

# 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	v1.34 27-03-2008
Time of report generation	02APR2008 01:52:17
Data source version	MIPAS/4.67-P
Processing scope for products	16MAR2008 00:00:00 to 17MAR2008 00:00:00
Start time of first product within scope	16MAR2008 00:43:42
Stop time of last product within scope	16MAR2008 15:49:18
Total number of level 1 products	6
Number of level 1 products with errors	0

#### 1.1.2 Summary per product

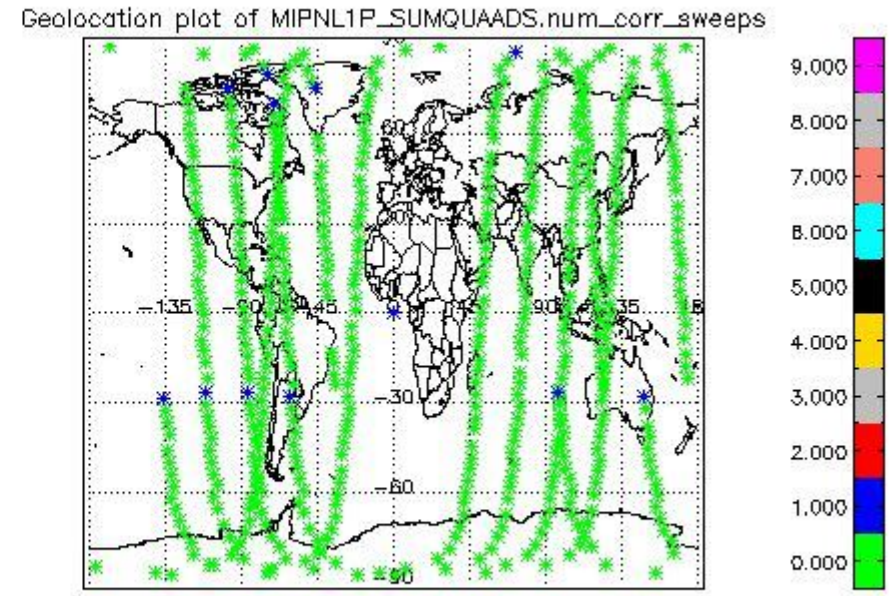
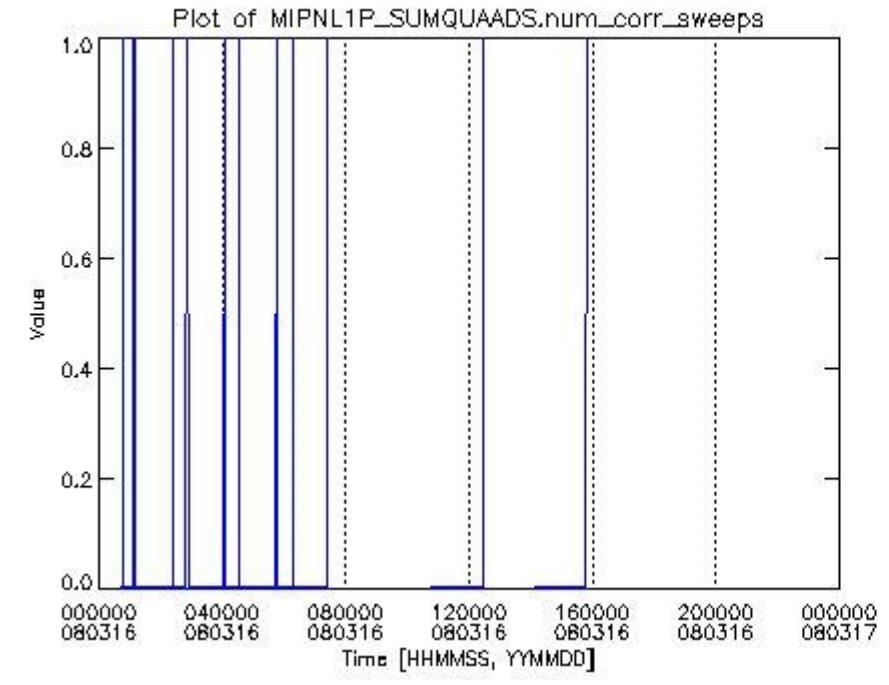
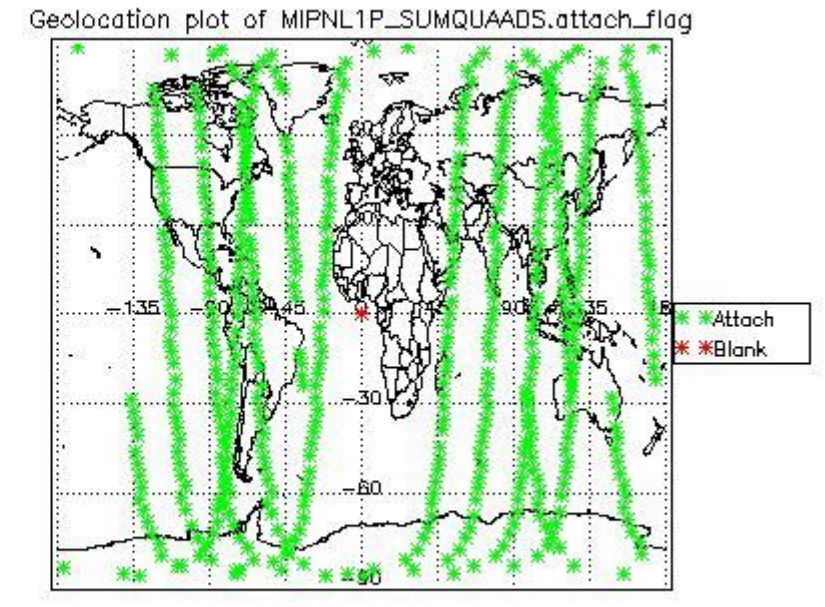
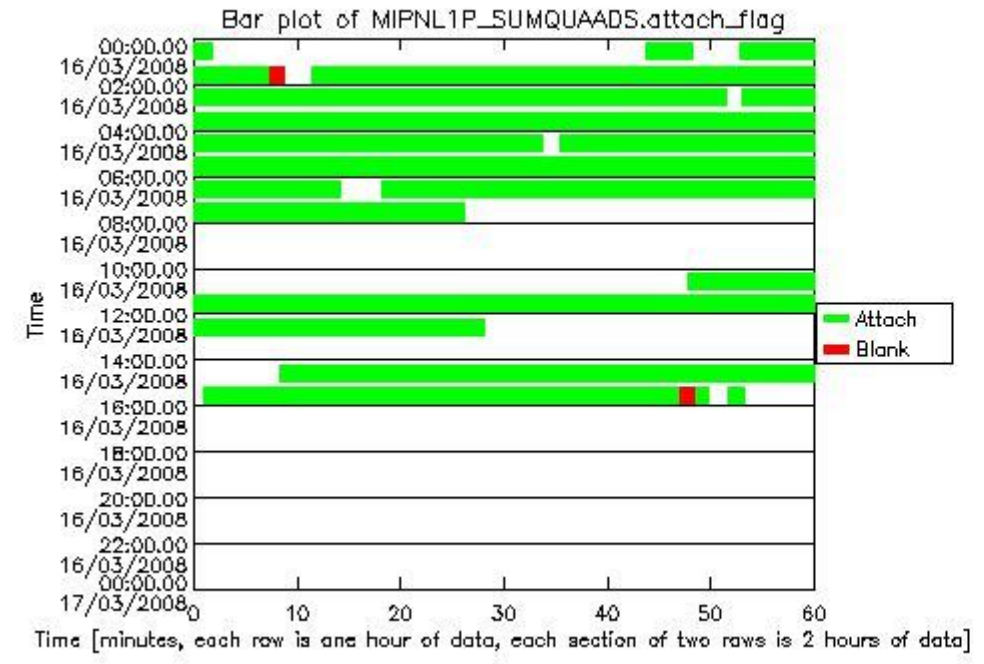
The following table shows a summary for each product used in this report.

#	Product name	Start time	Stop time	Prod err	Slice position (prod/tot)
0	MIP_NL__1PPDPA20080316_004342_000060252066_00475_31591_4735.N1	16MAR2008 00:43:42	16MAR2008 02:24:07	0	1/1
1	MIP_NL__1PPDPA20080316_022413_000060572066_00476_31592_4736.N1	16MAR2008 02:24:13	16MAR2008 04:05:10	0	1/1
2	MIP_NL__1PPDPA20080316_040516_000060282066_00477_31593_4732.N1	16MAR2008 04:05:16	16MAR2008 05:45:44	0	1/1
3	MIP_NL__1PPDPA20080316_054550_000059932066_00478_31594_4740.N1	16MAR2008 05:45:50	16MAR2008 07:25:42	0	1/1
4	MIP_NL__1PPDPA20080316_104749_000059932066_00481_31597_4790.N1	16MAR2008 10:47:49	16MAR2008 12:27:41	0	1/1
5	MIP_NL__1PPDPA20080316_140821_000060572066_00483_31599_4785.N1	16MAR2008 14:08:21	16MAR2008 15:49:18	0	1/1

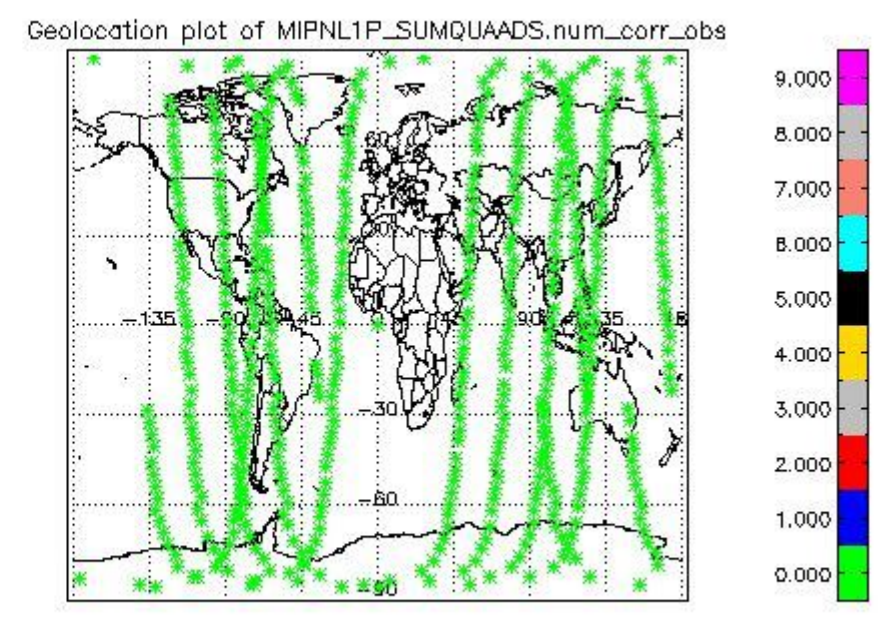
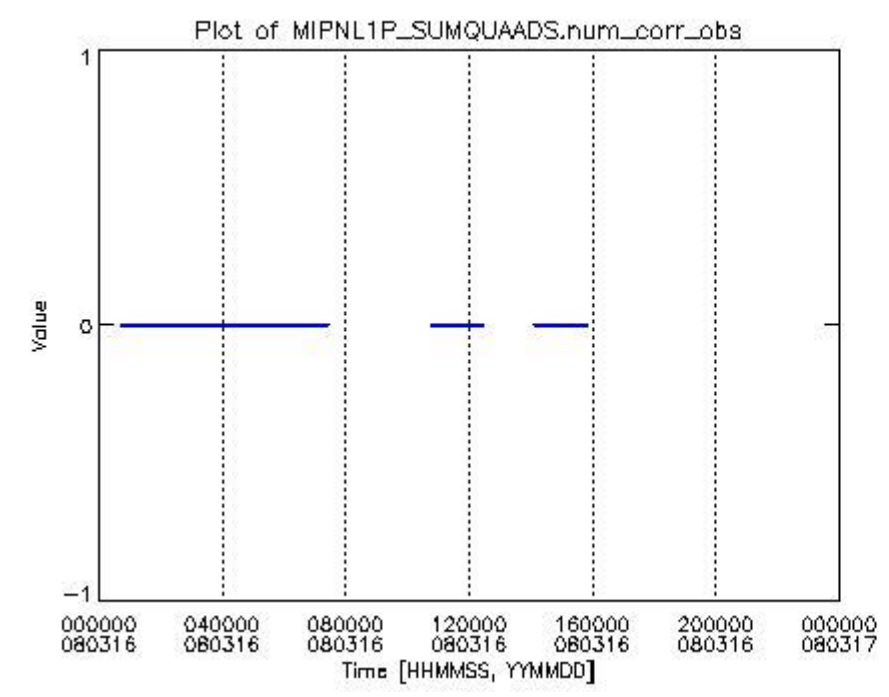
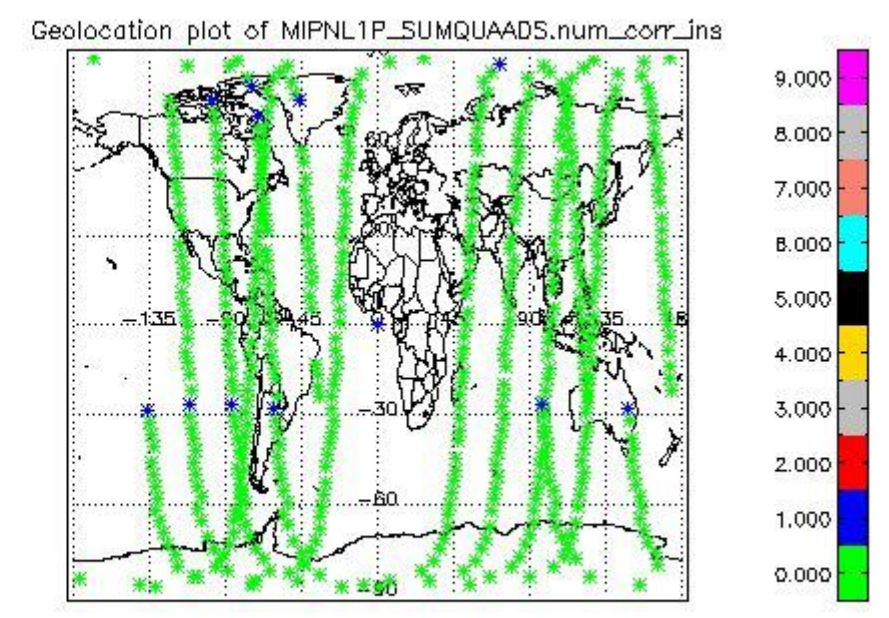
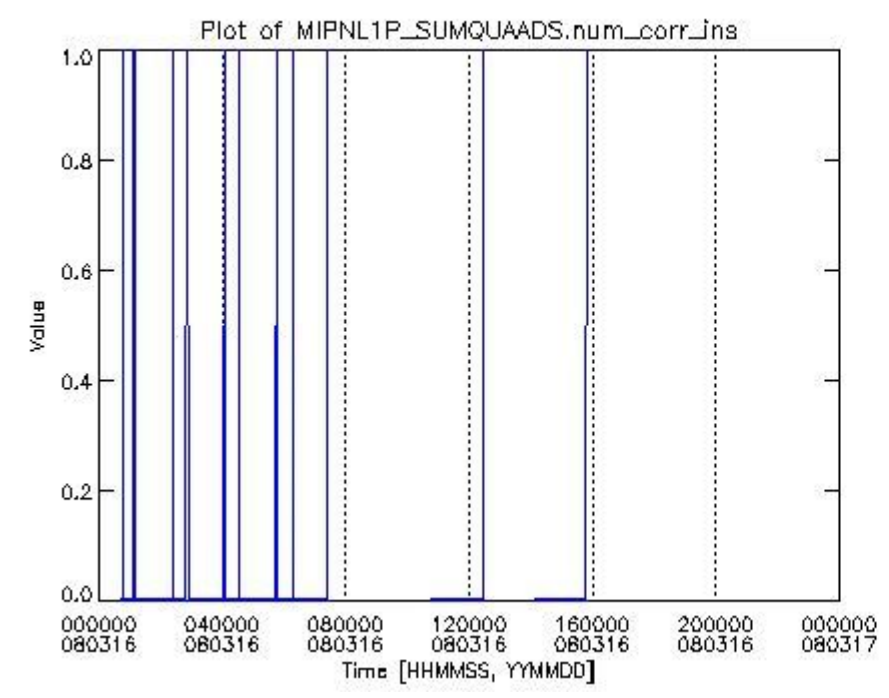
### 1.2 Product Quality Indicators

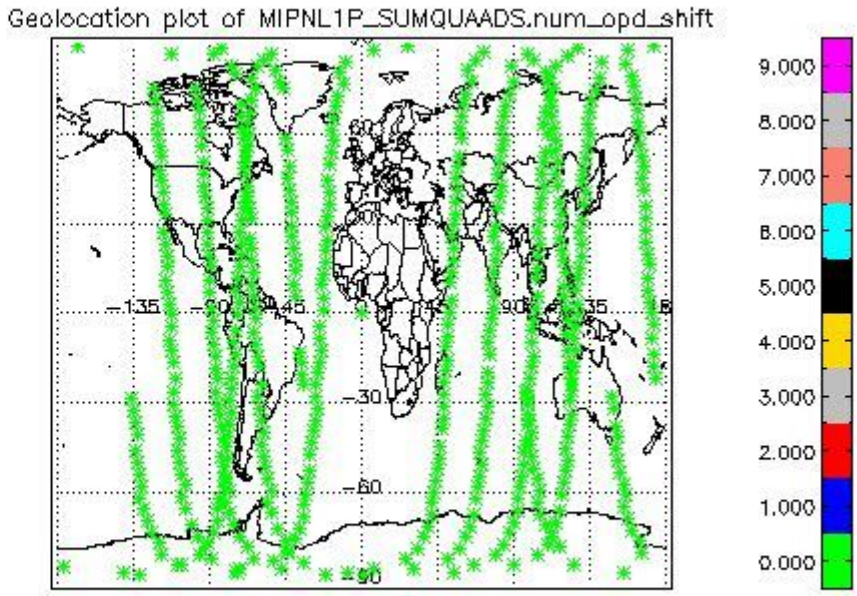
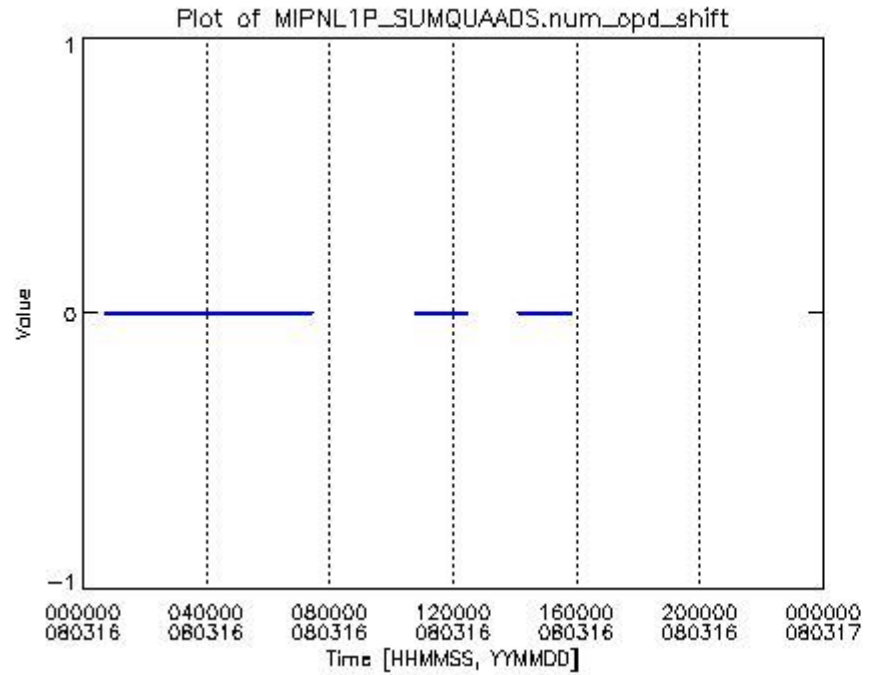
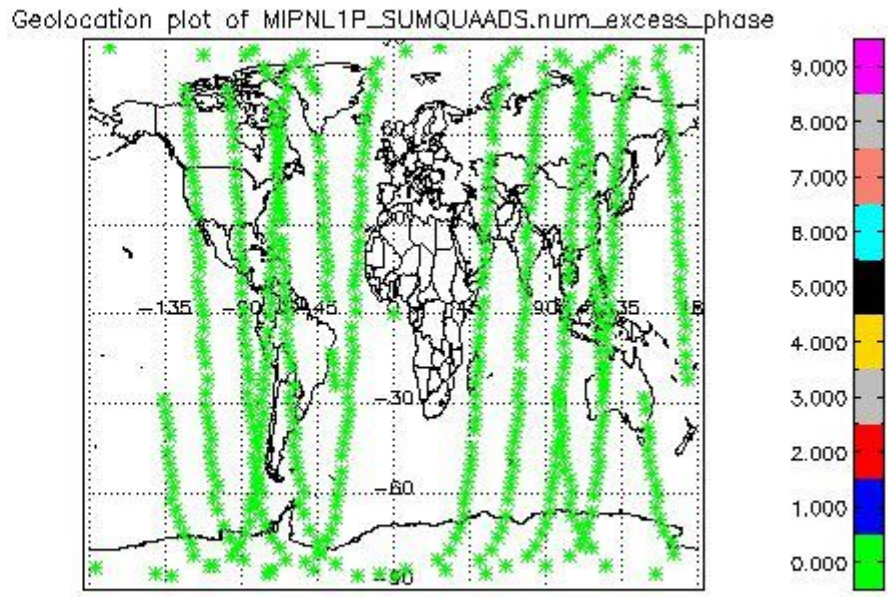
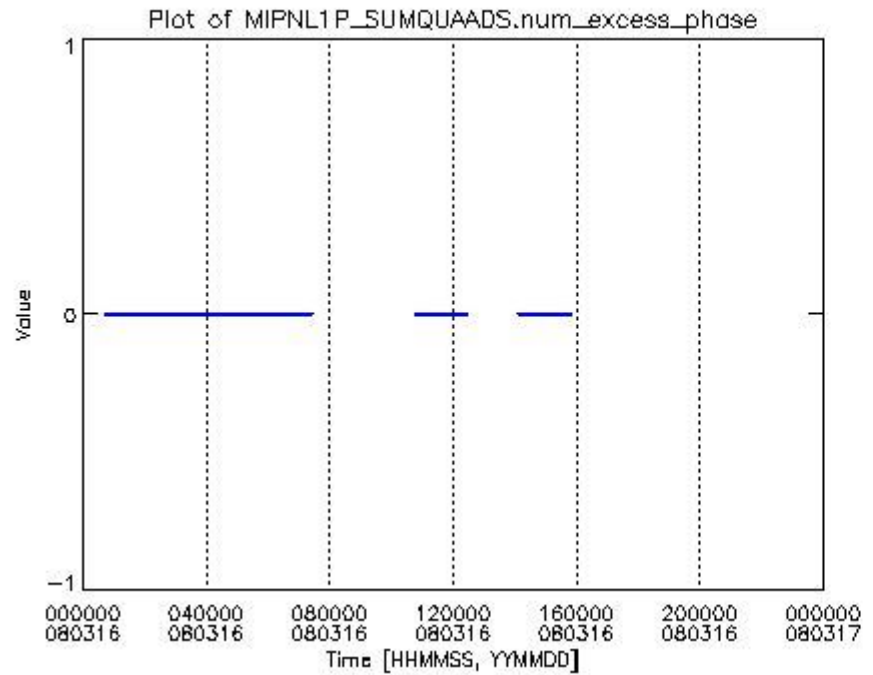
This report contains an analysis on product quality related parameters within the MIP\_NL\_\_1P product.

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

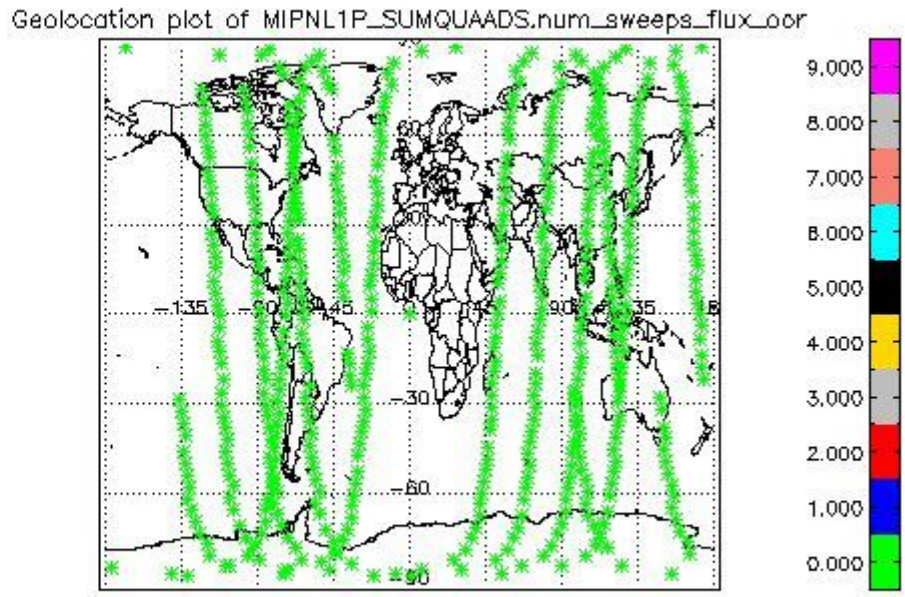
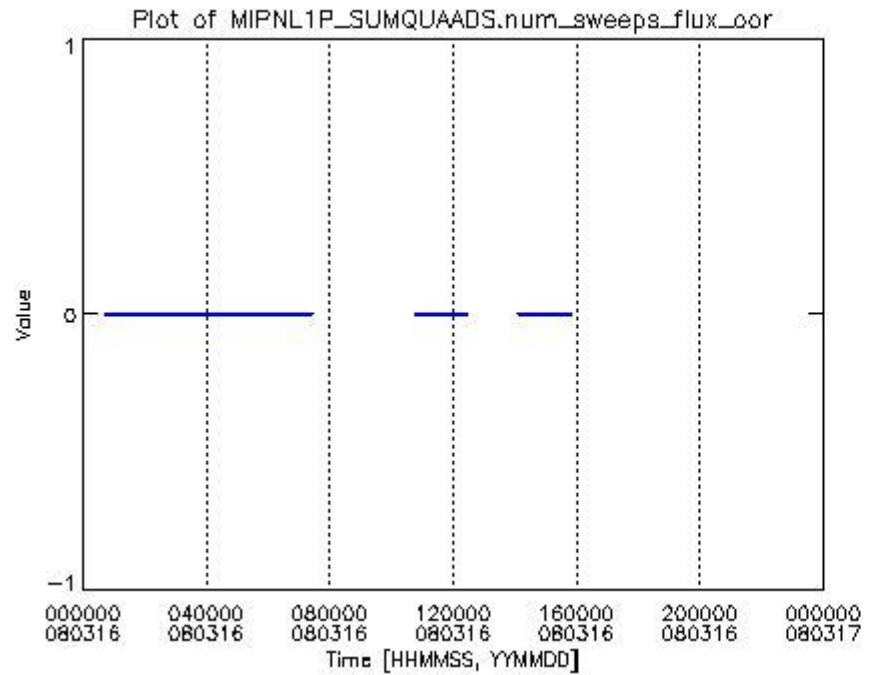




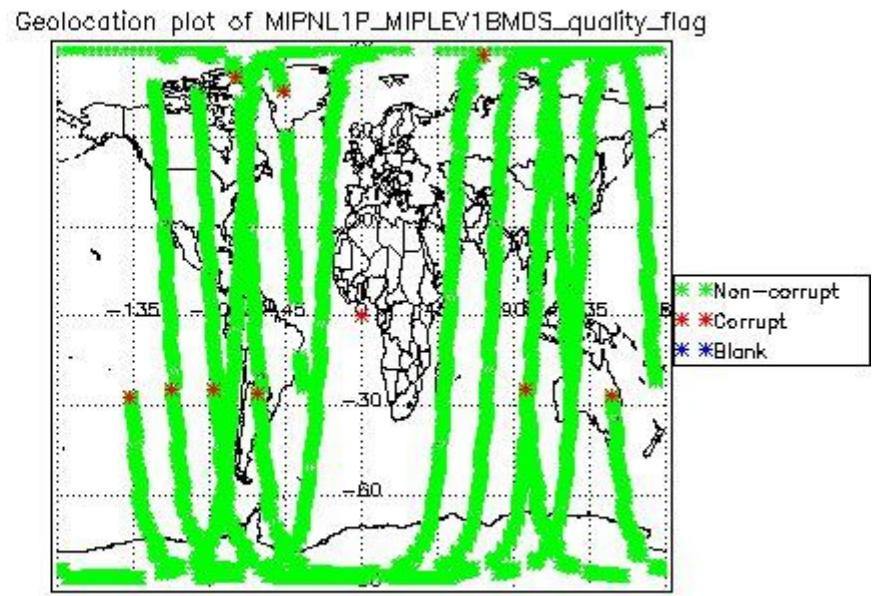
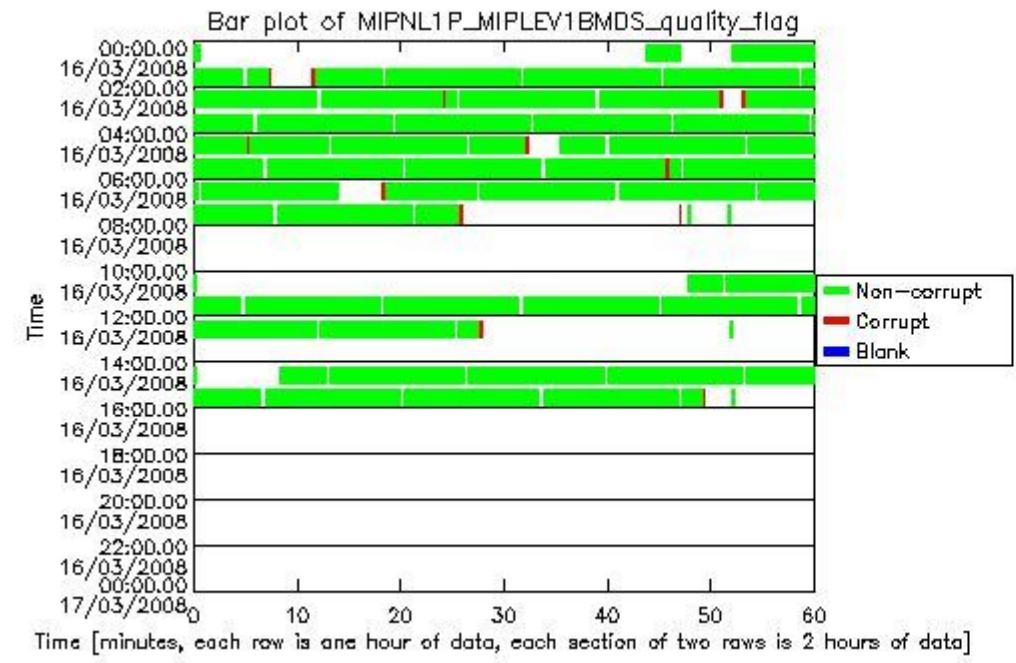


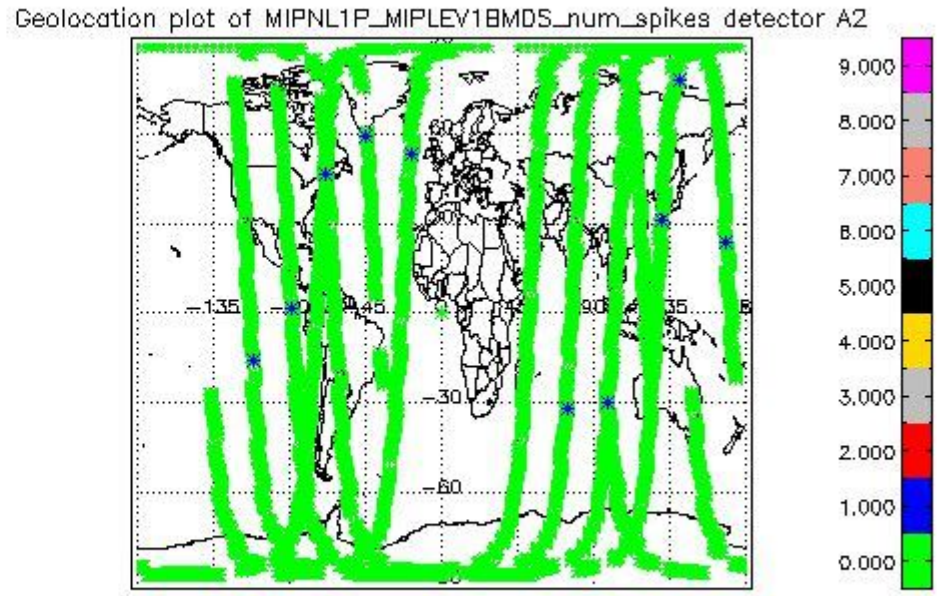
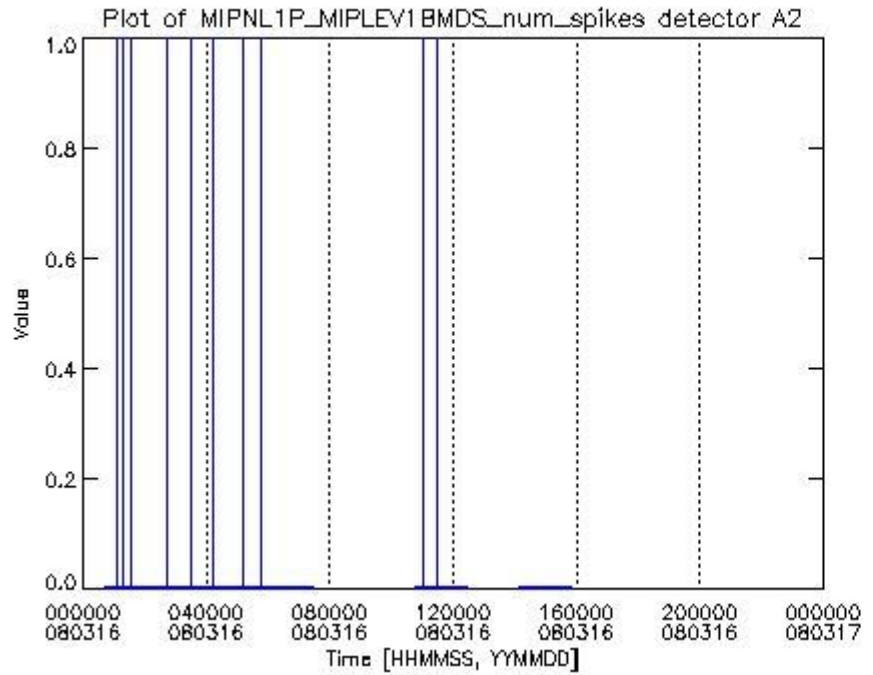
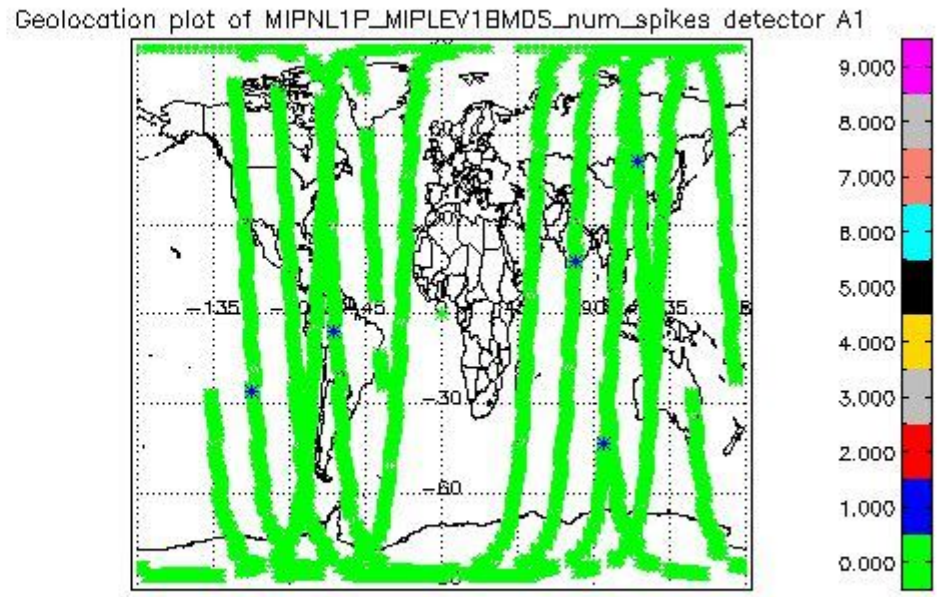
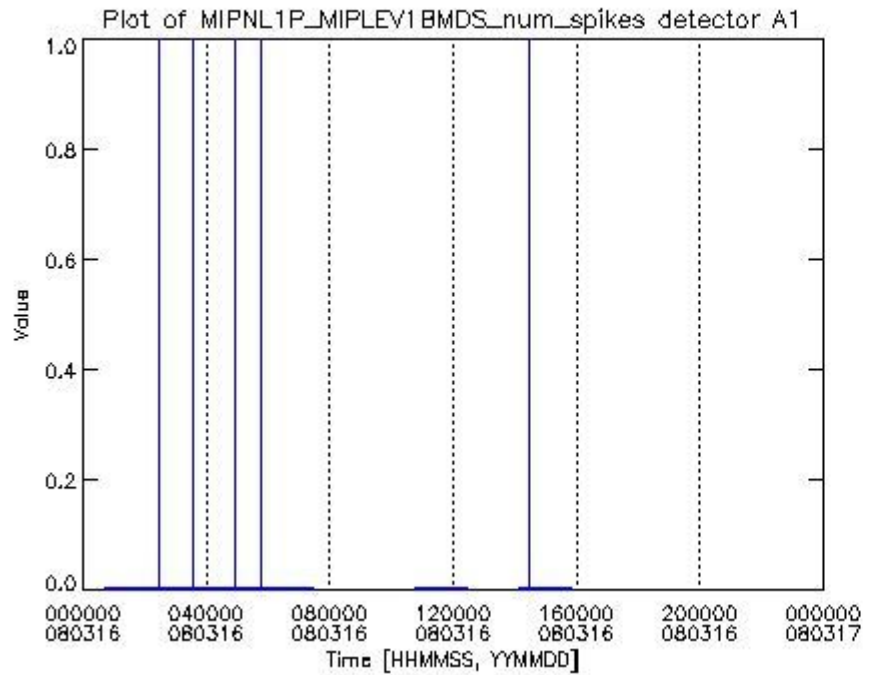




