

## 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	01SEP2008 17:51:31
Data source version	SCIA-OL/3.01-R
Processing scope for products	11AUG2004 00:00:00 to 12AUG2004 00:00:00
Start time of first product within scope	11AUG2004 02:03:42
Stop time of last product within scope	12AUG2004 00:46:59
Total number of level 2 products	14
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__2PRDPA20040811_020342_000033812029_00218_12797_9546.N1</a>	11AUG2004 02:03:42	11AUG2004 03:00:03	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20040811_034418_000033252029_00219_12798_9349.N1</a>	11AUG2004 03:44:18	11AUG2004 04:39:43	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20040811_052454_000033812029_00220_12799_9337.N1</a>	11AUG2004 05:24:54	11AUG2004 06:21:16	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20040811_070531_000033252029_00221_12800_9576.N1</a>	11AUG2004 07:05:31	11AUG2004 08:00:56	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20040811_084607_000033812029_00222_12801_9267.N1</a>	11AUG2004 08:46:07	11AUG2004 09:42:28	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20040811_102643_000033252029_00223_12802_9641.N1</a>	11AUG2004 10:26:43	11AUG2004 11:22:09	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20040811_120719_000033812029_00224_12803_9323.N1</a>	11AUG2004 12:07:19	11AUG2004 13:03:41	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20040811_134756_000033252029_00225_12804_9553.N1</a>	11AUG2004 13:47:56	11AUG2004 14:43:21	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20040811_152832_000033812029_00226_12805_9243.N1</a>	11AUG2004 15:28:32	11AUG2004 16:24:53	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20040811_170902_000033882029_00227_12806_9396.N1</a>	11AUG2004 17:09:02	11AUG2004 18:05:31	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20040811_185003_000033122029_00228_12807_9525.N1</a>	11AUG2004 18:50:03	11AUG2004 19:45:16	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20040811_203021_000033252029_00229_12808_9548.N1</a>	11AUG2004 20:30:21	11AUG2004 21:25:46	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20040811_221057_000033812029_00230_12809_9514.N1</a>	11AUG2004 22:10:57	11AUG2004 23:07:19	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20040811_235133_000033252029_00231_12810_9579.N1</a>	11AUG2004 23:51:33	12AUG2004 00:46:59	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: 136500

Total number of cloud data DSRs with good quality flag (=0): 136500 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	136500	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	136500	0.16952	0.12500	0.12500	0.25000	0.059859	s
CL_FRAC	136500	0.35359	0.30338	0.0000	1.0000	0.29114	-
CL_FRAC_ERR	136500	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	136500	5.4248	4.0000	4.0000	8.0000	1.9155	
PMD_READ_CL[0]	136500	0.23110	0.0000	0.0000	8.0000	1.0894	-
PMD_READ_CL[1]	136500	1.0054	0.0000	0.0000	8.0000	2.0136	-
CL_TOP_HEIGHT	115391	3.6267	2.0230	0.0000	17.000	3.7100	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	115391	59.484	78.087	0.0000	101.00	43.076	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	136500	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	136500	11001011	11000100	11000000	11100000	3374.8	flags
AERO_ABSO_IND	136500	0.75640	0.51134	-4.7274	10.449	1.0837	
AERO_IND_DIAG	136500	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	136500	01010110	00000000	00000000	11000000	24445.	flags

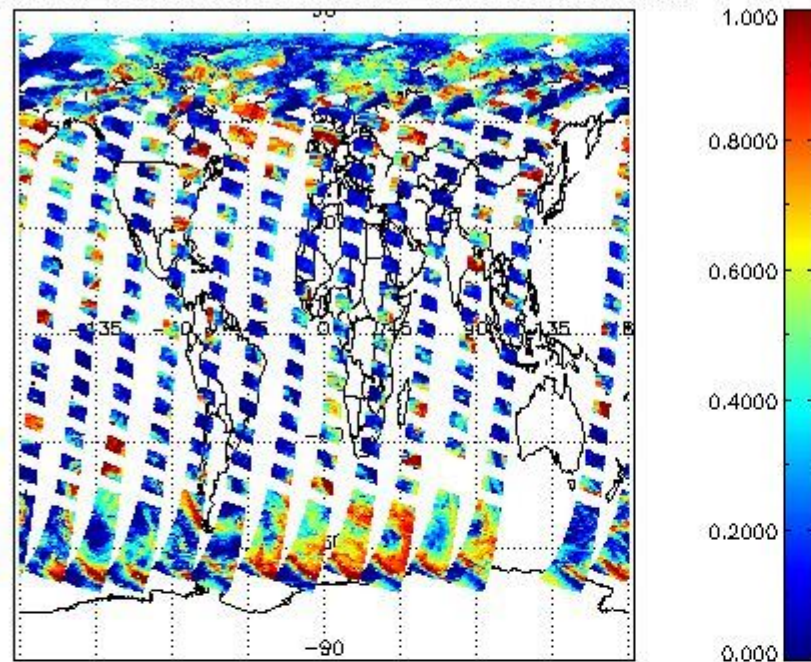
### Time and geolocation plots:

Plots are available for the following parameters:

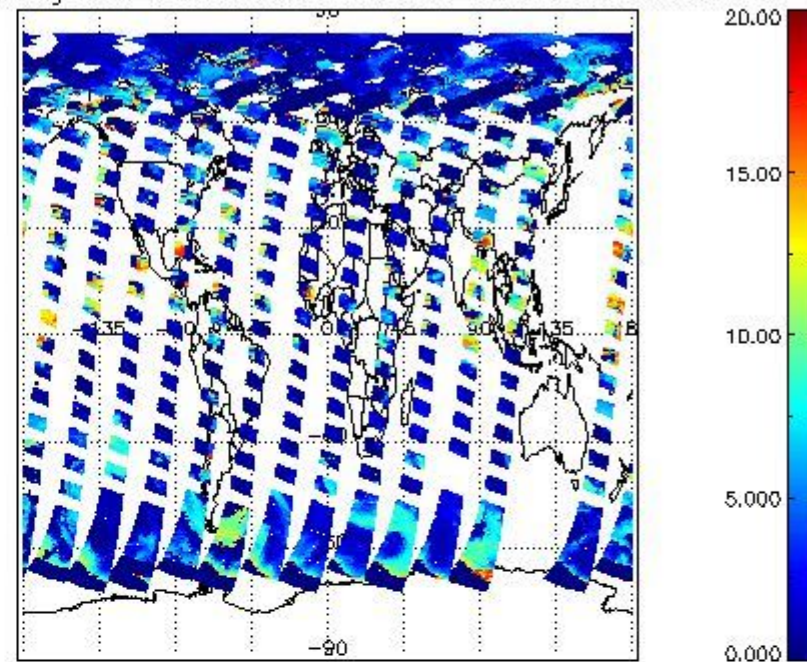
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



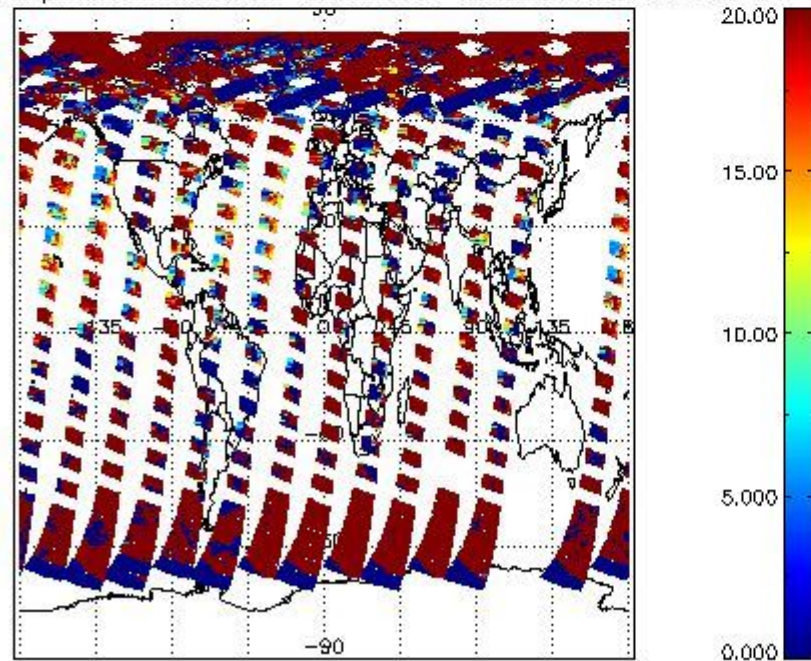
cL\_frac for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



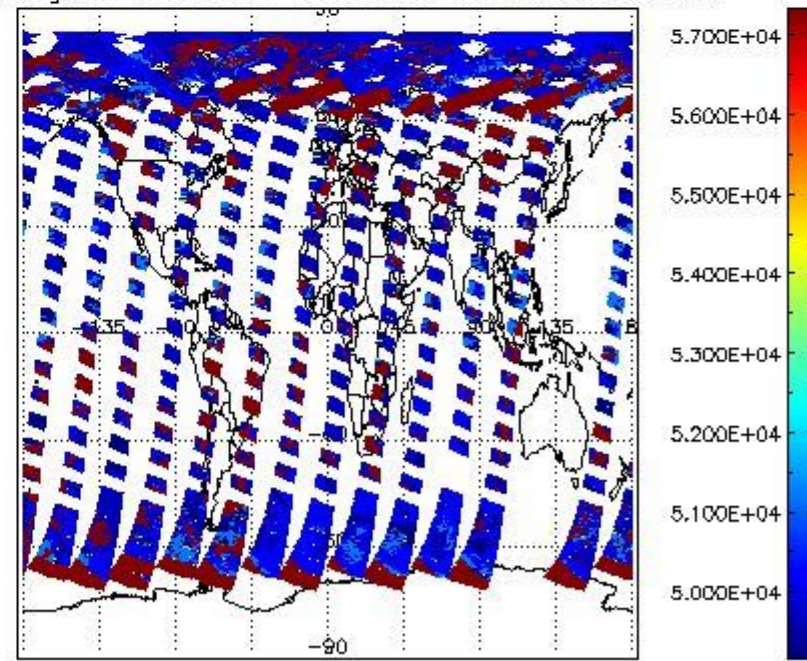
cL\_top\_height for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



