

## 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	06AUG2008 07:32:05
Data source version	SCIA-OL/3.01-R
Processing scope for products	27FEB2004 00:00:00 to 28FEB2004 00:00:00
Start time of first product within scope	26FEB2004 23:07:22
Stop time of last product within scope	28FEB2004 01:11:35
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.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PRDPA20040226_230722_000033772024_00345_10419_6886.N1</a>	26FEB2004 23:07:22	27FEB2004 00:03:39	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20040227_004921_000032372024_00346_10420_6679.N1</a>	27FEB2004 00:49:21	27FEB2004 01:43:19	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20040227_022833_000033772024_00347_10421_6711.N1</a>	27FEB2004 02:28:33	27FEB2004 03:24:50	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20040227_041032_000032372024_00348_10422_6715.N1</a>	27FEB2004 04:10:32	27FEB2004 05:04:30	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20040227_054944_000033772024_00349_10423_6692.N1</a>	27FEB2004 05:49:44	27FEB2004 06:46:01	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20040227_073143_000032372024_00350_10424_6790.N1</a>	27FEB2004 07:31:43	27FEB2004 08:25:41	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20040227_091055_000033772024_00351_10425_6894.N1</a>	27FEB2004 09:10:55	27FEB2004 10:07:12	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20040227_105254_000032372024_00352_10426_6850.N1</a>	27FEB2004 10:52:54	27FEB2004 11:46:52	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20040227_123206_000033772024_00353_10427_6764.N1</a>	27FEB2004 12:32:06	27FEB2004 13:28:23	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20040227_141405_000032372024_00354_10428_6672.N1</a>	27FEB2004 14:14:05	27FEB2004 15:08:02	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20040227_155317_000033772024_00355_10429_6786.N1</a>	27FEB2004 15:53:17	27FEB2004 16:49:34	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20040227_173401_000033342024_00356_10430_6640.N1</a>	27FEB2004 17:34:01	27FEB2004 18:29:36	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20040227_191400_000033492024_00357_10431_6697.N1</a>	27FEB2004 19:14:00	27FEB2004 20:09:49	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20040227_205627_000032372024_00358_10432_6722.N1</a>	27FEB2004 20:56:27	27FEB2004 21:50:24	0	GOOD
14	<a href="#">SCI_OL__2PRDPA20040227_223539_000033772024_00359_10433_6706.N1</a>	27FEB2004 22:35:39	27FEB2004 23:31:56	0	GOOD
15	<a href="#">SCI_OL__2PRDPA20040228_001738_000032372024_00360_10434_6661.N1</a>	28FEB2004 00:17:38	28FEB2004 01:11:35	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: 113806

Total number of cloud data DSRs with good quality flag (=0): 113806 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	113806	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	113806	0.22084	0.25000	0.12500	1.0000	0.10098	s
CL_FRAC	113806	0.45777	0.42854	0.0000	1.0000	0.28637	-
CL_FRAC_ERR	113806	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	113806	7.0669	8.0000	4.0000	32.000	3.2314	
PMD_READ_CL[0]	113806	0.38225	0.0000	0.0000	24.000	1.3856	-
PMD_READ_CL[1]	113806	0.29104	0.0000	0.0000	32.000	1.3725	-
CL_TOP_HEIGHT	103793	4.1376	2.4905	0.0000	17.000	3.9755	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	103793	47.723	33.077	0.0000	101.00	38.004	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	113806	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	113806	11000110	11000100	11000000	11100000	2354.2	flags
AERO_ABSO_IND	113806	0.76077	0.53850	-4.1164	12.017	1.2233	
AERO_IND_DIAG	113806	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	113806	01101000	11000000	00000000	11000000	24487.	flags

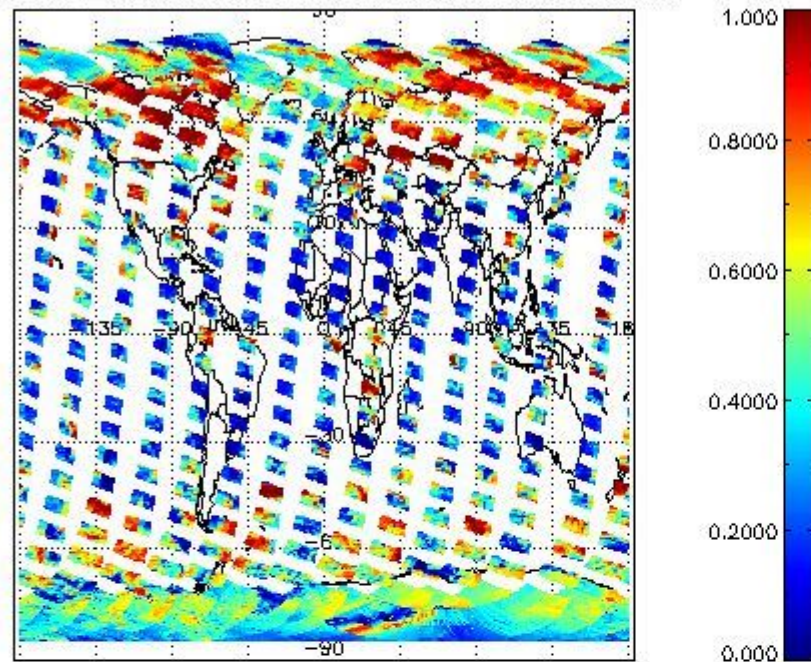
### Time and geolocation plots:

Plots are available for the following parameters:

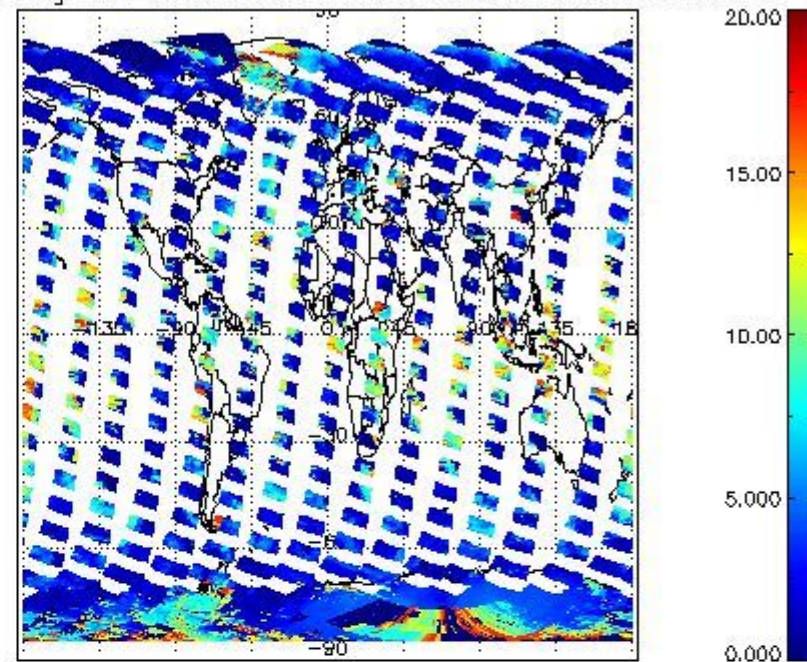
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



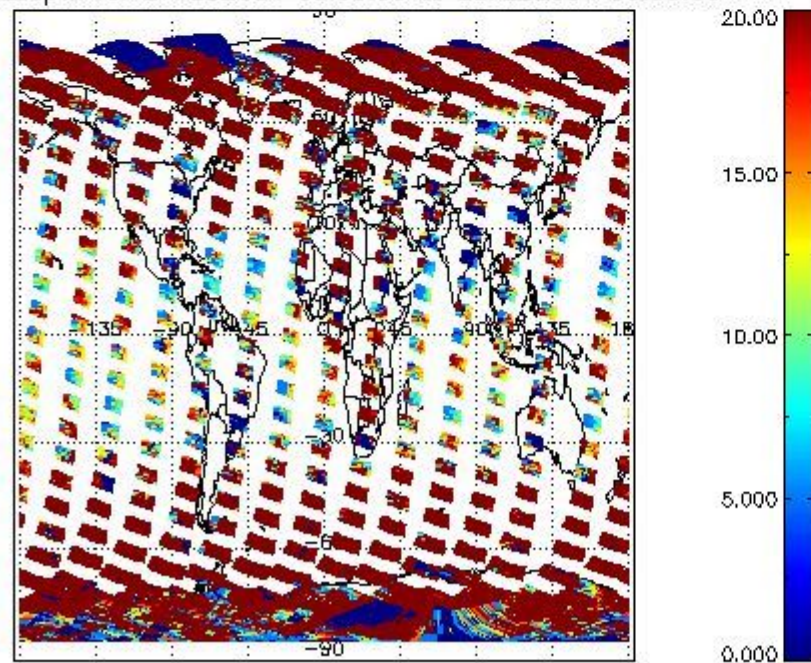
cL\_frac for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



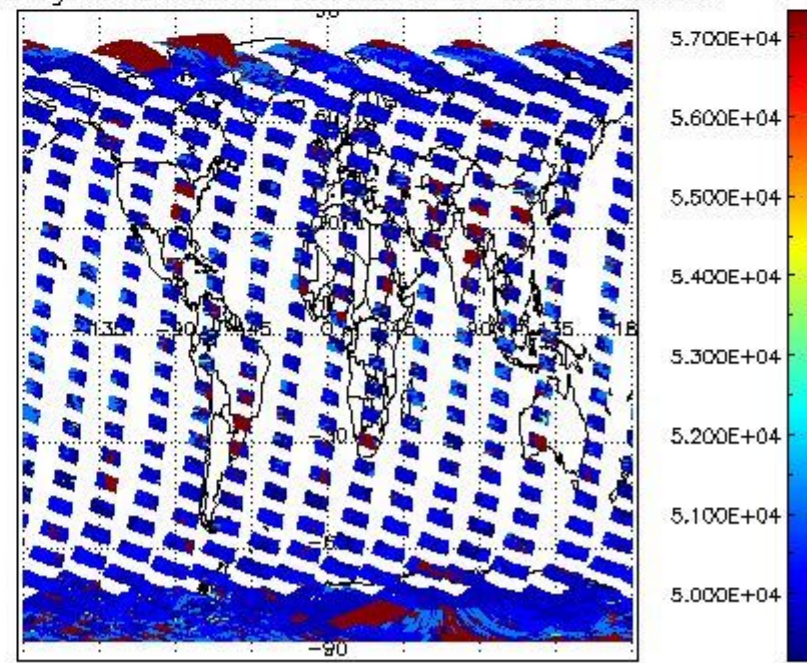
cL\_top\_height for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



