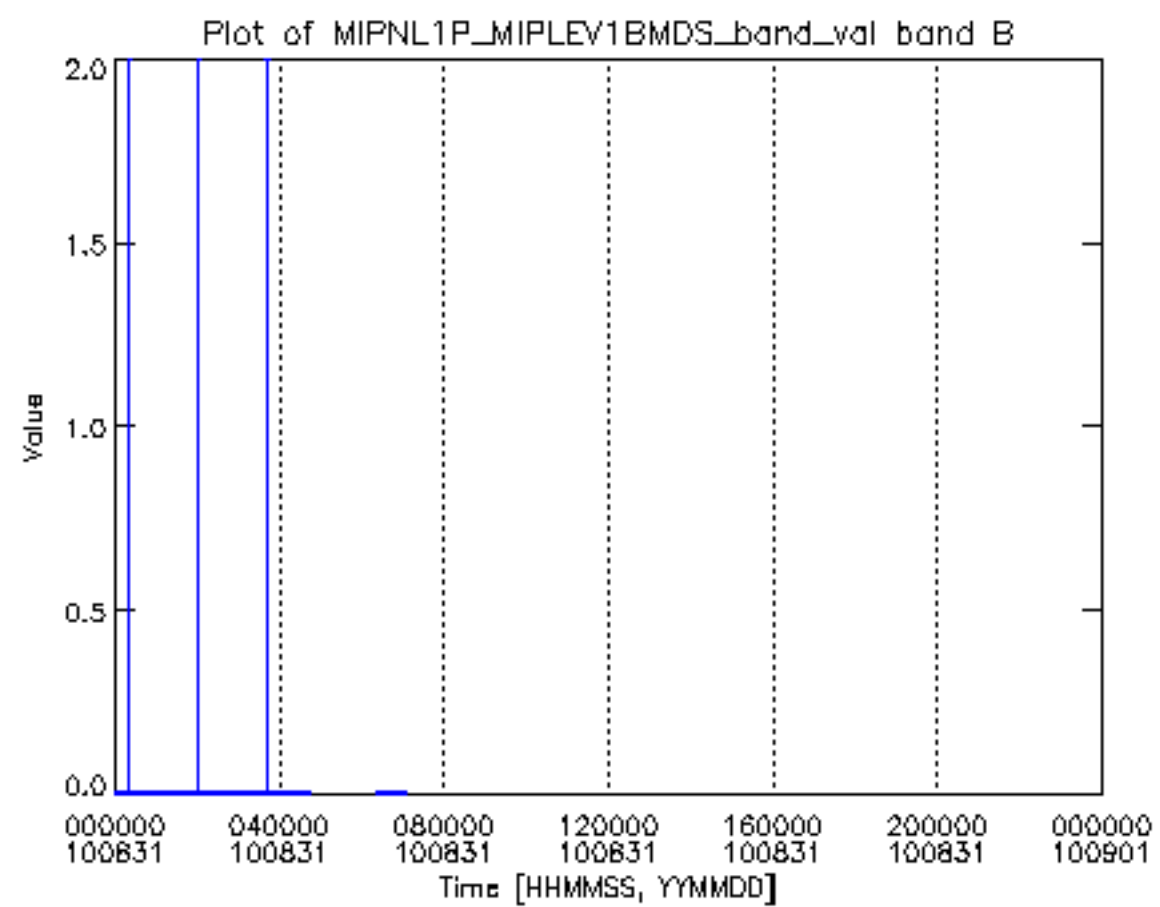




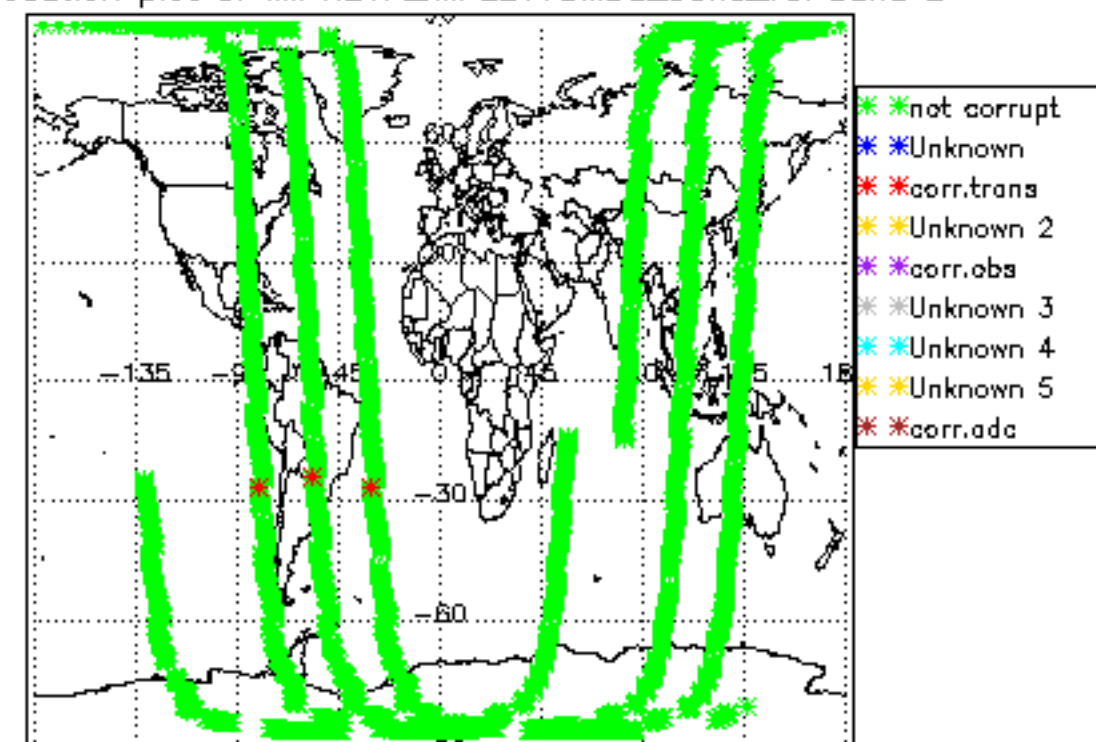
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB

