

## 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	1.6 (28-07-2008)
Time of report generation	05JUN2009 19:04:39
Data source version	SCIA-OL/3.01-R
Processing scope for products	17MAY2009 00:00:00 to 18MAY2009 00:00:00
Start time of first product within scope	16MAY2009 22:55:54
Stop time of last product within scope	18MAY2009 01:00:02
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.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PRDPA20090516_225554_000033252079_00073_37702_2568.N1</a>	16MAY2009 22:55:54	16MAY2009 23:51:20	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20090517_003630_000033122079_00074_37703_2569.N1</a>	17MAY2009 00:36:30	17MAY2009 01:31:43	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20090517_021705_000033252079_00075_37704_2570.N1</a>	17MAY2009 02:17:05	17MAY2009 03:12:31	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20090517_035741_000033122079_00076_37705_2571.N1</a>	17MAY2009 03:57:41	17MAY2009 04:52:54	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20090517_053817_000033252079_00077_37706_2572.N1</a>	17MAY2009 05:38:17	17MAY2009 06:33:43	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20090517_071853_000033122079_00078_37707_2573.N1</a>	17MAY2009 07:18:53	17MAY2009 08:14:06	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20090517_085928_000033252079_00079_37708_2574.N1</a>	17MAY2009 08:59:28	17MAY2009 09:54:54	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20090517_104004_000033122079_00080_37709_2575.N1</a>	17MAY2009 10:40:04	17MAY2009 11:35:17	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20090517_122040_000033252079_00081_37710_2576.N1</a>	17MAY2009 12:20:40	17MAY2009 13:16:05	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20090517_140115_000033122079_00082_37711_2577.N1</a>	17MAY2009 14:01:15	17MAY2009 14:56:28	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20090517_154151_000033252079_00083_37712_2578.N1</a>	17MAY2009 15:41:51	17MAY2009 16:37:16	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20090517_172146_000033682079_00084_37713_2579.N1</a>	17MAY2009 17:21:46	17MAY2009 18:17:55	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20090517_190222_000033812079_00085_37714_2580.N1</a>	17MAY2009 19:02:22	17MAY2009 19:58:43	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20090517_204338_000033122079_00086_37715_2581.N1</a>	17MAY2009 20:43:38	17MAY2009 21:38:51	0	GOOD
14	<a href="#">SCI_OL__2PRDPA20090517_222414_000033252079_00087_37716_2582.N1</a>	17MAY2009 22:24:14	17MAY2009 23:19:39	0	GOOD
15	<a href="#">SCI_OL__2PRDPA20090518_000449_000033122079_00088_37717_2583.N1</a>	18MAY2009 00:04:49	18MAY2009 01:00:02	0	GOOD

## 2.2 Product Quality Indicators

### 2.2.1 Cloud parameters

This is a new section that 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: 142740

Total number of cloud data DSRs with good quality flag (=0): 142740 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	142740	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	142740	0.17122	0.12500	0.12500	0.25000	0.060343	s
CL_FRAC	142740	0.34586	0.30720	0.0000	1.0000	0.30211	-
CL_FRAC_ERR	142740	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	142740	5.4791	4.0000	4.0000	8.0000	1.9310	
PMD_READ_CL[0]	142740	0.31244	0.0000	0.0000	8.0000	1.3403	-
PMD_READ_CL[1]	142740	1.6647	0.0000	0.0000	8.0000	2.7011	-
CL_TOP_HEIGHT	128594	2.7392	1.1170	0.0000	17.000	3.3463	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	128594	63.018	100.00	0.0000	101.00	43.967	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	142740	11100000	11100000	11100000	11100000	0.0000	flags. Bit definition = 0: low or high cloud; 1: ice or water cloud; 2: thick or thin cloud; 3-15: not used
CLOUD_FLAGS	142740	11001011	11000100	11000000	11100000	3455.2	flags
AERO_ABSO_IND	142740	3.8468	4.5138	-1.0287	16.062	2.4685	
AERO_IND_DIAG	142740	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	142740	01011001	00000000	00000000	11000000	24518.	flags

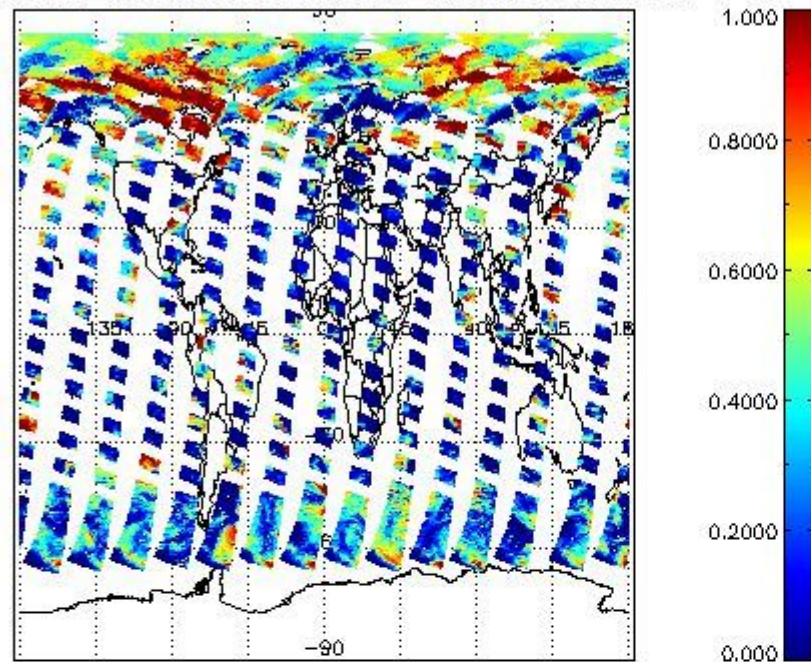
### Time and geolocation plots:

Plots are available for the following parameters:

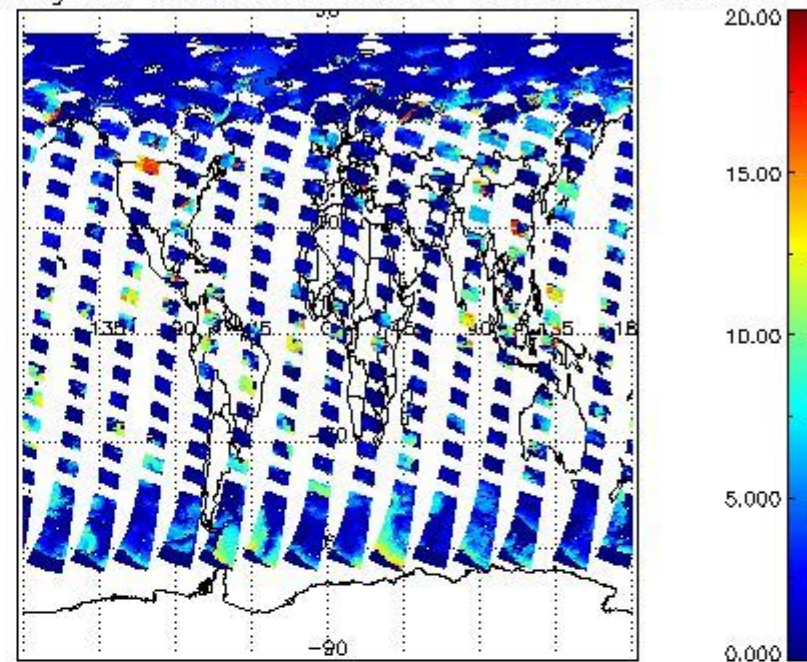
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



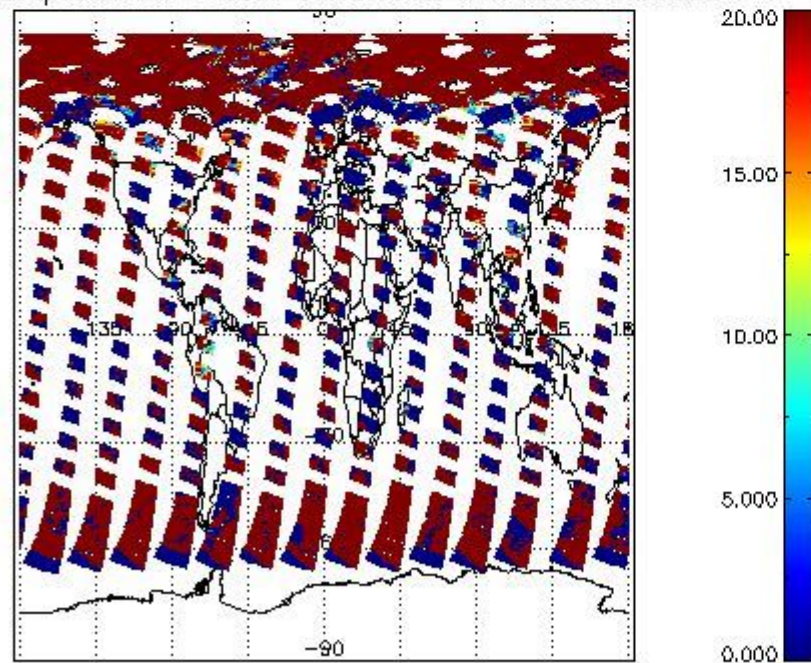
cL\_frac for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



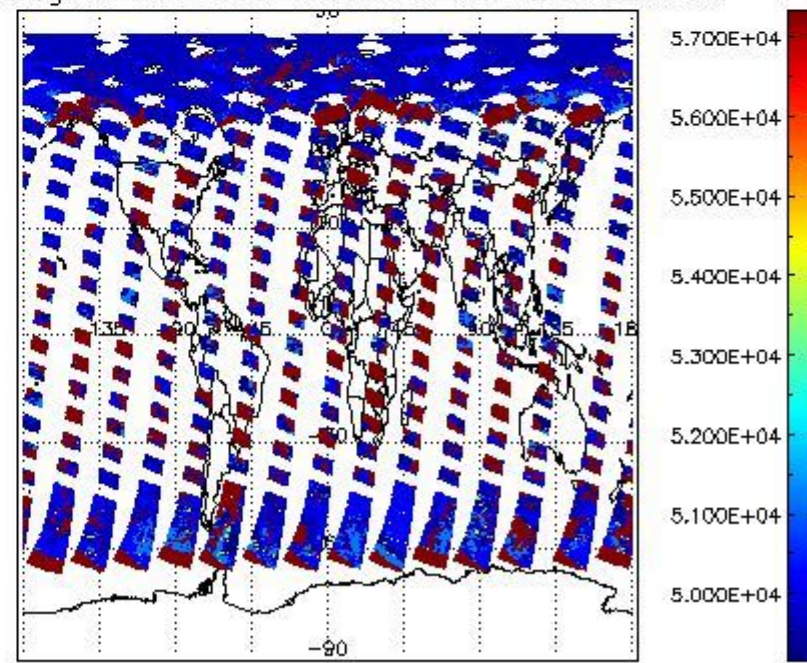
cL\_top\_height for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



