

## 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	17JUL2011 03:18:45
Data source version	SCIA-OL/5.01-U
Processing scope for products	05JUL2011 00:00:00 to 06JUL2011 00:00:00
Start time of first product within scope	04JUL2011 22:46:36
Stop time of last product within scope	06JUL2011 00:48:43
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__2PUDPA20110704_224636_000035303104_00145_48866_5393.N1</a>	04JUL2011 22:46:36	04JUL2011 23:45:27	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110705_002650_000035163104_00146_48867_5394.N1</a>	05JUL2011 00:26:50	05JUL2011 01:25:27	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110705_020704_000035303104_00147_48868_5400.N1</a>	05JUL2011 02:07:04	05JUL2011 03:05:55	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110705_034718_000035163104_00148_48869_5401.N1</a>	05JUL2011 03:47:18	05JUL2011 04:45:55	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110705_052733_000035303104_00149_48870_5402.N1</a>	05JUL2011 05:27:33	05JUL2011 06:26:23	0	GOOD

5	SCI_OL__2PUDPA20110705_070747_000035163104_00150_48871_5403.N1	05JUL2011 07:07:47	05JUL2011 08:06:23	0	GOOD
6	SCI_OL__2PUDPA20110705_084801_000035303104_00151_48872_5404.N1	05JUL2011 08:48:01	05JUL2011 09:46:51	0	GOOD
7	SCI_OL__2PUDPA20110705_102815_000035163104_00152_48873_5408.N1	05JUL2011 10:28:15	05JUL2011 11:26:51	0	GOOD
8	SCI_OL__2PUDPA20110705_120829_000035303104_00153_48874_5409.N1	05JUL2011 12:08:29	05JUL2011 13:07:19	0	GOOD
9	SCI_OL__2PUDPA20110705_134843_000035163104_00154_48875_5410.N1	05JUL2011 13:48:43	05JUL2011 14:47:19	0	GOOD
10	SCI_OL__2PUDPA20110705_152857_000035303104_00155_48876_5411.N1	05JUL2011 15:28:57	05JUL2011 16:27:47	0	GOOD
11	SCI_OL__2PUDPA20110705_170958_000034773104_00156_48877_5412.N1	05JUL2011 17:09:58	05JUL2011 18:07:56	0	GOOD
12	SCI_OL__2PUDPA20110705_184935_000035303104_00157_48878_5413.N1	05JUL2011 18:49:35	05JUL2011 19:48:25	0	GOOD
13	SCI_OL__2PUDPA20110705_202939_000035163104_00158_48879_5414.N1	05JUL2011 20:29:39	05JUL2011 21:28:15	0	GOOD
14	SCI_OL__2PUDPA20110705_220953_000035303104_00159_48880_5415.N1	05JUL2011 22:09:53	05JUL2011 23:08:44	0	GOOD
15	SCI_OL__2PUDPA20110705_235007_000035163104_00160_48881_5416.N1	05JUL2011 23:50:07	06JUL2011 00:48:43	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: 167239

Total number of cloud data DSRs with good quality flag (=0): 167239 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	167239	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	167239	0.16445	0.12500	0.12500	0.25000	0.058094	s
CL_FRAC	167239	0.30946	0.26337	0.0000	1.0000	0.26459	
CL_FRAC_ERR	167239	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	167239	5.2624	4.0000	4.0000	8.0000	1.8590	
PMD_READ_CL[0]	167239	0.23218	0.0000	0.0000	8.0000	1.0479	-
PMD_READ_CL[1]	167239	1.4025	0.0000	0.0000	8.0000	2.4957	-
CL_TOP_HEIGHT	126751	3.3029	1.4085	0.0000	17.000	3.7279	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	126751	62.650	100.00	0.0000	101.00	43.395	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	167239	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	167239	11001110	11000100	11000000	11100000	3665.8	
AERO_ABSO_IND	167239	0.18424	0.0000	0.0000	4.8365	0.43533	
AERO_IND_DIAG	167239	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	167239	01010000	00000000	00000000	11000000	24260.	

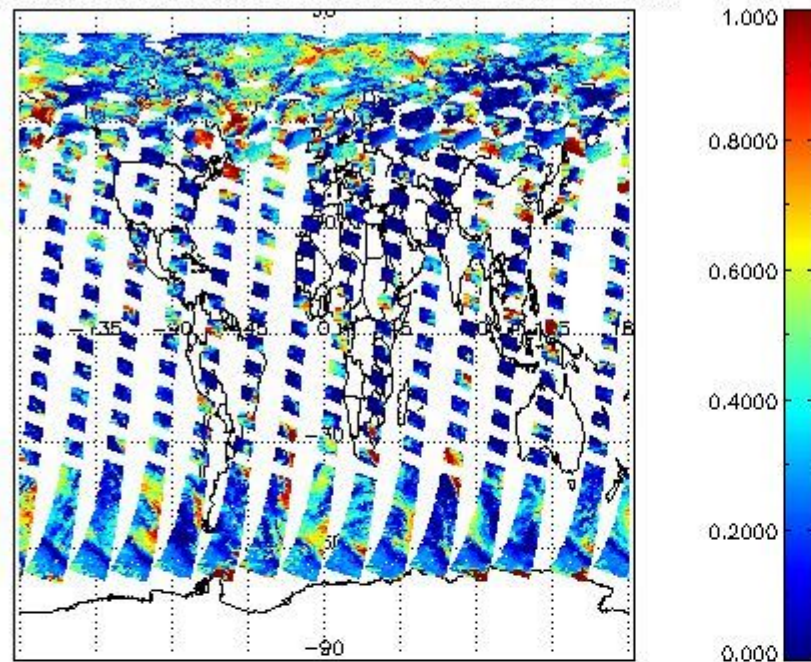
#### Time and geolocation plots:

Plots are available for the following parameters:

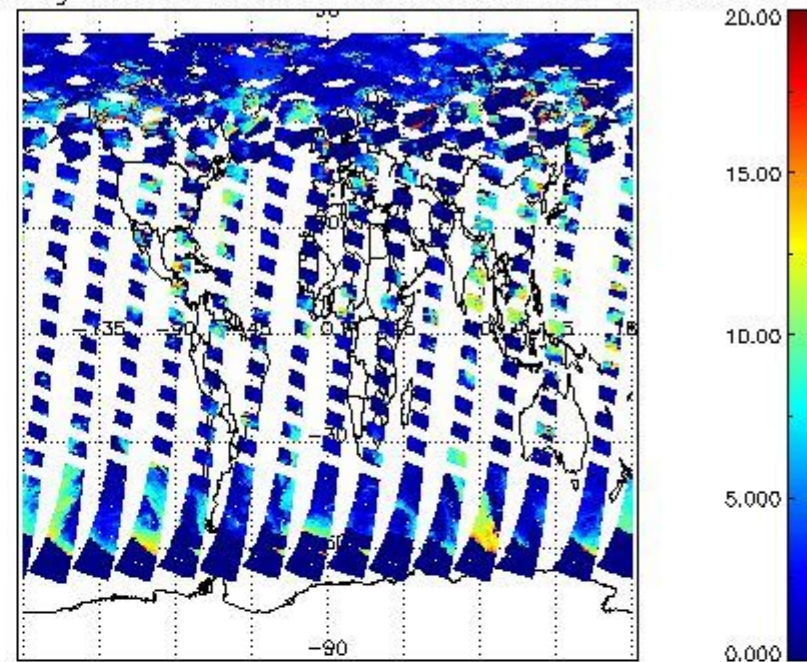
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



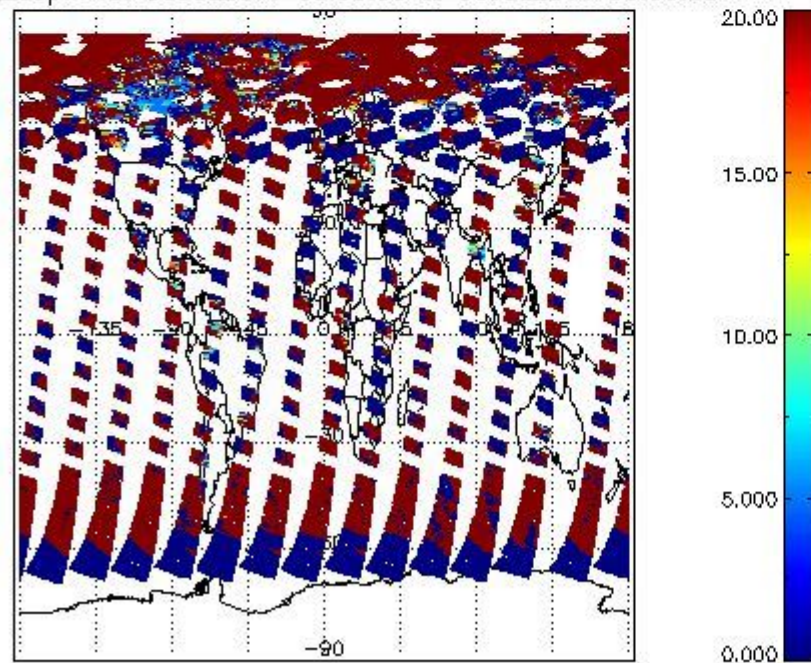
cL\_frac for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



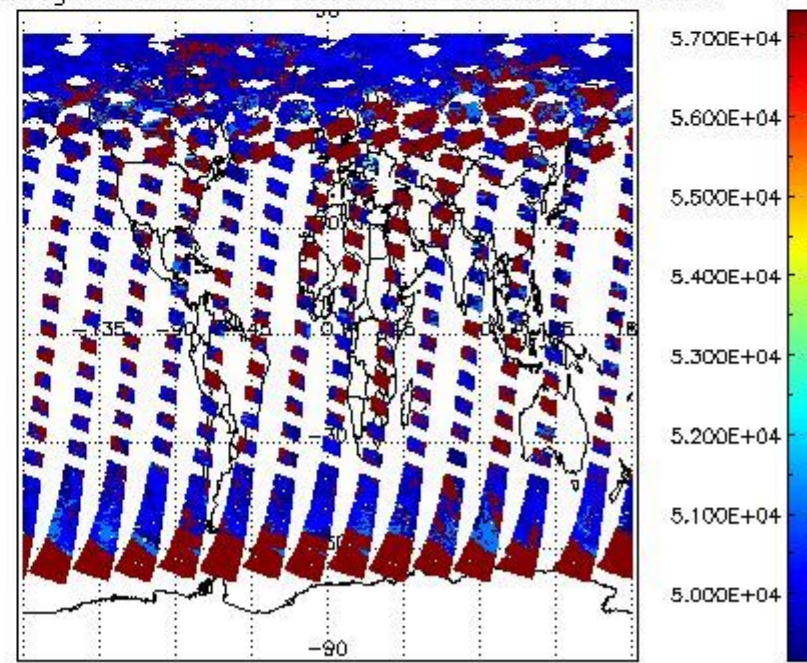
cL\_top\_height for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



cL\_opt\_depth for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



cloud\_flags for 05JUL2011 00:00:00 to 06JUL2011 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:

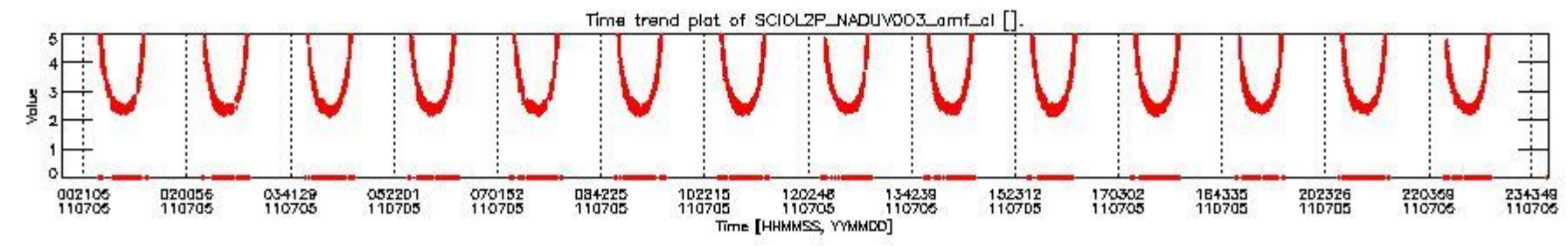
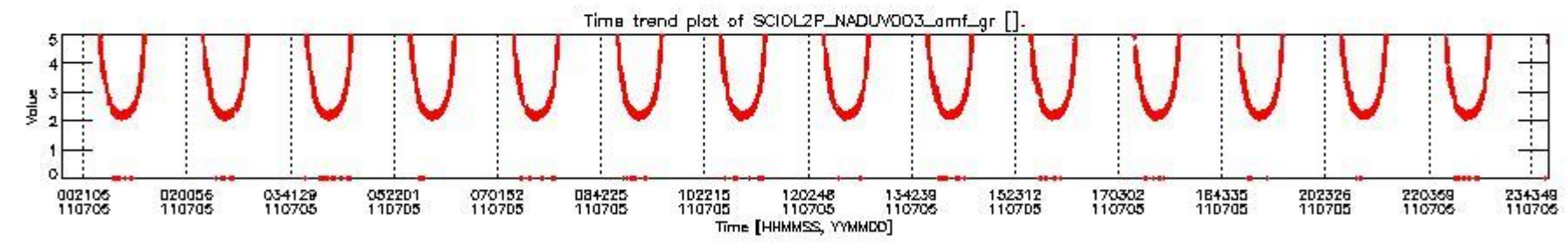
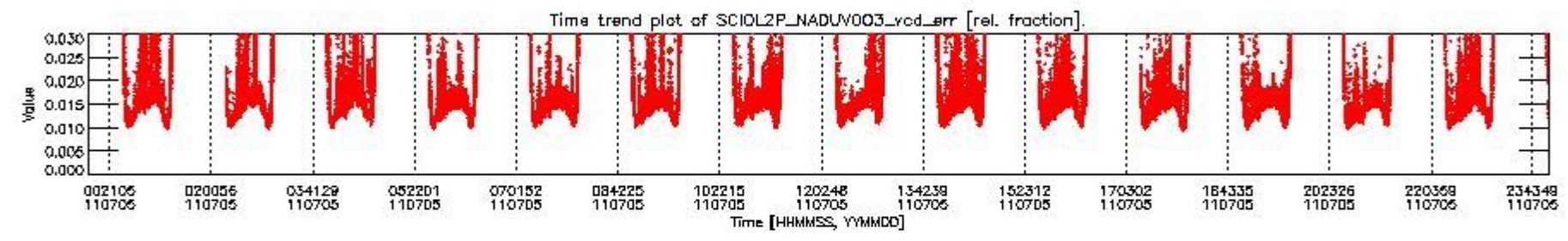
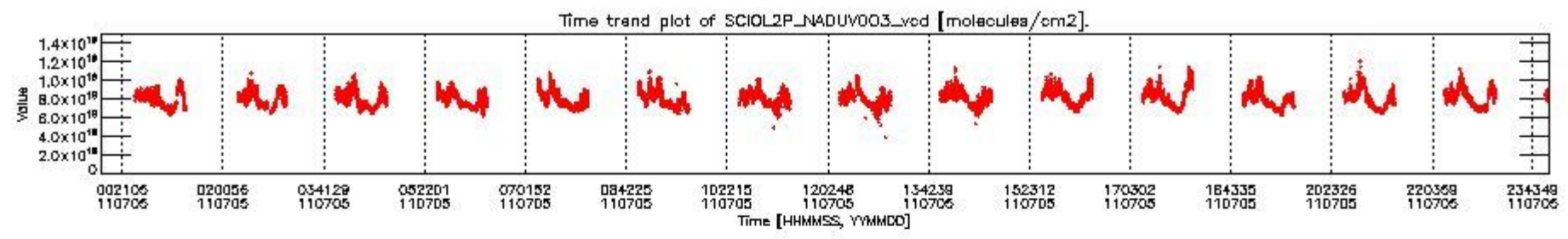
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

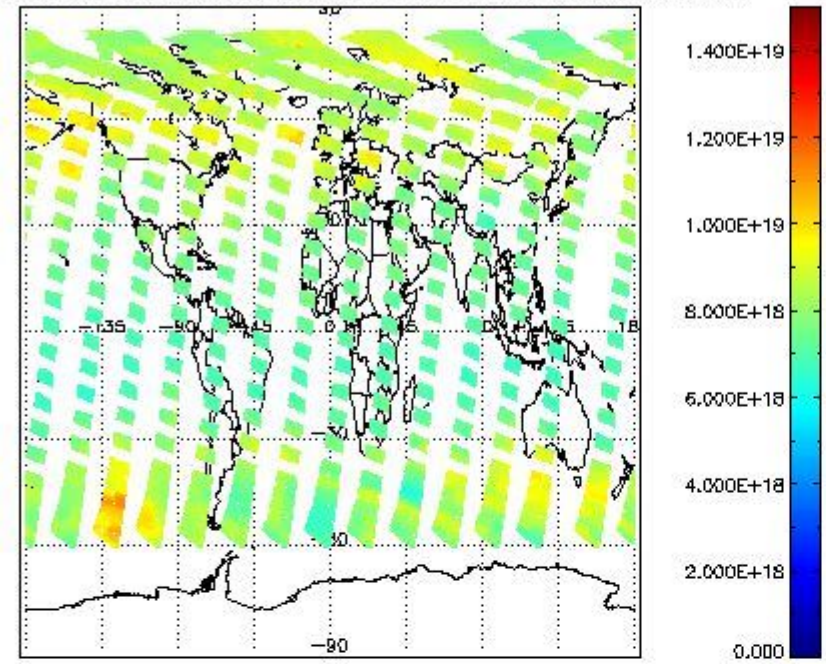
#### 2.2.2.1 O3 (UV0)



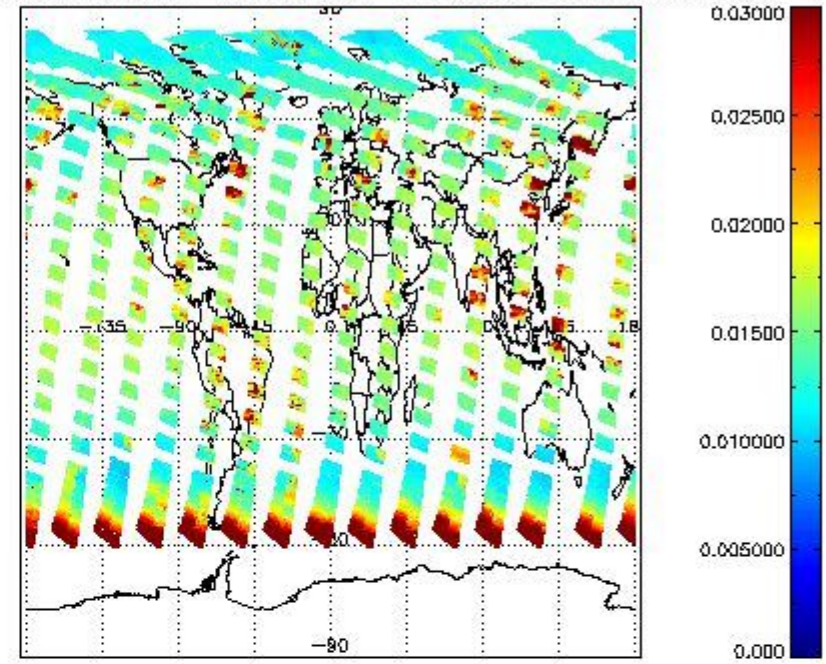




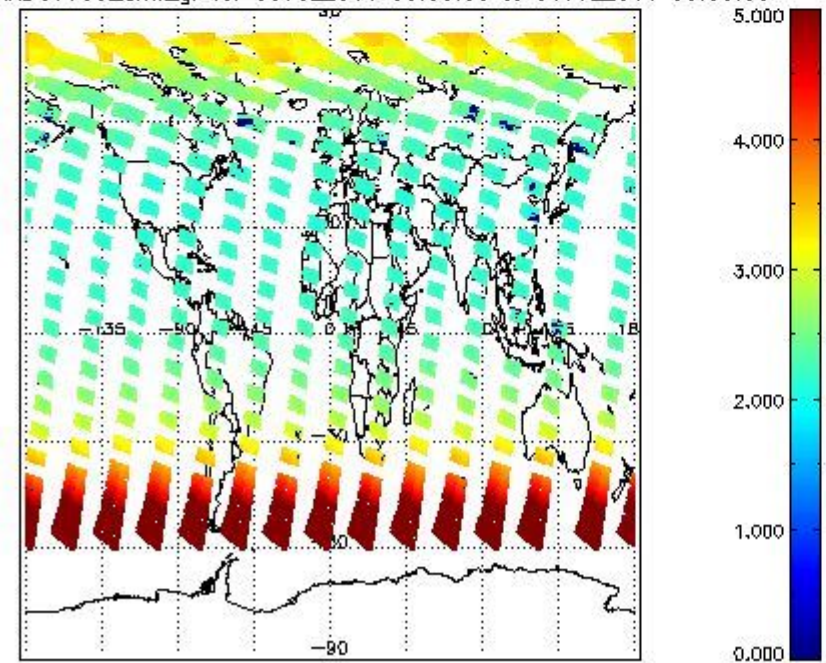
SCIOL2P\_NADUV003\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



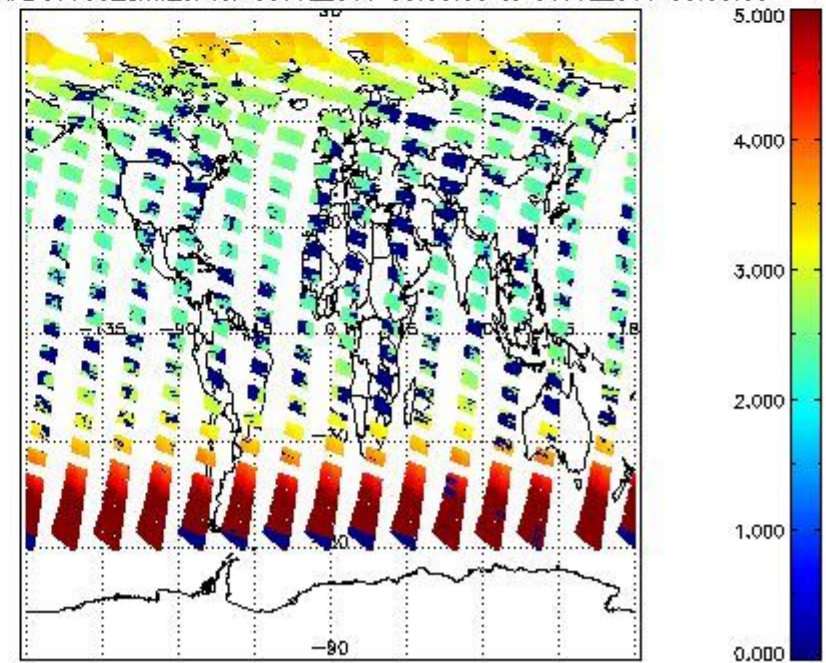
SCIOL2P\_NADUV003\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

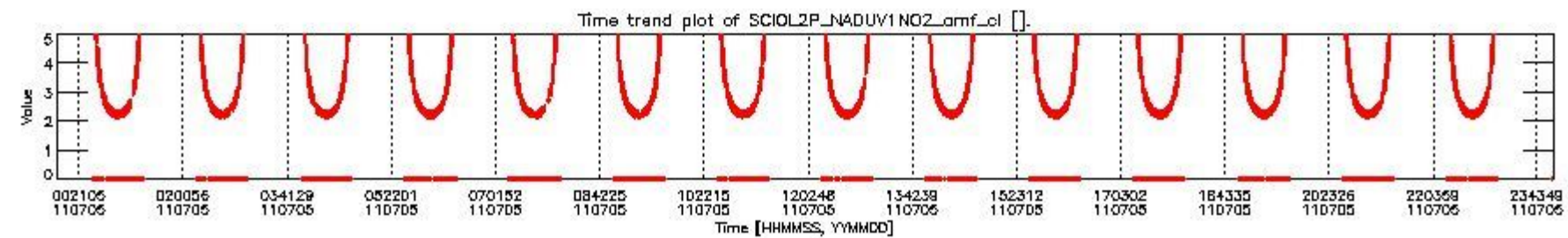
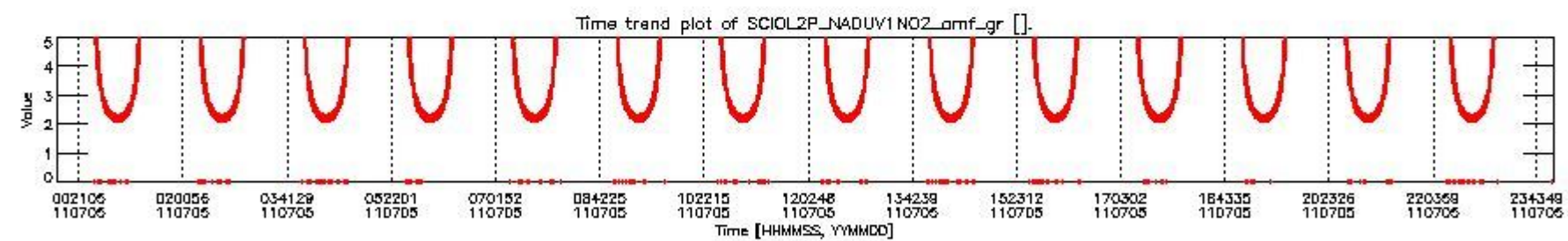
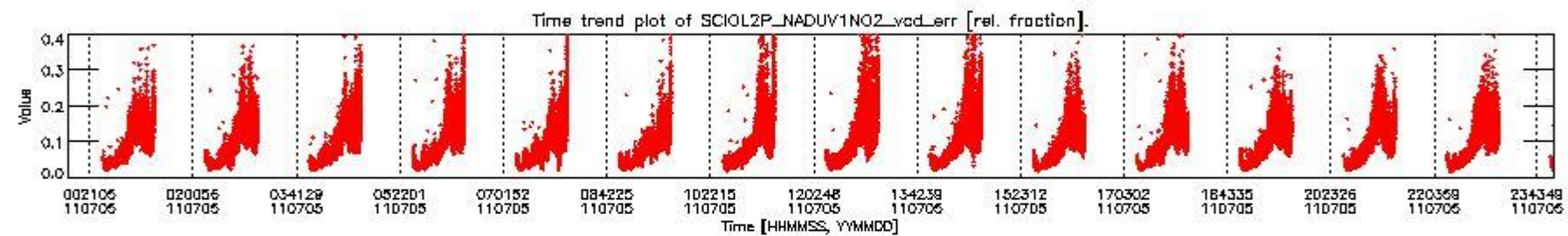
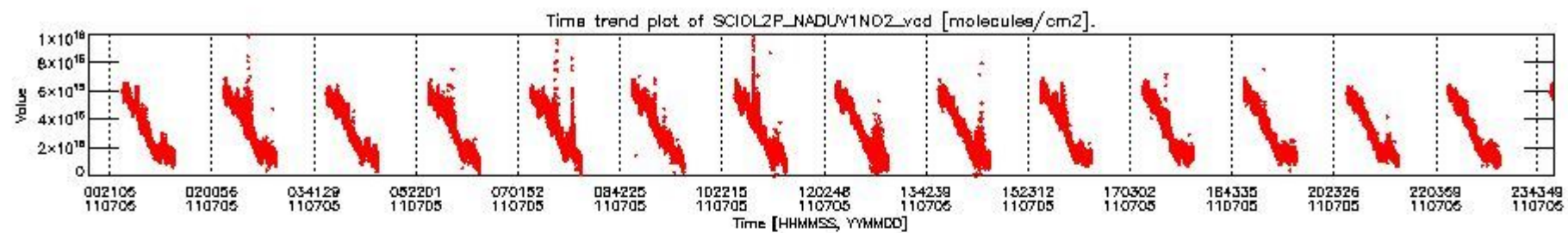