cL\_opt\_depth for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



cloud\_flags for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



## 2.2.2 Nadir

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

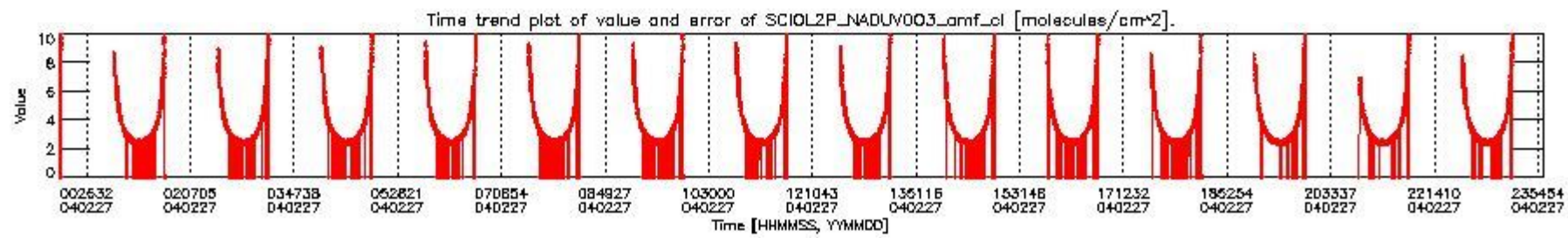
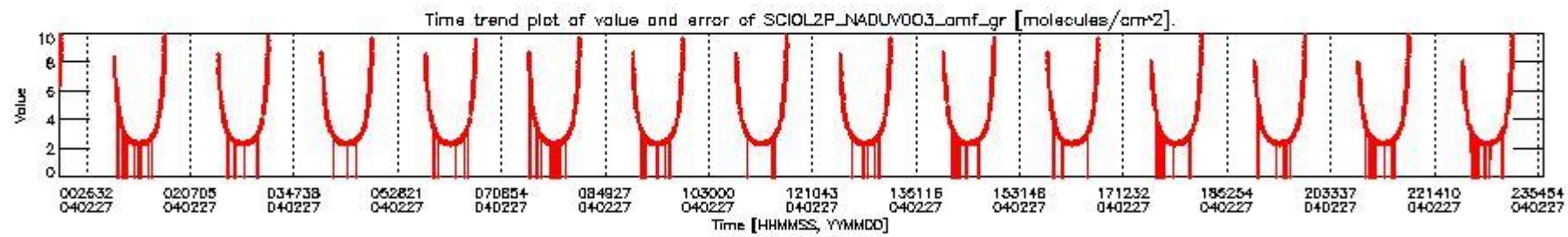
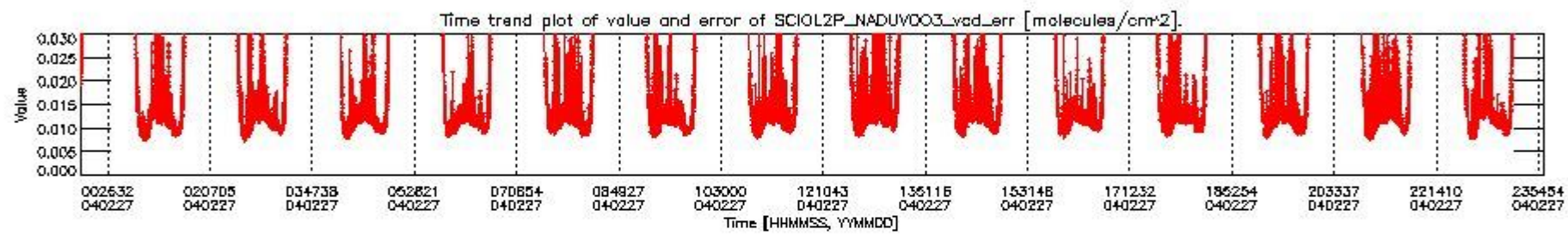
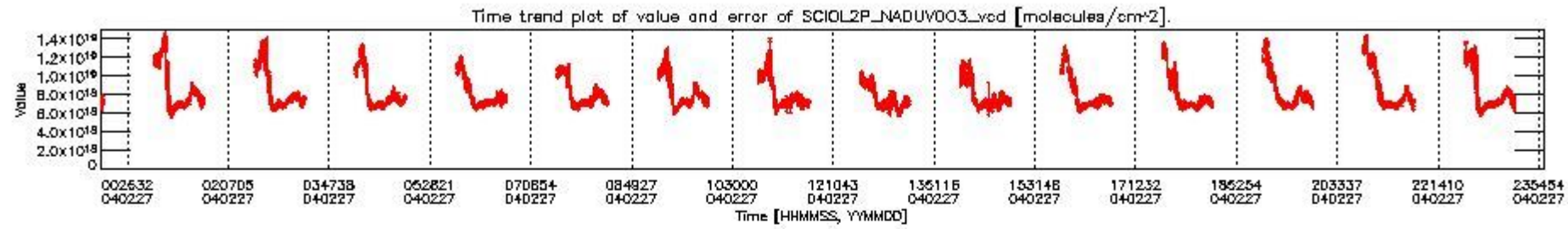
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr



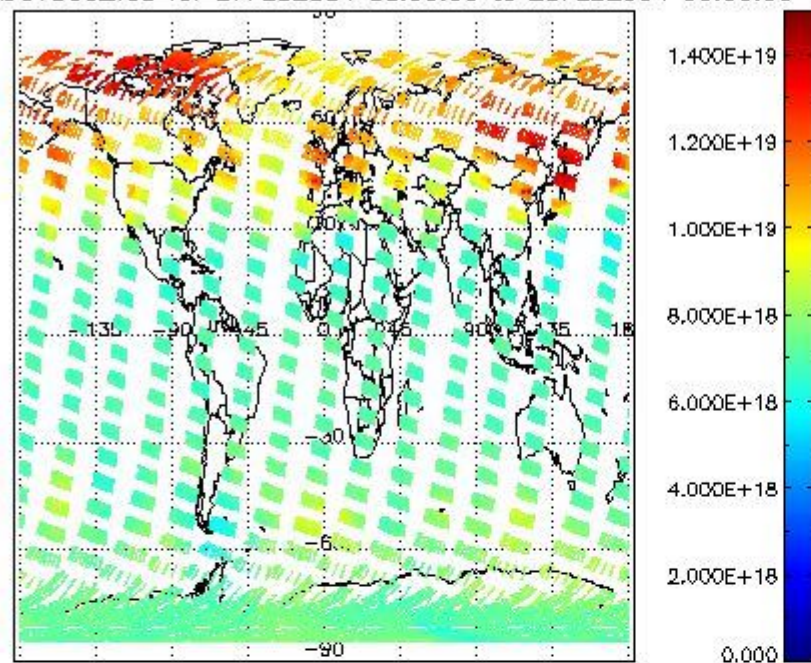
3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

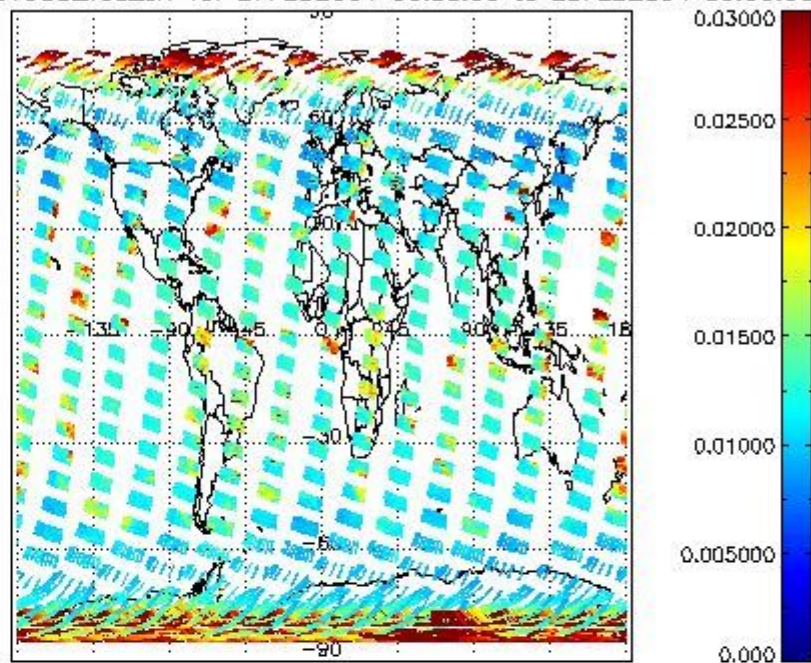




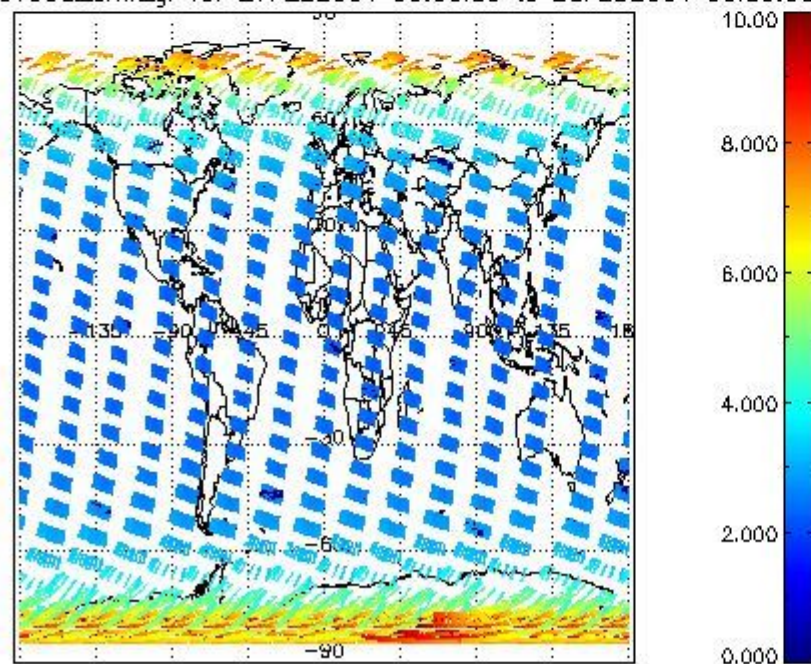
SCIOL2P\_NADUV003\_vcd for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



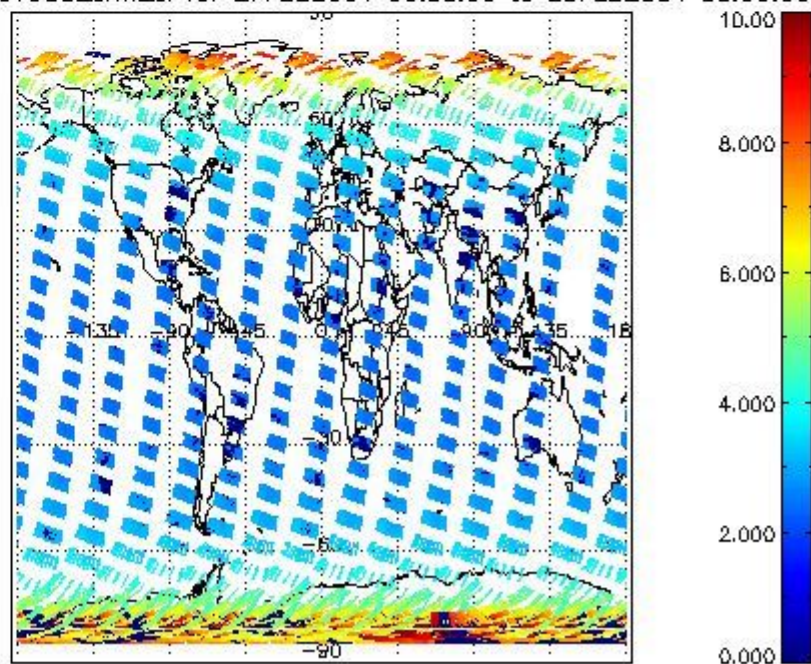
SCIOL2P\_NADUV003\_vcd\_err for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



