

## 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	22DEC2008 18:09:22
Data source version	SCIA-OL/3.01-R
Processing scope for products	27NOV2008 00:00:00 to 28NOV2008 00:00:00
Start time of first product within scope	27NOV2008 00:22:51
Stop time of last product within scope	28NOV2008 00:46:43
Total number of level 2 products	10
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__2PRDPA20081127_002251_000033252074_00131_35255_4717.N1</a>	27NOV2008 00:22:51	27NOV2008 01:18:17	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20081127_052439_000033812074_00133_35257_4729.N1</a>	27NOV2008 05:24:39	27NOV2008 06:21:01	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20081127_070516_000033252074_00135_35259_4733.N1</a>	27NOV2008 07:05:16	27NOV2008 08:00:41	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20081127_084552_000033812074_00136_35260_4738.N1</a>	27NOV2008 08:45:52	27NOV2008 09:42:13	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20081127_102628_000033252074_00137_35261_4746.N1</a>	27NOV2008 10:26:28	27NOV2008 11:21:53	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20081127_120704_000033812074_00138_35262_4753.N1</a>	27NOV2008 12:07:04	27NOV2008 13:03:25	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20081127_152816_000033812074_00140_35264_4756.N1</a>	27NOV2008 15:28:16	27NOV2008 16:24:38	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20081127_184950_000033122074_00142_35266_4801.N1</a>	27NOV2008 18:49:50	27NOV2008 19:45:03	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20081127_221041_000033812074_00144_35268_4802.N1</a>	27NOV2008 22:10:41	27NOV2008 23:07:02	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20081127_235117_000033252074_00145_35269_4803.N1</a>	27NOV2008 23:51:17	28NOV2008 00:46:43	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: 96200

Total number of cloud data DSRs with good quality flag (=0): 96200 (100.0 %)

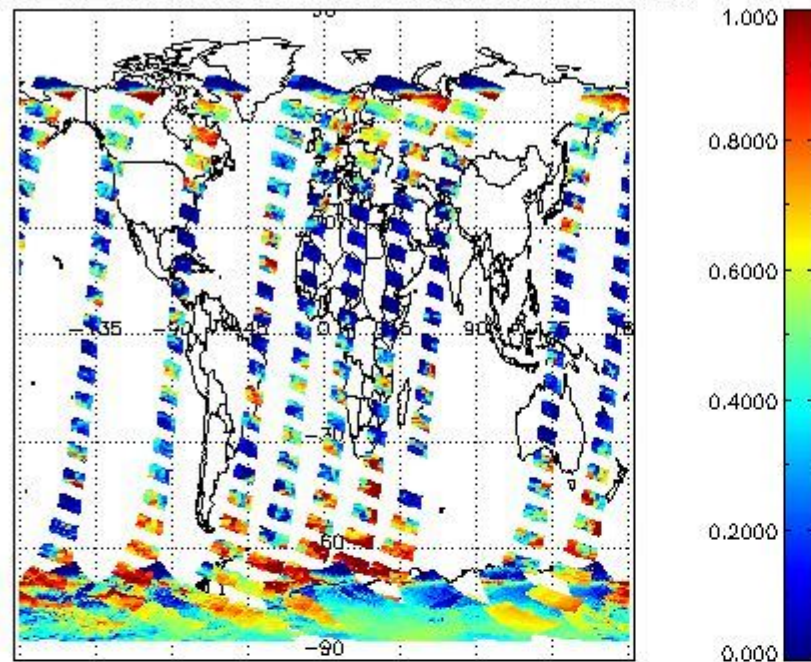
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	96200	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	96200	0.16824	0.12500	0.12500	0.25000	0.059460	s
CL_FRAC	96200	0.40381	0.41001	0.0000	1.0000	0.28294	-
CL_FRAC_ERR	96200	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	96200	5.3838	4.0000	4.0000	8.0000	1.9027	
PMD_READ_CL[0]	96200	0.22532	0.0000	0.0000	8.0000	1.0976	-
PMD_READ_CL[1]	96200	0.92825	0.0000	0.0000	8.0000	2.0839	-
CL_TOP_HEIGHT	83531	3.9926	2.9829	0.0000	17.000	3.7348	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	83531	54.655	44.980	0.0000	101.00	40.892	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	96200	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	96200	11001010	11000100	11000000	11100000	3220.9	flags
AERO_ABSO_IND	96200	3.0342	3.3777	-0.37341	10.974	2.1971	
AERO_IND_DIAG	96200	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	96200	01010100	00000000	00000000	11000000	24406.	flags

### Time and geolocation plots:

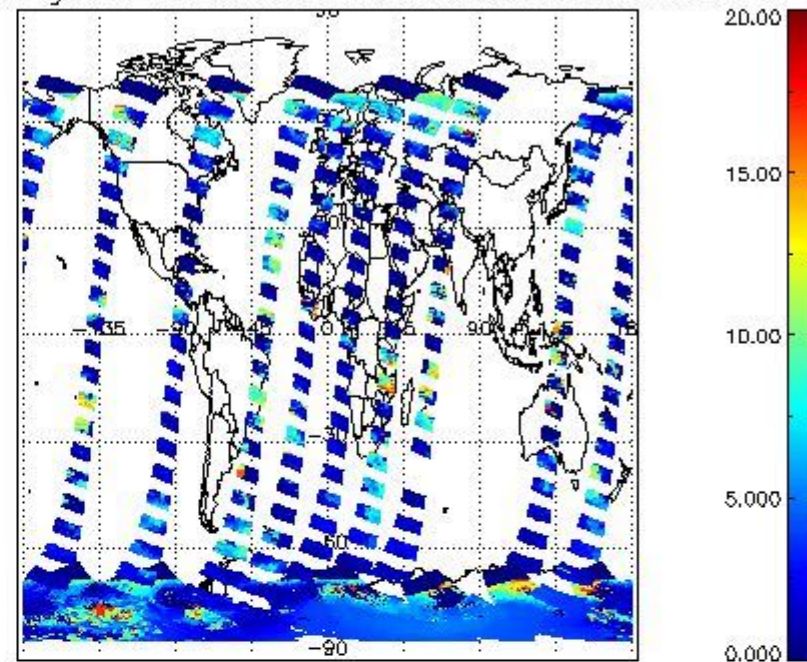
Plots are available for the following parameters:

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

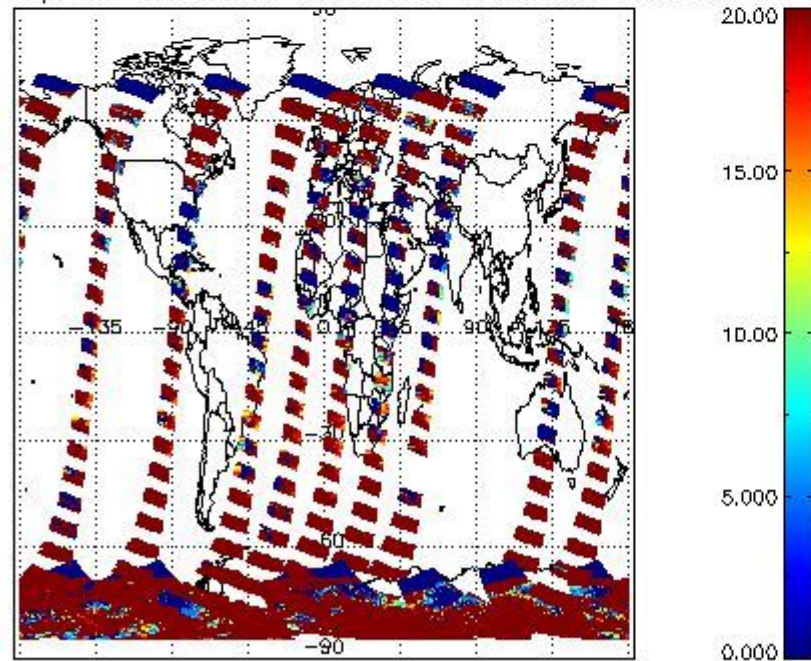
cLfrac for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



