

## 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	1.6 (28-07-2008)
Time of report generation	16MAR2009 09:51:43
Data source version	SCIA-OL/3.01-R
Processing scope for products	01JAN2008 00:00:00 to 02JAN2008 00:00:00
Start time of first product within scope	31DEC2007 22:47:35
Stop time of last product within scope	02JAN2008 00:50:48
Total number of level 2 products	14
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.

Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PRDPA20071231_224735_000032692064_00402_30516_0285.N1</a>	31DEC2007 22:47:35	31DEC2007 23:42:04	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20080101_002702_000033252064_00403_30517_0286.N1</a>	01JAN2008 00:27:02	01JAN2008 01:22:28	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20080101_020846_000032692064_00404_30518_0274.N1</a>	01JAN2008 02:08:46	01JAN2008 03:03:16	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20080101_034813_000033252064_00405_30519_0288.N1</a>	01JAN2008 03:48:13	01JAN2008 04:43:39	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20080101_052958_000032692064_00406_30520_0279.N1</a>	01JAN2008 05:29:58	01JAN2008 06:24:28	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20080101_070925_000033252064_00407_30521_0304.N1</a>	01JAN2008 07:09:25	01JAN2008 08:04:51	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20080101_085109_000032692064_00408_30522_0306.N1</a>	01JAN2008 08:51:09	01JAN2008 09:45:39	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20080101_103037_000033252064_00409_30523_0308.N1</a>	01JAN2008 10:30:37	01JAN2008 11:26:02	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20080101_153332_000032692064_00412_30526_0347.N1</a>	01JAN2008 15:33:32	01JAN2008 16:28:02	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20080101_171300_000033252064_00413_30527_0346.N1</a>	01JAN2008 17:13:00	01JAN2008 18:08:25	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20080101_185305_000033252064_00414_30528_0349.N1</a>	01JAN2008 18:53:05	01JAN2008 19:48:31	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20080101_203341_000033812064_00415_30529_0354.N1</a>	01JAN2008 20:33:41	01JAN2008 21:30:03	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20080101_221556_000032692064_00416_30530_0355.N1</a>	01JAN2008 22:15:56	01JAN2008 23:10:25	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20080101_235523_000033252064_00417_30531_0359.N1</a>	01JAN2008 23:55:23	02JAN2008 00:50:48	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: 126100

Total number of cloud data DSRs with good quality flag (=0): 126100 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	126100	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	126100	0.16959	0.12500	0.12500	0.25000	0.059878	s
CL_FRAC	126100	0.42858	0.44443	0.0000	1.0000	0.27610	-
CL_FRAC_ERR	126100	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	126100	5.4268	4.0000	4.0000	8.0000	1.9161	
PMD_READ_CL[0]	126100	0.21898	0.0000	0.0000	8.0000	1.0520	-
PMD_READ_CL[1]	126100	0.62725	0.0000	0.0000	8.0000	1.7075	-
CL_TOP_HEIGHT	111350	4.1476	3.3130	0.0000	17.000	3.6007	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	111350	54.711	44.378	0.0000	101.00	40.060	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	126100	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	126100	11001000	11000100	11000000	11100000	2965.0	flags
AERO_ABSO_IND	126100	2.5979	2.8266	-1.2126	15.548	2.0061	
AERO_IND_DIAG	126100	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	126100	01010110	00000000	00000000	11000000	24460.	flags

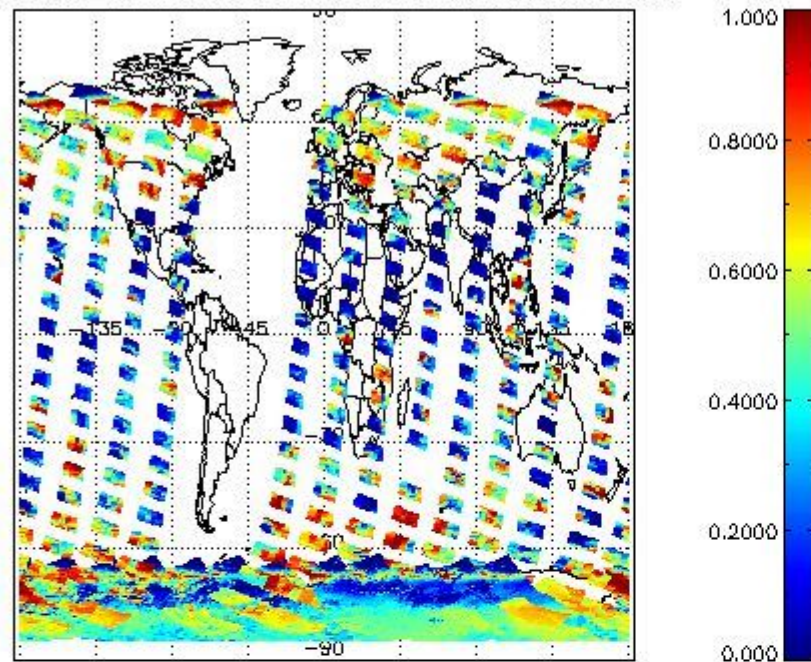
### Time and geolocation plots:

Plots are available for the following parameters:

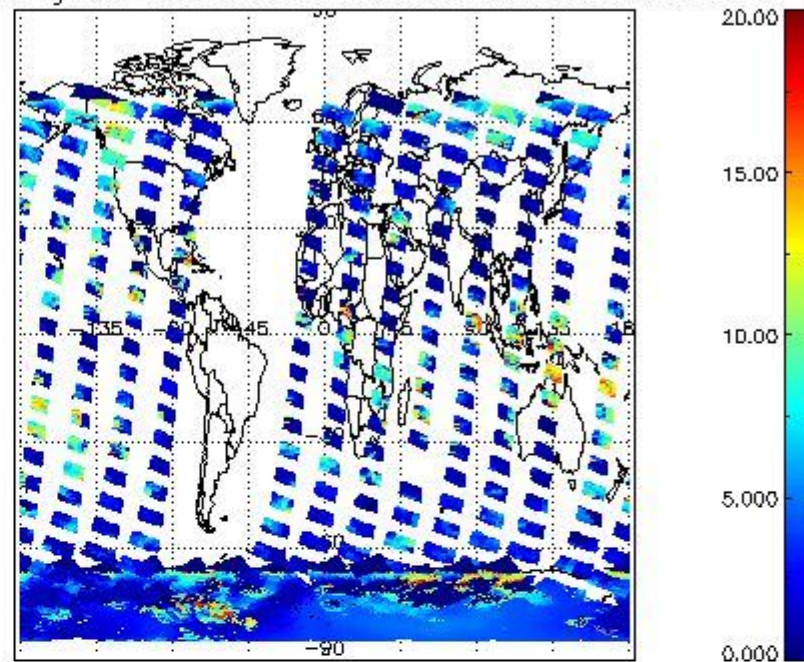
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



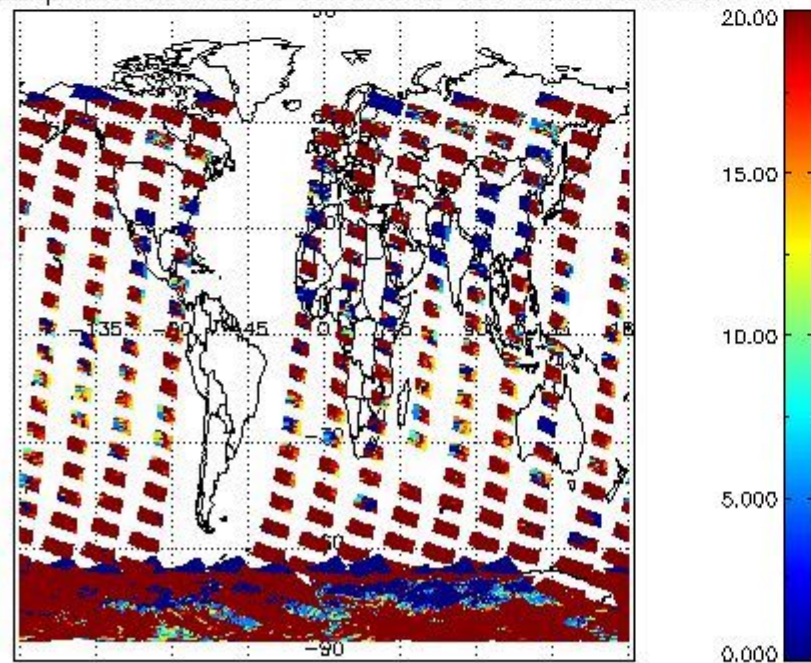
cL\_frac for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



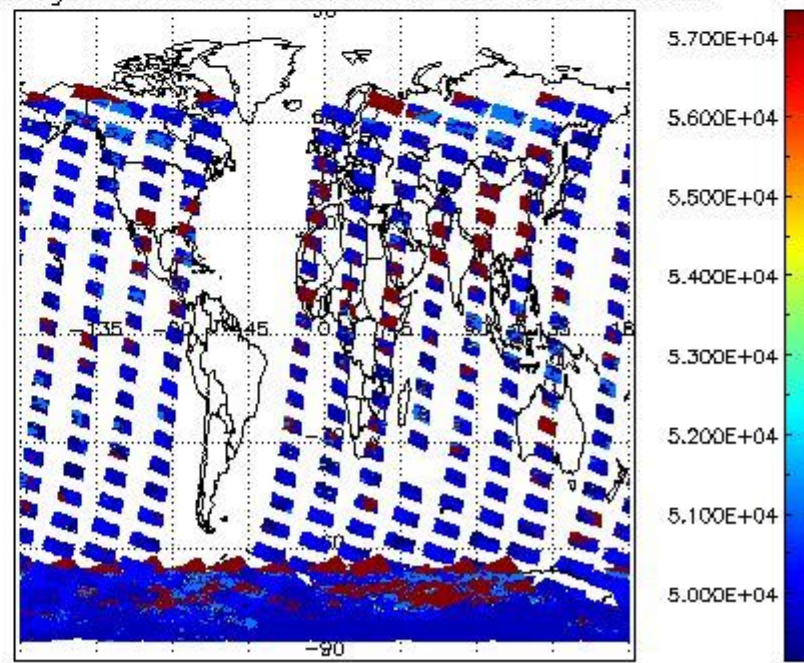
cL\_top\_height for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



