

## 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	29MAR2011 03:26:28
Data source version	SCIA-OL/5.01-U
Processing scope for products	09MAR2011 00:00:00 to 10MAR2011 00:00:00
Start time of first product within scope	08MAR2011 23:18:53
Stop time of last product within scope	09MAR2011 23:41:48
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__2PUDPA20110308_231853_000035843100_00174_47171_3663.N1</a>	08MAR2011 23:18:53	09MAR2011 00:18:38	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110309_005907_000035993100_00175_47172_3662.N1</a>	09MAR2011 00:59:07	09MAR2011 01:59:06	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110309_023920_000035843100_00176_47173_3664.N1</a>	09MAR2011 02:39:20	09MAR2011 03:39:05	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110309_041934_000035993100_00177_47174_3665.N1</a>	09MAR2011 04:19:34	09MAR2011 05:19:33	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110309_055948_000035843100_00178_47175_3666.N1</a>	09MAR2011 05:59:48	09MAR2011 06:59:32	0	GOOD

5	SCI_OL__2PUDPA20110309_074001_000035993100_00179_47176_3668.N1	09MAR2011 07:40:01	09MAR2011 08:40:00	0	GOOD
6	SCI_OL__2PUDPA20110309_092015_000035843100_00180_47177_3669.N1	09MAR2011 09:20:15	09MAR2011 10:19:59	0	GOOD
7	SCI_OL__2PUDPA20110309_110028_000035993100_00181_47178_3670.N1	09MAR2011 11:00:28	09MAR2011 12:00:27	0	GOOD
8	SCI_OL__2PUDPA20110309_124042_000035843100_00182_47179_3671.N1	09MAR2011 12:40:42	09MAR2011 13:40:26	0	GOOD
9	SCI_OL__2PUDPA20110309_142055_000035993100_00183_47180_3672.N1	09MAR2011 14:20:55	09MAR2011 15:20:54	0	GOOD
10	SCI_OL__2PUDPA20110309_160109_000035843100_00184_47181_3674.N1	09MAR2011 16:01:09	09MAR2011 17:00:53	0	GOOD
11	SCI_OL__2PUDPA20110309_174141_000035993100_00185_47182_3675.N1	09MAR2011 17:41:41	09MAR2011 18:41:40	0	GOOD
12	SCI_OL__2PUDPA20110309_192155_000035843100_00186_47183_3673.N1	09MAR2011 19:21:55	09MAR2011 20:21:40	0	GOOD
13	SCI_OL__2PUDPA20110309_210149_000035993100_00187_47184_3676.N1	09MAR2011 21:01:49	09MAR2011 22:01:48	0	GOOD
14	SCI_OL__2PUDPA20110309_224203_000035843100_00188_47185_3677.N1	09MAR2011 22:42:03	09MAR2011 23:41:48	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: 175081

Total number of cloud data DSRs with good quality flag (=0): 175081 (100.0 %)

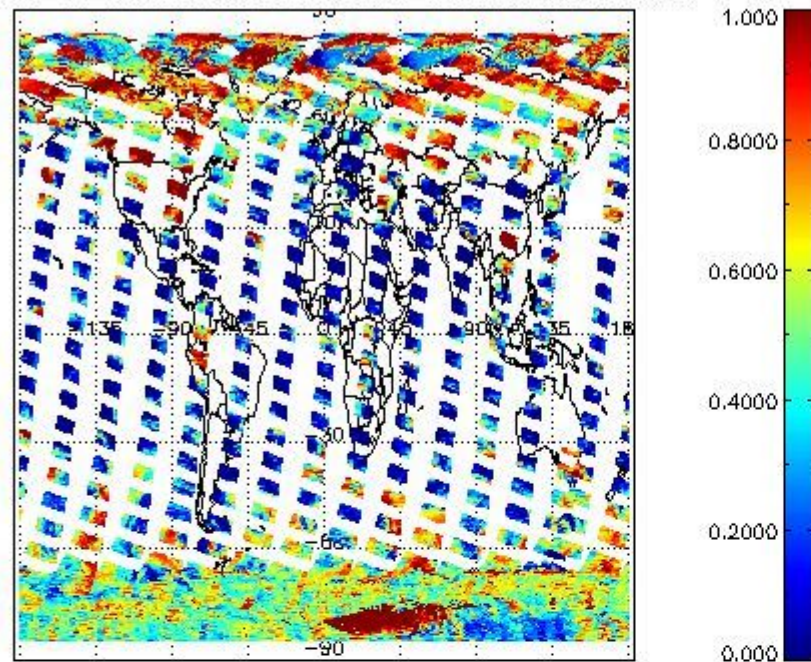
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	175081	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	175081	0.16313	0.12500	0.12500	0.25000	0.057551	s
CL_FRAC	175081	0.48845	0.49272	0.0000	1.0000	0.31932	-
CL_FRAC_ERR	175081	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	175081	5.2200	4.0000	4.0000	8.0000	1.8416	
PMD_READ_CL[0]	175081	0.57551	0.0000	0.0000	8.0000	1.3648	-
PMD_READ_CL[1]	175081	1.0874	0.0000	0.0000	8.0000	2.4550	-
CL_TOP_HEIGHT	134200	3.4452	2.0980	0.0000	17.000	3.5350	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	134200	65.302	100.00	0.0000	101.00	40.902	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	175081	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	175081	11001100	11000100	11000000	11100000	3523.0	flags
AERO_ABSO_IND	175081	0.40179	0.0000	0.0000	10.294	0.71886	
AERO_IND_DIAG	175081	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	175081	01001111	00000000	00000000	11000000	24192.	flags

#### Time and geolocation plots:

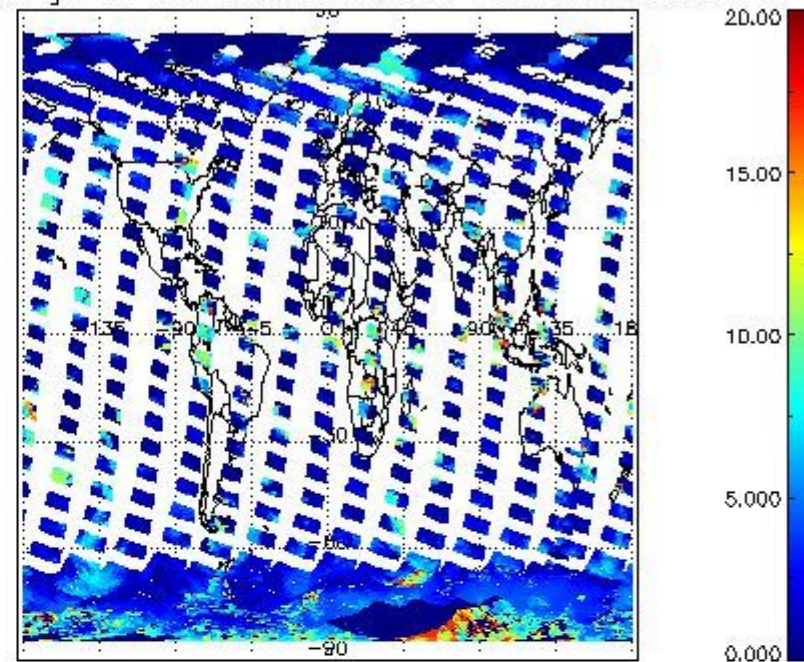
Plots are available for the following parameters:

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

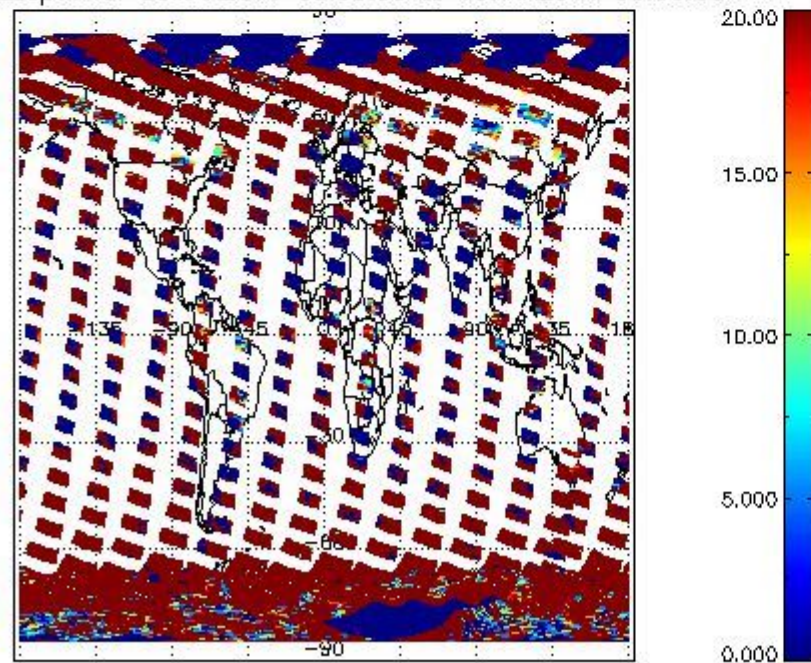
cL\_frac for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



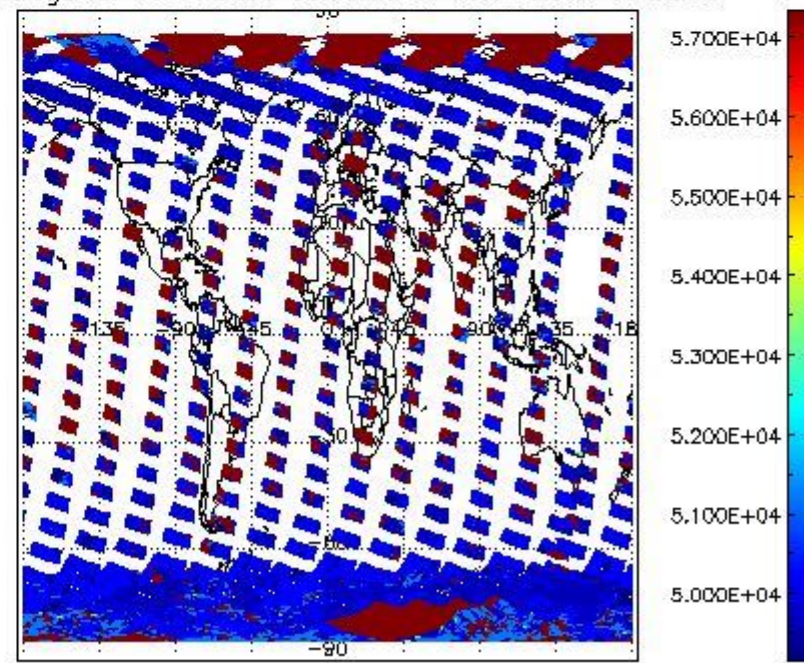
cL\_top\_height for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



cL\_opt\_depth for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



cloud\_flags for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



## 2.2.2 Nadir

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

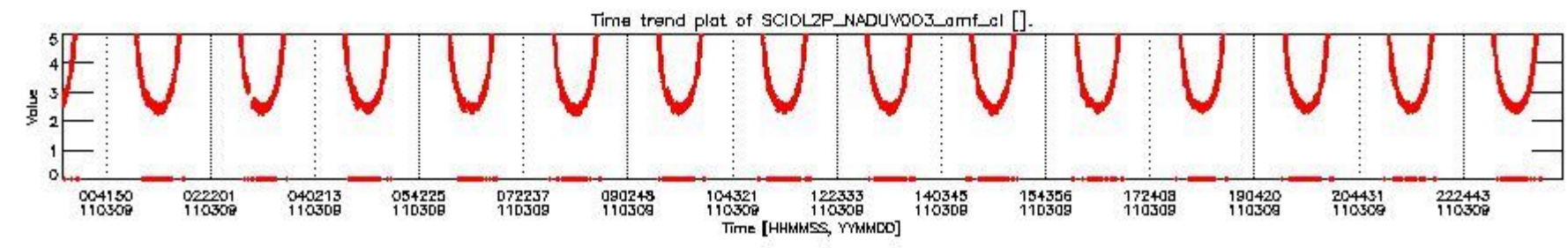
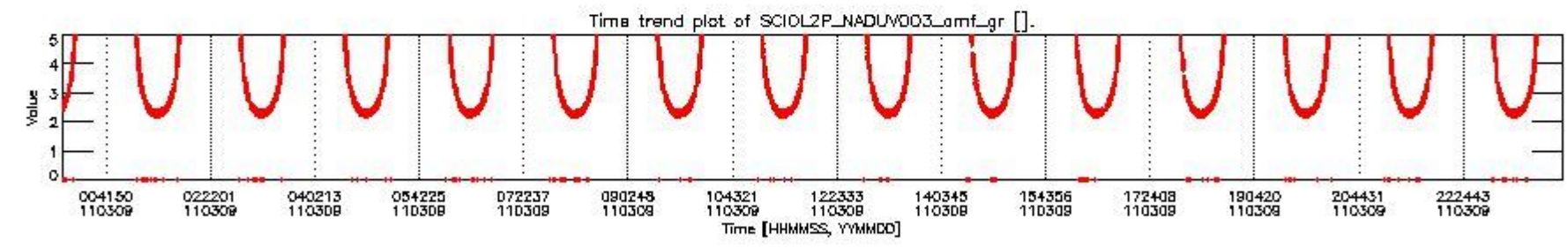
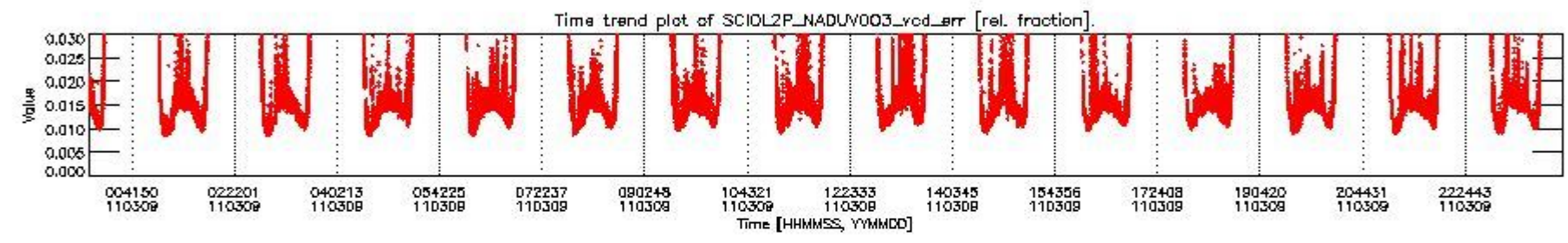
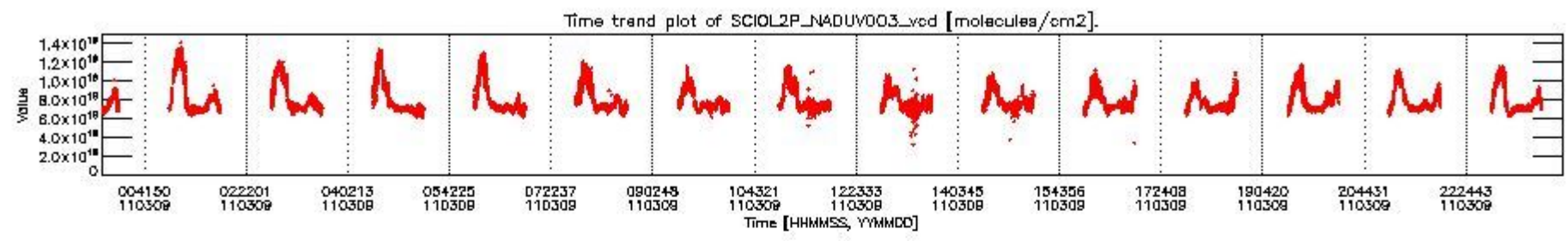
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

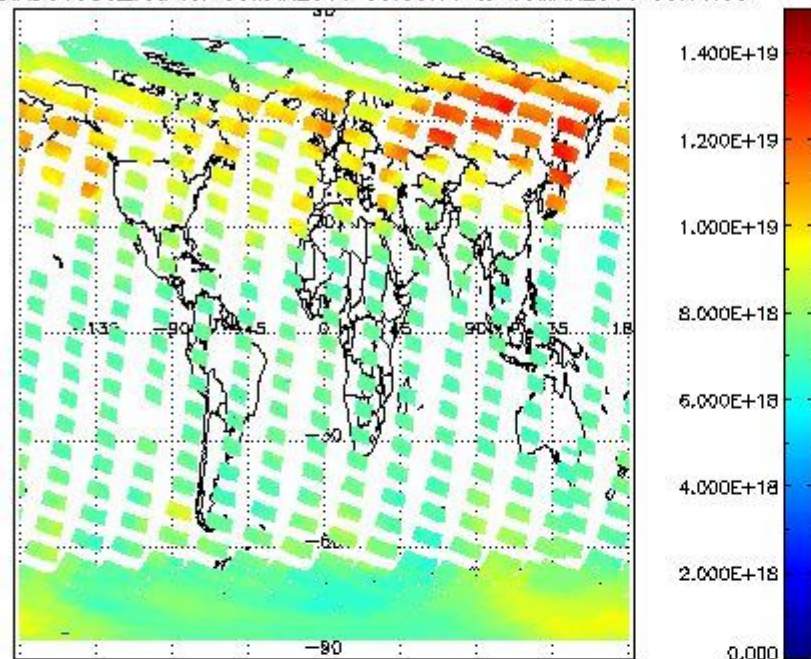
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr
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.

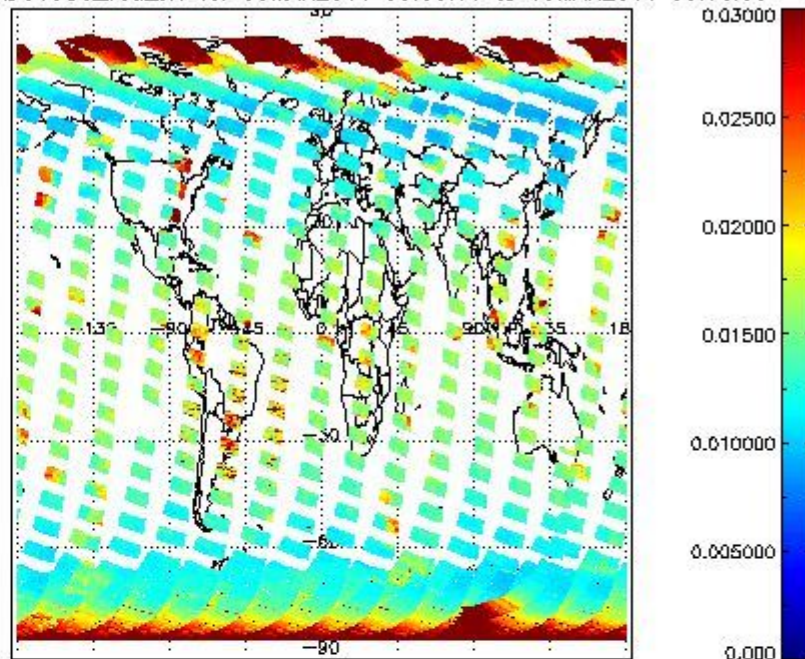
#### 2.2.2.1 O3 (UV0)



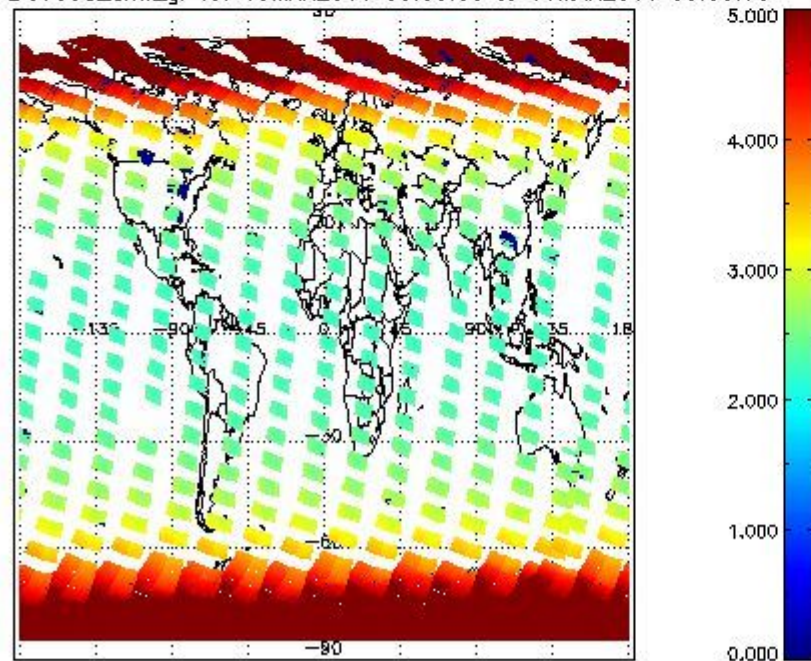
SCIOL2P\_NADUV003\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



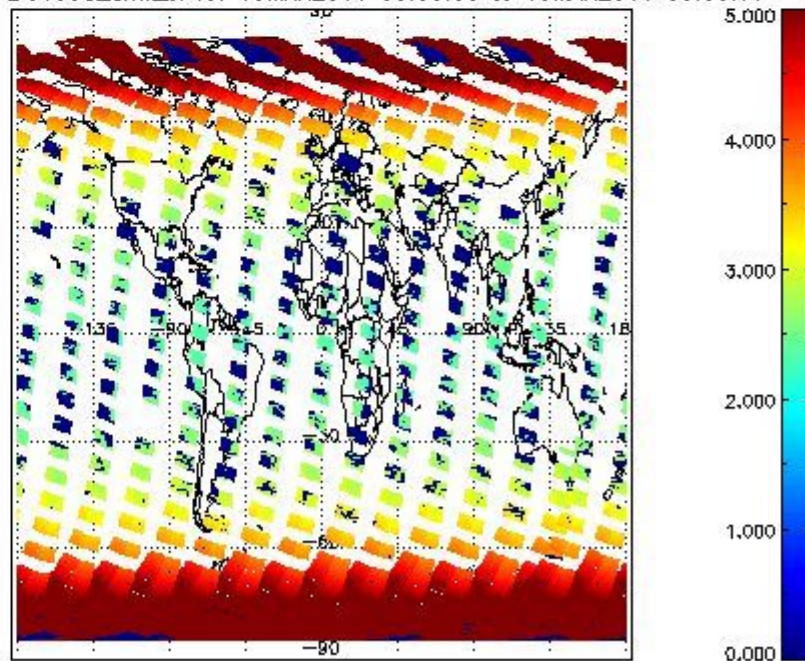
SCIOL2P\_NADUV003\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



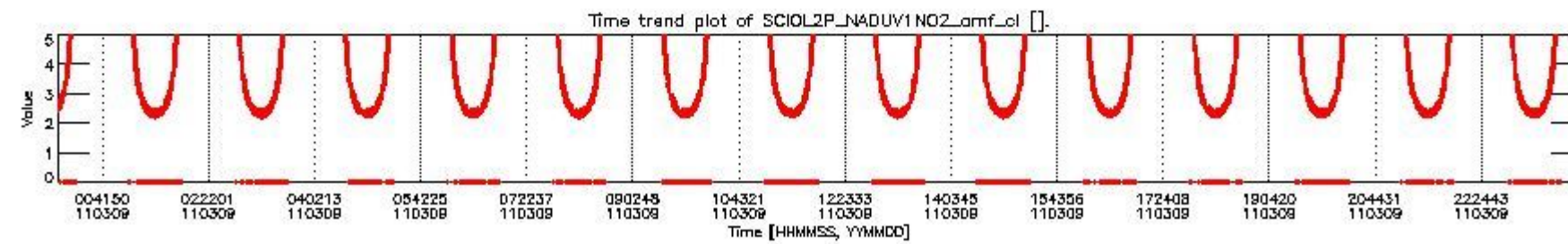
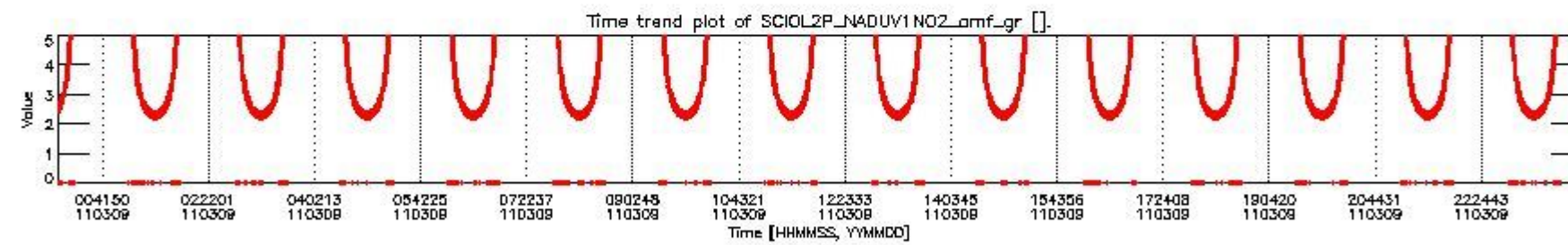
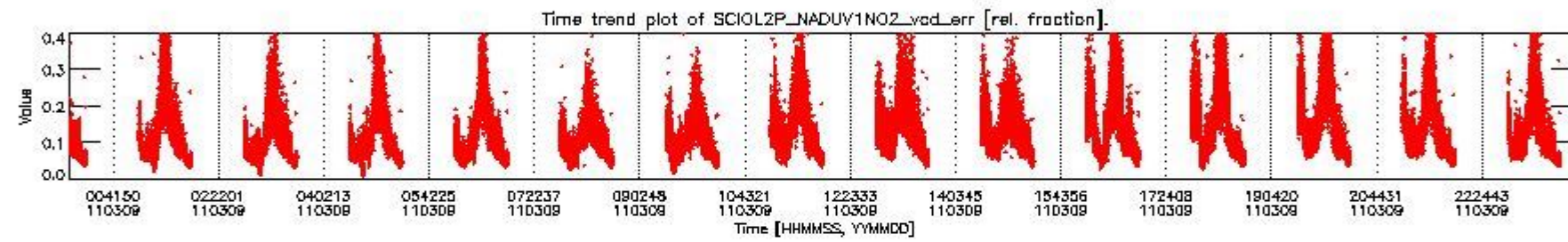
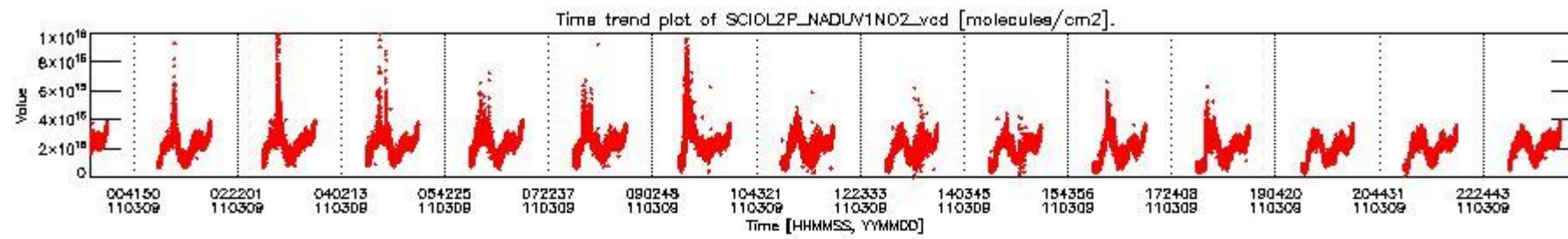
SCIOL2P\_NADUV003\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



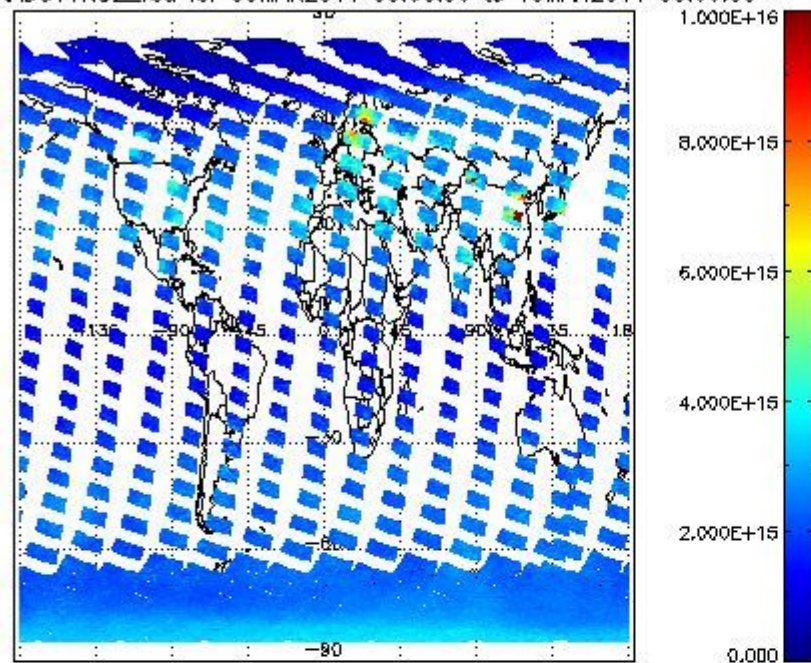
SCIOL2P\_NADUV003\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



