

## 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 20:31:45
Data source version	SCIA-OL/3.01-R
Processing scope for products	24JAN2008 00:00:00 to 25JAN2008 00:00:00
Start time of first product within scope	24JAN2008 00:02:40
Stop time of last product within scope	25JAN2008 00:26:33
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__2PRDPA20080124_000240_000033252065_00231_30846_1796.N1	24JAN2008 00:02:40	24JAN2008 00:58:06	0	GOOD
1	SCI_OL__2PRDPA20080124_014316_000033122065_00232_30847_1798.N1	24JAN2008 01:43:16	24JAN2008 02:38:28	0	GOOD
2	SCI_OL__2PRDPA20080124_032351_000033252065_00233_30848_1799.N1	24JAN2008 03:23:51	24JAN2008 04:19:17	0	GOOD
3	SCI_OL__2PRDPA20080124_050427_000033122065_00234_30849_1800.N1	24JAN2008 05:04:27	24JAN2008 05:59:40	0	GOOD
4	SCI_OL__2PRDPA20080124_064608_000032692065_00235_30850_1804.N1	24JAN2008 06:46:08	24JAN2008 07:40:37	0	GOOD
5	SCI_OL__2PRDPA20080124_082535_000033252065_00236_30851_1805.N1	24JAN2008 08:25:35	24JAN2008 09:21:00	0	GOOD
6	SCI_OL__2PRDPA20080124_100719_000032692065_00237_30852_1806.N1	24JAN2008 10:07:19	24JAN2008 11:01:48	0	GOOD
7	SCI_OL__2PRDPA20080124_114646_000033252065_00238_30853_1823.N1	24JAN2008 11:46:46	24JAN2008 12:42:11	0	GOOD
8	SCI_OL__2PRDPA20080124_132830_000032692065_00239_30854_1826.N1	24JAN2008 13:28:30	24JAN2008 14:22:59	0	GOOD
9	SCI_OL__2PRDPA20080124_150757_000033252065_00240_30855_1834.N1	24JAN2008 15:07:57	24JAN2008 16:03:22	0	GOOD
10	SCI_OL__2PRDPA20080124_164941_000032692065_00241_30856_1838.N1	24JAN2008 16:49:41	24JAN2008 17:44:10	0	GOOD
11	SCI_OL__2PRDPA20080124_182841_000033812065_00242_30857_1844.N1	24JAN2008 18:28:41	24JAN2008 19:25:02	0	GOOD
12	SCI_OL__2PRDPA20080124_200916_000033942065_00243_30858_1845.N1	24JAN2008 20:09:16	24JAN2008 21:05:50	0	GOOD
13	SCI_OL__2PRDPA20080124_215019_000033252065_00244_30859_1848.N1	24JAN2008 21:50:19	24JAN2008 22:45:45	0	GOOD
14	SCI_OL__2PRDPA20080124_233203_000032692065_00245_30860_1849.N1	24JAN2008 23:32:03	25JAN2008 00:26:33	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: 150032

Total number of cloud data DSRs with good quality flag (=0): 150032 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	150032	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	150032	0.17028	0.12500	0.12500	0.25000	0.060082	s
SURFACE_PRES	150032	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	150032	0.42646	0.41515	0.0000	1.0000	0.26949	-

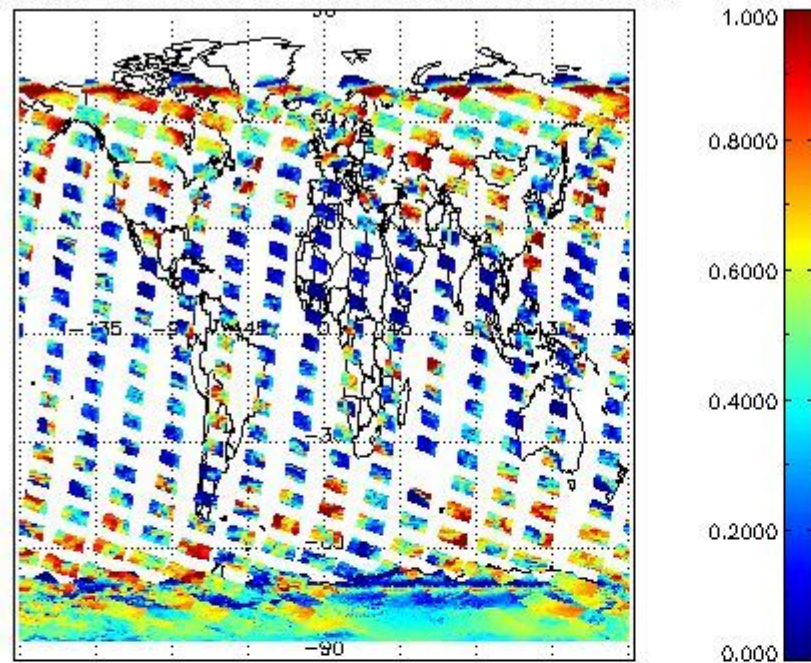
CL_FRAC_ERR	150032	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	150032	5.4491	4.0000	4.0000	8.0000	1.9226	
PMD_READ_CL[0]	150032	0.22250	0.0000	0.0000	8.0000	1.0174	-
PMD_READ_CL[1]	150032	0.47221	0.0000	0.0000	8.0000	1.5147	-
CL_TOP_HEIGHT	127557	4.4189	3.4520	0.0000	17.000	3.7630	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	127557	54.126	42.544	0.0000	101.00	39.476	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	150032	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	150032	11001000	11000100	11000000	11100000	2975.9	flags
AERO_ABSO_IND	150032	2.6458	2.9496	-1.8707	14.852	1.9255	
AERO_IND_DIAG	150032	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	150032	01010111	00000000	00000000	11000000	24477.	flags

Time and geolocation plots:

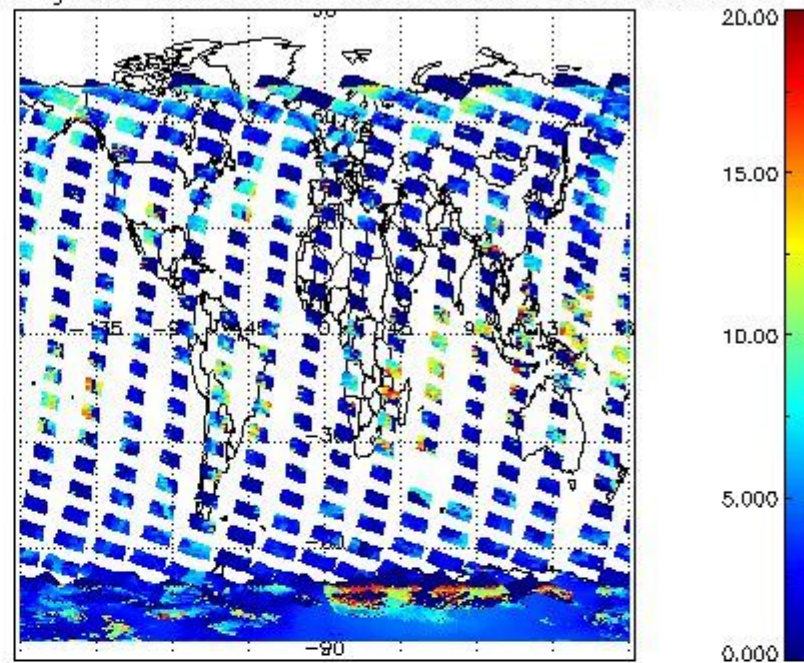
Plots are available for the following parameters:

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

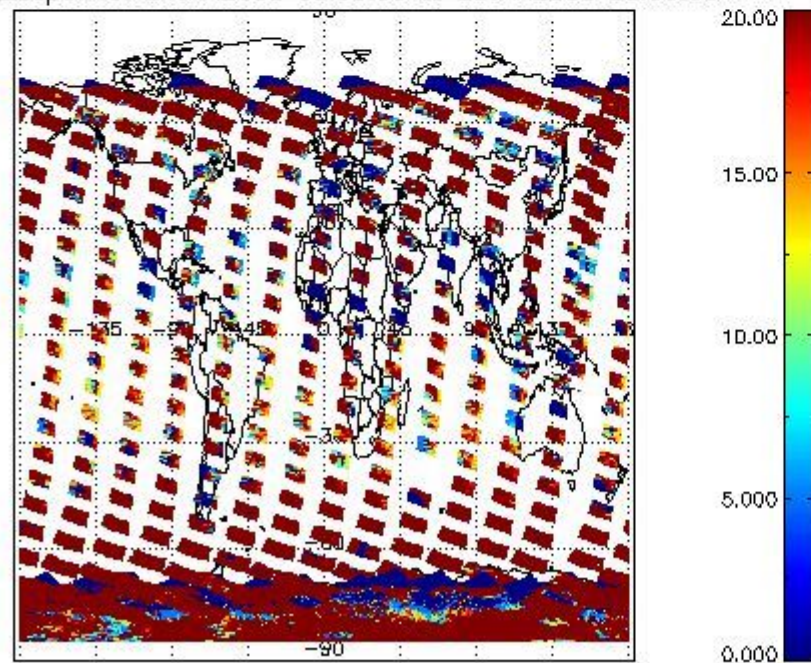
cL\_frac for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



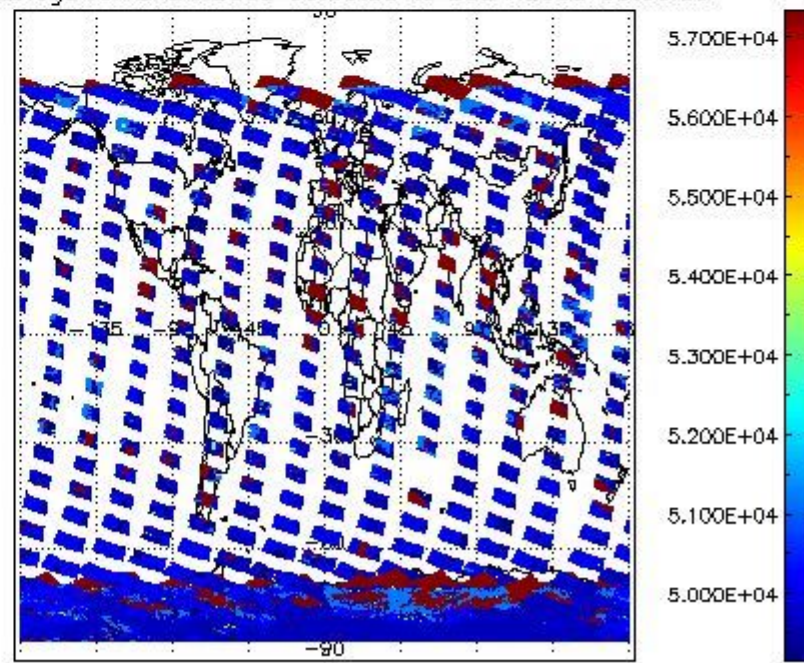
cL\_top\_height for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



