

## 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	07JUL2011 03:00:39
Data source version	SCIA-OL/5.01-U
Processing scope for products	24JUN2011 00:00:00 to 25JUN2011 00:00:00
Start time of first product within scope	23JUN2011 22:49:43
Stop time of last product within scope	25JUN2011 00:51:49
Total number of level 2 products	16
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__2PUDPA20110623_224943_000035303103_00418_48708_5223.N1</a>	23JUN2011 22:49:43	23JUN2011 23:48:33	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110624_002957_000035163103_00419_48709_5224.N1</a>	24JUN2011 00:29:57	24JUN2011 01:28:33	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110624_021011_000035303103_00420_48710_5225.N1</a>	24JUN2011 02:10:11	24JUN2011 03:09:01	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110624_035025_000035163103_00421_48711_5226.N1</a>	24JUN2011 03:50:25	24JUN2011 04:49:01	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110624_053039_000035303103_00422_48712_5227.N1</a>	24JUN2011 05:30:39	24JUN2011 06:29:29	0	GOOD

5	SCI_OL__2PUDPA20110624_071053_000035163103_00423_48713_5228.N1	24JUN2011 07:10:53	24JUN2011 08:09:29	0	GOOD
6	SCI_OL__2PUDPA20110624_085107_000035303103_00424_48714_5229.N1	24JUN2011 08:51:07	24JUN2011 09:49:57	0	GOOD
7	SCI_OL__2PUDPA20110624_103121_000035163103_00425_48715_5230.N1	24JUN2011 10:31:21	24JUN2011 11:29:57	0	GOOD
8	SCI_OL__2PUDPA20110624_121135_000035303103_00426_48716_5231.N1	24JUN2011 12:11:35	24JUN2011 13:10:25	0	GOOD
9	SCI_OL__2PUDPA20110624_135148_000035163103_00427_48717_5232.N1	24JUN2011 13:51:48	24JUN2011 14:50:25	0	GOOD
10	SCI_OL__2PUDPA20110624_153202_000035303103_00428_48718_5233.N1	24JUN2011 15:32:02	24JUN2011 16:30:53	0	GOOD
11	SCI_OL__2PUDPA20110624_171226_000035163103_00429_48719_5234.N1	24JUN2011 17:12:26	24JUN2011 18:11:02	0	GOOD
12	SCI_OL__2PUDPA20110624_185240_000035303103_00430_48720_5235.N1	24JUN2011 18:52:40	24JUN2011 19:51:30	0	GOOD
13	SCI_OL__2PUDPA20110624_203245_000035163103_00431_48721_5236.N1	24JUN2011 20:32:45	24JUN2011 21:31:21	0	GOOD
14	SCI_OL__2PUDPA20110624_221258_000035303104_00001_48722_5237.N1	24JUN2011 22:12:58	24JUN2011 23:11:49	0	GOOD
15	SCI_OL__2PUDPA20110624_235312_000035163104_00002_48723_5238.N1	24JUN2011 23:53:12	25JUN2011 00:51:49	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: 166660

Total number of cloud data DSRs with good quality flag (=0): 166660 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	166660	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	166660	0.16459	0.12500	0.12500	0.25000	0.058148	s
CL_FRAC	166660	0.30119	0.25253	0.0000	1.0000	0.26985	
CL_FRAC_ERR	166660	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	166660	5.2668	4.0000	4.0000	8.0000	1.8608	
PMD_READ_CL[0]	166660	0.22362	0.0000	0.0000	8.0000	1.0444	-
PMD_READ_CL[1]	166660	1.4844	0.0000	0.0000	8.0000	2.5298	-
CL_TOP_HEIGHT	125717	3.0866	1.1525	0.0000	17.000	3.5665	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	125717	59.622	85.930	0.0000	101.00	44.032	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	166660	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	166660	11001111	11000100	11000000	11100000	3711.1	
AERO_ABSO_IND	166660	0.16759	0.0000	0.0000	9.0475	0.41373	
AERO_IND_DIAG	166660	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	166660	01010001	00000000	00000000	11000000	24300.	

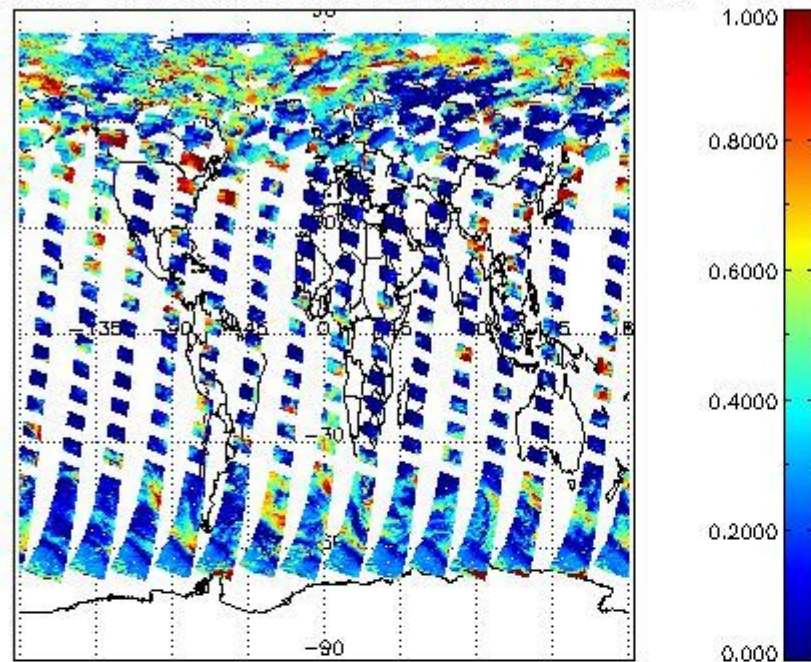
#### Time and geolocation plots:

Plots are available for the following parameters:

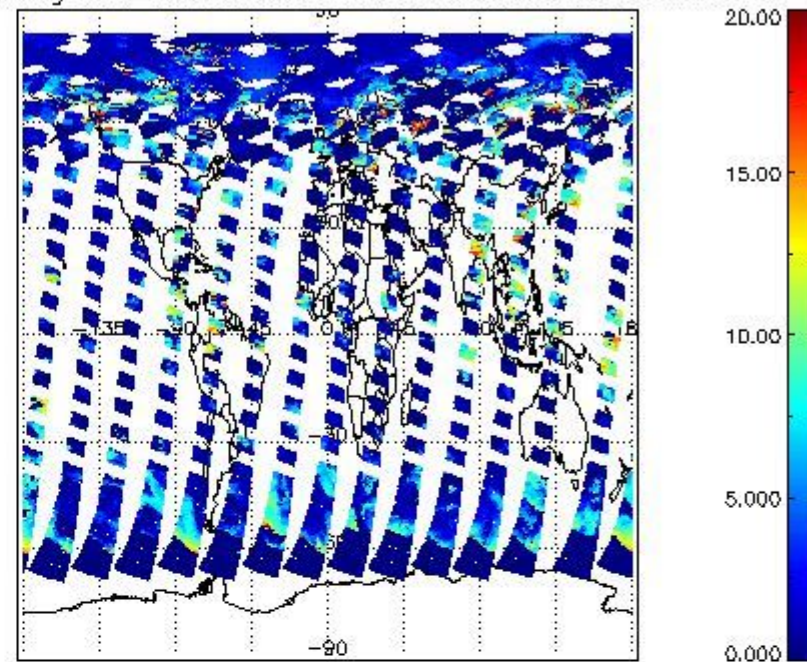
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



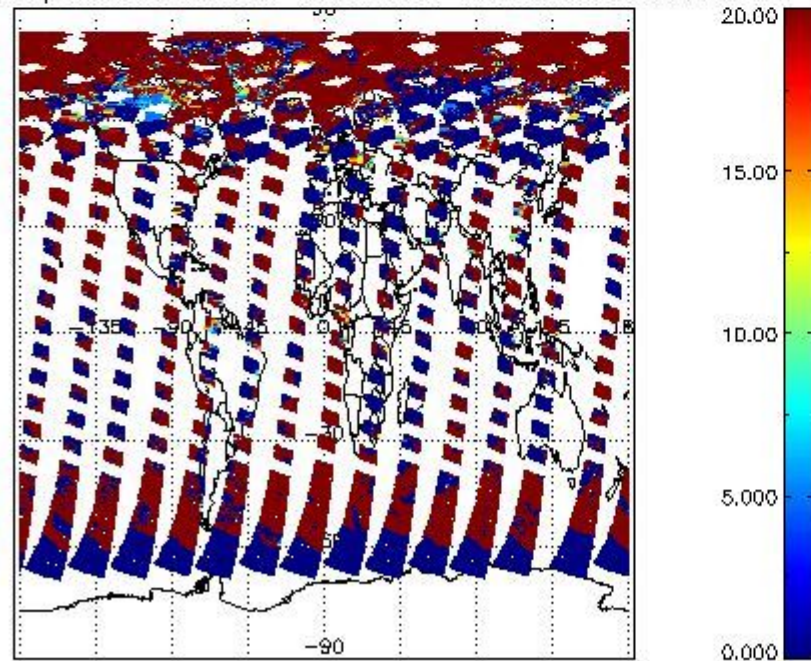
cL\_frac for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



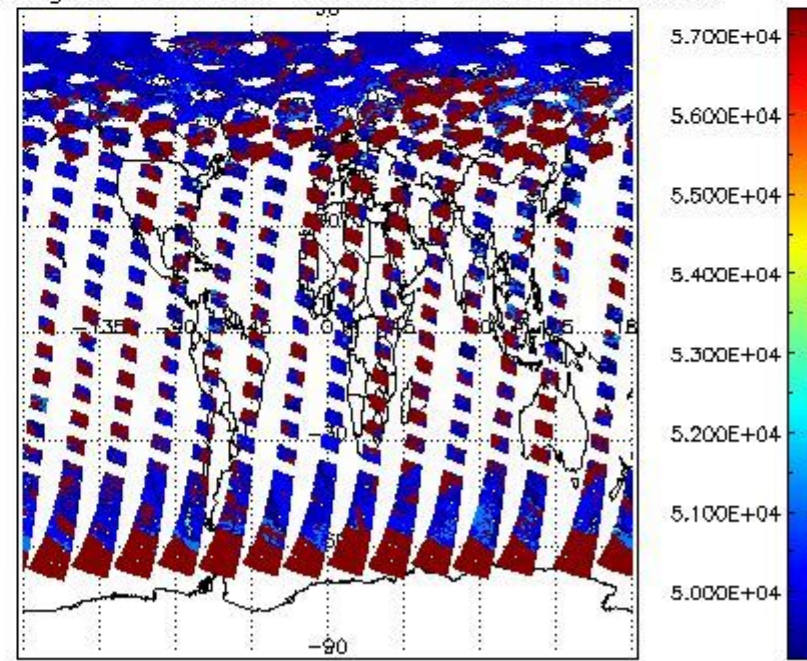
cL\_top\_height for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



cL\_opt\_depth for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



cloud\_flags for 24JUN2011 00:00:00 to 25JUN2011 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:

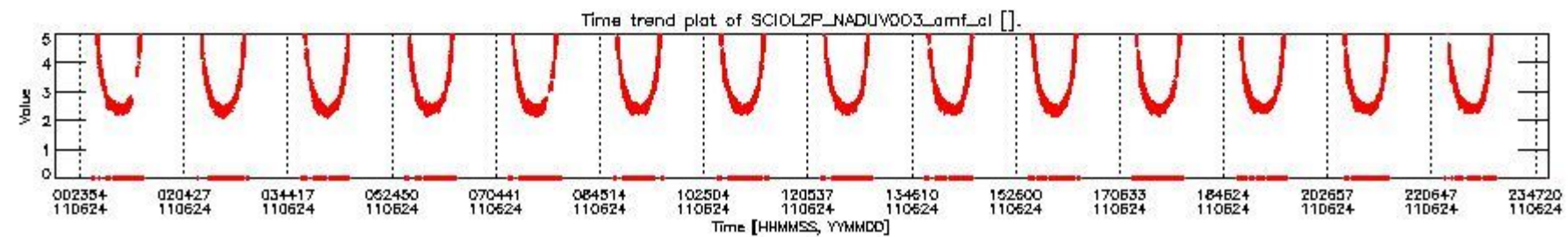
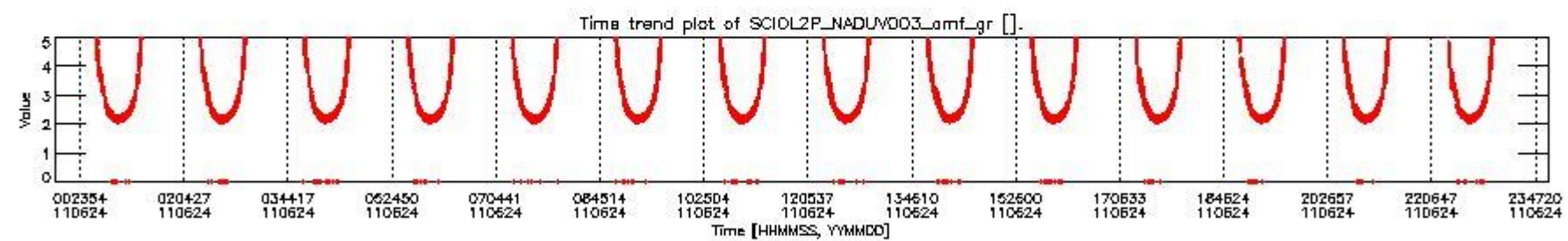
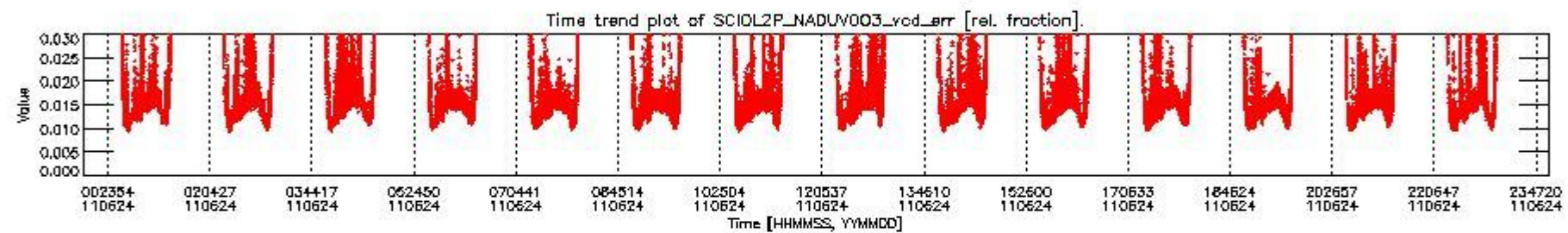
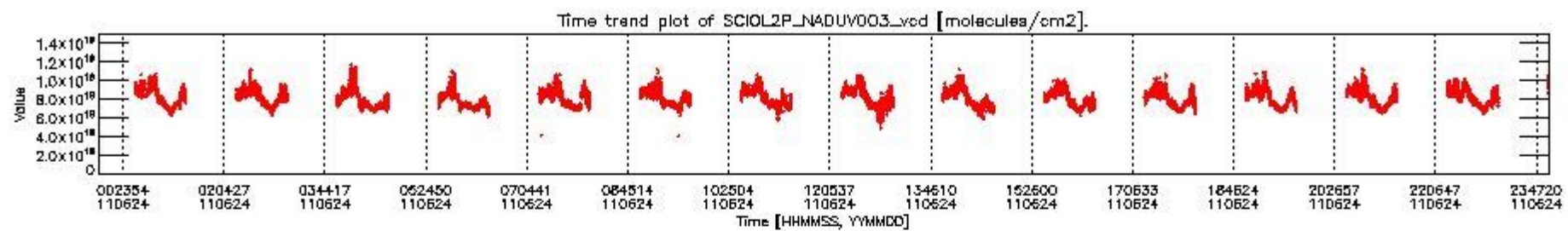
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

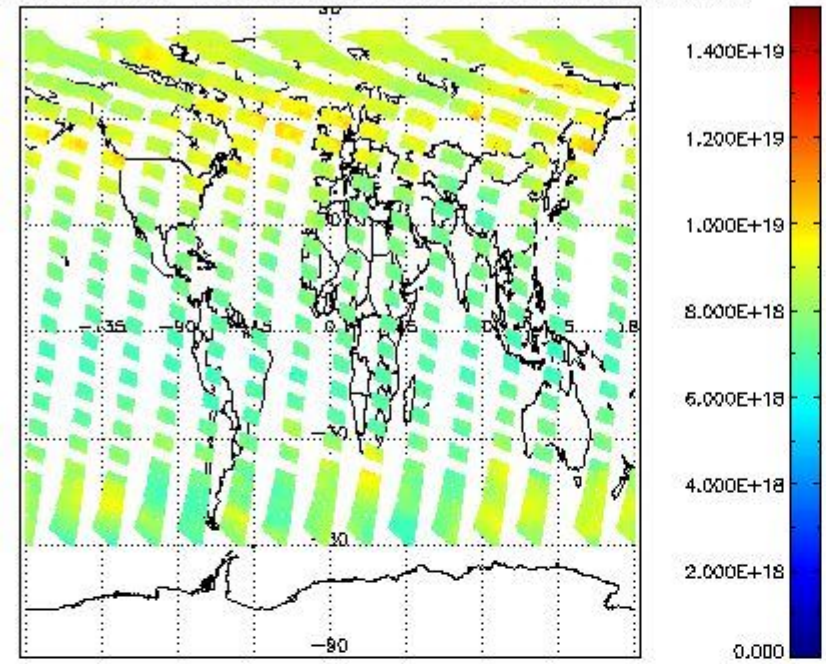
#### 2.2.2.1 O3 (UV0)



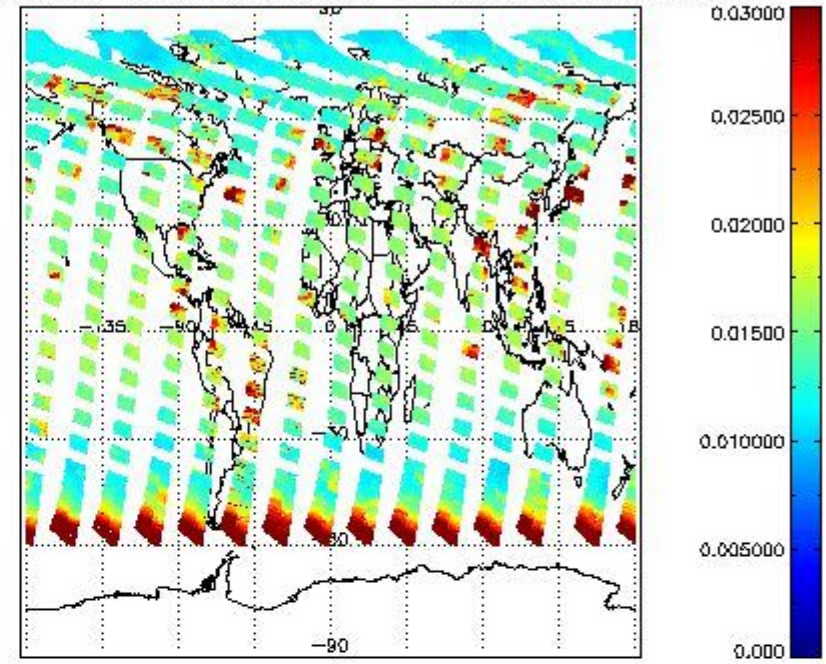




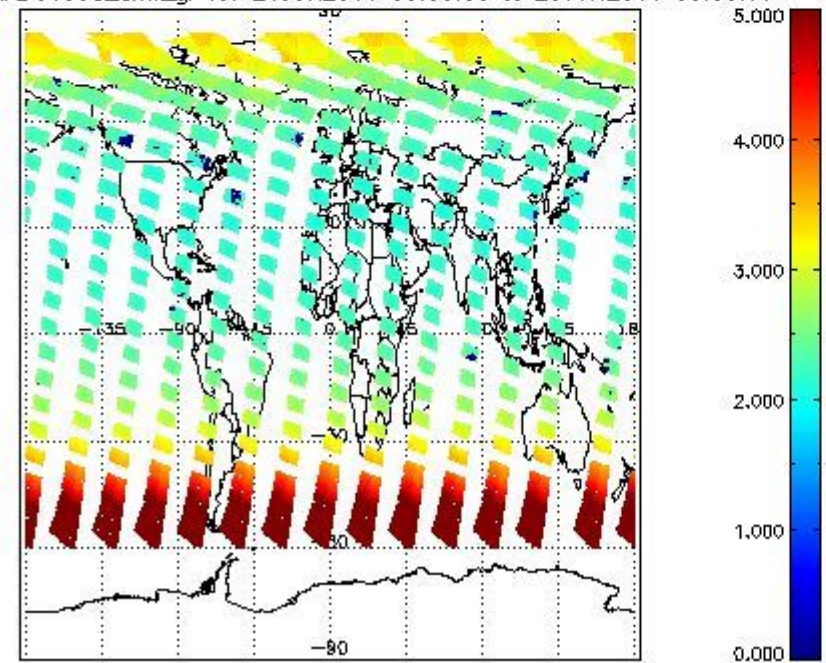
SCIOL2P\_NADUV003\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



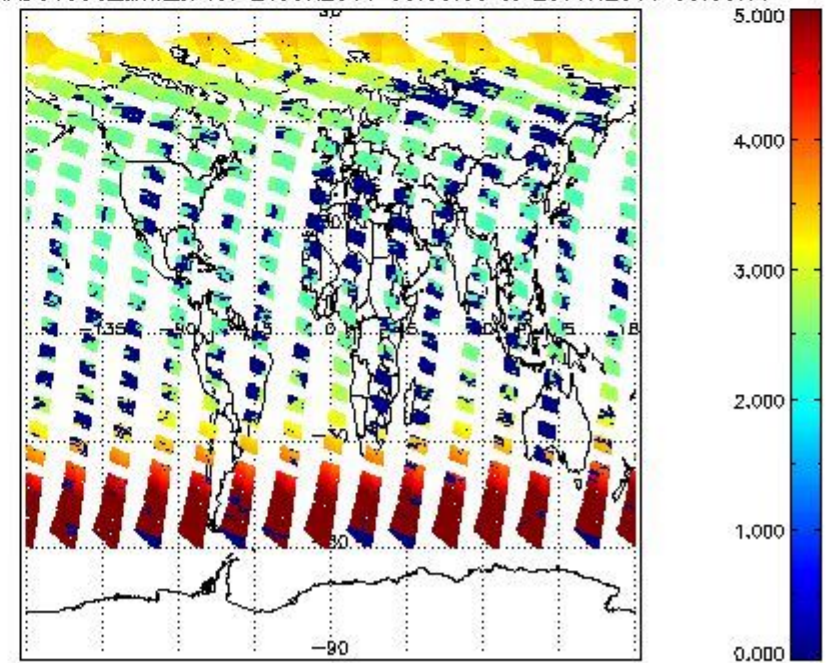
SCIOL2P\_NADUV003\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

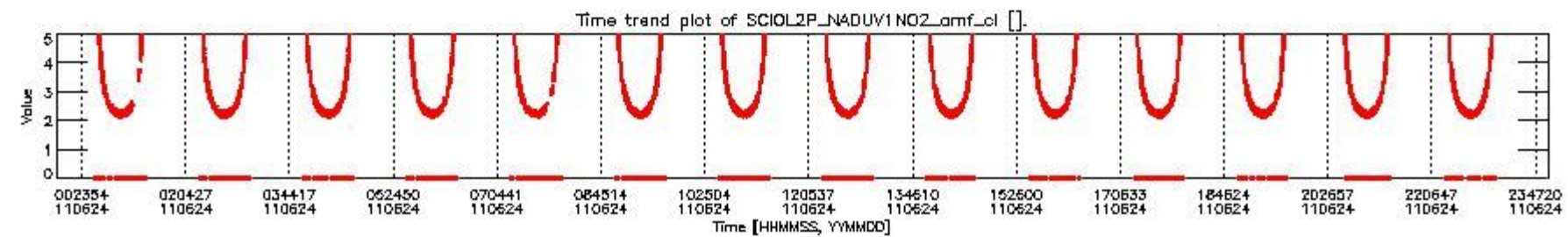
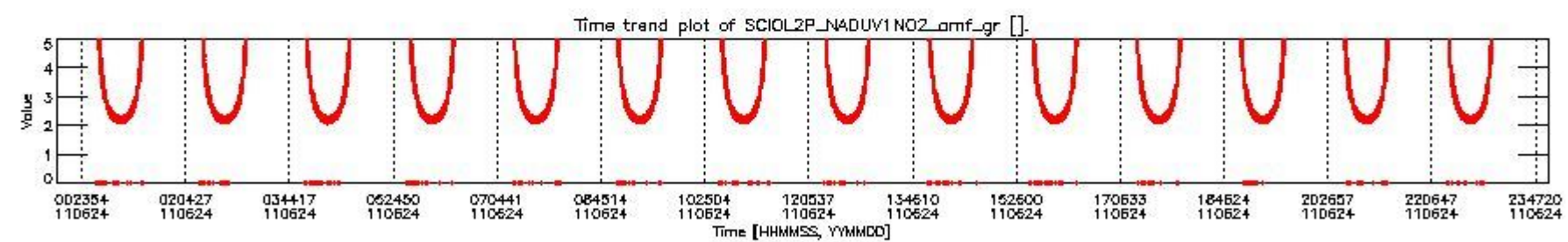
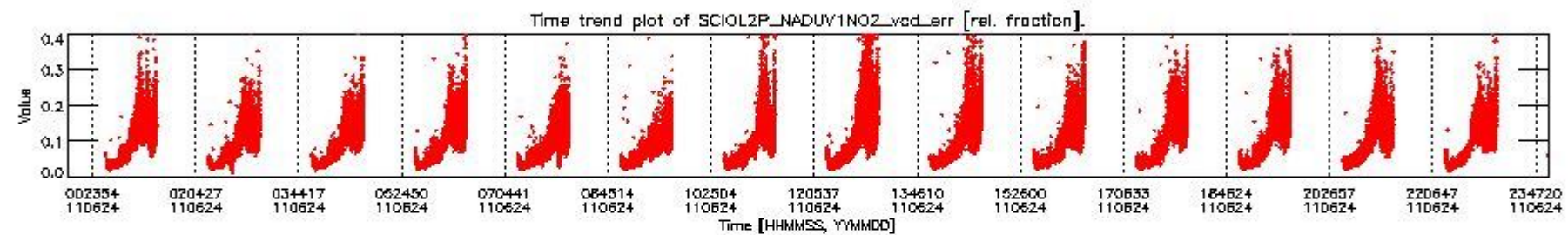
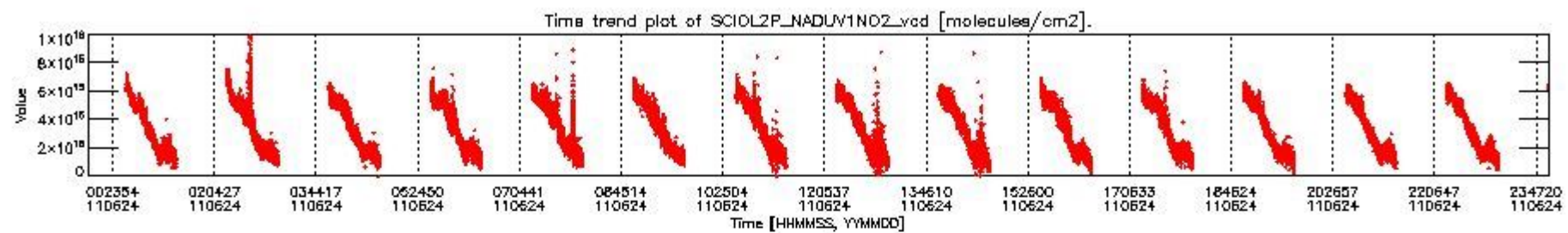


SCIOL2P\_NADUV003\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



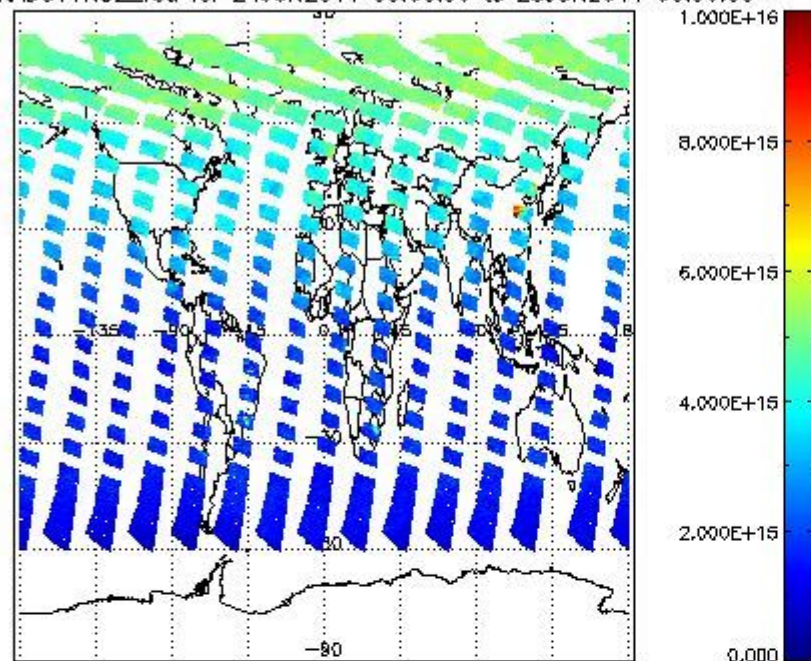
2.2.2.2 NO2 (UV1)



