

## 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	12FEB2009 09:17:56
Data source version	SCIA-OL/3.01-R
Processing scope for products	06JAN2009 00:00:00 to 07JAN2009 00:00:00
Start time of first product within scope	06JAN2009 17:52:27
Stop time of last product within scope	06JAN2009 23:50:09
Total number of level 2 products	4
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__2PRDPA20090106_175227_000033922075_00213_35838_1819.N1</a>	06JAN2009 17:52:27	06JAN2009 18:49:00	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20090106_193303_000033812075_00214_35839_1820.N1</a>	06JAN2009 19:33:03	06JAN2009 20:29:24	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20090106_211516_000032692075_00215_35840_1823.N1</a>	06JAN2009 21:15:16	06JAN2009 22:09:46	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20090106_225444_000033252075_00216_35841_1826.N1</a>	06JAN2009 22:54:44	06JAN2009 23:50:09	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: 41600

Total number of cloud data DSRs with good quality flag (=0): 41600 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	41600	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	41600	0.17031	0.12500	0.12500	0.25000	0.060091	s
CL_FRAC	41600	0.39403	0.39429	0.0000	1.0000	0.27593	-
CL_FRAC_ERR	41600	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	41600	5.4500	4.0000	4.0000	8.0000	1.9229	

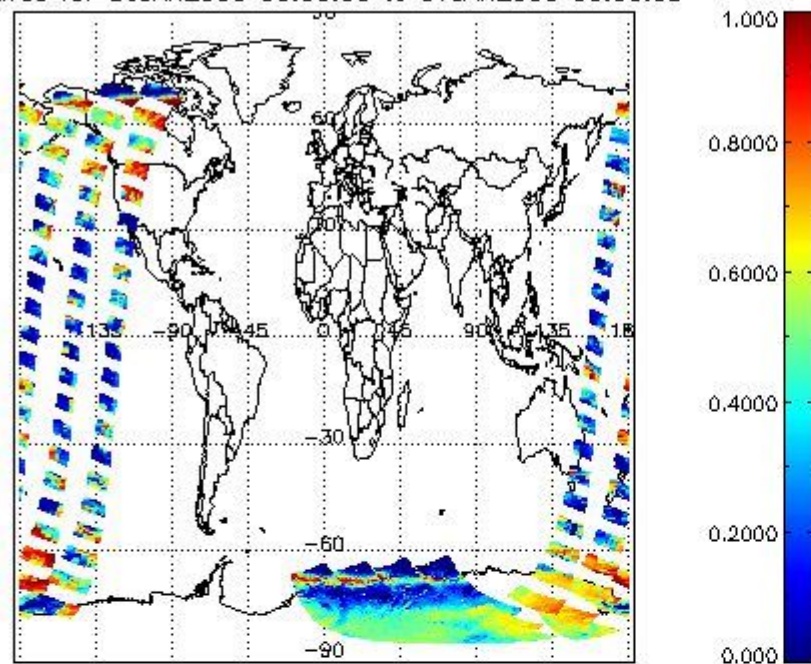
PMD_READ_CL[0]	41600	0.15774	0.0000	0.0000	8.0000	0.81923	-
PMD_READ_CL[1]	41600	0.72252	0.0000	0.0000	8.0000	1.7519	-
CL_TOP_HEIGHT	36020	4.1655	3.7750	0.0000	17.000	3.5445	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	36020	53.872	43.317	0.0000	101.00	39.667	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	41600	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	41600	11001001	11000100	11000000	11100000	3119.2	flags
AERO_ABSO_IND	41600	3.1385	3.7996	-0.33661	15.506	2.2322	
AERO_IND_DIAG	41600	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	41600	01010110	00000000	00000000	11000000	24451.	flags

### Time and geolocation plots:

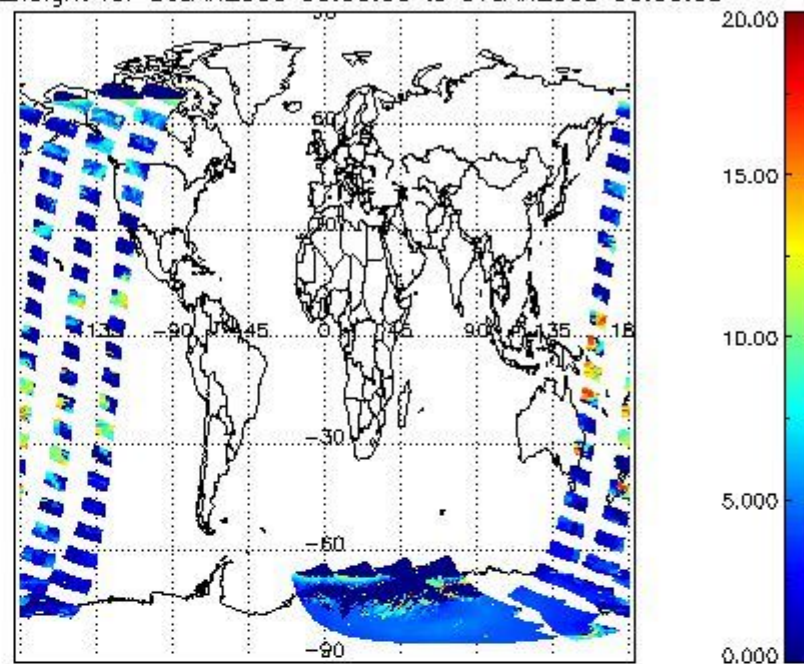
Plots are available for the following parameters:

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

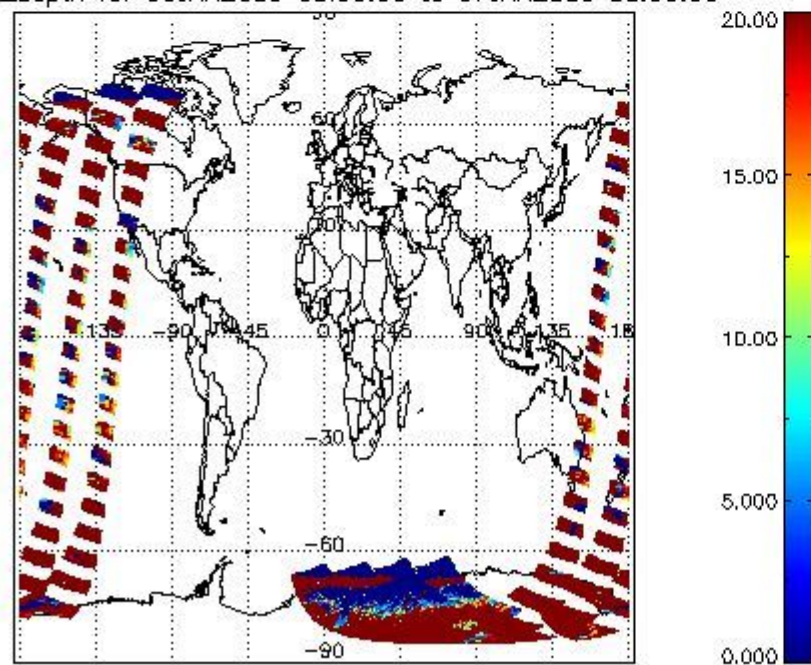
cL\_frac for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



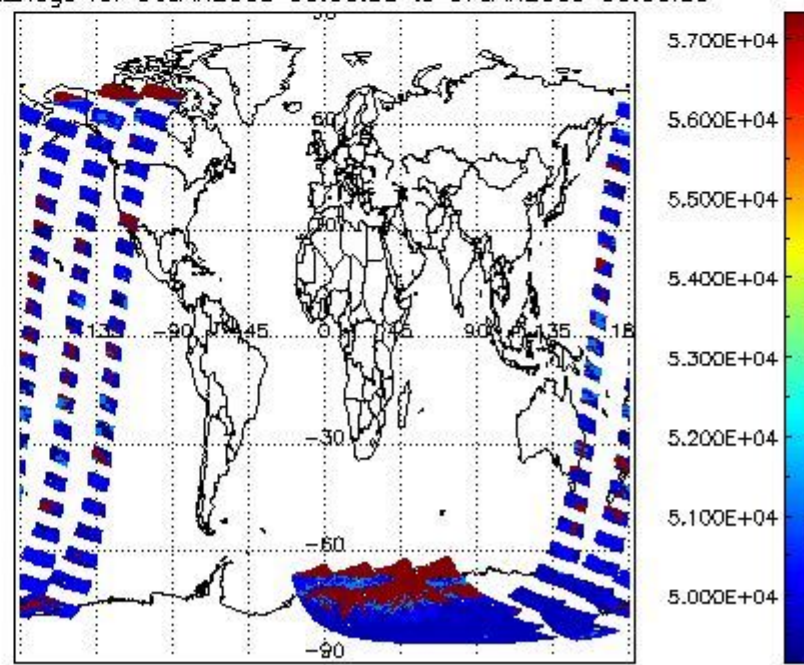
cL\_top\_height for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



