

## 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	01MAR2008 06:02:38
Data source version	SCIA-OL/3.01-R
Processing scope for products	07FEB2008 00:00:00 to 08FEB2008 00:00:00
Start time of first product within scope	06FEB2008 23:22:08
Stop time of last product within scope	07FEB2008 23:44:54
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__2PRDPA20080206_232208_000032692065_00431_31046_2656.N1	06FEB2008 23:22:08	07FEB2008 00:16:38	0	GOOD
1	SCI_OL__2PRDPA20080207_010135_000033252065_00432_31047_2655.N1	07FEB2008 01:01:35	07FEB2008 01:57:00	0	GOOD
2	SCI_OL__2PRDPA20080207_032243_000009052065_00433_31048_2653.N1	07FEB2008 03:22:43	07FEB2008 03:37:48	0	GOOD
3	SCI_OL__2PRDPA20080207_042246_000033252065_00434_31049_2657.N1	07FEB2008 04:22:46	07FEB2008 05:18:11	0	GOOD
4	SCI_OL__2PRDPA20080207_060430_000032692065_00435_31050_2658.N1	07FEB2008 06:04:30	07FEB2008 06:58:59	0	GOOD
5	SCI_OL__2PRDPA20080207_074357_000033252065_00436_31051_2674.N1	07FEB2008 07:43:57	07FEB2008 08:39:22	0	GOOD
6	SCI_OL__2PRDPA20080207_092541_000032692065_00437_31052_2689.N1	07FEB2008 09:25:41	07FEB2008 10:20:10	0	GOOD
7	SCI_OL__2PRDPA20080207_110508_000033252065_00438_31053_2692.N1	07FEB2008 11:05:08	07FEB2008 12:00:33	0	GOOD
8	SCI_OL__2PRDPA20080207_124652_000000522065_00439_31054_2720.N1	07FEB2008 12:46:52	07FEB2008 12:47:44	0	GOOD
9	SCI_OL__2PRDPA20080207_142823_000032012065_00440_31055_2721.N1	07FEB2008 14:28:23	07FEB2008 15:21:44	0	GOOD
10	SCI_OL__2PRDPA20080207_160803_000032692065_00441_31056_2731.N1	07FEB2008 16:08:03	07FEB2008 17:02:32	0	GOOD
11	SCI_OL__2PRDPA20080207_174703_000033812065_00442_31057_2732.N1	07FEB2008 17:47:03	07FEB2008 18:43:24	0	GOOD
12	SCI_OL__2PRDPA20080207_192738_000033942065_00443_31058_2736.N1	07FEB2008 19:27:38	07FEB2008 20:24:12	0	GOOD
13	SCI_OL__2PRDPA20080207_210841_000033252065_00444_31059_2738.N1	07FEB2008 21:08:41	07FEB2008 22:04:06	0	GOOD
14	SCI_OL__2PRDPA20080207_225024_000032692065_00445_31060_2739.N1	07FEB2008 22:50:24	07FEB2008 23:44:54	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: 135460

Total number of cloud data DSRs with good quality flag (=0): 135460 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	135460	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	135460	0.16747	0.12500	0.12500	0.25000	0.059202	s
SURFACE_PRES	135460	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	135460	0.41195	0.39320	0.0000	1.0000	0.27295	-

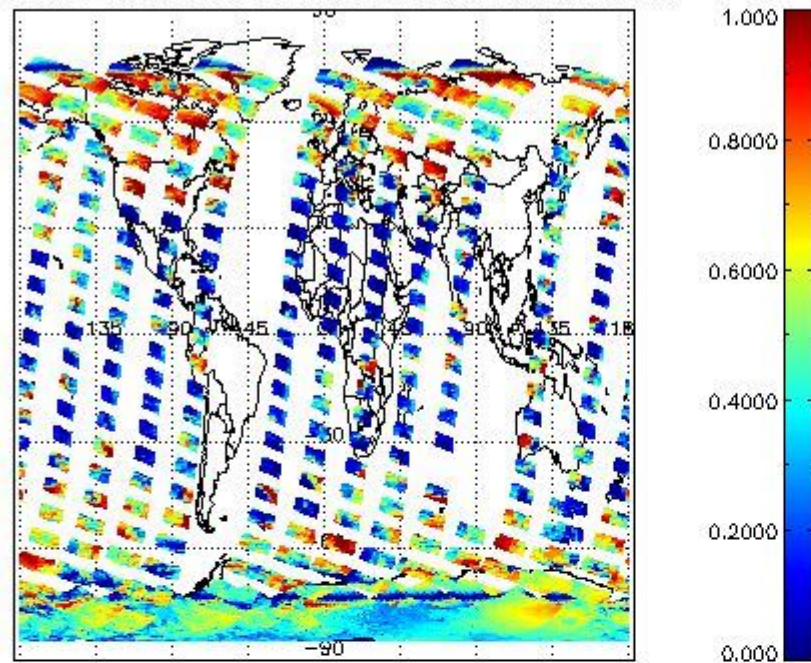
CL_FRAC_ERR	135460	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	135460	5.3589	4.0000	4.0000	8.0000	1.8945	
PMD_READ_CL[0]	135460	0.18783	0.0000	0.0000	8.0000	0.93597	-
PMD_READ_CL[1]	135460	0.58977	0.0000	0.0000	8.0000	1.6929	-
CL_TOP_HEIGHT	113336	4.1132	3.0410	0.0000	17.000	3.7427	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	113336	53.778	43.850	0.0000	101.00	40.016	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	135460	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	135460	11001001	11000100	11000000	11100000	3125.7	flags
AERO_ABSO_IND	135460	2.7042	3.0585	-1.0315	17.073	1.9796	
AERO_IND_DIAG	135460	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	135460	01010011	00000000	00000000	11000000	24378.	flags

Time and geolocation plots:

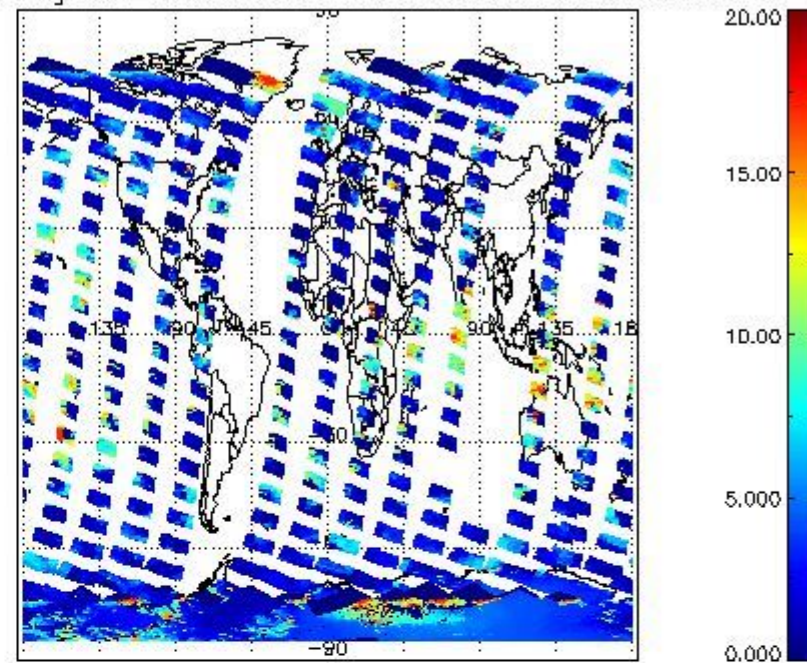
Plots are available for the following parameters:

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

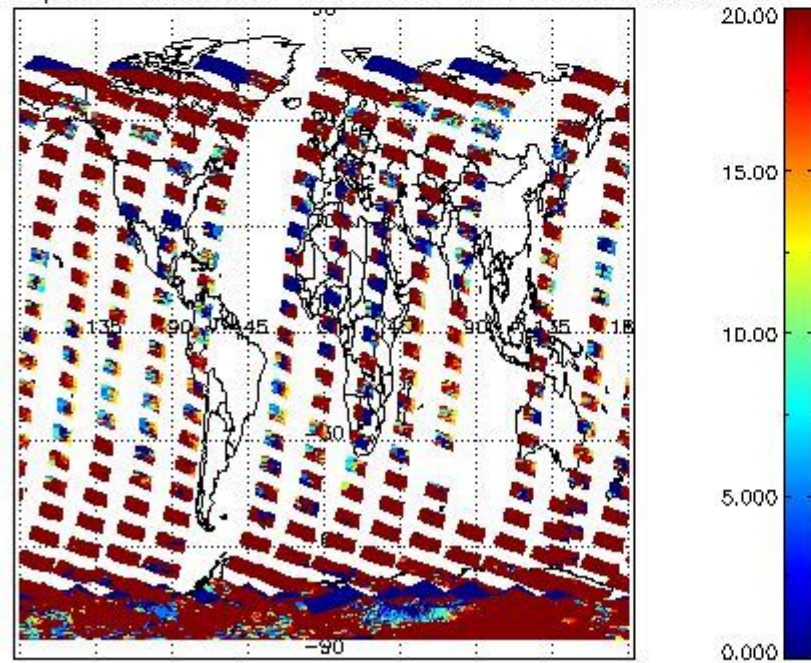
cLfrac for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



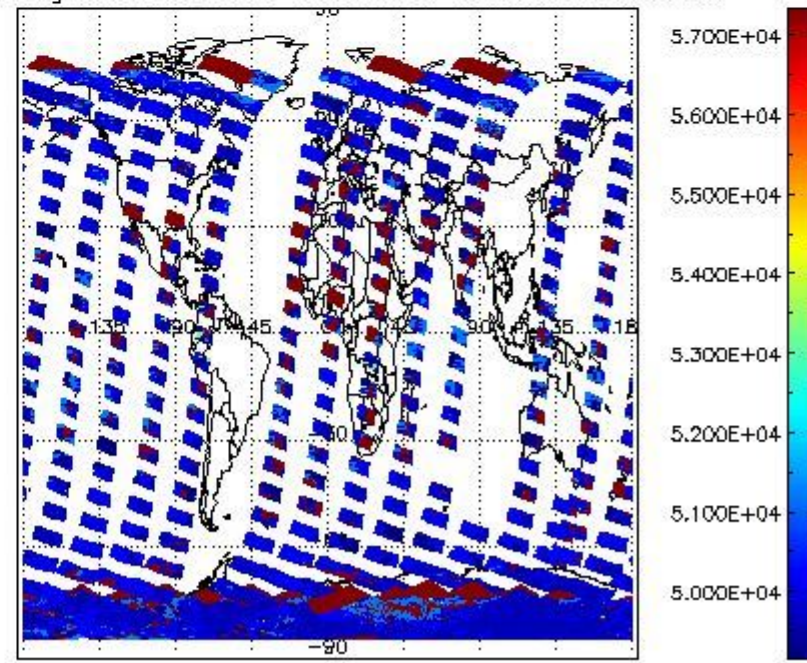
cL\_top\_height for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



