

## 2. SCIAMACHY Daily Report for Level 2 products

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## 2.1 General Info

This report contains a daily analysis on parameters extracted from SCIAMACHY Level 2 data (the SCI\_OL\_\_2P product).

### 2.1.1 Report summary

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

Item	Value
Report version	1.12 (24-06-2010)
Time of report generation	24JAN2011 05:12:40
Data source version	SCIA-OL/5.01-N
Processing scope for products	18JAN2011 00:00:00 to 19JAN2011 00:00:00
Start time of first product within scope	17JAN2011 23:56:26
Stop time of last product within scope	19JAN2011 00:19:33
Total number of level 2 products	14
Number of level 2 products with errors	0

### 2.1.2 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.

Products are checked for a minimum duration of 3500.0000 seconds and a maximum duration of 6000.0000 seconds. Products failing the duration test are highlighted in bold, and their stop time is highlighted in red.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PNDPA20110117_235626_000036013098_00317_46452_1311.N1</a>	17JAN2011 23:56:26	18JAN2011 00:56:27	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110118_013640_000081363098_00318_46453_1313.N1</a>	<b>18JAN2011 01:36:40</b>	<b>18JAN2011 03:52:16</b>	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110118_022949_000049473098_00319_46454_1312.N1</a>	18JAN2011 02:29:49	18JAN2011 03:52:16	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110118_035220_000061873098_00320_46455_1315.N1</a>	<b>18JAN2011 03:52:20</b>	<b>18JAN2011 05:35:27</b>	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110118_053639_000059413098_00321_46456_1316.N1</a>	18JAN2011 05:36:39	18JAN2011 07:15:41	0	GOOD

5	SCI_OL__2PNDPA20110118_071544_000039233098_00322_46457_1317.N1	18JAN2011 07:15:44	18JAN2011 08:21:08	0	GOOD
6	SCI_OL__2PNDPA20110118_082220_000059413098_00323_46458_1318.N1	18JAN2011 08:22:20	18JAN2011 10:01:21	0	GOOD
7	SCI_OL__2PNDPA20110118_100234_000059413098_00324_46459_1319.N1	18JAN2011 10:02:34	18JAN2011 11:41:35	0	GOOD
8	SCI_OL__2PNDPA20110118_114247_000059413098_00325_46460_1320.N1	18JAN2011 11:42:47	18JAN2011 13:21:49	0	GOOD
9	SCI_OL__2PNDPA20110118_132058_000034683098_00326_46461_1321.N1	18JAN2011 13:20:58	18JAN2011 14:18:47	0	GOOD
10	SCI_OL__2PNDPA20110118_145829_000036253098_00327_46462_1330.N1	18JAN2011 14:58:29	18JAN2011 15:58:55	0	GOOD
11	SCI_OL__2PNDPA20110118_163843_000036203098_00328_46463_1322.N1	18JAN2011 16:38:43	18JAN2011 17:39:03	0	GOOD
12	SCI_OL__2PNDPA20110118_182031_000034913098_00329_46464_1323.N1	18JAN2011 18:20:31	18JAN2011 19:18:42	0	GOOD
13	SCI_OL__2PNDPA20110118_232337_000033553098_00331_46466_1328.N1	18JAN2011 23:23:37	19JAN2011 00:19:33	0	GOOD

## 2.2 Product Quality Indicators

### 2.2.1 Cloud parameters

This section shows information about the cloud parameters estimation, in particular cloud fractions and cloud top height. IMPORTANT NOTE: The contents and layout of this section are still being validated. Please use with caution.

#### General statistics:

Total number of cloud data DSRs: 133609

Total number of cloud data DSRs with good quality flag (=0): 133609 (100.0 %)

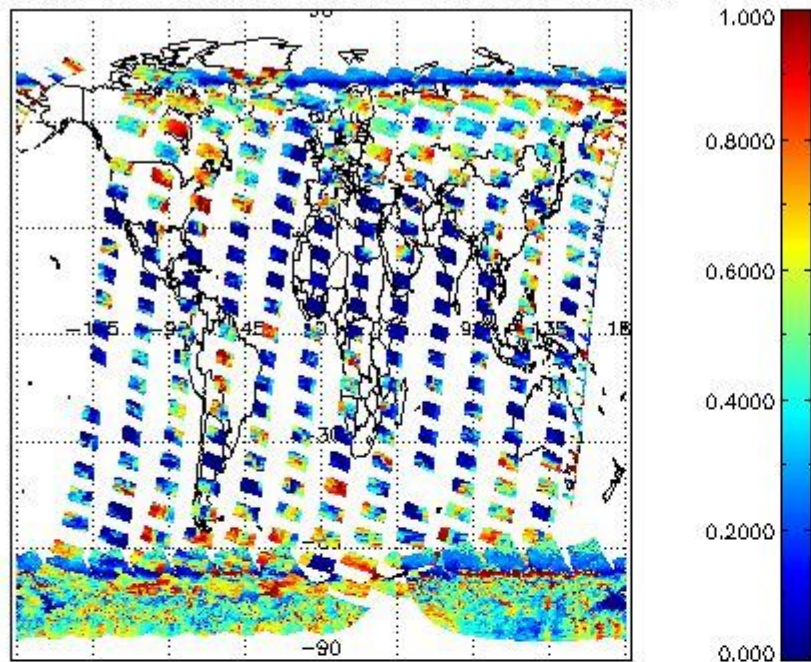
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	133609	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	133609	0.17411	0.12500	0.12500	0.25000	0.061048	s
CL_FRAC	133609	0.40064	0.37432	0.0000	1.0000	0.29054	-
CL_FRAC_ERR	133609	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	133609	5.5714	4.0000	4.0000	8.0000	1.9535	
PMD_READ_CL[0]	133609	0.35522	0.0000	0.0000	8.0000	1.2397	-
PMD_READ_CL[1]	133609	1.1707	0.0000	0.0000	8.0000	2.4848	-
CL_TOP_HEIGHT	100613	3.5394	2.3140	0.0000	17.000	3.5480	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	100613	53.577	44.902	0.0000	101.00	41.261	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	133609	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	133609	11001101	11000100	11000000	11100000	3601.2	flags
AERO_ABSO_IND	133609	0.49194	0.0000	0.0000	8.7126	0.83365	
AERO_IND_DIAG	133609	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	133609	01011010	00000000	00000000	11000000	24529.	flags

#### Time and geolocation plots:

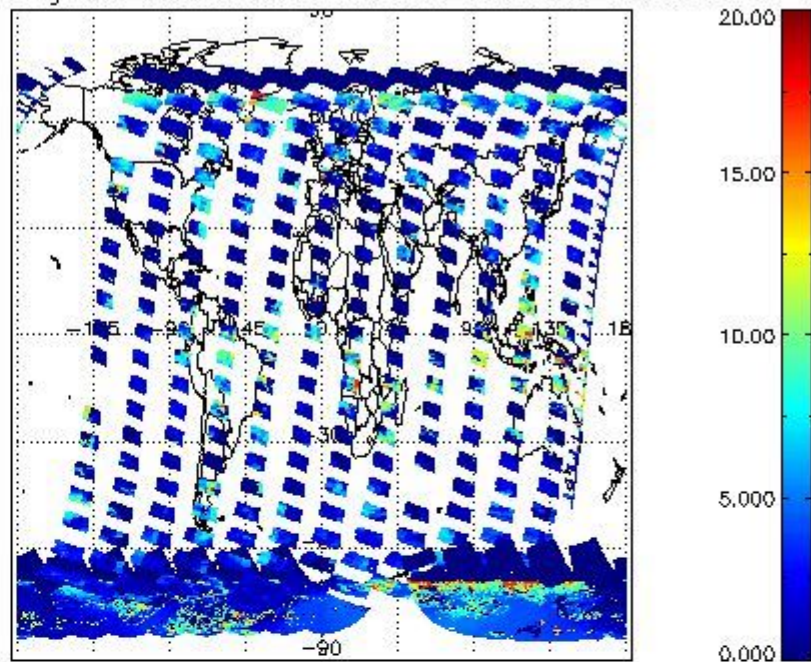
Plots are available for the following parameters:

Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags

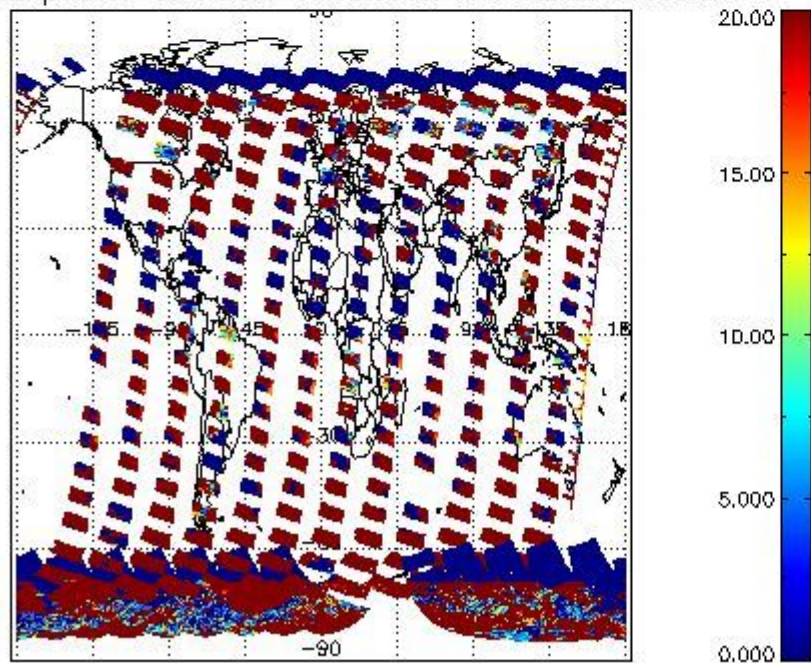
cL\_frac for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



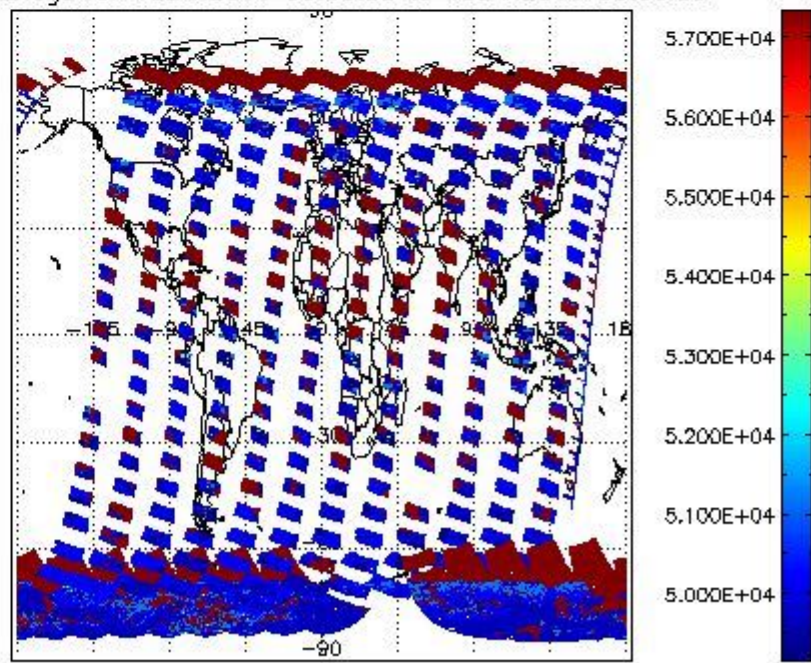
cL\_top\_height for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



cLopt\_depth for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



cloud\_flags for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



## 2.2.2 Nadir

This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

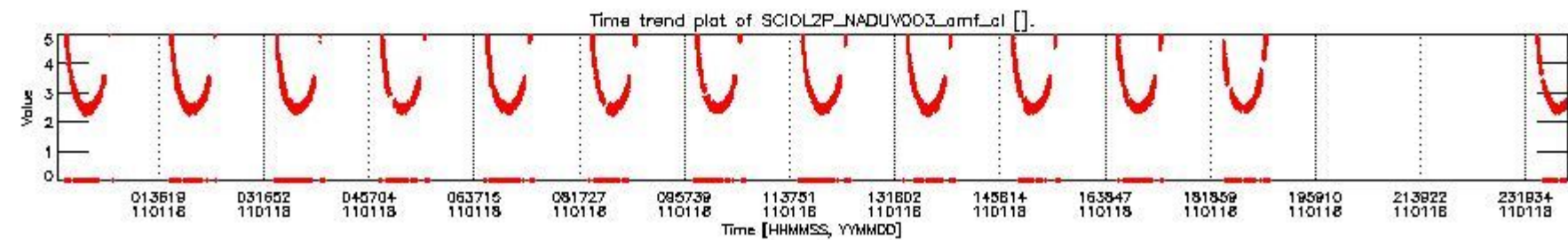
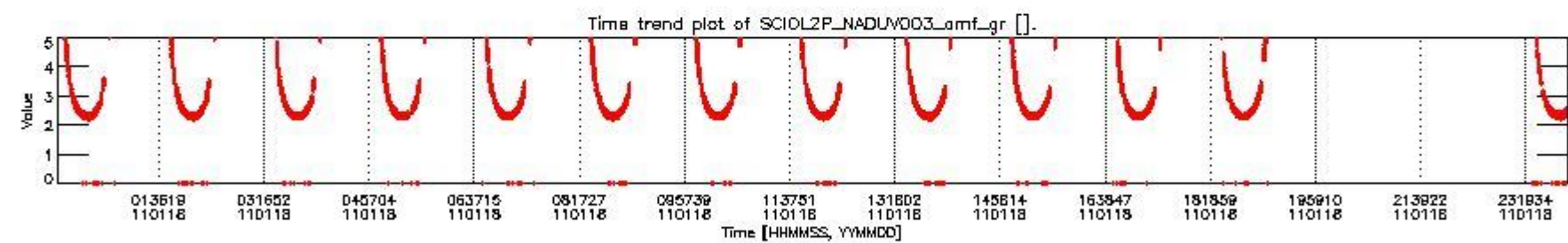
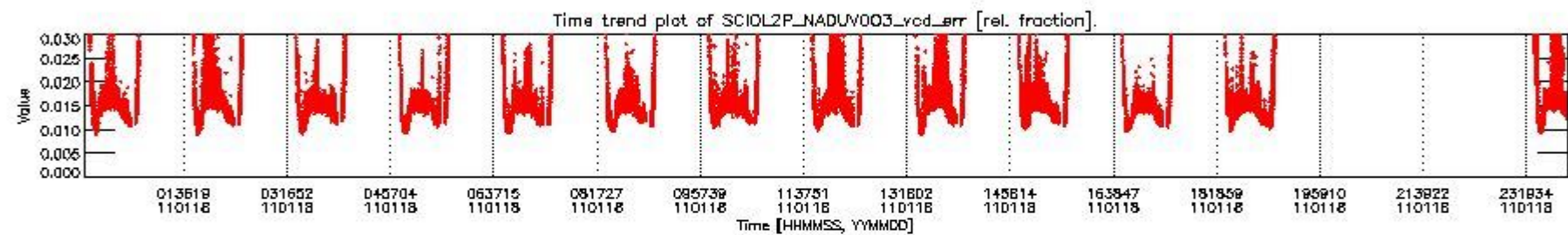
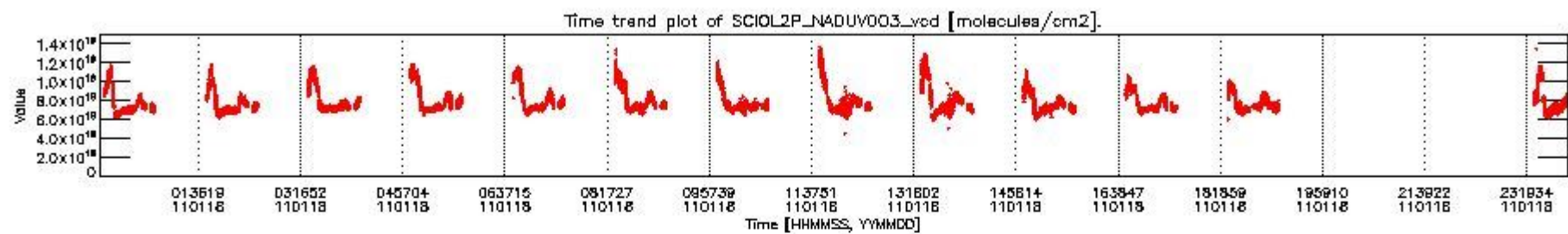
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

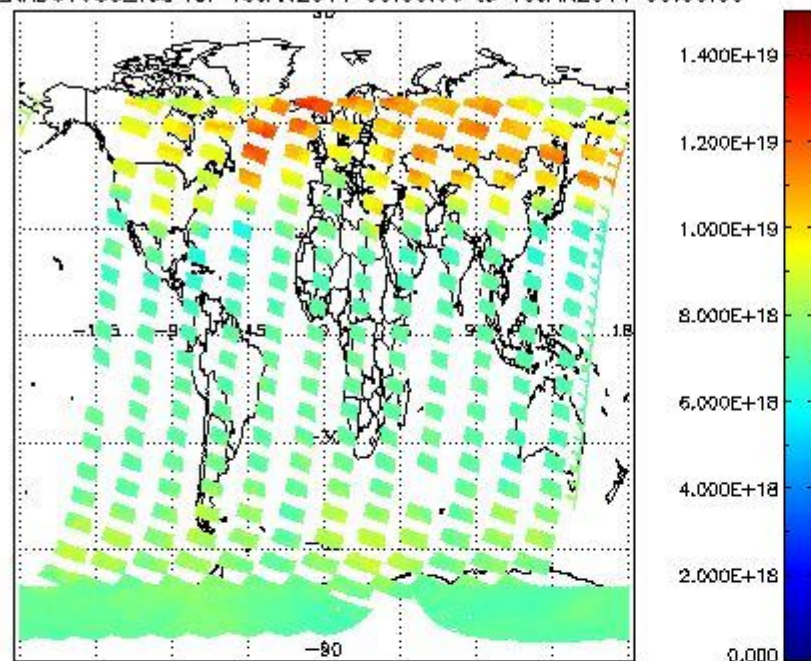
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr
15	SCIOL2P_NADUV5SO2_amf_cl
16	SCIOL2P_NADUV7SO2_vcd
17	SCIOL2P_NADUV7SO2_vcd_err
18	SCIOL2P_NADUV7SO2_amf_gr
19	SCIOL2P_NADUV7SO2_amf_cl
20	SCIOL2P_NADUV6OCL_slant_col_den
21	SCIOL2P_NADUV6OCL_err_slant_col
22	SCIOL2P_NADUV8H2O_vcd
23	SCIOL2P_NADUV8H2O_vcd_err
24	SCIOL2P_NADUV8H2O_amf_gr
25	SCIOL2P_NADIR3CO_vcd
26	SCIOL2P_NADIR3CO_vcd_err

Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in the MPH.

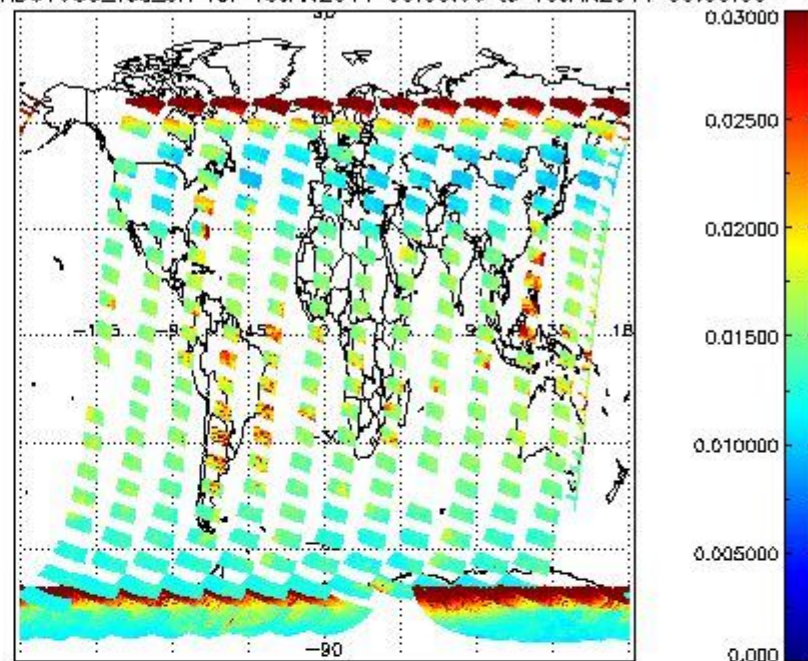
#### [2.2.2.1 O3 \(UV0\)](#)



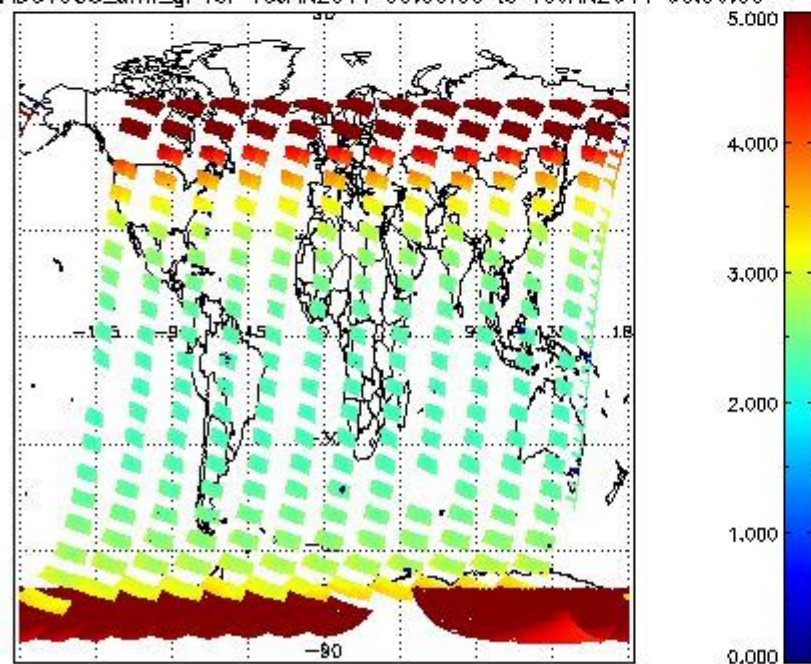
SCIOL2P\_NADUV003\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



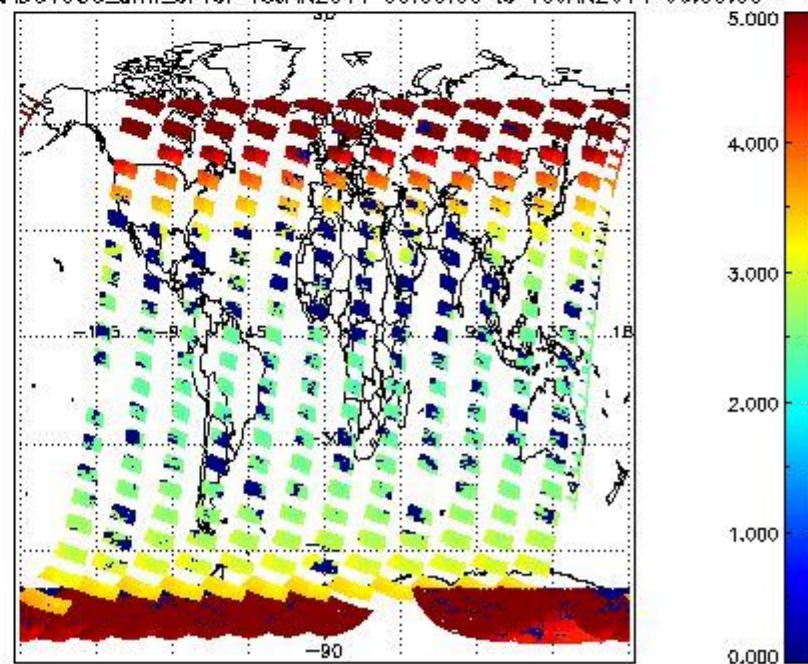
SCIOL2P\_NADUV003\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



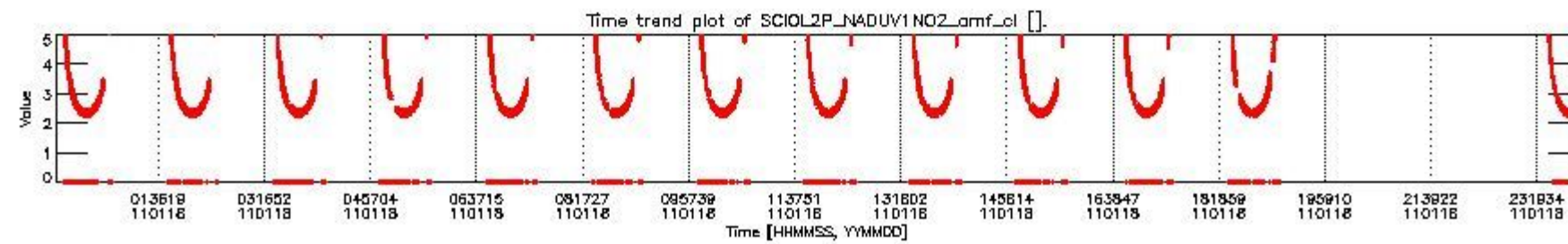
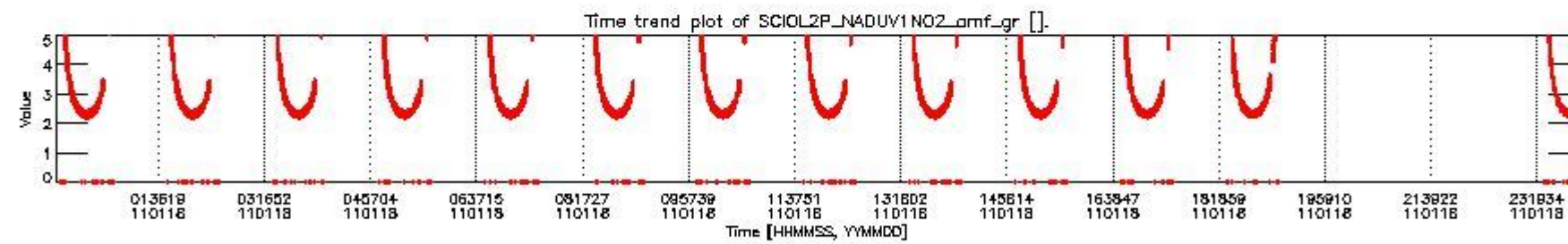
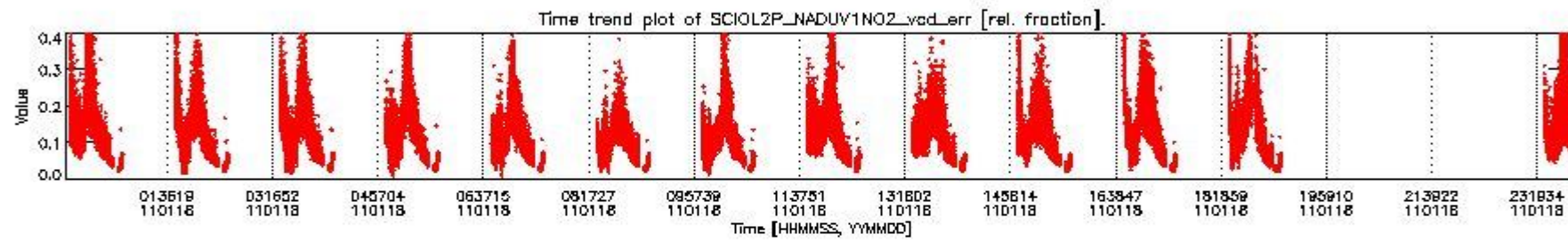
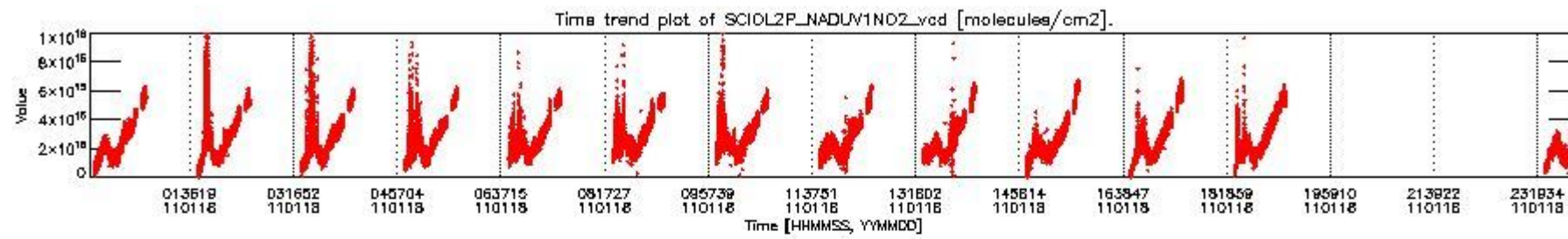
SCIOL2P\_NADUV003\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



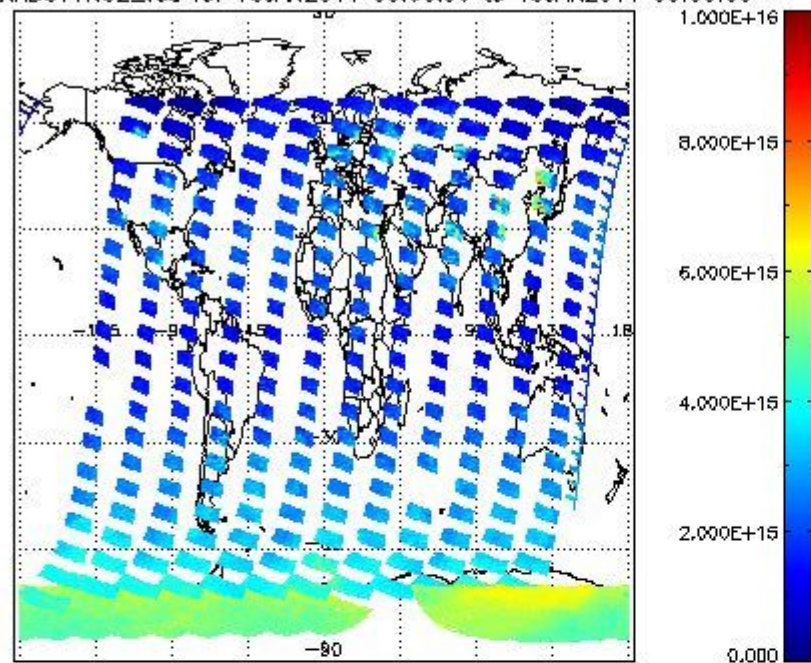
SCIOL2P\_NADUV003\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



