

## 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	21FEB2011 03:29:40
Data source version	SCIA-OL/5.01-U
Processing scope for products	03FEB2011 00:00:00 to 04FEB2011 00:00:00
Start time of first product within scope	03FEB2011 00:08:45
Stop time of last product within scope	04FEB2011 00:32:38
Total number of level 2 products	13
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__2PUDPA20110203_000845_000035993099_00117_46683_3142.N1</a>	03FEB2011 00:08:45	03FEB2011 01:08:44	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110203_051513_000032823099_00120_46686_3141.N1</a>	03FEB2011 05:15:13	03FEB2011 06:09:56	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110203_065431_000033503099_00121_46687_3143.N1</a>	03FEB2011 06:54:31	03FEB2011 07:50:22	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110203_083540_000032823099_00122_46688_3146.N1</a>	03FEB2011 08:35:40	03FEB2011 09:30:23	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110203_101458_000033503099_00123_46689_3149.N1</a>	03FEB2011 10:14:58	03FEB2011 11:10:49	0	GOOD

5	SCI_OL__2PUDPA20110203_115608_000032823099_00124_46690_3161.N1	03FEB2011 11:56:08	03FEB2011 12:50:50	0	GOOD
6	SCI_OL__2PUDPA20110203_133525_000033503099_00125_46691_3165.N1	03FEB2011 13:35:25	03FEB2011 14:31:16	0	GOOD
7	SCI_OL__2PUDPA20110203_151635_000032823099_00126_46692_3166.N1	03FEB2011 15:16:35	03FEB2011 16:11:17	0	GOOD
8	SCI_OL__2PUDPA20110203_165552_000033503099_00127_46693_3167.N1	03FEB2011 16:55:52	03FEB2011 17:51:43	0	GOOD
9	SCI_OL__2PUDPA20110203_183724_000032133099_00128_46694_3168.N1	03FEB2011 18:37:24	03FEB2011 19:30:58	0	GOOD
10	SCI_OL__2PUDPA20110203_201642_000032823099_00129_46695_3169.N1	03FEB2011 20:16:42	03FEB2011 21:11:24	0	GOOD
11	SCI_OL__2PUDPA20110203_215729_000032823099_00130_46696_3170.N1	03FEB2011 21:57:29	03FEB2011 22:52:12	0	GOOD
12	SCI_OL__2PUDPA20110203_233647_000033503099_00131_46697_3171.N1	03FEB2011 23:36:47	04FEB2011 00:32:38	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: 148296

Total number of cloud data DSRs with good quality flag (=0): 148296 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	148296	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	148296	0.16409	0.12500	0.12500	0.25000	0.057951	s
CL_FRAC	148296	0.45531	0.45667	0.0000	1.0000	0.29533	-
CL_FRAC_ERR	148296	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	148296	5.2509	4.0000	4.0000	8.0000	1.8544	
PMD_READ_CL[0]	148296	0.44245	0.0000	0.0000	8.0000	1.1848	-
PMD_READ_CL[1]	148296	0.96375	0.0000	0.0000	8.0000	2.2817	-
CL_TOP_HEIGHT	112298	3.9135	3.0434	0.0000	17.000	3.5497	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	112298	59.862	62.892	0.0000	101.00	40.347	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	148296	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	148296	11001100	11000100	11000000	11100000	3526.4	flags
AERO_ABSO_IND	148296	0.44191	0.0000	0.0000	6.0216	0.78054	
AERO_IND_DIAG	148296	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	148296	01001111	00000000	00000000	11000000	24208.	flags

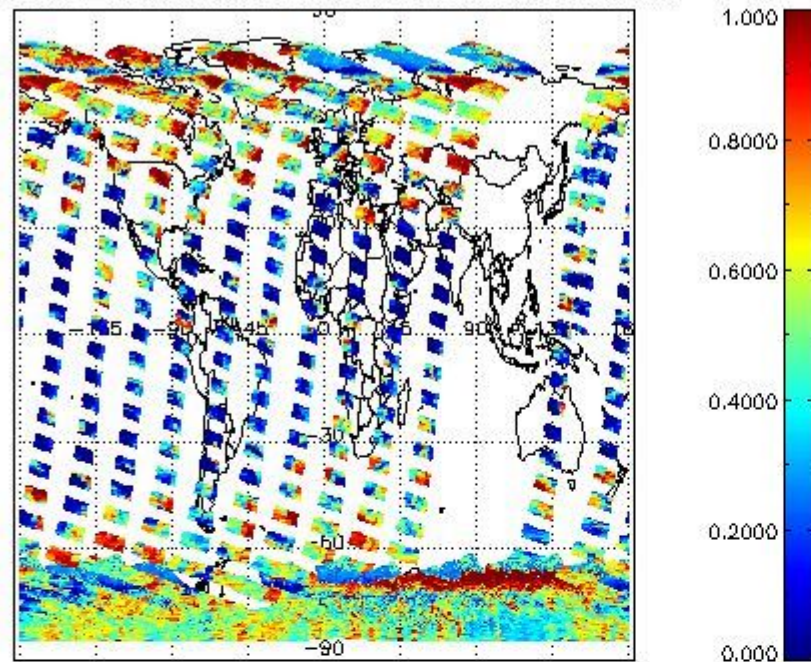
#### Time and geolocation plots:

Plots are available for the following parameters:

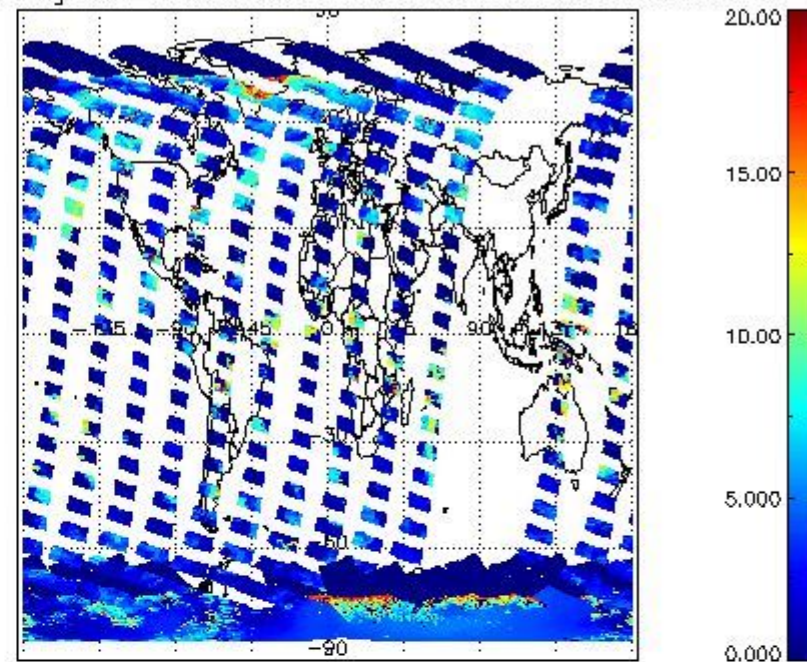
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



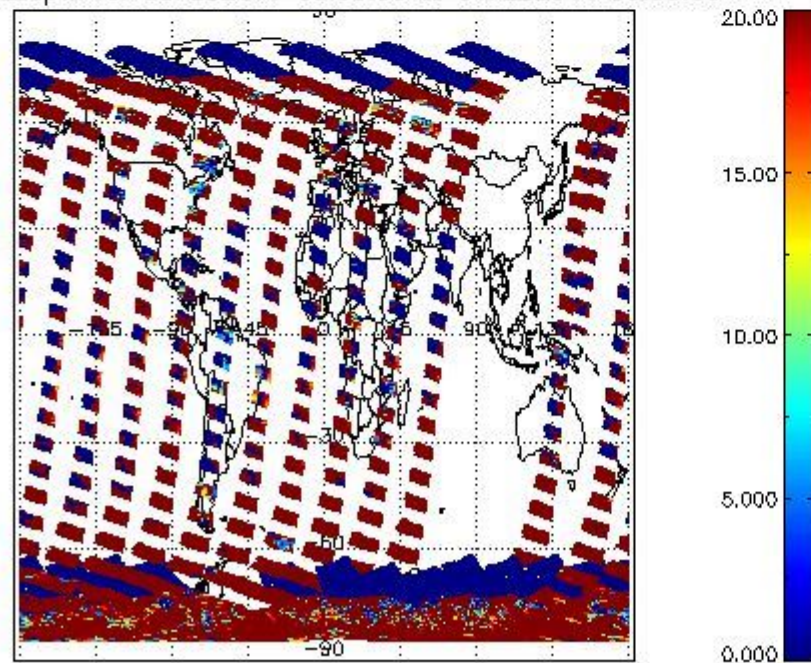
cL\_frac for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



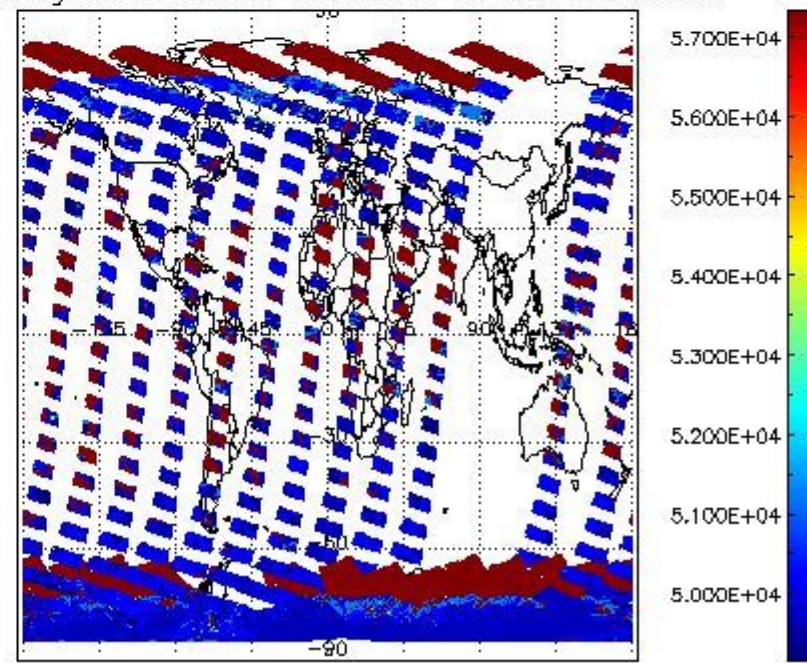
cL\_top\_height for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



cL\_opt\_depth for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



cloud\_flags for 03FEB2011 00:00:00 to 04FEB2011 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:

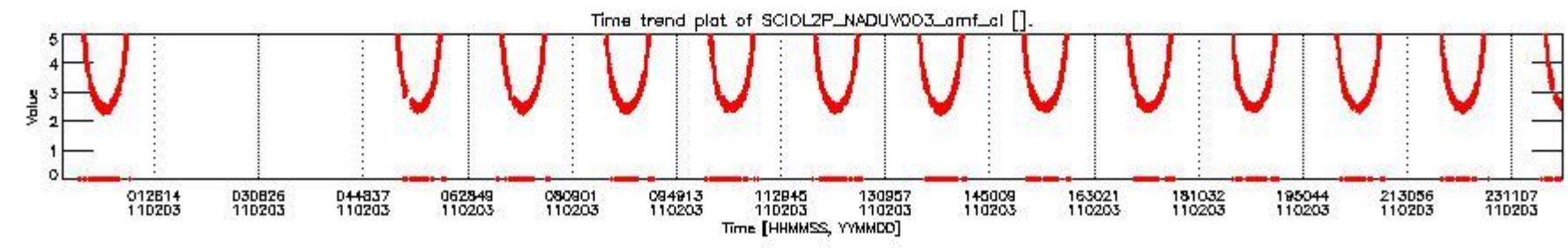
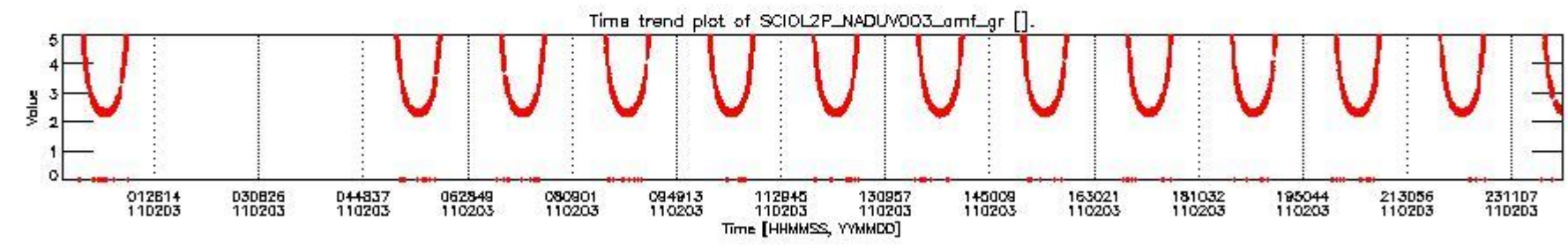
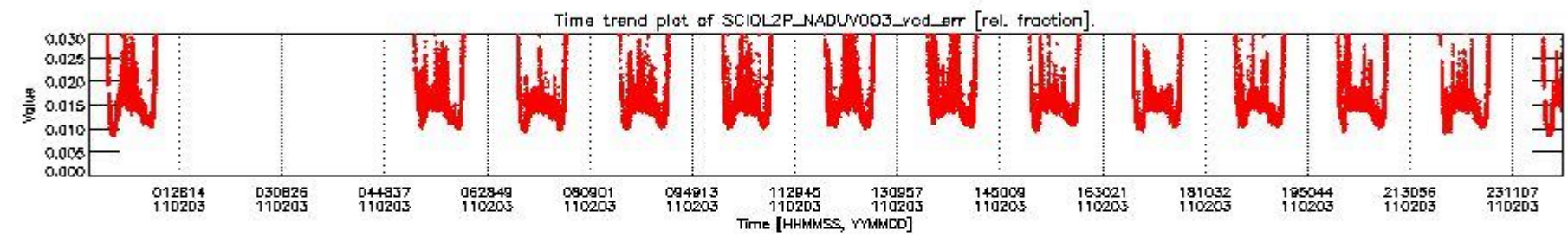
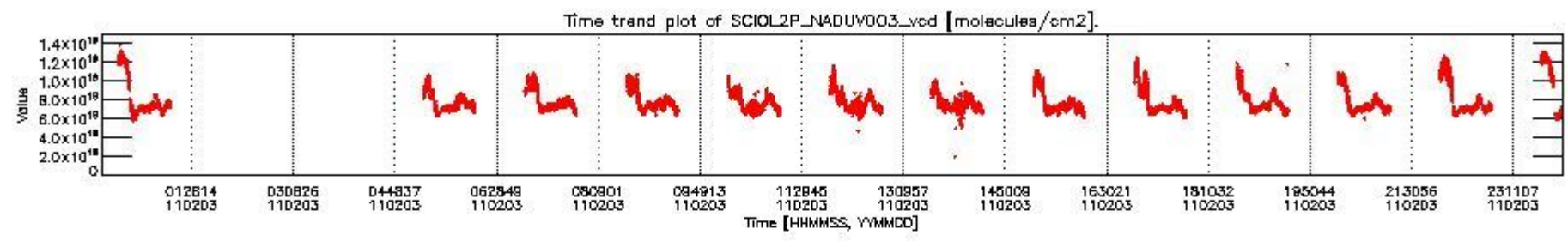
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

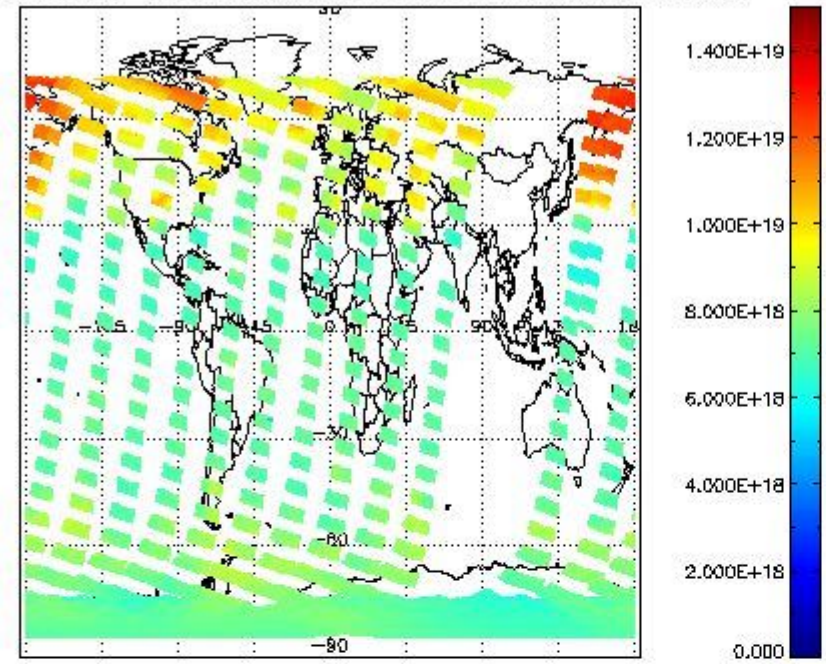
#### 2.2.2.1 O3 (UV0)



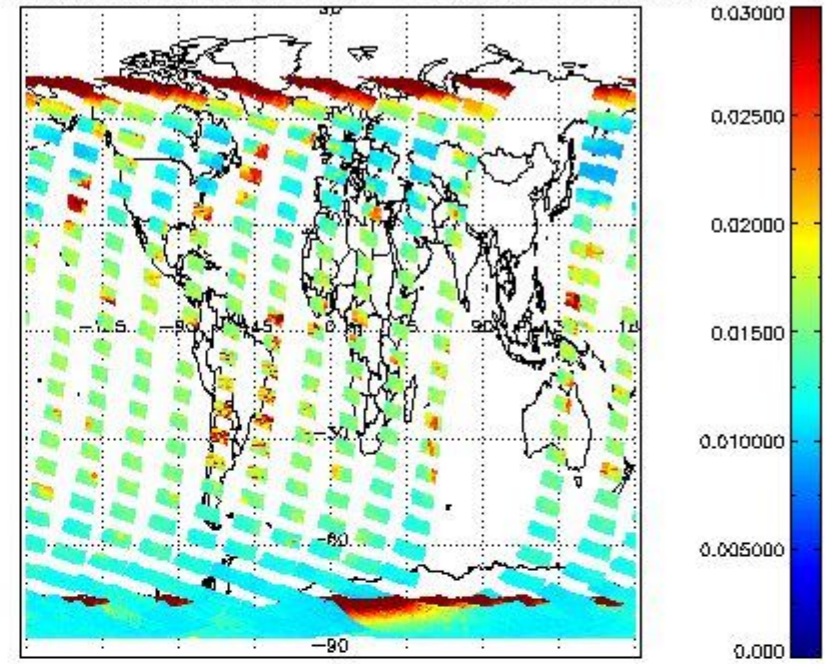




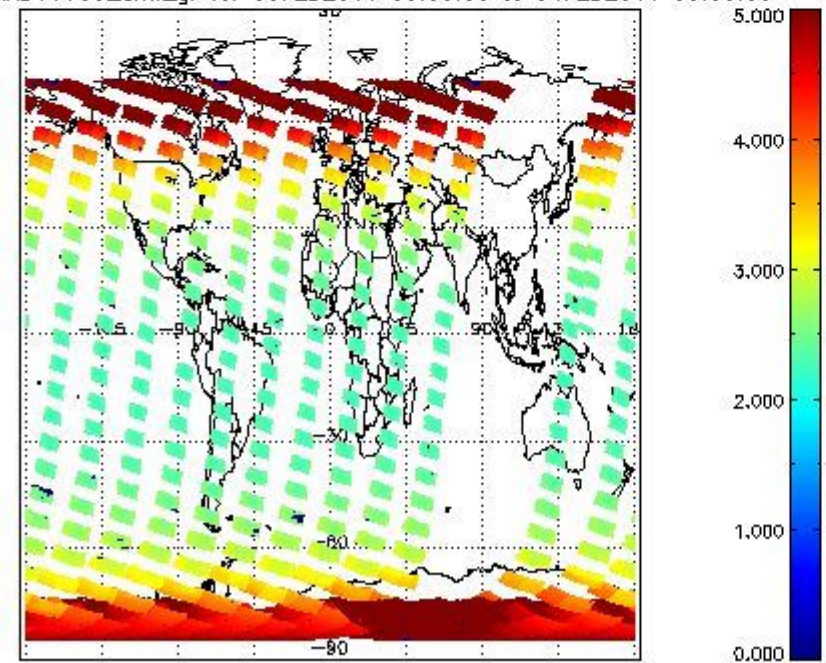
SCIOL2P\_NADUV003\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



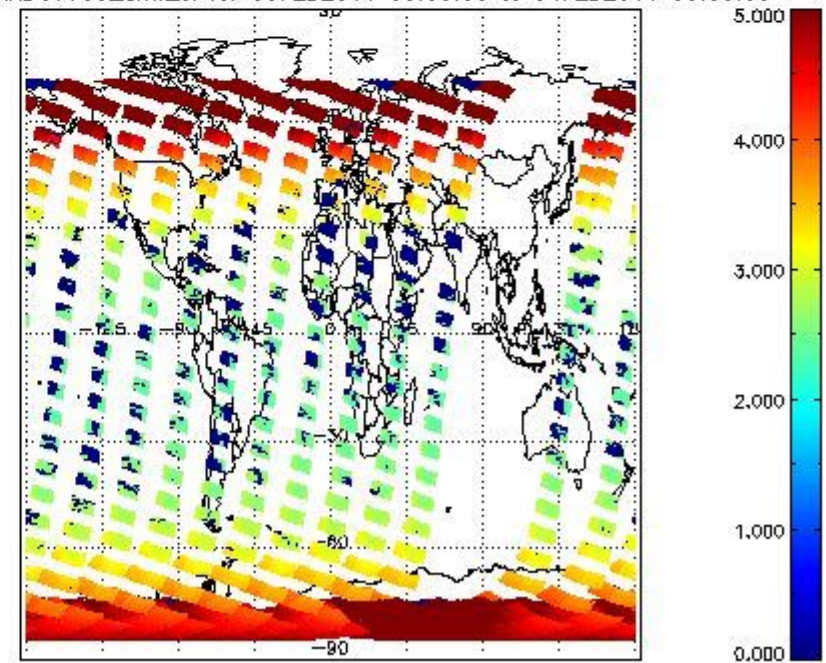
SCIOL2P\_NADUV003\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

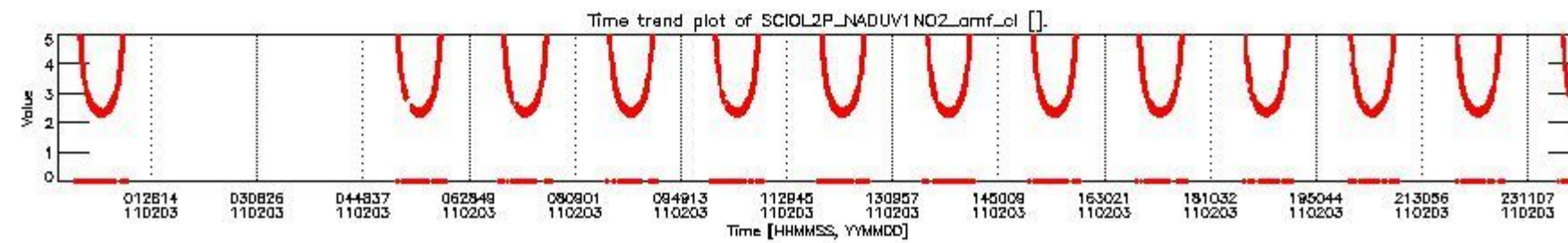
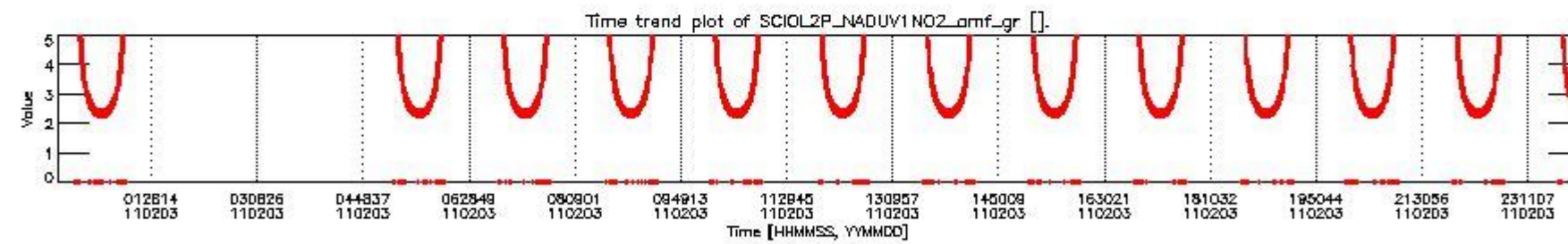
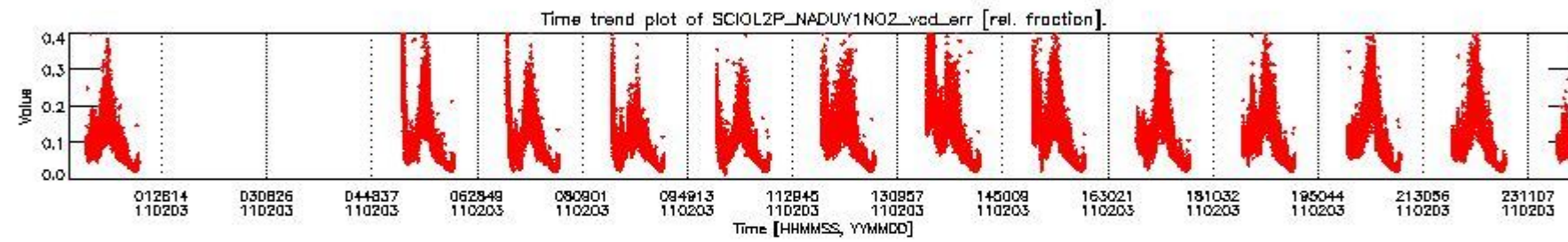
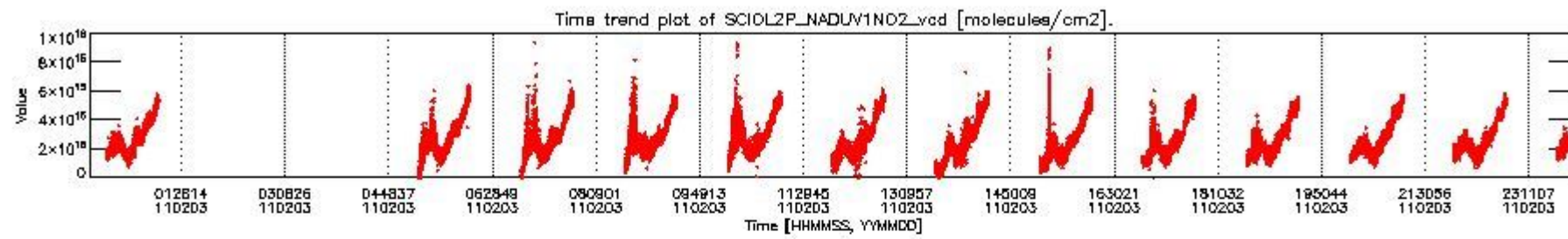


