

## 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	27JUL2011 05:07:14
Data source version	SCIA-OL/5.01-N
Processing scope for products	21JUL2011 00:00:00 to 22JUL2011 00:00:00
Start time of first product within scope	20JUL2011 23:00:43
Stop time of last product within scope	22JUL2011 01:02:52
Total number of level 2 products	17
Number of level 2 products with errors	0

### 2.1.2 Summary per product

The following table shows a summary for each product used in this report.

Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

Products are checked for a minimum duration of 3500.0000 seconds and a maximum duration of 6000.0000 seconds. Products failing the duration test are highlighted in bold, and their stop time is highlighted in red.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PNDPA20110720_230043_000035303104_00374_49095_4199.N1</a>	20JUL2011 23:00:43	20JUL2011 23:59:34	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110721_004057_000035163104_00375_49096_4200.N1</a>	21JUL2011 00:40:57	21JUL2011 01:39:33	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110721_022111_000028593104_00376_49097_4201.N1</a>	<b>21JUL2011 02:21:11</b>	<b>21JUL2011 03:08:51</b>	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110721_031003_000060643104_00377_49098_4202.N1</a>	<b>21JUL2011 03:10:03</b>	<b>21JUL2011 04:51:08</b>	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110721_045205_000059563104_00378_49099_4203.N1</a>	21JUL2011 04:52:05	21JUL2011 06:31:22	0	GOOD

5	SCI_OL__2PNDPA20110721_063126_000041003104_00379_49100_4204.N1	21JUL2011 06:31:26	21JUL2011 07:39:47	0	GOOD
6	SCI_OL__2PNDPA20110721_073950_000060793104_00380_49101_4205.N1	21JUL2011 07:39:50	21JUL2011 09:21:09	0	GOOD
7	SCI_OL__2PNDPA20110721_092113_000058873104_00381_49102_4206.N1	21JUL2011 09:21:13	21JUL2011 10:59:21	0	GOOD
8	SCI_OL__2PNDPA20110721_105924_000059563104_00382_49103_4207.N1	21JUL2011 10:59:24	21JUL2011 12:38:41	0	GOOD
9	SCI_OL__2PNDPA20110721_123844_000058733104_00383_49104_4208.N1	21JUL2011 12:38:44	21JUL2011 14:16:38	0	GOOD
10	SCI_OL__2PNDPA20110721_141750_000057653104_00384_49105_4209.N1	21JUL2011 14:17:50	21JUL2011 15:53:55	0	GOOD
11	SCI_OL__2PNDPA20110721_155358_000058293104_00385_49106_4210.N1	21JUL2011 15:53:58	21JUL2011 17:31:08	0	GOOD
12	SCI_OL__2PNDPA20110721_173112_000059023104_00386_49107_4211.N1	21JUL2011 17:31:12	21JUL2011 19:09:34	0	GOOD
13	SCI_OL__2PNDPA20110721_190938_000059313104_00387_49108_4212.N1	21JUL2011 19:09:38	21JUL2011 20:48:29	0	GOOD
14	SCI_OL__2PNDPA20110721_204724_000032993104_00388_49109_4213.N1	21JUL2011 20:47:24	21JUL2011 21:42:24	0	GOOD
15	SCI_OL__2PNDPA20110721_222402_000035303104_00388_49109_4214.N1	21JUL2011 22:24:02	21JUL2011 23:22:52	0	GOOD
16	SCI_OL__2PNDPA20110722_000416_000035163104_00389_49110_4215.N1	22JUL2011 00:04:16	22JUL2011 01:02:52	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: 165100

Total number of cloud data DSRs with good quality flag (=0): 165100 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	165100	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	165100	0.16496	0.12500	0.12500	0.25000	0.058294	s
CL_FRAC	165100	0.30097	0.25427	0.0000	1.0000	0.26815	
CL_FRAC_ERR	165100	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	165100	5.2787	4.0000	4.0000	8.0000	1.8654	
PMD_READ_CL[0]	165100	0.24862	0.0000	0.0000	8.0000	1.0750	-
PMD_READ_CL[1]	165100	1.4888	0.0000	0.0000	8.0000	2.5484	-
CL_TOP_HEIGHT	124971	3.2625	1.4004	0.0000	17.000	3.6714	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	124971	62.181	100.00	0.0000	101.00	43.821	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	165100	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	165100	11001110	11000100	11000000	11100000	3683.2	
AERO_ABSO_IND	165100	0.20640	0.0000	0.0000	15.268	0.47643	
AERO_IND_DIAG	165100	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	165100	01010010	00000000	00000000	11000000	24320.	

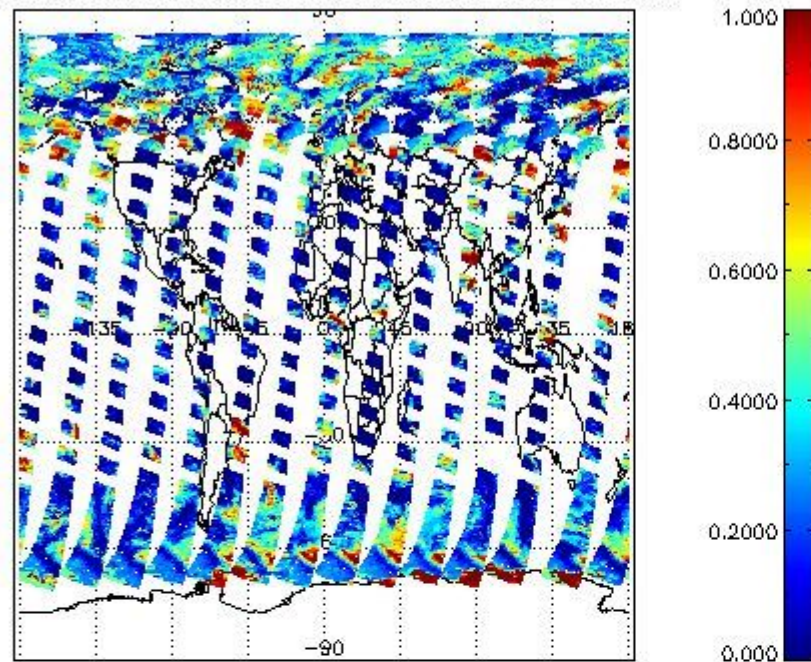
#### Time and geolocation plots:

Plots are available for the following parameters:

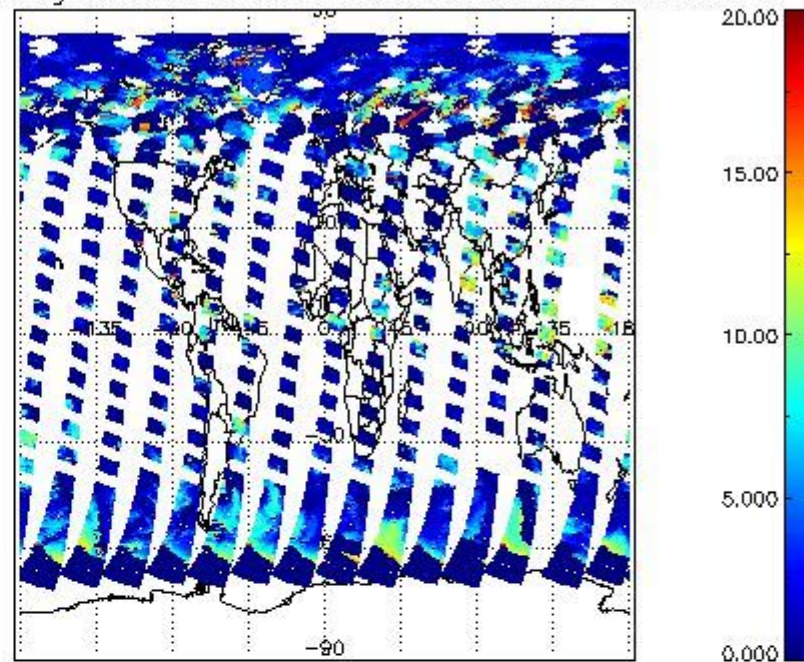
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



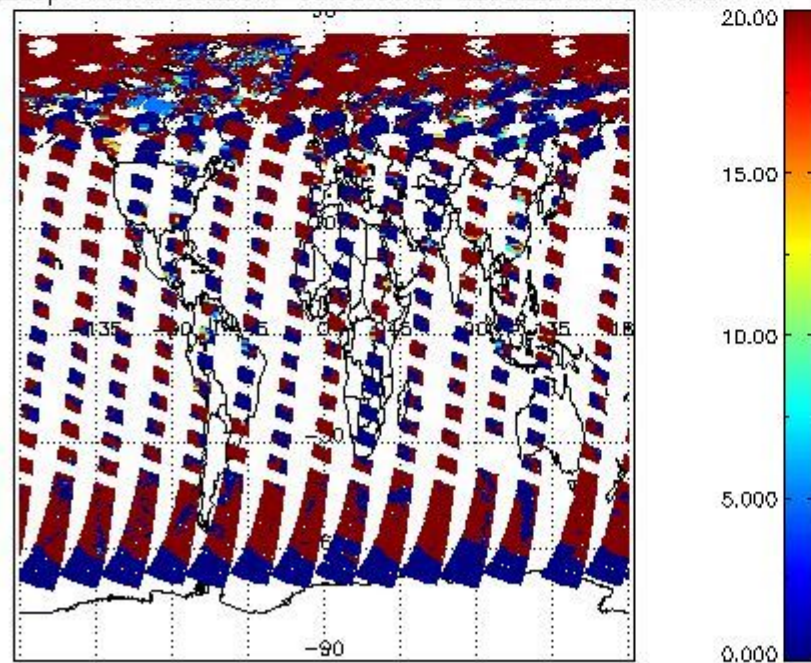
cL\_frac for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



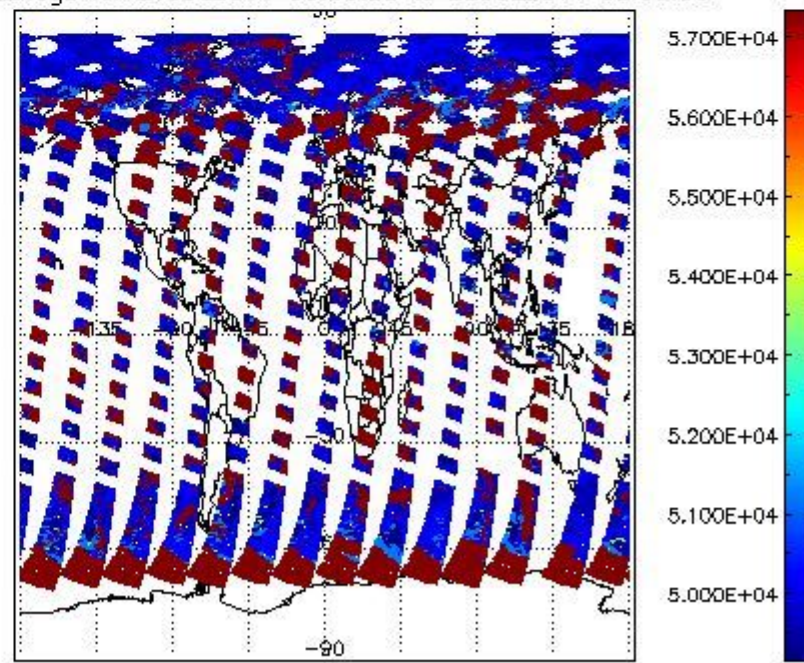
cL\_top\_height for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



cL\_opt\_depth for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



cloud\_flags for 21JUL2011 00:00:00 to 22JUL2011 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:

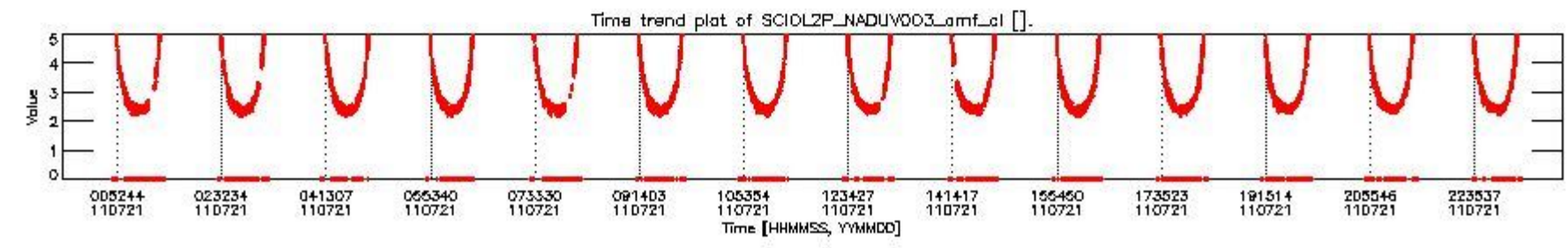
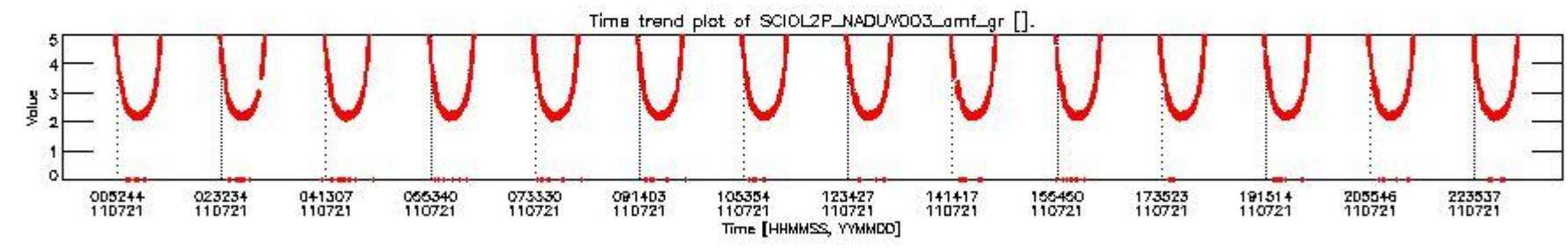
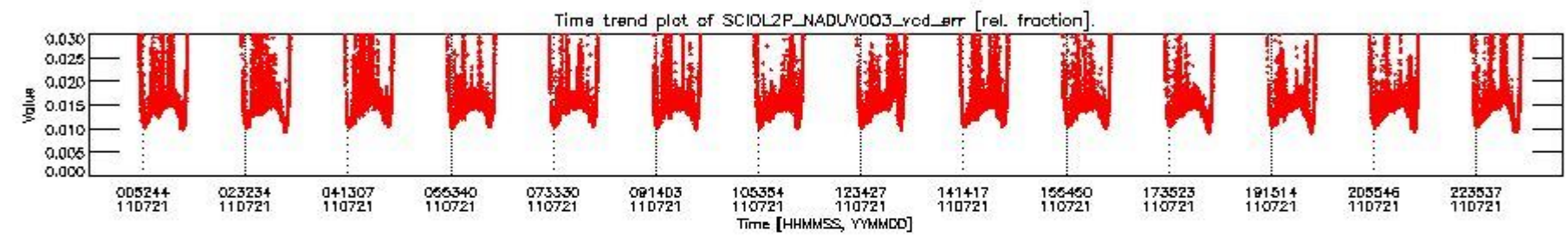
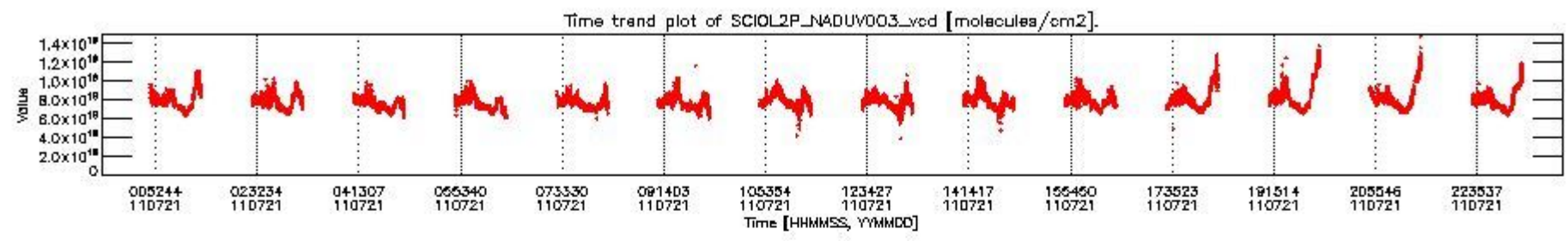
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

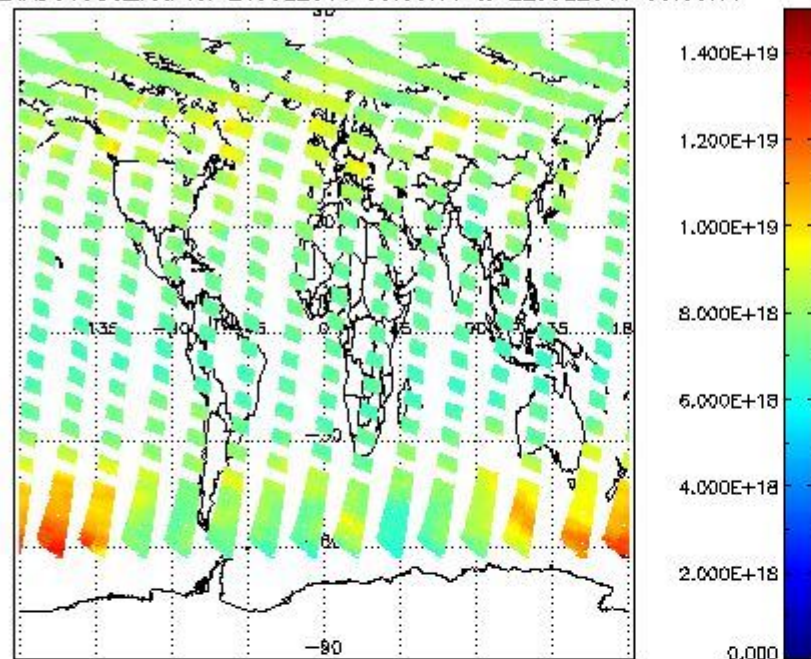
#### [2.2.2.1 O3 \(UV0\)](#)



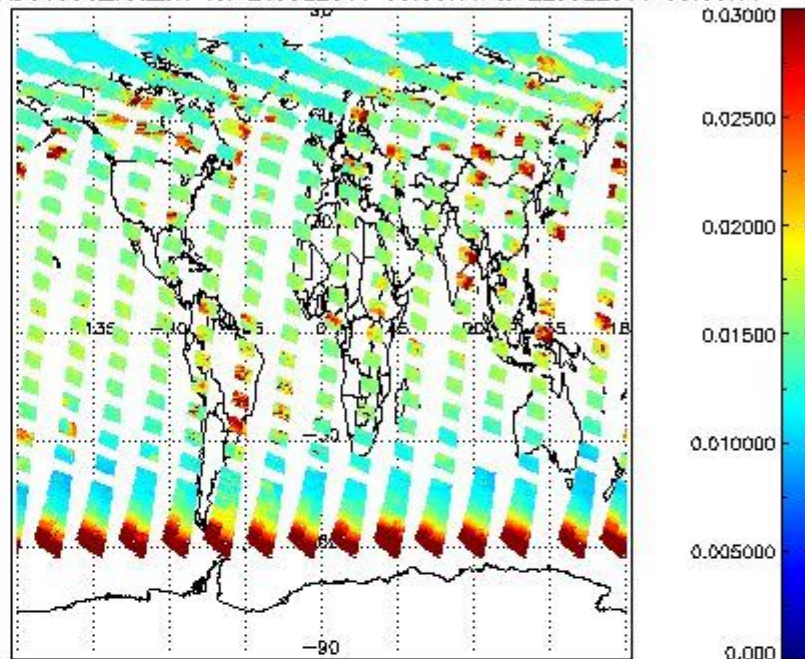




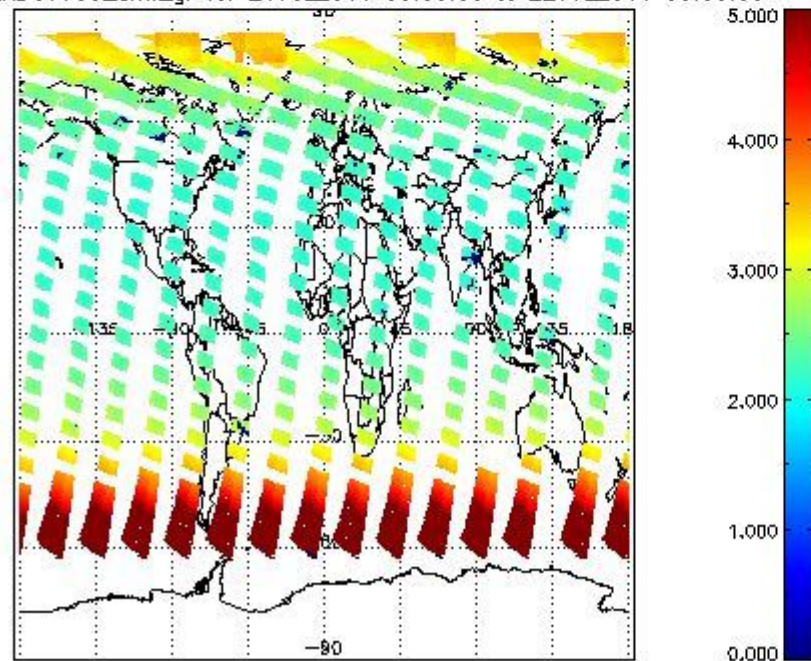
SCIOL2P\_NADUV003\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



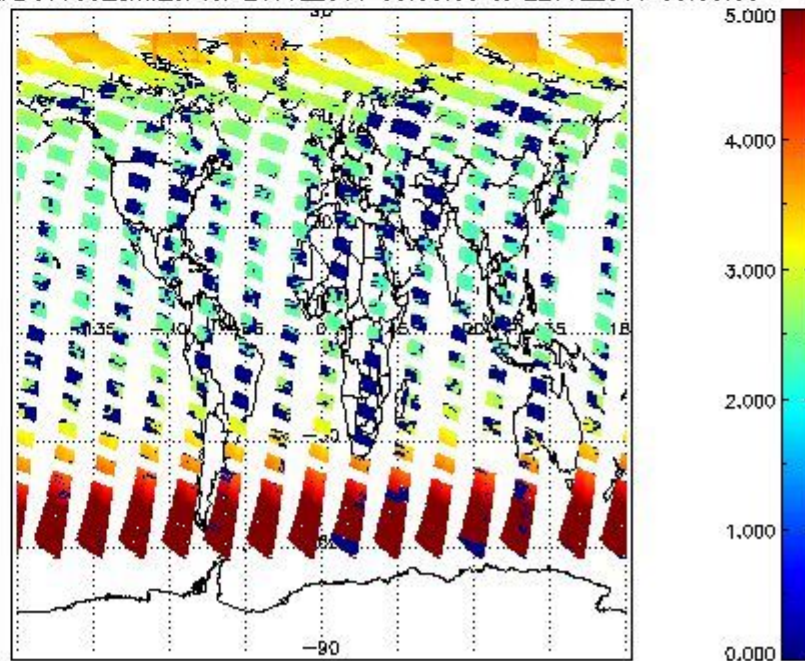
SCIOL2P\_NADUV003\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

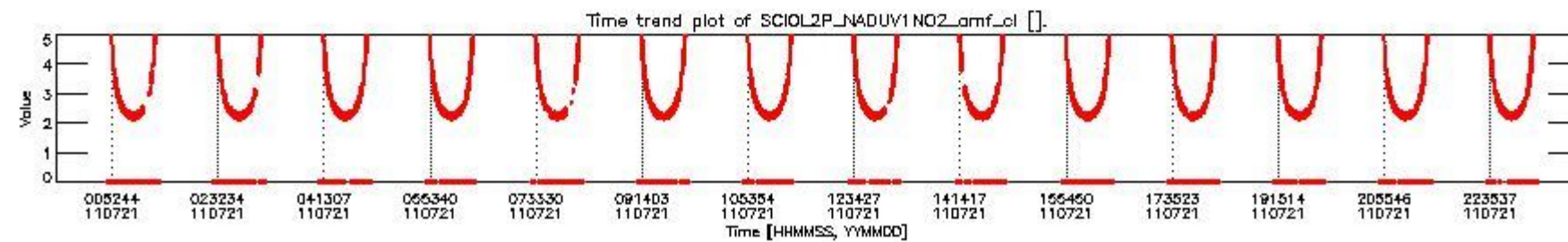
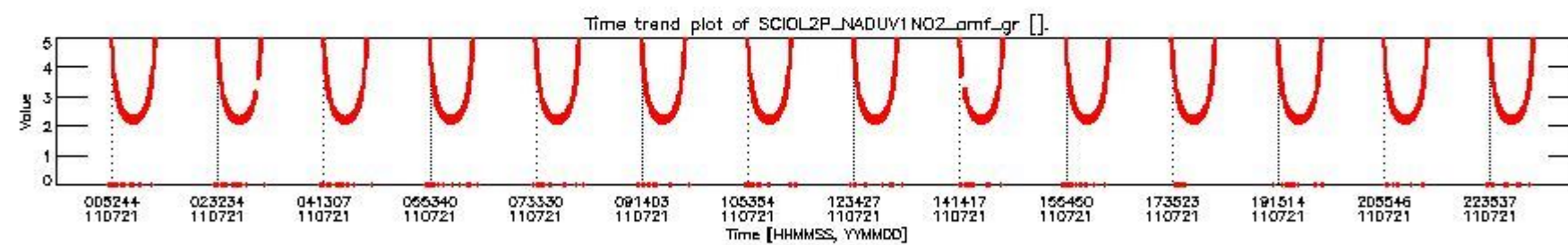
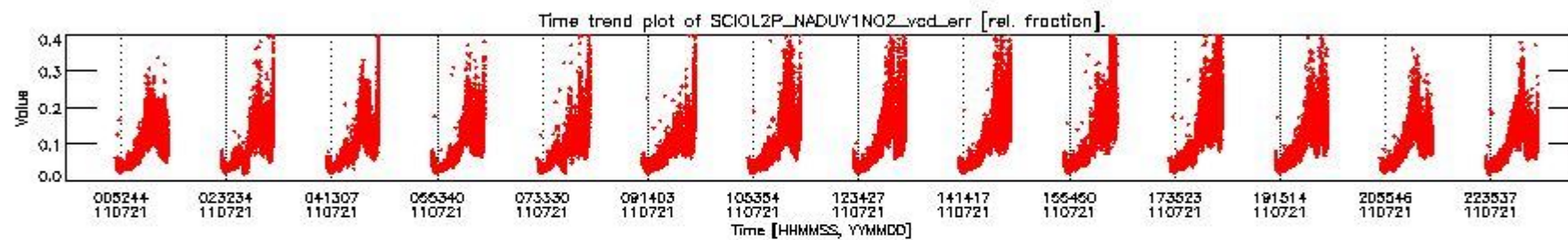
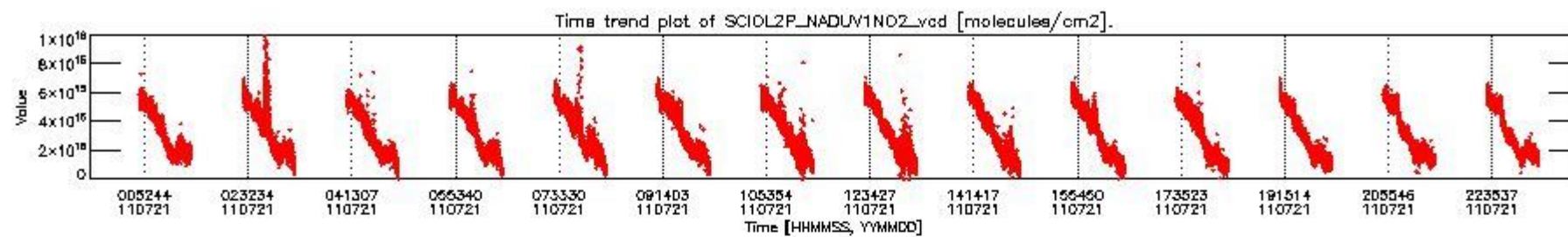