cLopt\_depth for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



cloud\_flags for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



## 2.2.2 Nadir

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

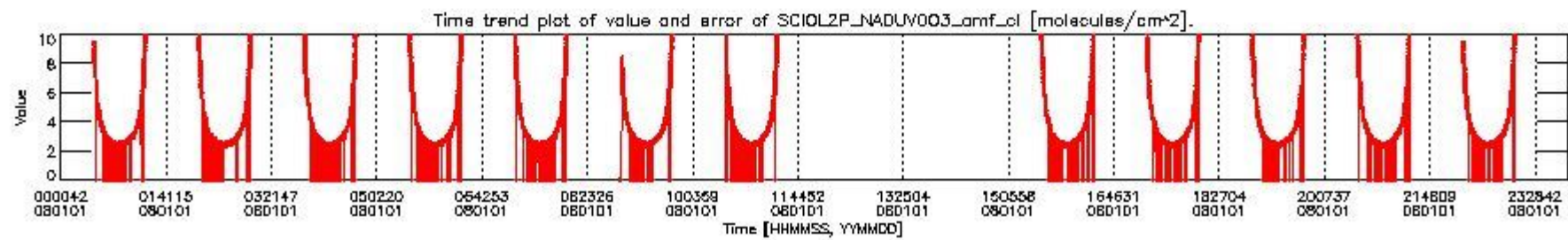
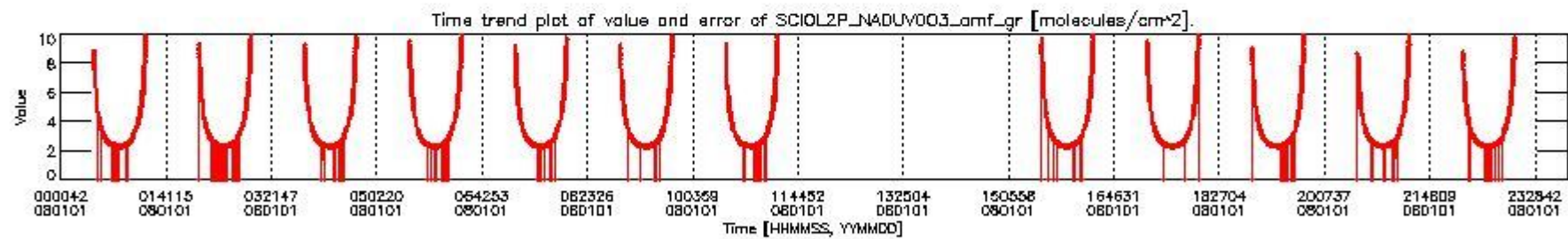
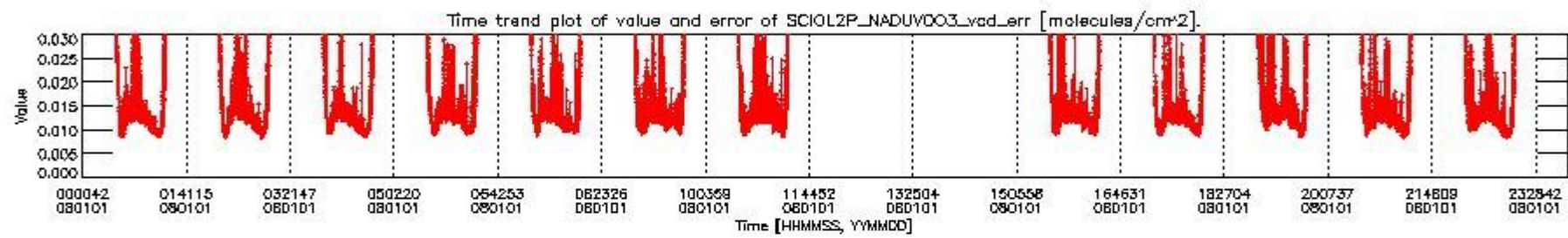
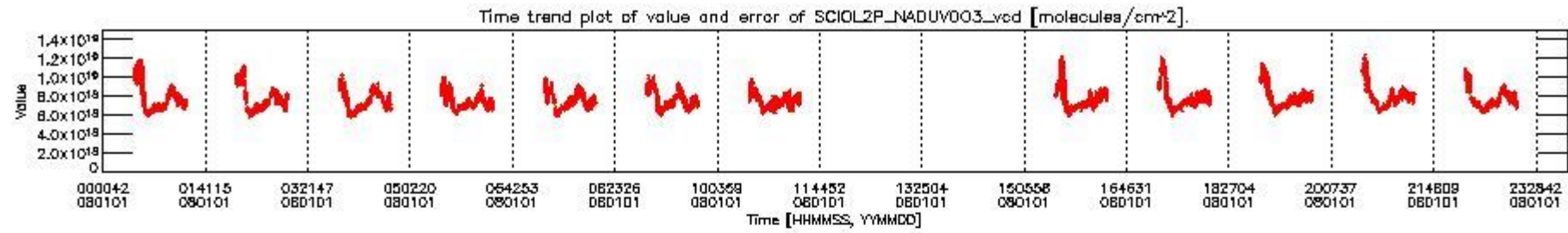
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr



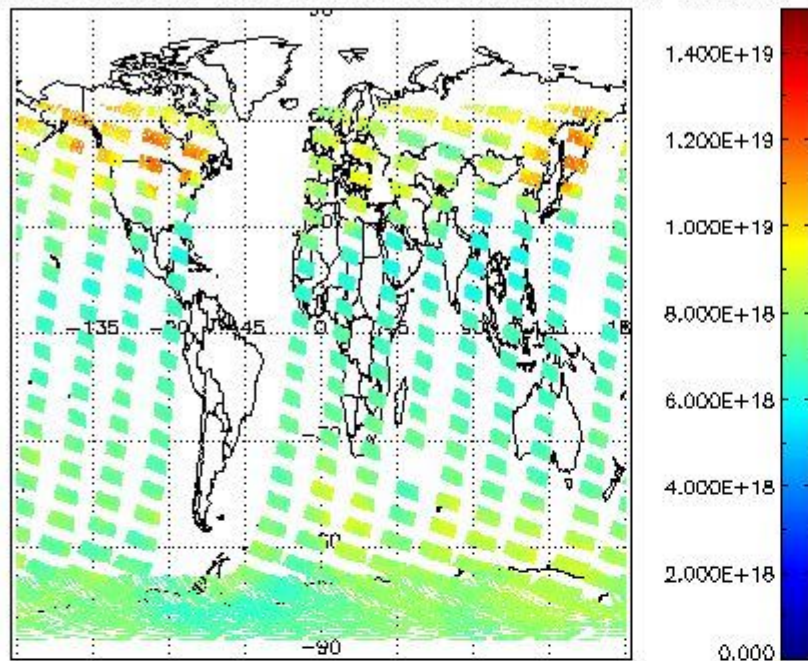
3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

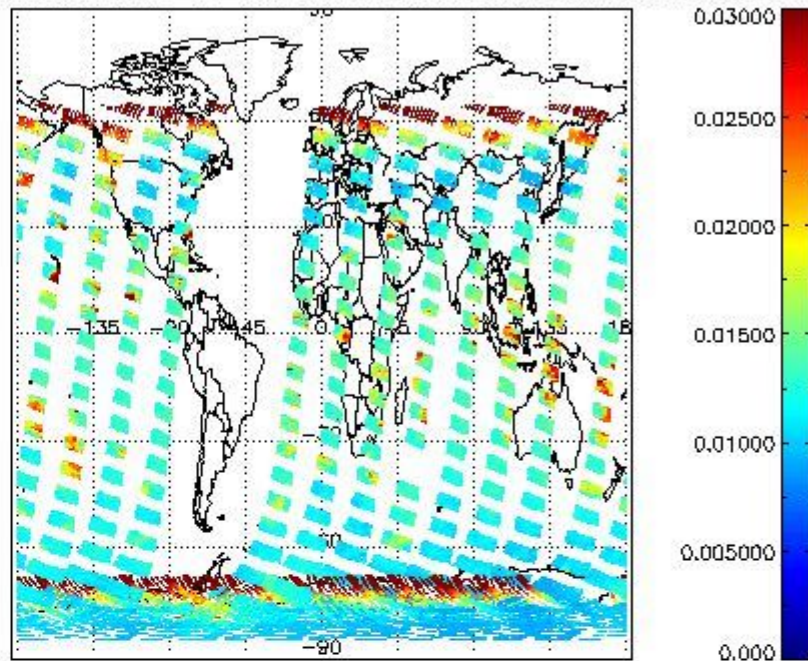




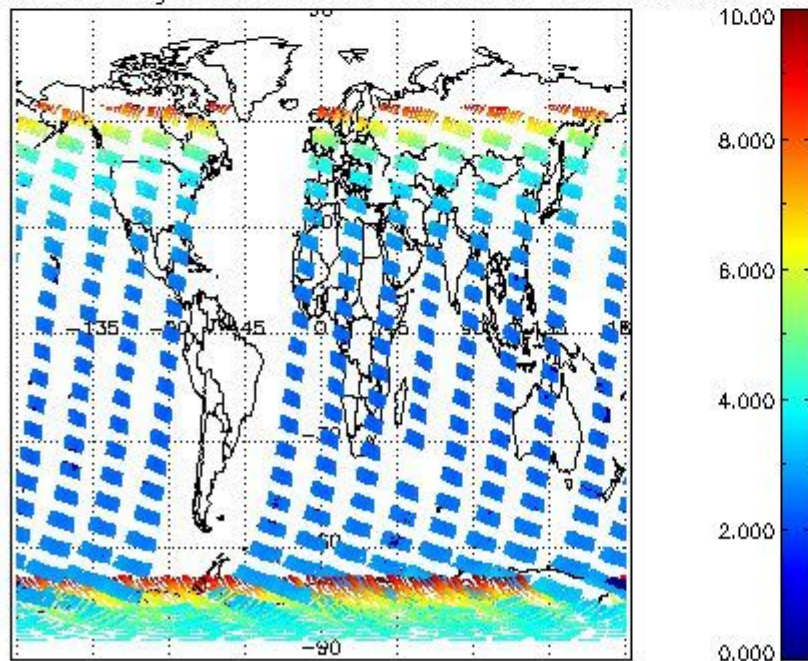
SCIOL2P\_NADUV003\_vcd for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



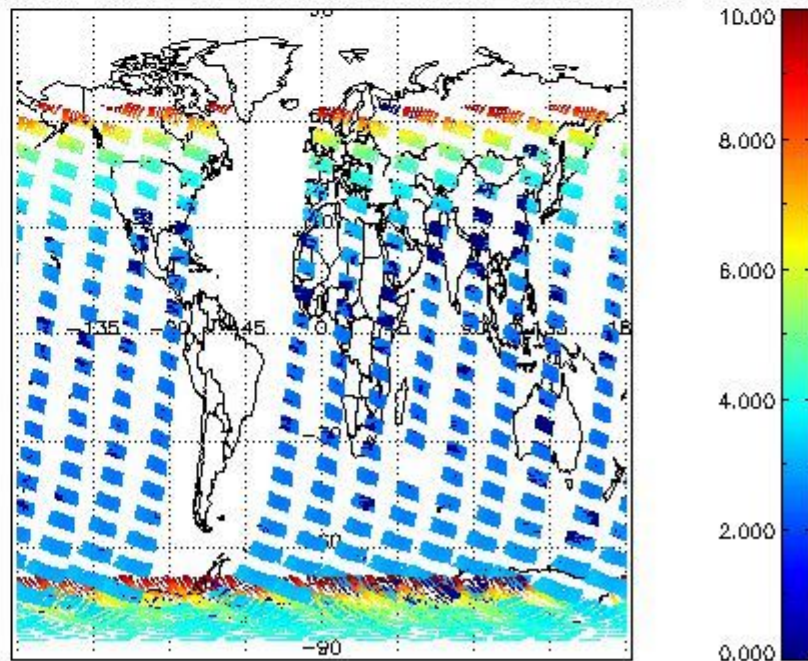
SCIOL2P\_NADUV003\_vcd\_err for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



