

## 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	09MAY2011 05:14:51
Data source version	SCIA-OL/5.01-N
Processing scope for products	03MAY2011 00:00:00 to 04MAY2011 00:00:00
Start time of first product within scope	02MAY2011 22:57:51
Stop time of last product within scope	04MAY2011 01:00:06
Total number of level 2 products	17
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__2PNDPA20110502_225751_000035163102_00101_47960_2946.N1</a>	02MAY2011 22:57:51	02MAY2011 23:56:27	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110503_003804_000035303102_00102_47961_2947.N1</a>	03MAY2011 00:38:04	03MAY2011 01:36:55	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110503_021818_000028593102_00103_47962_2948.N1</a>	<b>03MAY2011 02:18:18</b>	<b>03MAY2011 03:05:57</b>	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110503_030601_000060783102_00104_47963_2950.N1</a>	<b>03MAY2011 03:06:01</b>	<b>03MAY2011 04:47:19</b>	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110503_044723_000059953102_00105_47964_2951.N1</a>	03MAY2011 04:47:23	03MAY2011 06:27:19	0	GOOD

5	SCI_OL__2PNDPA20110503_062925_000039373102_00106_47965_2952.N1	03MAY2011 06:29:25	03MAY2011 07:35:03	0	GOOD
6	SCI_OL__2PNDPA20110503_073601_000059413102_00107_47966_2953.N1	03MAY2011 07:36:01	03MAY2011 09:15:02	0	GOOD
7	SCI_OL__2PNDPA20110503_091614_000058873102_00108_47967_2954.N1	03MAY2011 09:16:14	03MAY2011 10:54:22	0	GOOD
8	SCI_OL__2PNDPA20110503_105425_000059413102_00109_47968_2955.N1	03MAY2011 10:54:25	03MAY2011 12:33:27	0	GOOD
9	SCI_OL__2PNDPA20110503_123330_000059553102_00110_47969_2956.N1	03MAY2011 12:33:30	03MAY2011 14:12:46	0	GOOD
10	SCI_OL__2PNDPA20110503_141358_000057503102_00111_47970_2957.N1	03MAY2011 14:13:58	03MAY2011 15:49:49	0	GOOD
11	SCI_OL__2PNDPA20110503_155101_000057203102_00112_47971_2969.N1	03MAY2011 15:51:01	03MAY2011 17:26:22	0	GOOD
12	SCI_OL__2PNDPA20110503_172625_000058183102_00113_47972_2967.N1	03MAY2011 17:26:25	03MAY2011 19:03:24	0	GOOD
13	SCI_OL__2PNDPA20110503_190328_000059993102_00114_47973_2960.N1	03MAY2011 19:03:28	03MAY2011 20:43:27	0	GOOD
14	SCI_OL__2PNDPA20110503_204439_000032993102_00115_47974_2959.N1	03MAY2011 20:44:39	03MAY2011 21:39:39	0	GOOD
15	SCI_OL__2PNDPA20110503_222102_000035163102_00115_47974_2961.N1	03MAY2011 22:21:02	03MAY2011 23:19:38	0	GOOD
16	SCI_OL__2PNDPA20110504_000116_000035303102_00116_47975_2962.N1	04MAY2011 00:01:16	04MAY2011 01:00:06	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: 163540

Total number of cloud data DSRs with good quality flag (=0): 163540 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	163540	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	163540	0.16534	0.12500	0.12500	0.25000	0.058440	s
CL_FRAC	163540	0.40473	0.36601	0.0000	1.0000	0.31338	
CL_FRAC_ERR	163540	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	163540	5.2909	4.0000	4.0000	8.0000	1.8701	
PMD_READ_CL[0]	163540	0.44324	0.0000	0.0000	8.0000	1.3300	-
PMD_READ_CL[1]	163540	1.2513	0.0000	0.0000	8.0000	2.5125	-
CL_TOP_HEIGHT	127668	2.9018	1.2960	0.0000	17.000	3.2100	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	127668	69.121	101.00	0.0000	101.00	41.158	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	163540	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	163540	11001100	11000100	11000000	11100000	3580.7	
AERO_ABSO_IND	163540	0.19852	0.0000	0.0000	5.1287	0.45512	
AERO_IND_DIAG	163540	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	163540	01010010	00000000	00000000	11000000	24349.	

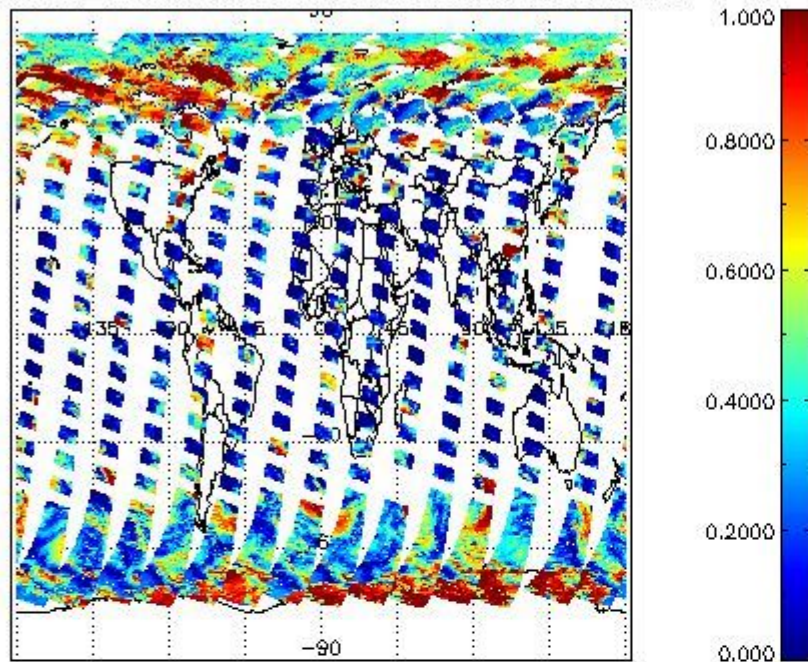
#### Time and geolocation plots:

Plots are available for the following parameters:

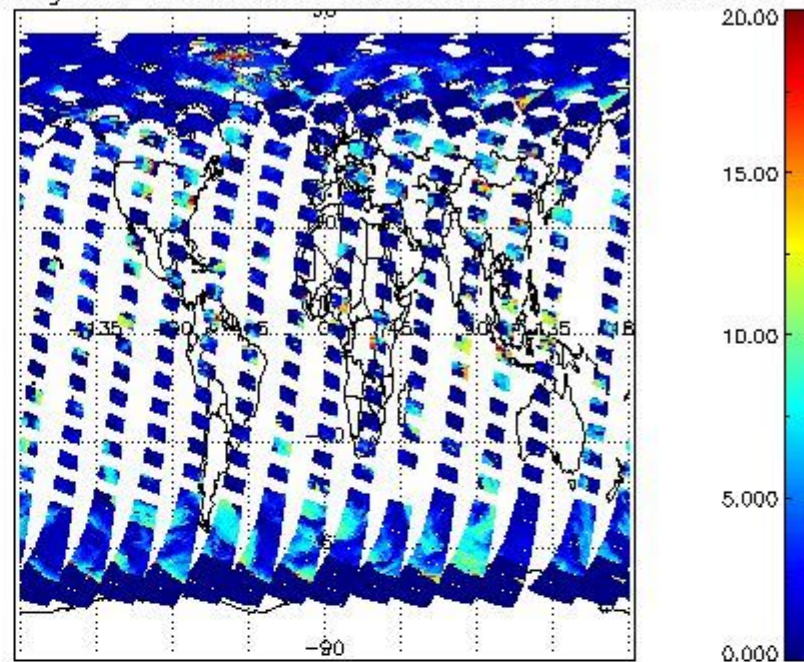
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



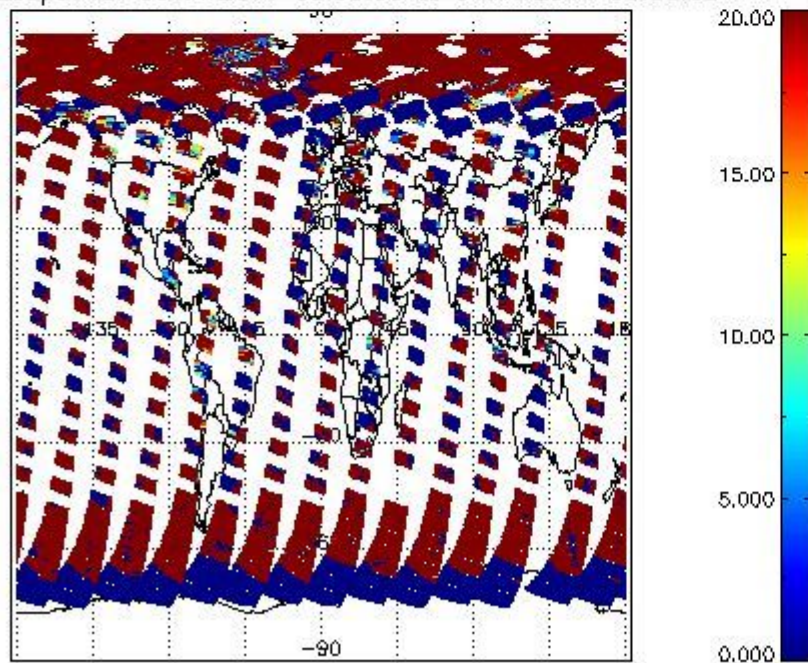
cL\_frac for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



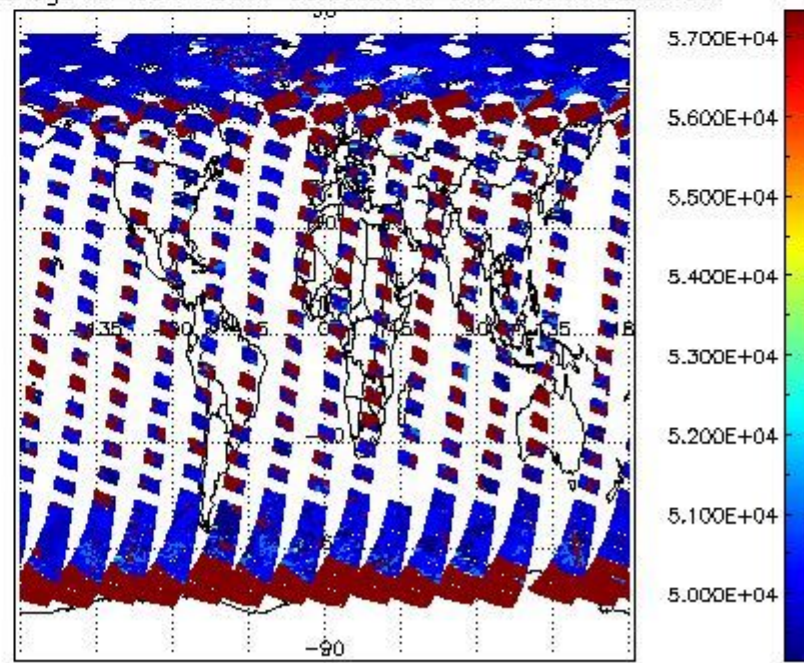
cL\_top\_height for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



cL\_opt\_depth for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



cloud\_flags for 03MAY2011 00:00:00 to 04MAY2011 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:

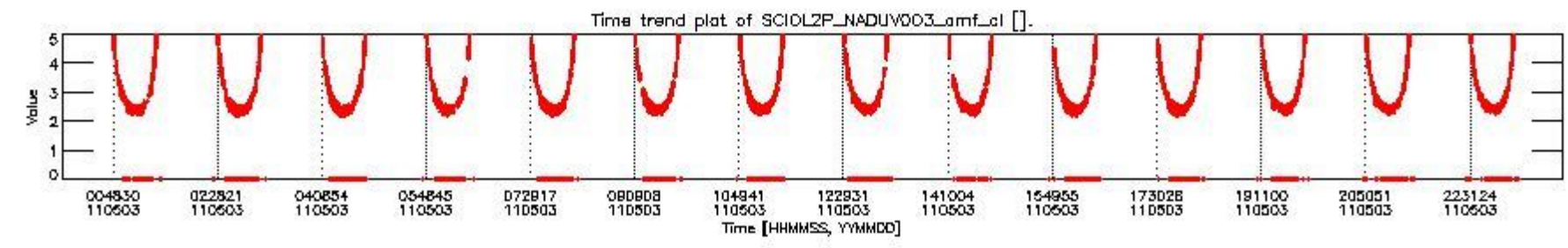
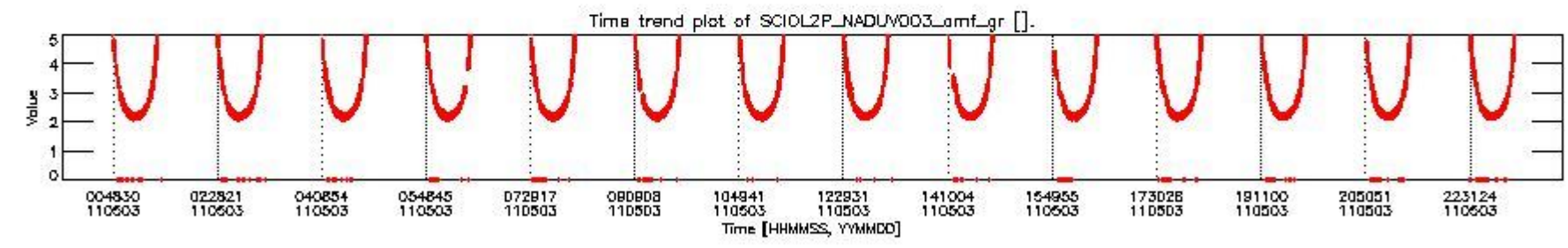
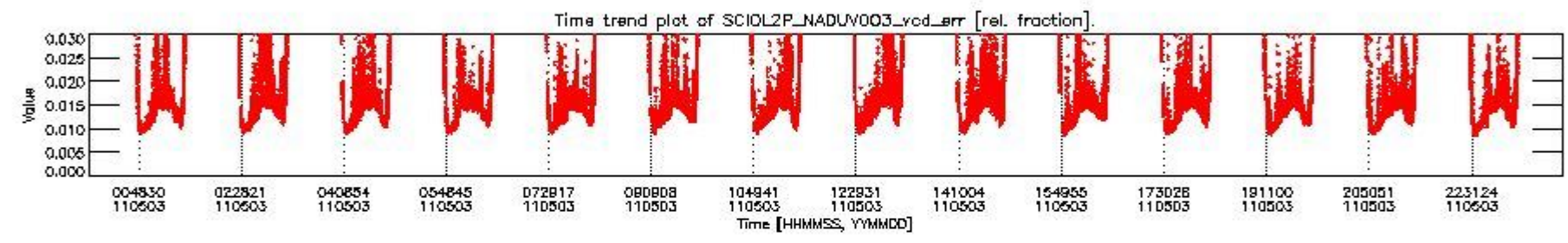
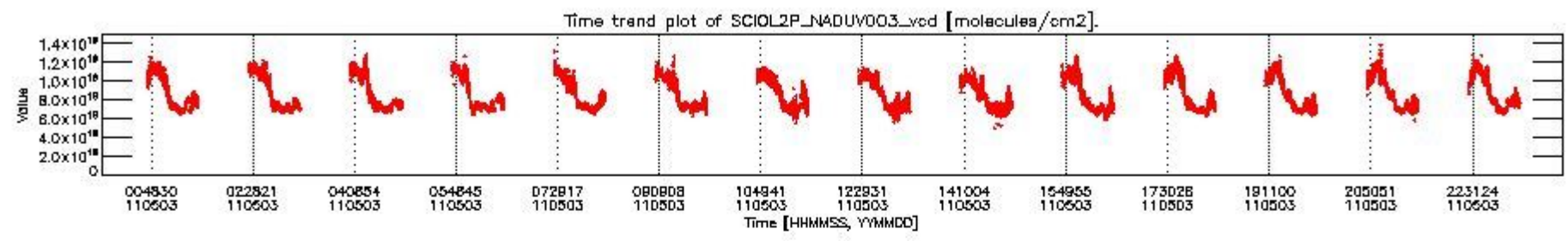
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

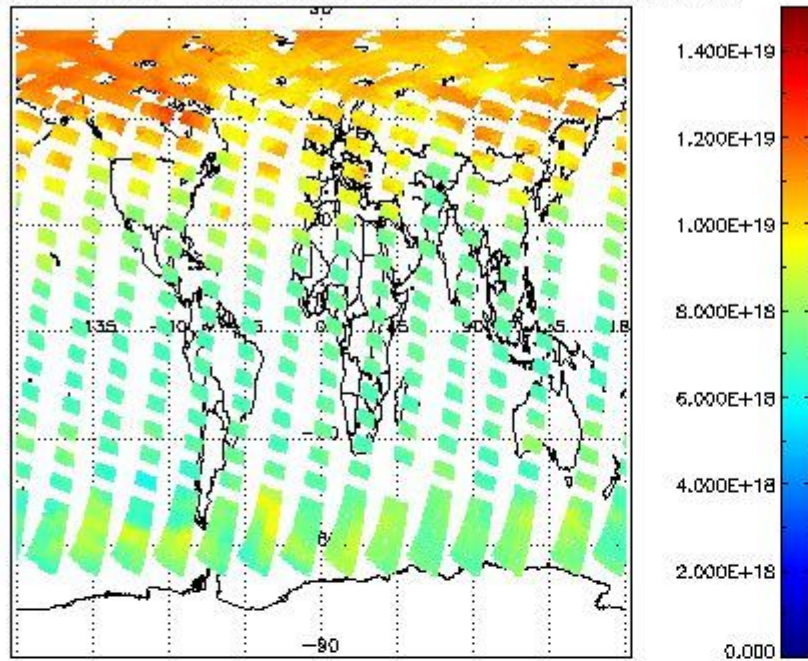
#### 2.2.2.1 O3 (UV0)



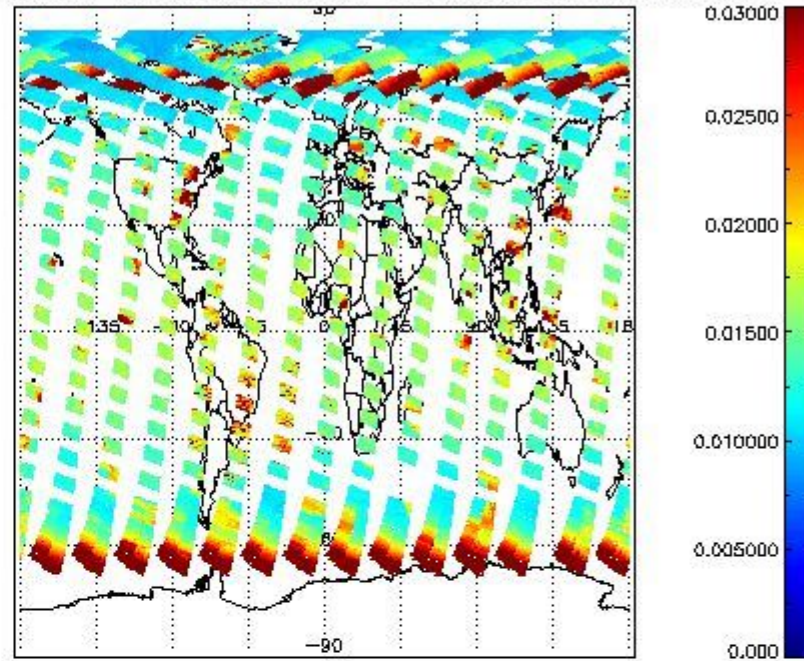




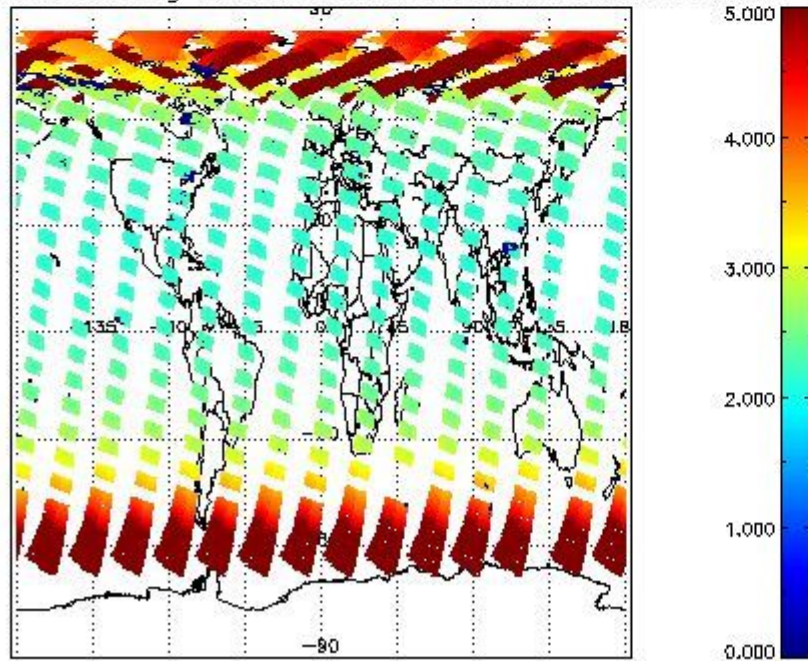
SCIOL2P\_NADUV003\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



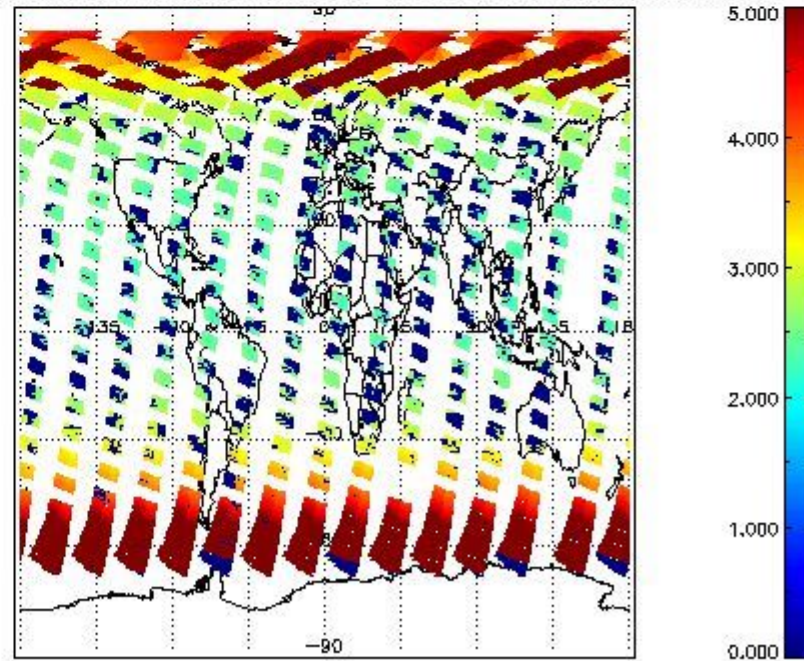
SCIOL2P\_NADUV003\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

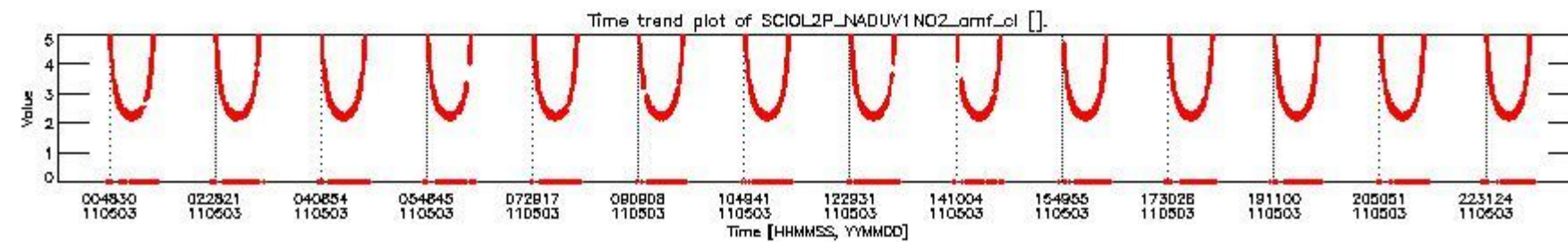
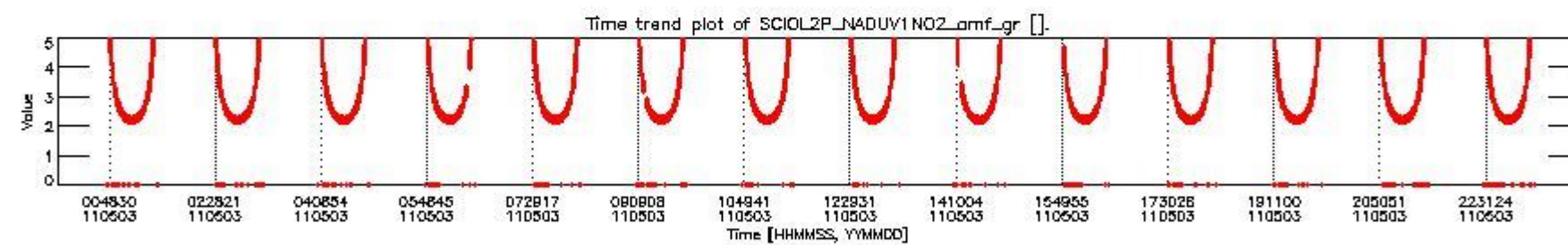
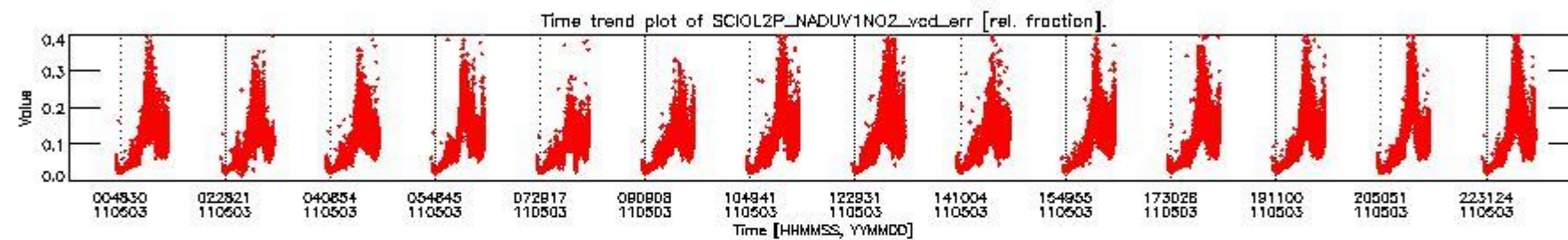
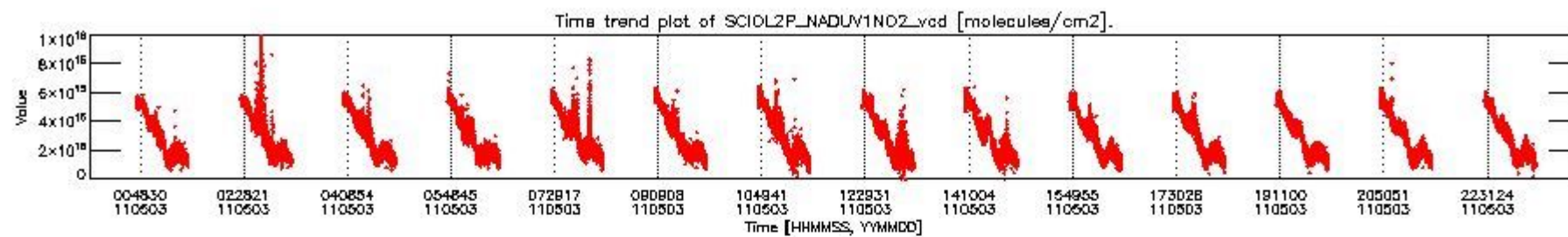


SCIOL2P\_NADUV003\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



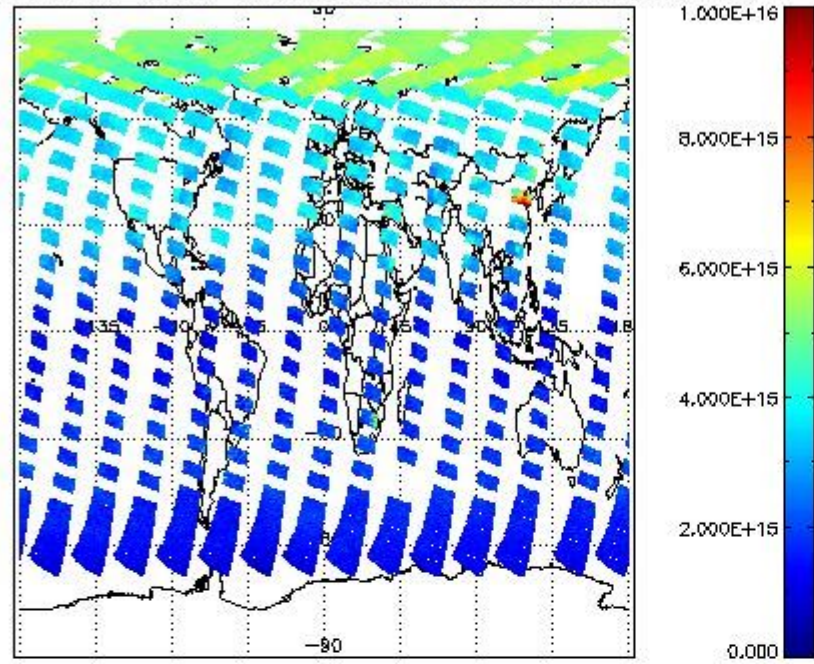
2.2.2.2 NO2 (UV1)