SCIOL2P\_NADUV003\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

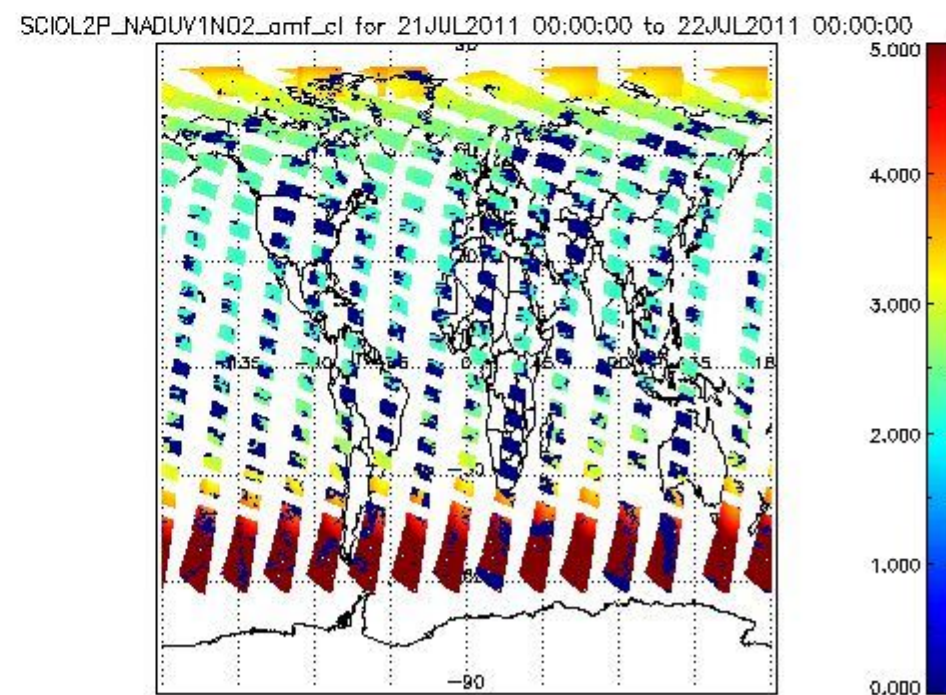
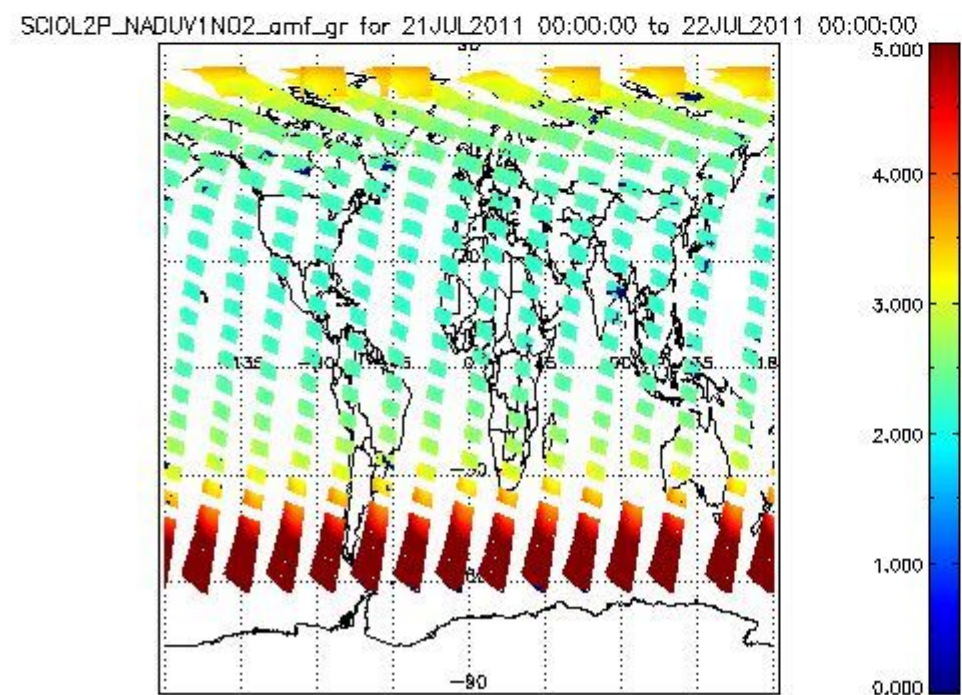
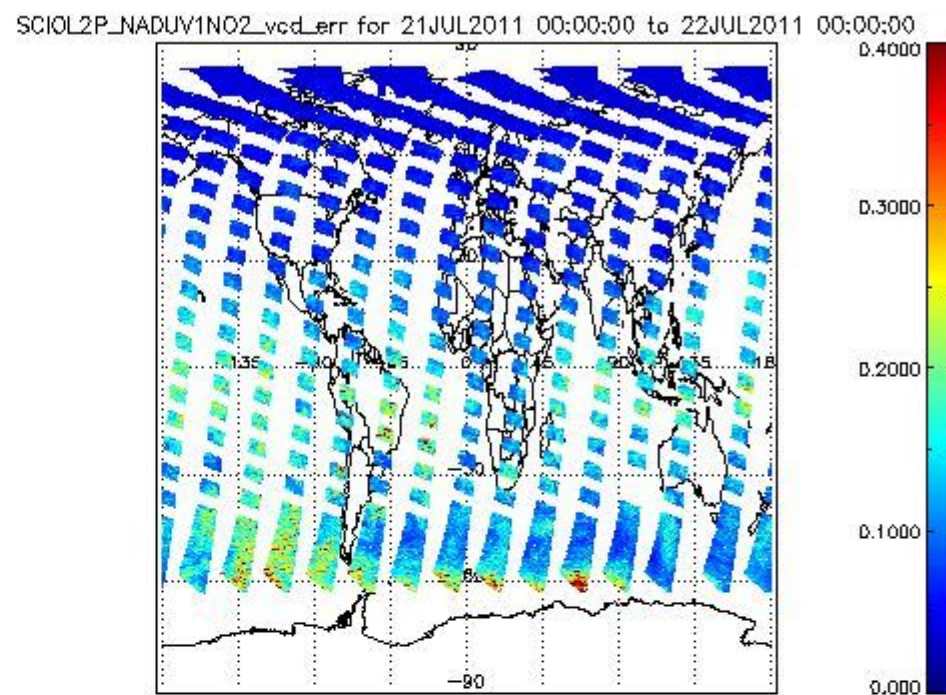
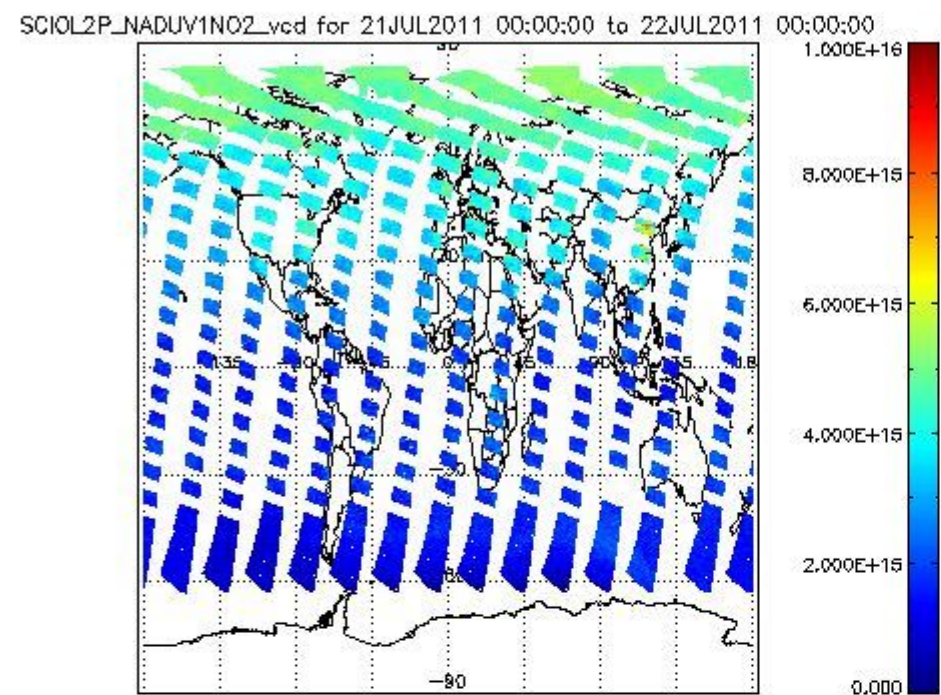


2.2.2.2 NO2 (UV1)



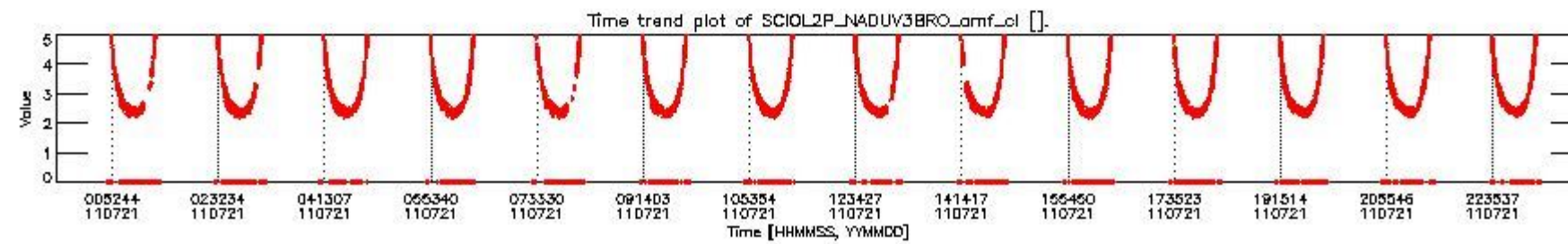
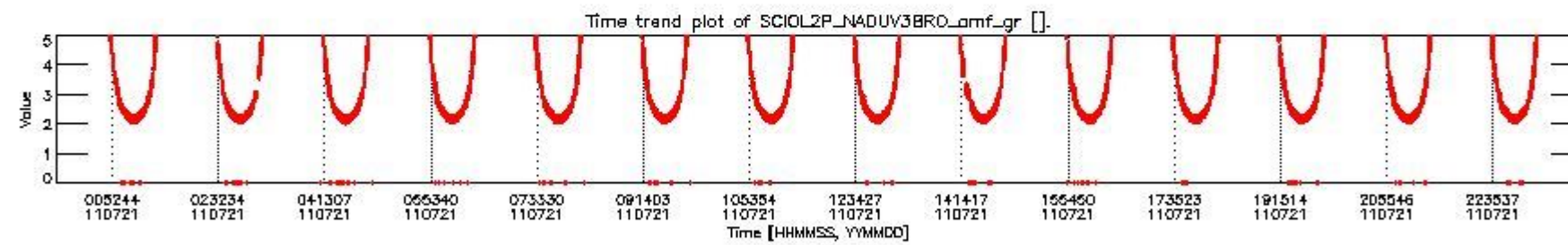
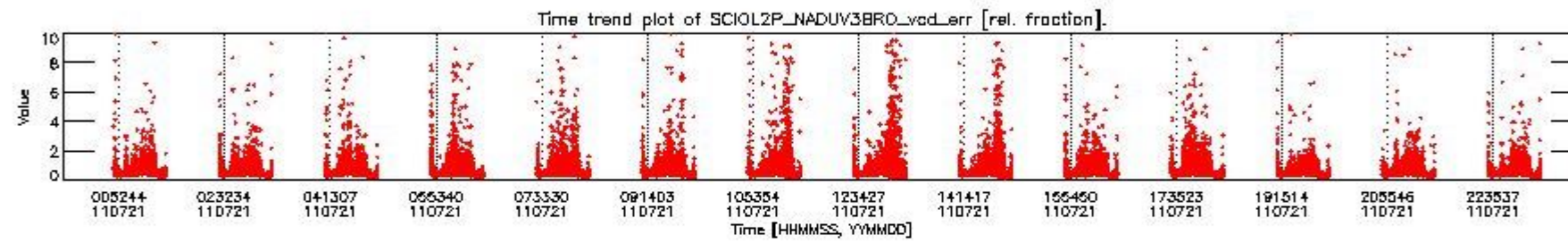
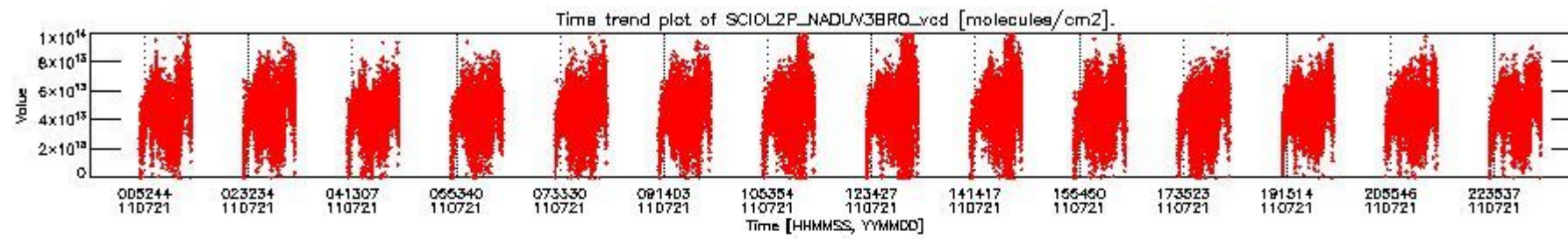




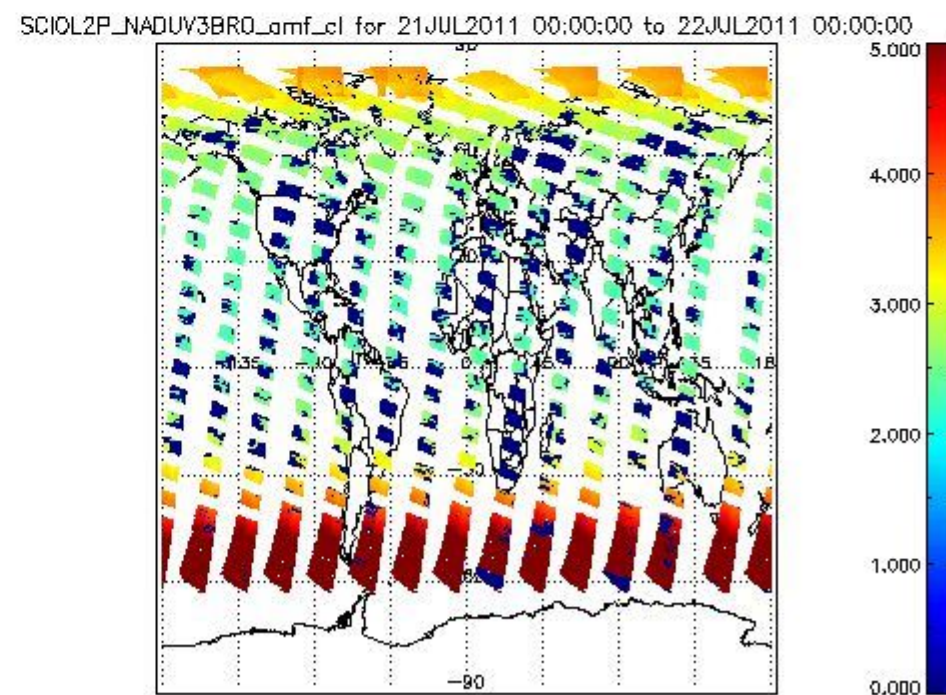
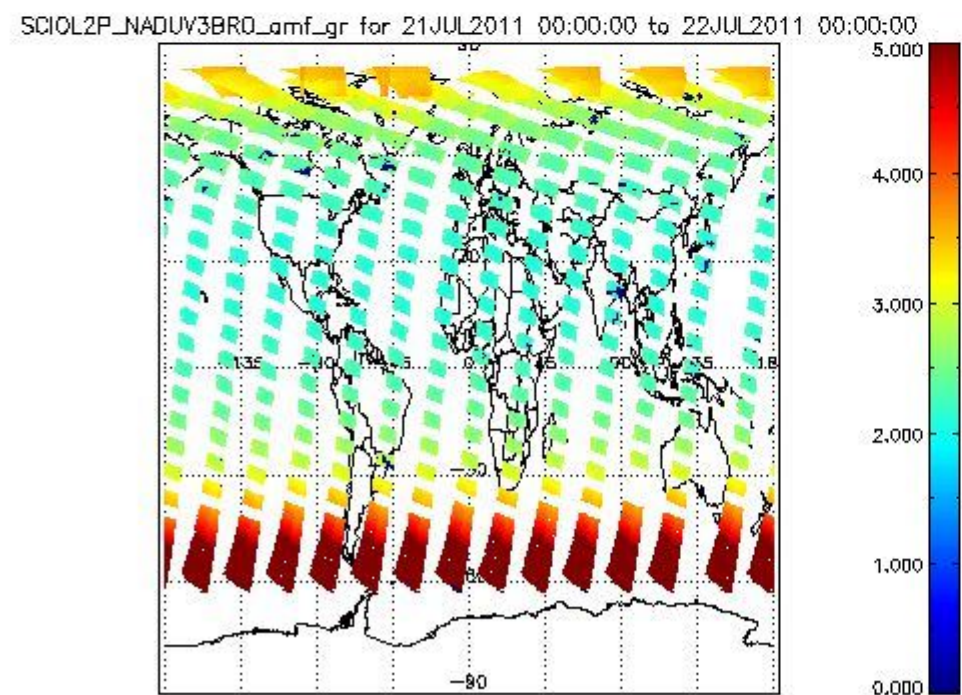
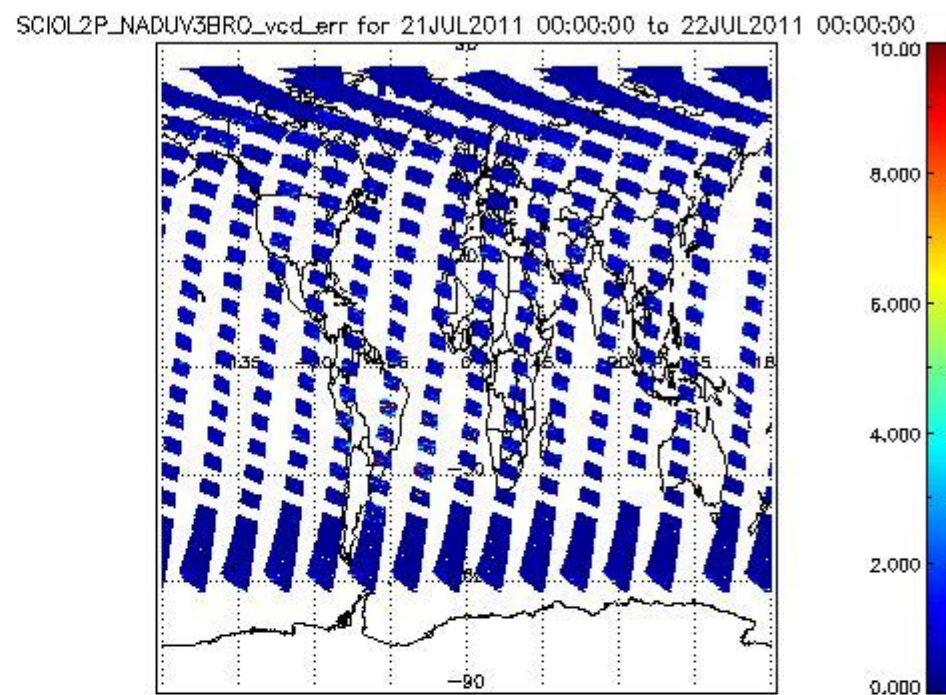
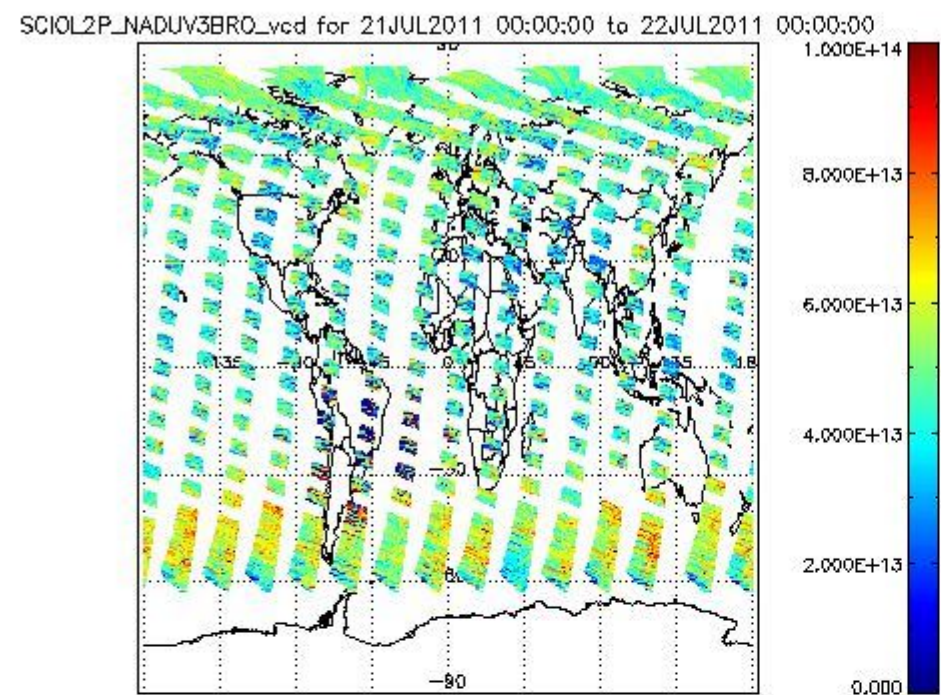


2.2.2.3 BrO (UV3)



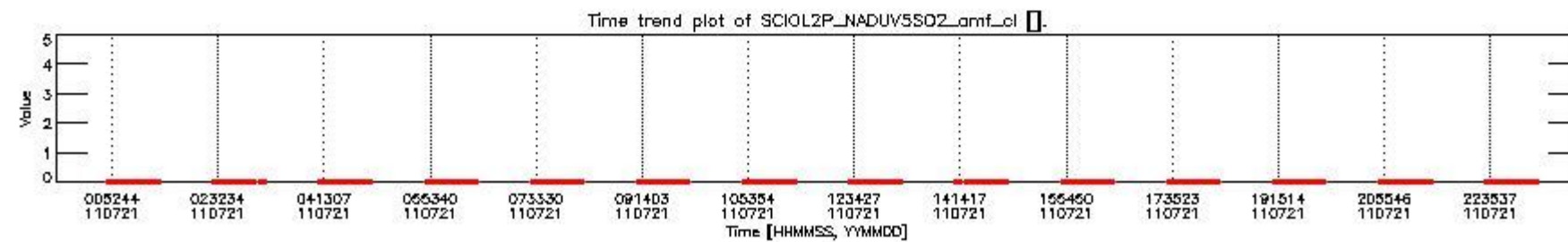
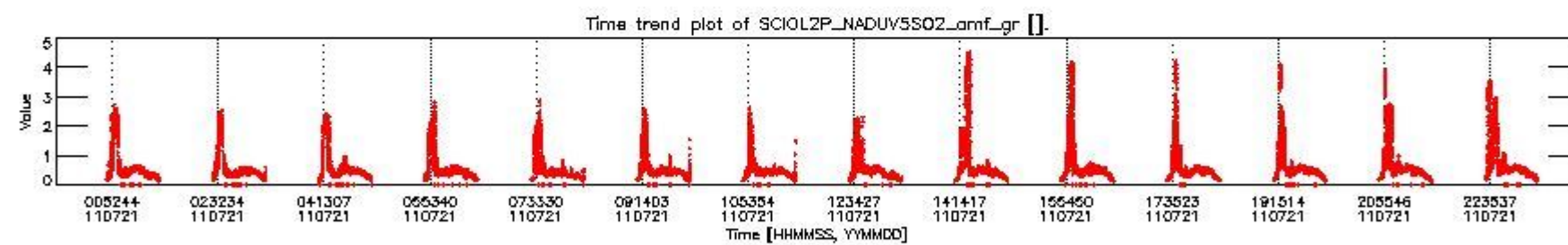
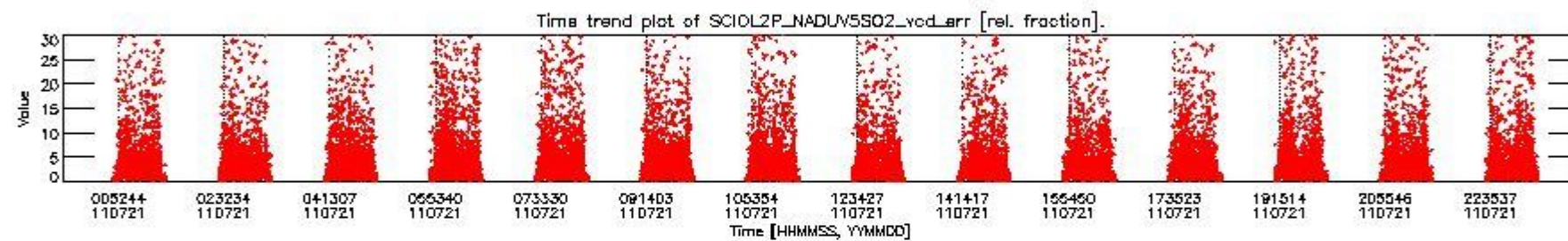
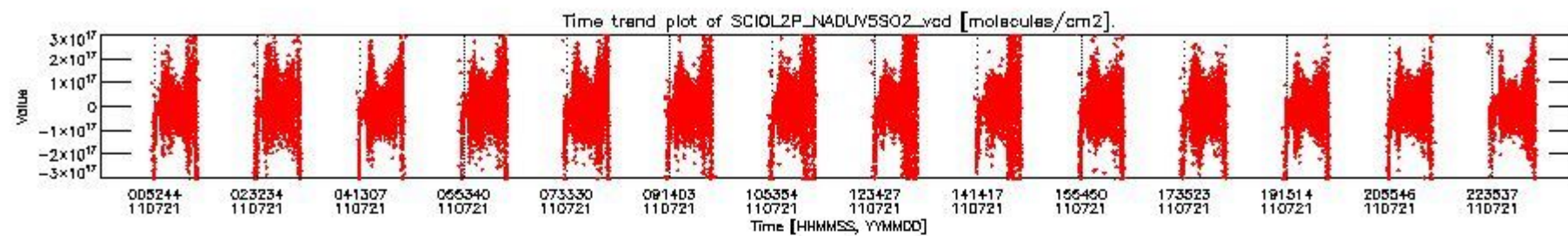




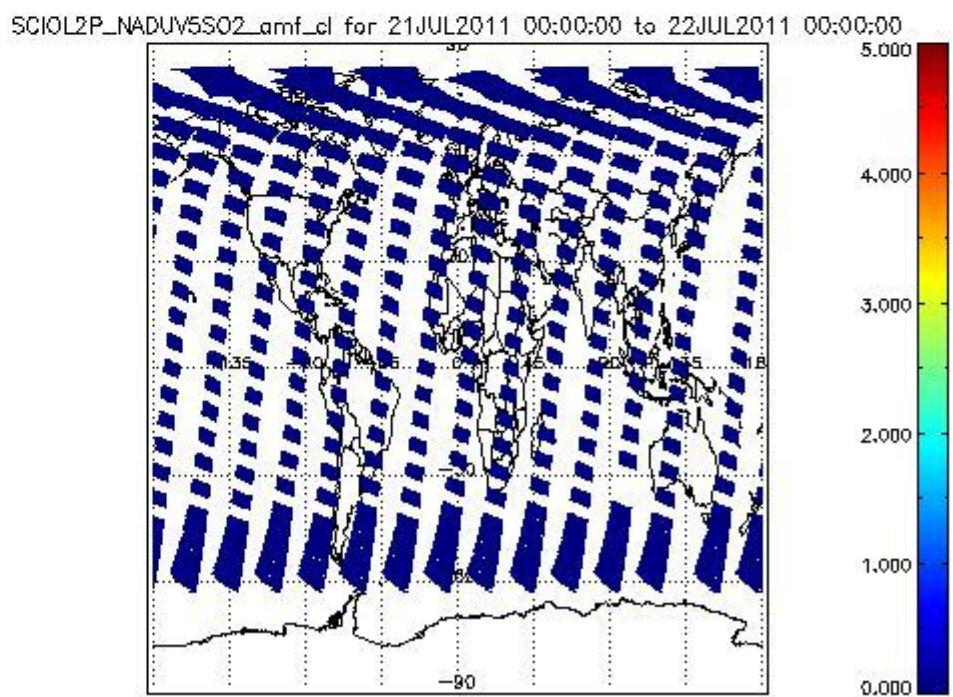
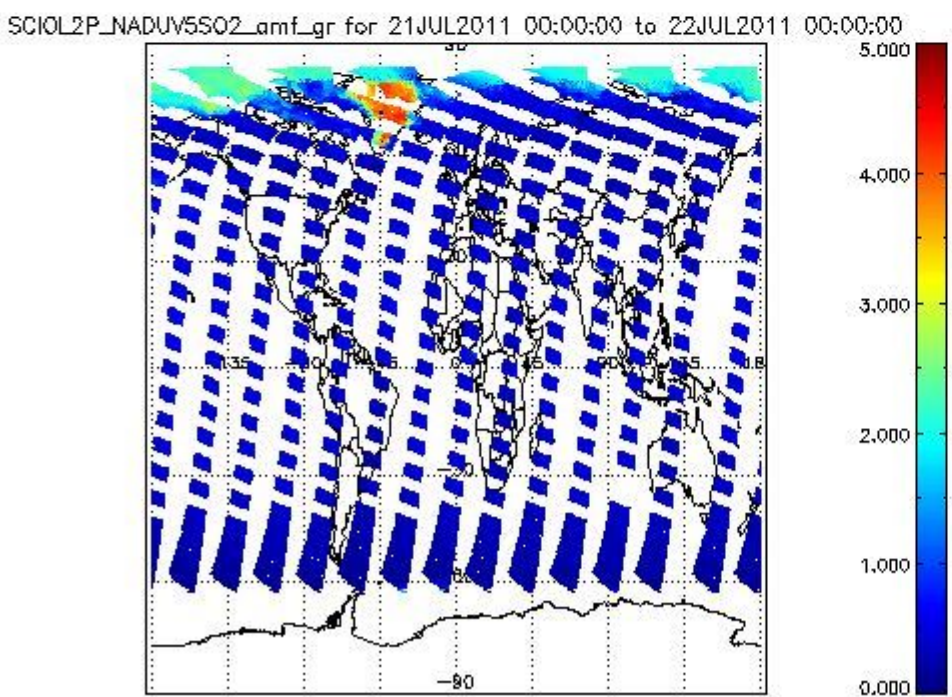
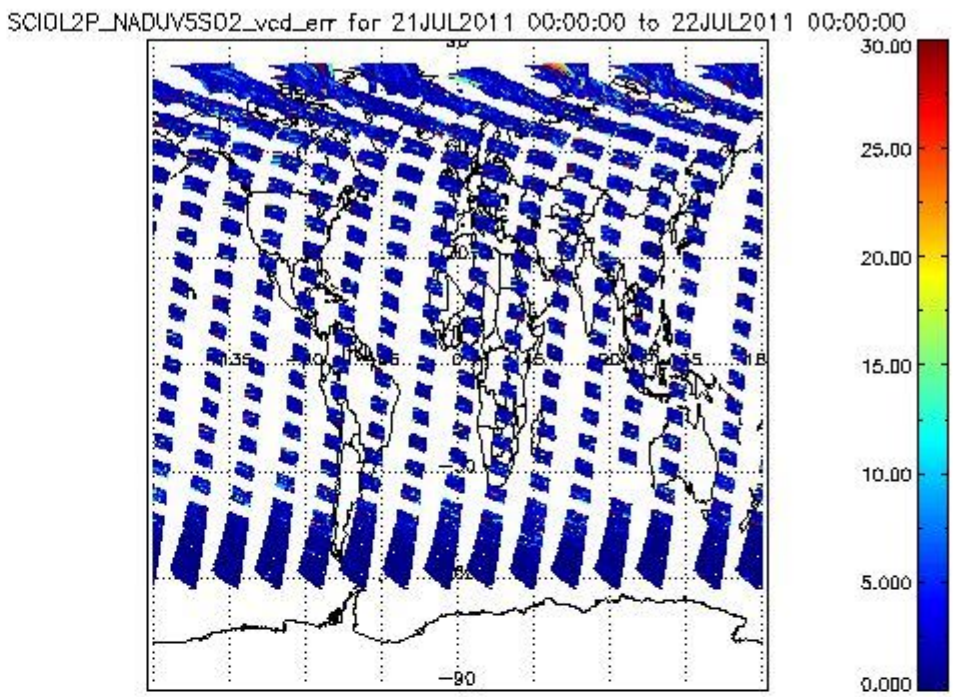
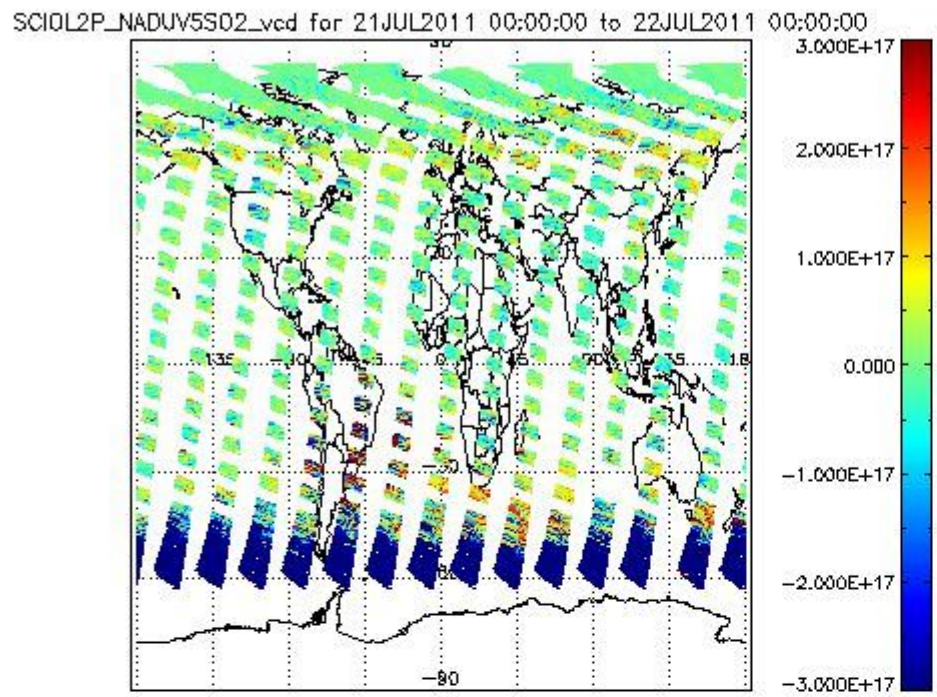