SCIOL2P\_NADUV003\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

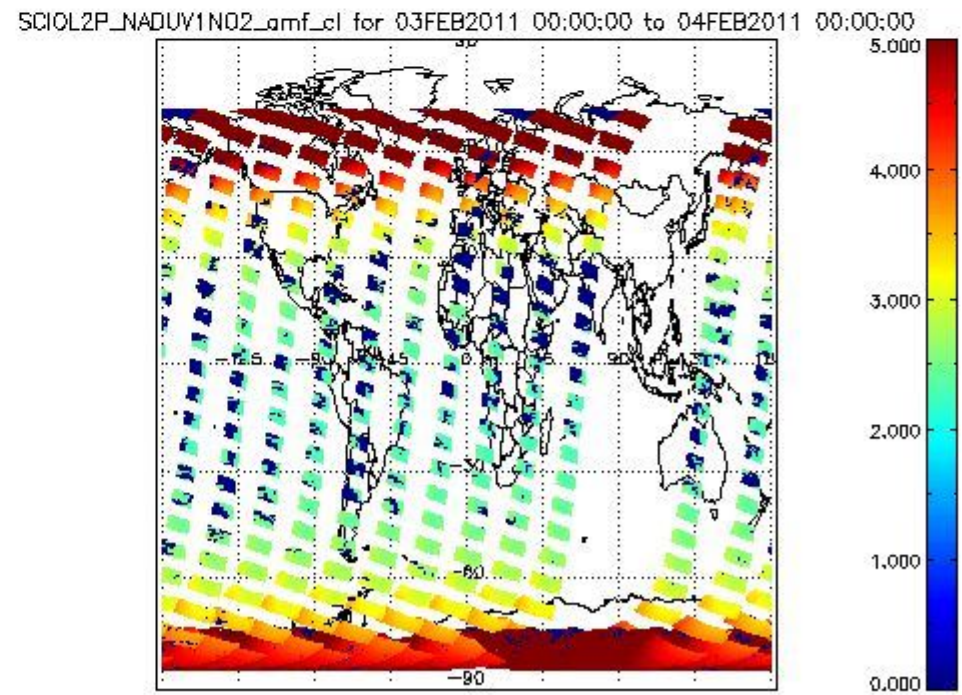
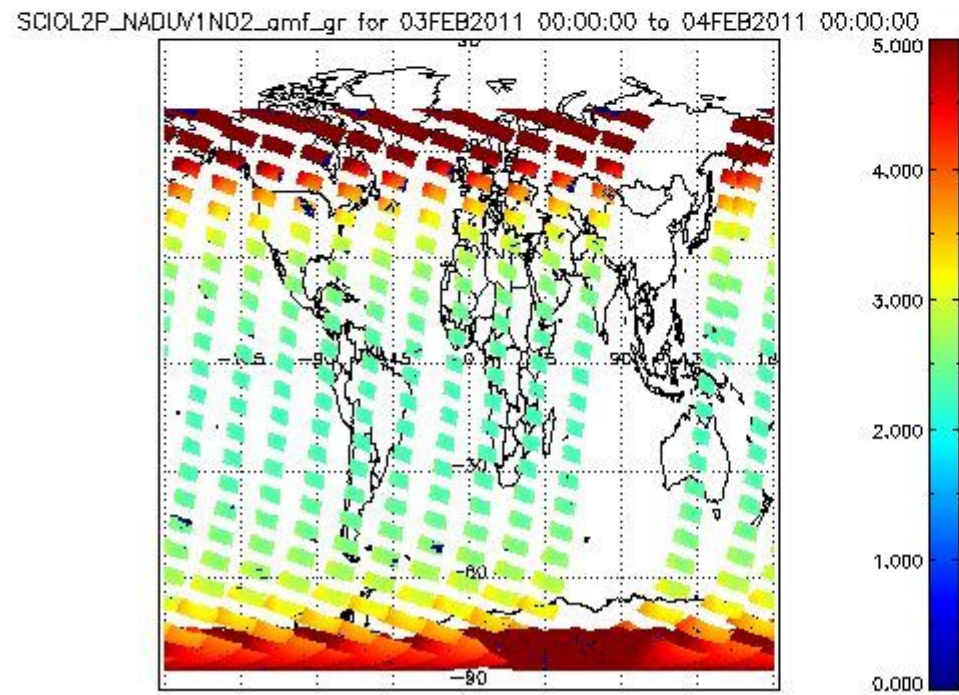
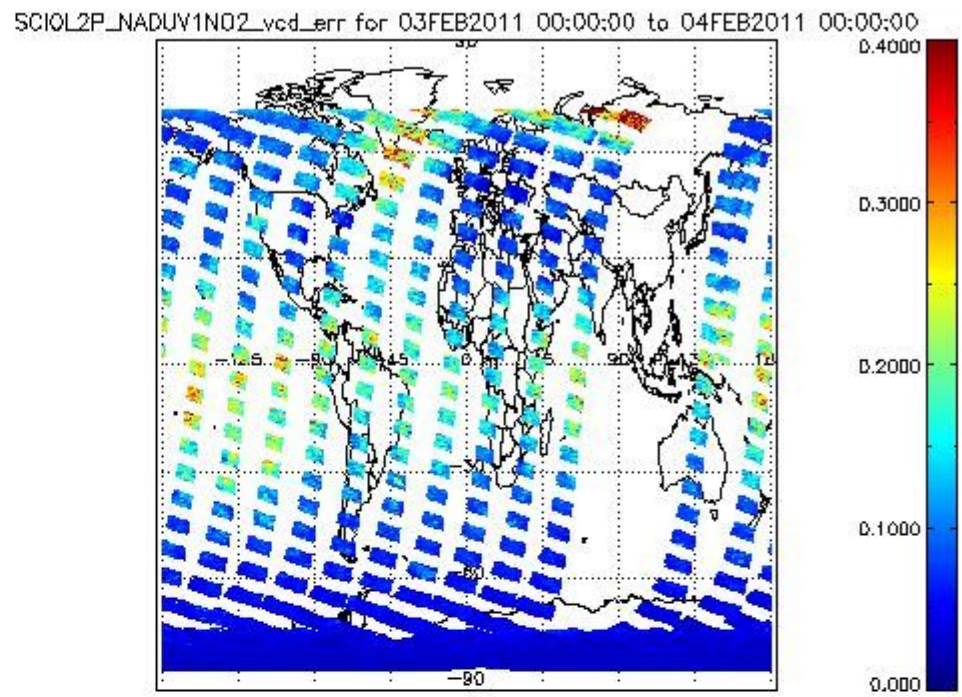
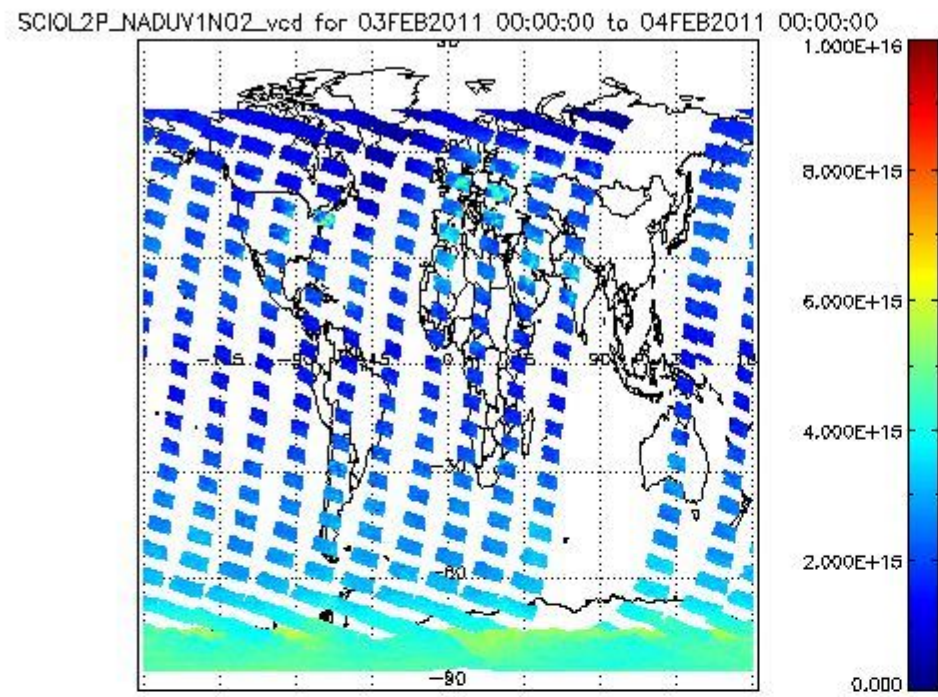


2.2.2.2 NO2 (UV1)



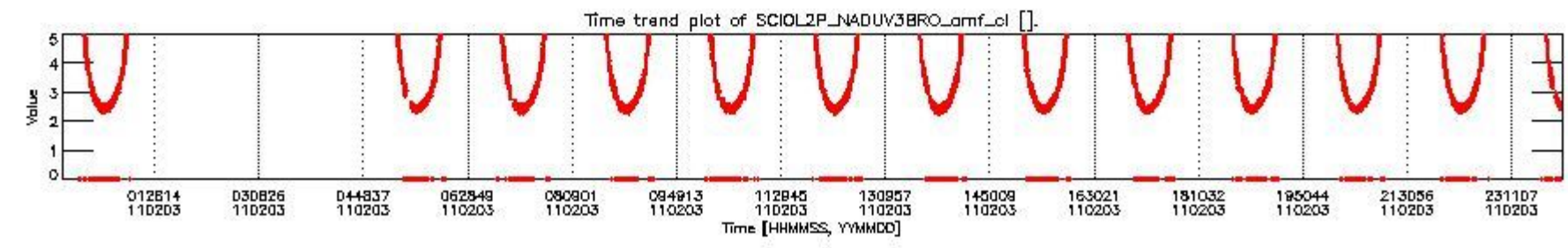
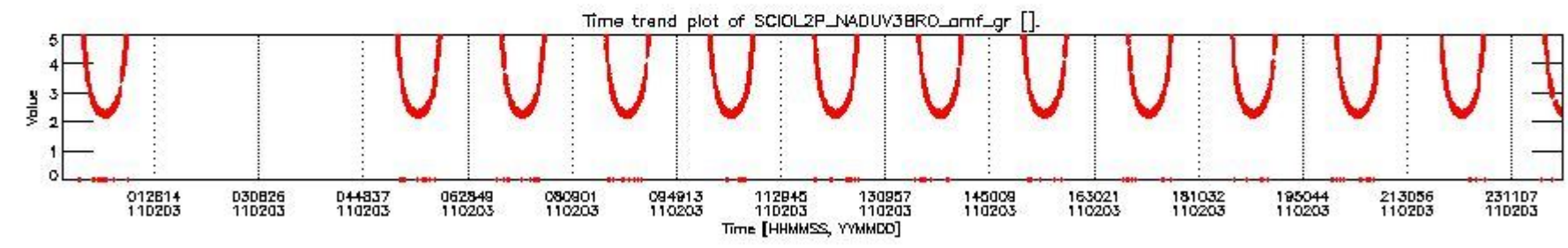
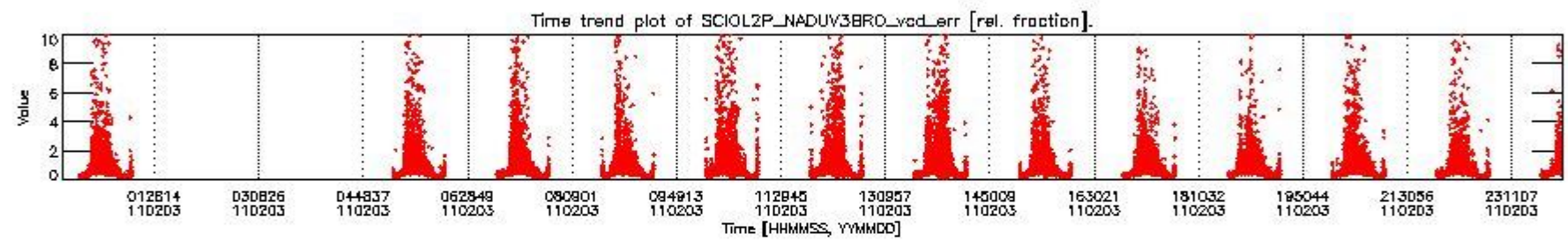
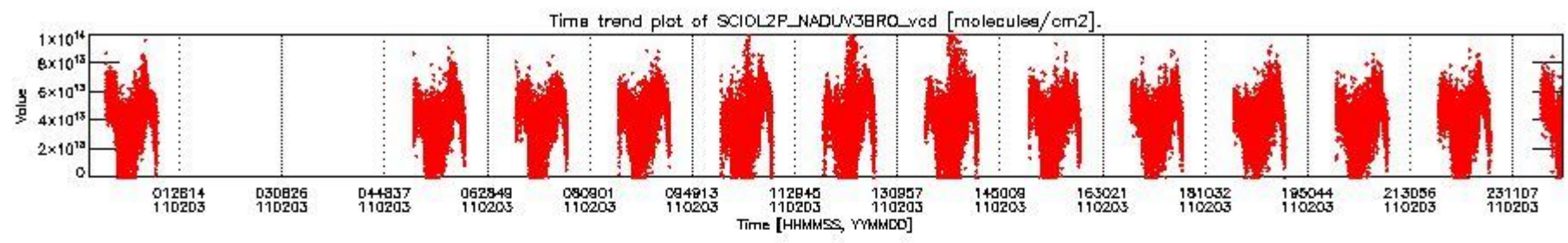






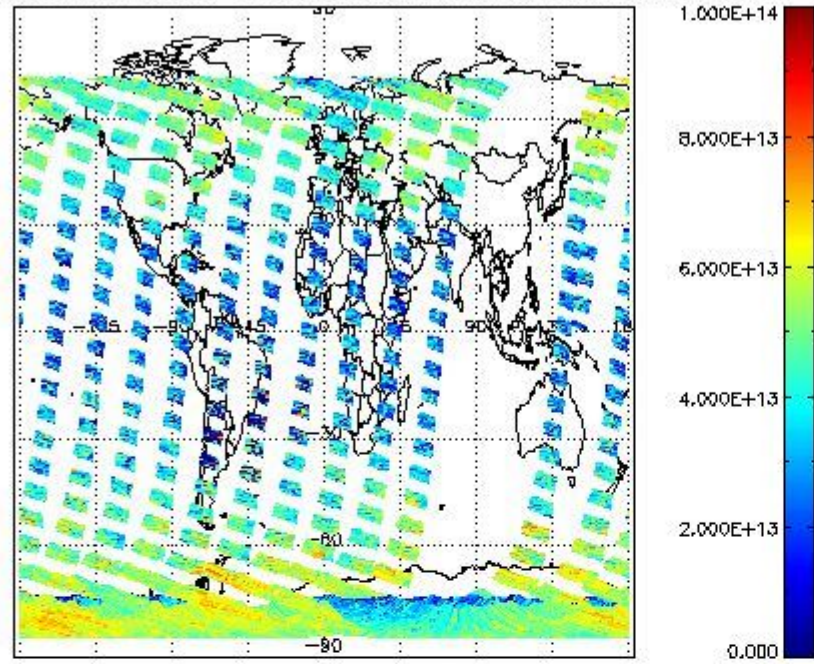
### 2.2.2.3 BrO (UV3)



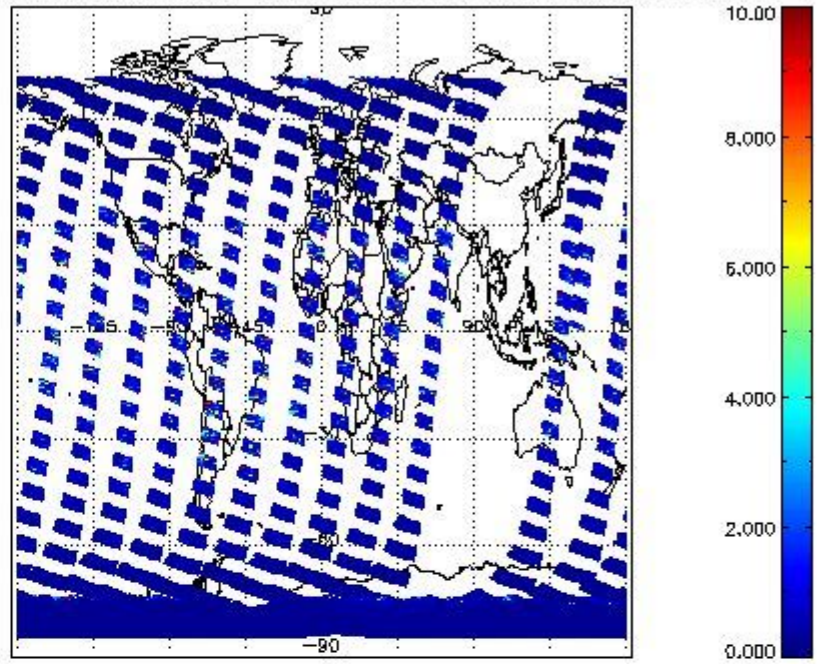




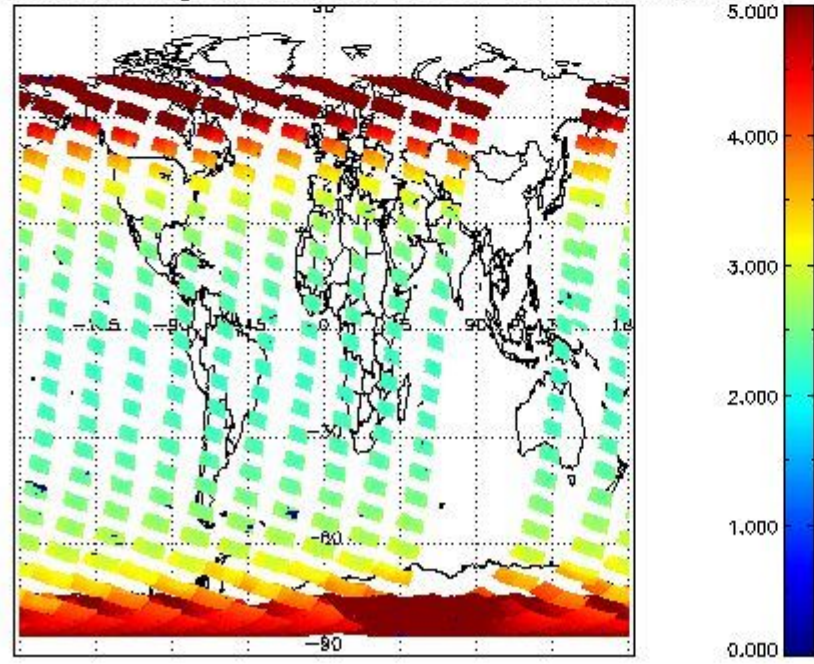
SCIOL2P\_NADUV3BRO\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



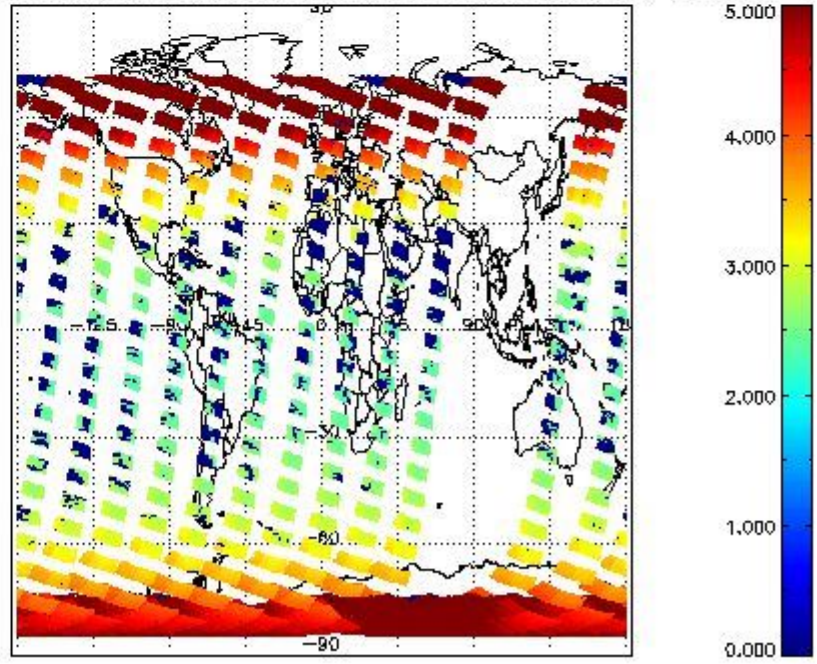
SCIOL2P\_NADUV3BRO\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

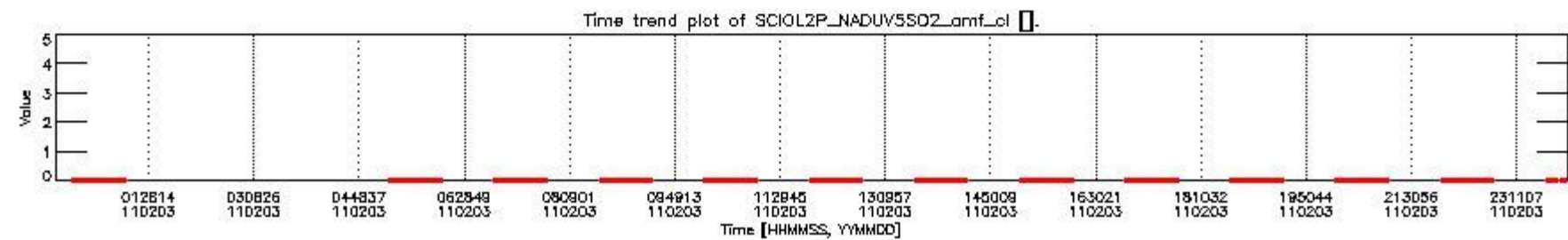
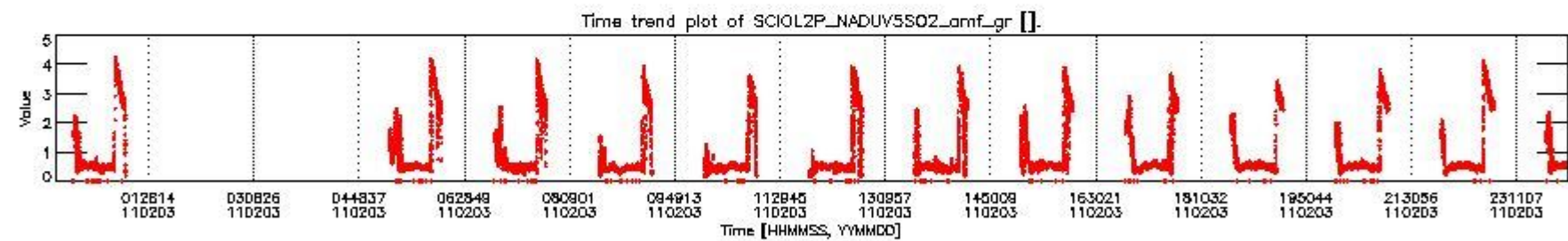
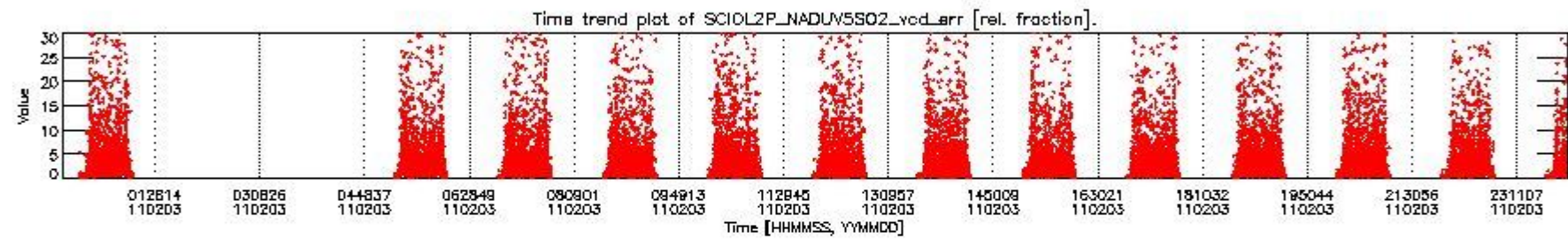
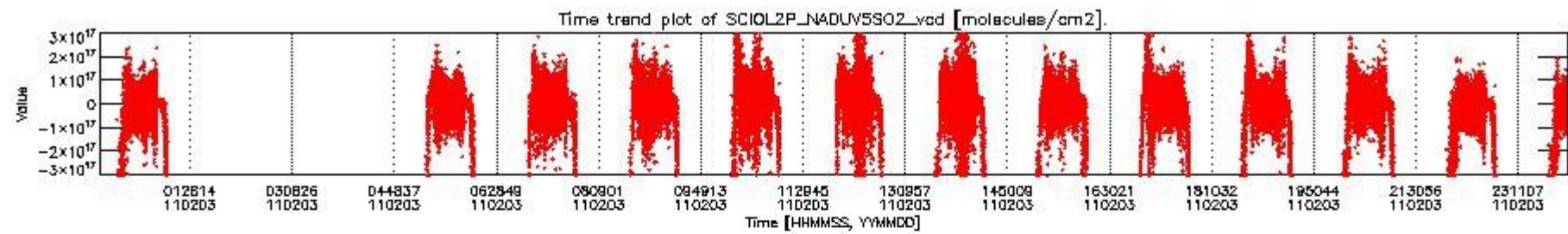


SCIOL2P\_NADUV3BRO\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



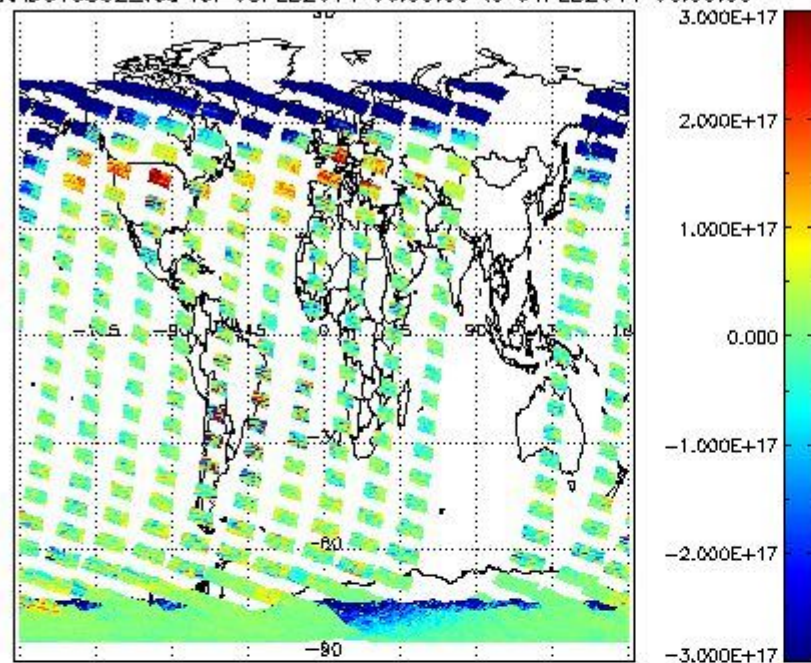
#### 2.2.2.4 SO2 (UV5)



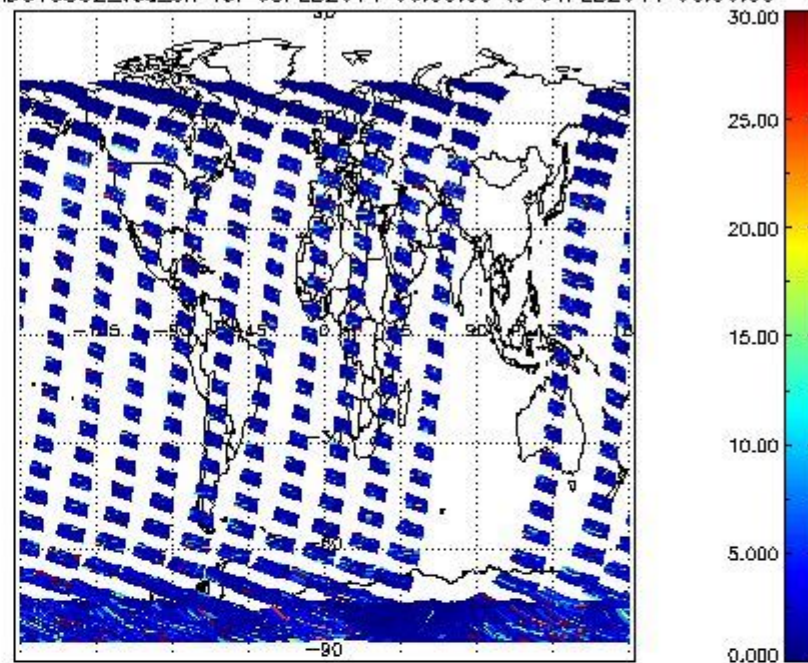




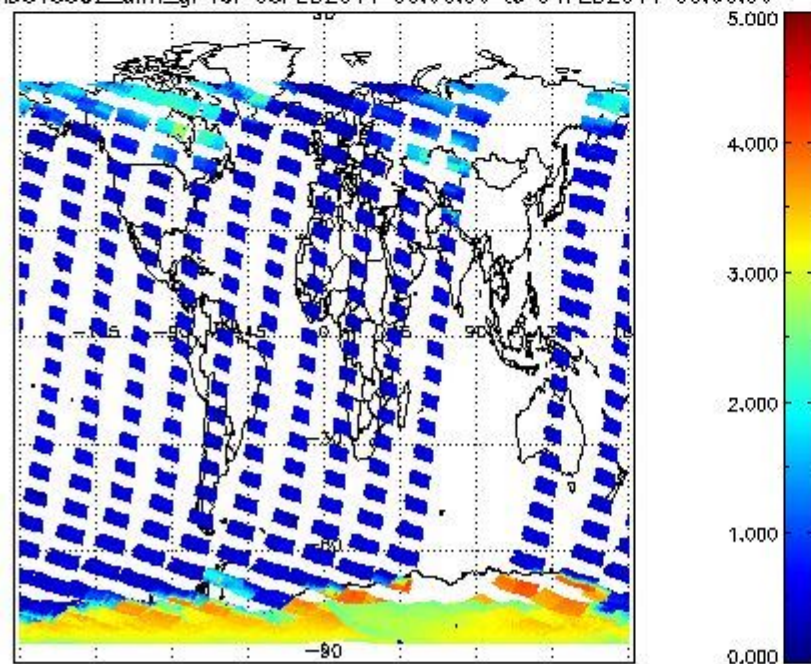
SCIOL2P\_NADUV5S02\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



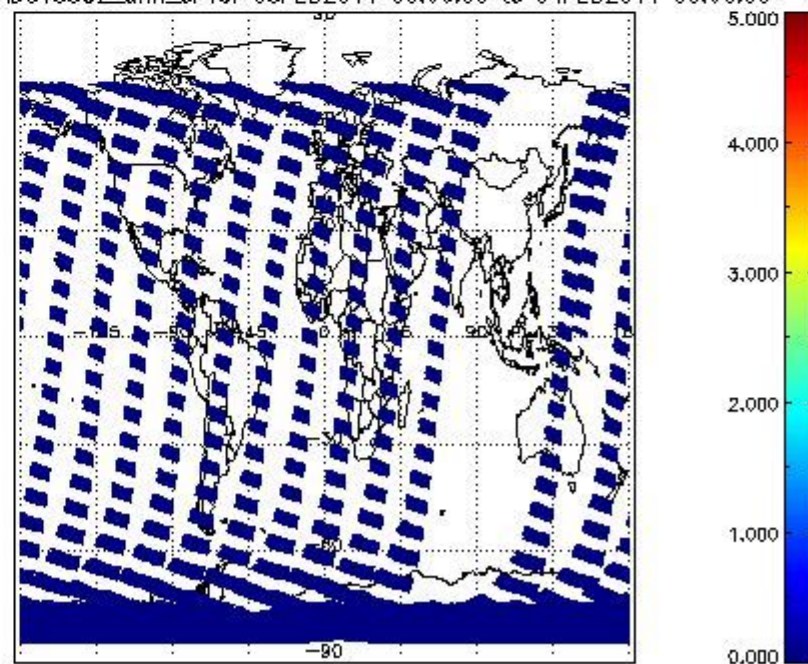
SCIOL2P\_NADUV5S02\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