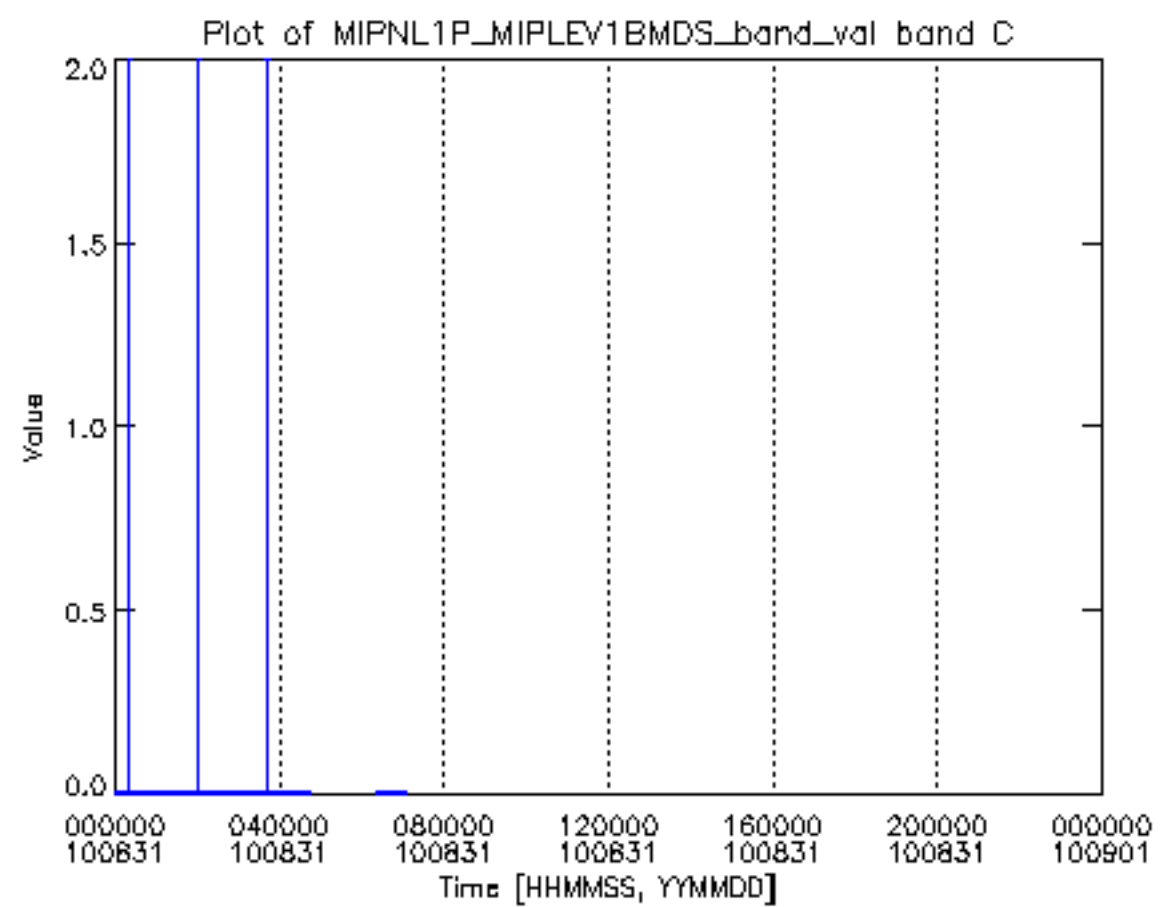




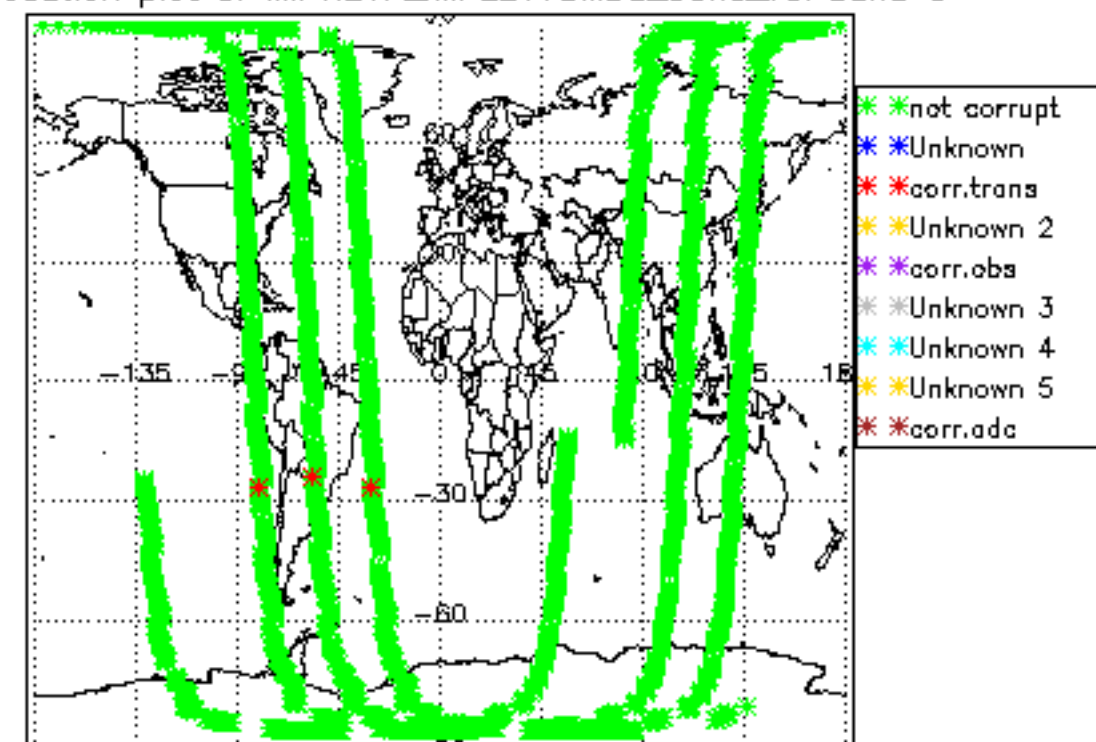


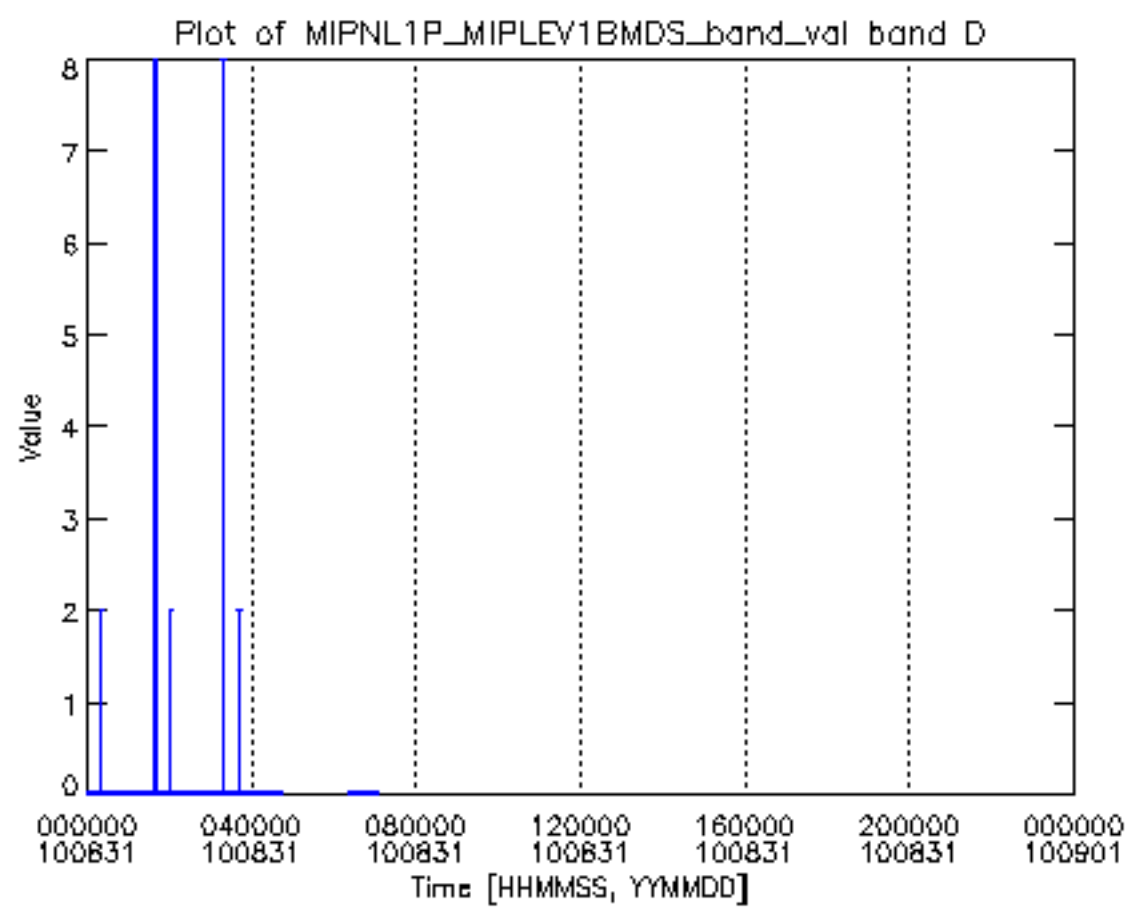
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band B