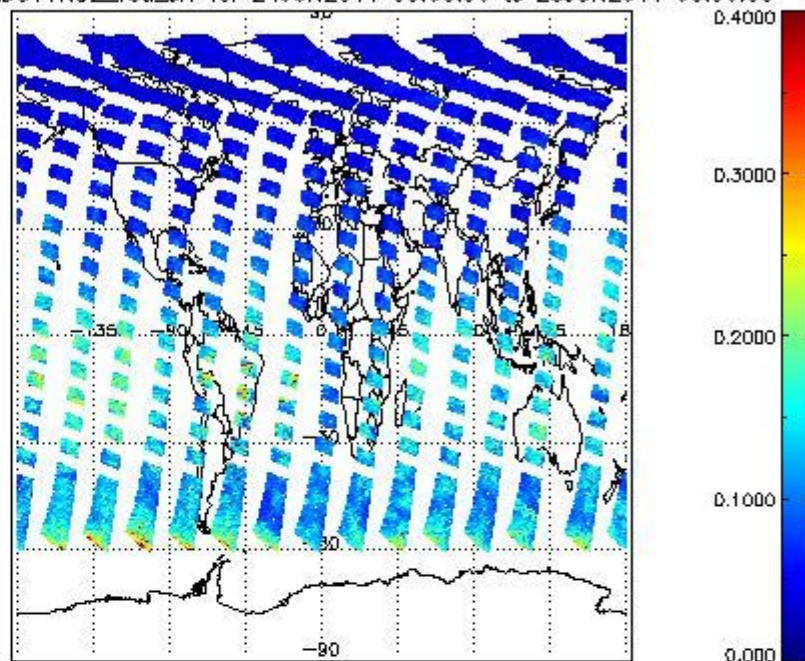




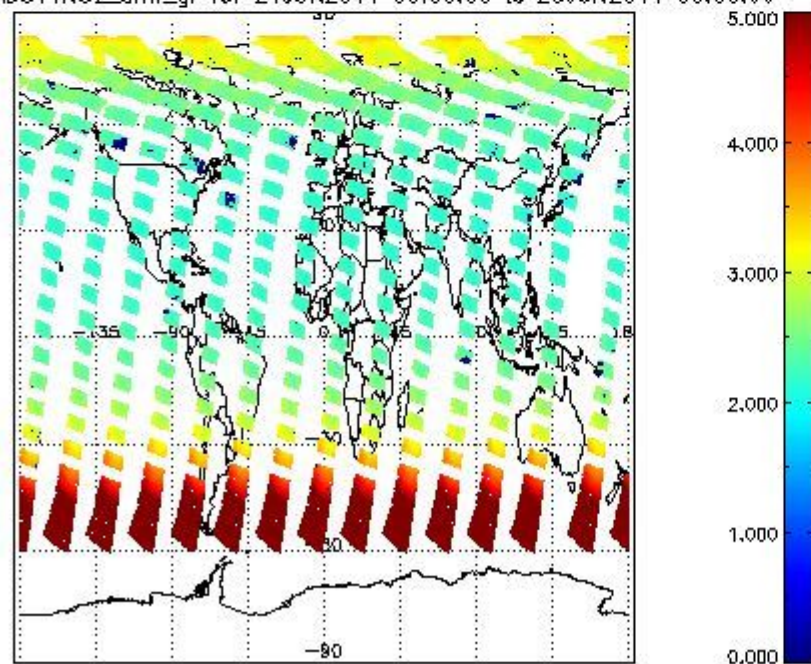
SCIOL2P\_NADUV1N02\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



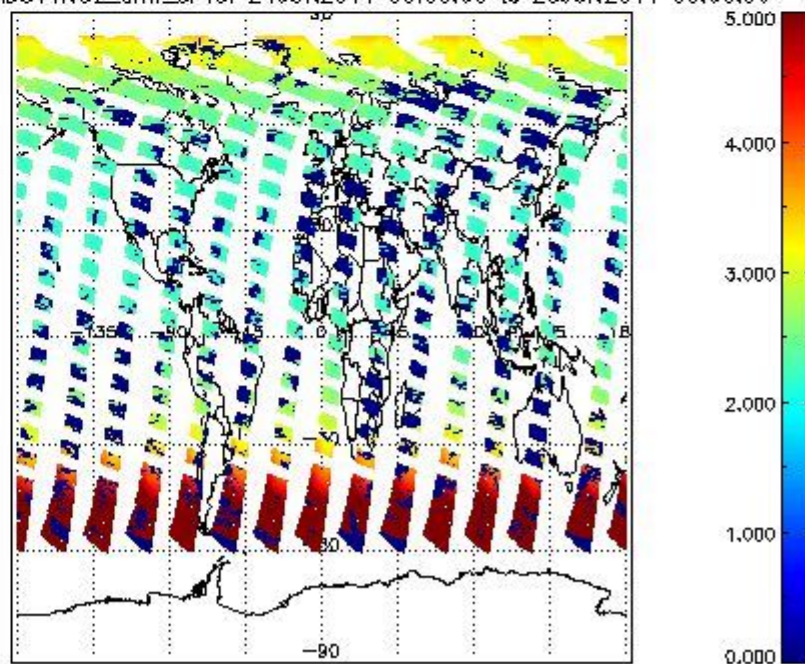
SCIOL2P\_NADUV1N02\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV1N02\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

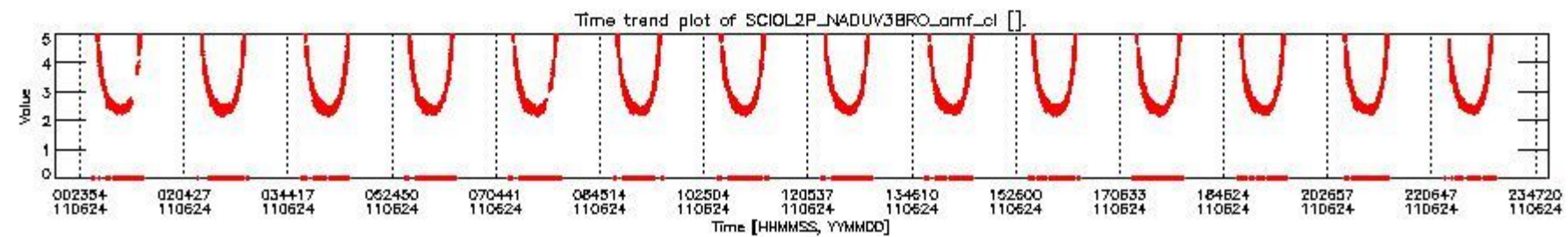
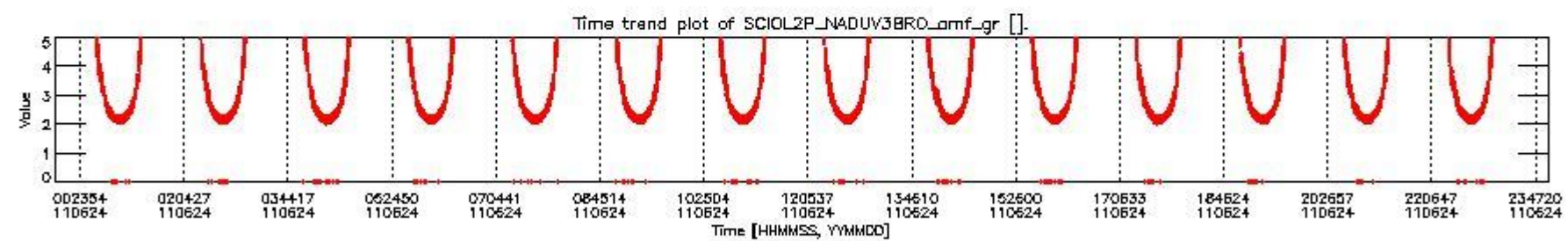
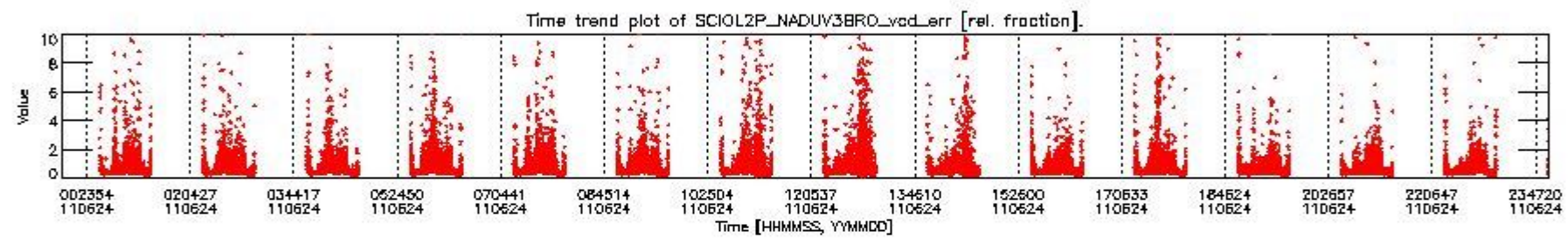
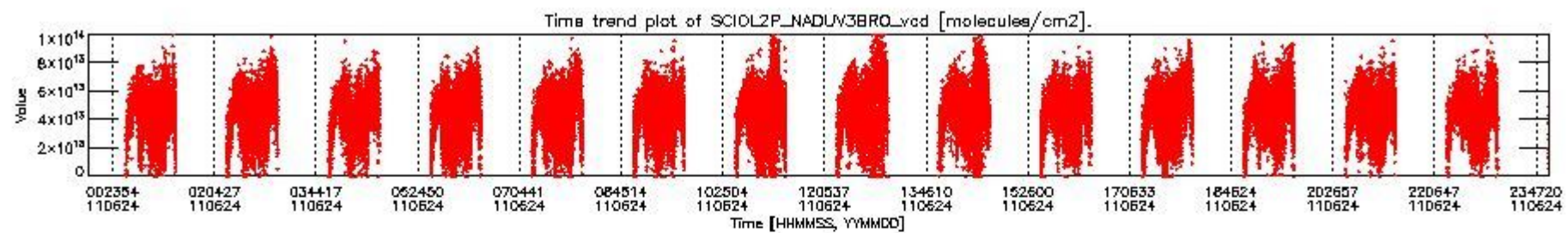


SCIOL2P\_NADUV1N02\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



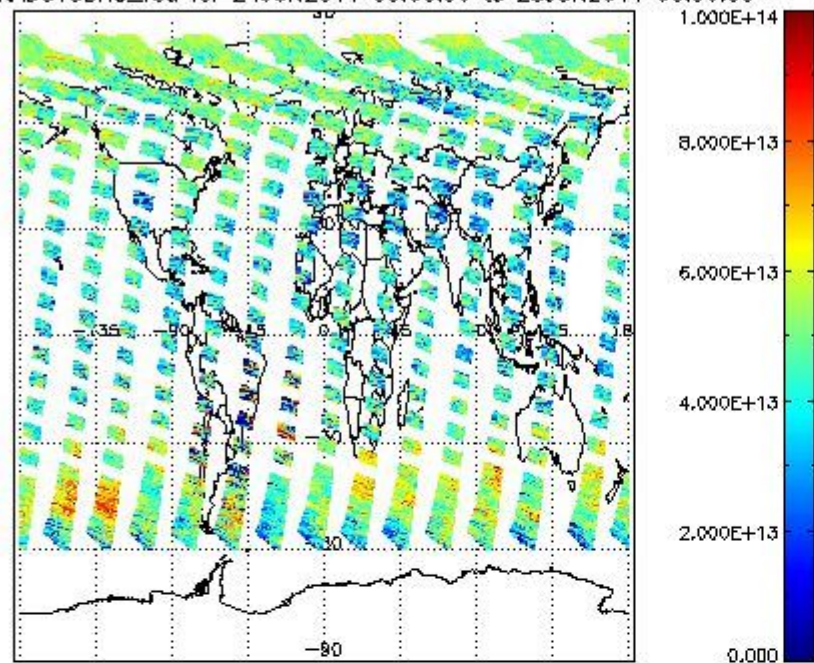
2.2.2.3 BrO (UV3)



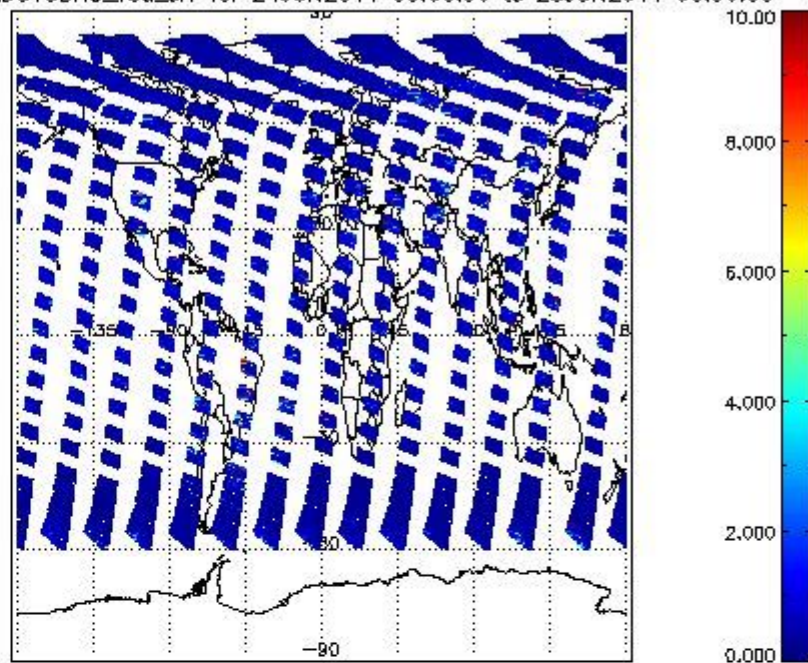




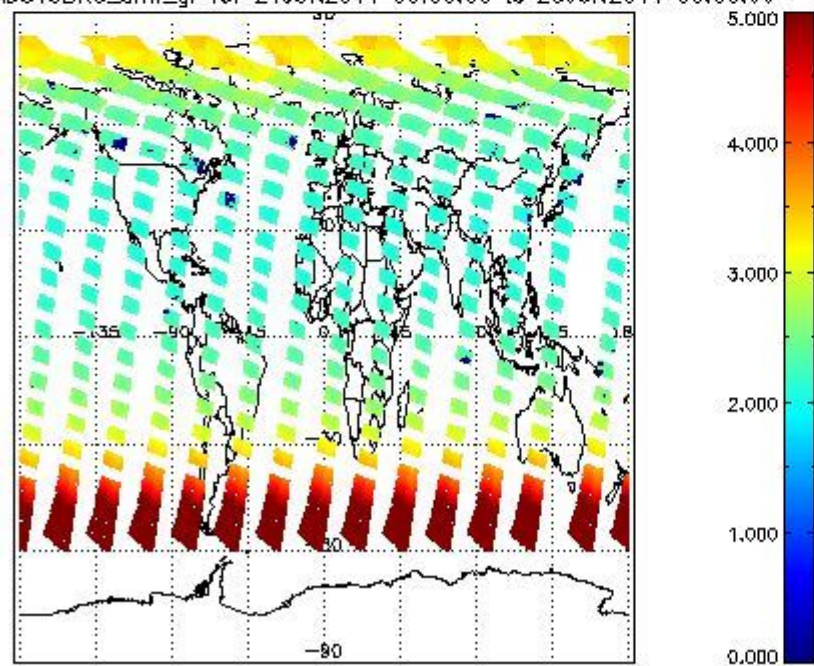
SCIOL2P\_NADUV3BRO\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



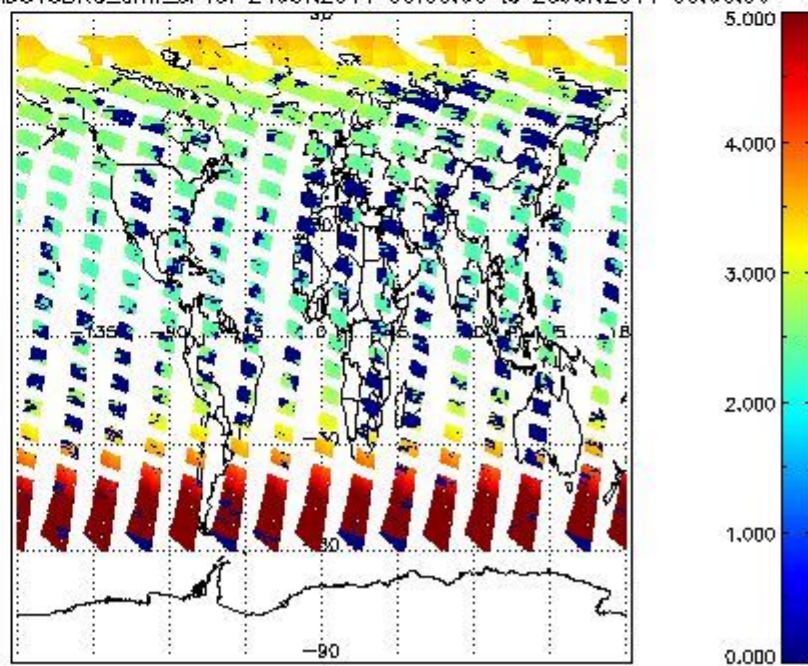
SCIOL2P\_NADUV3BRO\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

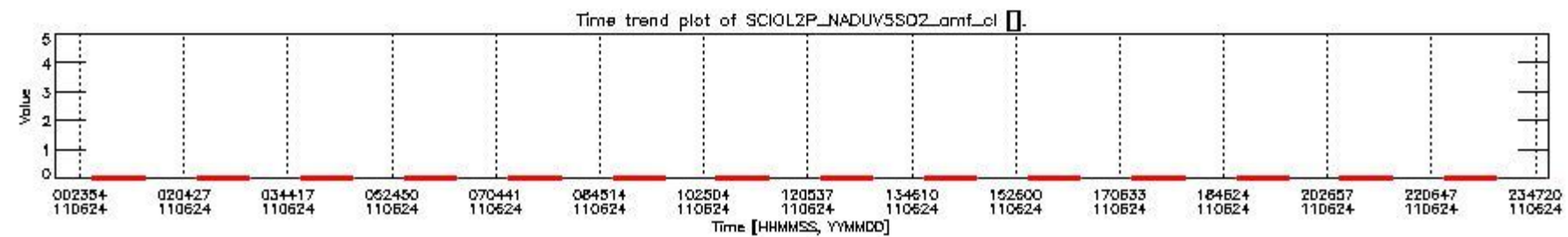
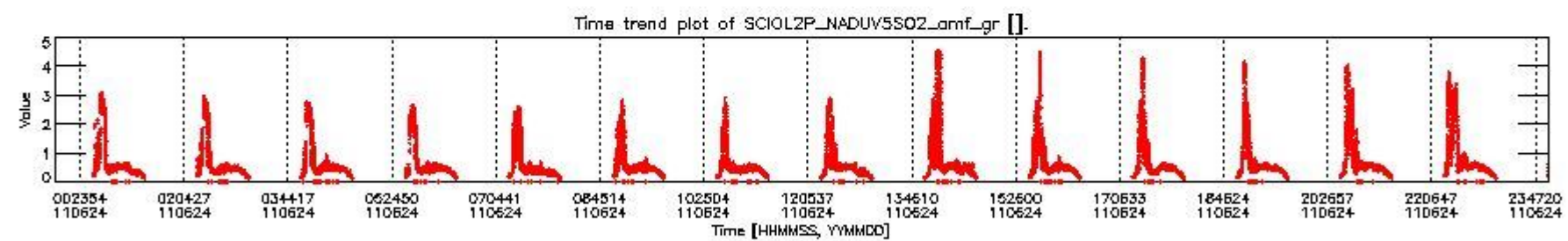
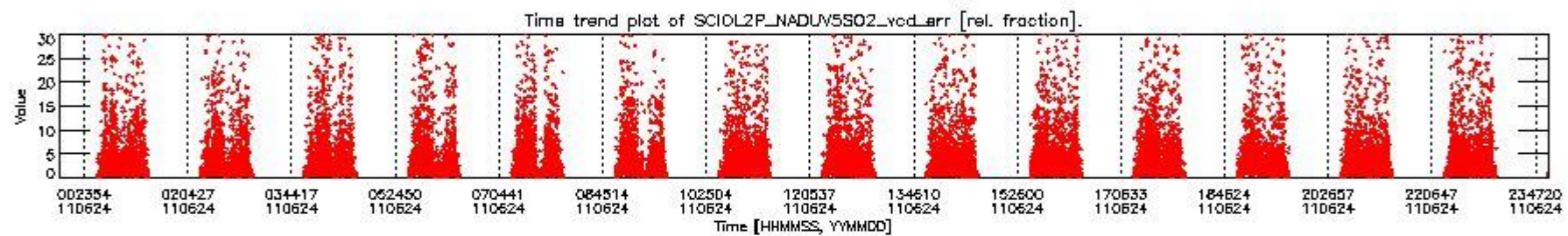
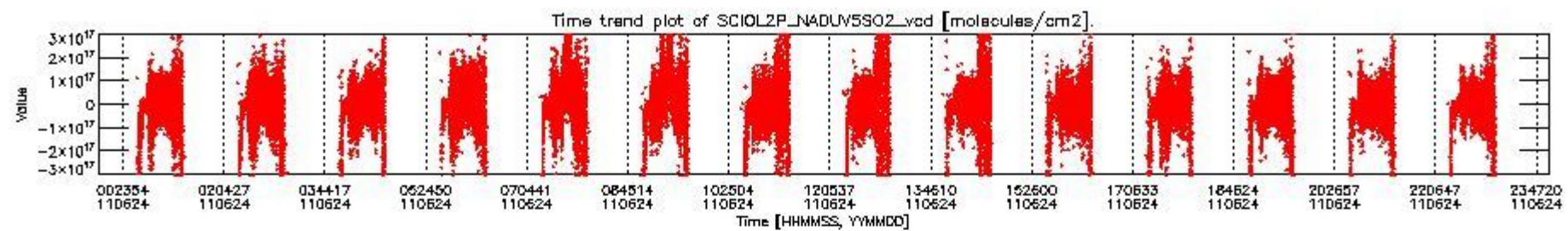


SCIOL2P\_NADUV3BRO\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



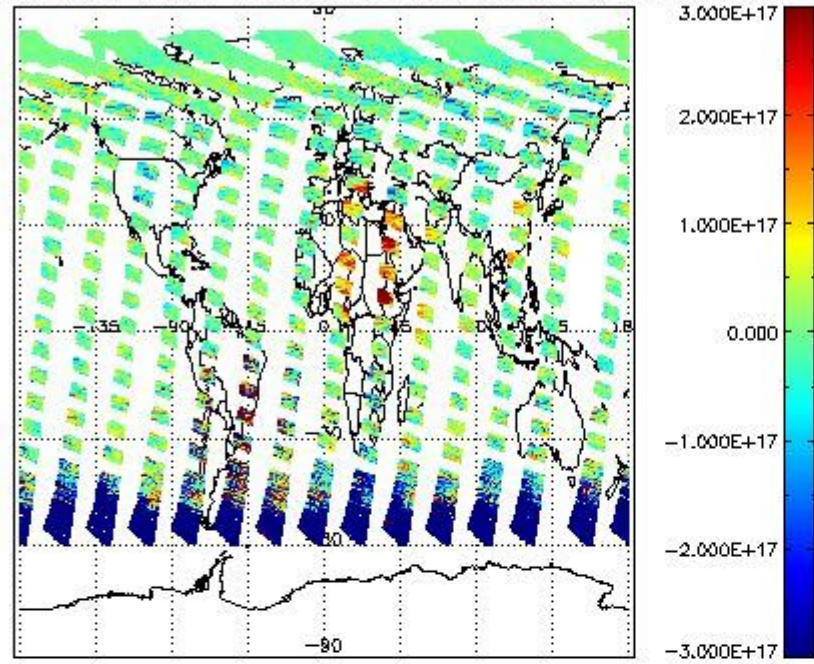
2.2.2.4 SO2 (UV5)



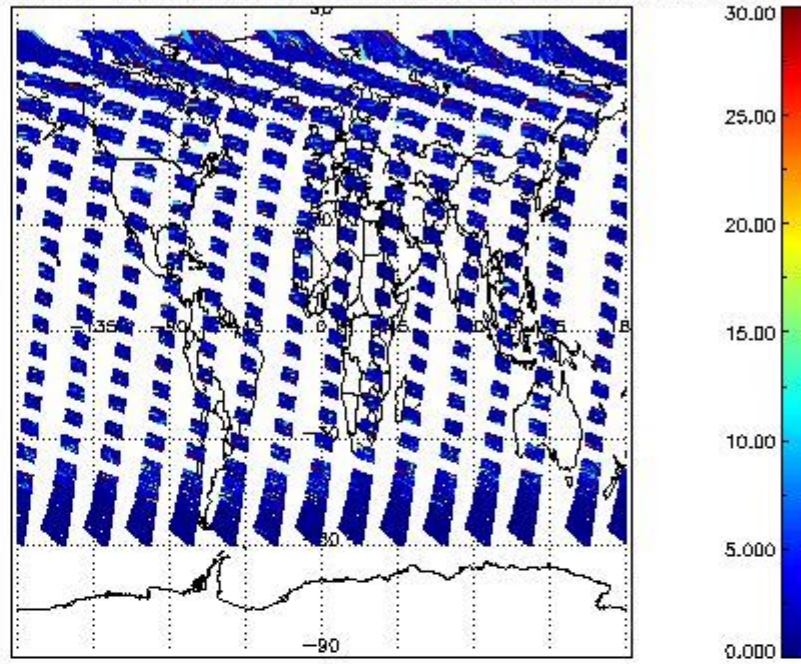




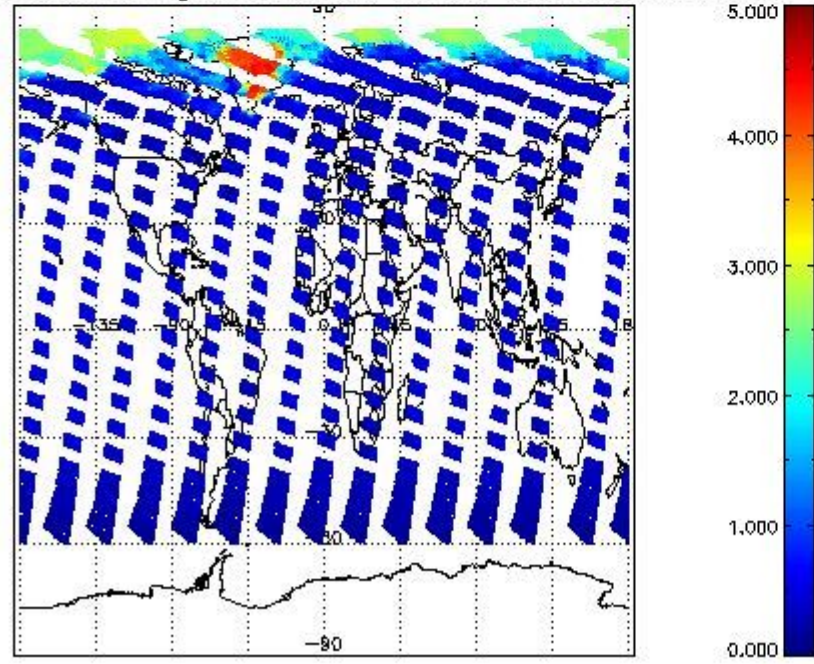
SCIOL2P\_NADUV5S02\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



