

## 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	1.13 (28-02-2011)
Time of report generation	16MAY2011 12:00:10
Data source version	SCIA-OL/5.01-N
Processing scope for products	10MAY2011 00:00:00 to 11MAY2011 00:00:00
Start time of first product within scope	09MAY2011 23:40:53
Stop time of last product within scope	11MAY2011 00:03:06
Total number of level 2 products	15
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__2PNDPA20110509_234053_000035303102_00202_48061_3063.N1</a>	09MAY2011 23:40:53	10MAY2011 00:39:44	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110510_012107_000088183102_00203_48062_3064.N1</a>	10MAY2011 01:21:07	10MAY2011 03:48:06	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110510_034904_000060643102_00205_48064_3065.N1</a>	10MAY2011 03:49:04	10MAY2011 05:30:08	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110510_053214_000059013102_00206_48065_3066.N1</a>	10MAY2011 05:32:14	10MAY2011 07:10:36	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110510_071134_000039773102_00207_48066_3067.N1</a>	10MAY2011 07:11:34	10MAY2011 08:17:52	0	GOOD

5	SCI_OL__2PNDPA20110510_081904_000060103102_00208_48067_3068.N1	10MAY2011 08:19:04	10MAY2011 09:59:14	0	GOOD
6	SCI_OL__2PNDPA20110510_095918_000059093102_00209_48068_3069.N1	10MAY2011 09:59:18	10MAY2011 11:37:47	0	GOOD
7	SCI_OL__2PNDPA20110510_113753_000060053102_00210_48069_3070.N1	10MAY2011 11:37:53	10MAY2011 13:17:58	0	GOOD
8	SCI_OL__2PNDPA20110510_131807_000058303102_00211_48070_3071.N1	10MAY2011 13:18:07	10MAY2011 14:55:17	0	GOOD
9	SCI_OL__2PNDPA20110510_145520_000057473102_00212_48071_3072.N1	10MAY2011 14:55:20	10MAY2011 16:31:08	0	GOOD
10	SCI_OL__2PNDPA20110510_163113_000059523102_00213_48072_3073.N1	10MAY2011 16:31:13	10MAY2011 18:10:26	0	GOOD
11	SCI_OL__2PNDPA20110510_180935_000031453102_00214_48073_3074.N1	10MAY2011 18:09:35	10MAY2011 19:02:01	0	GOOD
12	SCI_OL__2PNDPA20110510_194841_000032133102_00215_48074_3075.N1	10MAY2011 19:48:41	10MAY2011 20:42:15	0	GOOD
13	SCI_OL__2PNDPA20110510_212402_000035163102_00215_48074_3076.N1	10MAY2011 21:24:02	10MAY2011 22:22:38	0	GOOD
14	SCI_OL__2PNDPA20110510_230415_000035303102_00216_48075_3077.N1	10MAY2011 23:04:15	11MAY2011 00:03:06	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: 167781

Total number of cloud data DSRs with good quality flag (=0): 167781 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	167781	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	167781	0.16703	0.12500	0.12500	0.25000	0.059053	s
CL_FRAC	167781	0.38905	0.34581	0.0000	1.0000	0.31520	
CL_FRAC_ERR	167781	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	167781	5.3449	4.0000	4.0000	8.0000	1.8897	
PMD_READ_CL[0]	167781	0.46573	0.0000	0.0000	8.0000	1.4494	-
PMD_READ_CL[1]	167781	1.3545	0.0000	0.0000	8.0000	2.5694	-
CL_TOP_HEIGHT	133790	3.0263	1.2160	0.0000	17.000	3.4175	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	133790	66.177	100.00	0.0000	101.00	42.165	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	167781	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	167781	11001100	11000100	11000000	11100000	3598.9	
AERO_ABSO_IND	167781	0.19102	0.0000	0.0000	8.5424	0.45729	
AERO_IND_DIAG	167781	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	167781	01010100	00000000	00000000	11000000	24413.	

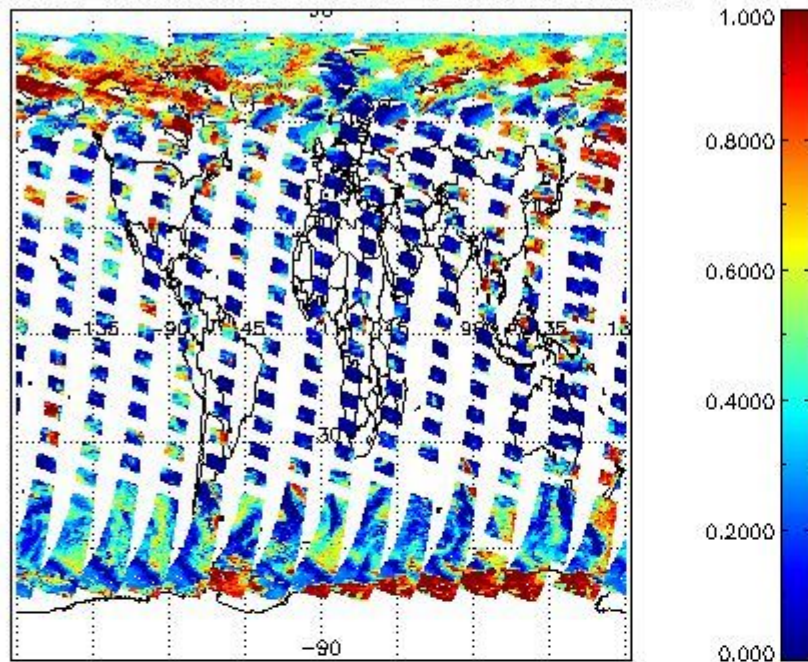
#### Time and geolocation plots:

Plots are available for the following parameters:

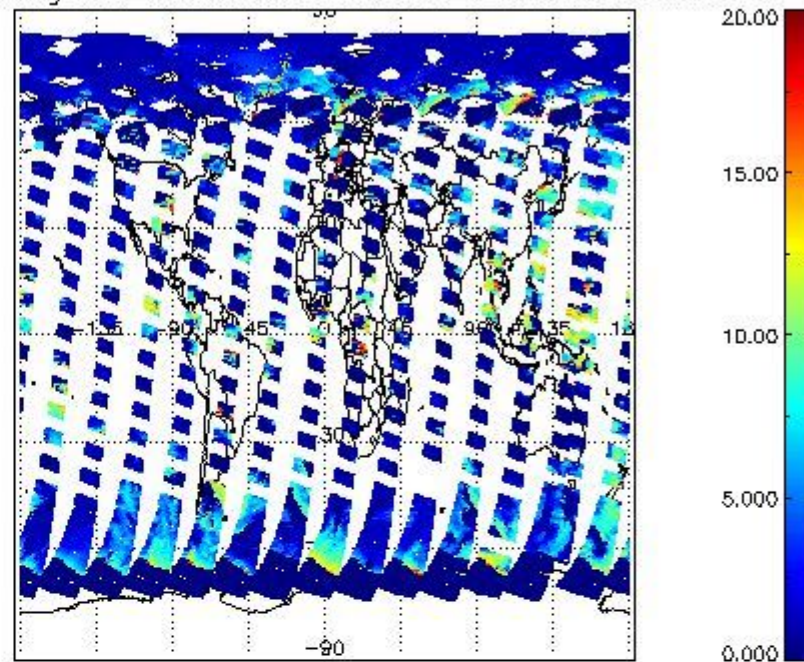
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



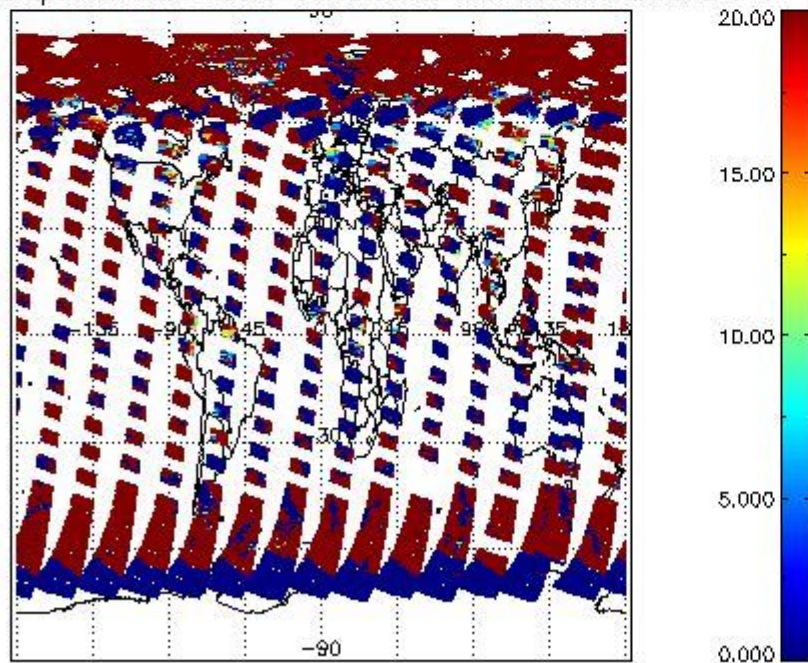
cL\_frac for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



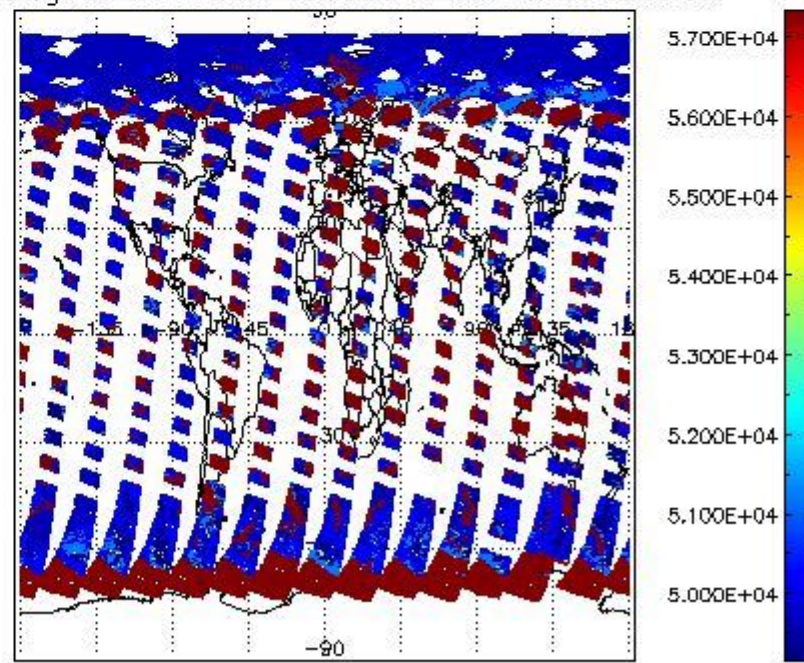
cL\_top\_height for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



cL\_opt\_depth for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



cloud\_flags for 10MAY2011 00:00:00 to 11MAY2011 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:

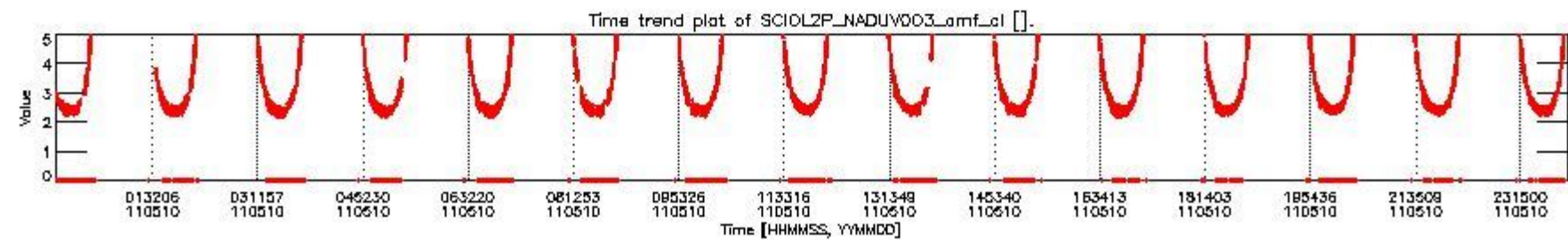
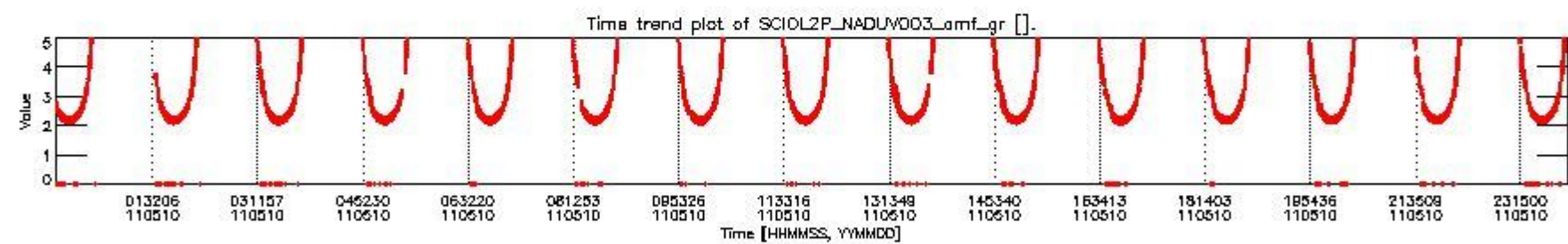
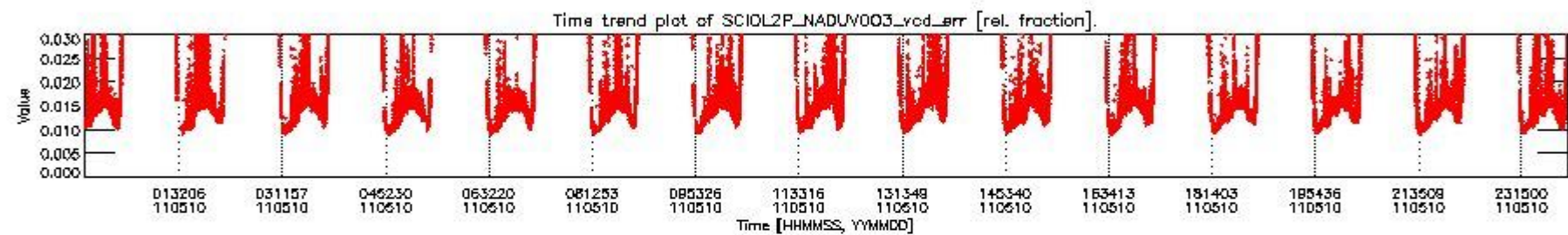
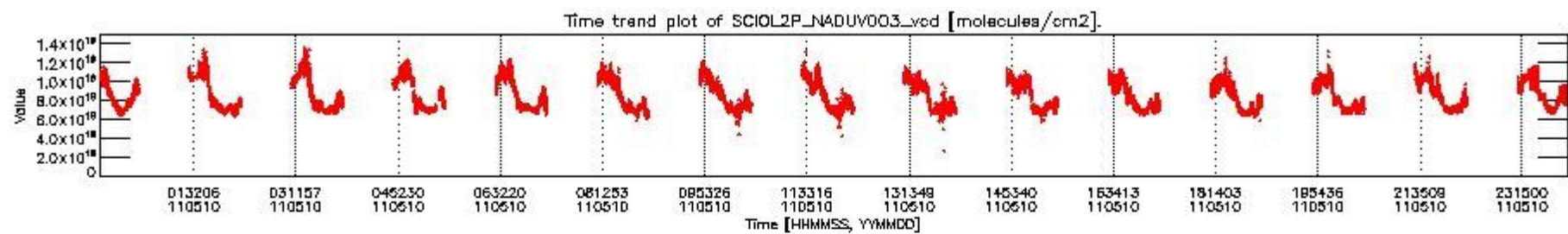
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

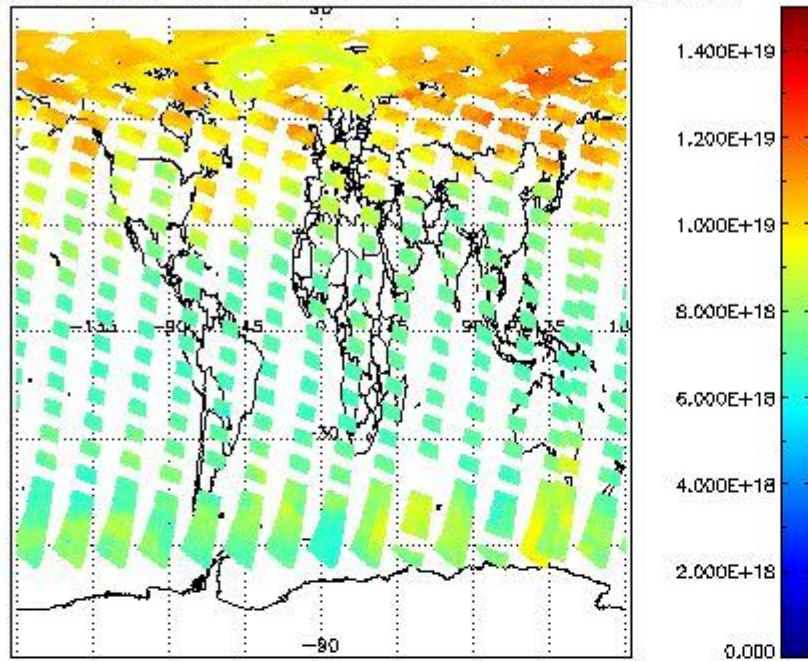
#### [2.2.2.1 O3 \(UV0\)](#)



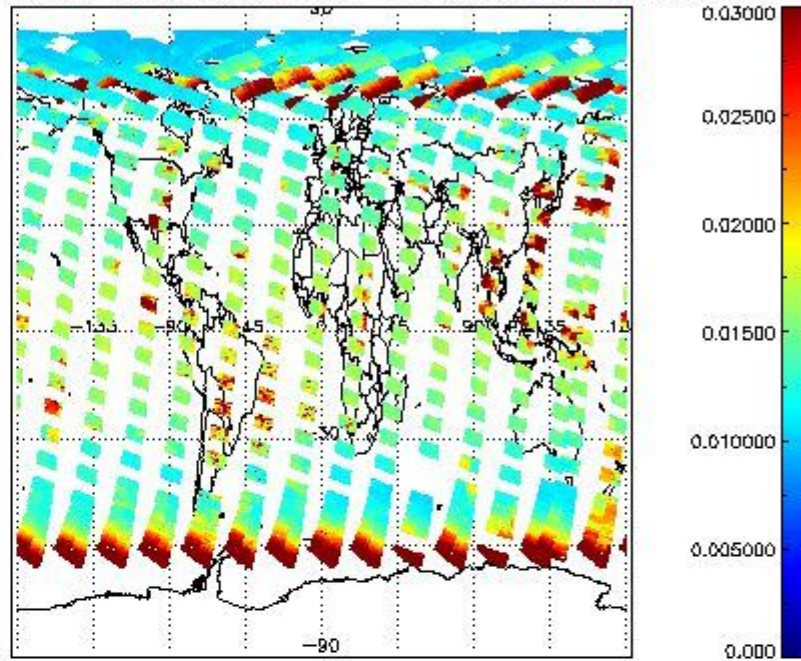




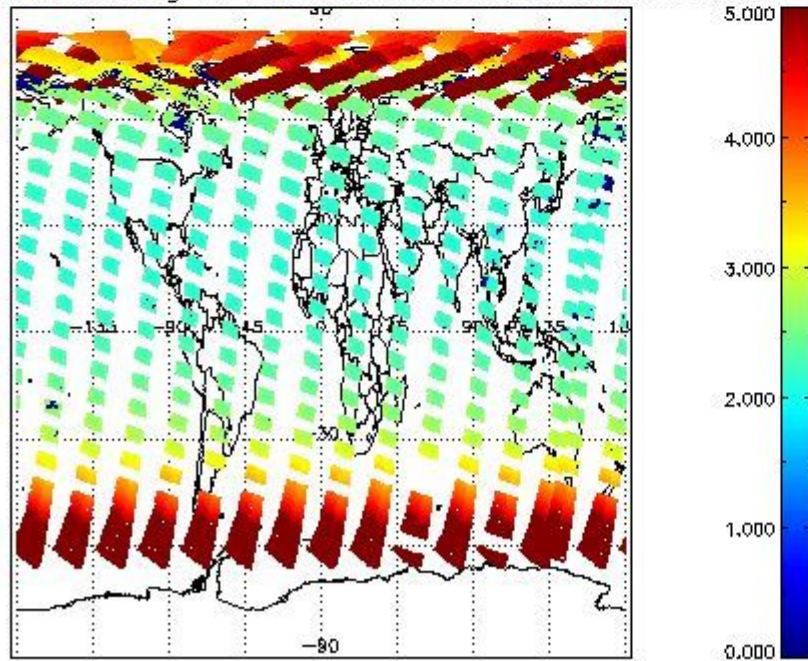
SCIOL2P\_NADUV003\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



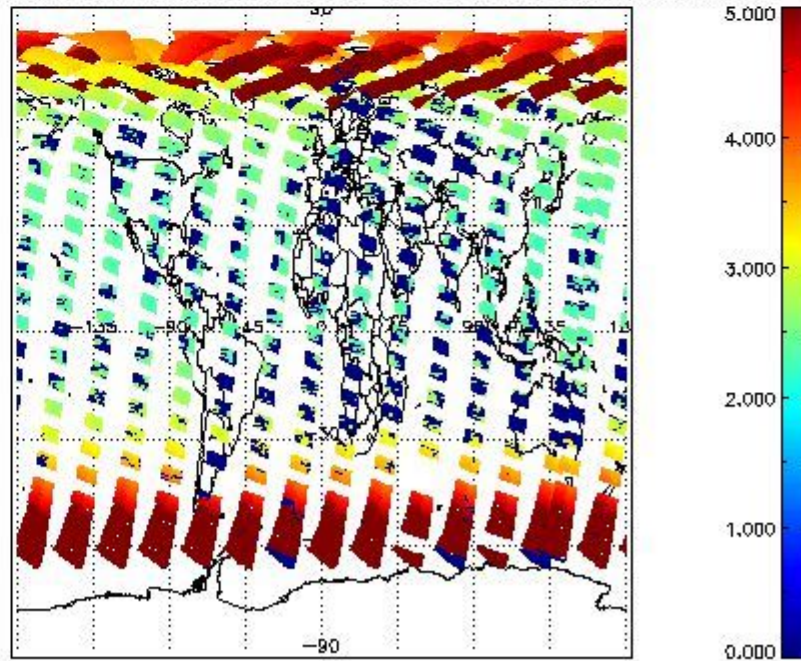
SCIOL2P\_NADUV003\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

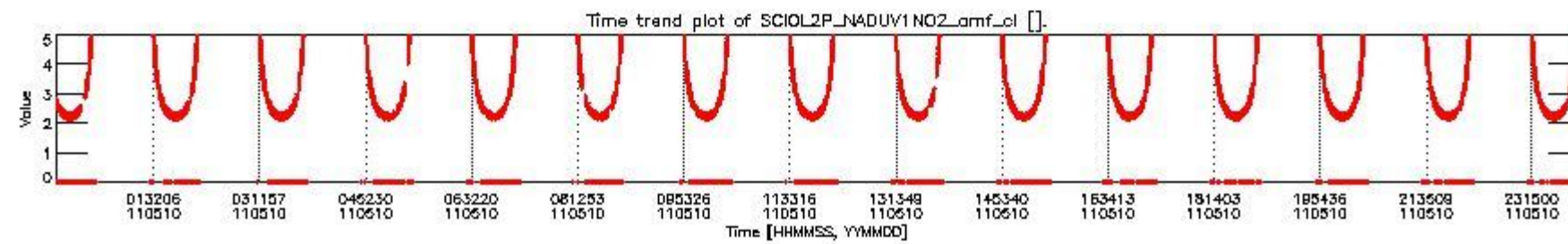
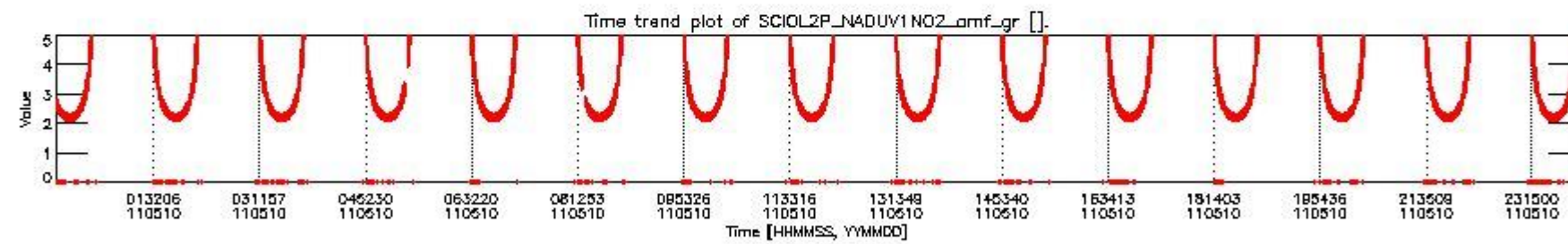
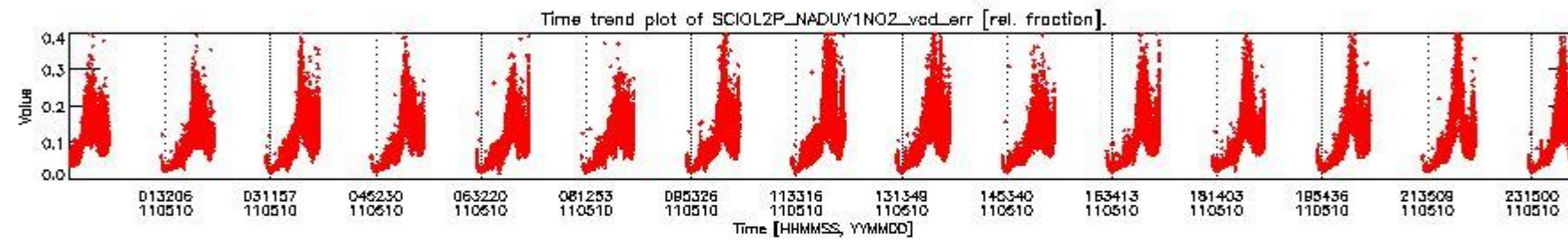
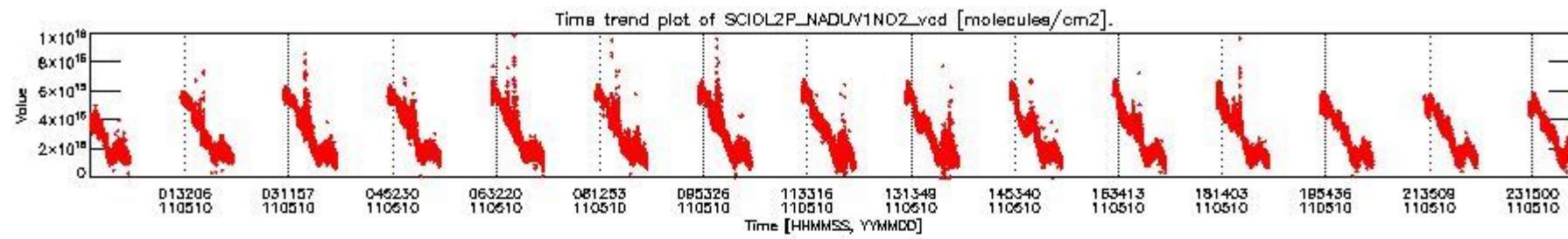


SCIOL2P\_NADUV003\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



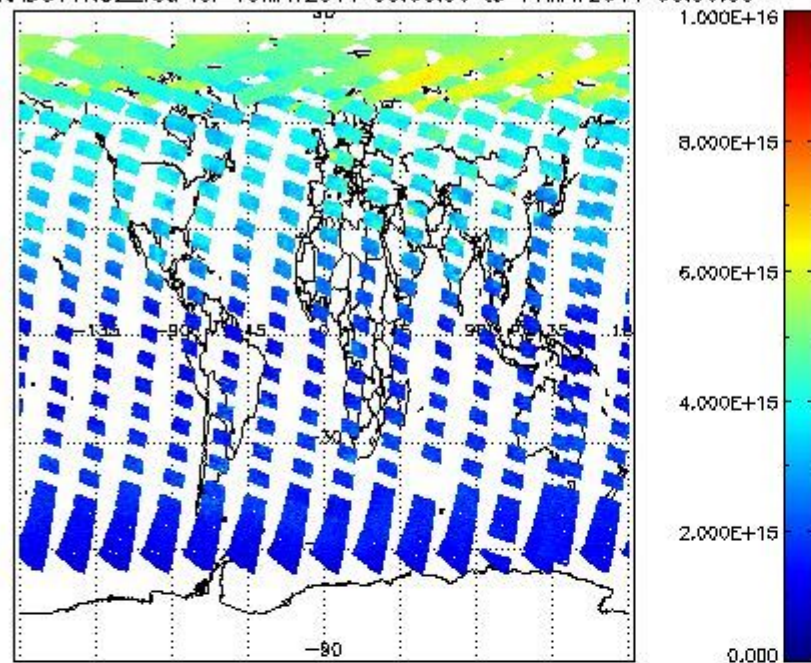
2.2.2.2 NO2 (UV1)