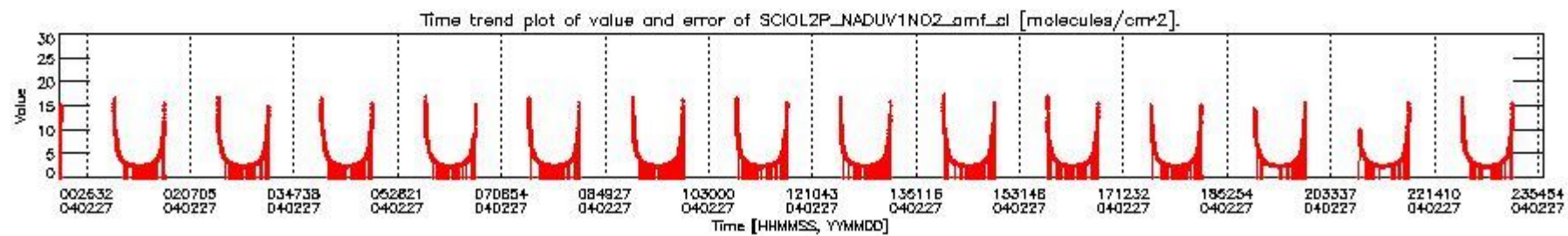
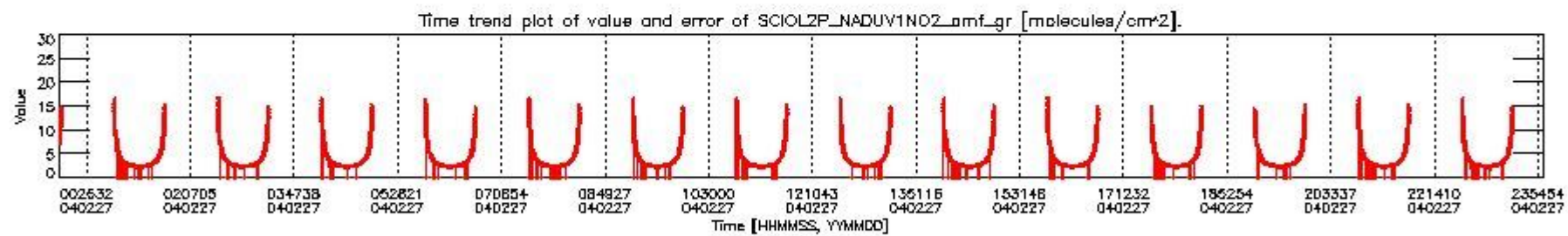
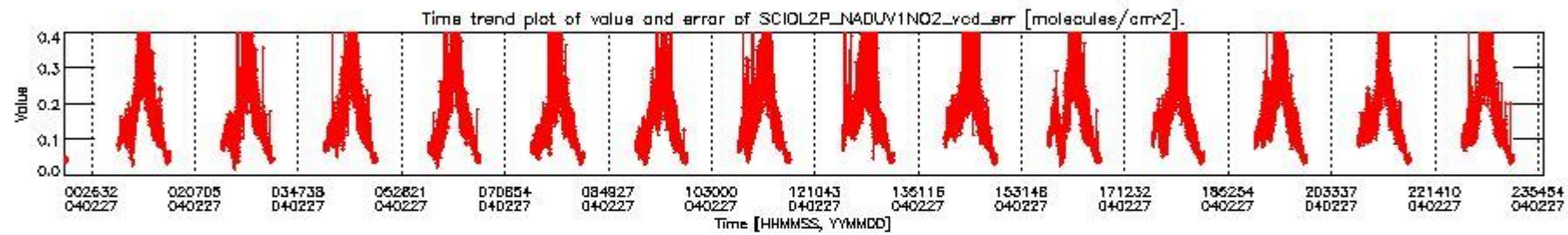
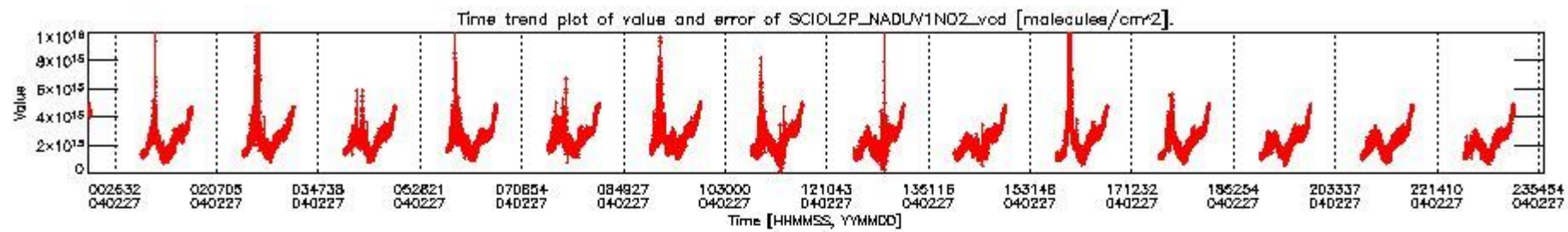
SCIOL2P\_NADUV003\_amf\_gr for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



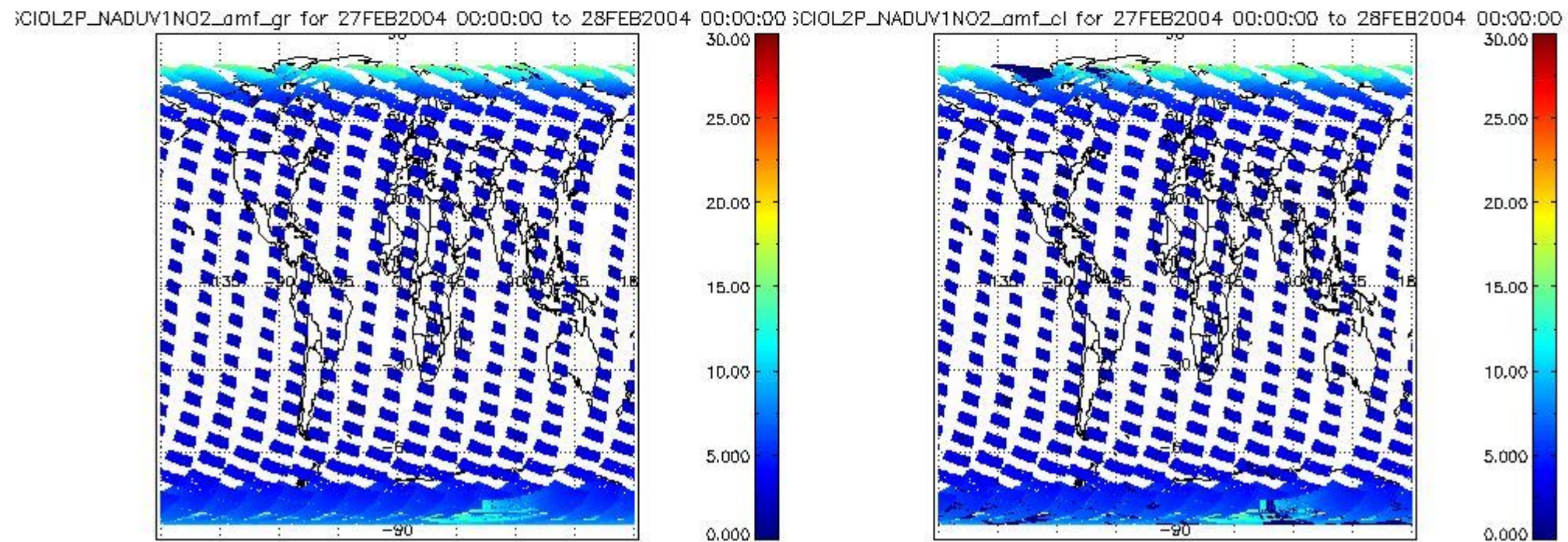
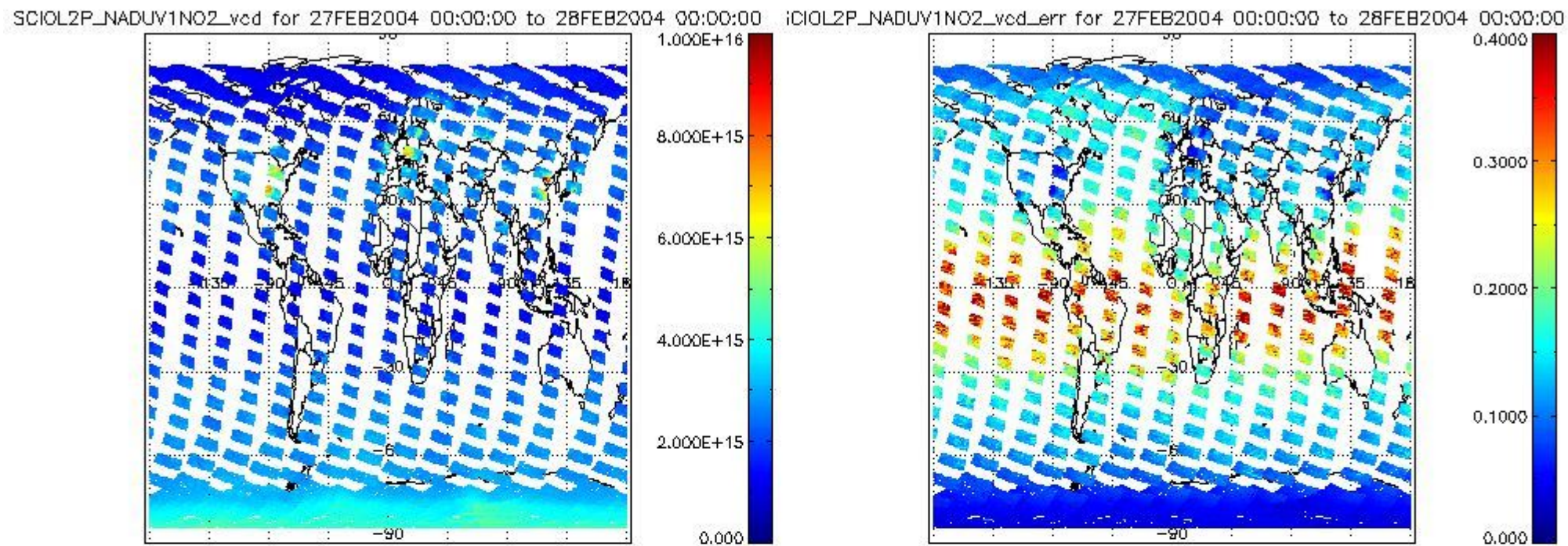
SCIOL2P\_NADUV003\_amf\_sl for 27FEB2004 00:00:00 to 28FEB2004 00:00:00