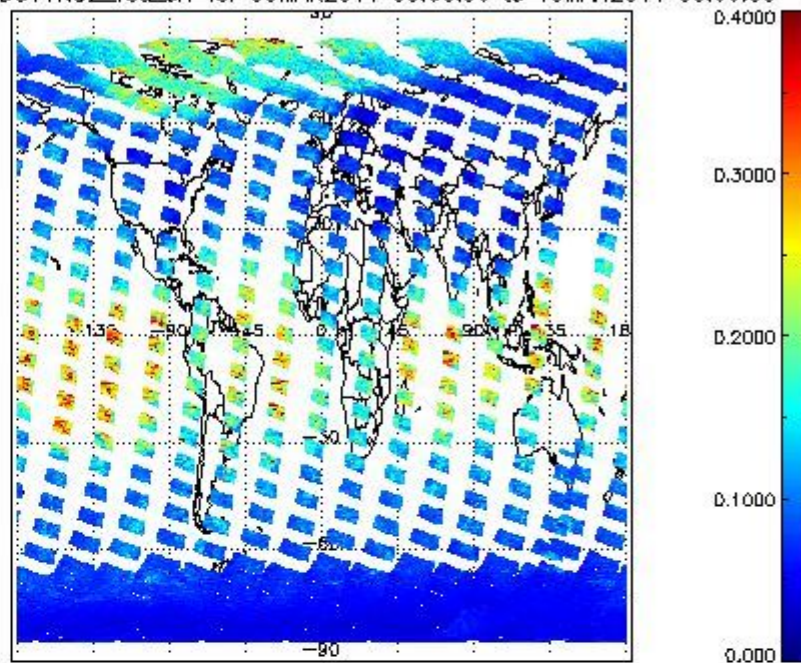
2.2.2.2 NO2 (UV1)



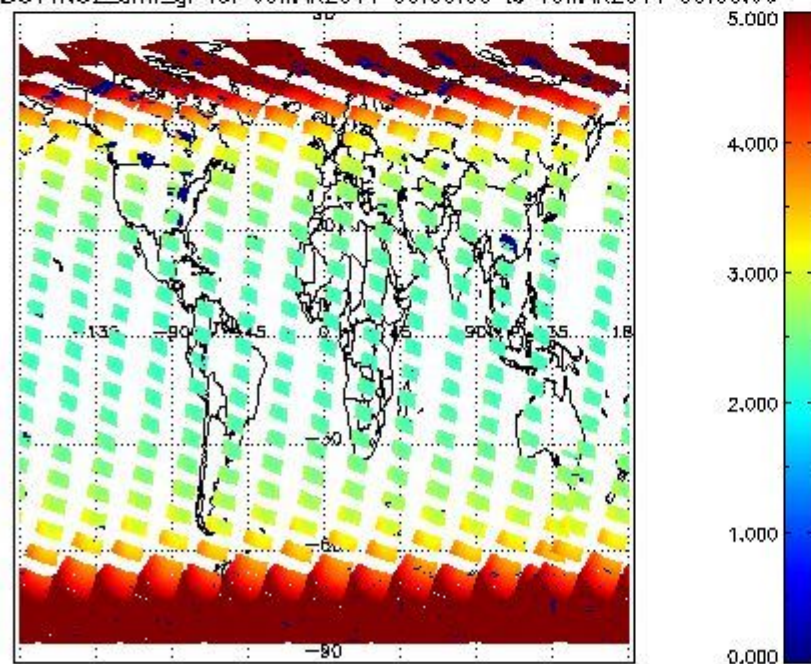
SCIOL2P\_NADUV1NO2\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



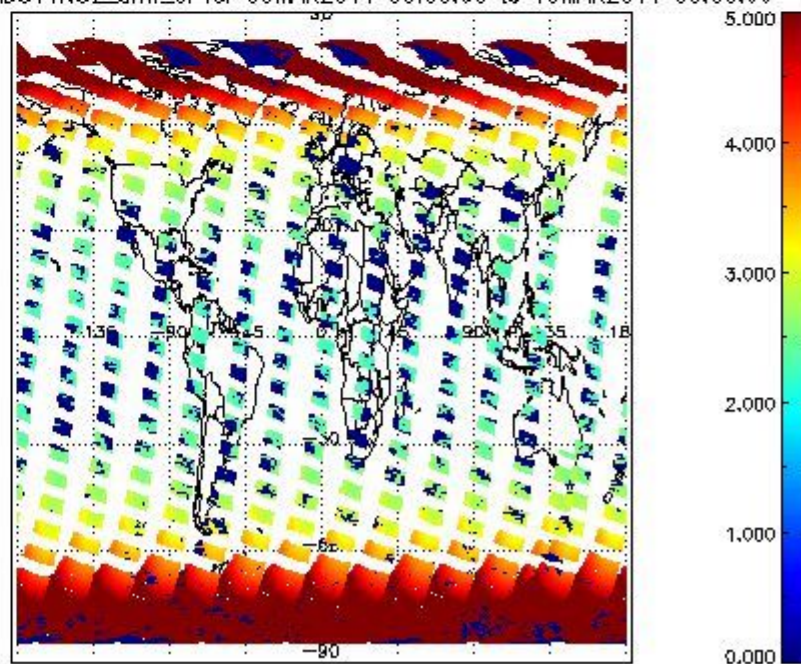
SCIOL2P\_NADUV1NO2\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

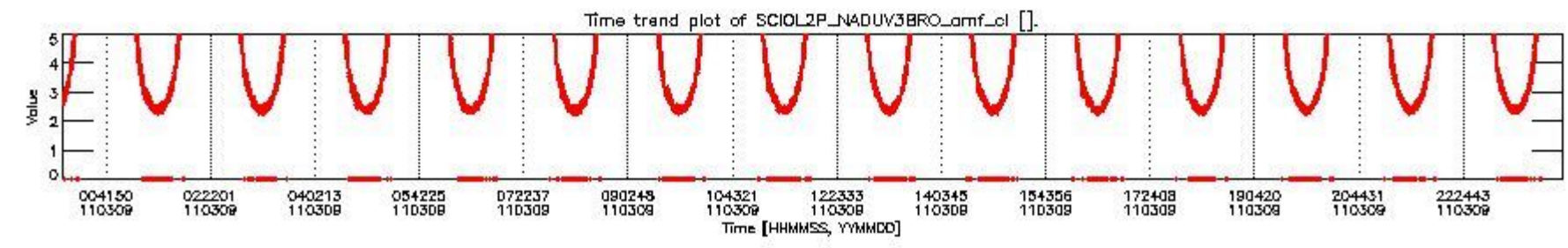
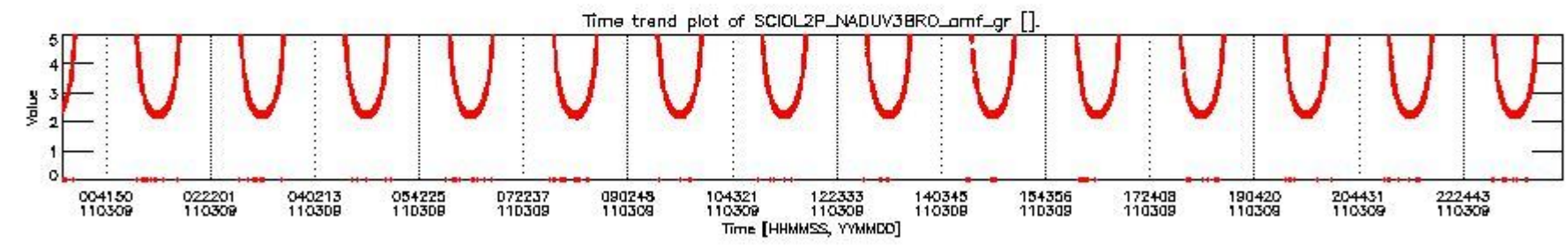
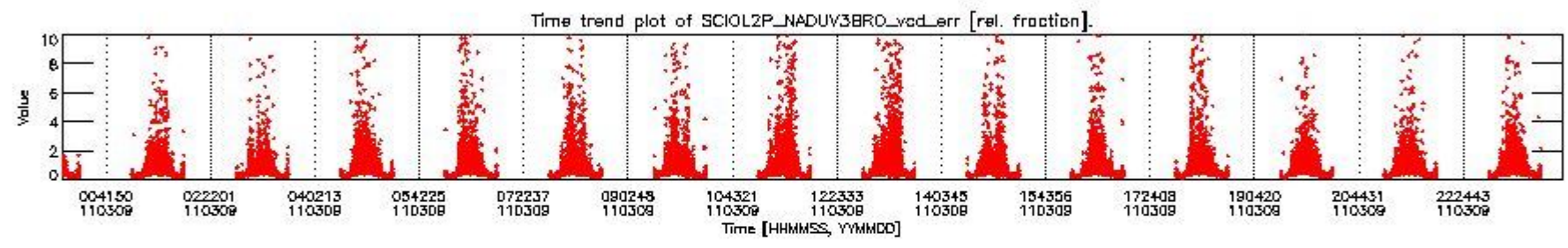
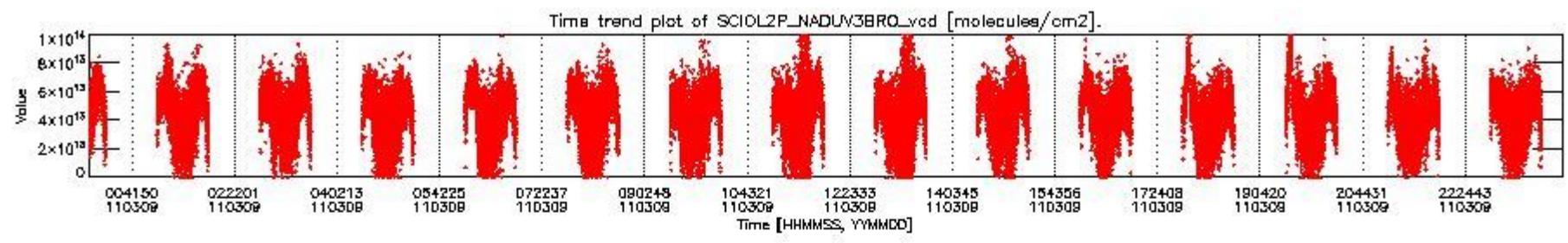


SCIOL2P\_NADUV1NO2\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

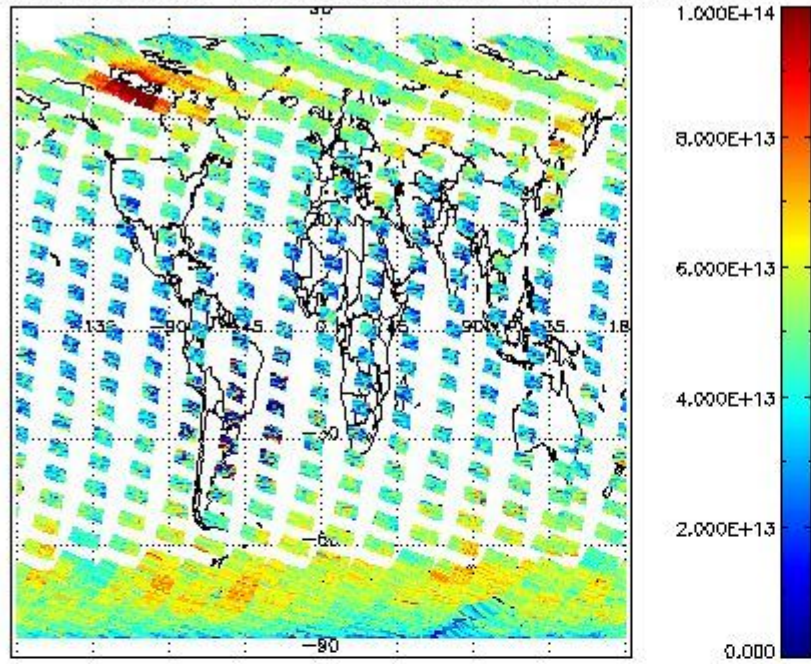


2.2.2.3 Bro (UV3)

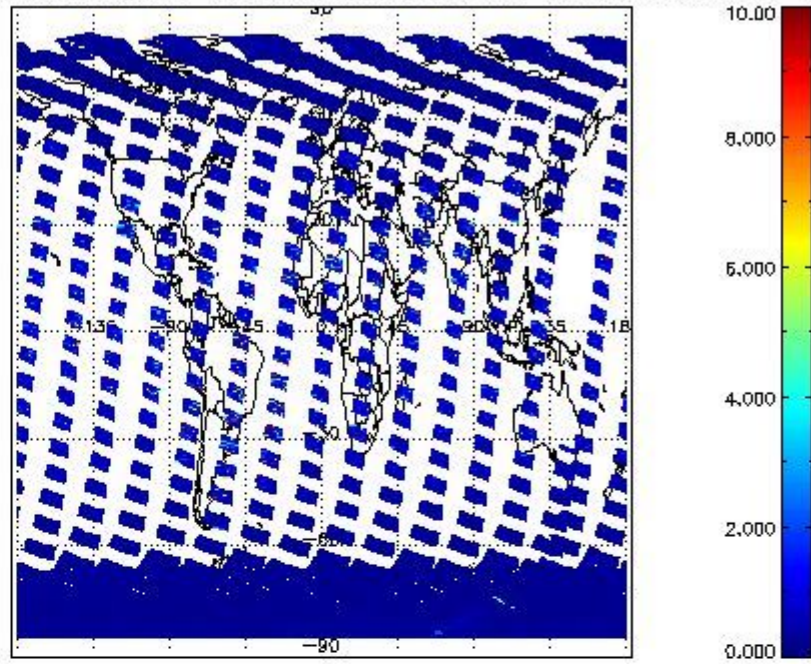




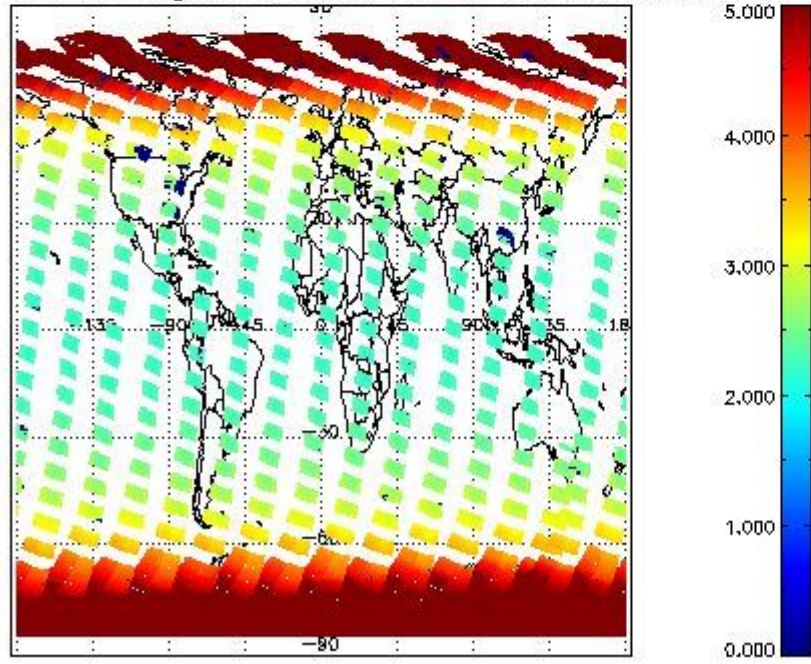
SCIOL2P\_NADUV3BRO\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



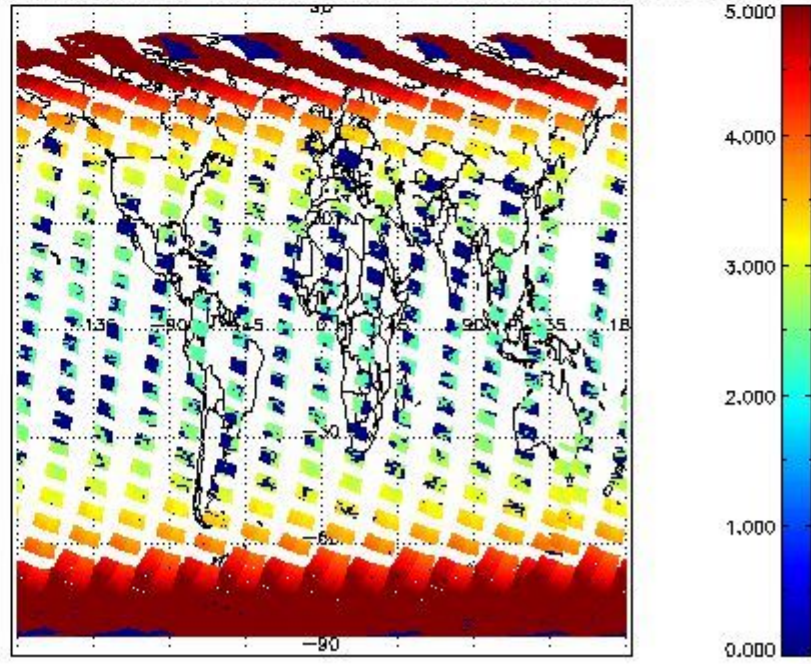
SCIOL2P\_NADUV3BRO\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



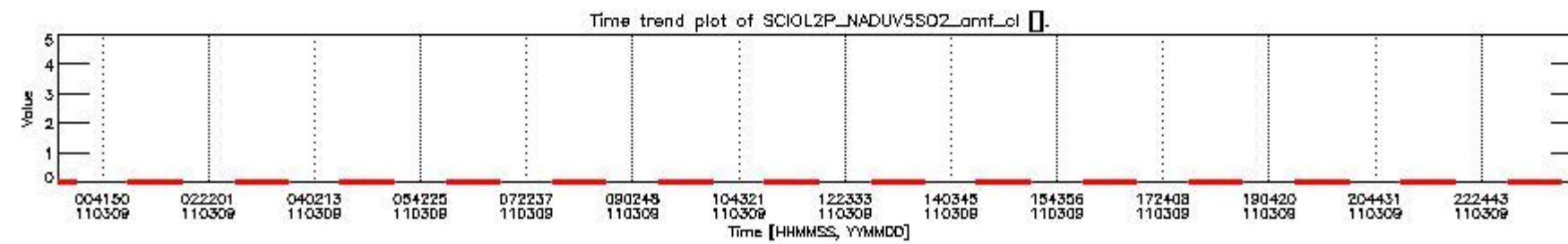
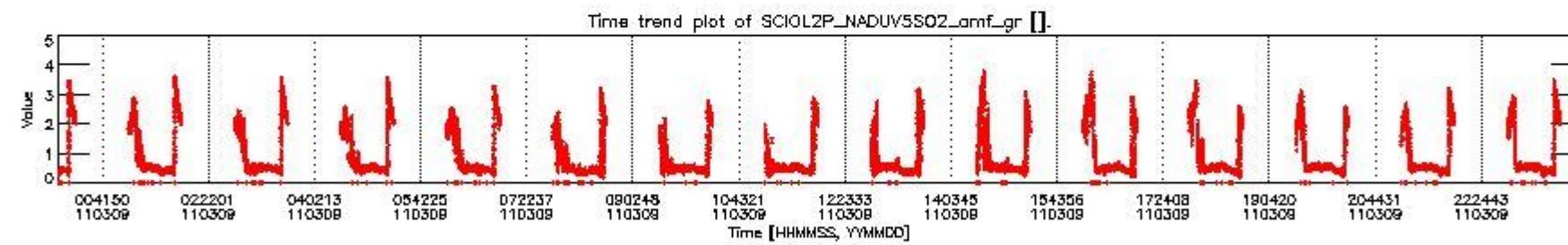
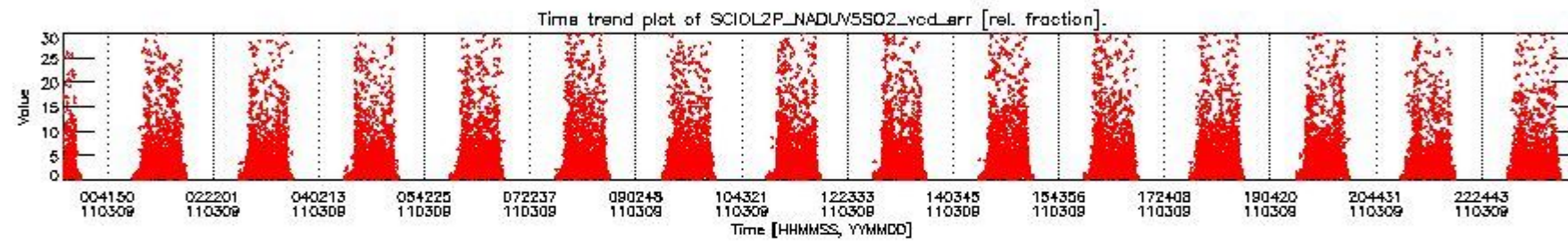
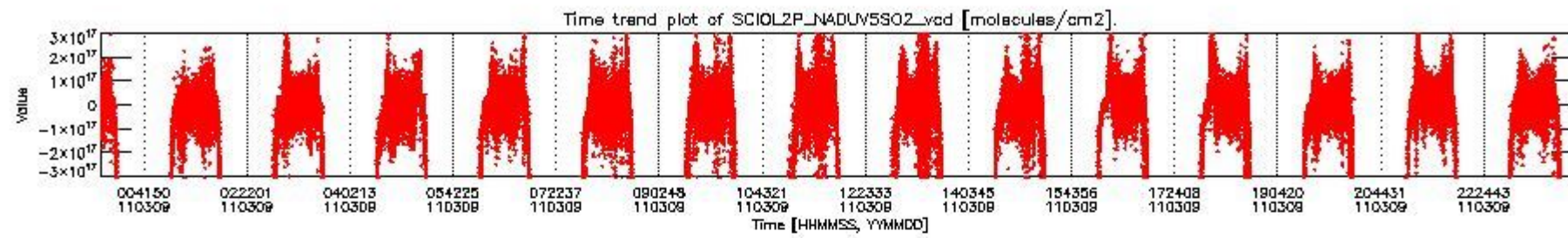
SCIOL2P\_NADUV3BRO\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



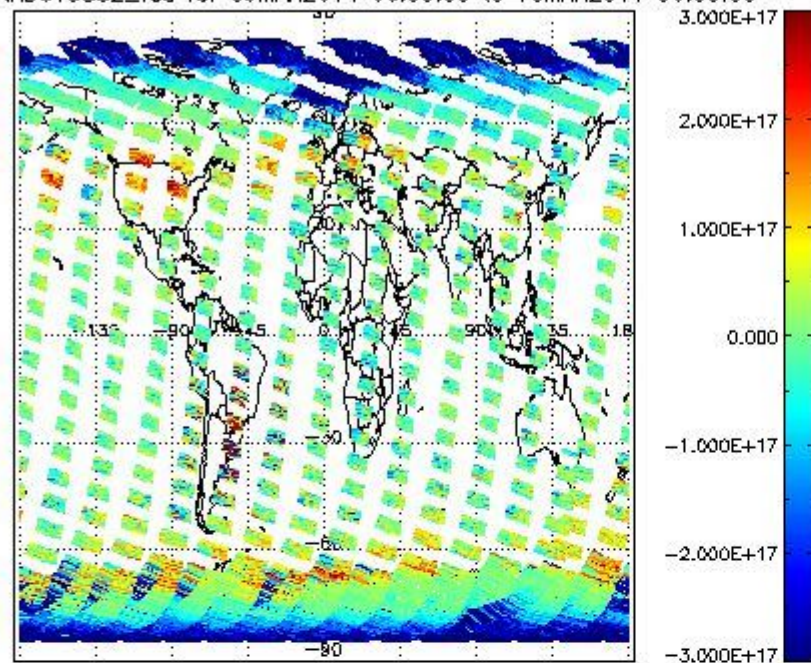
SCIOL2P\_NADUV3BRO\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



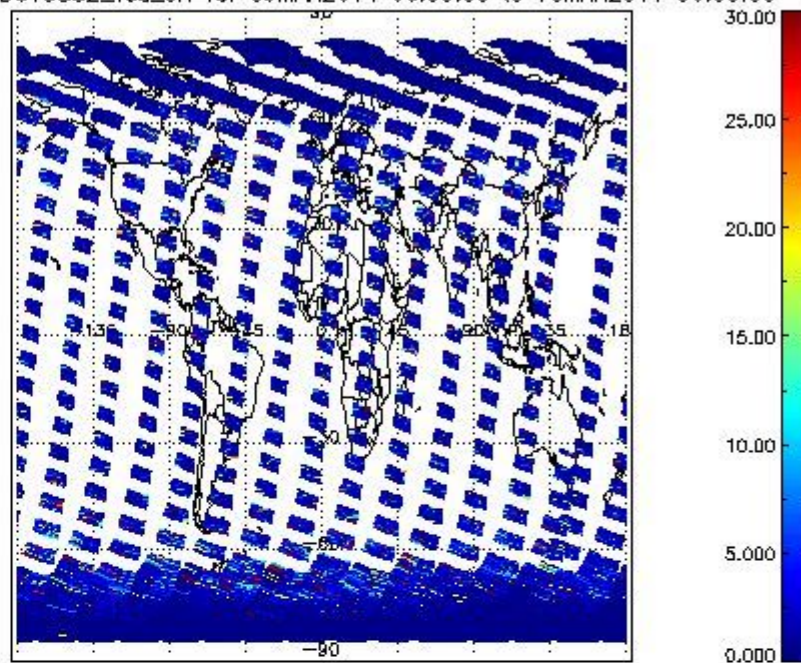
#### 2.2.2.4 SO2 (UV5)



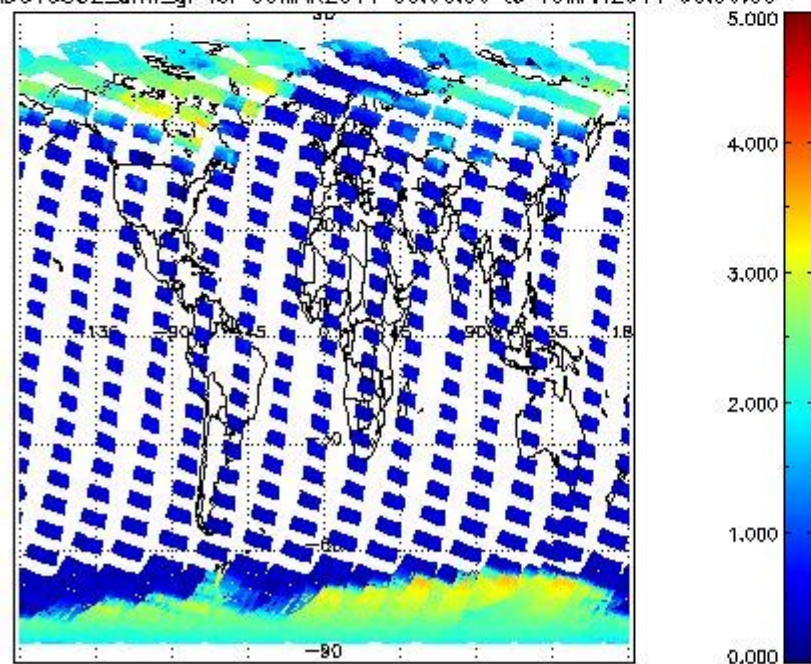
SCIOL2P\_NADUV5SO2\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



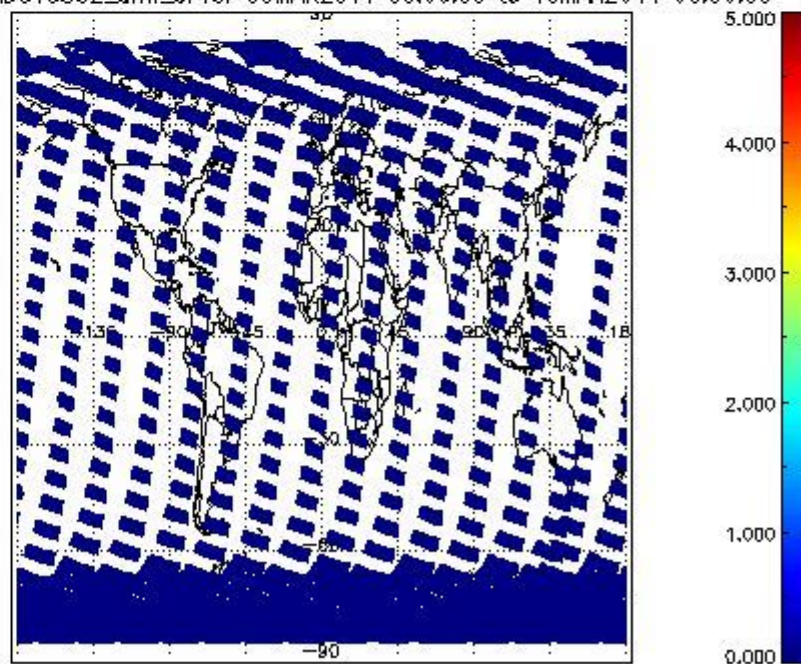
SCIOL2P\_NADUV5SO2\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