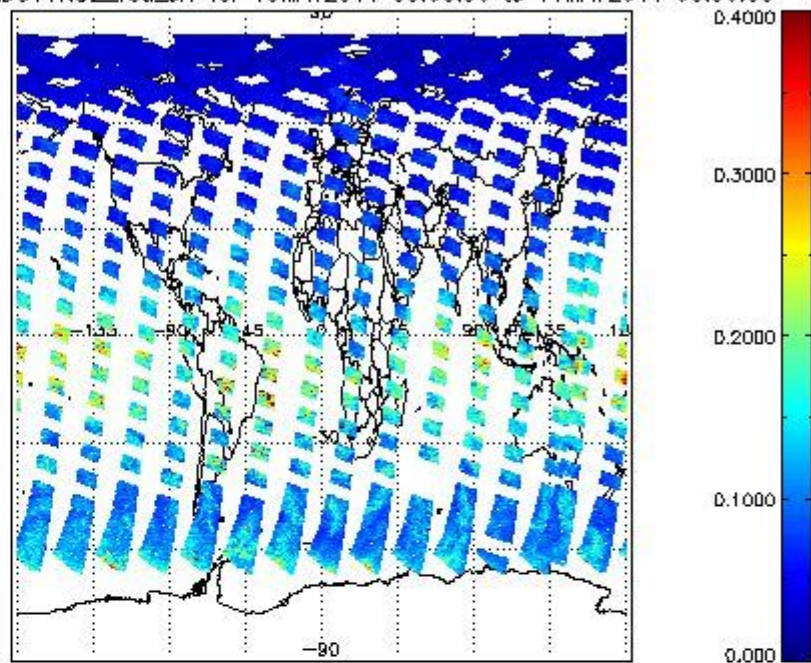




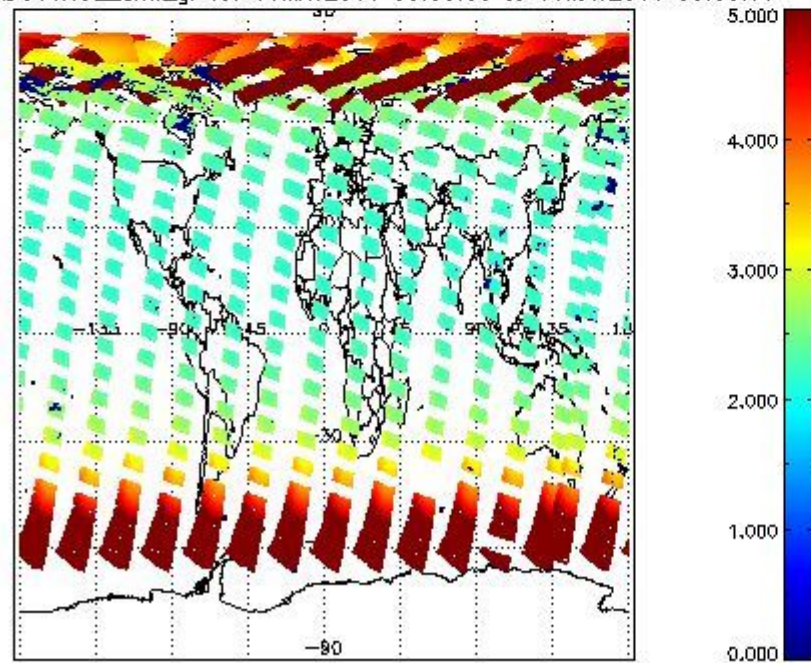
SCIOL2P\_NADUV1NO2\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



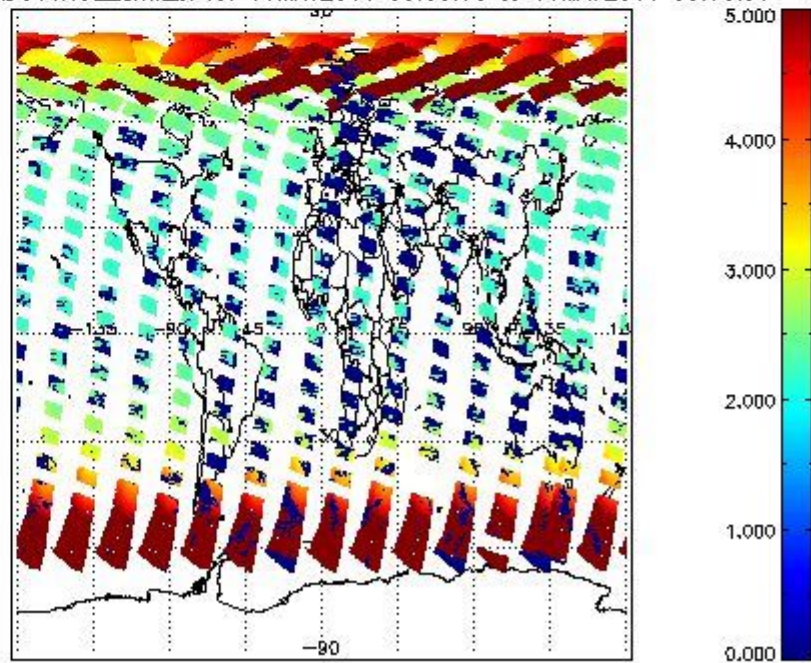
SCIOL2P\_NADUV1NO2\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

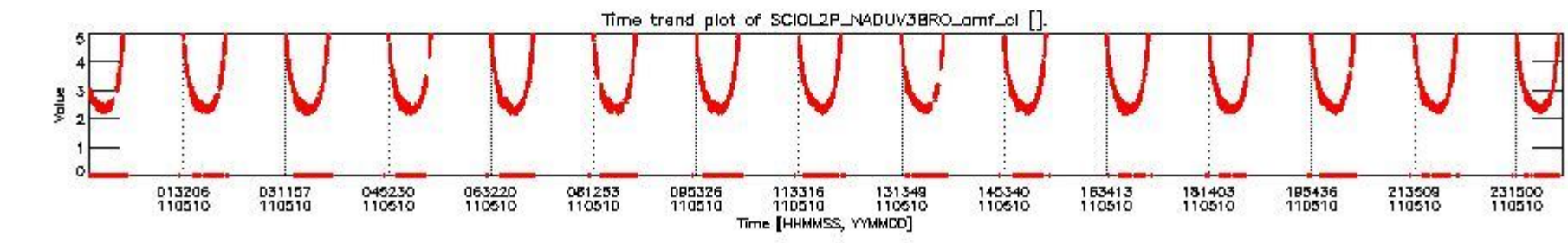
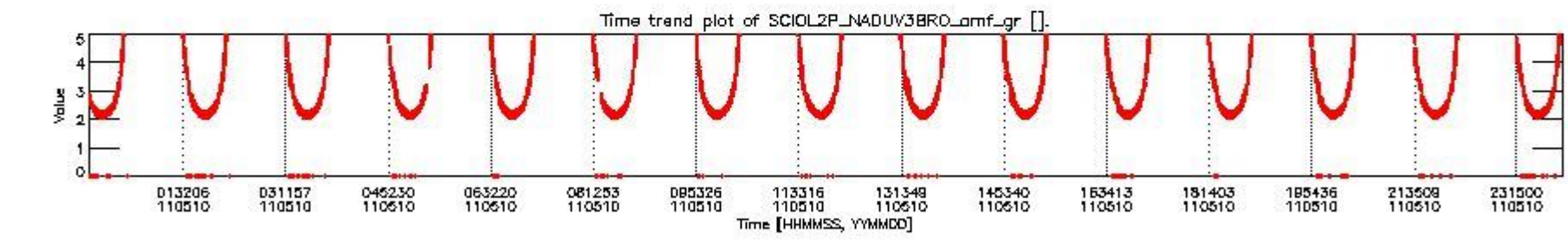
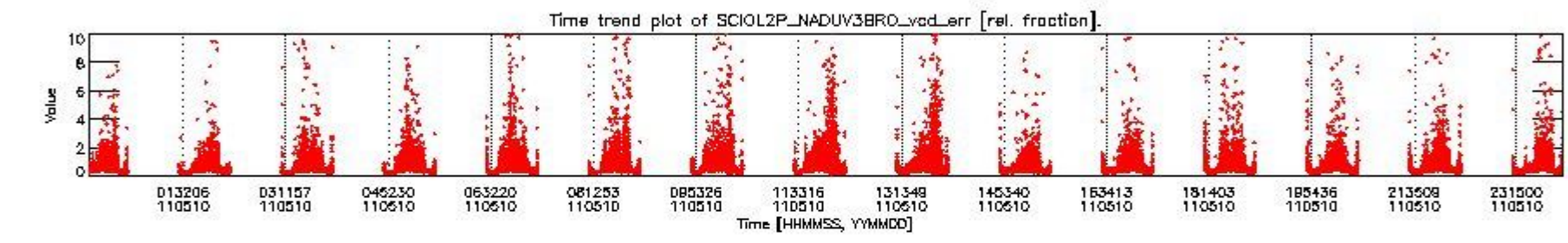
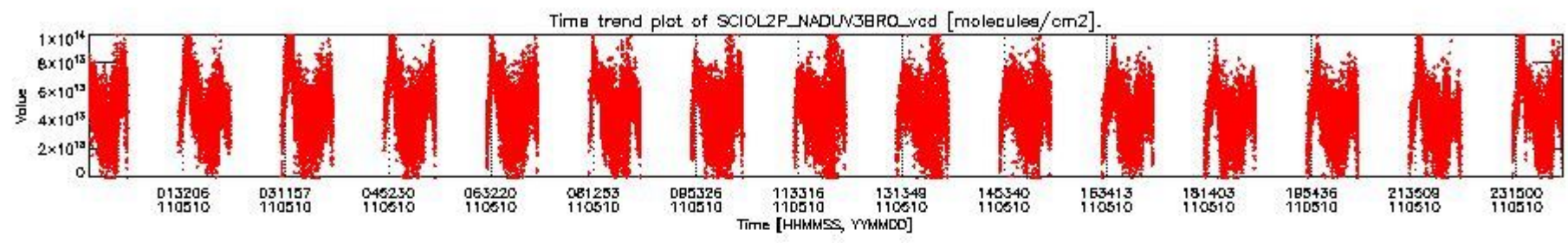


SCIOL2P\_NADUV1NO2\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



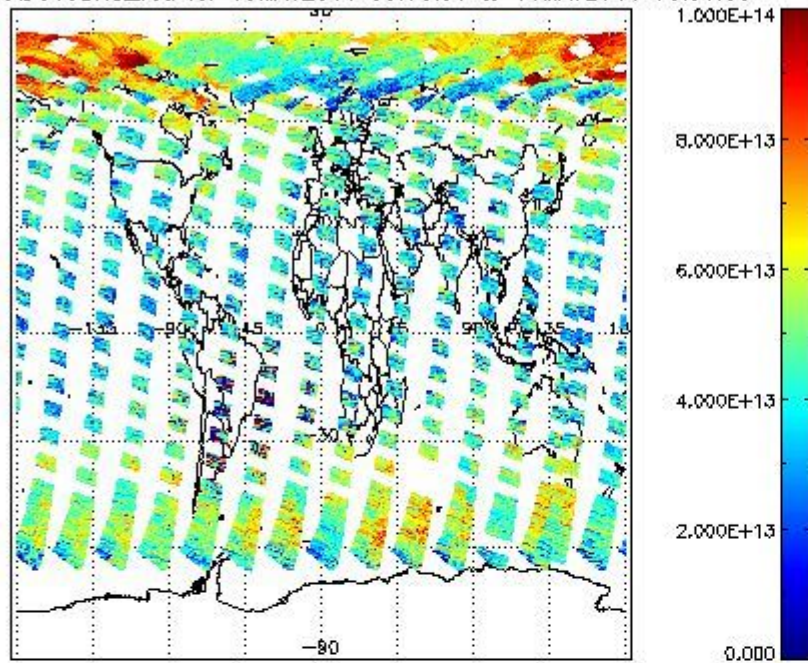
2.2.2.3 BrO (UV3)



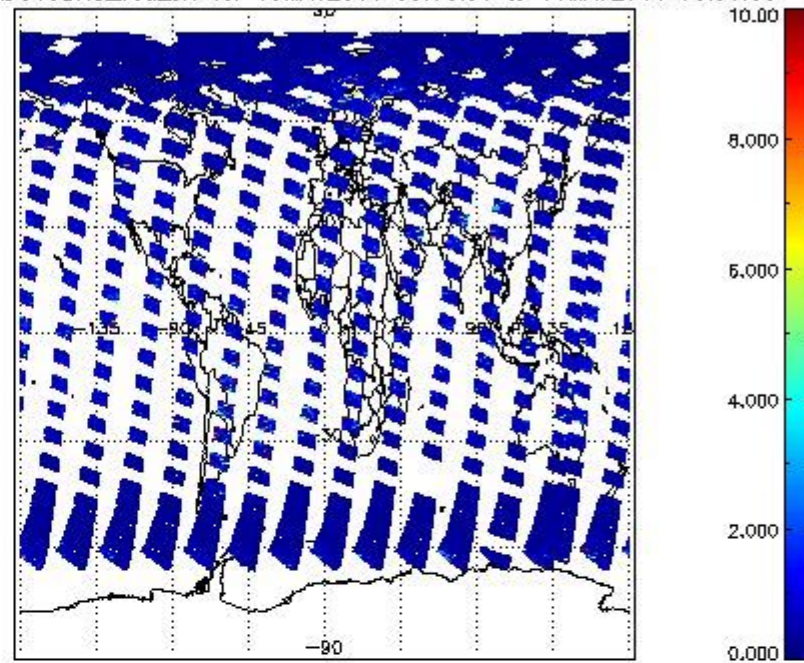




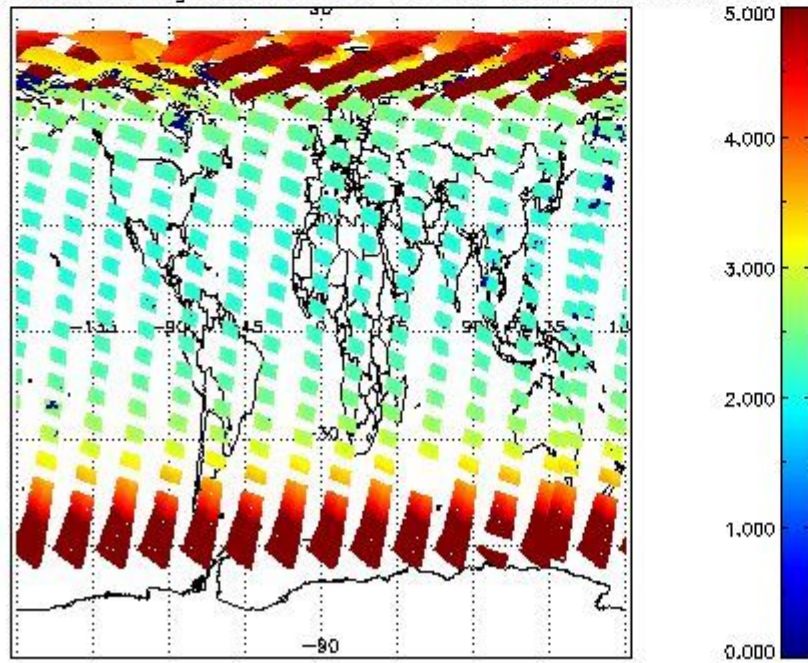
SCIOL2P\_NADUV3BRO\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



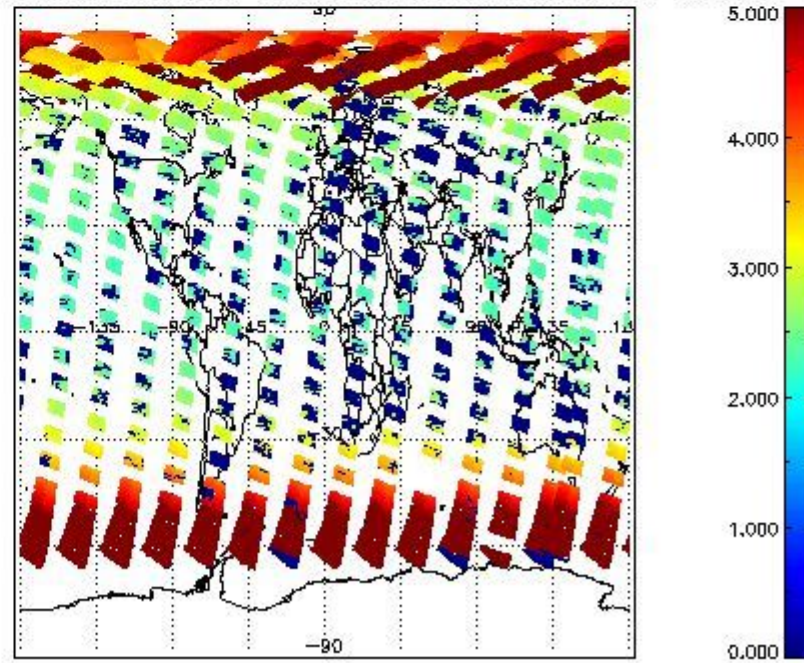
SCIOL2P\_NADUV3BRO\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

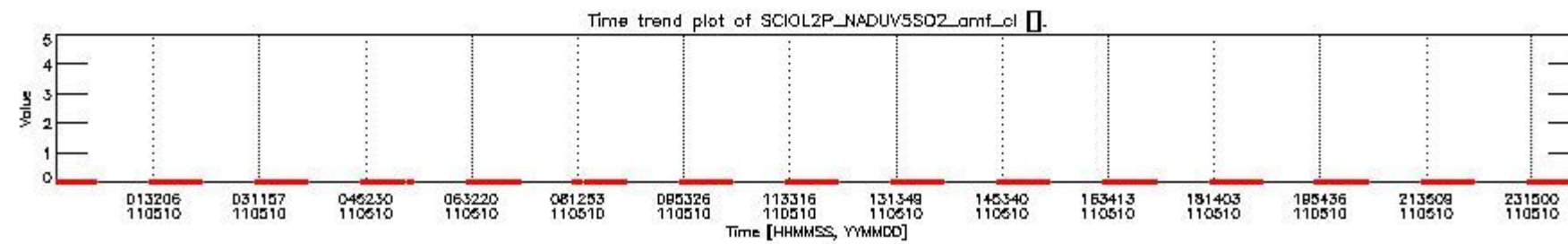
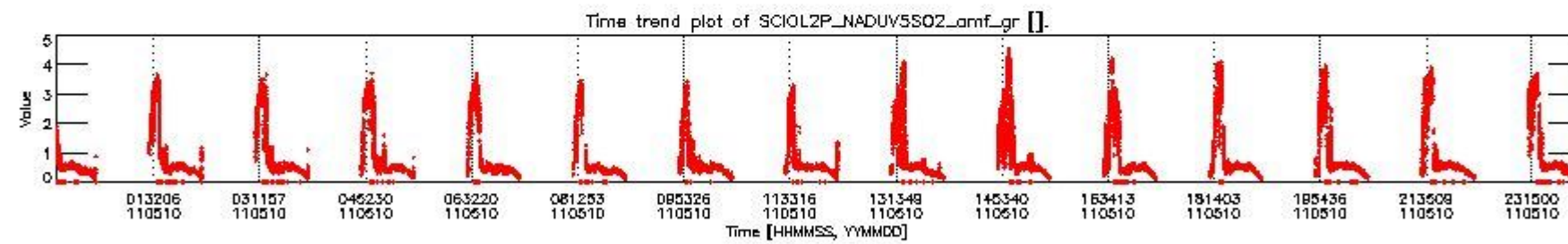
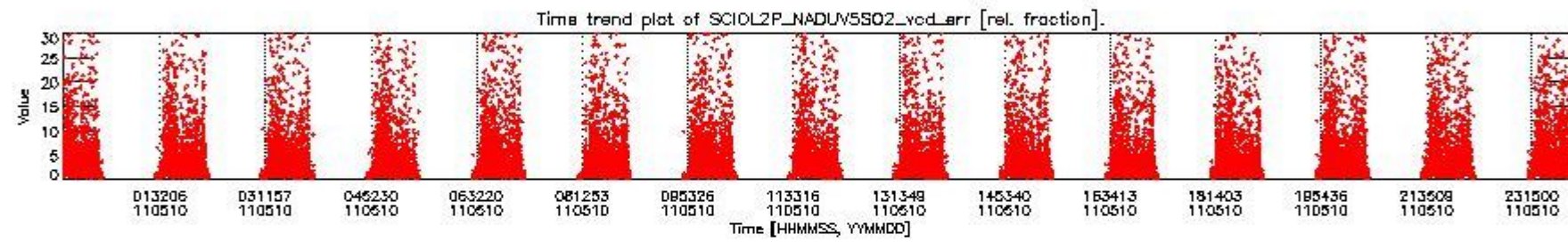
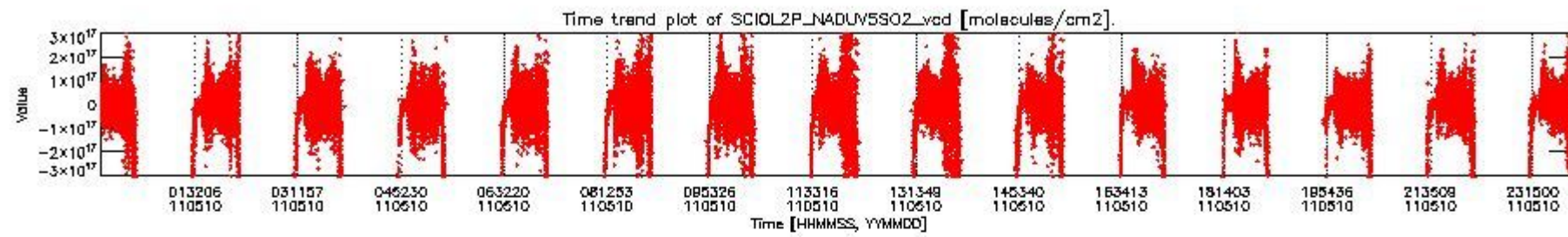


SCIOL2P\_NADUV3BRO\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



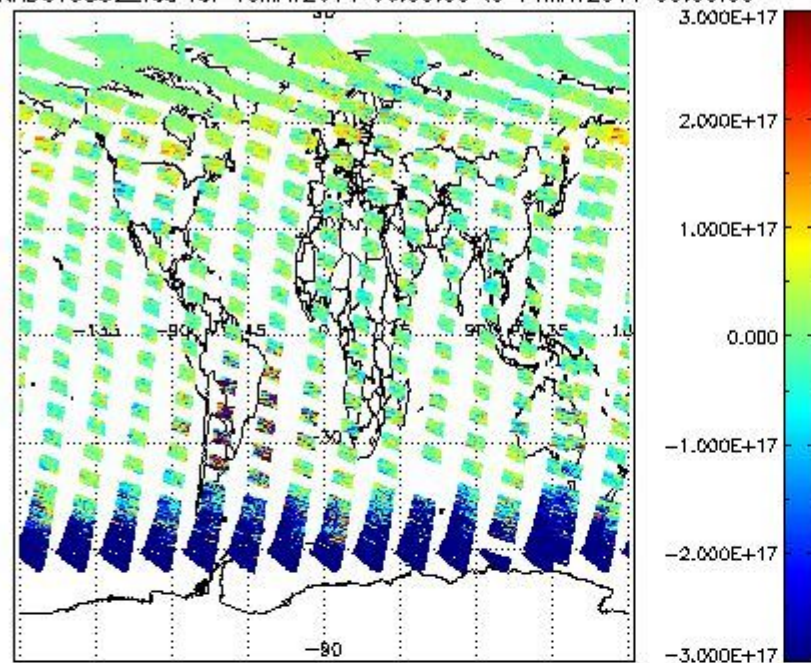
2.2.2.4 SO2 (UV5)



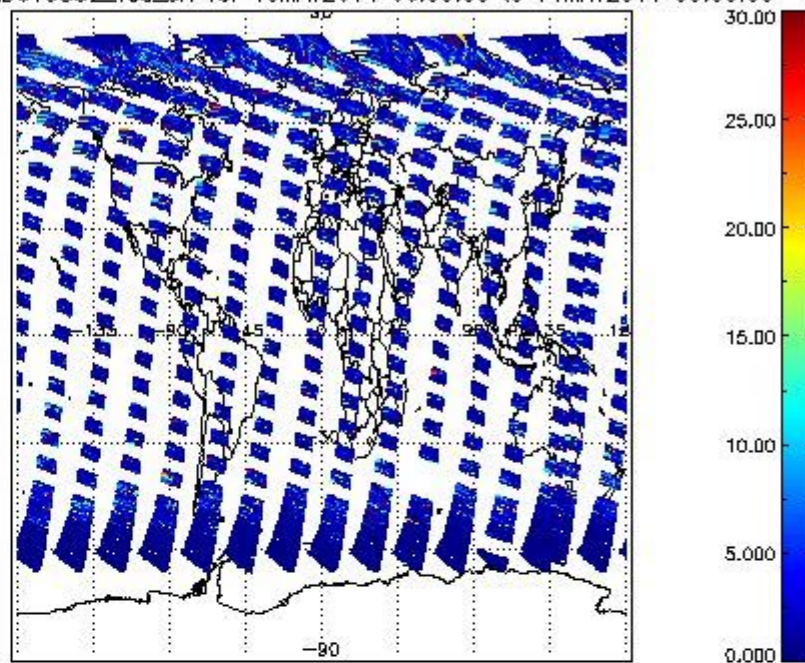




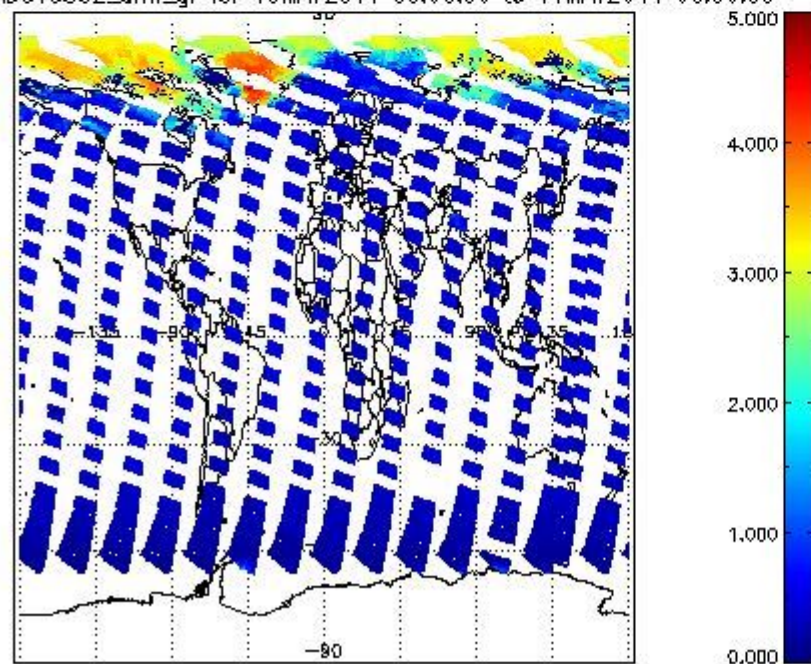
SCIOL2P\_NADUV5S02\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



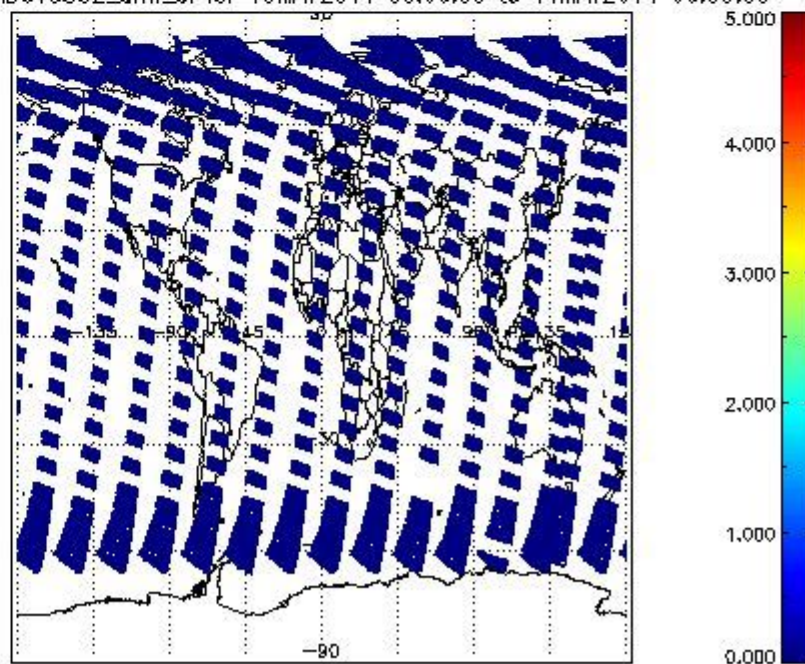
SCIOL2P\_NADUV5S02\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