cLopt\_depth for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



cloud\_flags for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



## 2.2.2 Nadir

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

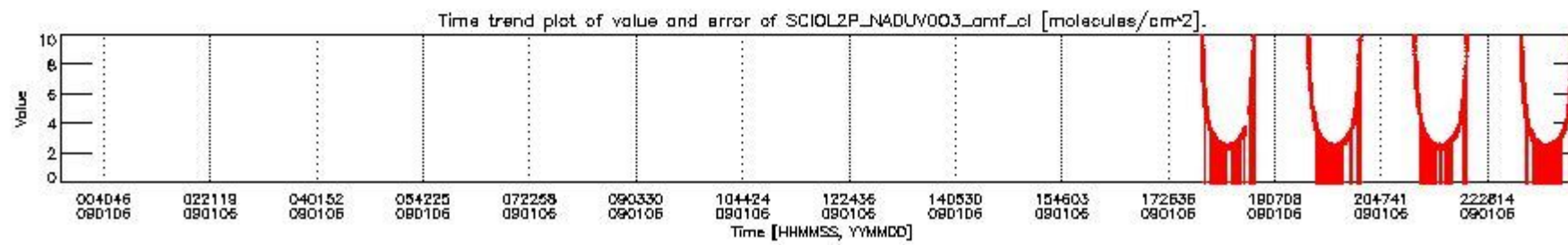
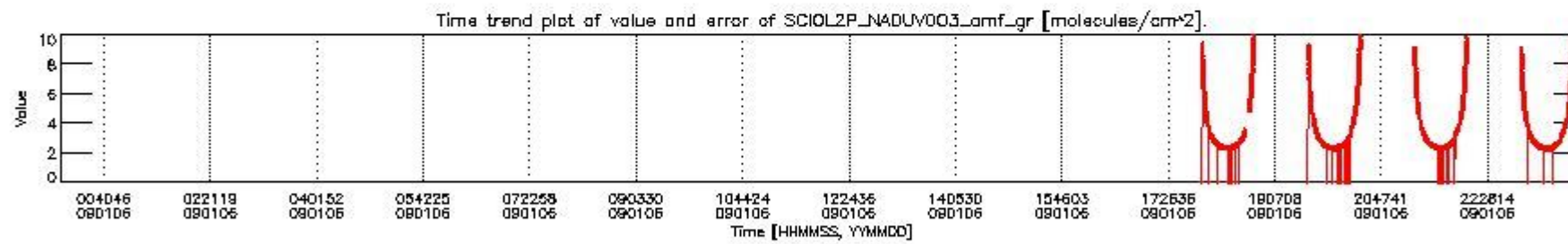
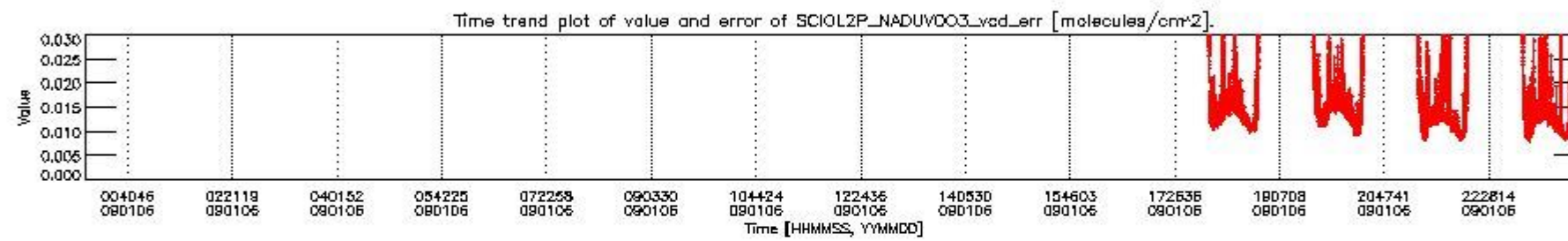
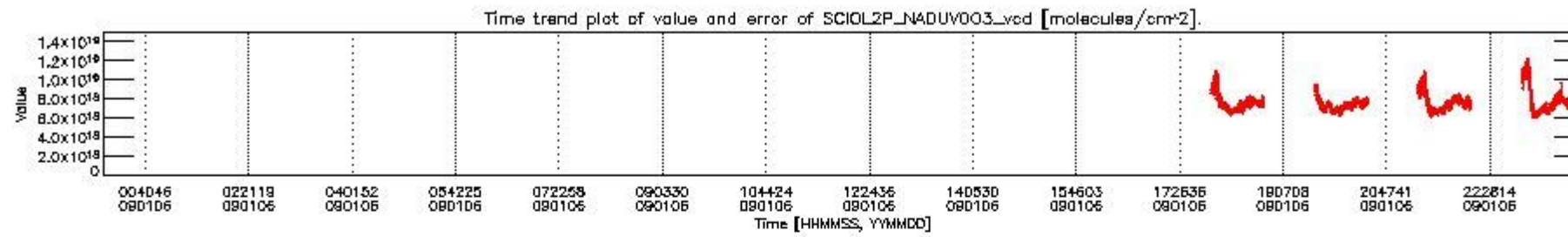
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

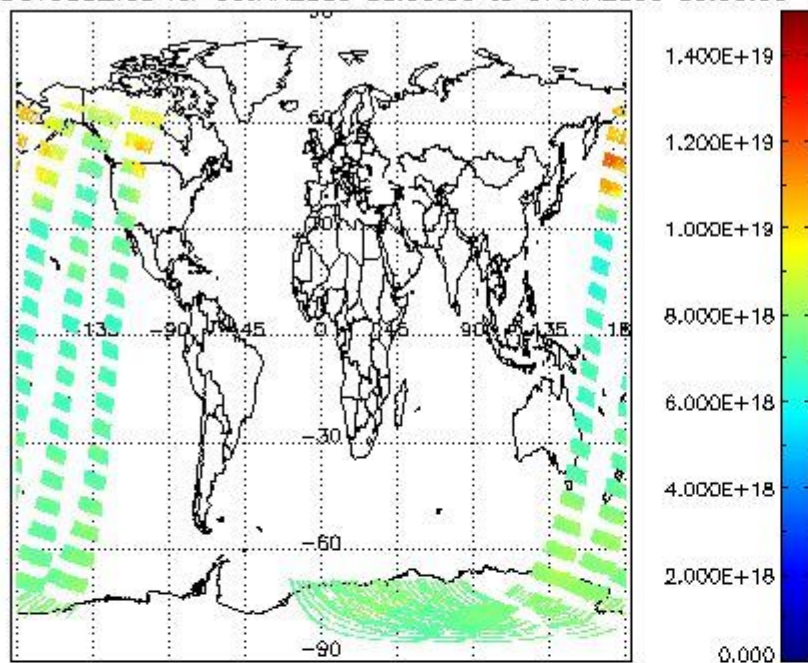


3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

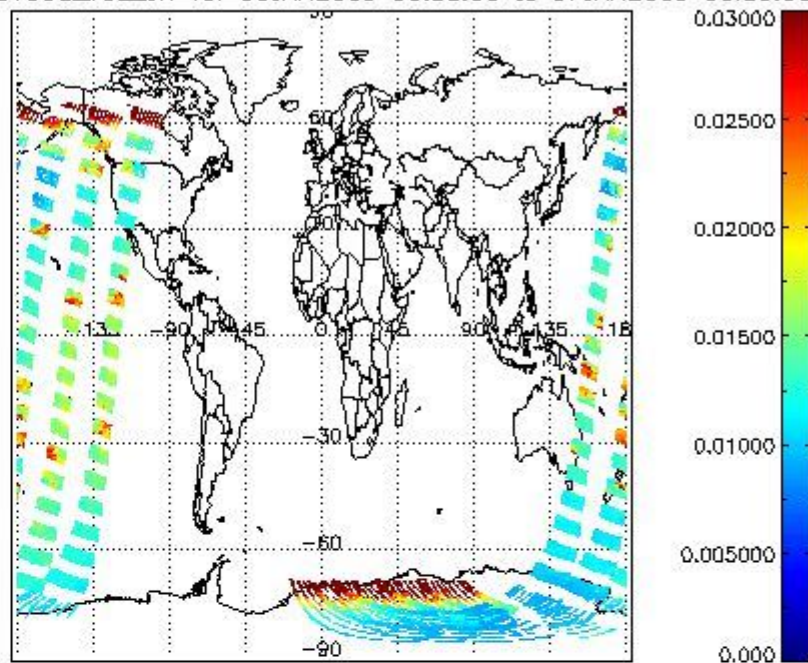
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



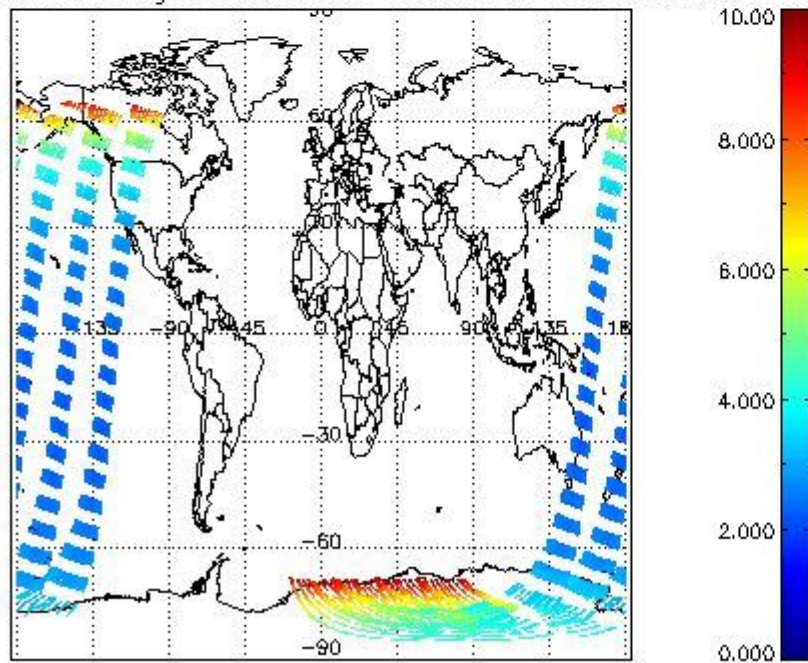
SCIOL2P\_NADUV003\_vcd for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



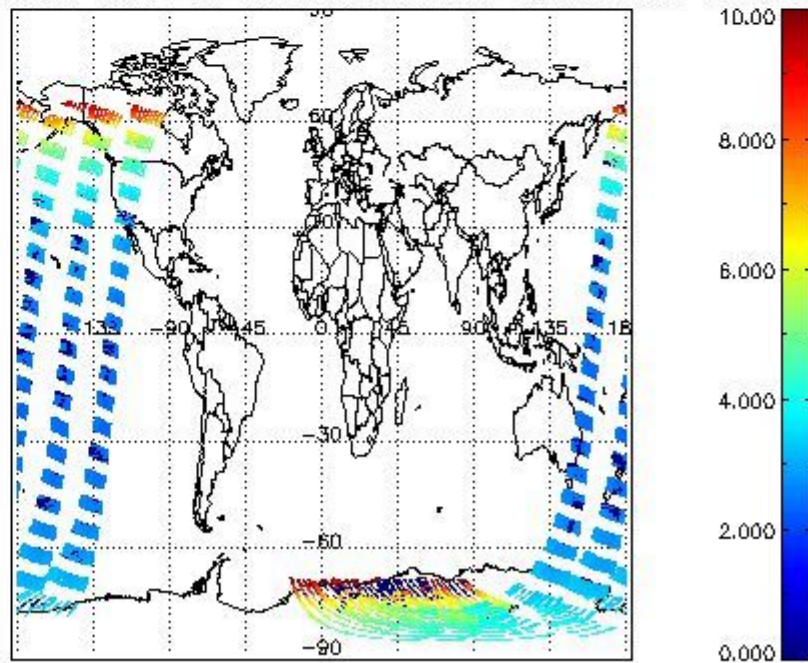
SCIOL2P\_NADUV003\_vcd\_err for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



