

## 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 18:29:02
Data source version	SCIA-OL/3.01-R
Processing scope for products	08JAN2008 00:00:00 to 09JAN2008 00:00:00
Start time of first product within scope	08JAN2008 00:06:37
Stop time of last product within scope	09JAN2008 00:30:22
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__2PRDPA20080108_000637_000033252065_00002_30617_0806.N1	08JAN2008 00:06:37	08JAN2008 01:02:02	0	GOOD
1	SCI_OL__2PRDPA20080108_014821_000032692065_00003_30618_0807.N1	08JAN2008 01:48:21	08JAN2008 02:42:51	0	GOOD
2	SCI_OL__2PRDPA20080108_032748_000033252065_00004_30619_0808.N1	08JAN2008 03:27:48	08JAN2008 04:23:14	0	GOOD
3	SCI_OL__2PRDPA20080108_050932_000032692065_00005_30620_0809.N1	08JAN2008 05:09:32	08JAN2008 06:04:02	0	GOOD
4	SCI_OL__2PRDPA20080108_064900_000033252065_00006_30621_0810.N1	08JAN2008 06:49:00	08JAN2008 07:44:25	0	GOOD
5	SCI_OL__2PRDPA20080108_083044_000032692065_00007_30622_0811.N1	08JAN2008 08:30:44	08JAN2008 09:25:14	0	GOOD
6	SCI_OL__2PRDPA20080108_101011_000033252065_00008_30623_0812.N1	08JAN2008 10:10:11	08JAN2008 11:05:37	0	GOOD
7	SCI_OL__2PRDPA20080108_115155_000032692065_00009_30624_0813.N1	08JAN2008 11:51:55	08JAN2008 12:46:25	0	GOOD
8	SCI_OL__2PRDPA20080108_133122_000033252065_00010_30625_0814.N1	08JAN2008 13:31:22	08JAN2008 14:26:48	0	GOOD
9	SCI_OL__2PRDPA20080108_151307_000032692065_00011_30626_0815.N1	08JAN2008 15:13:07	08JAN2008 16:07:36	0	GOOD
10	SCI_OL__2PRDPA20080108_165234_000033252065_00012_30627_0816.N1	08JAN2008 16:52:34	08JAN2008 17:47:59	0	GOOD
11	SCI_OL__2PRDPA20080108_183240_000033942065_00013_30628_0817.N1	08JAN2008 18:32:40	08JAN2008 19:29:15	0	GOOD
12	SCI_OL__2PRDPA20080108_201316_000033812065_00014_30629_0818.N1	08JAN2008 20:13:16	08JAN2008 21:09:38	0	GOOD
13	SCI_OL__2PRDPA20080108_215530_000032692065_00015_30630_0819.N1	08JAN2008 21:55:30	08JAN2008 22:49:59	0	GOOD
14	SCI_OL__2PRDPA20080108_233457_000033252065_00016_30631_0820.N1	08JAN2008 23:34:57	09JAN2008 00:30:22	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: 151320

Total number of cloud data DSRs with good quality flag (=0): 151320 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	151320	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	151320	0.16967	0.12500	0.12500	0.25000	0.059904	s
SURFACE_PRES	151320	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	151320	0.41221	0.40879	0.0000	1.0000	0.27431	-

CL_FRAC_ERR	151320	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	151320	5.4296	4.0000	4.0000	8.0000	1.9169	
PMD_READ_CL[0]	151320	0.20098	0.0000	0.0000	8.0000	0.97739	-
PMD_READ_CL[1]	151320	0.60744	0.0000	0.0000	8.0000	1.6895	-
CL_TOP_HEIGHT	130176	4.3939	3.4689	0.0000	17.000	3.8790	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	130176	52.962	40.188	0.0000	101.00	40.193	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	151320	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	151320	11001001	11000100	11000000	11100000	3051.3	flags
AERO_ABSO_IND	151320	2.6006	2.8299	-1.6774	15.255	1.9822	
AERO_IND_DIAG	151320	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	151320	01010110	00000000	00000000	11000000	24460.	flags

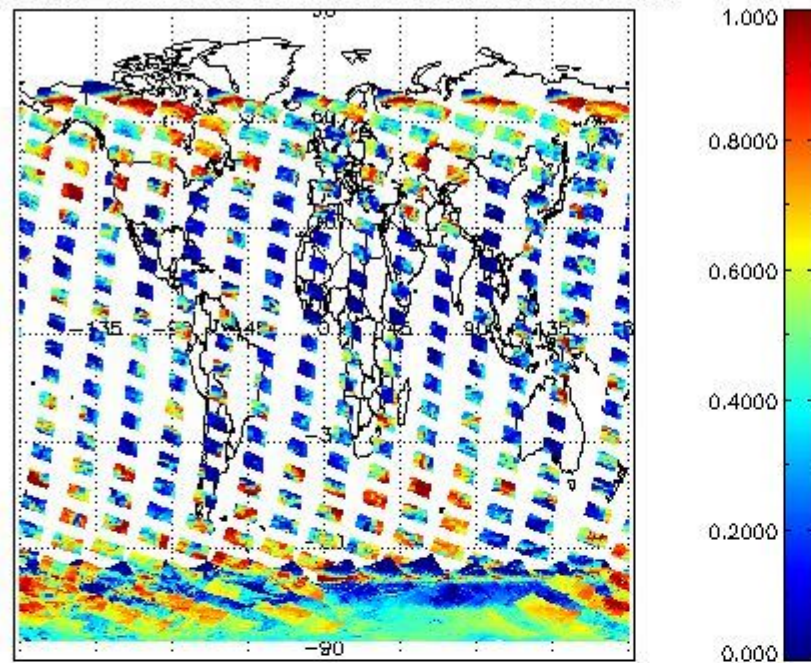
Time and geolocation plots:

Plots are available for the following parameters:

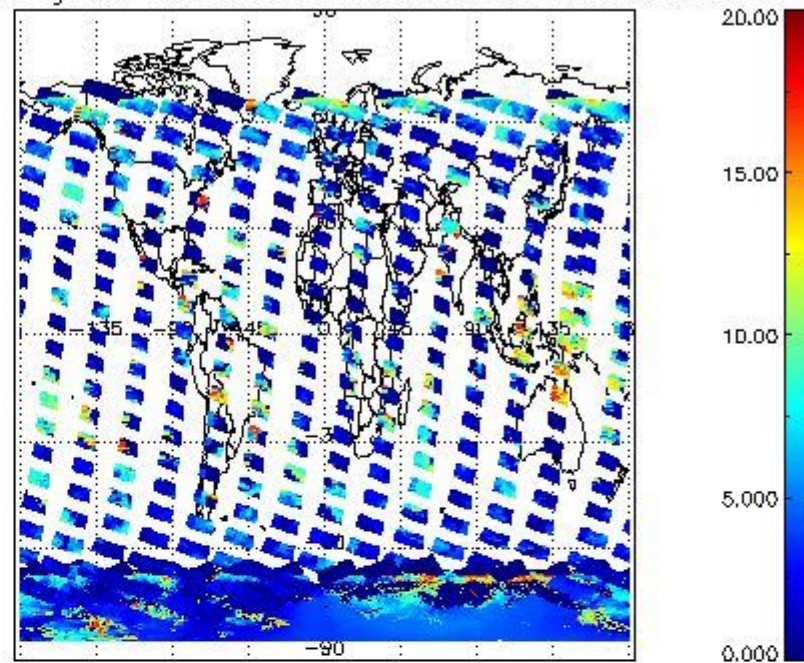
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



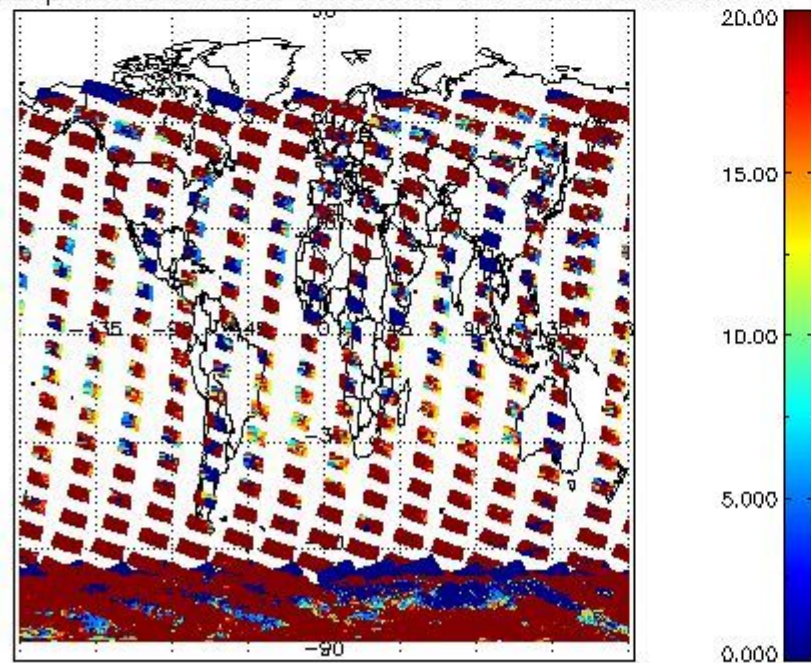
cL\_frac for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



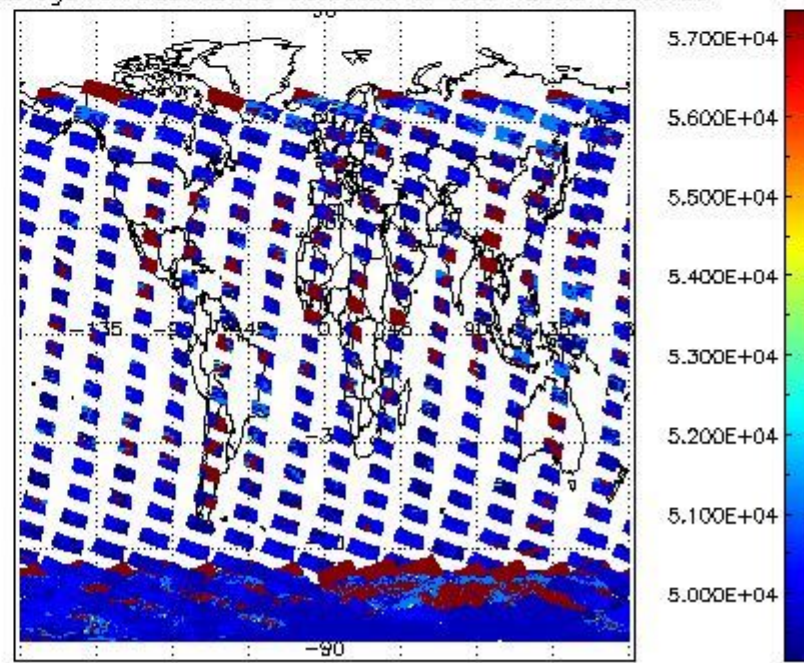
cL\_top\_height for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



