

## 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	27FEB2008 06:10:15
Data source version	SCIA-OL/3.01-R
Processing scope for products	05FEB2008 00:00:00 to 06FEB2008 00:00:00
Start time of first product within scope	04FEB2008 22:43:50
Stop time of last product within scope	06FEB2008 00:48:21
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	SCI_OL__2PRDPA20080204_224350_000033252065_00402_31017_2515.N1	04FEB2008 22:43:50	04FEB2008 23:39:16	0	GOOD
1	SCI_OL__2PRDPA20080205_002534_000032692065_00403_31018_2516.N1	05FEB2008 00:25:34	05FEB2008 01:20:04	0	GOOD
2	SCI_OL__2PRDPA20080205_020501_000033252065_00404_31019_2518.N1	05FEB2008 02:05:01	05FEB2008 03:00:27	0	GOOD
3	SCI_OL__2PRDPA20080205_034645_000032692065_00405_31020_2520.N1	05FEB2008 03:46:45	05FEB2008 04:41:15	0	GOOD
4	SCI_OL__2PRDPA20080205_052612_000033252065_00406_31021_2522.N1	05FEB2008 05:26:12	05FEB2008 06:21:38	0	GOOD
5	SCI_OL__2PRDPA20080205_070756_000032692065_00407_31022_2526.N1	05FEB2008 07:07:56	05FEB2008 08:02:26	0	GOOD
6	SCI_OL__2PRDPA20080205_084723_000033252065_00408_31023_2527.N1	05FEB2008 08:47:23	05FEB2008 09:42:49	0	GOOD
7	SCI_OL__2PRDPA20080205_102907_000032692065_00409_31024_2558.N1	05FEB2008 10:29:07	05FEB2008 11:23:37	0	GOOD
8	SCI_OL__2PRDPA20080205_120834_000033252065_00410_31025_2559.N1	05FEB2008 12:08:34	05FEB2008 13:04:00	0	GOOD
9	SCI_OL__2PRDPA20080205_135018_000032692065_00411_31026_2561.N1	05FEB2008 13:50:18	05FEB2008 14:44:48	0	GOOD
10	SCI_OL__2PRDPA20080205_152945_000033252065_00412_31027_2567.N1	05FEB2008 15:29:45	05FEB2008 16:25:11	0	GOOD
11	SCI_OL__2PRDPA20080205_171129_000032692065_00413_31028_2568.N1	05FEB2008 17:11:29	05FEB2008 18:05:59	0	GOOD
12	SCI_OL__2PRDPA20080205_185030_000033812065_00414_31029_2569.N1	05FEB2008 18:50:30	05FEB2008 19:46:51	0	GOOD
13	SCI_OL__2PRDPA20080205_203105_000033942065_00415_31030_2570.N1	05FEB2008 20:31:05	05FEB2008 21:27:39	0	GOOD
14	SCI_OL__2PRDPA20080205_221207_000033252065_00416_31031_2572.N1	05FEB2008 22:12:07	05FEB2008 23:07:33	0	GOOD
15	SCI_OL__2PRDPA20080205_235351_000032692065_00417_31032_2573.N1	05FEB2008 23:53:51	06FEB2008 00:48:21	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: 148449

Total number of cloud data DSRs with good quality flag (=0): 148449 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	148449	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	148449	0.16944	0.12500	0.12500	0.25000	0.059835	s
SURFACE_PRES	148449	0.0000	0.0000	0.0000	0.0000	0.0000	hPa

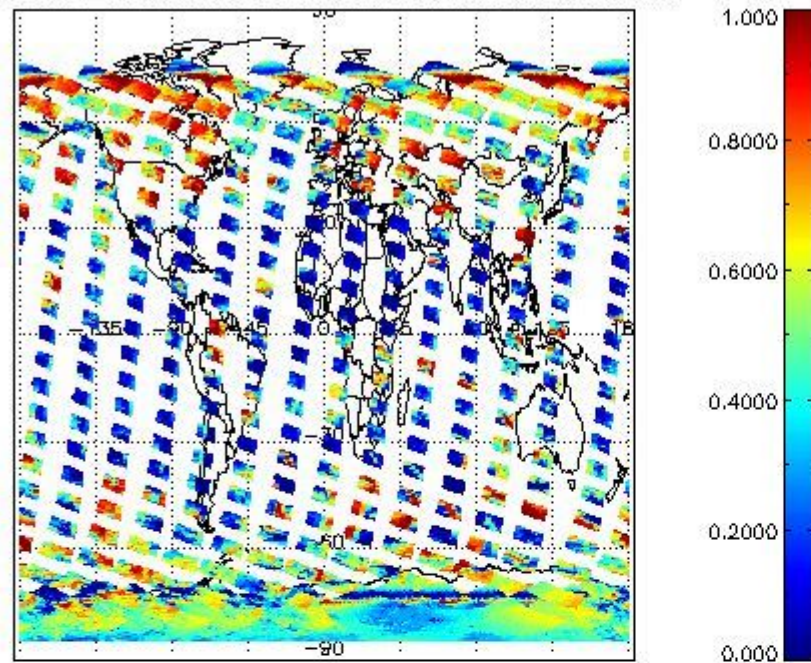
CL_FRAC	148449	0.42074	0.40100	0.0000	1.0000	0.27607	-
CL_FRAC_ERR	148449	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	148449	5.4222	4.0000	4.0000	8.0000	1.9147	
PMD_READ_CL[0]	148449	0.22808	0.0000	0.0000	8.0000	1.0564	-
PMD_READ_CL[1]	148449	0.57819	0.0000	0.0000	8.0000	1.7141	-
CL_TOP_HEIGHT	123450	4.0918	3.1320	0.0000	17.000	3.5571	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	123450	54.365	44.529	0.0000	101.00	39.574	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	148449	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	148449	11001001	11000100	11000000	11100000	3114.6	flags
AERO_ABSO_IND	148449	2.7414	3.0893	-1.6988	21.879	2.0002	
AERO_IND_DIAG	148449	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	148449	01010110	00000000	00000000	11000000	24448.	flags

Time and geolocation plots:

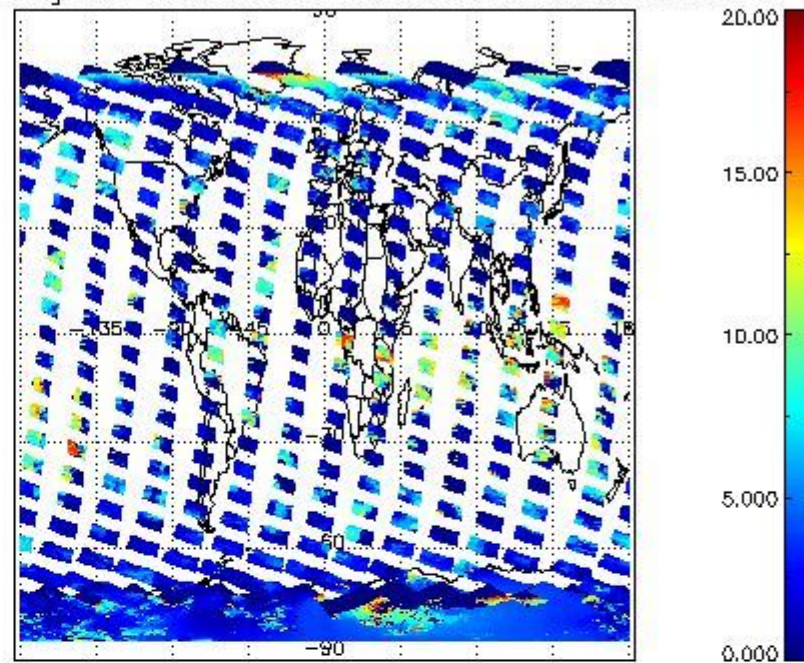
Plots are available for the following parameters:

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

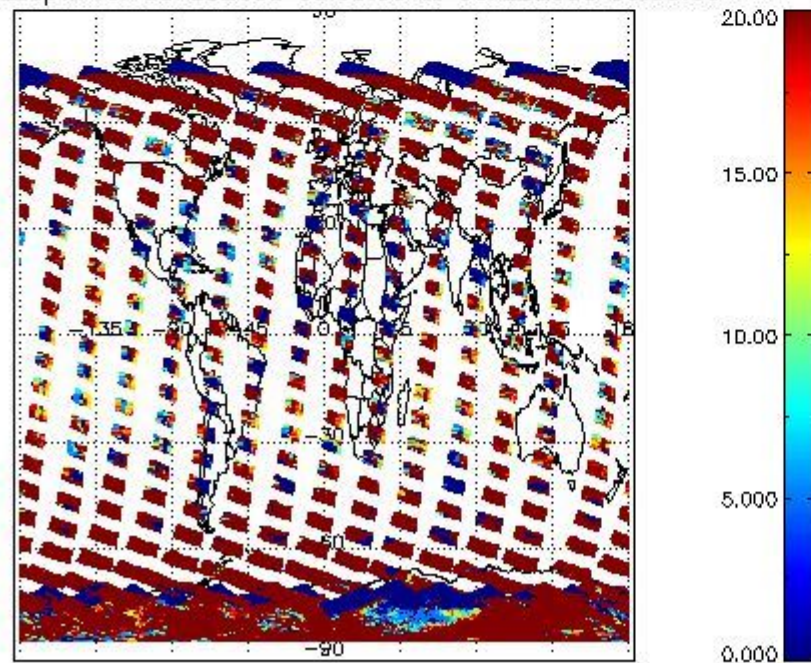
cL\_frac for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



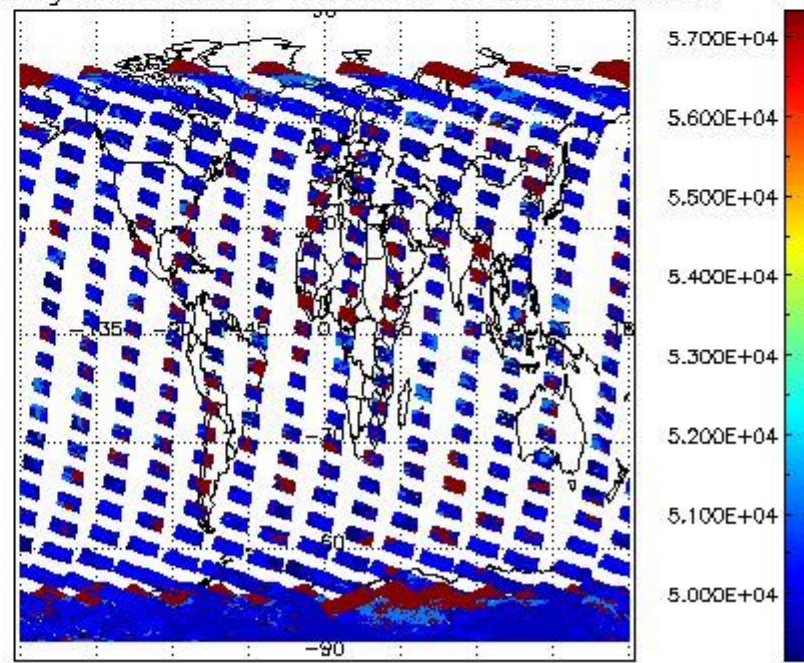
cL\_top\_height for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