cL\_opt\_depth for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



cloud\_flags for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



## 2.2.2 Nadir

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

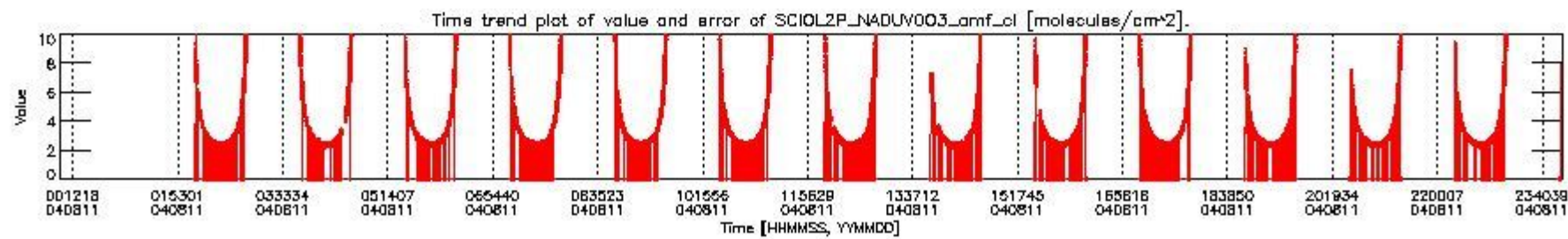
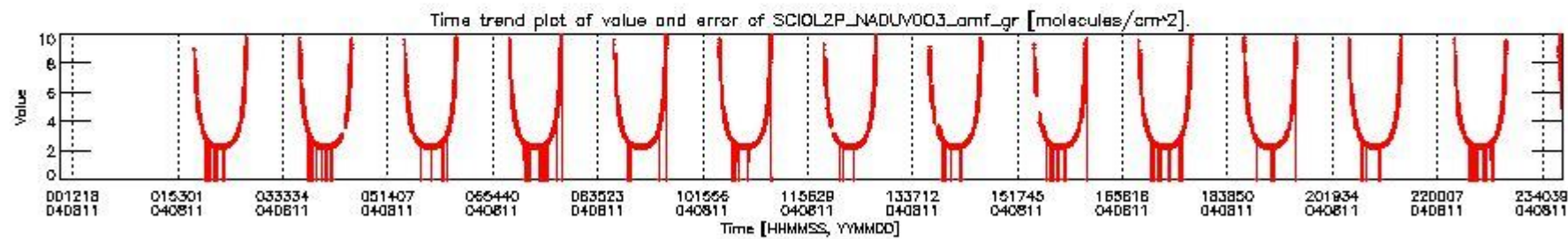
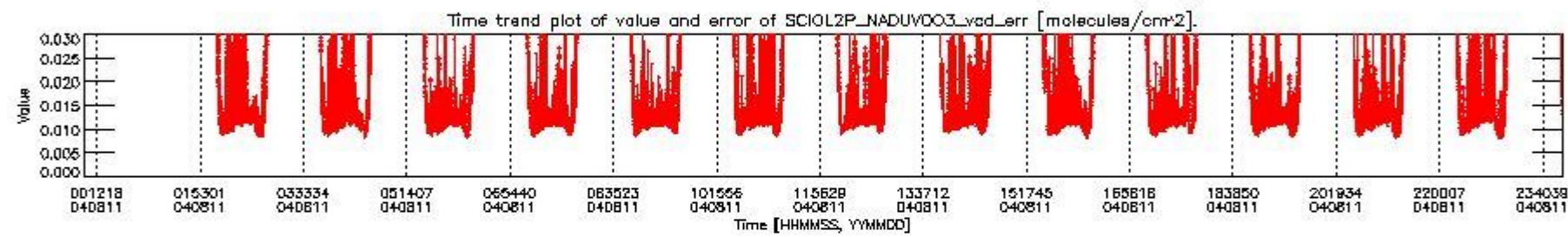
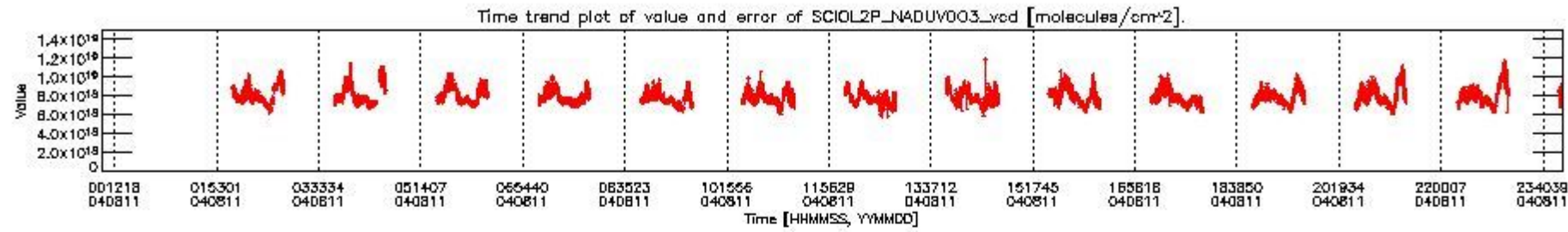
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr



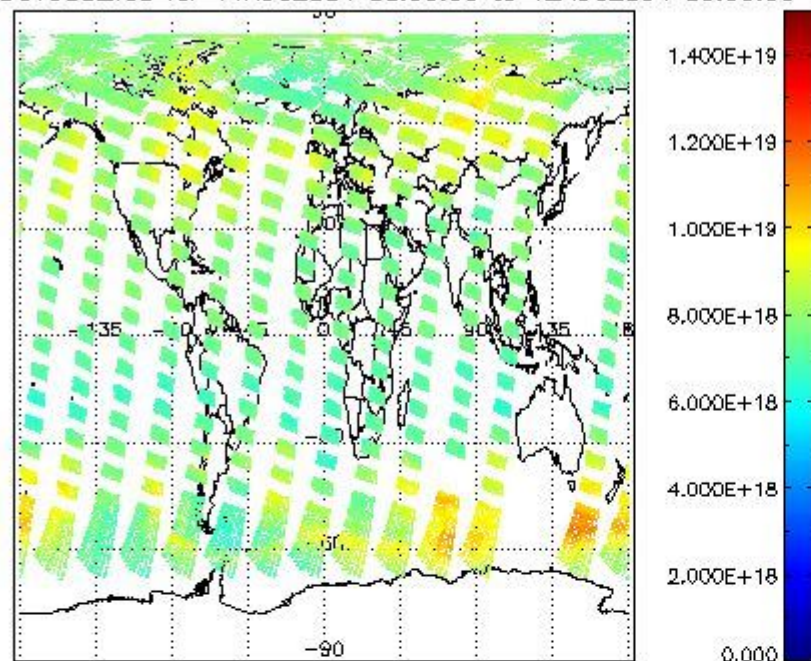
3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

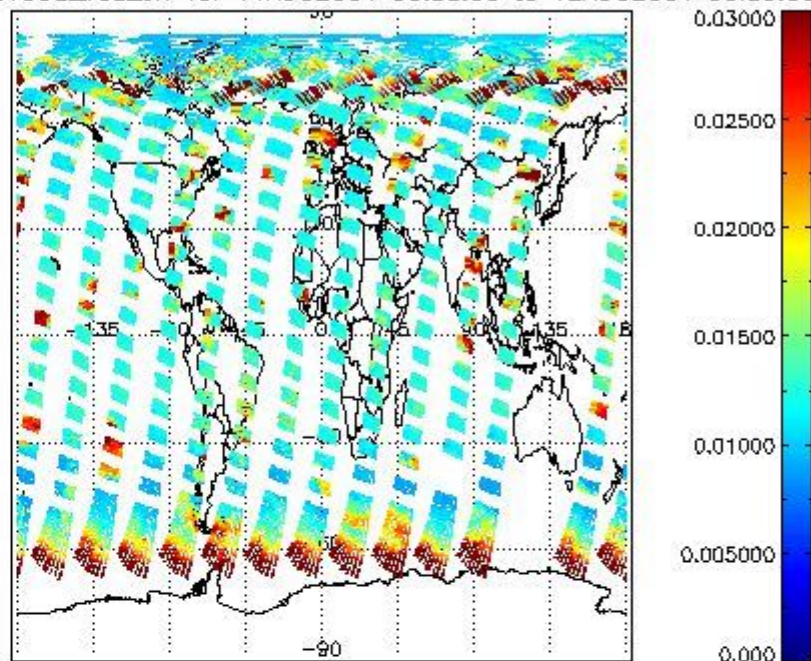




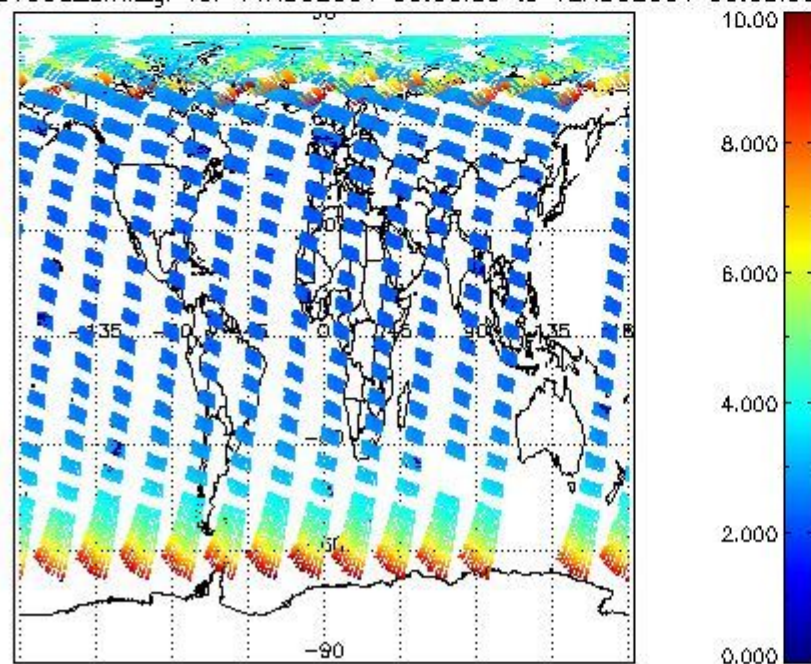
SCIOL2P\_NADUV003\_vcd for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



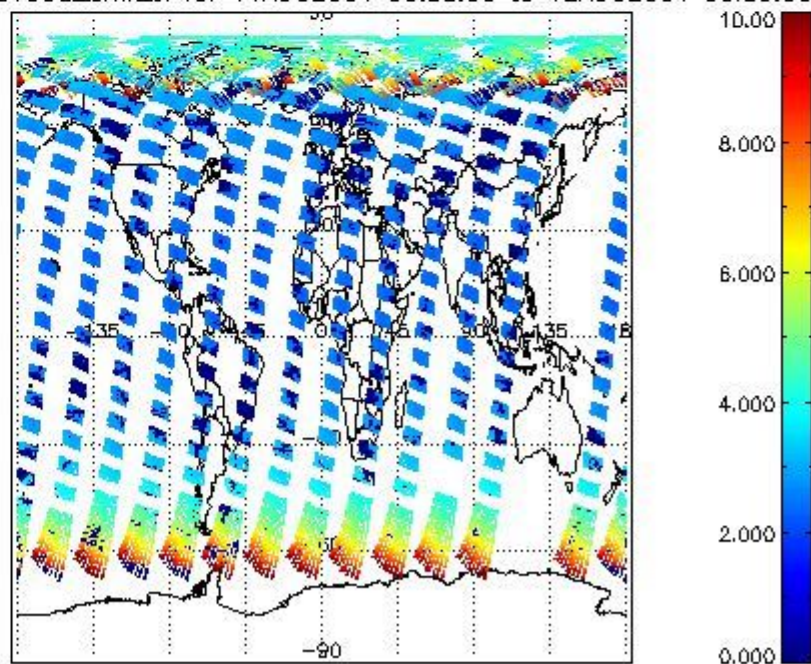
SCIOL2P\_NADUV003\_vcd\_err for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