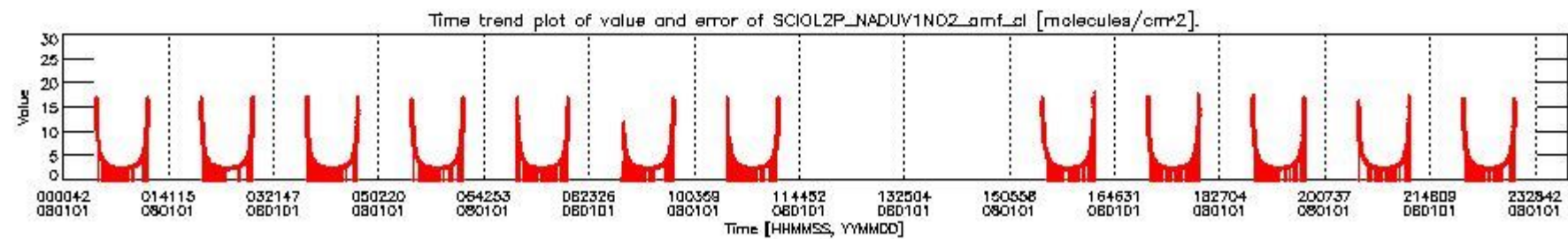
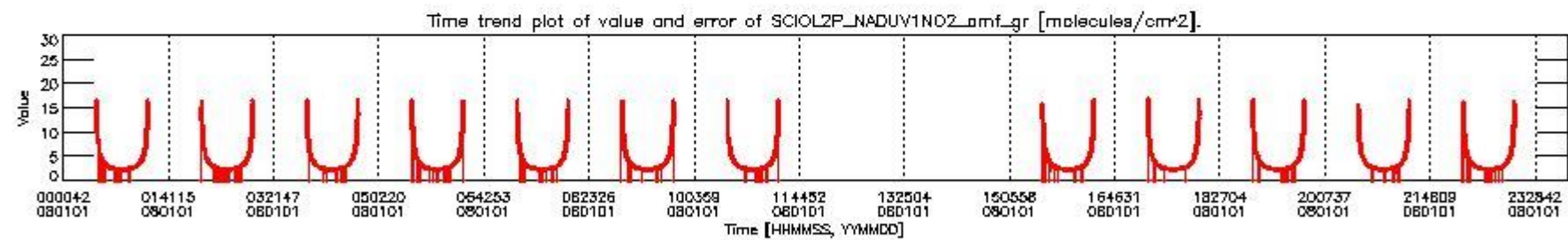
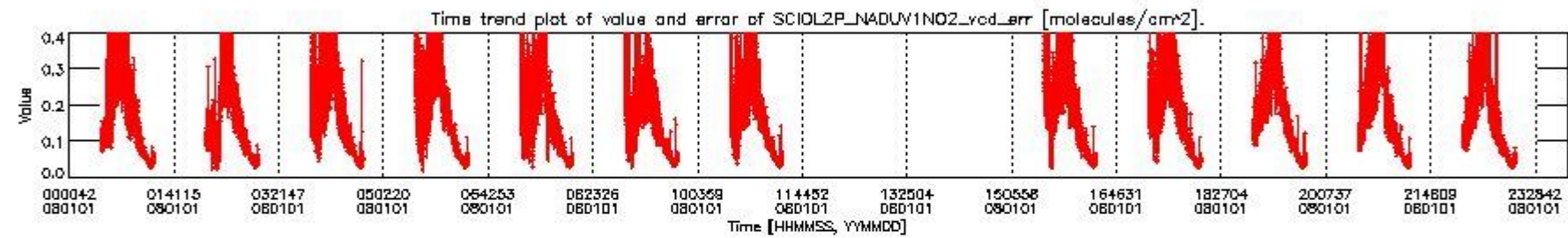
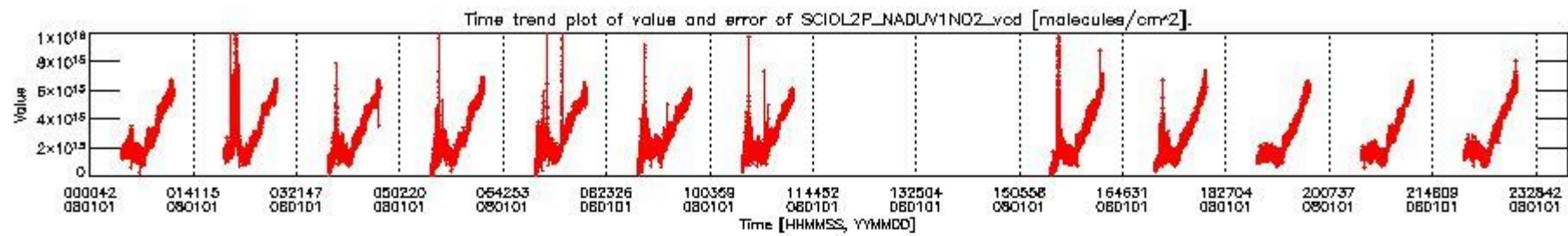
SCIOL2P\_NADUV003\_amf\_gr for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



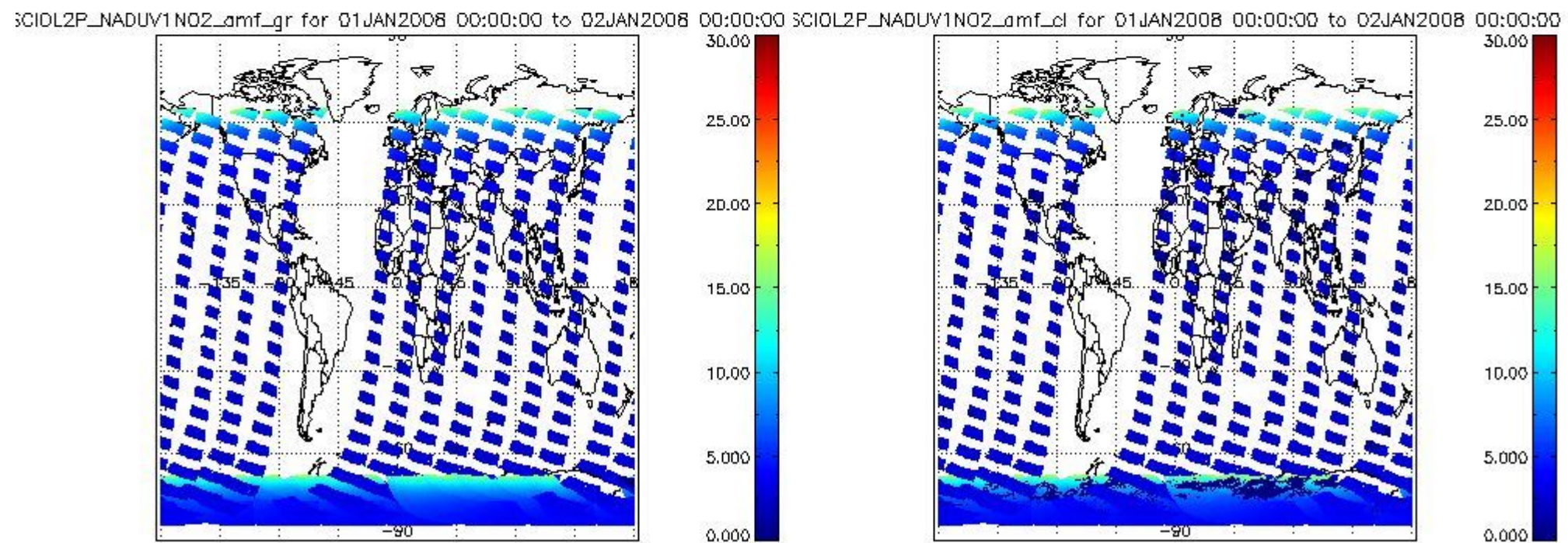
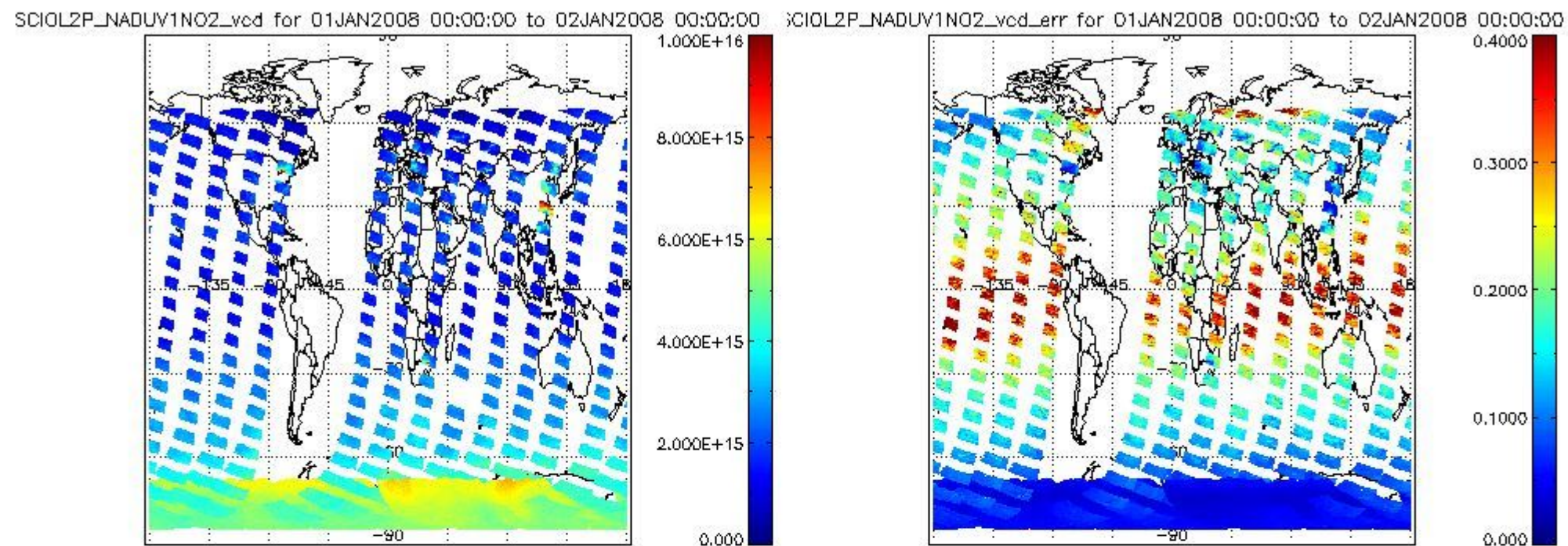
SCIOL2P\_NADUV003\_amf\_cl for 01JAN2008 00:00:00 to 02JAN2008 00:00:00