cLopt\_depth for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



cloud\_flags for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



## 2.2.2 Nadir

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

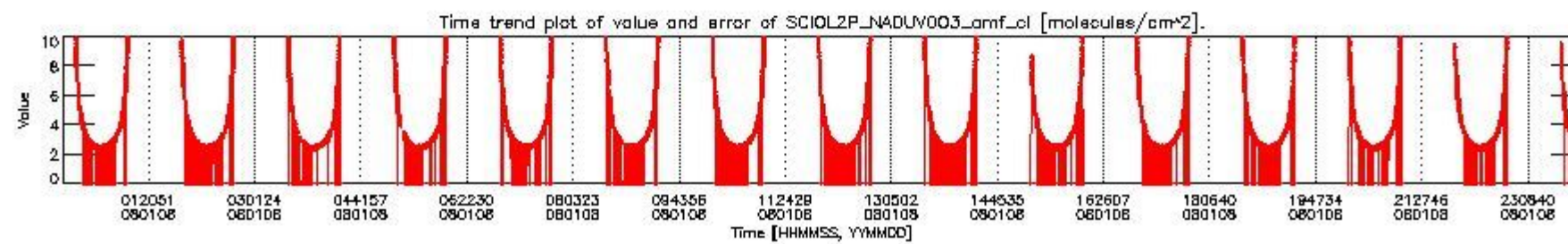
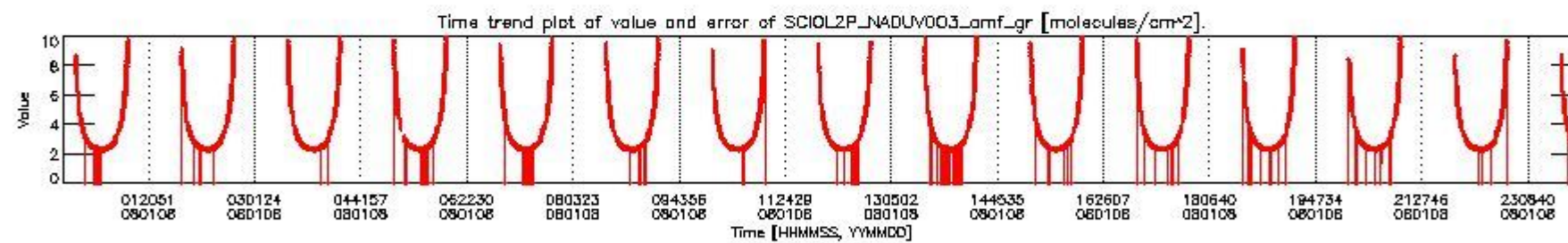
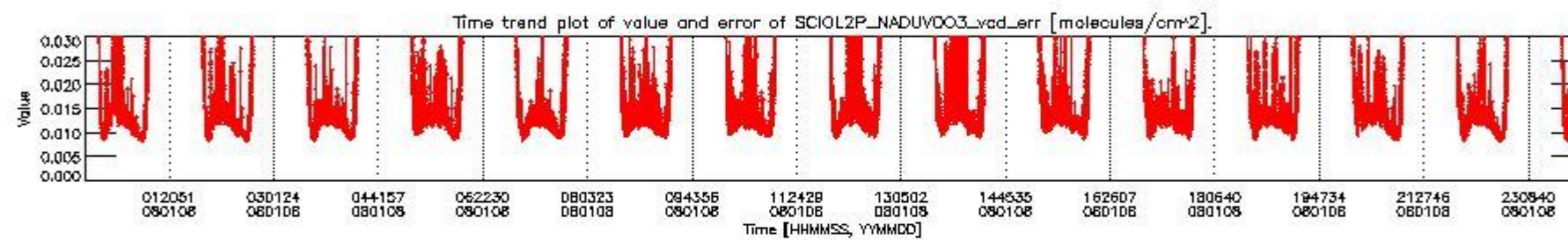
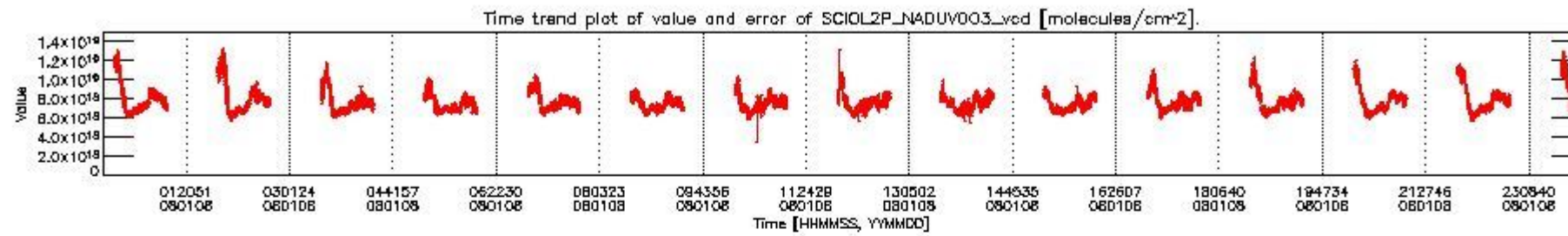
The following data items are currently included into this section:

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



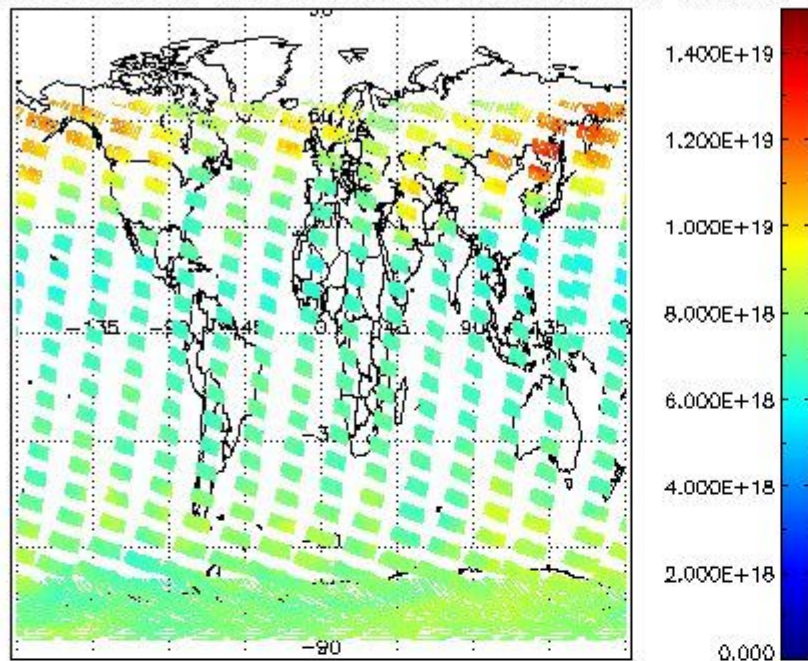
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

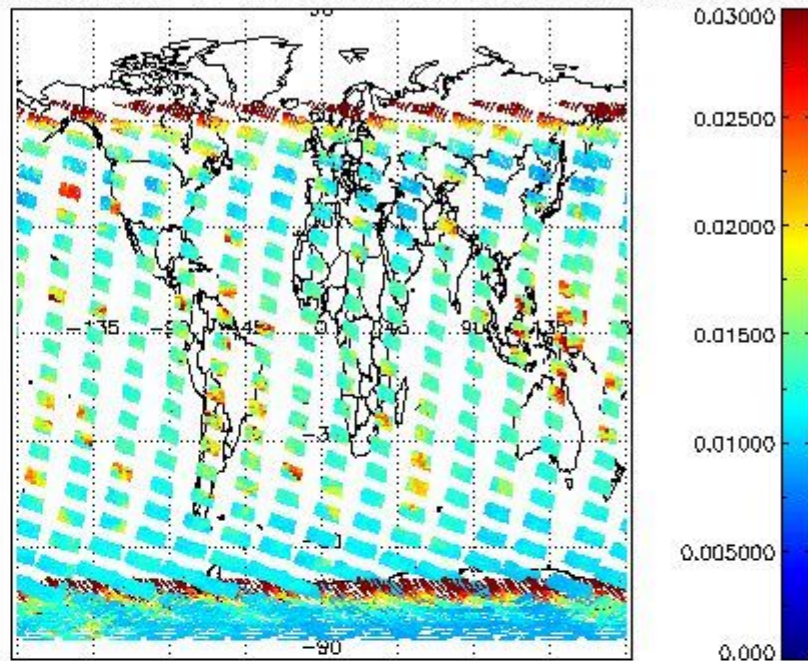




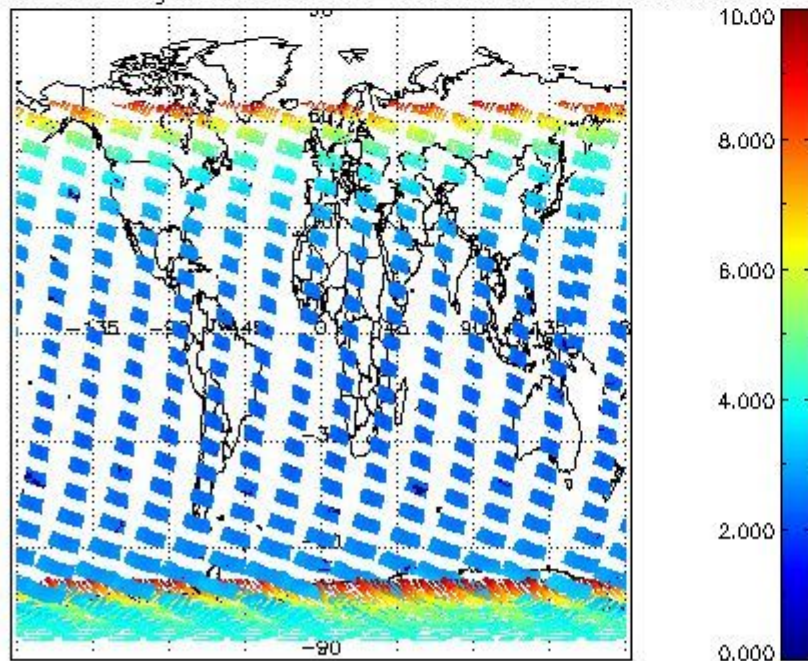
SCIOL2P\_NADUV003\_vcd for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