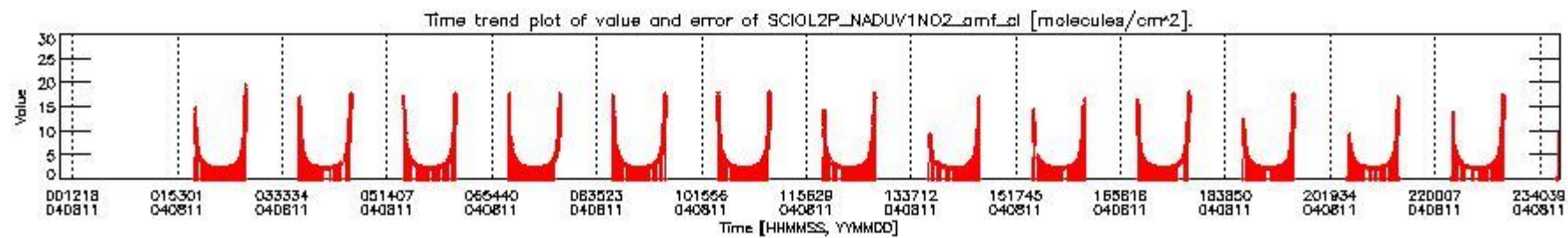
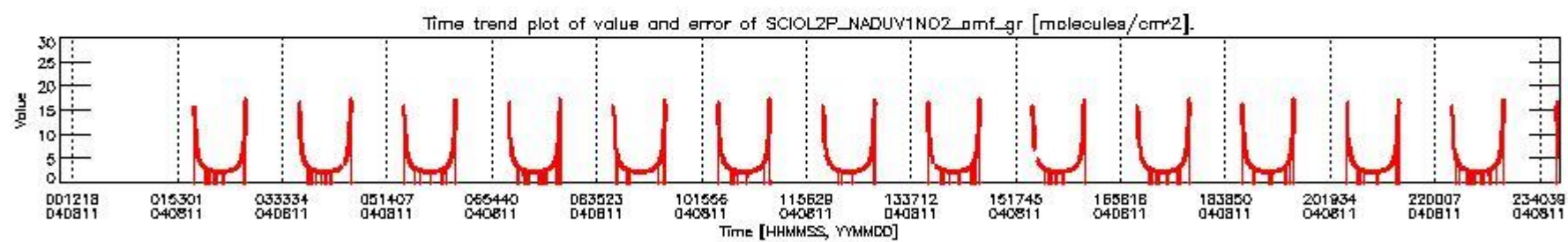
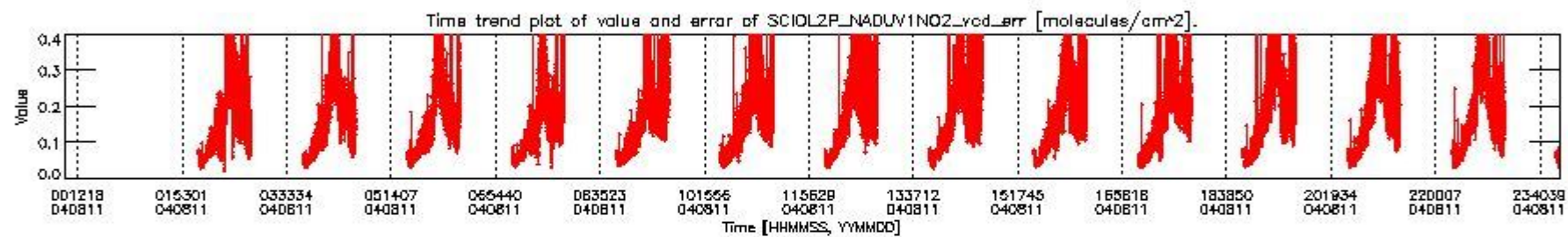
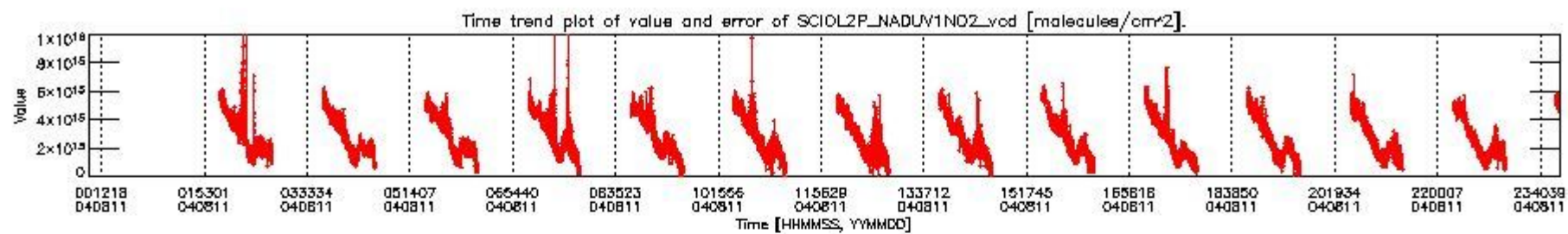
SCIOL2P\_NADUV003\_amf\_gr for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



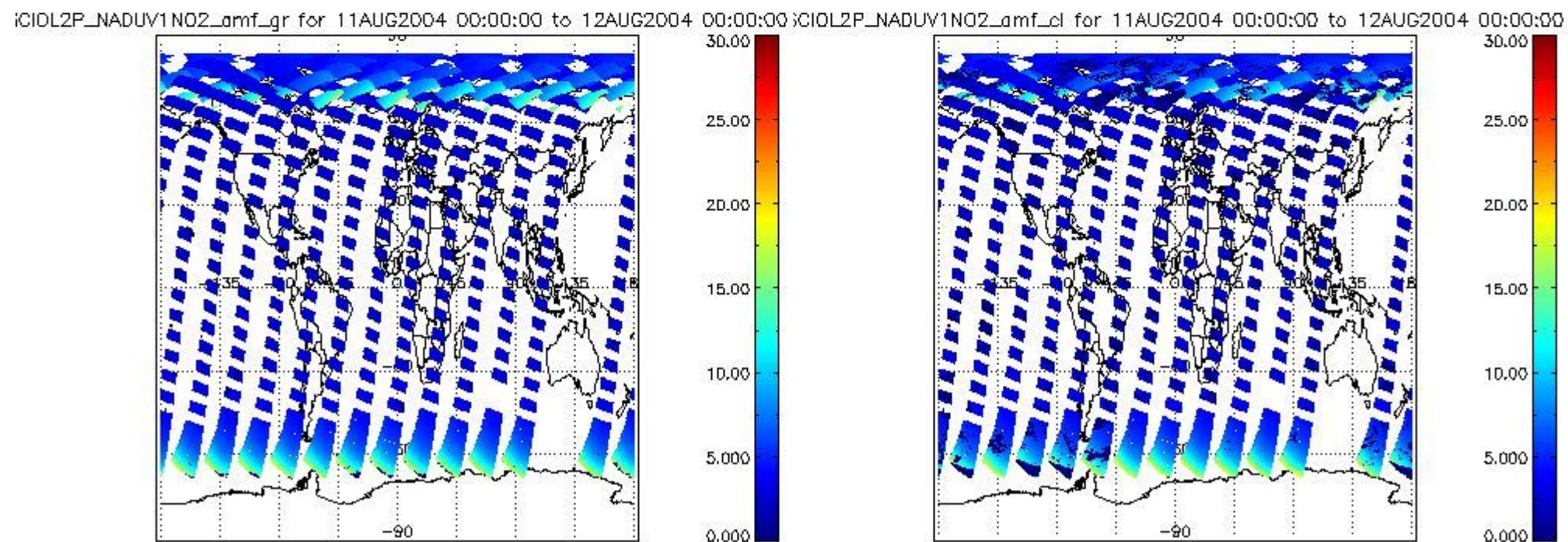
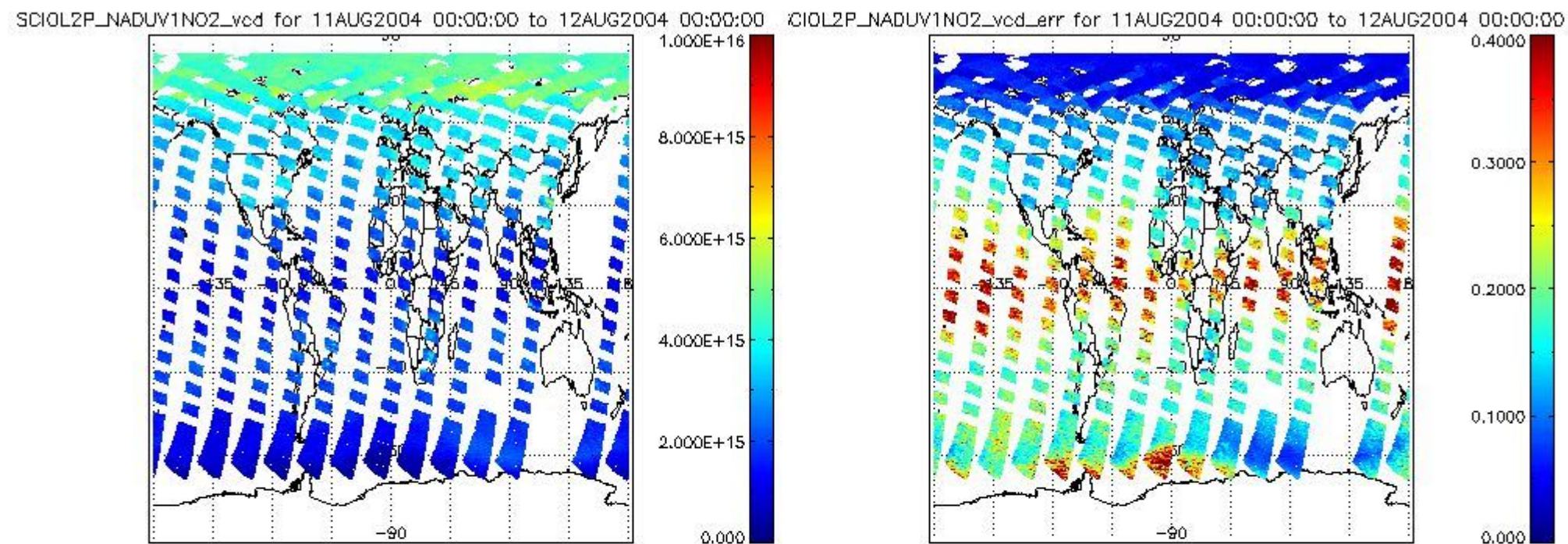
SCIOL2P\_NADUV003\_amf\_cl for 11AUG2004 00:00:00 to 12AUG2004 00:00:00











