

## 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	1.4 (06-11-2007)
Time of report generation	31MAR2008 06:03:30
Data source version	SCIA-OL/3.01-R
Processing scope for products	08MAR2008 00:00:00 to 09MAR2008 00:00:00
Start time of first product within scope	08MAR2008 00:15:05
Stop time of last product within scope	09MAR2008 00:38:47
Total number of level 2 products	15
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	SCI_OL__2PRDPA20080308_001505_000033252066_00360_31476_4294.N1	08MAR2008 00:15:05	08MAR2008 01:10:31	0	GOOD
1	SCI_OL__2PRDPA20080308_015649_000032692066_00361_31477_4291.N1	08MAR2008 01:56:49	08MAR2008 02:51:19	0	GOOD
2	SCI_OL__2PRDPA20080308_033616_000033252066_00362_31478_4292.N1	08MAR2008 03:36:16	08MAR2008 04:31:42	0	GOOD
3	SCI_OL__2PRDPA20080308_051800_000032692066_00363_31479_4295.N1	08MAR2008 05:18:00	08MAR2008 06:12:30	0	GOOD
4	SCI_OL__2PRDPA20080308_065727_000033252066_00364_31480_4296.N1	08MAR2008 06:57:27	08MAR2008 07:52:53	0	GOOD
5	SCI_OL__2PRDPA20080308_083911_000032692066_00365_31481_4297.N1	08MAR2008 08:39:11	08MAR2008 09:33:41	0	GOOD
6	SCI_OL__2PRDPA20080308_101838_000033252066_00366_31482_4298.N1	08MAR2008 10:18:38	08MAR2008 11:14:04	0	GOOD
7	SCI_OL__2PRDPA20080308_120022_000032692066_00367_31483_4299.N1	08MAR2008 12:00:22	08MAR2008 12:54:52	0	GOOD
8	SCI_OL__2PRDPA20080308_133949_000033252066_00368_31484_4301.N1	08MAR2008 13:39:49	08MAR2008 14:35:14	0	GOOD
9	SCI_OL__2PRDPA20080308_152133_000032692066_00369_31485_4303.N1	08MAR2008 15:21:33	08MAR2008 16:16:03	0	GOOD
10	SCI_OL__2PRDPA20080308_170100_000033252066_00370_31486_4304.N1	08MAR2008 17:01:00	08MAR2008 17:56:25	0	GOOD
11	SCI_OL__2PRDPA20080308_184106_000033942066_00371_31487_4306.N1	08MAR2008 18:41:06	08MAR2008 19:37:40	0	GOOD
12	SCI_OL__2PRDPA20080308_202141_000033812066_00372_31488_4309.N1	08MAR2008 20:21:41	08MAR2008 21:18:03	0	GOOD
13	SCI_OL__2PRDPA20080308_220355_000032692066_00373_31489_4311.N1	08MAR2008 22:03:55	08MAR2008 22:58:24	0	GOOD
14	SCI_OL__2PRDPA20080308_234322_000033252066_00374_31490_4312.N1	08MAR2008 23:43:22	09MAR2008 00:38:47	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: 144040

Total number of cloud data DSRs with good quality flag (=0): 144040 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	144040	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	144040	0.17103	0.12500	0.12500	0.25000	0.060291	s
SURFACE_PRES	144040	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	144040	0.39024	0.35331	0.0000	1.0000	0.28525	-

CL_FRAC_ERR	144040	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	144040	5.4729	4.0000	4.0000	8.0000	1.9293	
PMD_READ_CL[0]	144040	0.20666	0.0000	0.0000	8.0000	0.97395	-
PMD_READ_CL[1]	144040	0.83805	0.0000	0.0000	8.0000	2.0214	-
CL_TOP_HEIGHT	120497	3.9734	2.3100	0.0000	17.000	4.0132	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	120497	55.953	49.993	0.0000	101.00	40.687	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	144040	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	144040	11001010	11000100	11000000	11100000	3222.6	flags
AERO_ABSO_IND	144040	2.9741	3.4371	-1.4207	16.706	2.0050	
AERO_IND_DIAG	144040	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	144040	01011001	00000000	00000000	11000000	24511.	flags

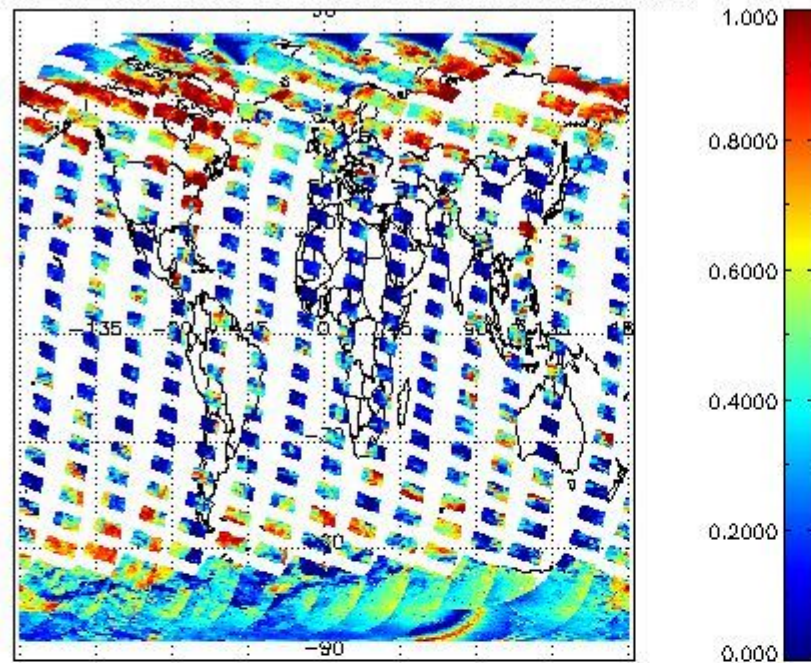
Time and geolocation plots:

Plots are available for the following parameters:

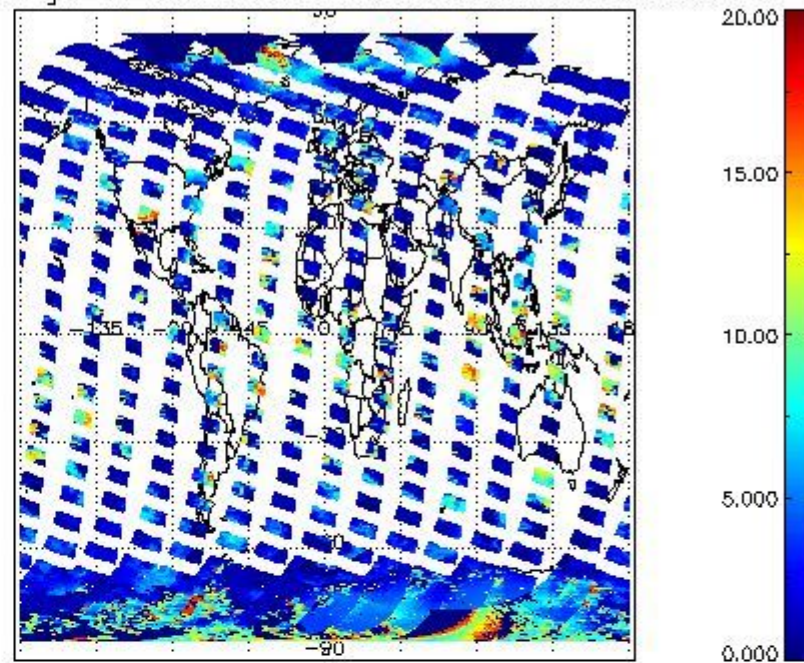
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



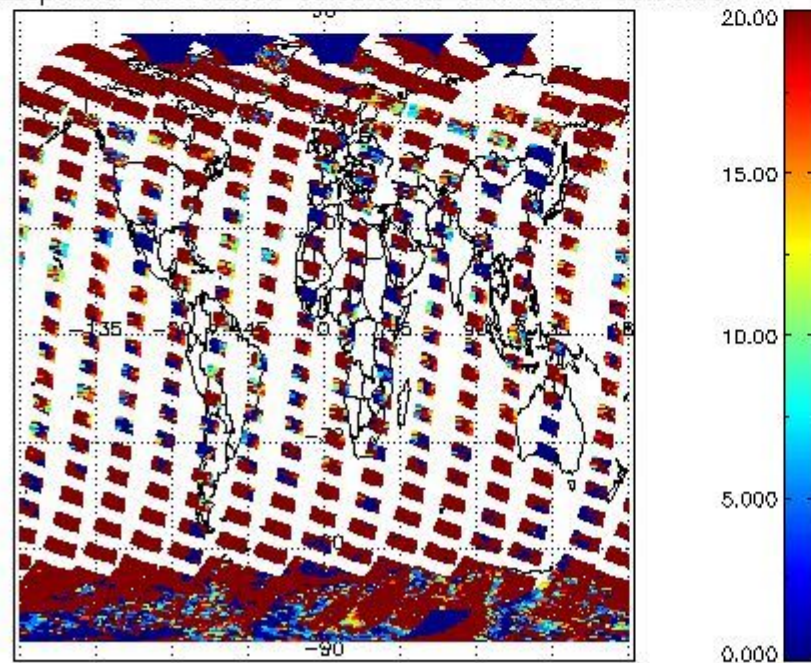
cLfrac for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



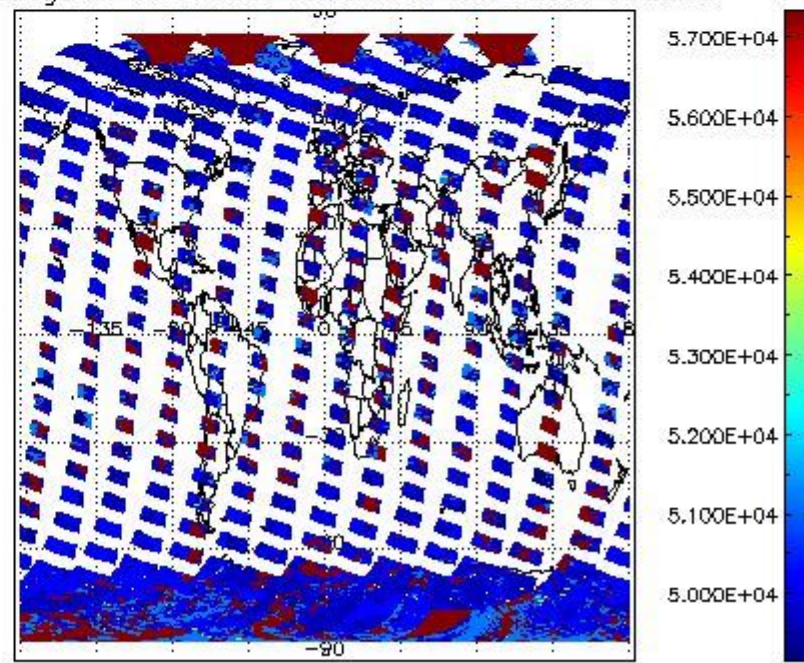
cLtop\_height for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