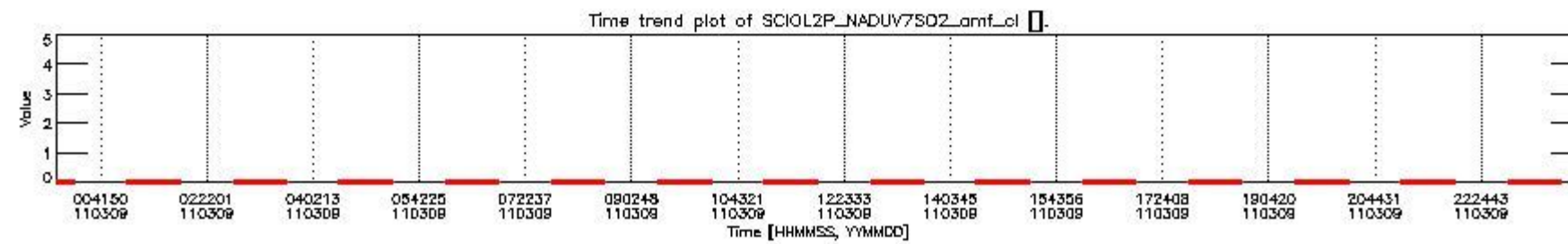
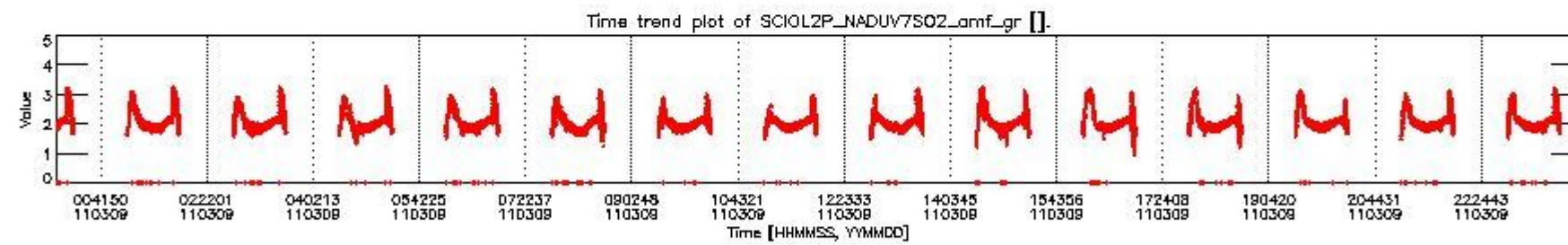
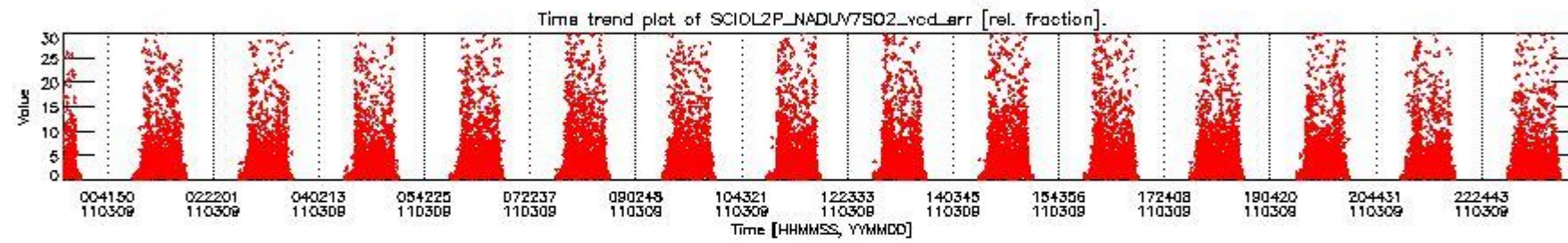
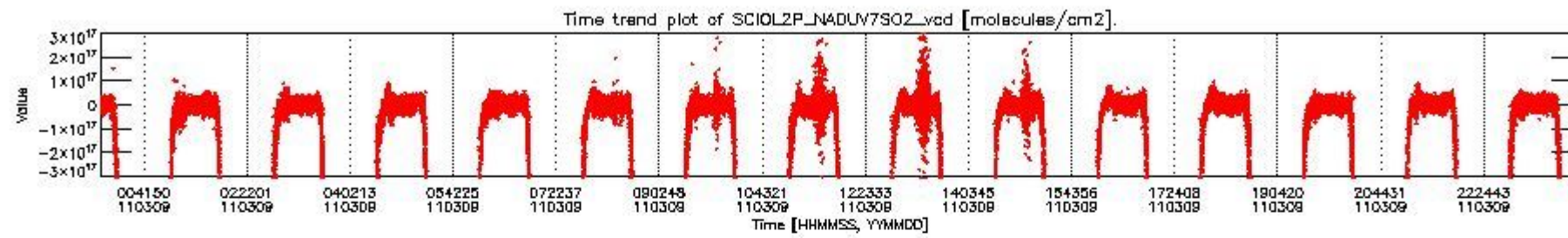
SCIOL2P\_NADUV5SO2\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



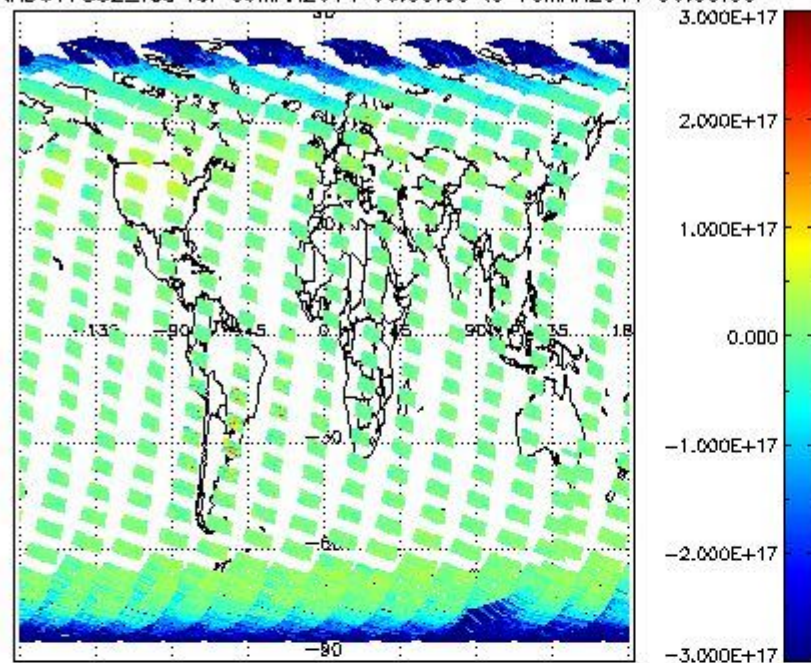
SCIOL2P\_NADUV5SO2\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



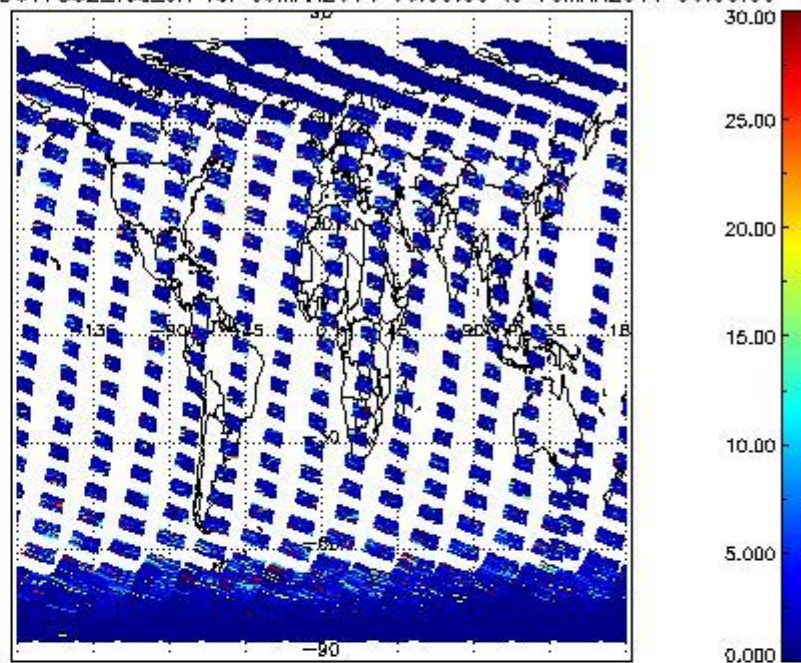
### 2.2.2.5 SO2 (UV7)



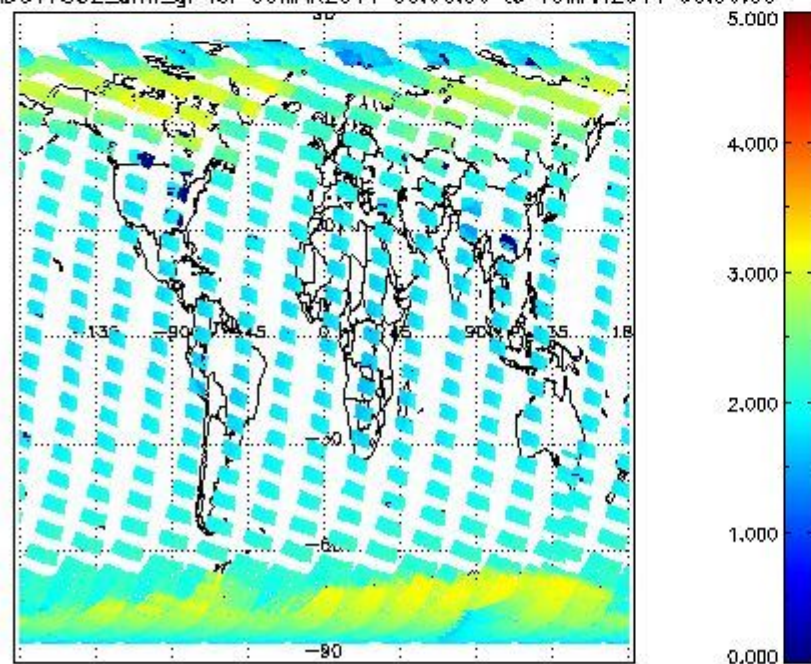
SCIOL2P\_NADUV7S02\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



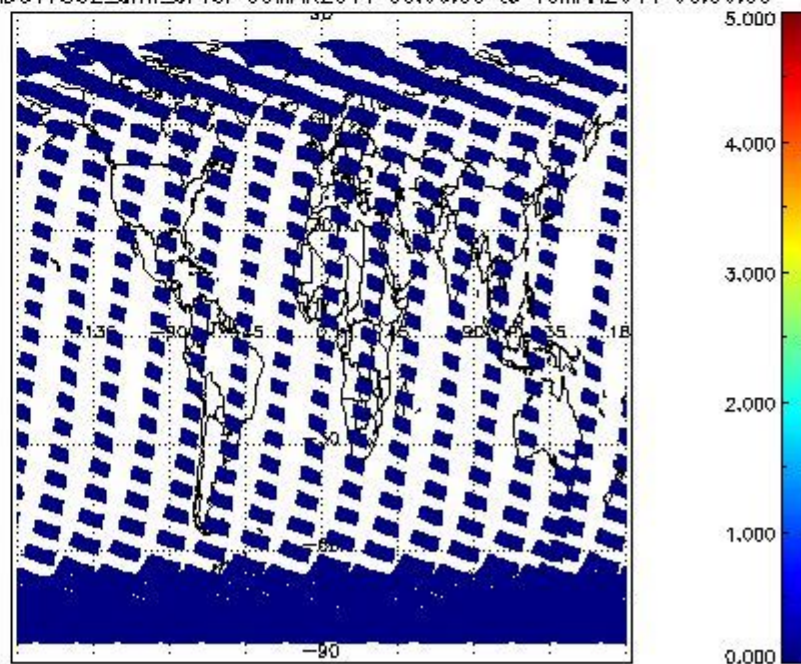
SCIOL2P\_NADUV7S02\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



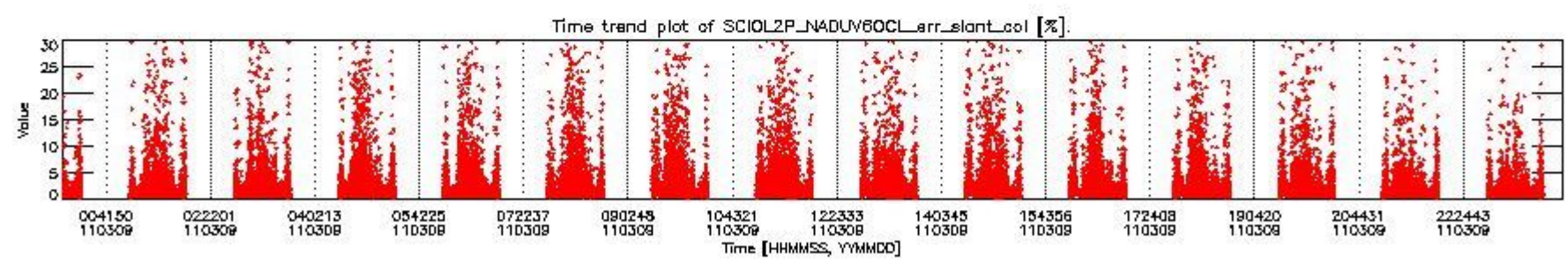
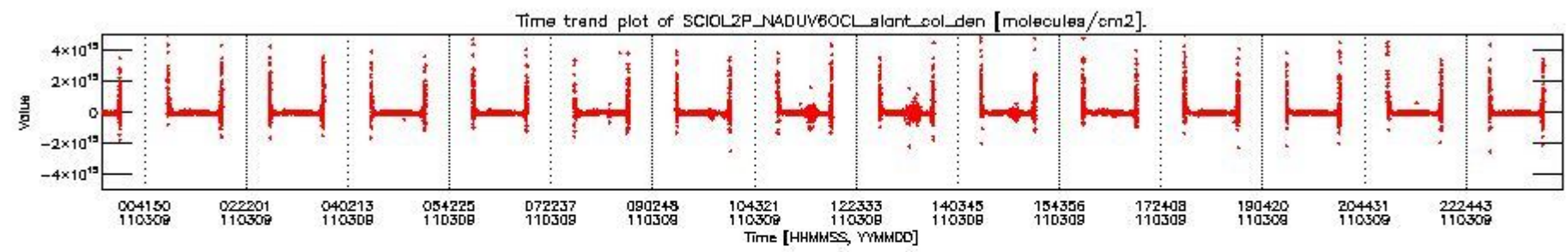
SCIOL2P\_NADUV7S02\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



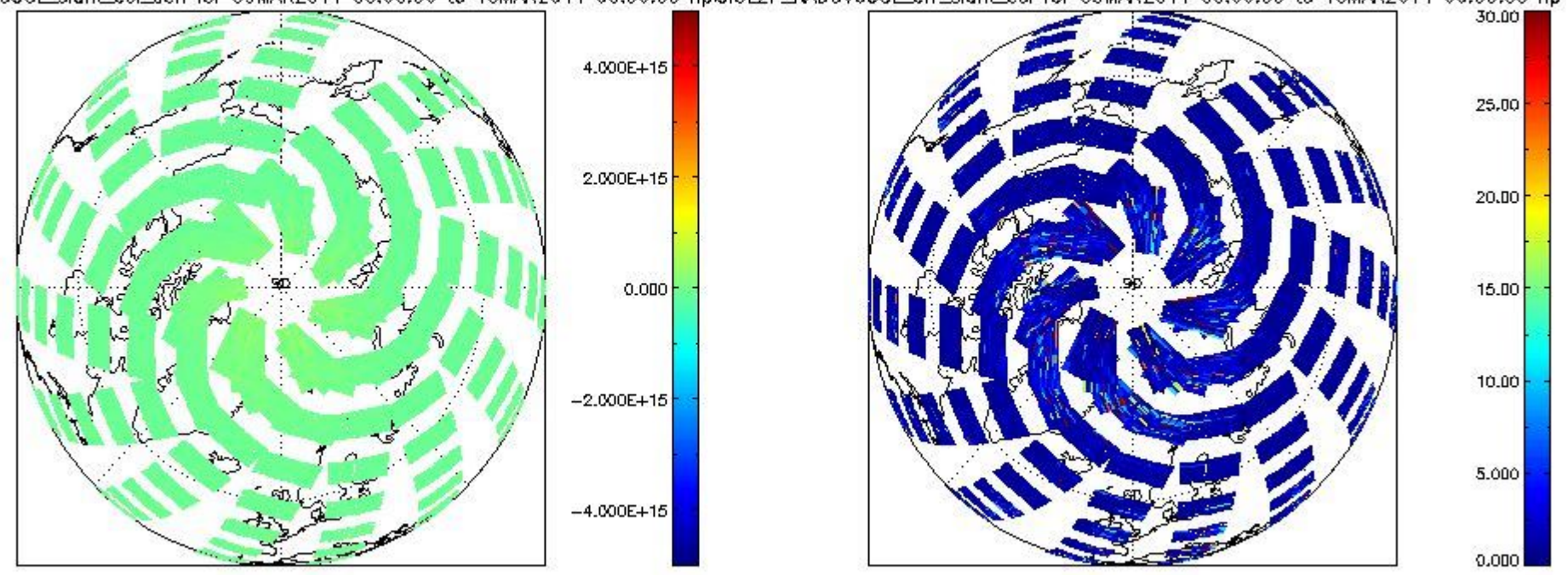
SCIOL2P\_NADUV7S02\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



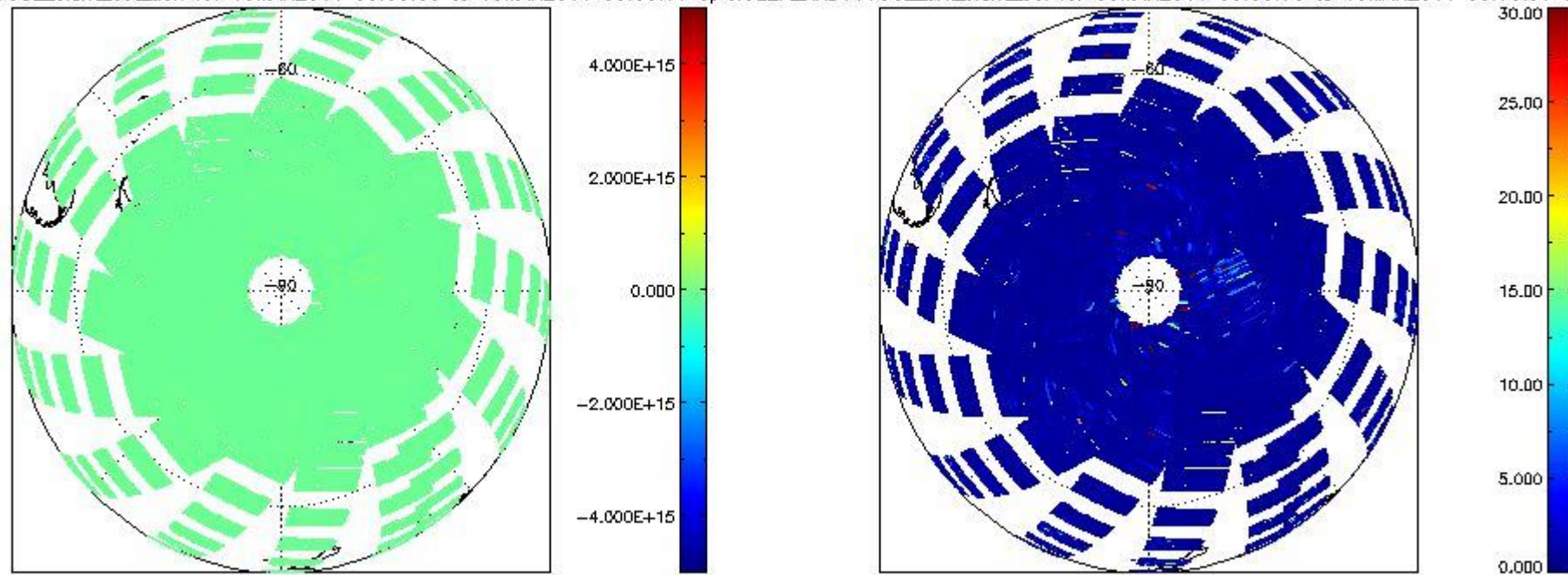
## 2.2.2.6 OCIO (UV6)



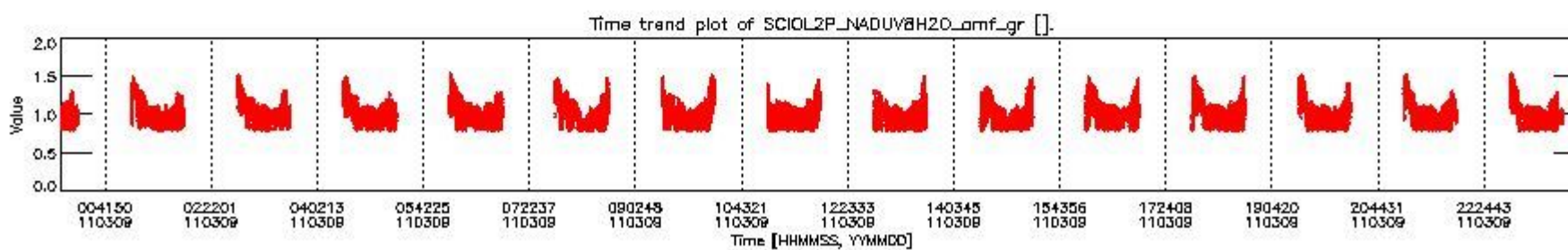
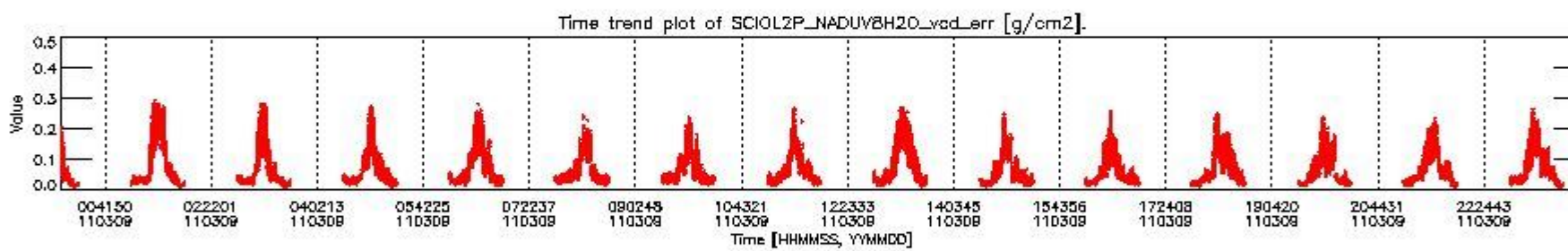
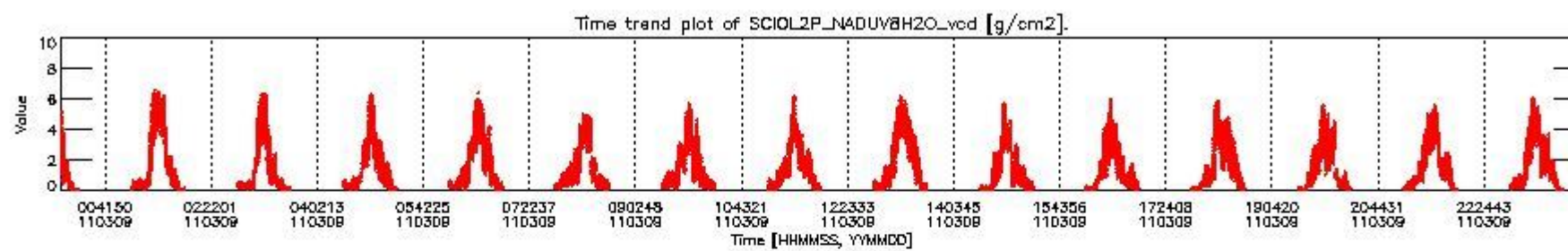
CIOL2P\_NADUV6OCLslant\_col\_den for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 npCIOL2P\_NADUV6OCLerr\_slant\_col for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 np



CIOL2P\_NADUV6OCL\_slant\_coLden for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 sp:CIOL2P\_NADUV6OCL\_err\_slant\_col for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 sp

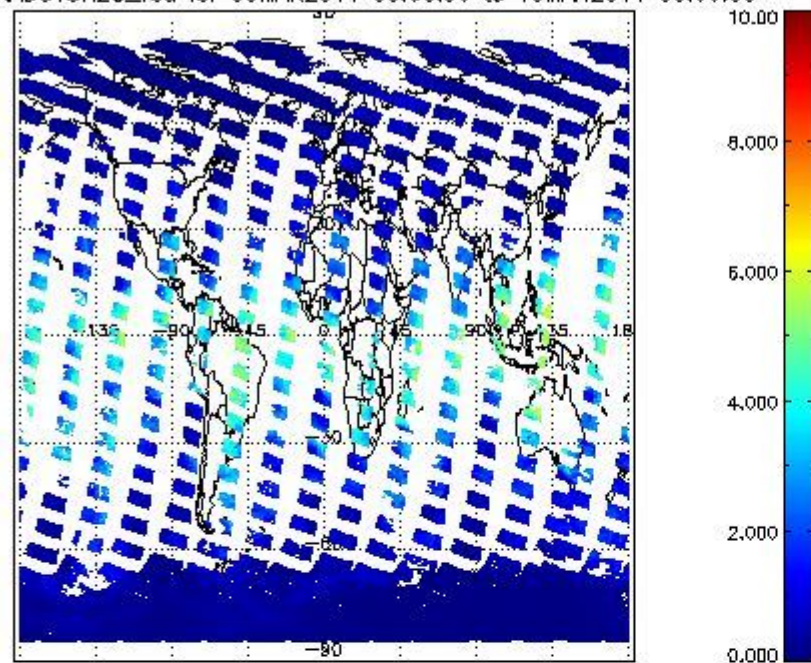


### 2.2.2.7 H2O (UV8)

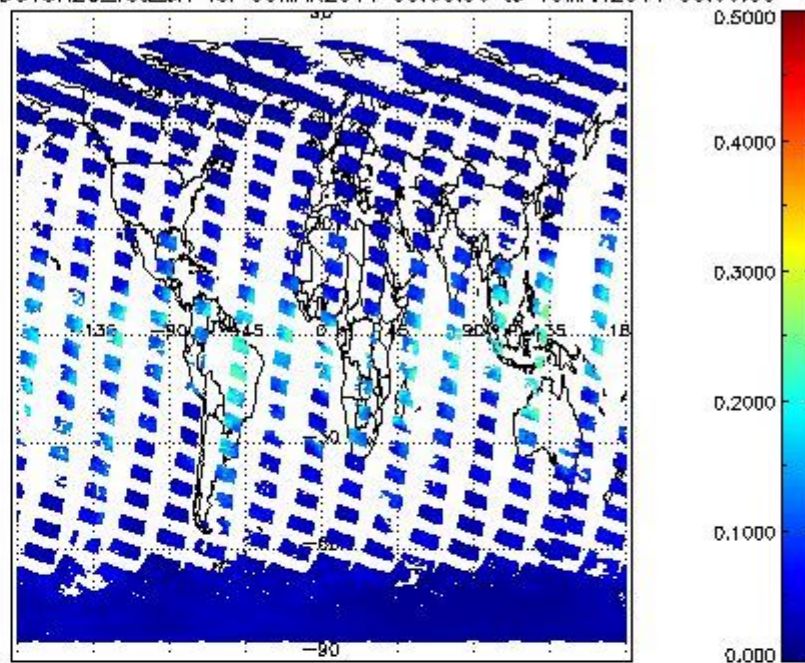




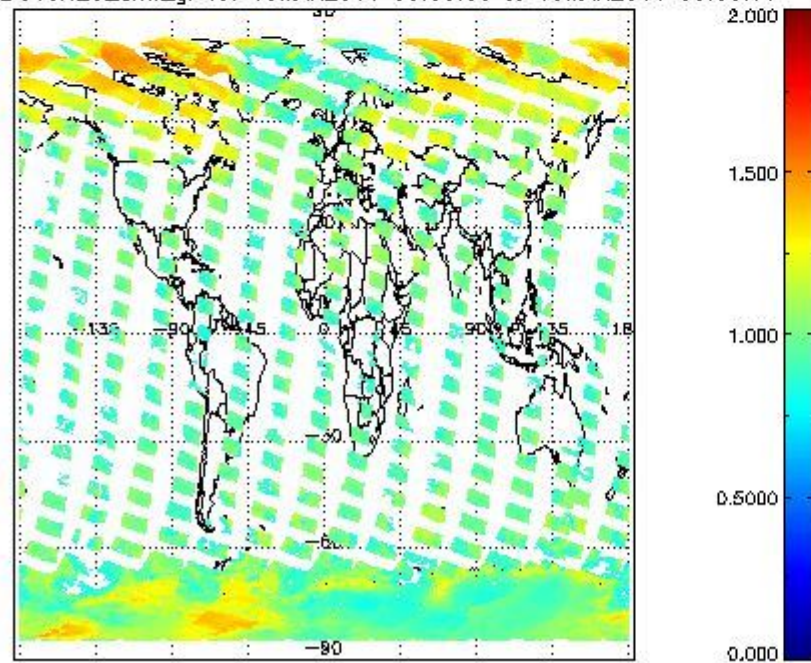
SCIOL2P\_NADUV8H2O\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