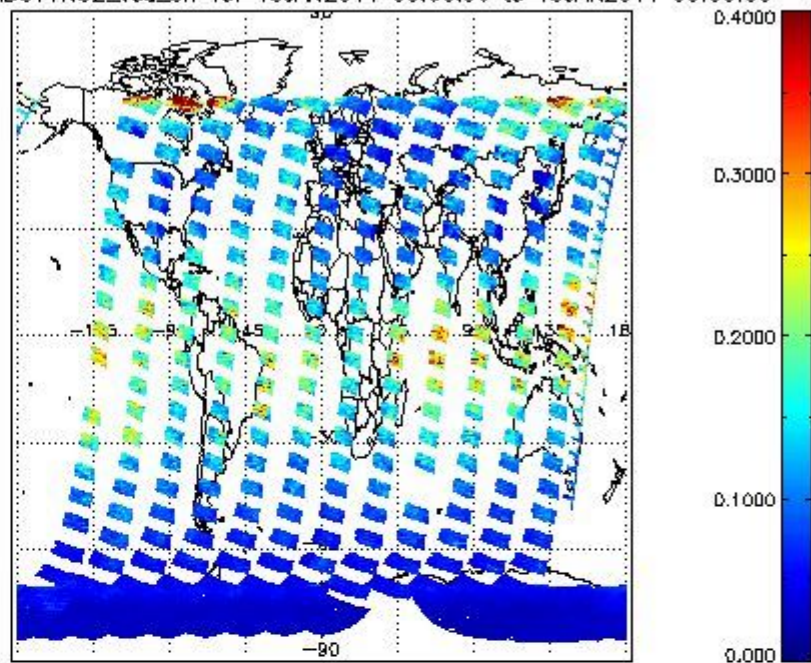
2.2.2.2 NO2 (UV1)



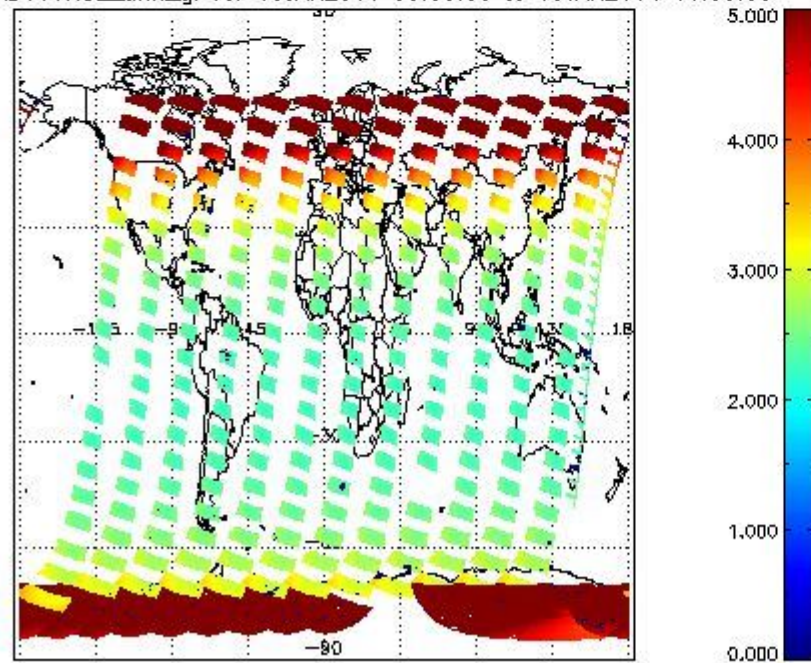
SCIOL2P\_NADUV1NO2\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



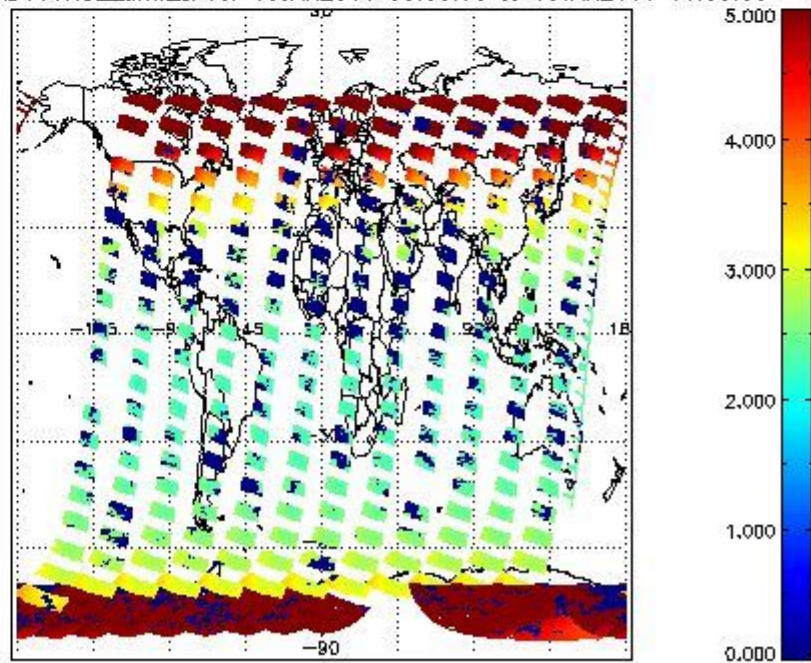
SCIOL2P\_NADUV1NO2\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

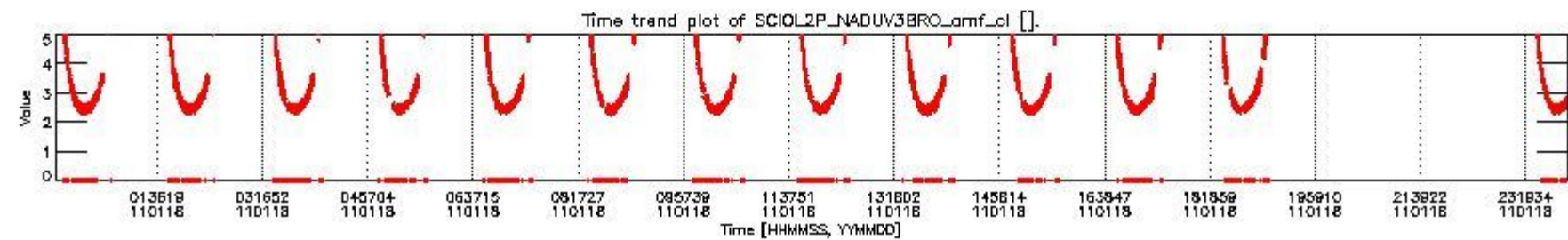
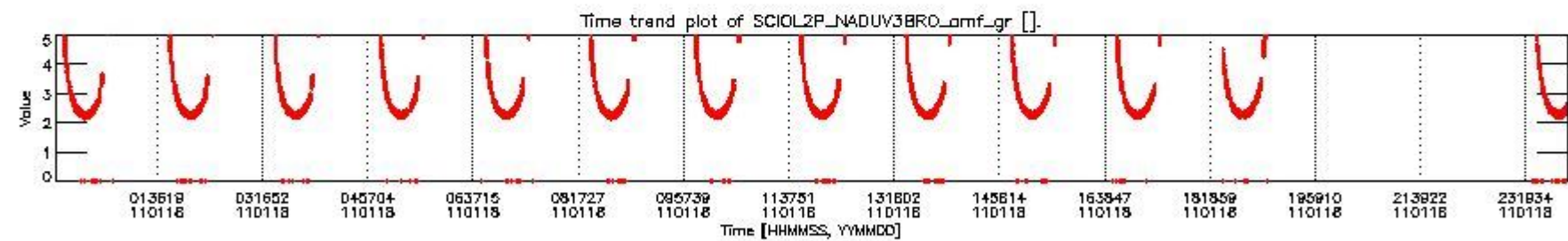
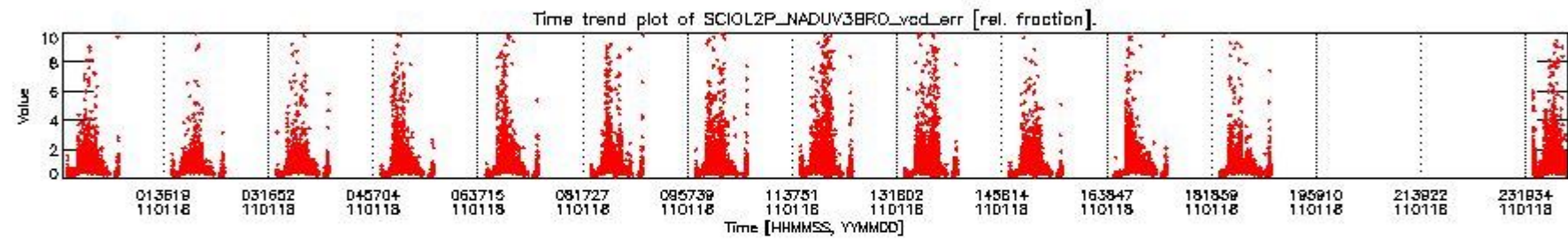
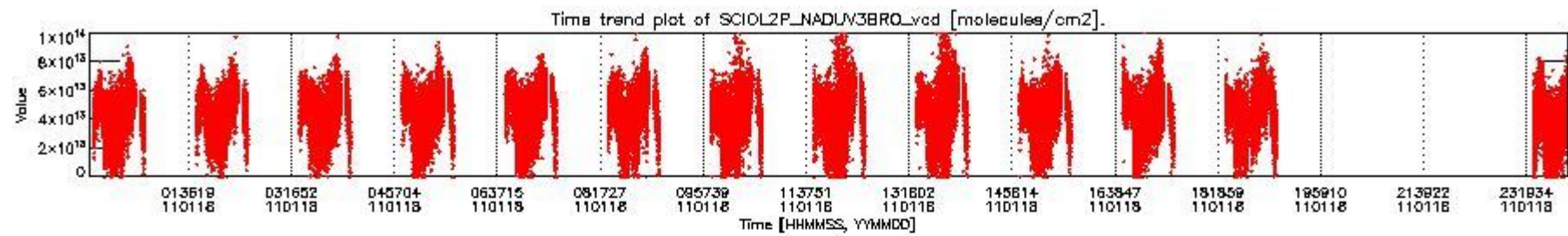


SCIOL2P\_NADUV1NO2\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

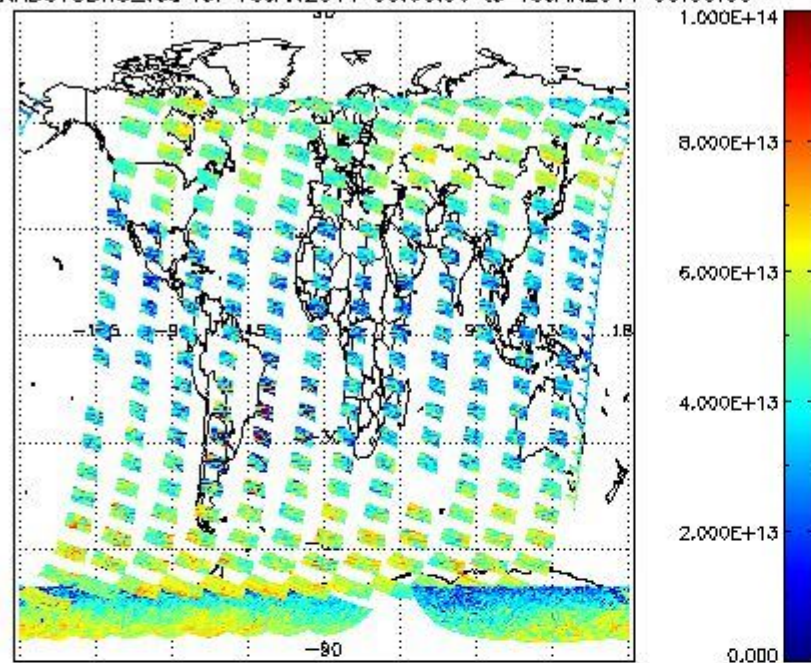


2.2.2.3 BrO (UV3)

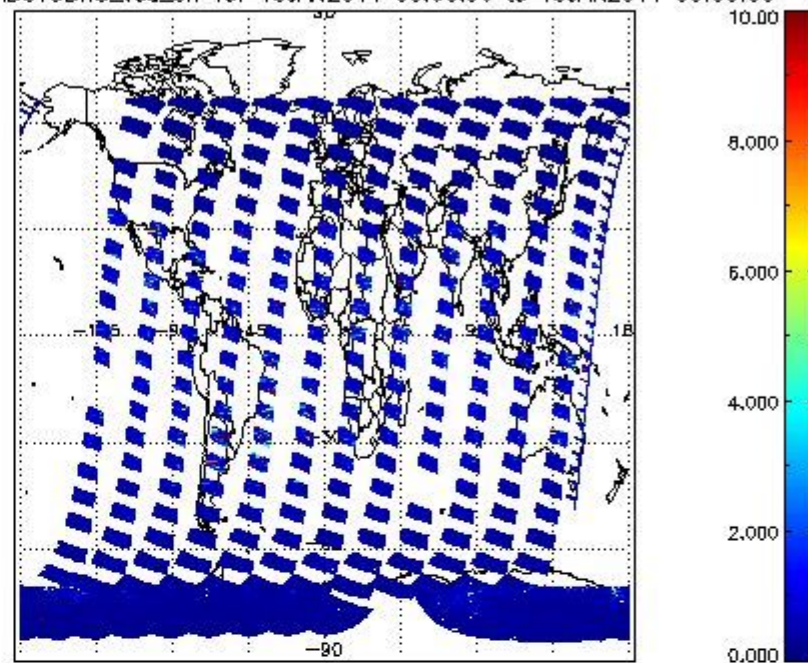




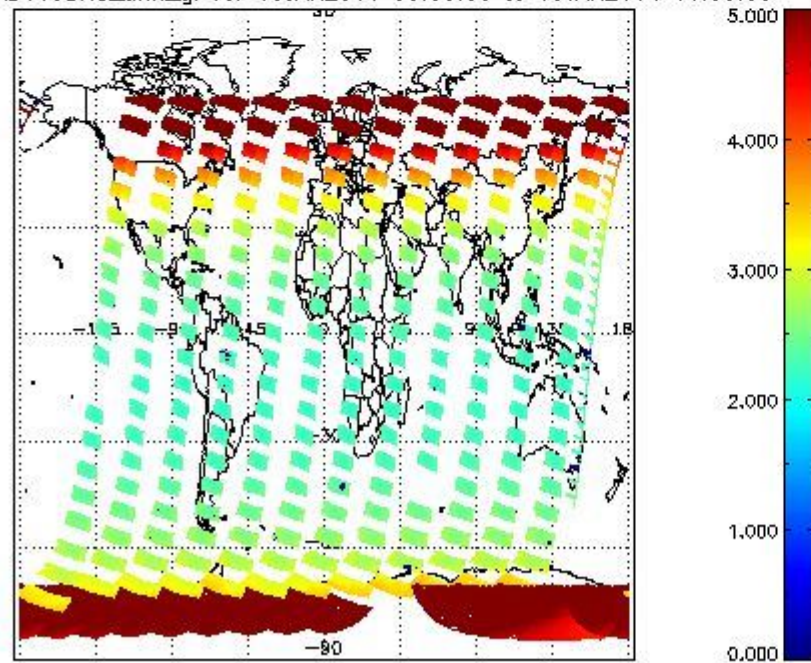
SCIOL2P\_NADUV3BRO\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



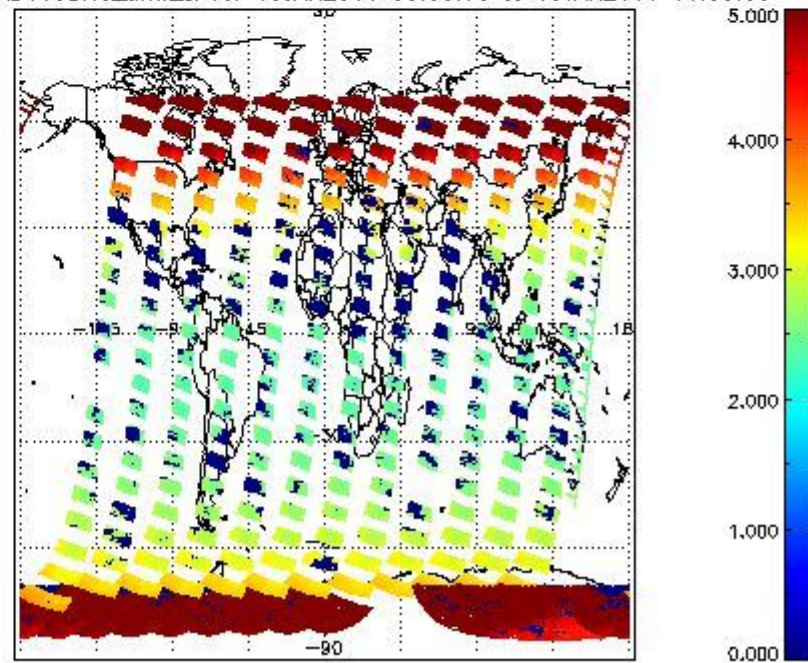
SCIOL2P\_NADUV3BRO\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



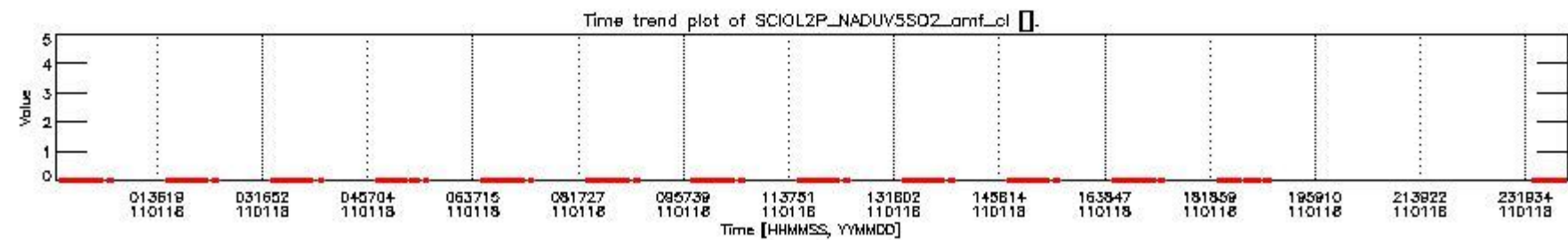
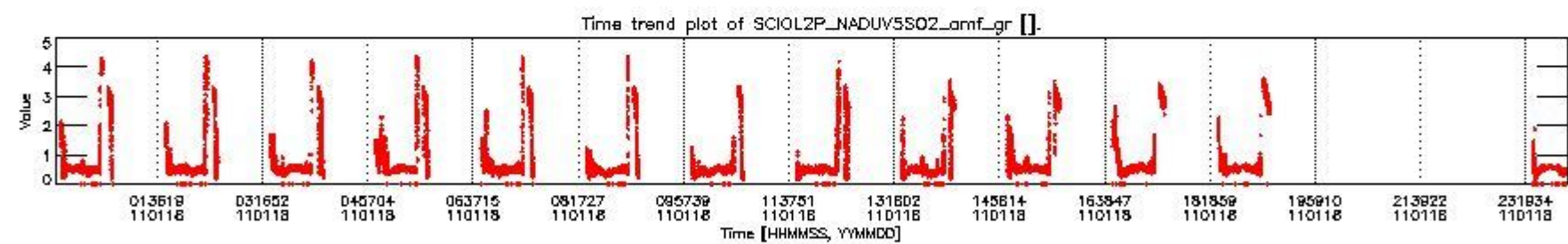
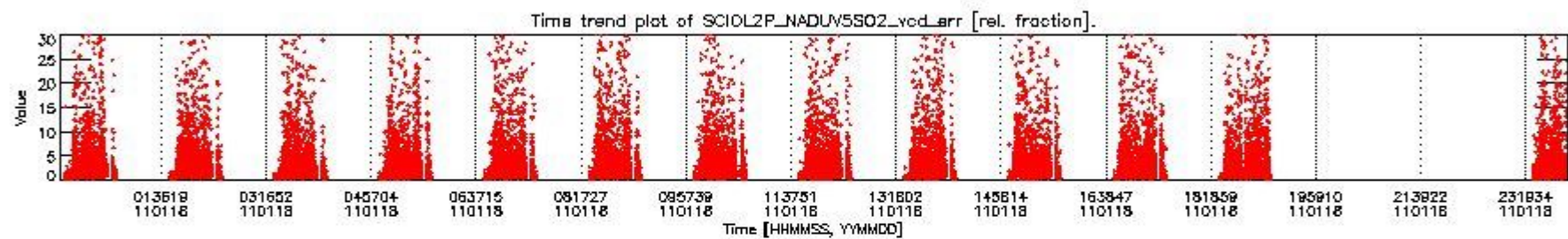
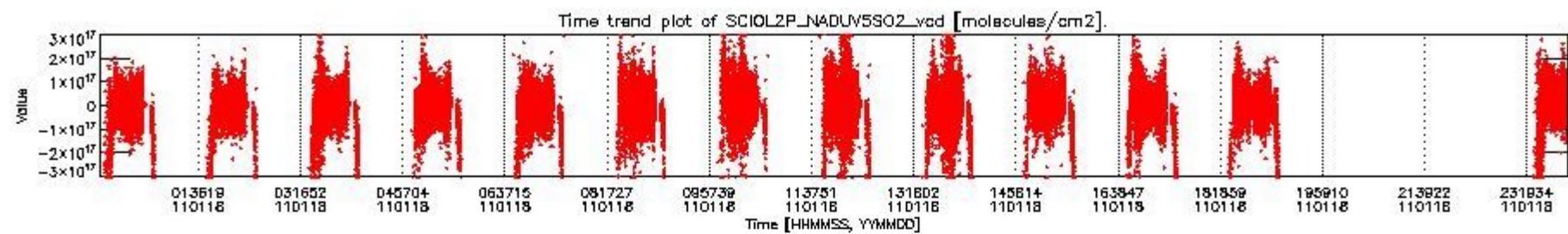
SCIOL2P\_NADUV3BRO\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



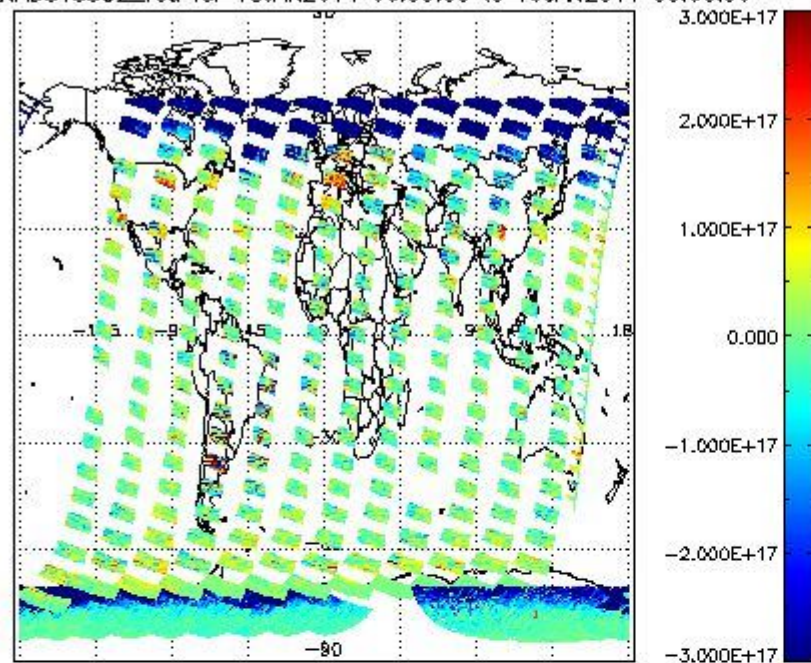
SCIOL2P\_NADUV3BRO\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



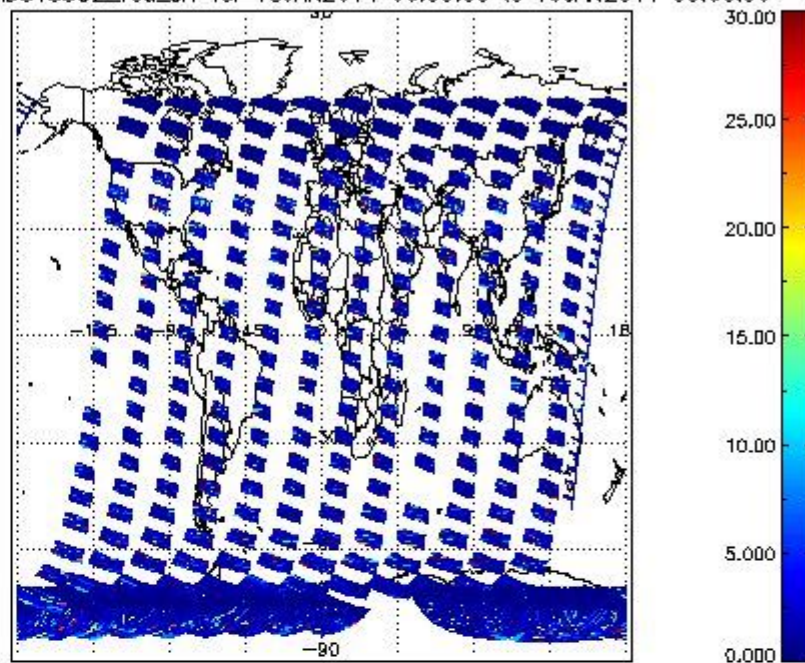
2.2.2.4 SO2 (UV5)



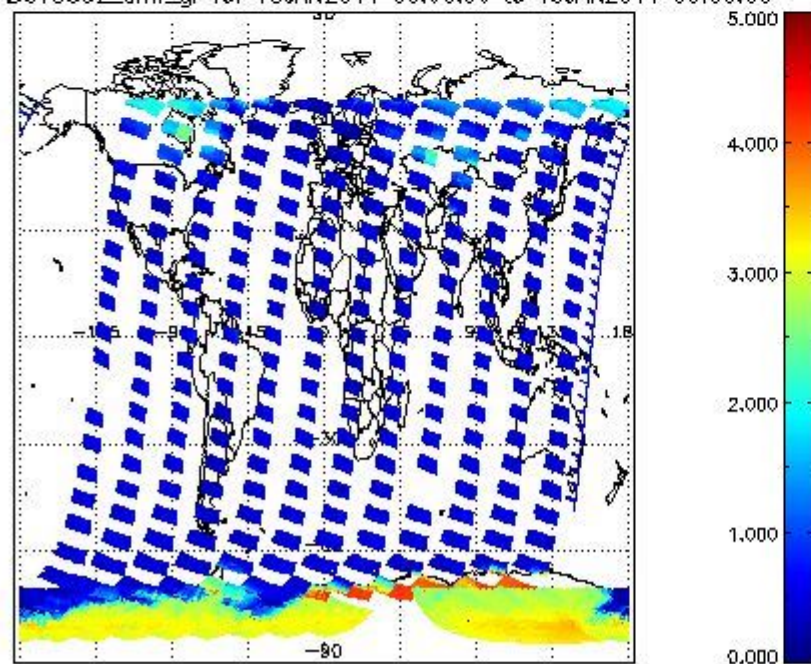
SCIOL2P\_NADUV5SO2\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



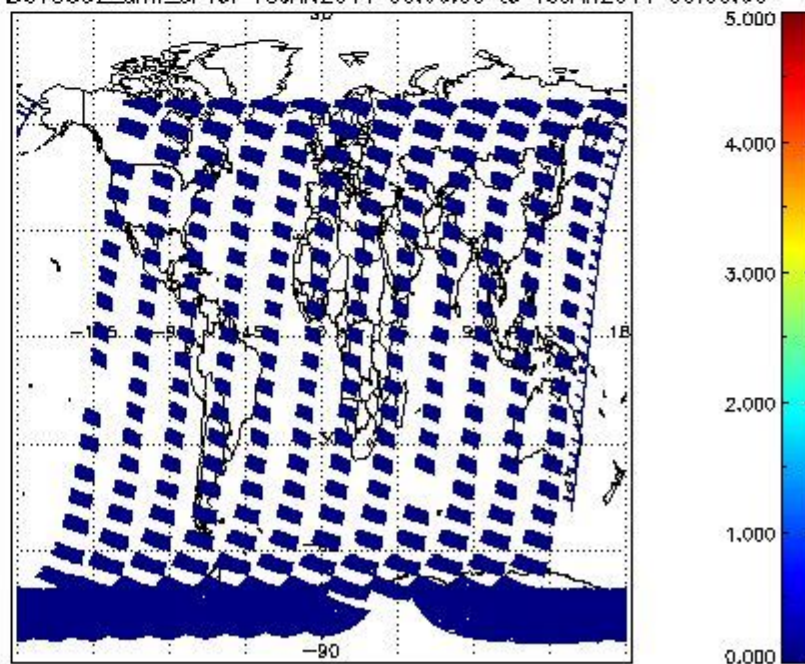
SCIOL2P\_NADUV5SO2\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