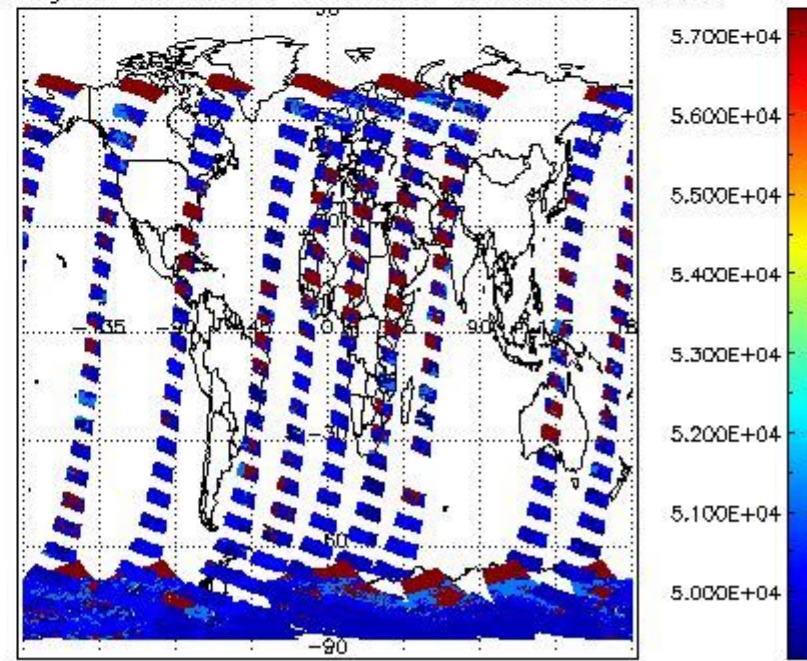
cL\_top\_height for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



cLopt\_depth for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



cloud\_flags for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



## 2.2.2 Nadir

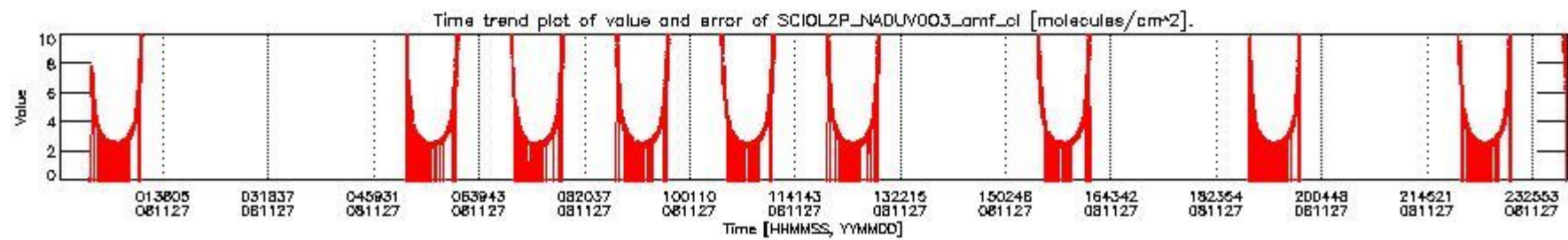
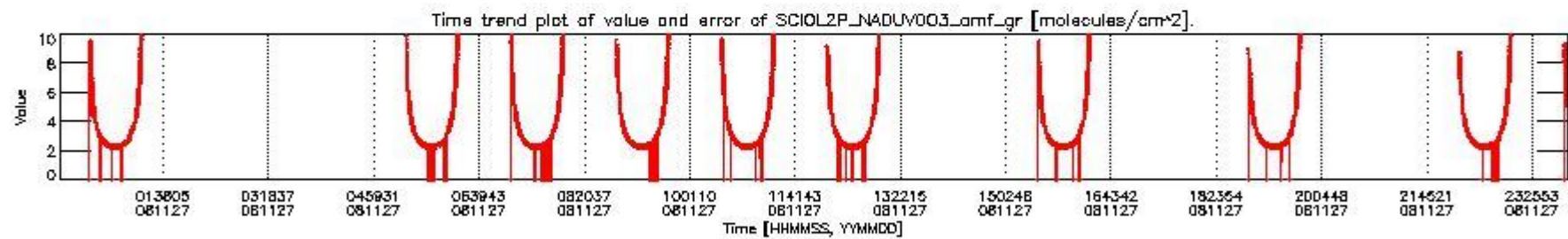
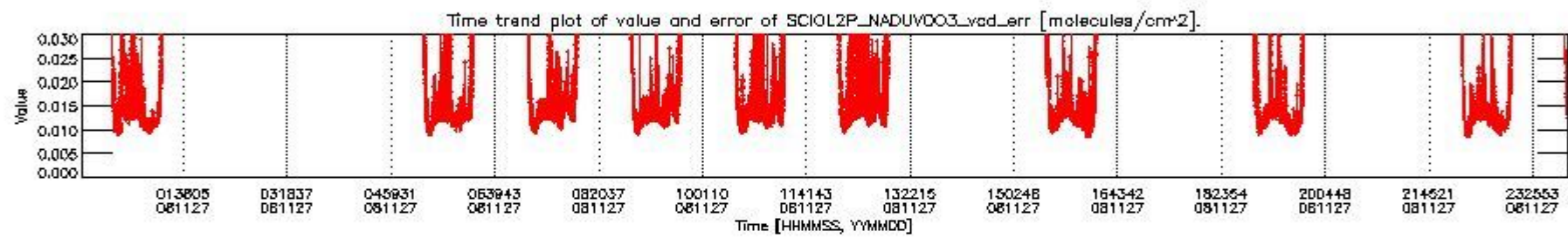
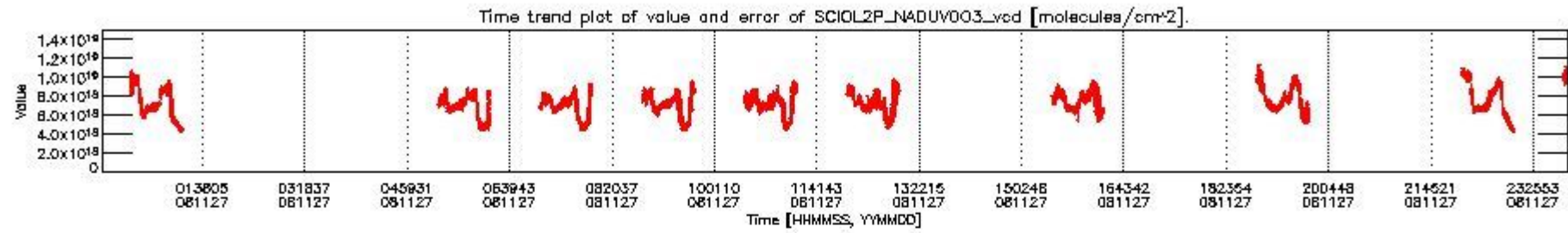
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

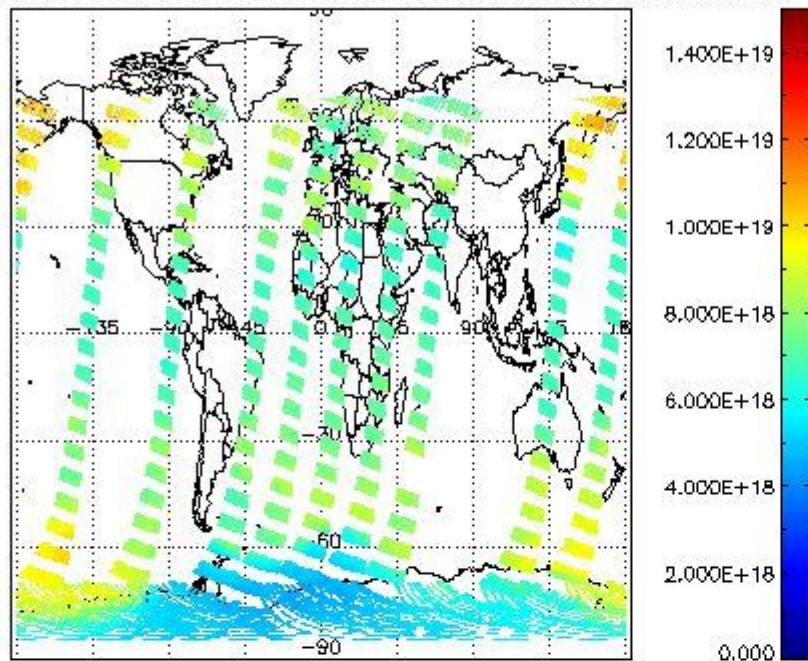
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

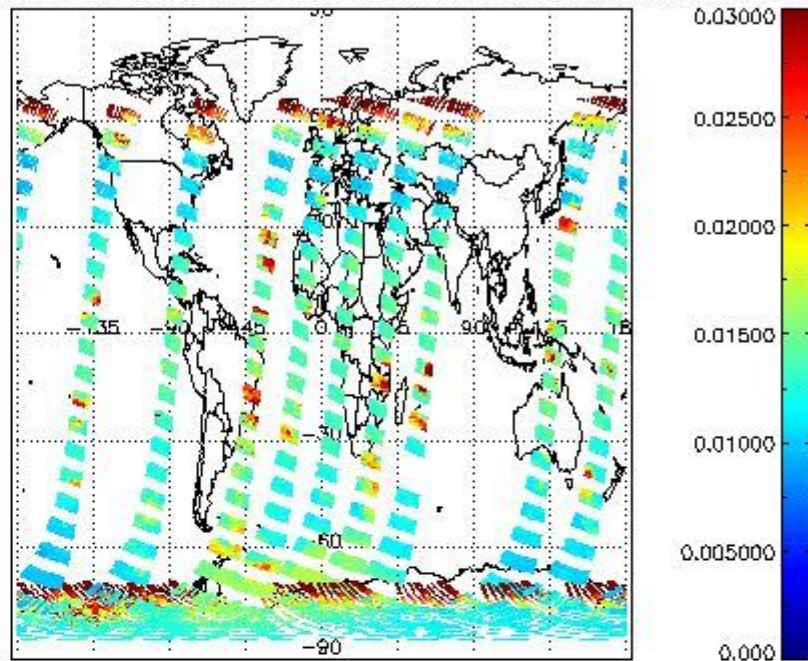
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