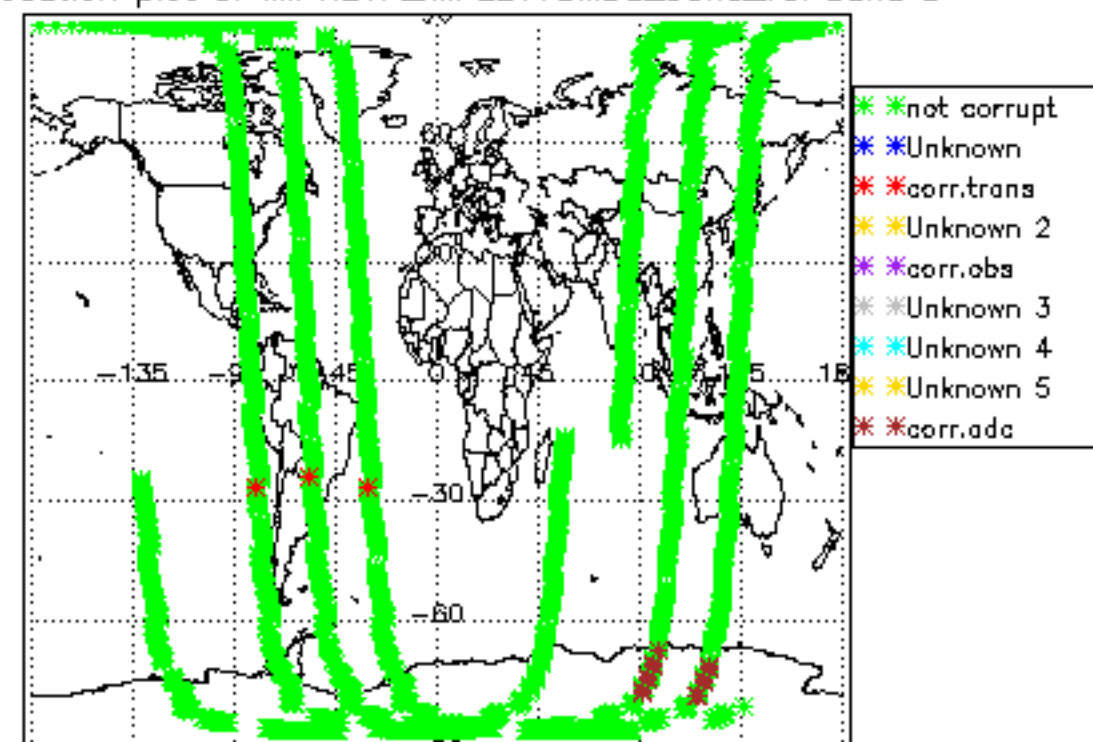


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_Lval band C



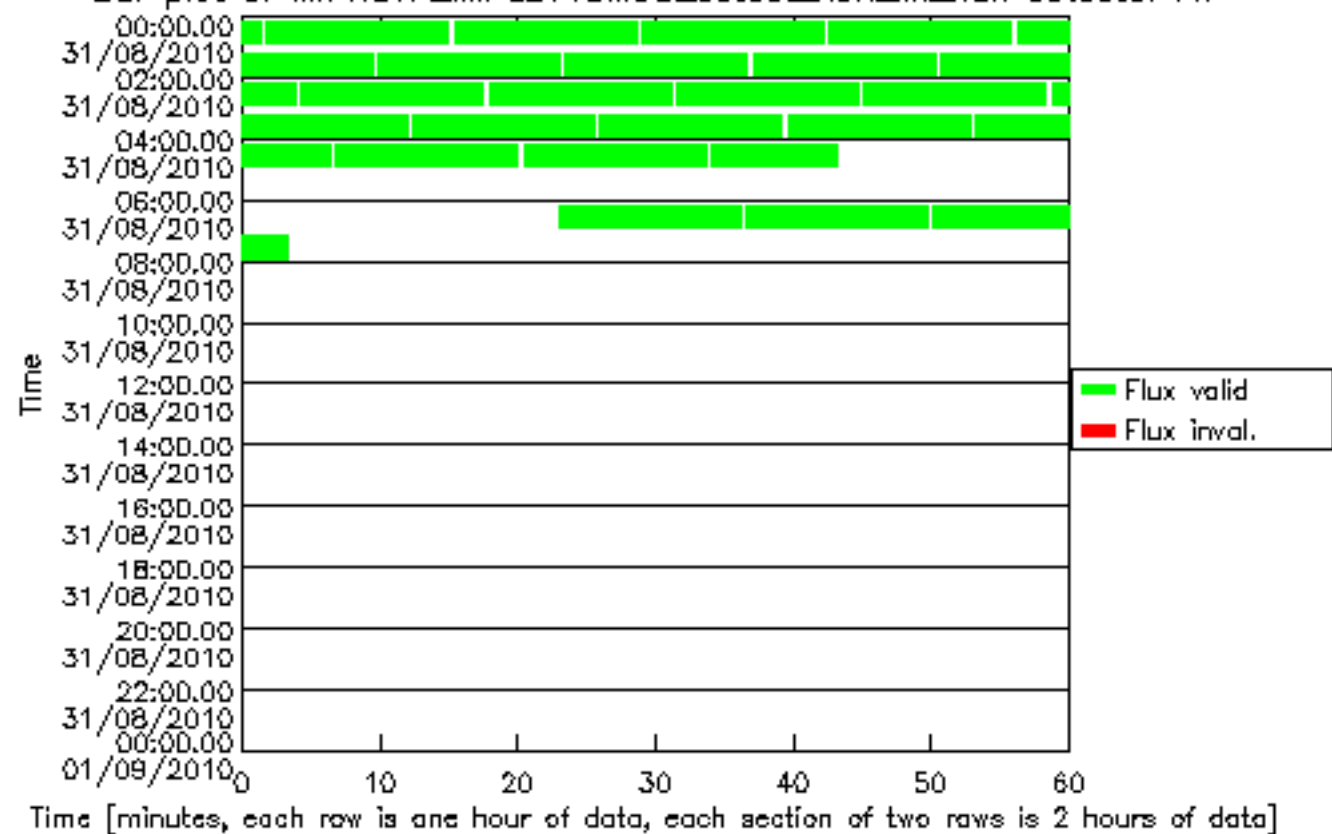


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_Lval band D