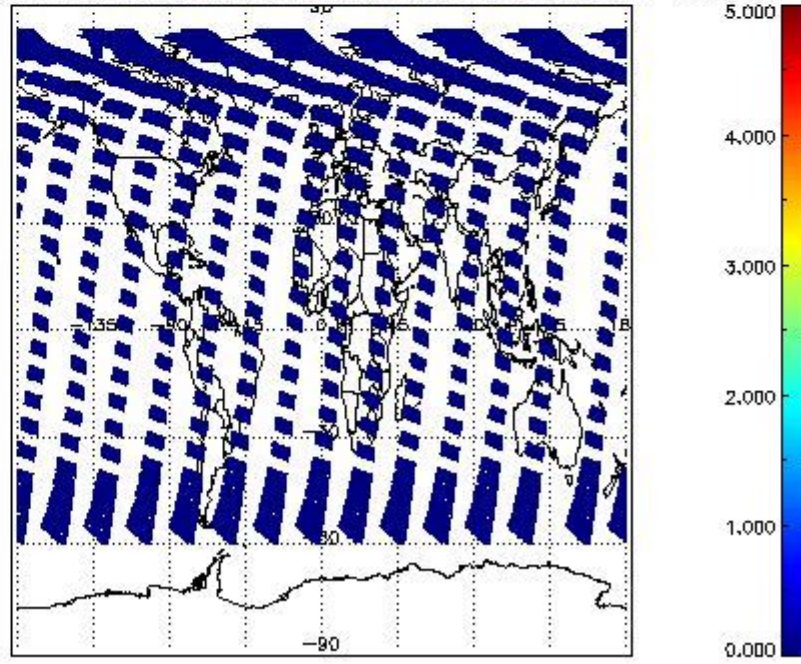
SCIOL2P\_NADUV5S02\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

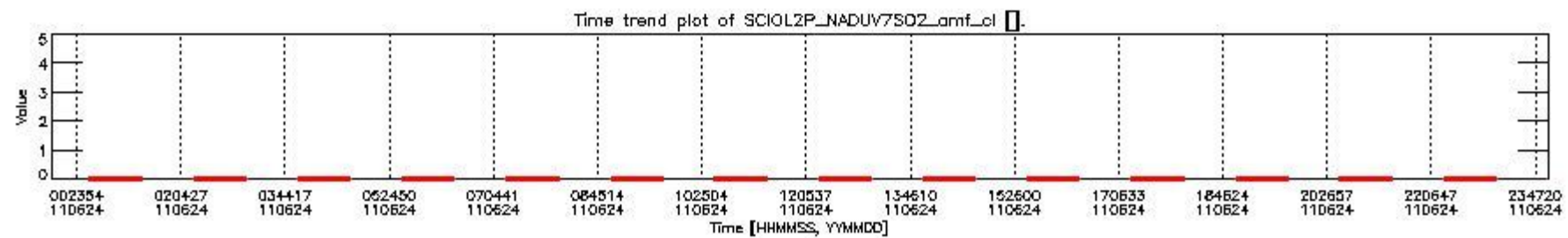
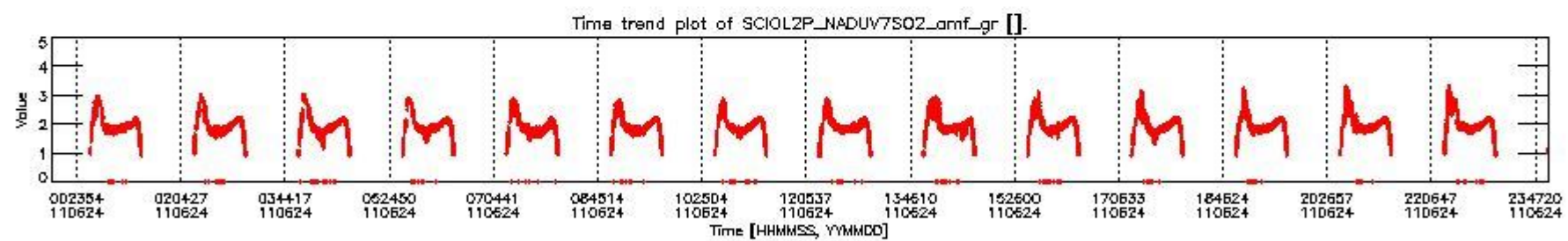
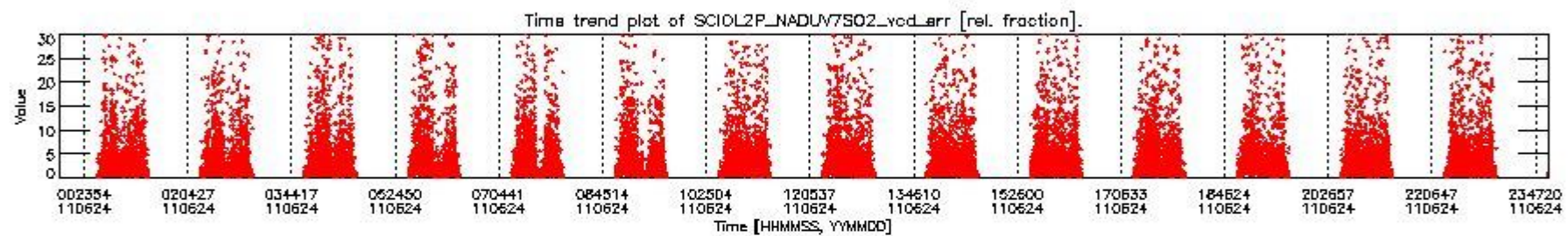
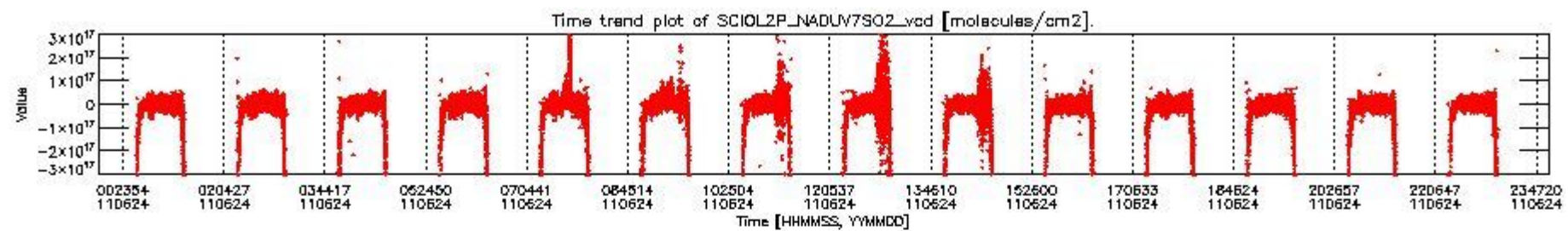


SCIOL2P\_NADUV5S02\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



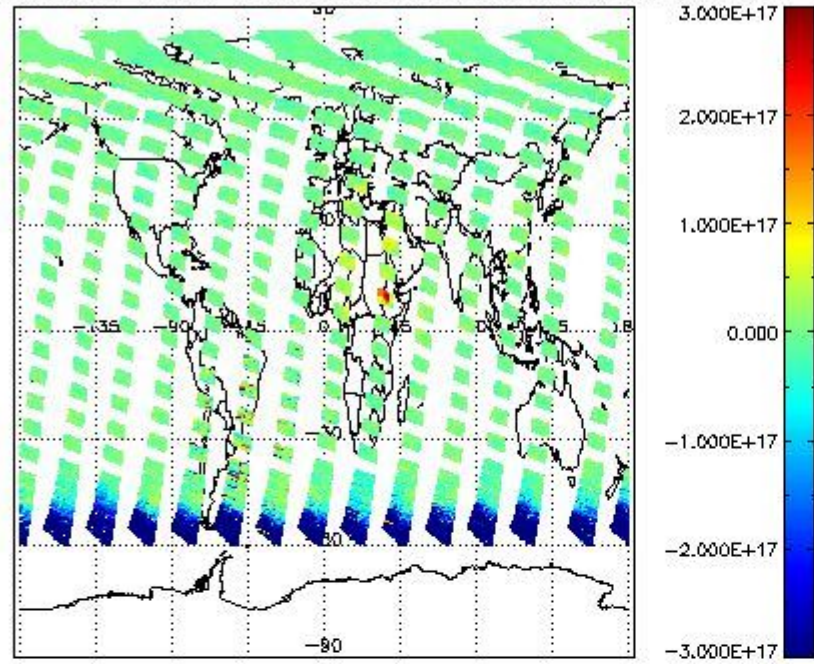
### 2.2.2.5 SO2 (UV7)



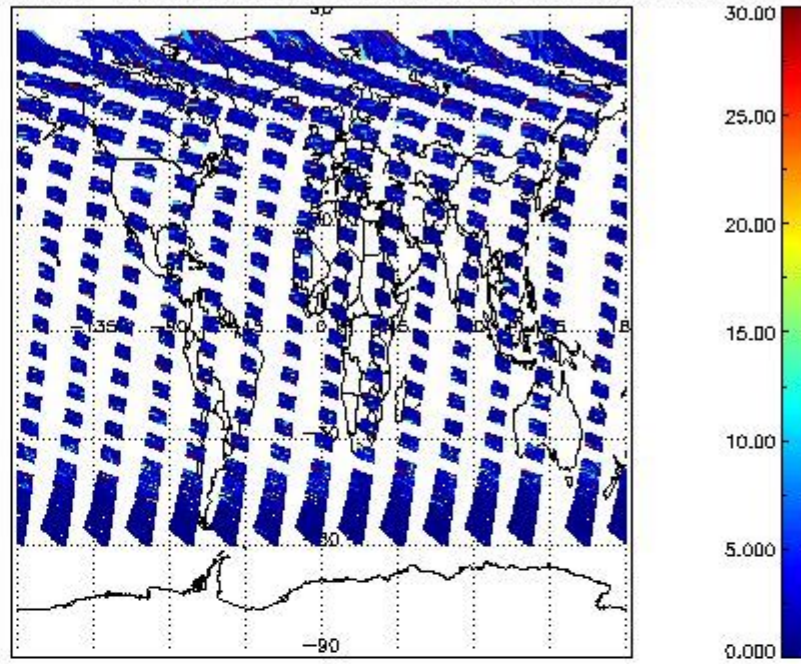




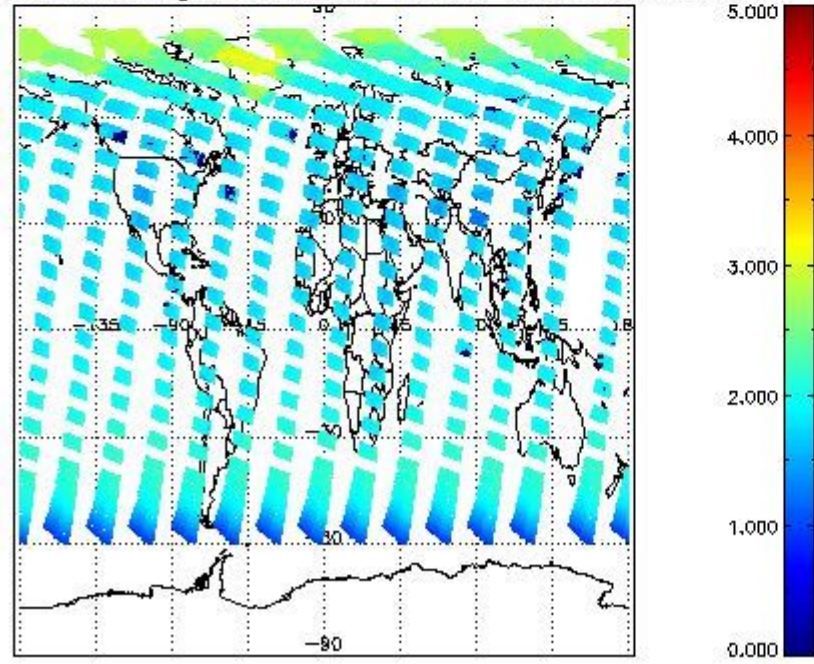
SCIOL2P\_NADUV7S02\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



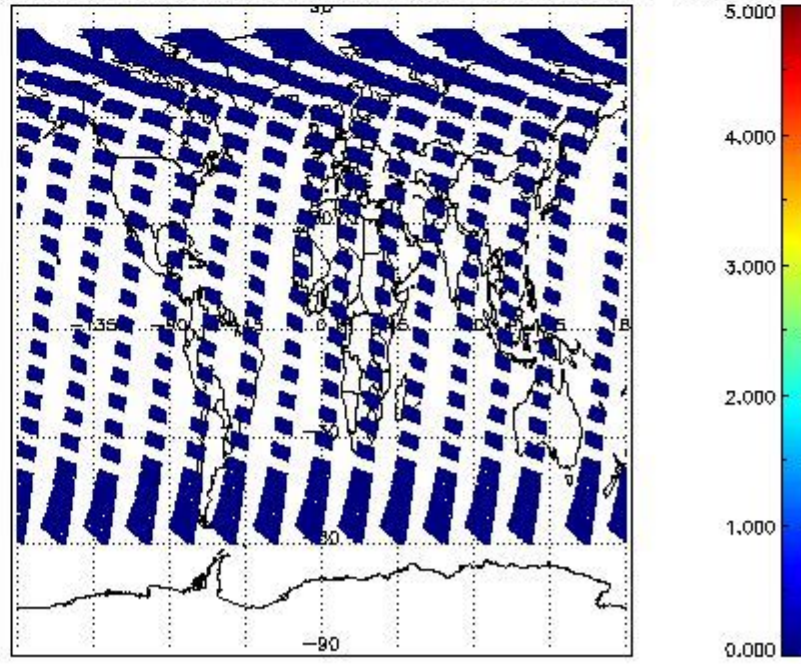
SCIOL2P\_NADUV7S02\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

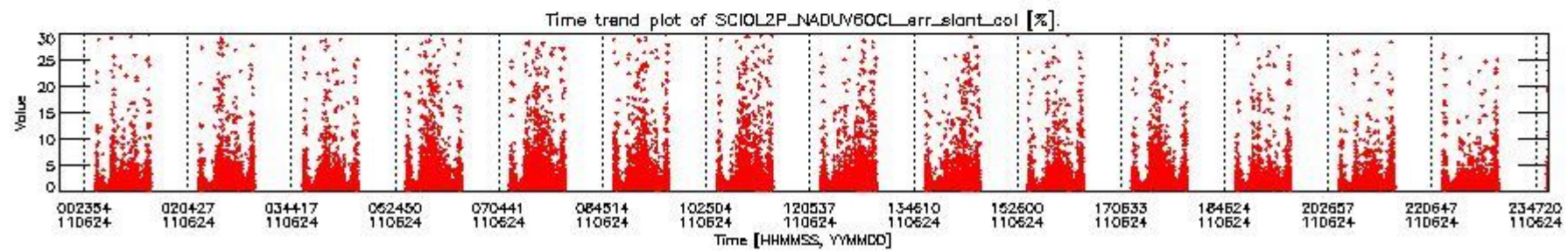
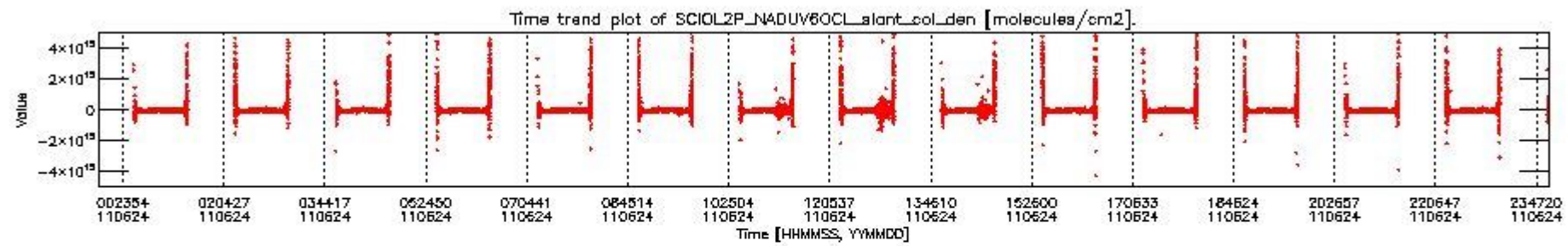


SCIOL2P\_NADUV7S02\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

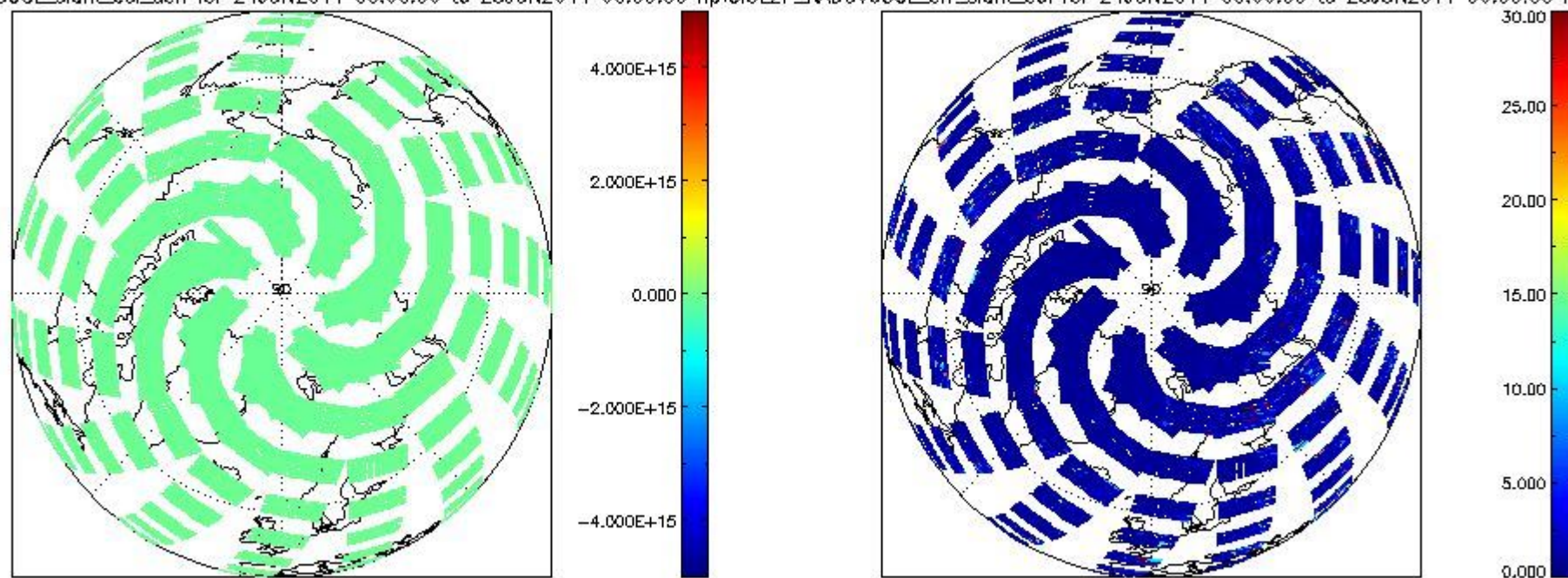


2.2.2.6 OCIO (UV6)



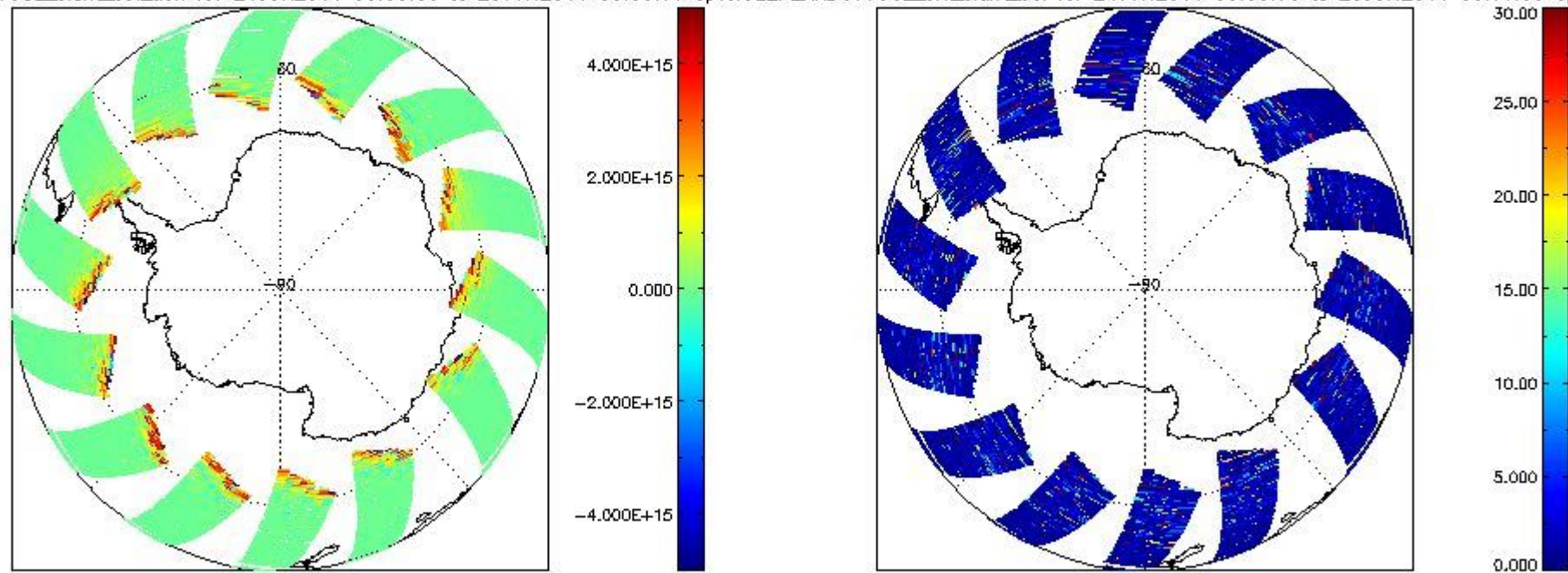


CIOL2P\_NADUV60CLslant\_col\_den for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 np; CIOL2P\_NADUV60CLerr\_slant\_col for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 np

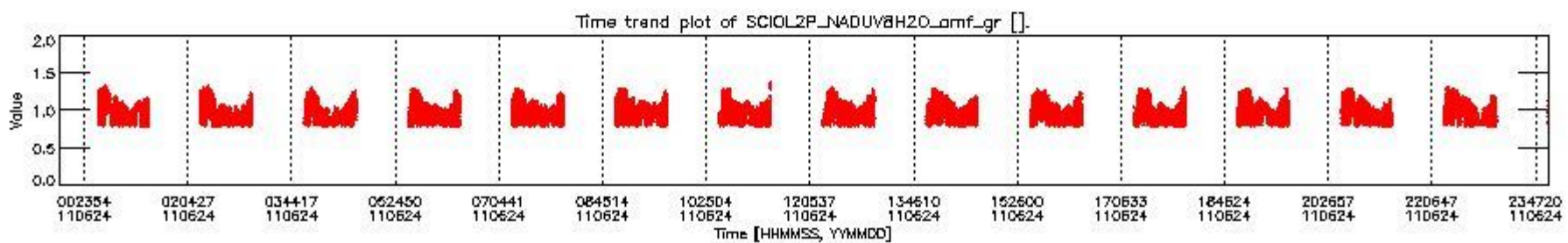
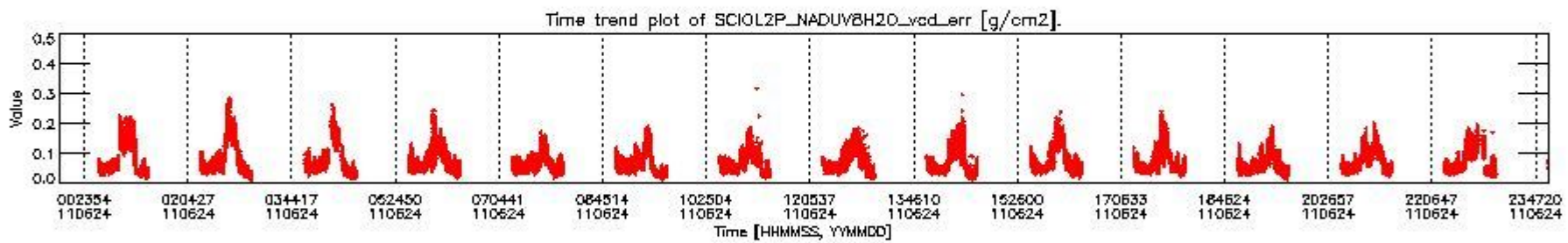
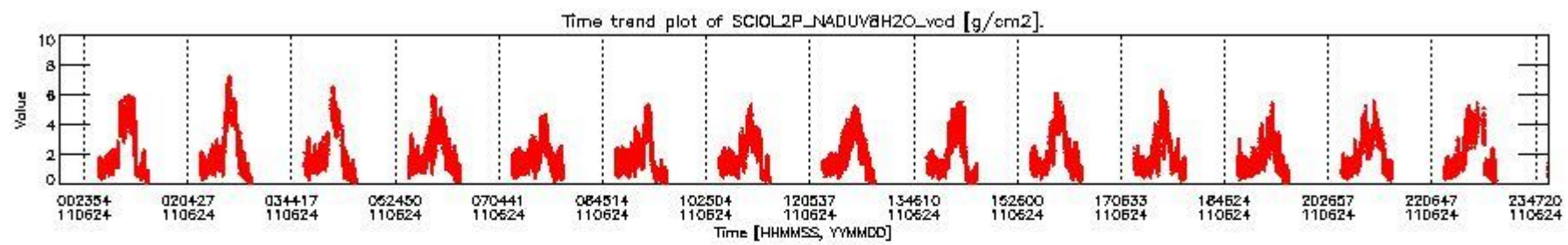




CIOL2P\_NADUV60CL\_slant\_col\_den for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 sp | CIOL2P\_NADUV60CL\_err\_slant\_col for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 sp

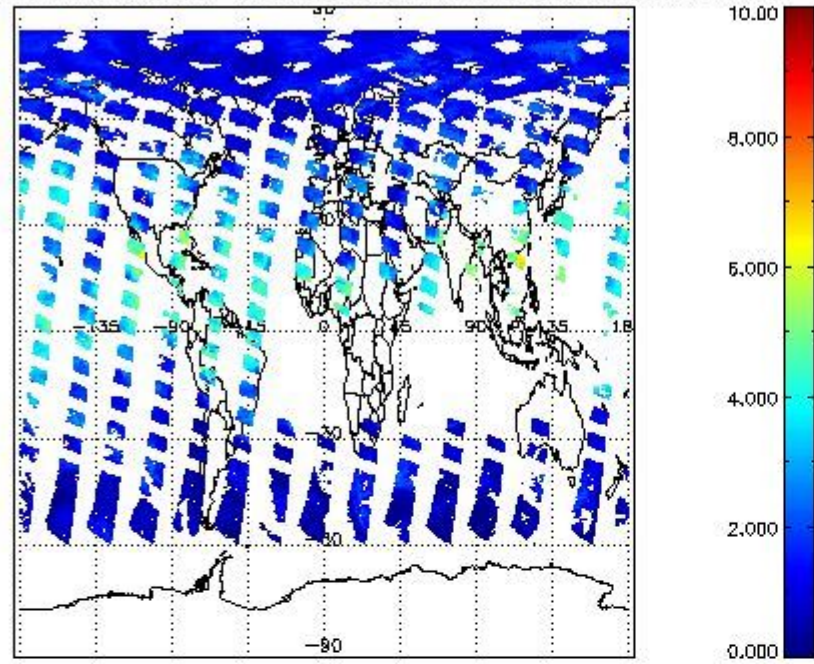


### 2.2.2.7 H2O (UV8)

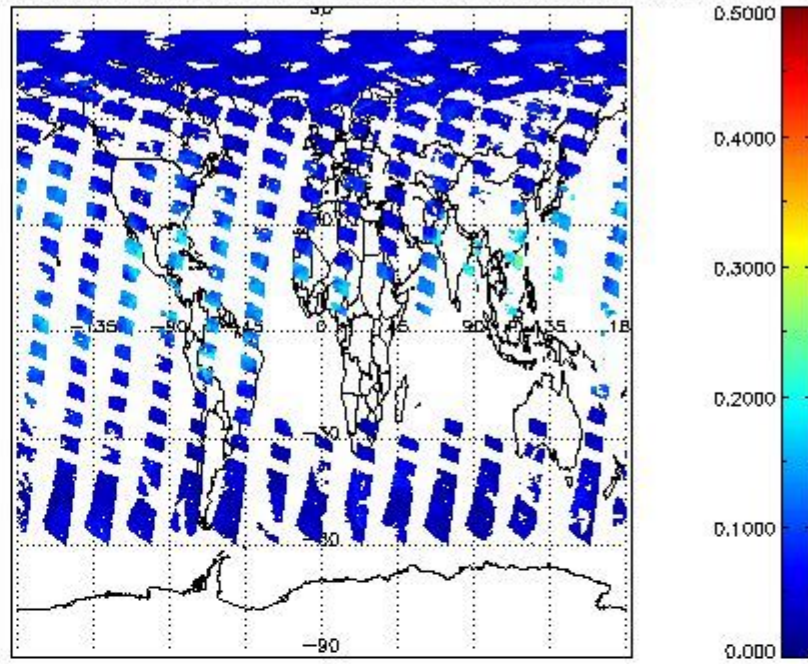




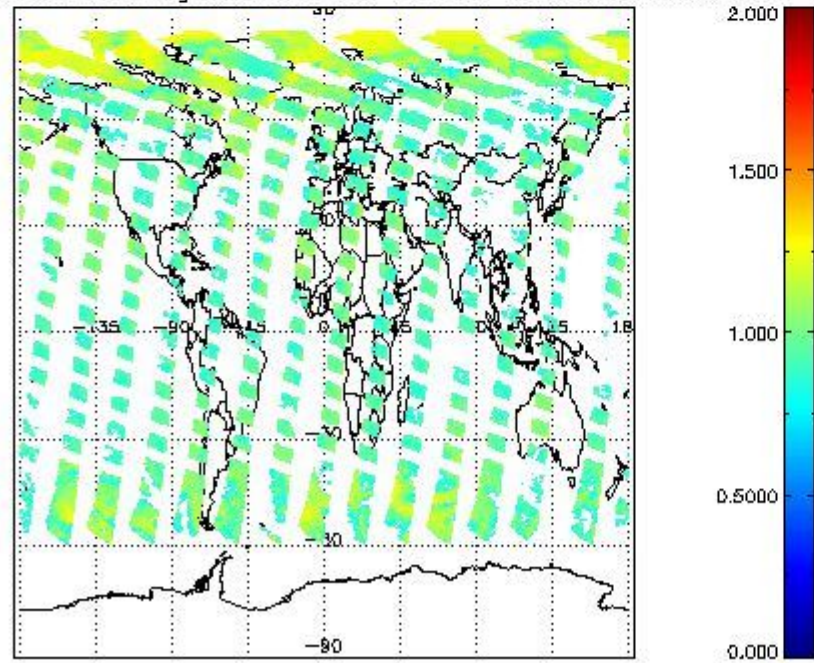
SCIOL2P\_NADUV8H2O\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV8H2O\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

