

## 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	19JUL2009 06:03:19
Data source version	SCIA-OL/3.01-R
Processing scope for products	01JUL2009 00:00:00 to 02JUL2009 00:00:00
Start time of first product within scope	30JUN2009 22:40:16
Stop time of last product within scope	02JUL2009 00:44:41
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__2PRDPA20090630_224016_000033122080_00216_38346_3183.N1</a>	30JUN2009 22:40:16	30JUN2009 23:35:29	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20090701_002052_000033252080_00217_38347_3184.N1</a>	01JUL2009 00:20:52	01JUL2009 01:16:17	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20090701_020128_000033122080_00218_38348_3185.N1</a>	01JUL2009 02:01:28	01JUL2009 02:56:40	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20090701_034204_000033252080_00219_38349_3186.N1</a>	01JUL2009 03:42:04	01JUL2009 04:37:29	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20090701_052240_000033122080_00220_38350_3187.N1</a>	01JUL2009 05:22:40	01JUL2009 06:17:52	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20090701_070316_000033252080_00221_38351_3189.N1</a>	01JUL2009 07:03:16	01JUL2009 07:58:41	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20090701_084352_000033122080_00222_38352_3188.N1</a>	01JUL2009 08:43:52	01JUL2009 09:39:04	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20090701_102427_000033122080_00223_38353_3190.N1</a>	01JUL2009 10:24:27	01JUL2009 11:19:40	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20090701_120503_000033122080_00224_38354_3191.N1</a>	01JUL2009 12:05:03	01JUL2009 13:00:16	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20090701_134539_000033252080_00225_38355_3192.N1</a>	01JUL2009 13:45:39	01JUL2009 14:41:05	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20090701_152615_000033122080_00226_38356_3193.N1</a>	01JUL2009 15:26:15	01JUL2009 16:21:28	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20090701_170640_000033052080_00227_38357_3194.N1</a>	01JUL2009 17:06:40	01JUL2009 18:01:45	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20090701_184647_000033682080_00228_38358_3195.N1</a>	01JUL2009 18:46:47	01JUL2009 19:42:56	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20090701_202803_000033252080_00229_38359_3196.N1</a>	01JUL2009 20:28:03	01JUL2009 21:23:29	0	GOOD
14	<a href="#">SCI_OL__2PRDPA20090701_220839_000033122080_00230_38360_3197.N1</a>	01JUL2009 22:08:39	01JUL2009 23:03:52	0	GOOD
15	<a href="#">SCI_OL__2PRDPA20090701_234915_000033252080_00231_38361_3198.N1</a>	01JUL2009 23:49:15	02JUL2009 00:44:41	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: 143780

Total number of cloud data DSRs with good quality flag (=0): 143780 (100.0 %)

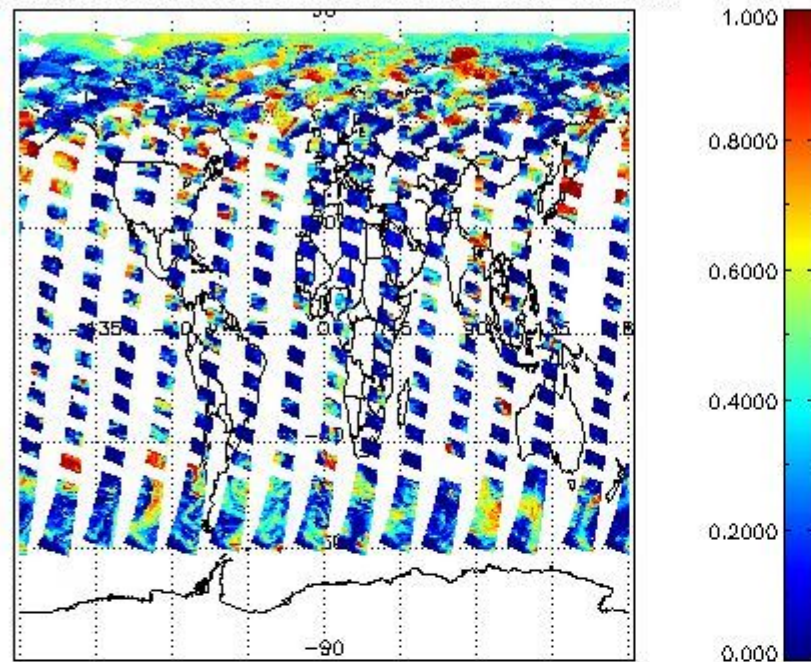
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	143780	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	143780	0.16998	0.12500	0.12500	0.25000	0.059995	s
CL_FRAC	143780	0.29207	0.23277	0.0000	1.0000	0.27730	-
CL_FRAC_ERR	143780	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	143780	5.4394	4.0000	4.0000	8.0000	1.9198	
PMD_READ_CL[0]	143780	0.14796	0.0000	0.0000	8.0000	0.88835	-
PMD_READ_CL[1]	143780	1.8260	0.0000	0.0000	8.0000	2.6721	-
CL_TOP_HEIGHT	126437	3.3454	1.2540	0.0000	17.000	3.8905	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	126437	57.964	94.282	0.0000	101.00	45.450	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	143780	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	143780	11001101	11000100	11000000	11100000	3597.1	flags
AERO_ABSO_IND	143780	4.1261	4.8142	-0.86820	16.523	2.7134	
AERO_IND_DIAG	143780	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	143780	01010111	00000000	00000000	11000000	24485.	flags

### Time and geolocation plots:

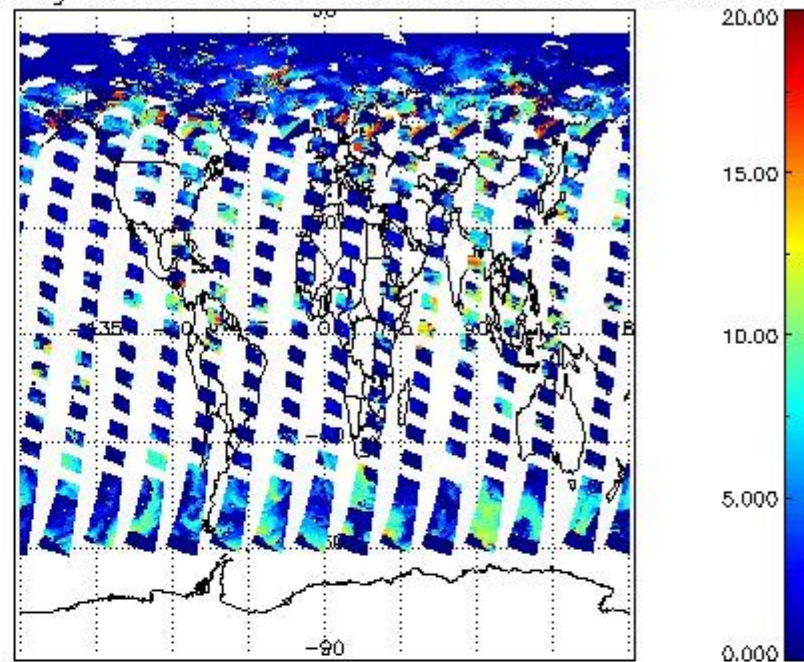
Plots are available for the following parameters:

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

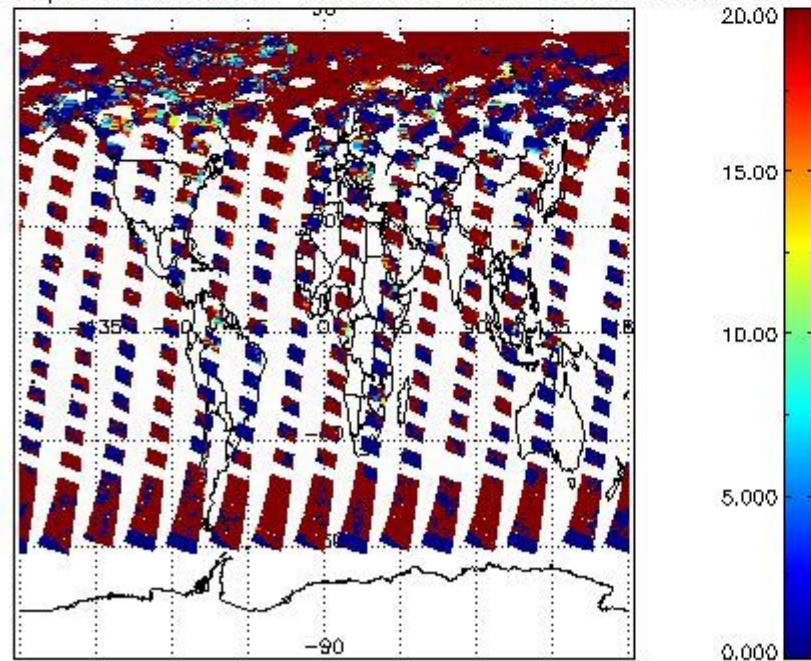
cL\_frac for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



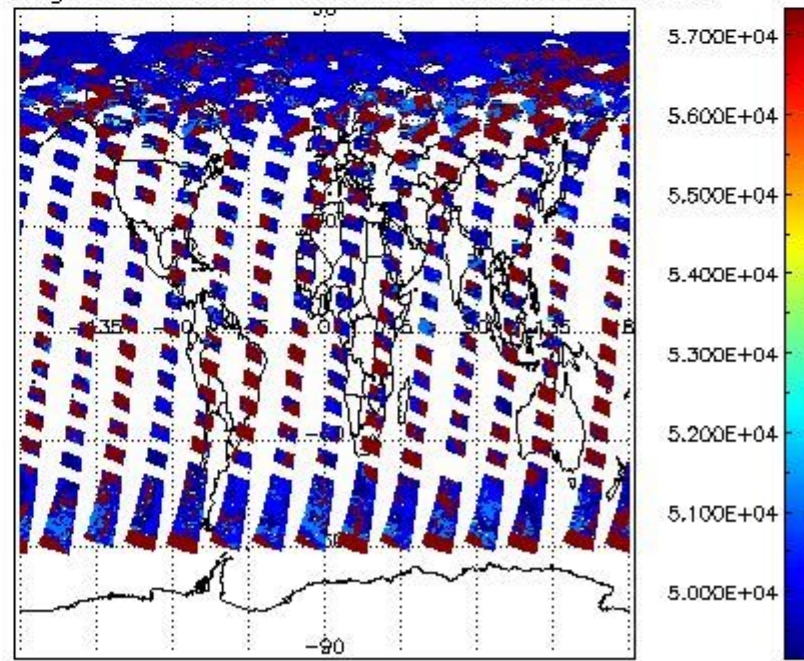
cL\_top\_height for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