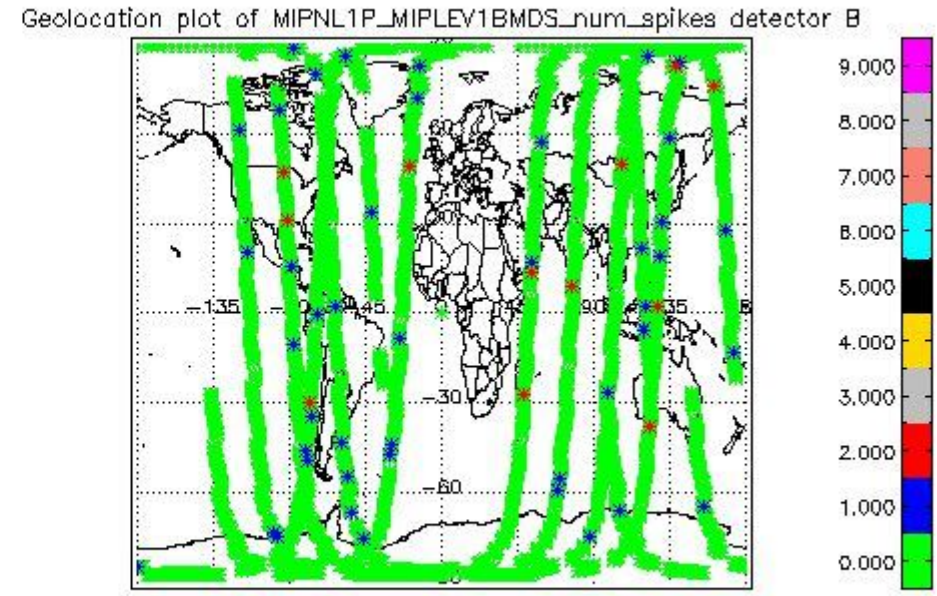
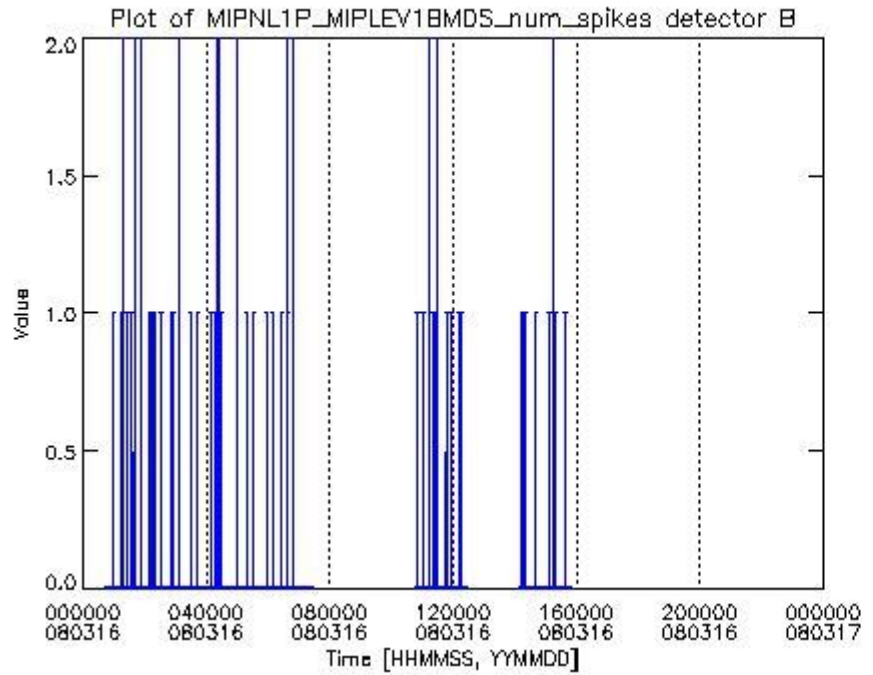
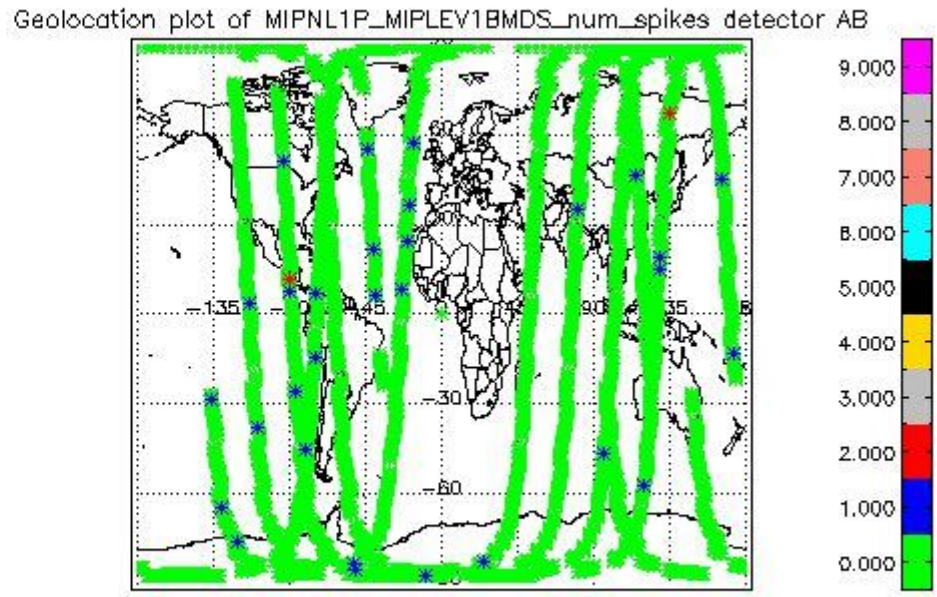
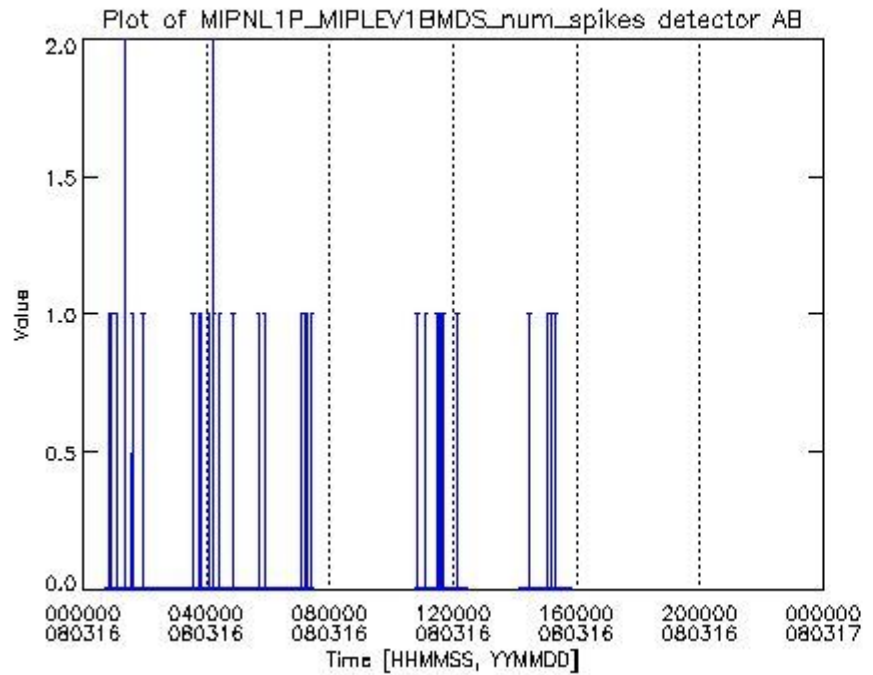


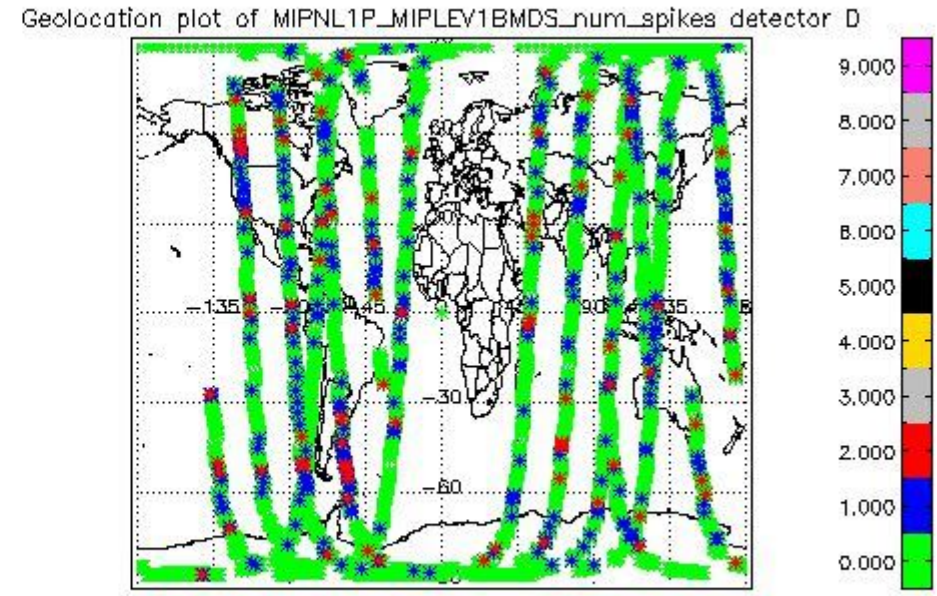
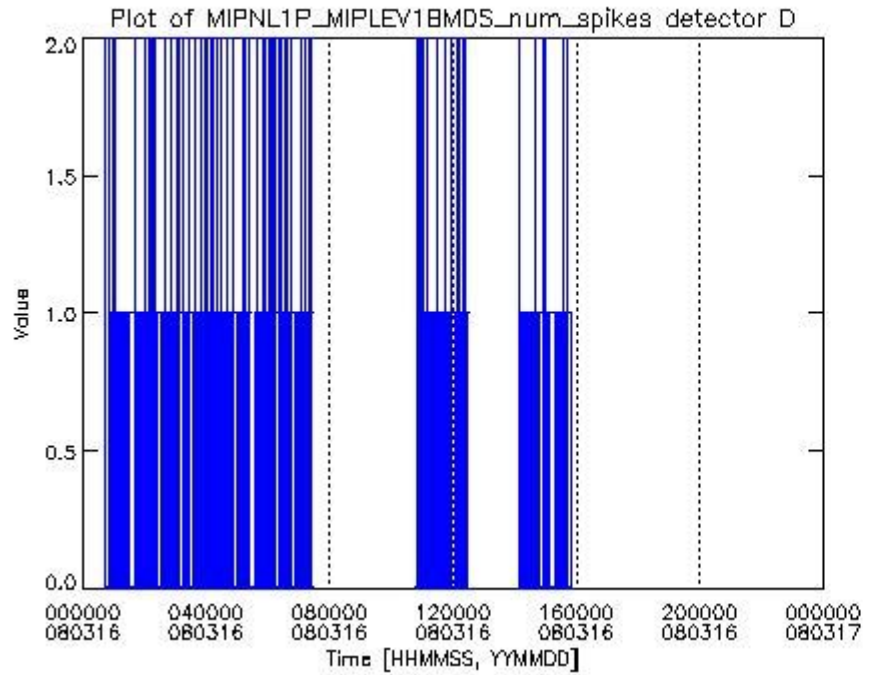
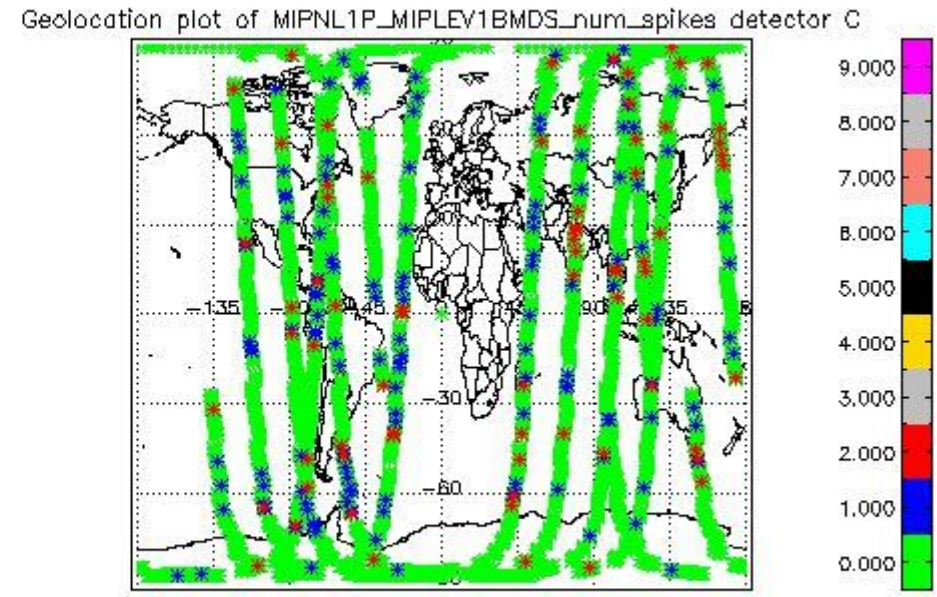
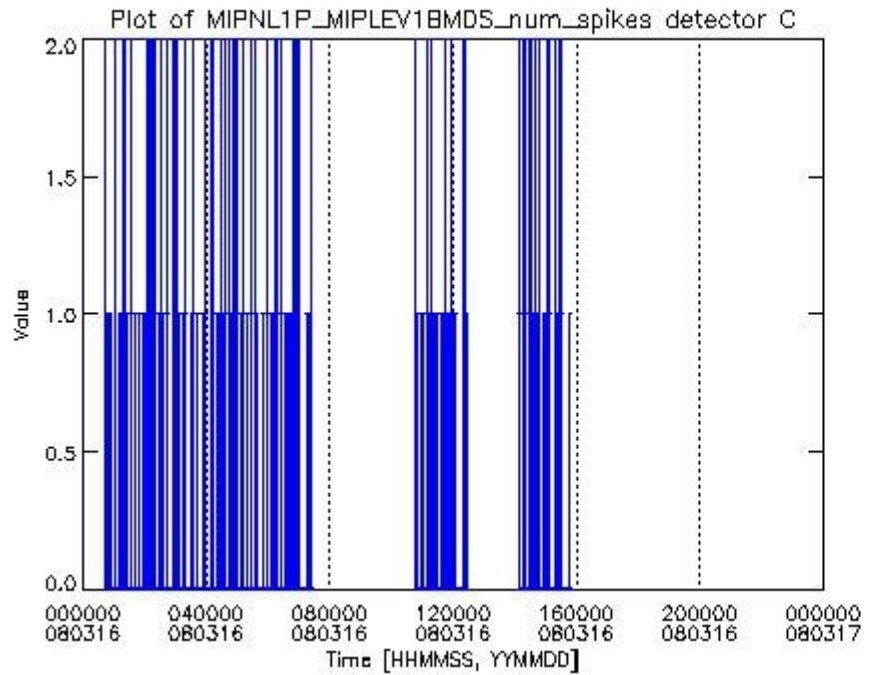
1.2.2 Trends and geolocation of MIPAS LEVEL 1 MDS



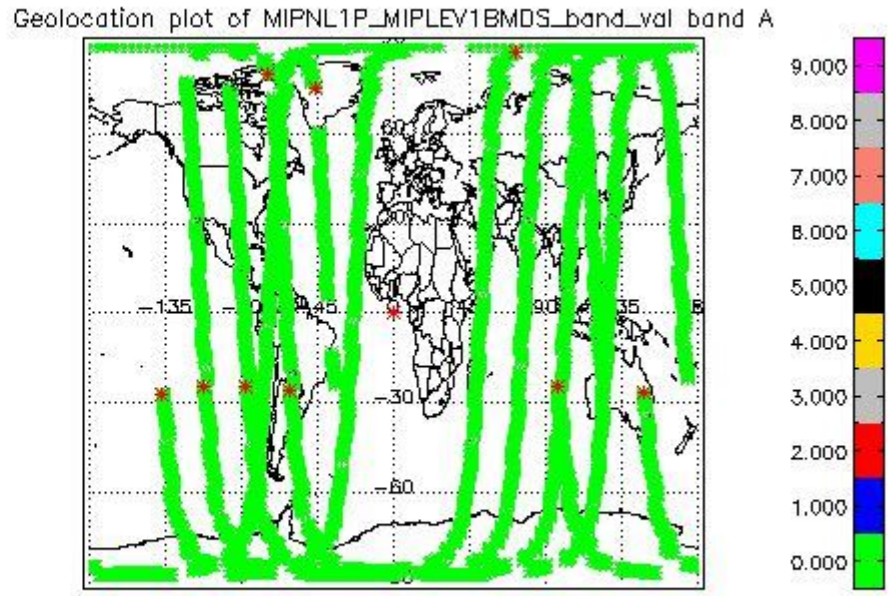
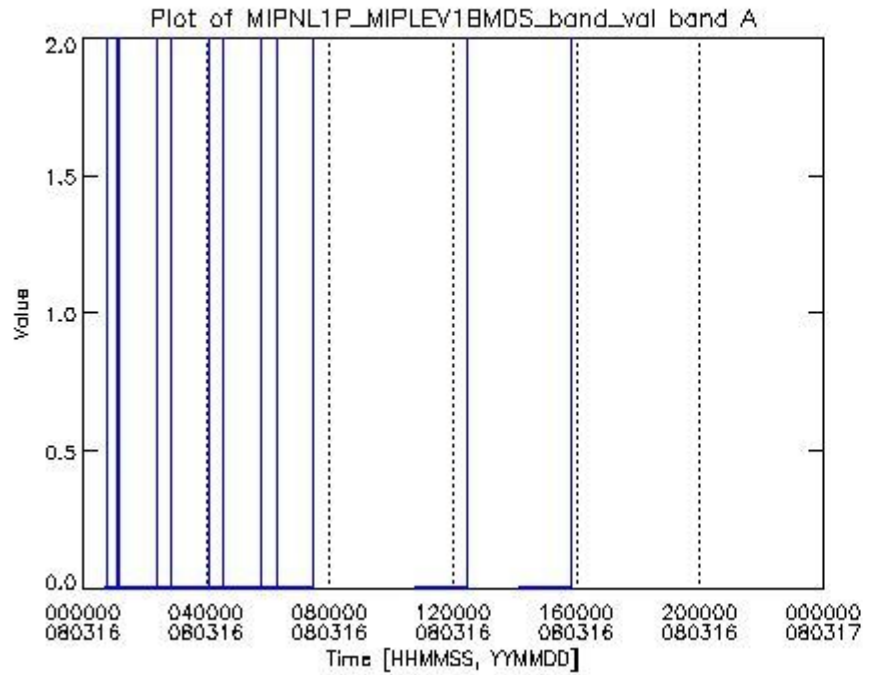
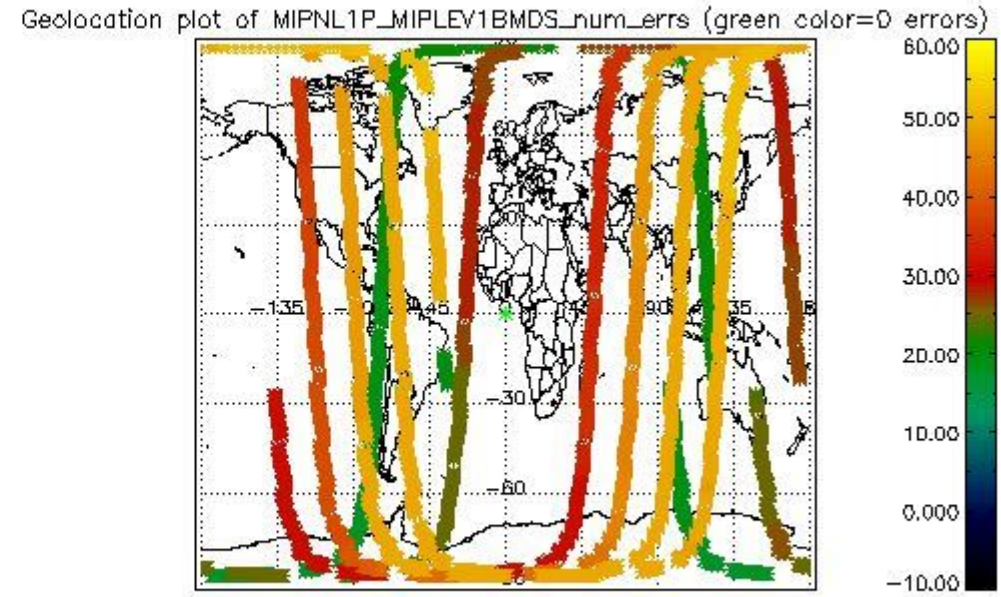
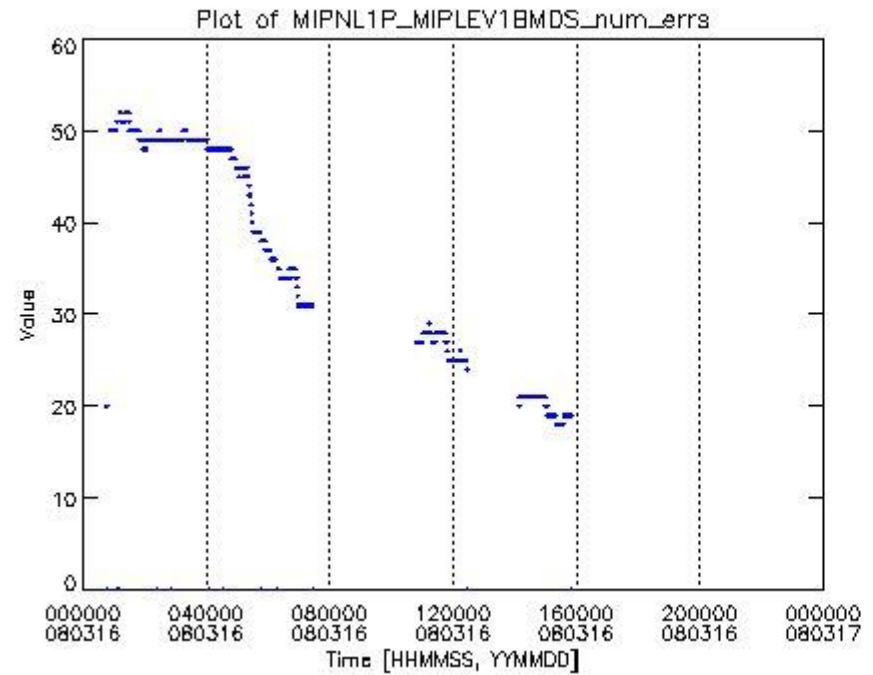


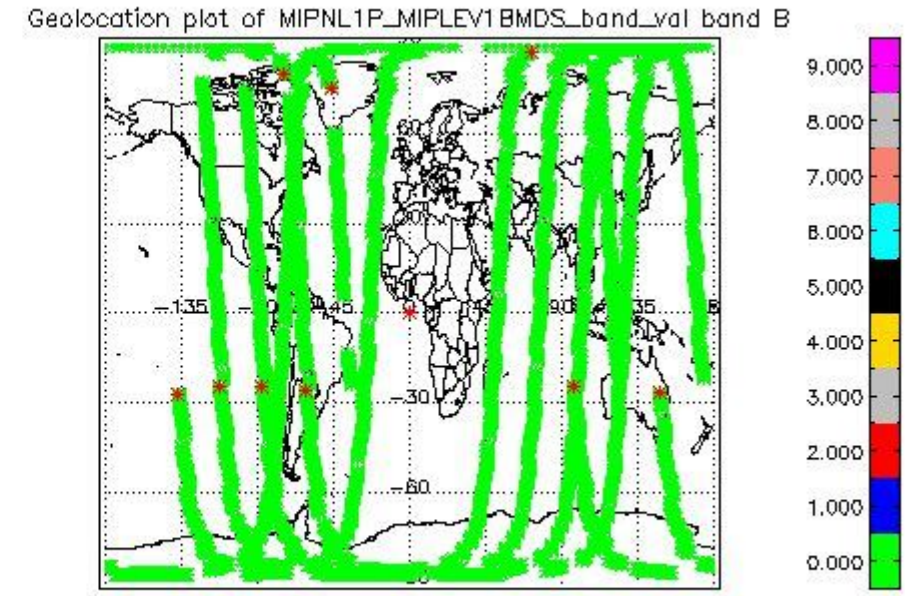
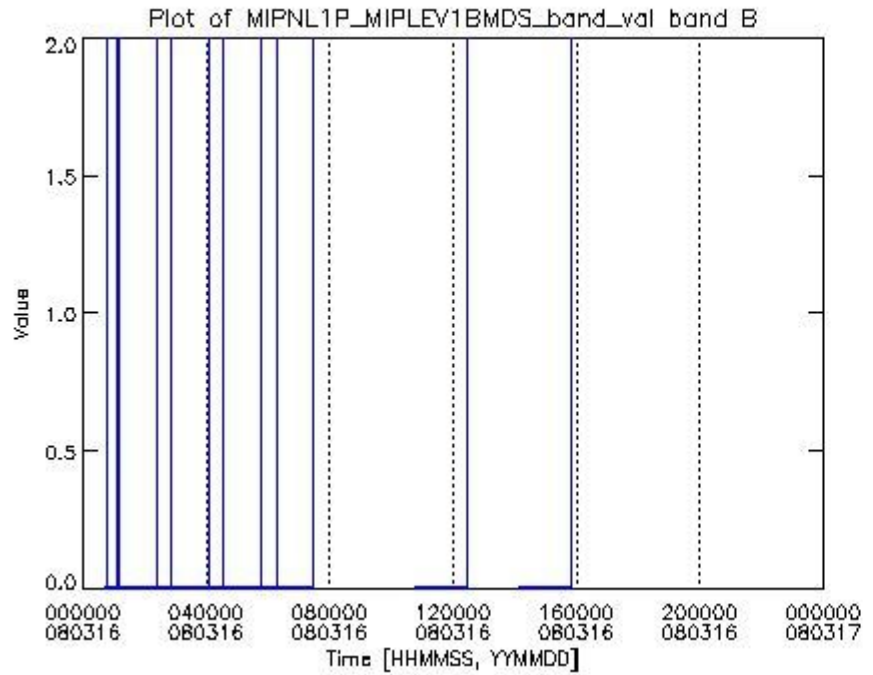
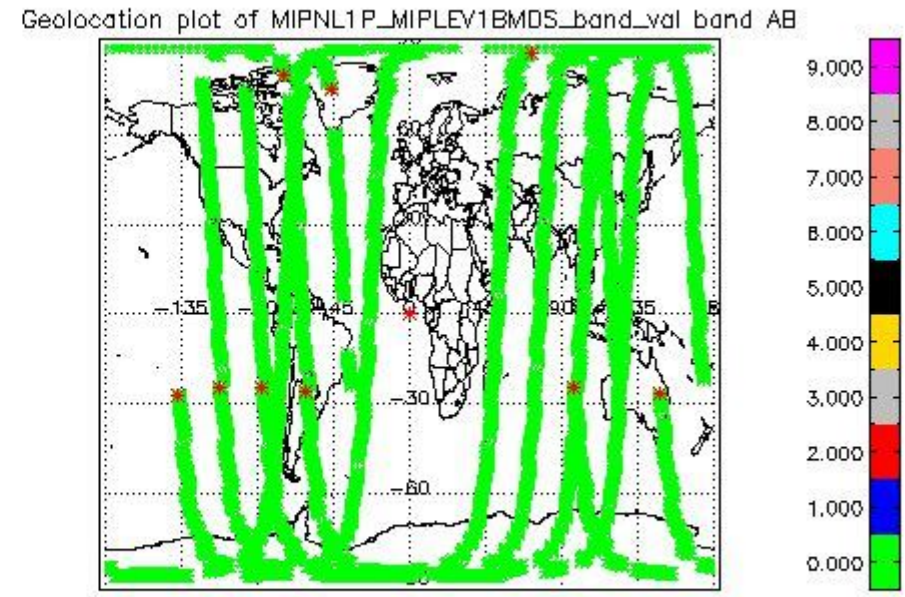
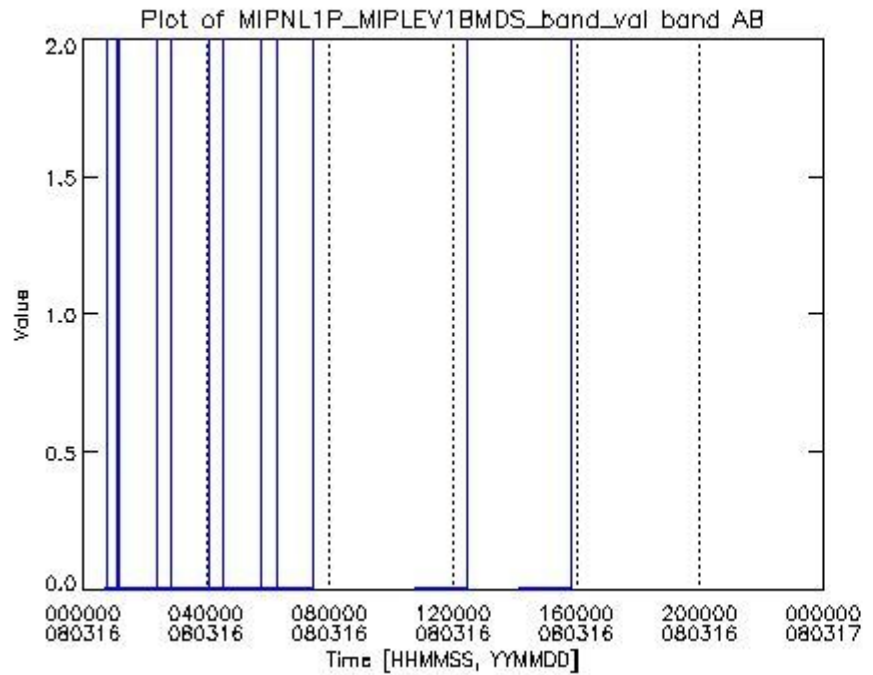




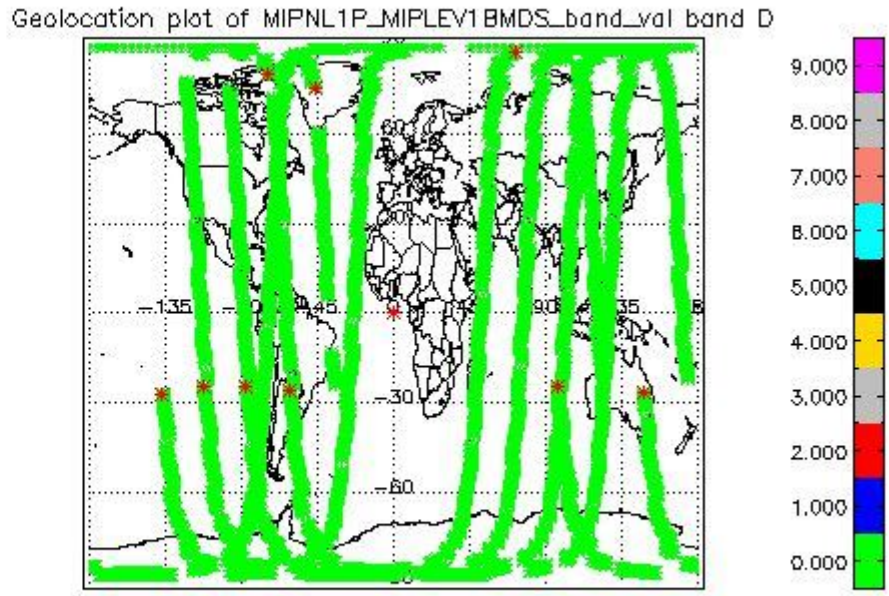
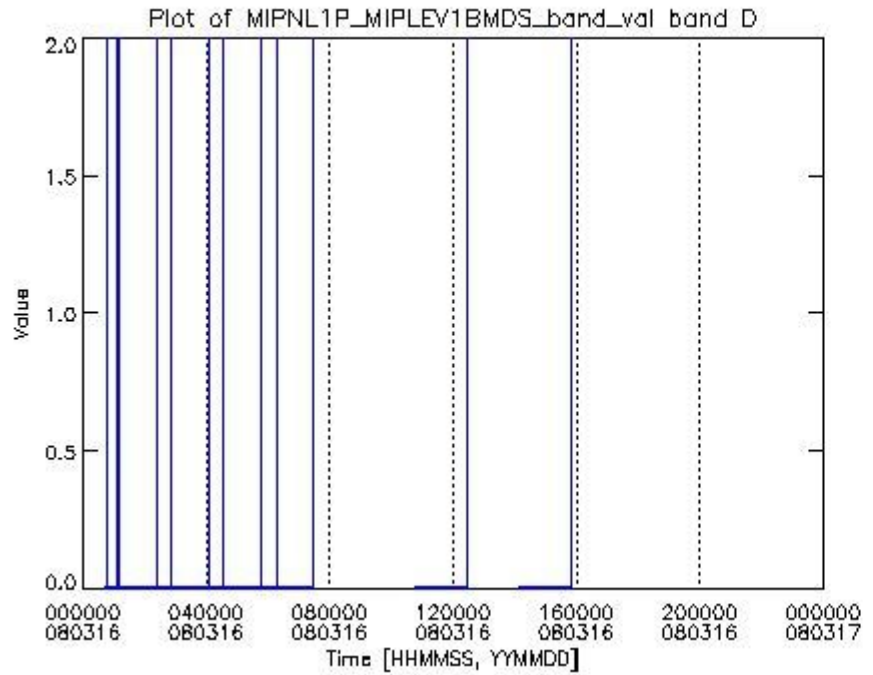
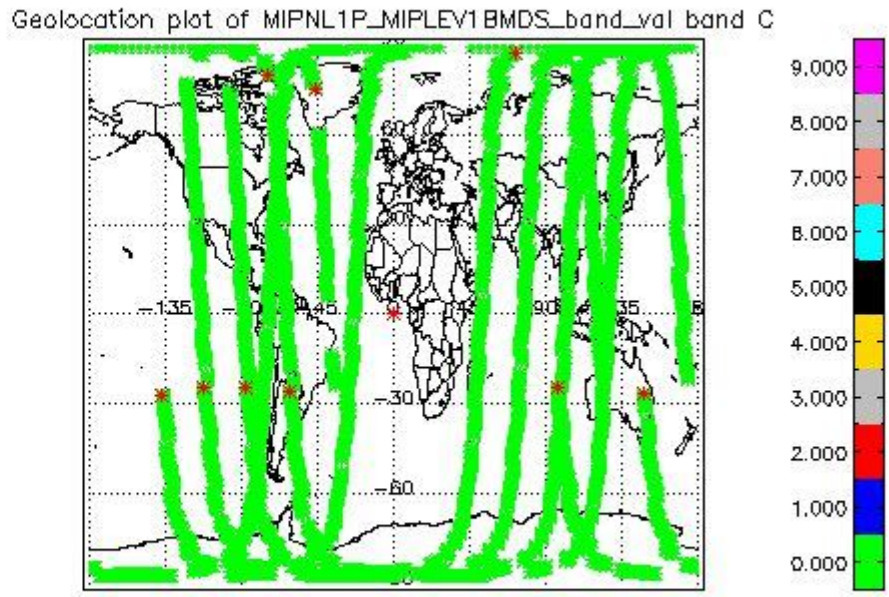
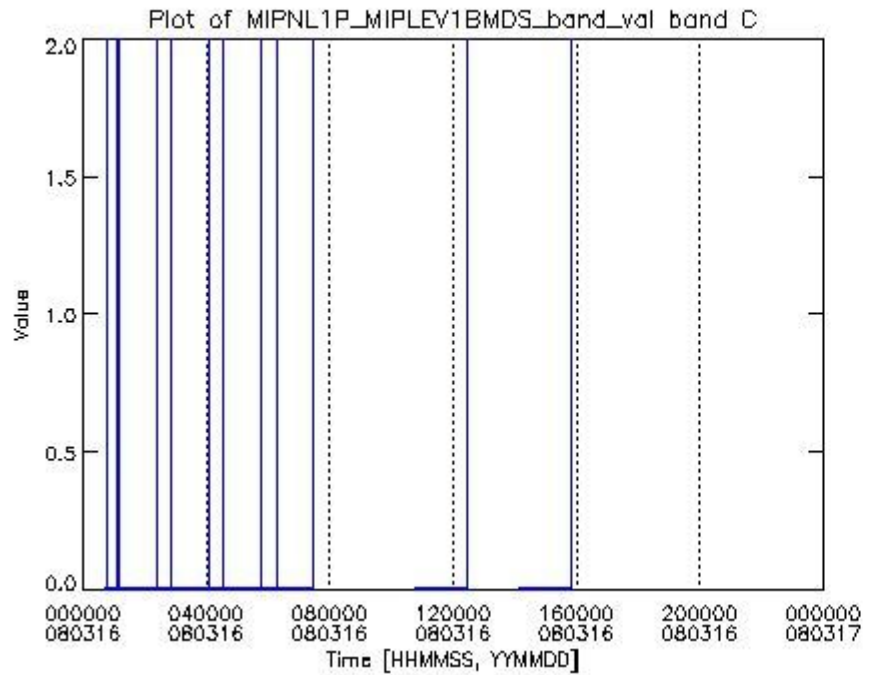




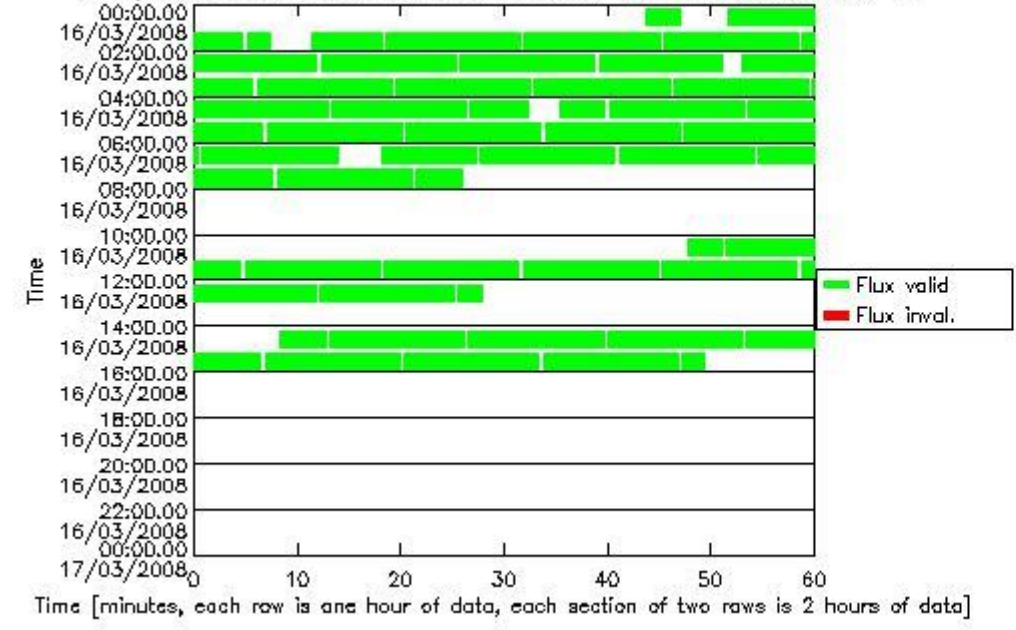




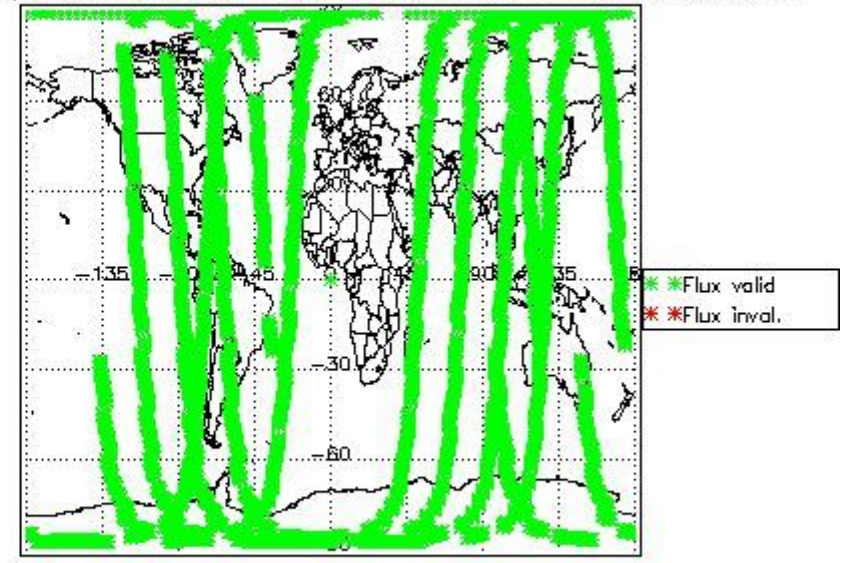




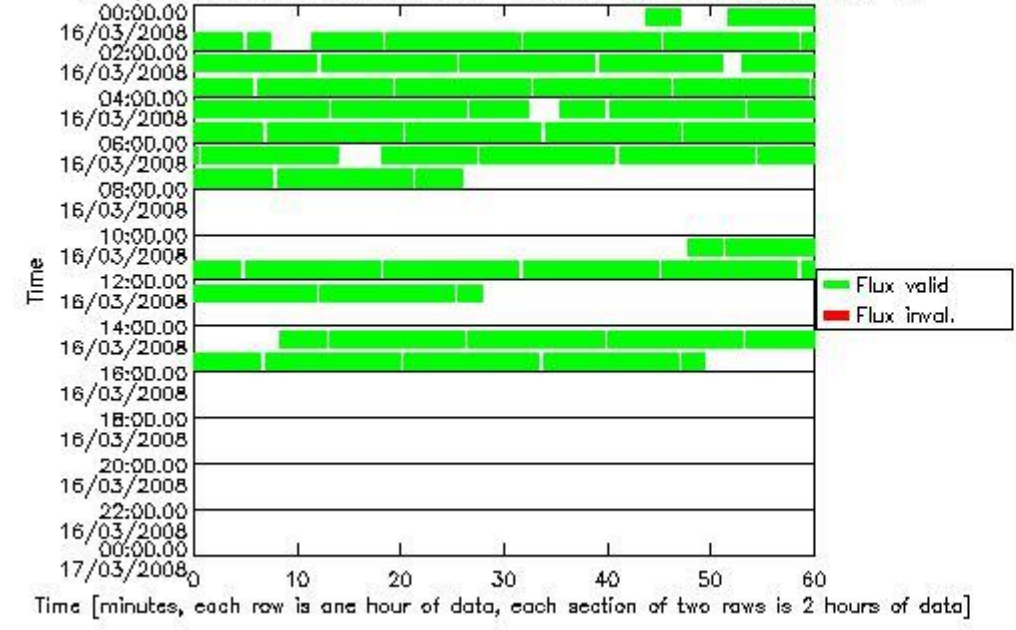
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1