### 2.2.3 Limb

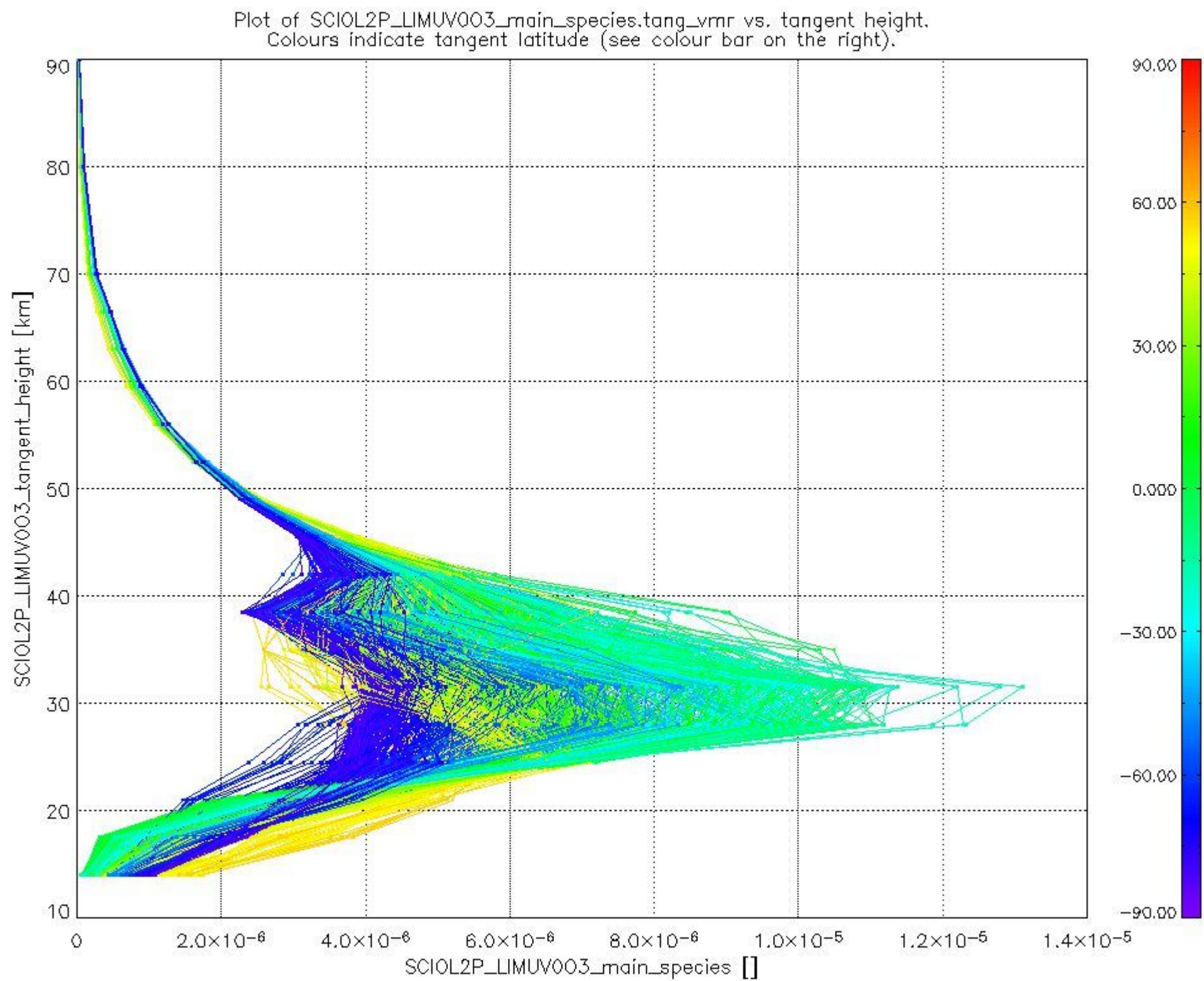
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

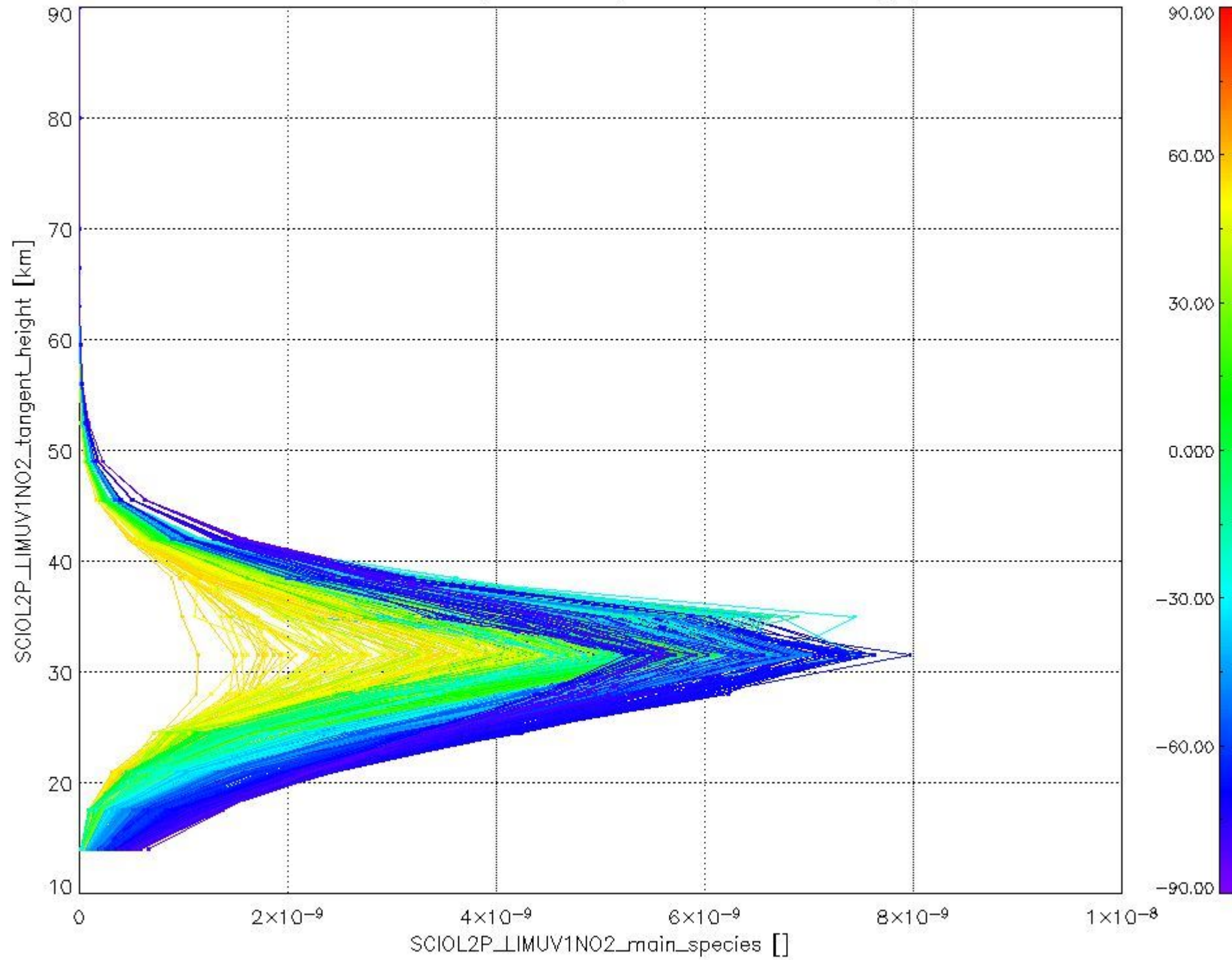


The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.





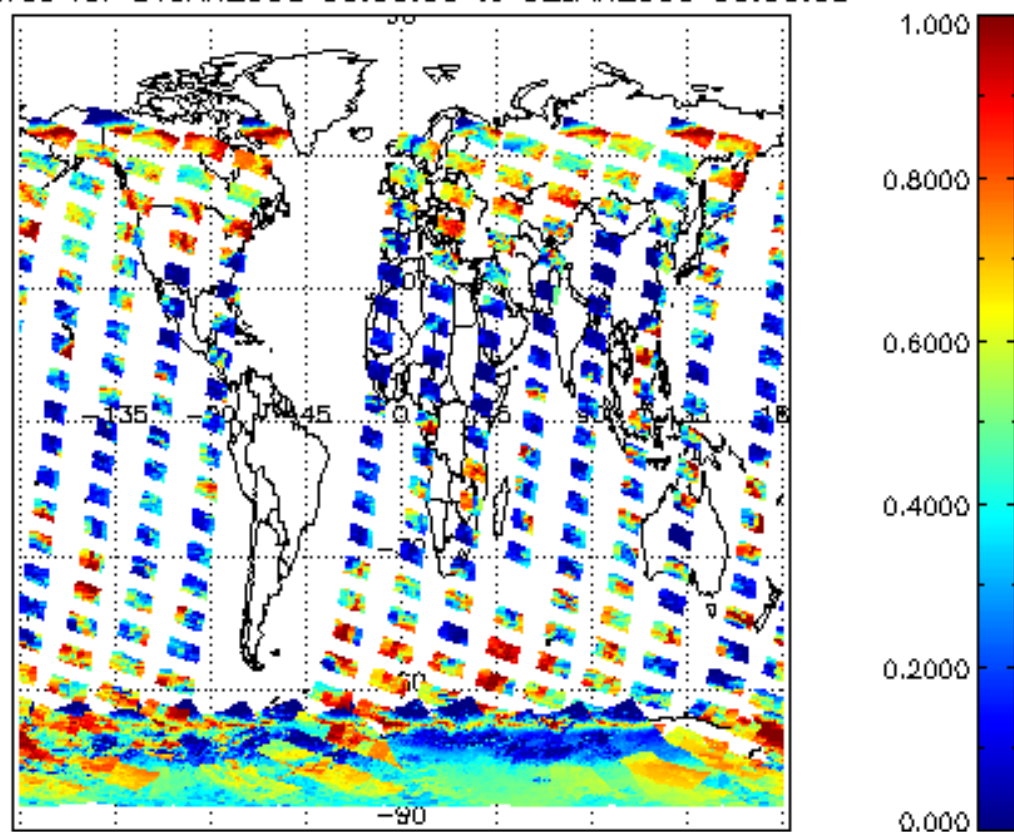
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