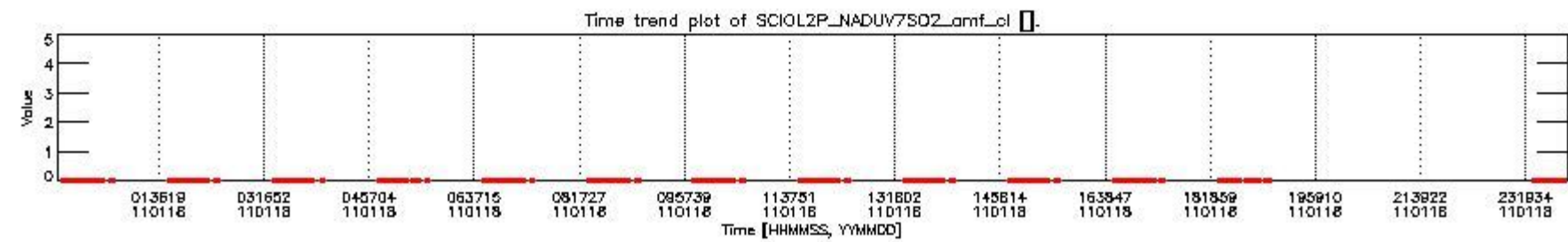
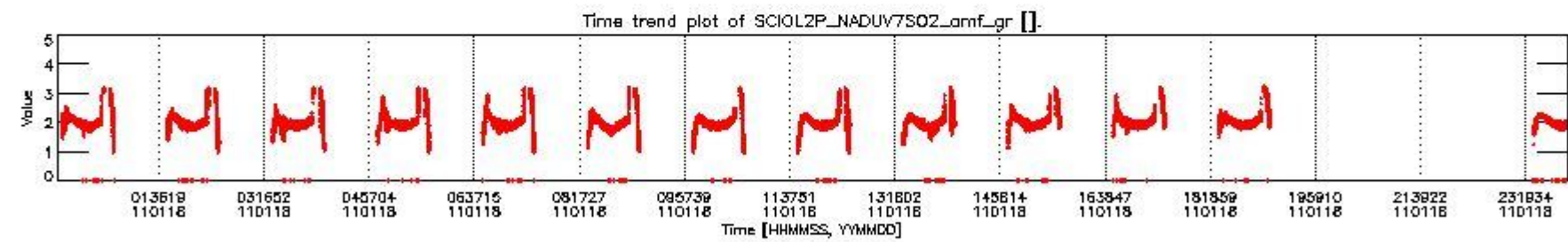
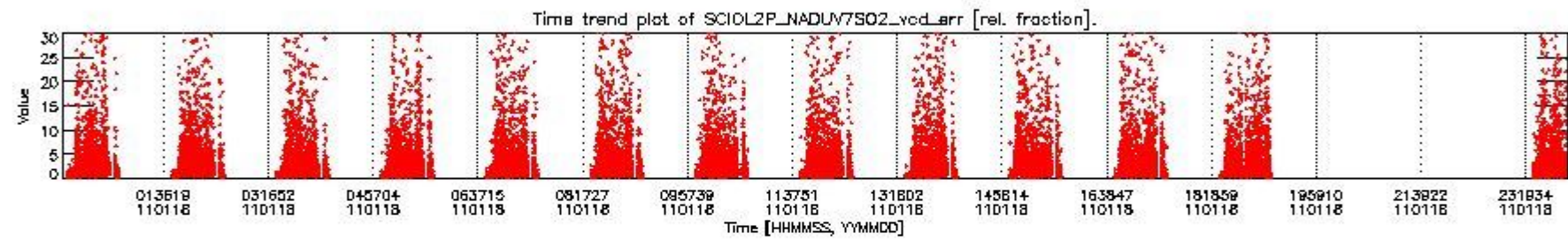
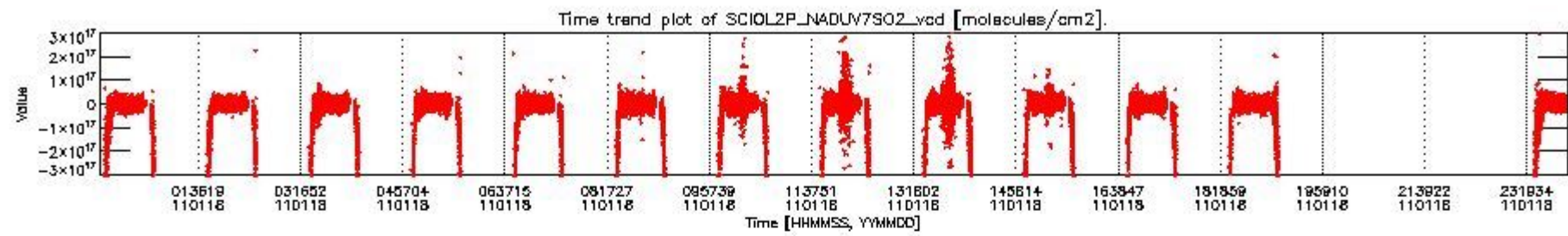
SCIOL2P\_NADUV5SO2\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

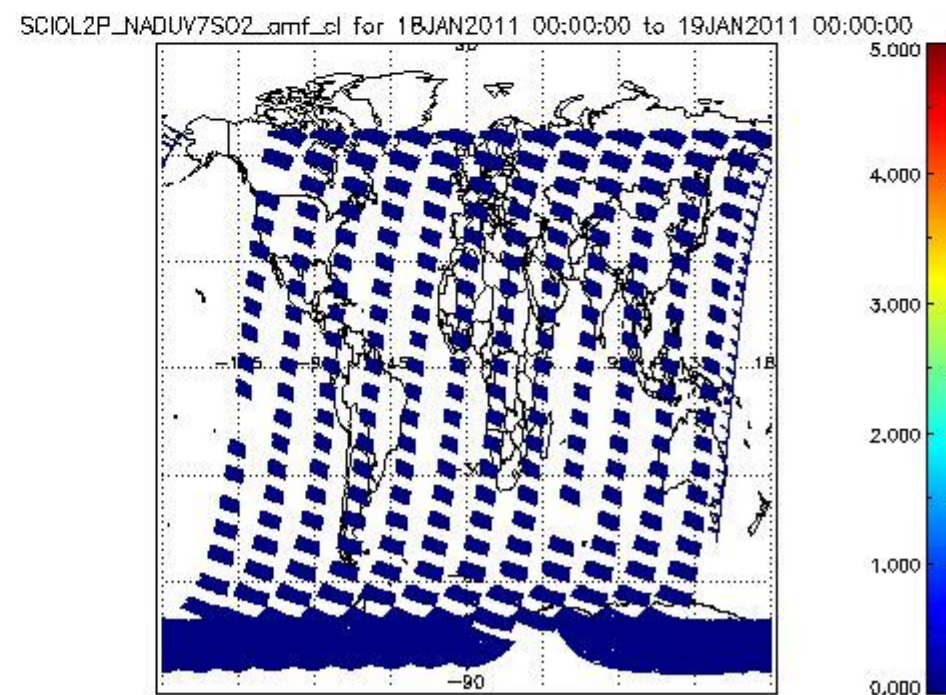
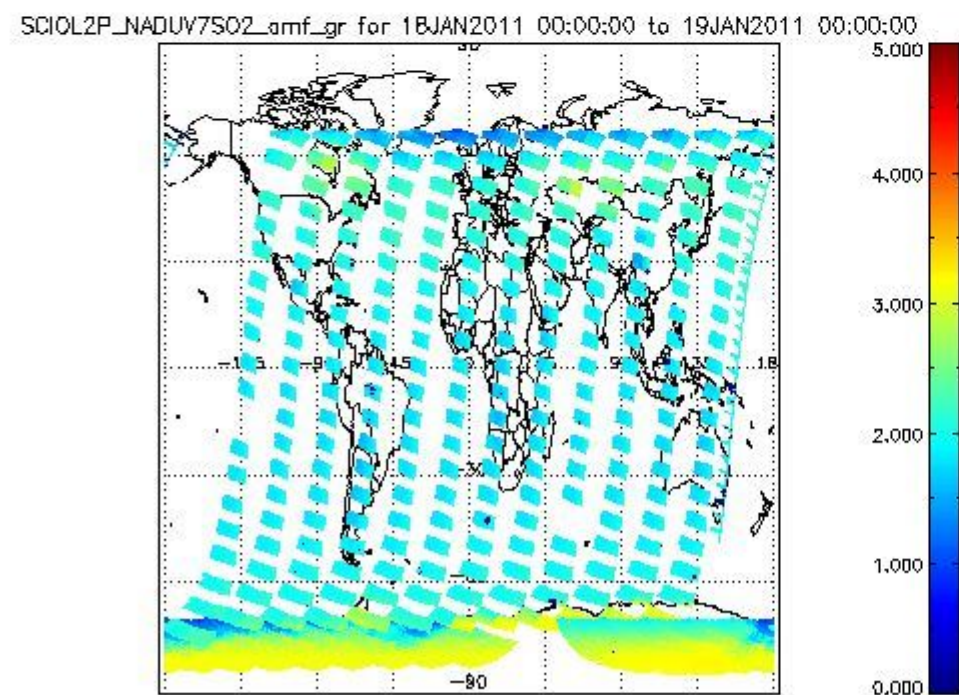
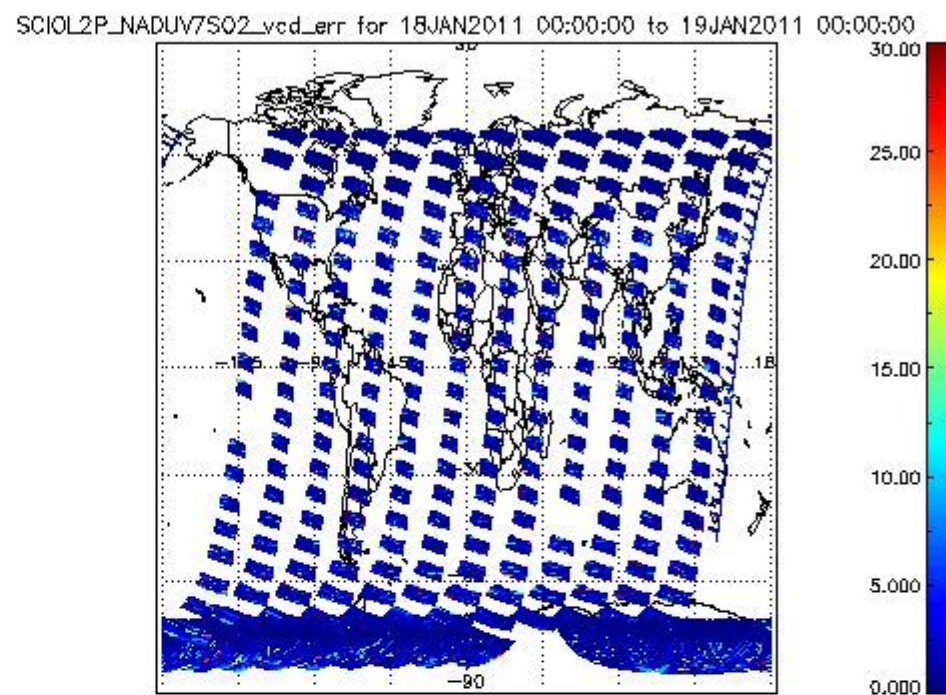
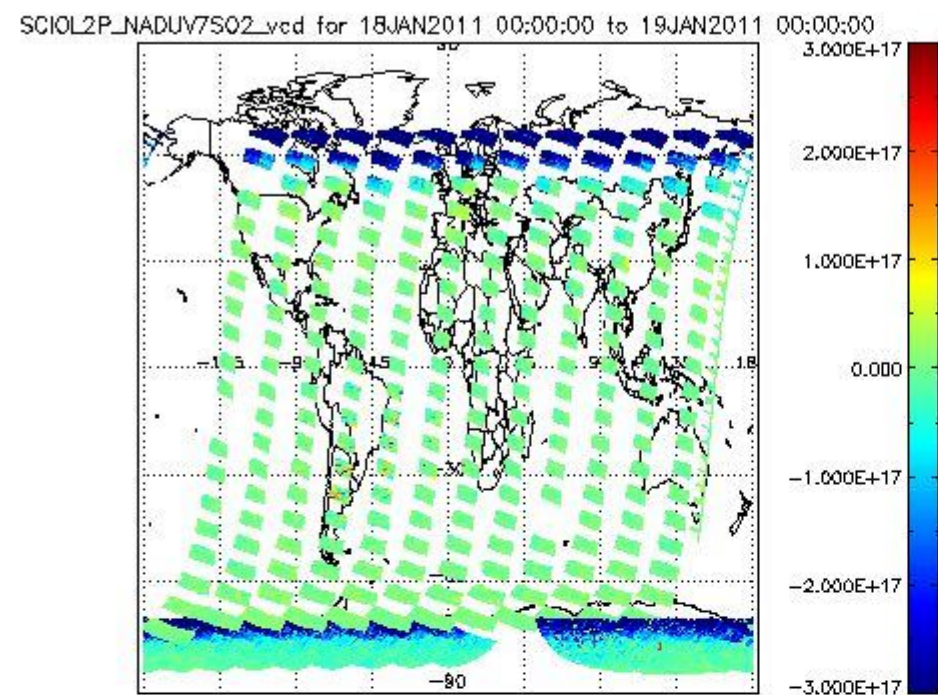


SCIOL2P\_NADUV5SO2\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

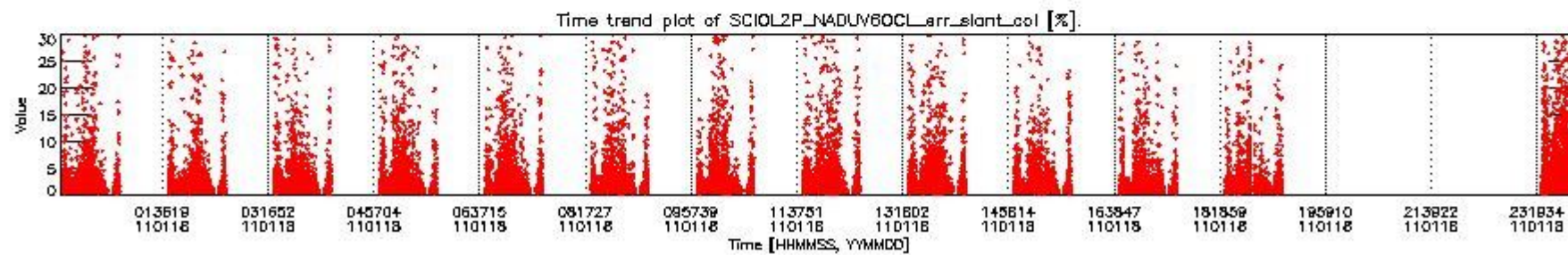
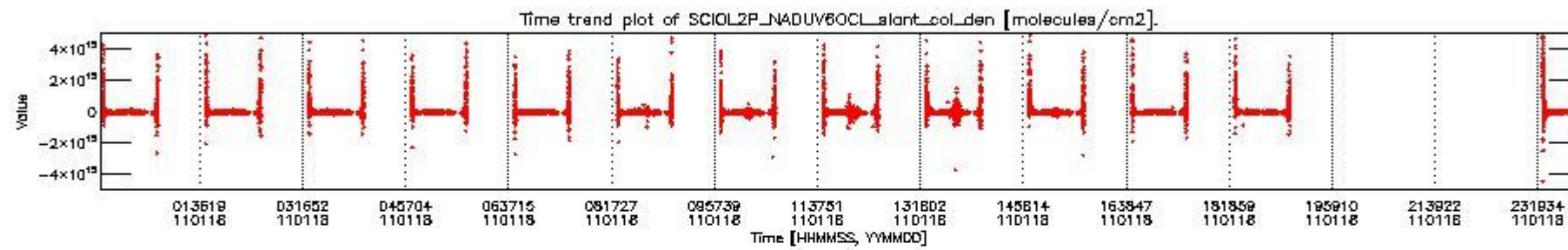


2.2.2.5 SO2 (UV7)

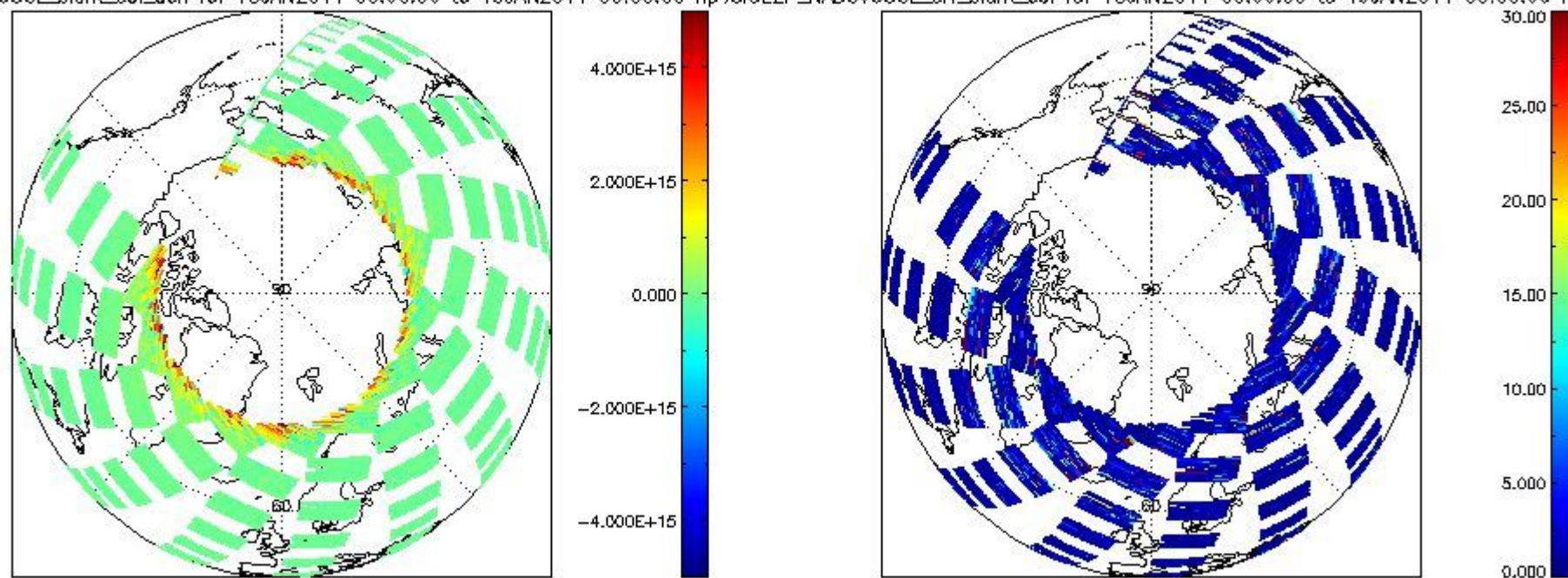




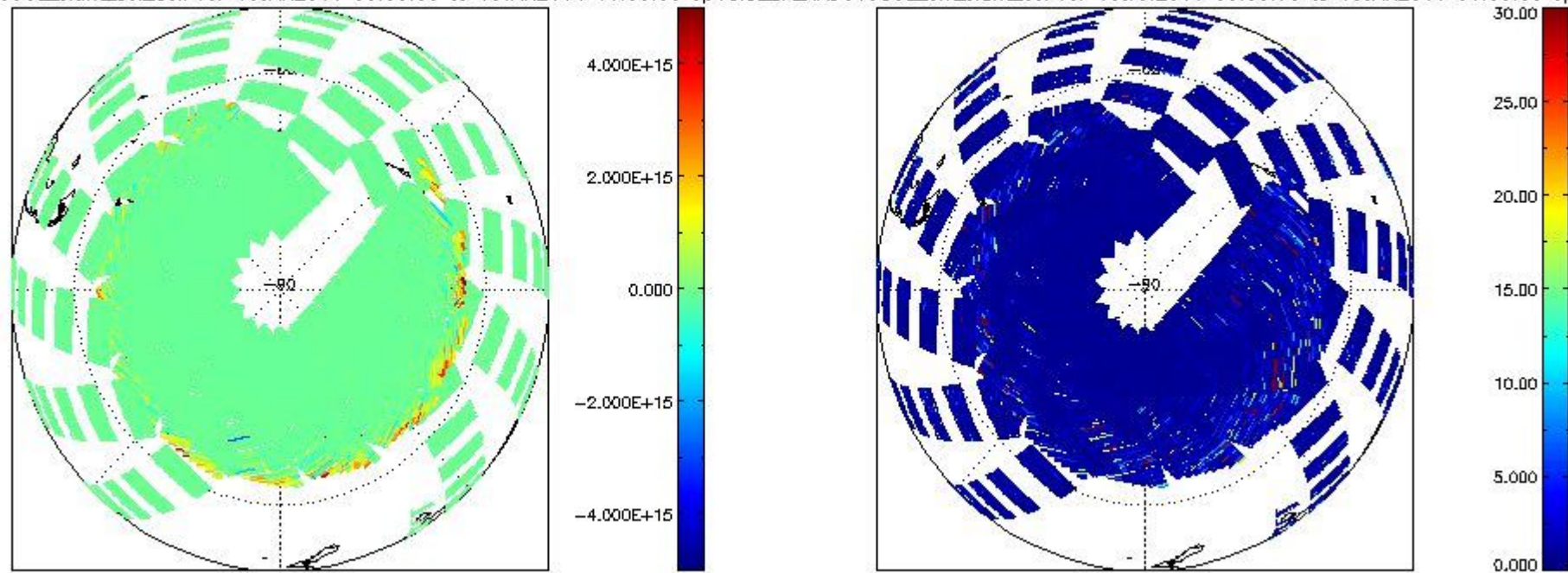
2.2.2.6 OCIO (UV6)



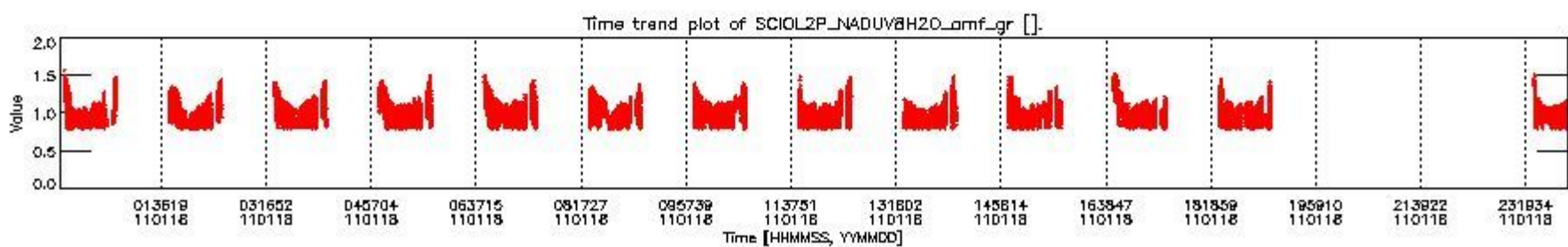
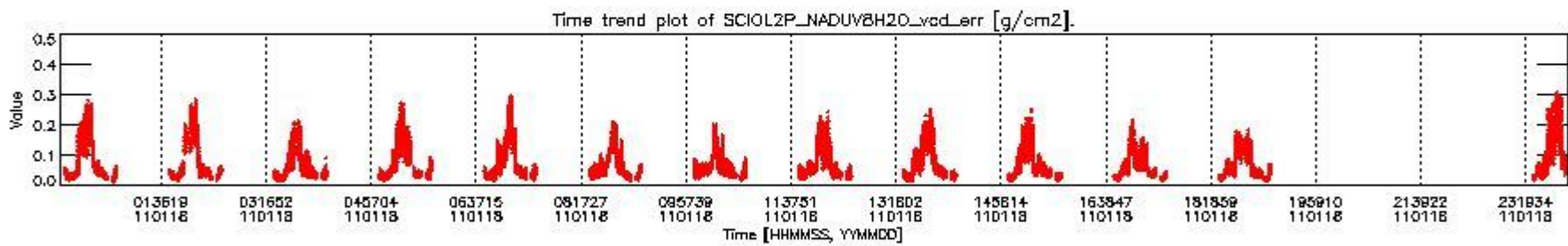
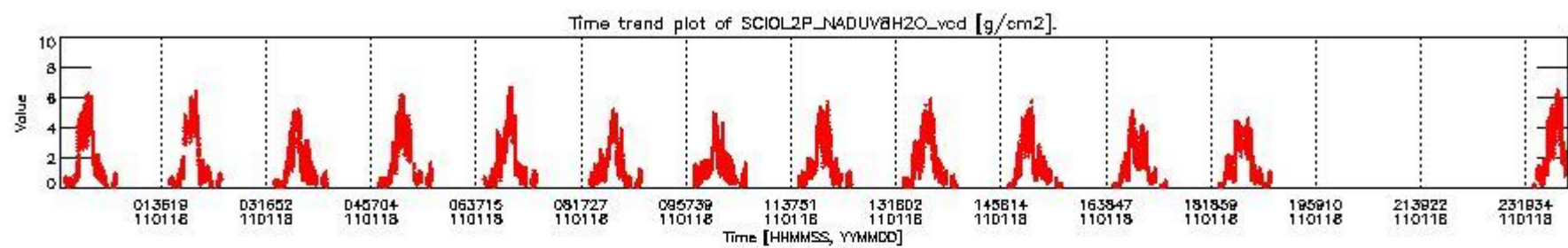
SCIDL2P\_NADUV60CL\_slant\_col\_den for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 np;SCIDL2P\_NADUV60CL\_err\_slant\_col for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 np



SCIOL2P\_NADUV6OCL\_slant\_col\_den for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 sp SCIOL2P\_NADUV6OCL\_slant\_col\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 sp

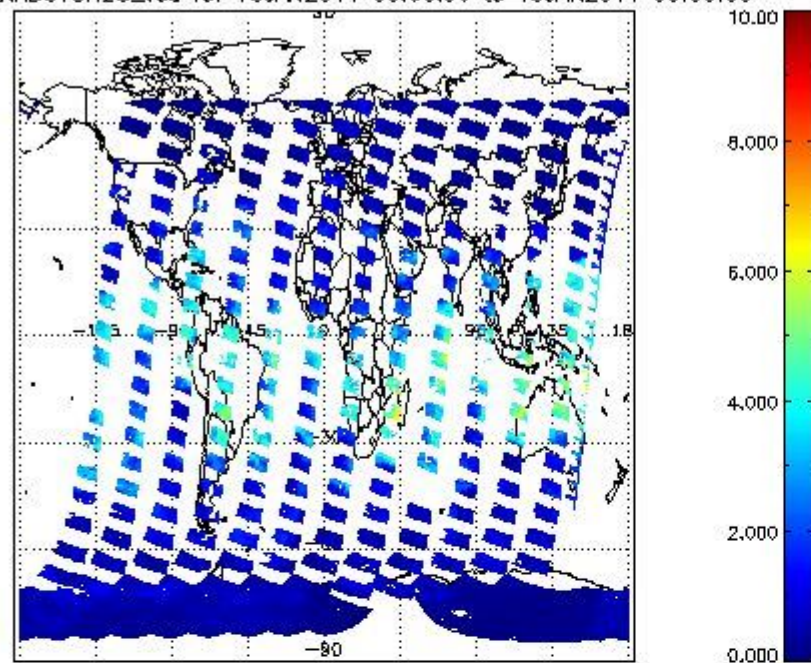


### 2.2.2.7 H2O (UV8)

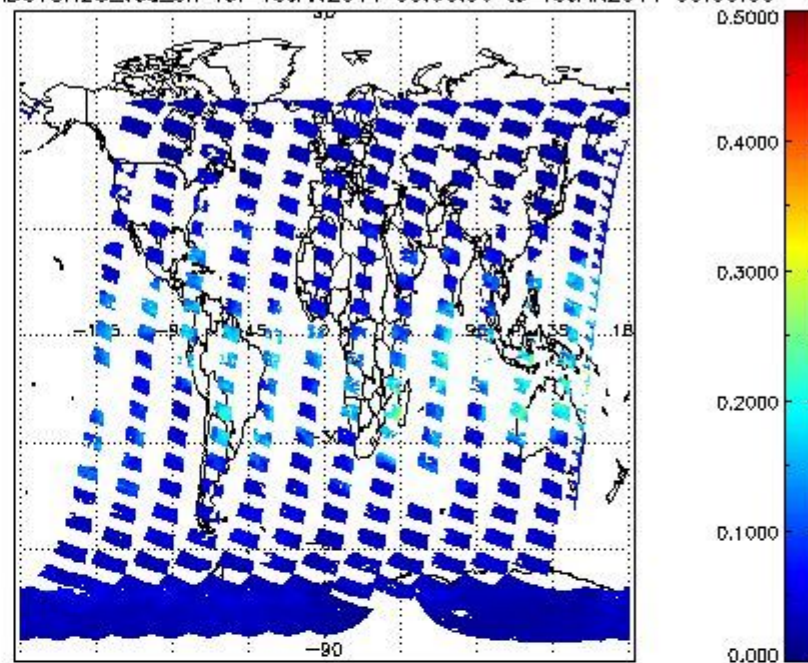




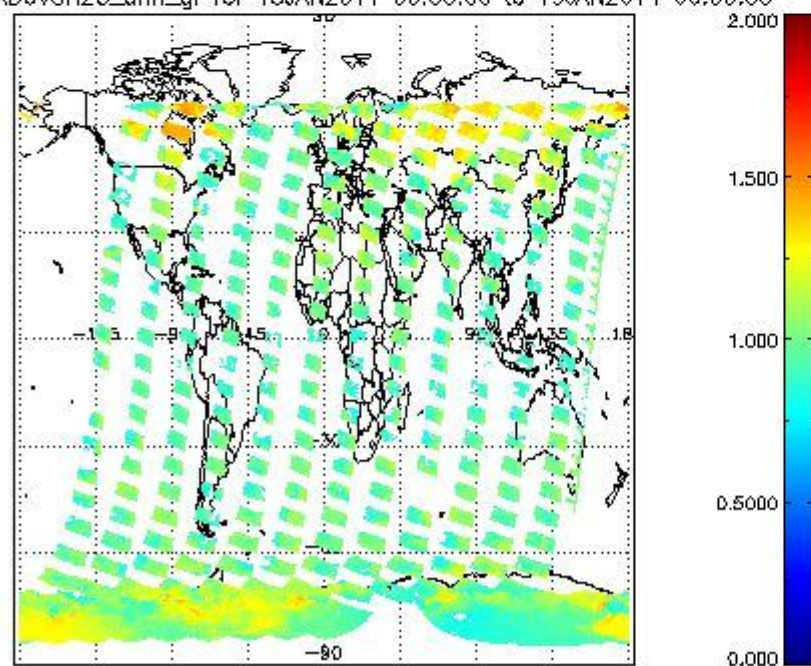
SCIOL2P\_NADUV8H20\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