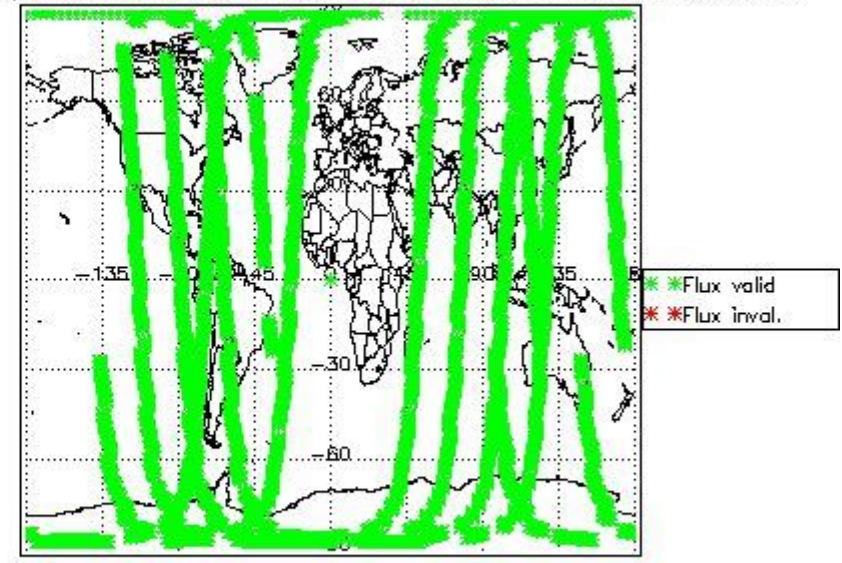
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1



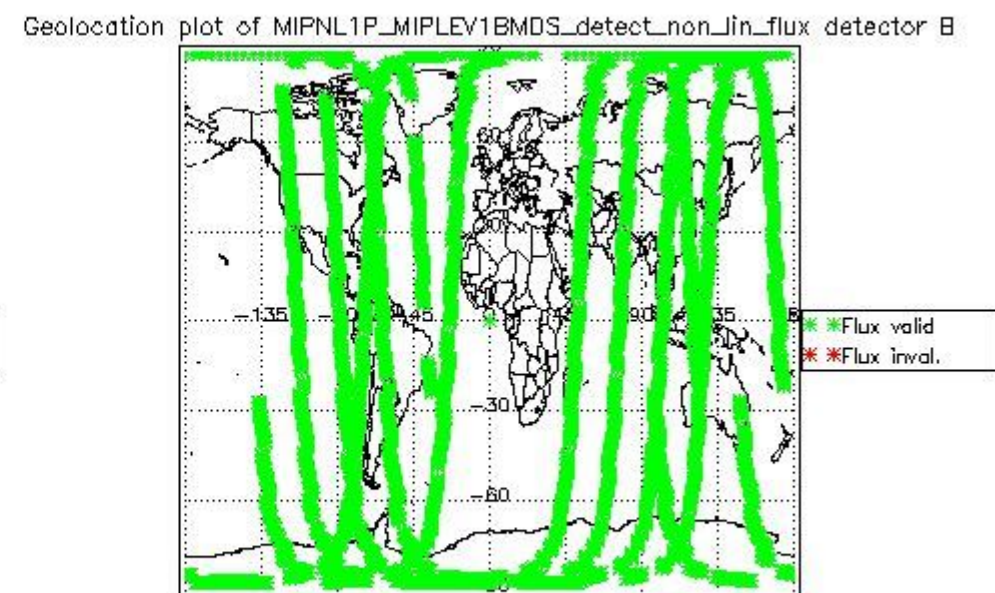
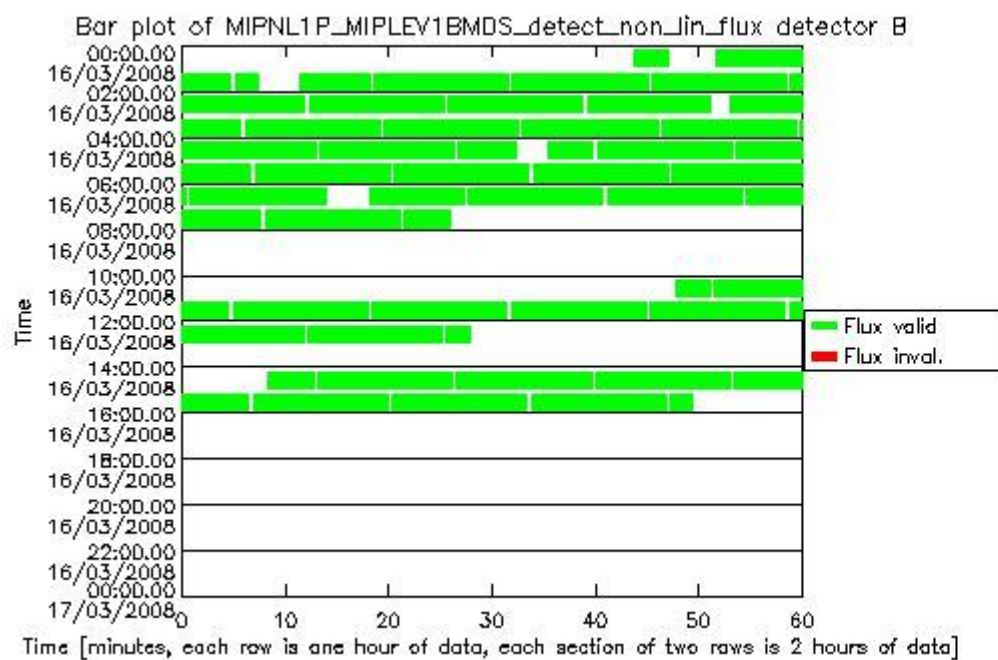
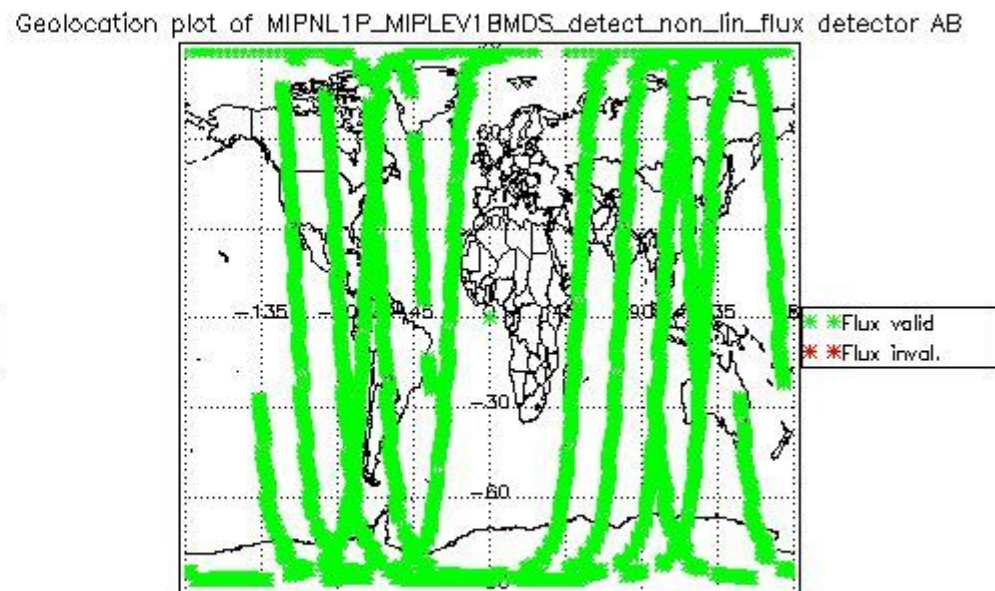
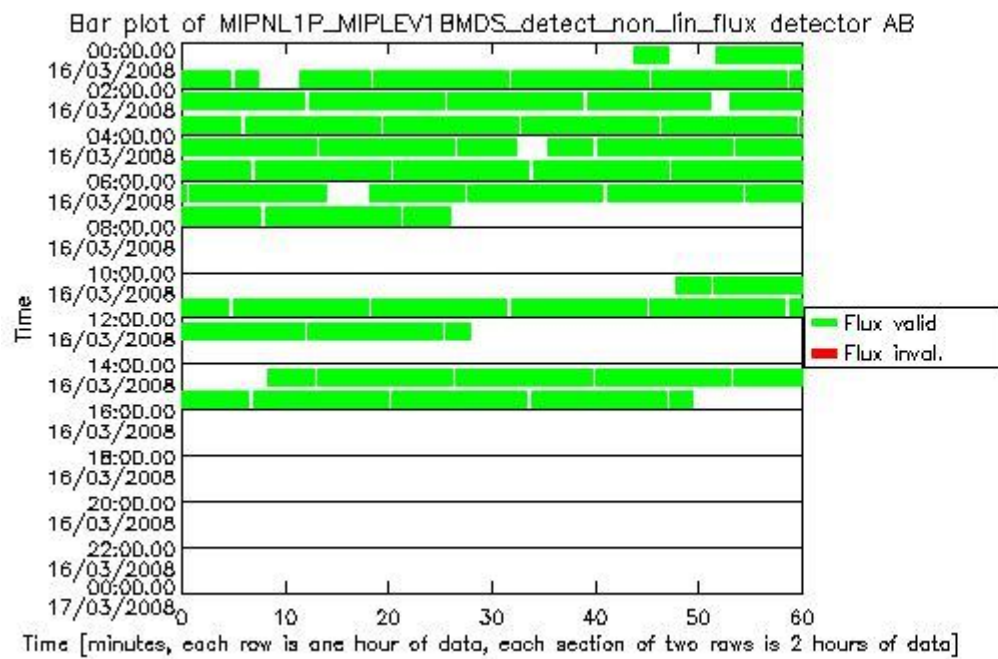
Bar plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2



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







### 1.2.3 Scan information ADS

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

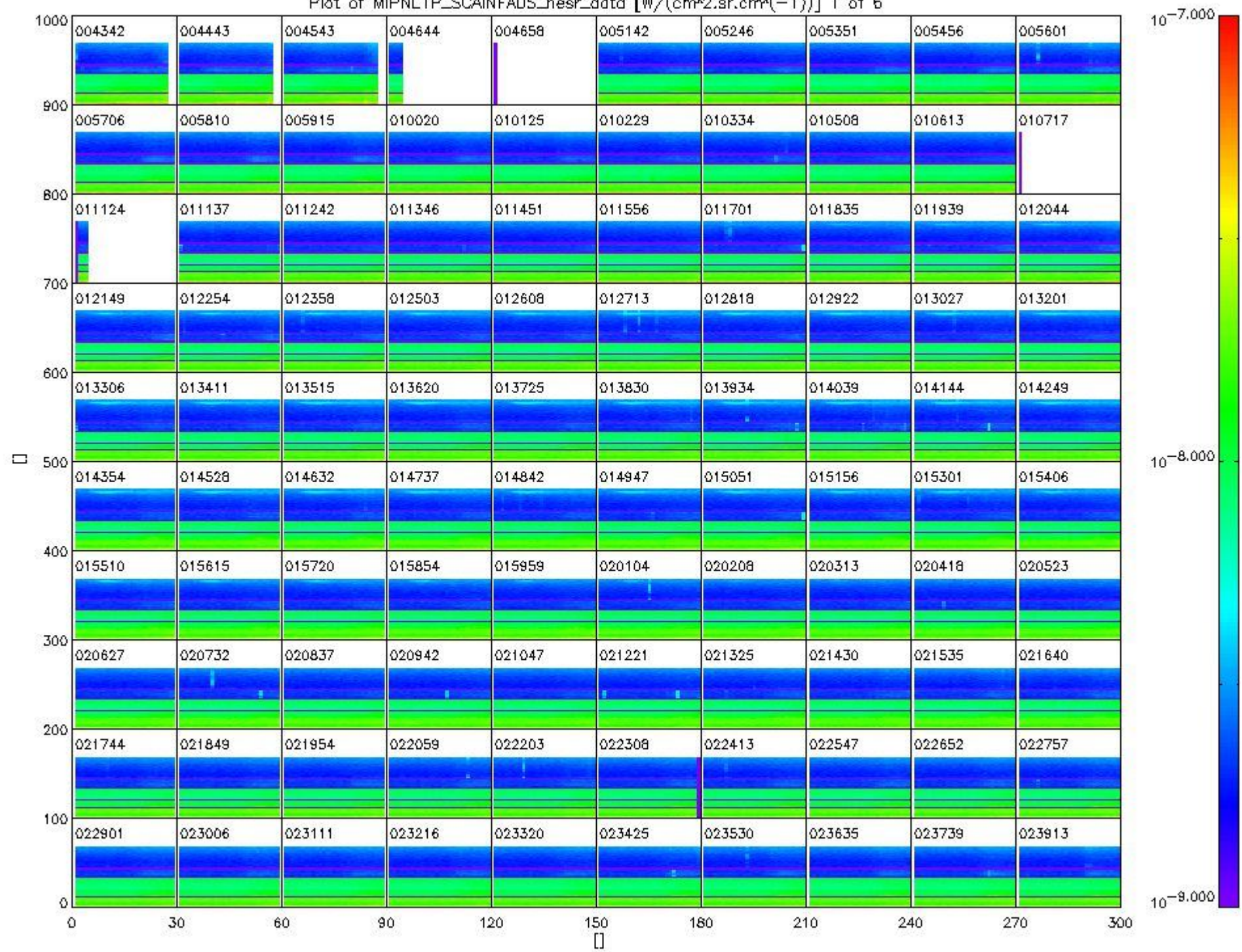
The horizontal axis represents the sweep ID (starts at 1).

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\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 1 of 6

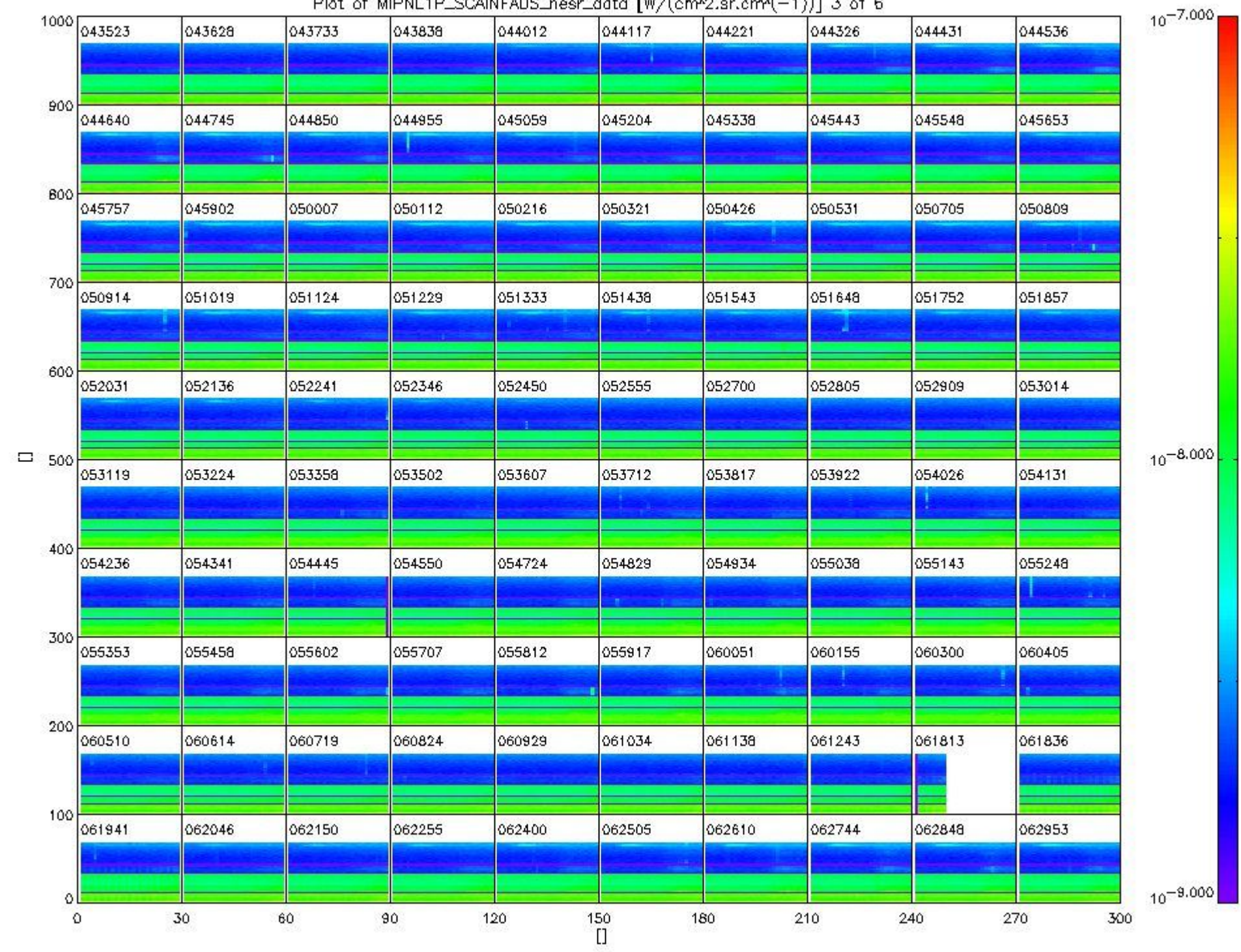








Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 3 of 6

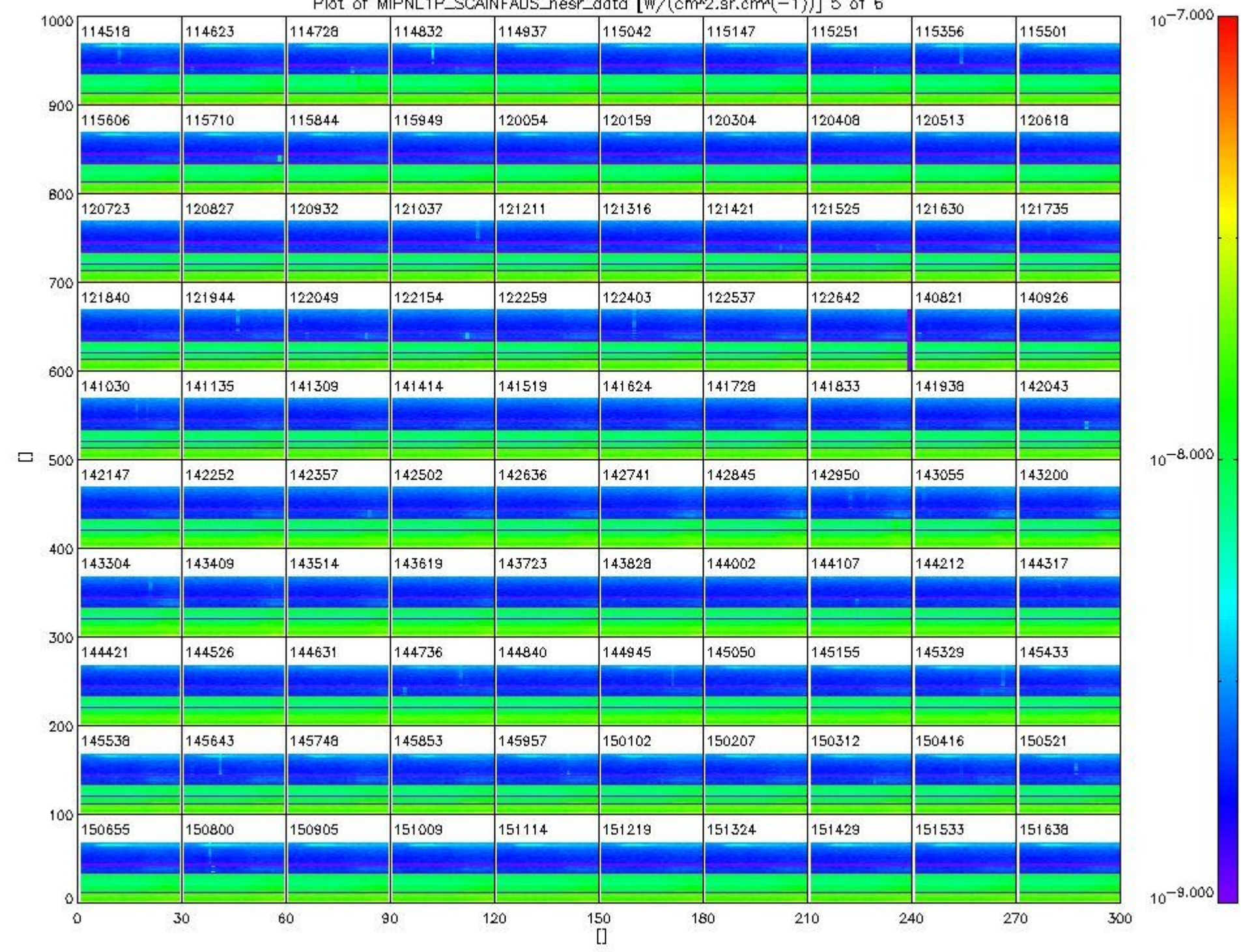




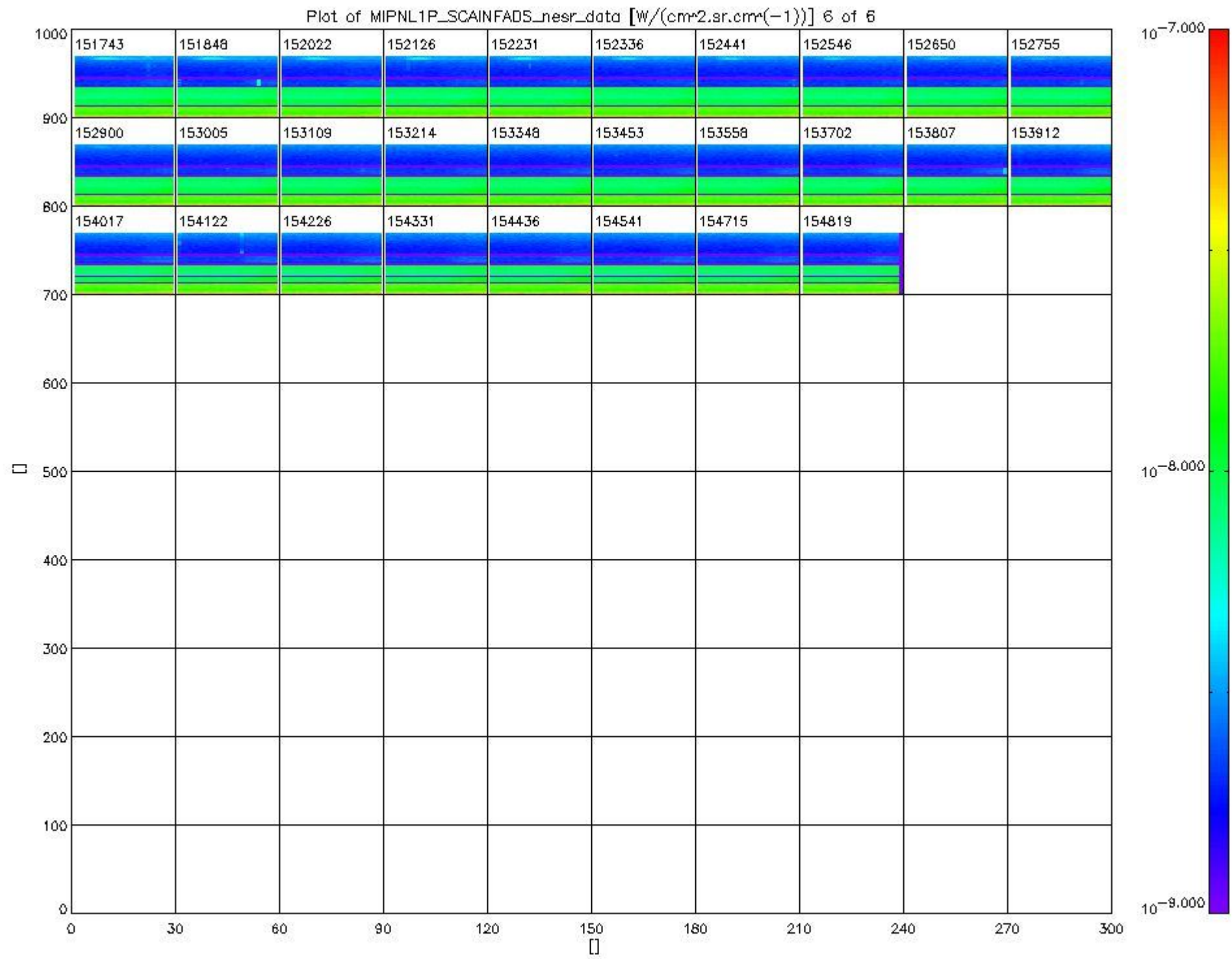




Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 5 of 6



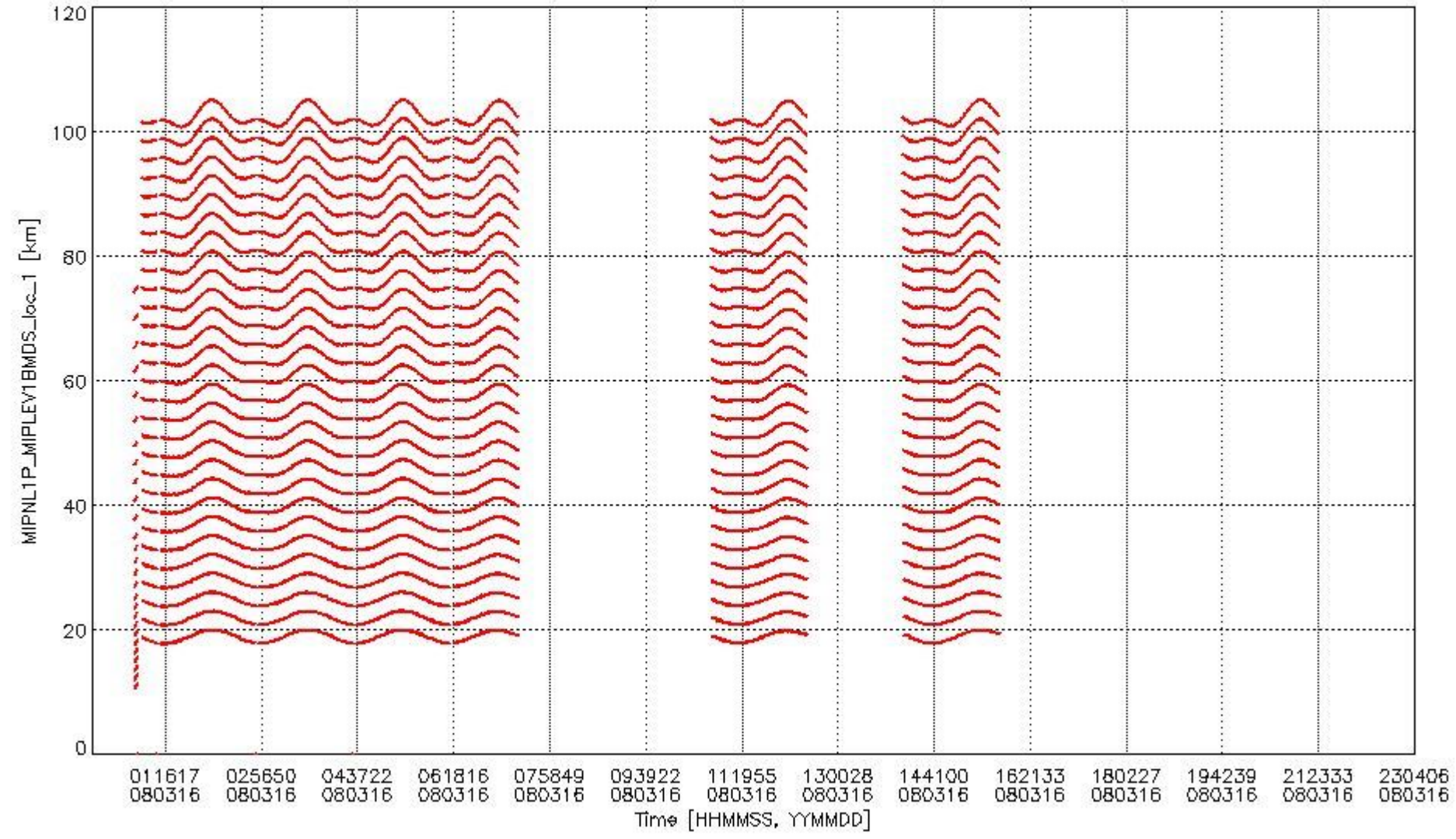




### 1.3 Physical Quality Indicators

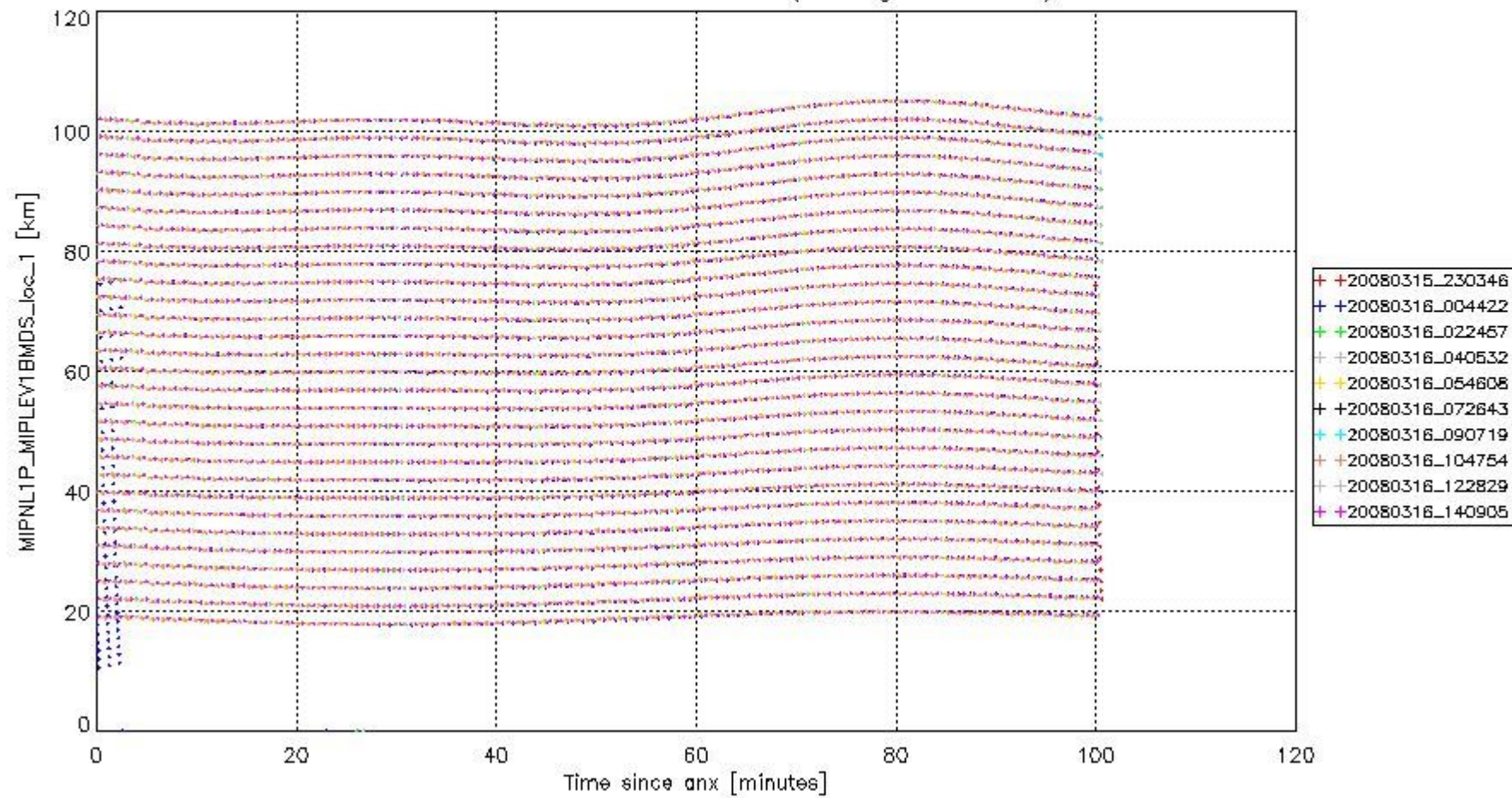
#### 1.3.1 Tangent altitude

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





Plot of MIPNL1P\_MIPLEV1BMD5\_Joc\_1 against relative time within orbit.  
The colours indicate distinct orbits (see legend for anx).