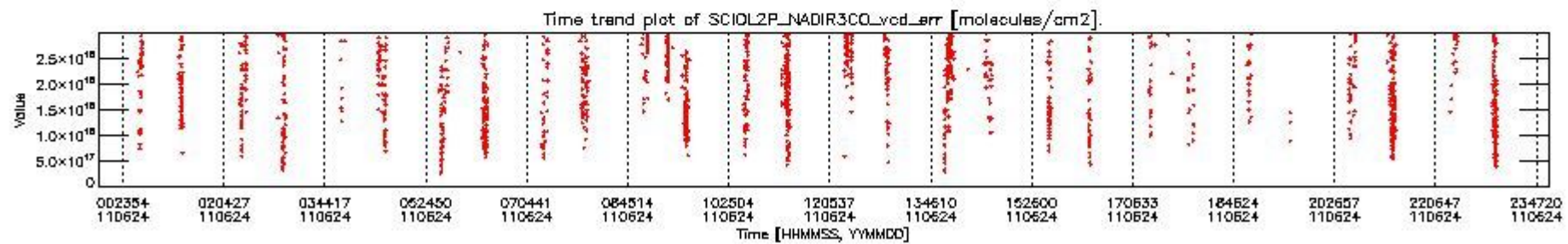
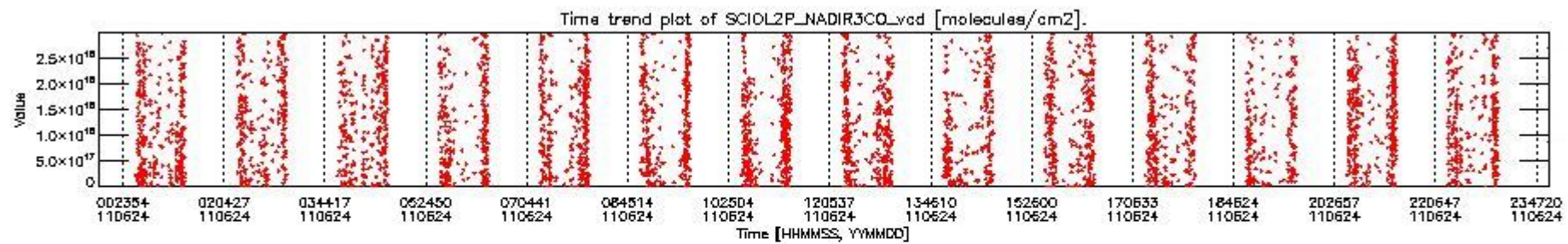


SCIOL2P\_NADUV8H2O\_arnf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

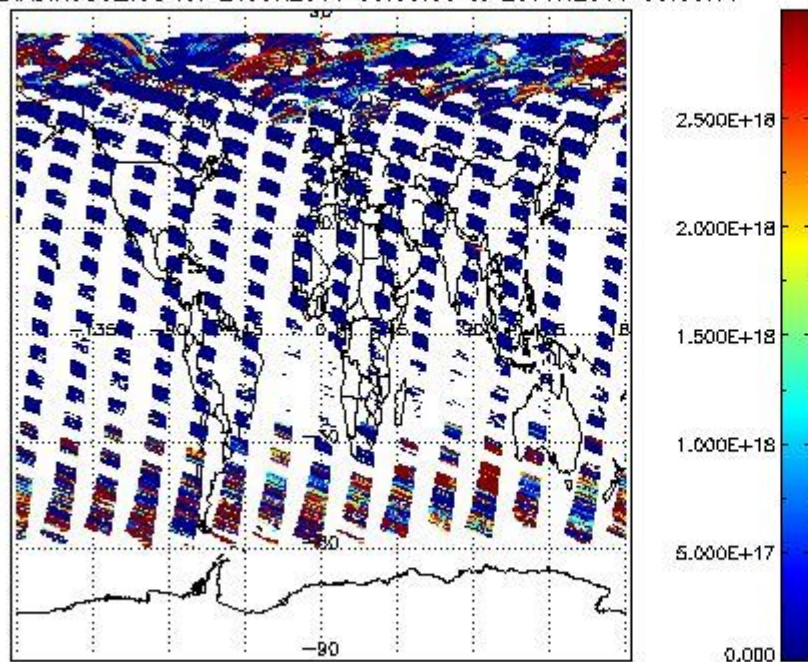


### 2.2.2.8 CO (IR3)

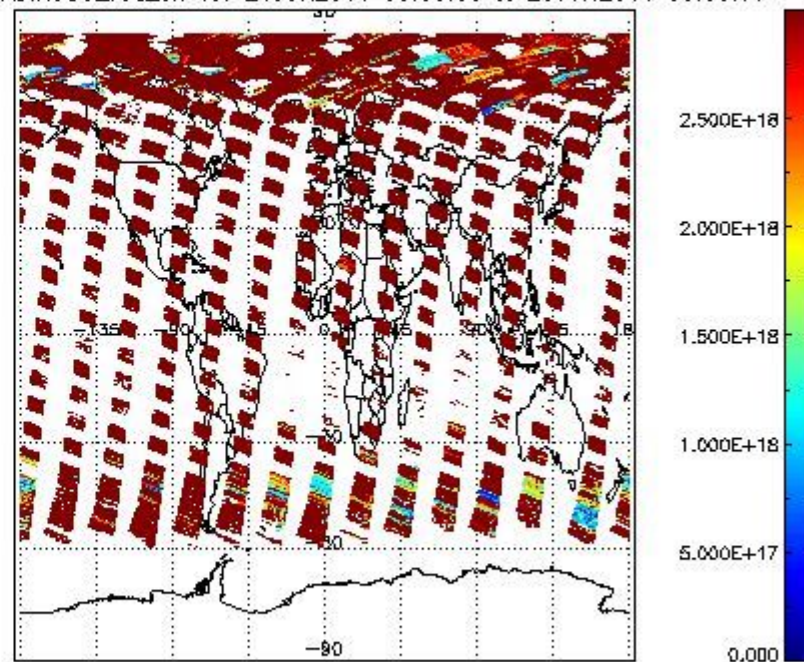




SCIDL2P\_NADIR3CO\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 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.

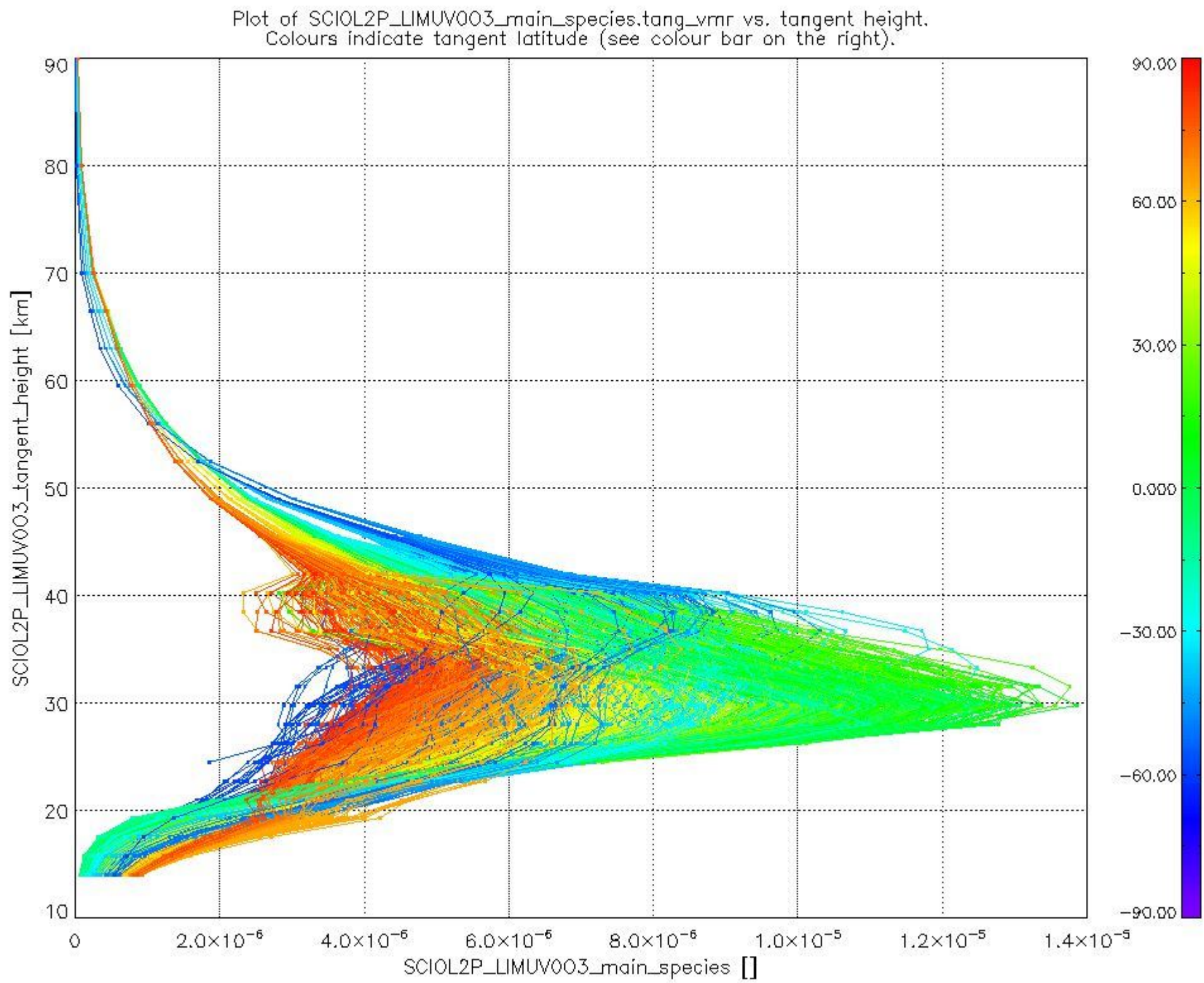
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



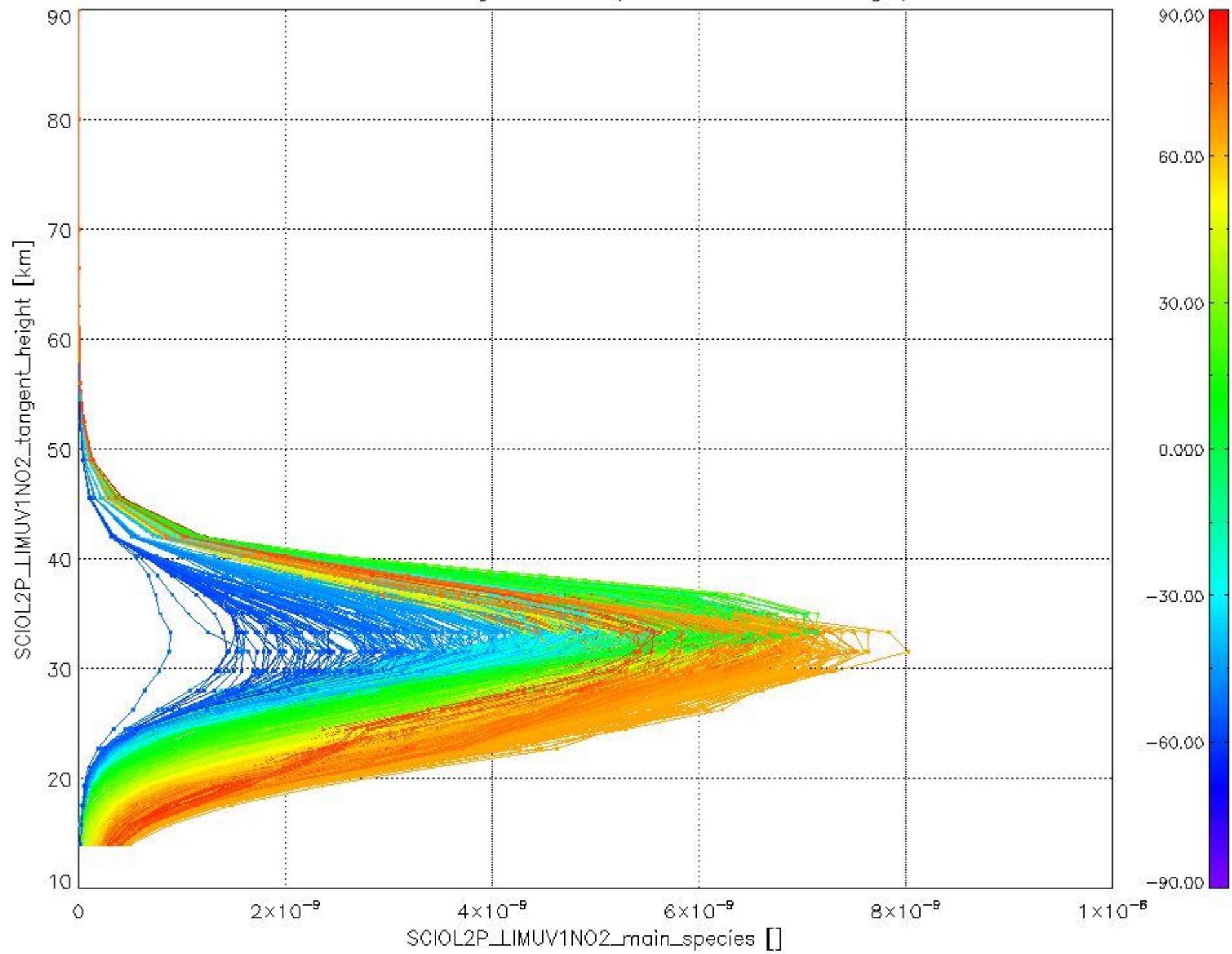
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)

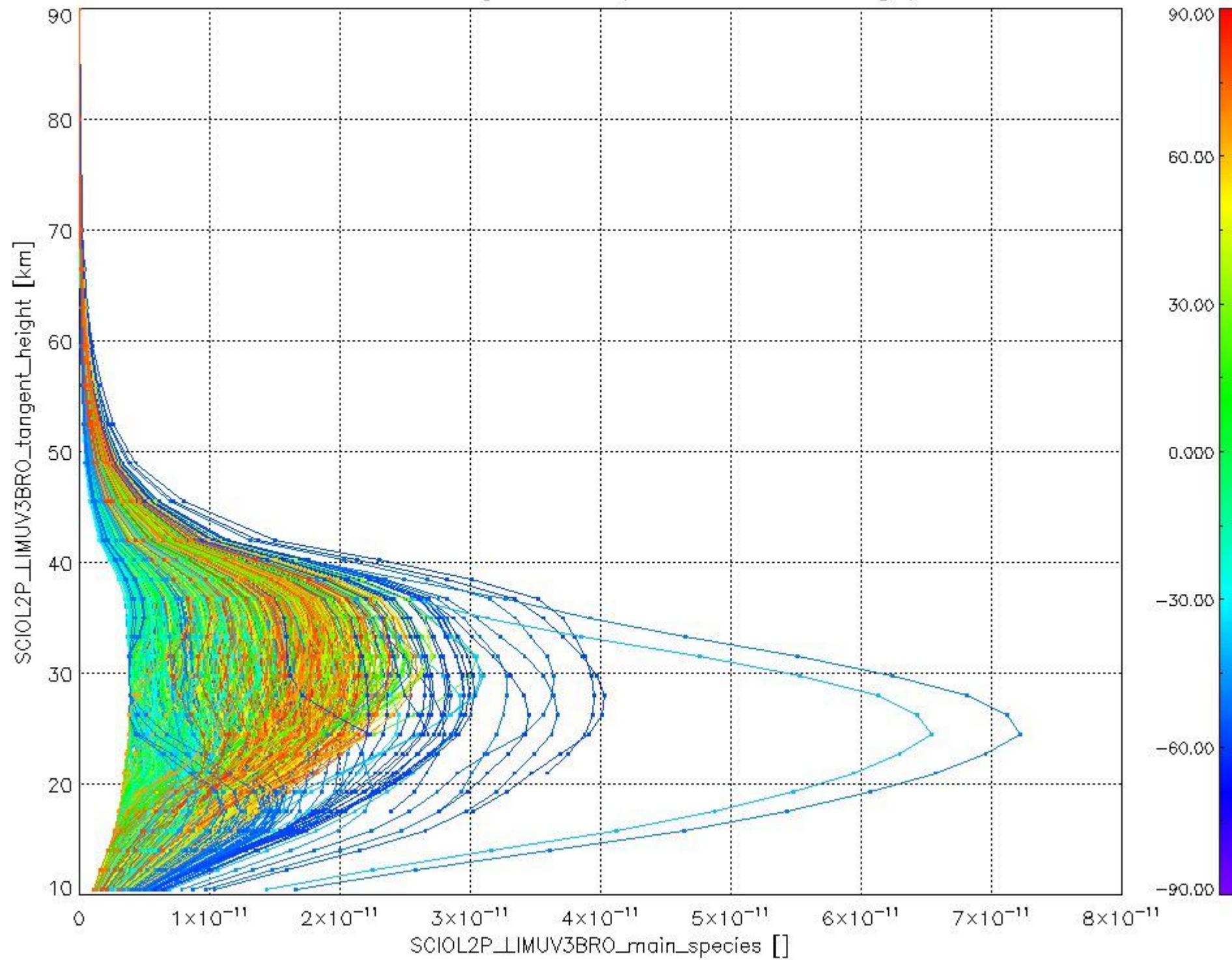
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).



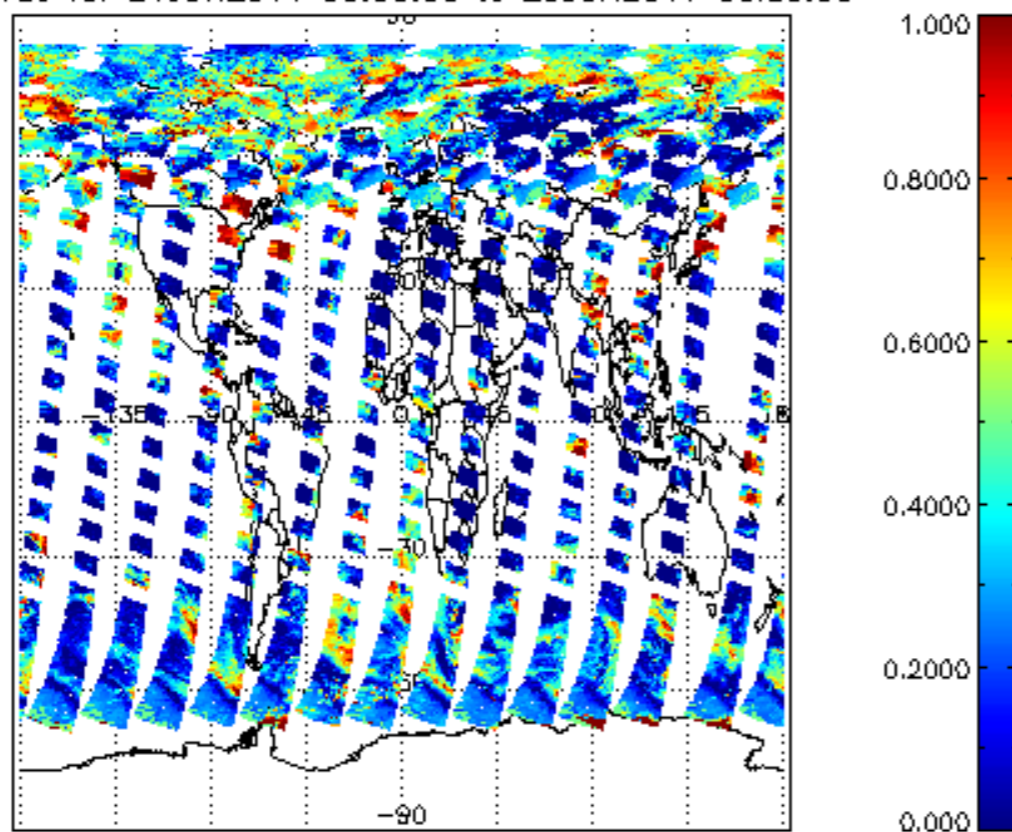
### 2.3 ADF monitoring

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_AXVIEC20110628_110240_20110623_190434_20110625_190434
3	SCI_MF1_AXVIEC20110628_110345_20110624_182748_20110626_182748

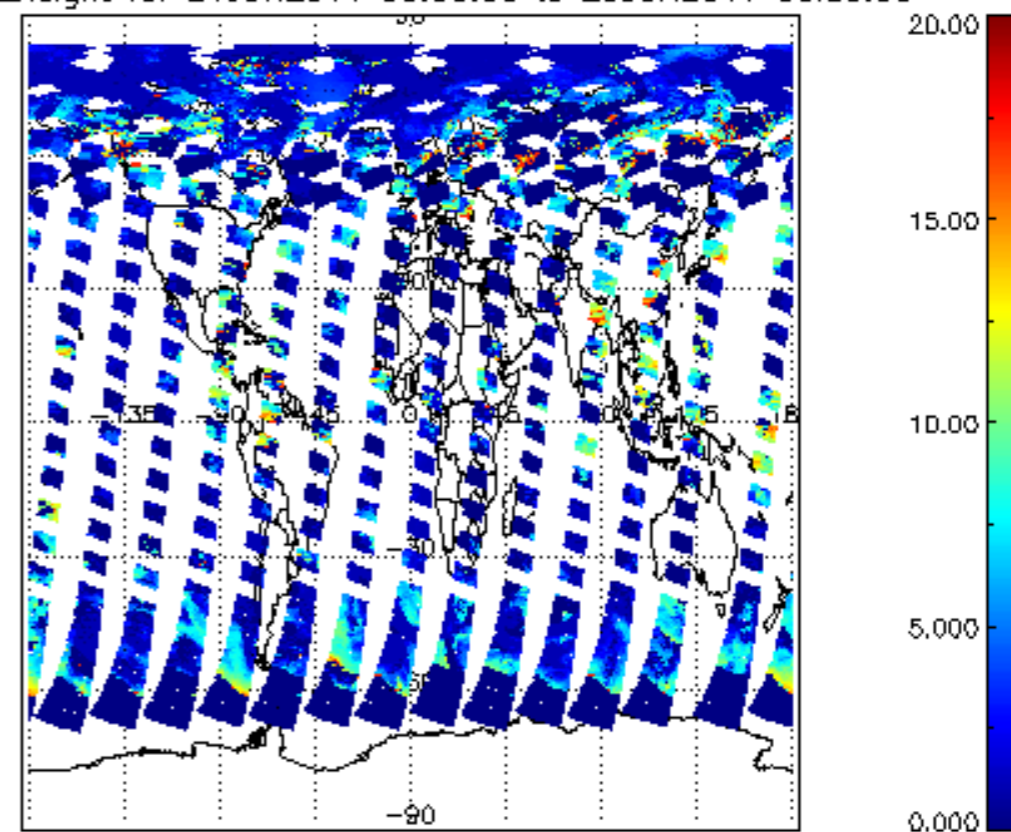




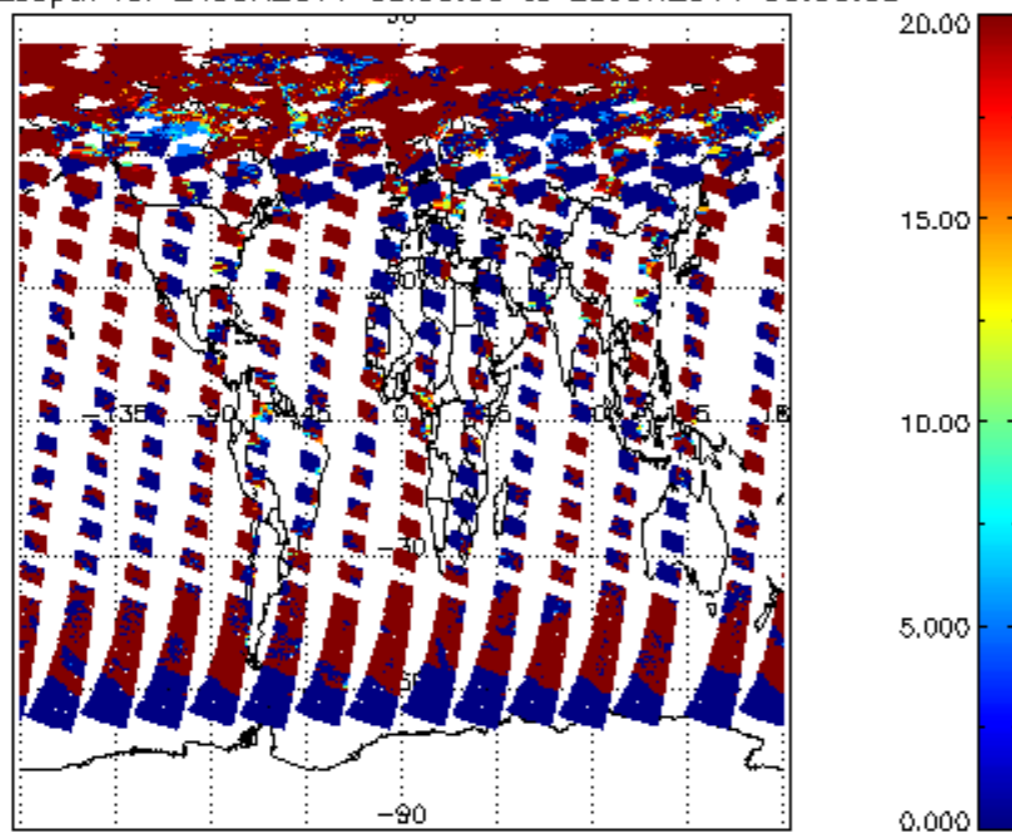
cl\_frac for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



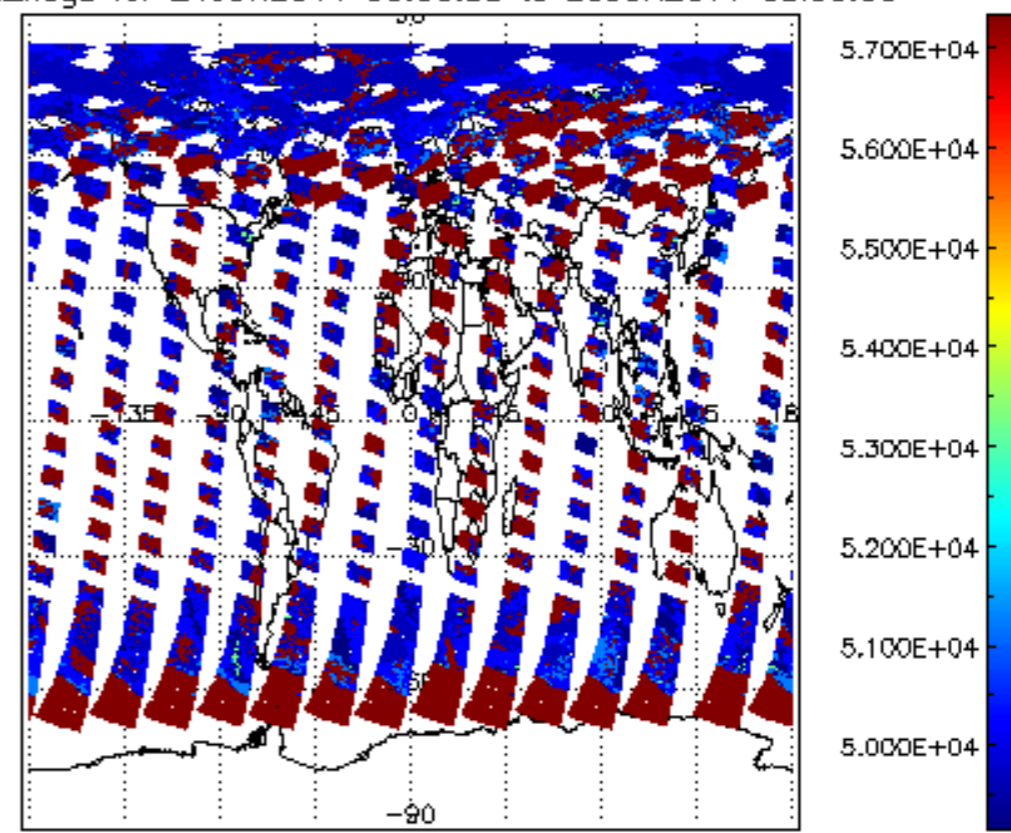
cl\_top\_height for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



