

## 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	08JUL2011 03:00:39
Data source version	SCIA-OL/5.01-U
Processing scope for products	25JUN2011 00:00:00 to 26JUN2011 00:00:00
Start time of first product within scope	24JUN2011 23:53:12
Stop time of last product within scope	26JUN2011 00:15:04
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__2PUDPA20110624_235312_000035163104_00002_48723_5238.N1</a>	24JUN2011 23:53:12	25JUN2011 00:51:49	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110625_013326_000035303104_00003_48724_5239.N1</a>	25JUN2011 01:33:26	25JUN2011 02:32:17	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110625_031340_000035163104_00004_48725_5240.N1</a>	25JUN2011 03:13:40	25JUN2011 04:12:16	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110625_045354_000035303104_00005_48726_5241.N1</a>	25JUN2011 04:53:54	25JUN2011 05:52:45	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110625_063408_000035163104_00006_48727_5242.N1</a>	25JUN2011 06:34:08	25JUN2011 07:32:45	0	GOOD

5	SCI_OL_2PUDPA20110625_081422_000035303104_00007_48728_5243.N1	25JUN2011 08:14:22	25JUN2011 09:13:13	0	GOOD
6	SCI_OL_2PUDPA20110625_095436_000035163104_00008_48729_5244.N1	25JUN2011 09:54:36	25JUN2011 10:53:13	0	GOOD
7	SCI_OL_2PUDPA20110625_113450_000035303104_00009_48730_5245.N1	25JUN2011 11:34:50	25JUN2011 12:33:41	0	GOOD
8	SCI_OL_2PUDPA20110625_131504_000035163104_00010_48731_5246.N1	25JUN2011 13:15:04	25JUN2011 14:13:40	0	GOOD
9	SCI_OL_2PUDPA20110625_145518_000035303104_00011_48732_5247.N1	25JUN2011 14:55:18	25JUN2011 15:54:09	0	GOOD
10	SCI_OL_2PUDPA20110625_163532_000035163104_00012_48733_5248.N1	25JUN2011 16:35:32	25JUN2011 17:34:08	0	GOOD
11	SCI_OL_2PUDPA20110625_181555_000035303104_00013_48734_5249.N1	25JUN2011 18:15:55	25JUN2011 19:14:46	0	GOOD
12	SCI_OL_2PUDPA20110625_195610_000035163104_00014_48735_5250.N1	25JUN2011 19:56:10	25JUN2011 20:54:46	0	GOOD
13	SCI_OL_2PUDPA20110625_213614_000035303104_00015_48736_5251.N1	25JUN2011 21:36:14	25JUN2011 22:35:05	0	GOOD
14	SCI_OL_2PUDPA20110625_231628_000035163104_00016_48737_5252.N1	25JUN2011 23:16:28	26JUN2011 00:15:04	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: 171591

Total number of cloud data DSRs with good quality flag (=0): 171591 (100.0 %)

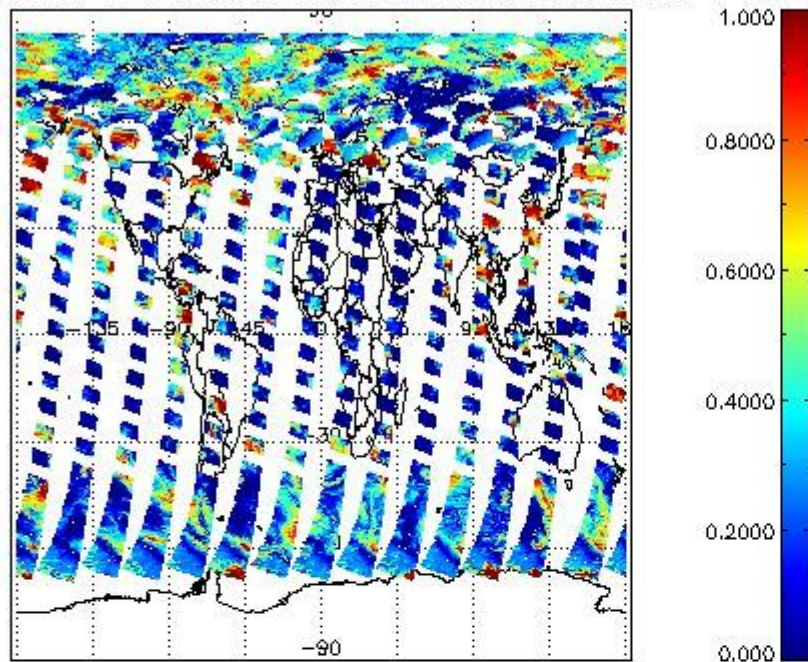
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	171591	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	171591	0.16590	0.12500	0.12500	0.25000	0.058651	s
CL_FRAC	171591	0.31499	0.26756	0.0000	1.0000	0.27457	
CL_FRAC_ERR	171591	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	171591	5.3089	4.0000	4.0000	8.0000	1.8768	
PMD_READ_CL[0]	171591	0.26222	0.0000	0.0000	8.0000	1.1595	-
PMD_READ_CL[1]	171591	1.4357	0.0000	0.0000	8.0000	2.5174	-
CL_TOP_HEIGHT	131616	3.1481	1.2474	0.0000	17.000	3.5886	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	131616	59.997	85.076	0.0000	101.00	43.600	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	171591	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	171591	11001110	11000100	11000000	11100000	3682.3	
AERO_ABSO_IND	171591	0.17008	0.0000	0.0000	21.597	0.43361	
AERO_IND_DIAG	171591	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	171591	01010011	00000000	00000000	11000000	24362.	

#### Time and geolocation plots:

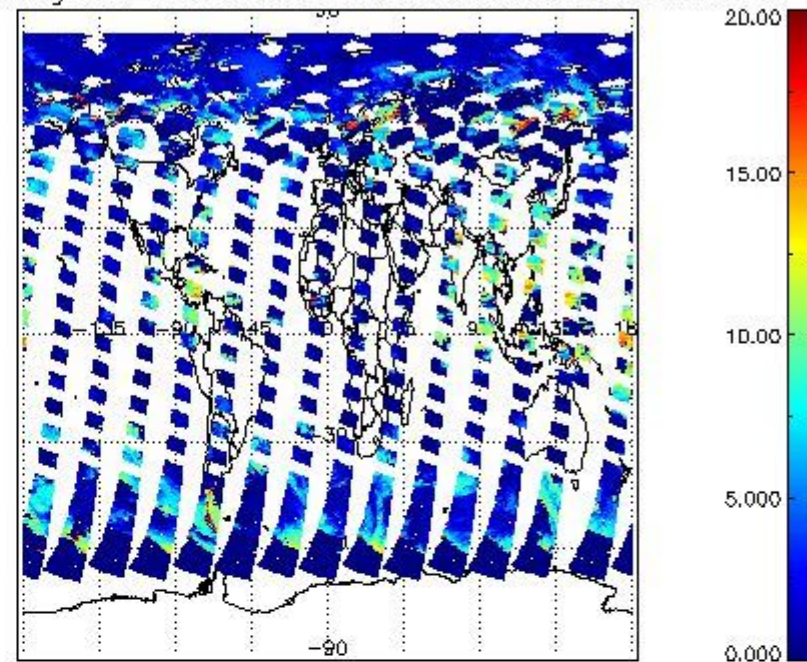
Plots are available for the following parameters:

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

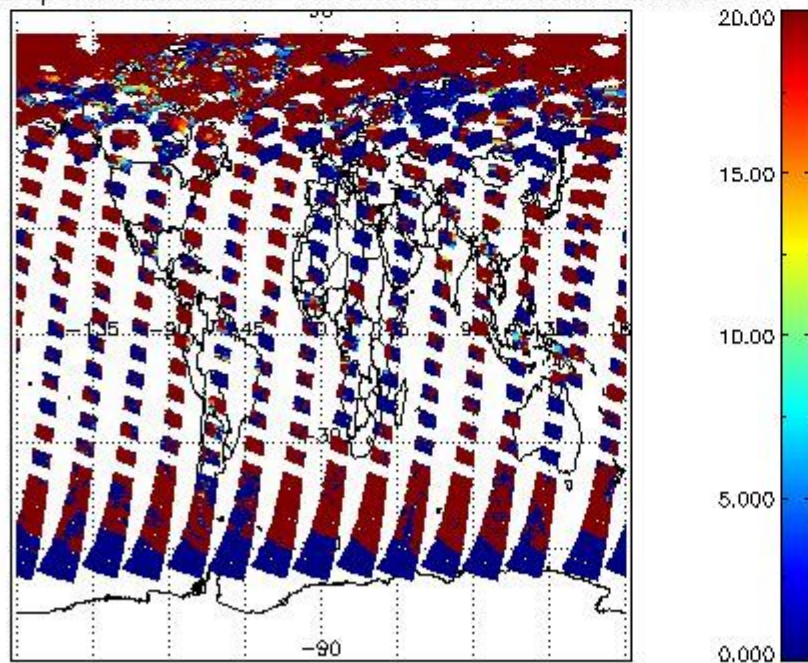
cL\_frac for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



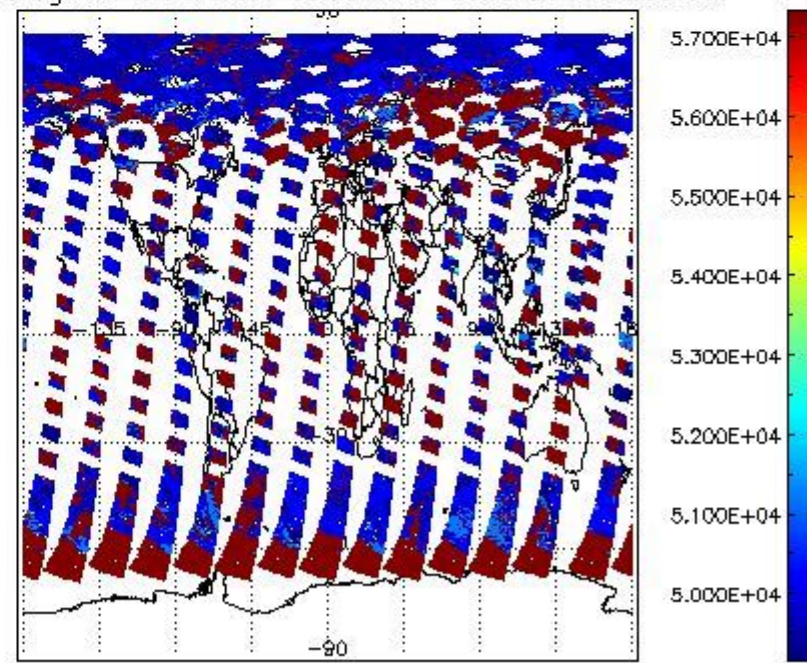
cL\_top\_height for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



cL\_opt\_depth for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



cloud\_flags for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



## 2.2.2 Nadir

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

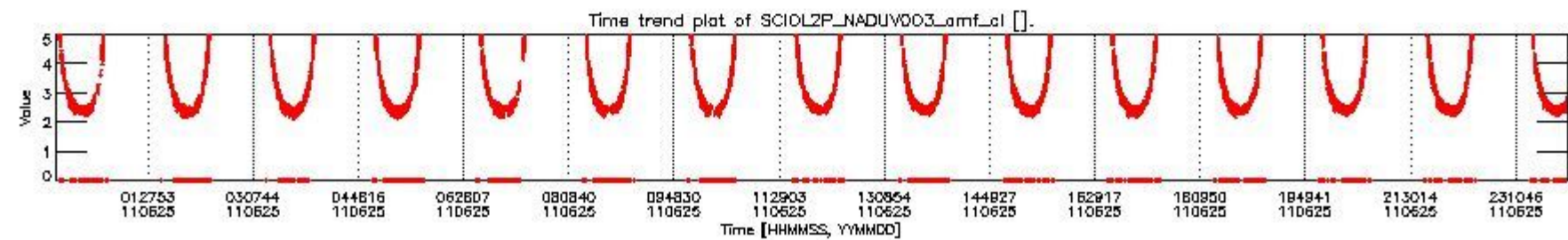
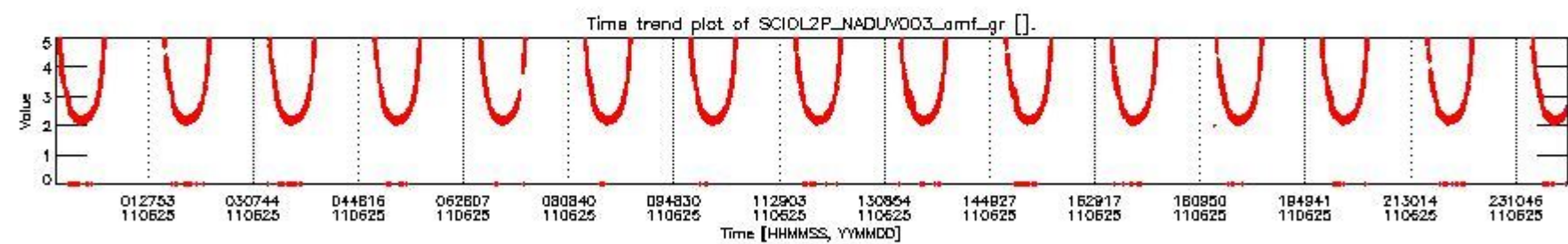
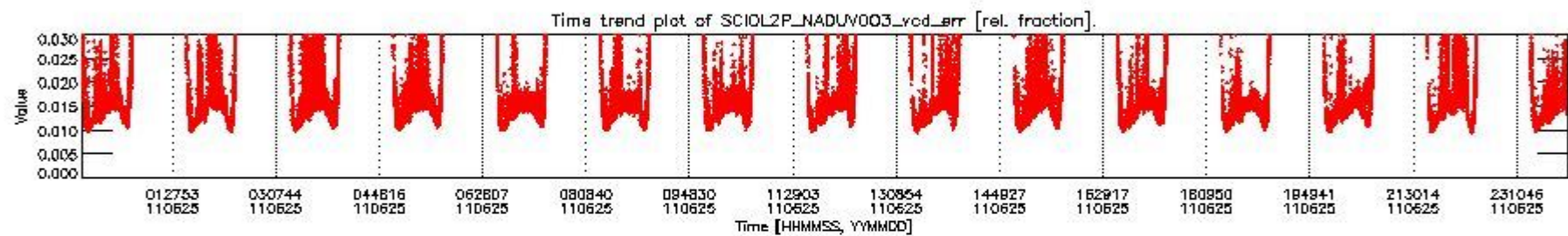
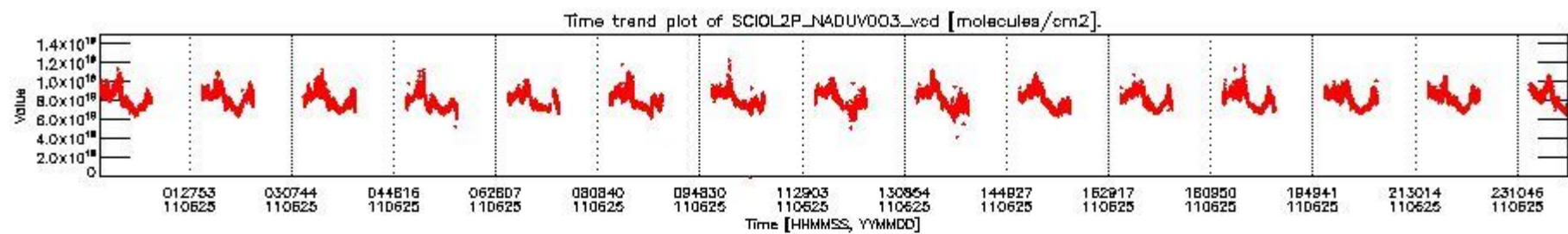
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

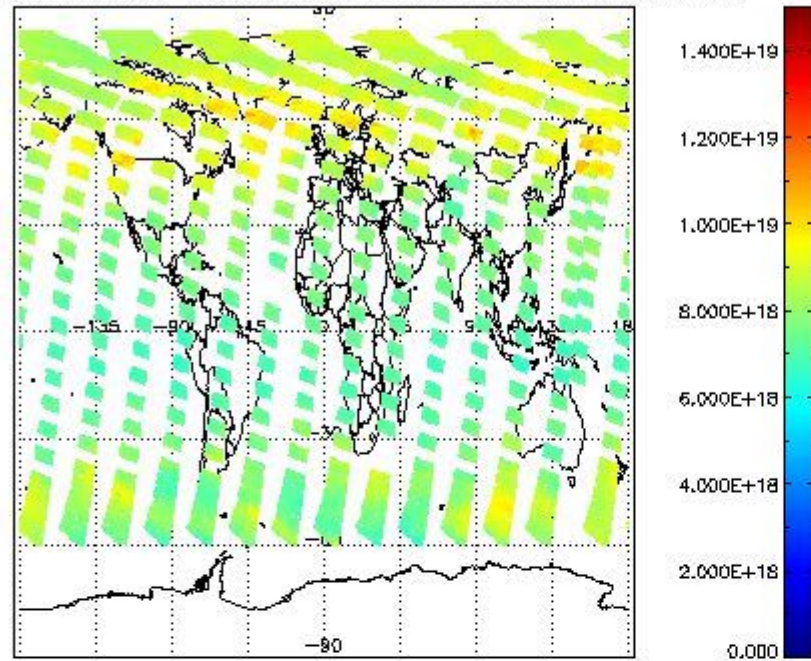
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr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

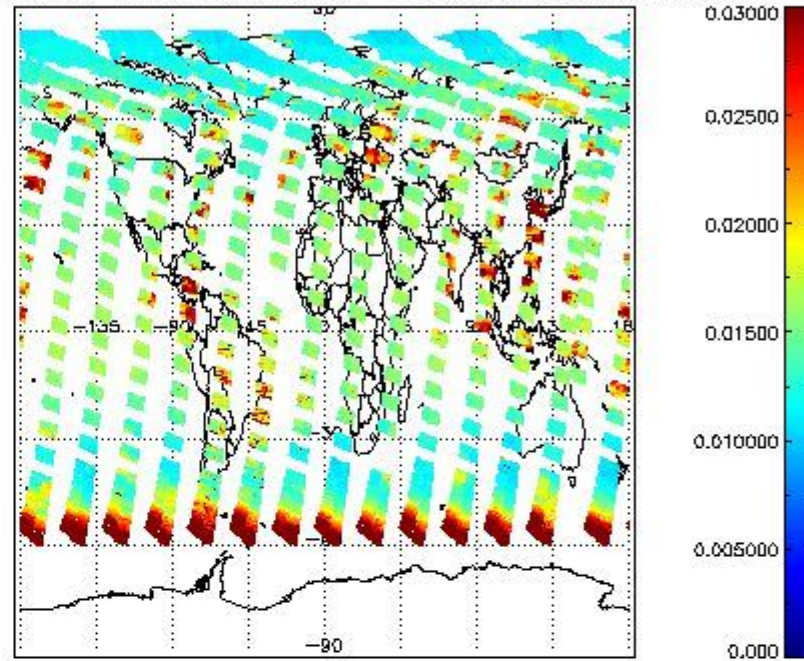
#### 2.2.2.1 O3 (UV0)



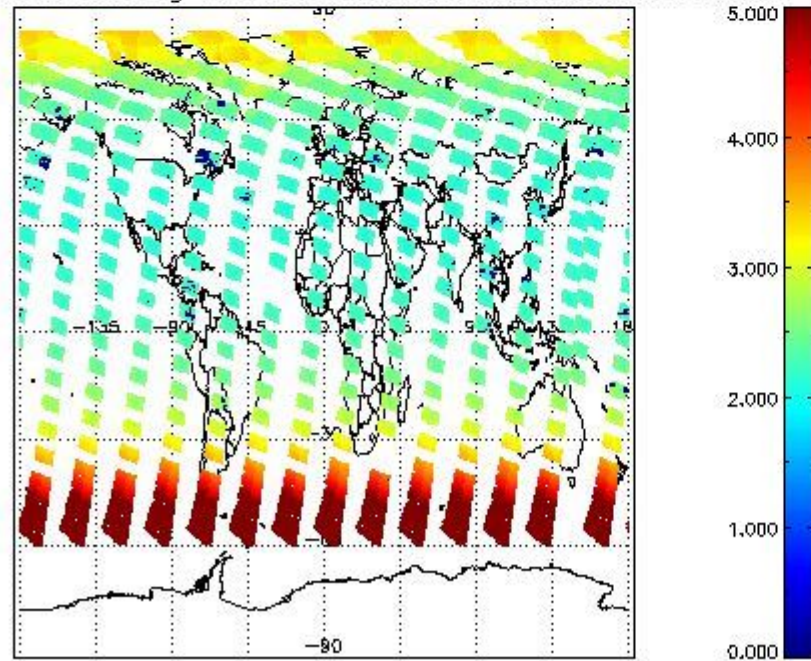
SCIOL2P\_NADUV003\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



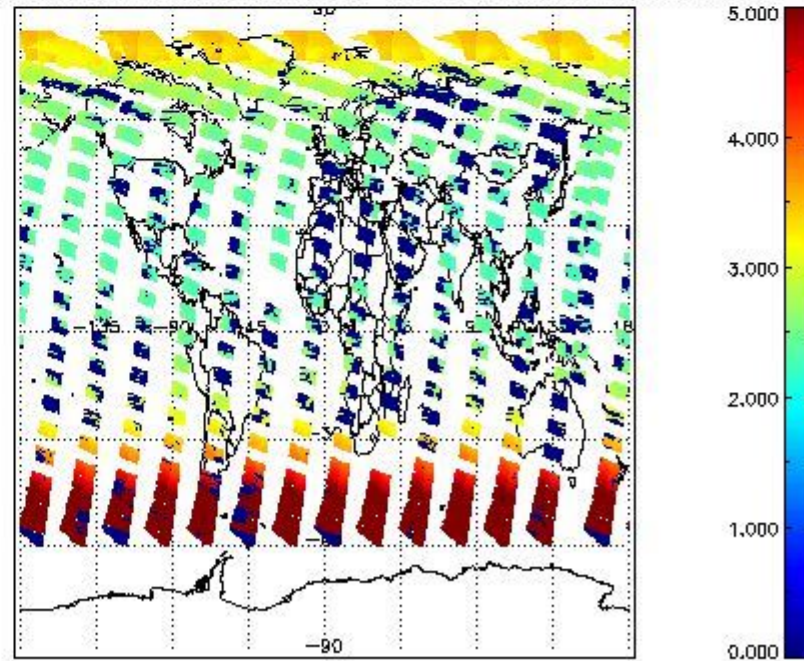
SCIOL2P\_NADUV003\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



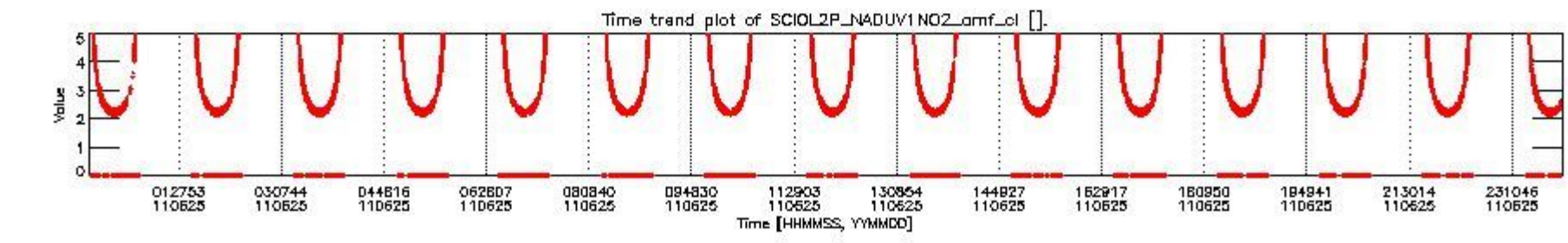
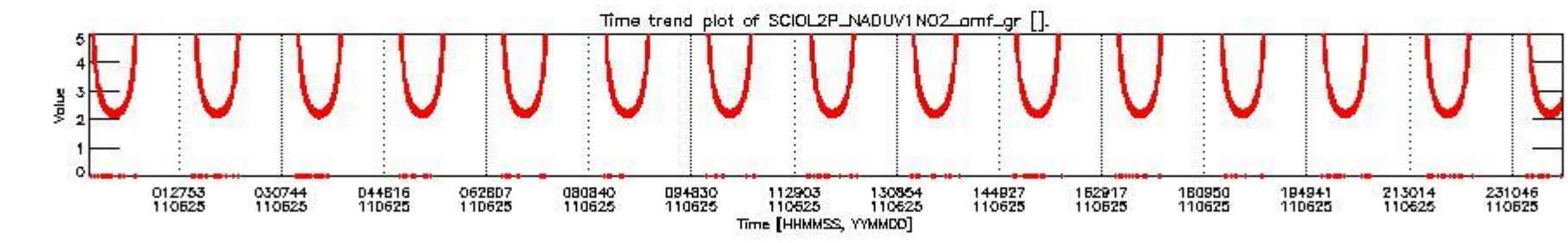
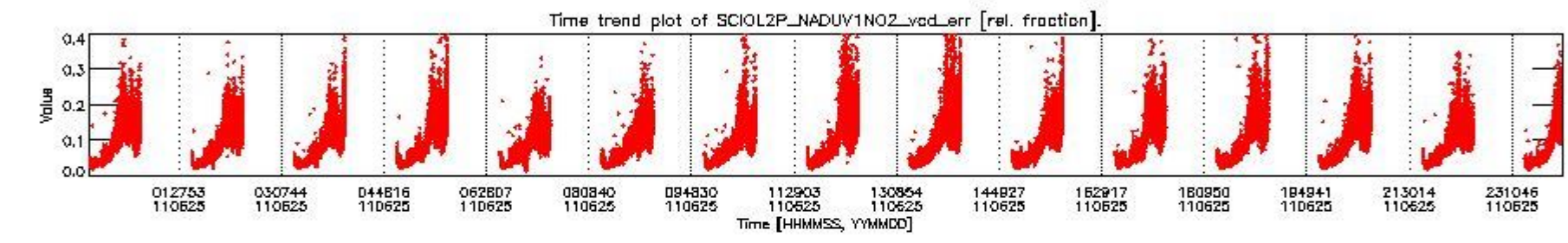
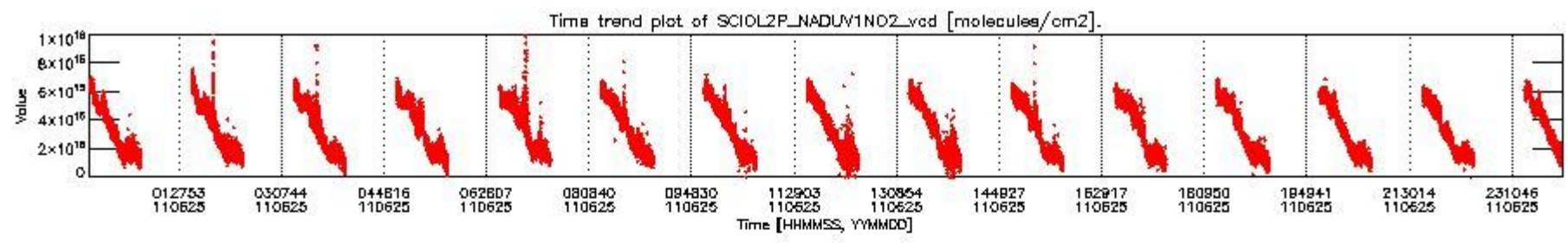
SCIOL2P\_NADUV003\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



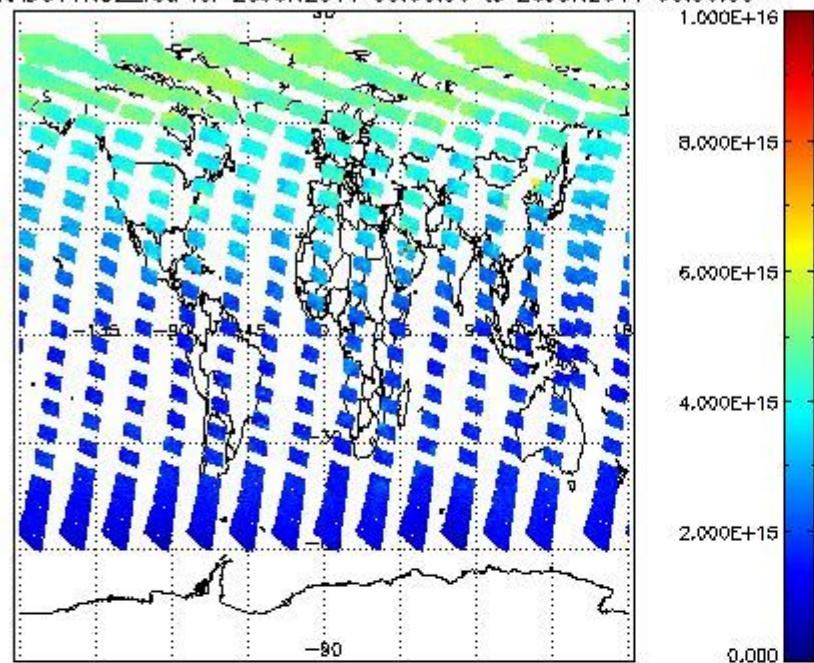
SCIOL2P\_NADUV003\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