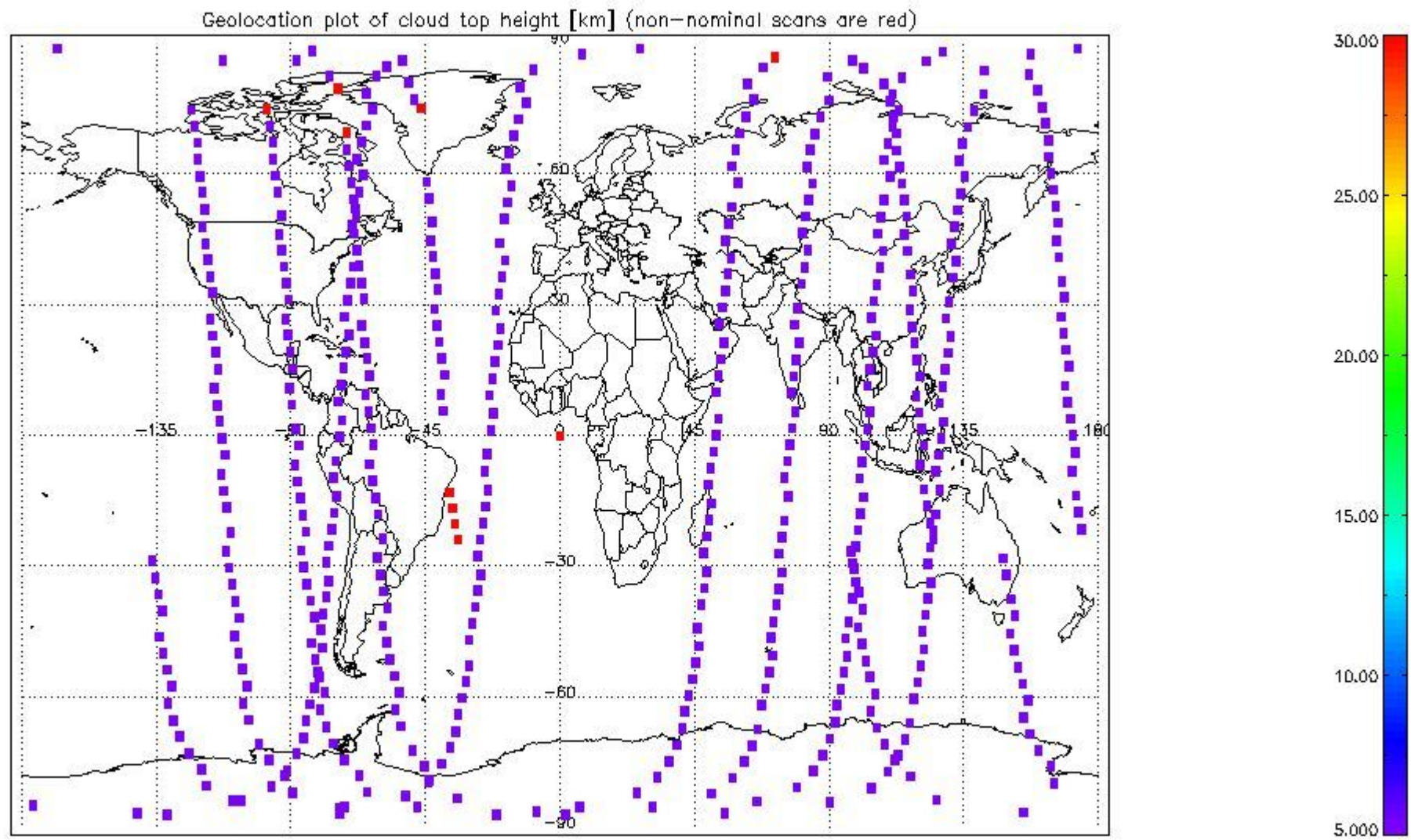
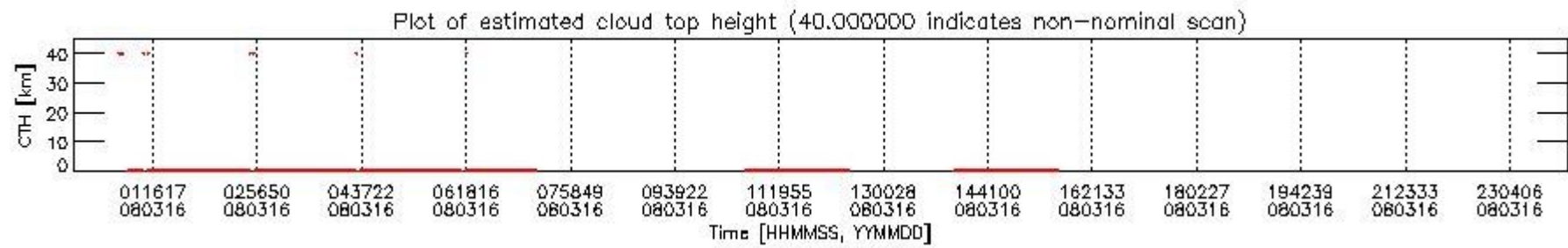
### 1.3.2 Cloud top height

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

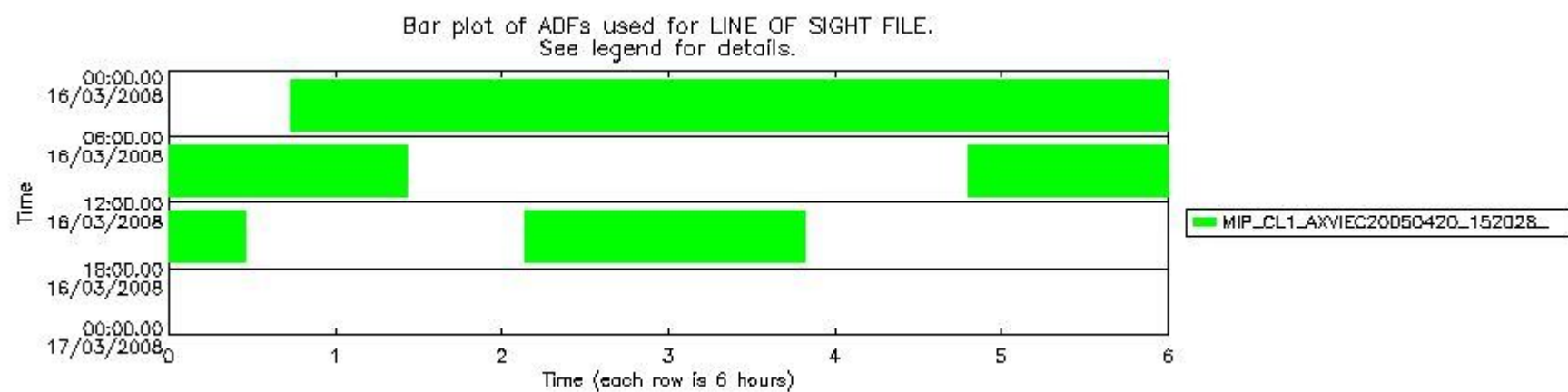
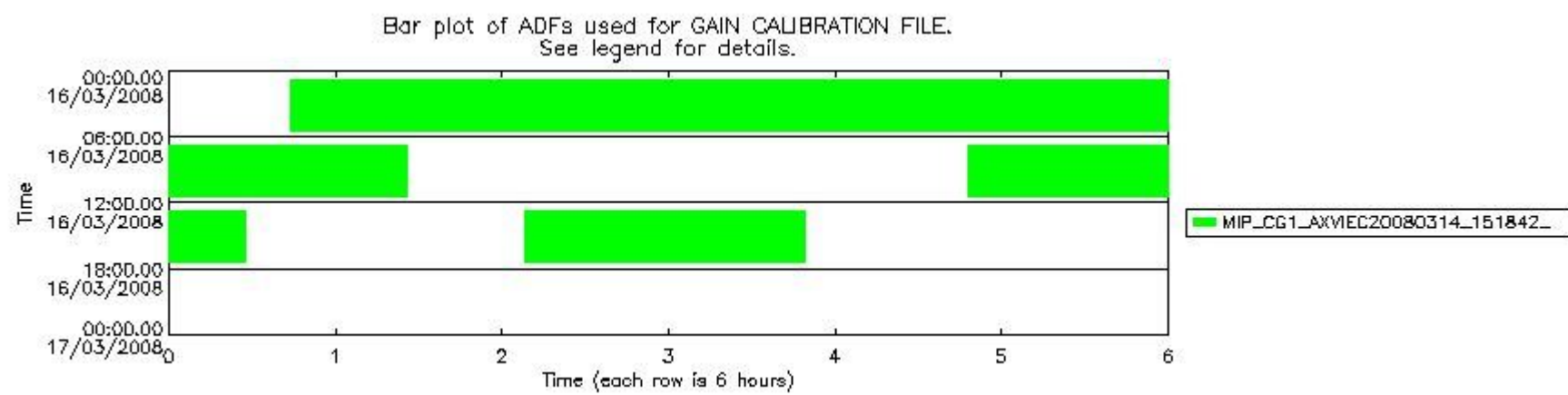
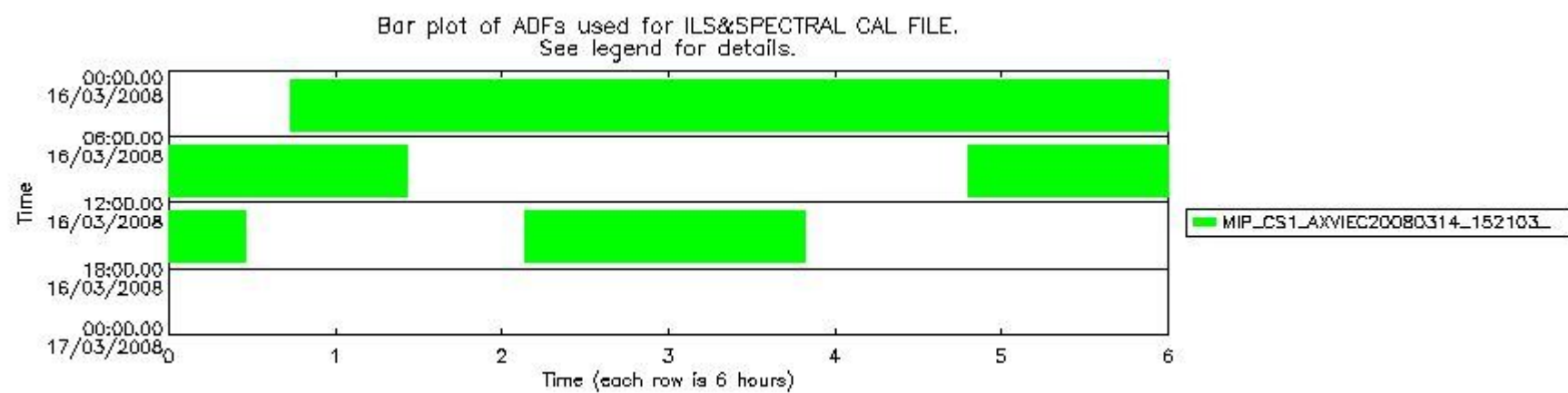


## 1.4 ADF monitoring

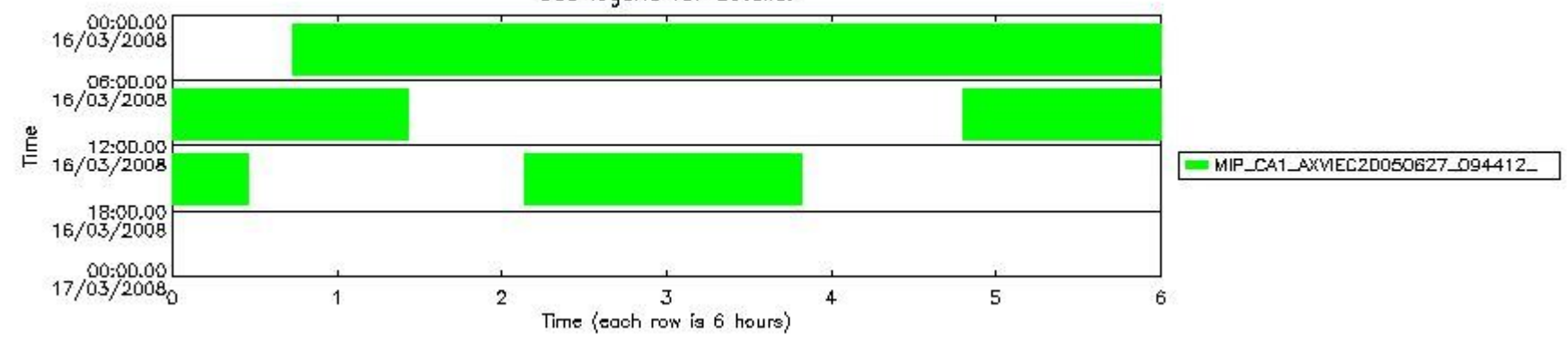
Number	ADF
0	AUX_FRO_AXVPDS20080319_010111_20080315_221000_20080318_005000
1	MIP_CA1_AXVIEC20050627_094412_20040809_000000_20090809_000000
2	MIP_CG1_AXVIEC20080314_151842_20080315_000000_20130315_000000
3	MIP_CL1_AXVIEC20050420_152028_20050420_095747_20100420_095747
4	MIP_CO1_AXVIEC20080314_151959_20080315_000000_20130315_000000
5	MIP_CS1_AXVIEC20080314_152103_20080315_000000_20130315_000000
6	MIP_MW1_AXVIEC20050627_094928_20040809_000000_20090809_000000
7	MIP_PS1_AXVIEC20050627_100609_20040809_000000_20090809_000000



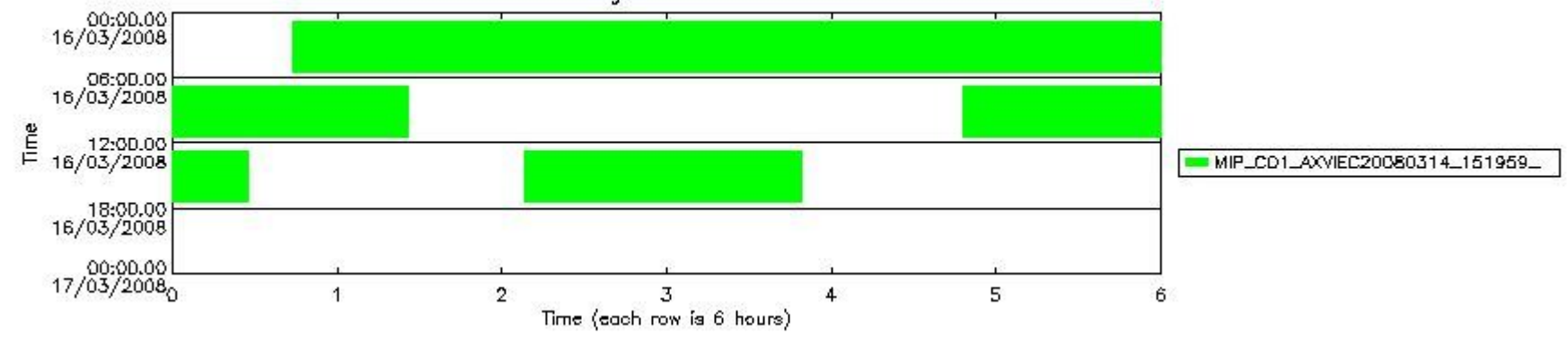
Number	Product name	#CS1	#CG1	#CL1	#CA1	#CO1	#MW1	#PS1	#FPO
0	MIP_NL__1PPDPA20080316_004342_000060252066_00475_31591_4735.N1	5	2	3	1	4	6	7	0
1	MIP_NL__1PPDPA20080316_022413_000060572066_00476_31592_4736.N1	5	2	3	1	4	6	7	0
2	MIP_NL__1PPDPA20080316_040516_000060282066_00477_31593_4732.N1	5	2	3	1	4	6	7	0
3	MIP_NL__1PPDPA20080316_054550_000059932066_00478_31594_4740.N1	5	2	3	1	4	6	7	0
4	MIP_NL__1PPDPA20080316_104749_000059932066_00481_31597_4790.N1	5	2	3	1	4	6	7	0
5	MIP_NL__1PPDPA20080316_140821_000060572066_00483_31599_4785.N1	5	2	3	1	4	6	7	0



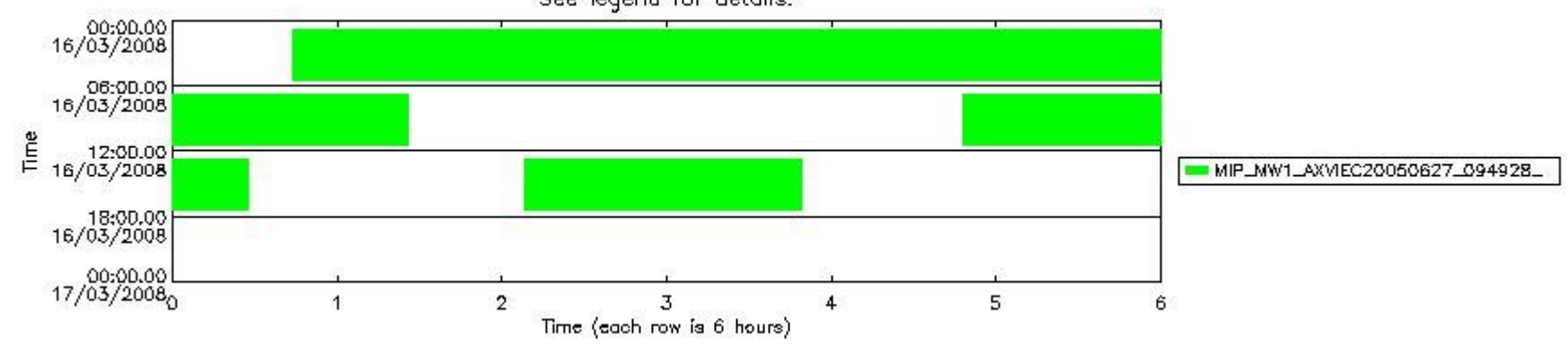
Bar plot of ADFs used for INSTRUMENT CHAR FILE.  
See legend for details.



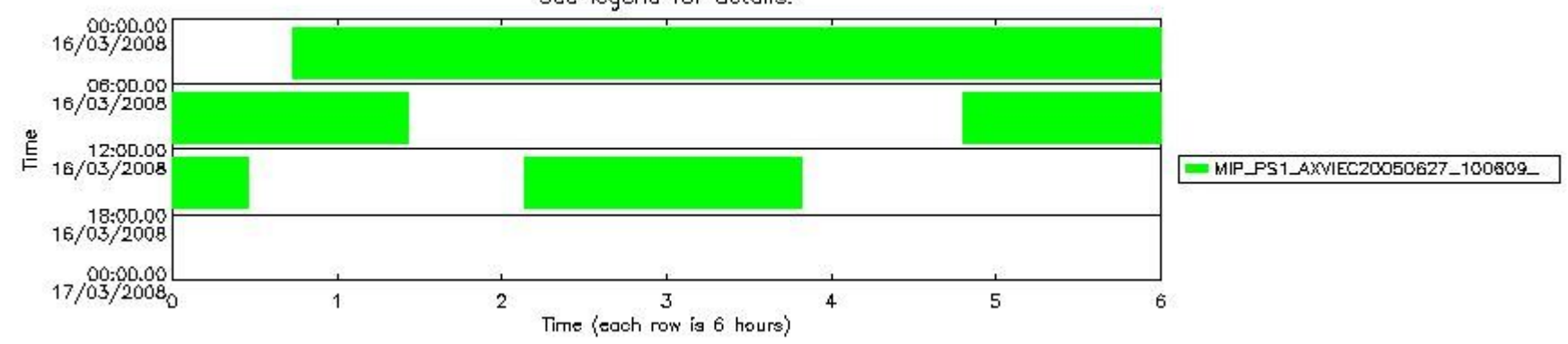
Bar plot of ADFs used for OFFSET VALIDATION FILE.  
See legend for details.



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

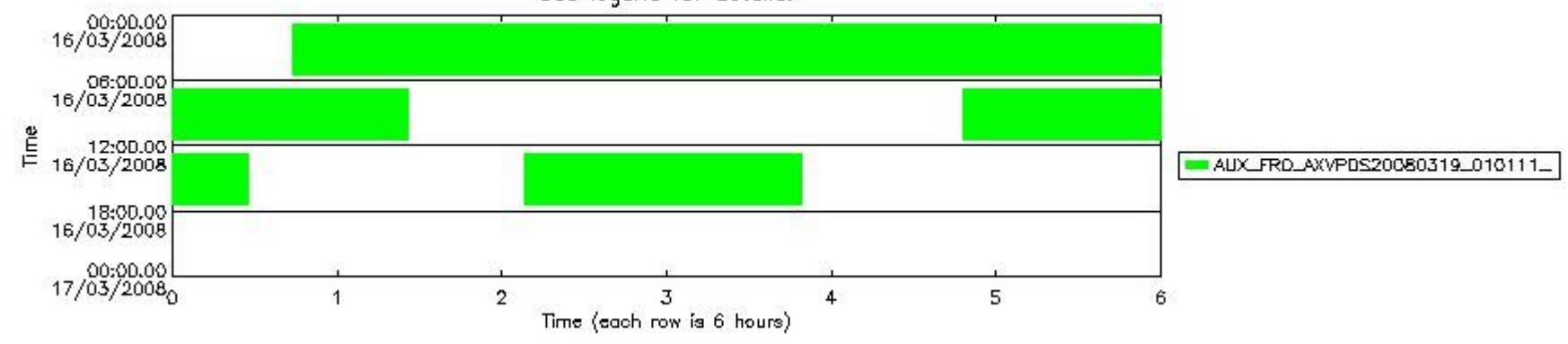


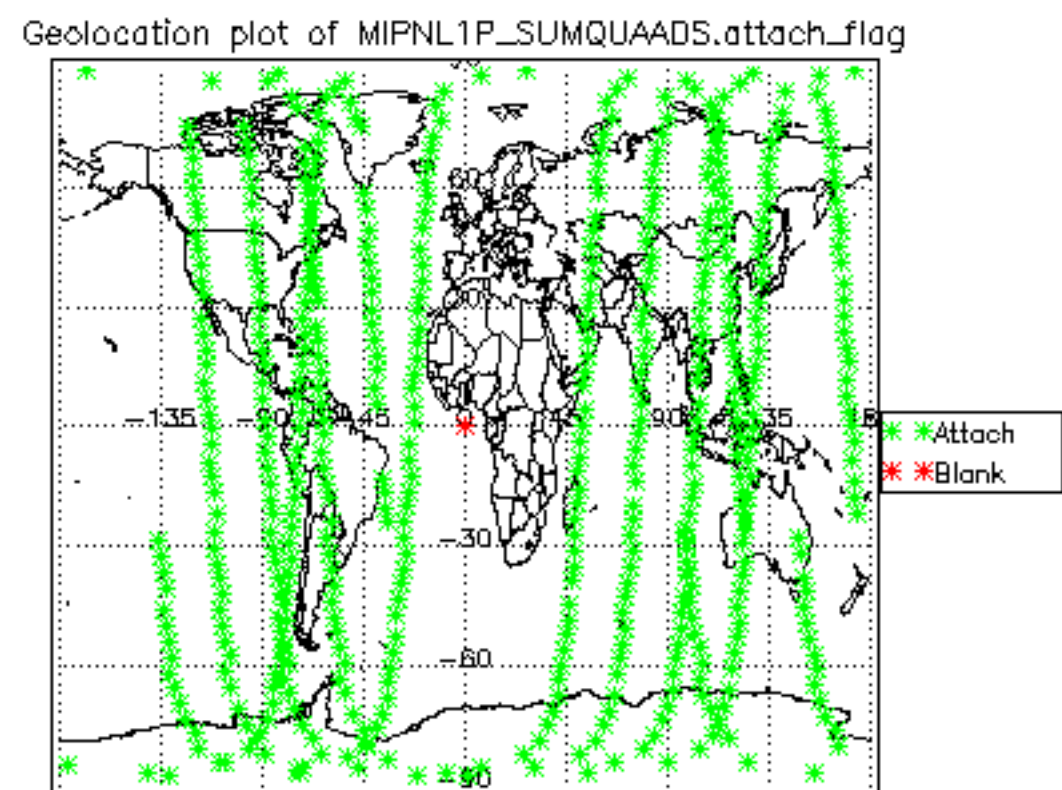
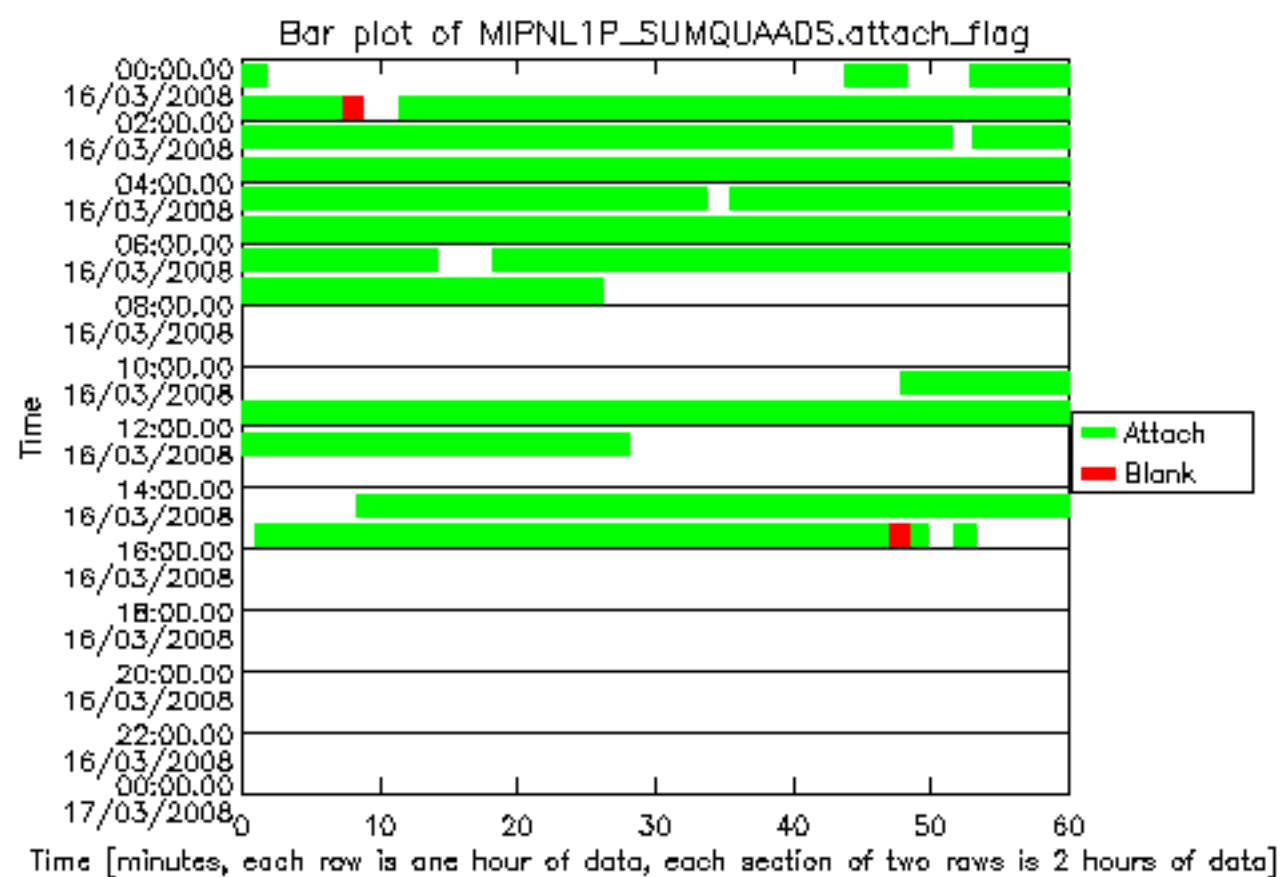
Bar plot of ADFs used for PROCESS PARAMETERS FILE.  
See legend for details.



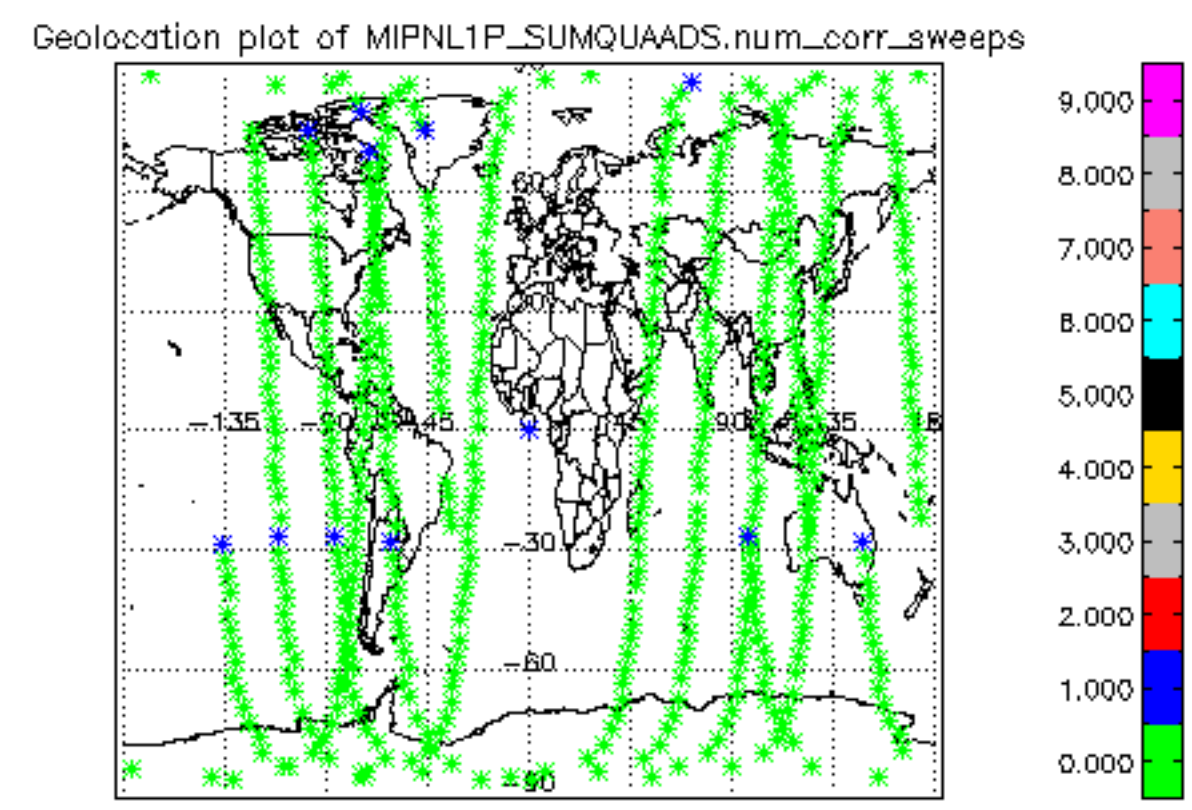
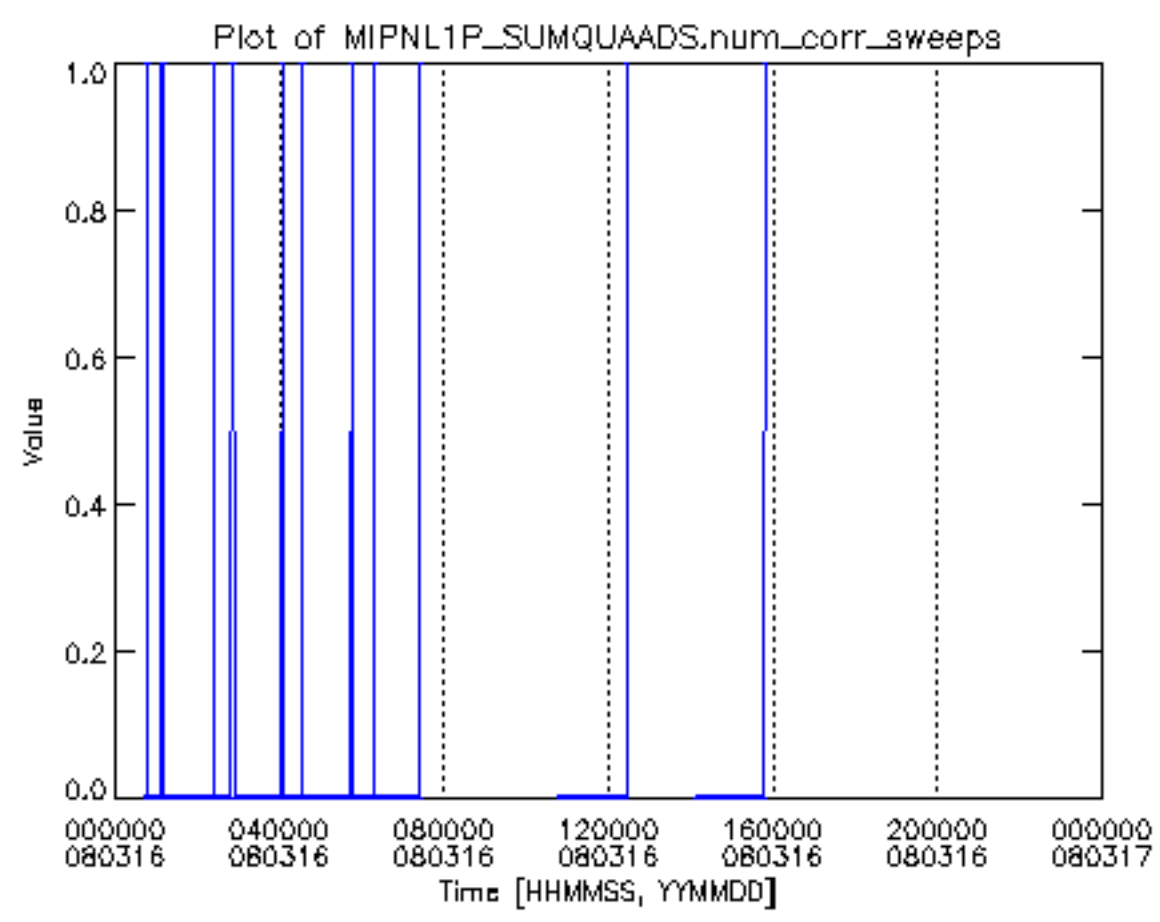


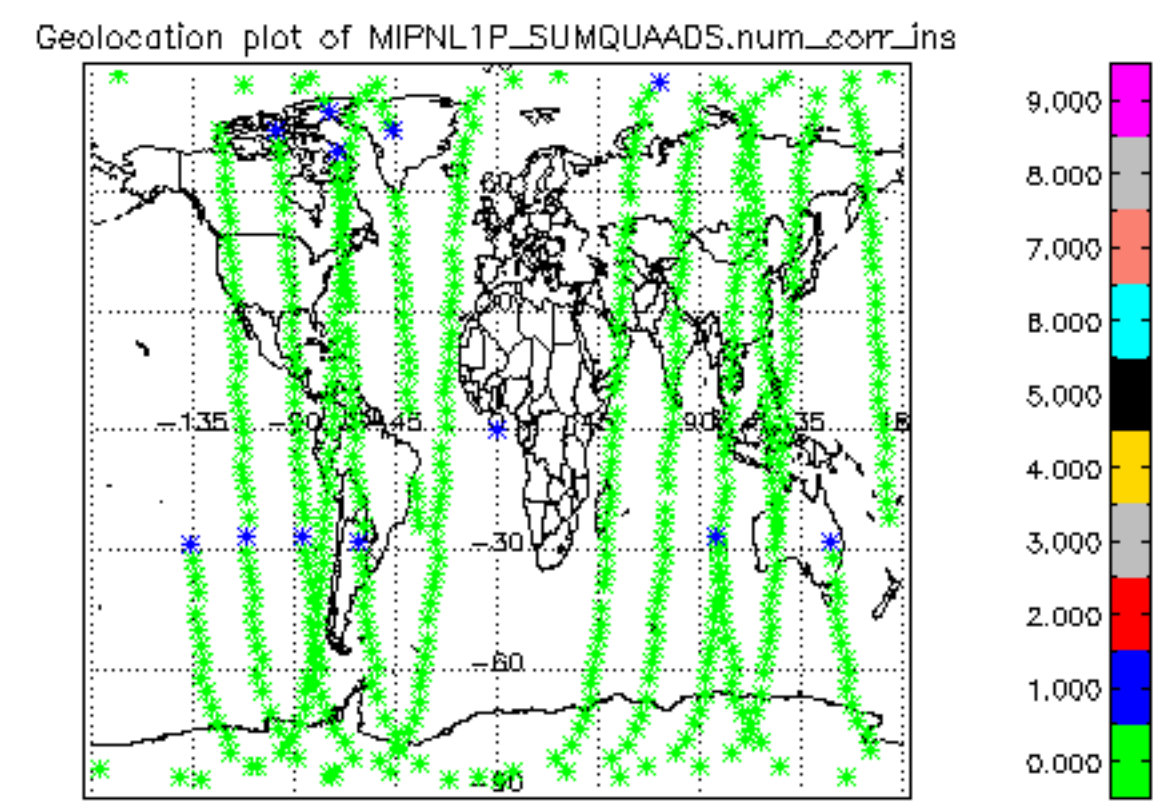
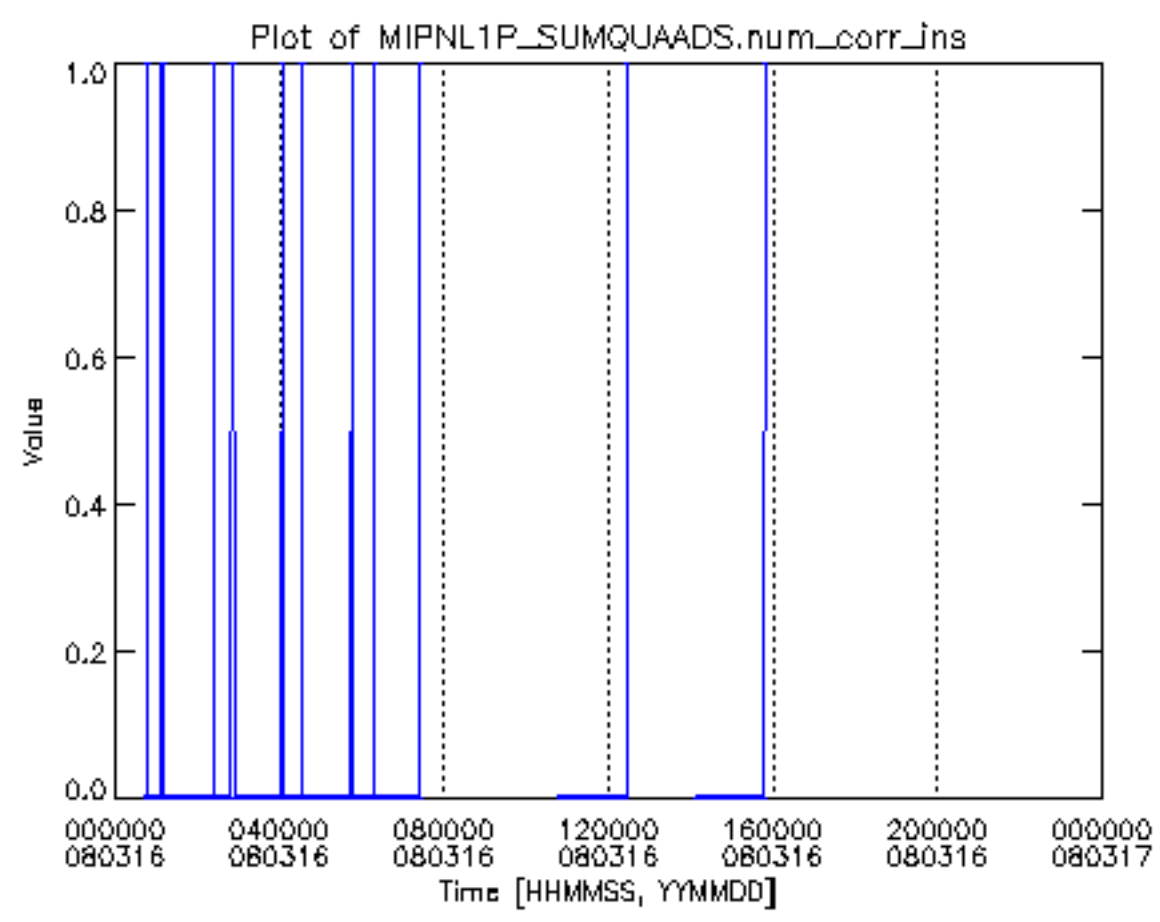
Bar plot of ADFs used for ORBIT DATA FILE.  
See legend for details.