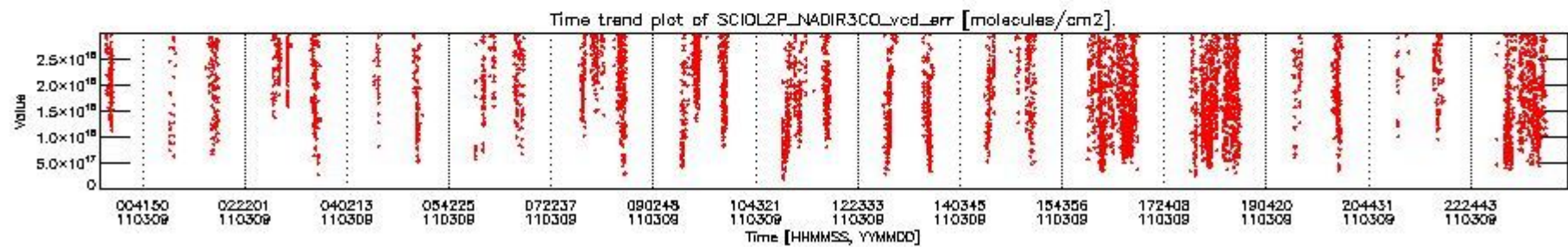
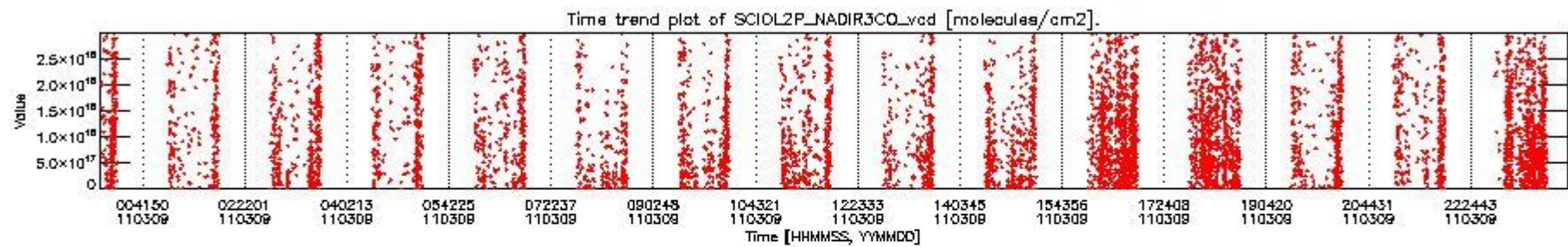


SCIOL2P\_NADUV8H2O\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

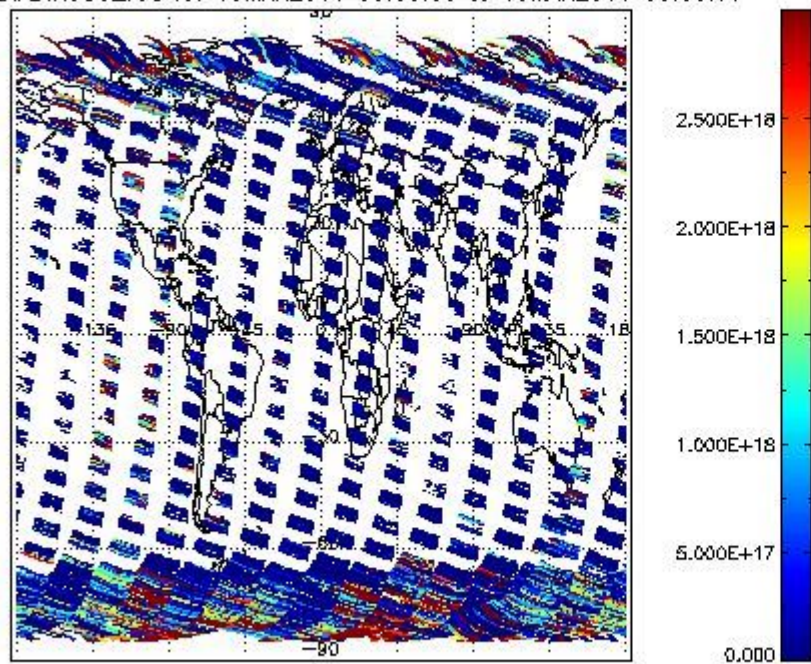


SCIOL2P\_NADUV8H2O\_arnf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

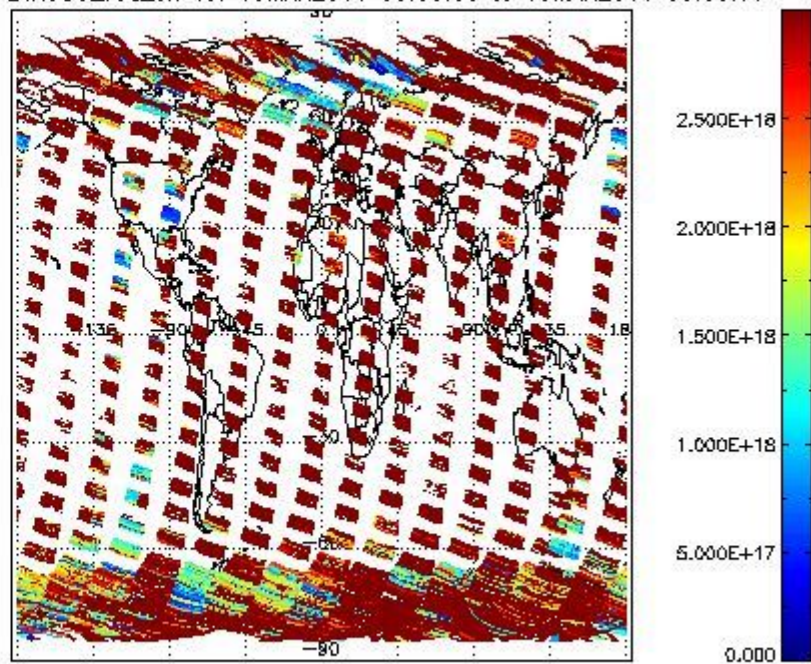




SCIOL2P\_NADIR3CO\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



### 2.2.3 Limb

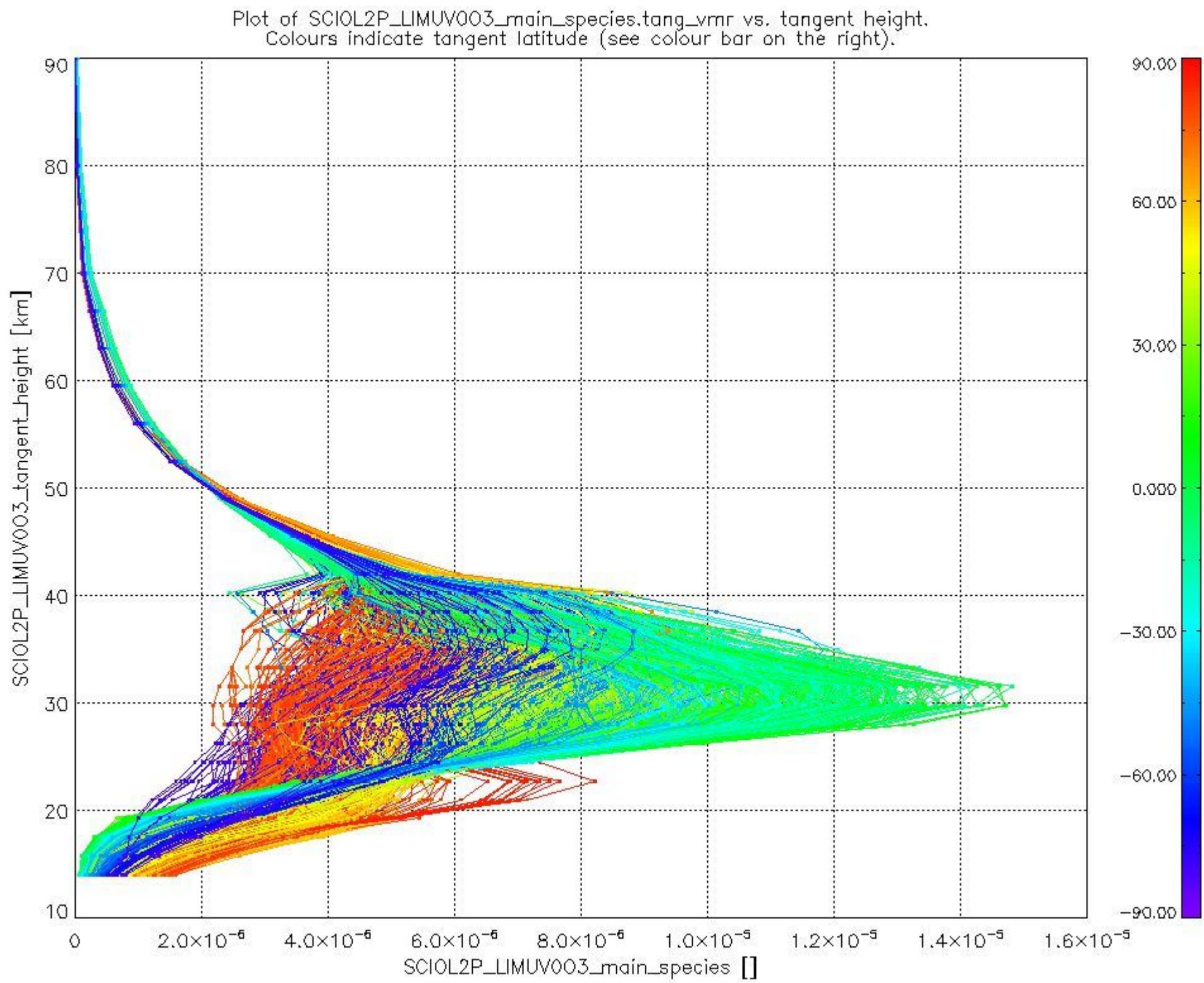
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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

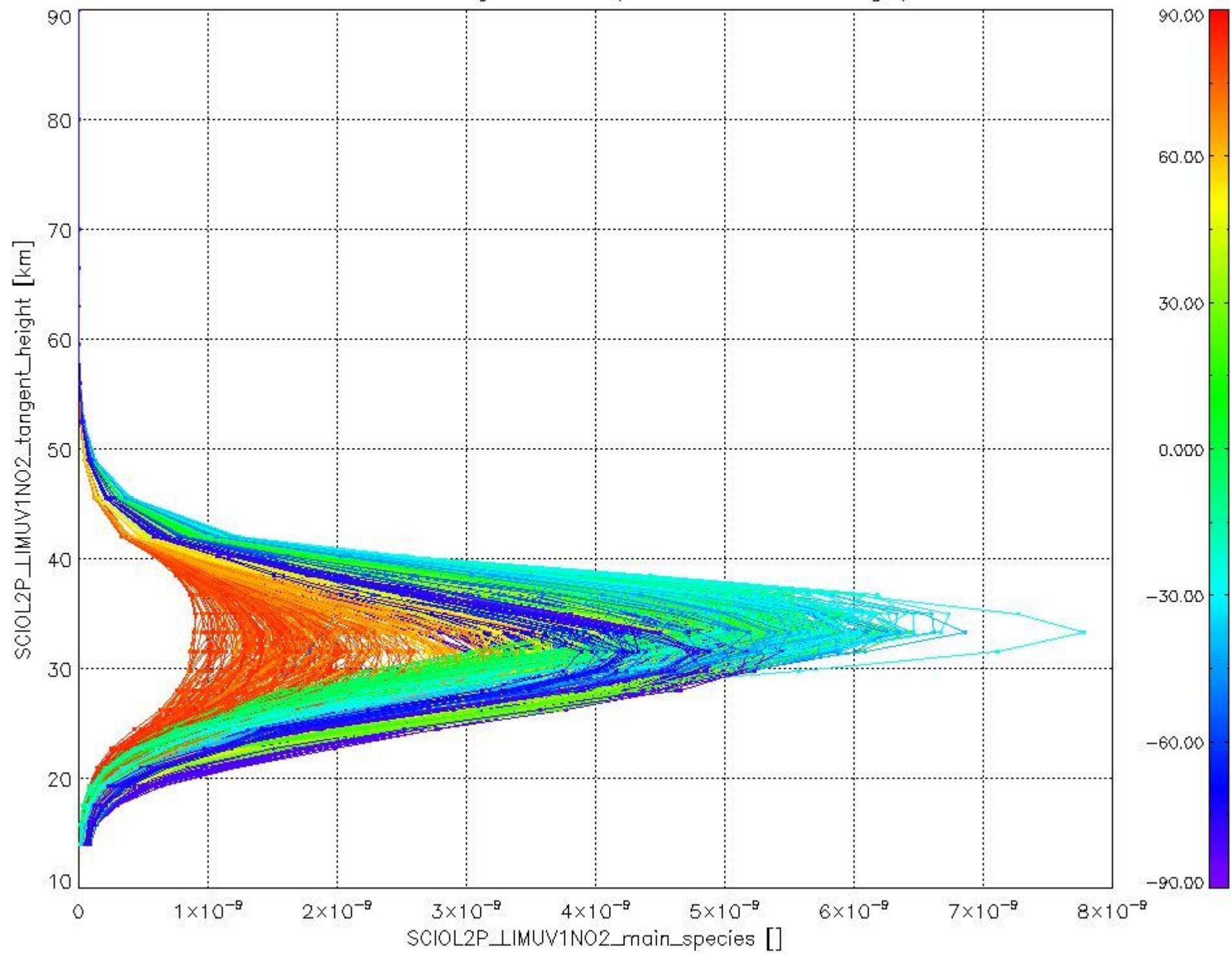
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



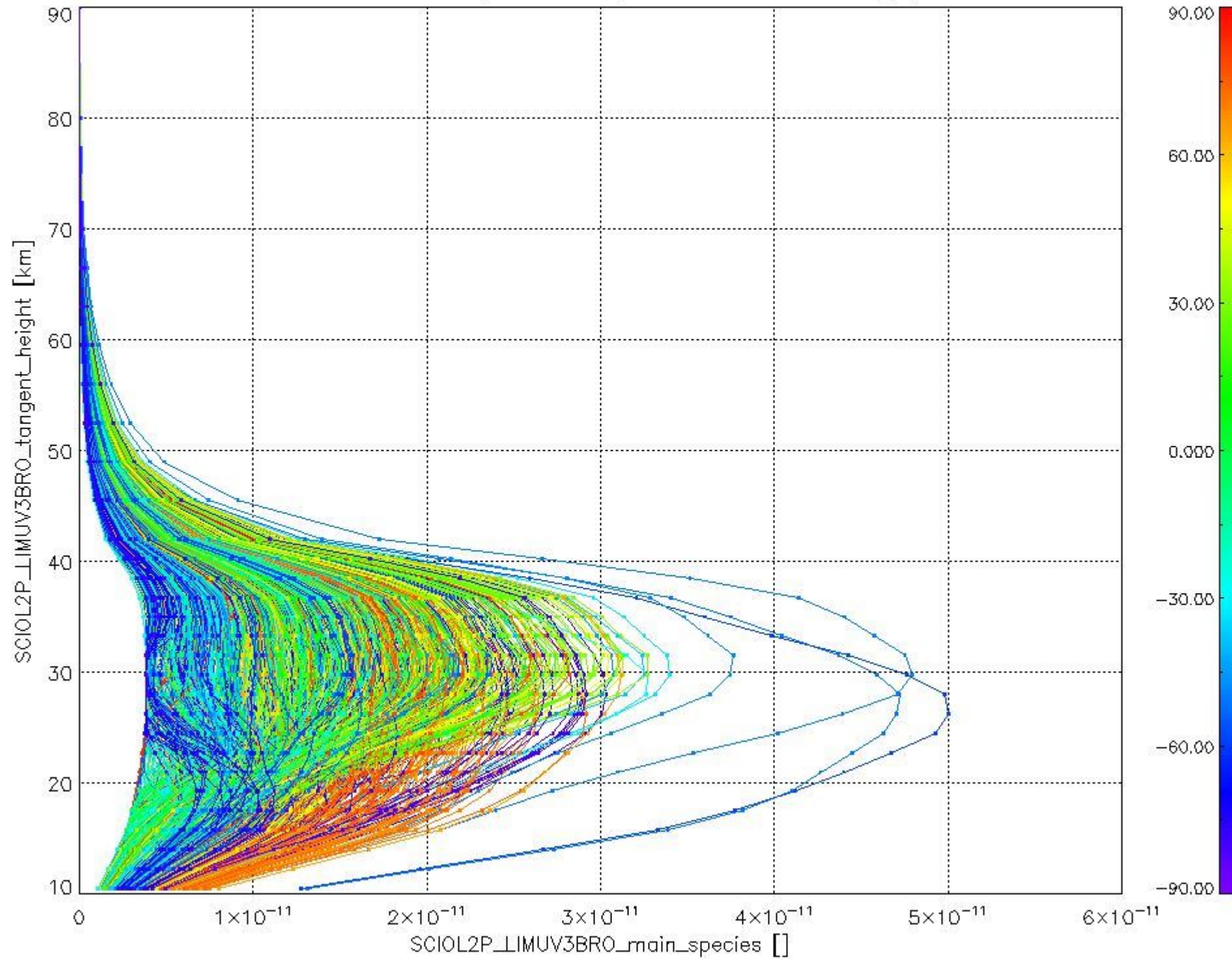
2.2.3.2 NO2 (UV1)

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).

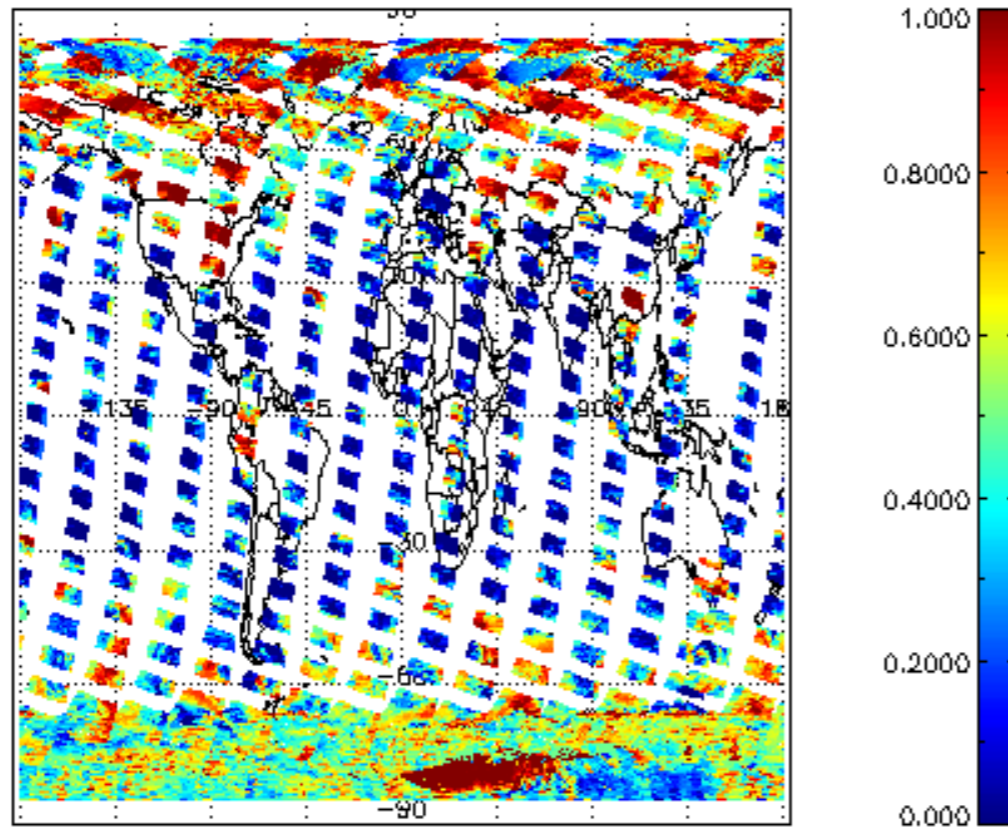


### 2.3 ADF monitoring

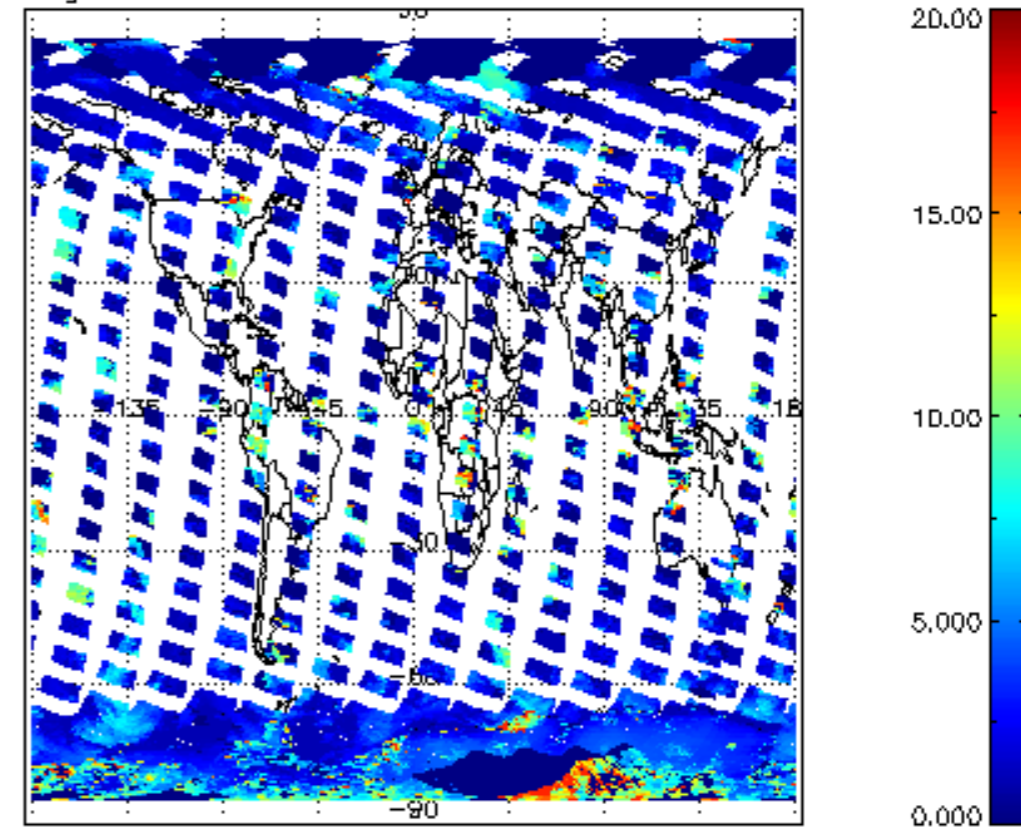
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110315_110028_20110308_192836_20110310_192836
3	SCI_MF1_AXVIEC20110315_110132_20110309_185151_20110311_185151



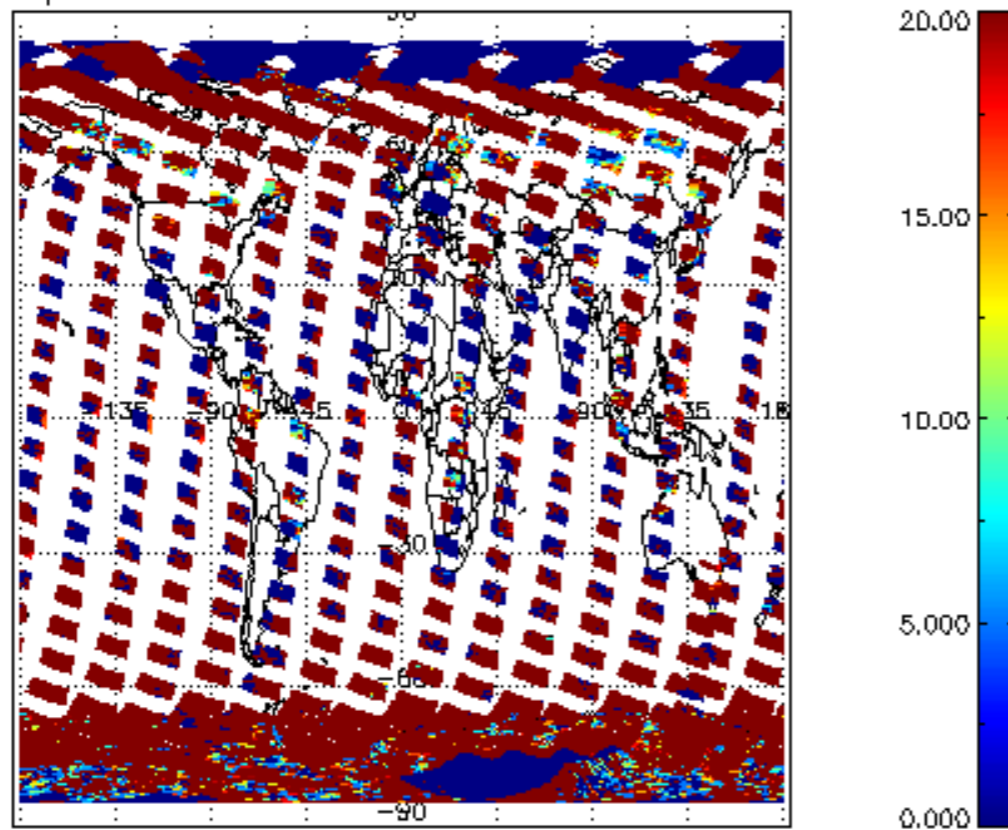
cL\_frac for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



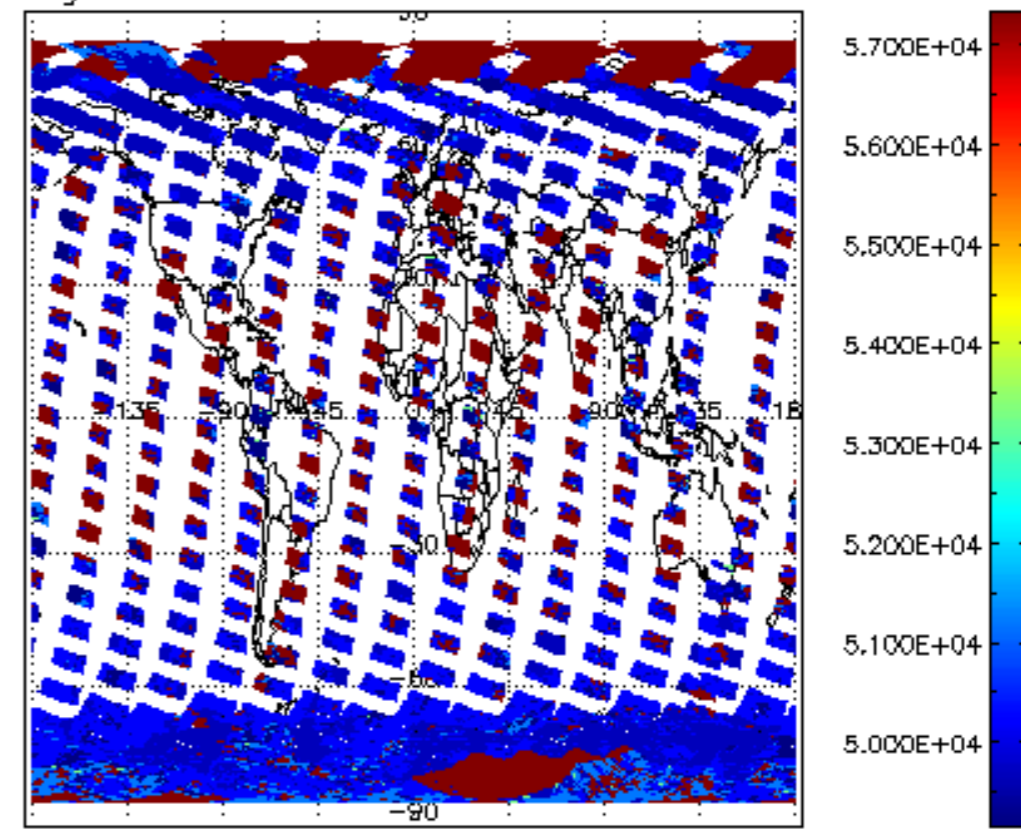
cL\_top\_height for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