cL\_opt\_depth for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



cloud\_flags for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



## 2.2.2 Nadir

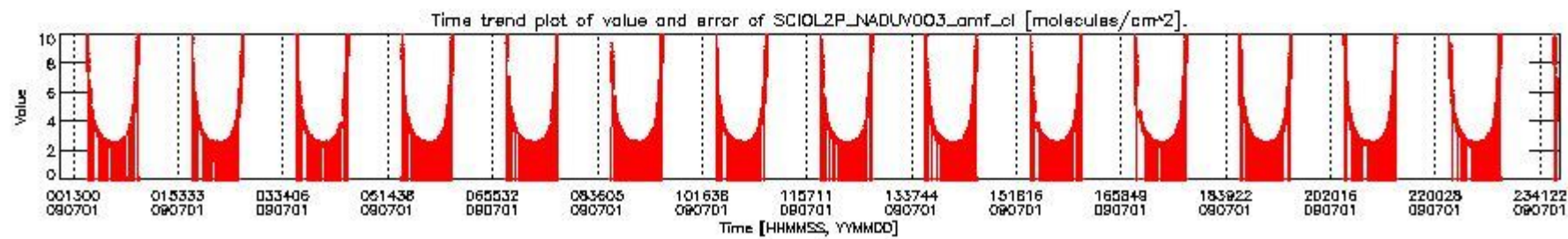
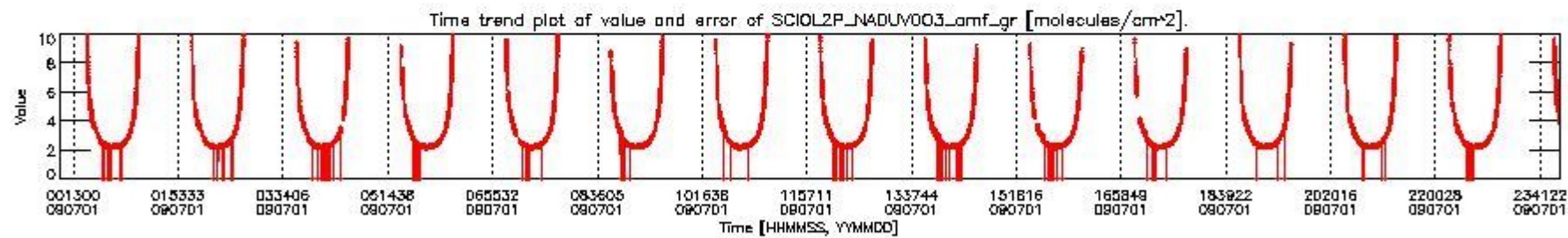
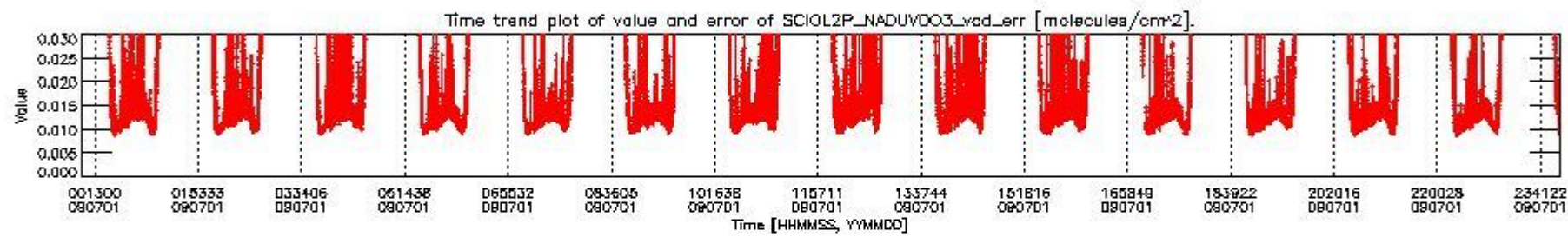
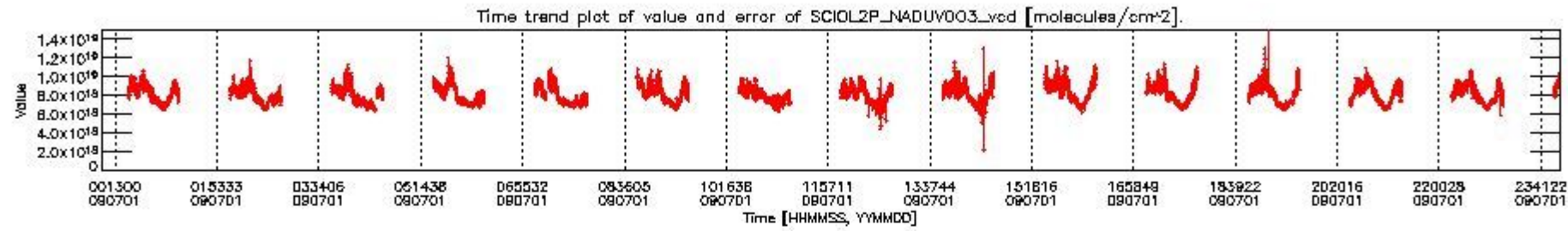
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

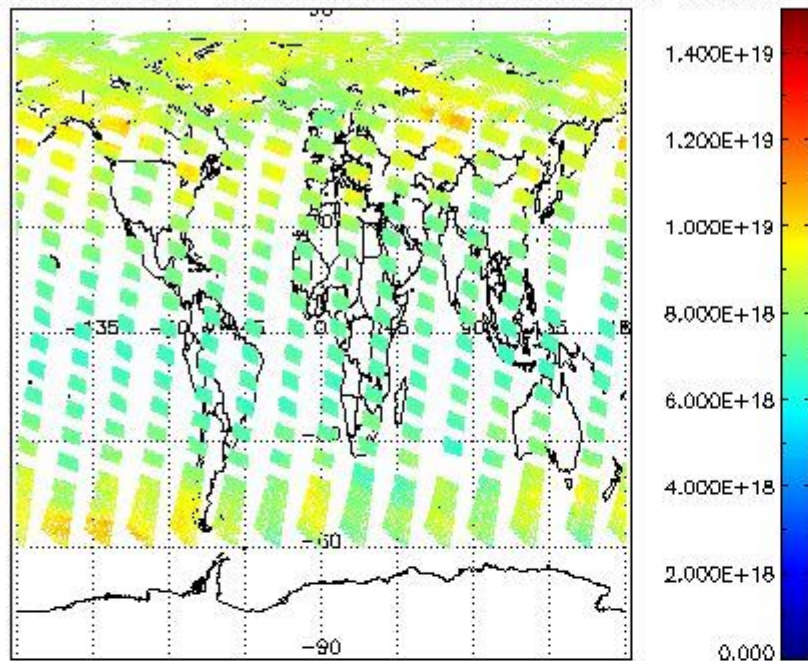
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

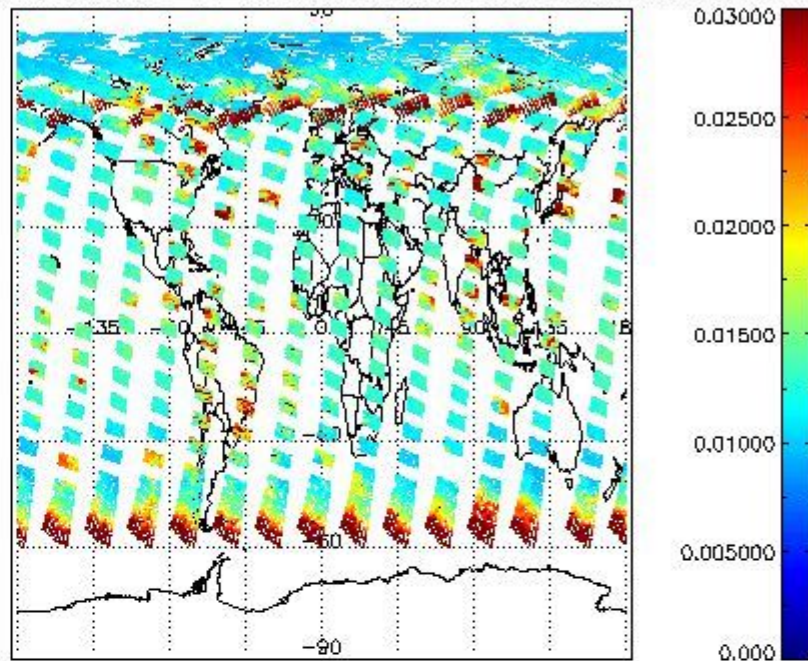
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in the MPH.



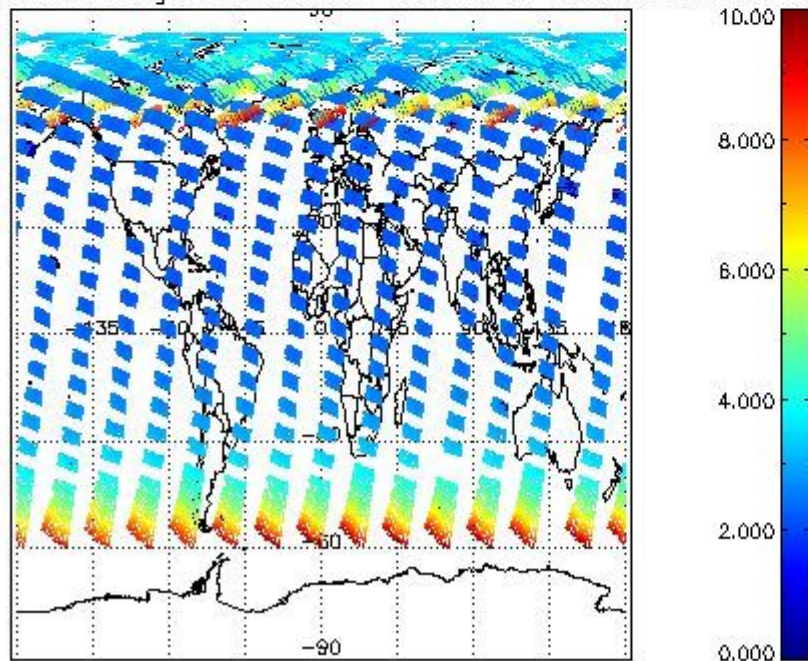
SCIOL2P\_NADUV003\_vcd for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



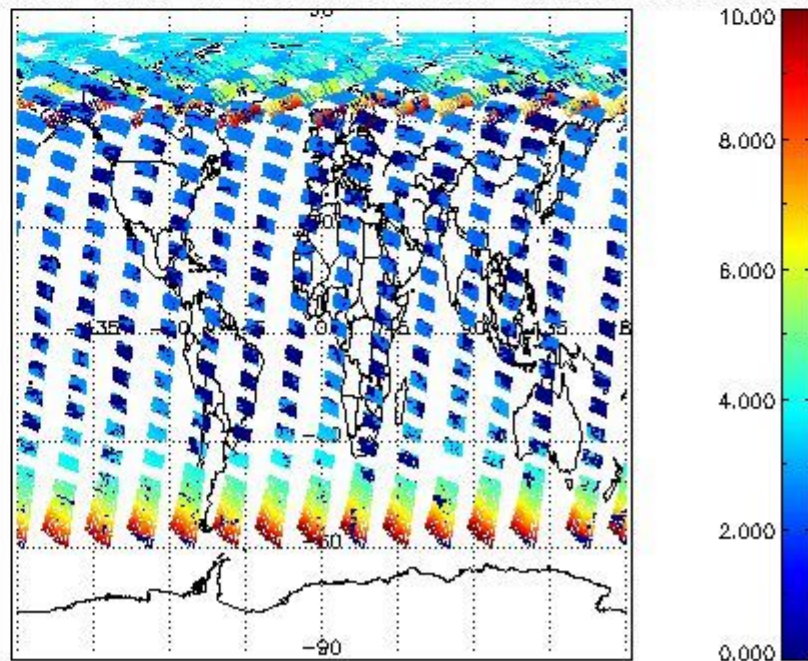
SCIOL2P\_NADUV003\_vcd\_err for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