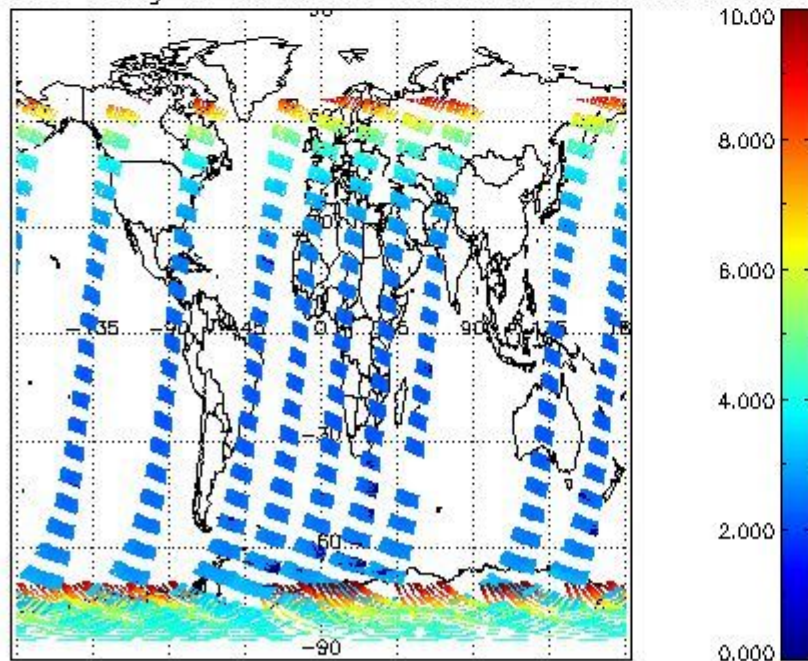
SCIOL2P\_NADUV003\_vcd for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



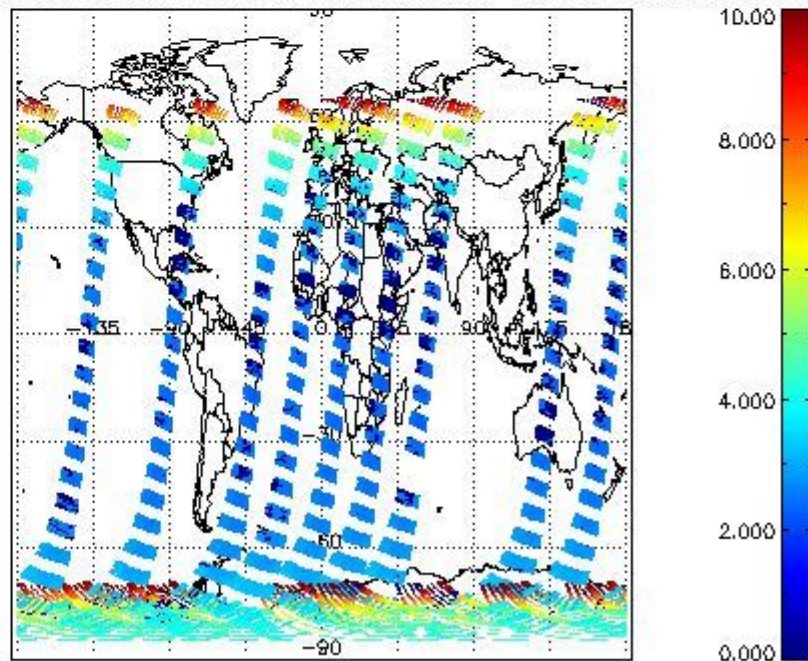
SCIOL2P\_NADUV003\_vcd\_err for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

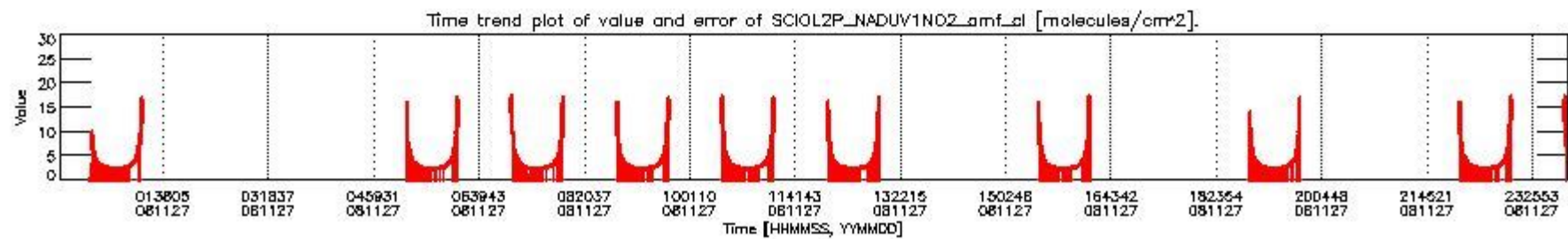
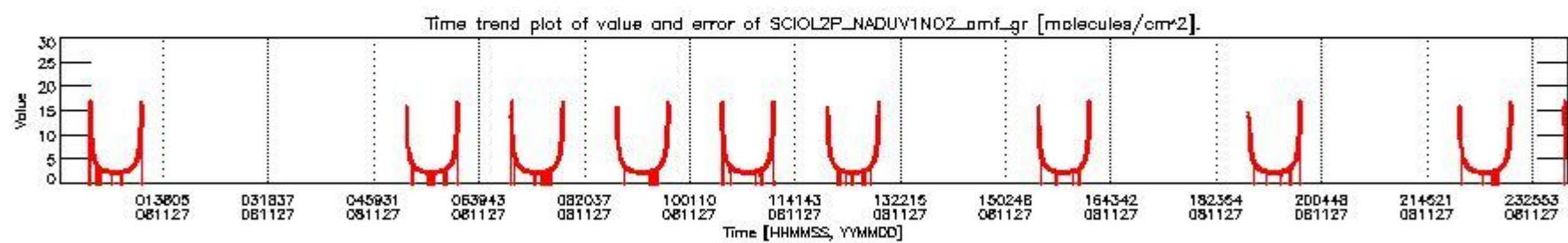
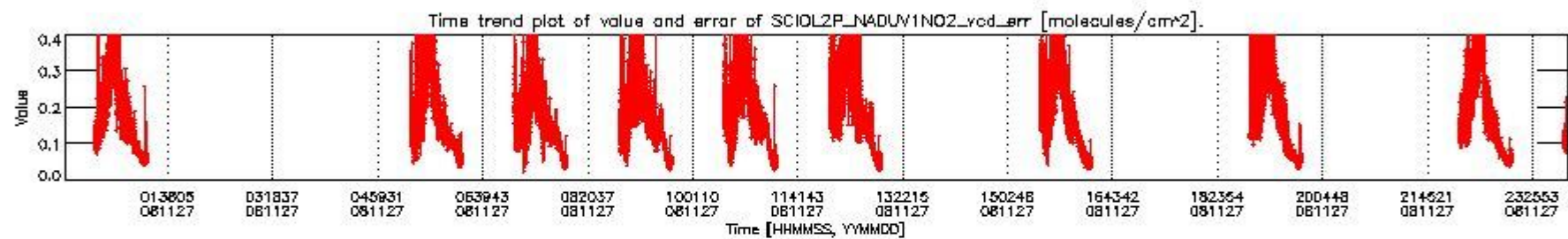
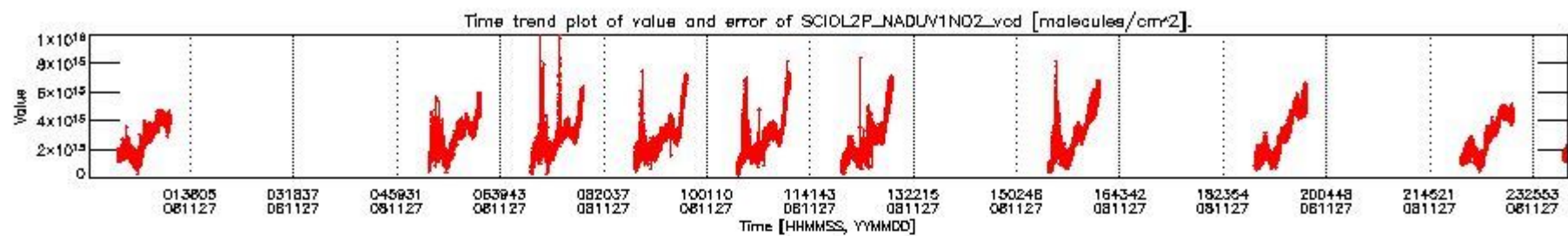