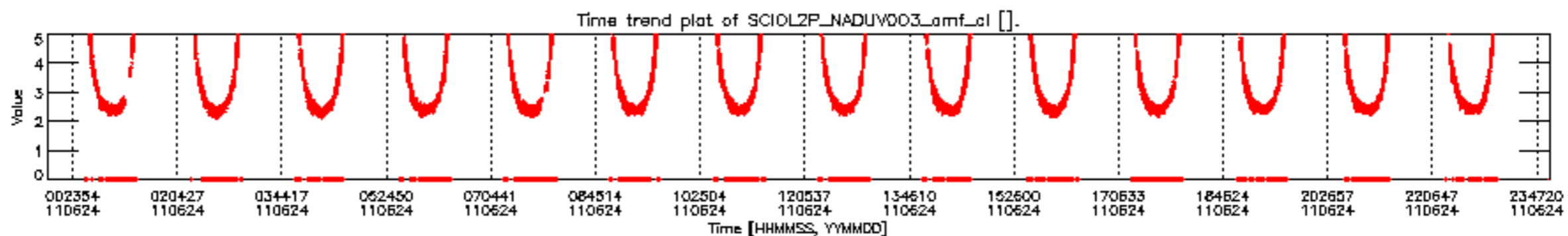
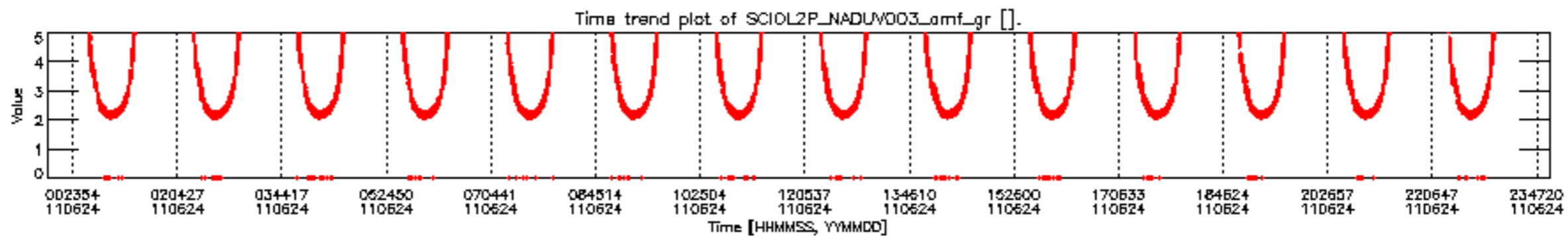
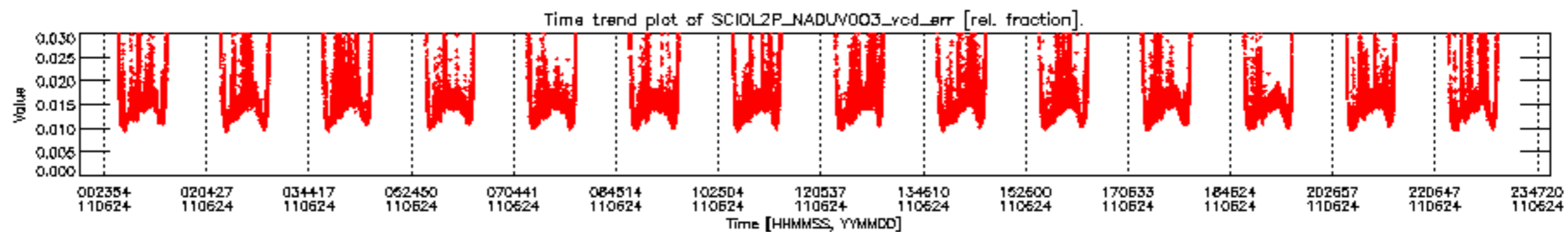
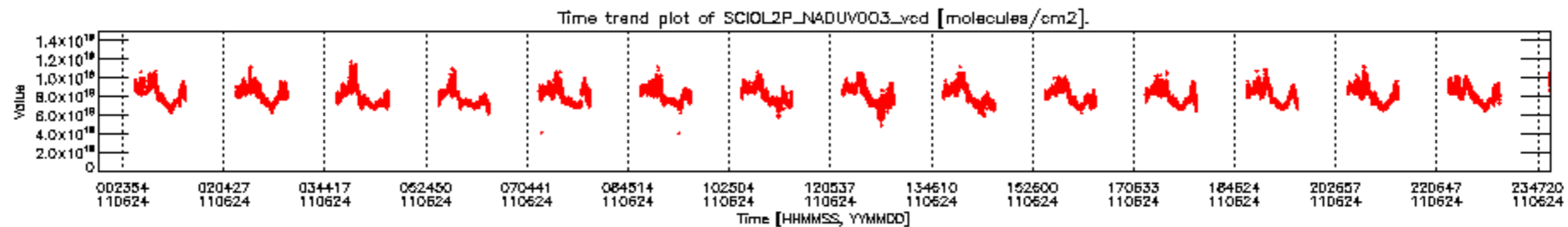
cl\_opt\_depth for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



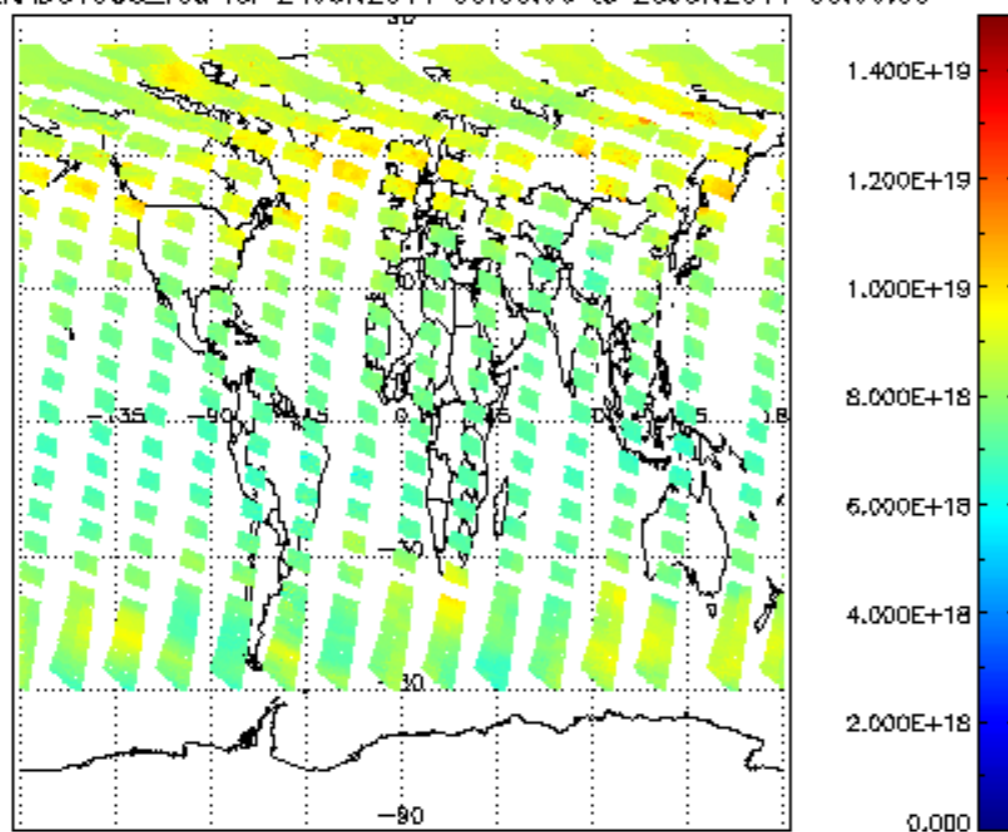
cloud\_flags for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



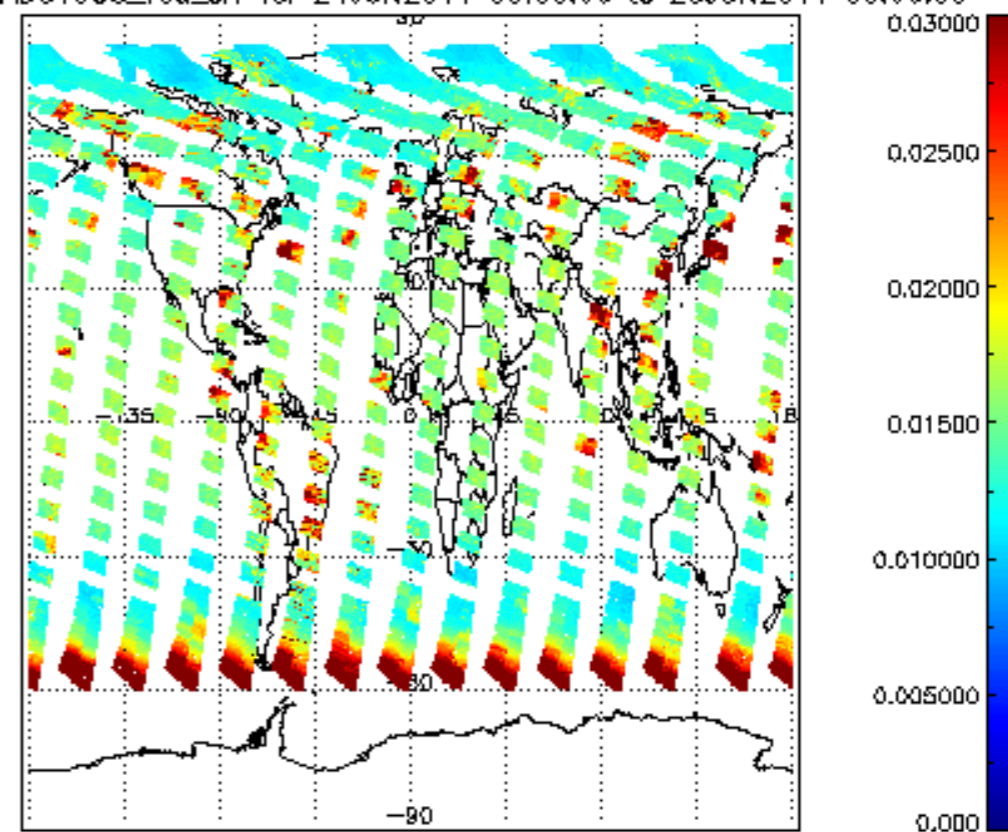




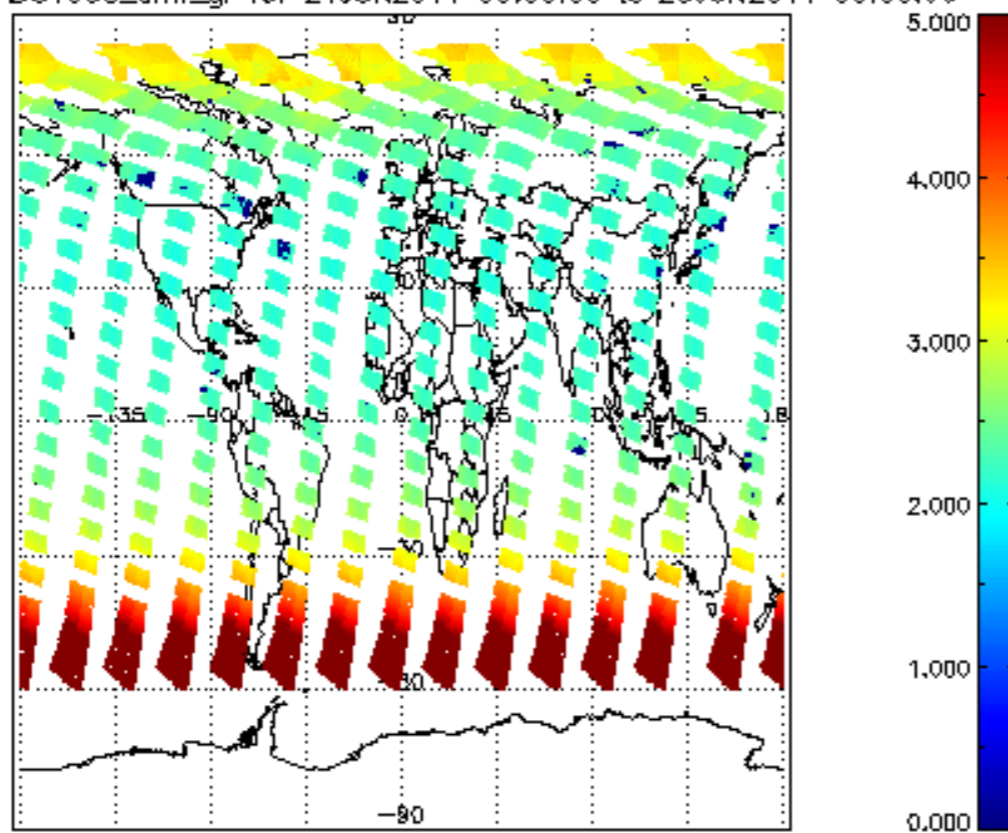
SCIOL2P\_NADUV003\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



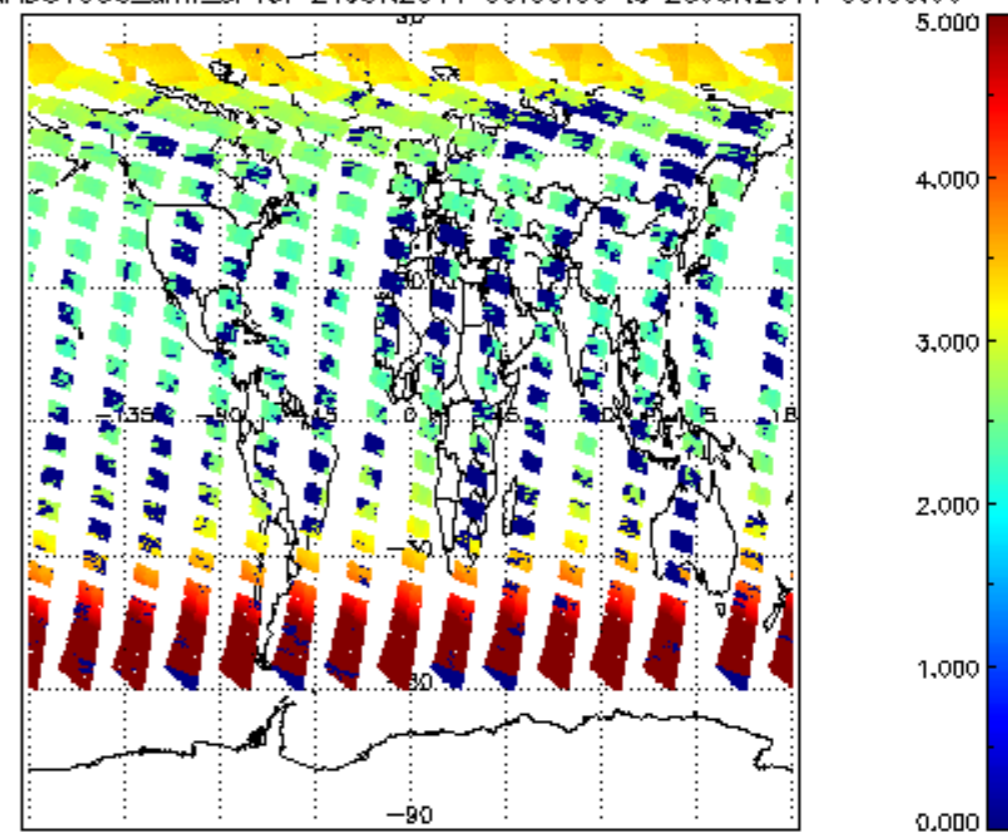
SCIOL2P\_NADUV003\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



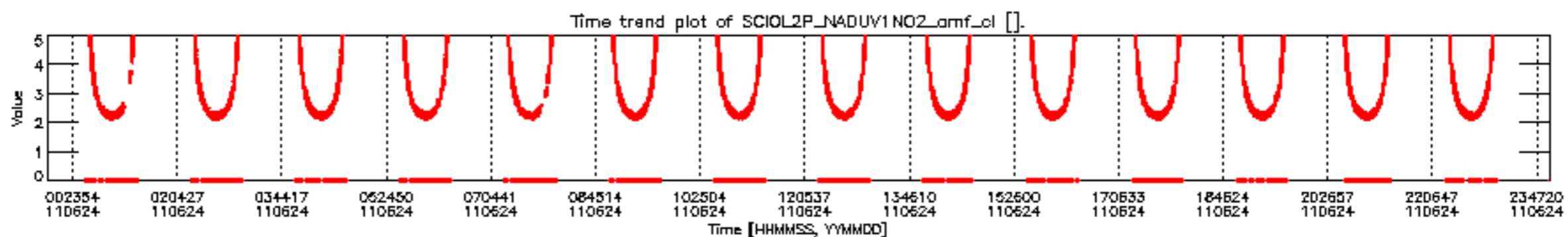
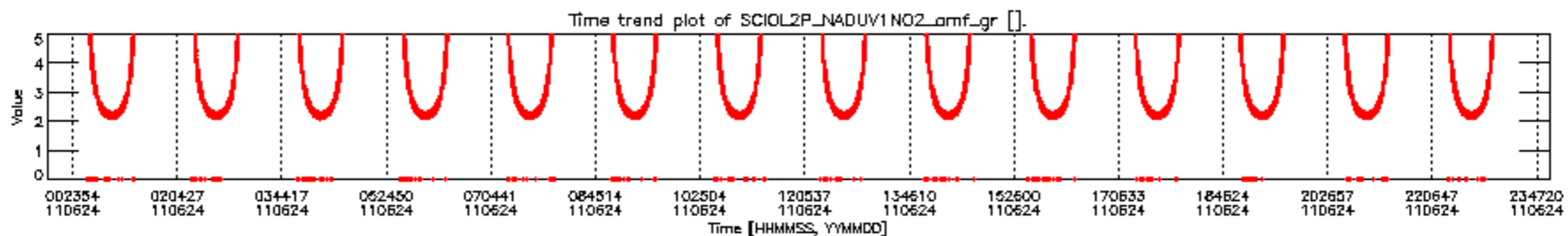
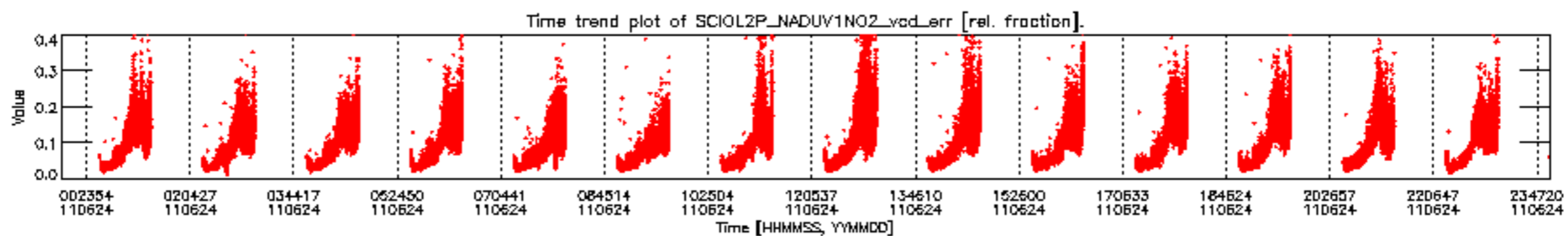
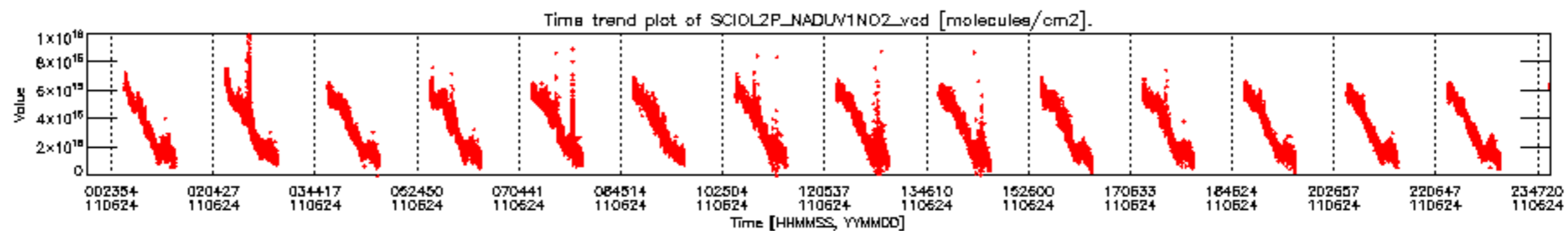
SCIOL2P\_NADUV003\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



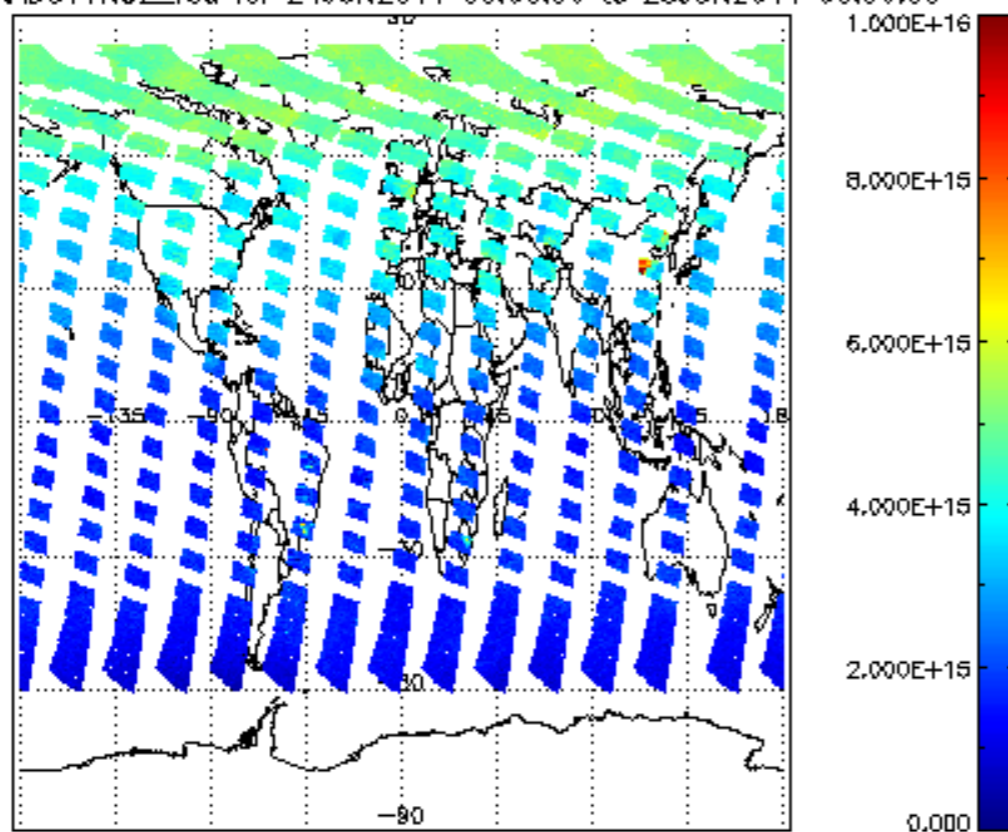
SCIOL2P\_NADUV003\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



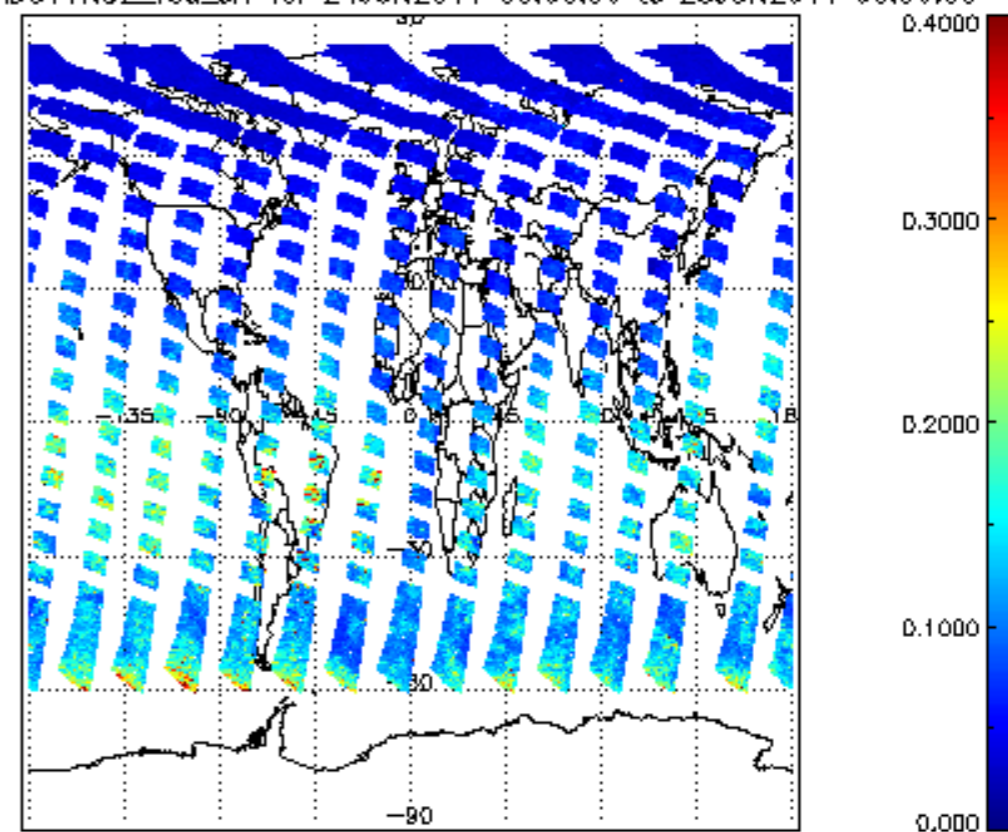




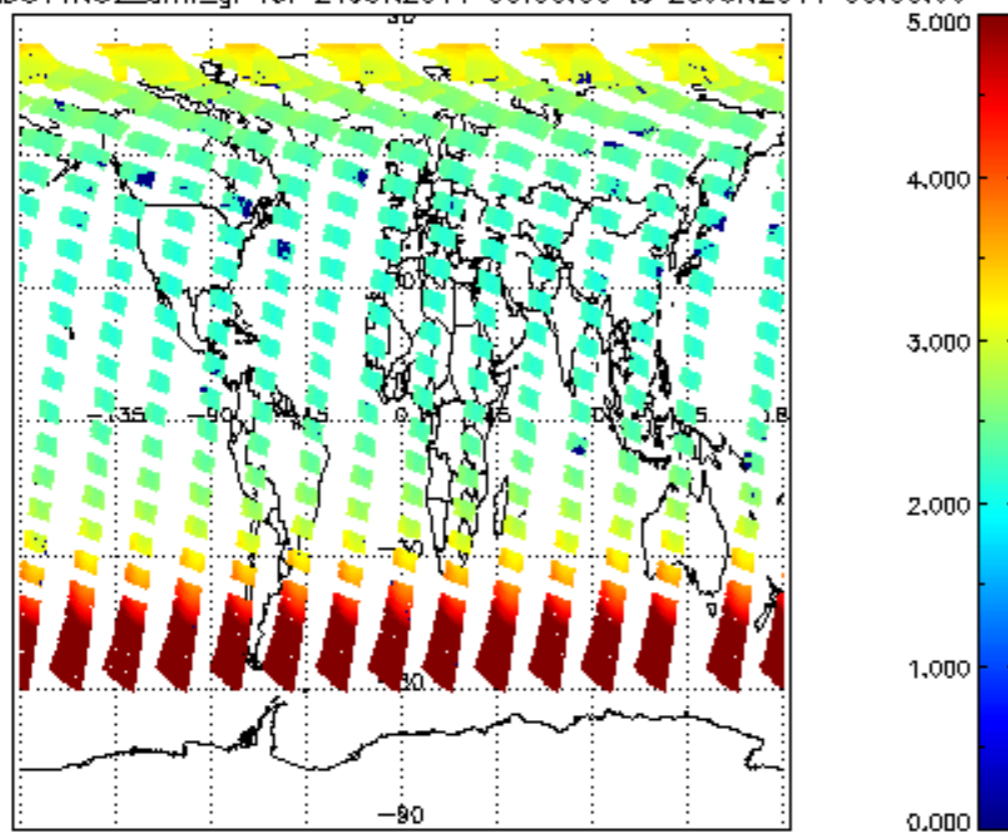
SCIOL2P\_NADUV1NO2\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