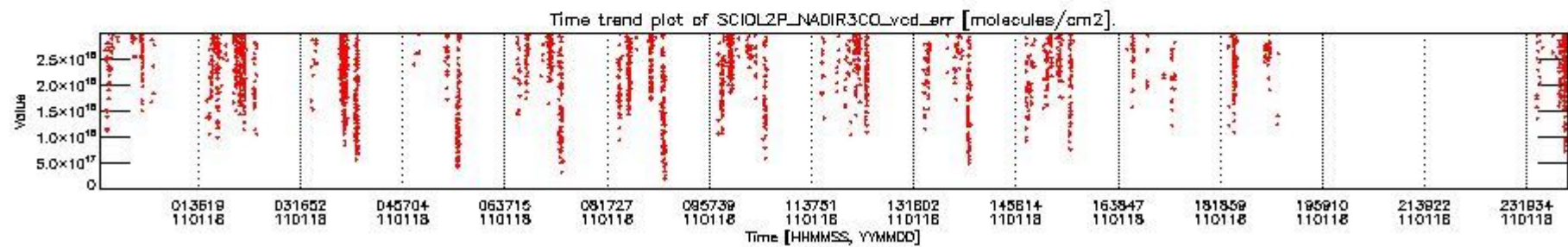
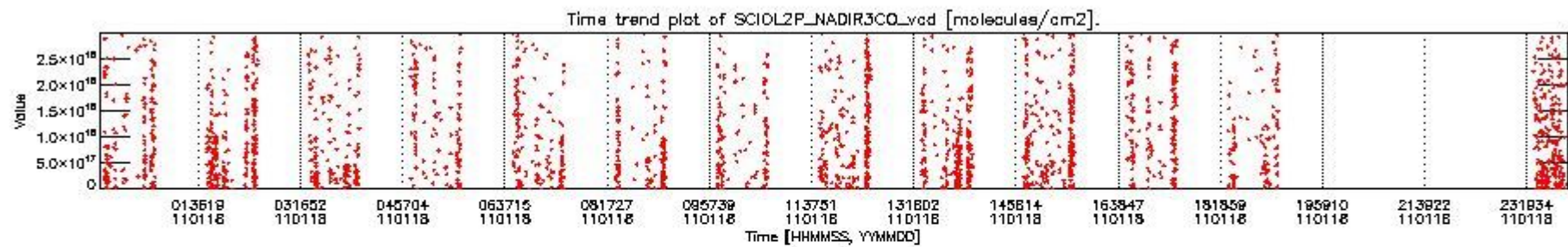


SCIOL2P\_NADUV8H20\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

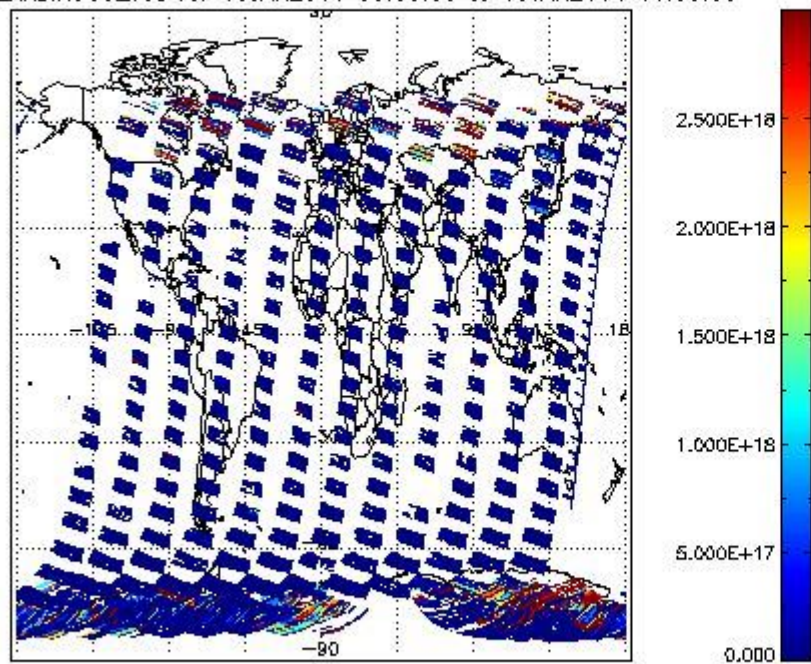


SCIOL2P\_NADUV8H20\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

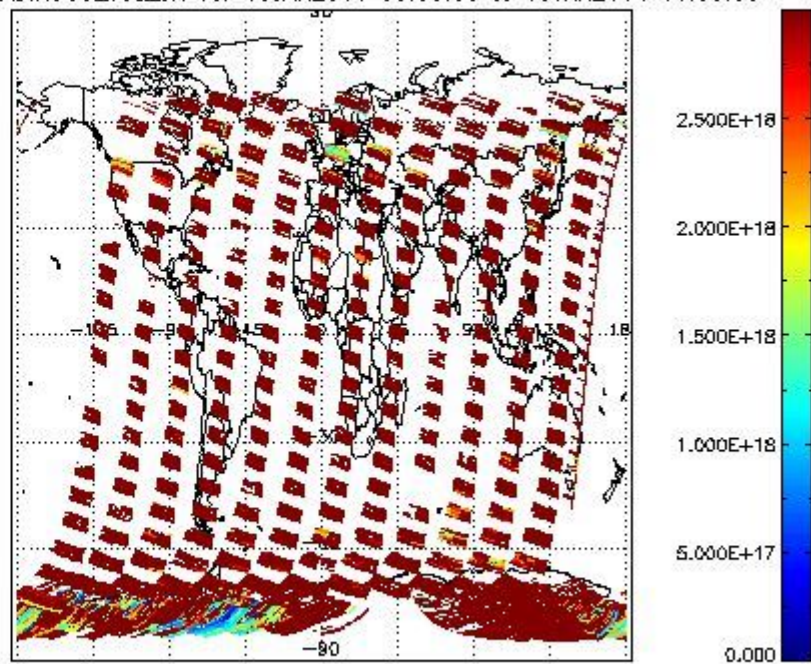




SCIDL2P\_NADIR3CO\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



### 2.2.3 Limb

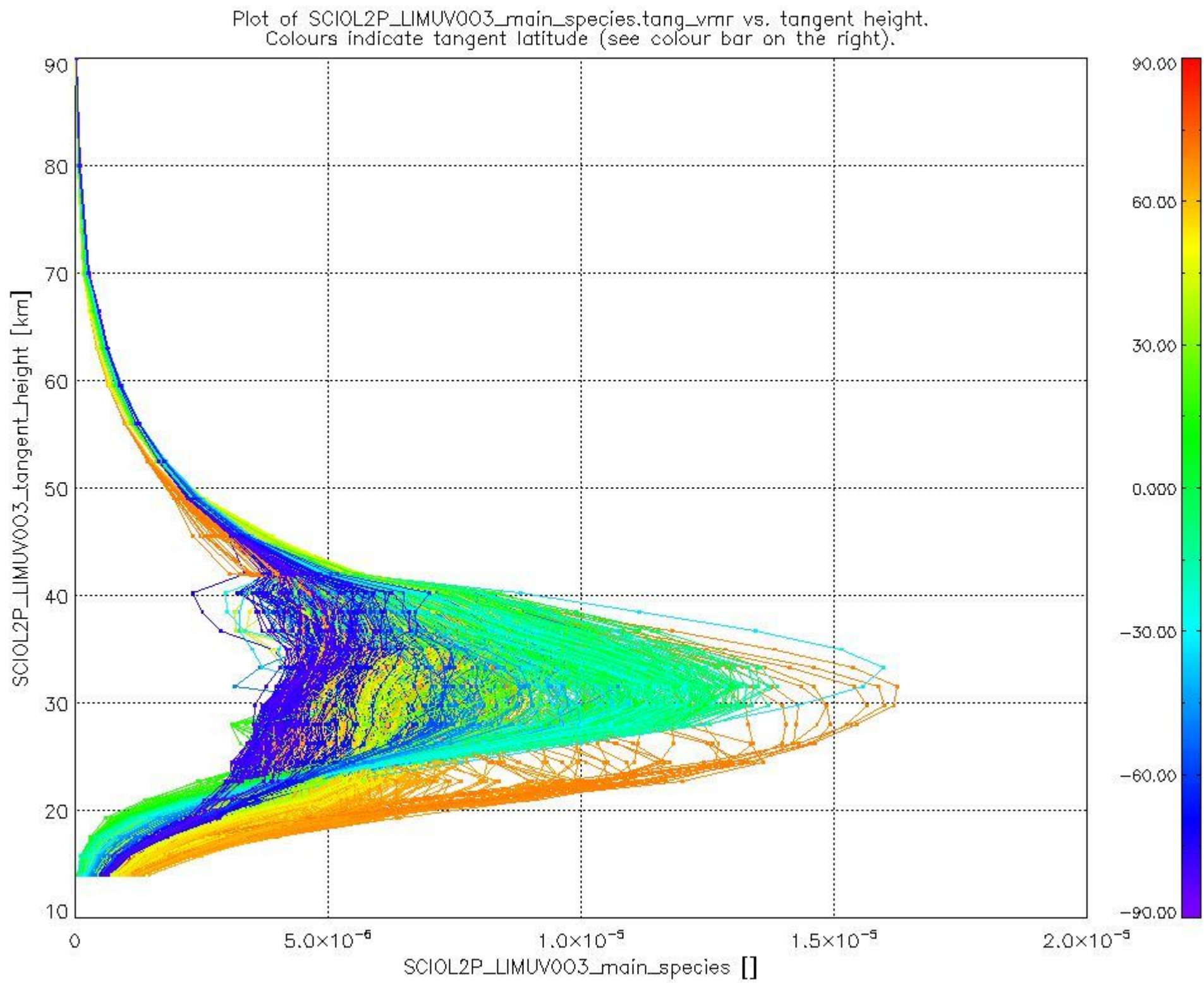
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species

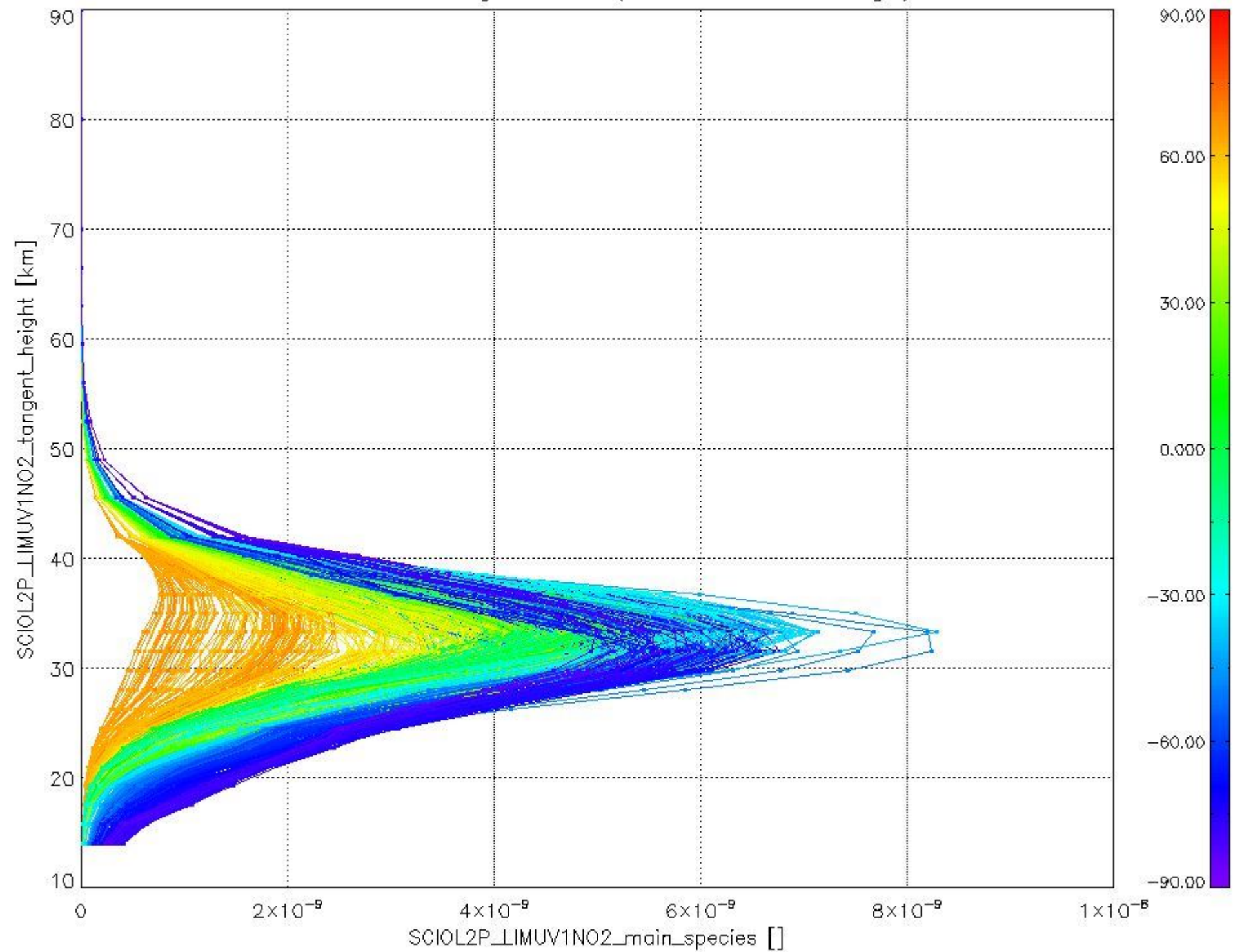
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



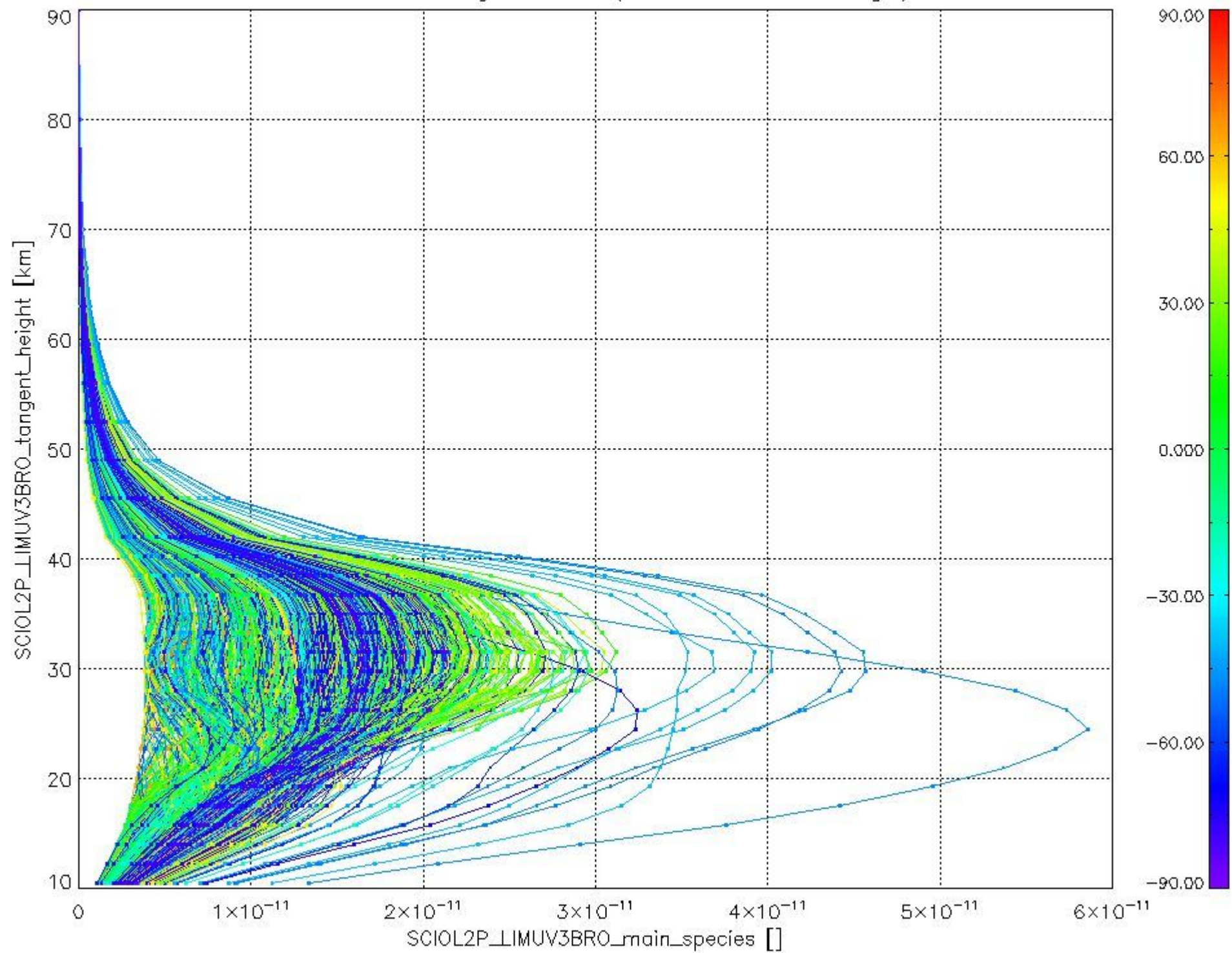
2.2.3.2 NO2 (UV1)

Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



### 2.2.3.3 BrO (UV3)

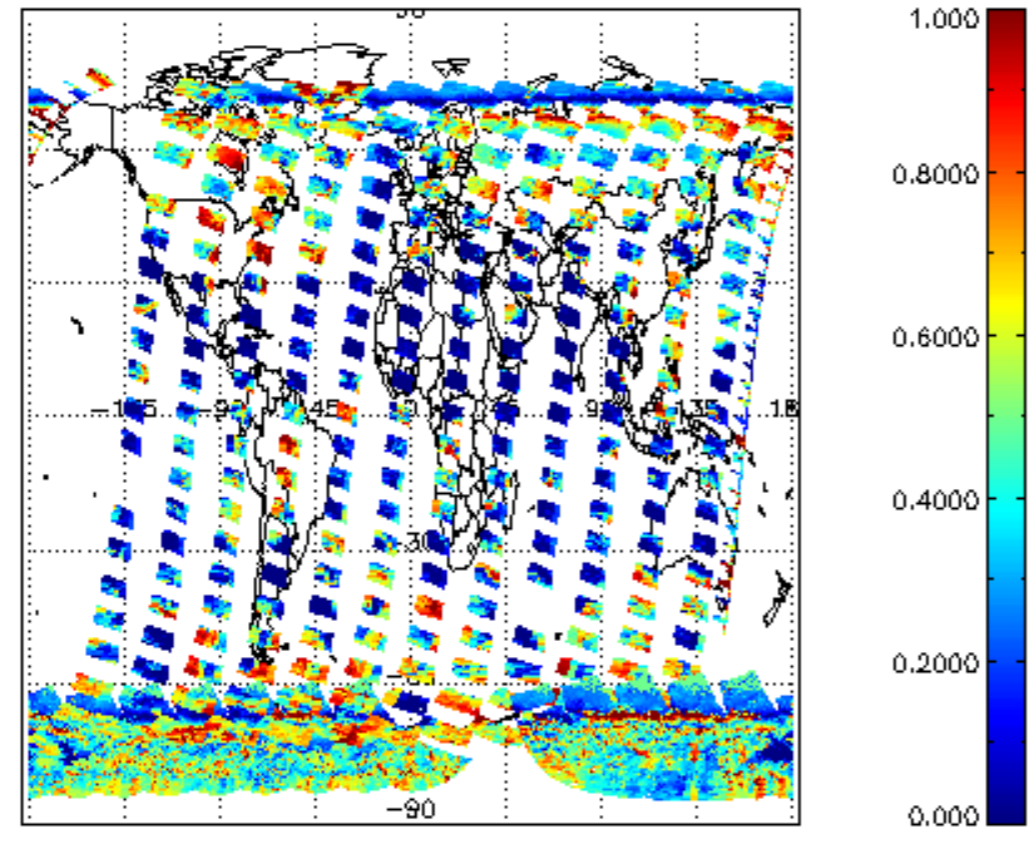
Plot of SCIOL2P\_LIMUV3BRO\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



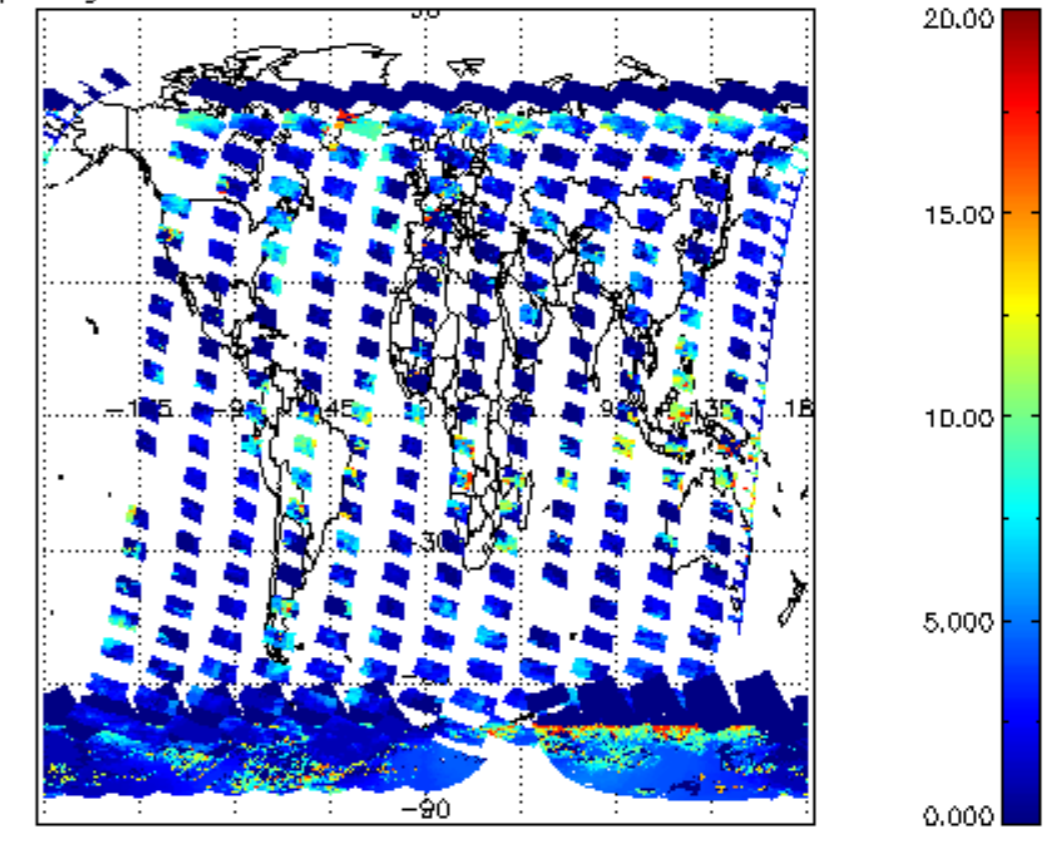
### 2.3 ADF monitoring

Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110111_111009_20110117_182205_20110214_182205

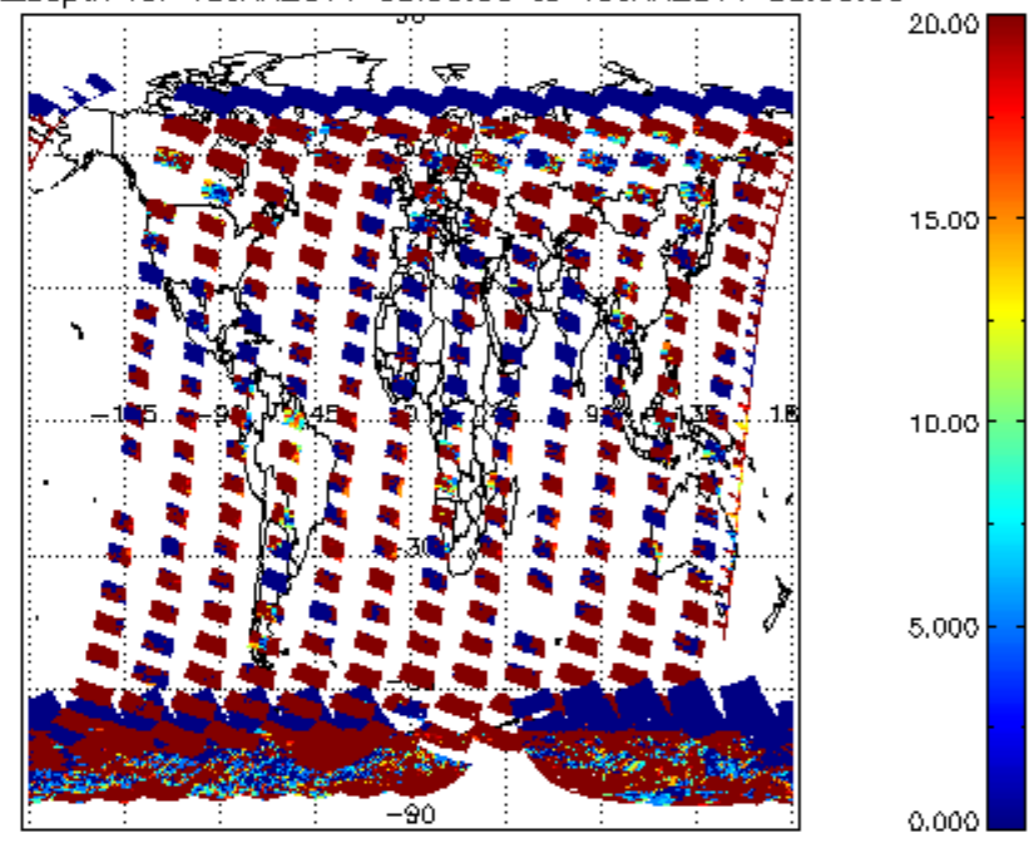
cL\_frac for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



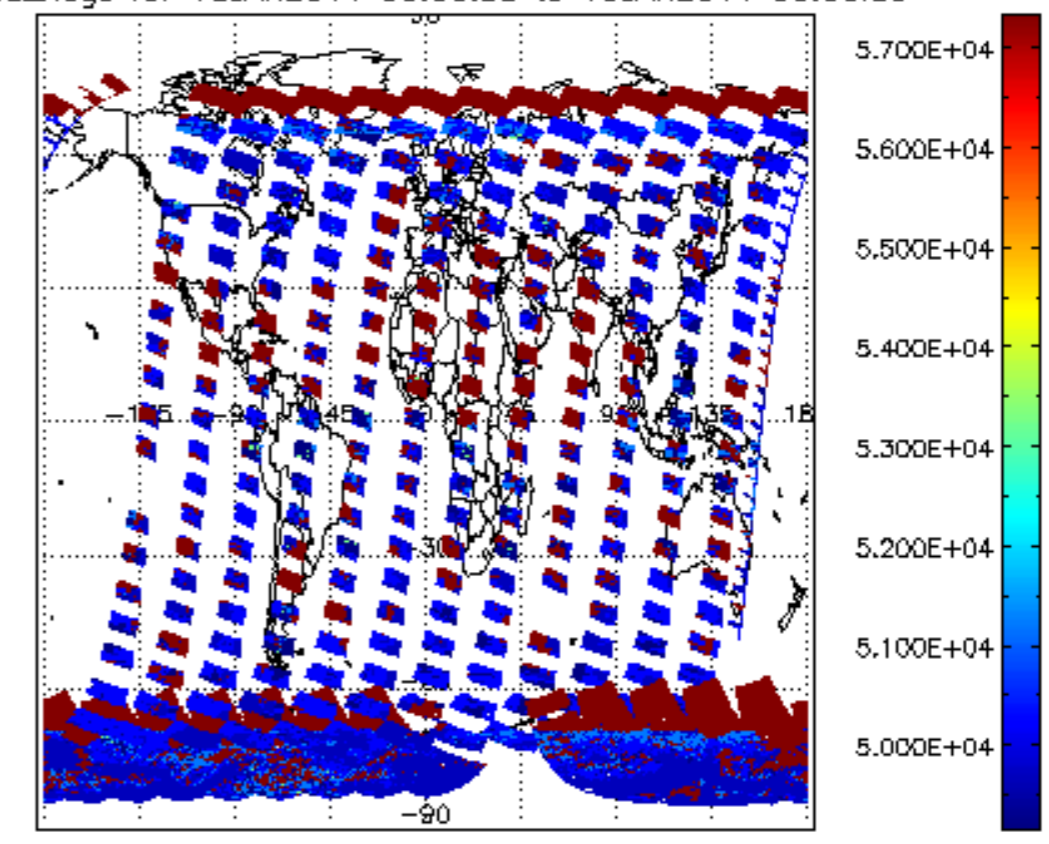
cL\_top\_height for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