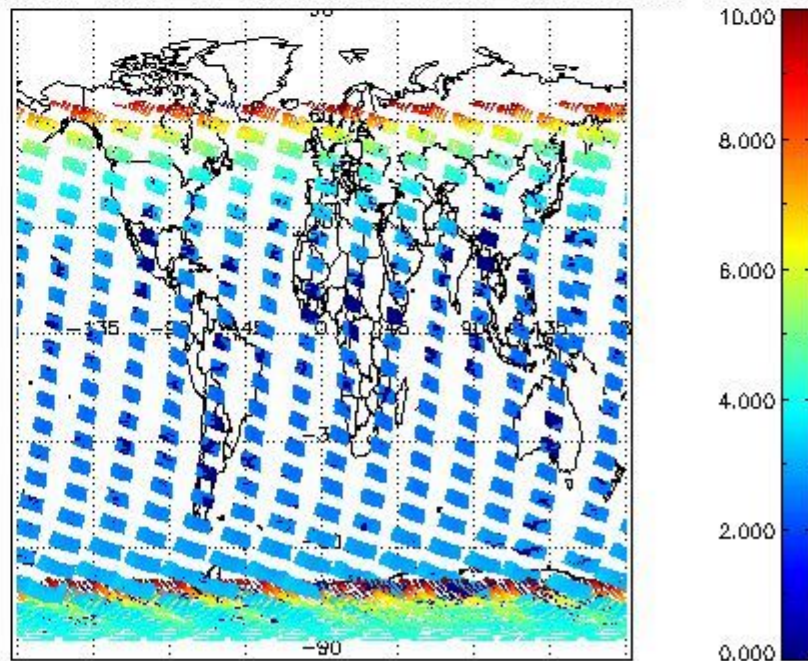
SCIOL2P\_NADUV003\_vcd\_err for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



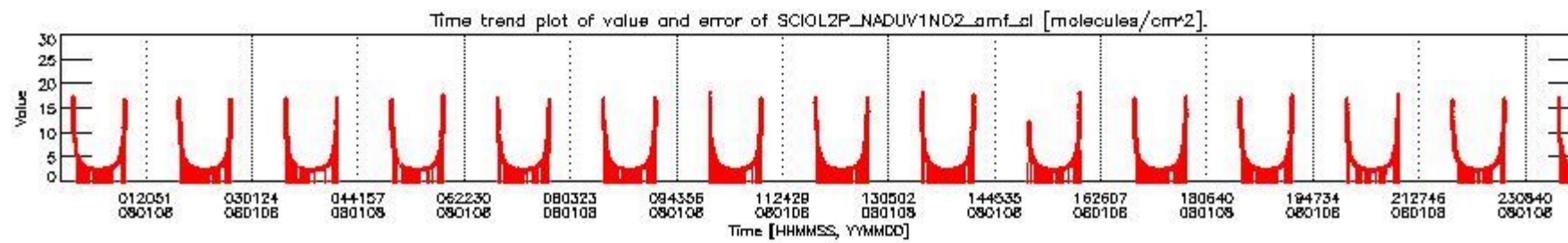
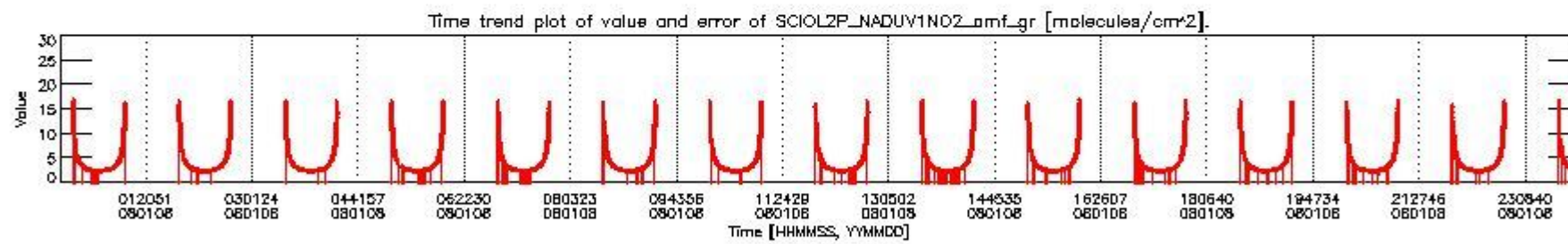
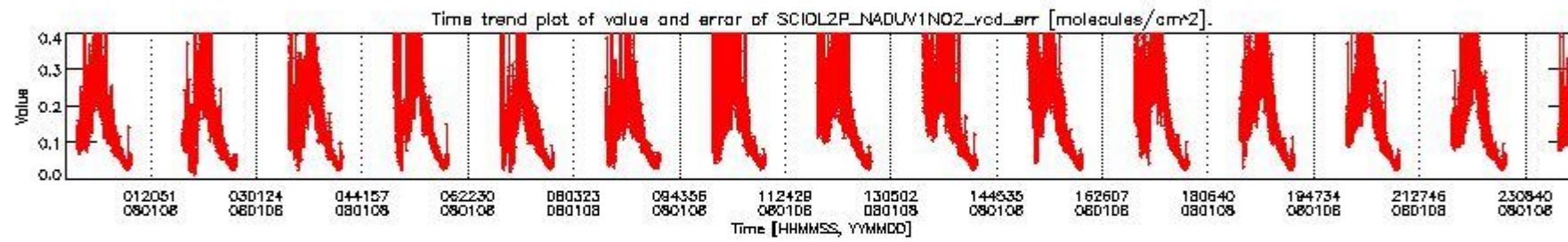
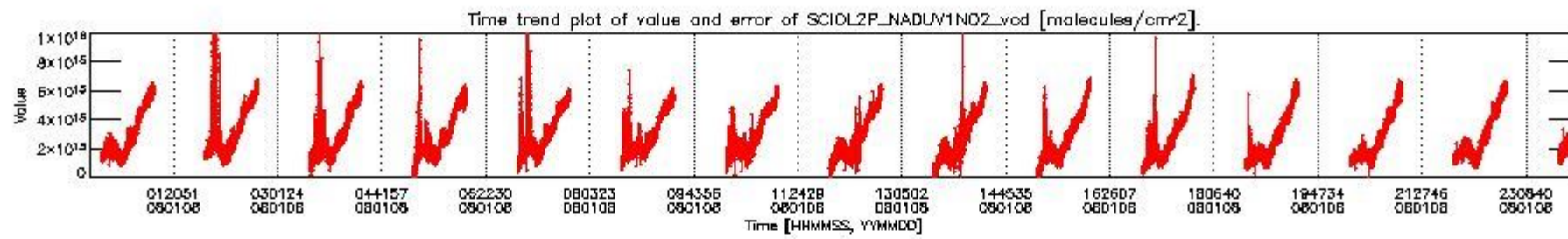
SCIOL2P\_NADUV003\_amf\_gr for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



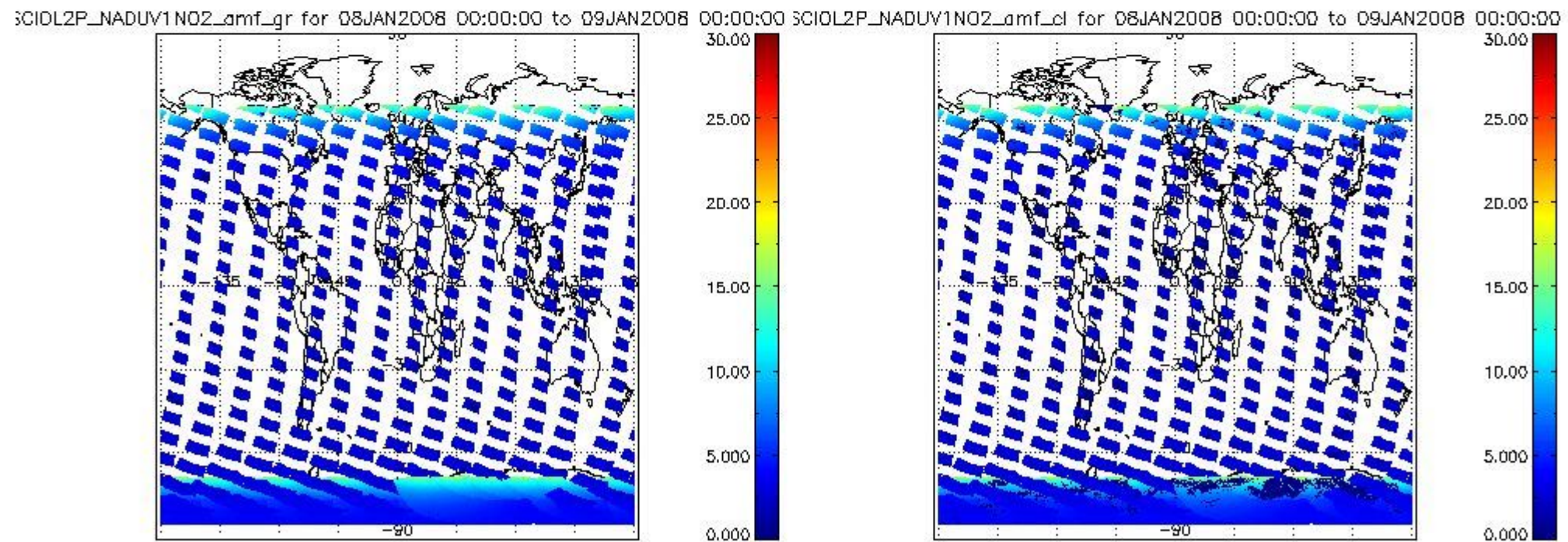
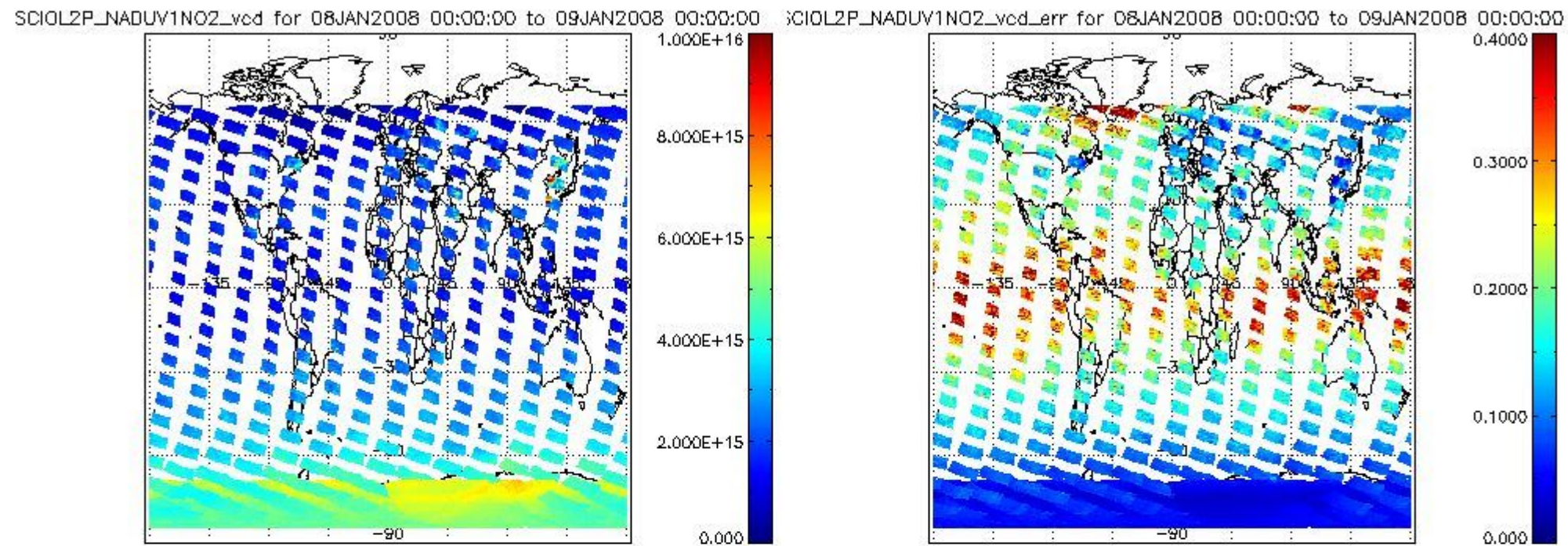
SCIOL2P\_NADUV003\_amf\_cl for 08JAN2008 00:00:00 to 09JAN2008 00:00:00