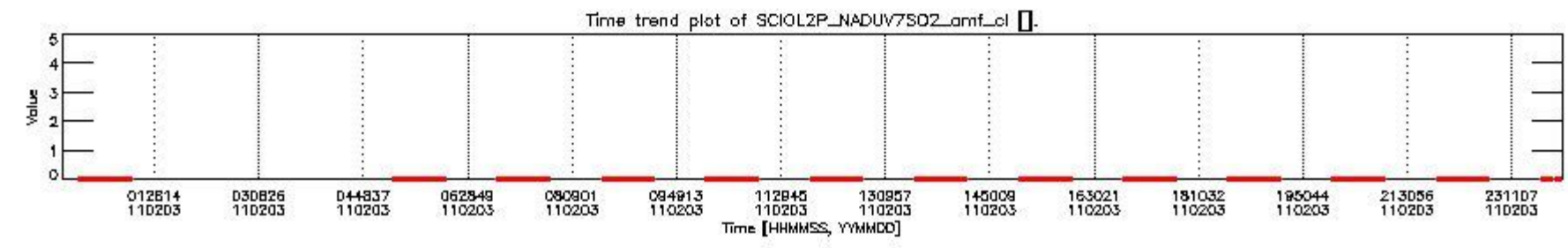
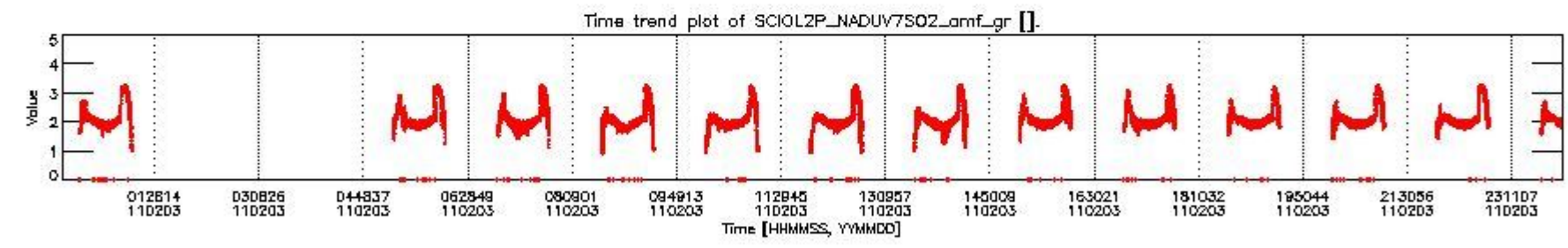
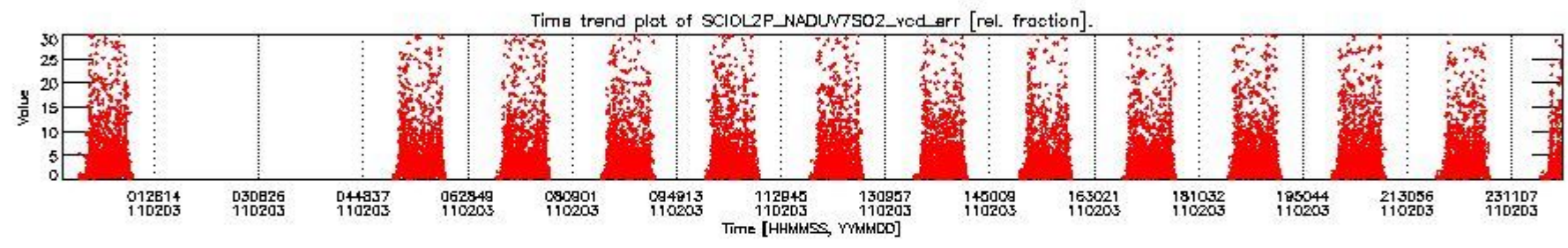
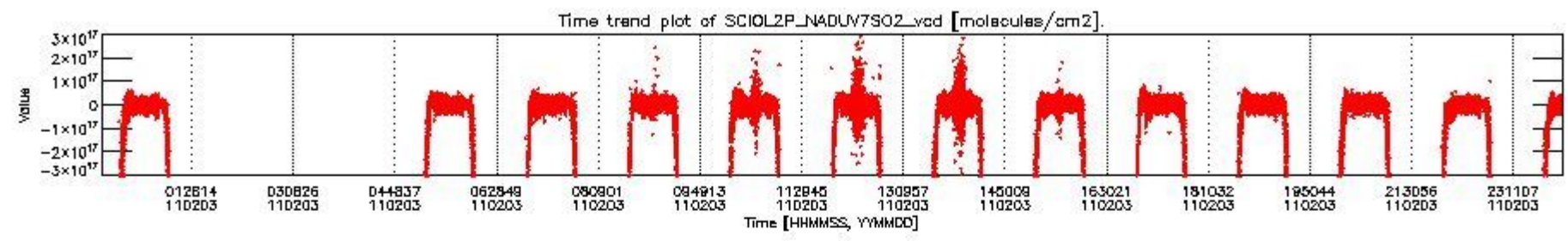


SCIOL2P\_NADUV5S02\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



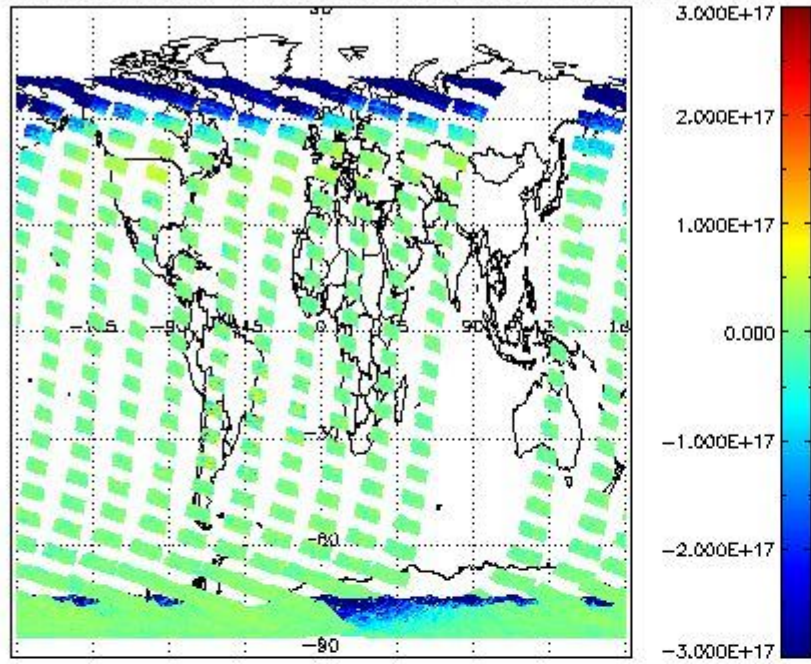
## 2.2.2.5 SO2 (UV7)



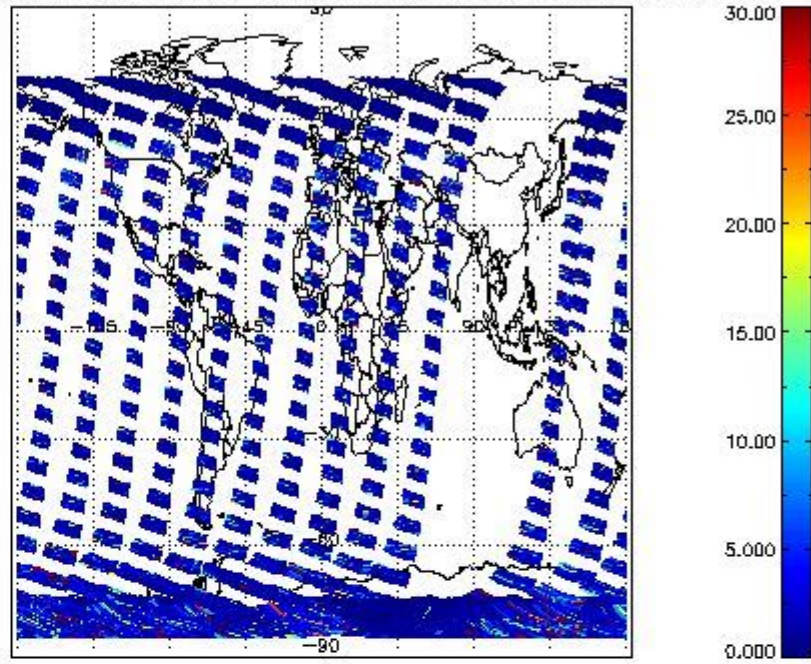




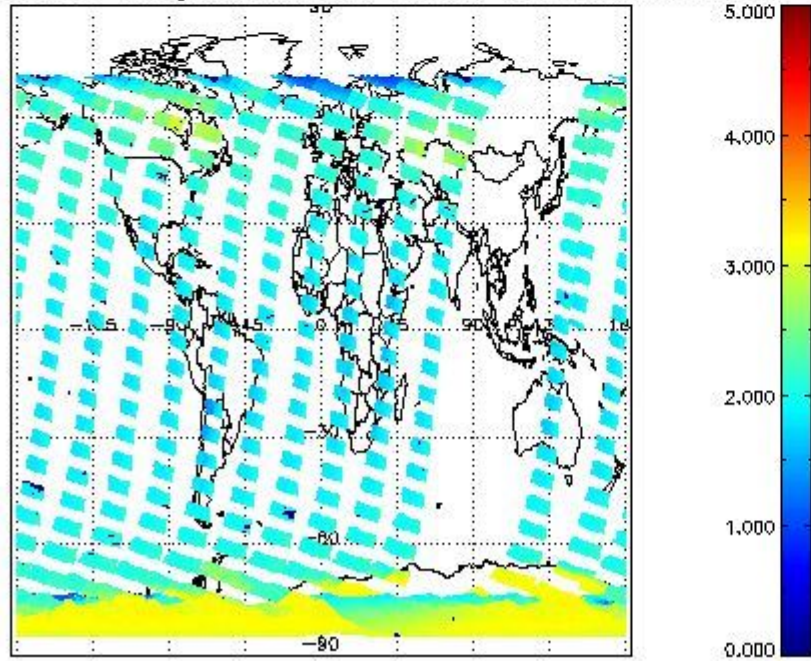
SCIOL2P\_NADUV7S02\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



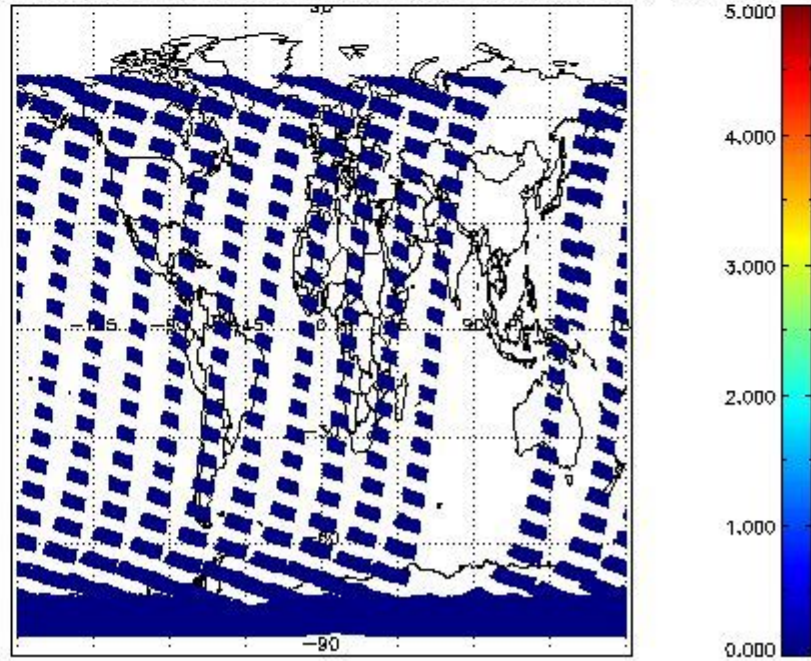
SCIOL2P\_NADUV7S02\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

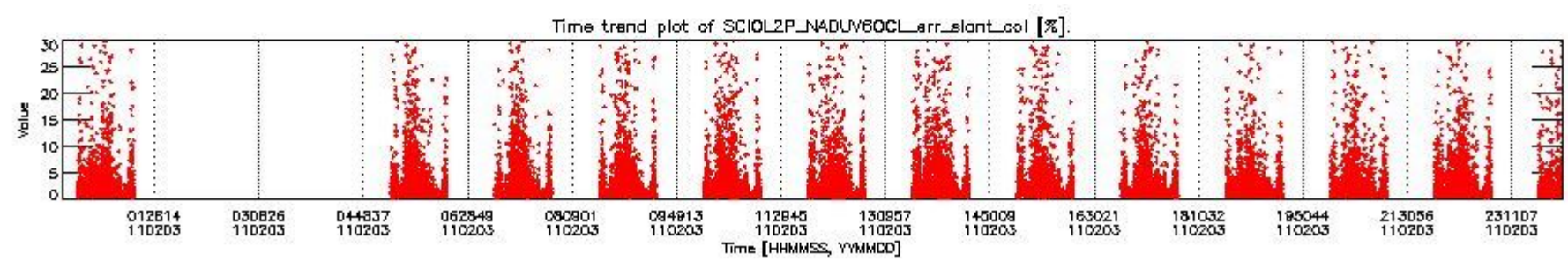
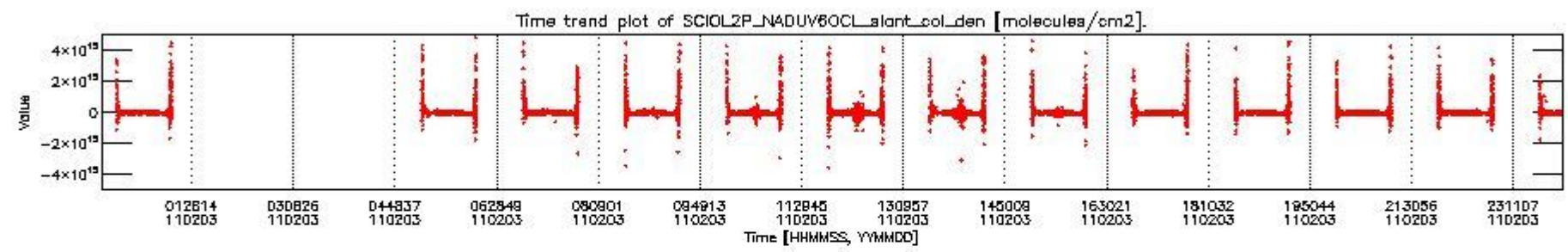


SCIOL2P\_NADUV7S02\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

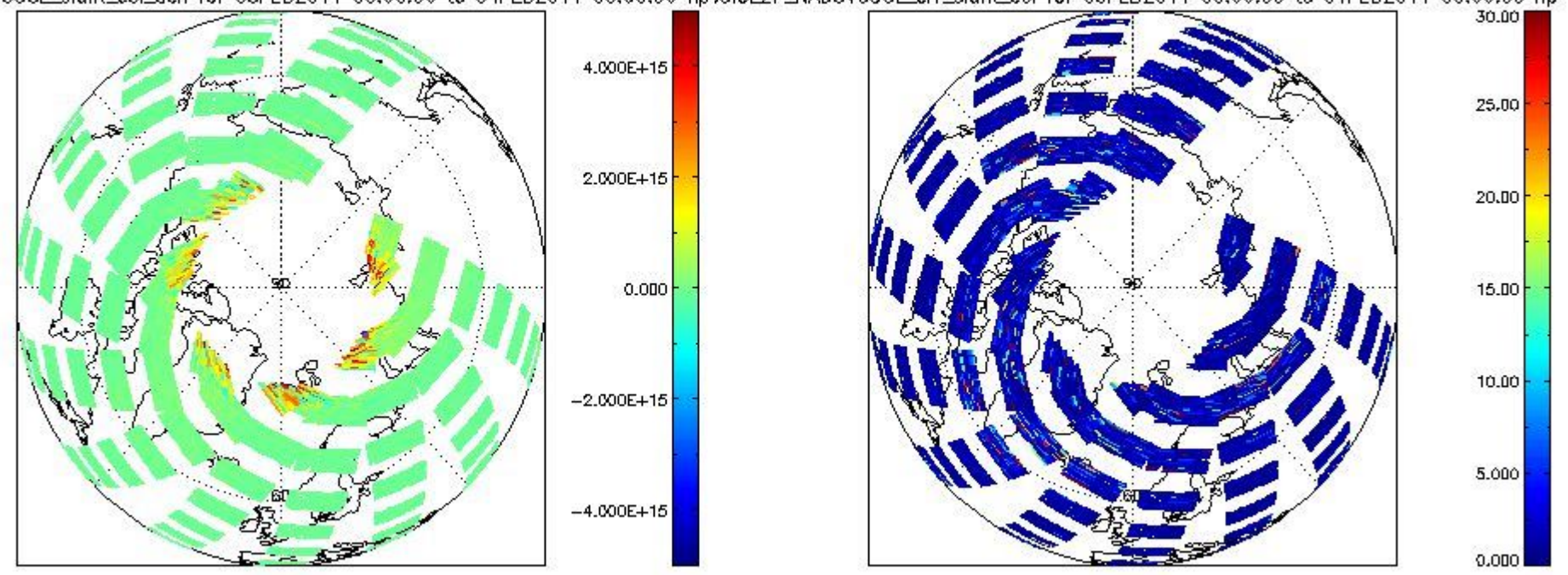


## 2.2.2.6 OCIO (UV6)



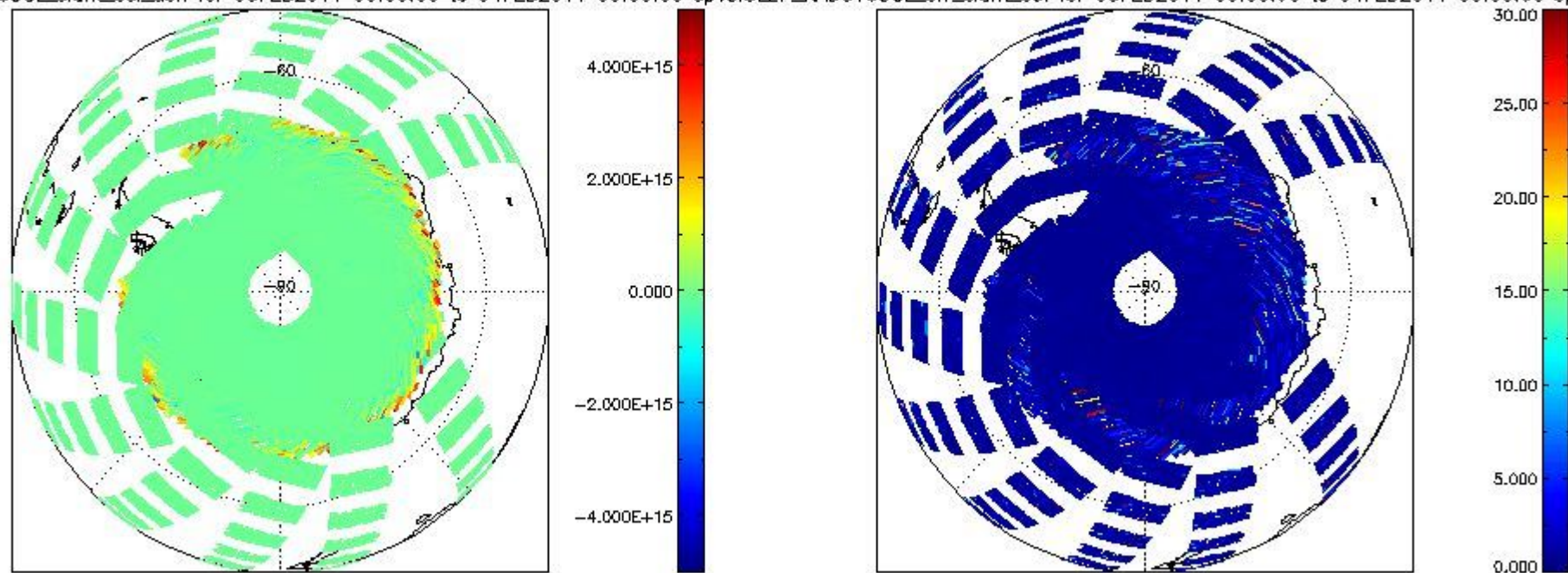


CIOL2P\_NADUV6OCL\_slant\_col\_den for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 np

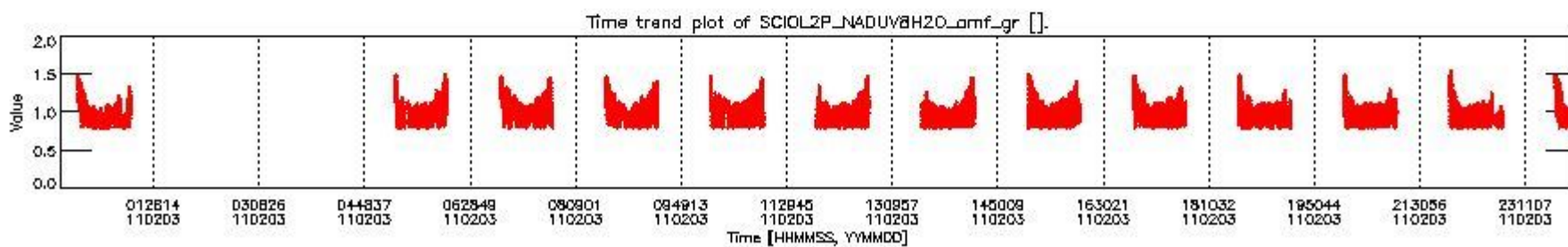
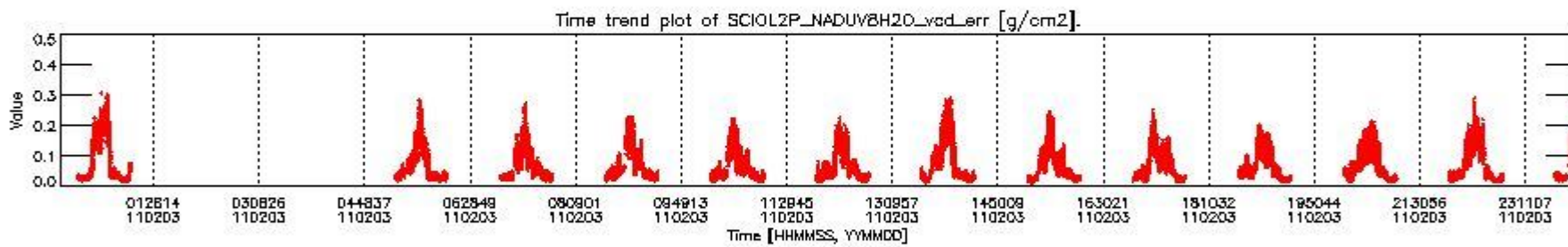
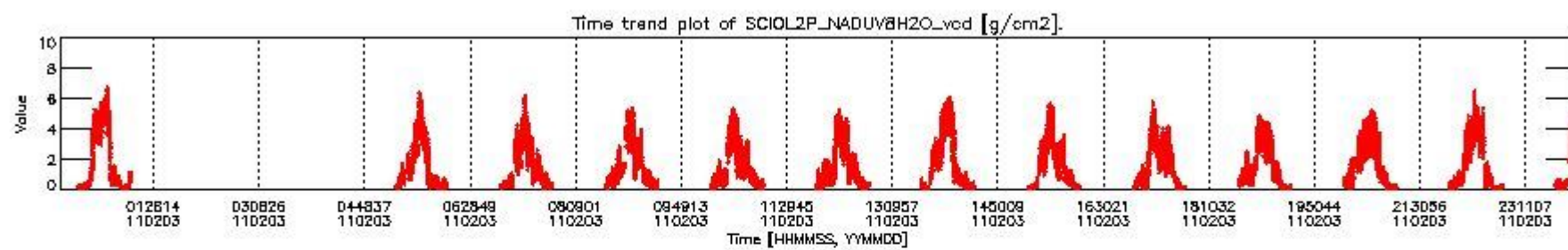




CIOL2P\_NADUV6OCL\_slant\_col\_den for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 sp;CIOL2P\_NADUV6OCL\_err\_slant\_col for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 sp

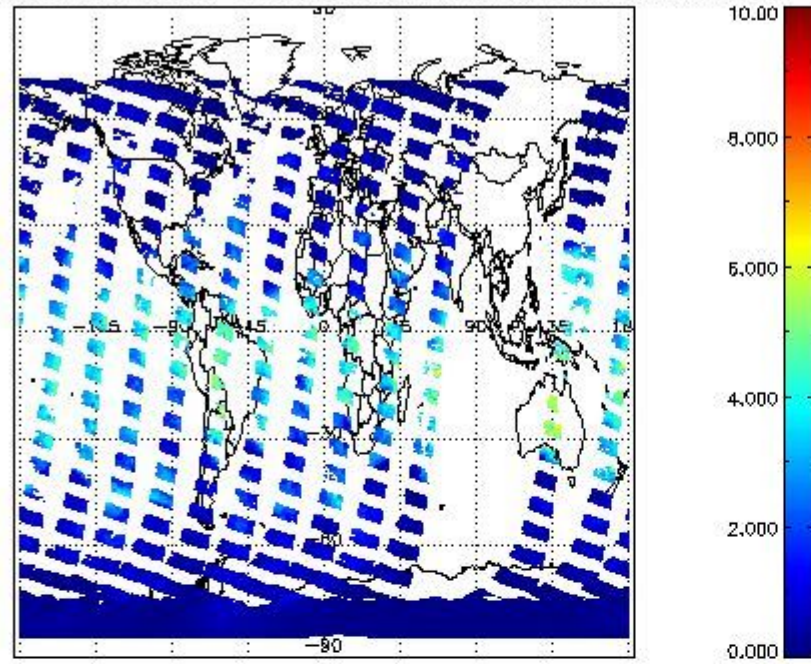


### 2.2.2.7 H2O (UV8)

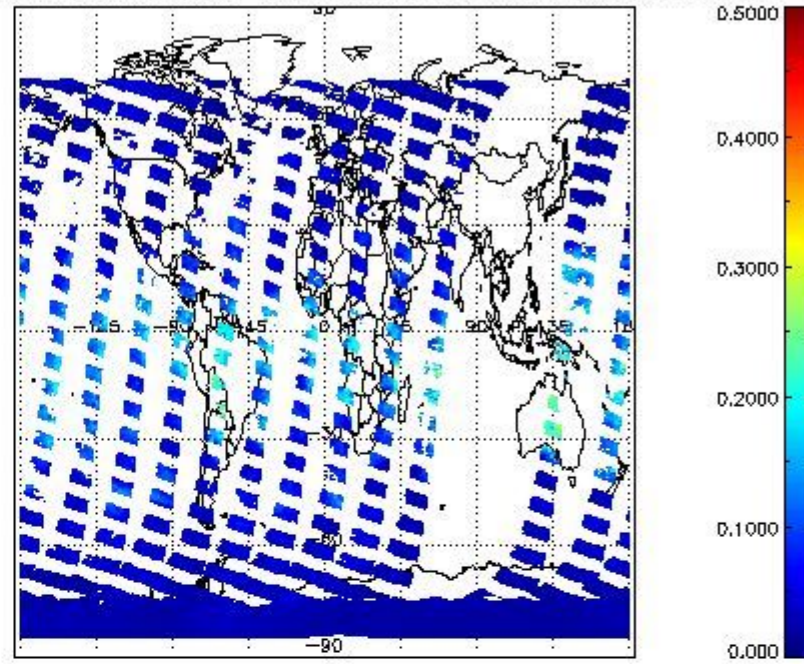




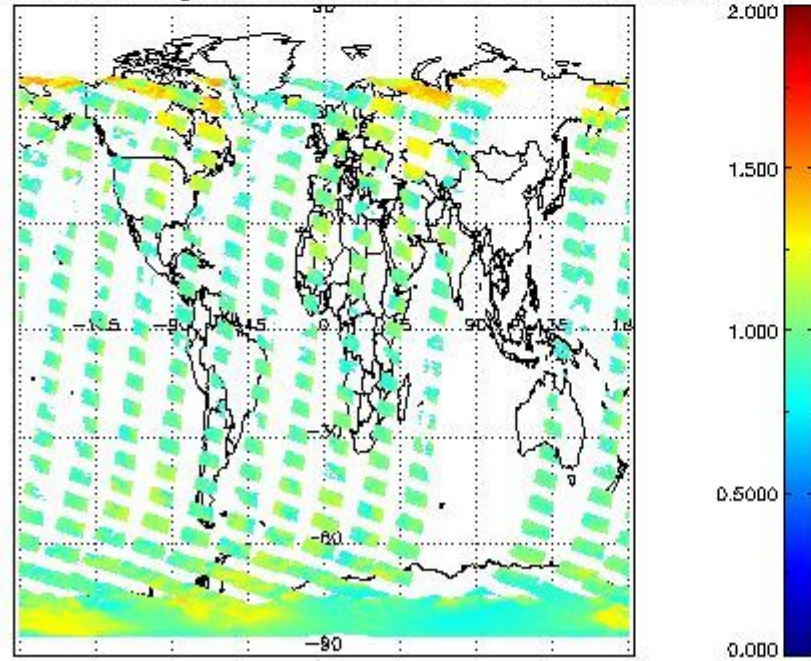
SCIOL2P\_NADUV8H2O\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIOL2P\_NADUV8H2O\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