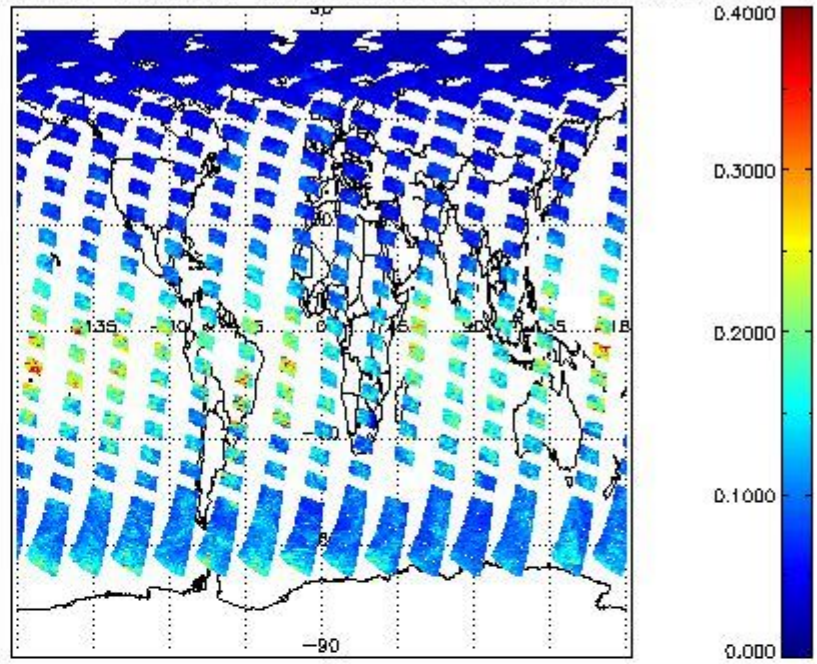




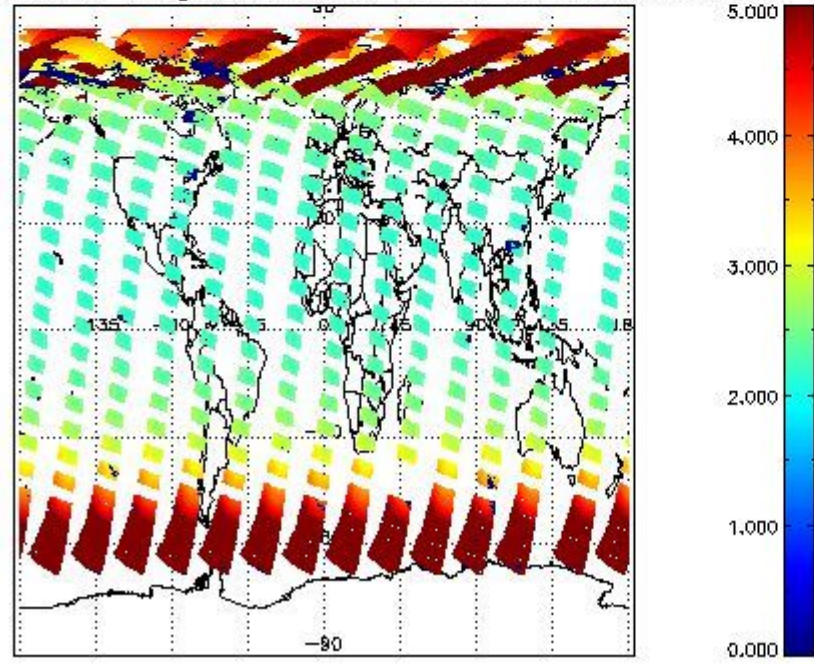
SCIOL2P\_NADUV1NO2\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



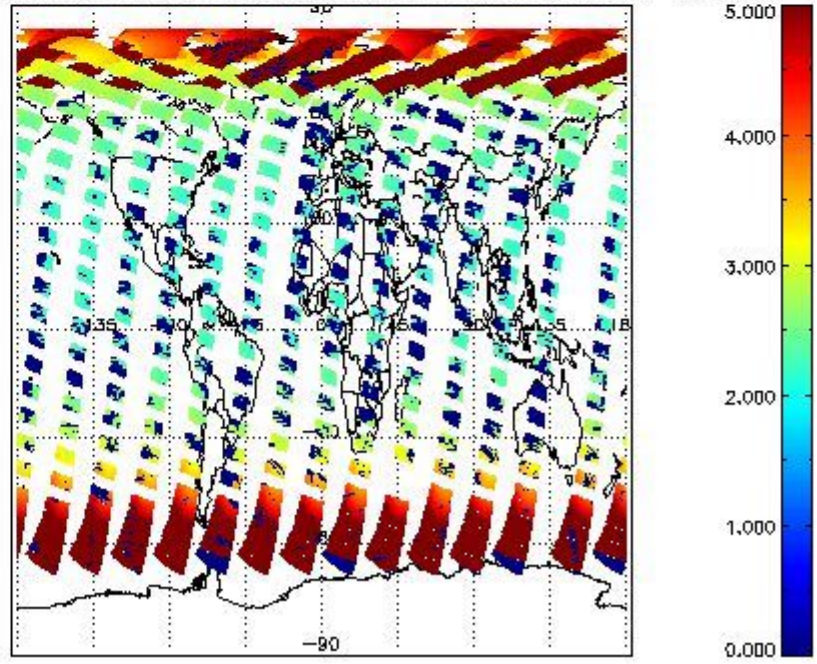
SCIOL2P\_NADUV1NO2\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

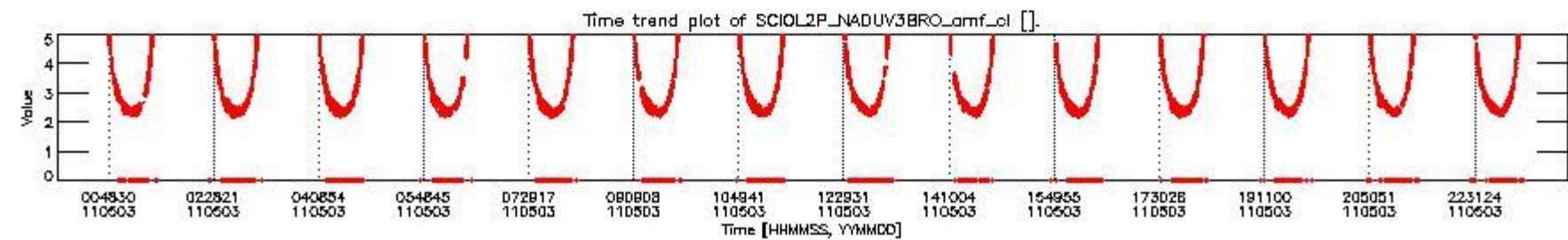
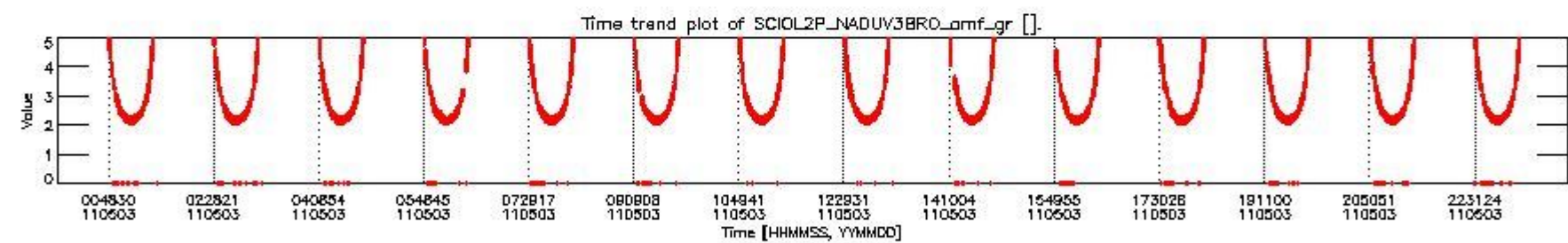
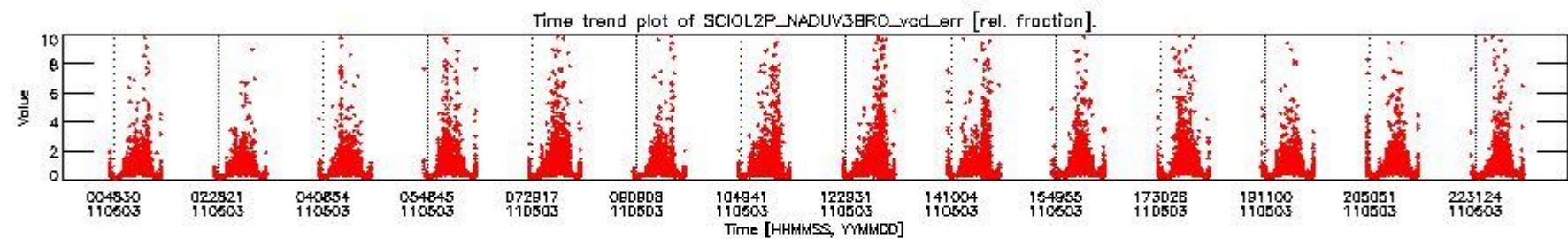
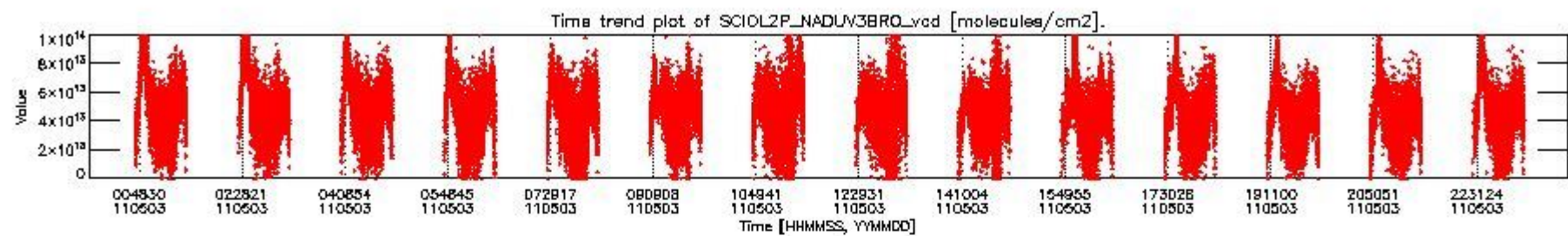


SCIOL2P\_NADUV1NO2\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



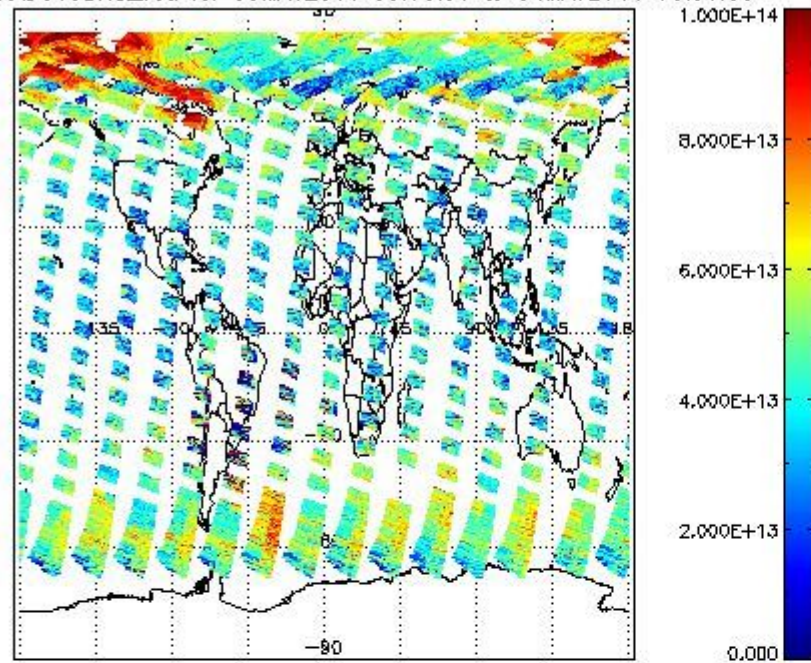
2.2.2.3 BrO (UV3)



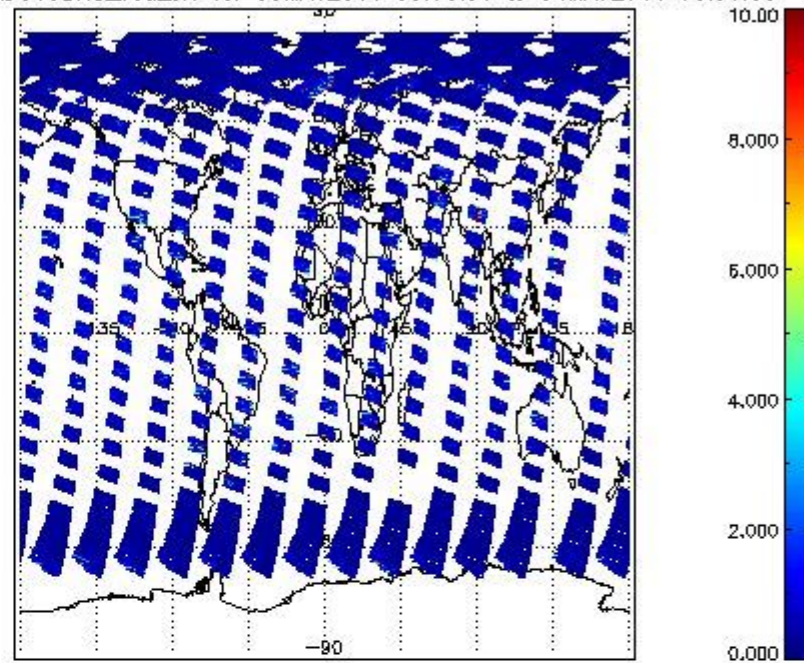




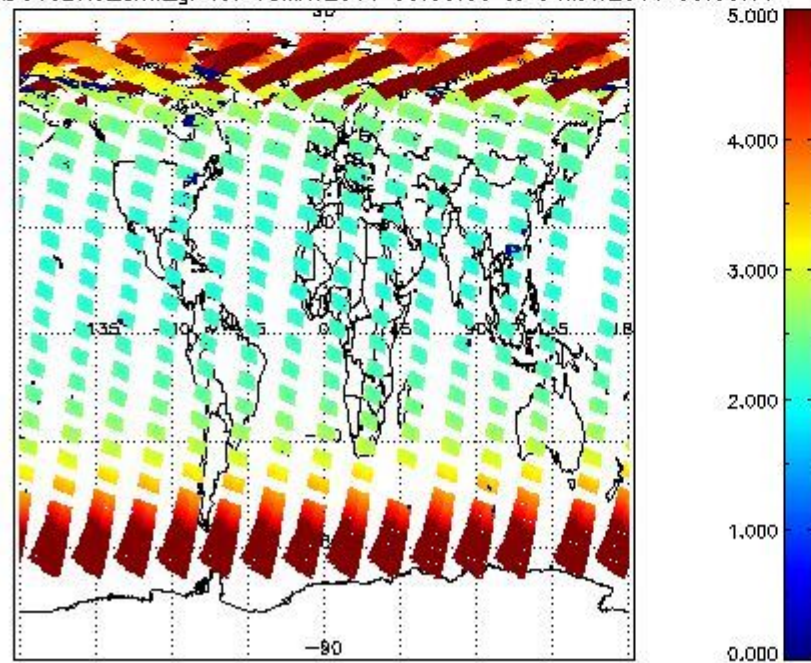
SCIOL2P\_NADUV3BRO\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



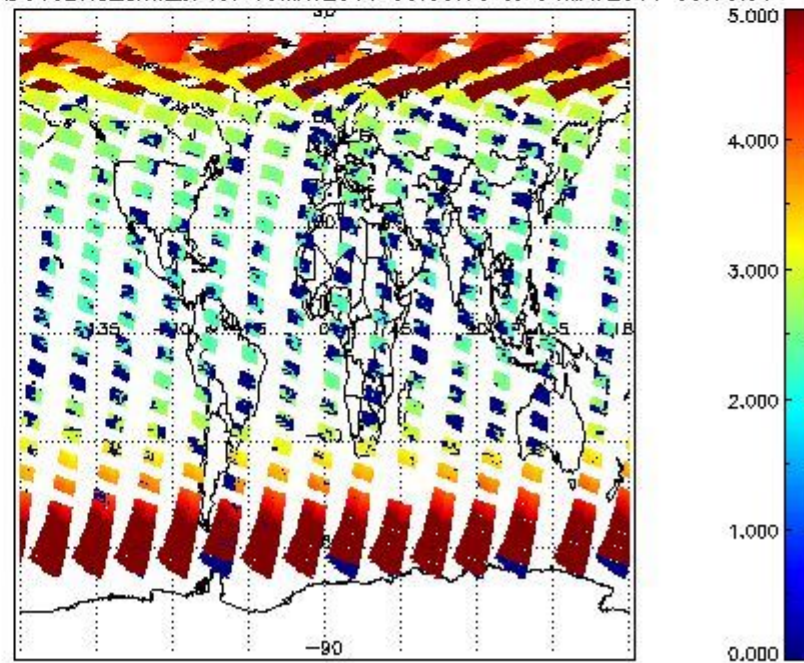
SCIOL2P\_NADUV3BRO\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

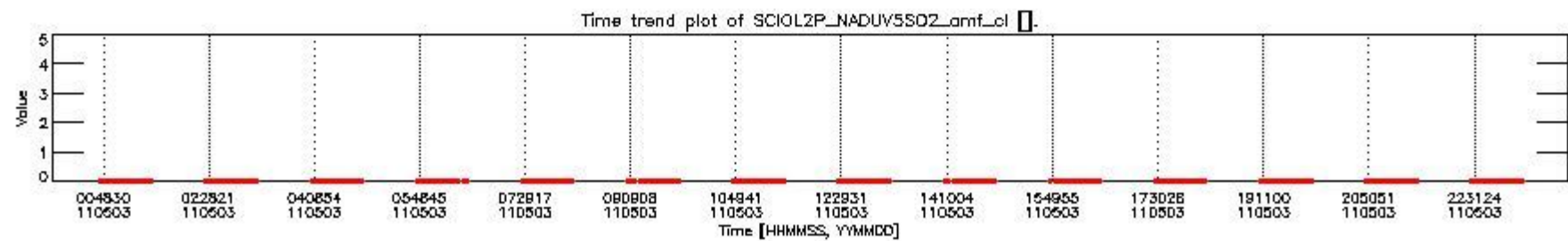
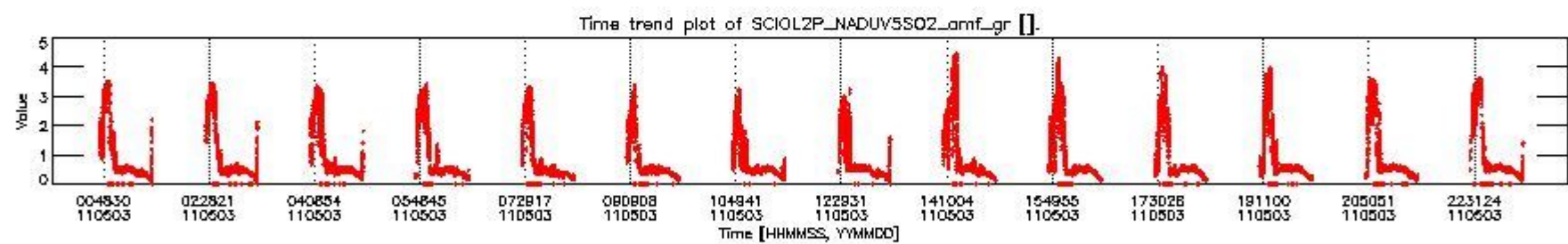
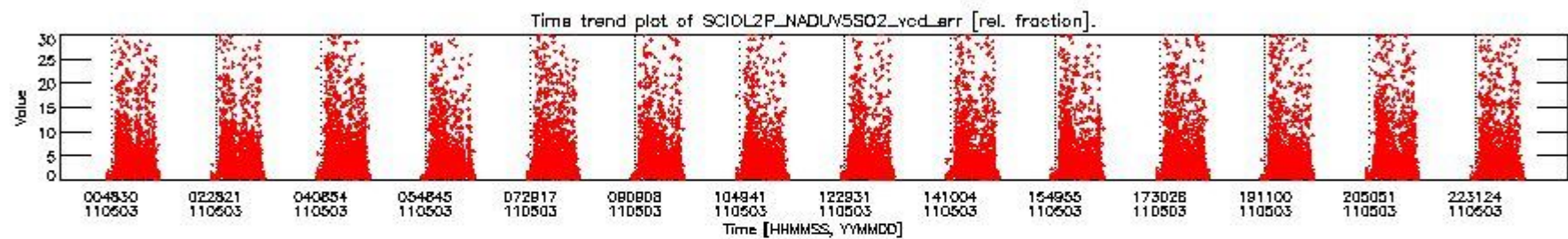
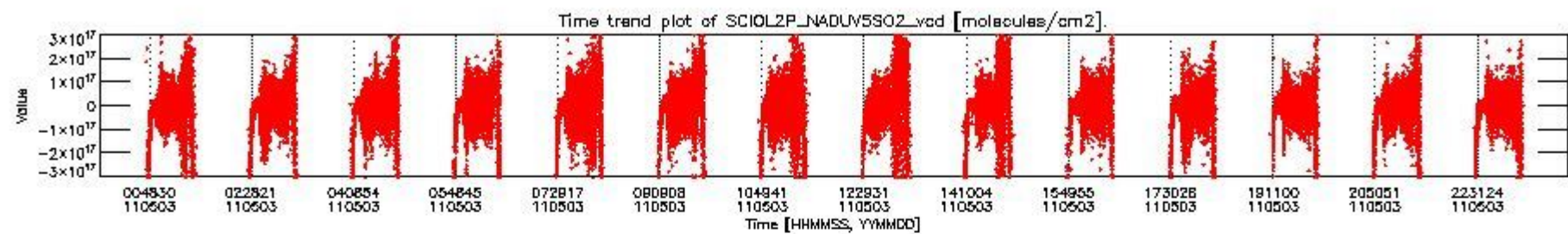


SCIOL2P\_NADUV3BRO\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



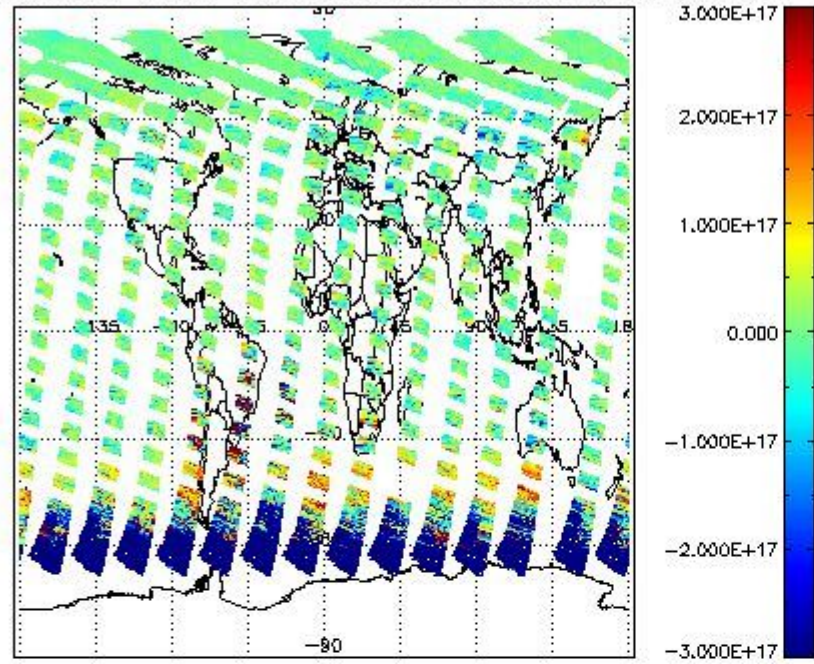
#### 2.2.2.4 SO2 (UV5)



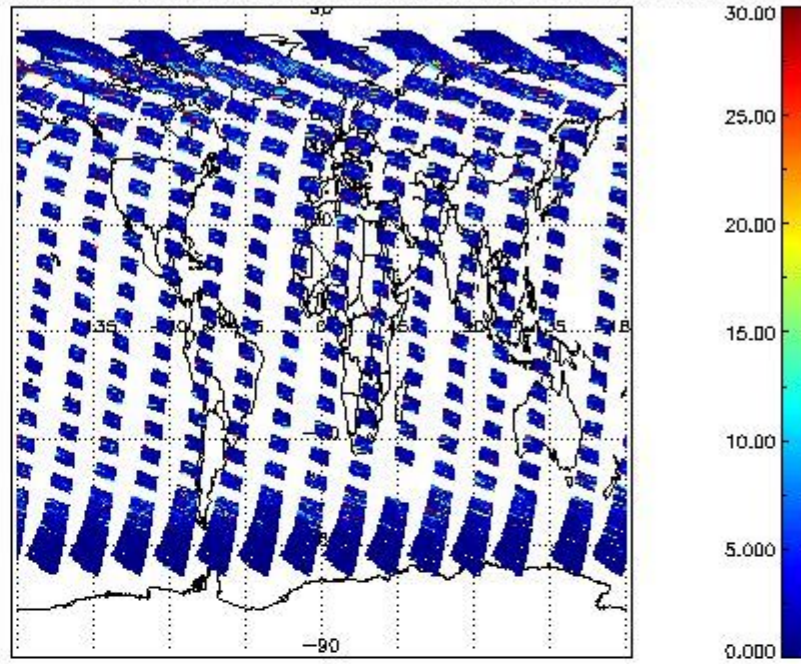




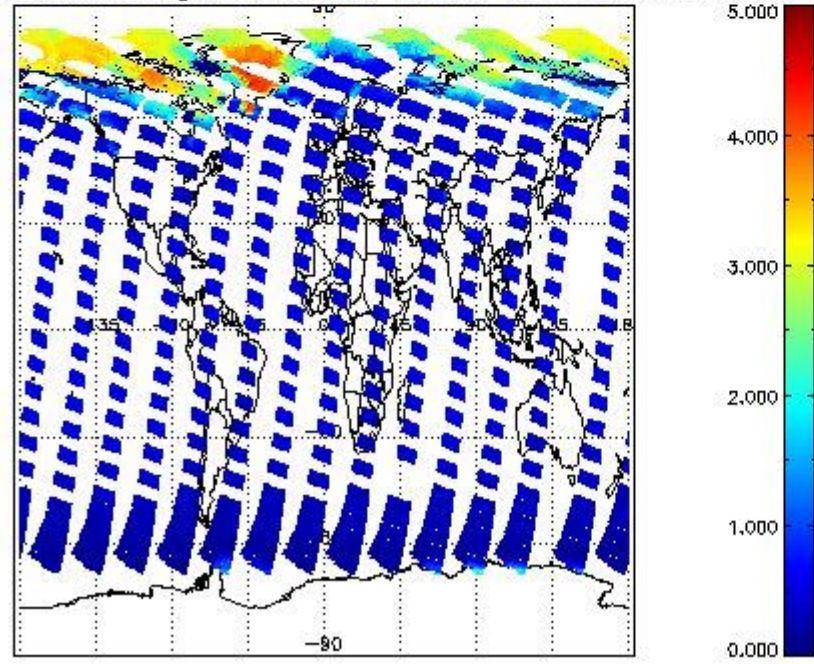
SCIOL2P\_NADUV5S02\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