cL\_opt\_depth for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



cloud\_flags for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



## 2.2.2 Nadir

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

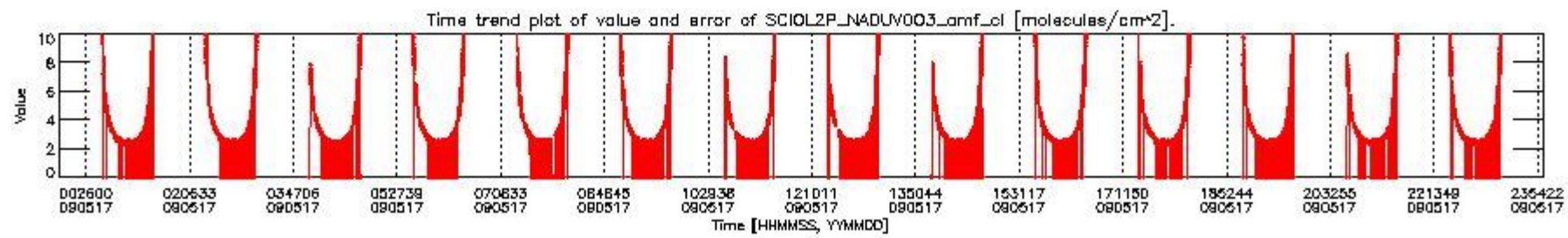
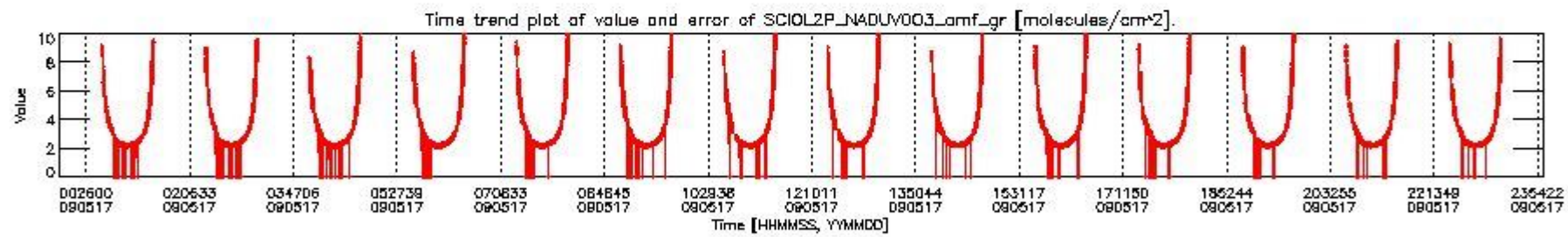
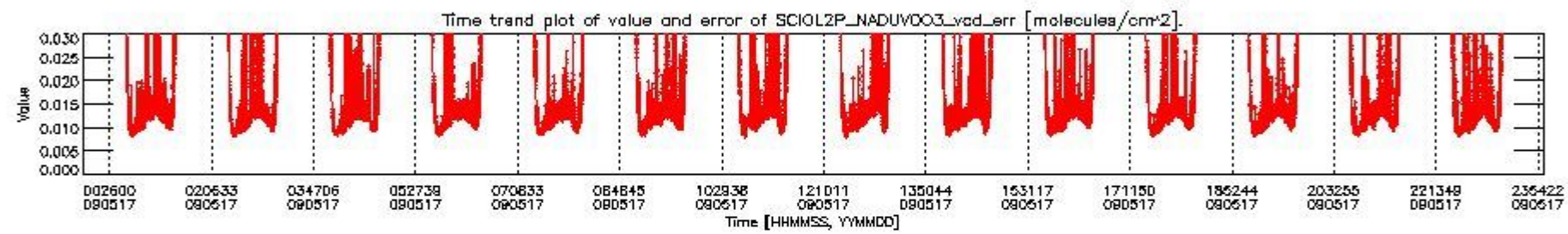
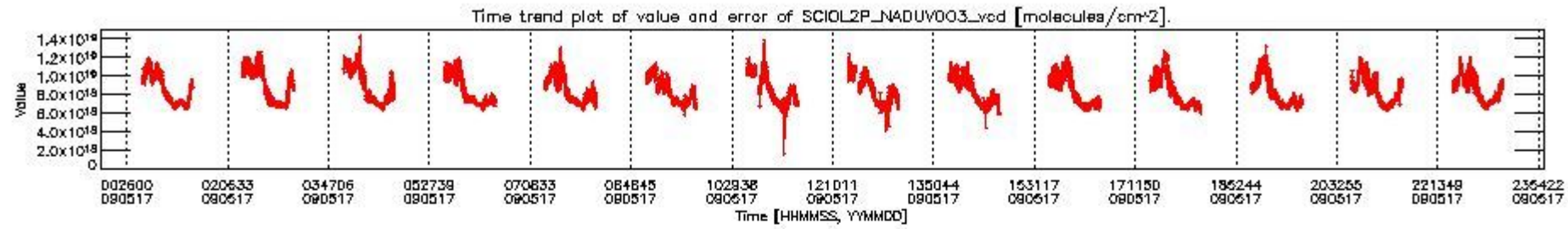
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr



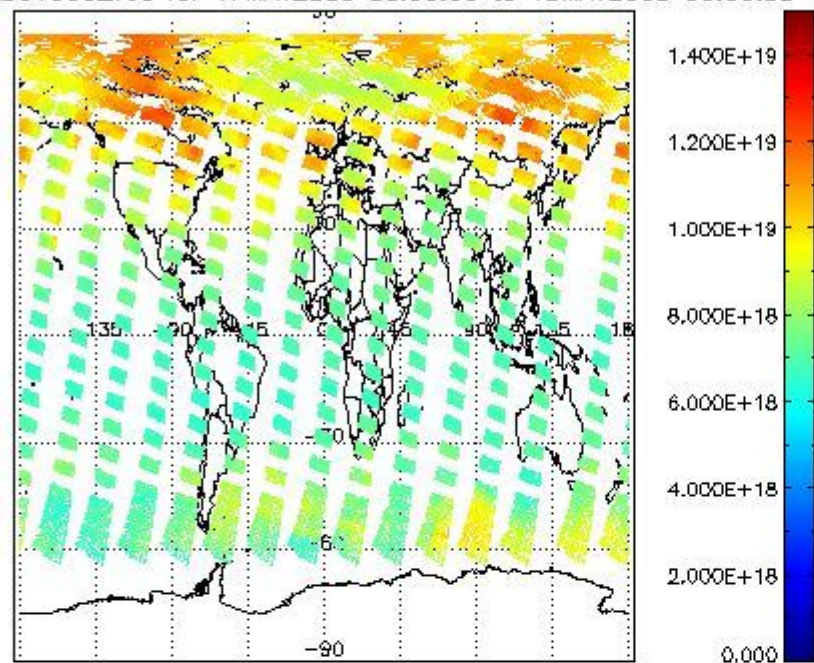
3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

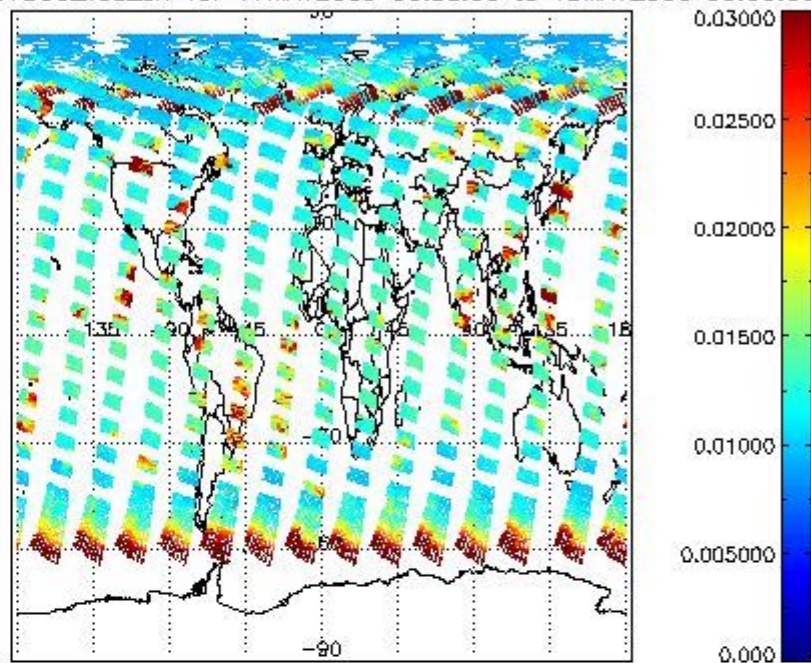




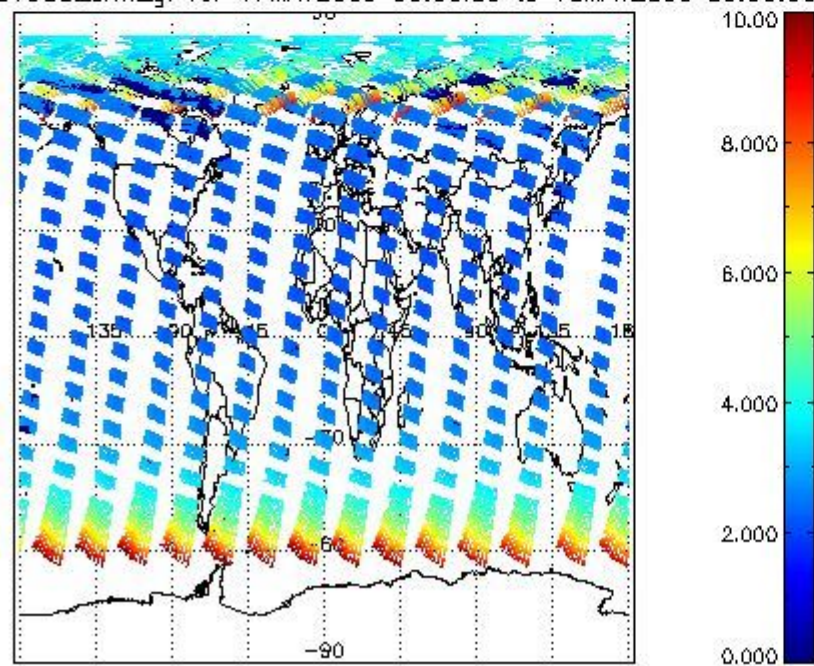
SCIOL2P\_NADUV003\_vcd for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



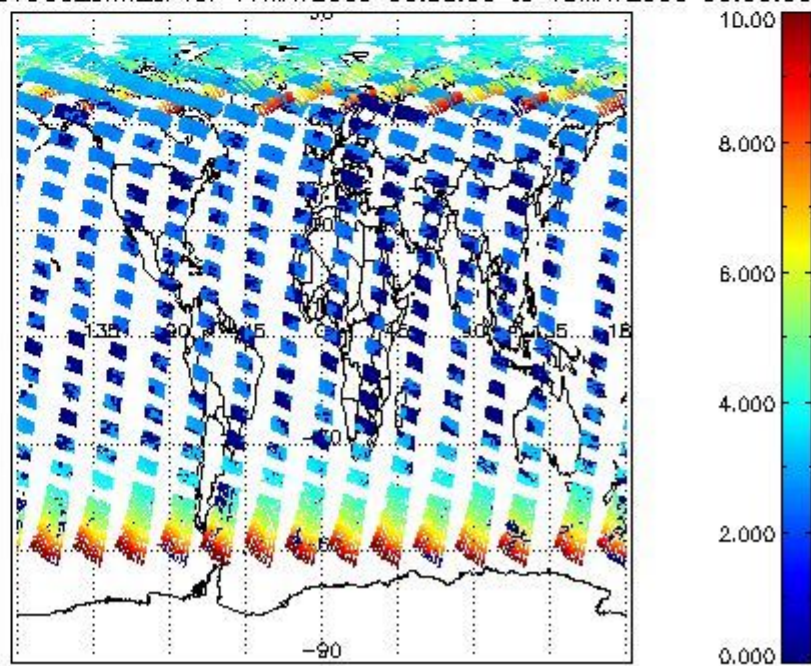
SCIOL2P\_NADUV003\_vcd\_err for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