cL\_opt\_depth for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



cloud\_flags for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



### 2.2.2 Nadir

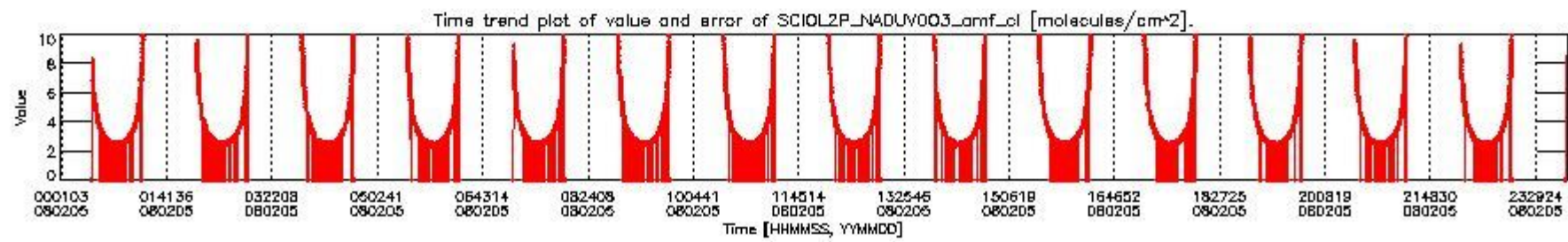
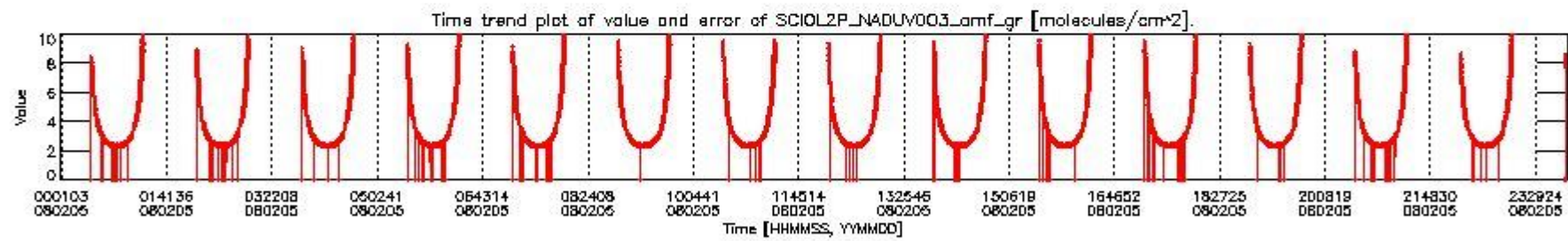
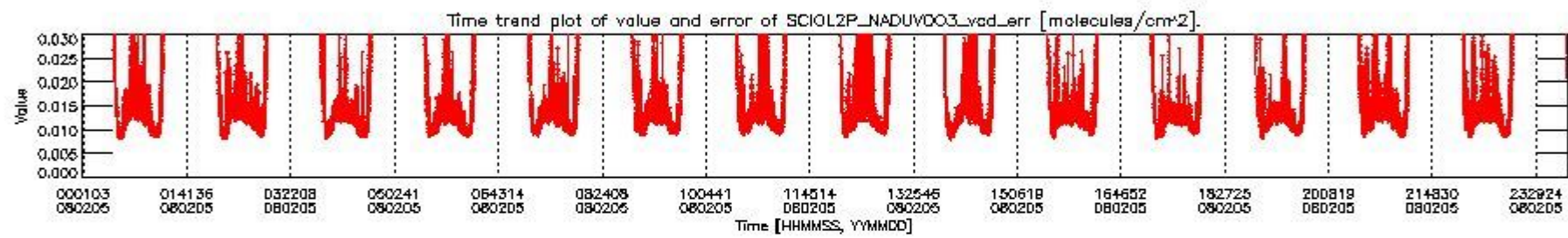
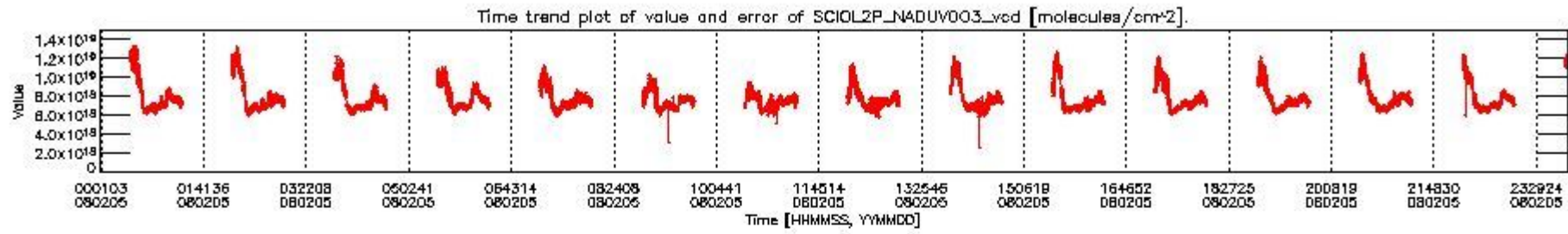
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

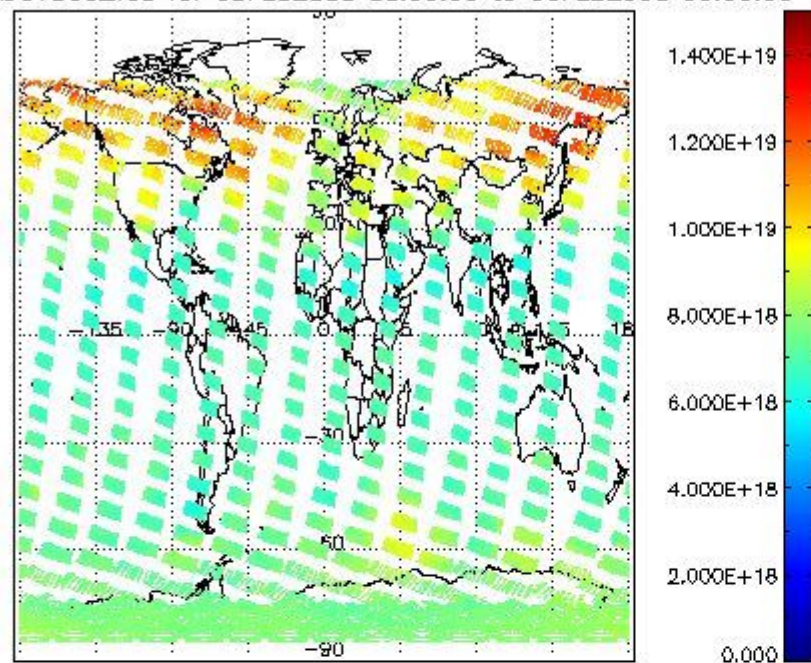
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

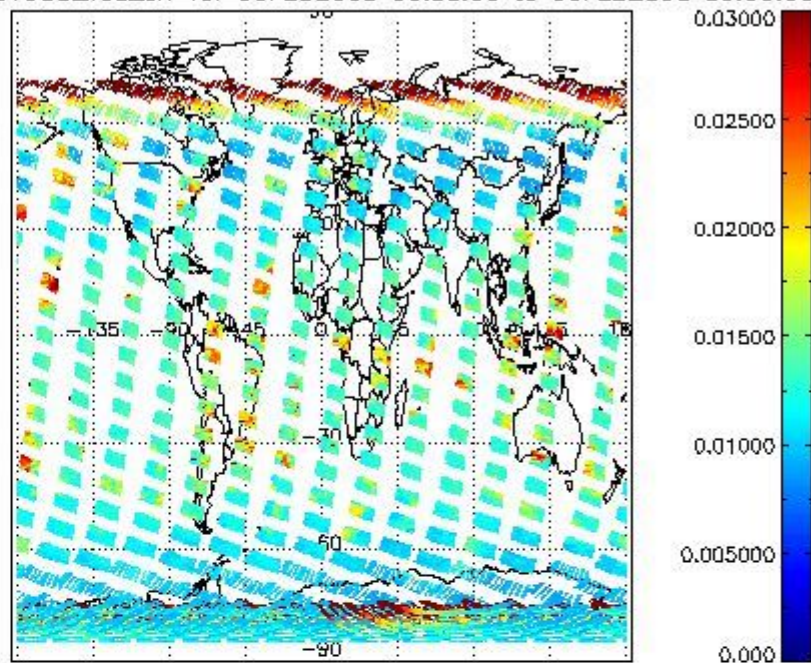
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



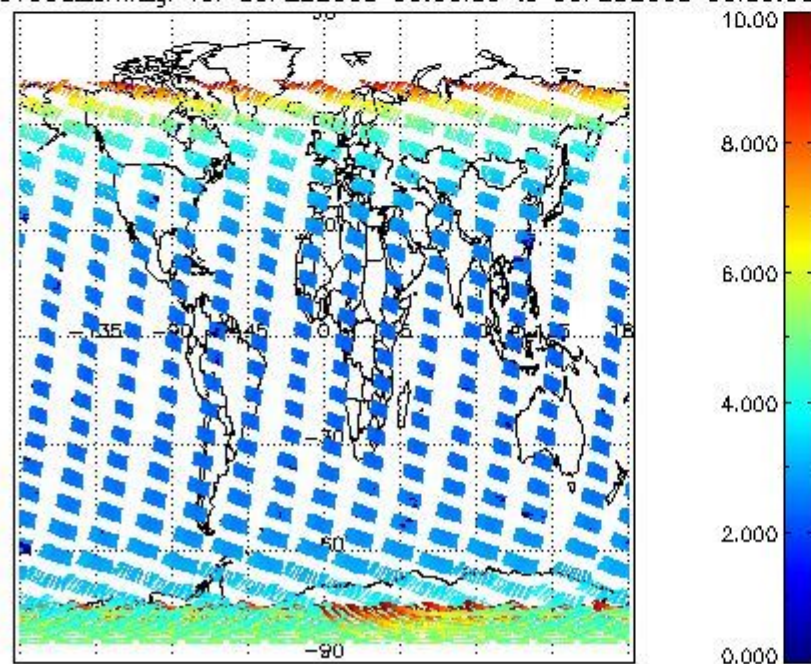
SCIOL2P\_NADUV003\_vcd for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