cLopt\_depth for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



cloud\_flags for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



### 2.2.2 Nadir

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

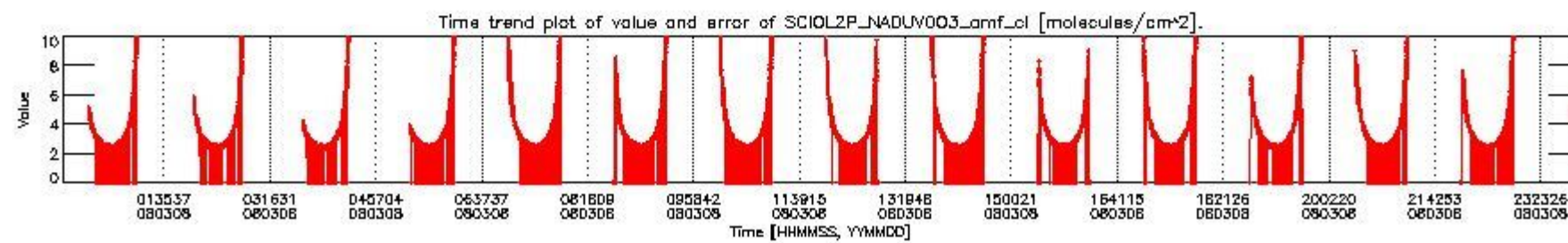
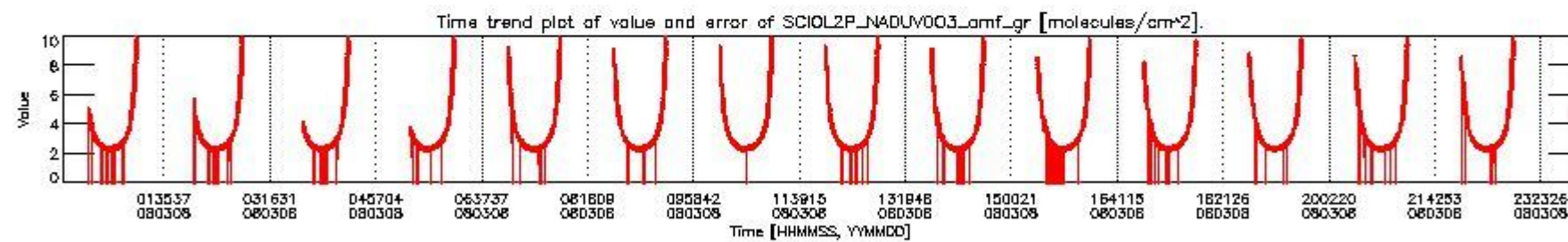
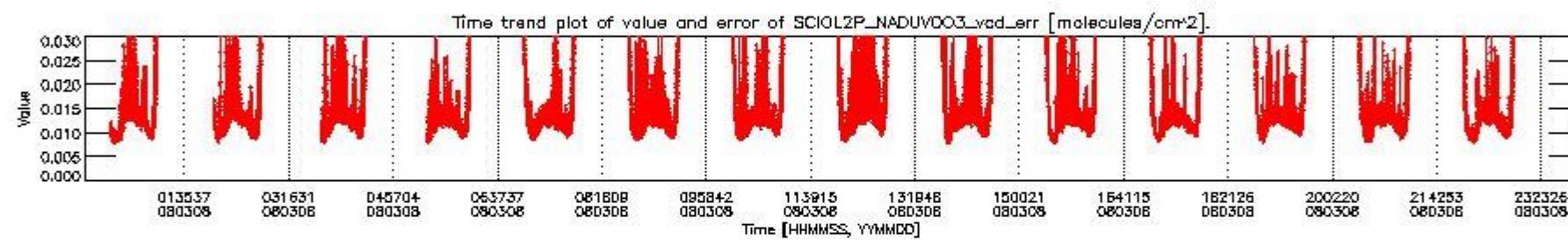
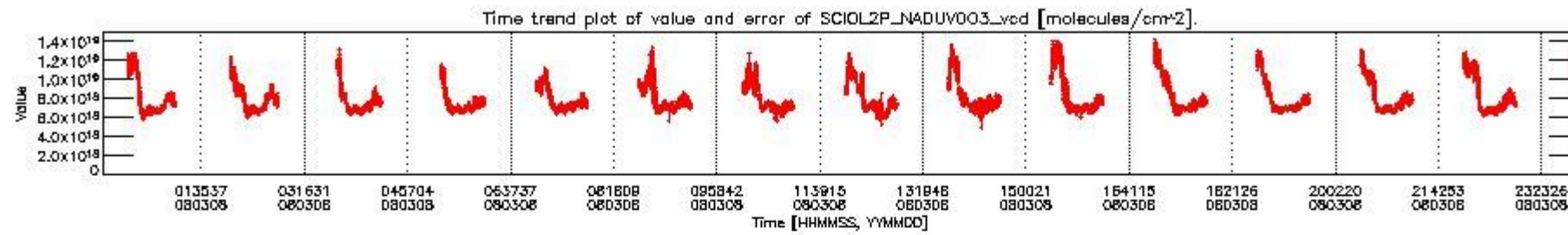
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl



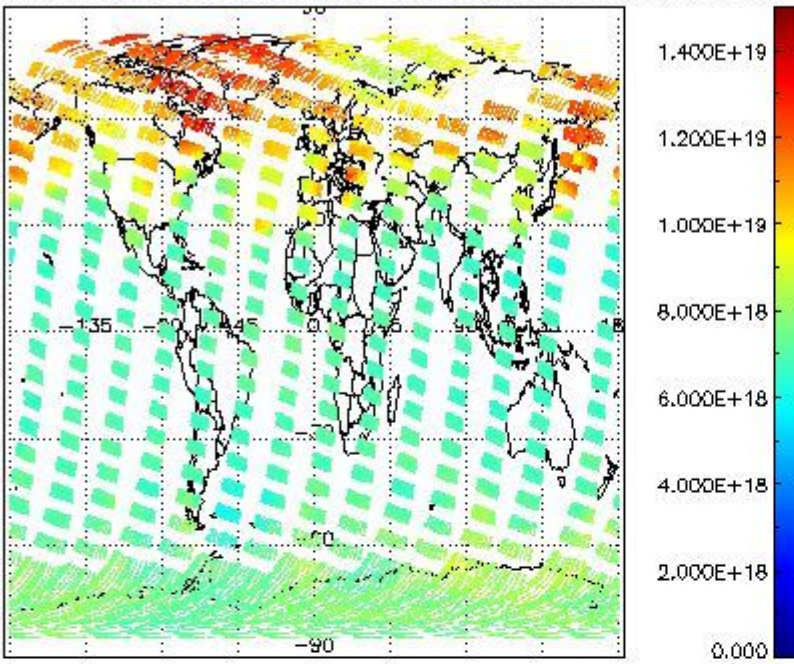
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

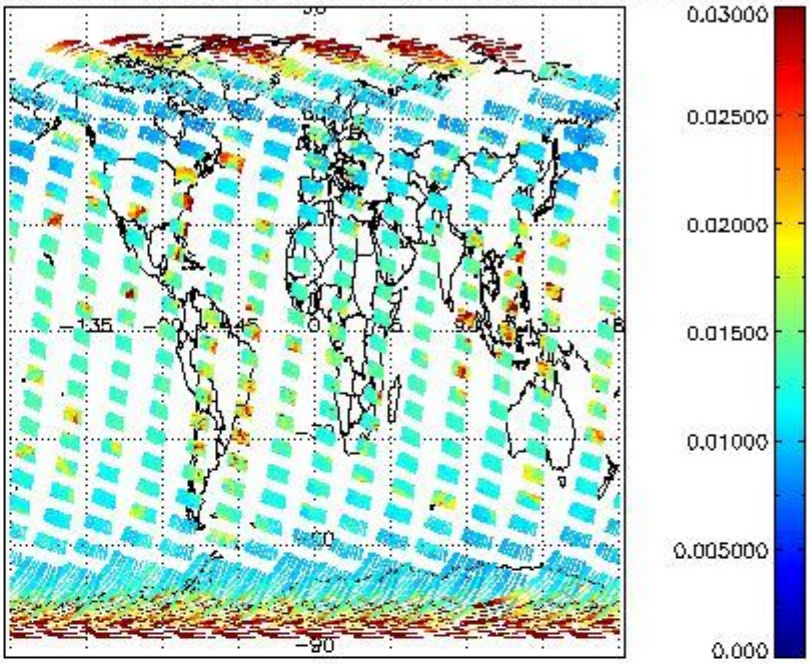




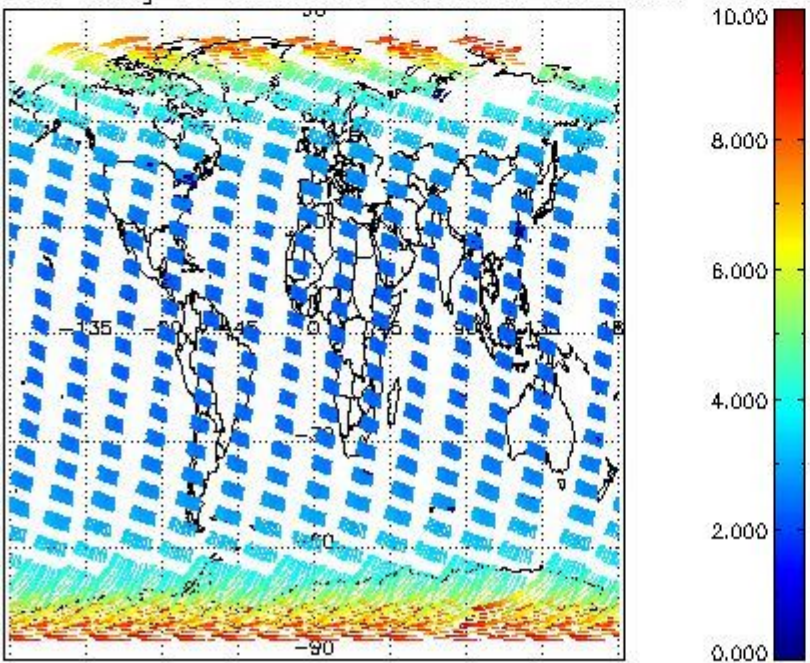
SCIOL2P\_NADUV003\_vcd for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