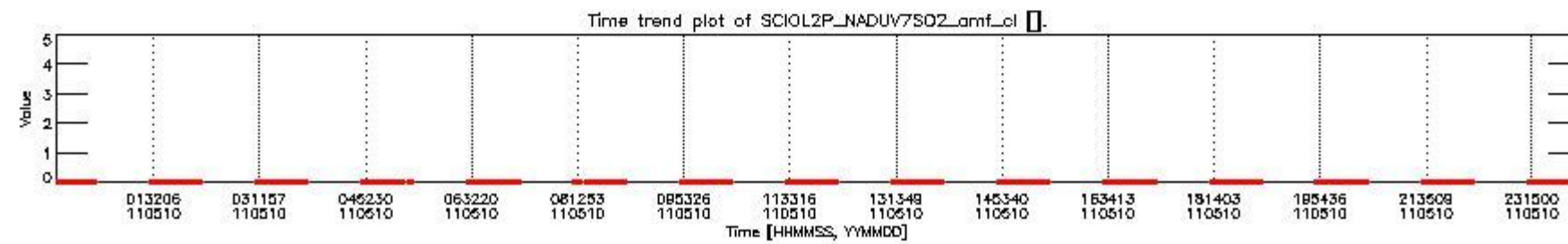
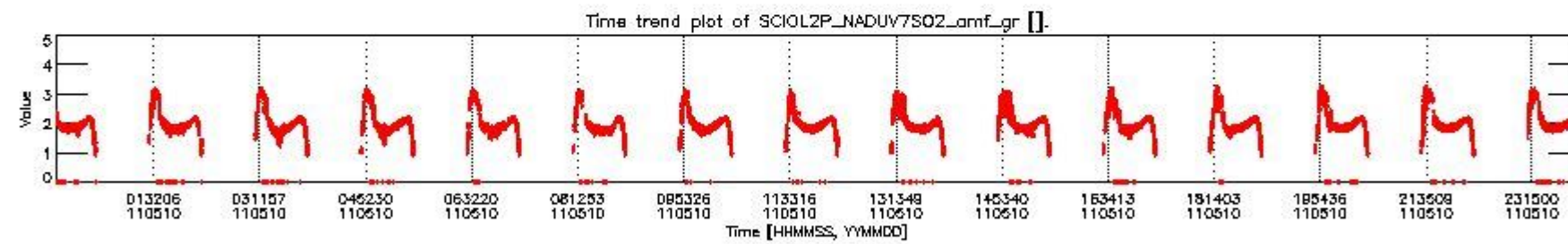
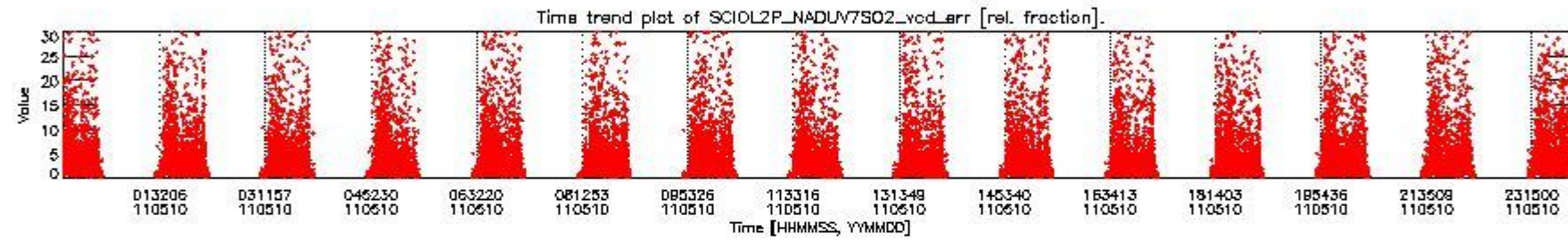
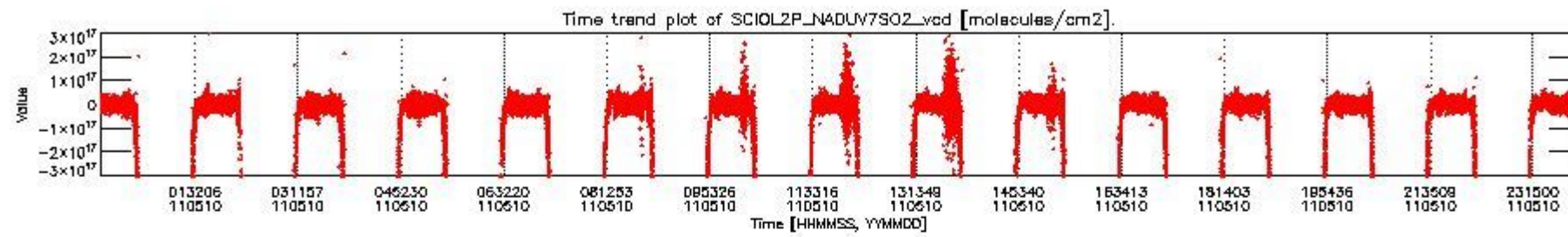


SCIOL2P\_NADUV5S02\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



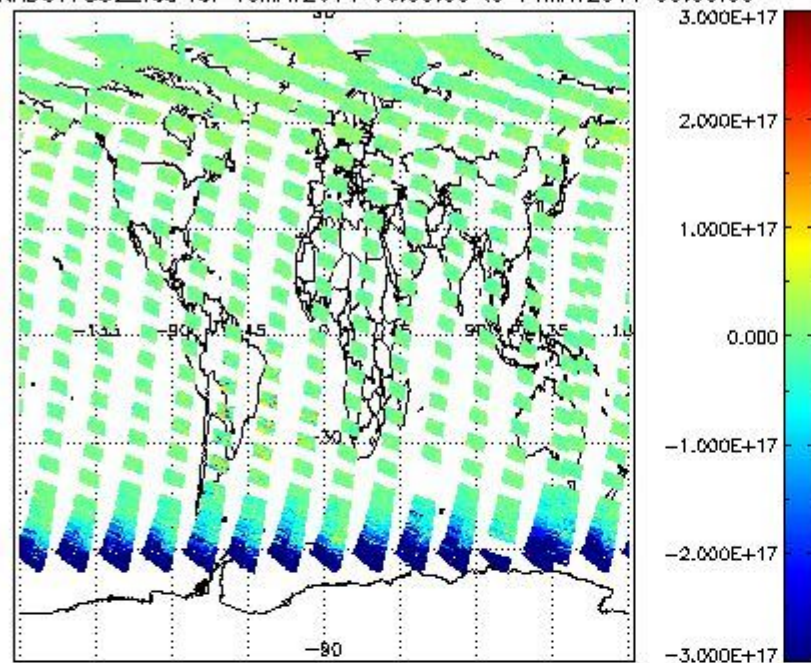
2.2.2.5 SO2 (UV7)



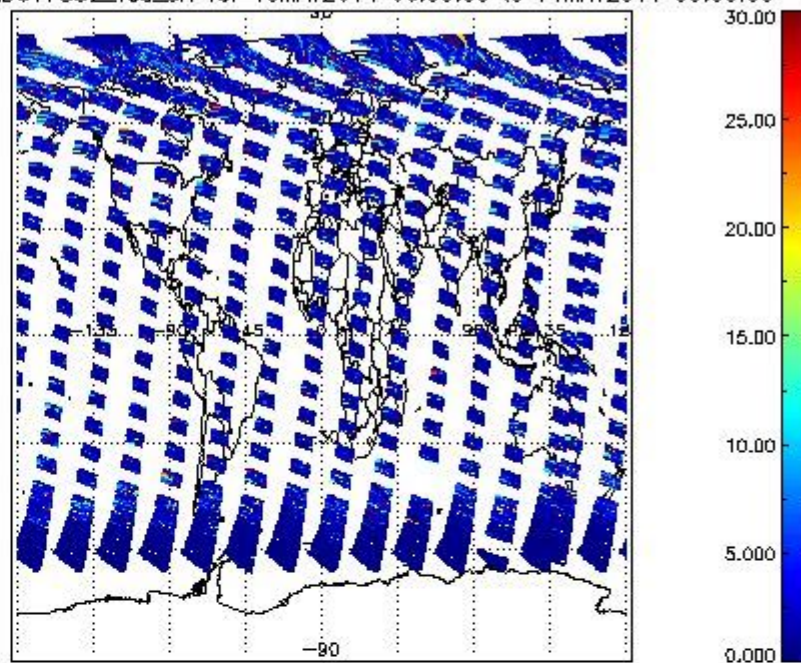




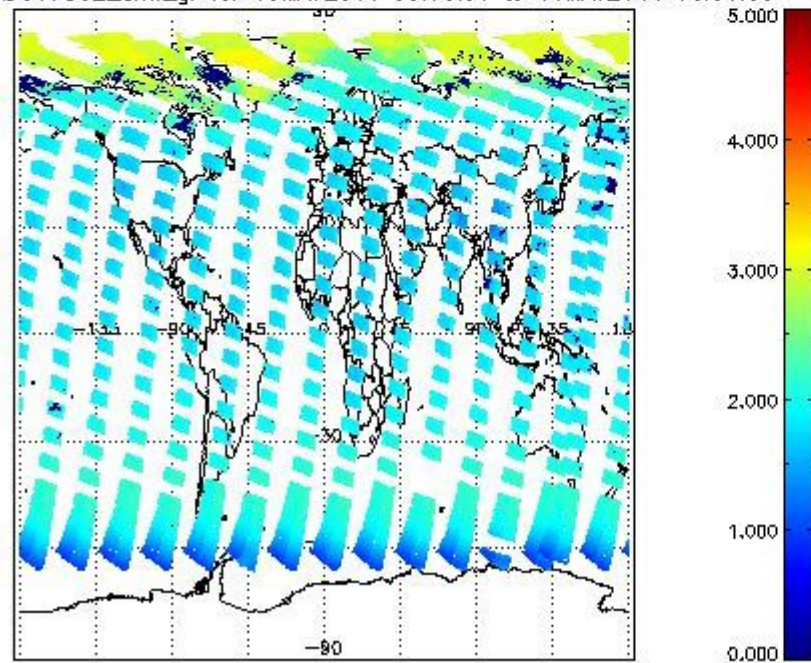
SCIOL2P\_NADUV7S02\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



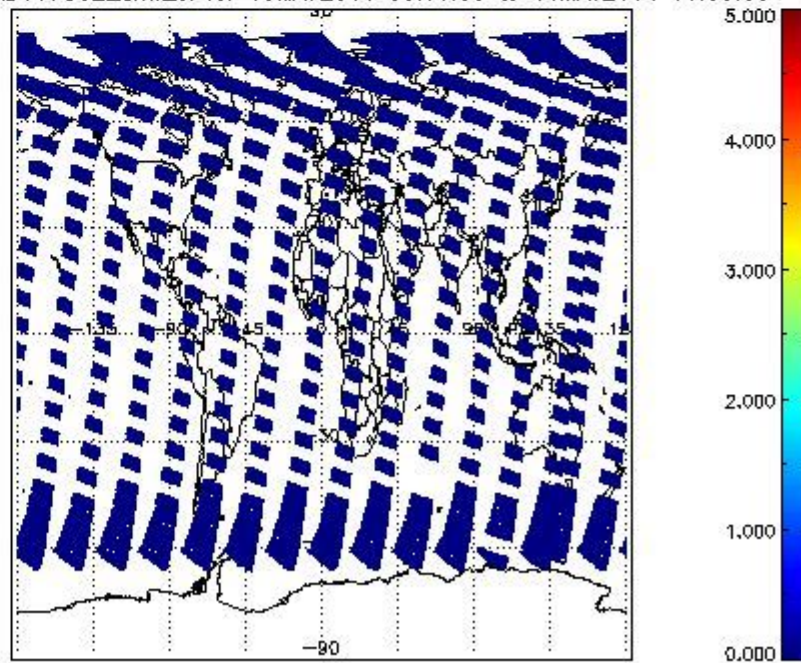
SCIOL2P\_NADUV7S02\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

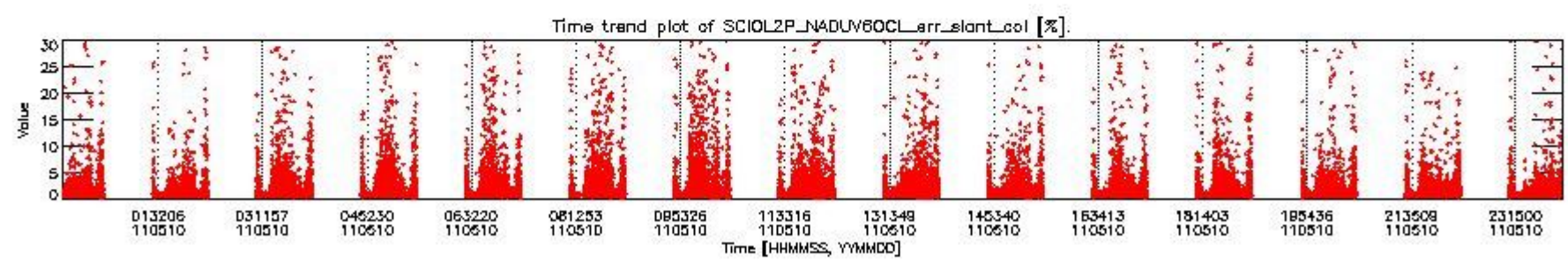
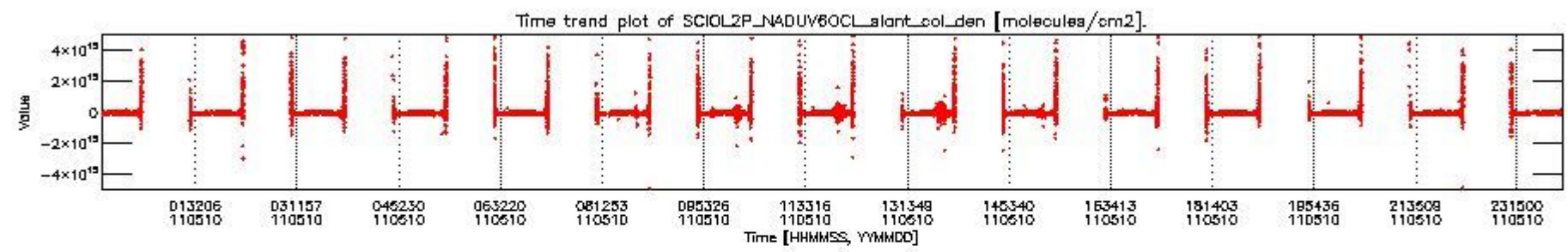


SCIOL2P\_NADUV7S02\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

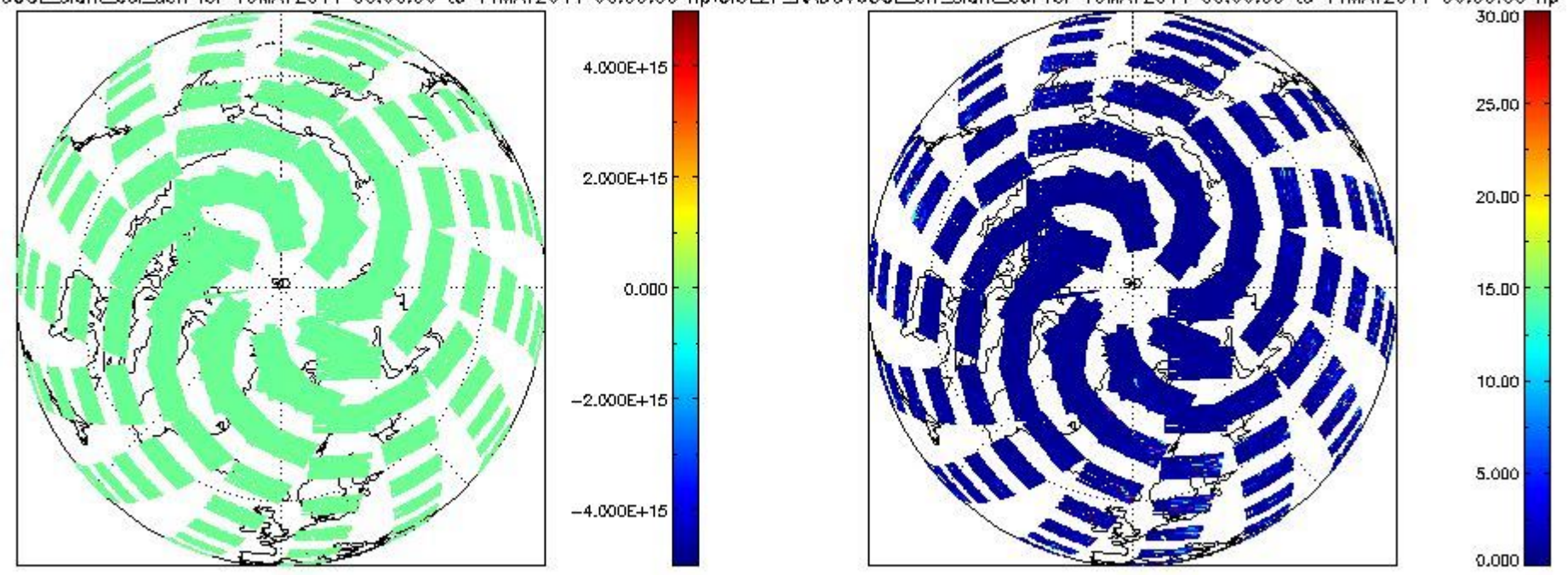


2.2.2.6 OCIO (UV6)



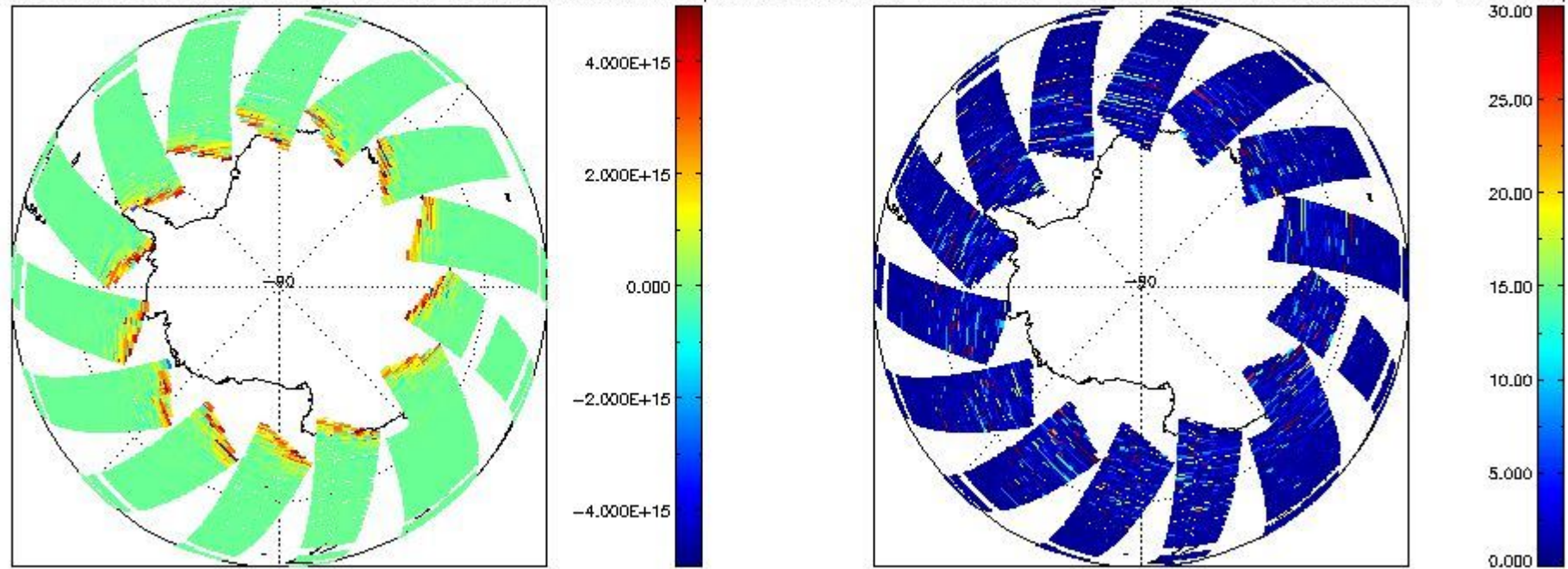


CIOL2P\_NADUV6OCL\_slant\_col\_den for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 np

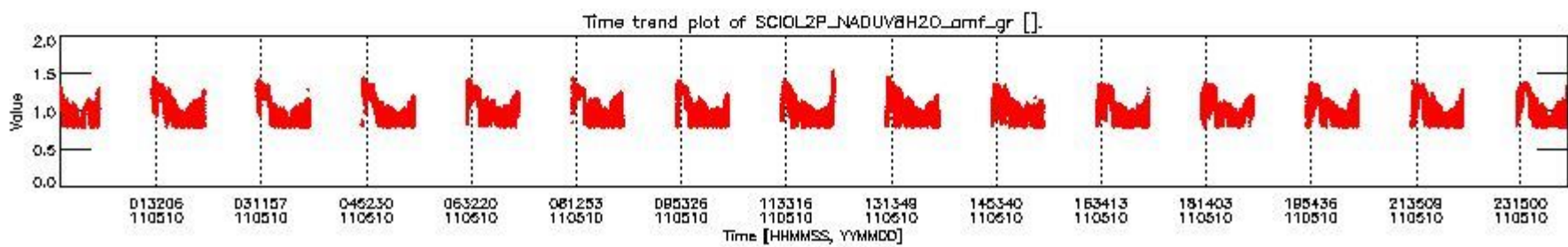
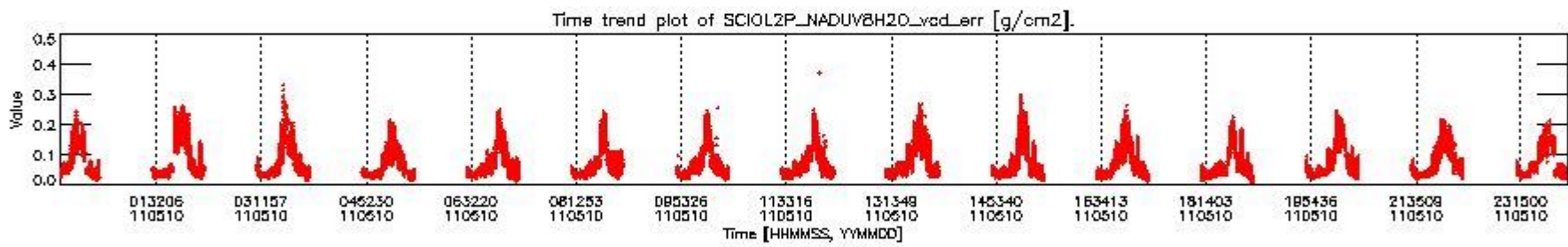
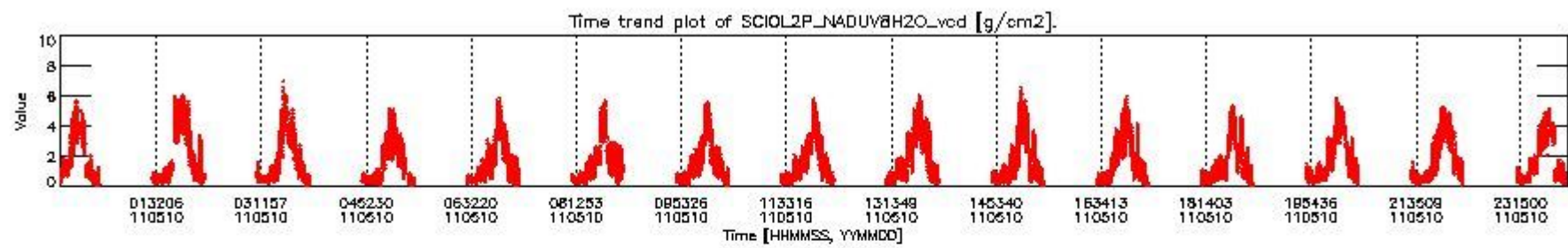




CIOL2P\_NADUV6OCL\_slant\_col\_den for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 sp | CIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 sp

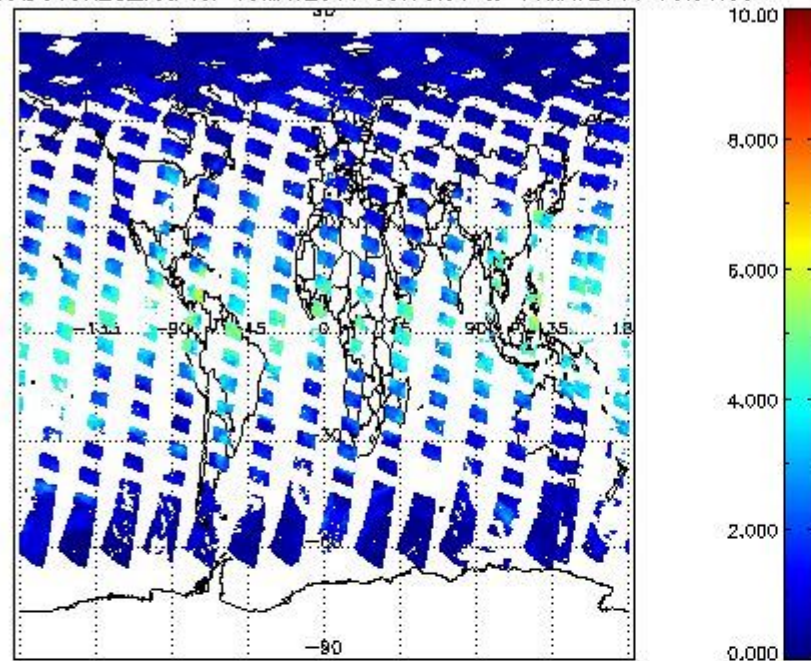


### 2.2.2.7 H2O (UV8)

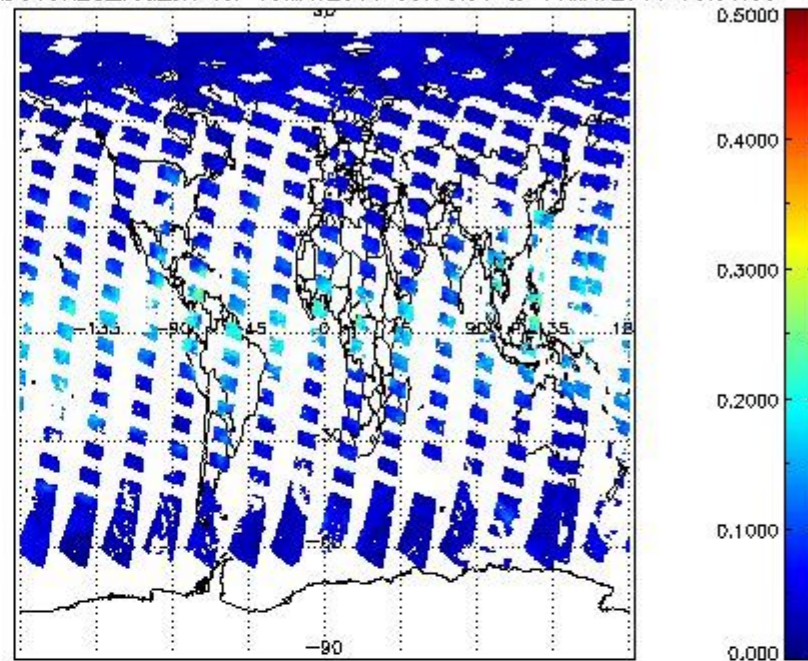




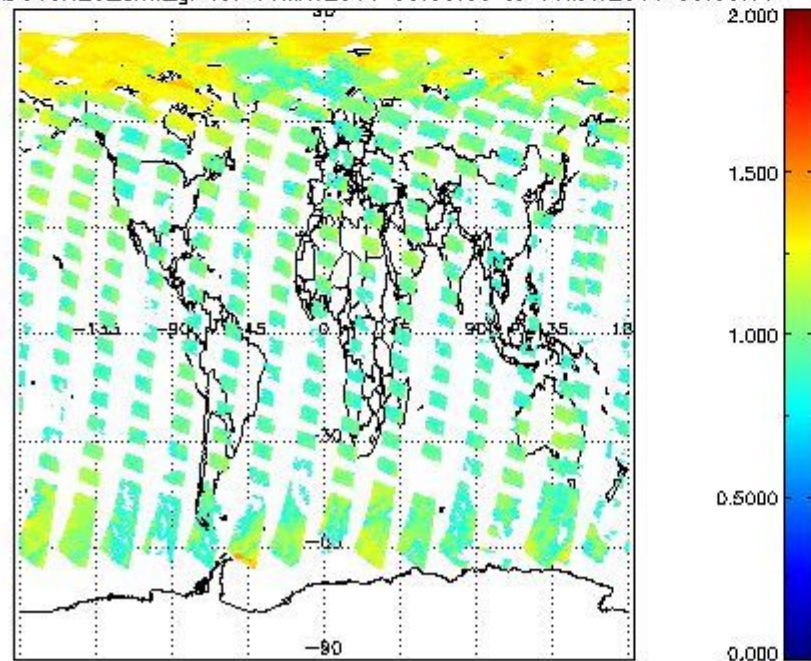
SCIOL2P\_NADUV8H2O\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