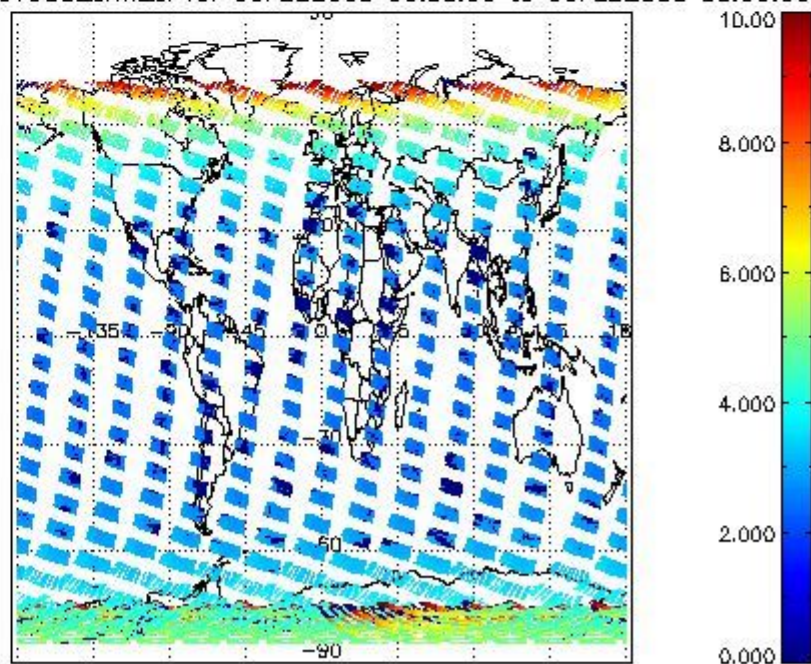
SCIOL2P\_NADUV003\_vcd\_err for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

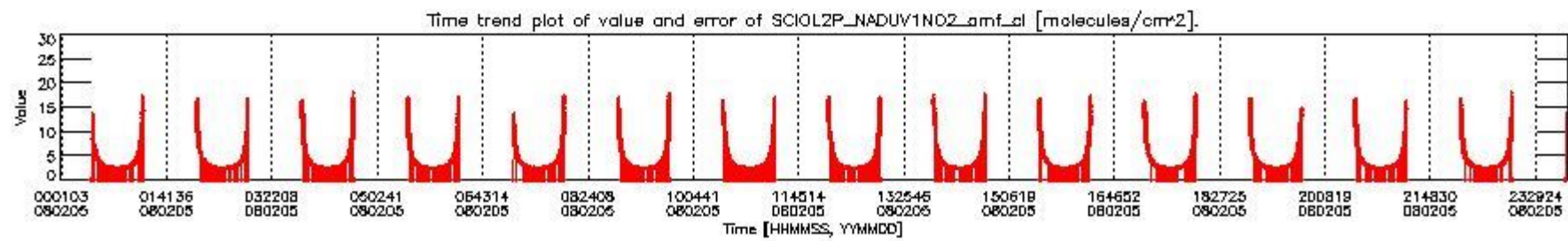
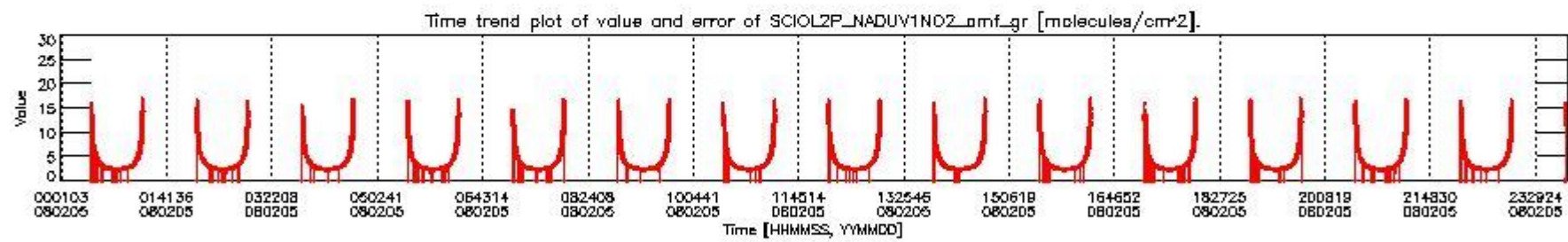
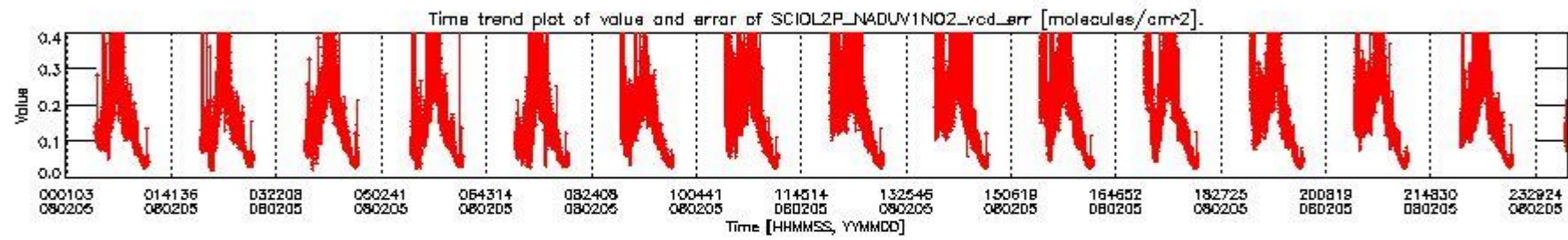
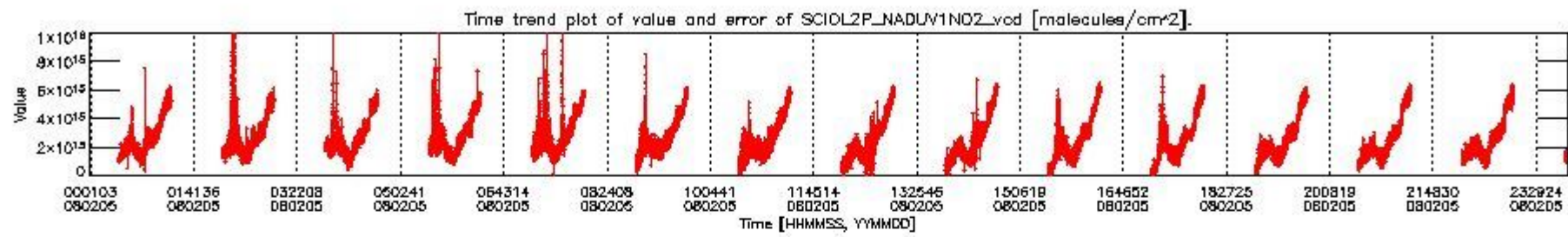


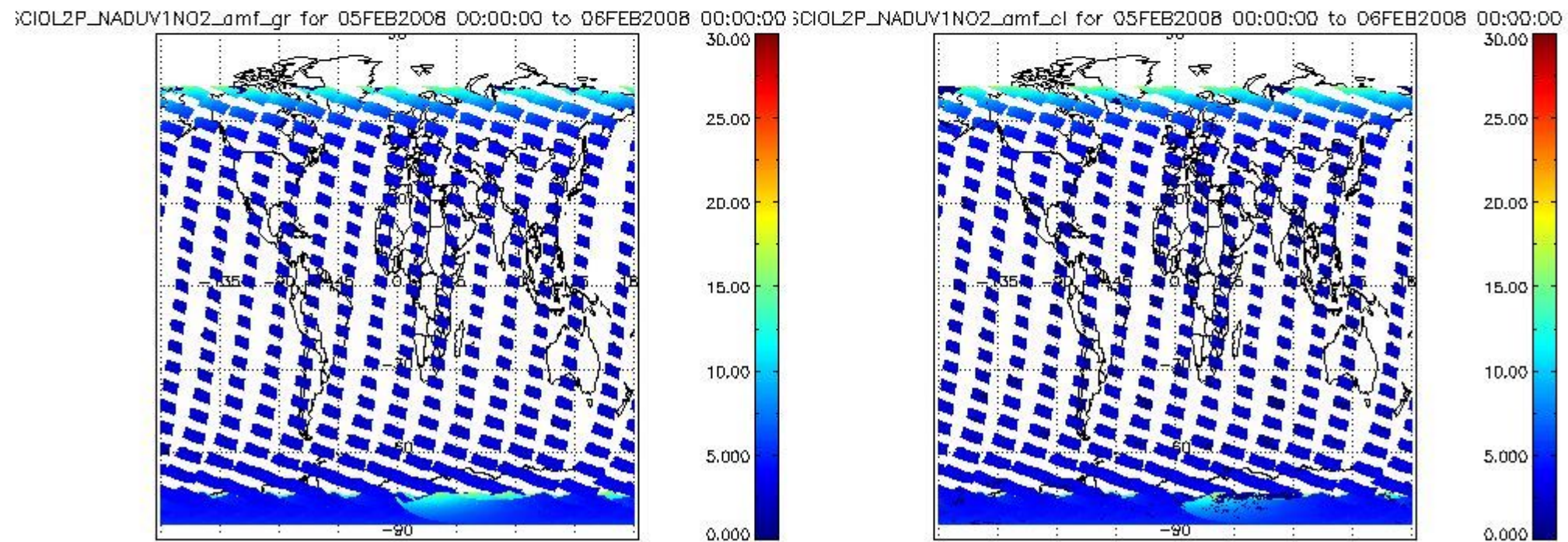
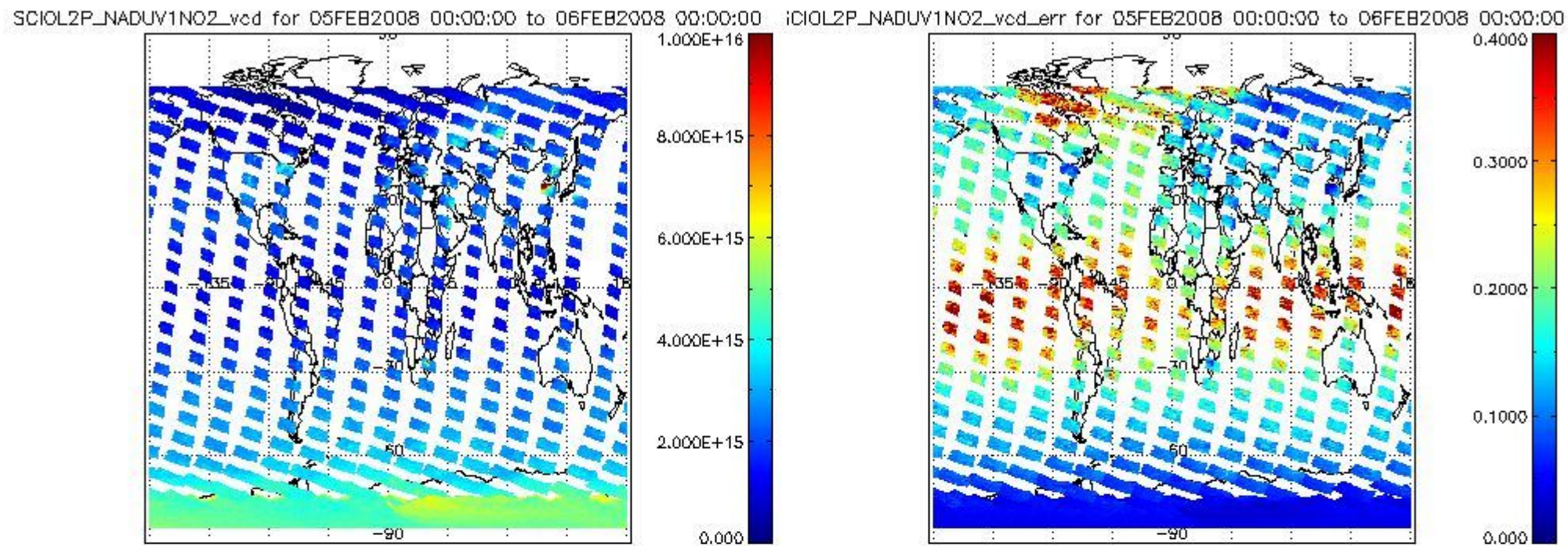
SCIOL2P\_NADUV003\_amf\_gr for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 05FEB2008 00:00:00 to 06FEB2008 00:00:00