### 2.2.3 Limb

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

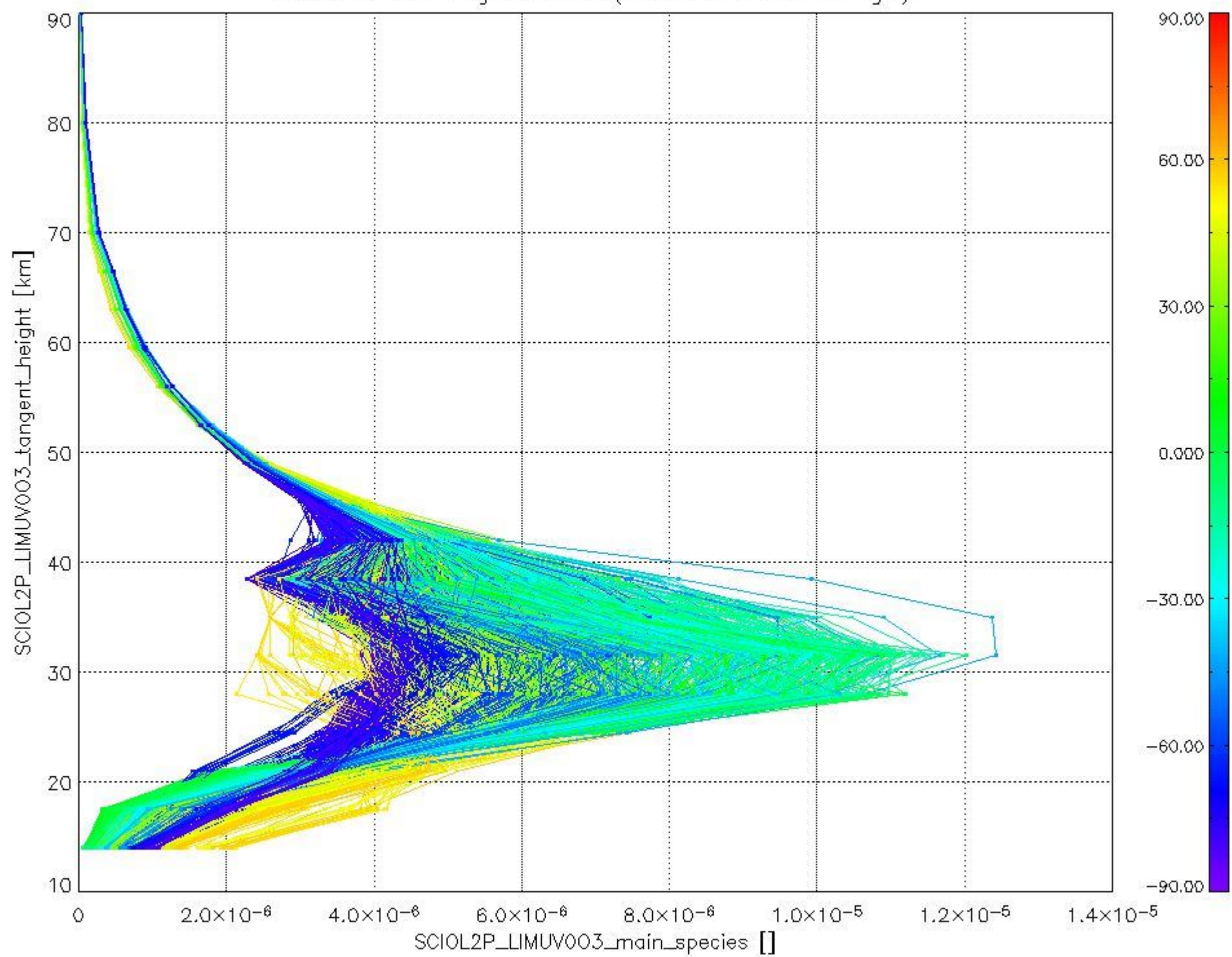
The following data items are currently included into this section:

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.

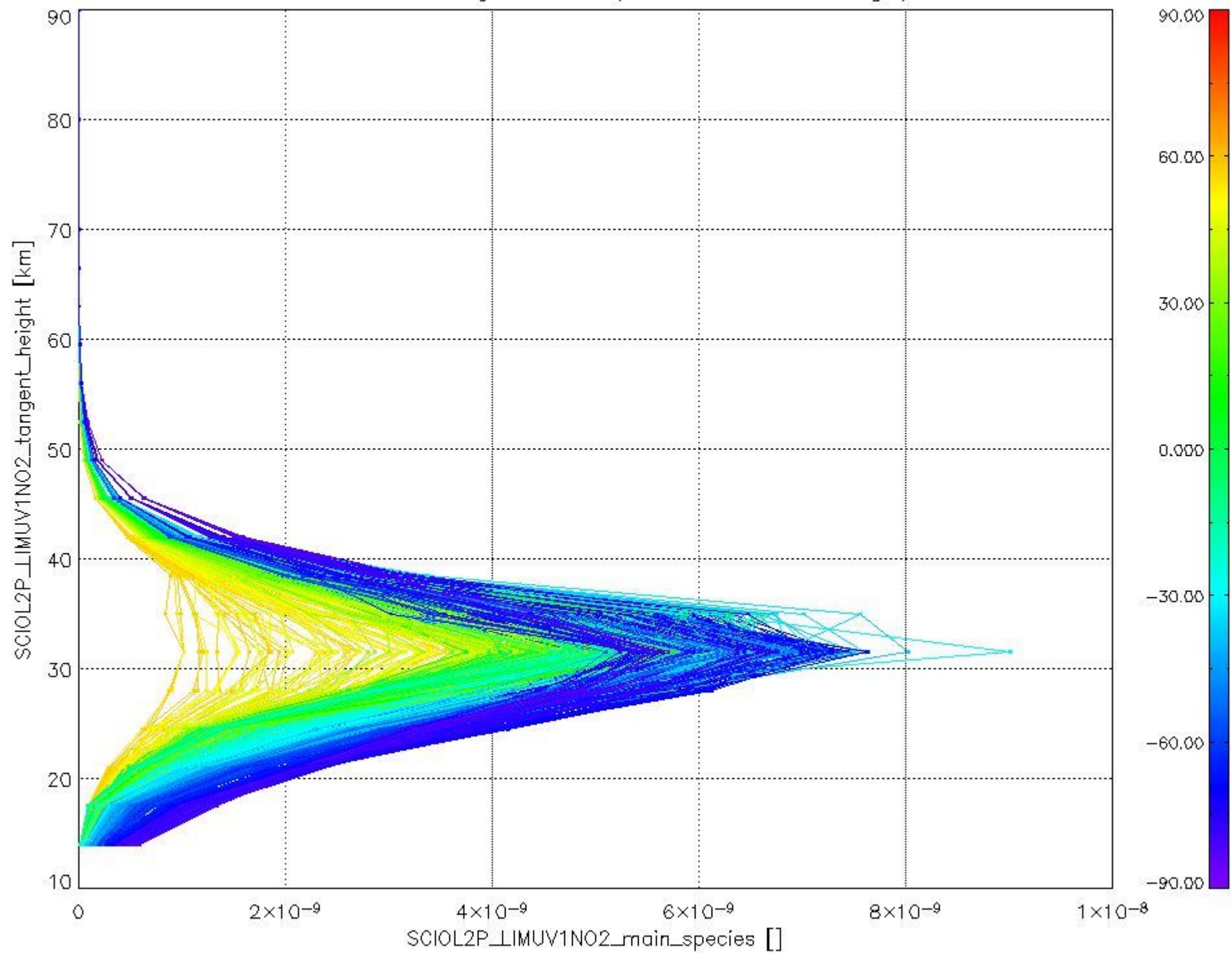


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





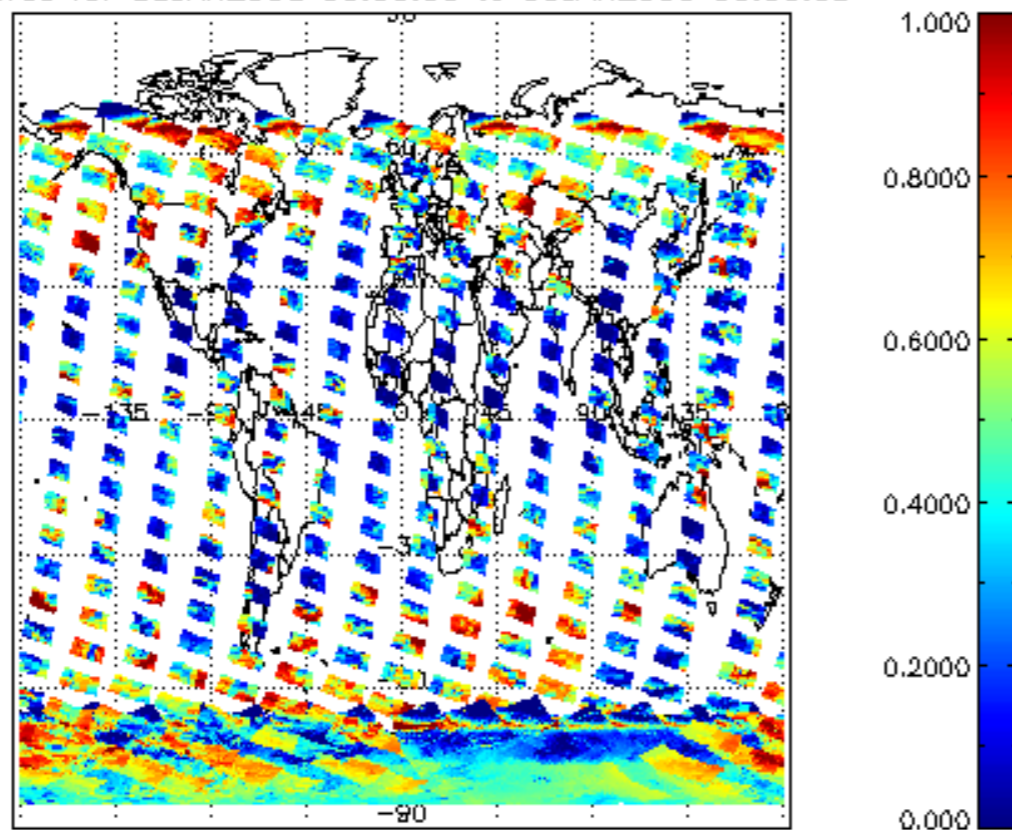
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