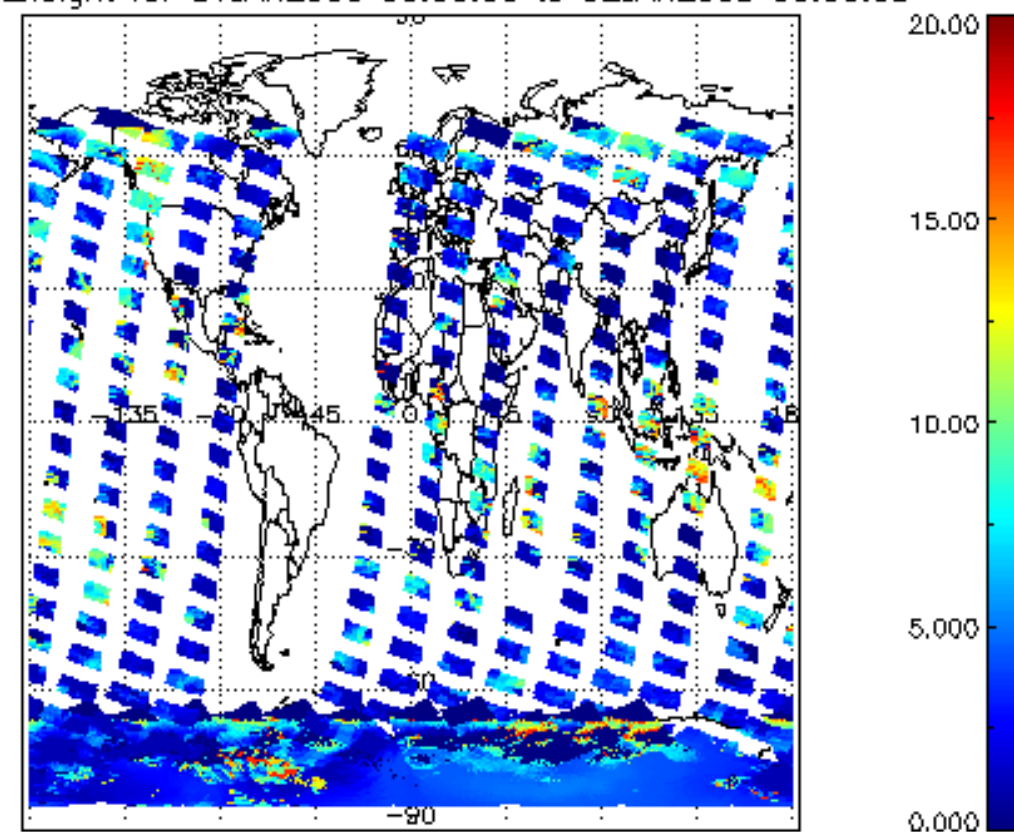
### 2.3 ADF monitoring

Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED

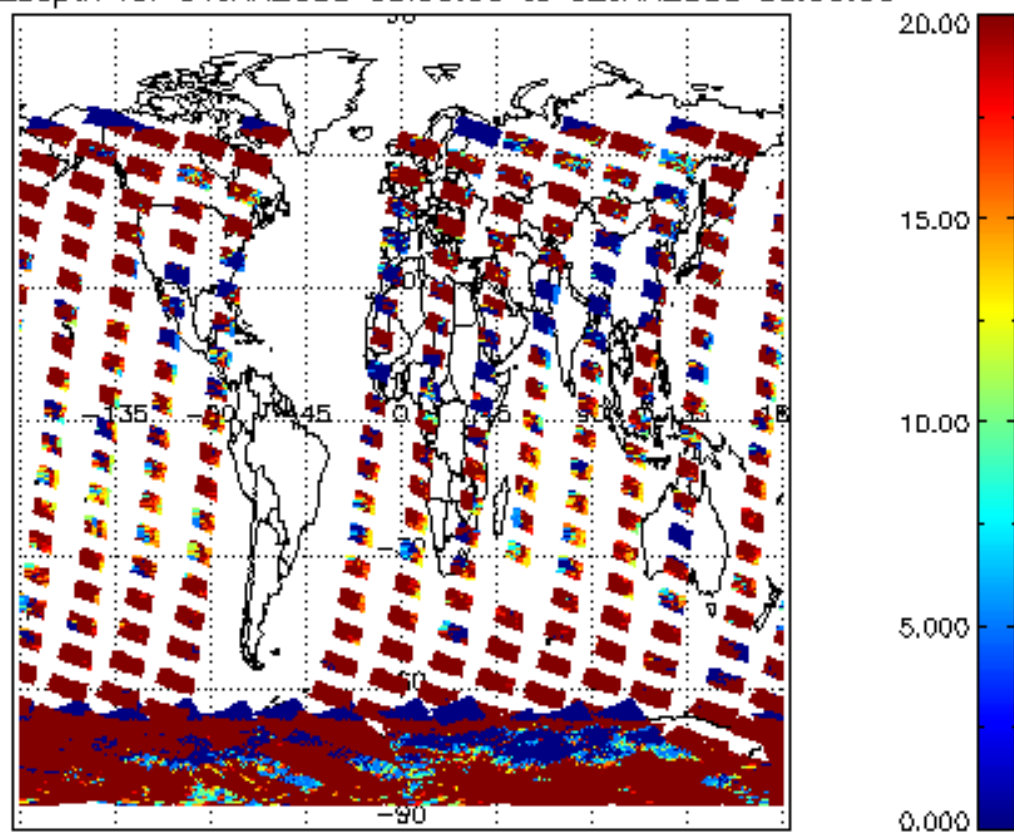
cL\_frac for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



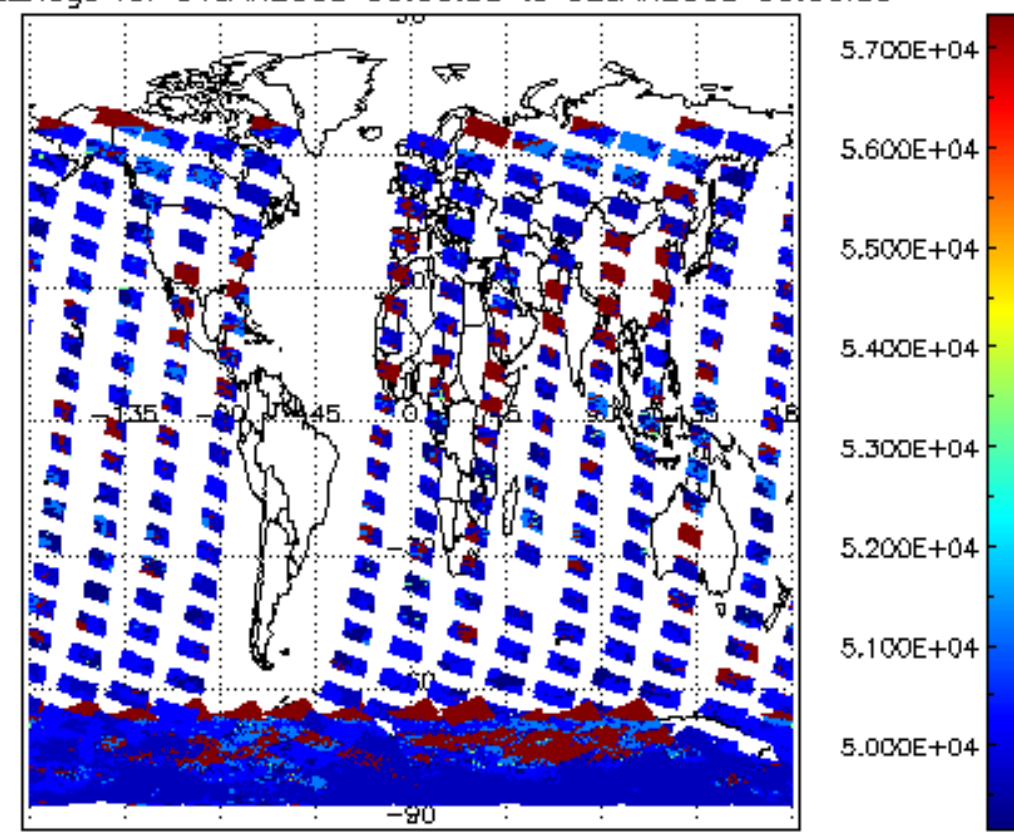
cL\_top\_height for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



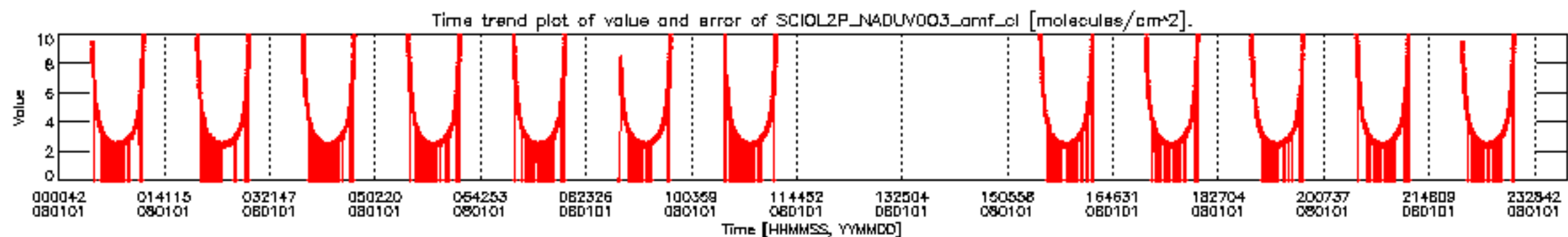
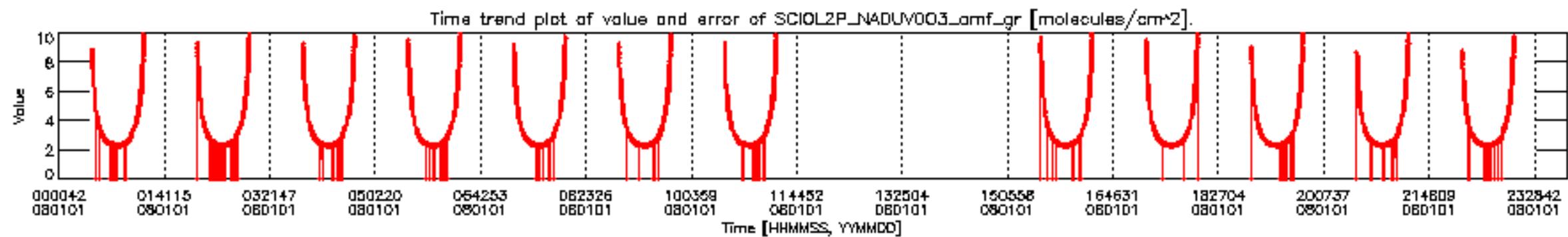
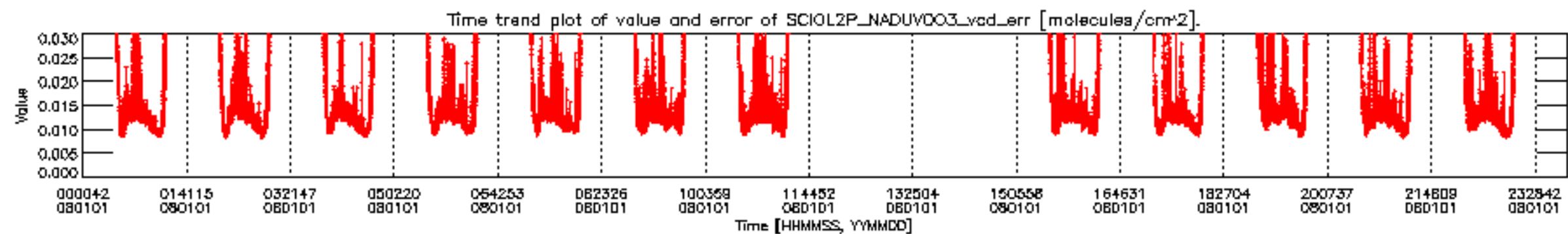
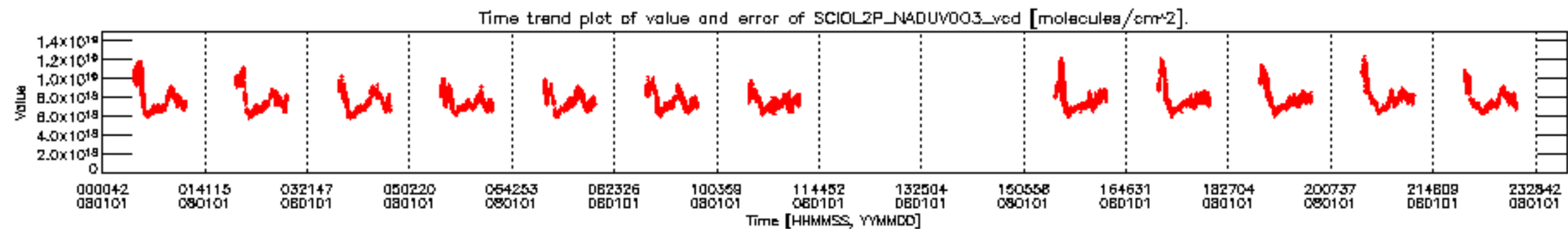
cLopt\_depth for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