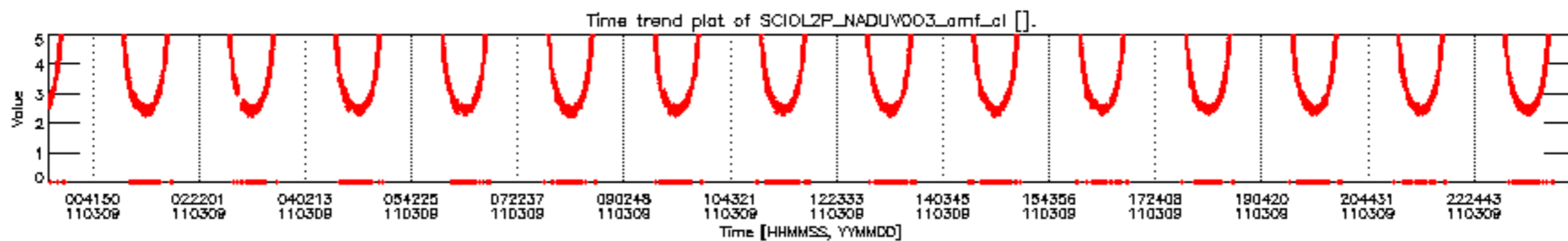
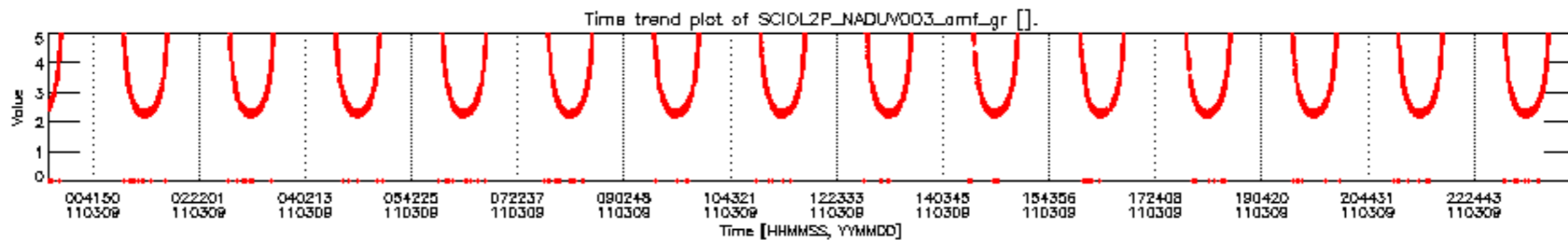
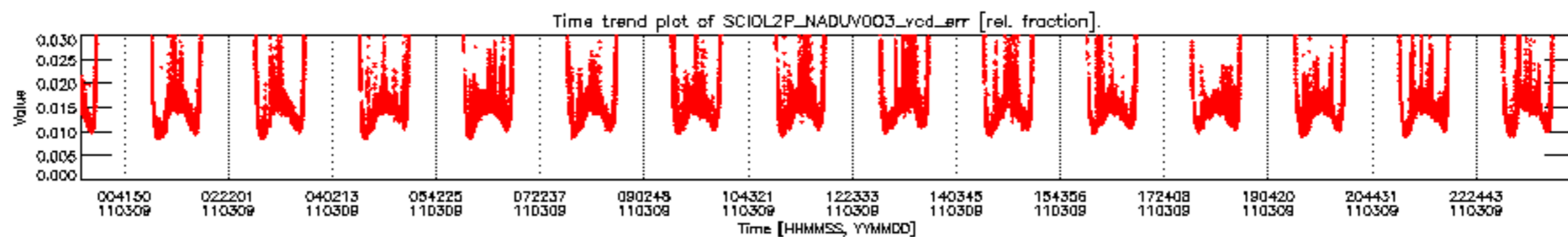
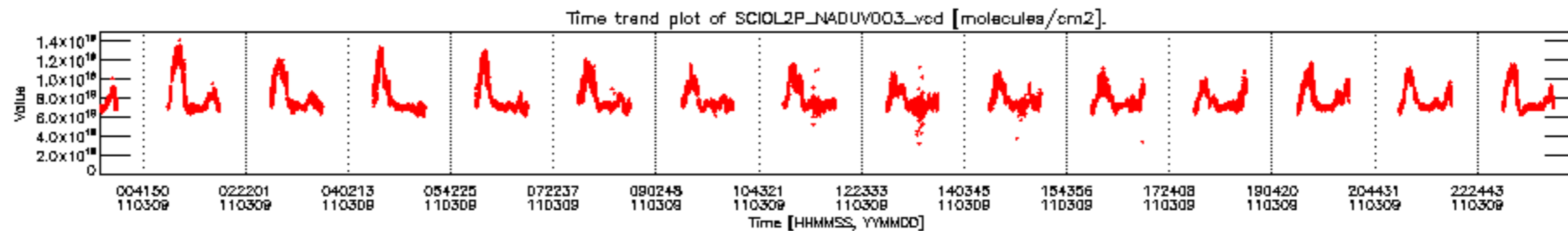


cL\_opt\_depth for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



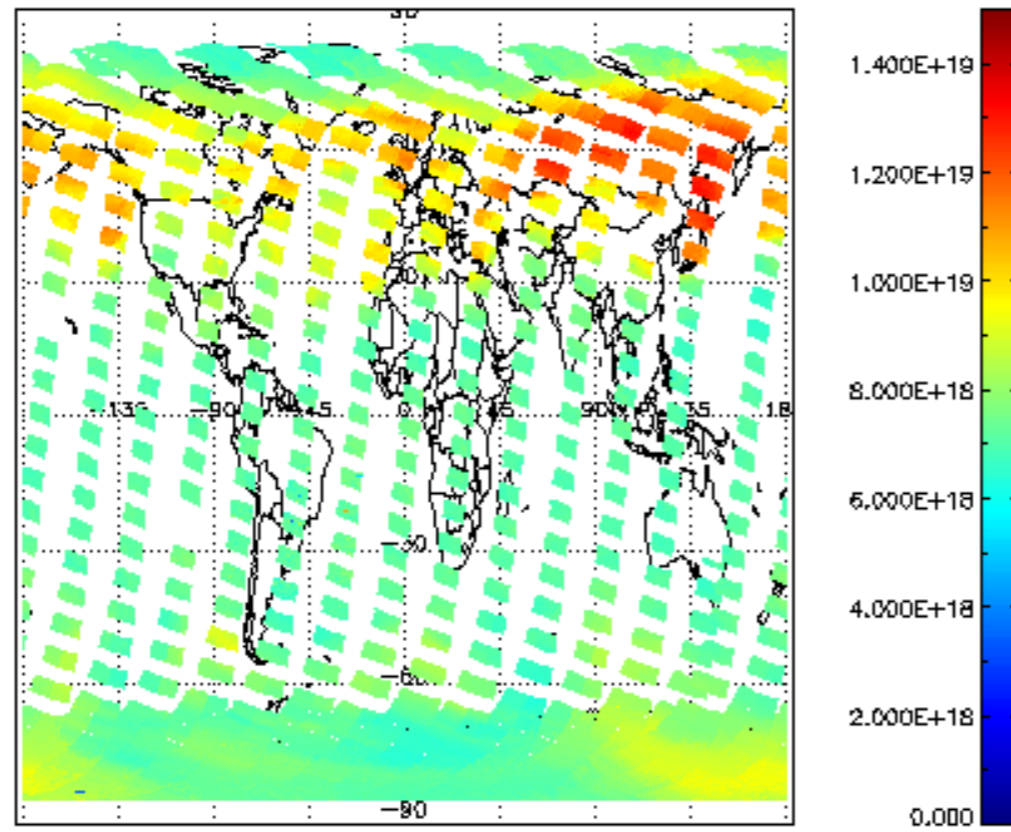
cloud\_flags for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



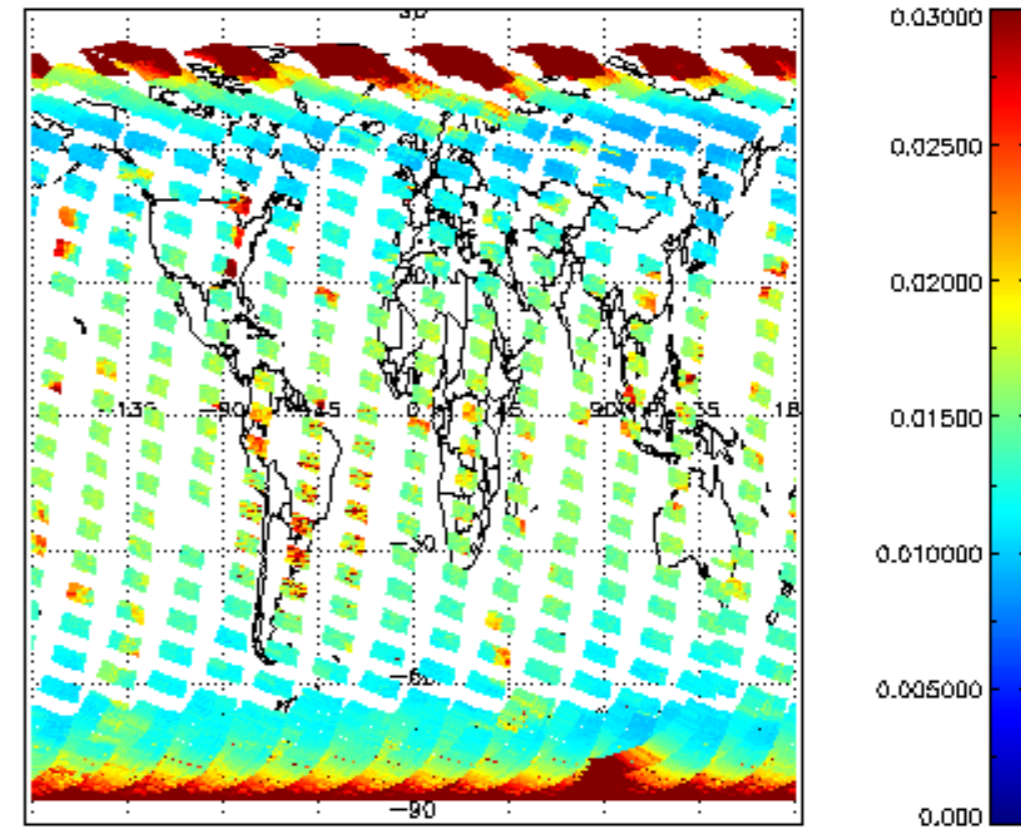




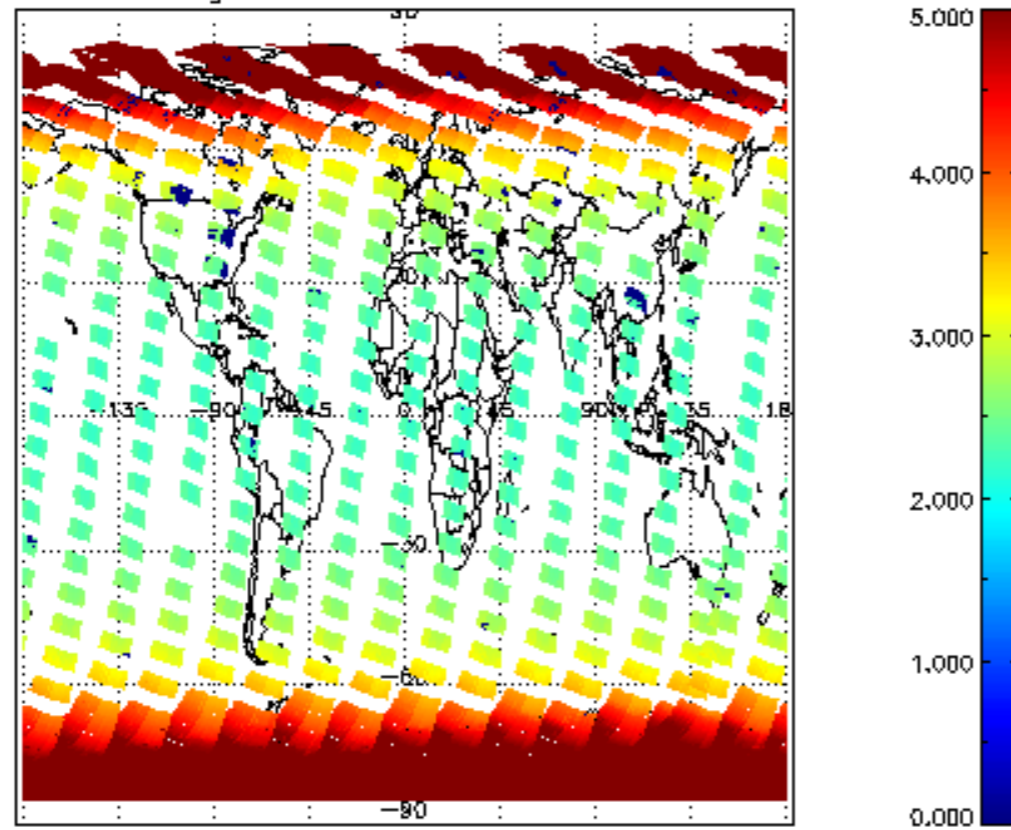
SCIOL2P\_NADUV003\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



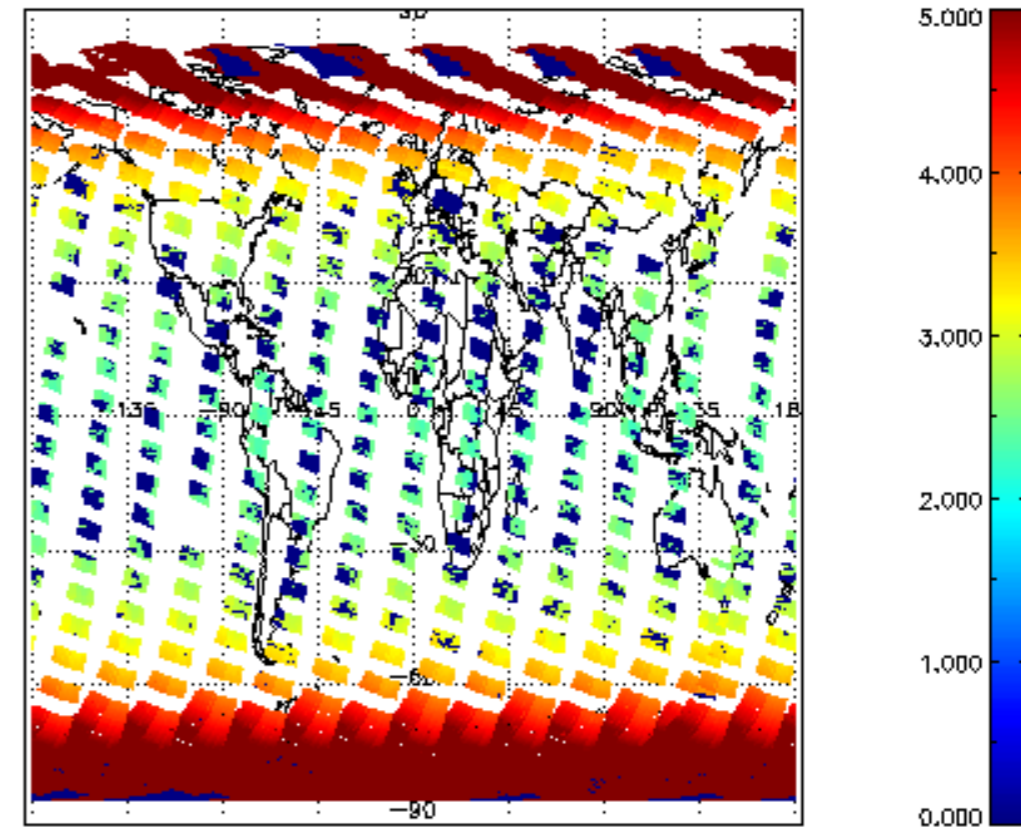
SCIOL2P\_NADUV003\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

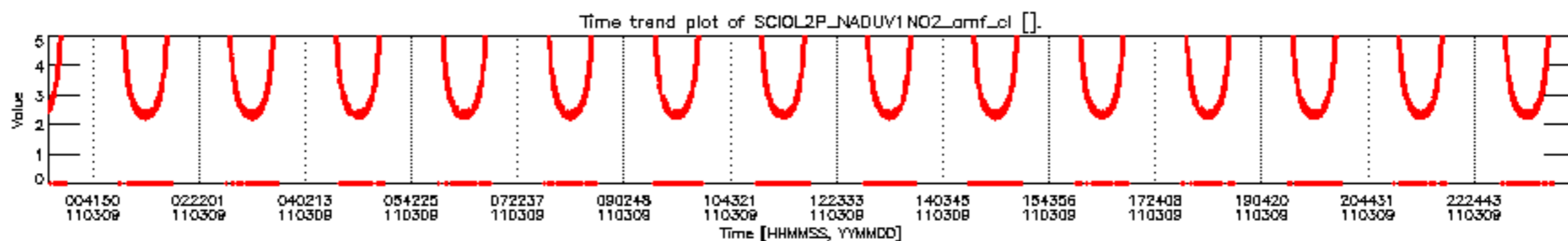
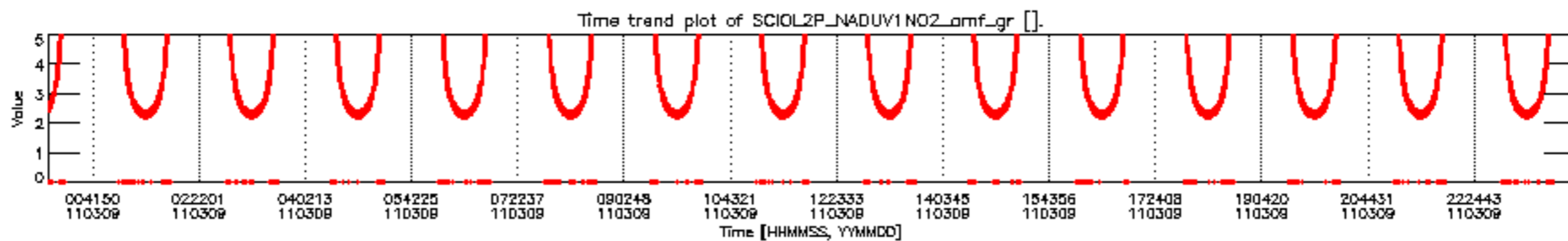
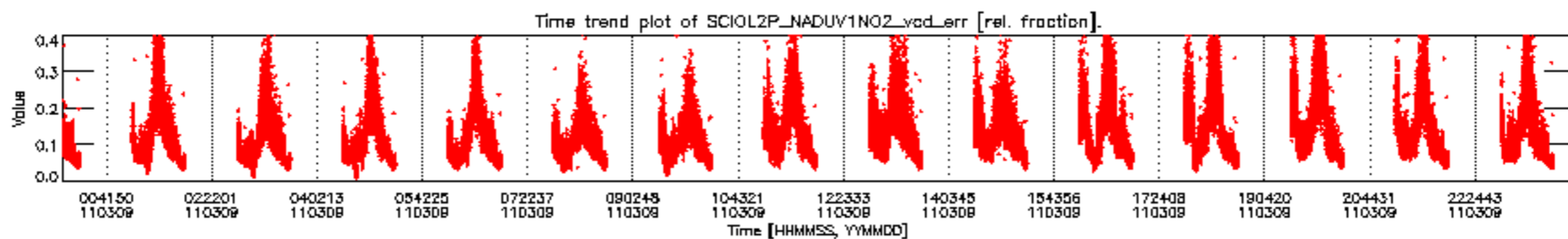
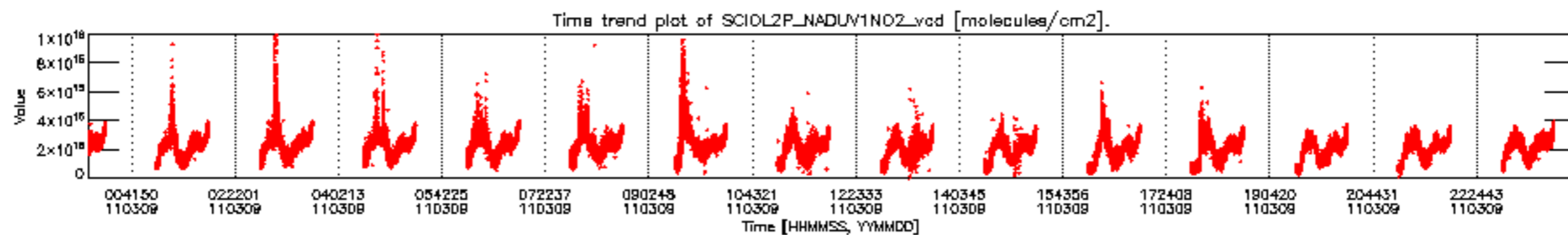


SCIOL2P\_NADUV003\_arnf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

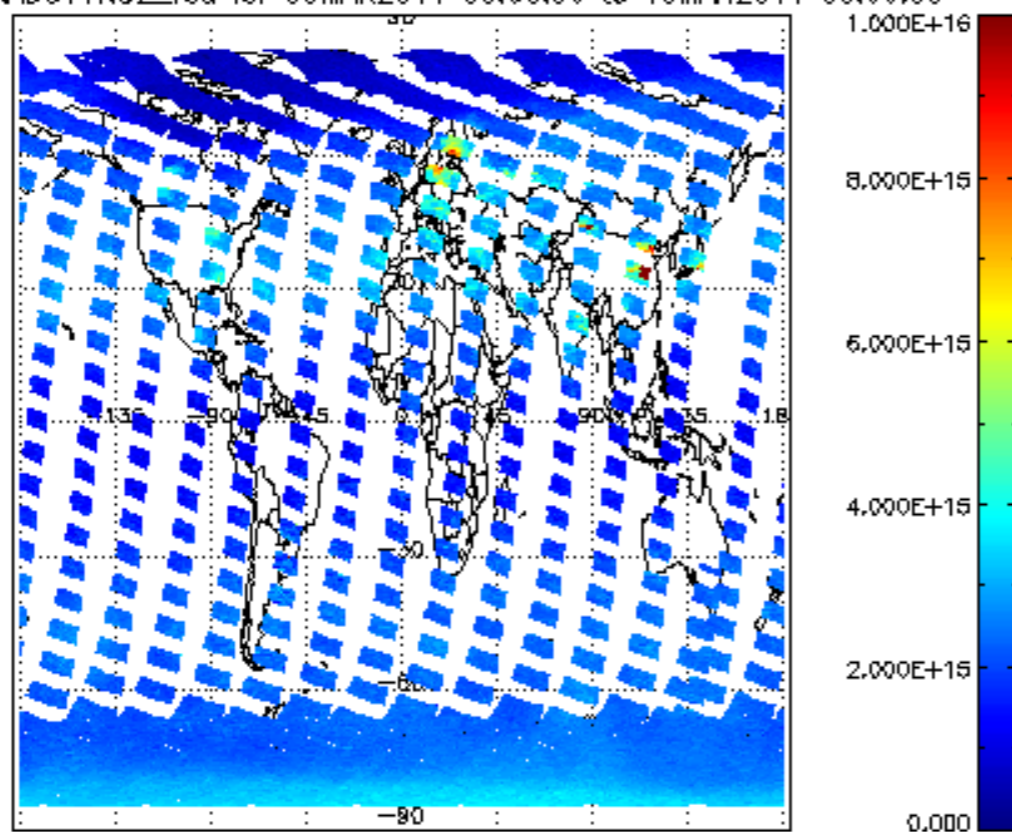


SCIOL2P\_NADUV003\_arnf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

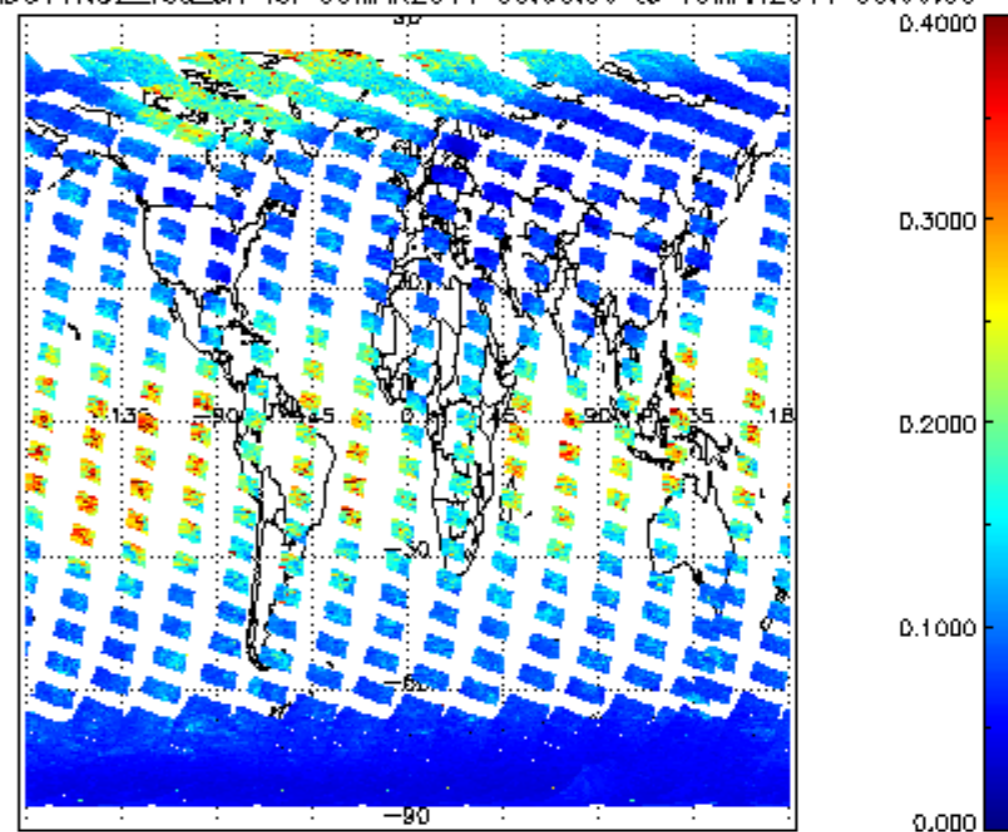




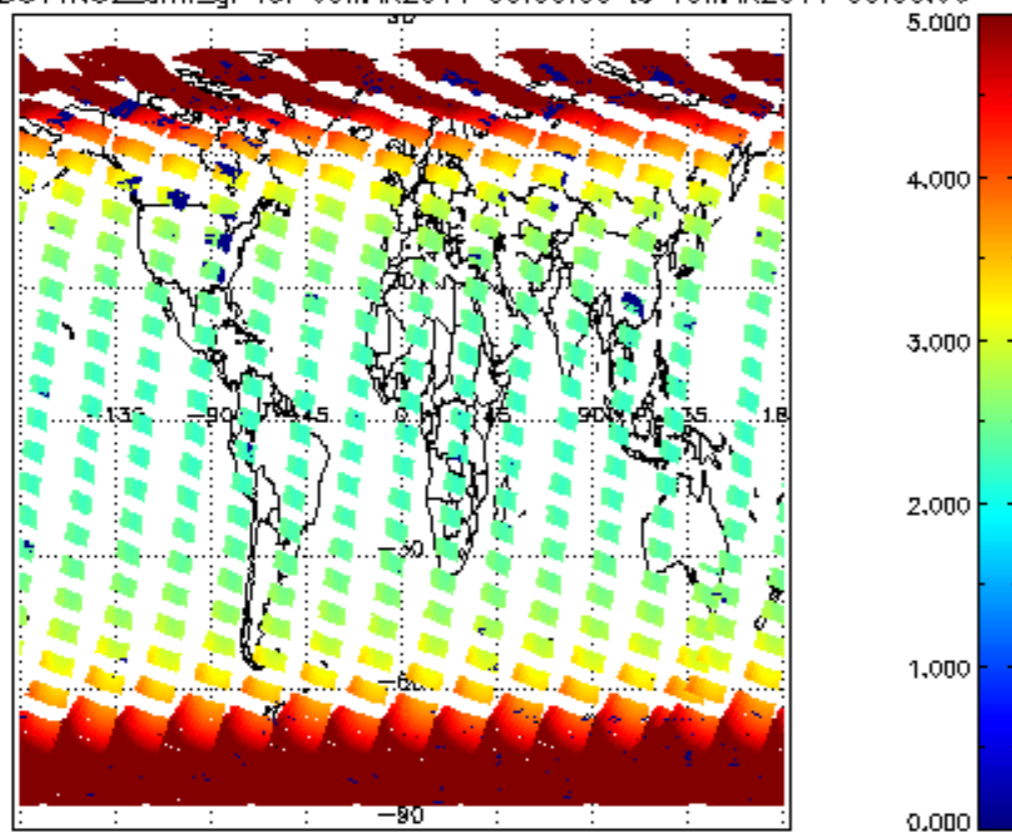
SCIOL2P\_NADUV1NO2\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



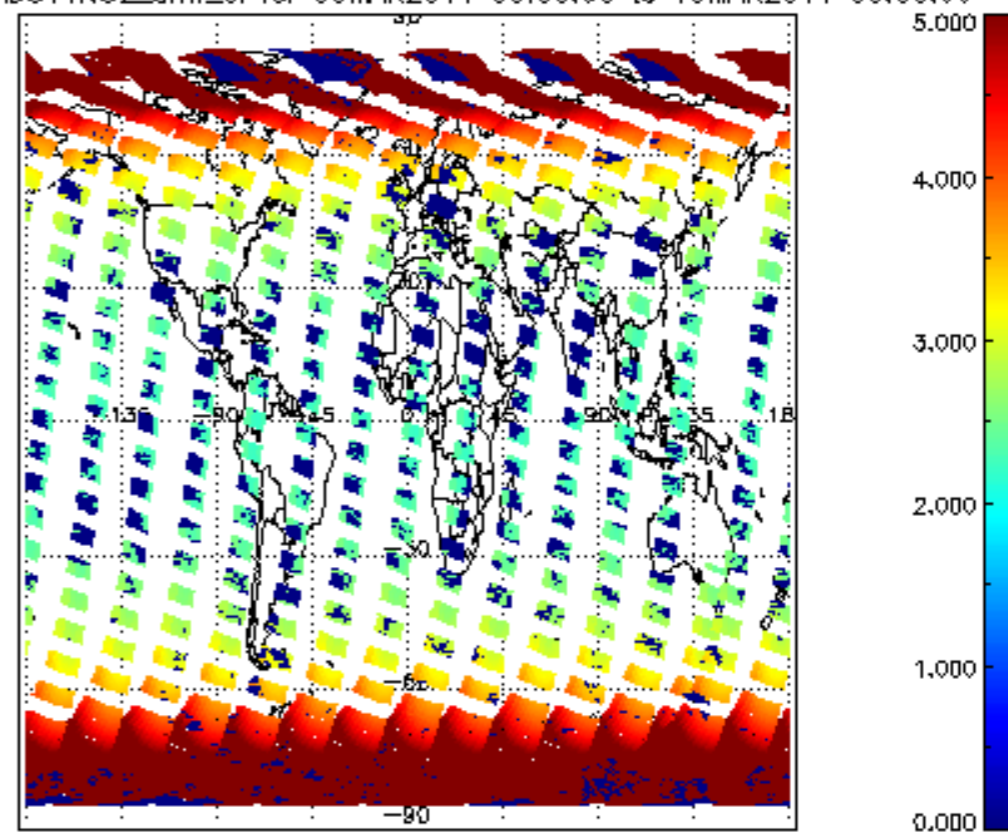
SCIOL2P\_NADUV1NO2\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