SCIOL2P\_NADUV003\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

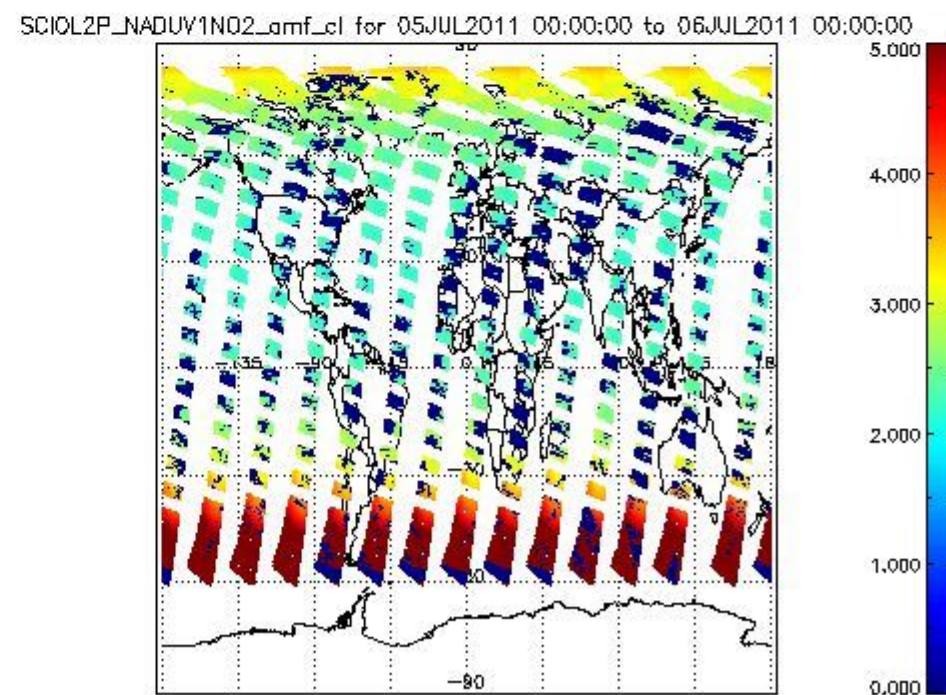
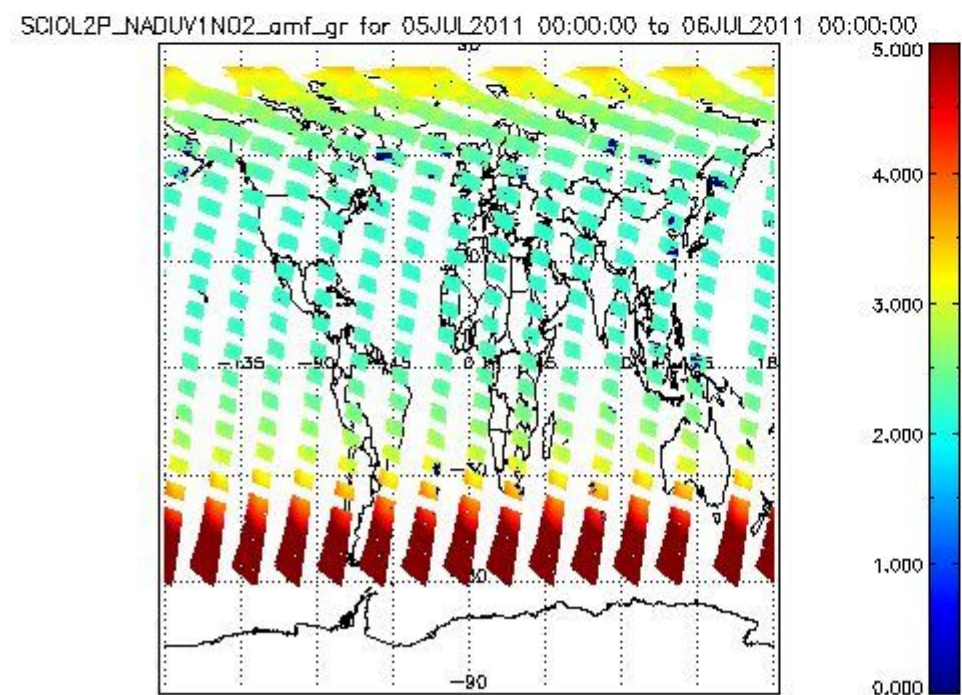
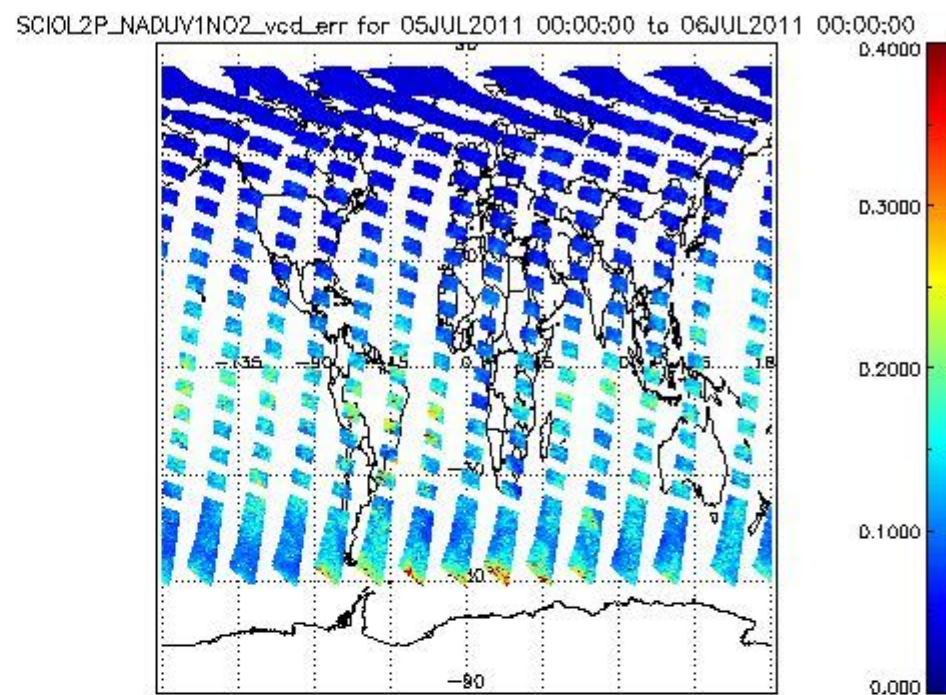
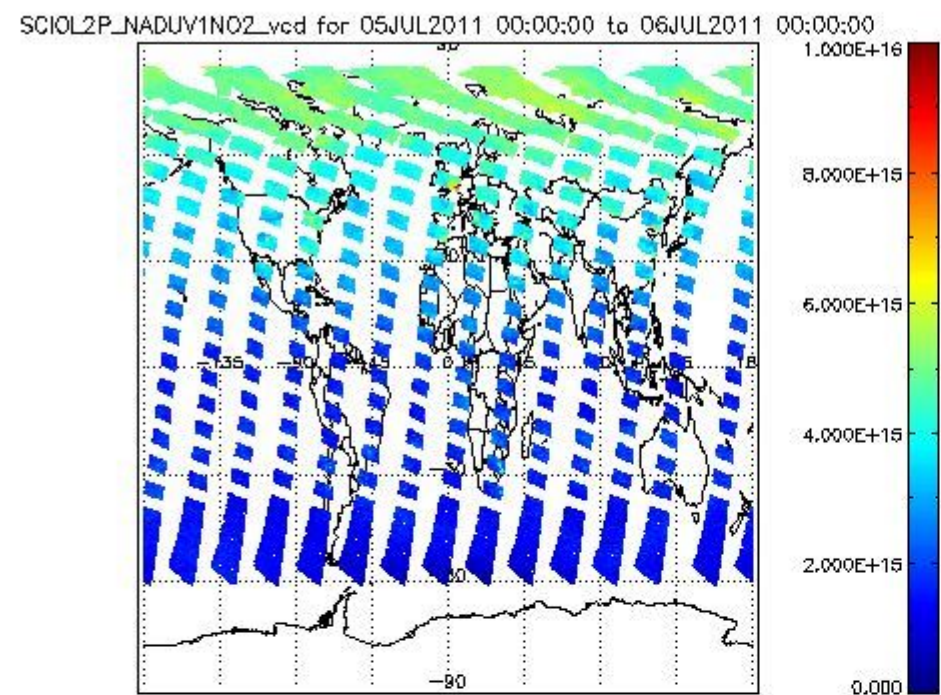


2.2.2.2 NO2 (UV1)



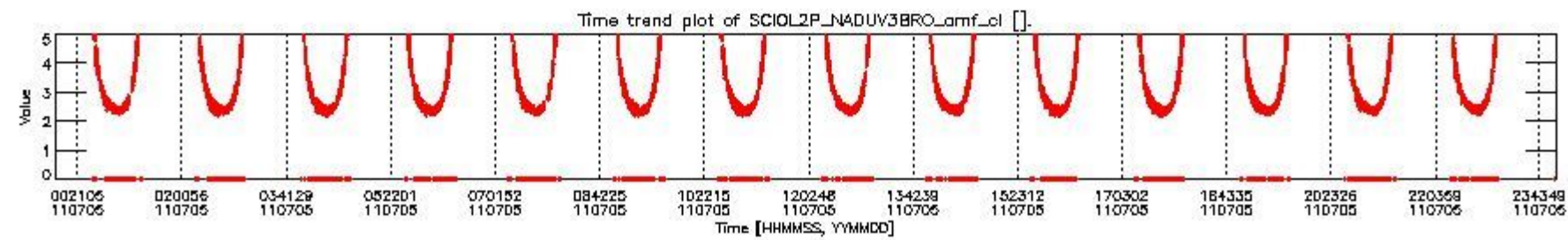
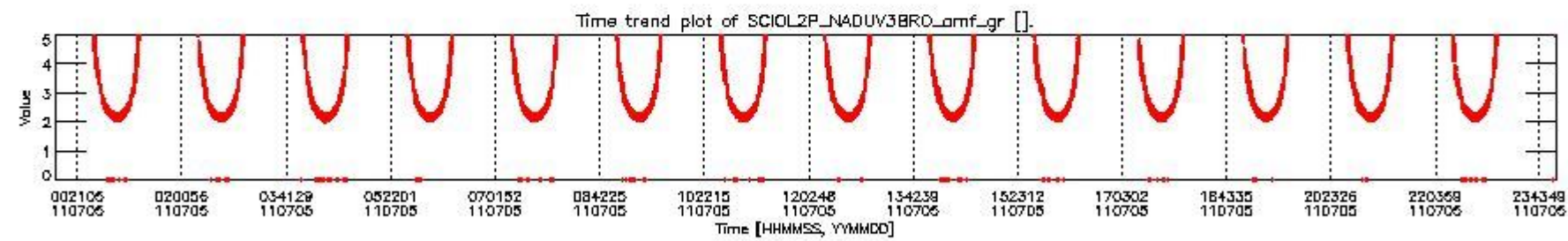
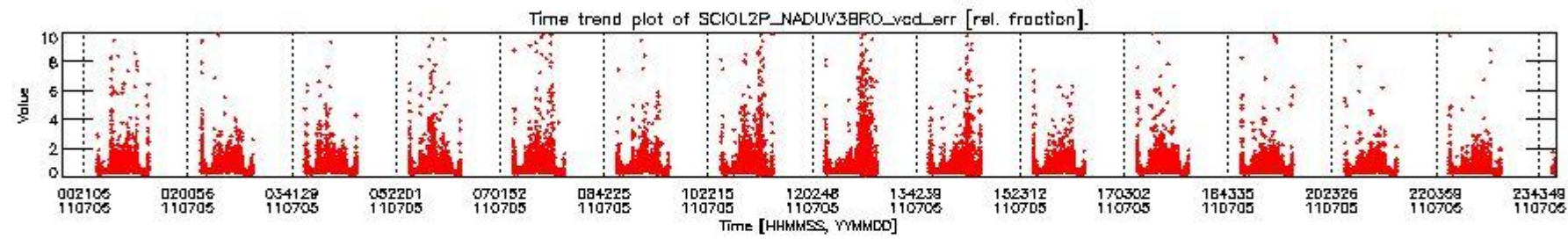
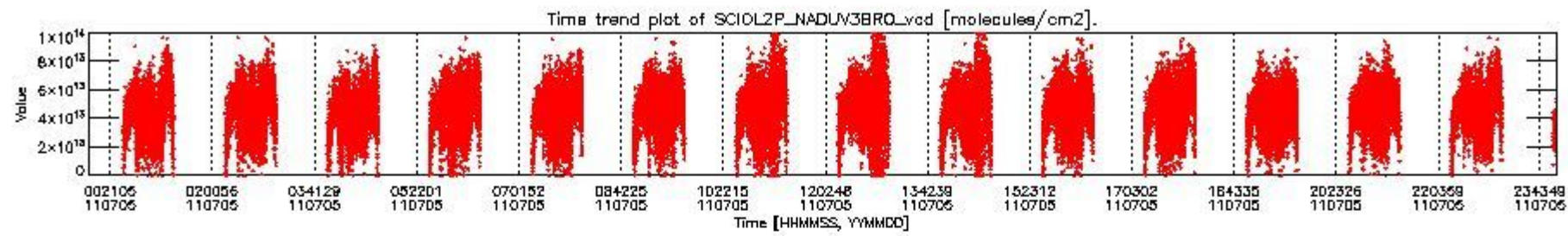




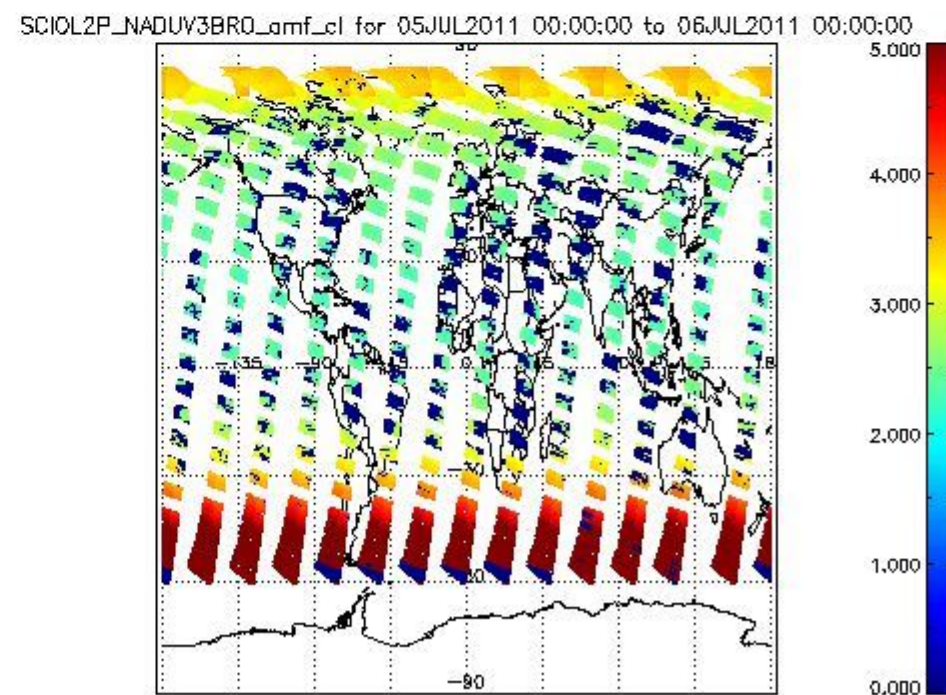
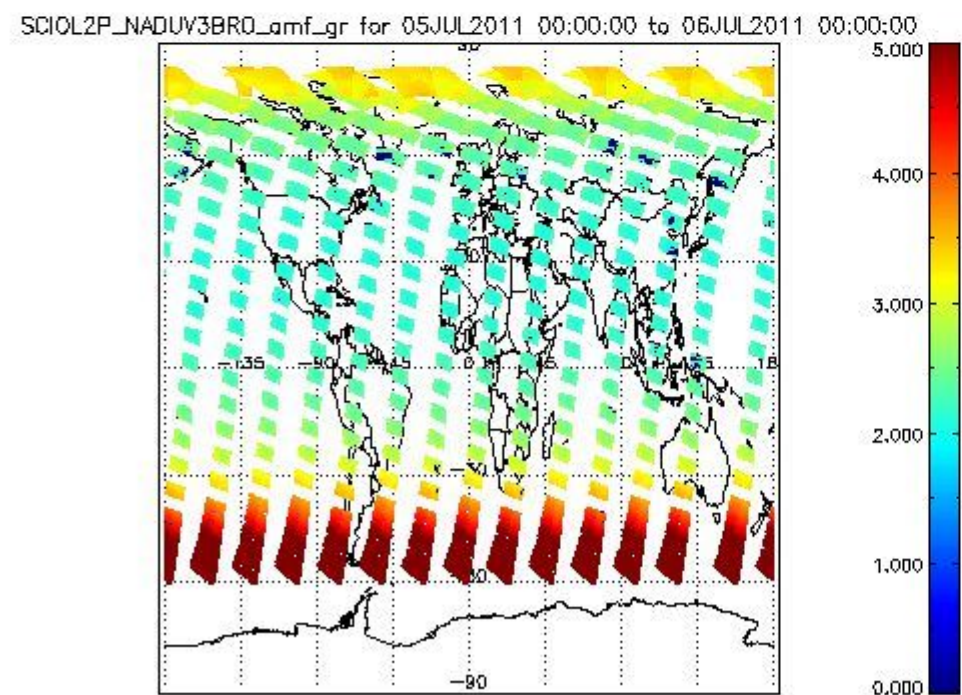
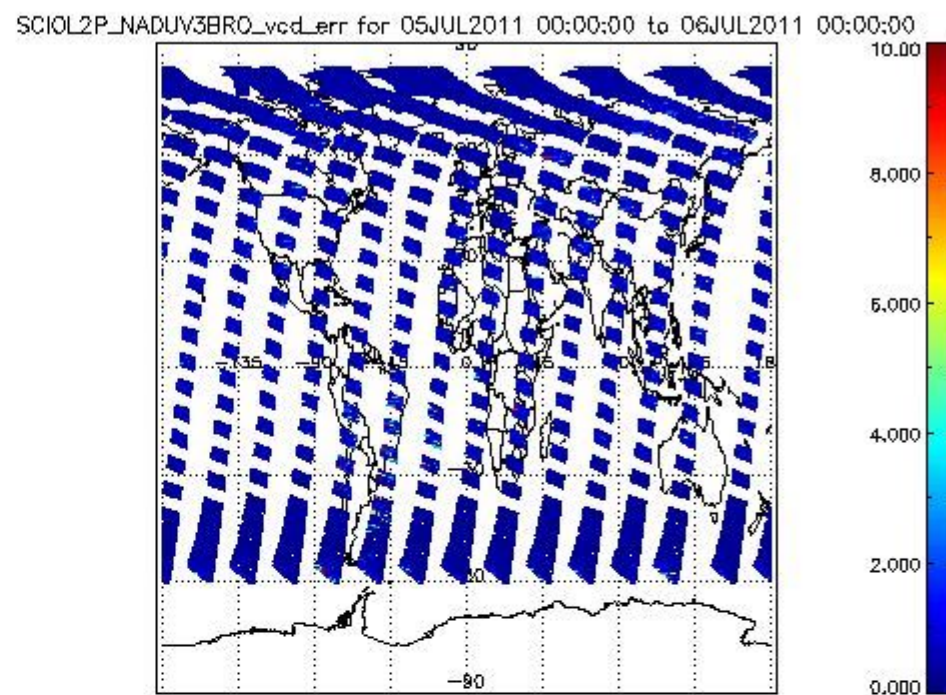
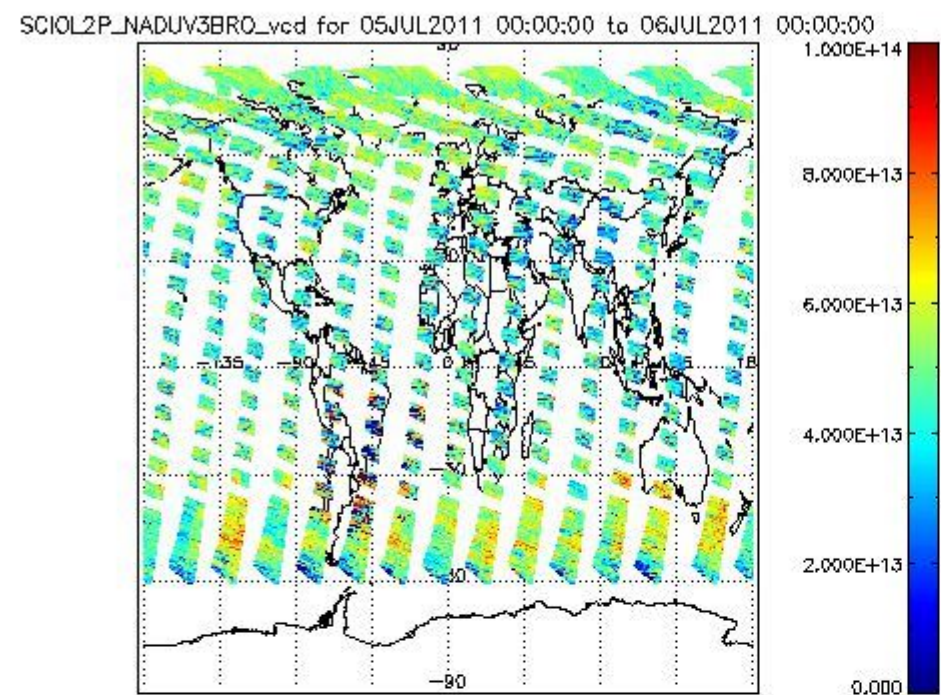


2.2.2.3 BrO (UV3)



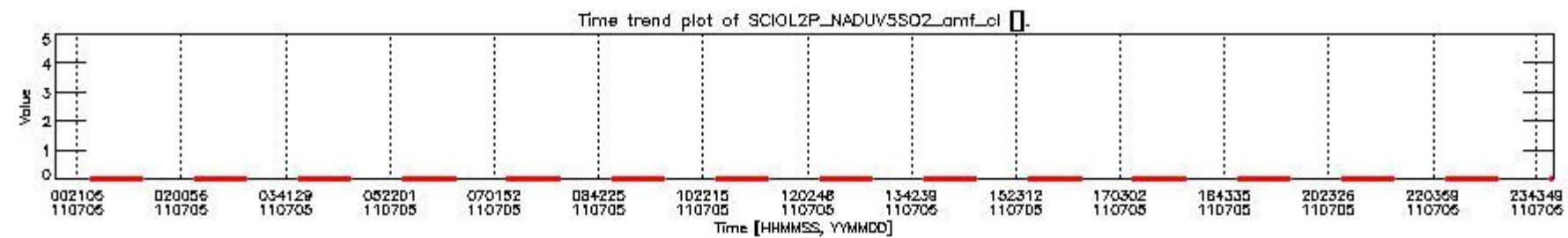
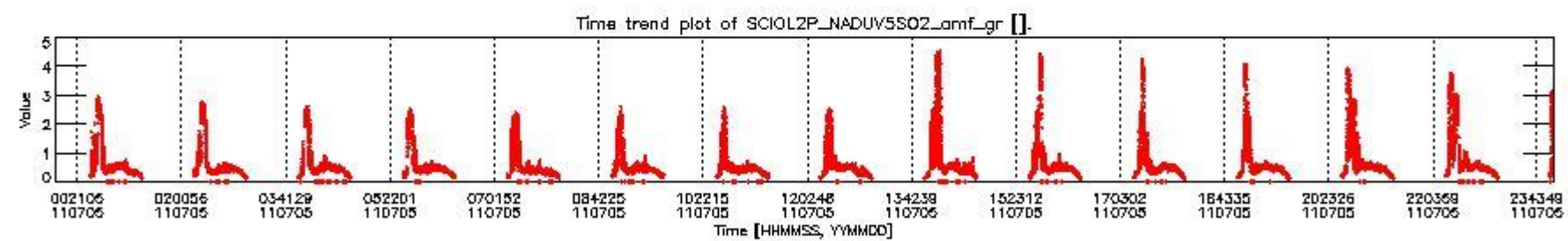
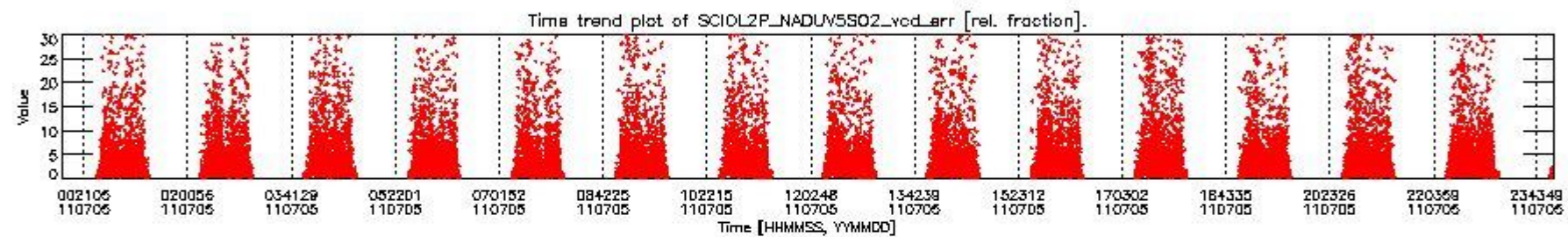
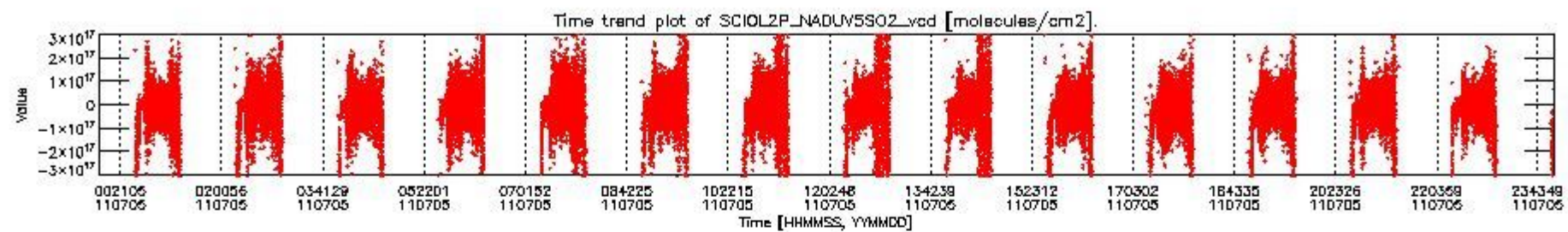






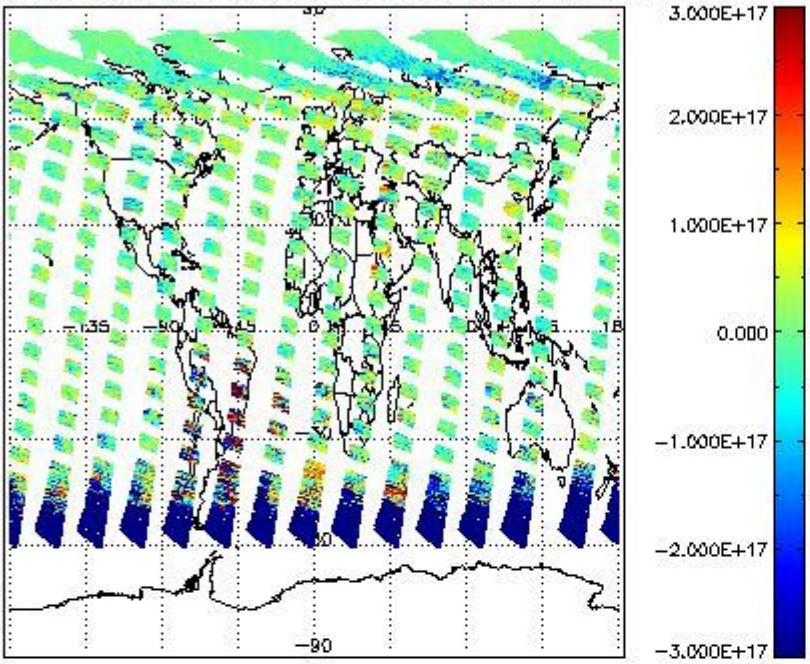
#### 2.2.2.4 SO2 (UV5)



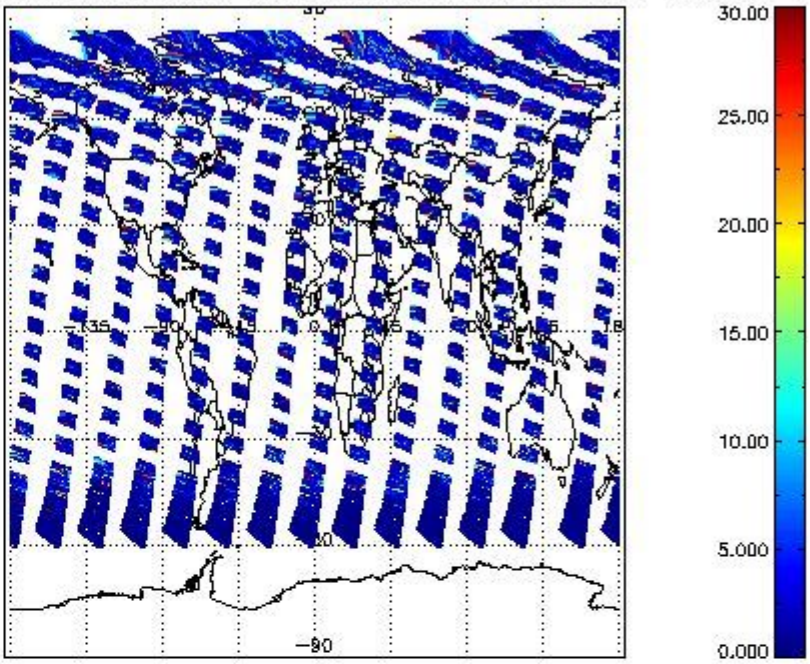




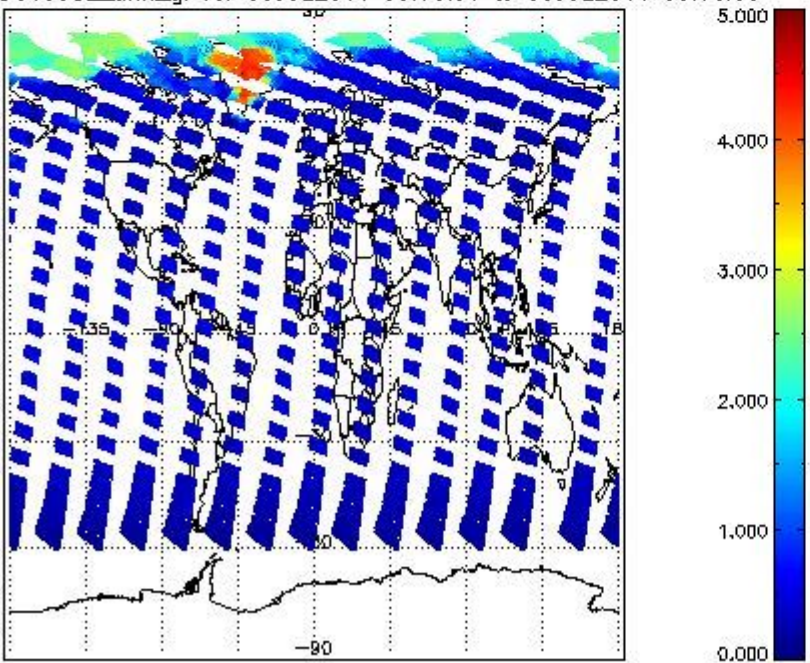
SCIOL2P\_NADUV5S02\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