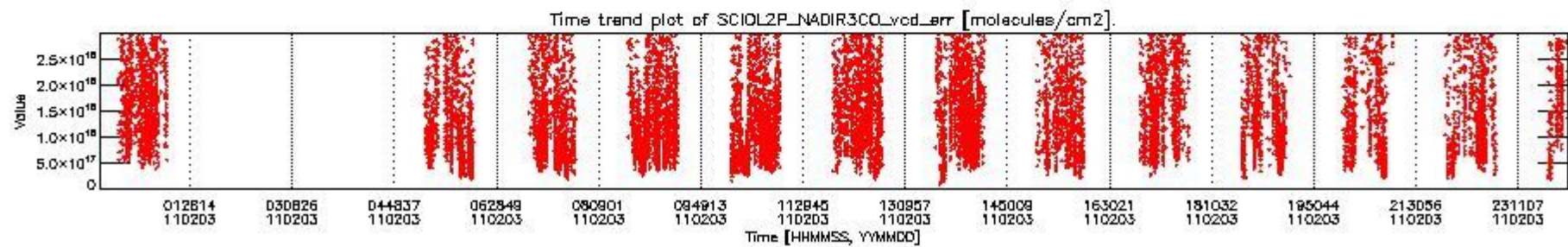
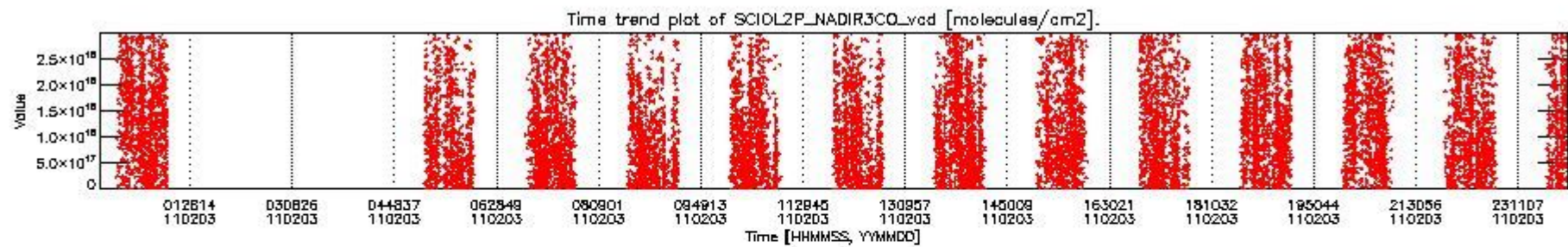


SCIOL2P\_NADUV8H2O\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

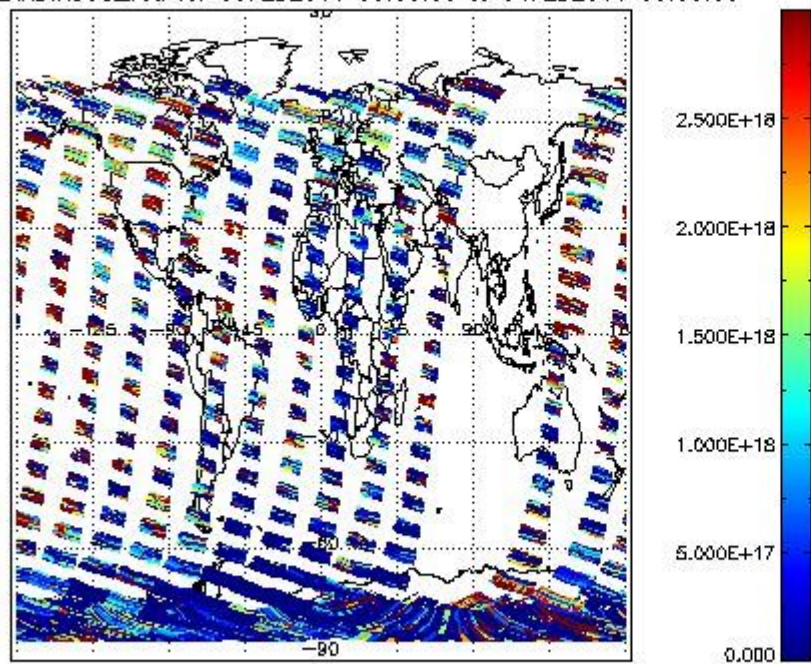


### 2.2.2.8 CO (IR3)

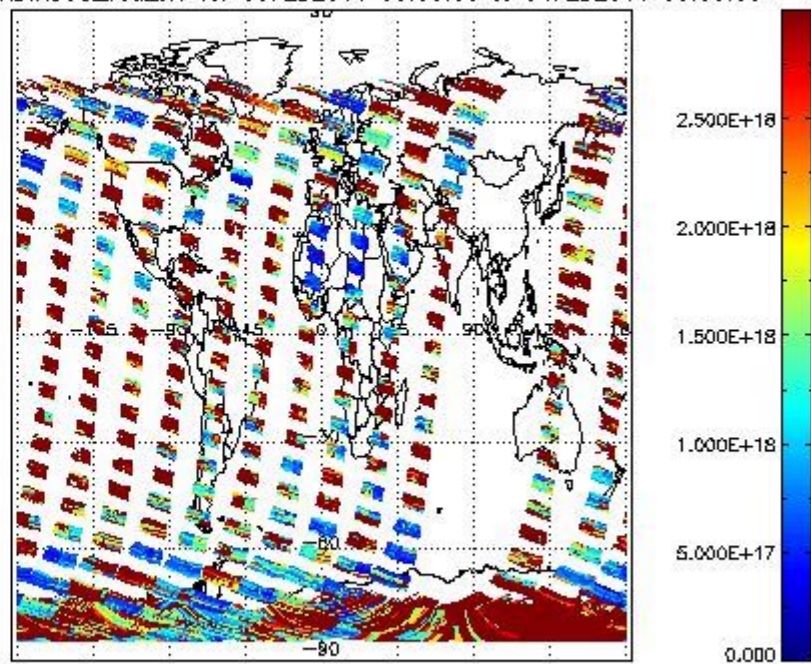




SCIDL2P\_NADIR3CO\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 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.

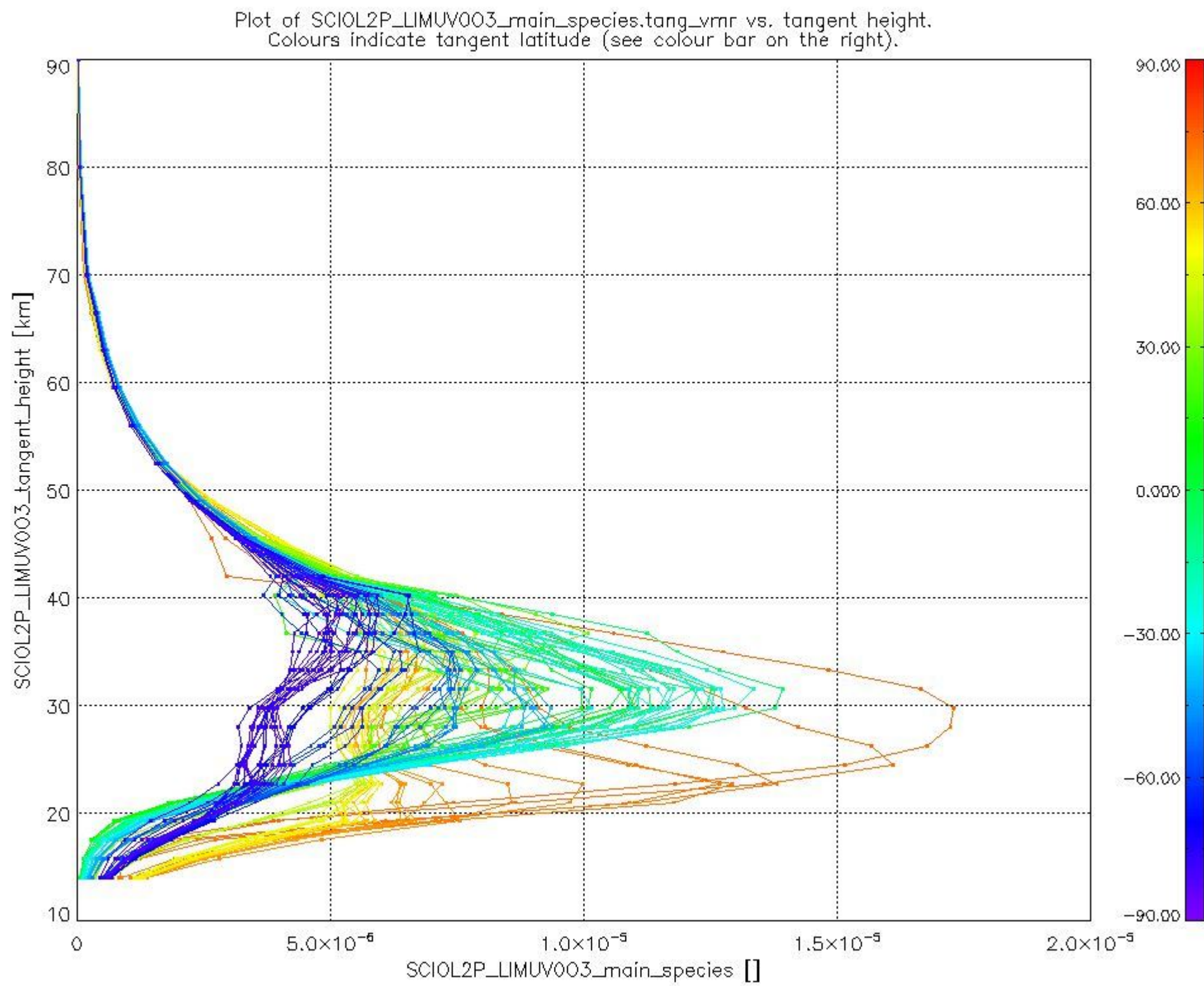
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



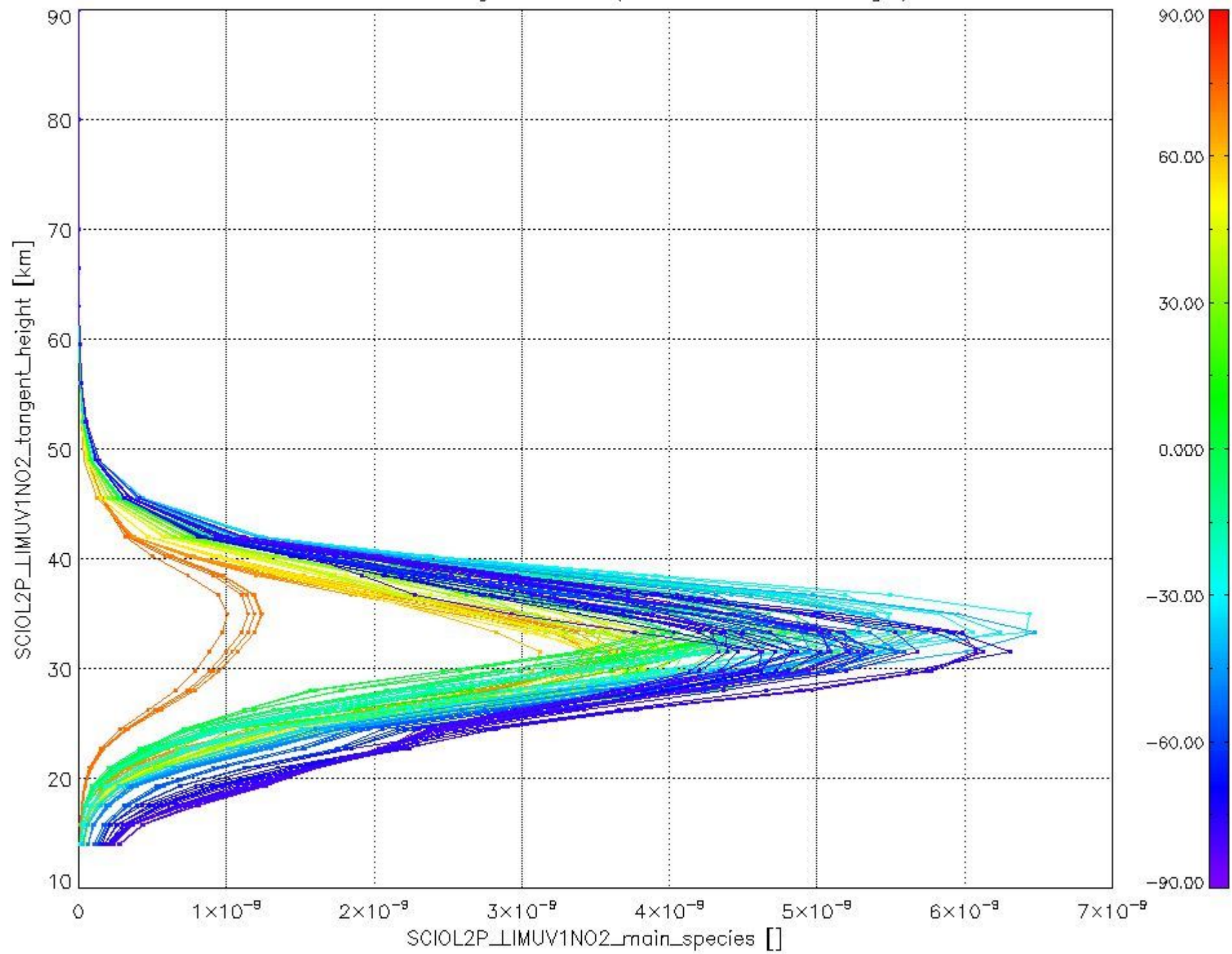
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

### 2.2.3.1 O3 (UV0)



### 2.2.3.2 NO2 (UV1)

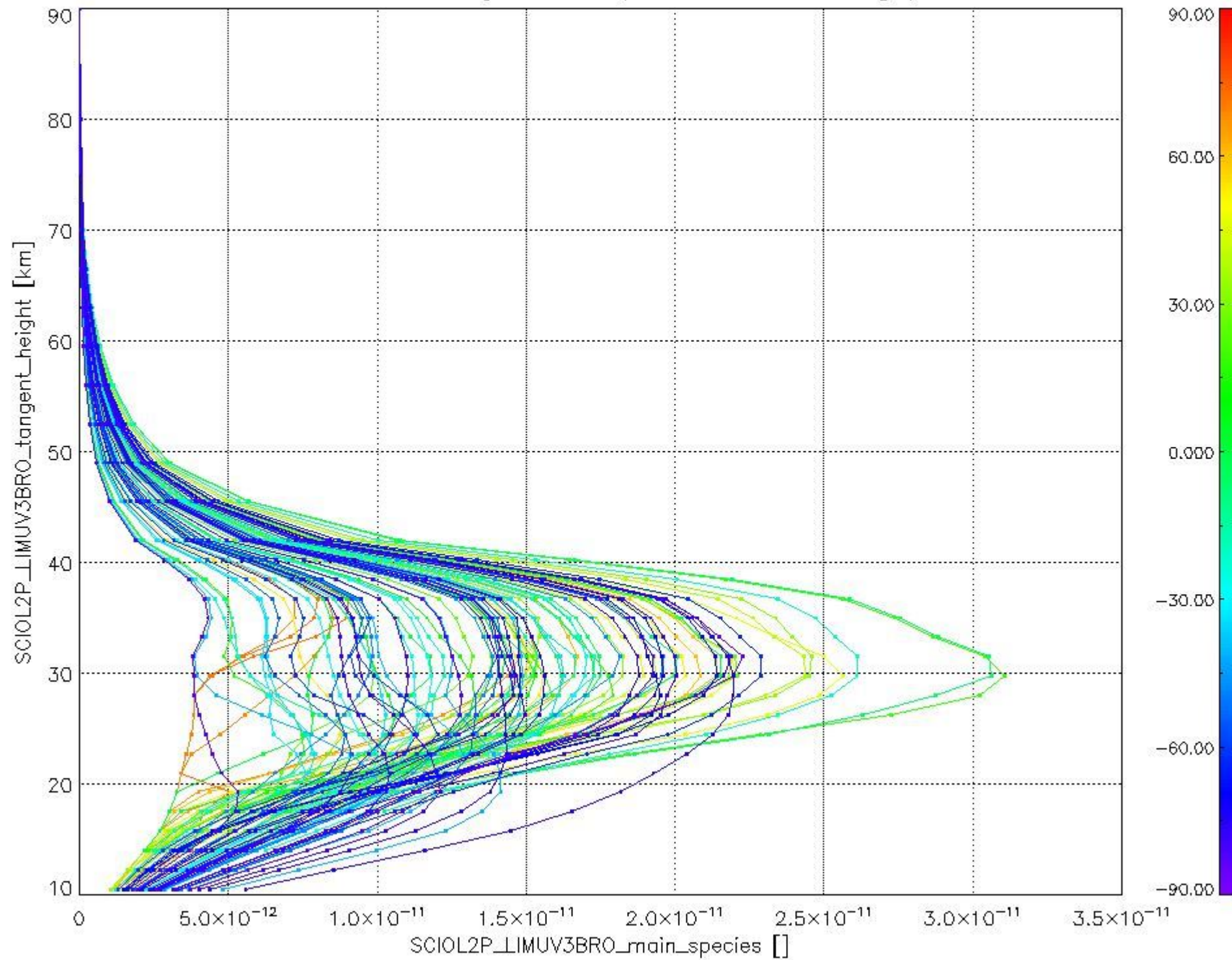
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).



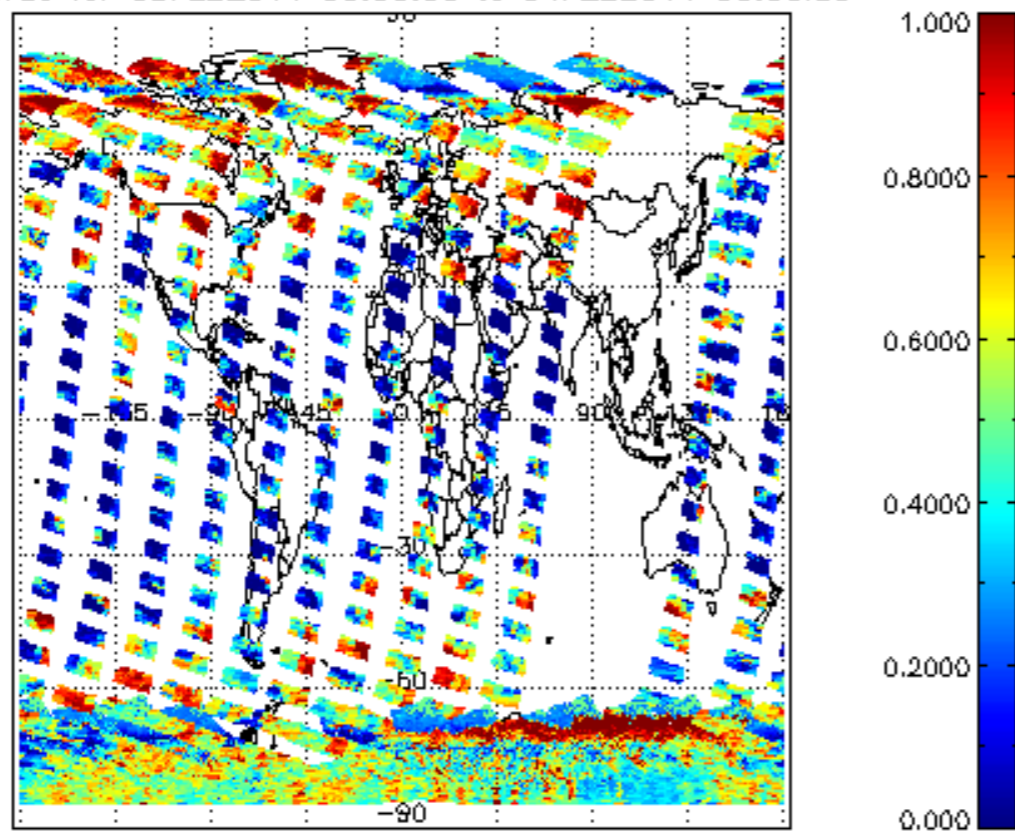
### 2.3 ADF monitoring

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_AXVIEC20110208_110105_20110202_183521_20110204_183521
3	SCI_MF1_AXVIEC20110208_110217_20110203_193850_20110205_193850

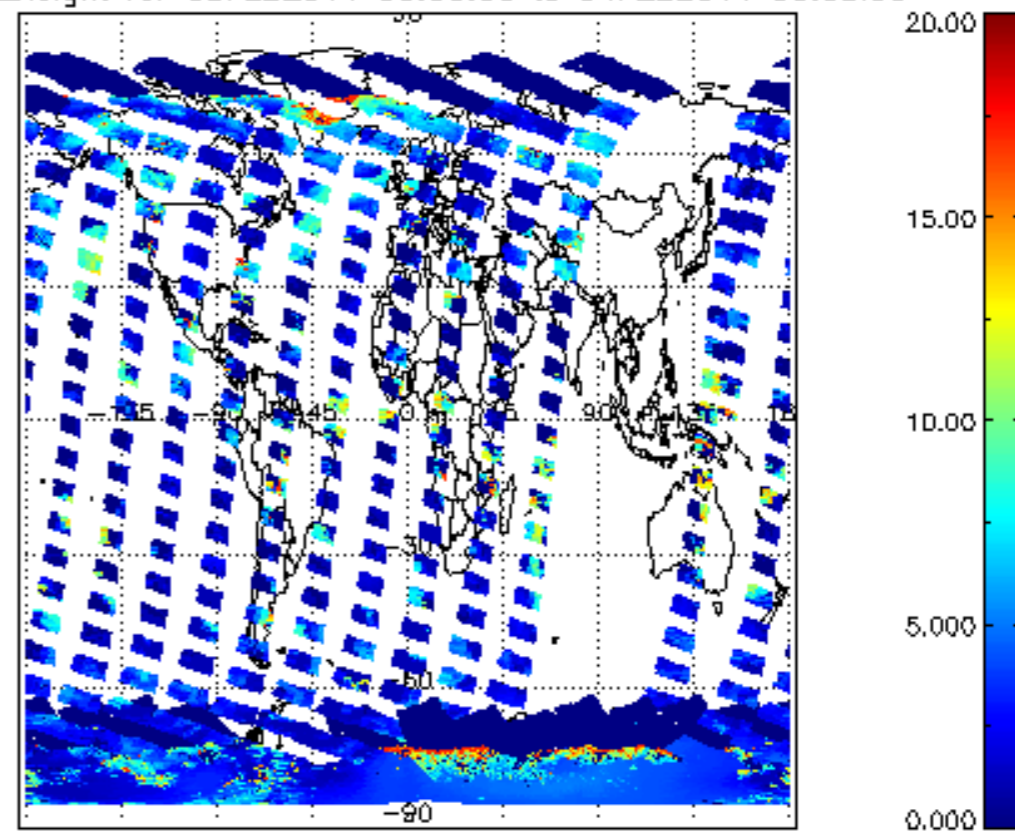




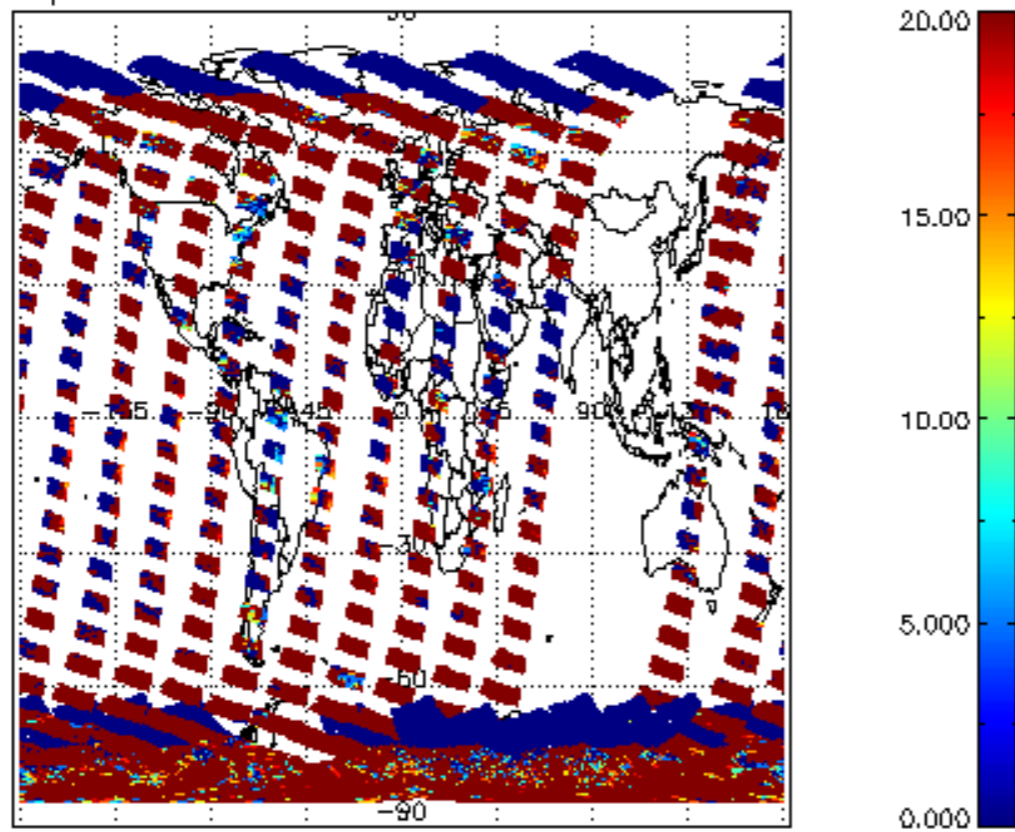
cL\_frac for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



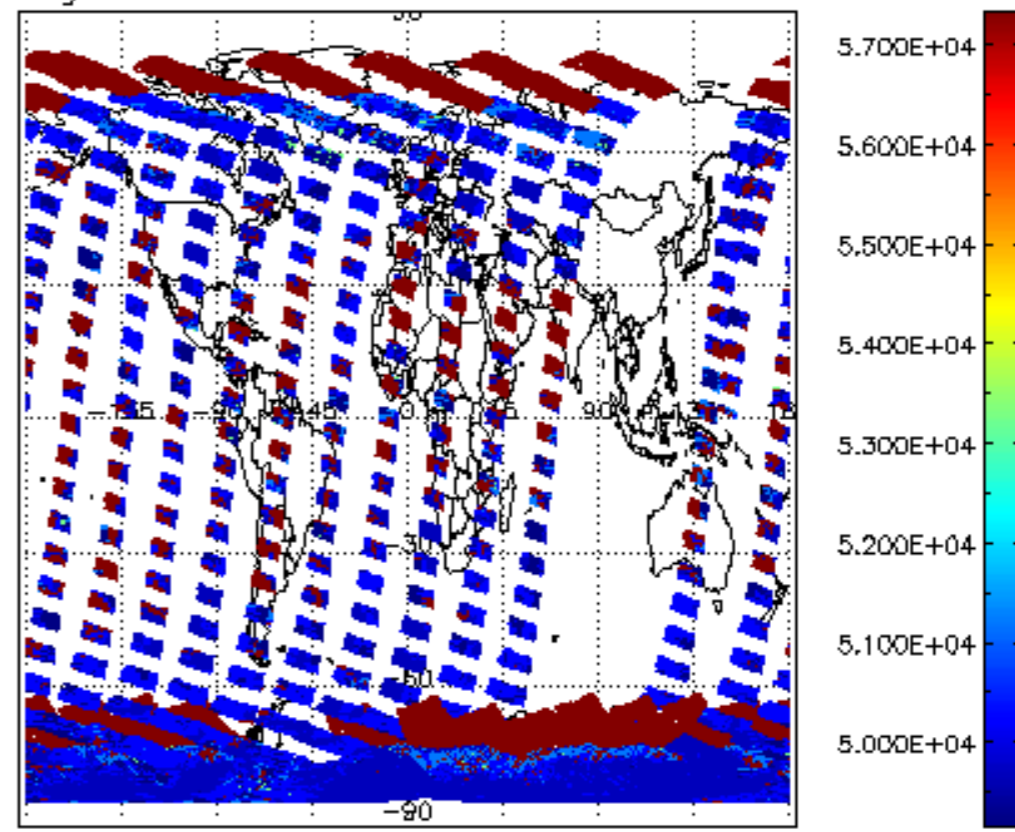
cL\_top\_height for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