### 2.2.3 Limb

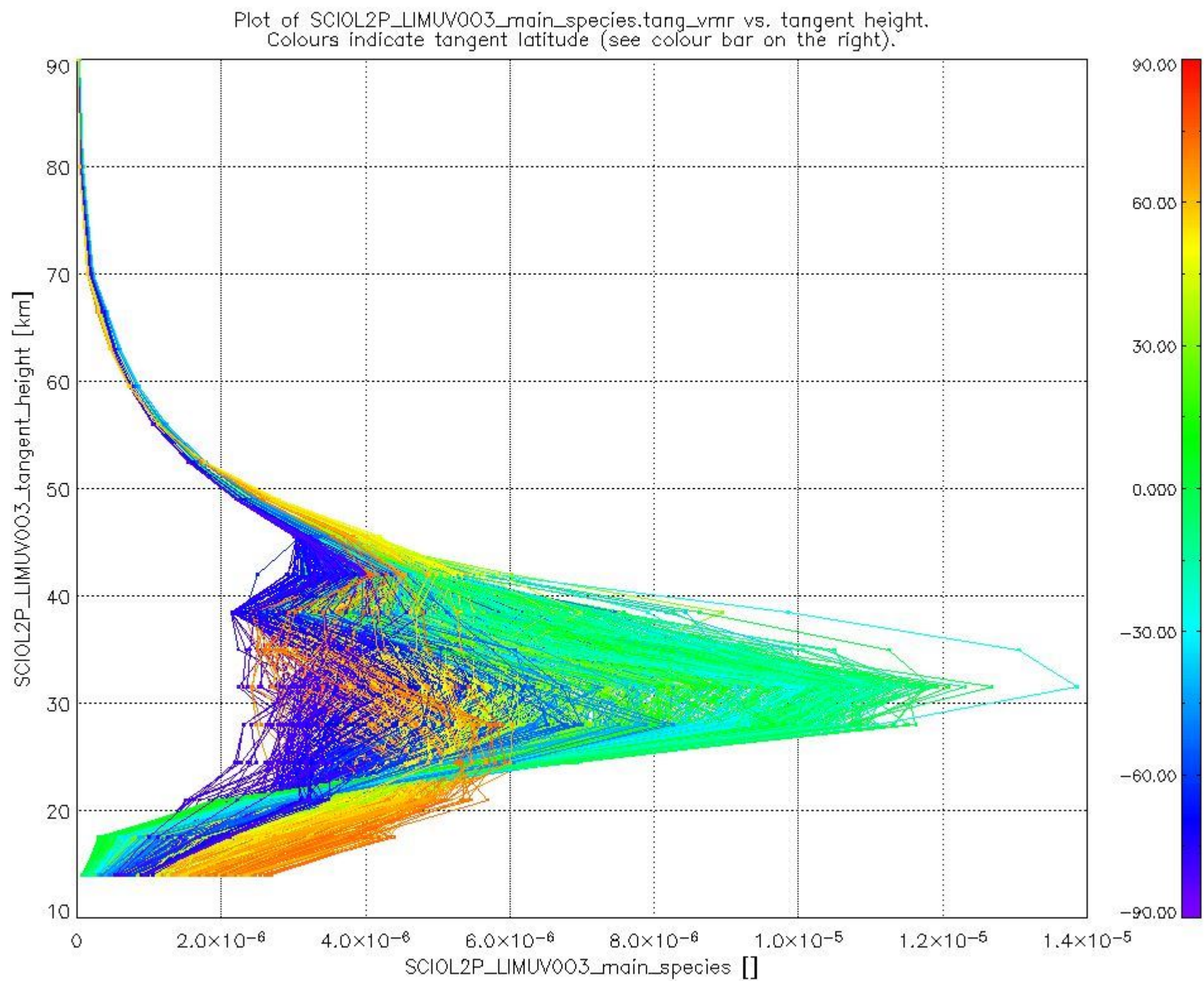
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

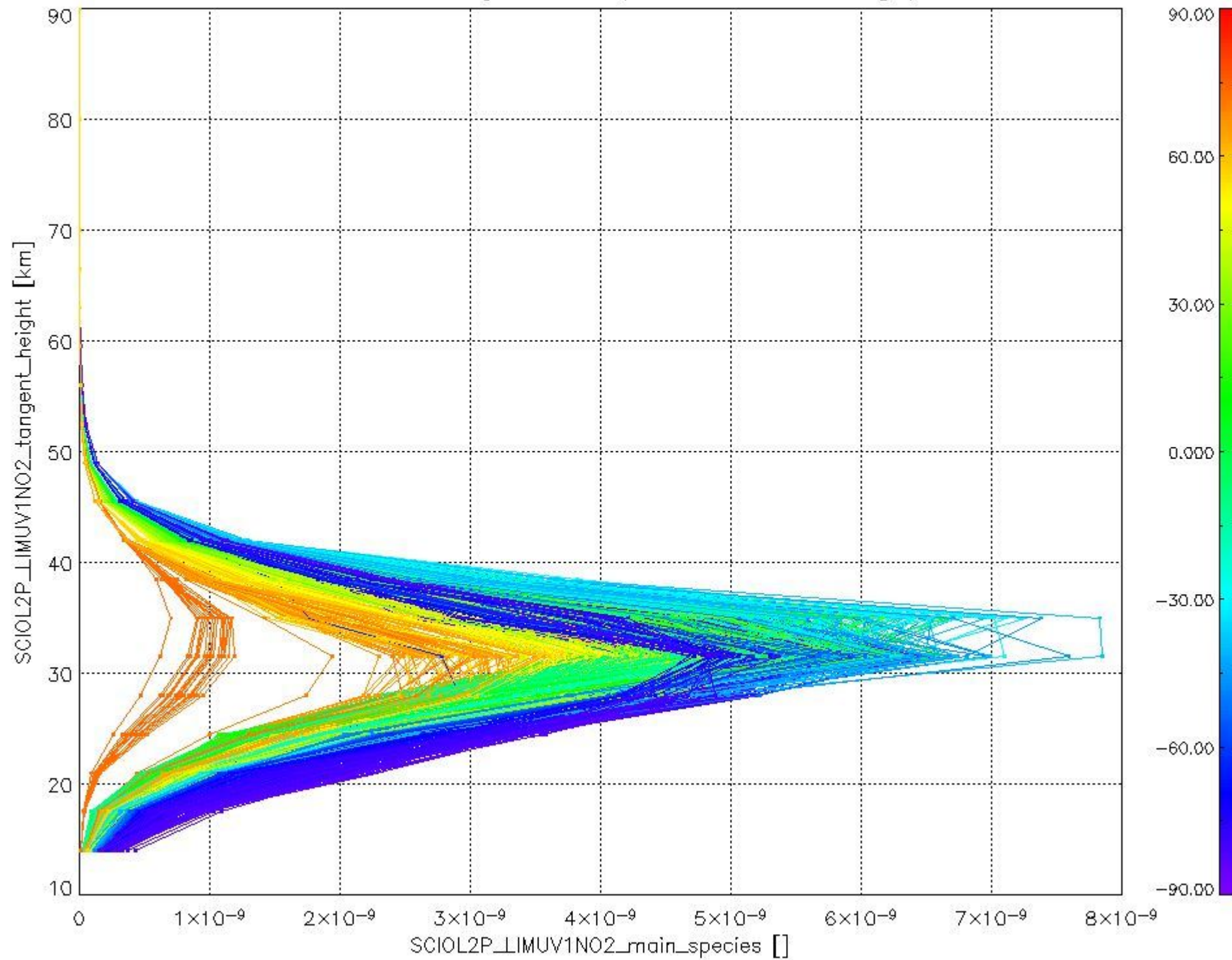


The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.