### 2.2.3 Limb

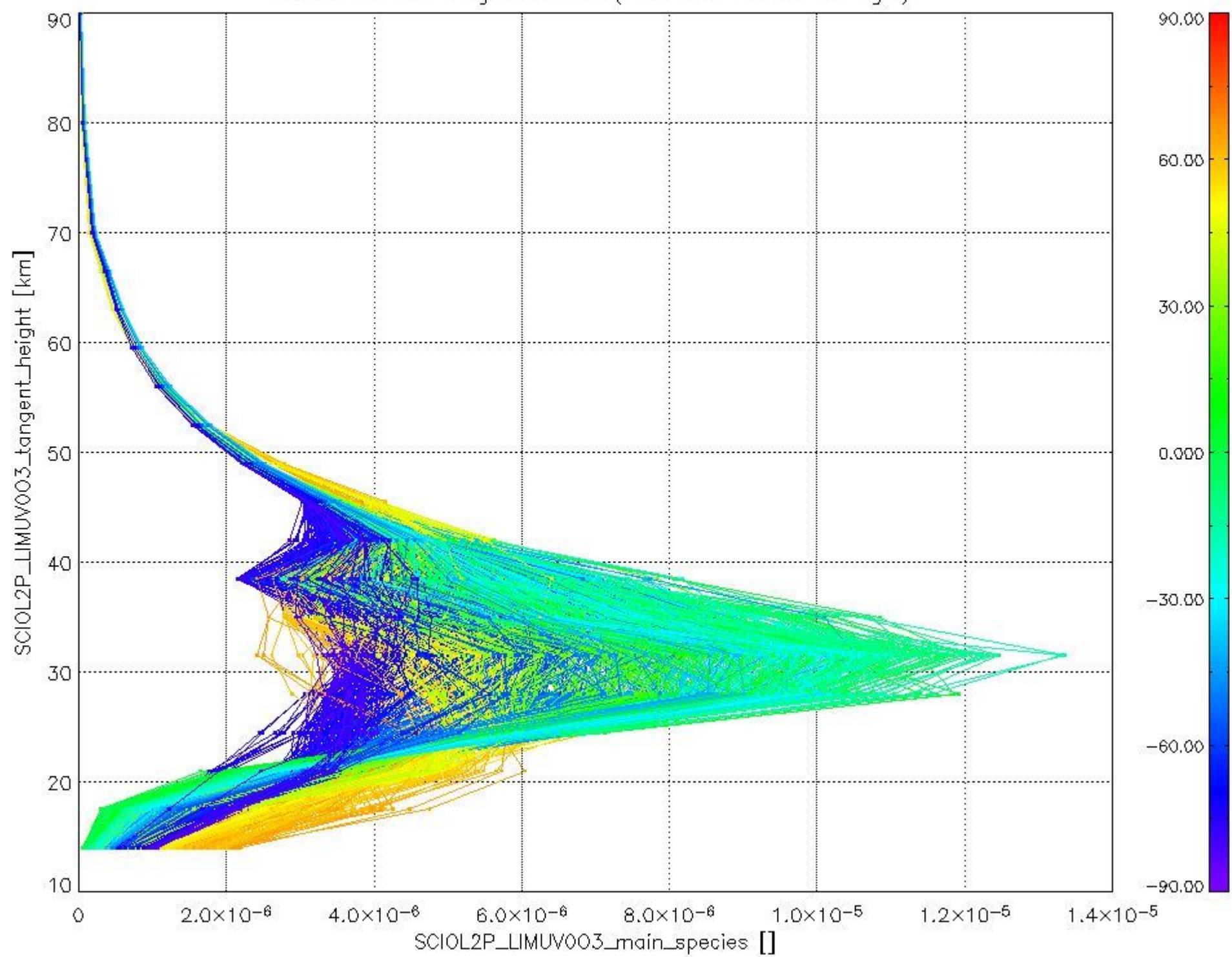
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

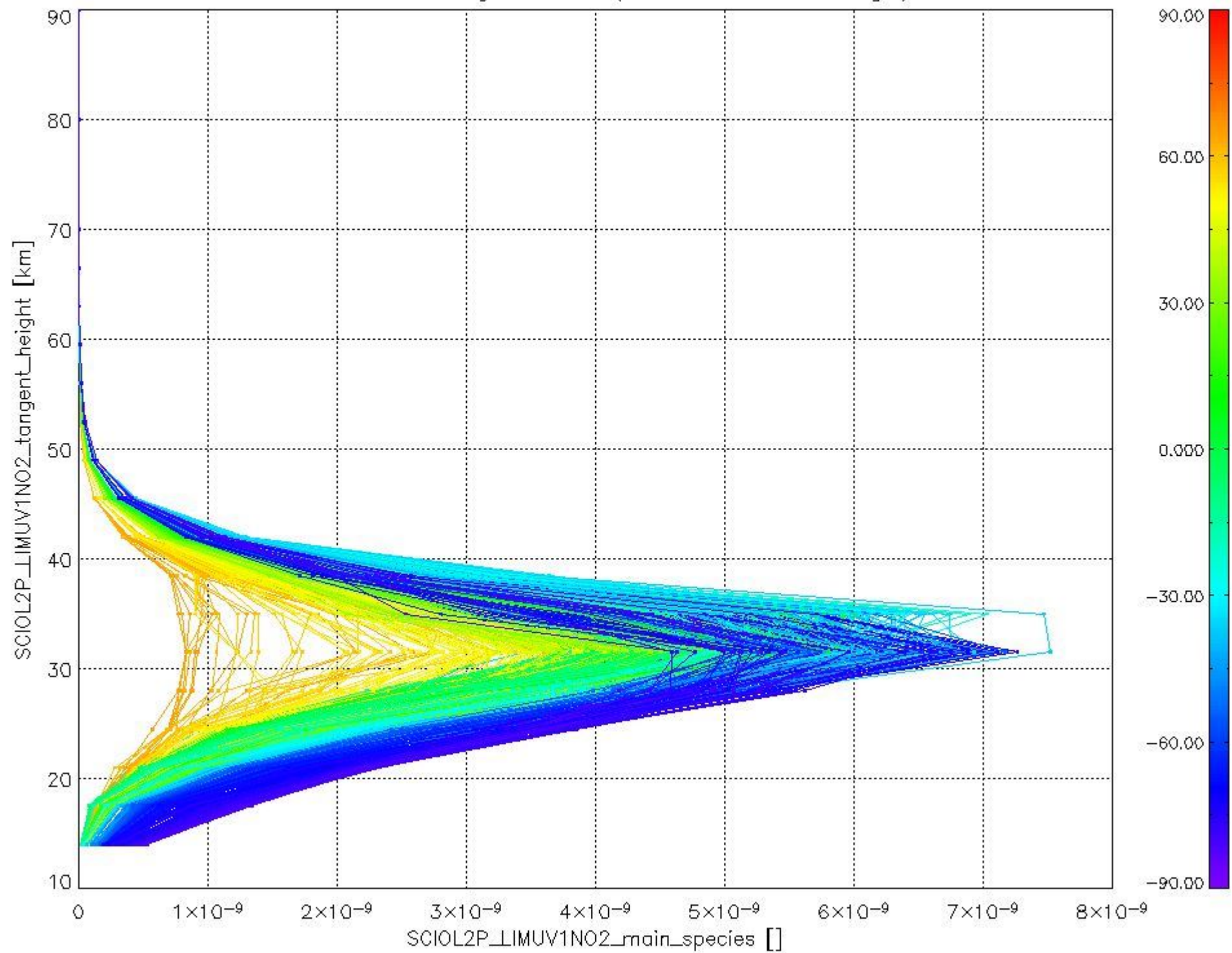
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





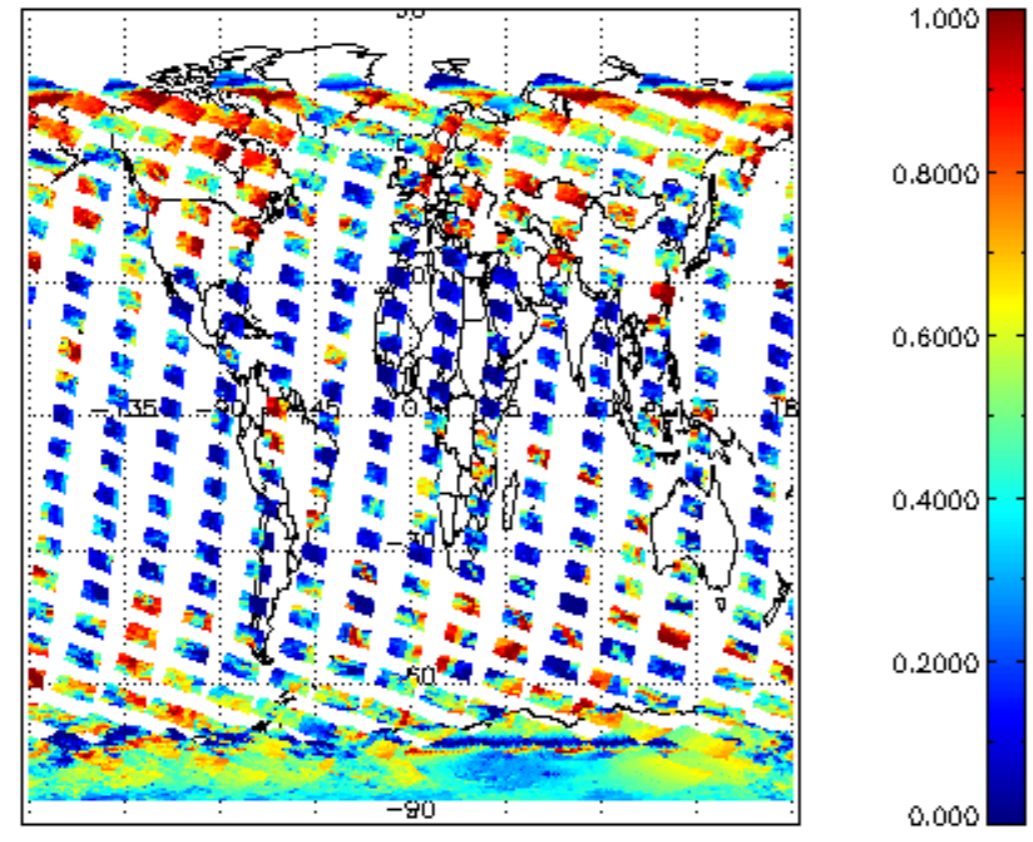
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