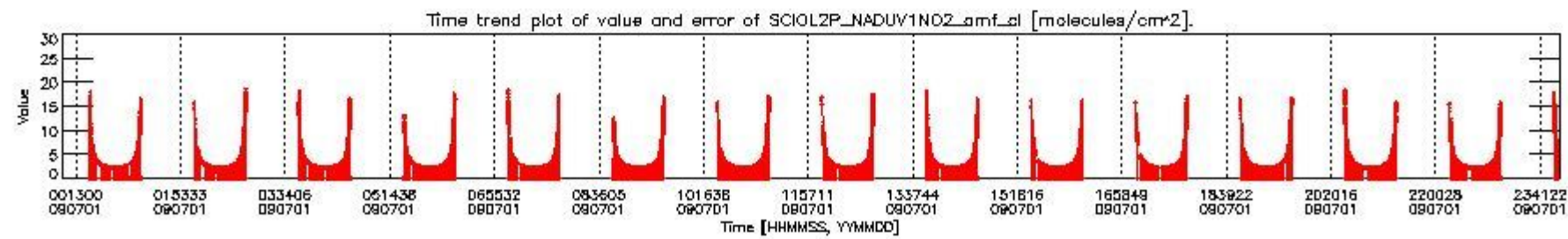
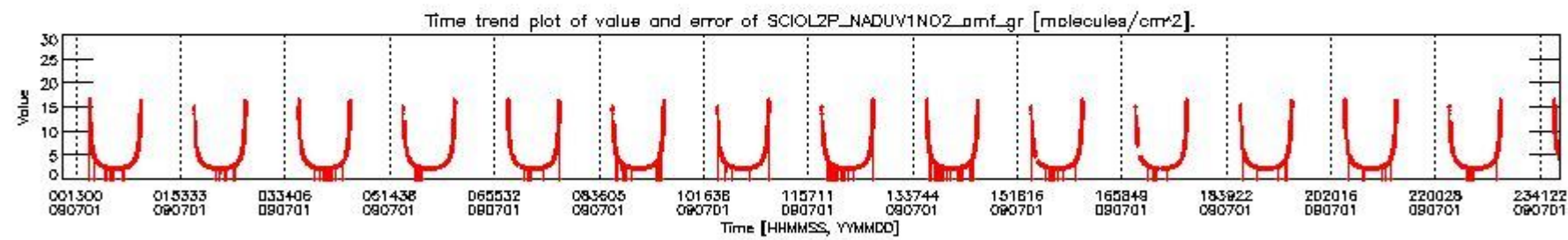
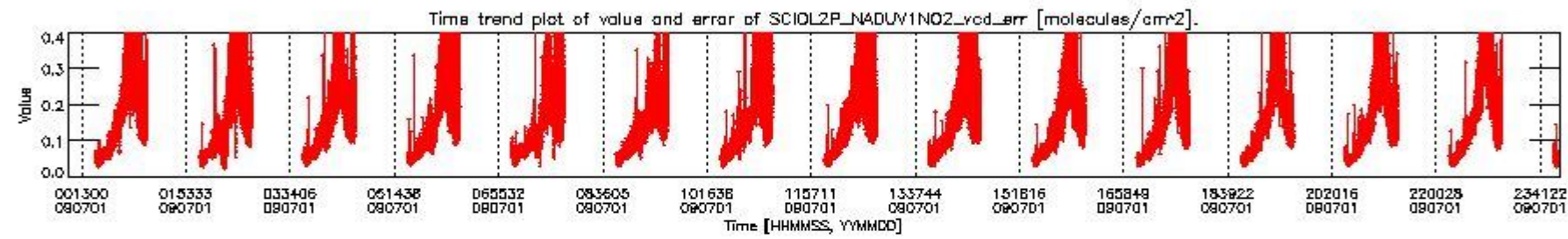
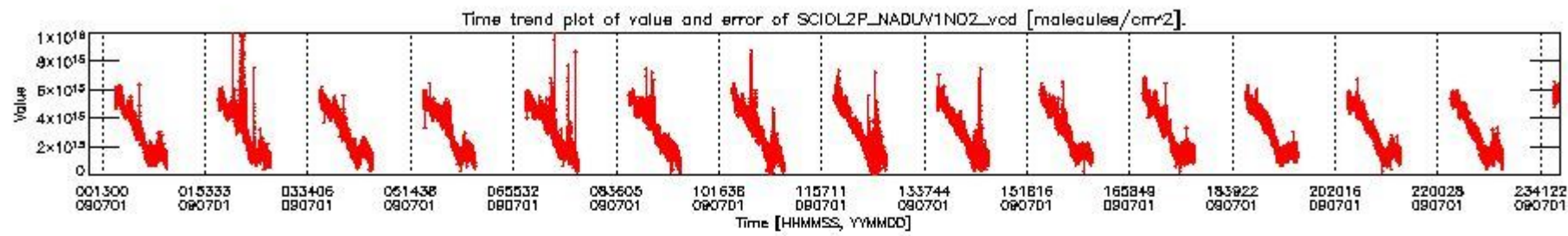


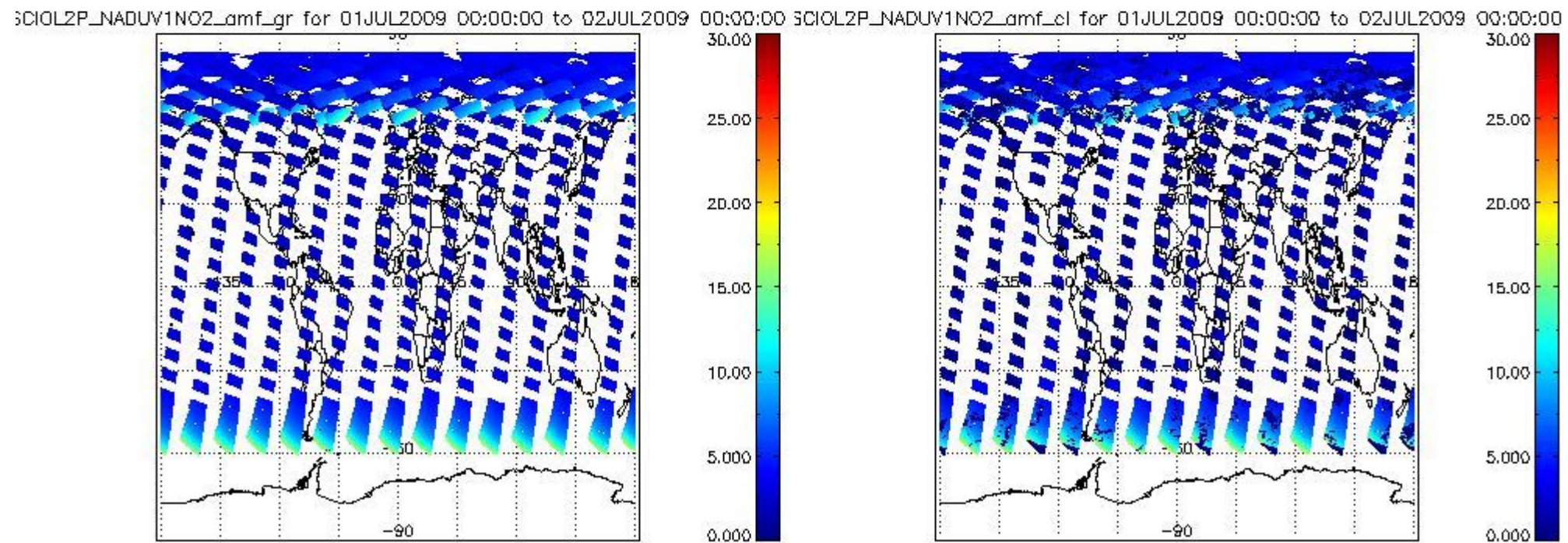
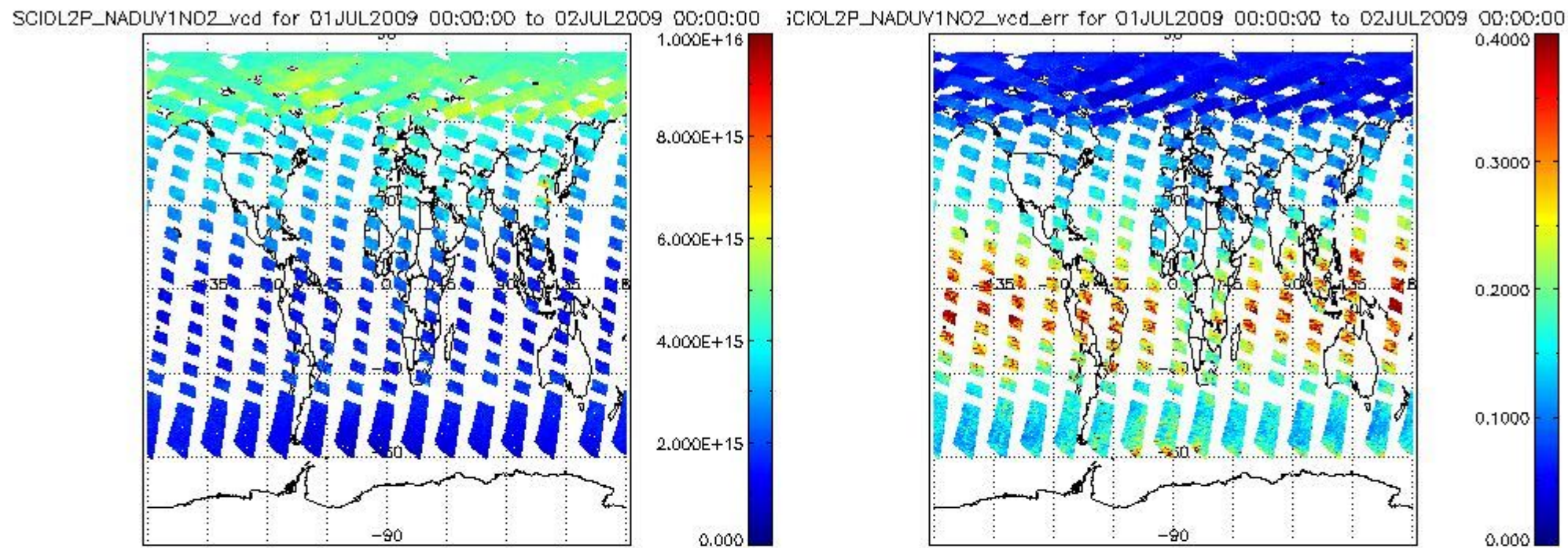
SCIOL2P\_NADUV003\_amf\_gr for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 01JUL2009 00:00:00 to 02JUL2009 00:00:00