#### 2.2.2.4 SO2 (UV5)







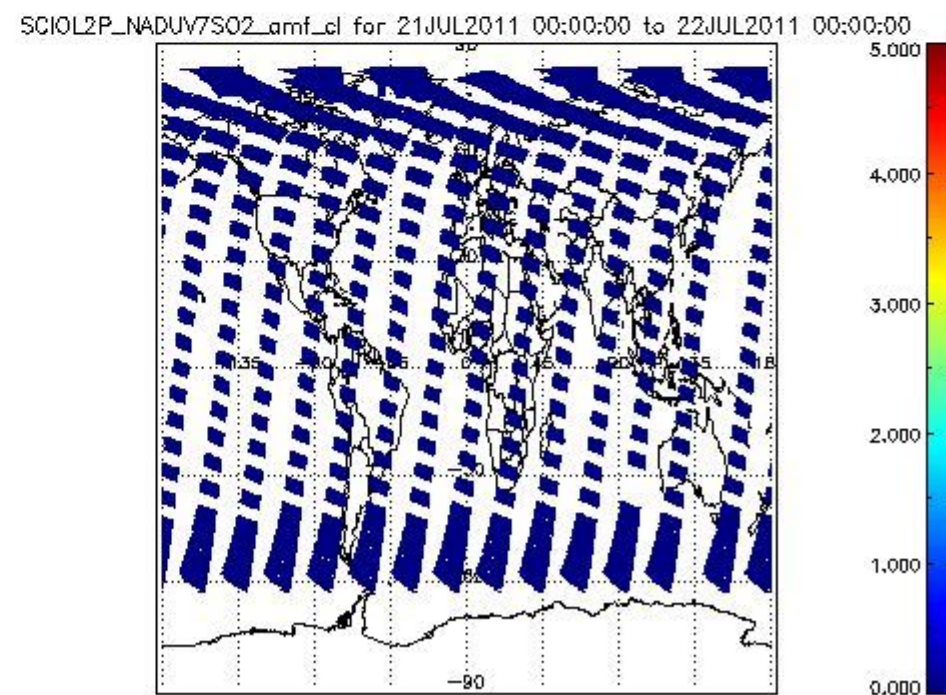
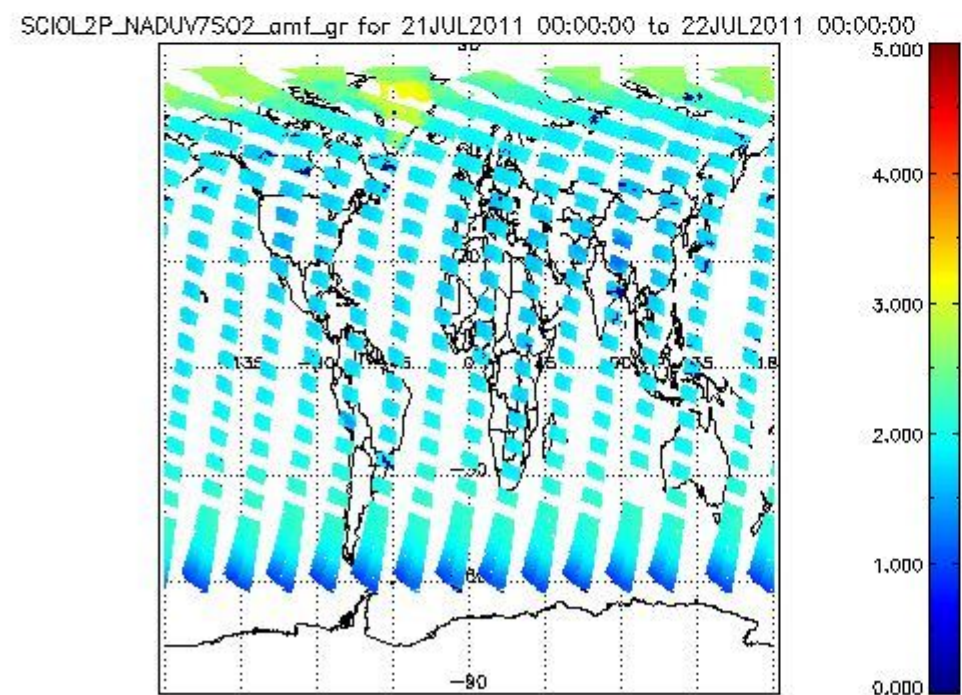
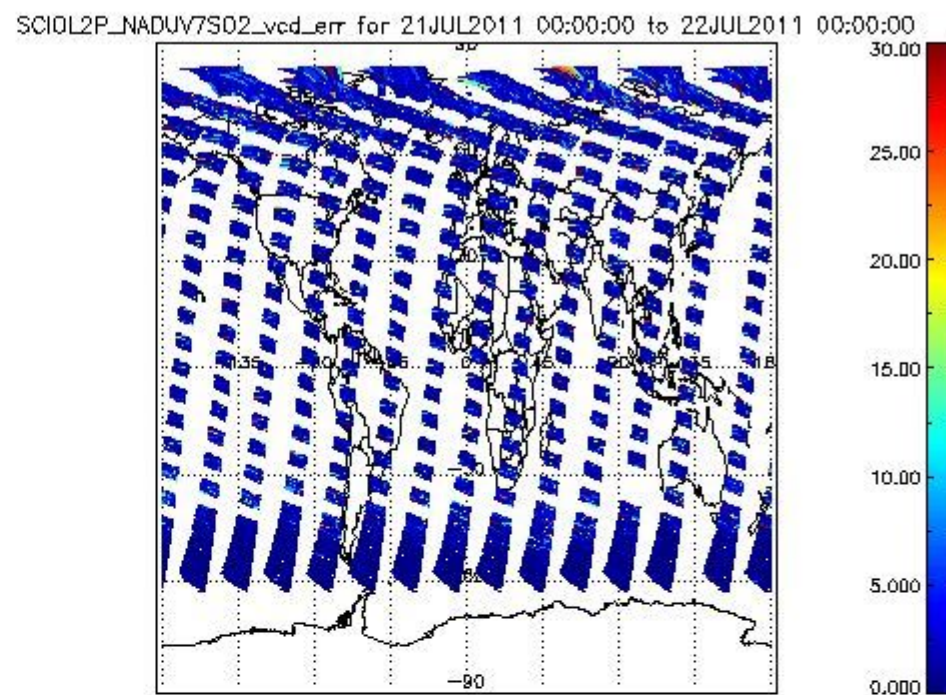
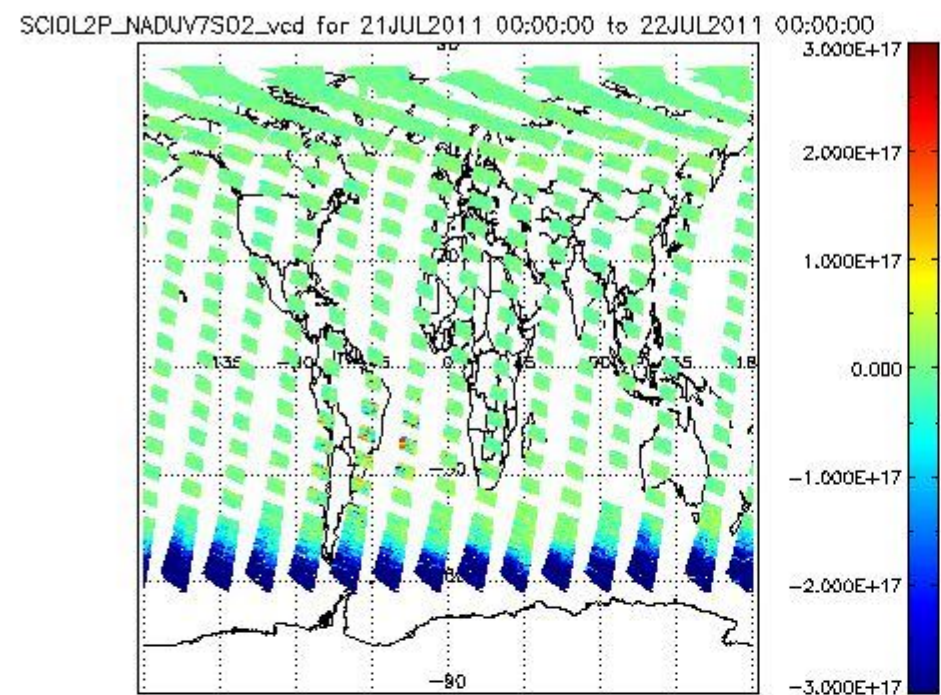


2.2.2.5 SO2 (UV7)



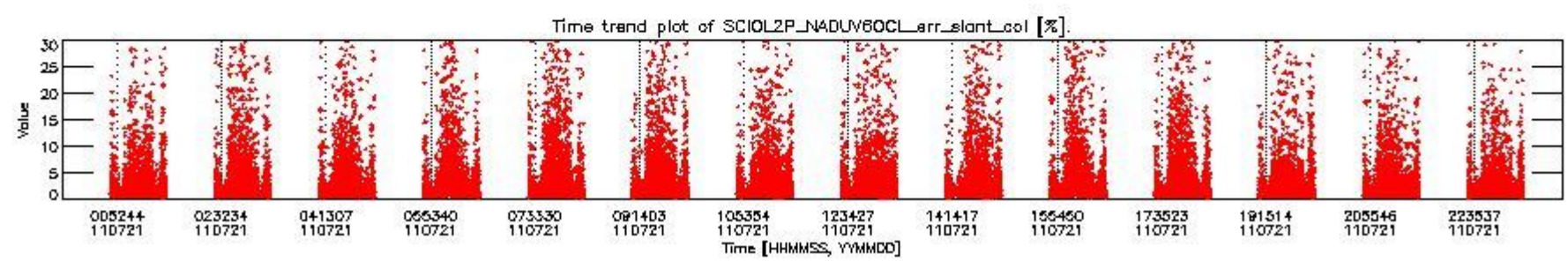
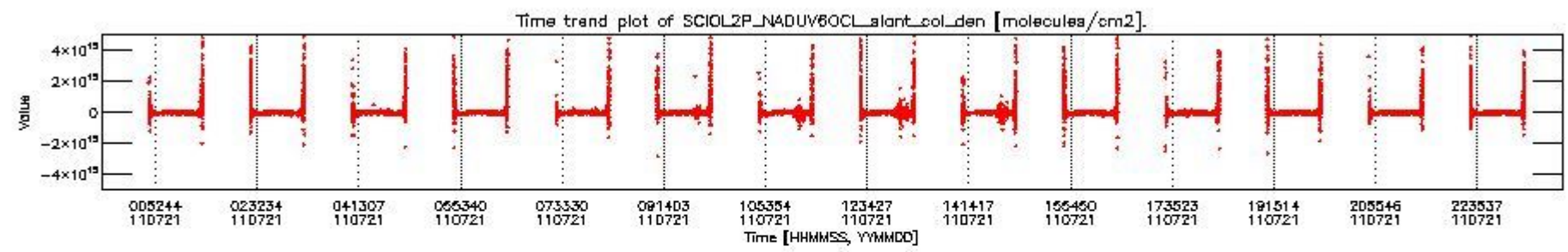




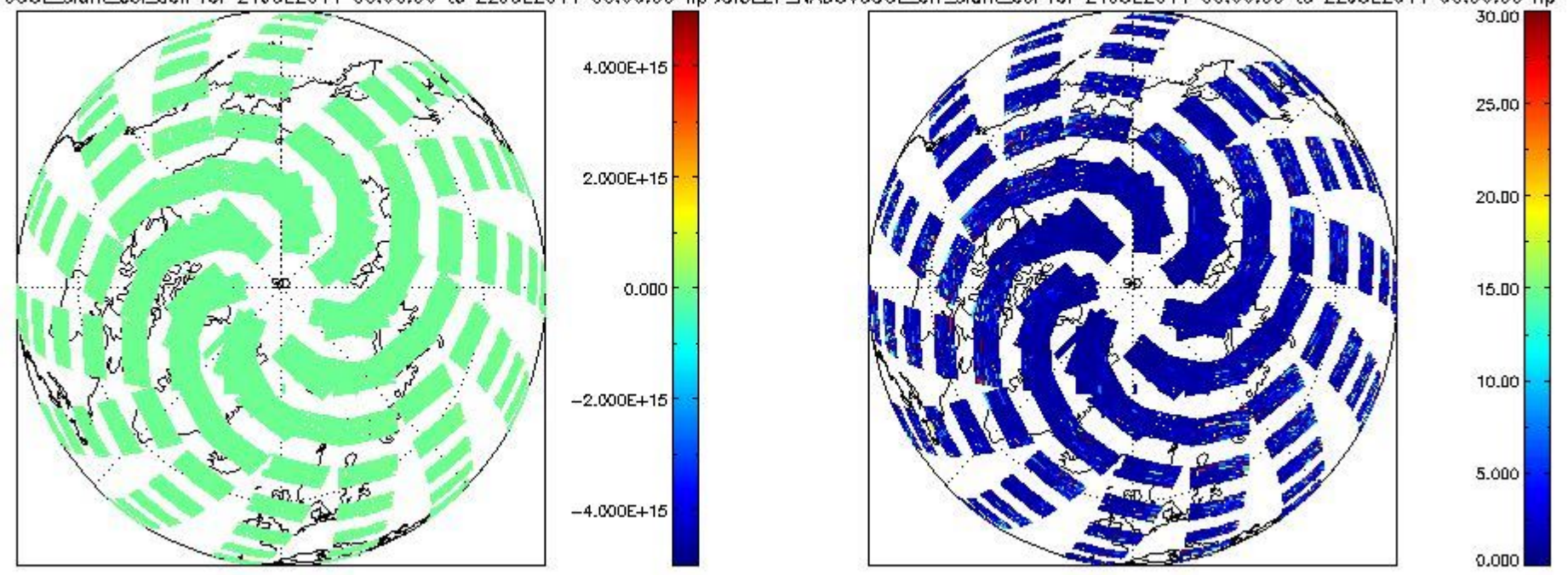


2.2.2.6 OCIO (UV6)



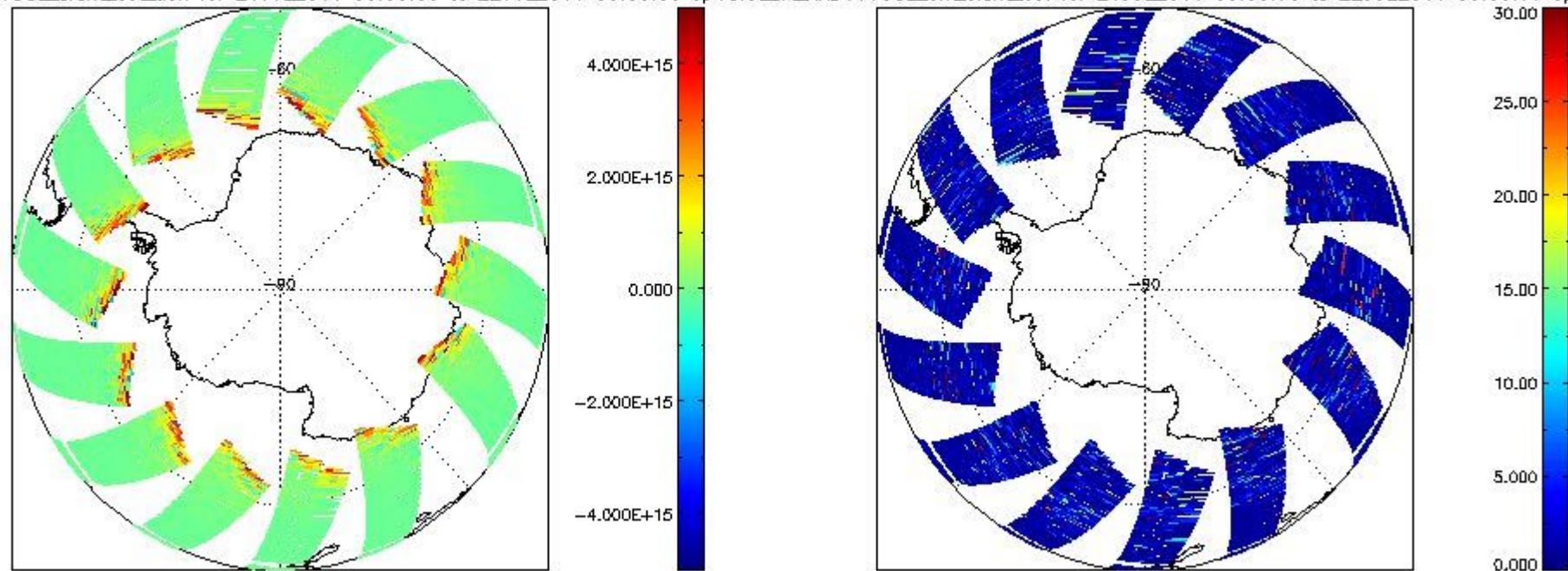


SCIOI2P\_NADUV6OCLslant\_col\_den for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 np SCIOI2P\_NADUV6OCLlarr\_slant\_col for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 np

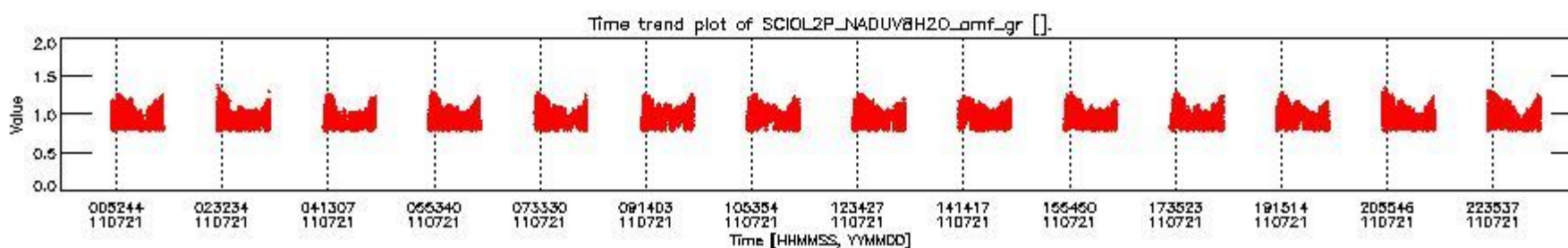
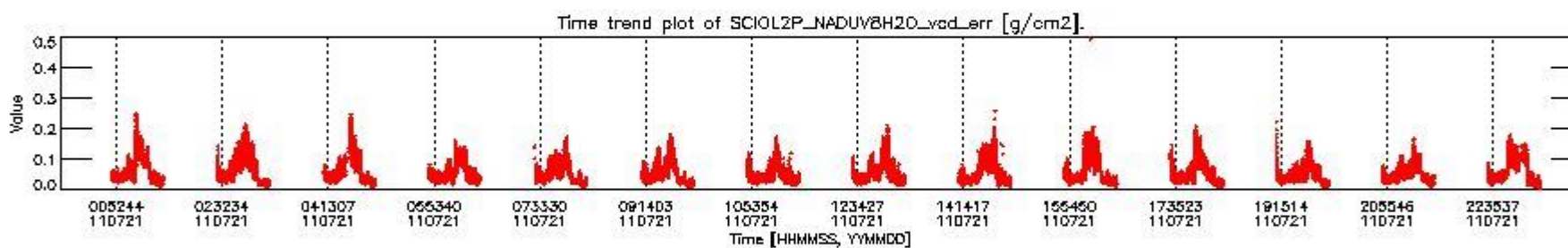
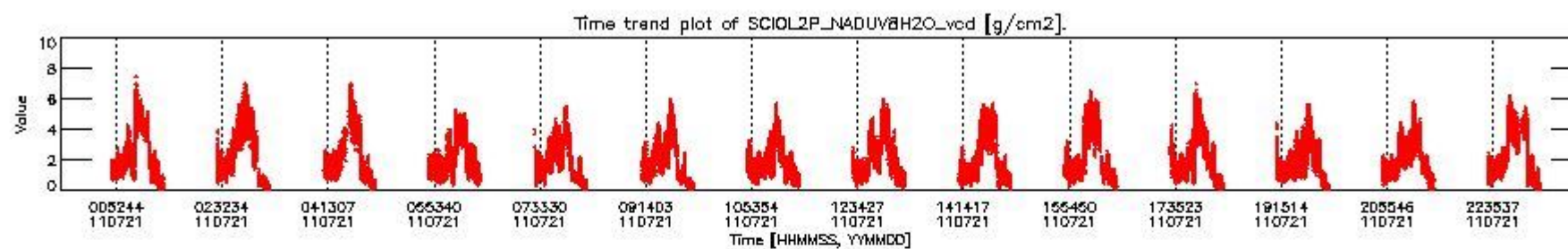




SCIOL2P\_NADUV6OCL\_slant\_col\_den for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 sp SCIOL2P\_NADUV6OCL\_err\_slant\_col for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 sp

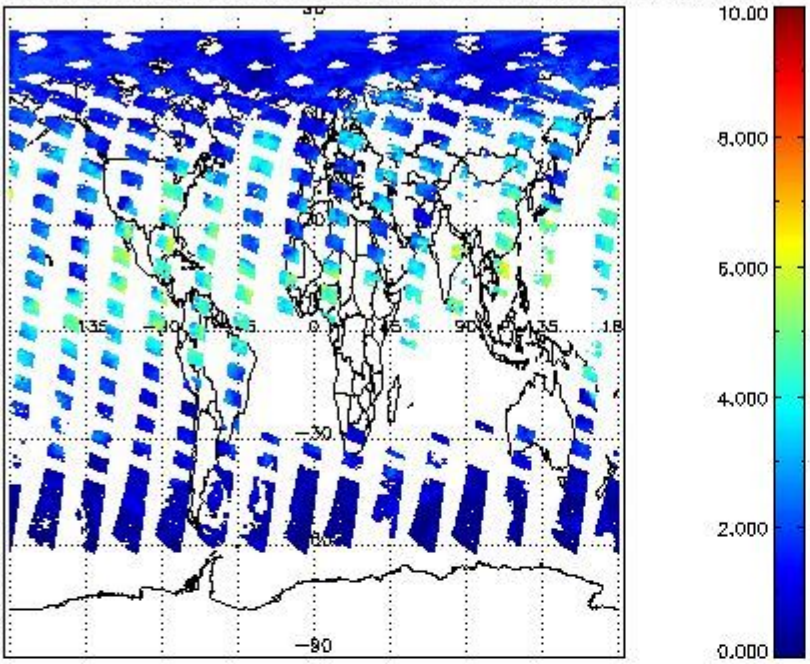


### 2.2.2.7 H2O (UV8)

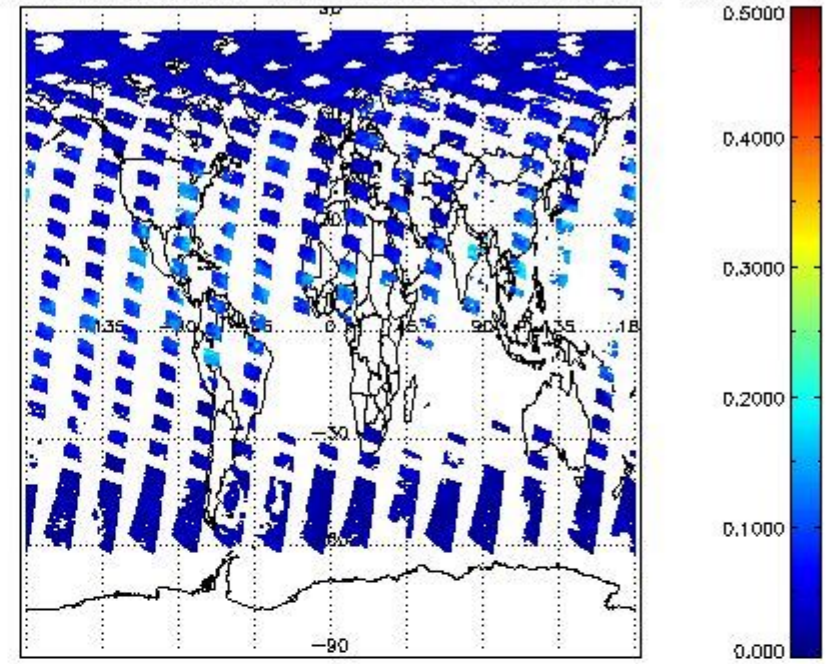




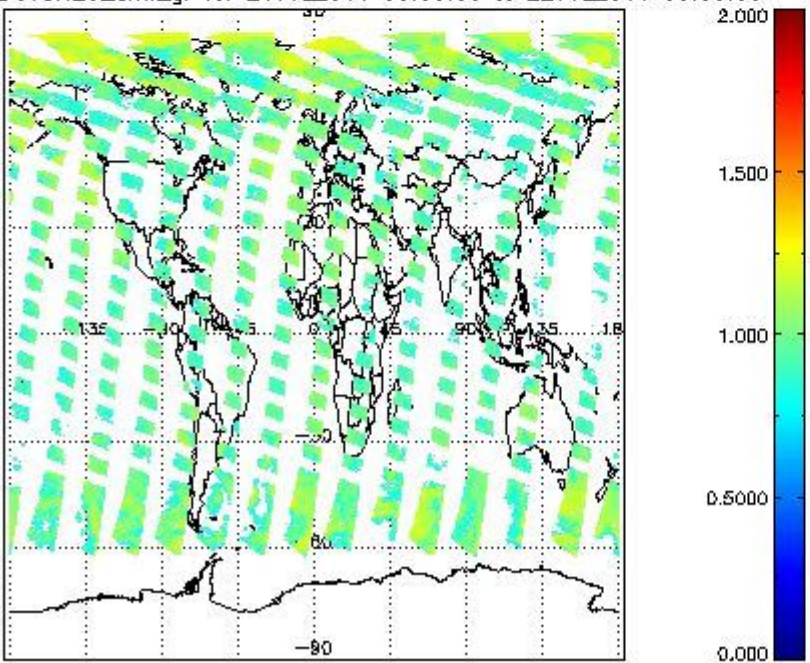
SCIOL2P\_NADUV8H20\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