### 2.2.3 Limb

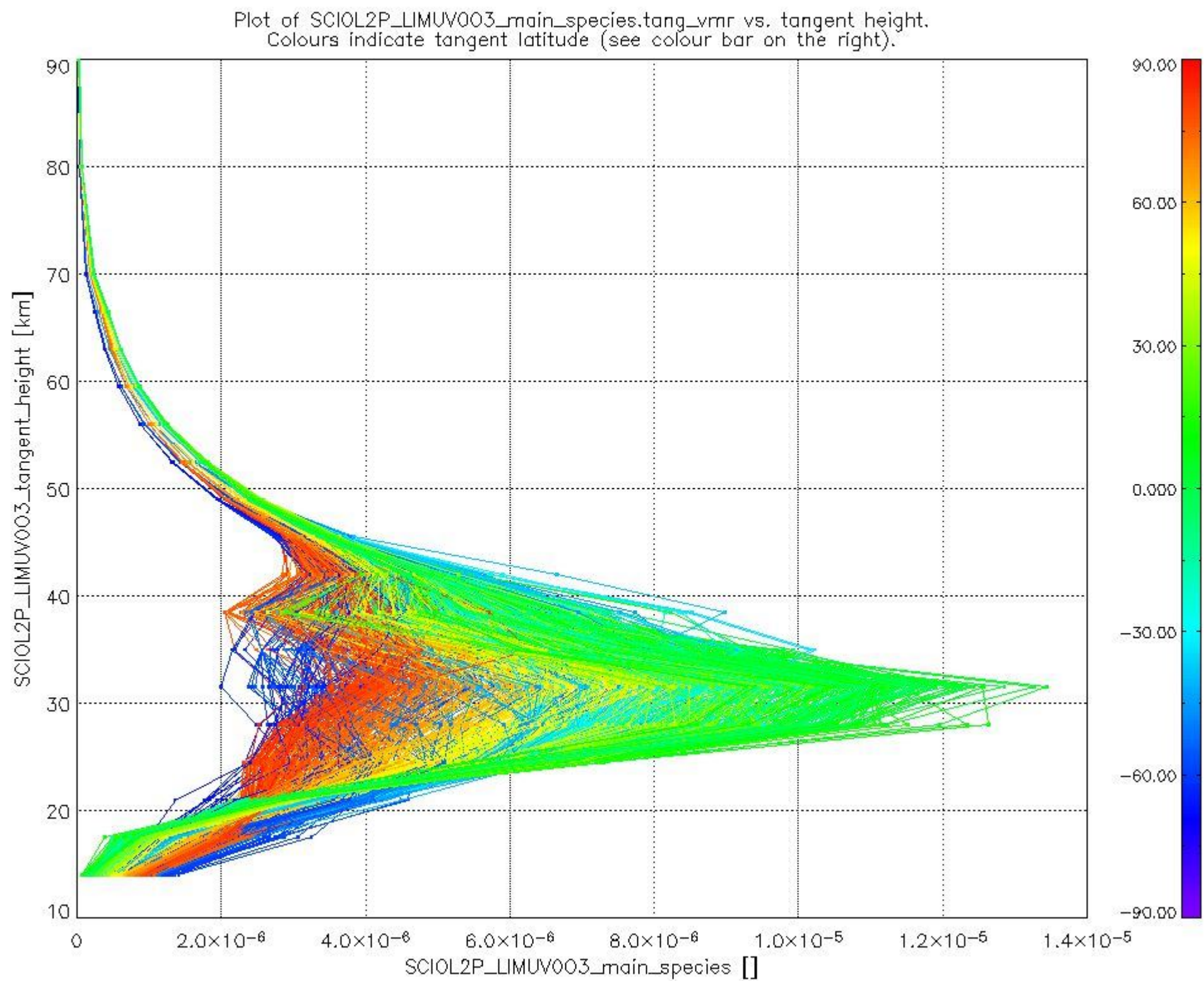
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

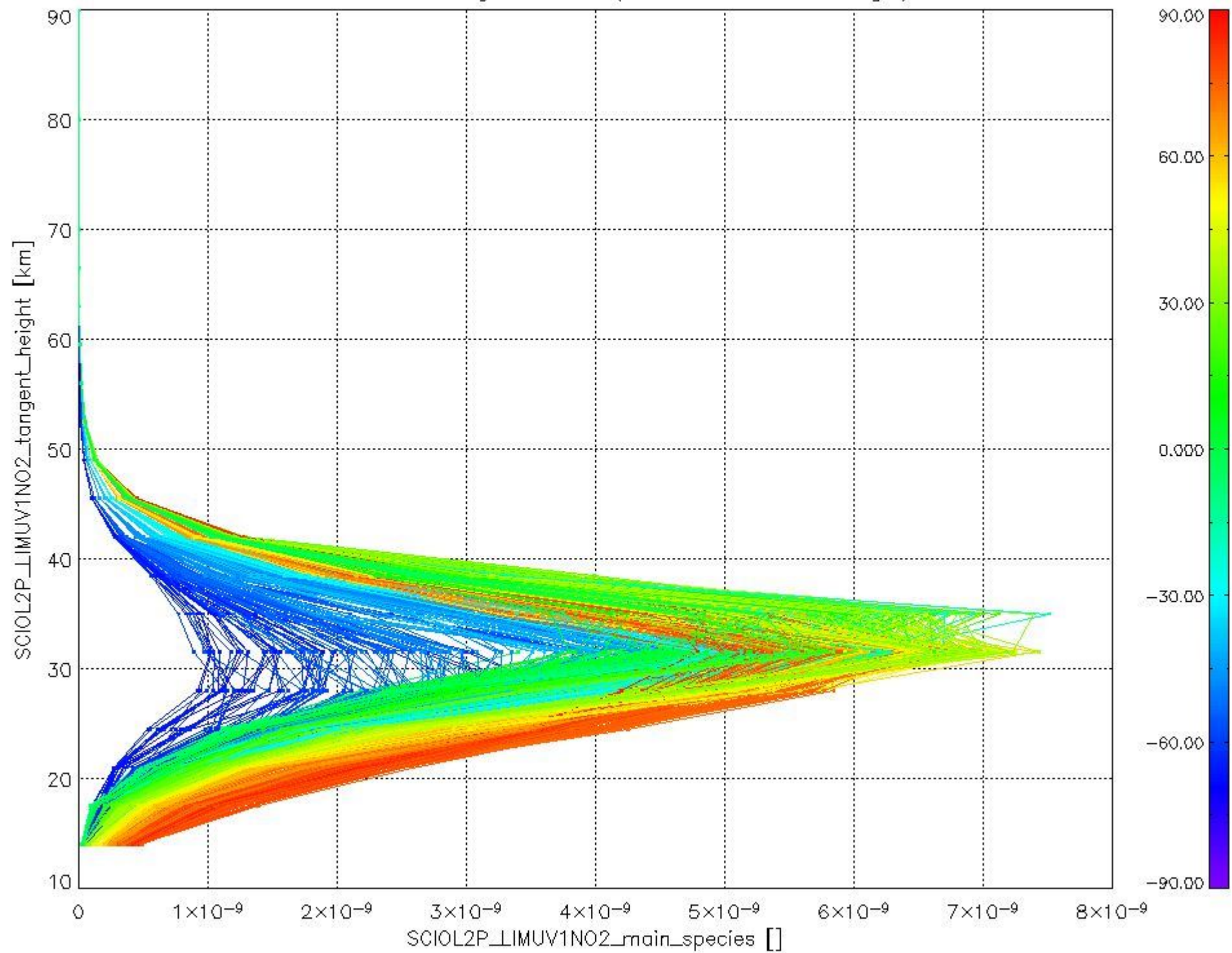


The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.





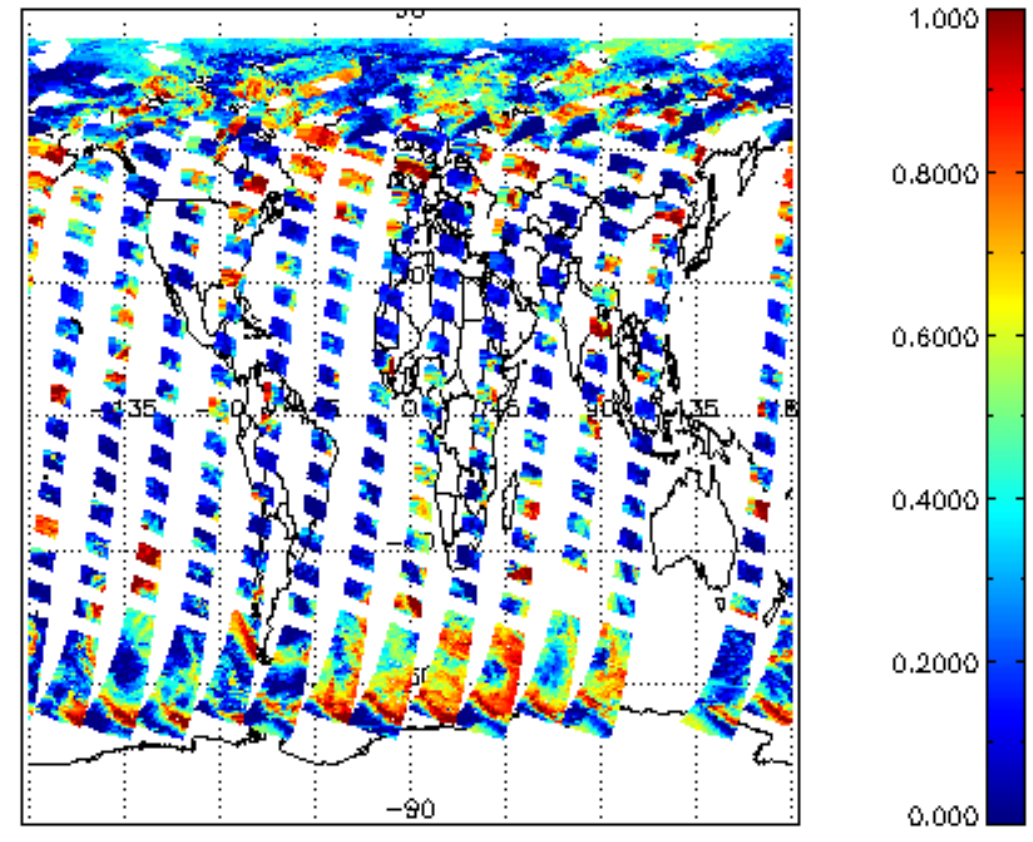
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