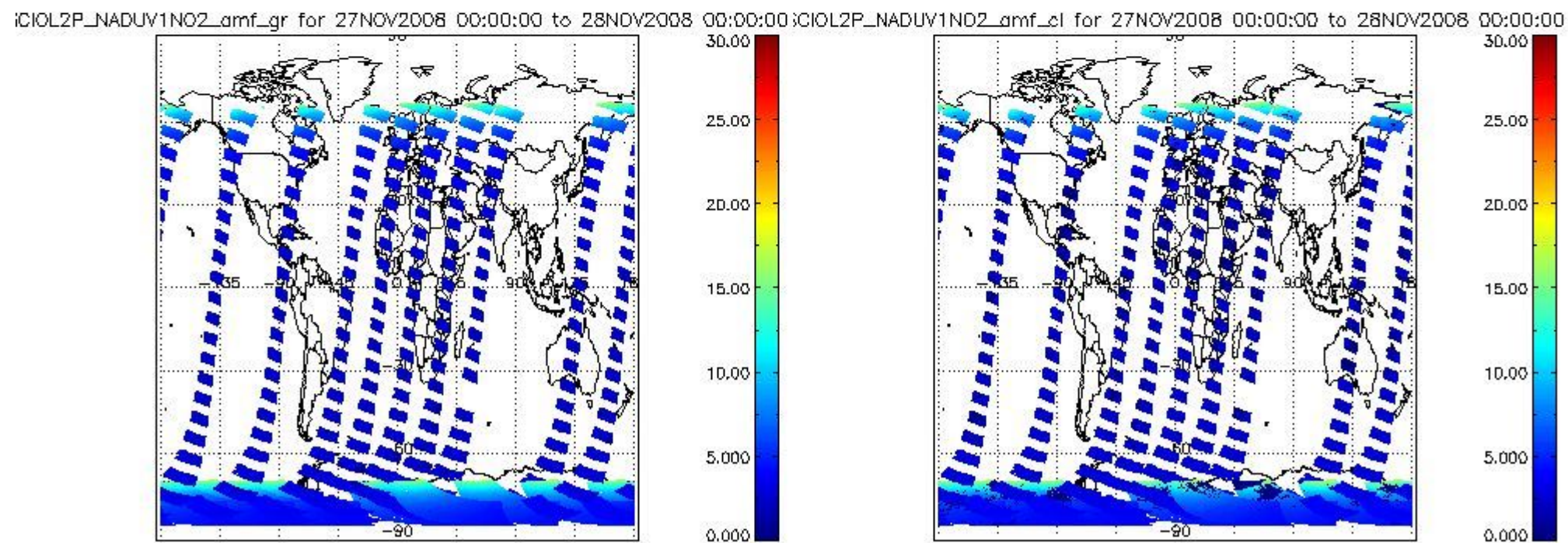
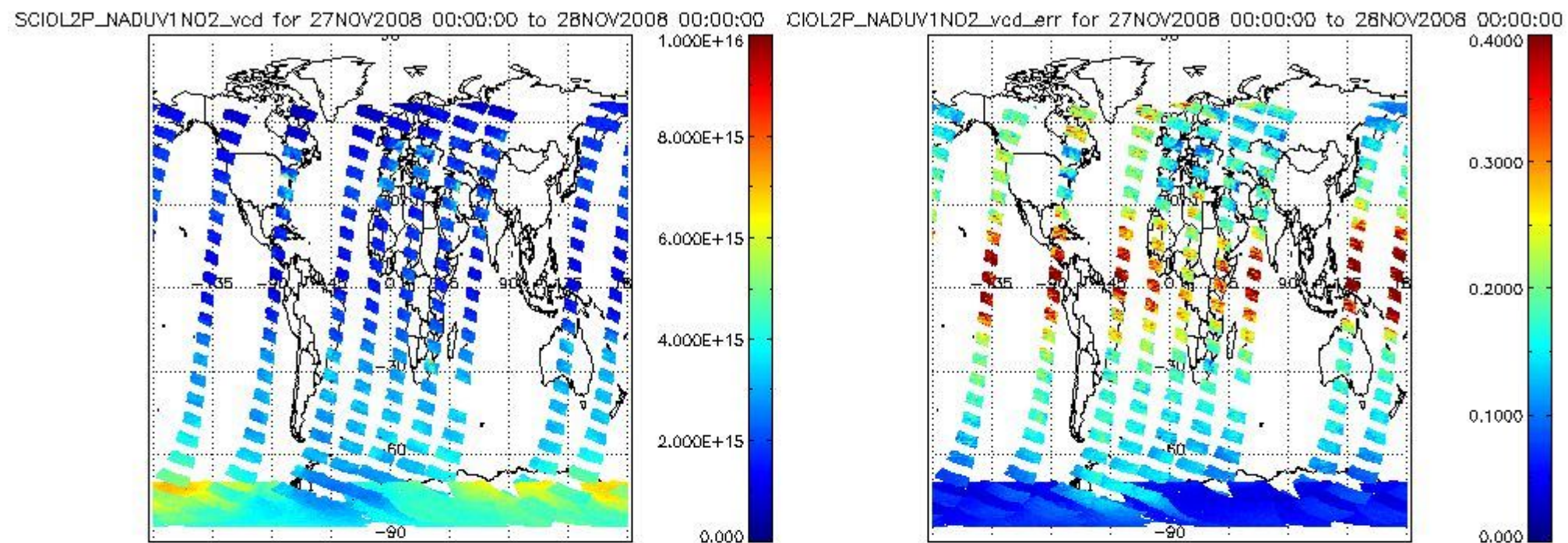
SCIOL2P\_NADUV003\_amf\_gr for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 27NOV2008 00:00:00 to 28NOV2008 00:00:00







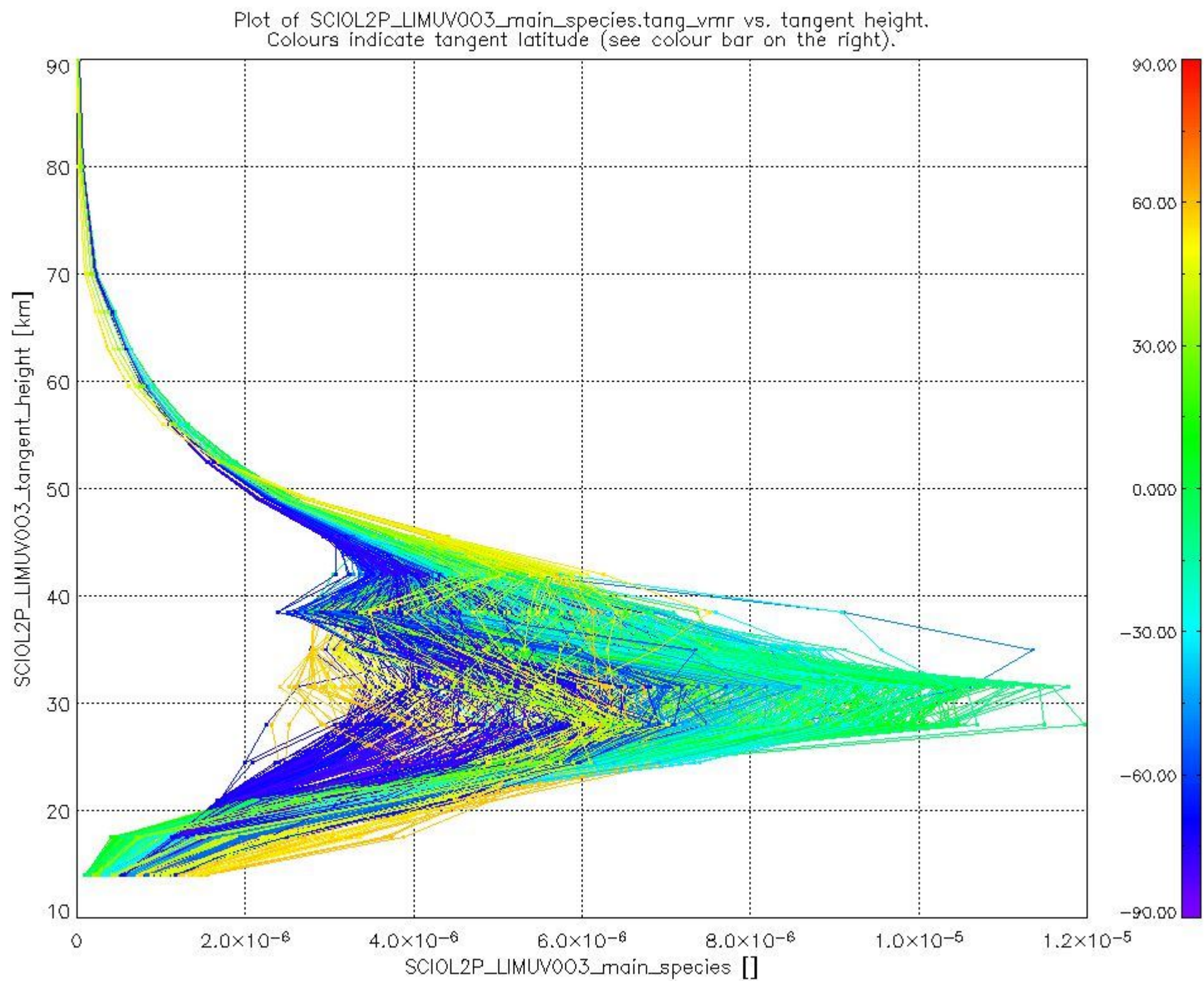
### 2.2.3 Limb

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:

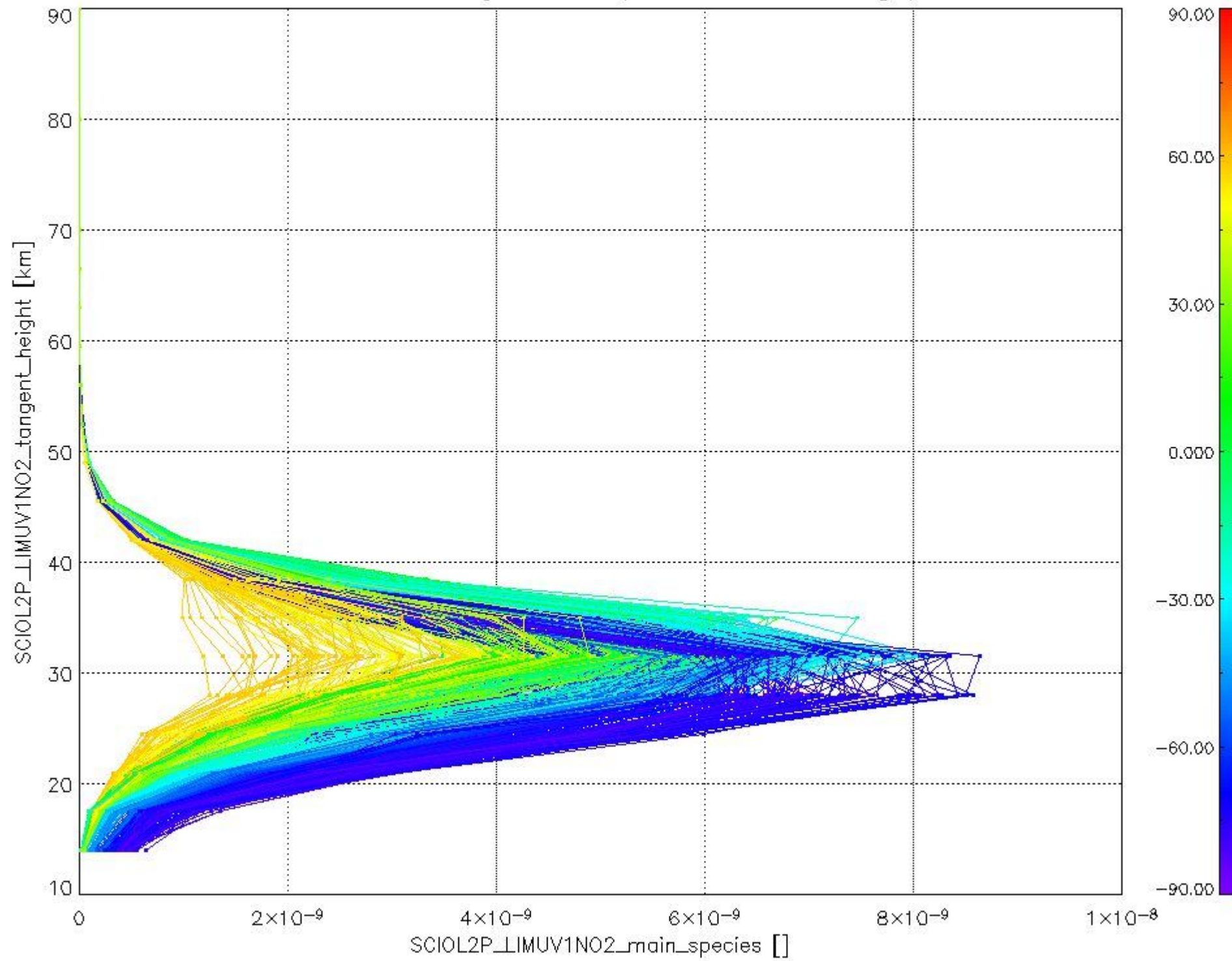
Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

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





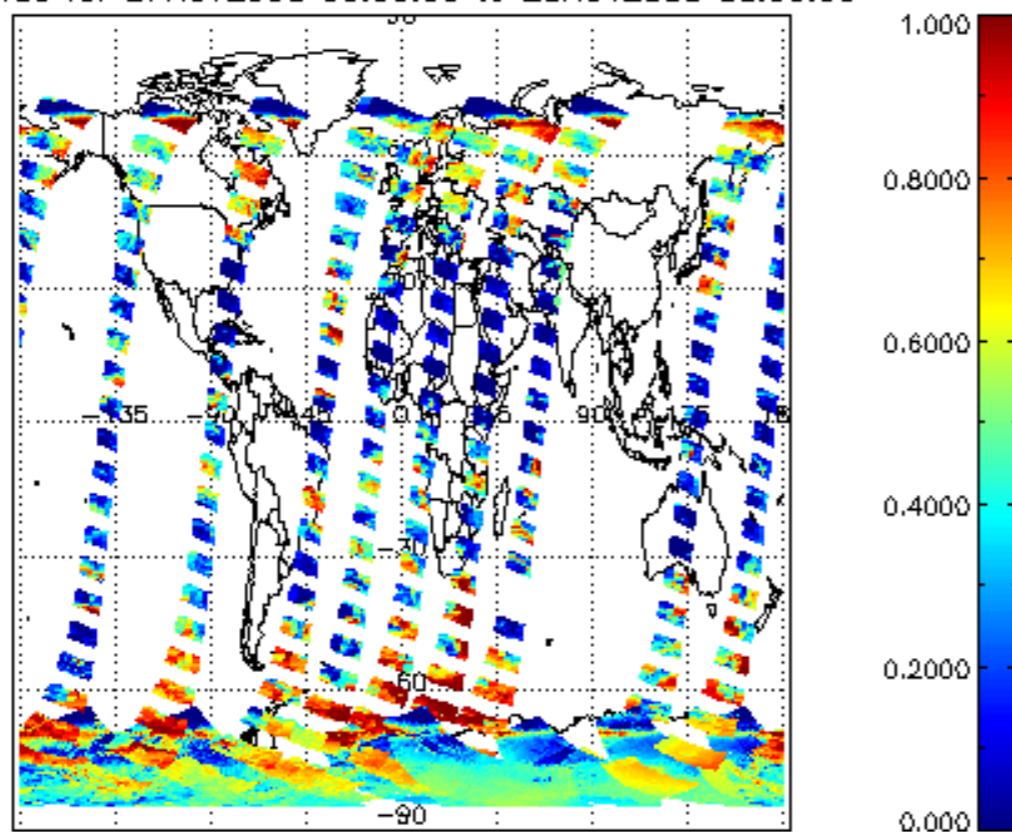
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