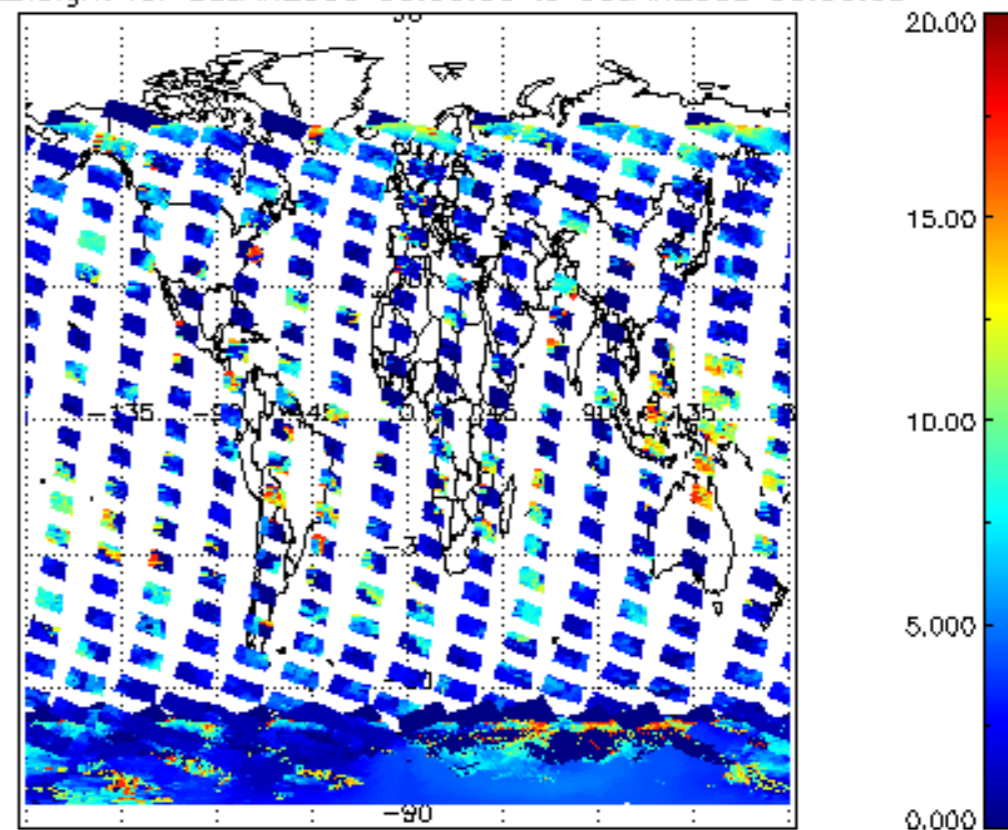
### 2.3 ADF monitoring

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

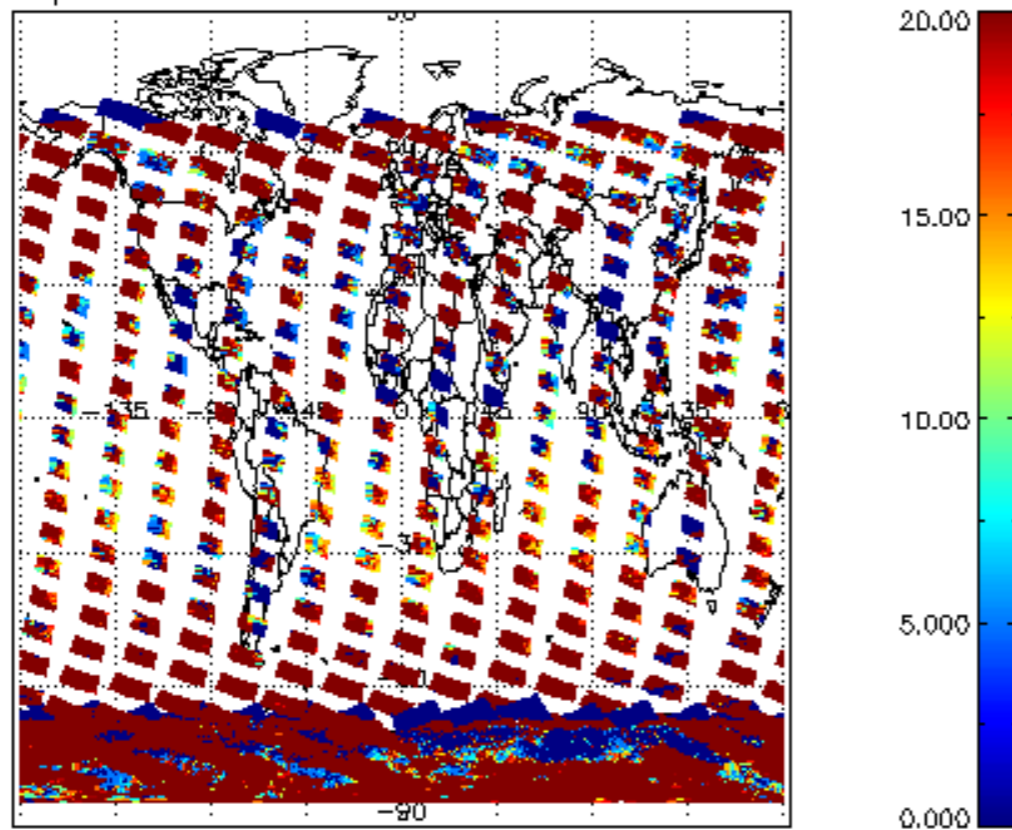
cL\_frac for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



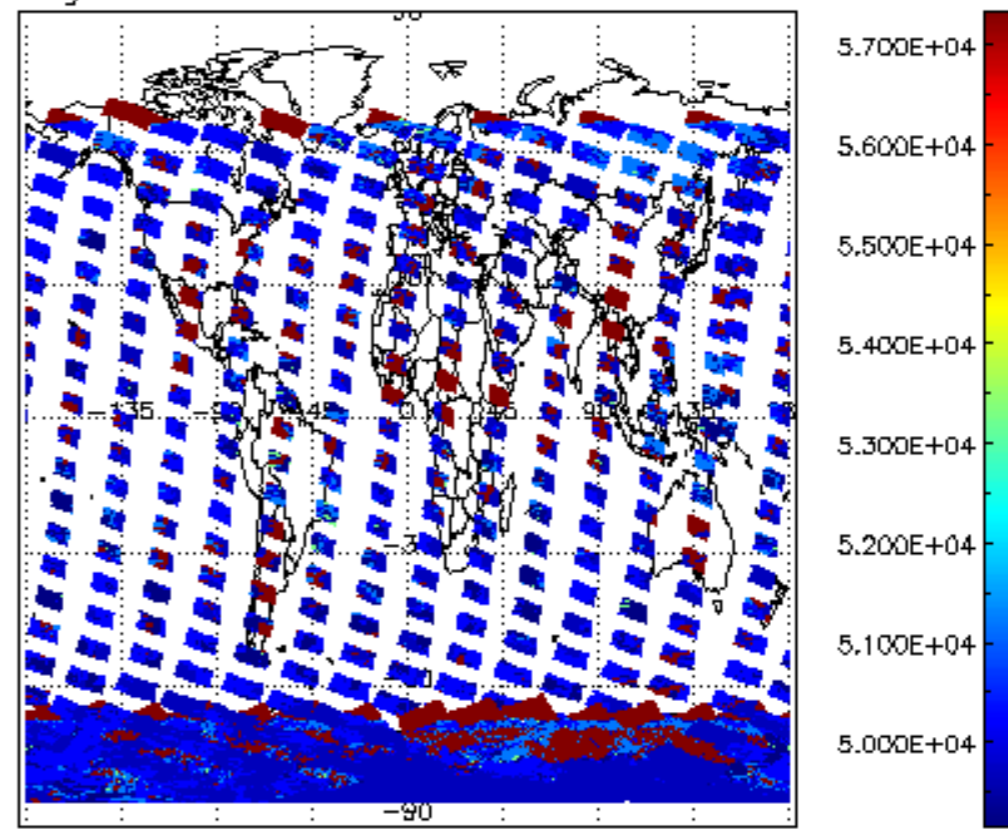
cL\_top\_height for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



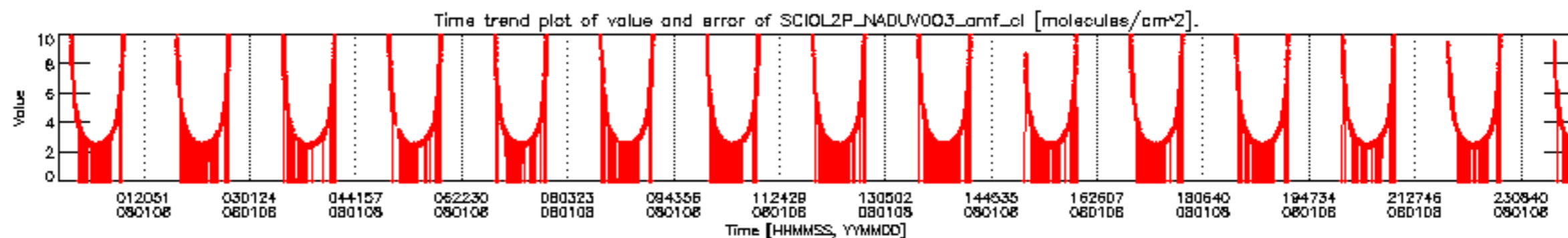
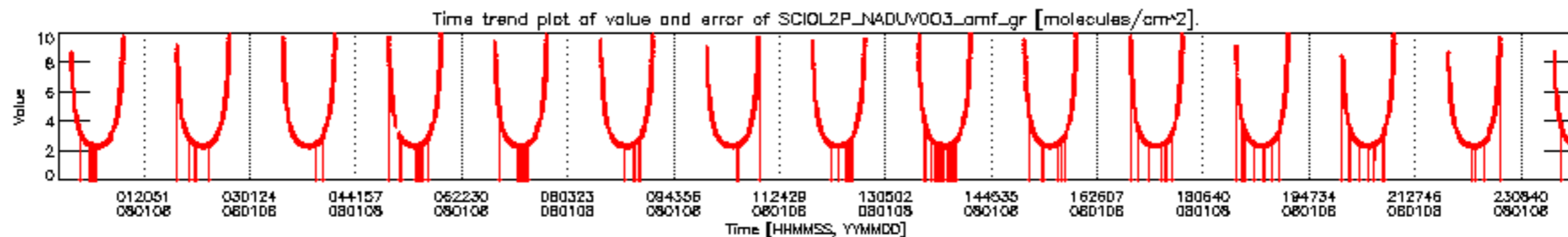
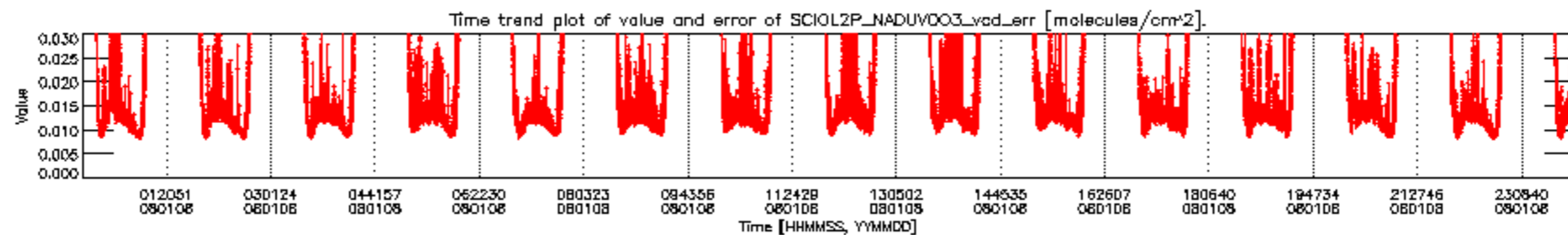
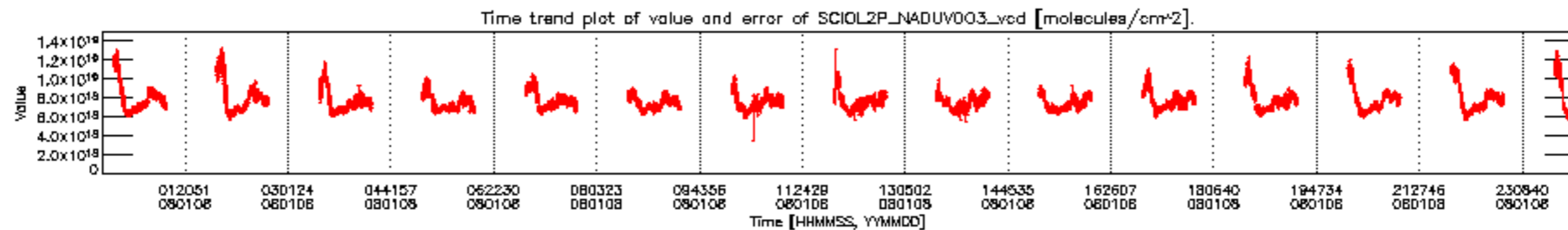
cLopt\_depth for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