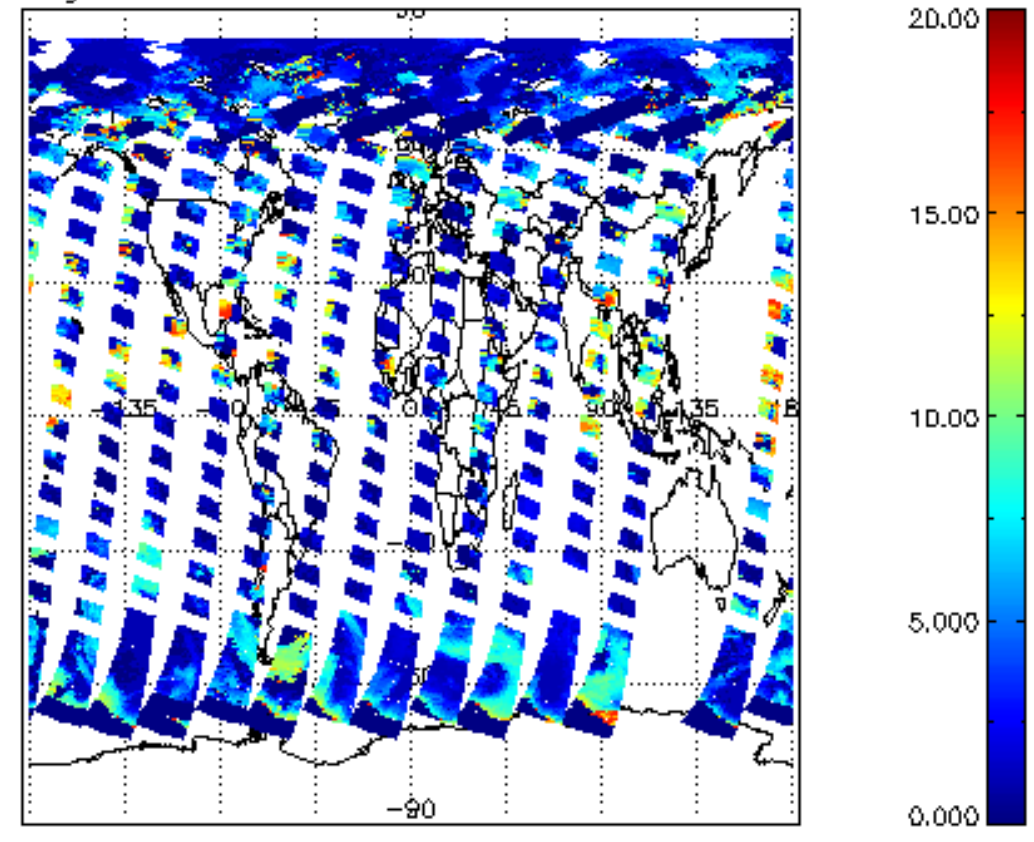
### 2.3 ADF monitoring

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

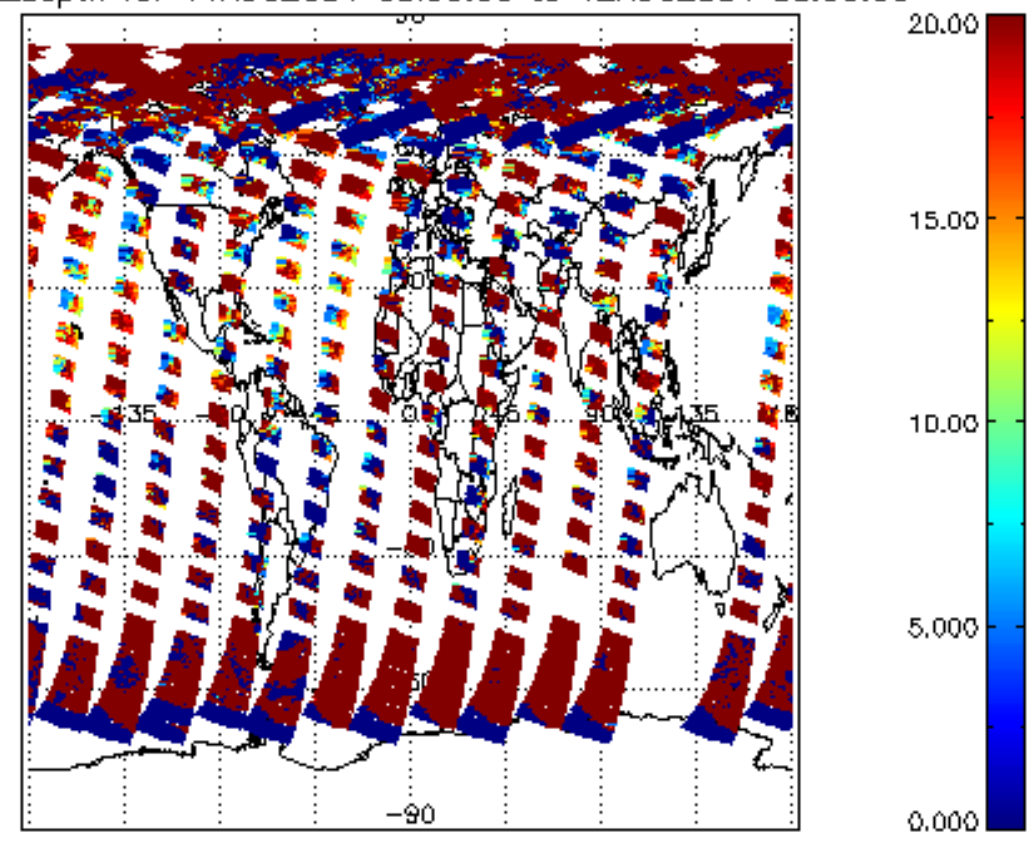
cL\_frac for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



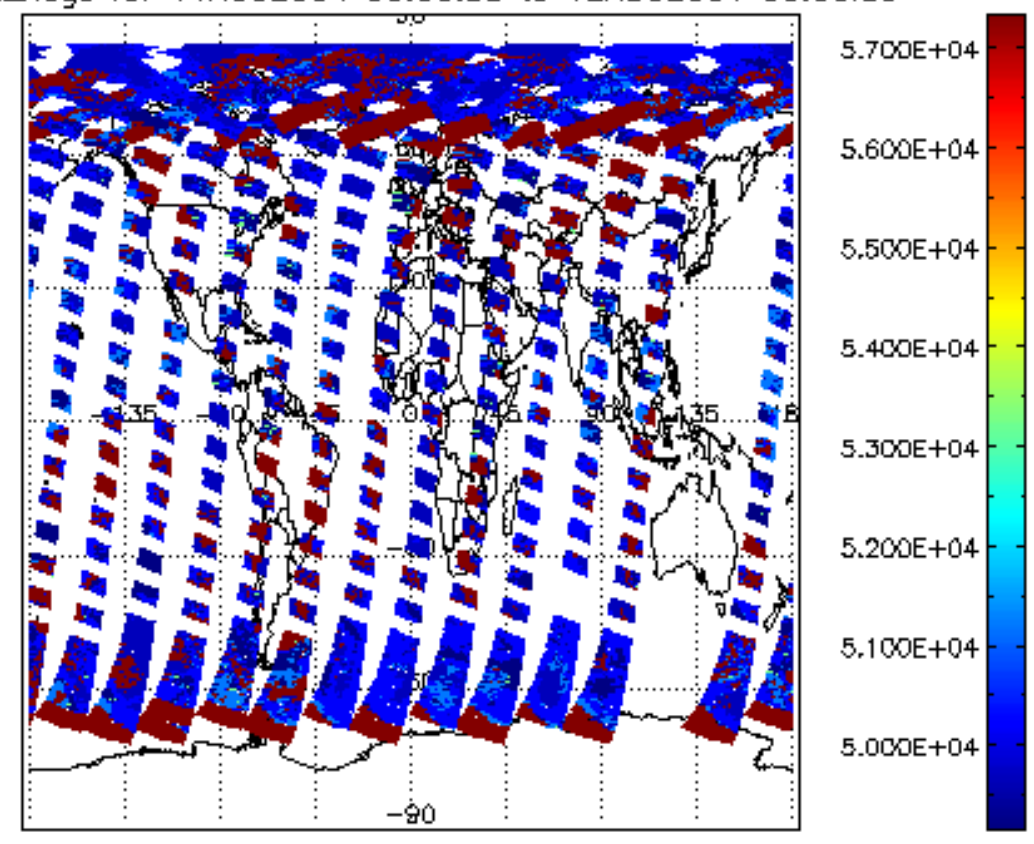
cL\_top\_height for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



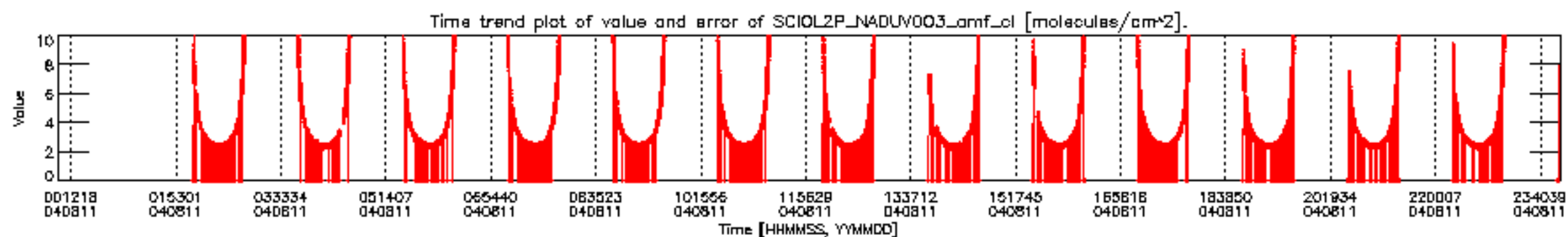
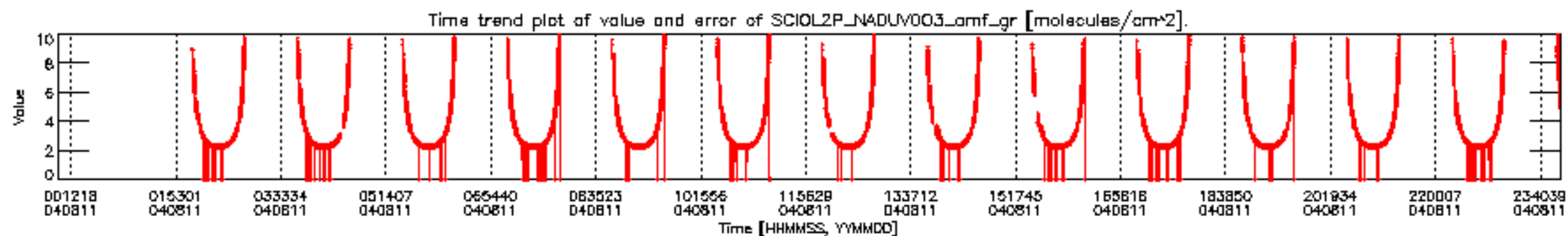
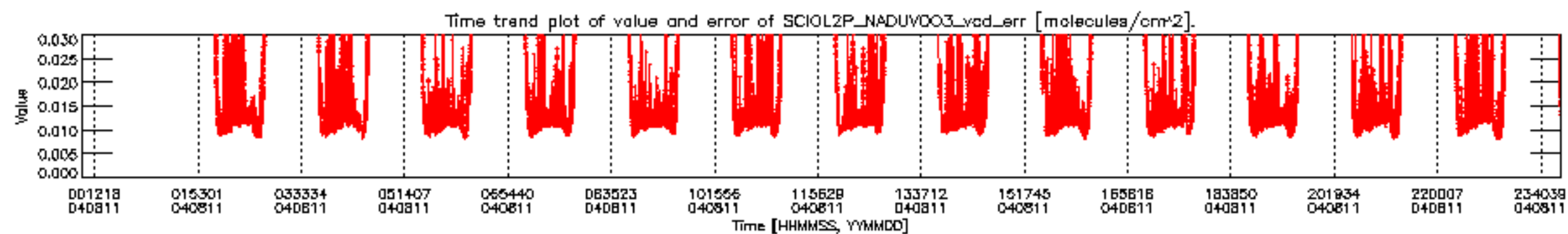
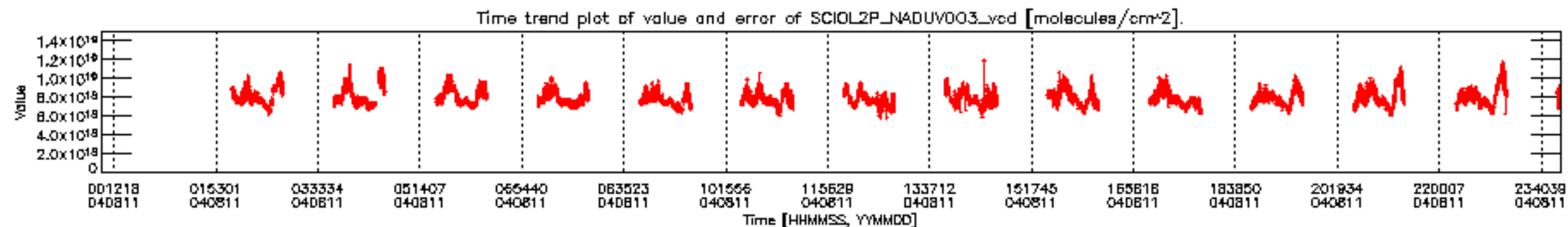
cL\_opt\_depth for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