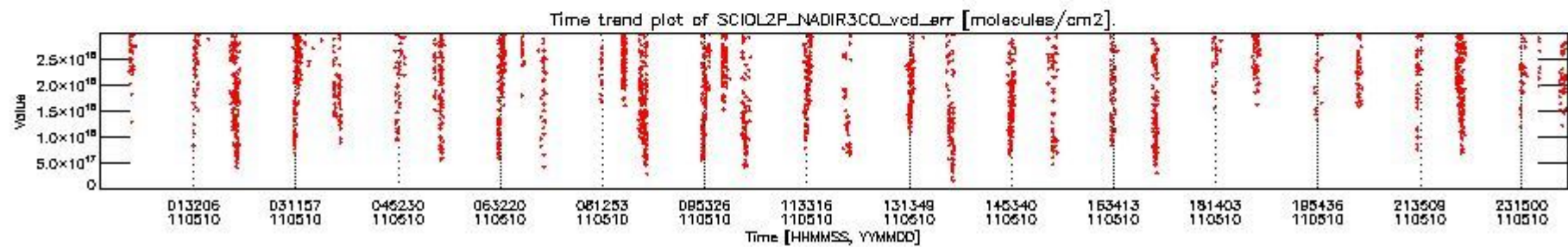
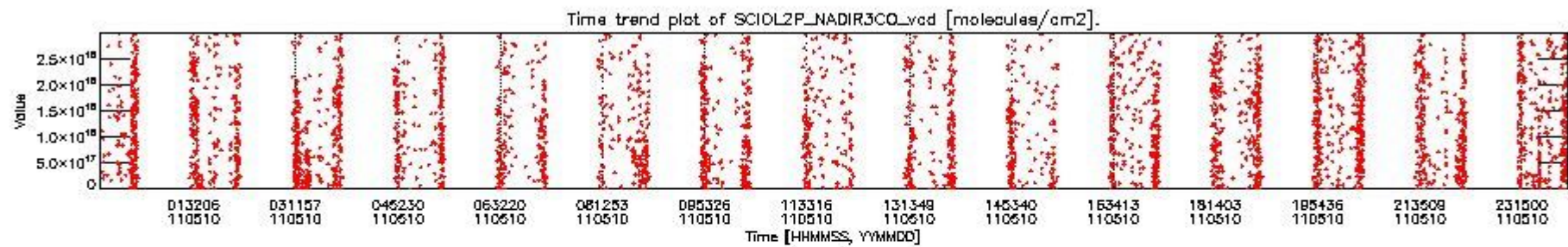
SCIOL2P\_NADUV8H2O\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



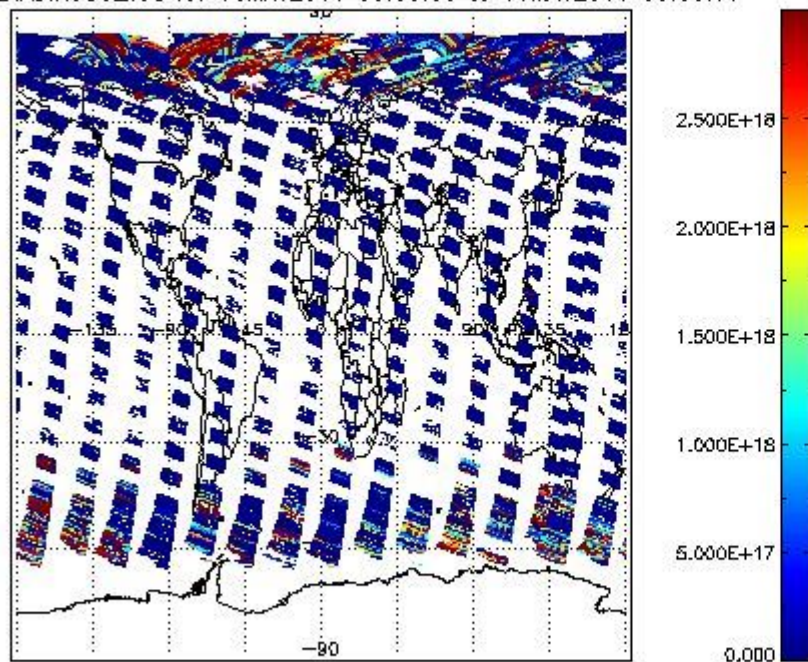
SCIOL2P\_NADUV8H2O\_arnf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



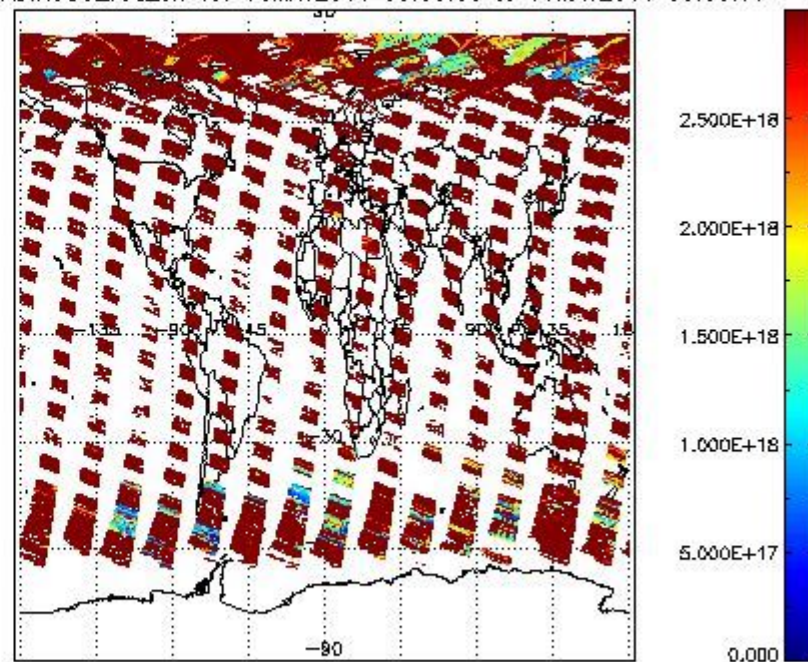




SCIDL2P\_NADIR3CO\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 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.

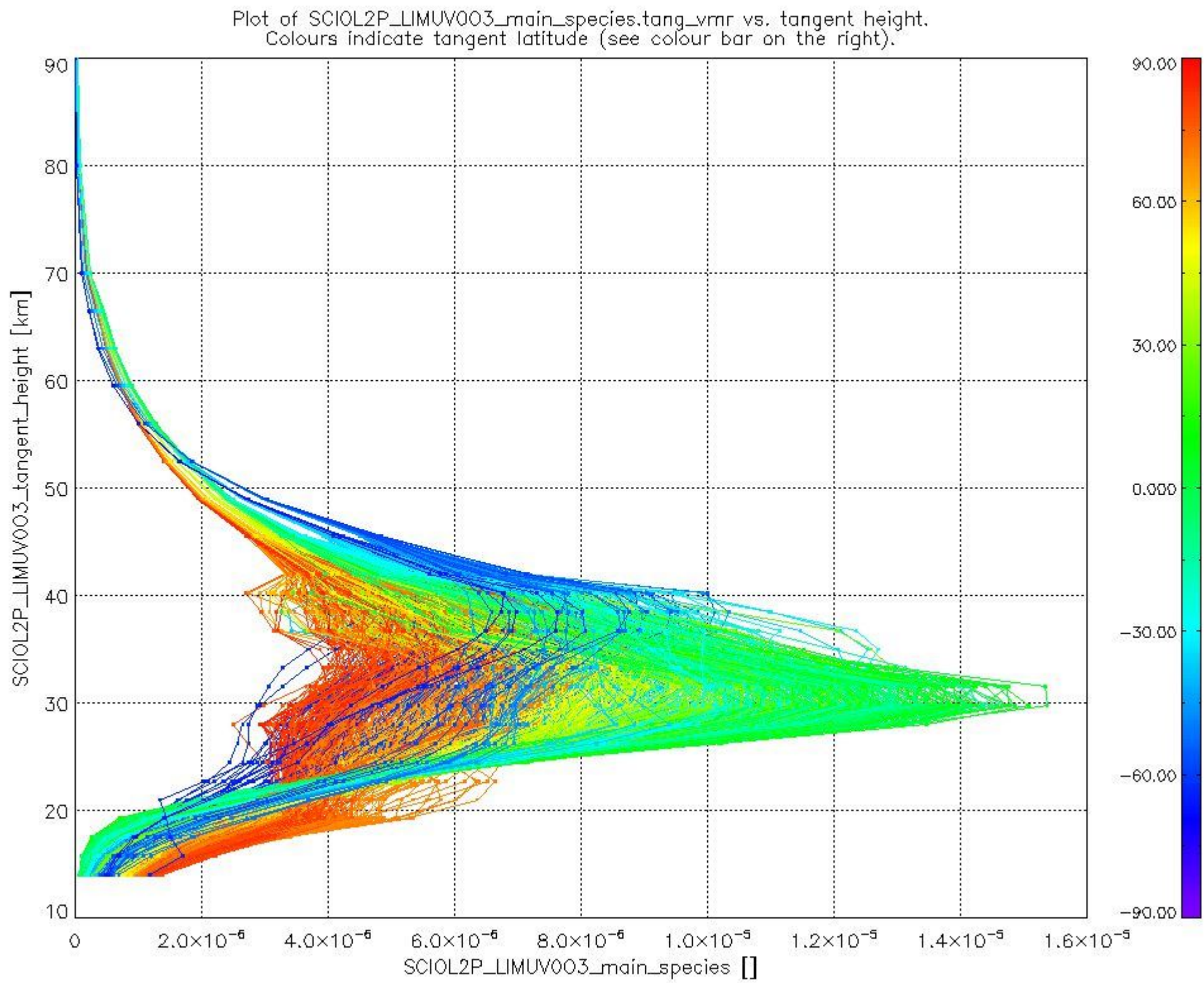
The following data items are currently included into this section:

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.

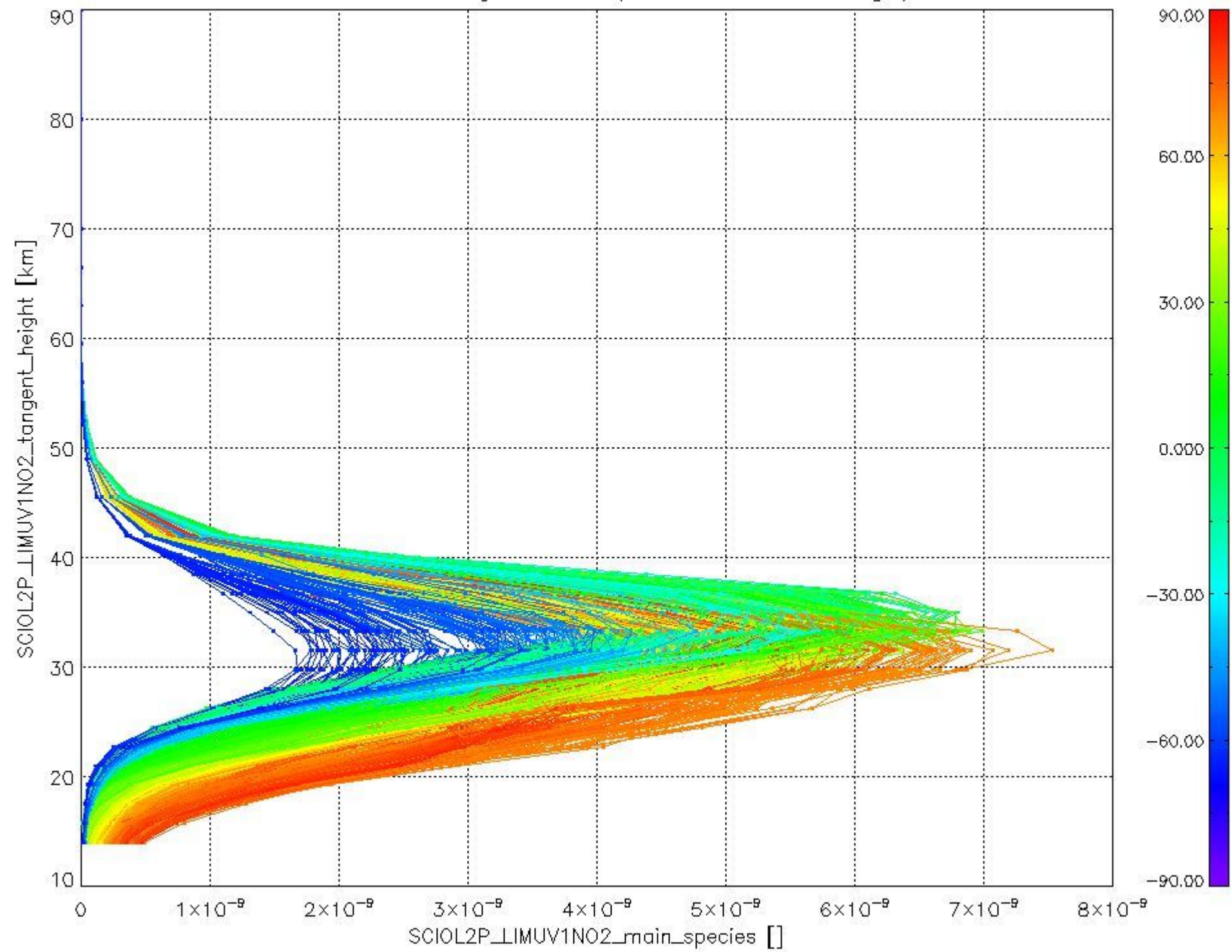
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



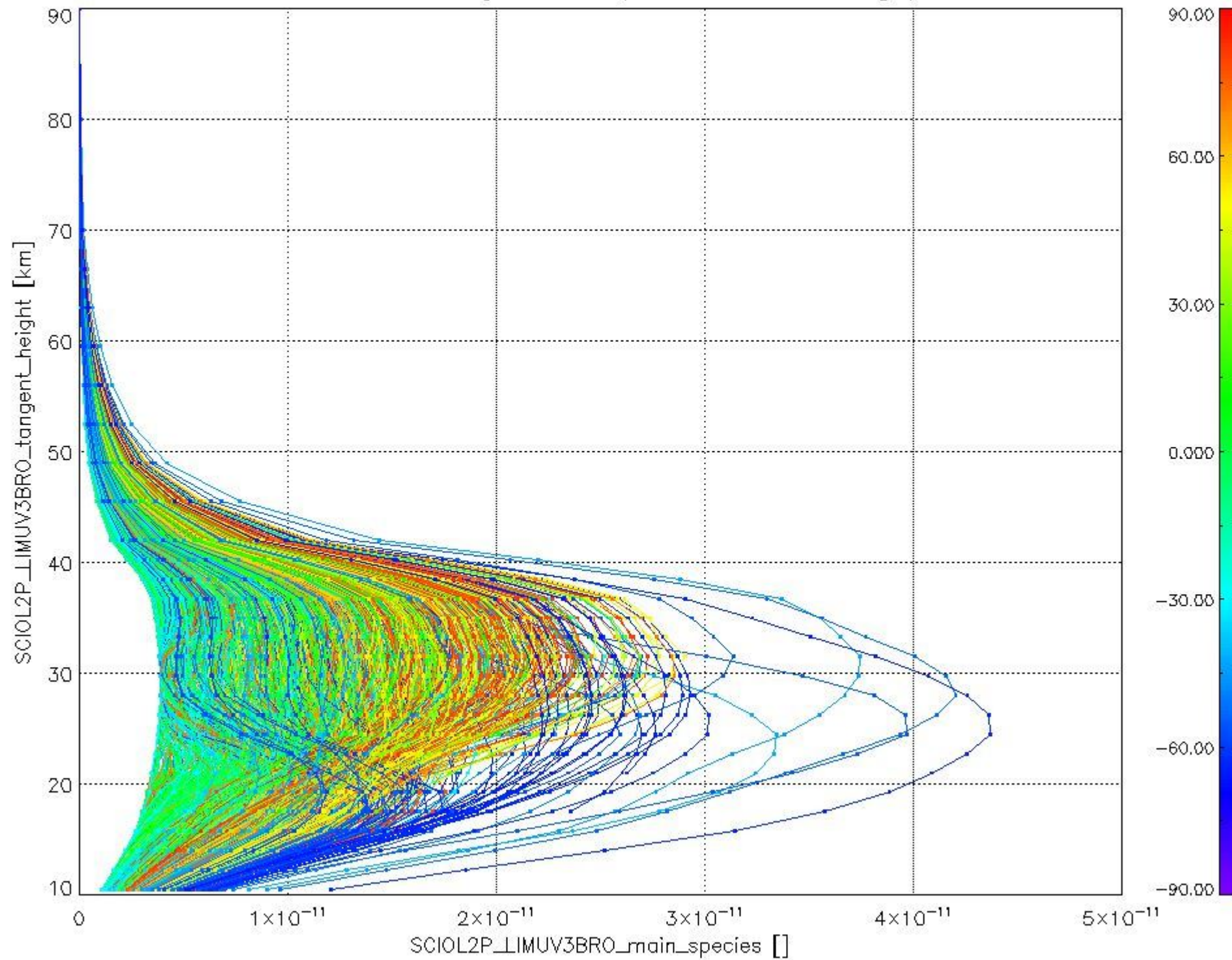
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



### 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

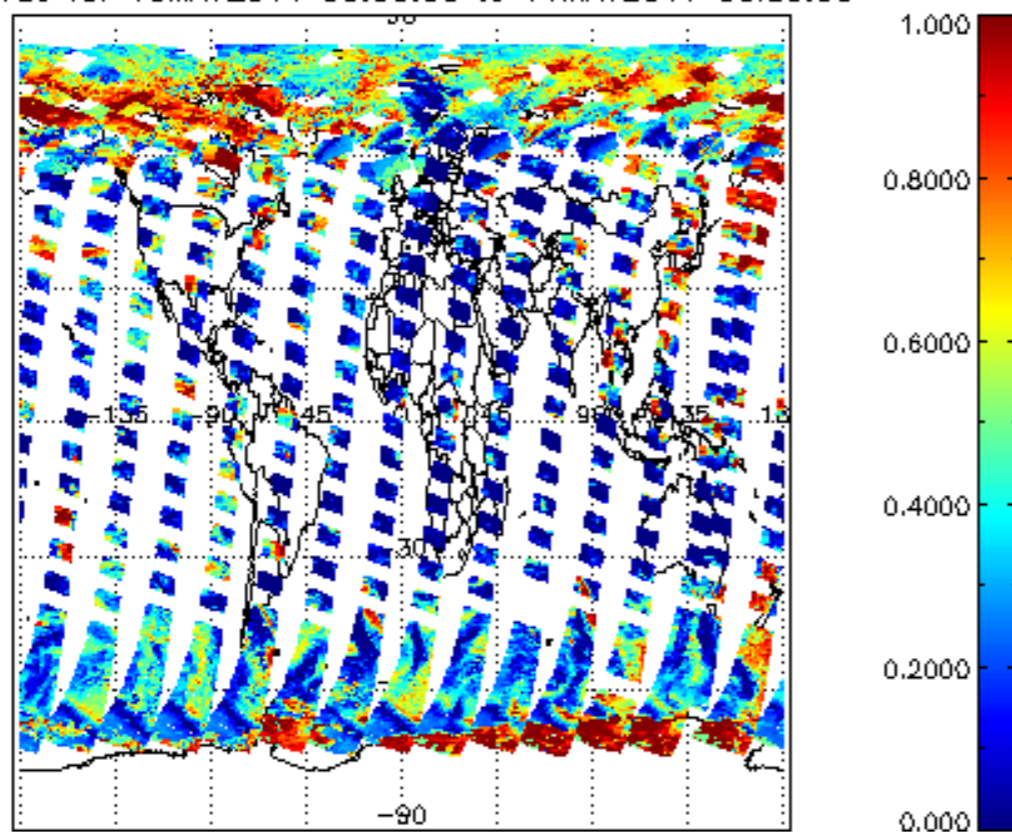
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110426_111441_20110425_182810_20110523_182810
3	SCI_MF1_AXVIEC20110510_110703_20110509_181443_20110511_181443
4	SCI_MF1_AXVIEC20110510_110808_20110510_191812_20110512_191812



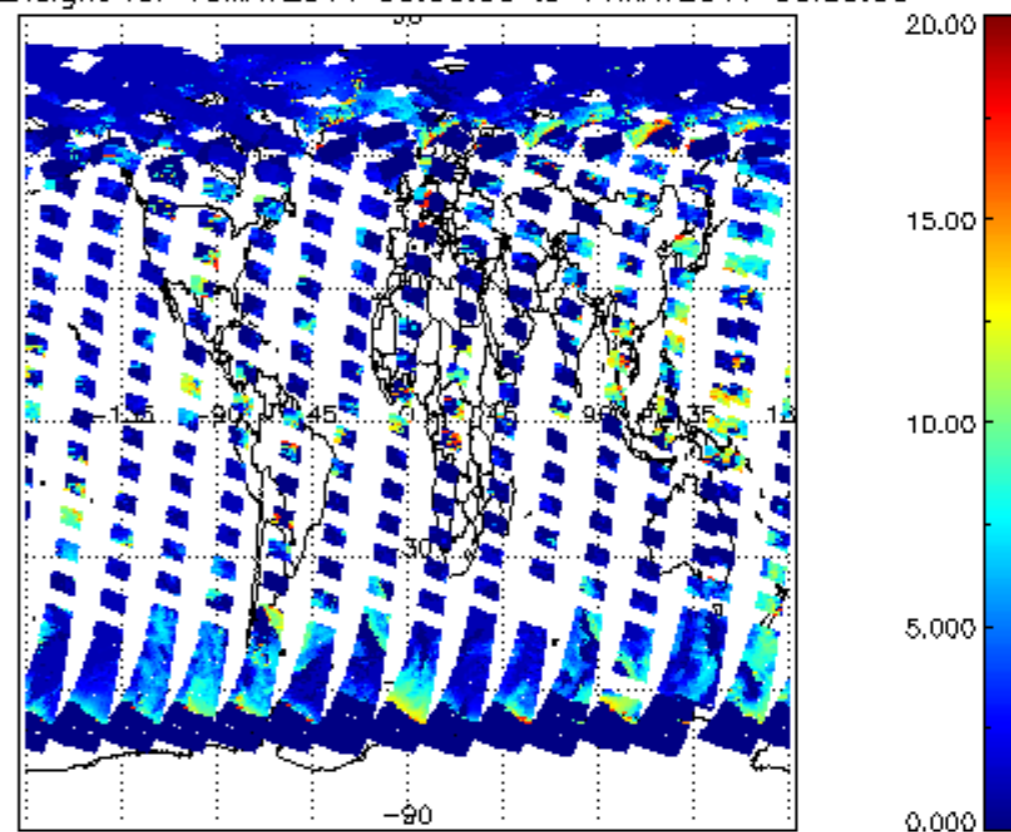




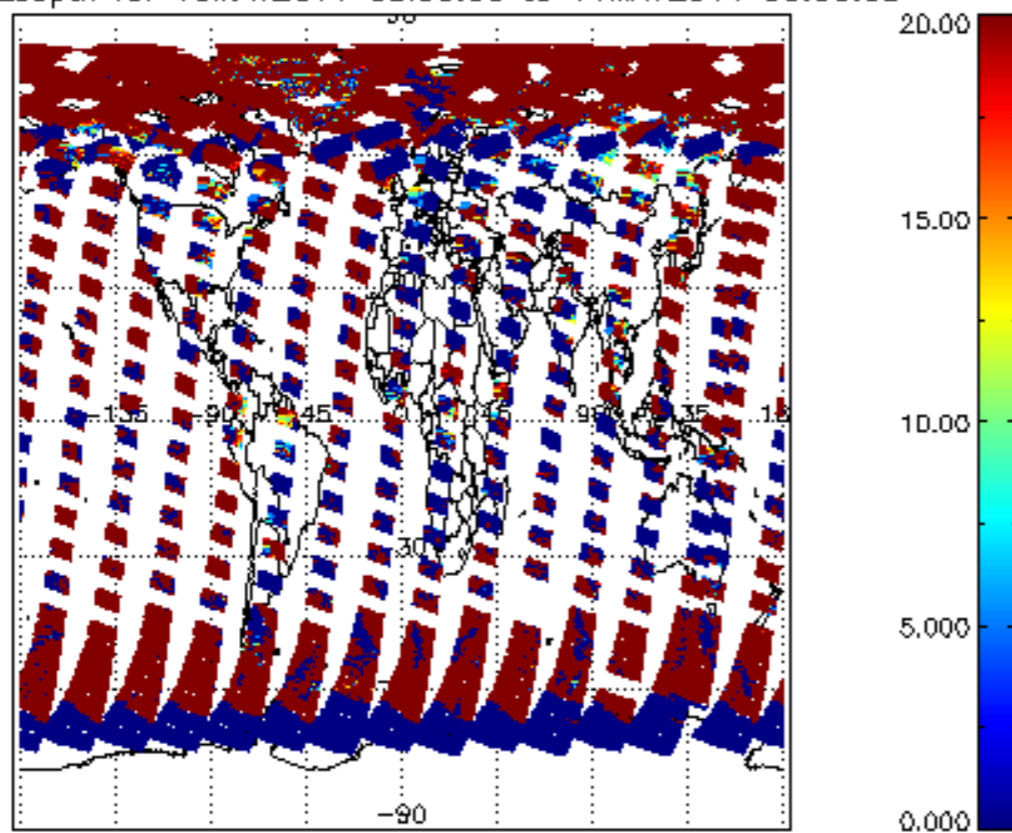
cL\_frac for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



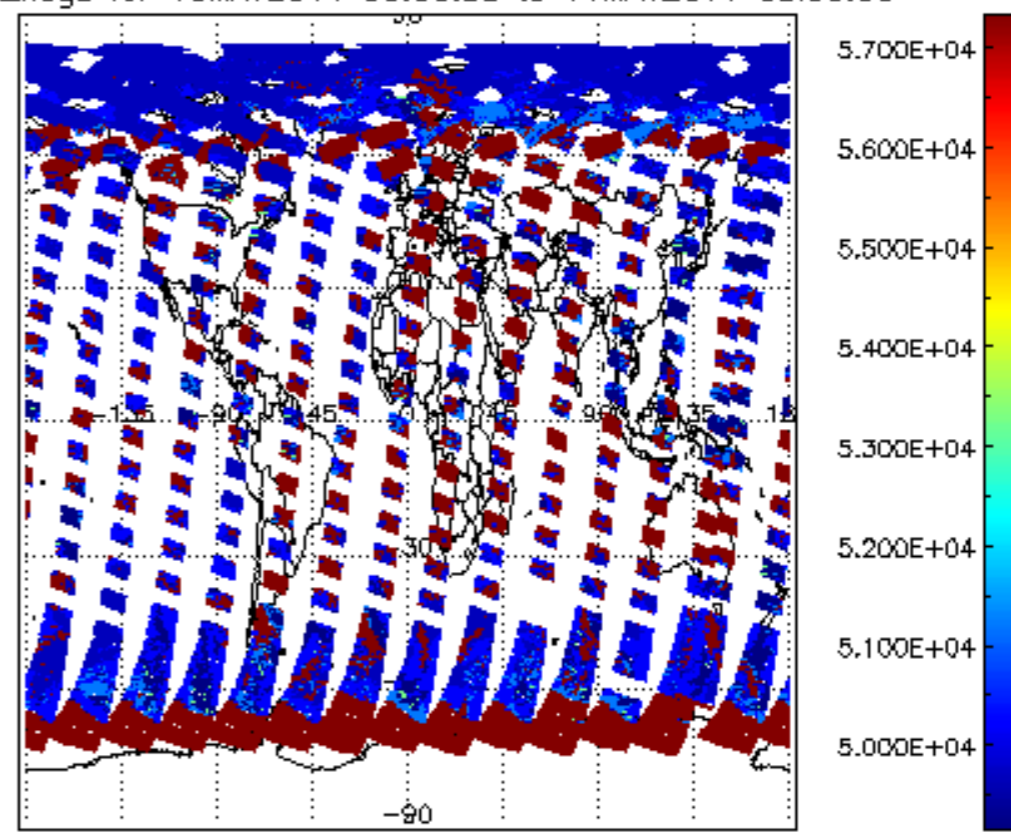
cL\_top\_height for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