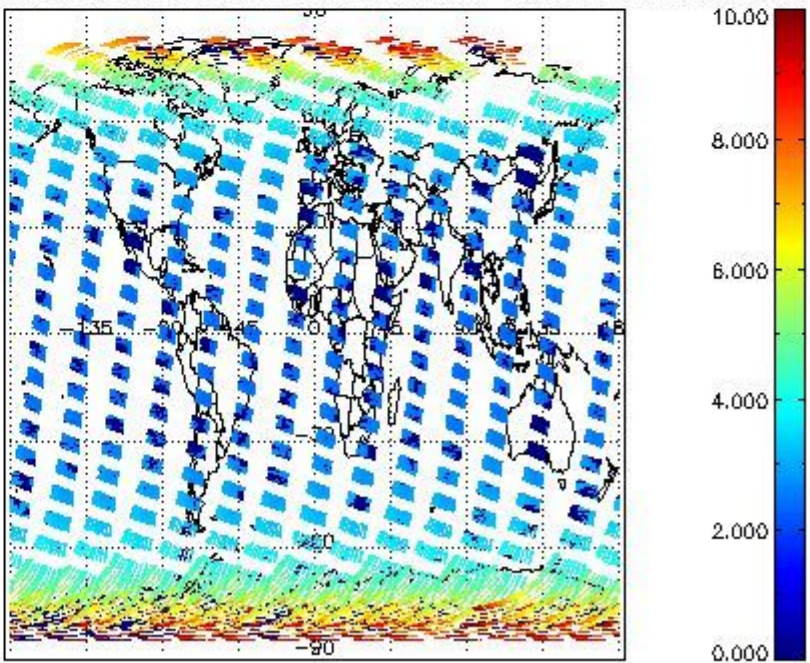
SCIOL2P\_NADUV003\_vcd\_err for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



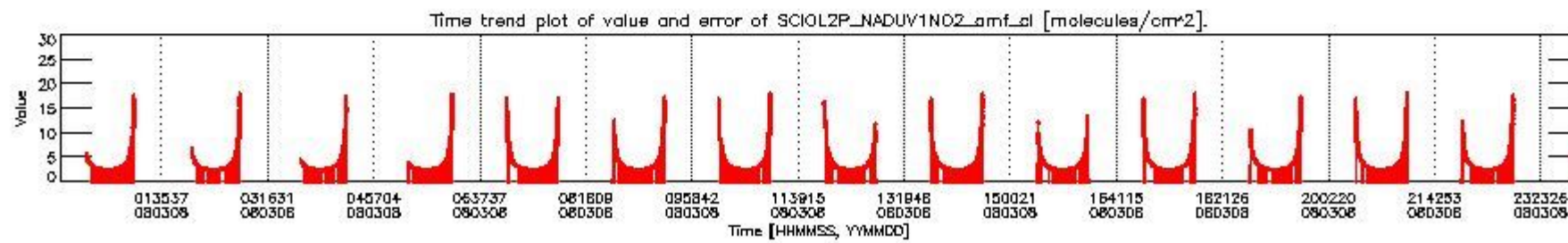
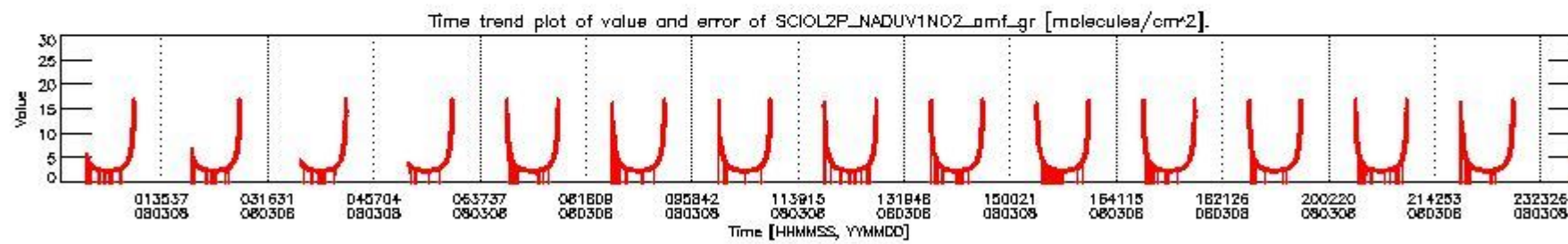
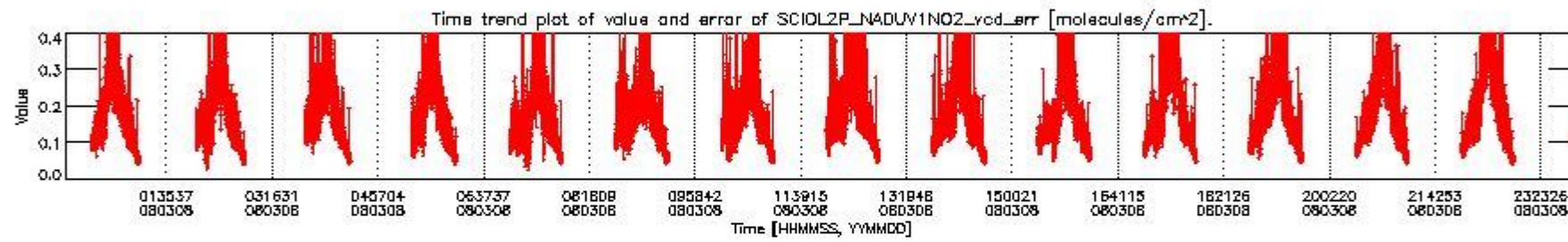
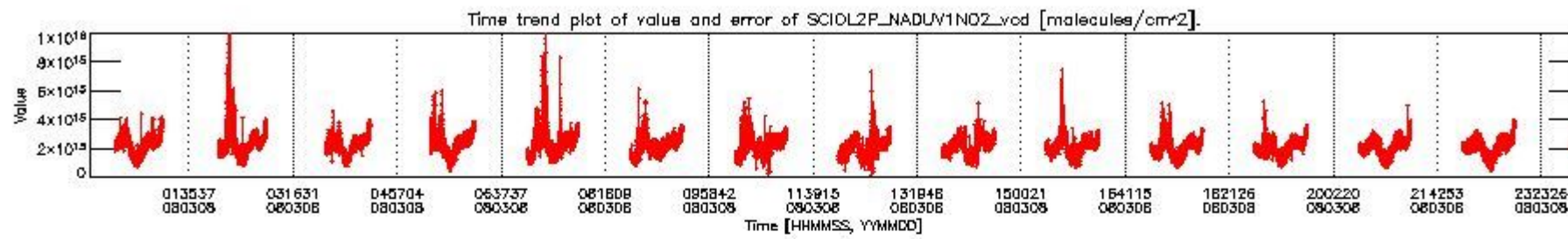
SCIOL2P\_NADUV003\_amf\_gr for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



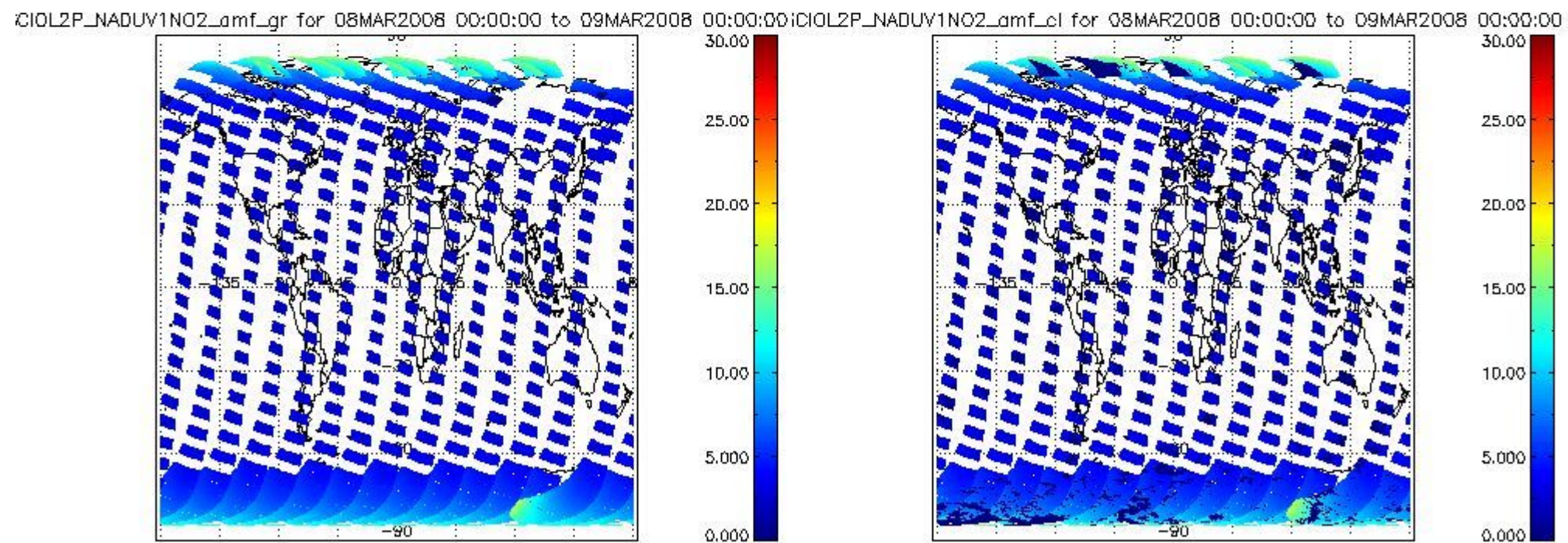
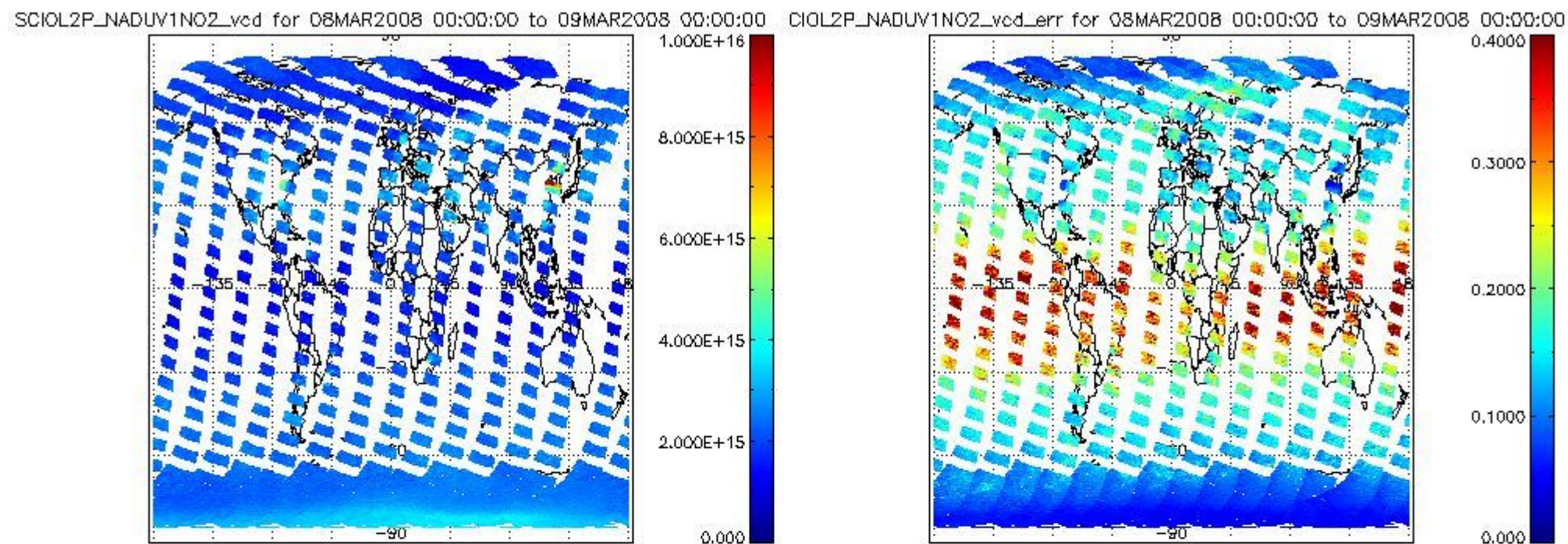
SCIOL2P\_NADUV003\_amf\_cl for 08MAR2008 00:00:00 to 09MAR2008 00:00:00