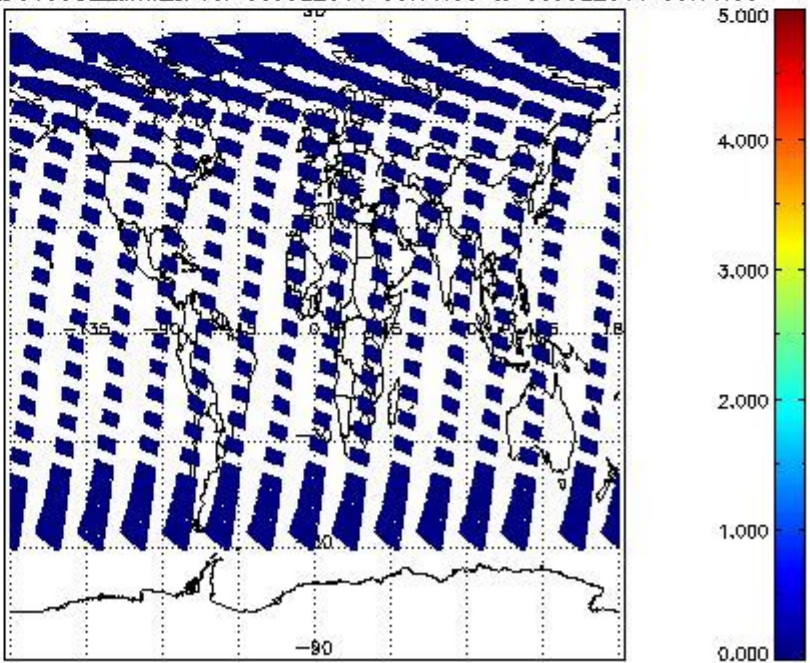
SCIOL2P\_NADUV5S02\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

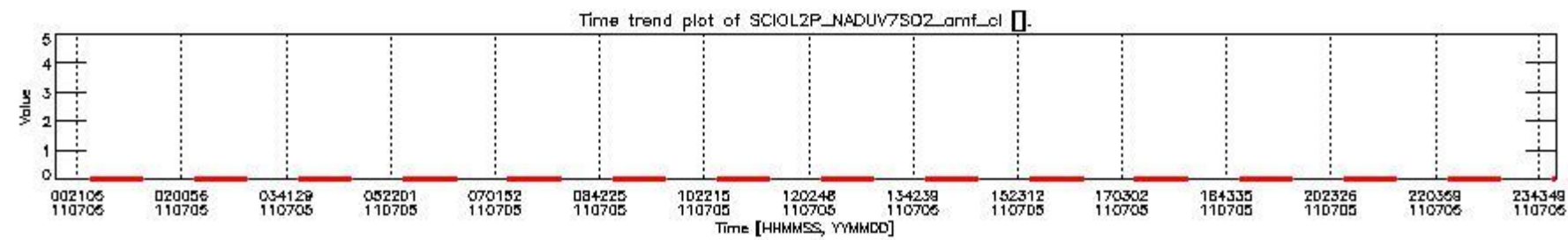
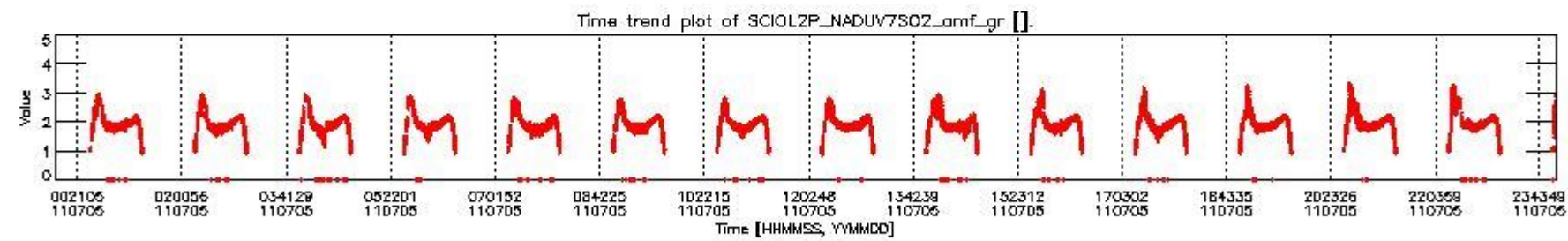
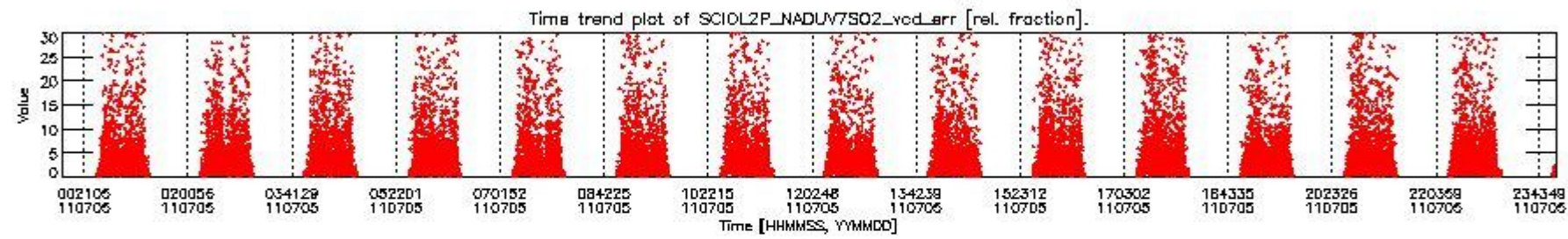
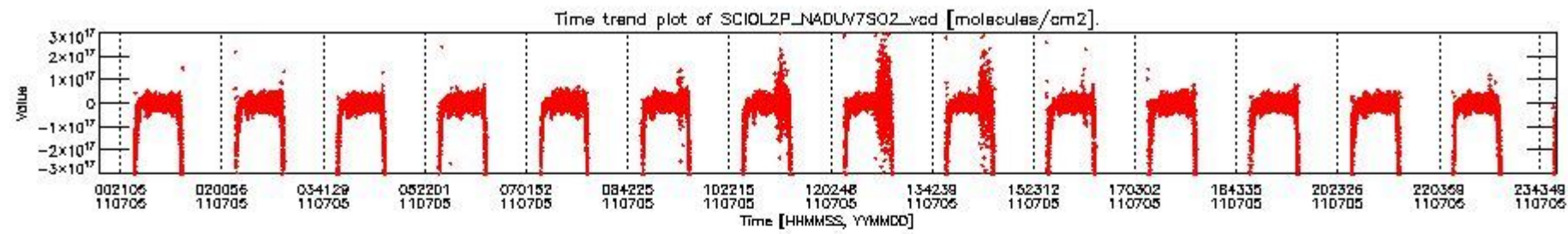


SCIOL2P\_NADUV5S02\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

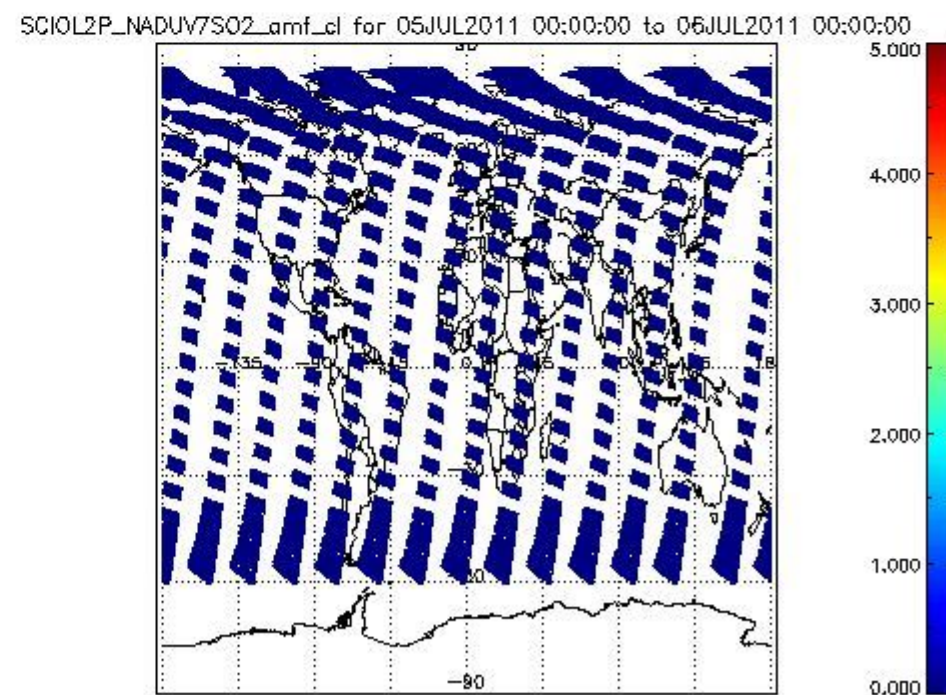
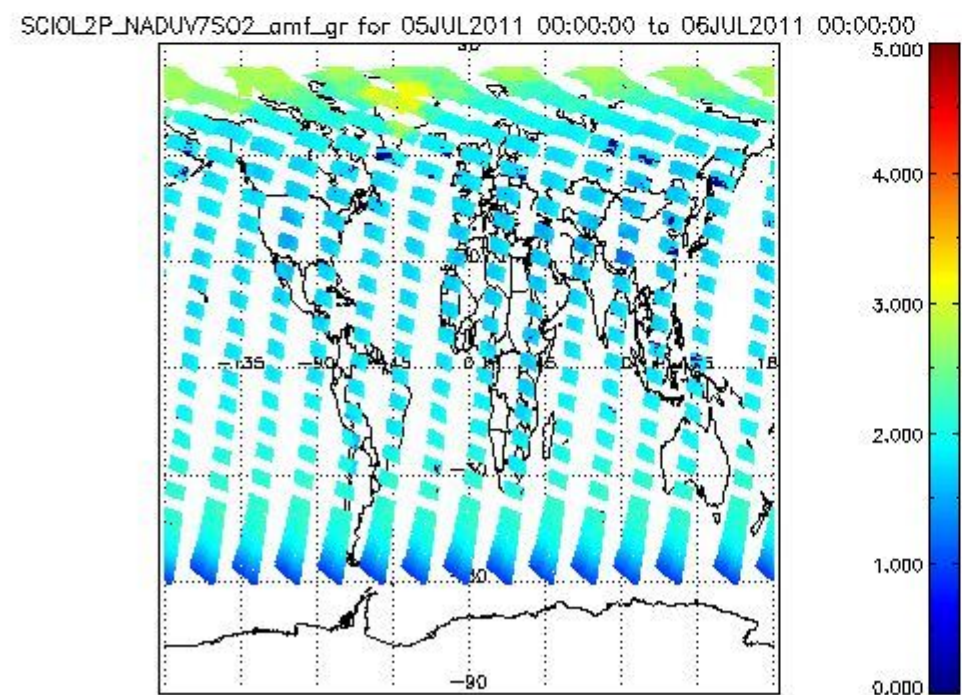
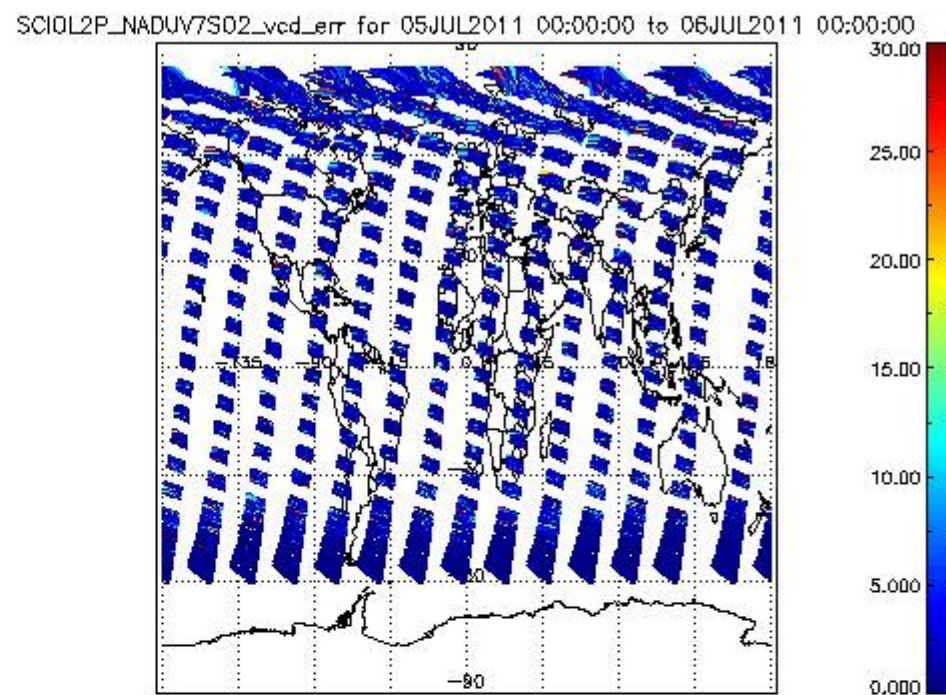
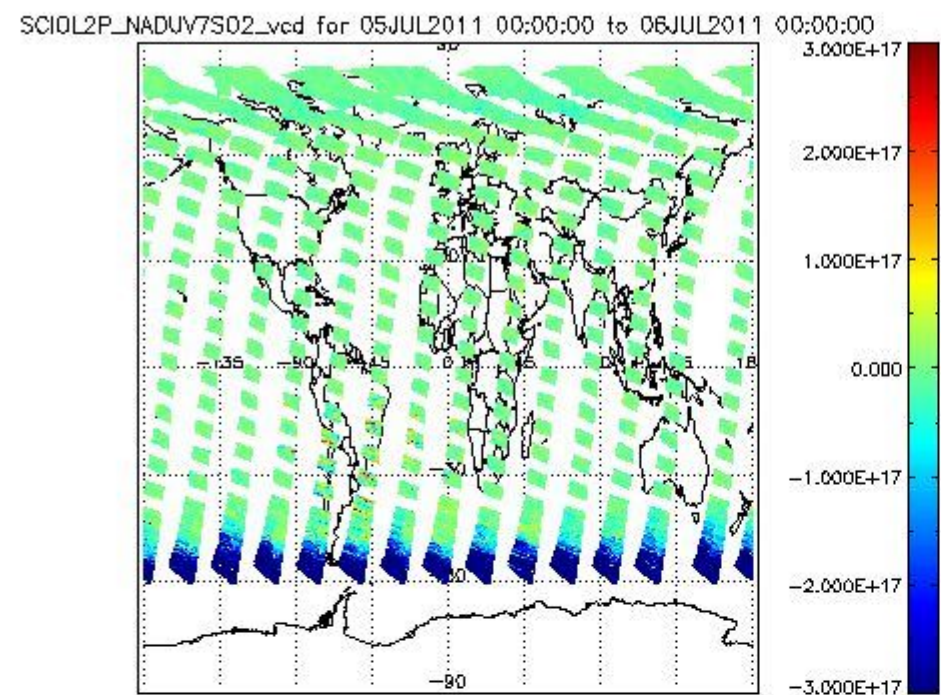


2.2.2.5 SO2 (UV7)



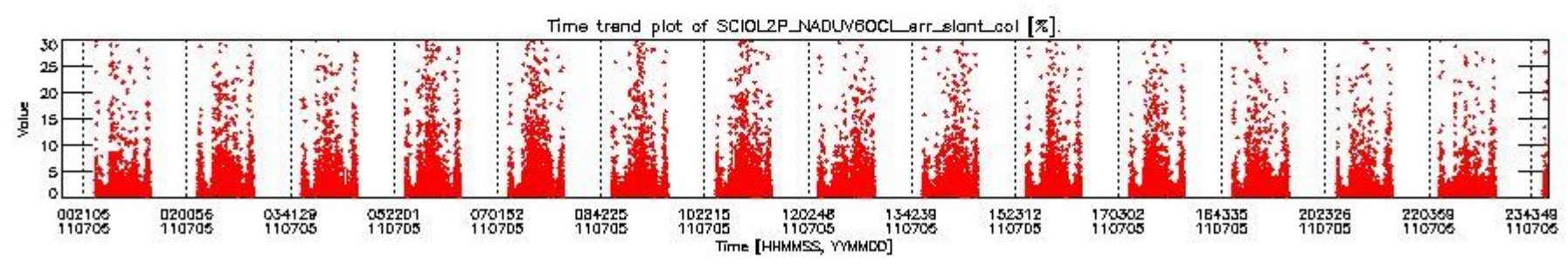
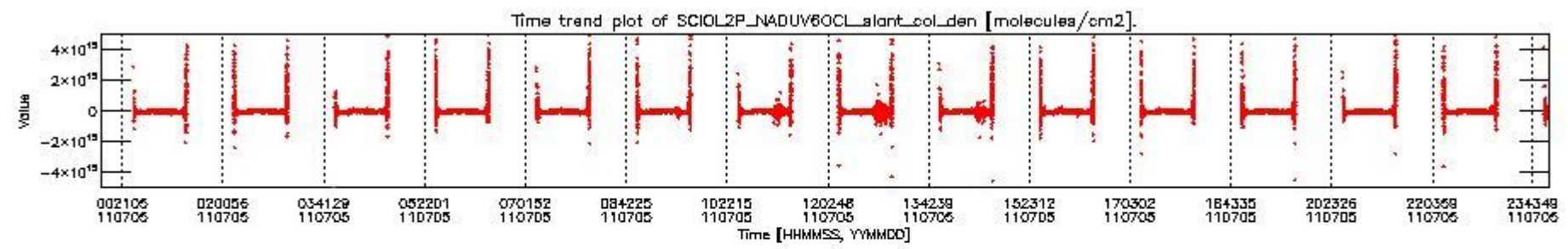




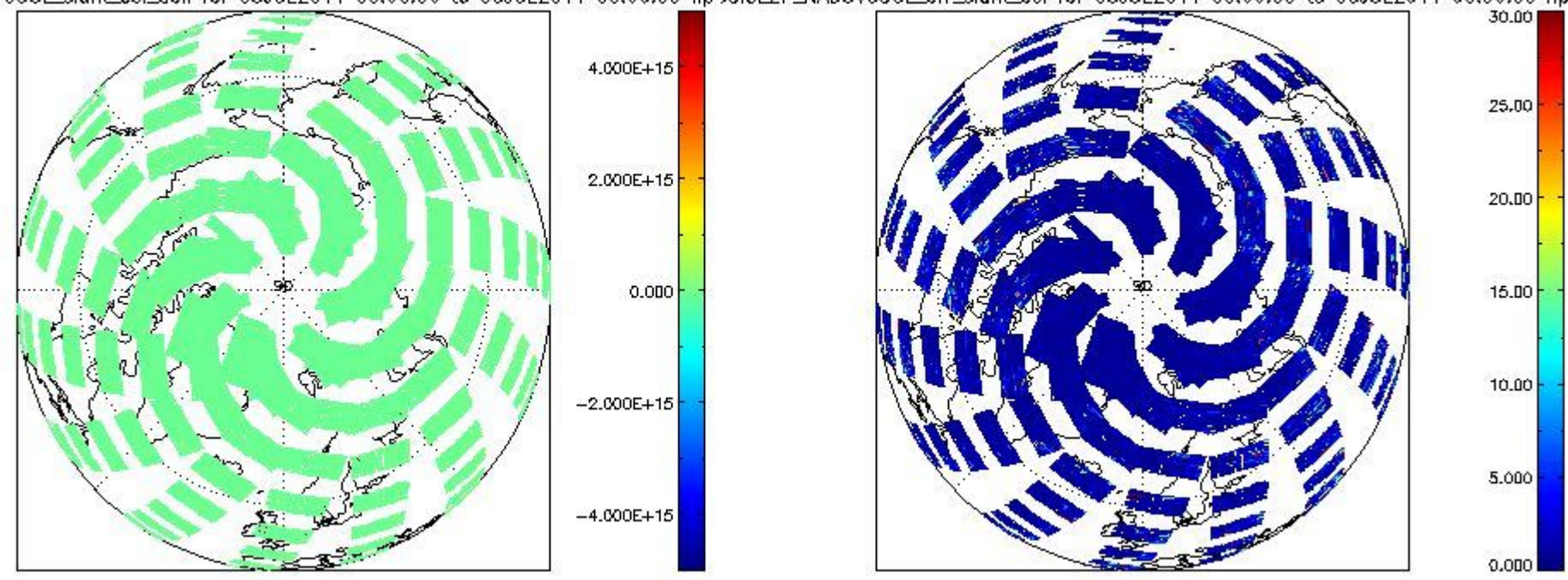


### 2.2.2.6 OCIO (UV6)



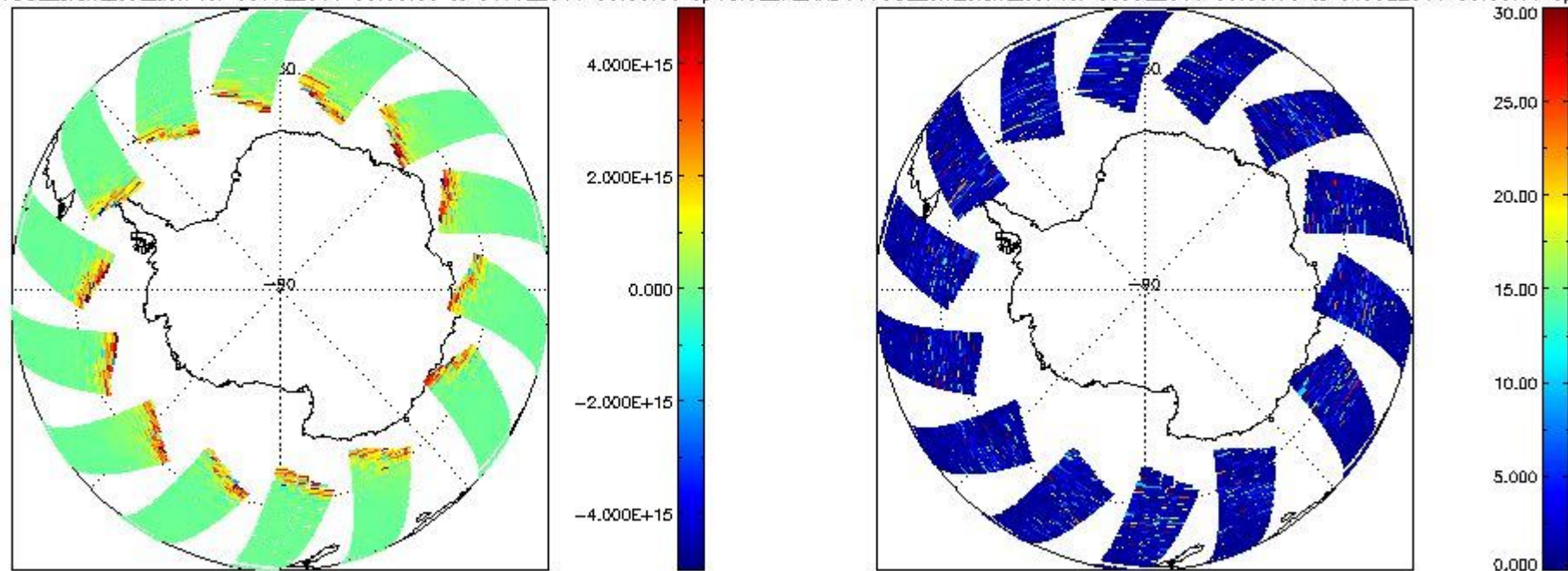


SCIO2P\_NADUV6OCLslant\_col\_den for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 np SCIO2P\_NADUV6OCLarr\_slant\_col for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 np

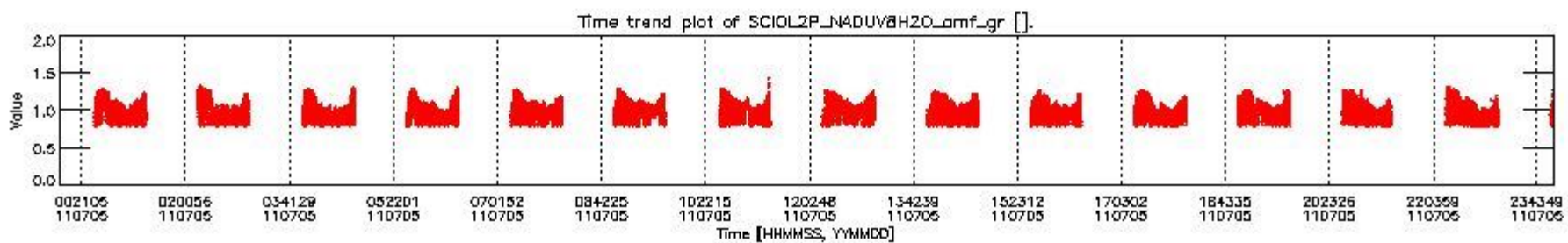
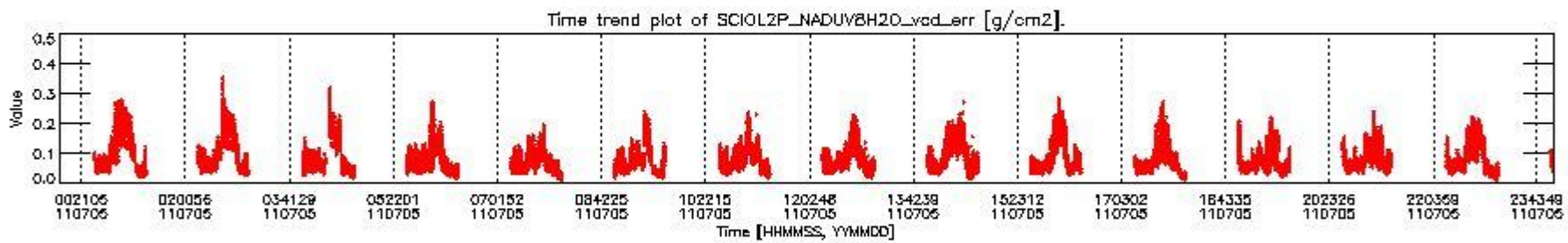
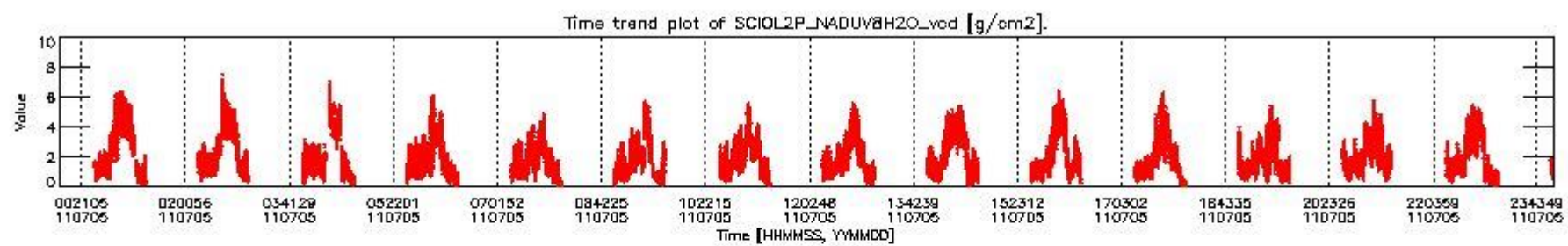




SCIOL2P\_NADUV60CL\_slant\_coLden for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 sp SCIOL2P\_NADUV60CL\_err\_slant\_col for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 sp

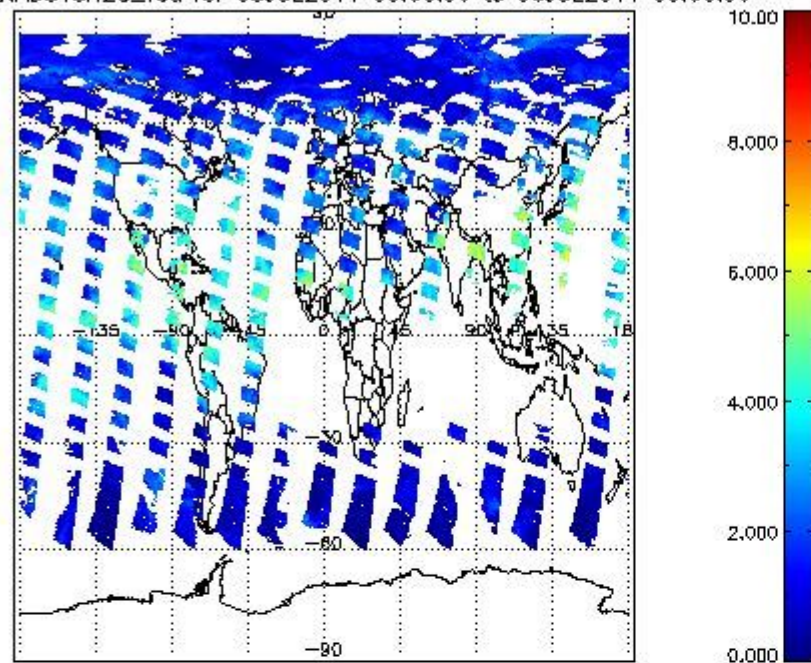


### 2.2.2.7 H2O (UV8)

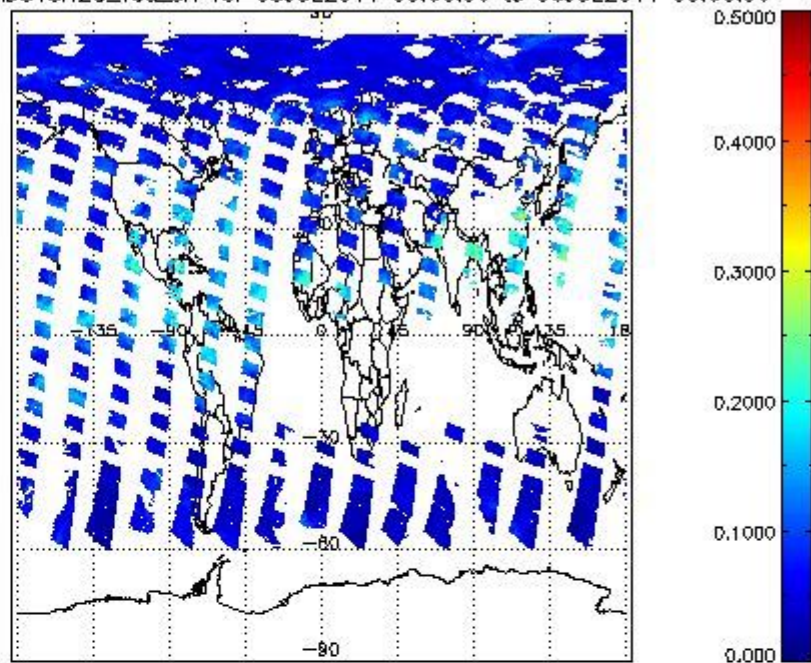




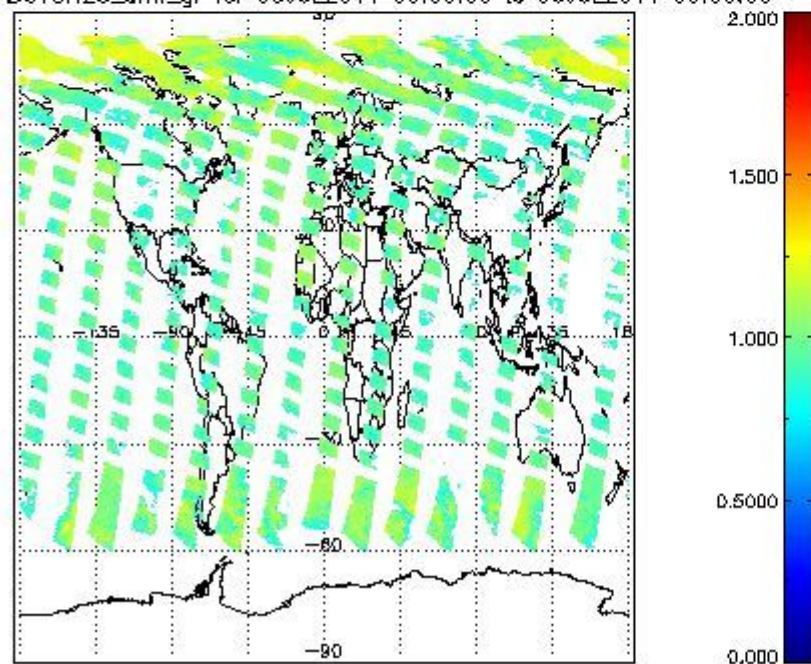
SCIOL2P\_NADUV8H20\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



