

## 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	10MAR2008 21:04:42
Data source version	SCIA-OL/3.01-R
Processing scope for products	28JAN2008 00:00:00 to 29JAN2008 00:00:00
Start time of first product within scope	27JAN2008 23:36:23
Stop time of last product within scope	29JAN2008 00:00:06
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__2PRDPA20080127_233623_000033252065_00288_30903_2032.N1	27JAN2008 23:36:23	28JAN2008 00:31:48	0	GOOD
1	SCI_OL__2PRDPA20080128_011807_000032692065_00289_30904_2030.N1	28JAN2008 01:18:07	28JAN2008 02:12:37	0	GOOD
2	SCI_OL__2PRDPA20080128_025734_000033252065_00290_30905_2033.N1	28JAN2008 02:57:34	28JAN2008 03:52:59	0	GOOD
3	SCI_OL__2PRDPA20080128_043918_000032692065_00291_30906_2034.N1	28JAN2008 04:39:18	28JAN2008 05:33:48	0	GOOD
4	SCI_OL__2PRDPA20080128_061845_000033252065_00292_30907_2035.N1	28JAN2008 06:18:45	28JAN2008 07:14:10	0	GOOD
5	SCI_OL__2PRDPA20080128_080029_000032692065_00293_30908_2036.N1	28JAN2008 08:00:29	28JAN2008 08:54:59	0	GOOD
6	SCI_OL__2PRDPA20080128_093956_000033252065_00294_30909_2037.N1	28JAN2008 09:39:56	28JAN2008 10:35:22	0	GOOD
7	SCI_OL__2PRDPA20080128_112140_000032692065_00295_30910_1988.N1	28JAN2008 11:21:40	28JAN2008 12:16:10	0	GOOD
8	SCI_OL__2PRDPA20080128_130107_000033252065_00296_30911_1991.N1	28JAN2008 13:01:07	28JAN2008 13:56:32	0	GOOD
9	SCI_OL__2PRDPA20080128_144251_000032692065_00297_30912_2038.N1	28JAN2008 14:42:51	28JAN2008 15:37:21	0	GOOD
10	SCI_OL__2PRDPA20080128_162218_000033252065_00298_30913_1992.N1	28JAN2008 16:22:18	28JAN2008 17:17:44	0	GOOD
11	SCI_OL__2PRDPA20080128_180227_000033942065_00299_30914_1996.N1	28JAN2008 18:02:27	28JAN2008 18:59:01	0	GOOD
12	SCI_OL__2PRDPA20080128_194302_000033812065_00300_30915_1997.N1	28JAN2008 19:43:02	28JAN2008 20:39:24	0	GOOD
13	SCI_OL__2PRDPA20080128_212513_000032692065_00301_30916_1998.N1	28JAN2008 21:25:13	28JAN2008 22:19:43	0	GOOD
14	SCI_OL__2PRDPA20080128_230440_000033252065_00302_30917_2001.N1	28JAN2008 23:04:40	29JAN2008 00:00:06	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: 153610

Total number of cloud data DSRs with good quality flag (=0): 153610 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	153610	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	153610	0.16964	0.12500	0.12500	0.25000	0.059895	s
SURFACE_PRES	153610	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	153610	0.42167	0.41166	0.0000	1.0000	0.26980	-

CL_FRAC_ERR	153610	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	153610	5.4286	4.0000	4.0000	8.0000	1.9166	
PMD_READ_CL[0]	153610	0.21058	0.0000	0.0000	8.0000	0.99664	-
PMD_READ_CL[1]	153610	0.54396	0.0000	0.0000	8.0000	1.6609	-
CL_TOP_HEIGHT	128978	4.3091	3.4590	0.0000	17.000	3.6759	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	128978	53.527	41.830	0.0000	101.00	39.688	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	153610	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	153610	11001001	11000100	11000000	11100000	3075.4	flags
AERO_ABSO_IND	153610	2.6458	2.9566	-1.5003	17.142	1.9228	
AERO_IND_DIAG	153610	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	153610	01010110	00000000	00000000	11000000	24460.	flags

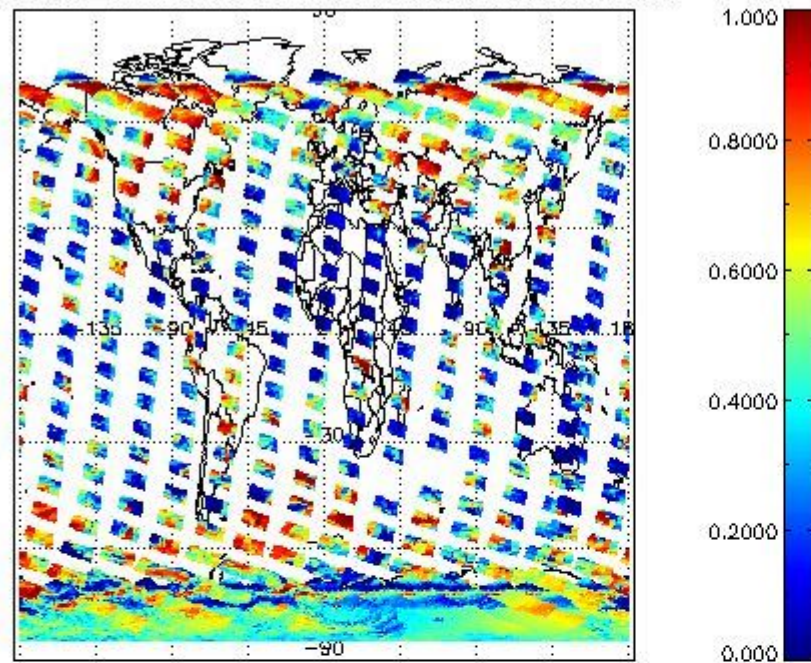
Time and geolocation plots:

Plots are available for the following parameters:

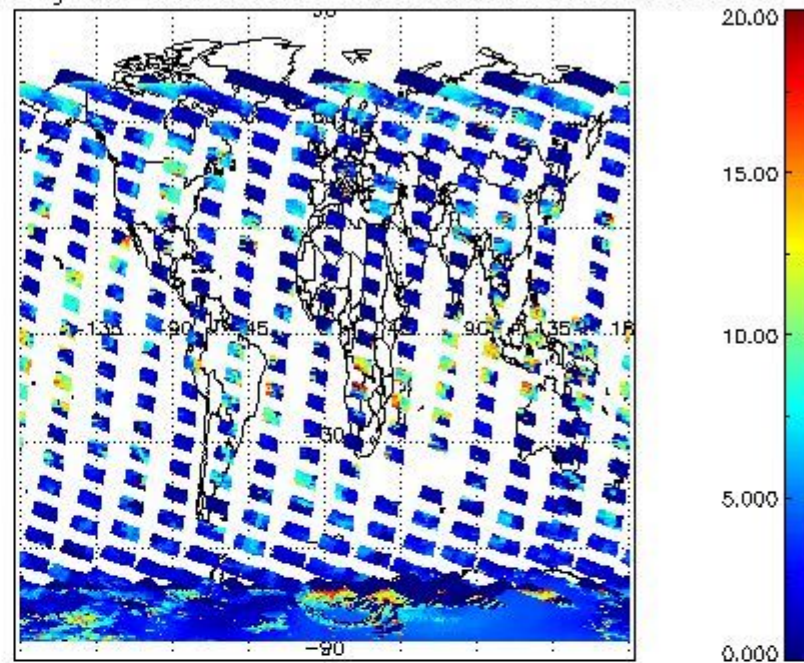
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



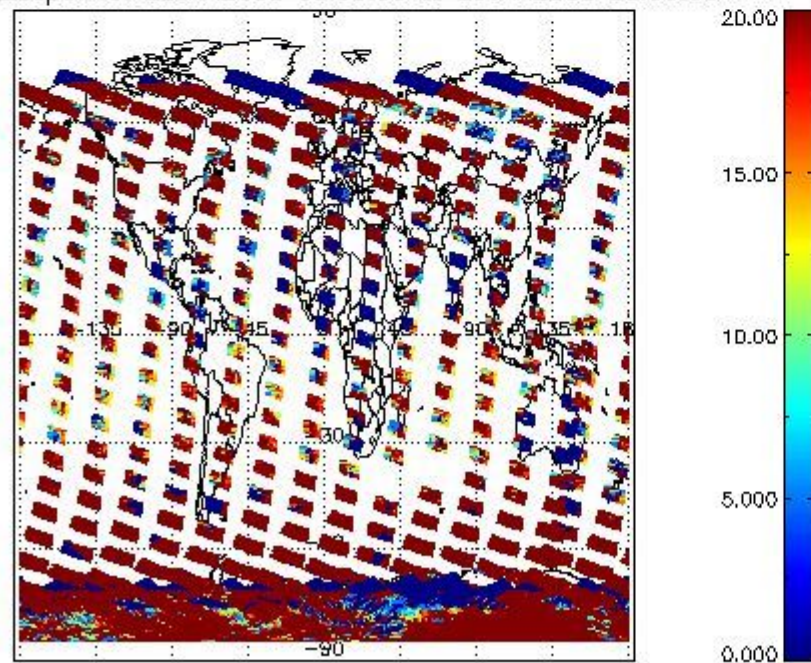
cL\_frac for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



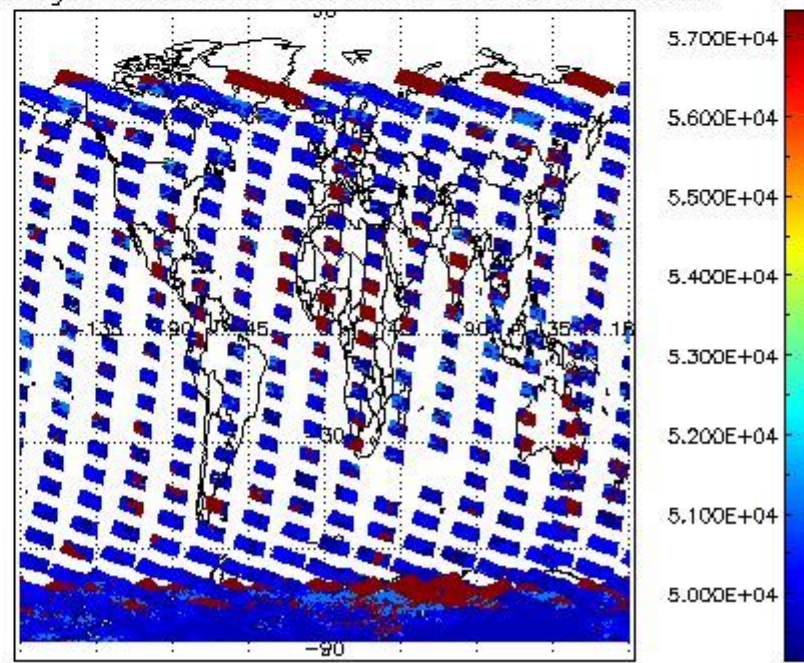
cL\_top\_height for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