cLopt\_depth for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



cloud\_flags for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



## 2.2.2 Nadir

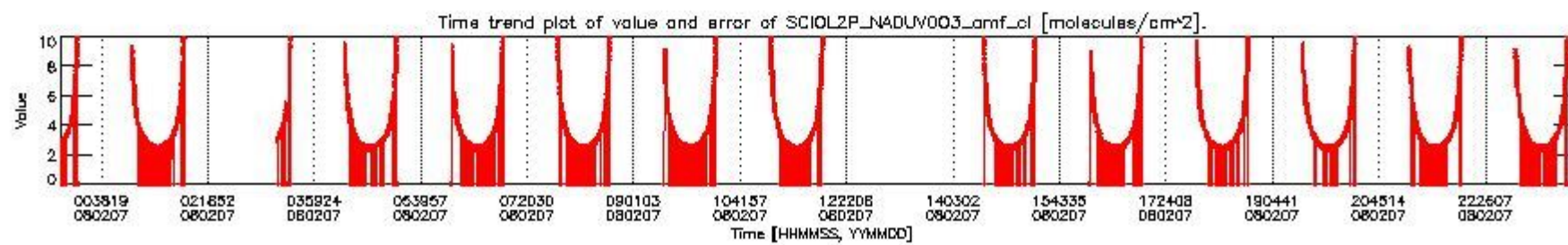
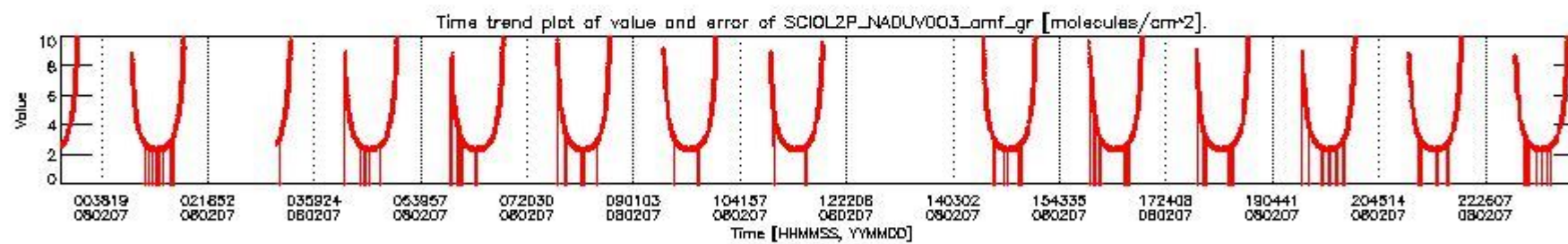
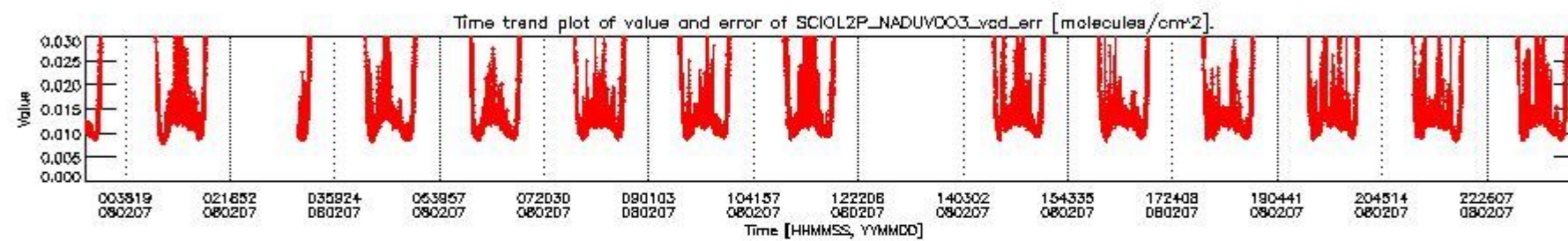
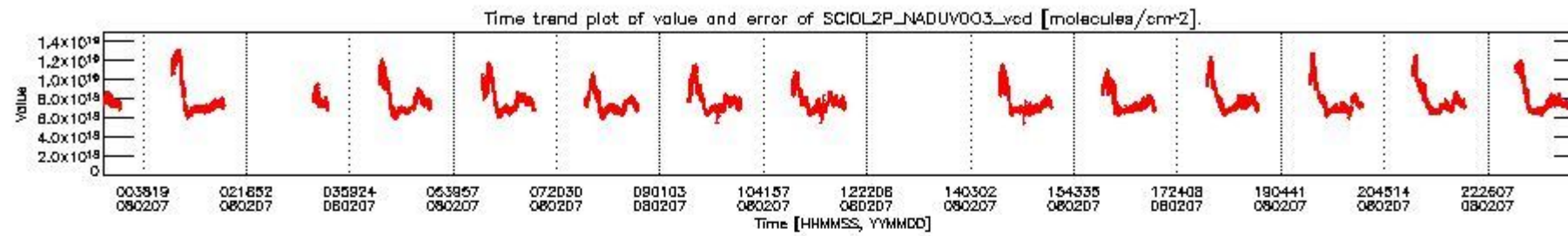
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

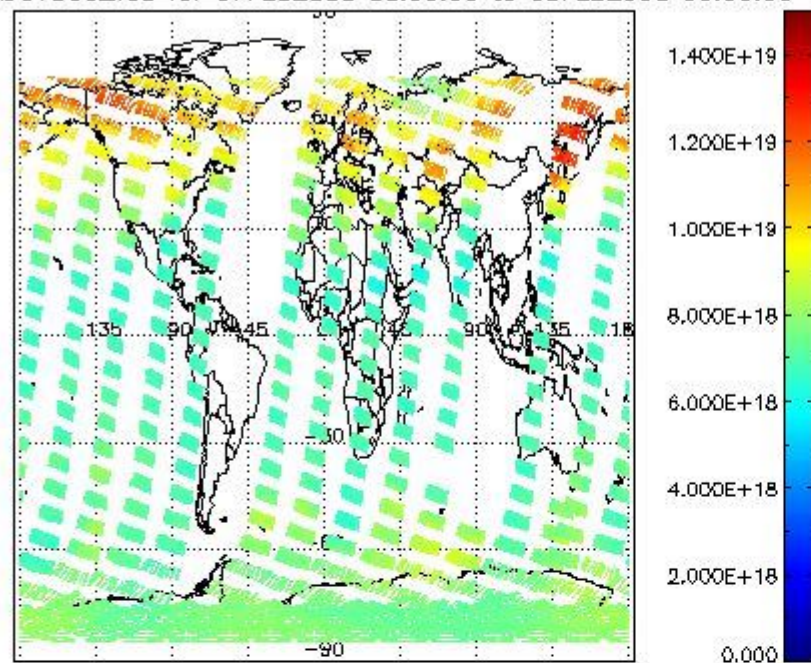
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

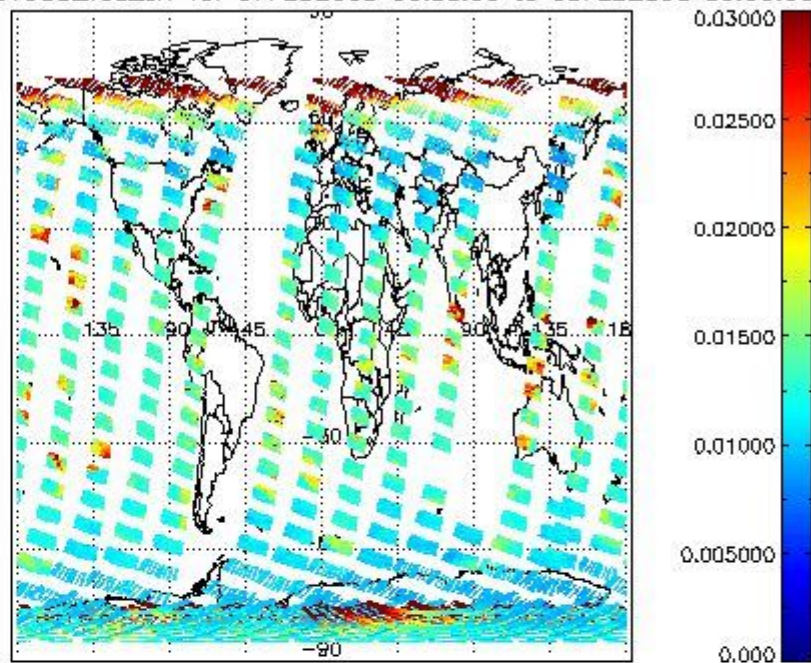
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



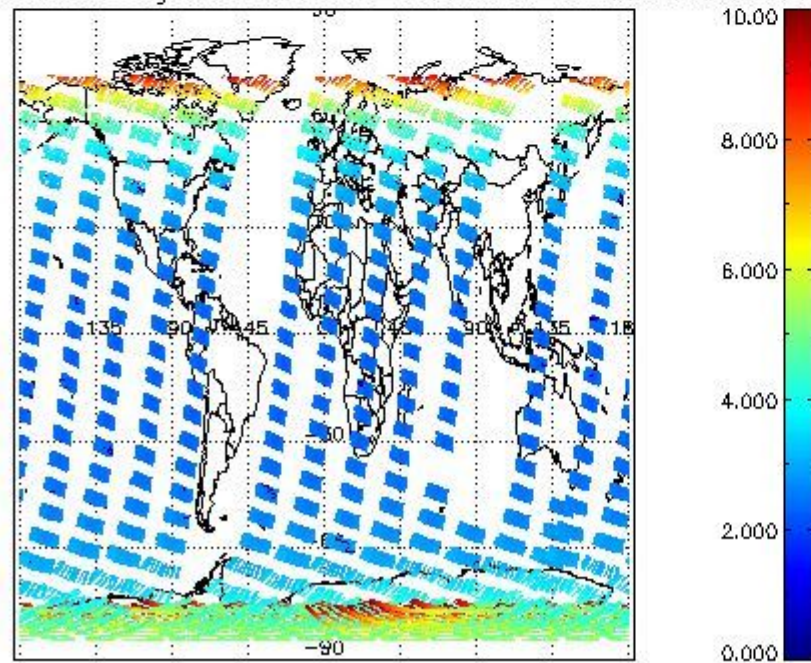
SCIOL2P\_NADUV003\_vcd for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



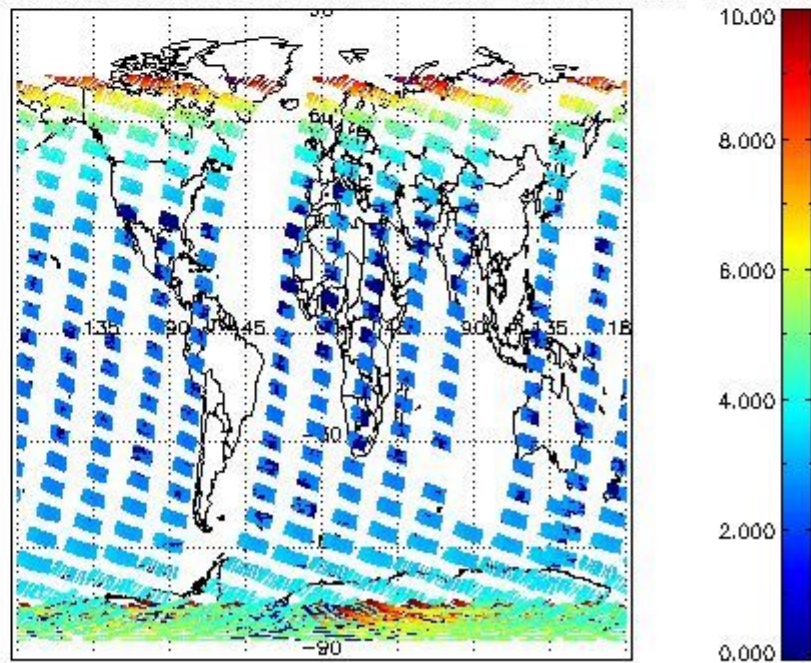
SCIOL2P\_NADUV003\_vcd\_err for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