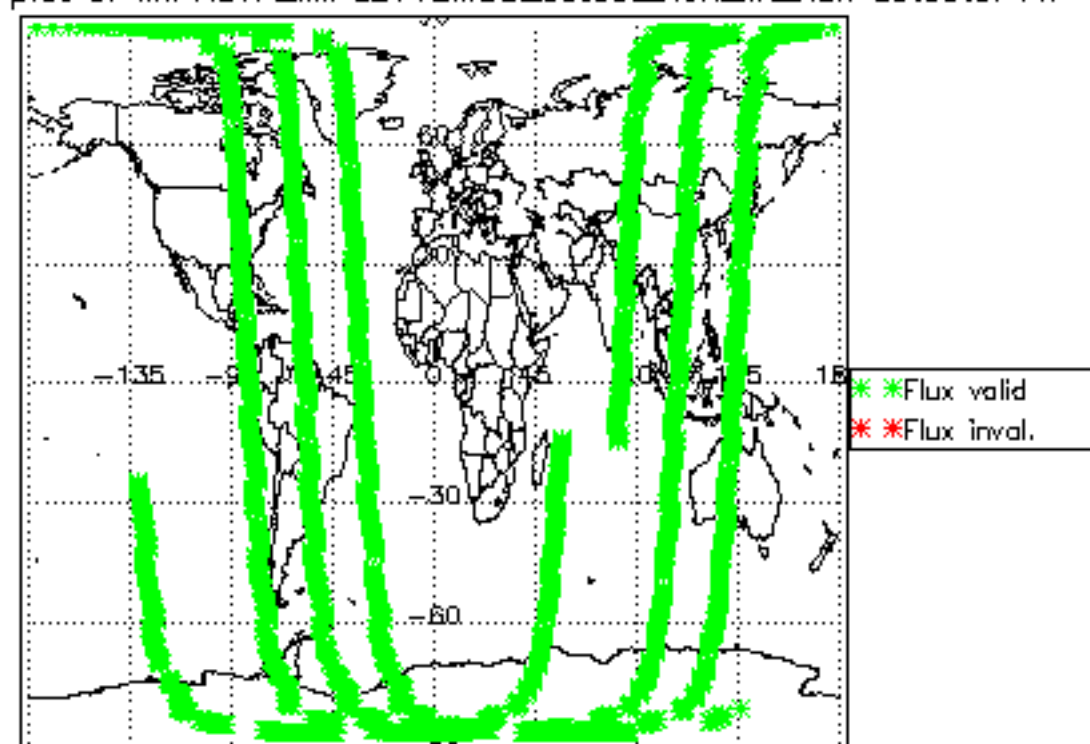




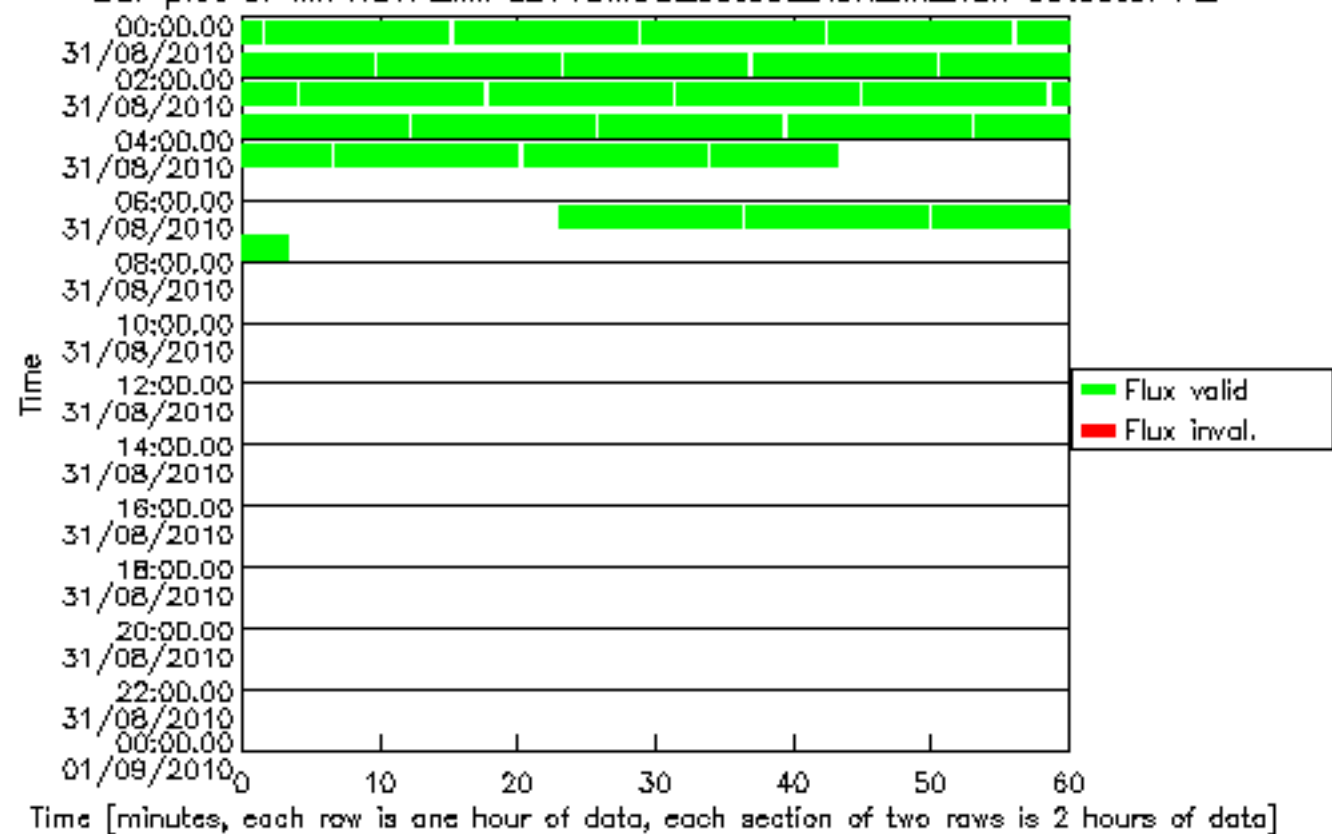
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1



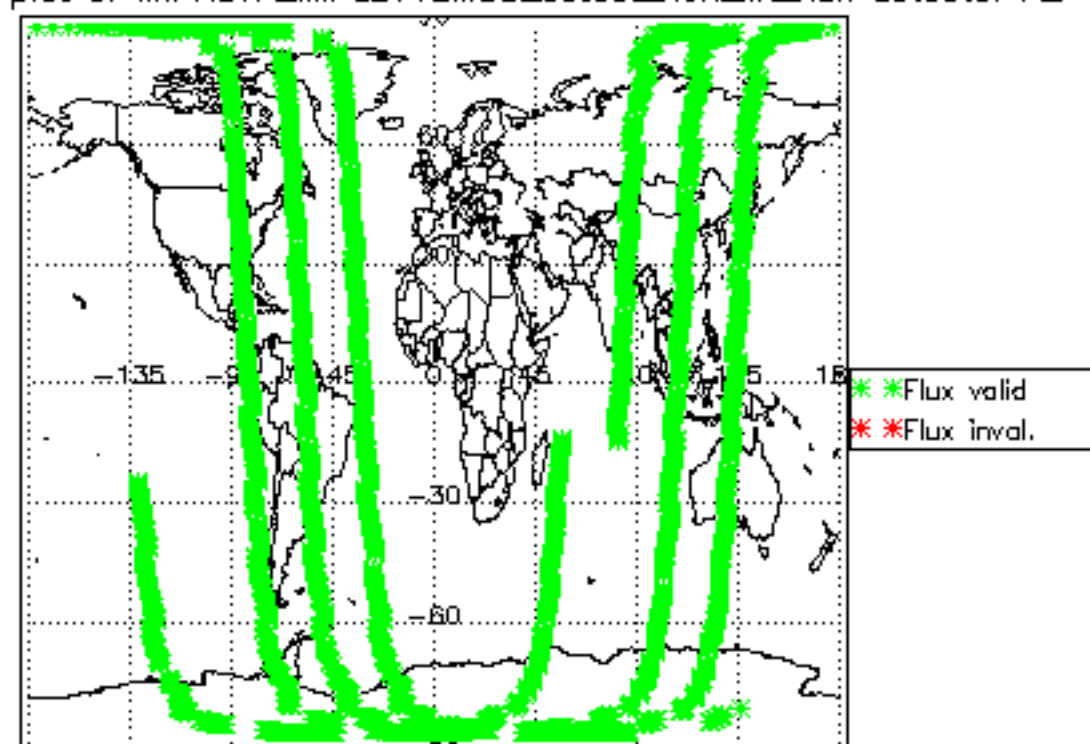
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1