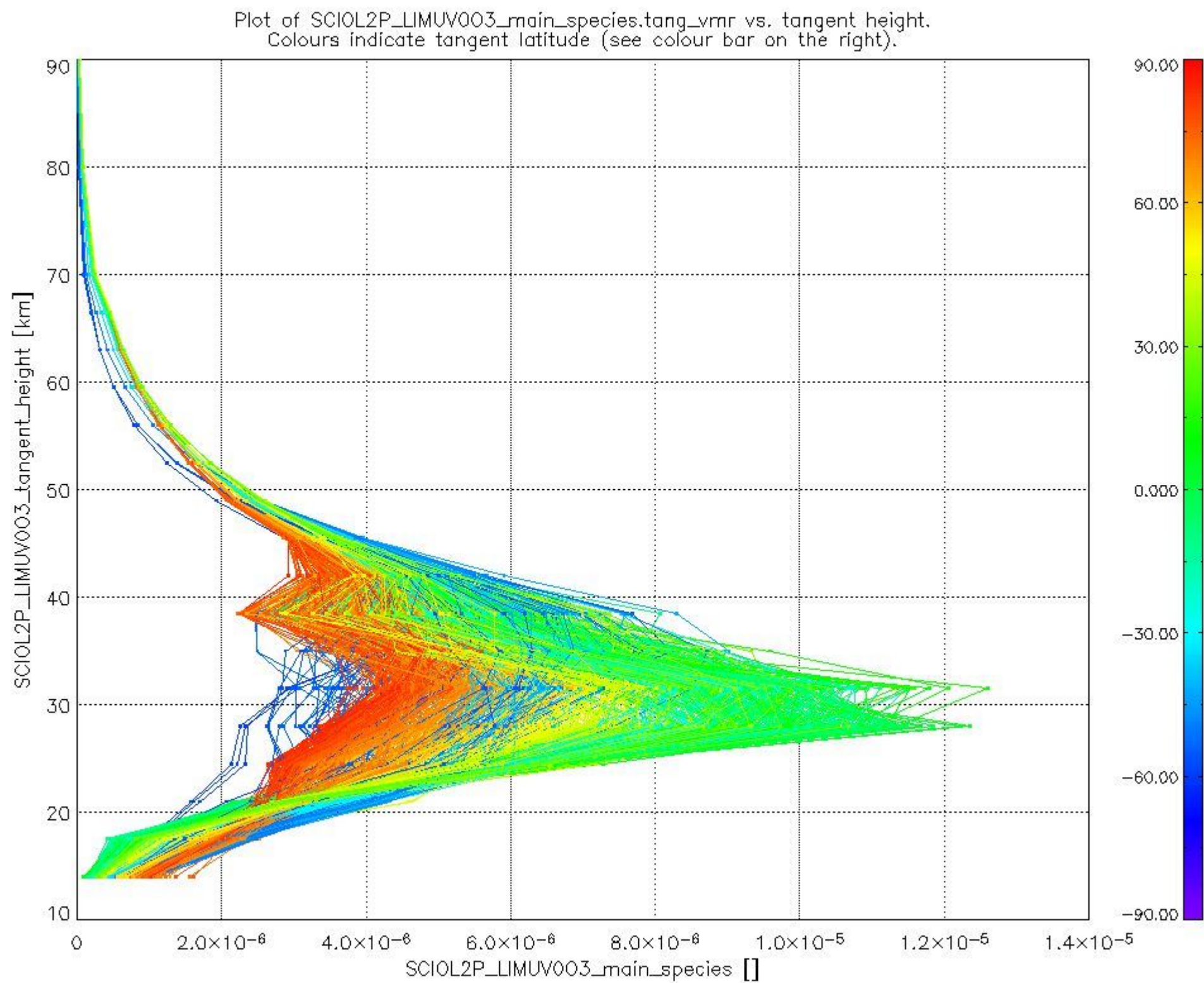
### 2.2.3 Limb

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:

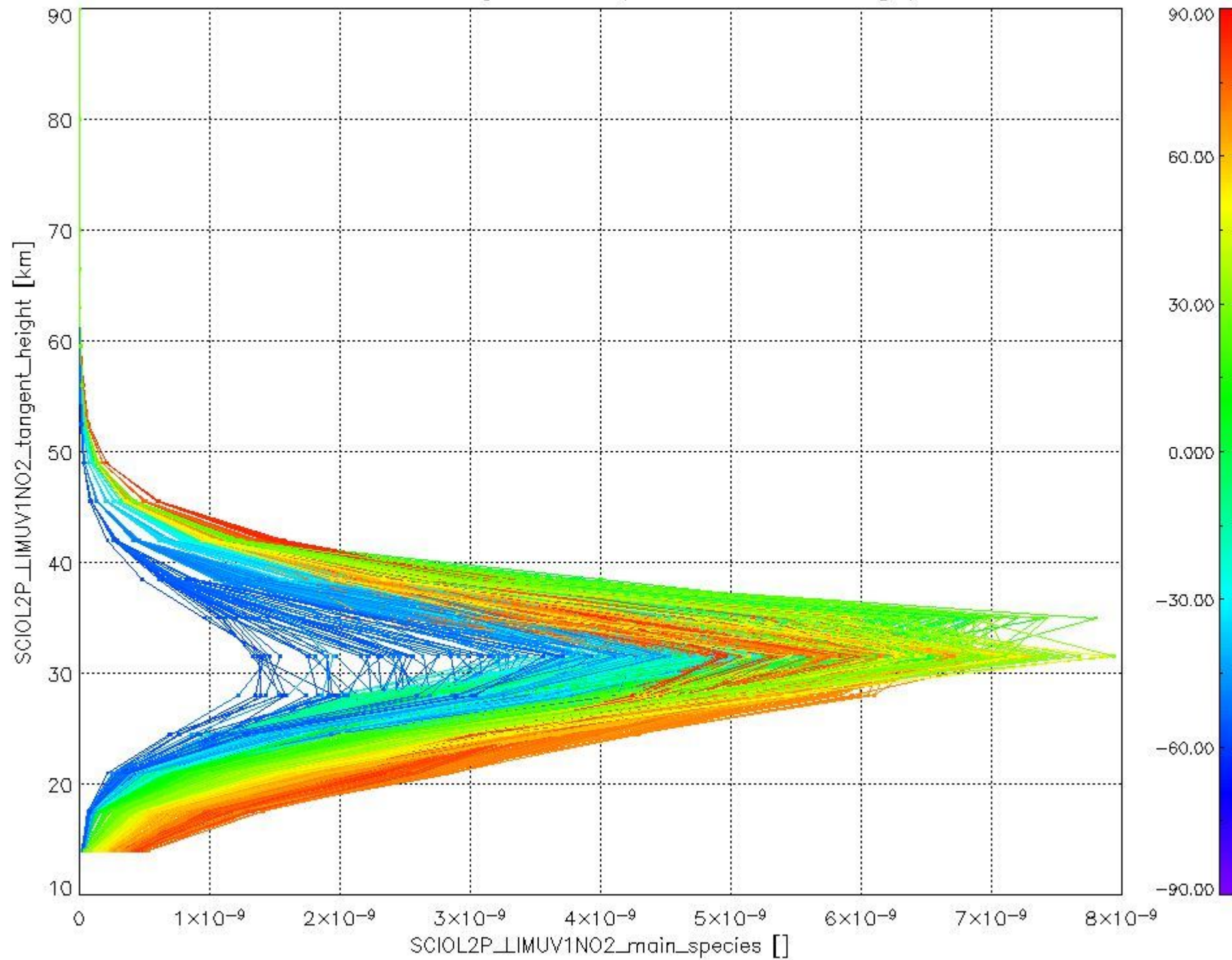
Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

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





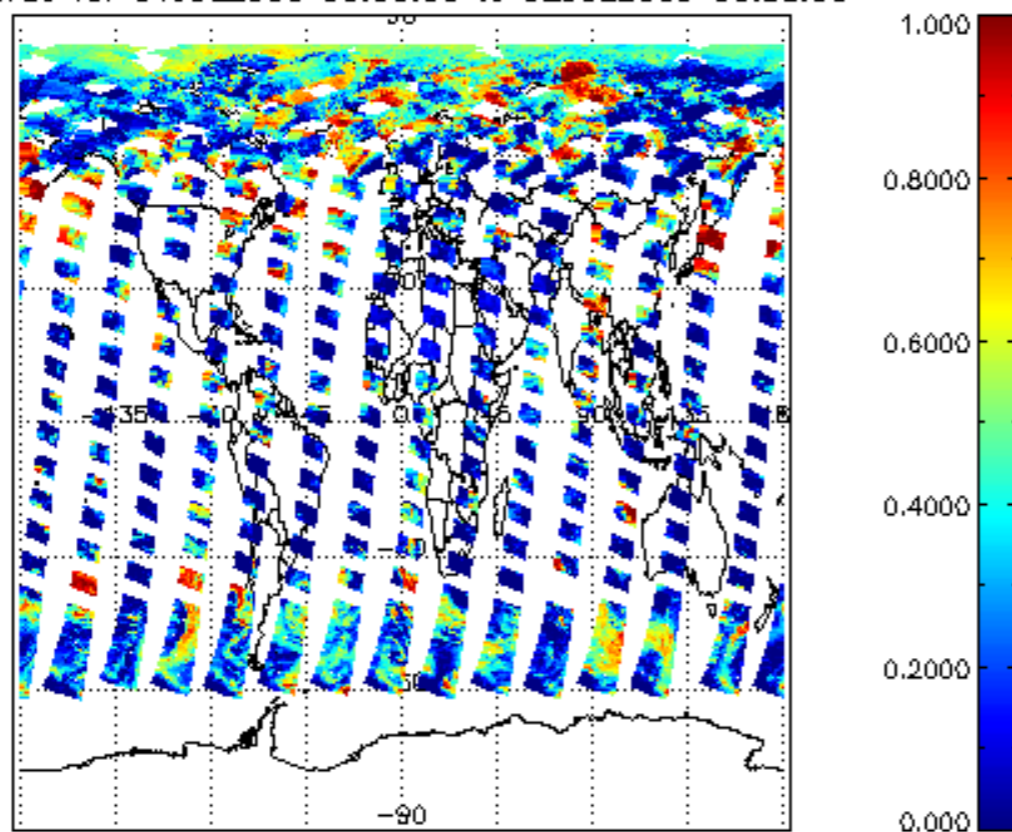
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