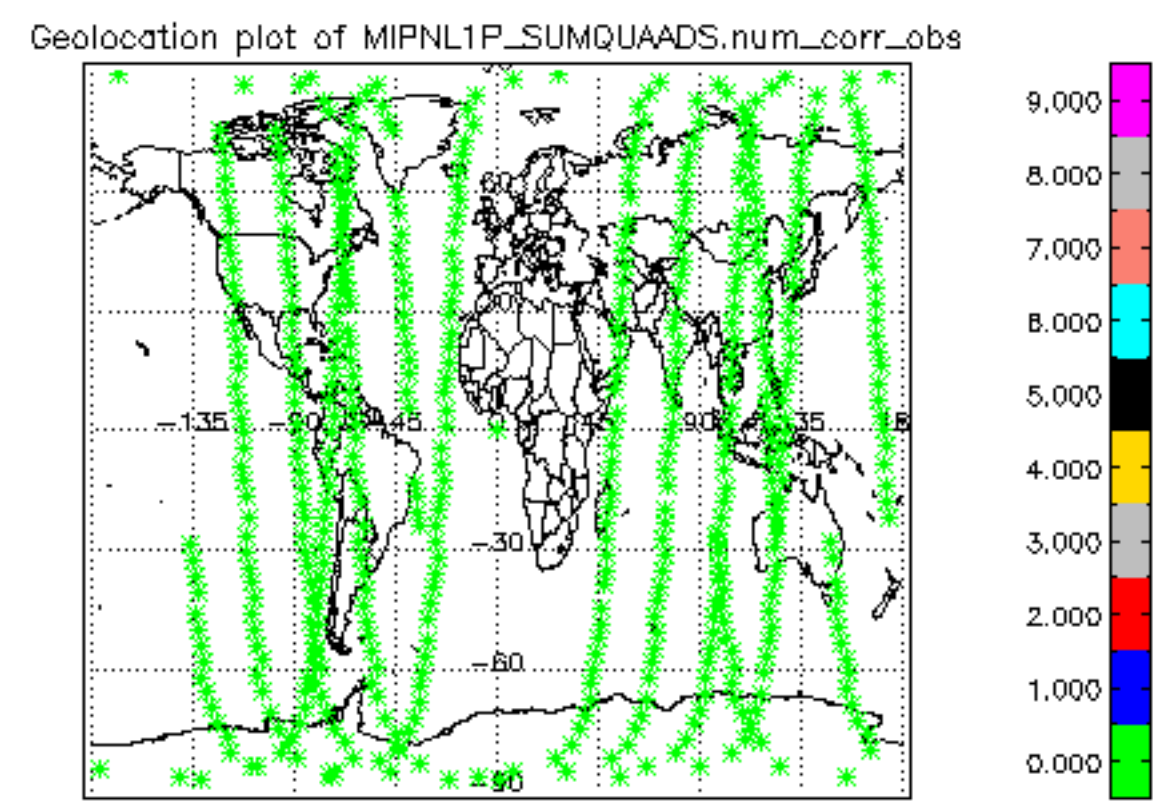
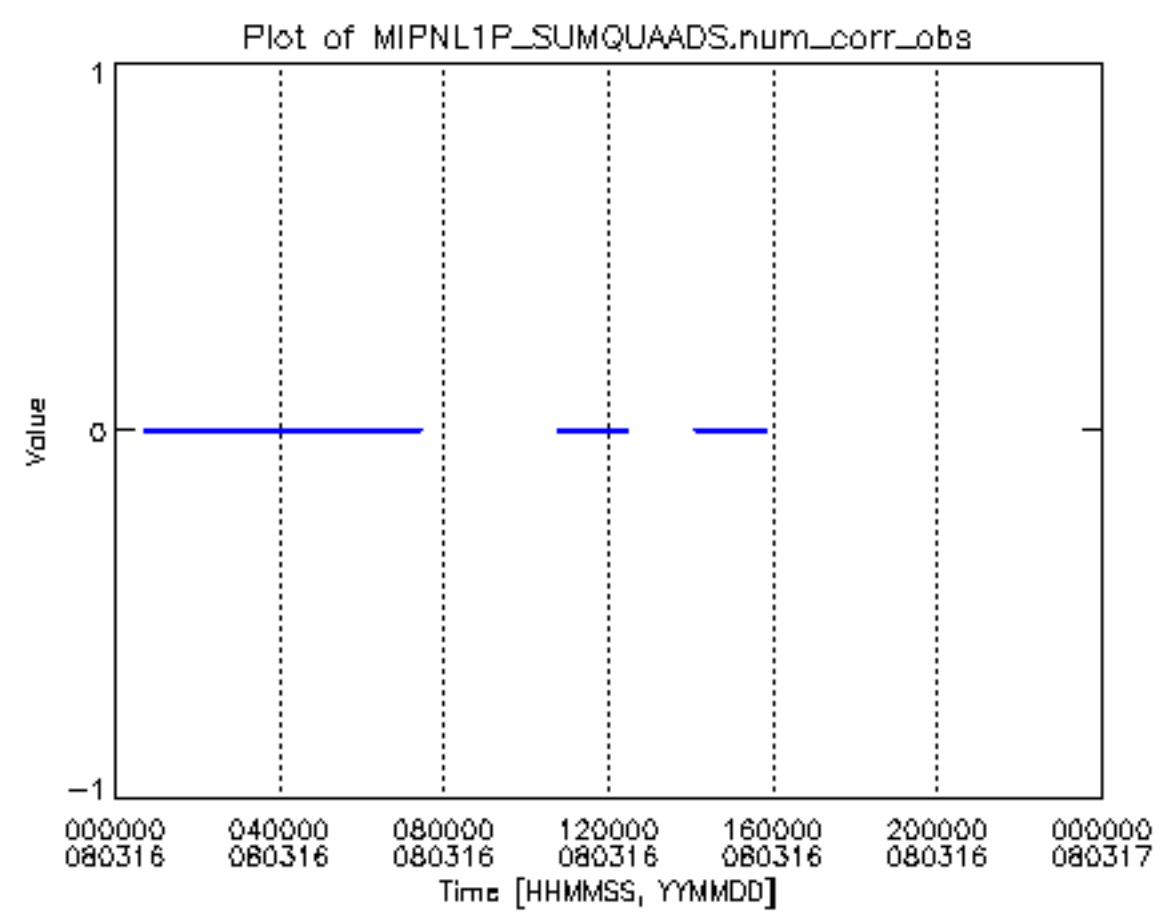


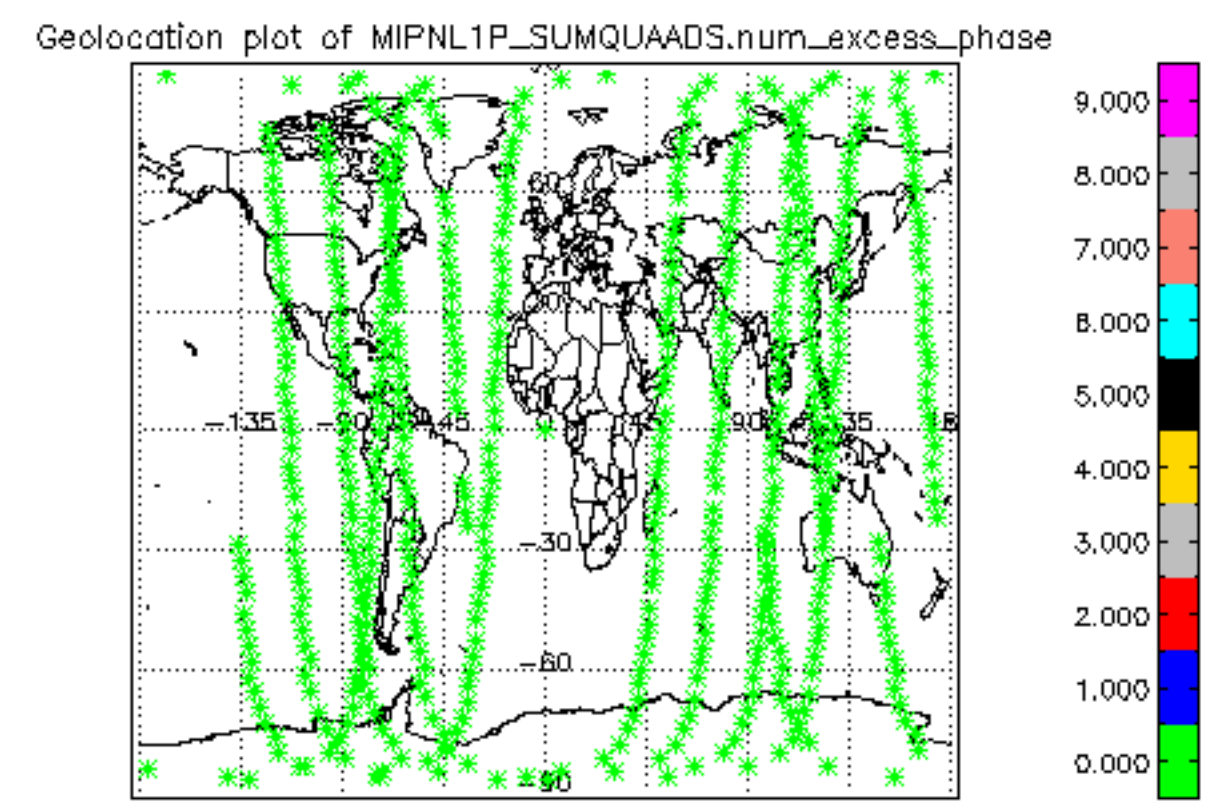
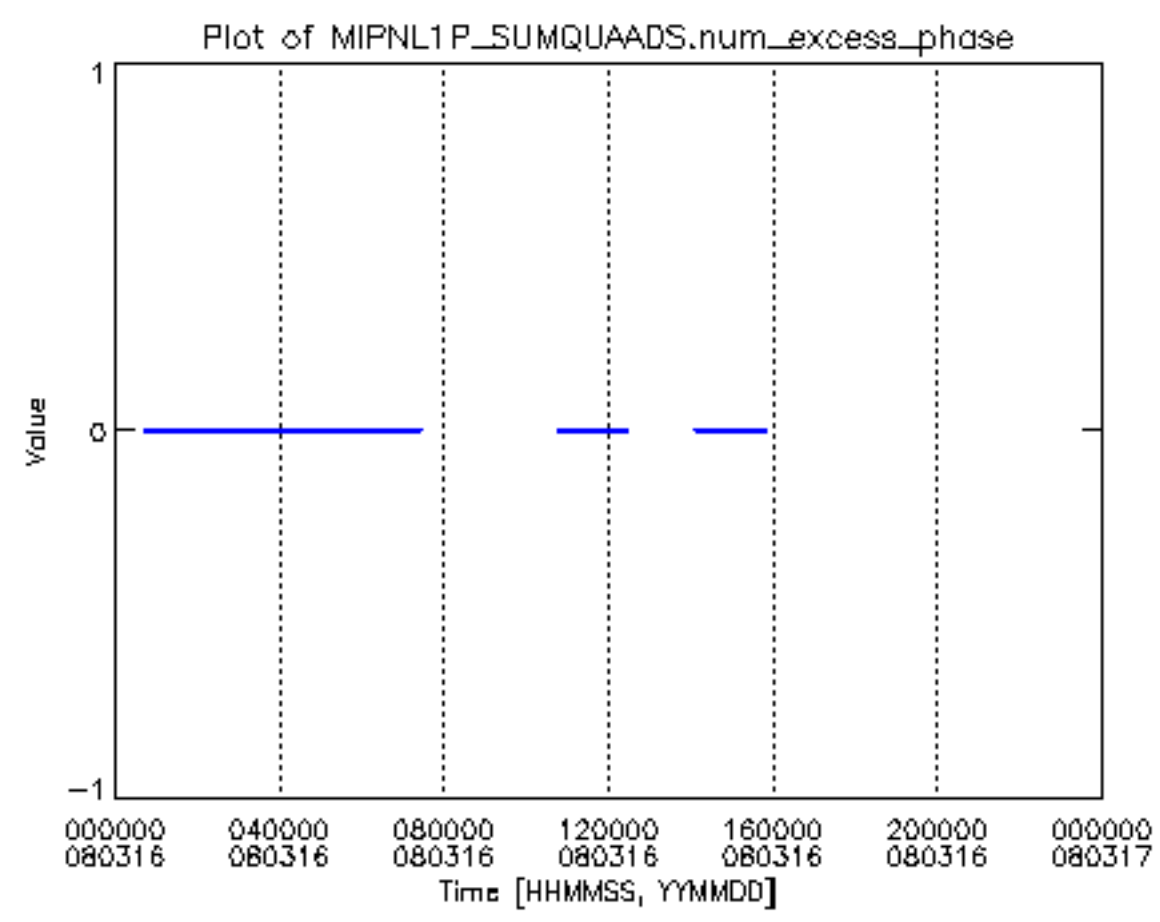




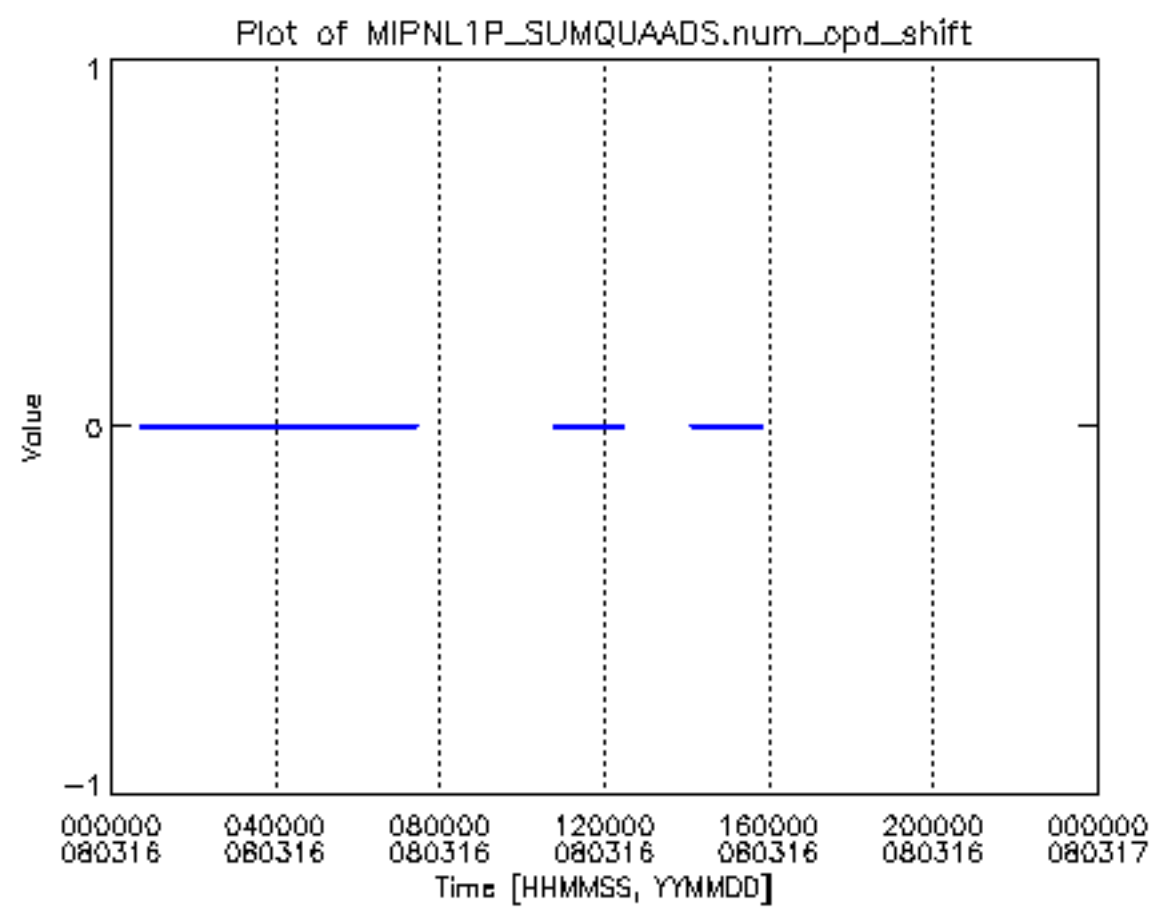




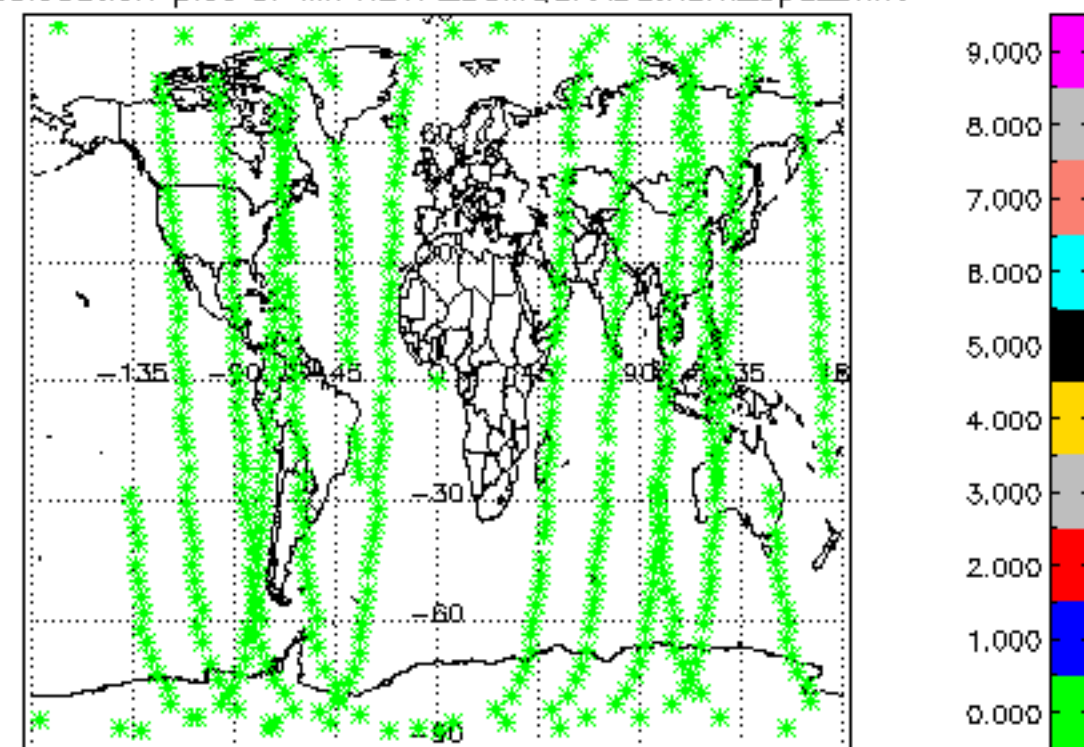


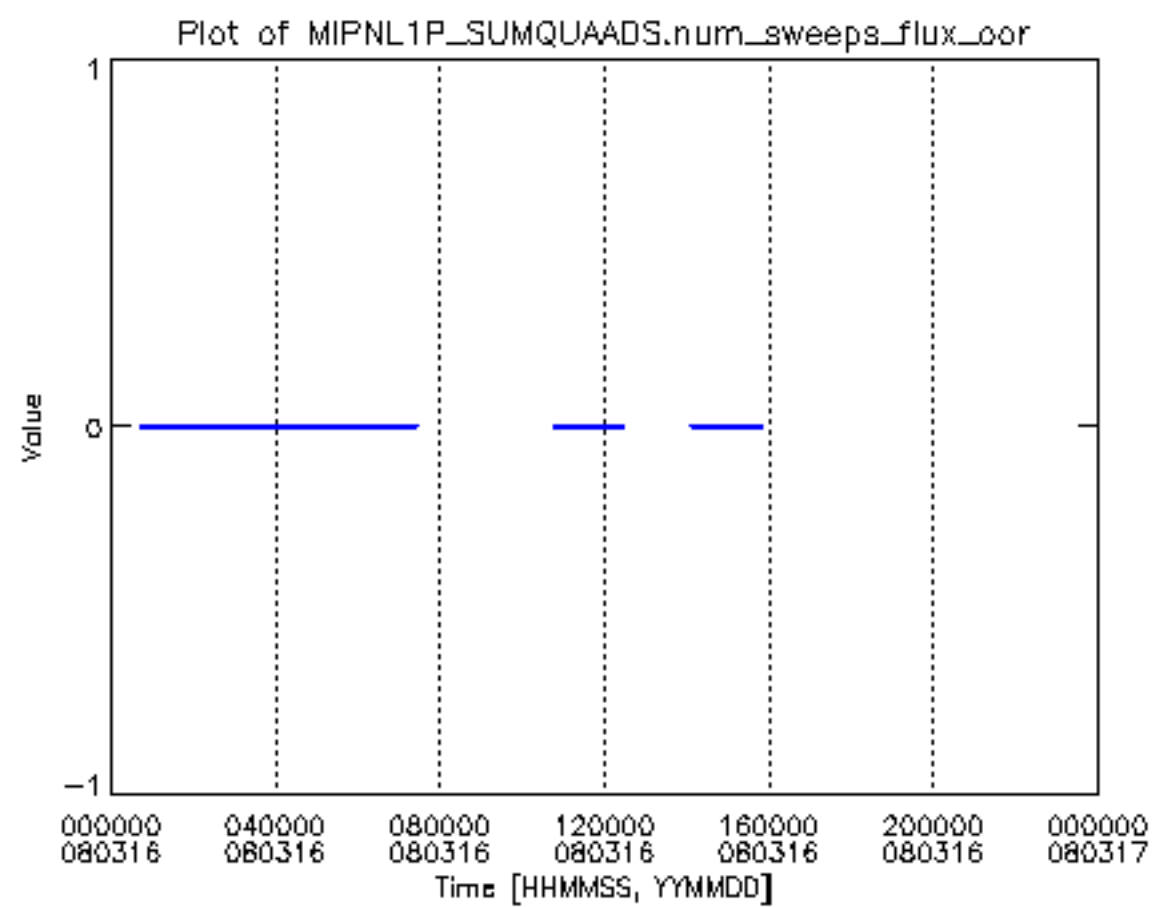




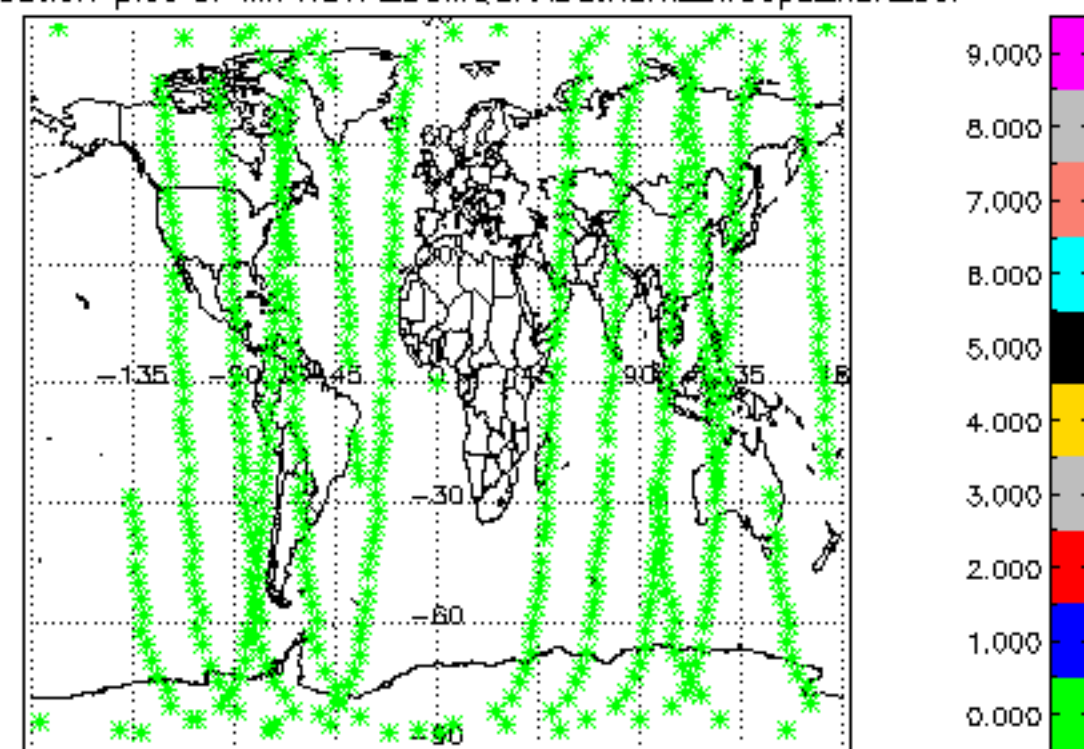


Geolocation plot of MIPNL1P\_SUMQUAADS.num\_opd\_shift

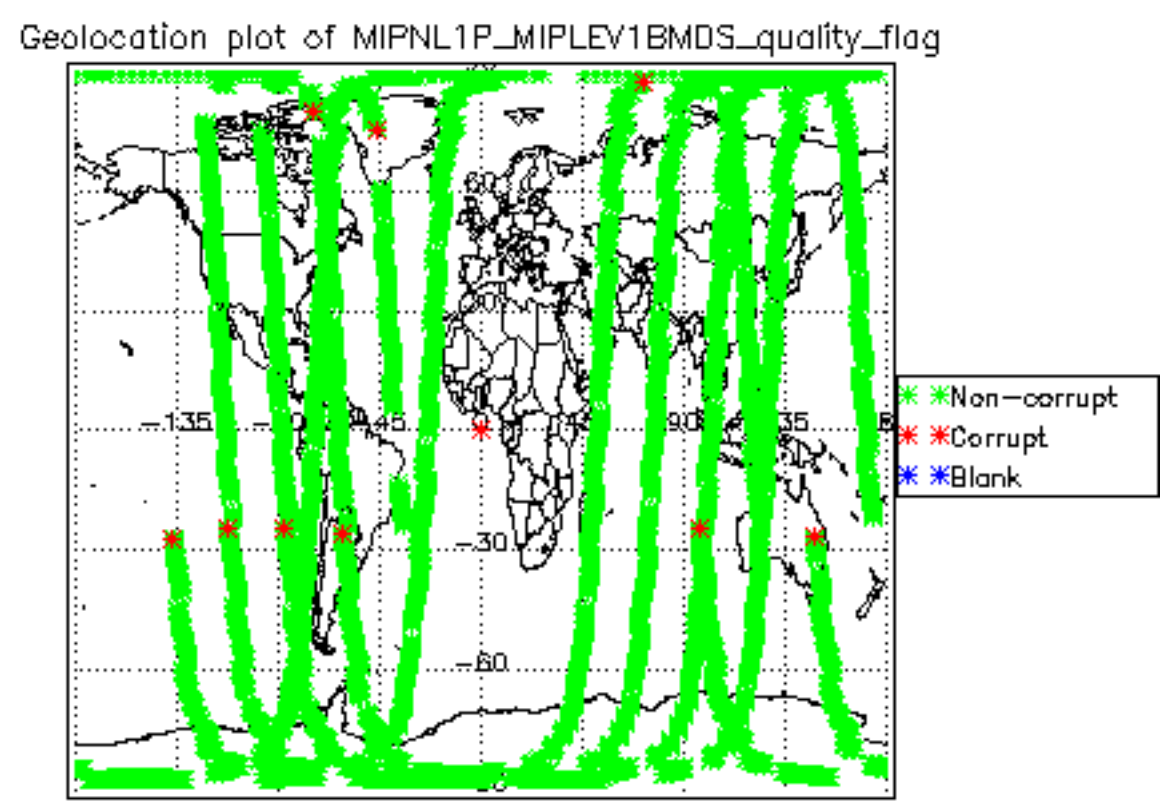
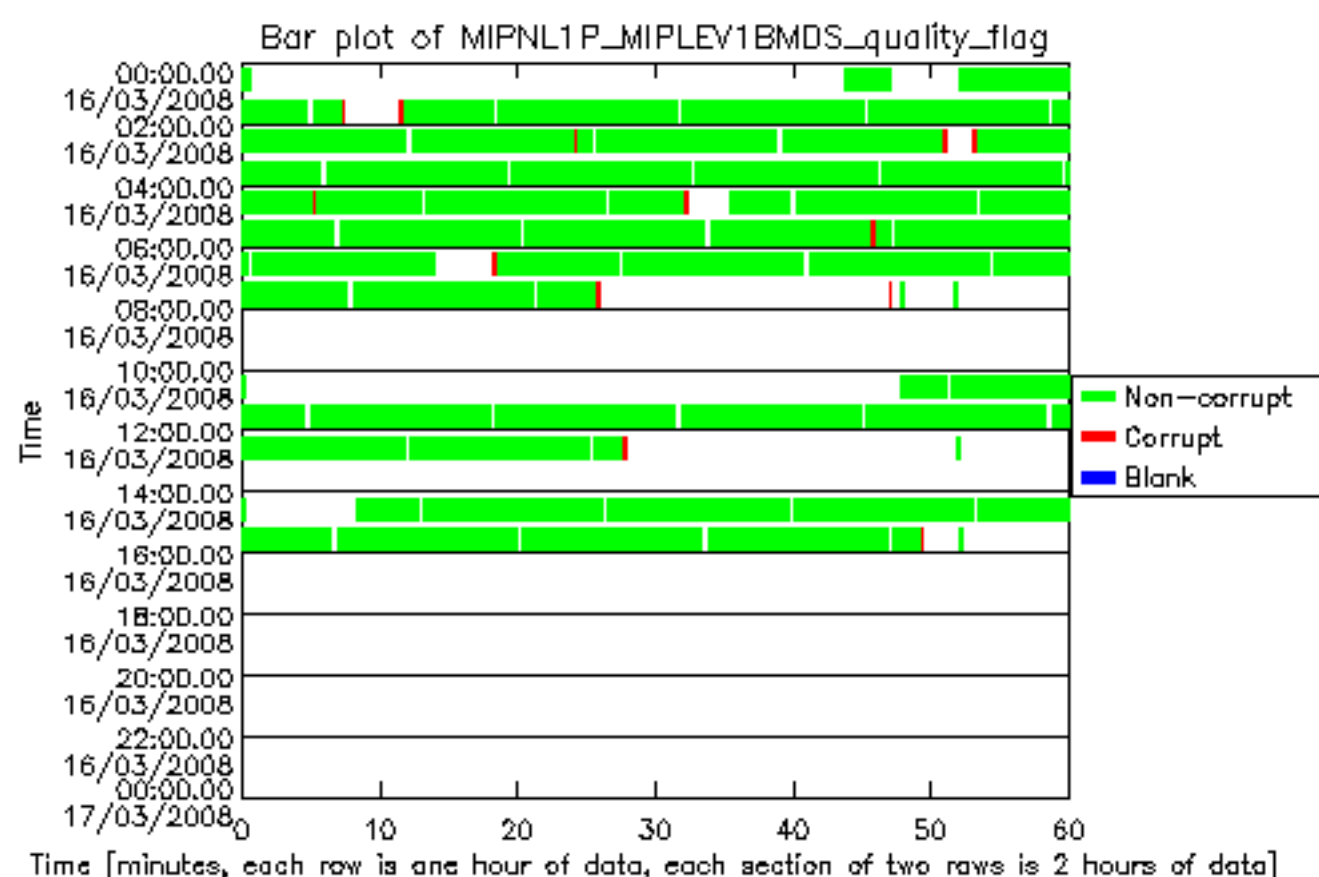


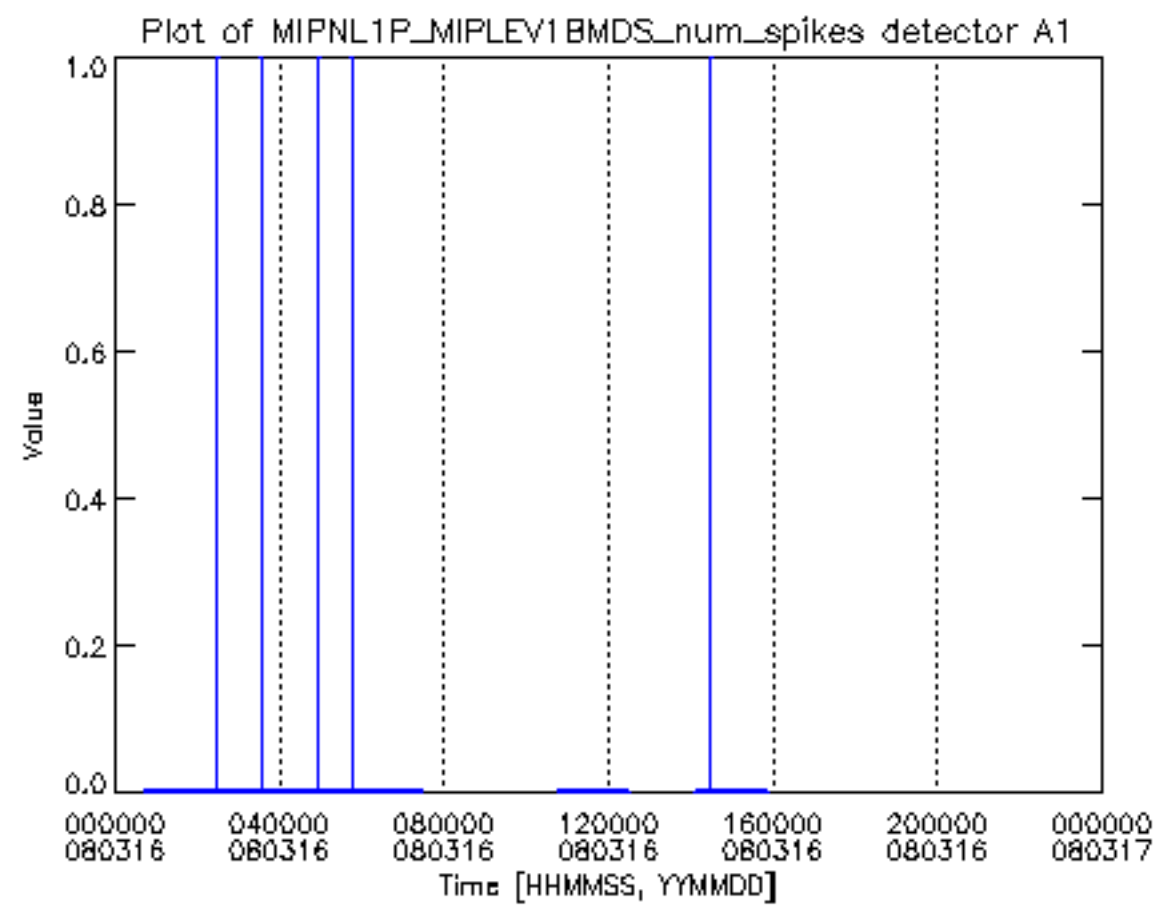


Geolocation plot of MIPNL1P\_SUMQUAADS.num\_sweeps\_flux\_oor

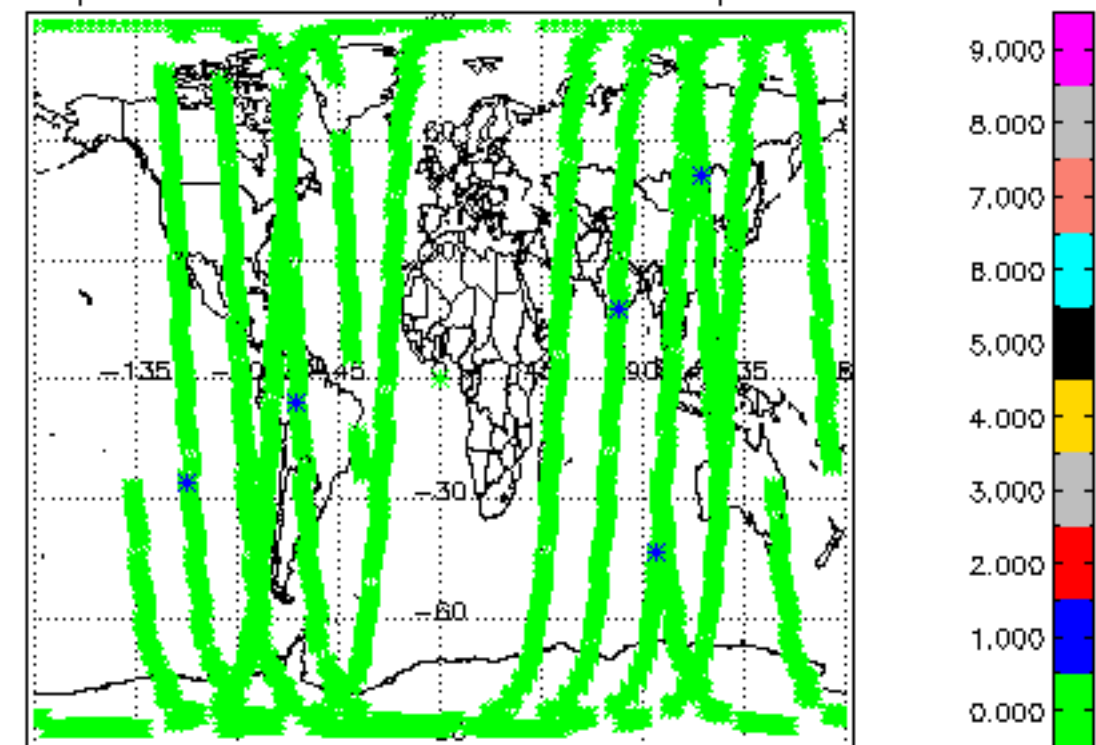




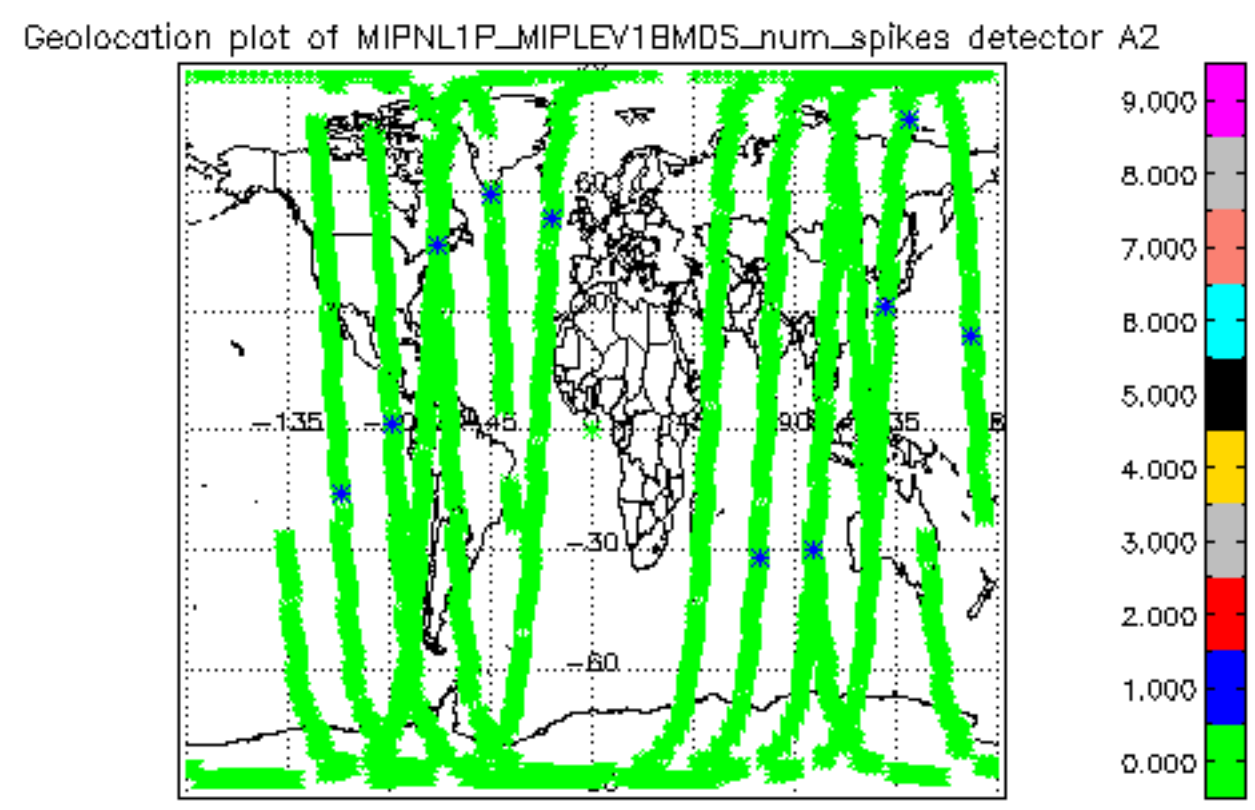
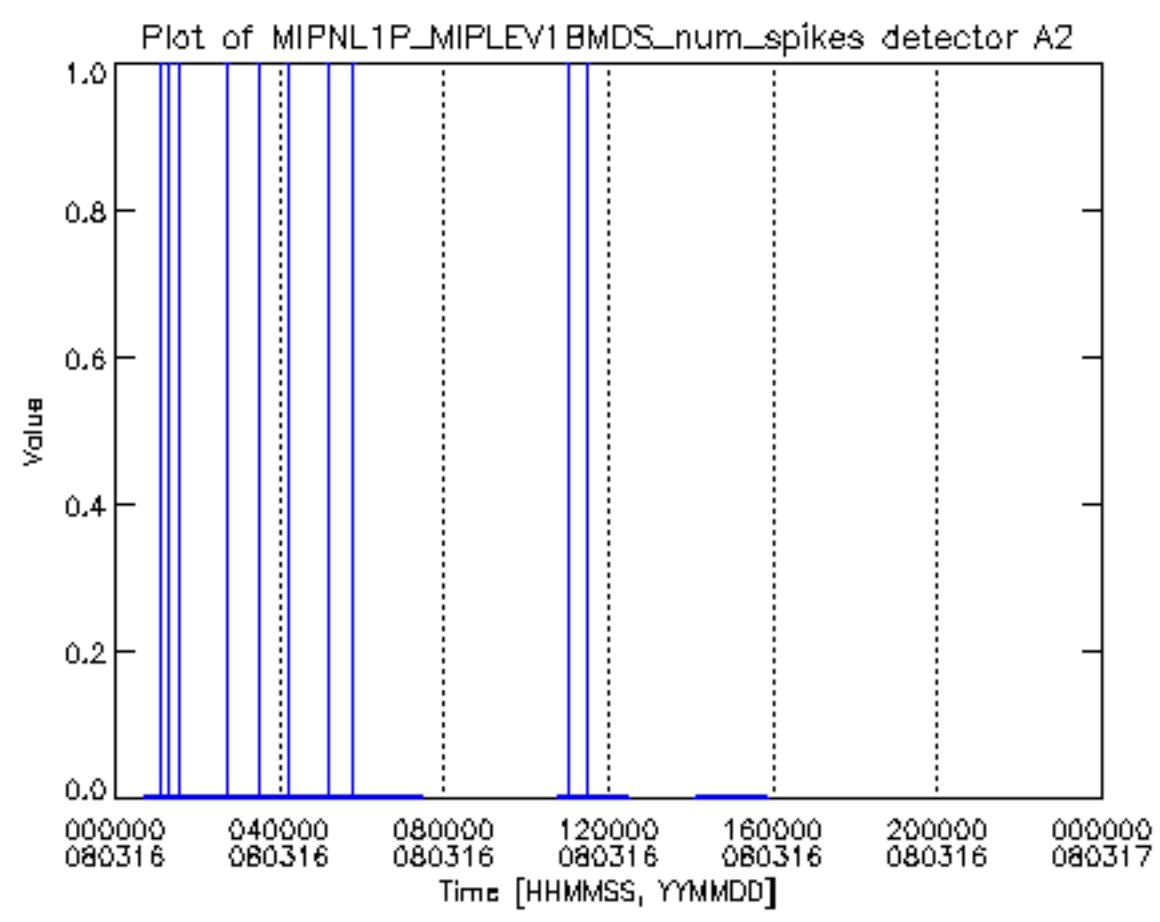