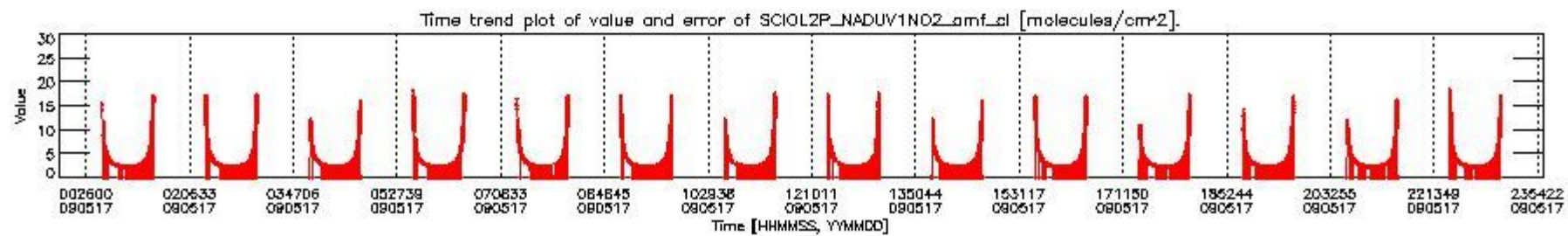
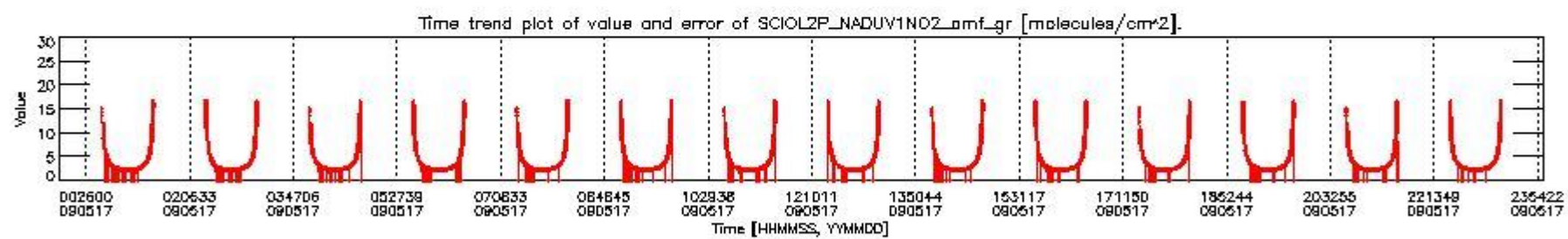
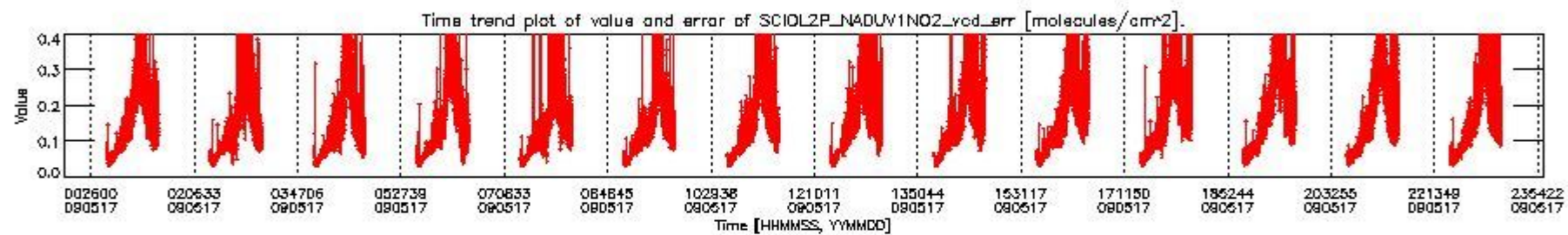
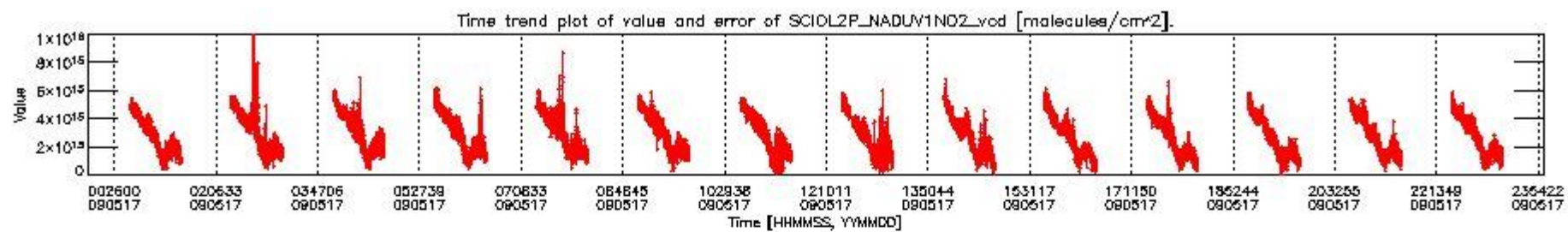
SCIOL2P\_NADUV003\_amf\_gr for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



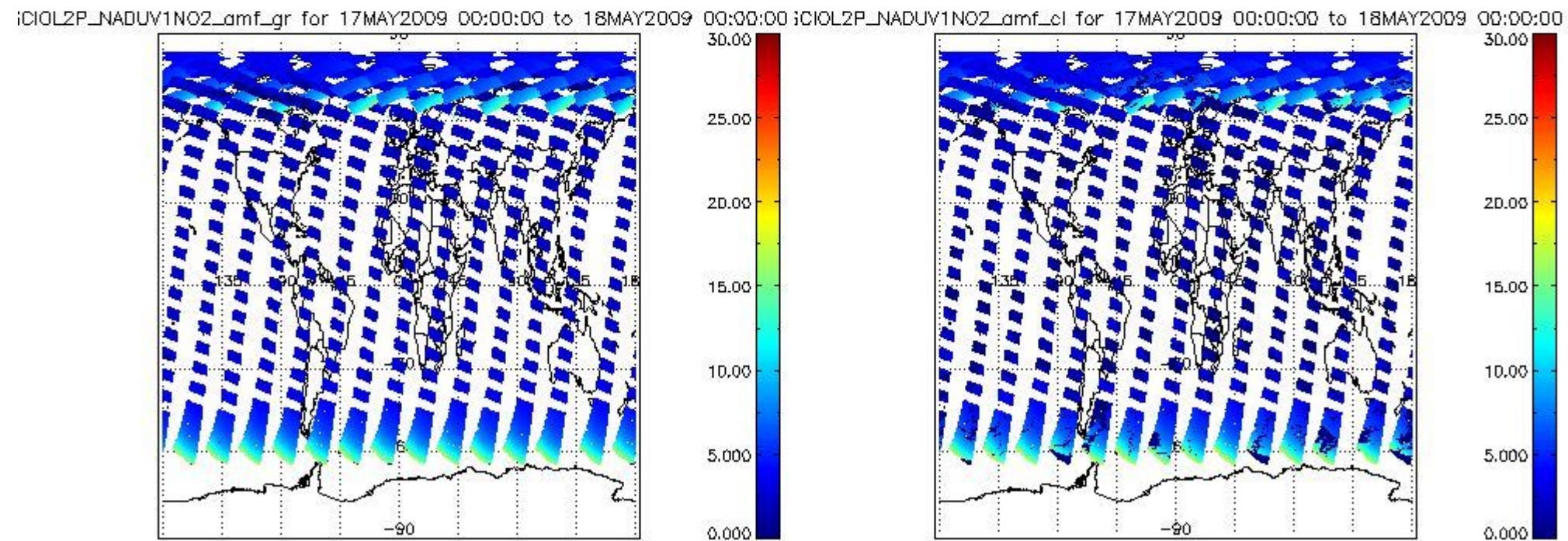
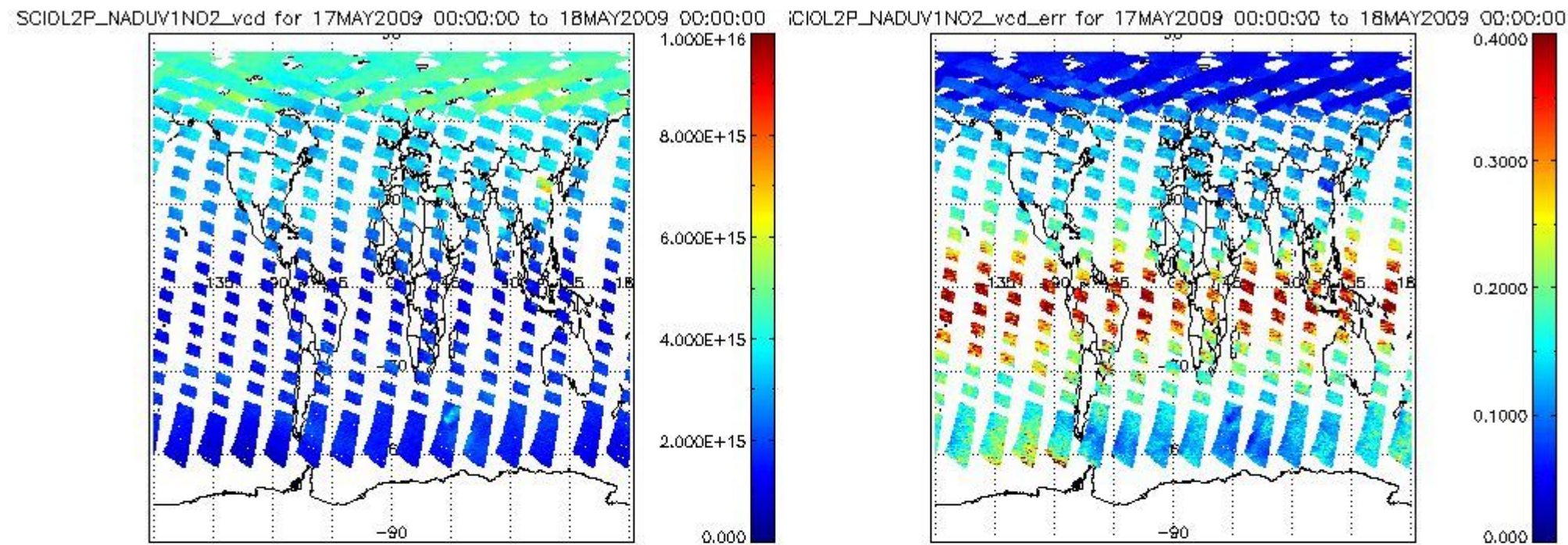
SCIOL2P\_NADUV003\_amf\_cl for 17MAY2009 00:00:00 to 18MAY2009 00:00:00