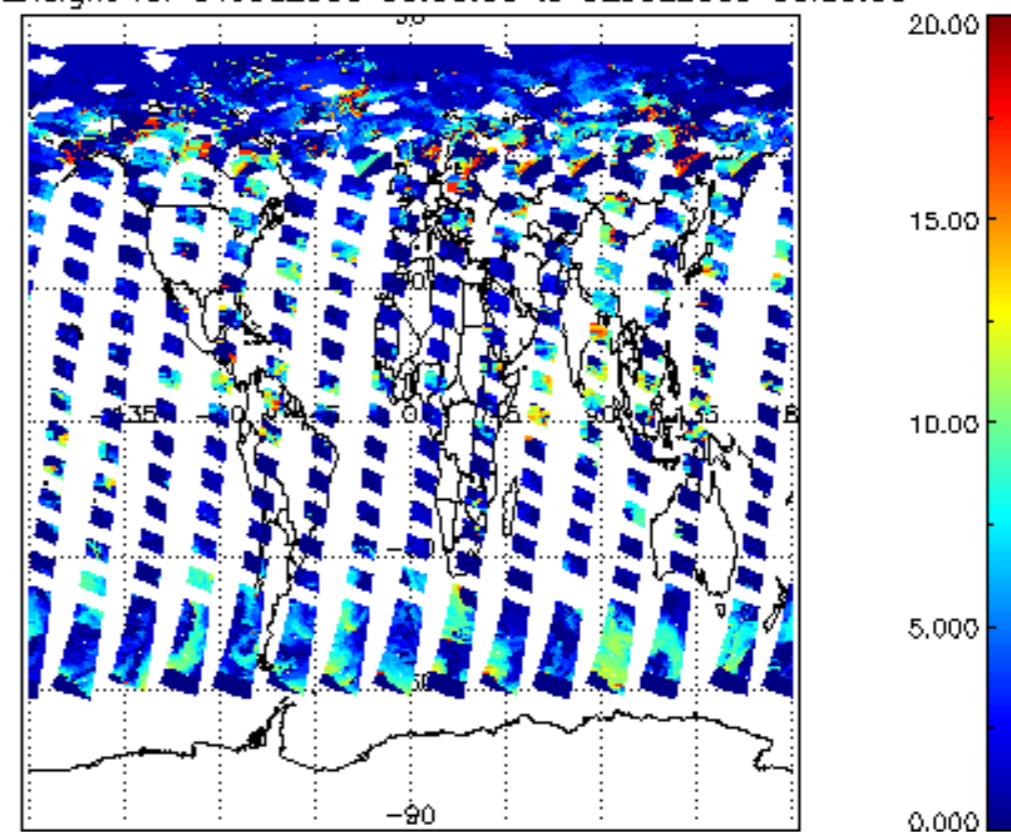
### 2.3 ADF monitoring

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

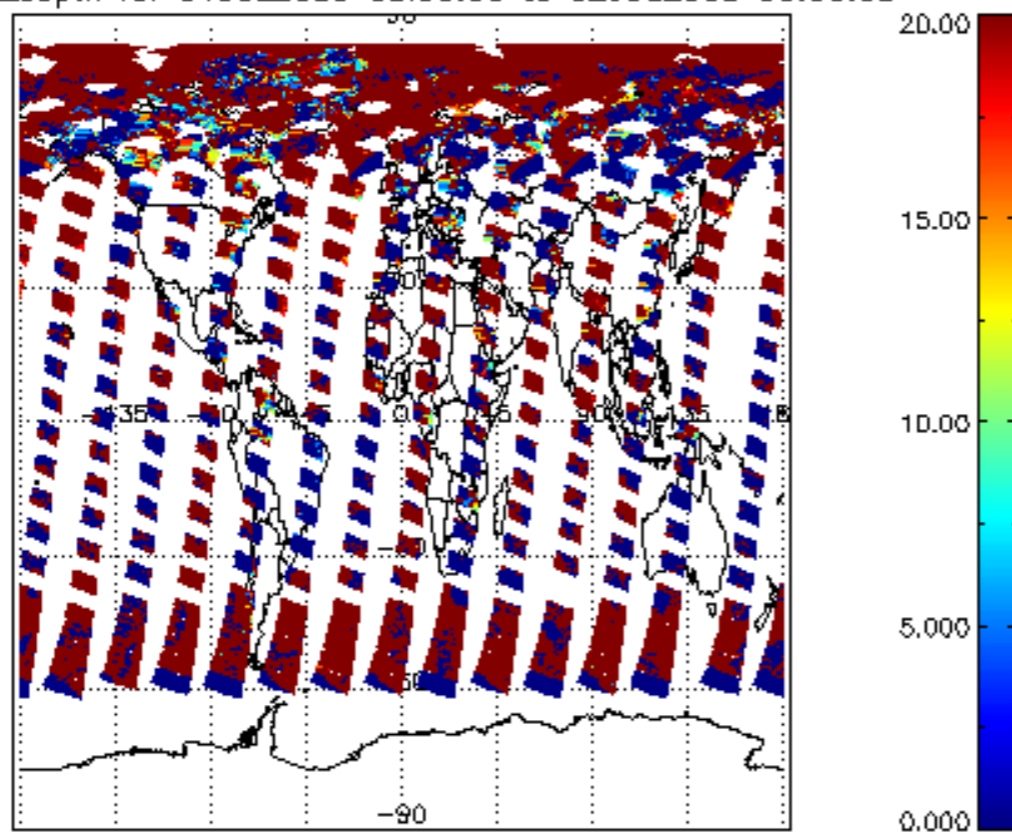
cl\_frac for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



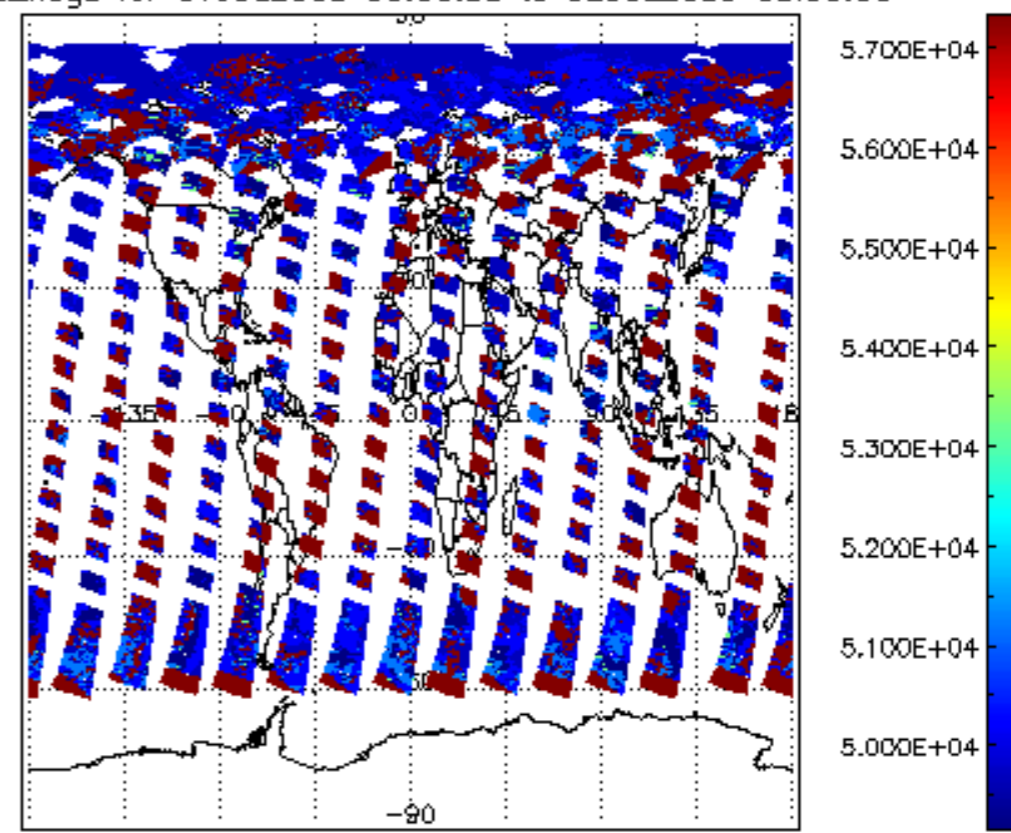
cl\_top\_height for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

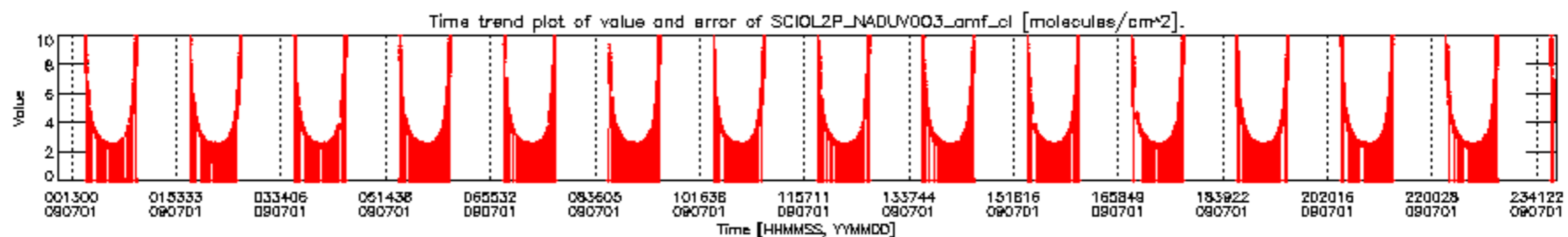
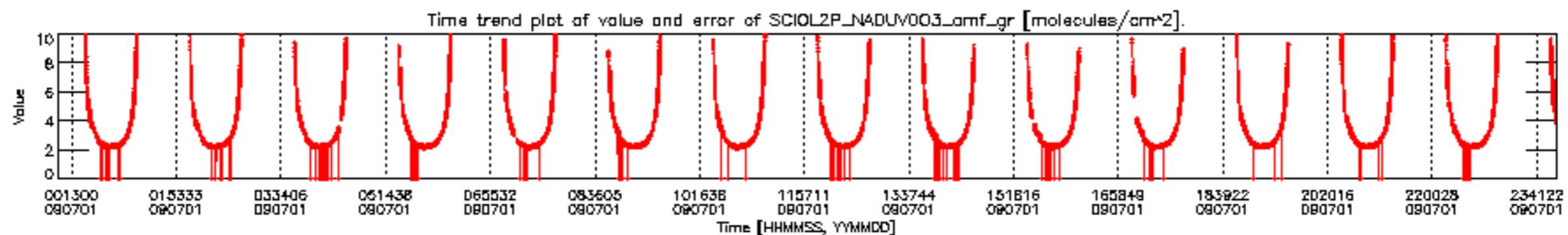
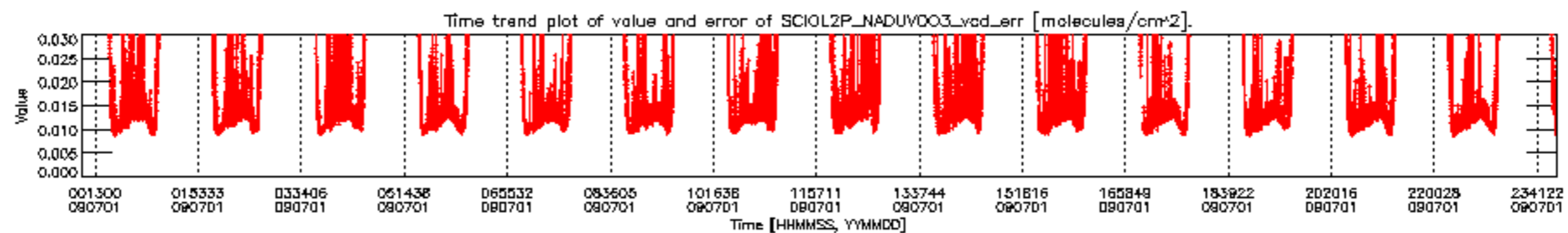
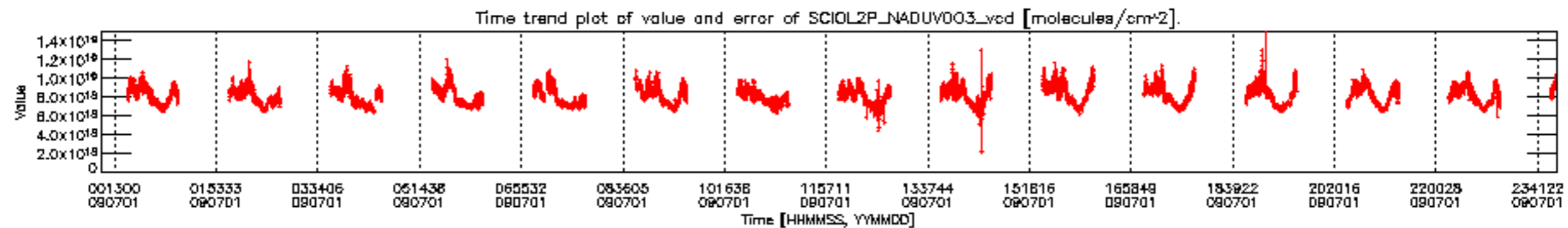