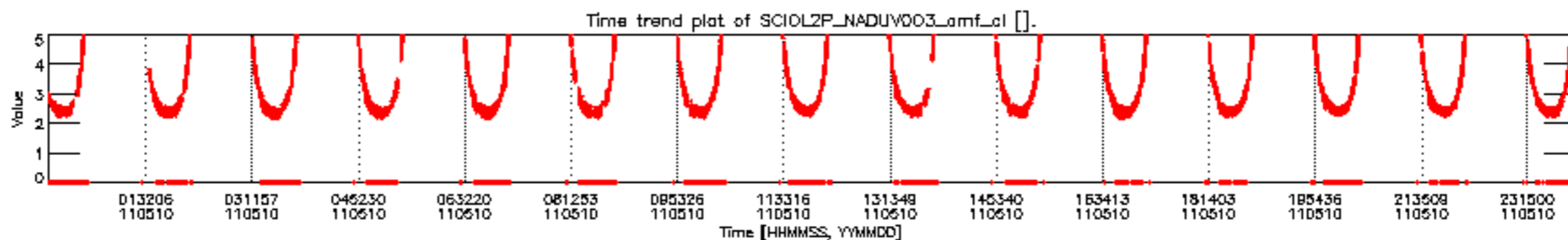
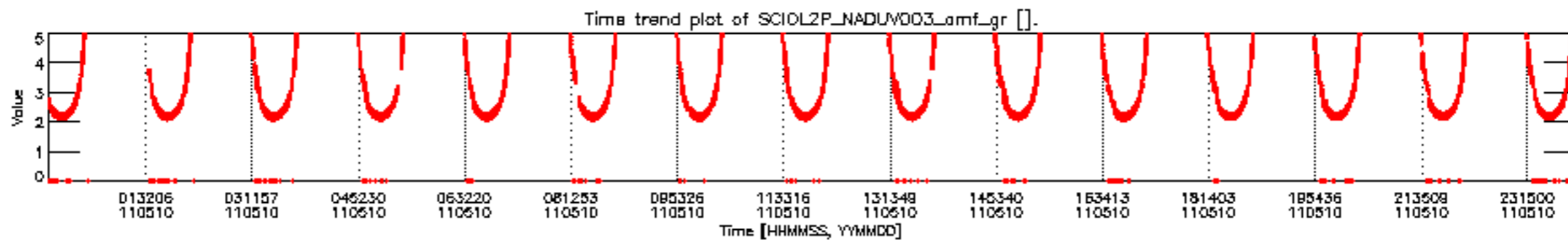
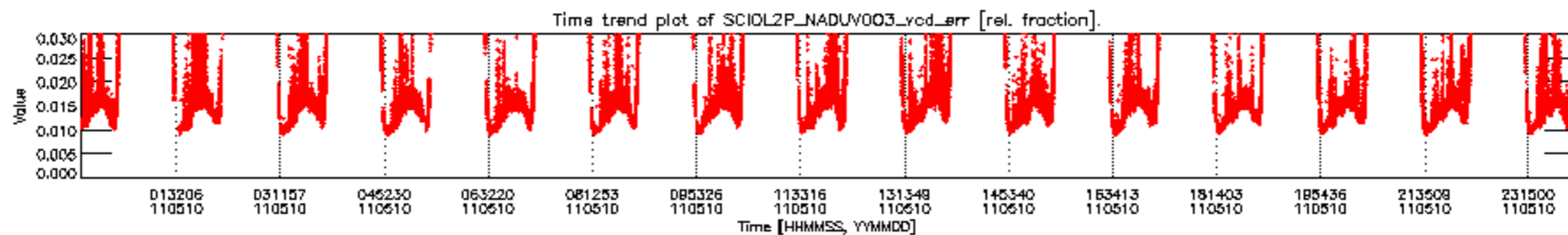
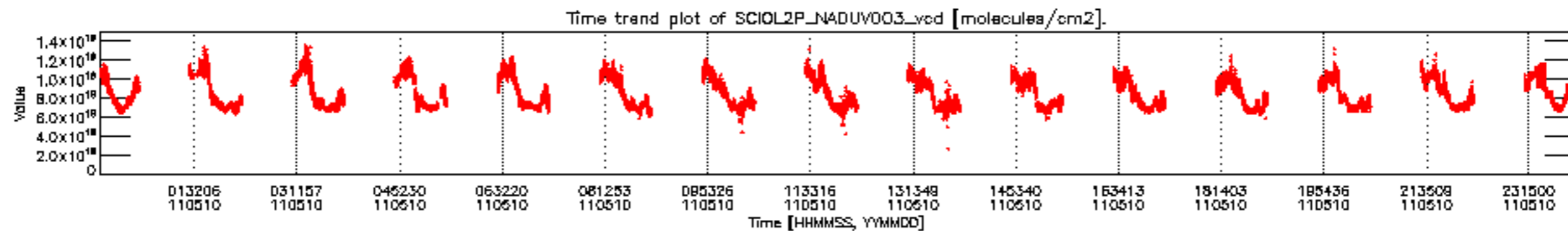
cL\_opt\_depth for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



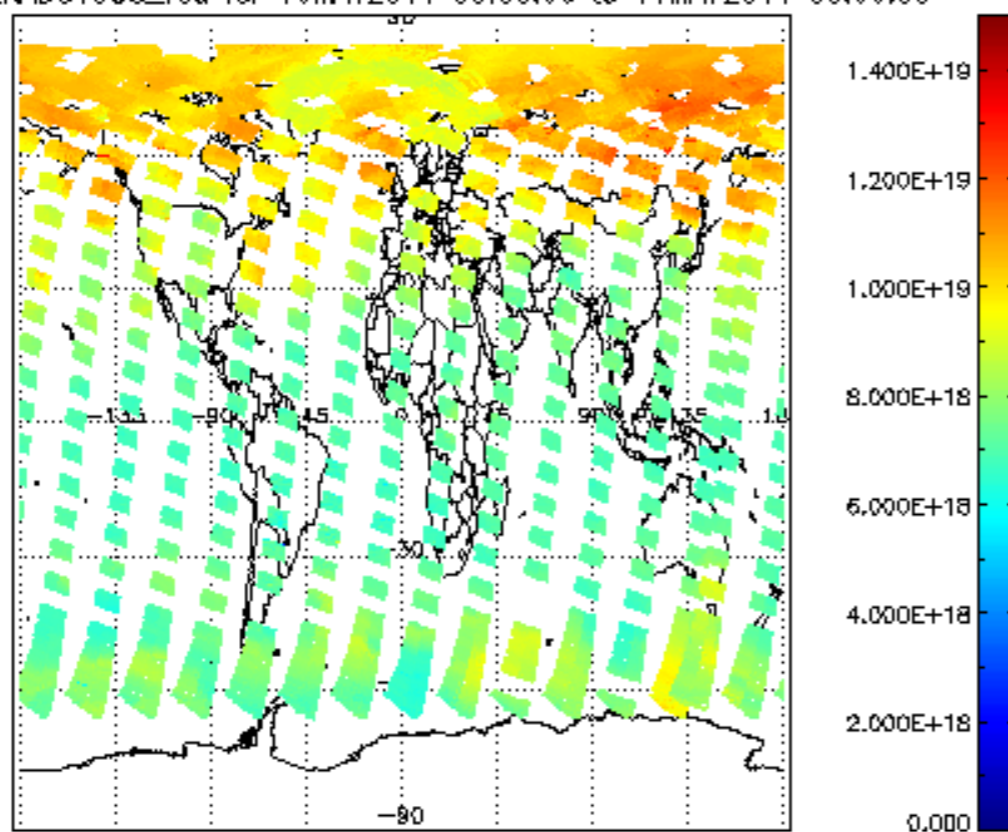
cloud\_flags for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



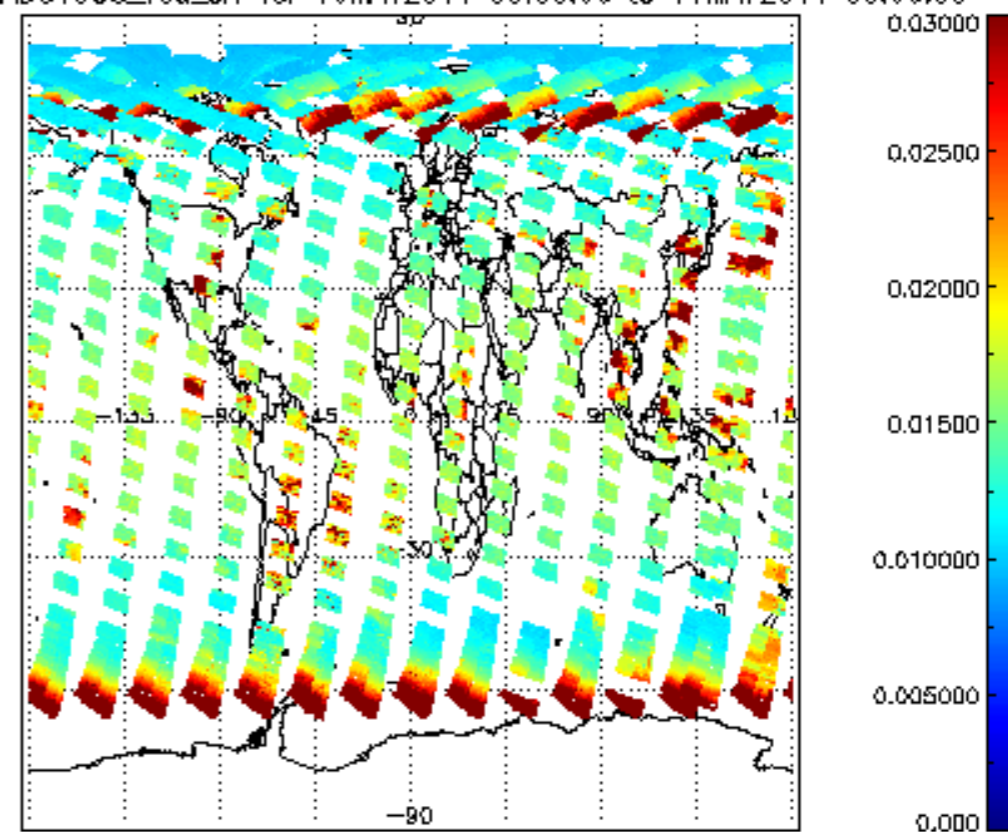




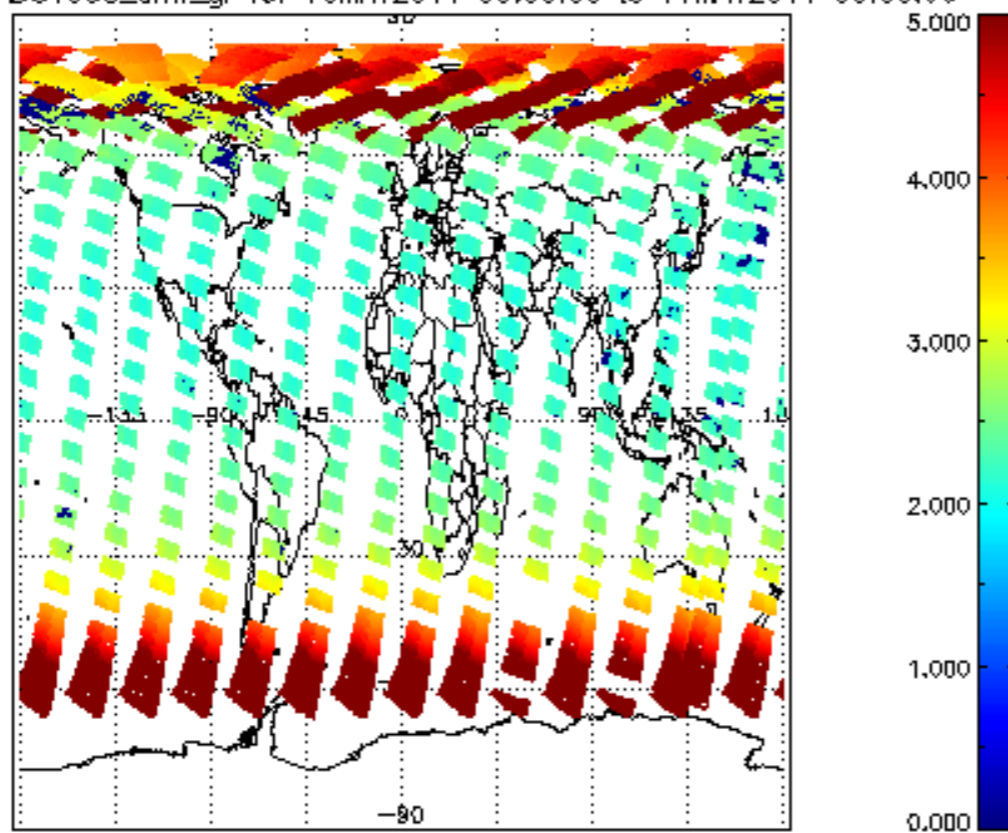
SCIOL2P\_NADUV003\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



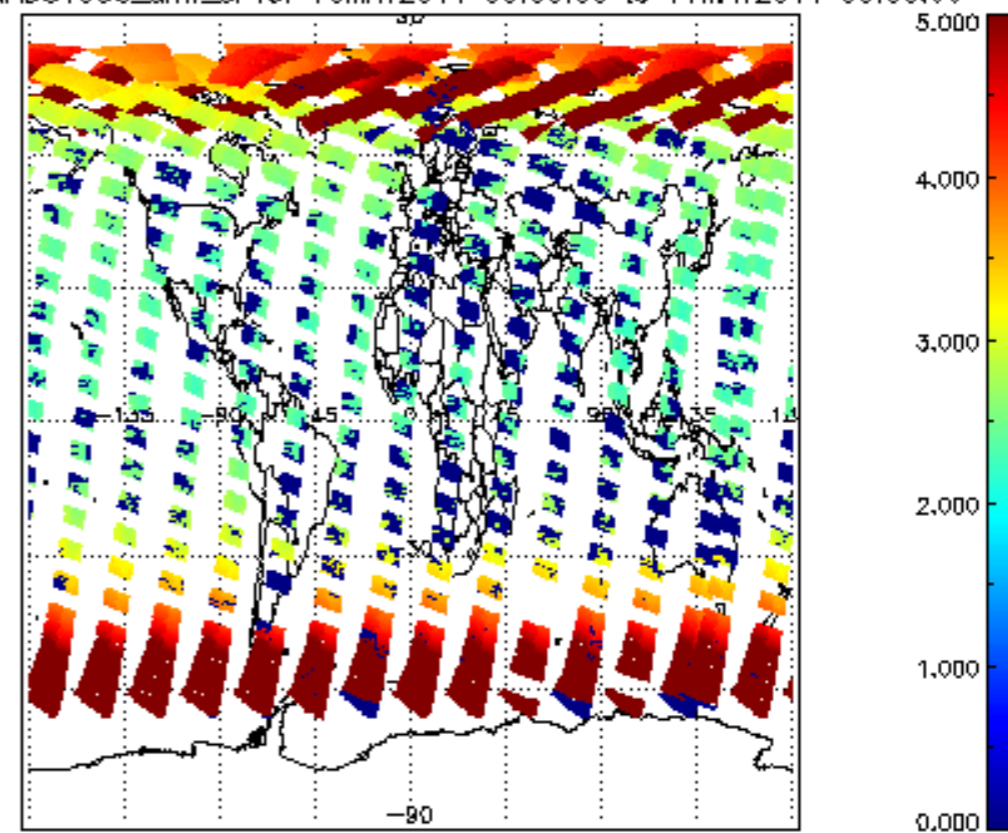
SCIOL2P\_NADUV003\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



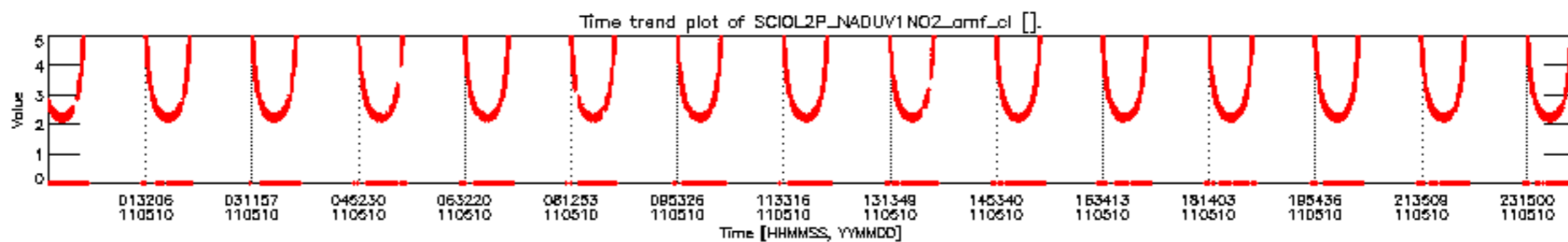
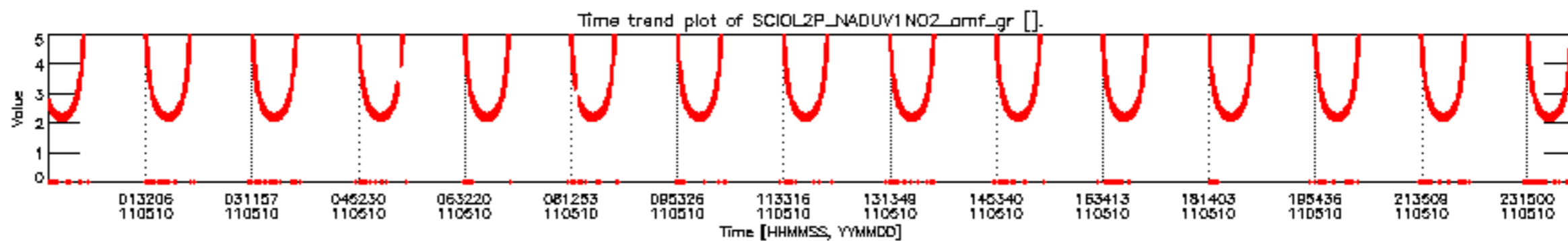
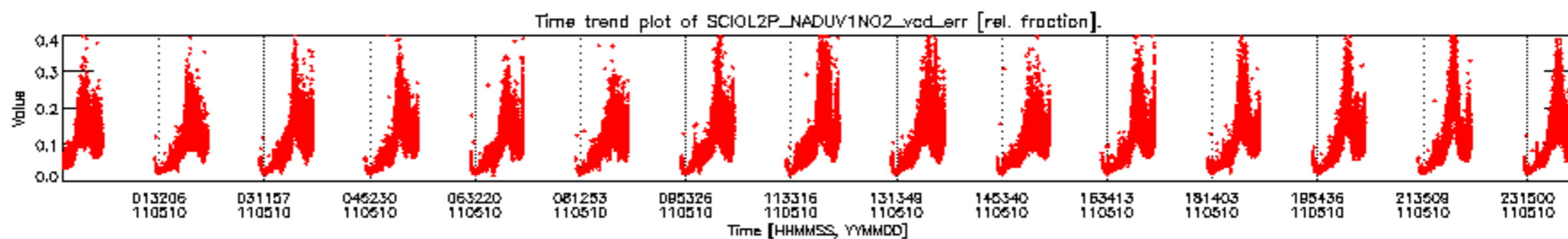
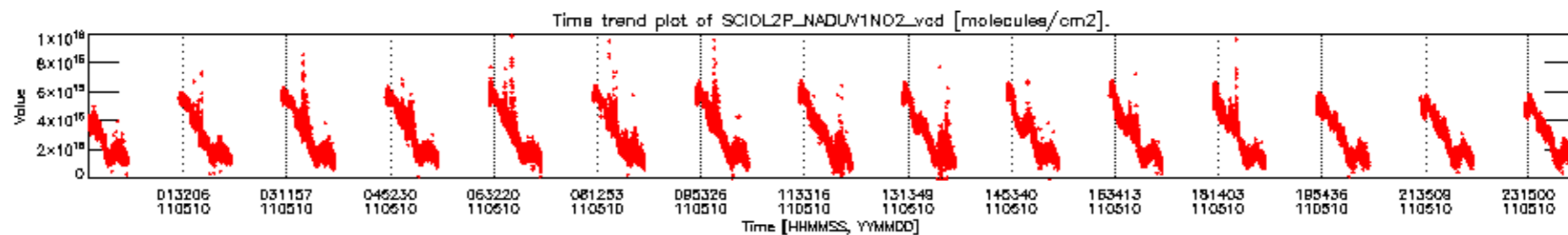
SCIOL2P\_NADUV003\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



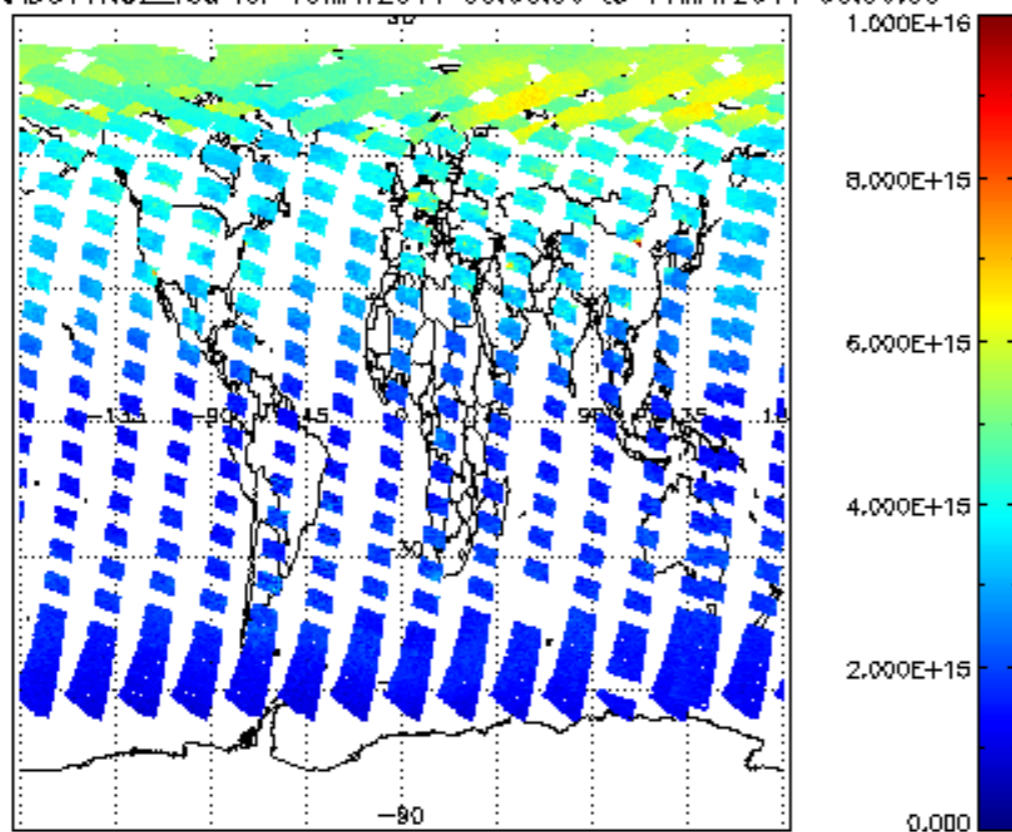
SCIOL2P\_NADUV003\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



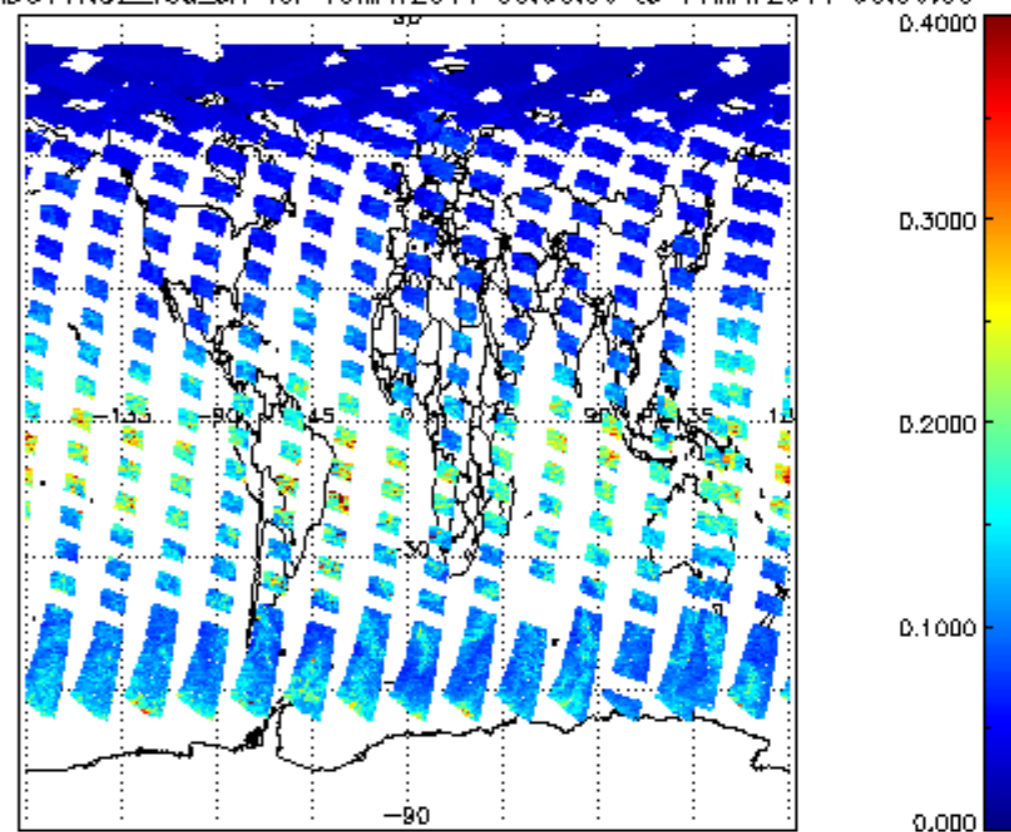




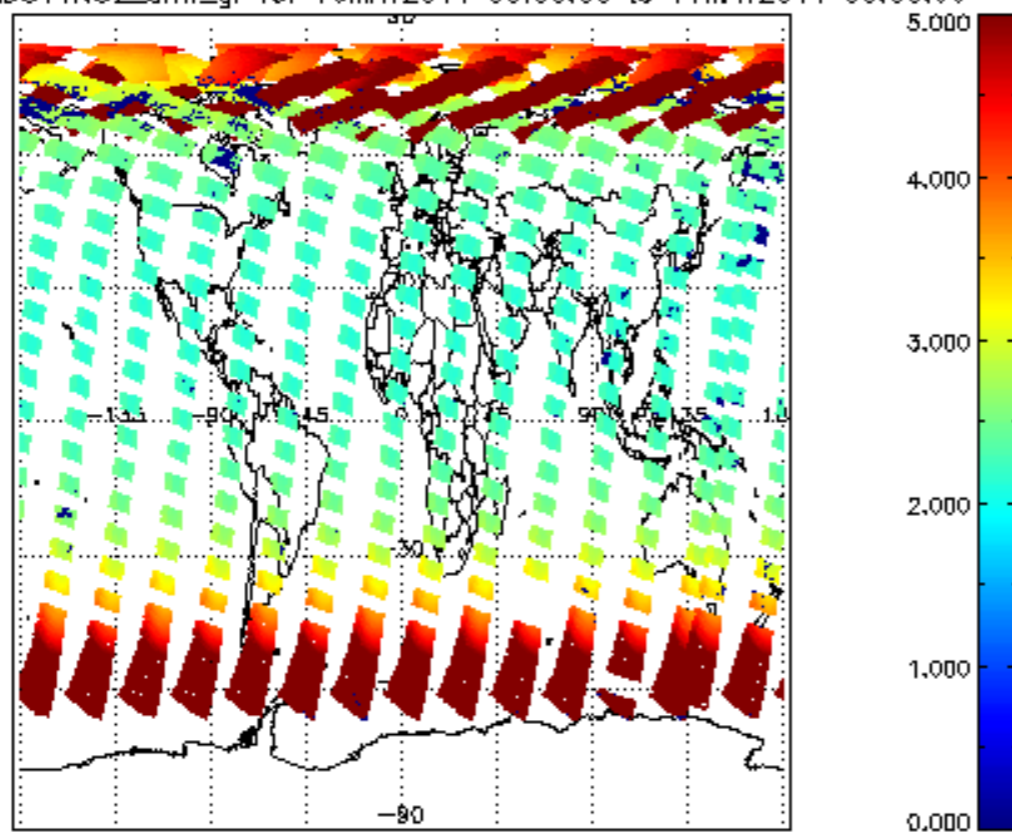
SCIOL2P\_NADUV1NO2\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



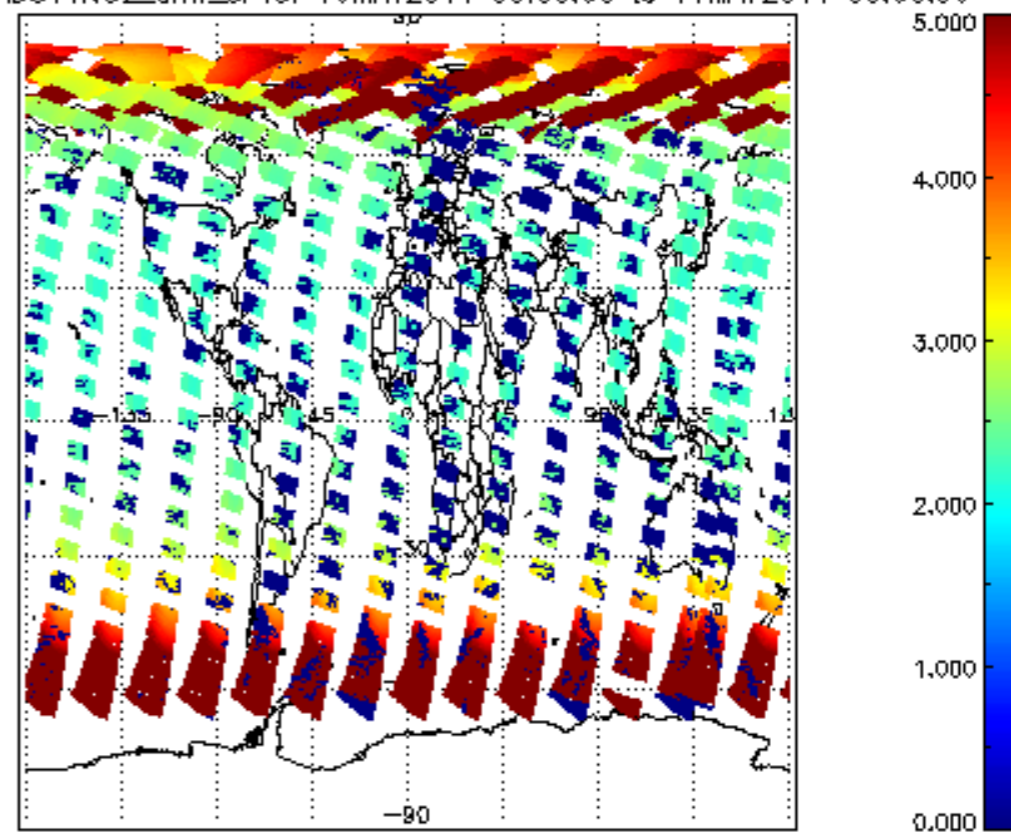
SCIOL2P\_NADUV1NO2\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