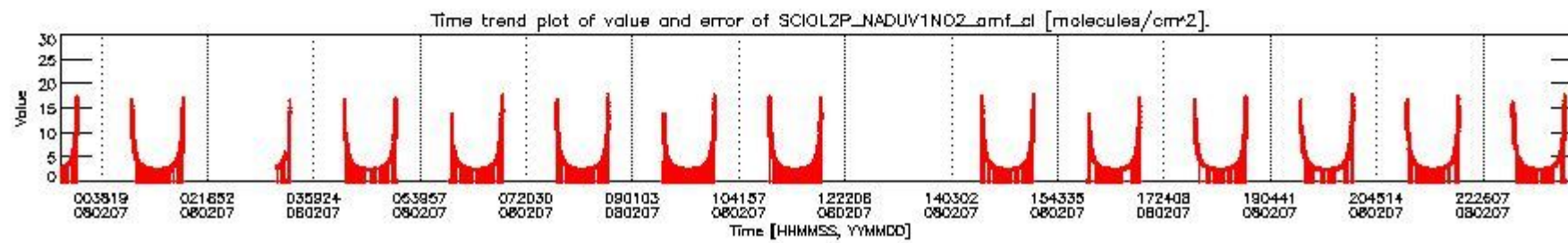
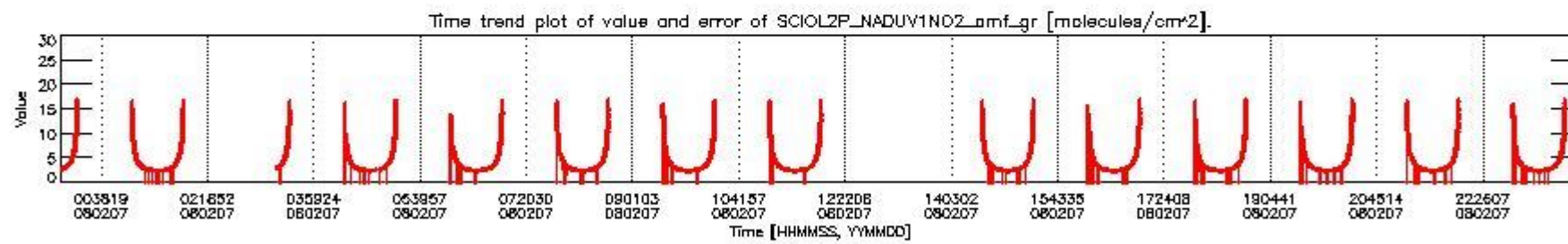
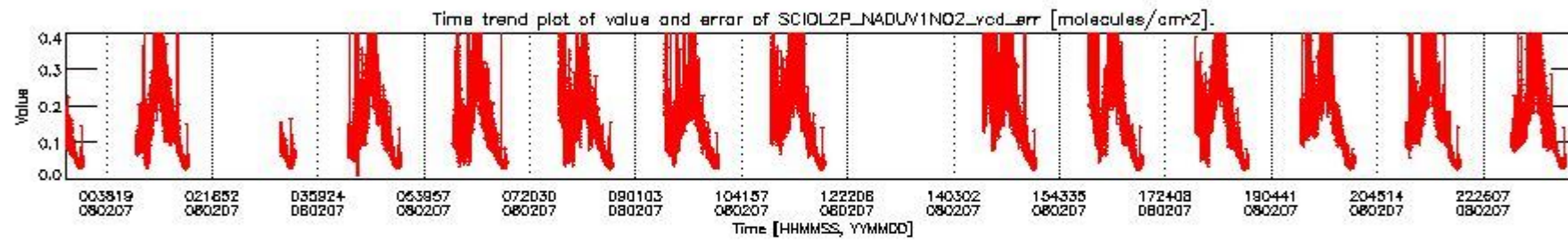
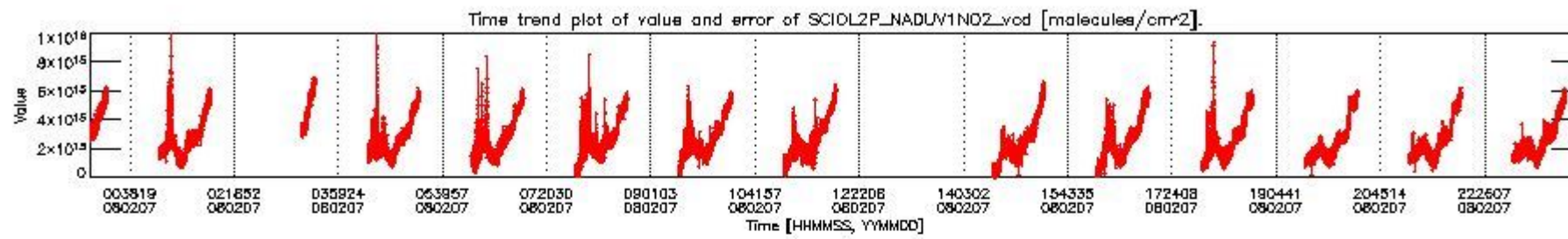


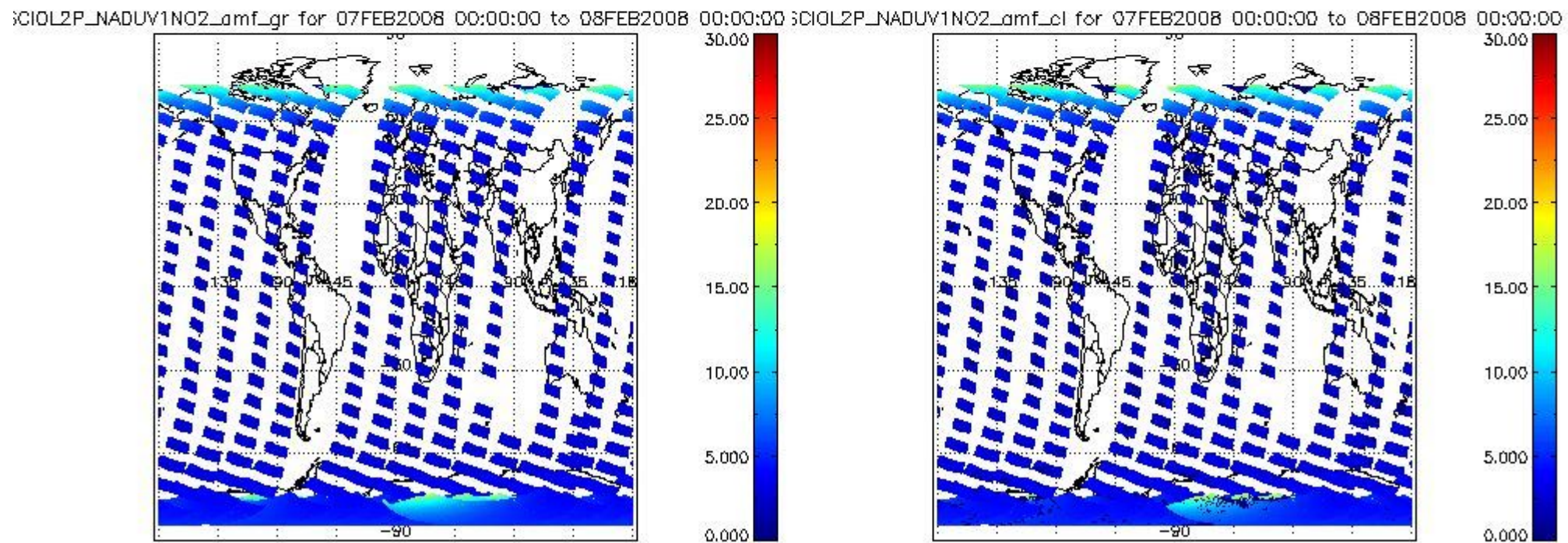
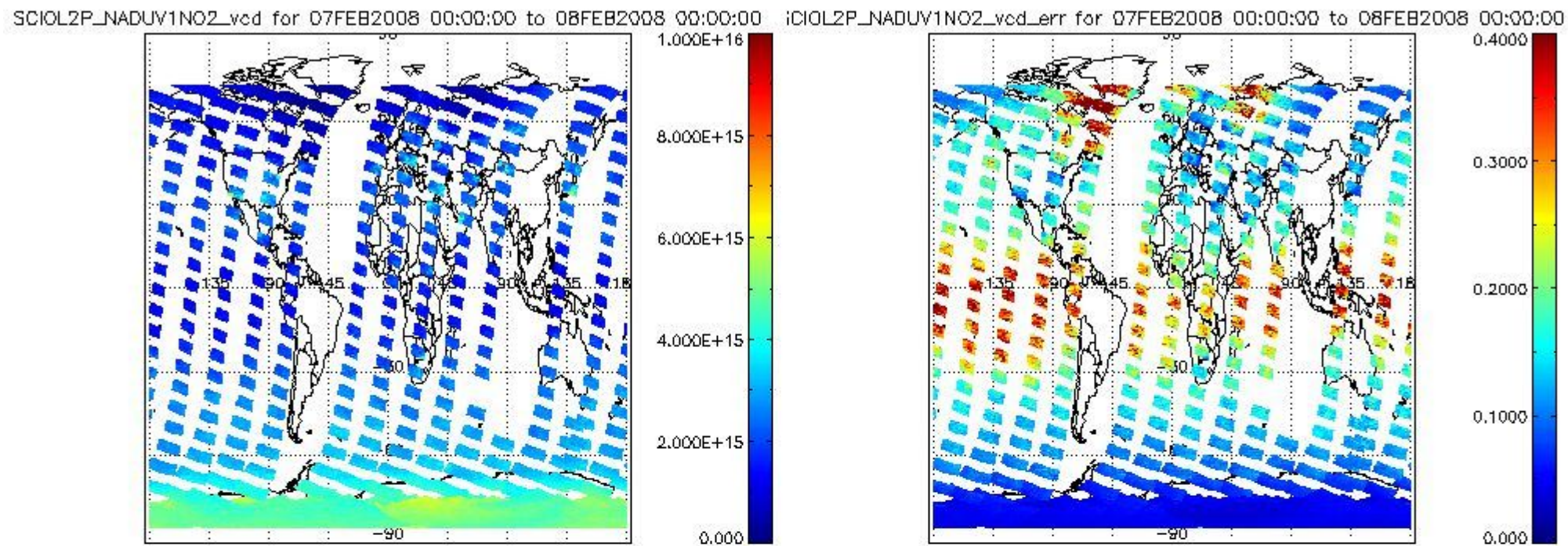
SCIOL2P\_NADUV003\_amf\_gr for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 07FEB2008 00:00:00 to 08FEB2008 00:00:00