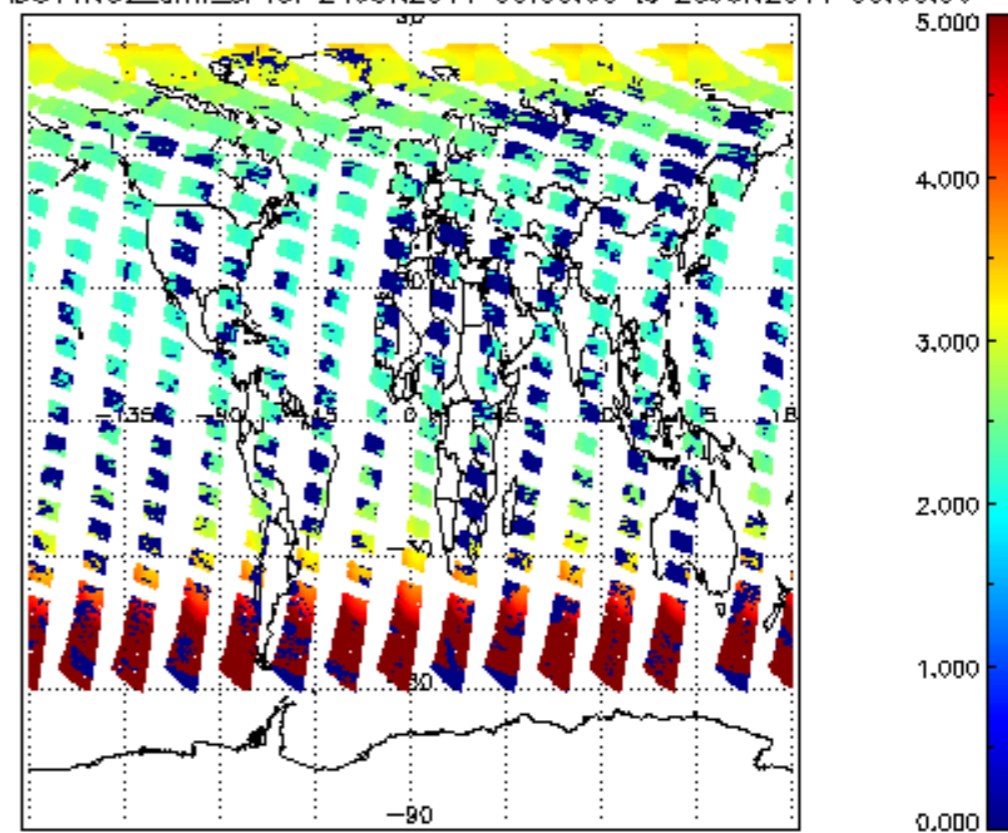
SCIOL2P\_NADUV1NO2\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



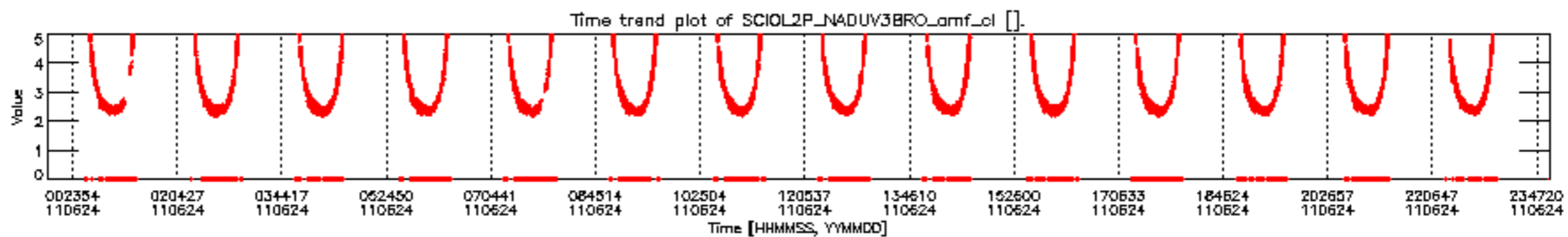
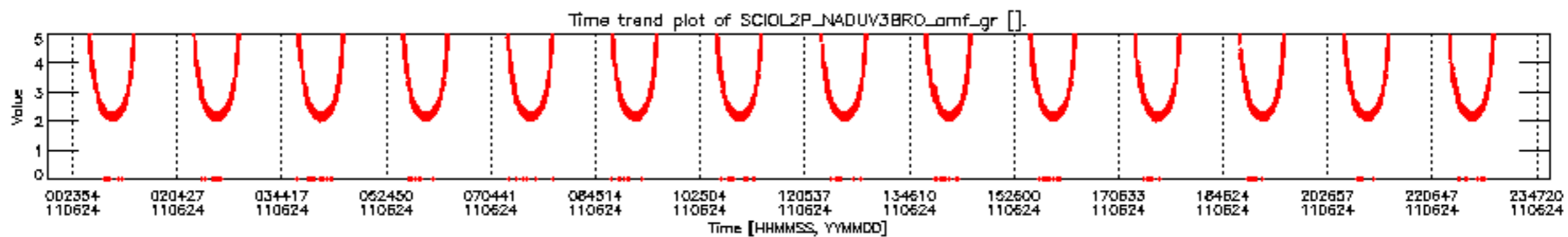
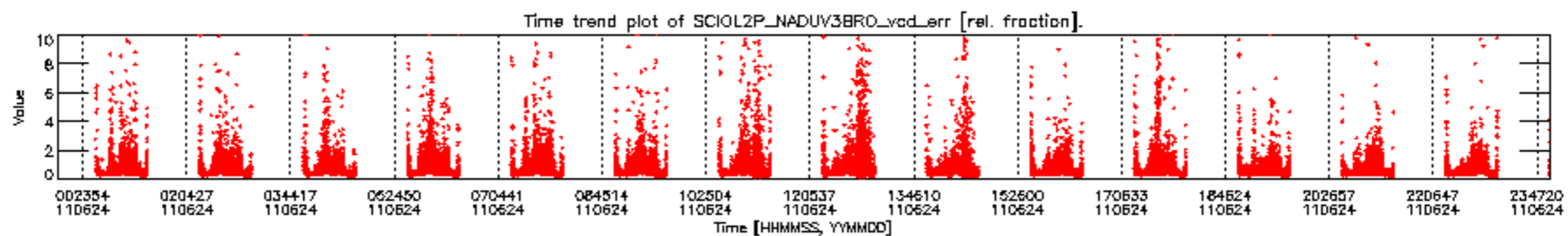
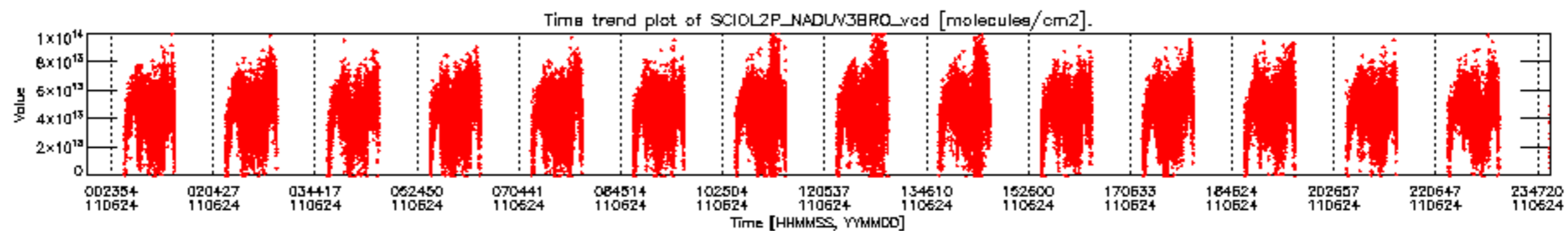
SCIOL2P\_NADUV1NO2\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



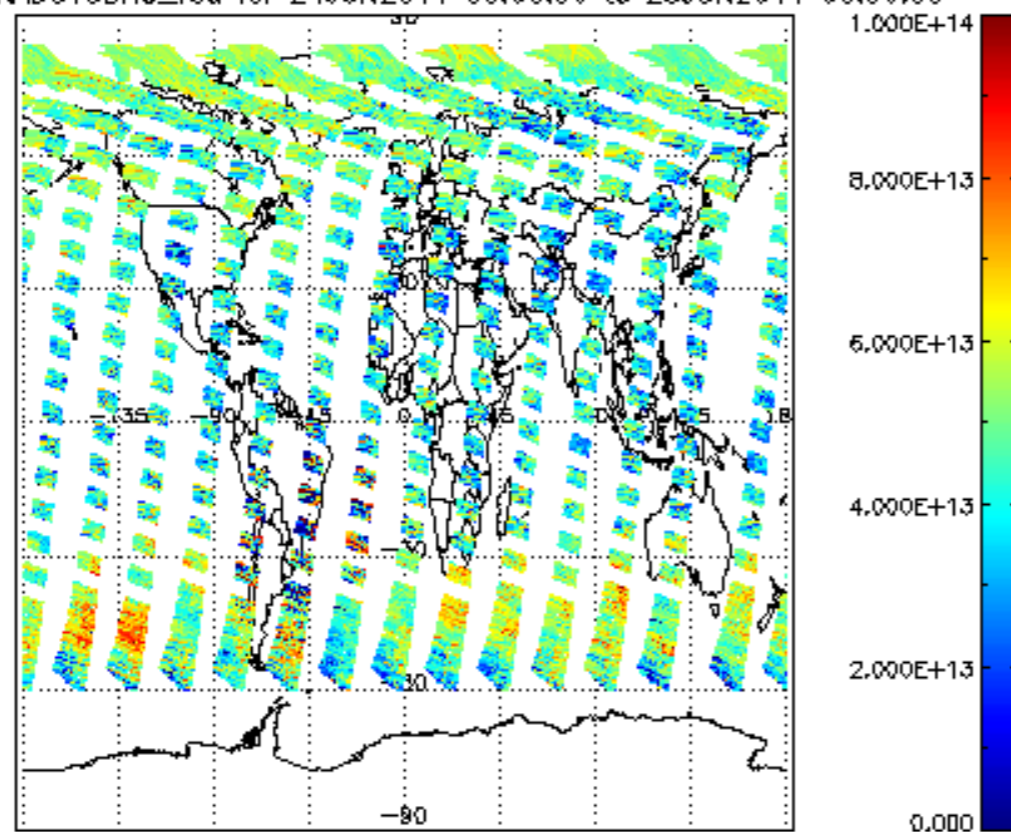
SCIOL2P\_NADUV1NO2\_amf\_sl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



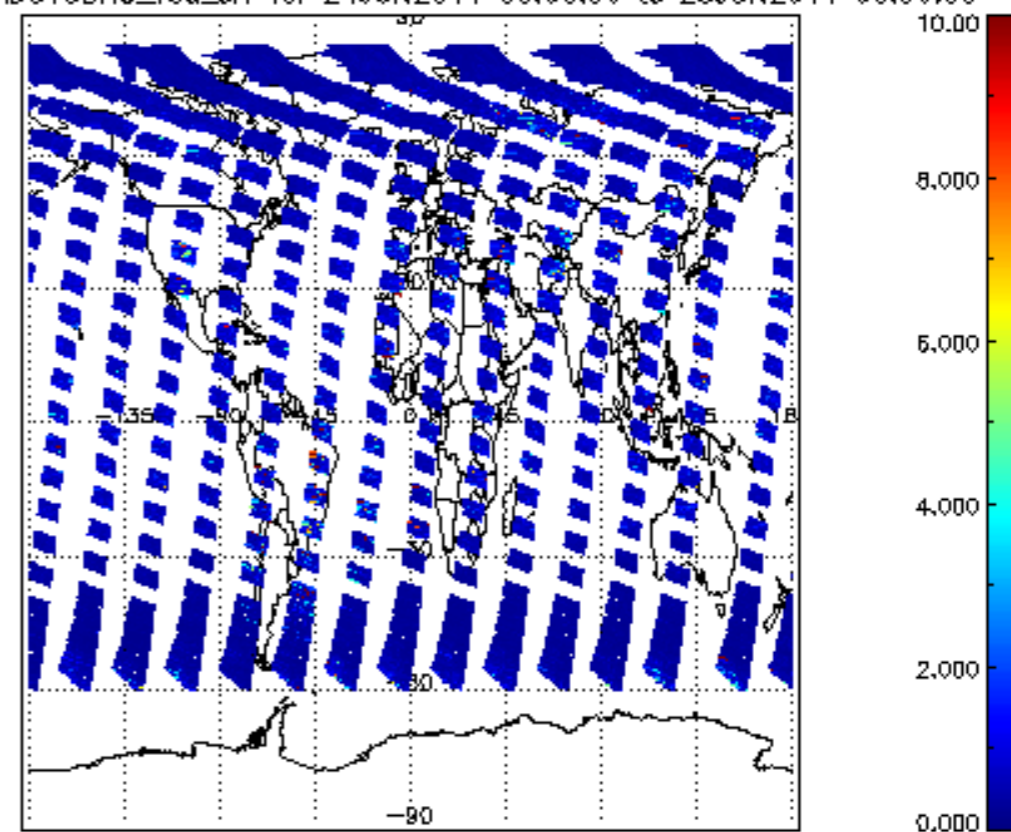




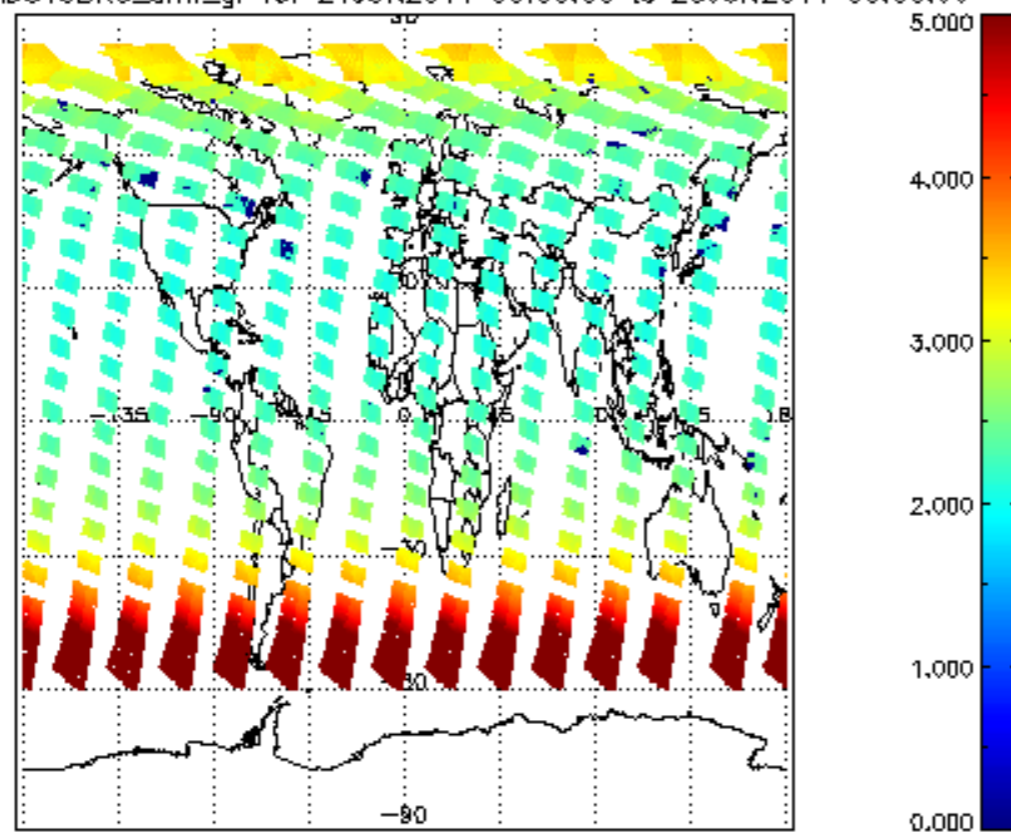
SCIOL2P\_NADUV3BRO\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



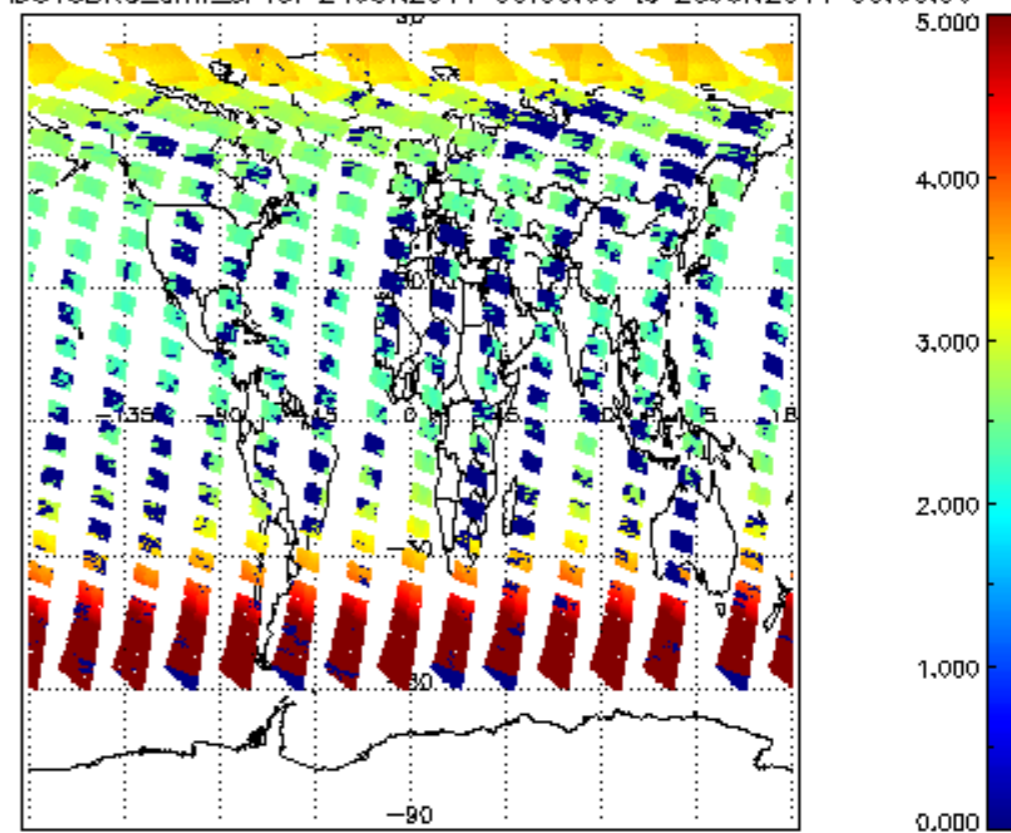
SCIOL2P\_NADUV3BRO\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



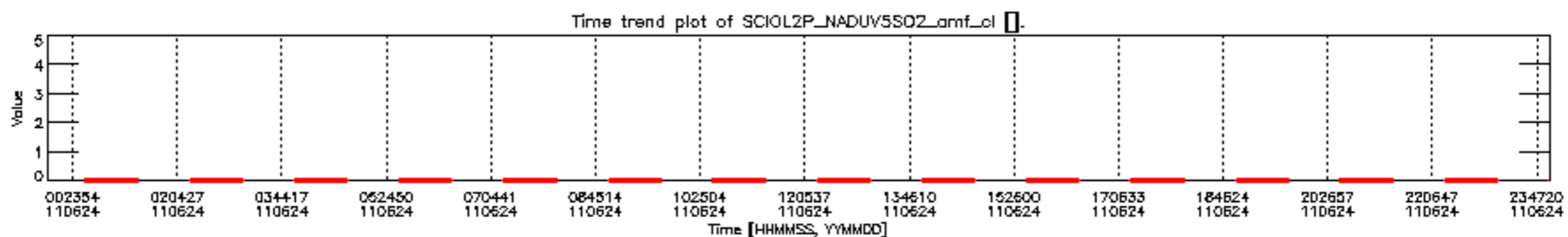
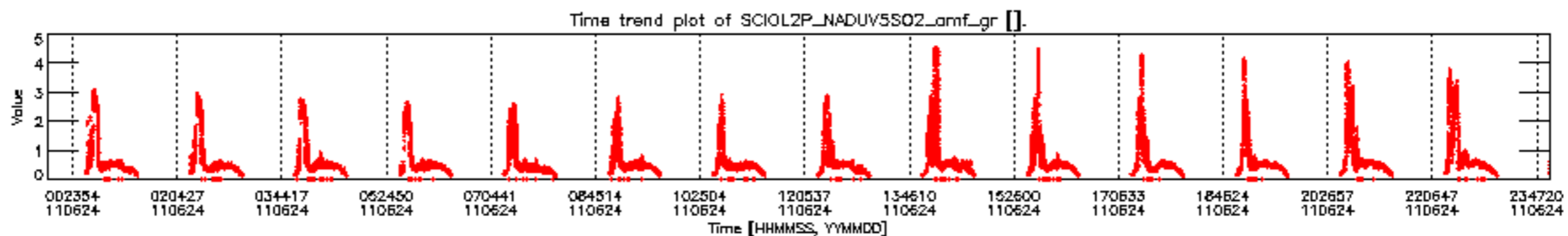
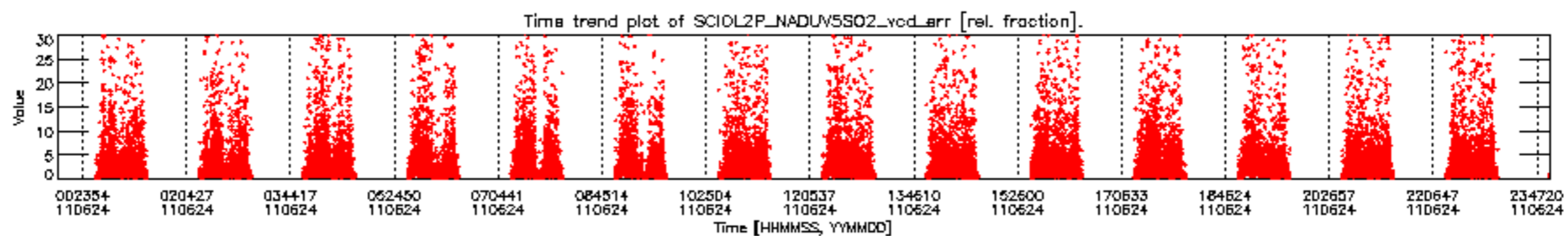
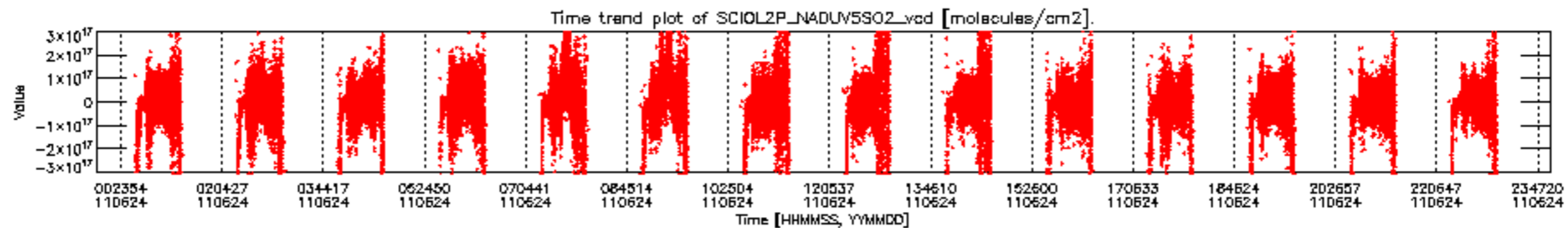
SCIOL2P\_NADUV3BRO\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



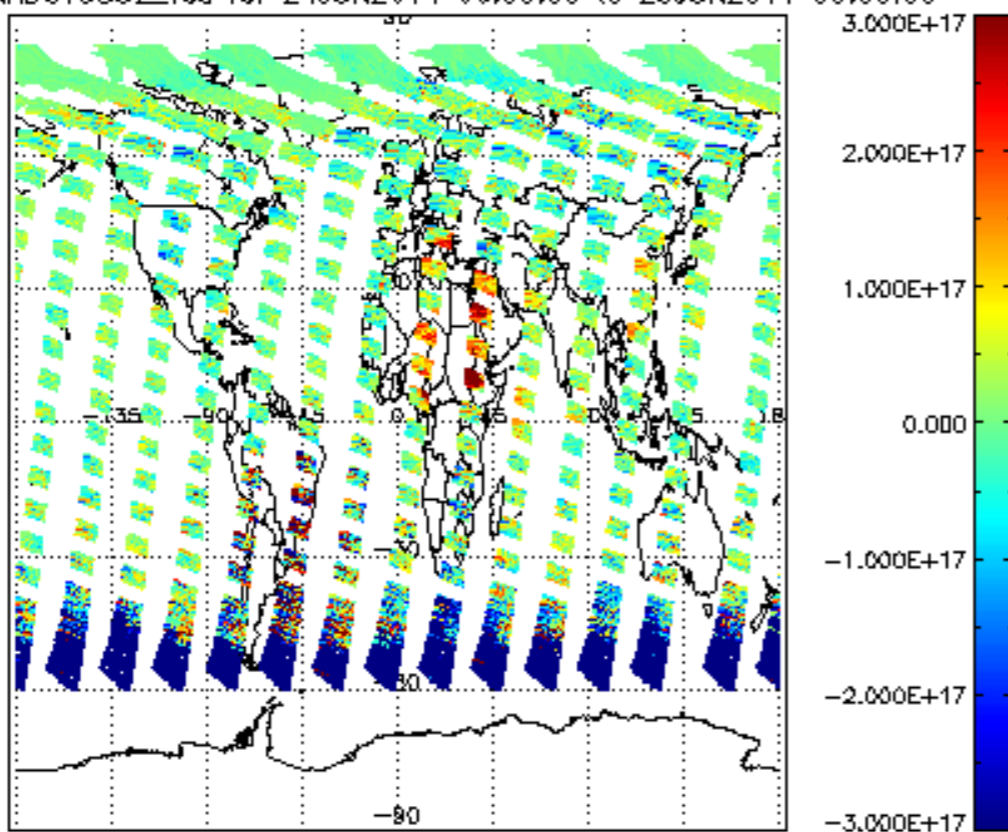
SCIOL2P\_NADUV3BRO\_amf\_sl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