cLopt\_depth for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



cloud\_flags for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



### 2.2.2 Nadir

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

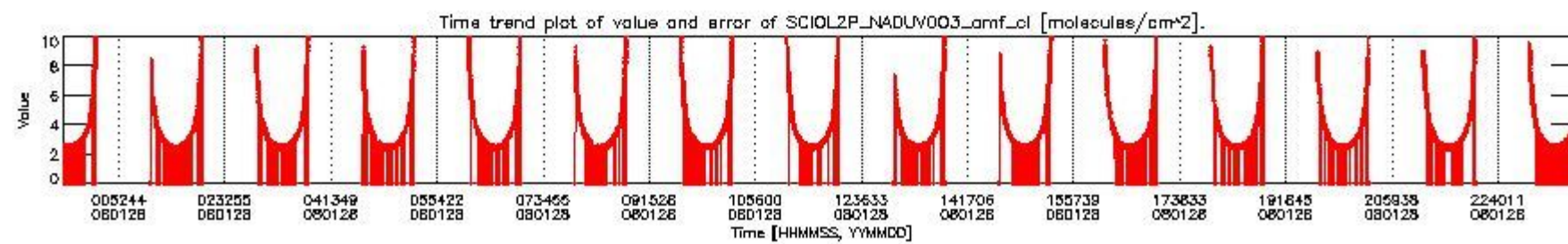
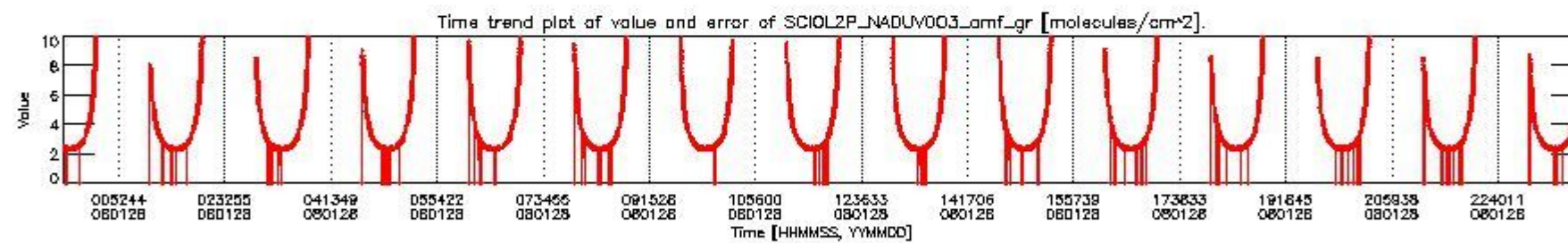
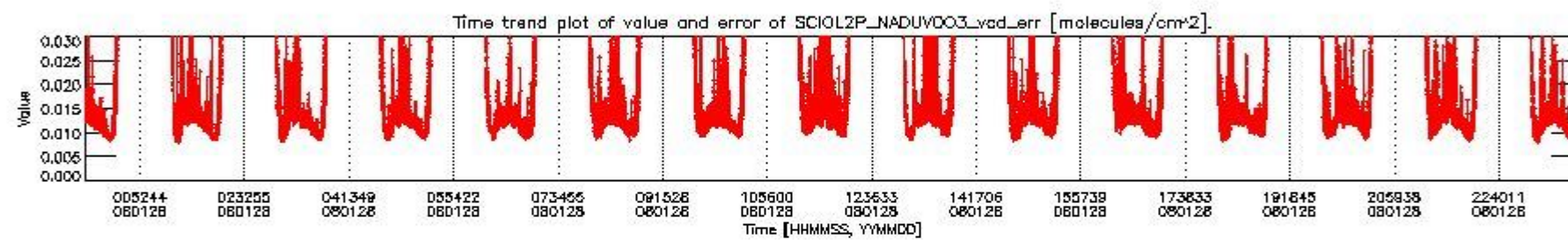
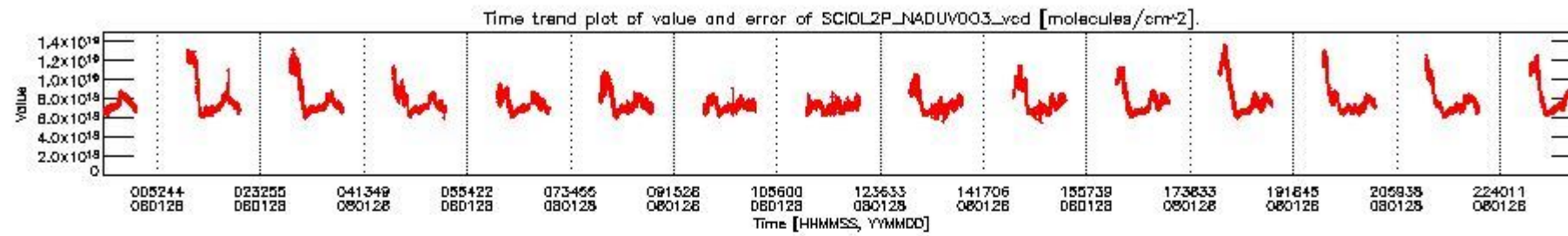
The following data items are currently included into this section:

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



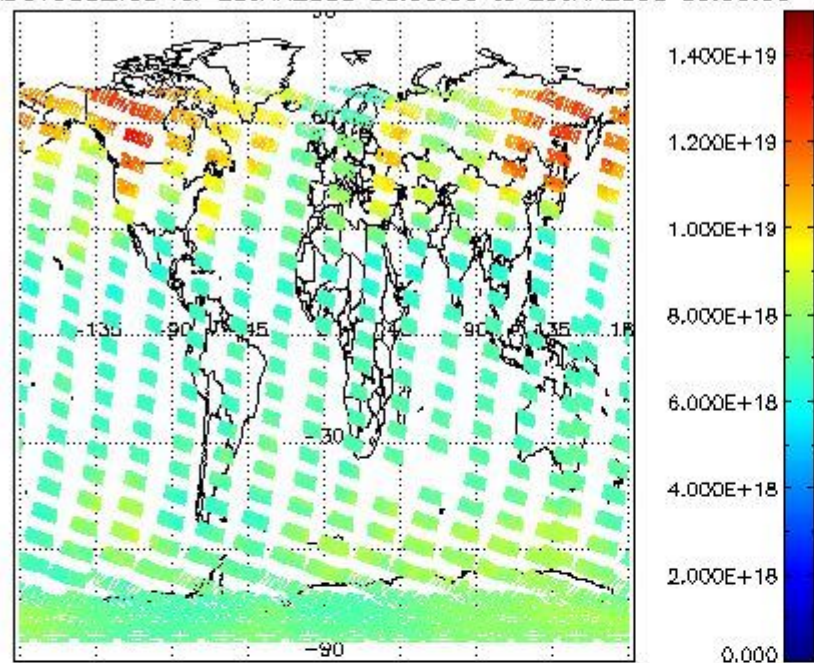
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

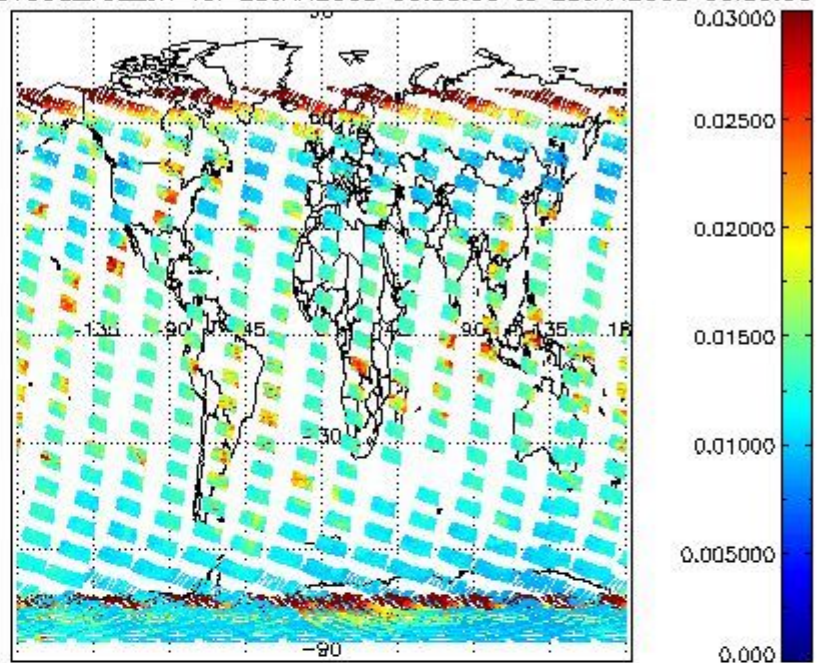




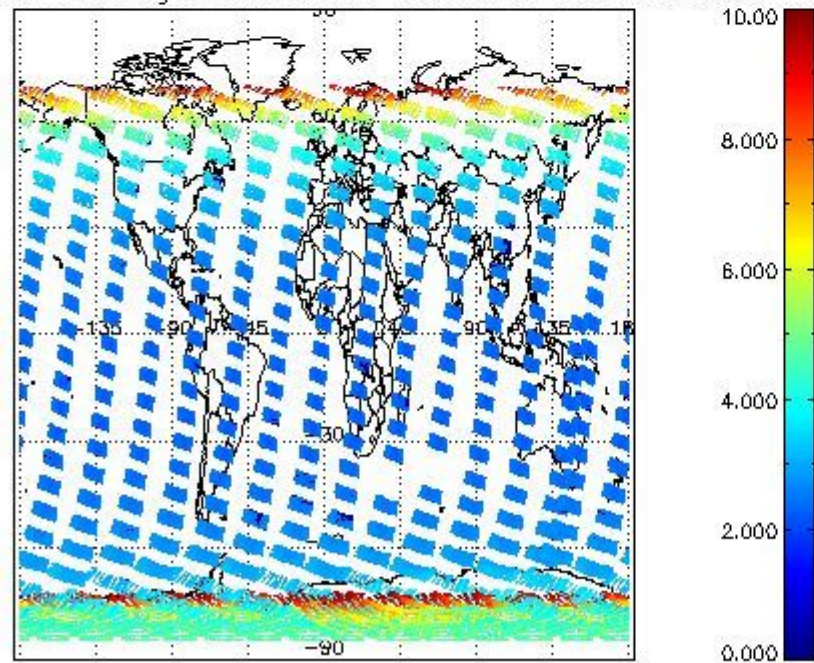
SCIOL2P\_NADUV003\_vcd for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