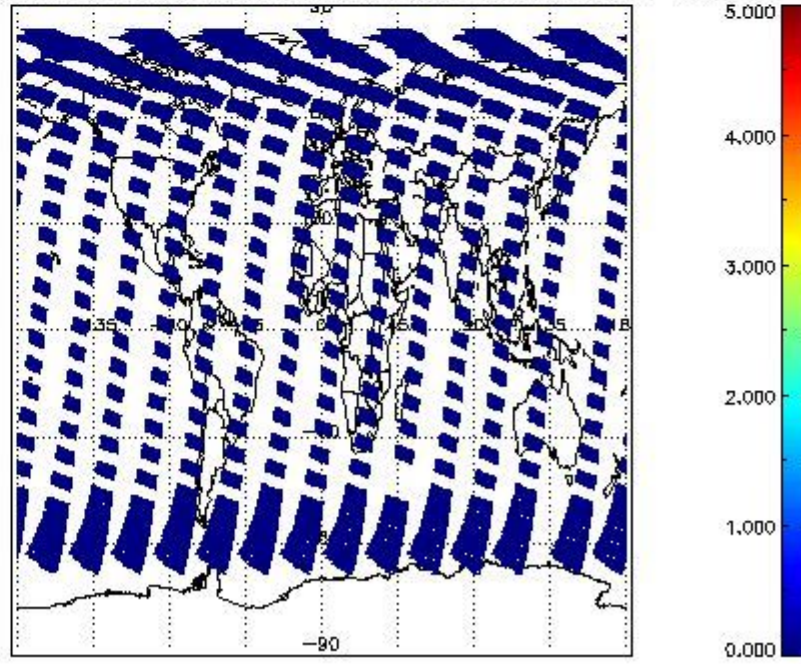
SCIOL2P\_NADUV5S02\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

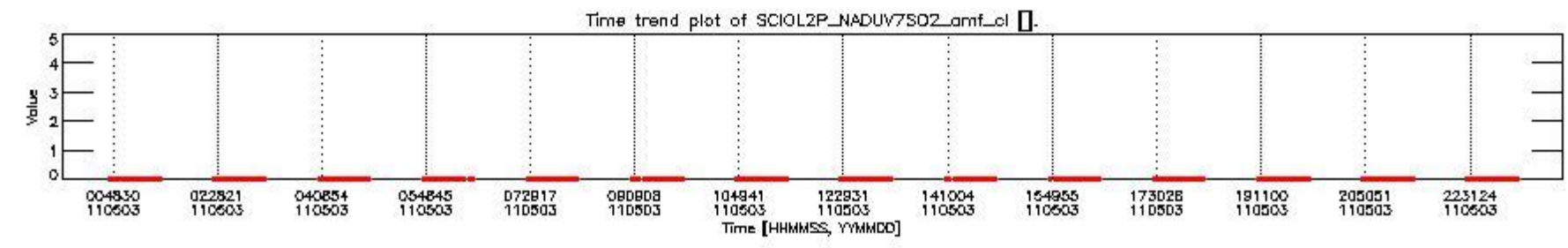
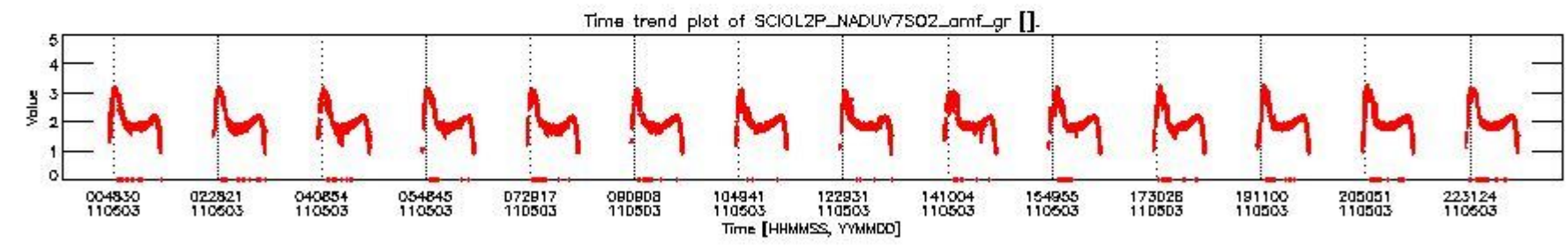
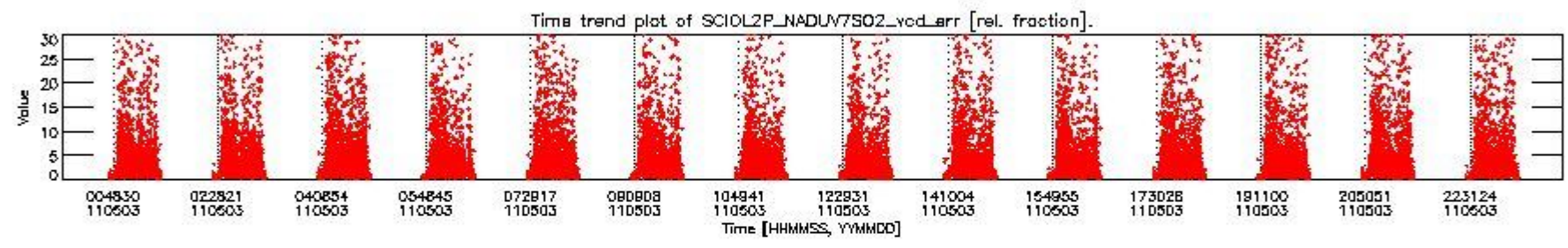
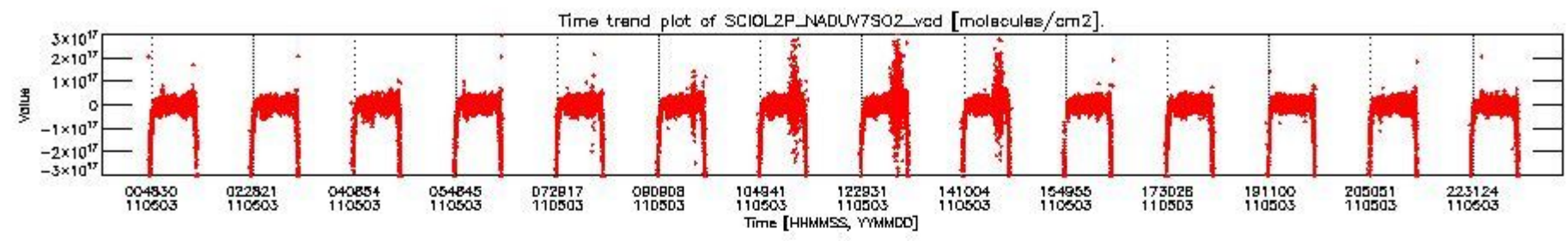


SCIOL2P\_NADUV5S02\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



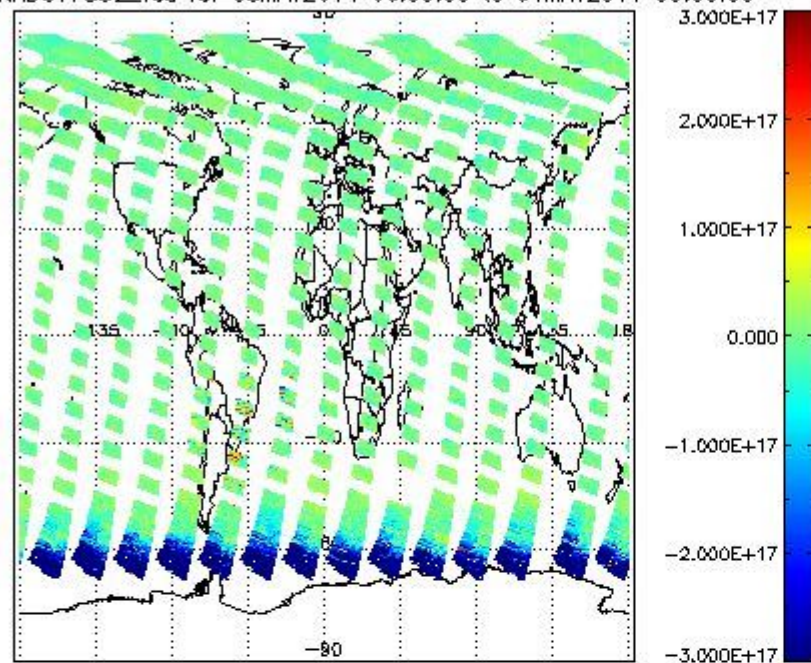
### 2.2.2.5 SO2 (UV7)



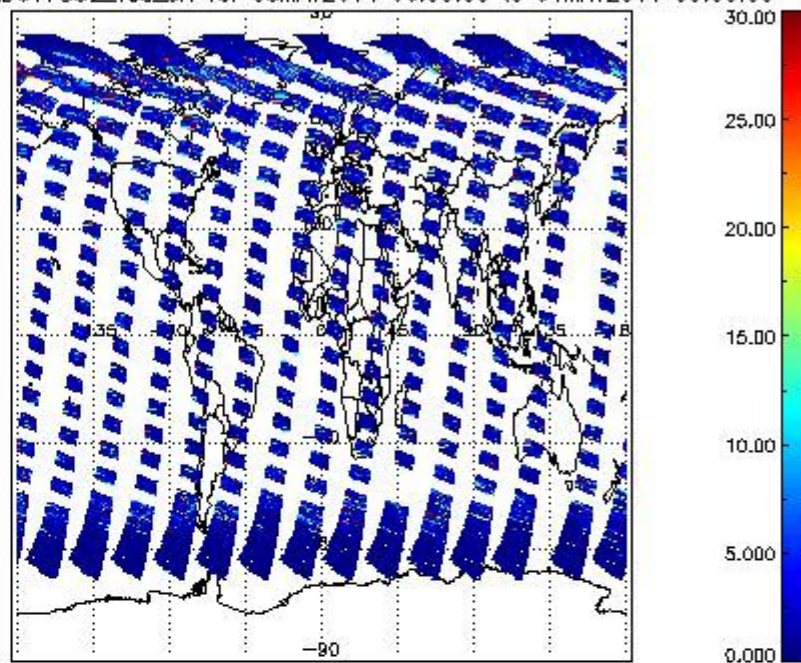




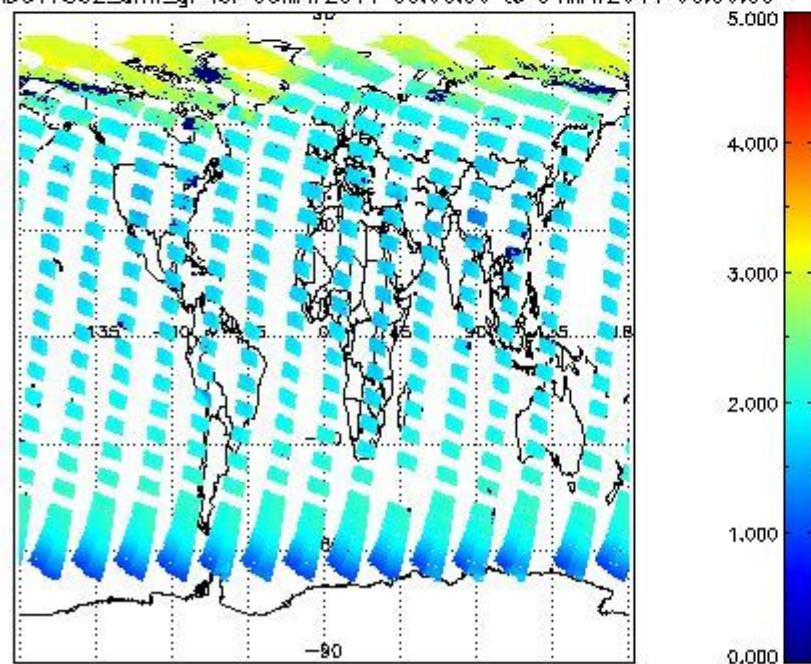
SCIOL2P\_NADUV7S02\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



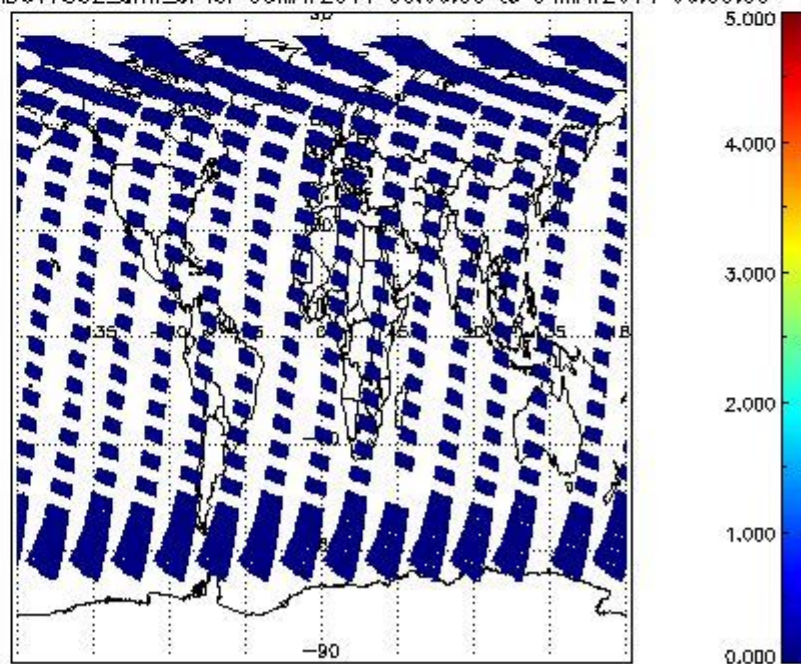
SCIOL2P\_NADUV7S02\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

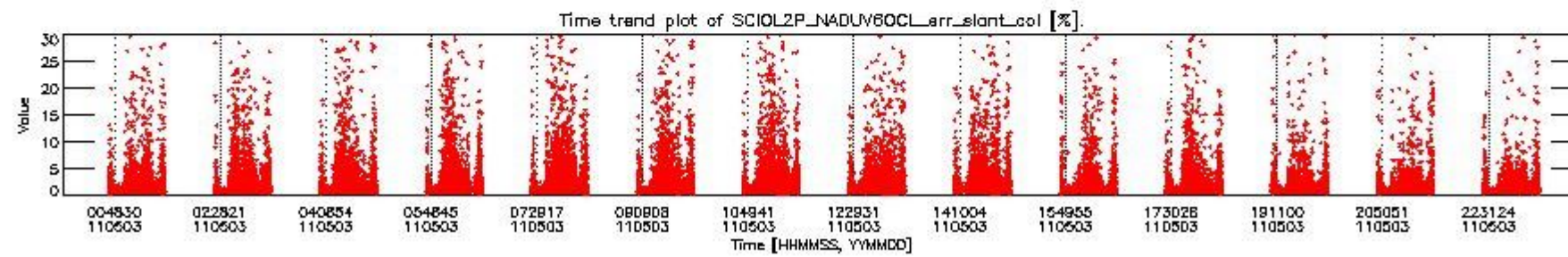
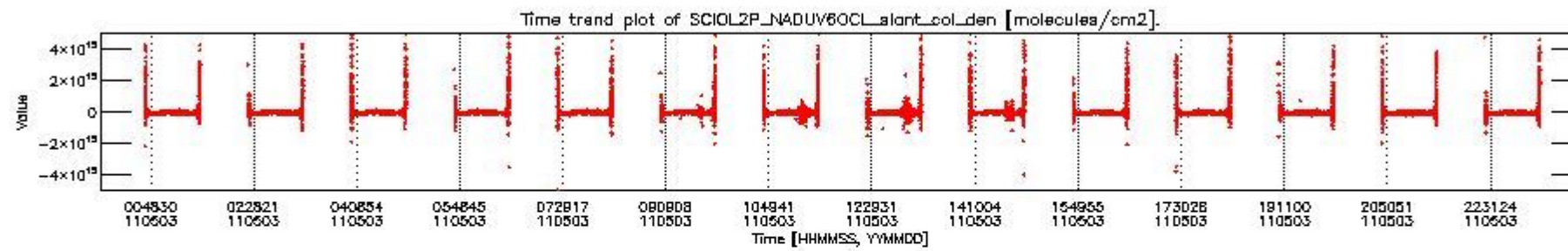


SCIOL2P\_NADUV7S02\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

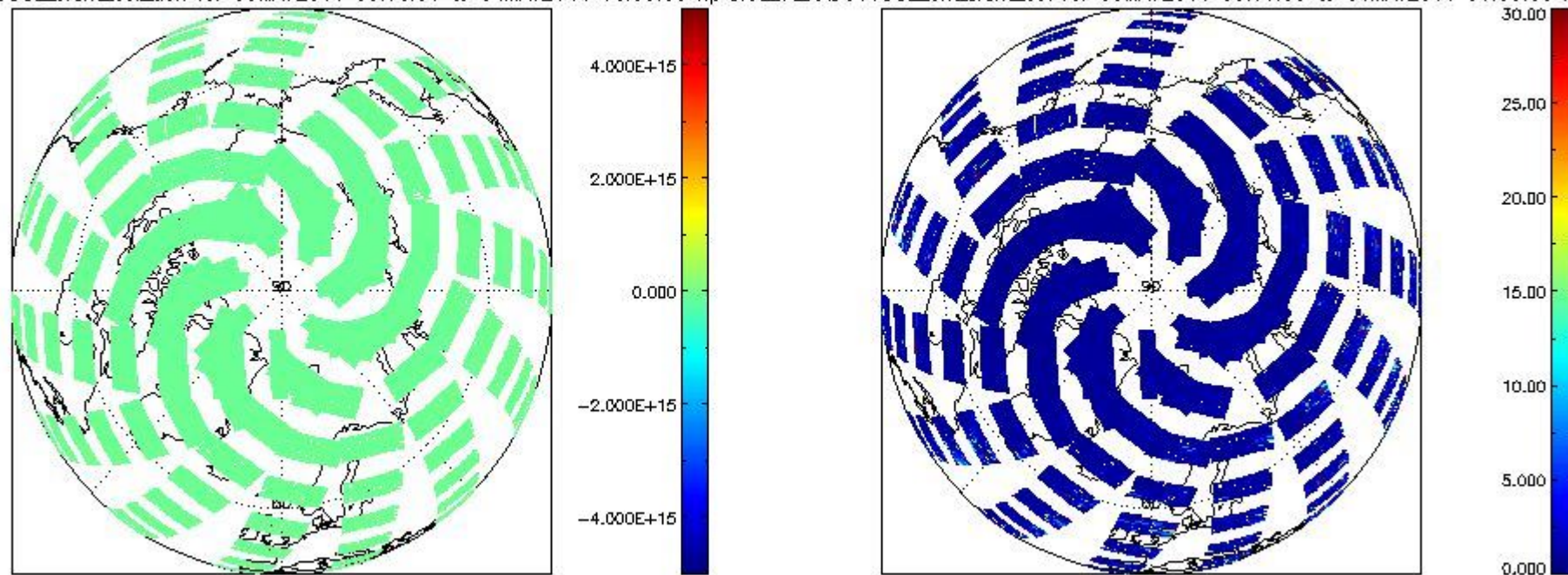


2.2.2.6 OCIO (UV6)



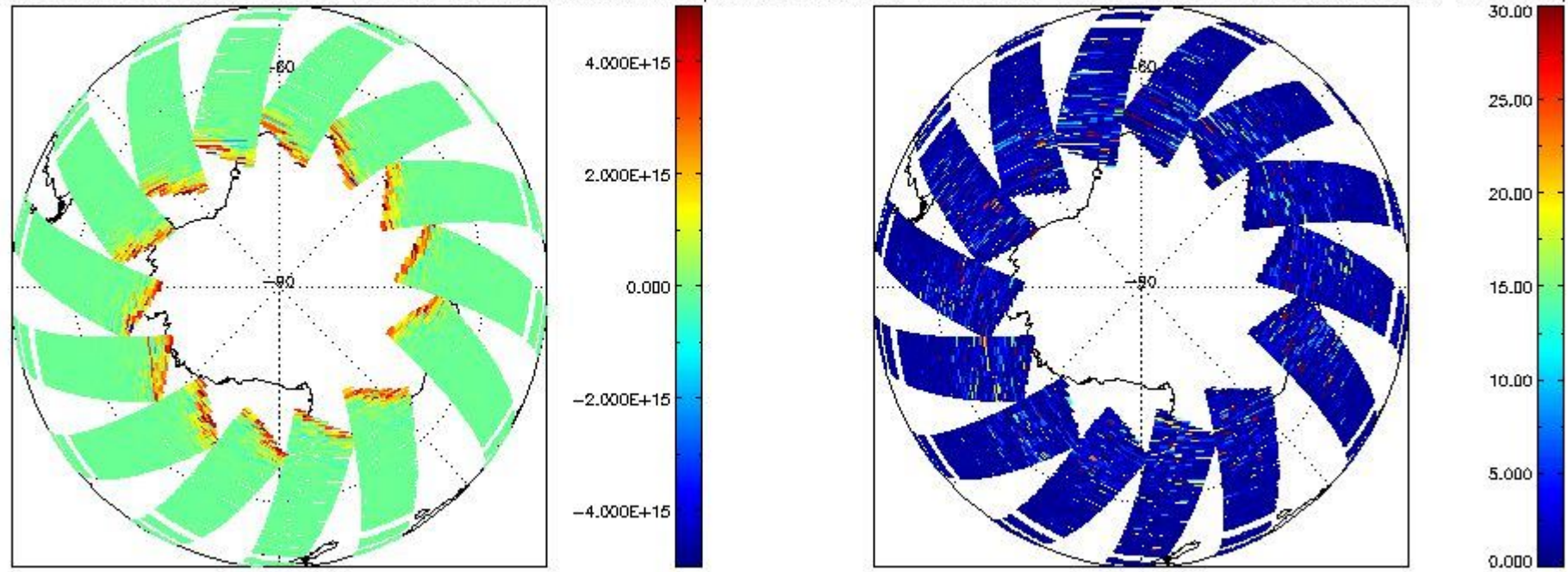


CIOL2P\_NADUV6OCLslant\_col\_den for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 np; CIOL2P\_NADUV6OCLerr\_slant\_col for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 np

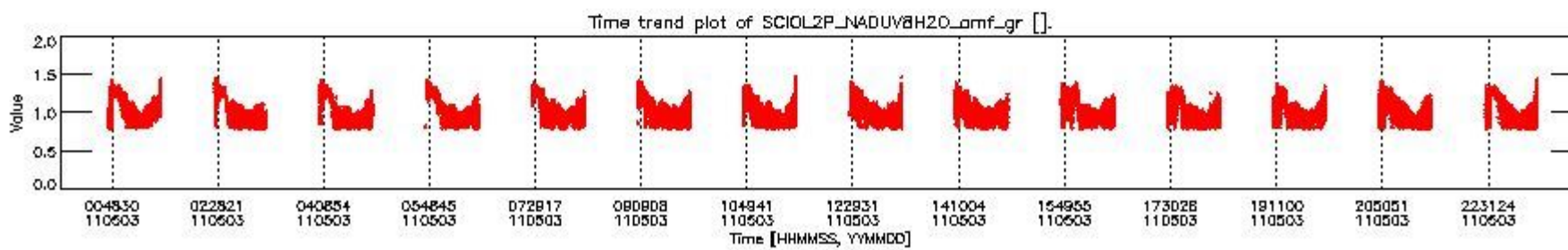
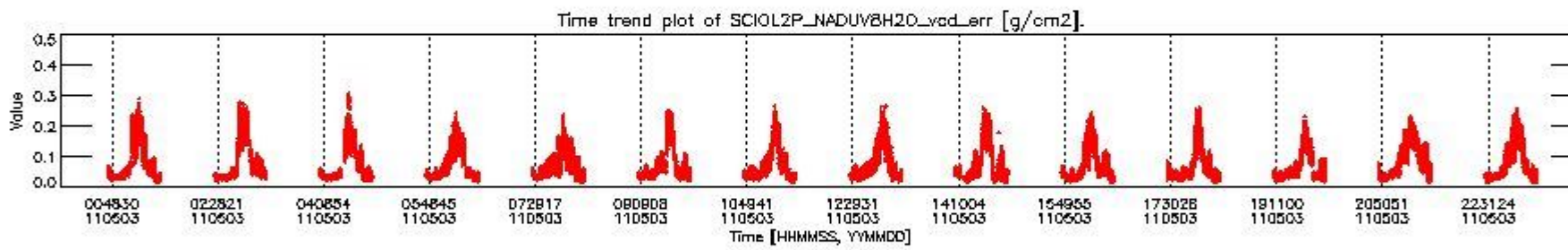
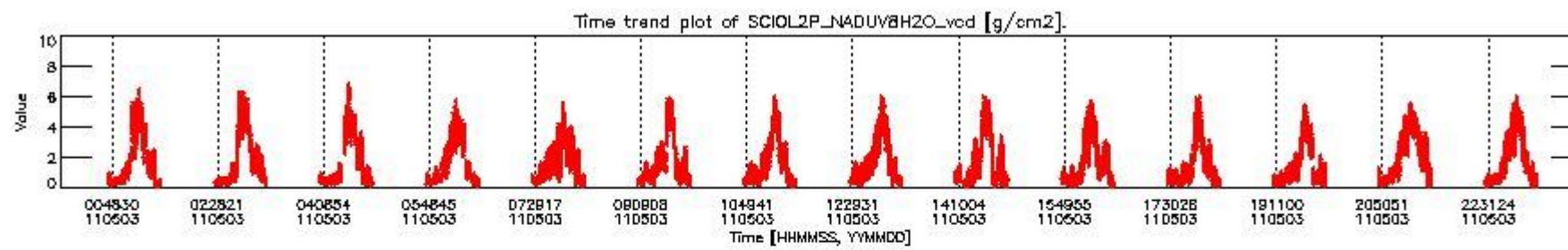




CIOL2P\_NADUV60CL\_slant\_col\_den for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 sp | CIOL2P\_NADUV60CL\_err\_slant\_col for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 sp

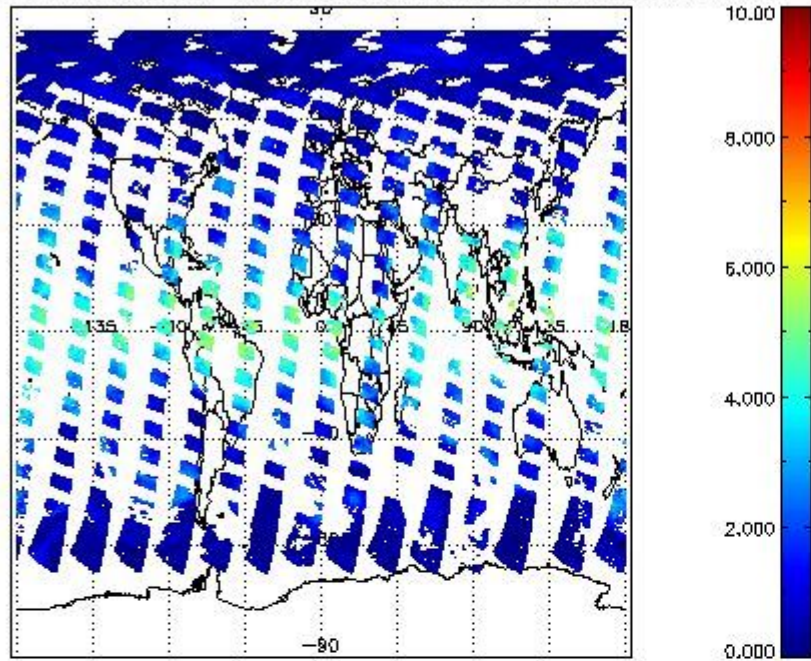


### 2.2.2.7 H2O (UV8)

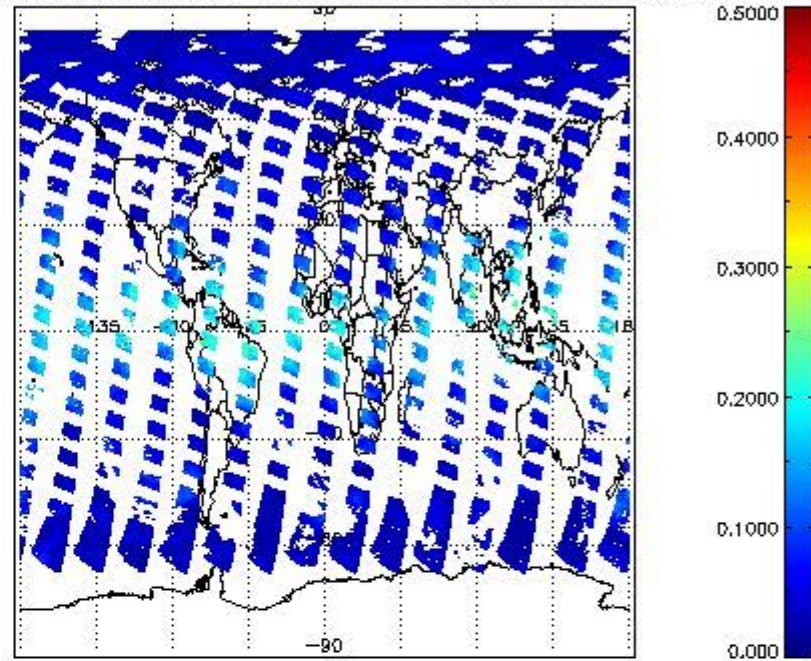




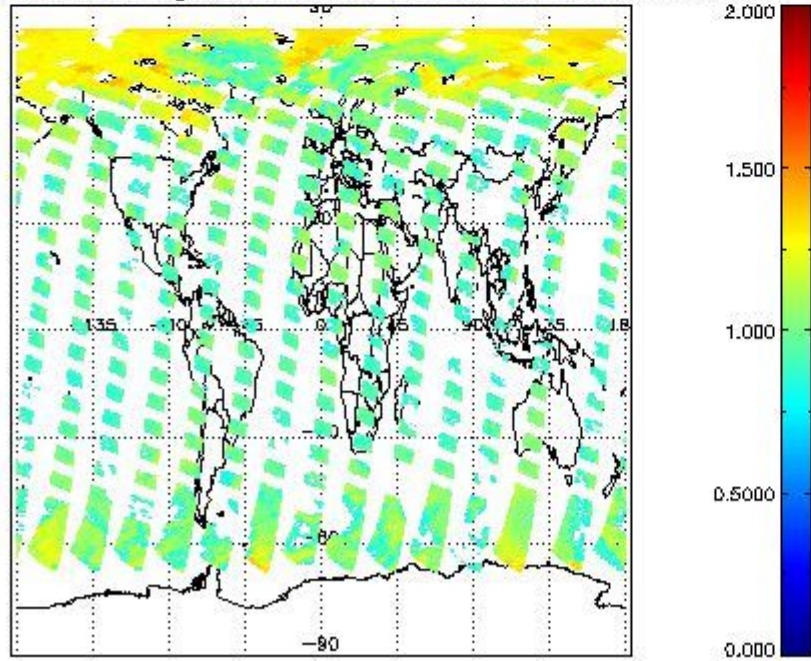
SCIOL2P\_NADUV8H2O\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