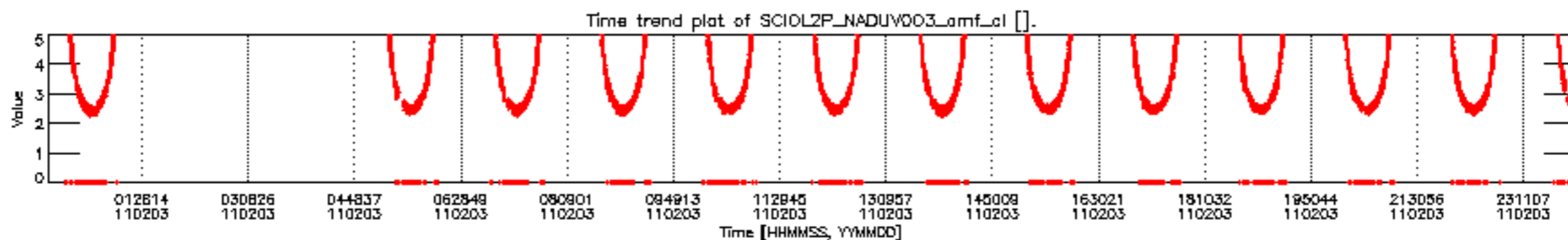
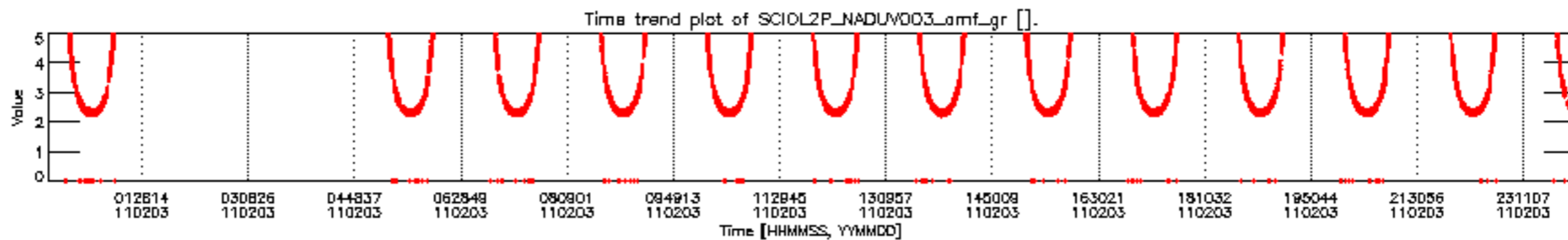
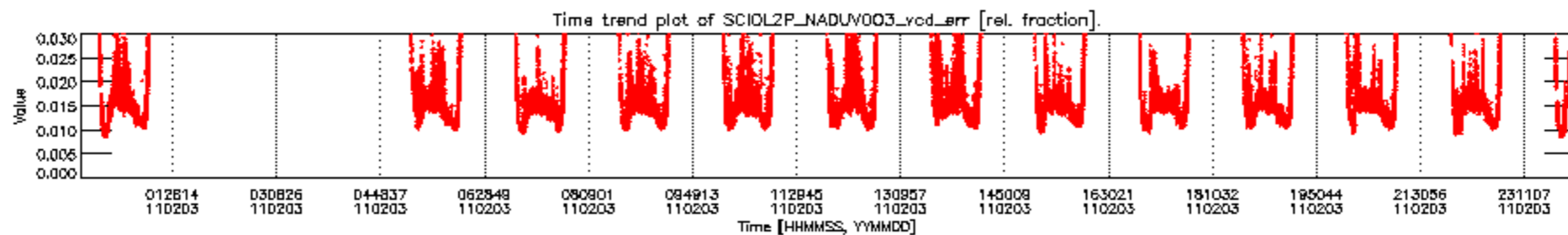
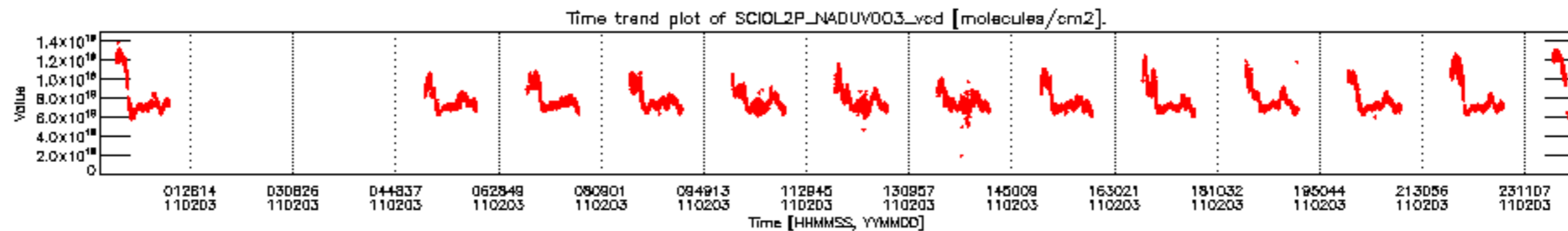


cL\_opt\_depth for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



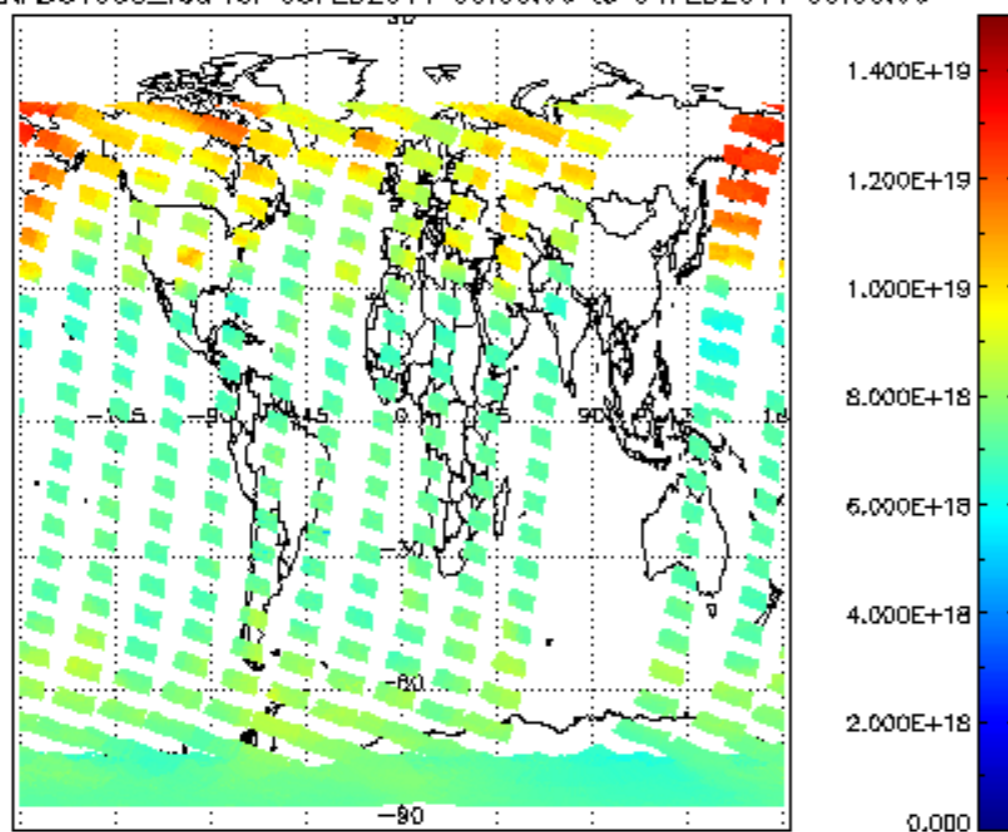
cloud\_flags for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



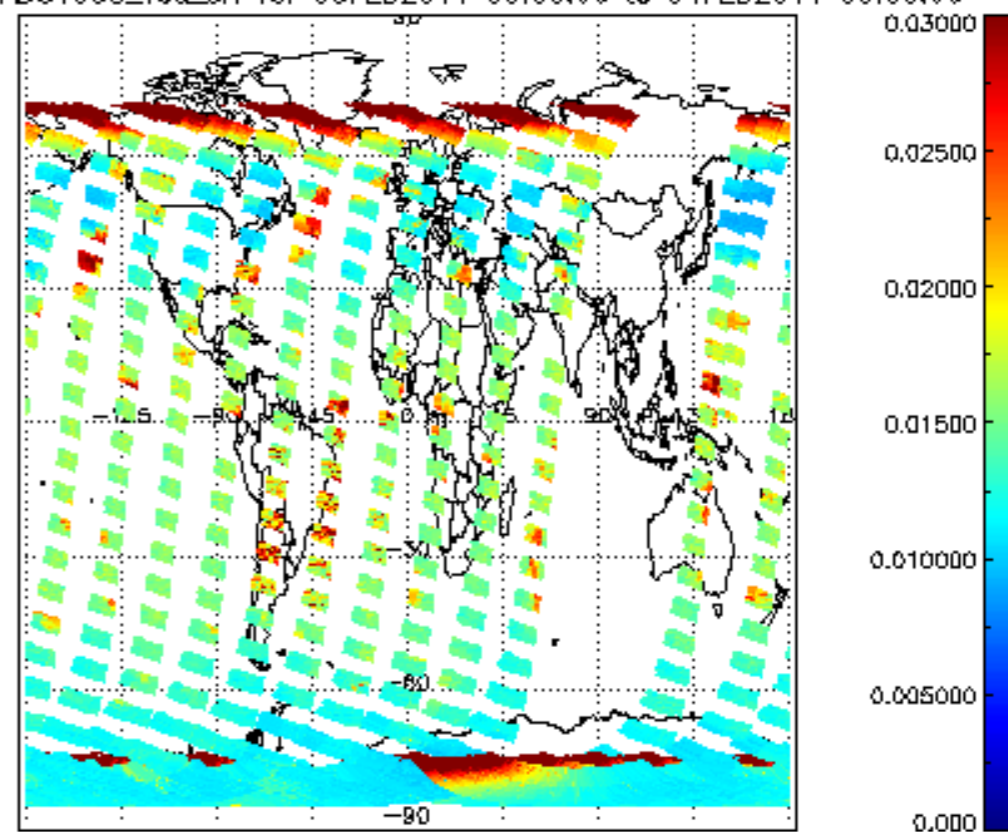




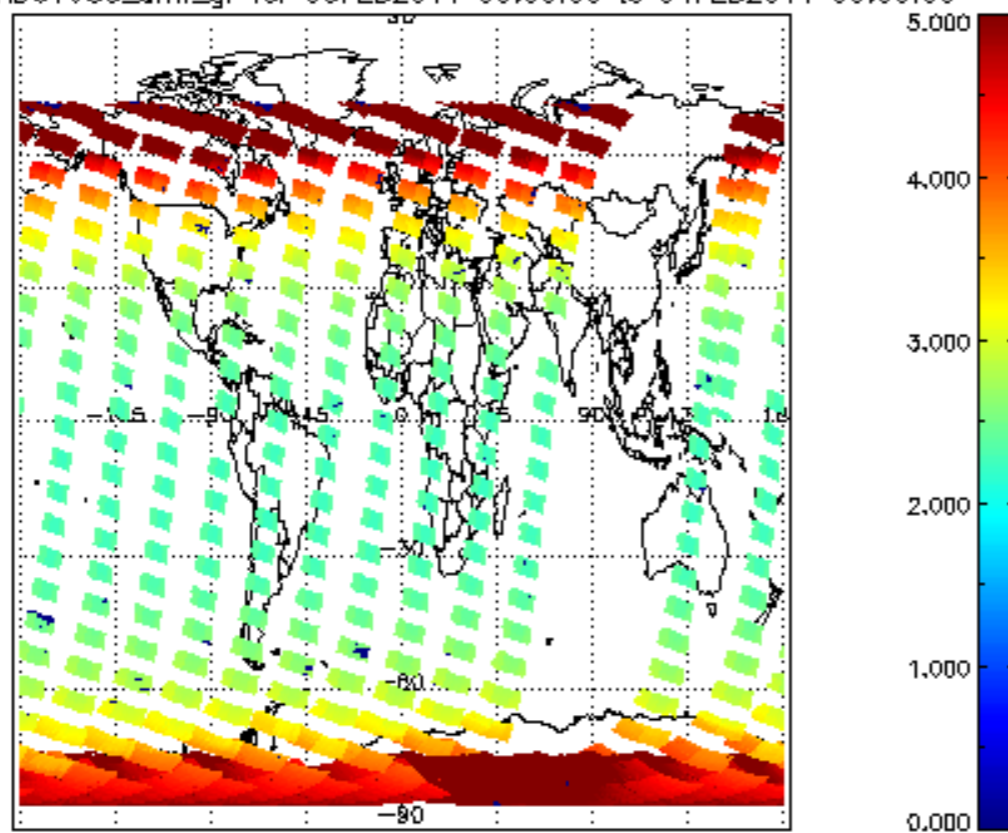
SCIOL2P\_NADUV003\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



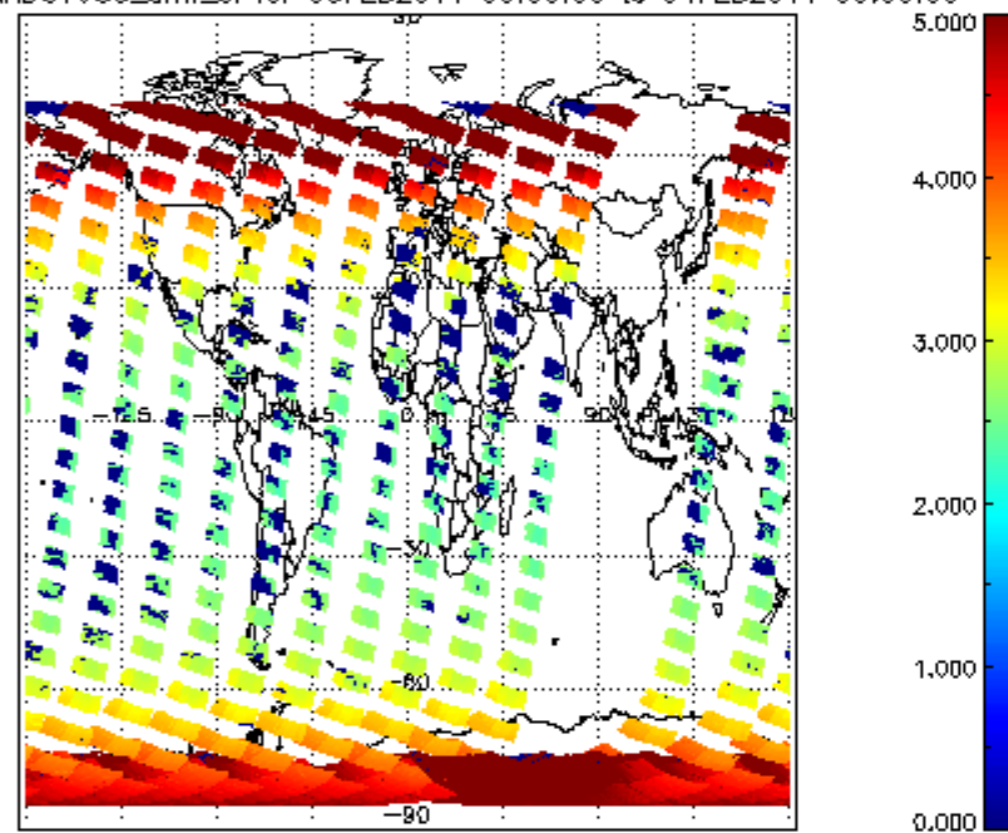
SCIOL2P\_NADUV003\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

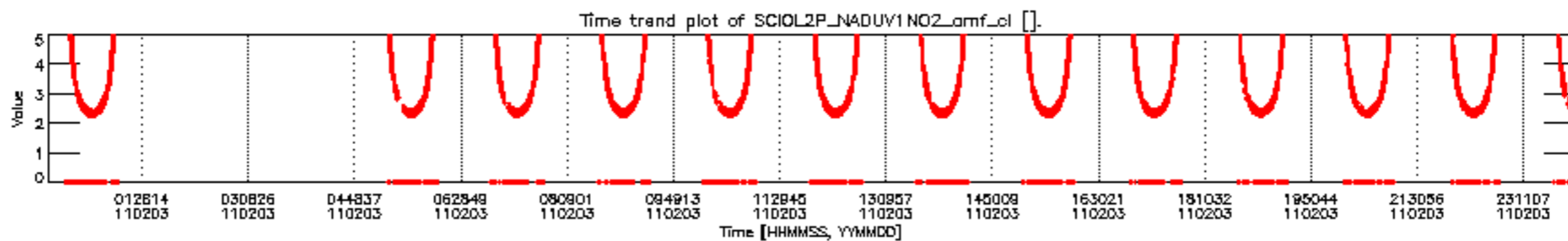
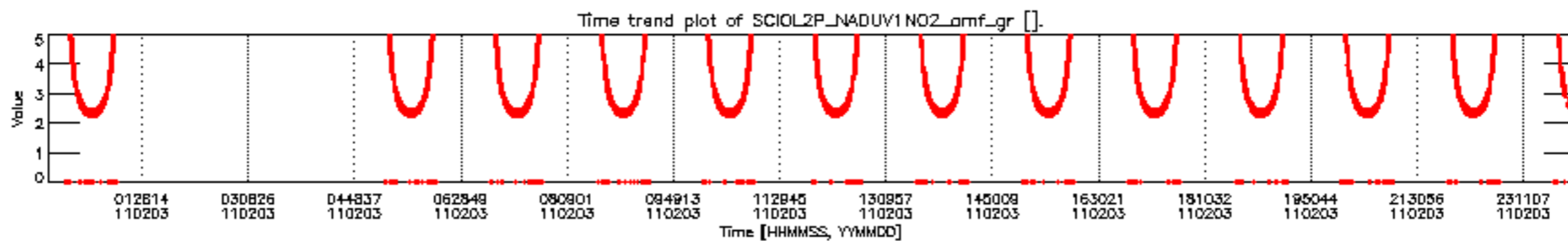
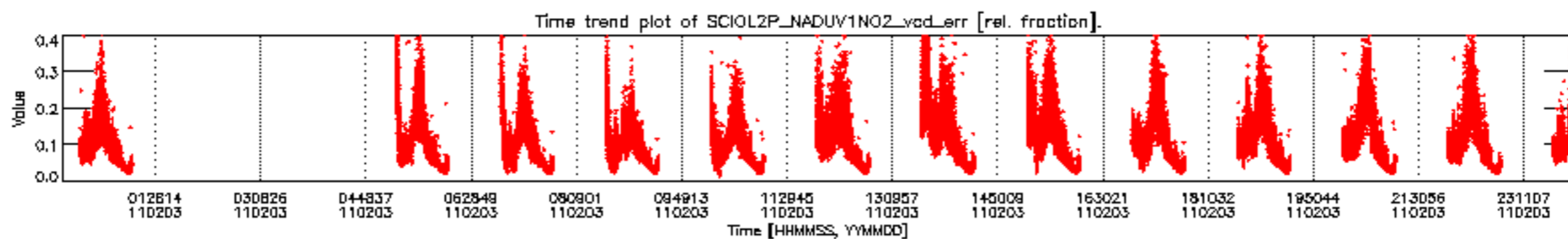
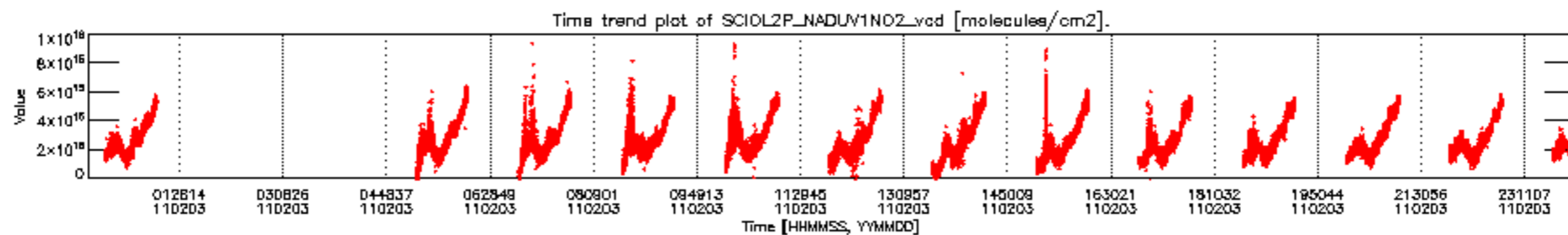


SCIOL2P\_NADUV003\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



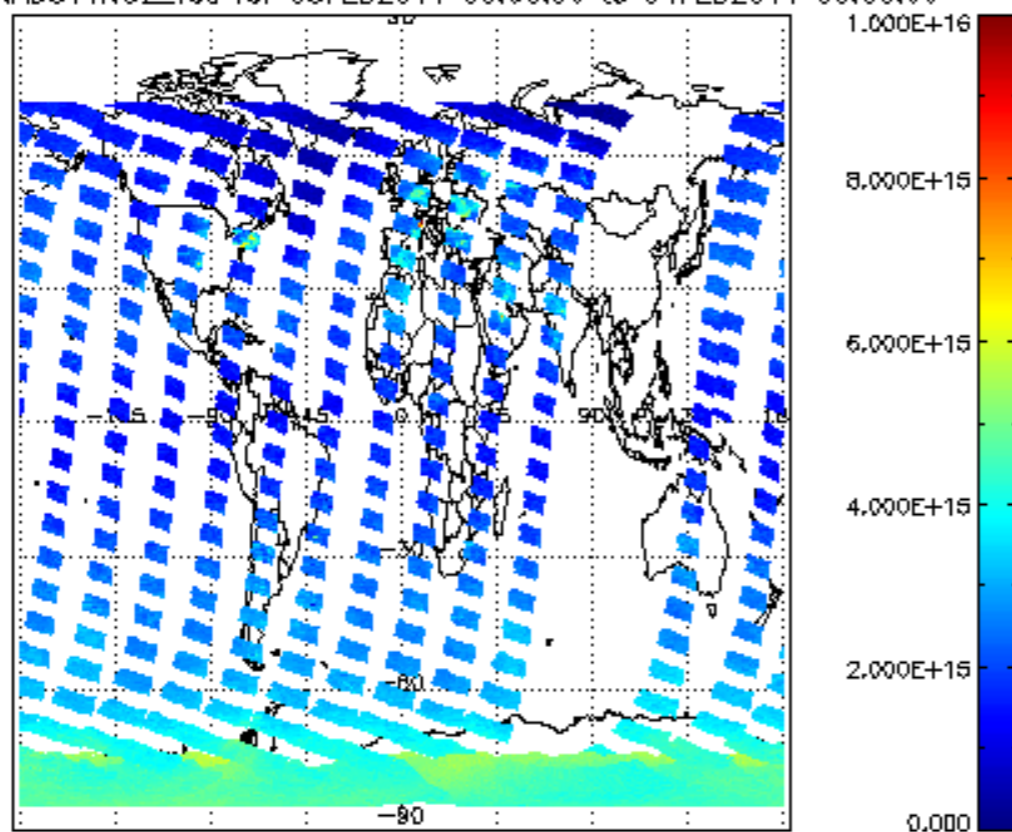
SCIOL2P\_NADUV003\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



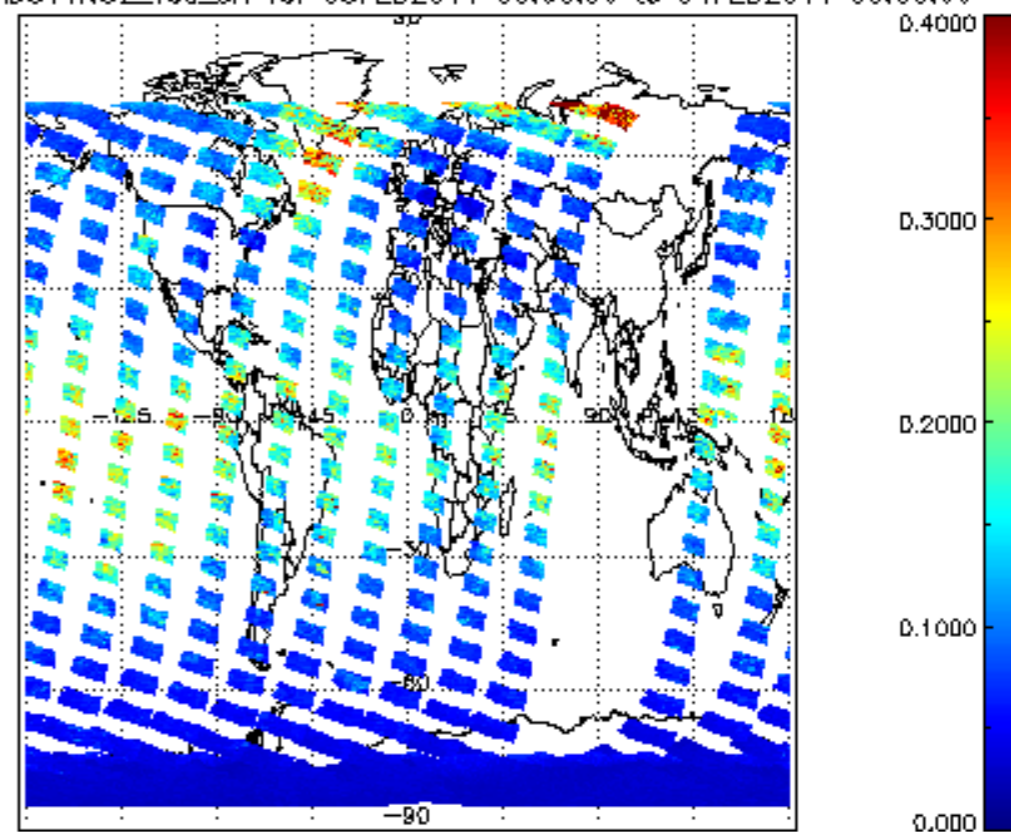




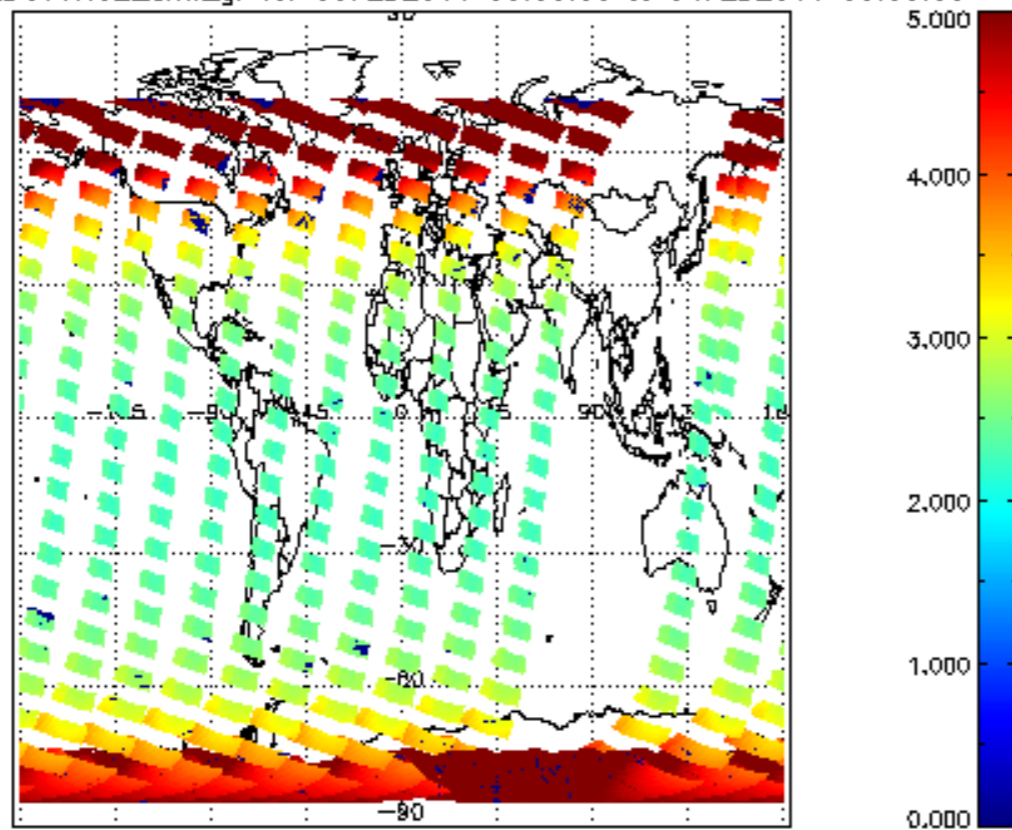
SCIOL2P\_NADUV1N02\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



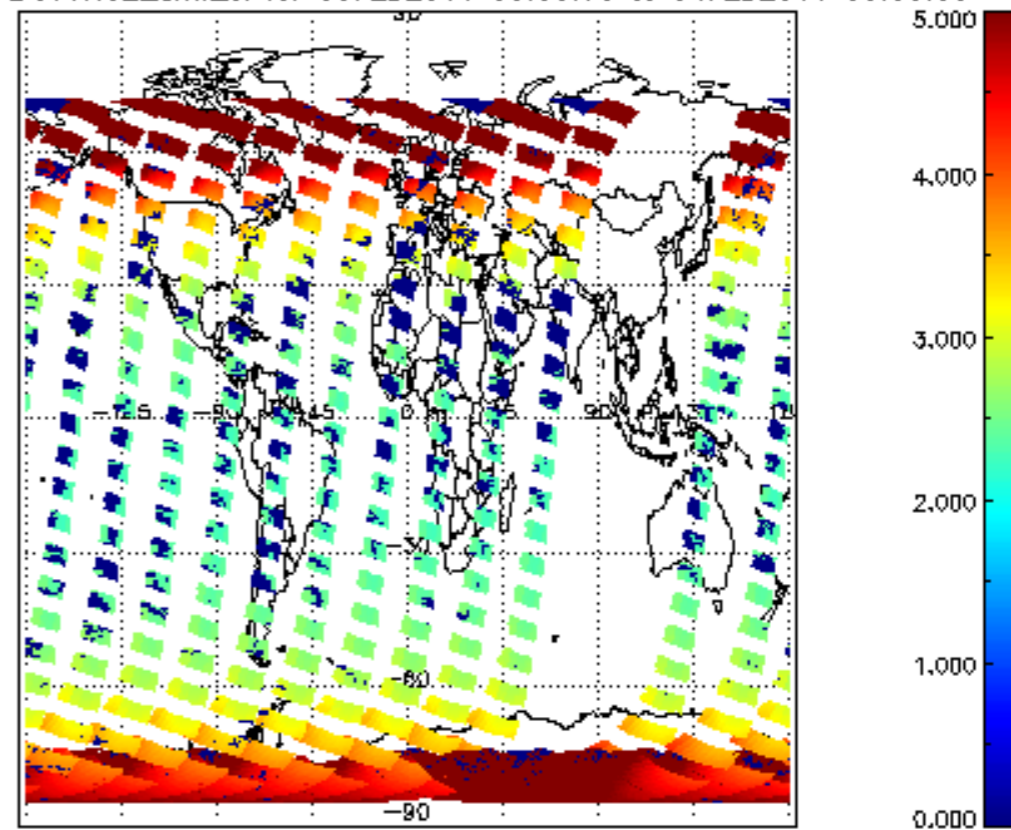
SCIOL2P\_NADUV1N02\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