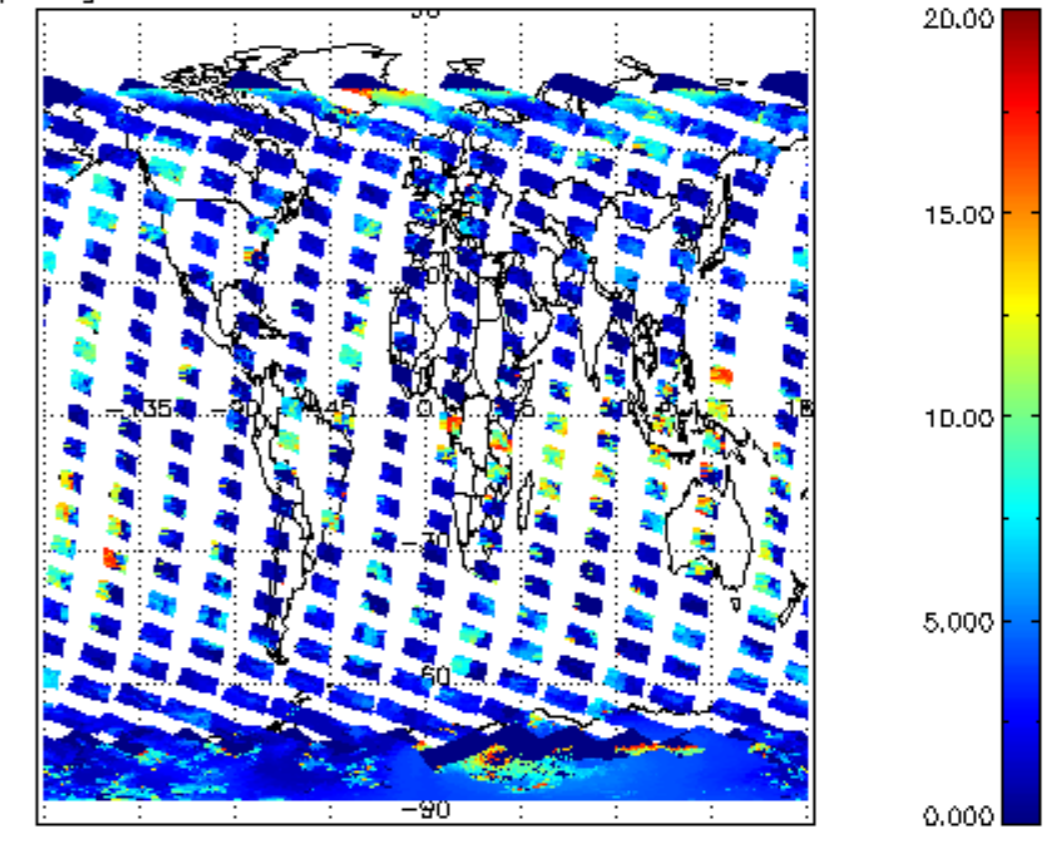
### 2.3 ADF monitoring

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

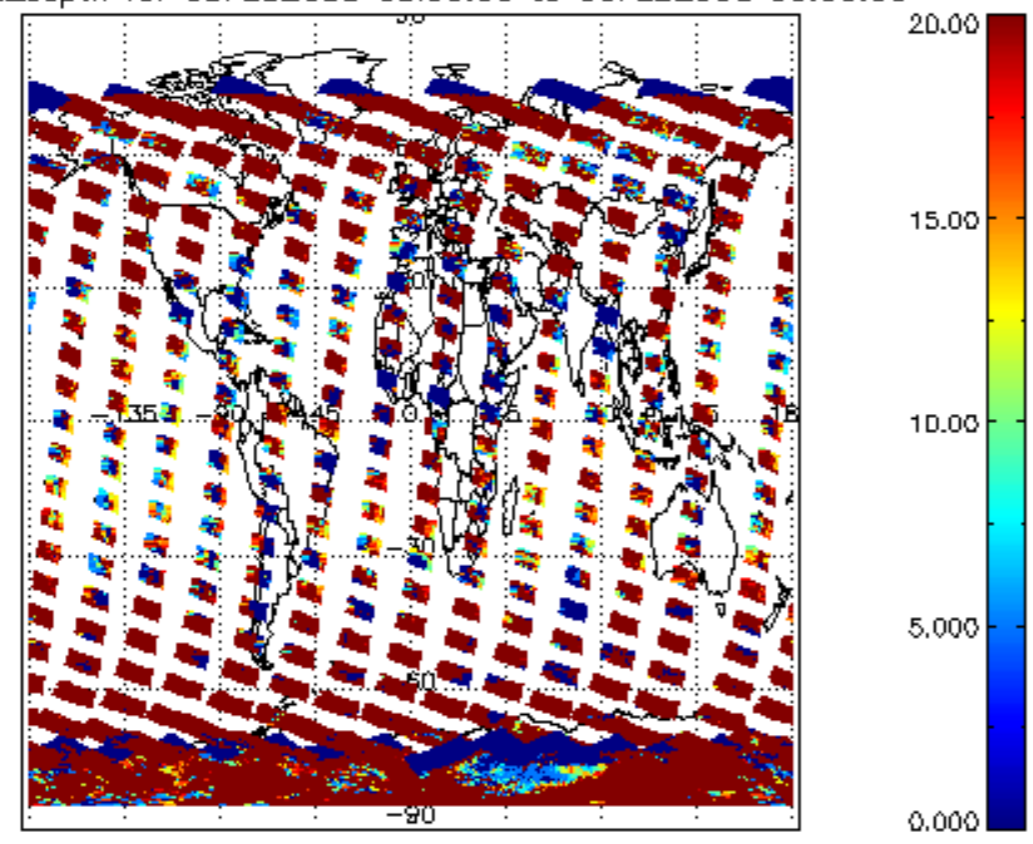
cl\_frac for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



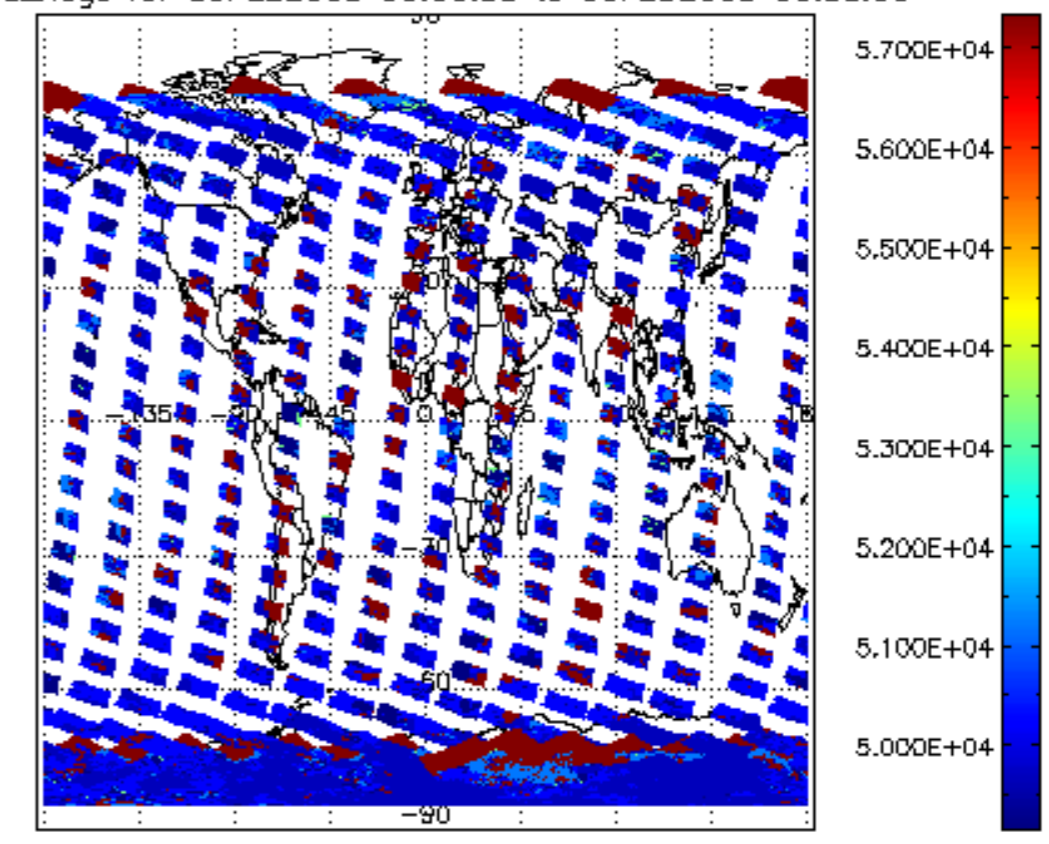
cl\_top\_height for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

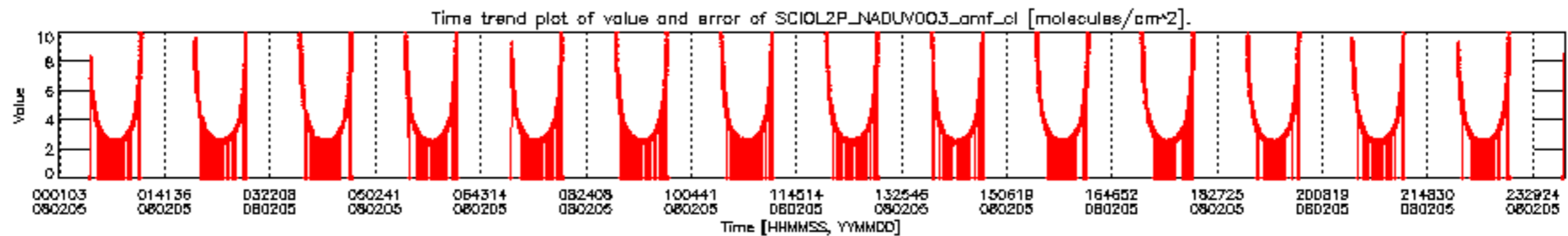
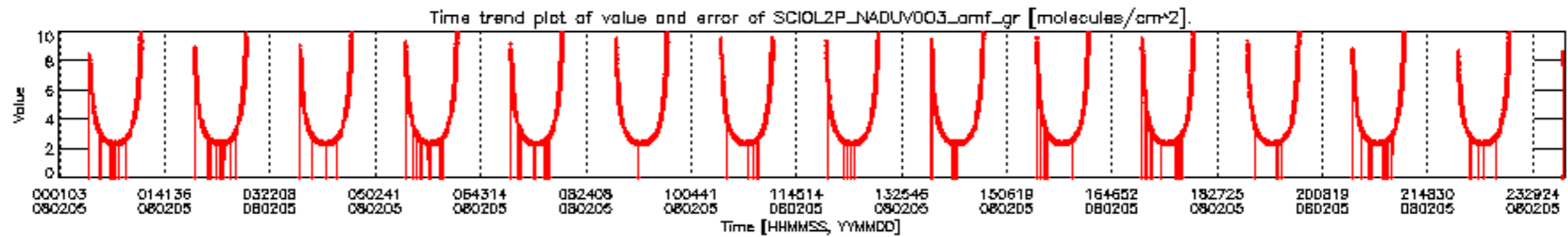
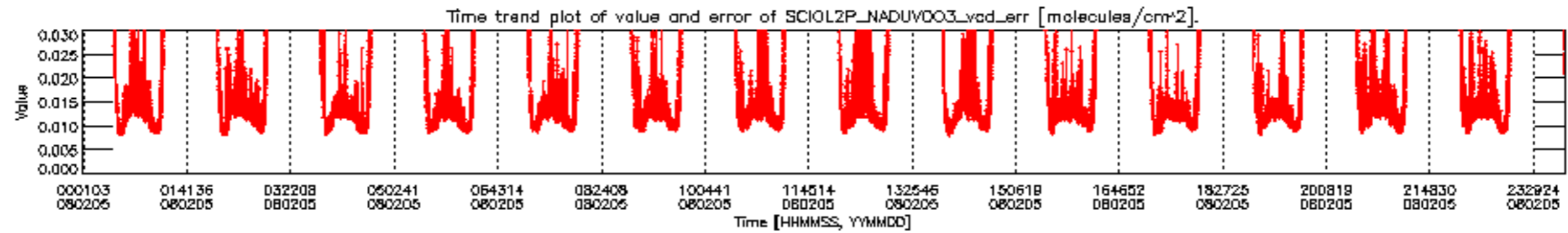
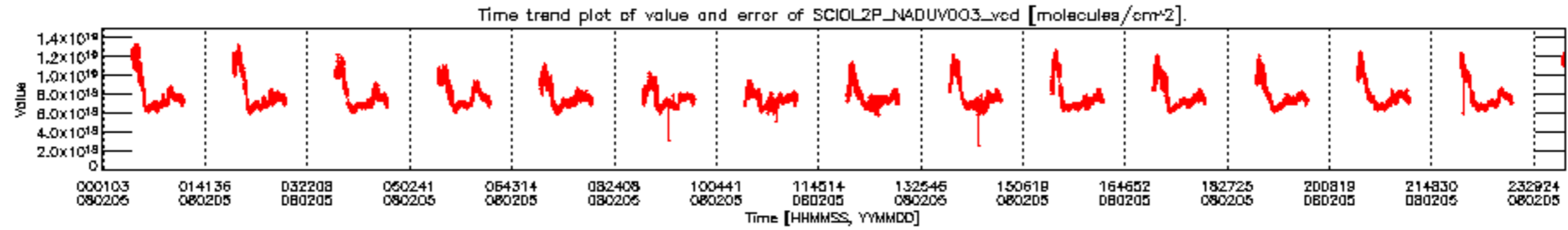