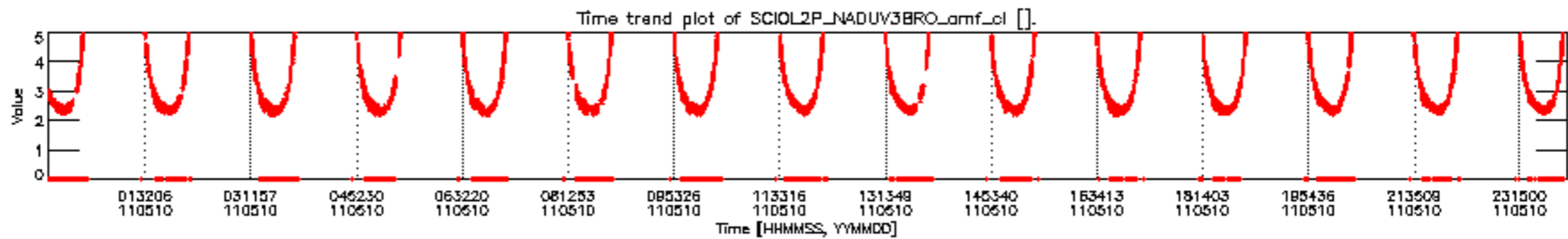
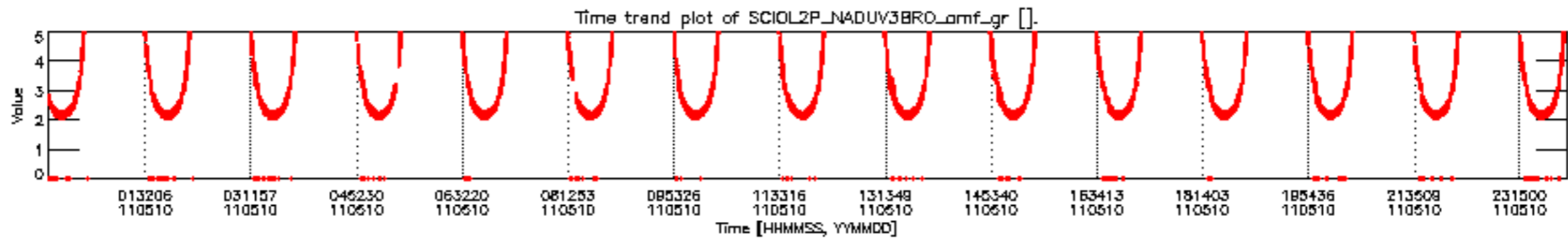
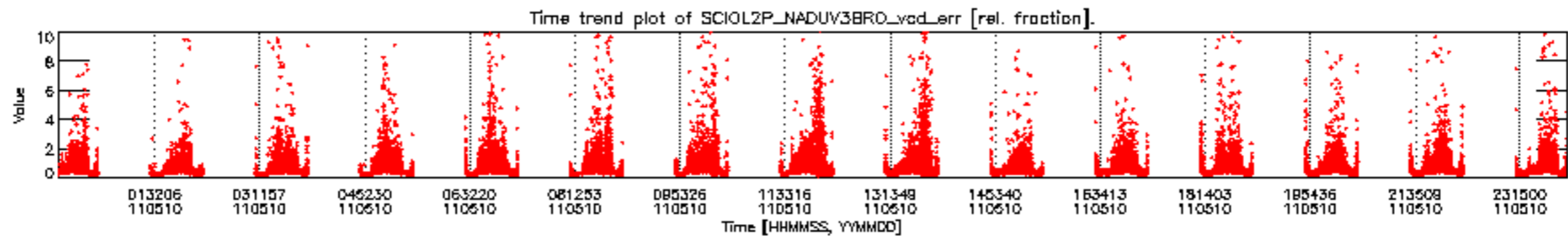
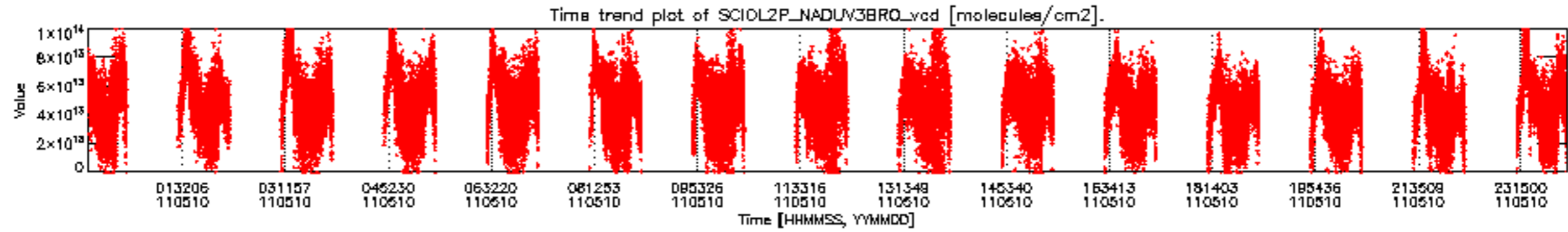
SCIOL2P\_NADUV1NO2\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



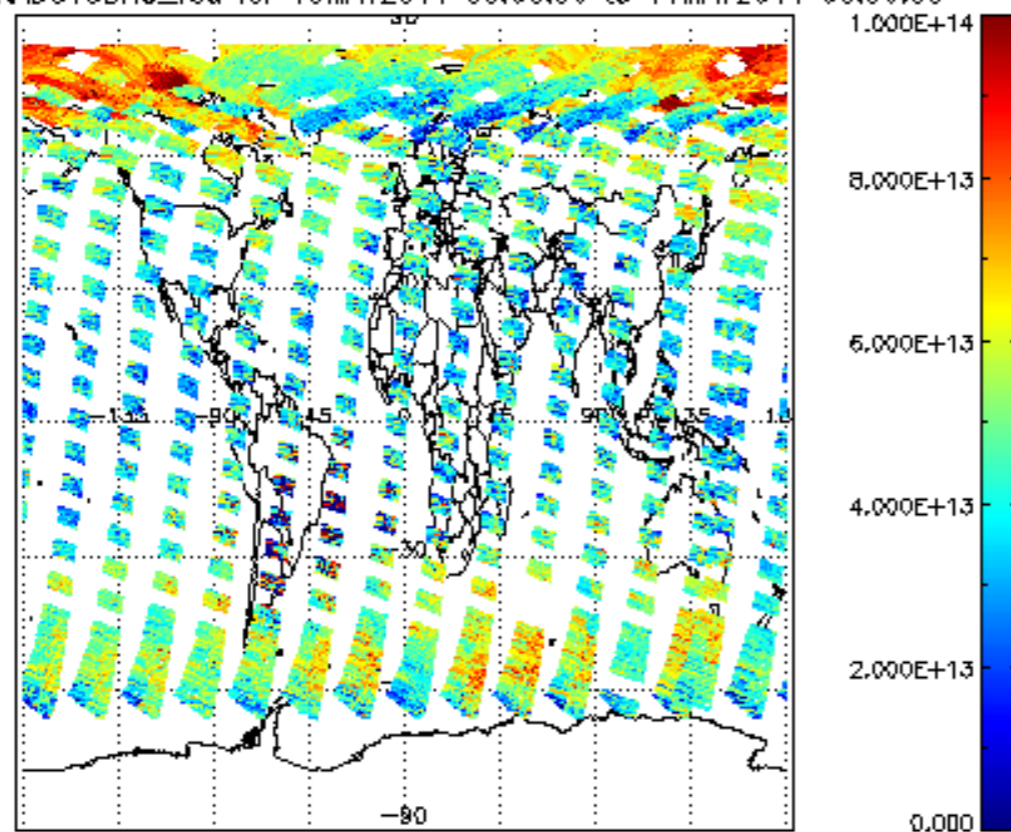
SCIOL2P\_NADUV1NO2\_amf\_sl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



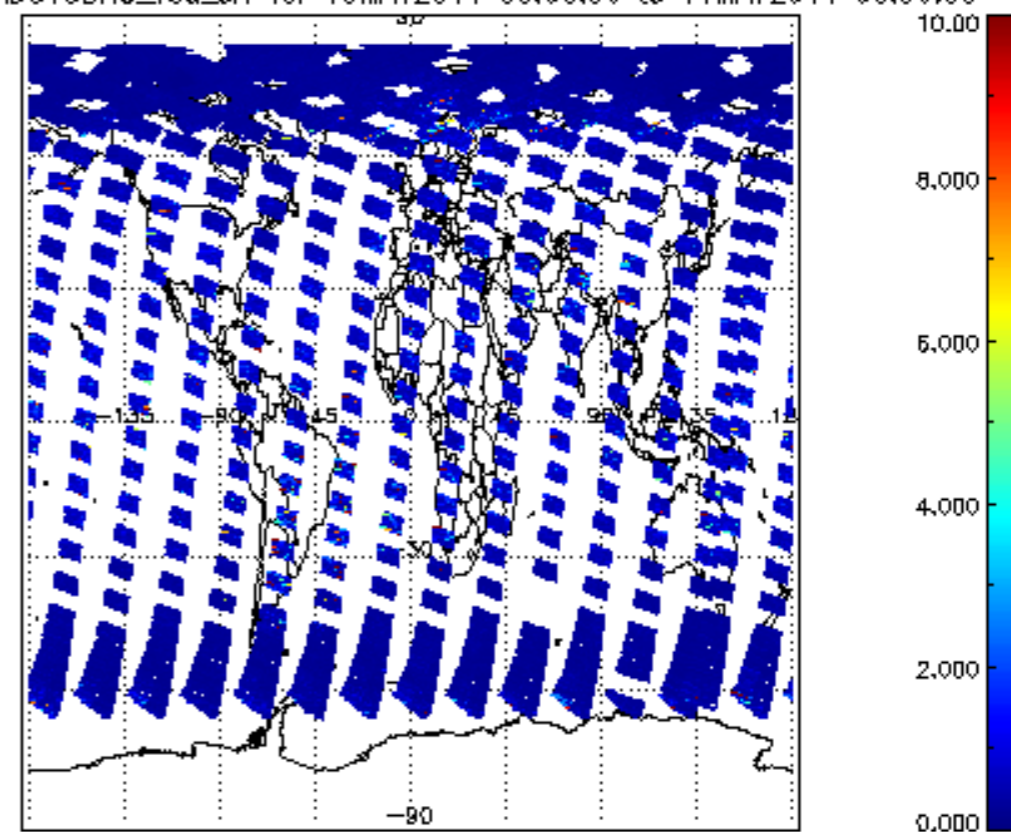




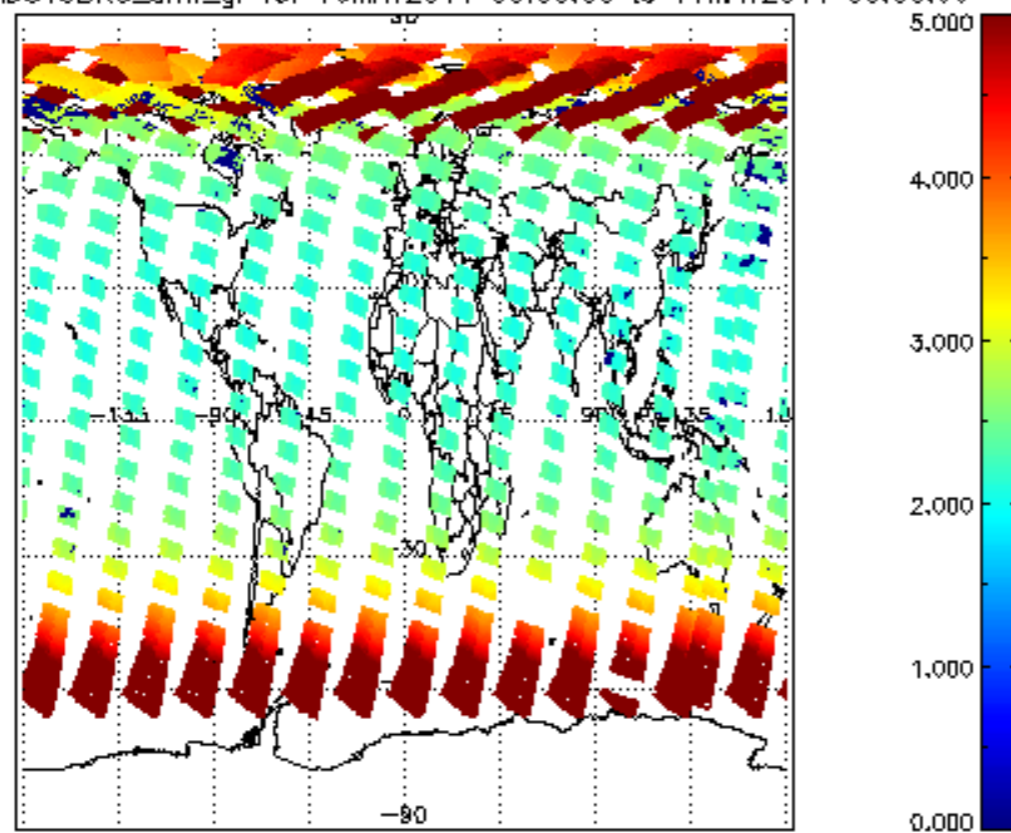
SCIOL2P\_NADUV3BRO\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



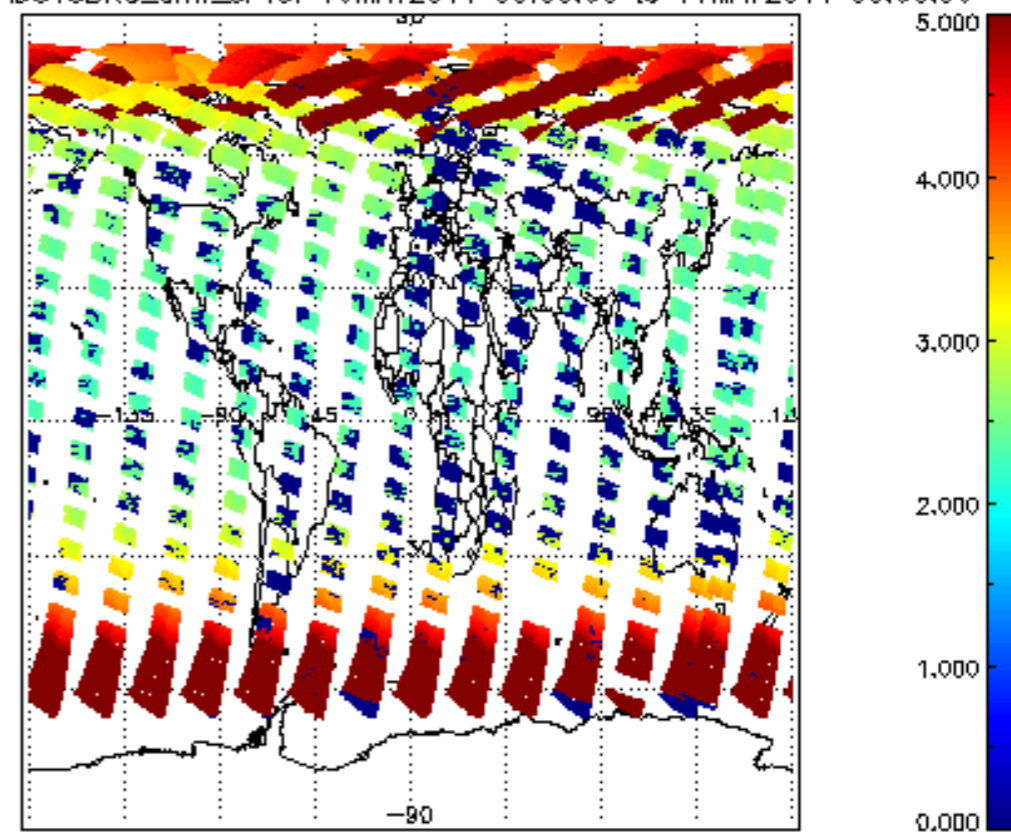
SCIOL2P\_NADUV3BRO\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



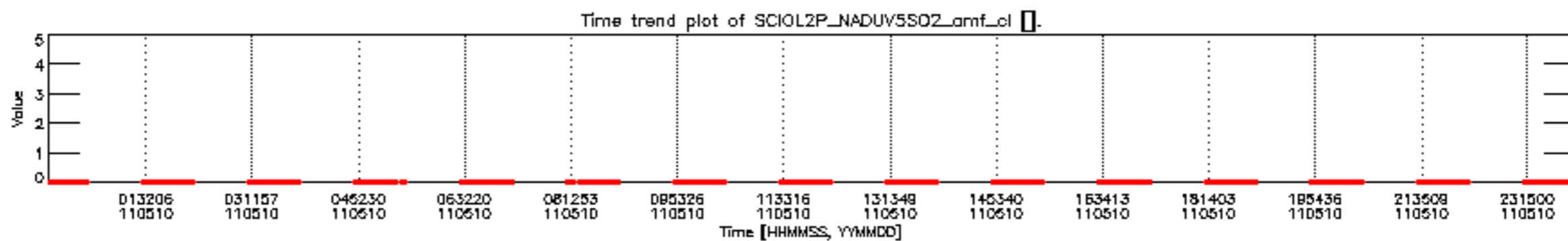
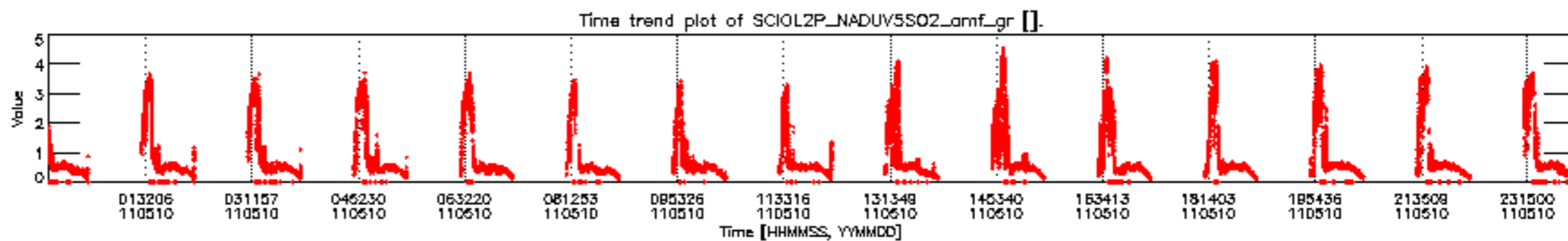
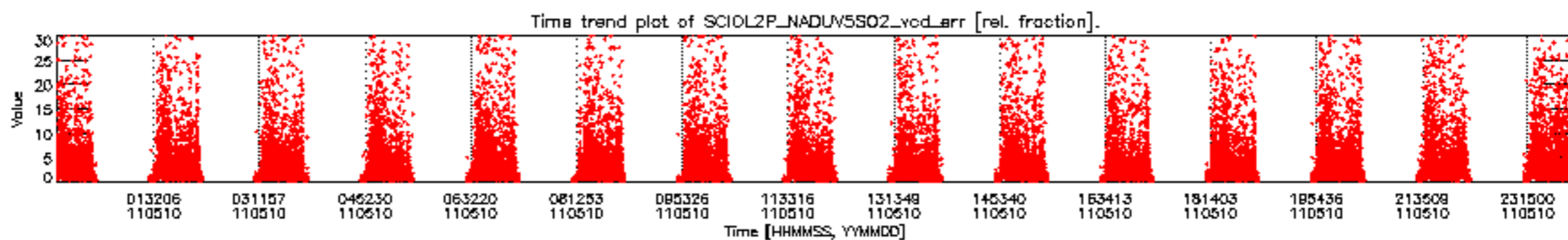
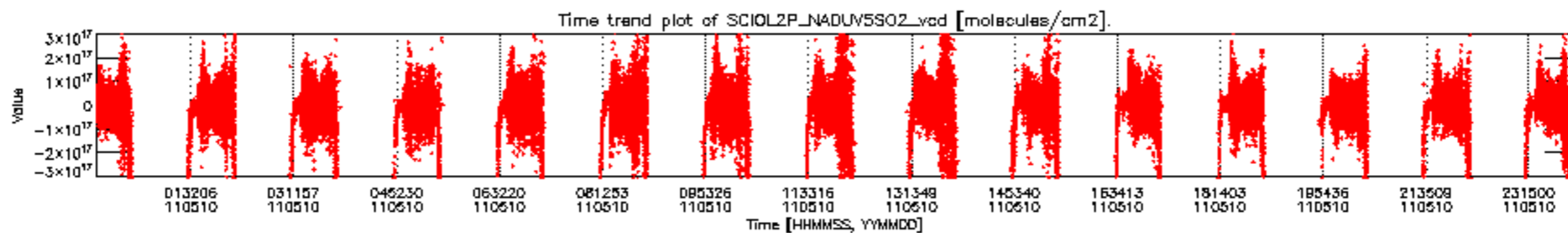
SCIOL2P\_NADUV3BRO\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



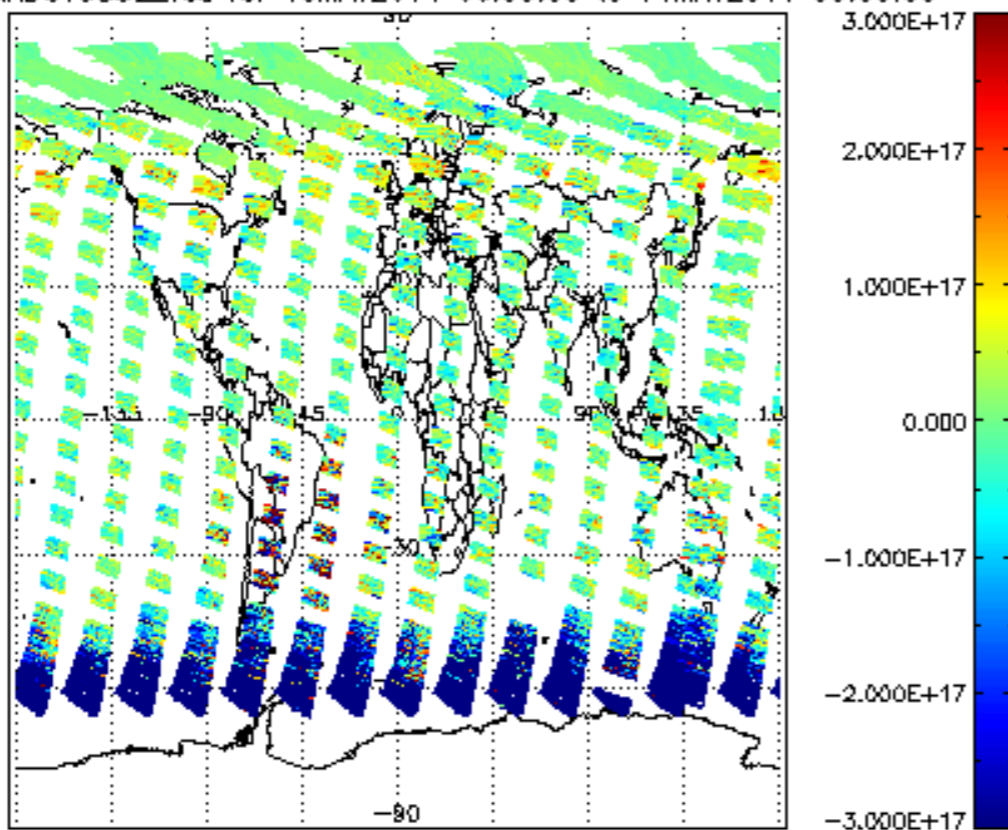
SCIOL2P\_NADUV3BRO\_amf\_sl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



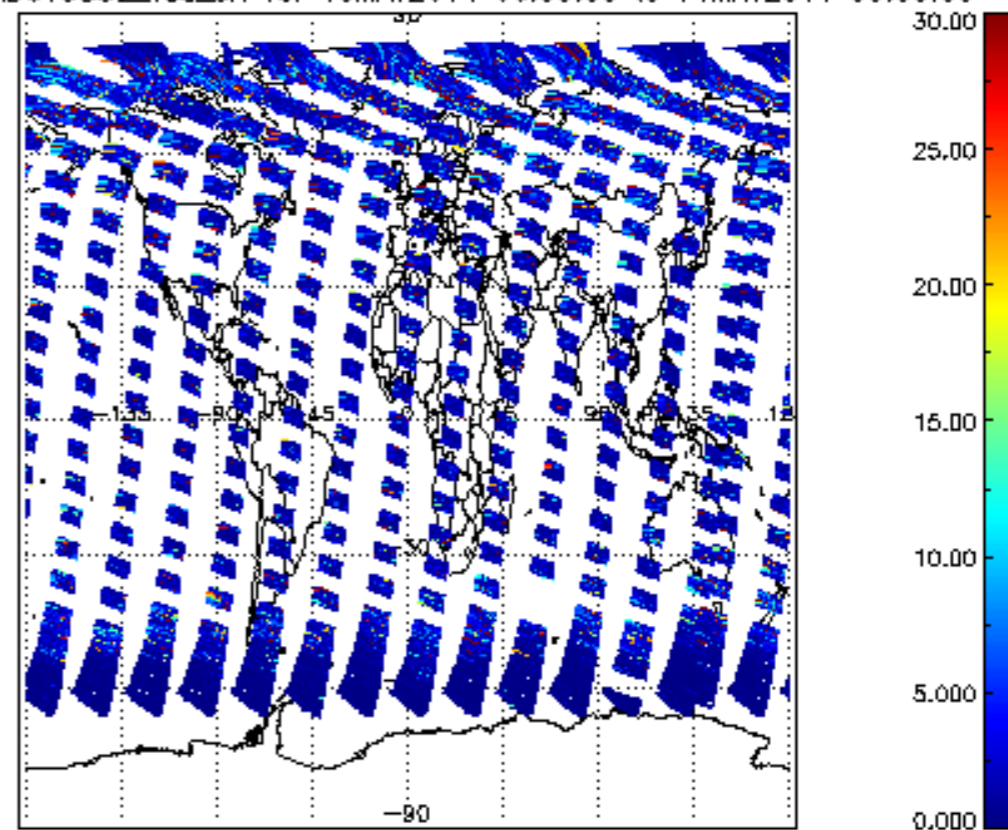




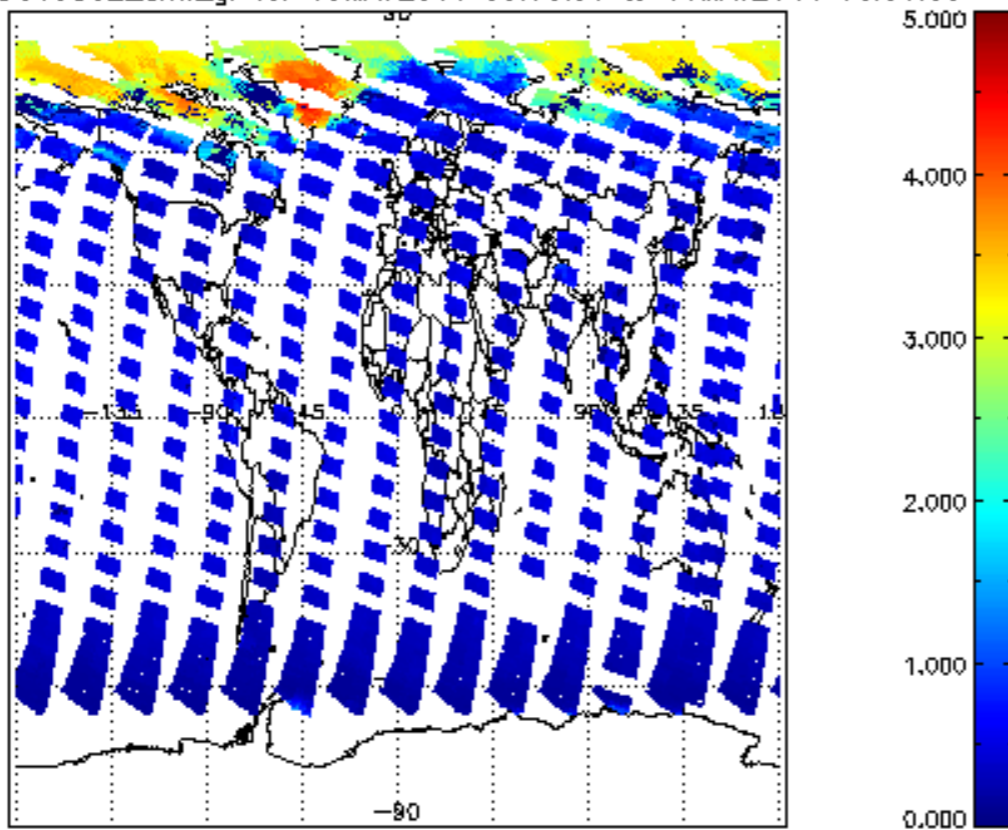
SCIOL2P\_NADUV5S02\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