SCIOL2P\_NADUV8H20\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

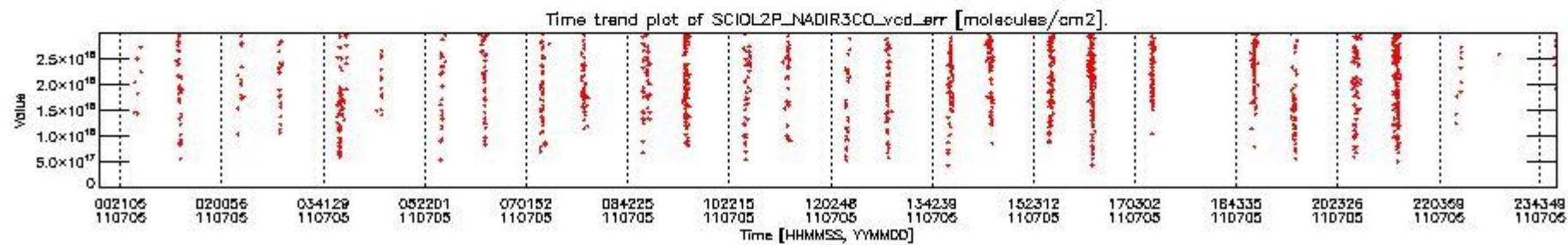
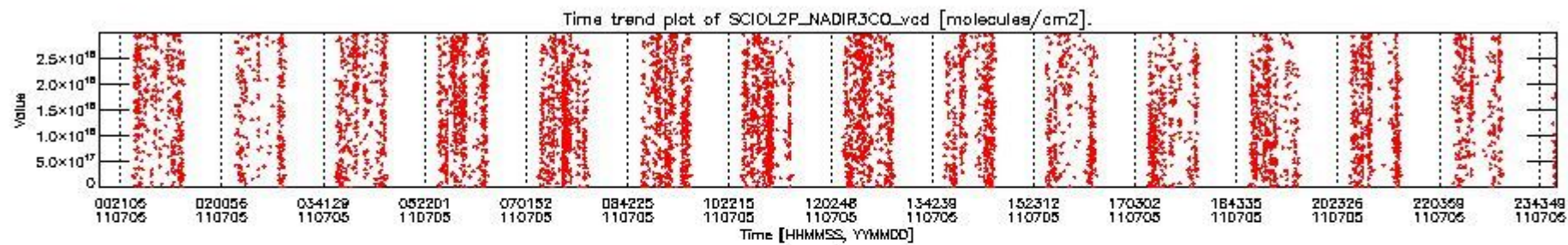


SCIOL2P\_NADUV8H20\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

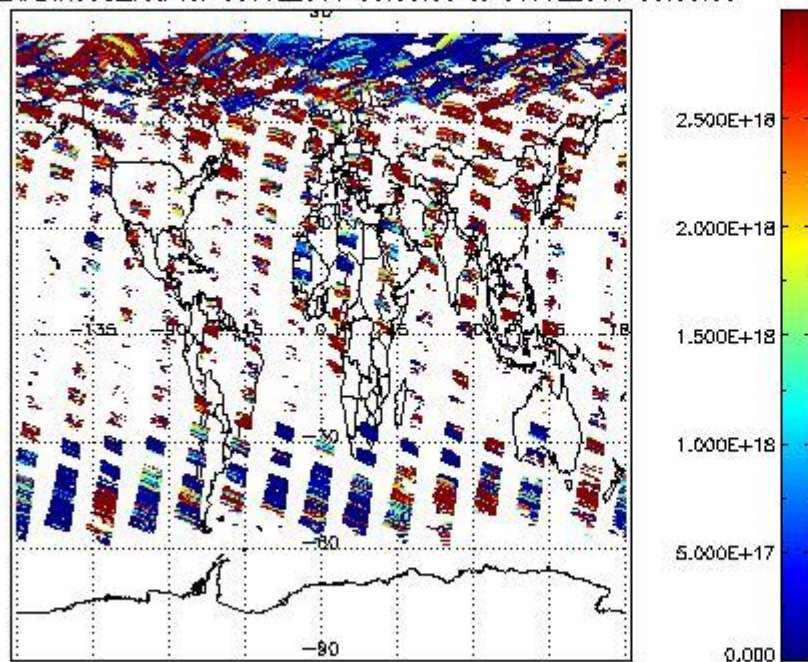


2.2.2.8 CO (IR3)

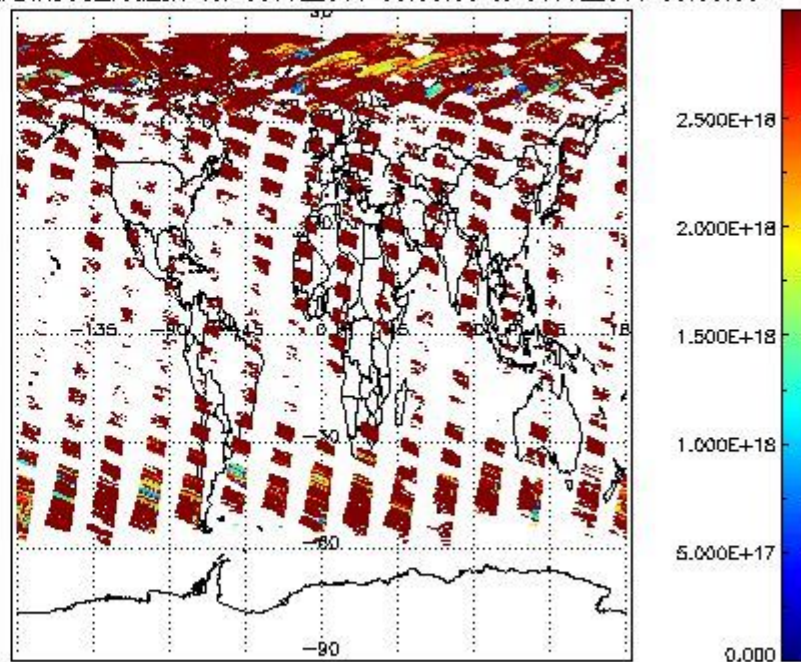




SCIDL2P\_NADIR3CO\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 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.

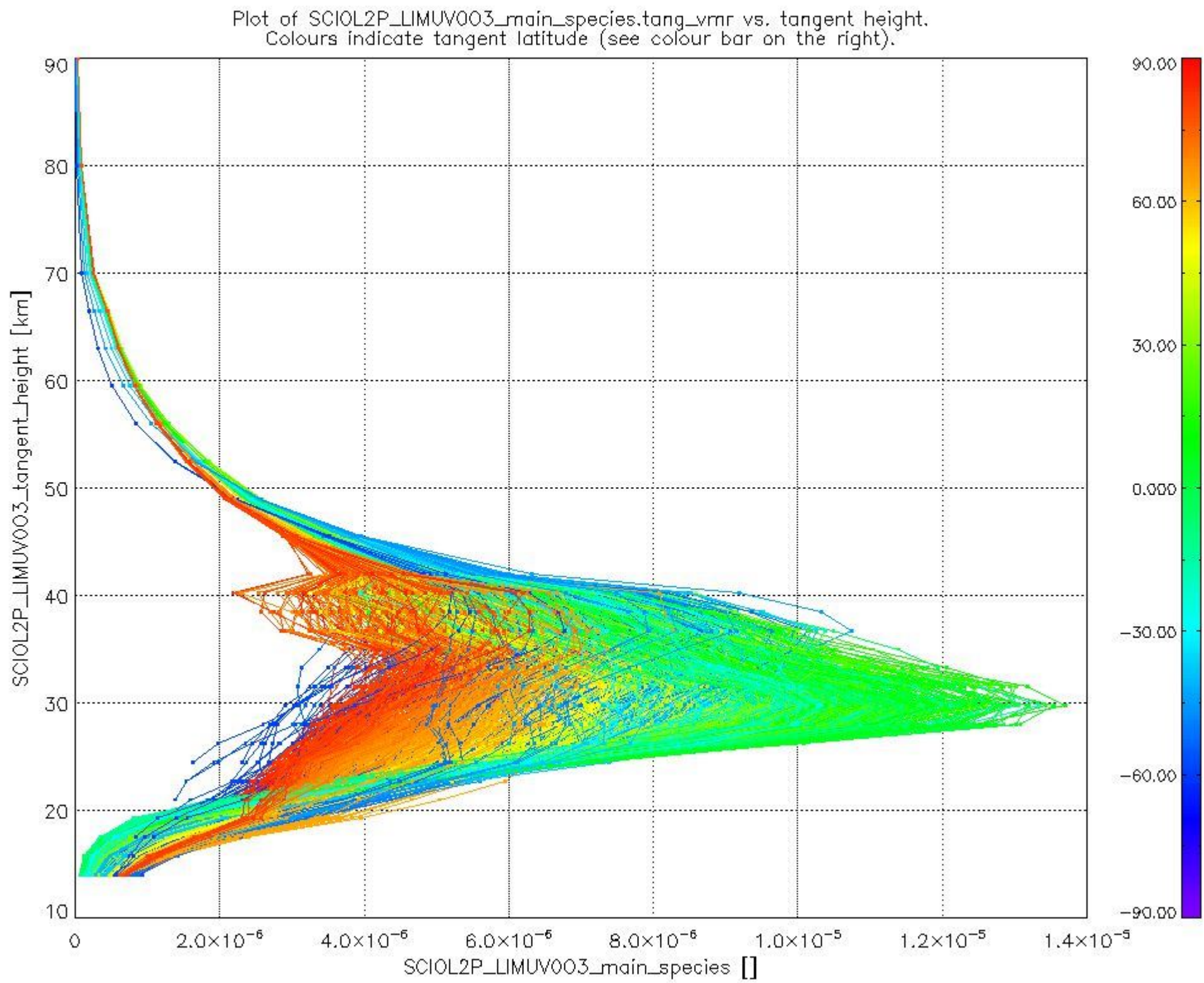
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



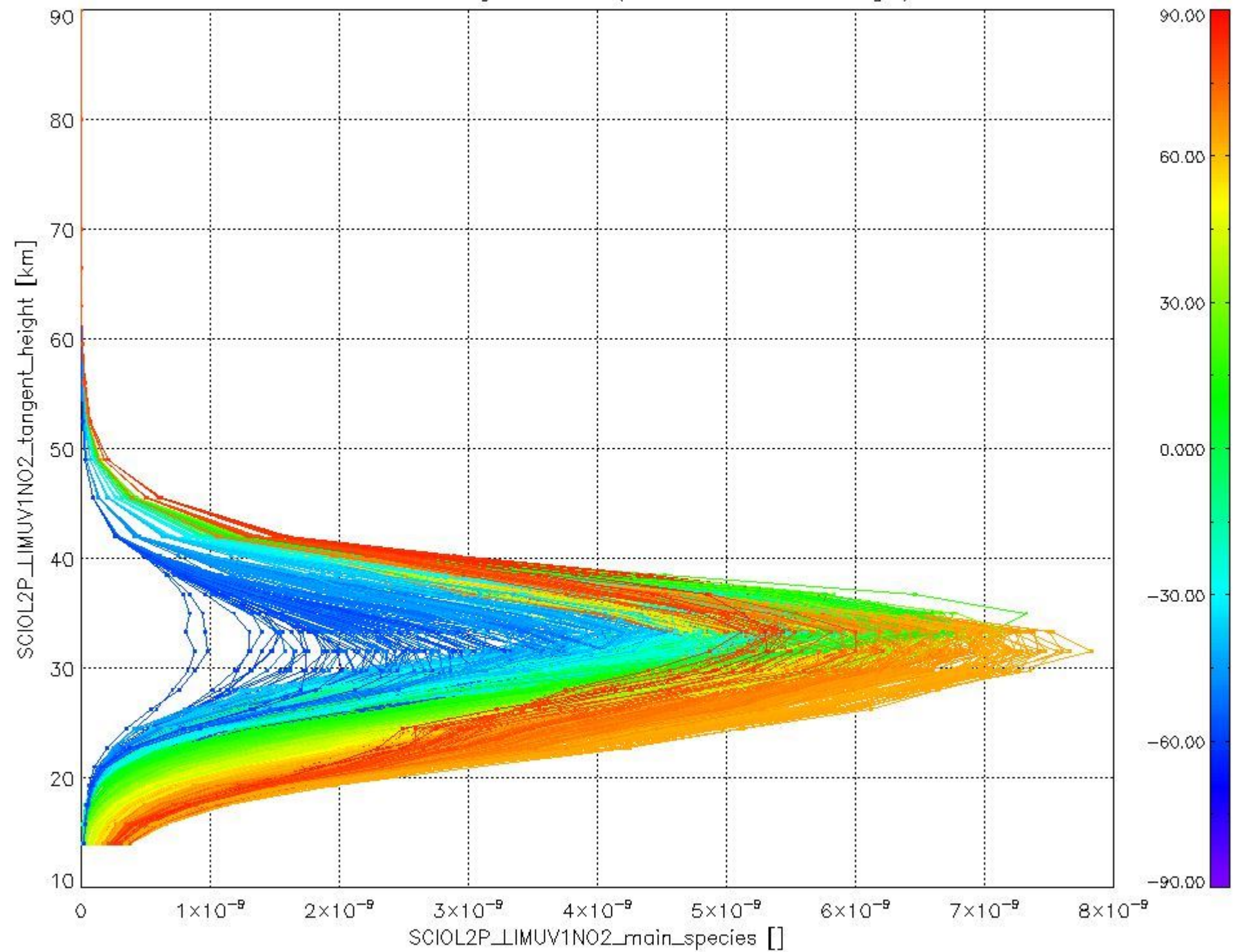
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)

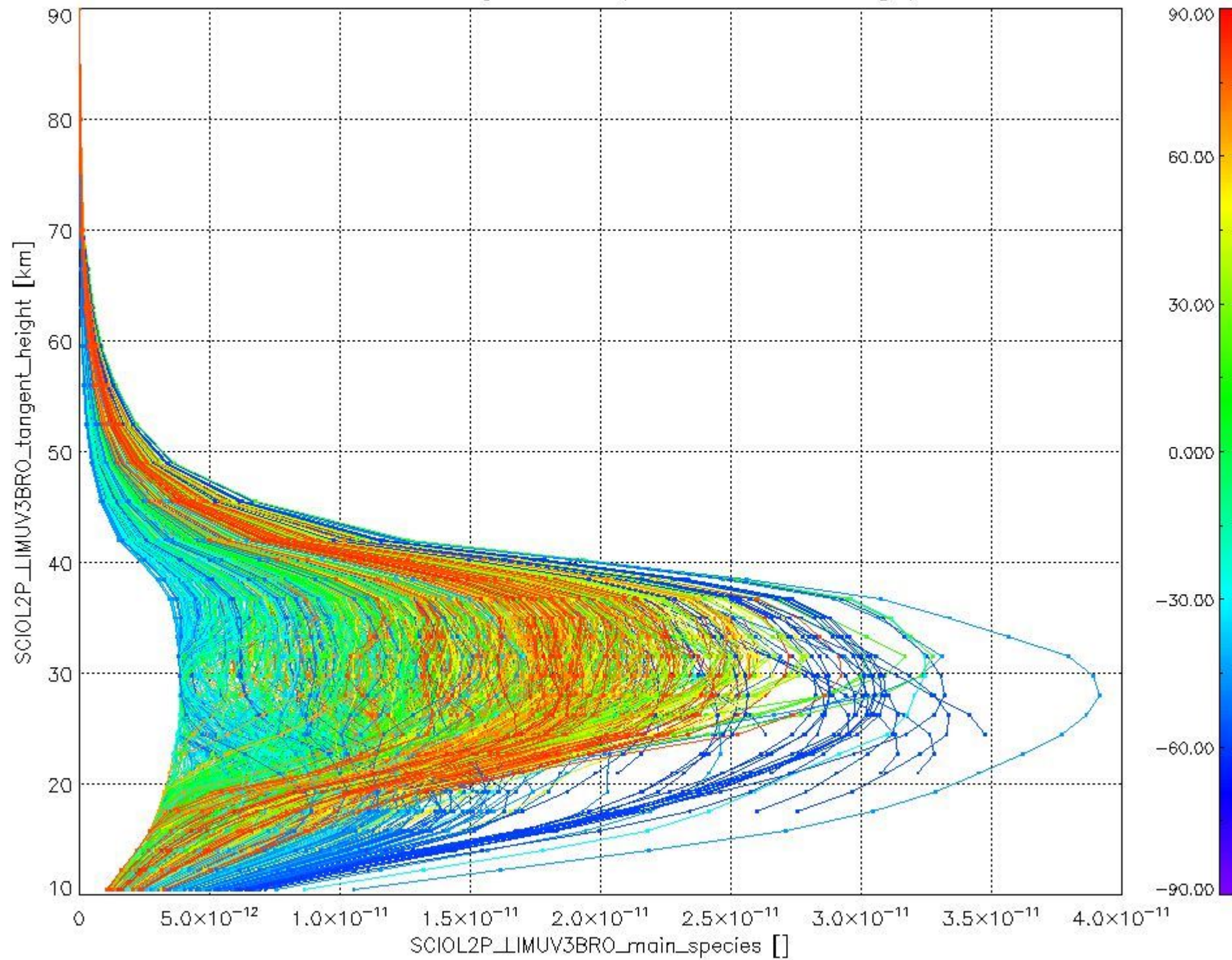
Plot of SCIO2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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

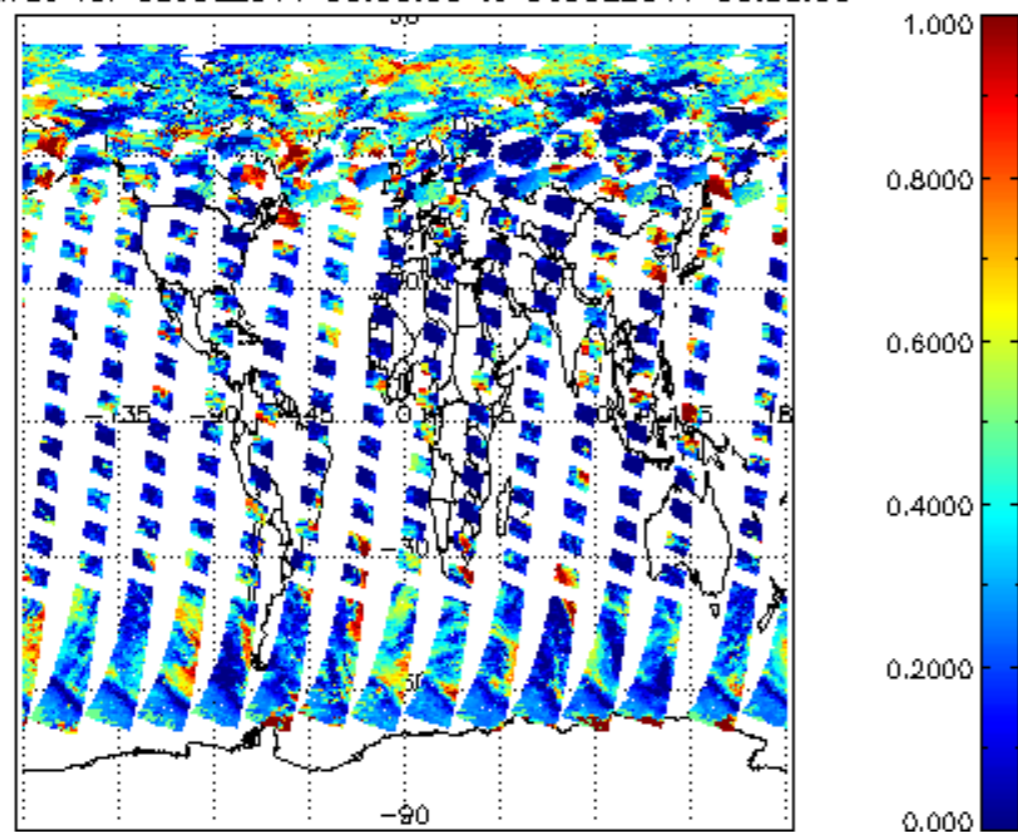
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110705_110710_20110704_190109_20110706_190109
3	SCI_MF1_AXVIEC20110712_110022_20110705_182424_20110707_182424



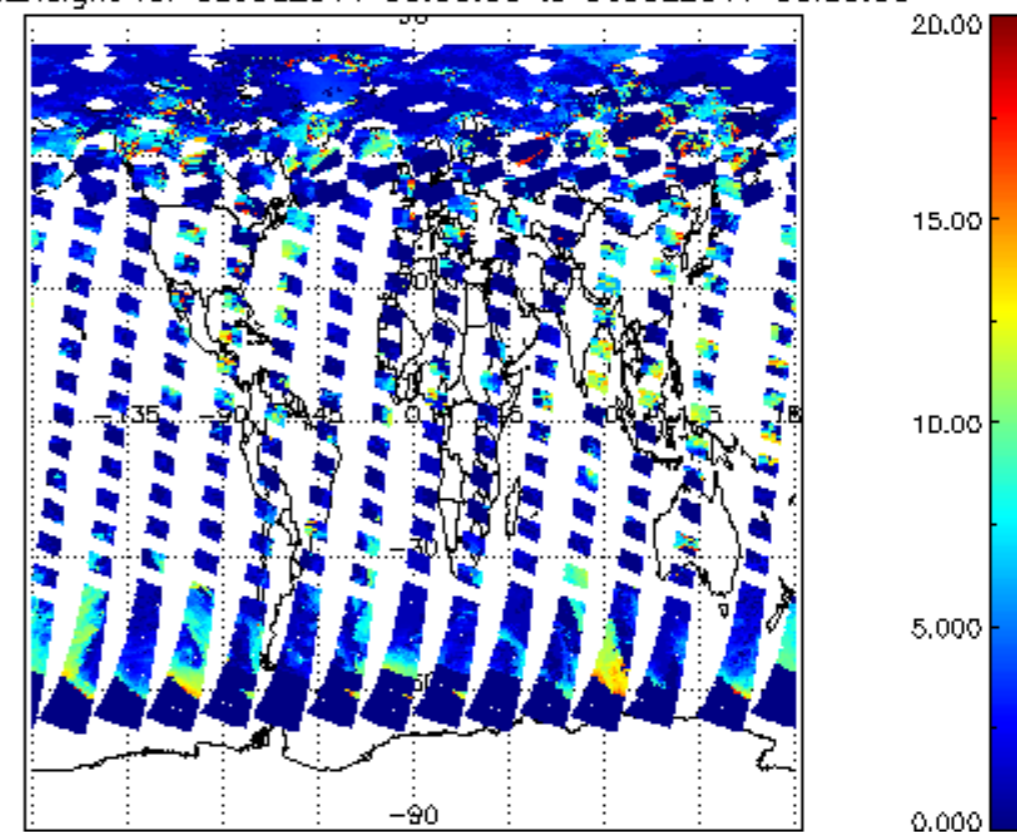




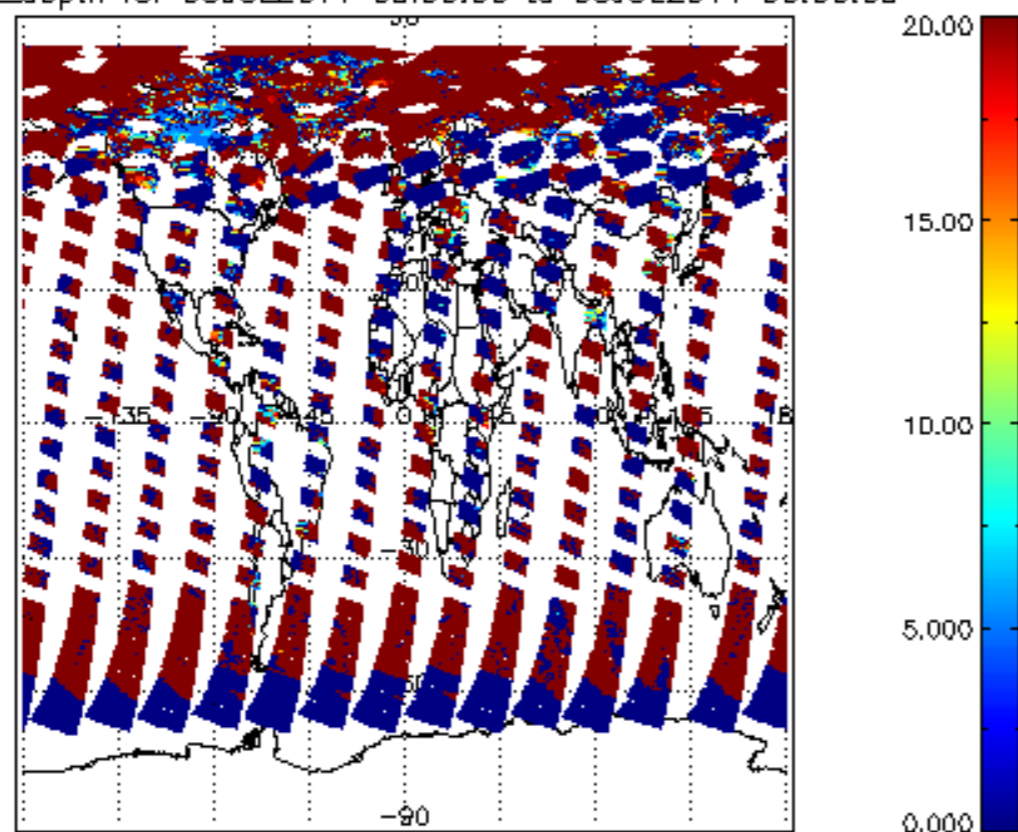
cl\_frac for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



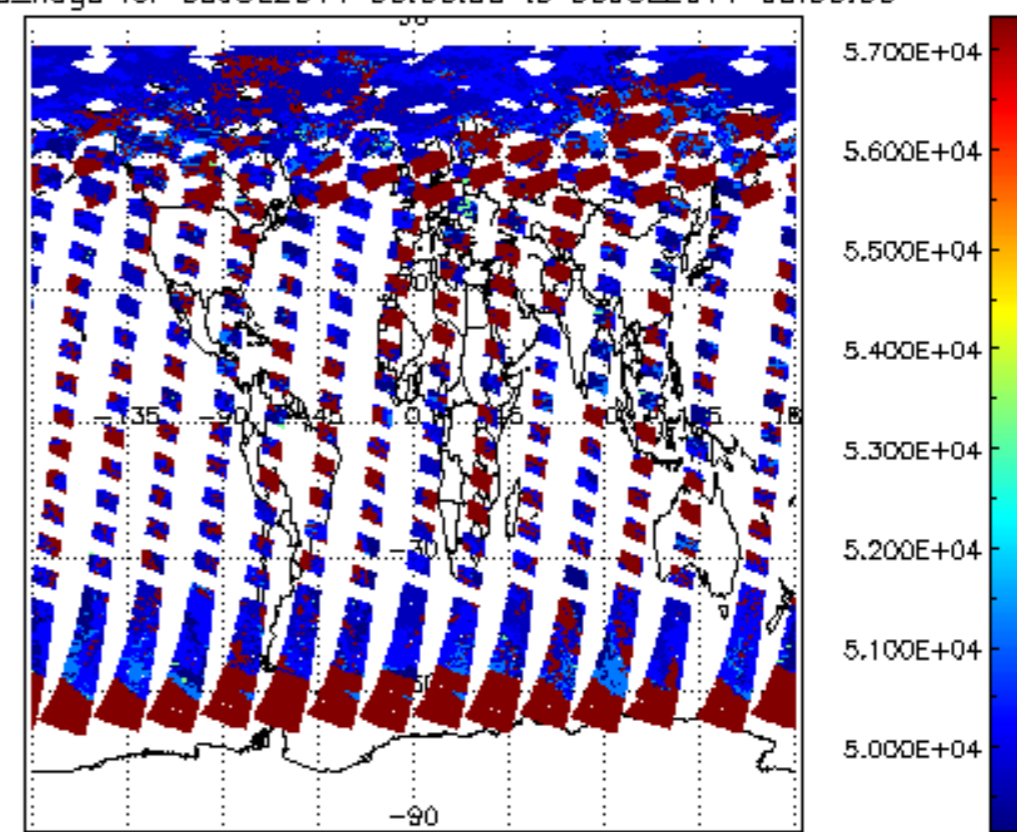
cl\_top\_height for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