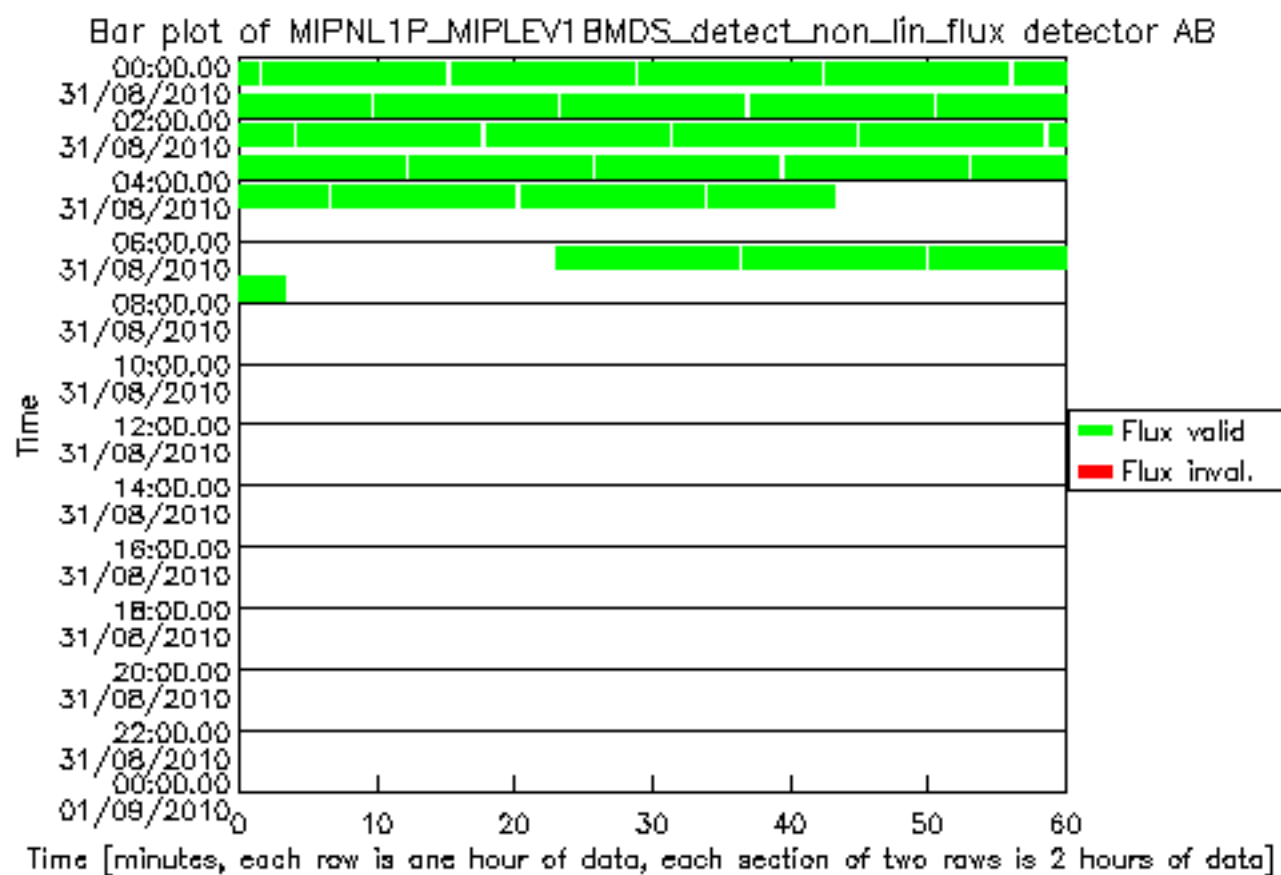


Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2

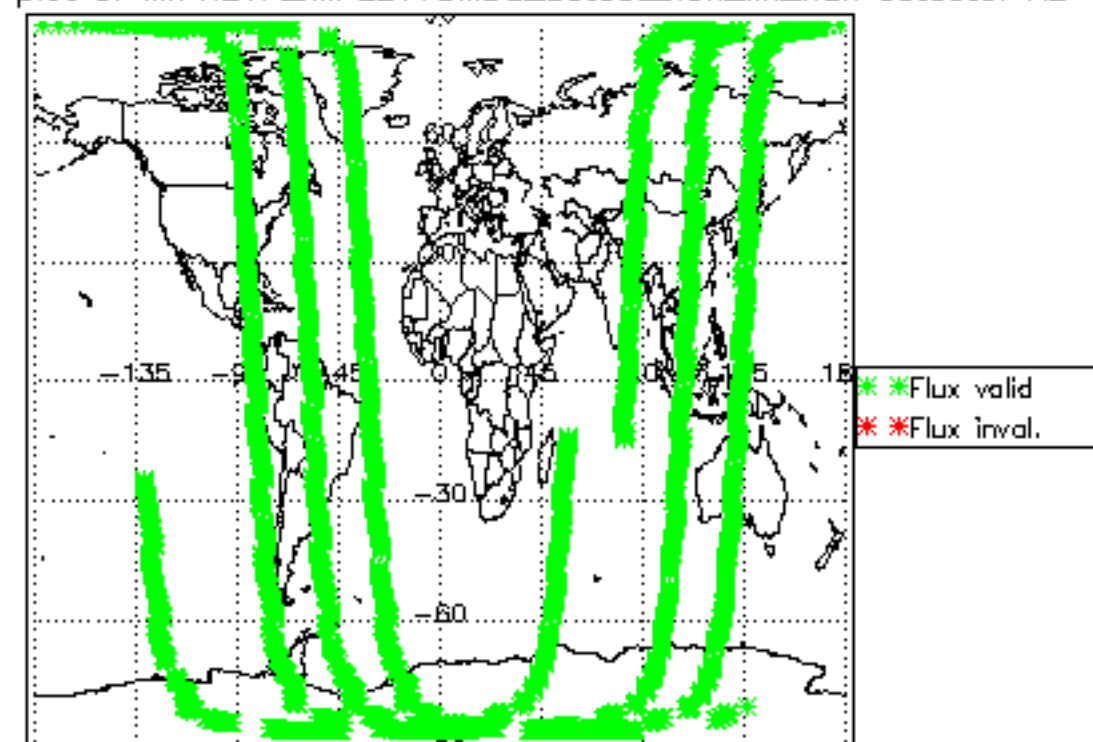


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2

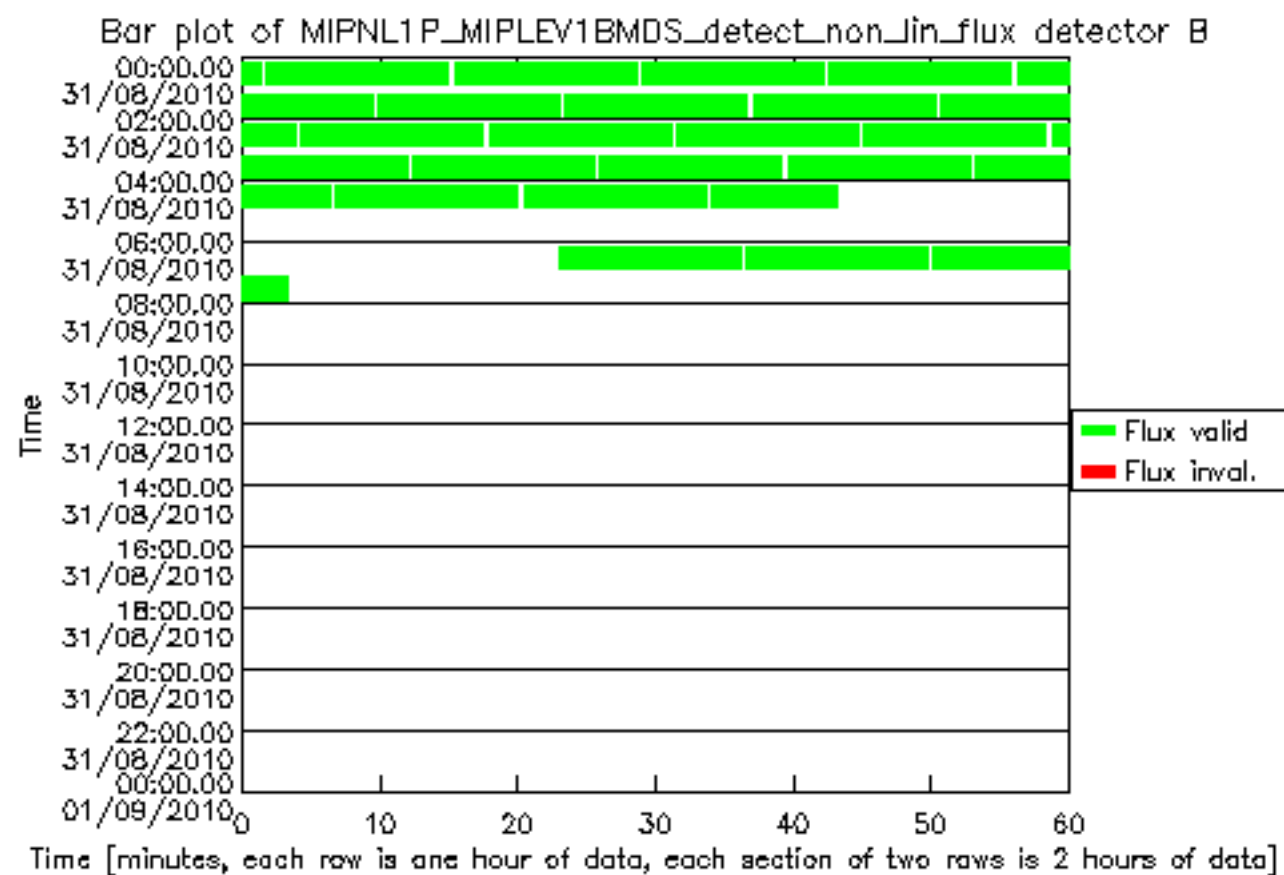




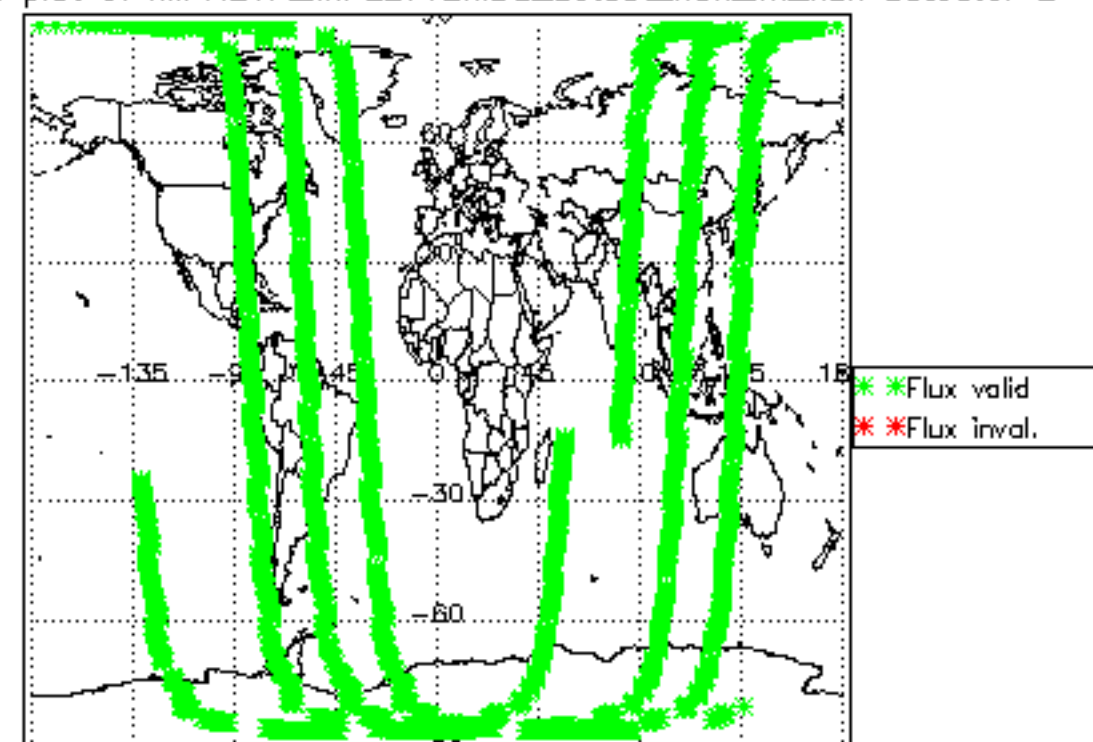
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB



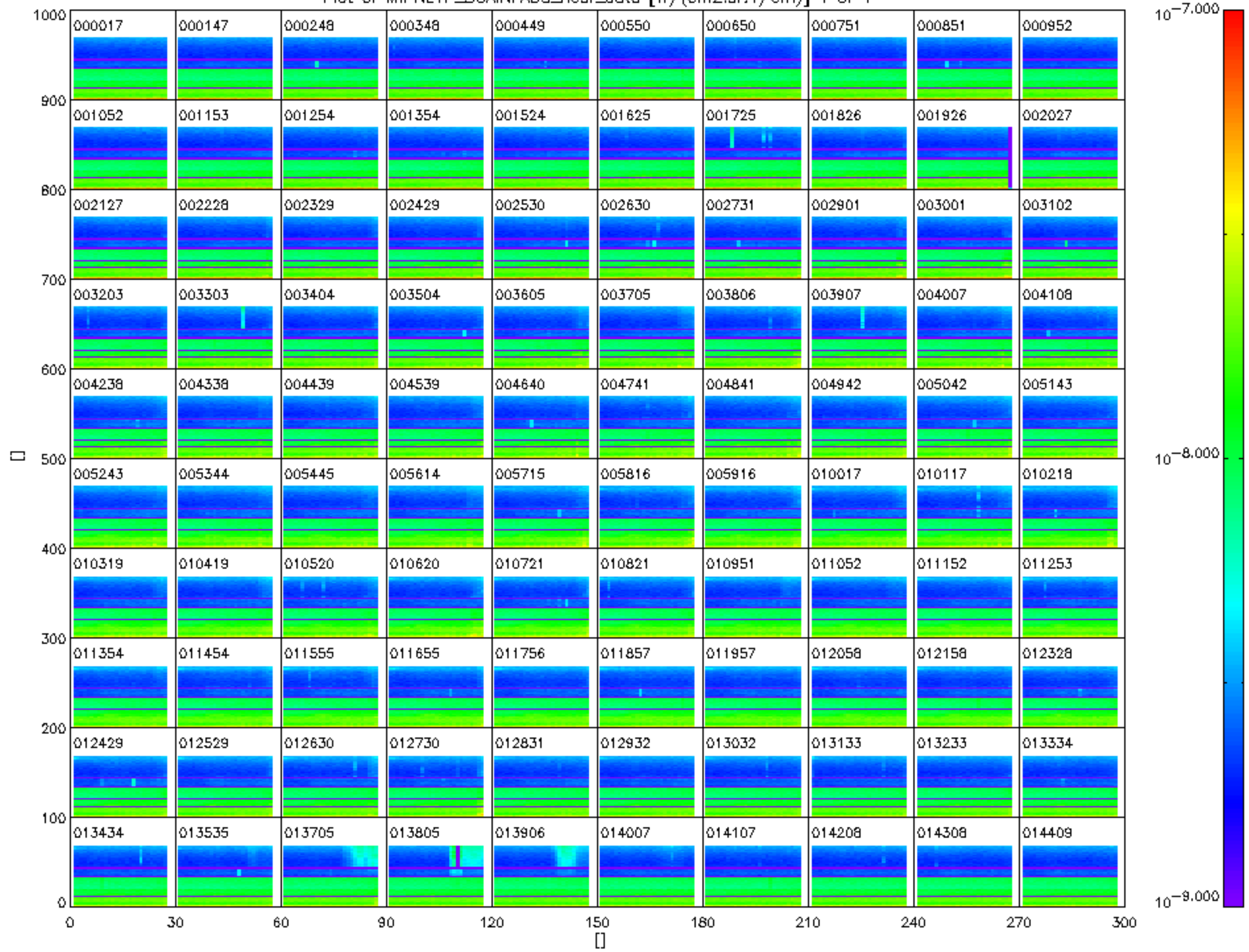




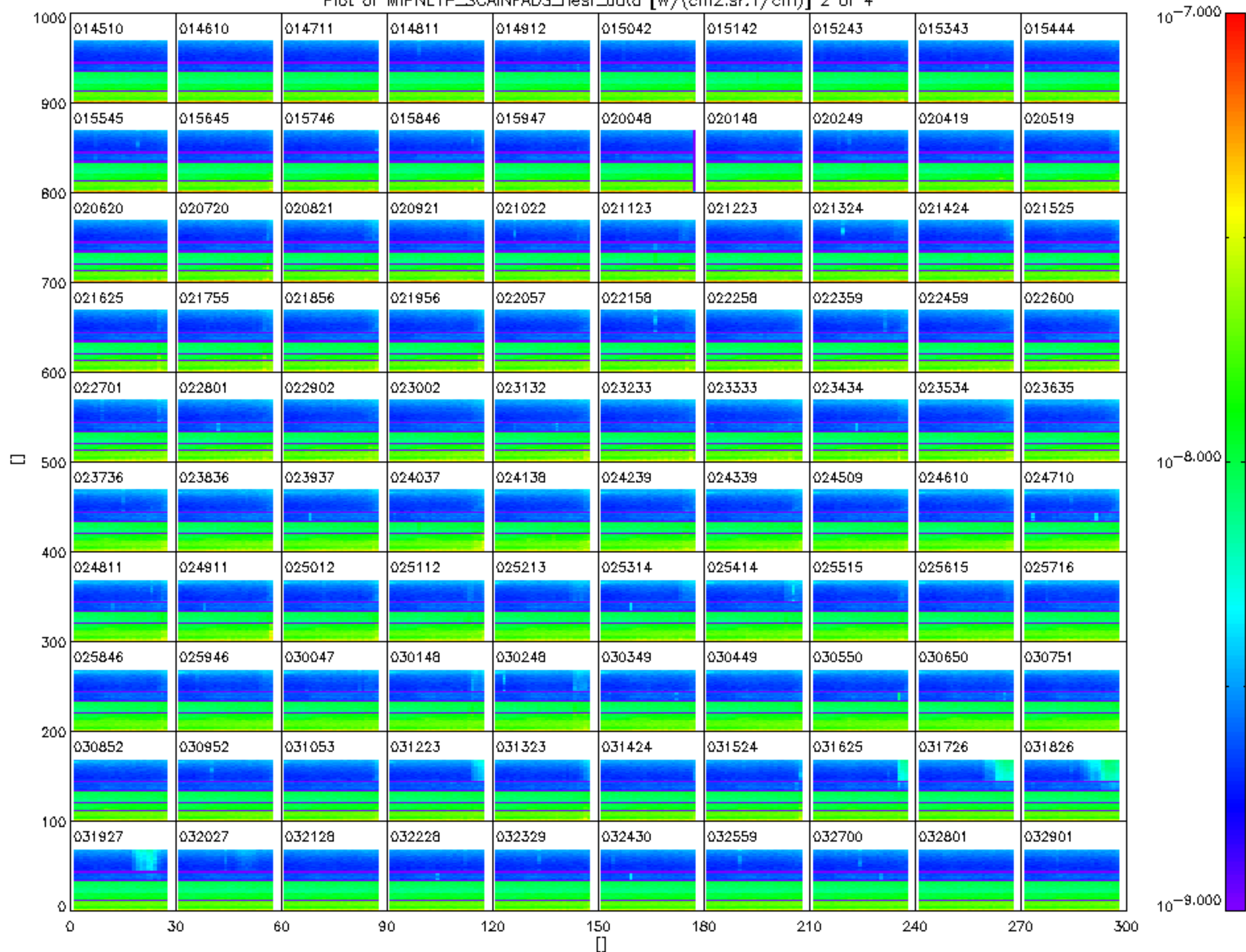
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector B