### 2.2.3 Limb

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

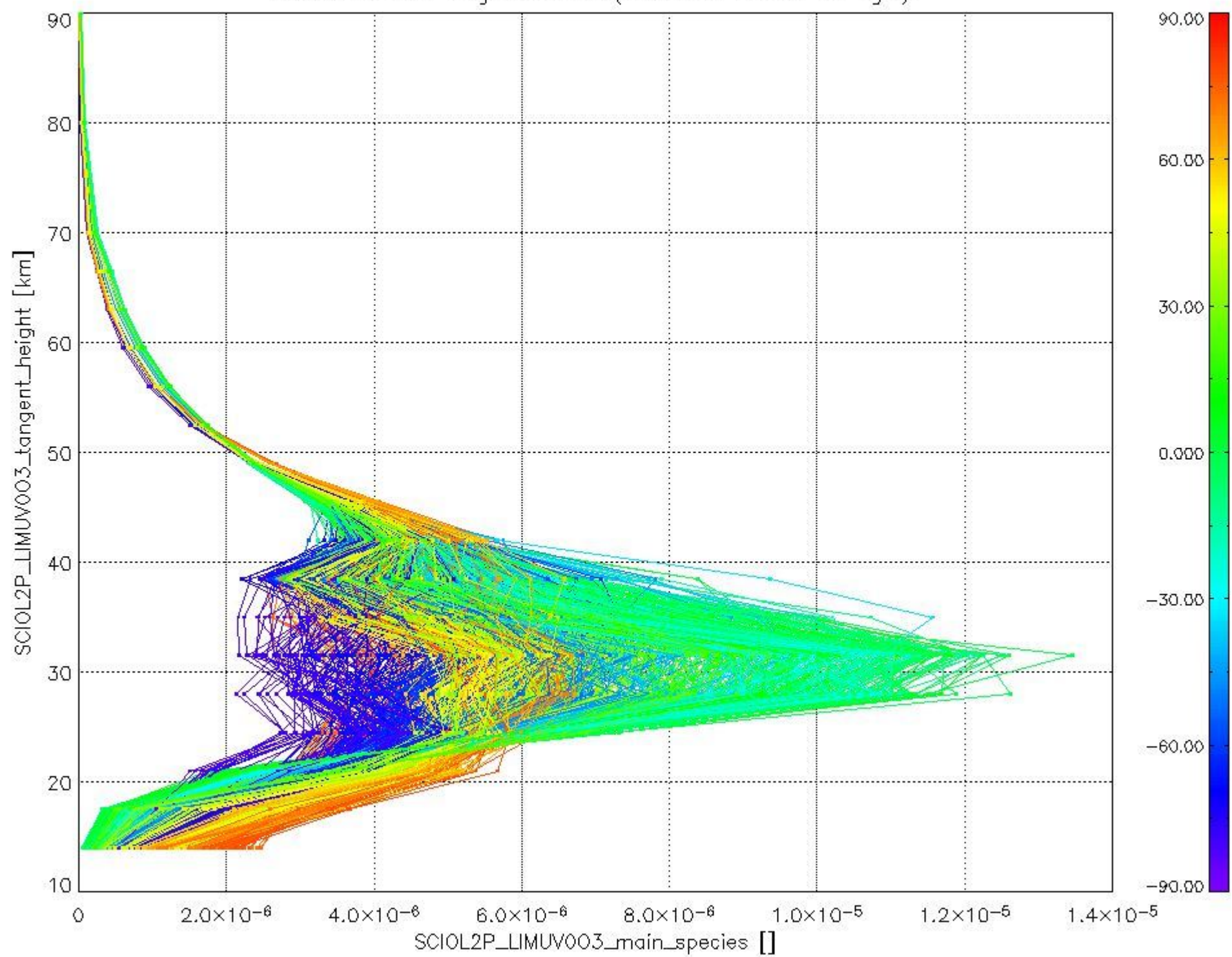
The following data items are currently included into this section:

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.

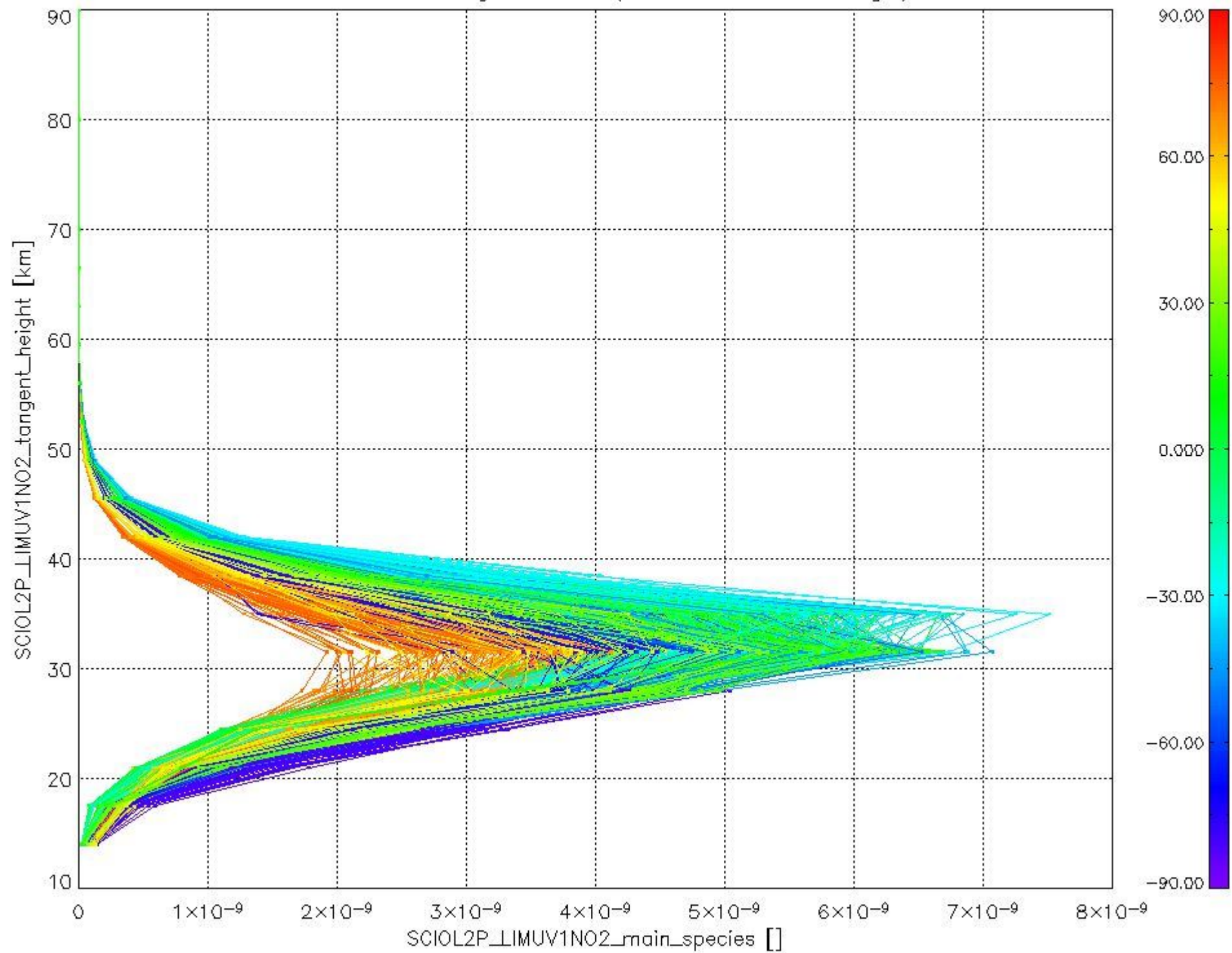


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





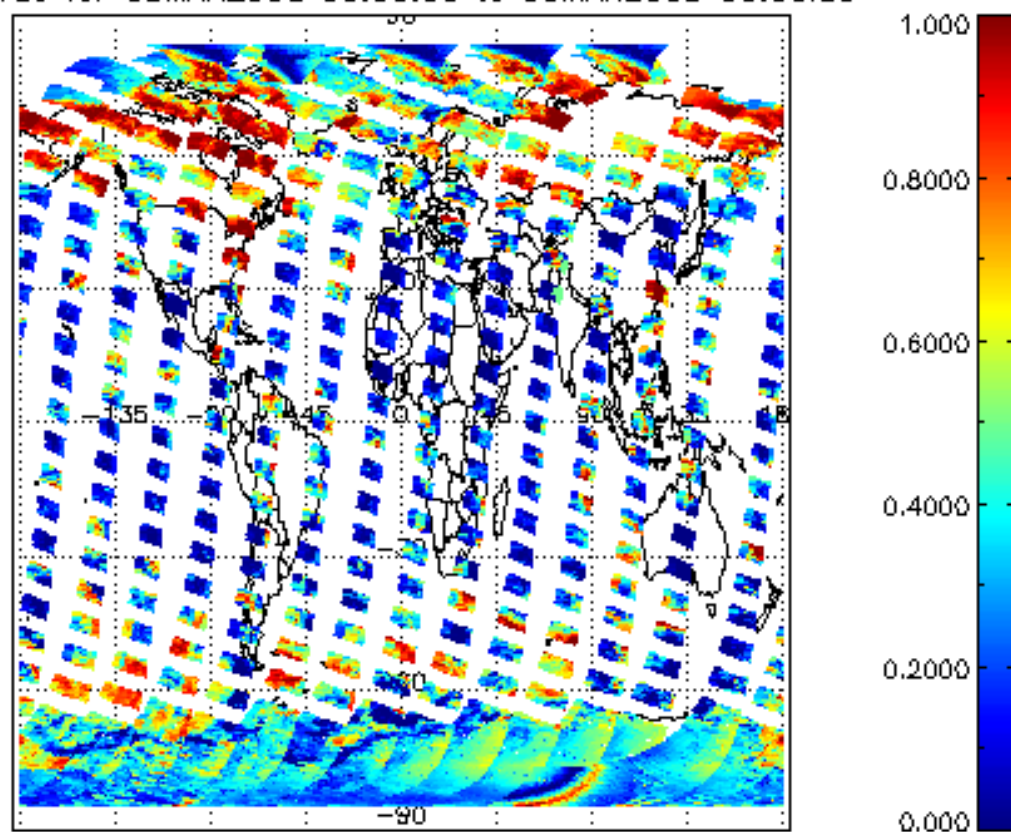
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