SCIOL2P\_NADUV8H20\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

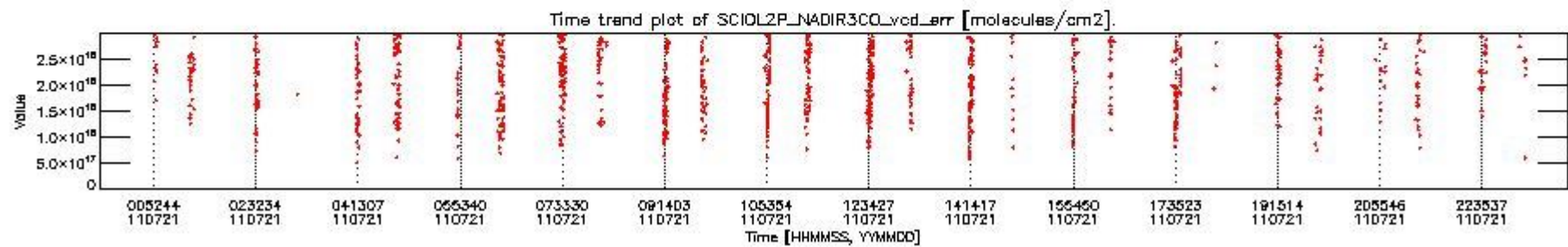
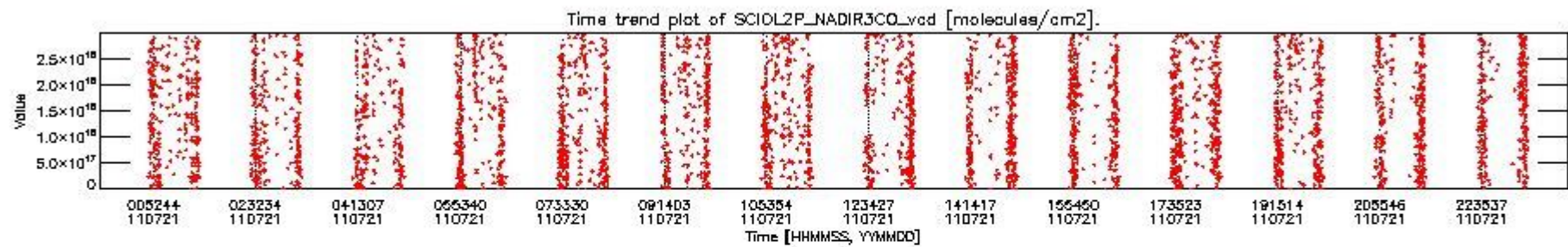


SCIOL2P\_NADUV8H20\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

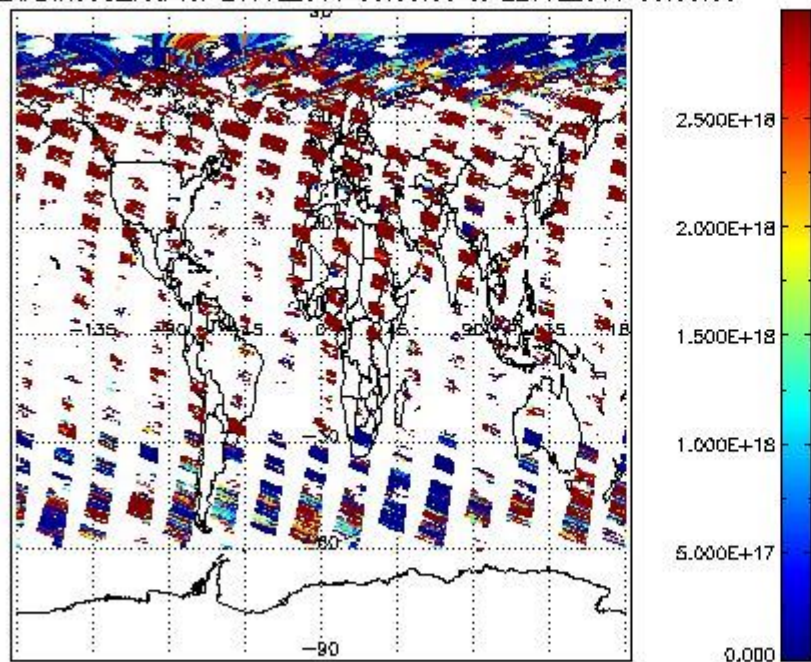


2.2.2.8 CO (IR3)

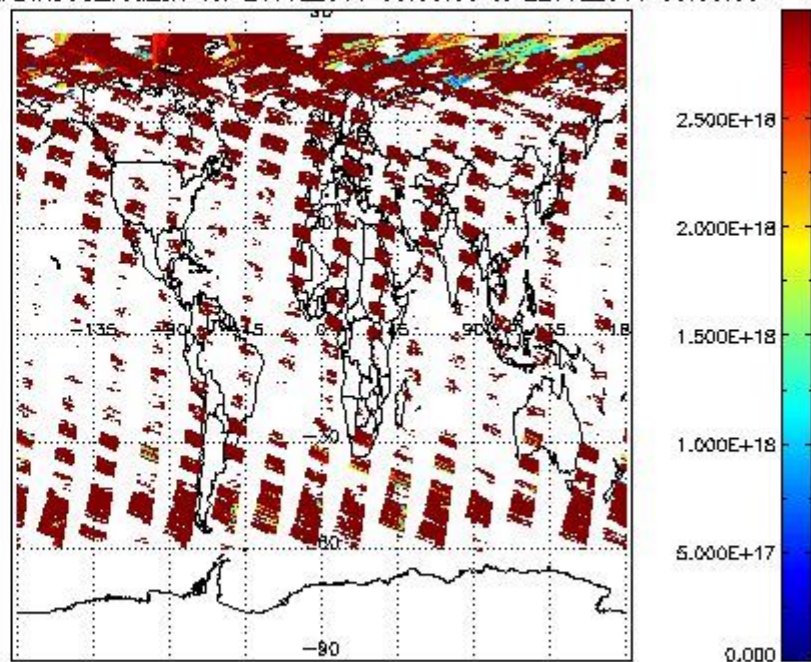




SCIDL2P\_NADIR3CO\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 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.

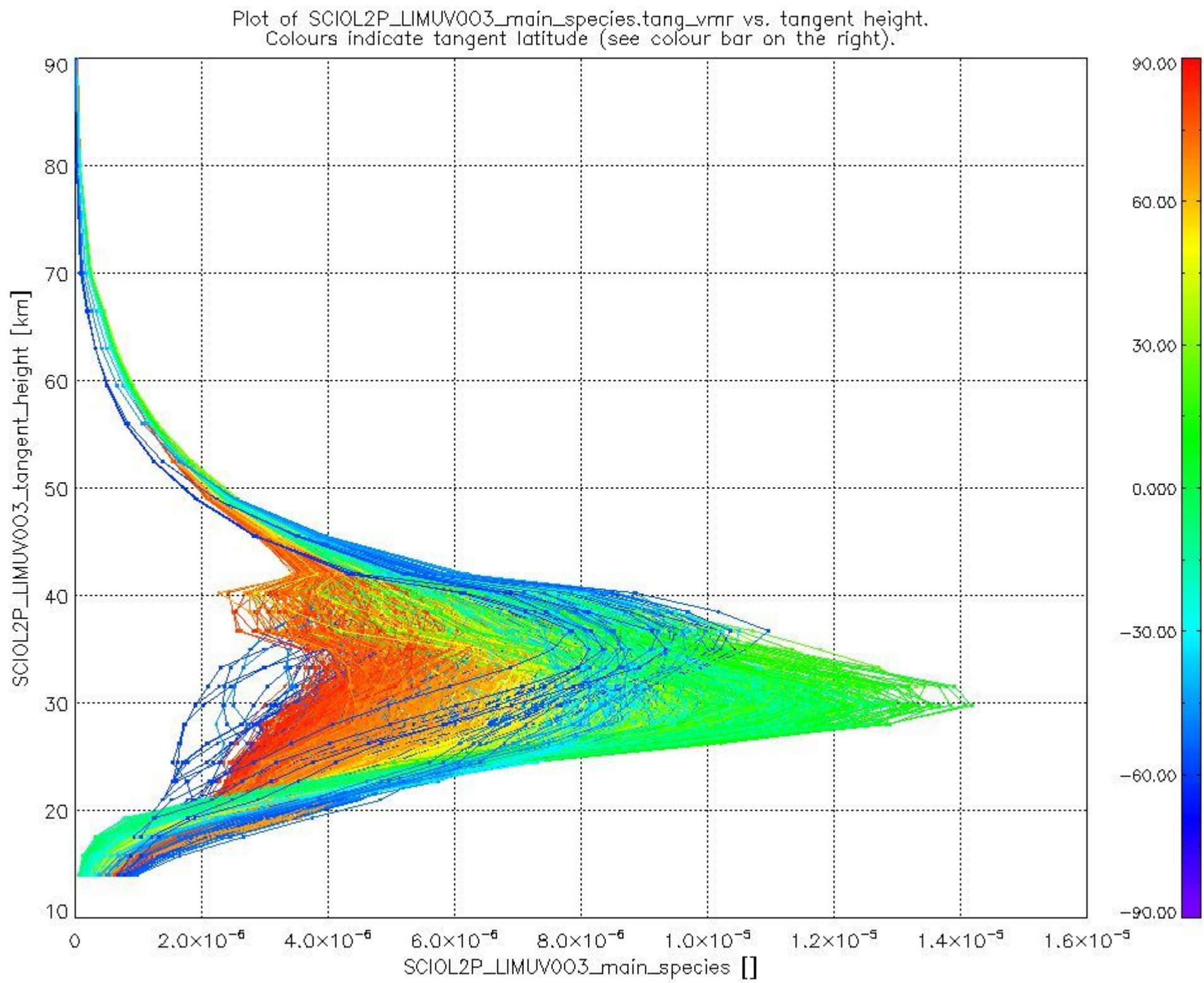
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



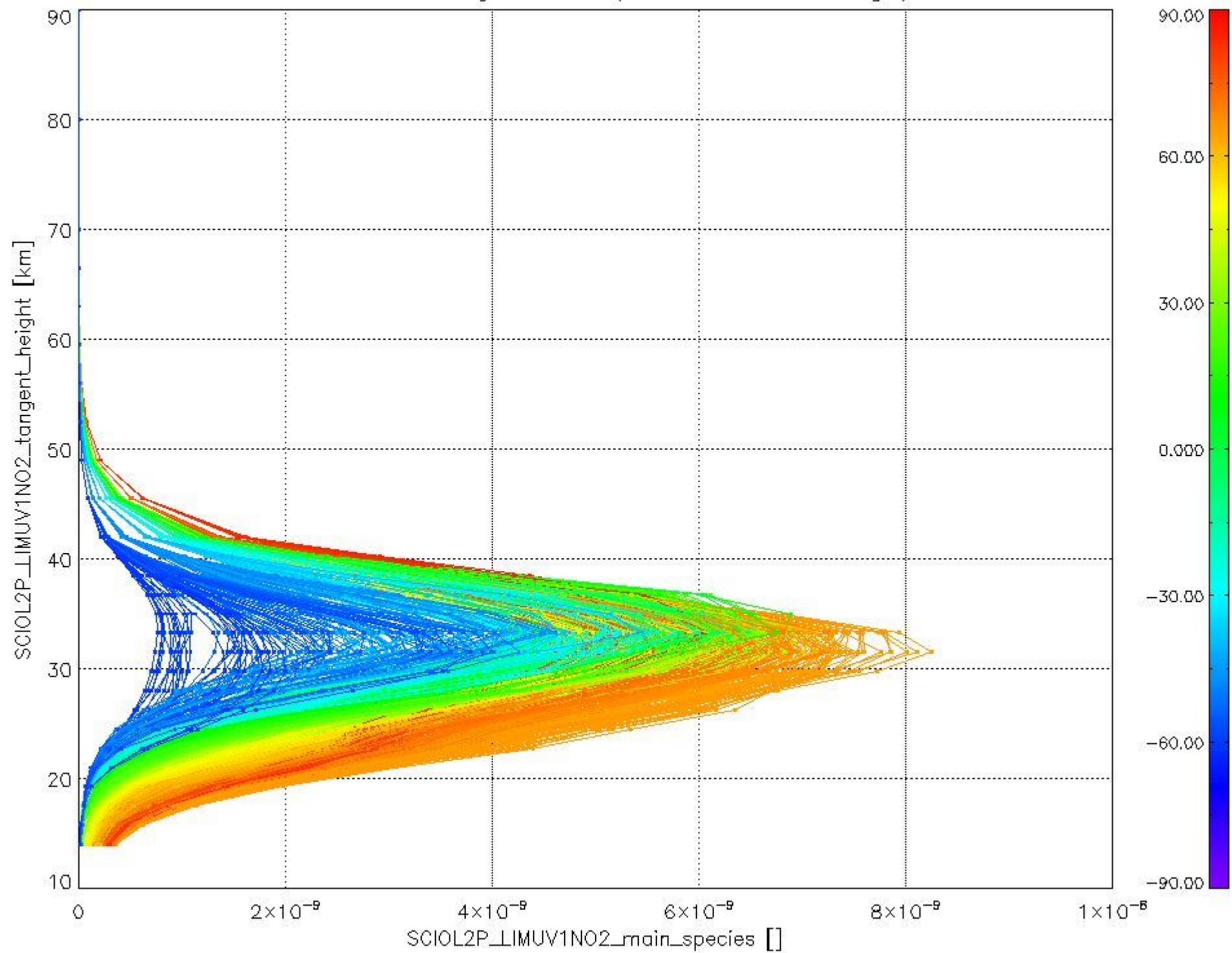
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)

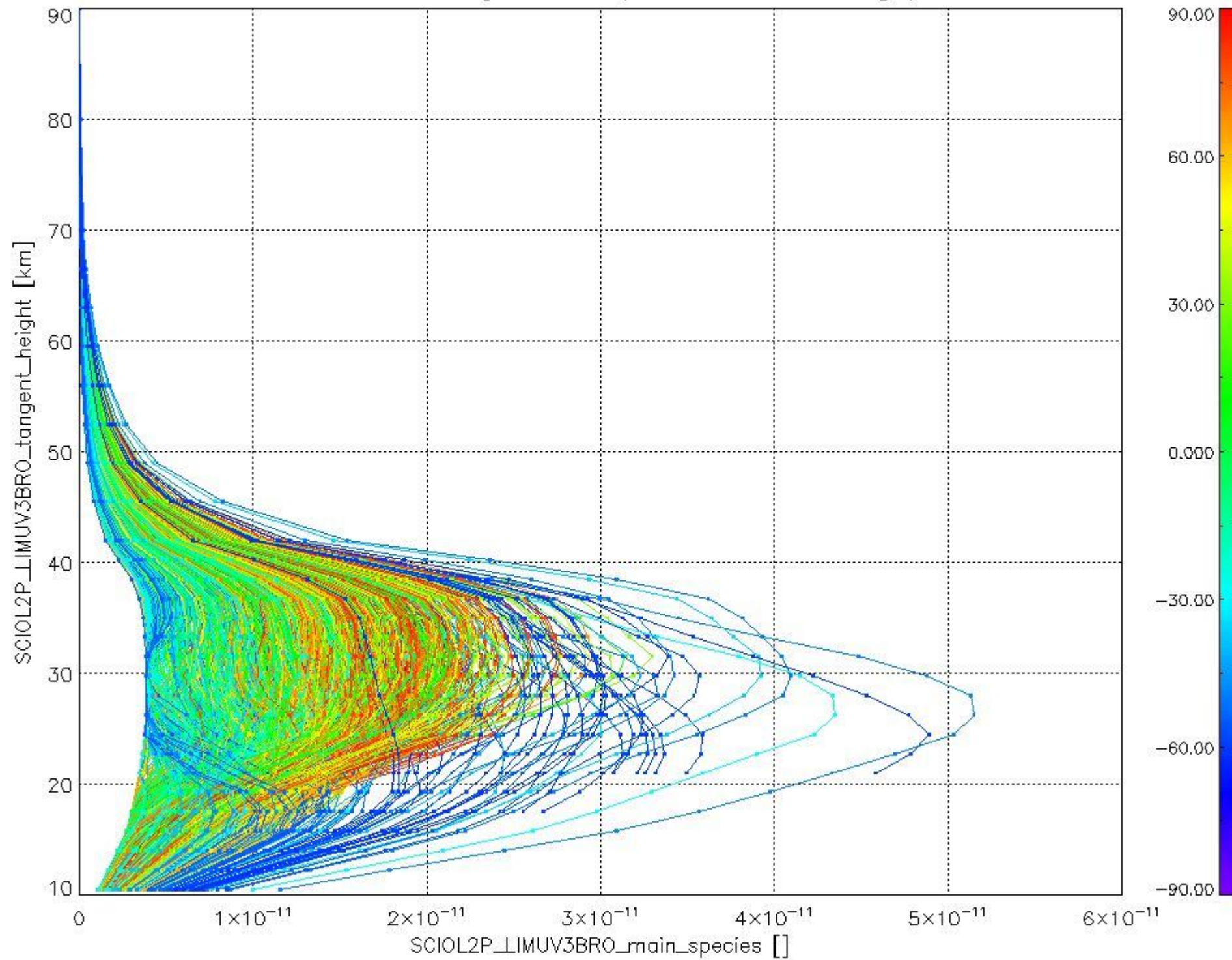
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).



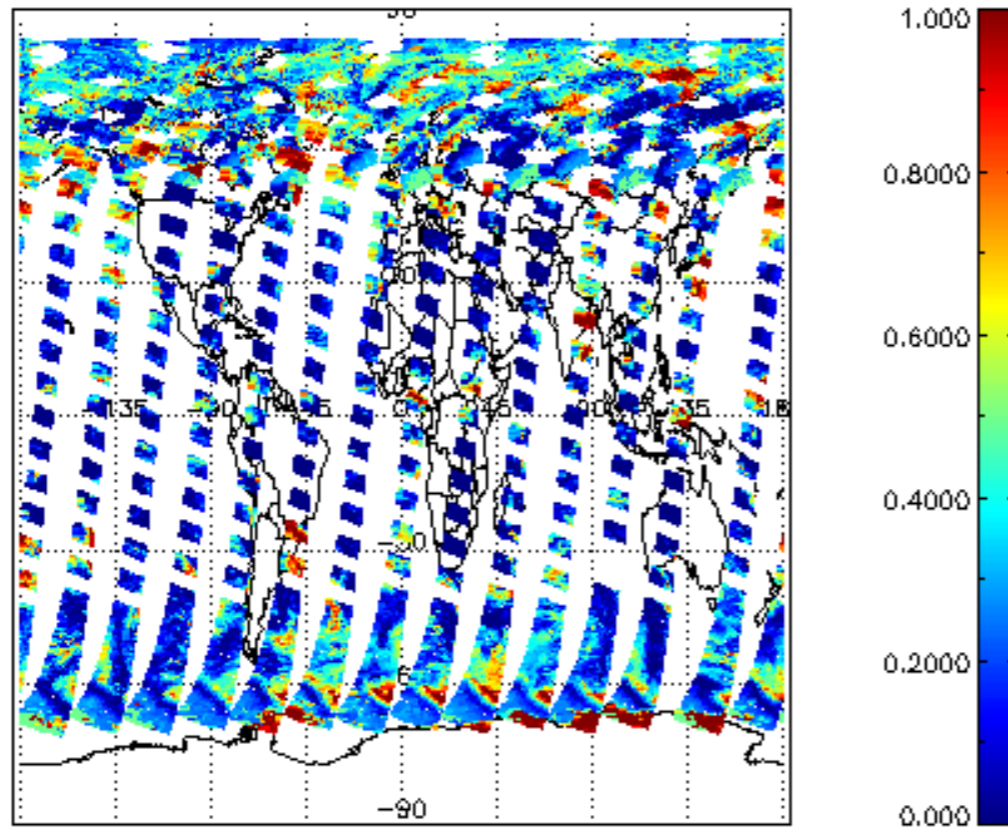
### 2.3 ADF monitoring

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_AXVIEC20110719_110901_20110720_191425_20110722_191425
3	SCI_MF1_AXVIEC20110719_111006_20110721_183740_20110723_183740

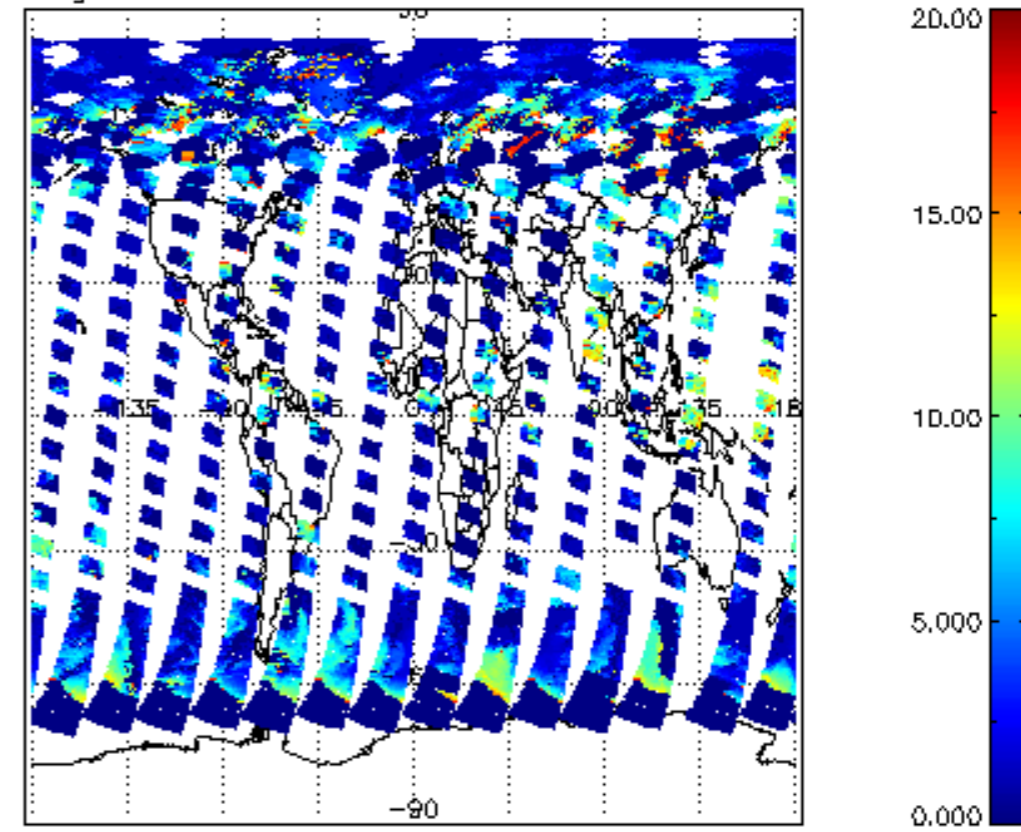




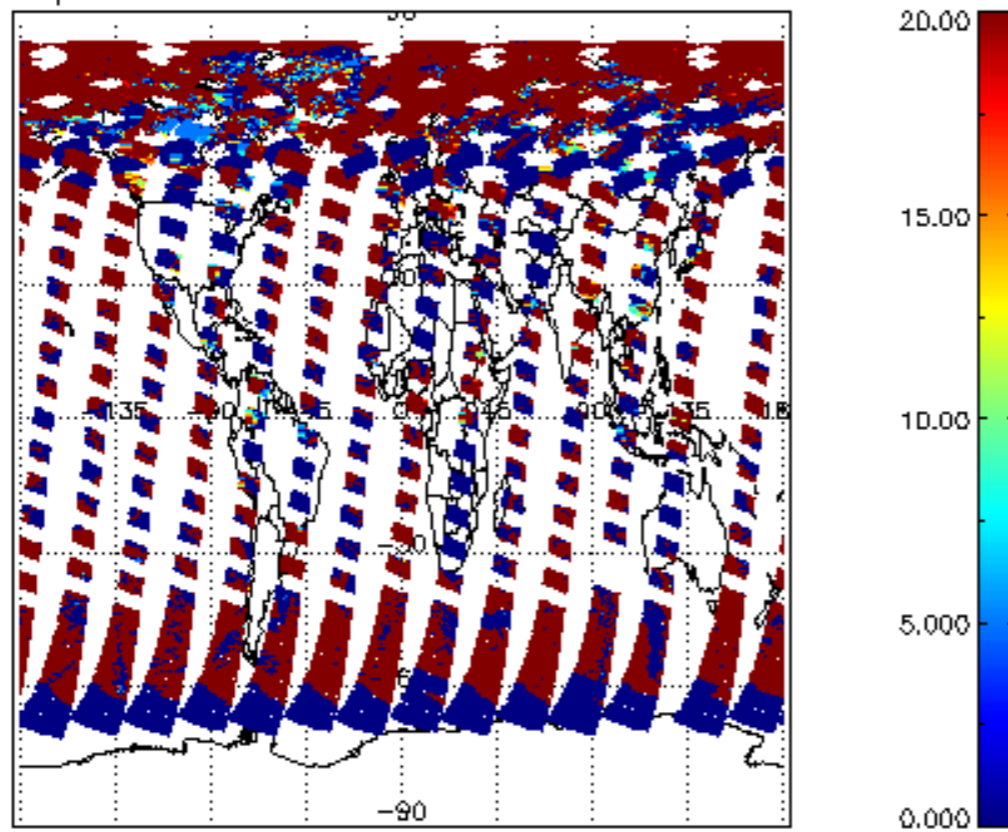
cl\_frac for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



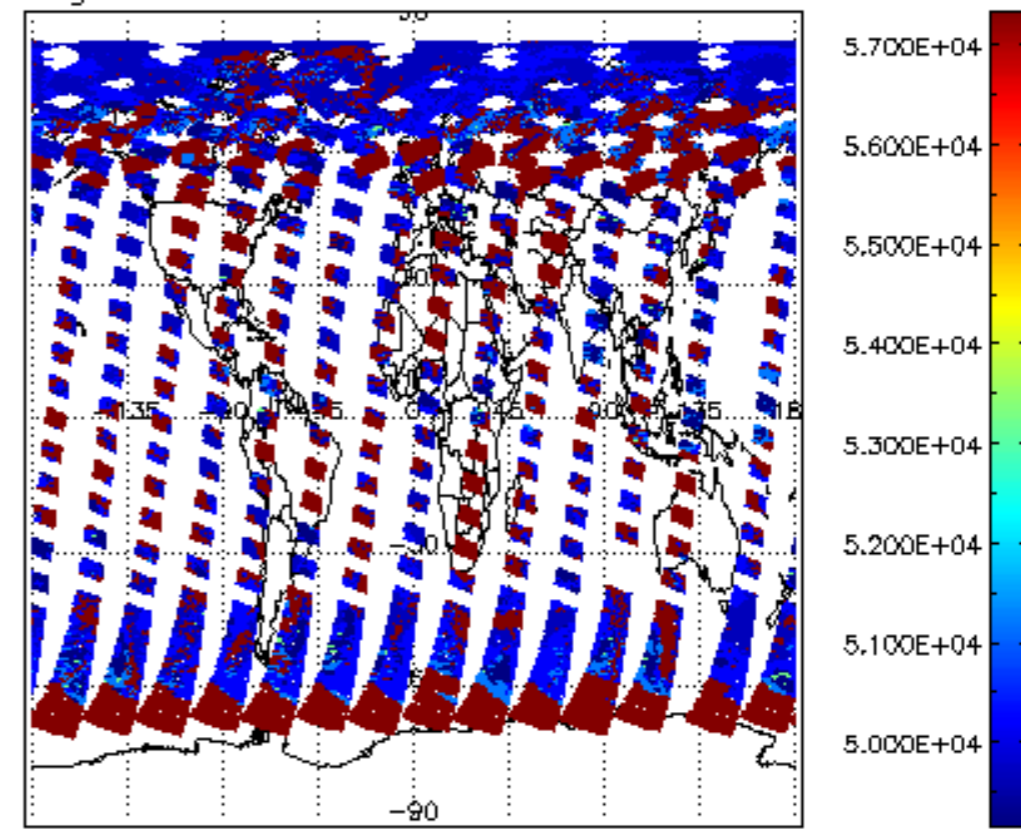
cl\_top\_height for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