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

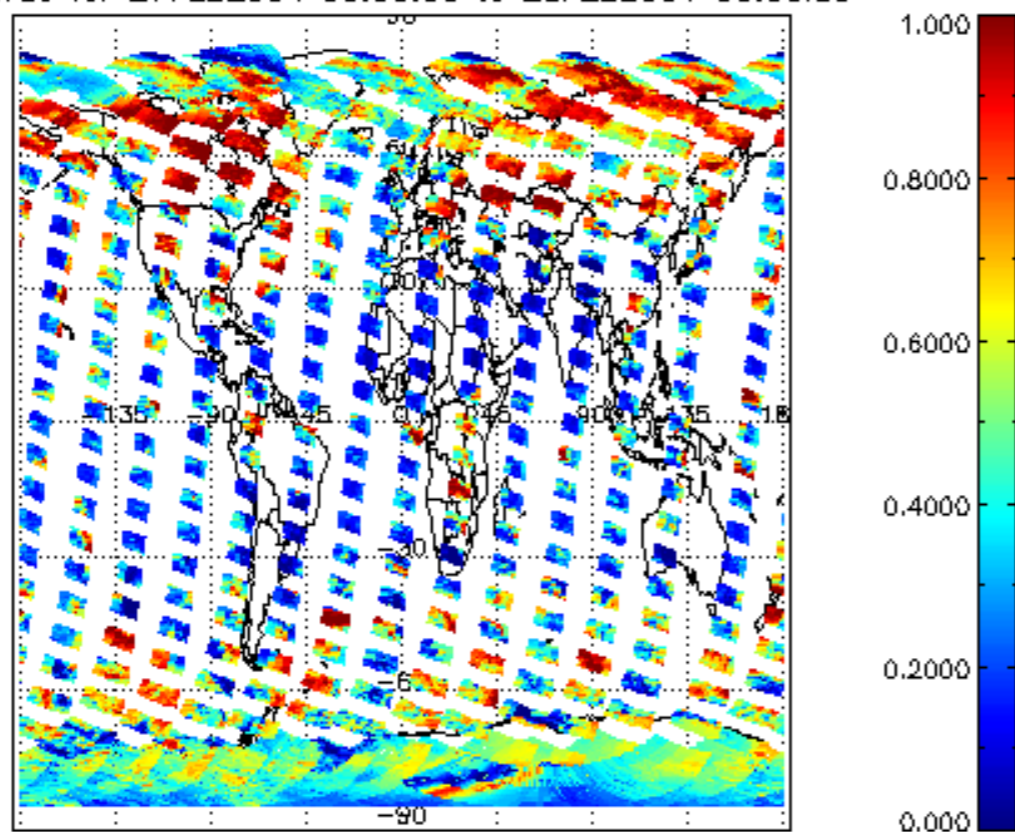


### 2.3 ADF monitoring

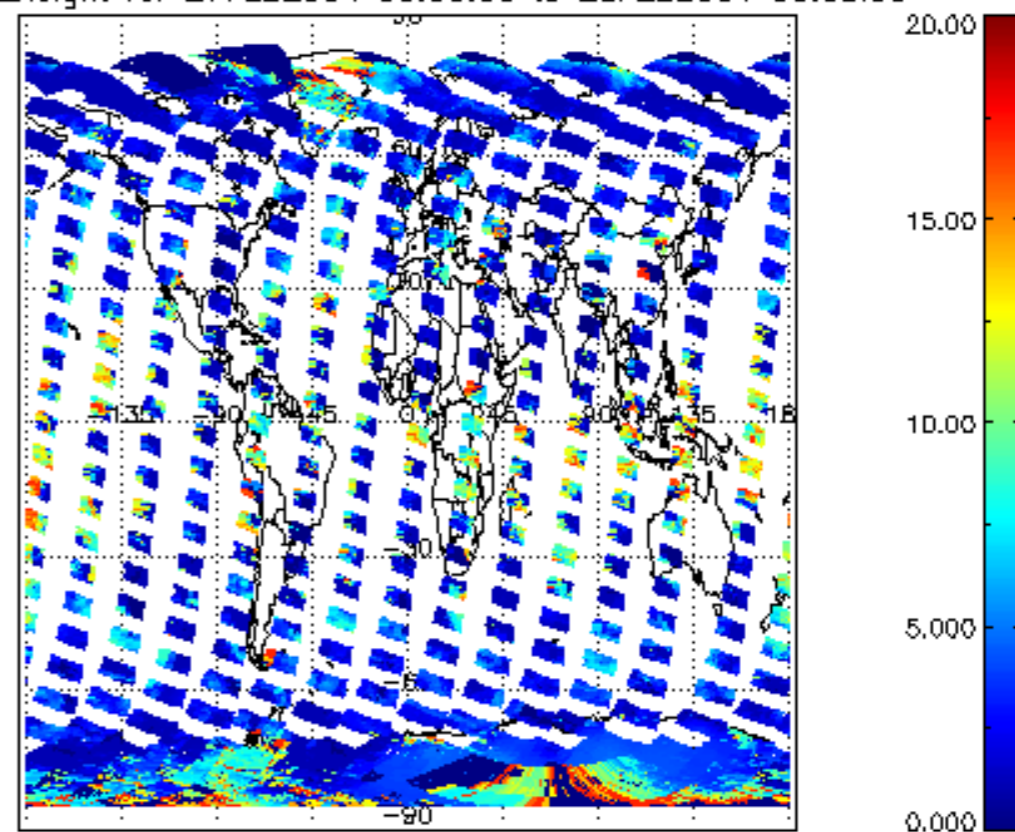
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20070629_092400_20070720_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED



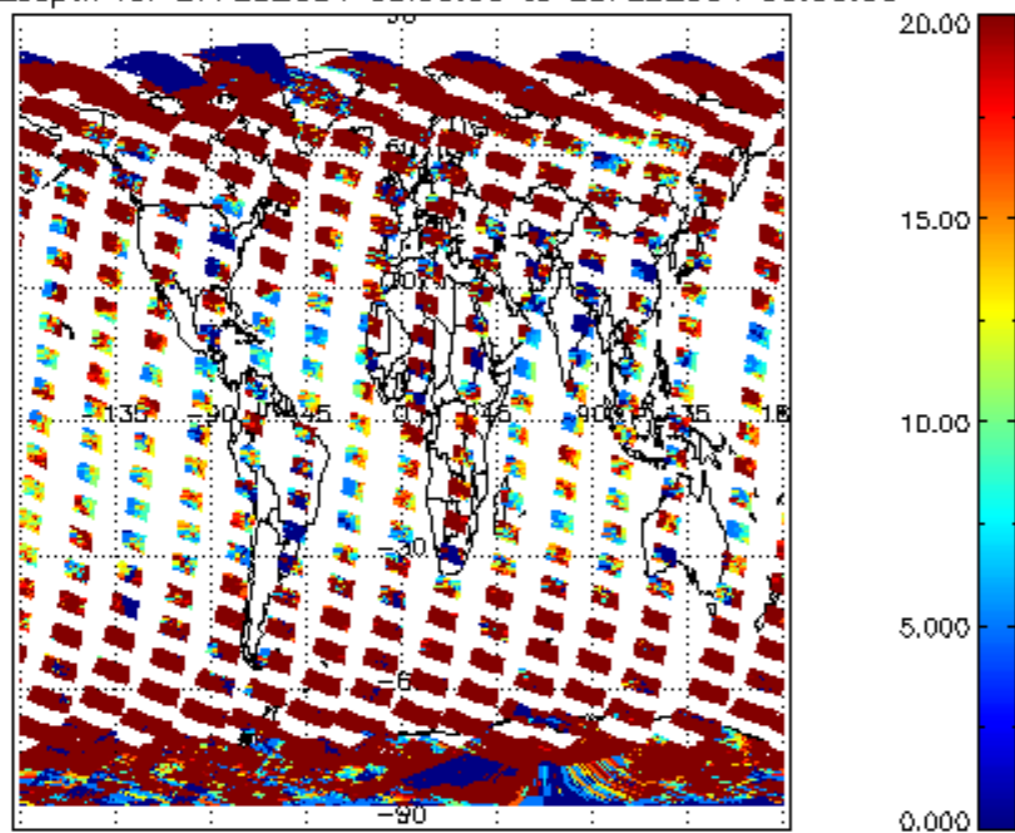
cl\_frac for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



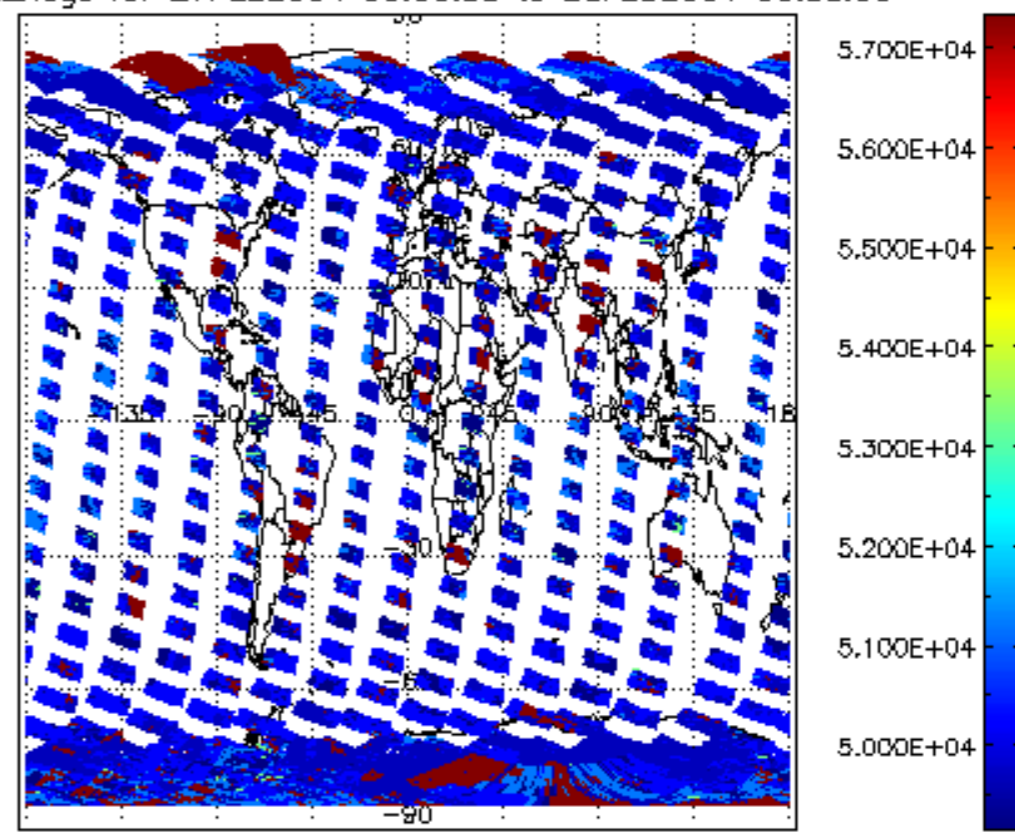
cl\_top\_height for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



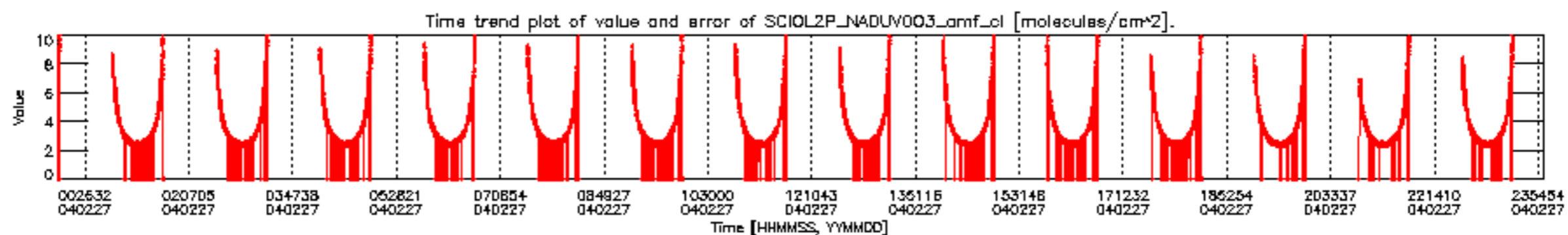
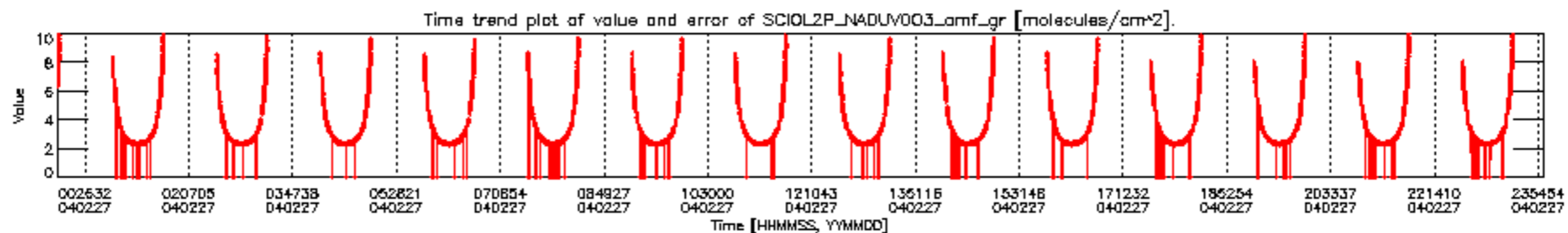
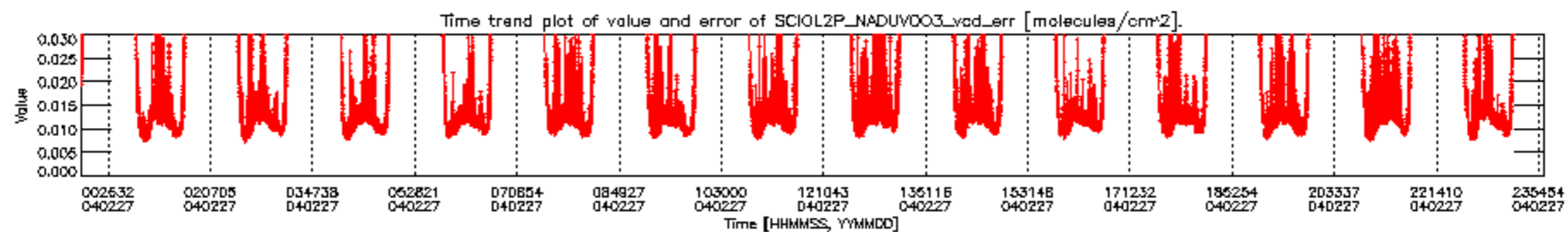
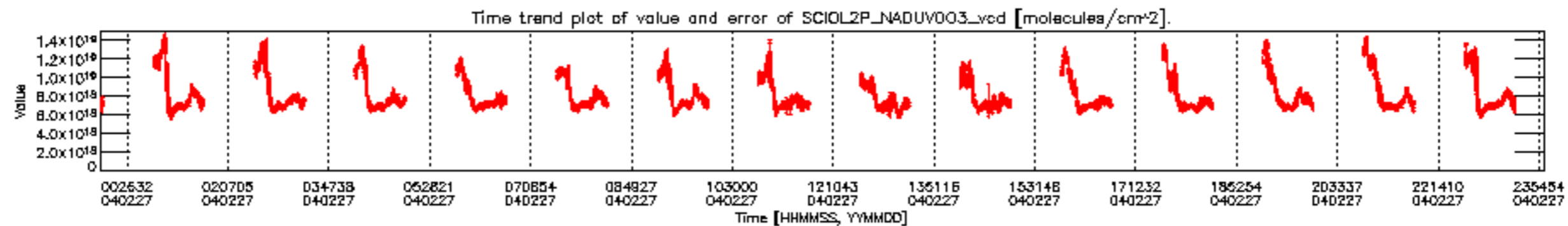
cl\_opt\_depth for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