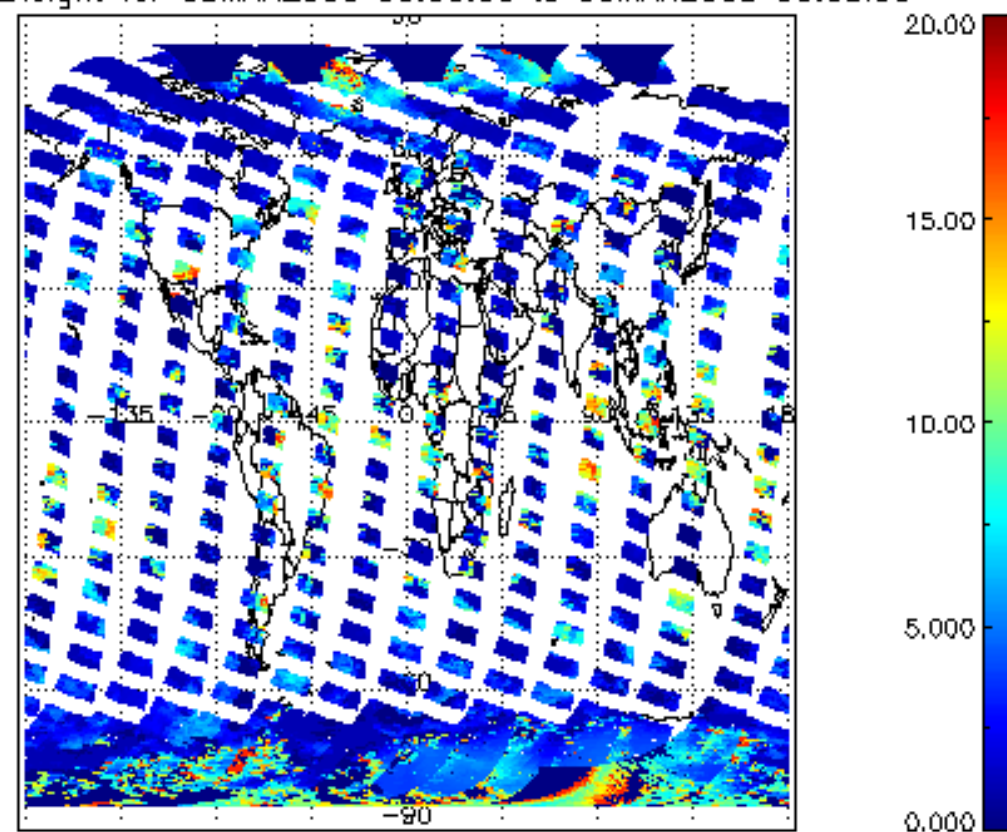
### 2.3 ADF monitoring

Number	ADF
	IN_ (INITIALISATION_FILE)
0	SCI_IN_AXNPDE20070629_092400_20070720_000000_20991231_235959
	ECF (ECMWF_FILE)
1	NOT USED

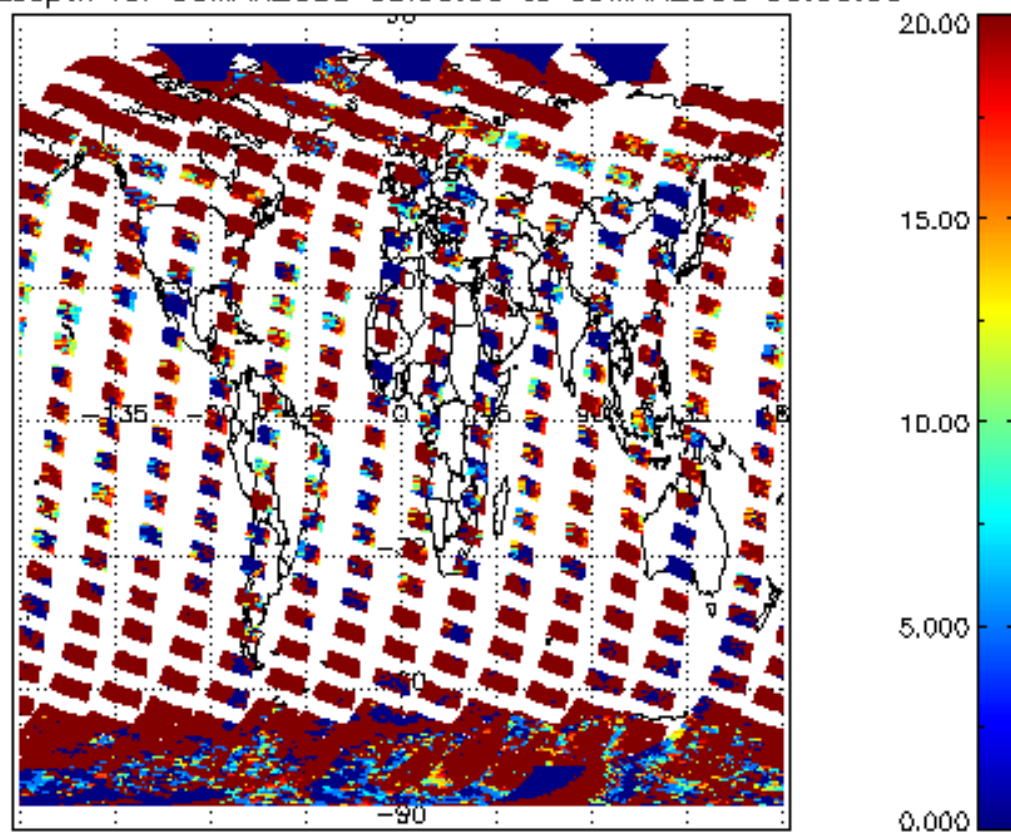
cL\_frac for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



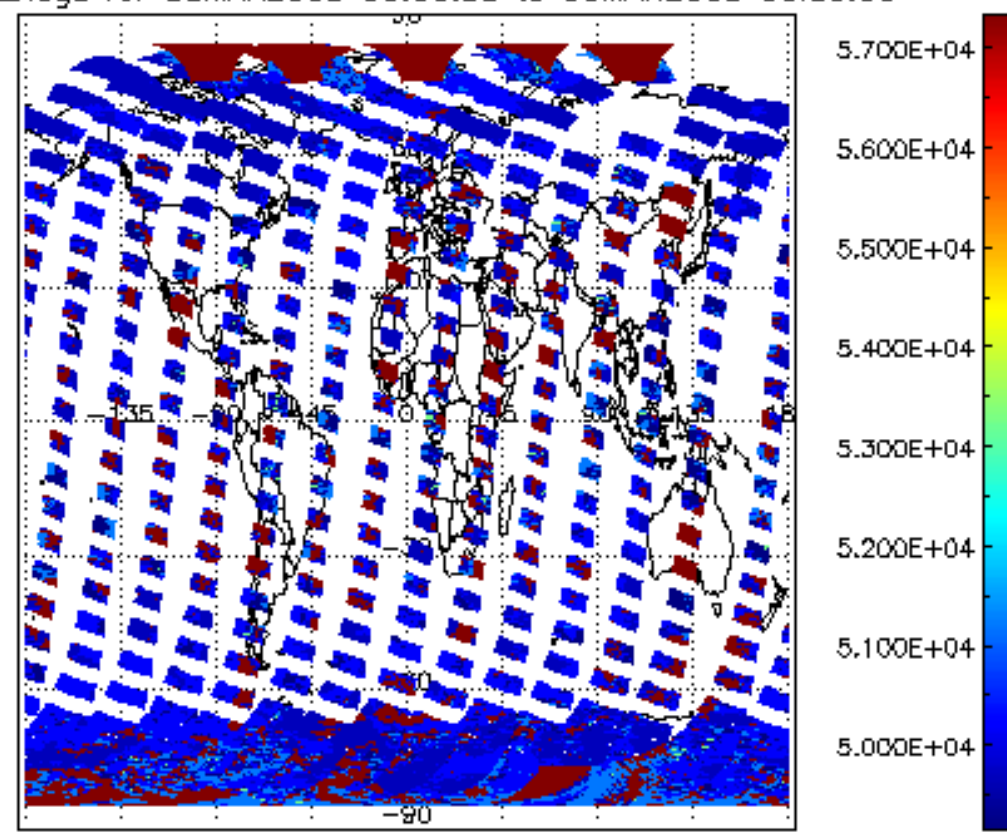
cL\_top\_height for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



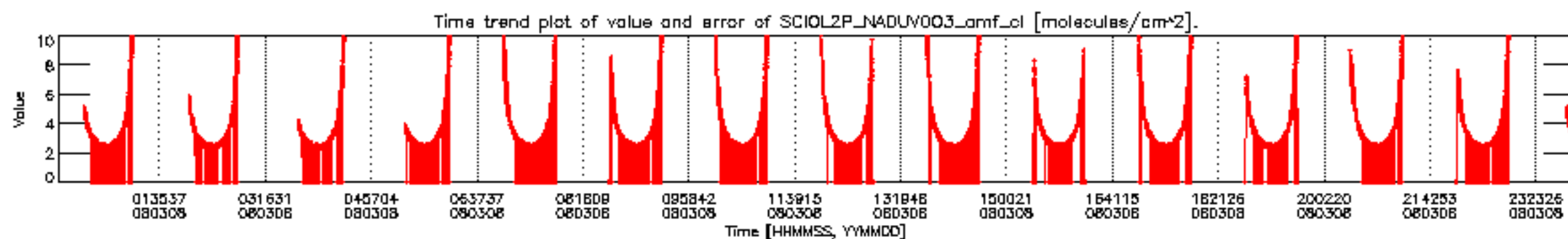
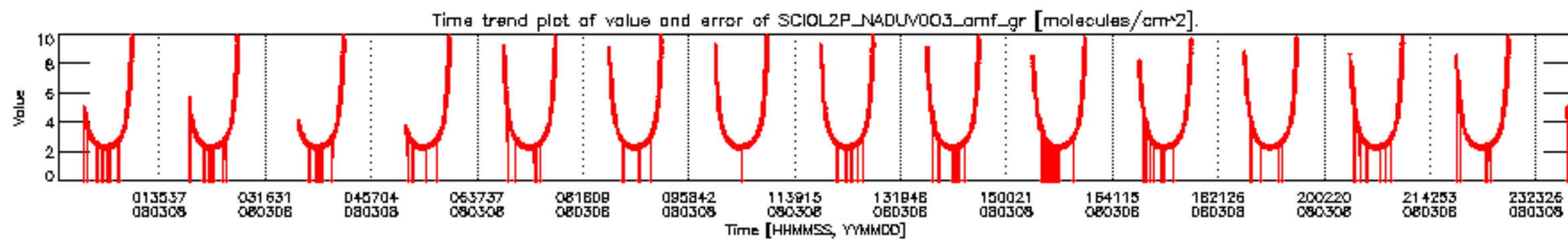
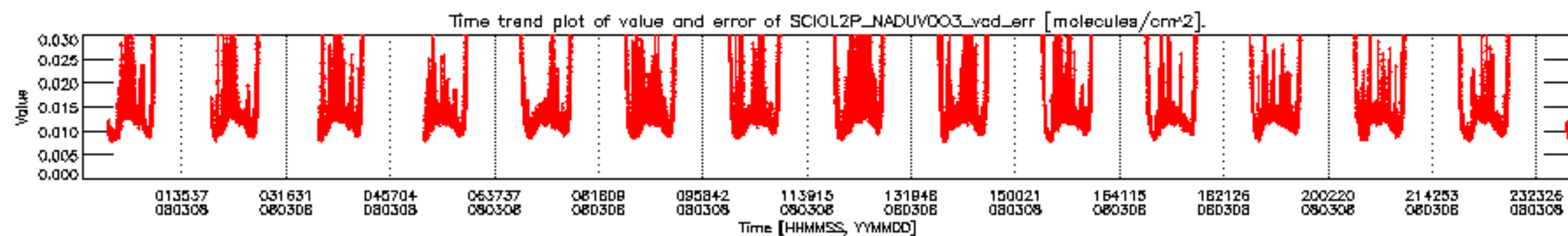
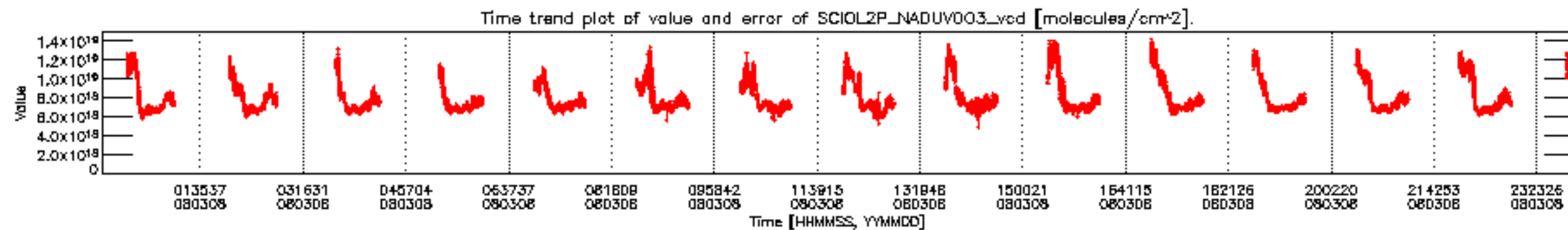
cL\_opt\_depth for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