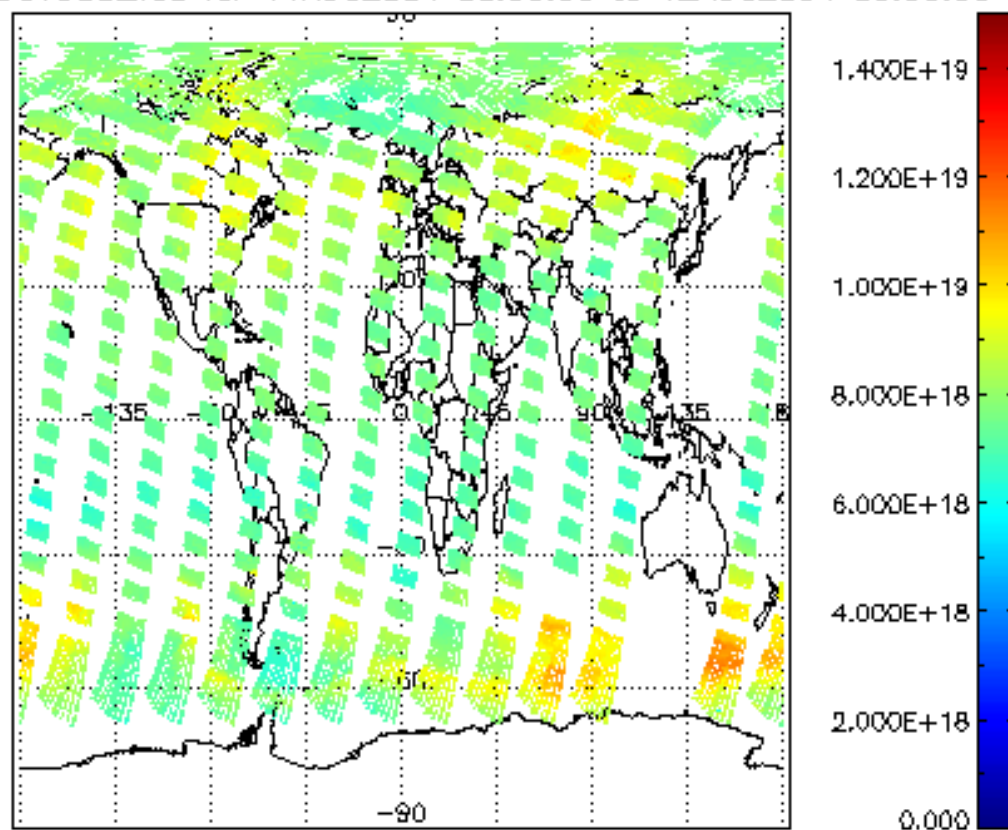
cloud\_flags for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



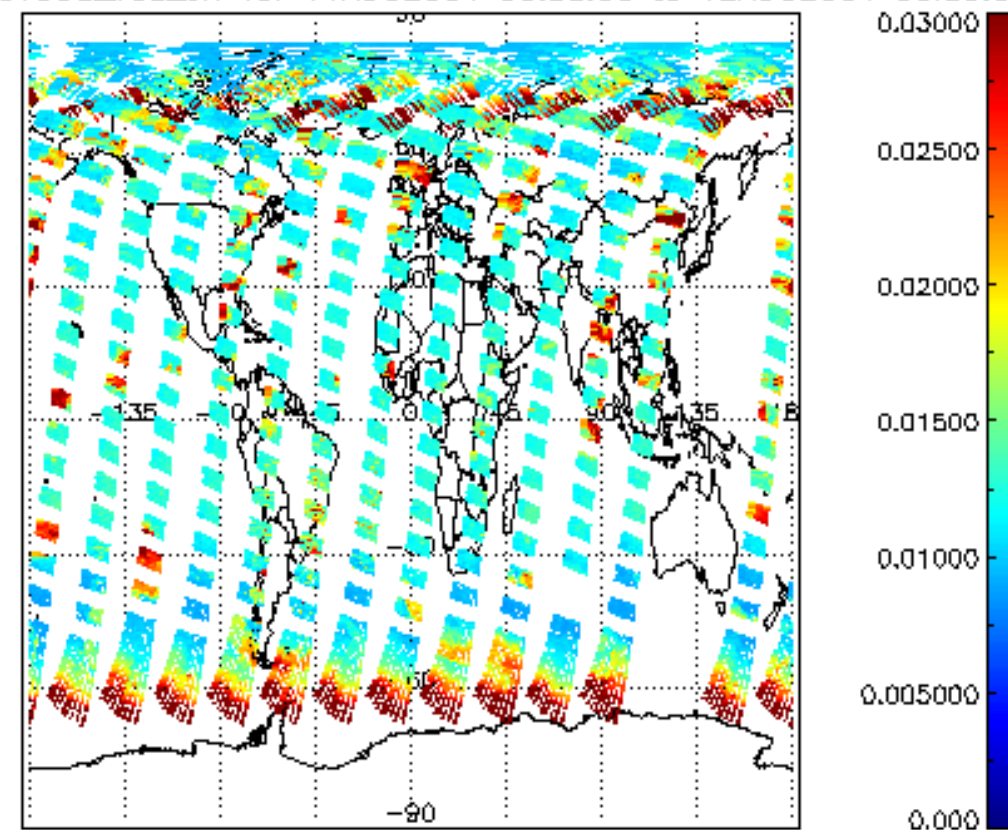




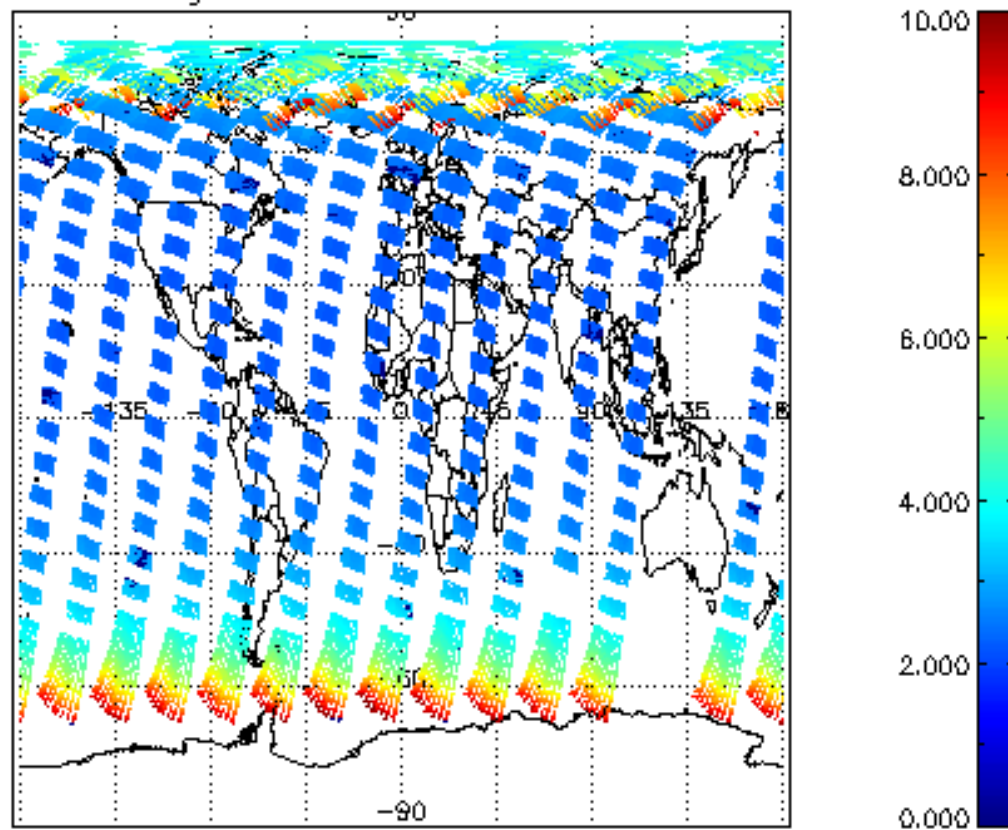
SCIOL2P\_NADUV003\_vcd for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