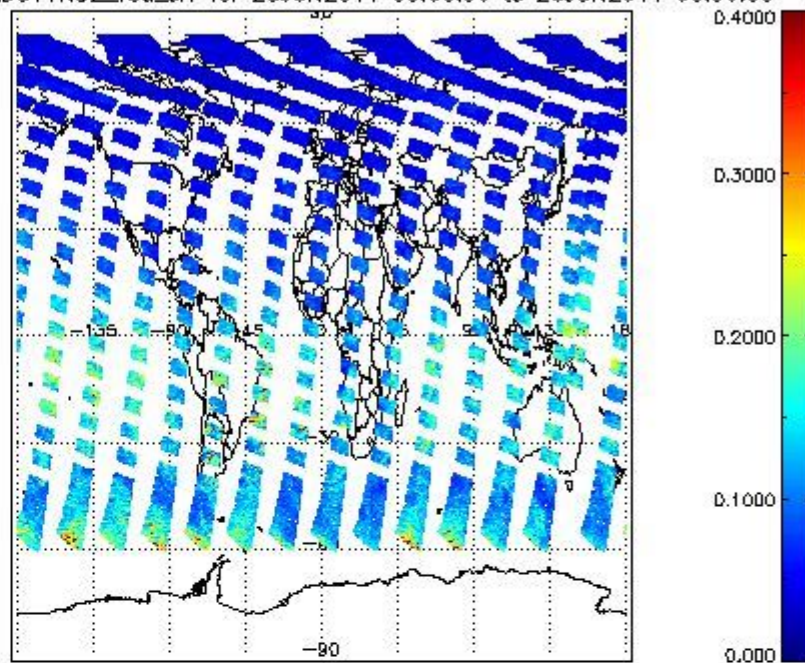
2.2.2.2 NO2 (UV1)



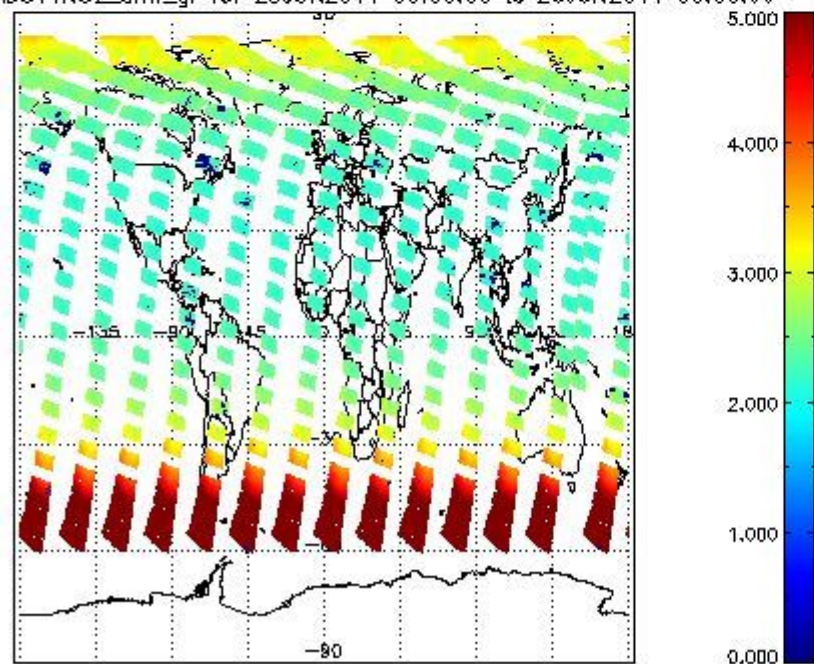
SCIOL2P\_NADUV1NO2\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



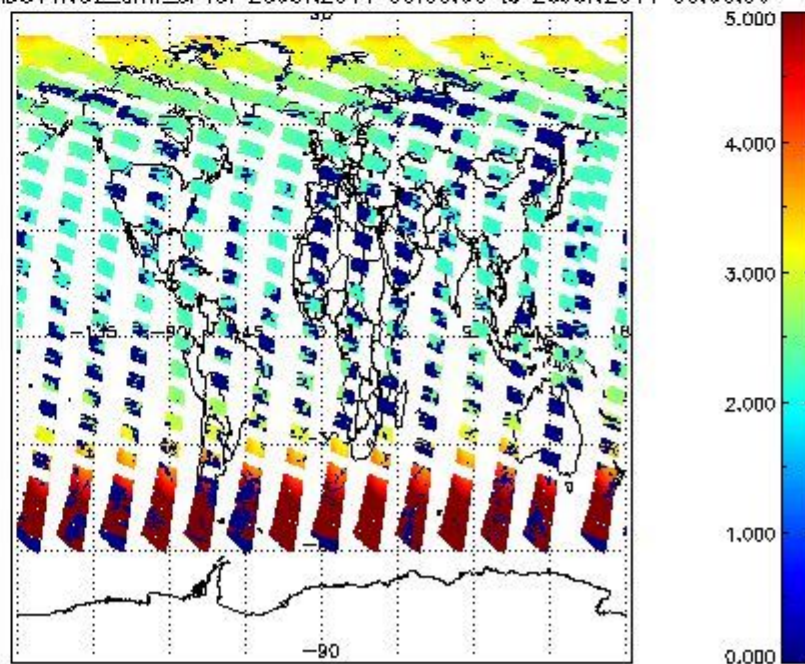
SCIOL2P\_NADUV1NO2\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

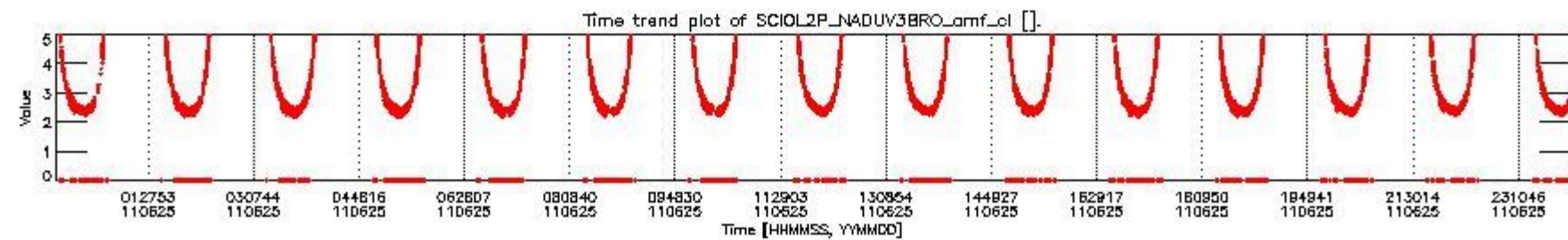
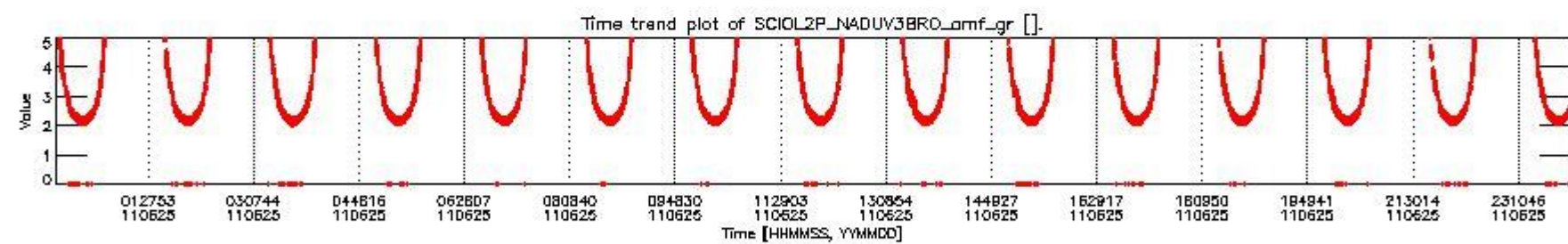
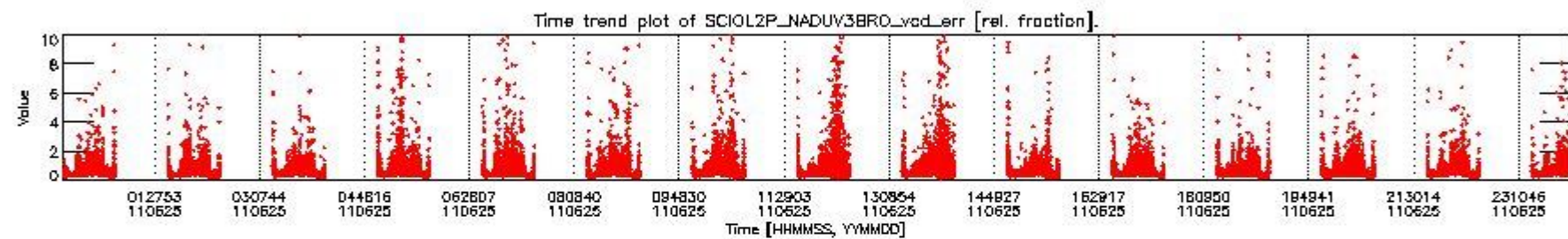
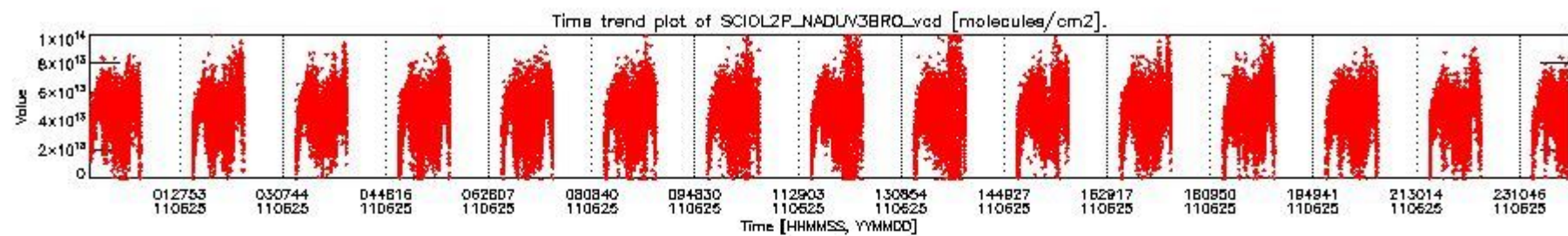


SCIOL2P\_NADUV1NO2\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

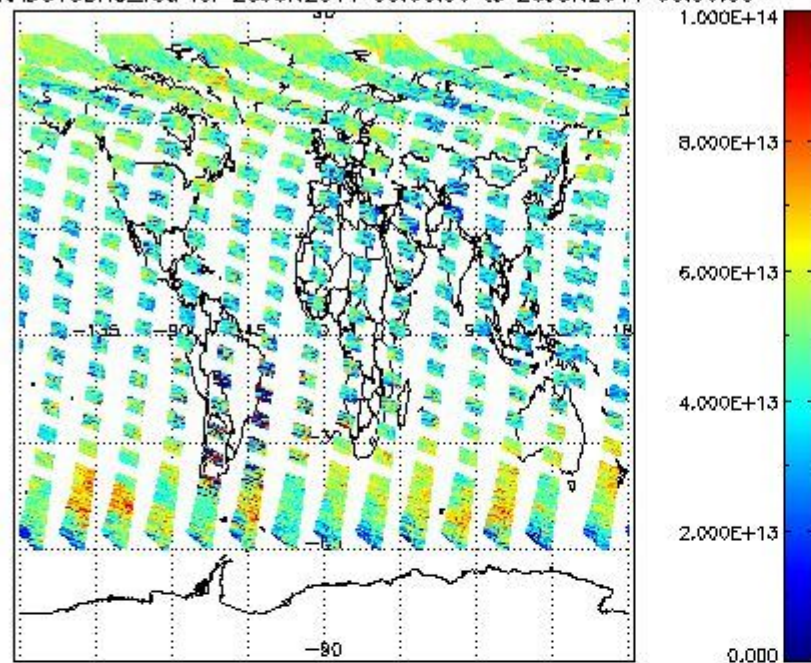


2.2.2.3 BrO (UV3)

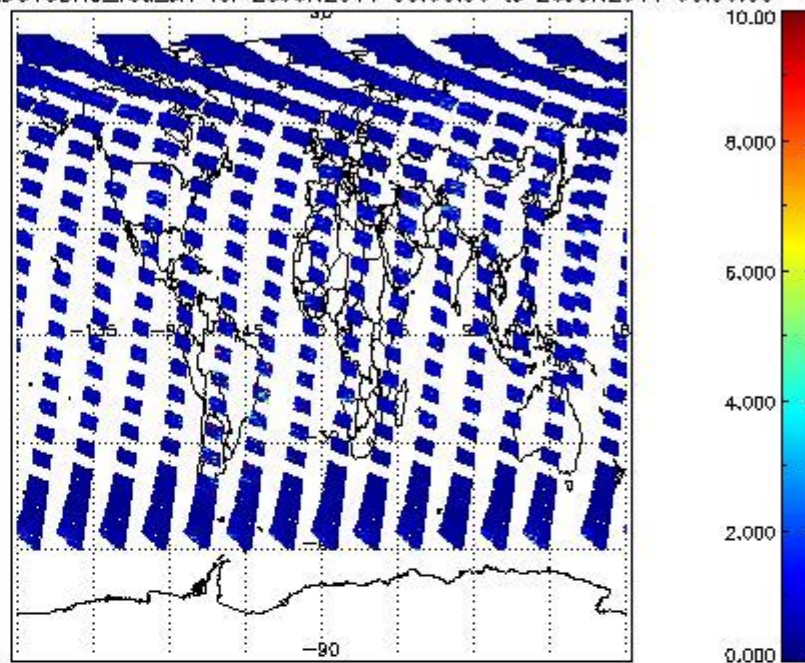




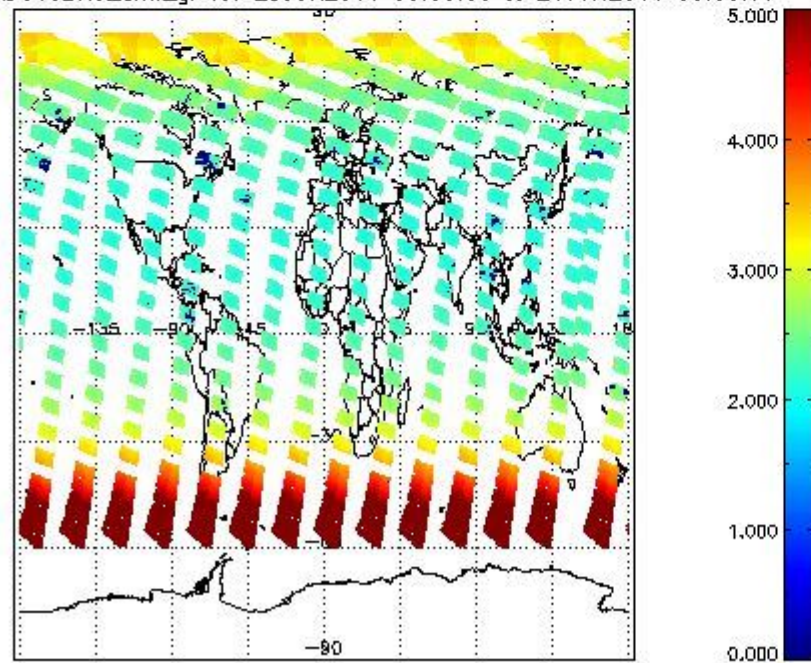
SCIOL2P\_NADUV3BRO\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



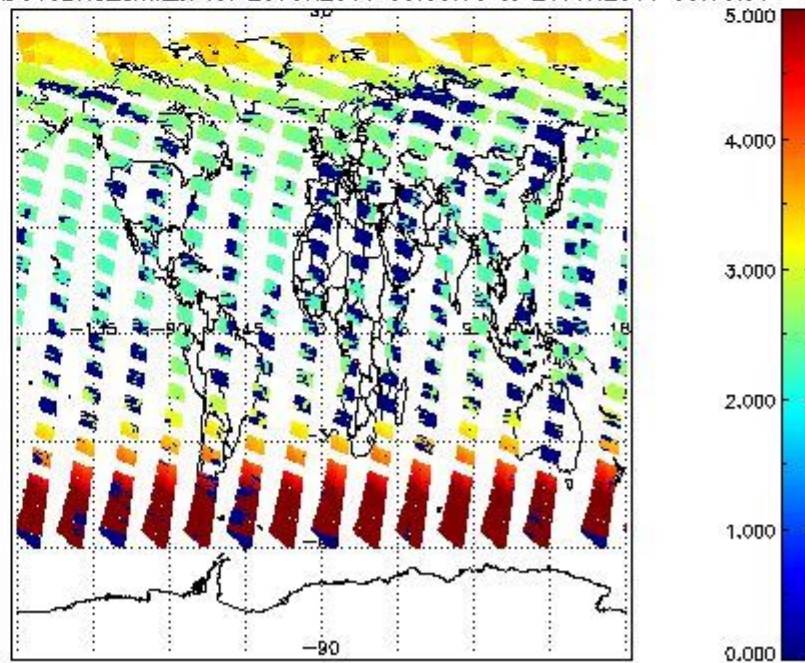
SCIOL2P\_NADUV3BRO\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



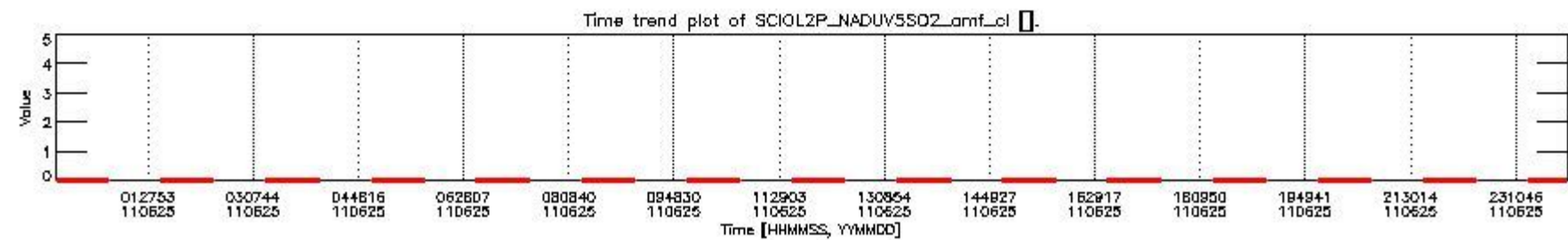
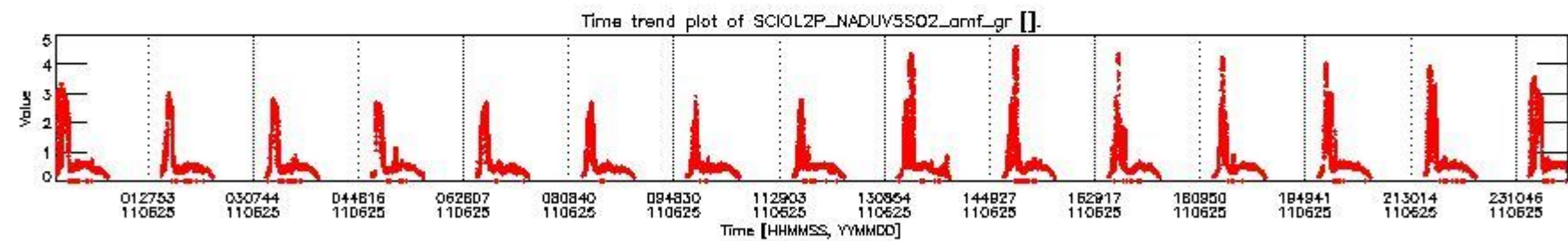
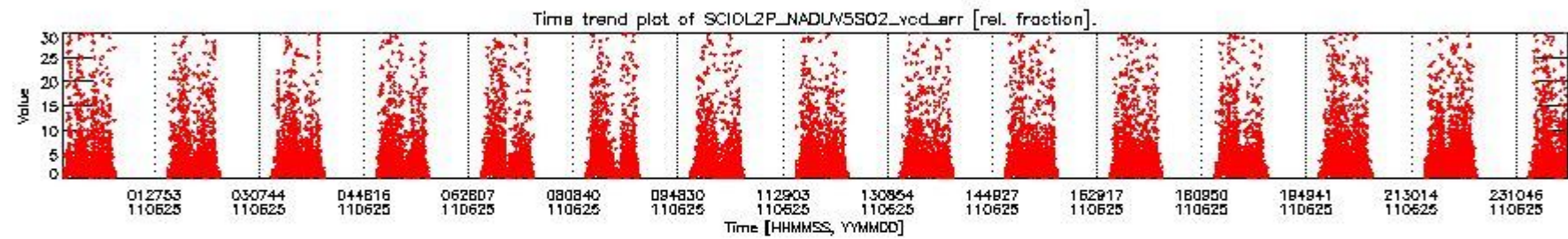
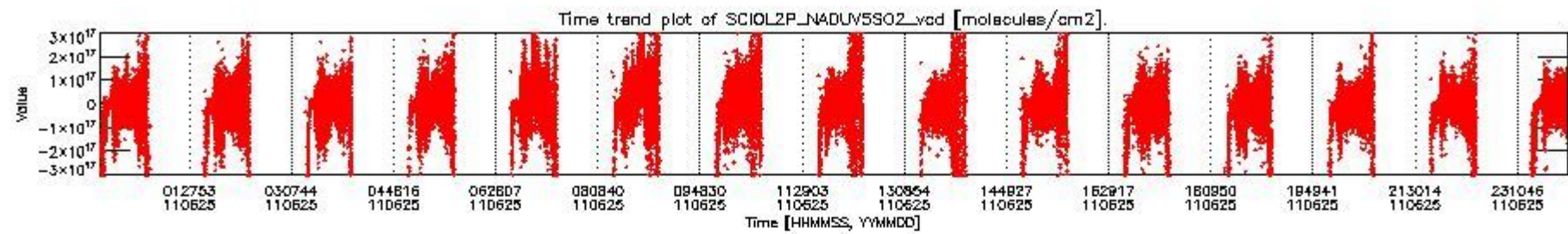
SCIOL2P\_NADUV3BRO\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



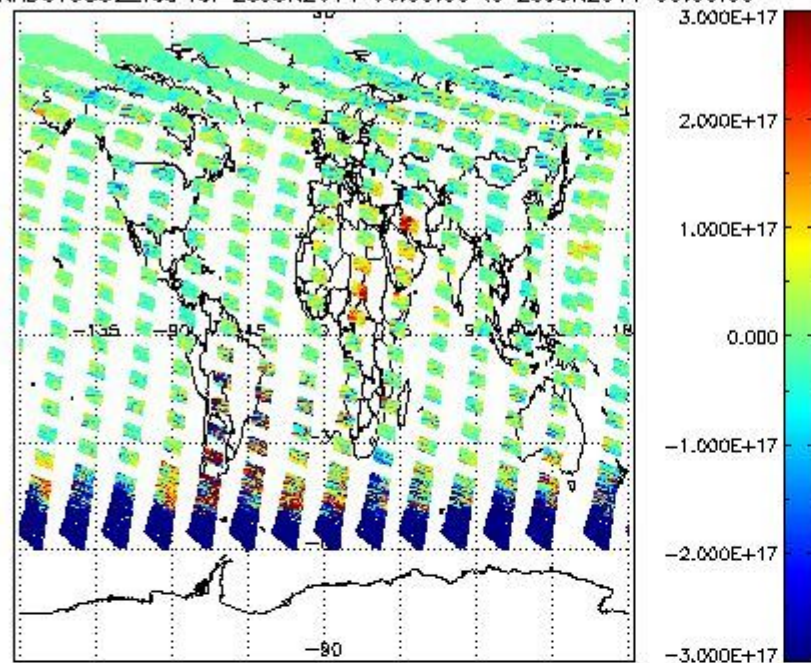
SCIOL2P\_NADUV3BRO\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



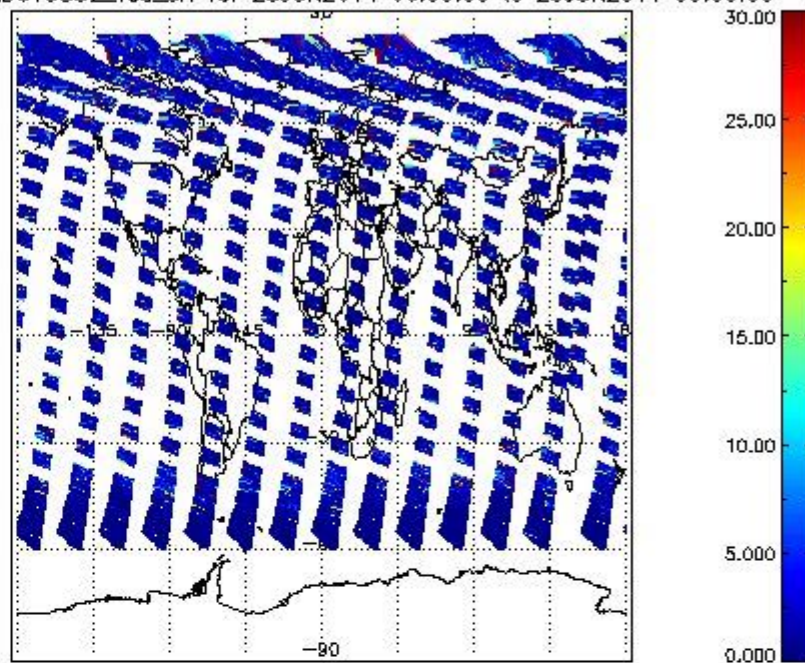
2.2.2.4 SO2 (UV5)



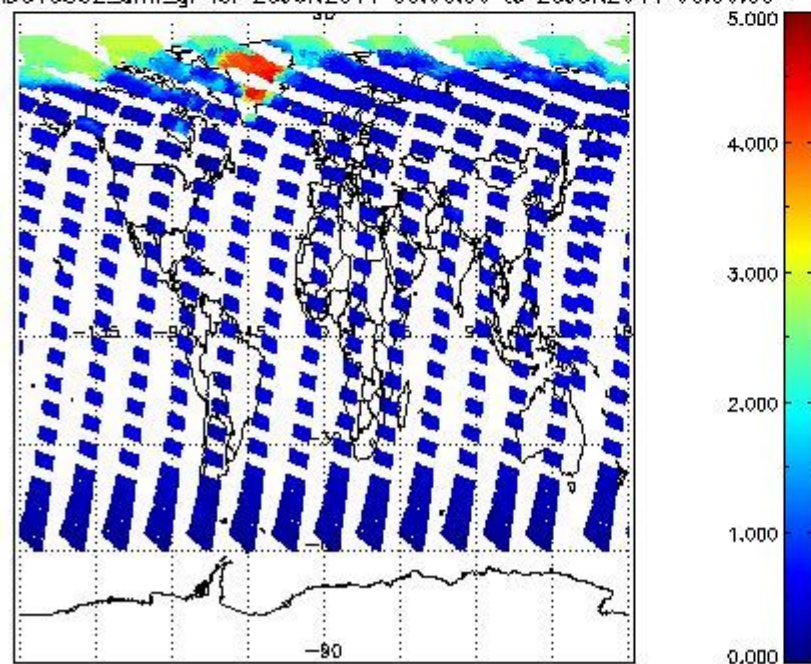
SCIOL2P\_NADUV5S02\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



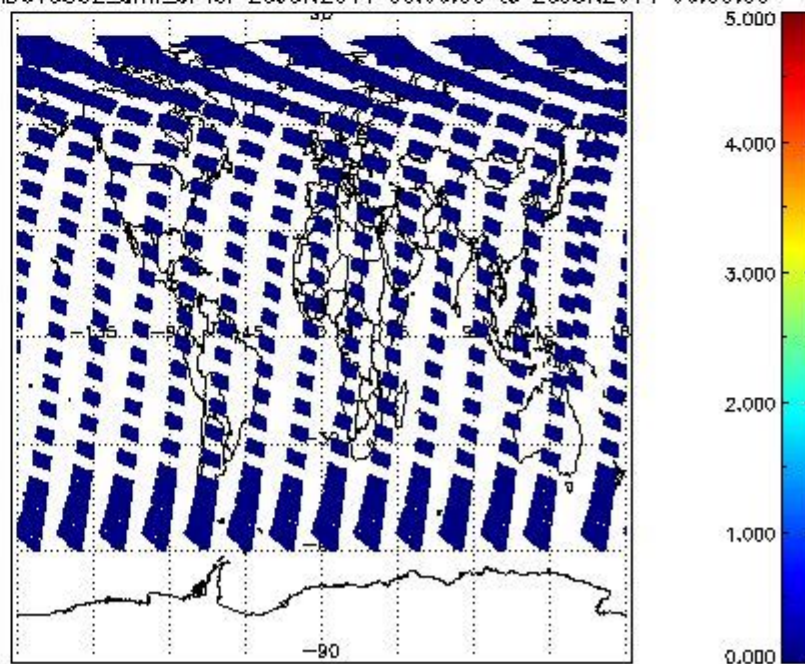
SCIOL2P\_NADUV5S02\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