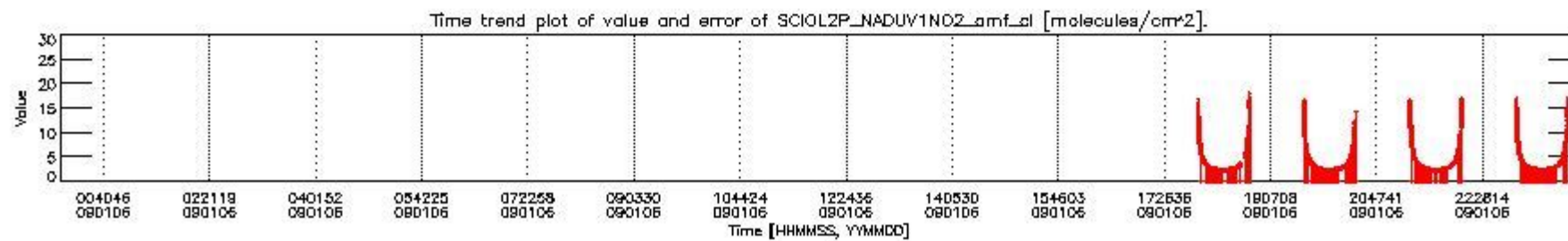
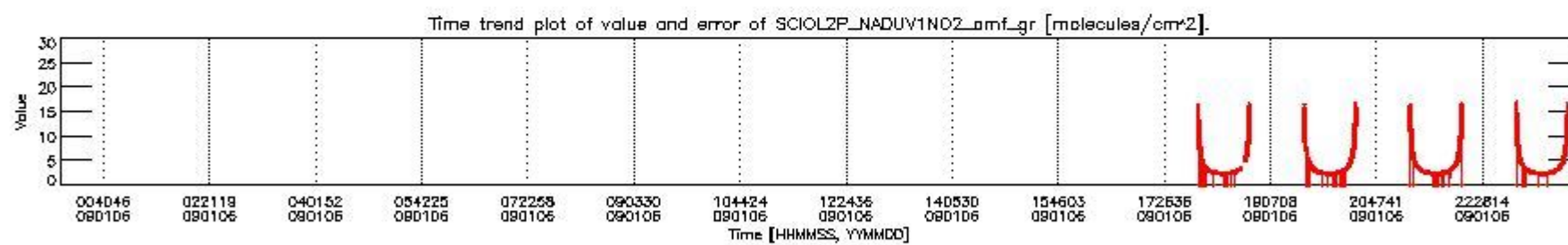
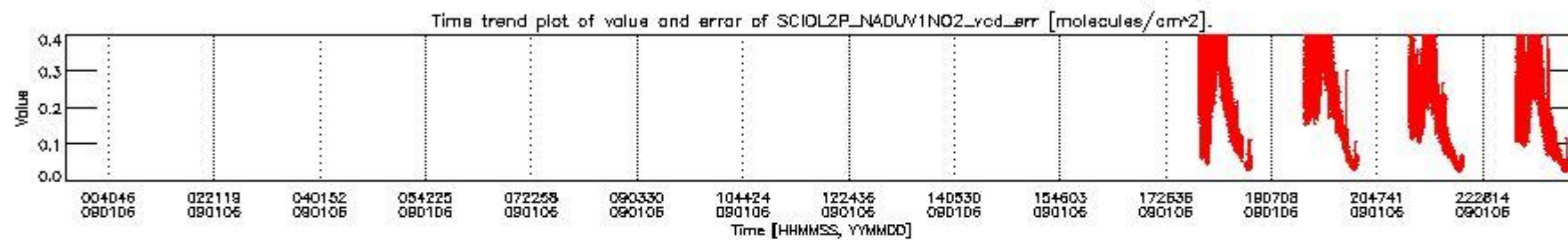
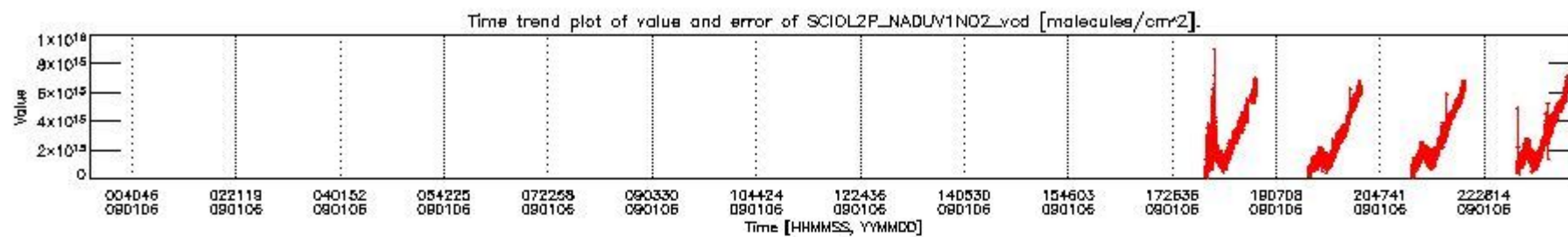
SCIOL2P\_NADUV003\_amf\_gr for 06JAN2009 00:00:00 to 07JAN2009 00:00:00

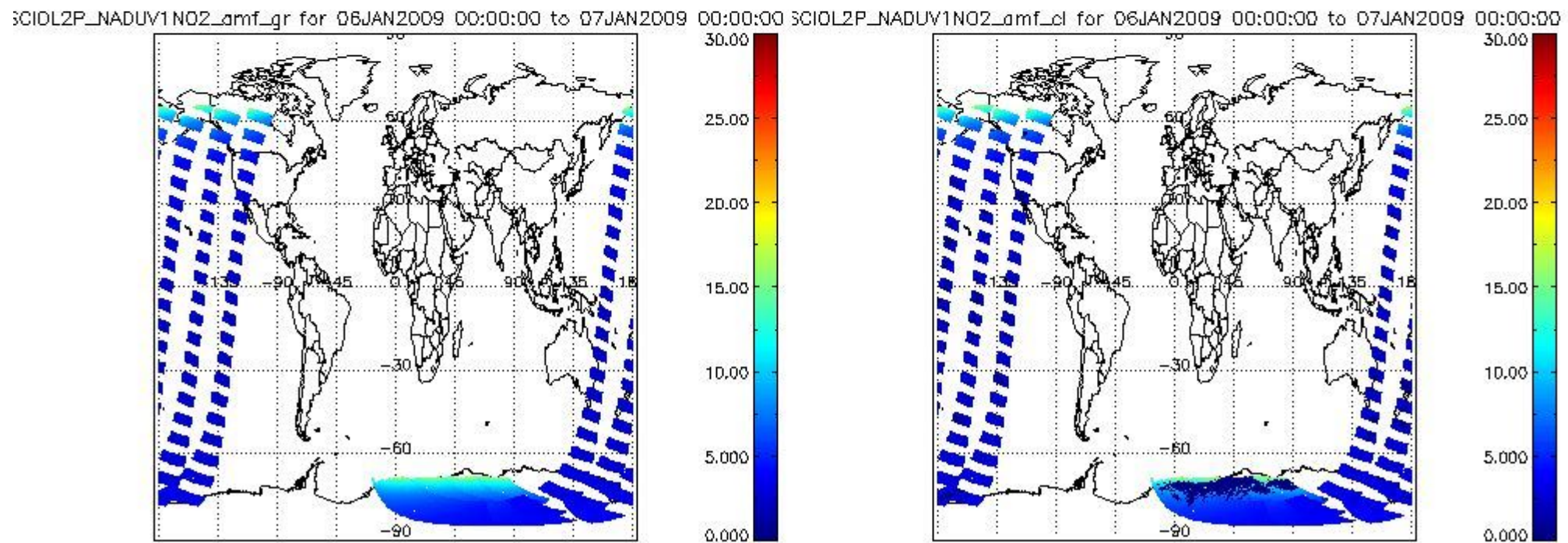
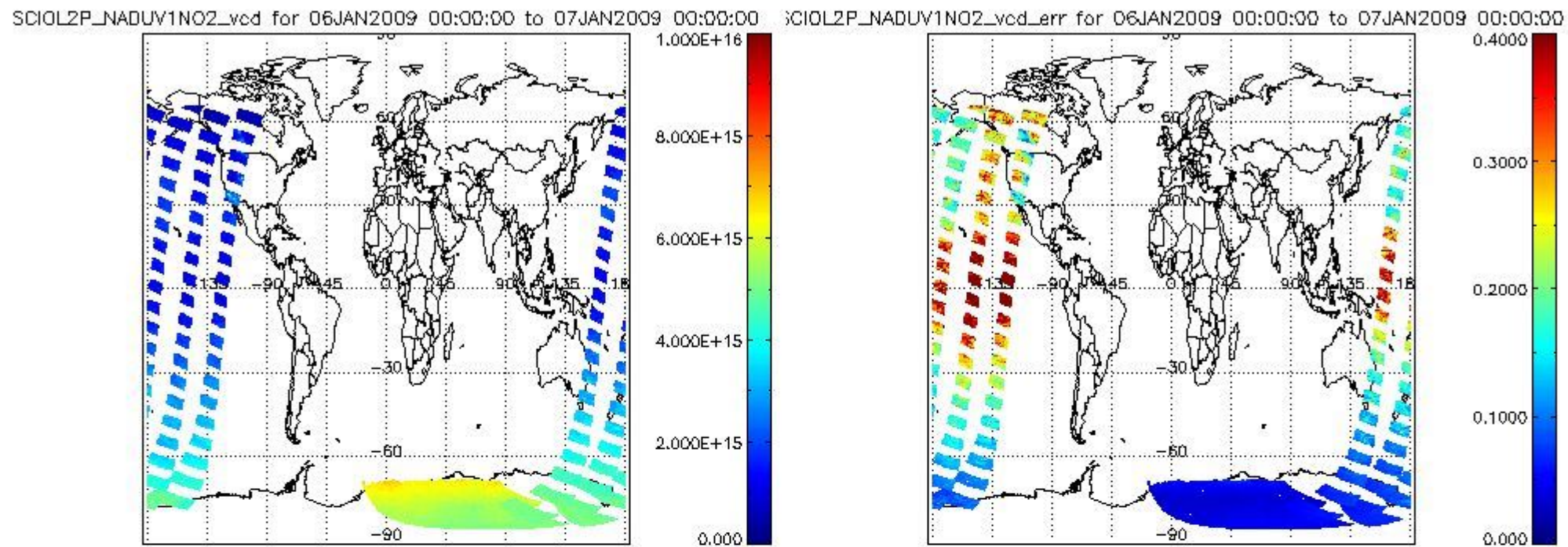