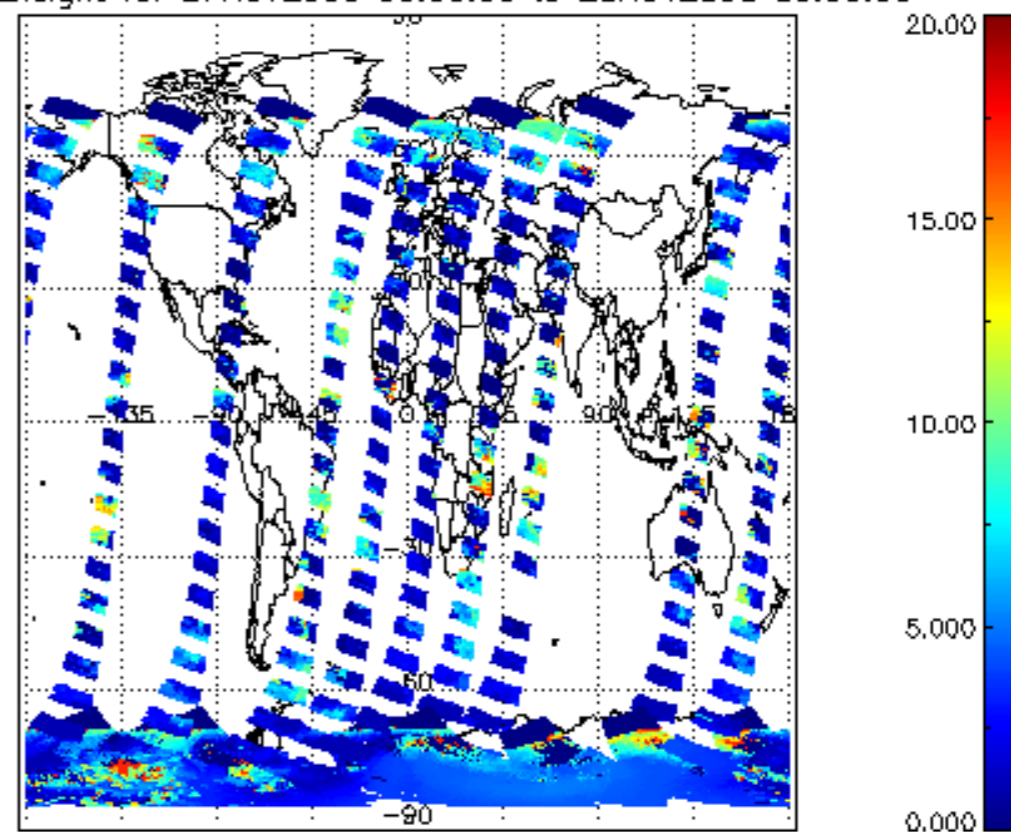
### 2.3 ADF monitoring

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

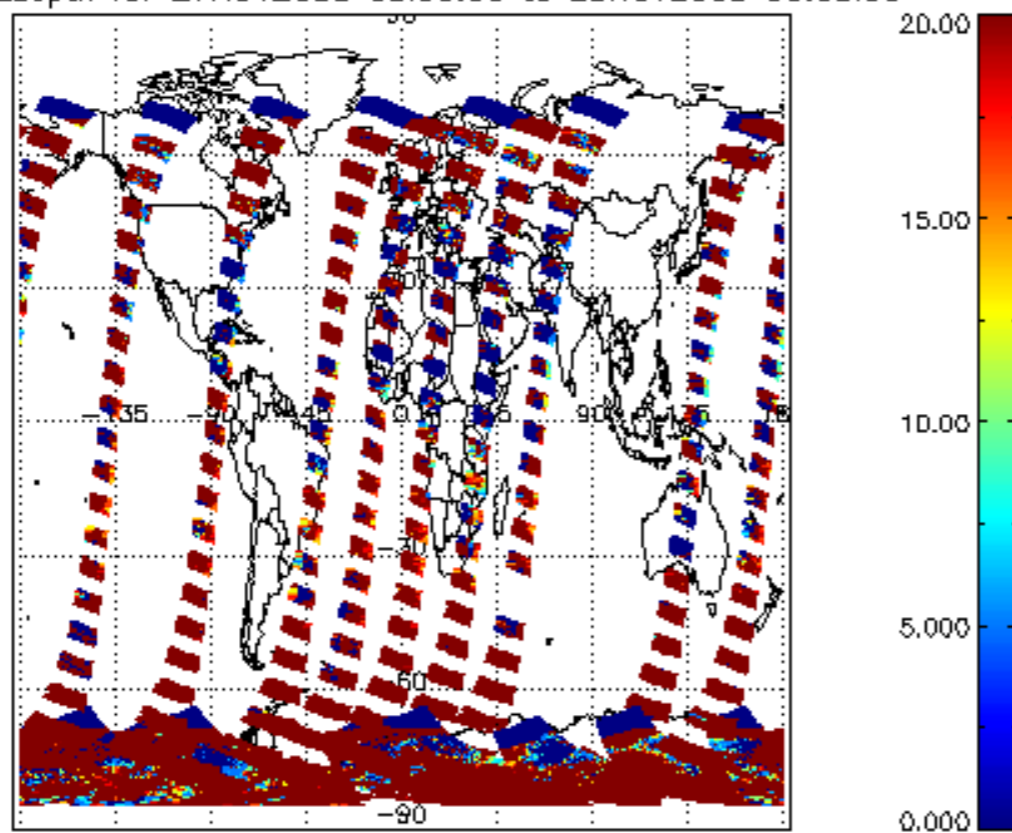
cLfrac for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



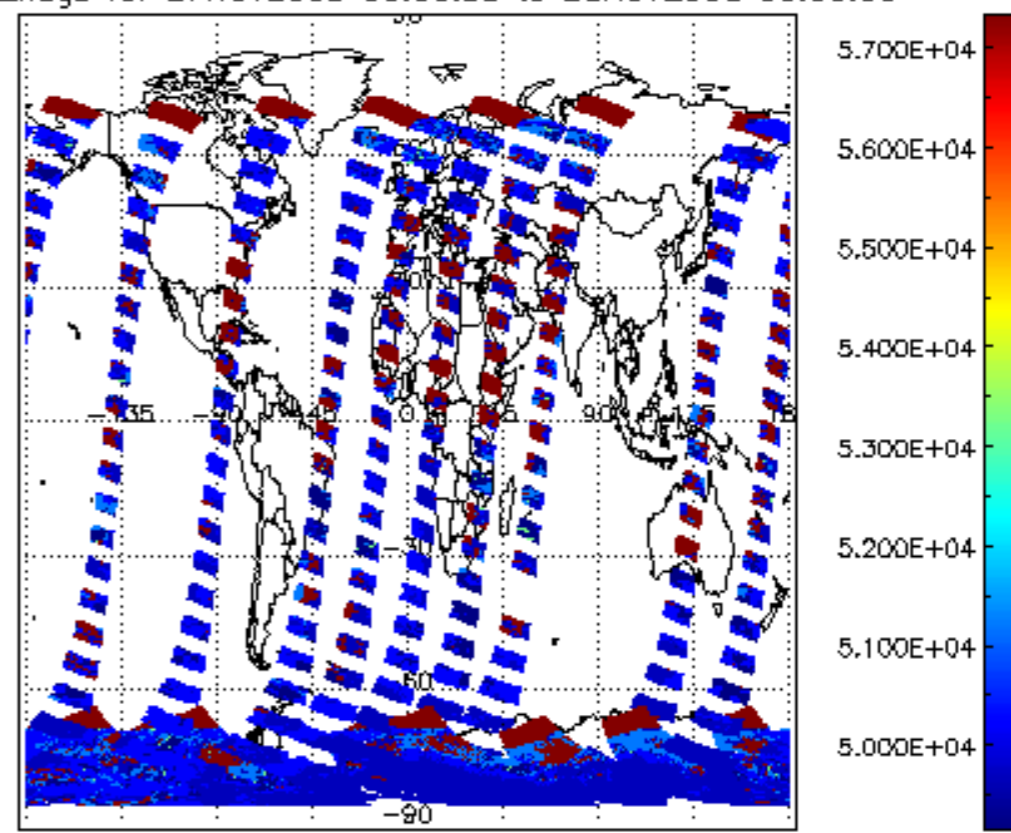
cl\_top\_height for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

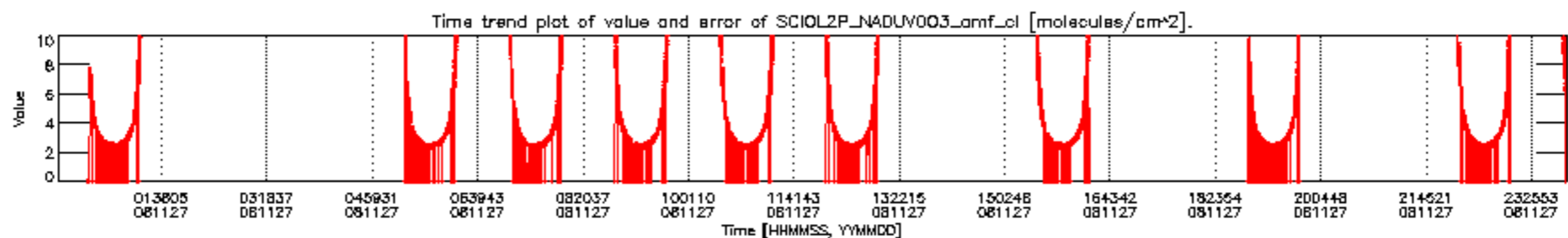
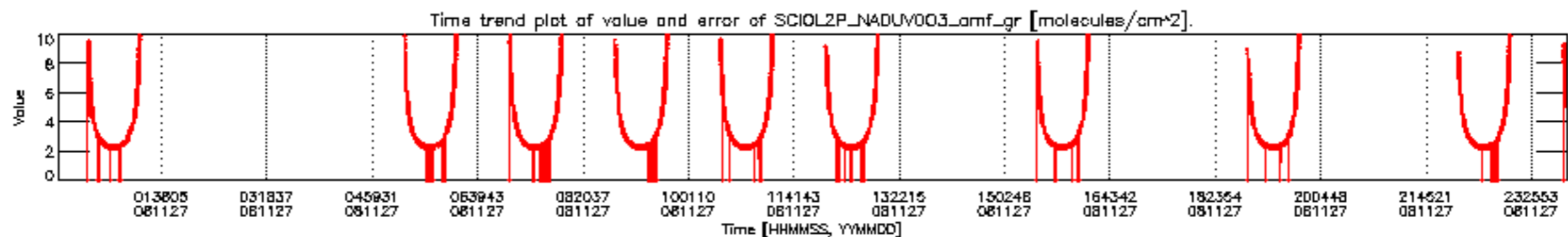
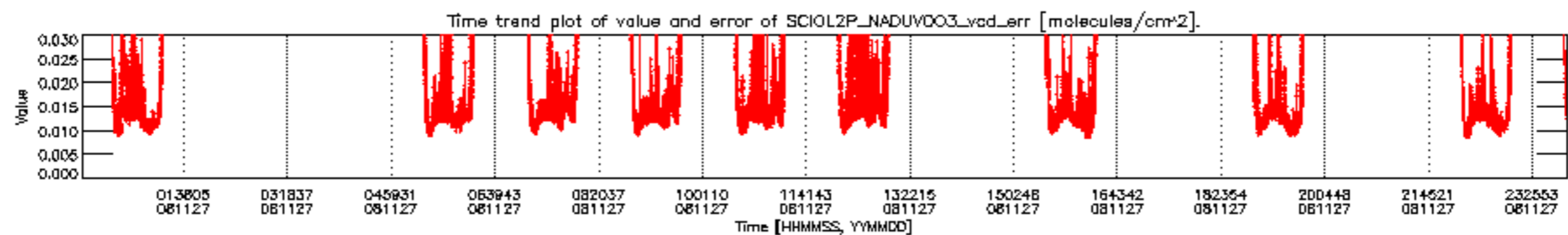
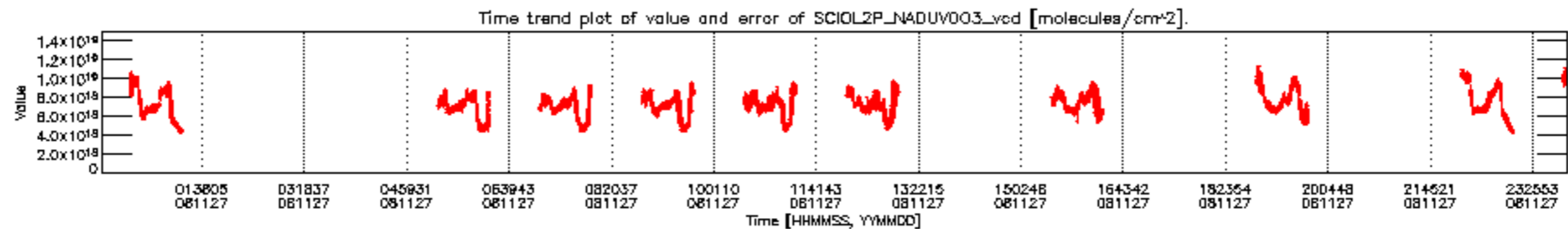