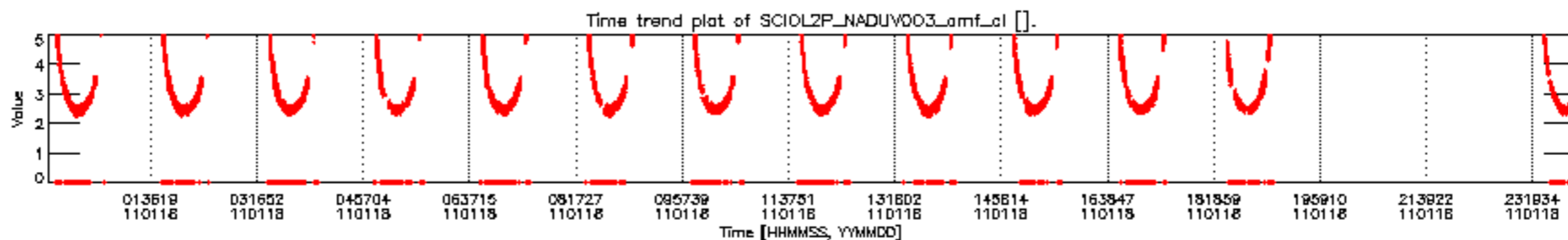
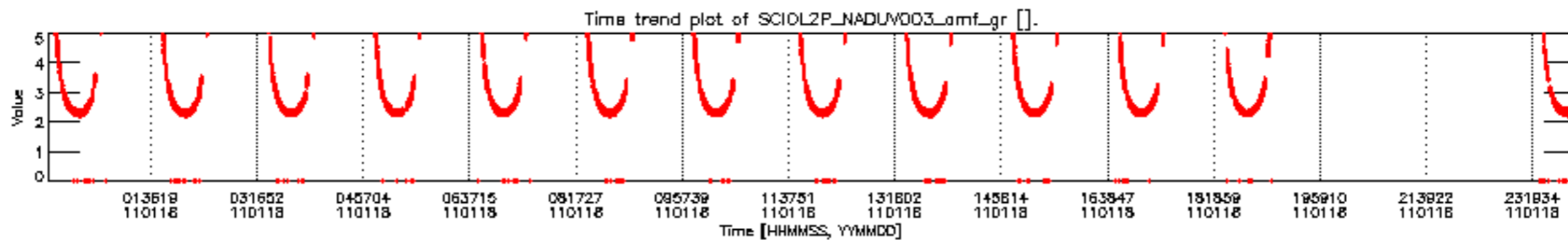
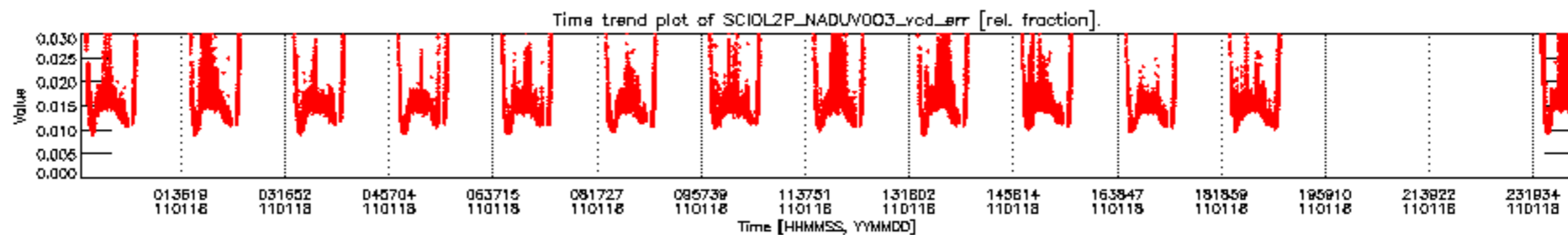
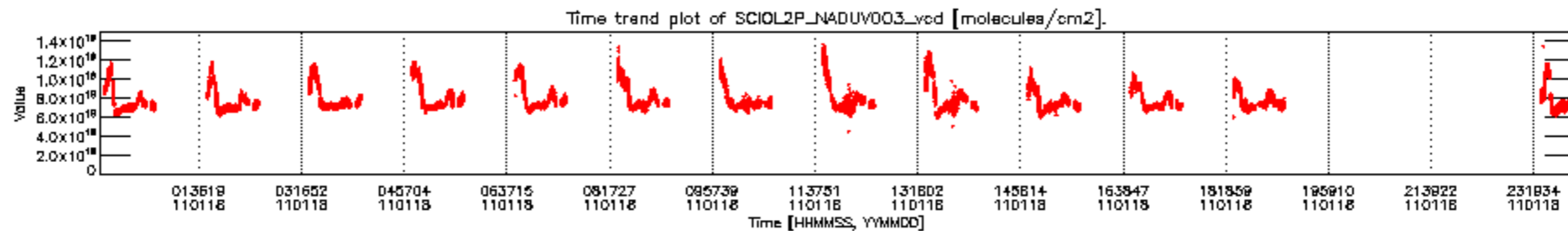


cLopt\_depth for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

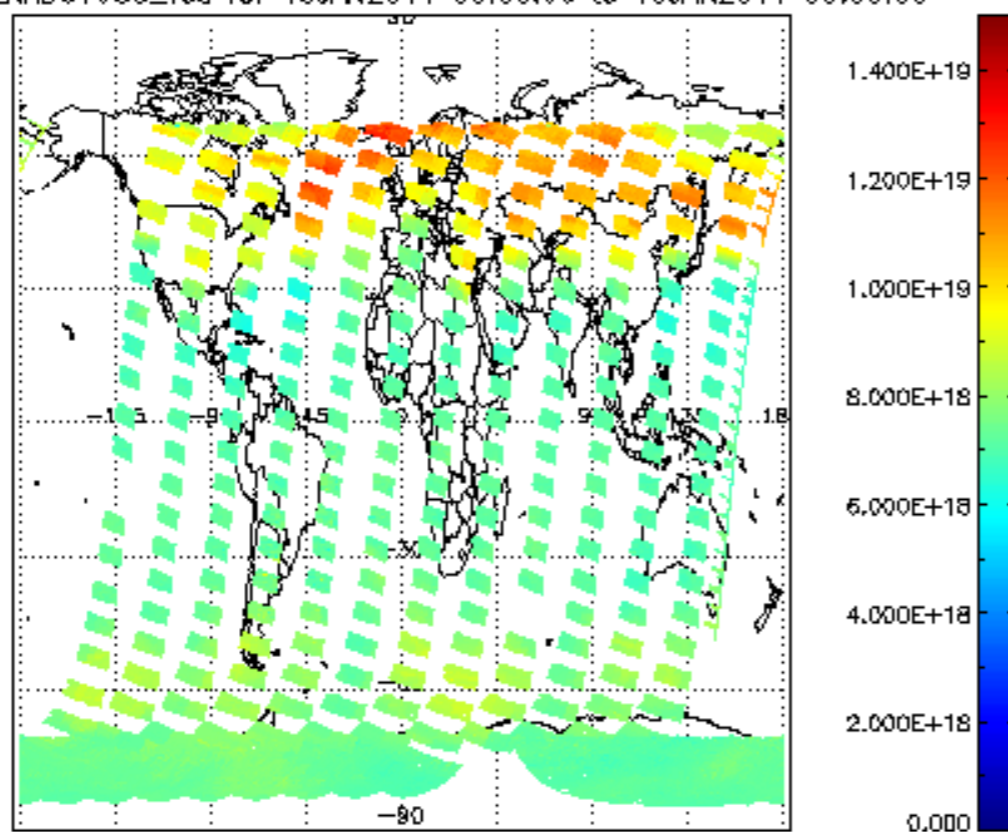


cloud\_flags for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

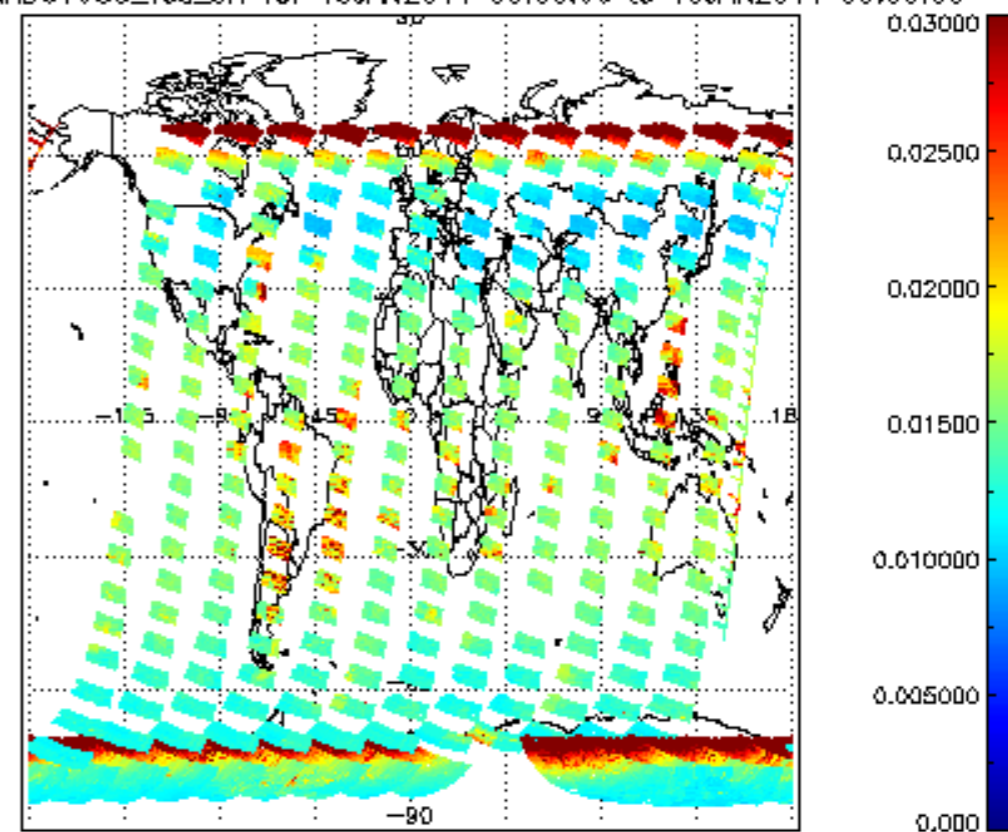




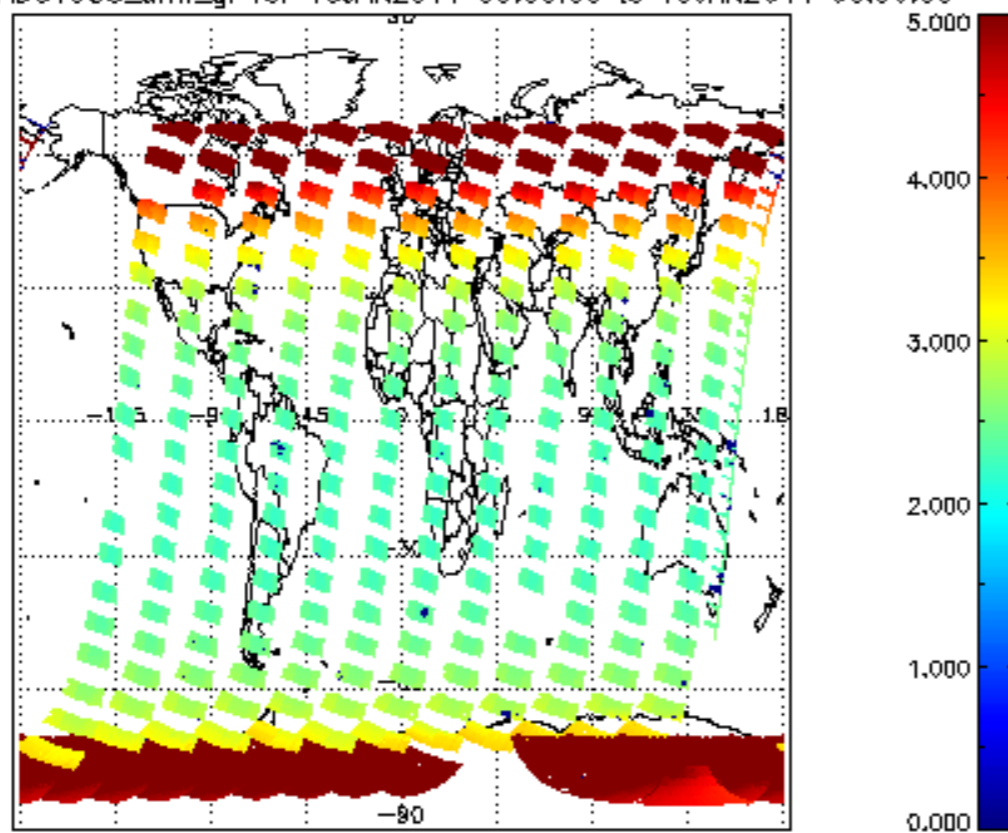
SCIOL2P\_NADUV003\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



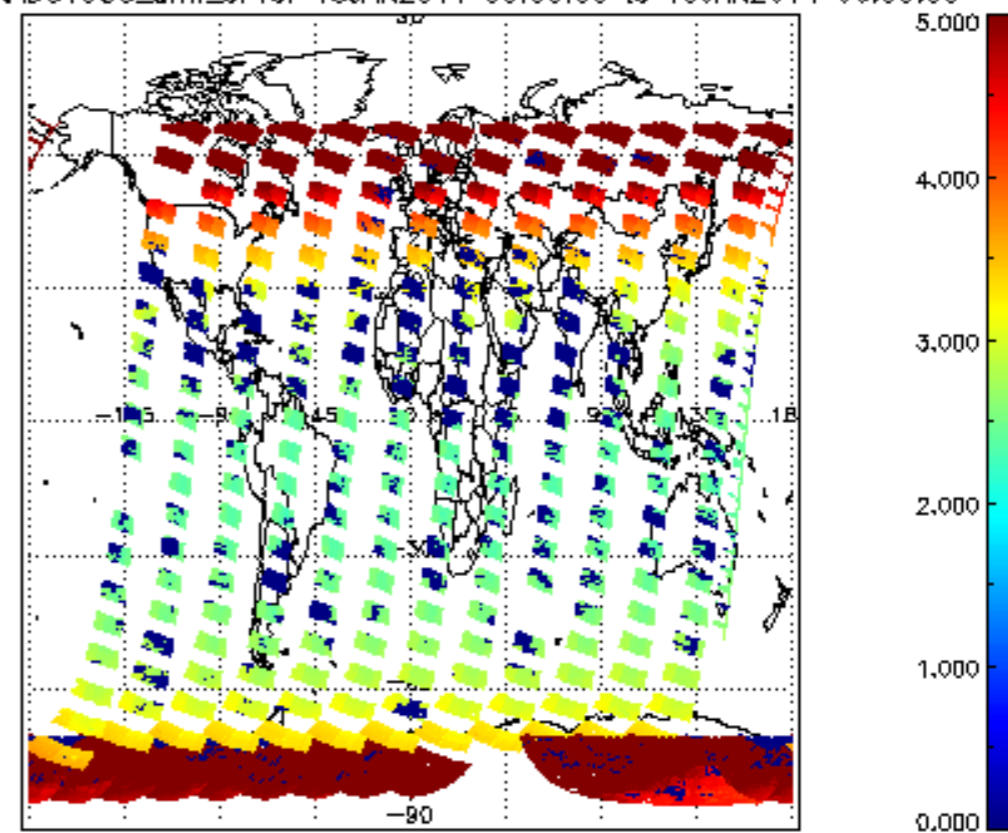
SCIOL2P\_NADUV003\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



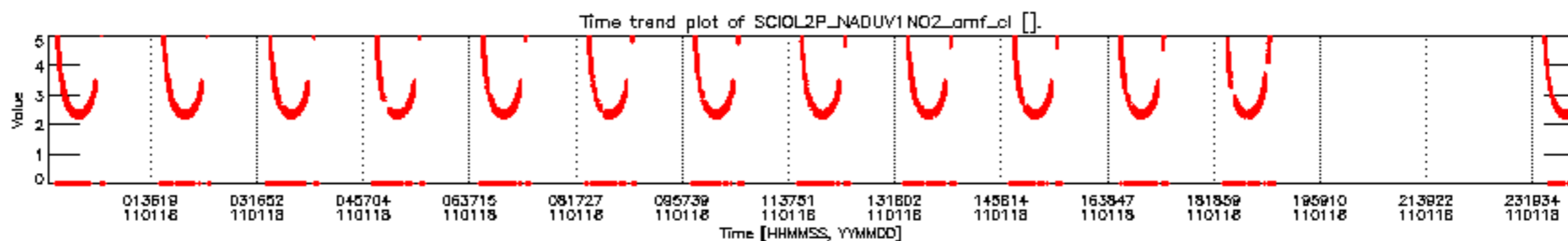
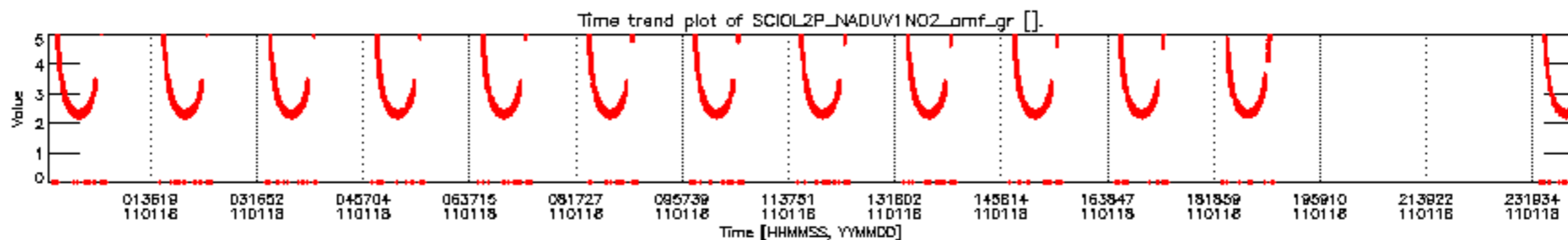
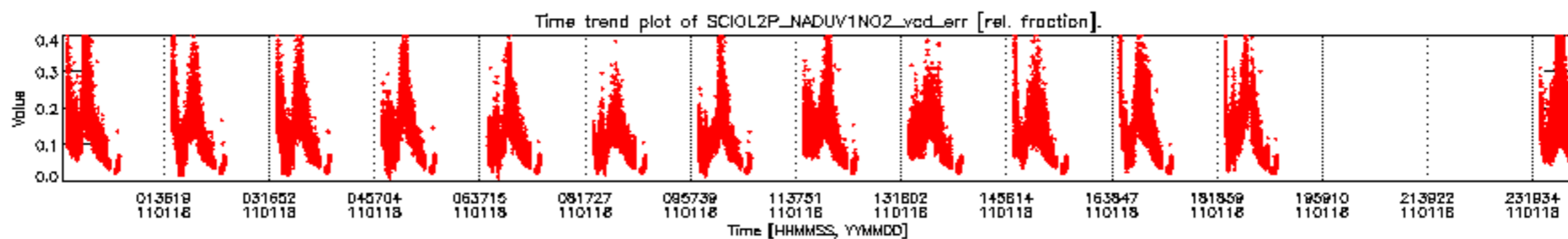
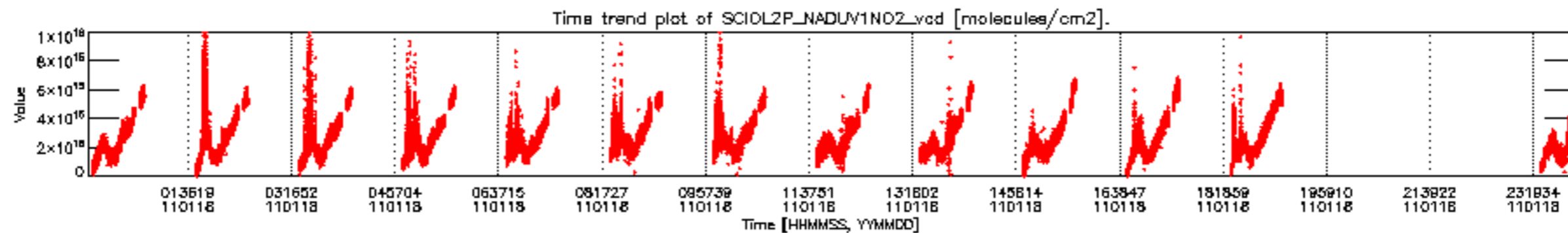
SCIOL2P\_NADUV003\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



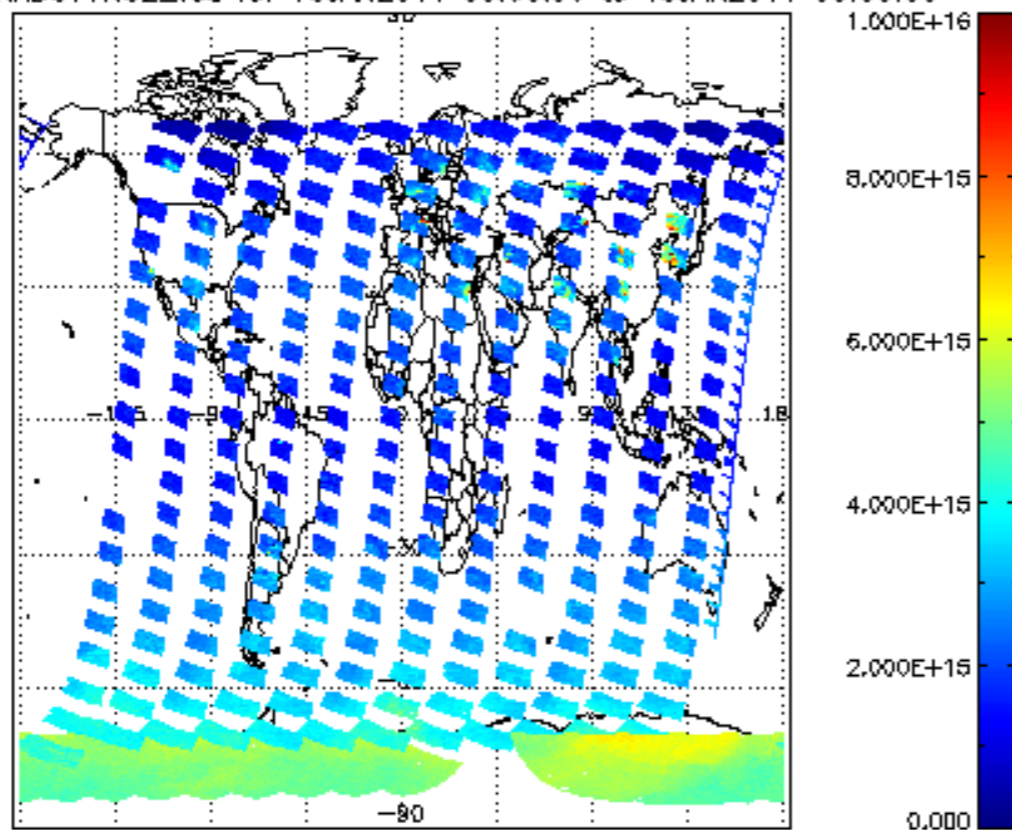
SCIOL2P\_NADUV003\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



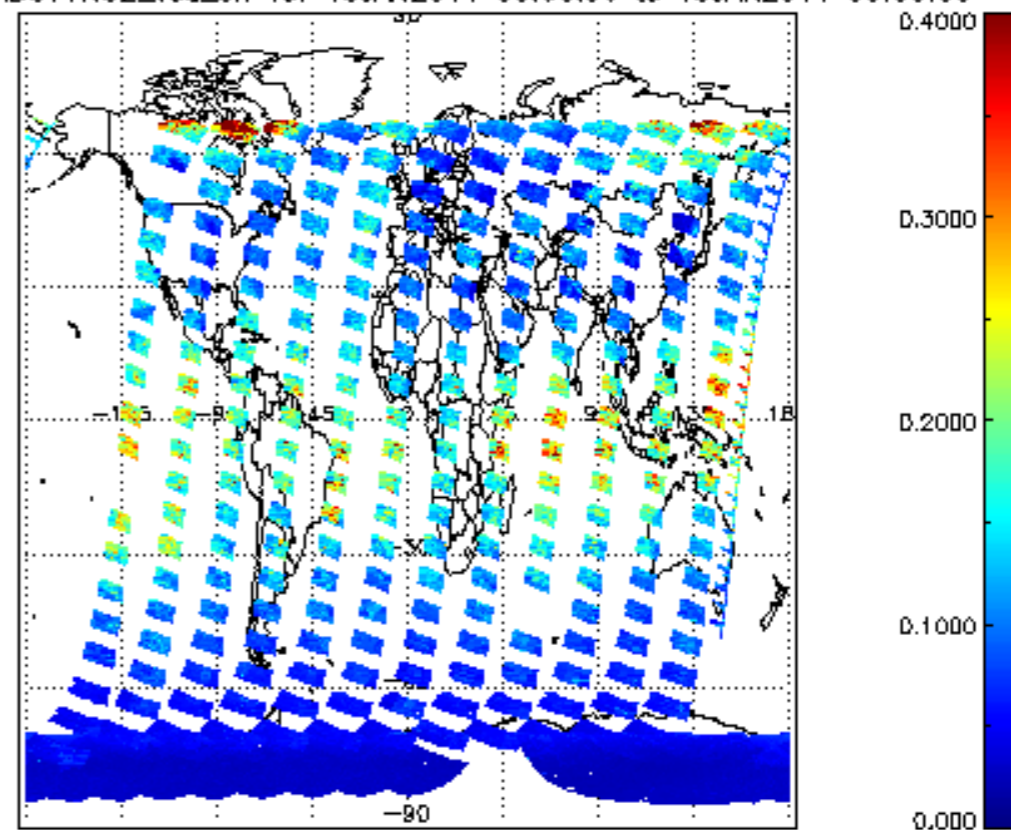




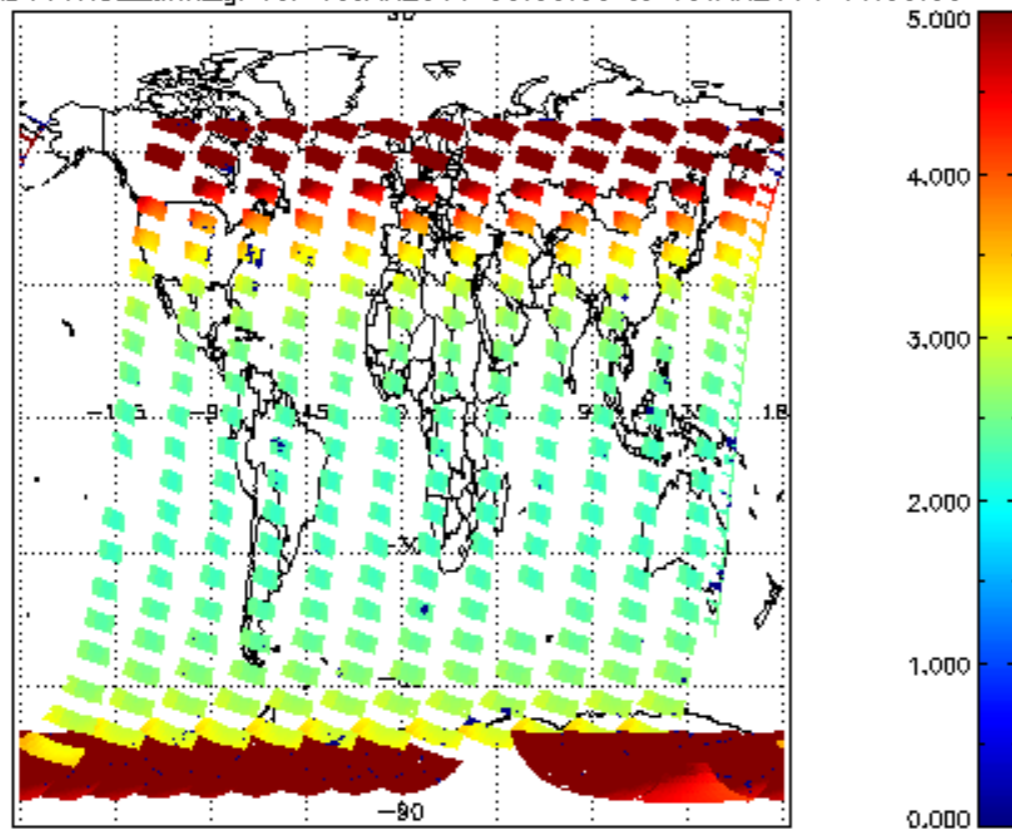
SCIOL2P\_NADUV1NO2\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



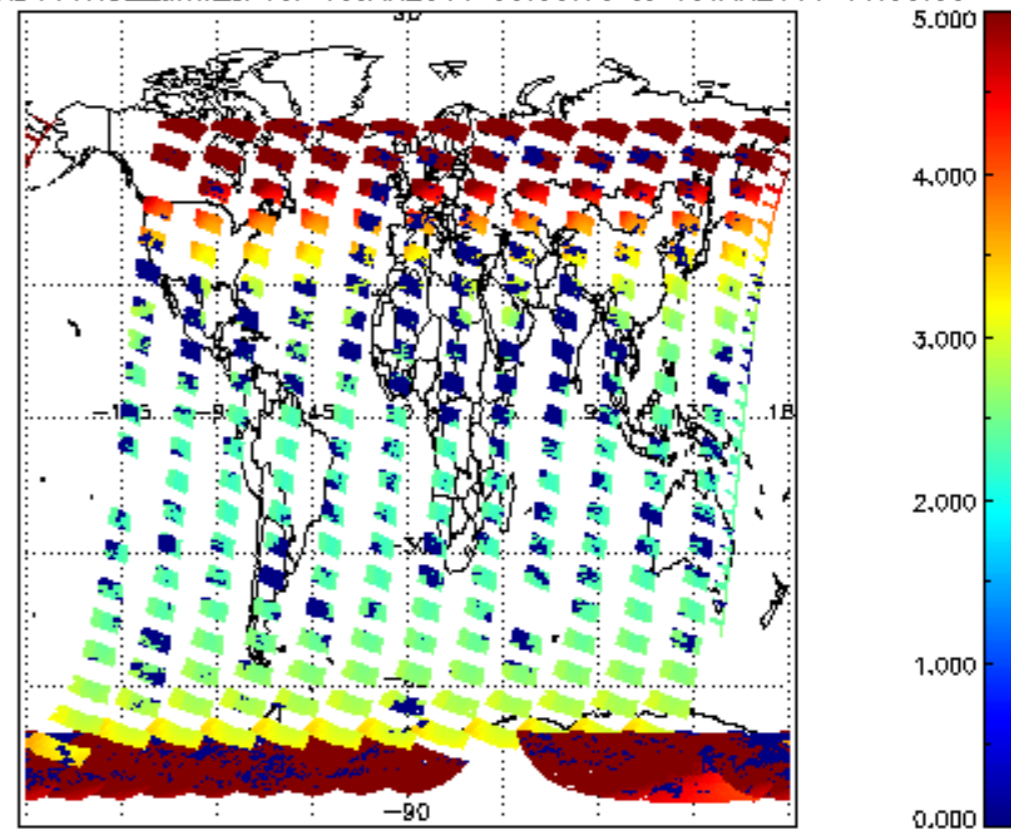
SCIOL2P\_NADUV1NO2\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