### 2.2.3 Limb

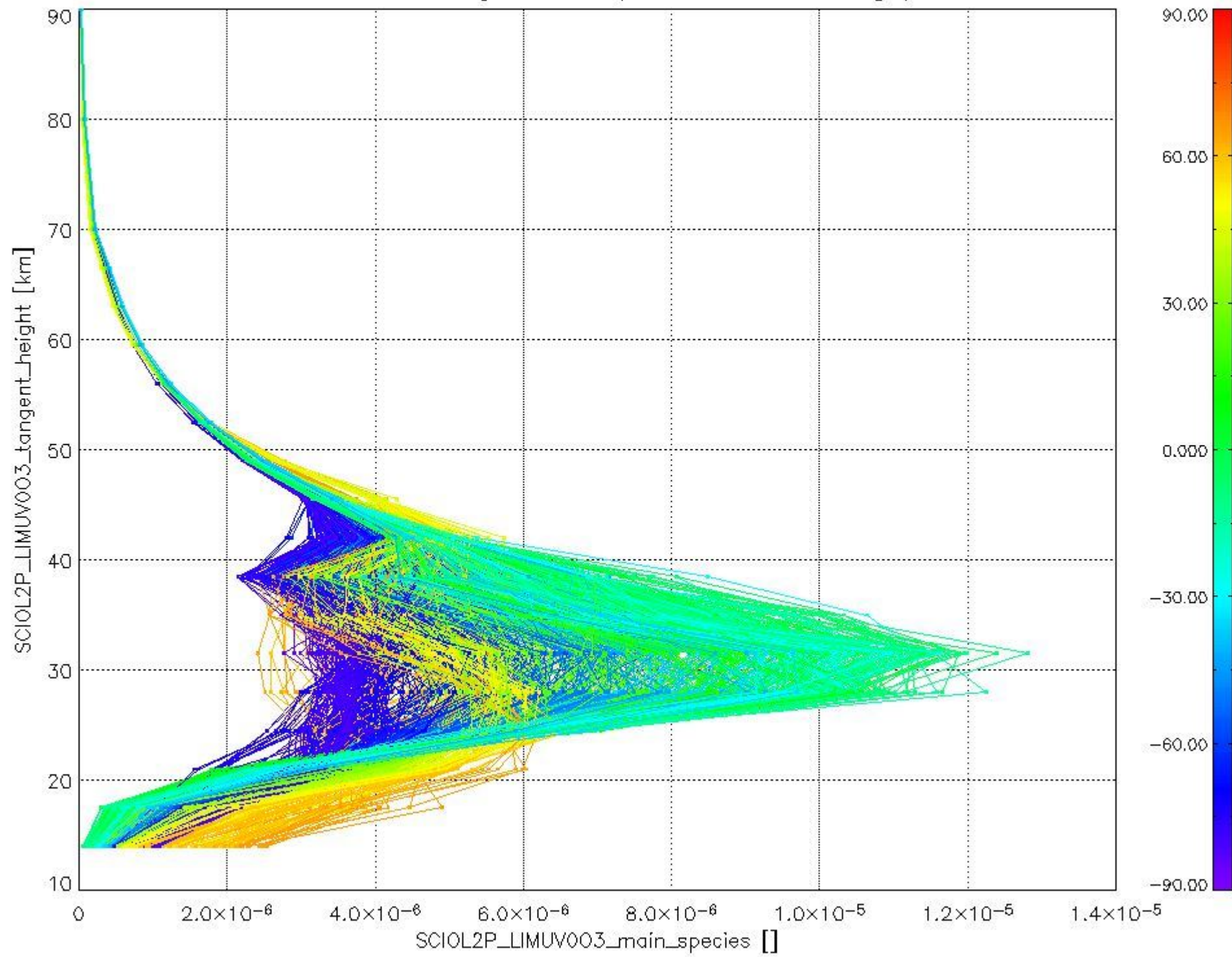
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

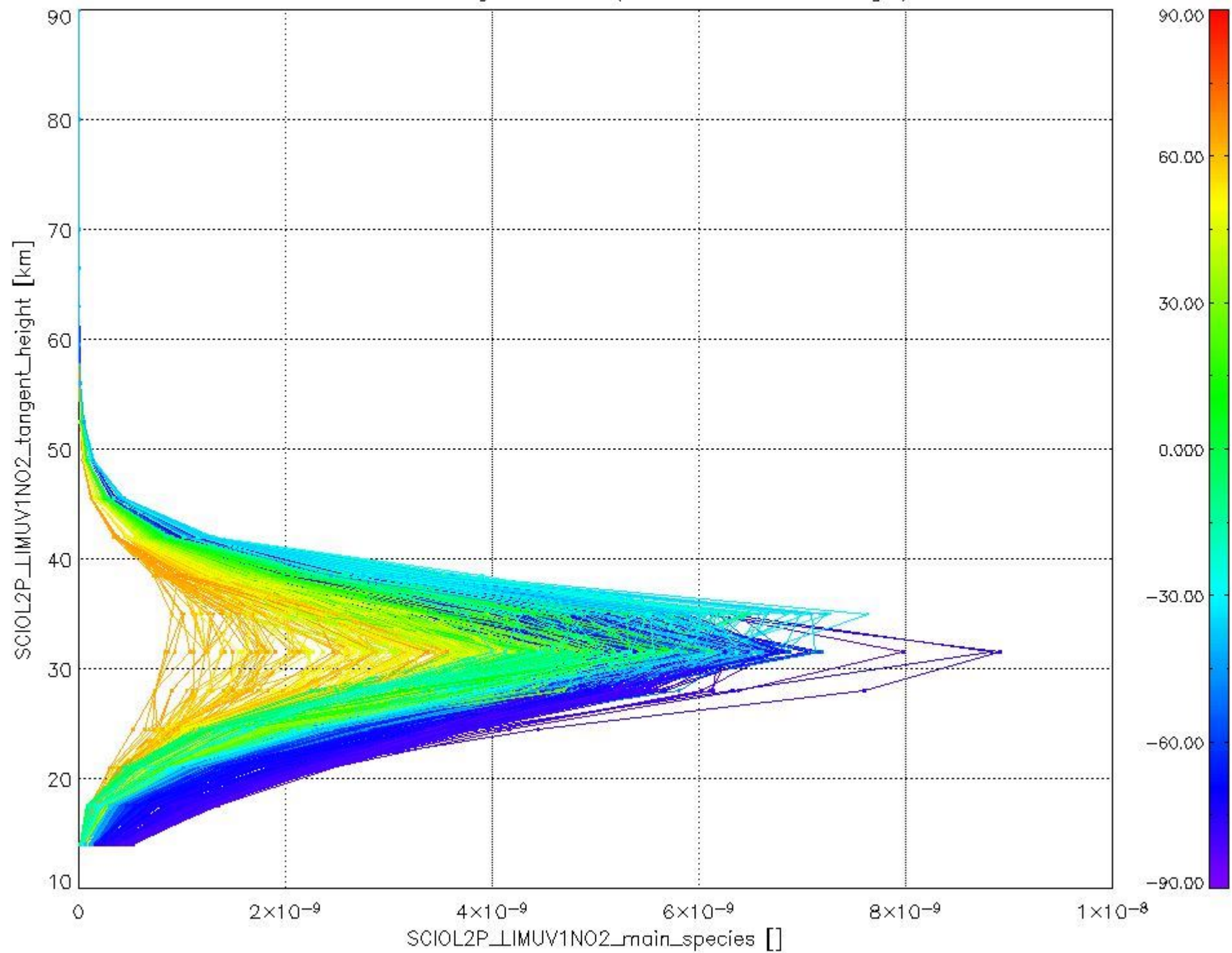
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





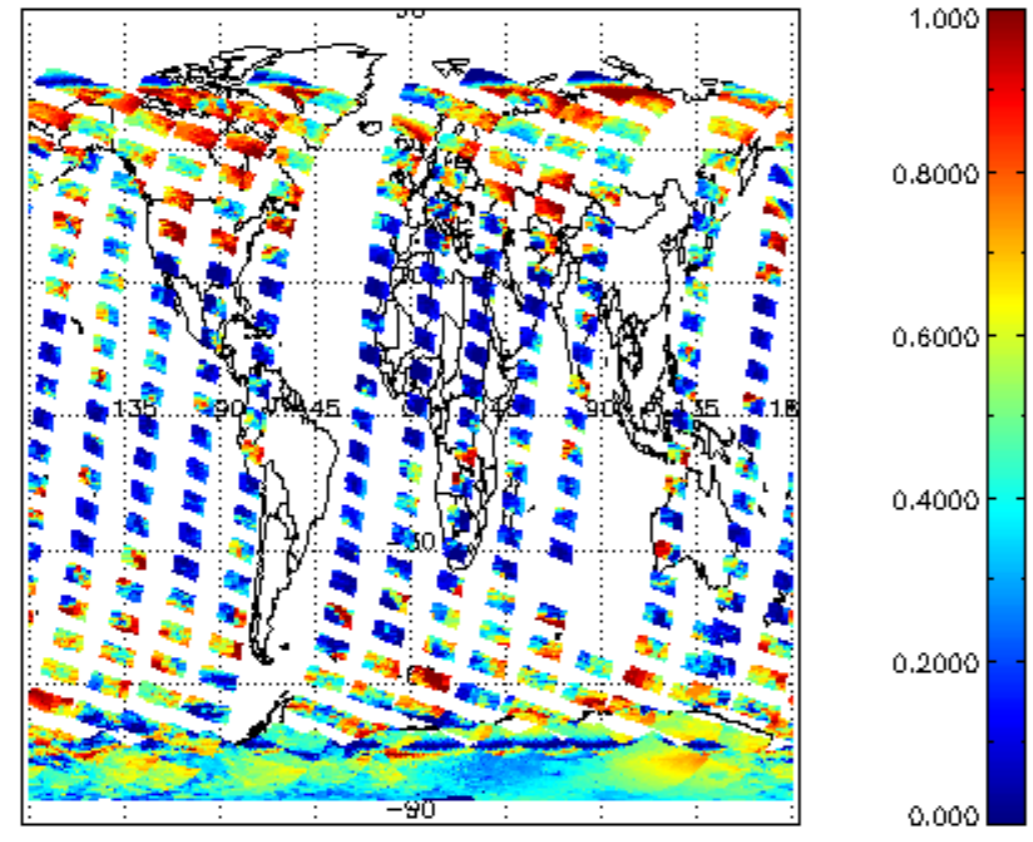
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