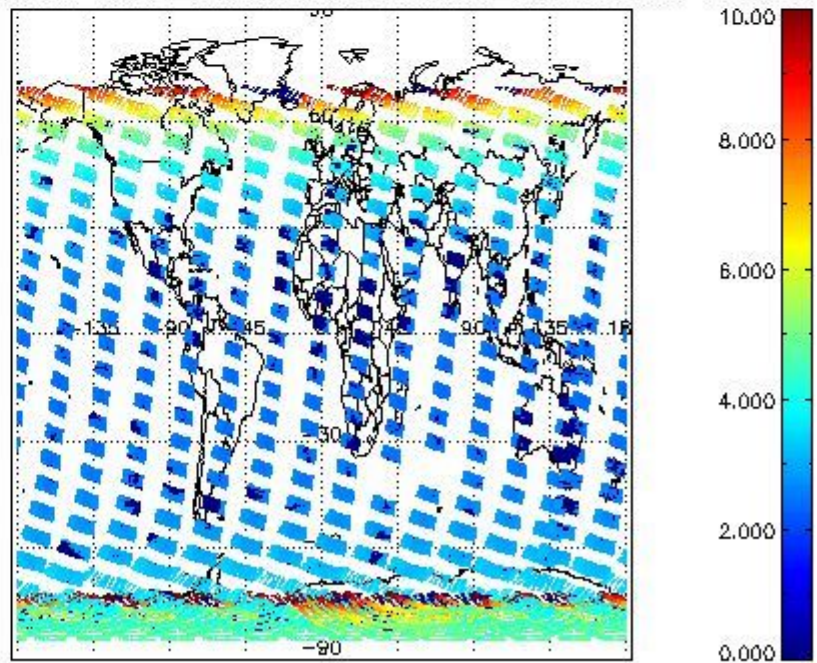
SCIOL2P\_NADUV003\_vcd\_err for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



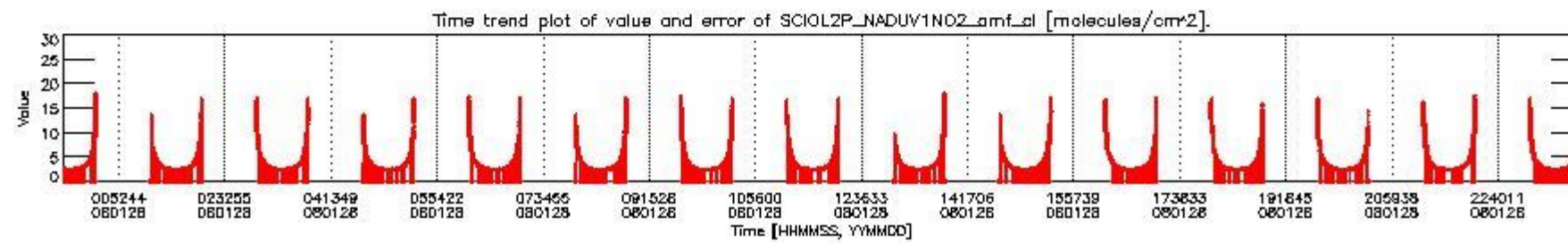
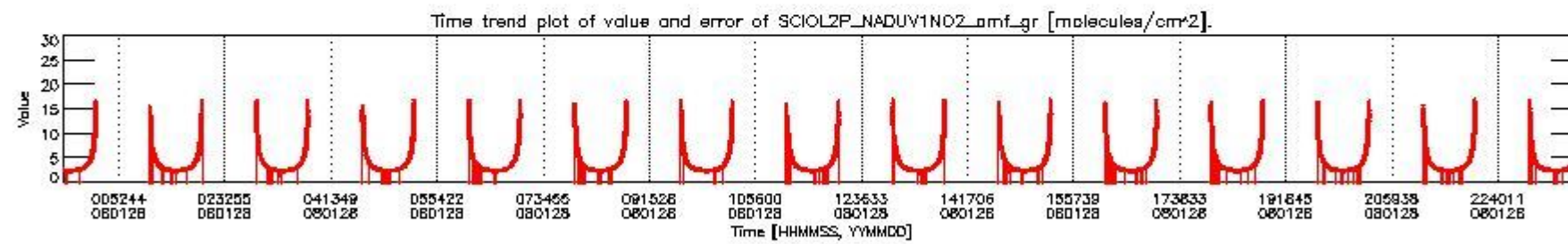
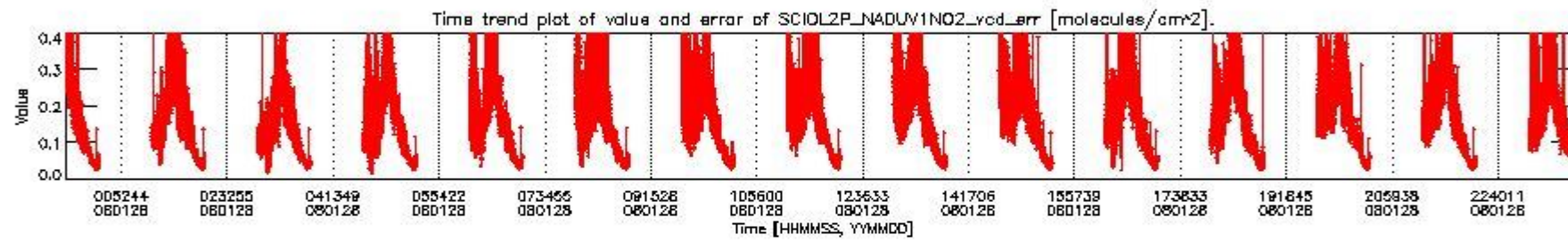
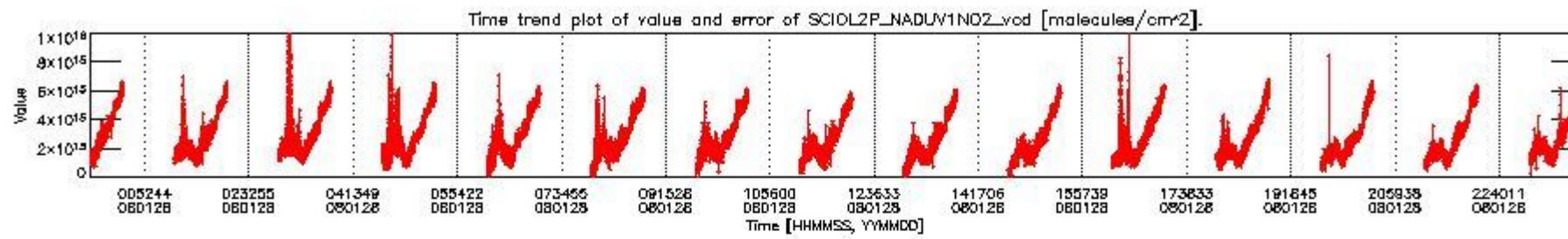
SCIOL2P\_NADUV003\_amf\_gr for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



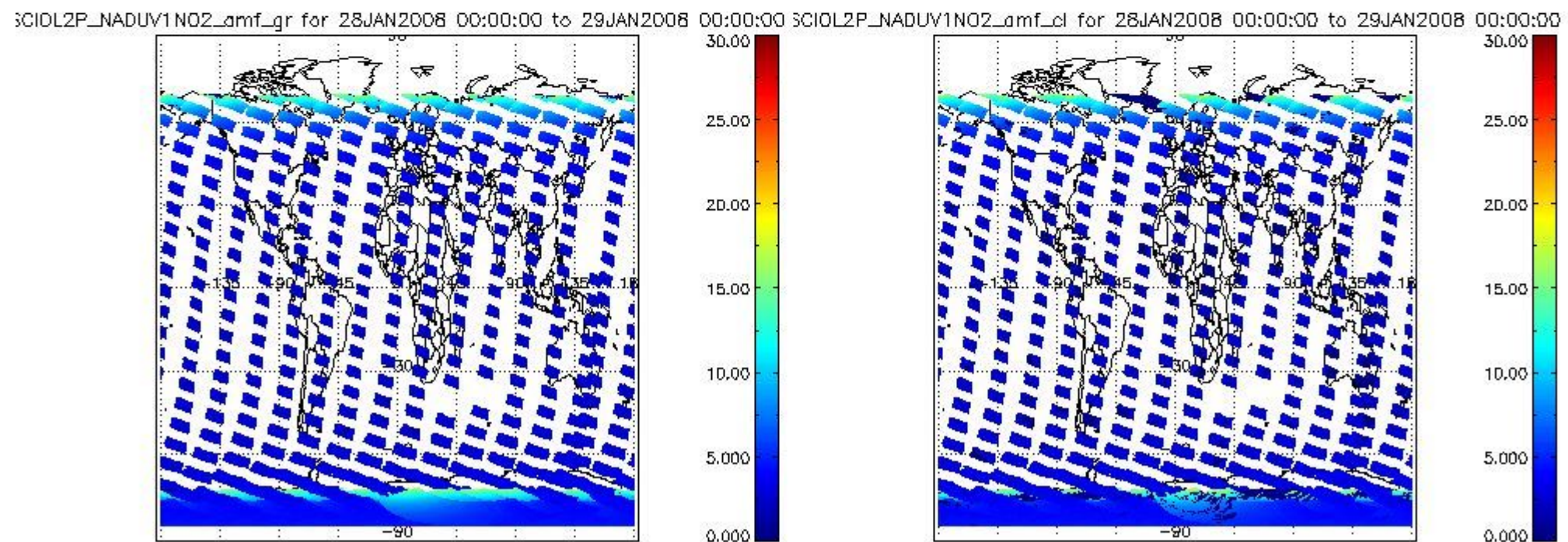
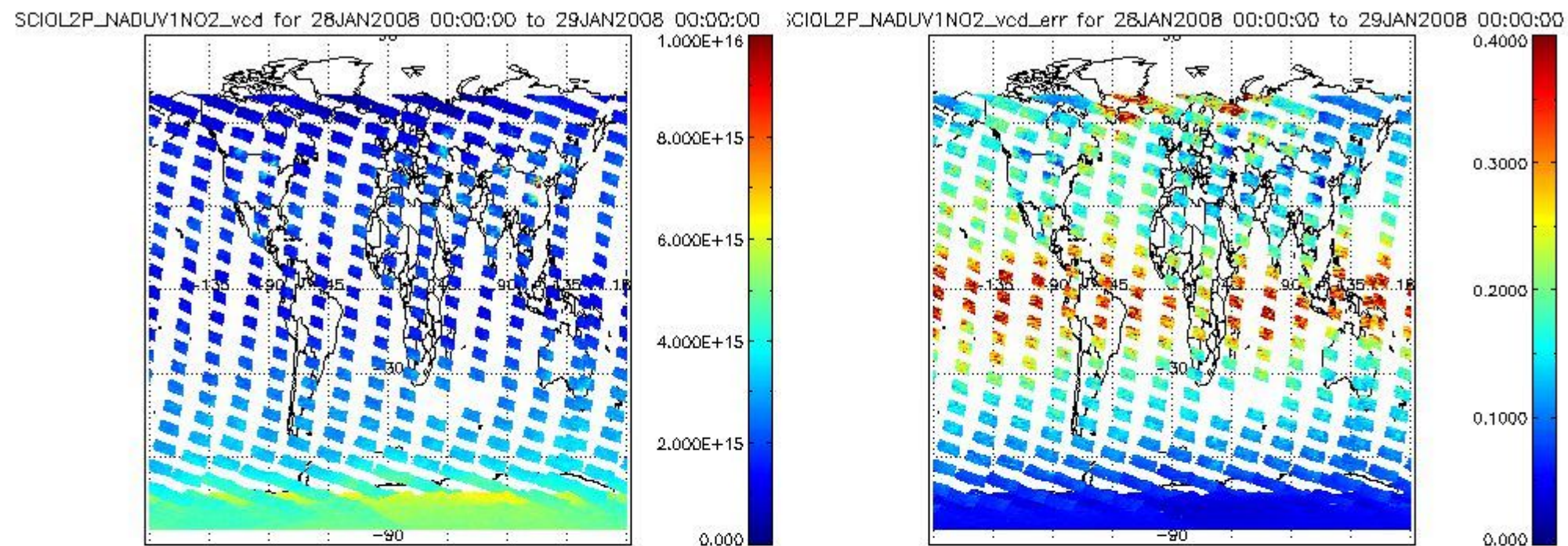
SCIOL2P\_NADUV003\_amf\_cl for 28JAN2008 00:00:00 to 29JAN2008 00:00:00