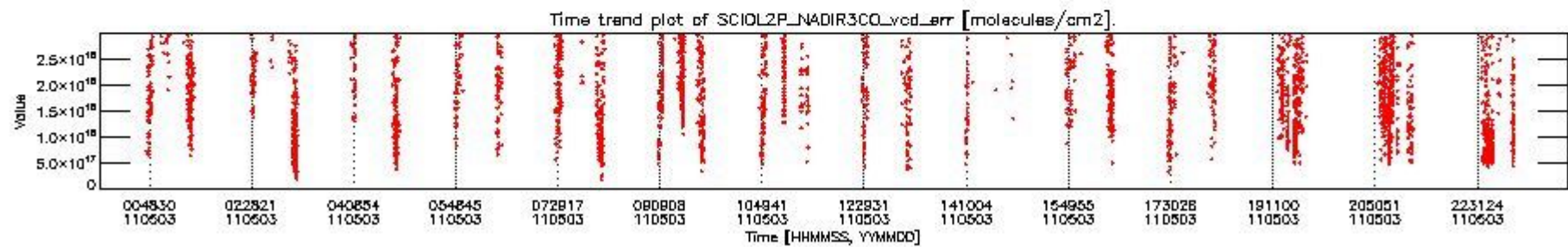
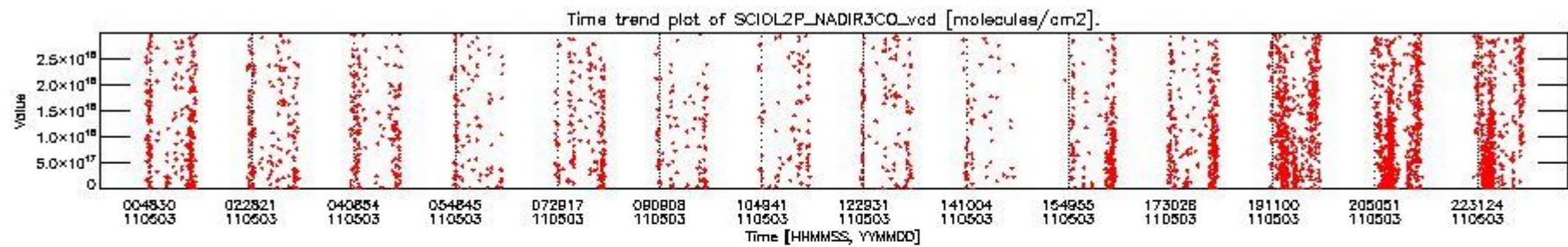
SCIOL2P\_NADUV8H2O\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



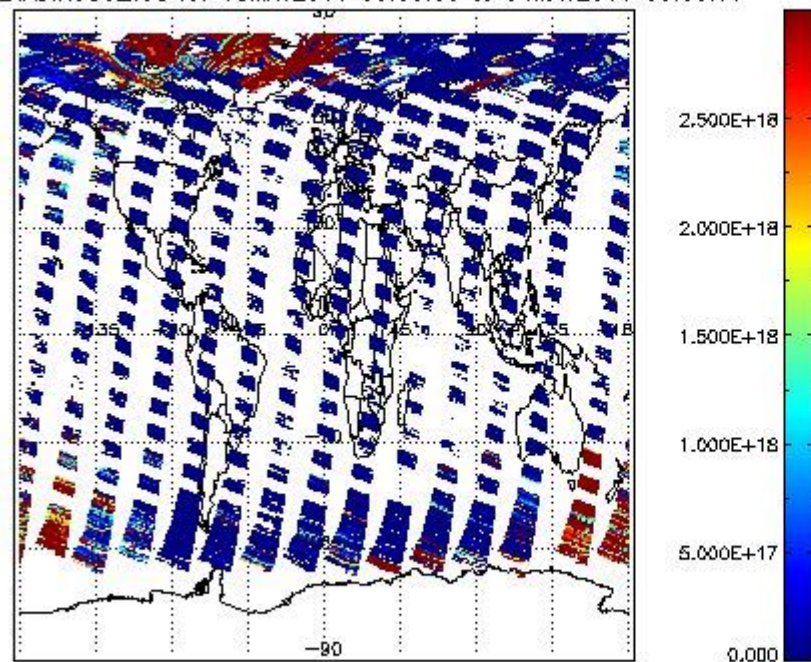
SCIOL2P\_NADUV8H2O\_arnf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



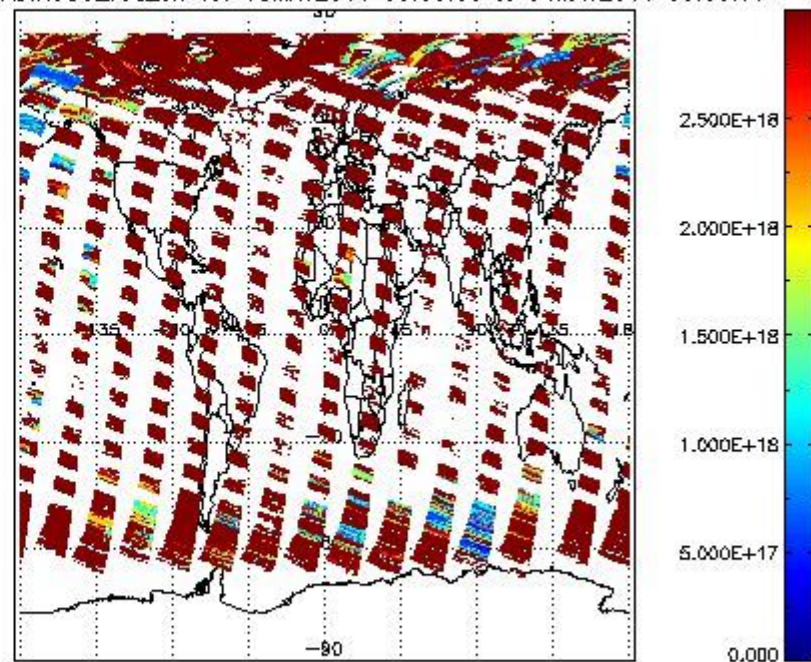




SCIOL2P\_NADIR3CO\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 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.

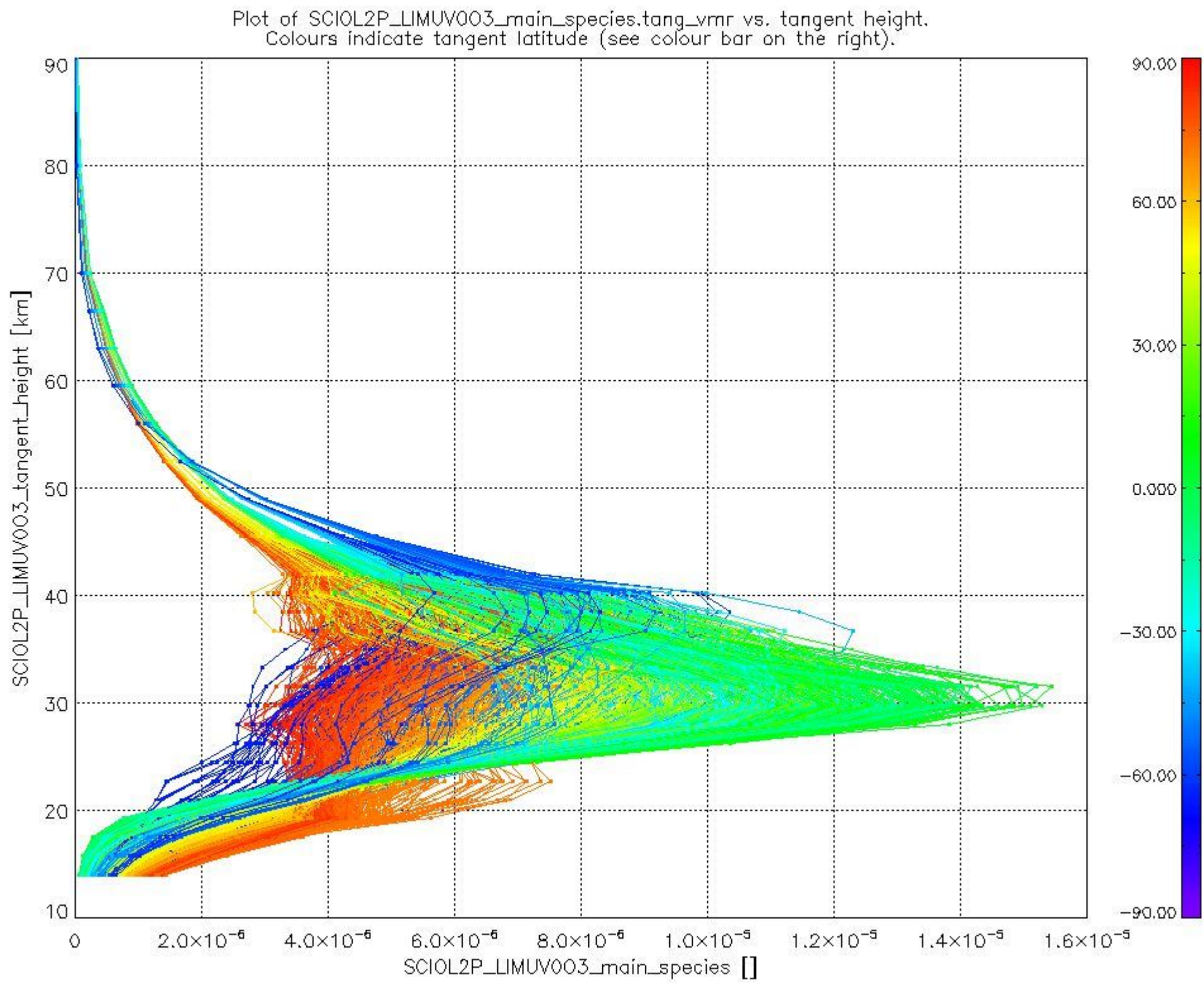
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_LIMUV003_main_species
1	SCIOL2P_LIMUV1NO2_main_species
2	SCIOL2P_LIMUV3BRO_main_species



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

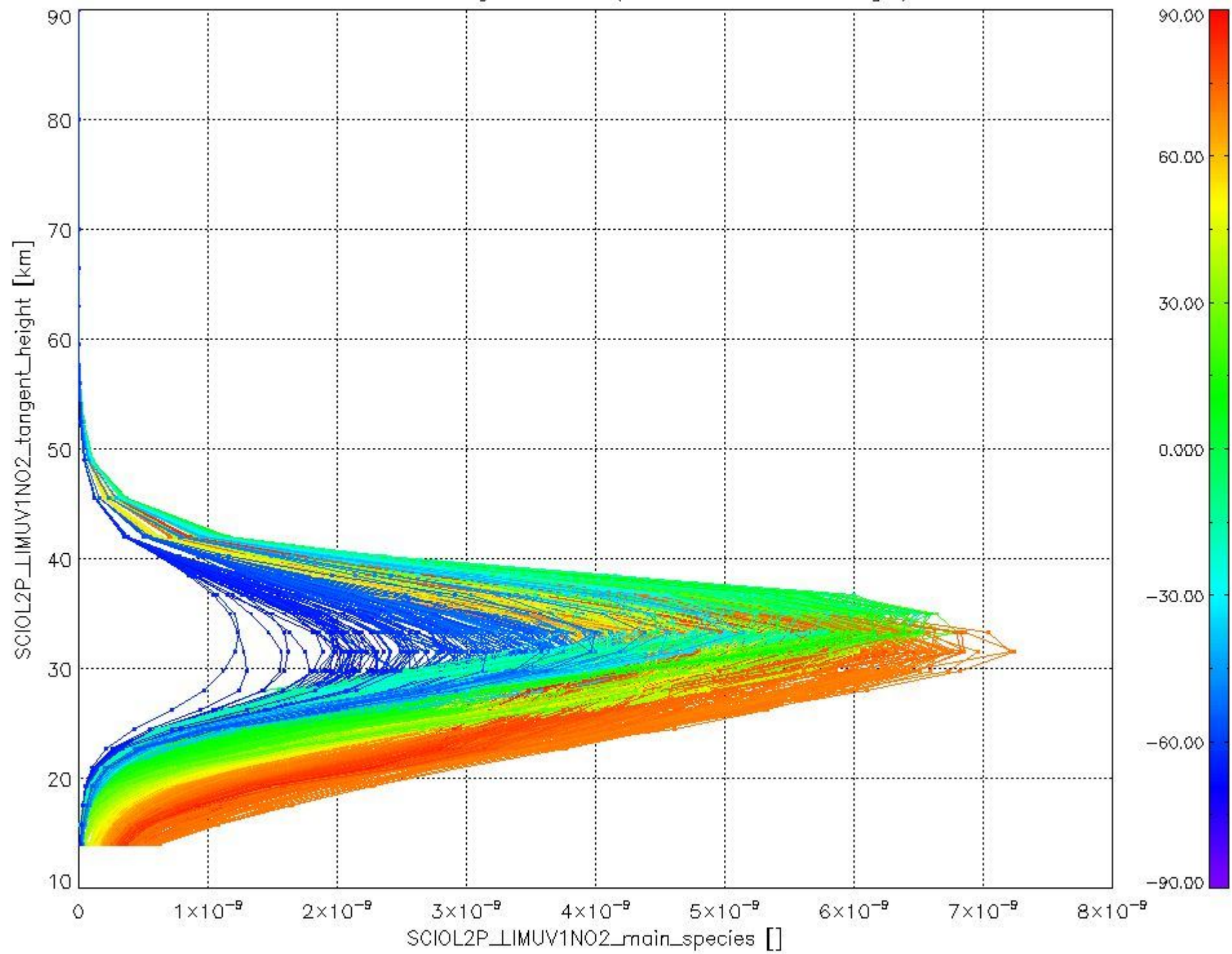
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



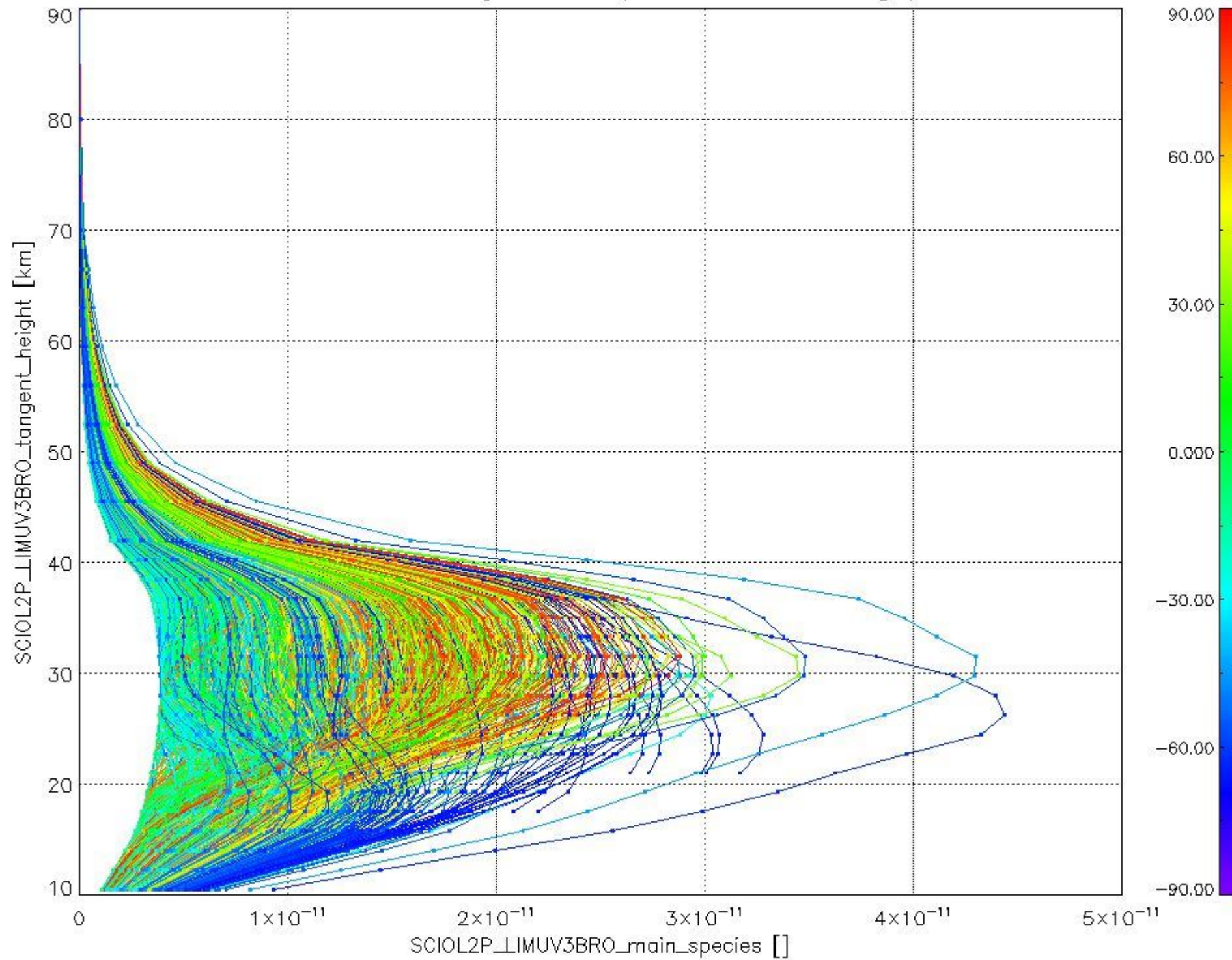
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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

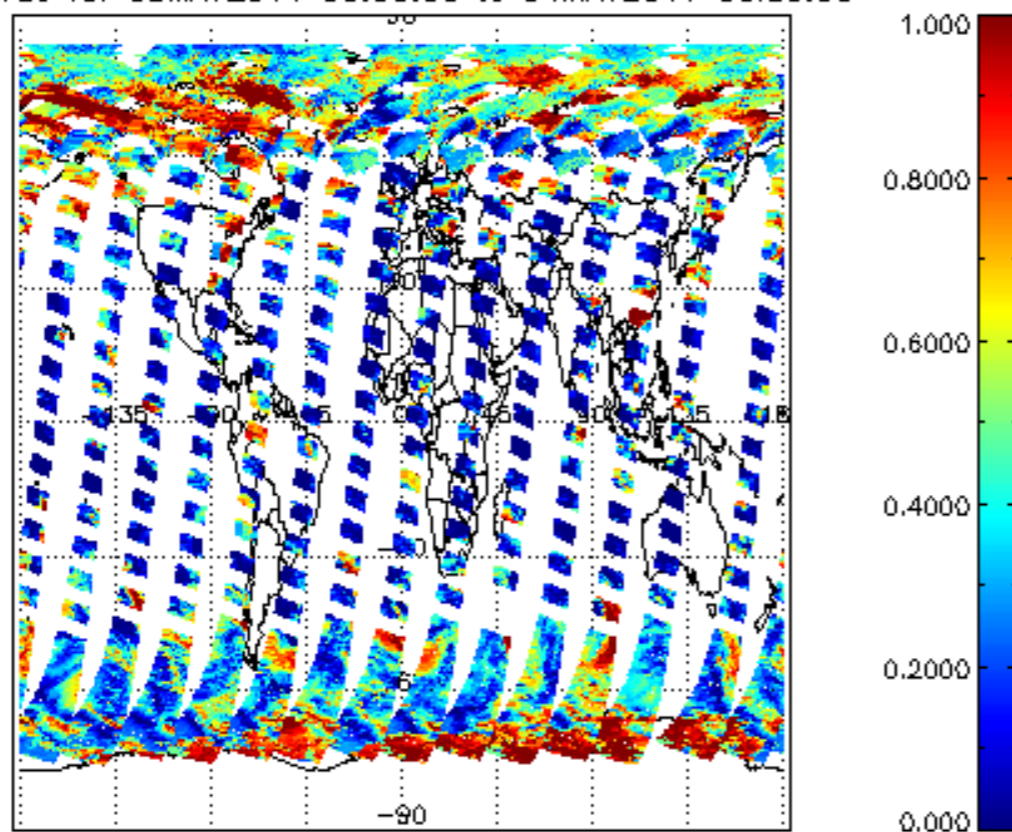
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110426_111441_20110425_182810_20110523_182810
3	SCI_MF1_AXVIEC20110426_112903_20110501_180805_20110503_180805



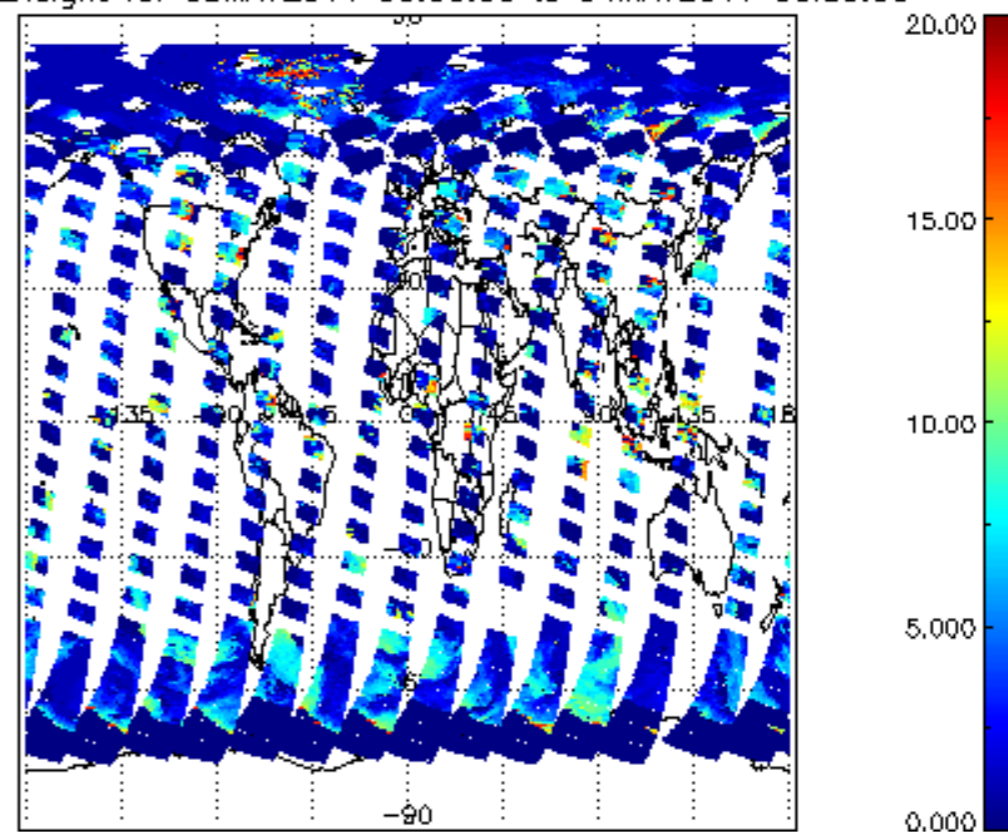




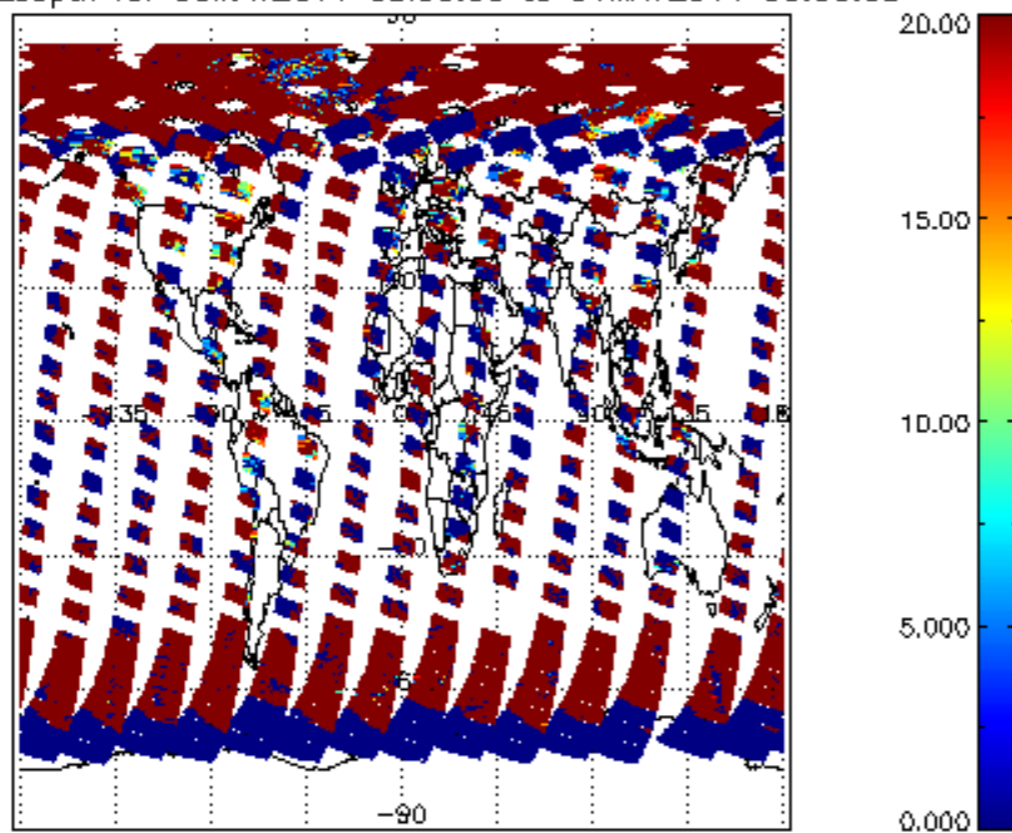
cL\_frac for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



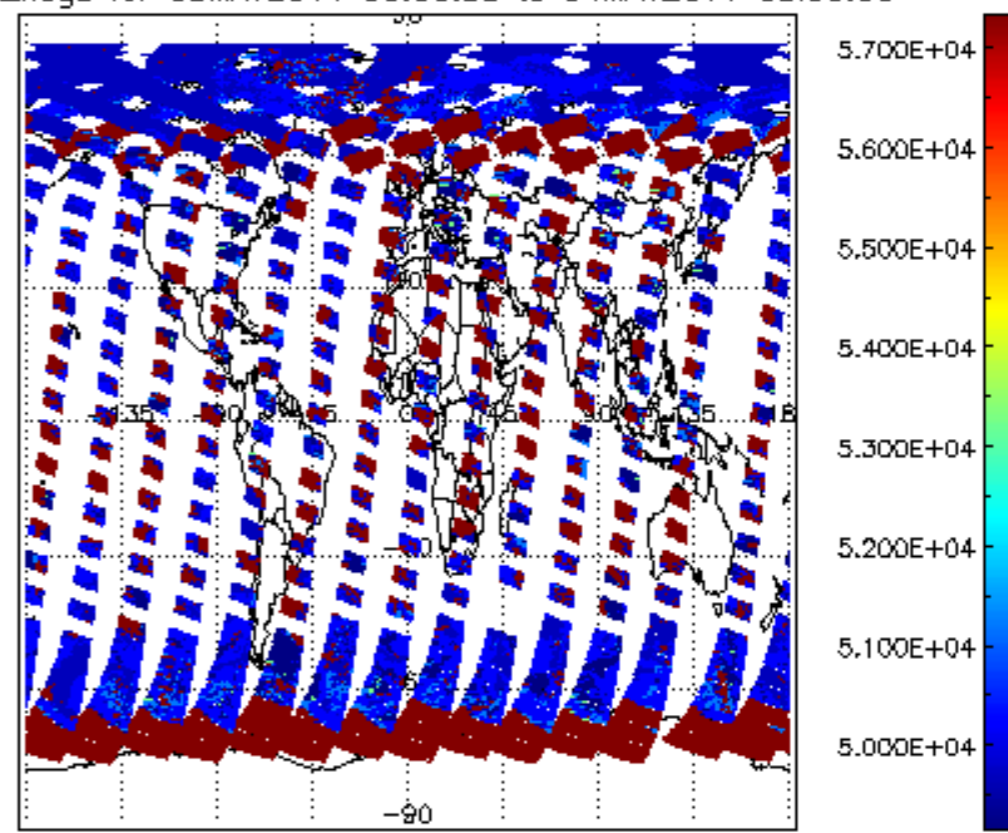
cL\_top\_height for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