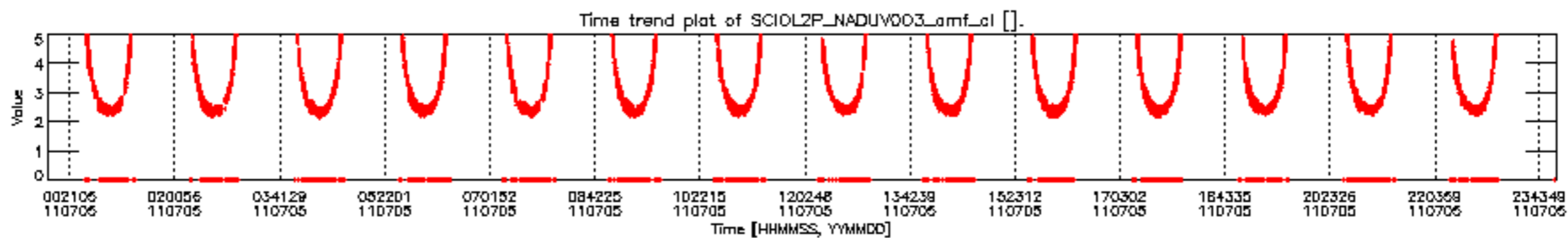
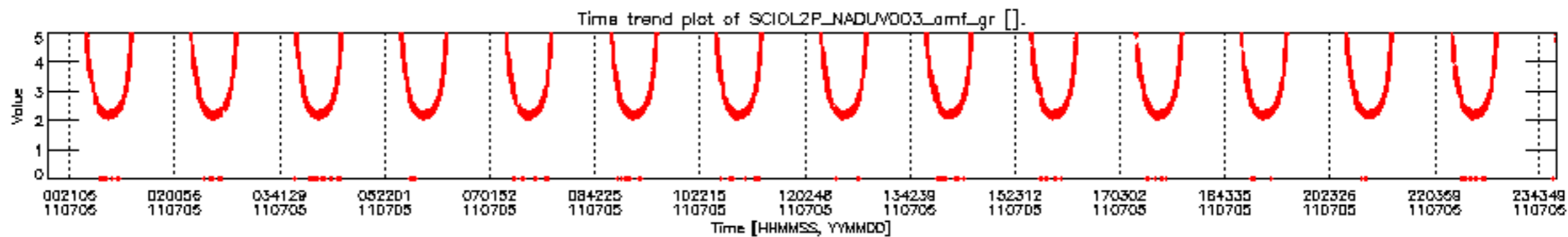
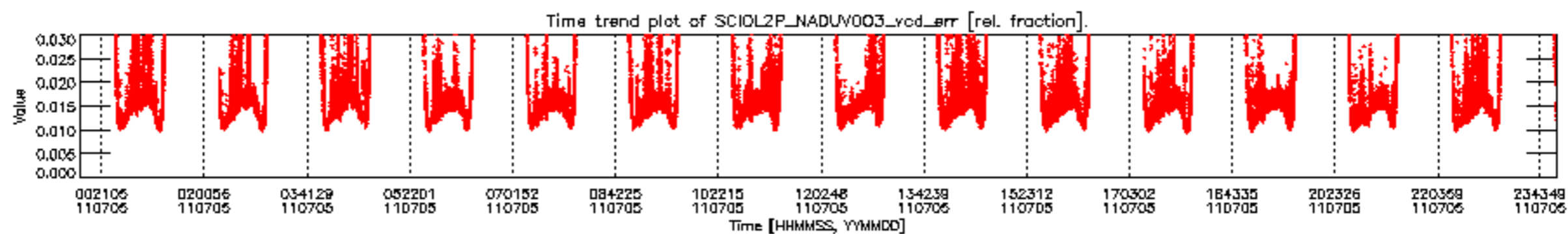
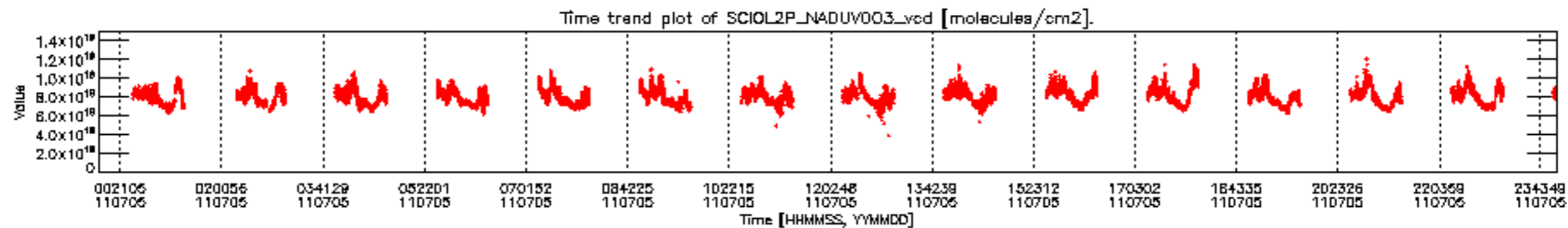
cl\_opt\_depth for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



cloud\_flags for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

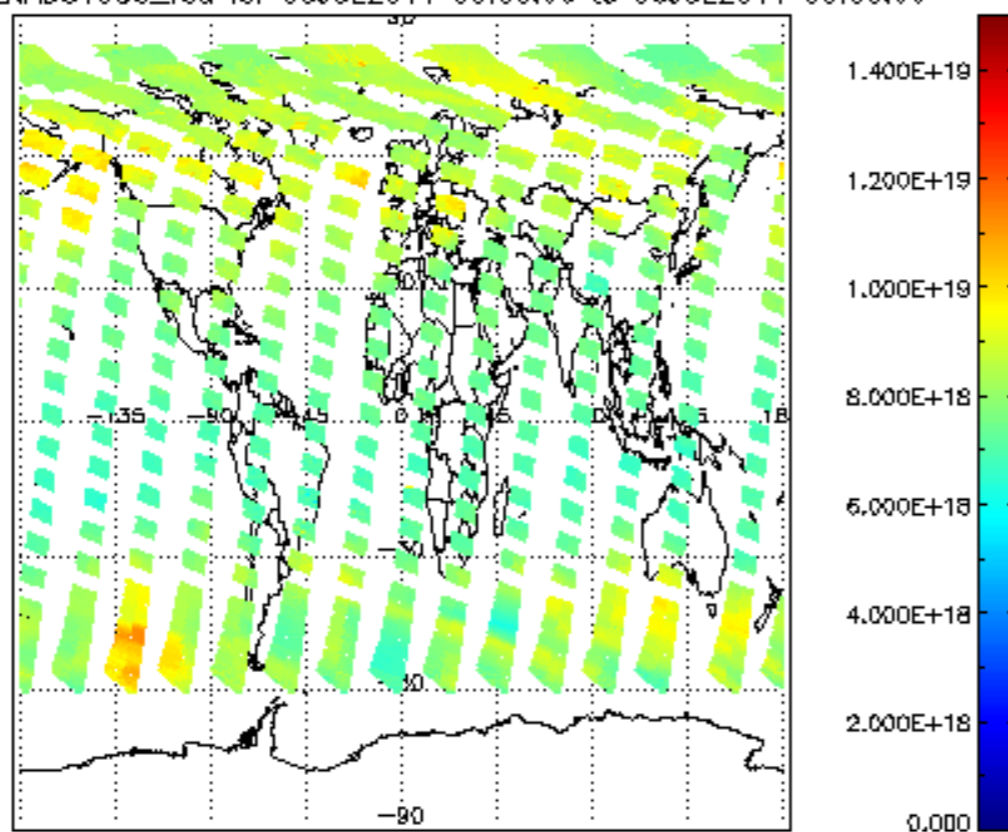




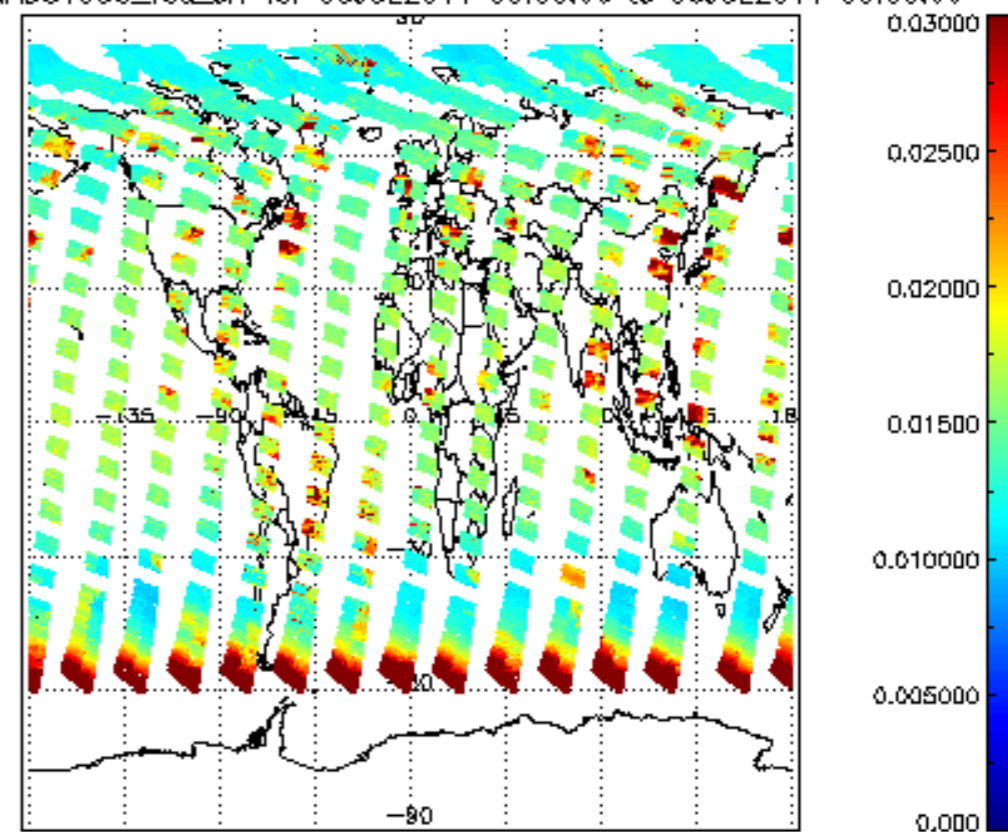




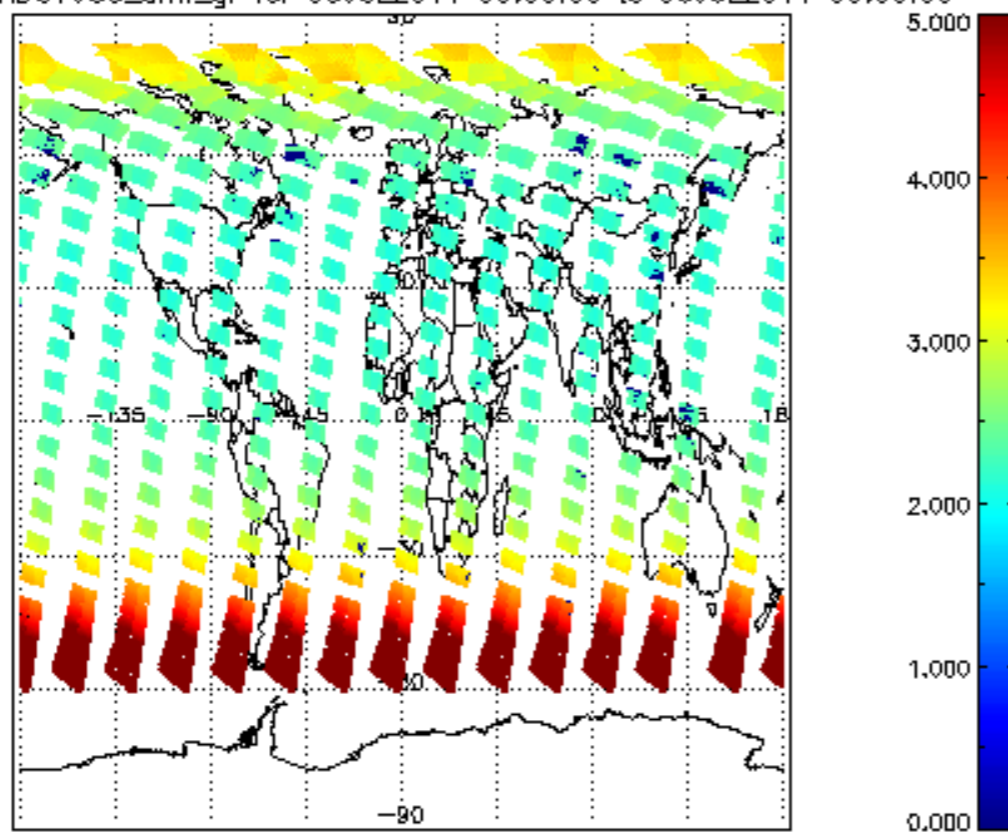
SCIOL2P\_NADUV003\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



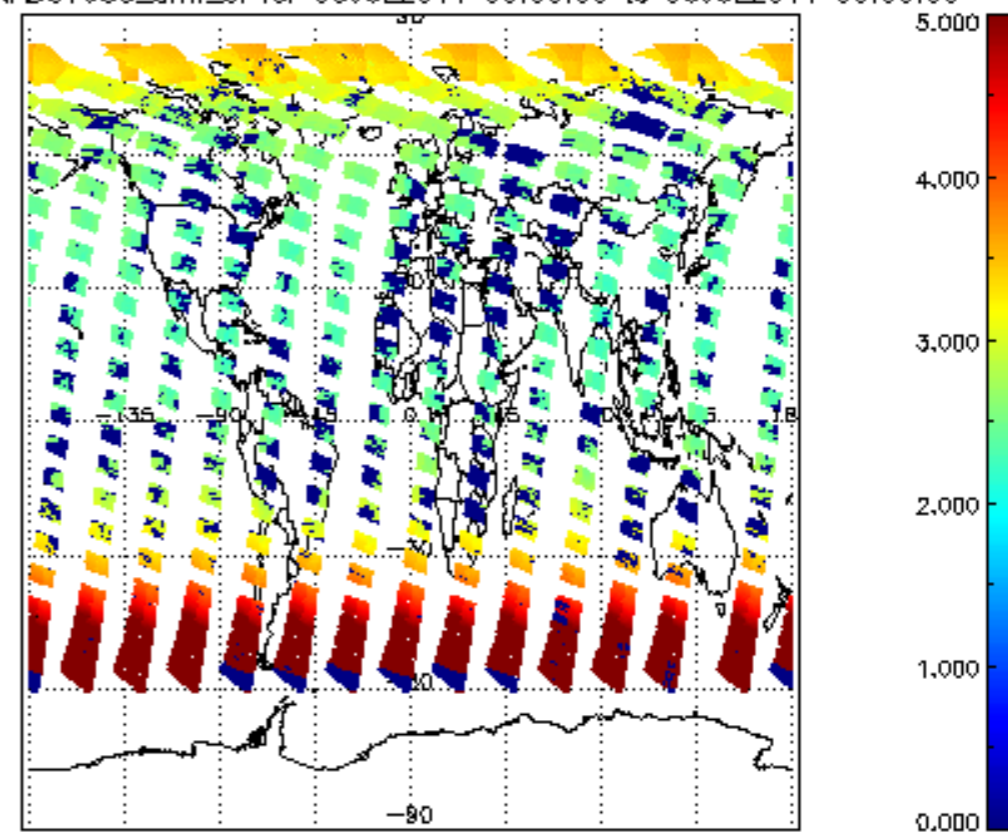
SCIOL2P\_NADUV003\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

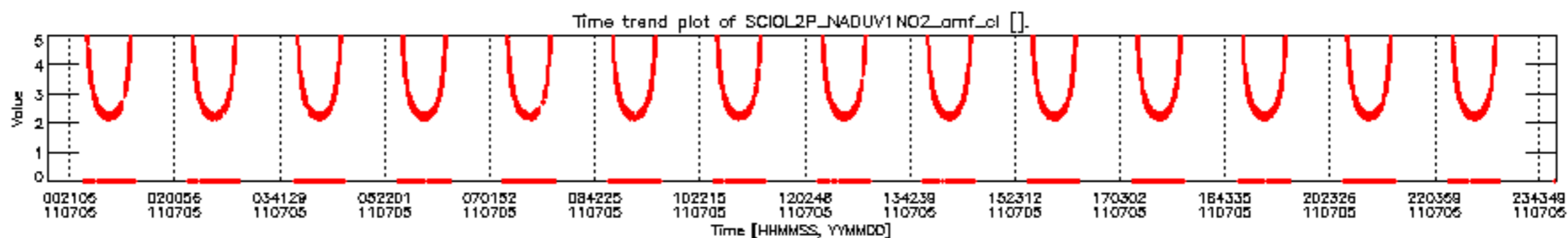
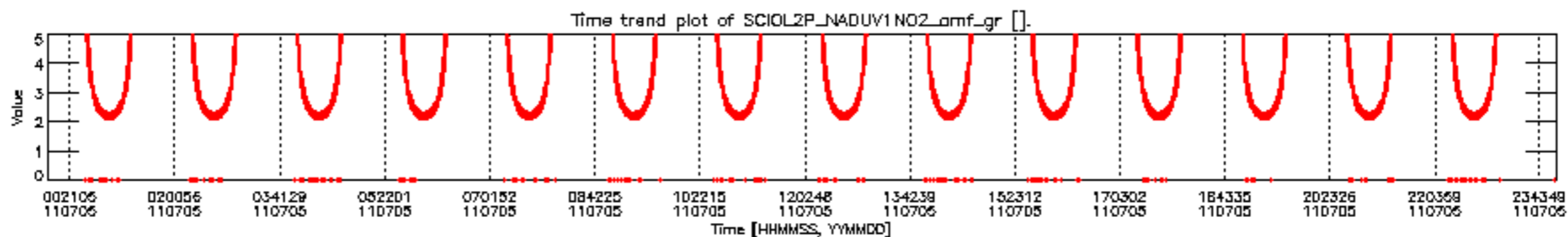
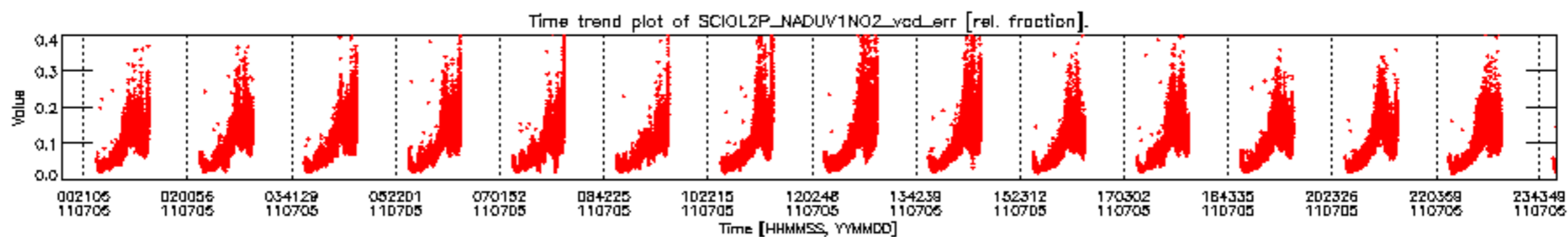
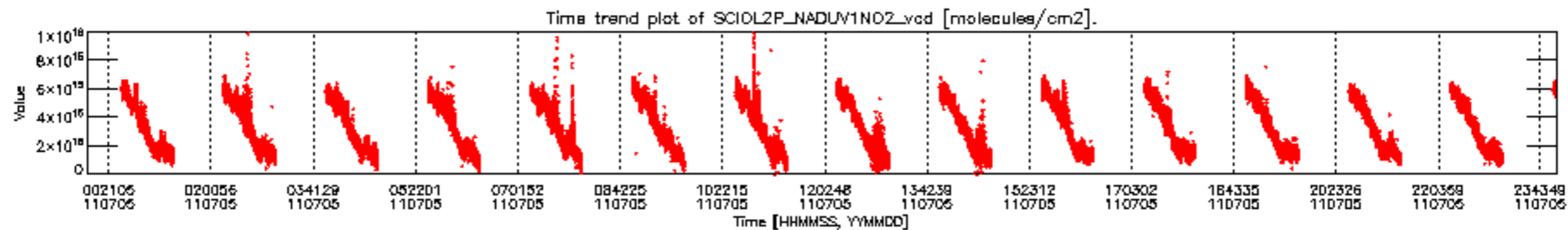


SCIOL2P\_NADUV003\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



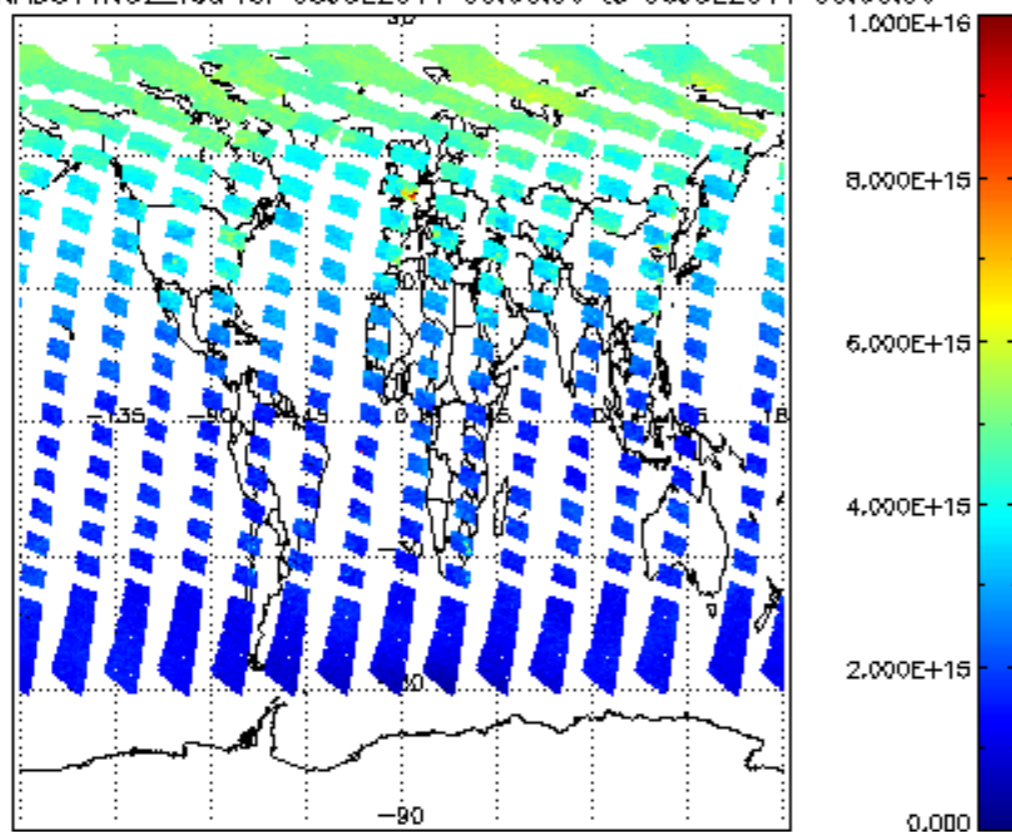
SCIOL2P\_NADUV003\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



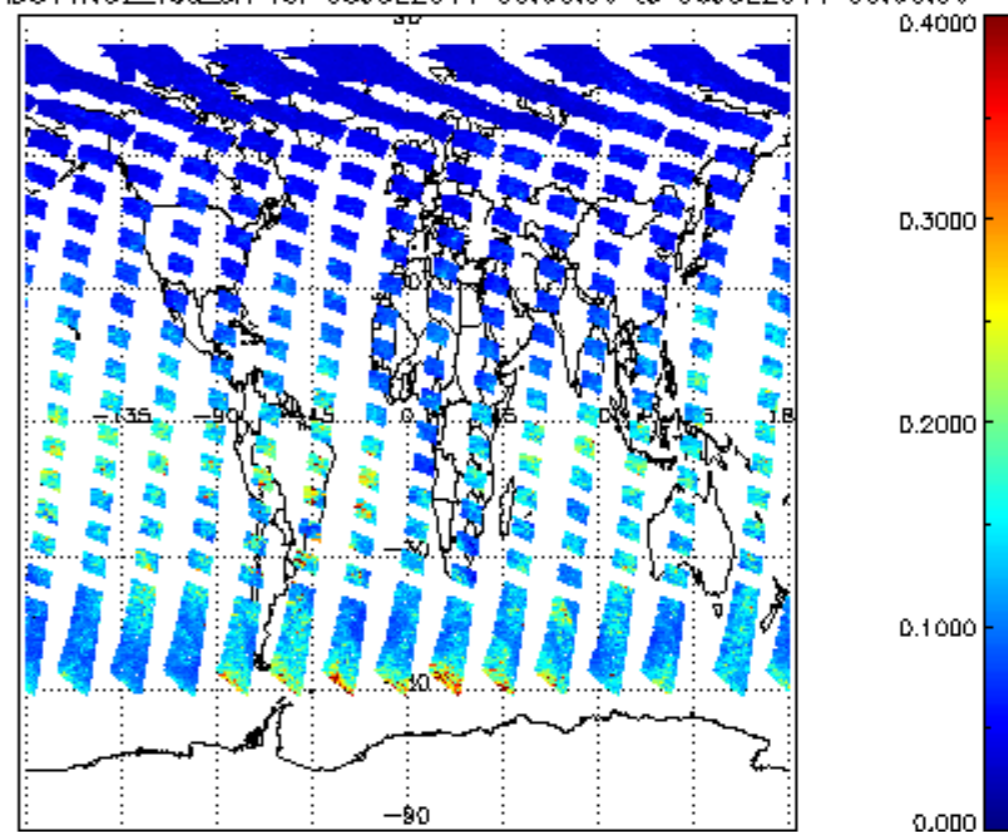




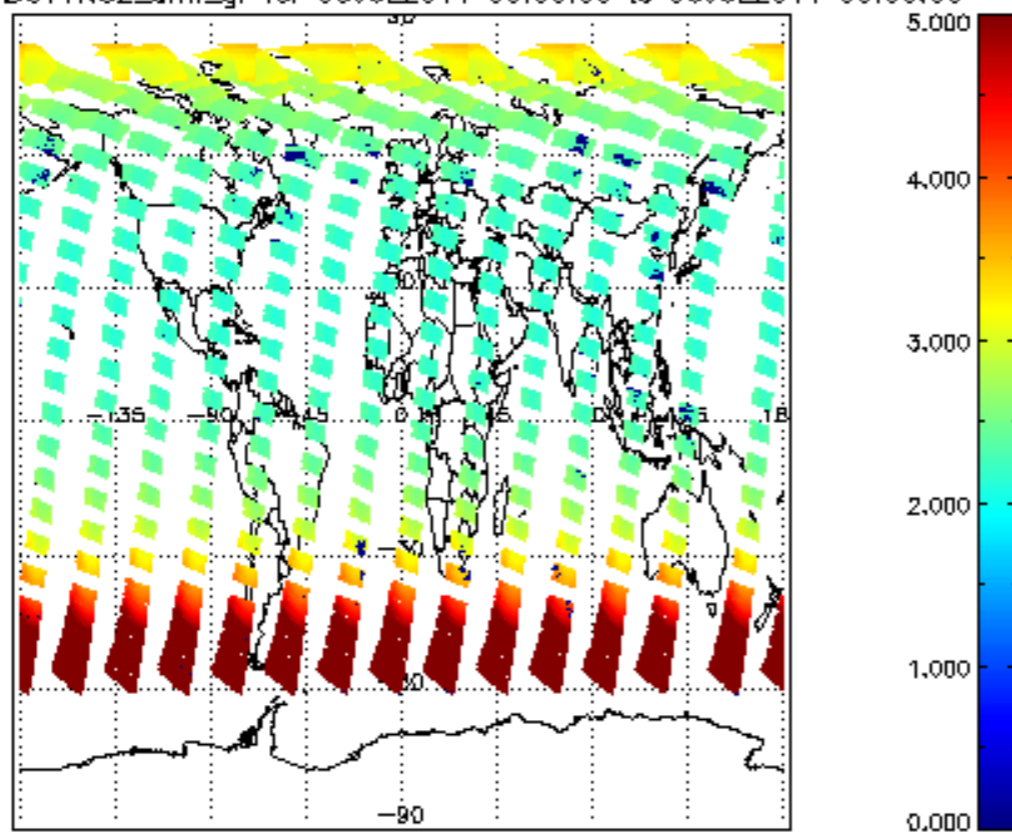
SCIOL2P\_NADUV1N02\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



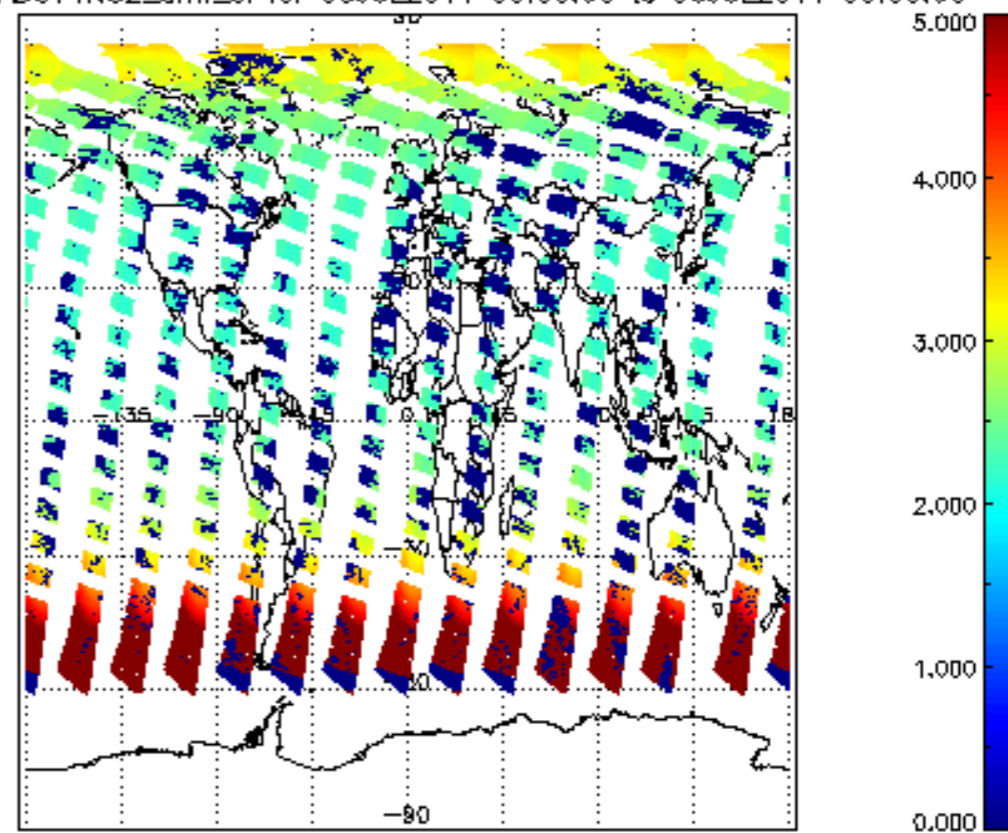
SCIOL2P\_NADUV1N02\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