### 2.2.3 Limb

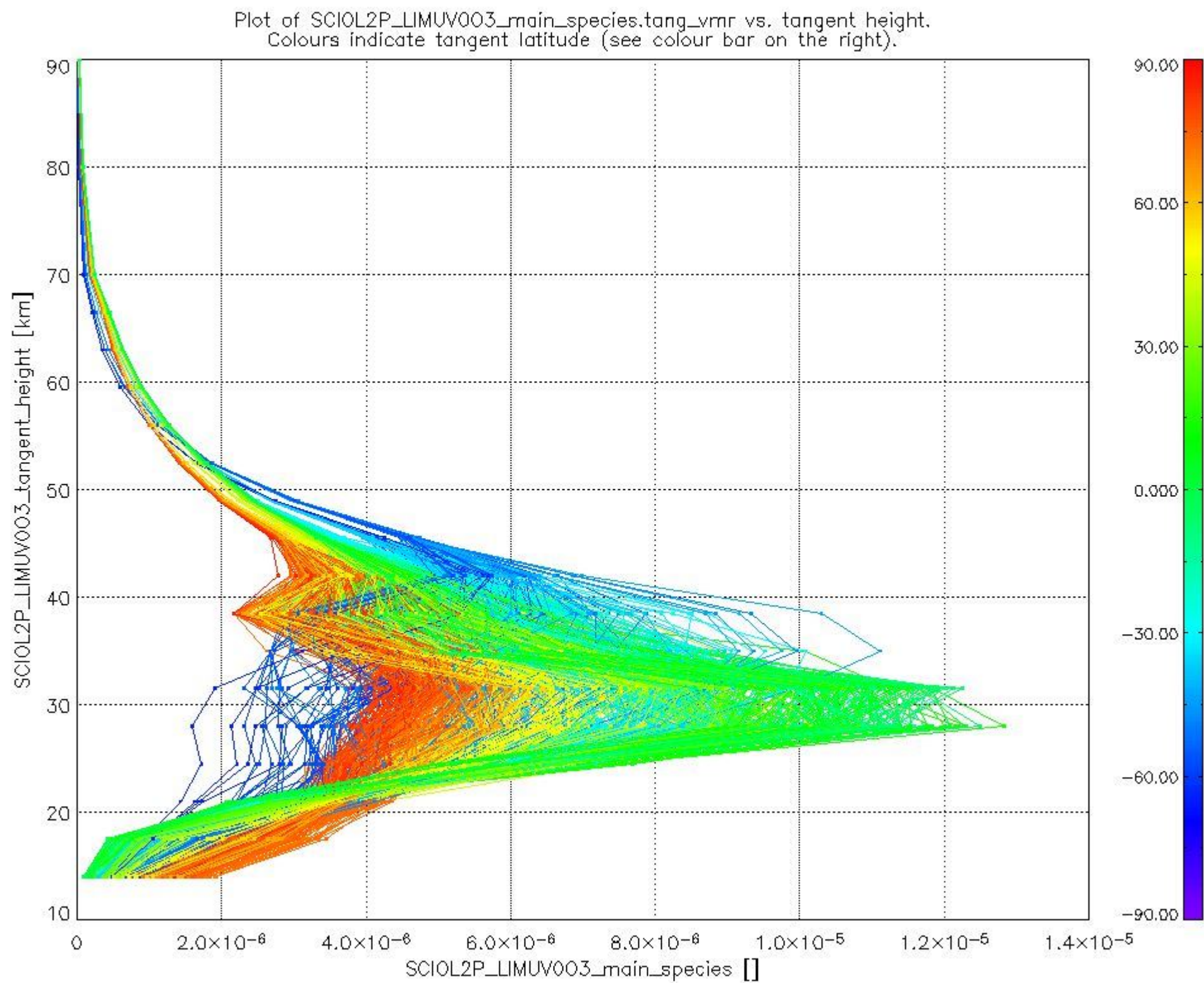
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

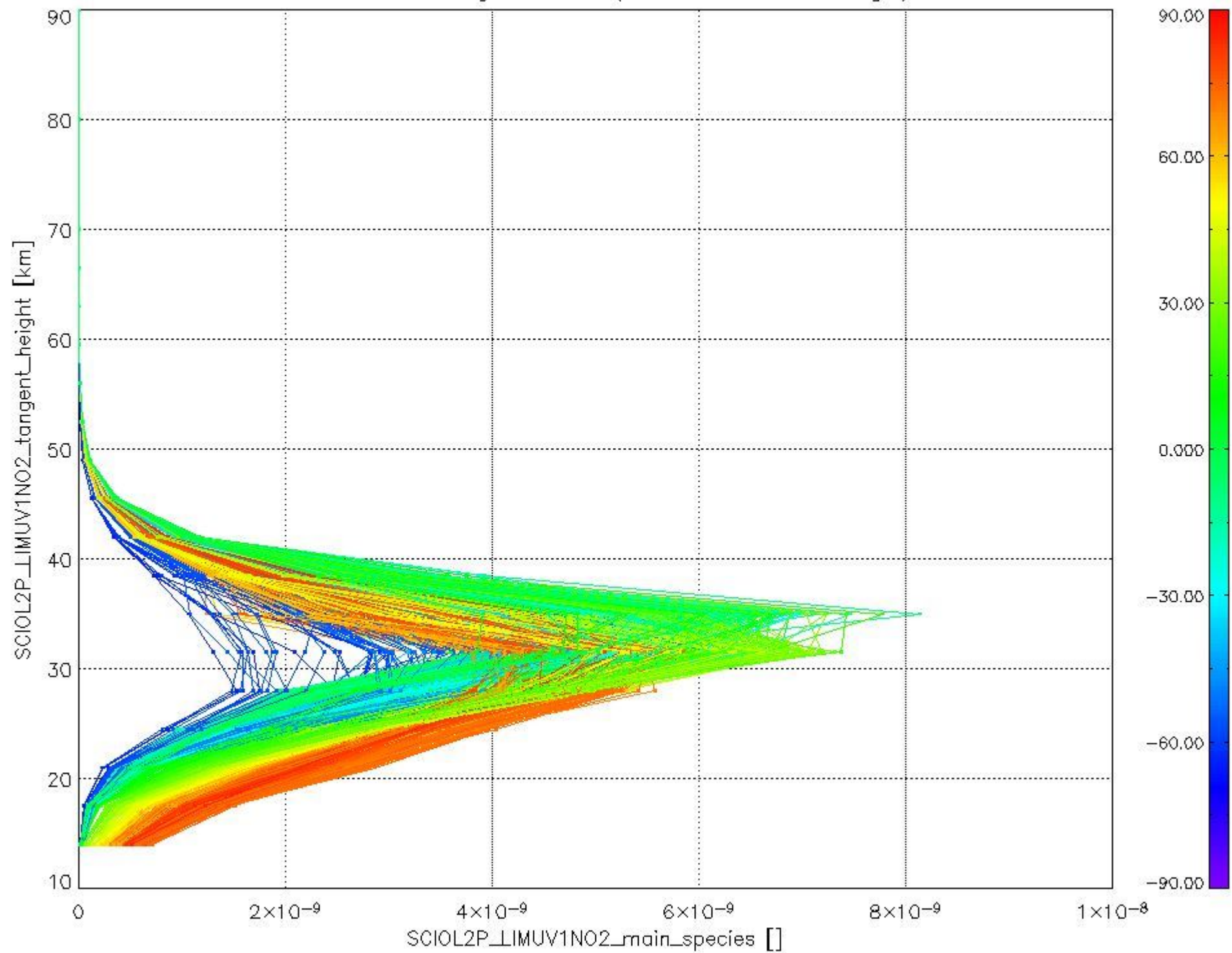


The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.





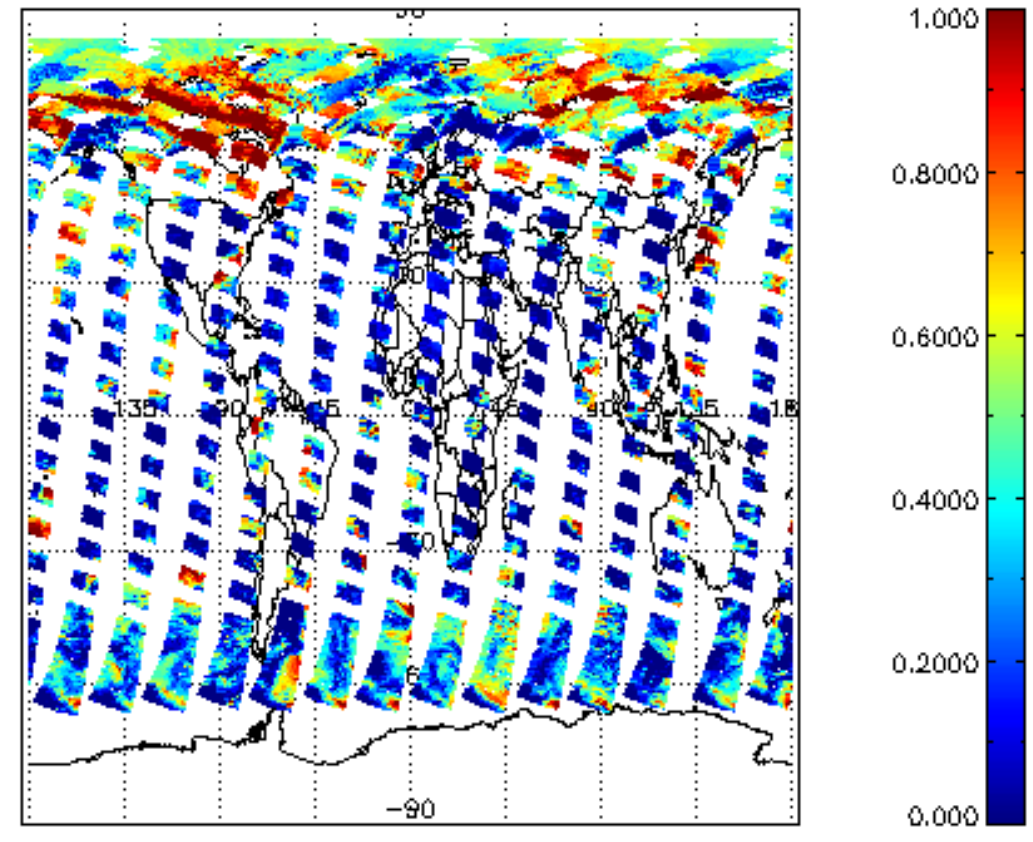
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