cLopt\_depth for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



cloud\_flags for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



## 2.2.2 Nadir

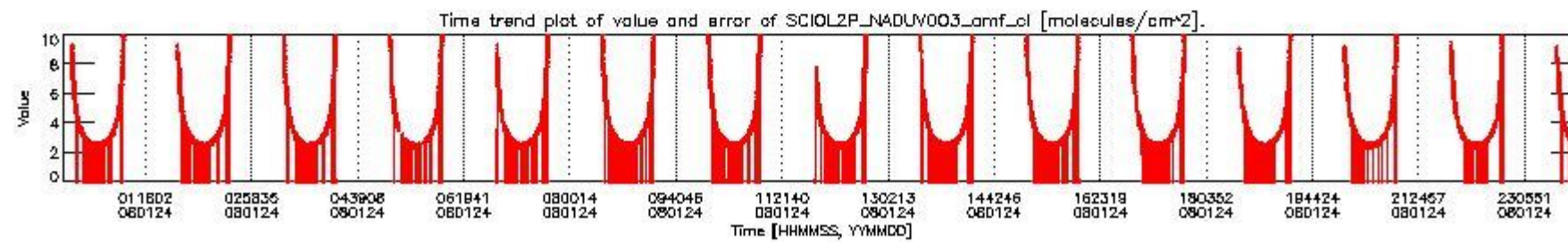
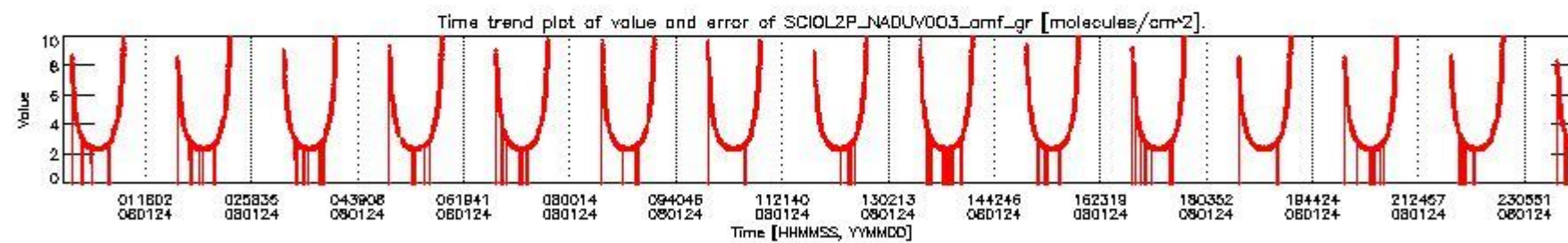
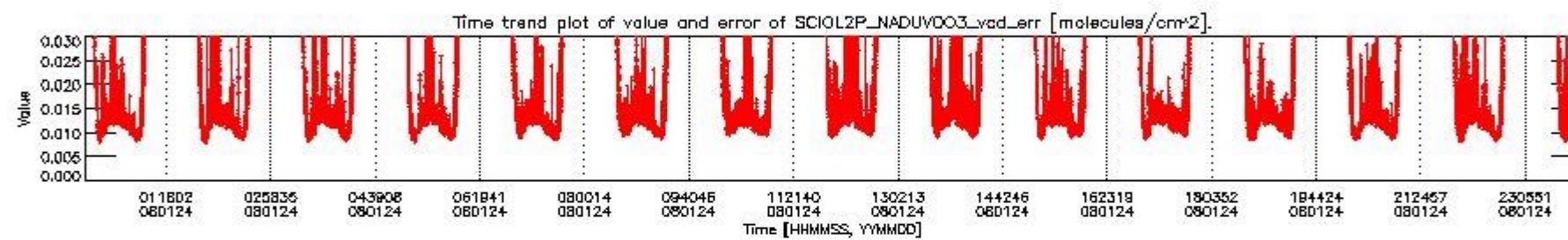
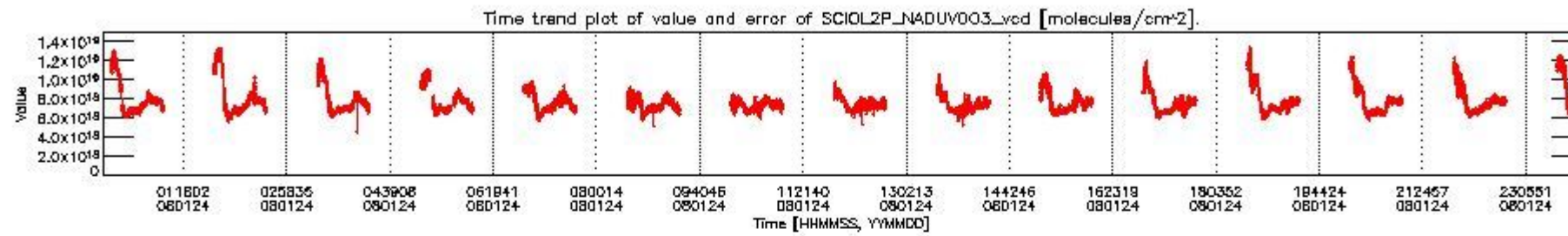
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

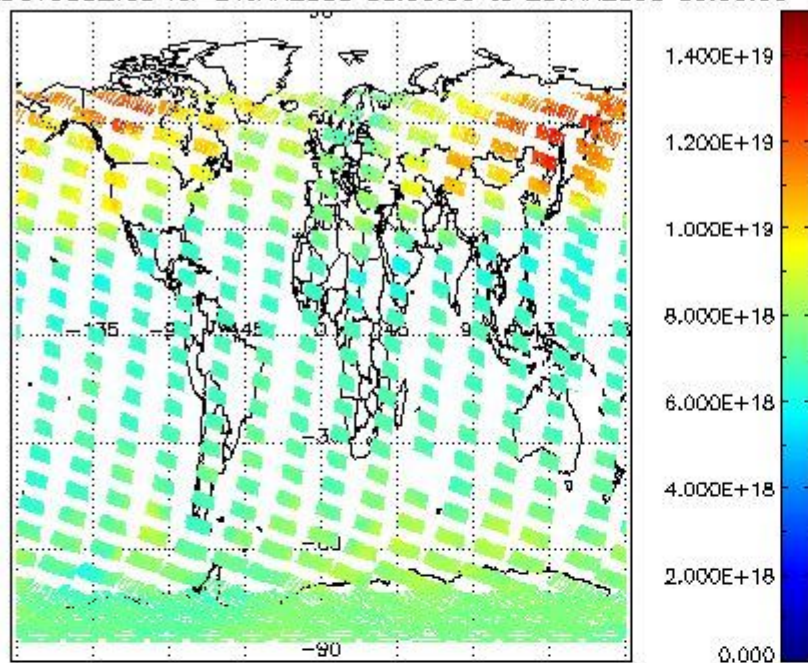
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

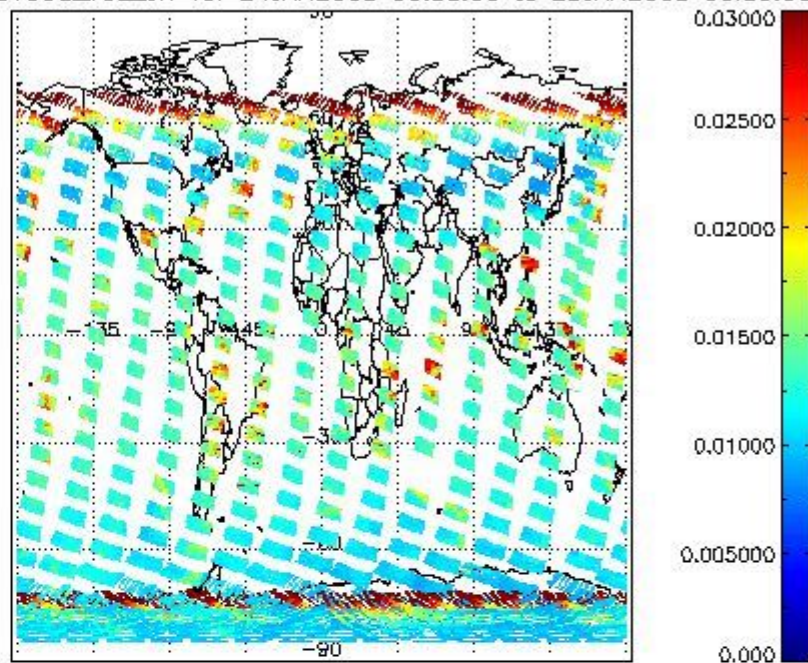
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



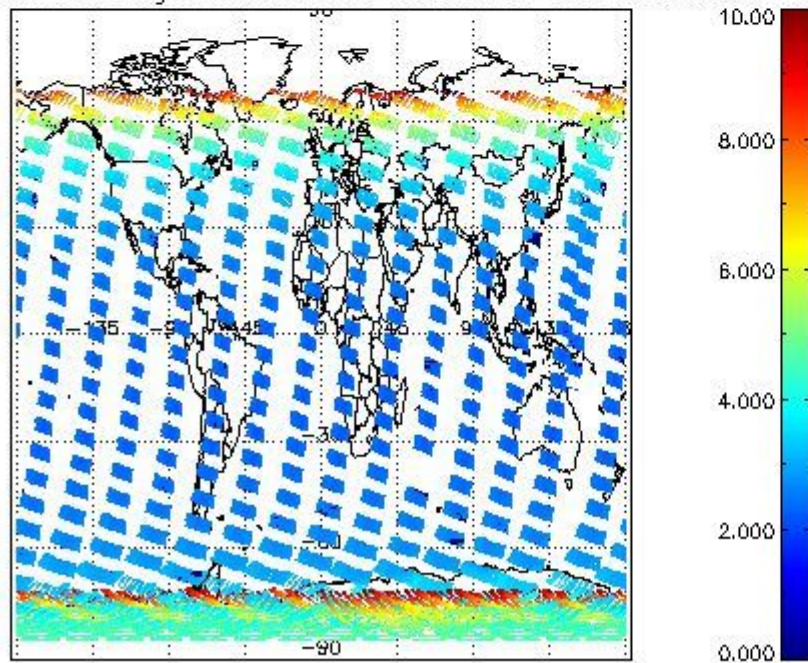
SCIOL2P\_NADUV003\_vcd for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