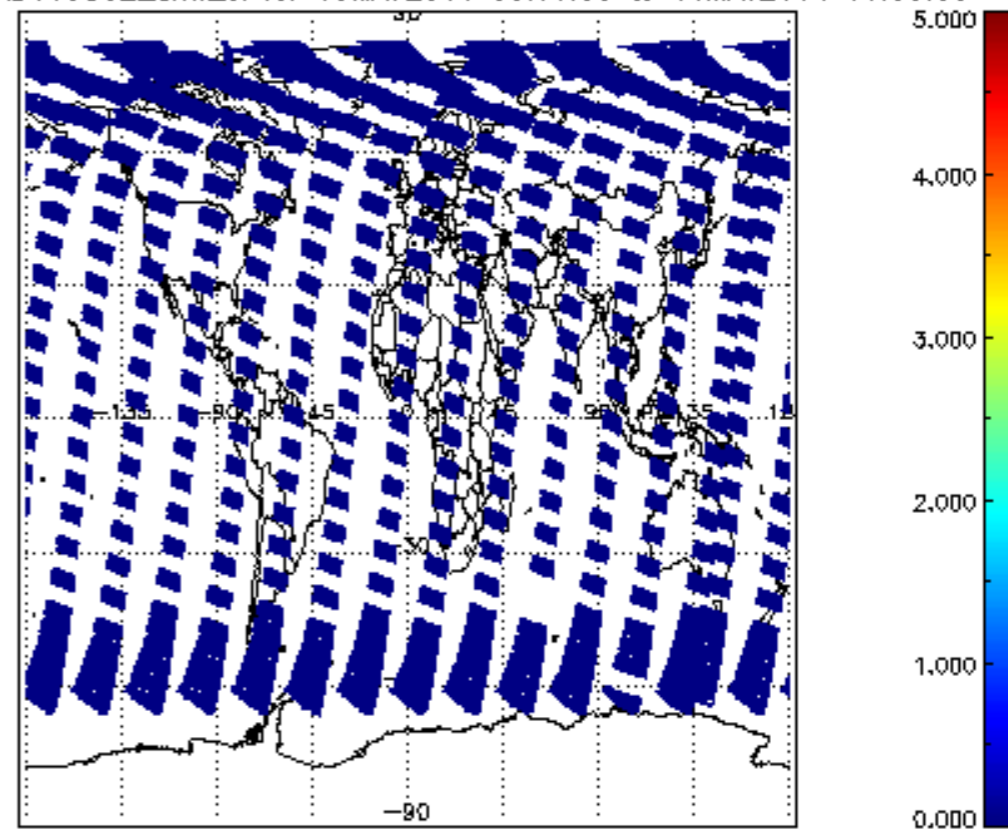
SCIOL2P\_NADUV5S02\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



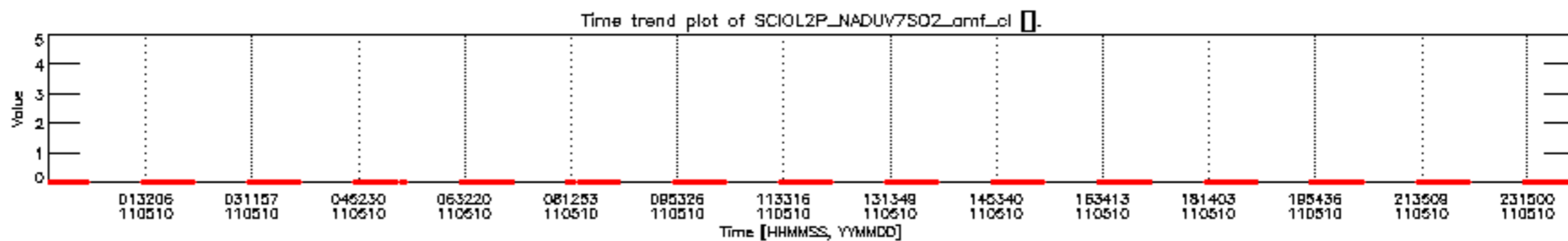
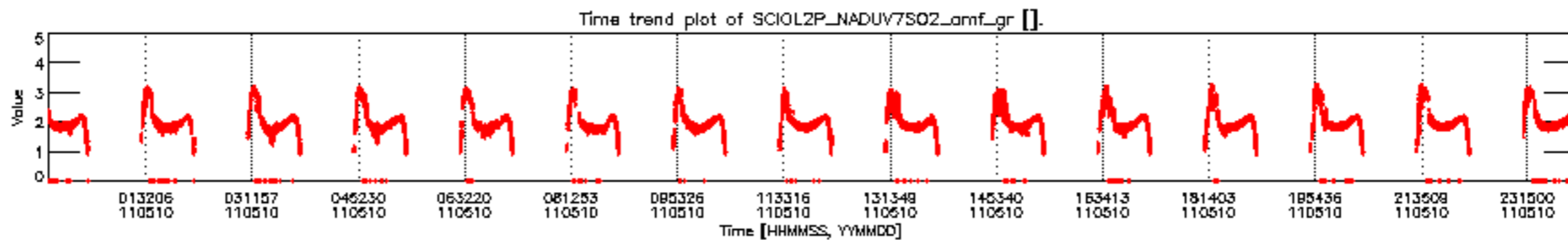
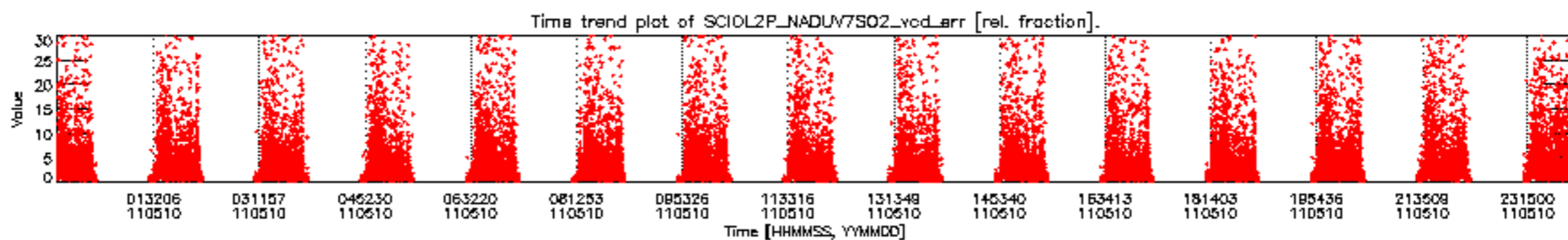
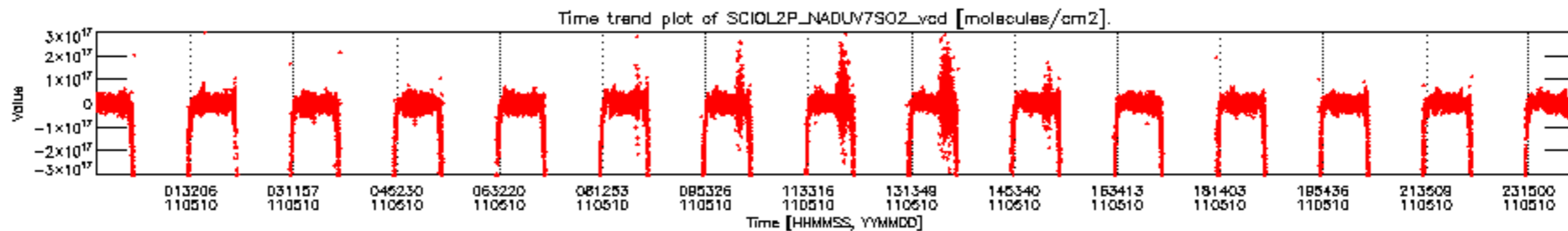
SCIOL2P\_NADUV5S02\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



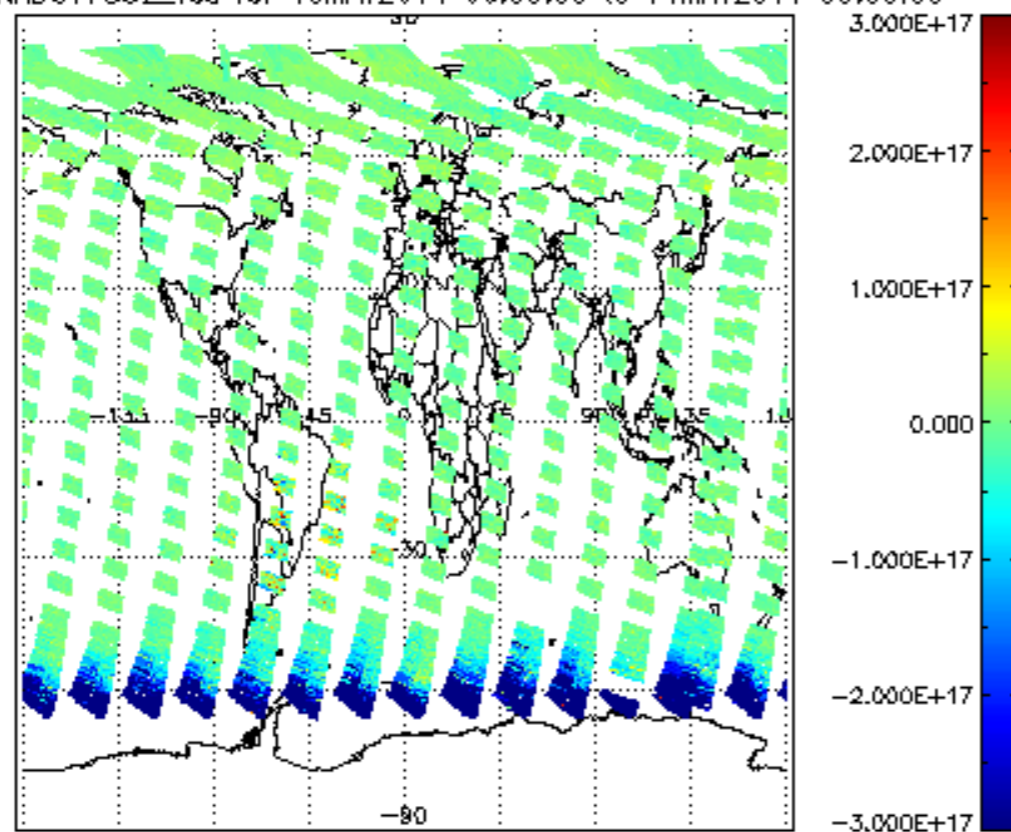
SCIOL2P\_NADUV5S02\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



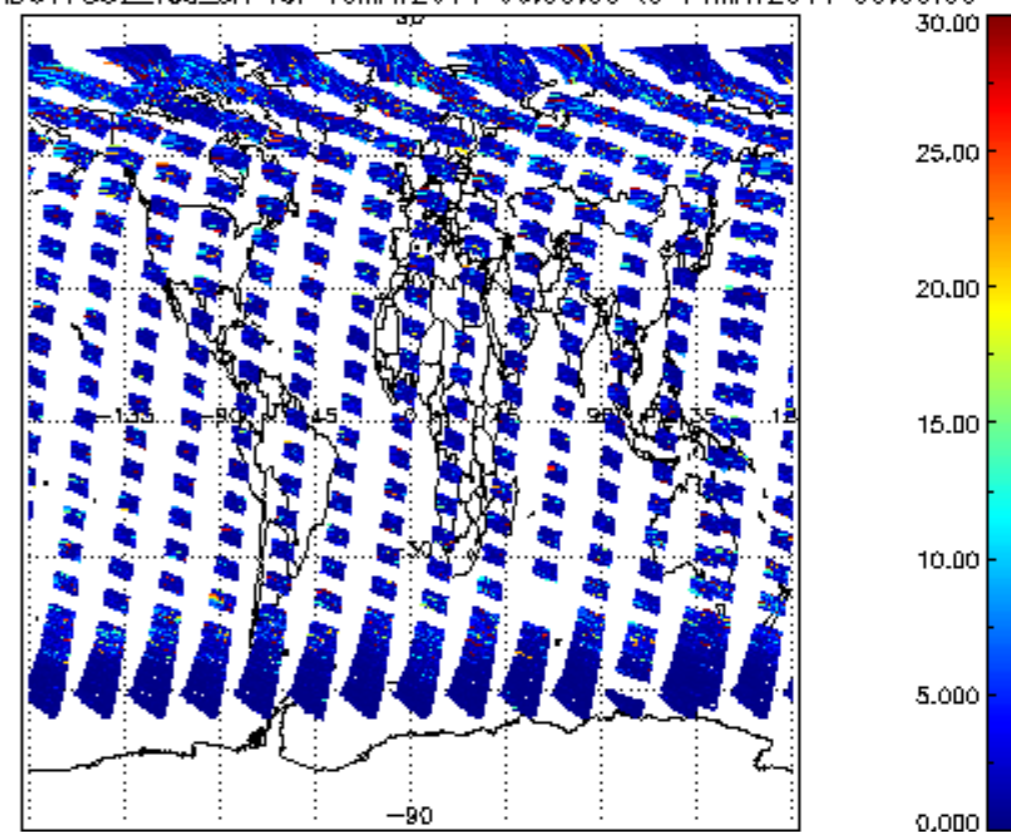




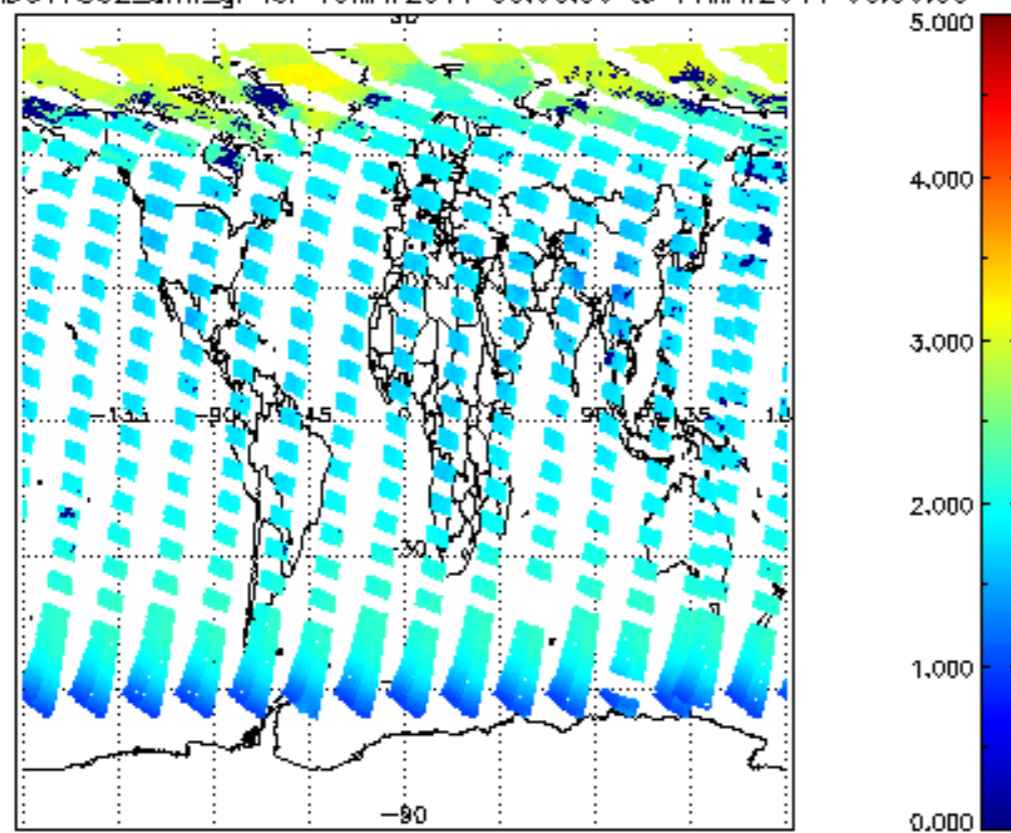
SCIOL2P\_NADUV7S02\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



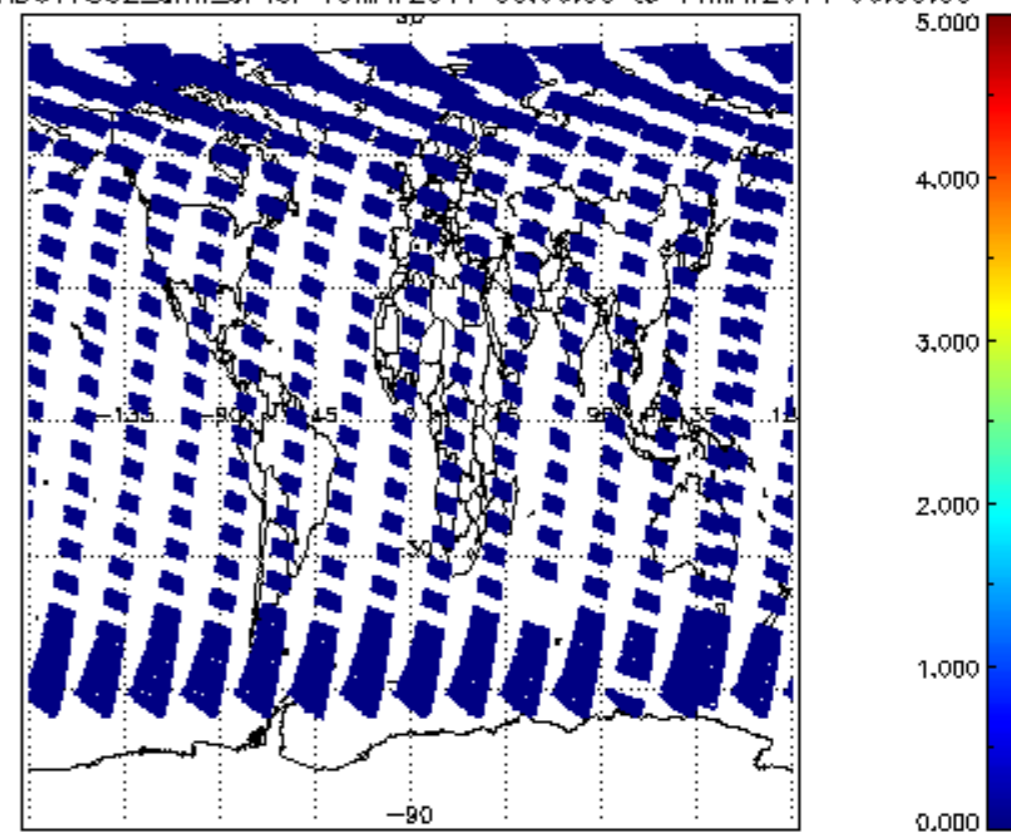
SCIOL2P\_NADUV7S02\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



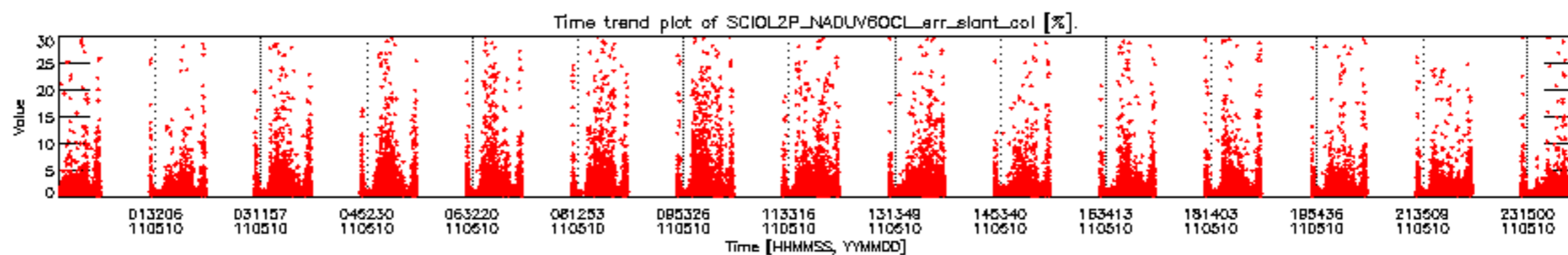
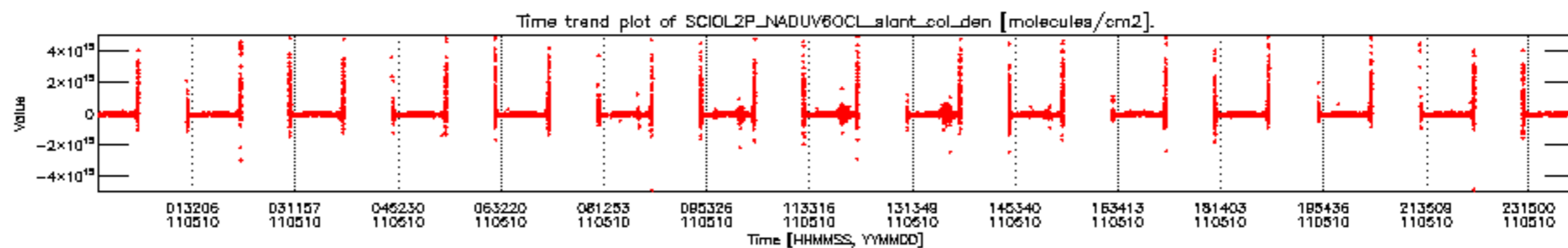
SCIOL2P\_NADUV7S02\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



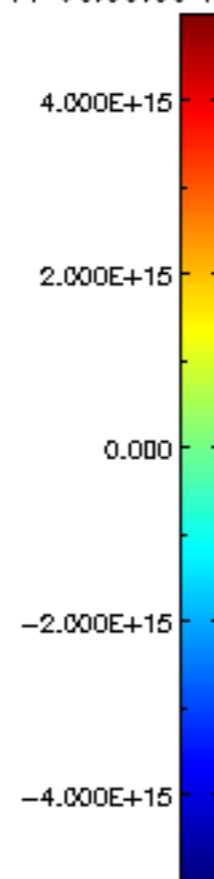
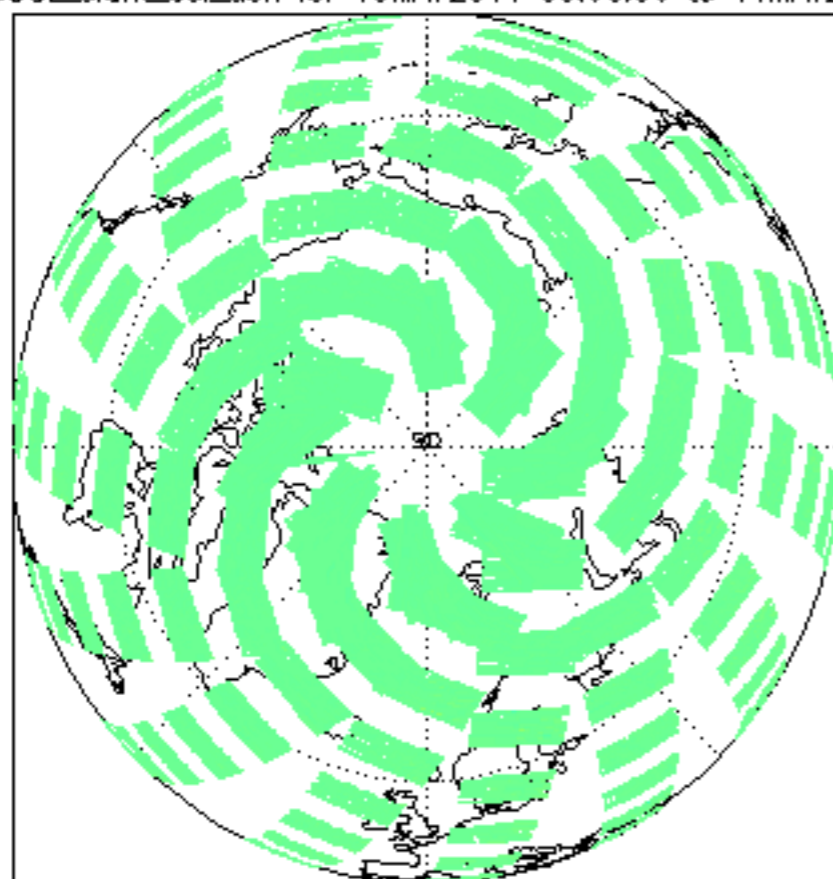
SCIOL2P\_NADUV7S02\_amf\_cl for 10MAY2011 00:00:00 to 11MAY2011 00:00:00





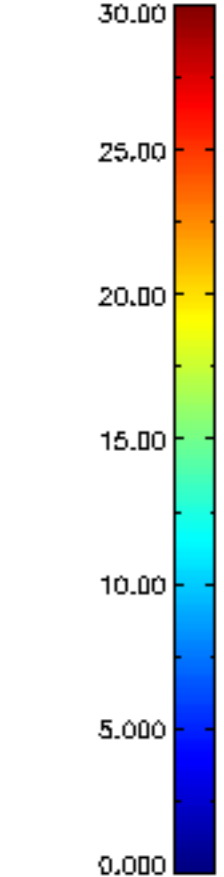
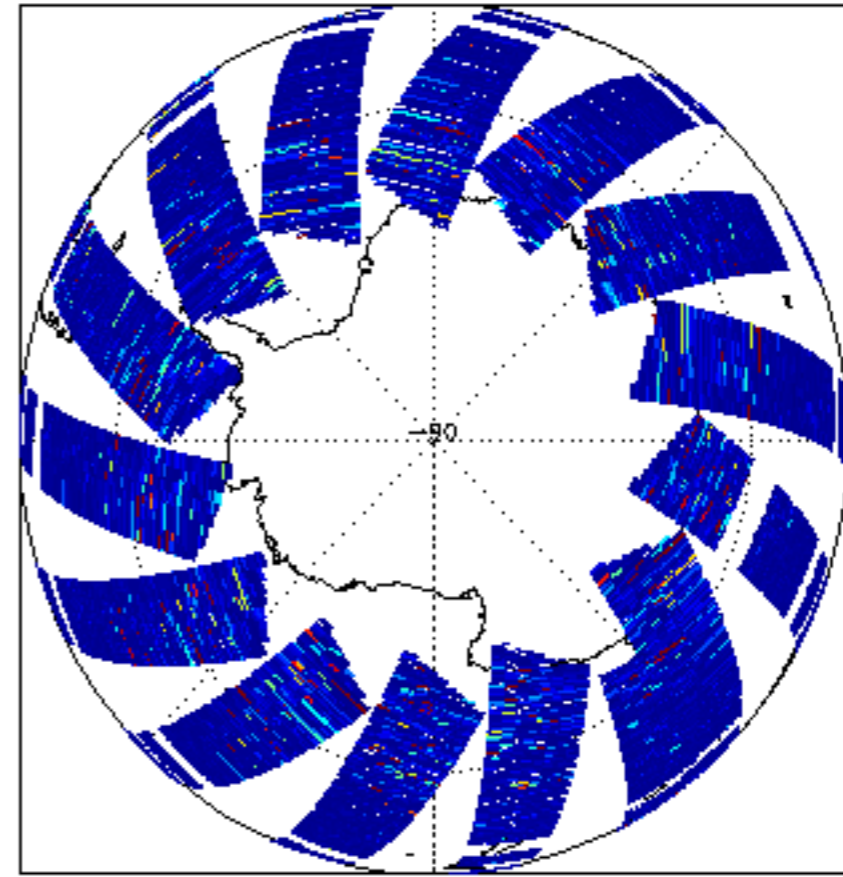
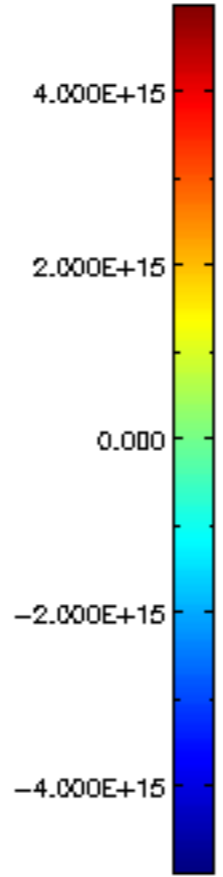
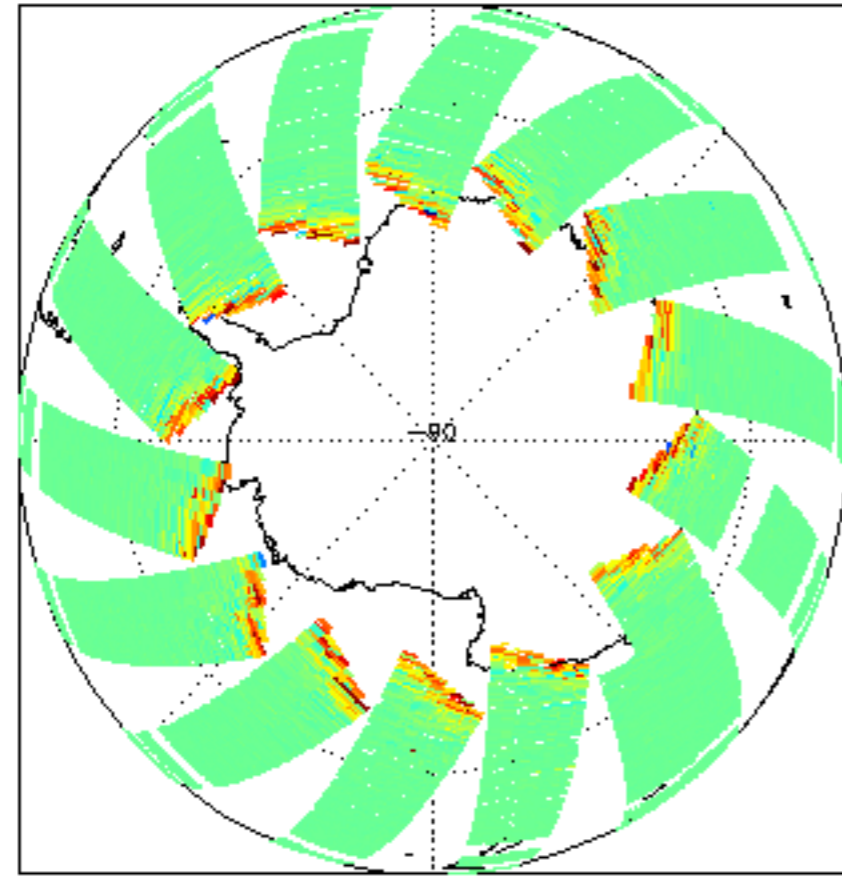