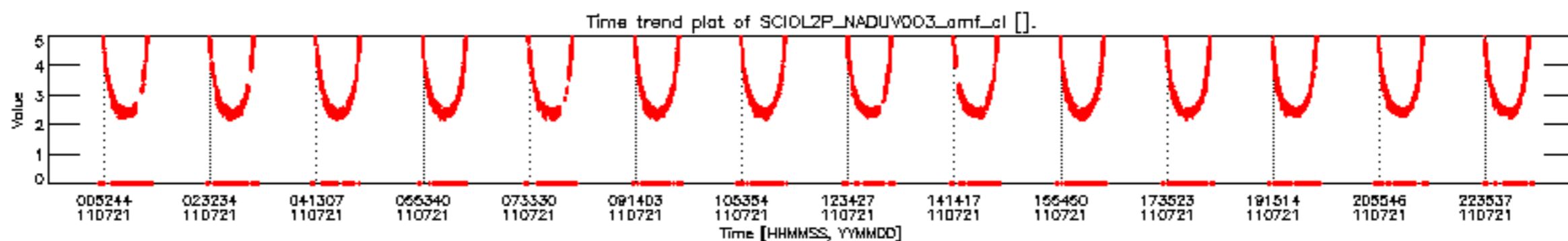
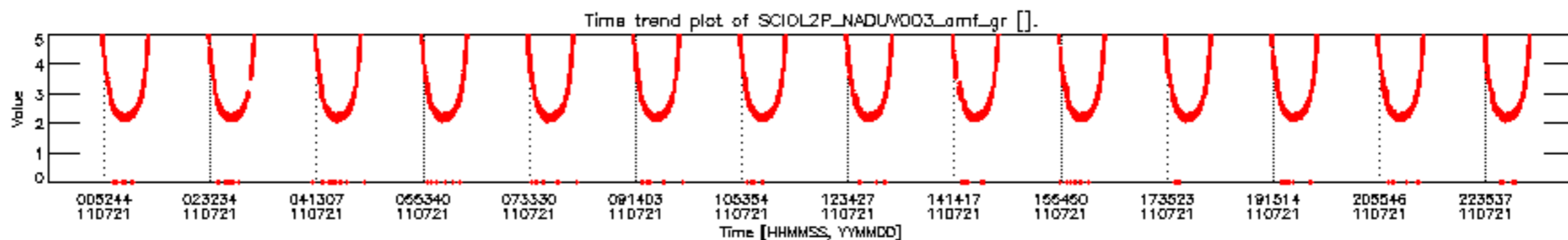
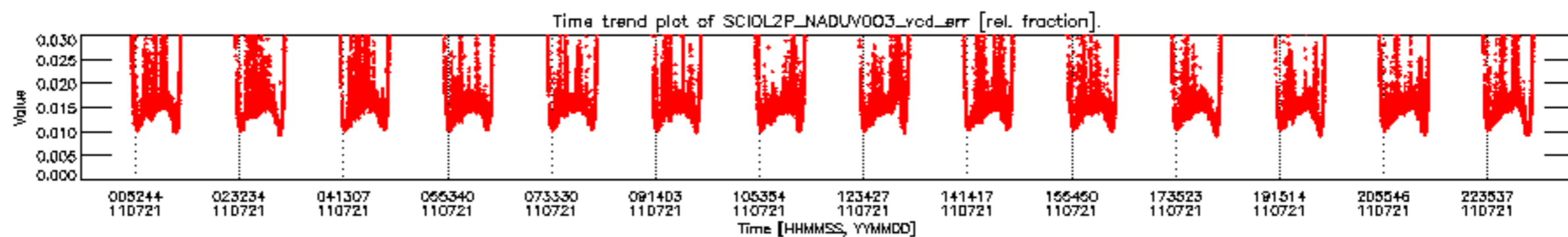
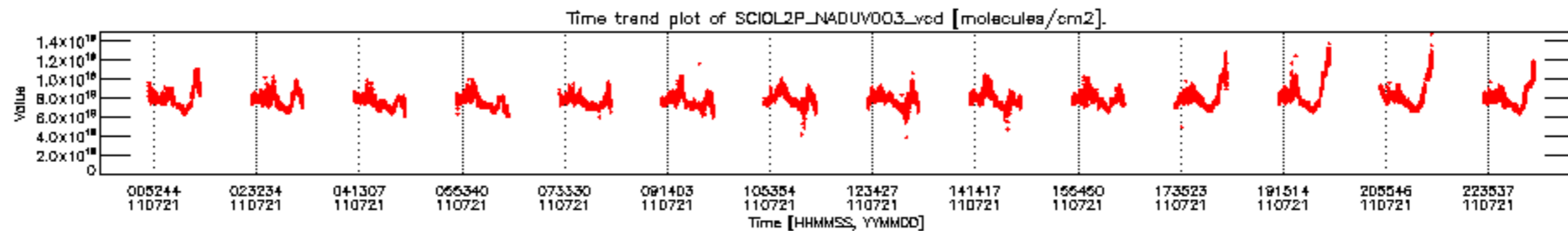


cl\_lopt\_depth for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



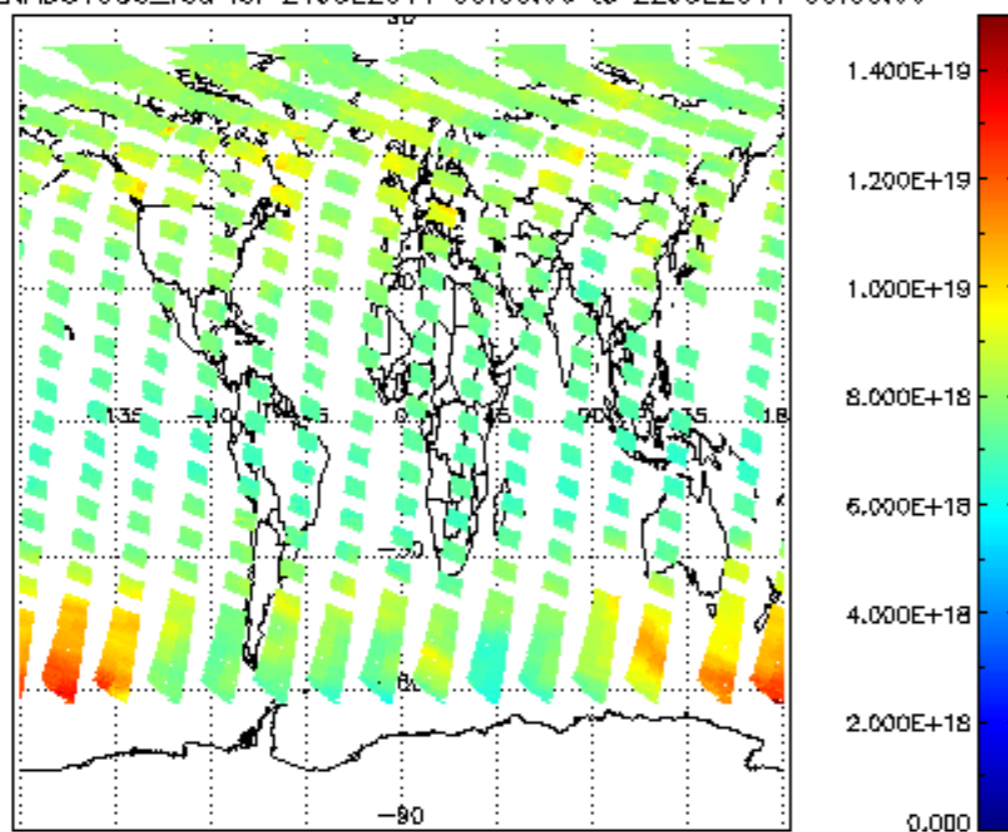
cloud\_flags for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



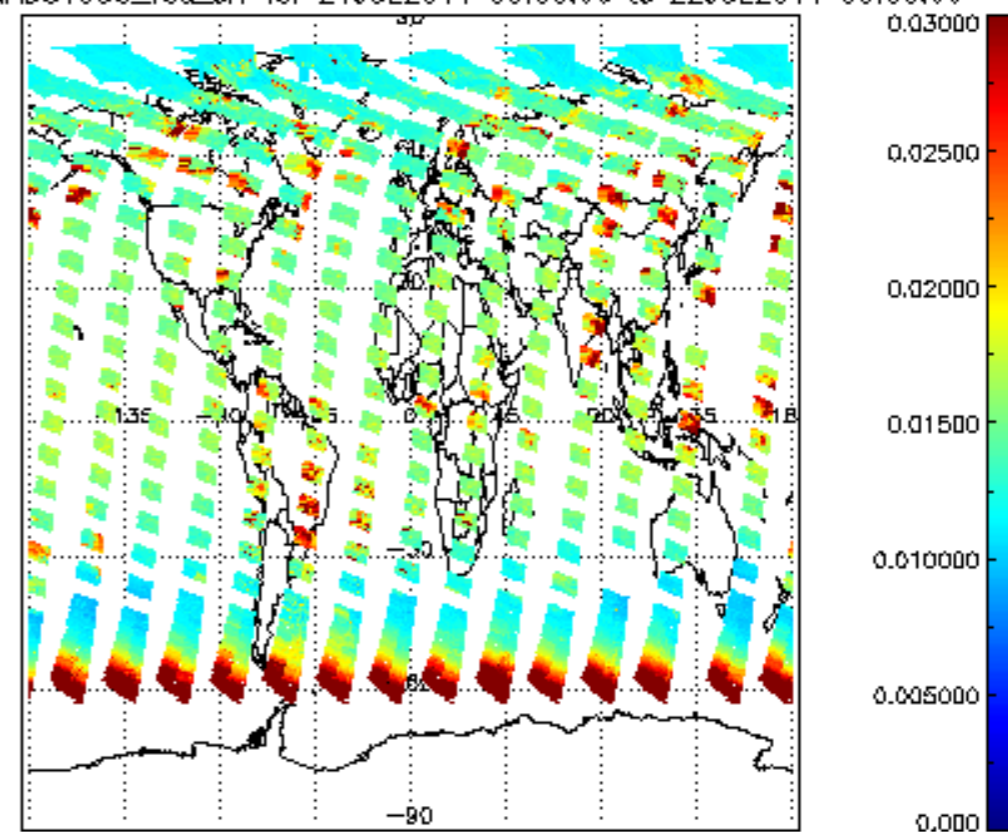




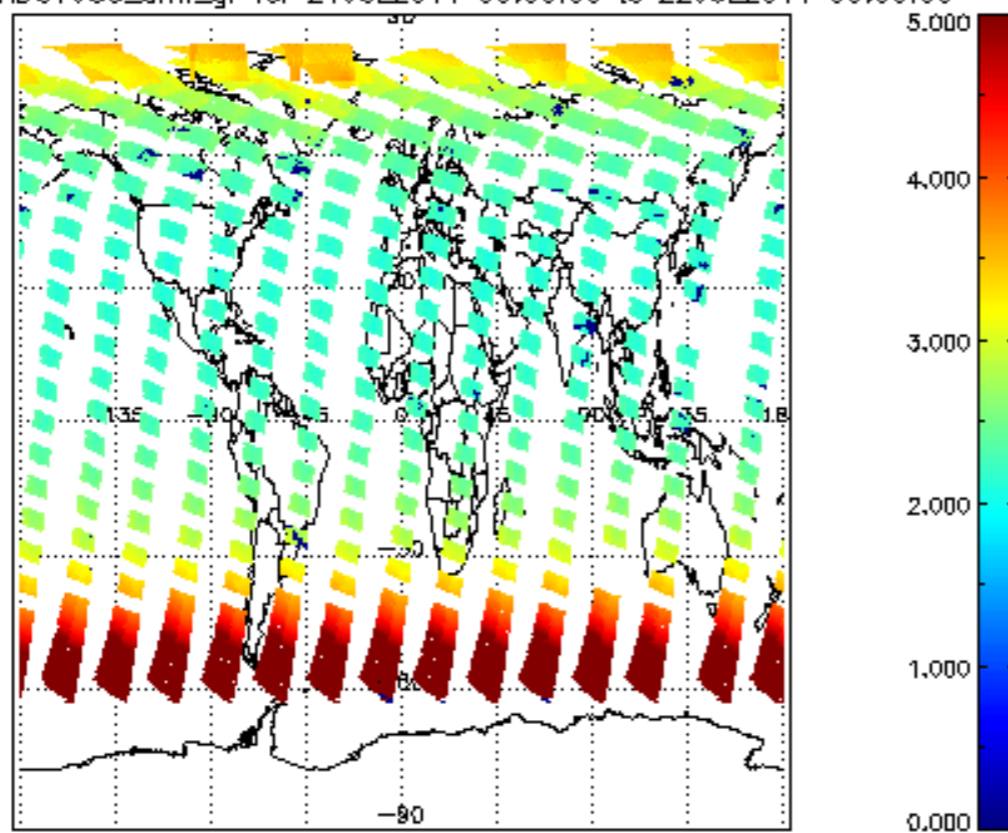
SCIOL2P\_NADUV003\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



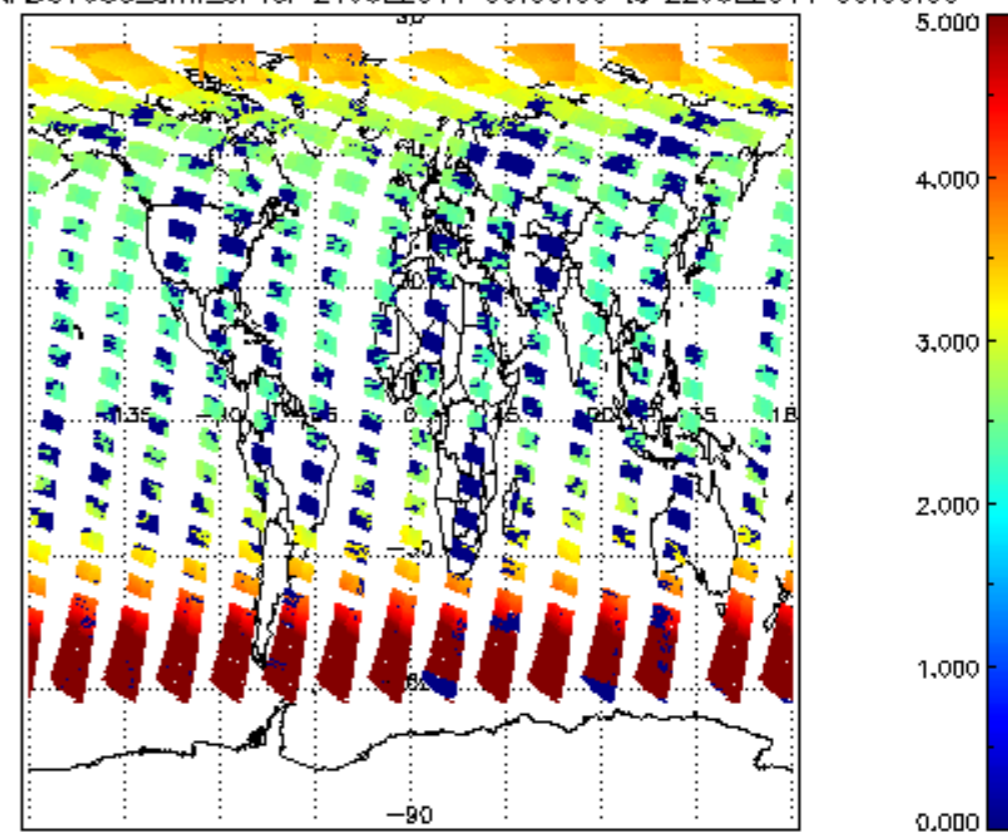
SCIOL2P\_NADUV003\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

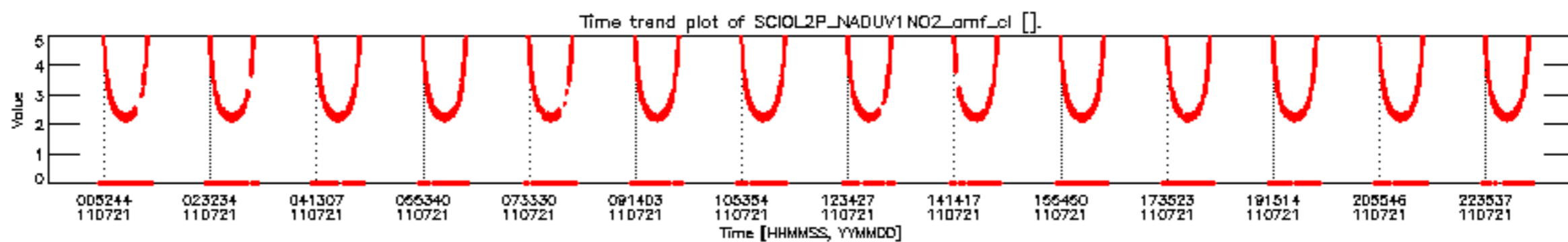
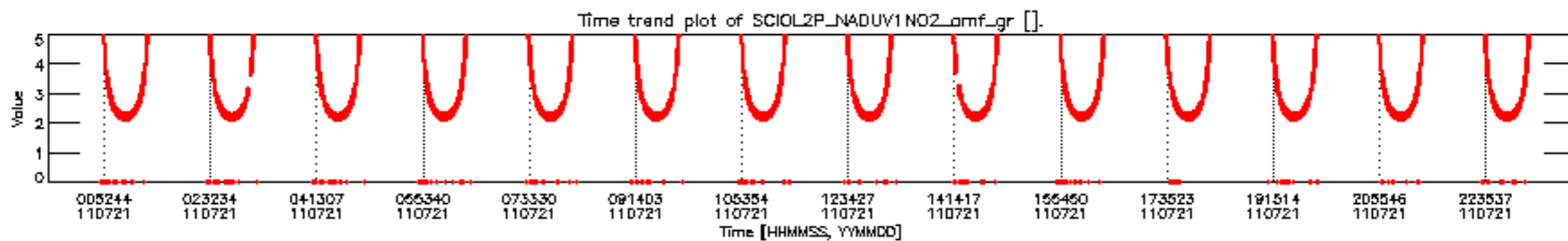
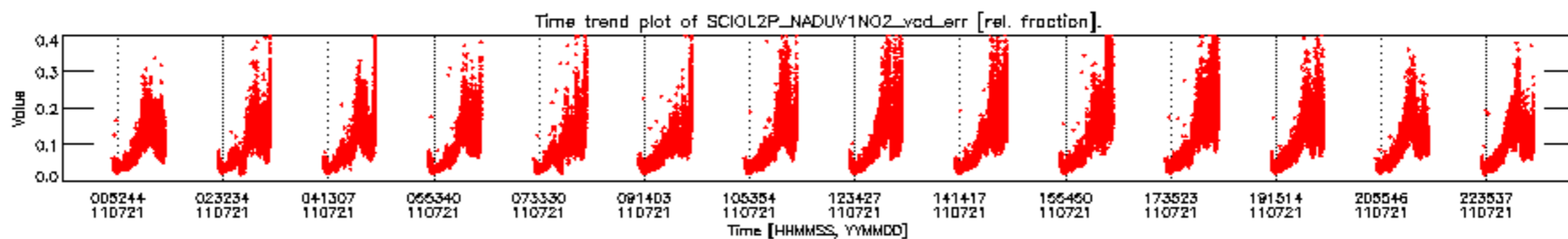
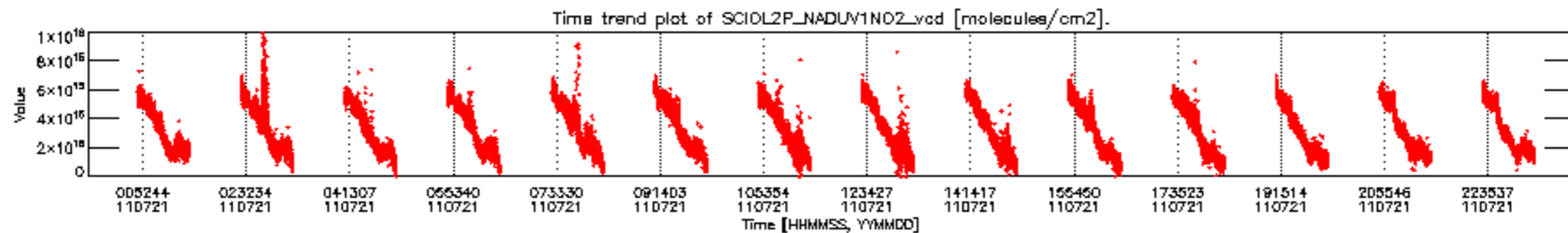


SCIOL2P\_NADUV003\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



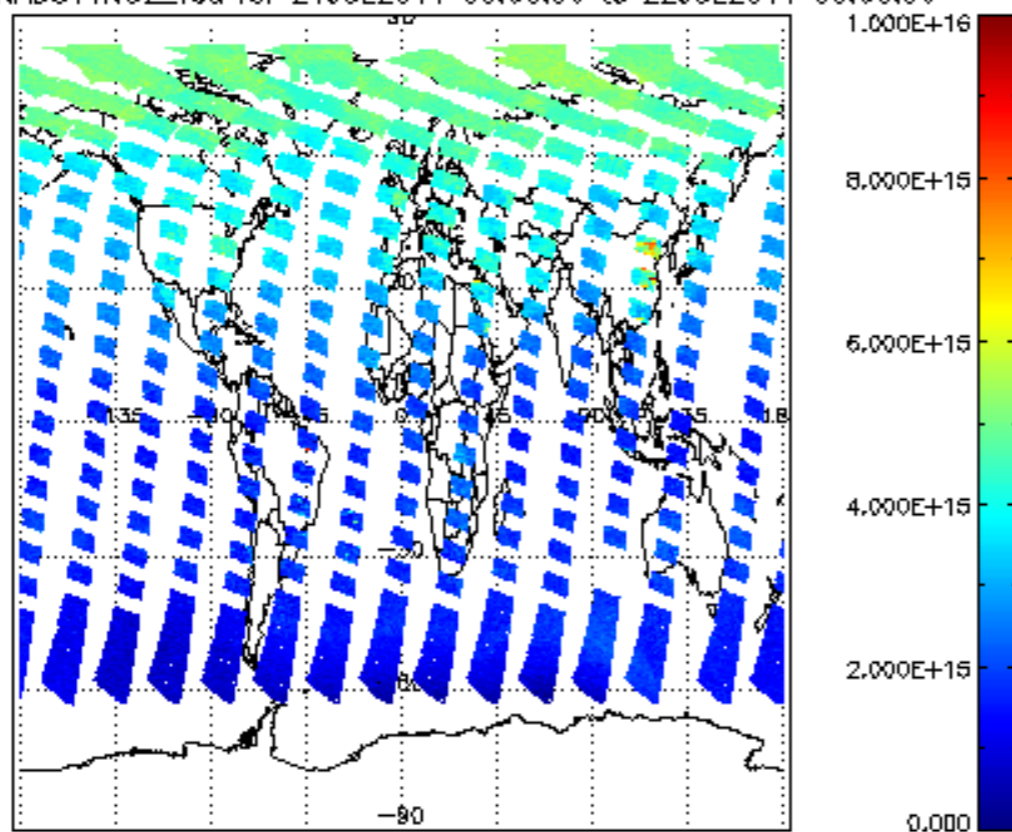
SCIOL2P\_NADUV003\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



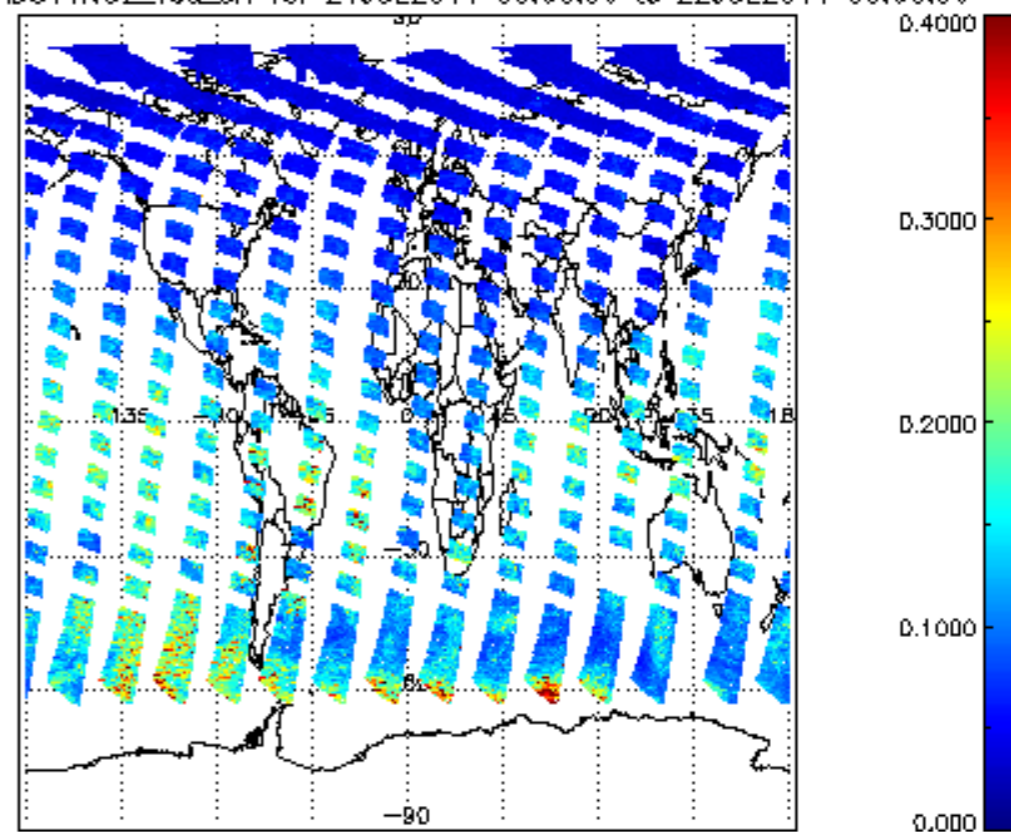




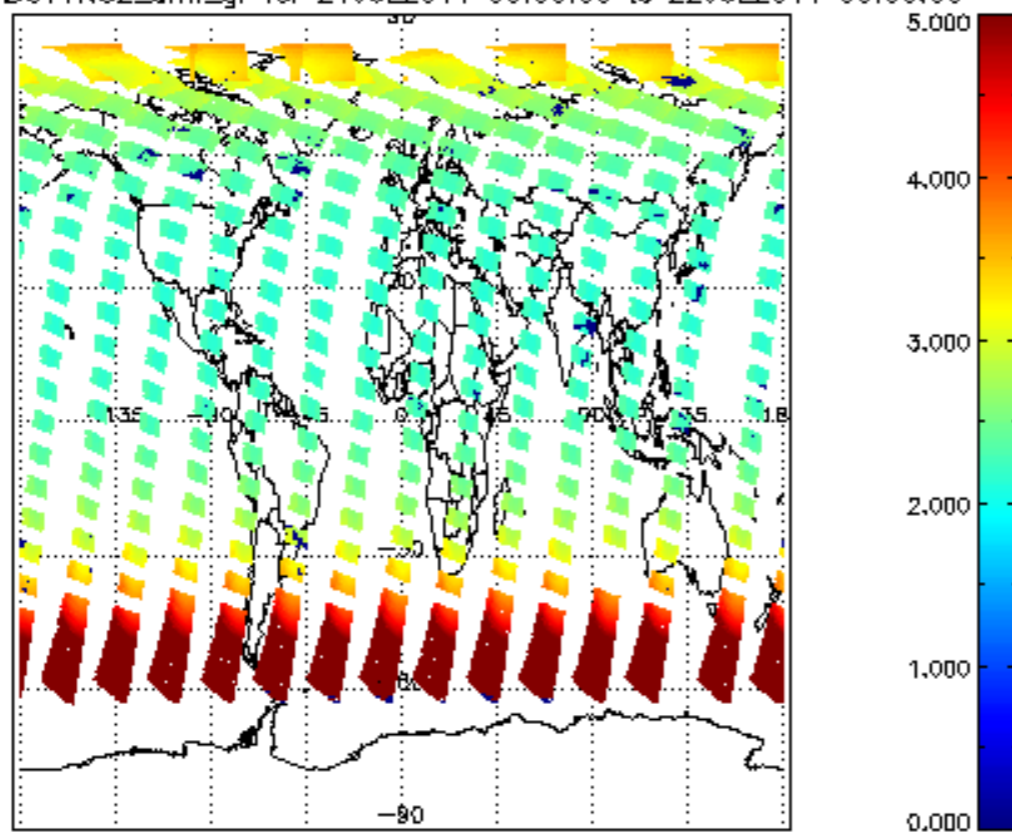
SCIOL2P\_NADUV1N02\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



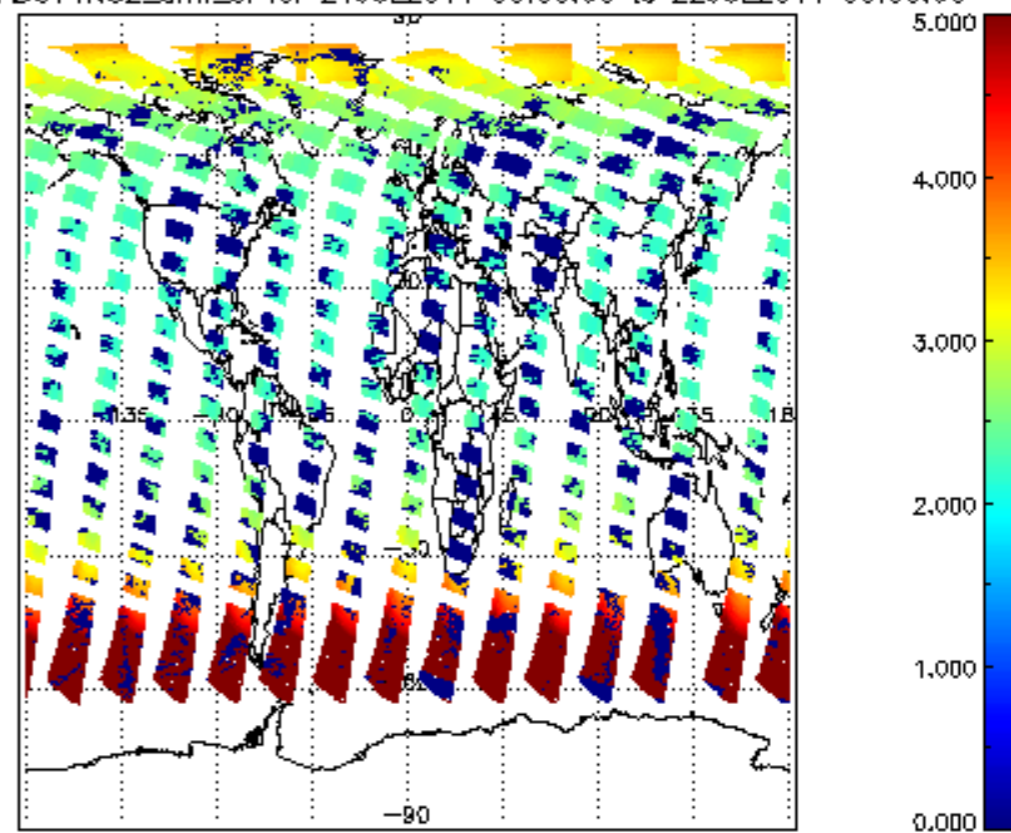
SCIOL2P\_NADUV1N02\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