cloud\_flags for 27FEB2004 00:00:00 to 28FEB2004 00:00:00

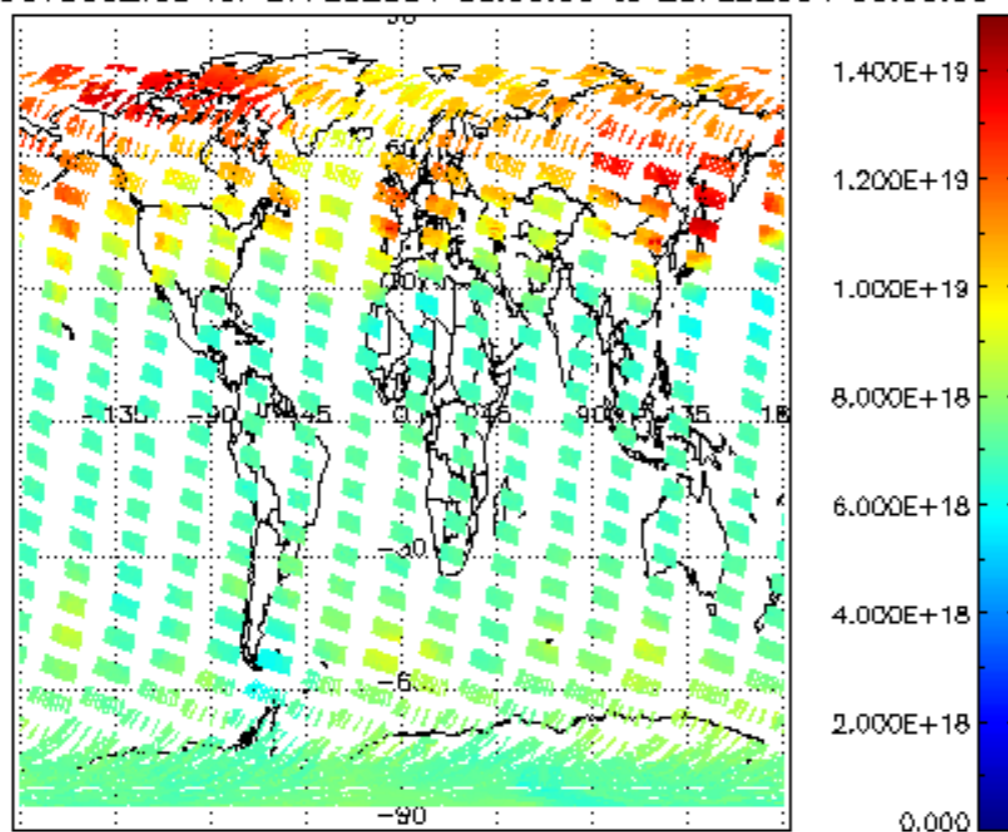




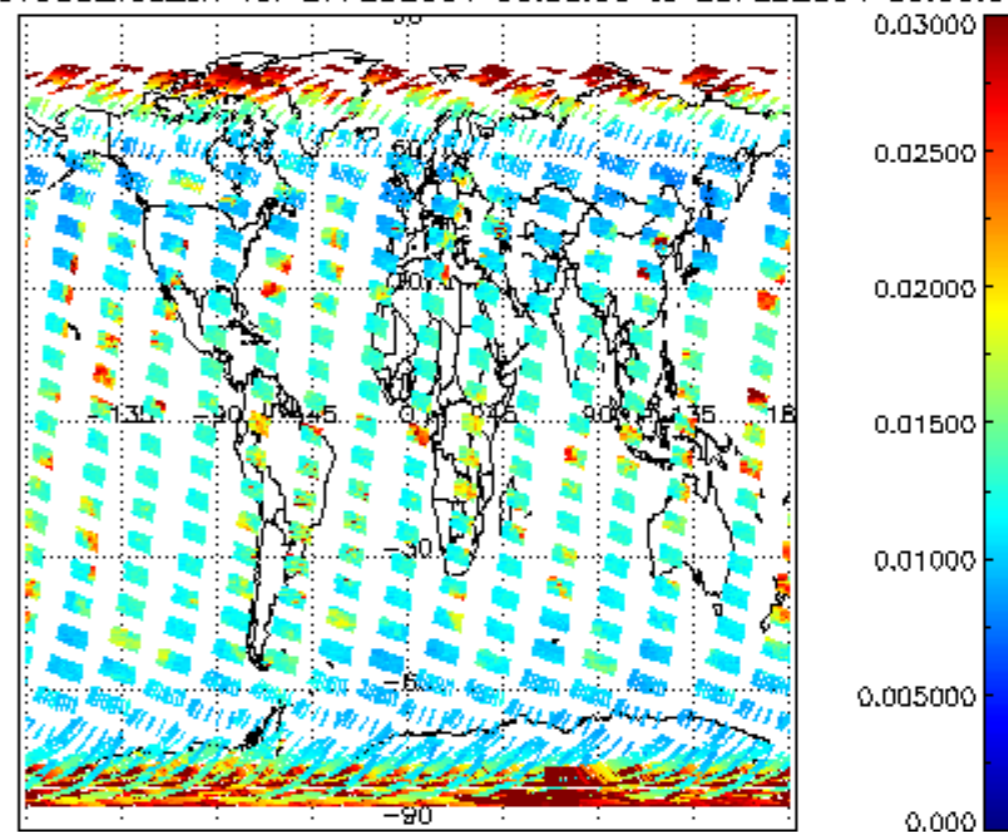




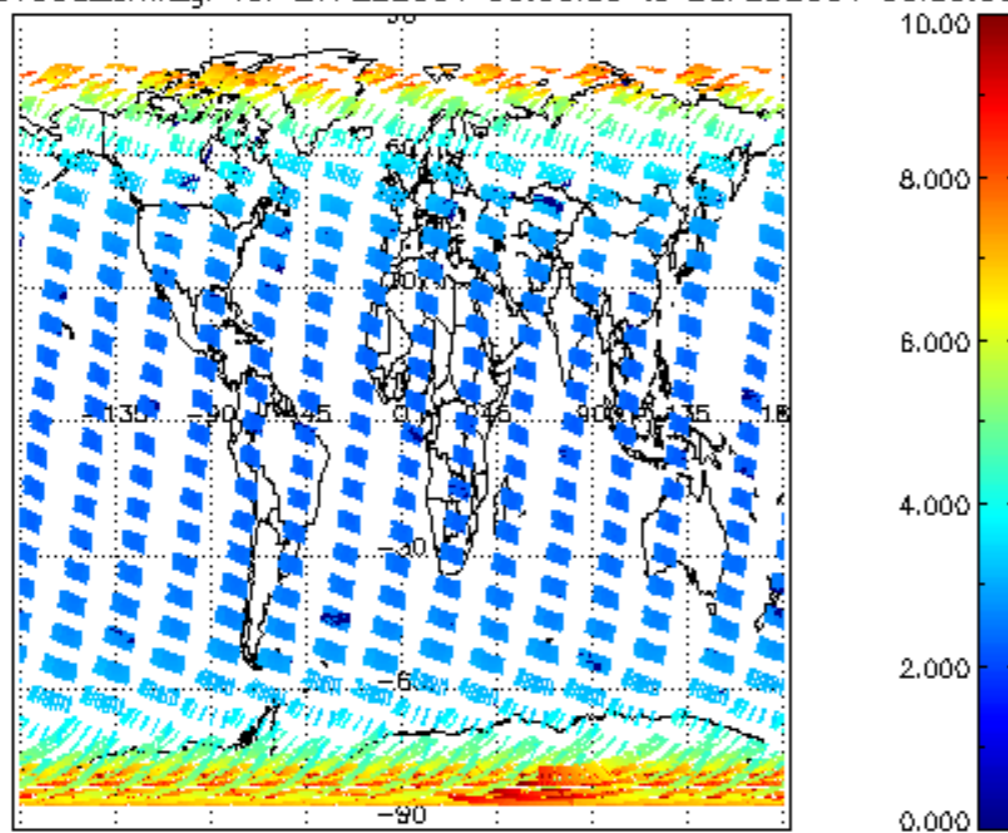
SCIOL2P\_NADUV003\_vcd for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