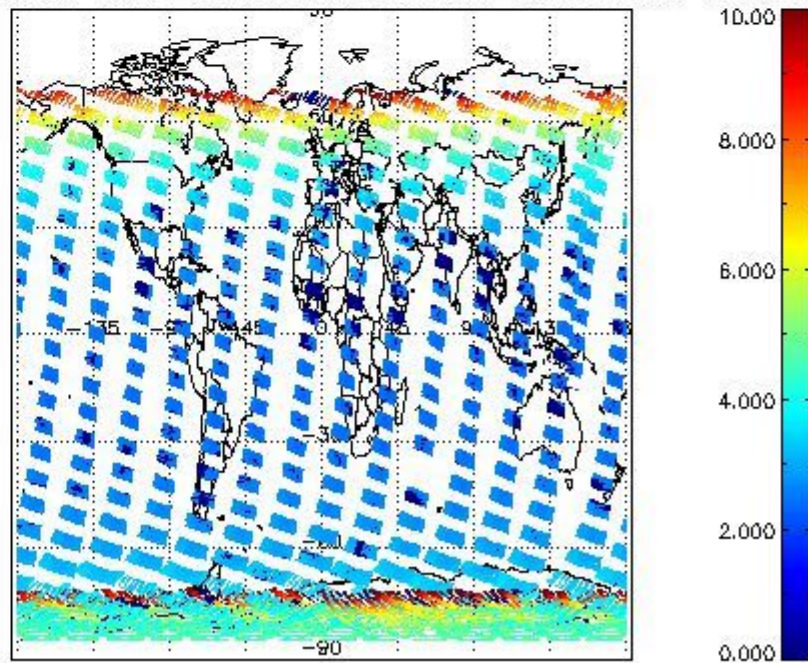
SCIOL2P\_NADUV003\_vcd\_err for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

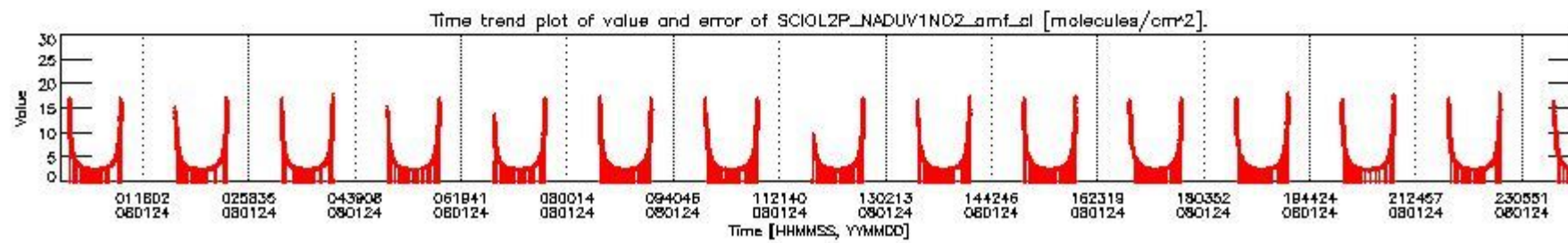
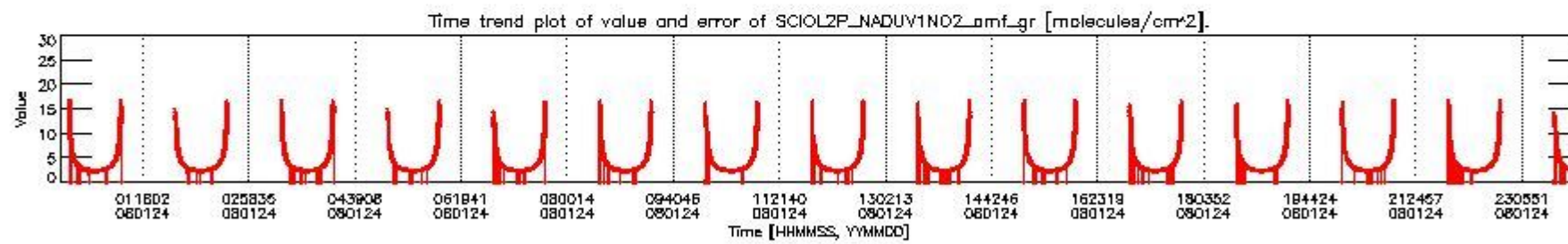
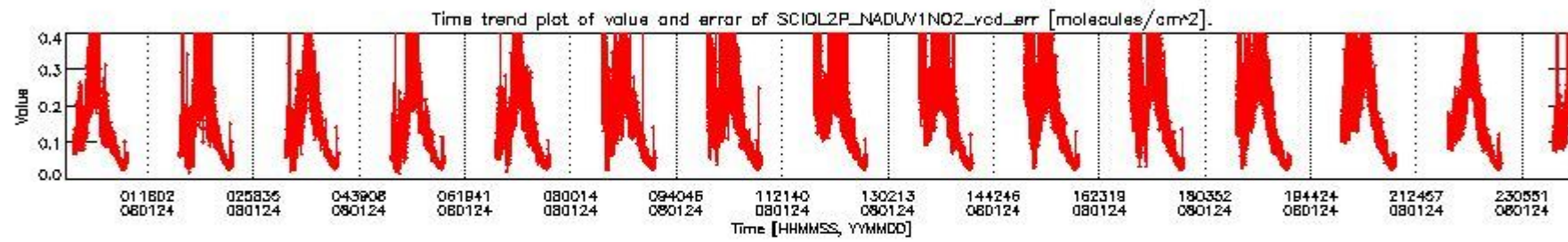
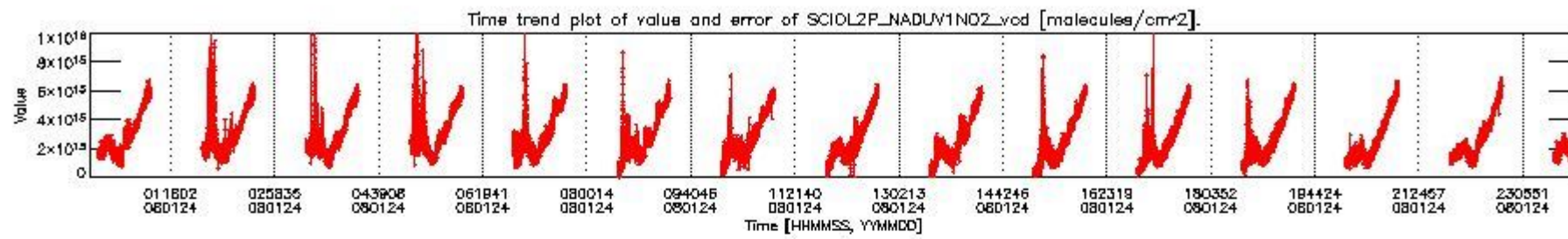


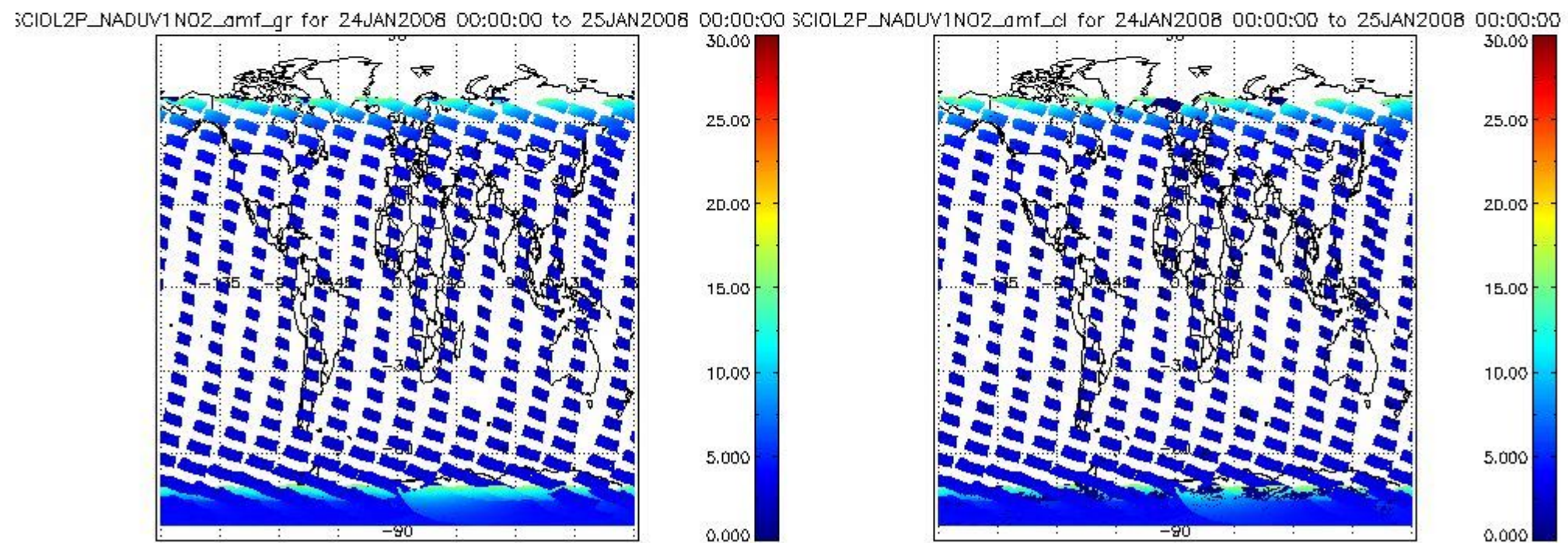
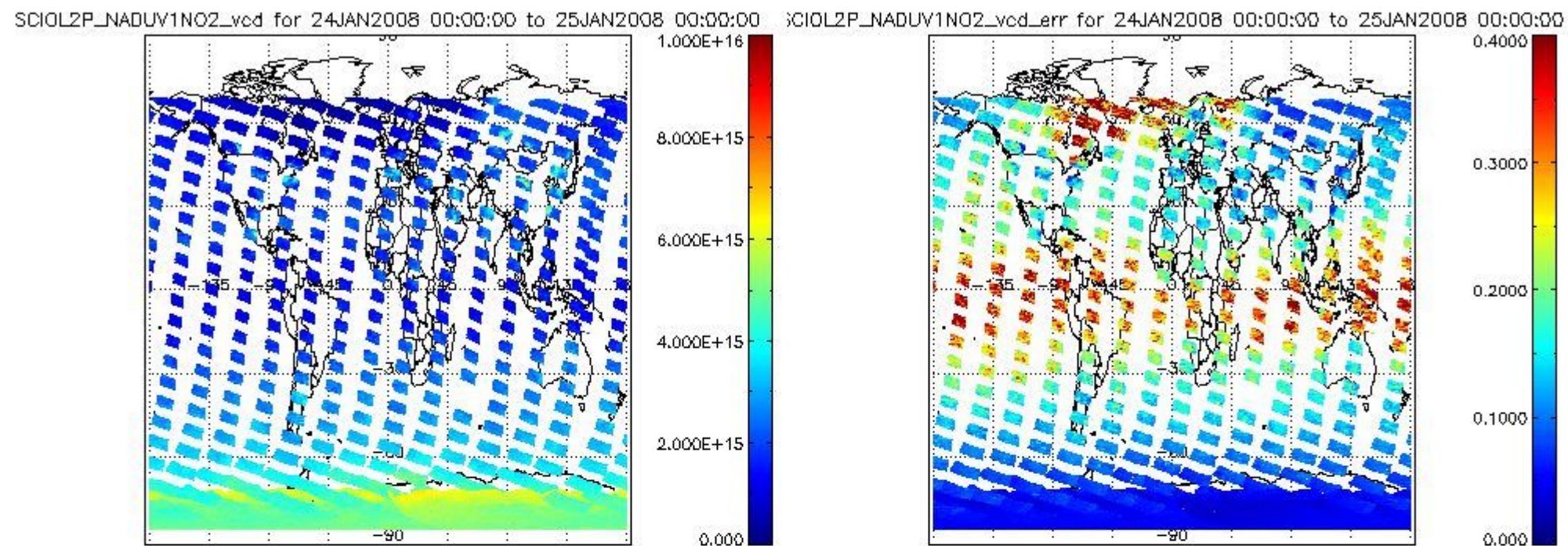
SCIOL2P\_NADUV003\_amf\_gr for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 24JAN2008 00:00:00 to 25JAN2008 00:00:00