cl\_opt\_depth for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

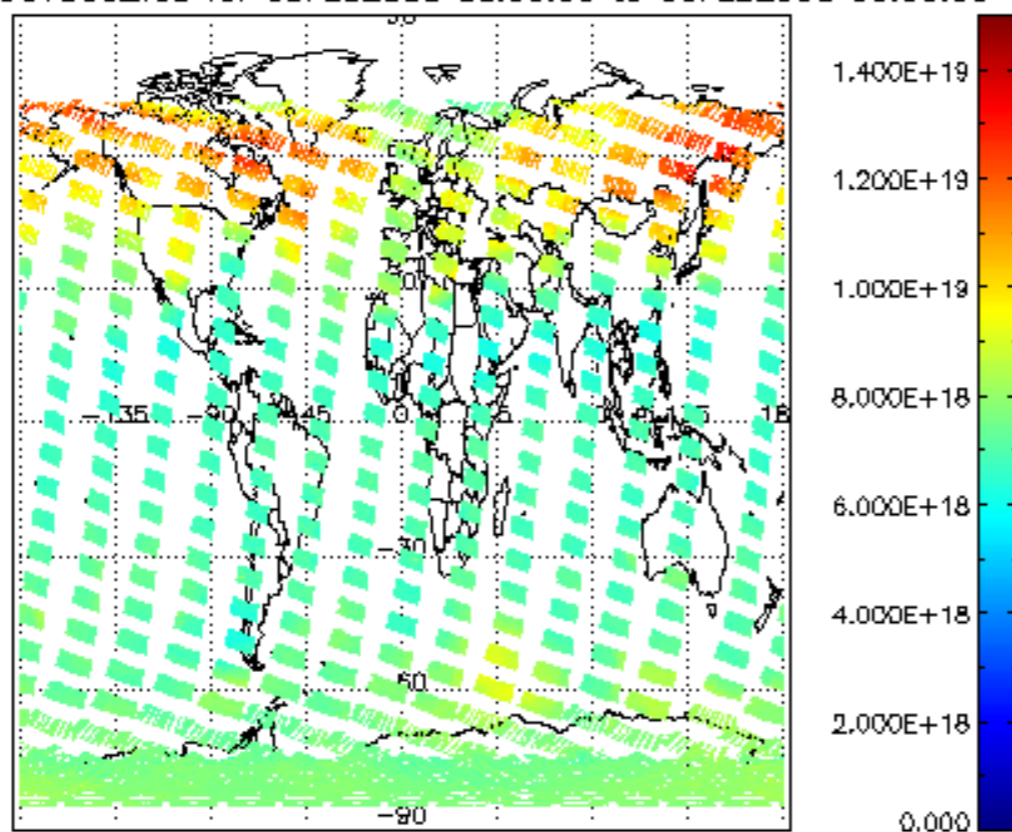


cloud\_flags for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

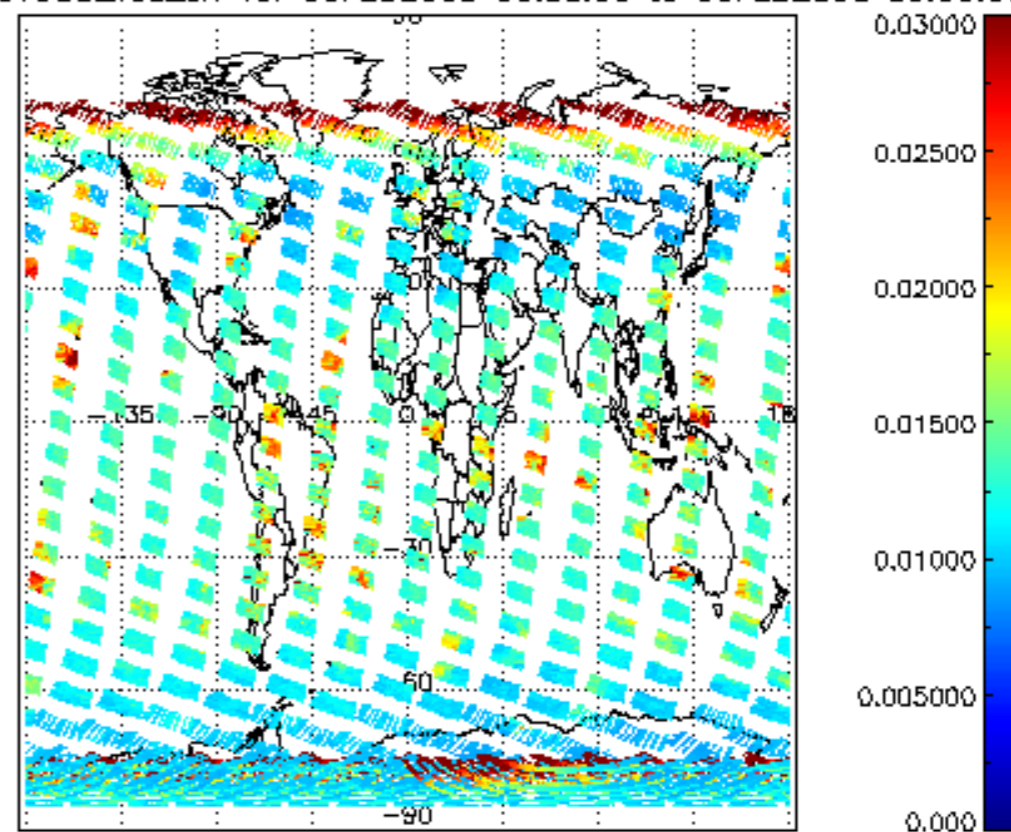




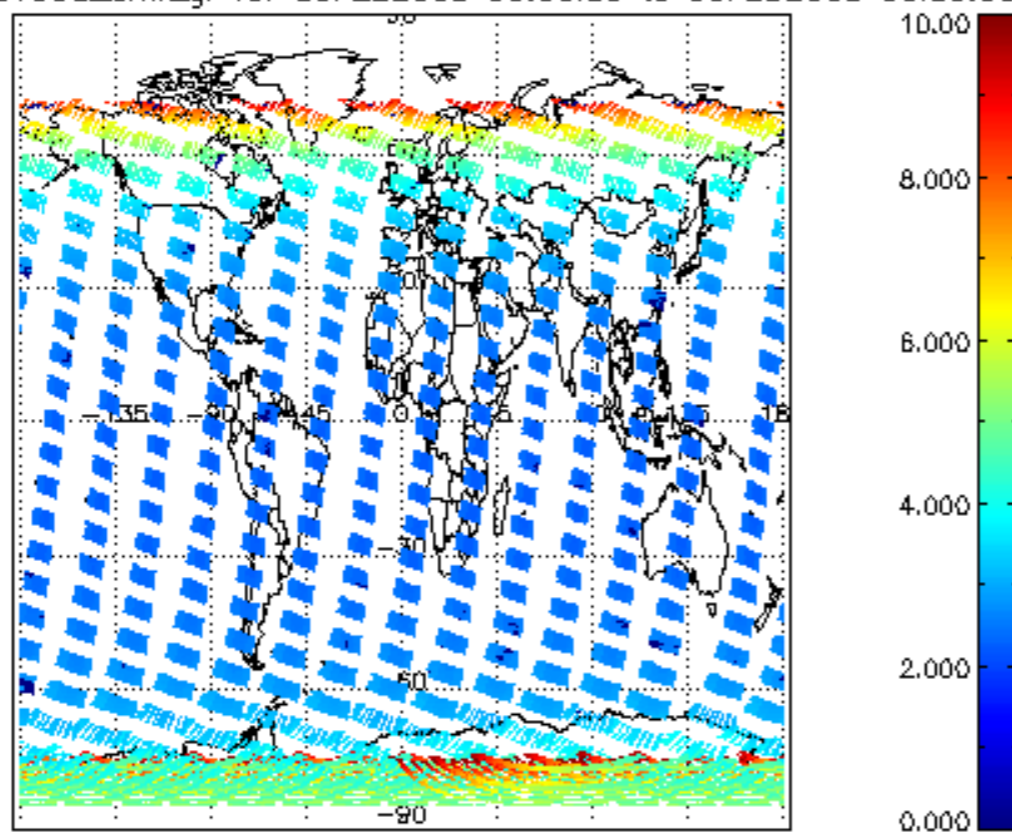
SCIOL2P\_NADUV003\_vcd for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