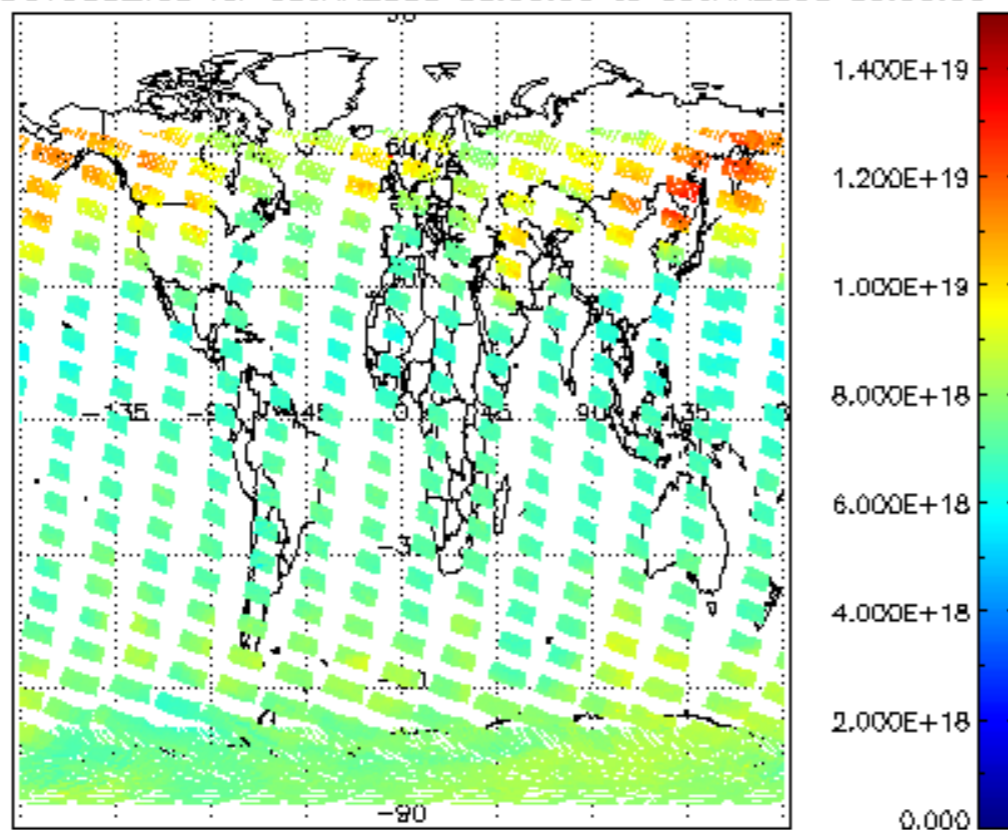
cloud\_flags for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



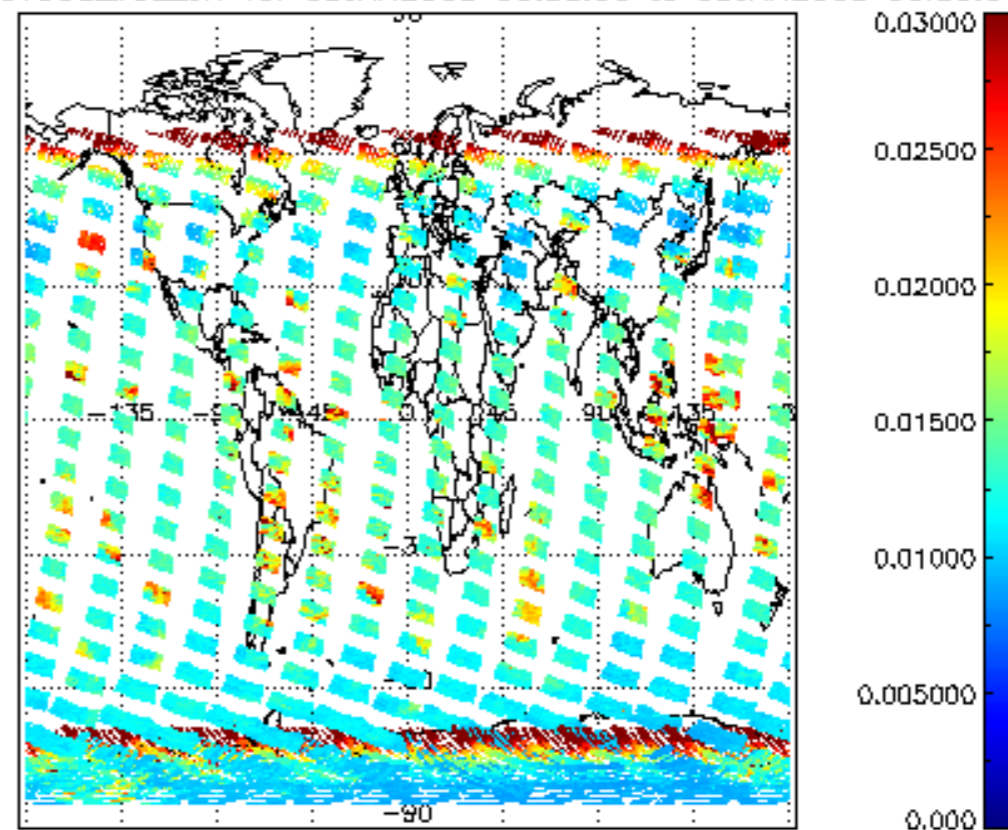




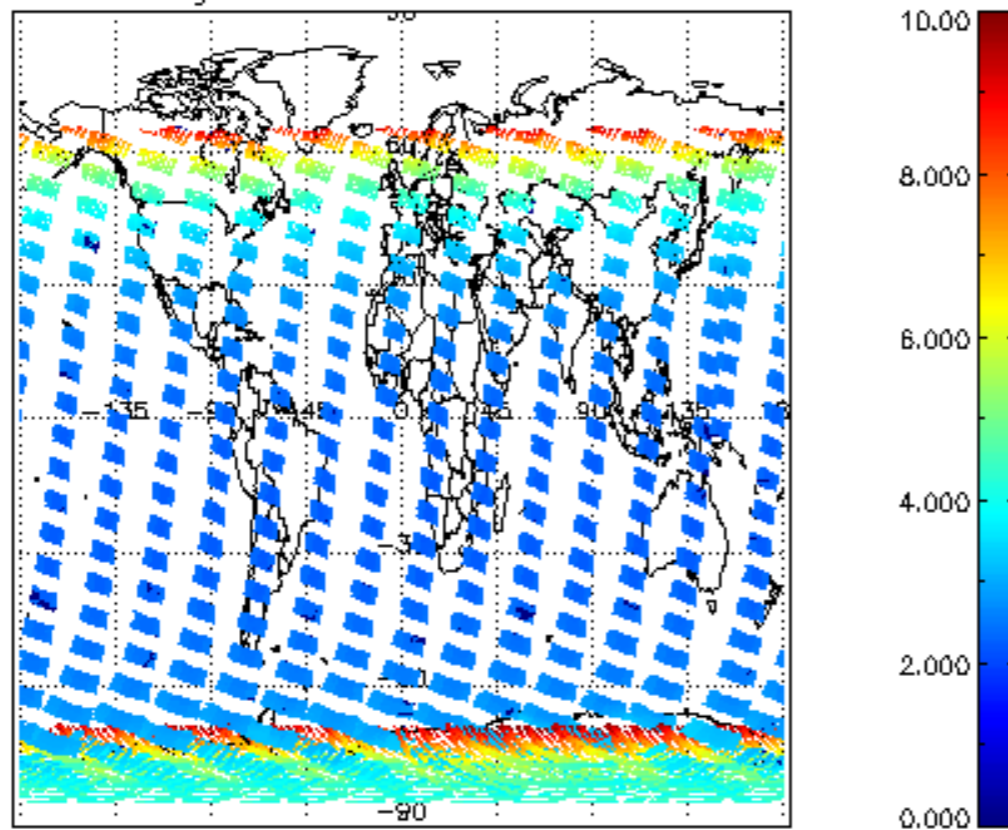
SCIOL2P\_NADUV003\_vcd for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