### 2.2.3 Limb

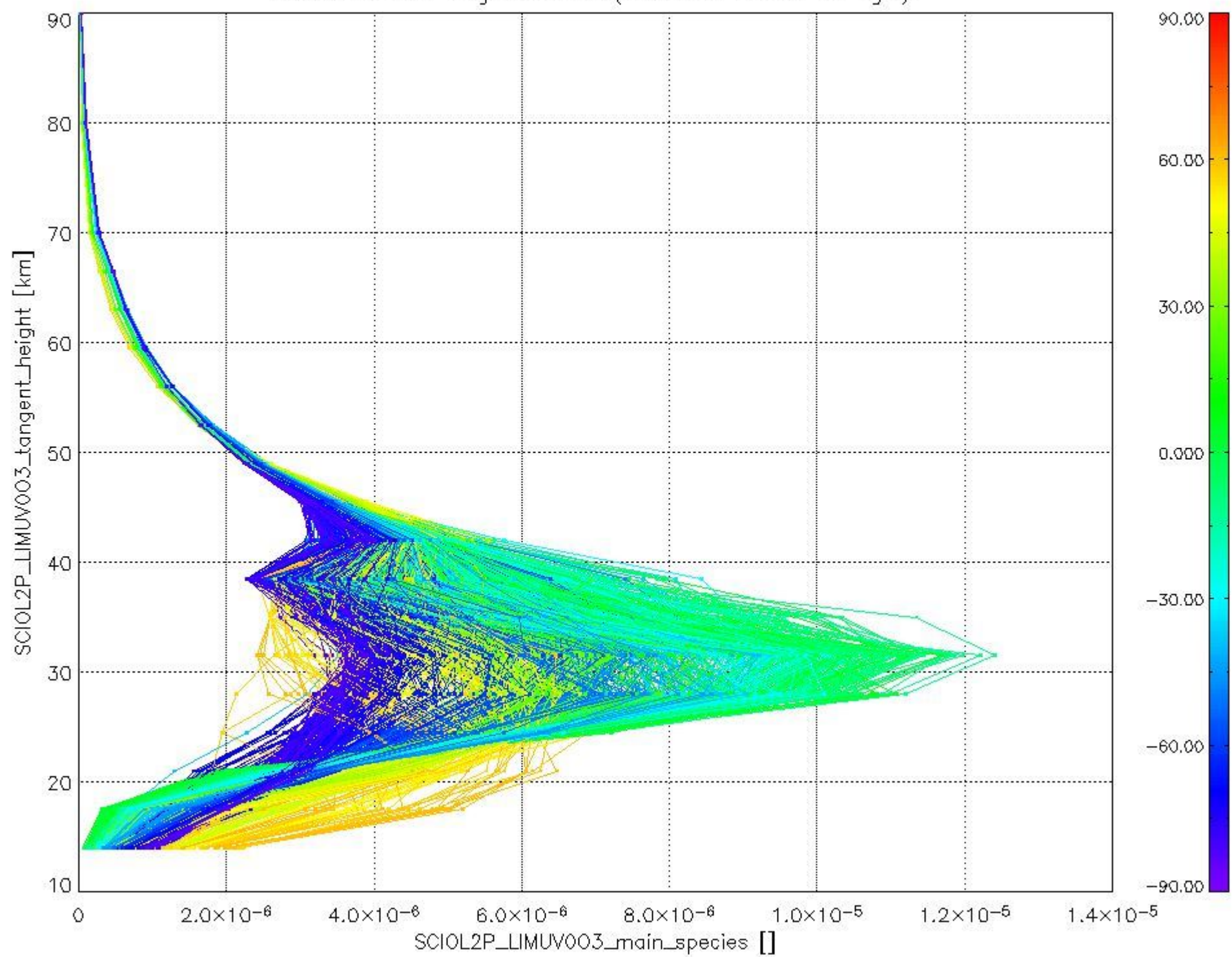
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

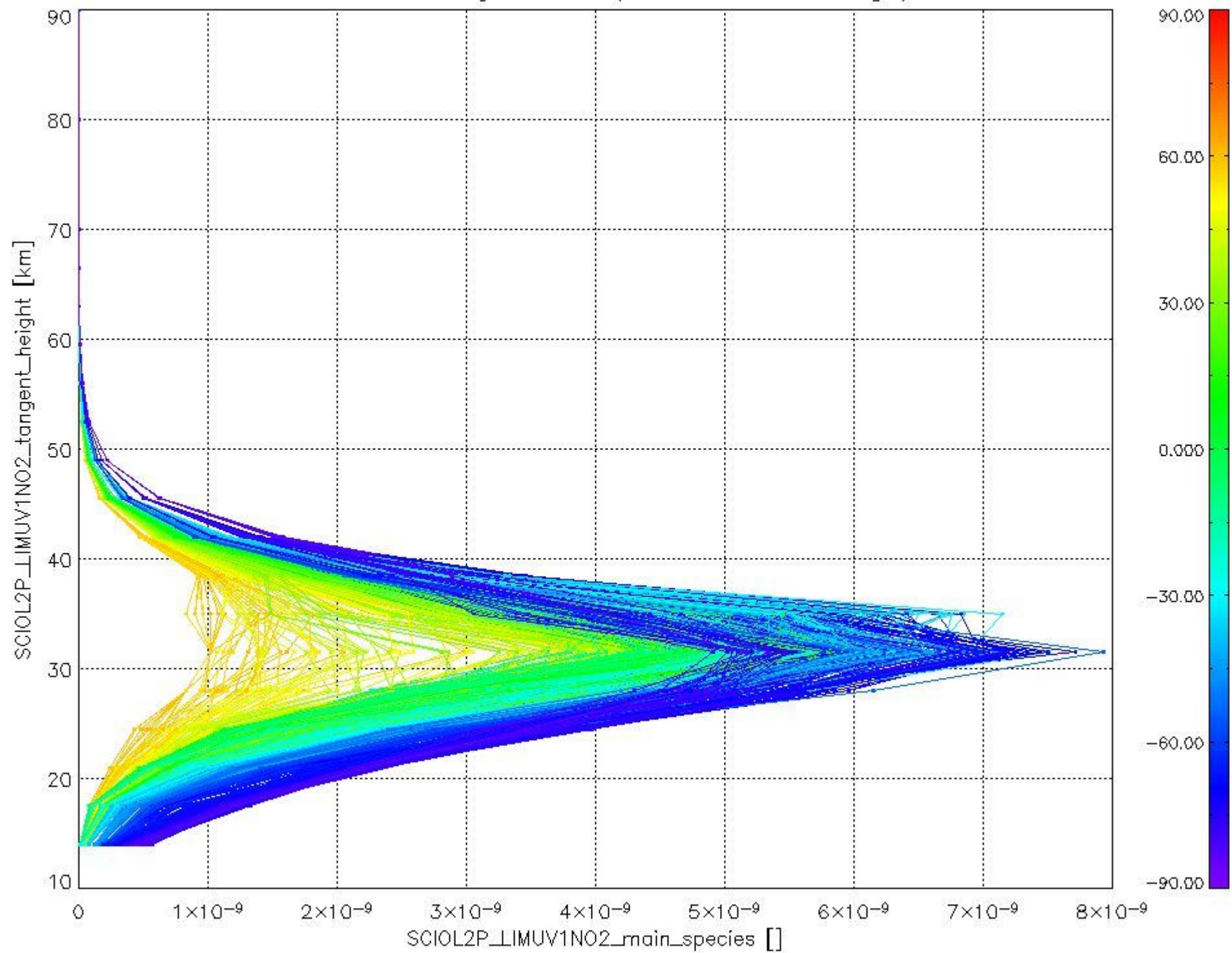
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





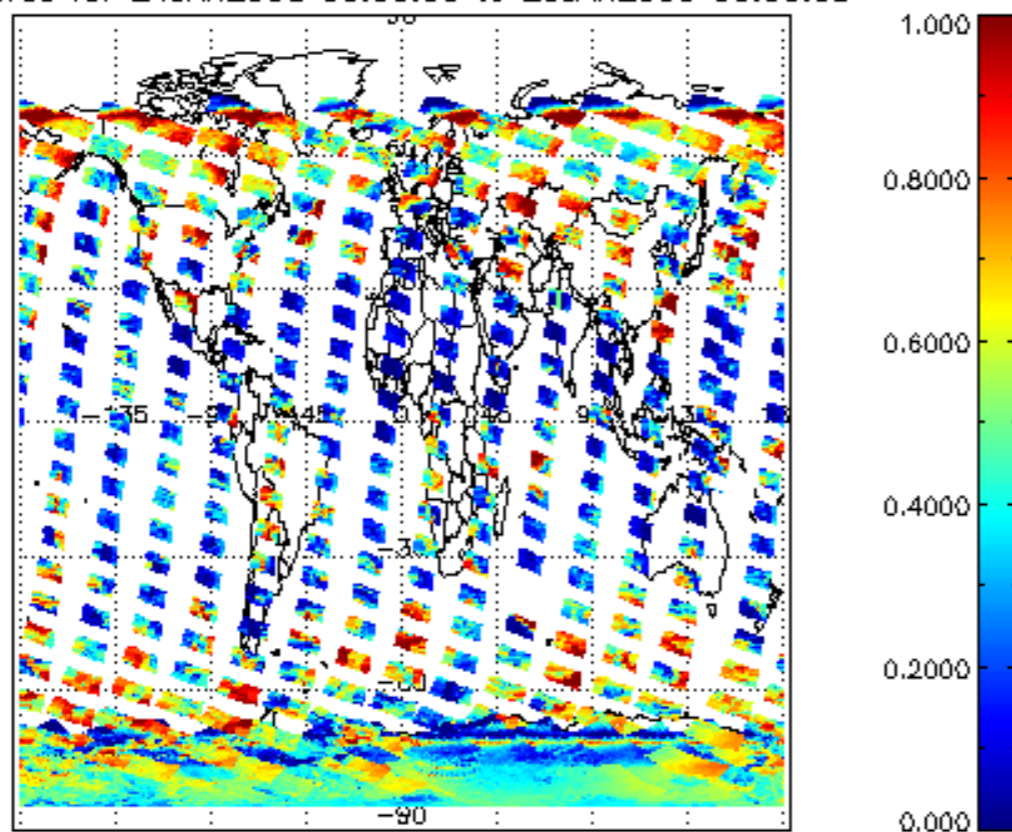
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