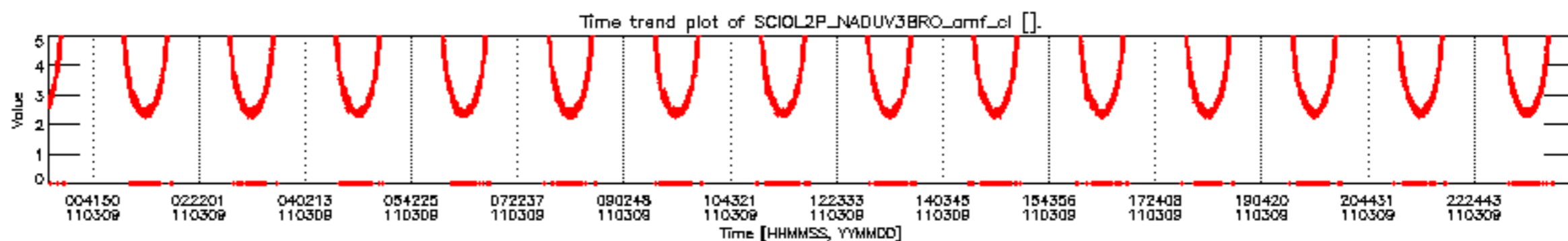
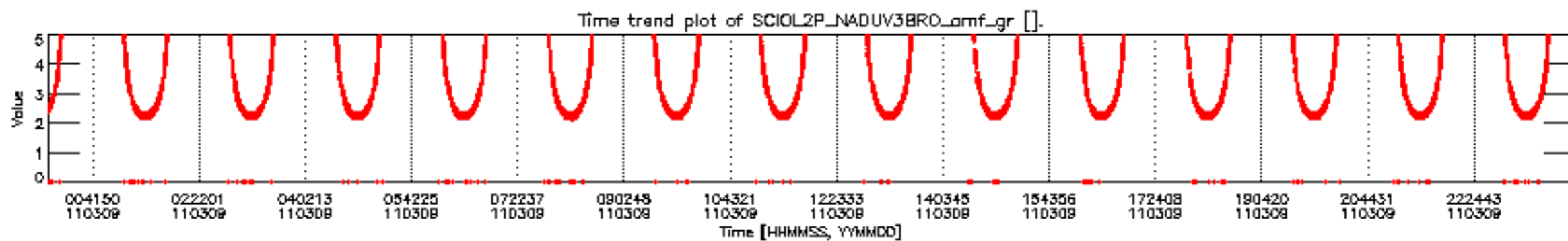
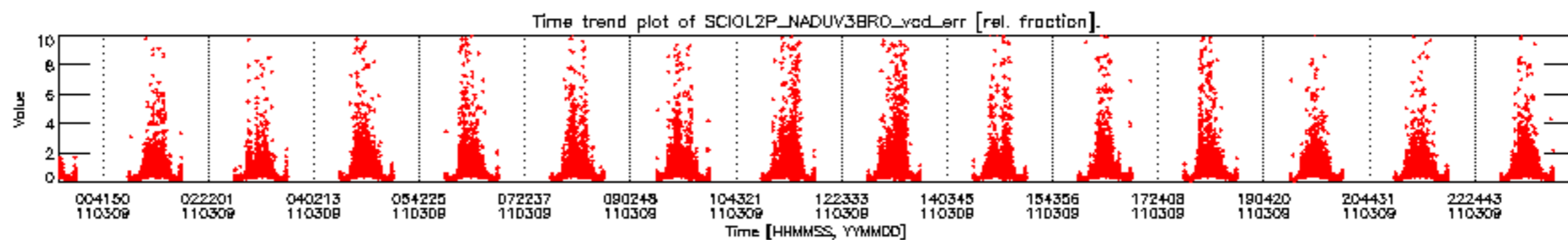
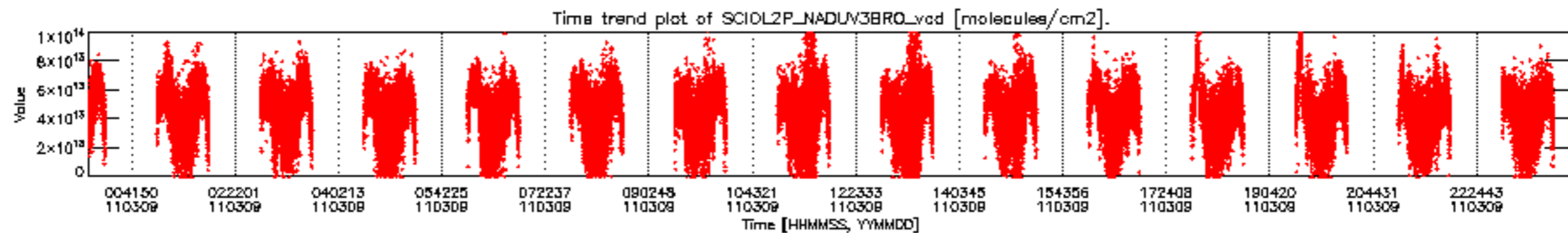


SCIOL2P\_NADUV1NO2\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

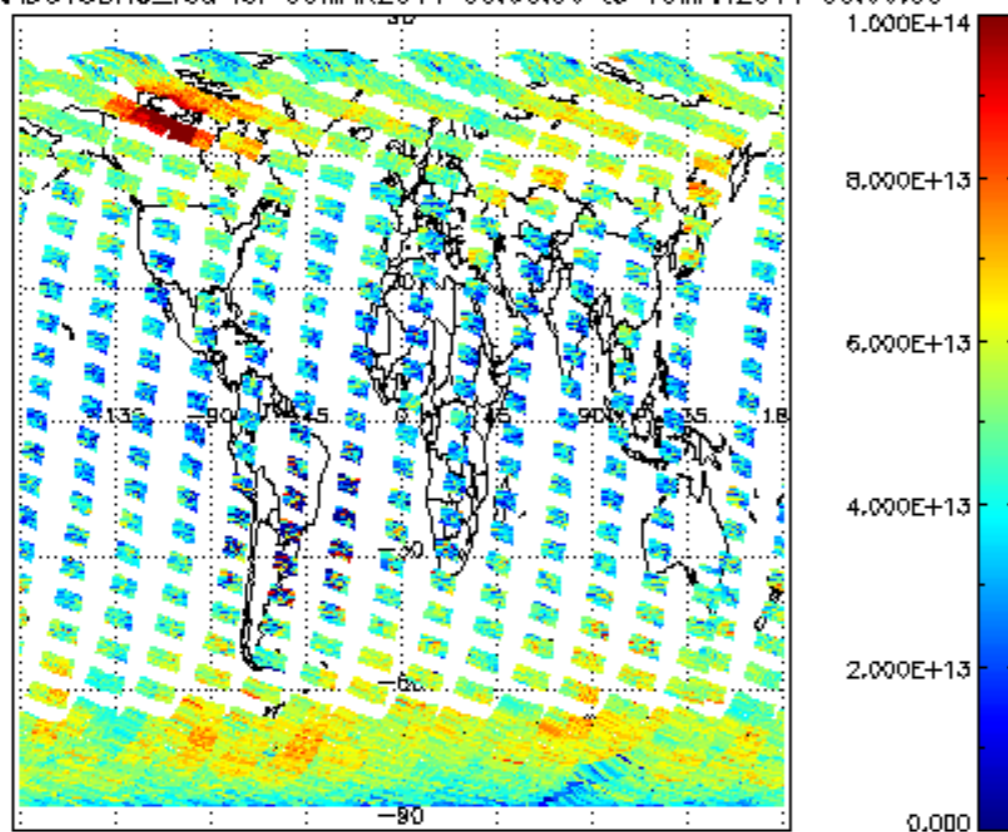


SCIOL2P\_NADUV1NO2\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

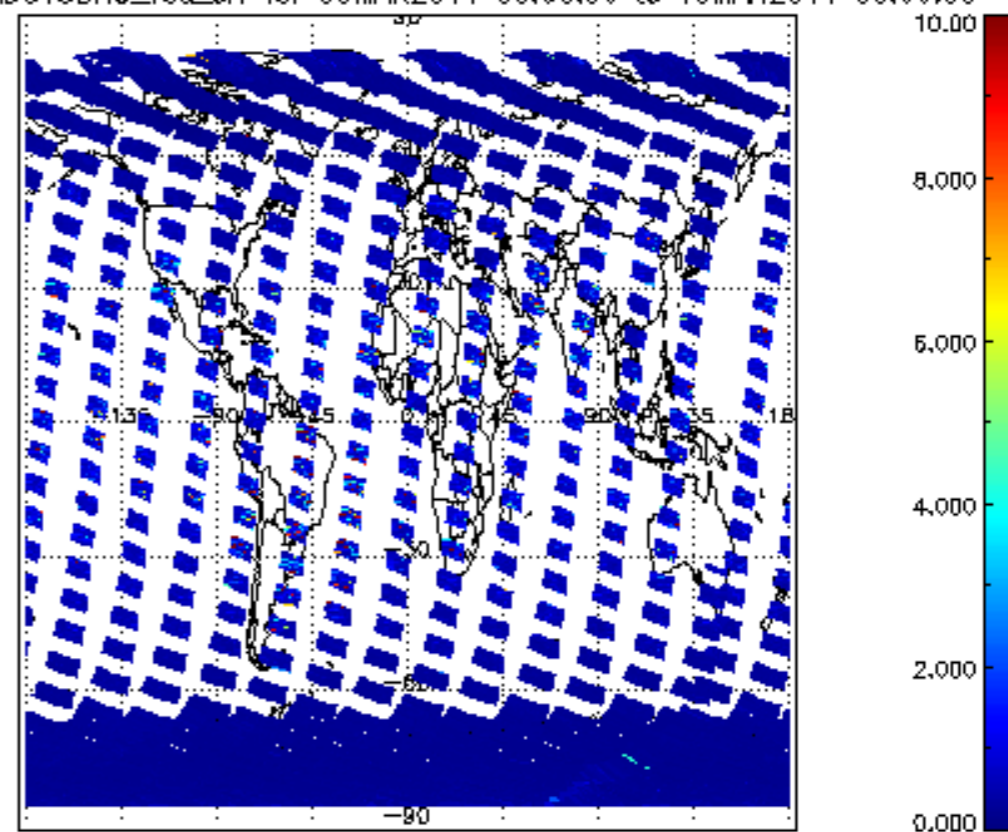




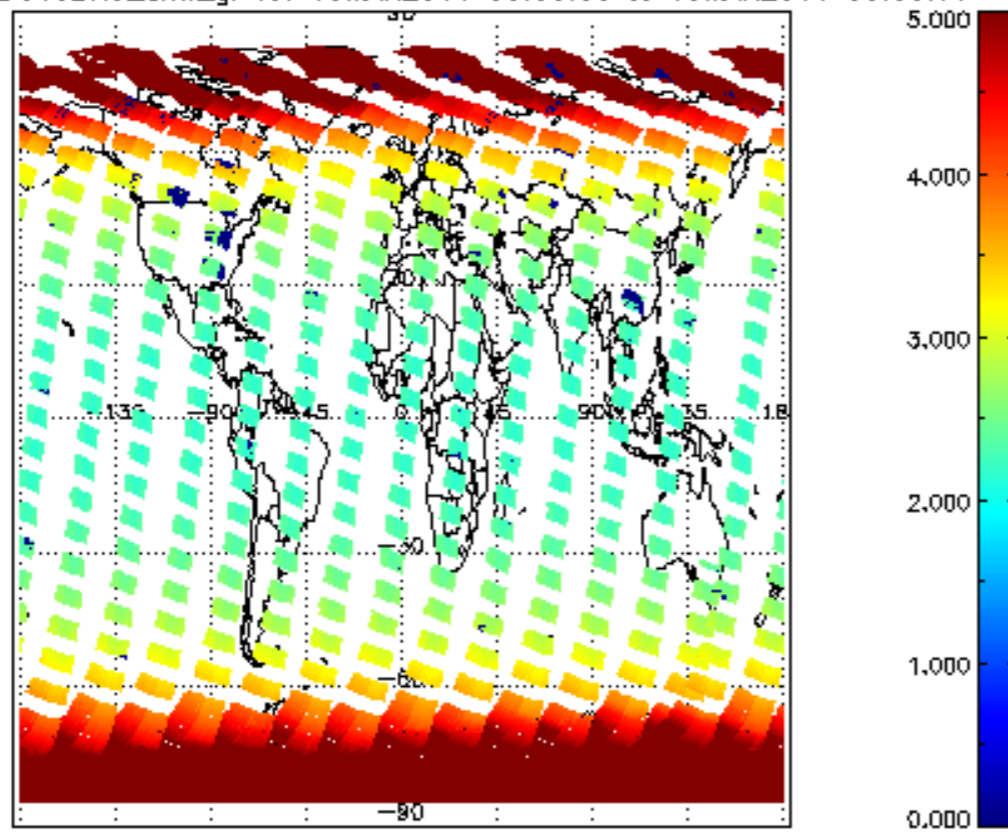
SCIOL2P\_NADUV3BRO\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



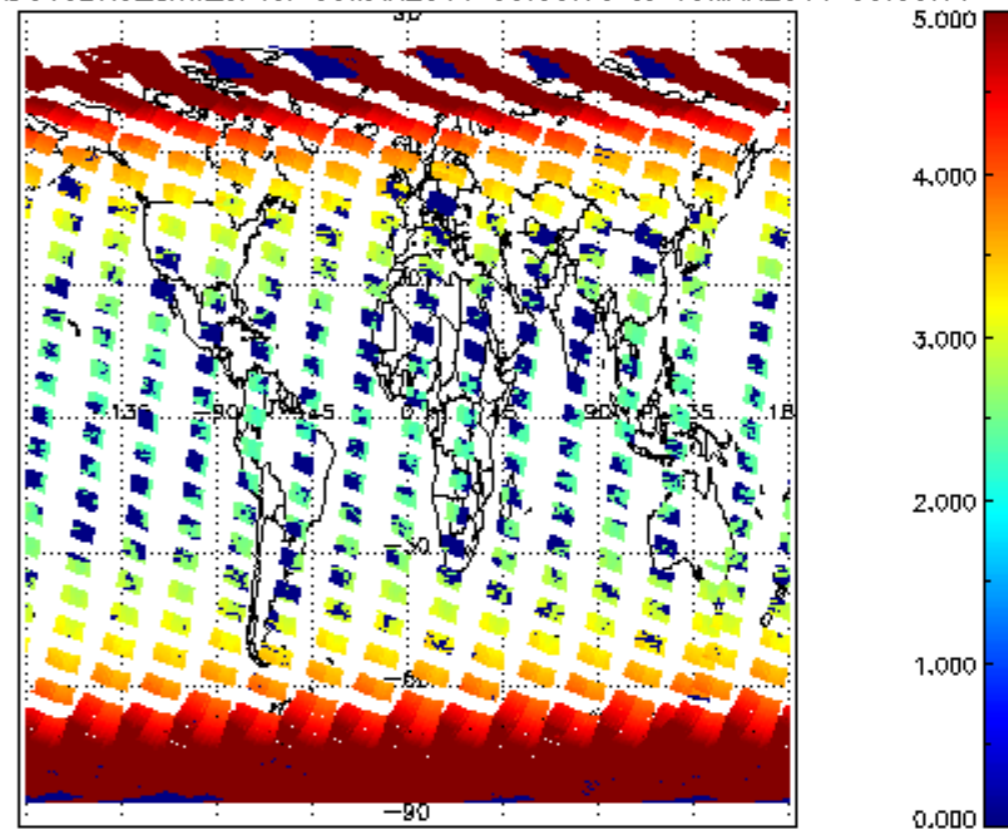
SCIOL2P\_NADUV3BRO\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

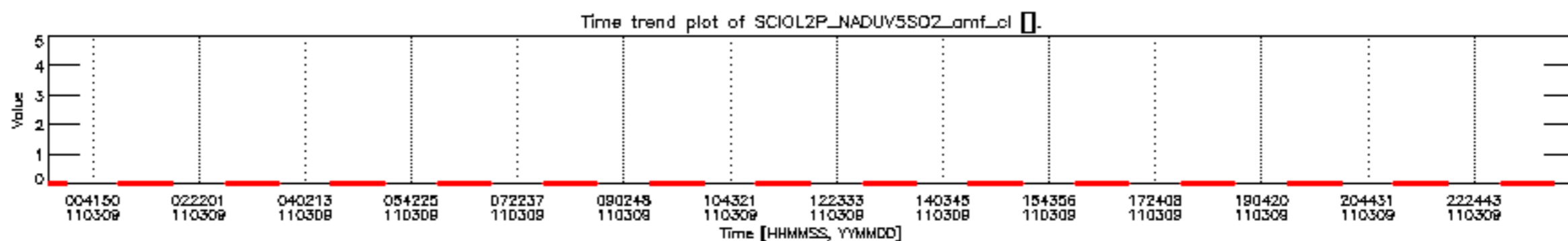
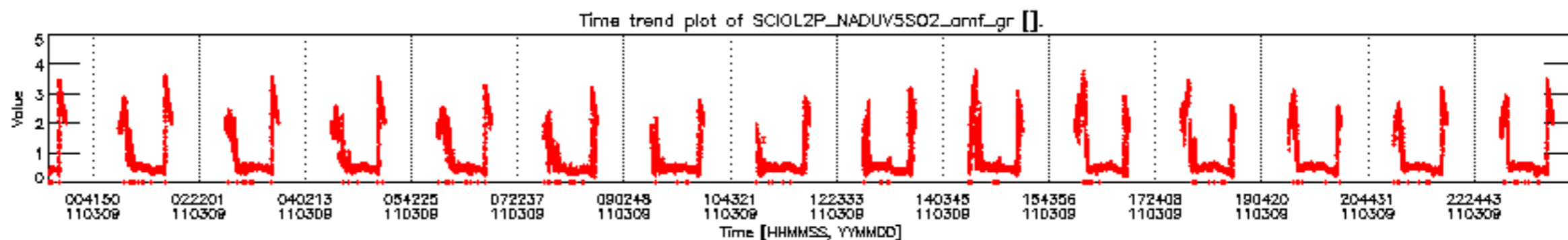
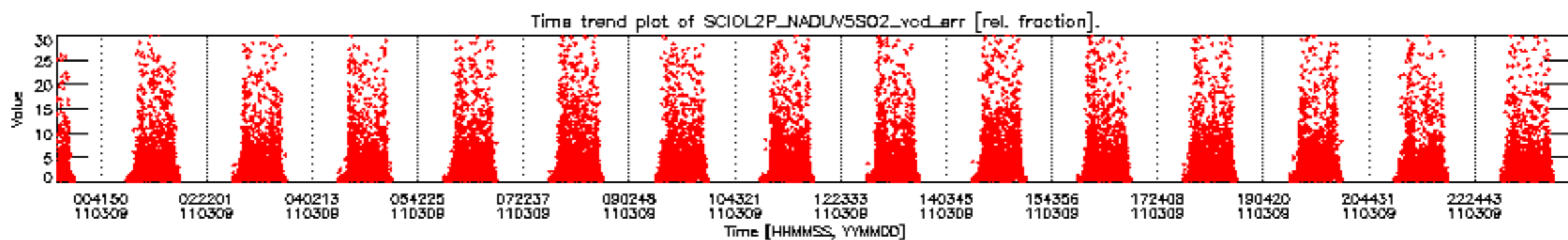
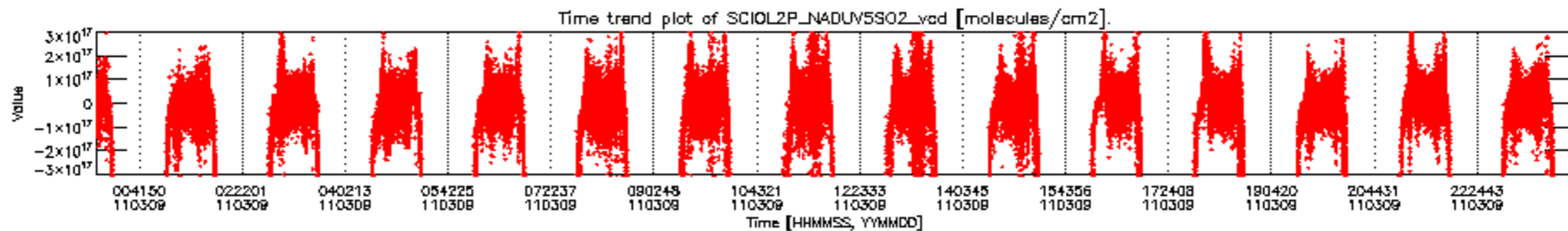


SCIOL2P\_NADUV3BRO\_arnf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

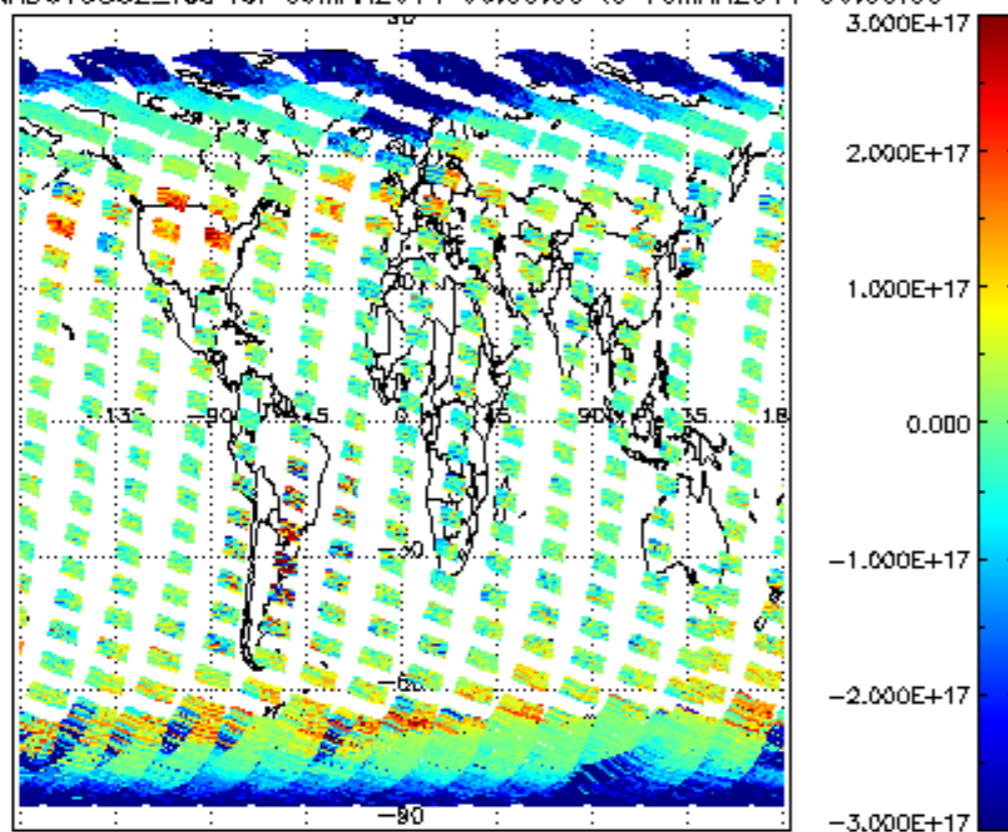


SCIOL2P\_NADUV3BRO\_arnf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

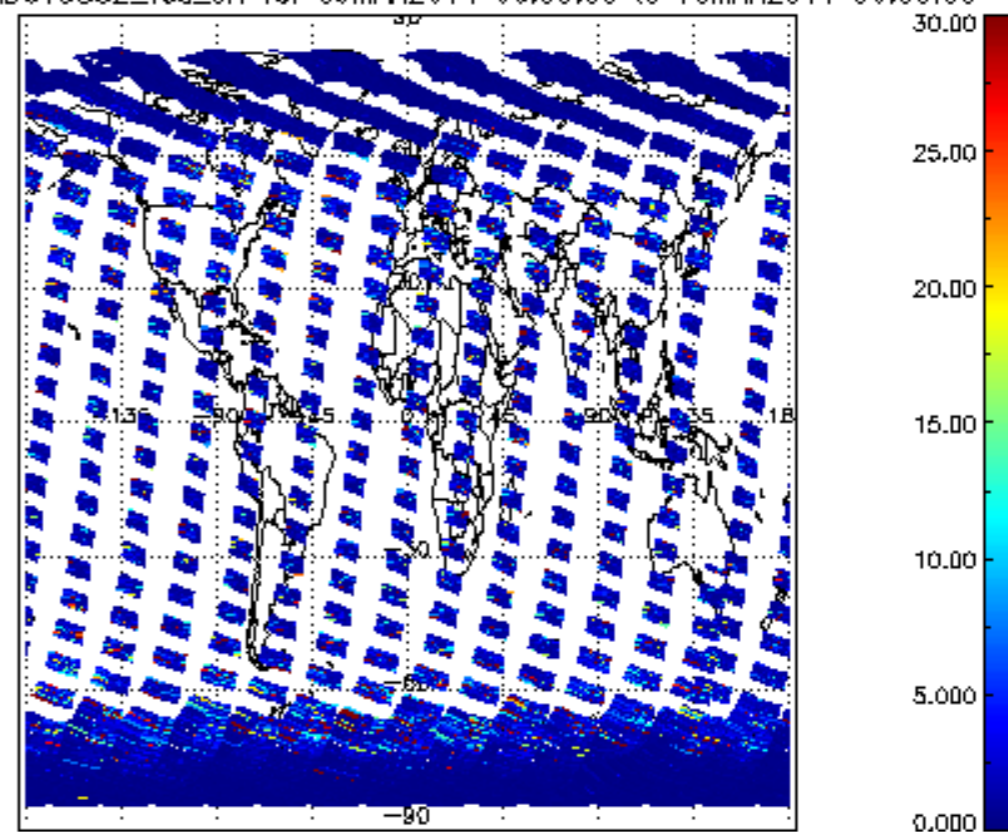




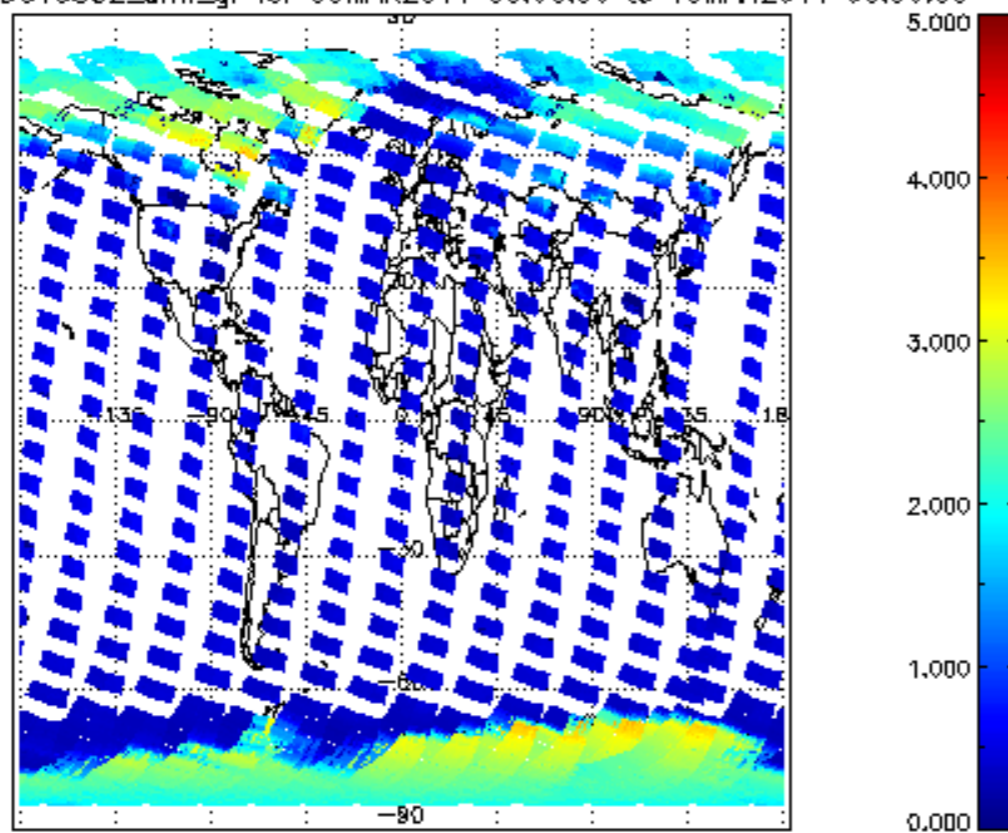
SCIOL2P\_NADUV5S02\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