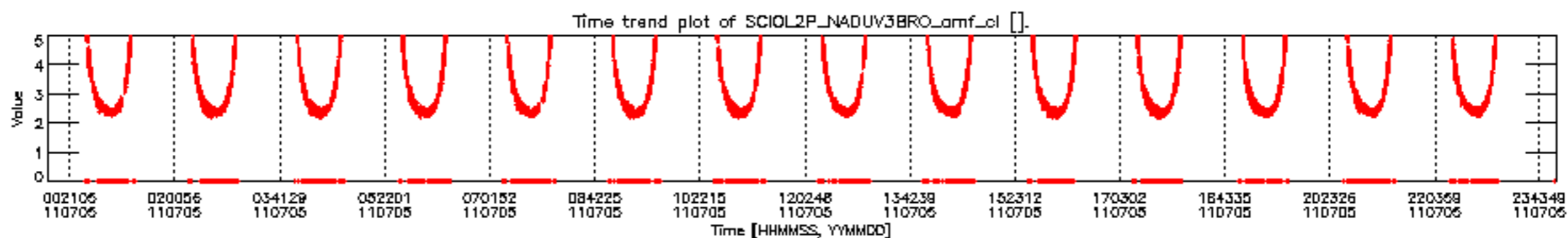
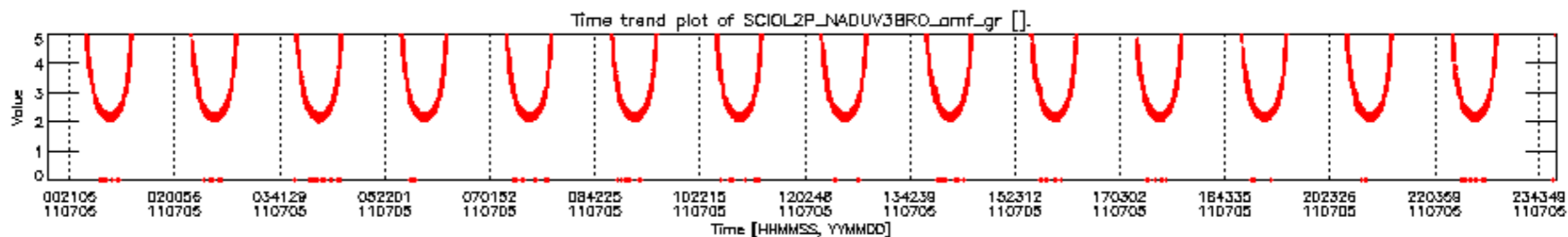
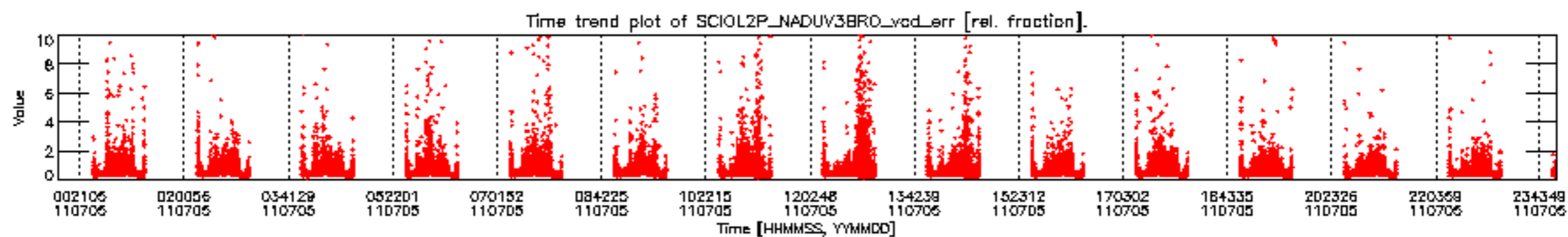
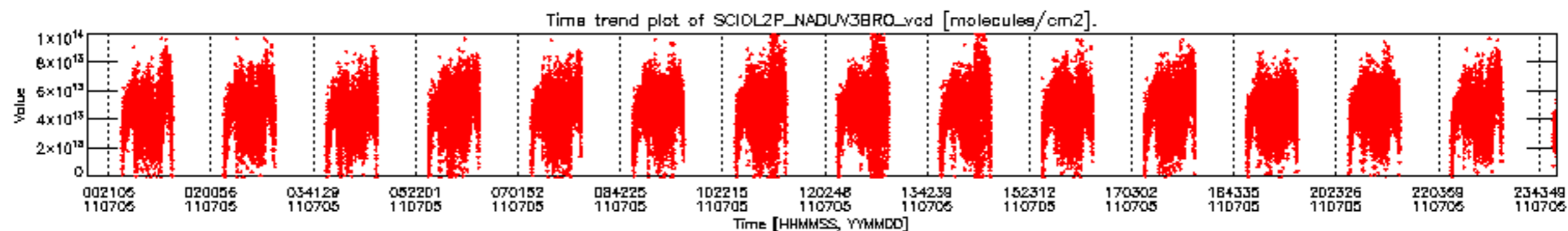


SCIOL2P\_NADUV1N02\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



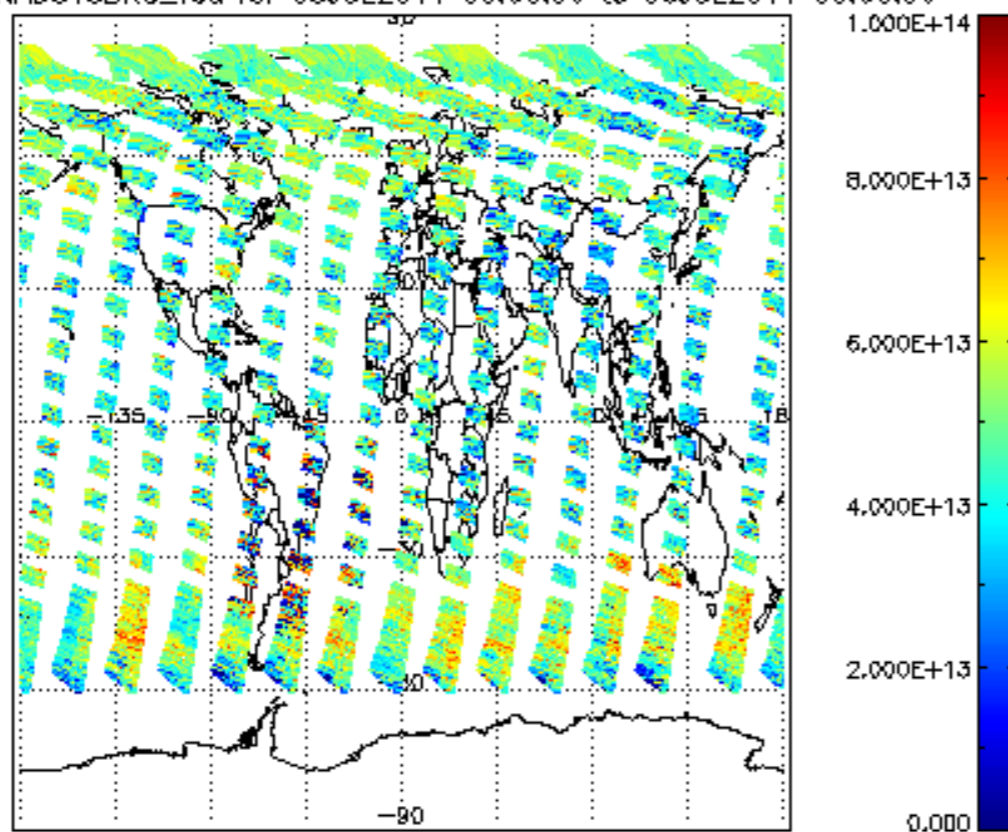
SCIOL2P\_NADUV1N02\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



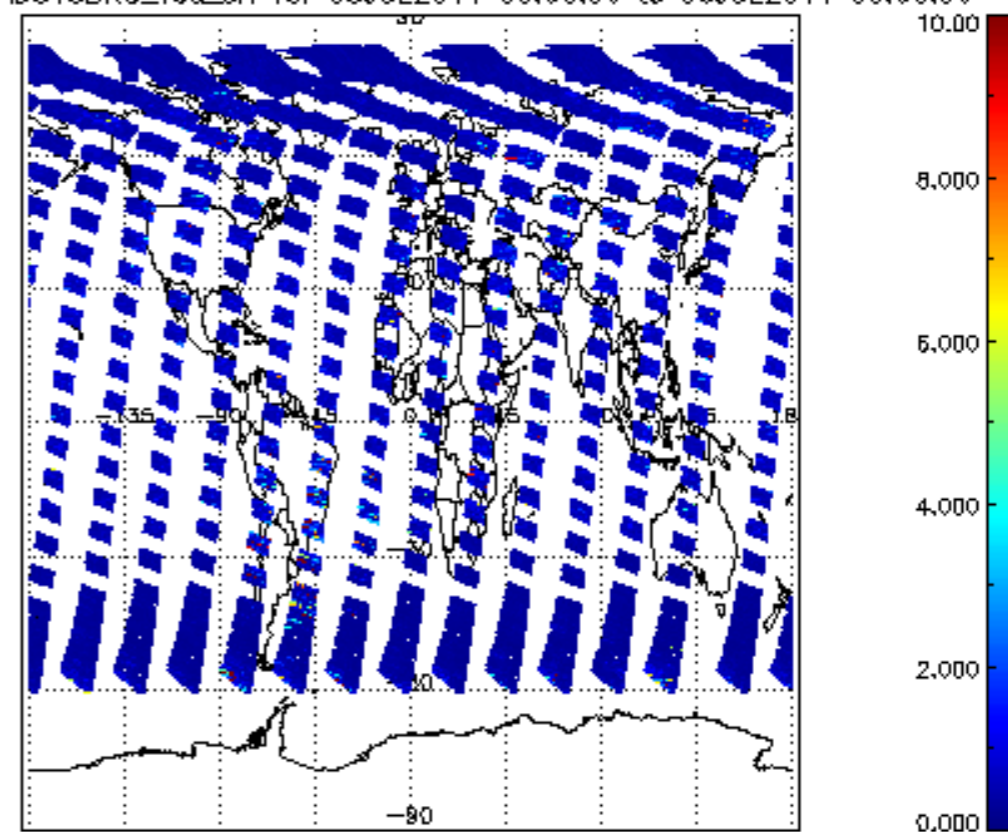




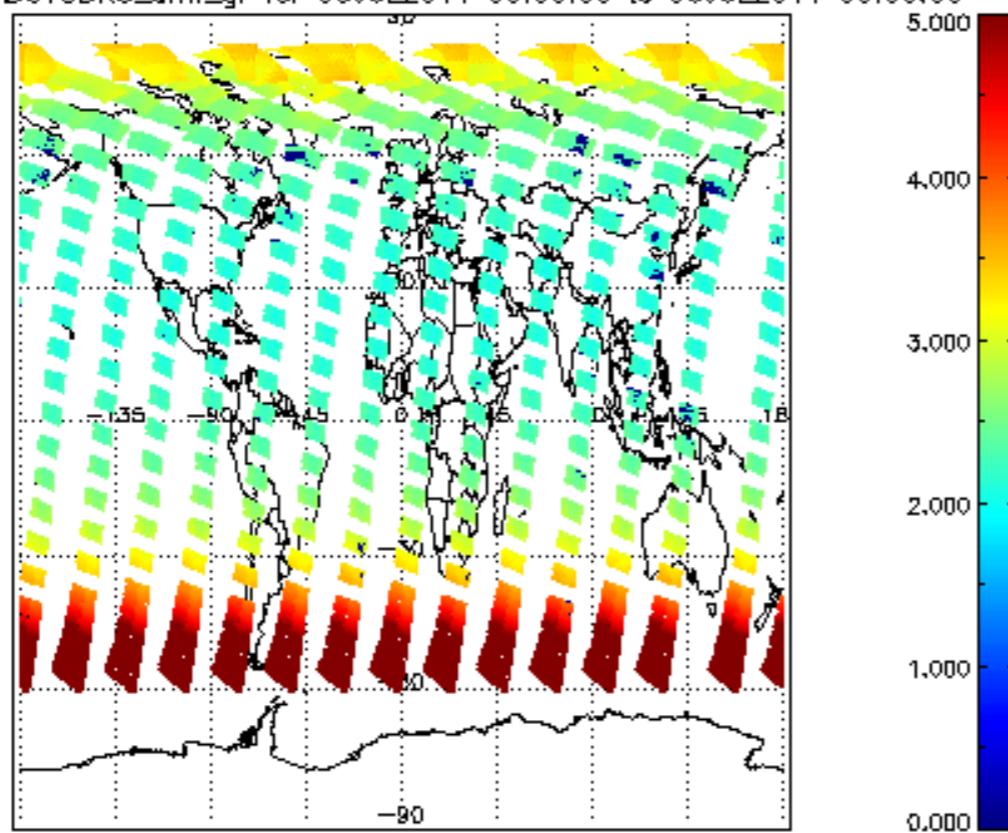
SCIOL2P\_NADUV3BRO\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



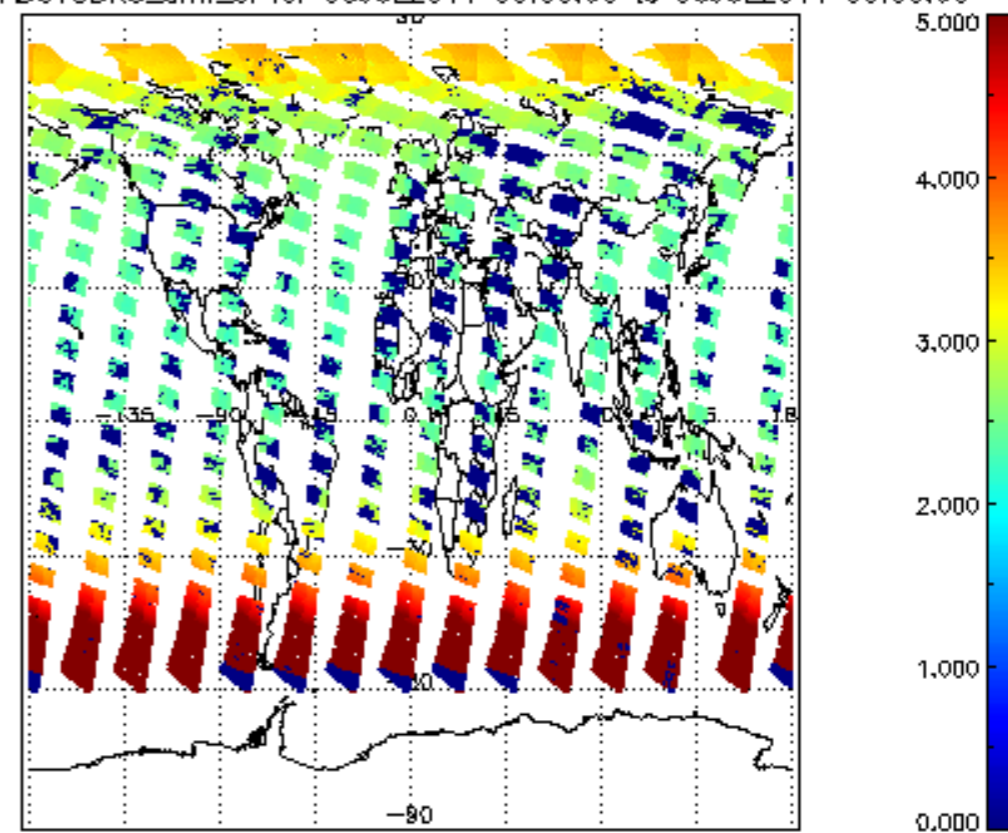
SCIOL2P\_NADUV3BRO\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

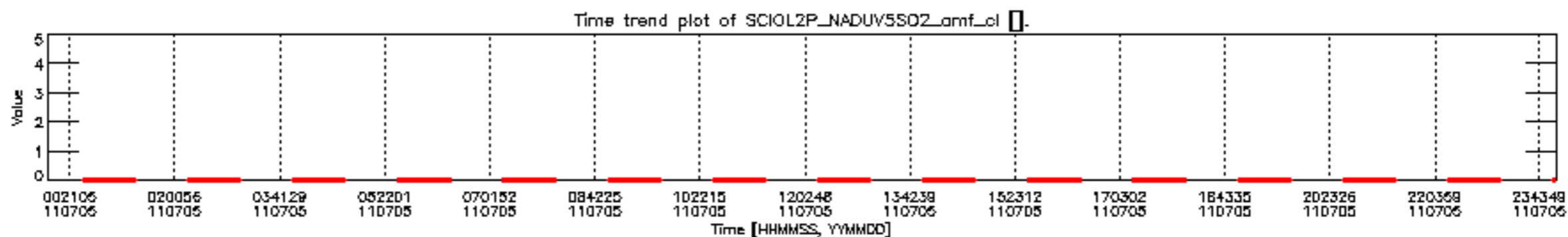
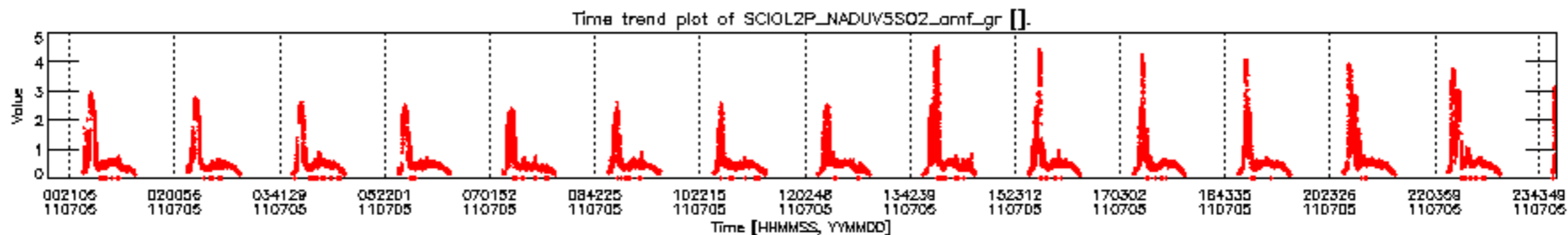
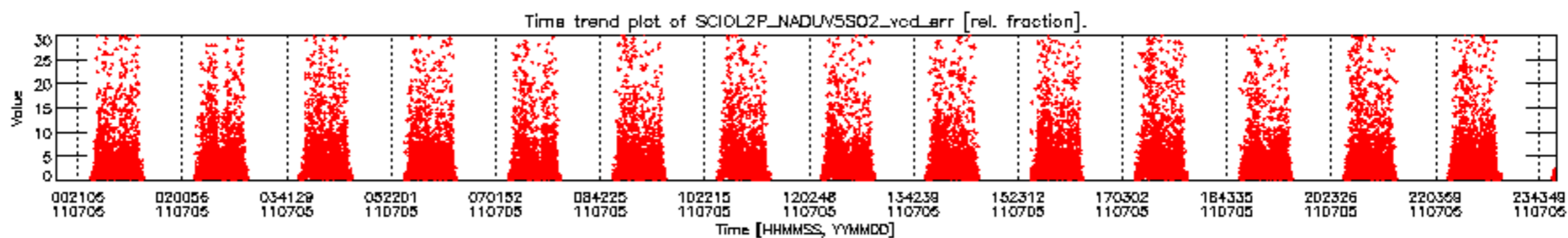
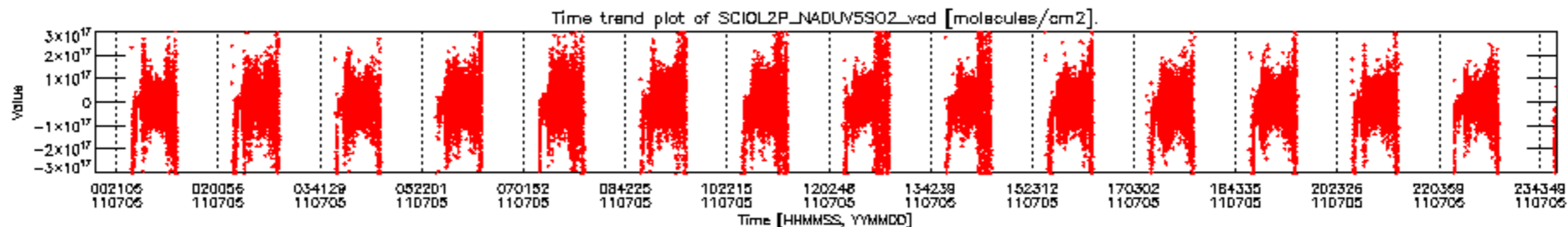


SCIOL2P\_NADUV3BRO\_arnf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



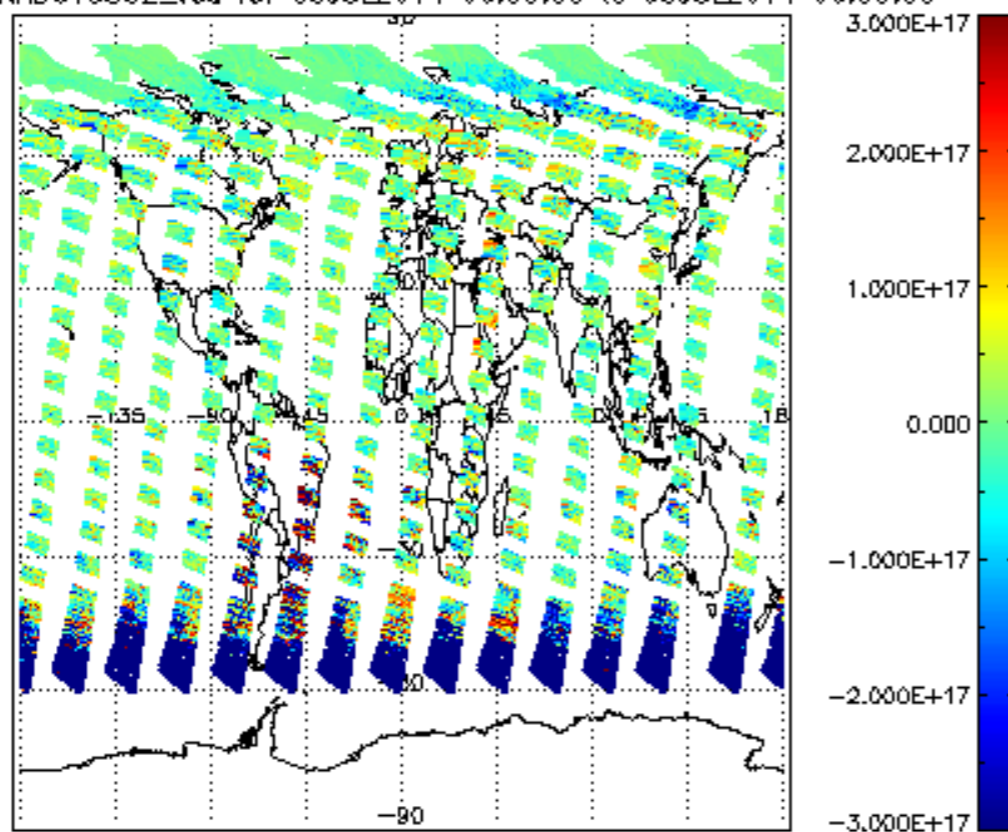
SCIOL2P\_NADUV3BRO\_arnf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



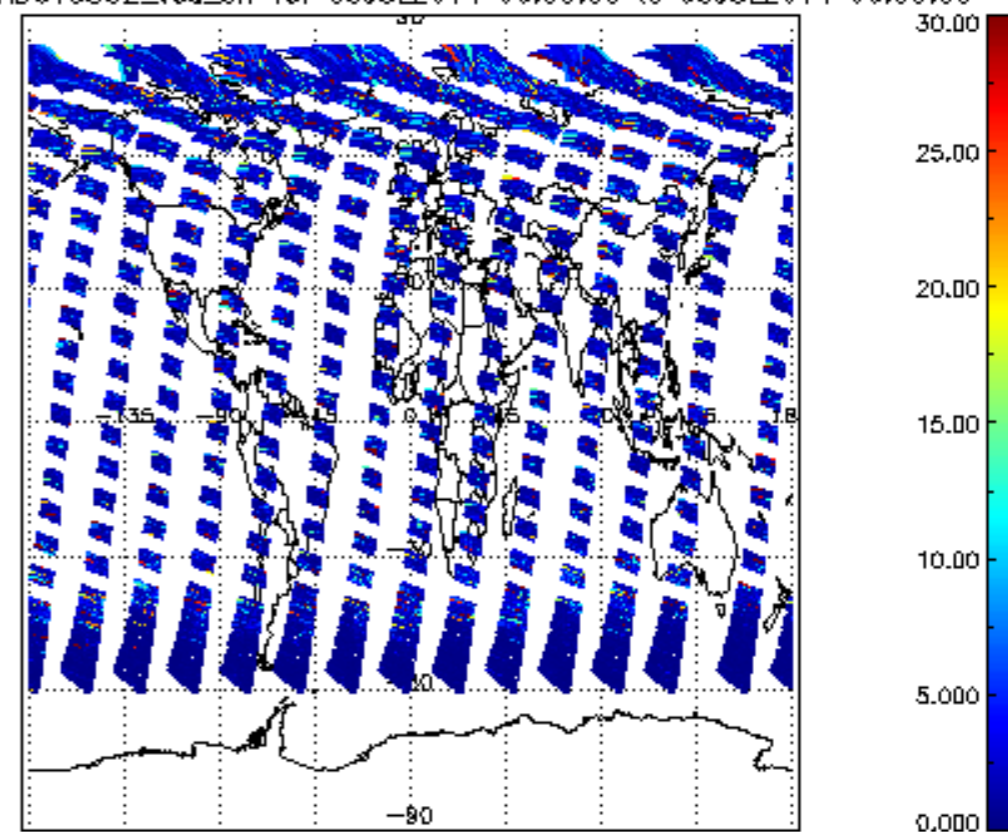




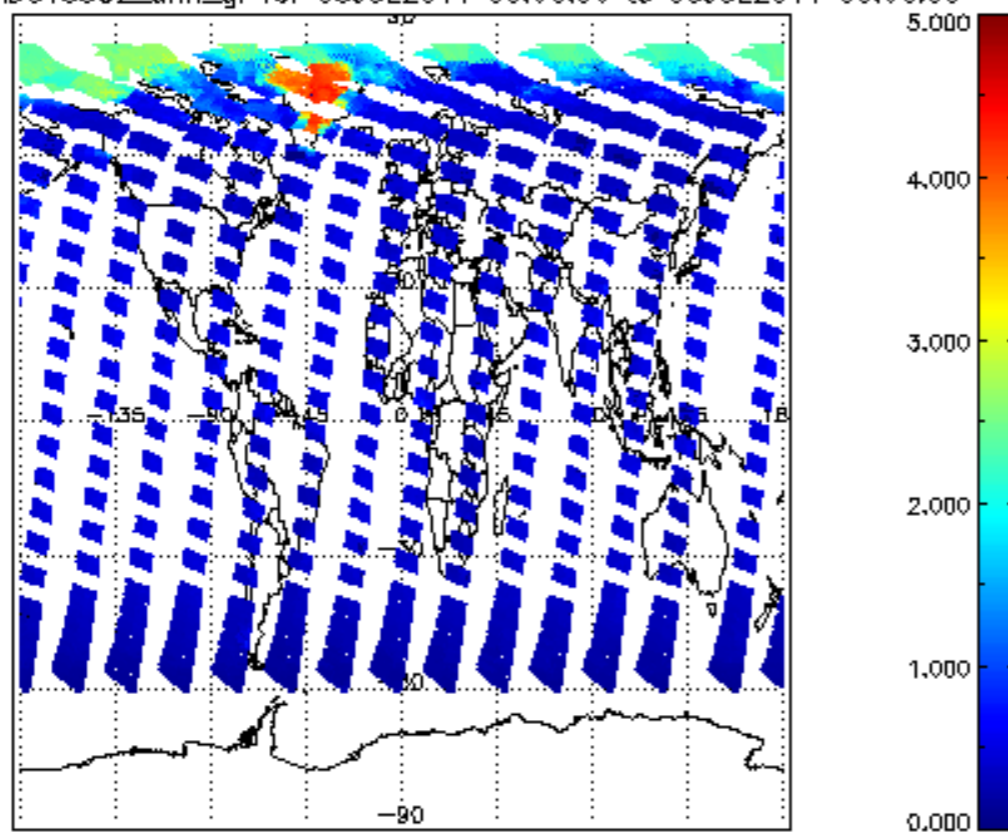
SCIOL2P\_NADUV5S02\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