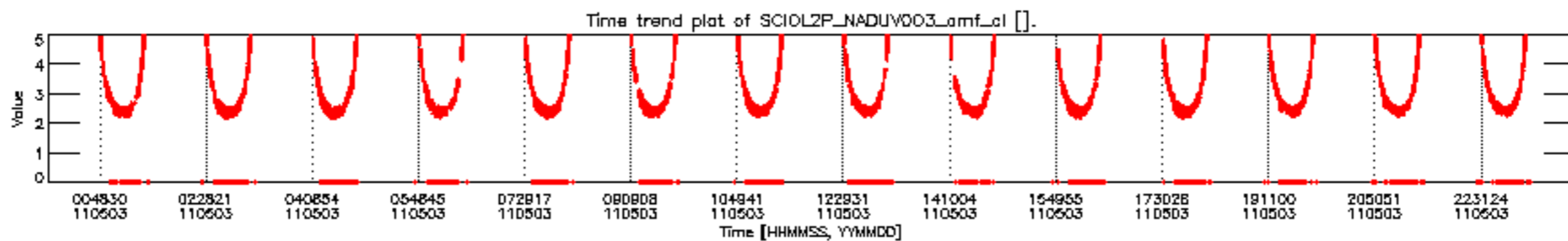
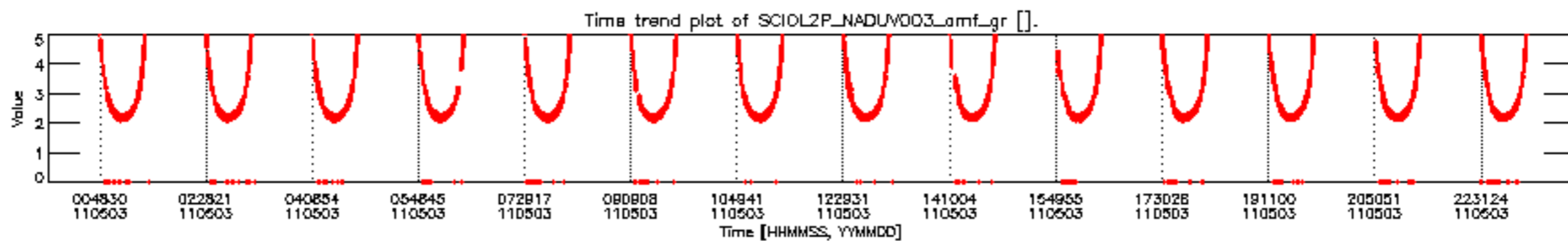
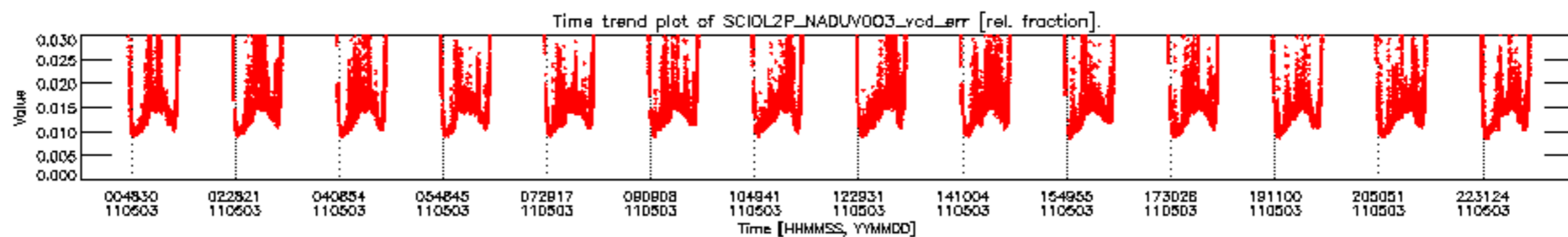
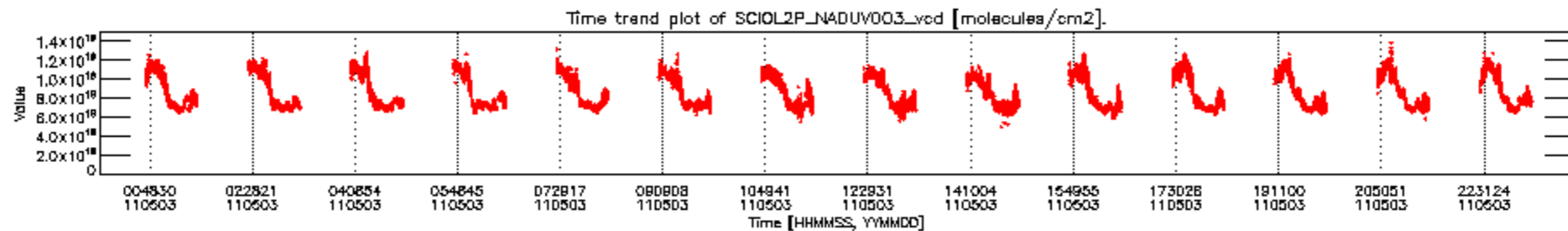
cL\_opt\_depth for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



cloud\_flags for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

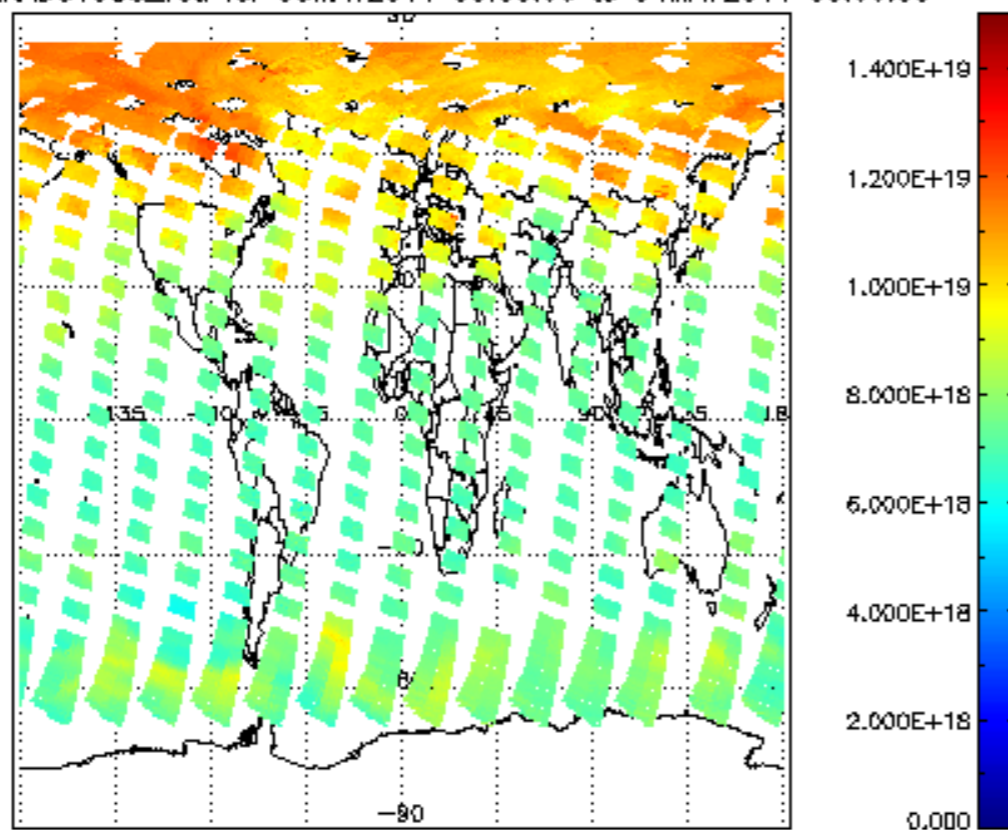




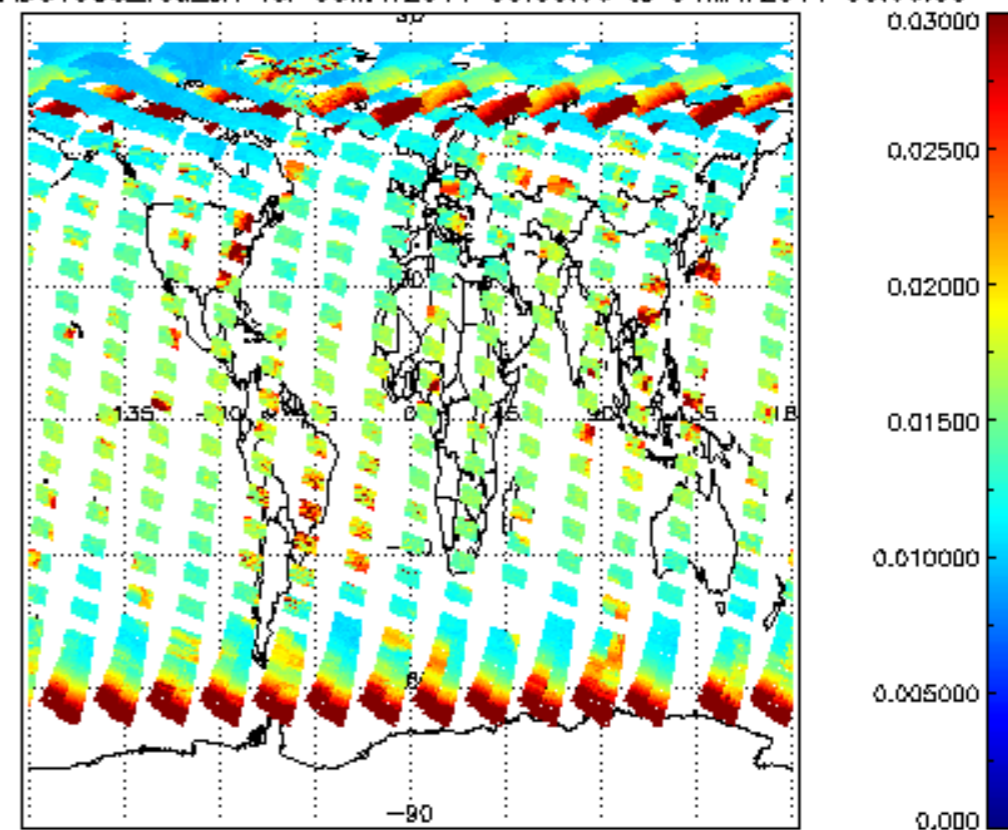




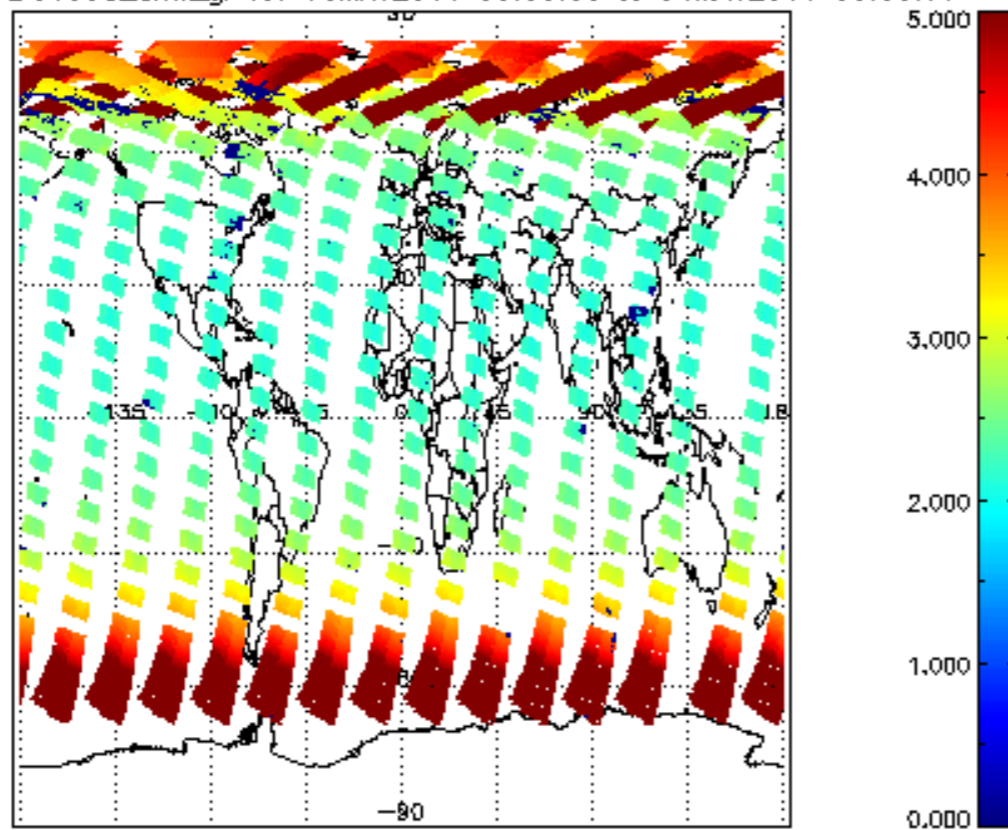
SCIOL2P\_NADUV003\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



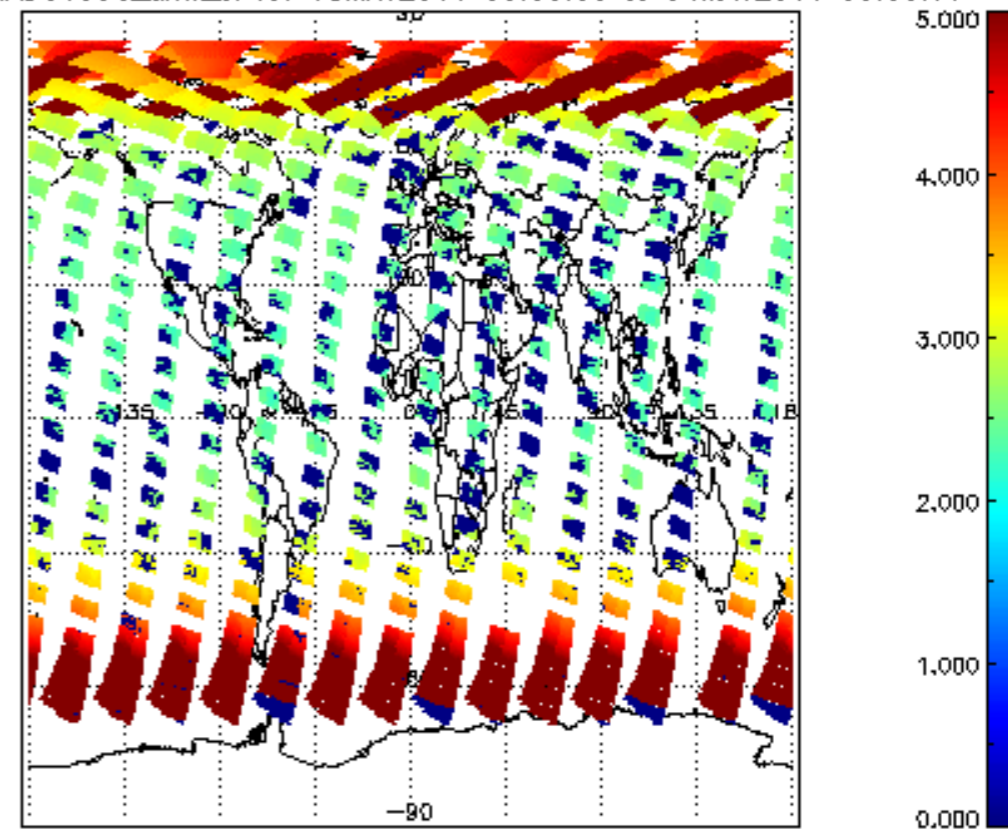
SCIOL2P\_NADUV003\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



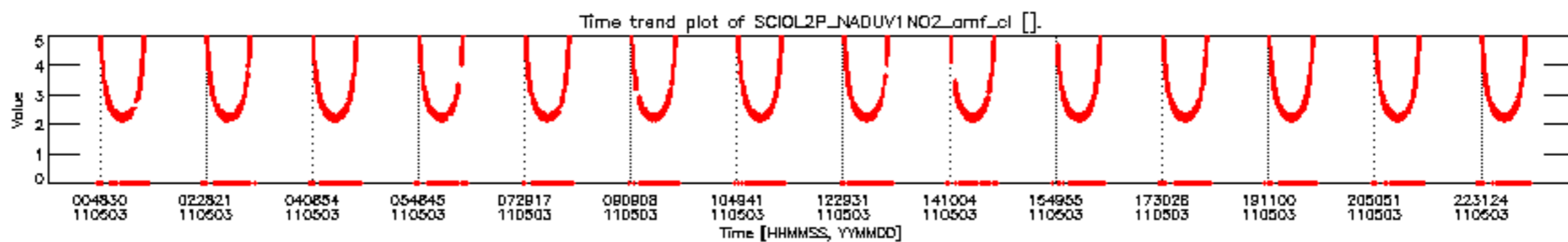
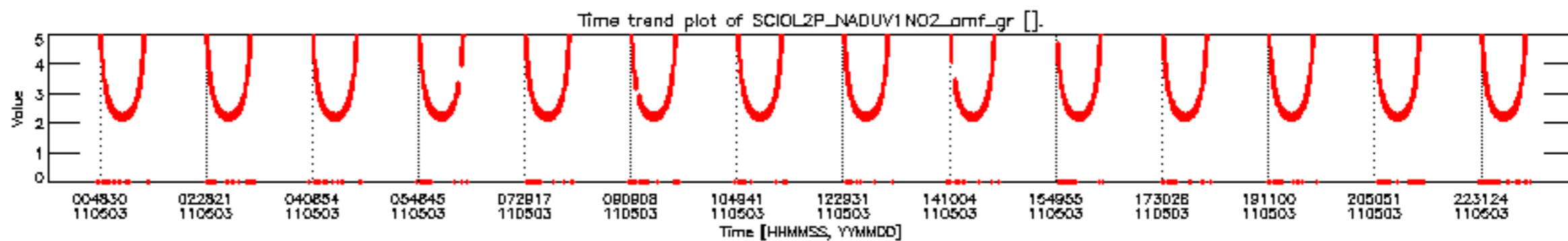
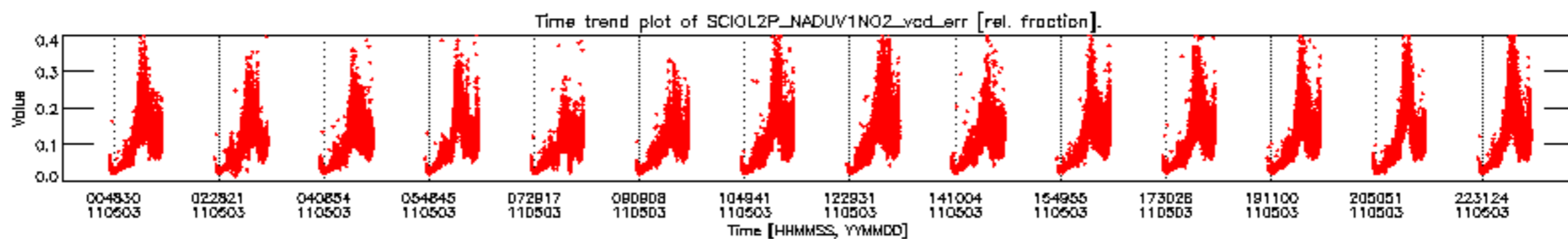
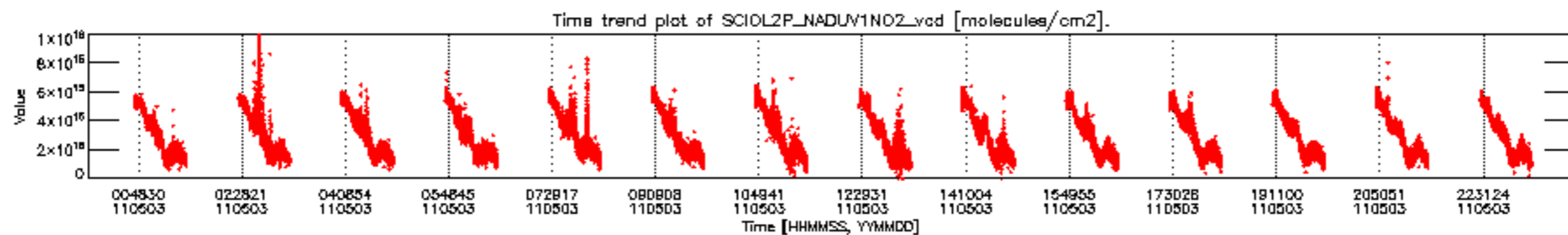
SCIOL2P\_NADUV003\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



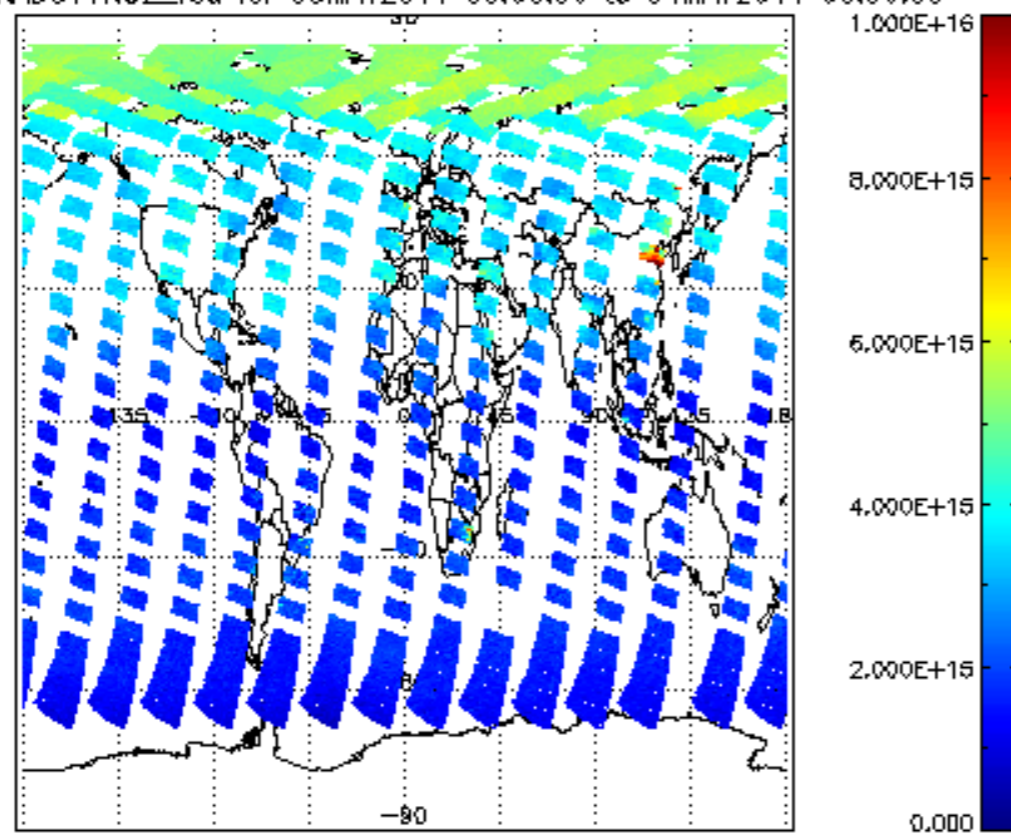
SCIOL2P\_NADUV003\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



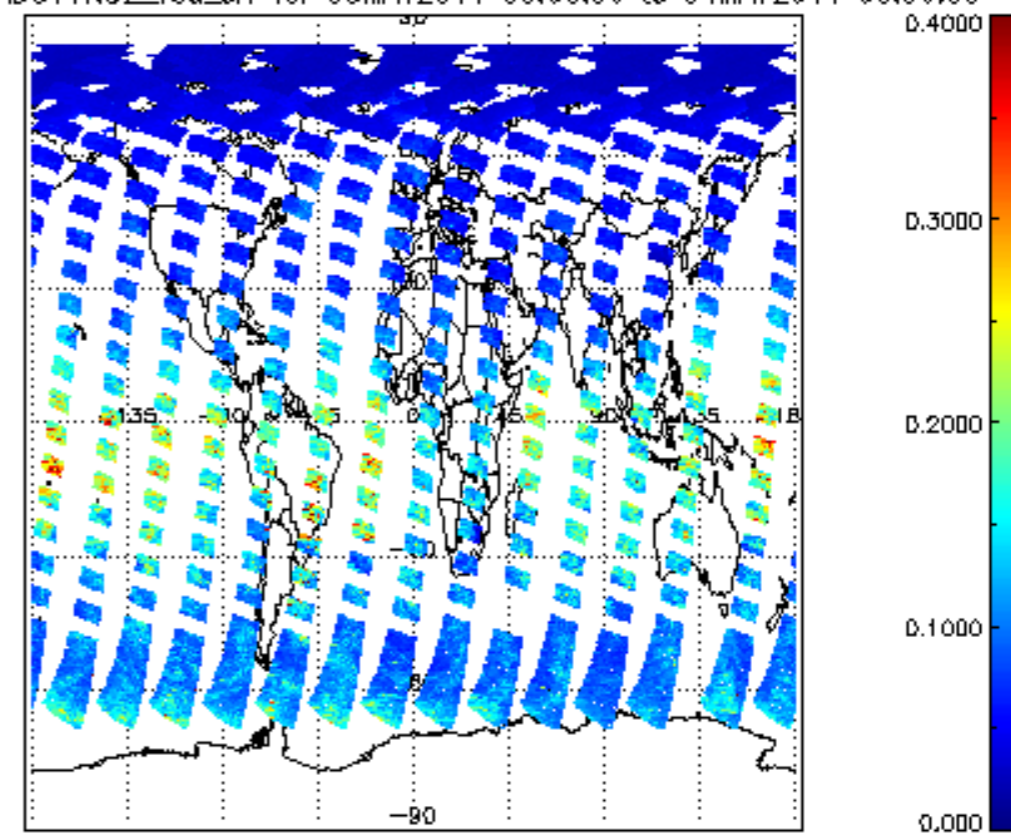




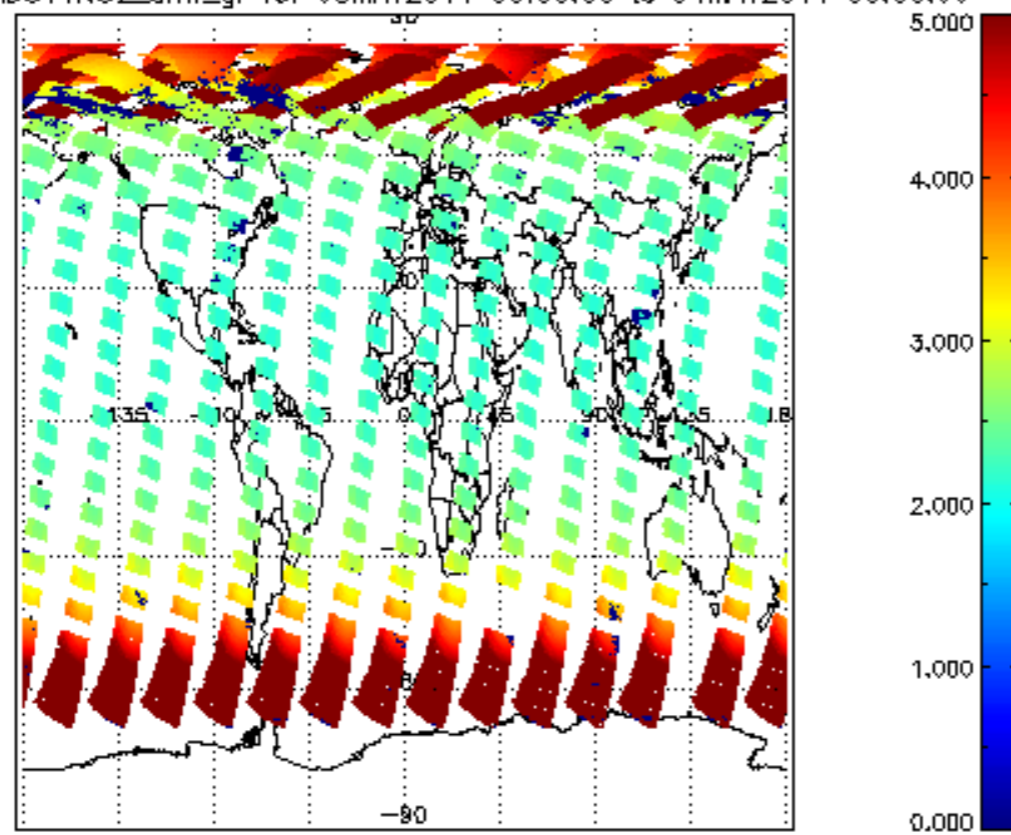
SCIOL2P\_NADUV1NO2\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