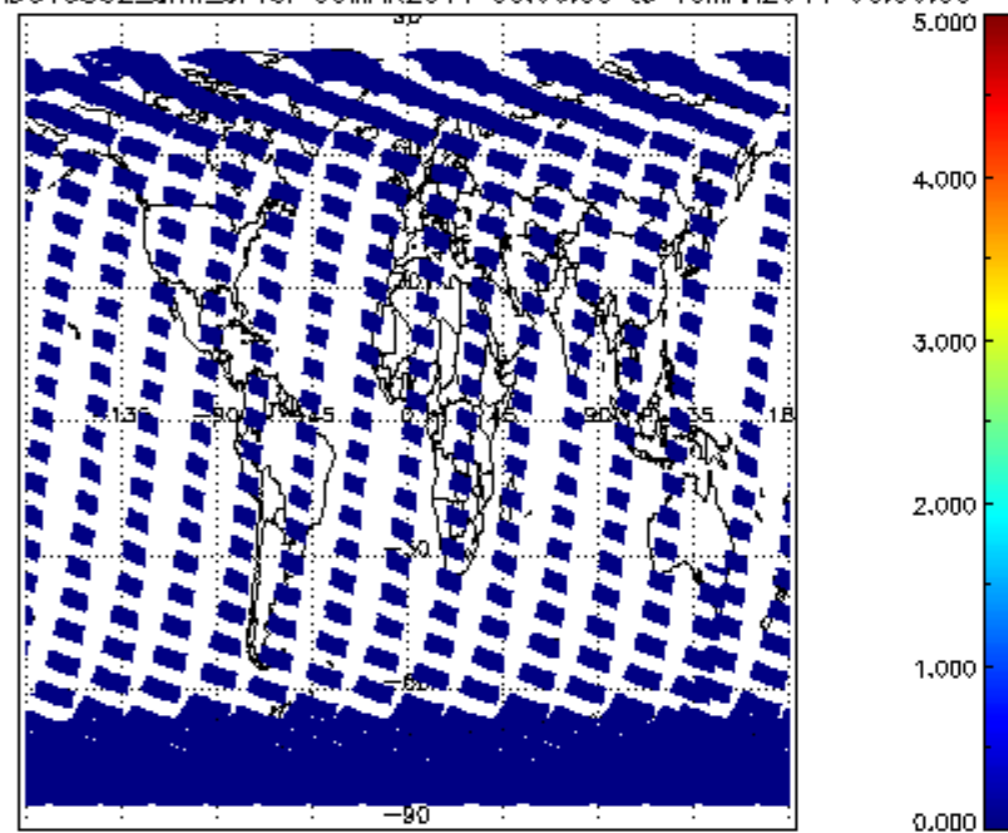
SCIOL2P\_NADUV5S02\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

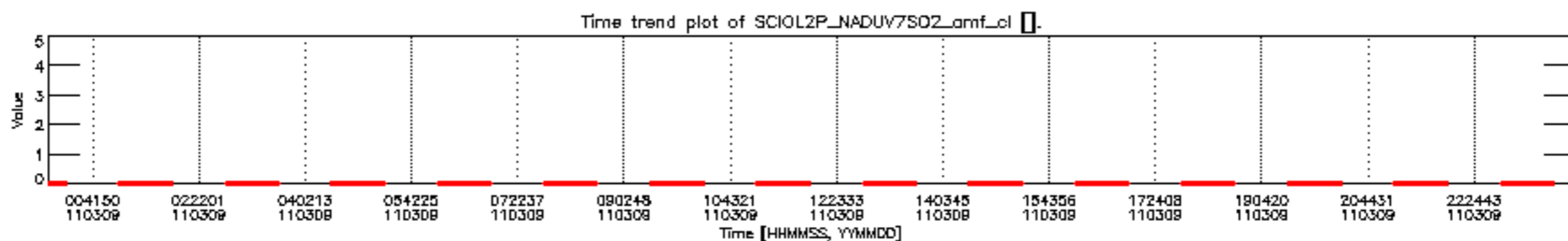
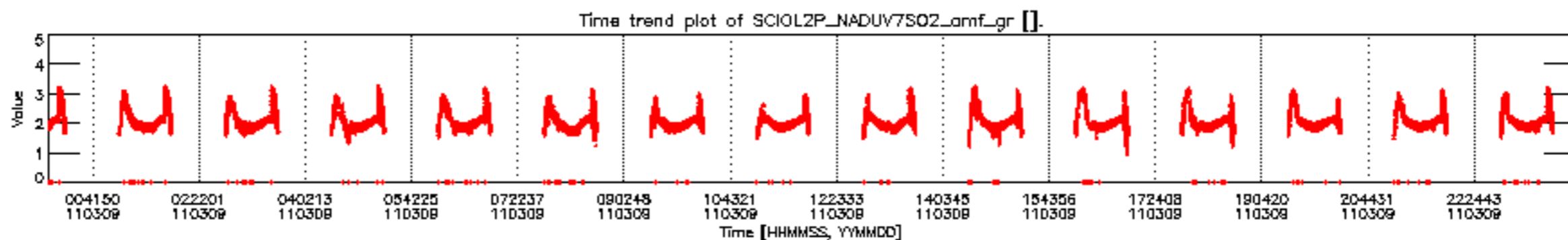
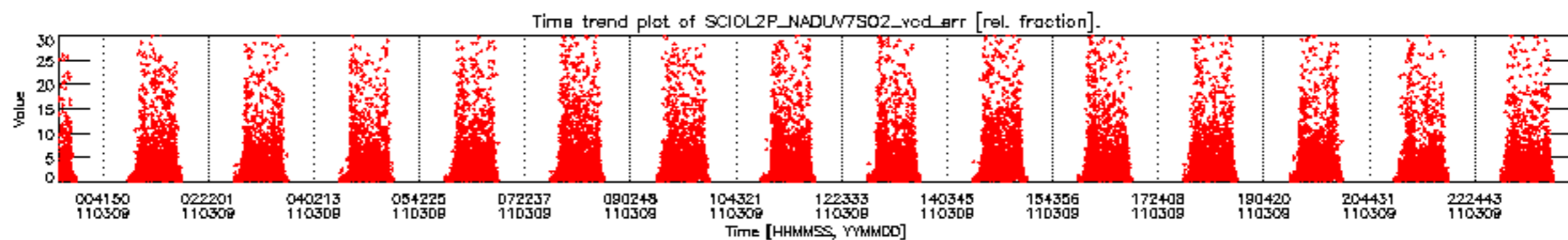
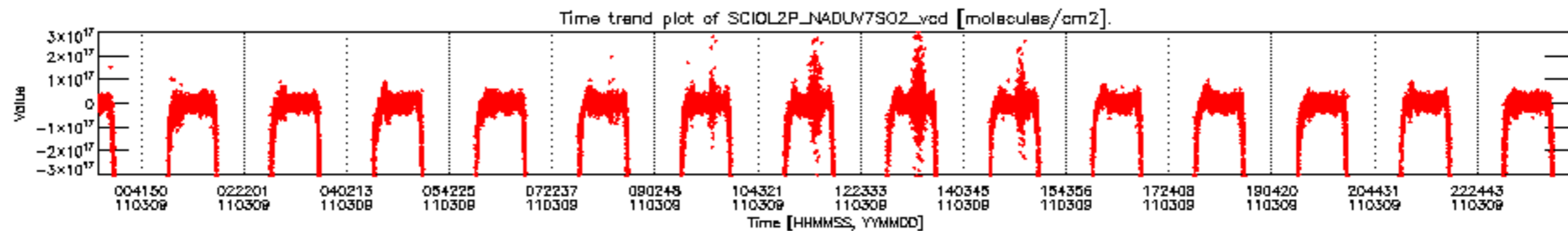


SCIOL2P\_NADUV5S02\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



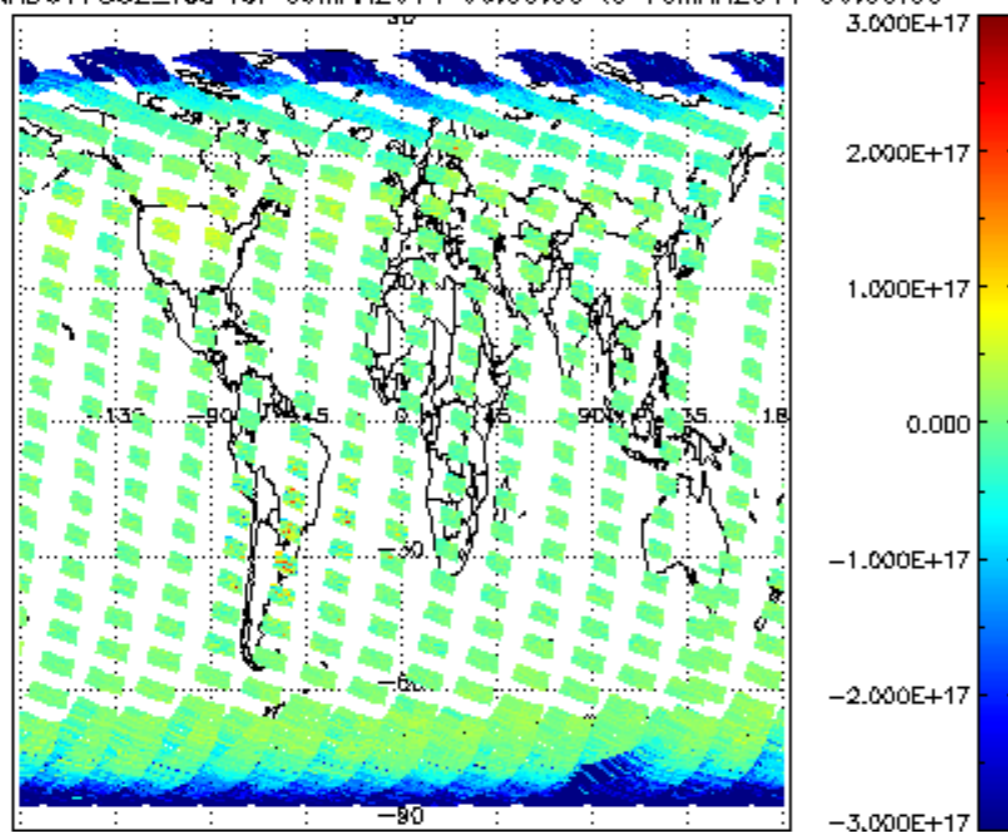
SCIOL2P\_NADUV5S02\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



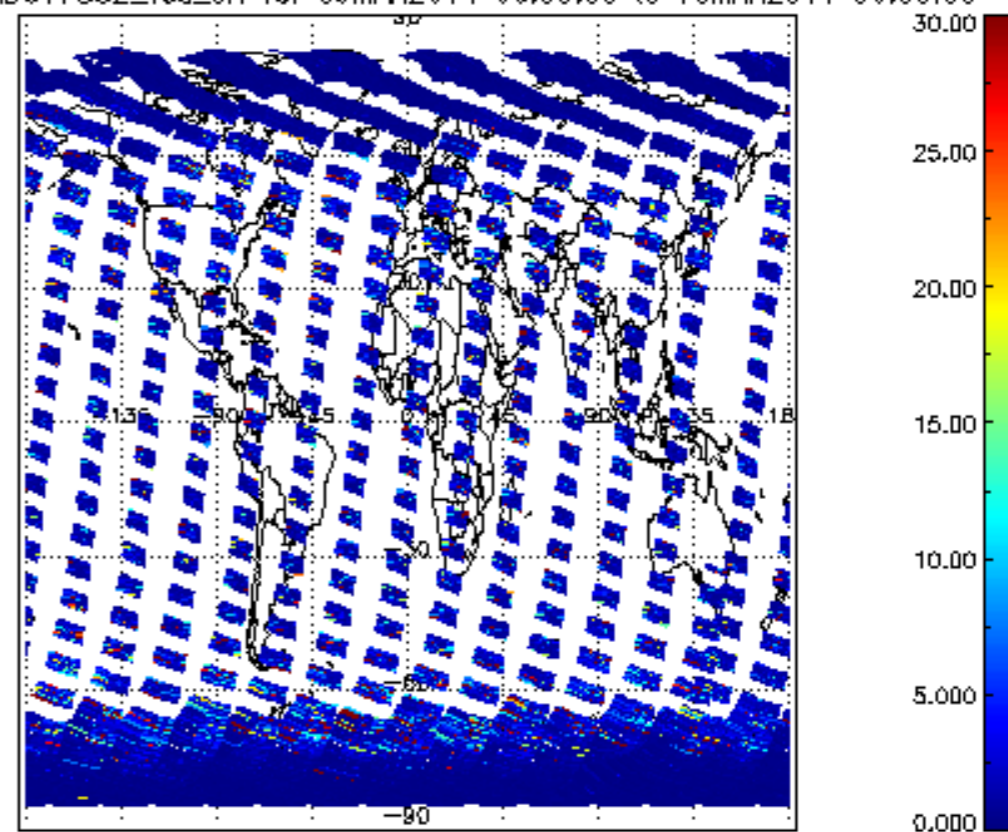




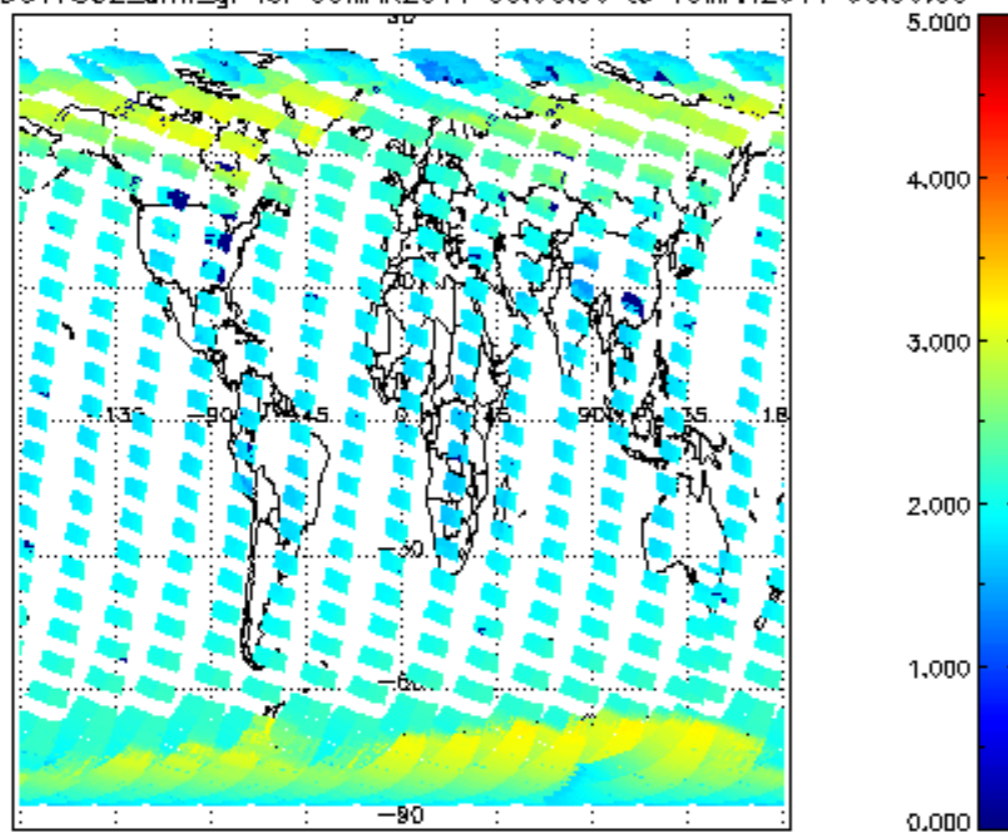
SCIOL2P\_NADUV7S02\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00



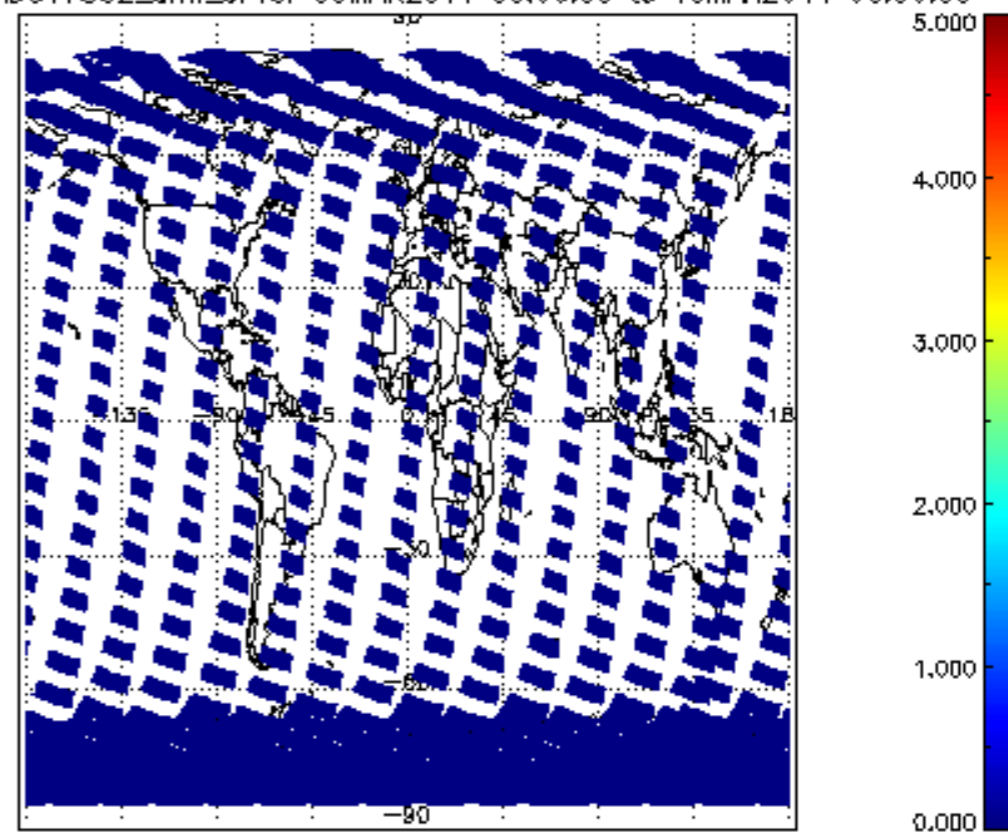
SCIOL2P\_NADUV7S02\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

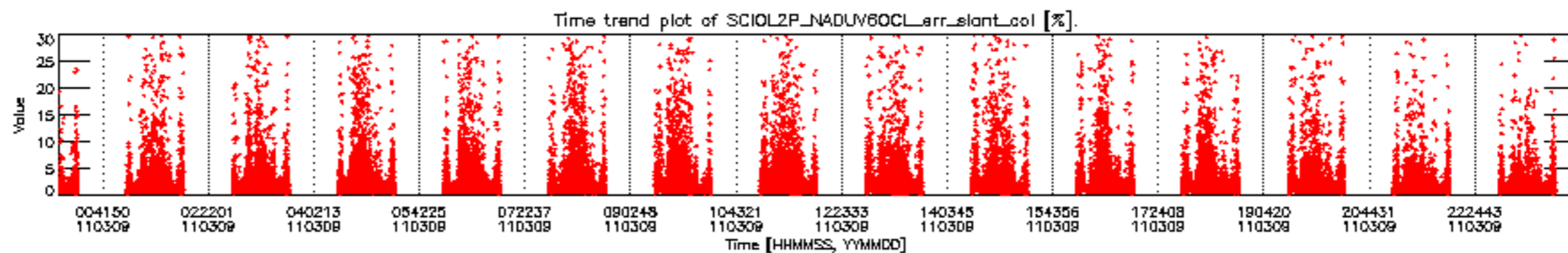
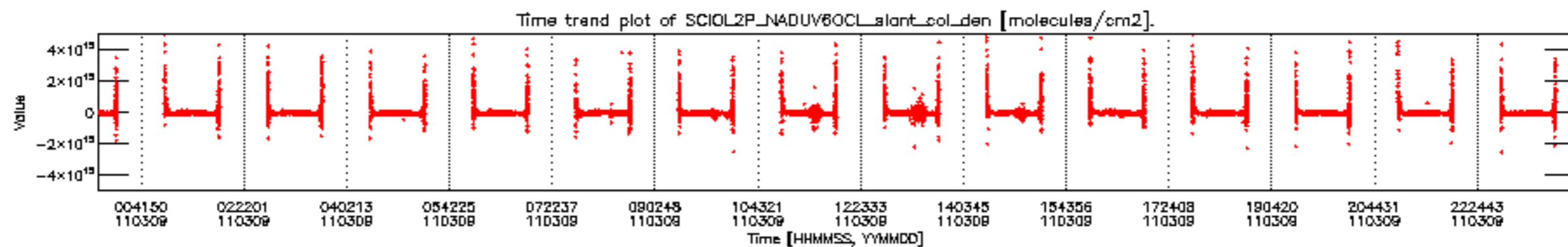


SCIOL2P\_NADUV7S02\_amf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

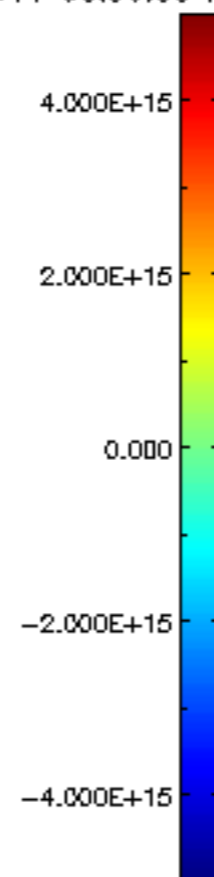
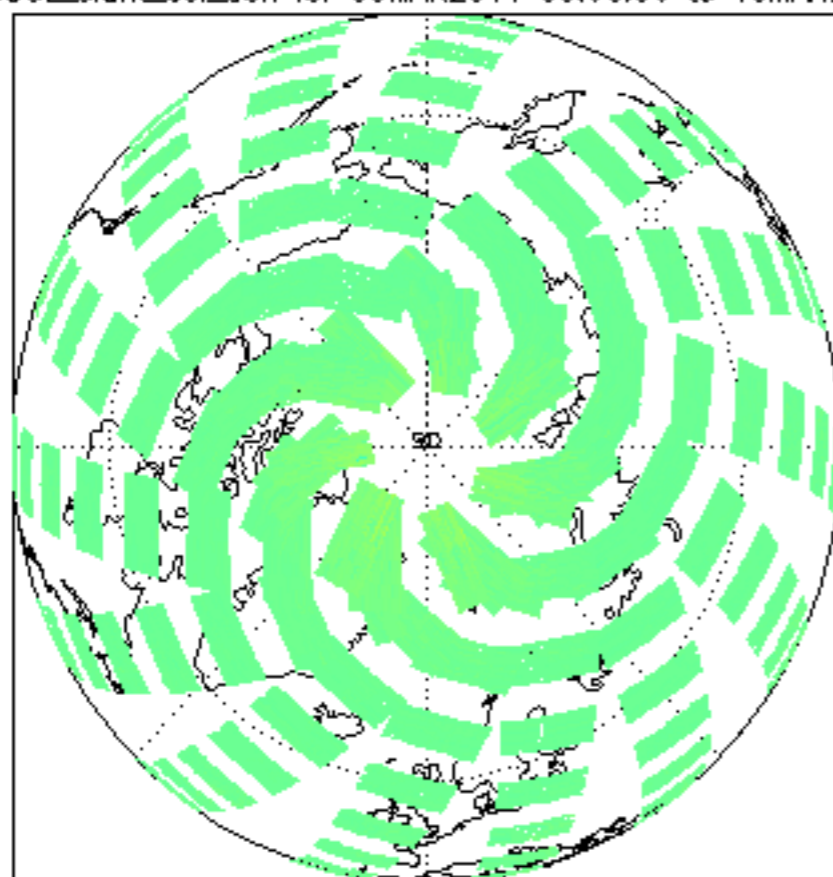


SCIOL2P\_NADUV7S02\_amf\_cl for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

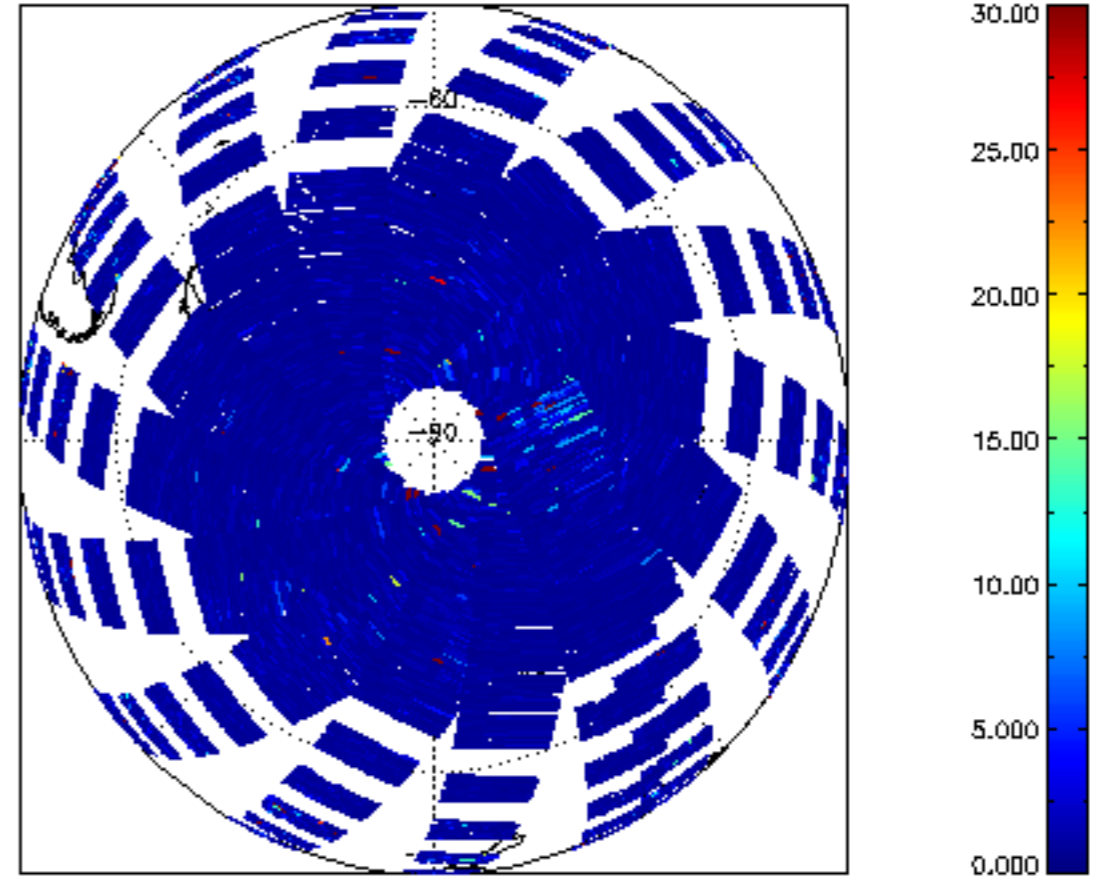
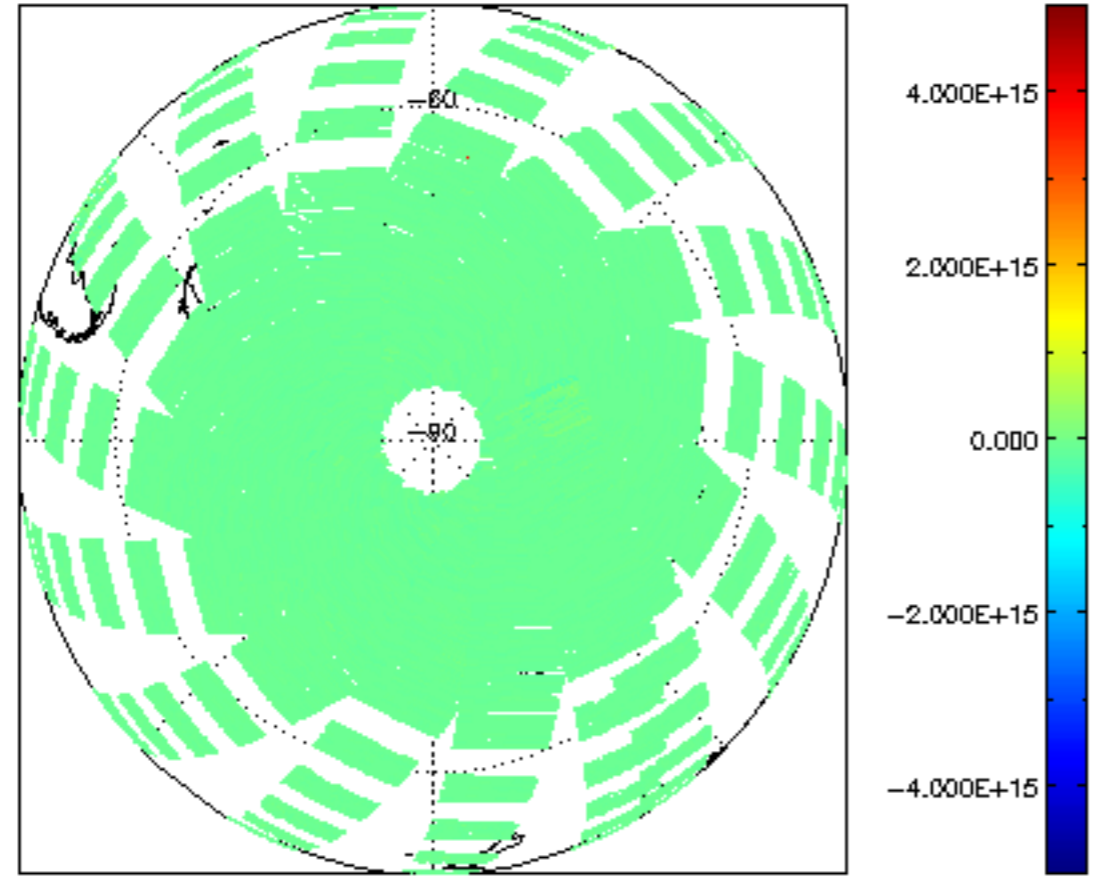