### 2.2.3 Limb

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

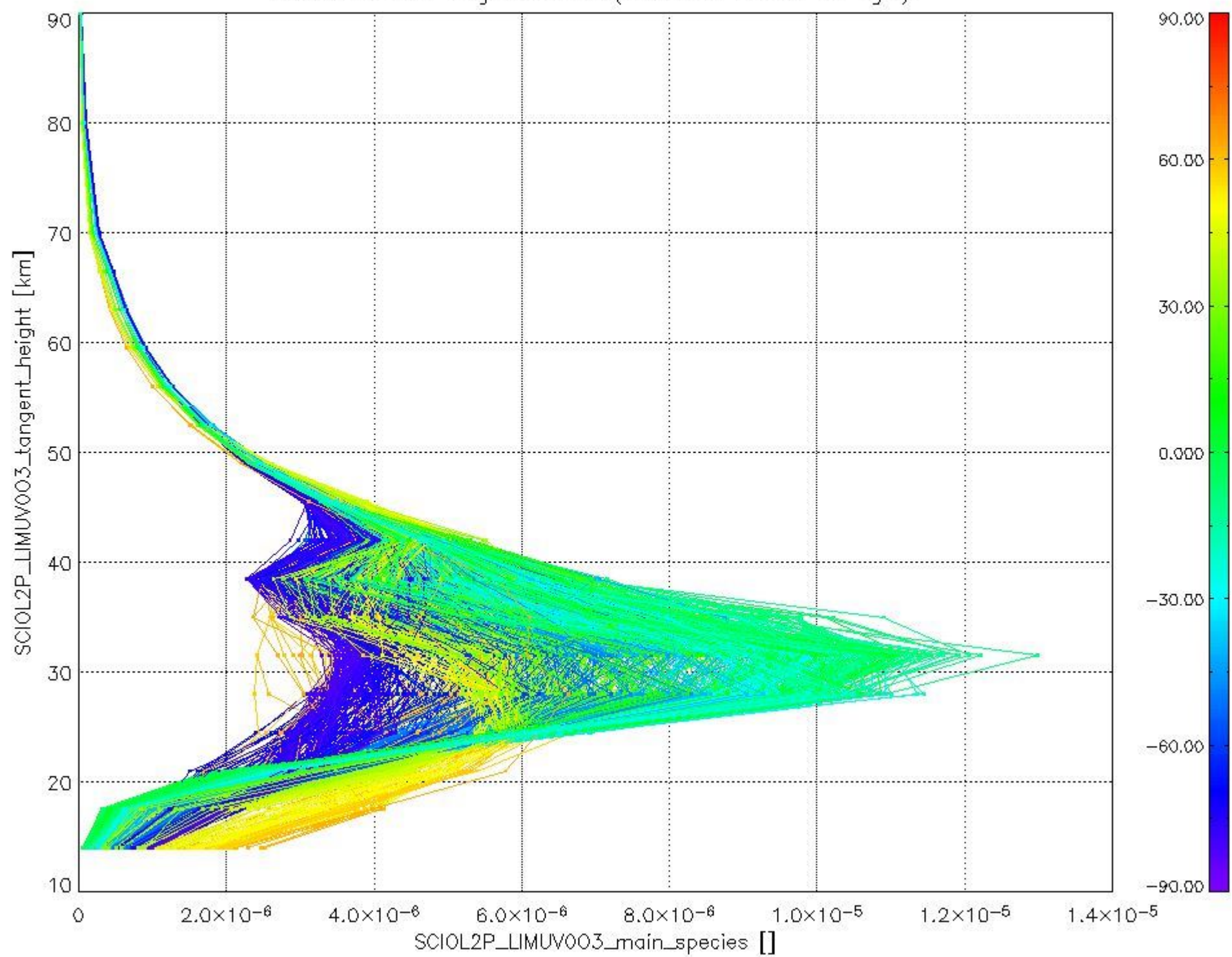
The following data items are currently included into this section:

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.

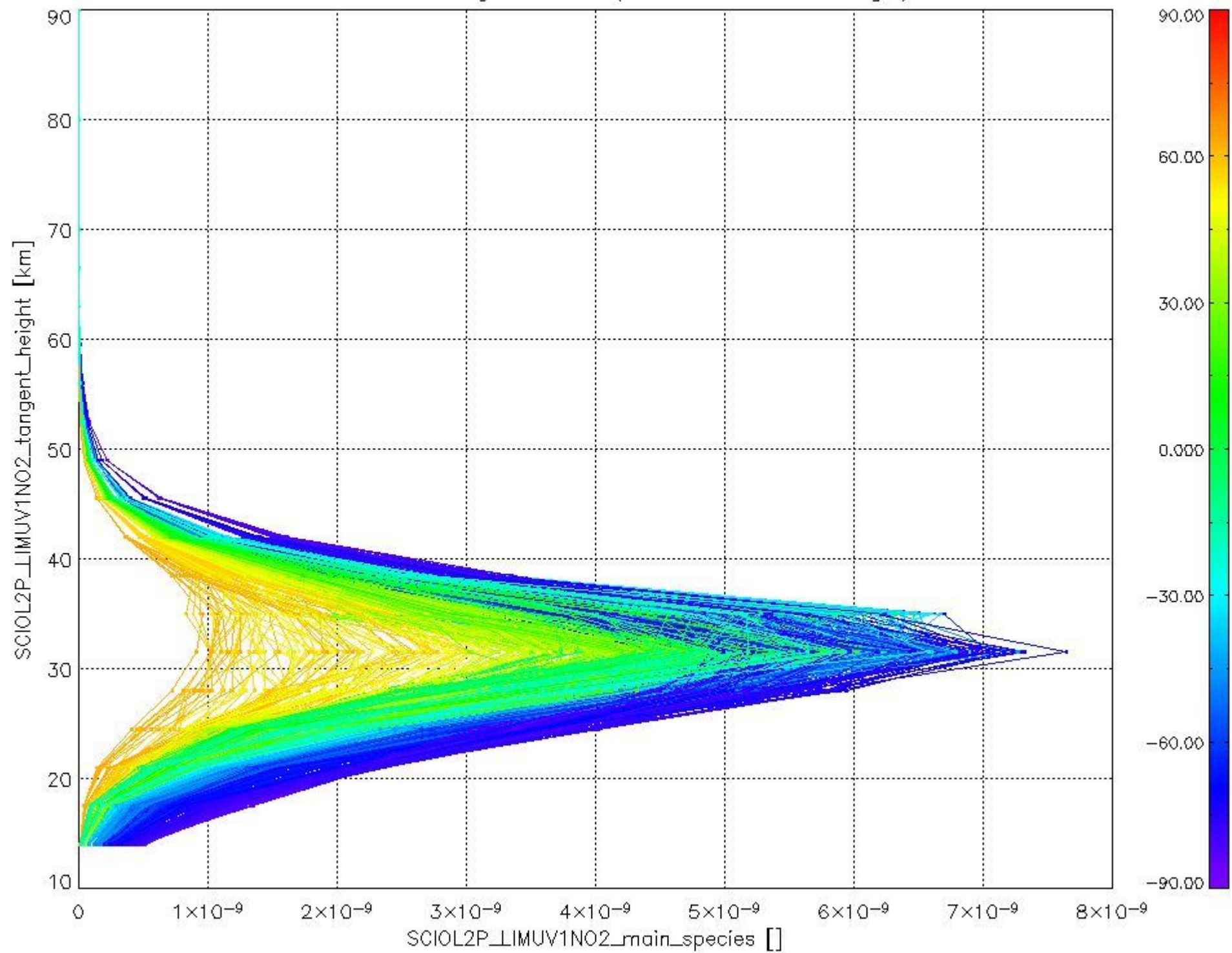


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





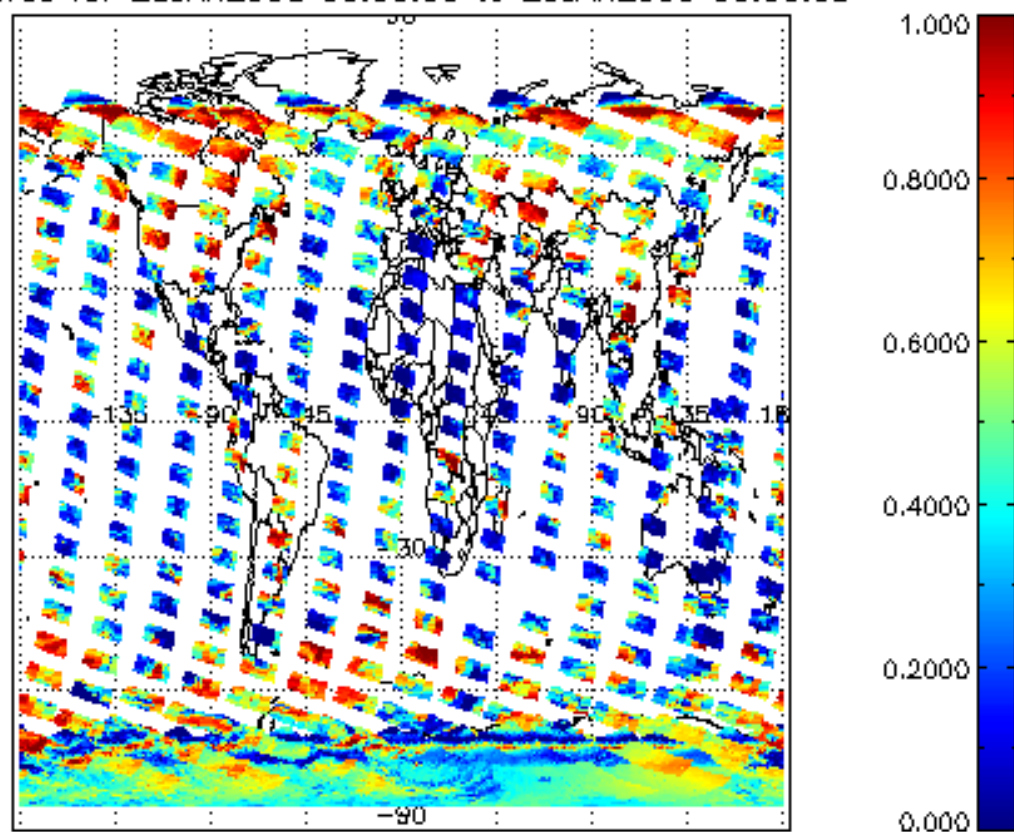
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