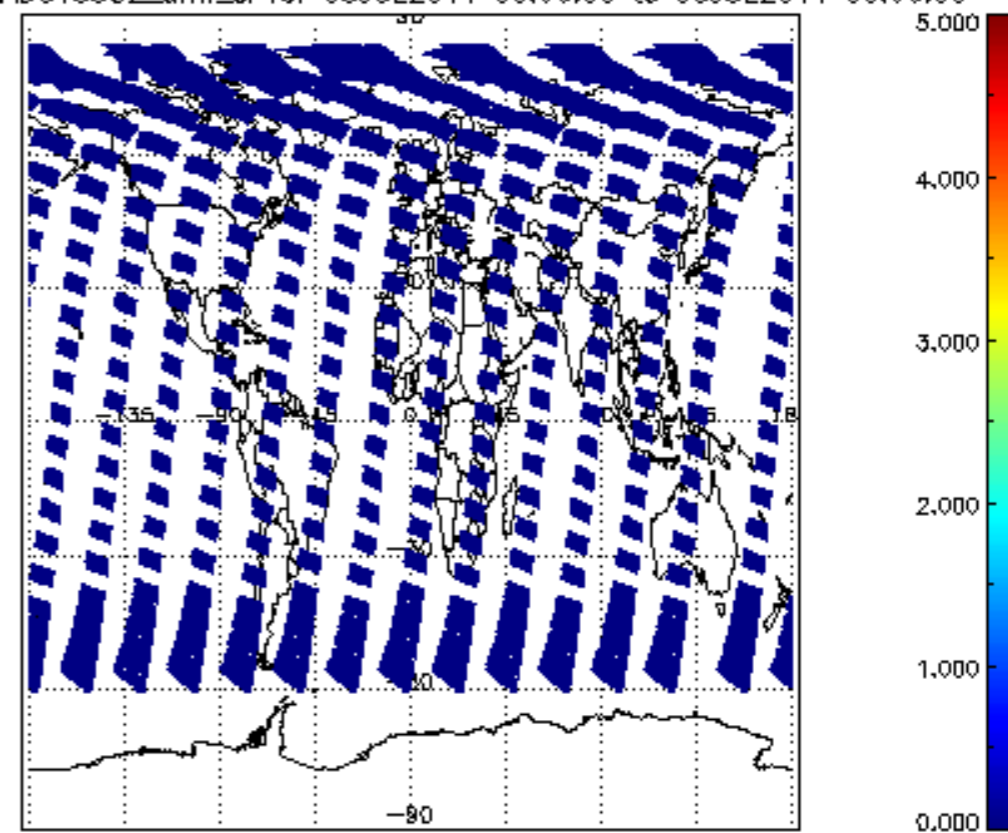
SCIOL2P\_NADUV5S02\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

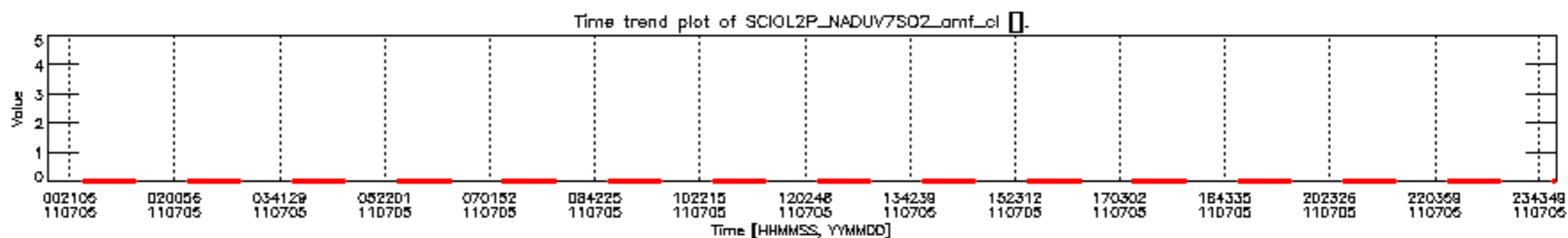
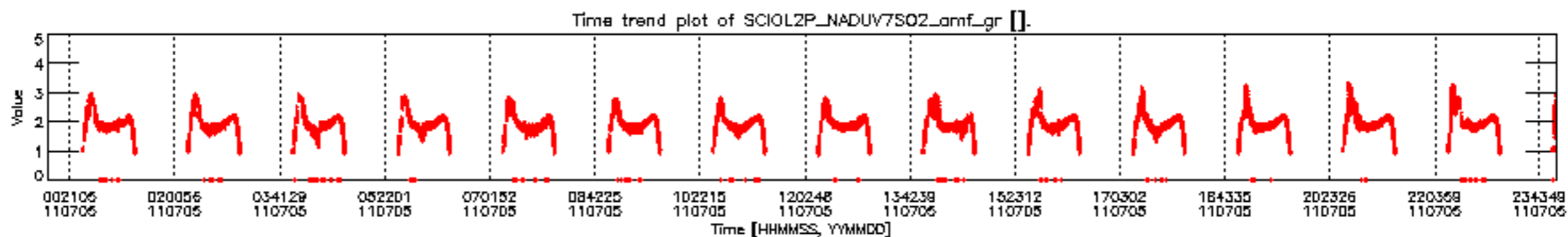
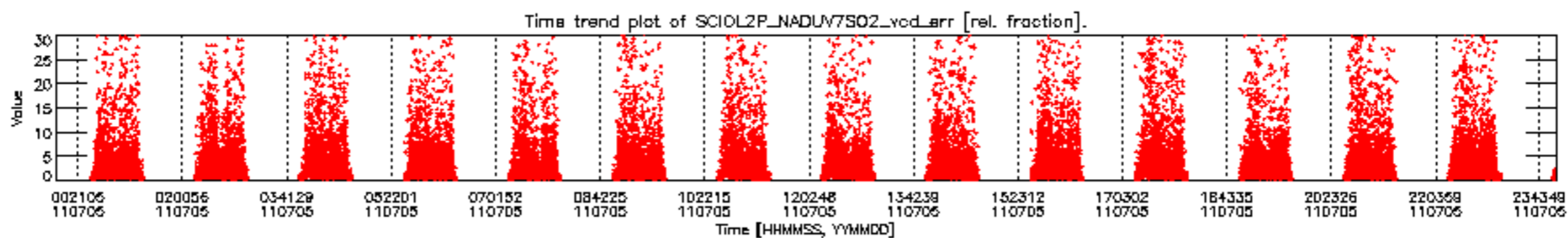
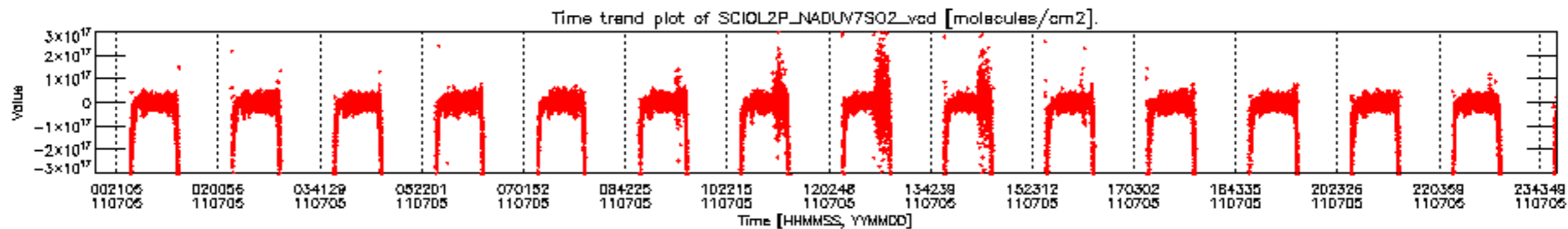


SCIOL2P\_NADUV5S02\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



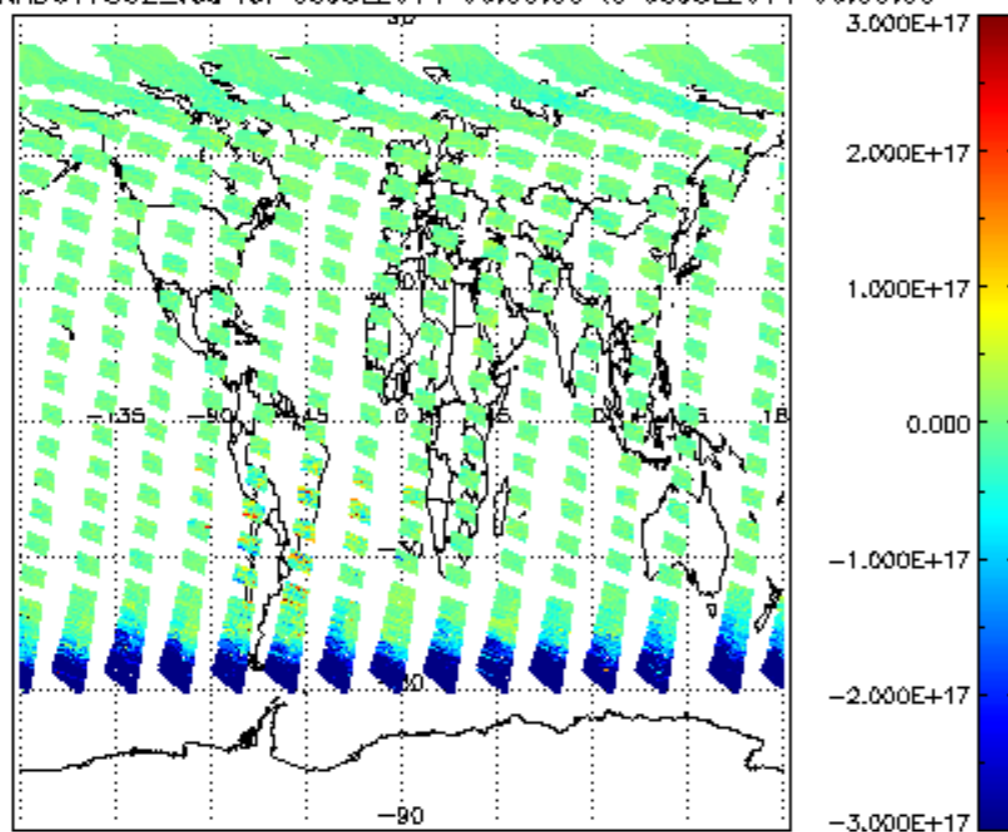
SCIOL2P\_NADUV5S02\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



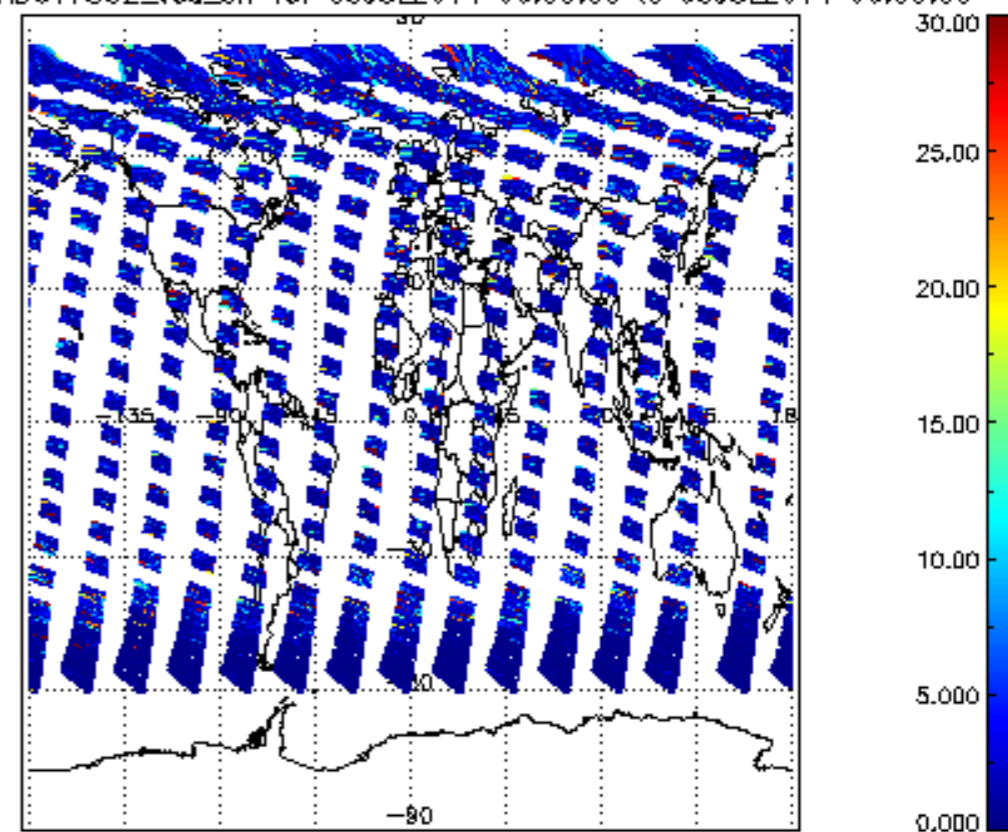




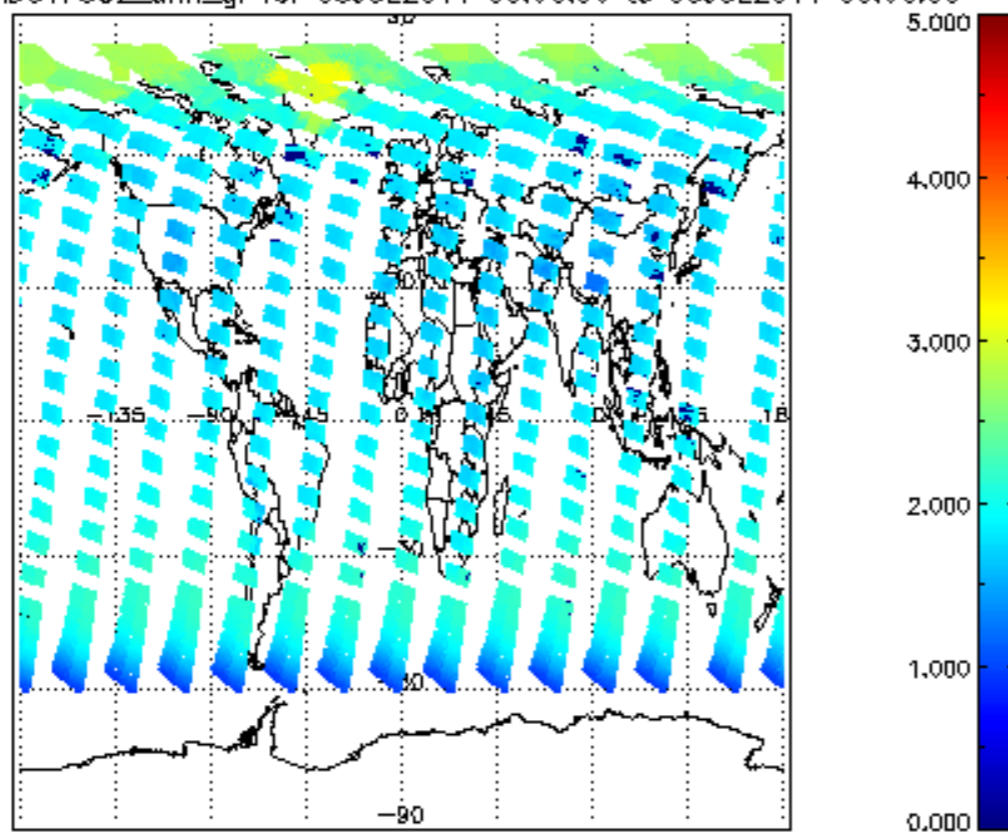
SCIOL2P\_NADUV7S02\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



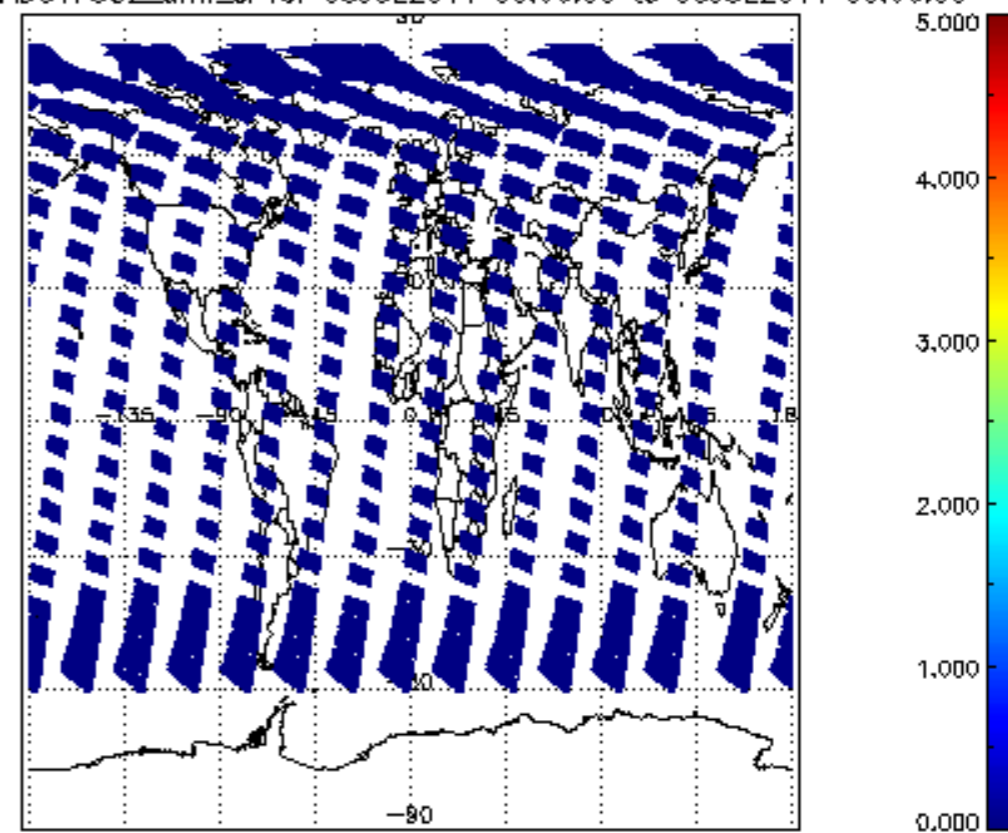
SCIOL2P\_NADUV7S02\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

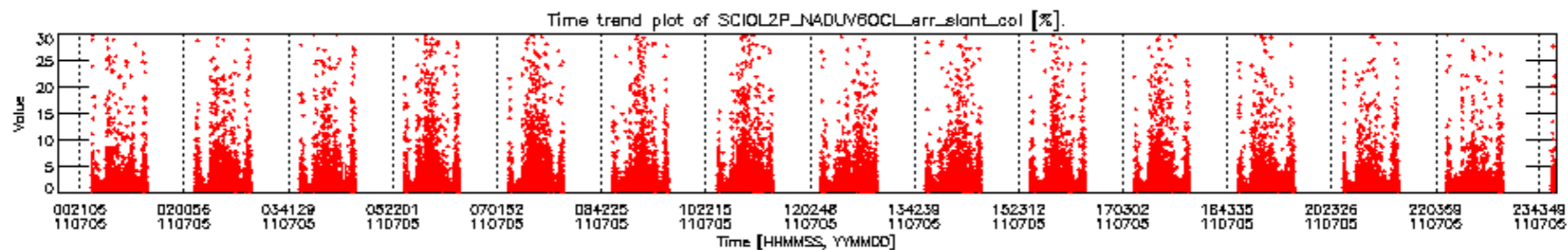
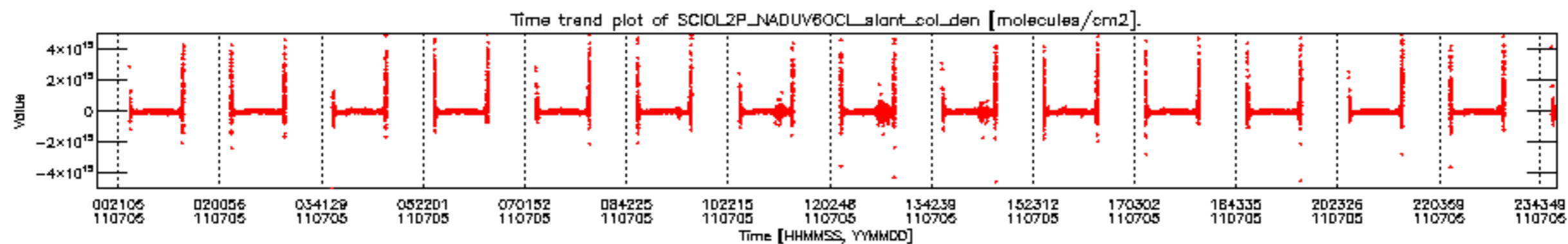


SCIOL2P\_NADUV7S02\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



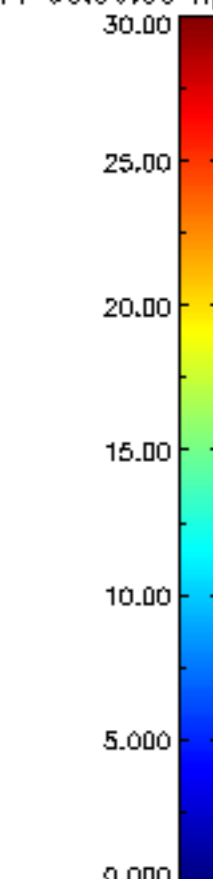
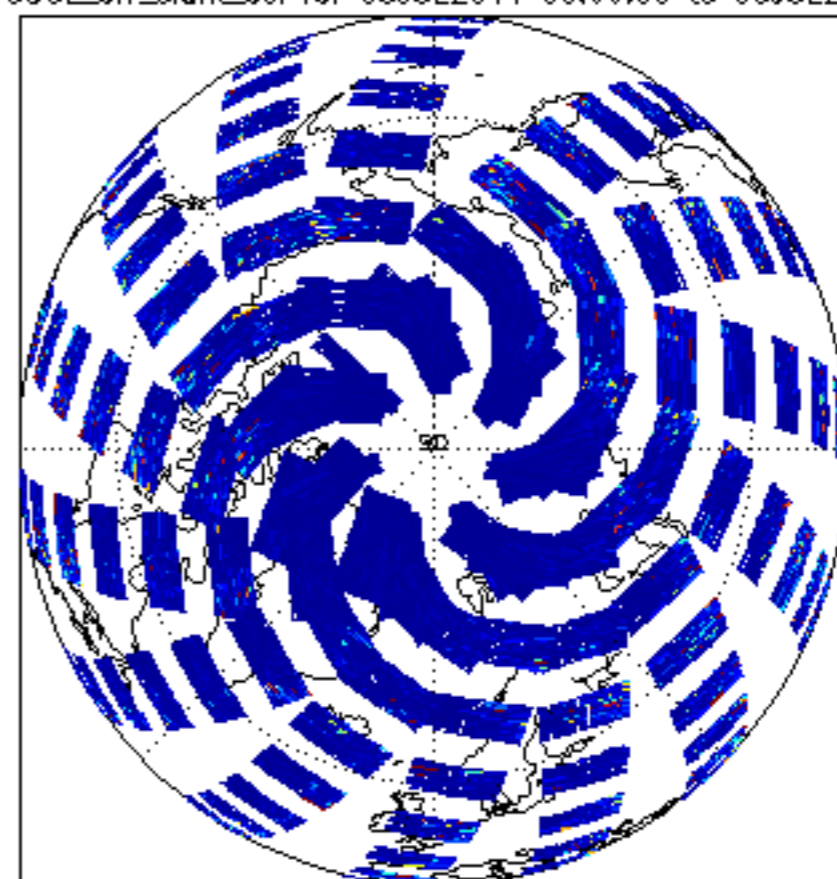
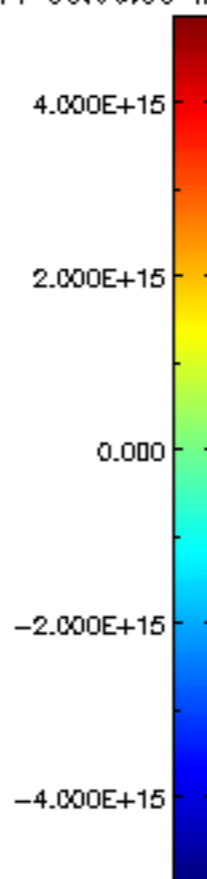
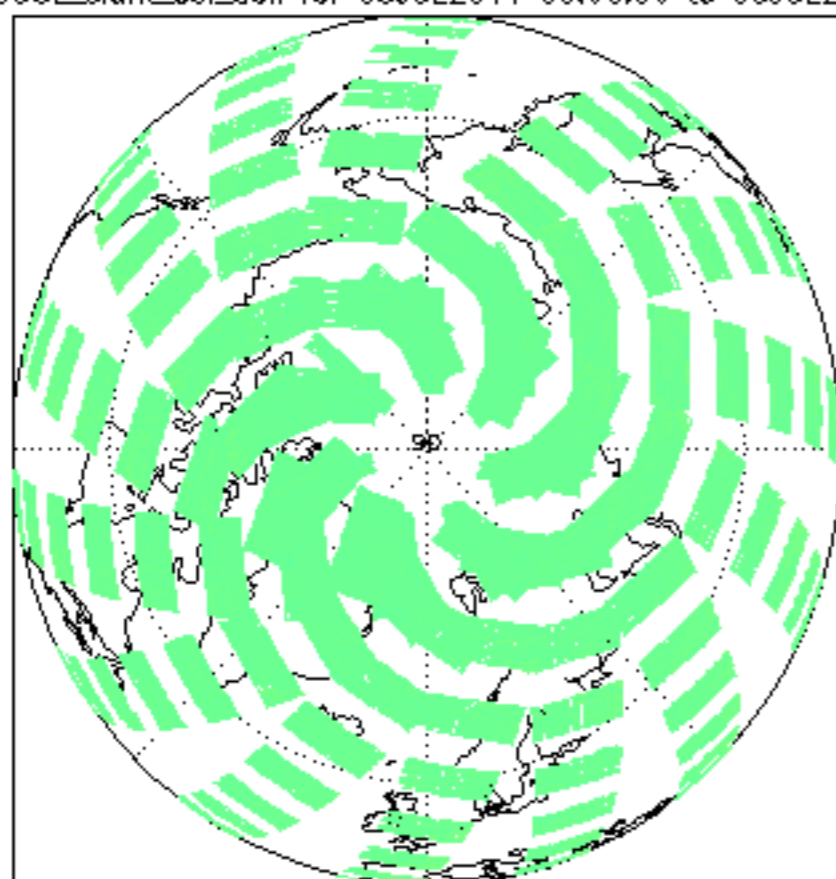
SCIOL2P\_NADUV7S02\_amf\_cl for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



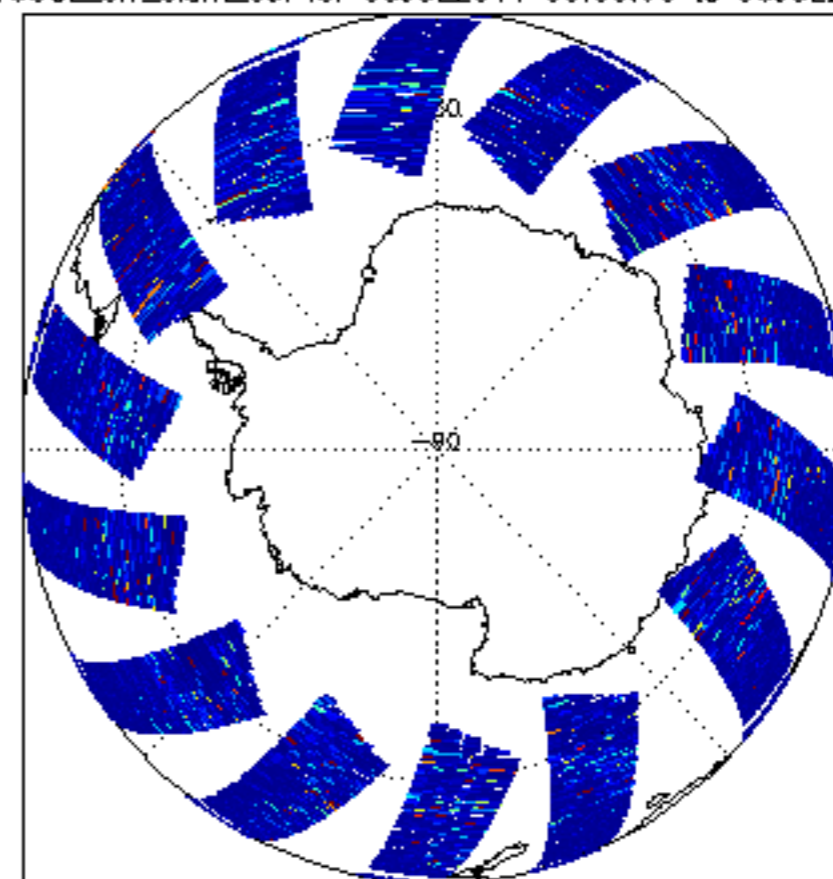
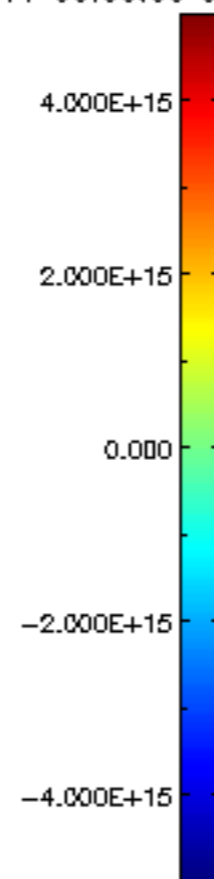
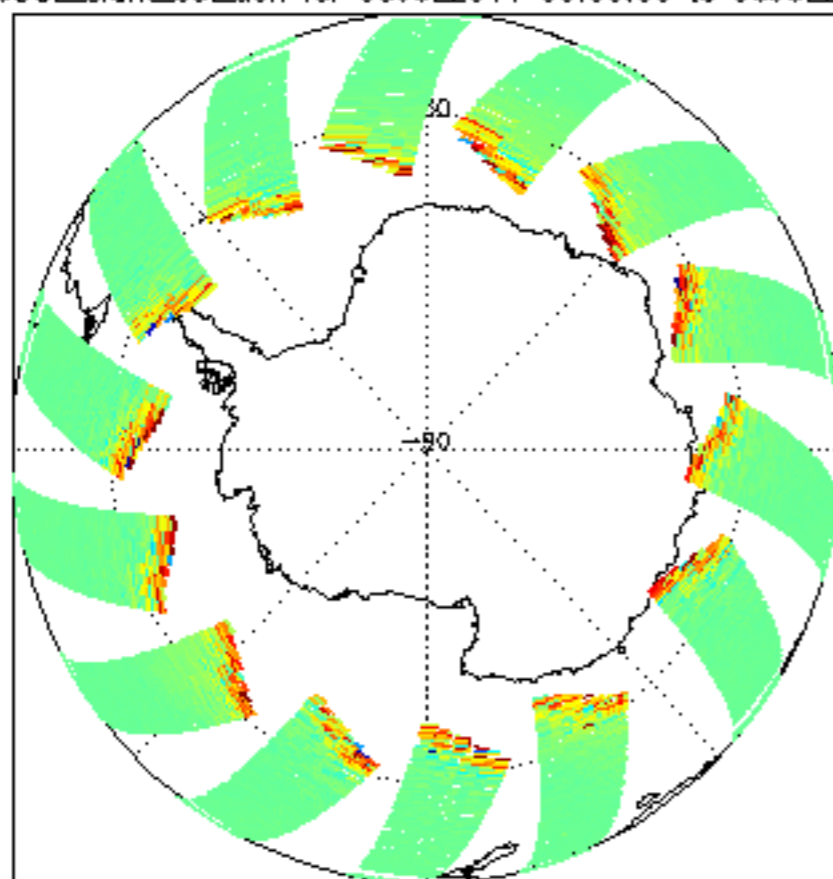