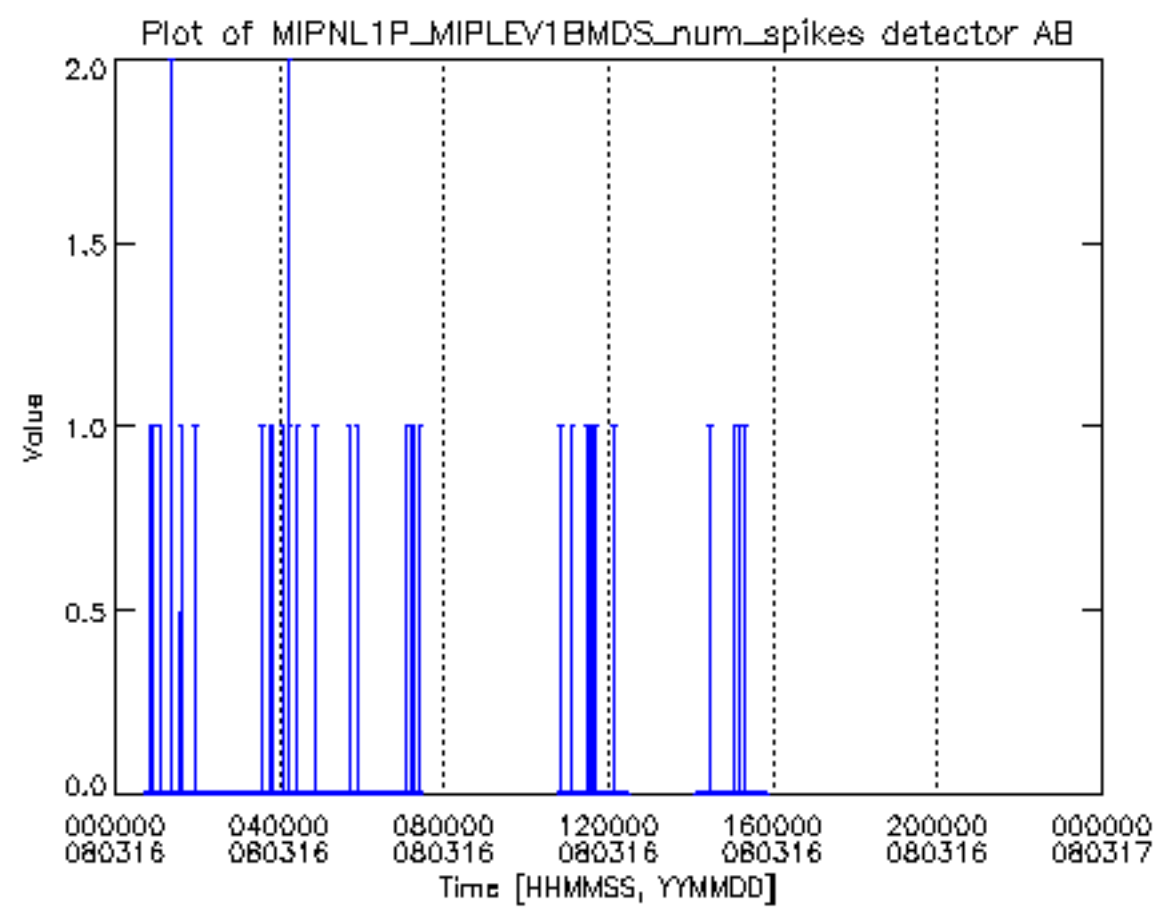


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector A1

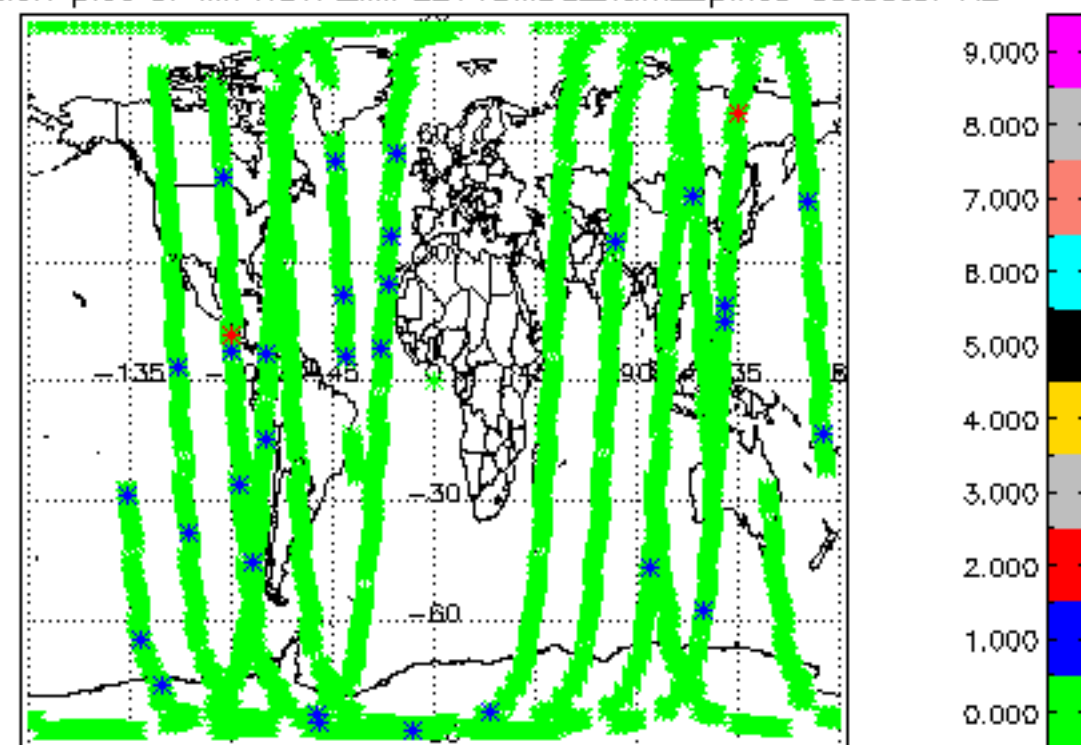




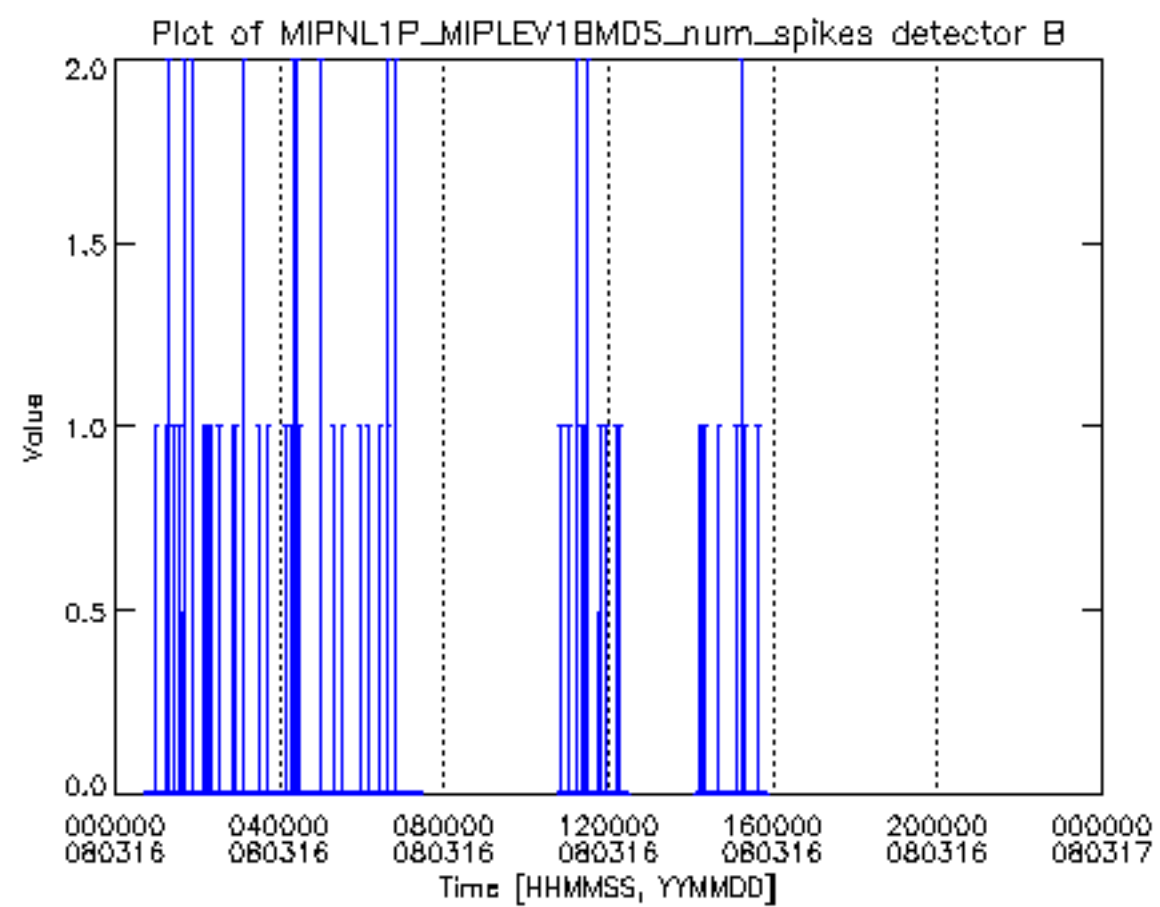




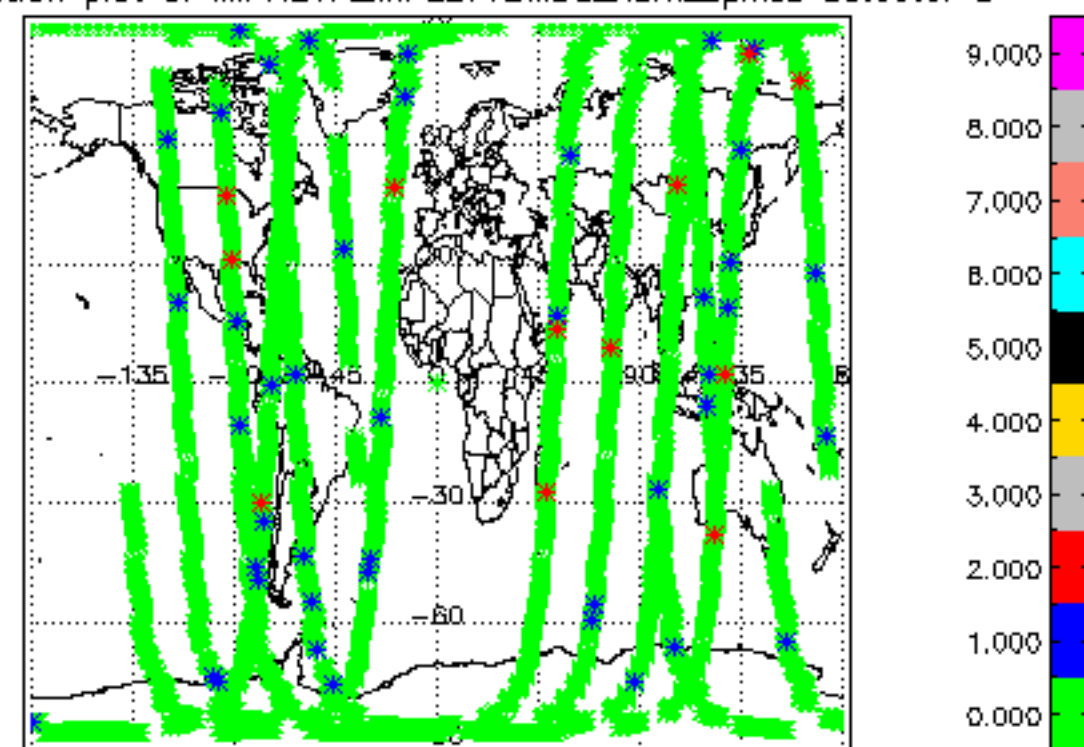
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector AB

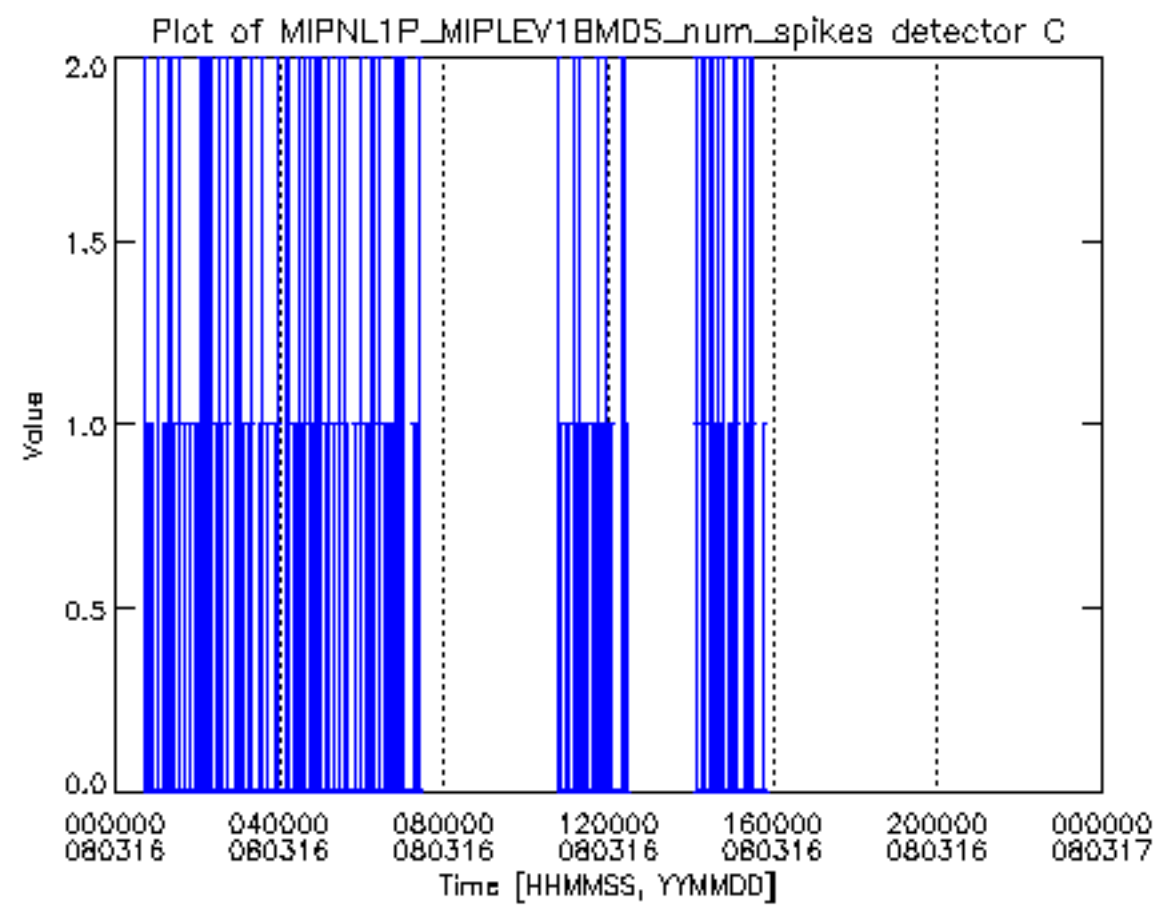




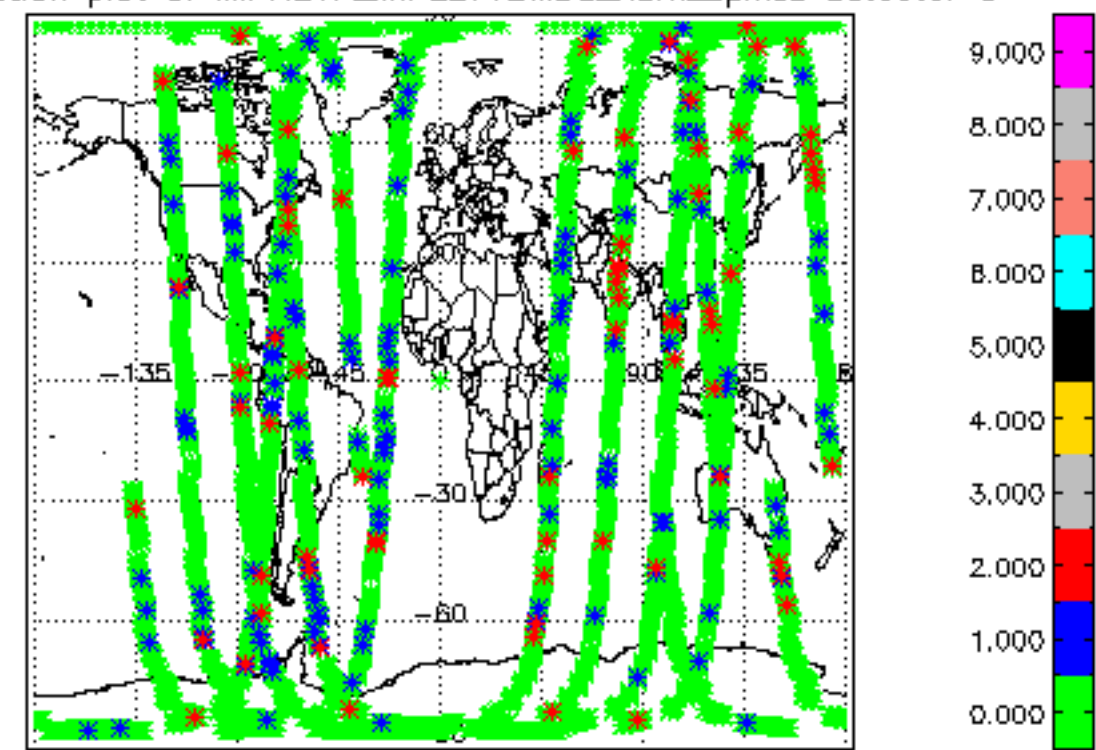


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector B

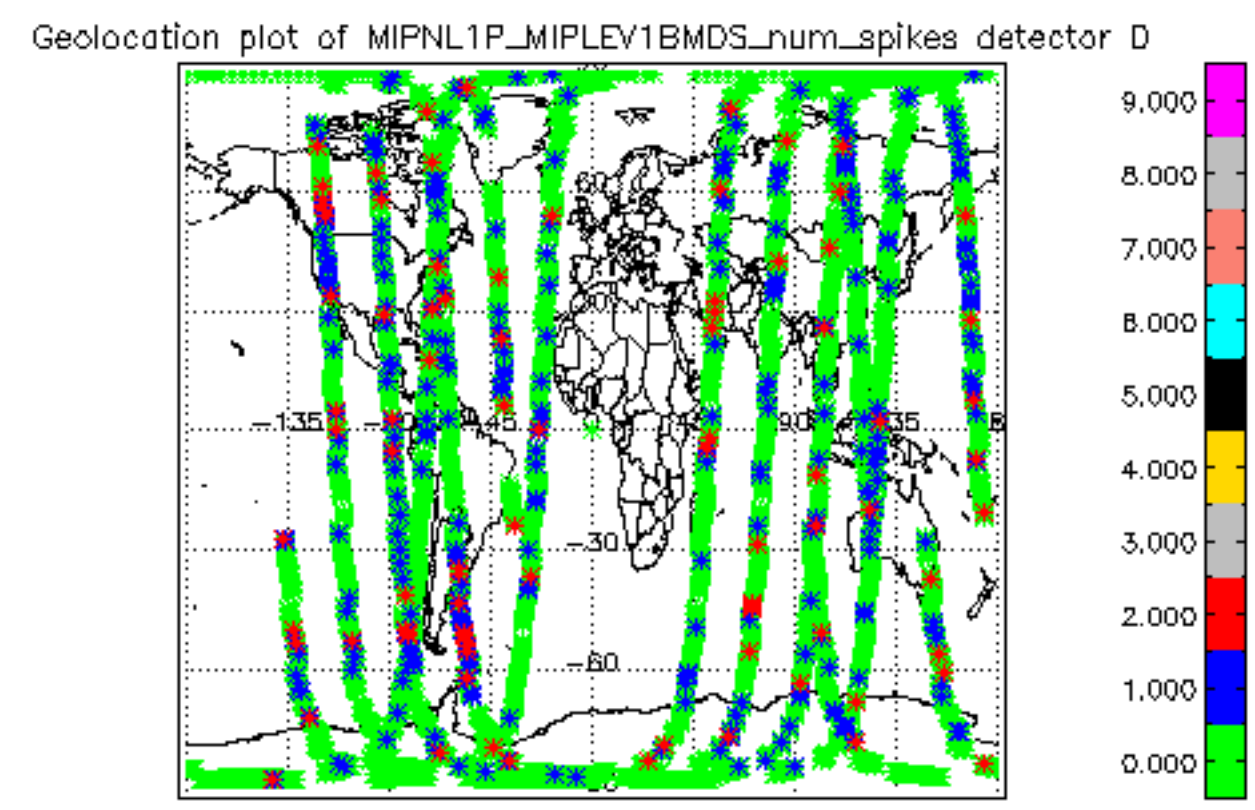
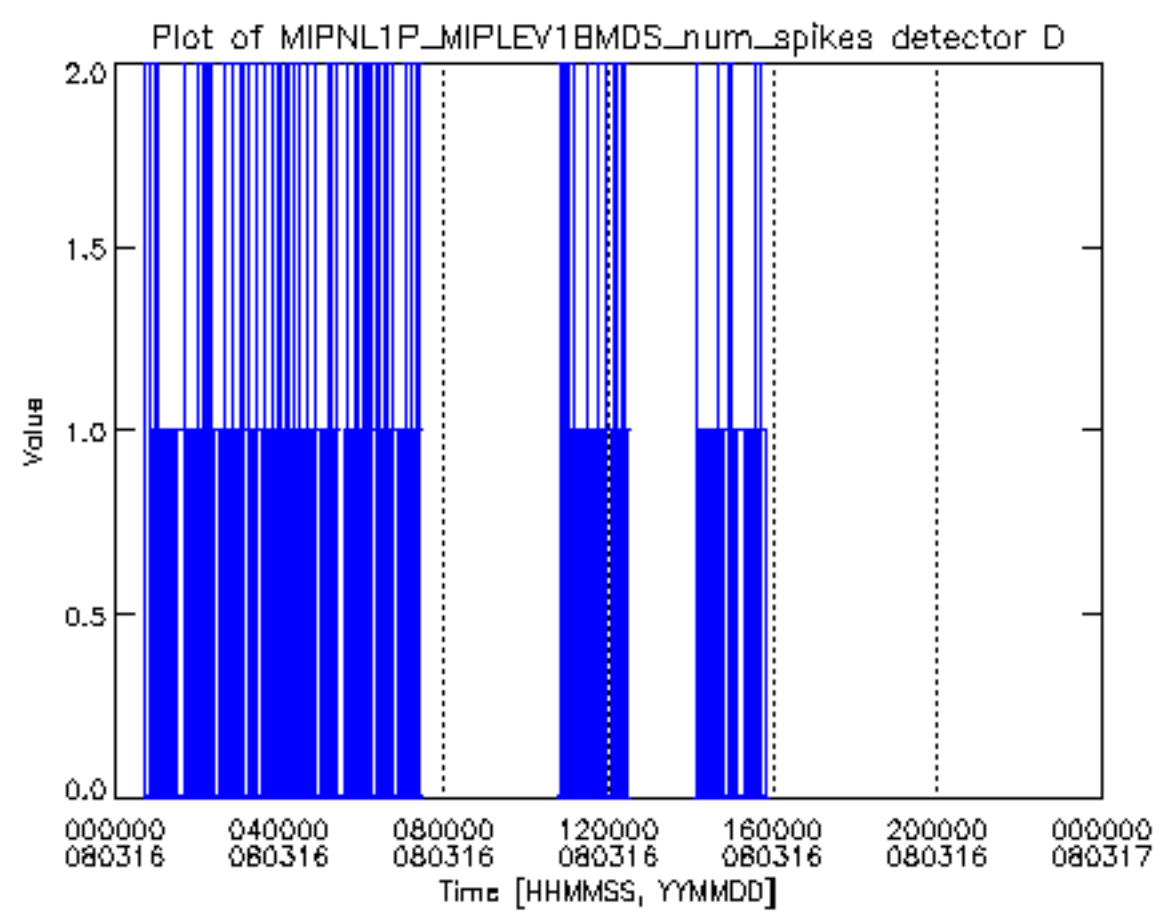


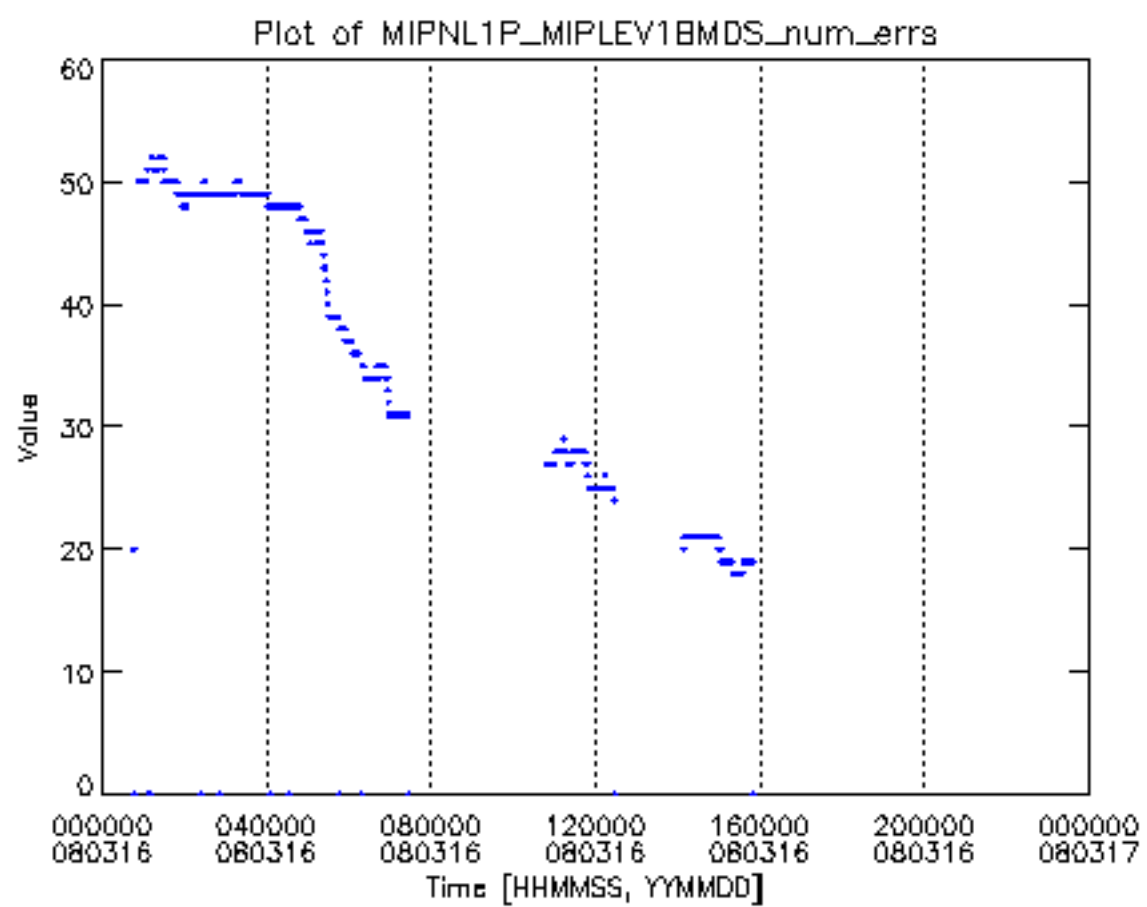


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_spikes detector C

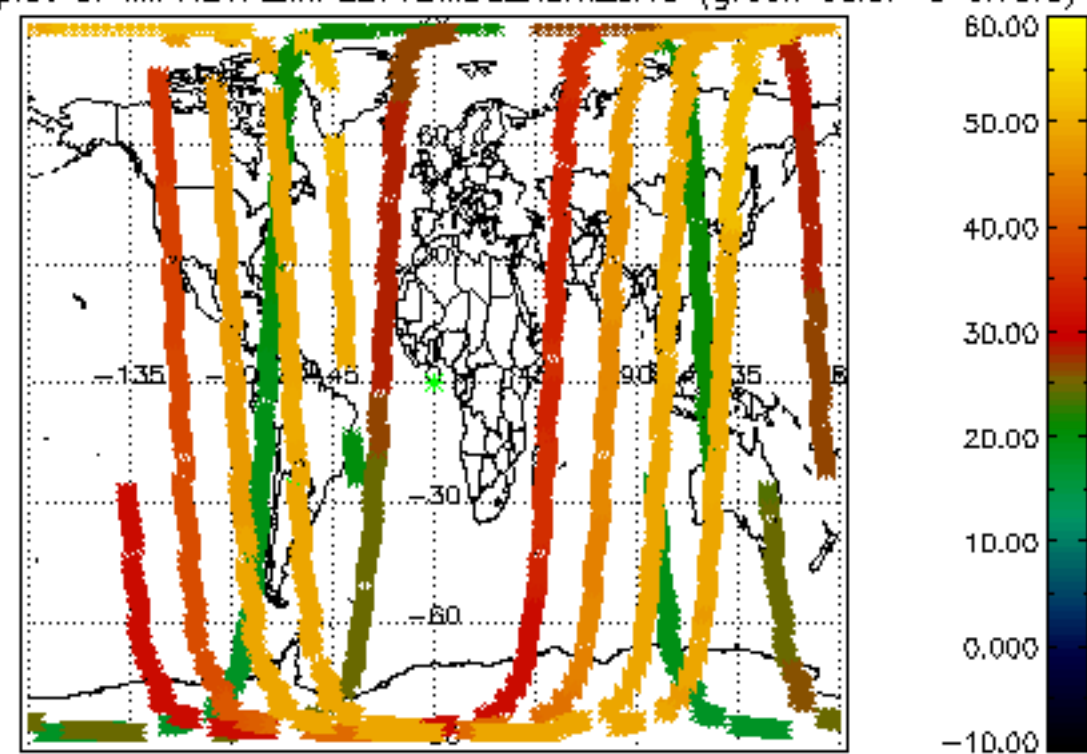




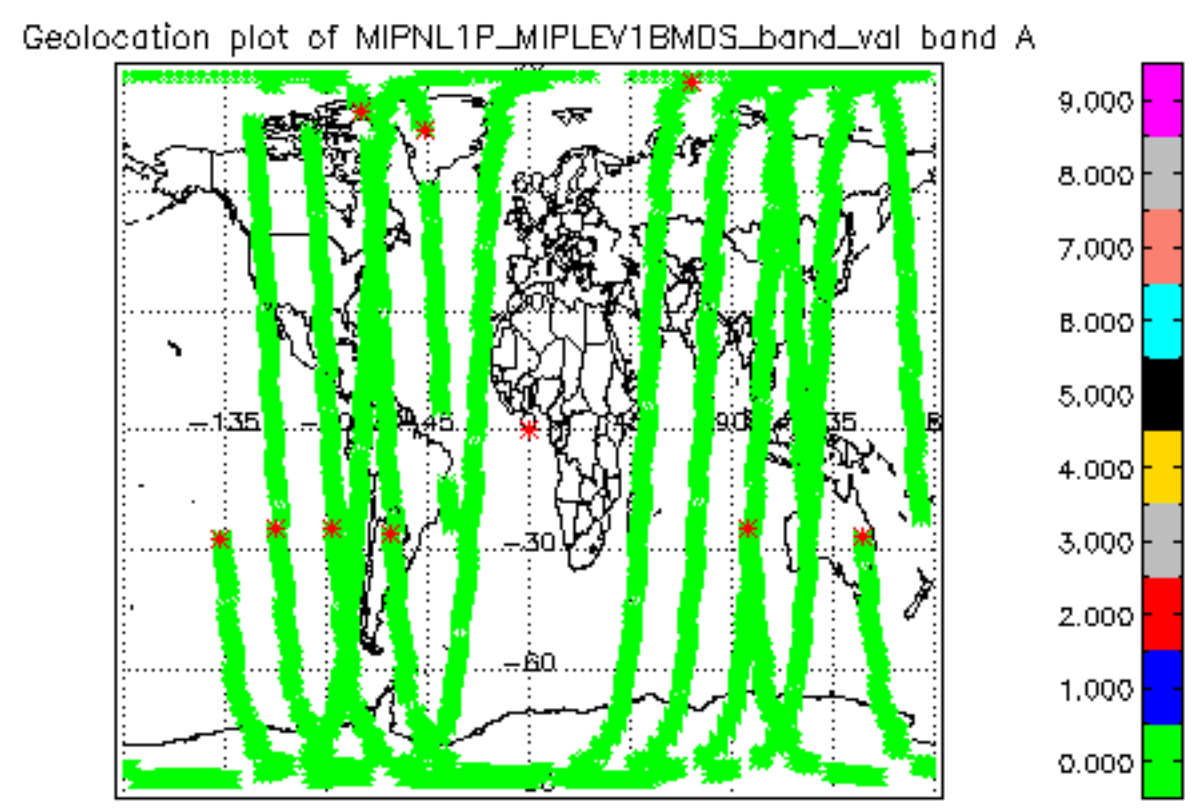
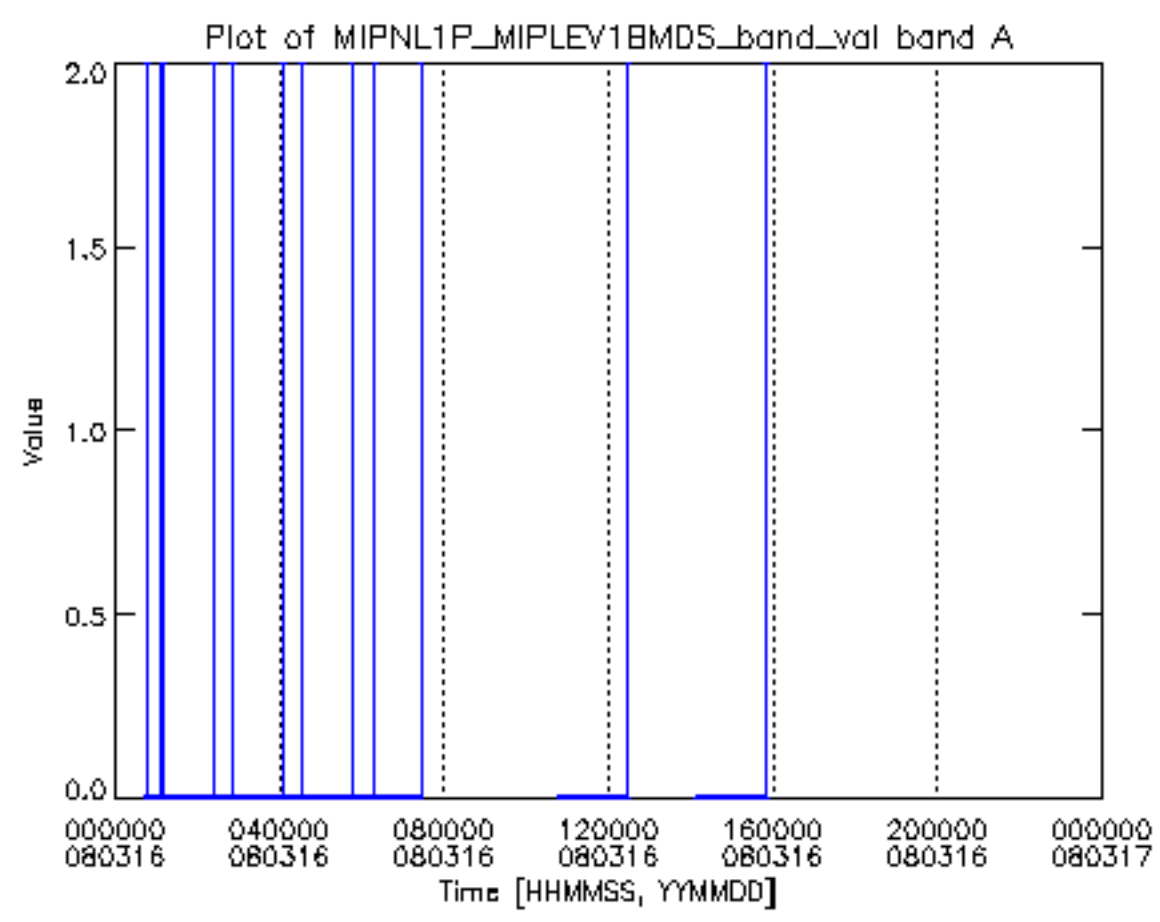


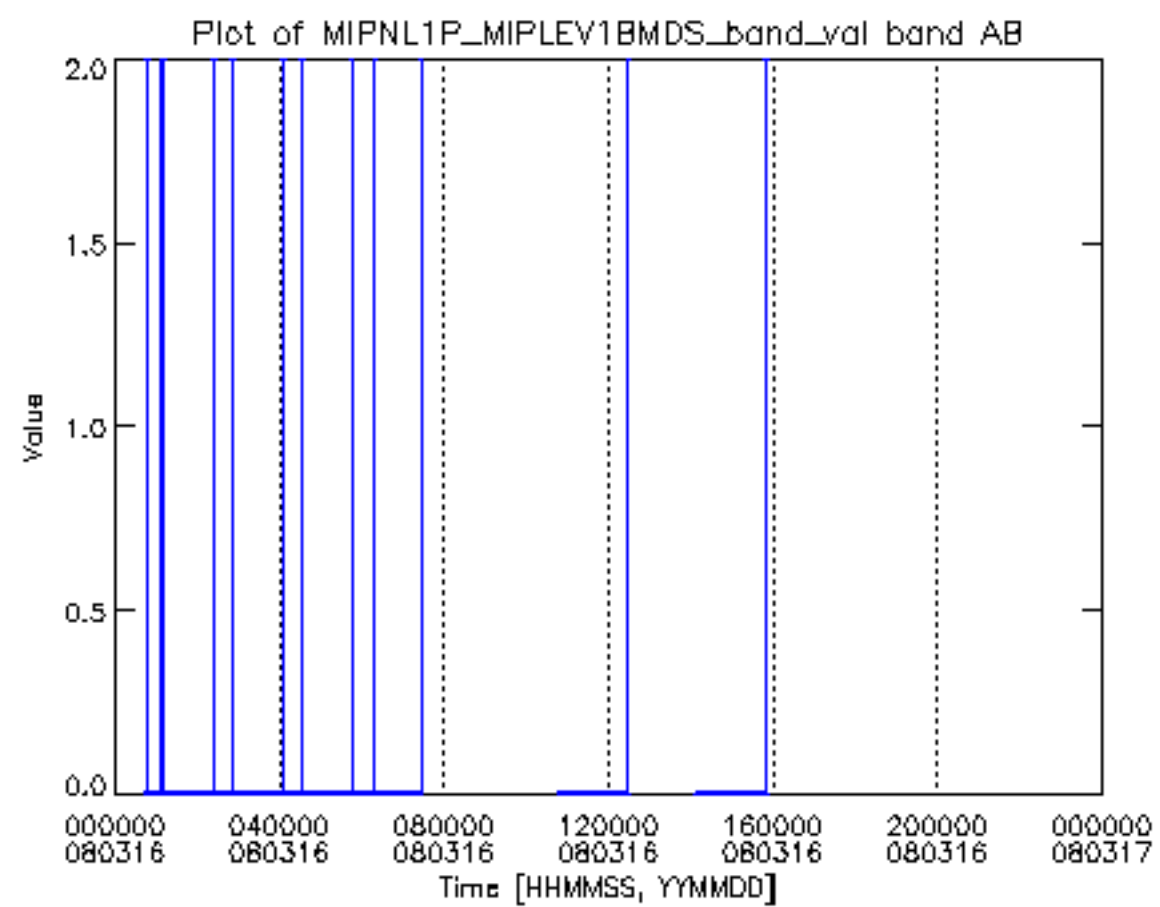


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_num\_errs (green color=0 errors)