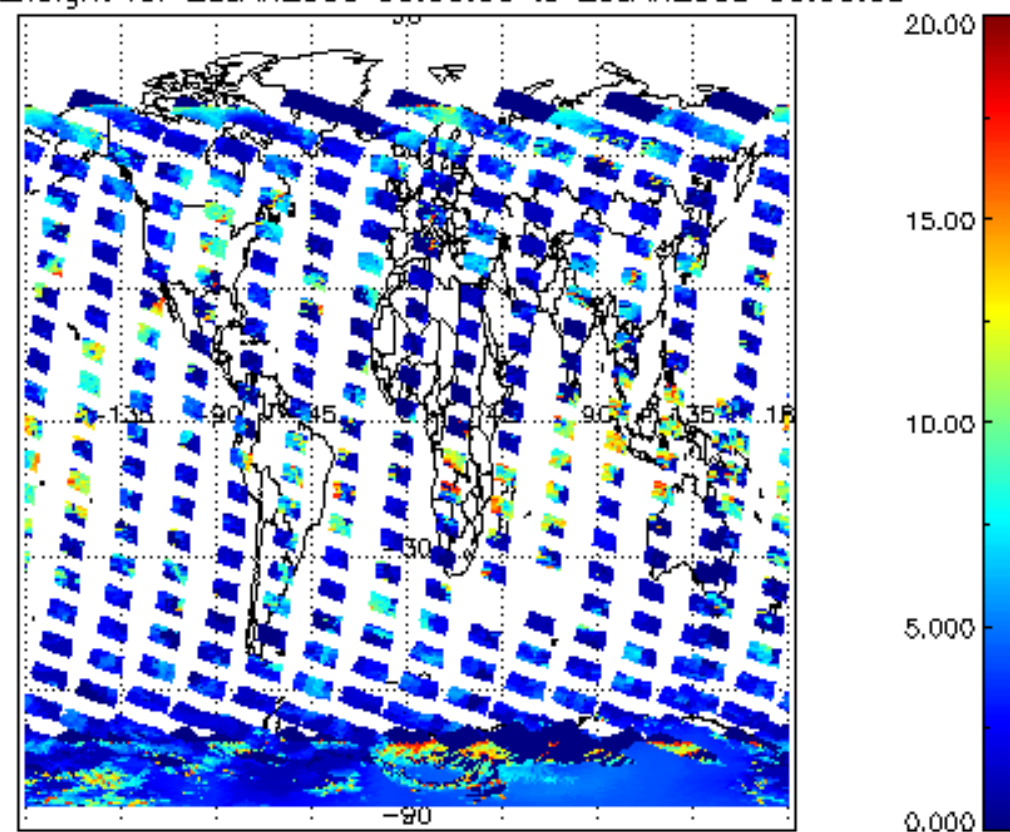
### 2.3 ADF monitoring

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

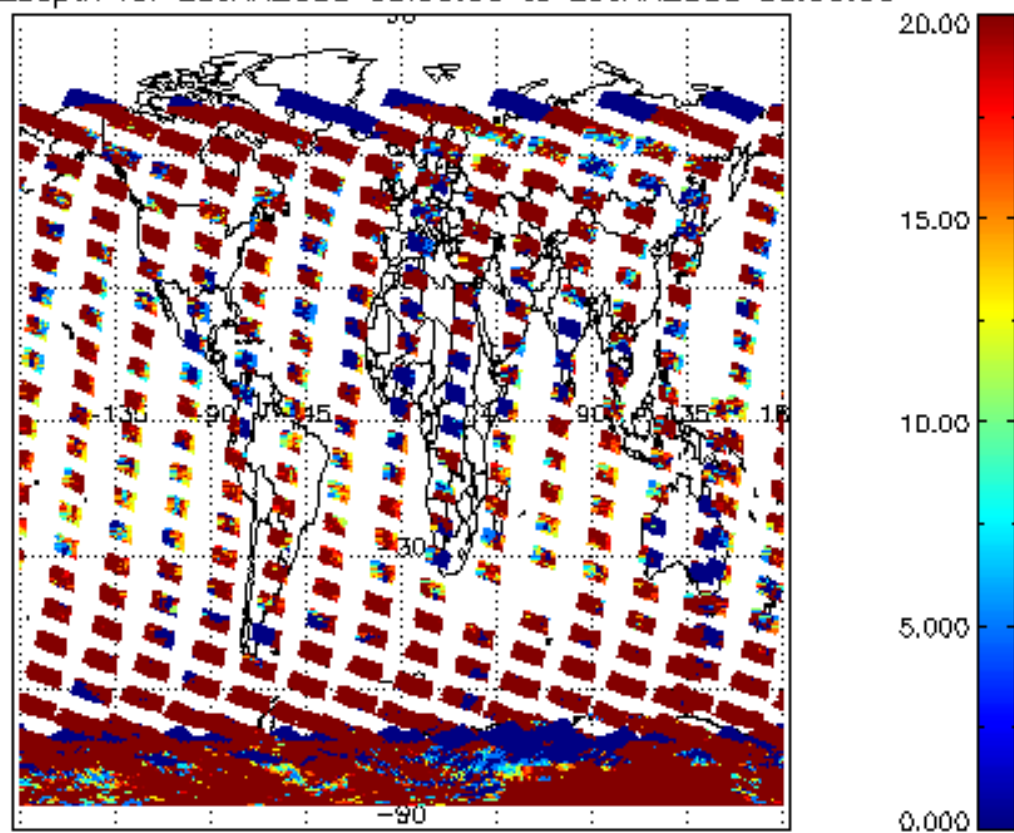
cL\_frac for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



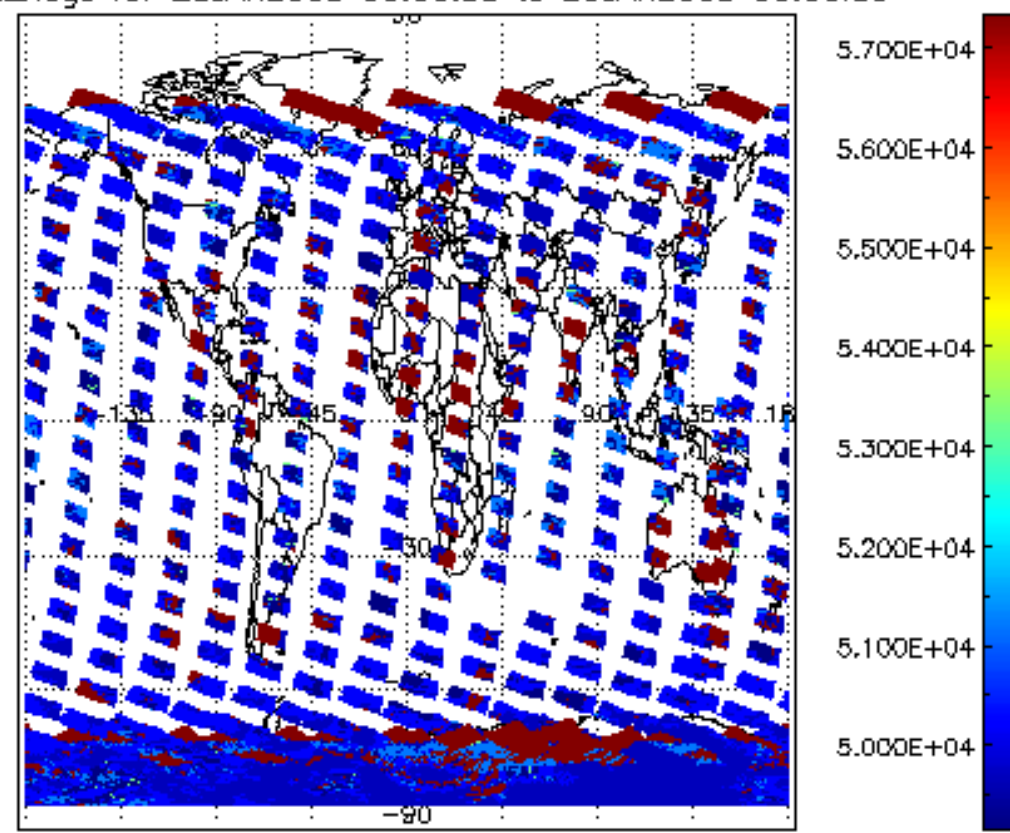
cL\_top\_height for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



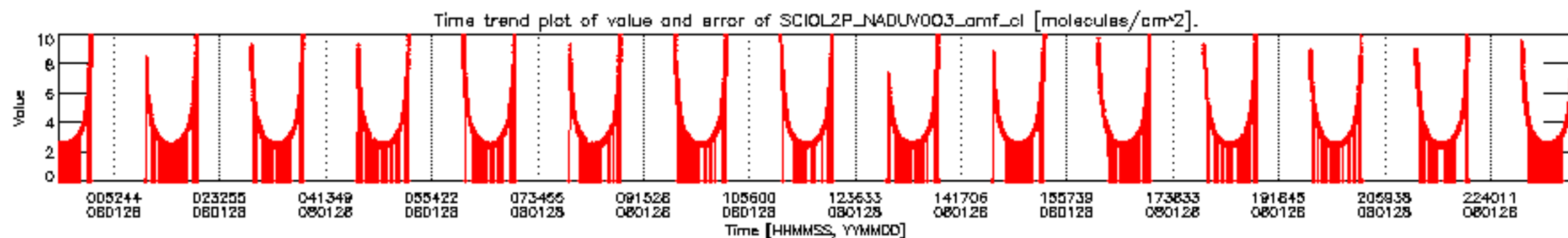
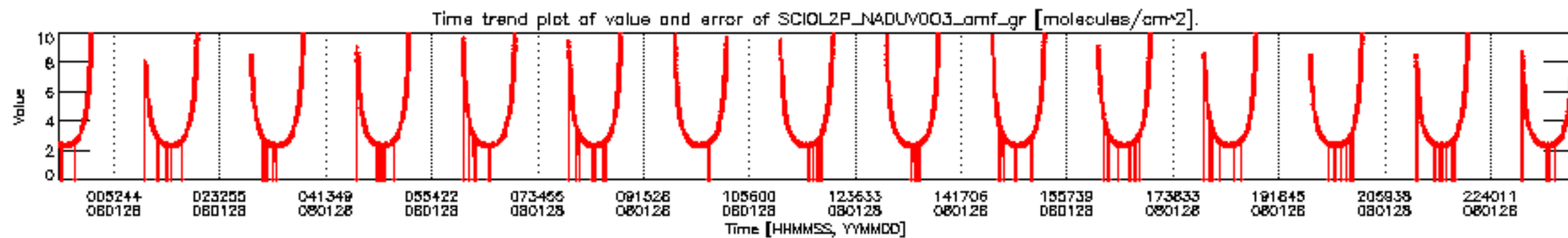
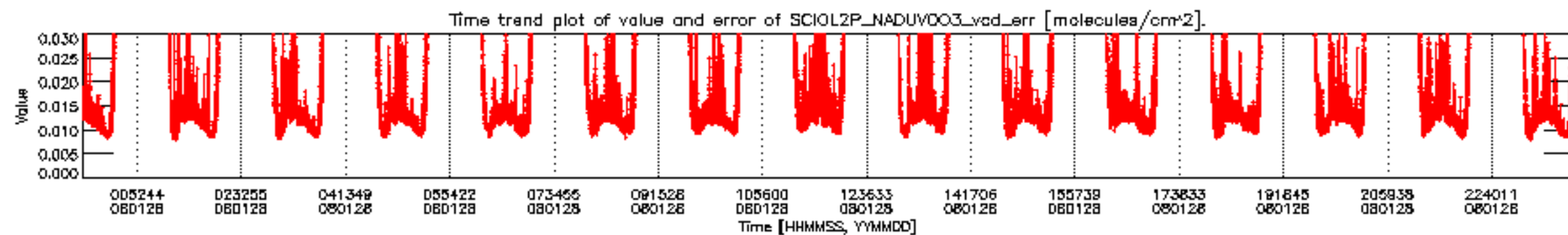
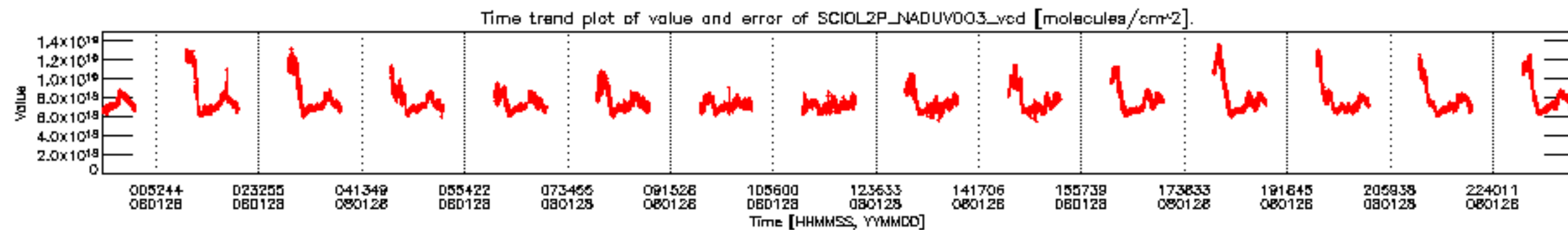
cLopt\_depth for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