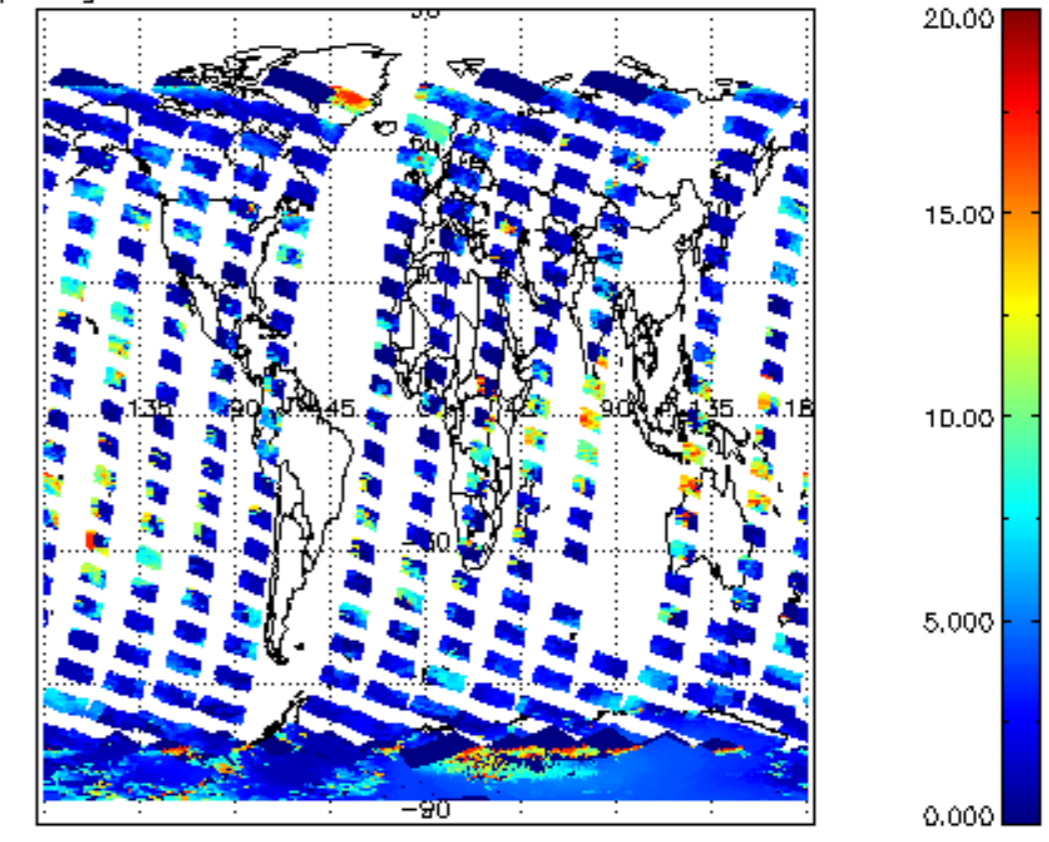
### 2.3 ADF monitoring

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

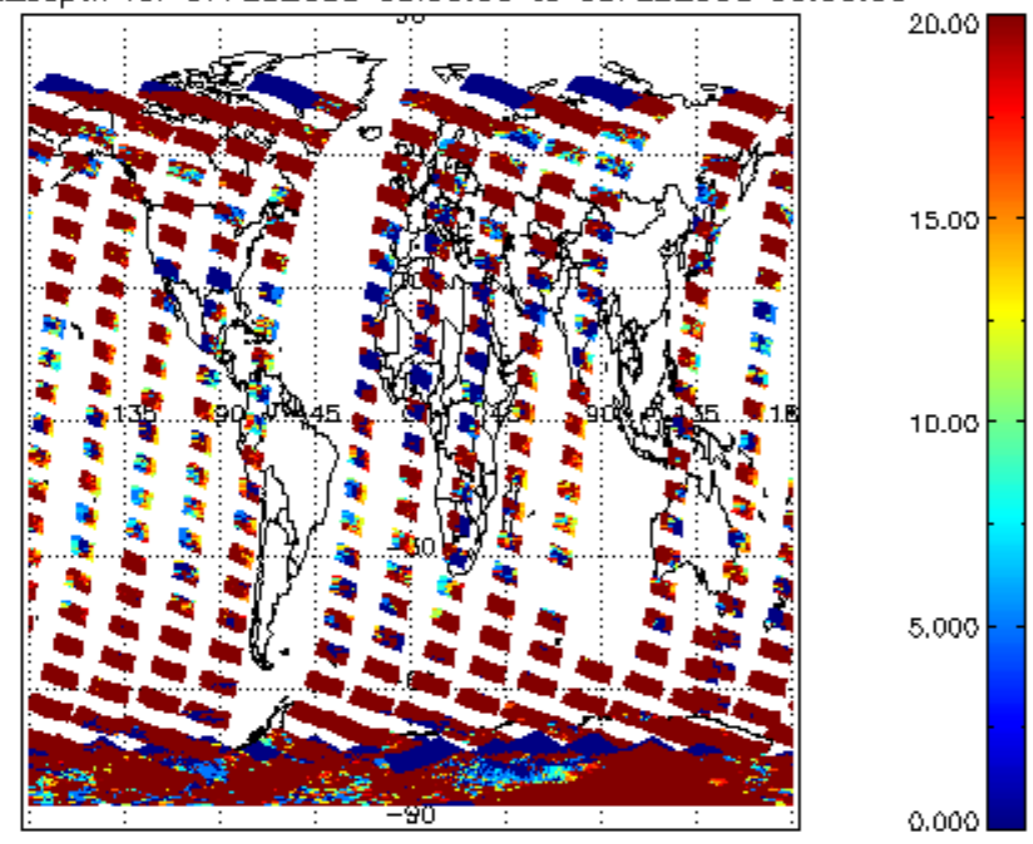
cl\_frac for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



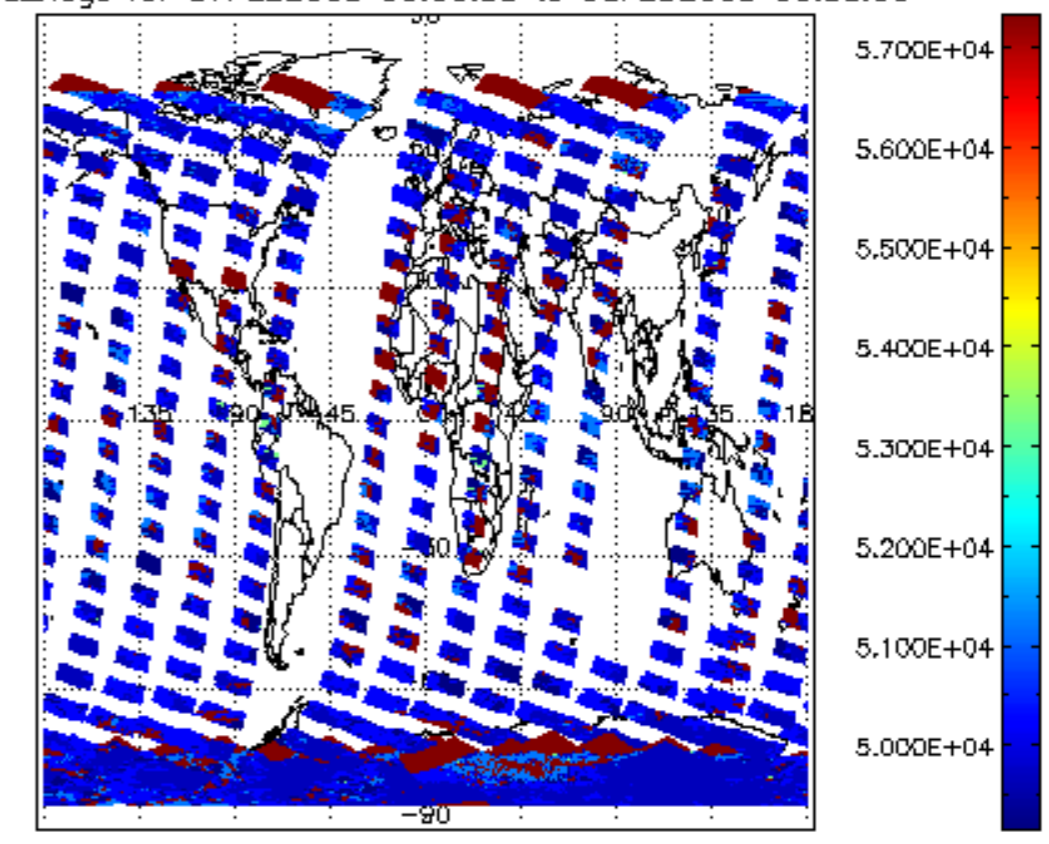
cl\_top\_height for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

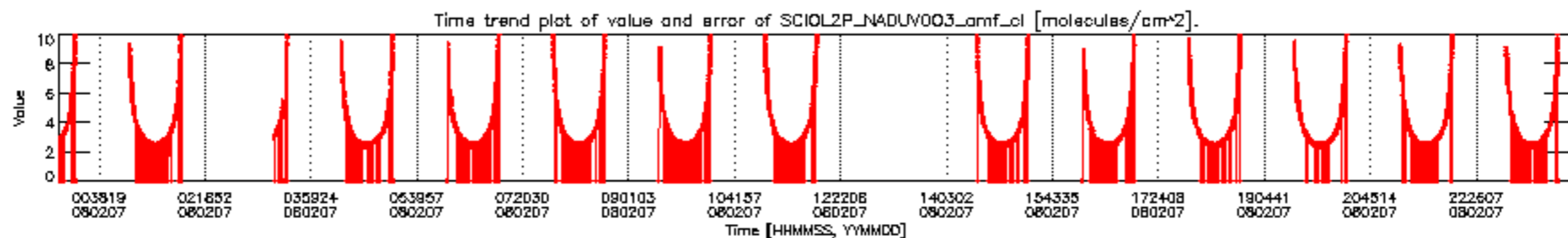
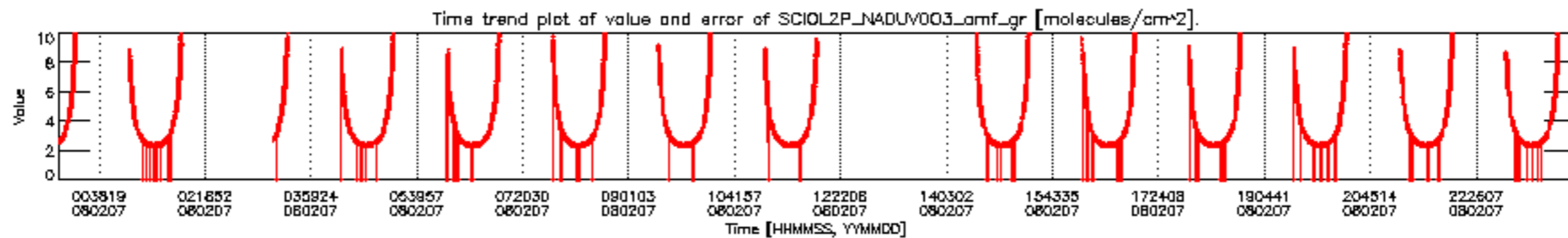
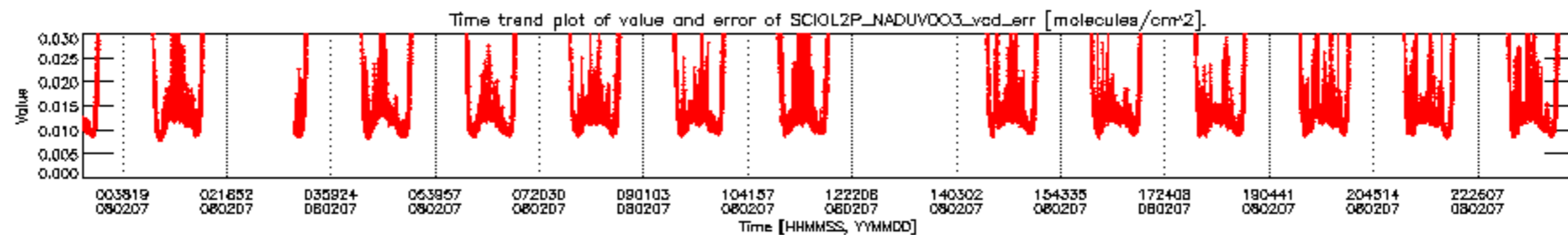
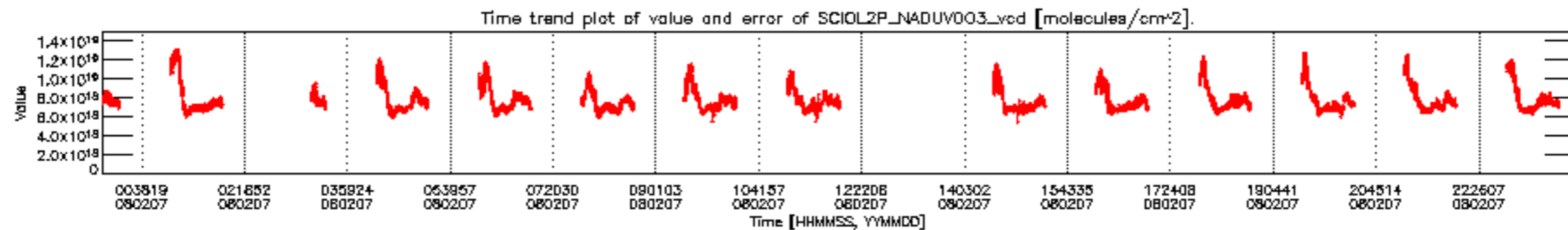