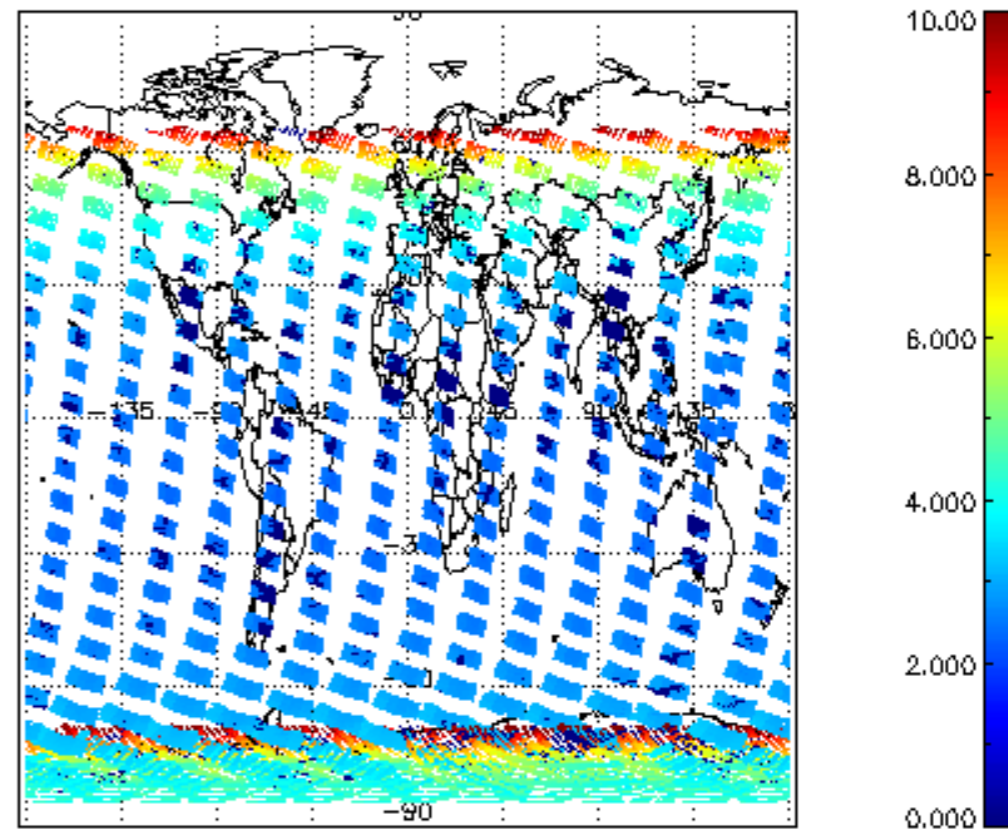
SCIOL2P\_NADUV003\_vcd\_err for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



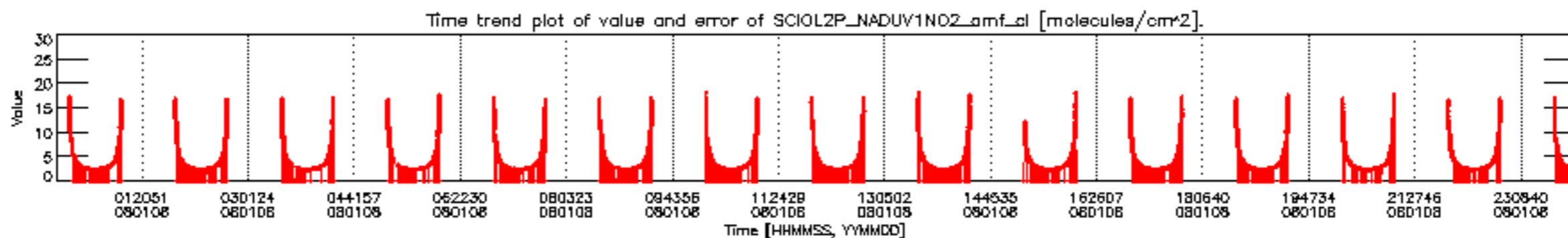
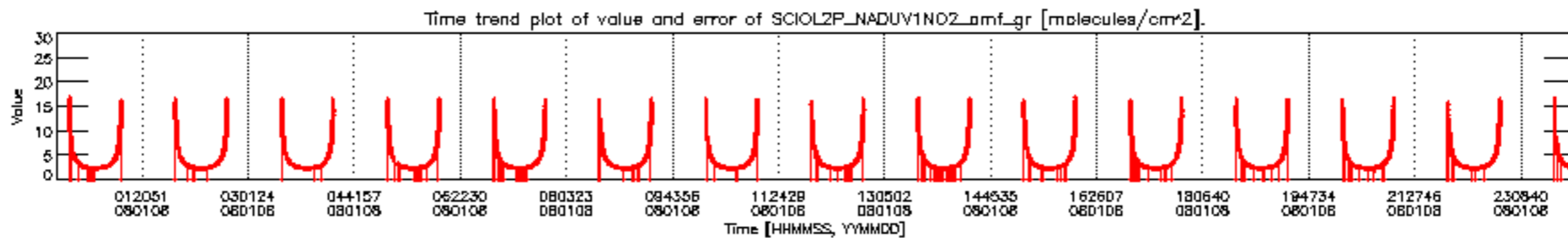
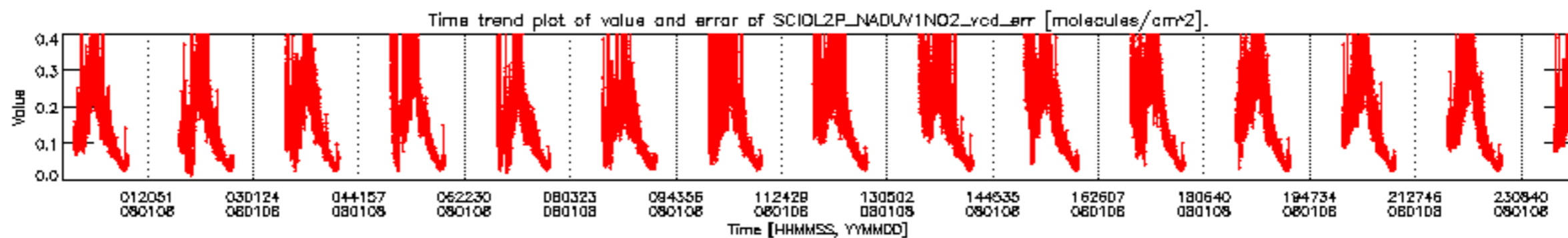
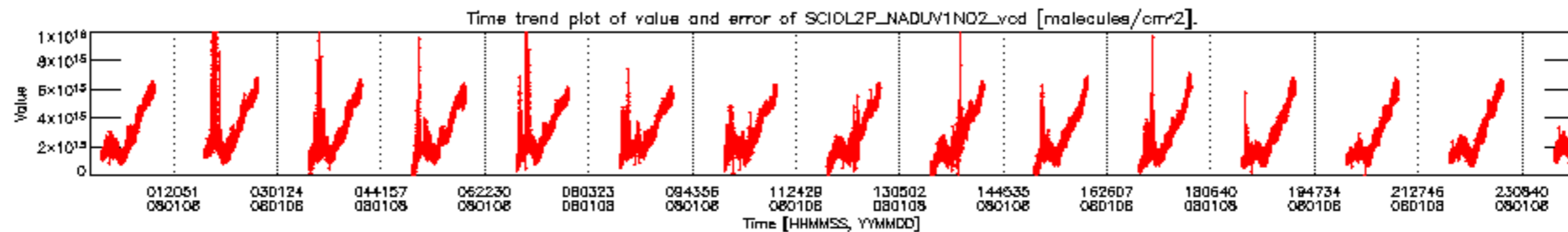
SCIOL2P\_NADUV003\_amf\_gr for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



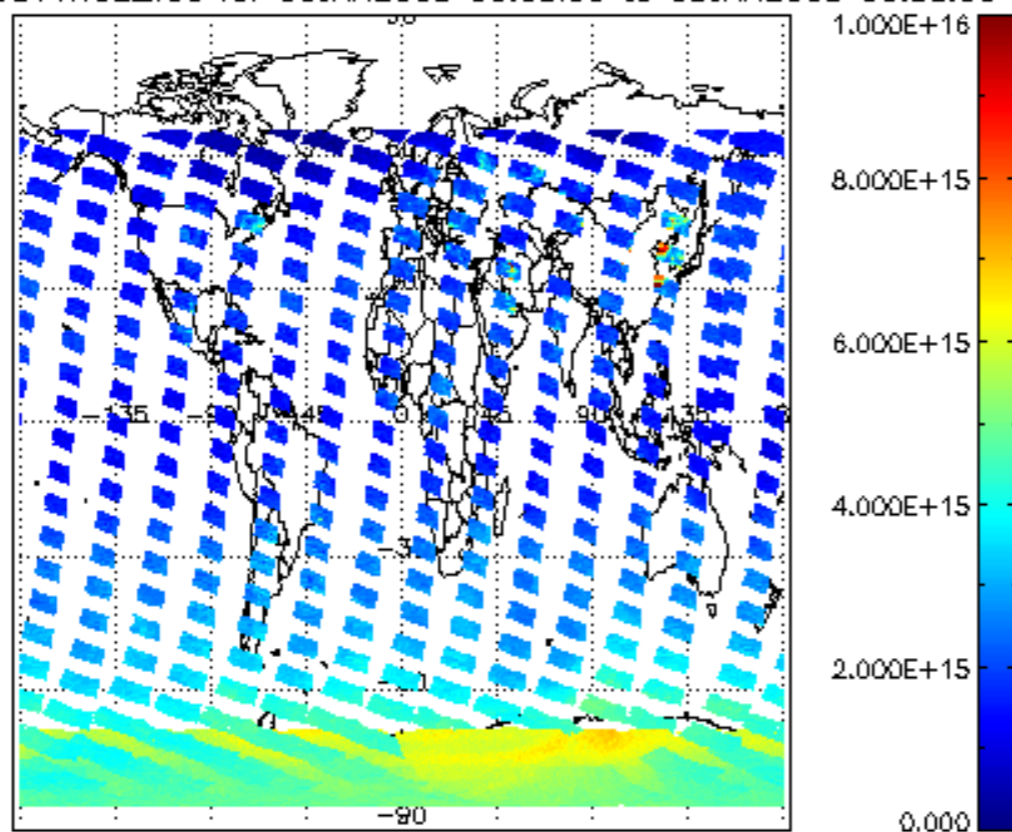
SCIOL2P\_NADUV003\_amf\_cl for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