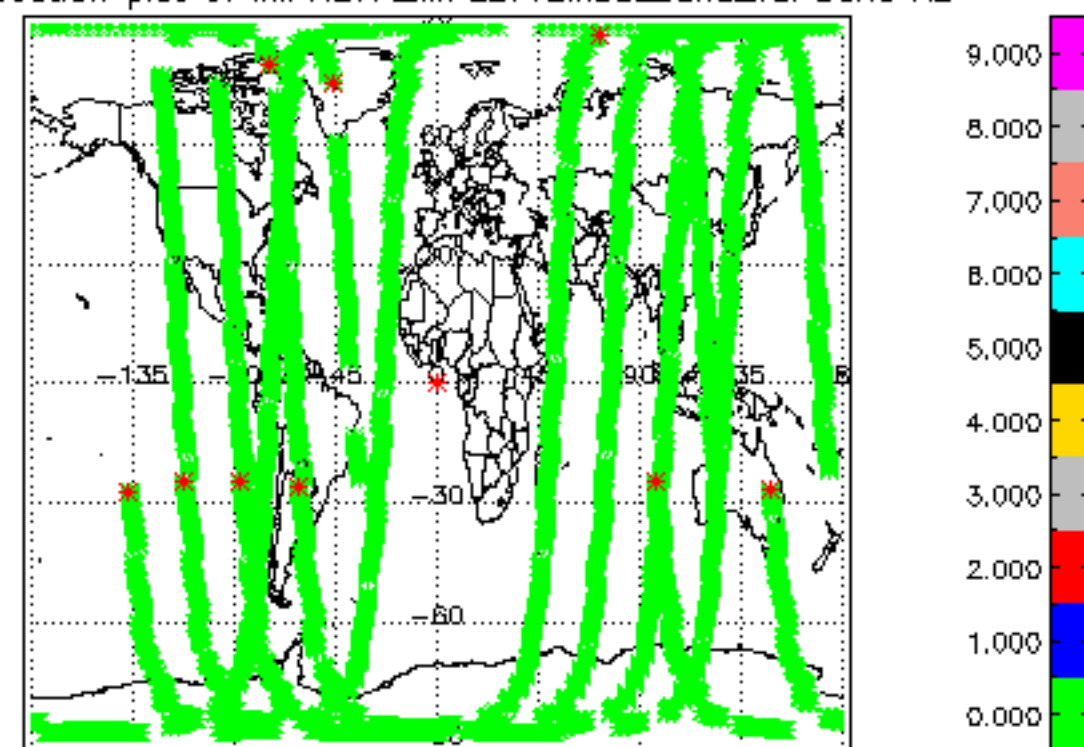


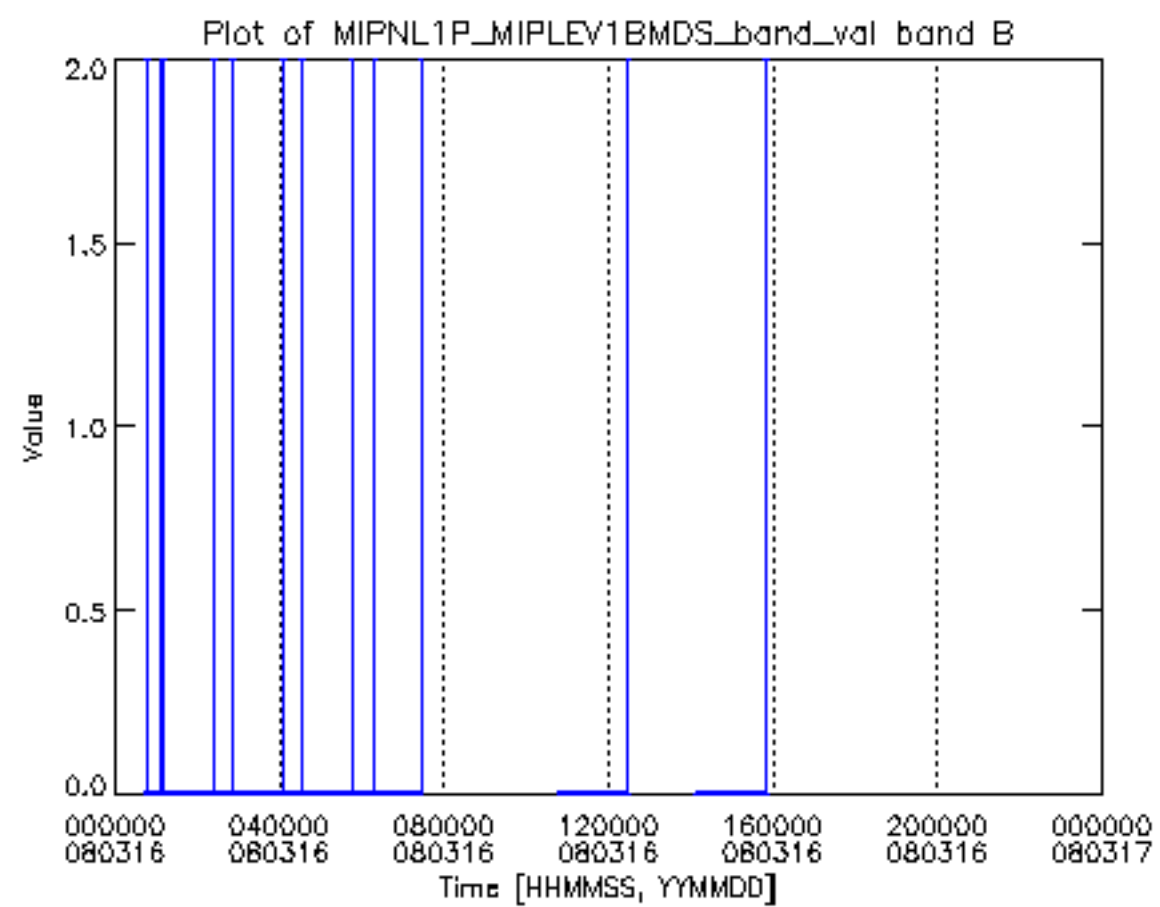




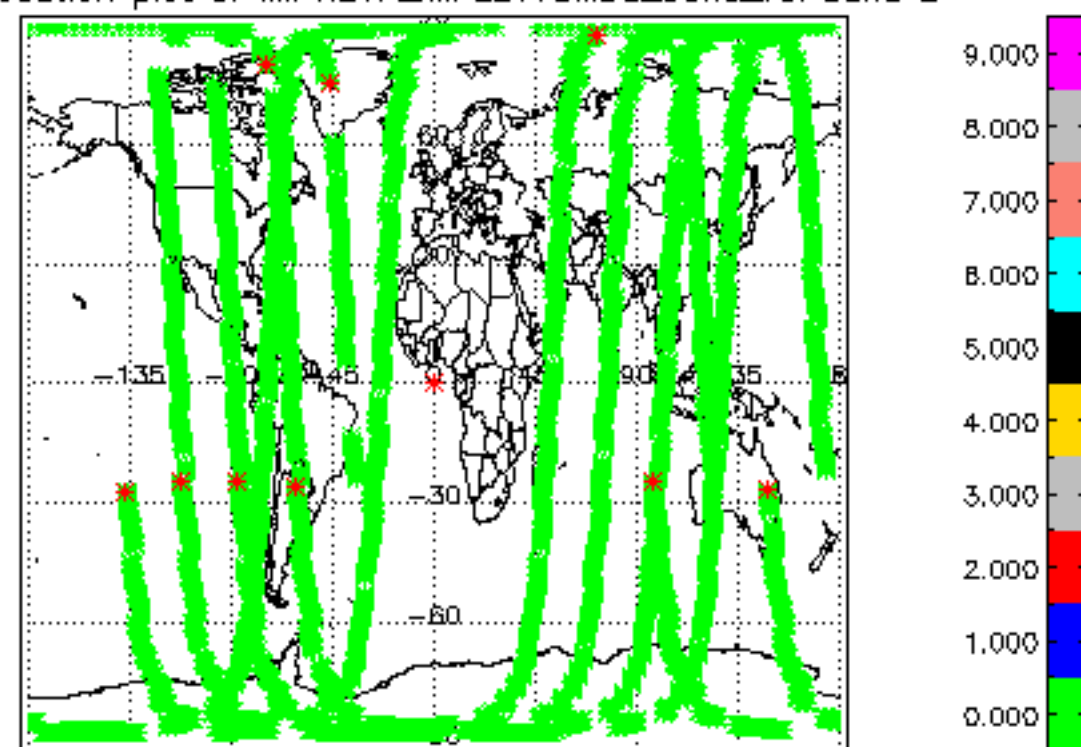


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_val band AB

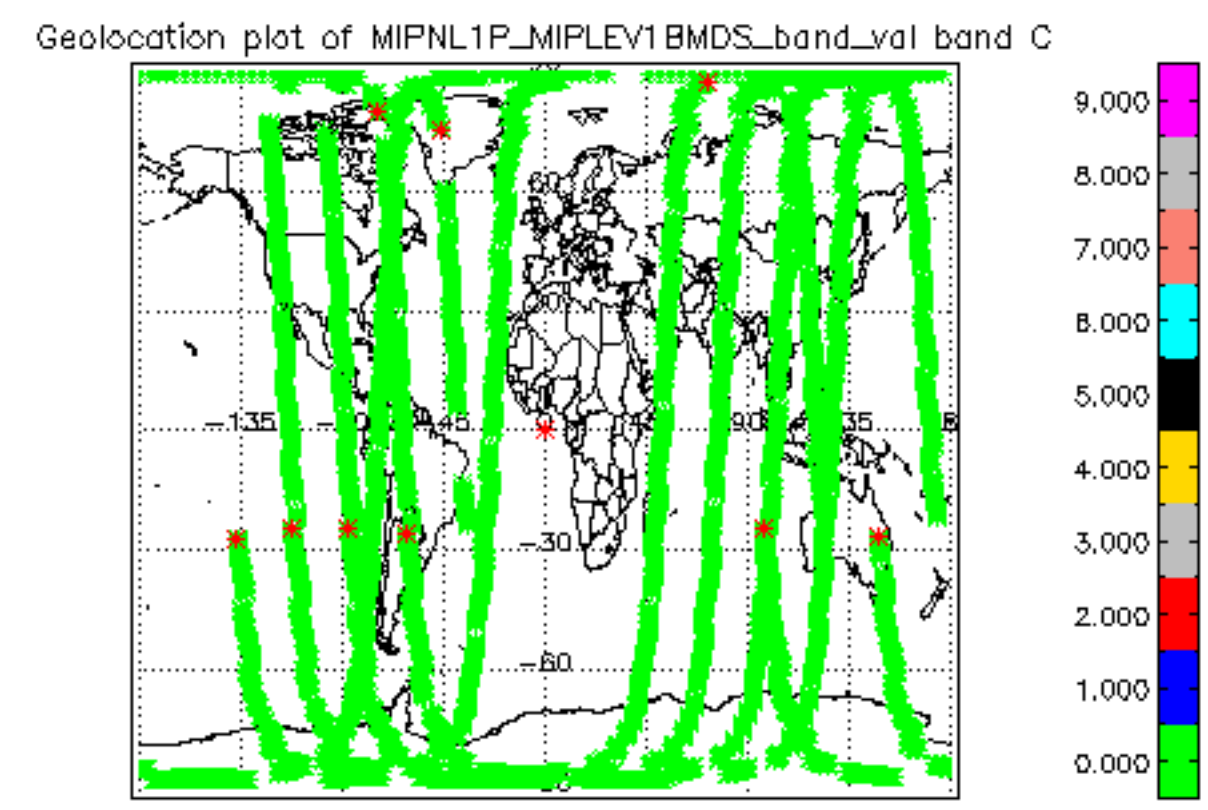
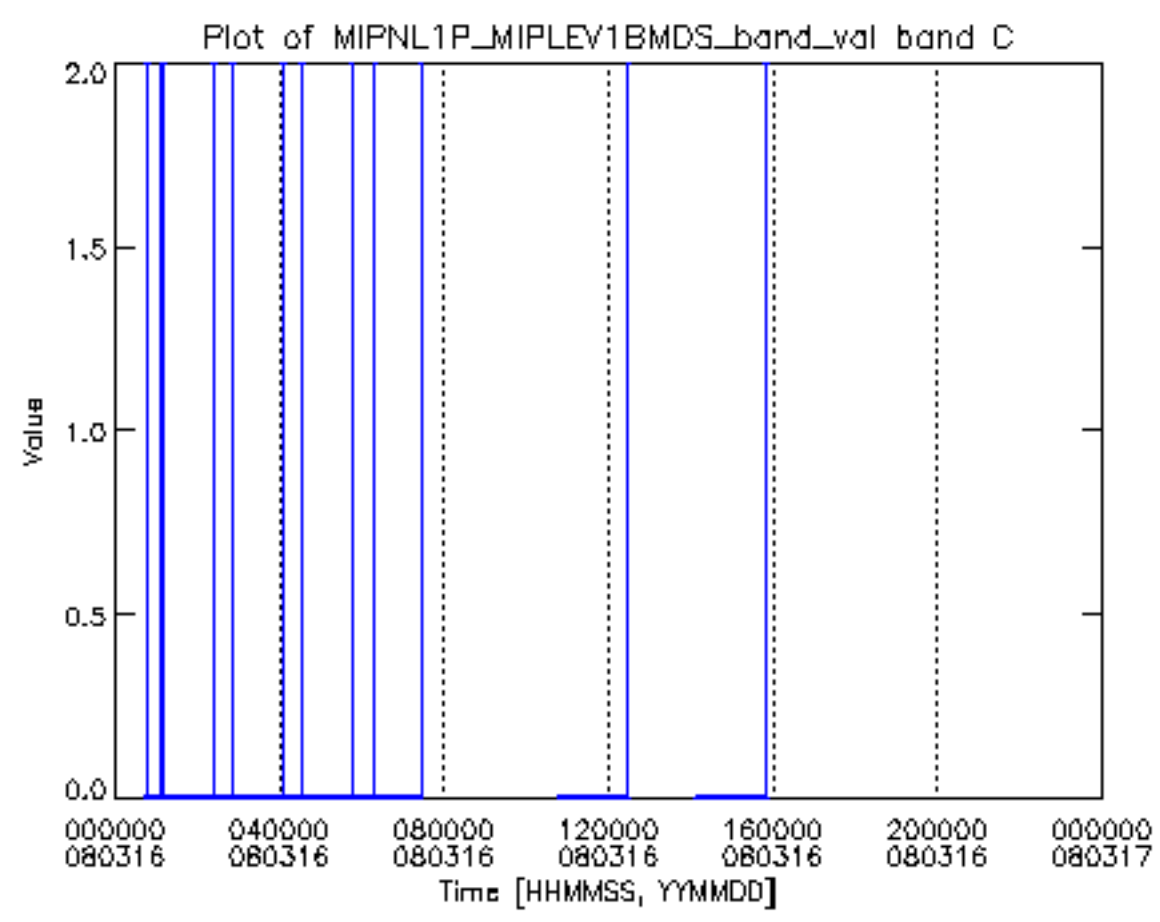


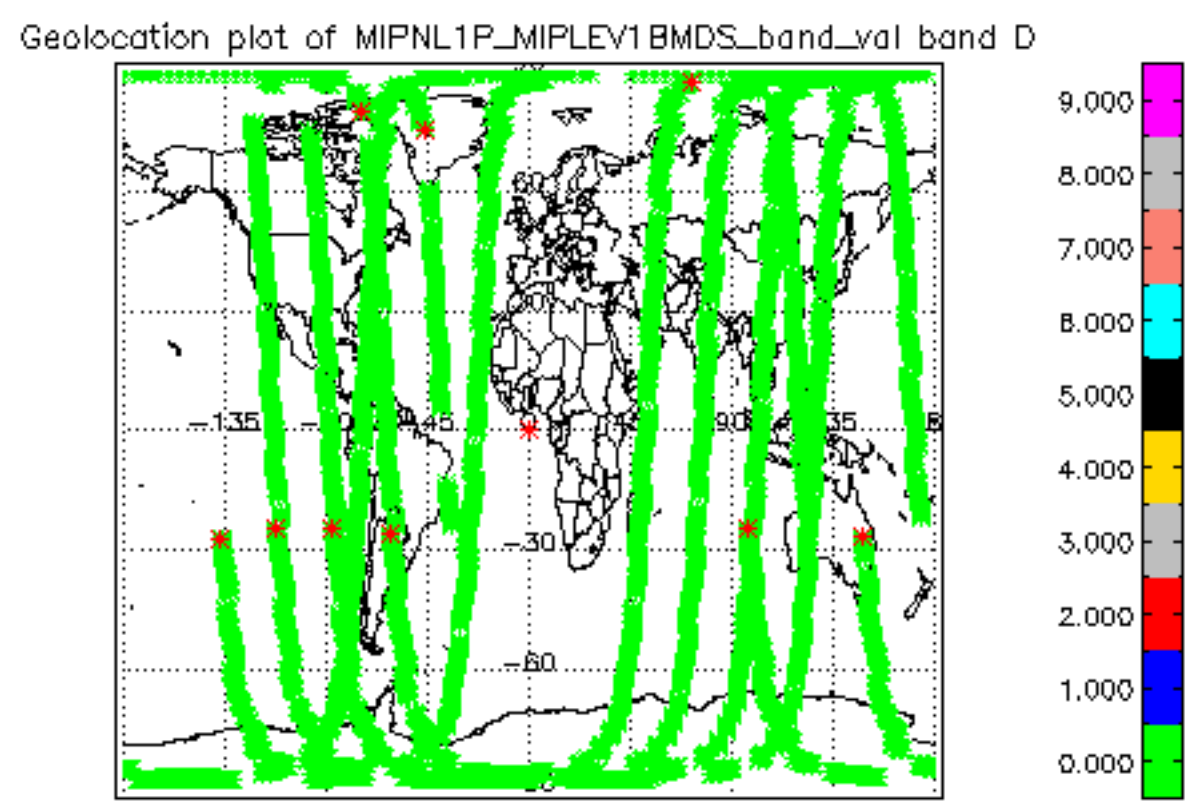
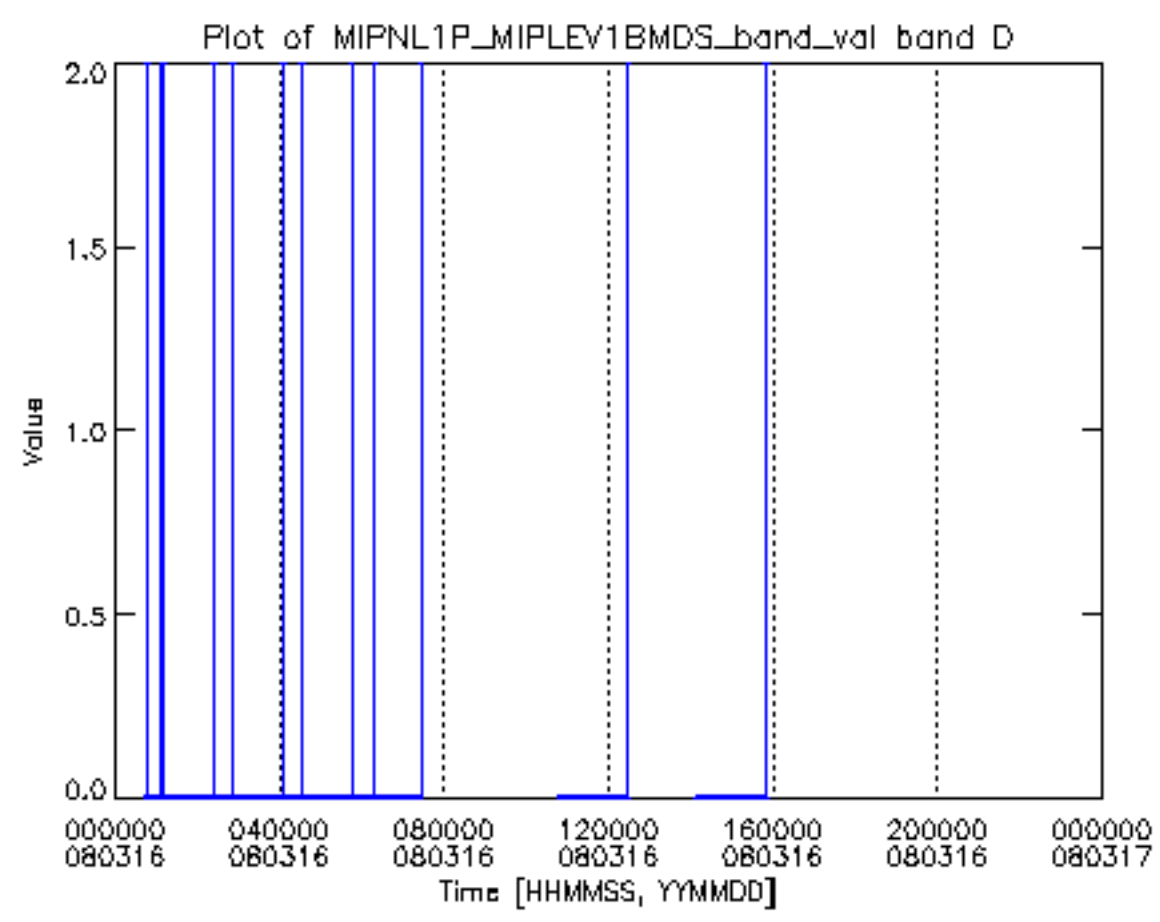


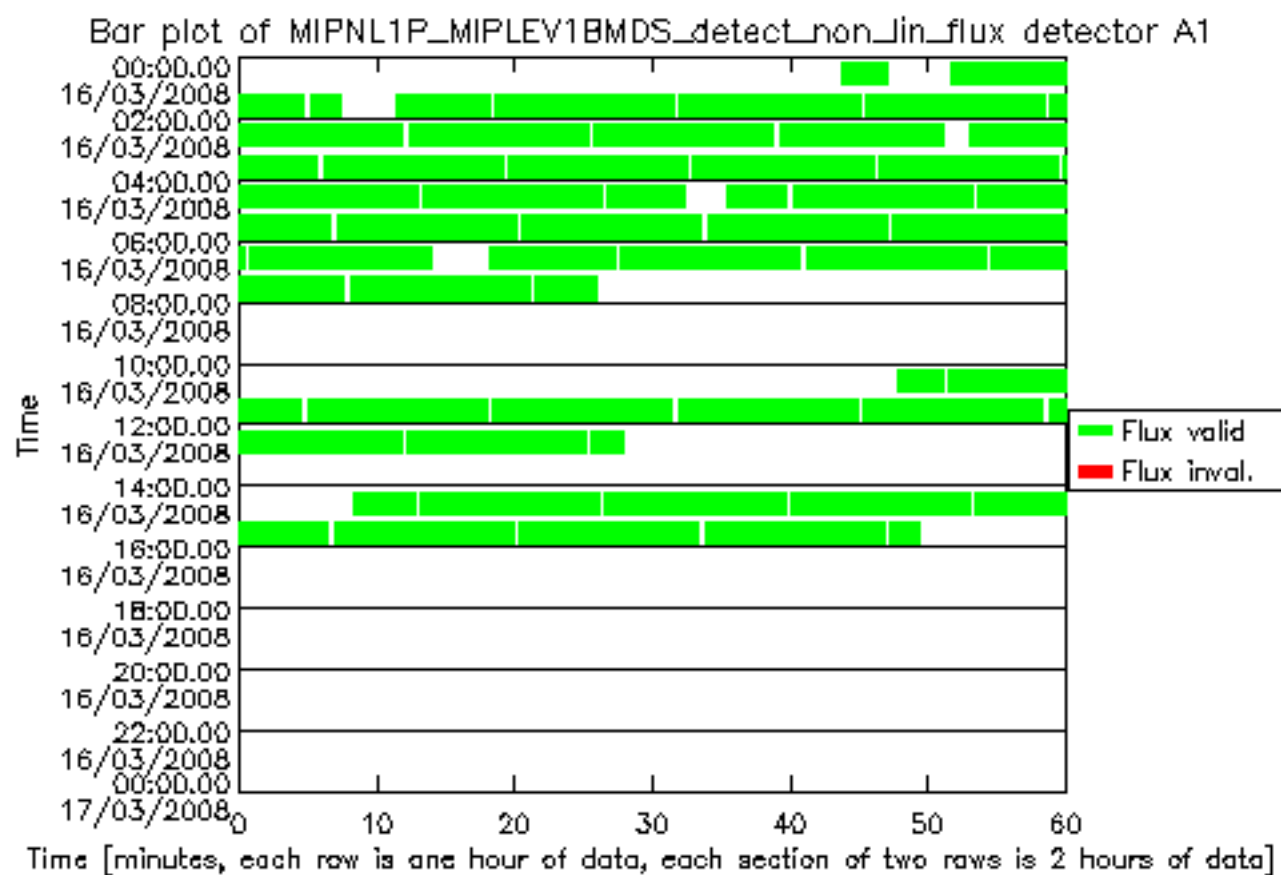
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_band\_Lval band B



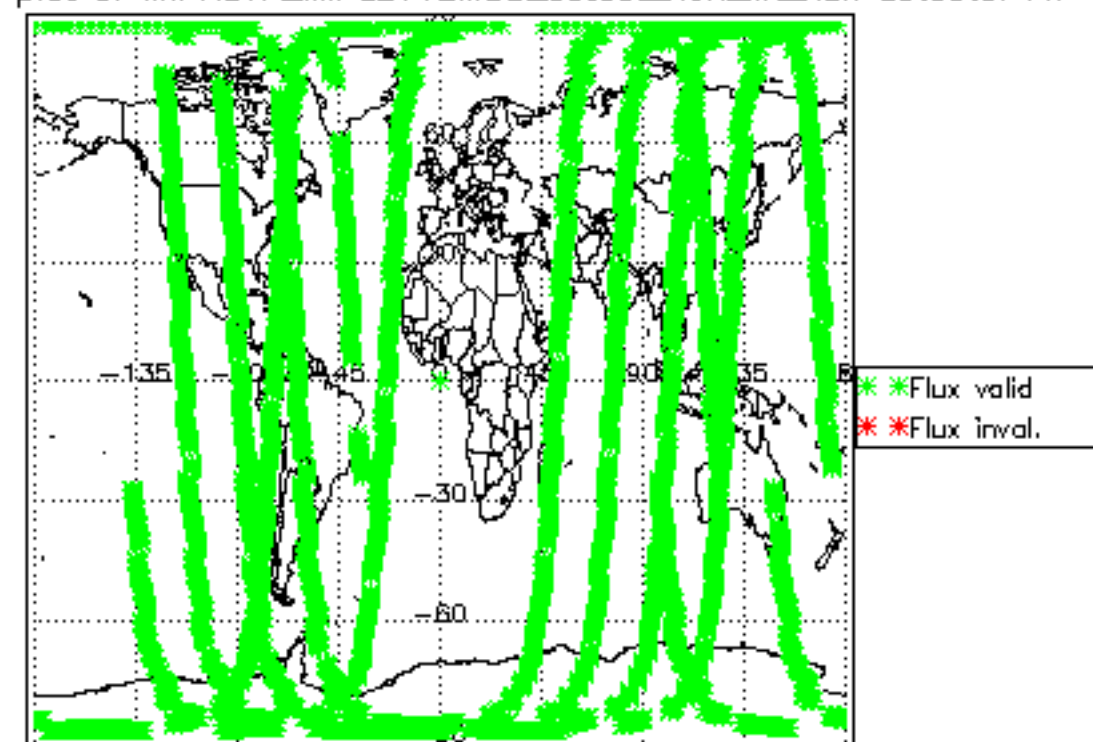




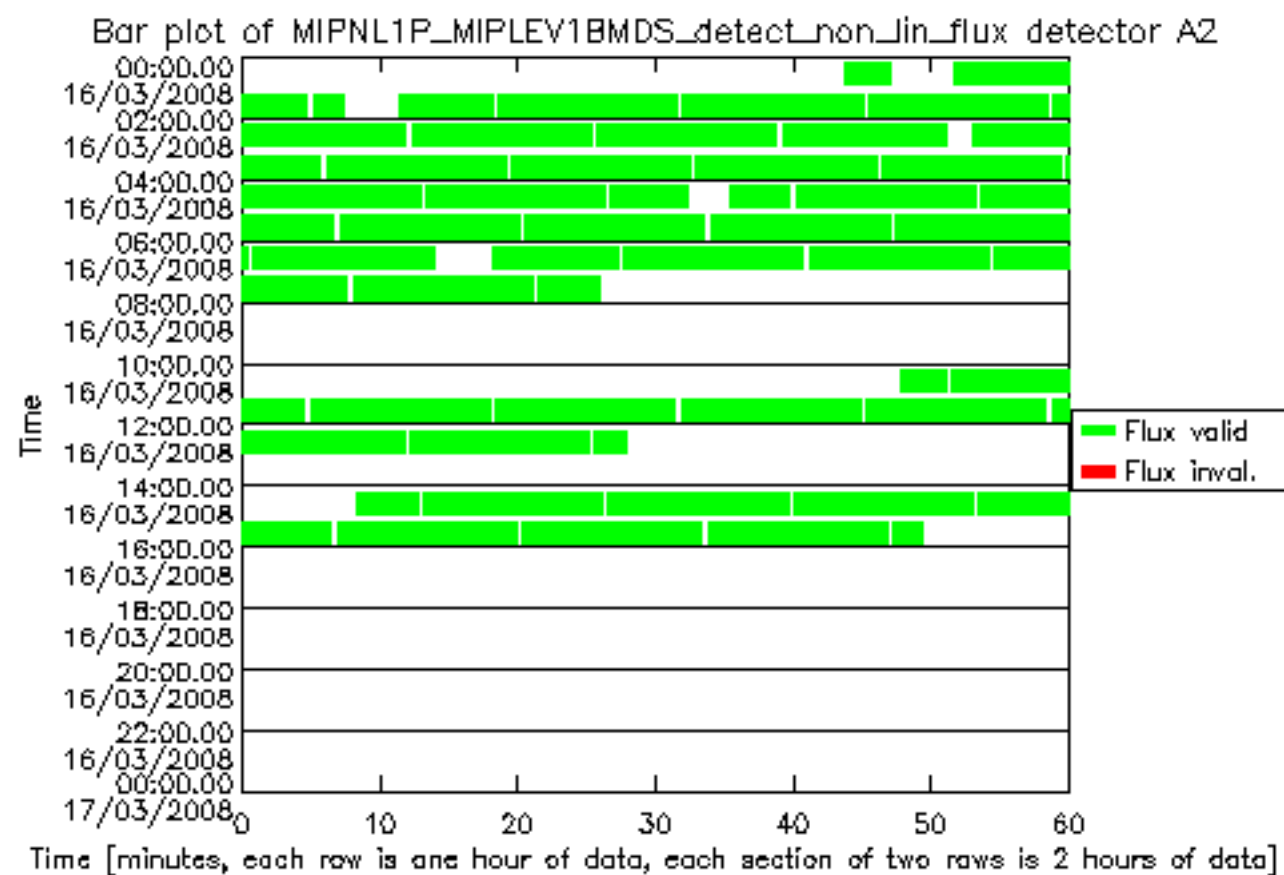




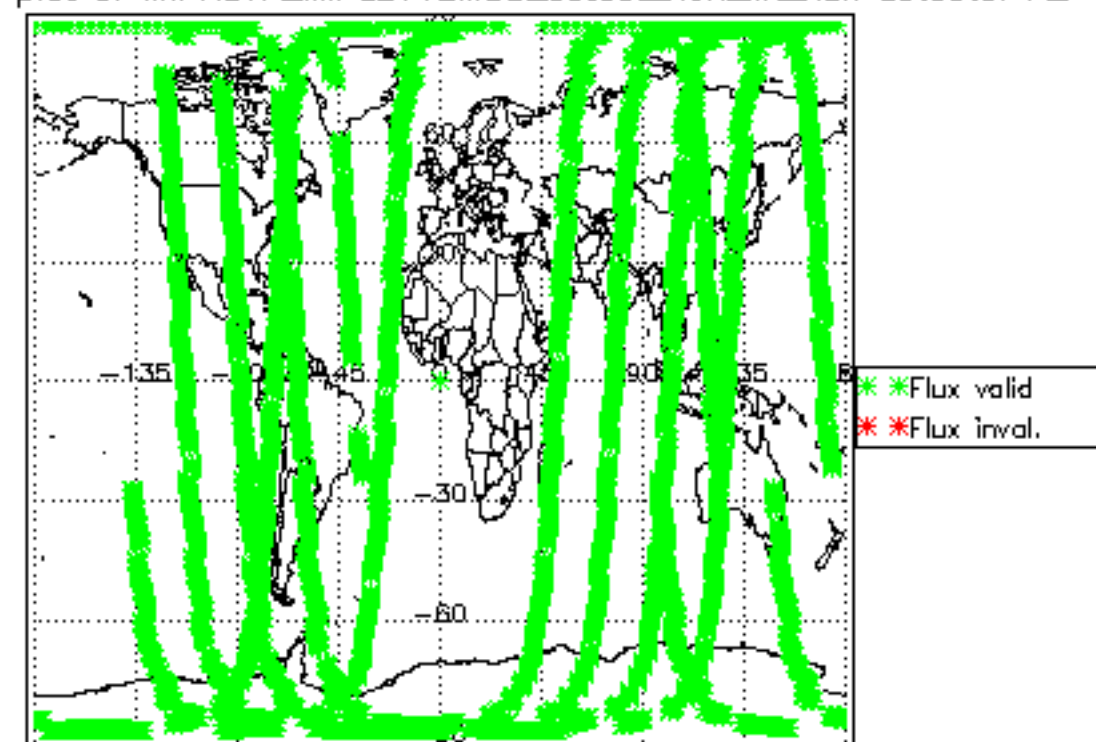
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A1