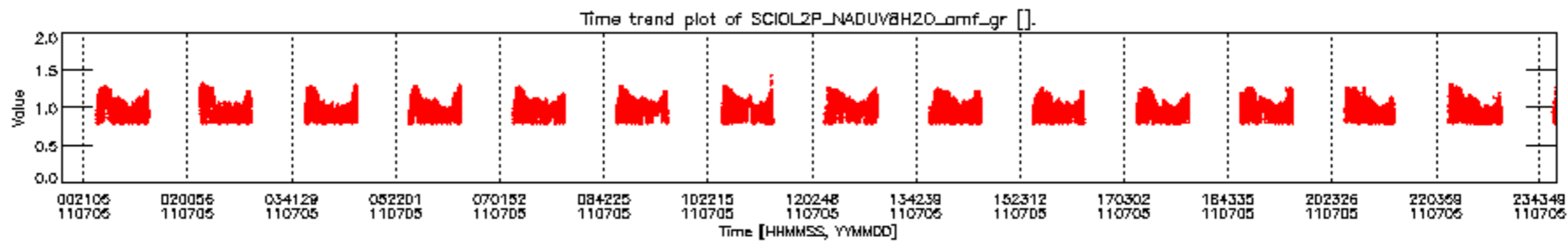
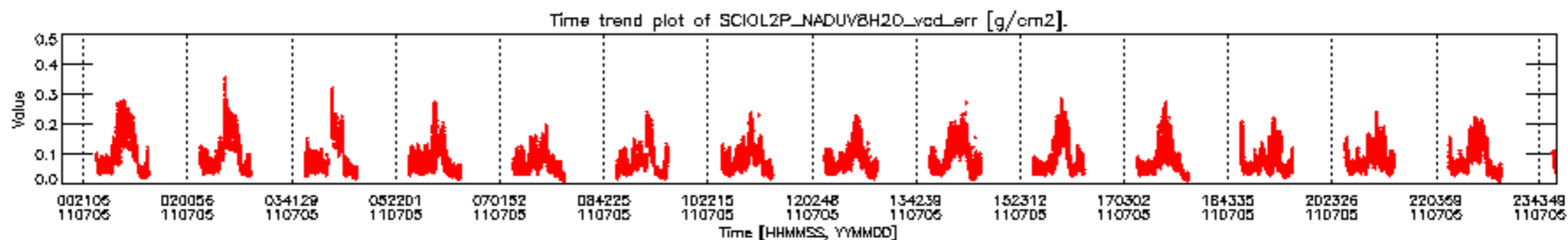
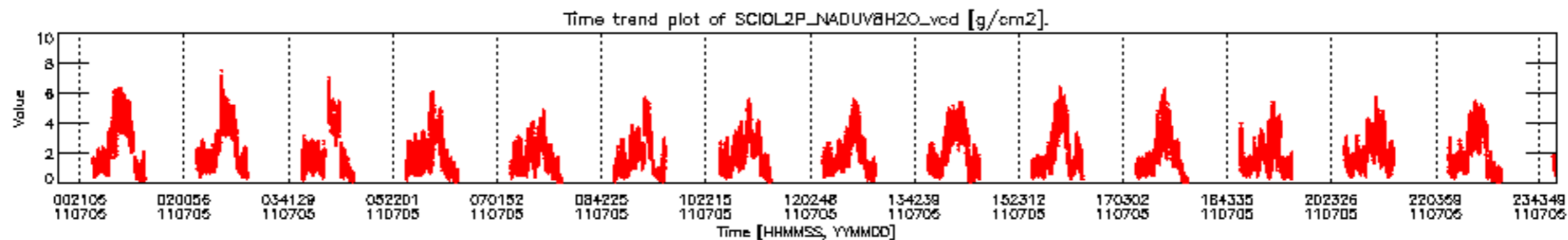
iCIOL2P\_NADUV6OCL\_slant\_col\_den for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 np 3iCIOL2P\_NADUV6OCL\_err\_slant\_col for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 np



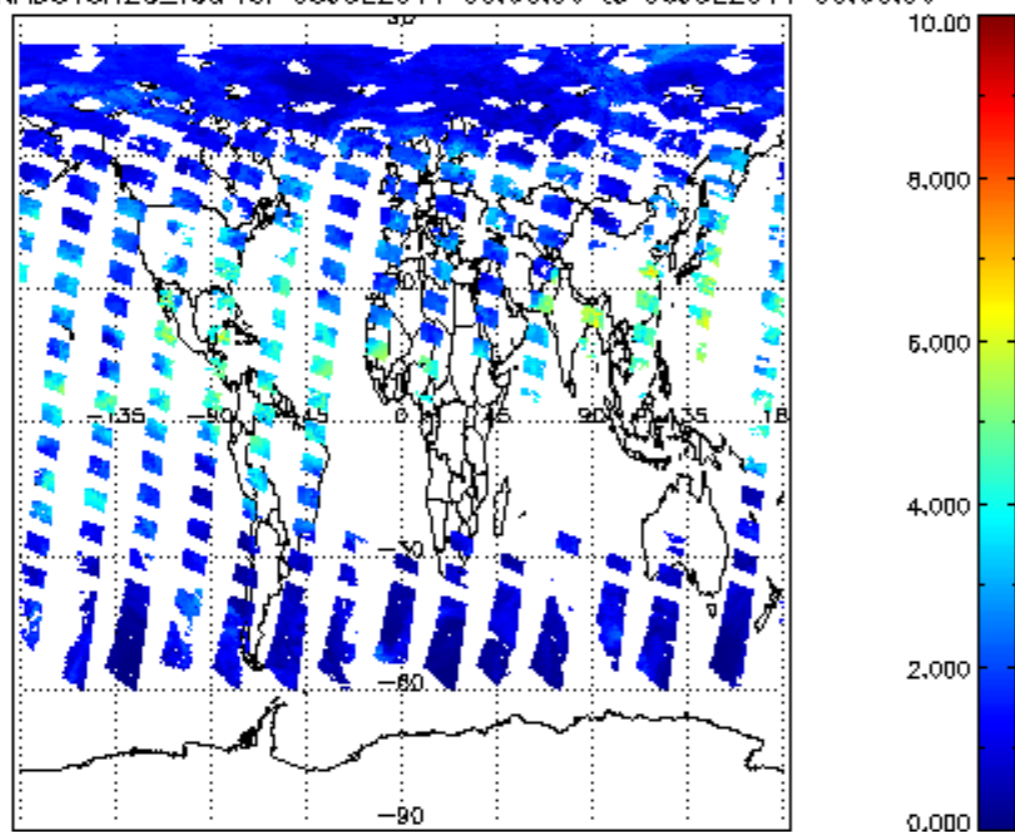
iCIOL2P\_NADUV6OCL\_slant\_coLden for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 sp }iCIOL2P\_NADUV6OCL\_em\_slant\_col for 05JUL2011 00:00:00 to 06JUL2011 00:00:00 sp



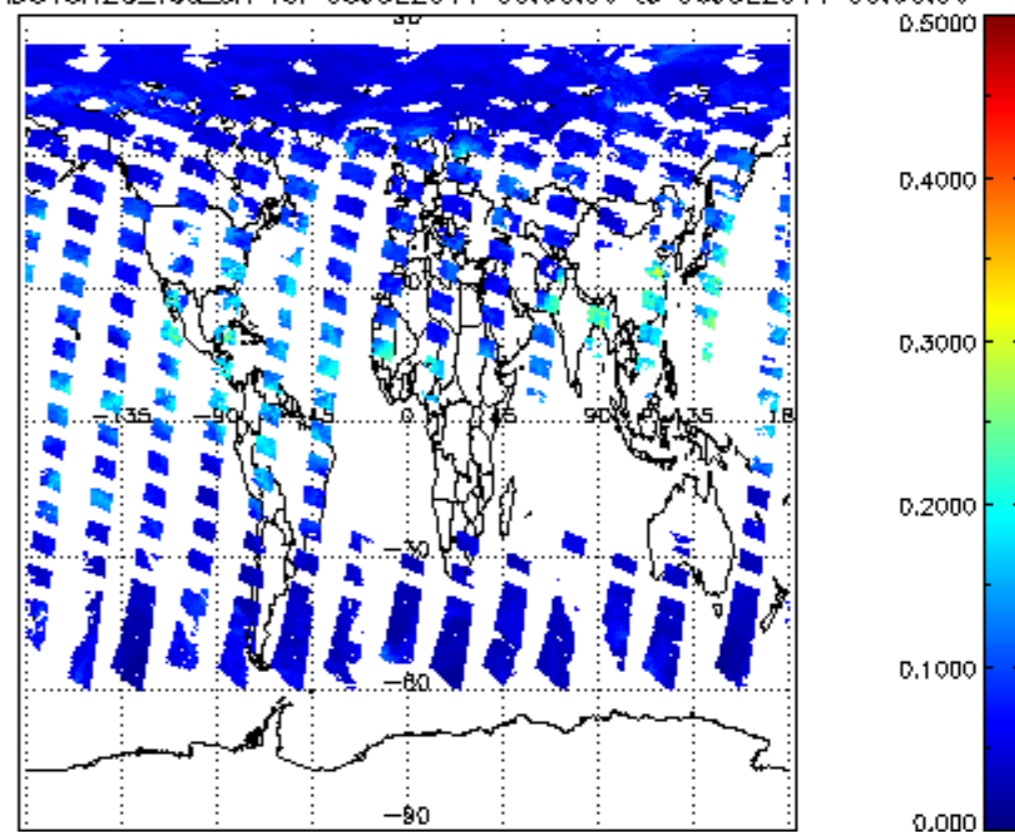




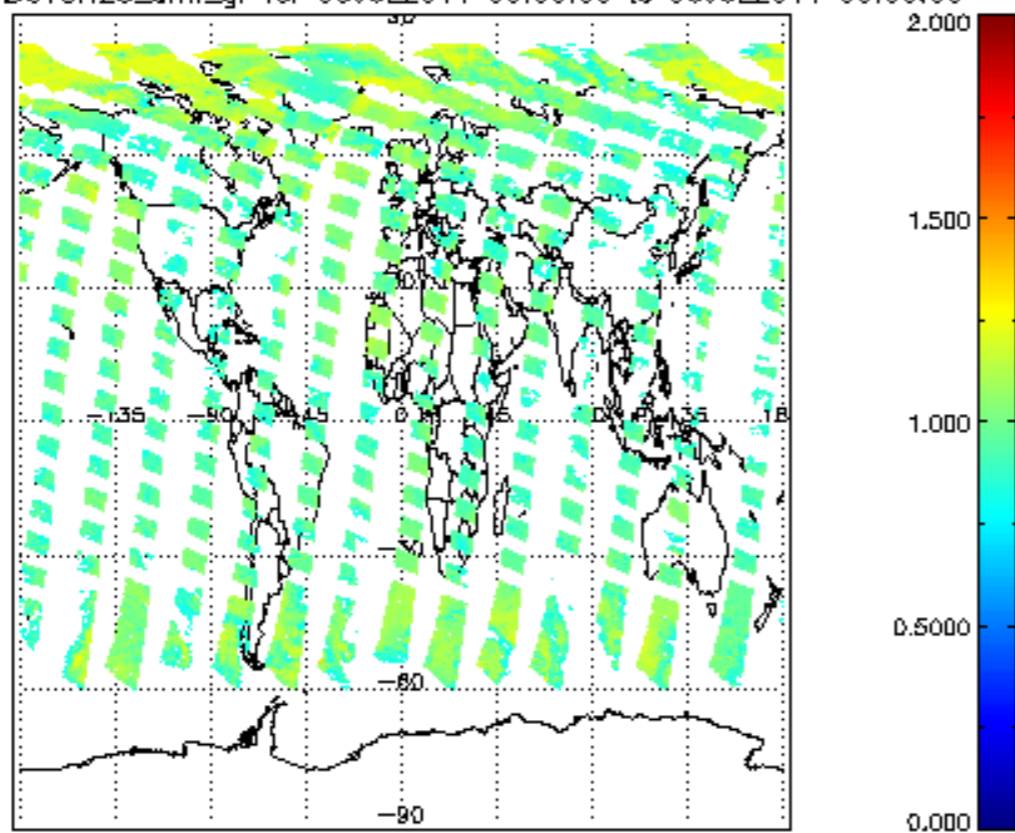
SCIOL2P\_NADUV8H20\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



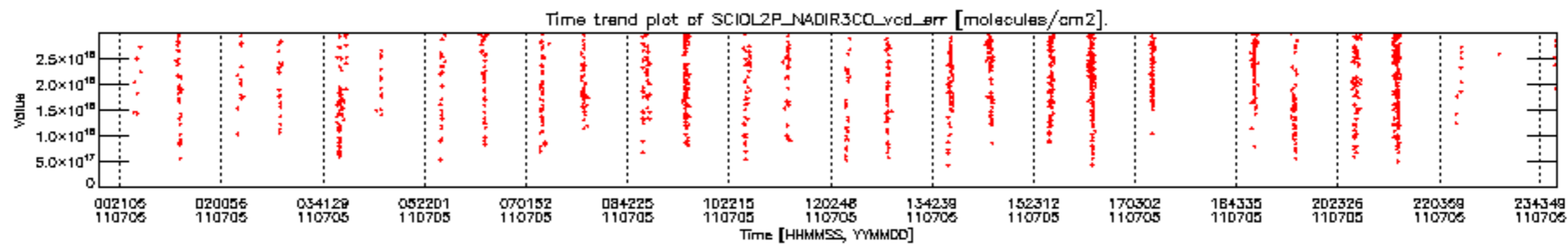
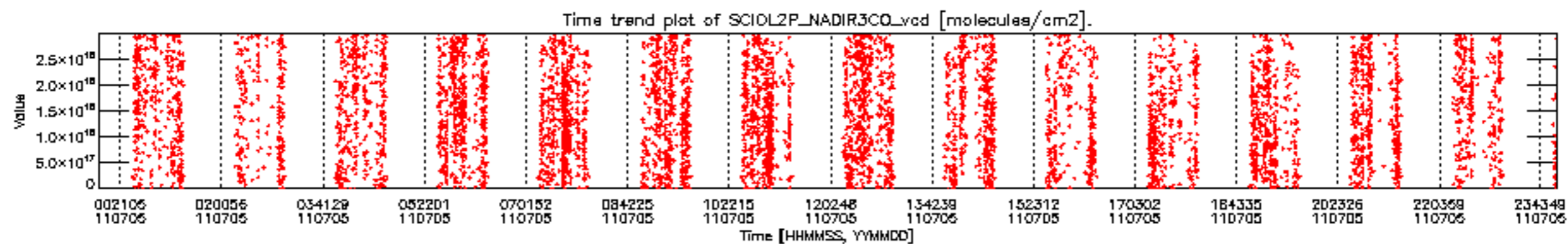
SCIOL2P\_NADUV8H20\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



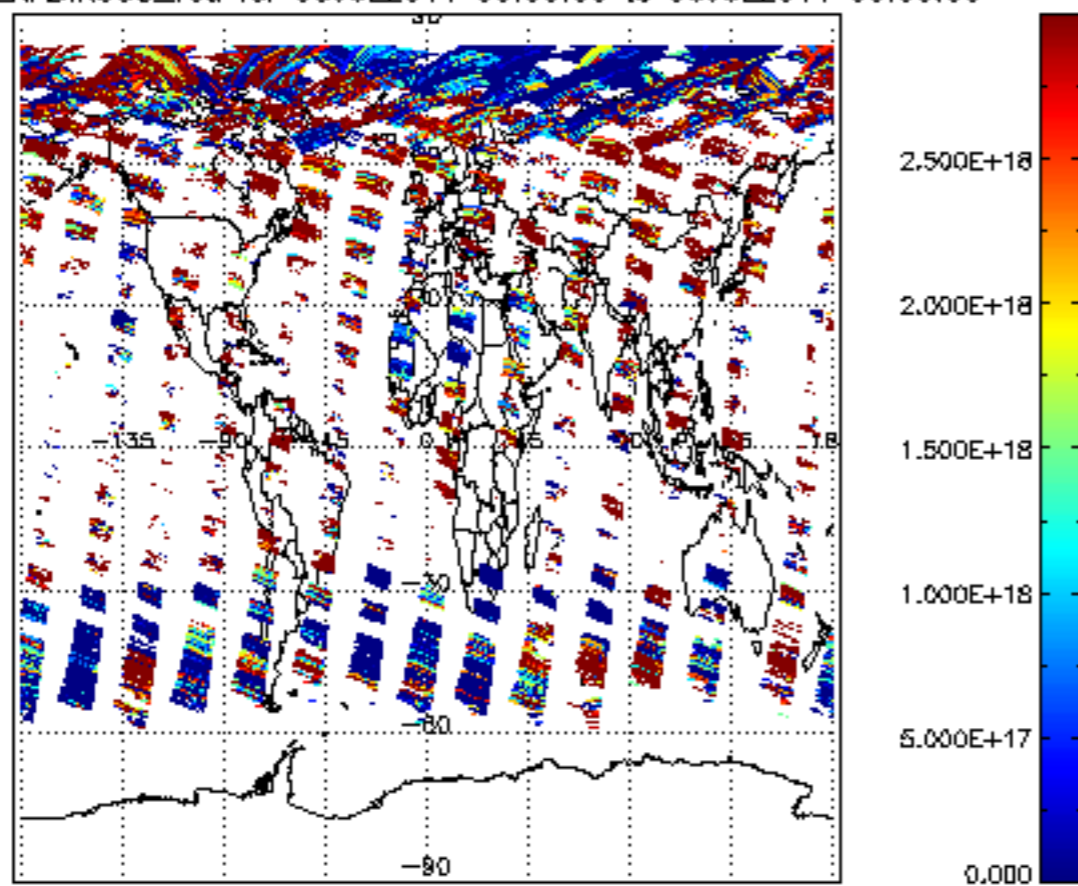
SCIOL2P\_NADUV8H20\_amf\_gr for 05JUL2011 00:00:00 to 06JUL2011 00:00:00



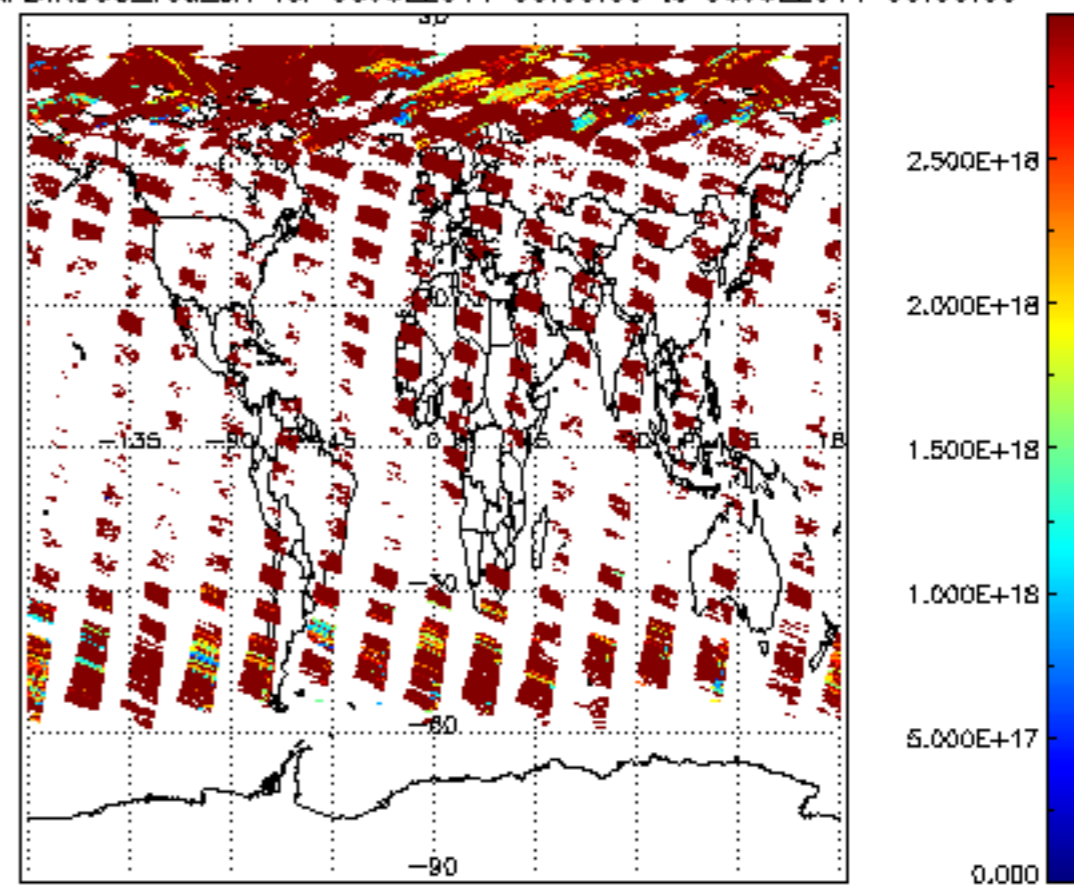




SCIOL2P\_NADIR3CO\_vcd for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

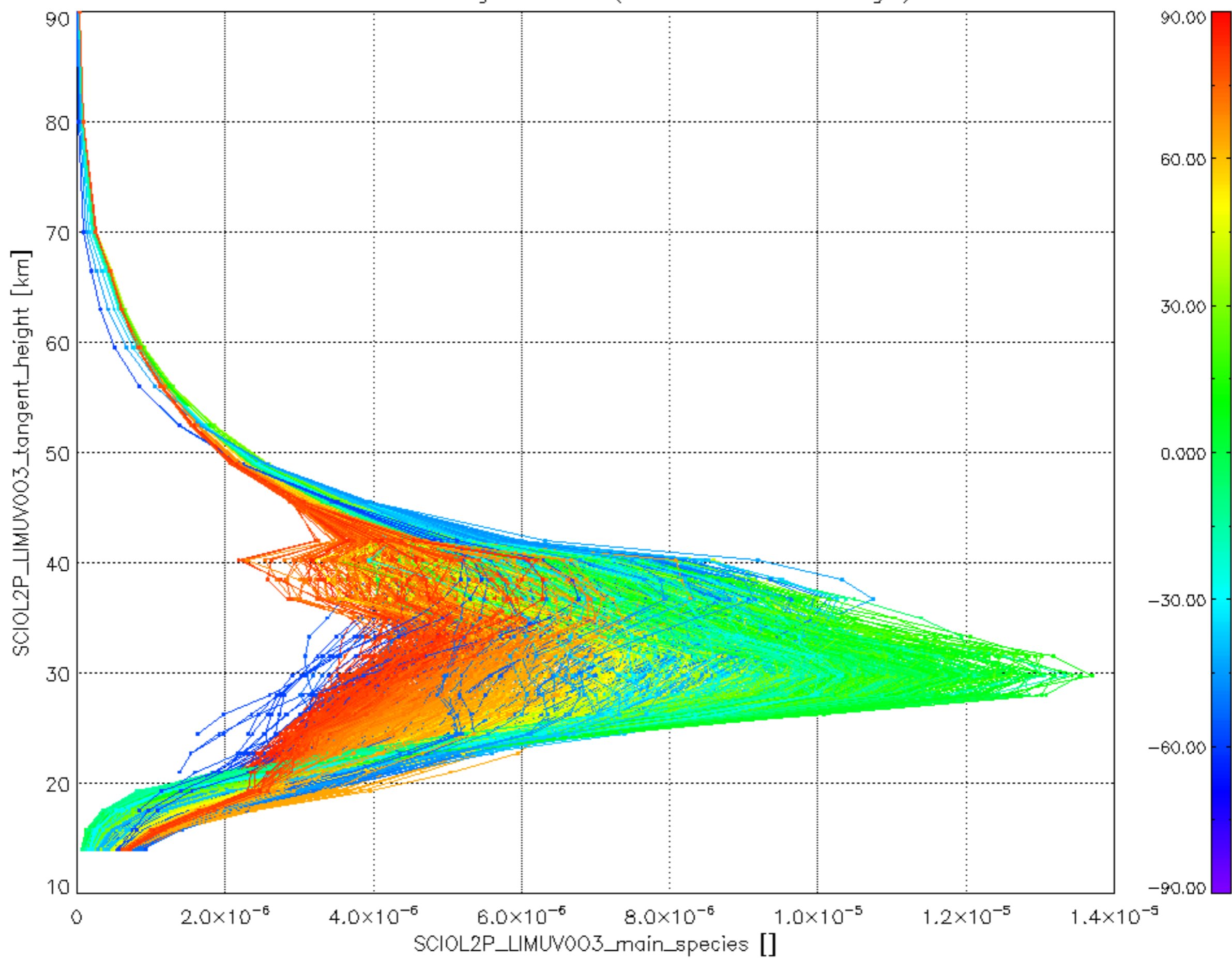


SCIOL2P\_NADIR3CO\_vcd\_err for 05JUL2011 00:00:00 to 06JUL2011 00:00:00

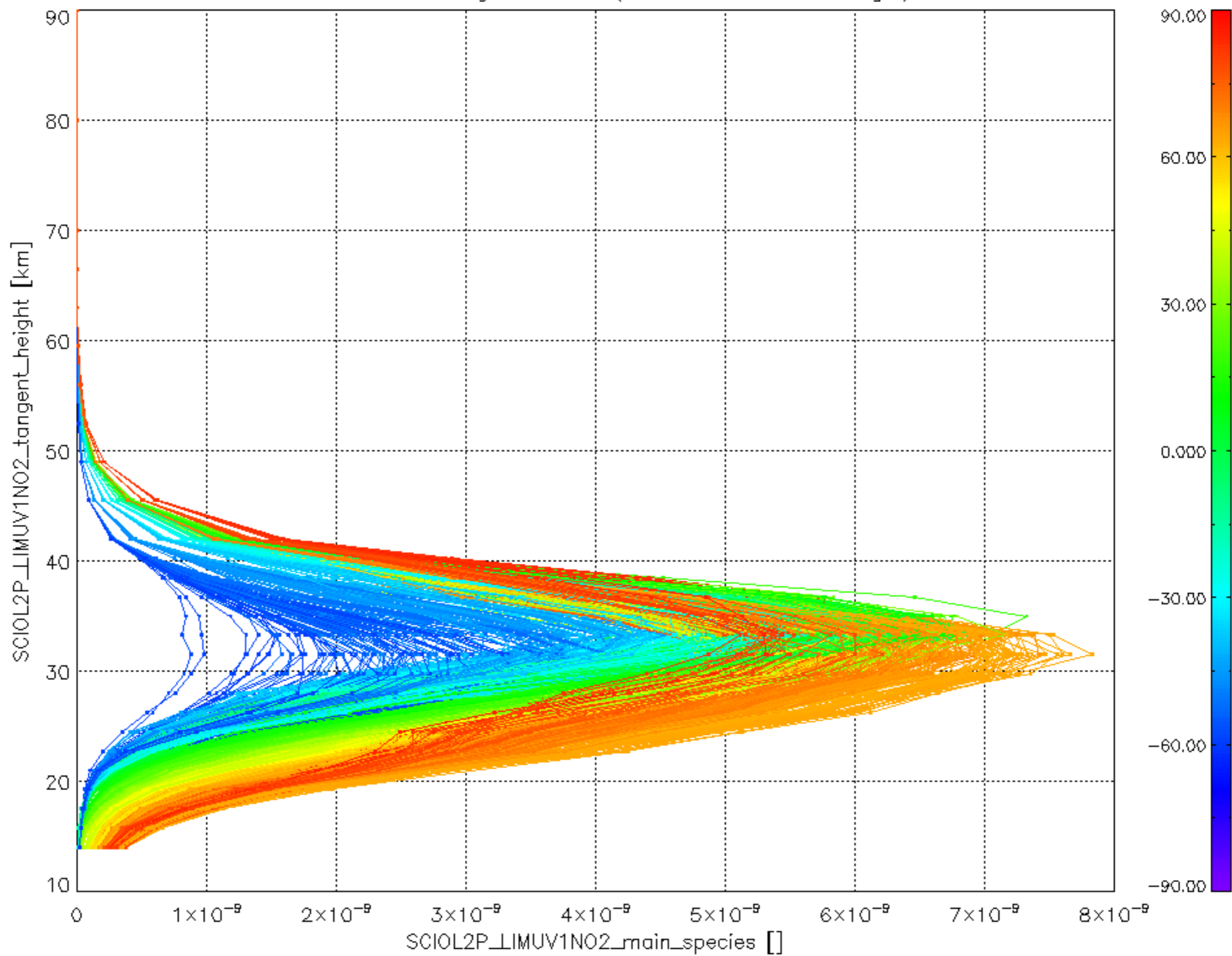




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



Plot of SCIOL2P\_LIMUV1N02\_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).