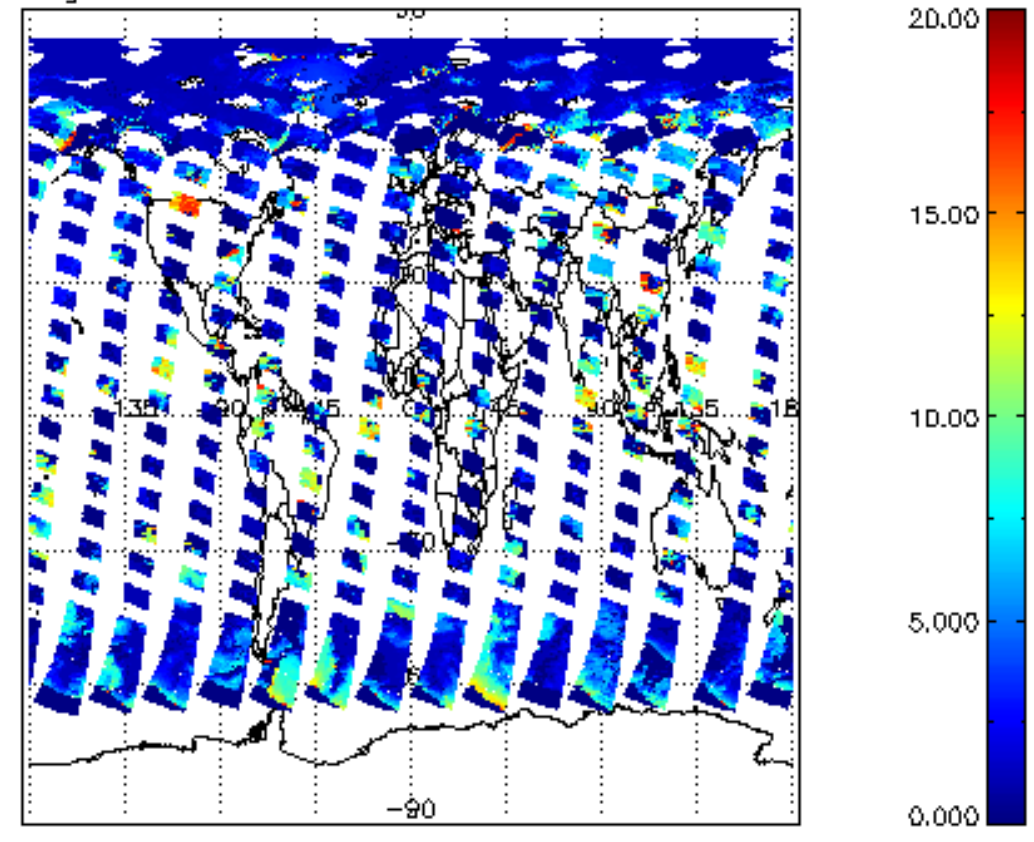
### 2.3 ADF monitoring

Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED

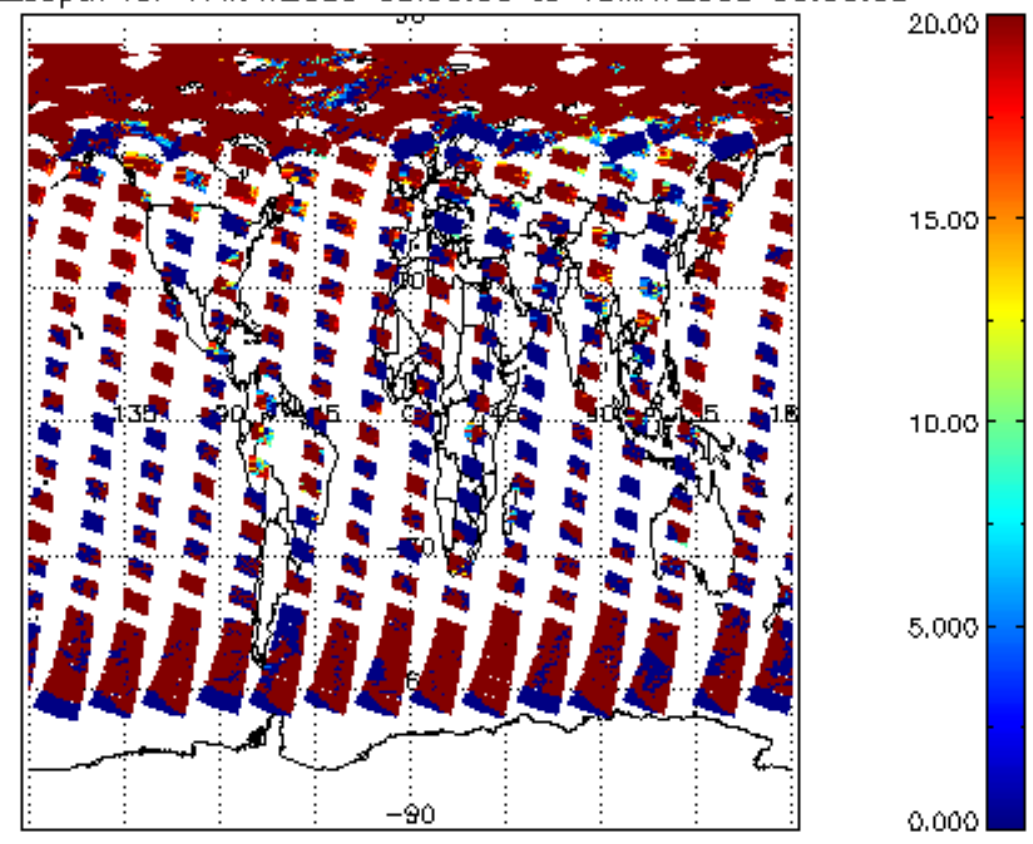
cl\_frac for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



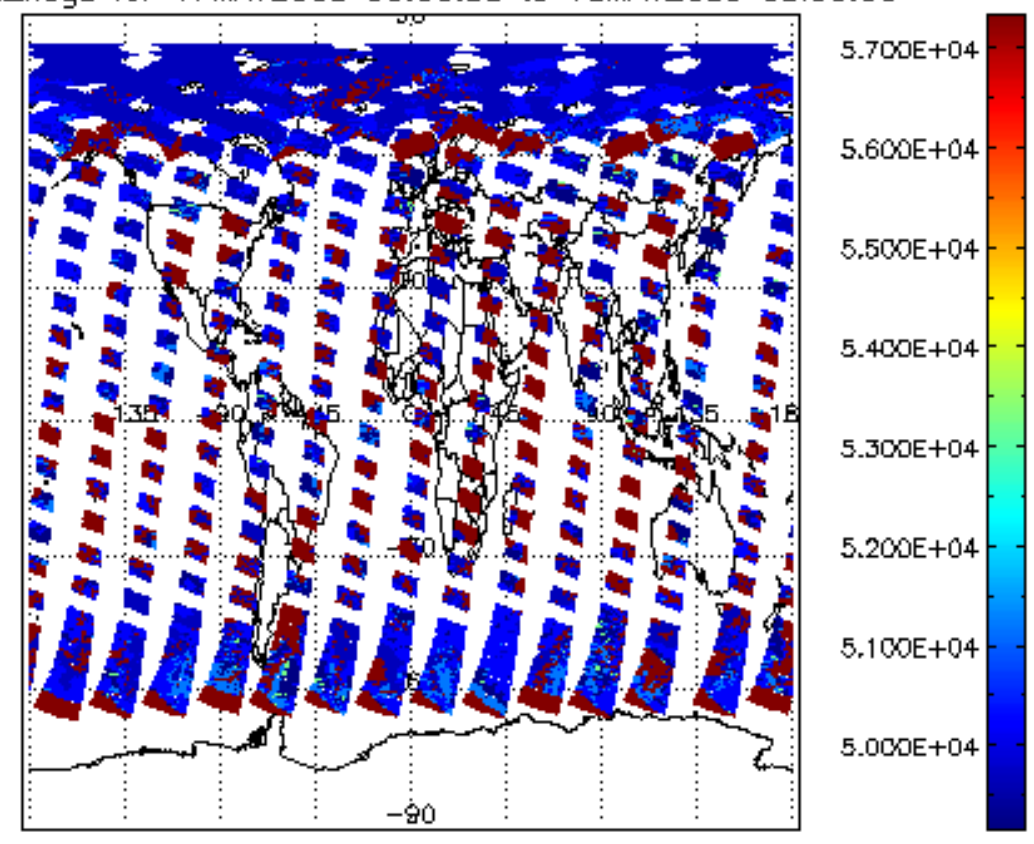
cl\_top\_height for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



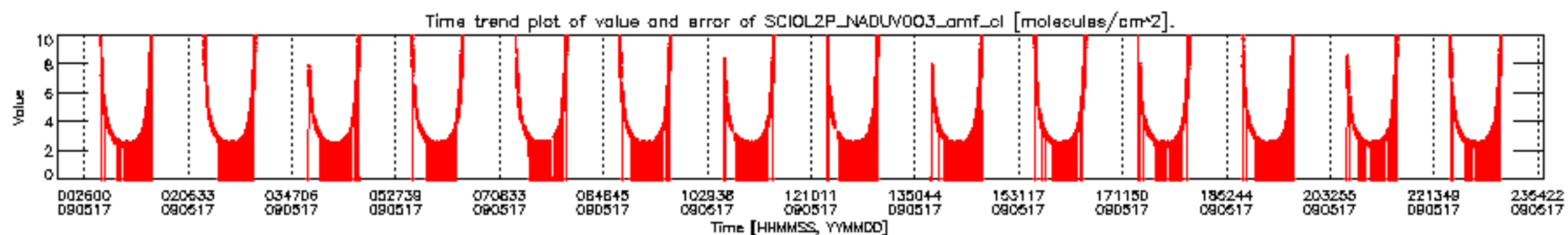
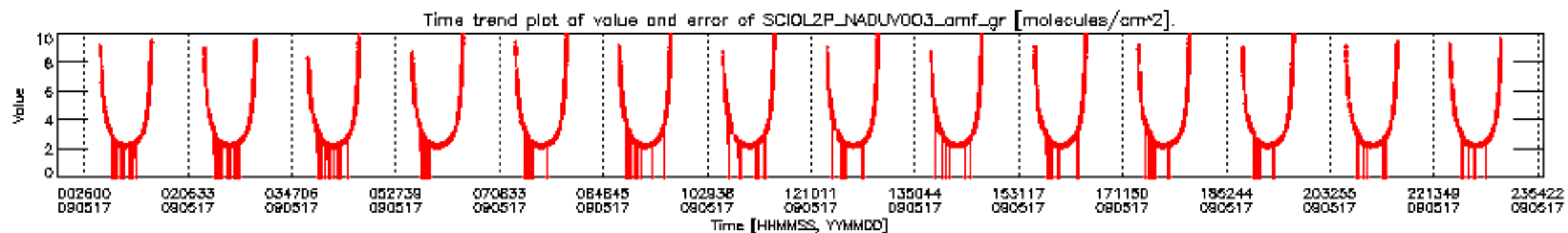
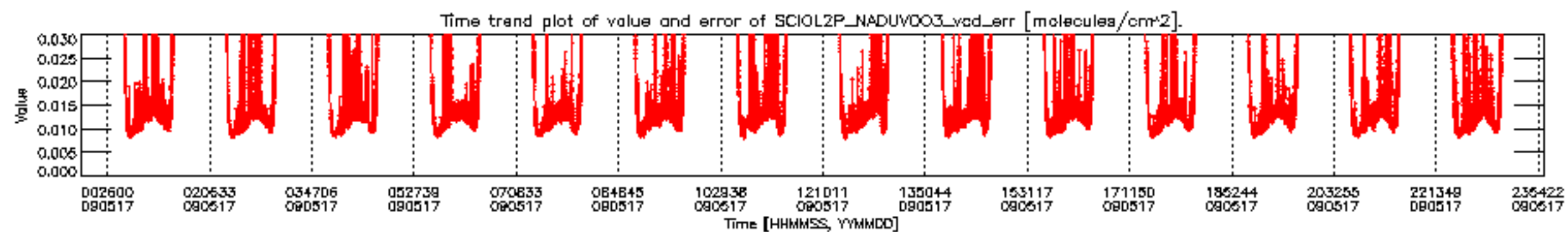
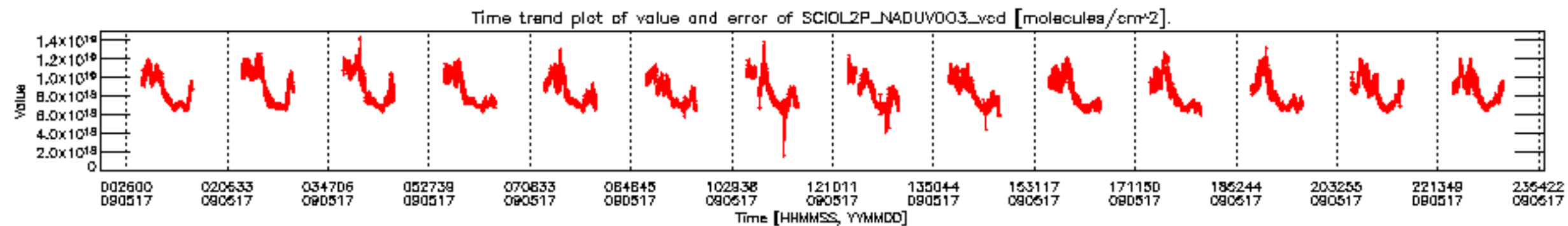
cl\_opt\_depth for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