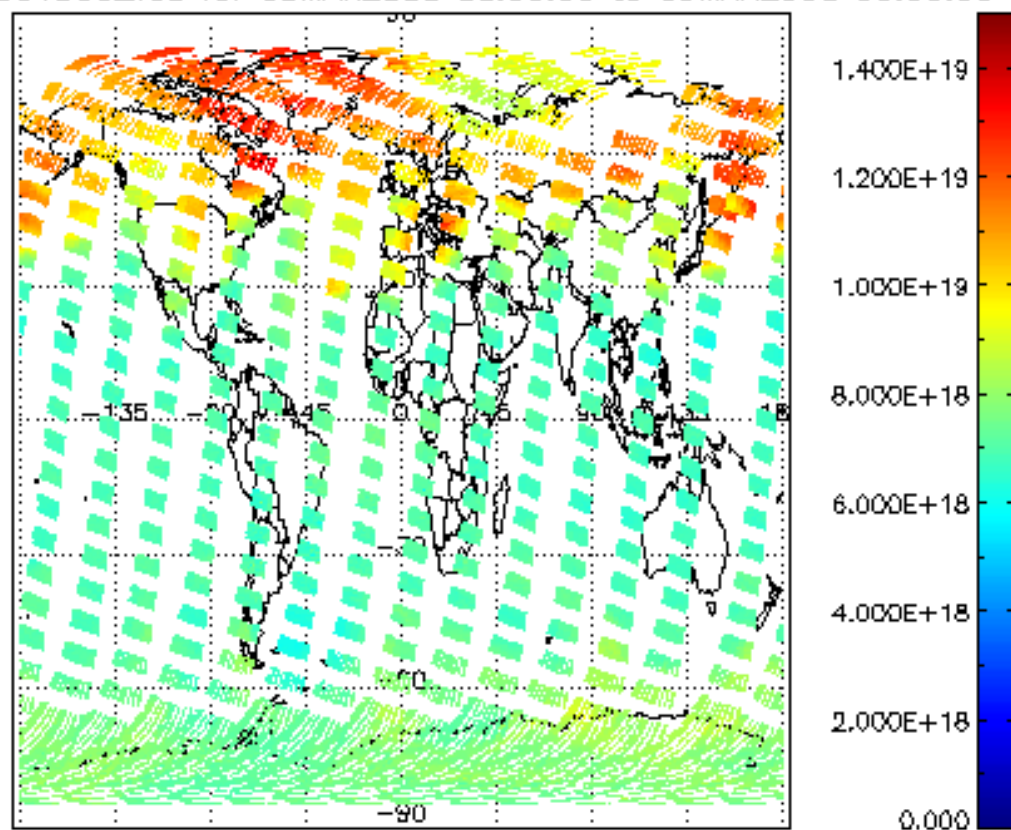
cloud\_flags for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



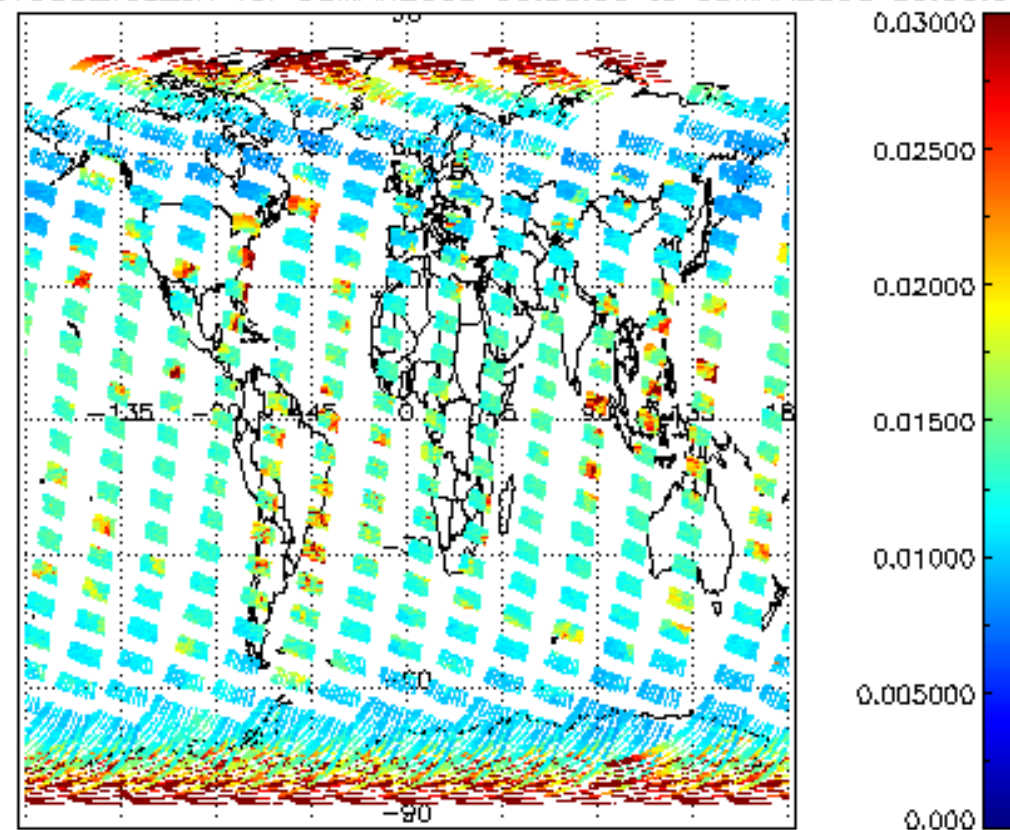




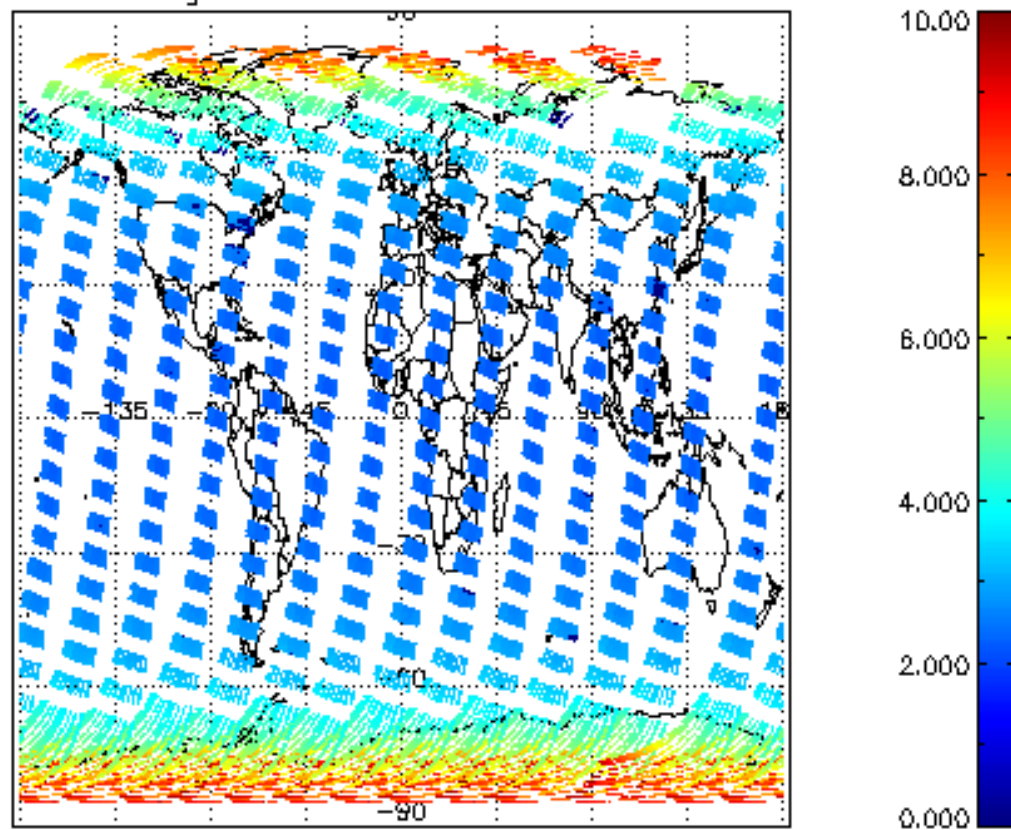
SCIOL2P\_NADUV003\_vcd for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