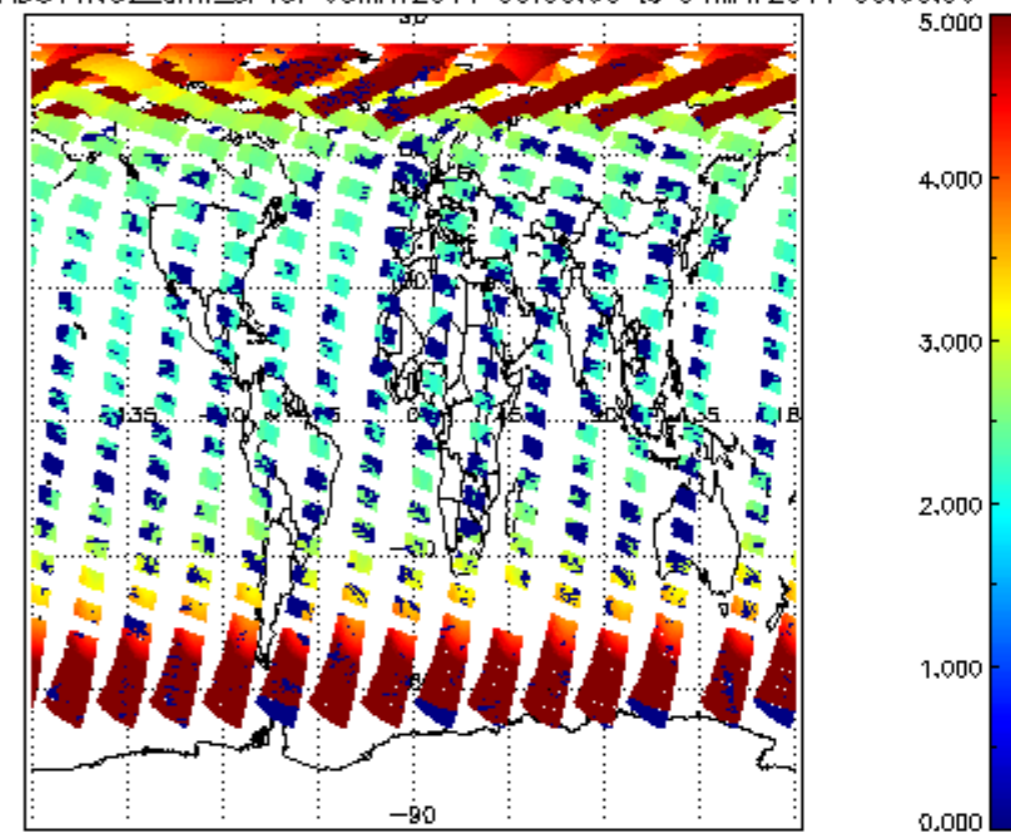
SCIOL2P\_NADUV1NO2\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



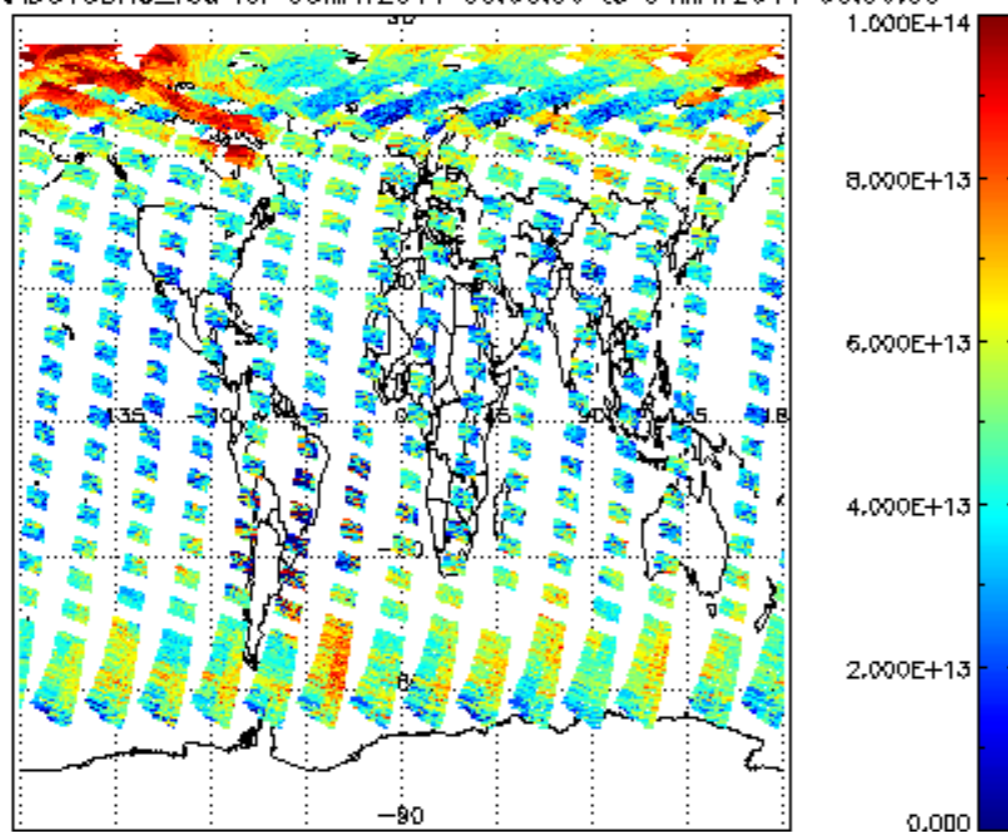
SCIOL2P\_NADUV1NO2\_amf\_sl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



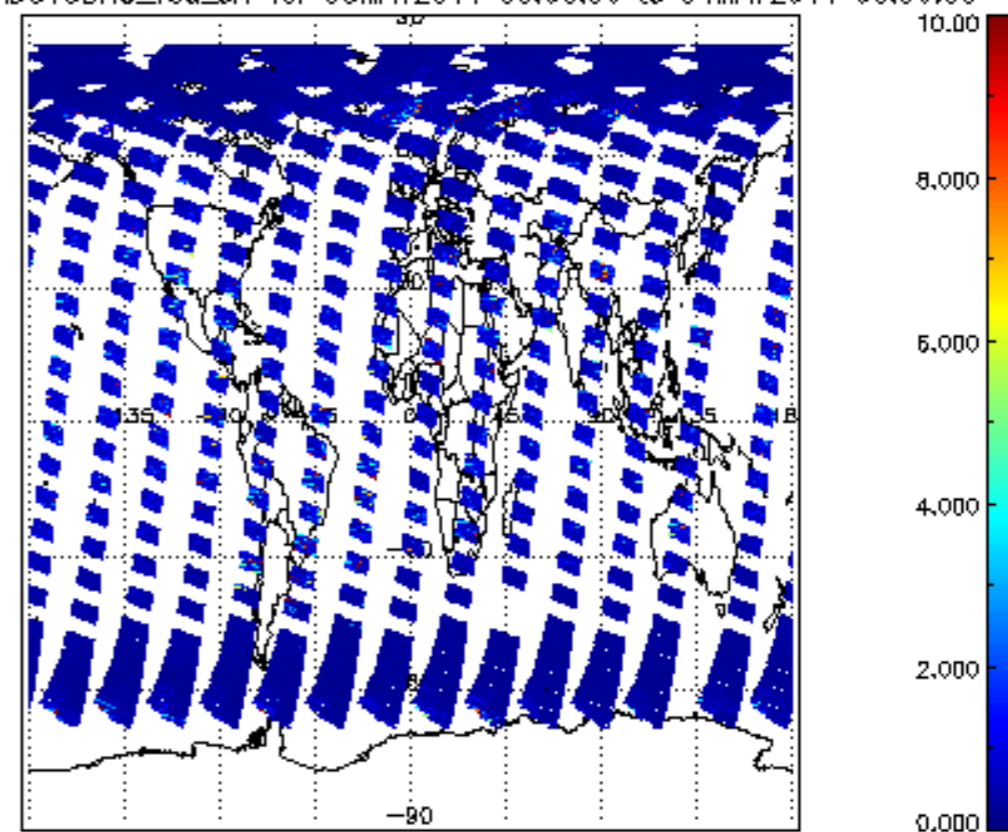




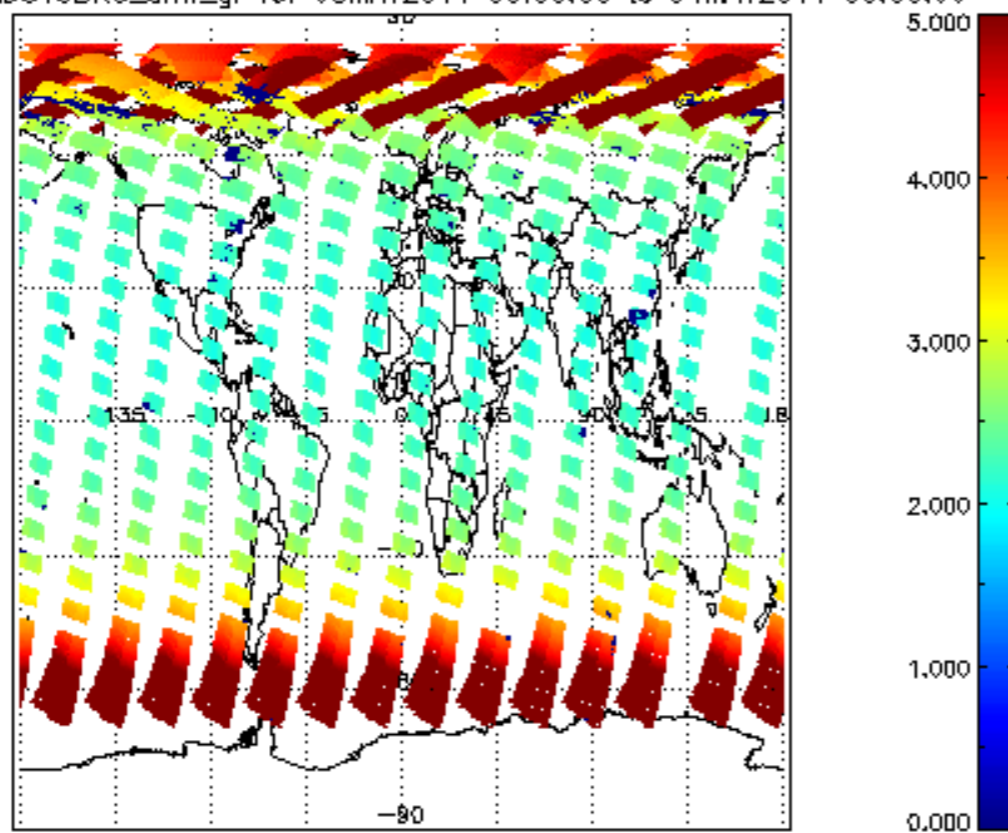
SCIOL2P\_NADUV3BRO\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



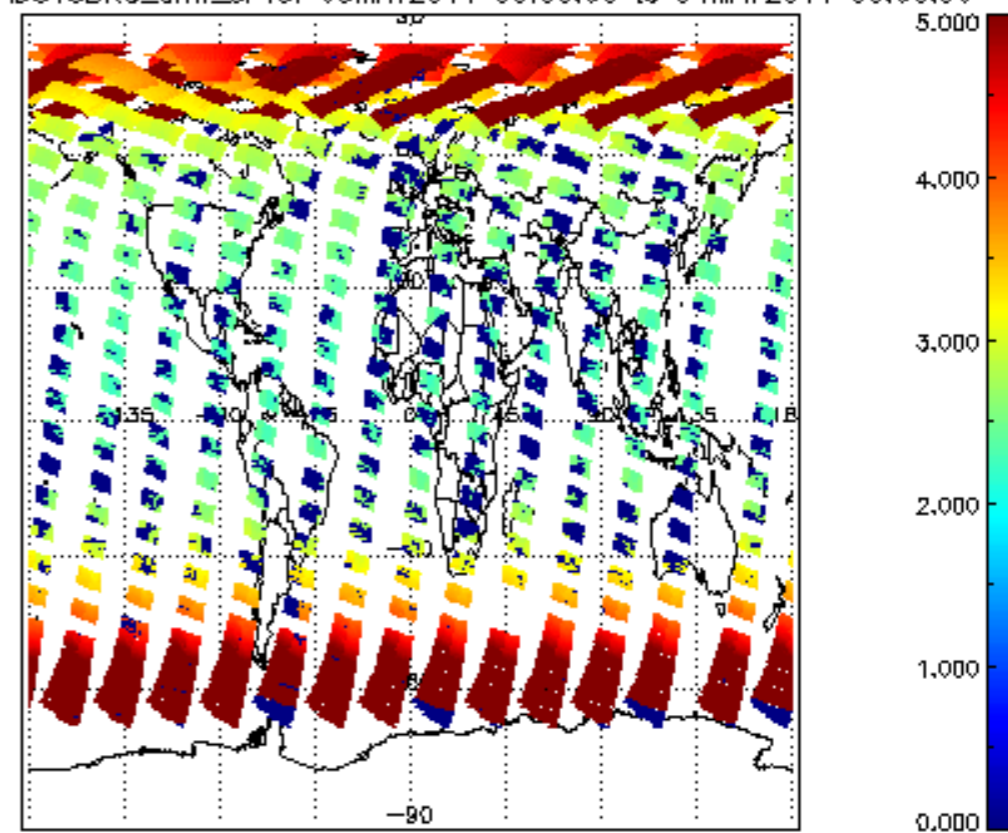
SCIOL2P\_NADUV3BRO\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



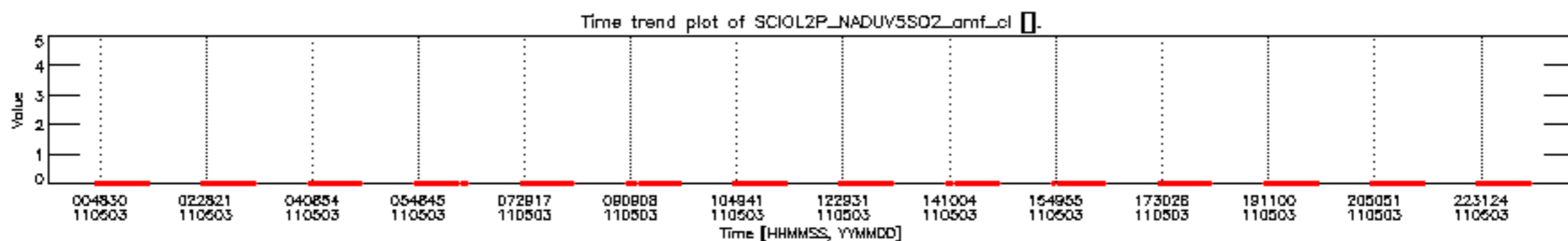
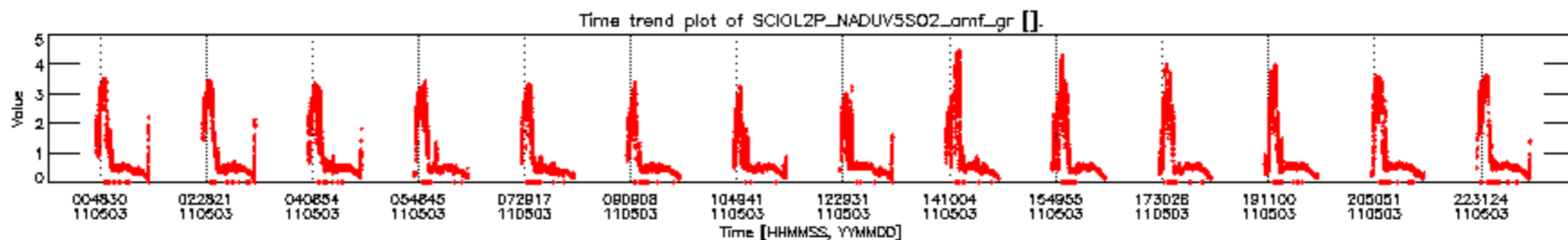
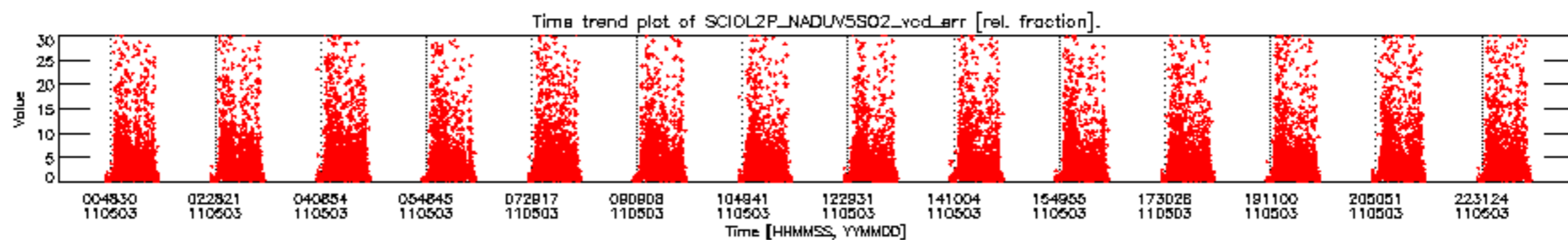
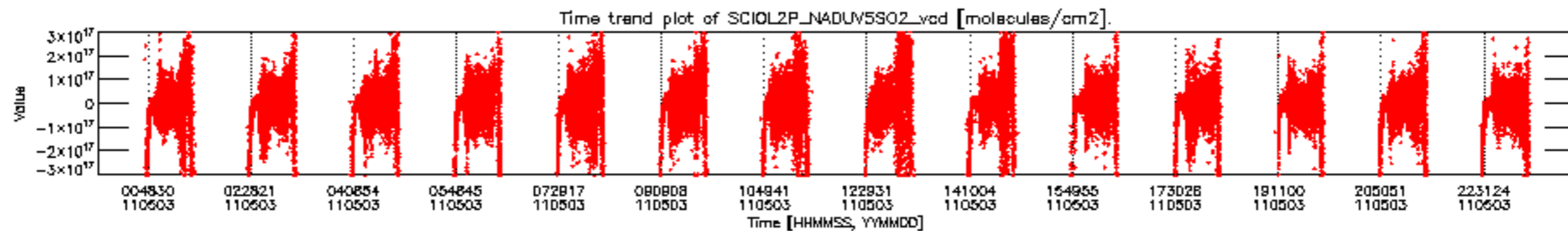
SCIOL2P\_NADUV3BRO\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



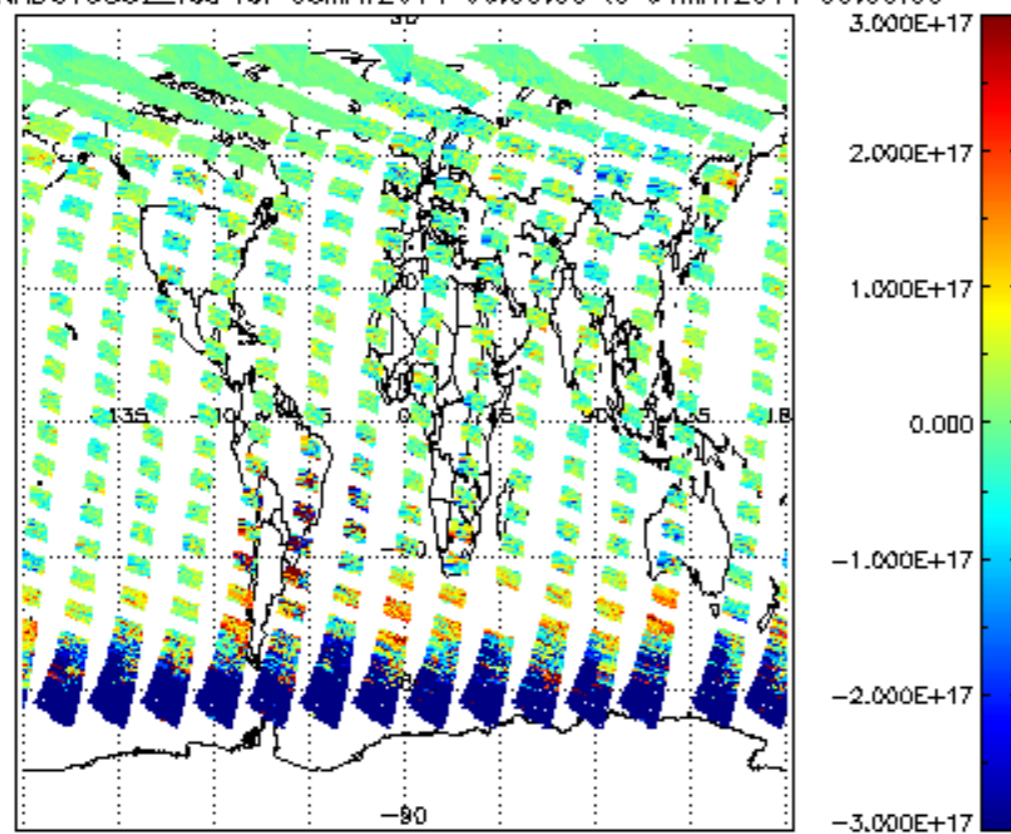
SCIOL2P\_NADUV3BRO\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



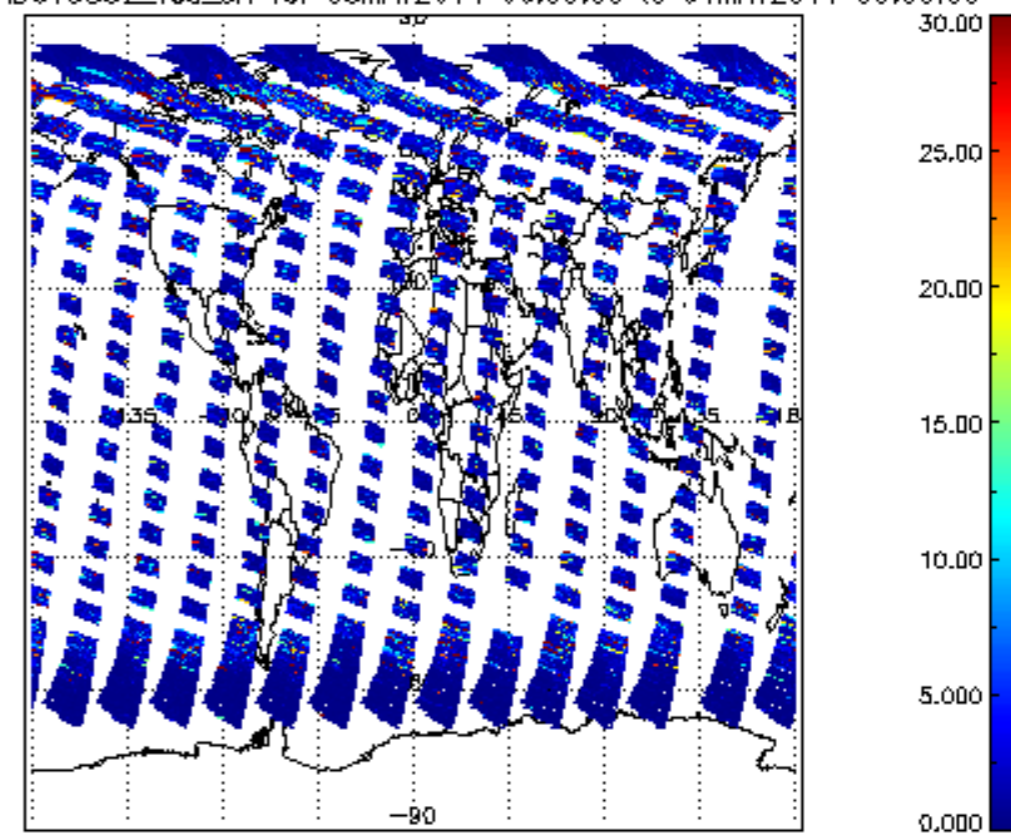




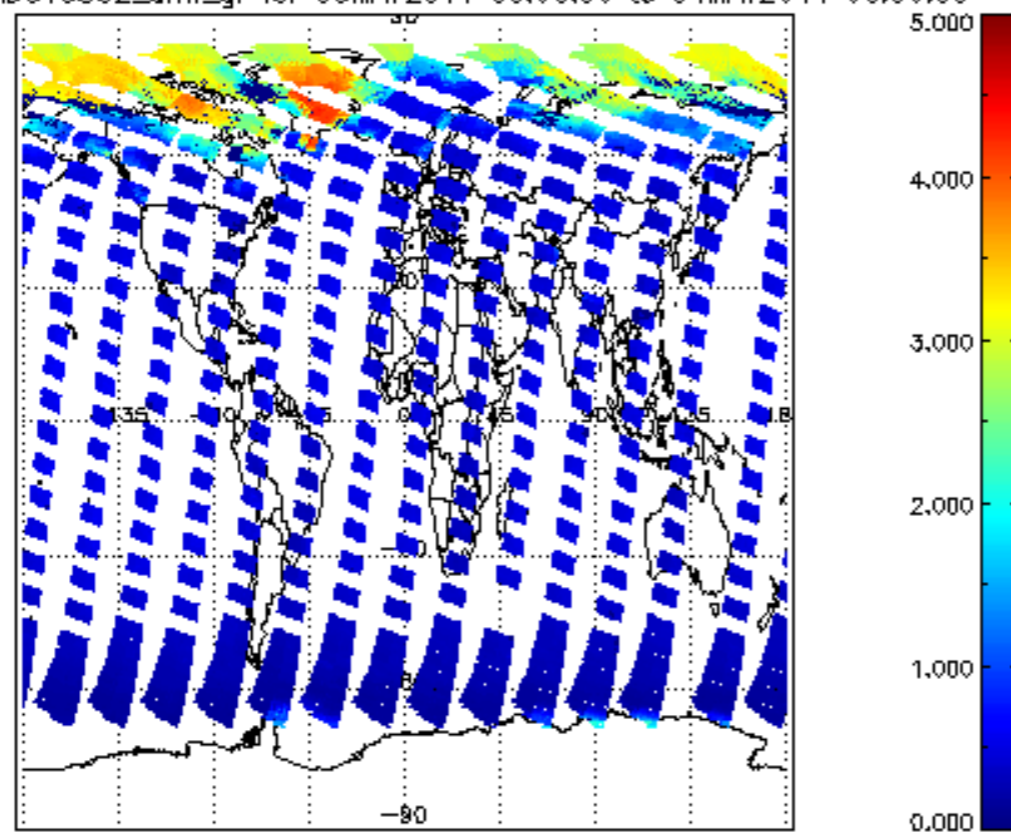
SCIOL2P\_NADUV5S02\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



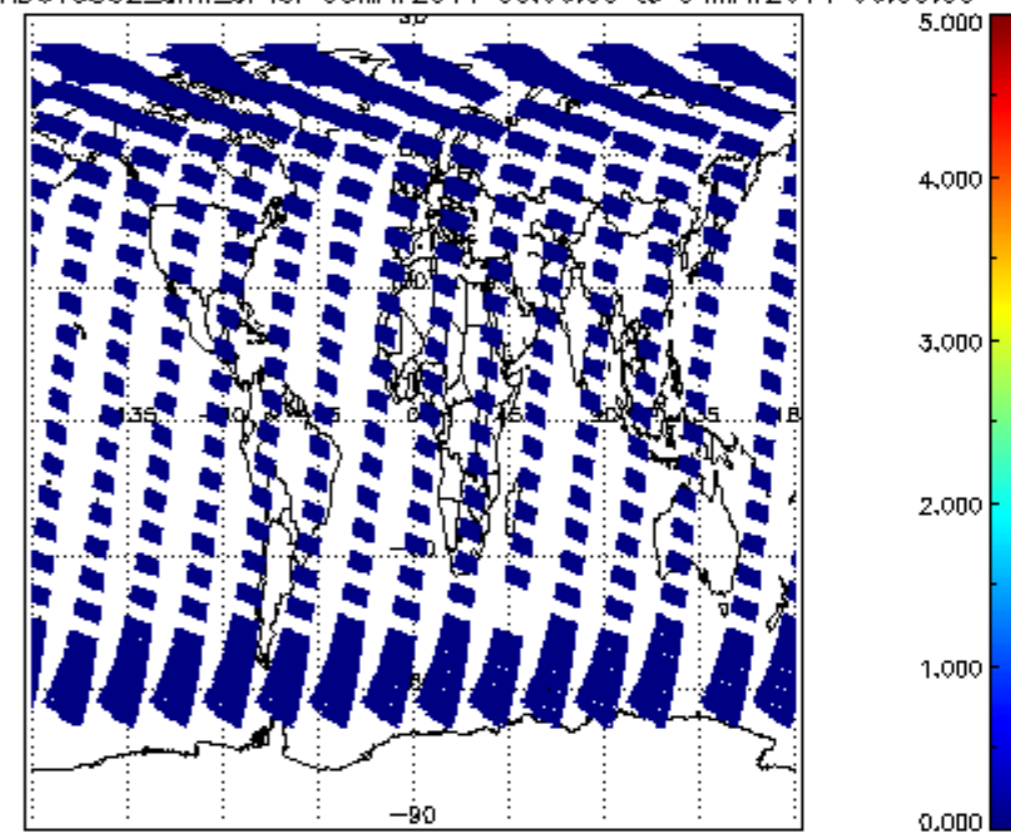
SCIOL2P\_NADUV5S02\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