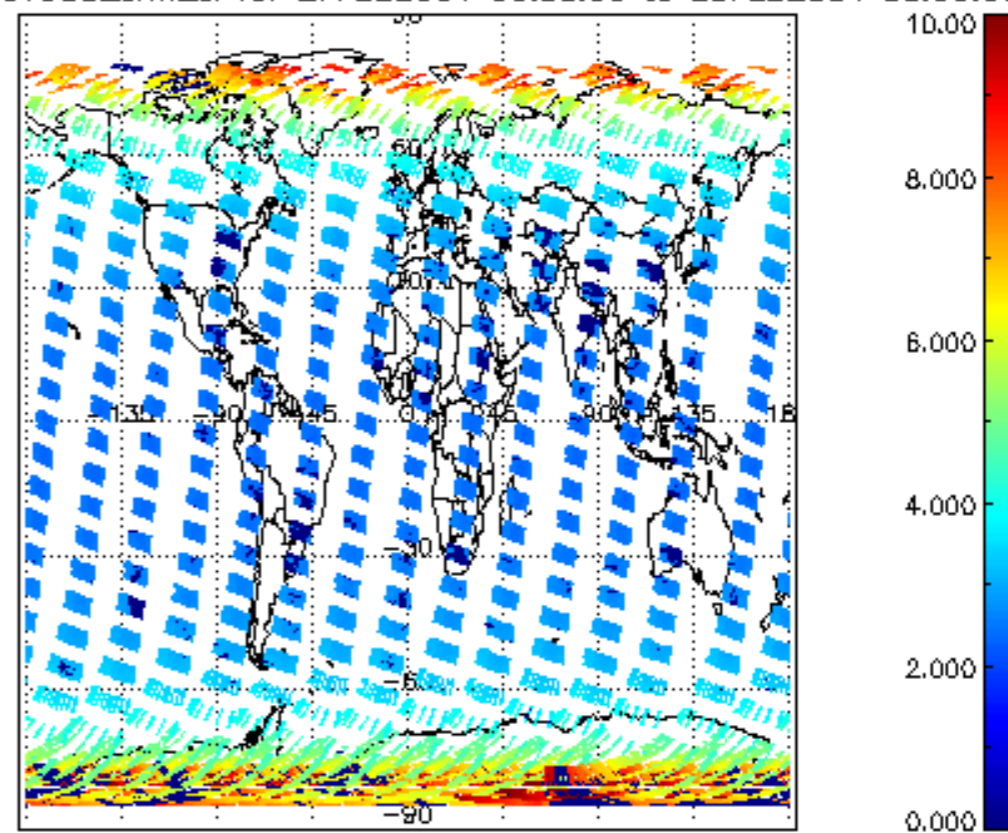
SCIOL2P\_NADUV003\_vcd\_err for 27FEB2004 00:00:00 to 28FEB2004 00:00:00

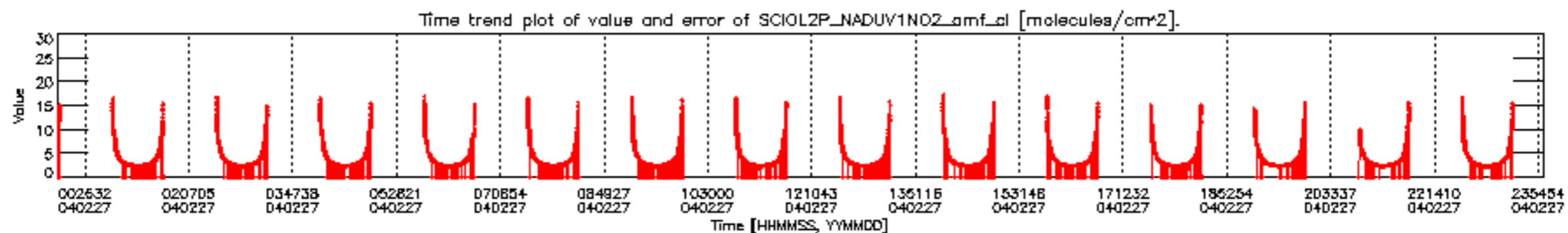
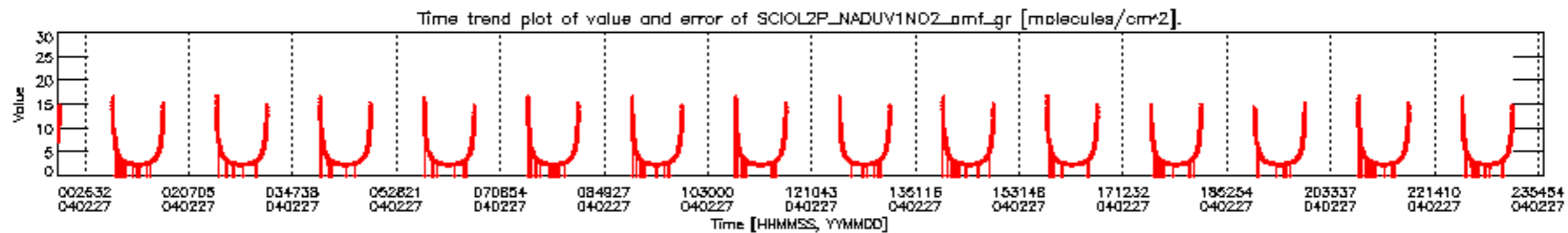
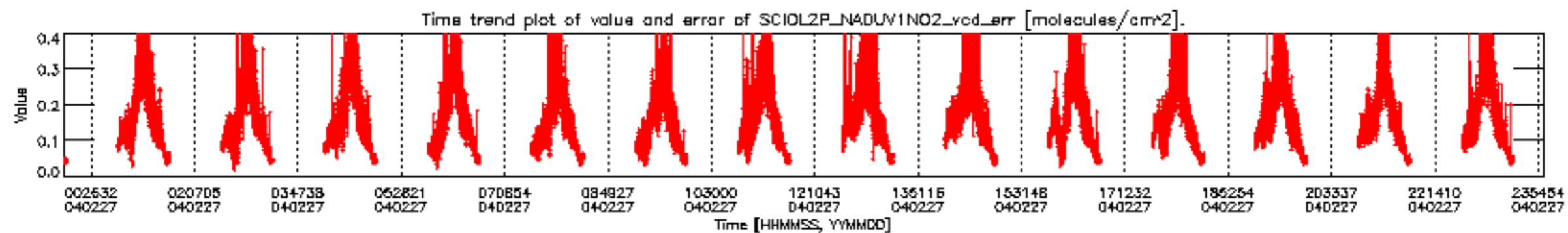
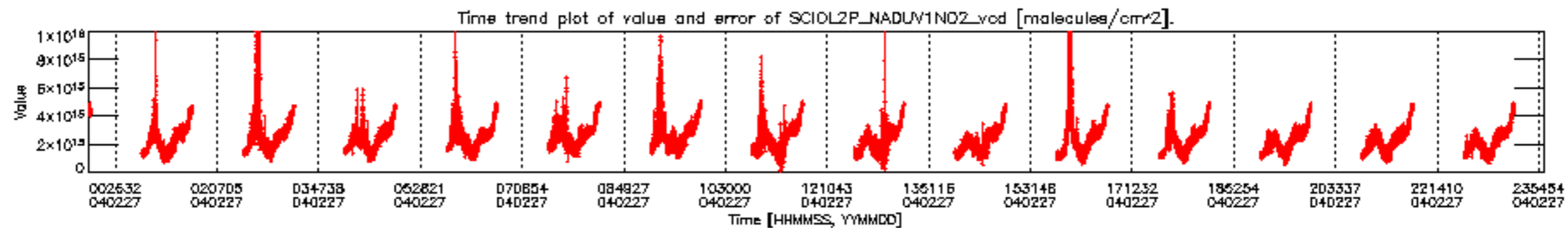


SCIOL2P\_NADUV003\_amf\_gr for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



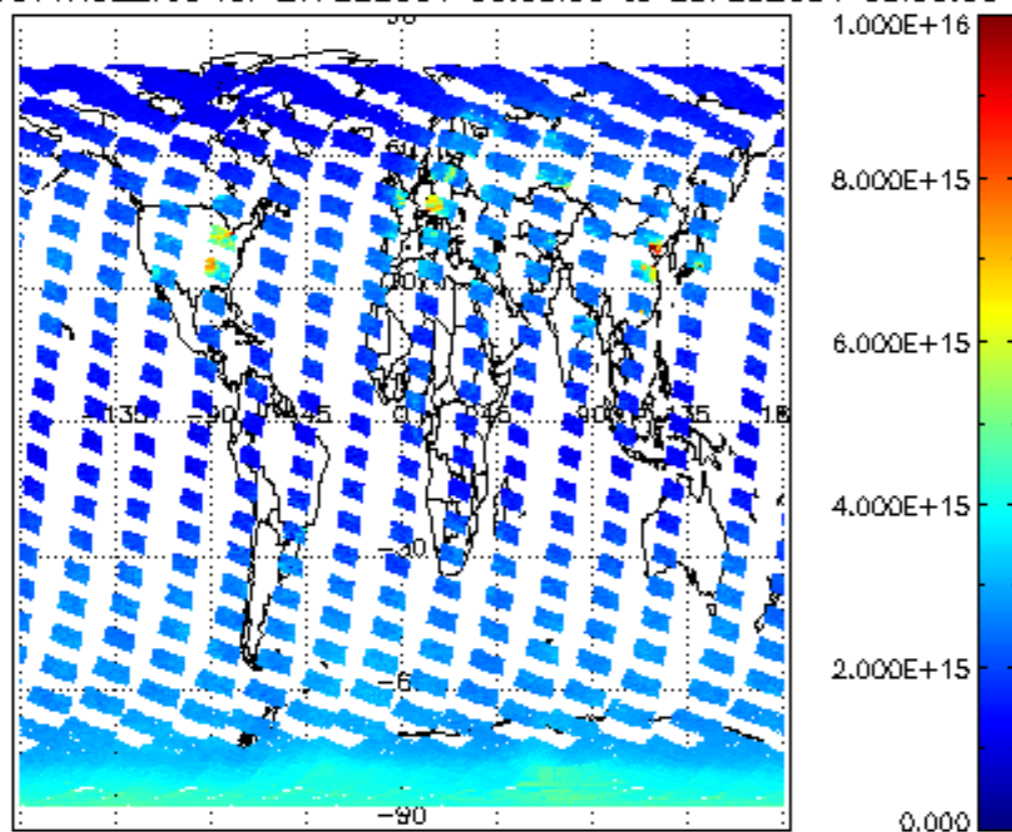
SCIOL2P\_NADUV003\_amf\_cl for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