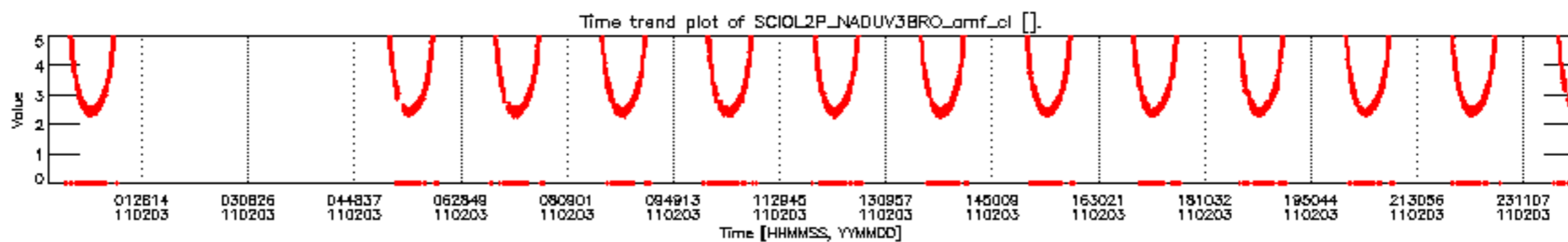
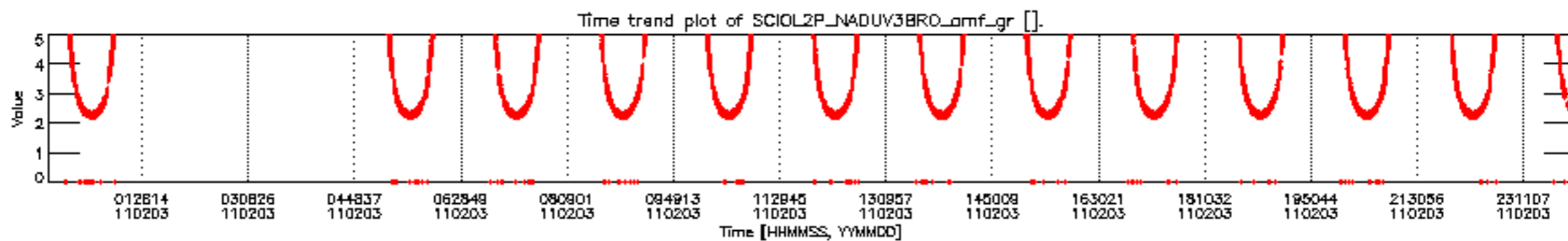
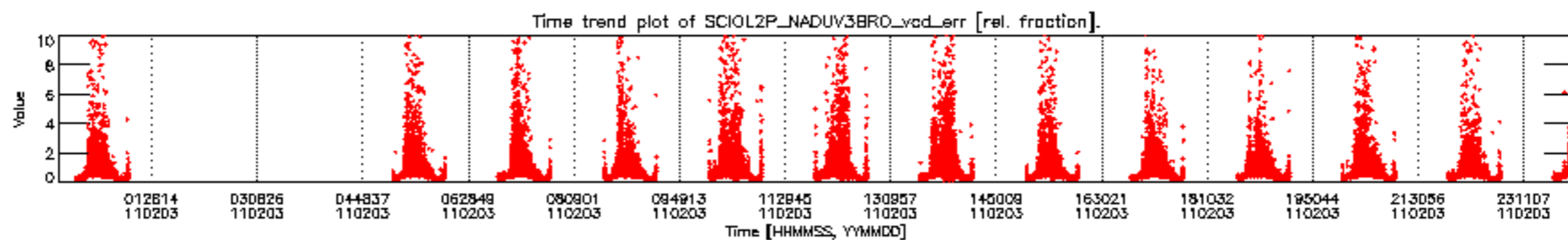
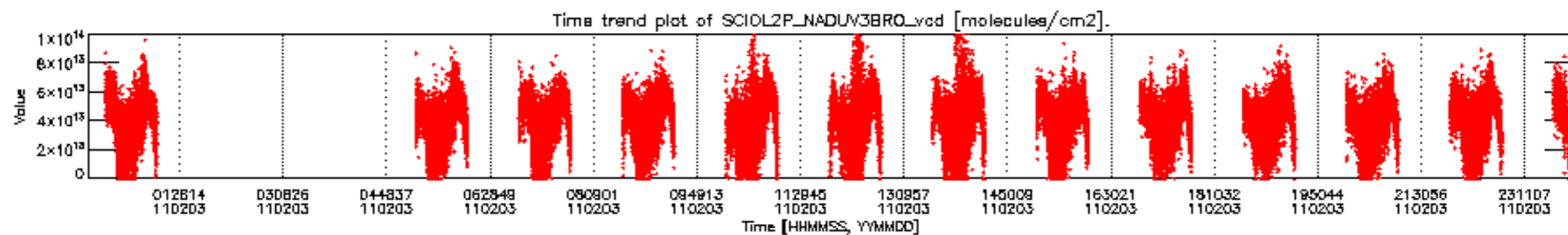


SCIOL2P\_NADUV1N02\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



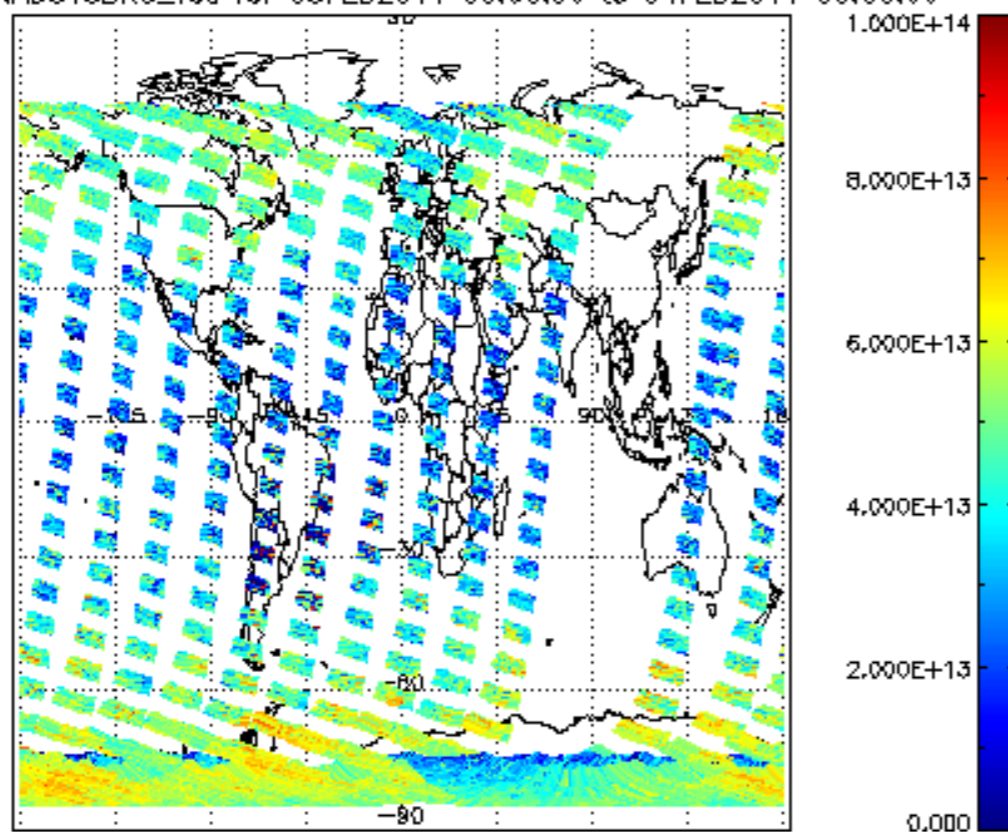
SCIOL2P\_NADUV1N02\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



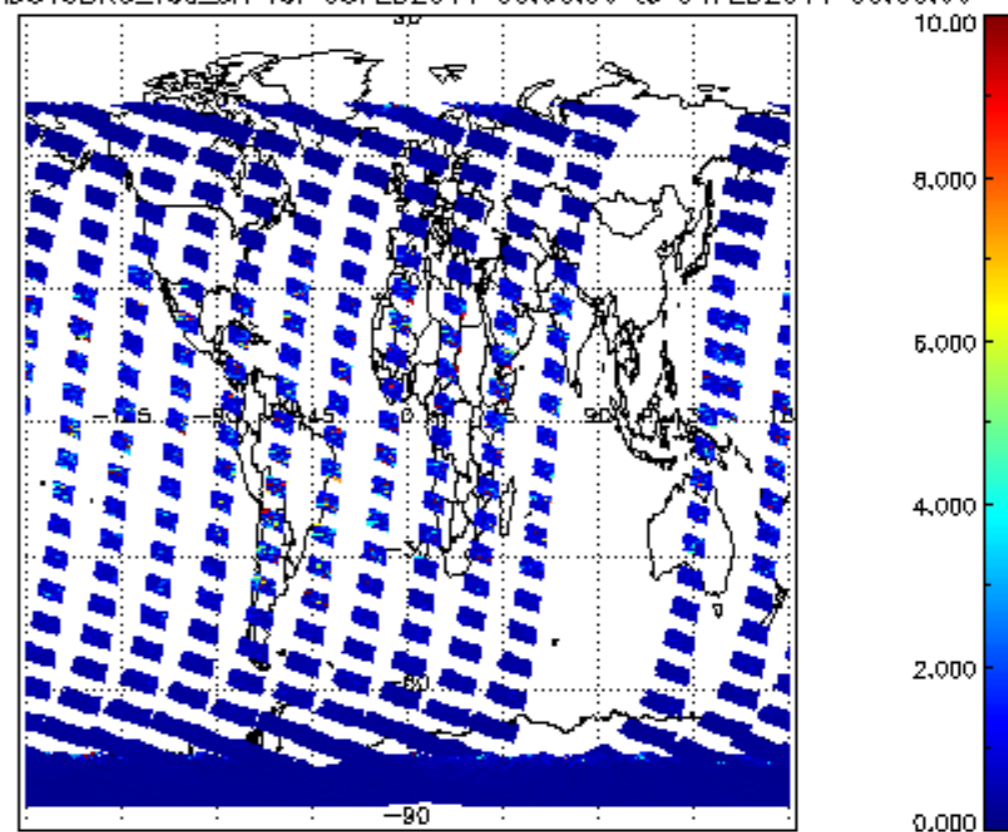




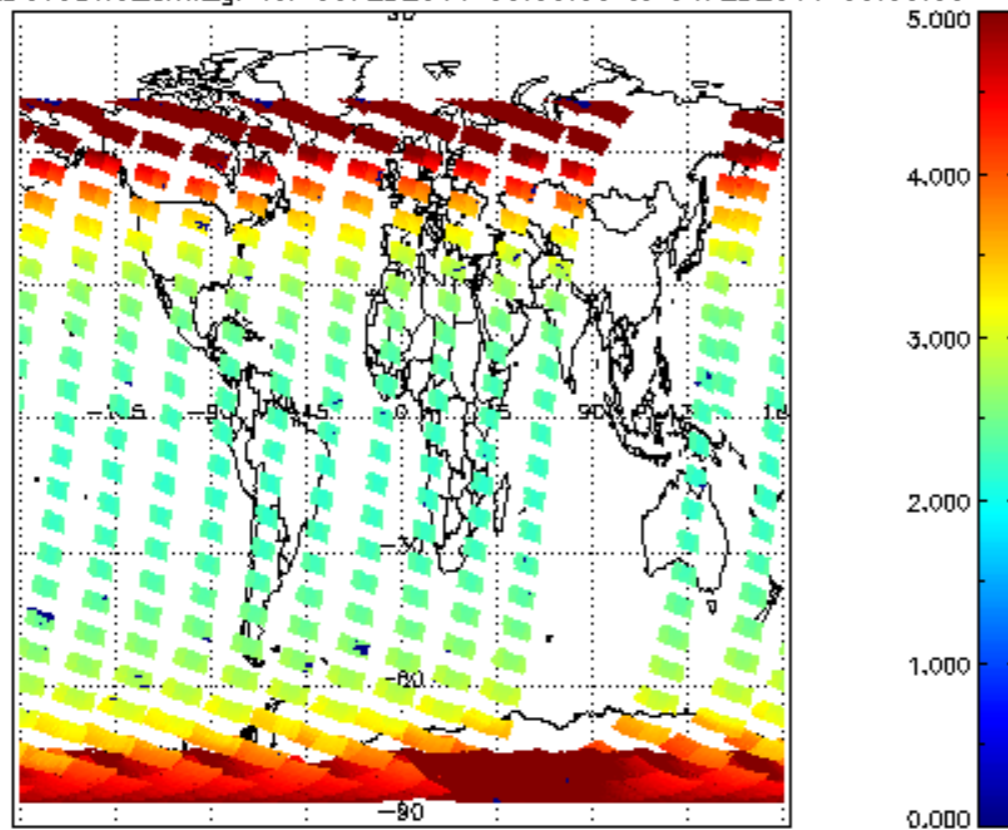
SCIOL2P\_NADUV3BRO\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



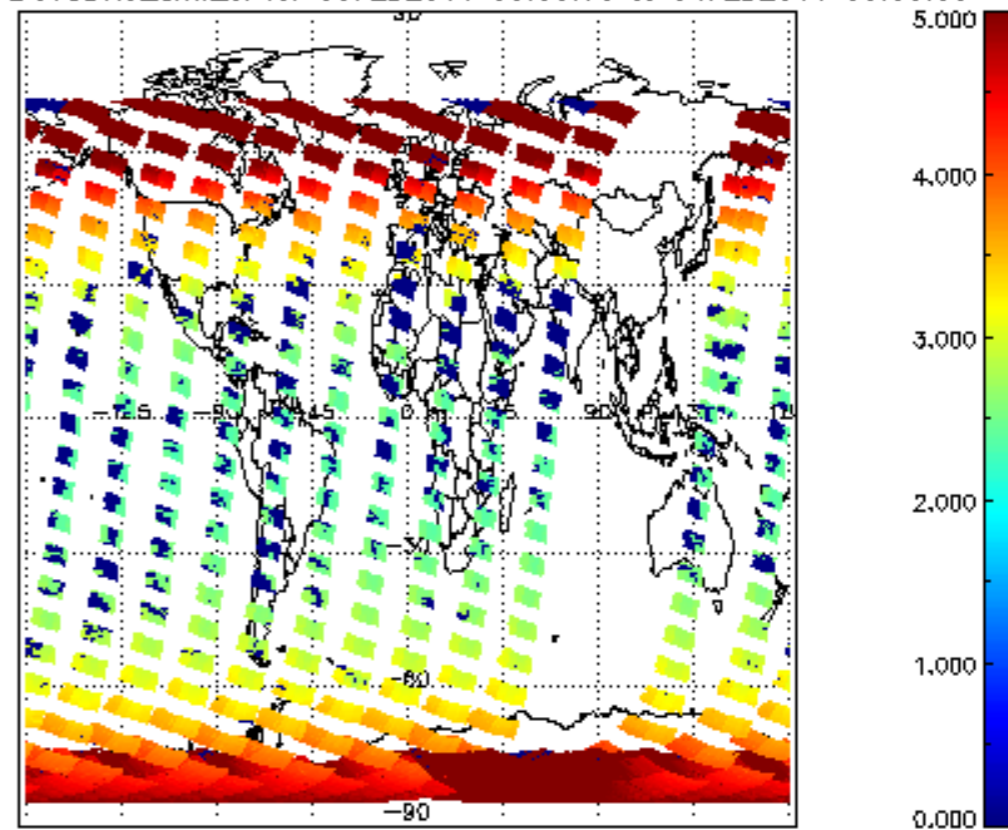
SCIOL2P\_NADUV3BRO\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

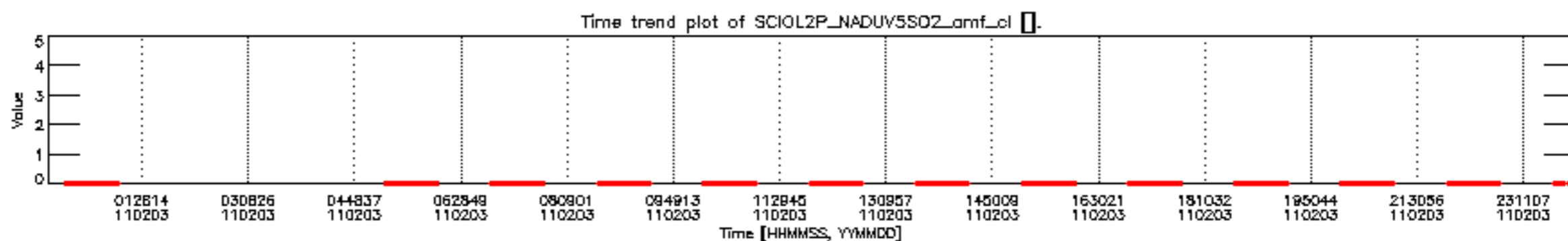
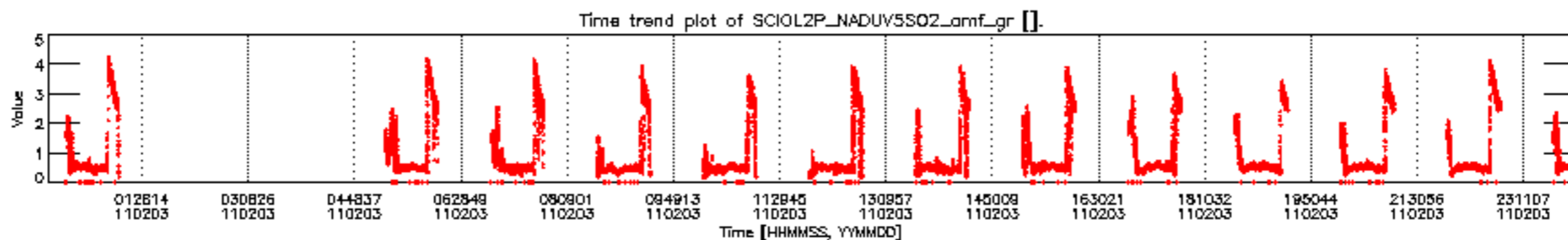
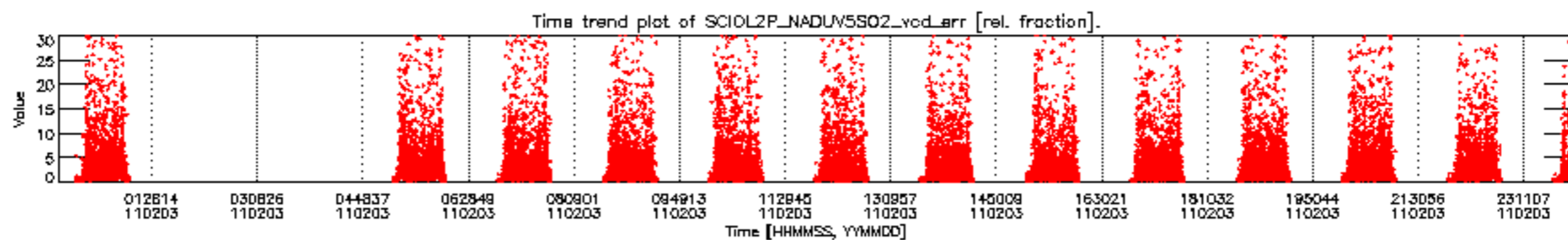
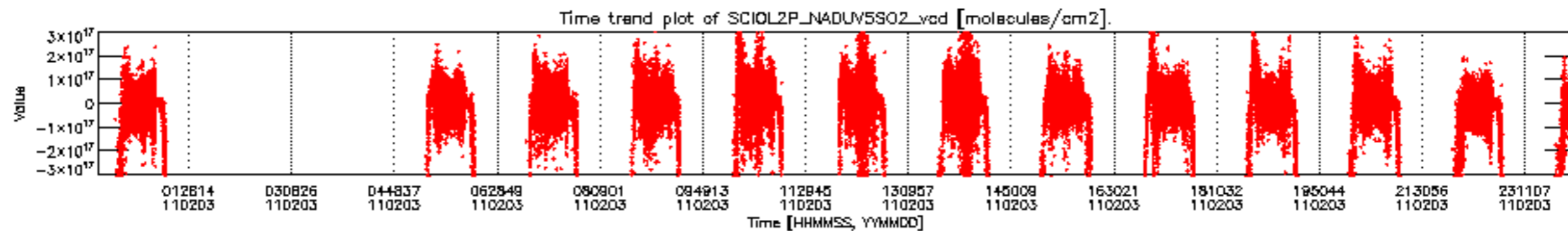


SCIOL2P\_NADUV3BRO\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



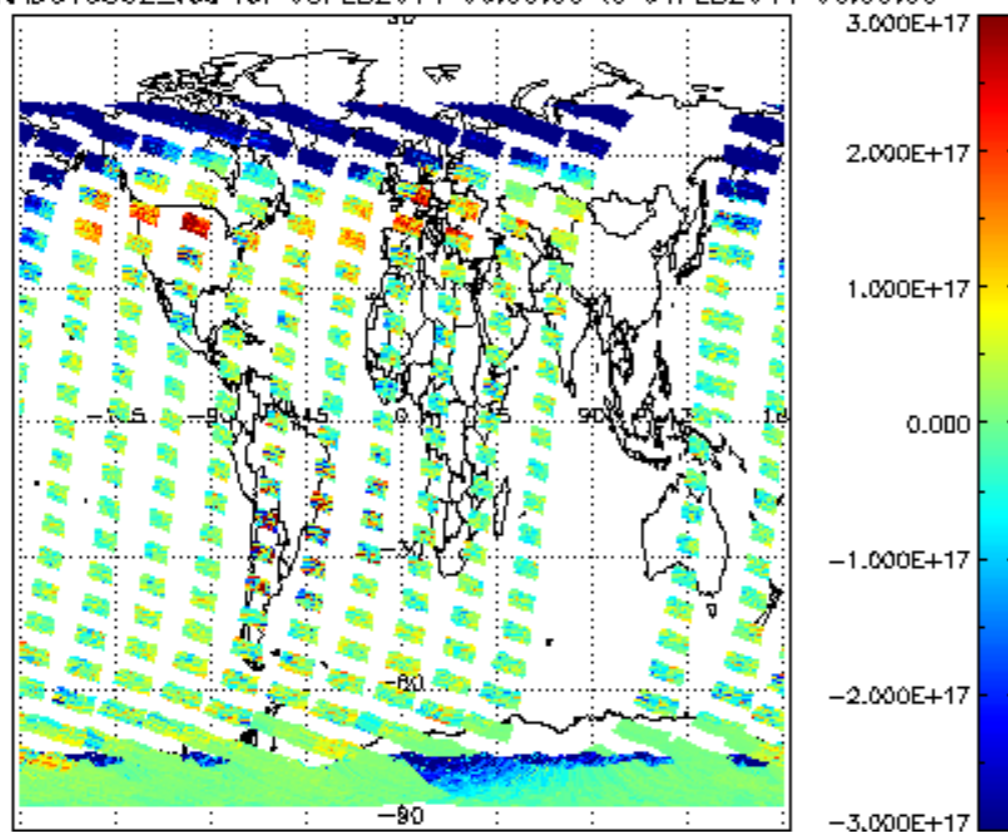
SCIOL2P\_NADUV3BRO\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



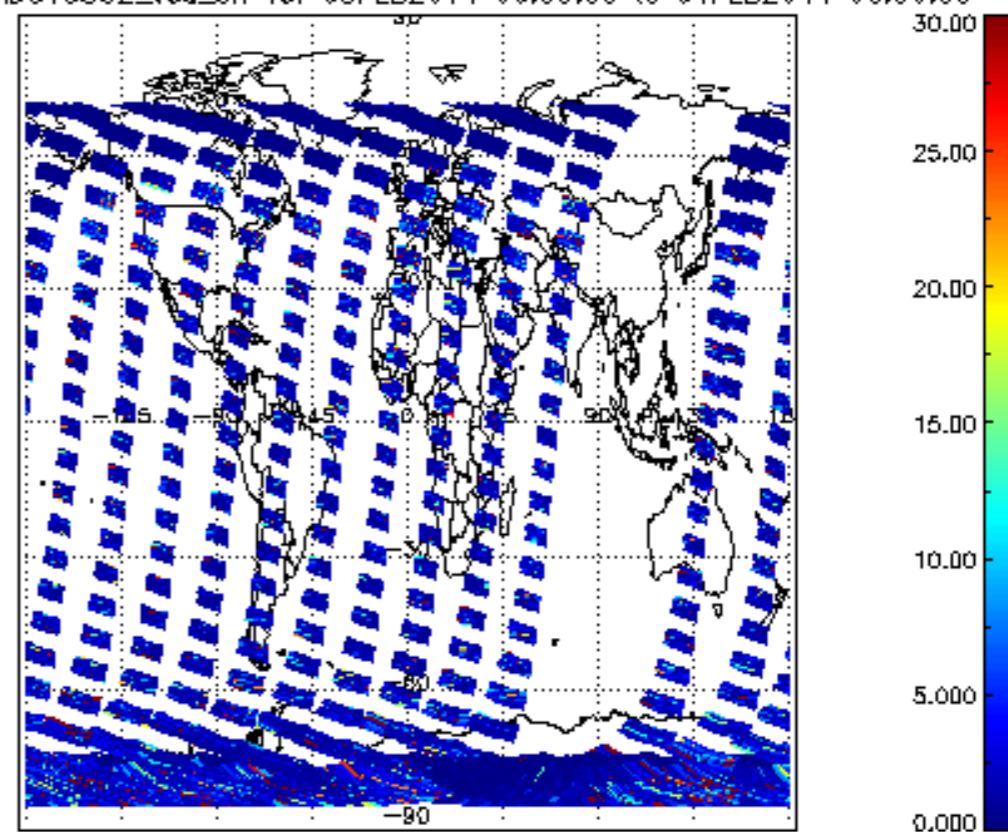




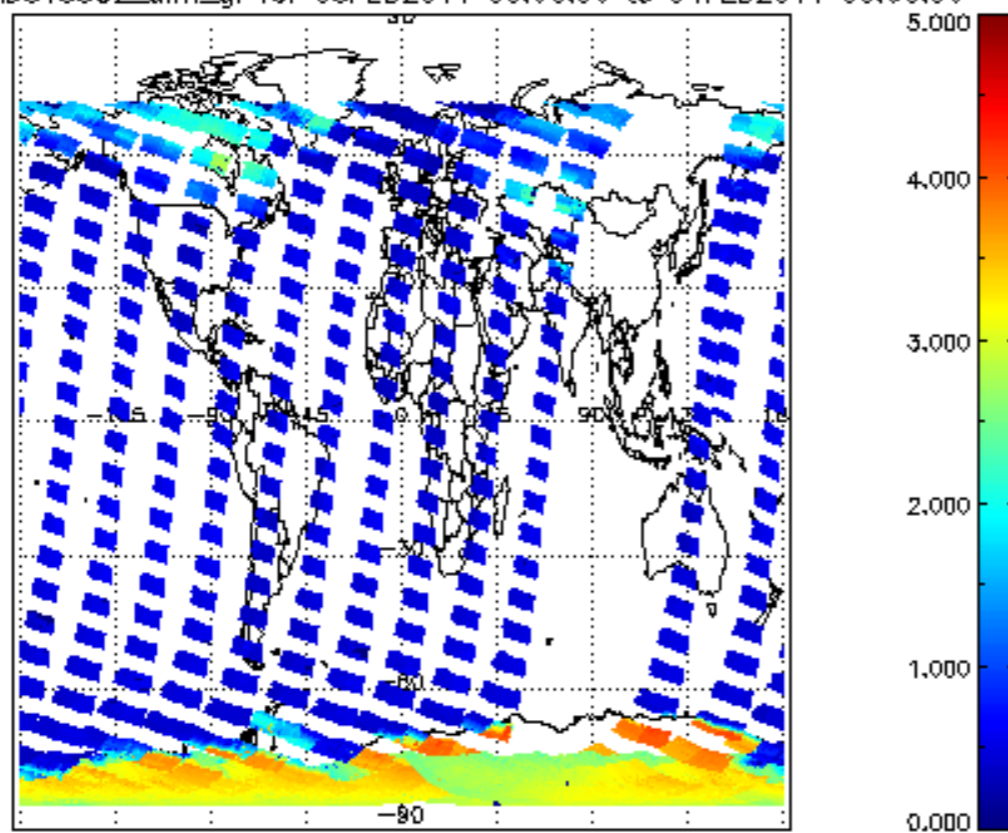
SCIOL2P\_NADUV5S02\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