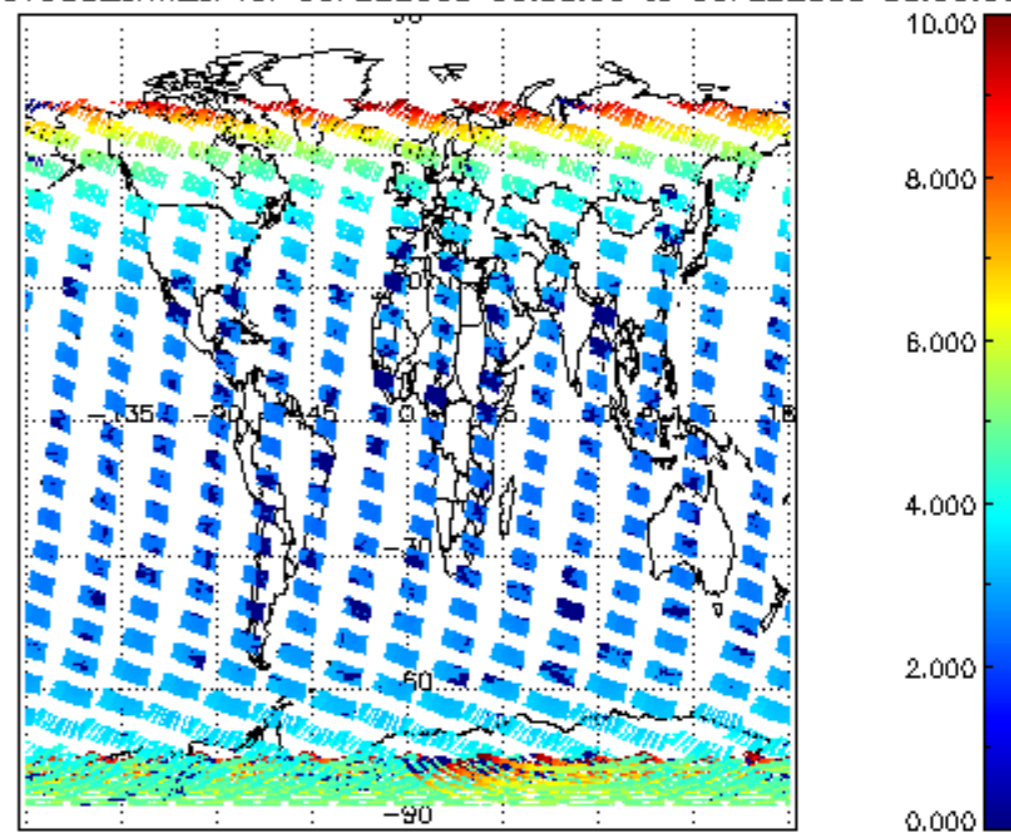
SCIOL2P\_NADUV003\_vcd\_err for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

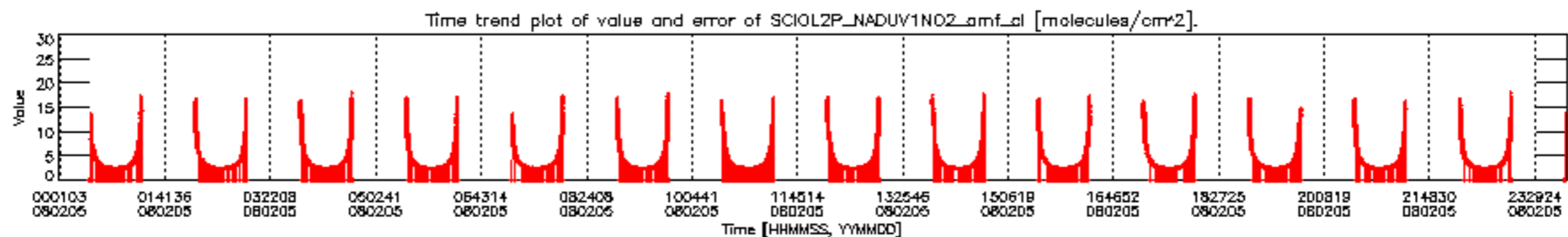
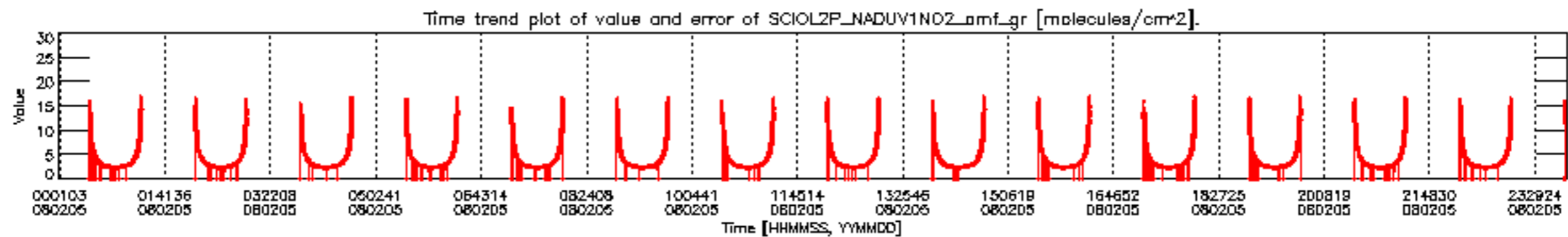
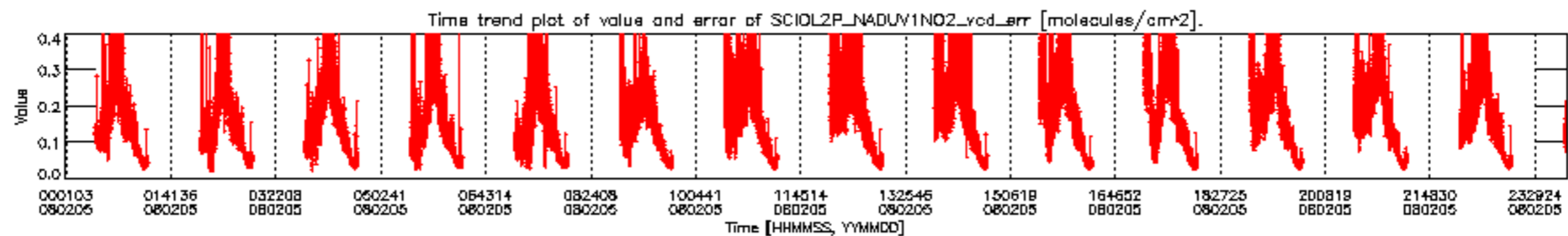
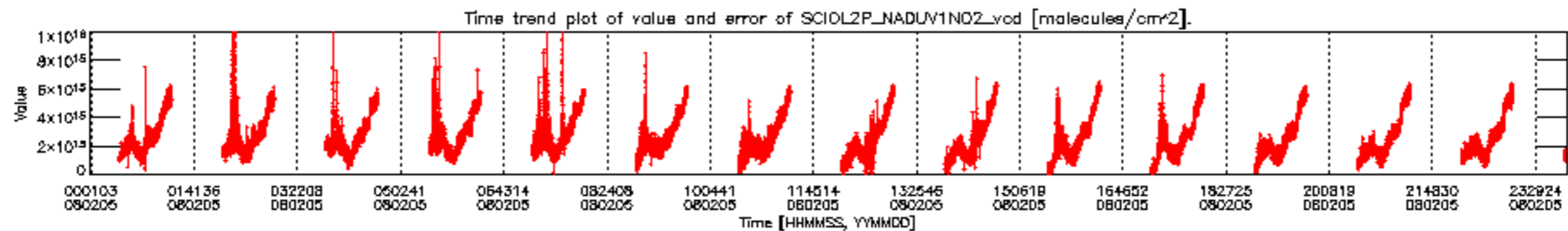


SCIOL2P\_NADUV003\_amf\_gr for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