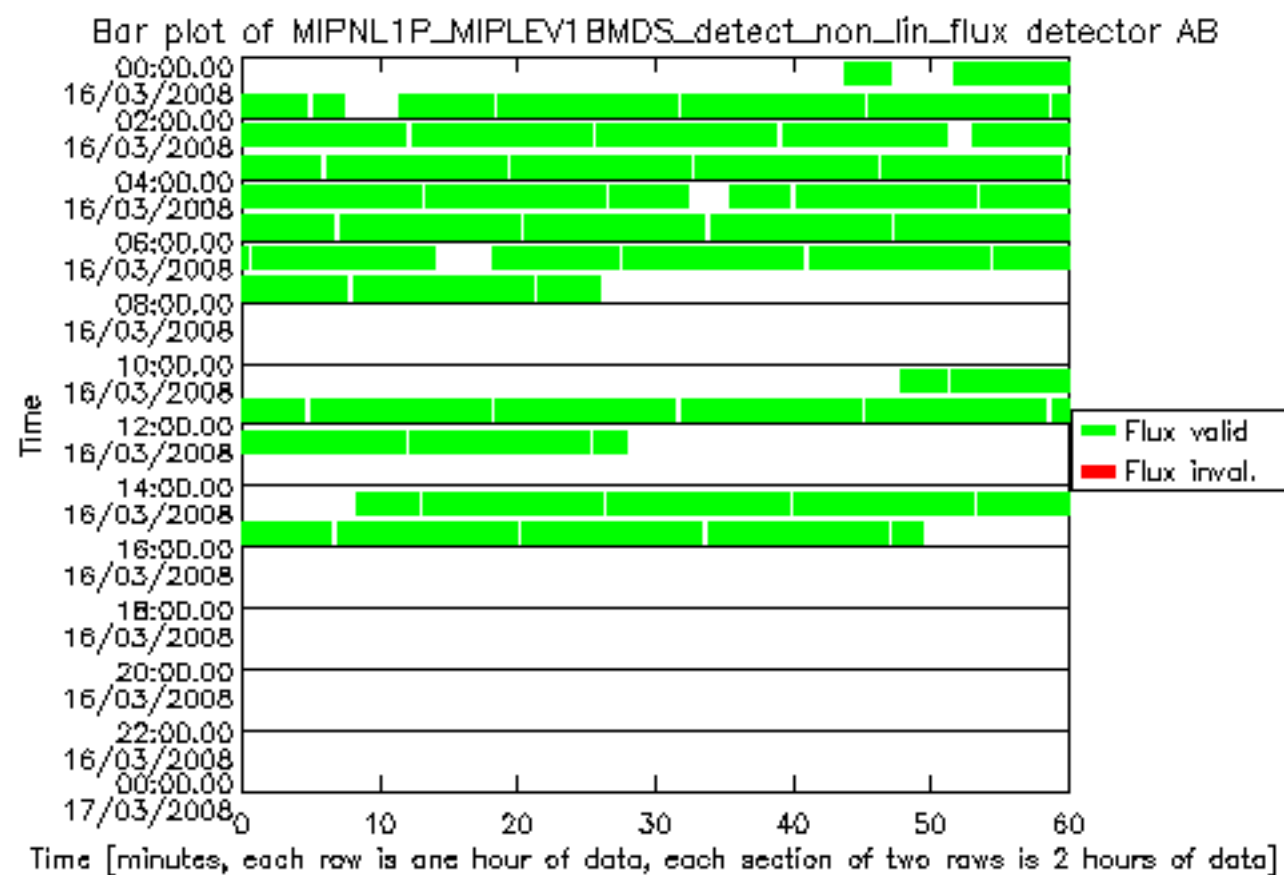




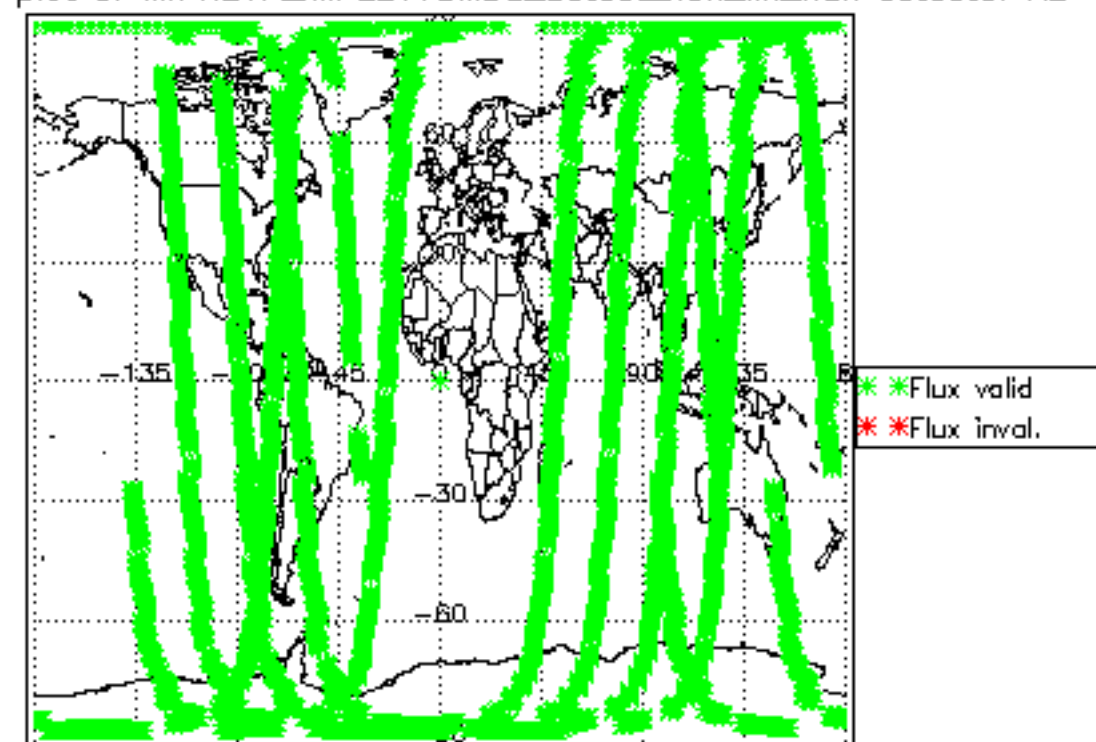


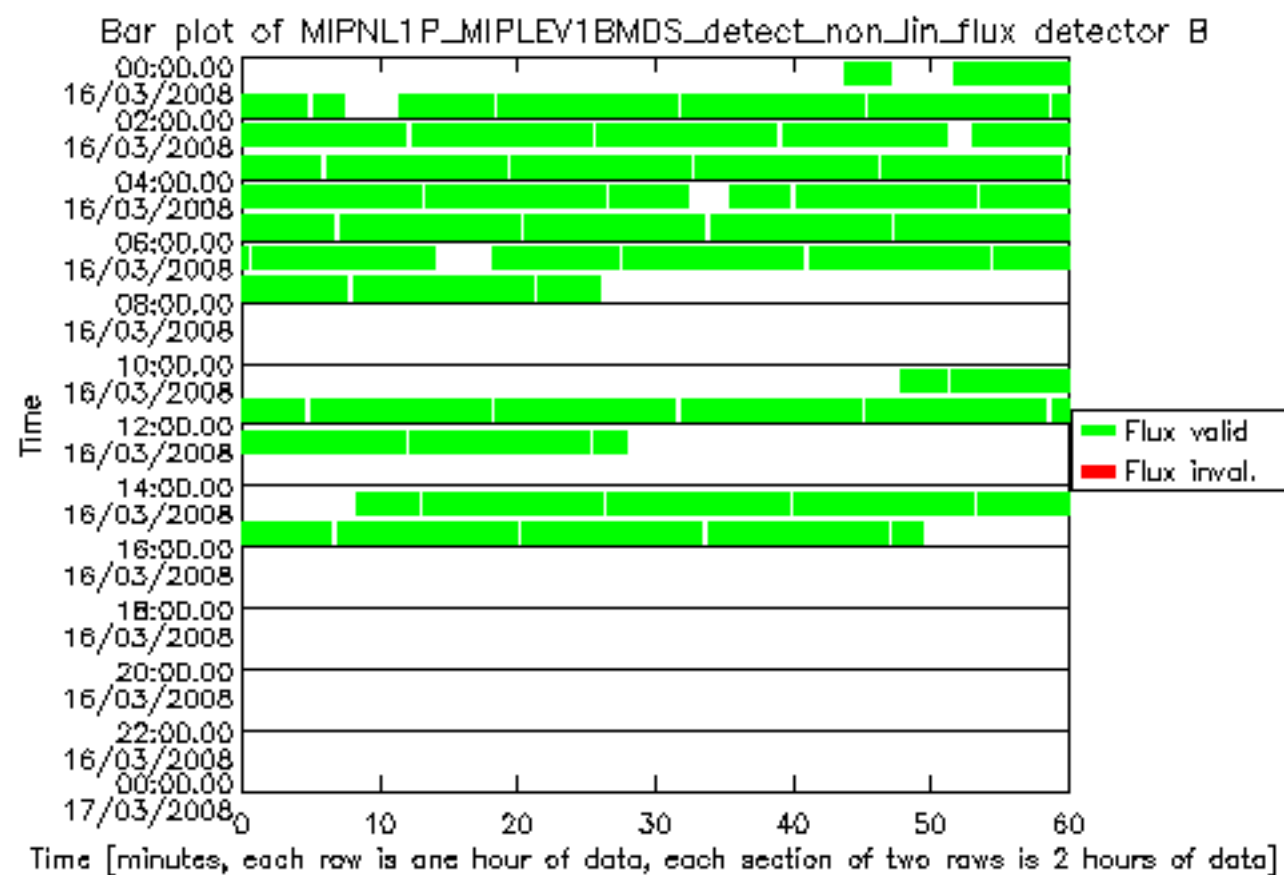
Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector A2



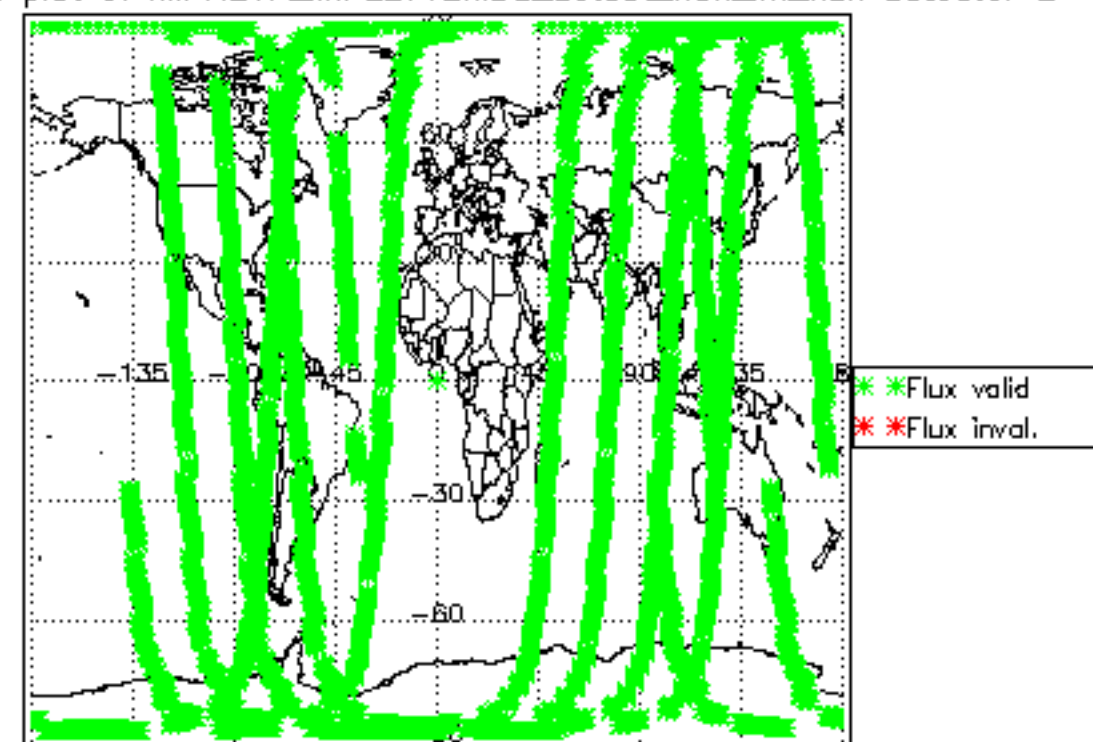


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector AB



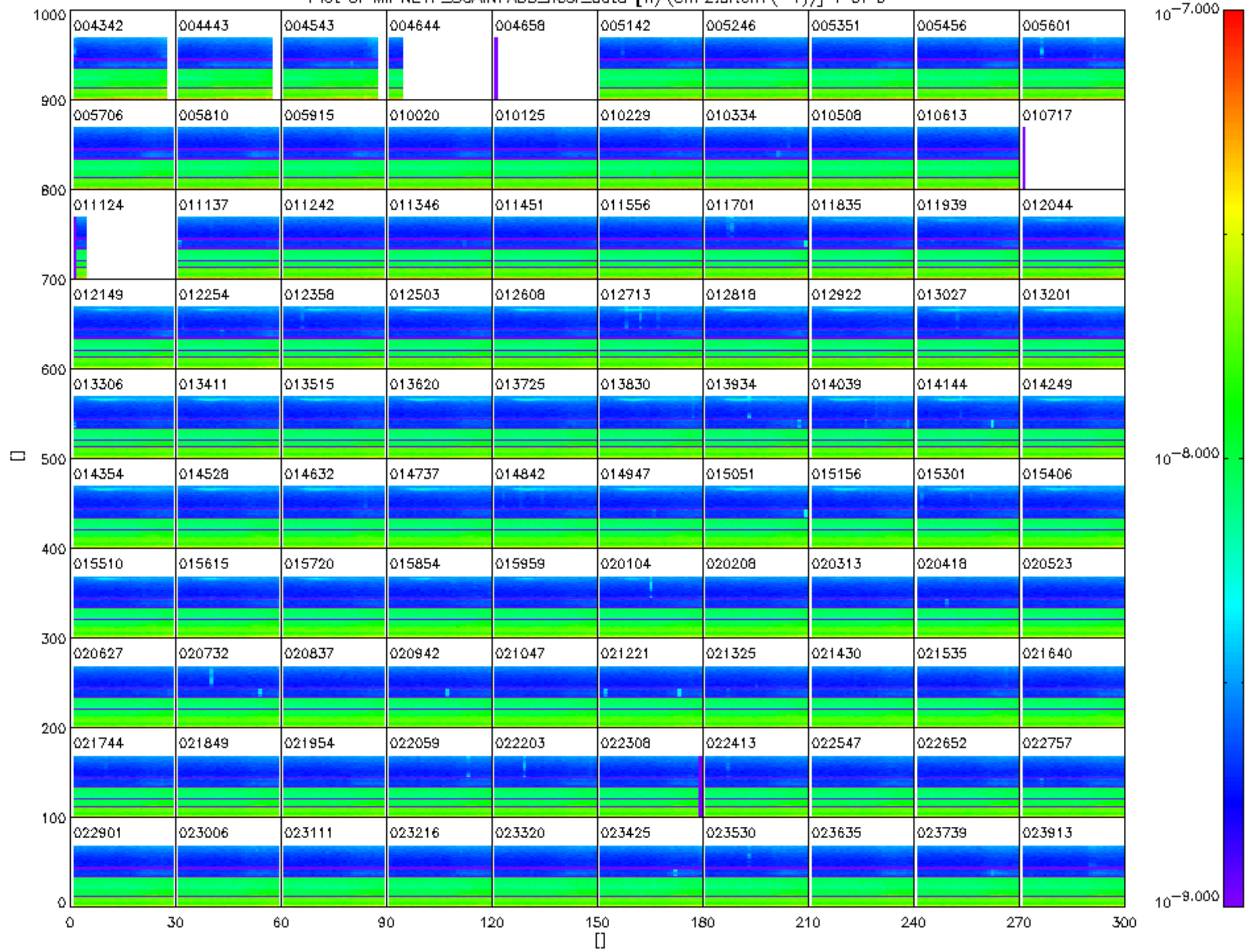


Geolocation plot of MIPNL1P\_MIPLEV1BMDS\_detect\_non\_lin\_flux detector B

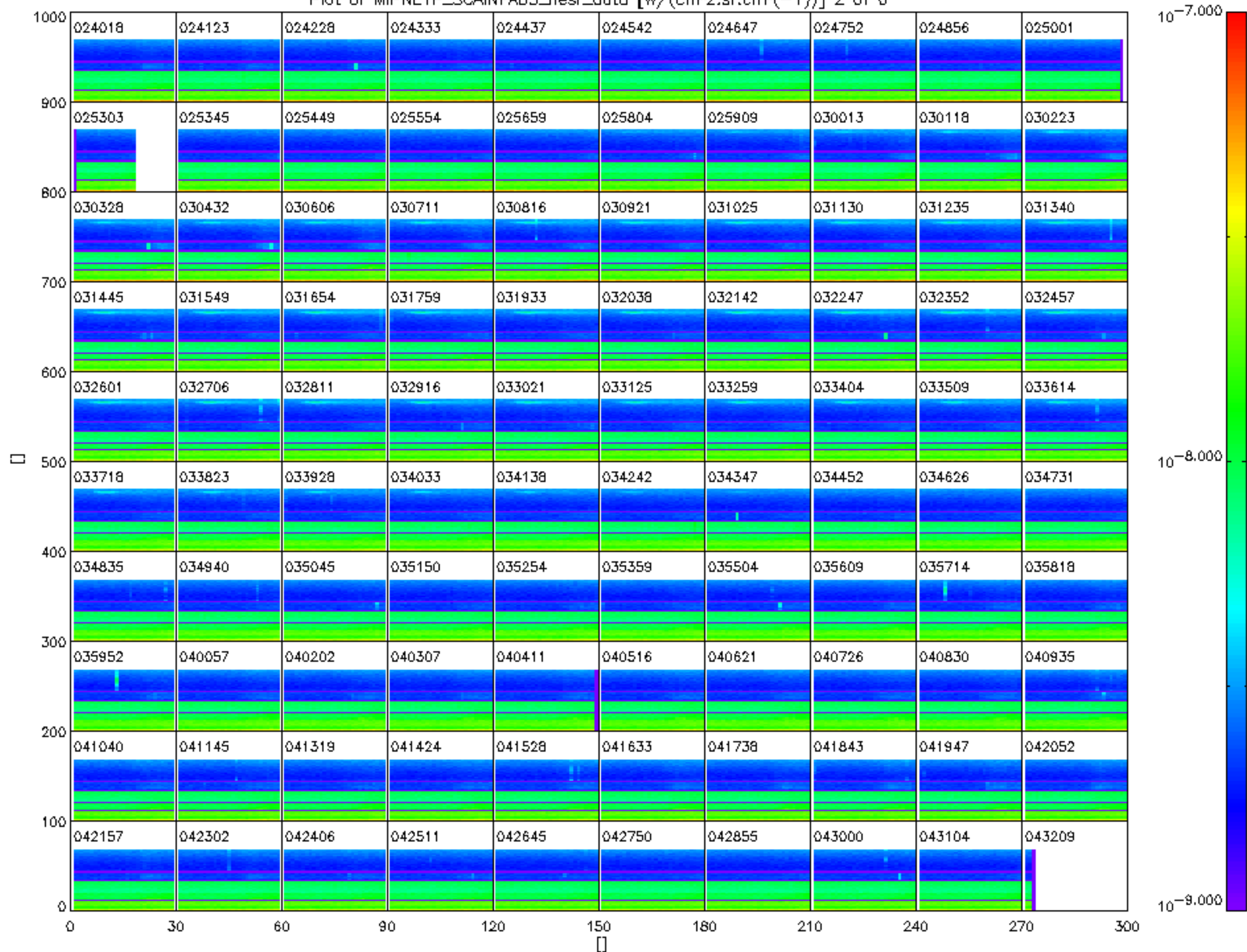




Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 1 of 6

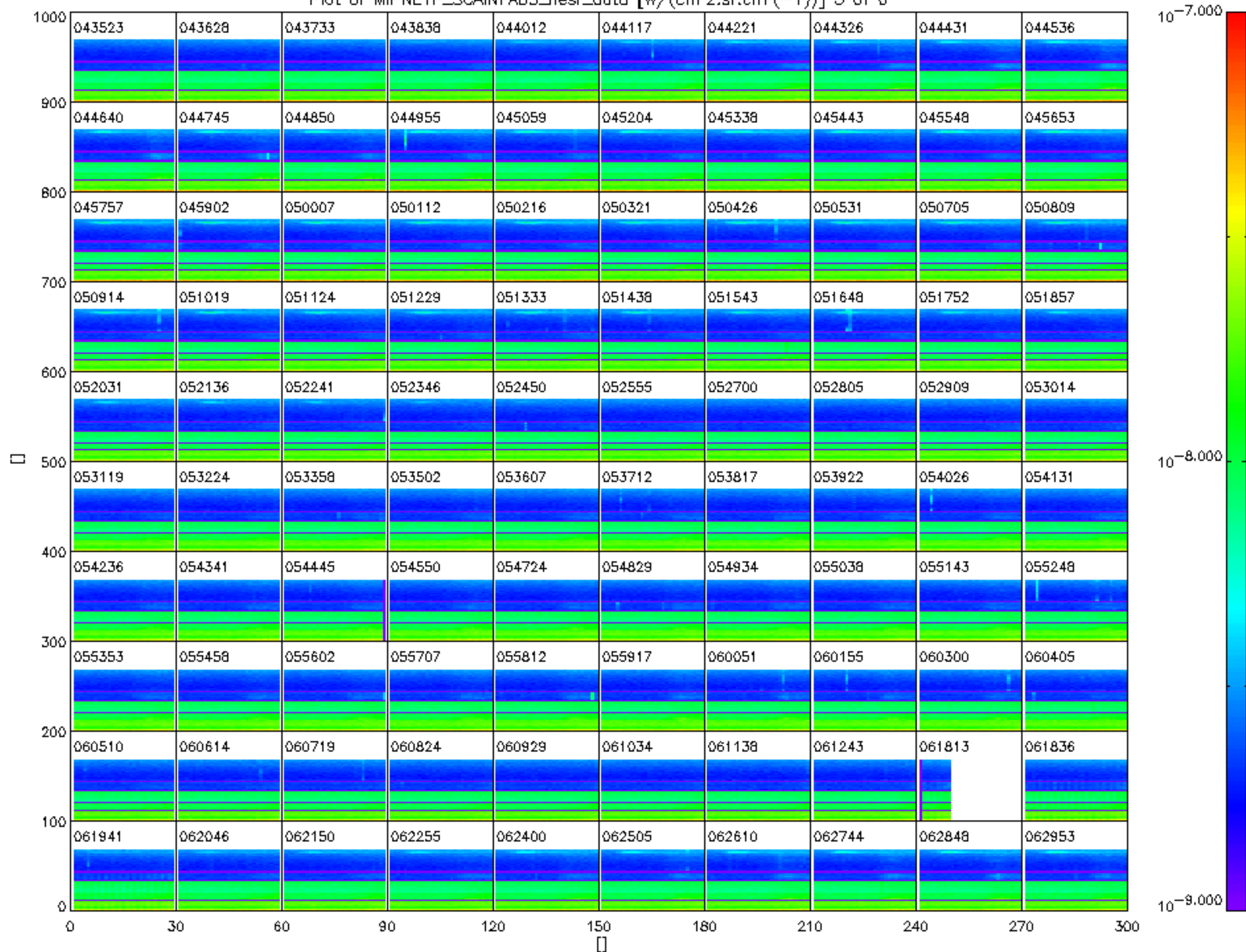


Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 2 of 6



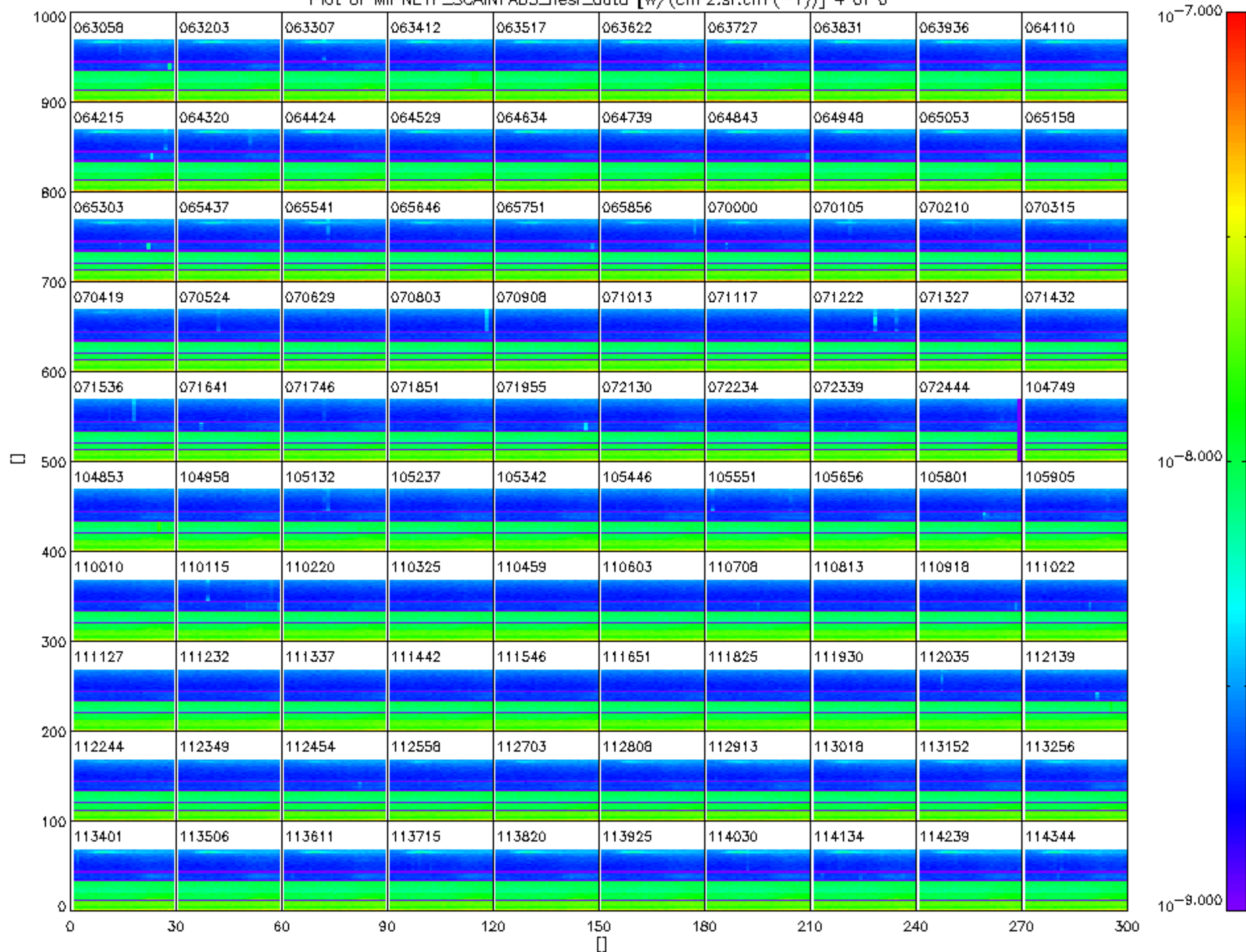


Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 3 of 6

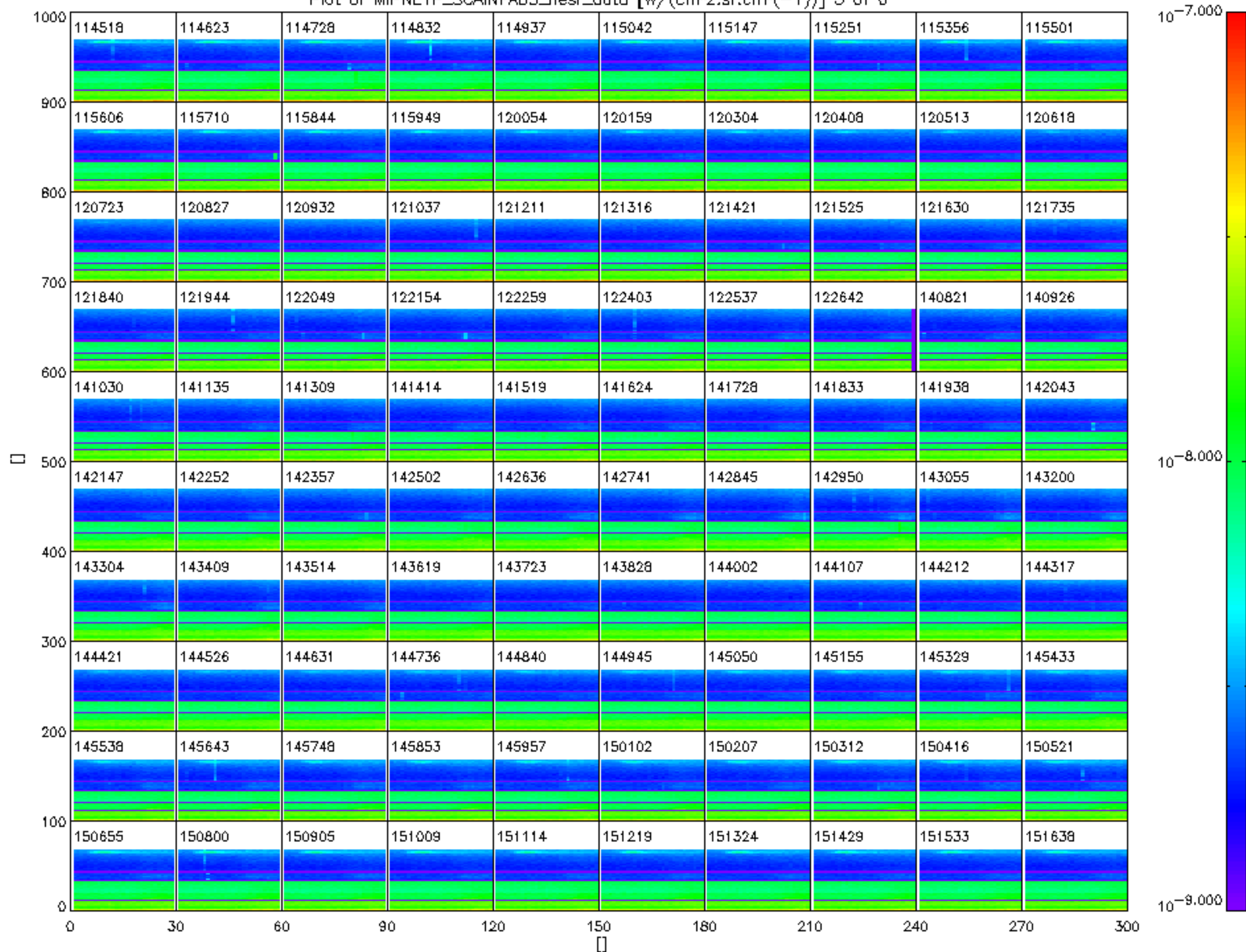




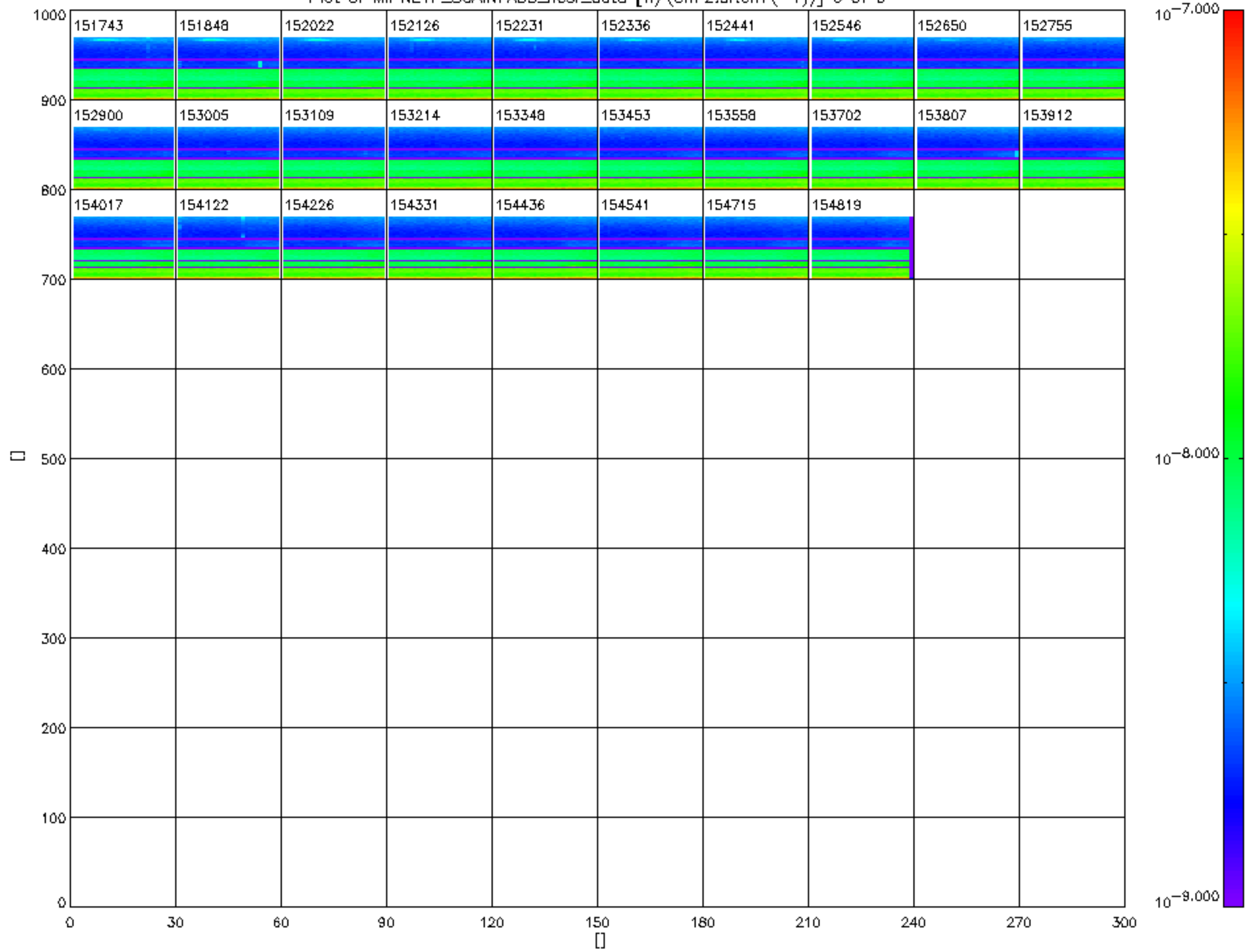
Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 4 of 6



Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 5 of 6

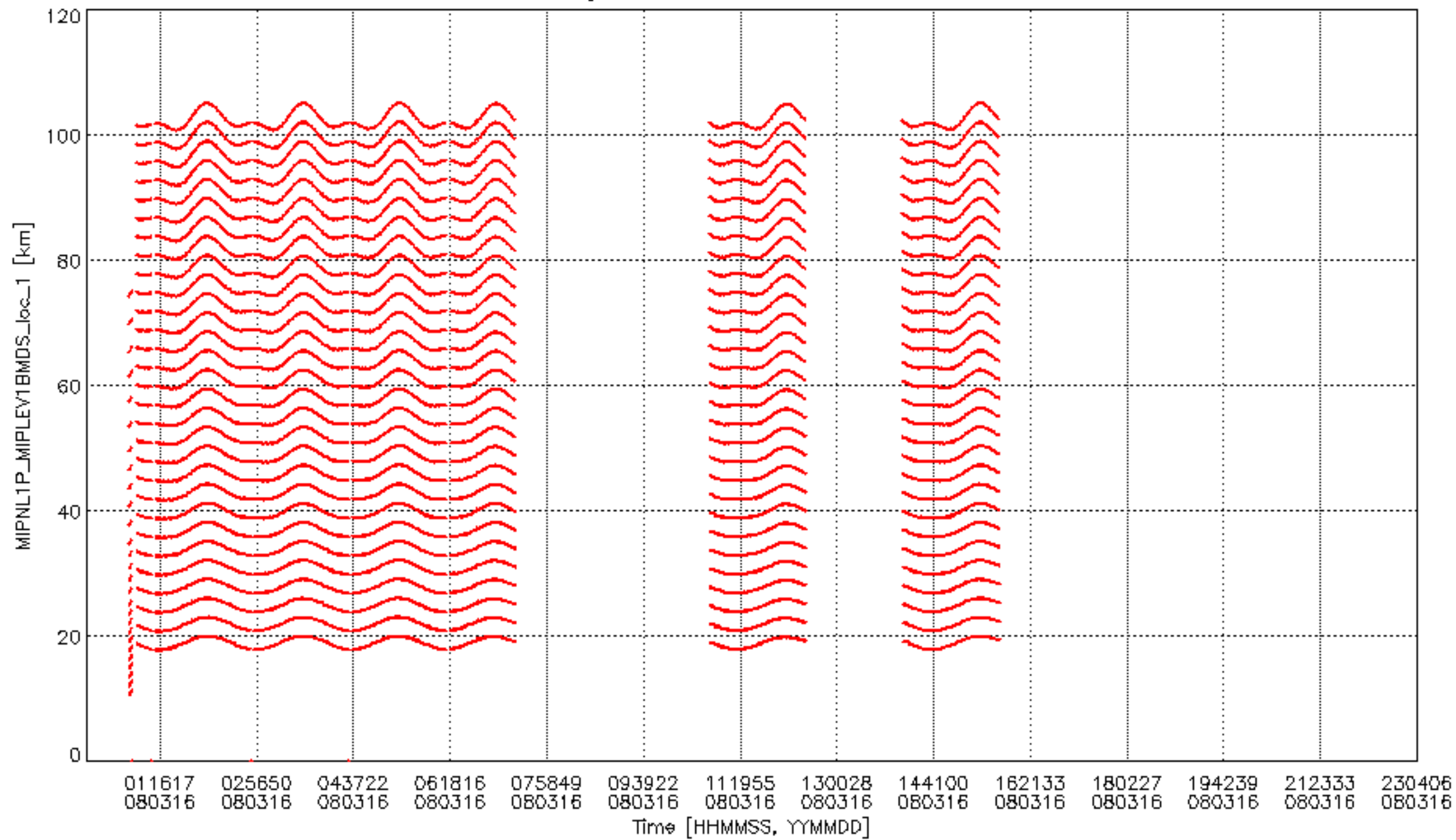


Plot of MIPNL1P\_SCAINFADS\_nesr\_data [W/(cm<sup>2</sup>.sr.cm<sup>-1</sup>)] 6 of 6

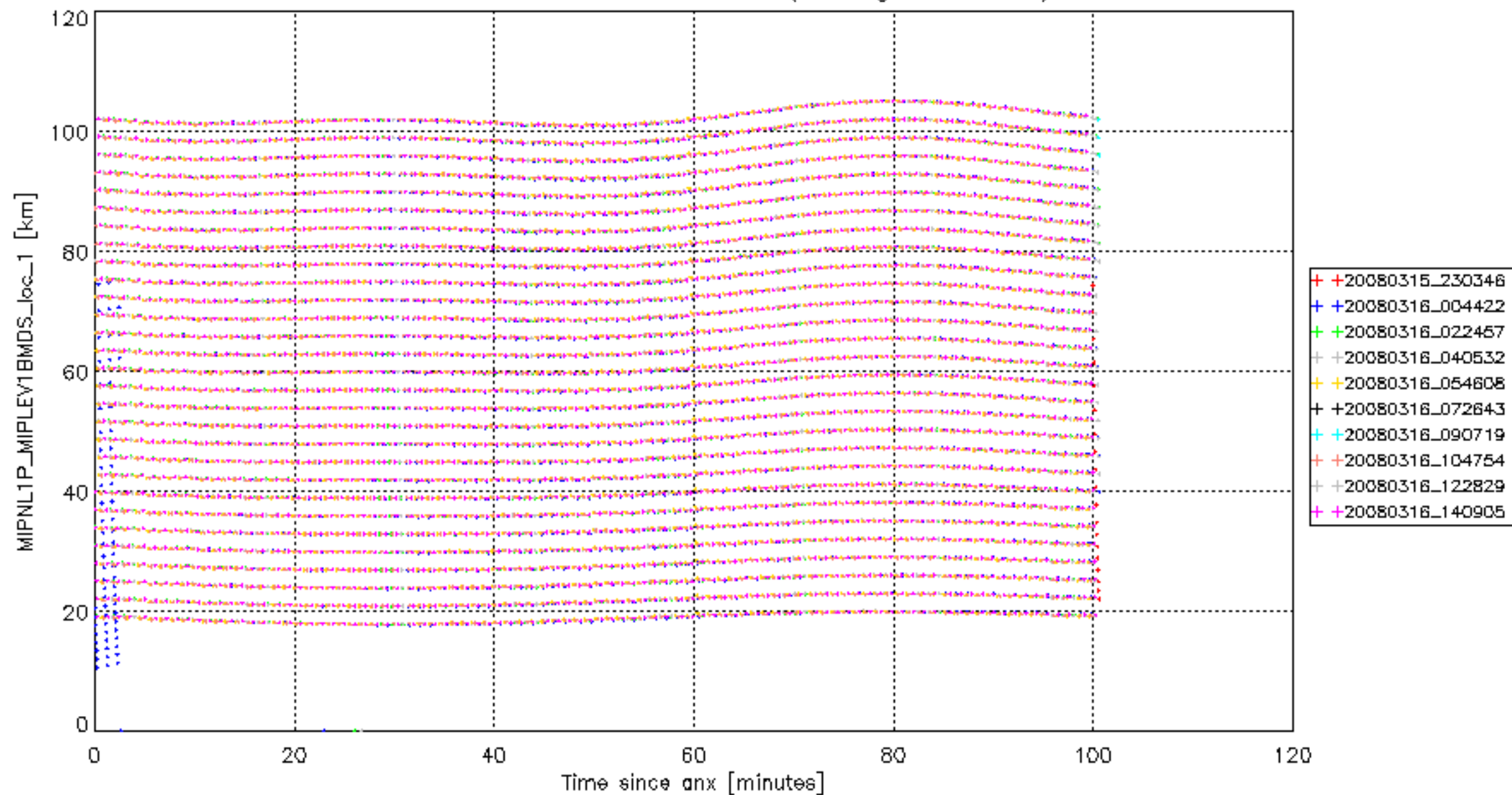


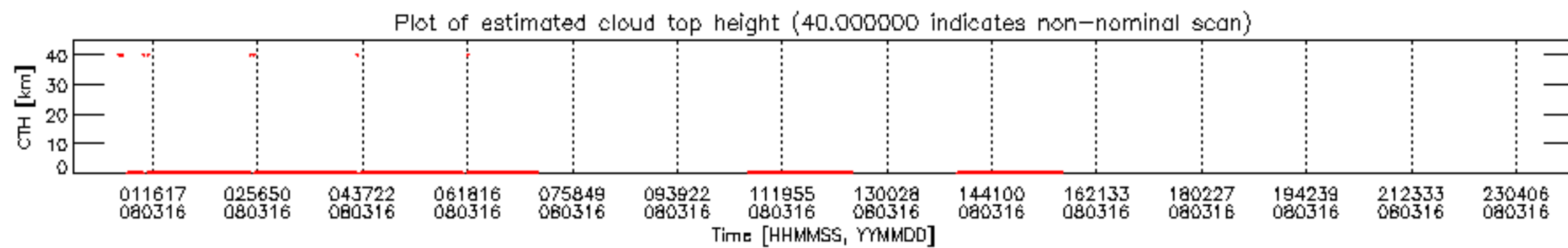


Plot of MIPNL1P\_MIPLEV1BMDS\_loc\_1 against time.  
The vertical grid lines indicate estimated anx events.



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







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