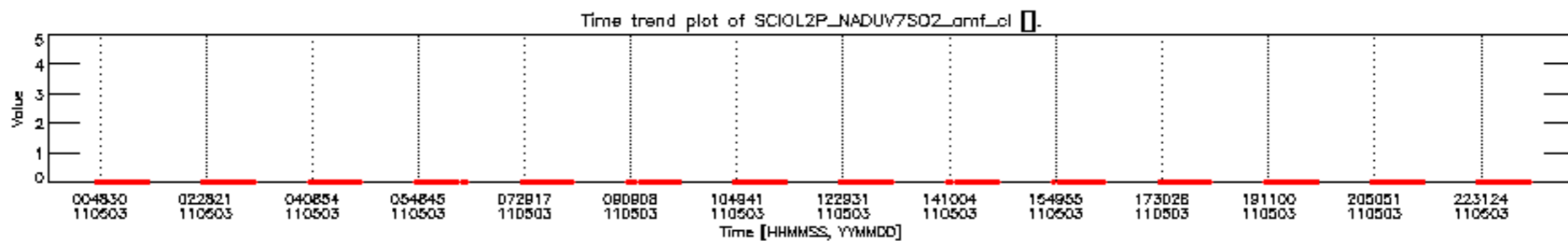
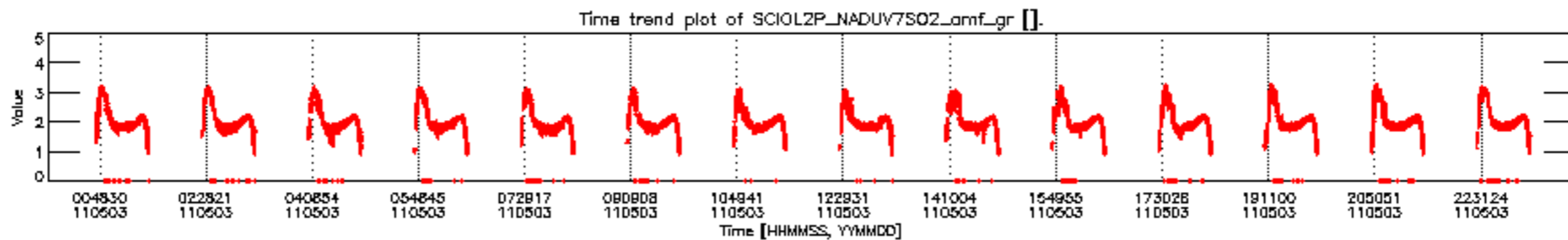
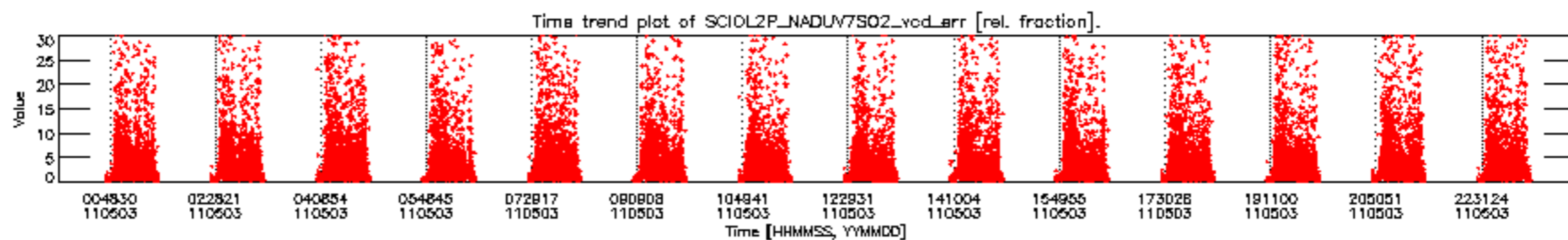
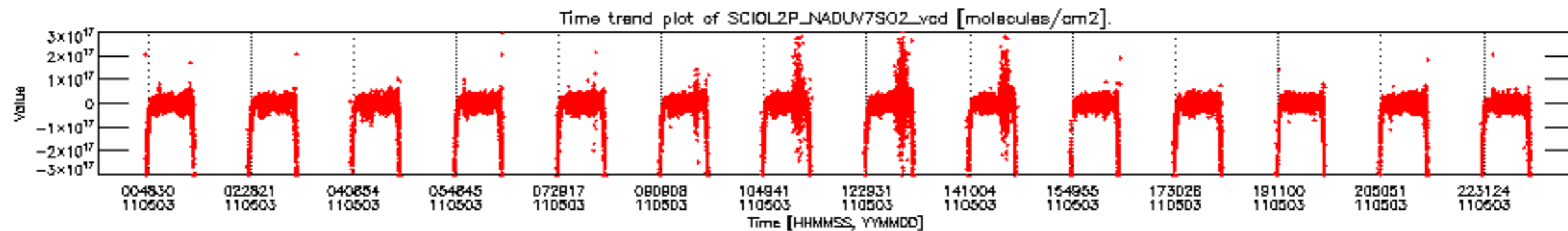
SCIOL2P\_NADUV5S02\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



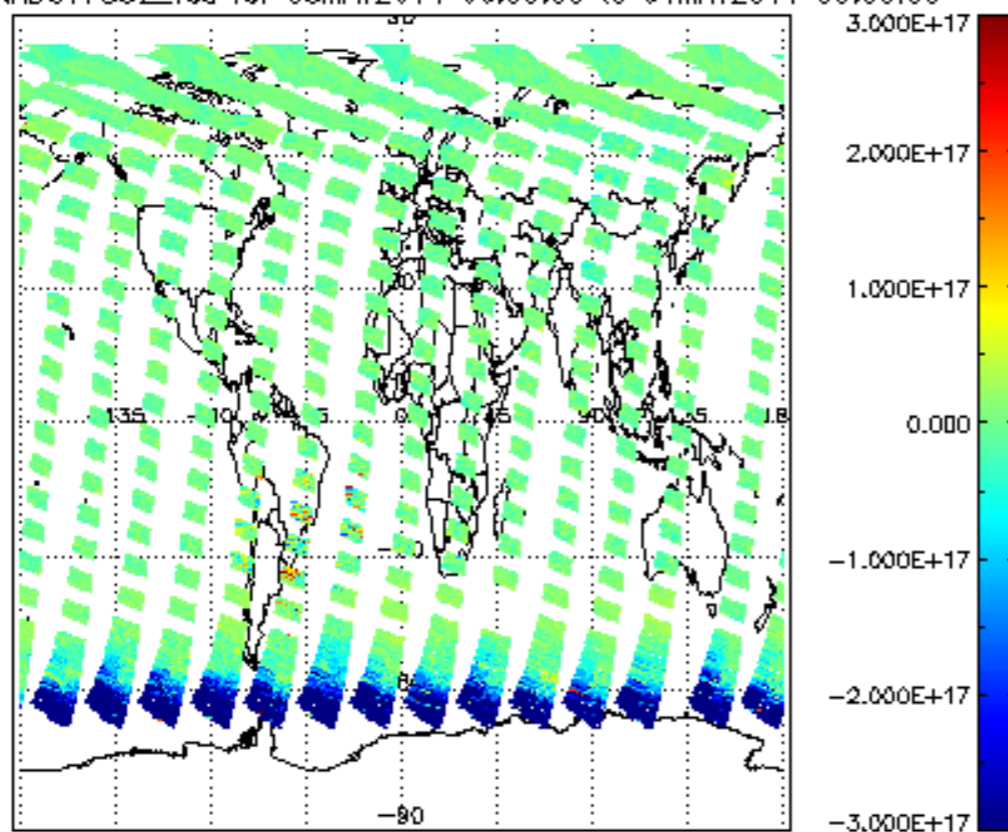
SCIOL2P\_NADUV5S02\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



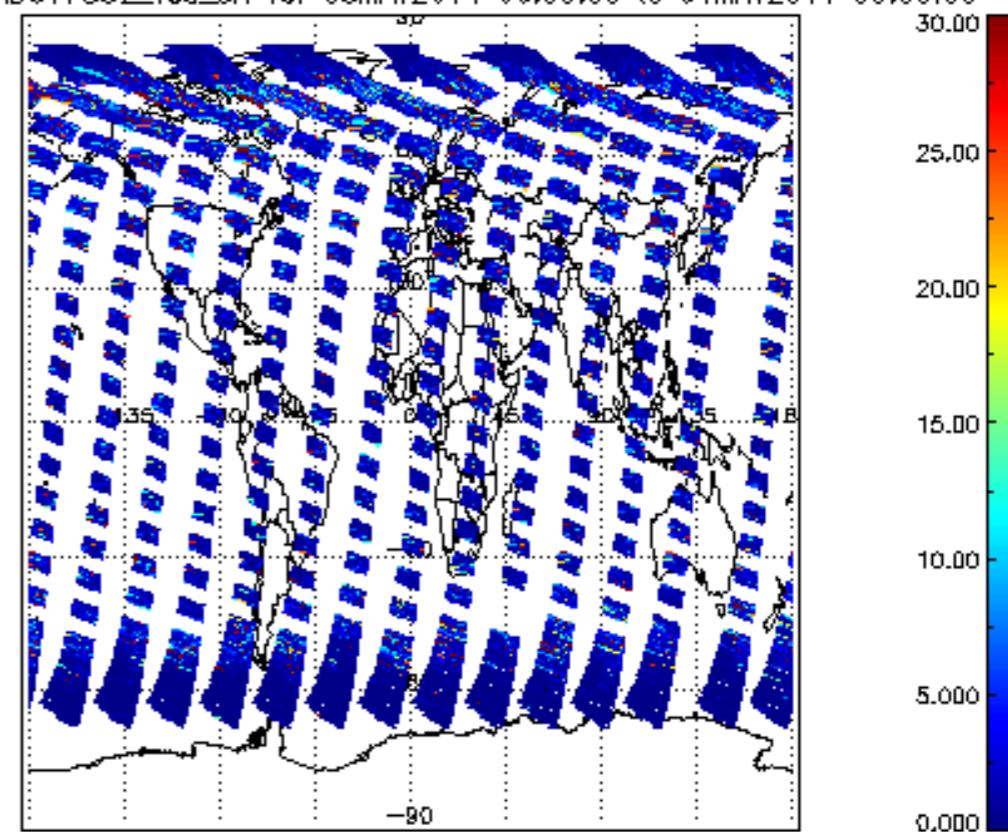




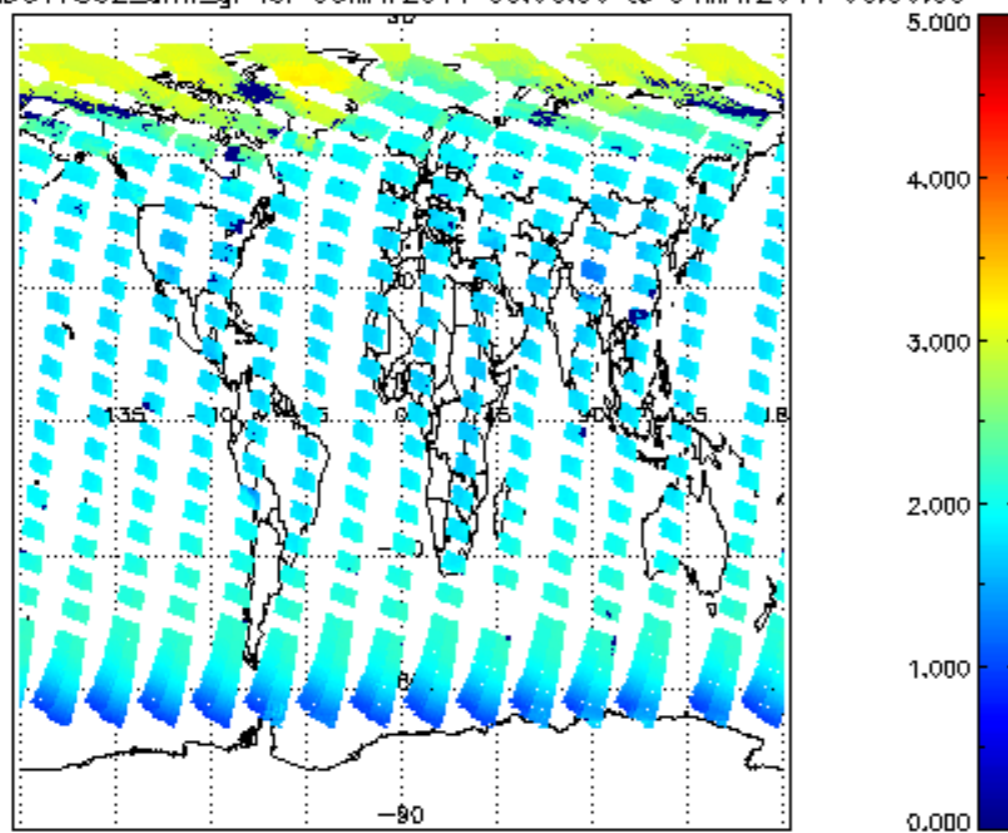
SCIOL2P\_NADUV7S02\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



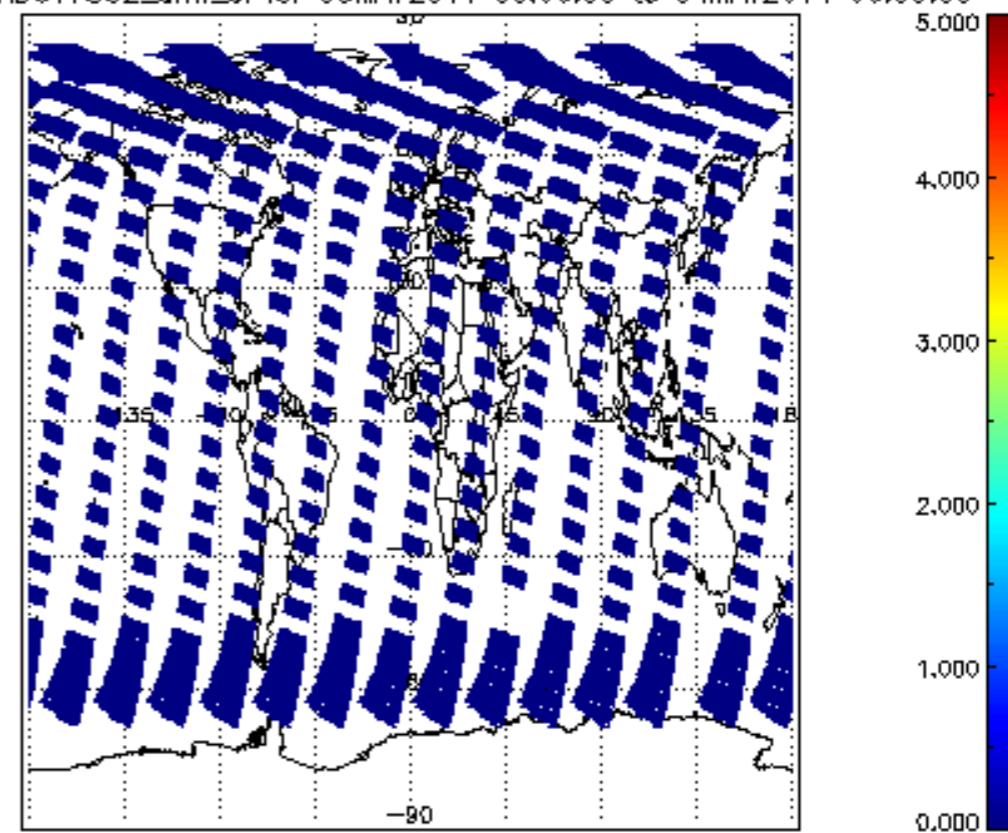
SCIOL2P\_NADUV7S02\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



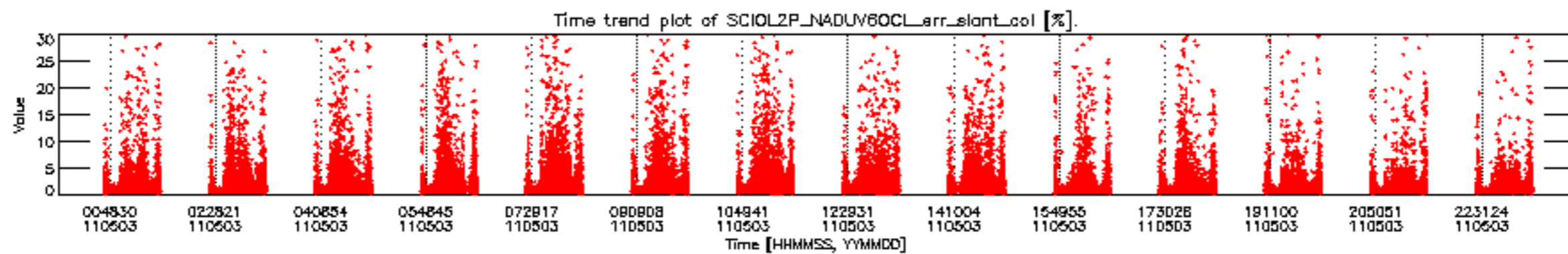
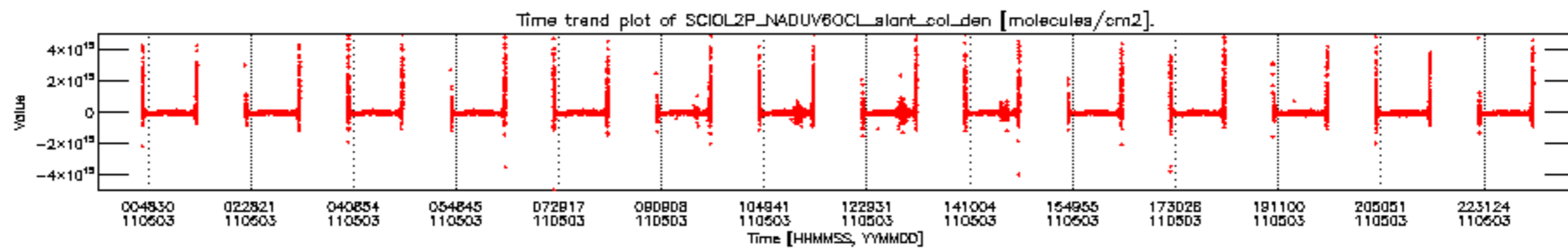
SCIOL2P\_NADUV7S02\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



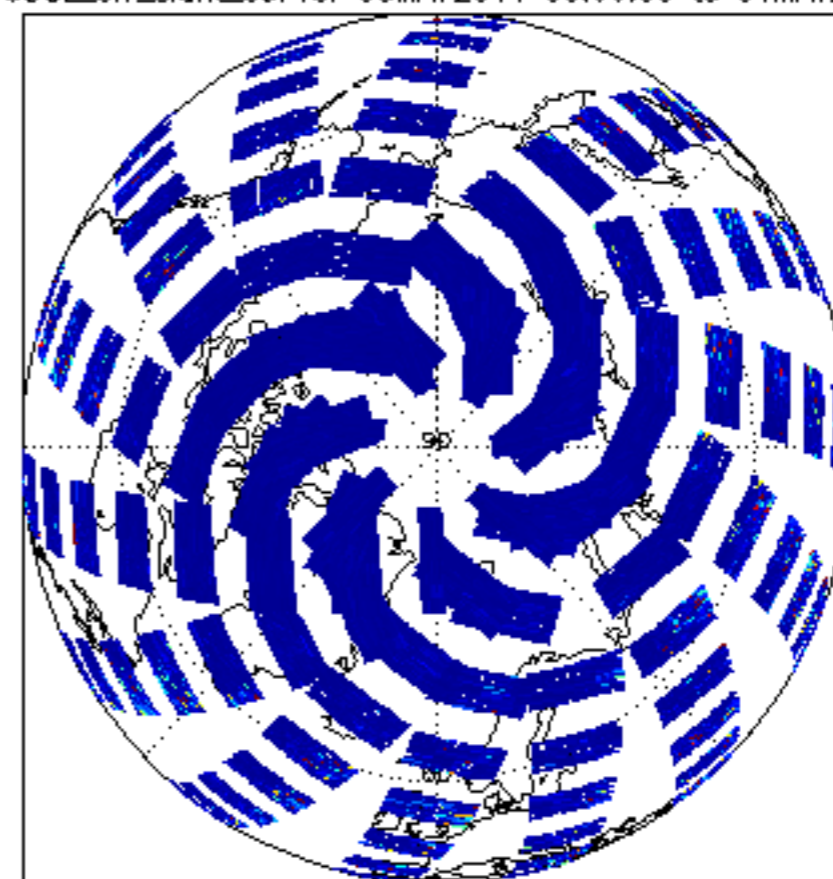
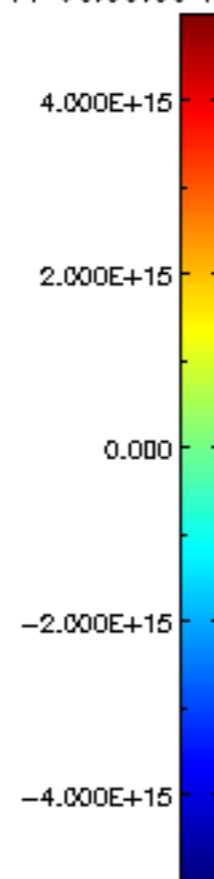
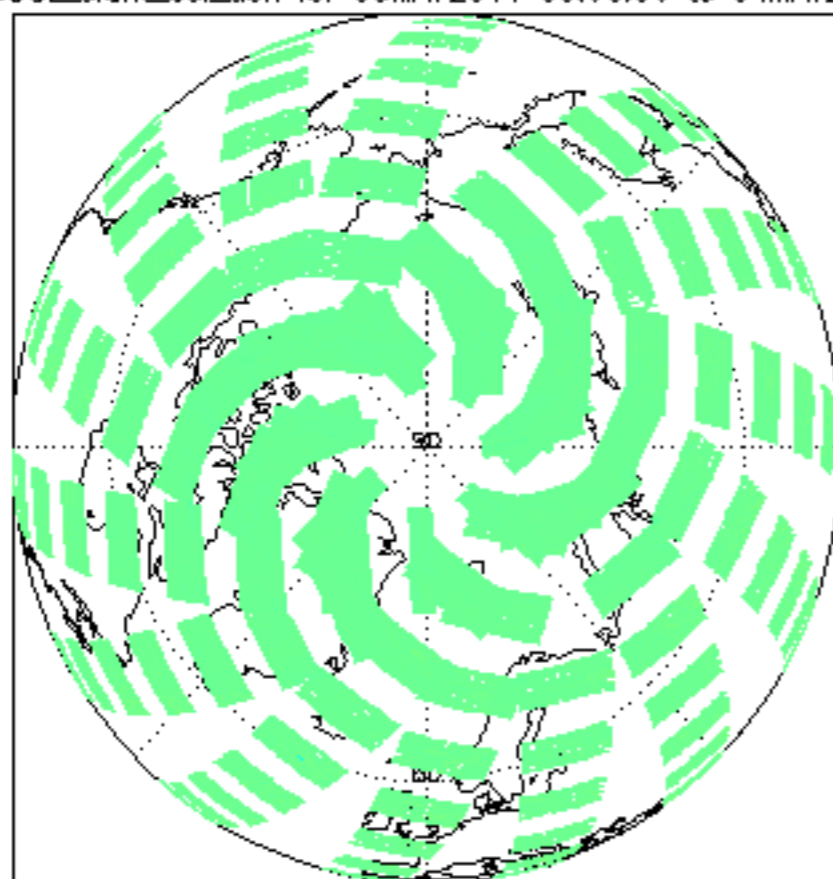
SCIOL2P\_NADUV7S02\_amf\_cl for 03MAY2011 00:00:00 to 04MAY2011 00:00:00





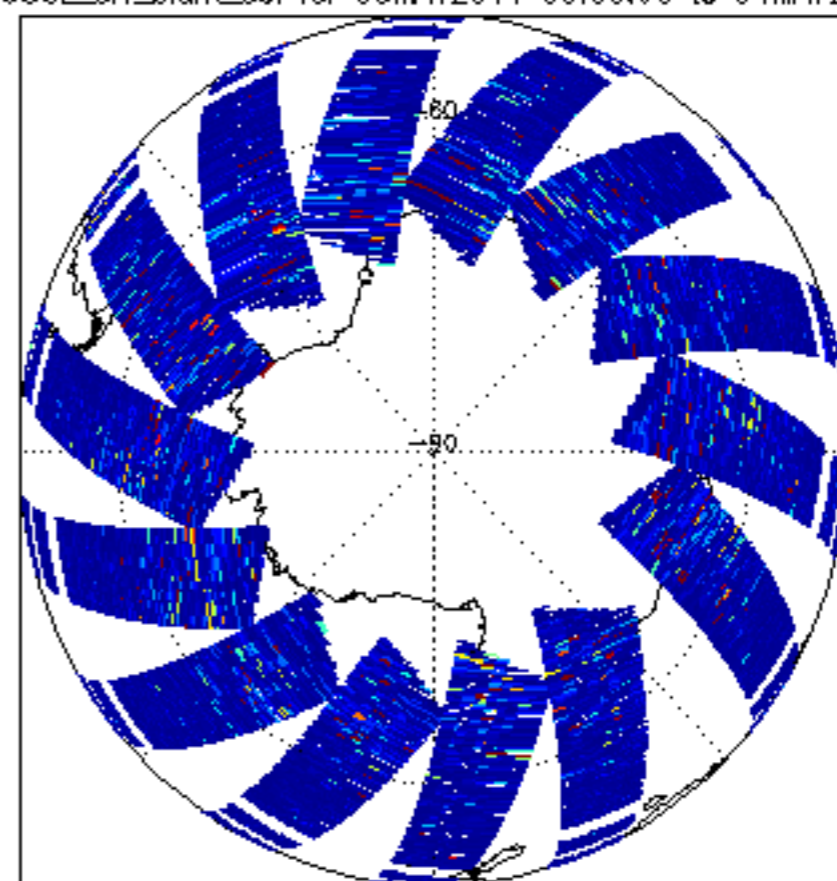
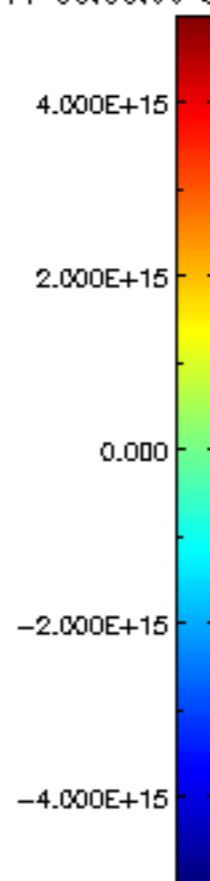
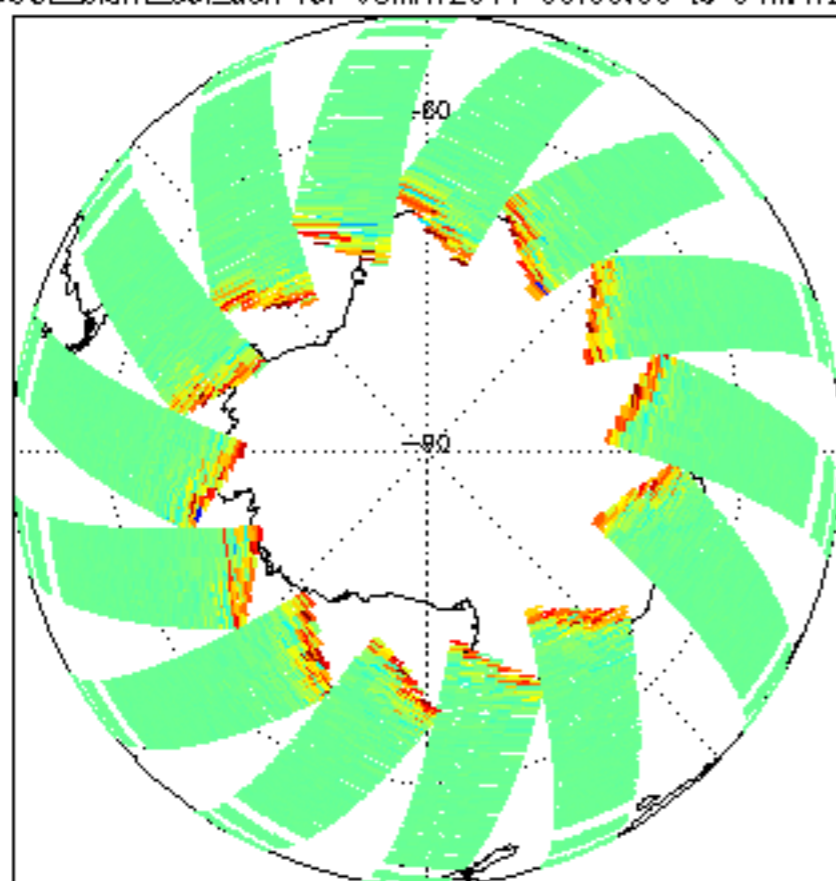