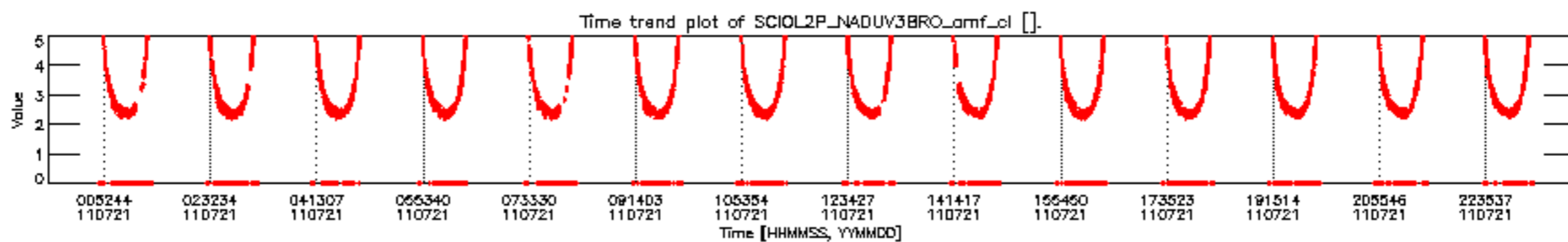
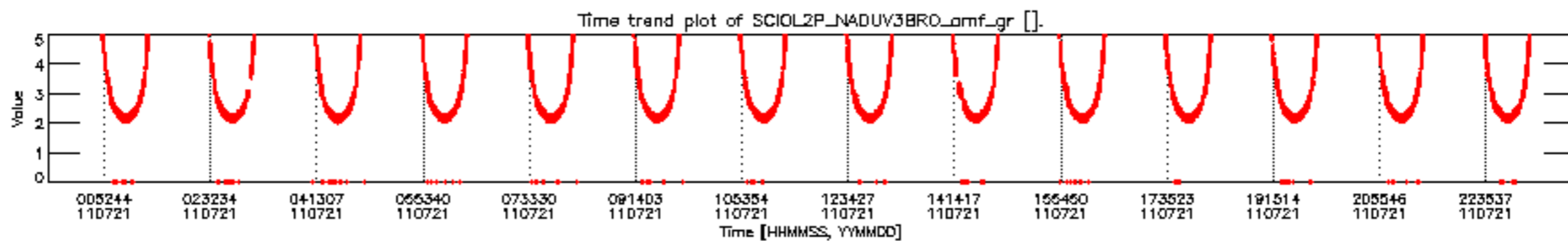
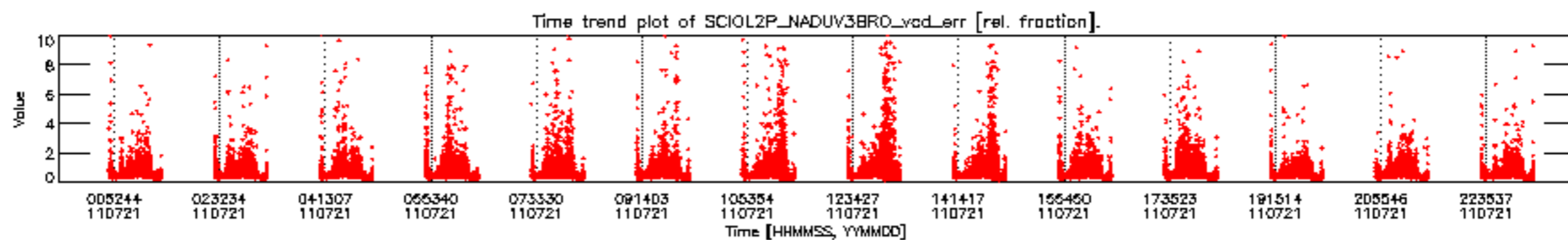
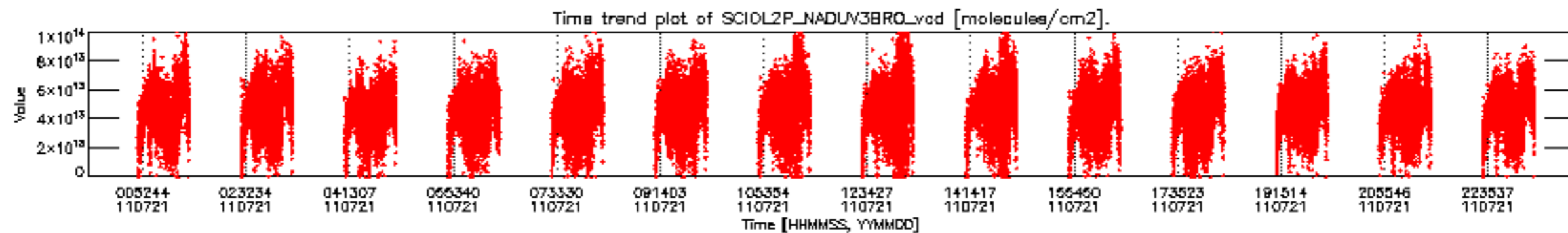


SCIOL2P\_NADUV1N02\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



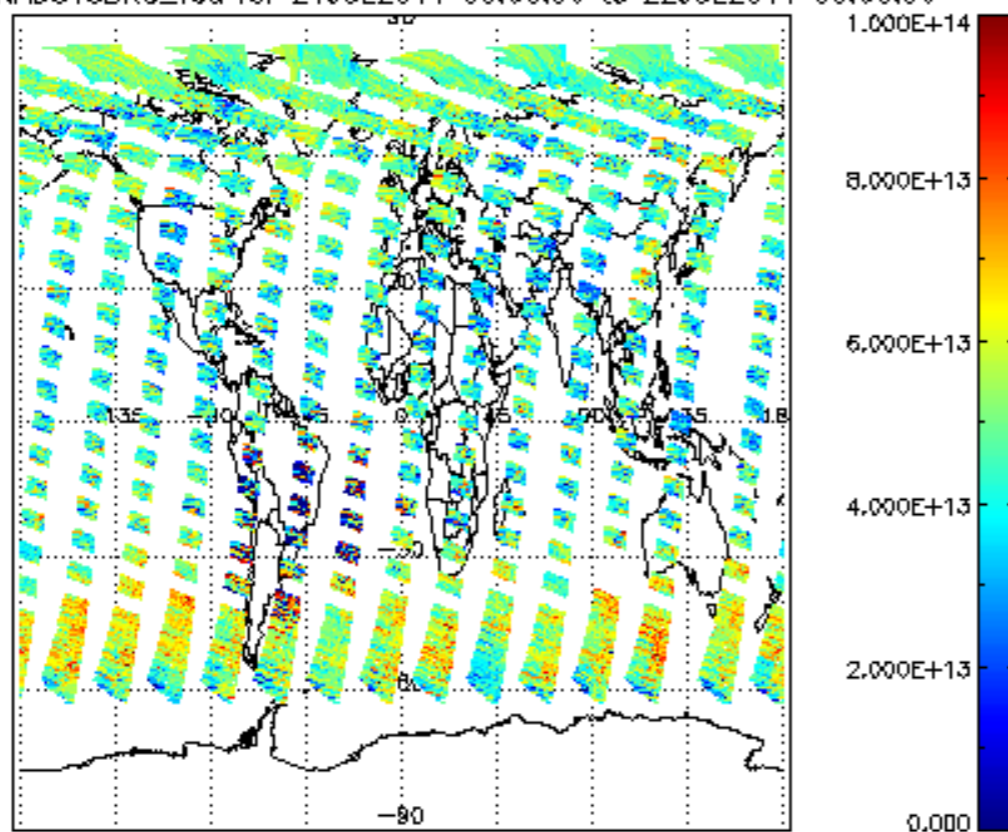
SCIOL2P\_NADUV1N02\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



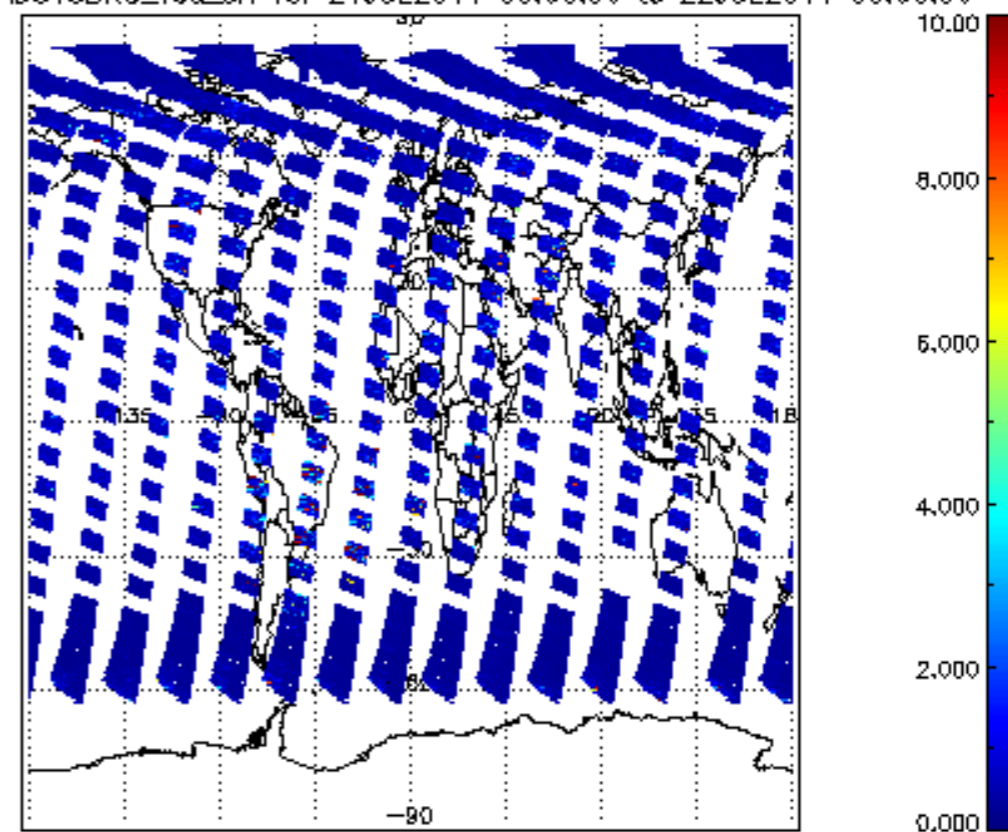




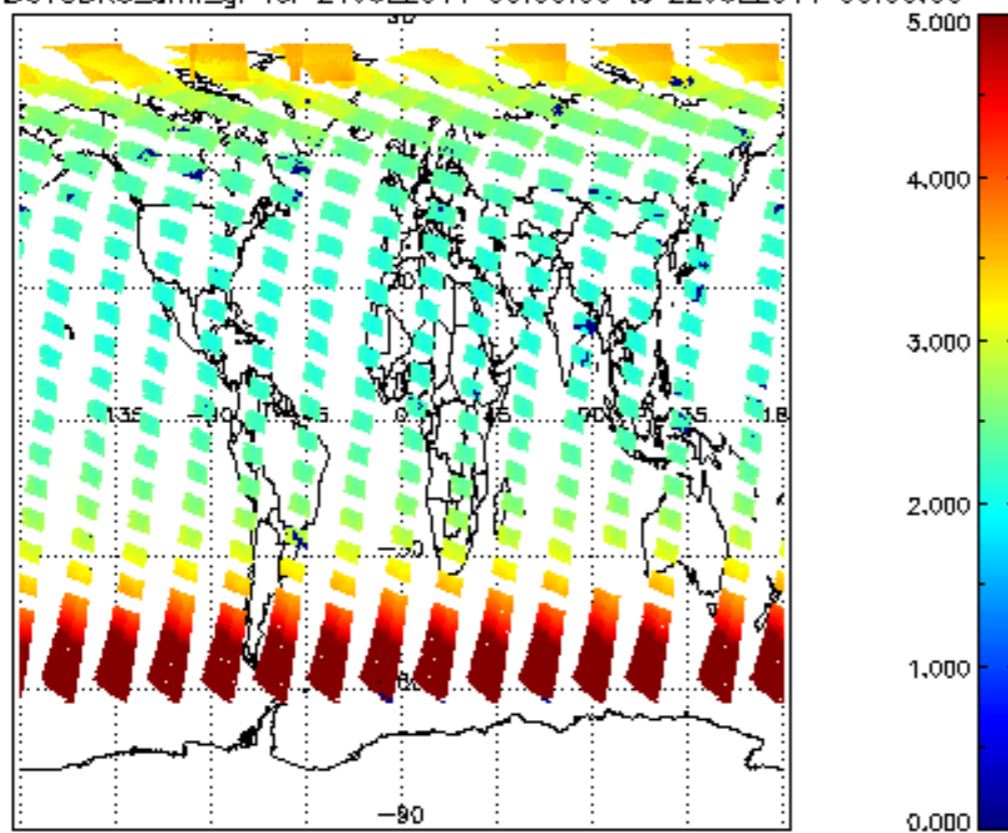
SCIOL2P\_NADUV3BRO\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



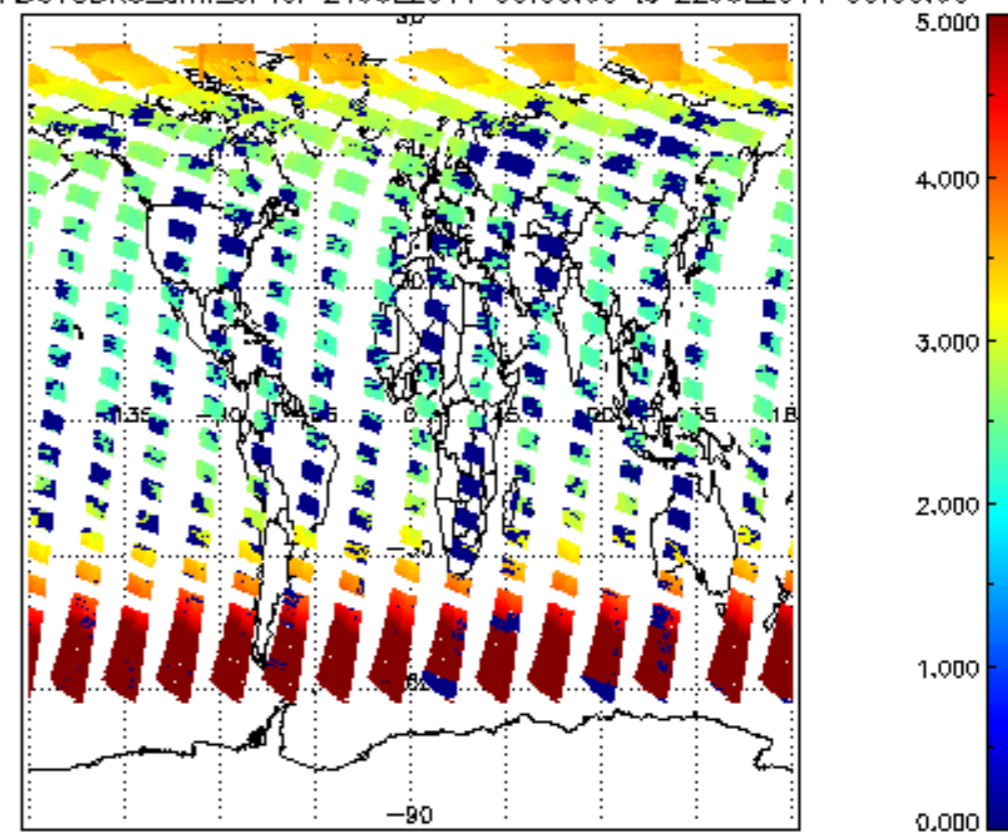
SCIOL2P\_NADUV3BRO\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

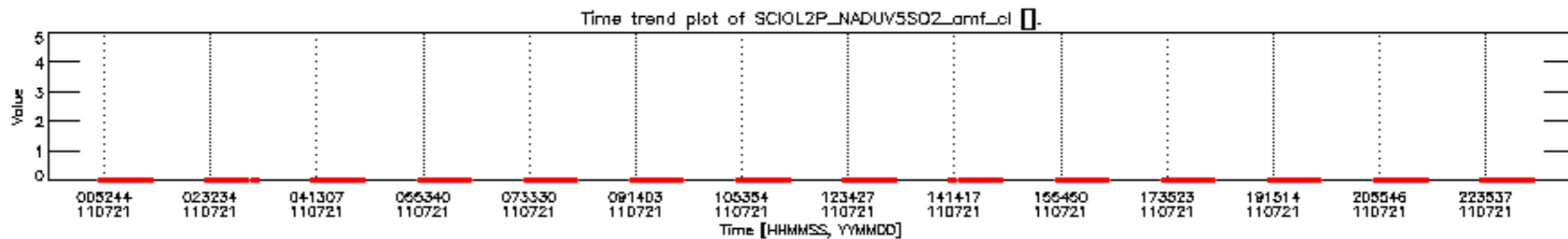
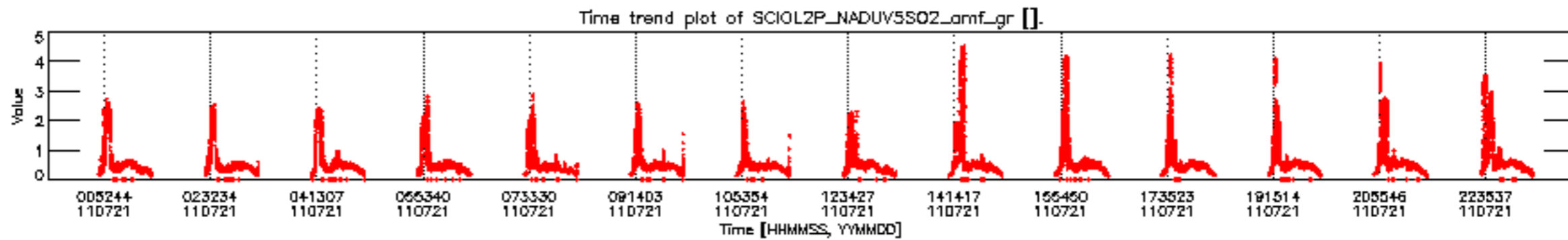
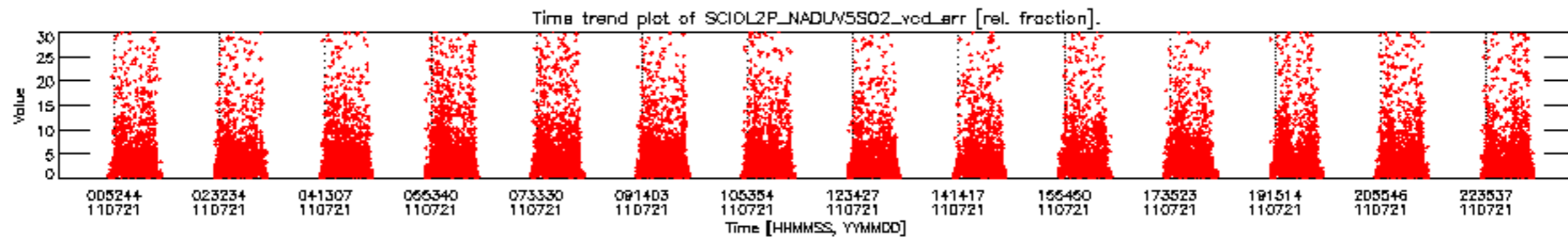
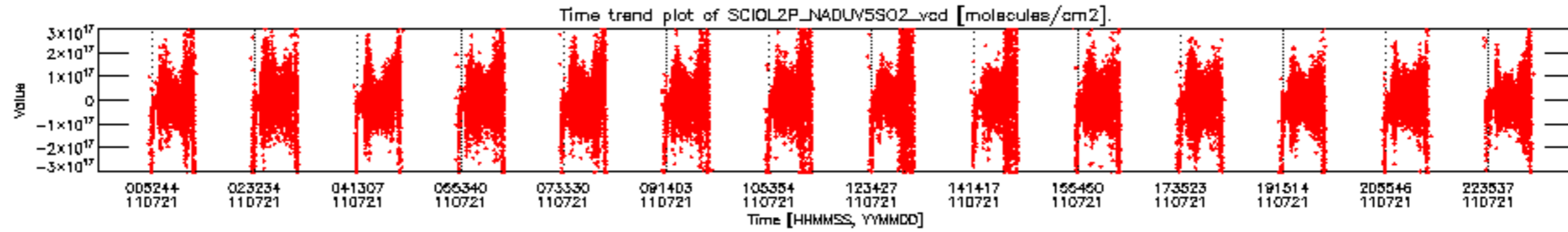


SCIOL2P\_NADUV3BRO\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



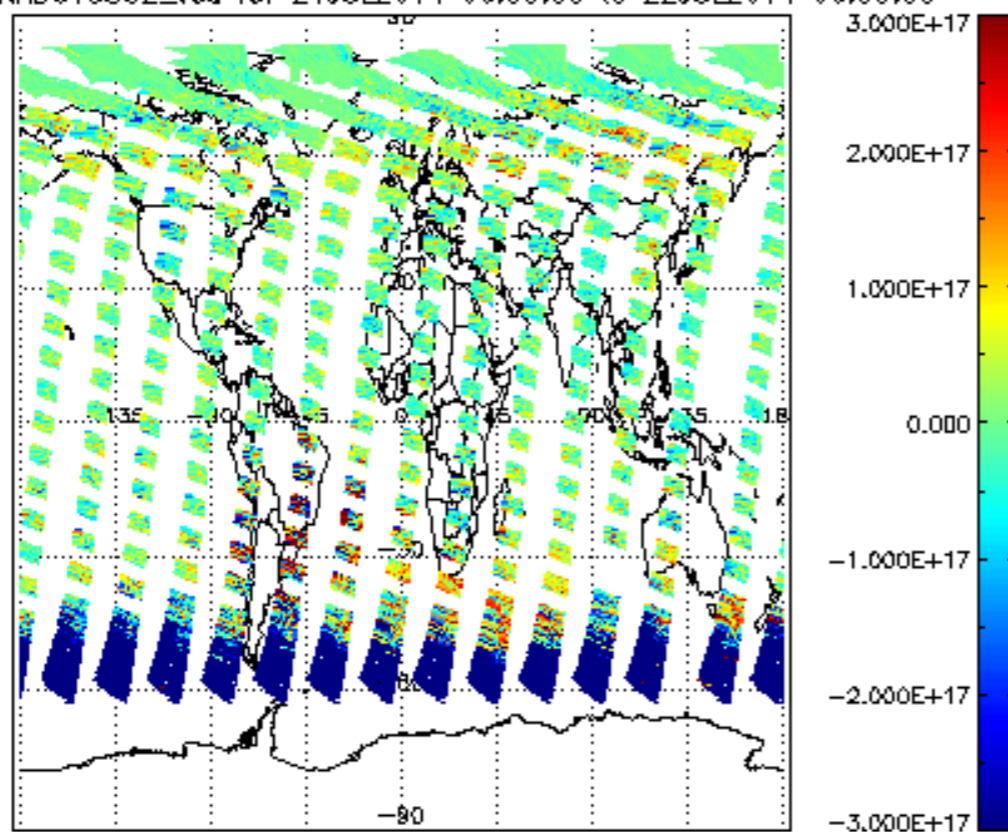
SCIOL2P\_NADUV3BRO\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



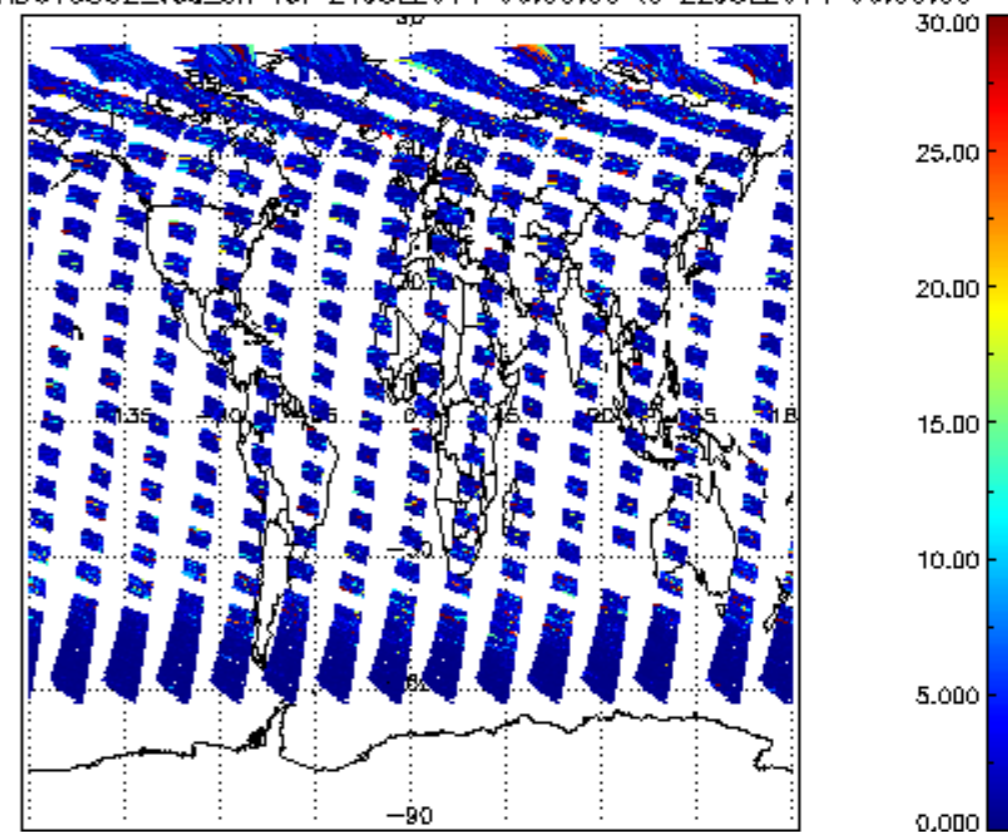




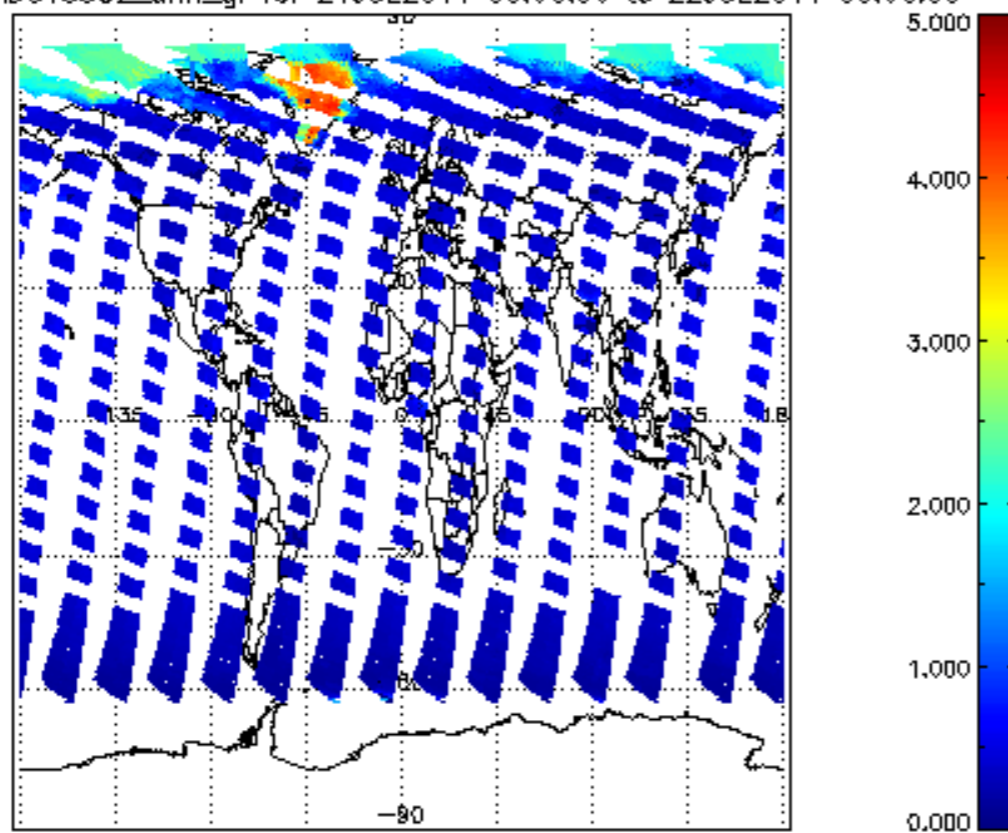
SCIOL2P\_NADUV5S02\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