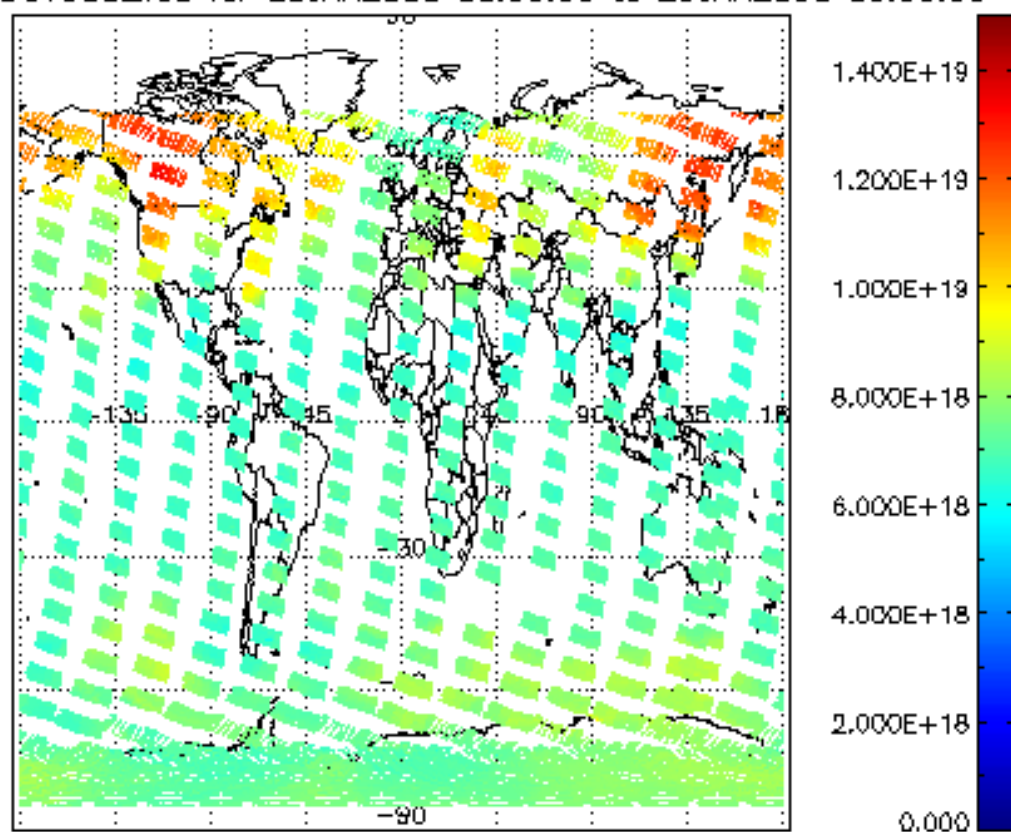
cloud\_flags for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



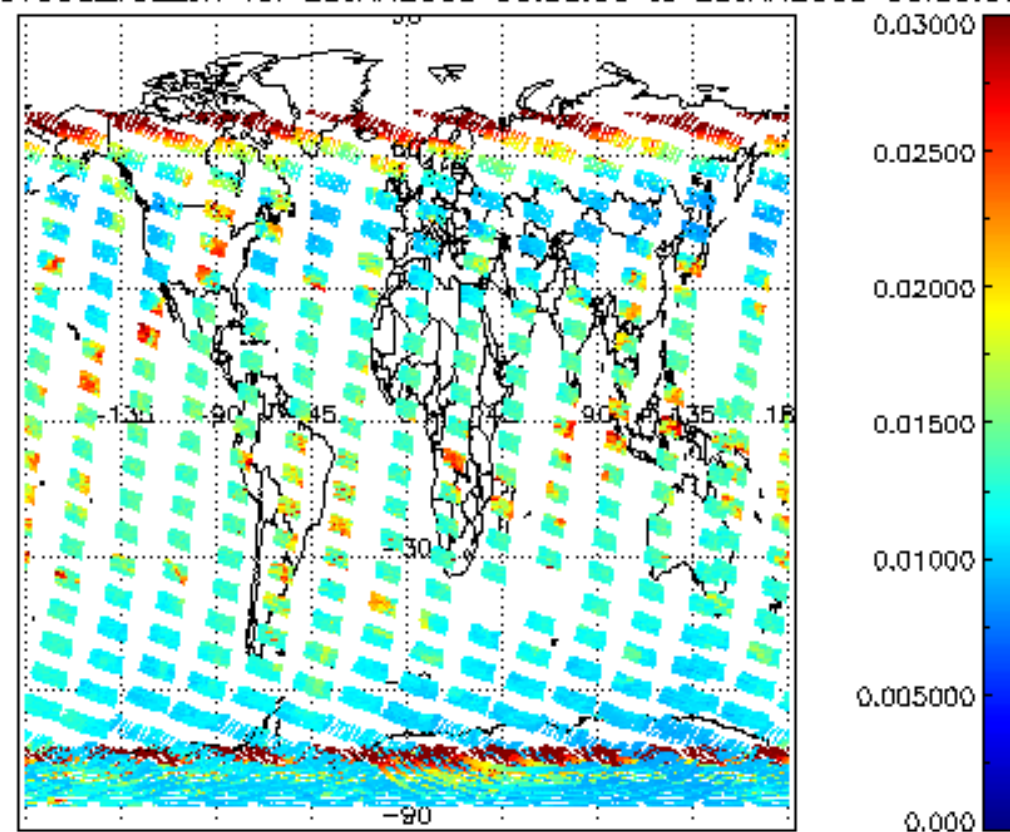




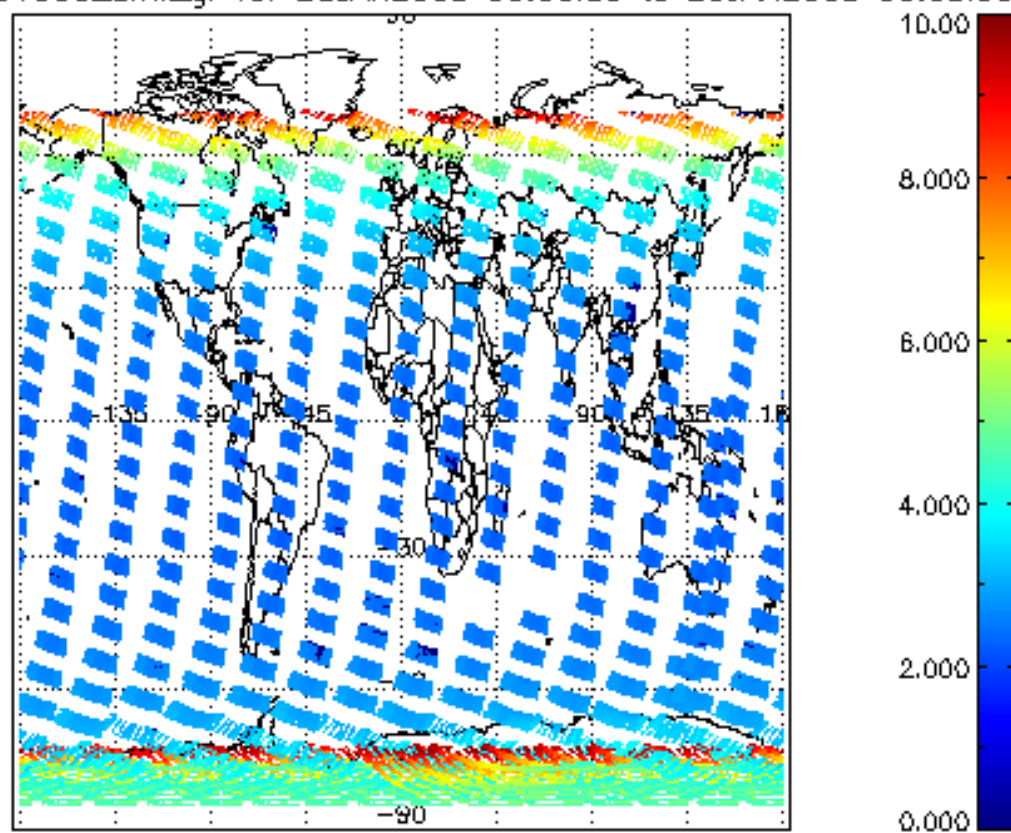
SCIOL2P\_NADUV003\_vcd for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