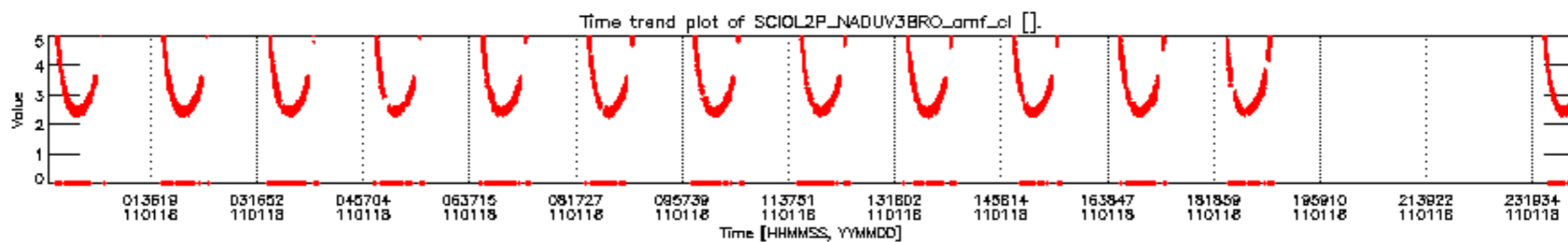
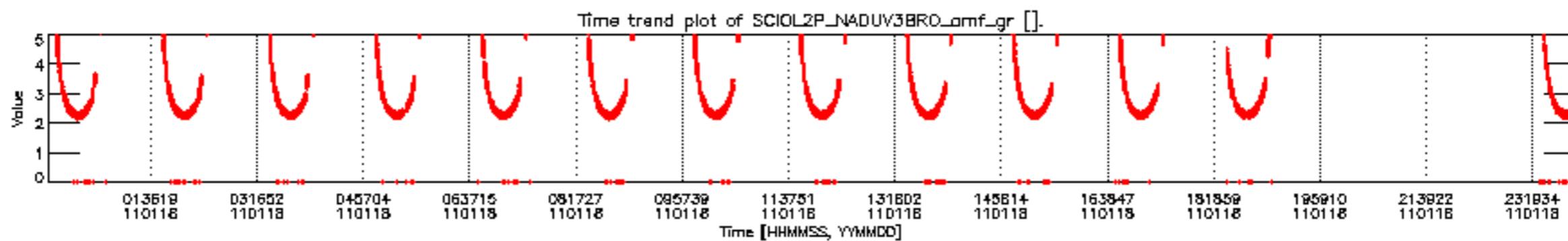
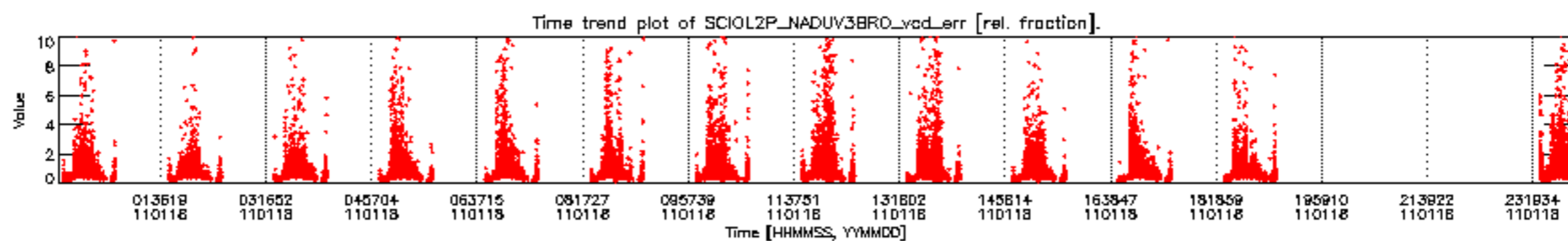
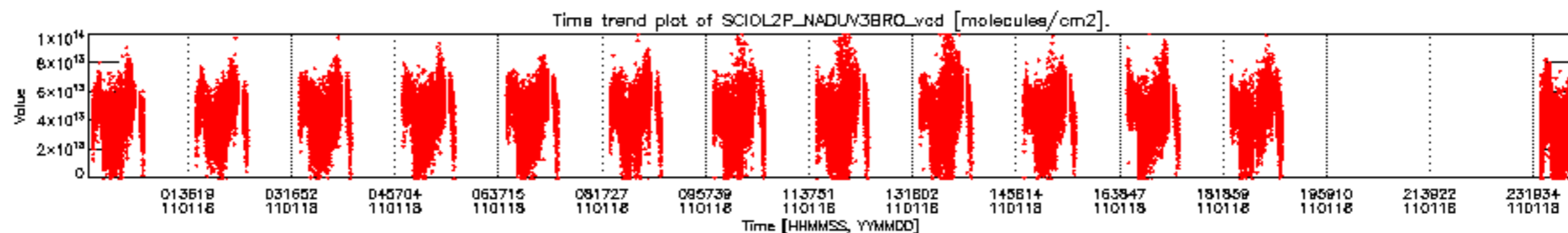


SCIOL2P\_NADUV1NO2\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

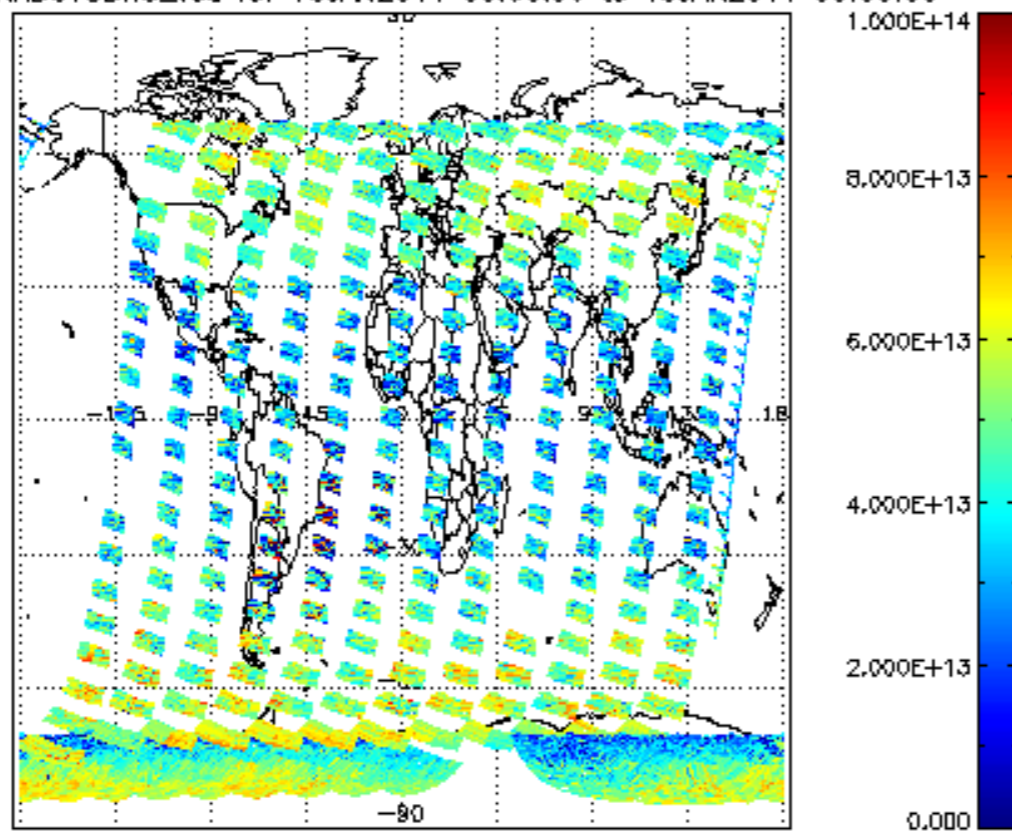


SCIOL2P\_NADUV1NO2\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

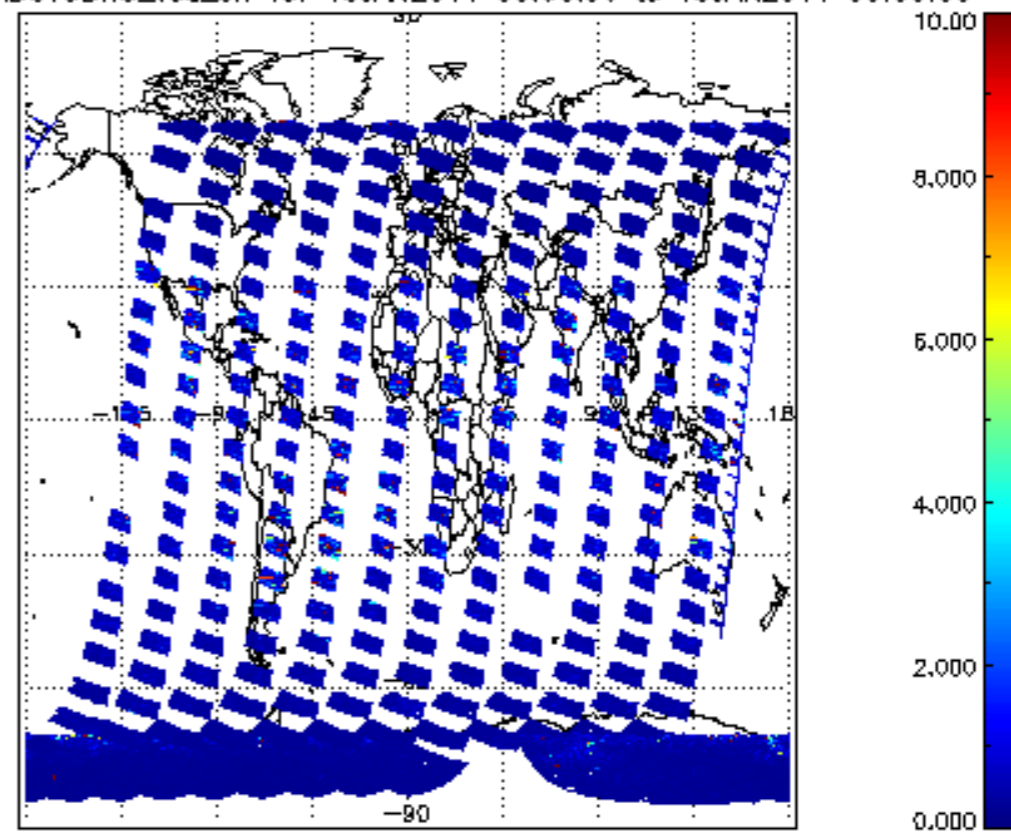




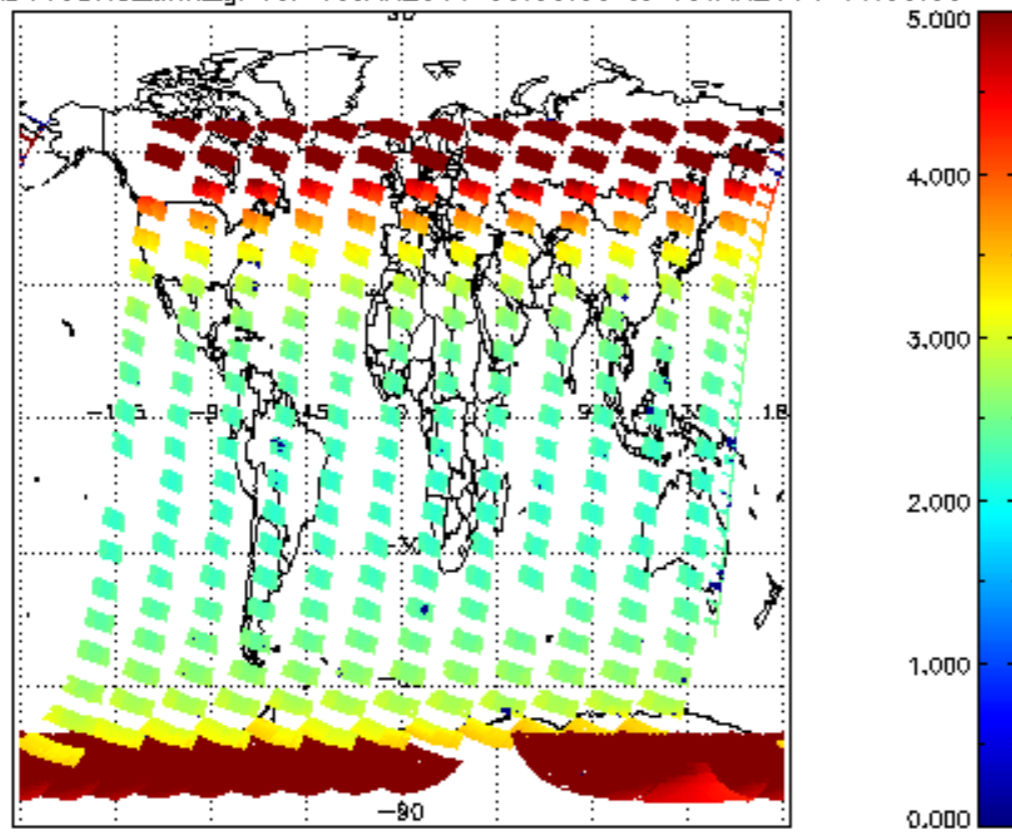
SCIOL2P\_NADUV3BRO\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



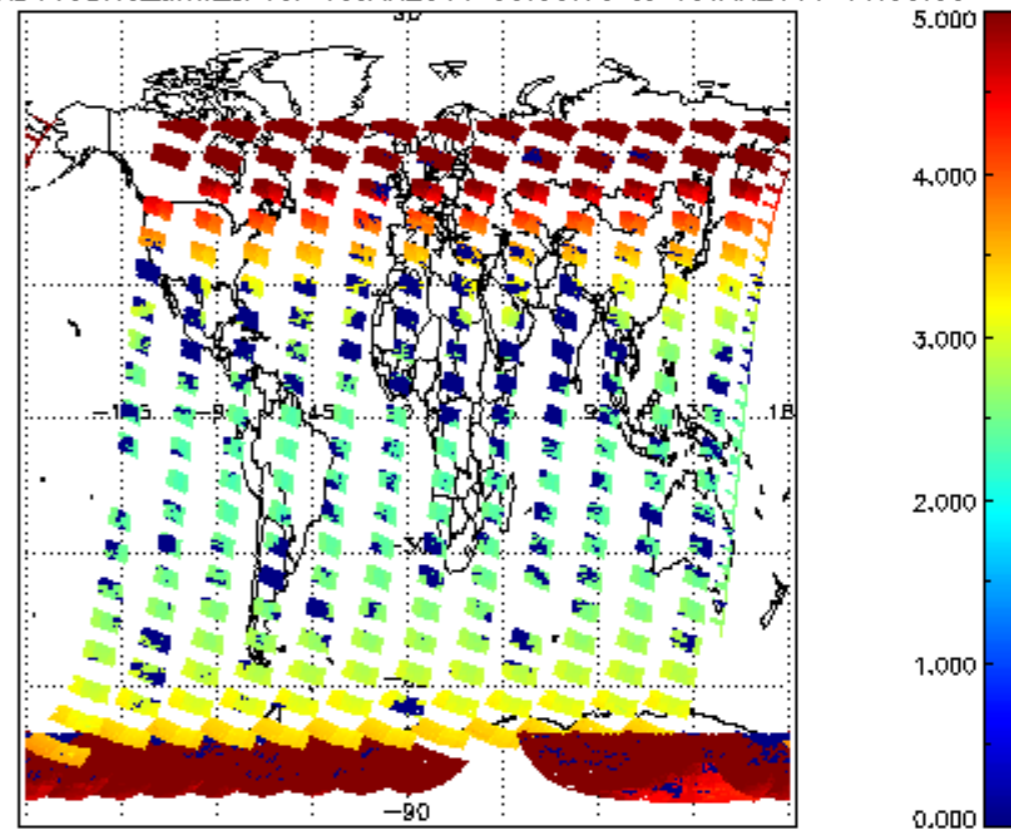
SCIOL2P\_NADUV3BRO\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

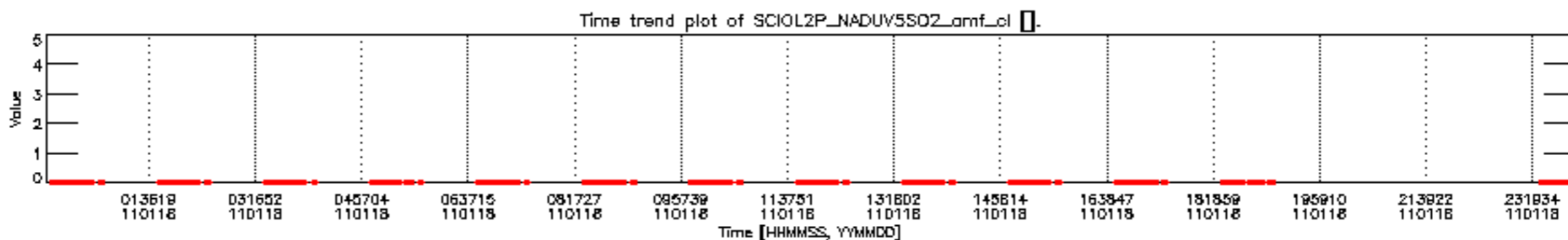
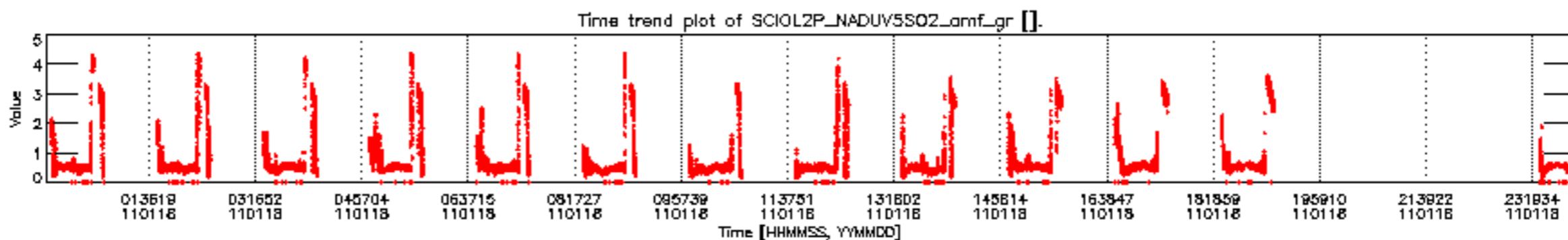
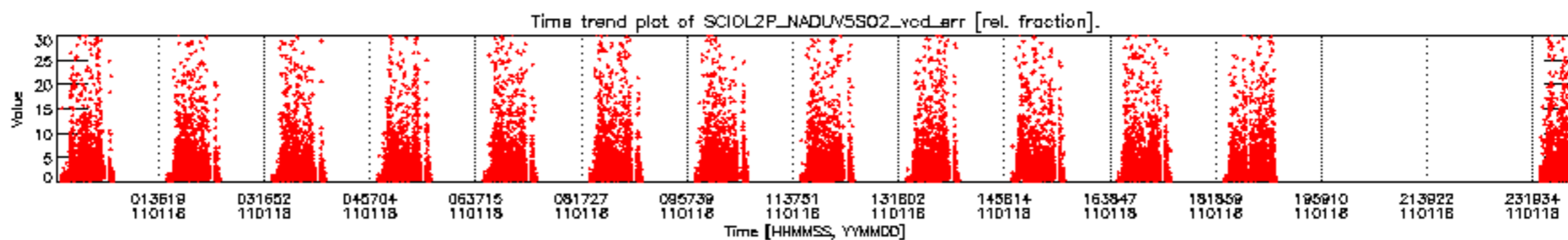
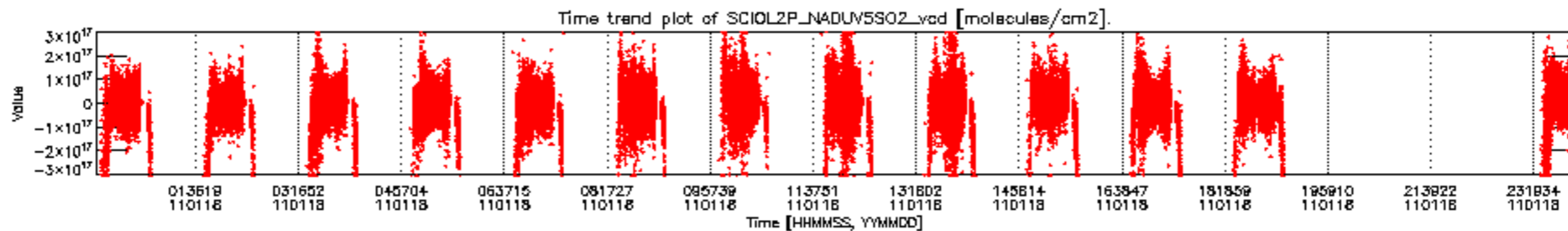


SCIOL2P\_NADUV3BRO\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

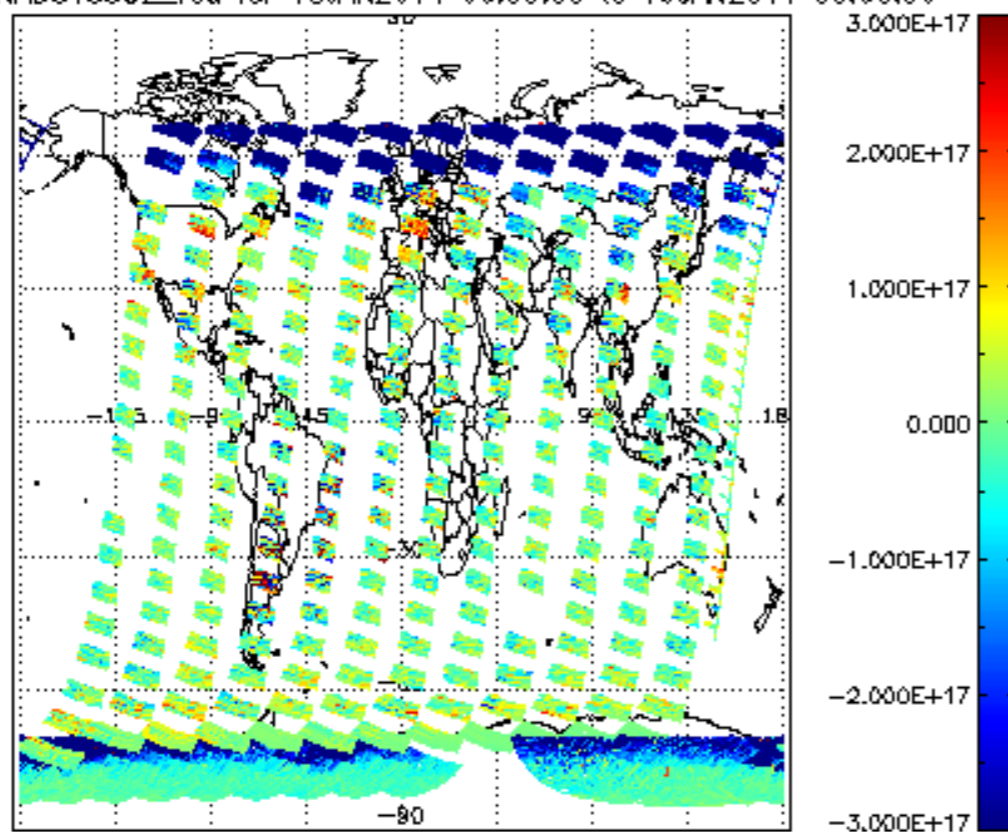


SCIOL2P\_NADUV3BRO\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

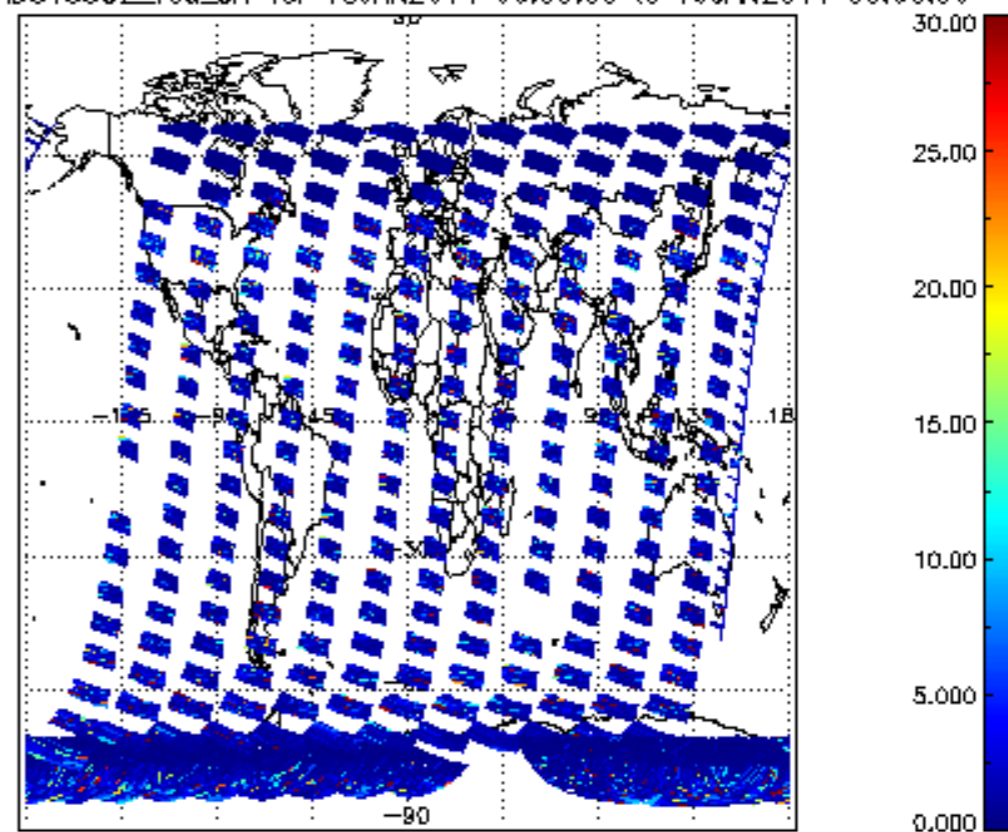




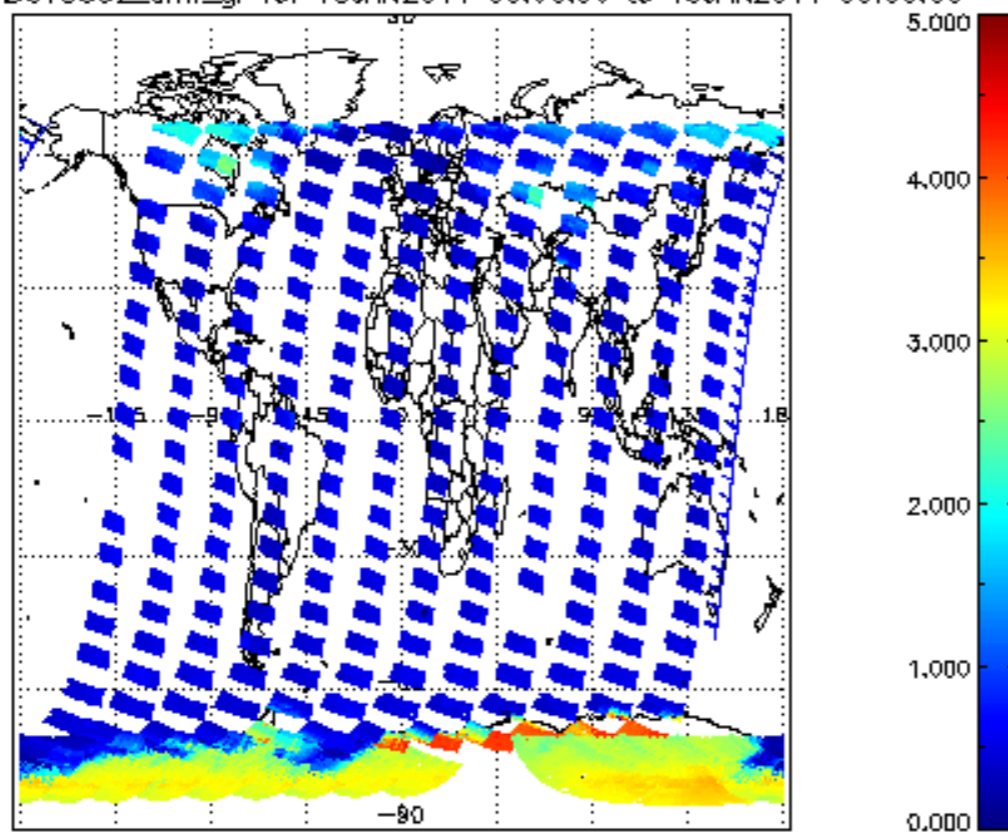
SCIOL2P\_NADUV5S02\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