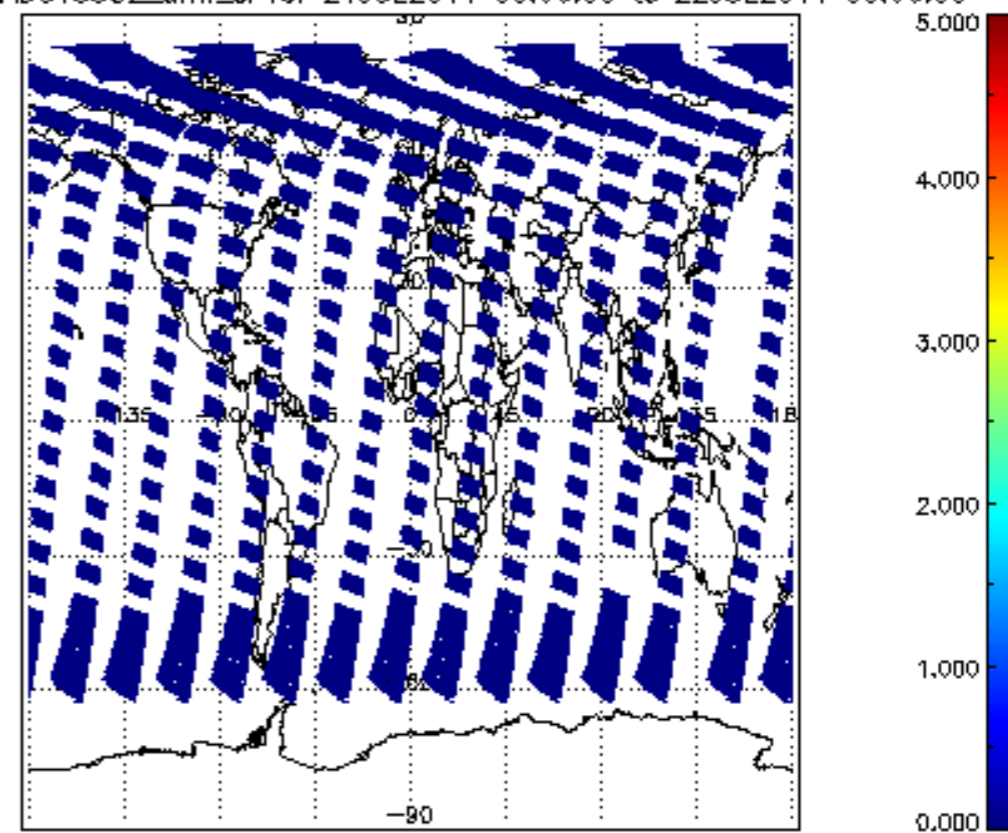
SCIOL2P\_NADUV5S02\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

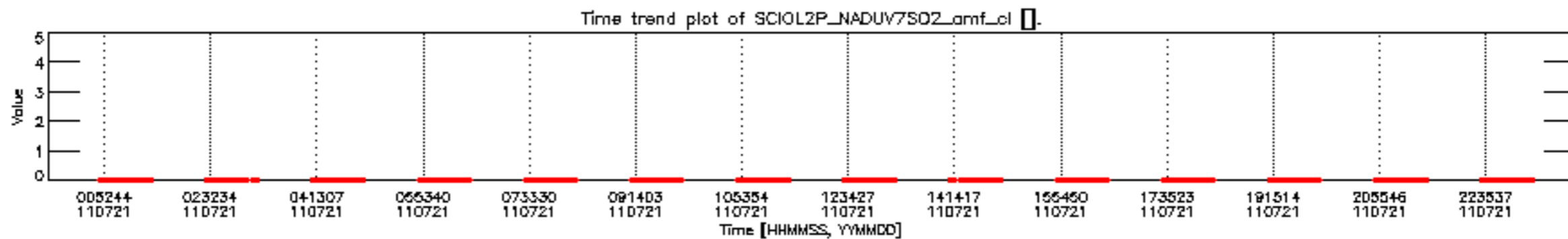
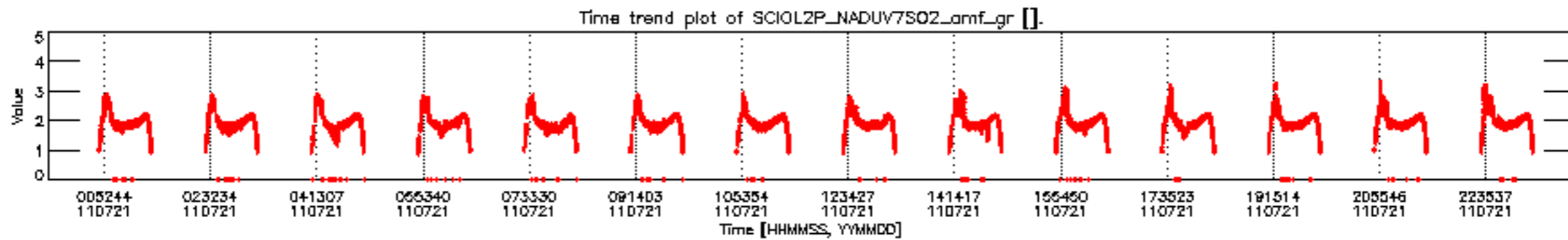
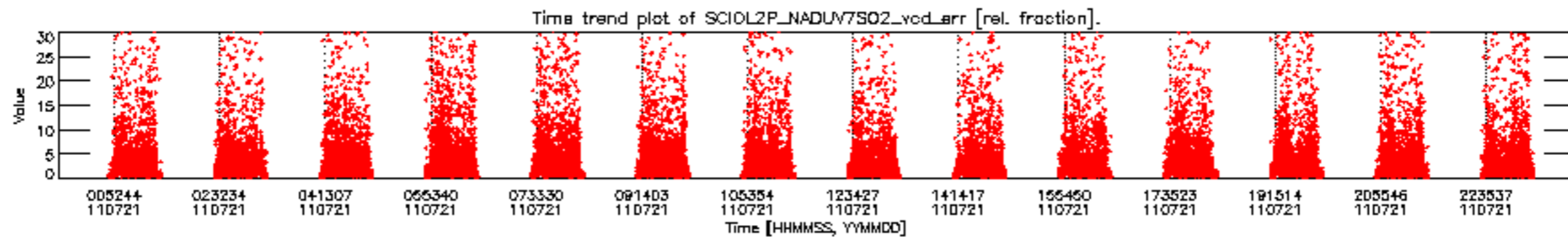
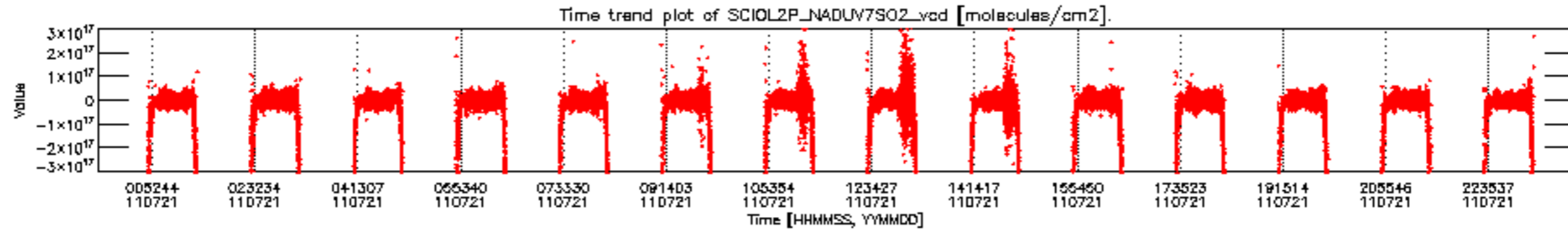


SCIOL2P\_NADUV5S02\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



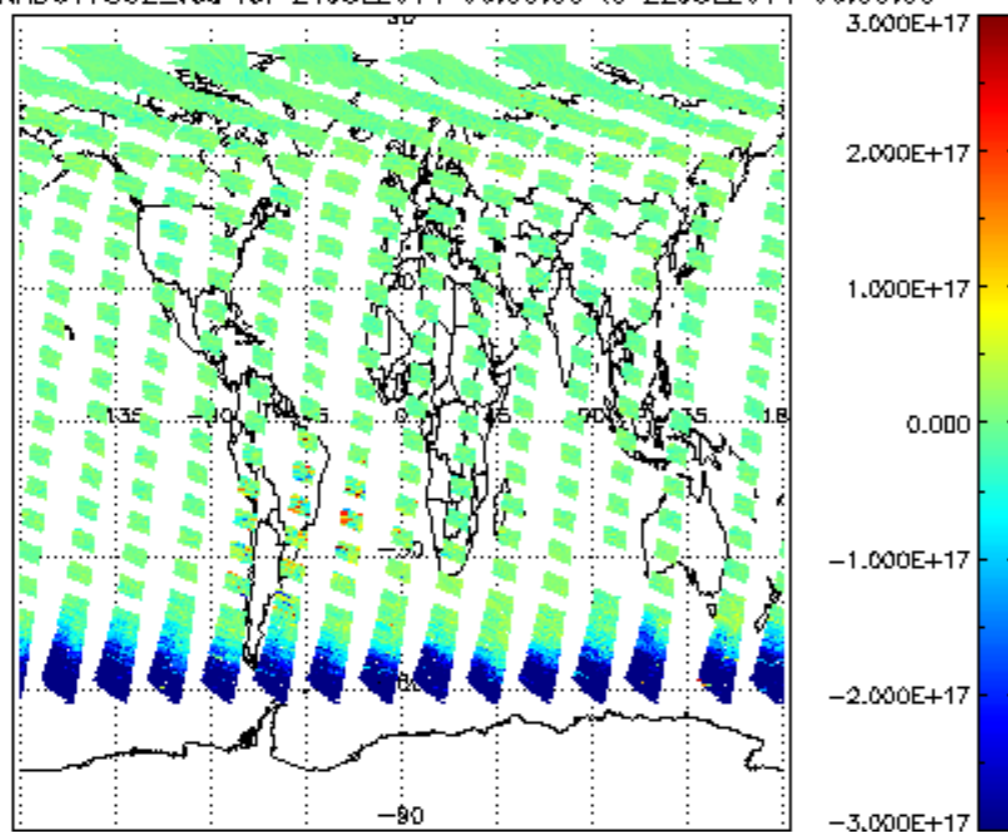
SCIOL2P\_NADUV5S02\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



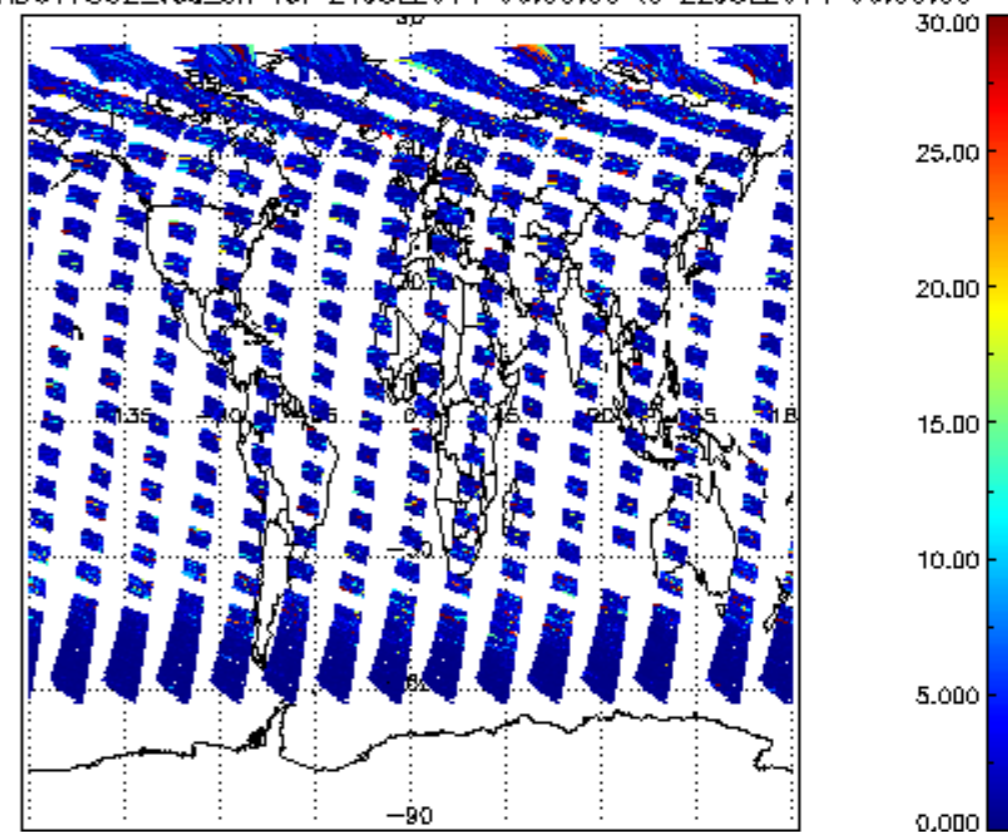




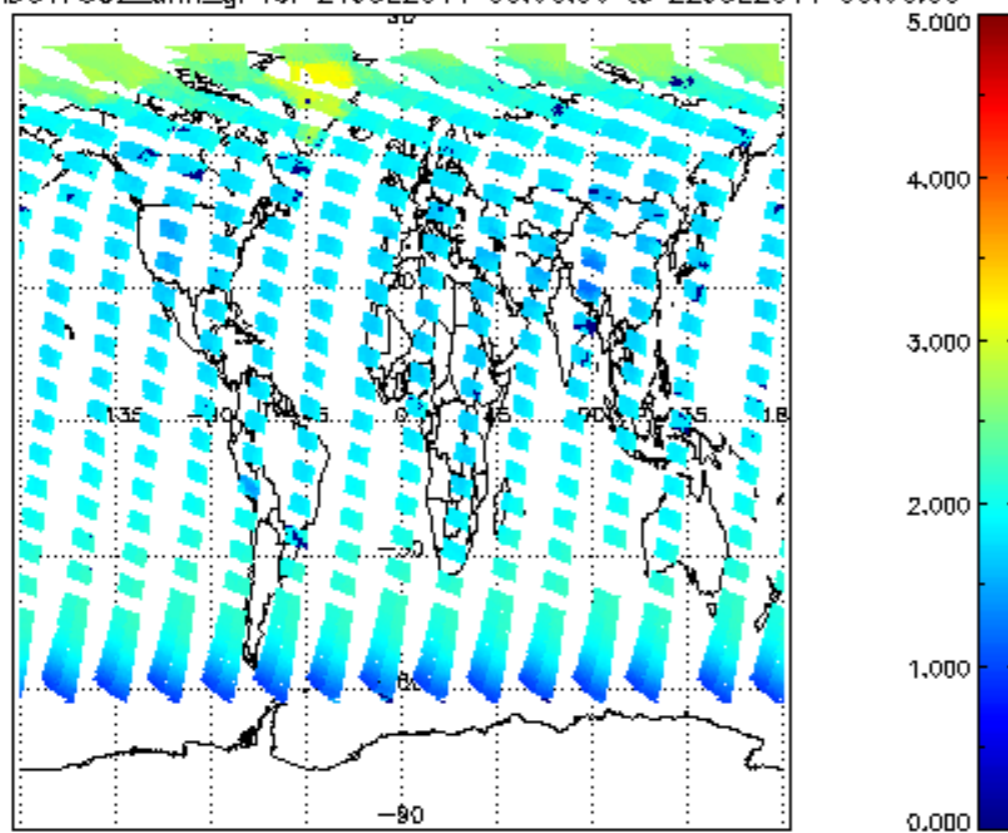
SCIOL2P\_NADUV7S02\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



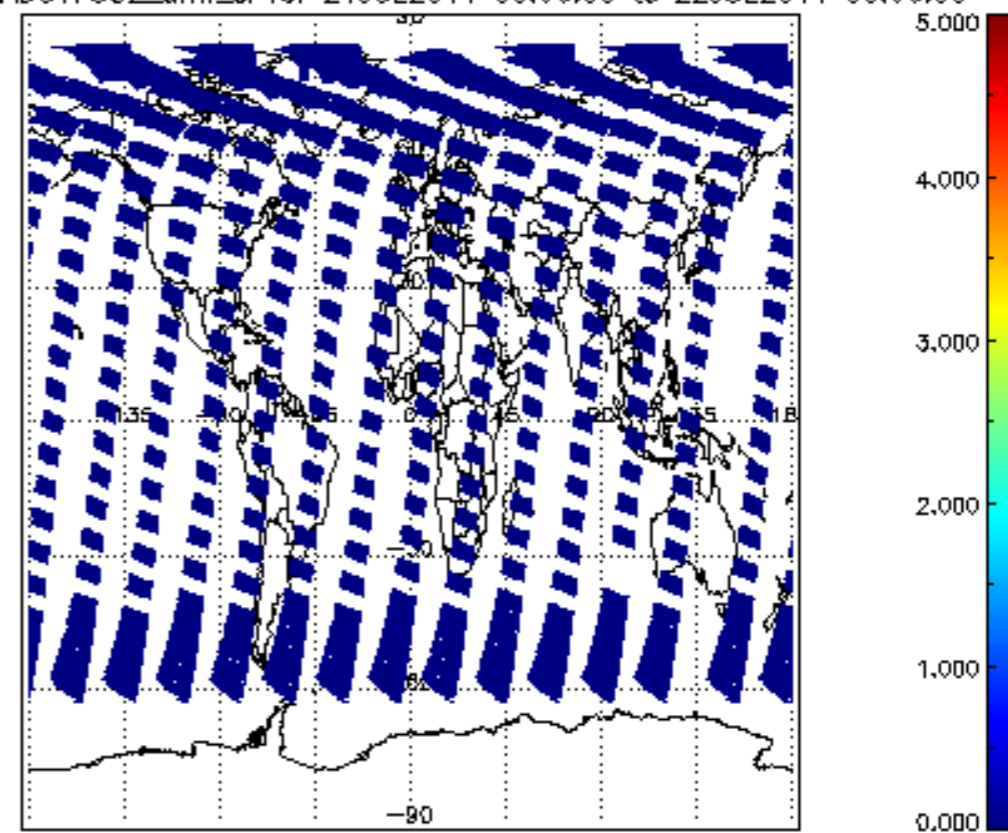
SCIOL2P\_NADUV7S02\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

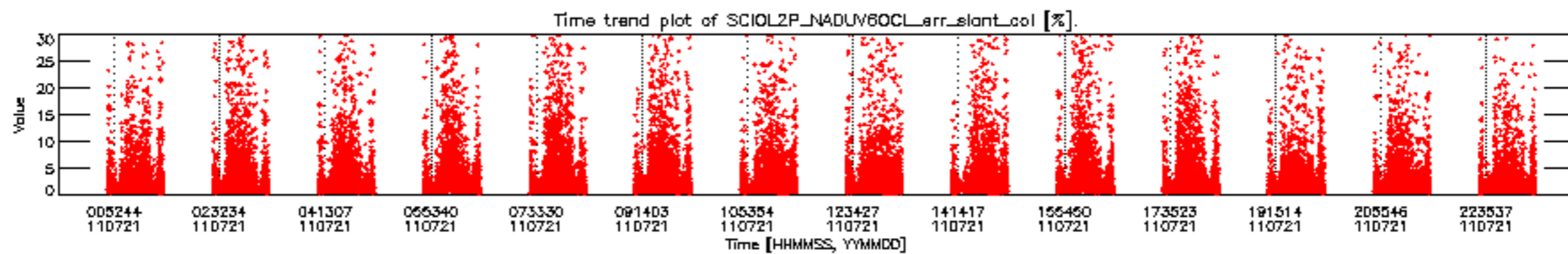
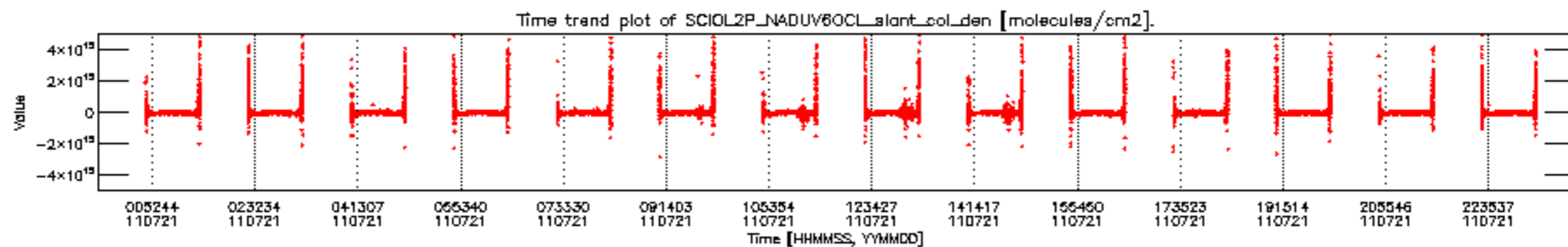


SCIOL2P\_NADUV7S02\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



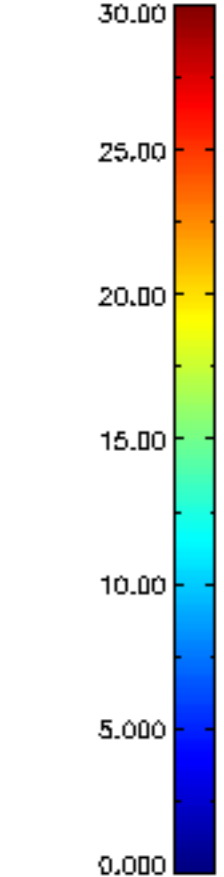
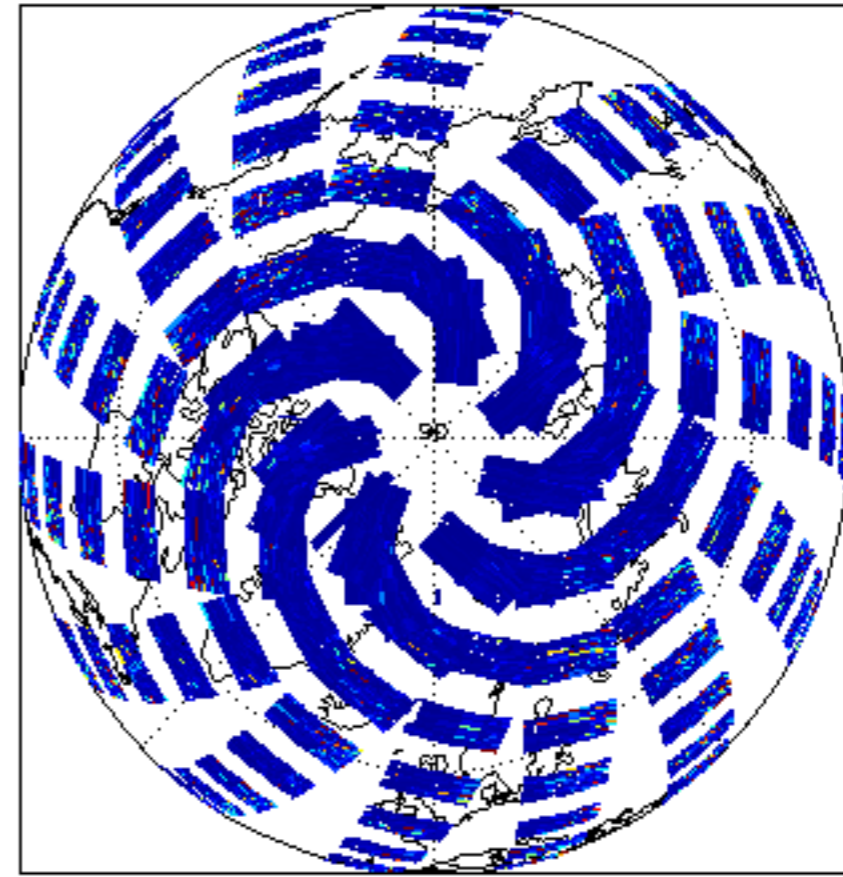
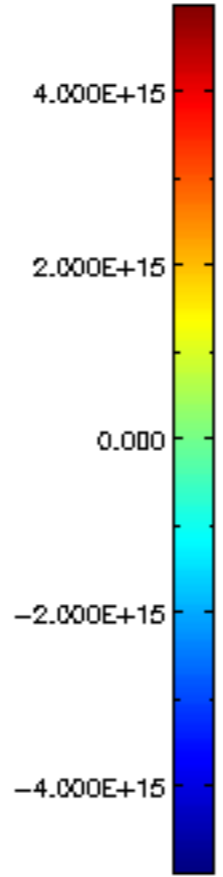
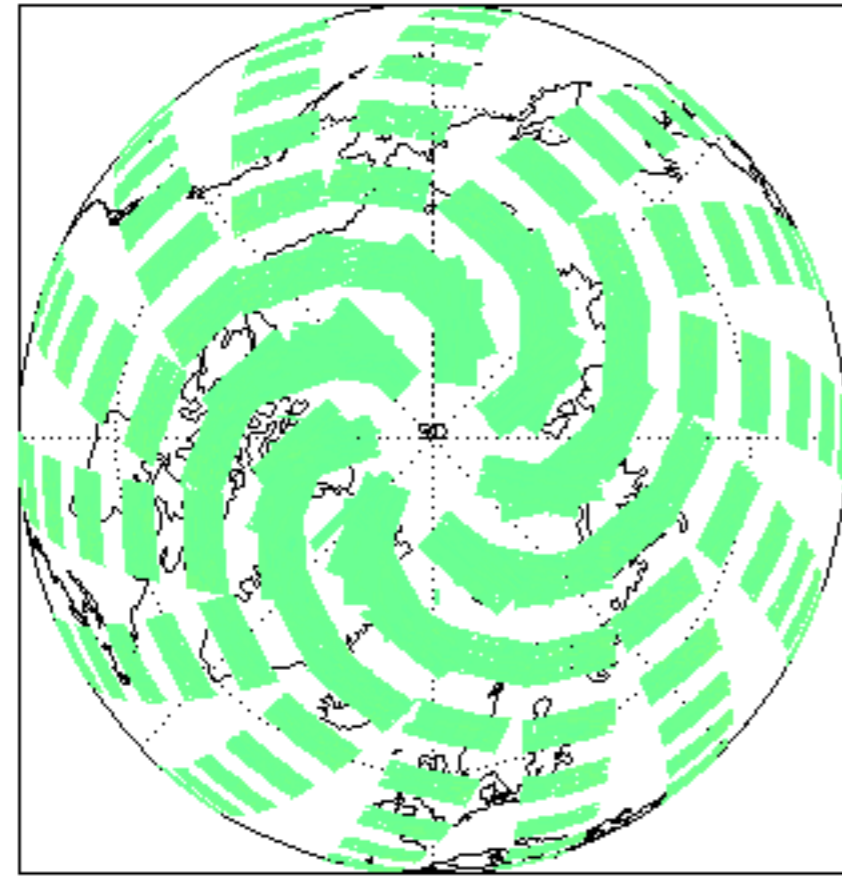
SCIOL2P\_NADUV7S02\_amf\_cl for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



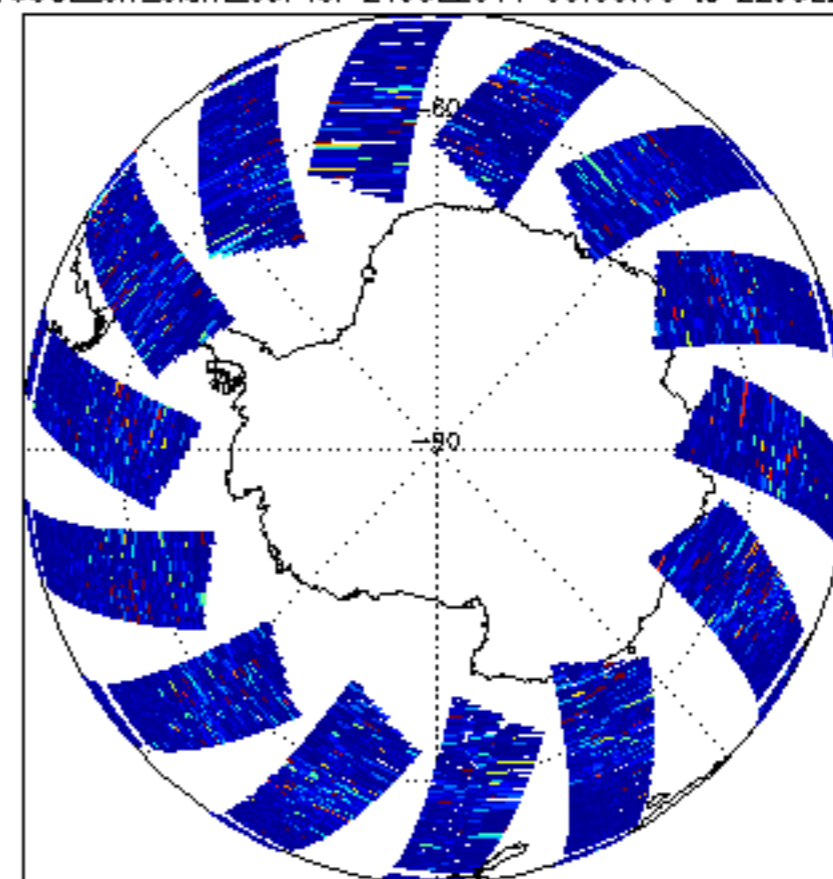
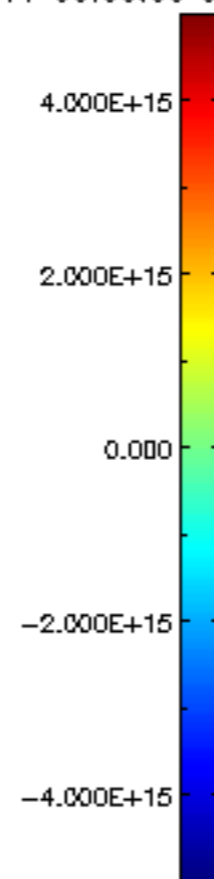
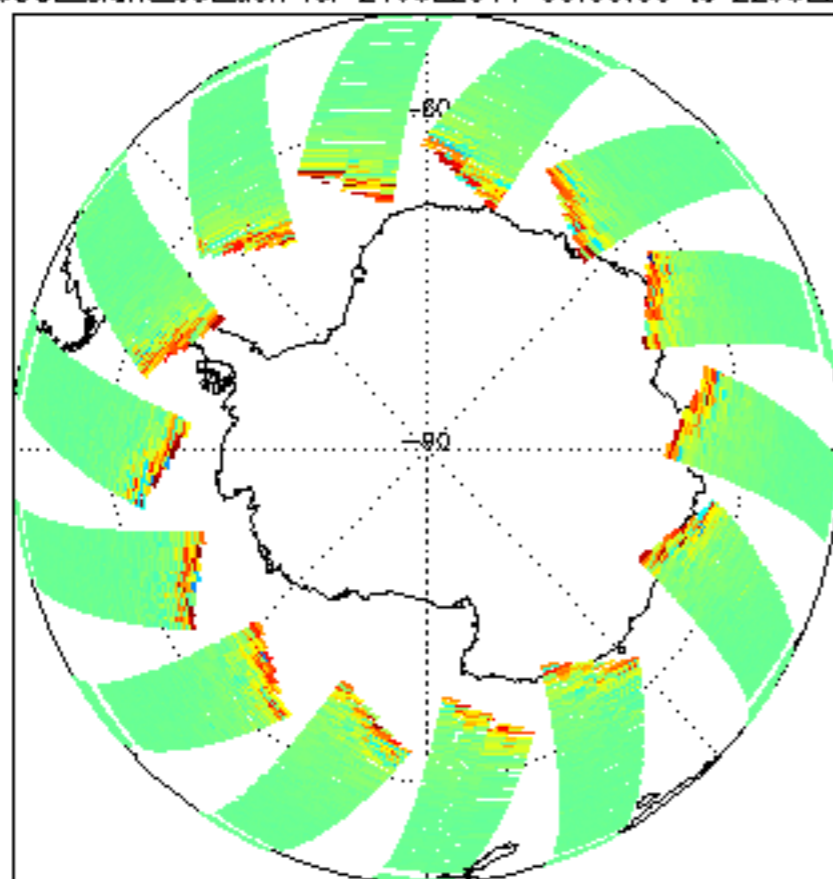