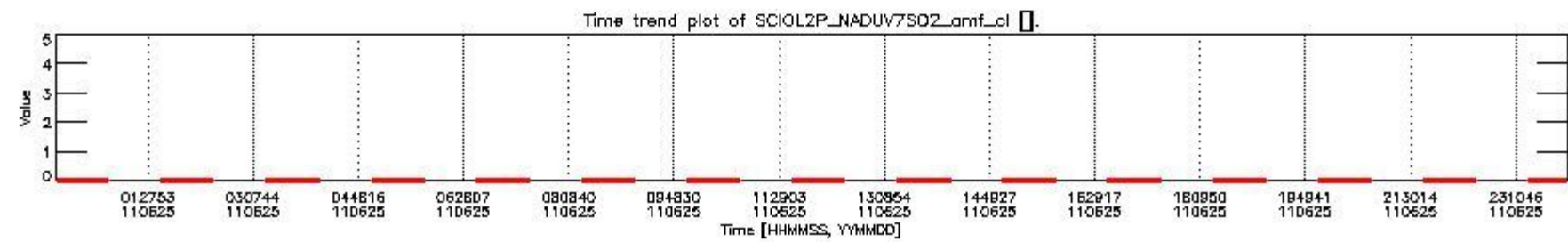
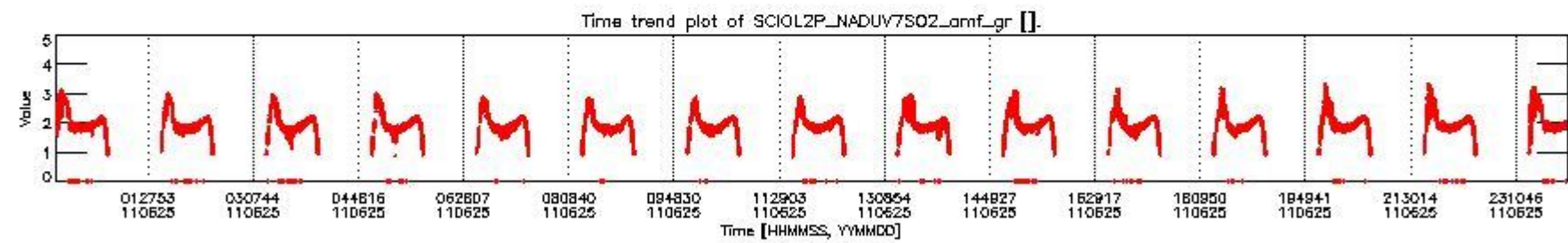
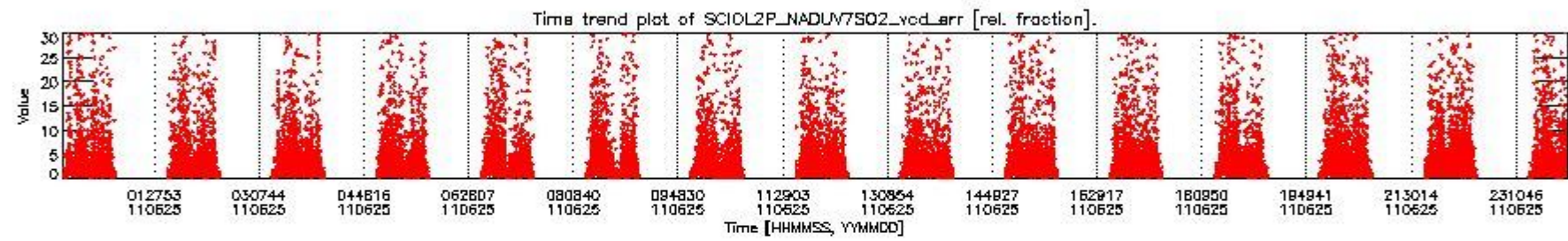
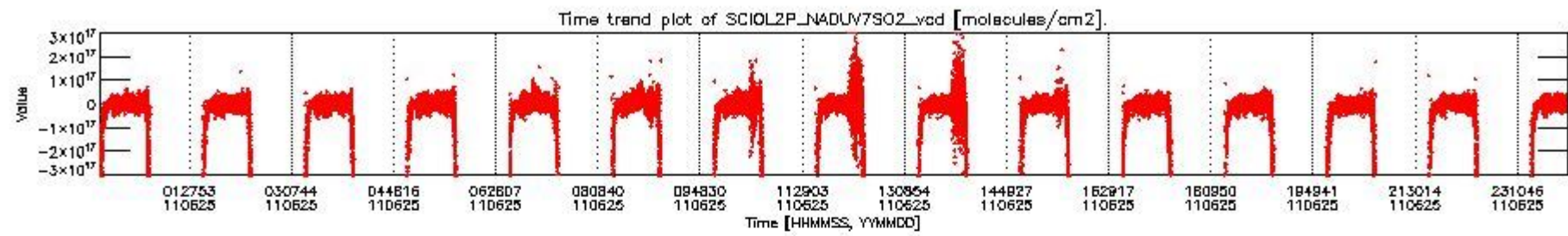
SCIOL2P\_NADUV5S02\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



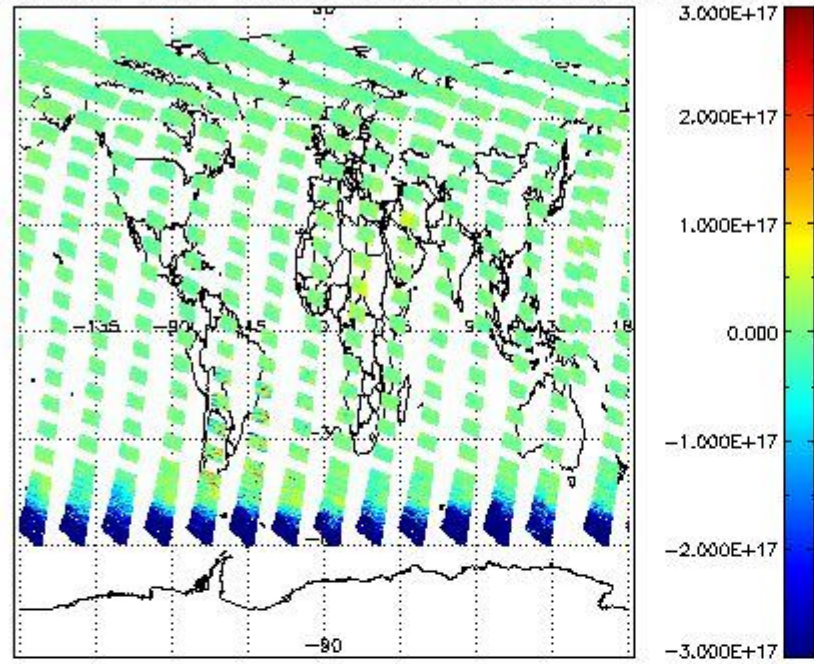
SCIOL2P\_NADUV5S02\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



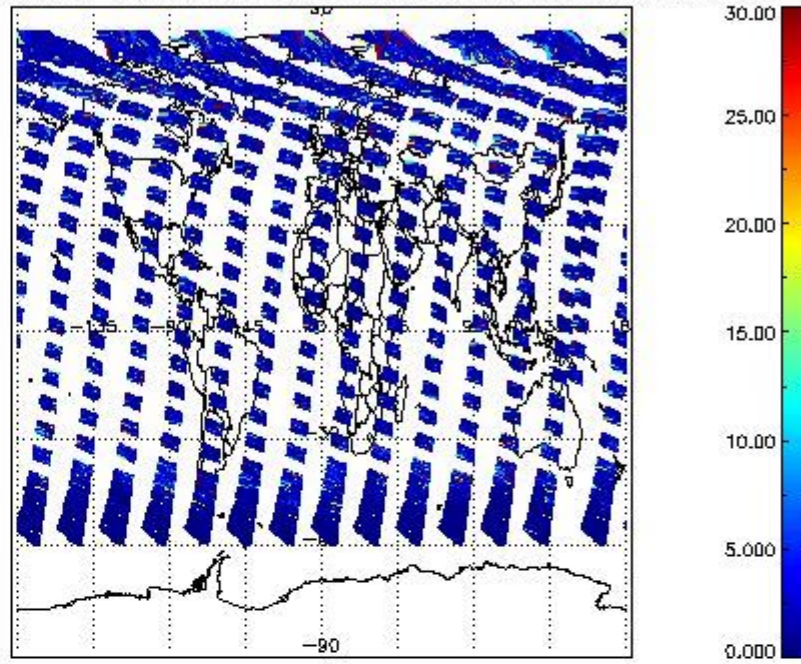
2.2.2.5 SO2 (UV7)



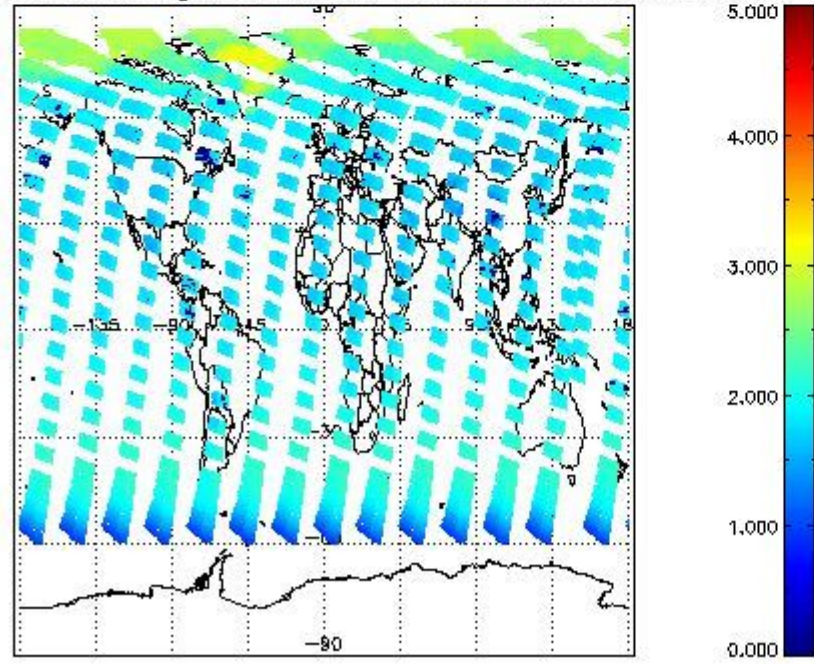
SCIOL2P\_NADUV7S02\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



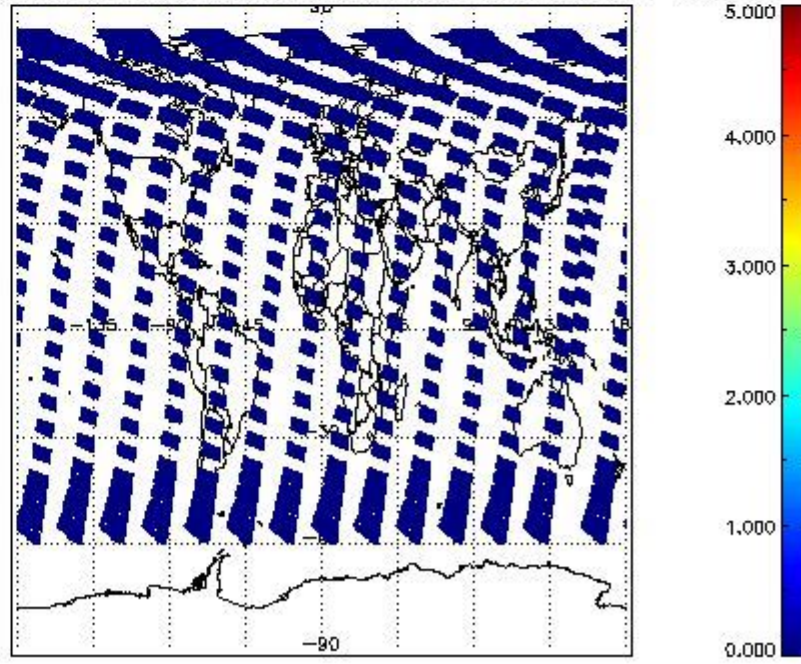
SCIOL2P\_NADUV7S02\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



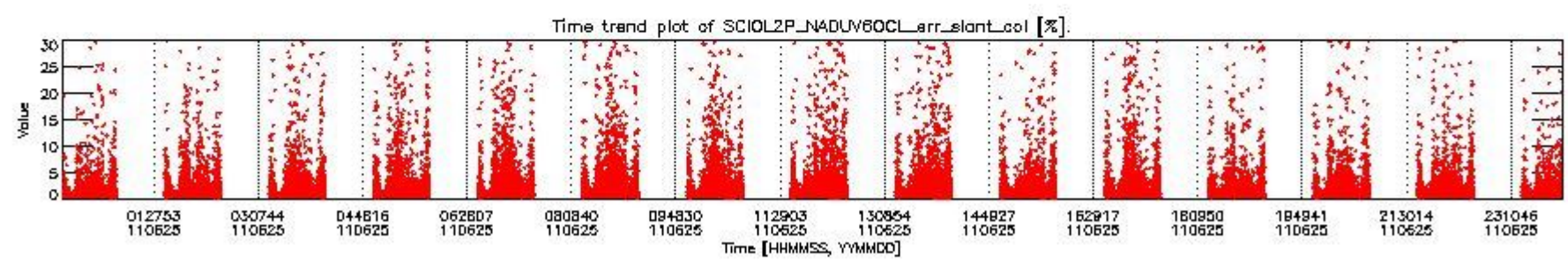
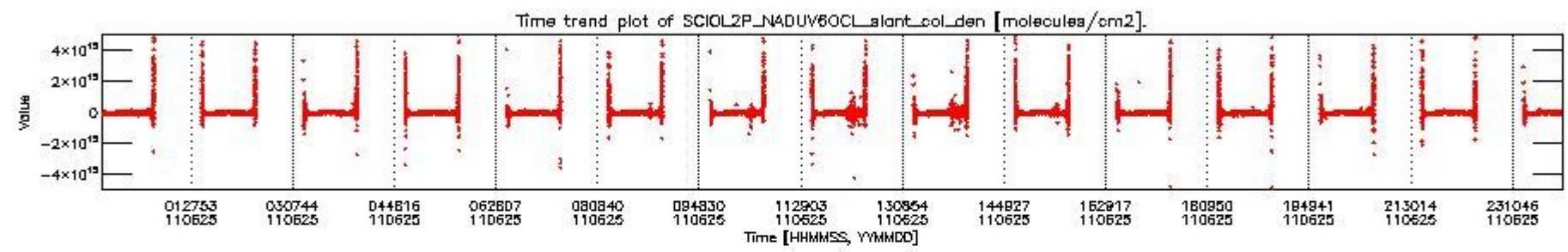
SCIOL2P\_NADUV7S02\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



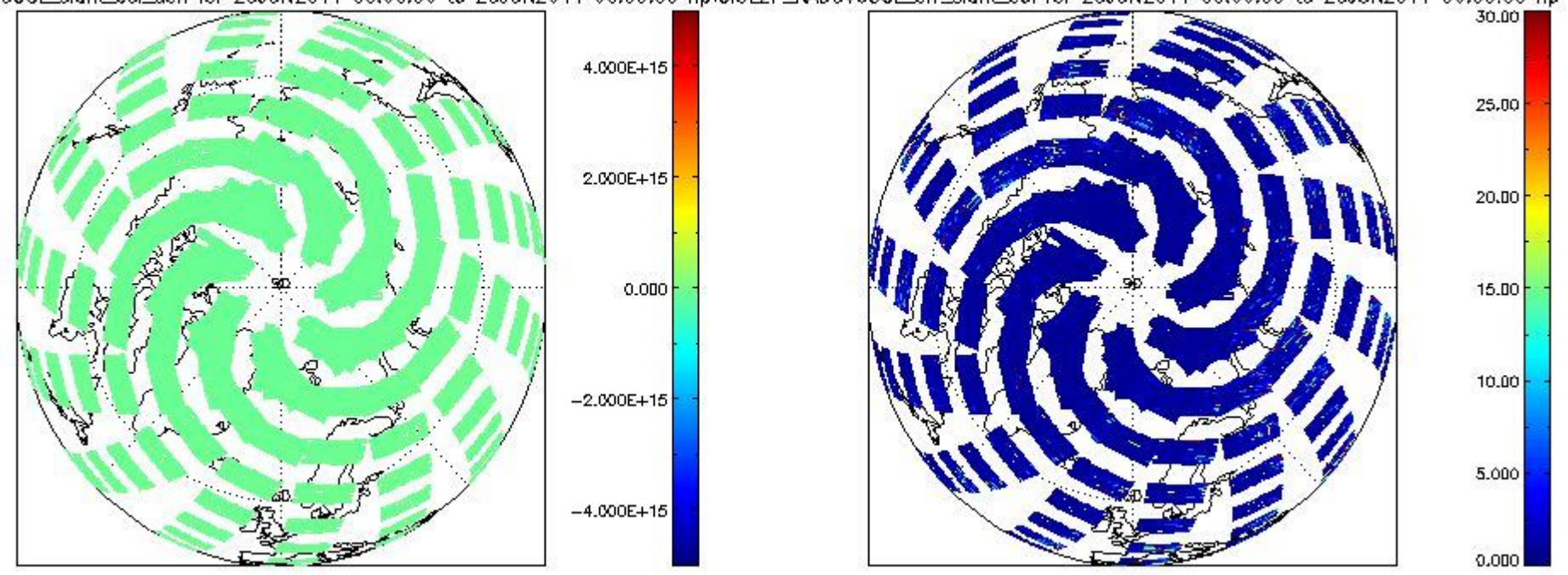
SCIOL2P\_NADUV7S02\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



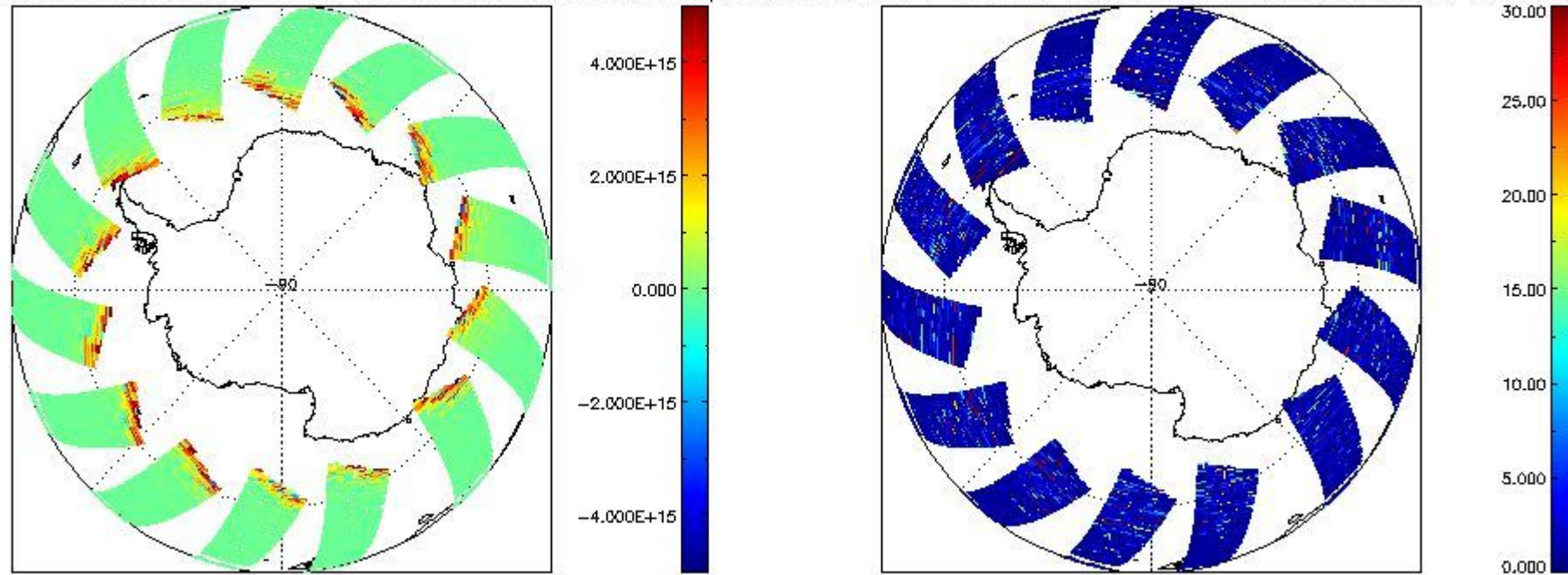
2.2.2.6 OCIO (UV6)



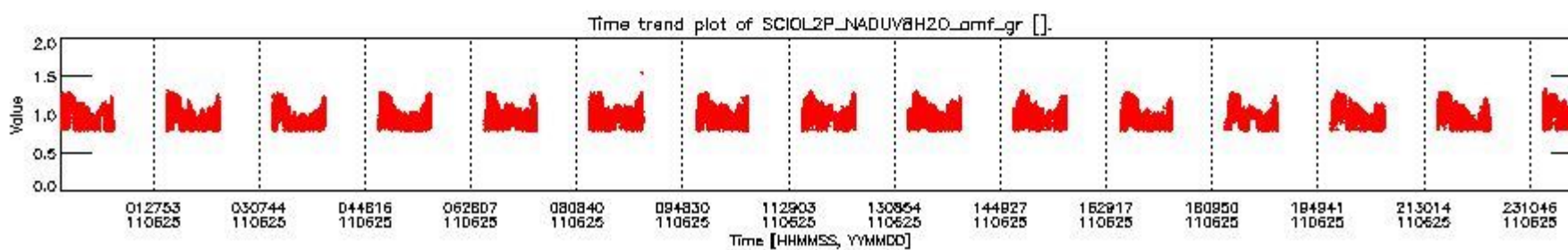
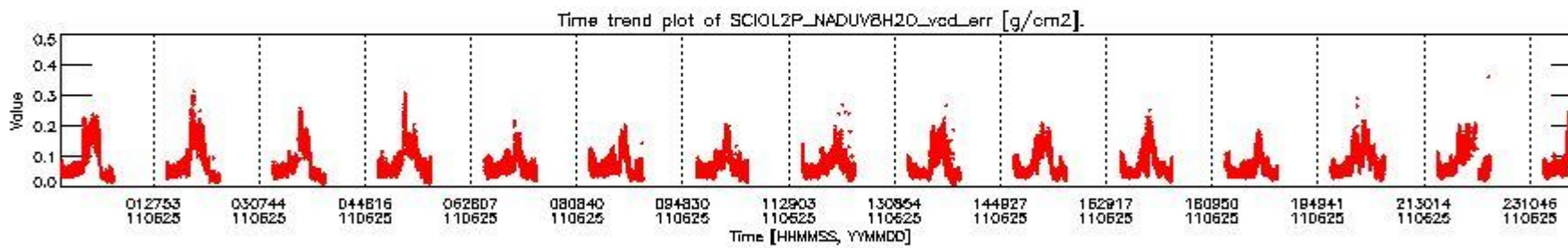
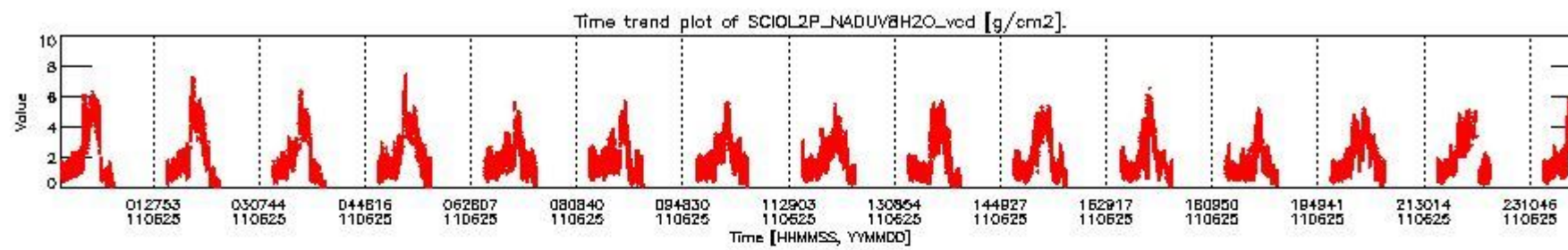
CIOL2P\_NADUV60CL\_slant\_col\_den for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 np; CIOL2P\_NADUV60CL\_err\_slant\_col for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 np



CIOL2P\_NADUV60CL\_slant\_col\_den for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 sp; CIOL2P\_NADUV60CL\_err\_slant\_col for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 sp

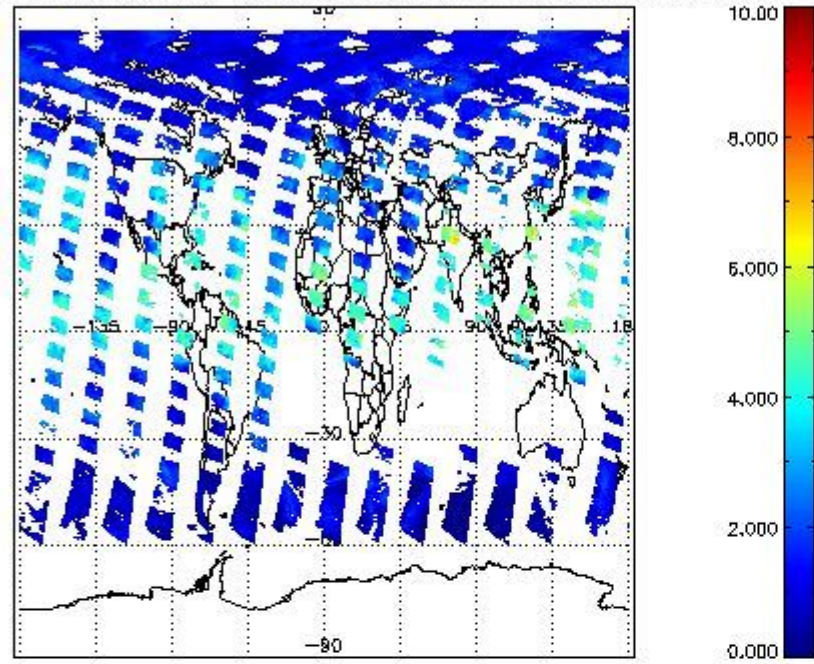


### 2.2.2.7 H<sub>2</sub>O (UV8)

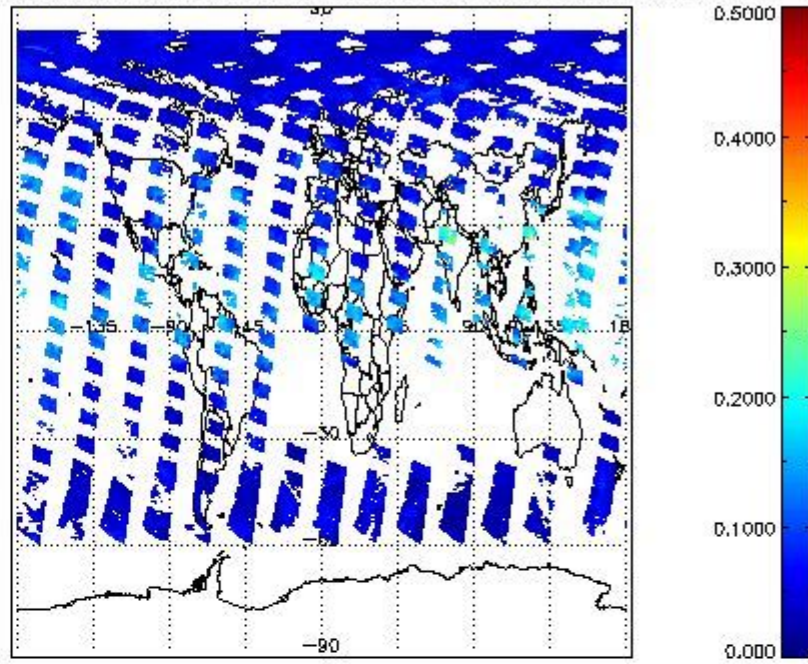




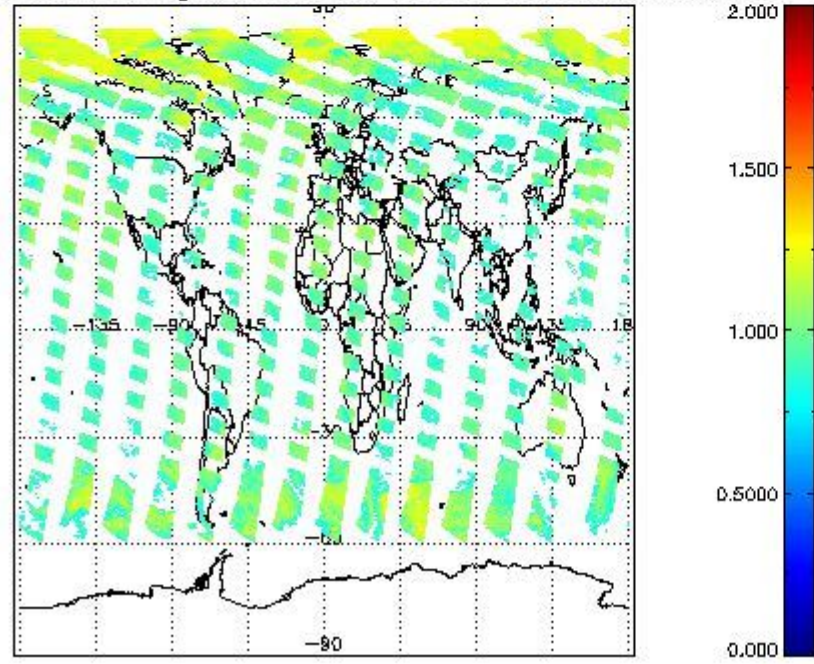
SCIOL2P\_NADUV8H2O\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