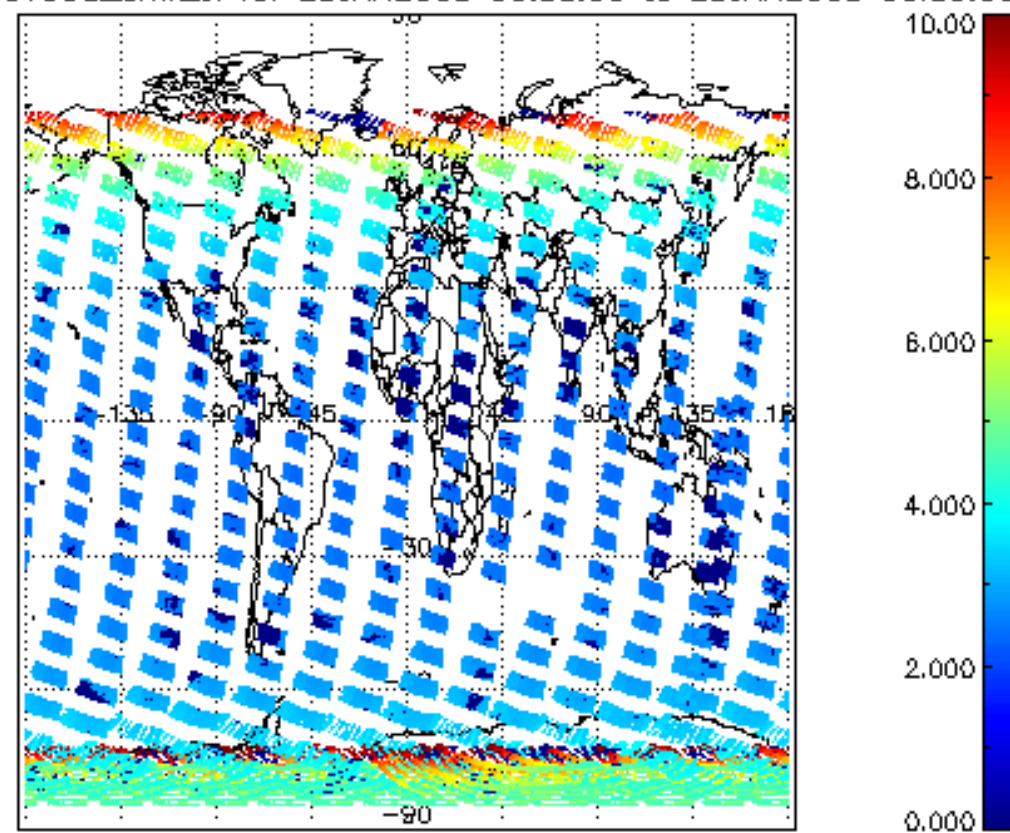
SCIOL2P\_NADUV003\_vcd\_err for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



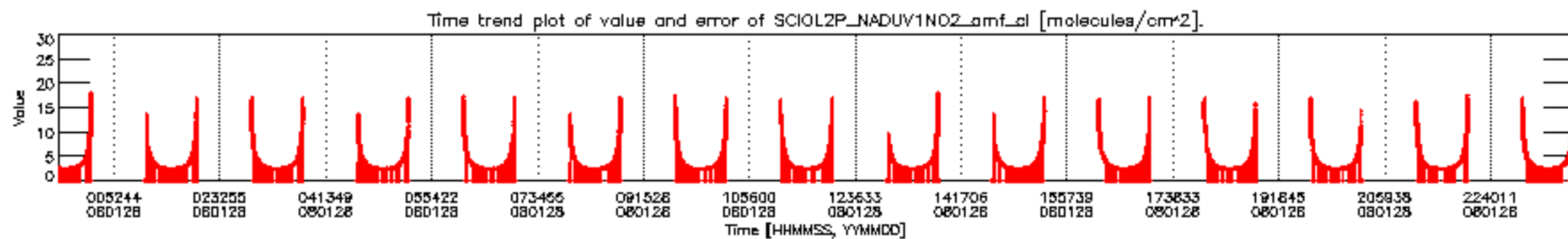
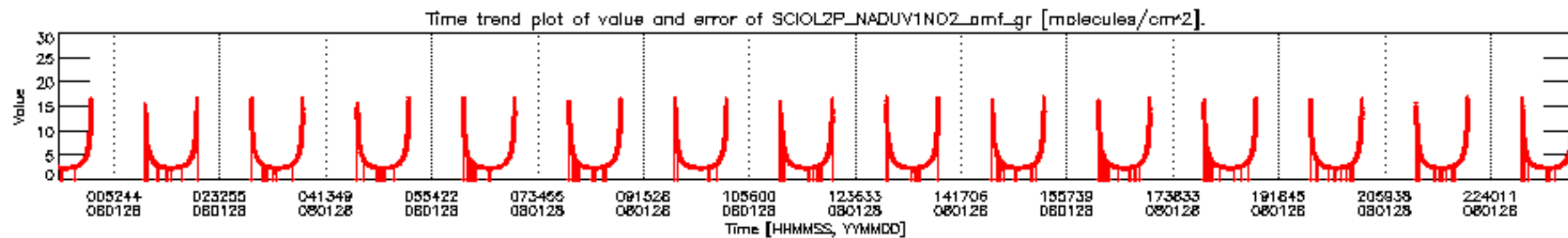
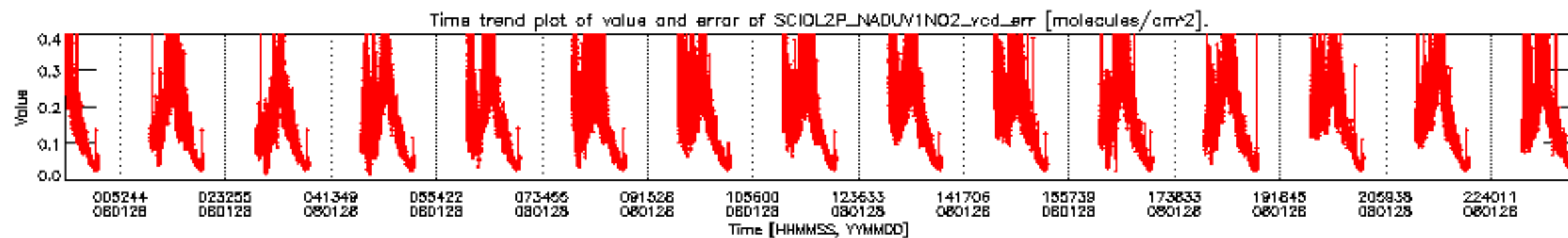
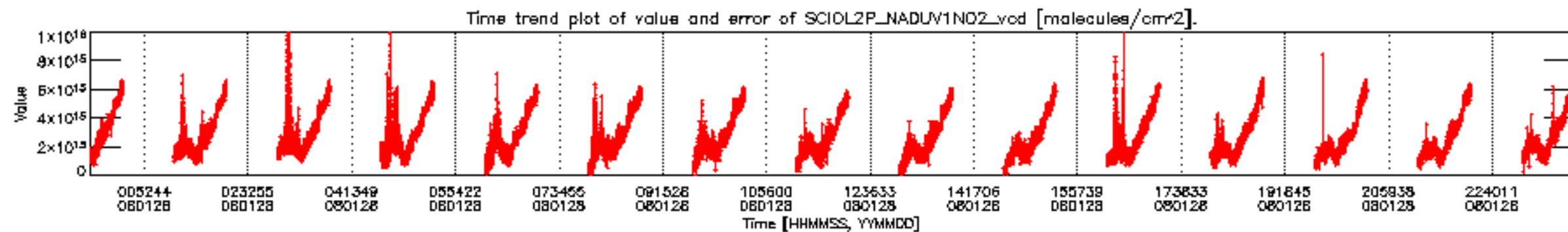
SCIOL2P\_NADUV003\_amf\_gr for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



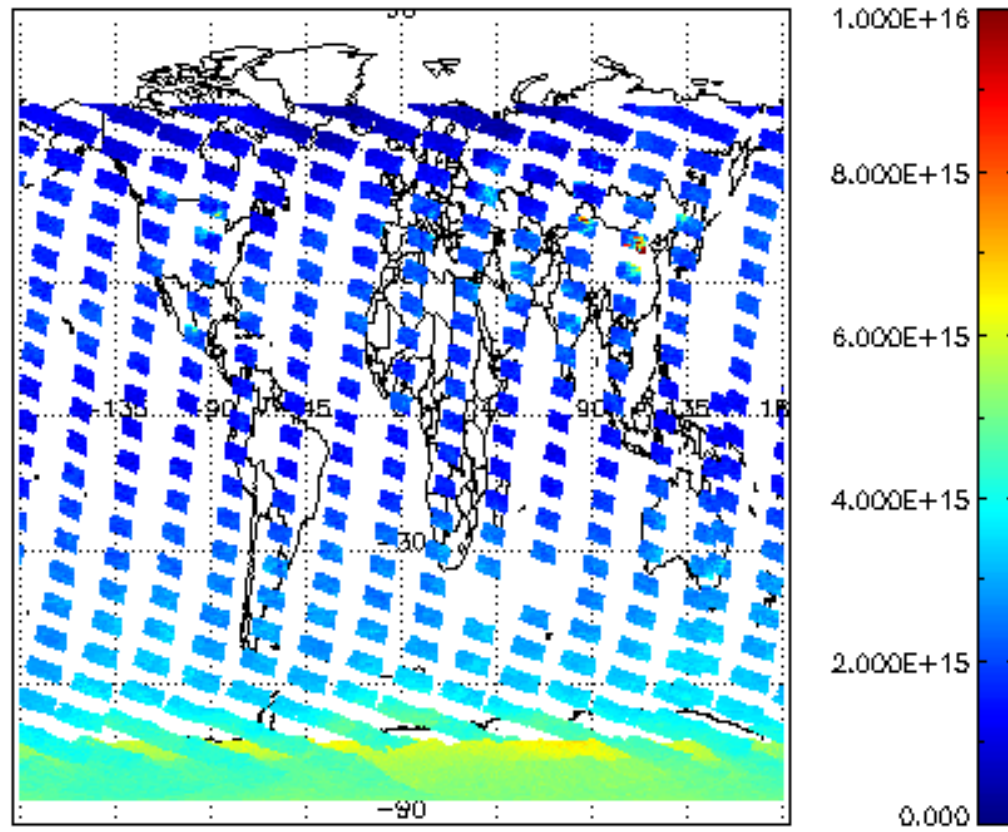
SCIOL2P\_NADUV003\_amf\_cl for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