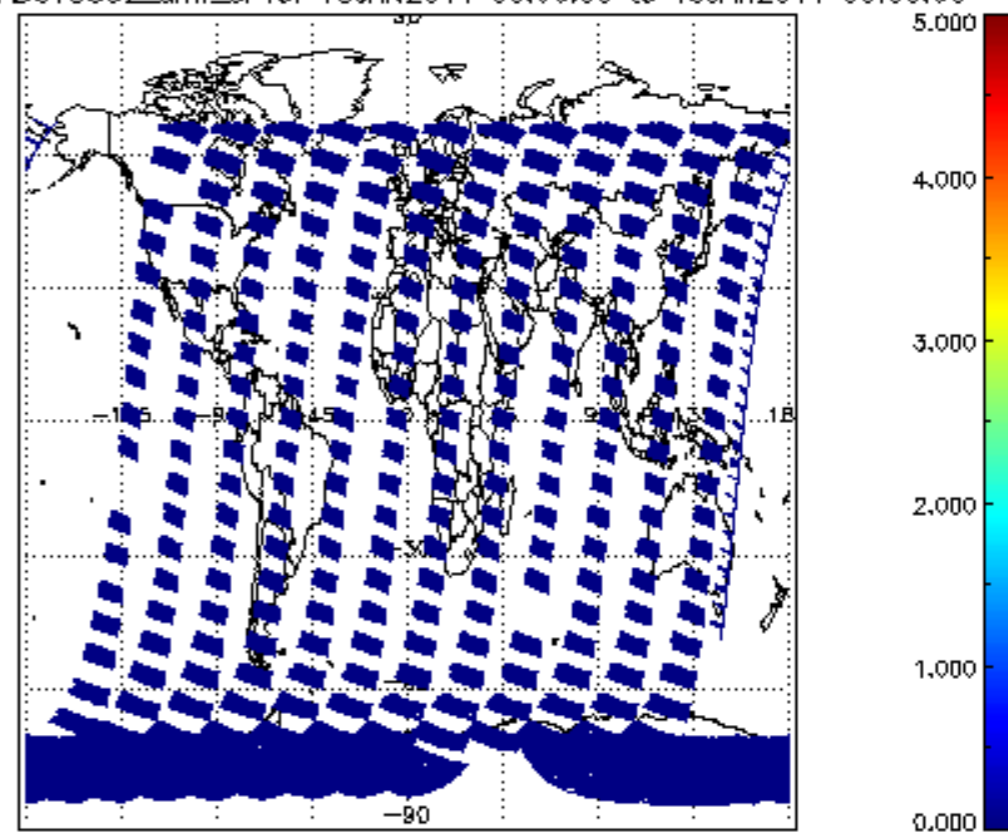
SCIOL2P\_NADUV5S02\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

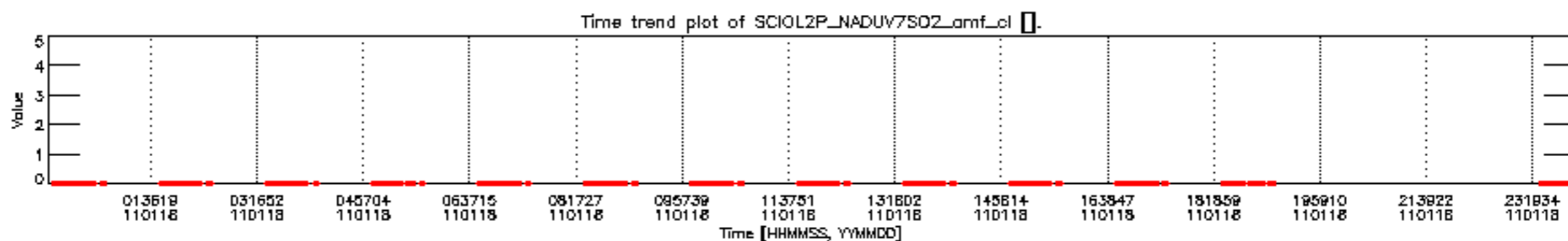
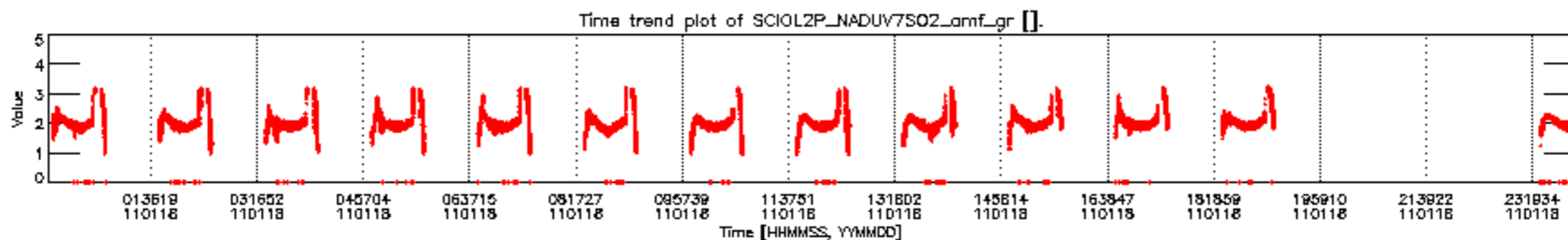
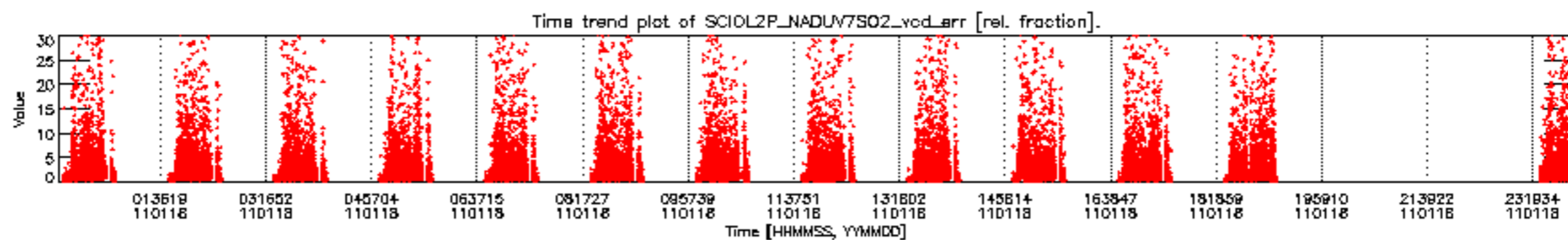
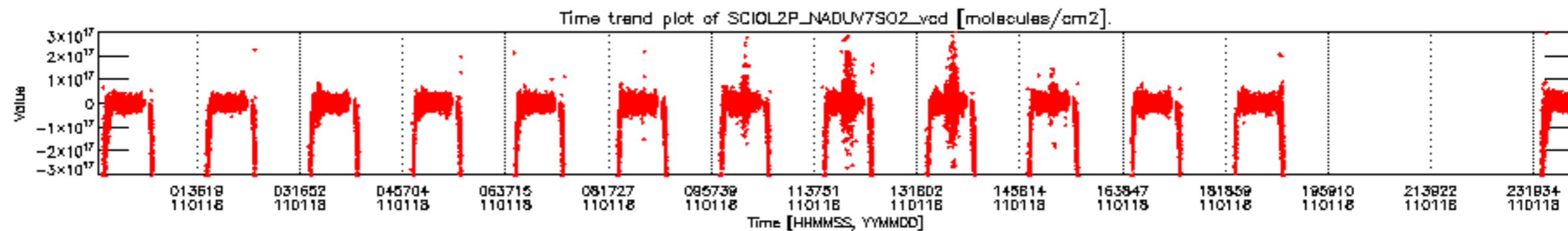


SCIOL2P\_NADUV5S02\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

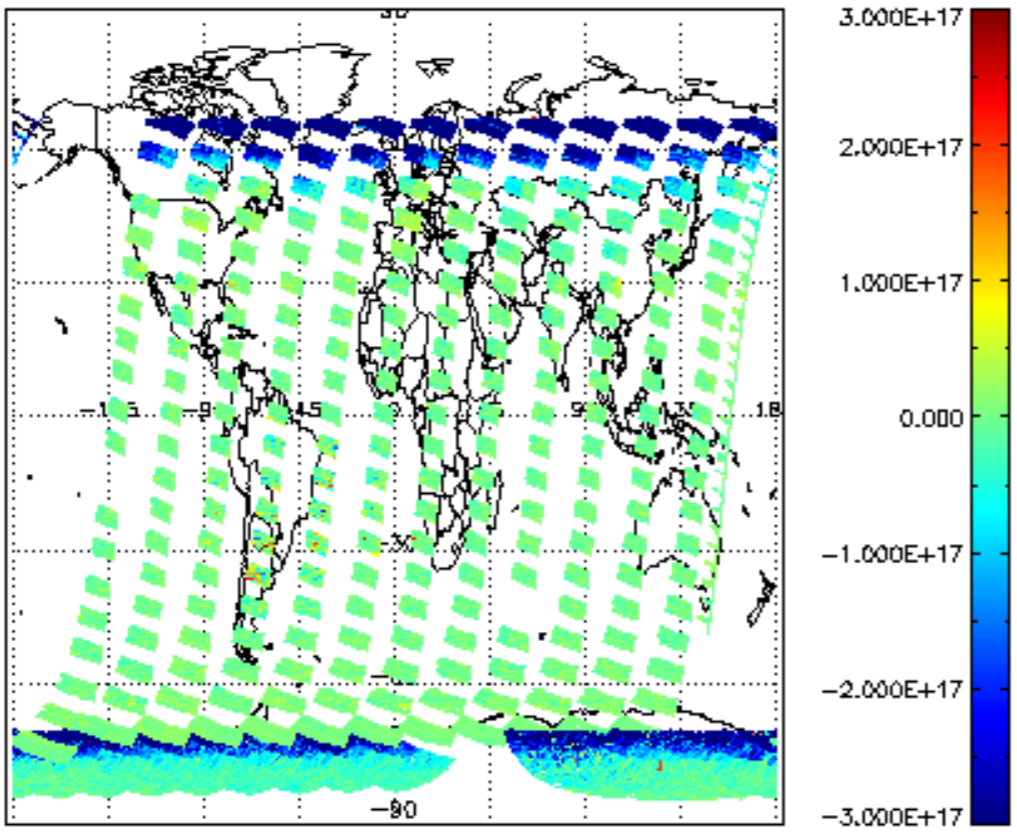


SCIOL2P\_NADUV5S02\_amf\_sl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

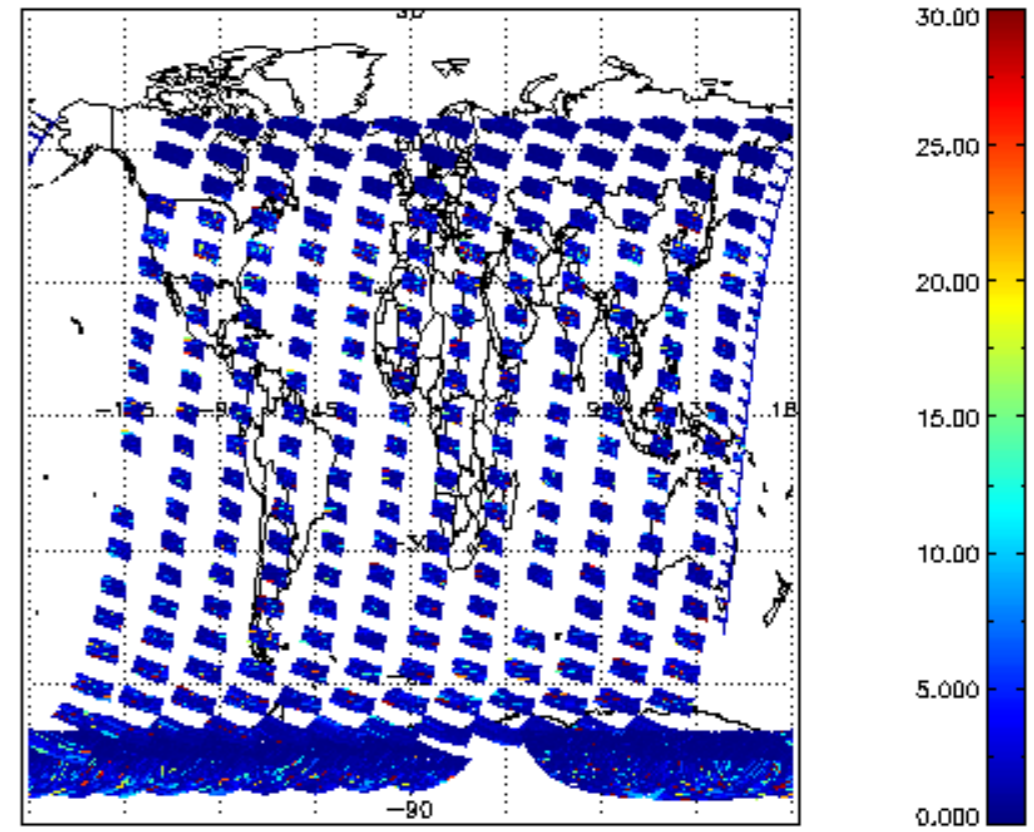




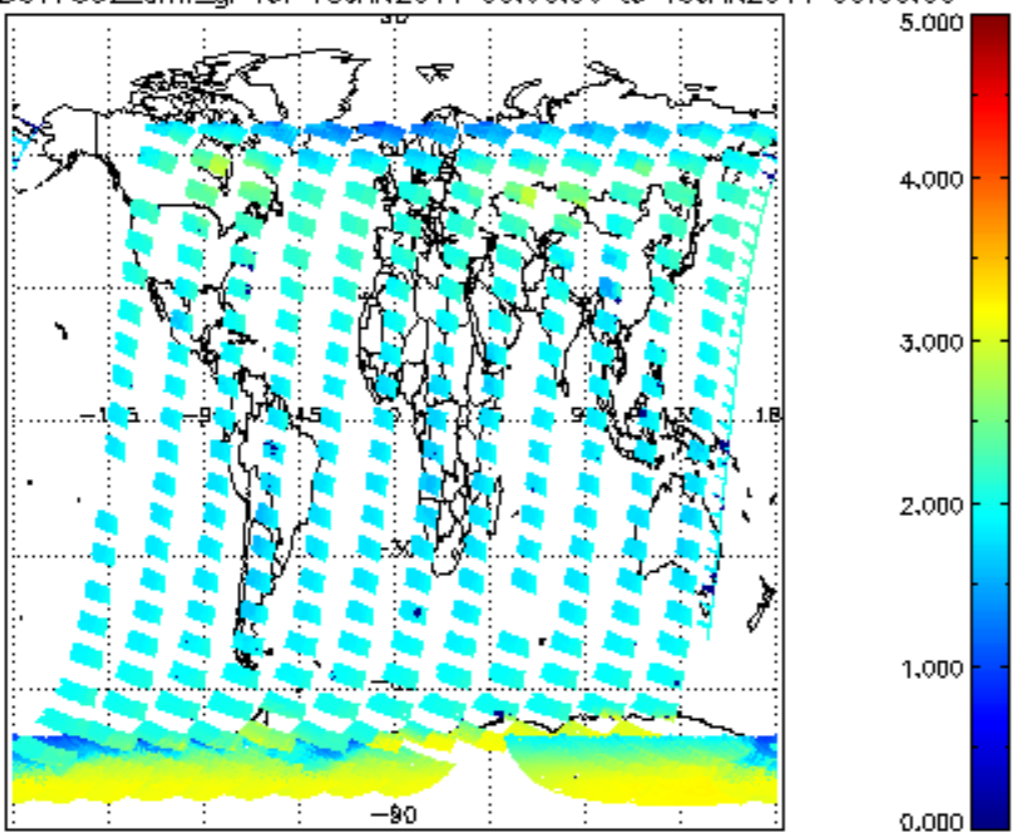
SCIOL2P\_NADUV7S02\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



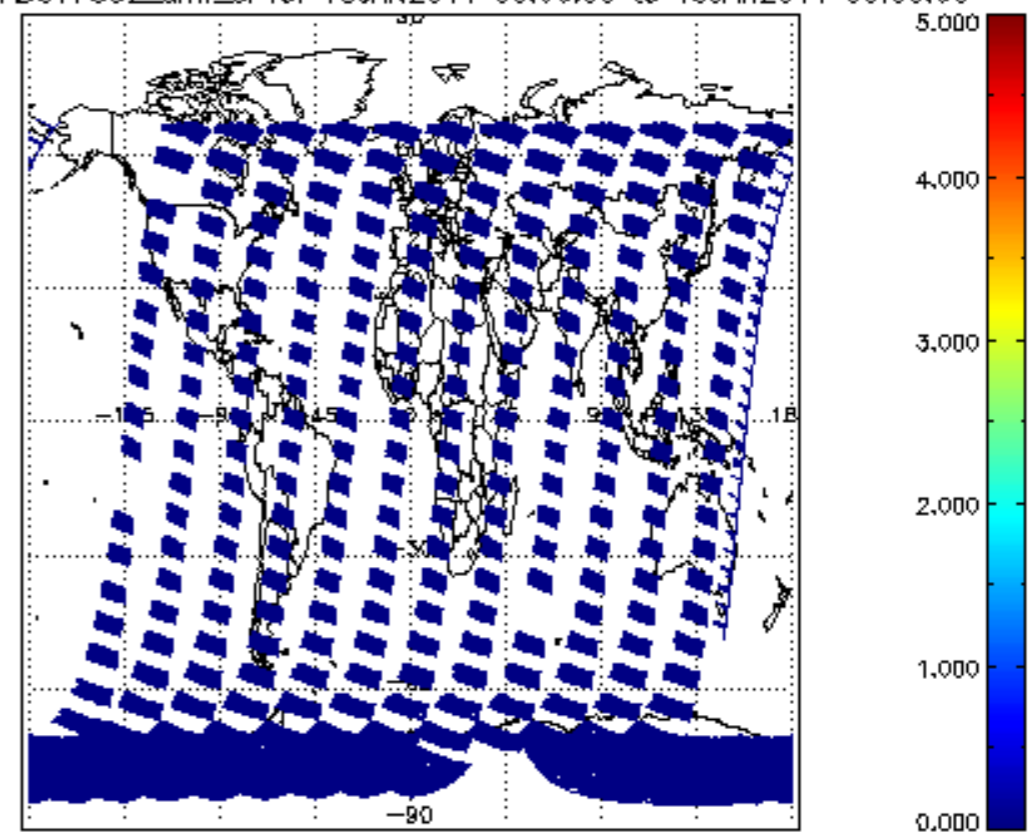
SCIOL2P\_NADUV7S02\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



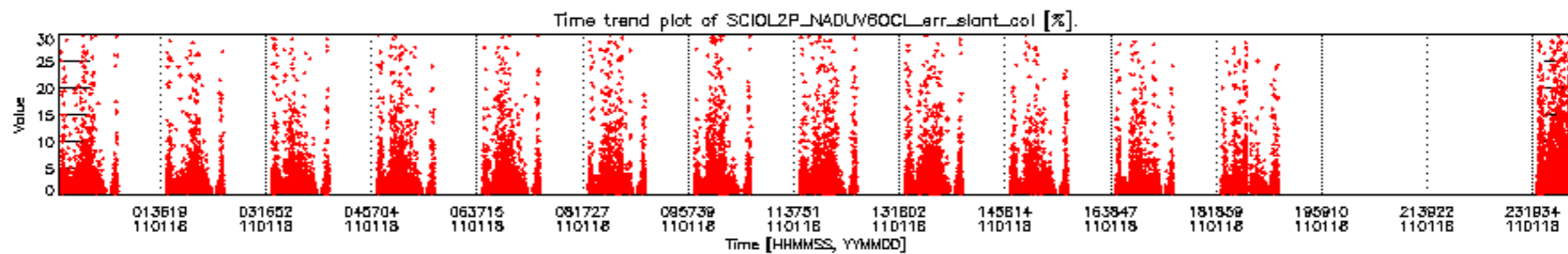
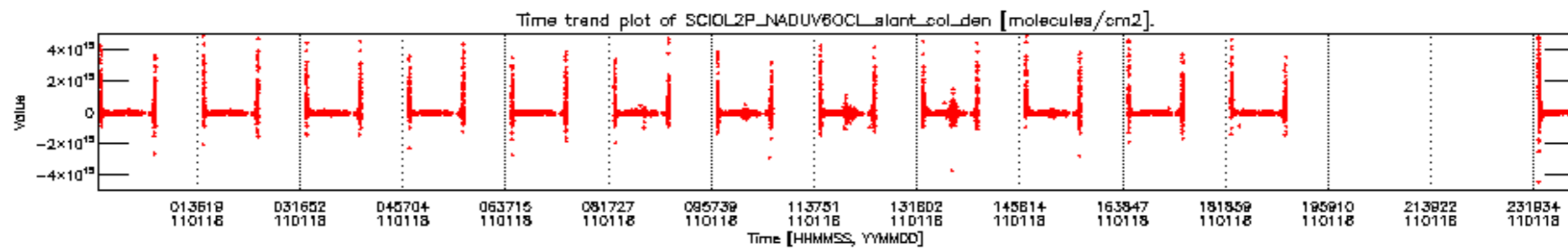
SCIOL2P\_NADUV7S02\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



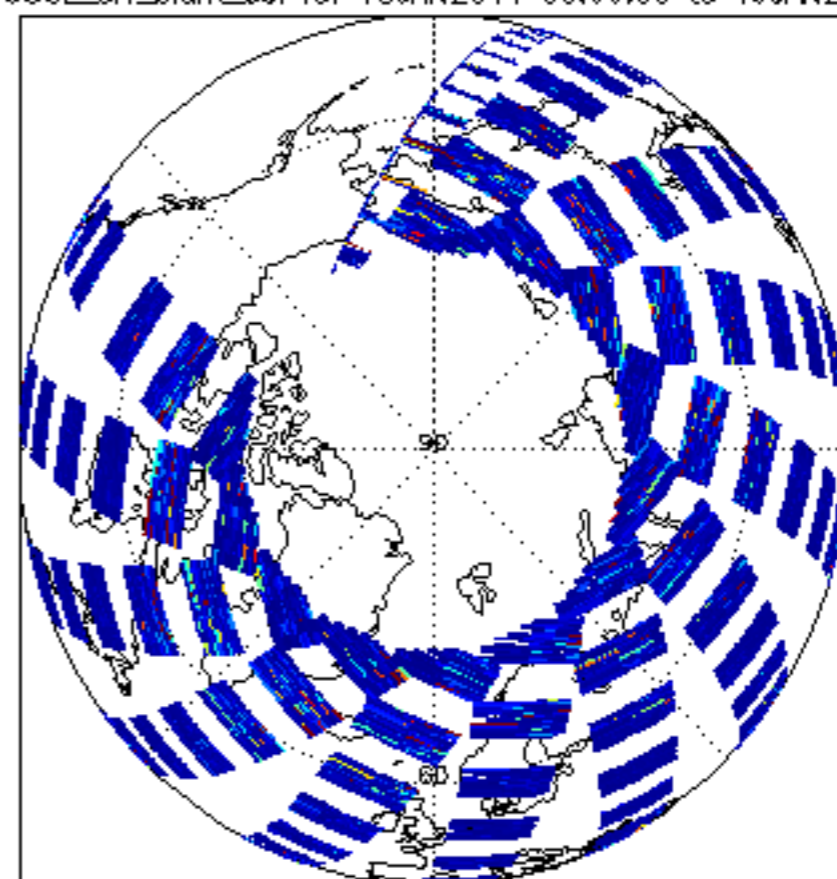
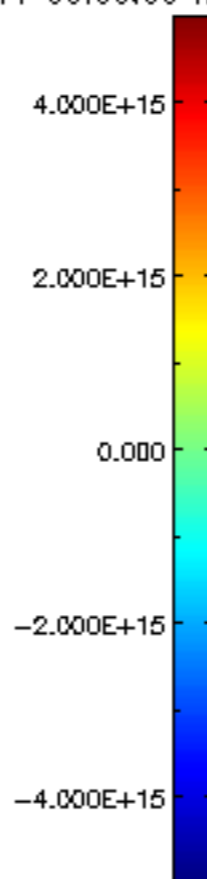
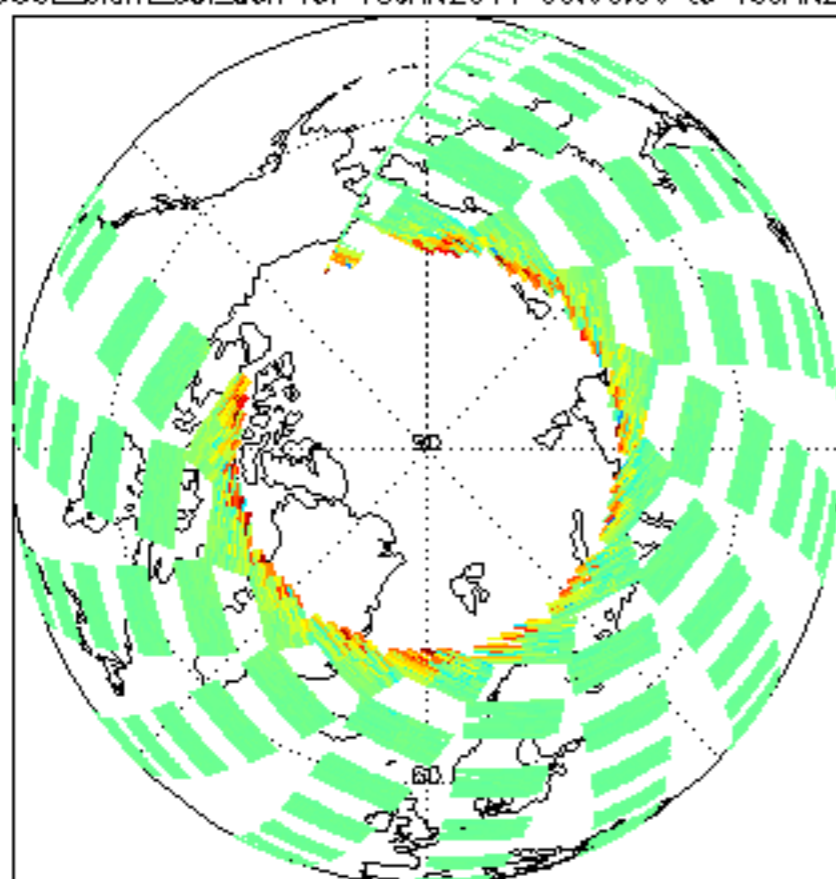
SCIOL2P\_NADUV7S02\_amf\_cl for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



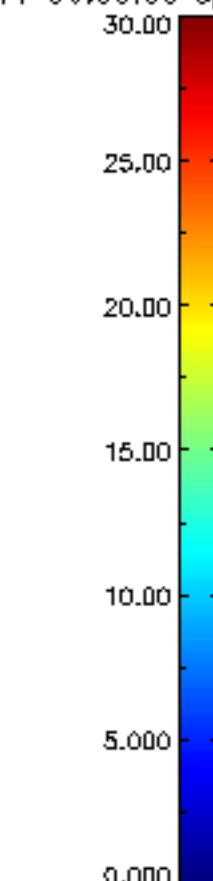
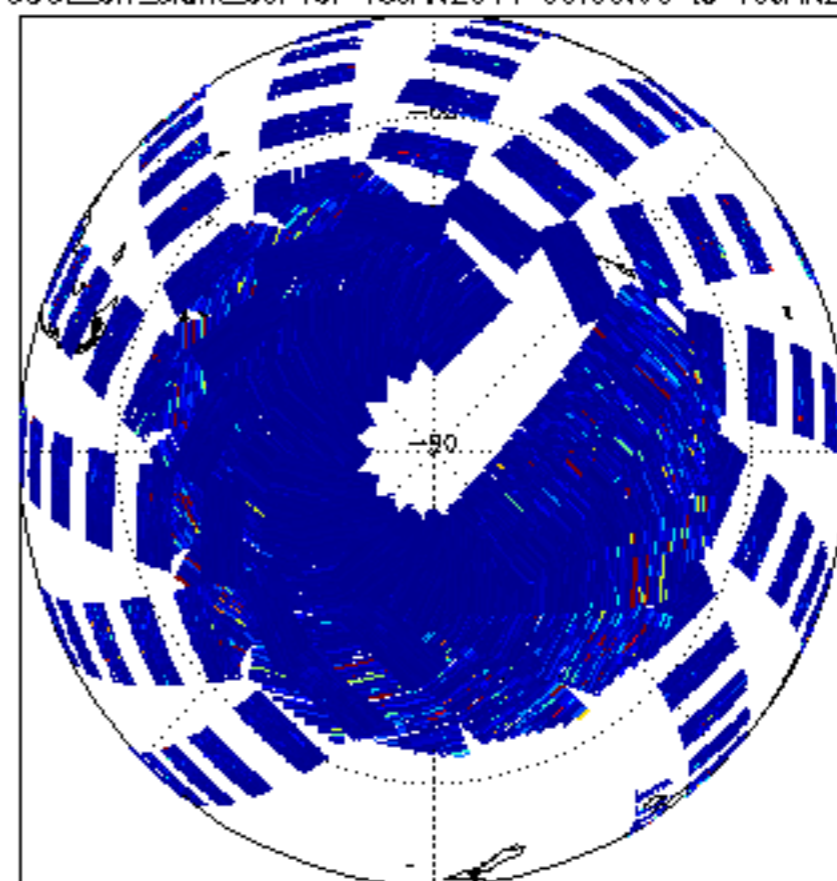
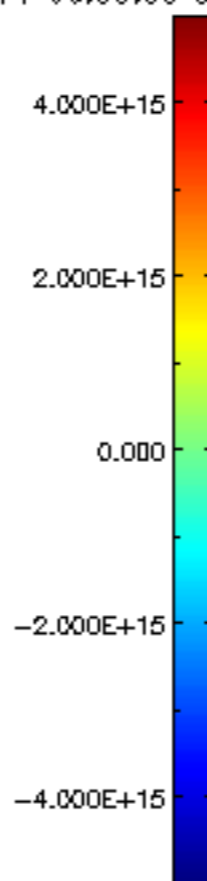
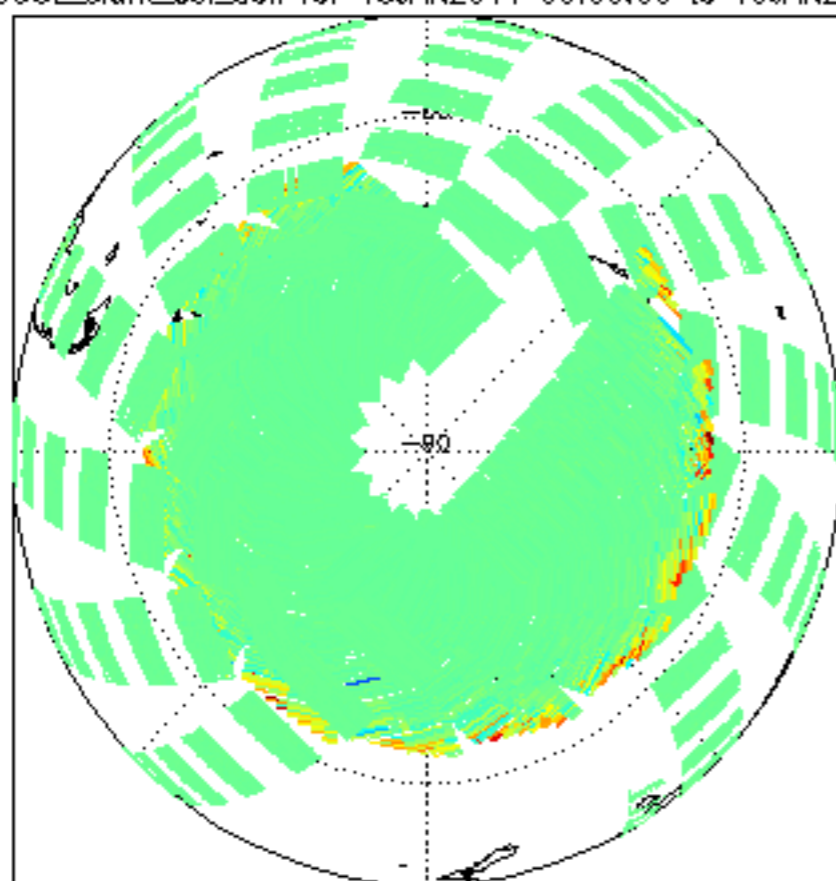