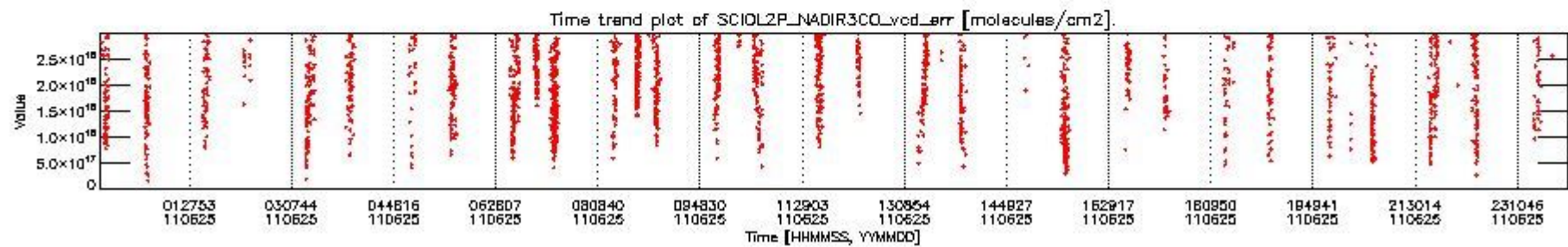
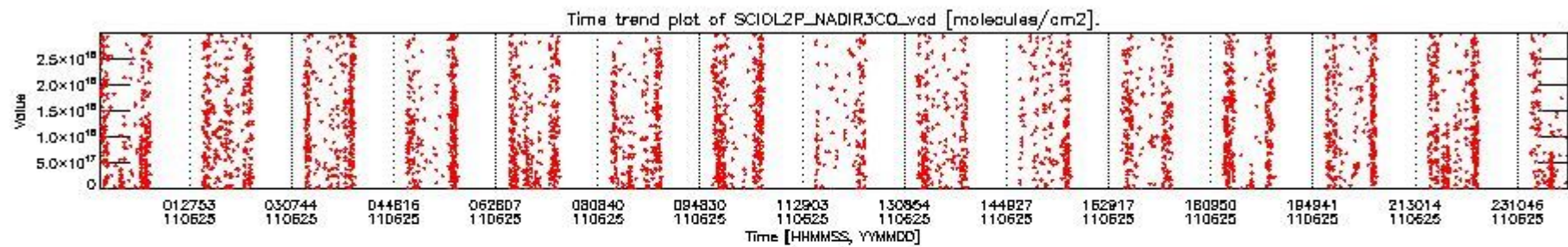


SCIOL2P\_NADUV8H2O\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

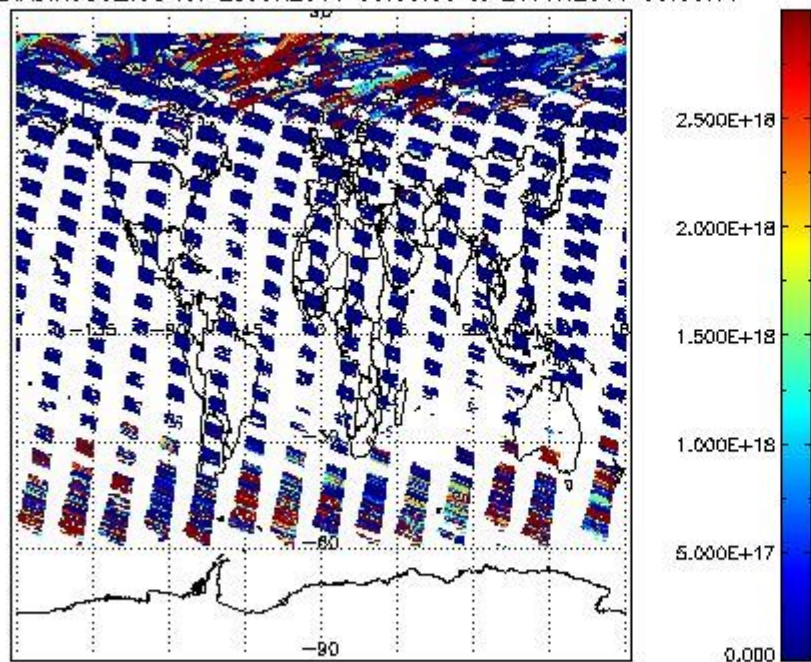


SCIOL2P\_NADUV8H2O\_arnf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

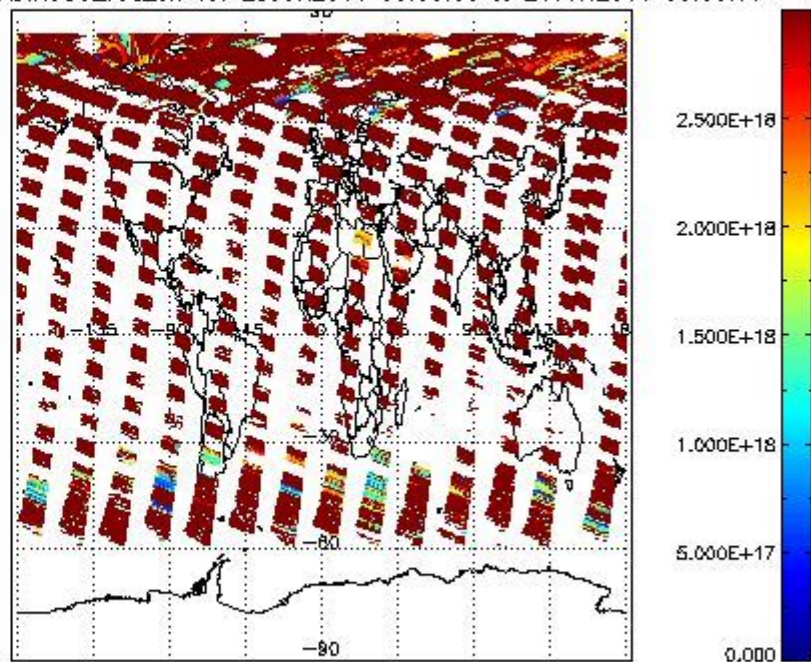




SCIDL2P\_NADIR3CO\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



### 2.2.3 Limb

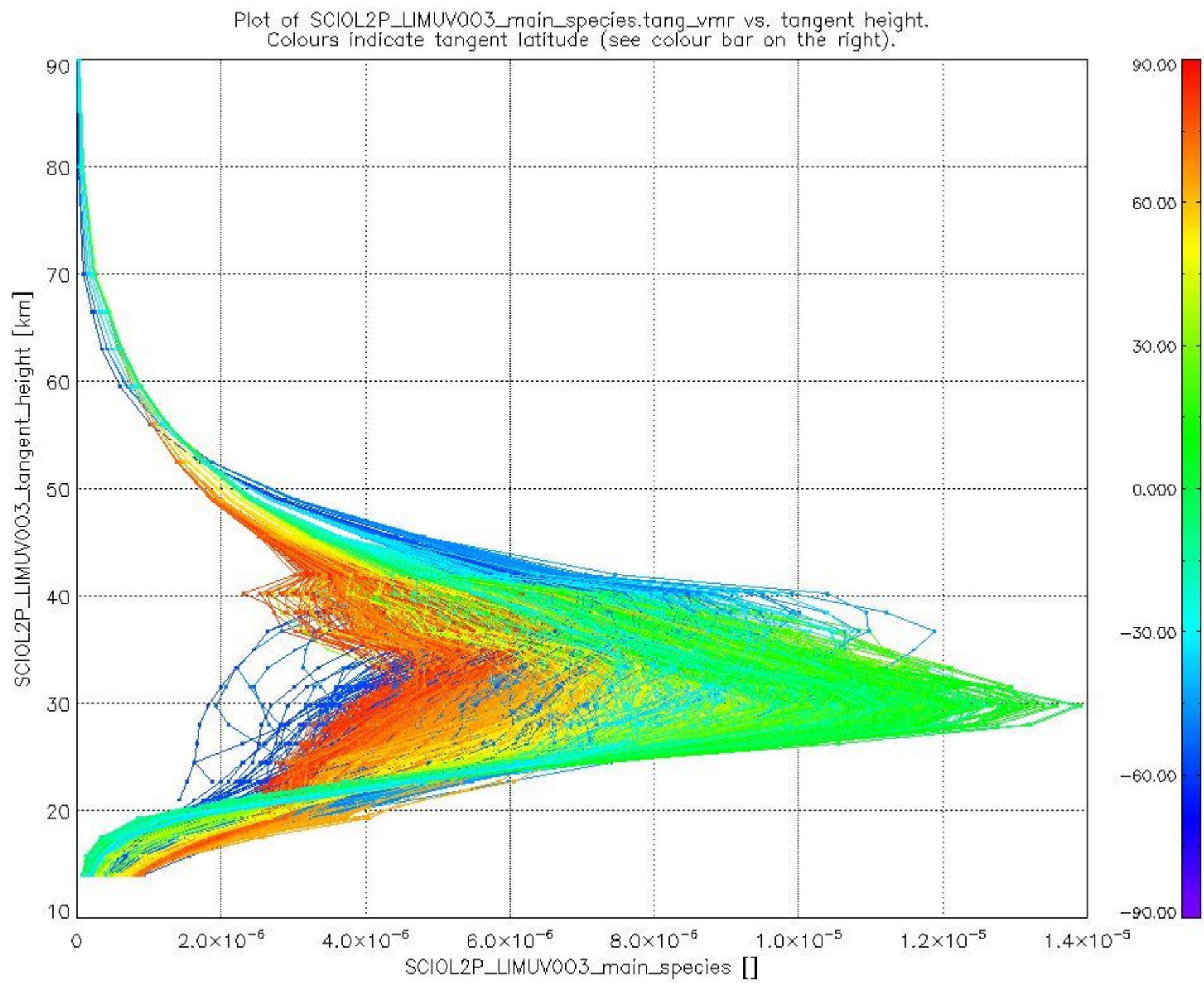
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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

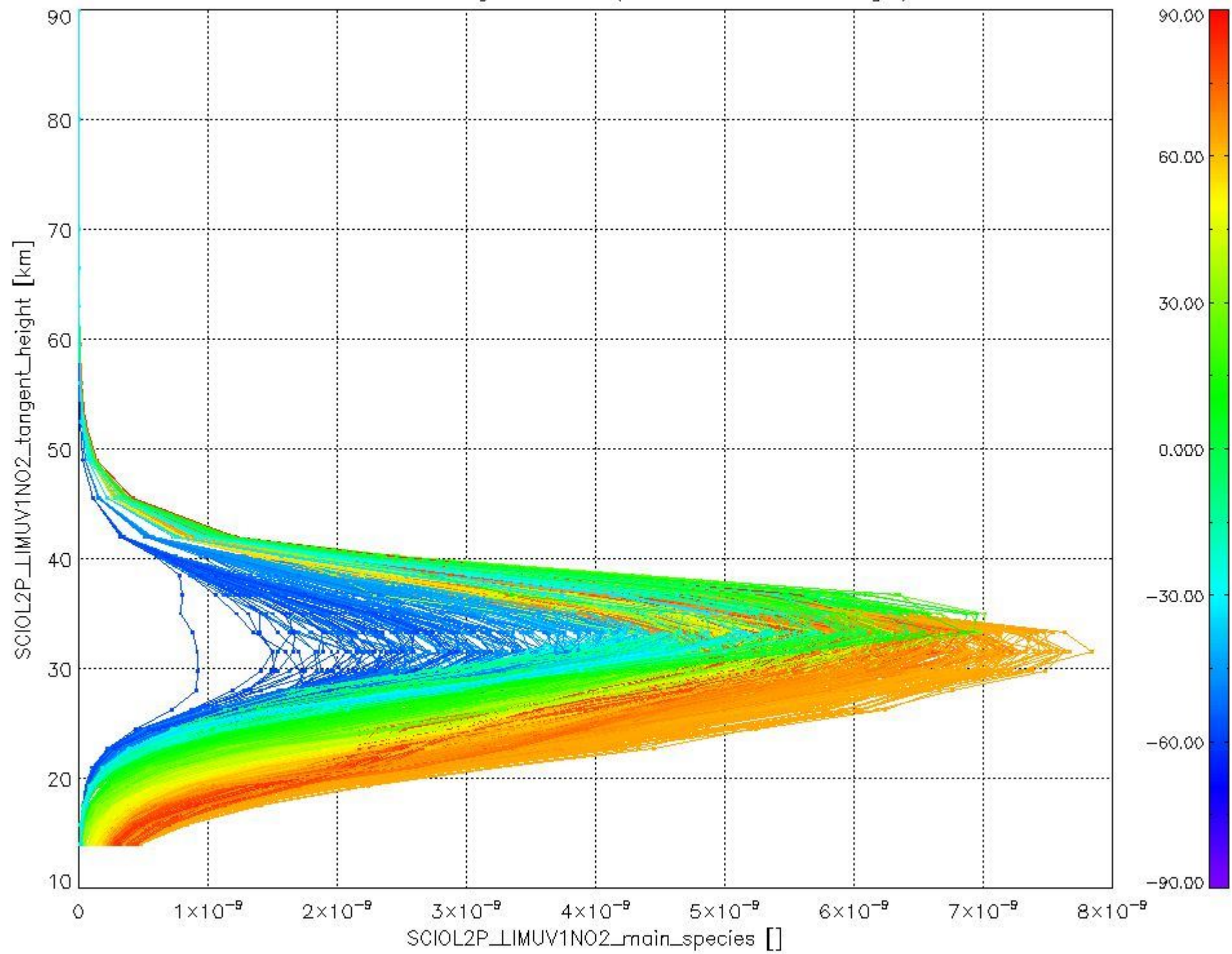
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



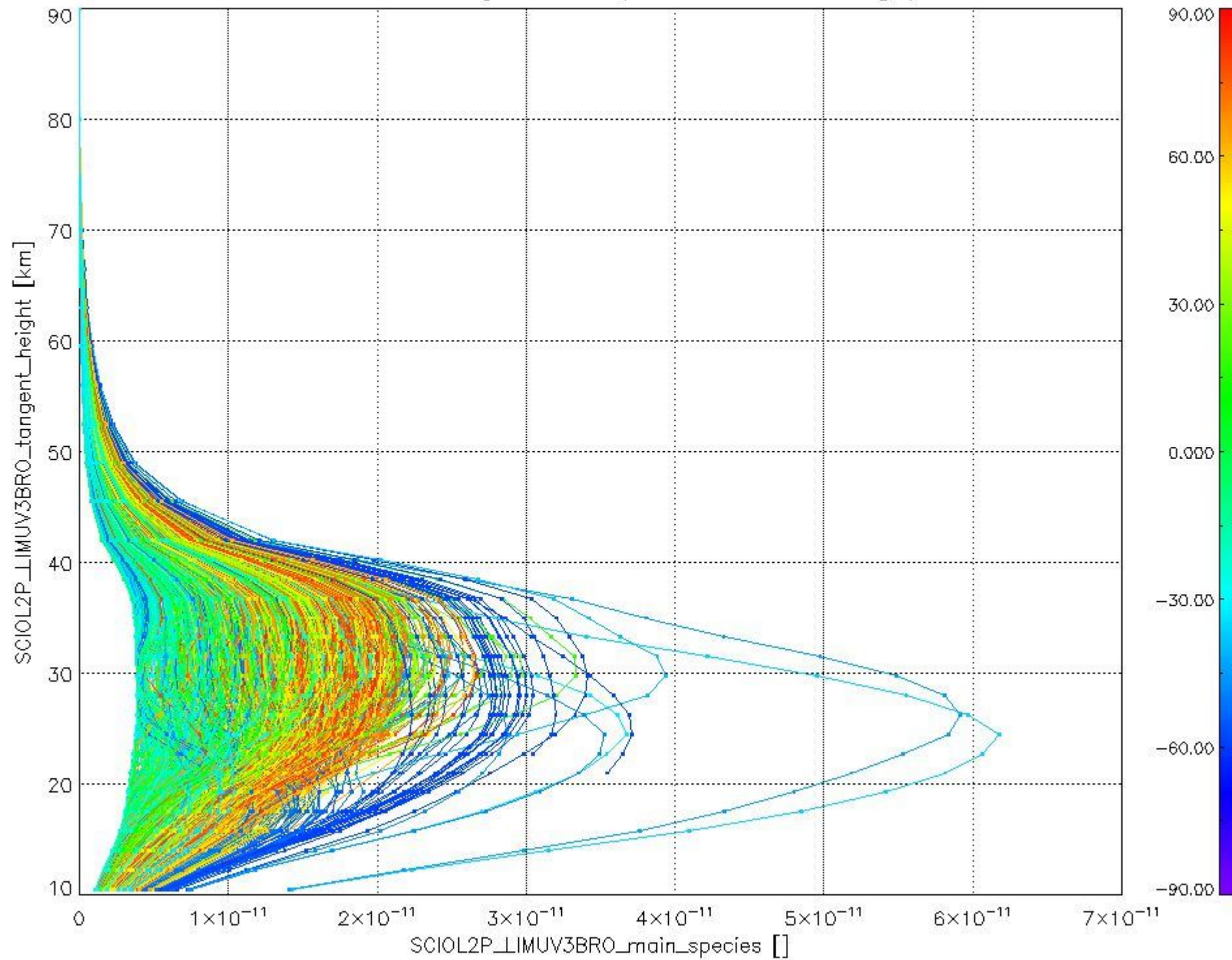
2.2.3.2 NO2 (UV1)

Plot of SCIO2P\_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).

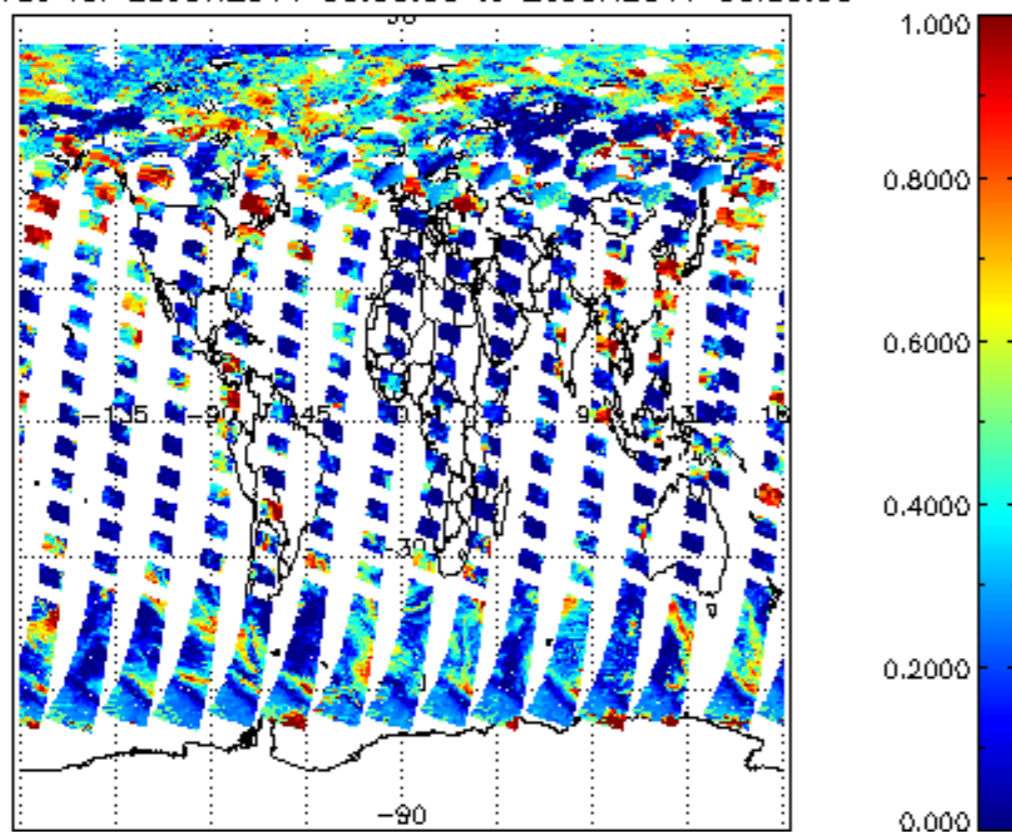


### 2.3 ADF monitoring

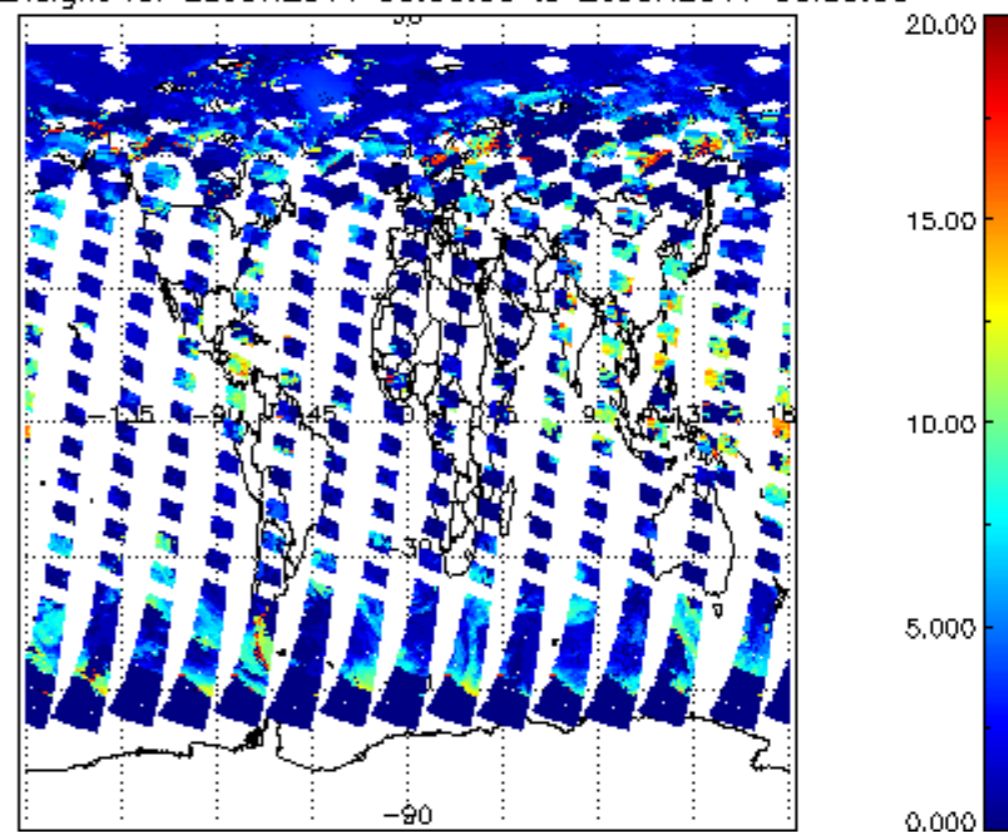
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110628_110345_20110624_182748_20110626_182748
3	SCI_MF1_AXVIEC20110628_110449_20110625_193117_20110627_193117



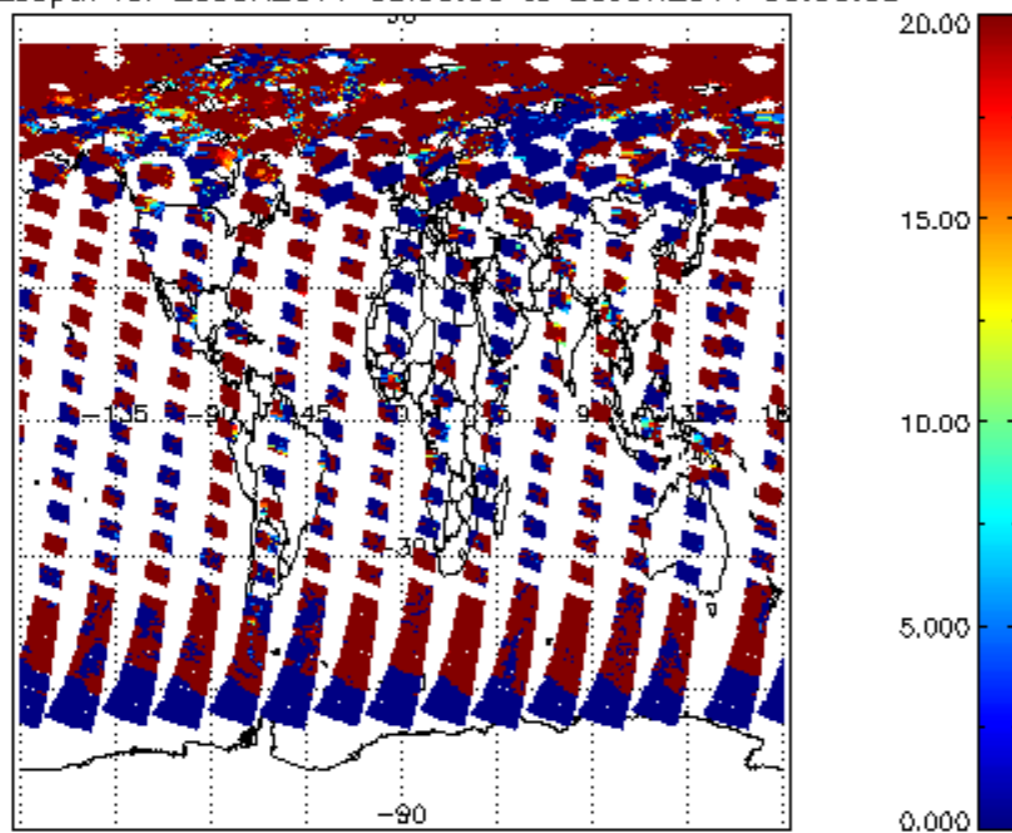
cl\_frac for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



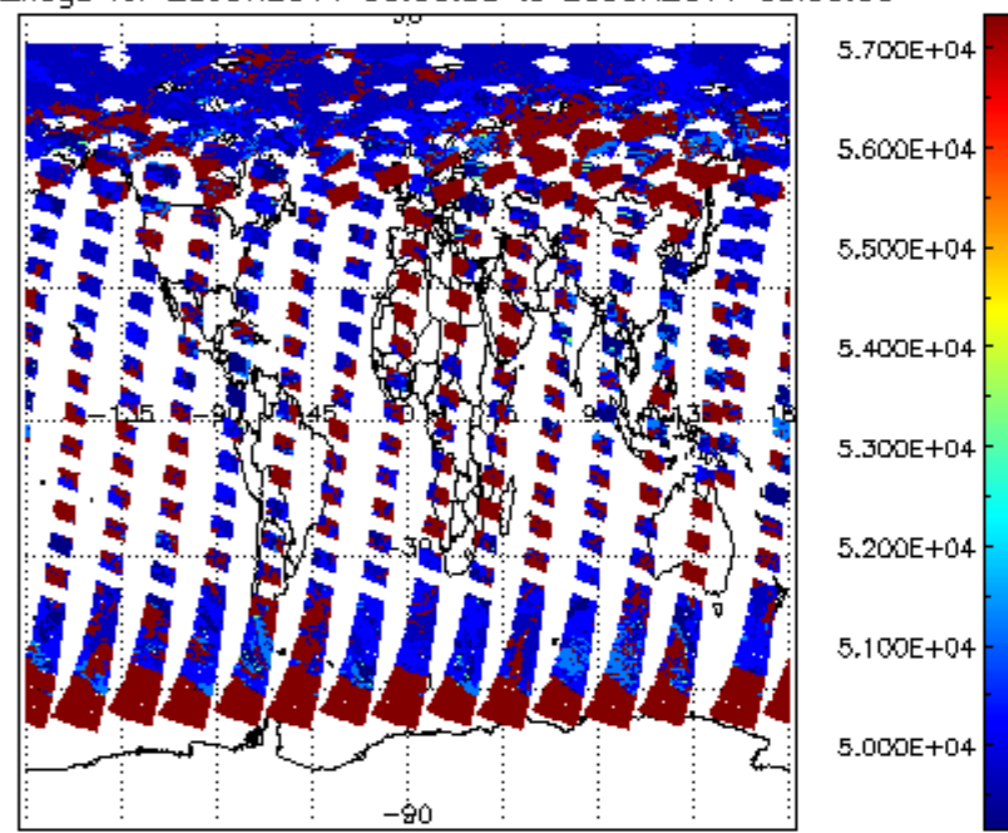
cl\_top\_height for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