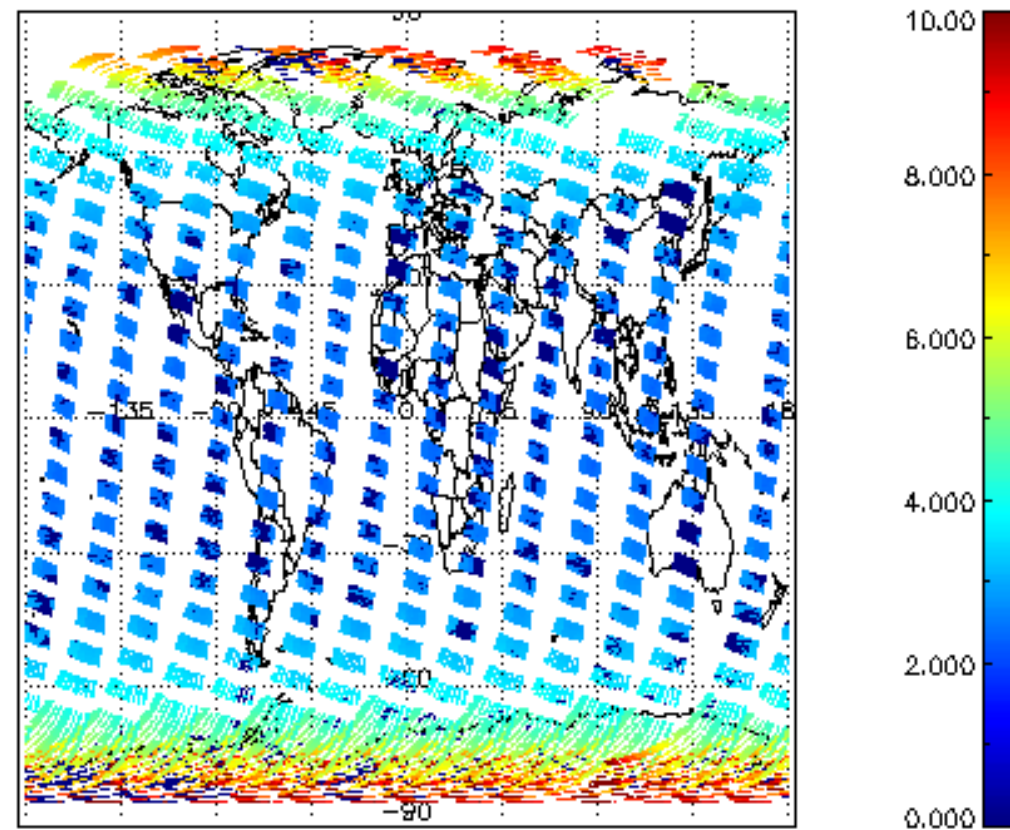
SCIOL2P\_NADUV003\_vcd\_err for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



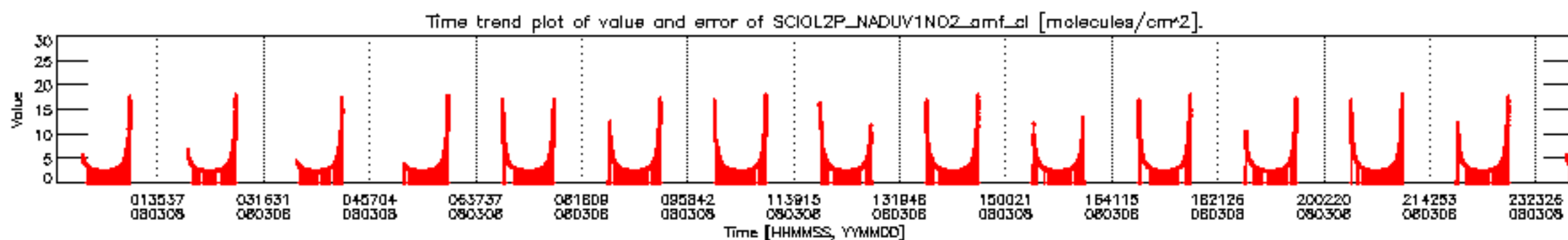
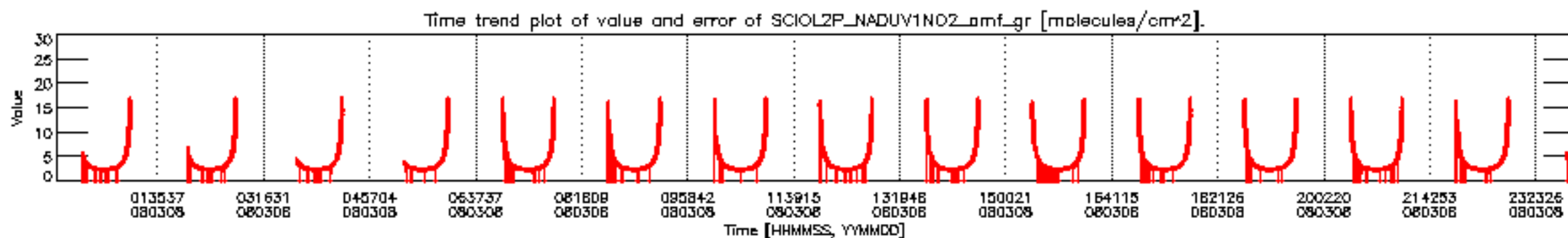
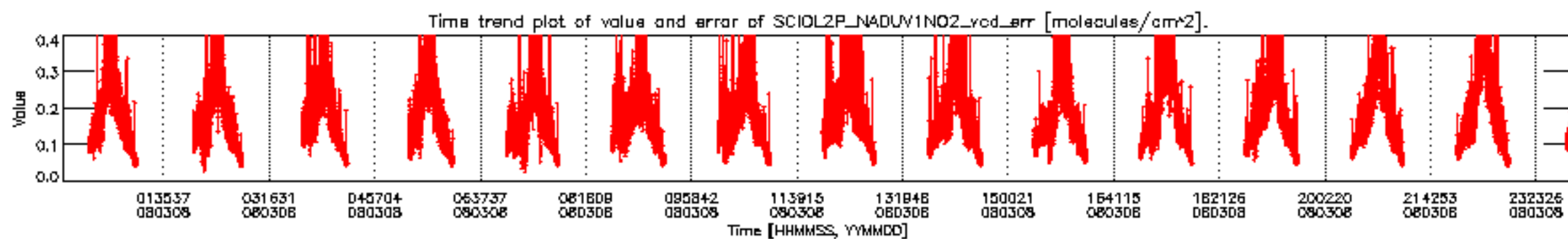
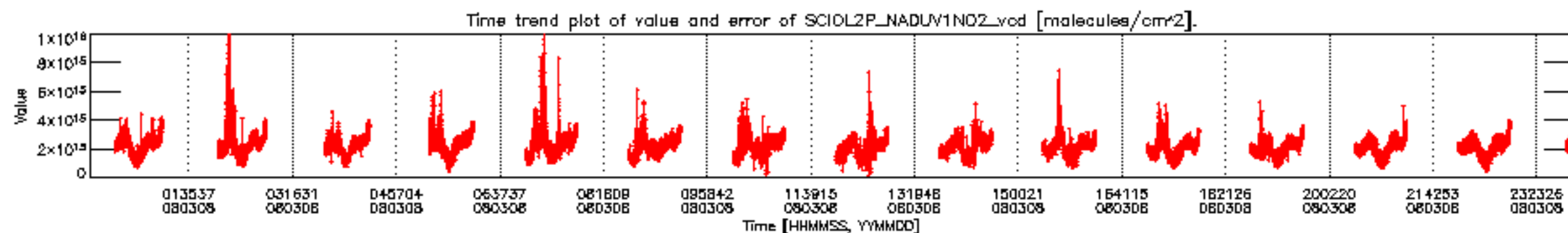
SCIOL2P\_NADUV003\_amf\_gr for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



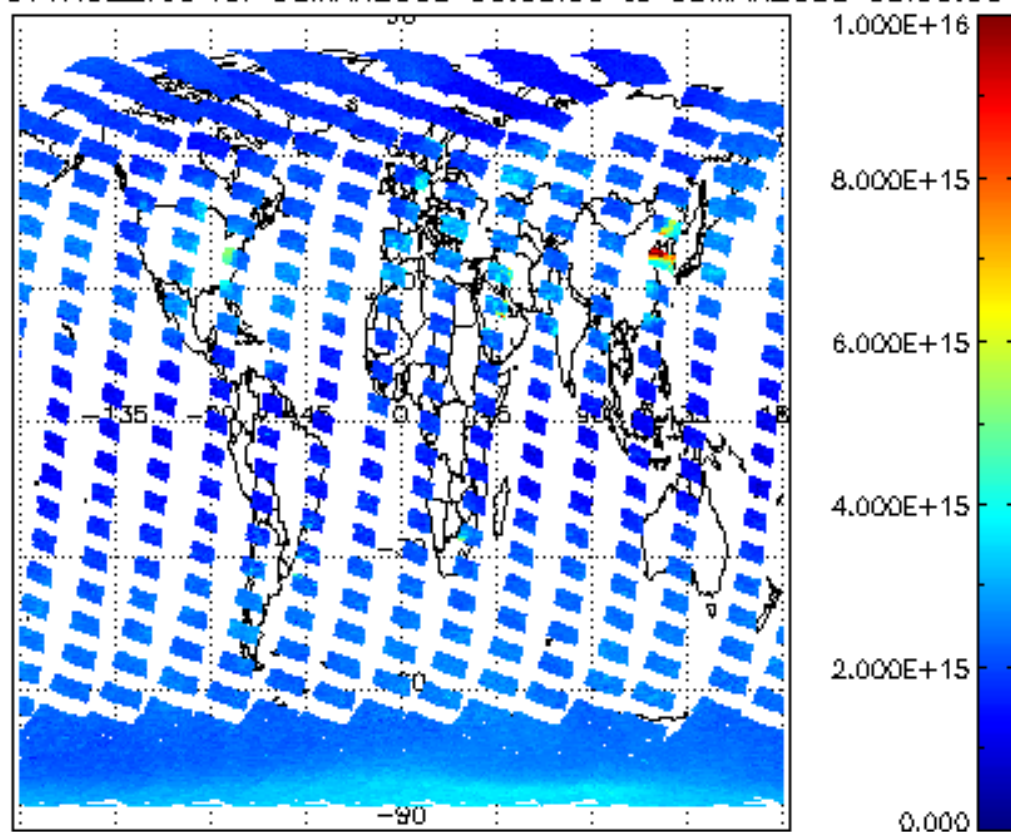
SCIOL2P\_NADUV003\_amf\_cl for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