cl\_lopt\_depth for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

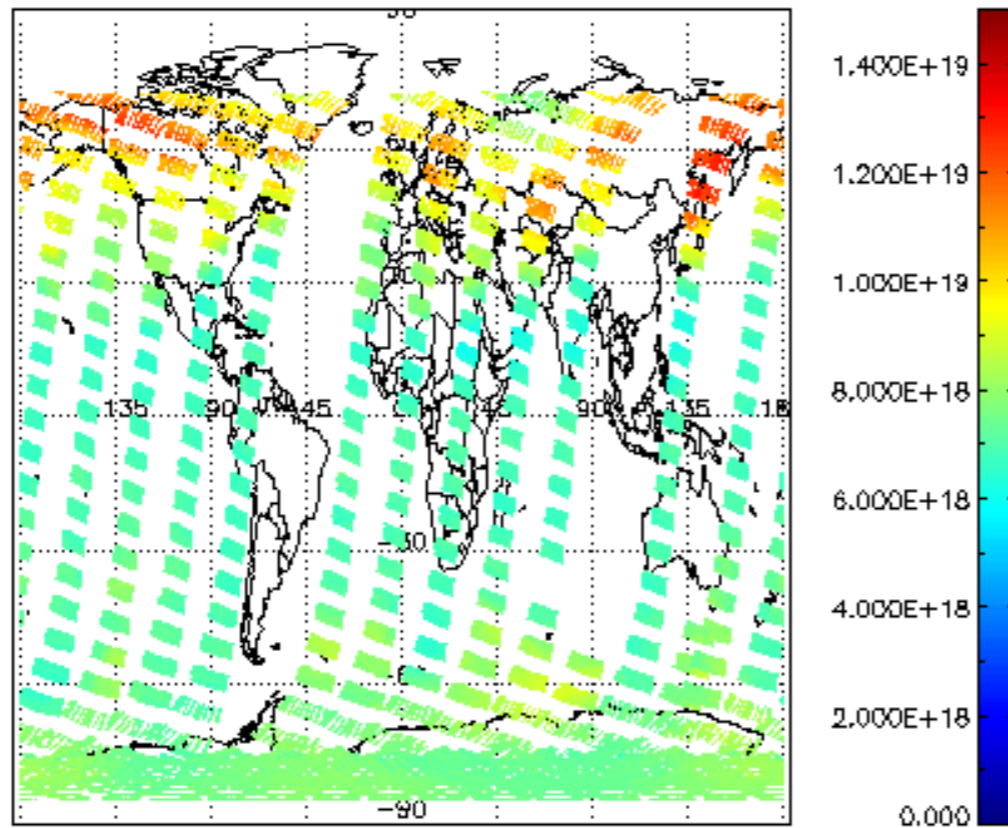


cloud\_flags for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

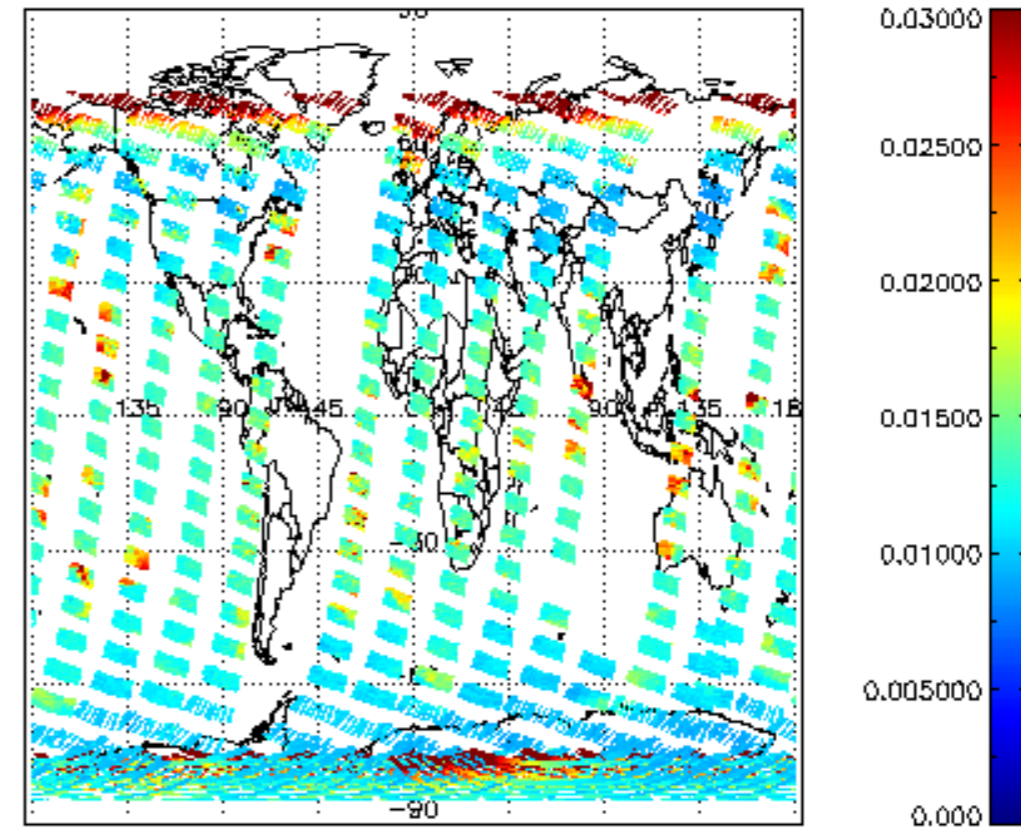




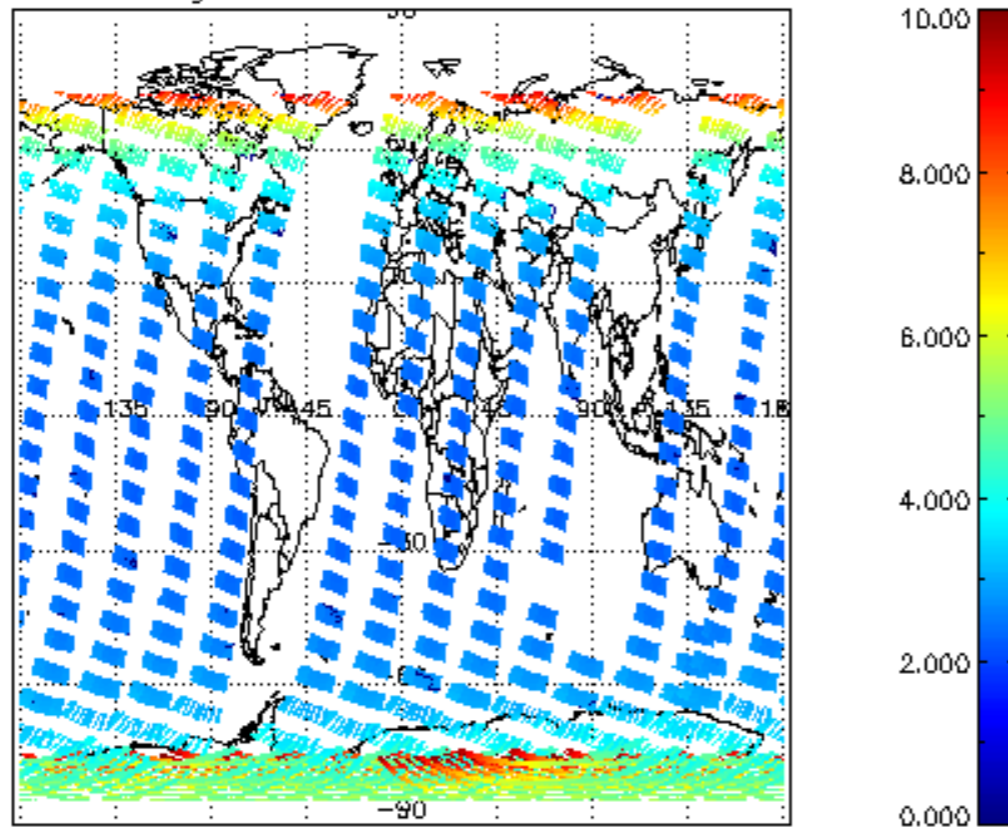
SCIOL2P\_NADUV003\_vcd for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