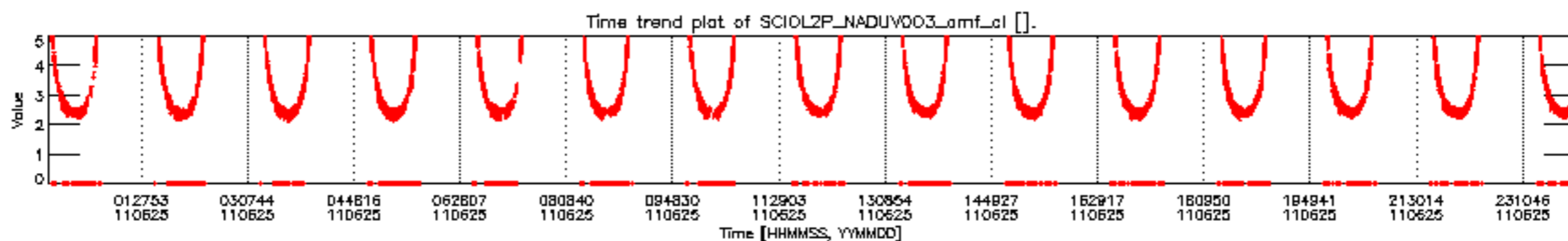
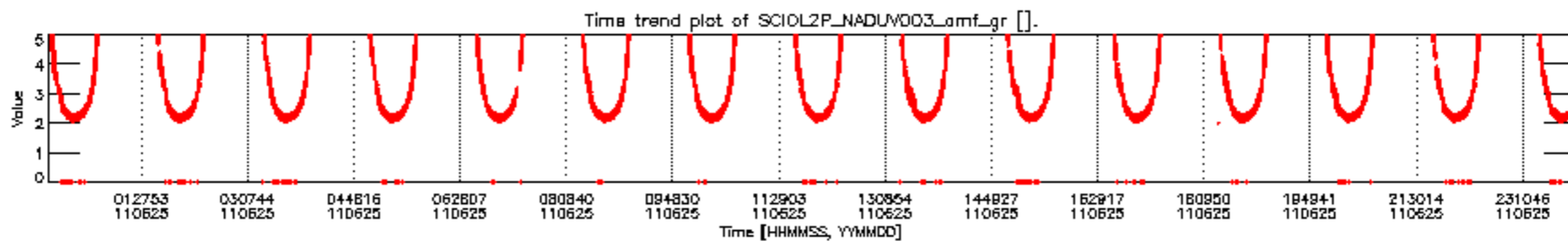
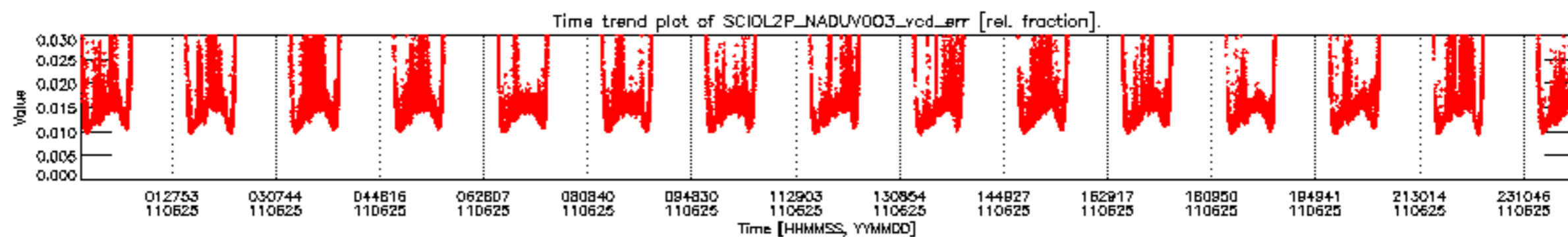
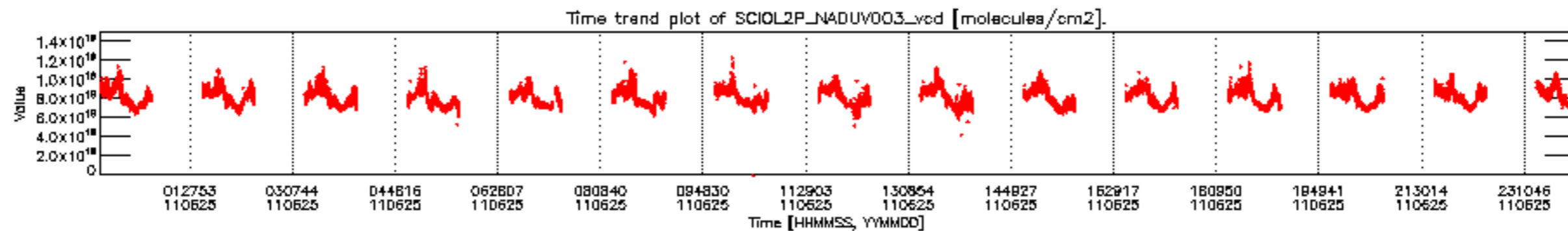


cl\_opt\_depth for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



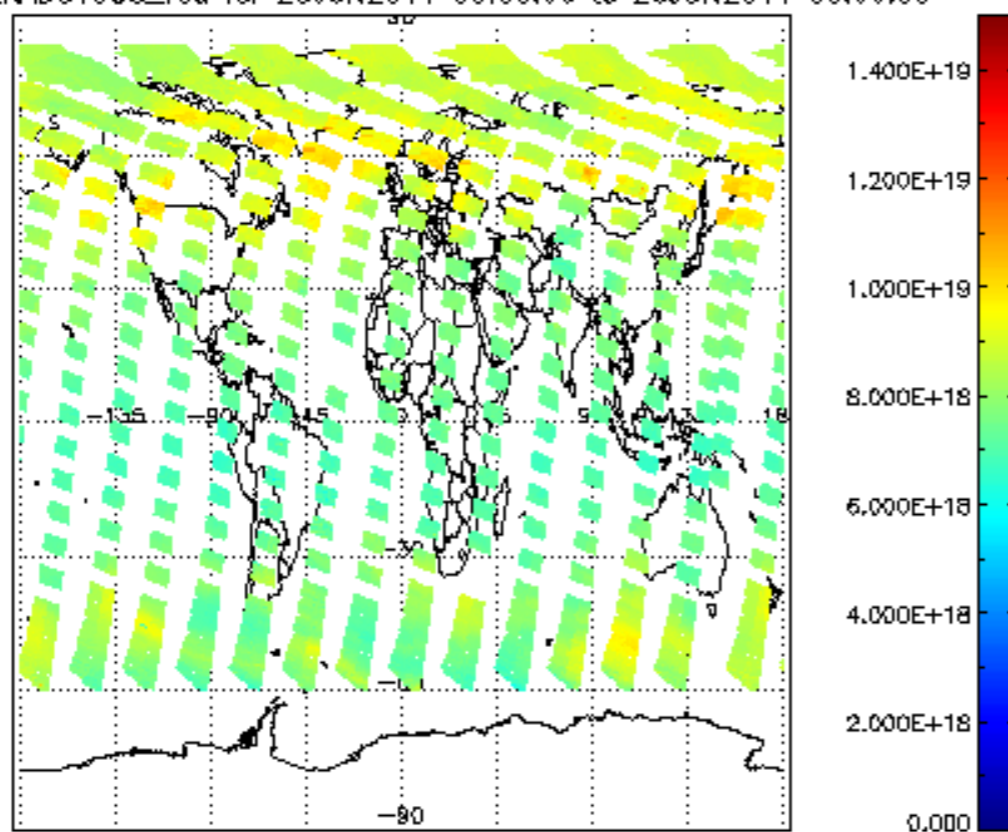
cloud\_flags for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



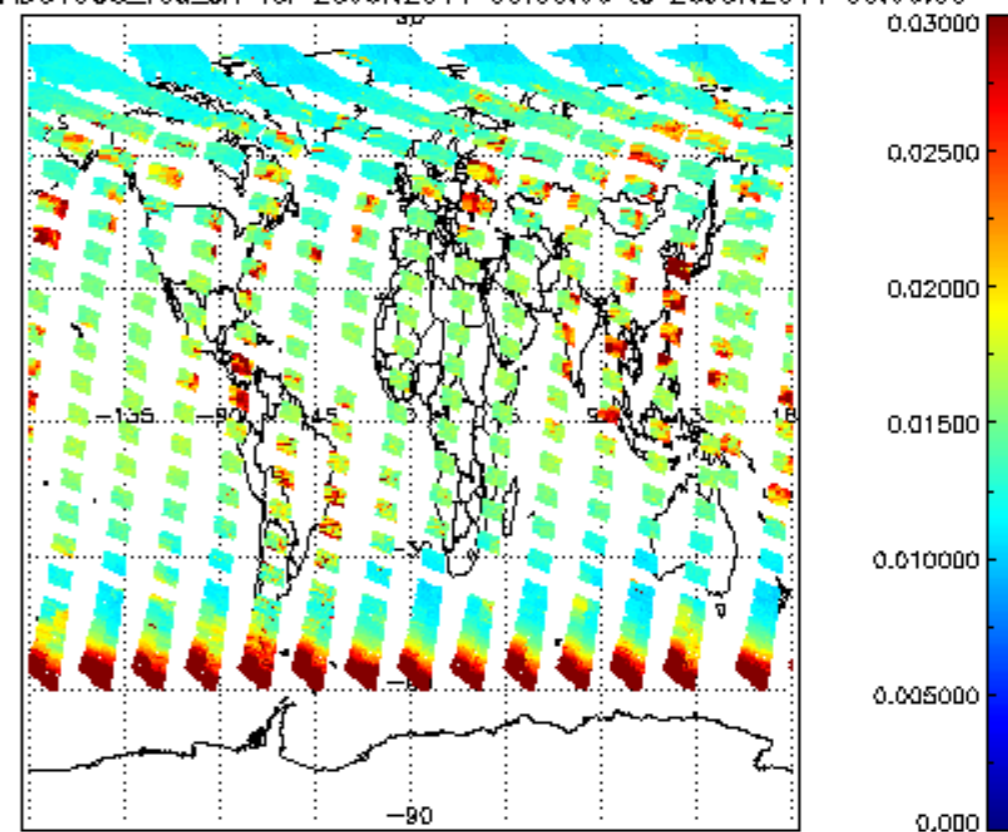




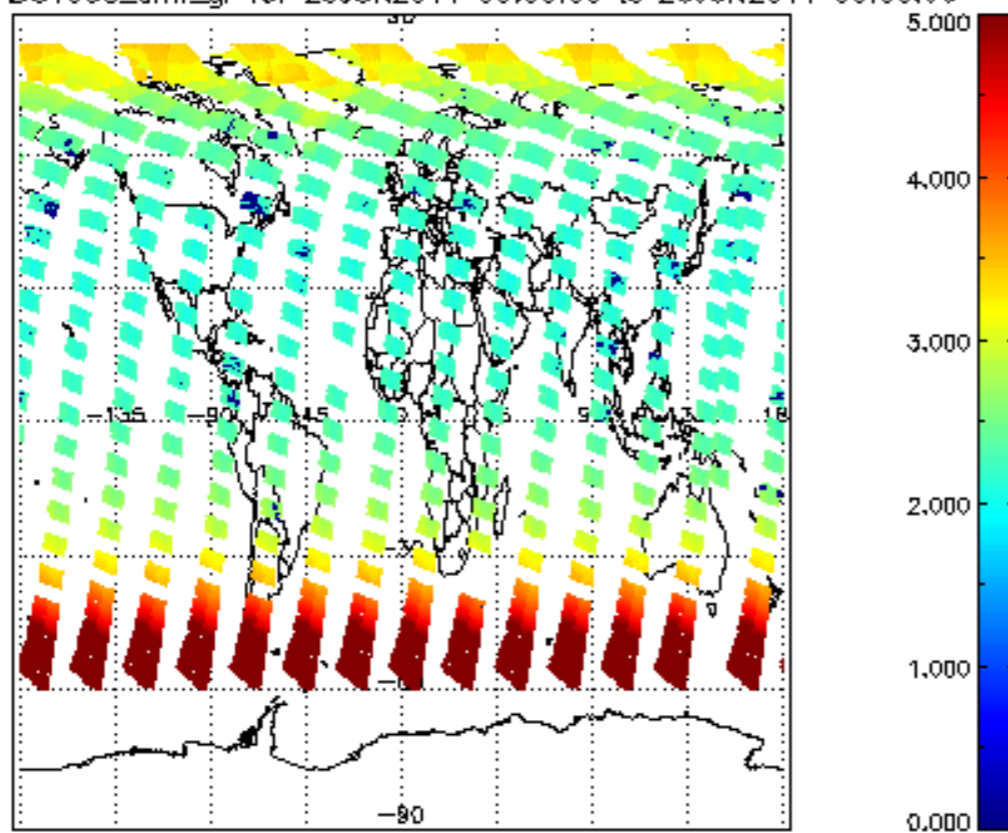
SCIOL2P\_NADUV003\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



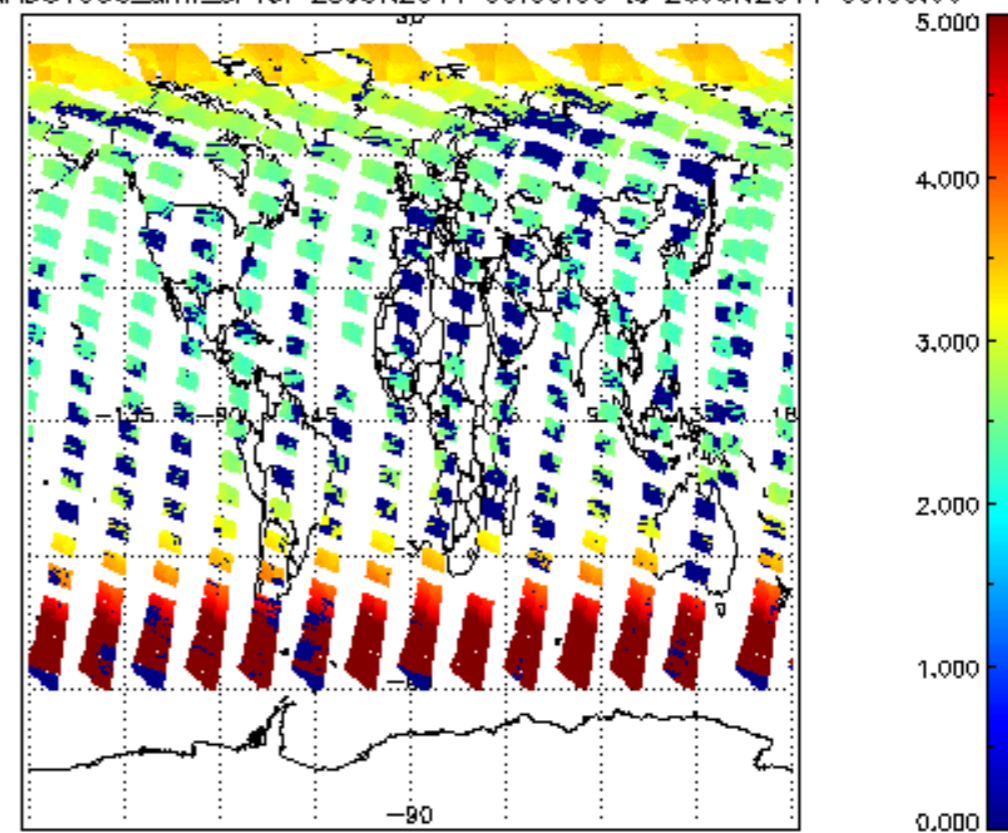
SCIOL2P\_NADUV003\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

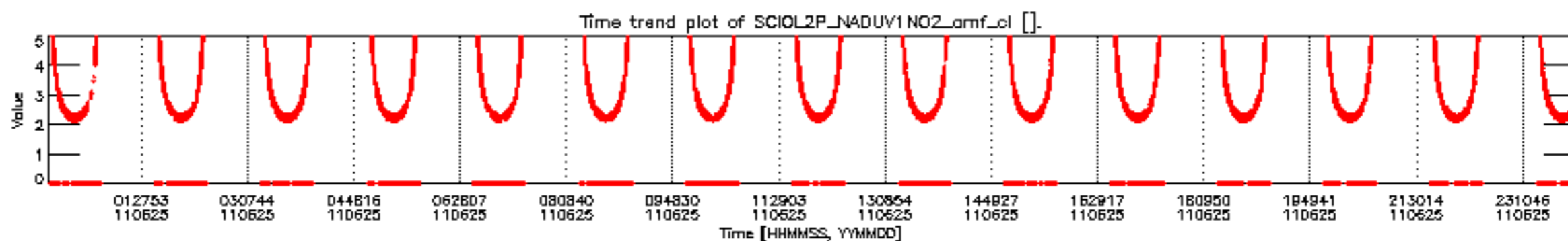
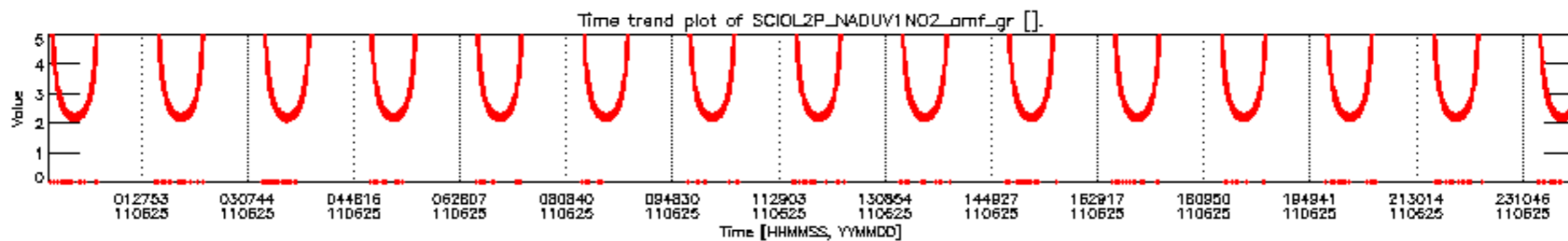
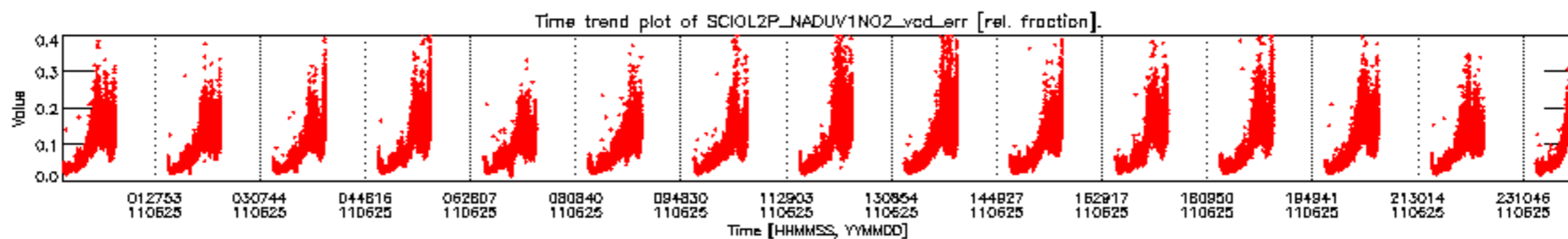
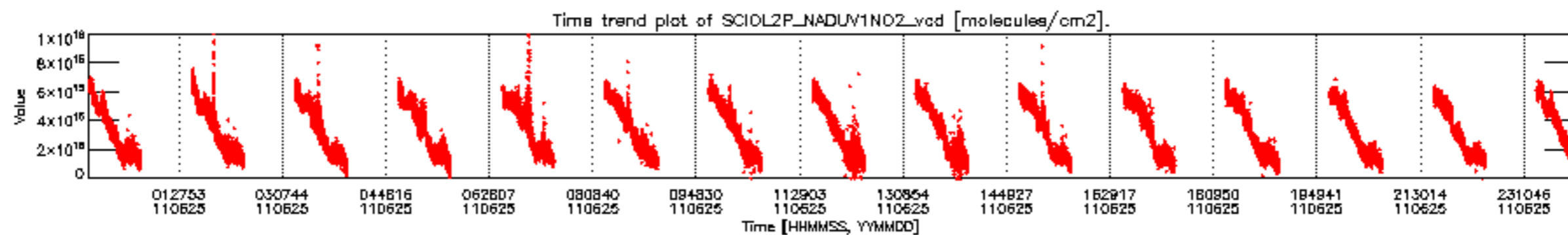


SCIOL2P\_NADUV003\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

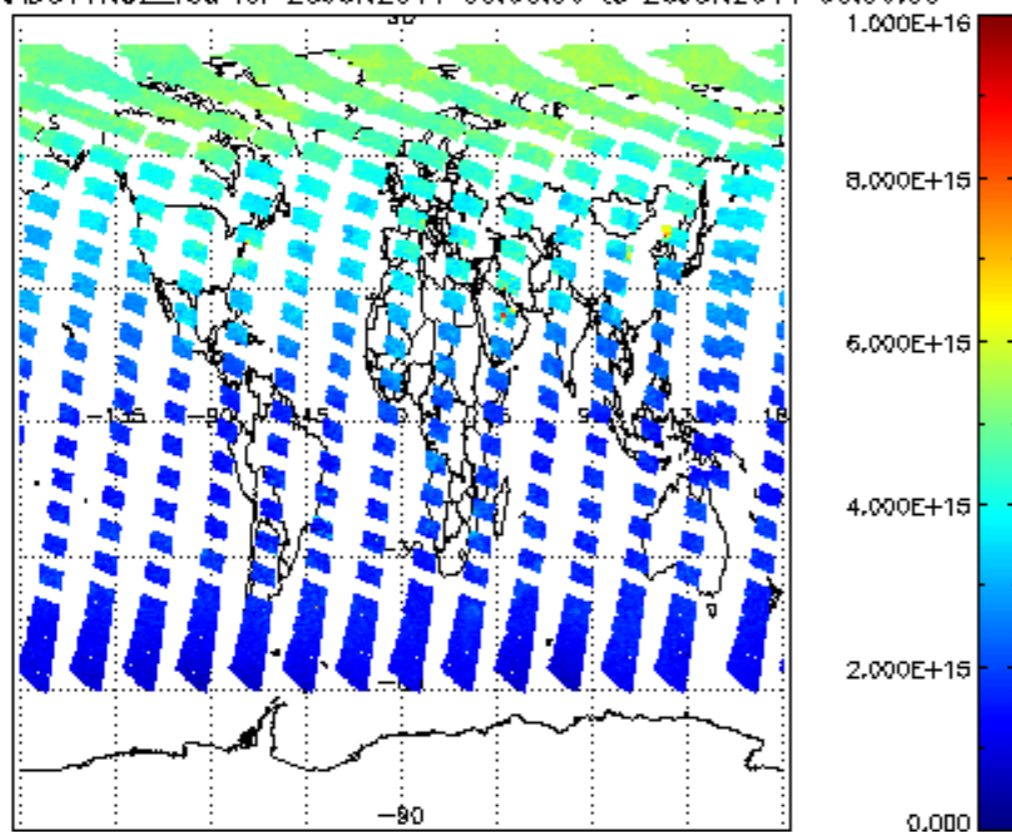


SCIOL2P\_NADUV003\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

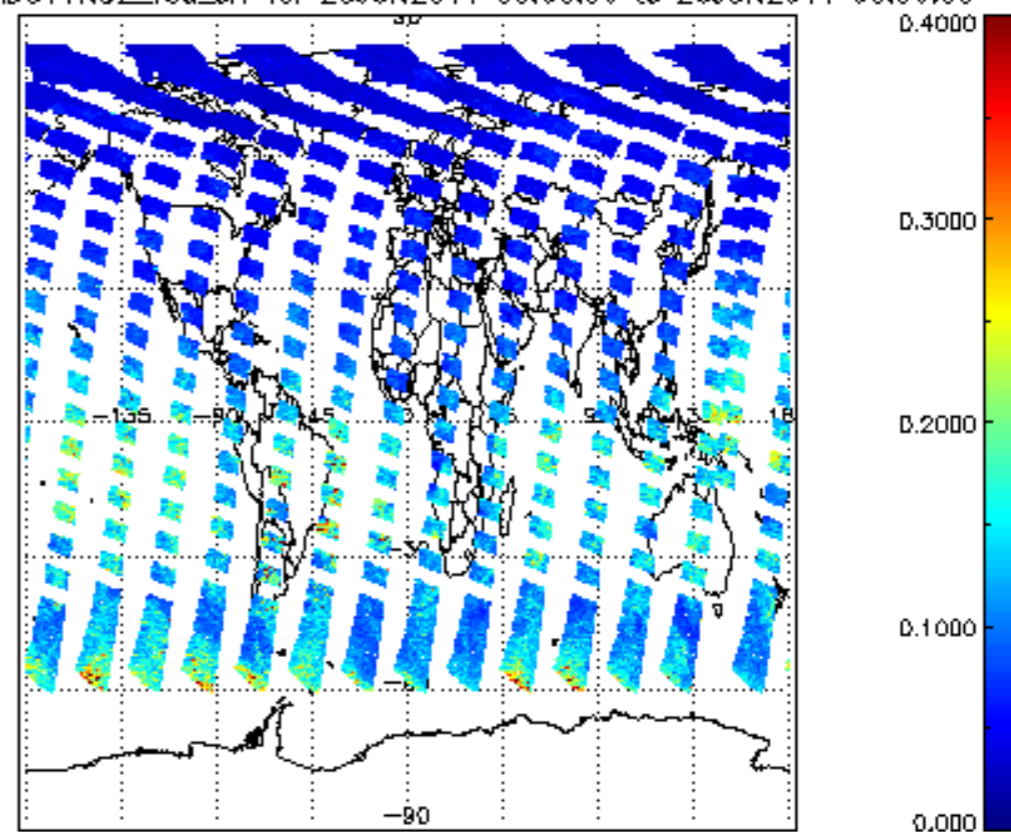




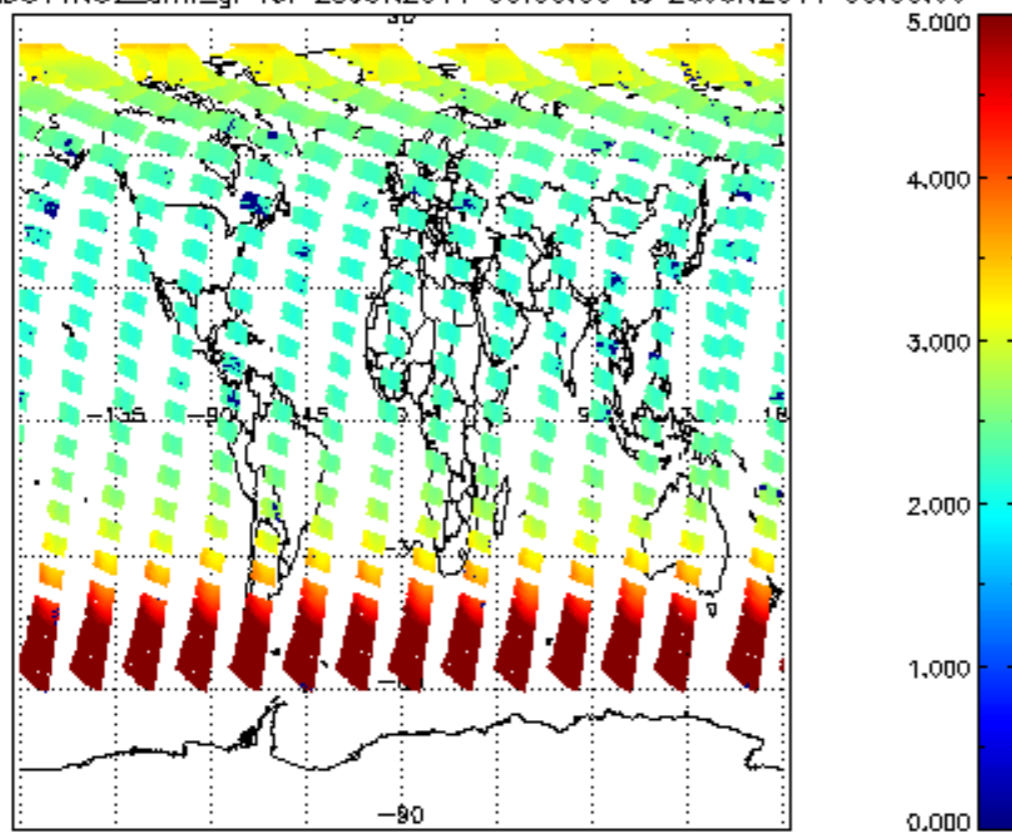
SCIOL2P\_NADUV1NO2\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



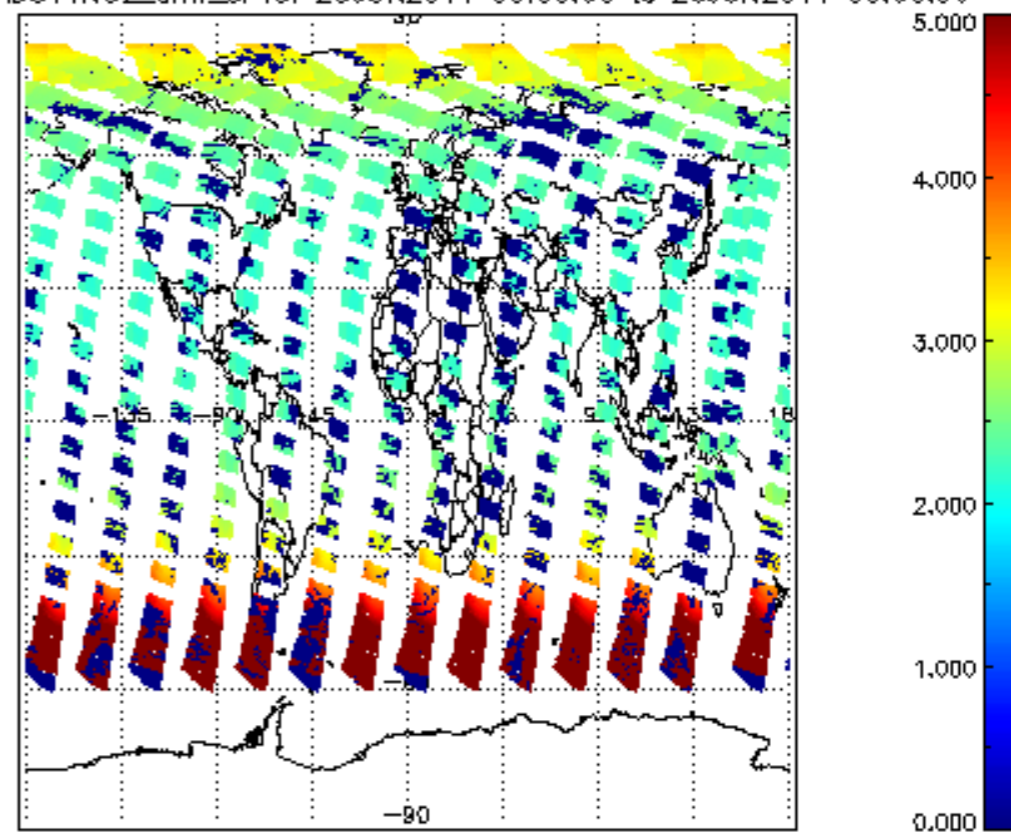
SCIOL2P\_NADUV1NO2\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