cl\_lopt\_depth for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

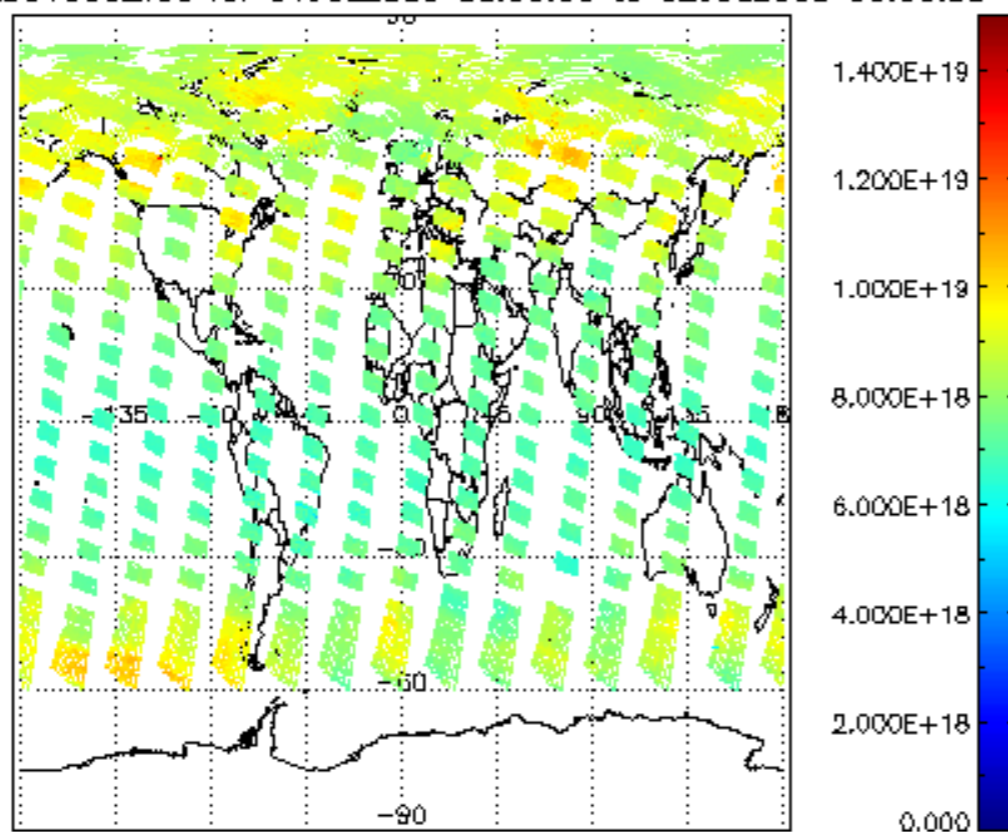


cloud\_flags for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

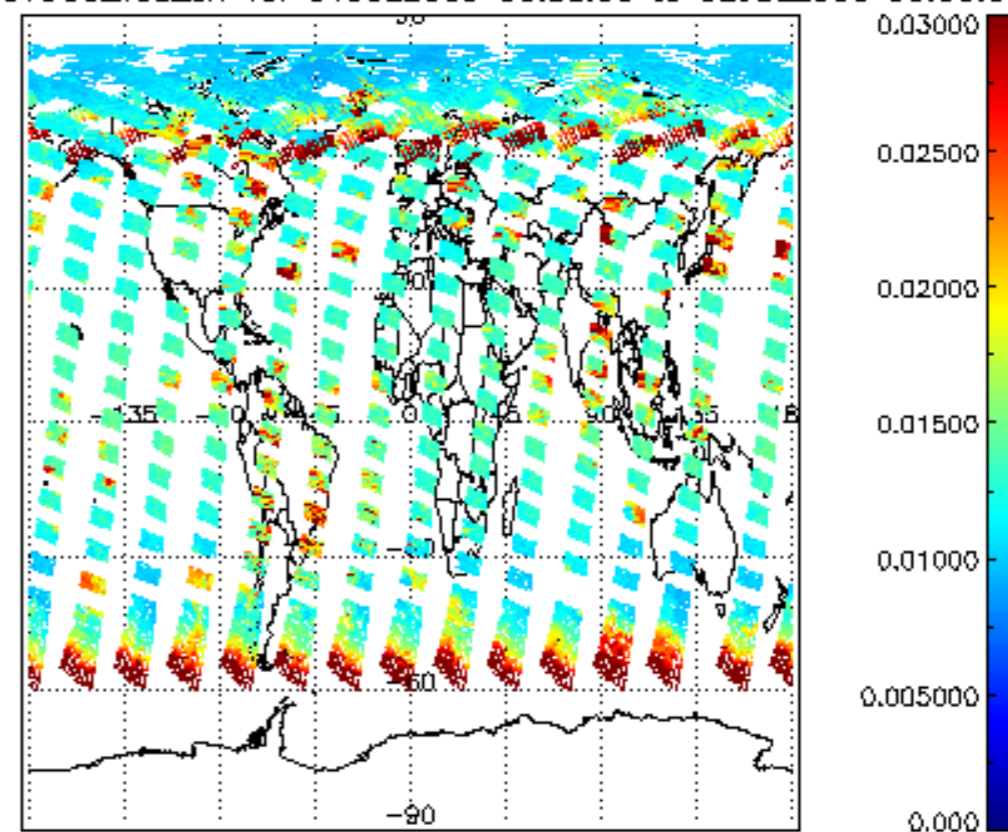




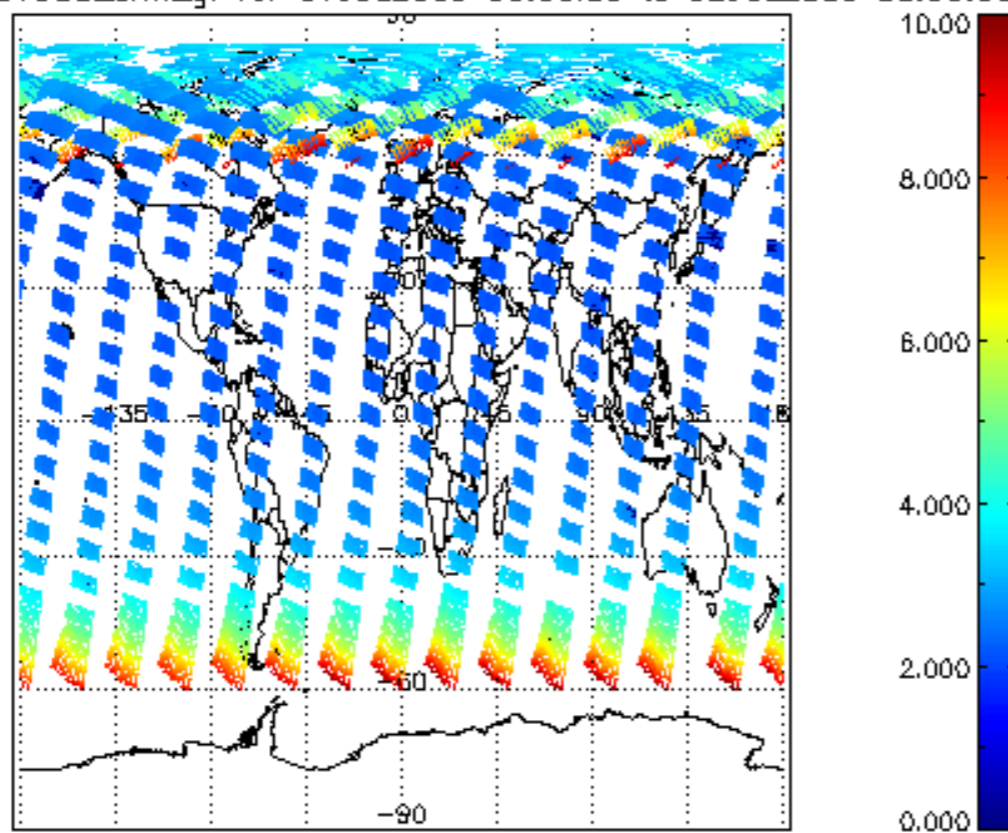
SCIOL2P\_NADUV003\_vcd for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