SCIOL2P\_NADUV003\_amf\_cl for 06JAN2009 00:00:00 to 07JAN2009 00:00:00









### 2.2.3 Limb

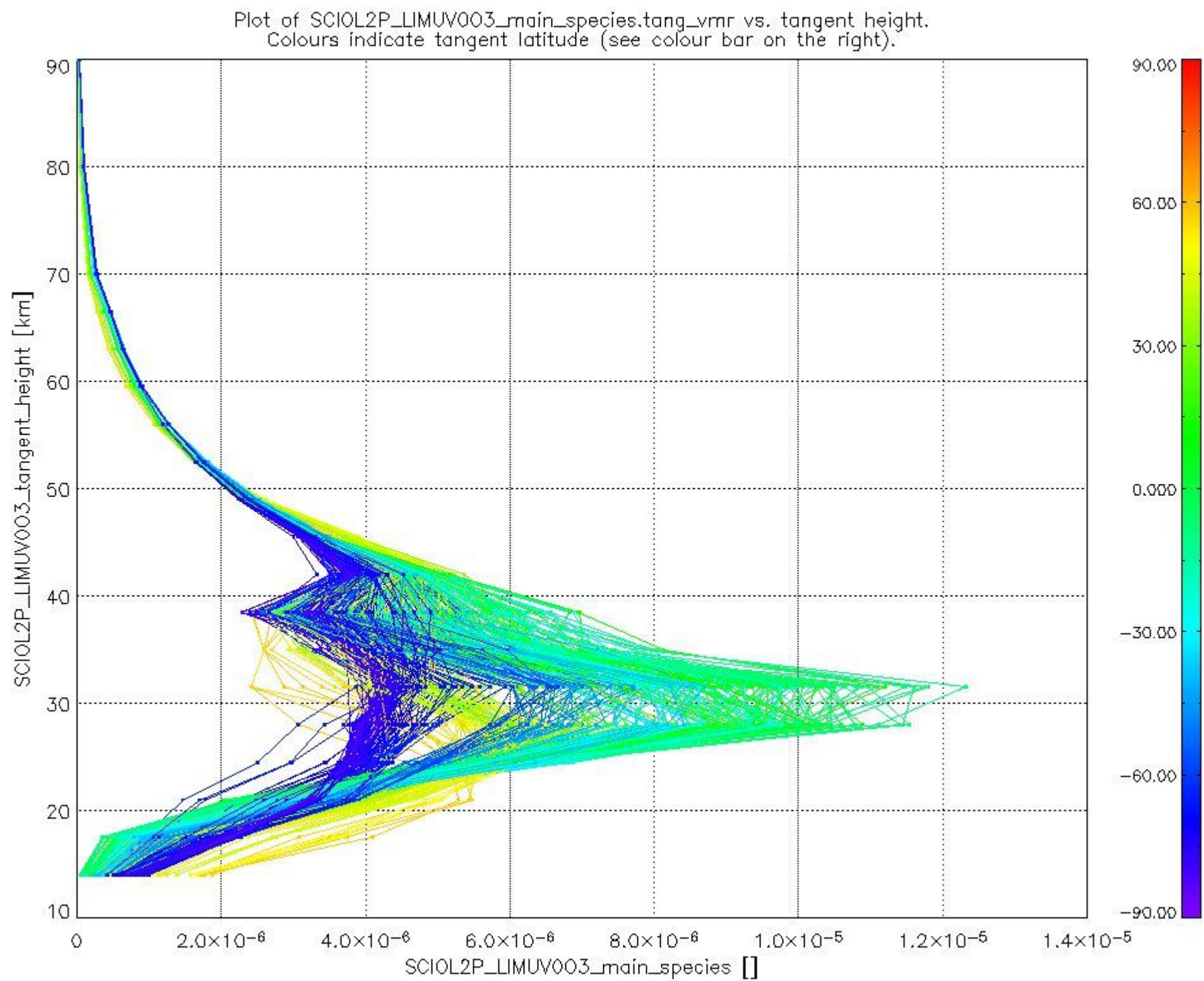
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

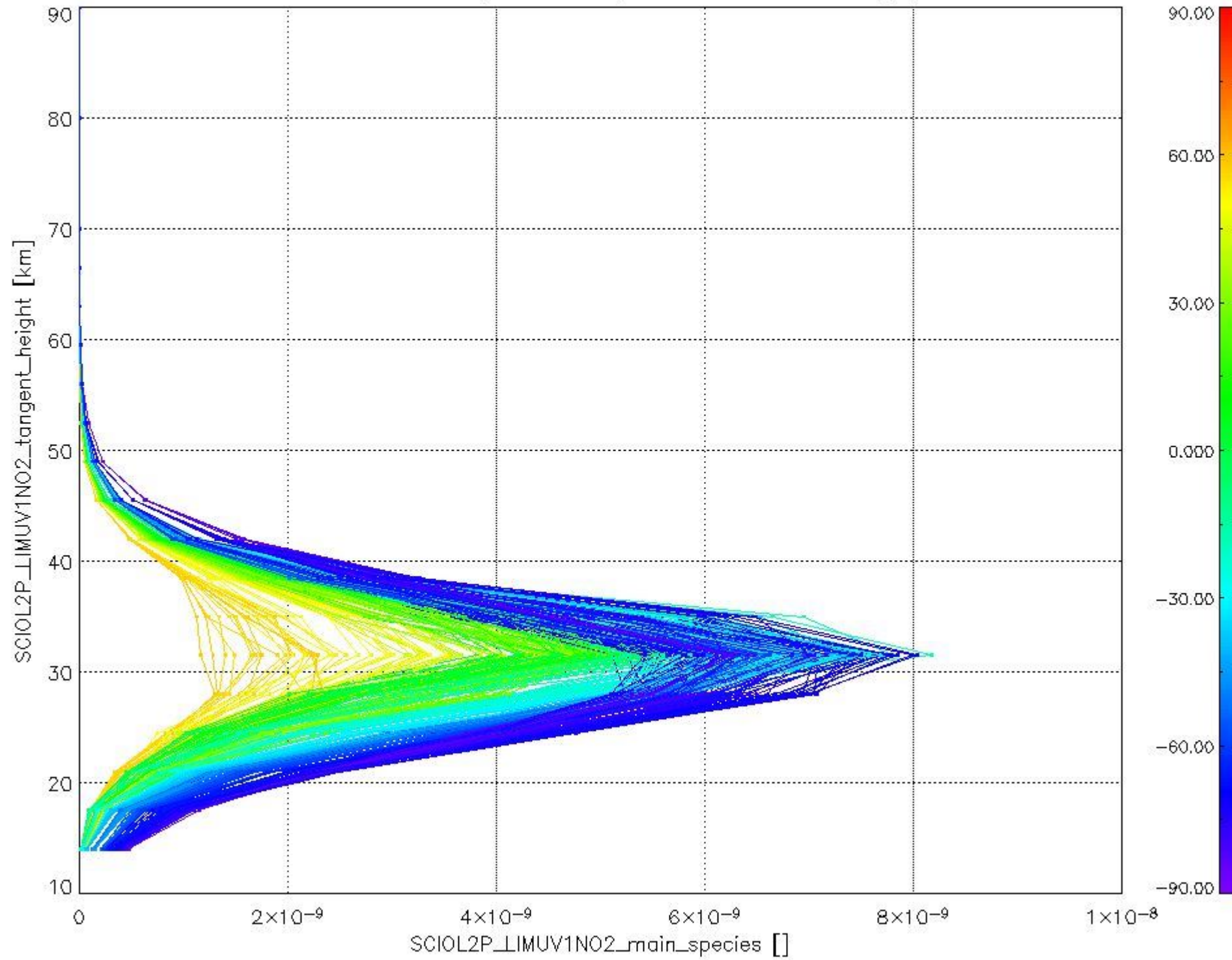


The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.





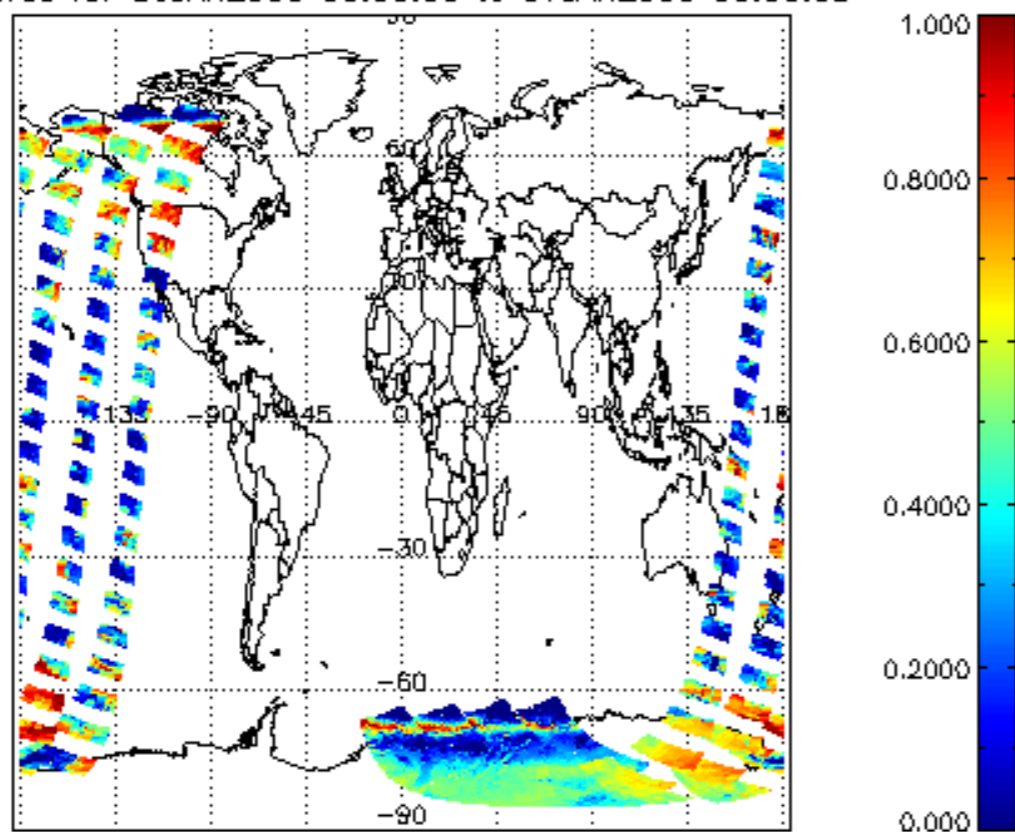
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