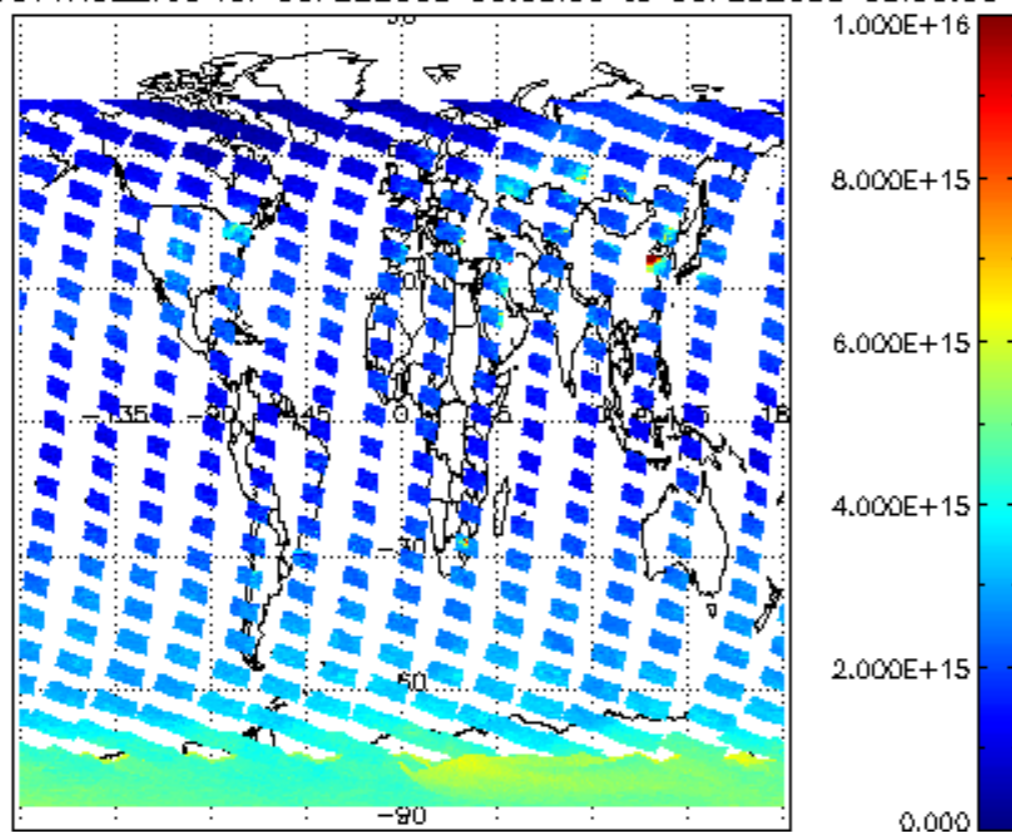


SCIOL2P\_NADUV003\_amf\_cl for 05FEB2008 00:00:00 to 06FEB2008 00:00:00

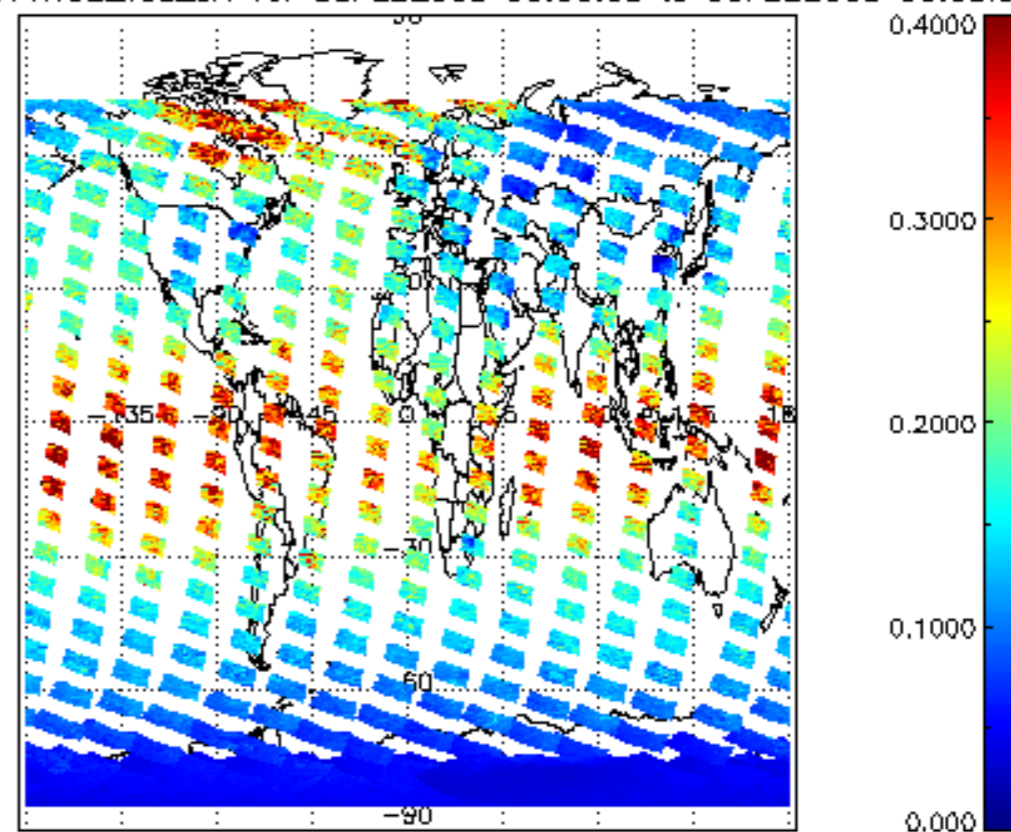




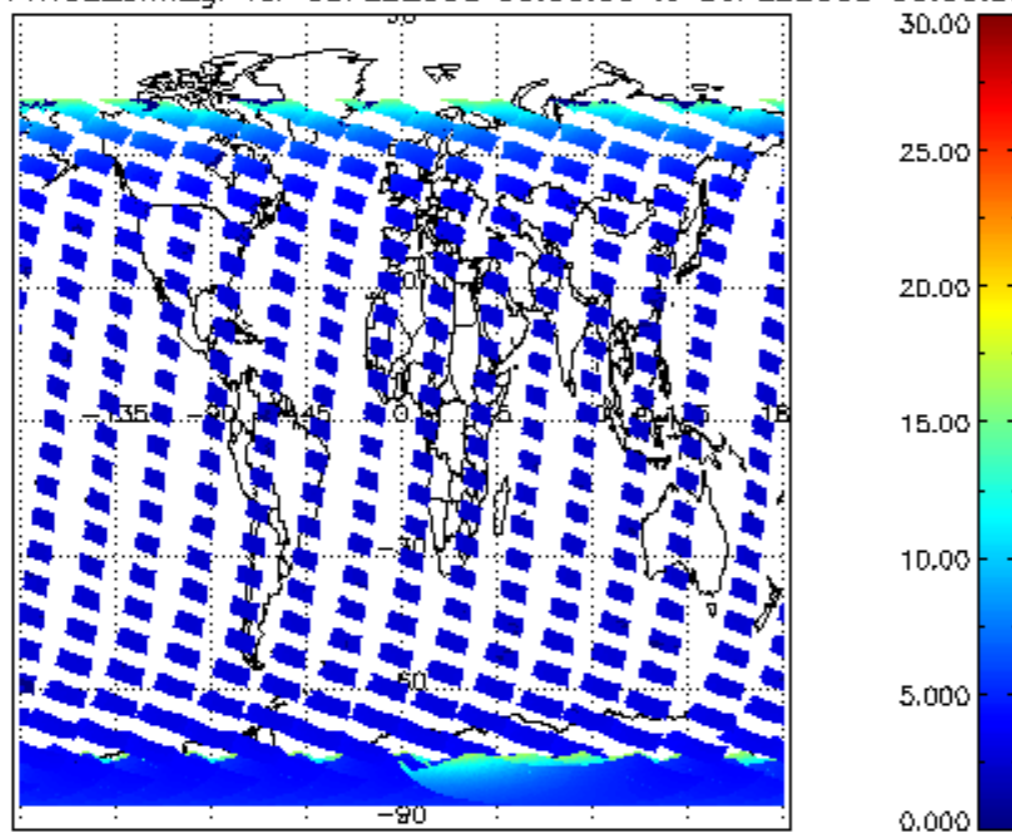
SCIOL2P\_NADUV1NO2\_vcd for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



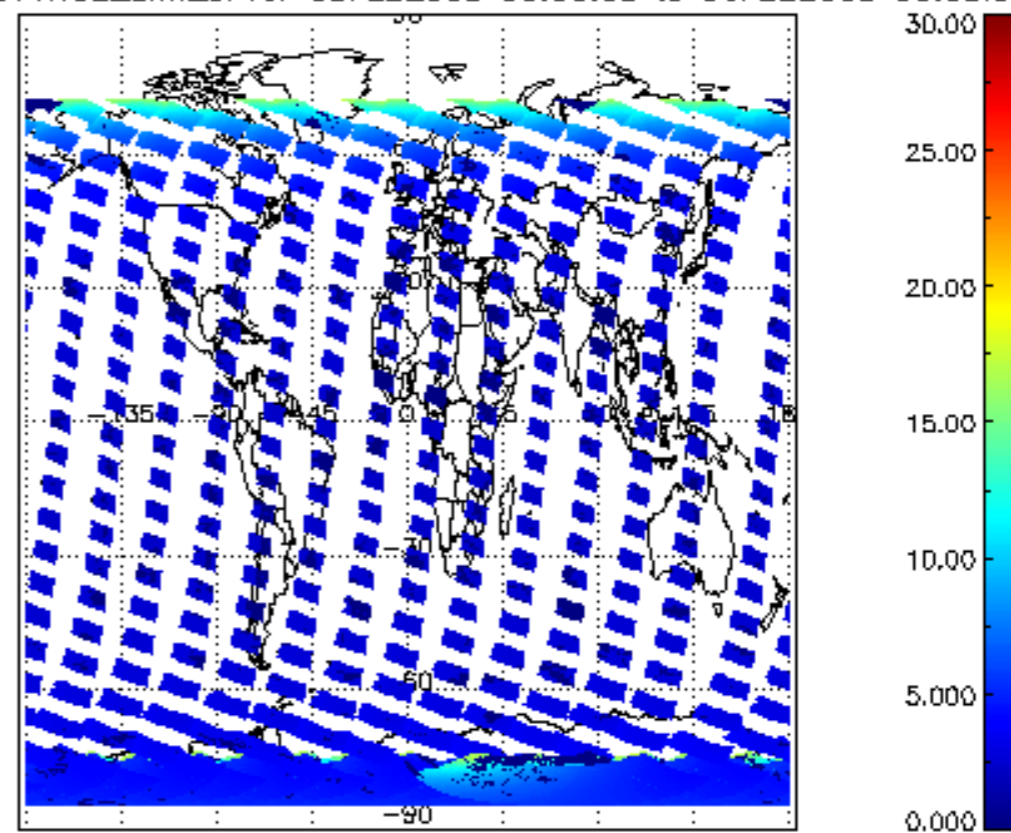
SCIOL2P\_NADUV1NO2\_vcd\_err for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



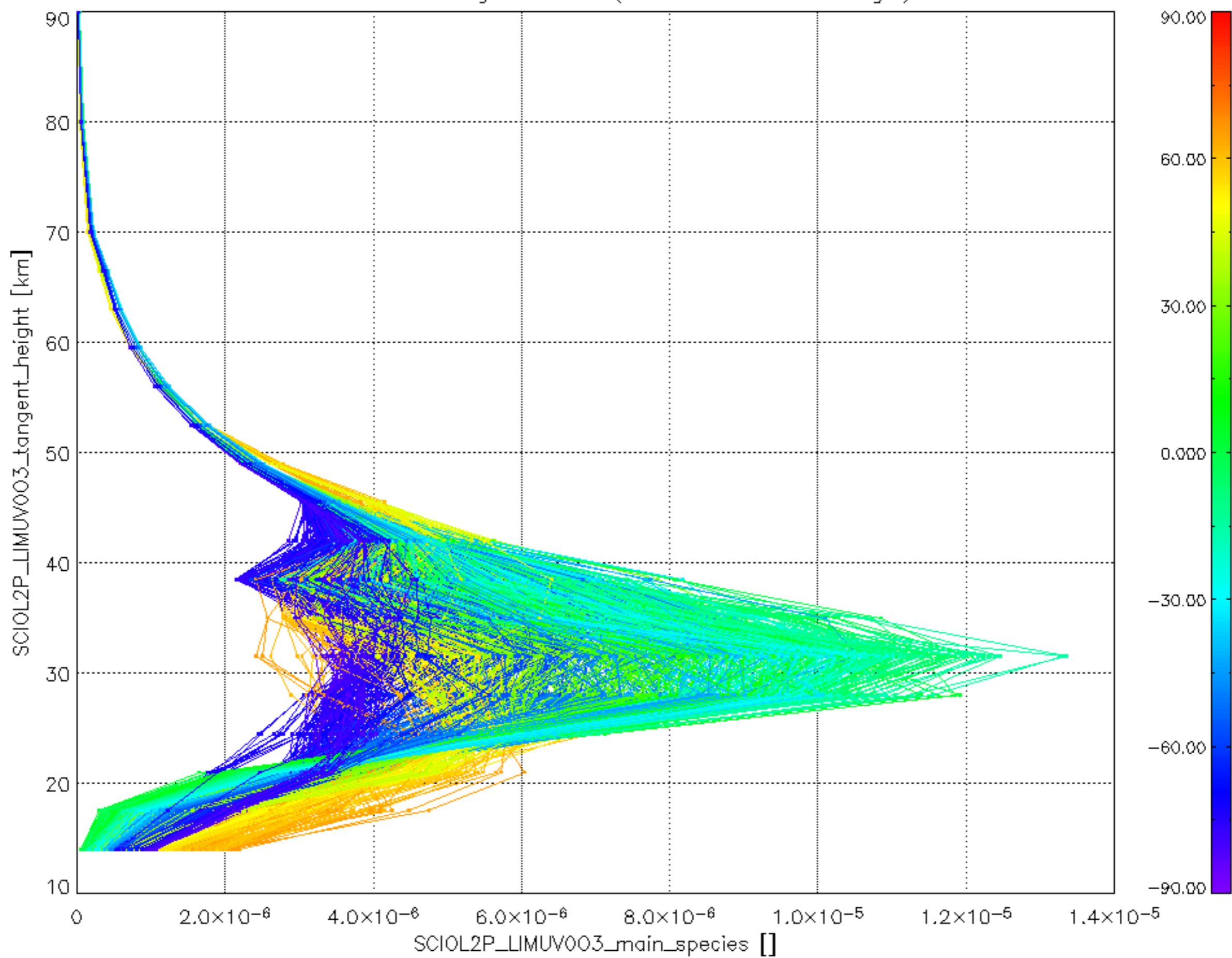
SCIOL2P\_NADUV1NO2\_amf\_gr for 05FEB2008 00:00:00 to 06FEB2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 05FEB2008 00:00:00 to 06FEB2008 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).