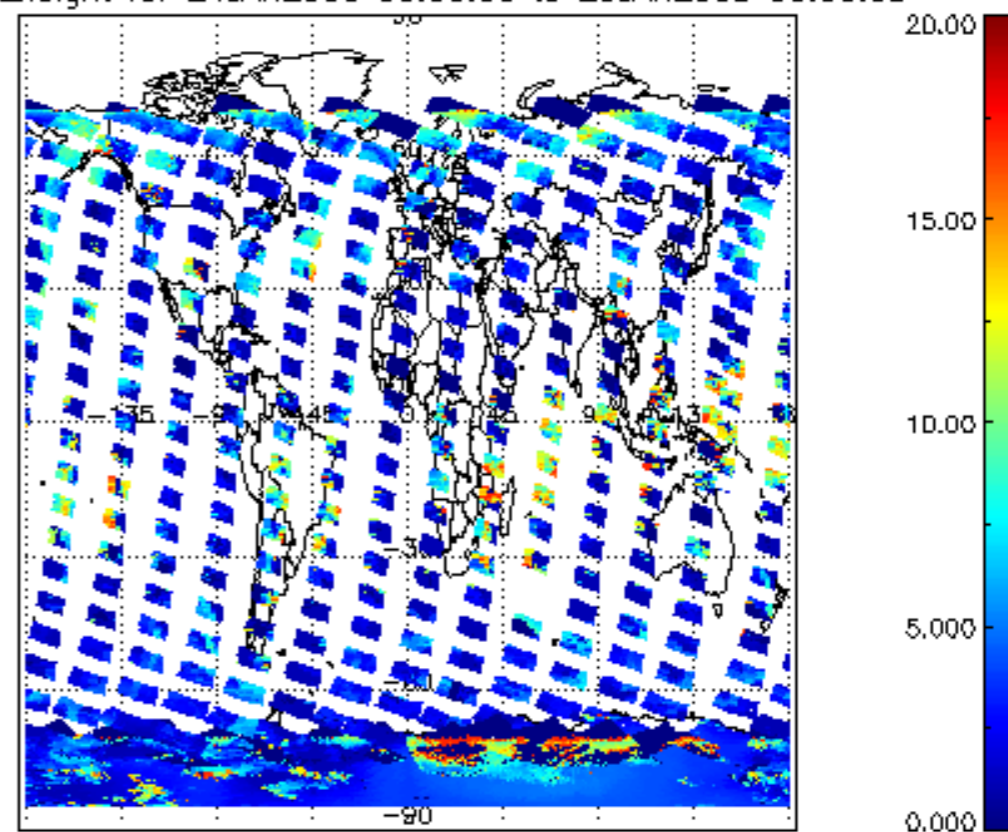
### 2.3 ADF monitoring

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

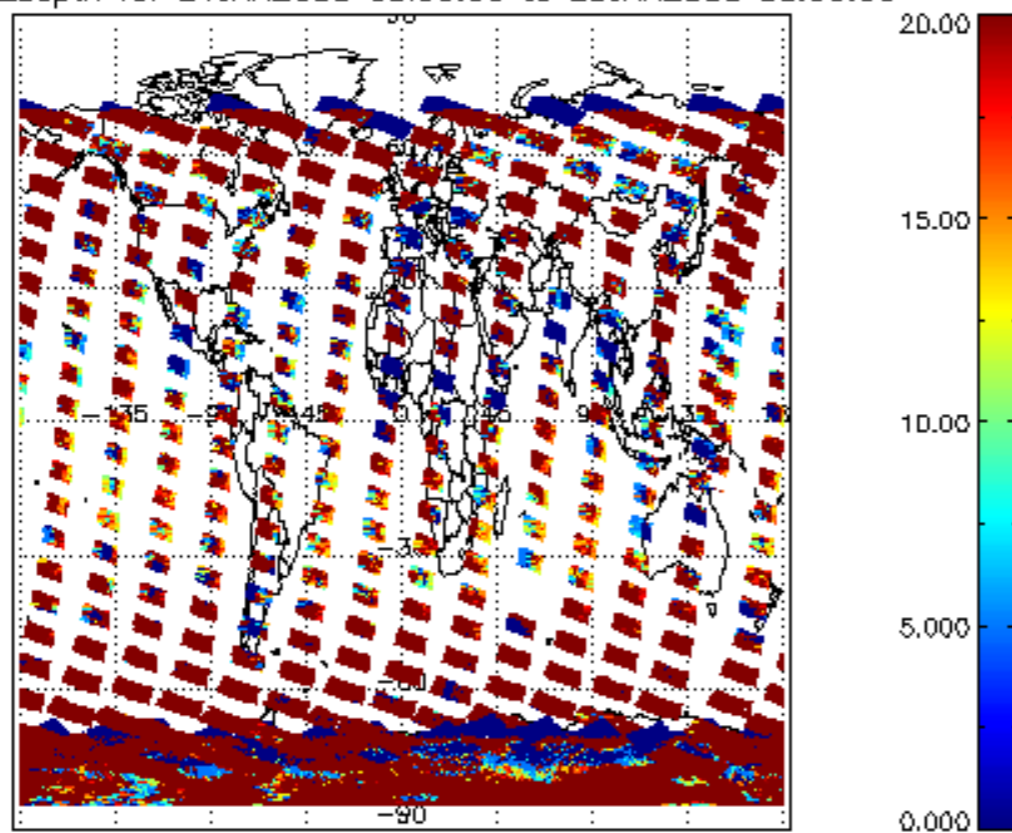
cL\_frac for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



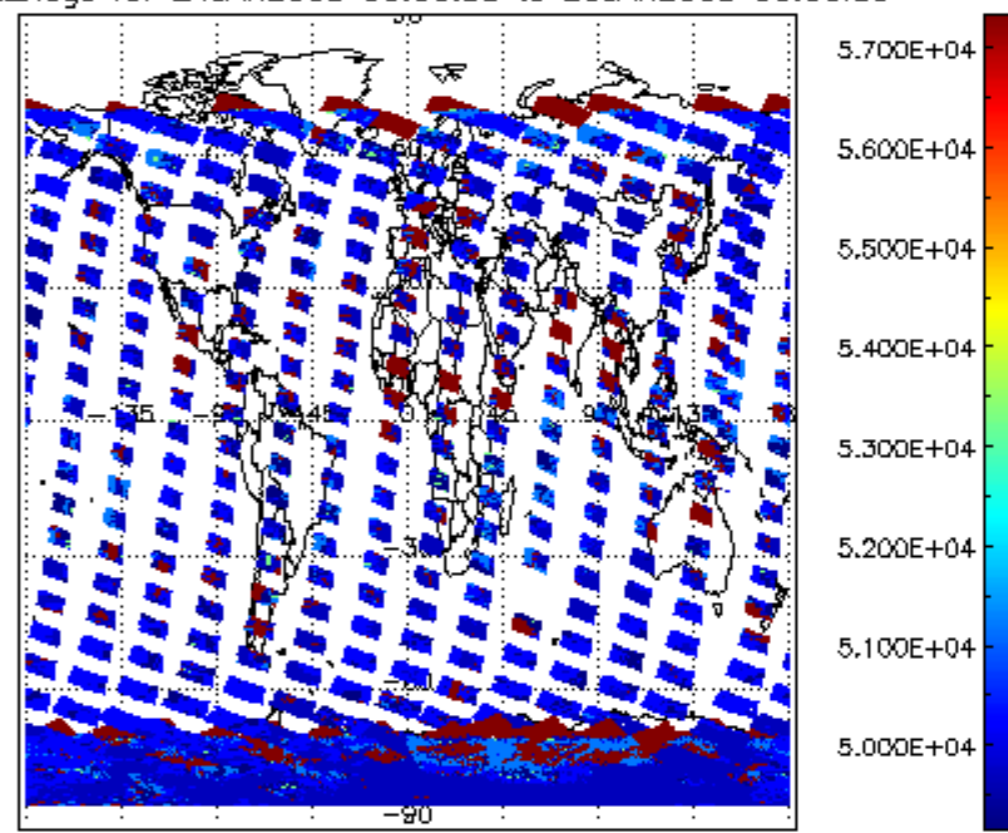
cL\_top\_height for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

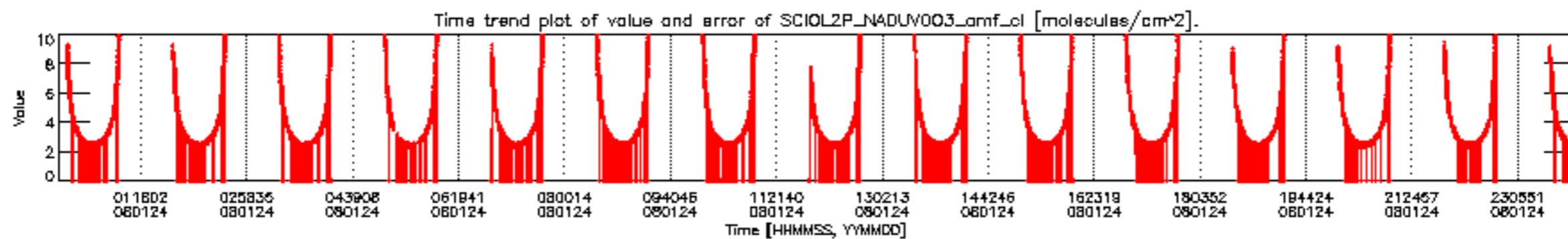
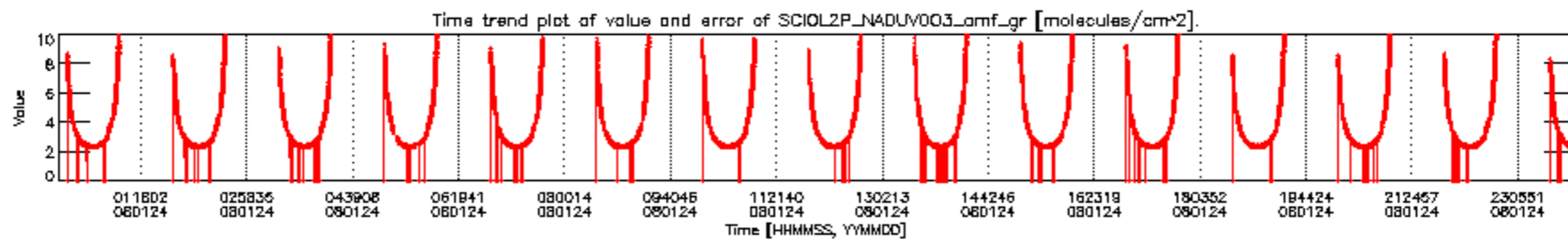
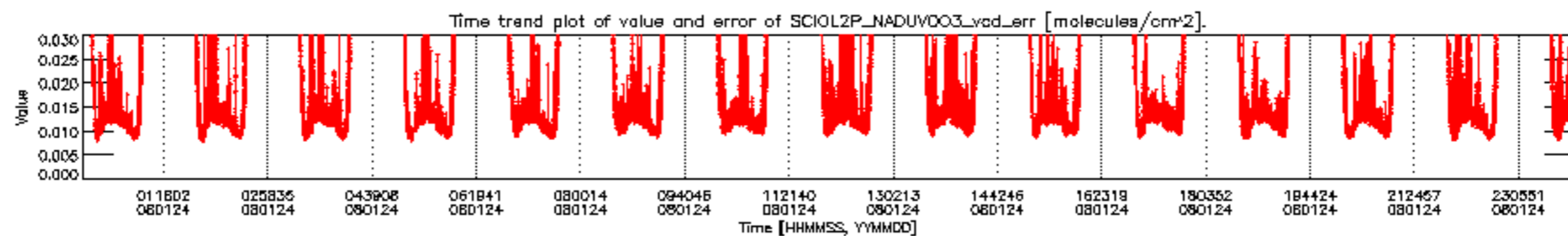
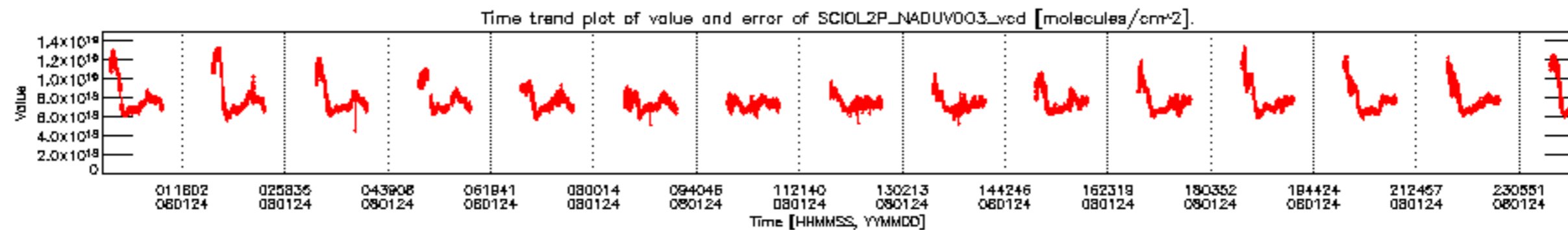