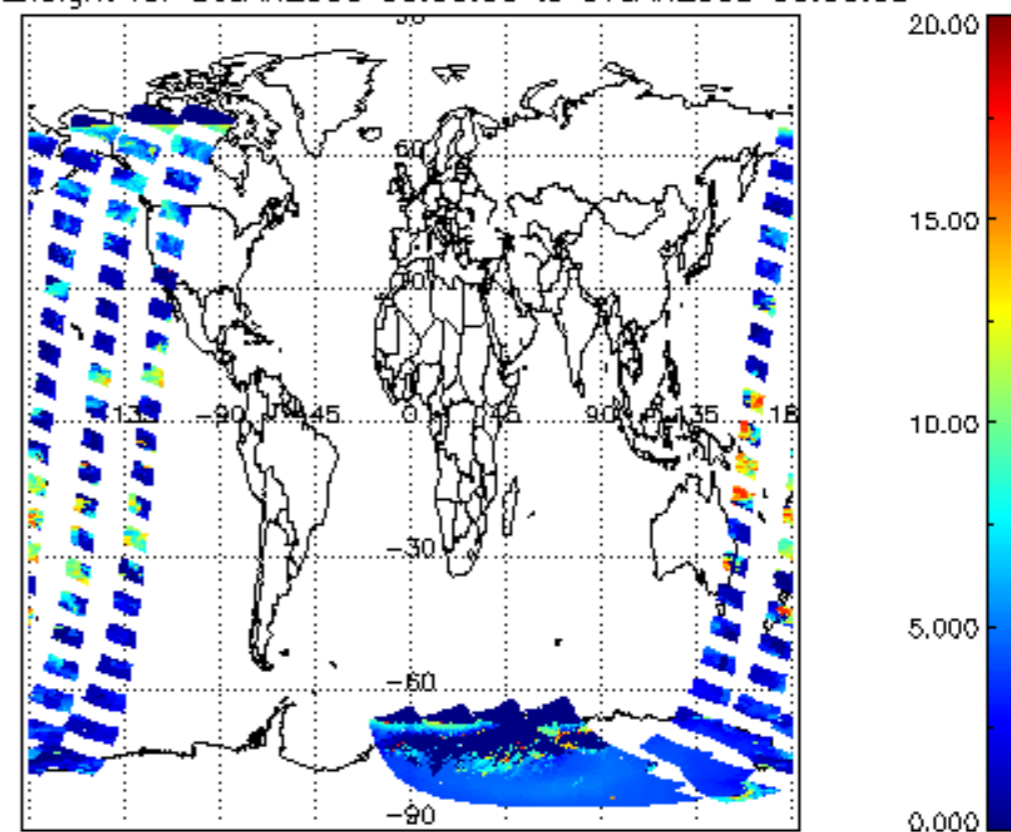
### 2.3 ADF monitoring

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

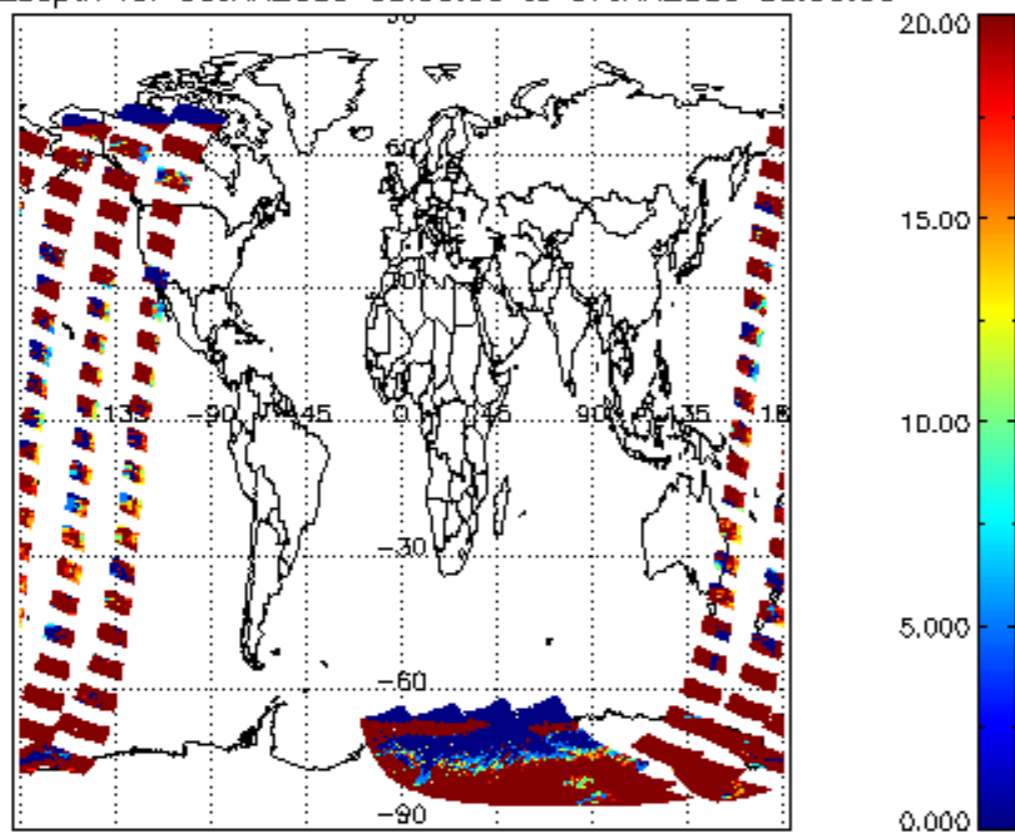
cL\_frac for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



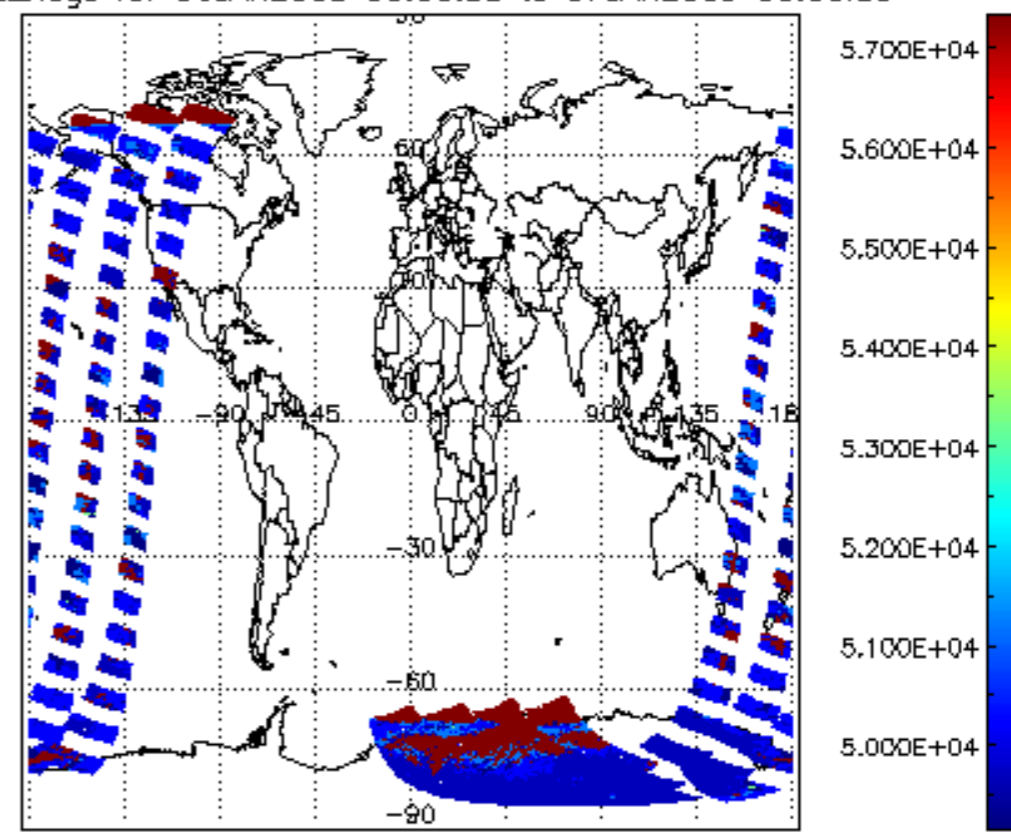
cL\_top\_height for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



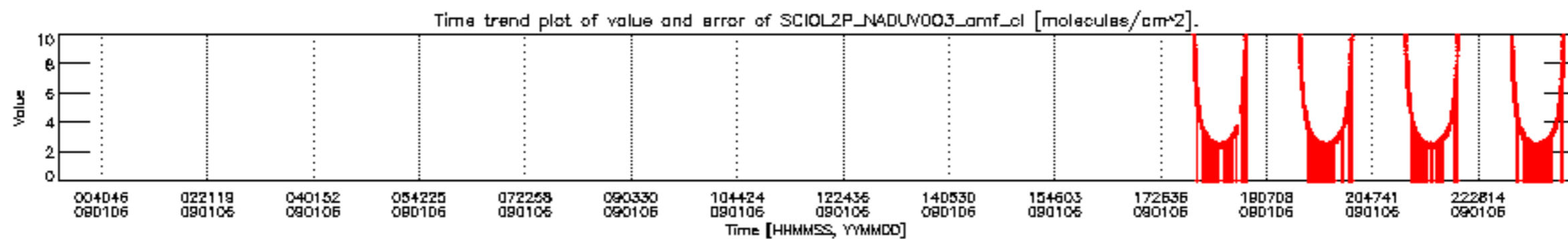
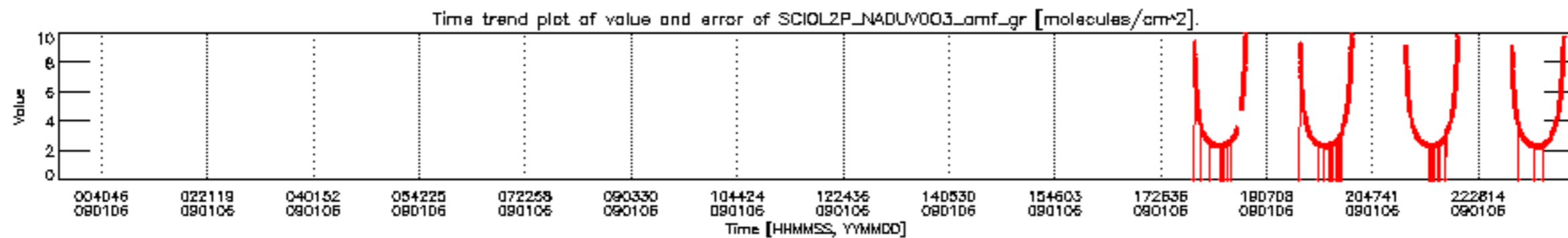
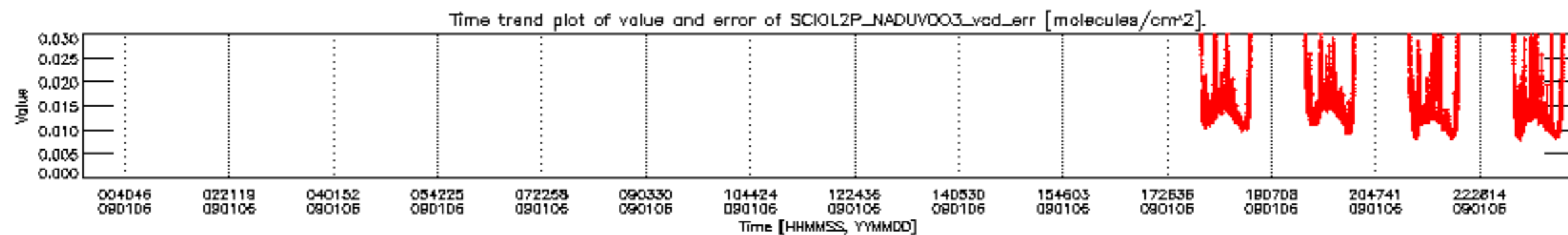
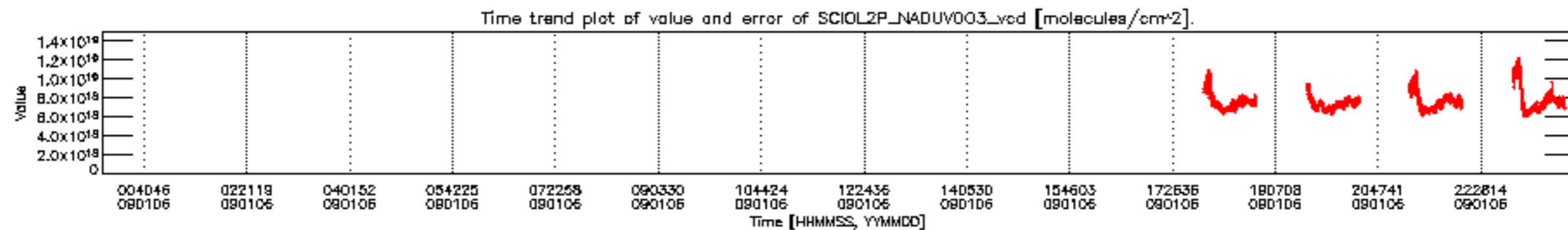
cLopt\_depth for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