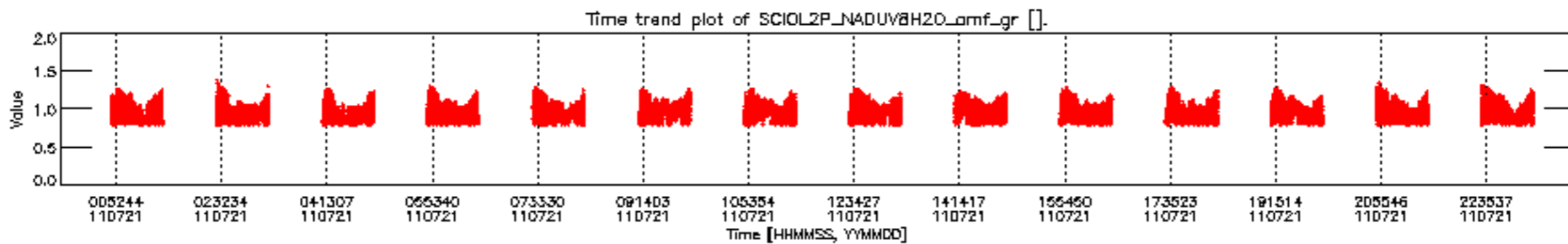
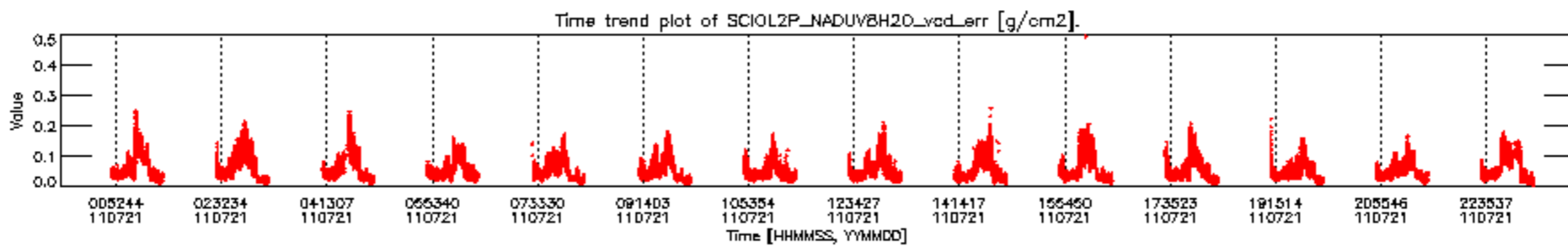
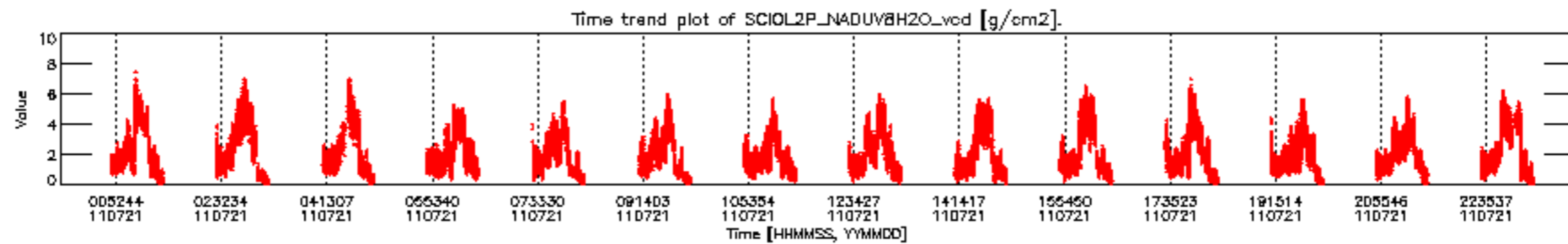
iCIOL2P\_NADUV6OCL\_slant\_col\_den for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 np



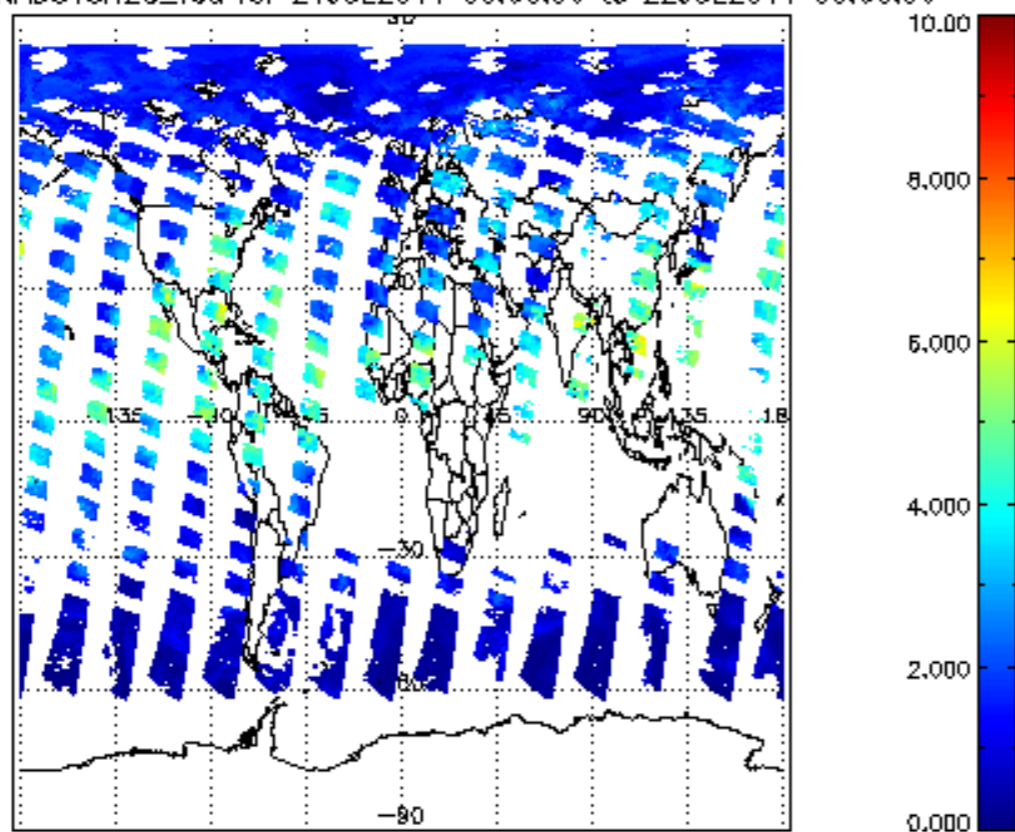
iCIOL2P\_NADUV6OCL\_slant\_coLden for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 sp 3iCIOL2P\_NADUV6OCL\_em\_slant\_col for 21JUL2011 00:00:00 to 22JUL2011 00:00:00 sp



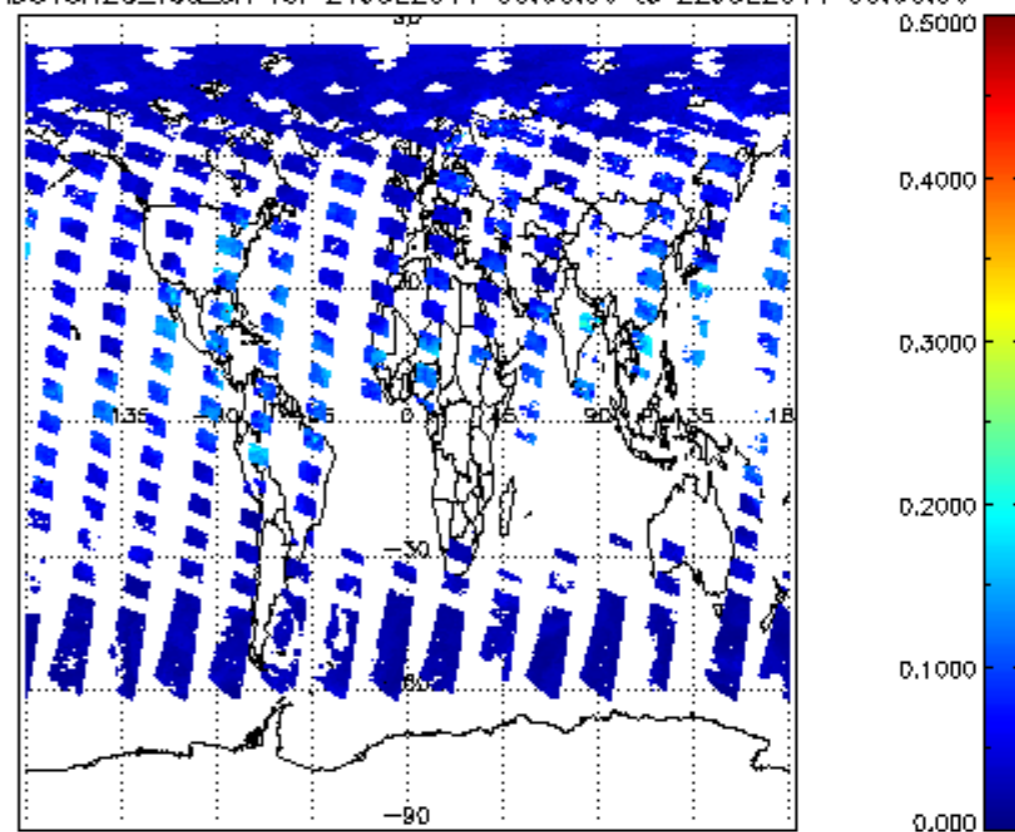




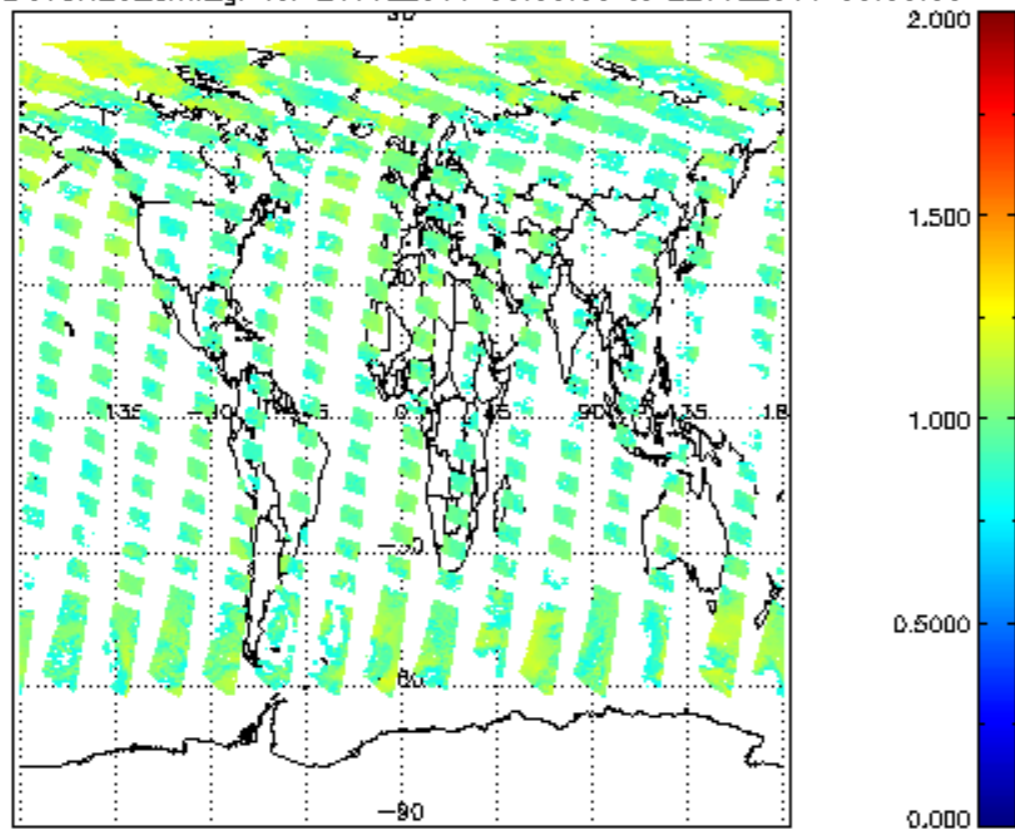
SCIOL2P\_NADUV8H20\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



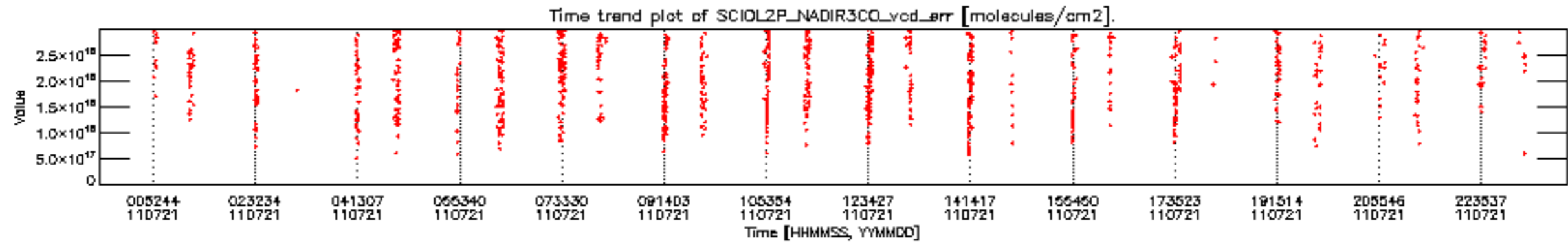
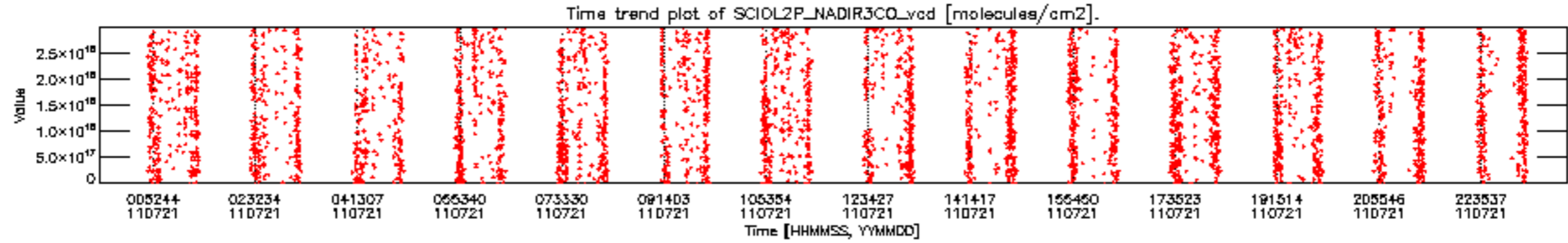
SCIOL2P\_NADUV8H20\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



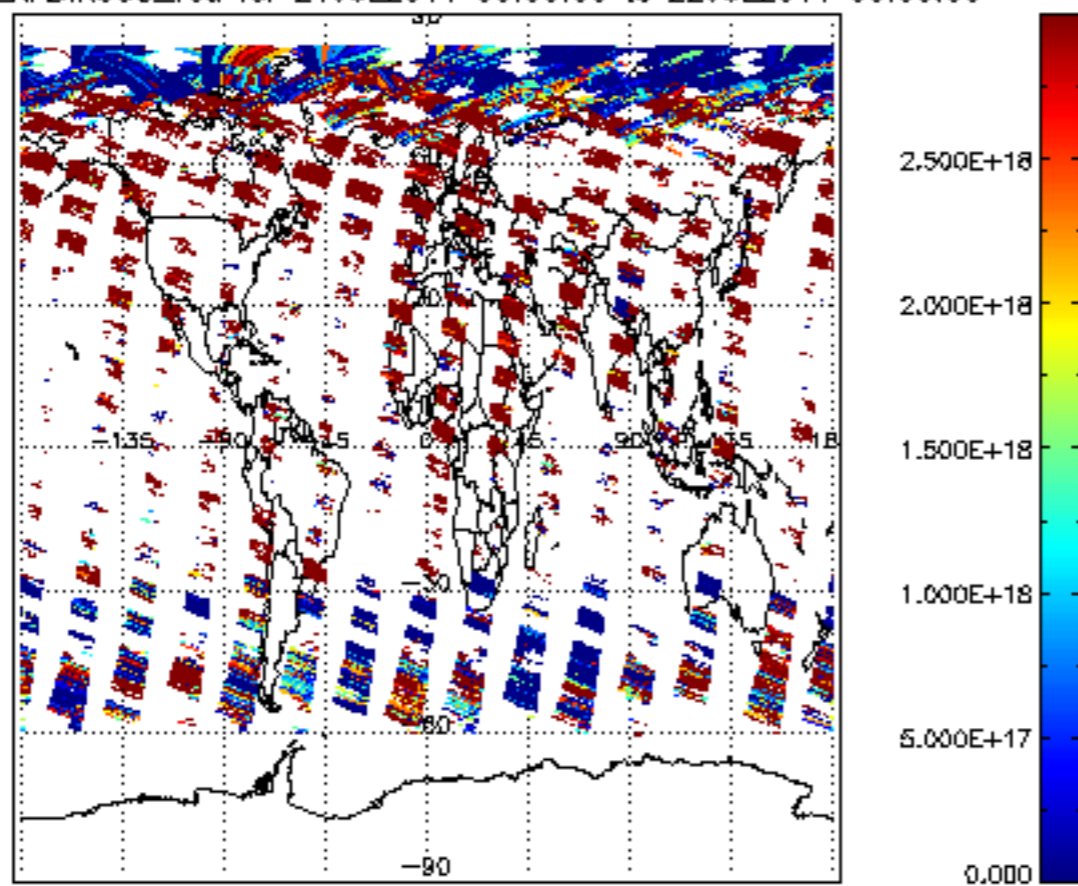
SCIOL2P\_NADUV8H20\_amf\_gr for 21JUL2011 00:00:00 to 22JUL2011 00:00:00



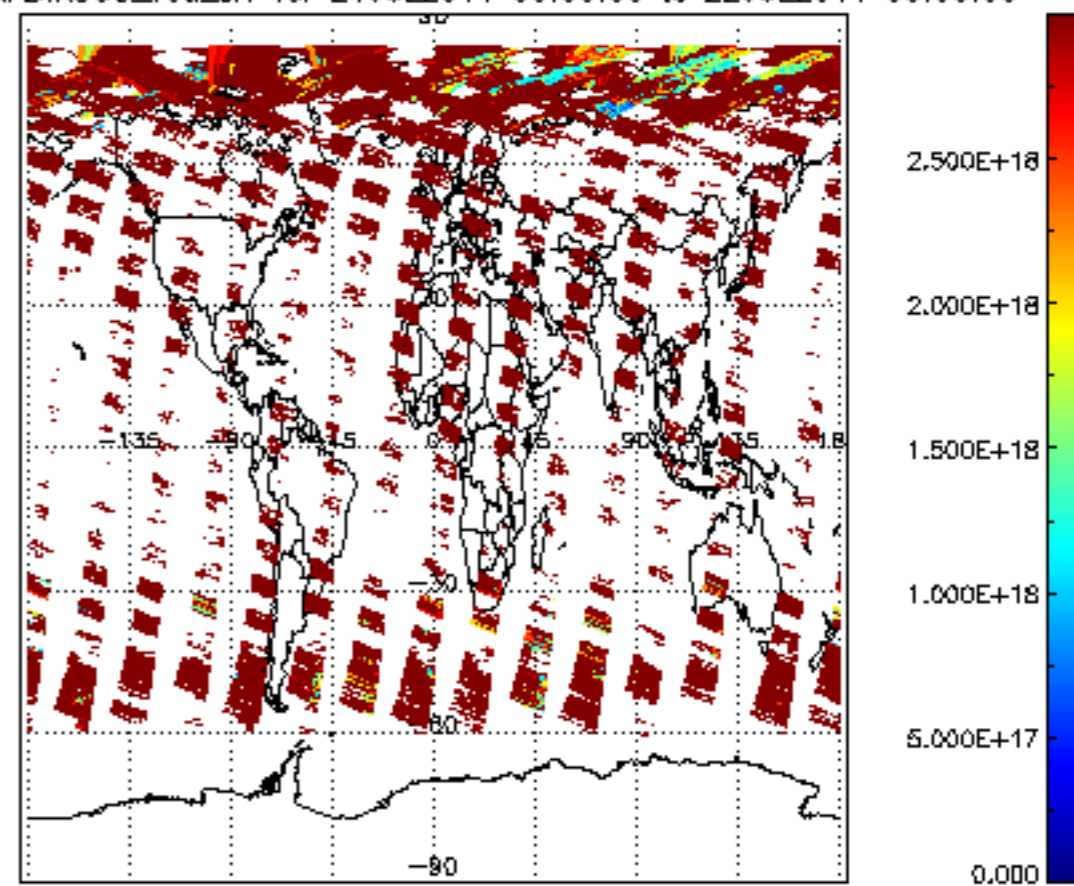




SCIOL2P\_NADIR3CO\_vcd for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

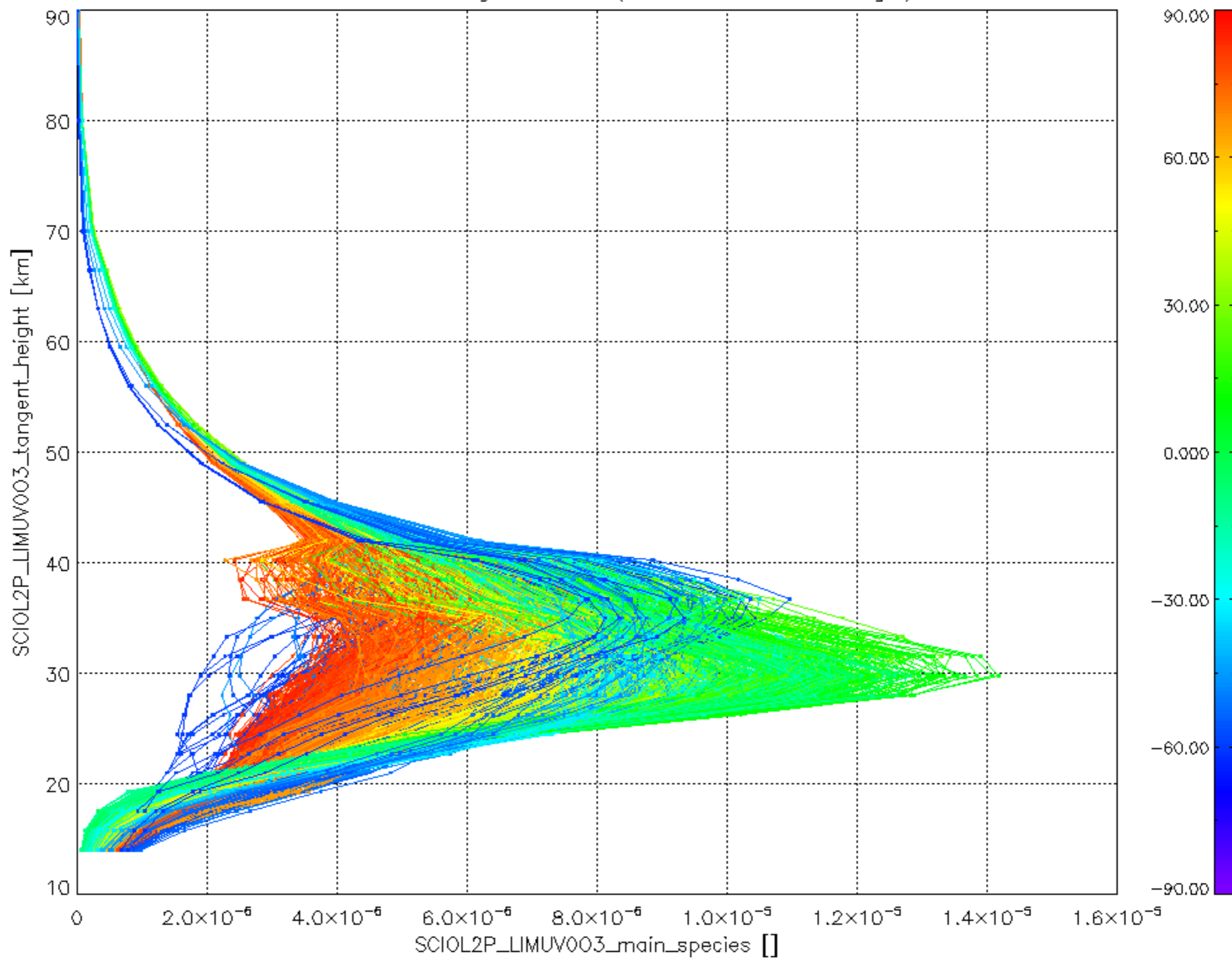


SCIOL2P\_NADIR3CO\_vcd\_err for 21JUL2011 00:00:00 to 22JUL2011 00:00:00

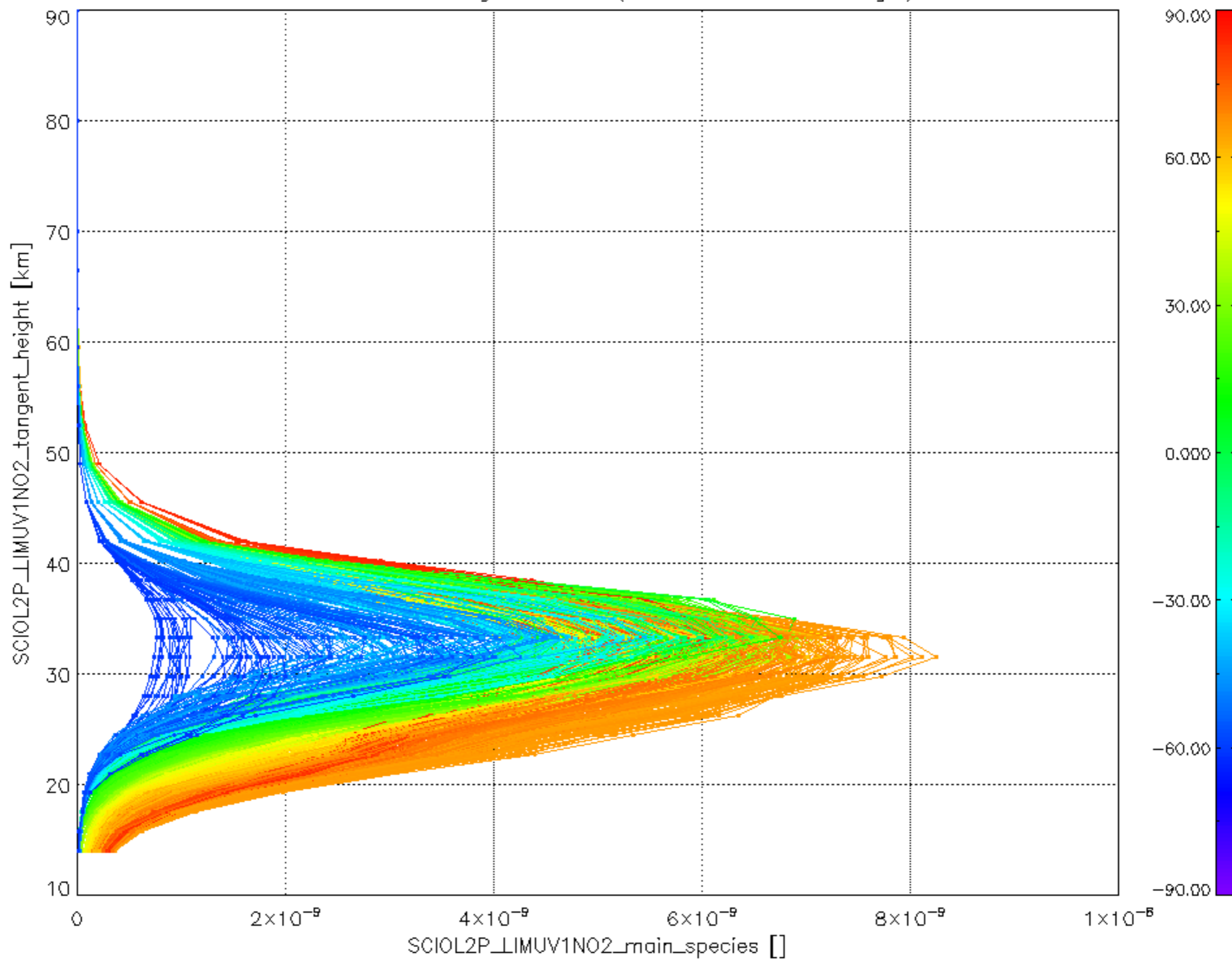




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