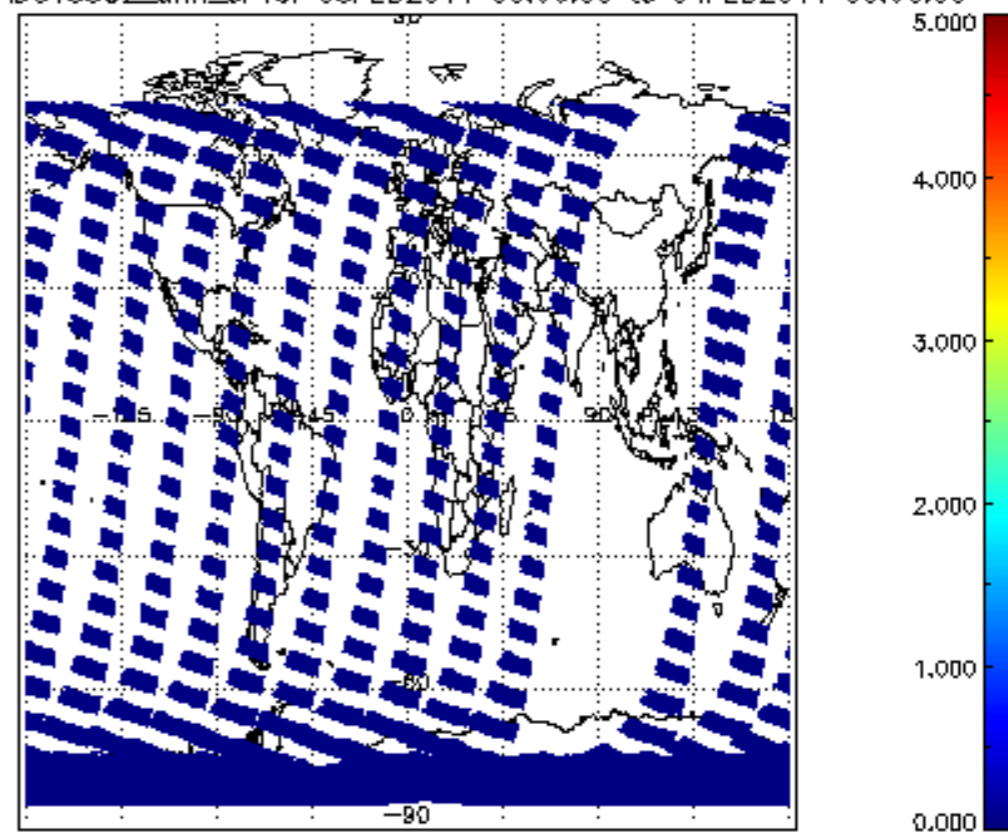
SCIOL2P\_NADUV5S02\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

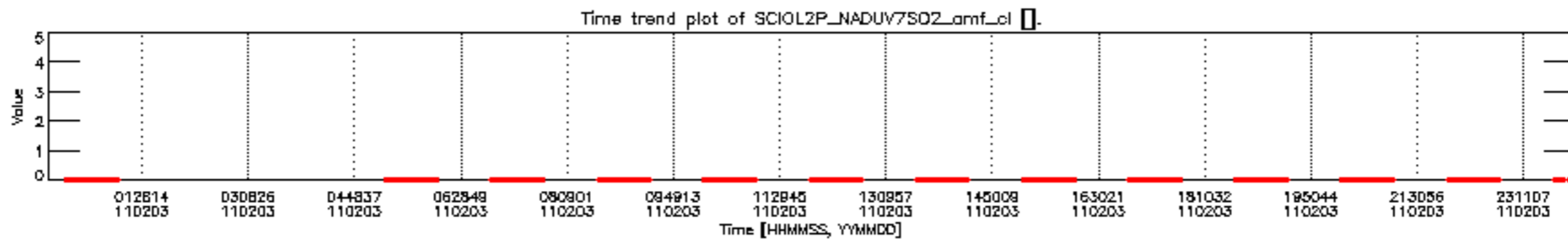
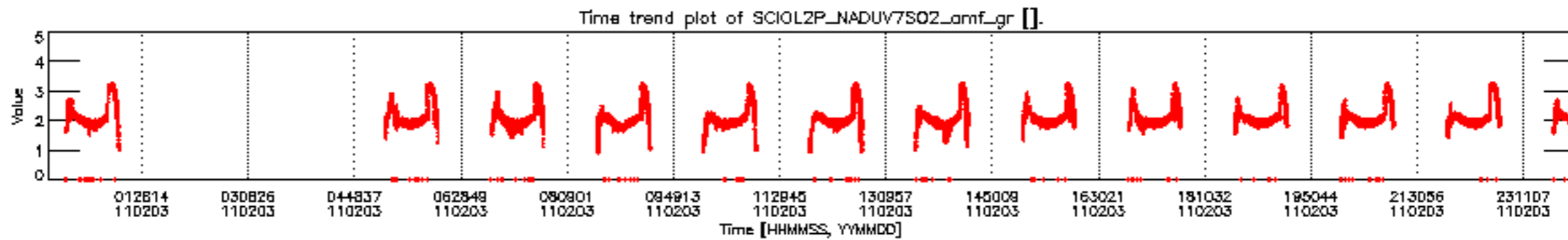
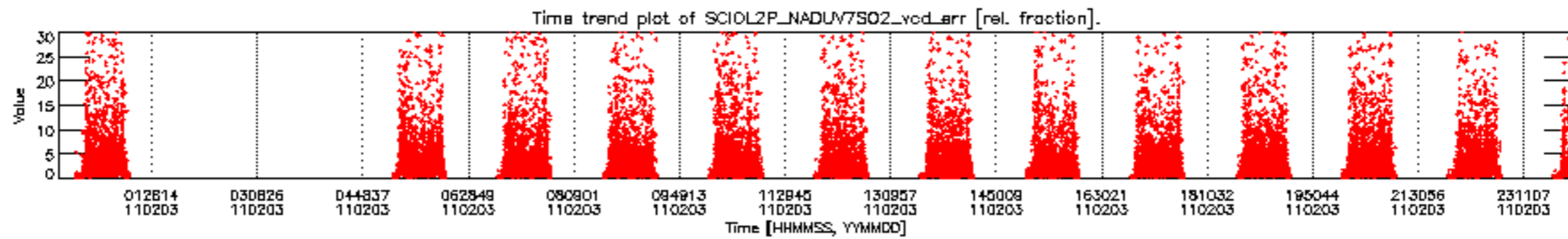
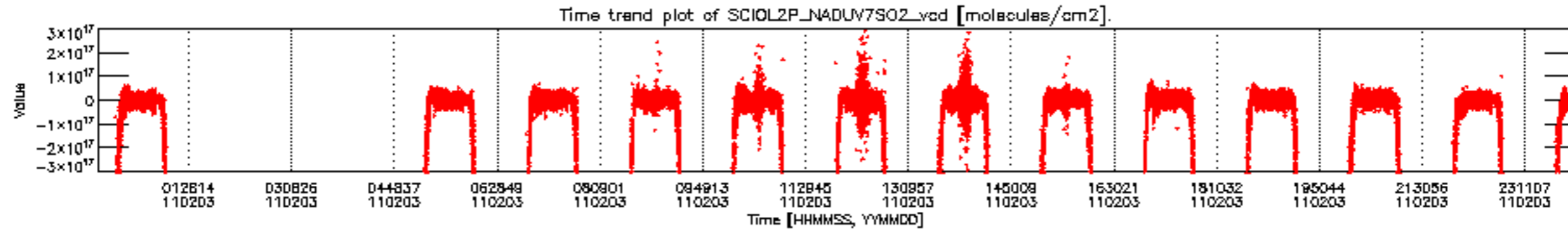


SCIOL2P\_NADUV5S02\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



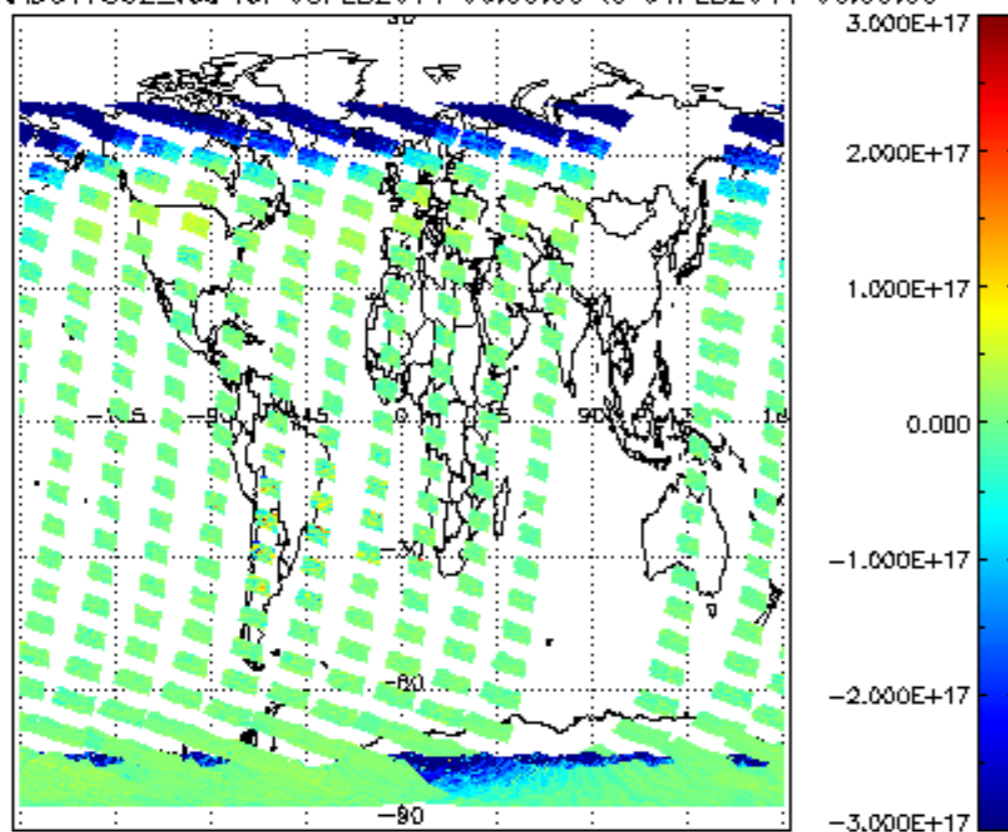
SCIOL2P\_NADUV5S02\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



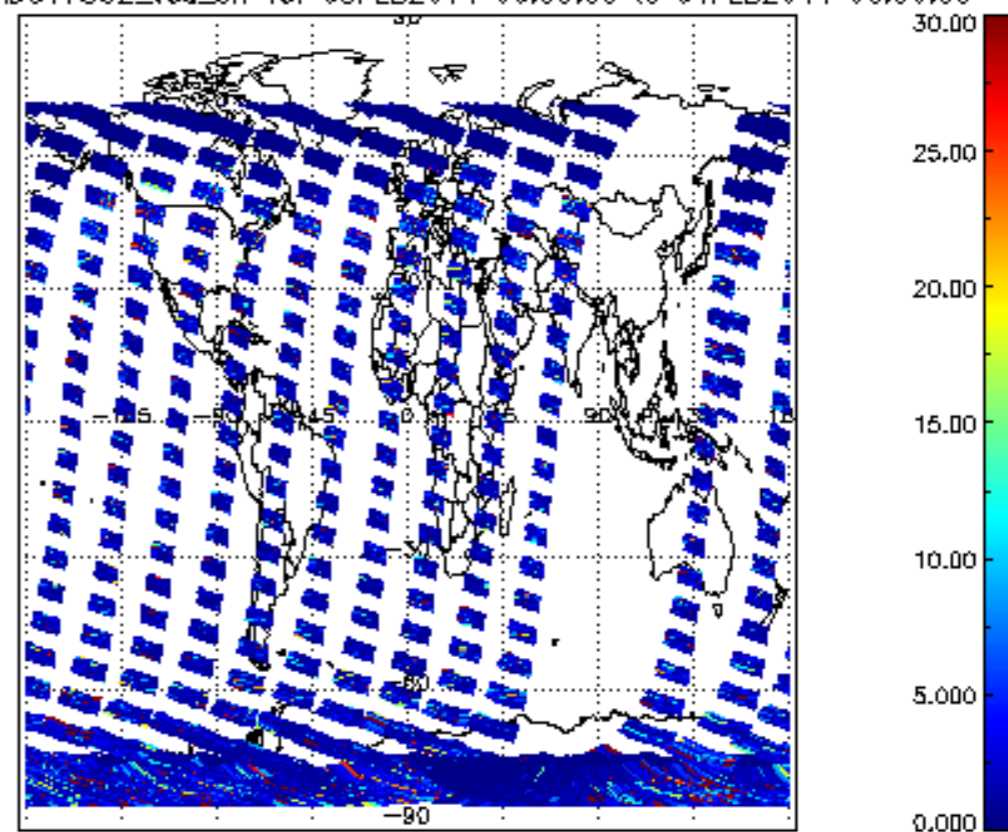




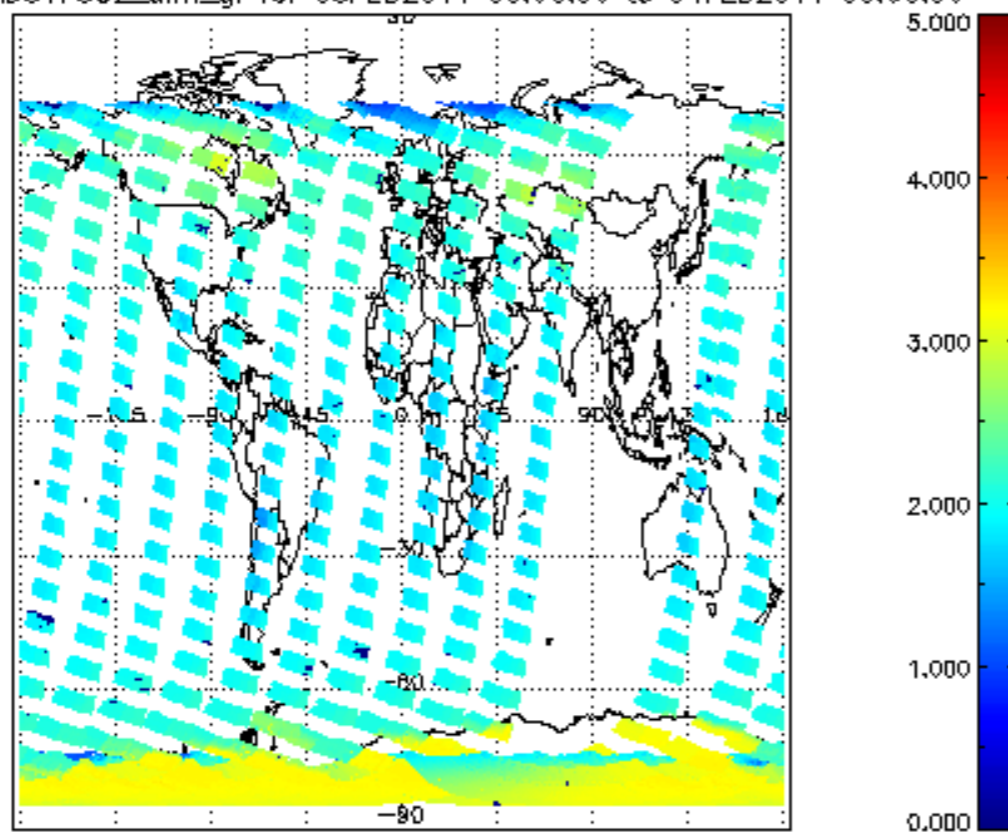
SCIOL2P\_NADUV7S02\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



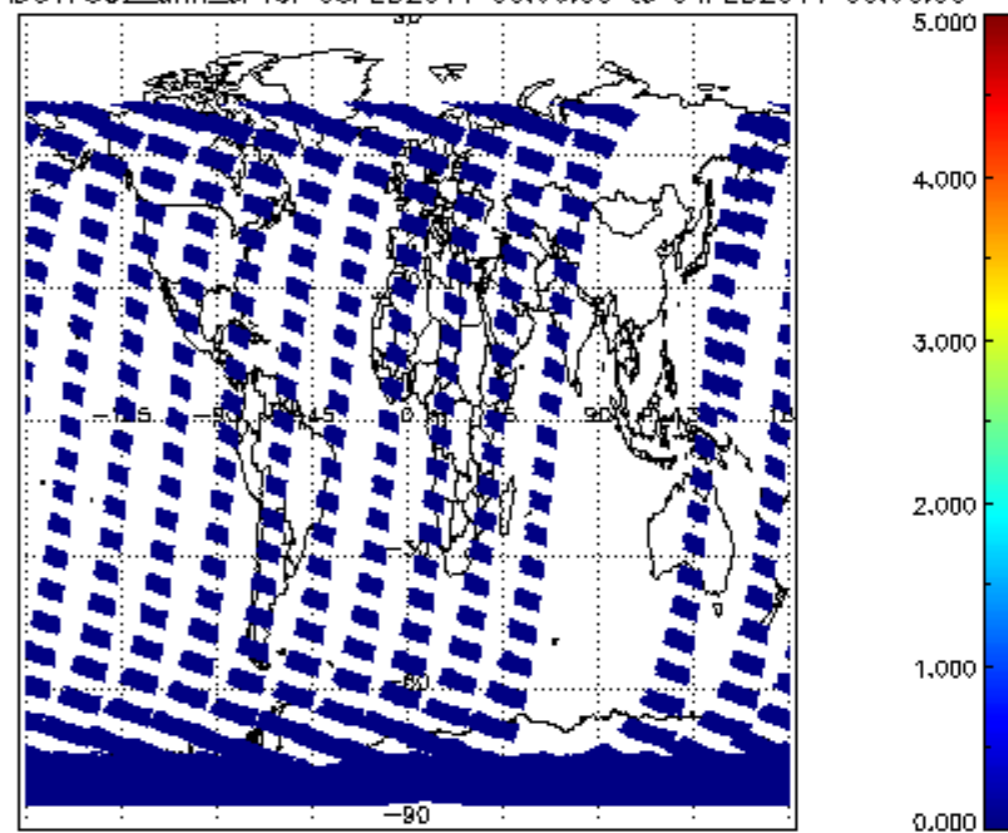
SCIOL2P\_NADUV7S02\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

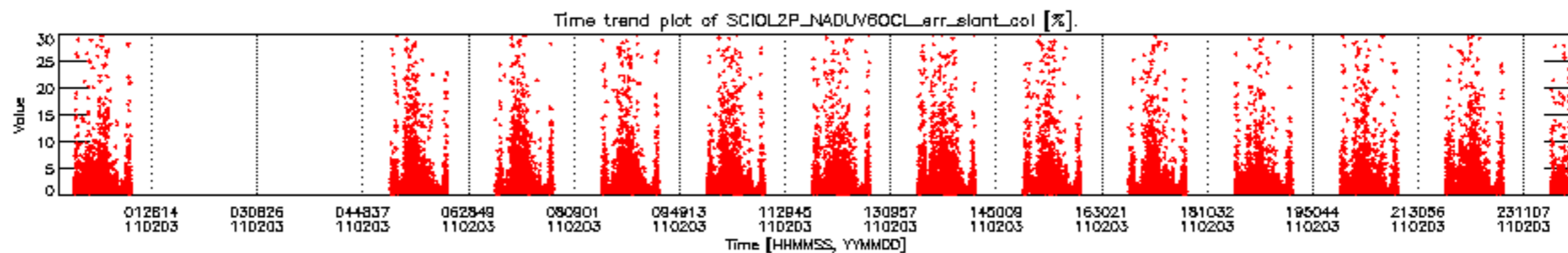
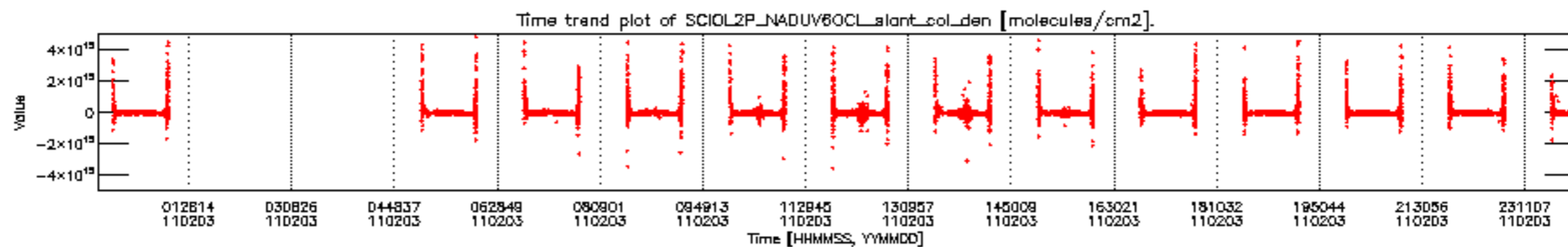


SCIOL2P\_NADUV7S02\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



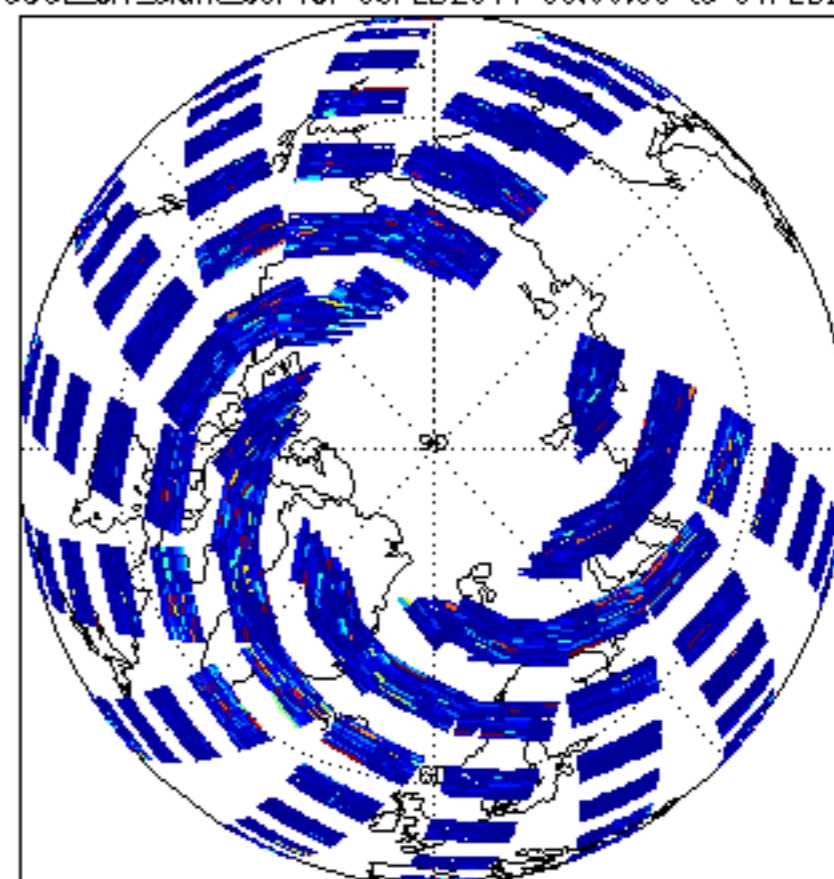
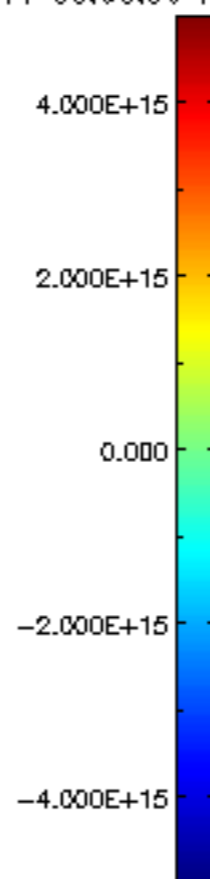
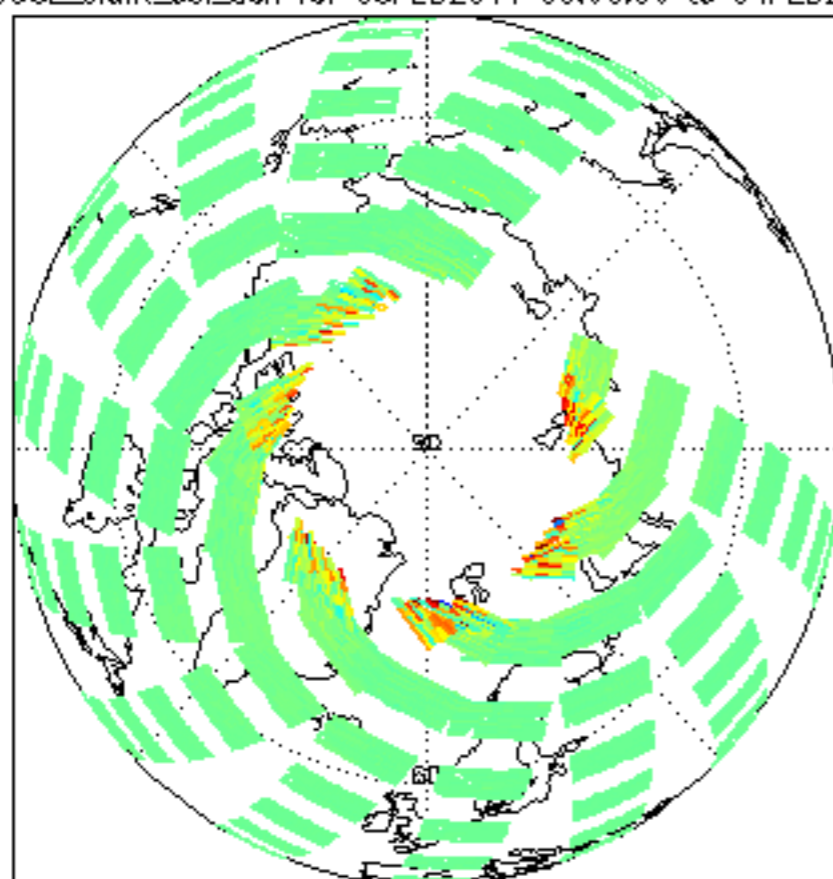
SCIOL2P\_NADUV7S02\_amf\_cl for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



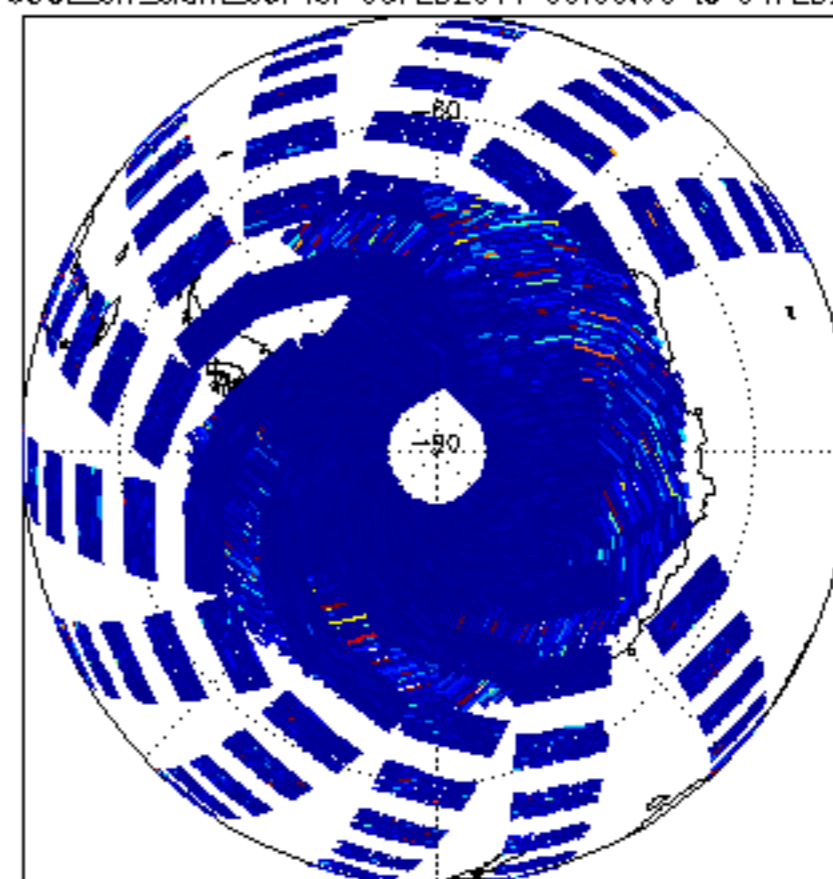
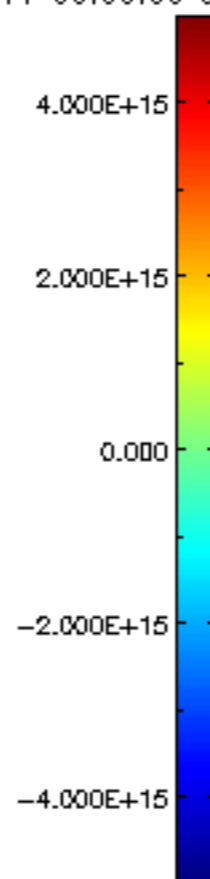
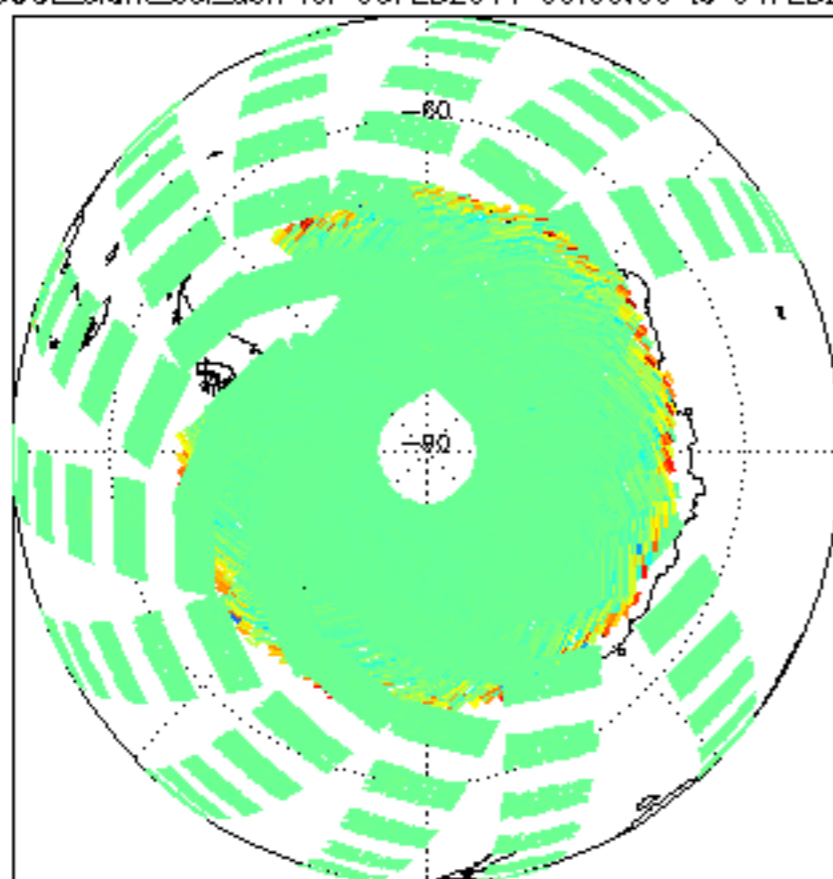