cLopt\_depth for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

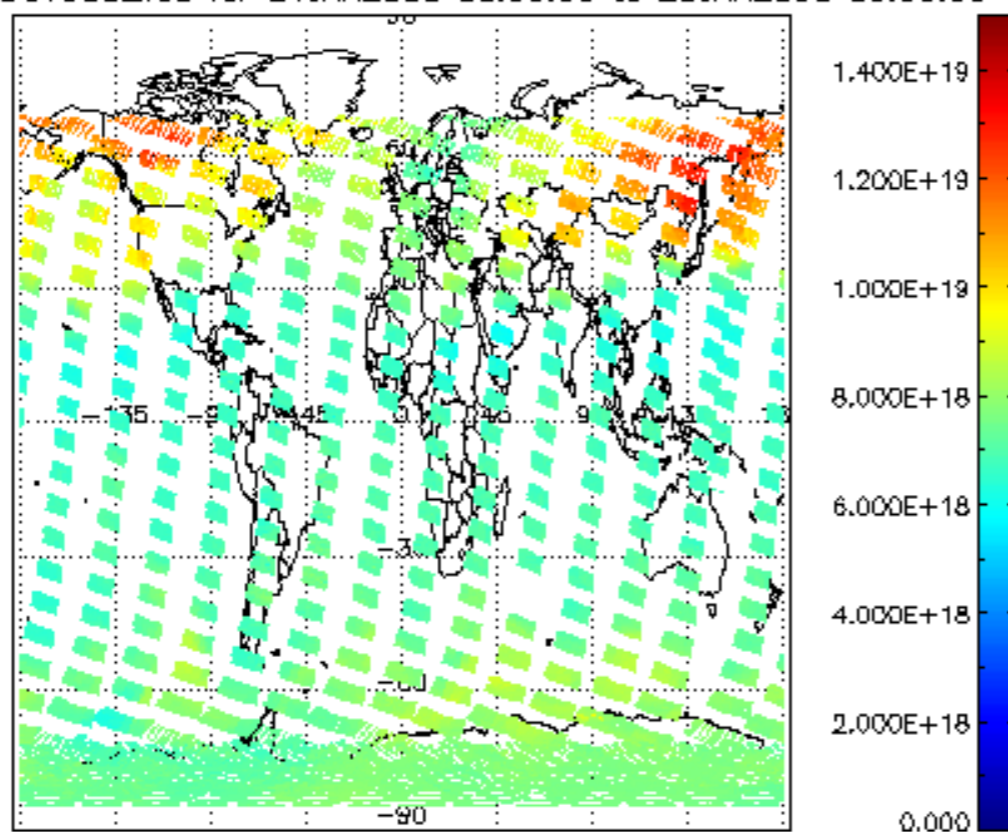


cloud\_flags for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

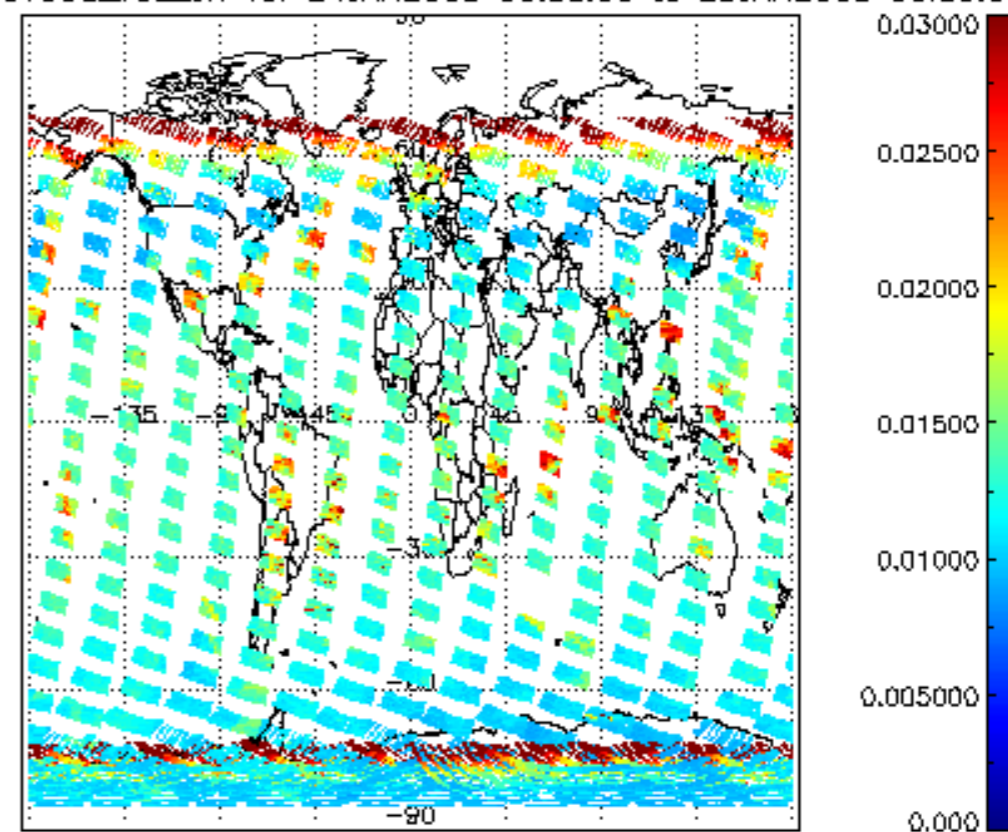




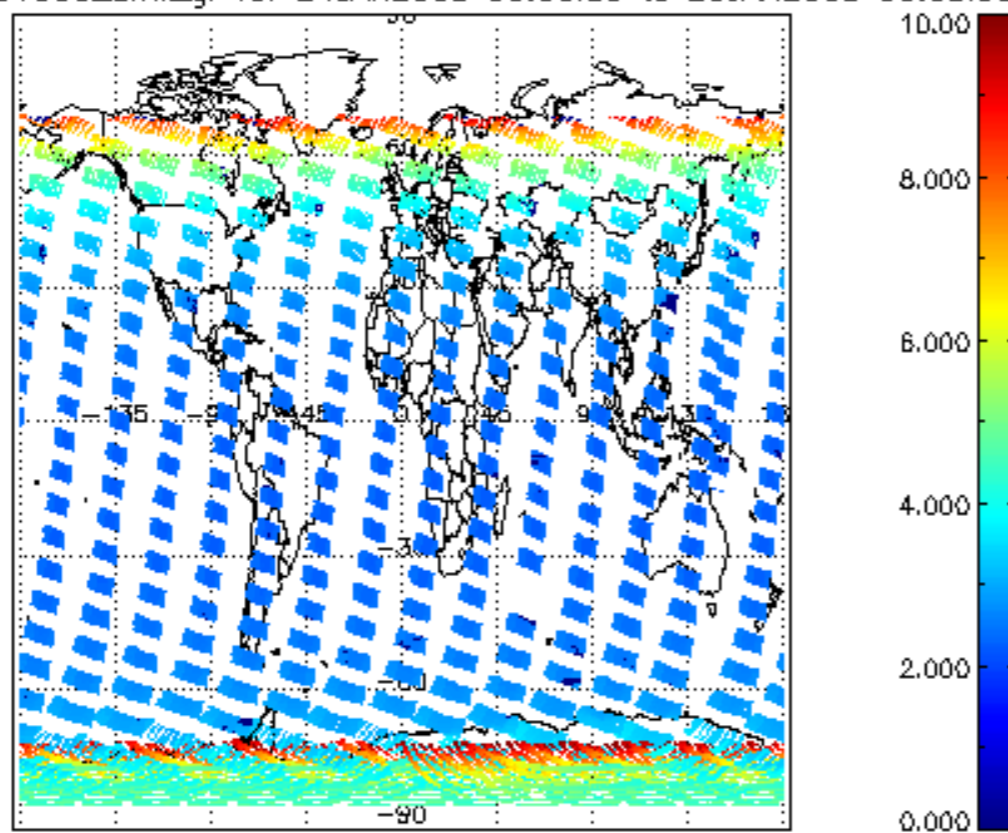
SCIOL2P\_NADUV003\_vcd for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