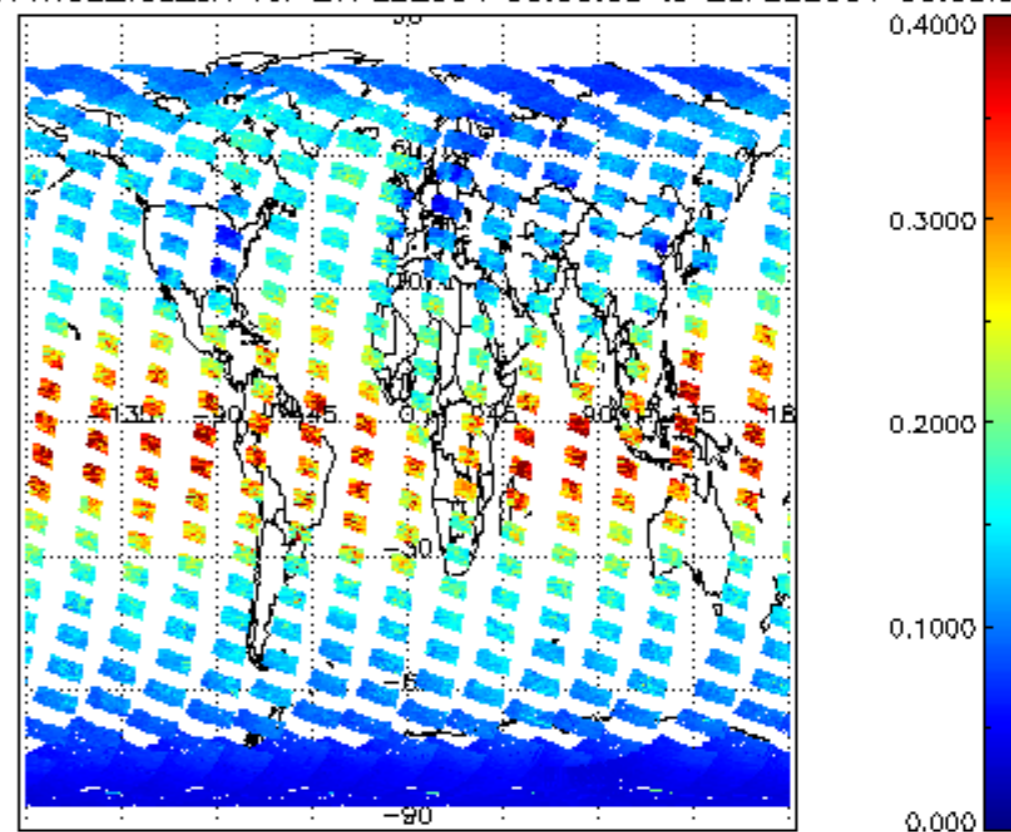




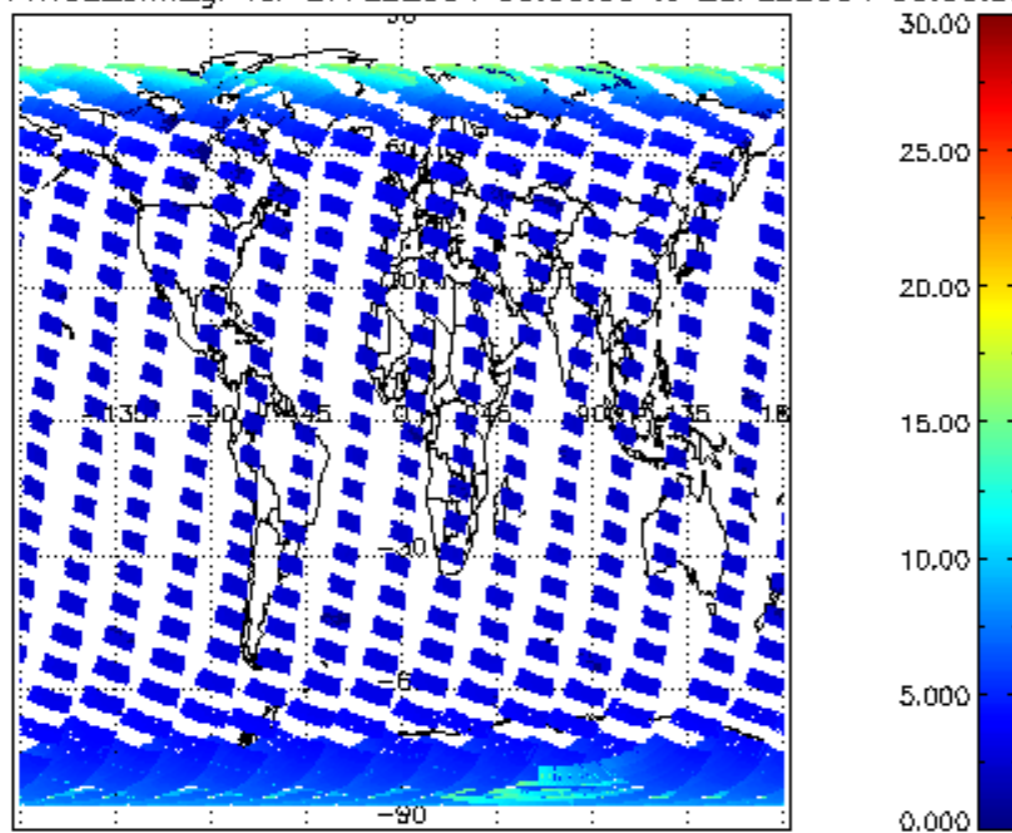
SCIOL2P\_NADUV1NO2\_vcd for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



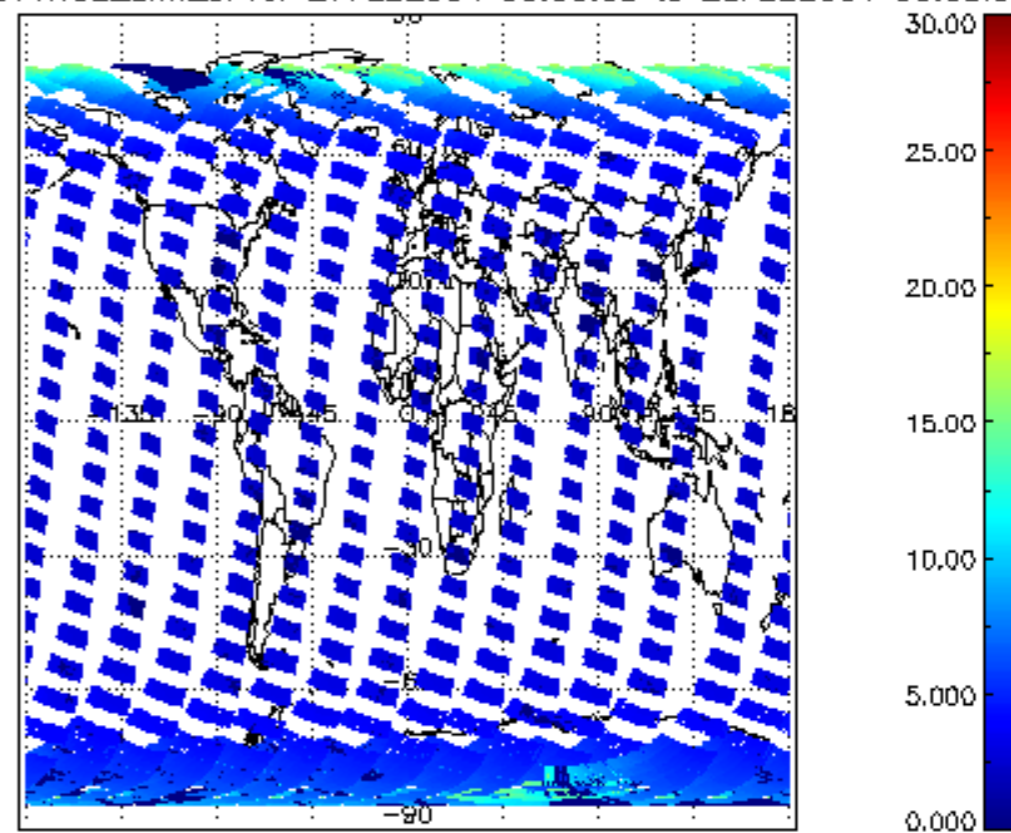
SCIOL2P\_NADUV1NO2\_vcd\_err for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



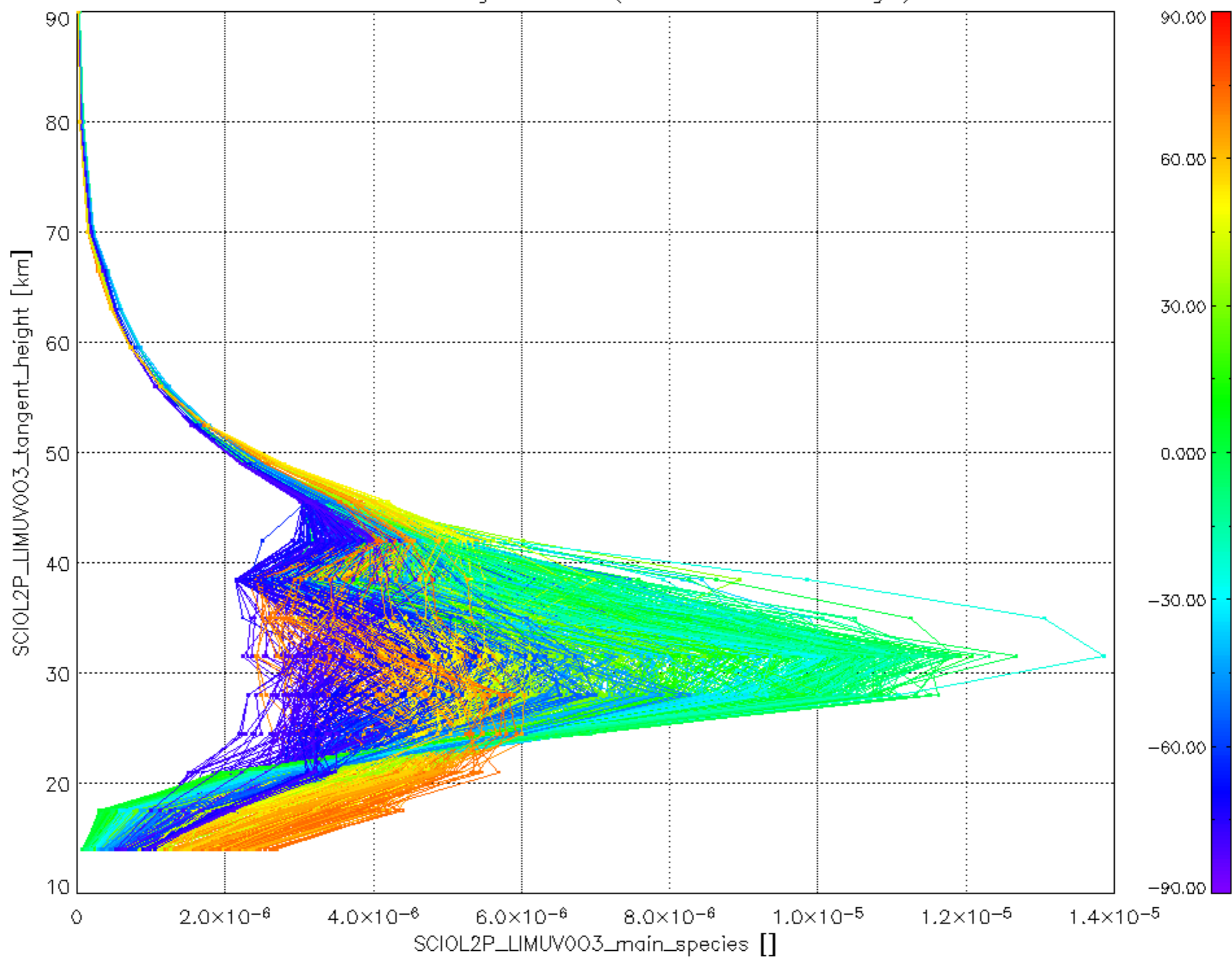
SCIOL2P\_NADUV1NO2\_amf\_gr for 27FEB2004 00:00:00 to 28FEB2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 27FEB2004 00:00:00 to 28FEB2004 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).