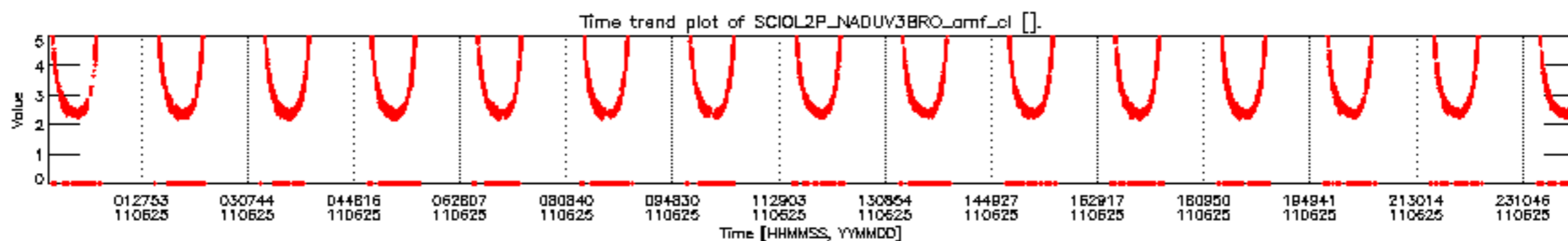
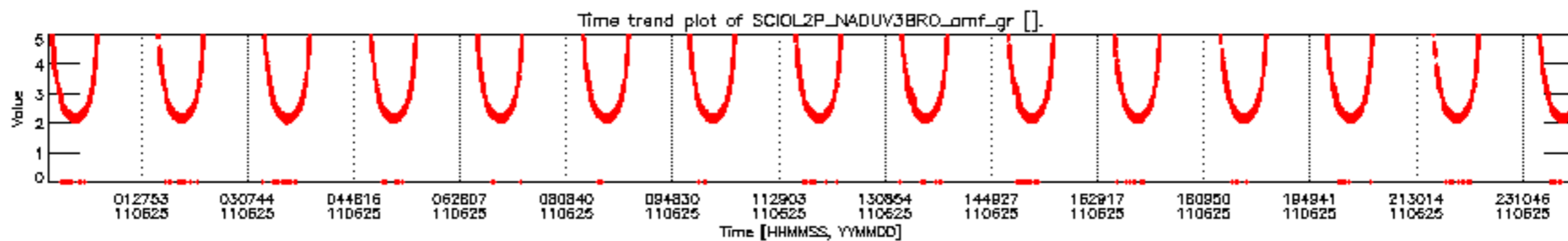
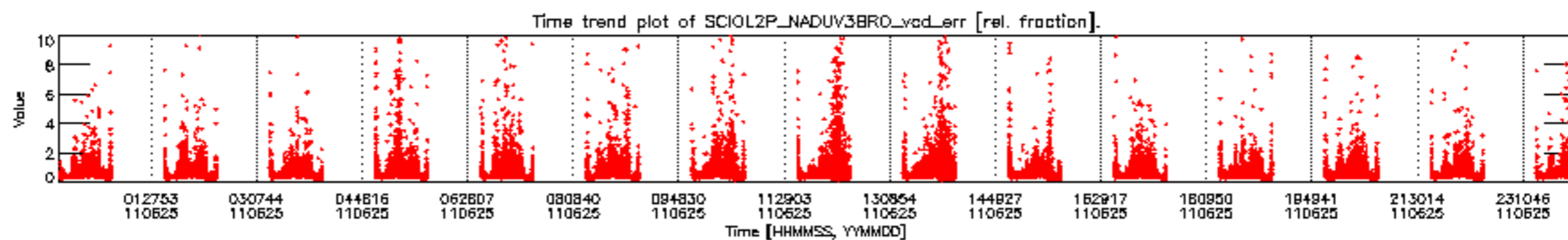
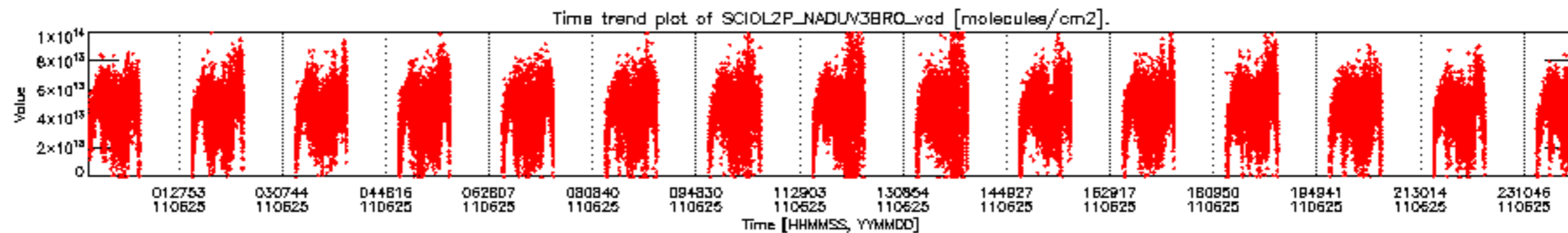


SCIOL2P\_NADUV1NO2\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

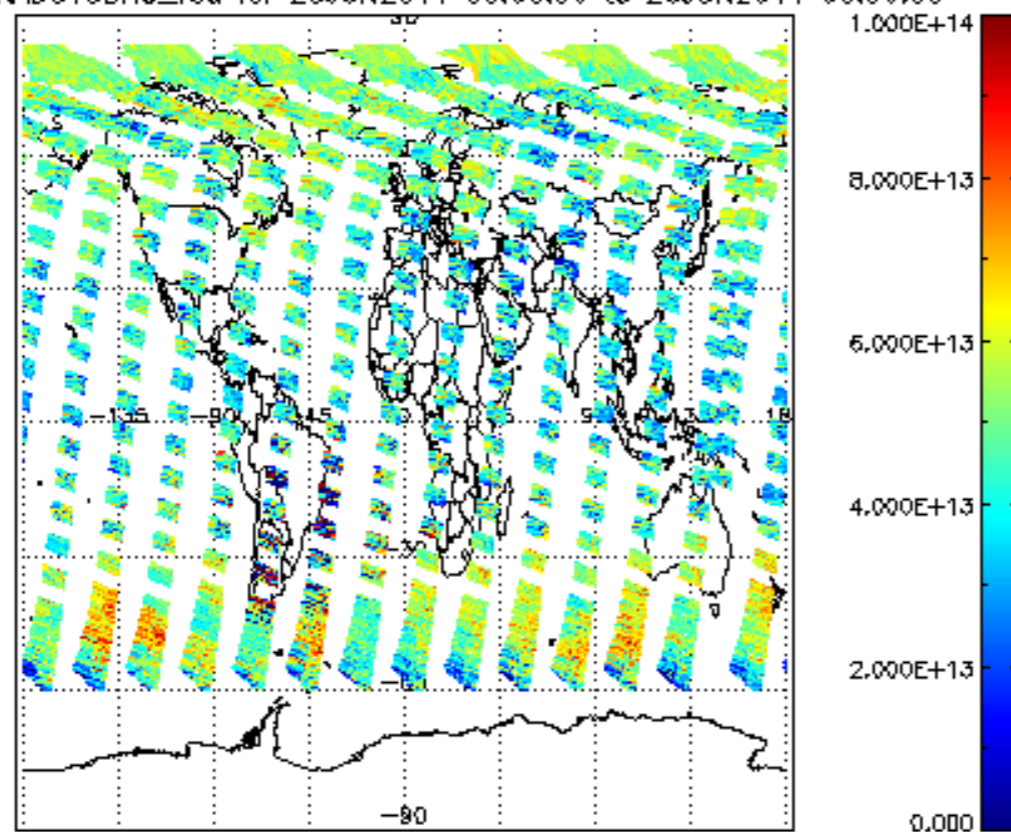


SCIOL2P\_NADUV1NO2\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

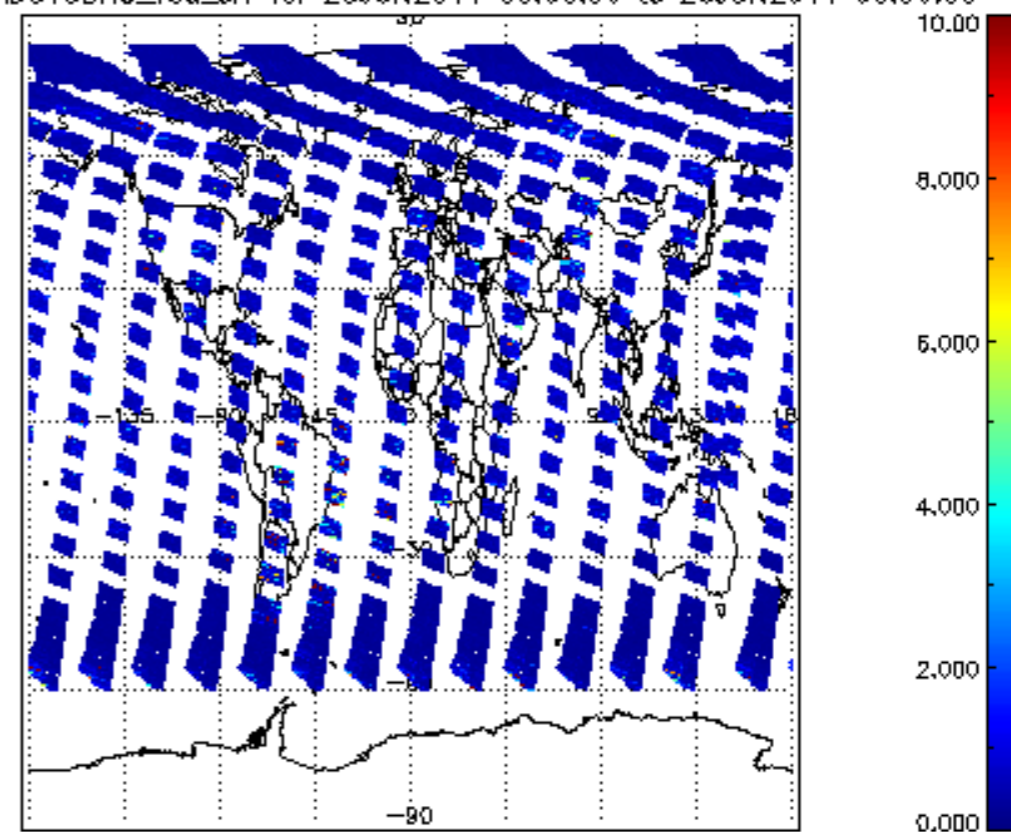




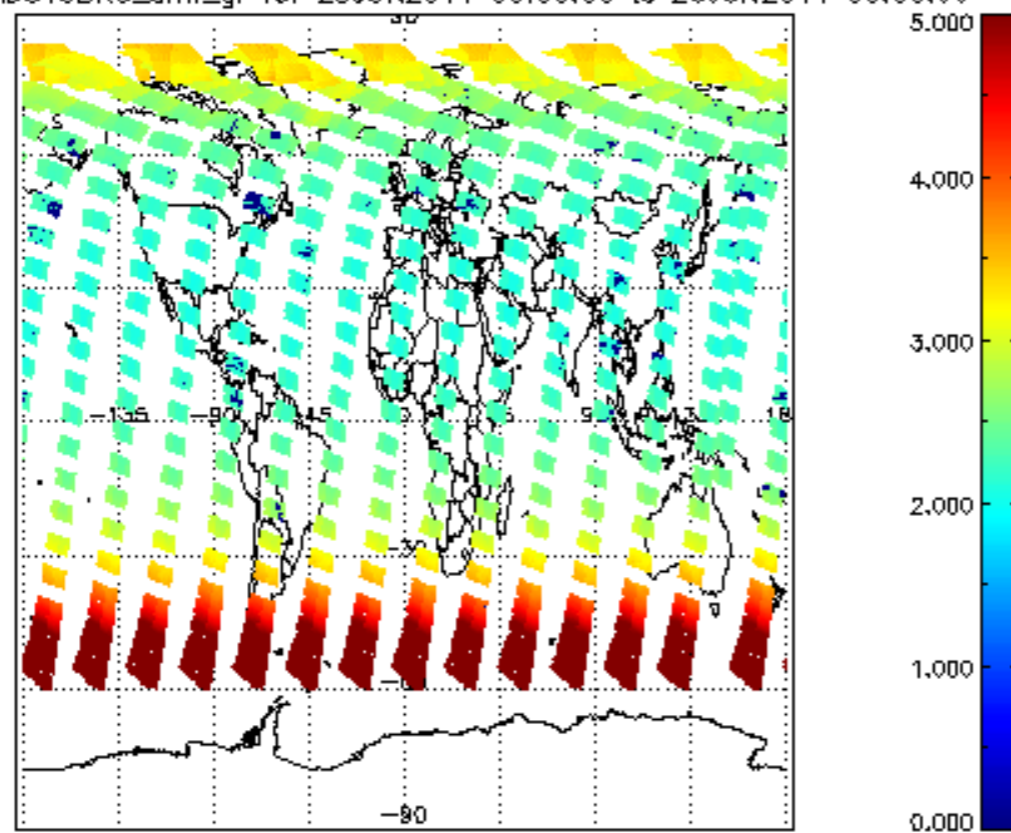
SCIOL2P\_NADUV3BRO\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



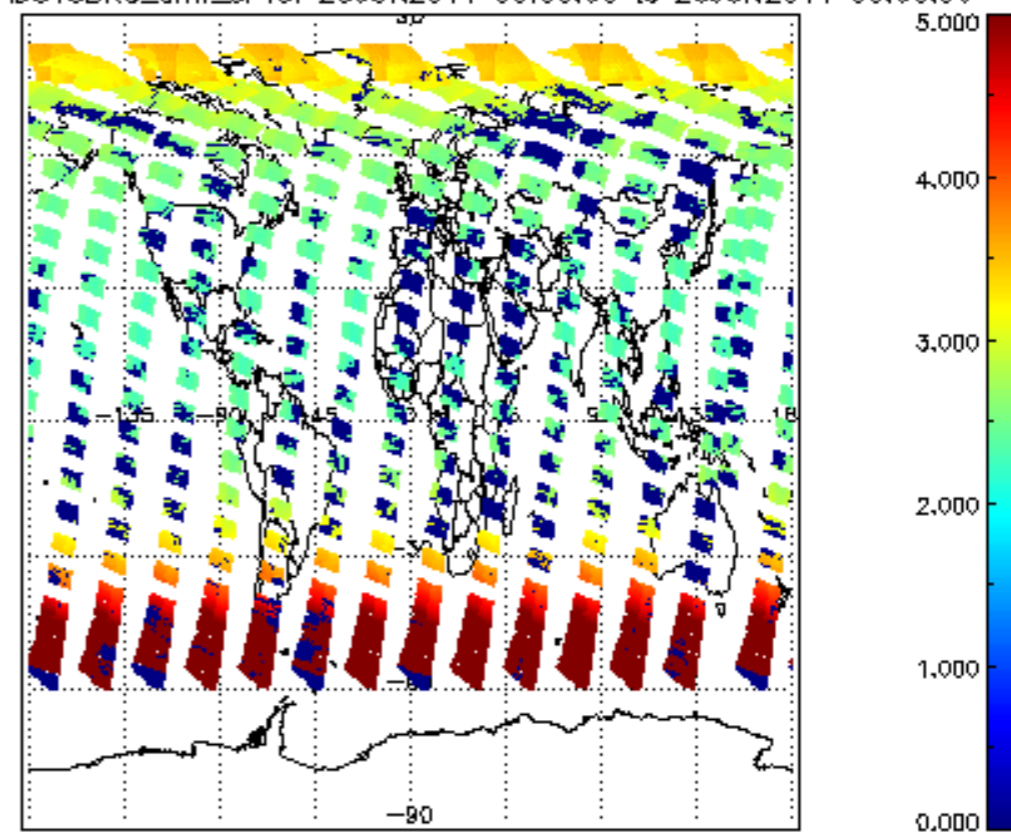
SCIOL2P\_NADUV3BRO\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

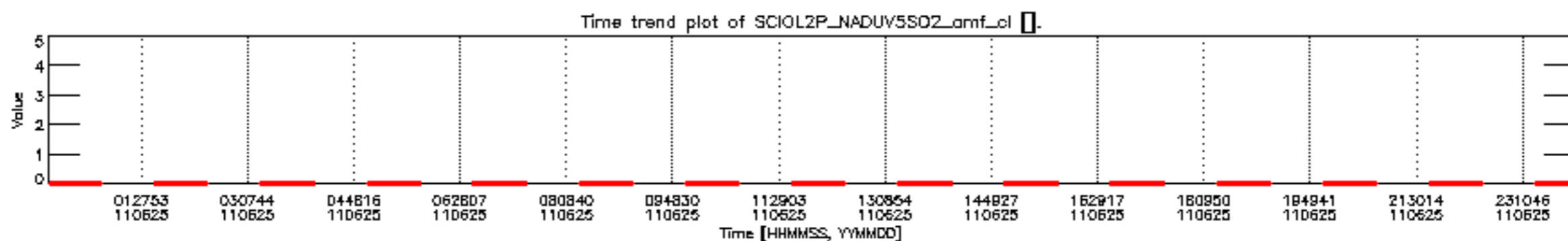
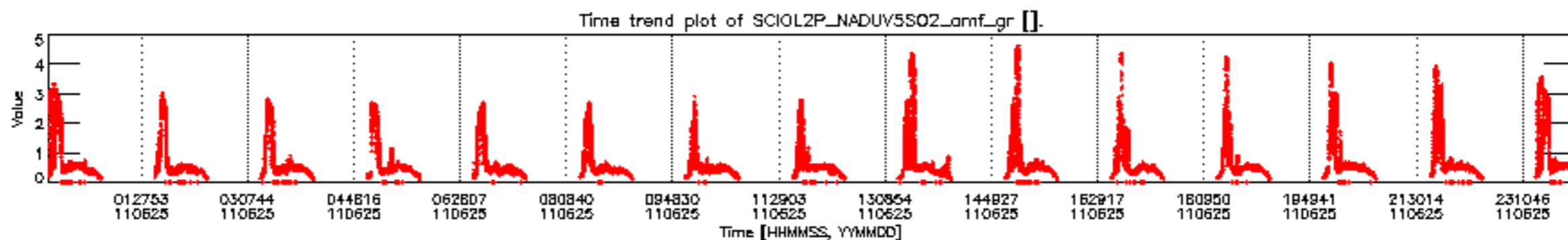
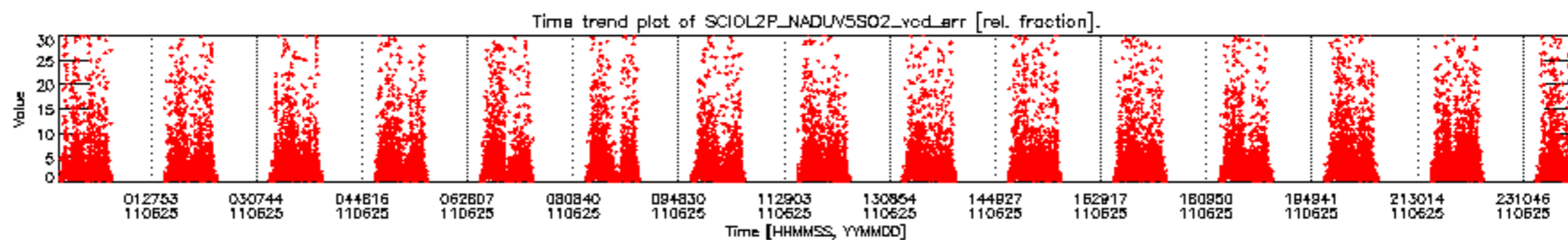
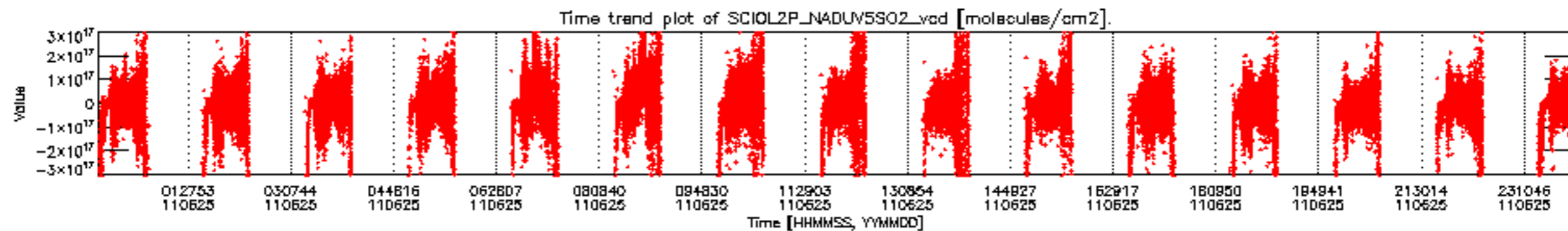


SCIOL2P\_NADUV3BRO\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

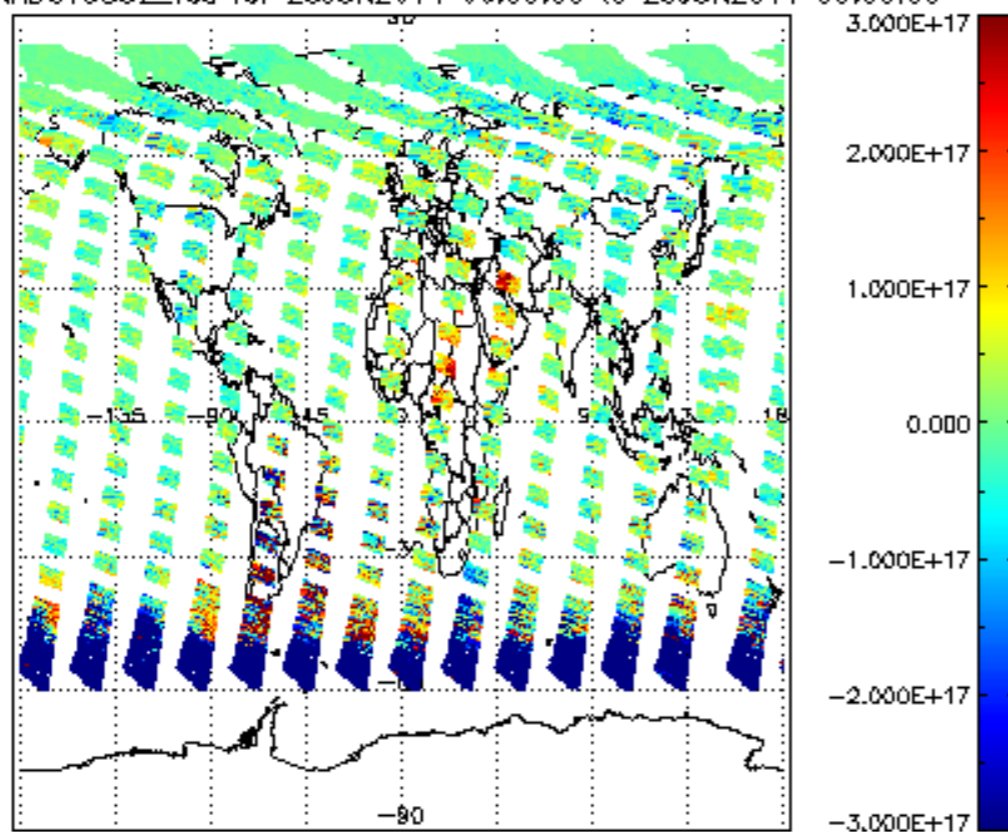


SCIOL2P\_NADUV3BRO\_amf\_sl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

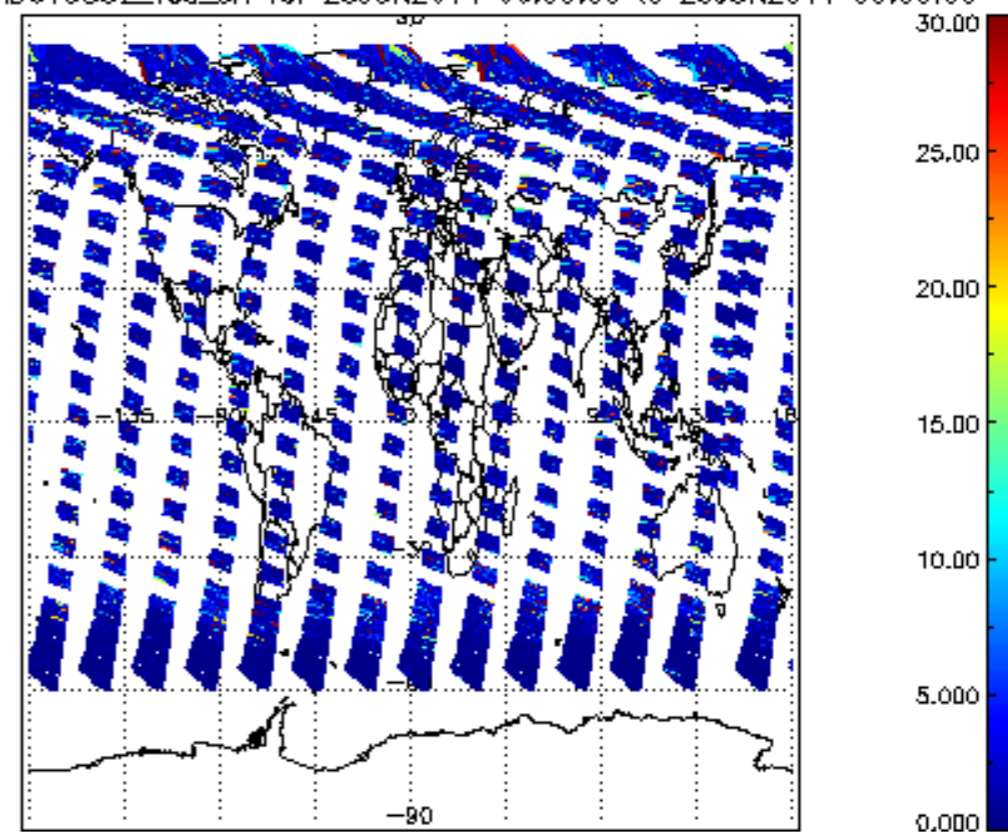




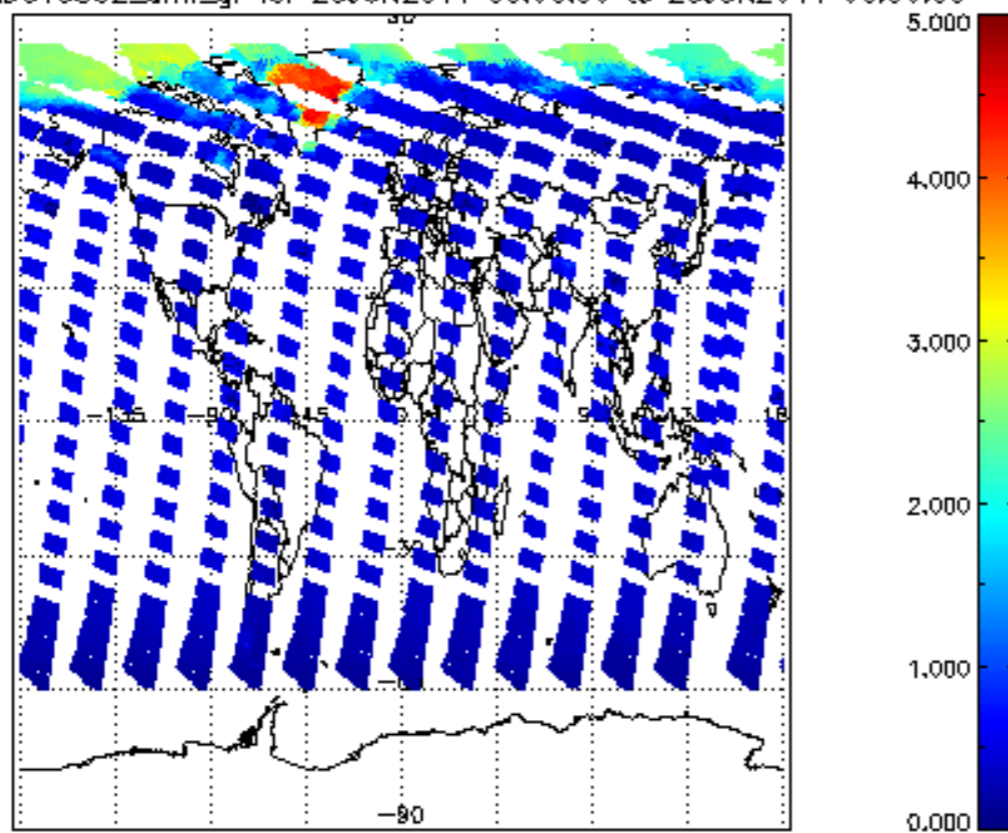
SCIOL2P\_NADUV5S02\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