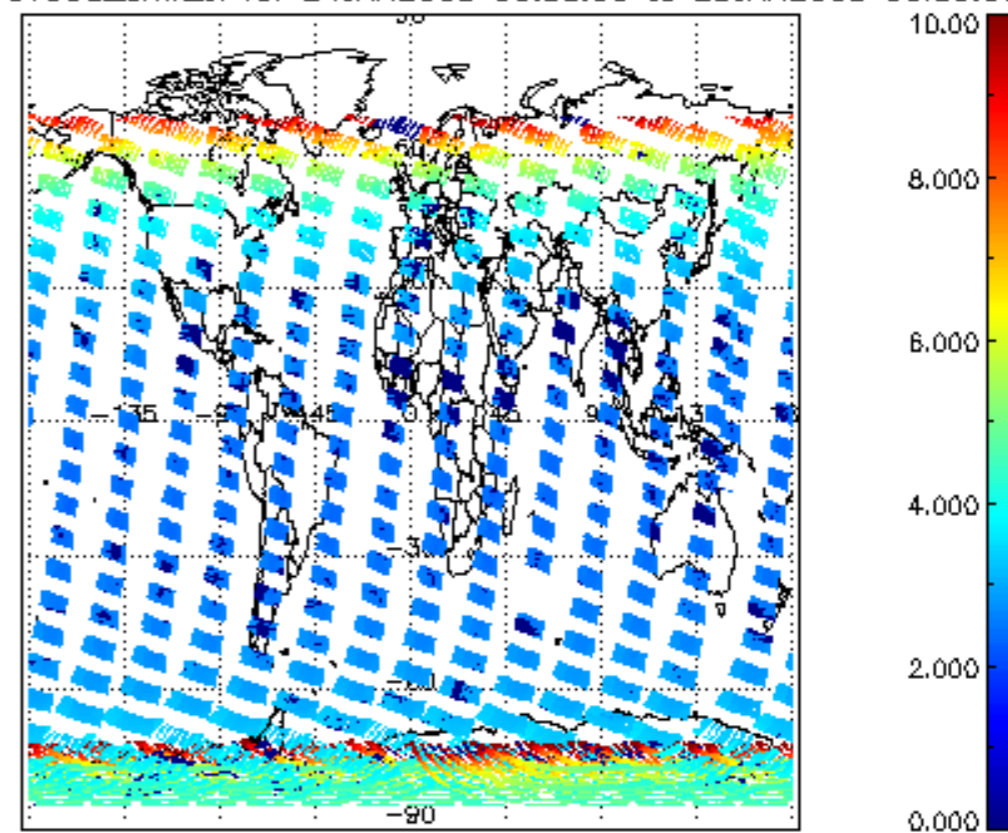
SCIOL2P\_NADUV003\_vcd\_err for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

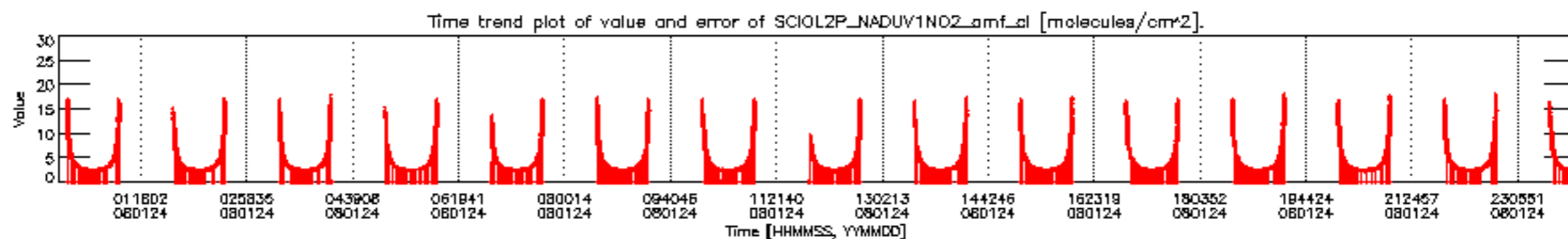
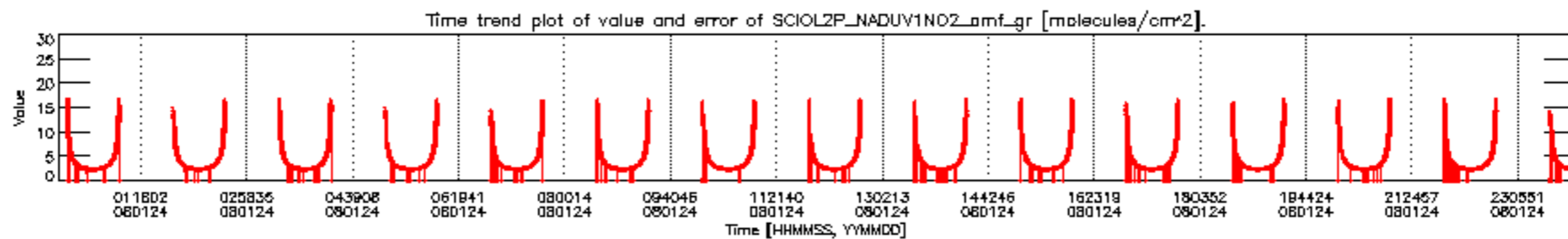
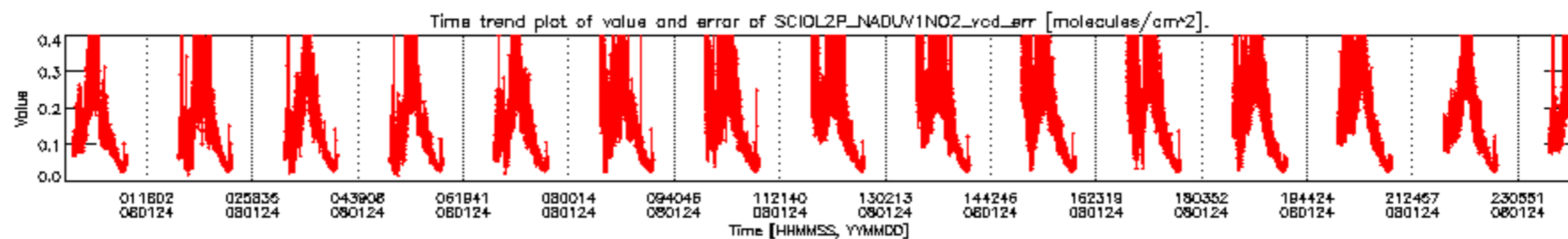
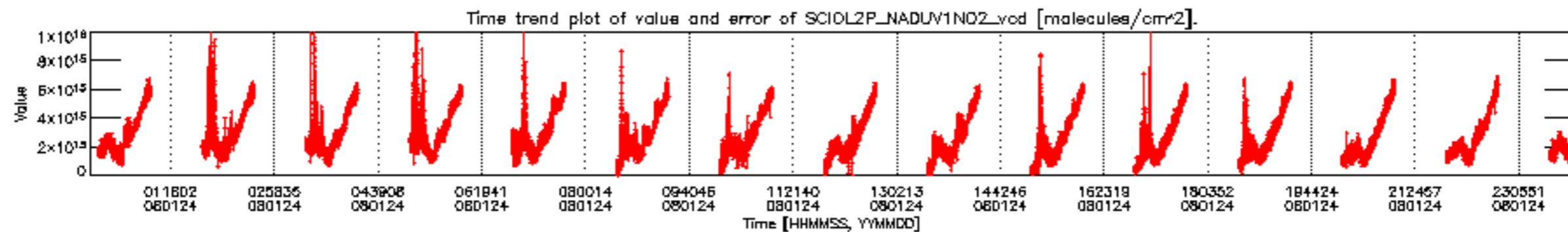


SCIOL2P\_NADUV003\_amf\_gr for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