cl\_opt\_depth for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

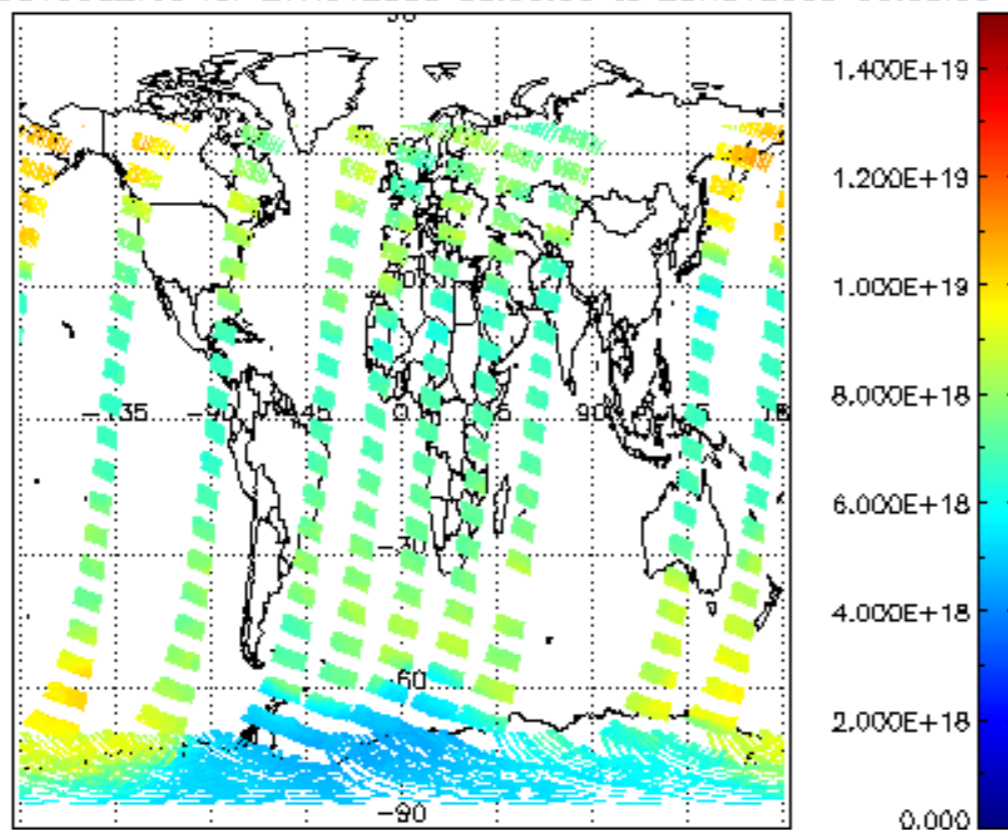


cloud\_flags for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

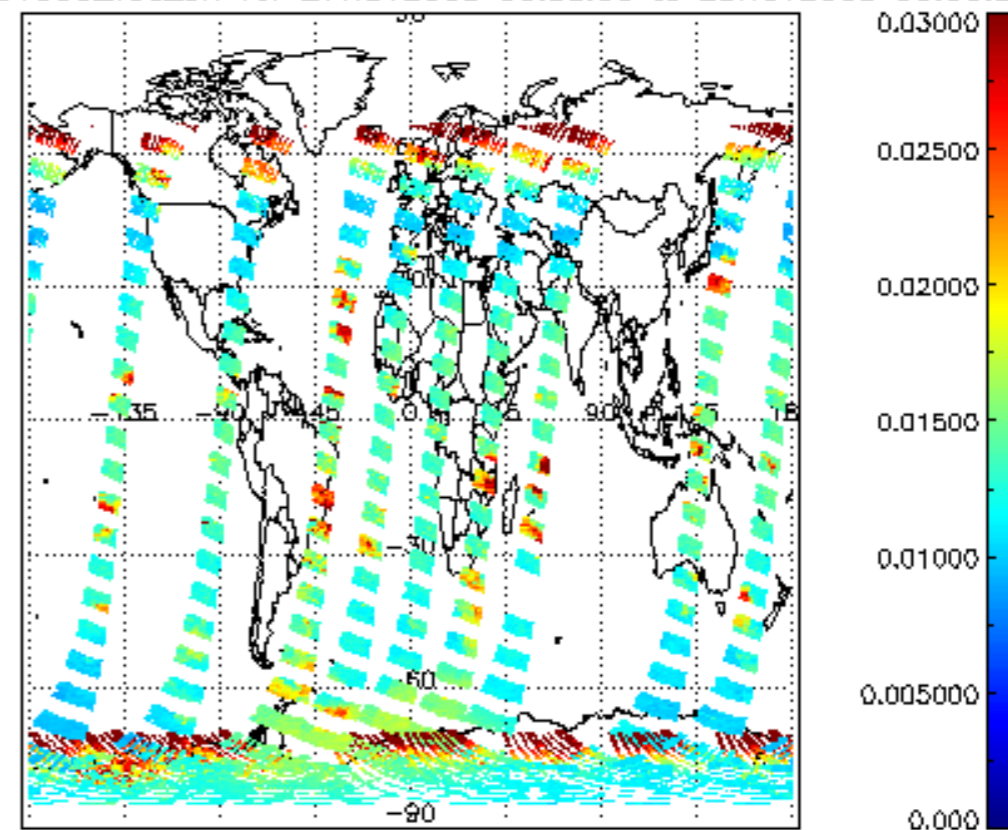




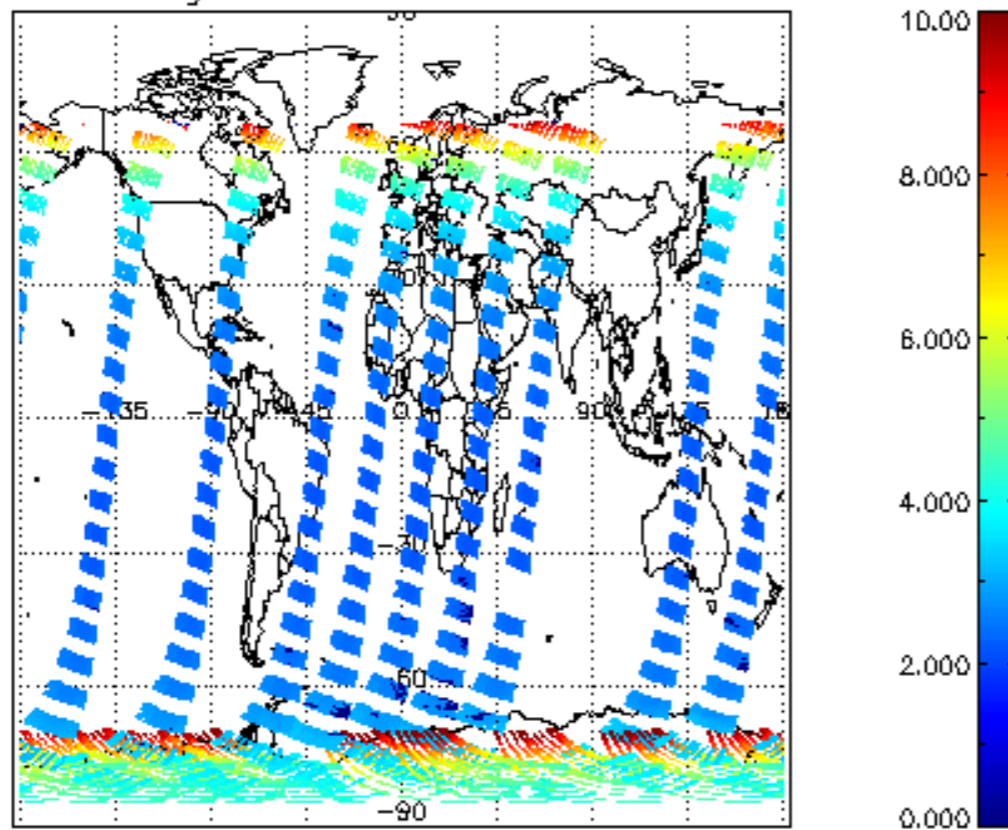
SCIOL2P\_NADUV003\_vcd for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