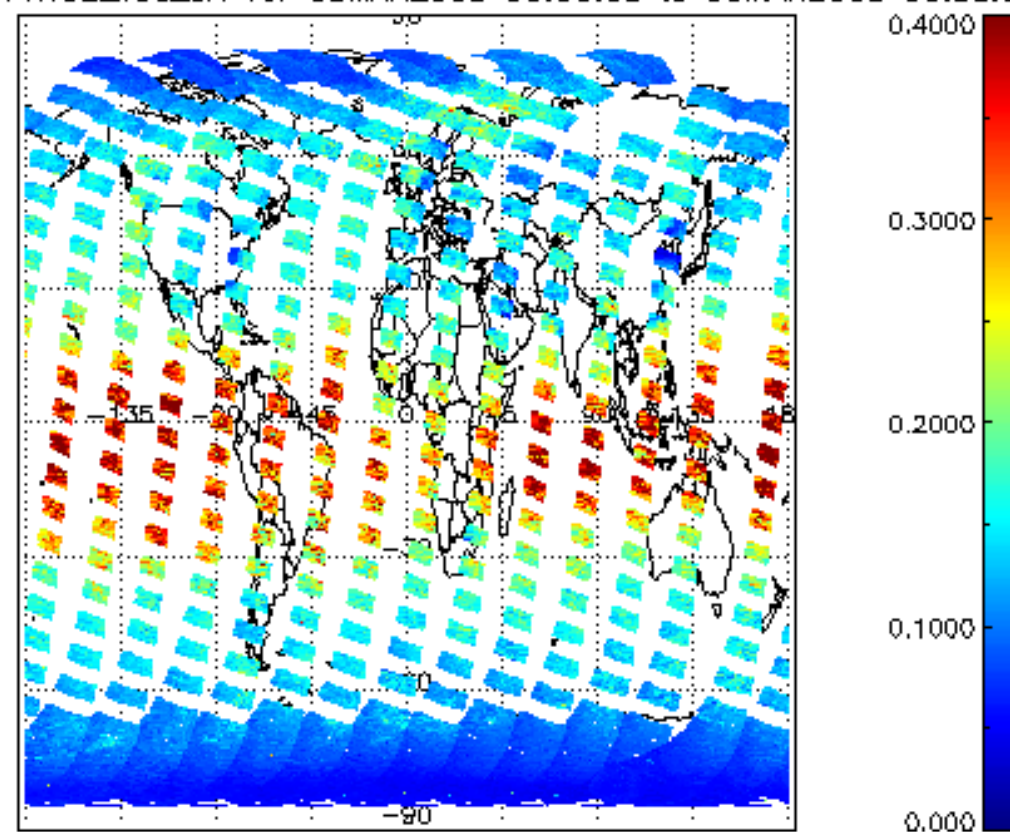




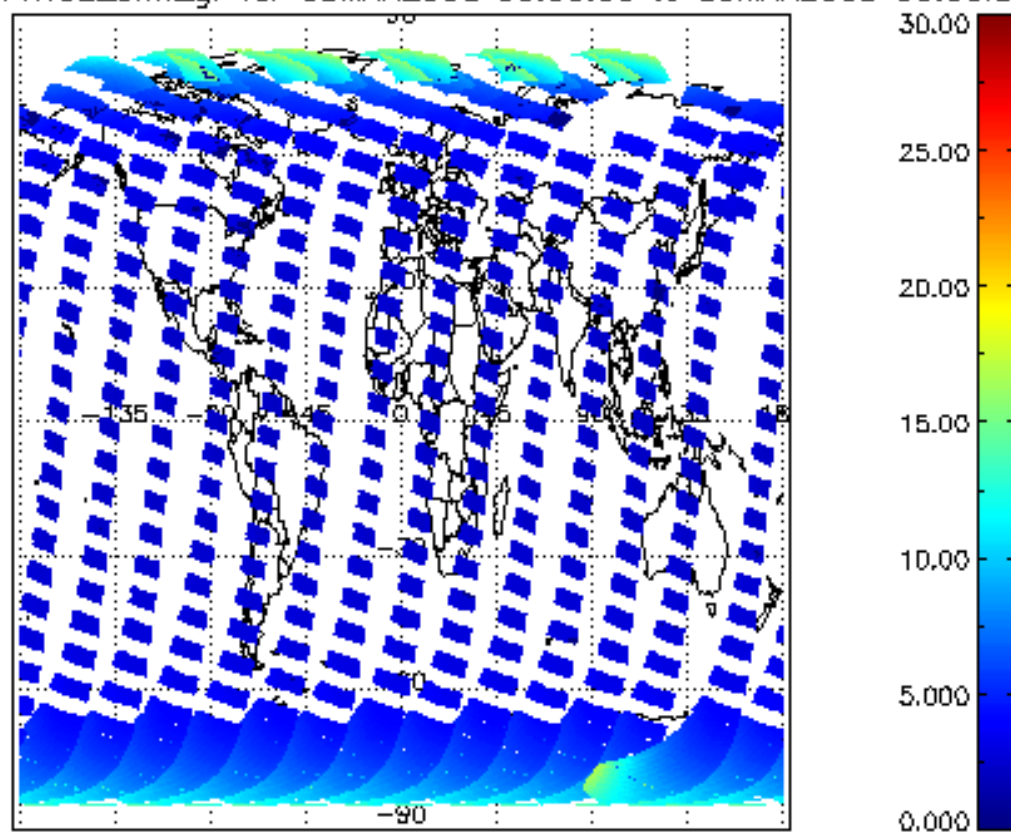
SCIOL2P\_NADUV1NO2\_vcd for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



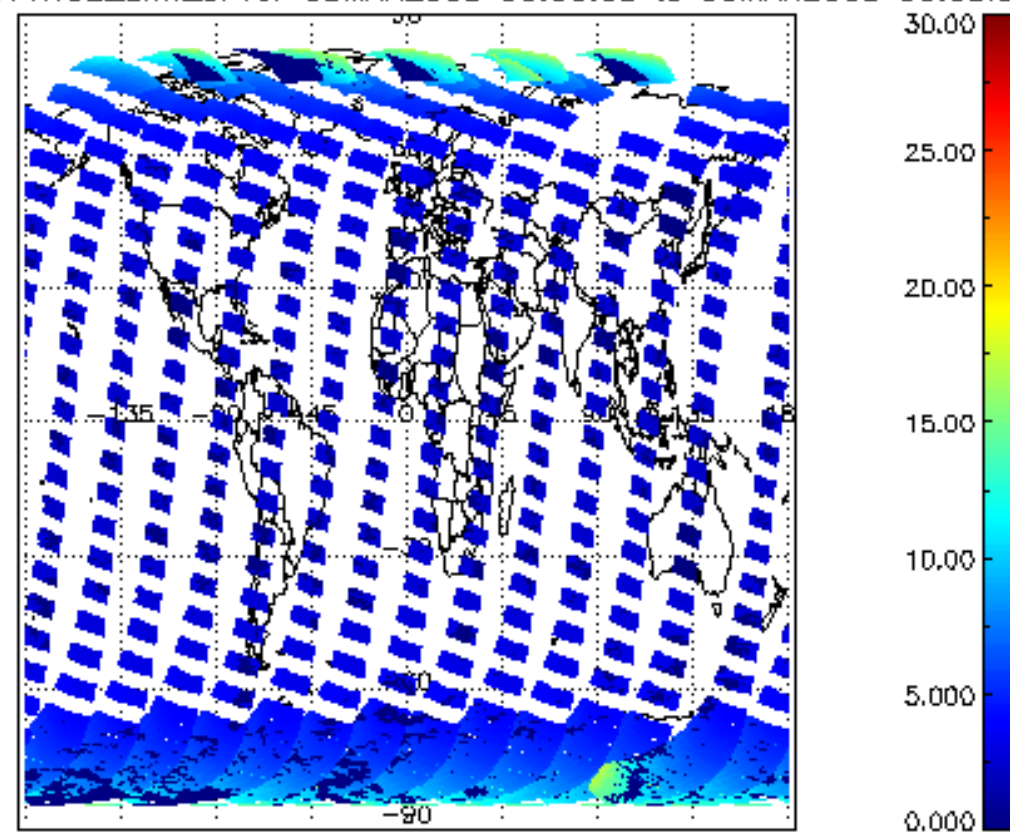
SCIOL2P\_NADUV1NO2\_vcd\_err for 08MAR2008 00:00:00 to 09MAR2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 08MAR2008 00:00:00 to 09MAR2008 00:00:00

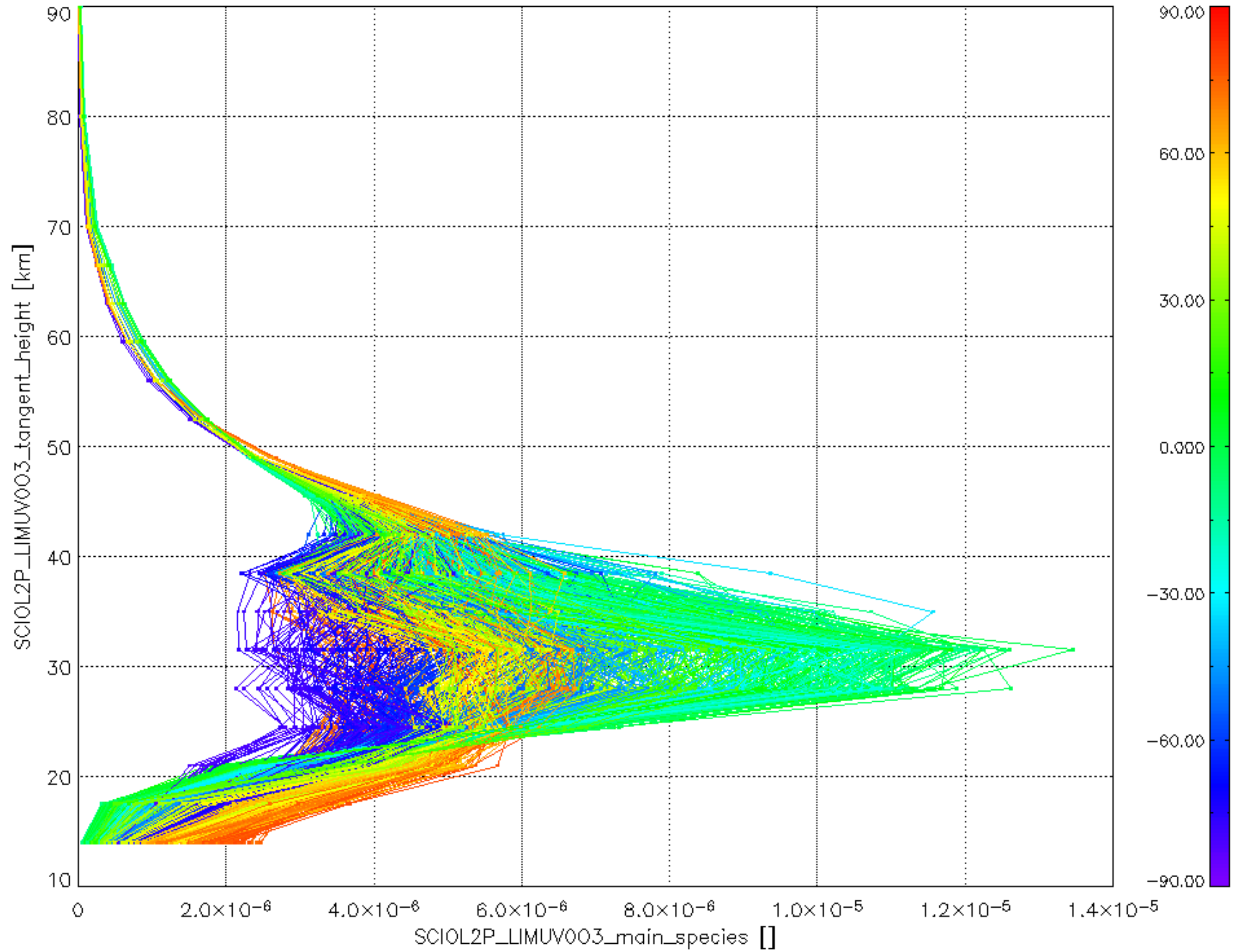


SCIOL2P\_NADUV1NO2\_amf\_cl for 08MAR2008 00:00:00 to 09MAR2008 00:00:00





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).