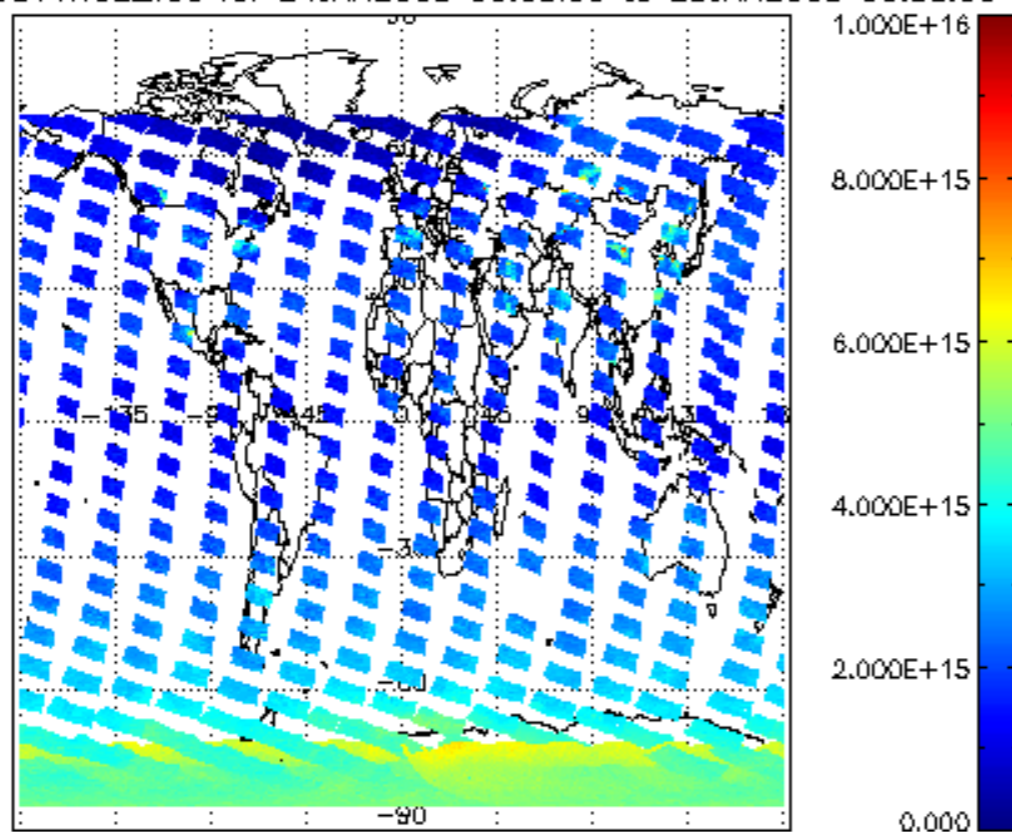


SCIOL2P\_NADUV003\_amf\_cl for 24JAN2008 00:00:00 to 25JAN2008 00:00:00

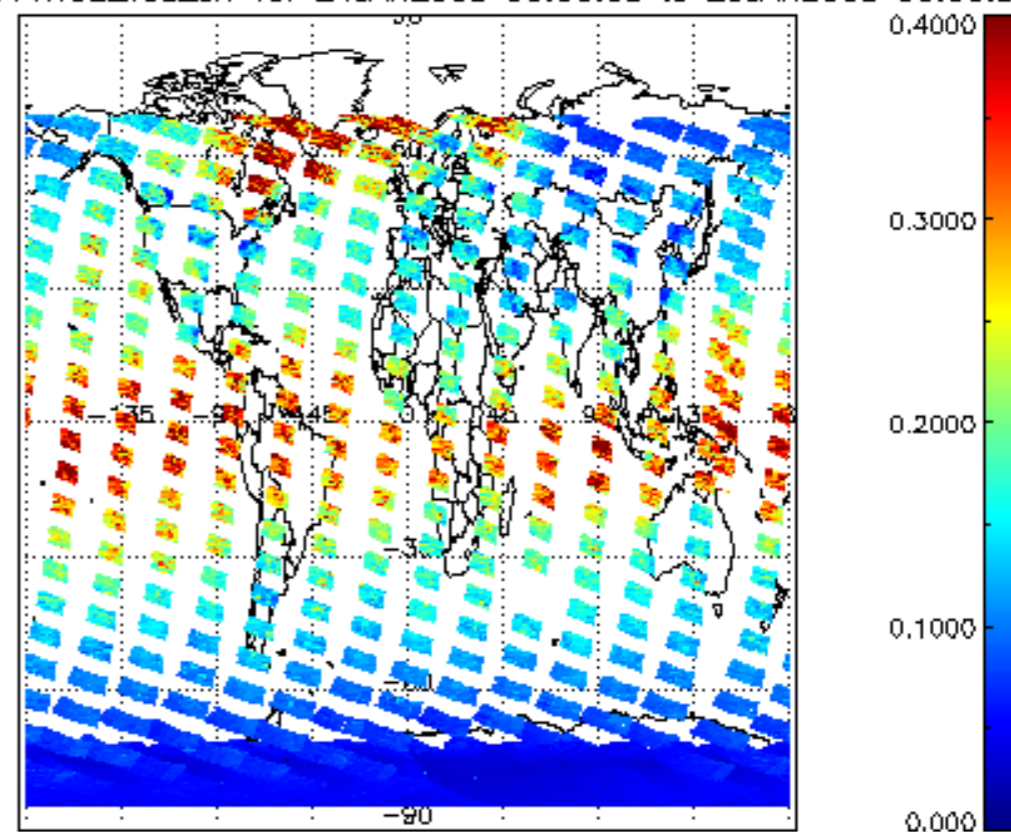




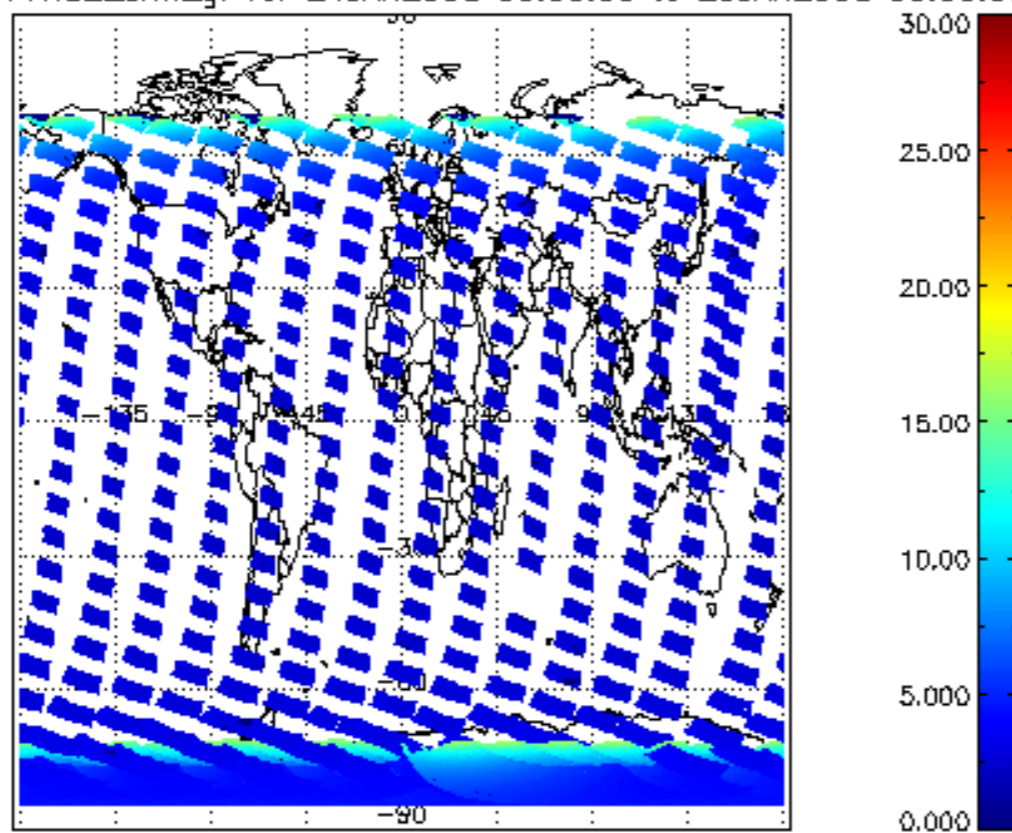
SCIOL2P\_NADUV1NO2\_vcd for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



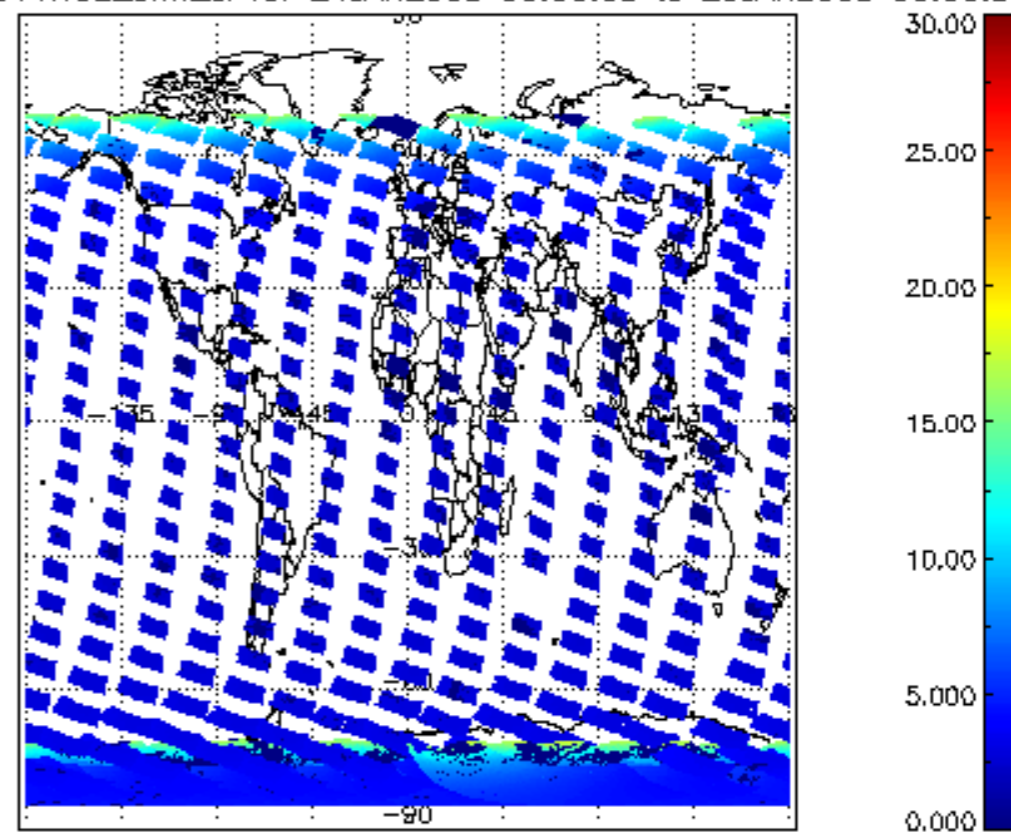
SCIOL2P\_NADUV1NO2\_vcd\_err for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



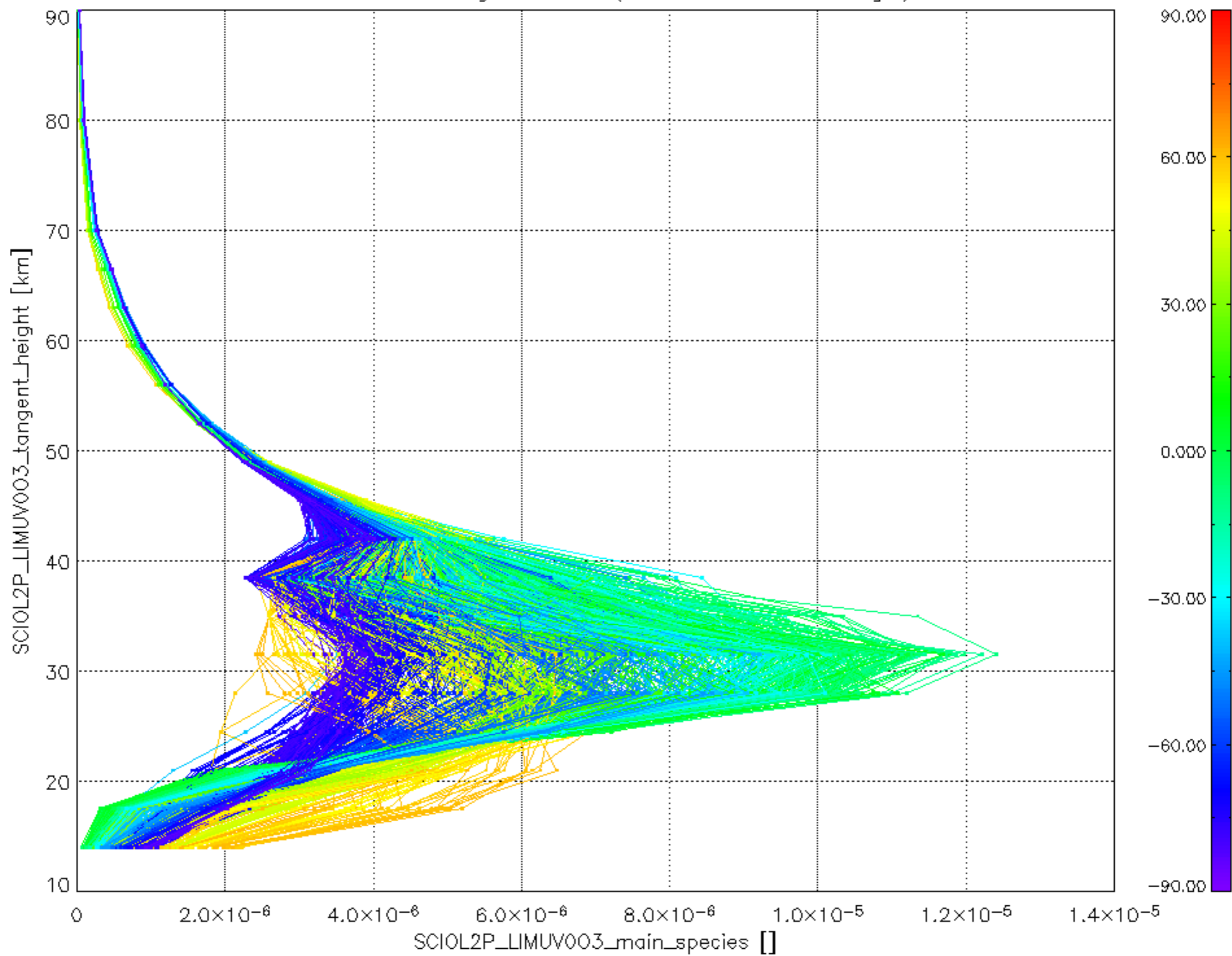
SCIOL2P\_NADUV1NO2\_amf\_gr for 24JAN2008 00:00:00 to 25JAN2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 24JAN2008 00:00:00 to 25JAN2008 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\_LIMUV1N02\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).