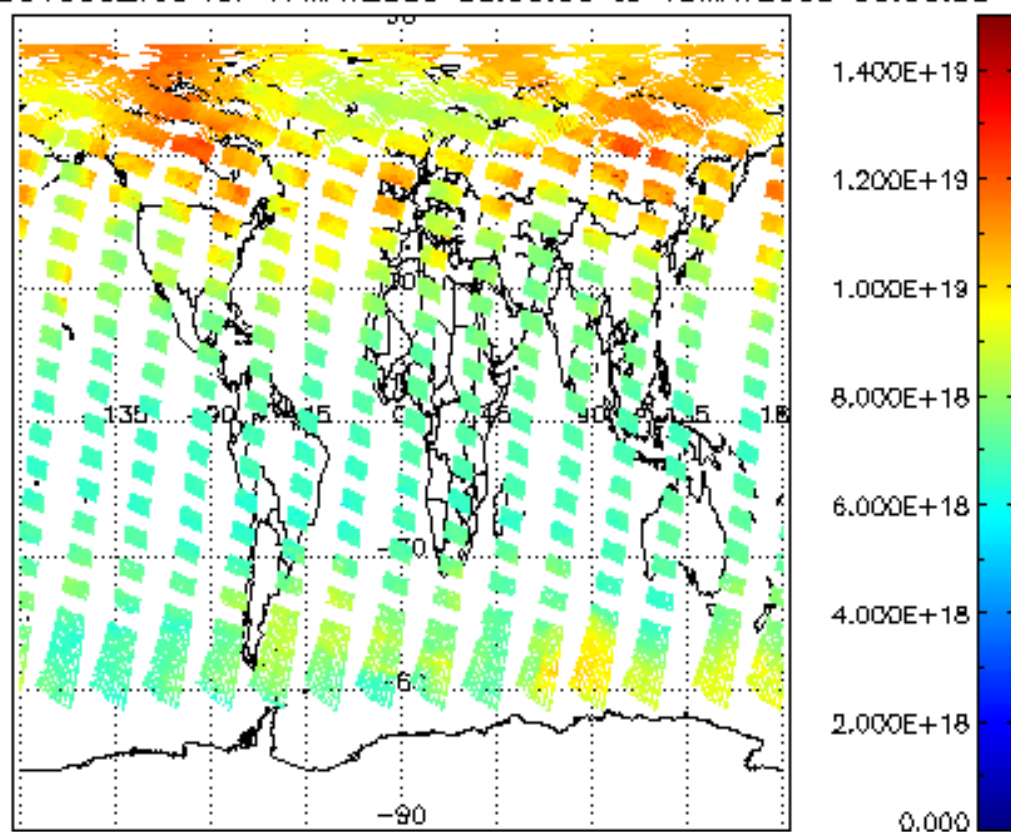
cloud\_flags for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



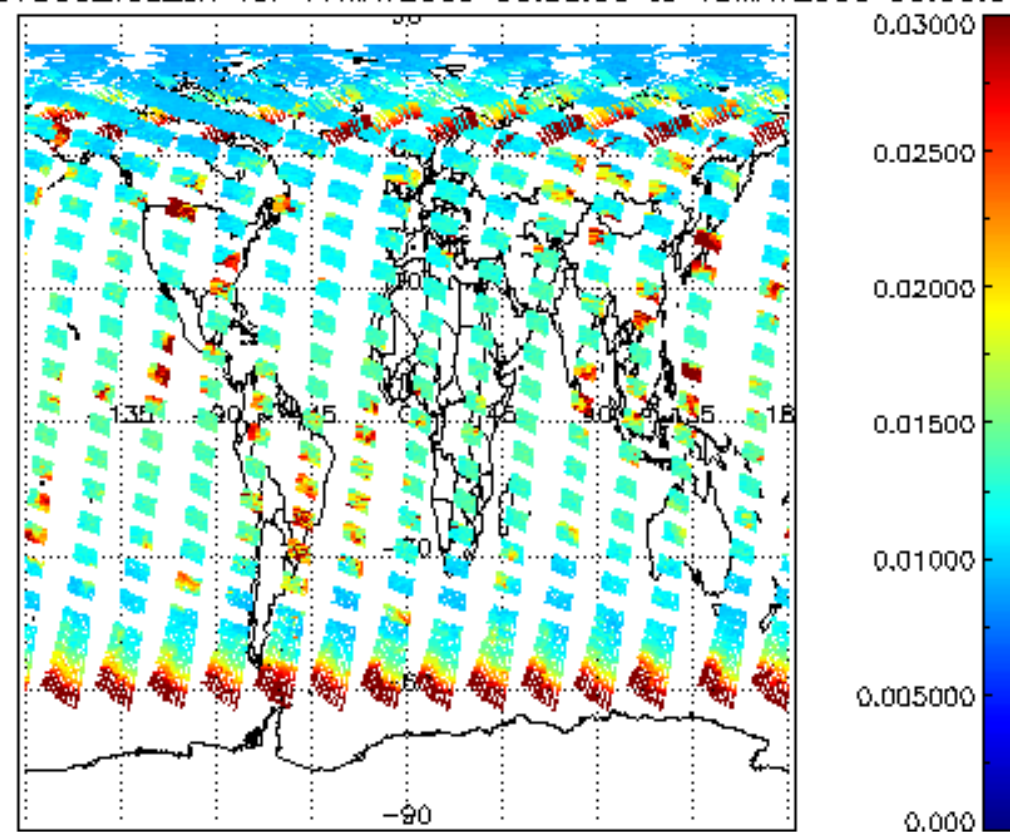




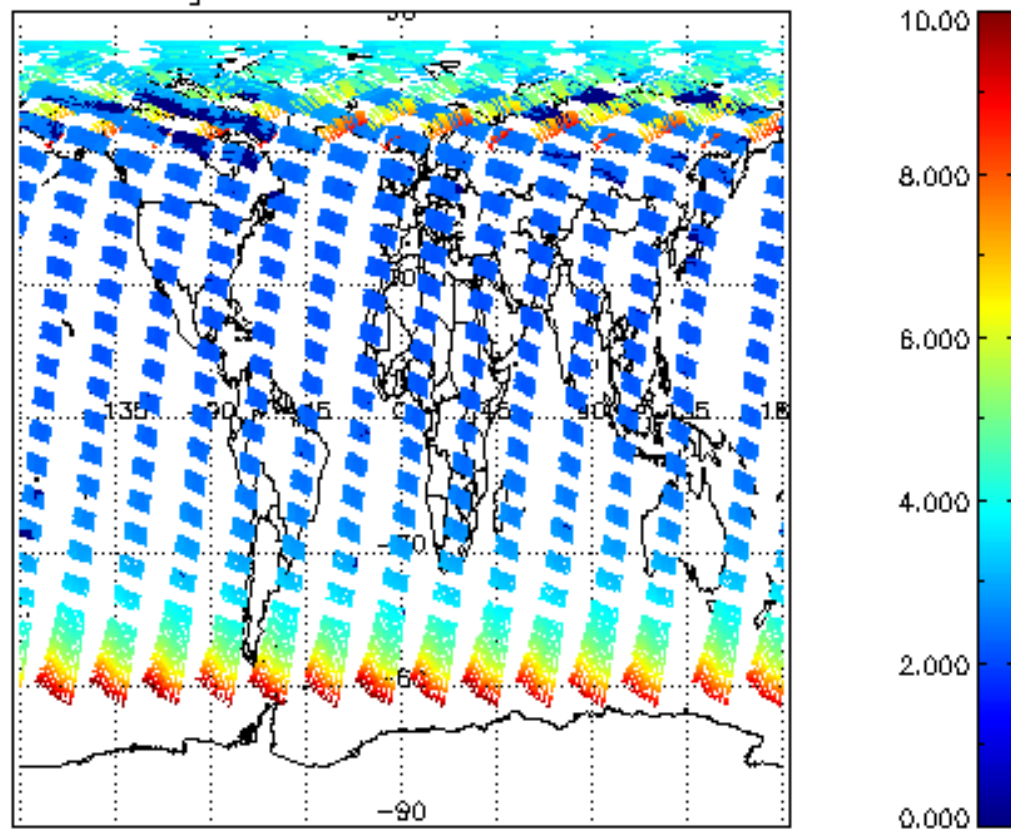
SCIOL2P\_NADUV003\_vcd for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