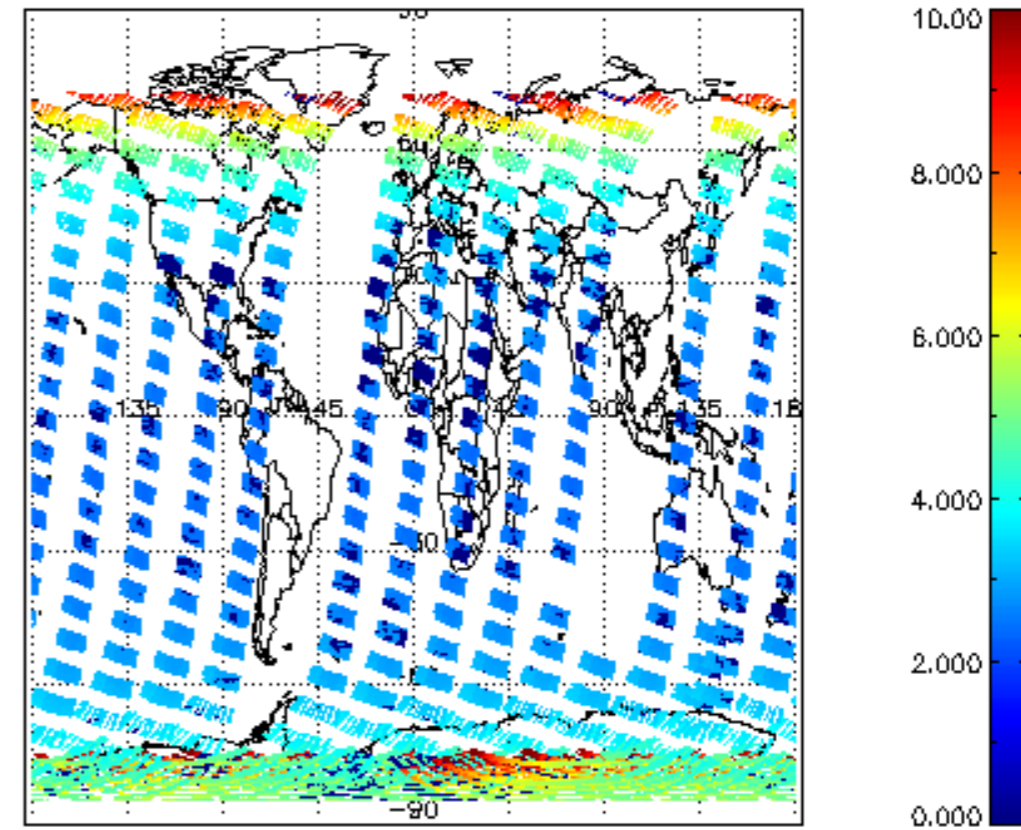
SCIOL2P\_NADUV003\_vcd\_err for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

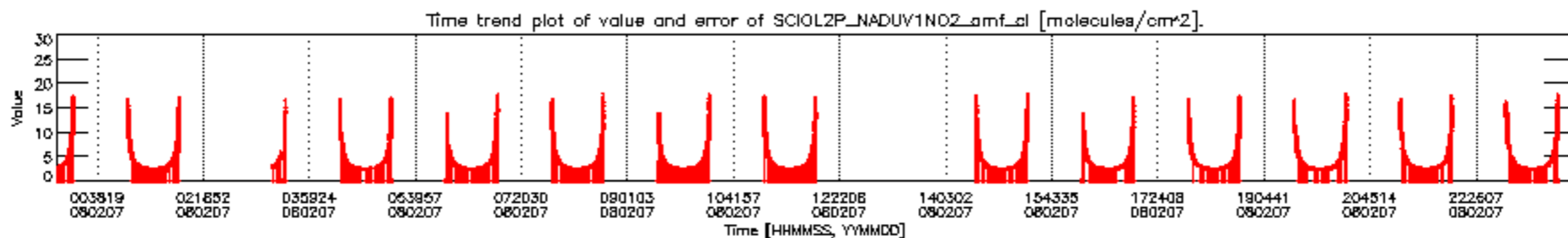
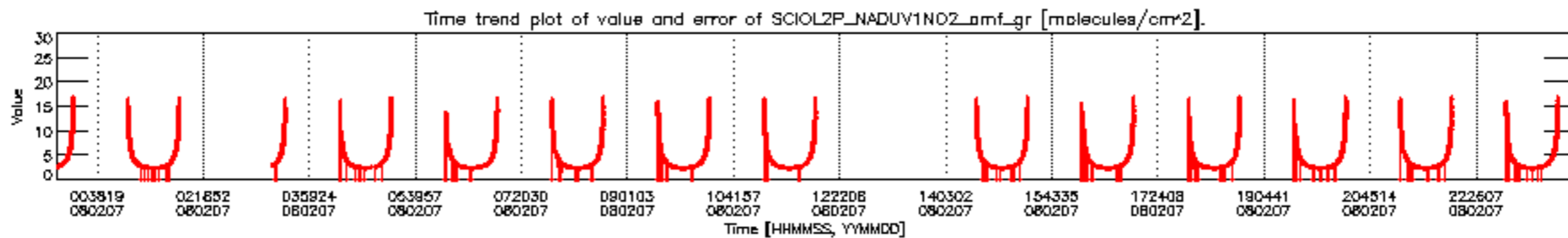
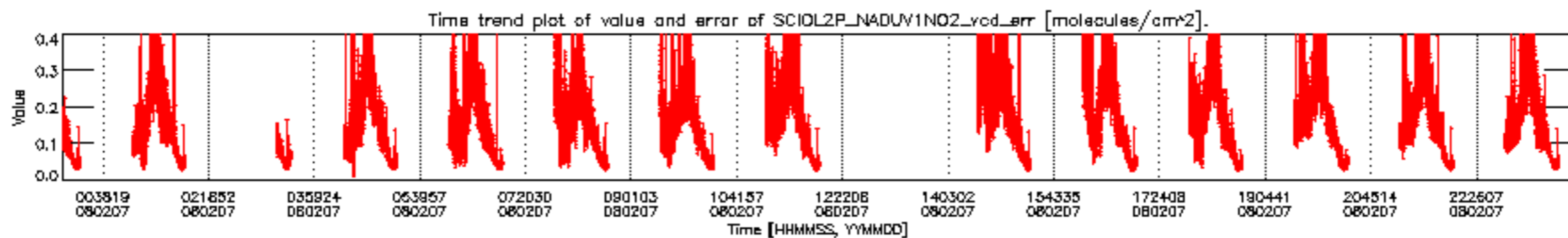
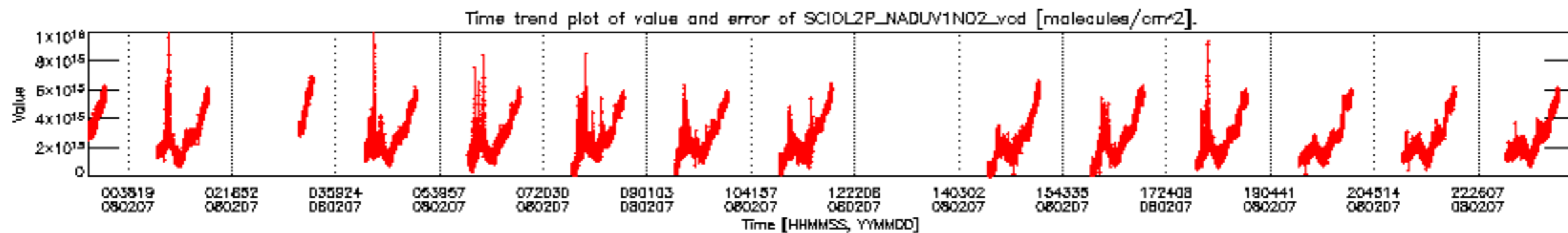


SCIOL2P\_NADUV003\_amf\_gr for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