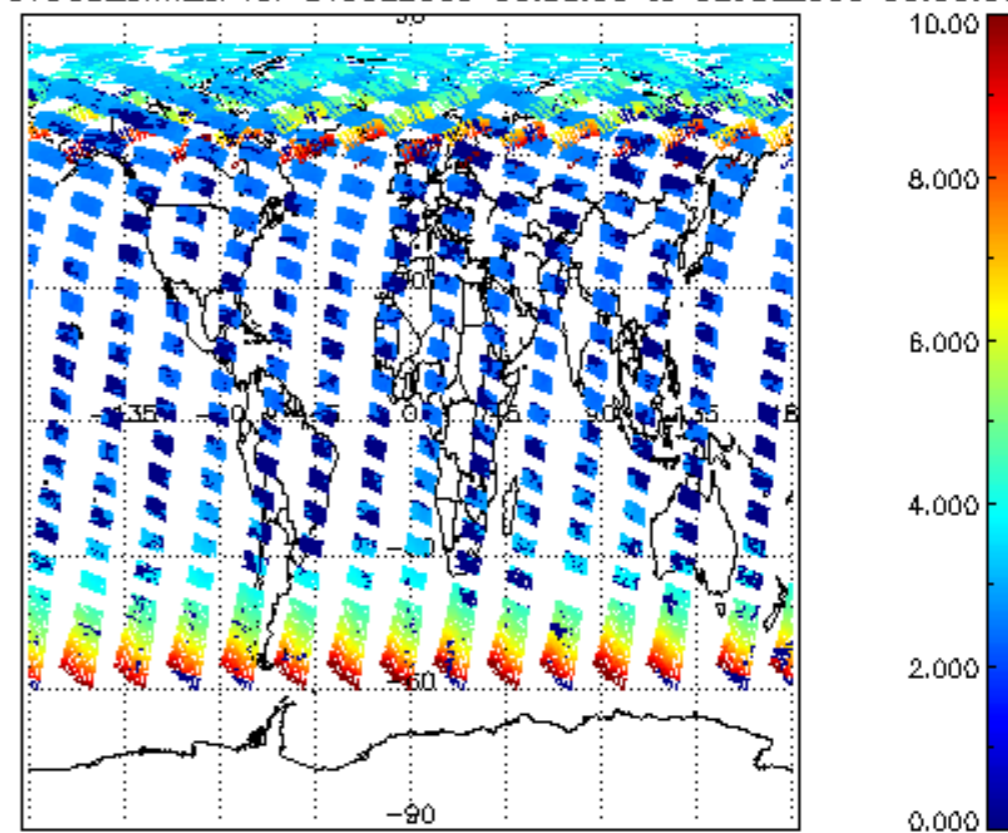
SCIOL2P\_NADUV003\_vcd\_err for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

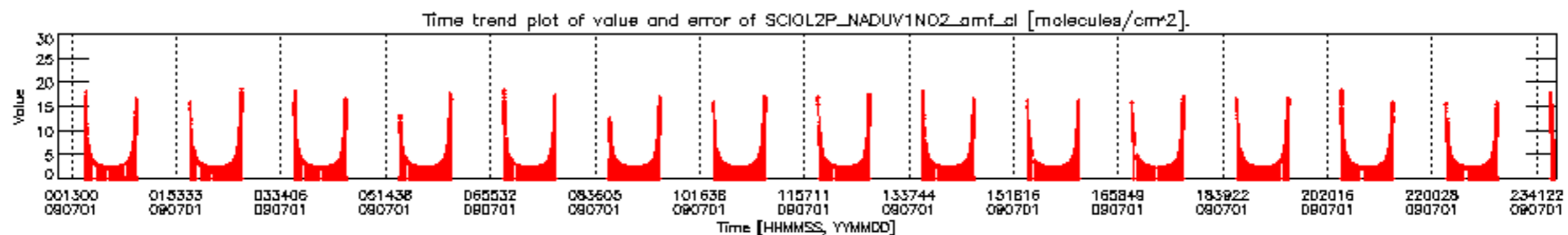
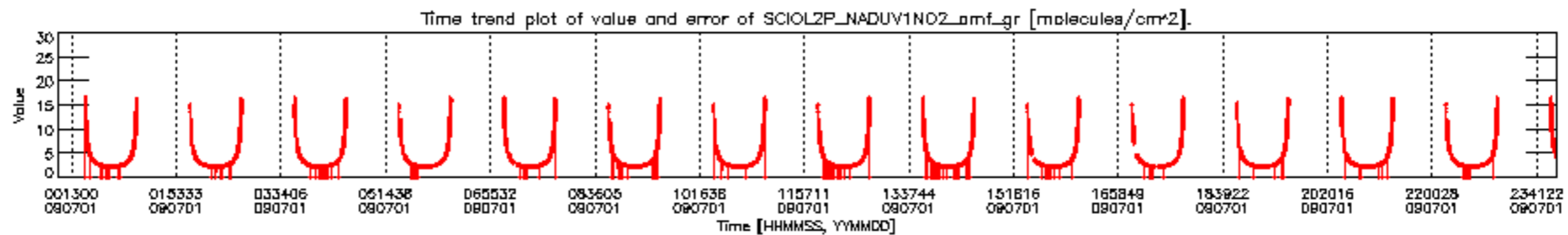
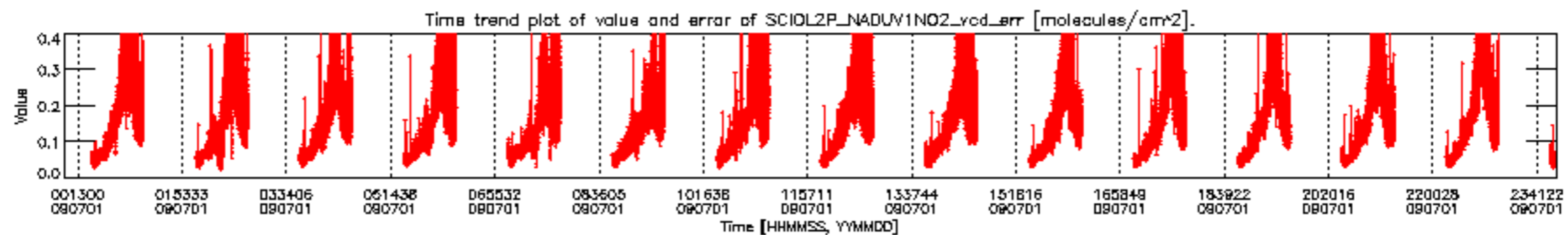
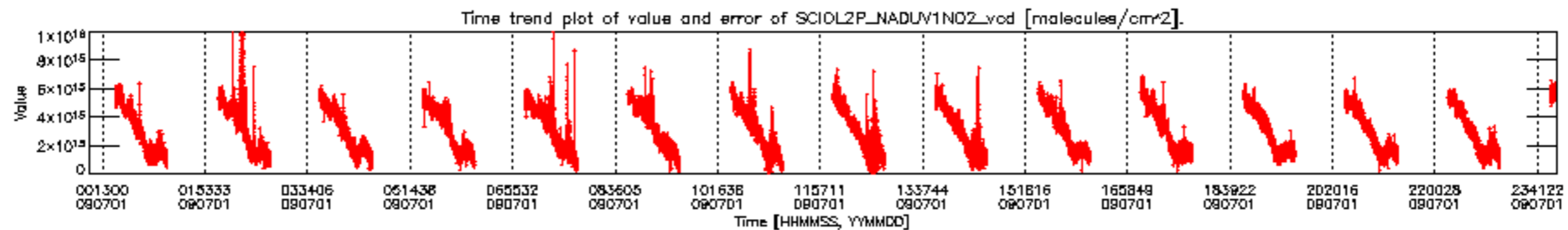


SCIOL2P\_NADUV003\_amf\_gr for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