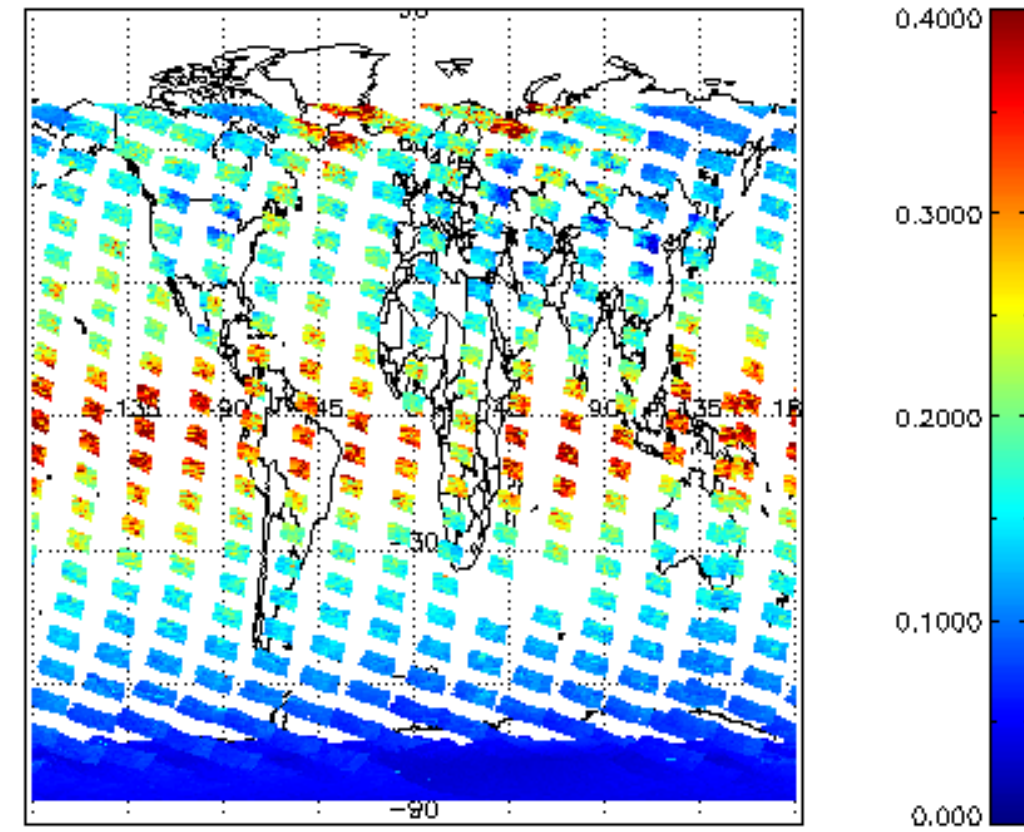




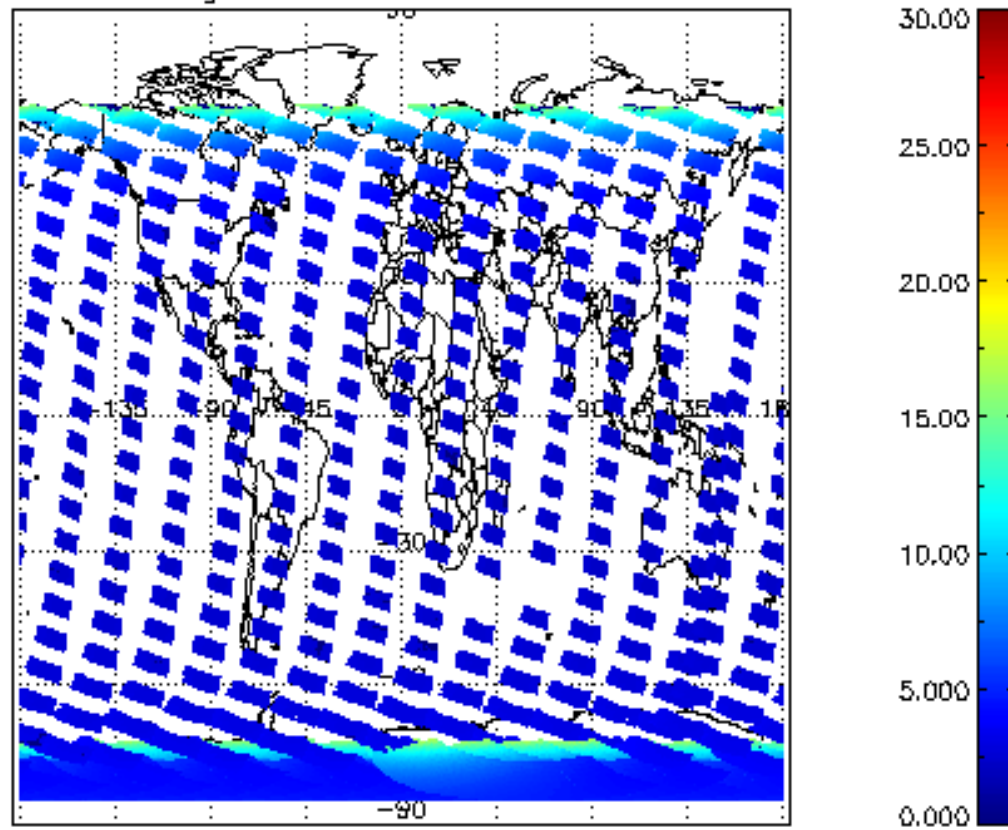
SCIOL2P\_NADUV1NO2\_vcd for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



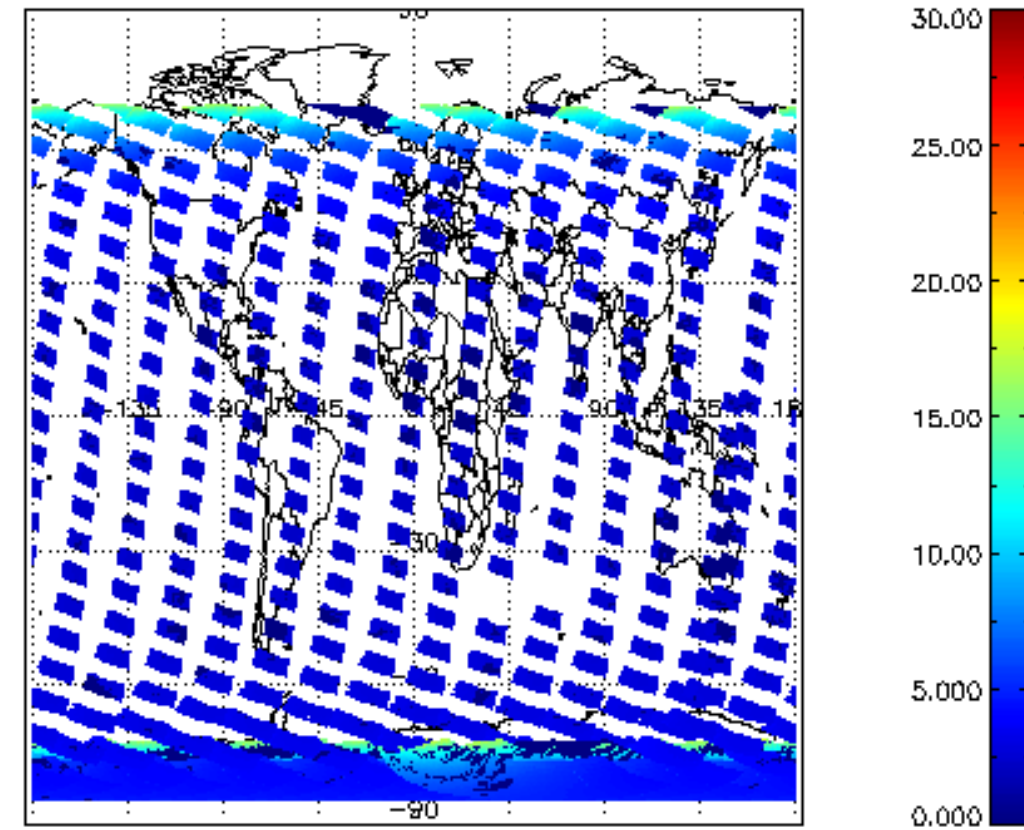
SCIOL2P\_NADUV1NO2\_vcd\_err for 28JAN2008 00:00:00 to 29JAN2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 28JAN2008 00:00:00 to 29JAN2008 00:00:00

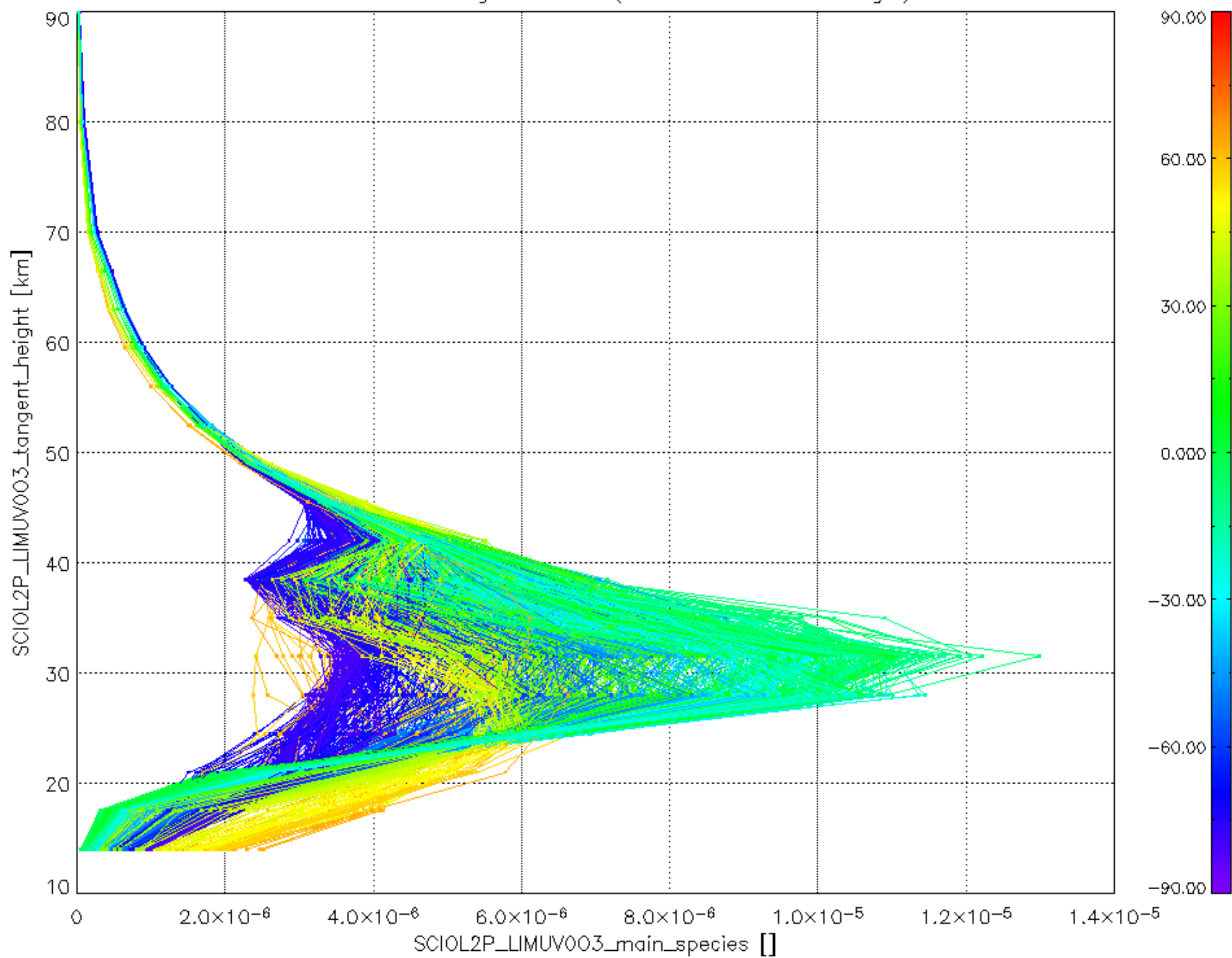


SCIOL2P\_NADUV1NO2\_amf\_cl for 28JAN2008 00:00:00 to 29JAN2008 00:00:00





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).