Plot of MIPNL1P\_SCAINFADS\_near\_data [W/(cm2.sr.1/cm)] 1 of 4

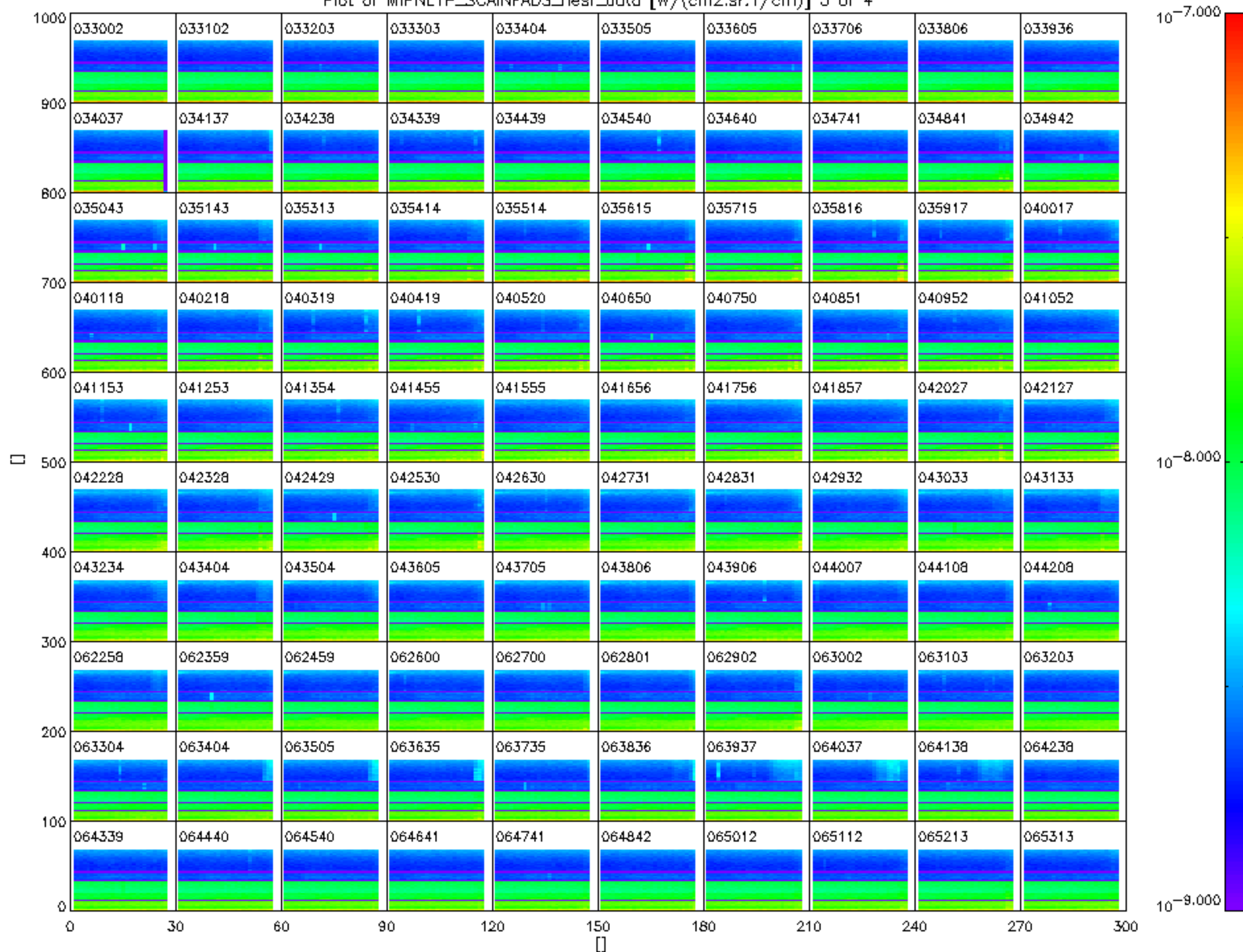


Plot of MIPNL1P\_SCAINFADS\_near\_data [W/(cm2.sr.1/cm)] 2 of 4



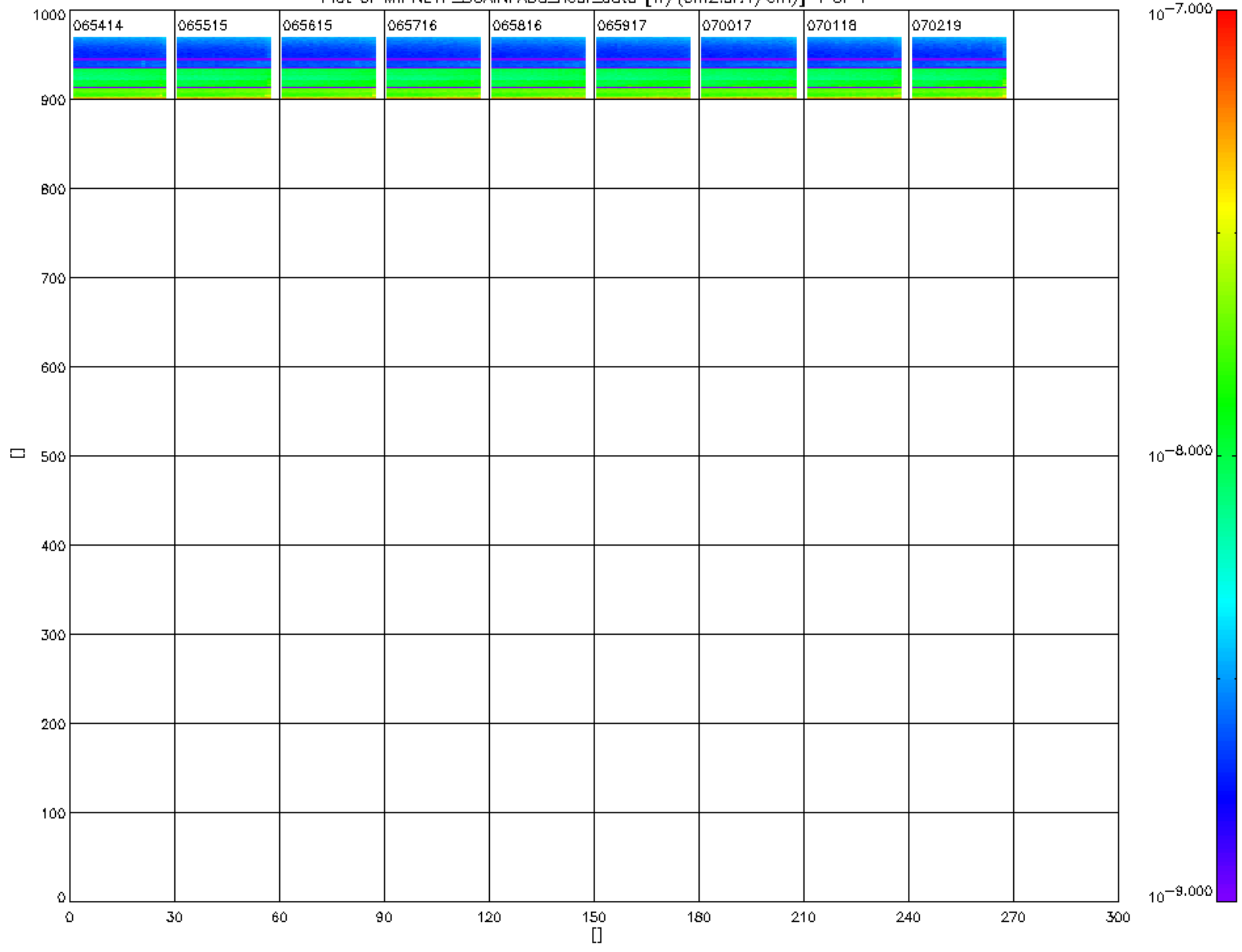


Plot of MIPNL1P\_SCAINFADS\_near\_data [W/(cm2.sr.1/cm)] 3 of 4

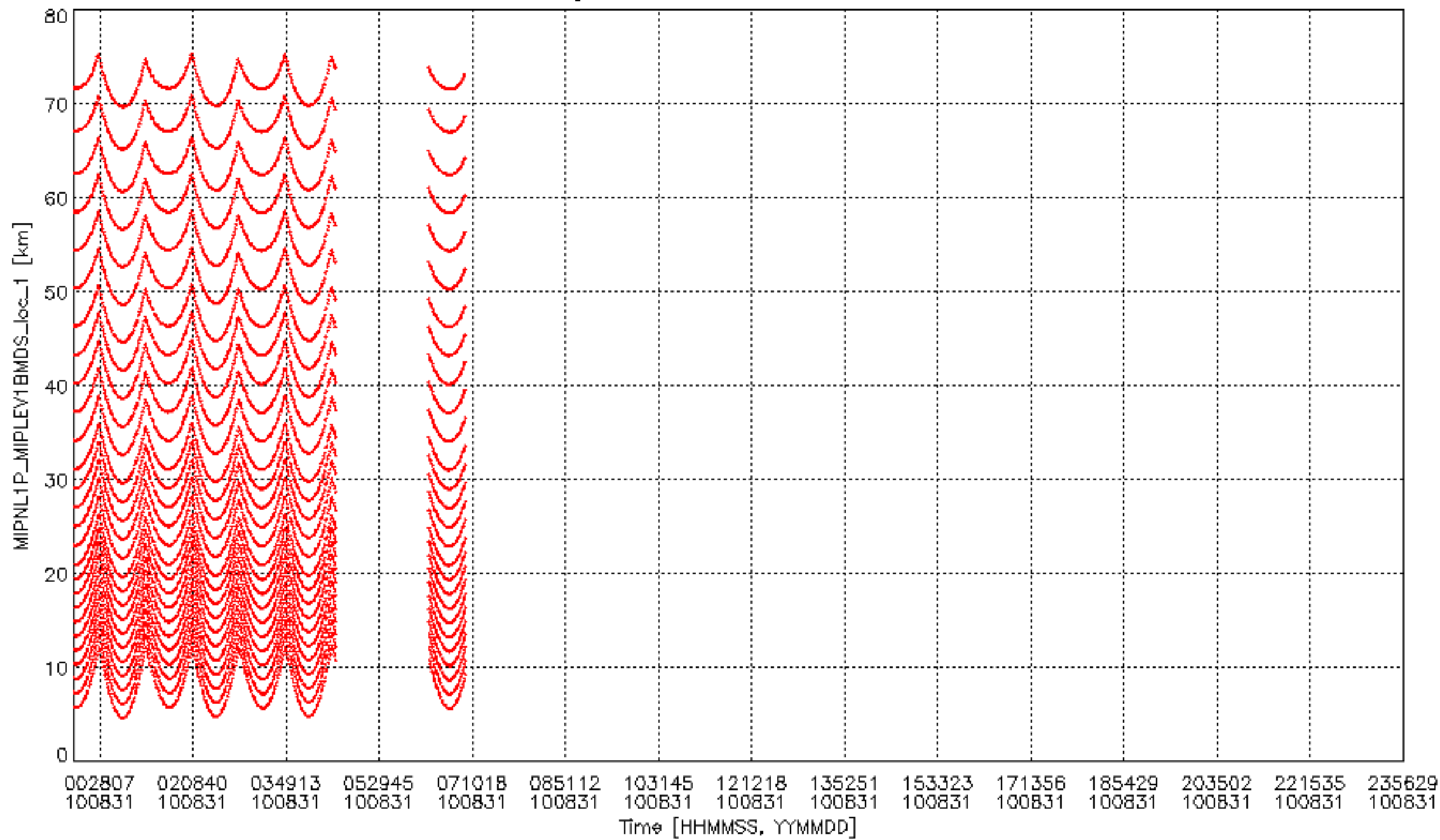