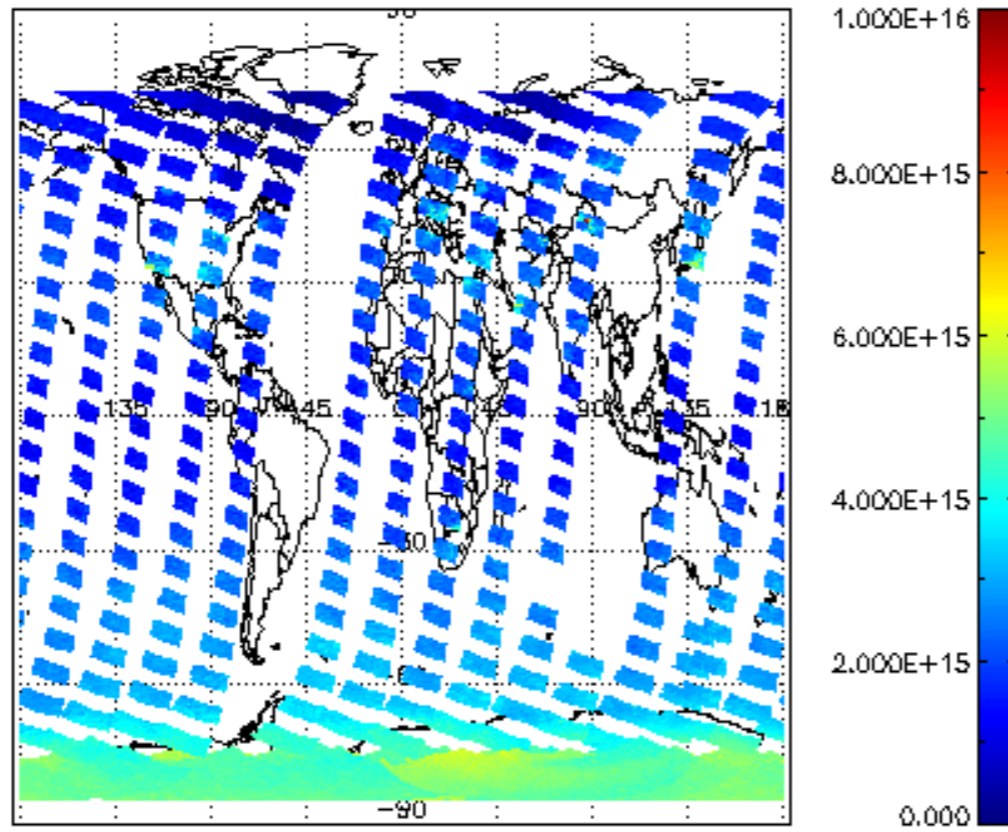


SCIOL2P\_NADUV003\_amf\_cl for 07FEB2008 00:00:00 to 08FEB2008 00:00:00

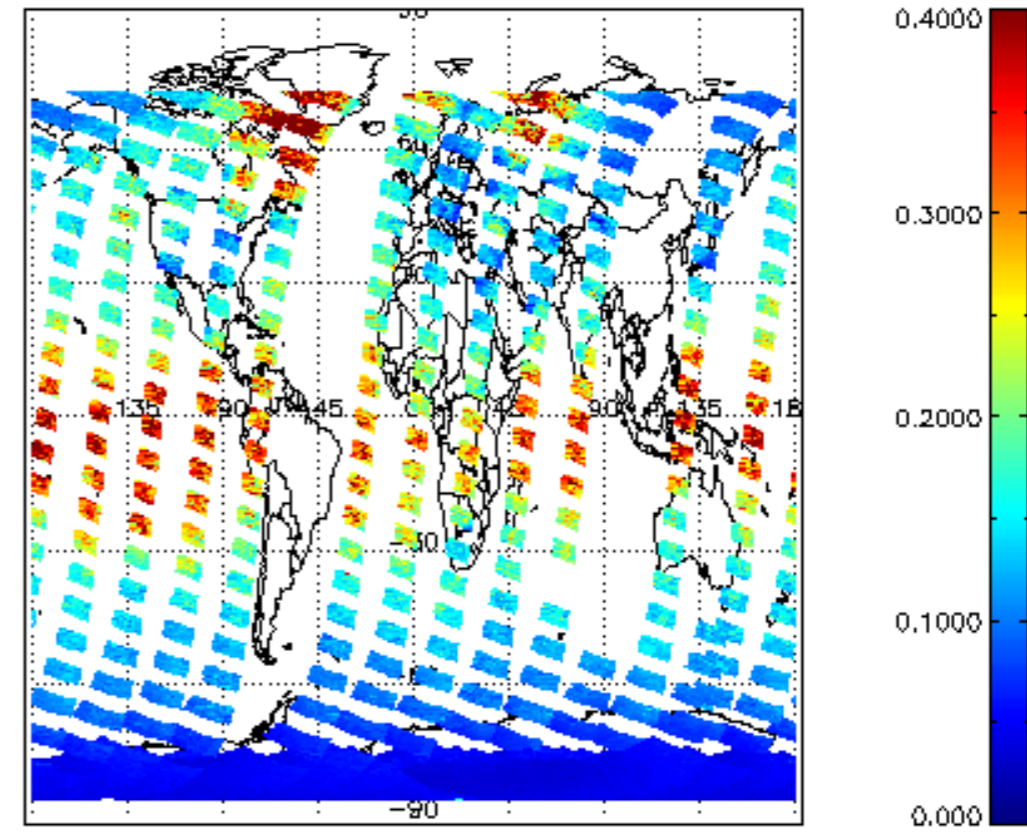




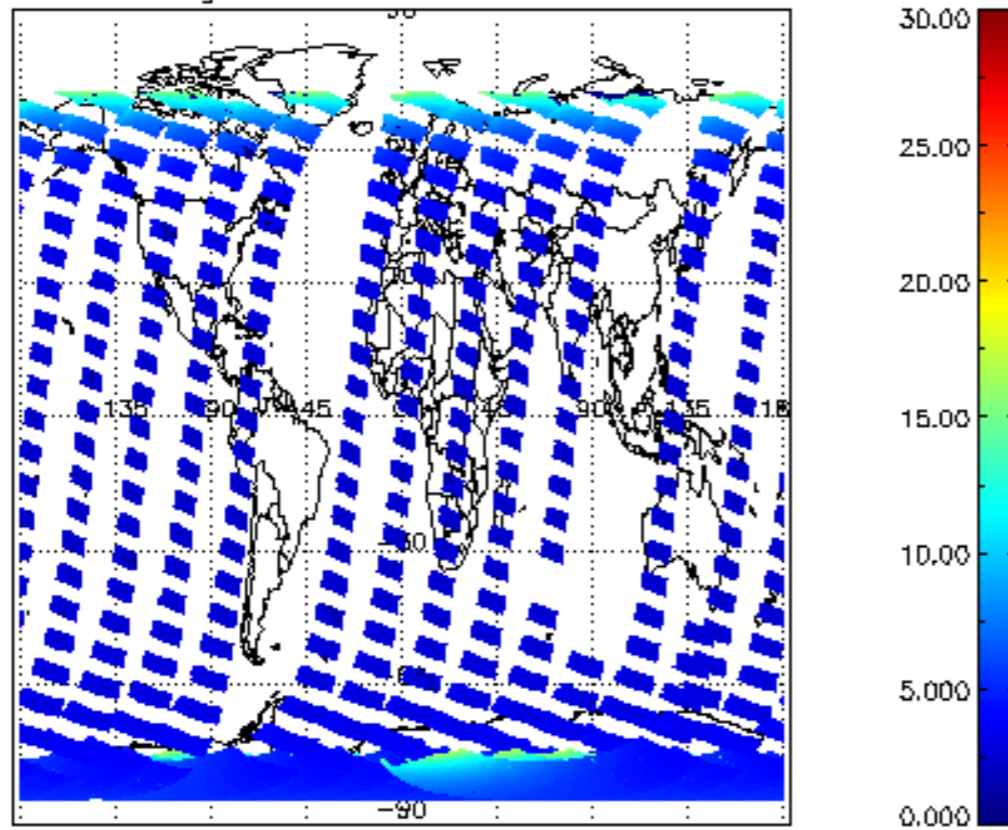
SCIOL2P\_NADUV1NO2\_vcd for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



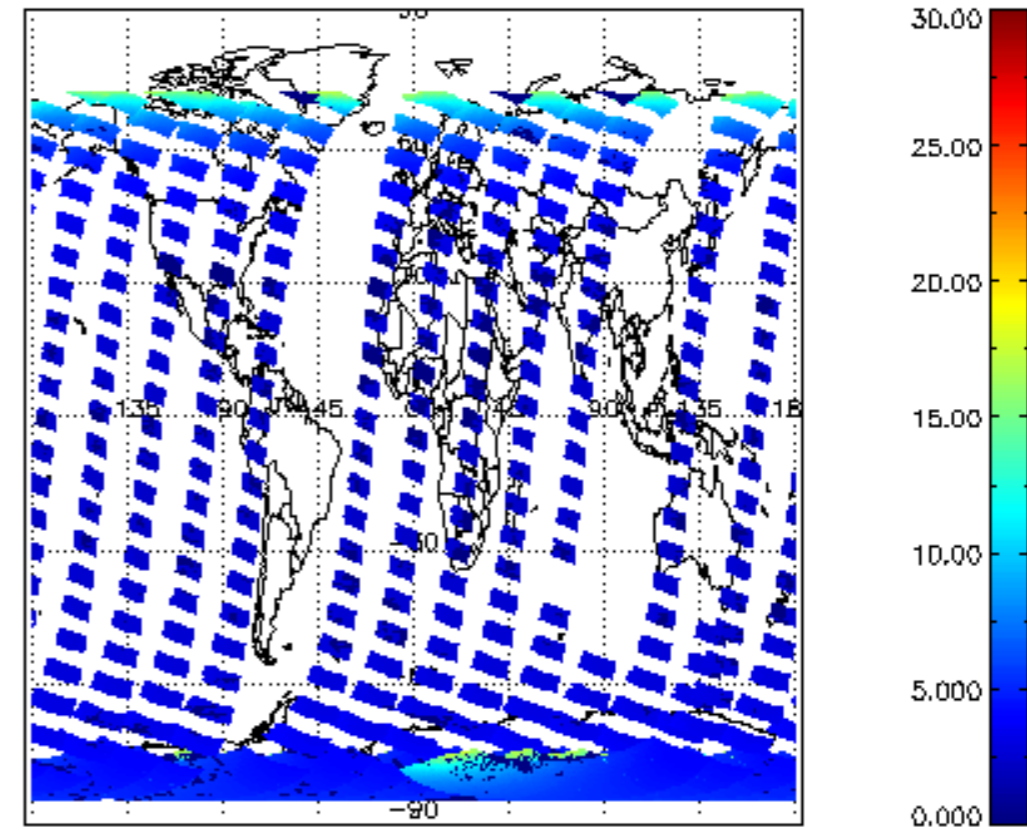
SCIOL2P\_NADUV1NO2\_vcd\_err for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



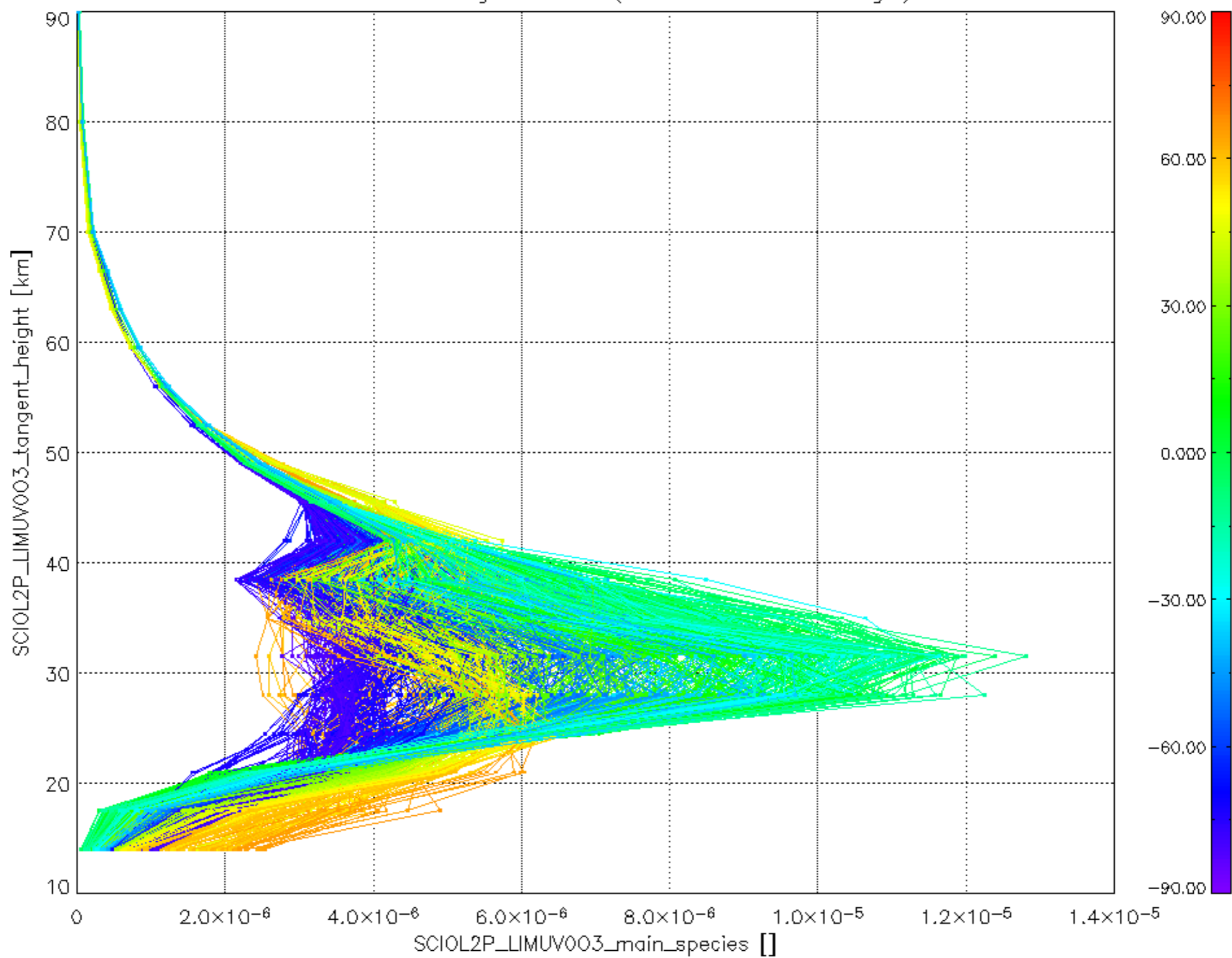
SCIOL2P\_NADUV1NO2\_amf\_gr for 07FEB2008 00:00:00 to 08FEB2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 07FEB2008 00:00:00 to 08FEB2008 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).