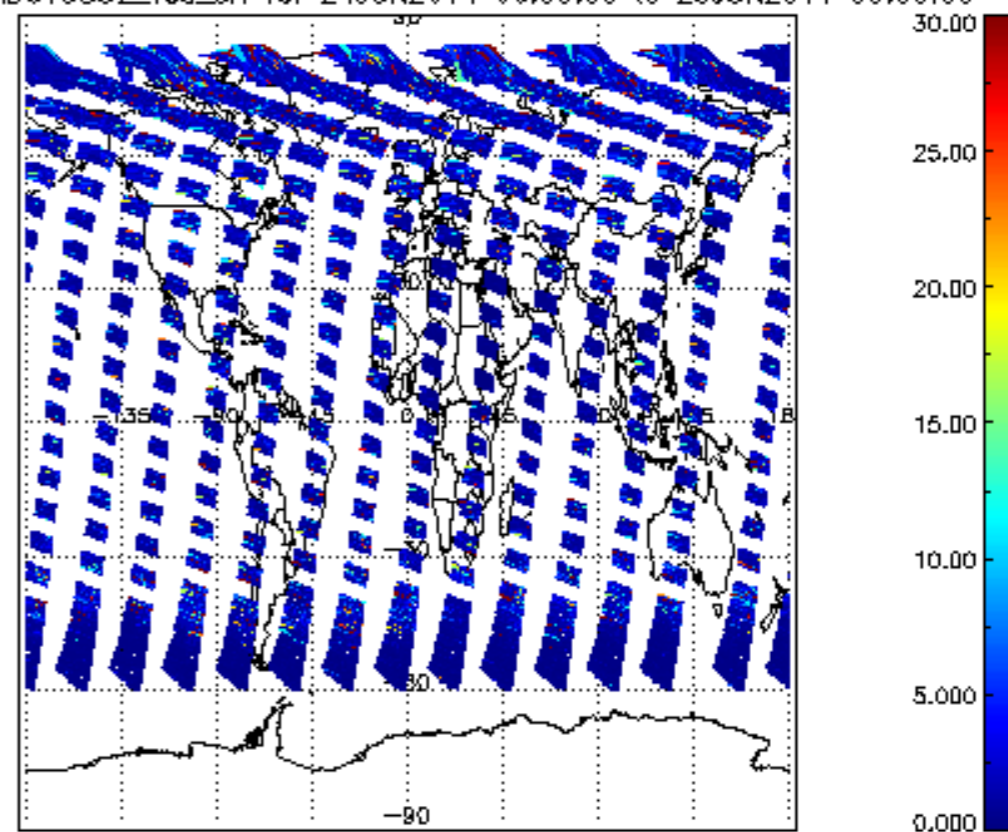




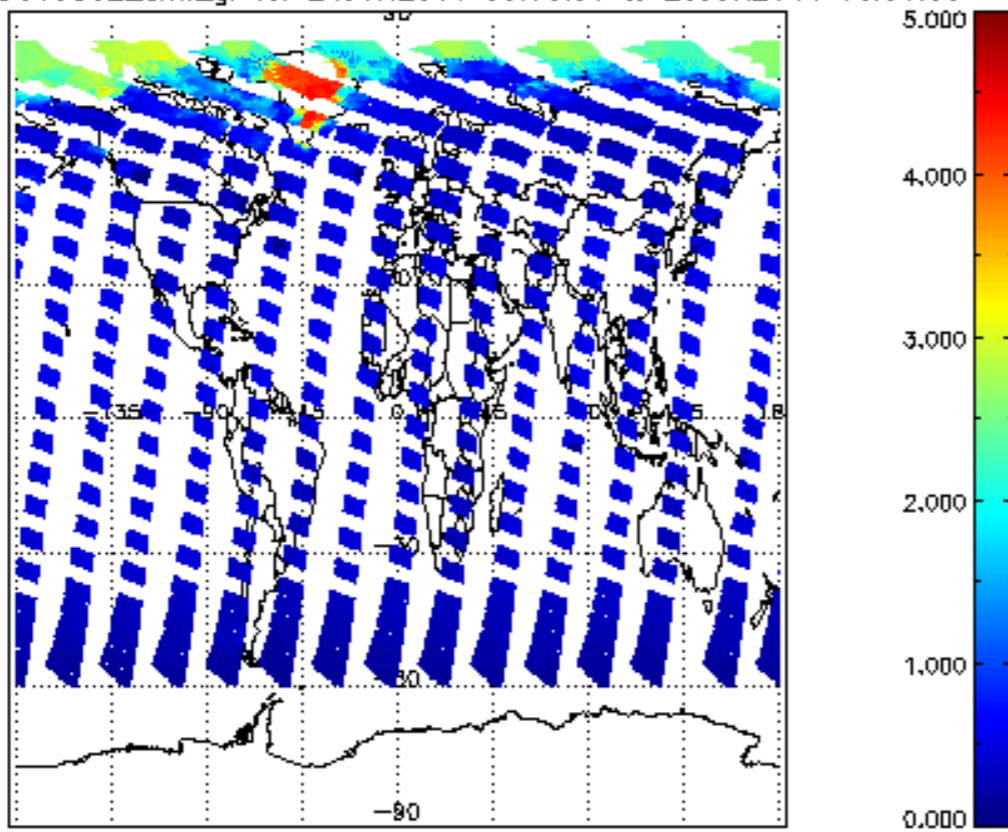
SCIOL2P\_NADUV5S02\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



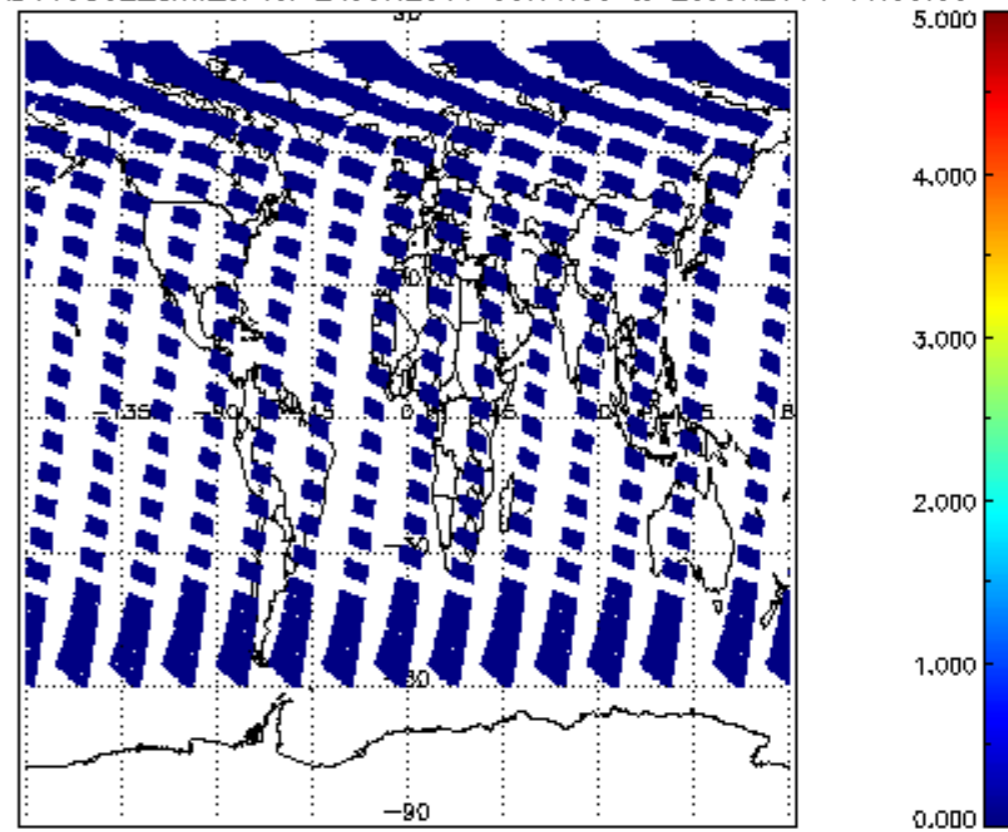
SCIOL2P\_NADUV5S02\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



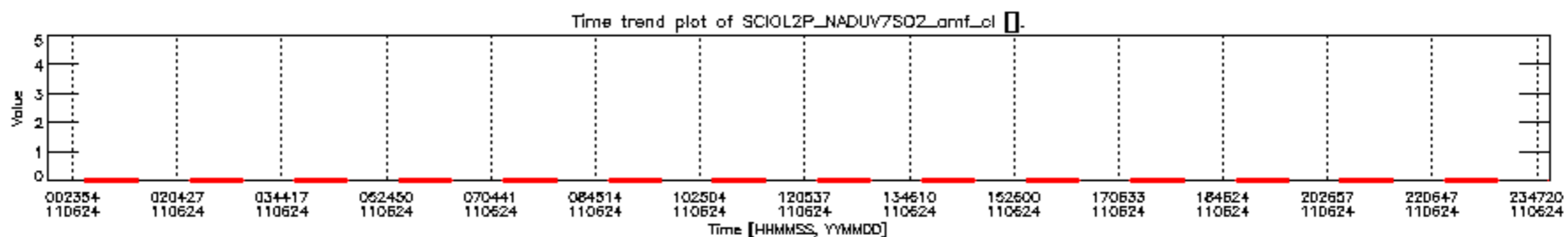
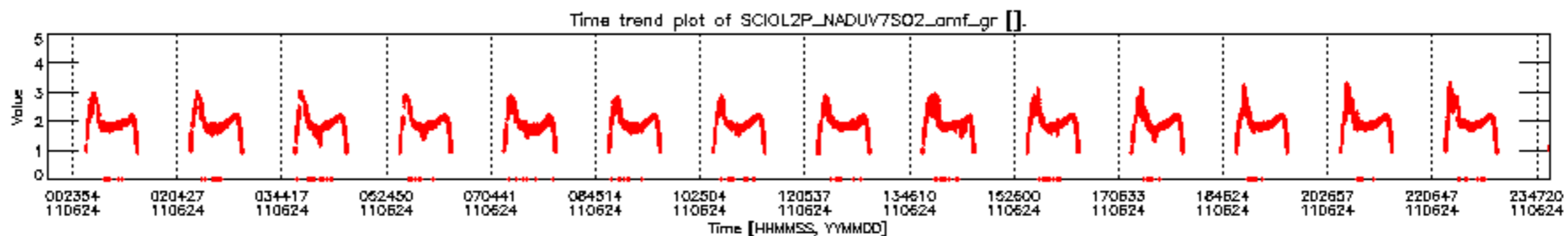
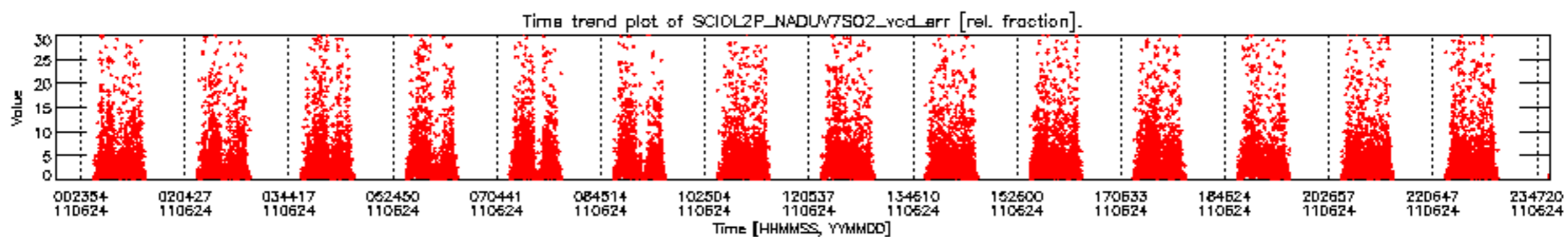
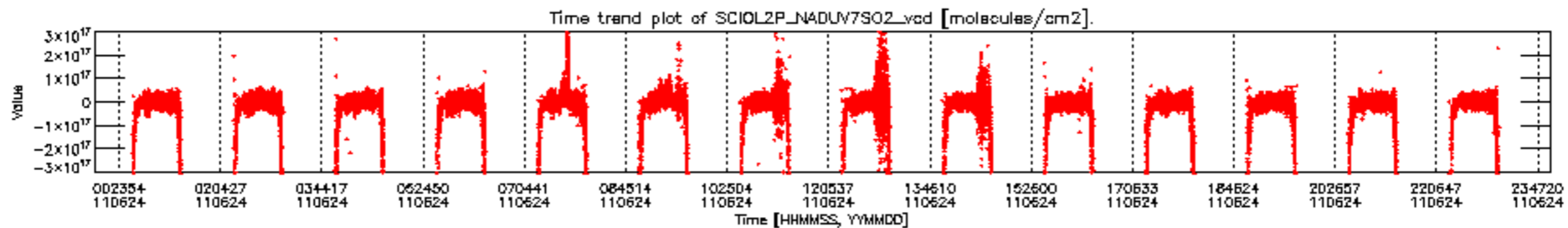
SCIOL2P\_NADUV5S02\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



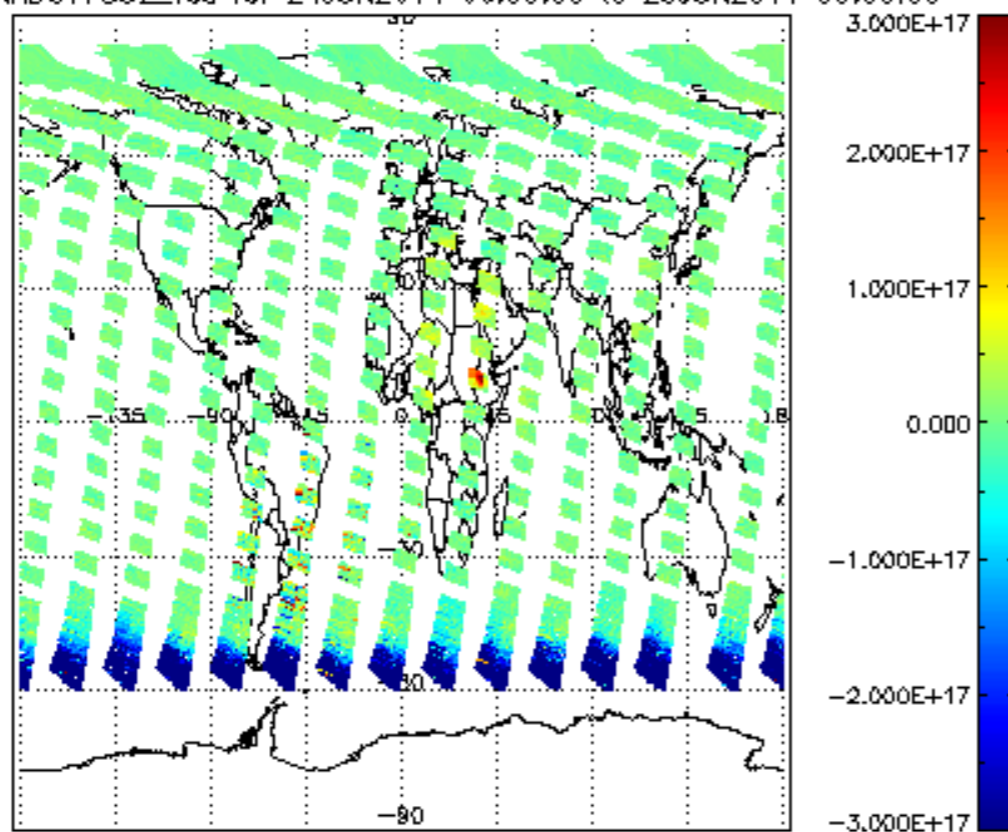
SCIOL2P\_NADUV5S02\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



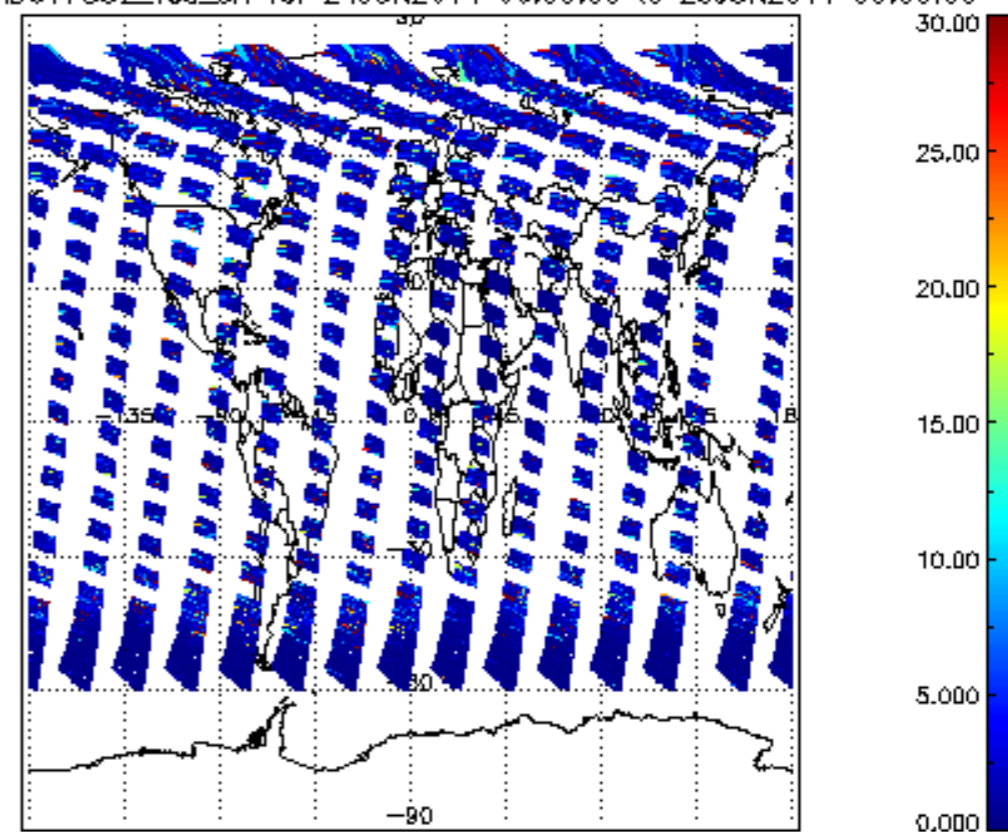




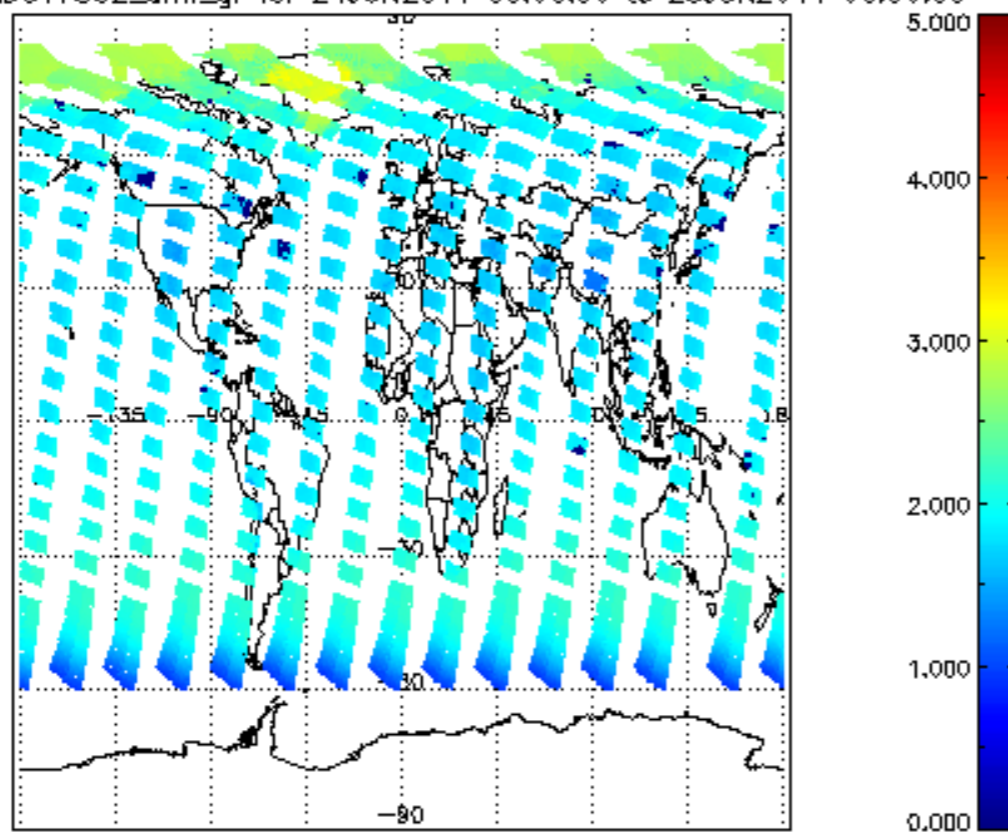
SCIOL2P\_NADUV7S02\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



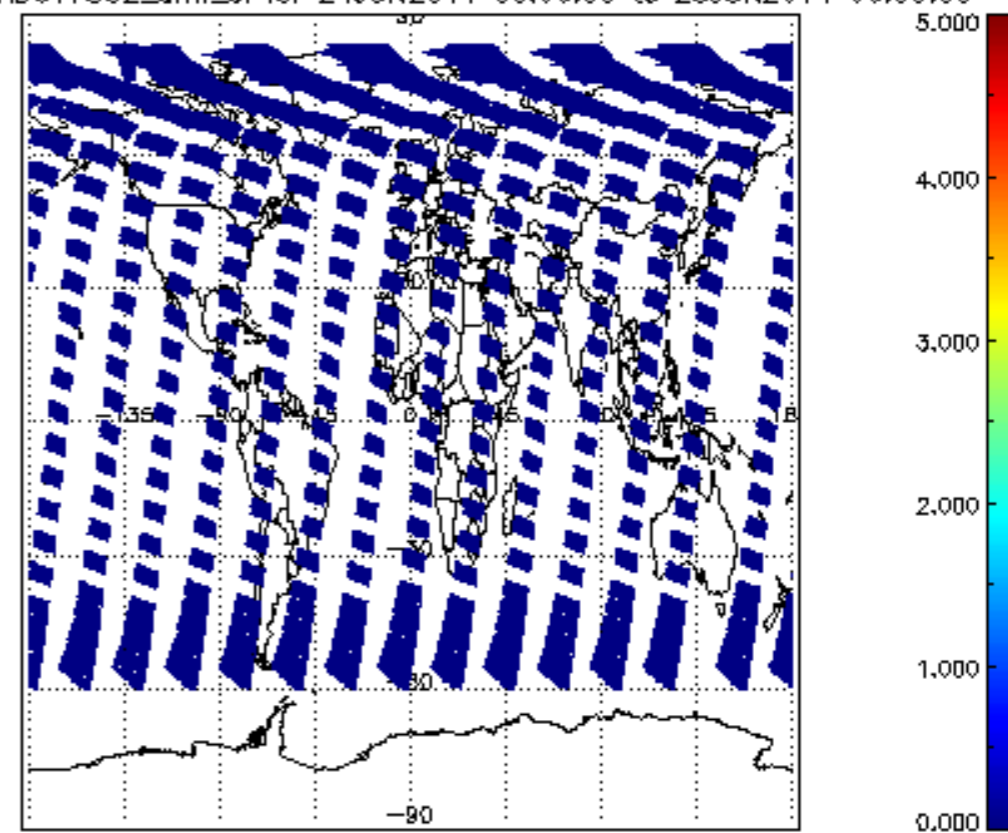
SCIOL2P\_NADUV7S02\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



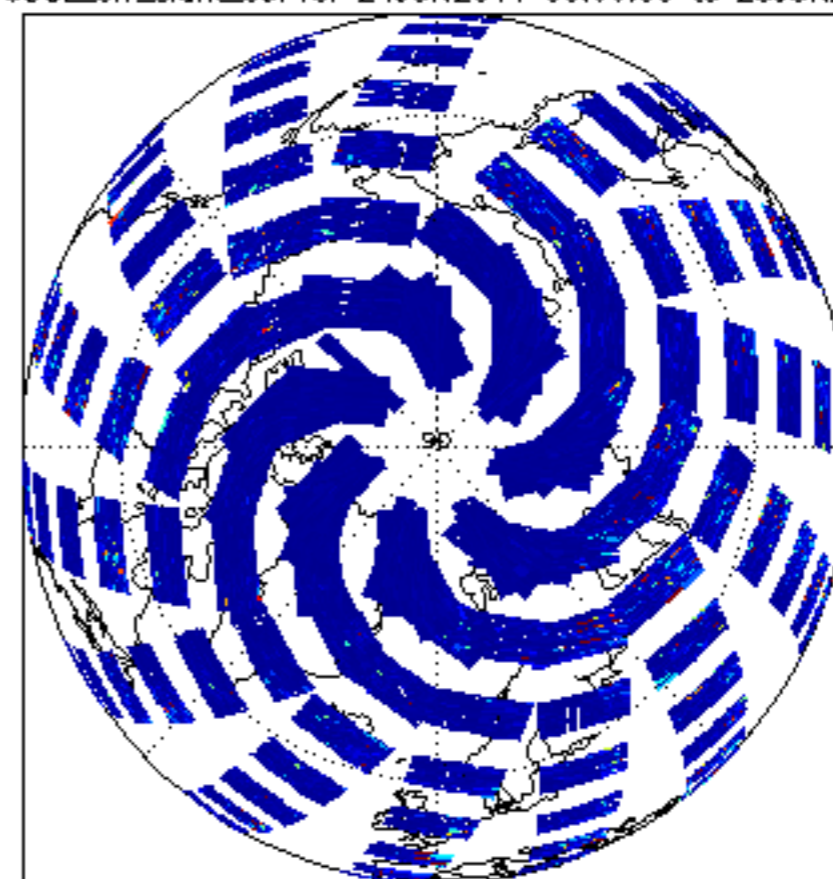
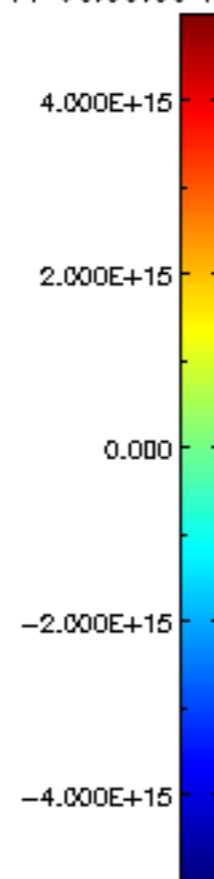
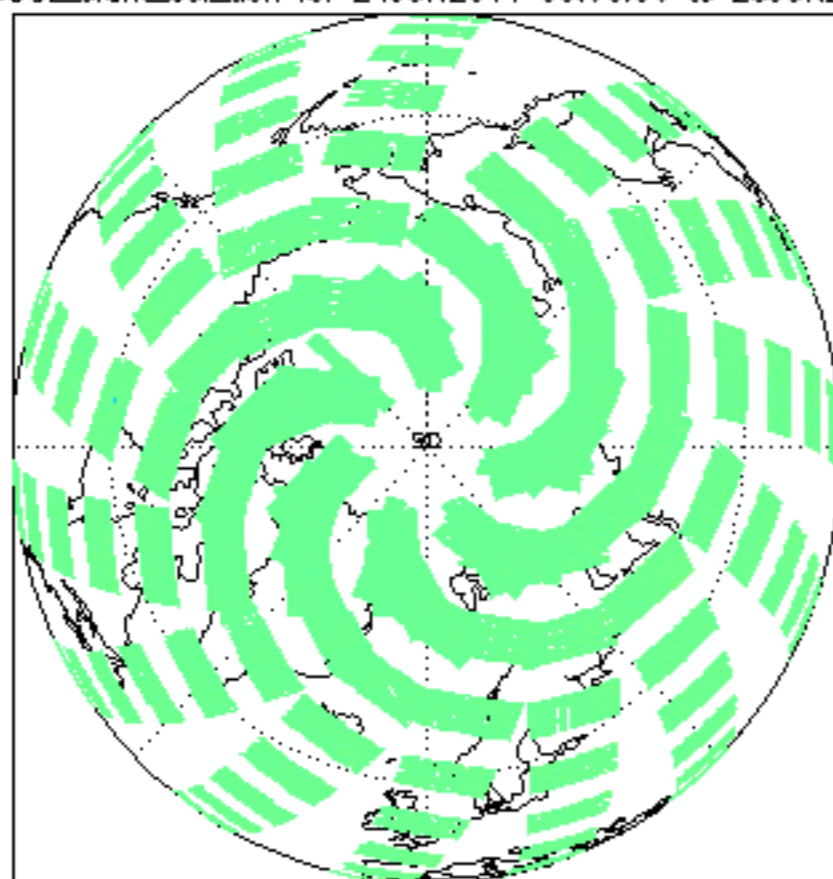
SCIOL2P\_NADUV7S02\_amf\_cl for 24JUN2011 00:00:00 to 25JUN2011 00:00:00