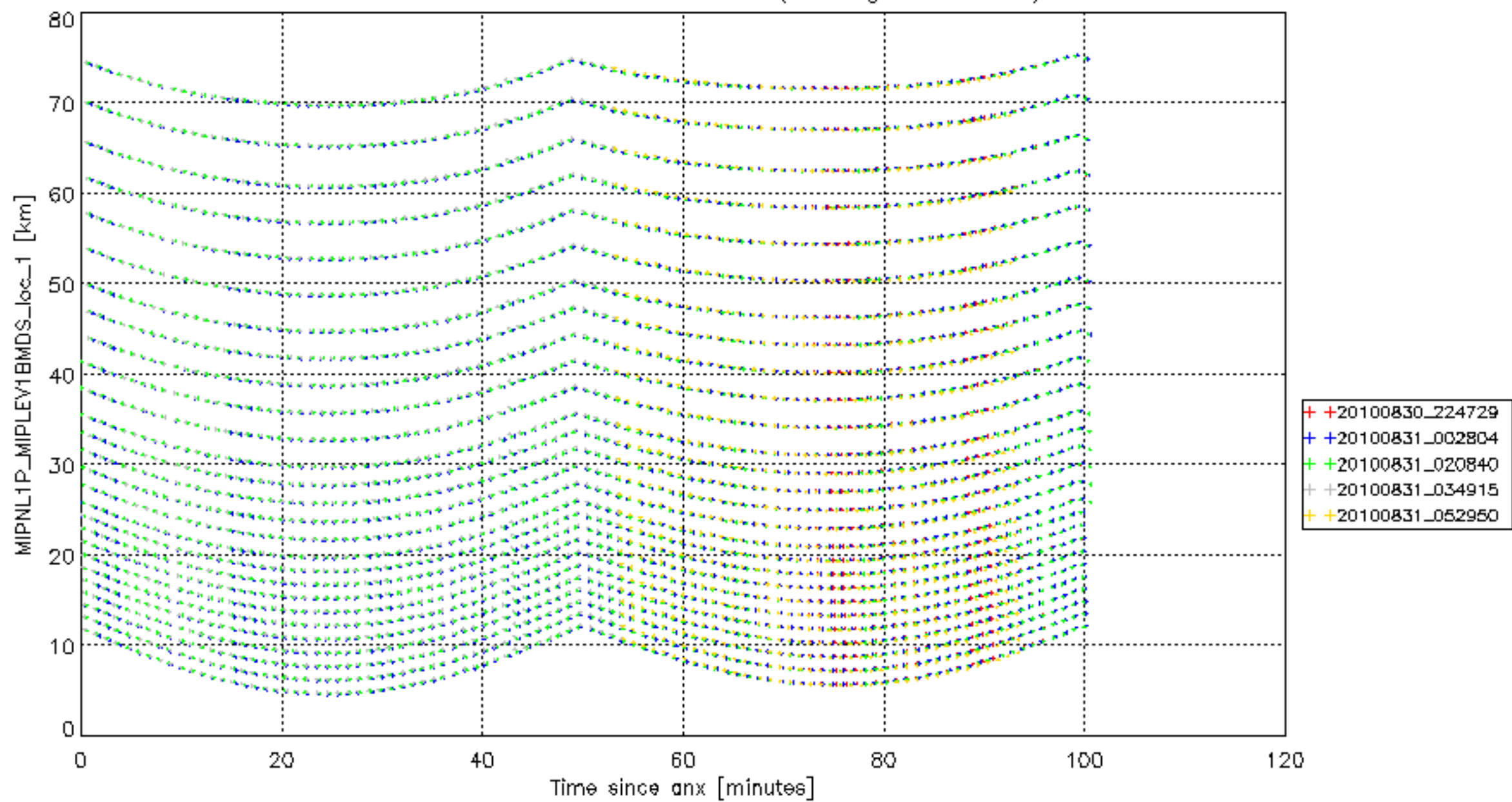
Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm2.sr.1/cm)] 4 of 4



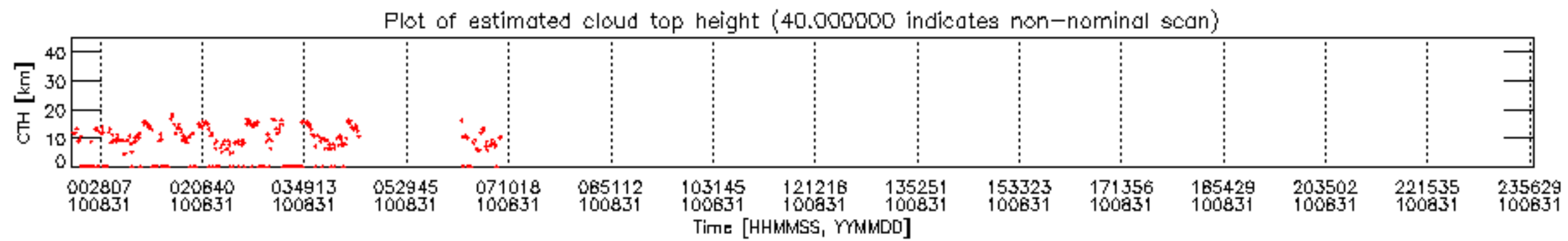
Plot of MIPNL1P\_MIPLEV1BMDS\_loc\_1 against time.  
The vertical grid lines indicate estimated anx events.



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)