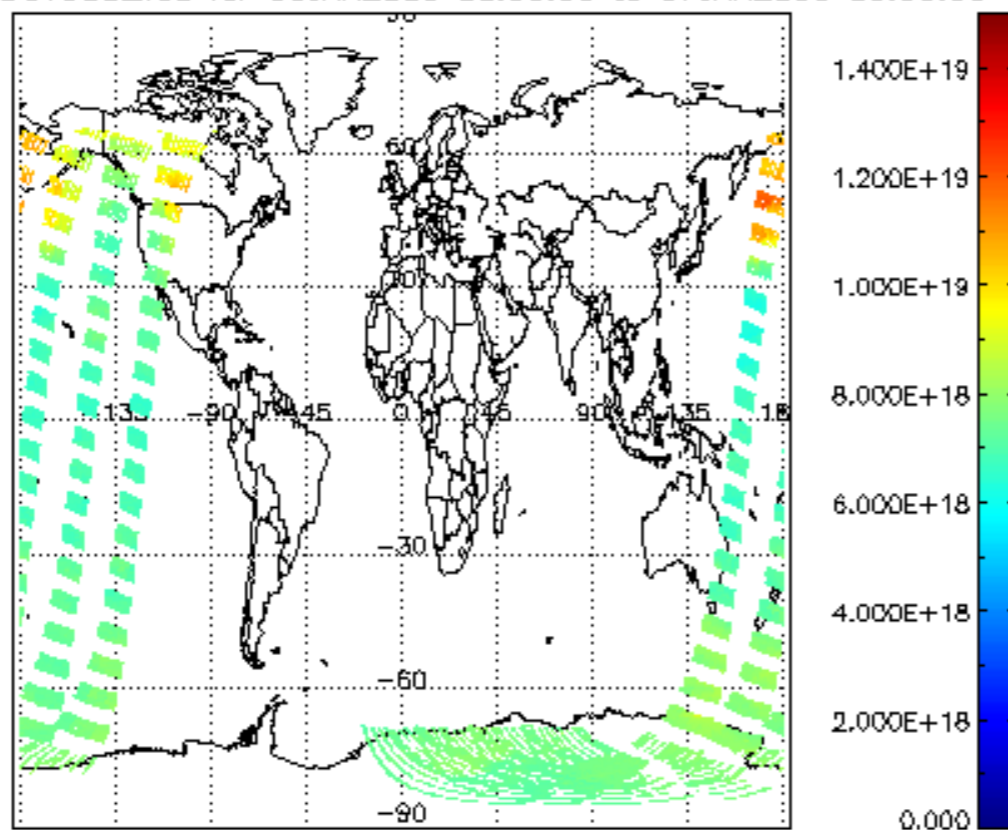
cloud\_flags for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



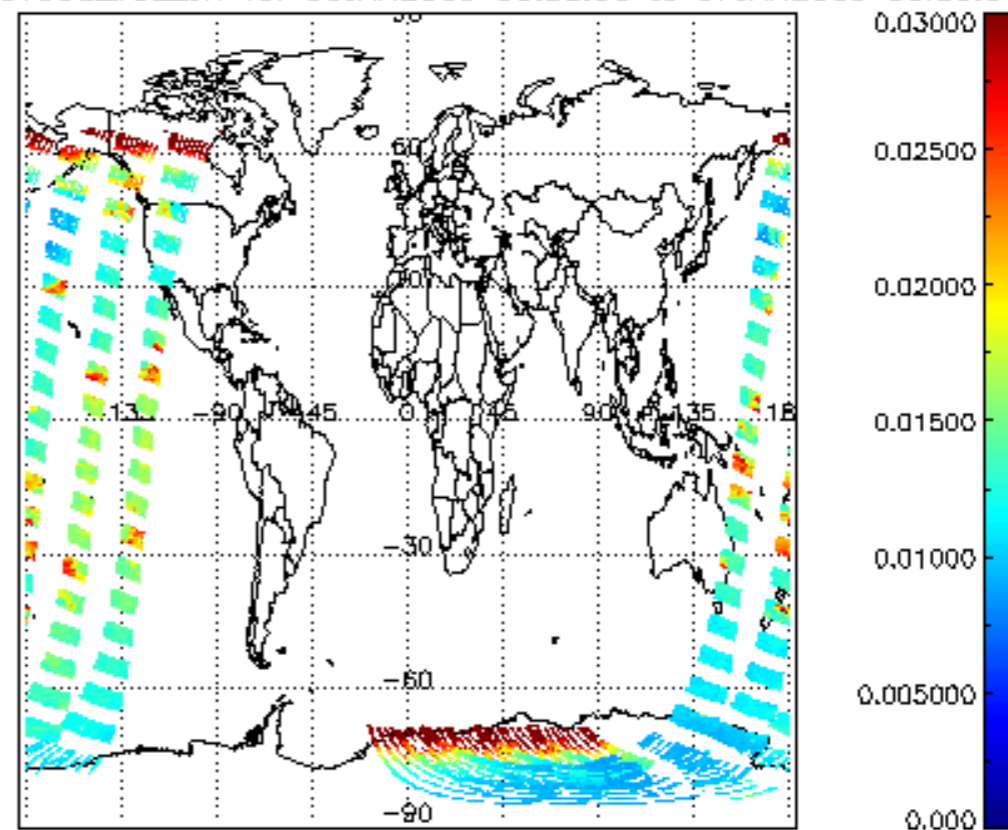




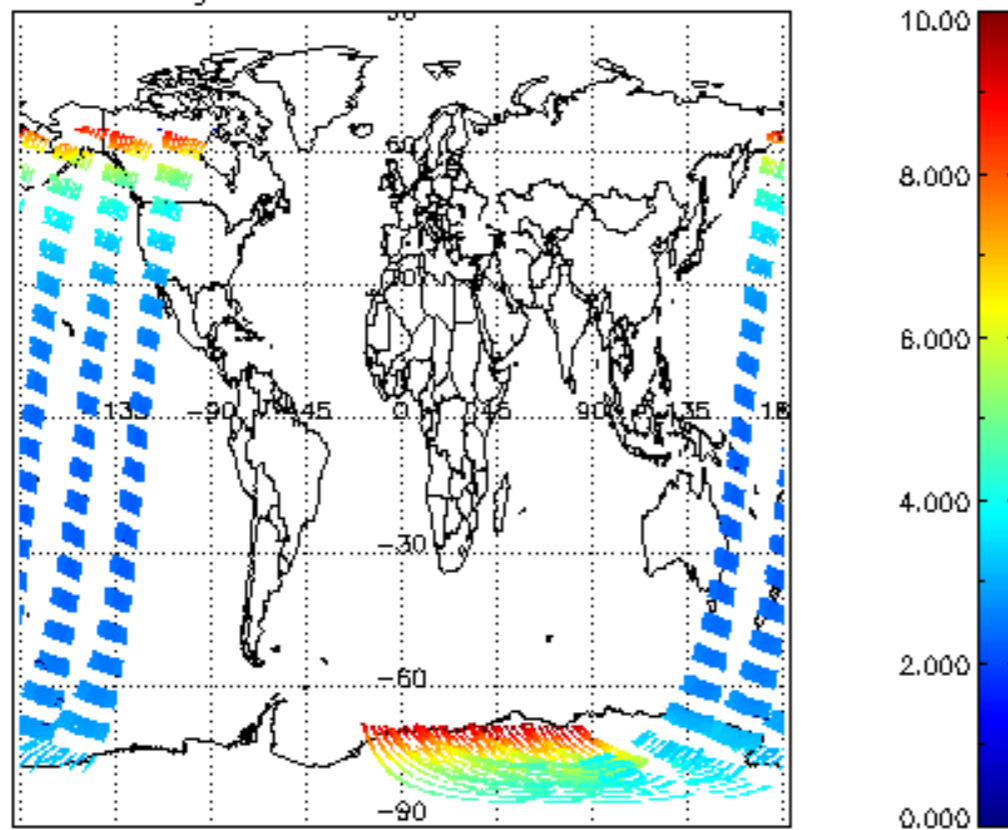
SCIOL2P\_NADUV003\_vcd for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