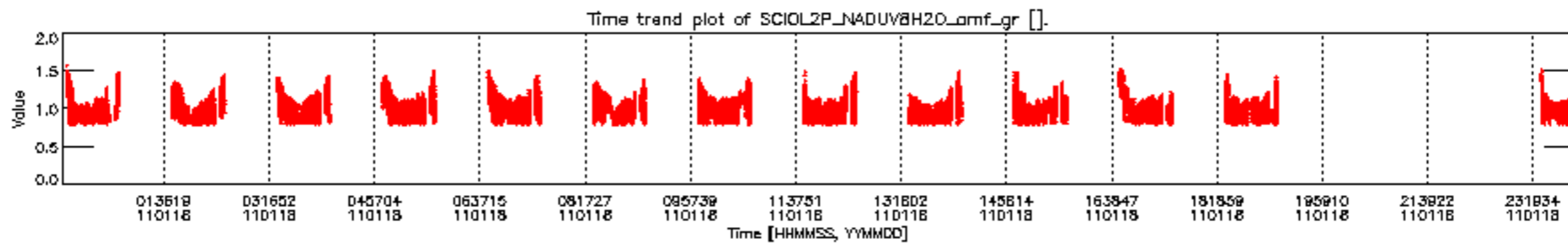
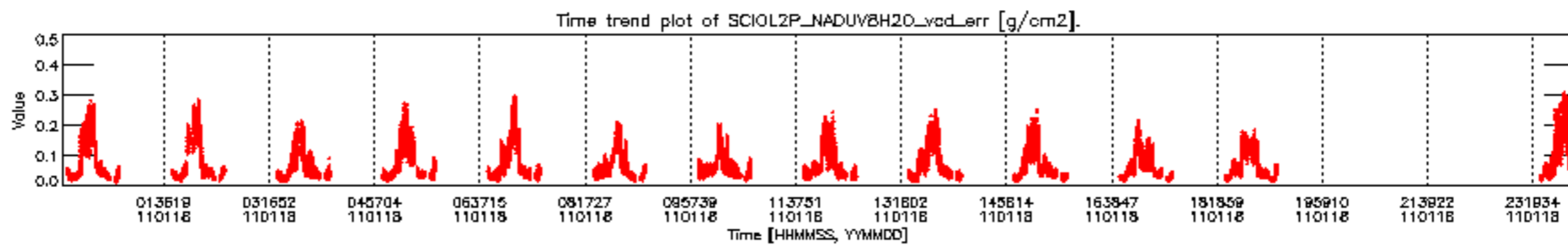
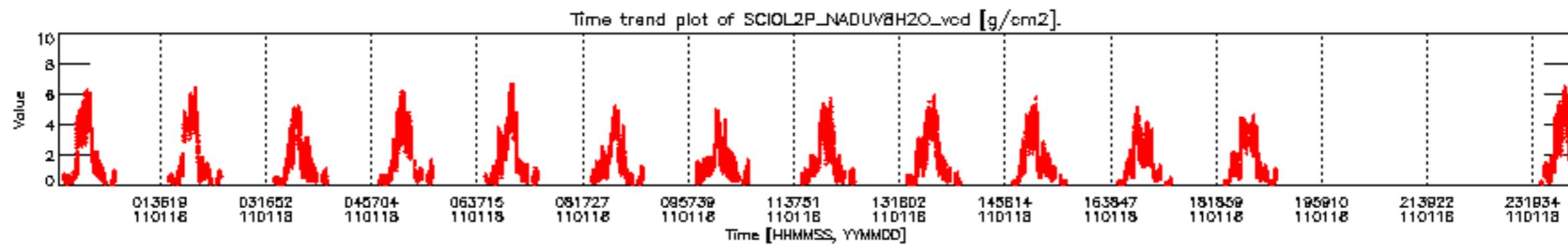


ICIOL2P\_NADUV60CL\_slant\_col\_den for 1BJAN2011 00:00:00 to 19JAN2011 00:00:00 np;ICIOL2P\_NADUV60CL\_err\_slant\_col for 1BJAN2011 00:00:00 to 19JAN2011 00:00:00 np

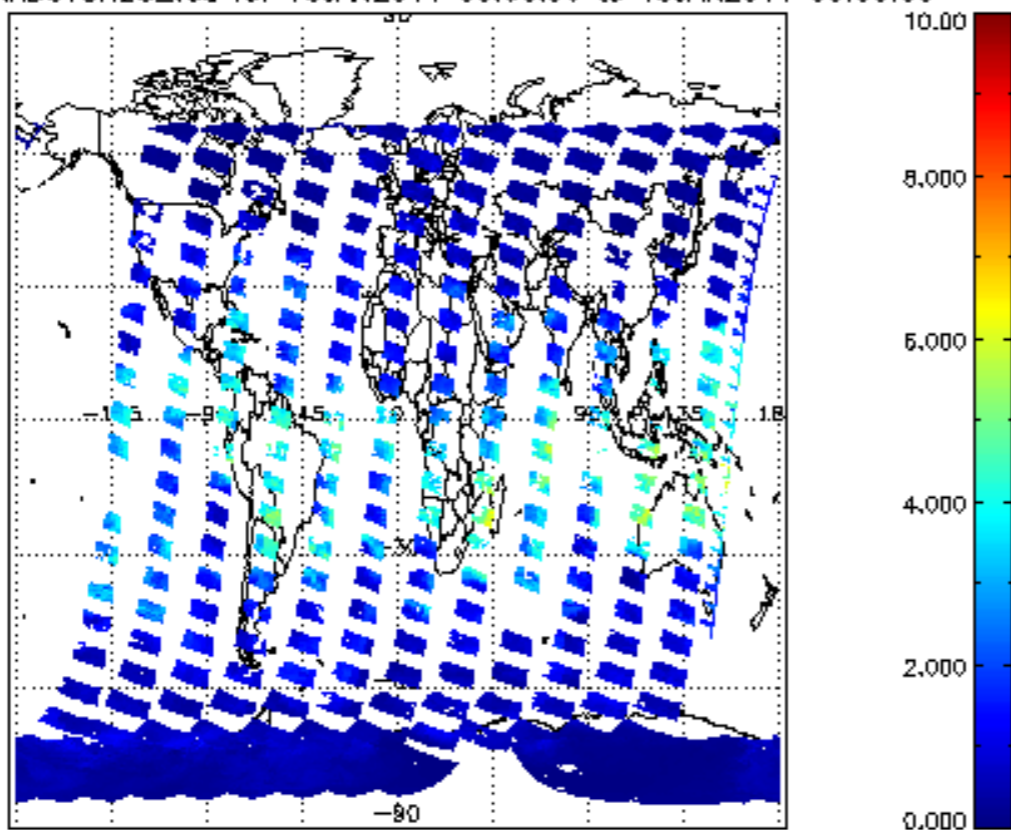


iCIOL2P\_NADUV6OCL\_slant\_col\_den for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 sp 3iCIOL2P\_NADUV6OCL\_err\_slant\_col for 18JAN2011 00:00:00 to 19JAN2011 00:00:00 sp

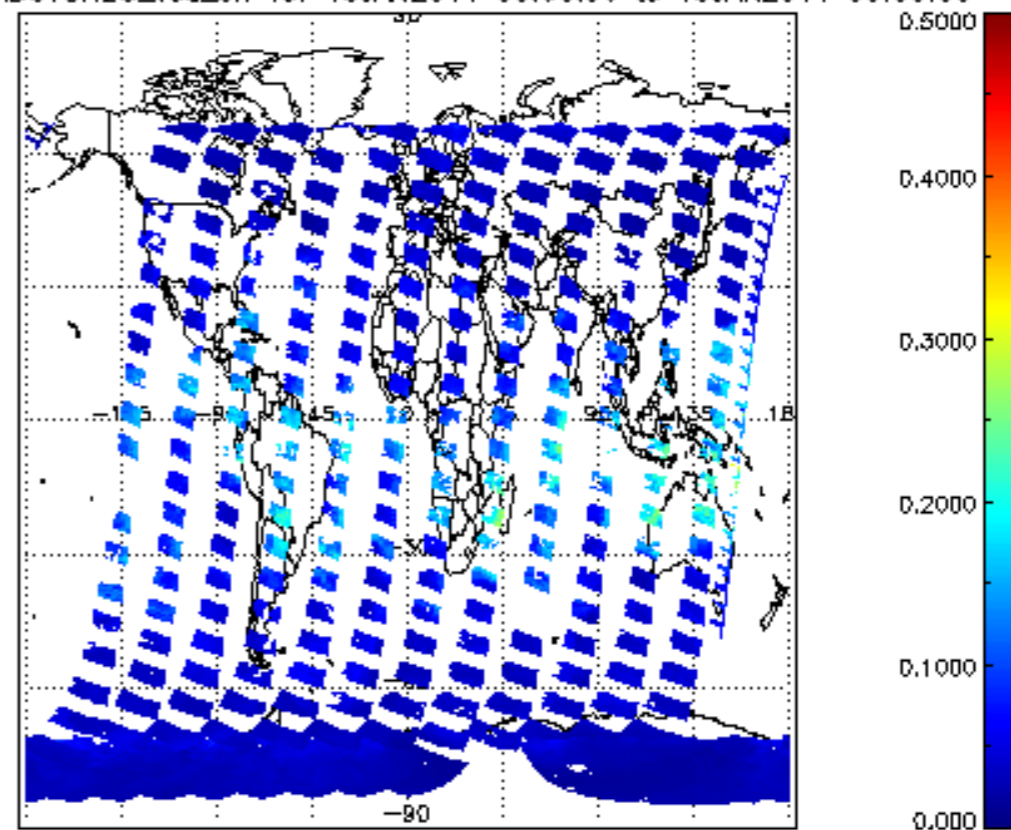




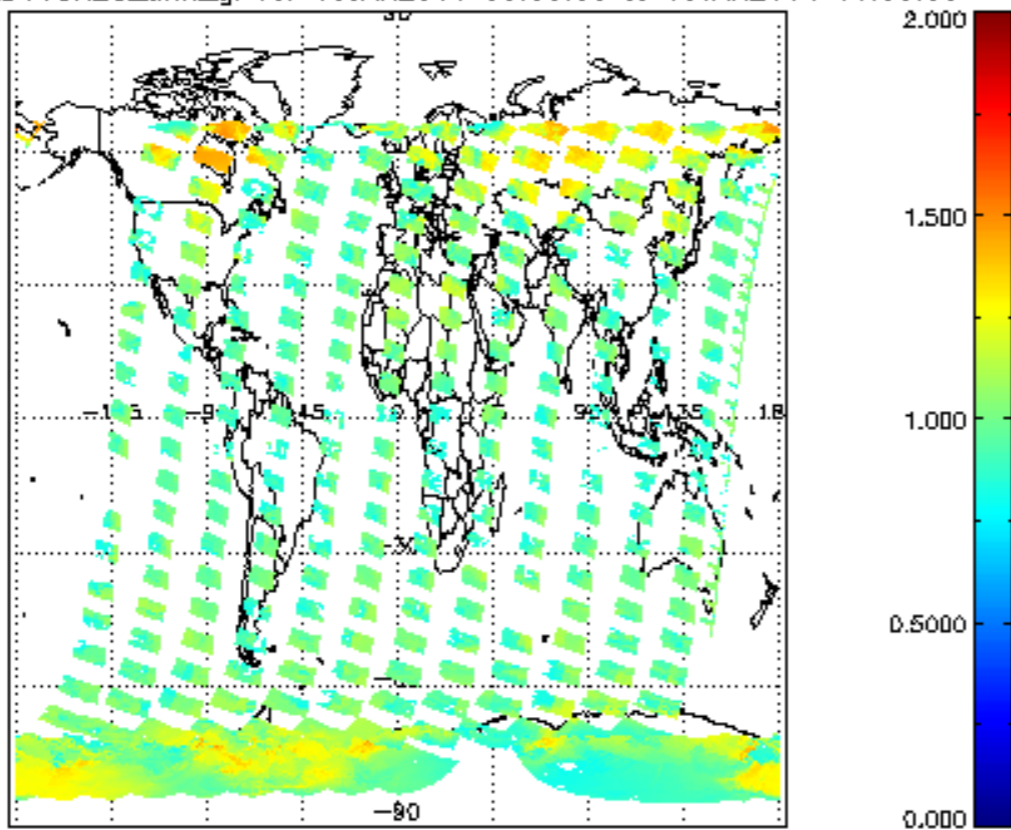
SCIOL2P\_NADUV8H20\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

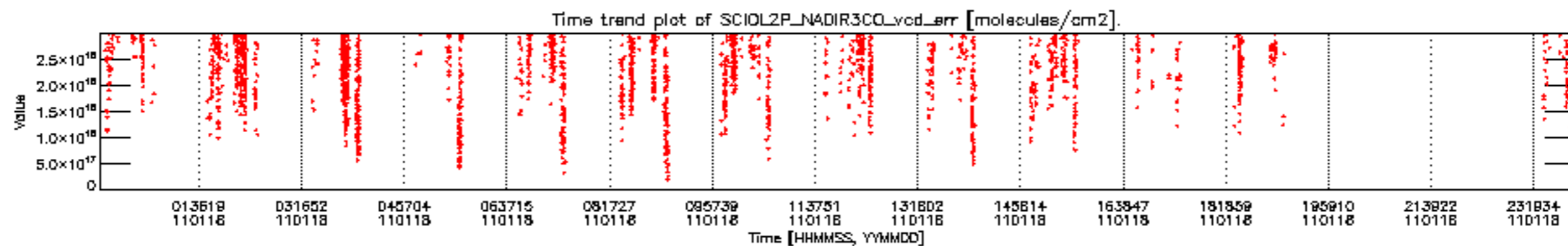
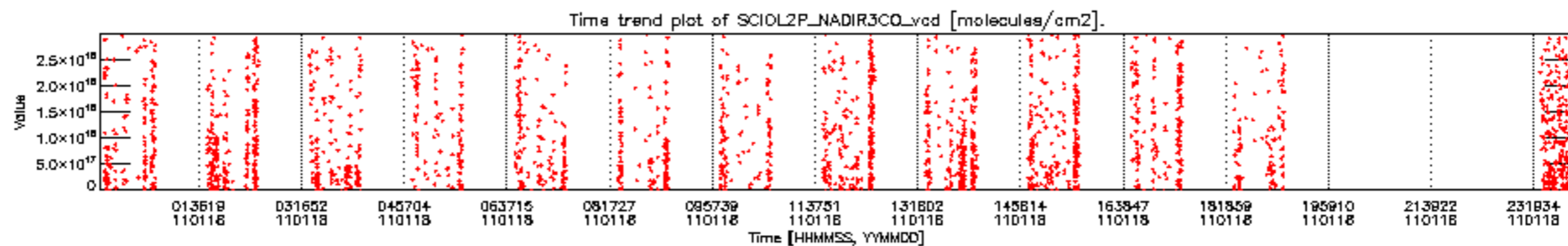


SCIOL2P\_NADUV8H20\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

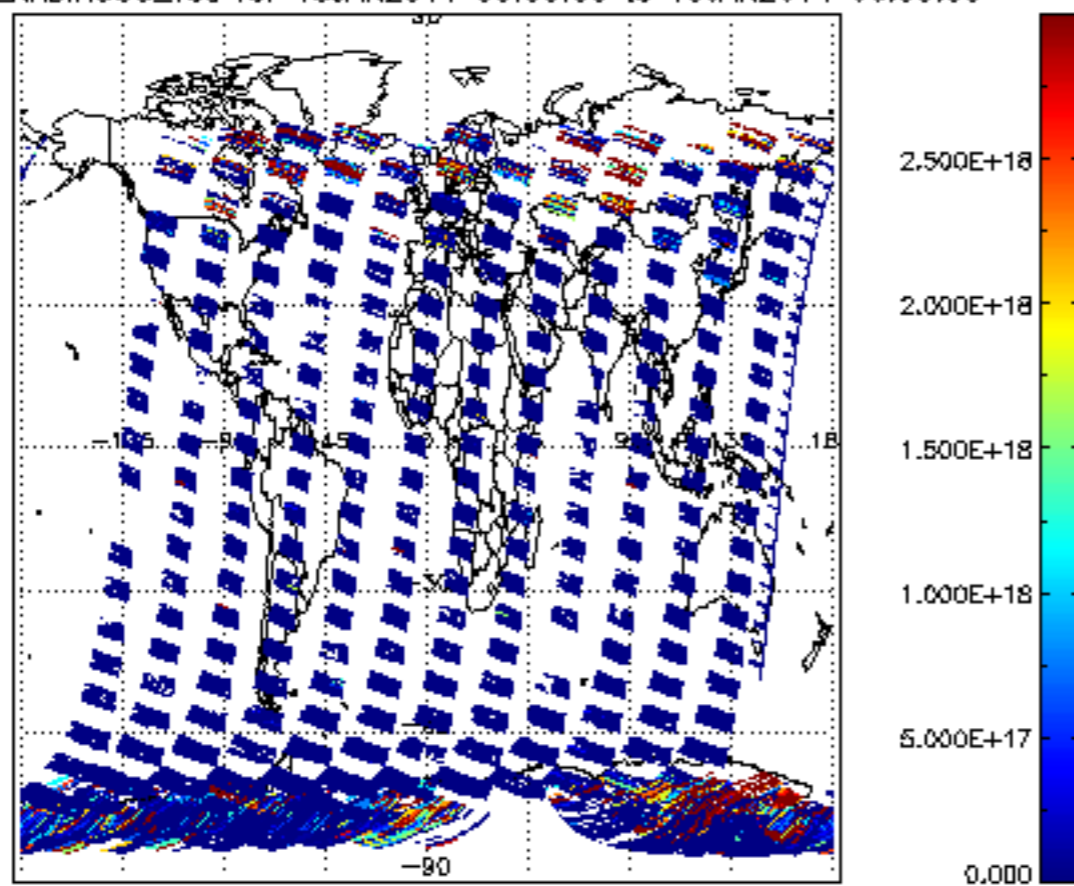


SCIOL2P\_NADUV8H20\_amf\_gr for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

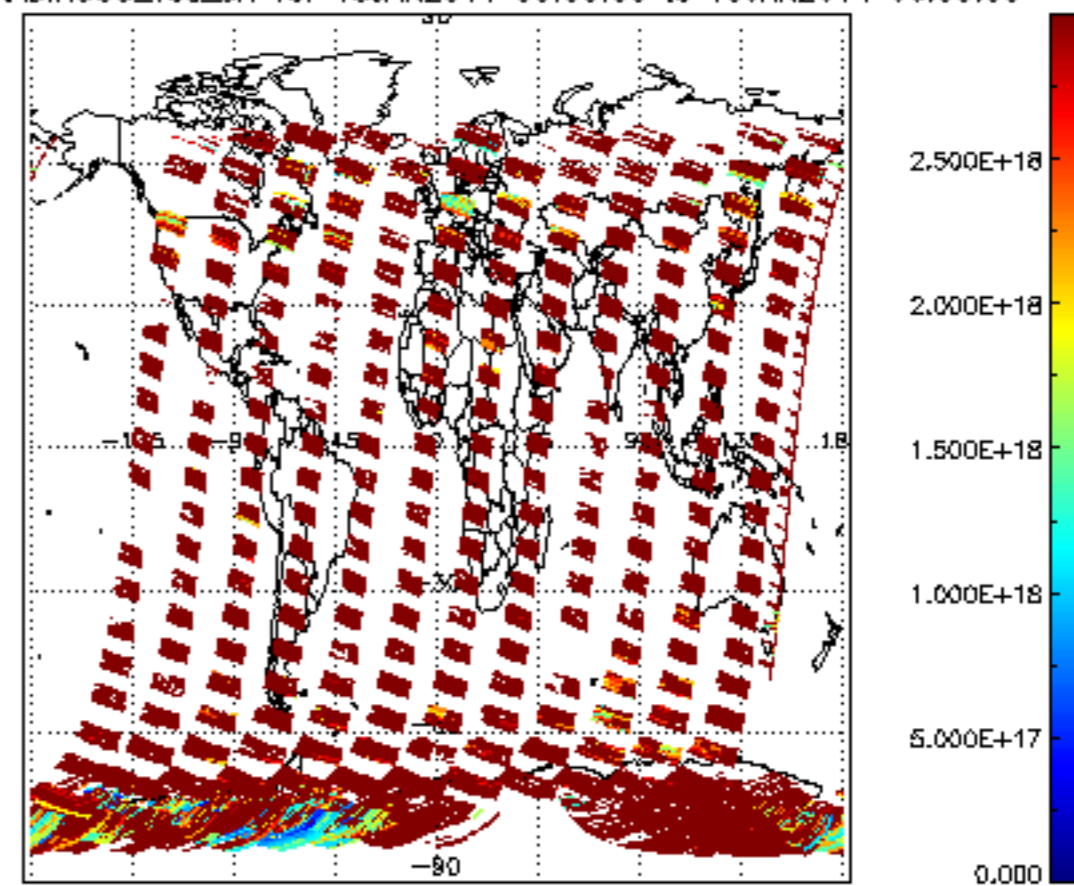




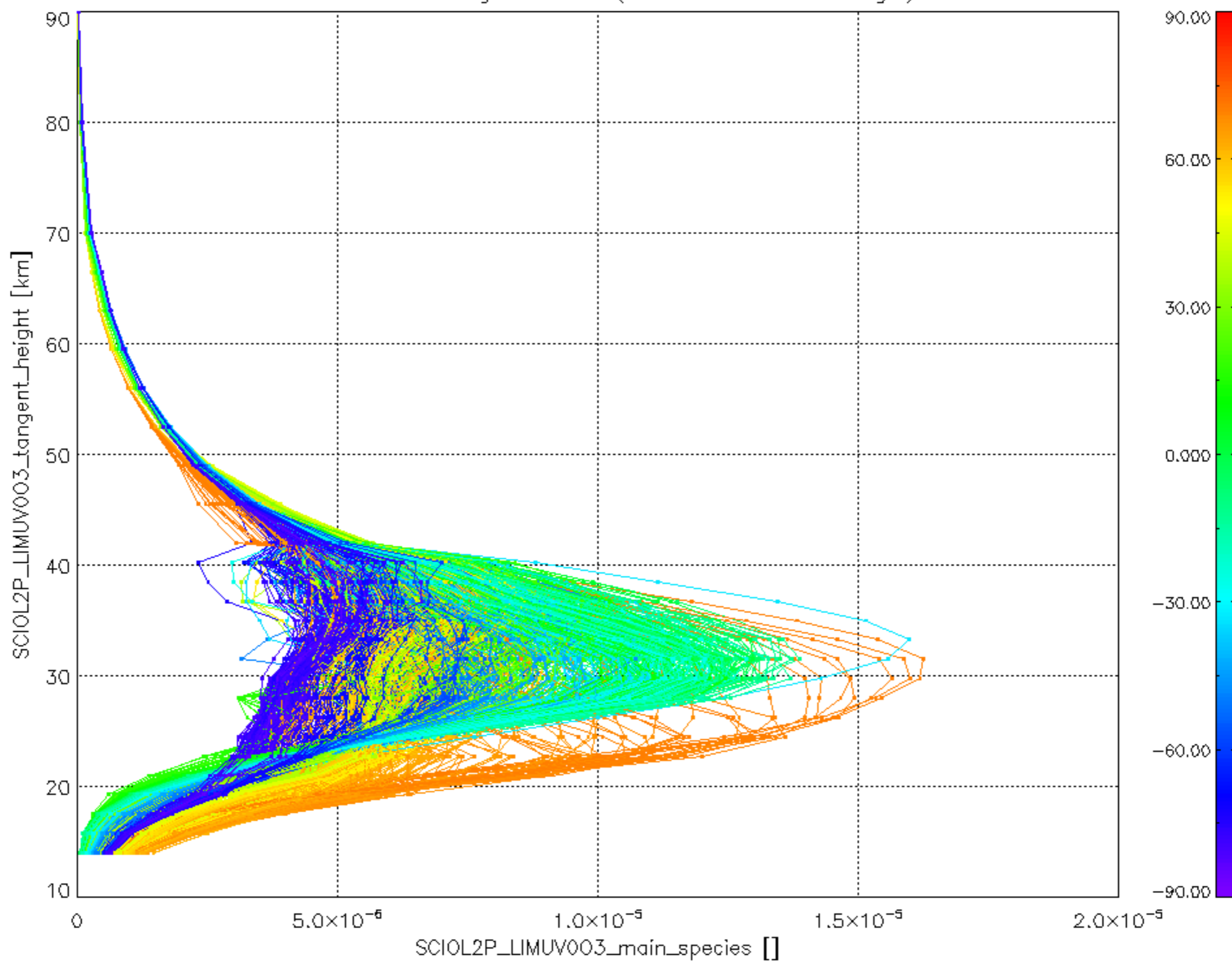
SCIOL2P\_NADIR3CO\_vcd for 18JAN2011 00:00:00 to 19JAN2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 18JAN2011 00:00:00 to 19JAN2011 00:00:00

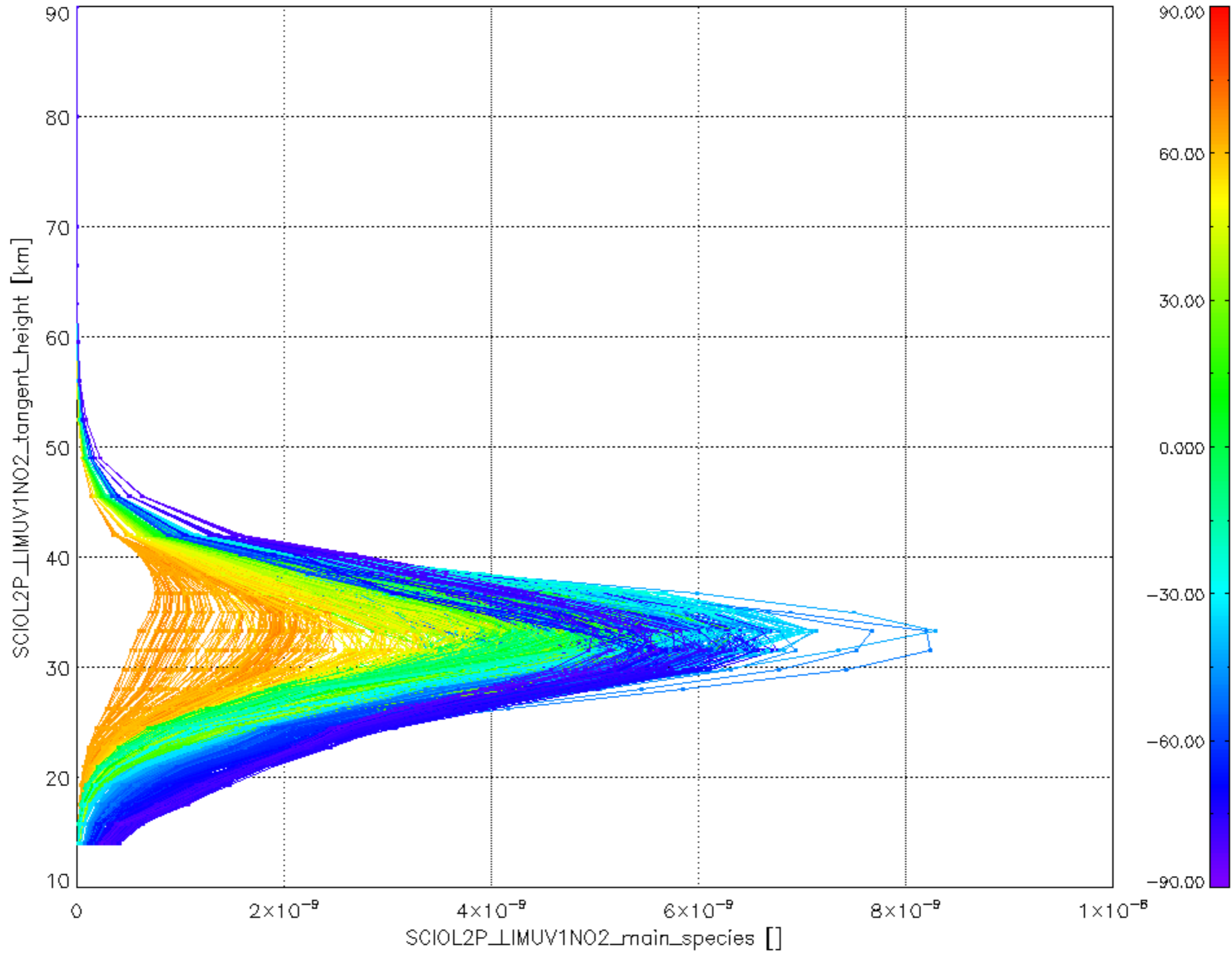


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



Plot of SCIOL2P\_LIMUV3BRO\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).