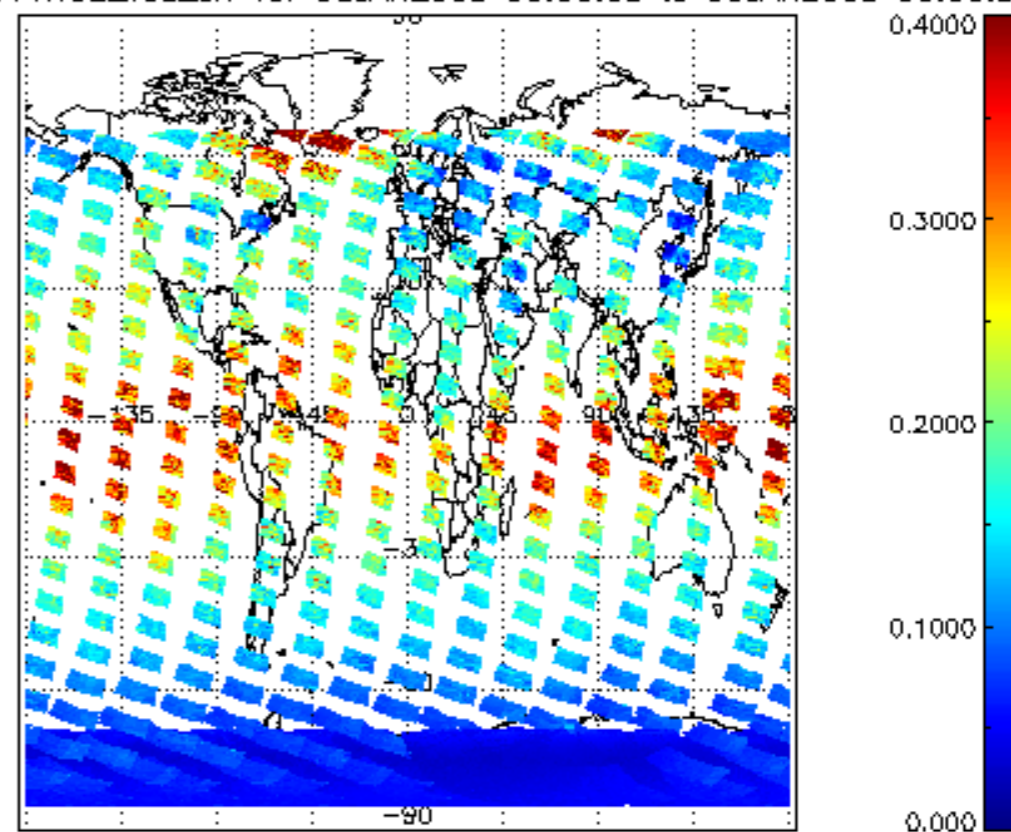




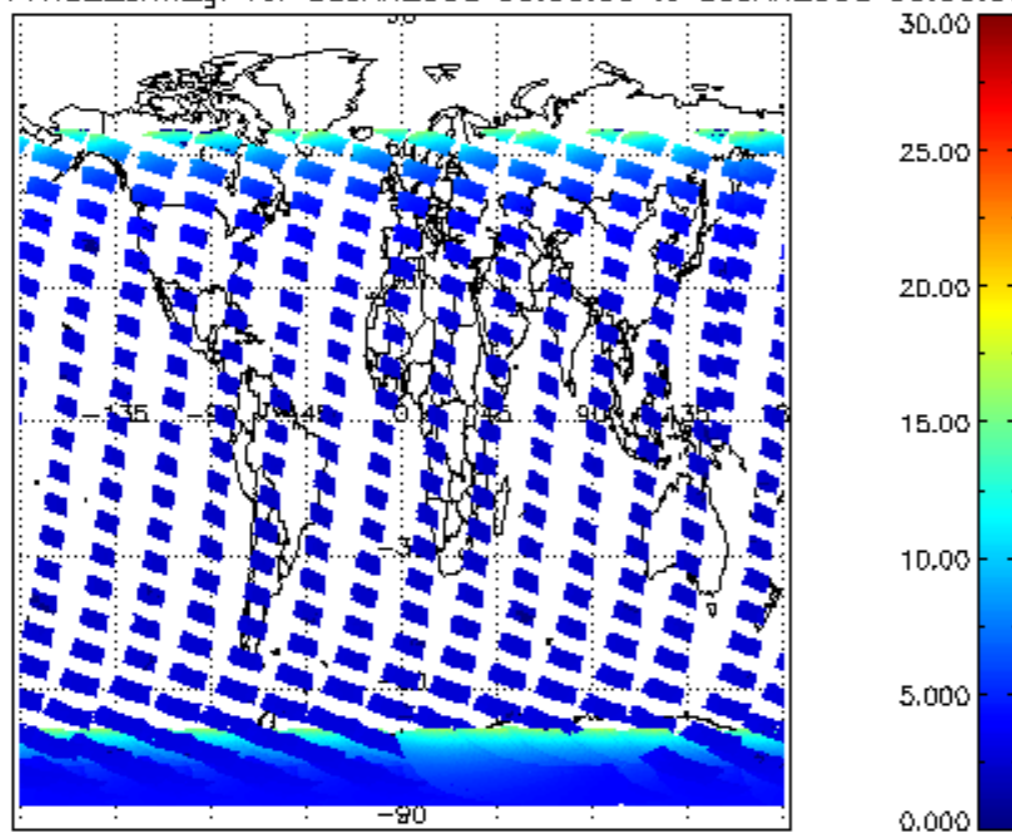
SCIOL2P\_NADUV1NO2\_vcd for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



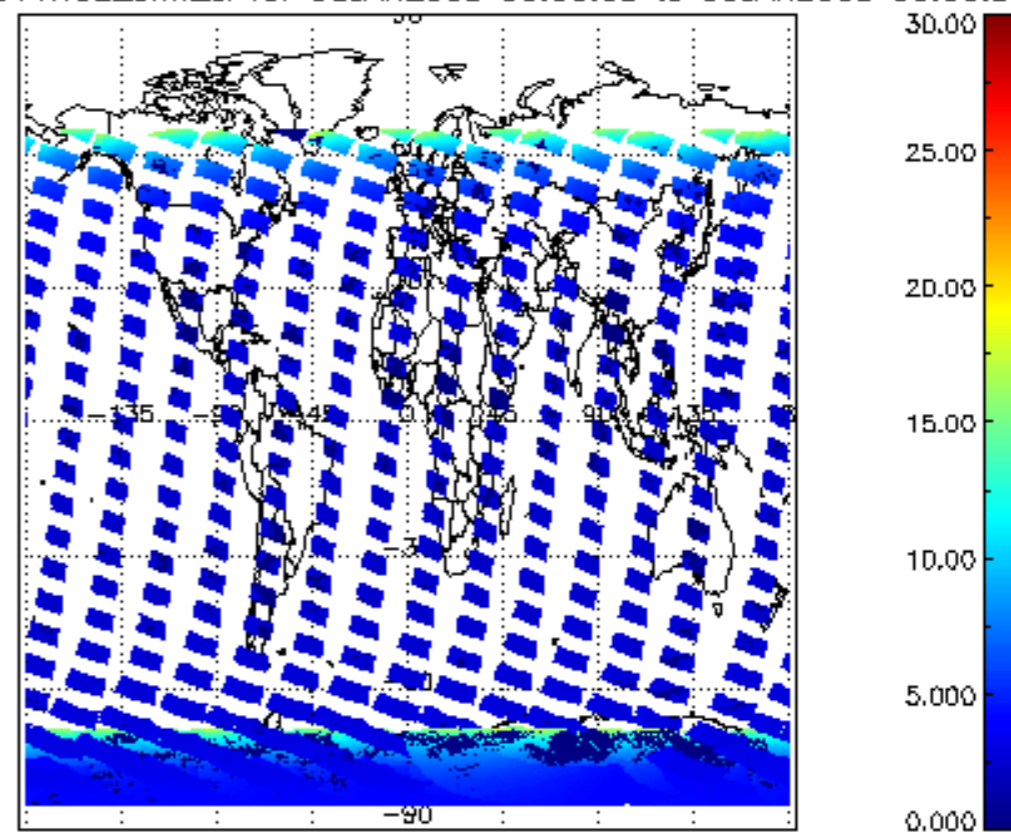
SCIOL2P\_NADUV1NO2\_vcd\_err for 08JAN2008 00:00:00 to 09JAN2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 08JAN2008 00:00:00 to 09JAN2008 00:00:00

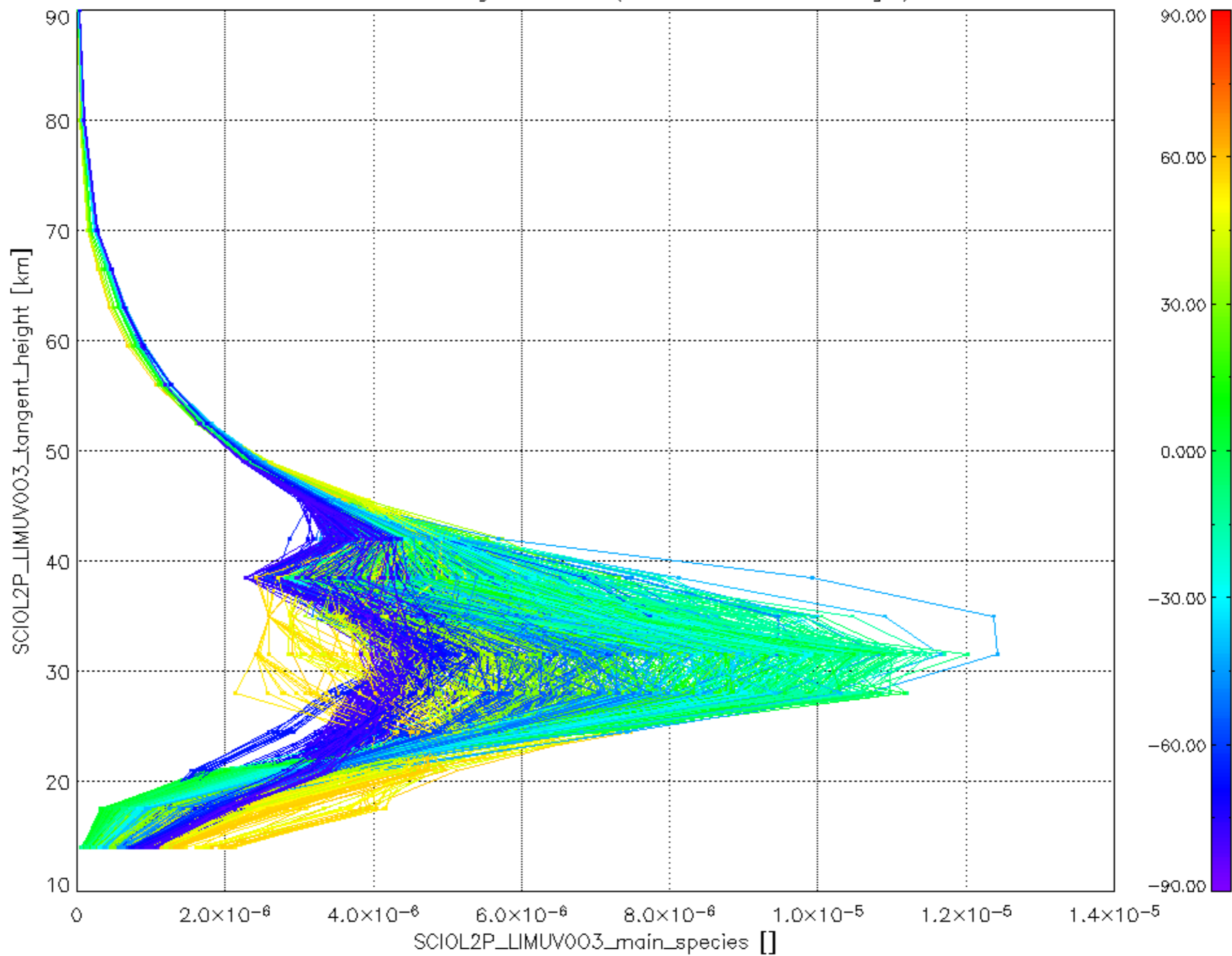


SCIOL2P\_NADUV1NO2\_amf\_cl for 08JAN2008 00:00:00 to 09JAN2008 00:00:00





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).