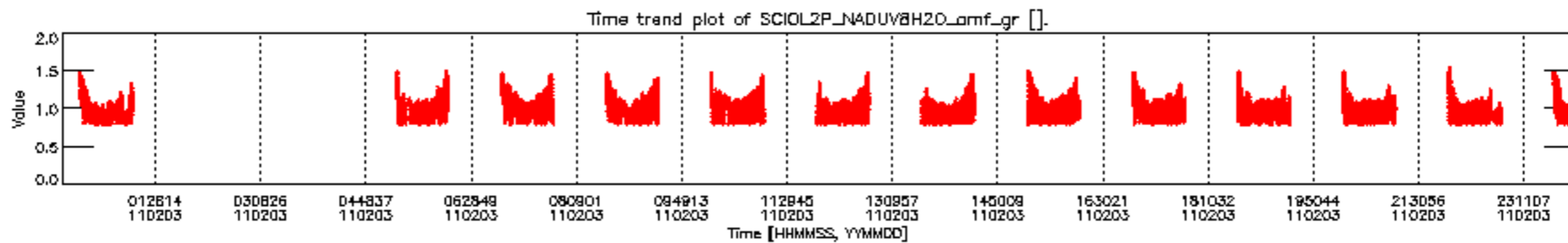
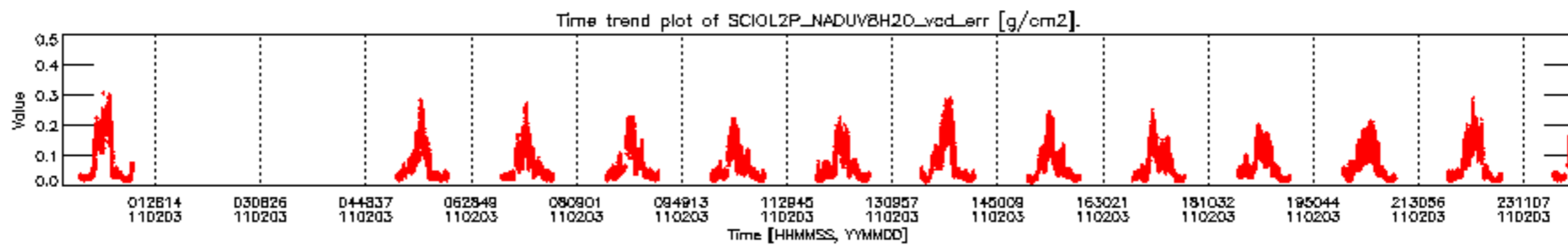
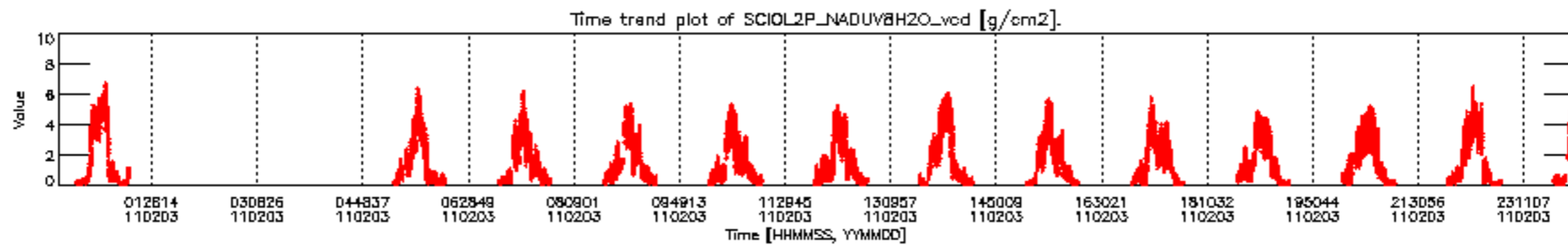
CIOL2P\_NADUV6OCL\_slant\_col\_den for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 np



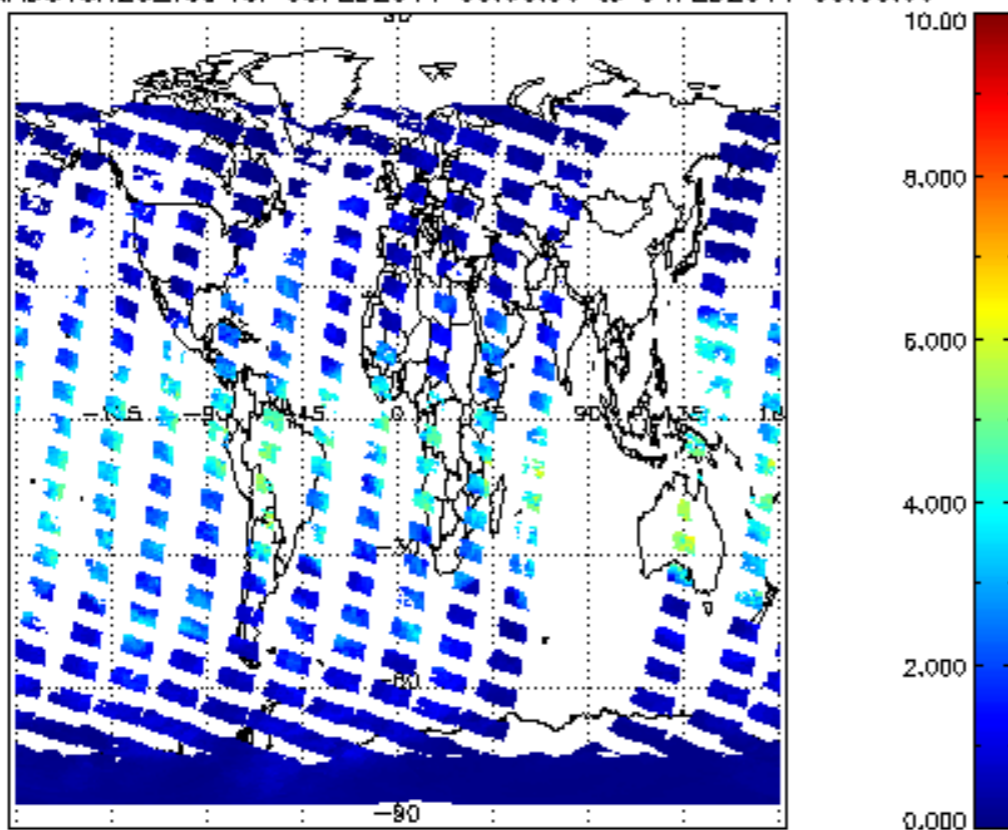
CIOL2P\_NADUV6OCL\_slant\_col\_den for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 03FEB2011 00:00:00 to 04FEB2011 00:00:00 sp



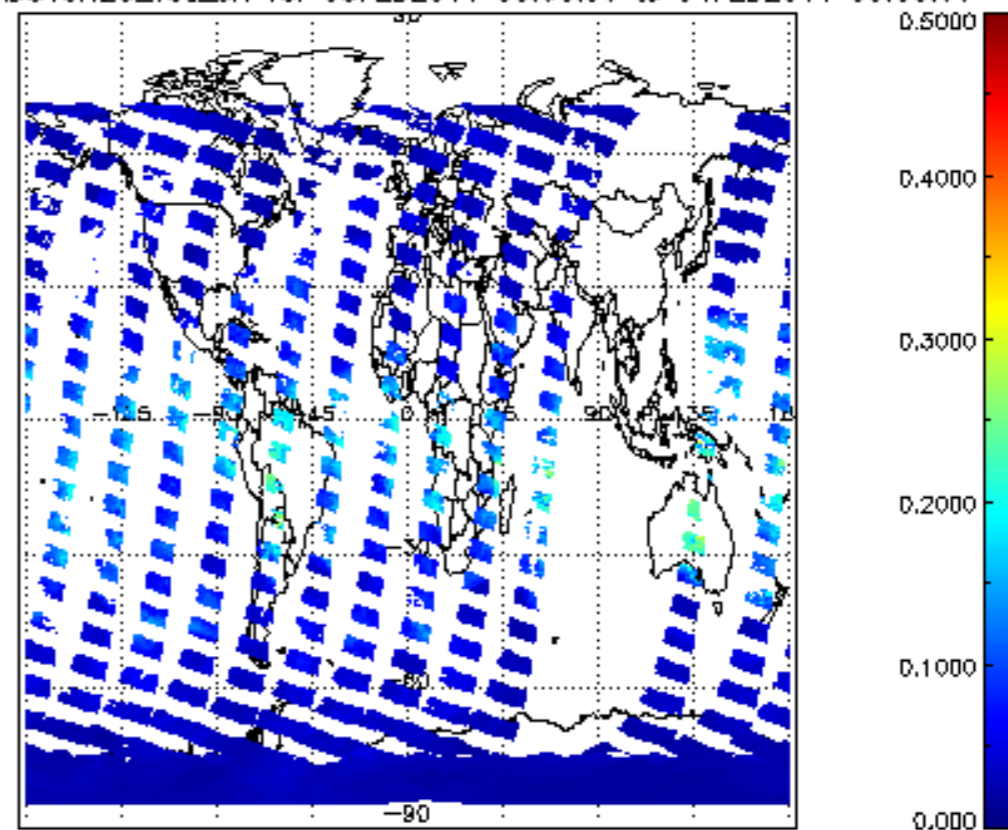




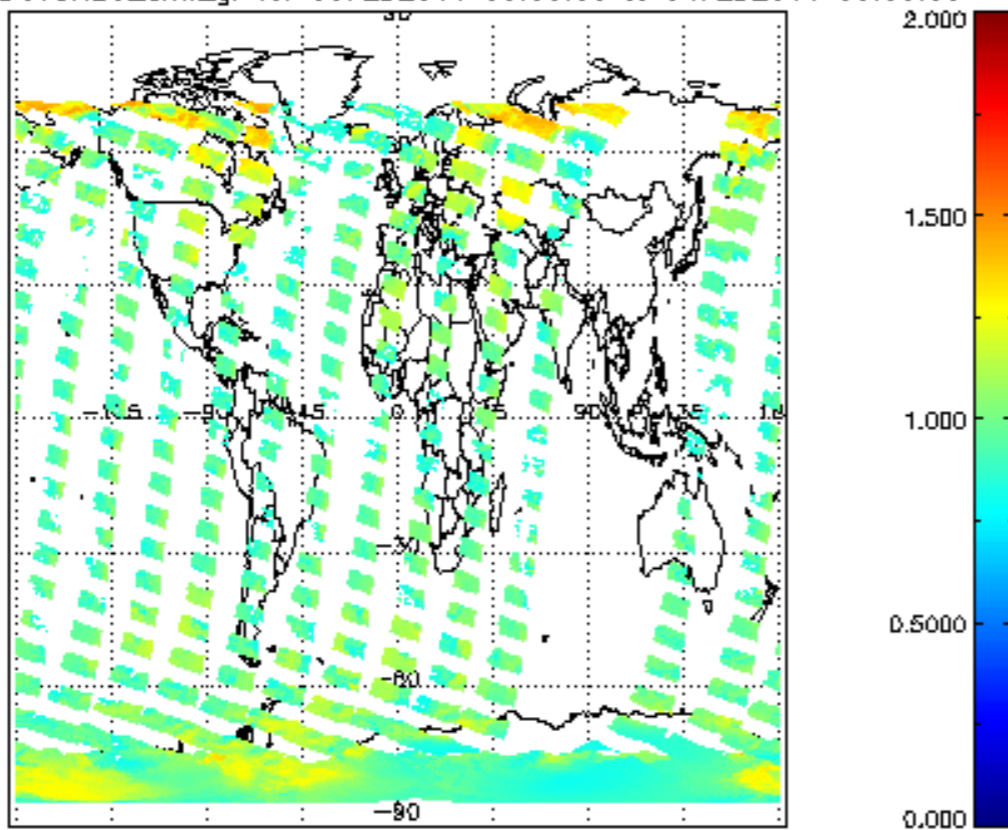
SCIOL2P\_NADUV8H20\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



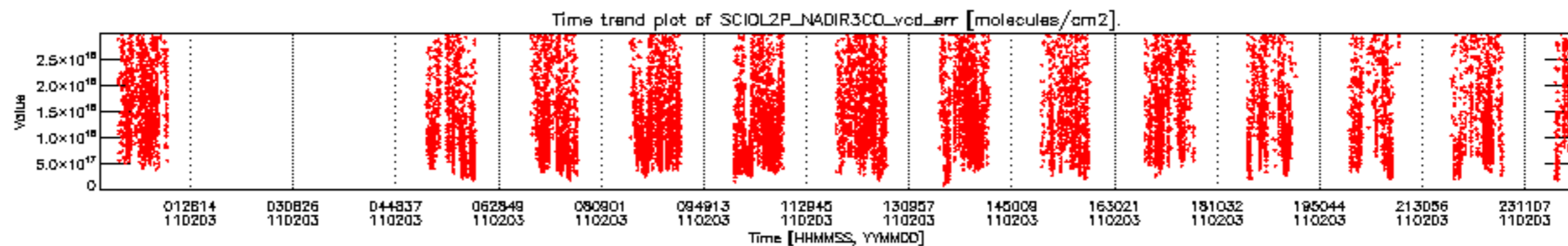
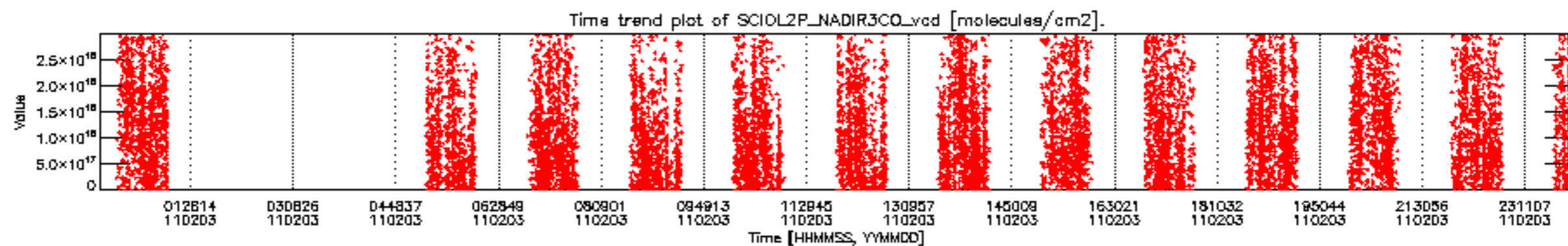
SCIOL2P\_NADUV8H20\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



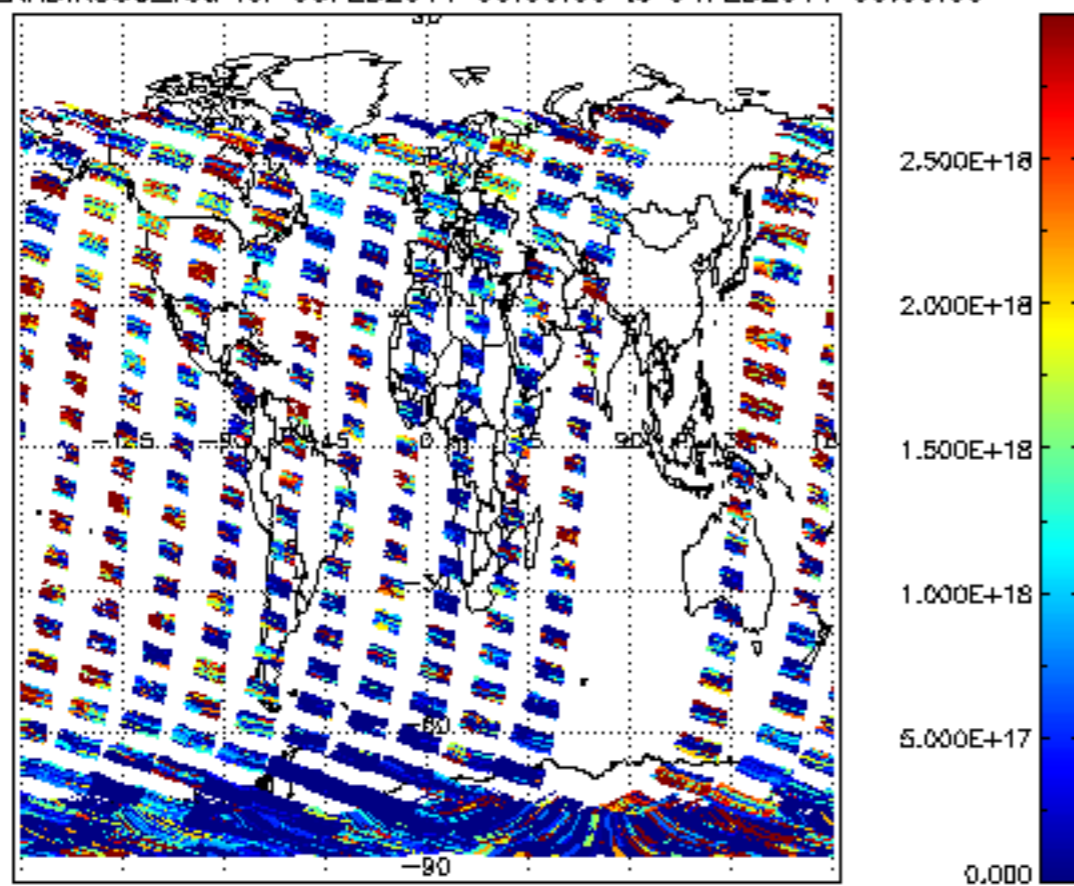
SCIOL2P\_NADUV8H20\_amf\_gr for 03FEB2011 00:00:00 to 04FEB2011 00:00:00



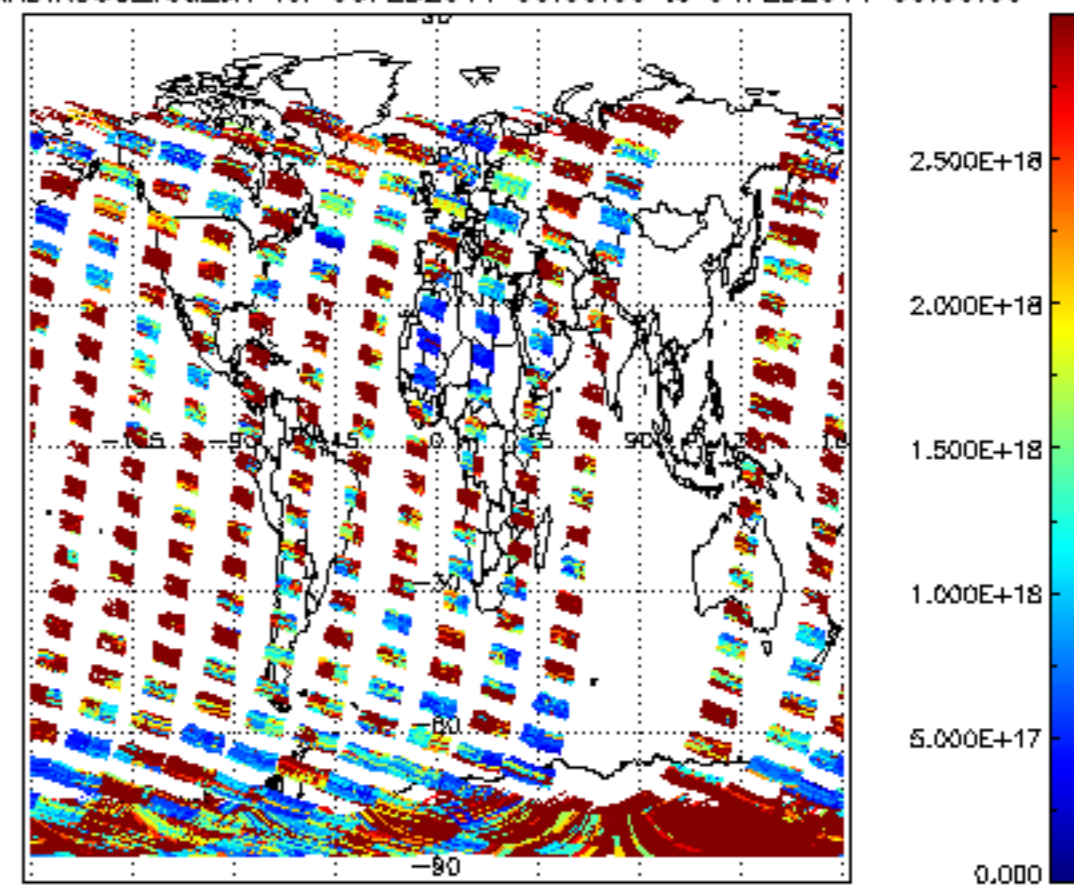




SCIOL2P\_NADIR3CO\_vcd for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

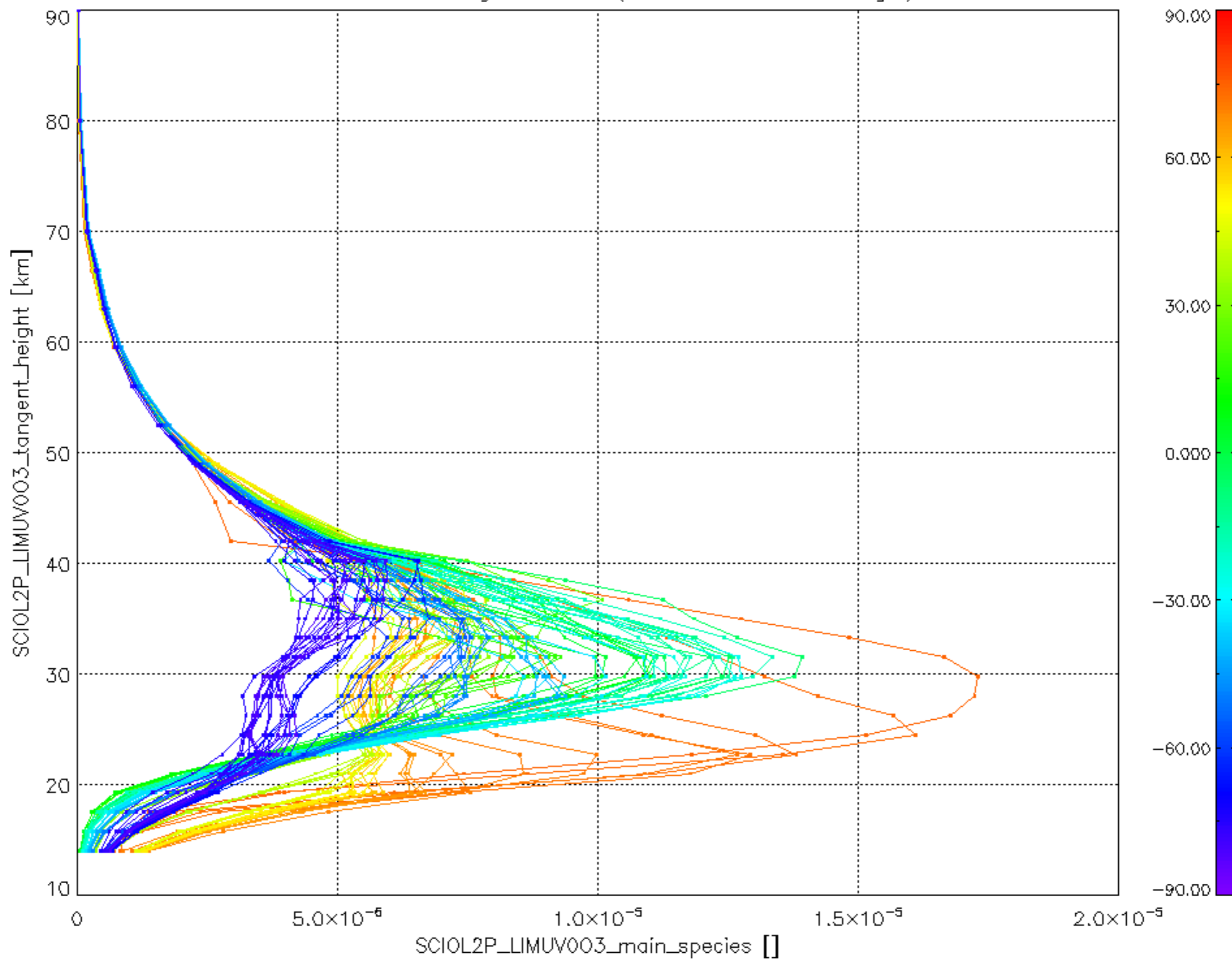


SCIOL2P\_NADIR3CO\_vcd\_err for 03FEB2011 00:00:00 to 04FEB2011 00:00:00

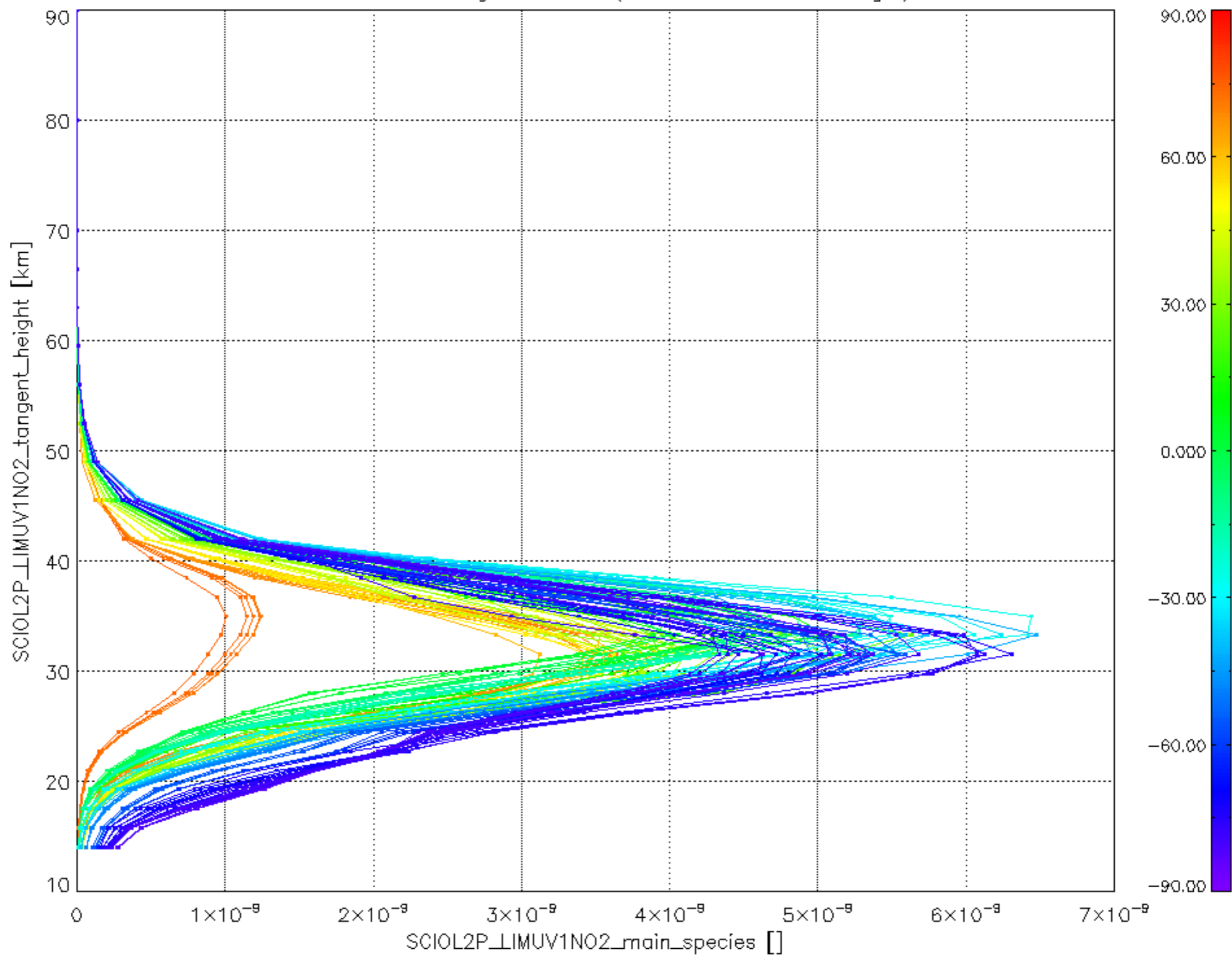




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



Plot of SCIOL2P\_LIMUV1N02\_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).