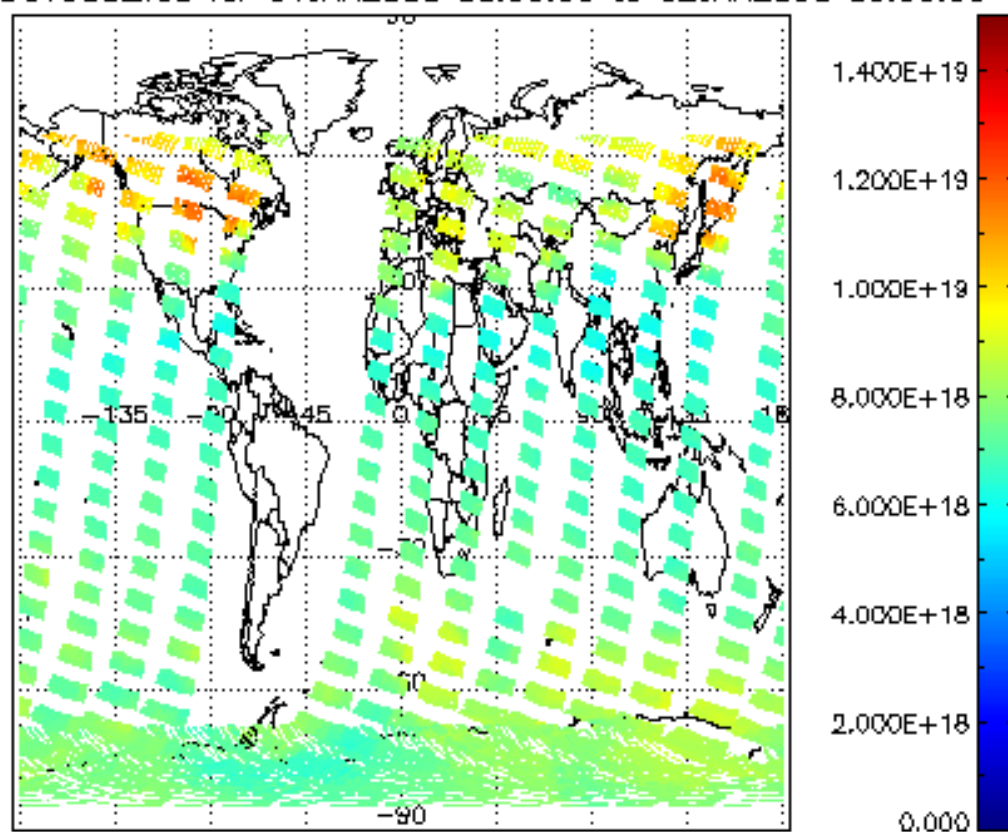
cloud\_flags for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



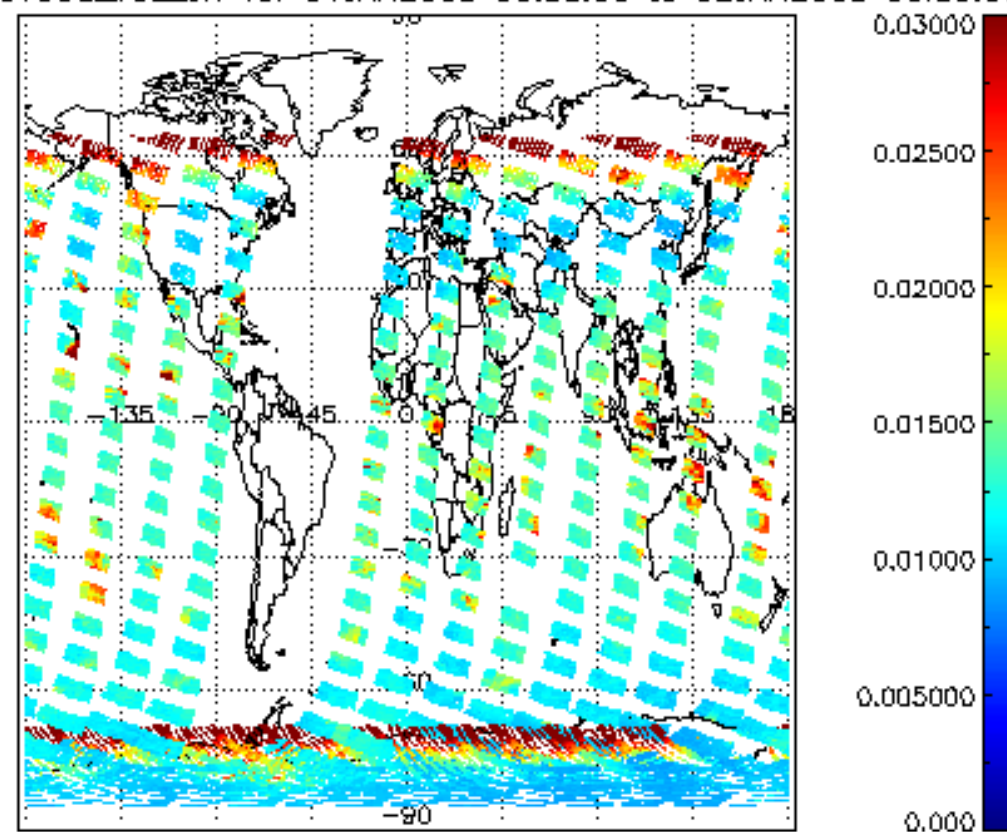




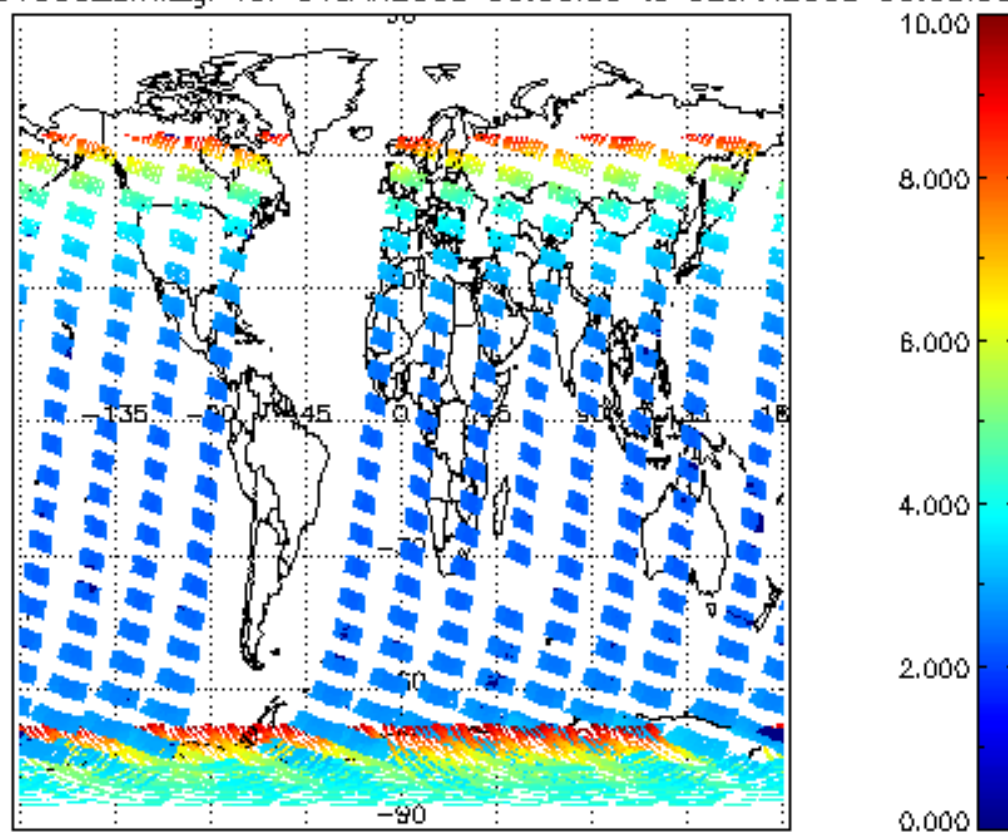
SCIOL2P\_NADUV003\_vcd for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