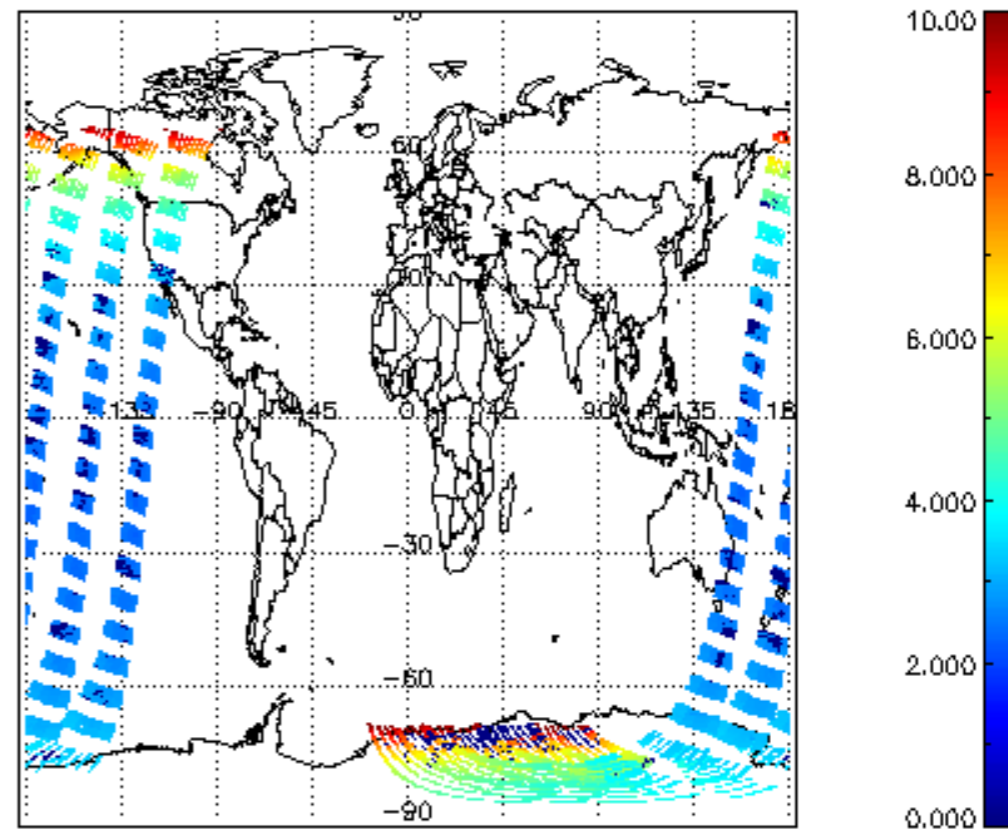
SCIOL2P\_NADUV003\_vcd\_err for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



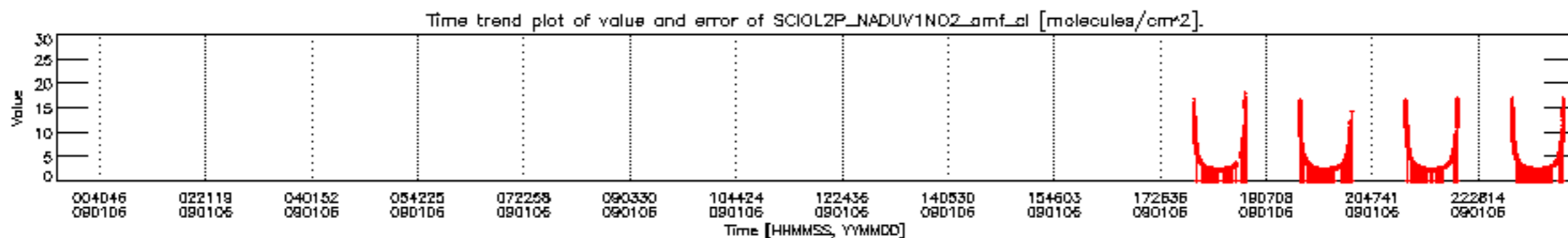
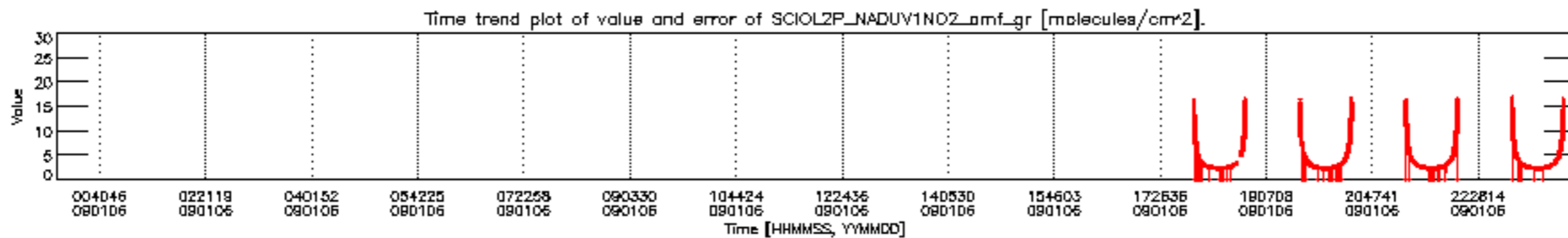
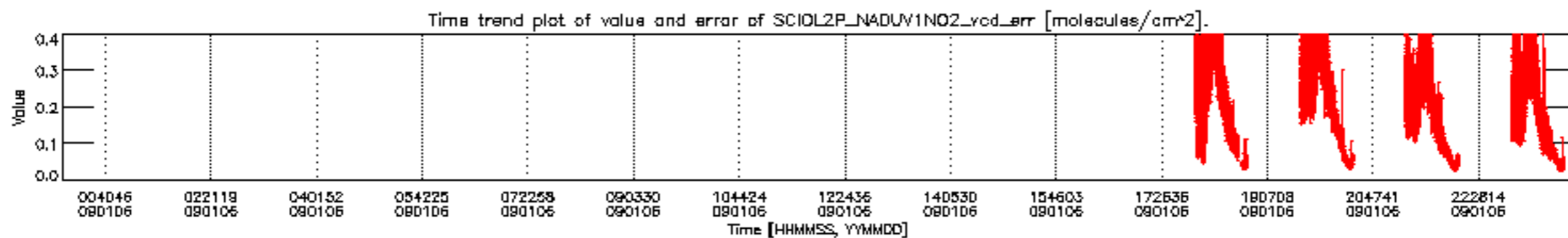
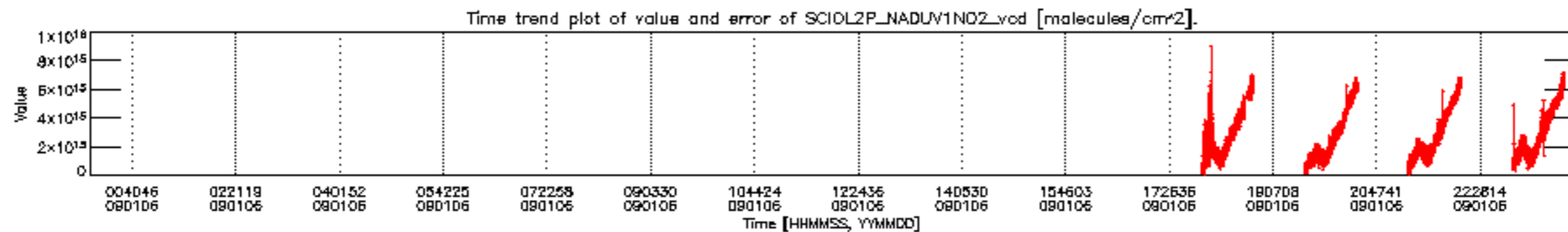
SCIOL2P\_NADUV003\_amf\_gr for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



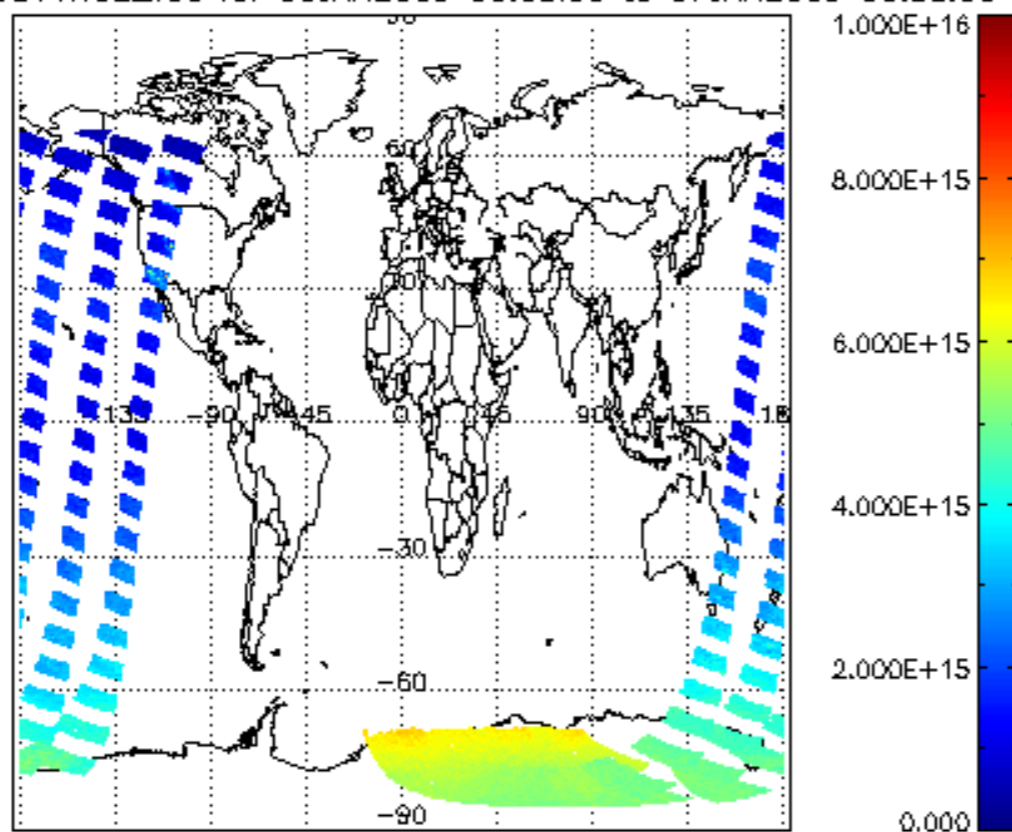
SCIOL2P\_NADUV003\_amf\_cl for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