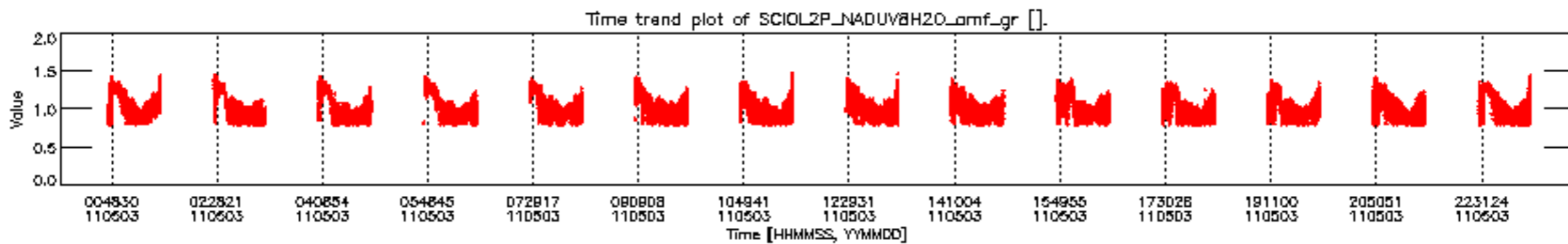
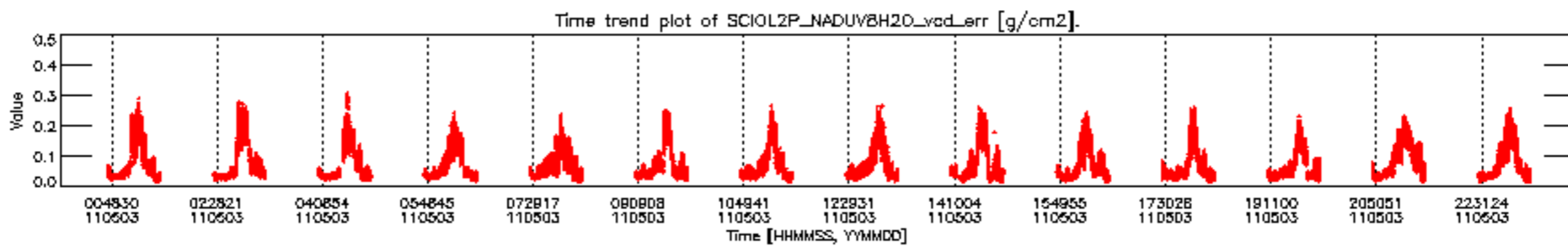
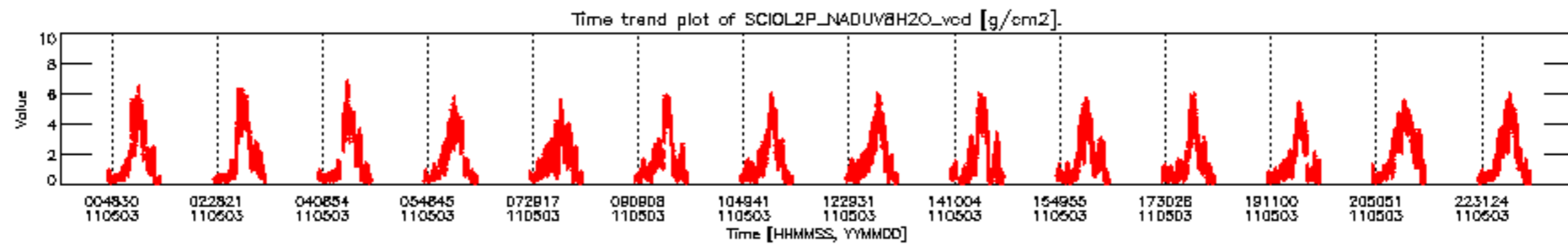
CIOL2P\_NADUV6OCL\_slant\_col\_den for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 np





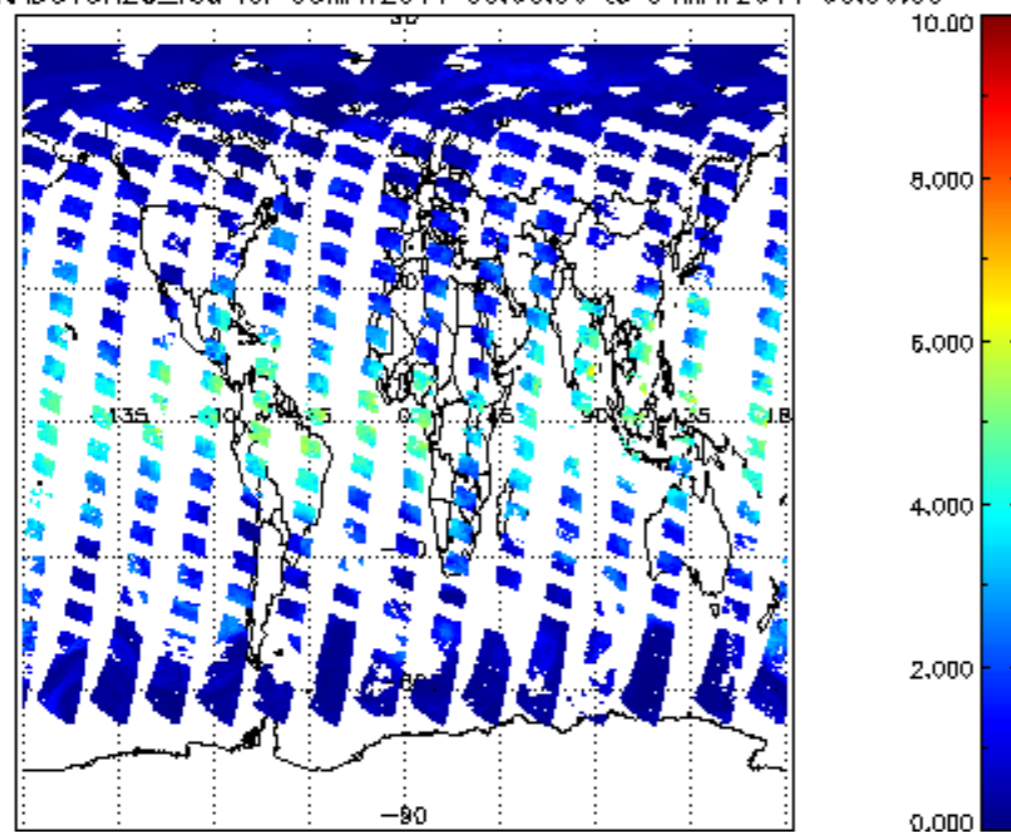
CIOL2P\_NADUV60CL\_slant\_col\_den for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 03MAY2011 00:00:00 to 04MAY2011 00:00:00 sp



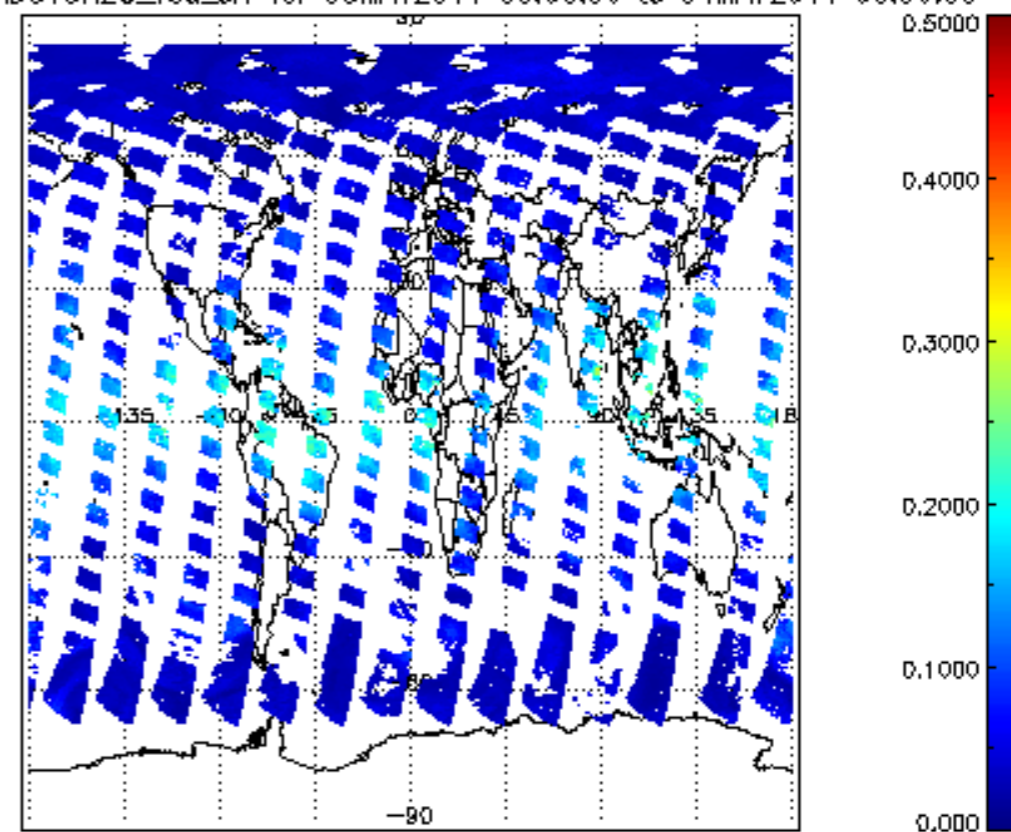




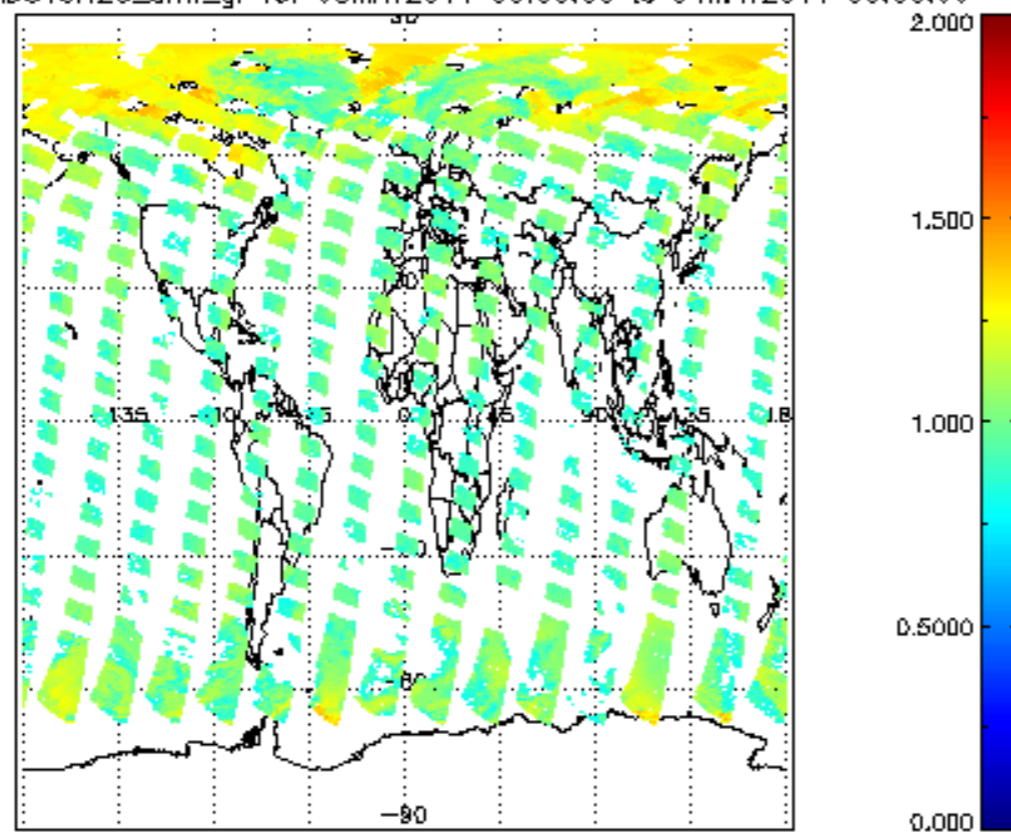
SCIOL2P\_NADUV8H2O\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

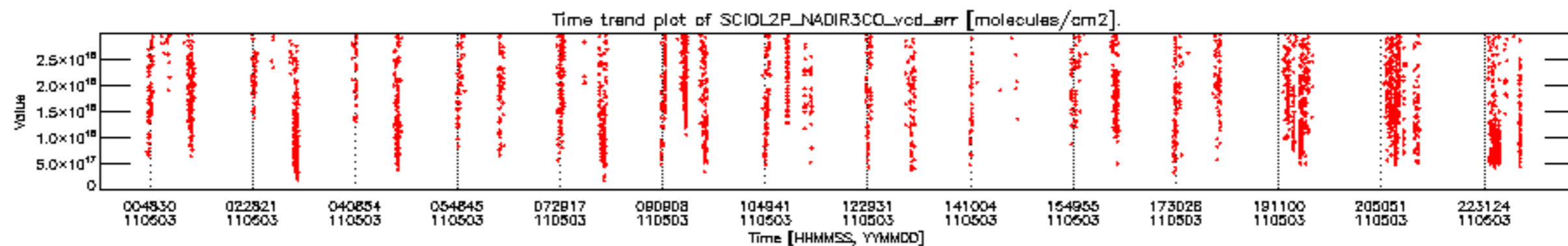
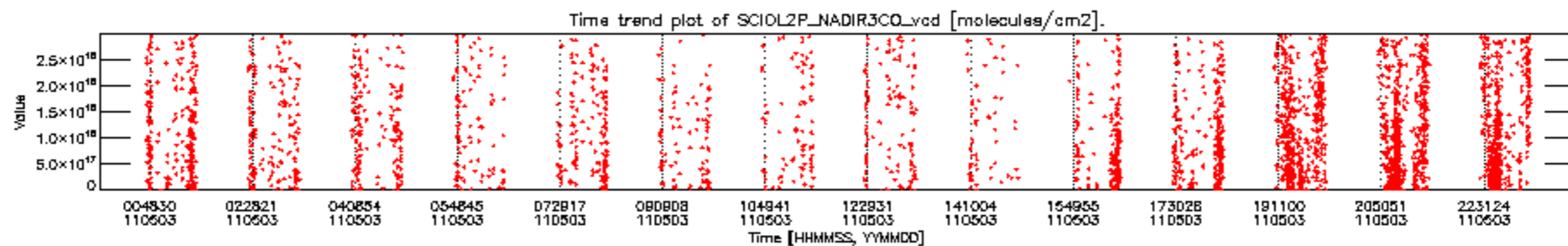


SCIOL2P\_NADUV8H2O\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



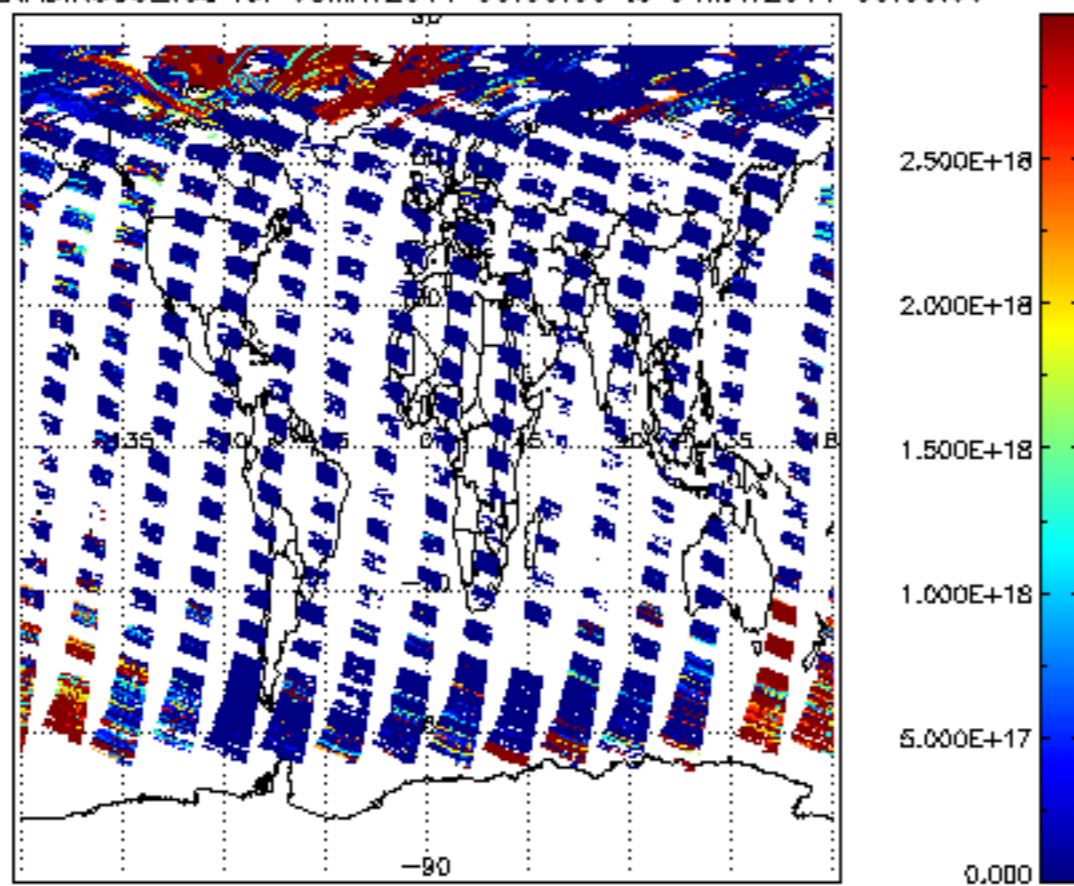
SCIOL2P\_NADUV8H2O\_amf\_gr for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



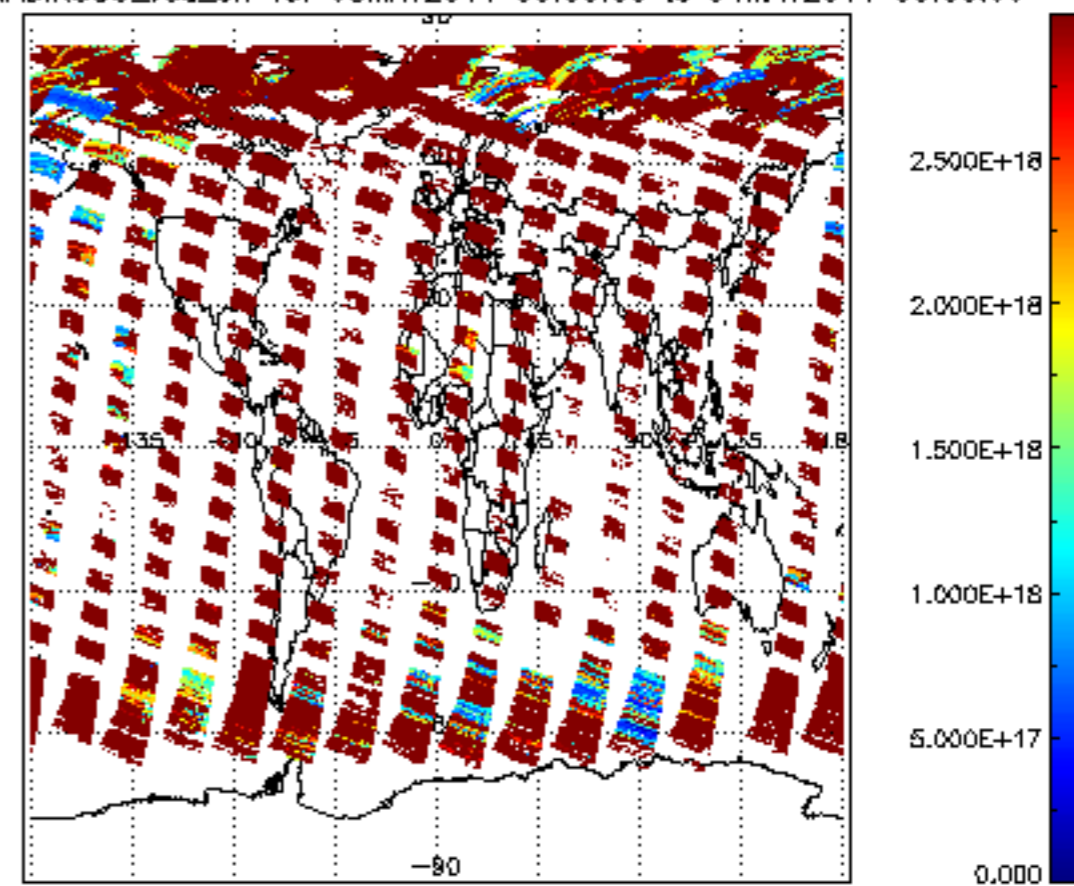




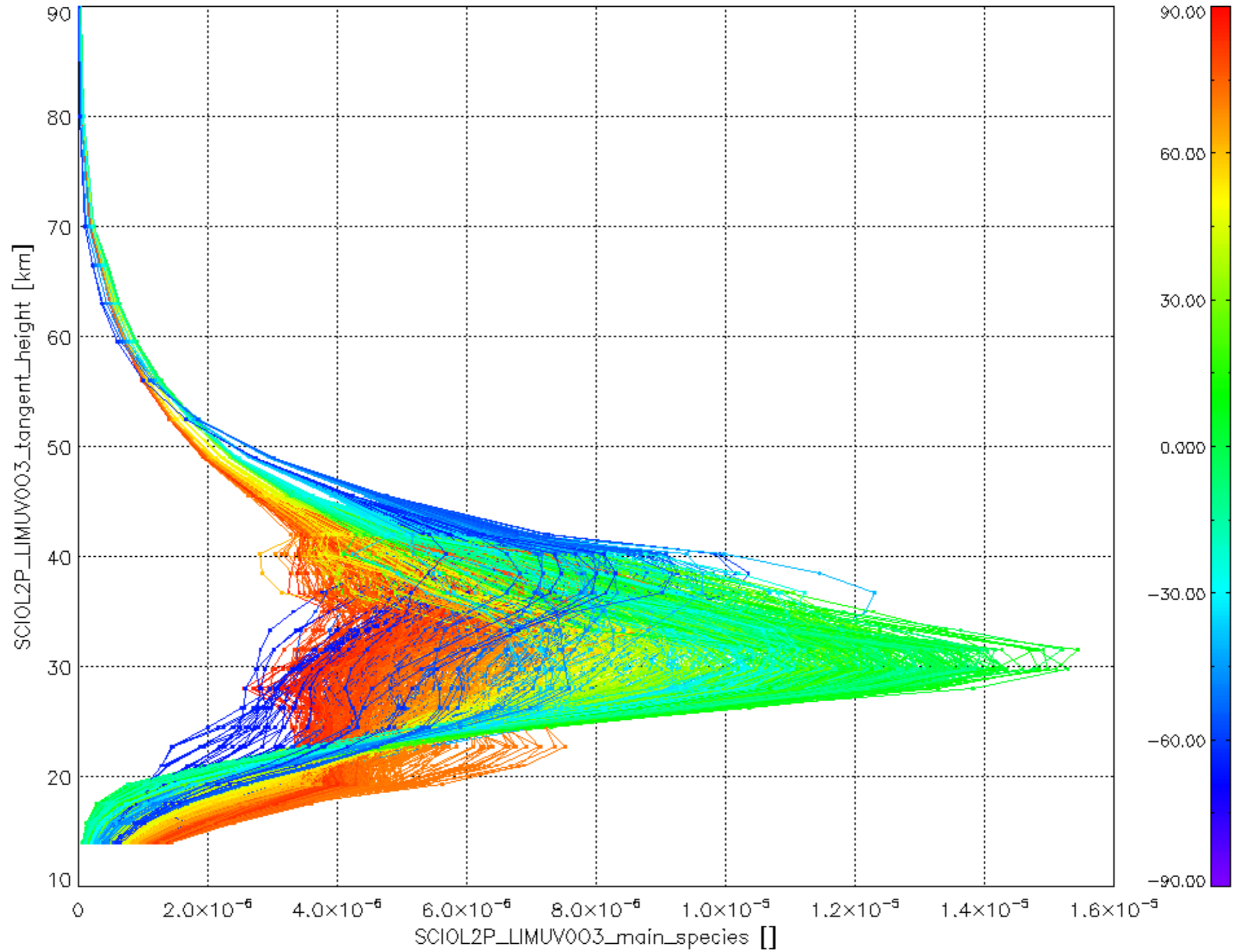
SCIOL2P\_NADIR3CO\_vcd for 03MAY2011 00:00:00 to 04MAY2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 03MAY2011 00:00:00 to 04MAY2011 00:00:00

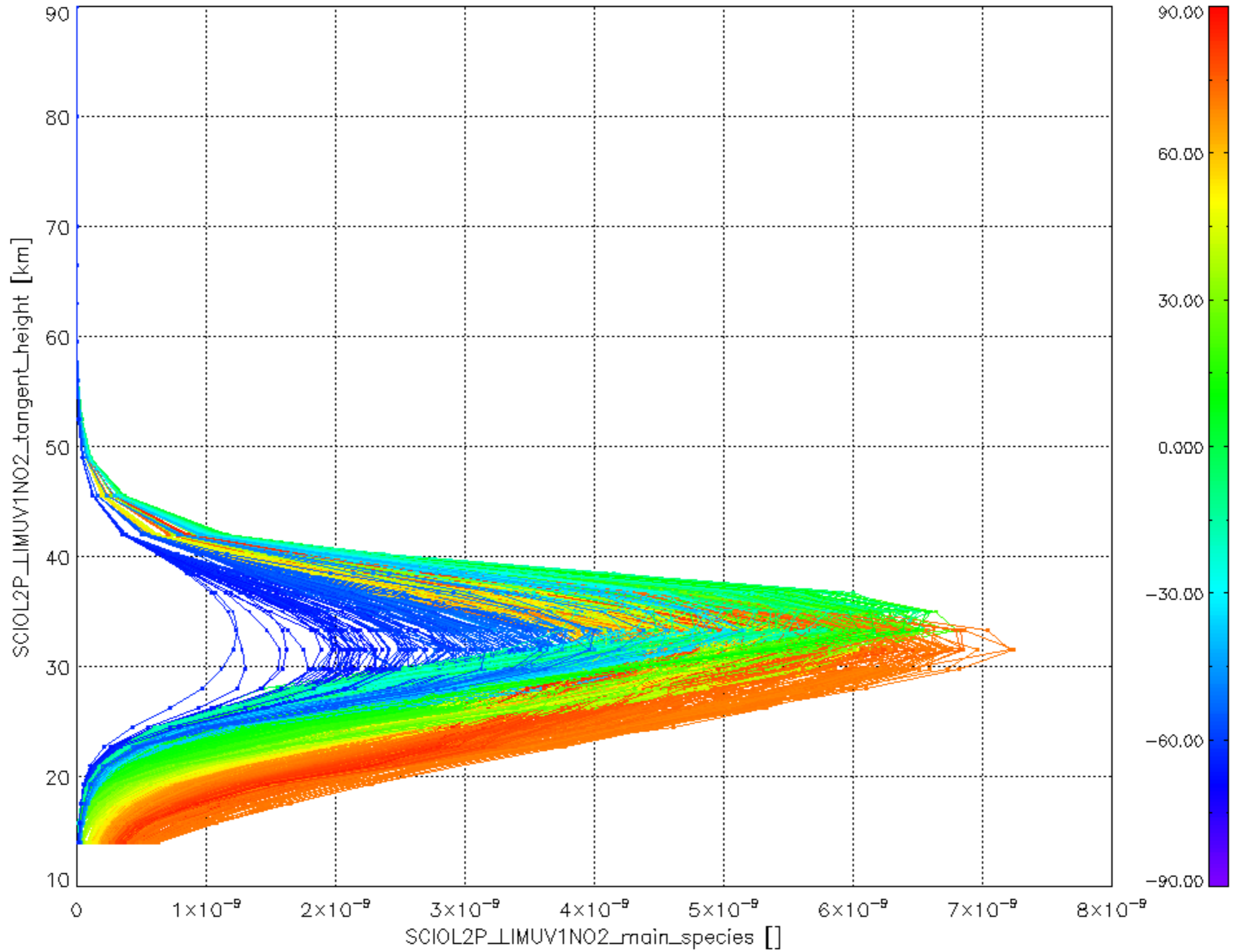


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