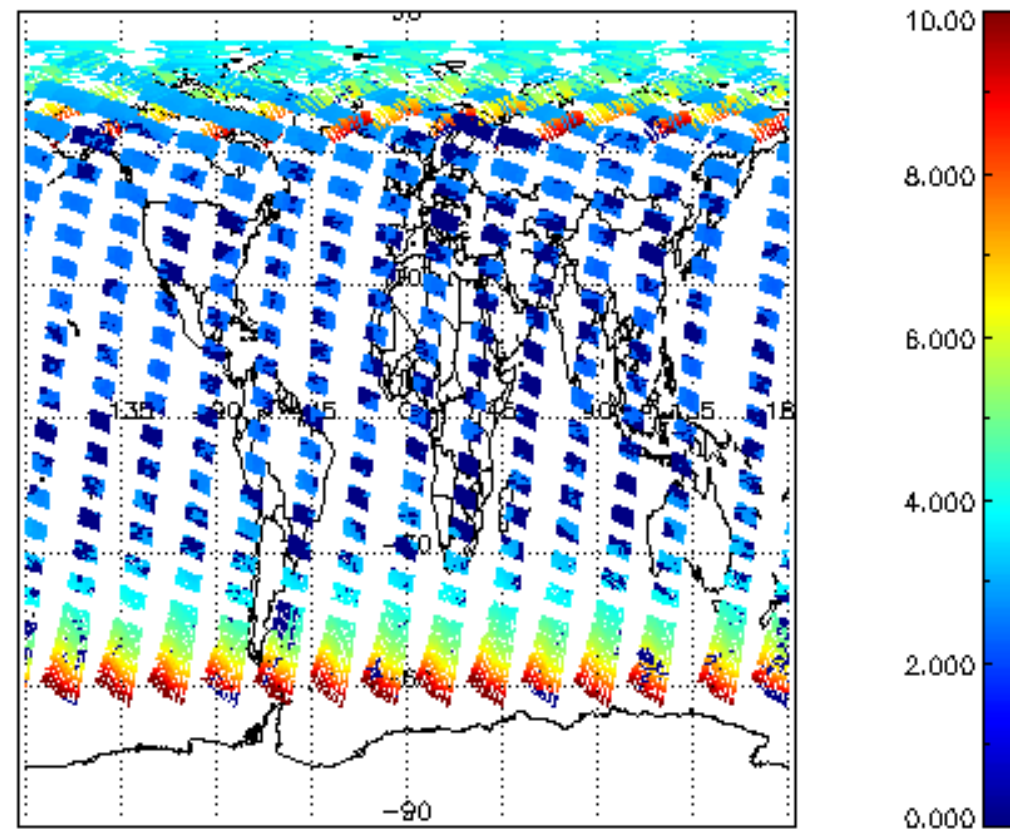
SCIOL2P\_NADUV003\_vcd\_err for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



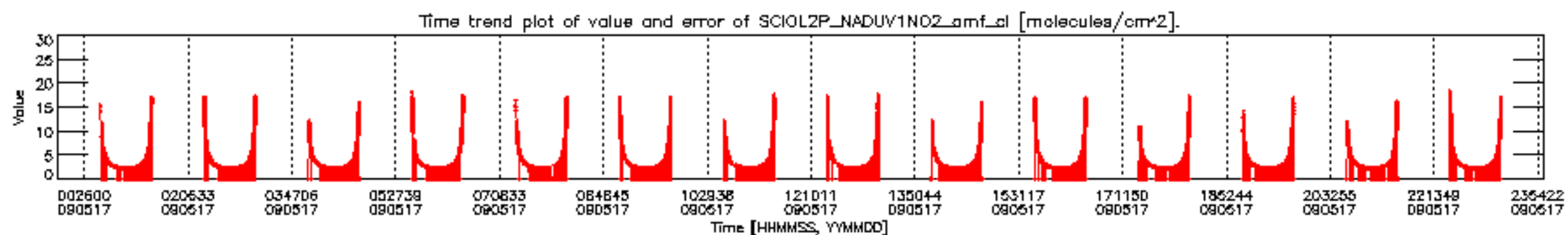
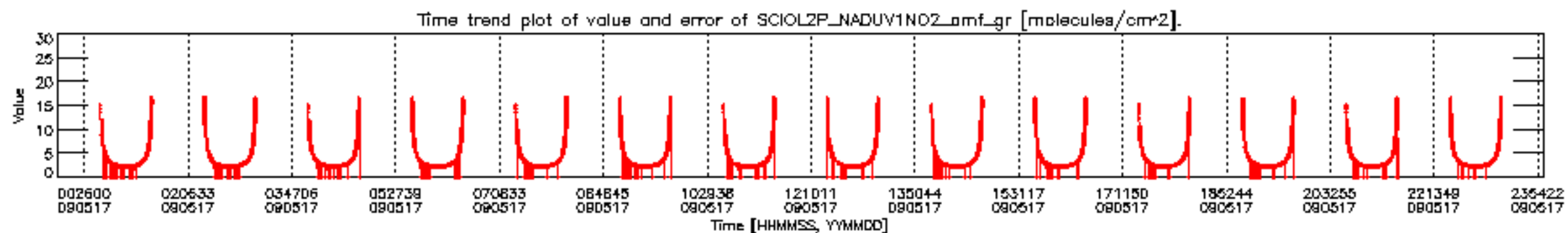
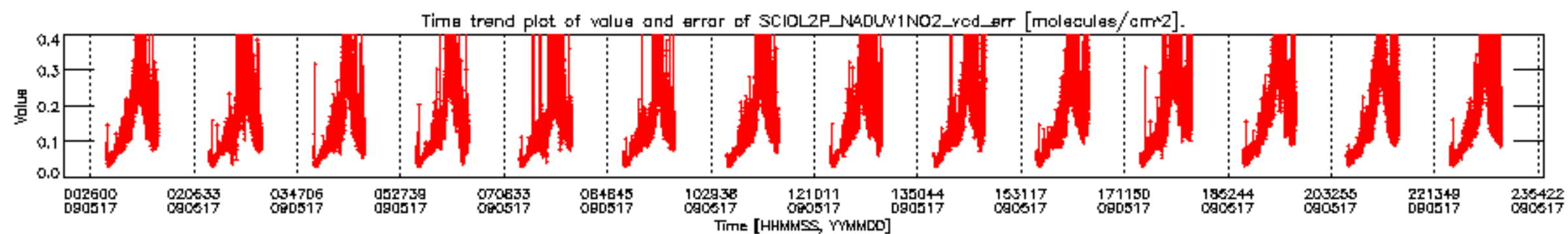
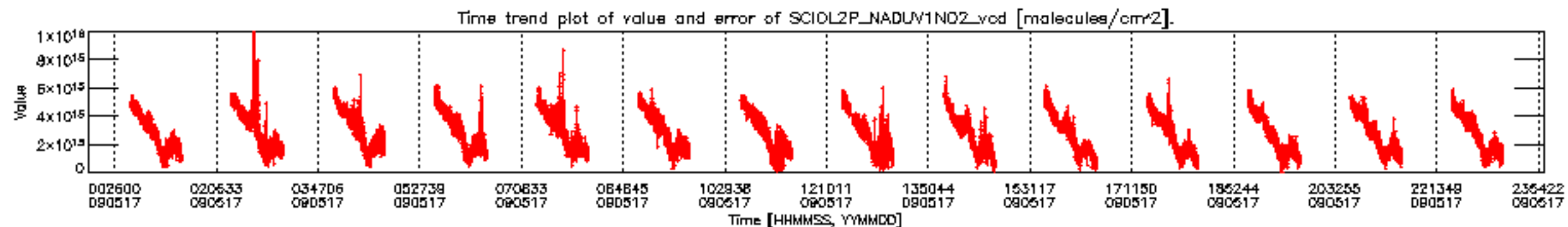
SCIOL2P\_NADUV003\_amf\_gr for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



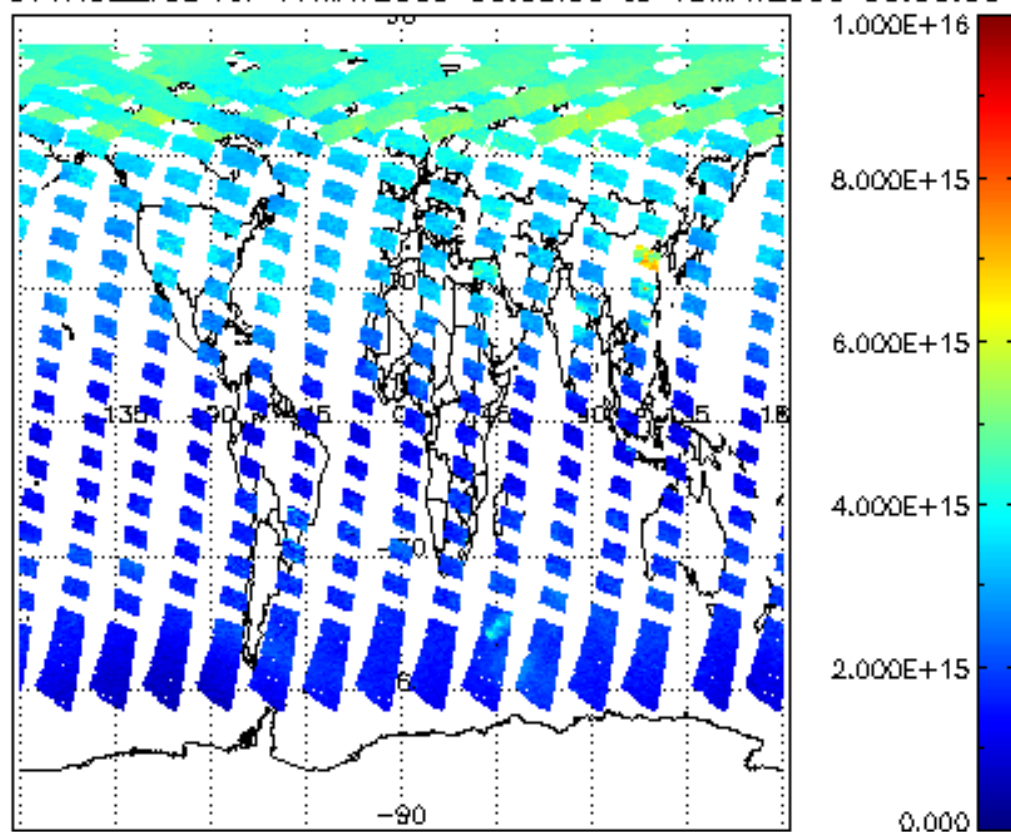
SCIOL2P\_NADUV003\_amf\_cl for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