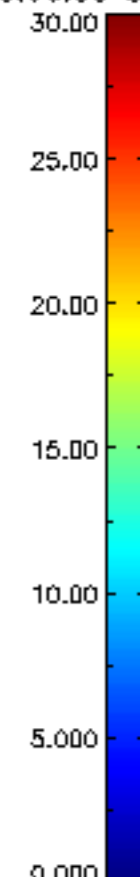
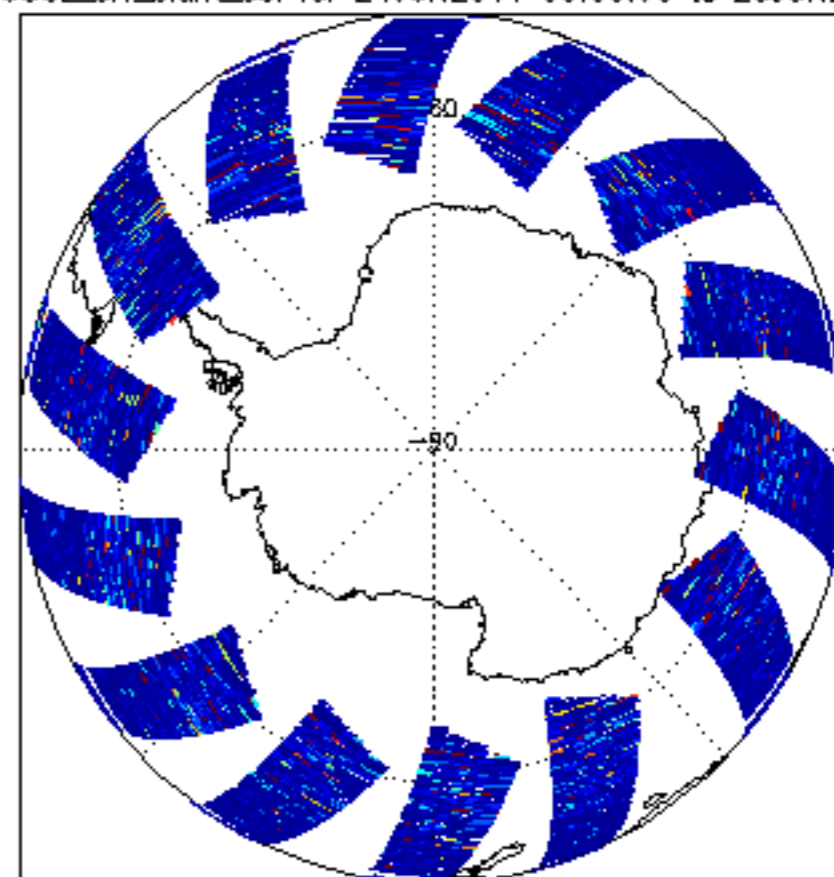
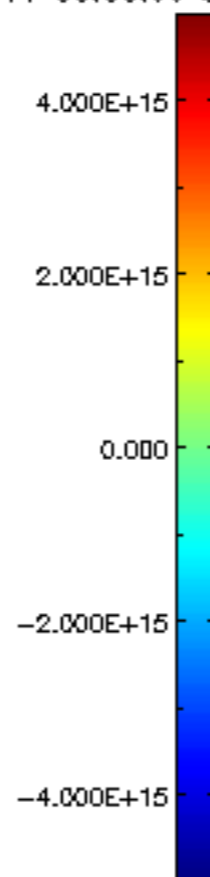
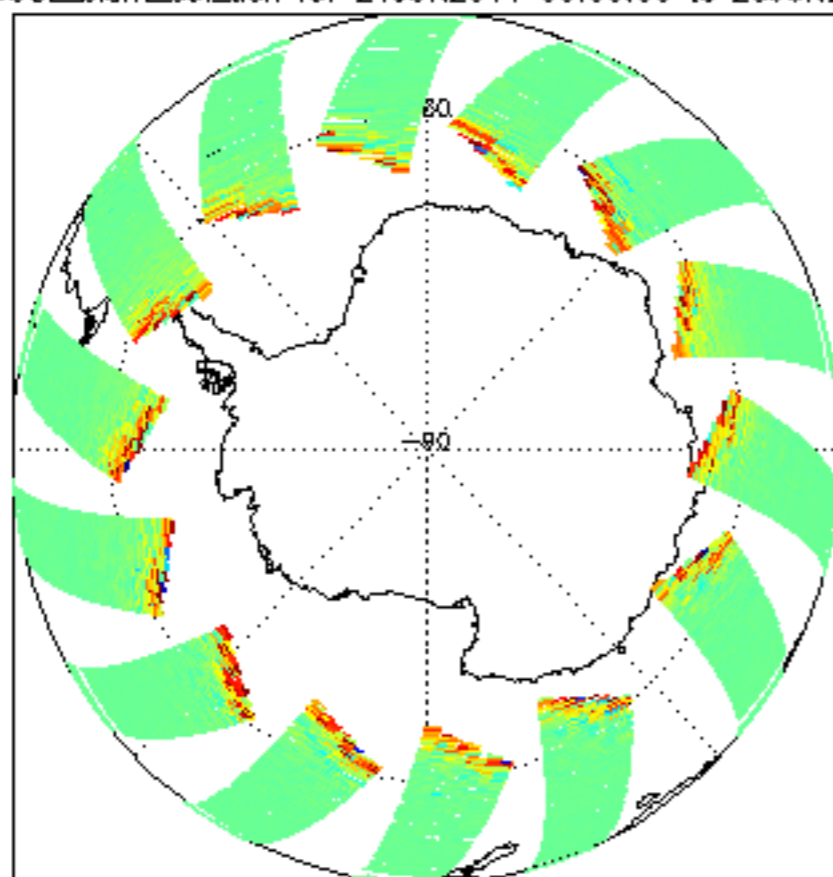


CIOL2P\_NADUV60CL\_slant\_col\_den for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 np iCIOL2P\_NADUV60CL\_err\_slant\_col for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 np





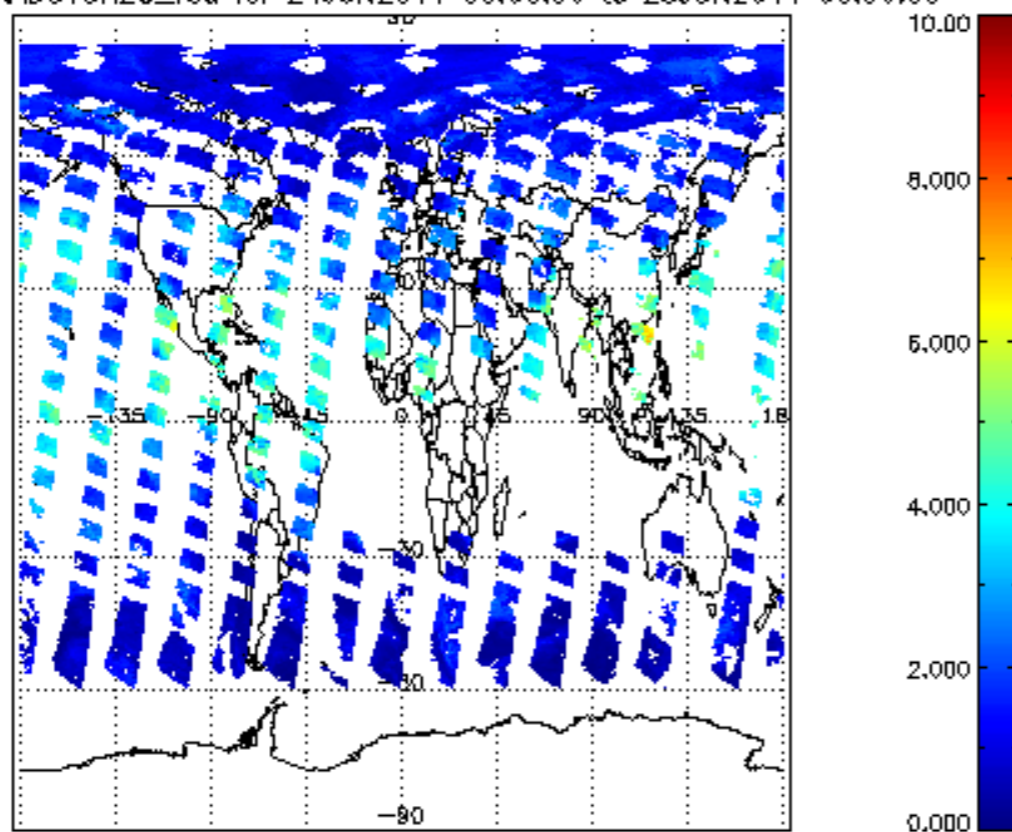
CIOL2P\_NADUV60CL\_slant\_col\_den for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 24JUN2011 00:00:00 to 25JUN2011 00:00:00 sp



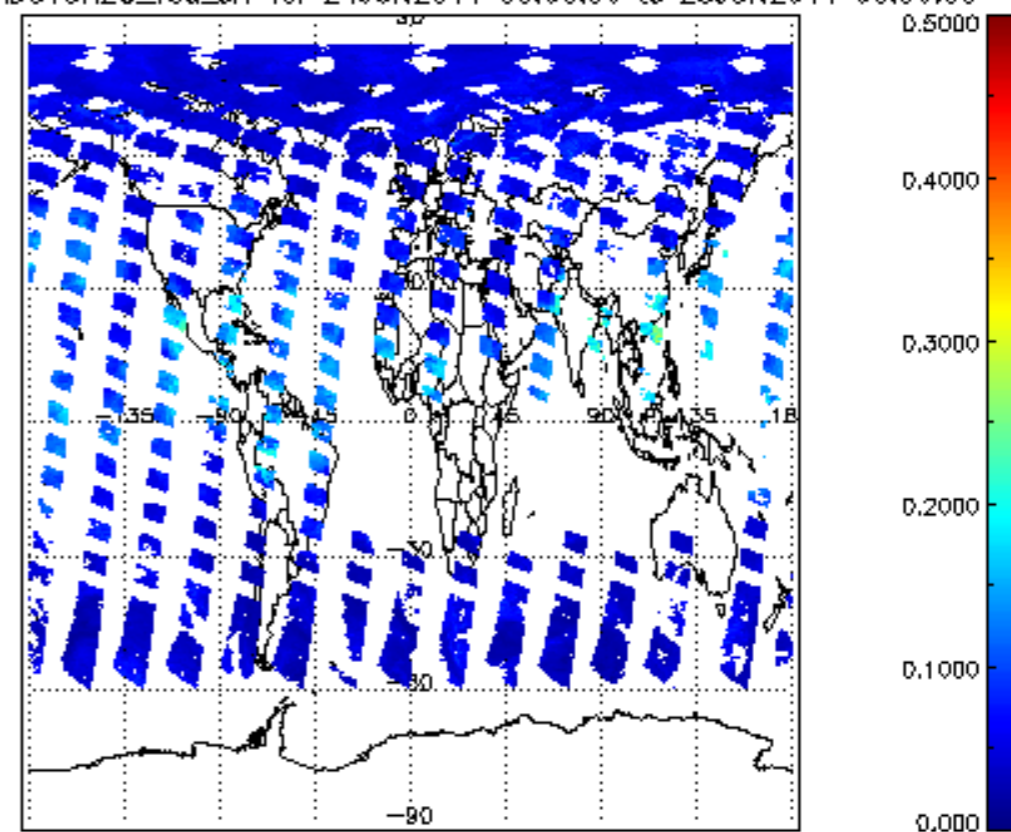




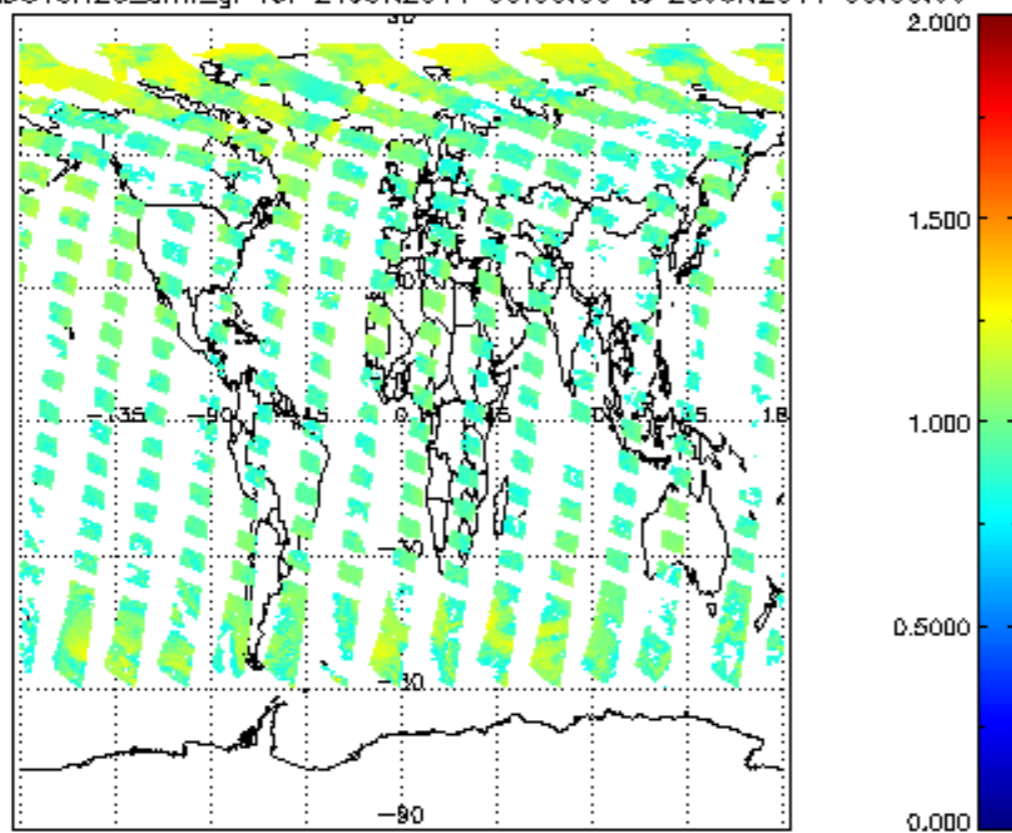
SCIOL2P\_NADUV8H2O\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

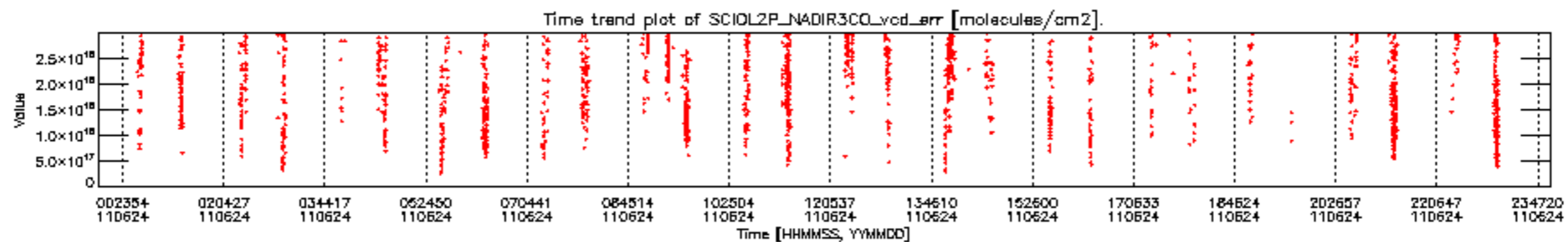
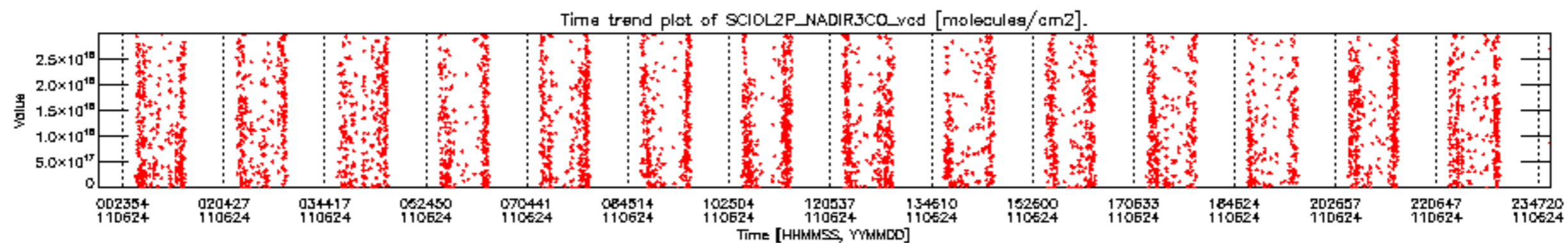


SCIOL2P\_NADUV8H2O\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



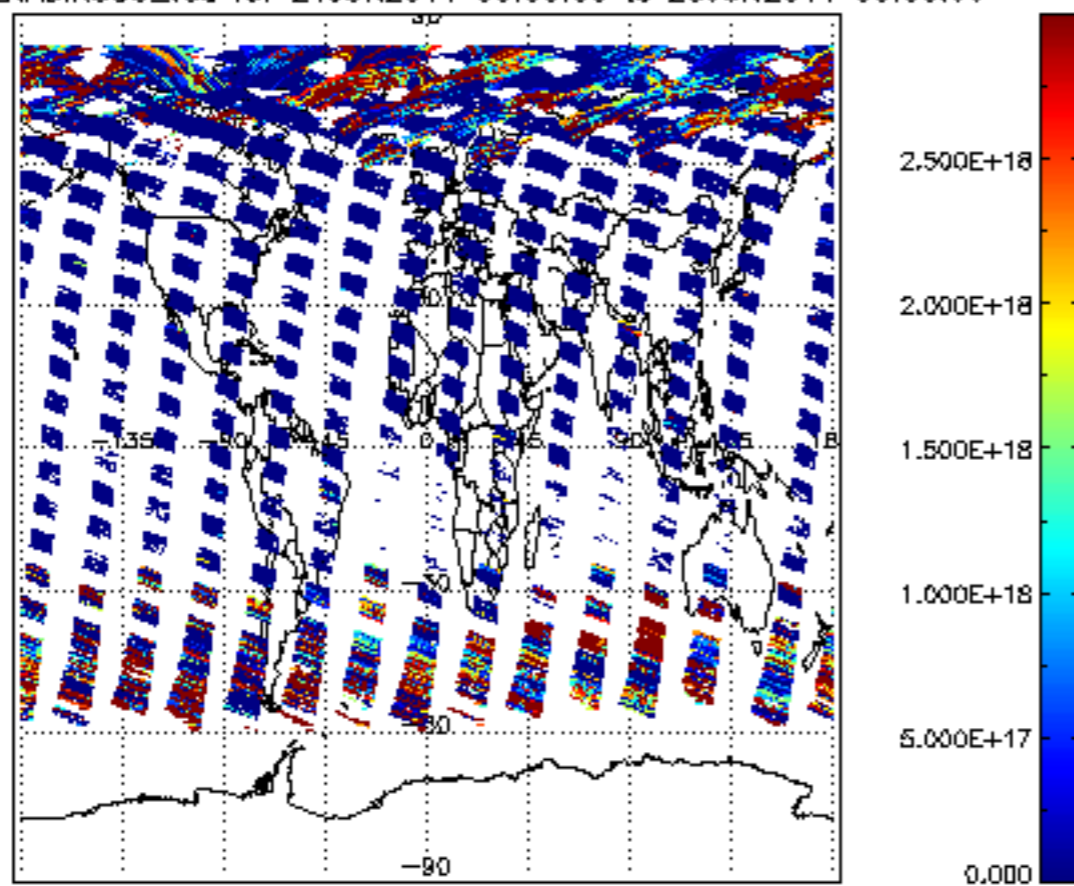
SCIOL2P\_NADUV8H2O\_amf\_gr for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



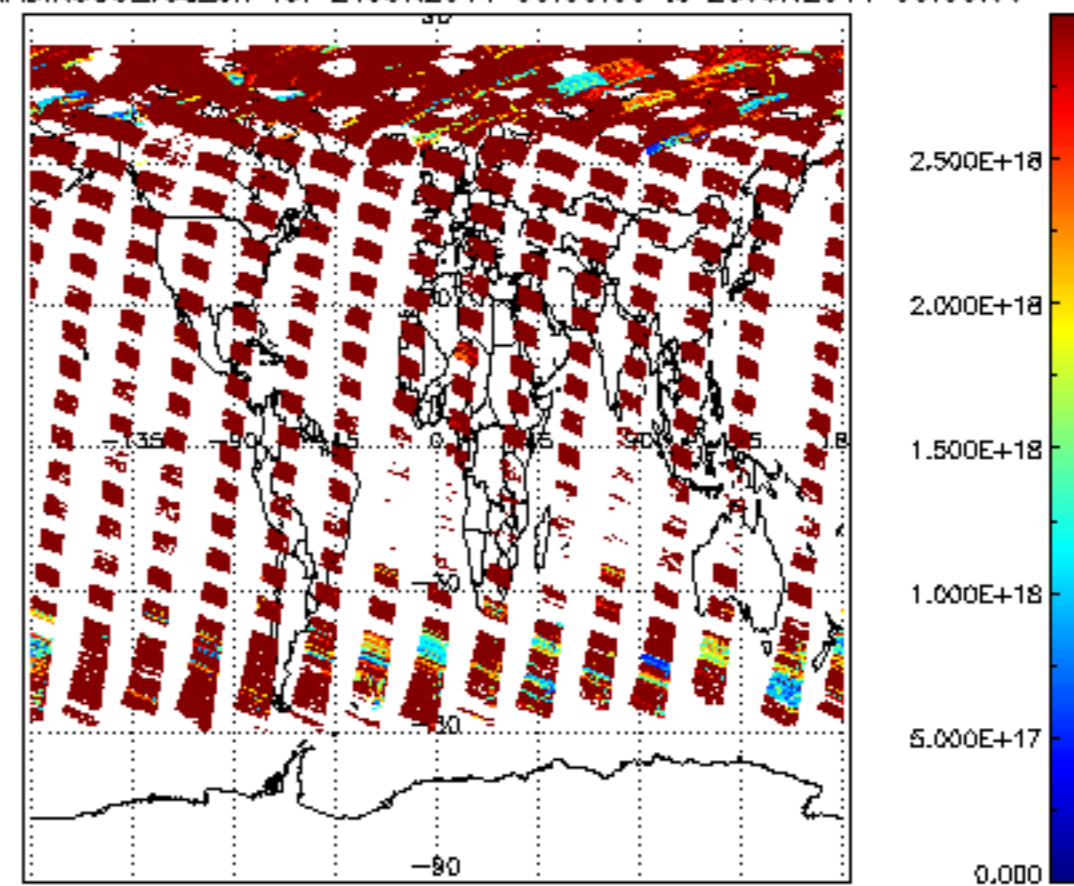




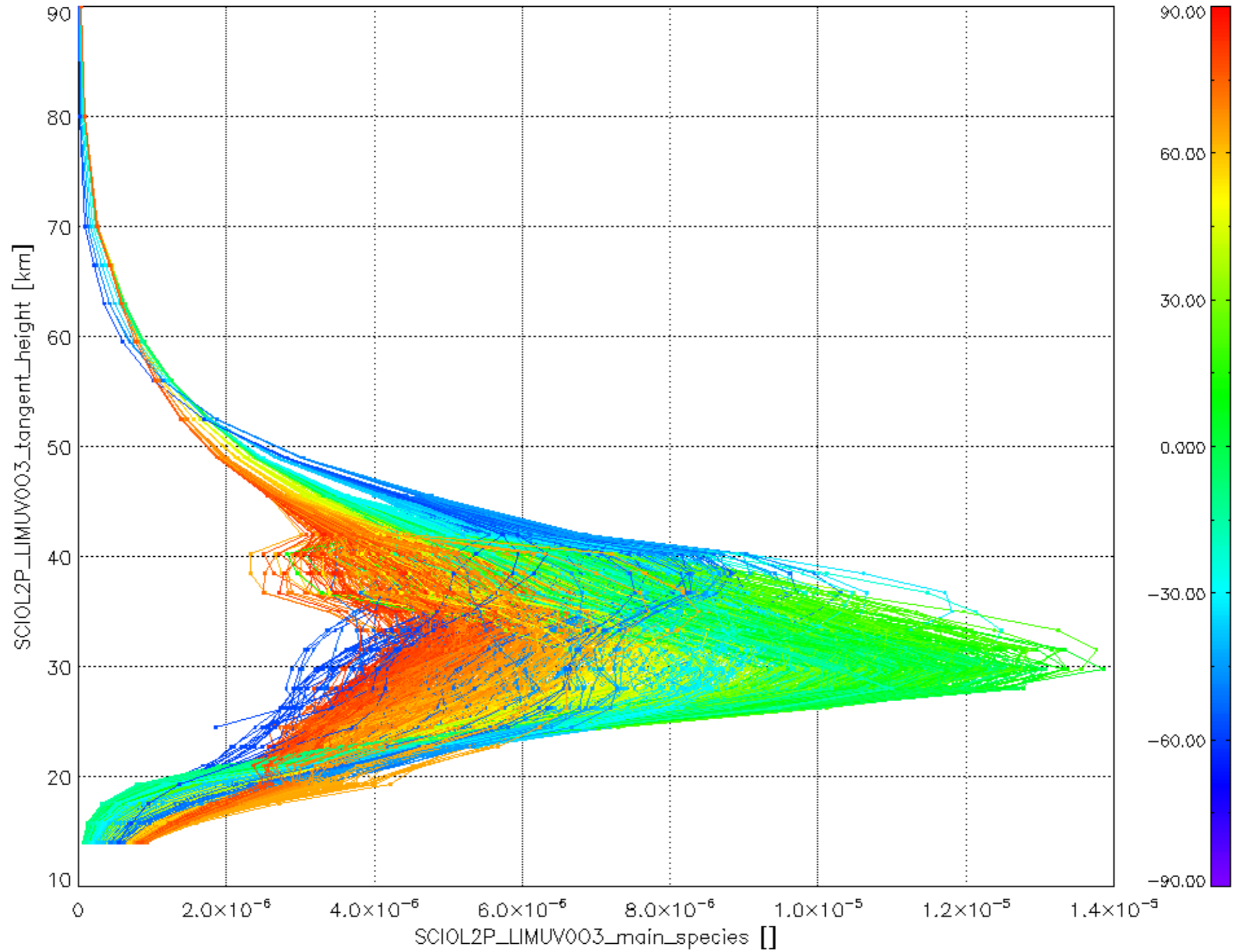
SCIOL2P\_NADIR3CO\_vcd for 24JUN2011 00:00:00 to 25JUN2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 24JUN2011 00:00:00 to 25JUN2011 00:00:00

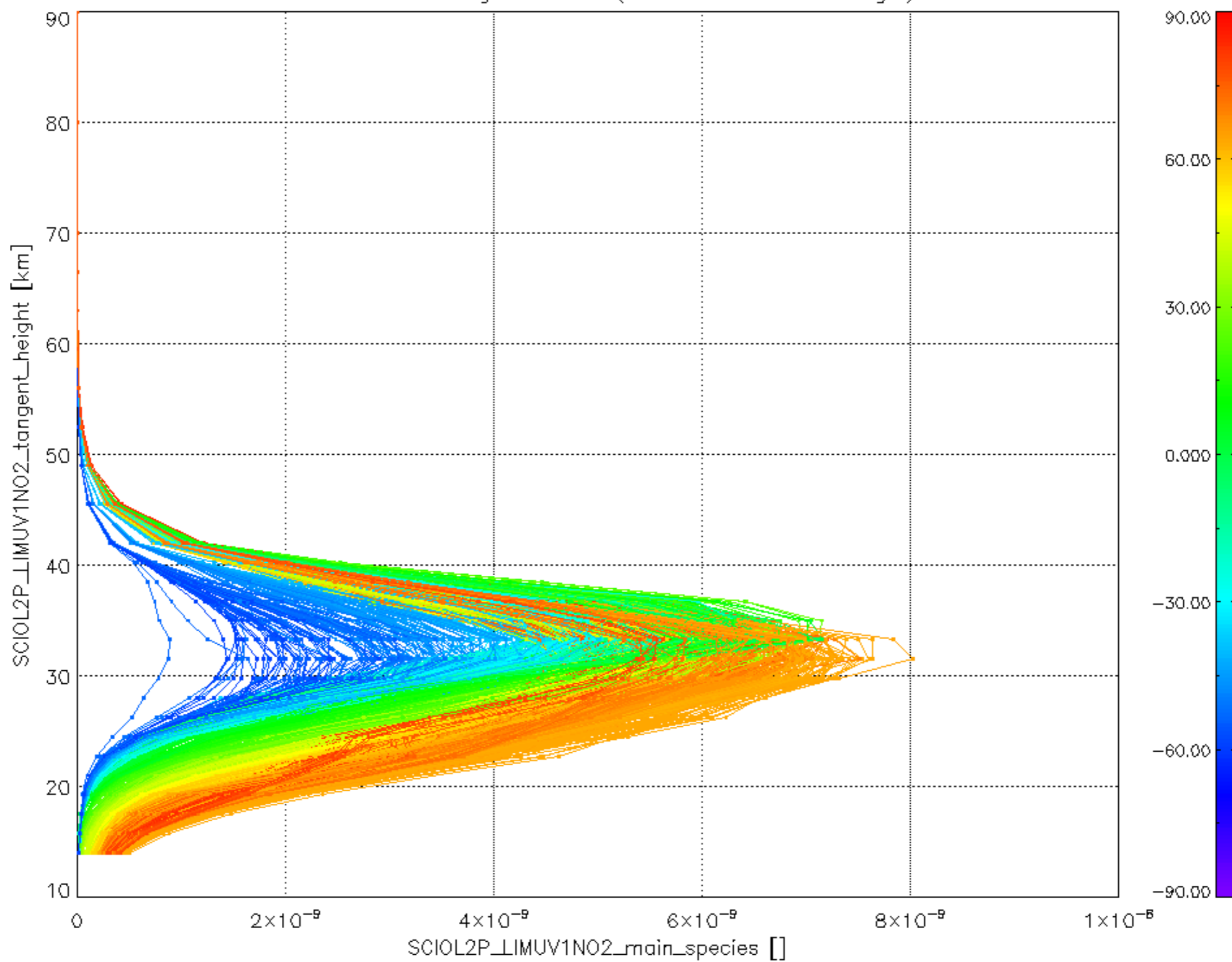


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