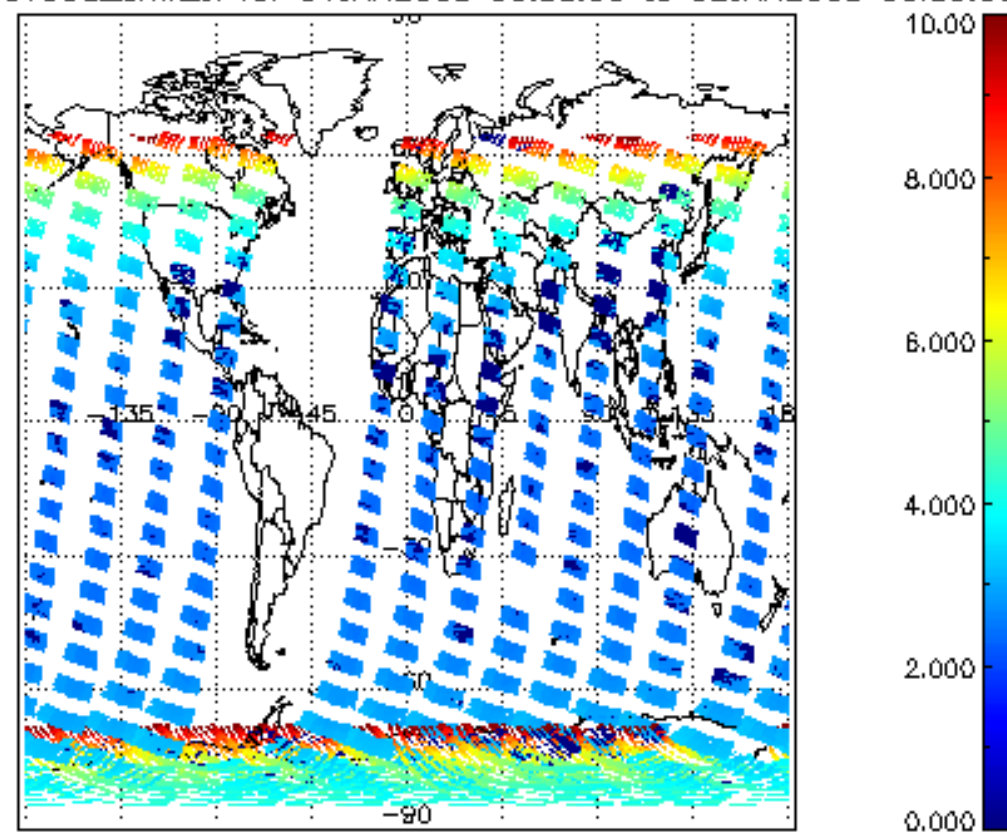
SCIOL2P\_NADUV003\_vcd\_err for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



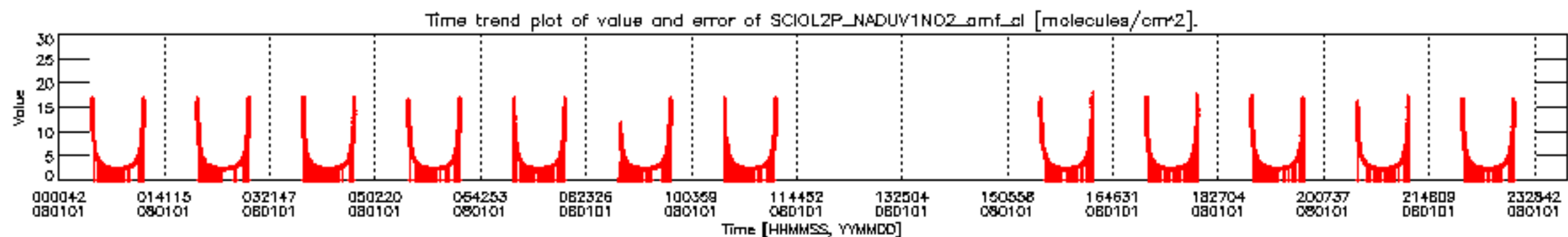
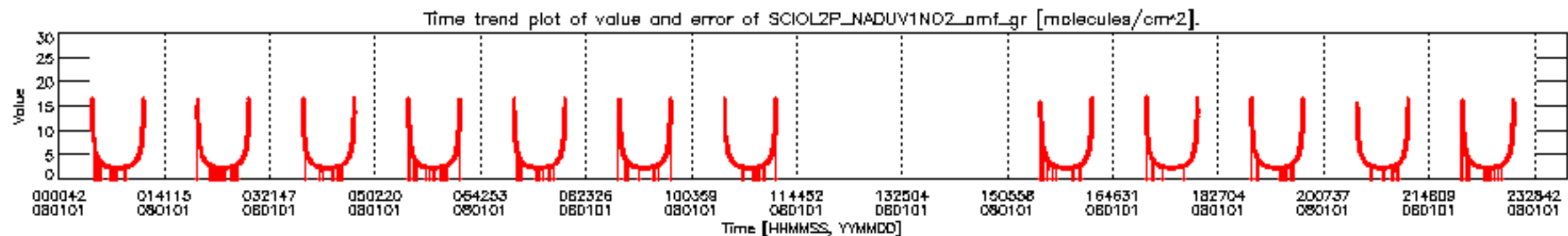
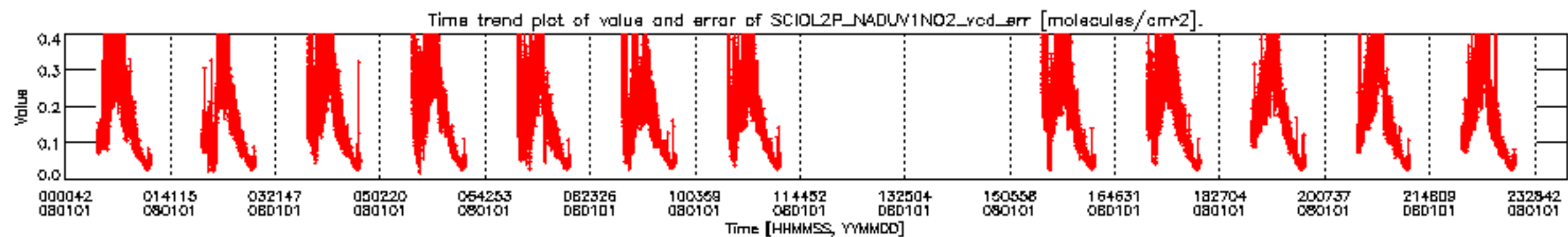
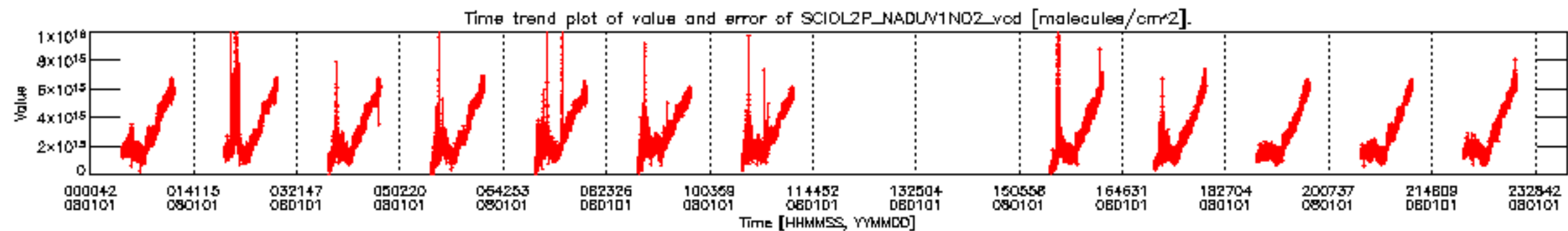
SCIOL2P\_NADUV003\_amf\_gr for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



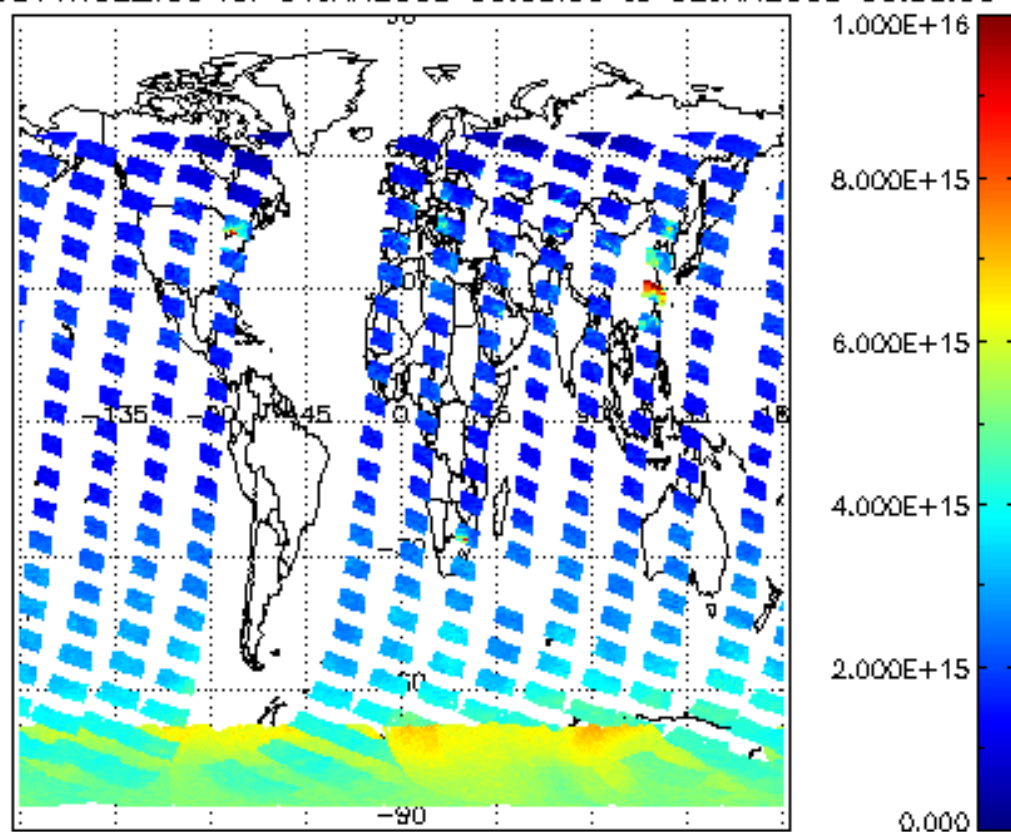
SCIOL2P\_NADUV003\_amf\_cl for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