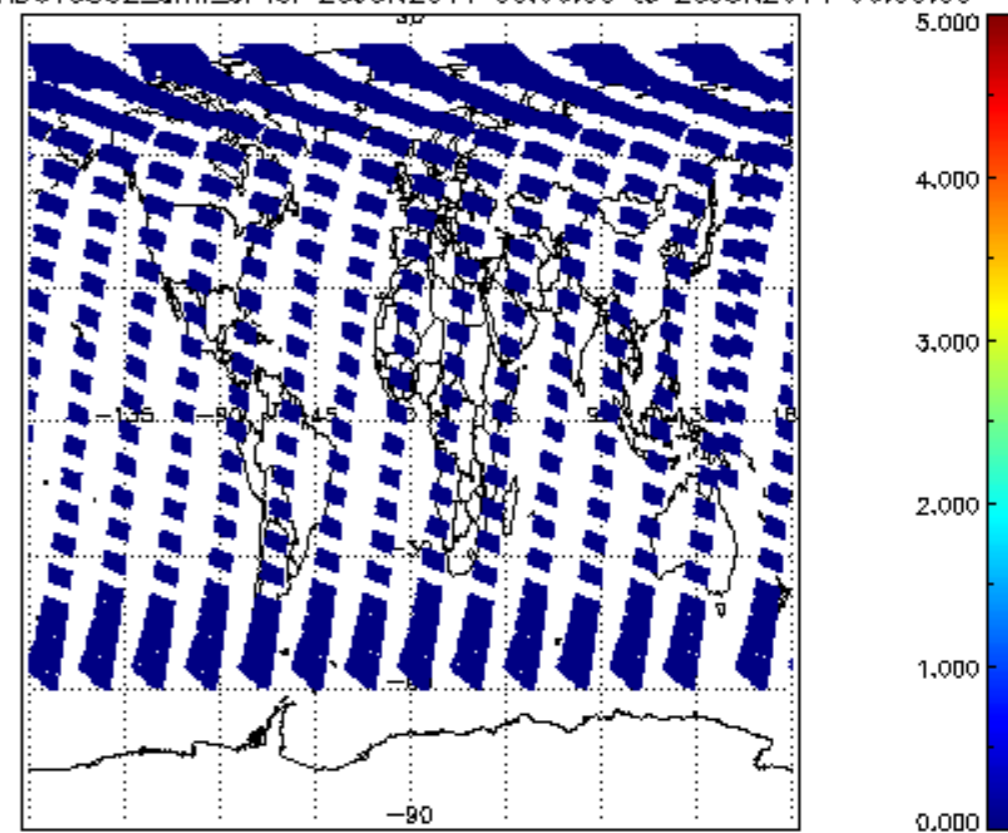
SCIOL2P\_NADUV5S02\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

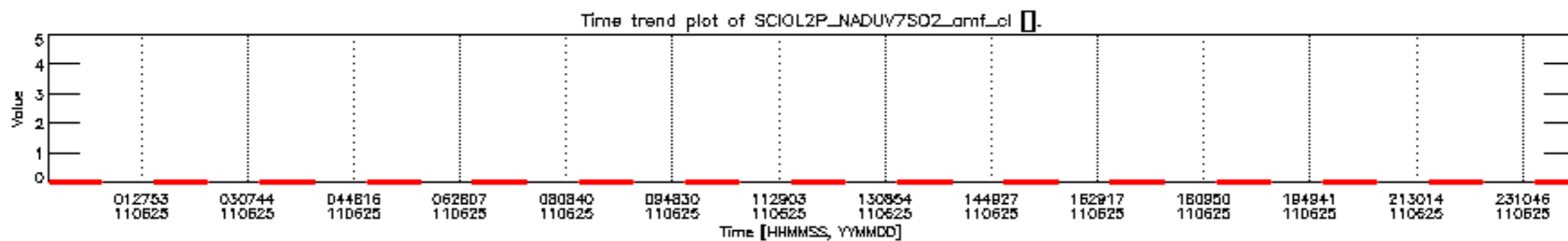
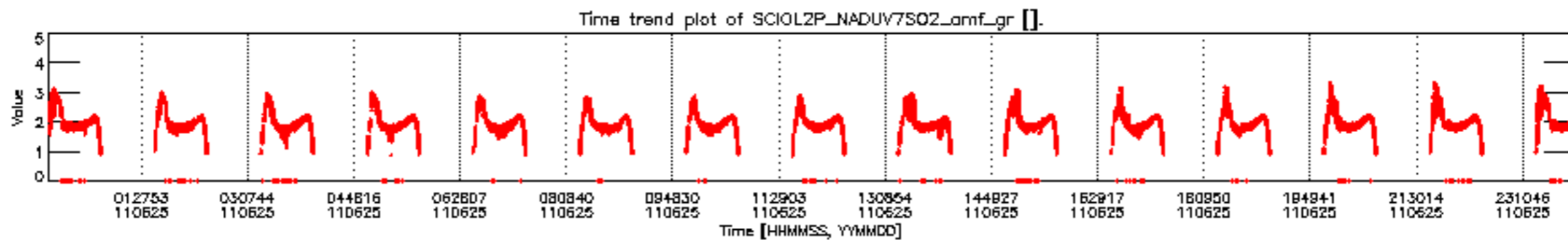
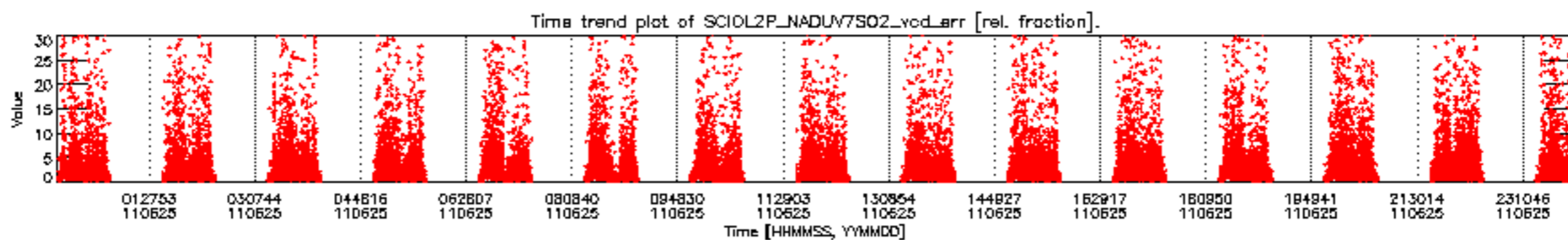
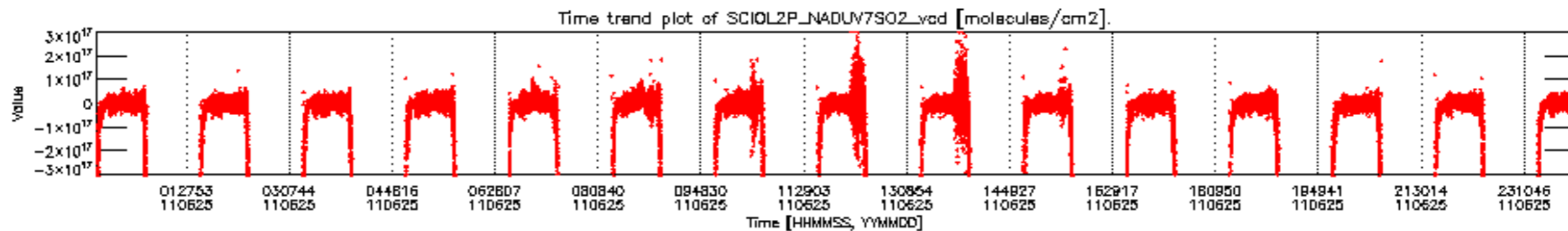


SCIOL2P\_NADUV5S02\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



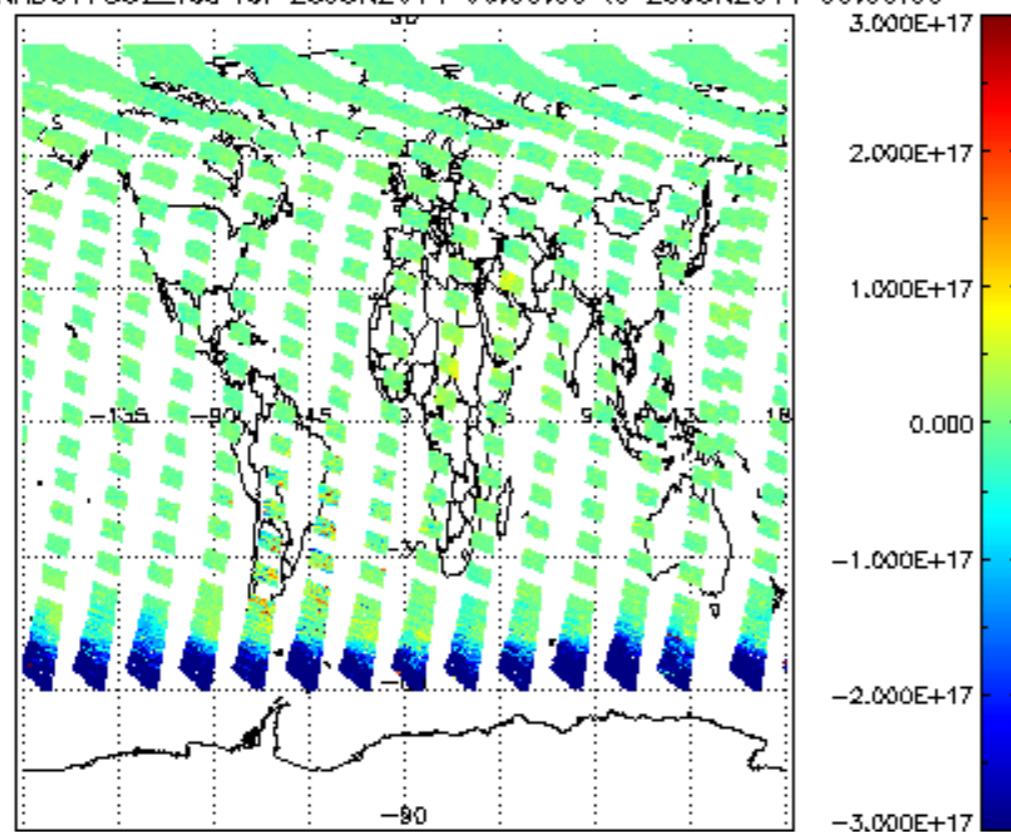
SCIOL2P\_NADUV5S02\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



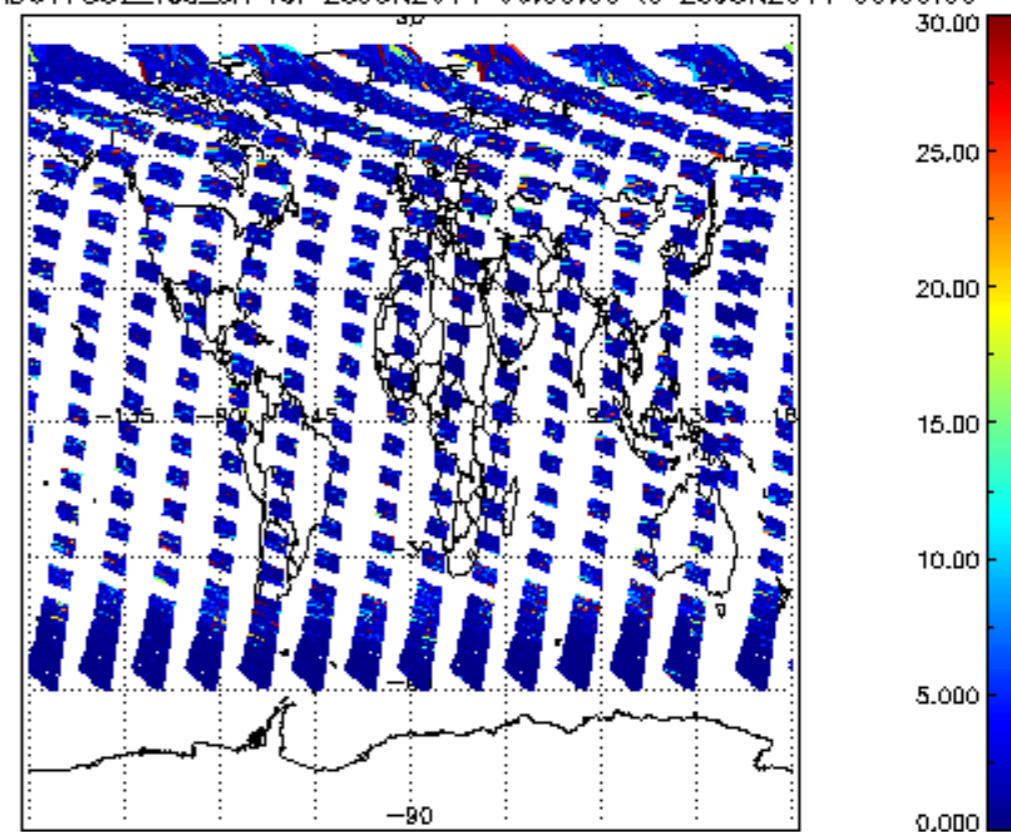




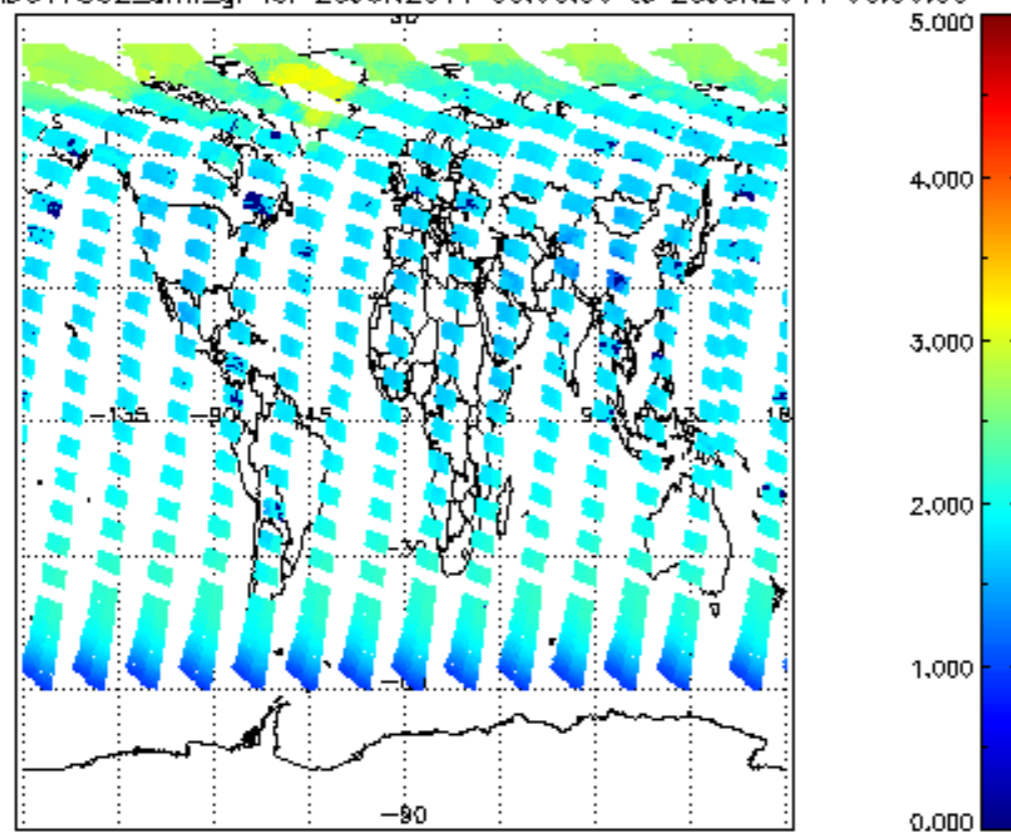
SCIOL2P\_NADUV7S02\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00



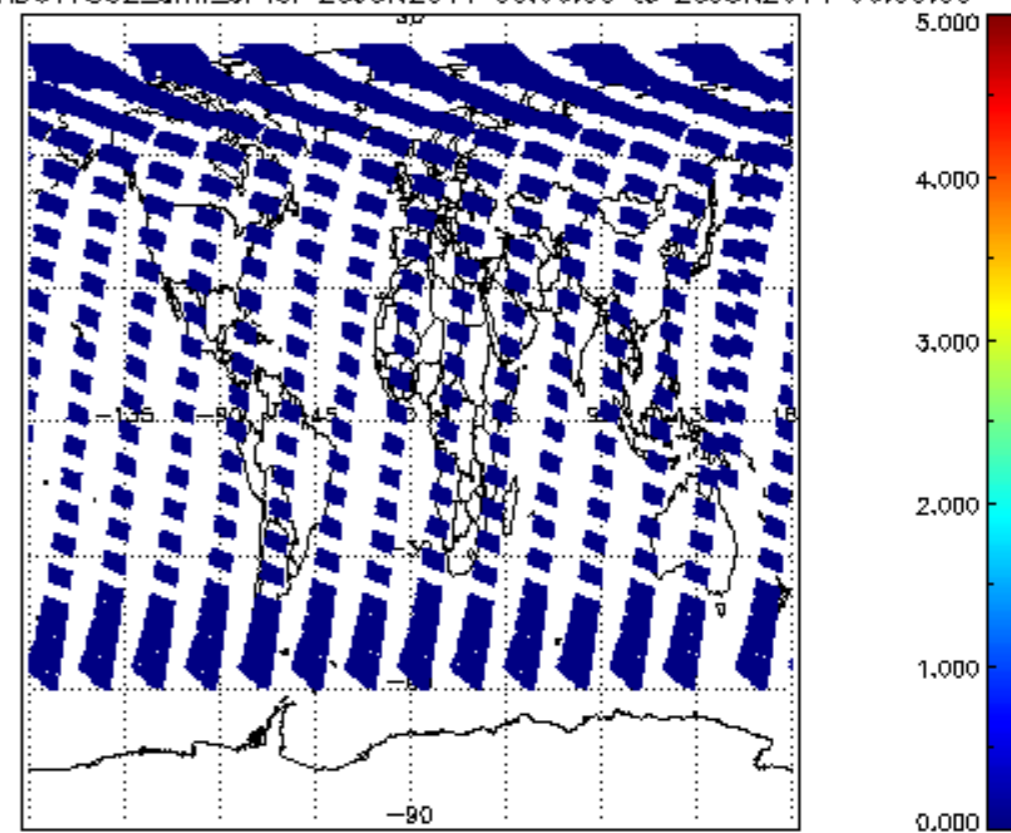
SCIOL2P\_NADUV7S02\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

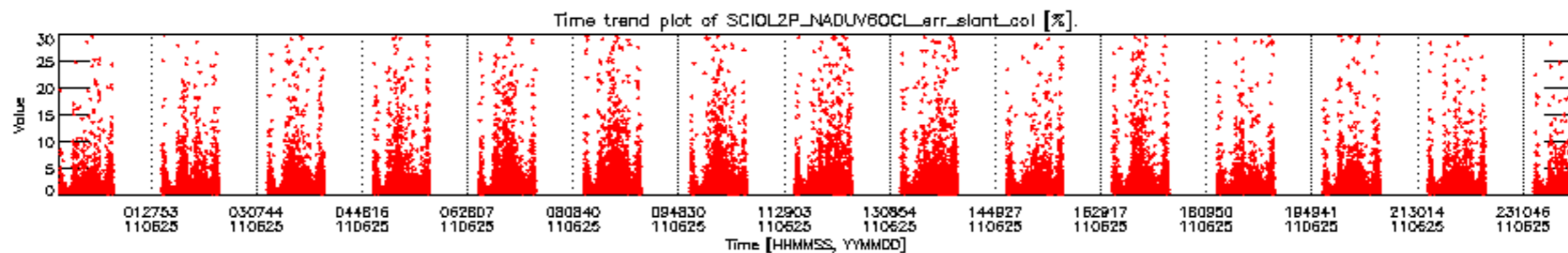
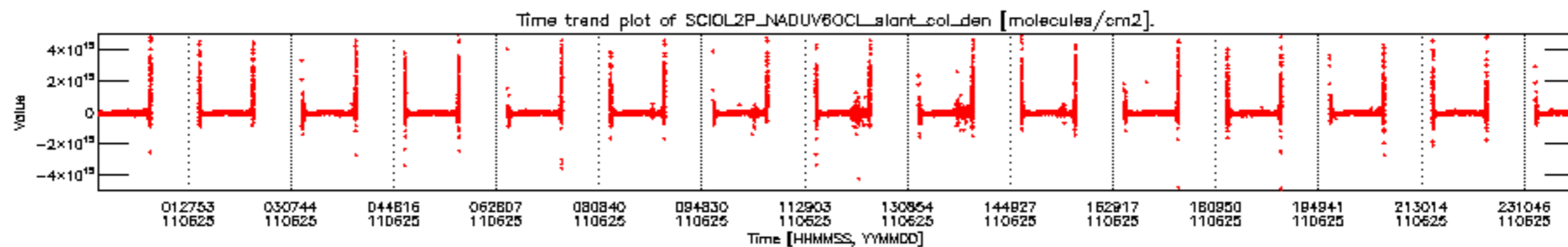


SCIOL2P\_NADUV7S02\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

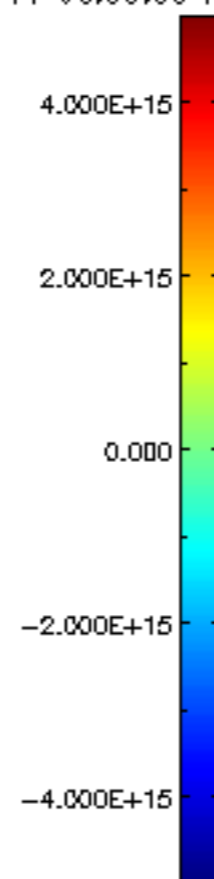
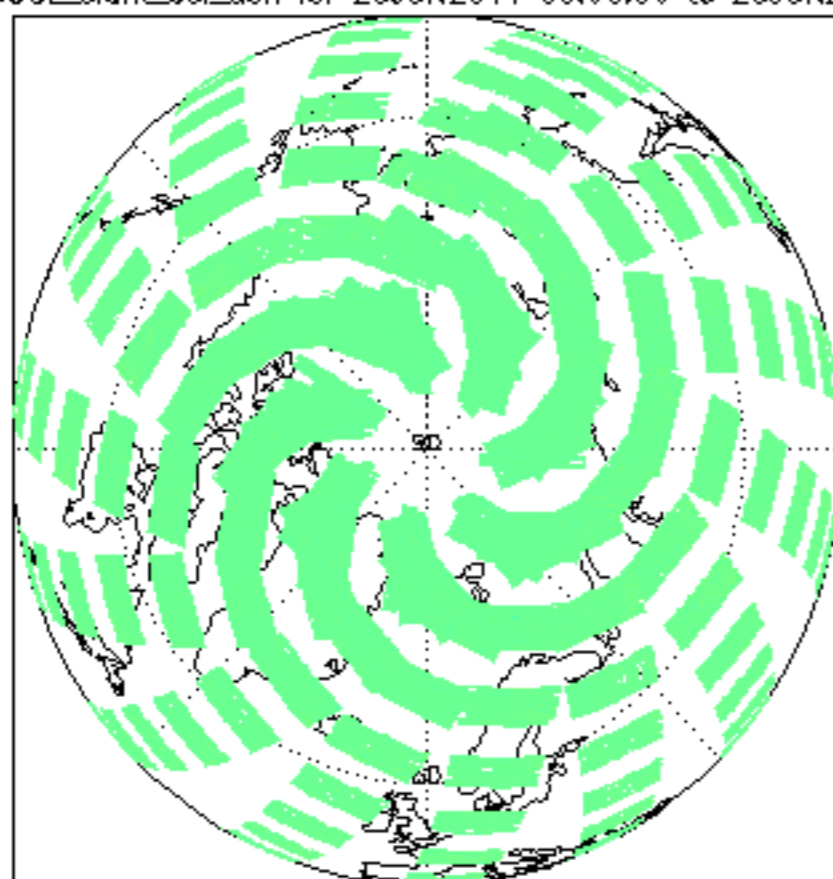


SCIOL2P\_NADUV7S02\_amf\_cl for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

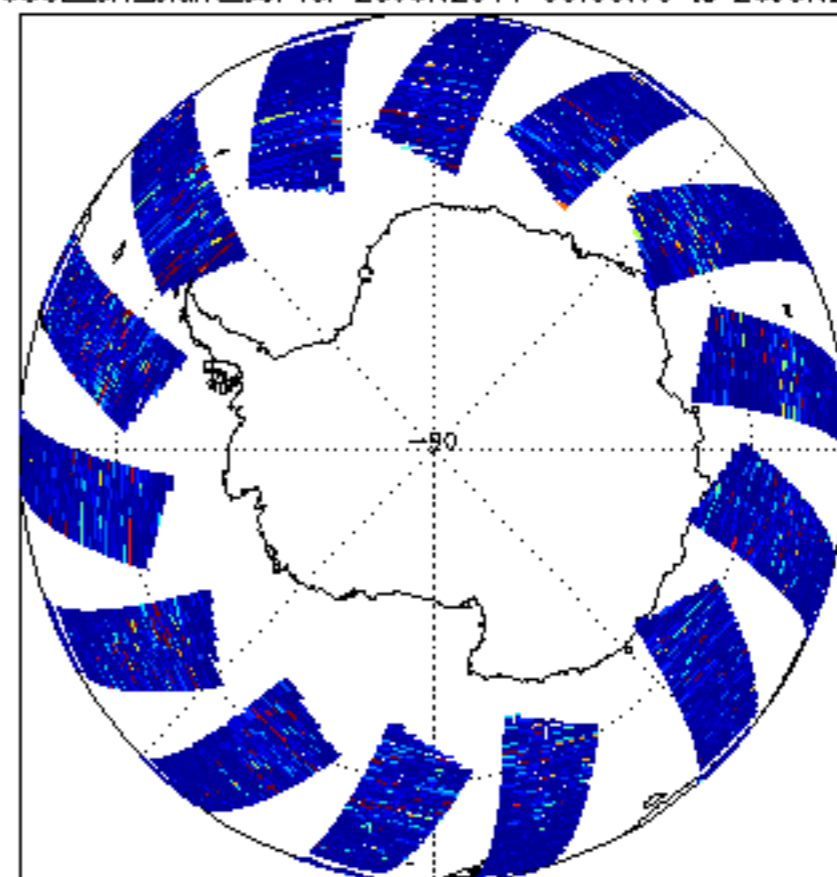
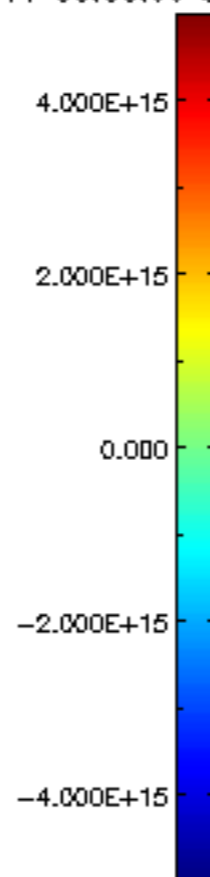
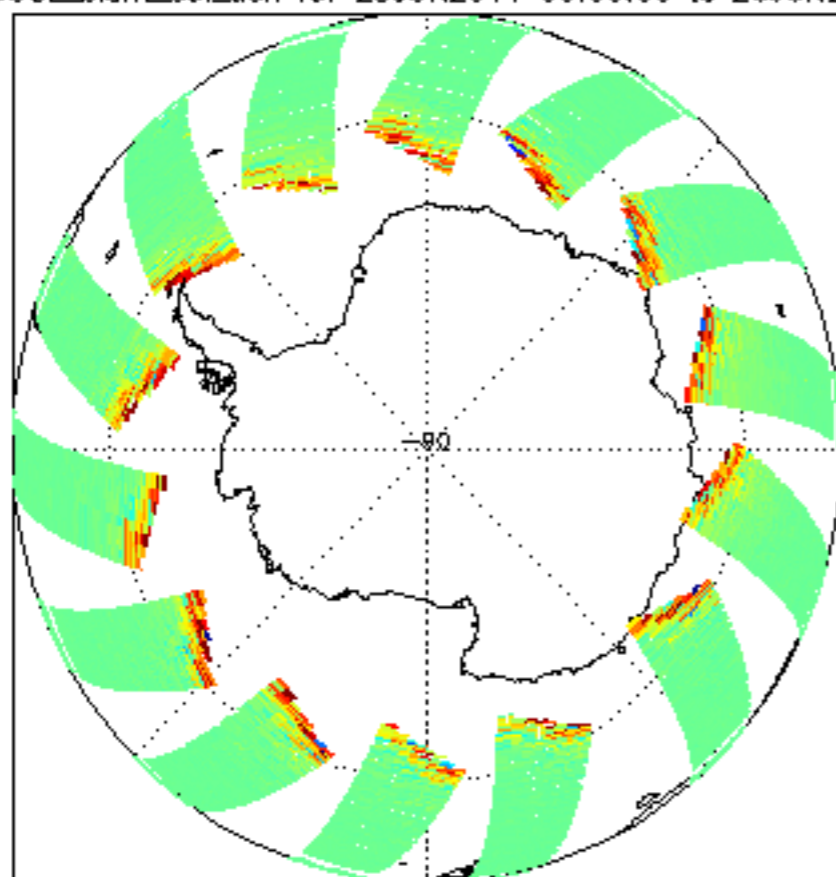