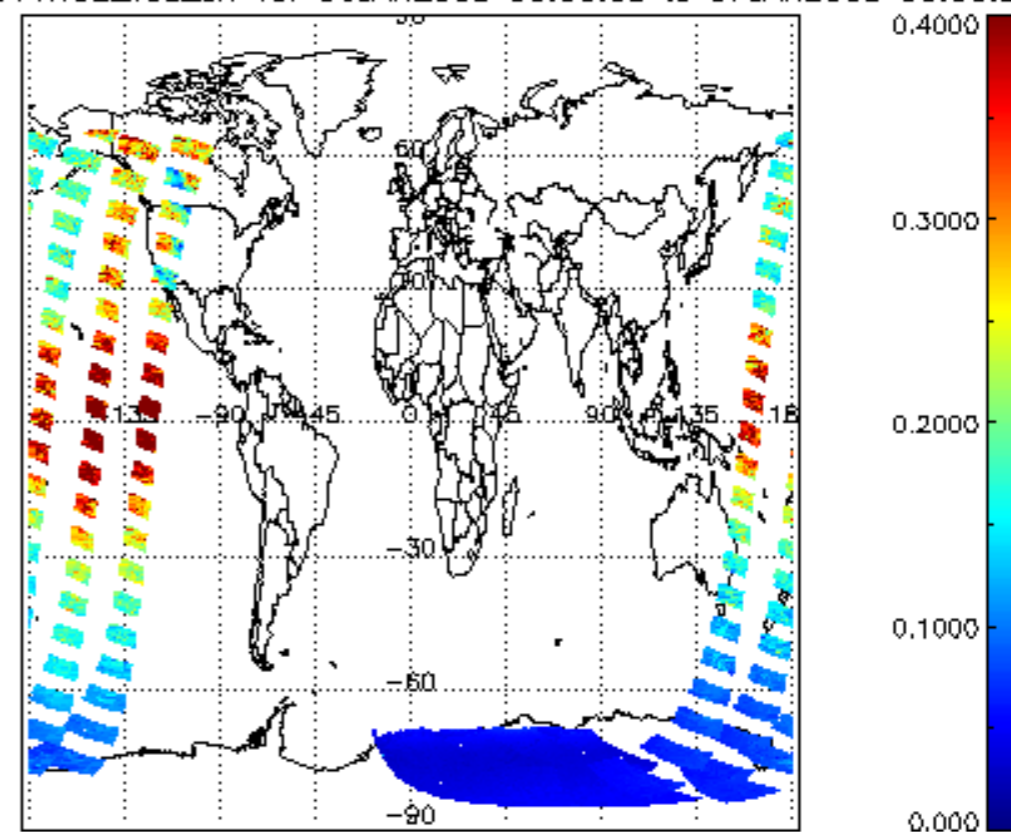




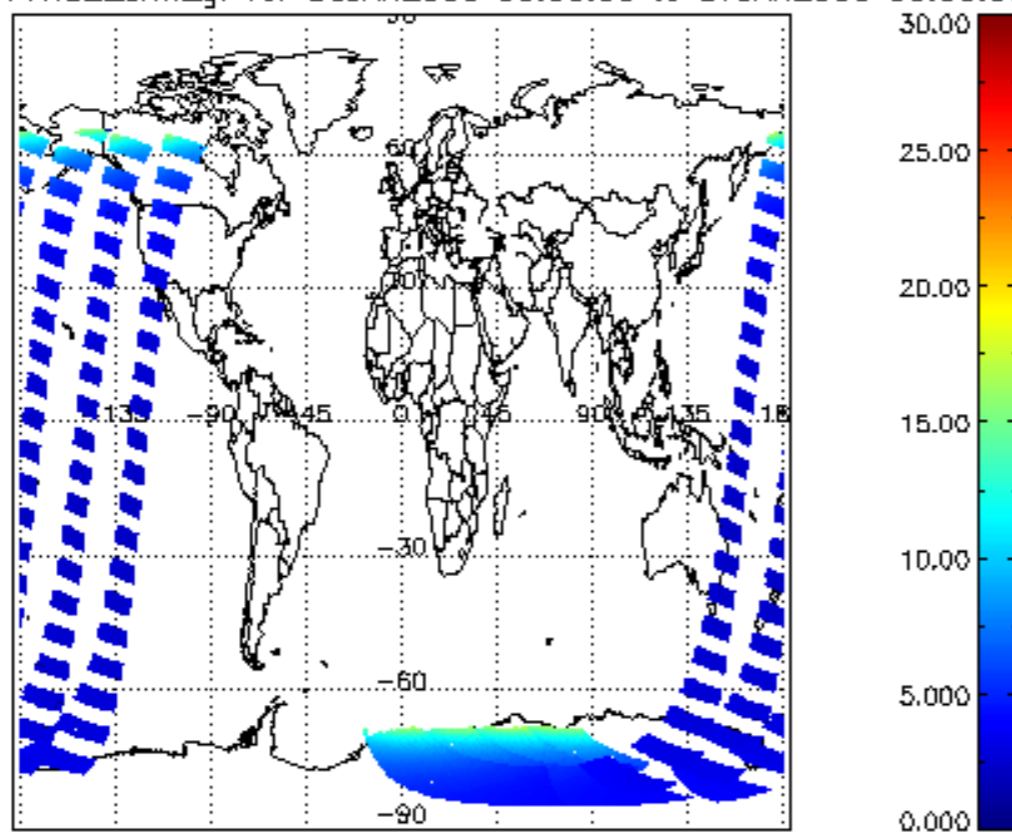
SCIOL2P\_NADUV1NO2\_vcd for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



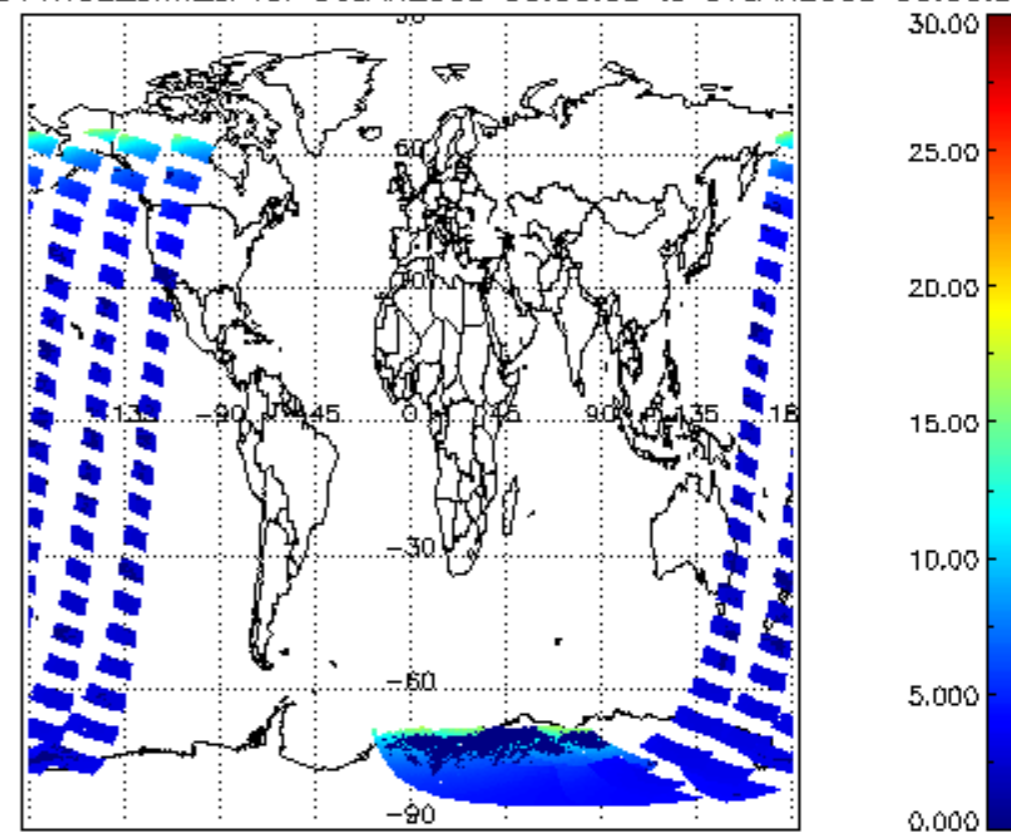
SCIOL2P\_NADUV1NO2\_vcd\_err for 06JAN2009 00:00:00 to 07JAN2009 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 06JAN2009 00:00:00 to 07JAN2009 00:00:00

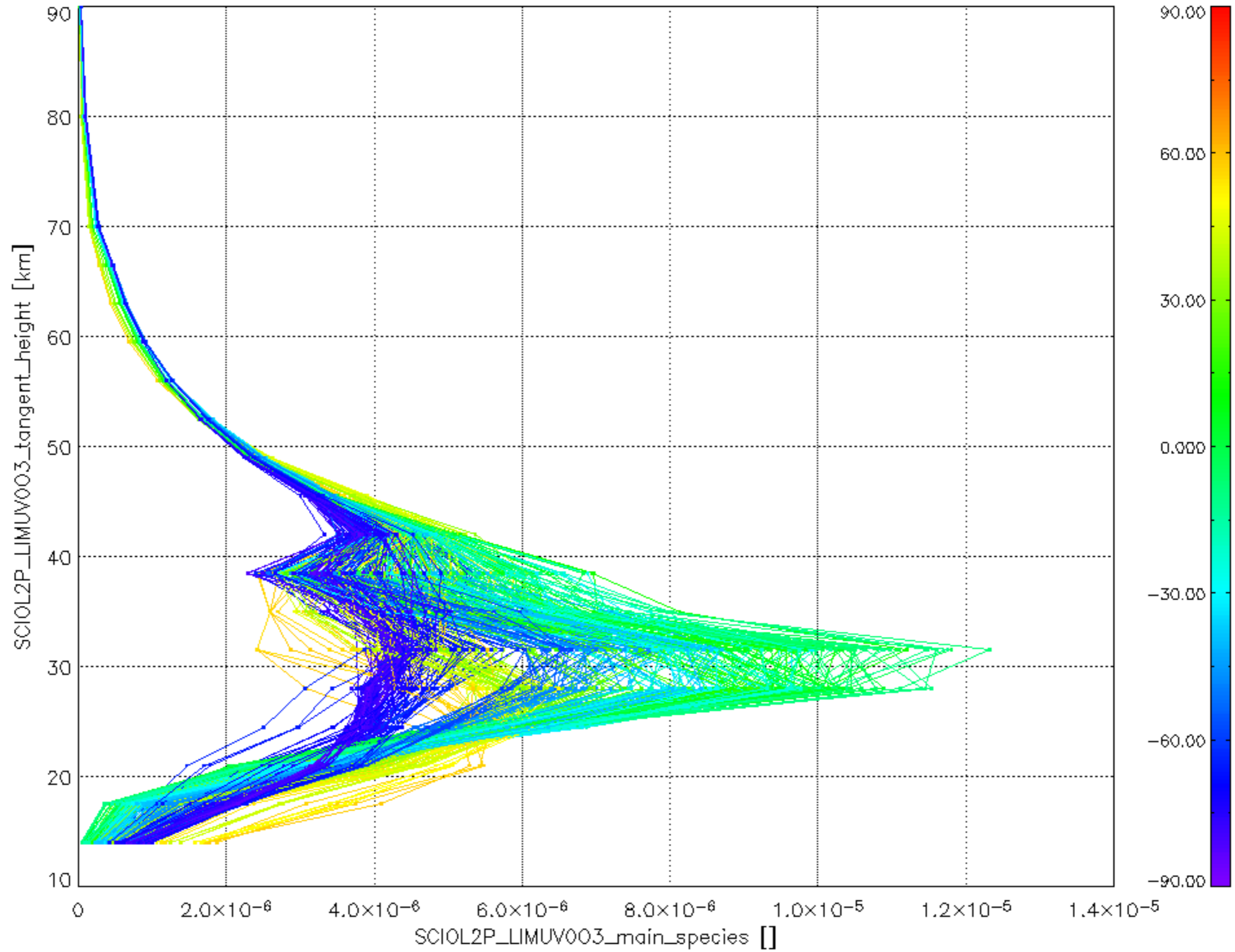


SCIOL2P\_NADUV1NO2\_amf\_cl for 06JAN2009 00:00:00 to 07JAN2009 00:00:00





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).