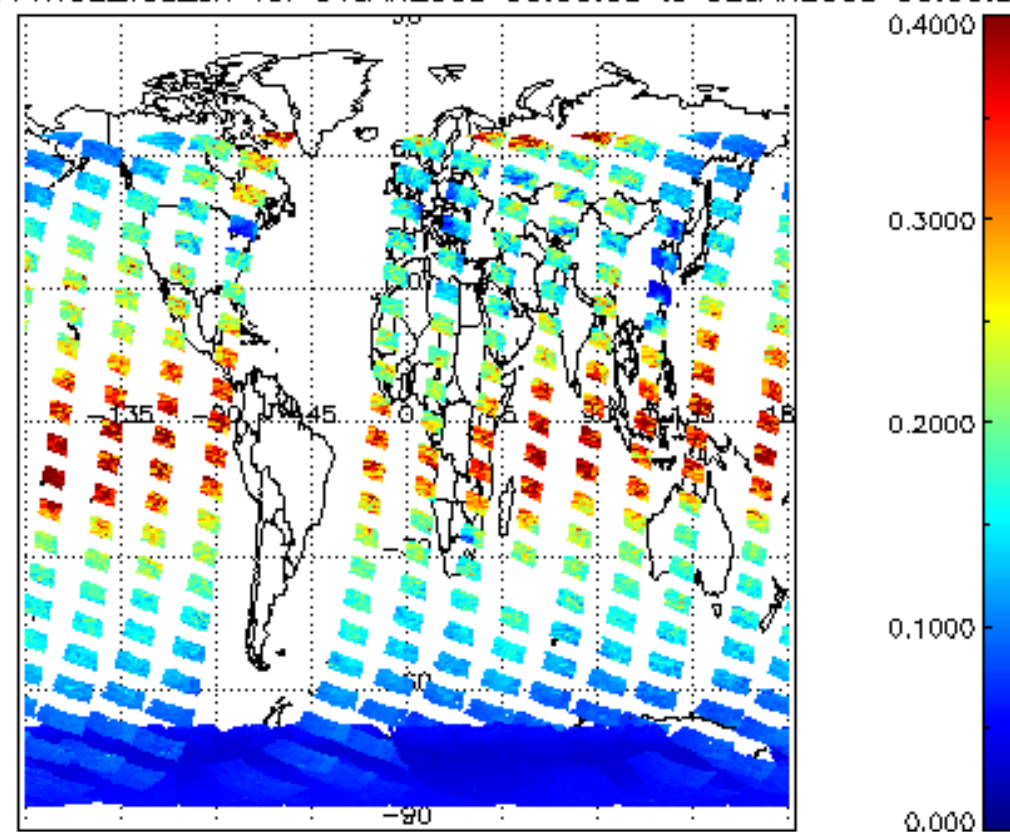




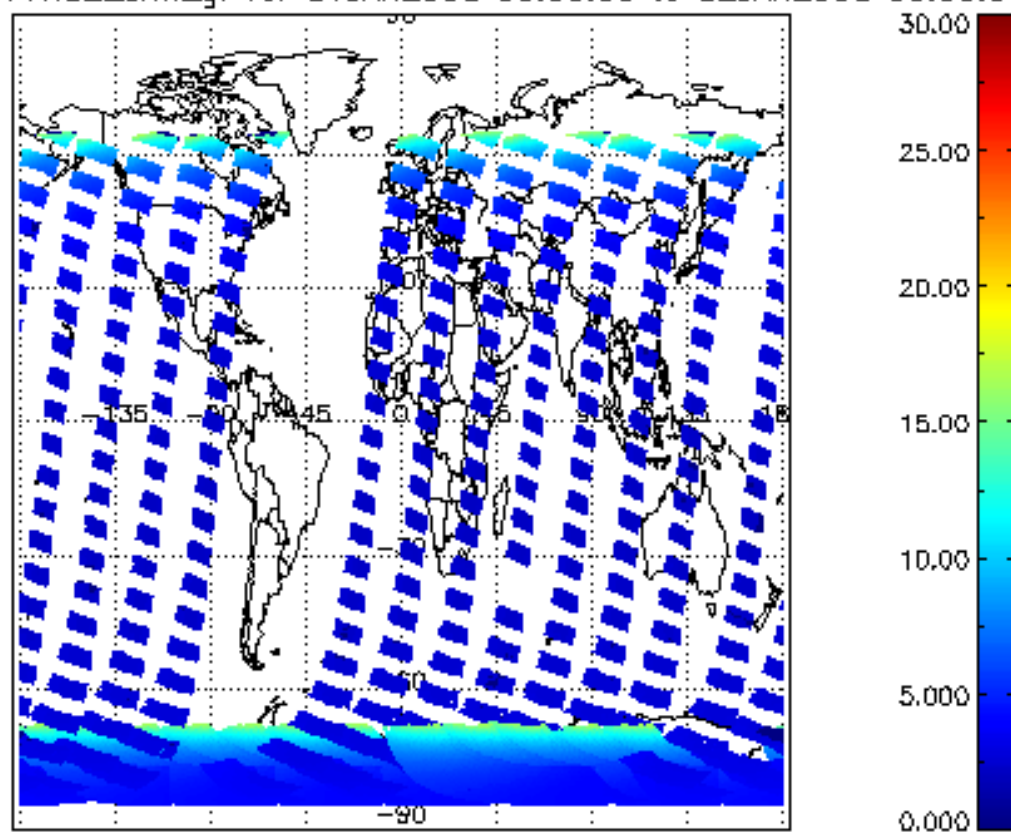
SCIOL2P\_NADUV1NO2\_vcd for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



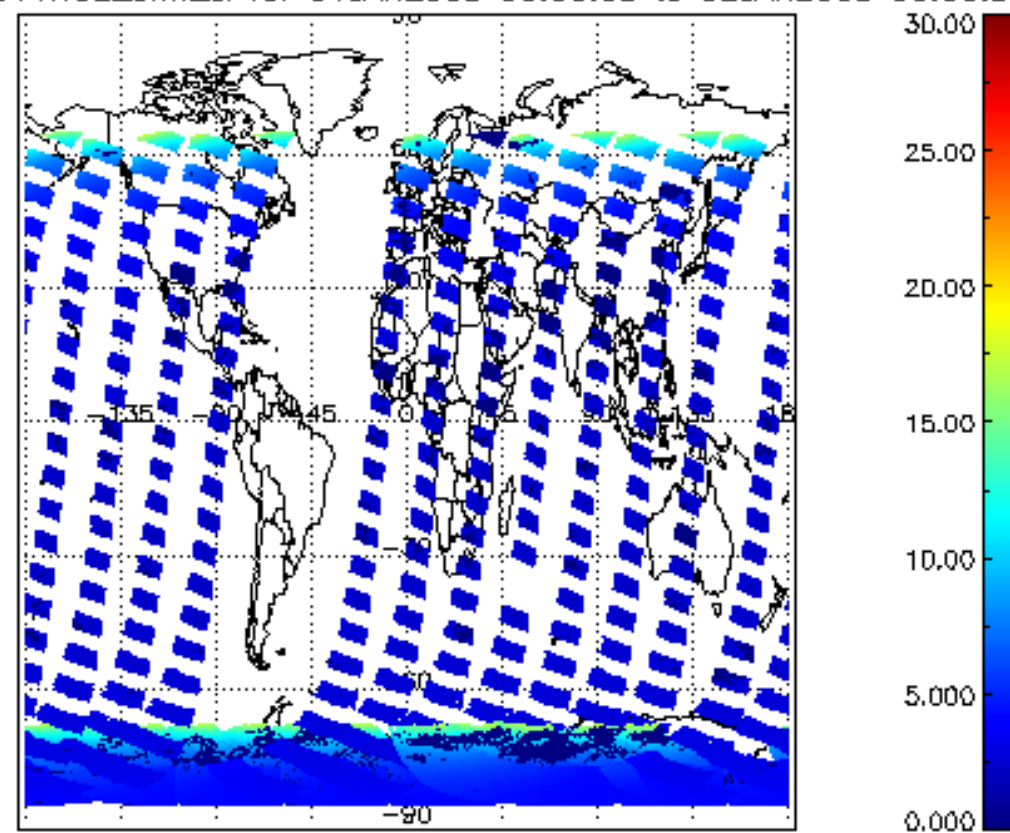
SCIOL2P\_NADUV1NO2\_vcd\_err for 01JAN2008 00:00:00 to 02JAN2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 01JAN2008 00:00:00 to 02JAN2008 00:00:00

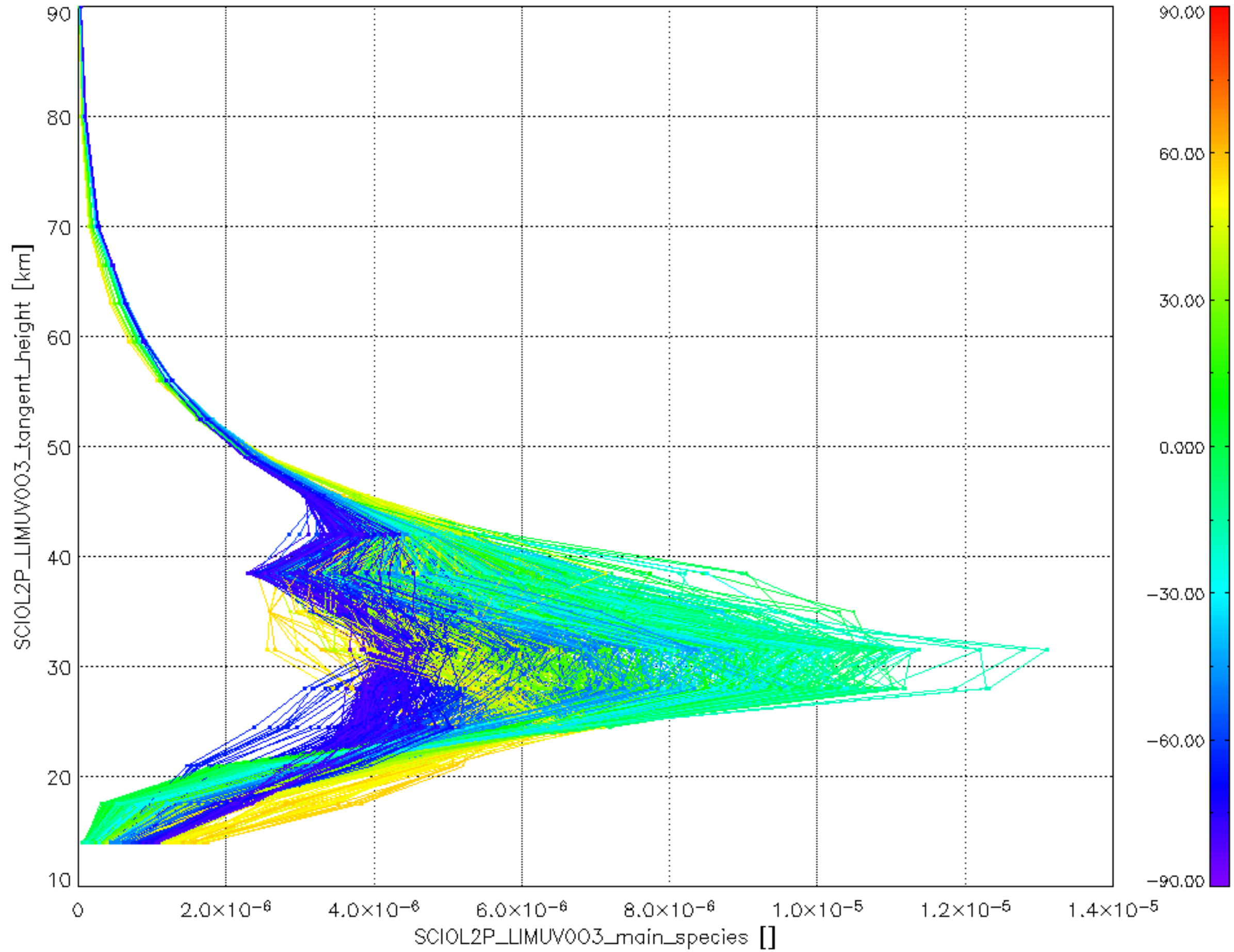


SCIOL2P\_NADUV1NO2\_amf\_cl for 01JAN2008 00:00:00 to 02JAN2008 00:00:00





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).