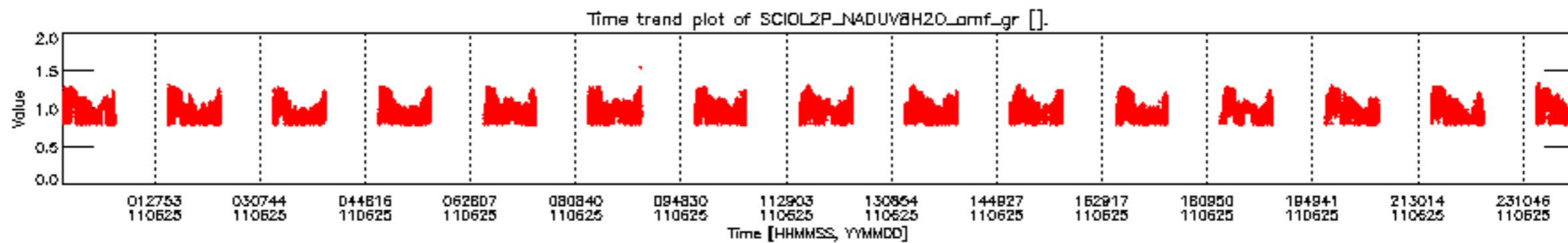
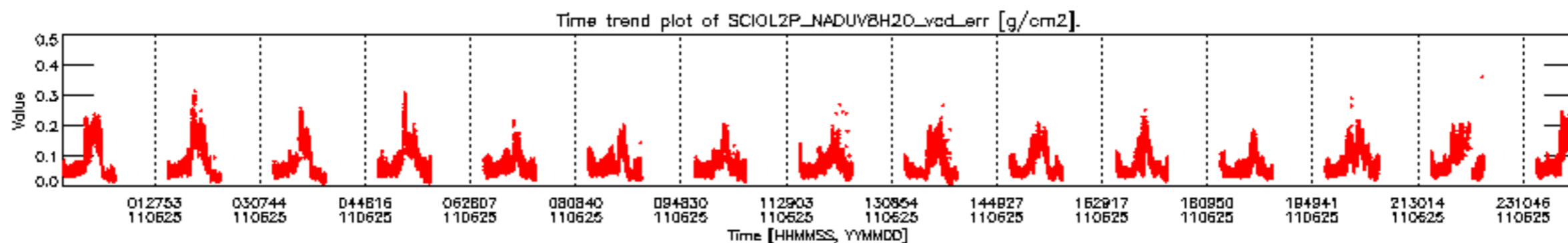
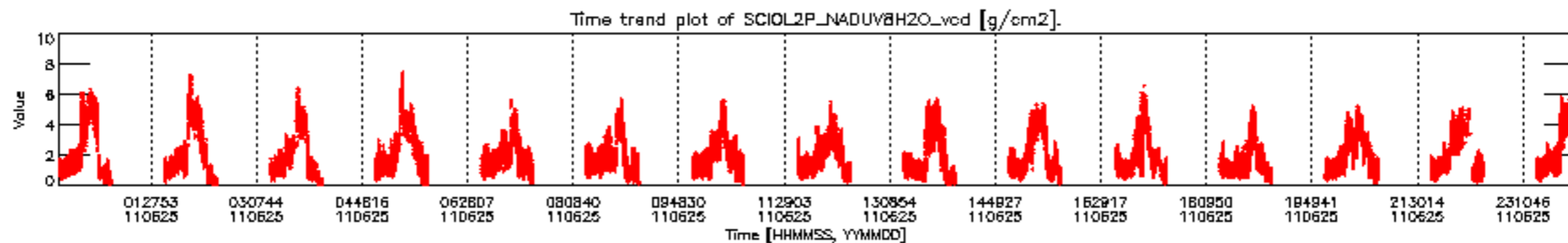


CIOL2P\_NADUV60CL\_slant\_col\_den for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 np iCIOL2P\_NADUV60CL\_err\_slant\_col for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 np

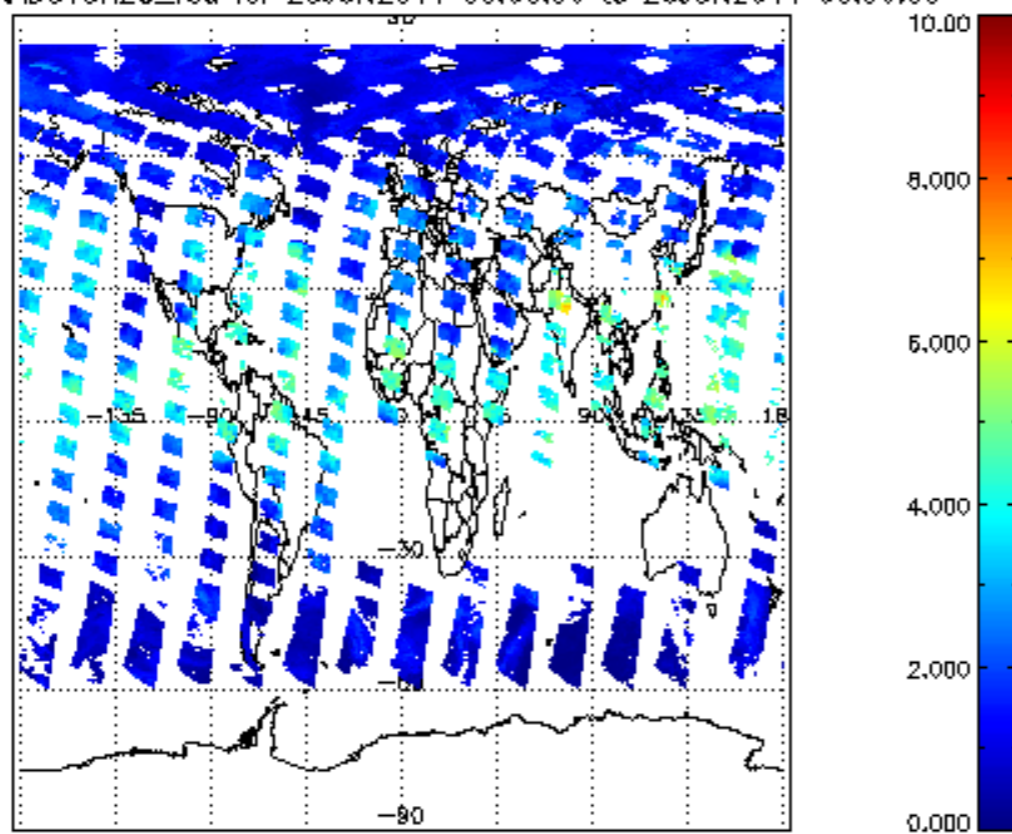


CIOL2P\_NADUV60CL\_slant\_col\_den for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 25JUN2011 00:00:00 to 26JUN2011 00:00:00 sp

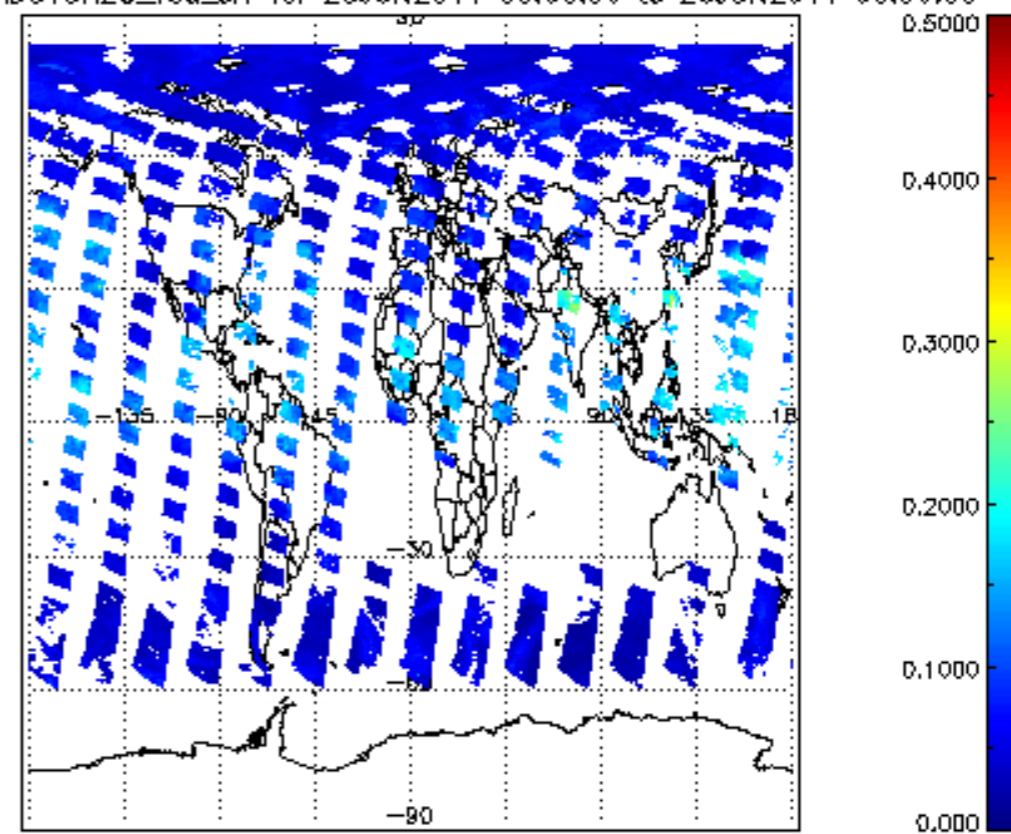




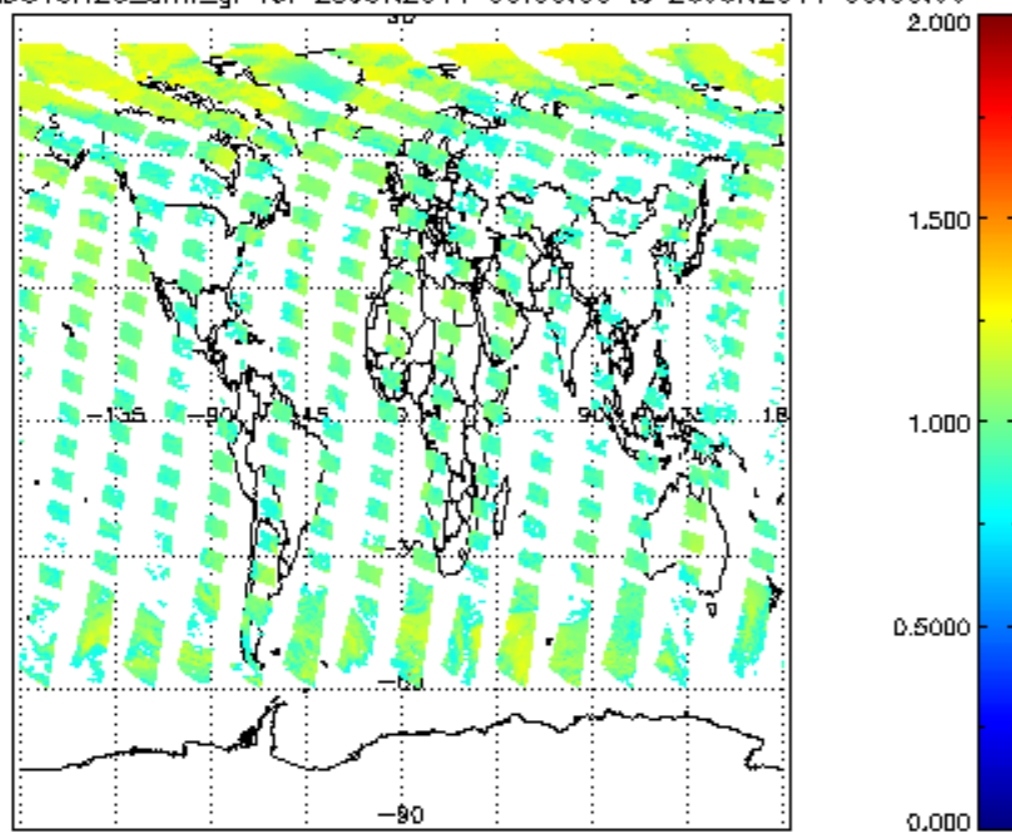
SCIOL2P\_NADUV8H2O\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

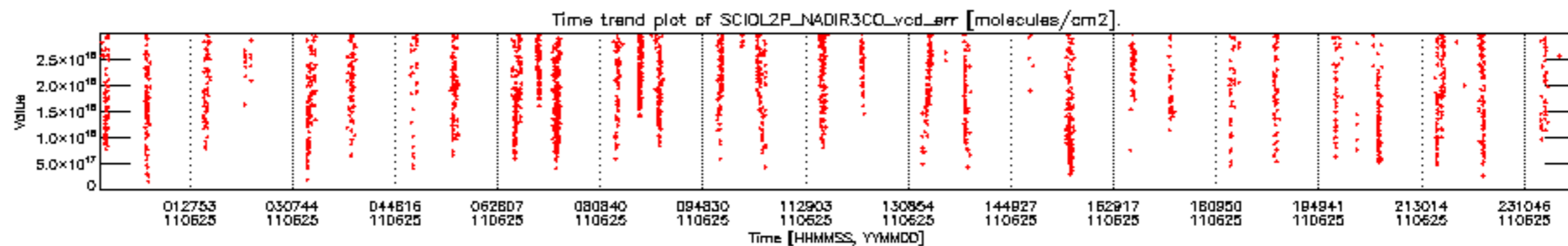
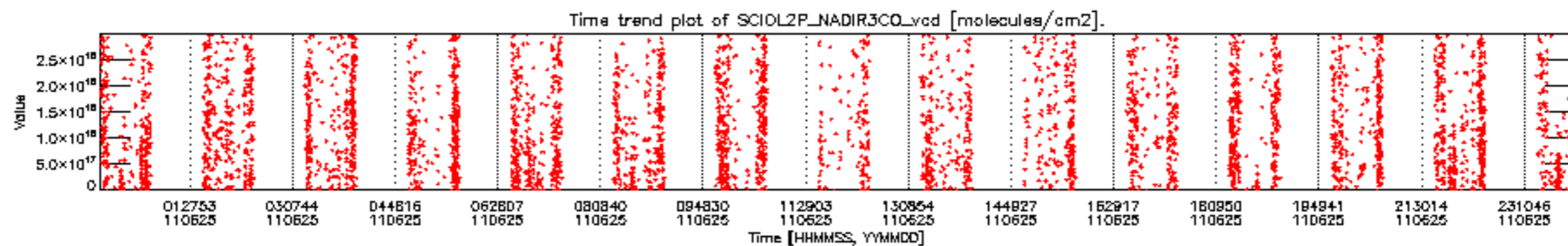


SCIOL2P\_NADUV8H2O\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

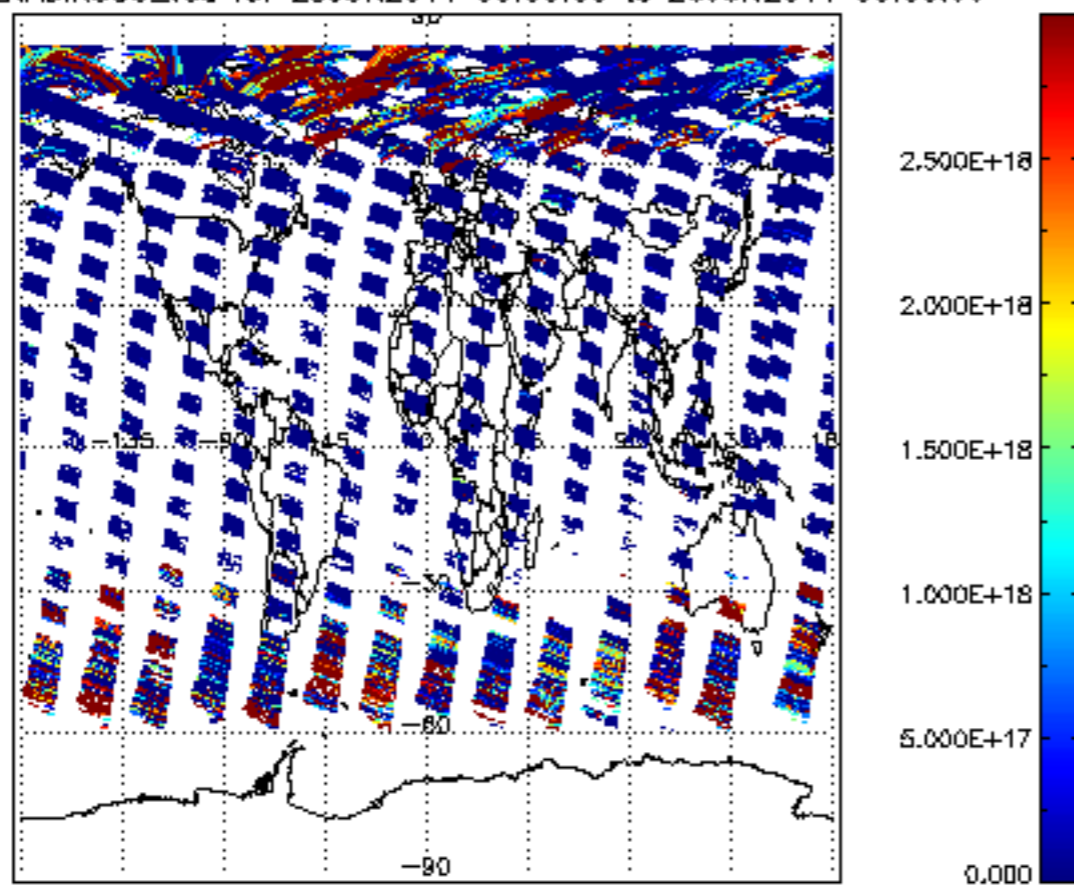


SCIOL2P\_NADUV8H2O\_amf\_gr for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

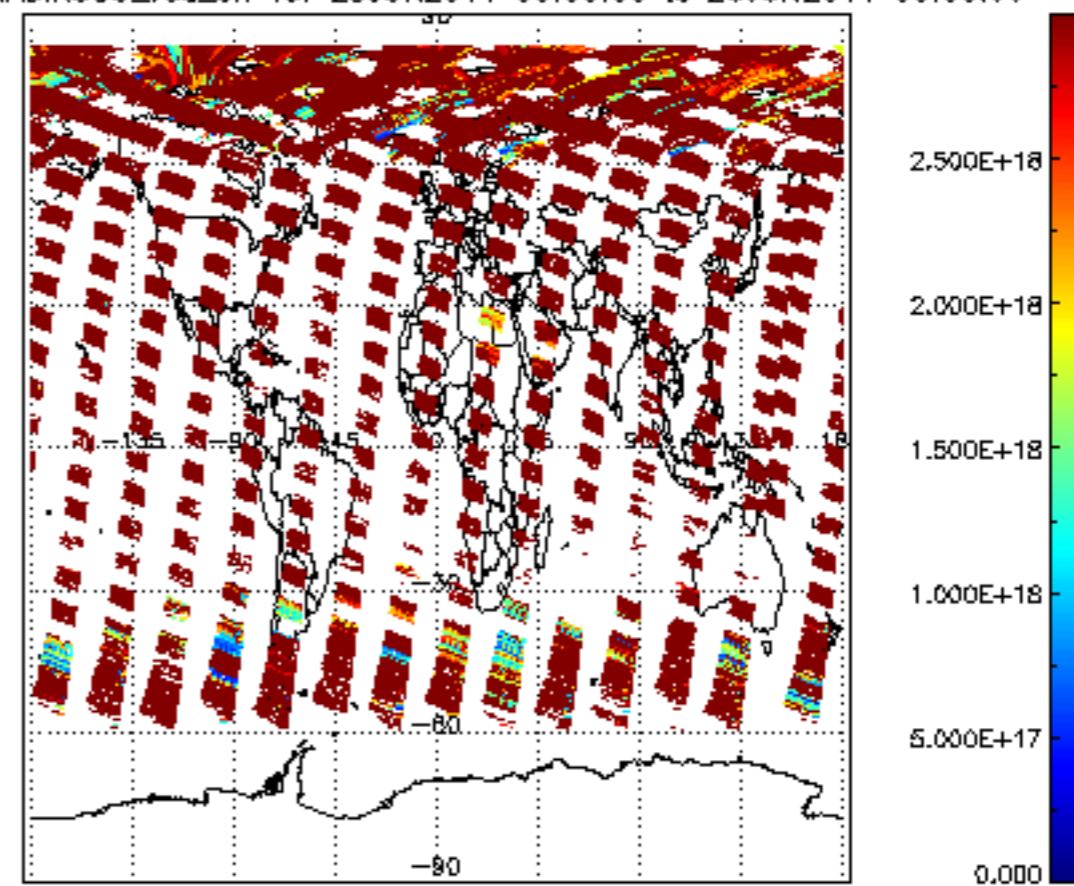




SCIOL2P\_NADIR3CO\_vcd for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

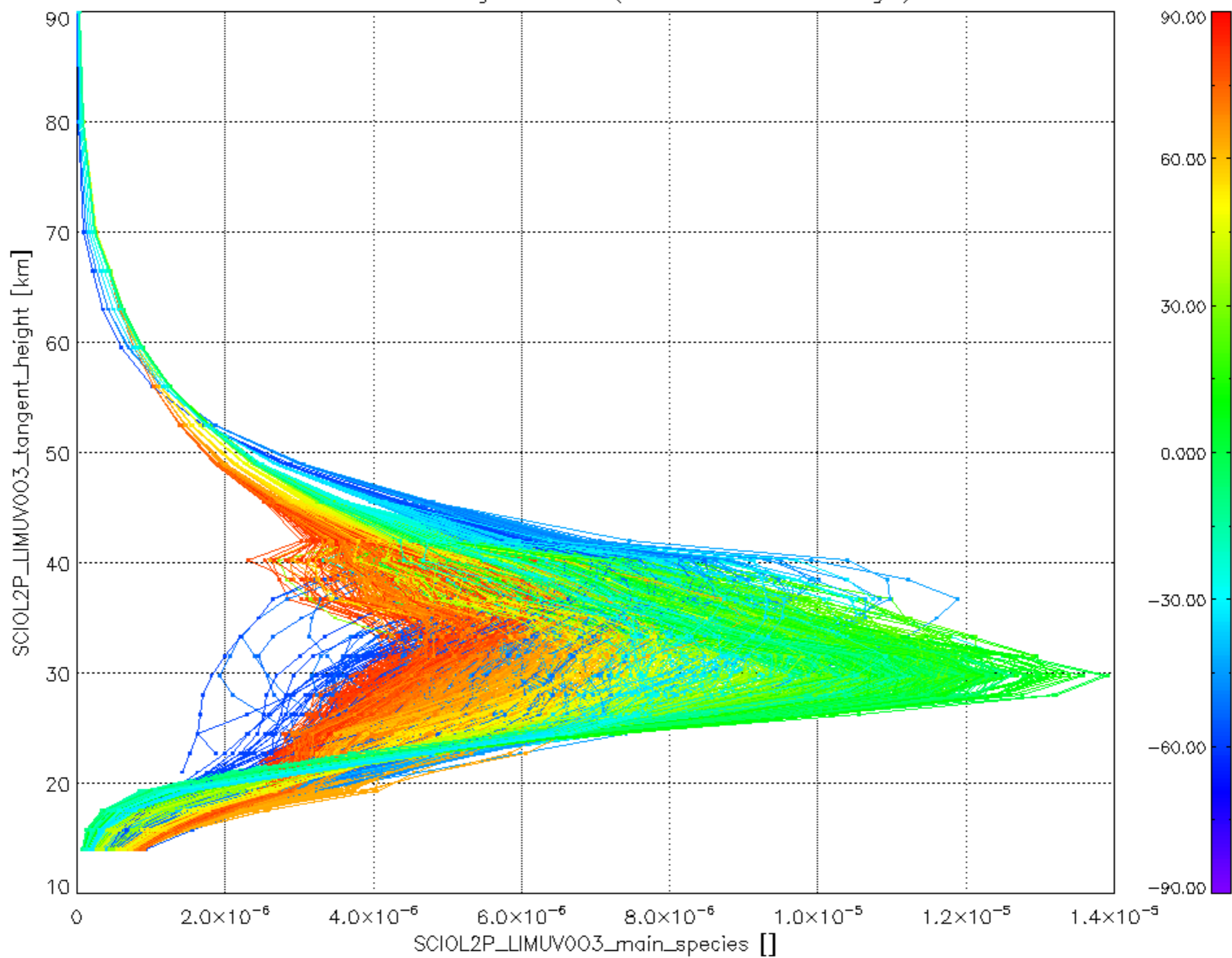


SCIOL2P\_NADIR3CO\_vcd\_err for 25JUN2011 00:00:00 to 26JUN2011 00:00:00

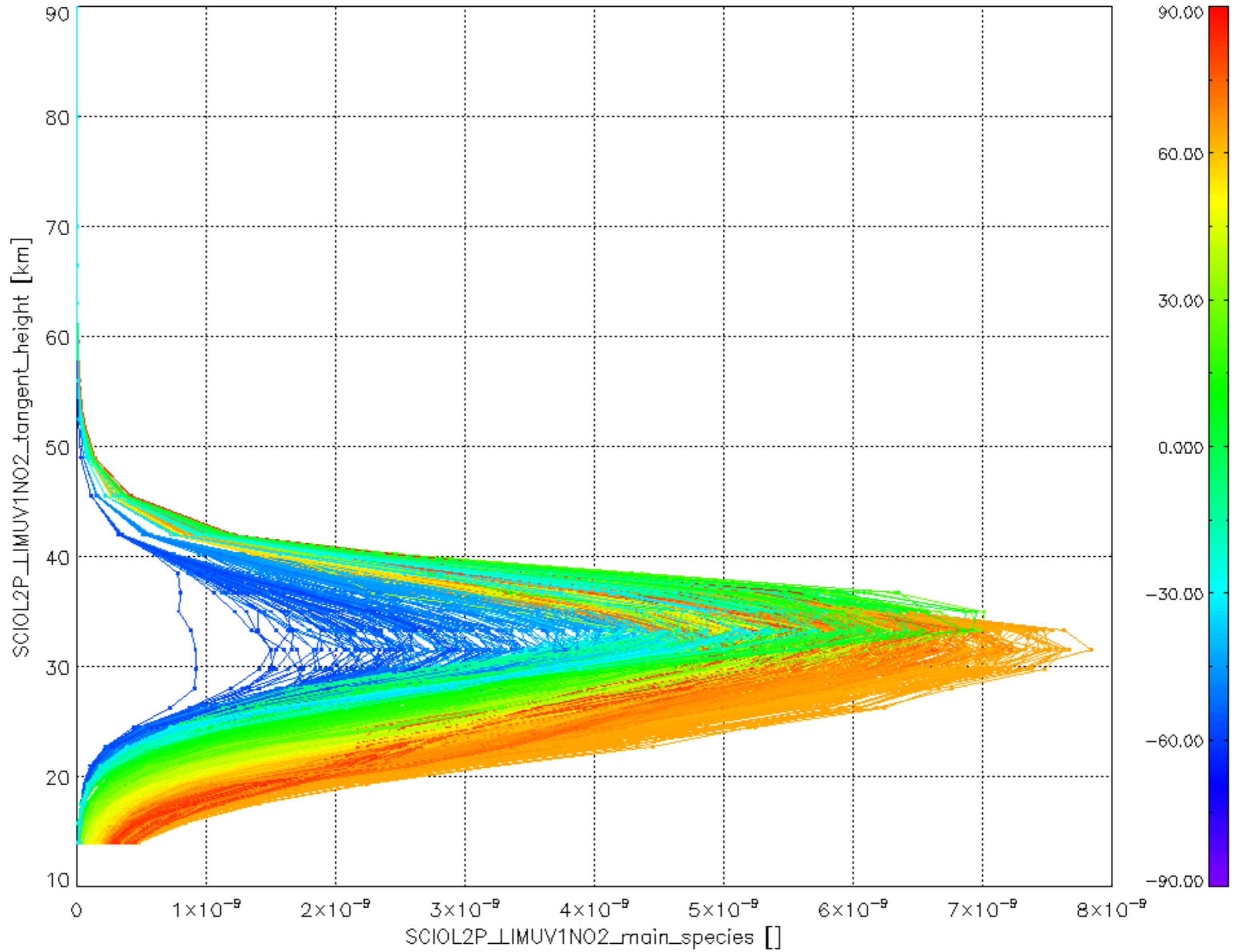




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