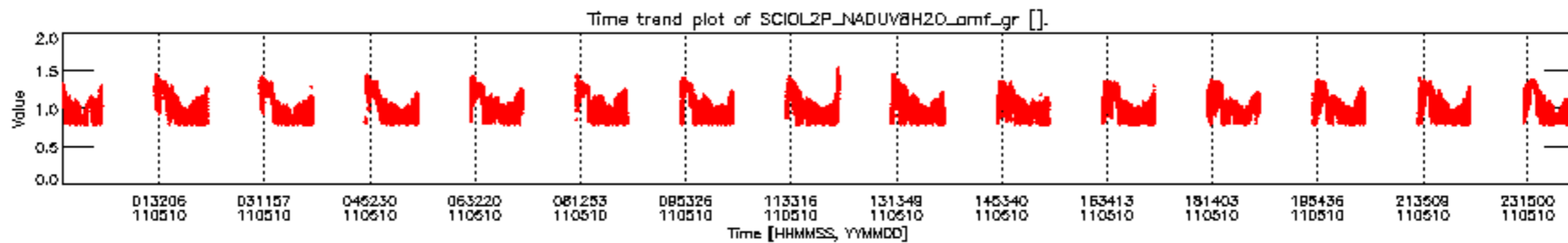
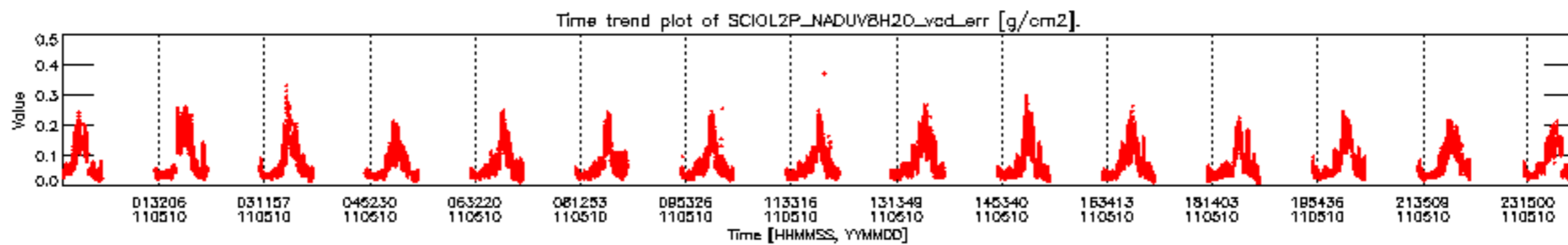
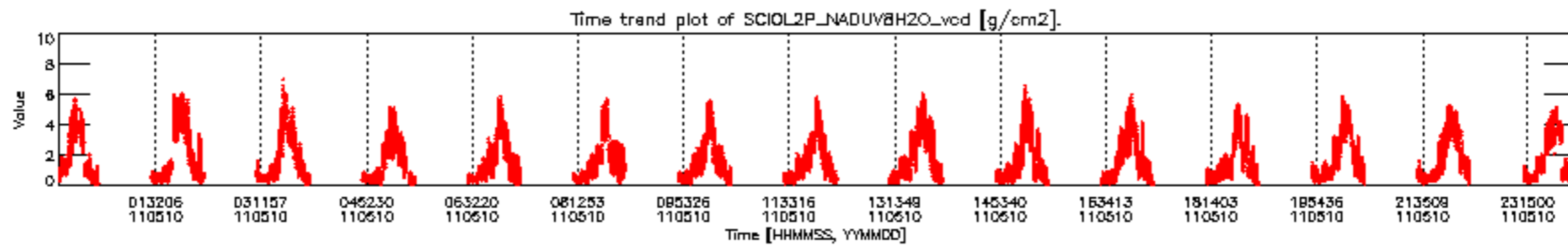
CIOL2P\_NADUV6OCL\_slant\_col\_den for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 np





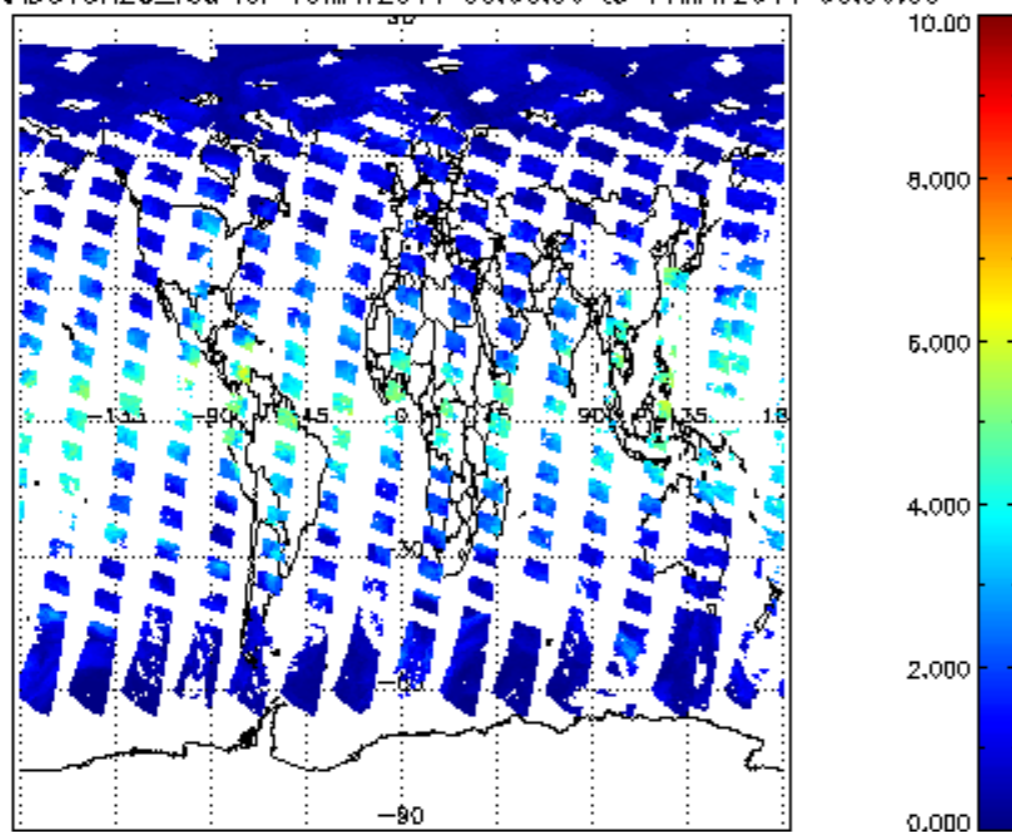
CIOL2P\_NADUV60CL\_slant\_col\_den for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 10MAY2011 00:00:00 to 11MAY2011 00:00:00 sp



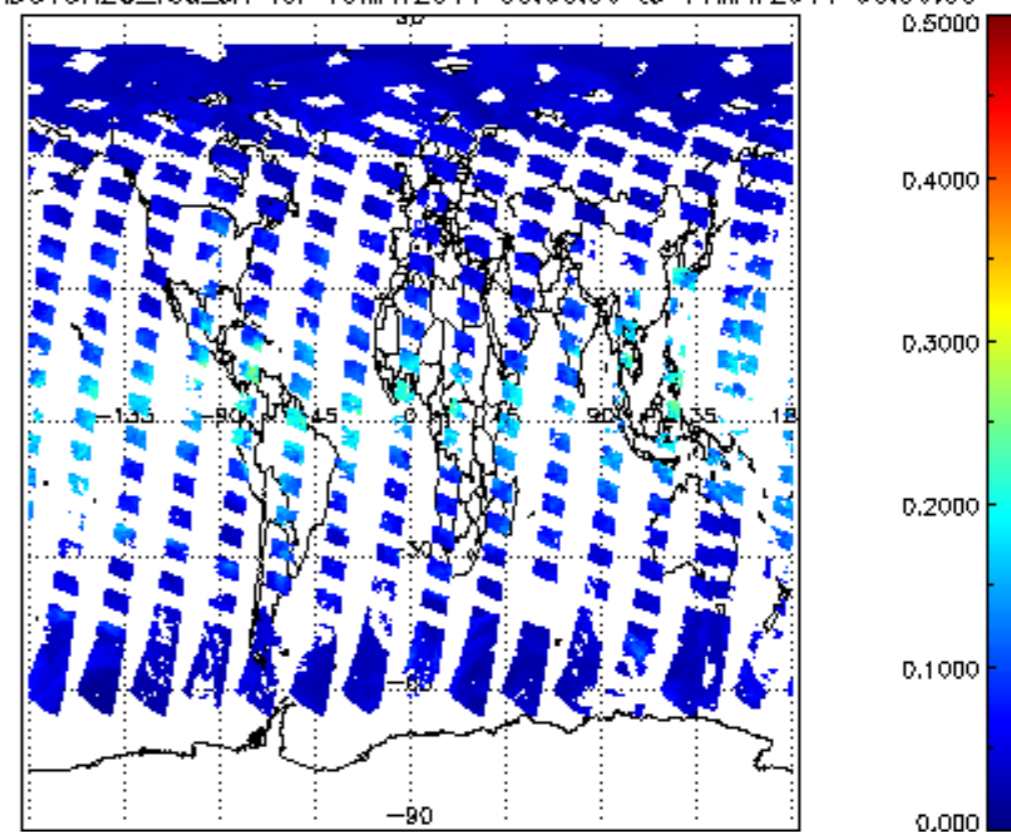




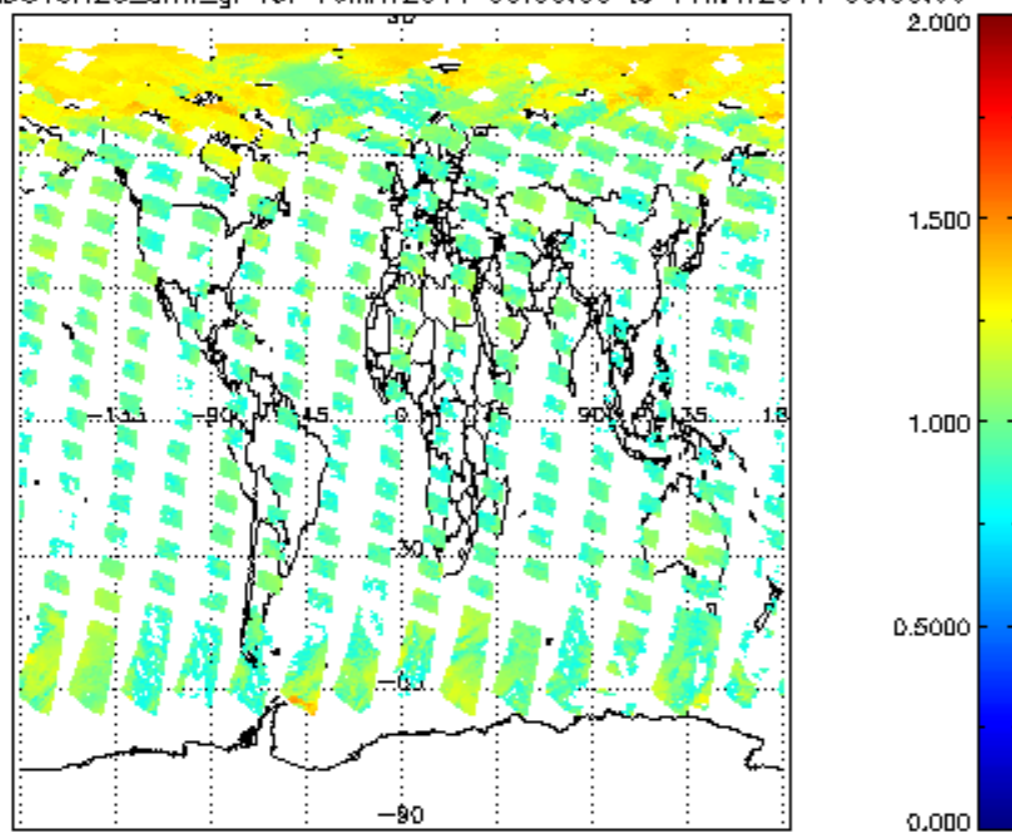
SCIOL2P\_NADUV8H2O\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

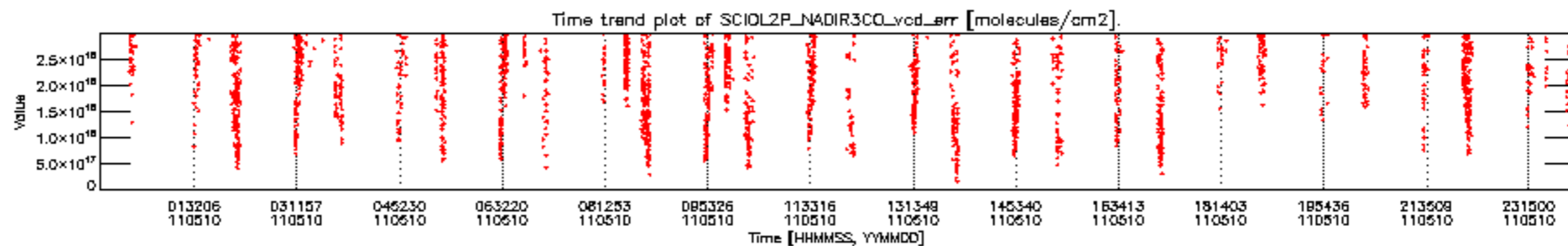
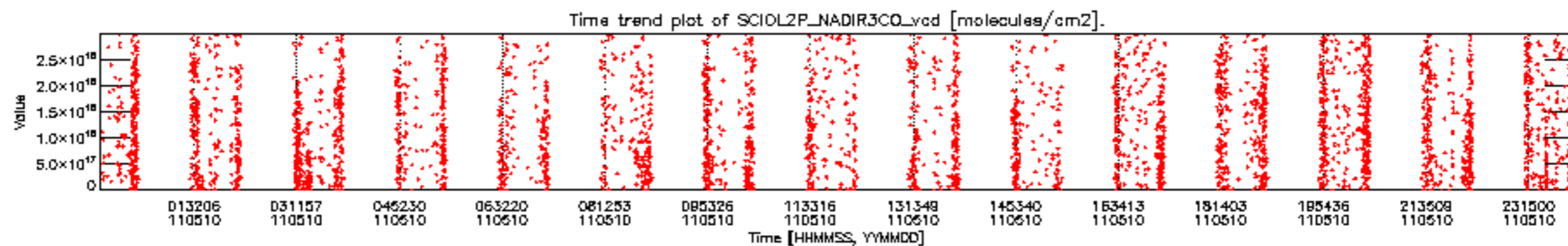


SCIOL2P\_NADUV8H2O\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



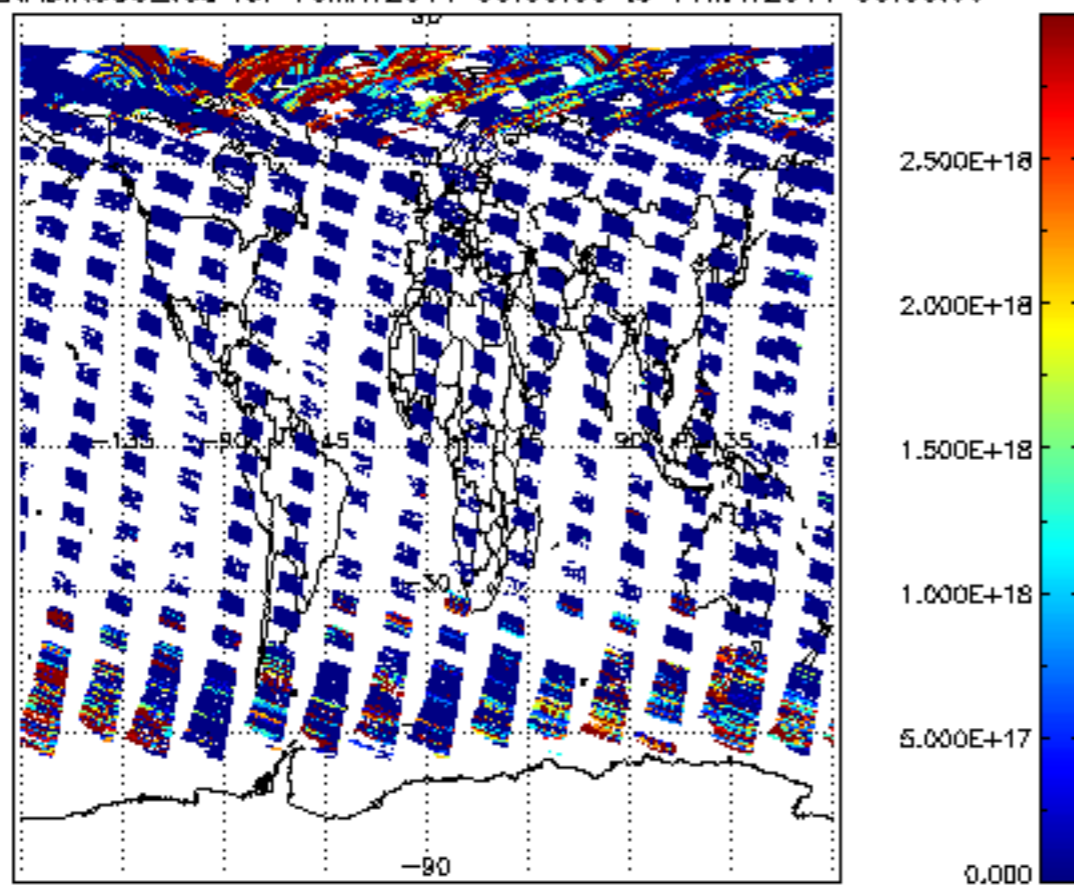
SCIOL2P\_NADUV8H2O\_amf\_gr for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



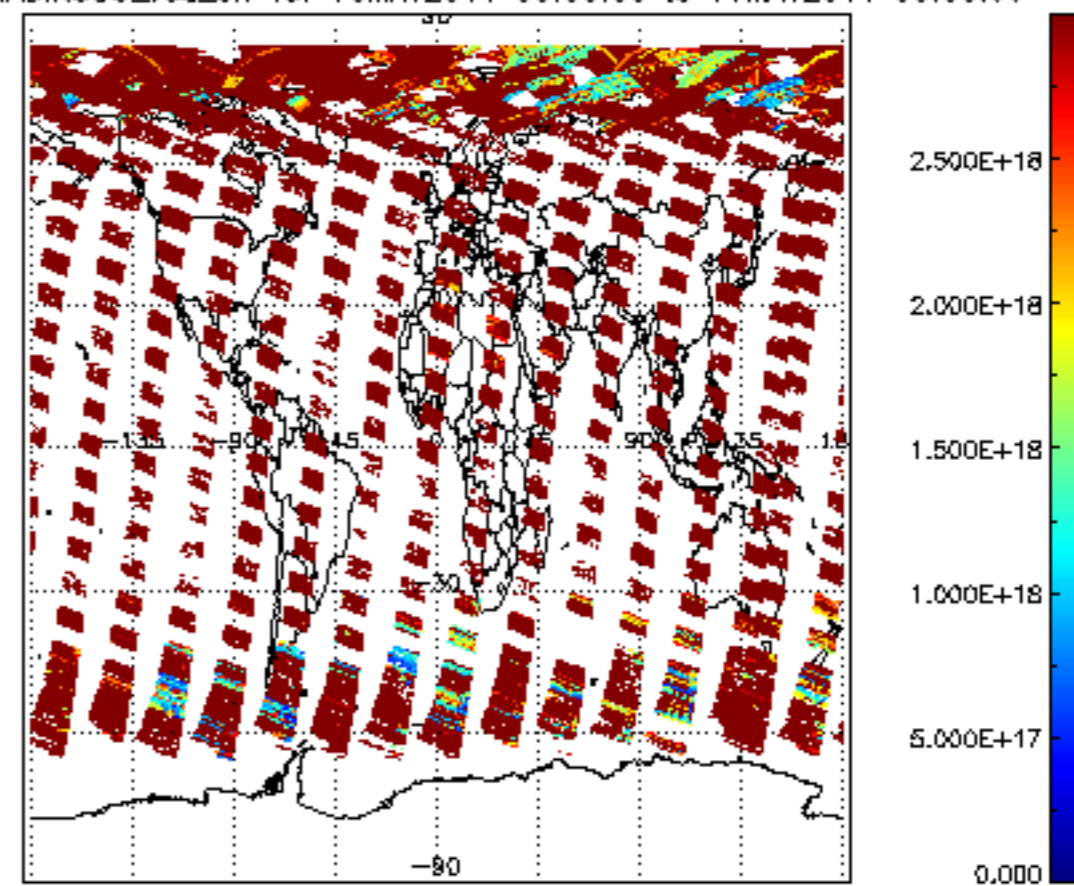




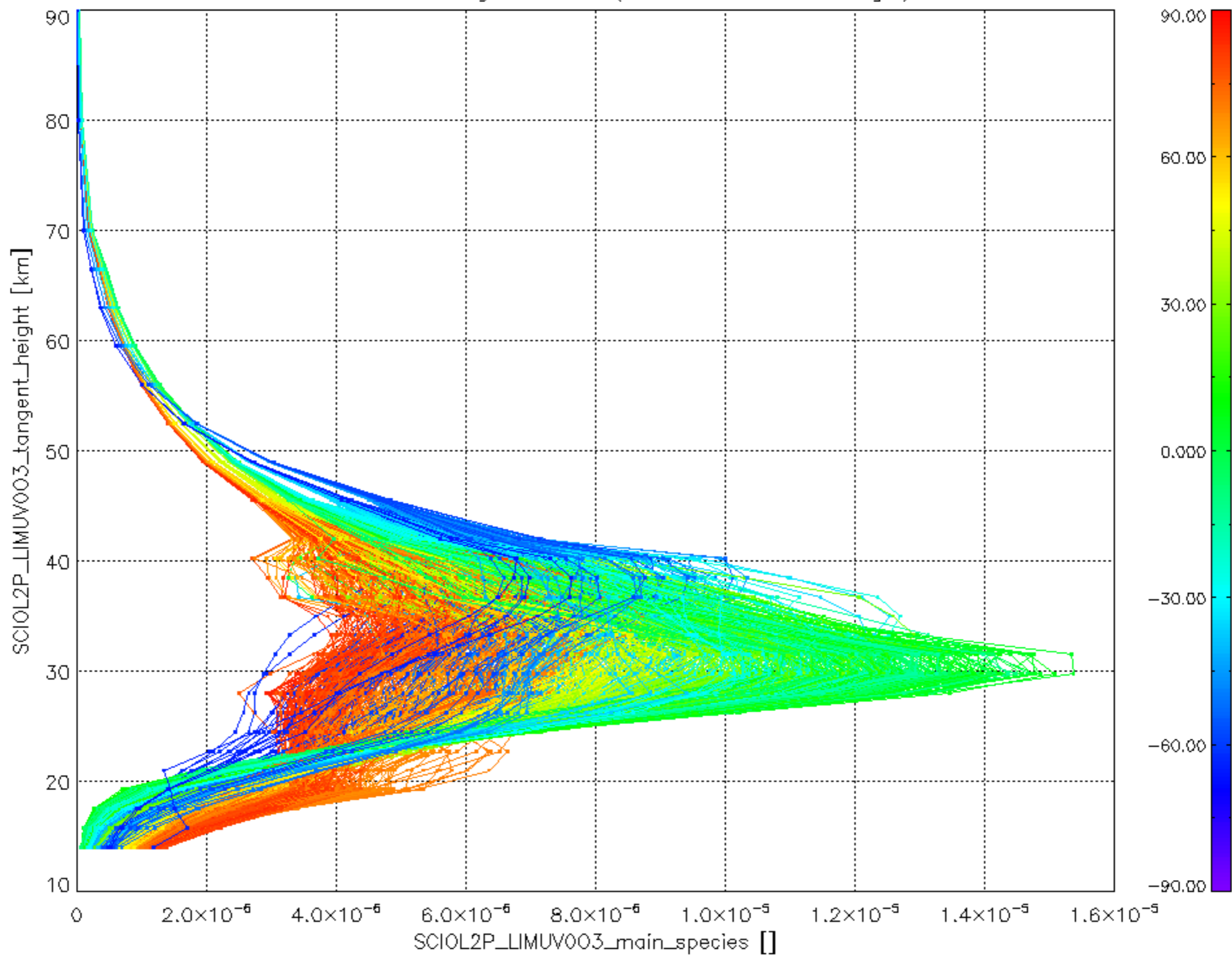
SCIOL2P\_NADIR3CO\_vcd for 10MAY2011 00:00:00 to 11MAY2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 10MAY2011 00:00:00 to 11MAY2011 00:00:00

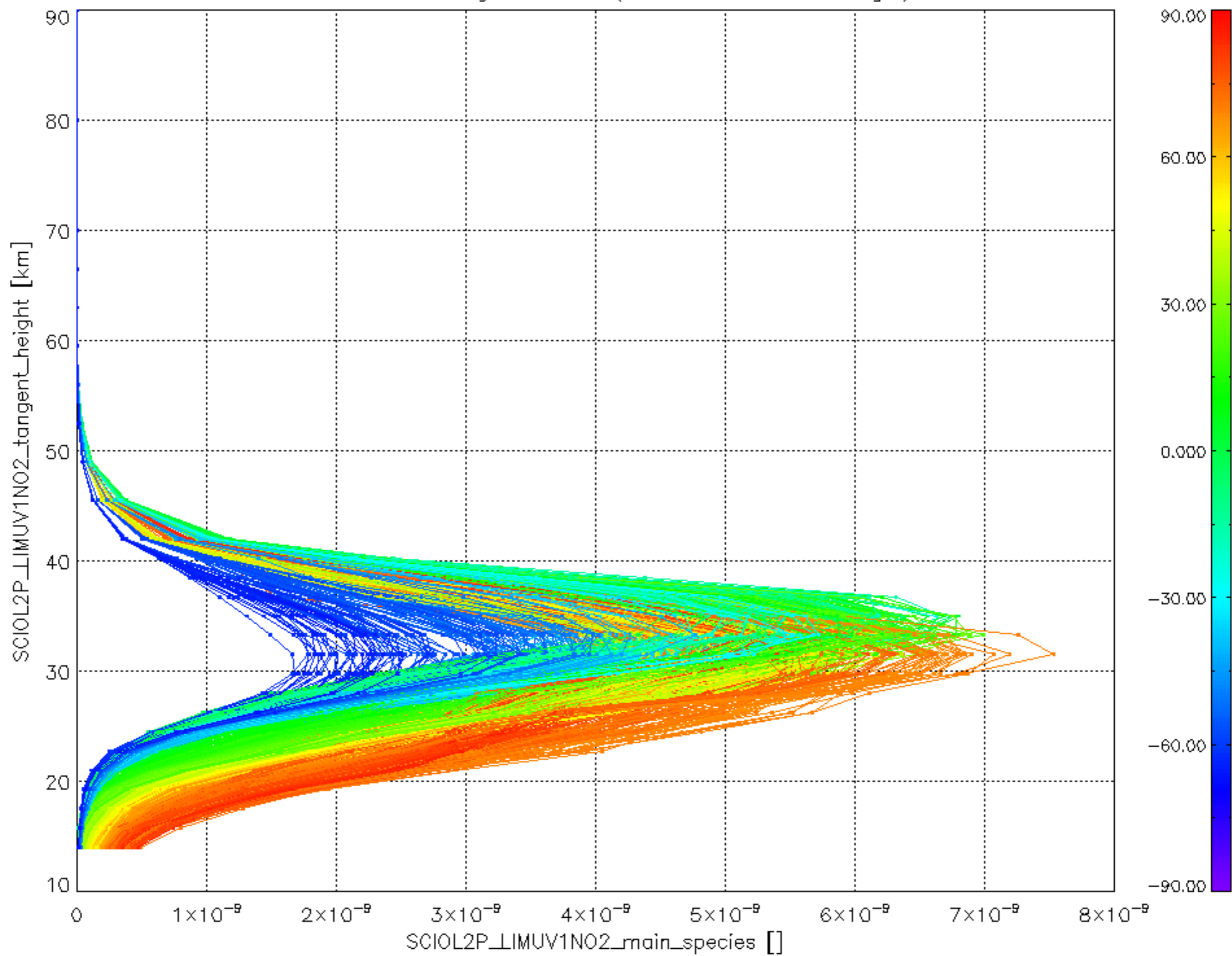


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