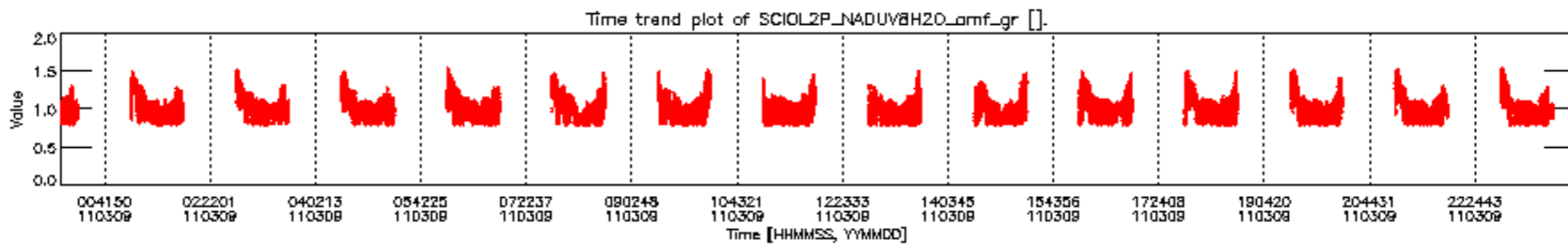
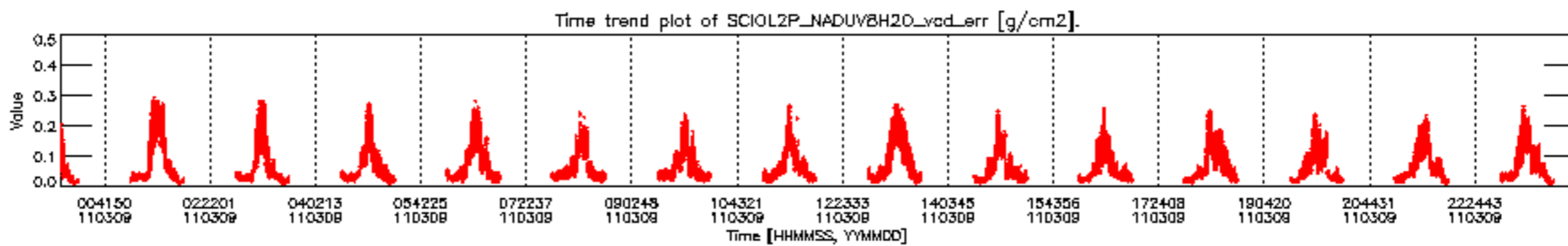
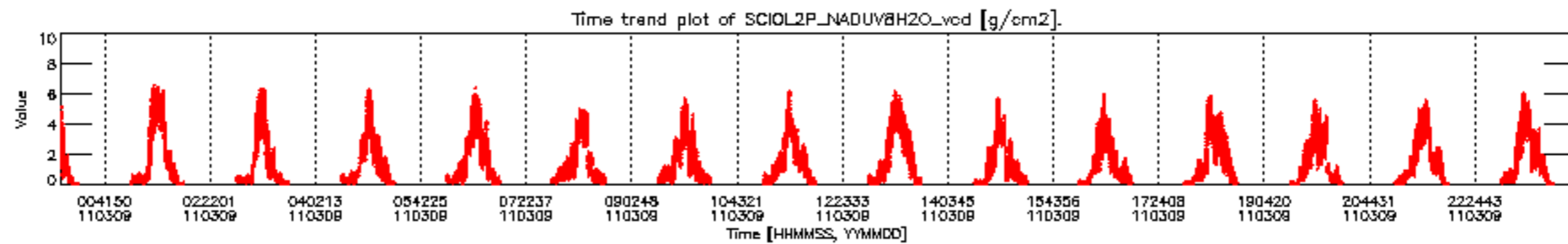


CIOL2P\_NADUV6OCL\_slant\_col\_den for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 np

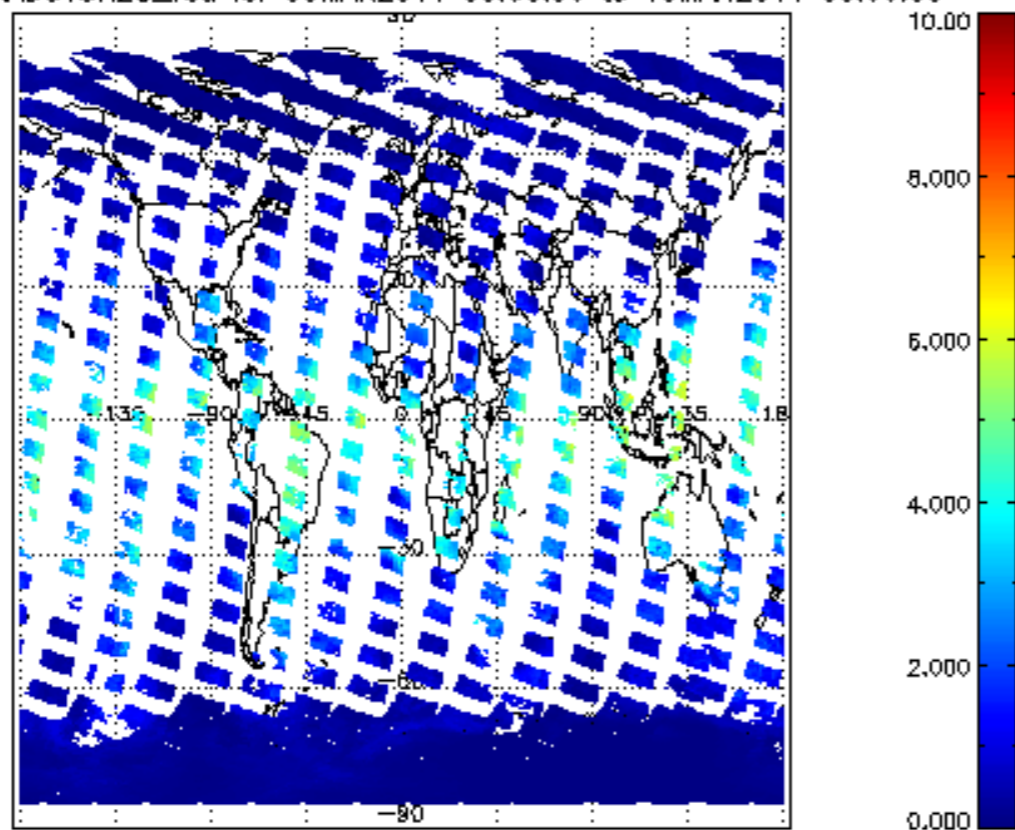


CIOL2P\_NADUV6OCL\_slant\_coLden for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 09MAR2011 00:00:00 to 10MAR2011 00:00:00 sp

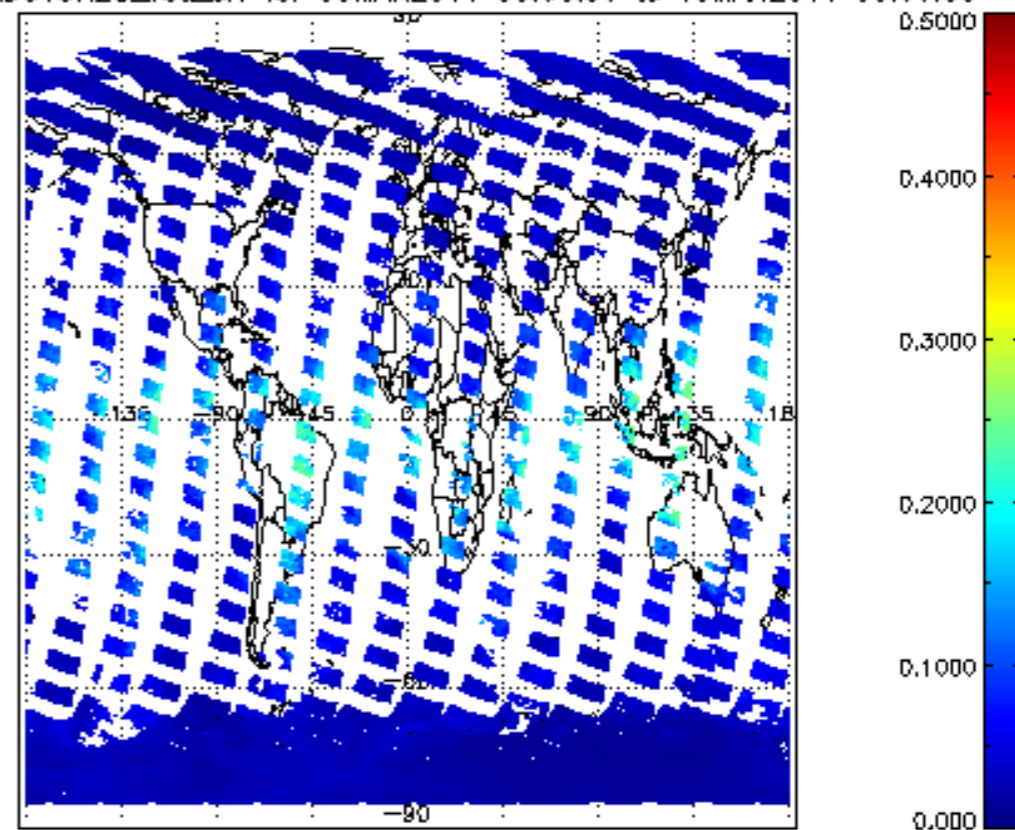




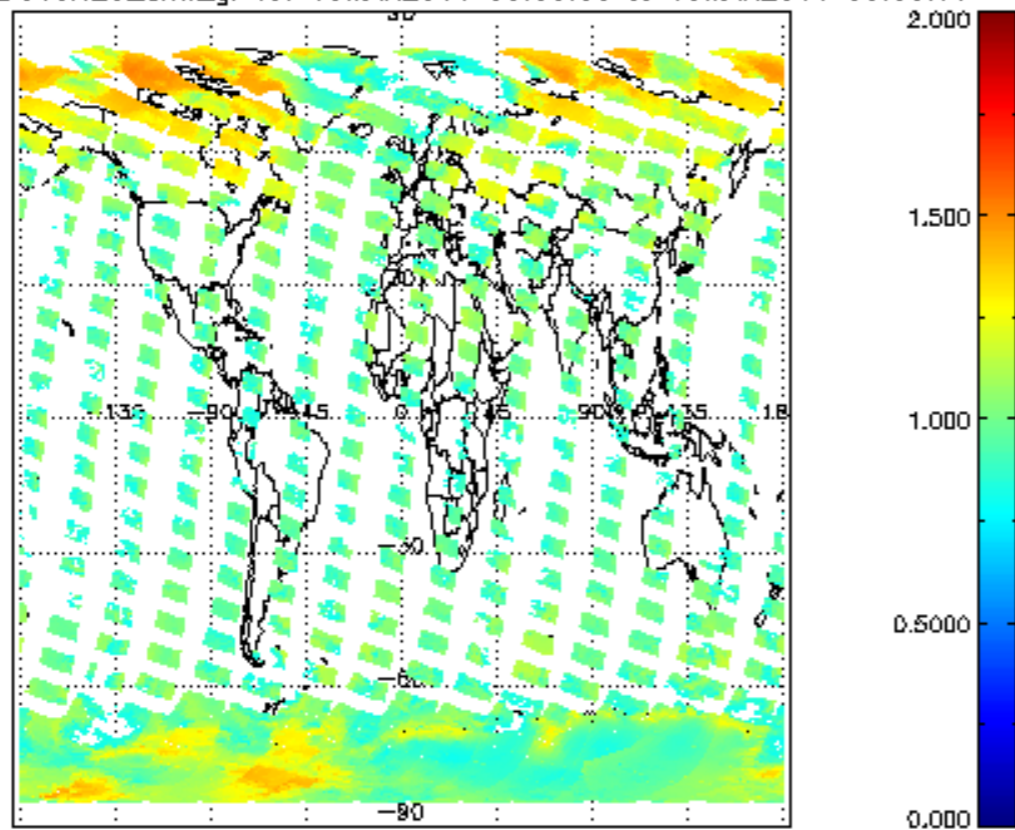
SCIOL2P\_NADUV8H20\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

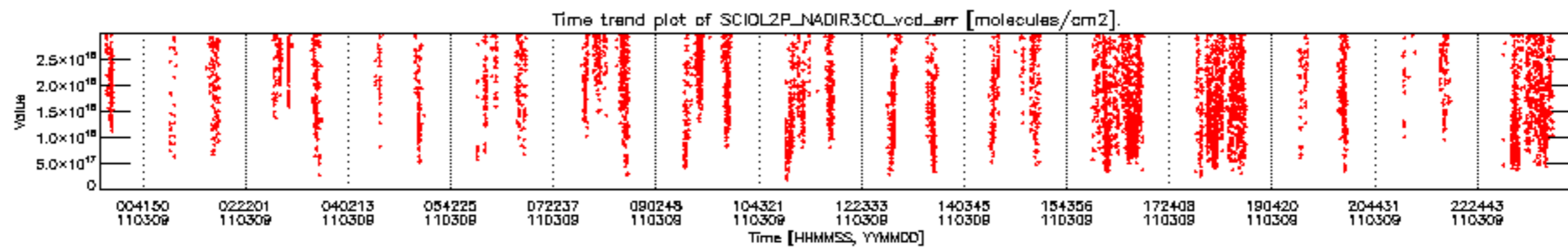
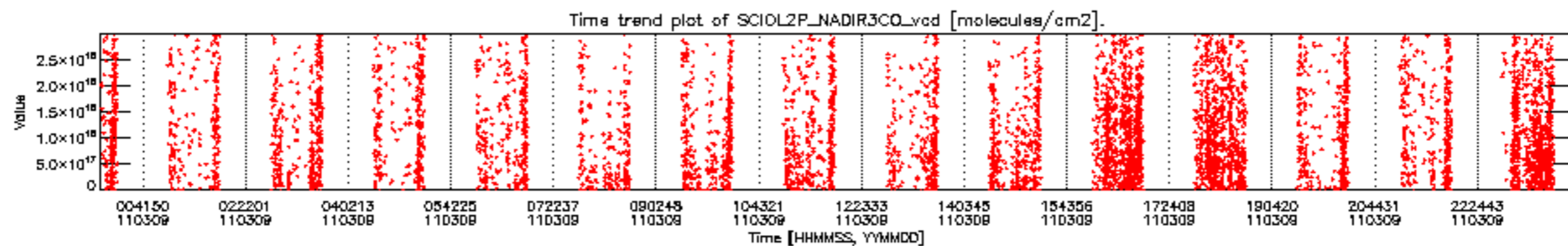


SCIOL2P\_NADUV8H20\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

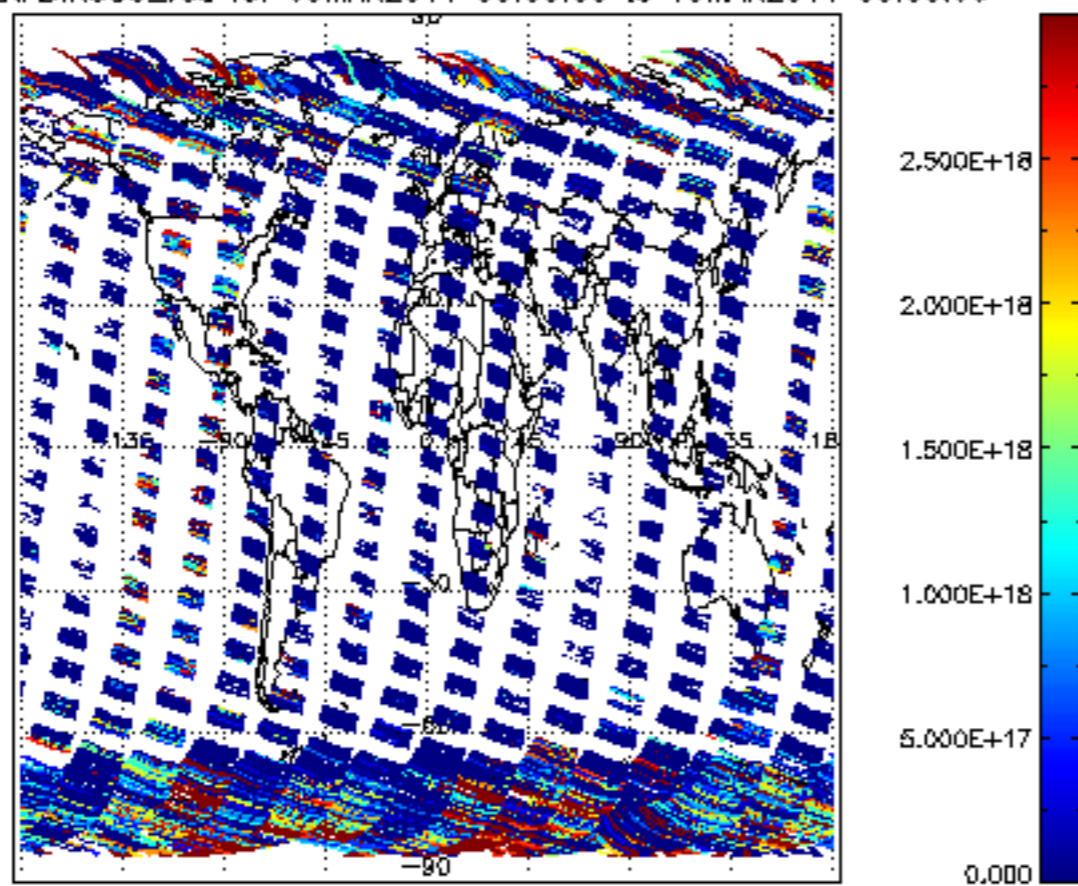


SCIOL2P\_NADUV8H20\_arnf\_gr for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

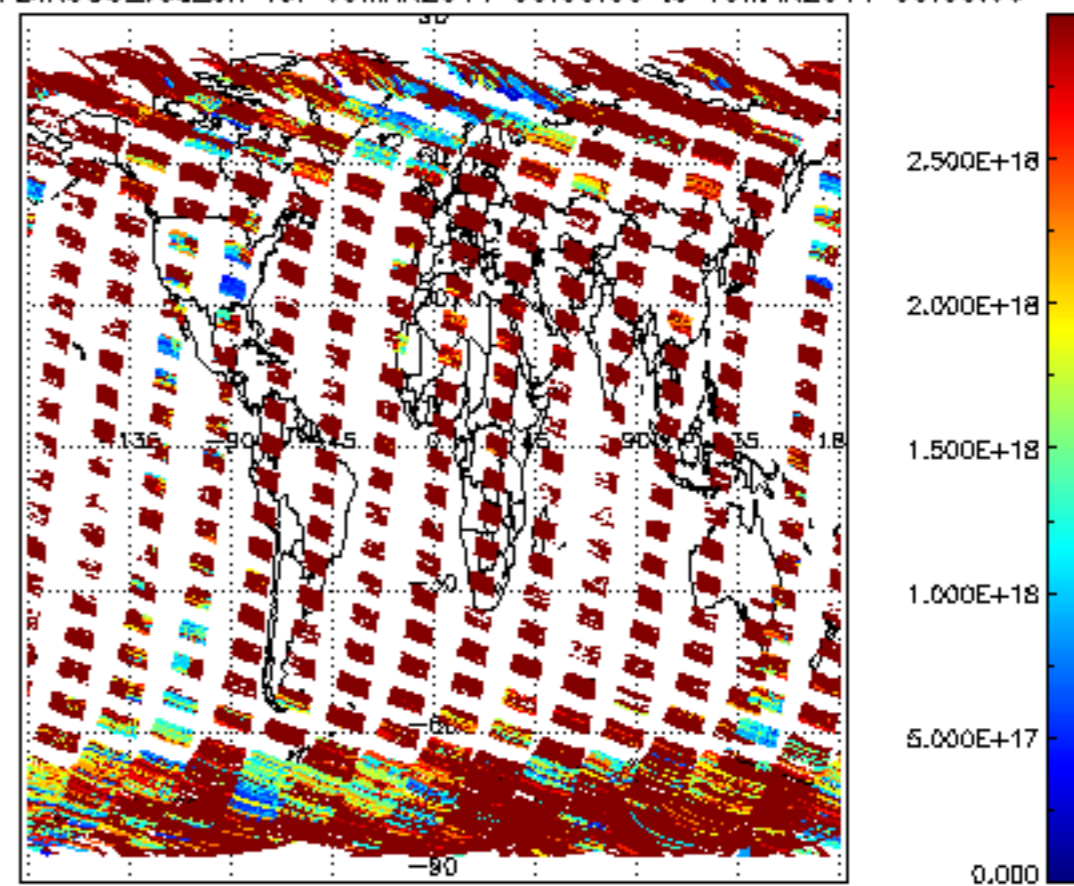




SCIOL2P\_NADIR3CO\_vcd for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

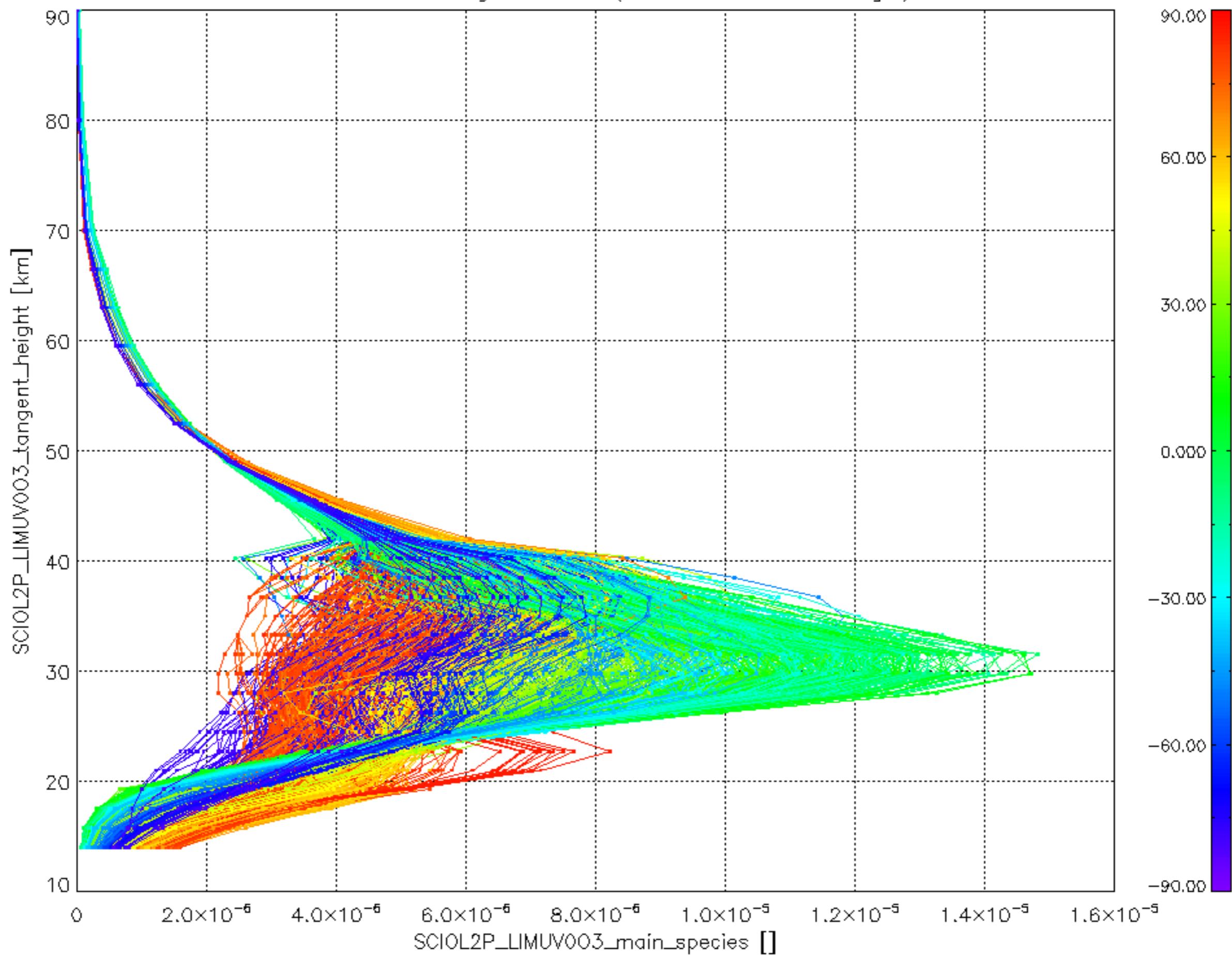


SCIOL2P\_NADIR3CO\_vcd\_err for 09MAR2011 00:00:00 to 10MAR2011 00:00:00

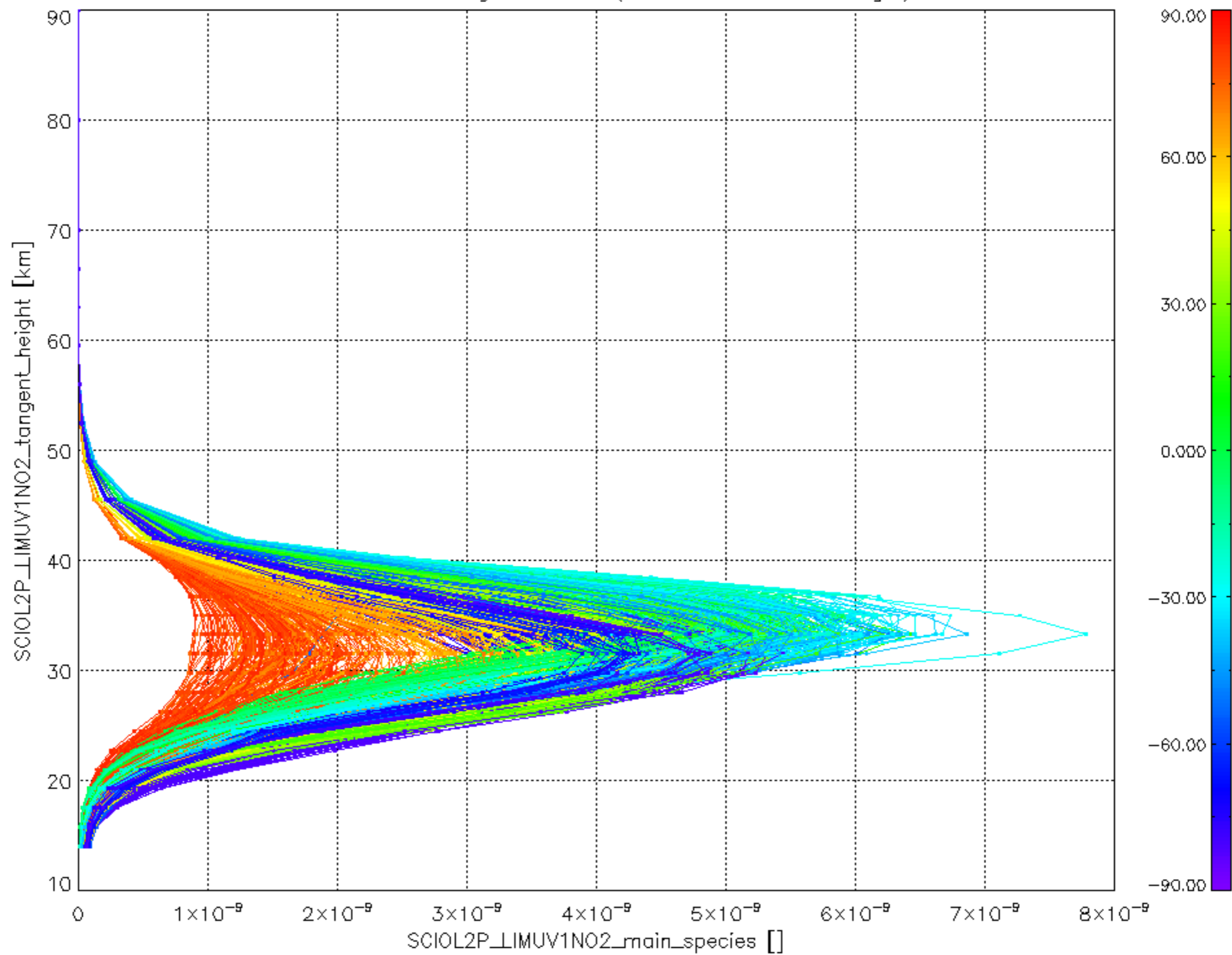




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