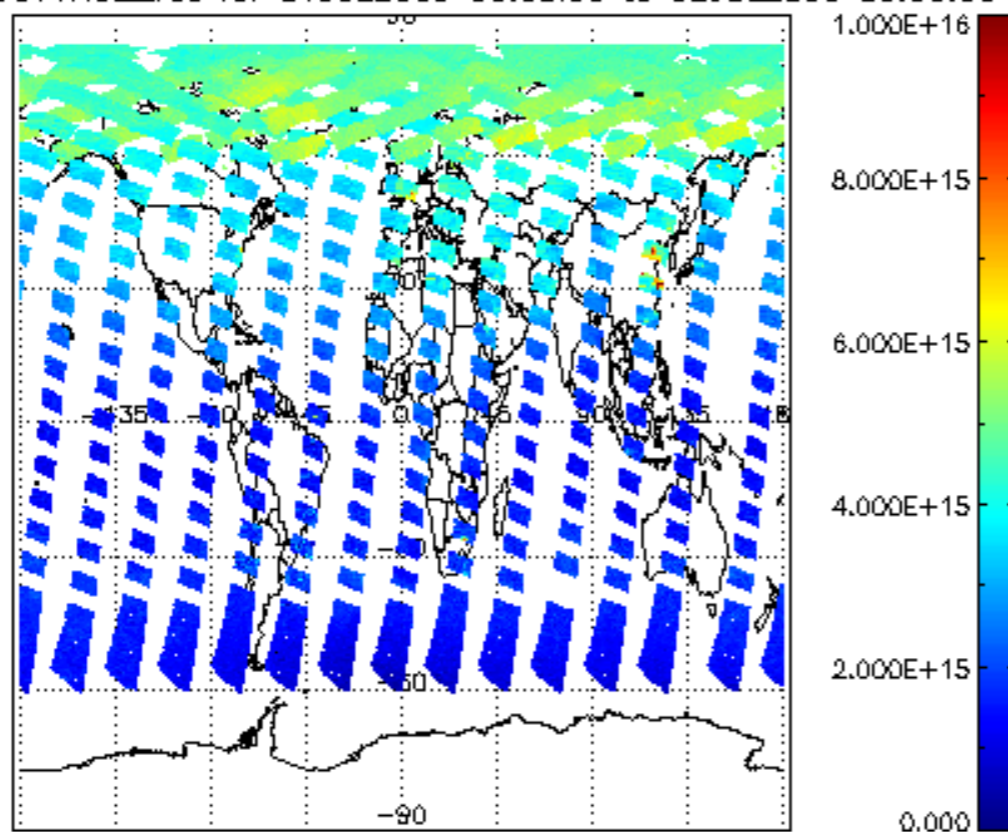


SCIOL2P\_NADUV003\_amf\_cl for 01JUL2009 00:00:00 to 02JUL2009 00:00:00

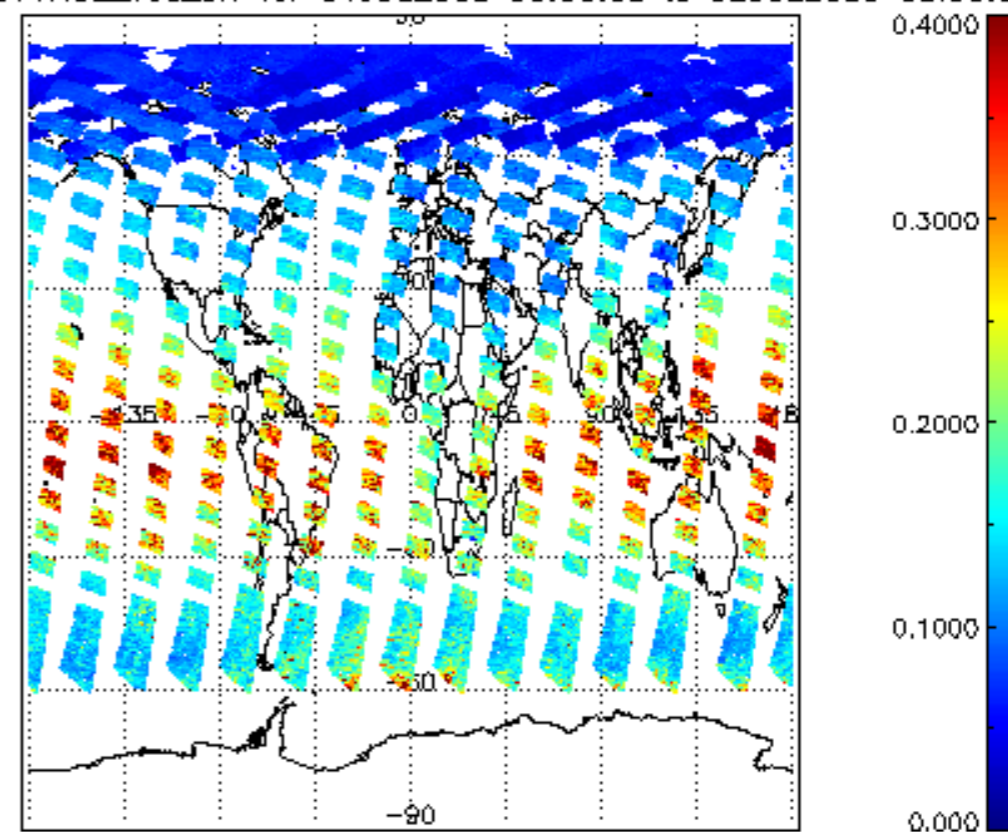




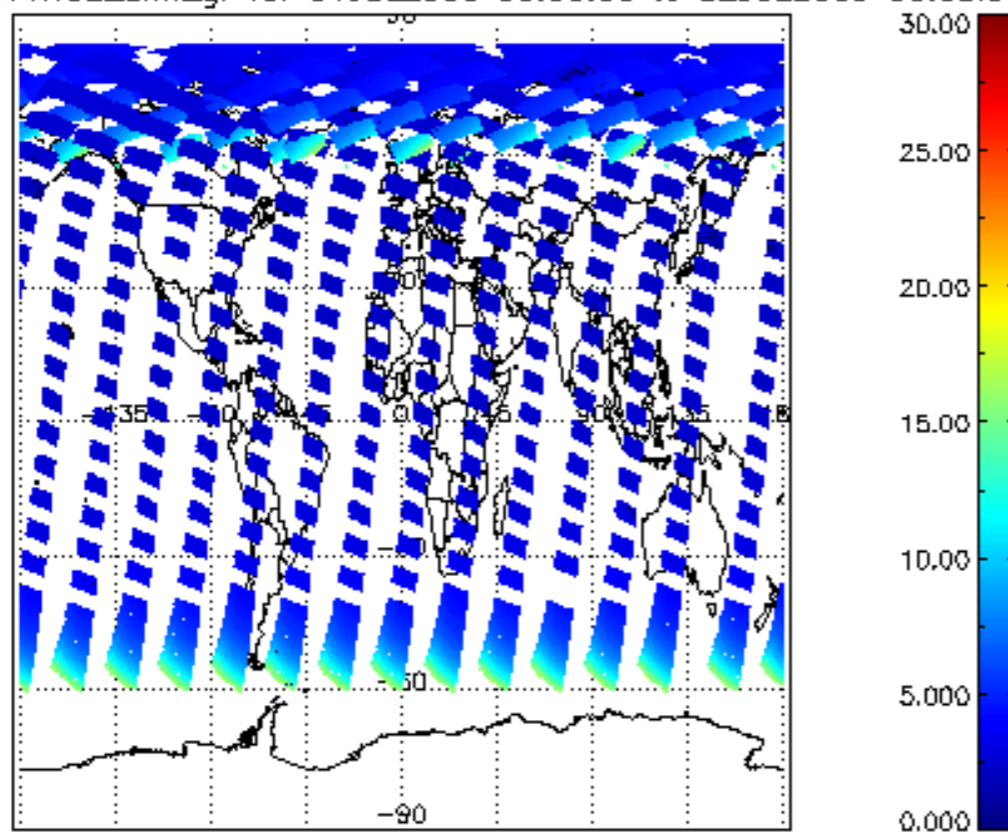
SCIOL2P\_NADUV1NO2\_vcd for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



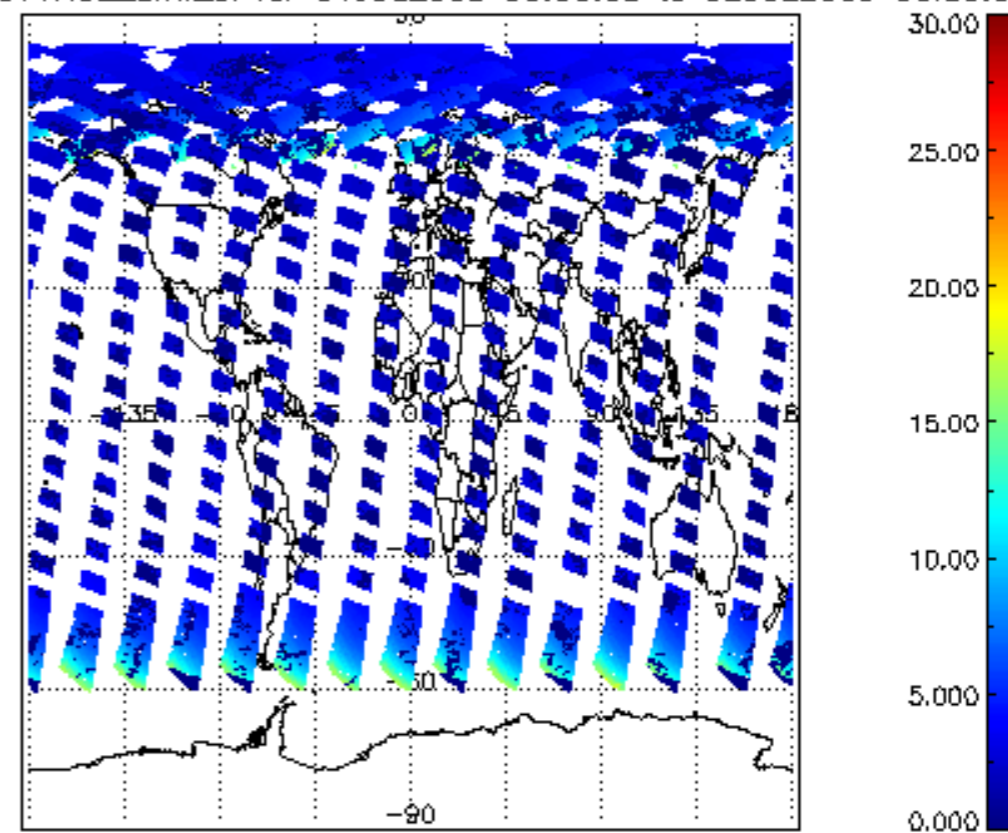
SCIOL2P\_NADUV1NO2\_vcd\_err for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



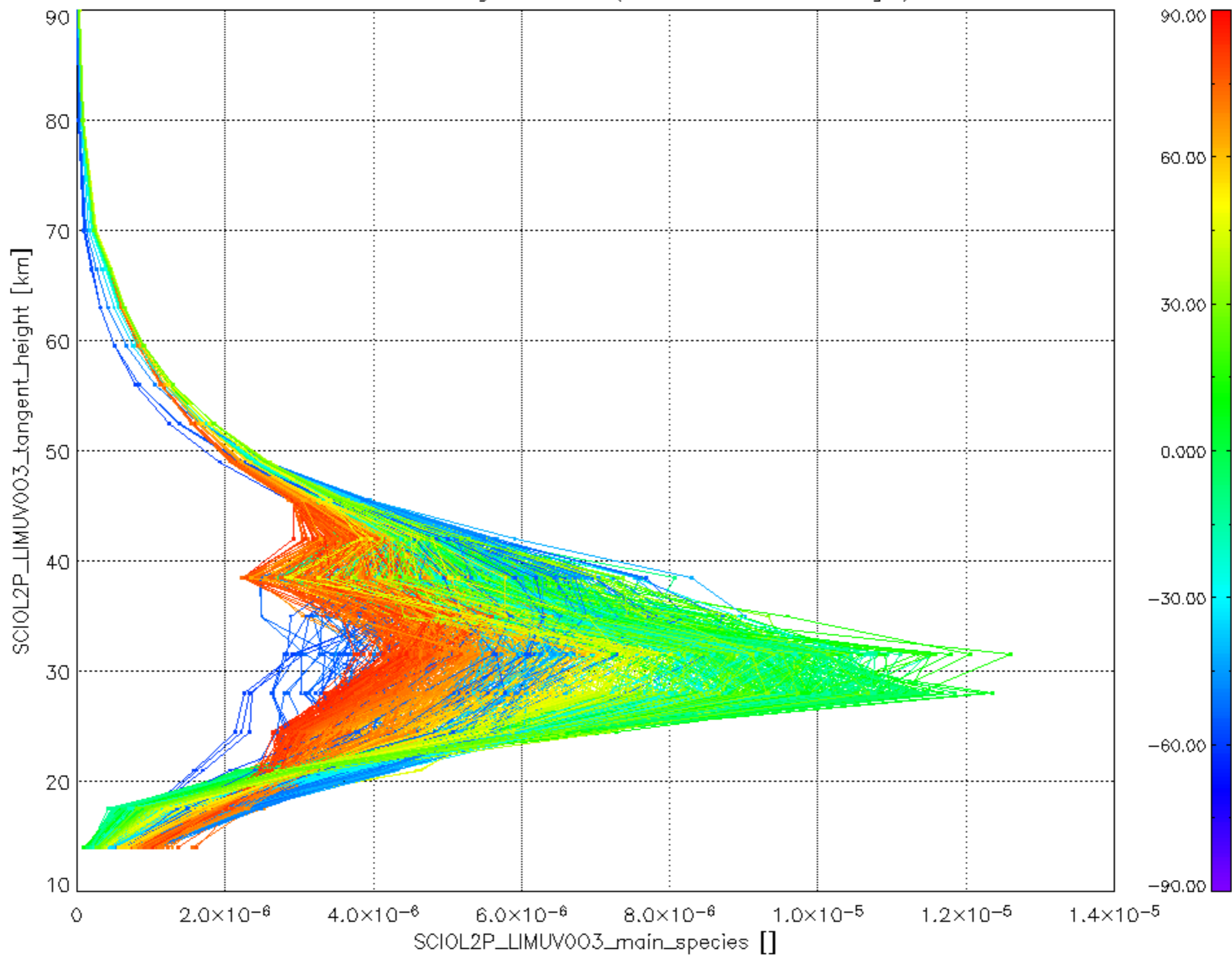
SCIOL2P\_NADUV1NO2\_amf\_gr for 01JUL2009 00:00:00 to 02JUL2009 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 01JUL2009 00:00:00 to 02JUL2009 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).