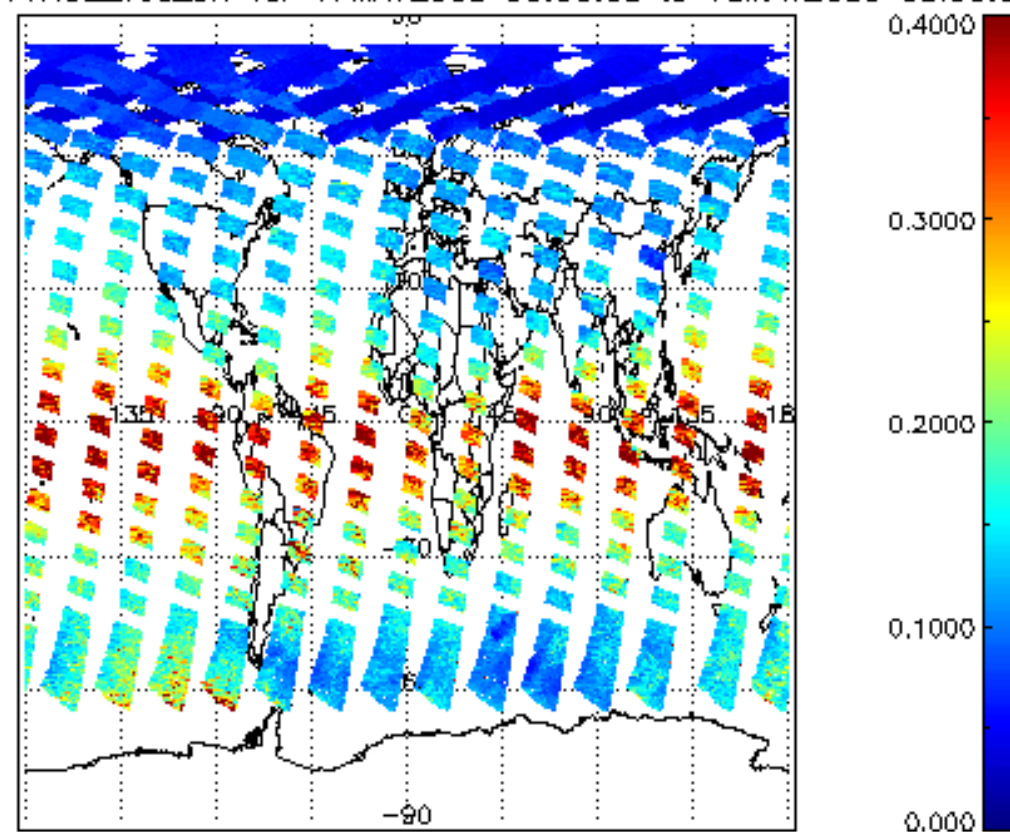




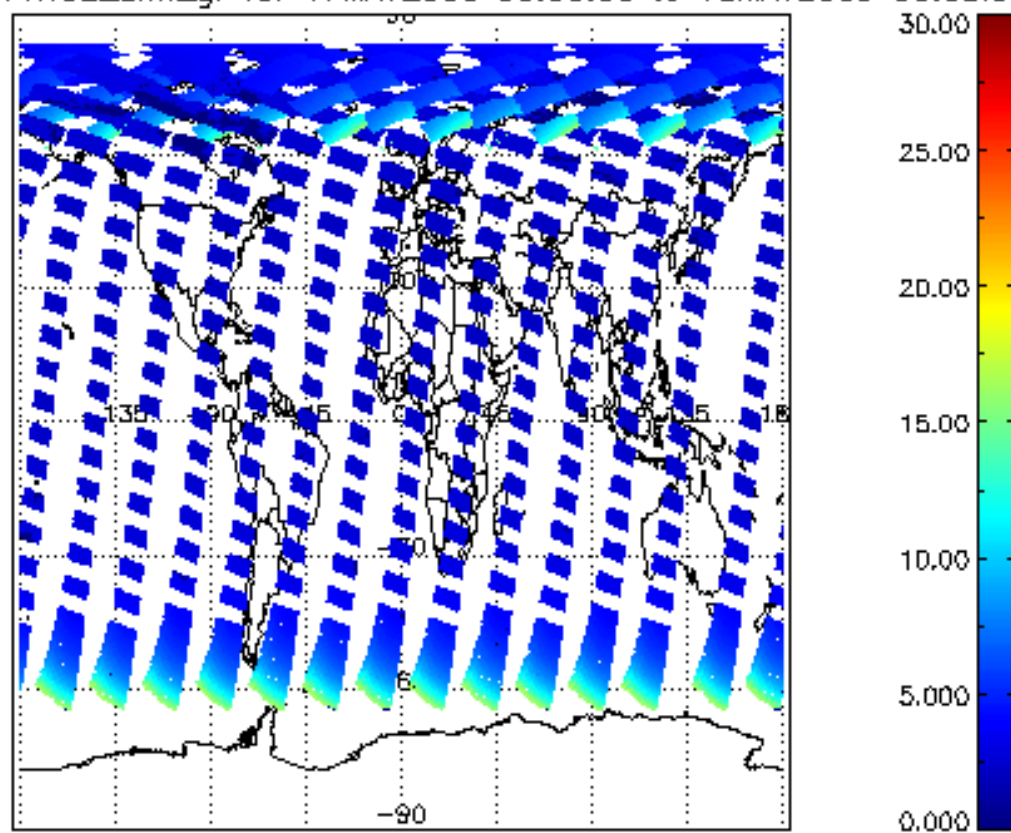
SCIOL2P\_NADUV1NO2\_vcd for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



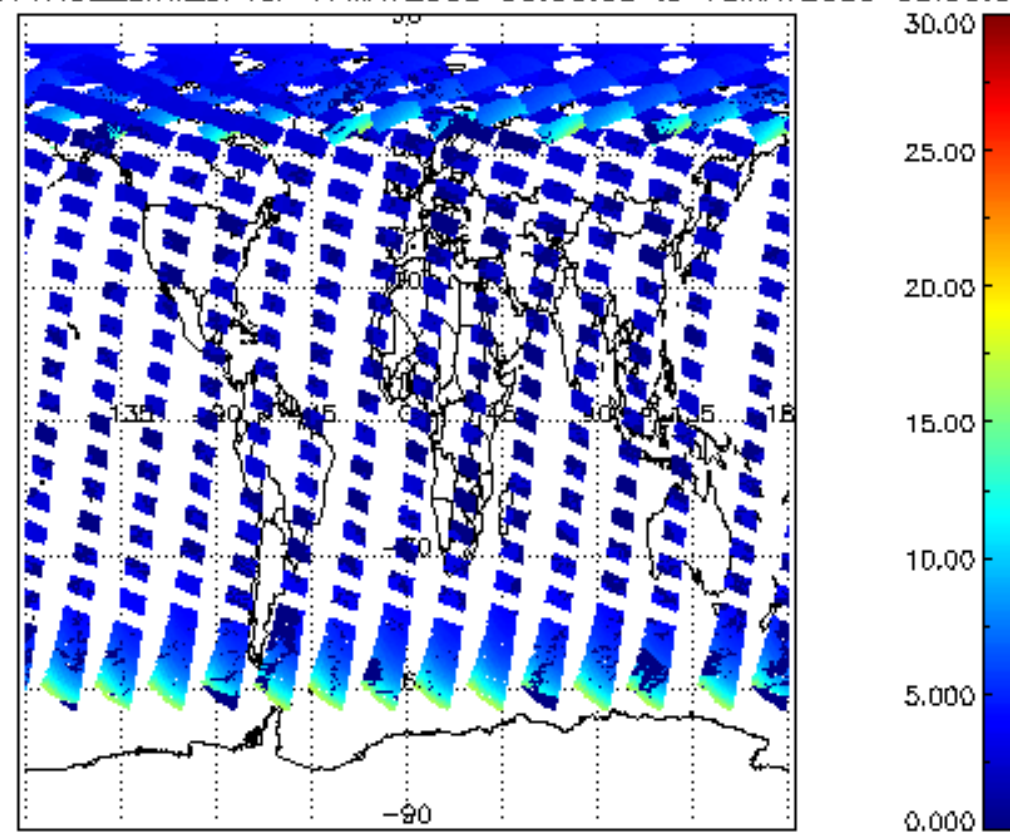
iCIOL2P\_NADUV1NO2\_vcd\_err for 17MAY2009 00:00:00 to 18MAY2009 00:00:00



iCIOL2P\_NADUV1NO2\_amf\_gr for 17MAY2009 00:00:00 to 18MAY2009 00:00:00

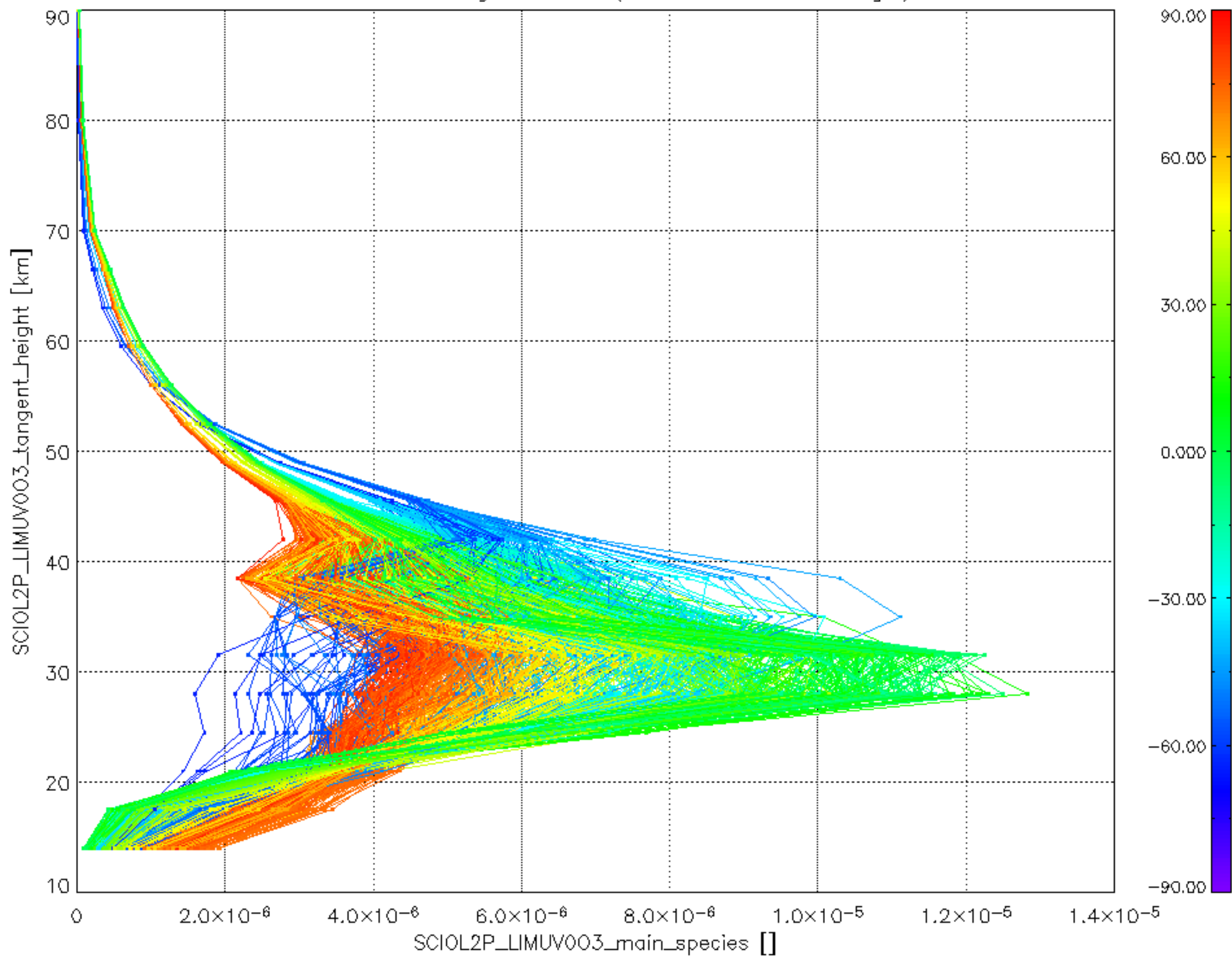


iCIOL2P\_NADUV1NO2\_amf\_cl for 17MAY2009 00:00:00 to 18MAY2009 00:00:00





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).