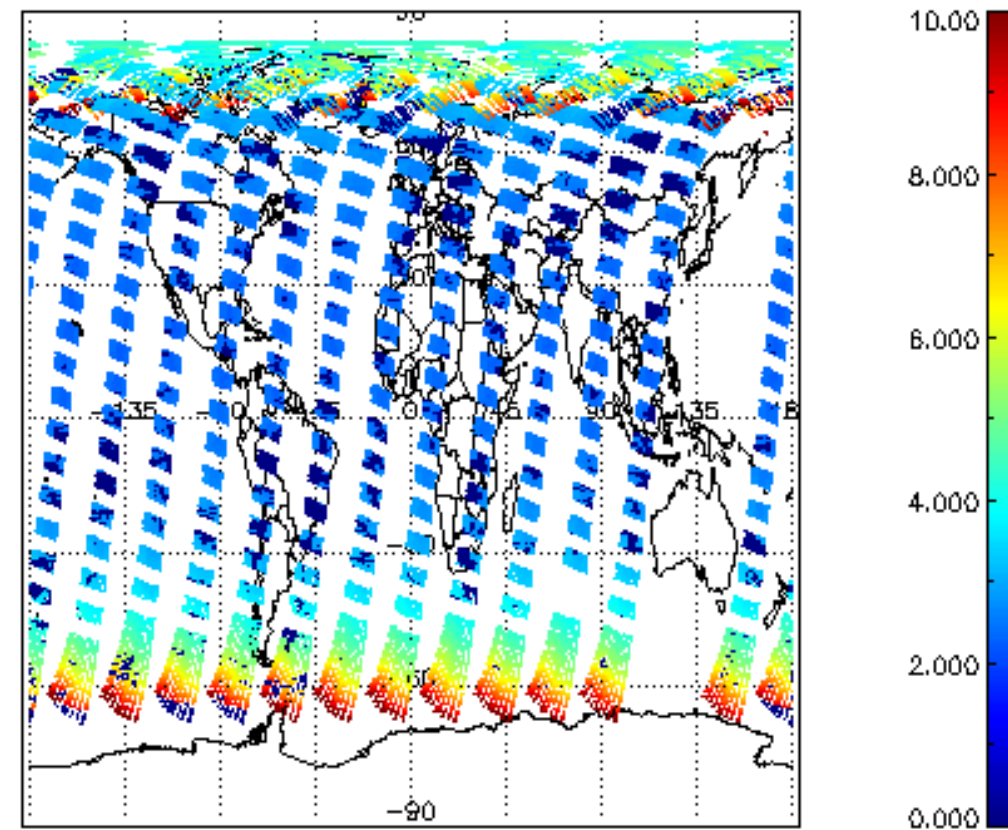
SCIOL2P\_NADUV003\_vcd\_err for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



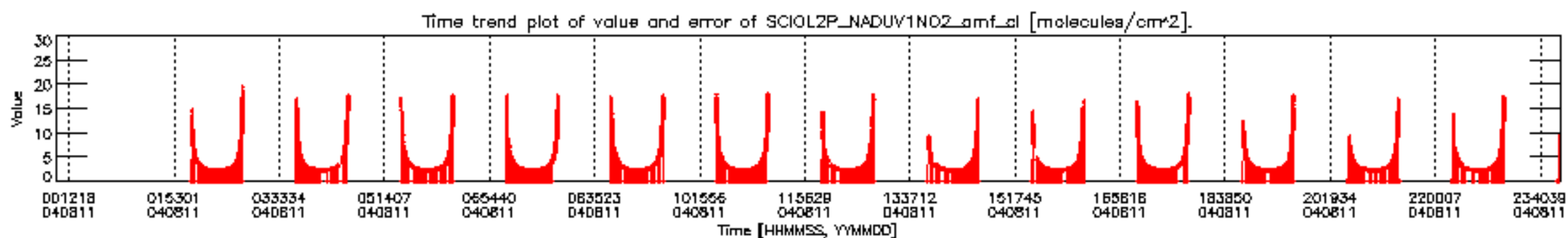
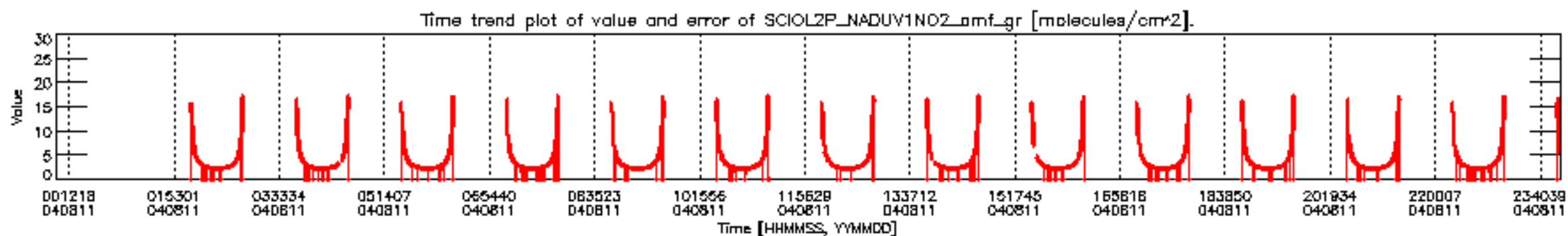
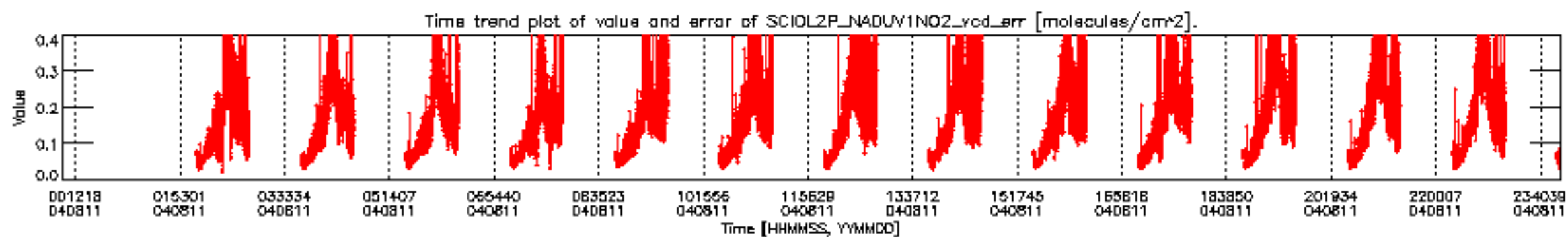
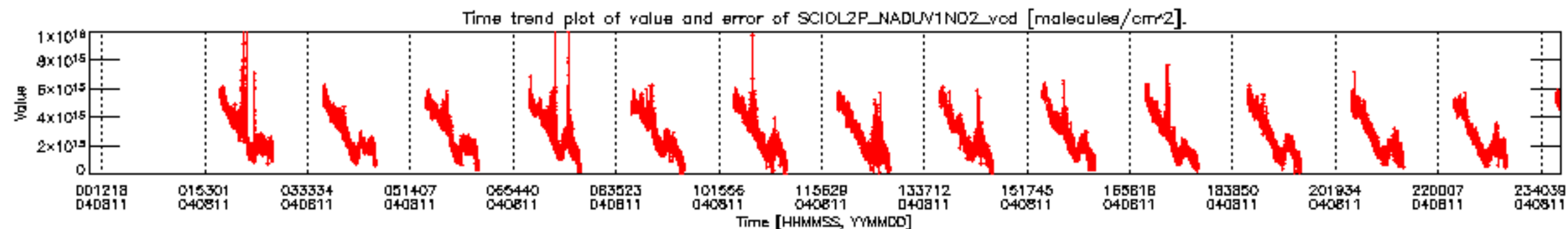
SCIOL2P\_NADUV003\_amf\_gr for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



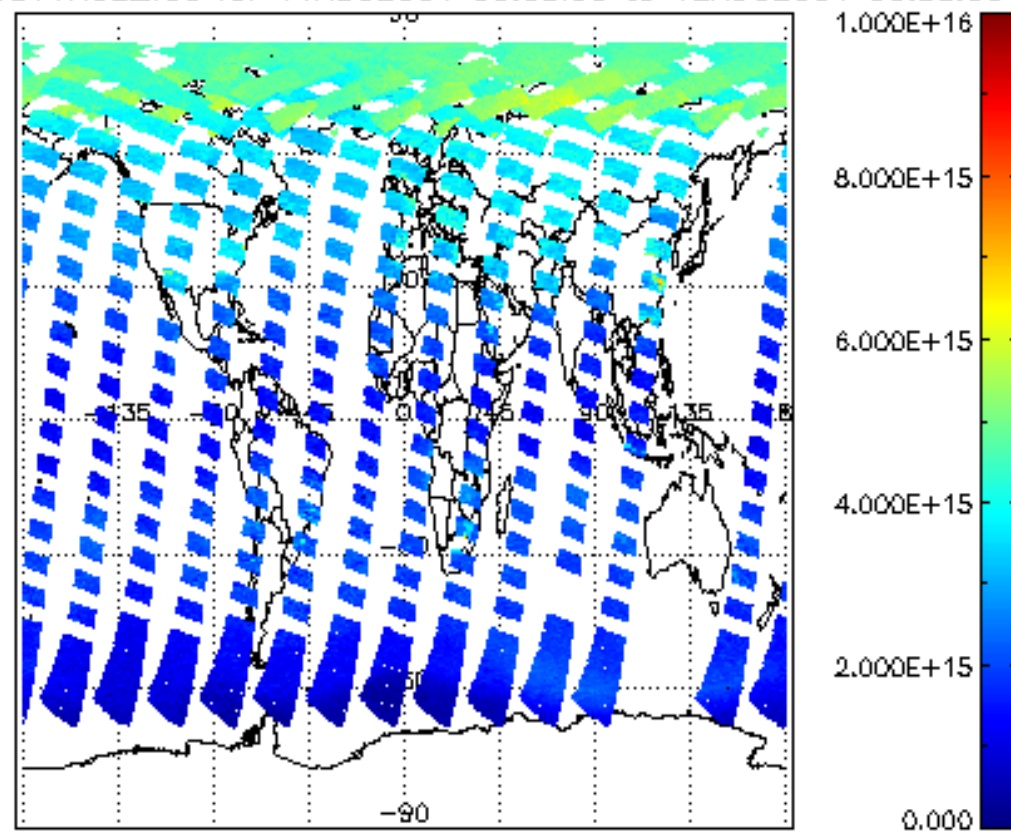
SCIOL2P\_NADUV003\_amf\_cl for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



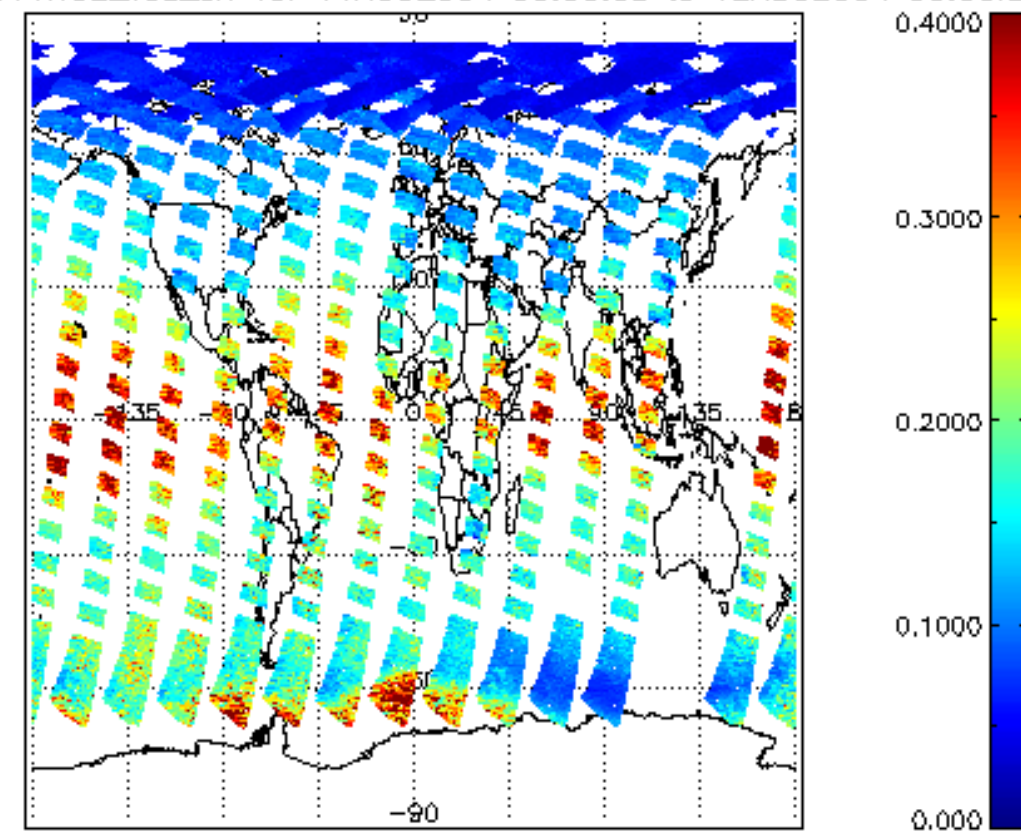




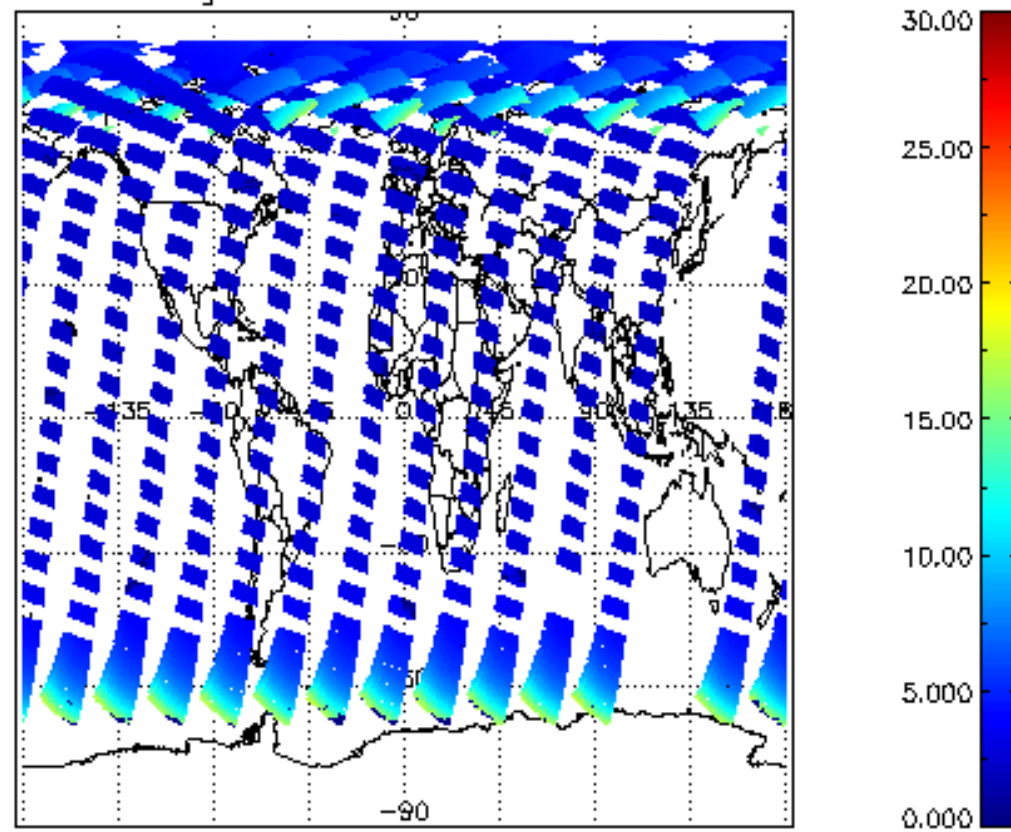
SCIOL2P\_NADUV1NO2\_vcd for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



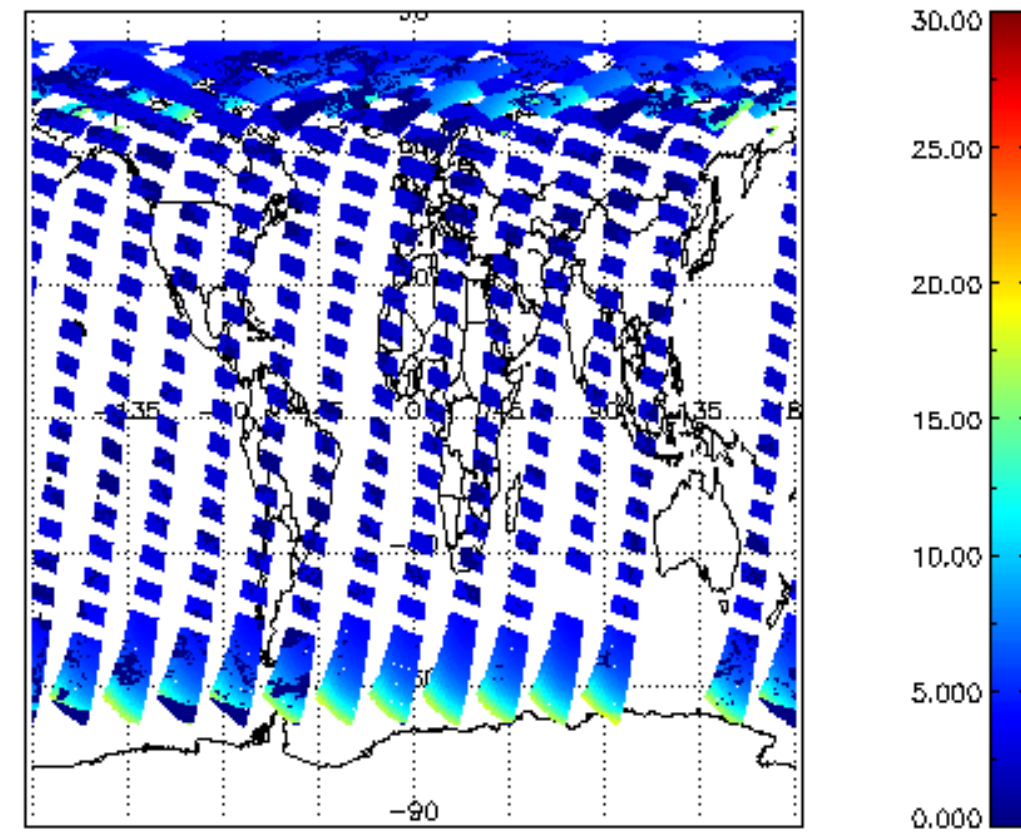
SCIOL2P\_NADUV1NO2\_vcd\_err for 11AUG2004 00:00:00 to 12AUG2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 11AUG2004 00:00:00 to 12AUG2004 00:00:00

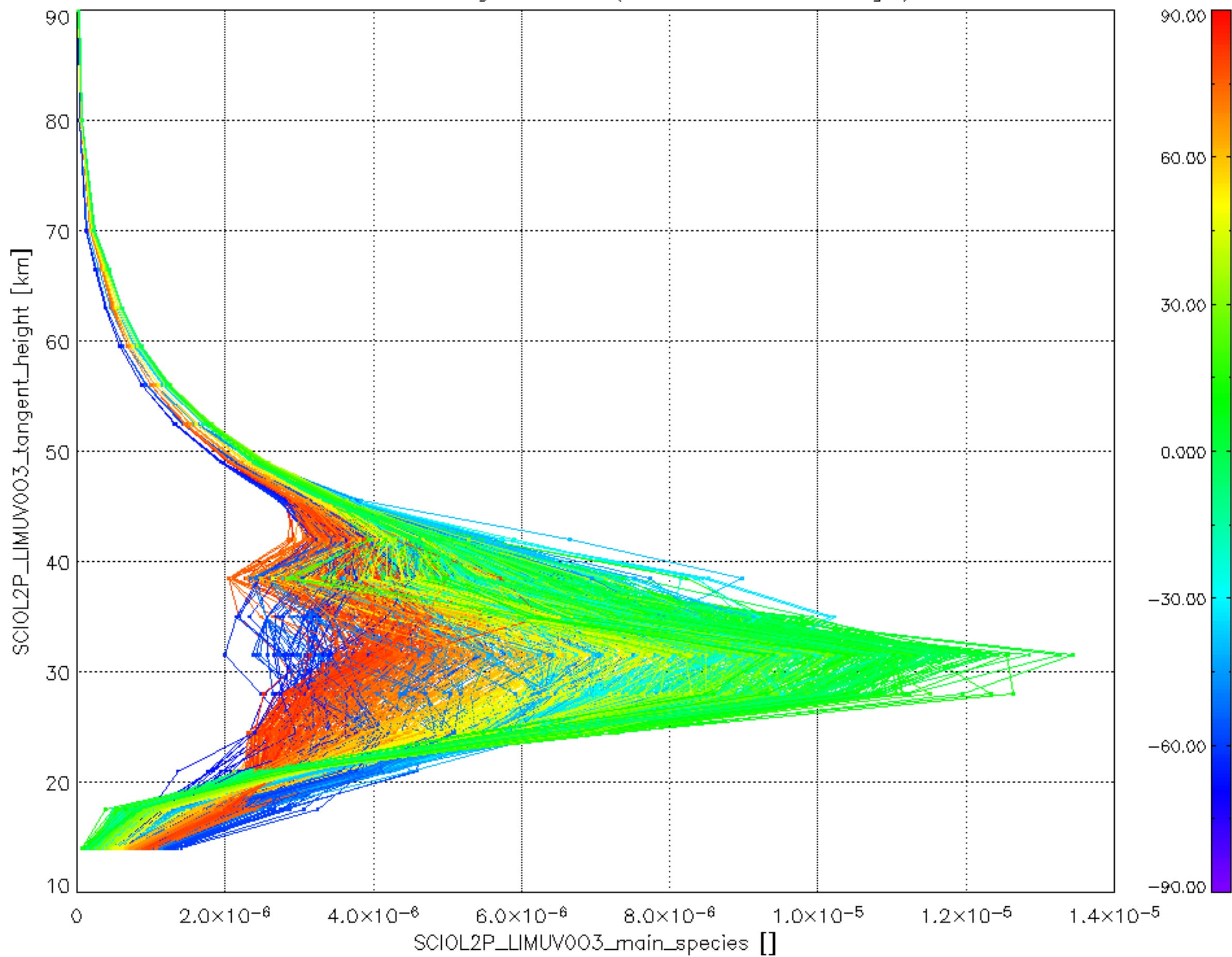


SCIOL2P\_NADUV1NO2\_amf\_cl for 11AUG2004 00:00:00 to 12AUG2004 00:00:00





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).