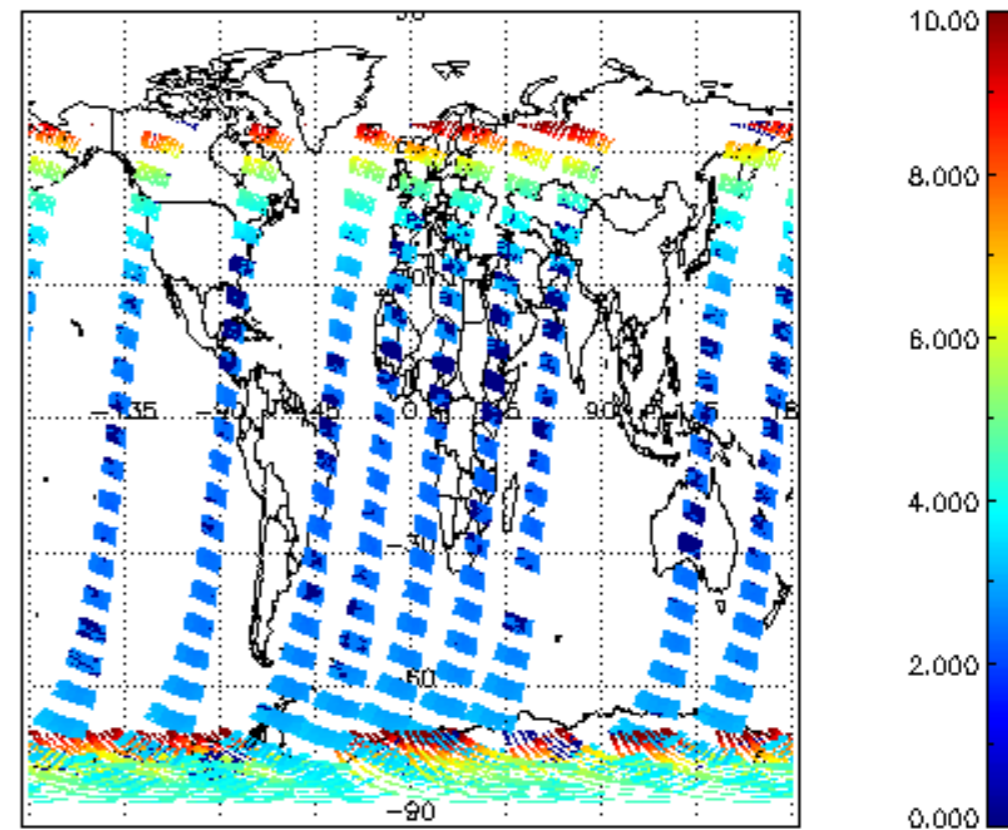
SCIOL2P\_NADUV003\_vcd\_err for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

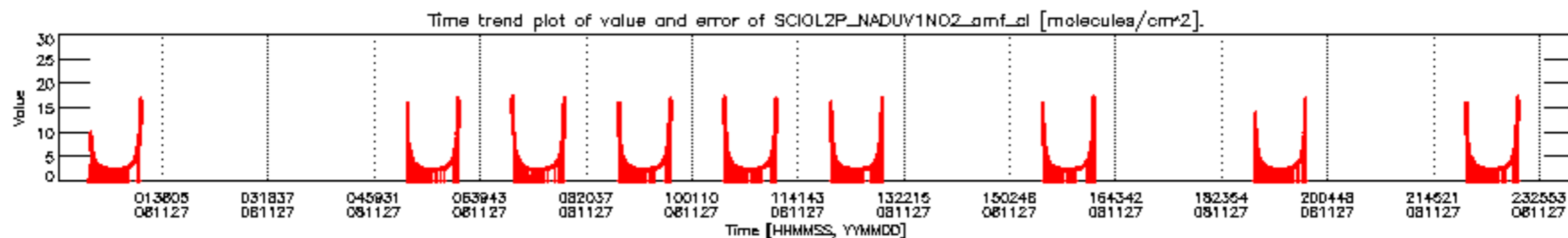
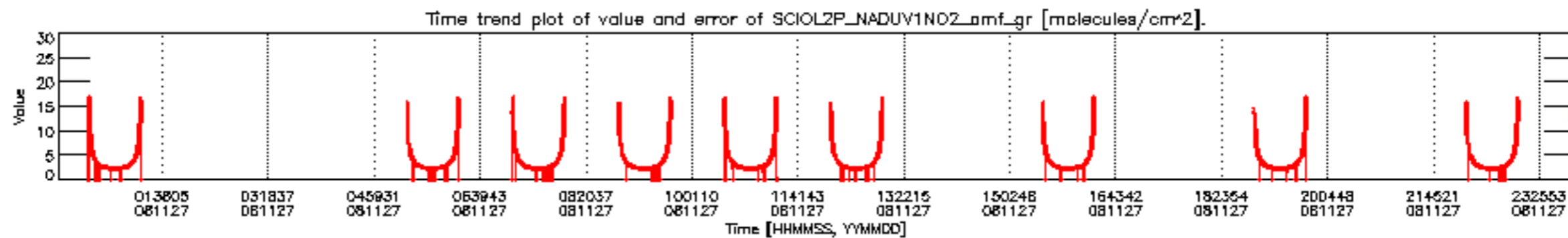
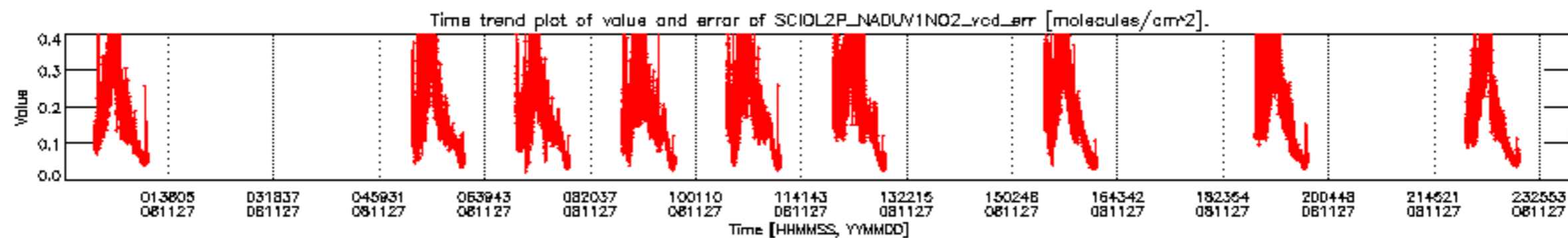
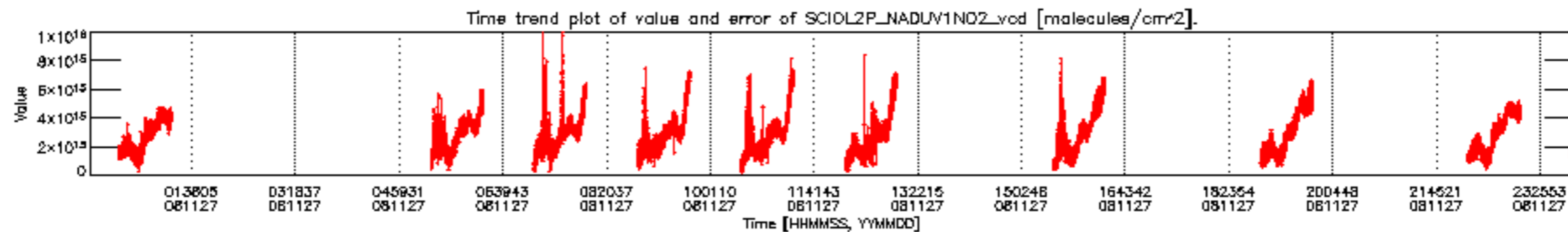


SCIOL2P\_NADUV003\_amf\_gr for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

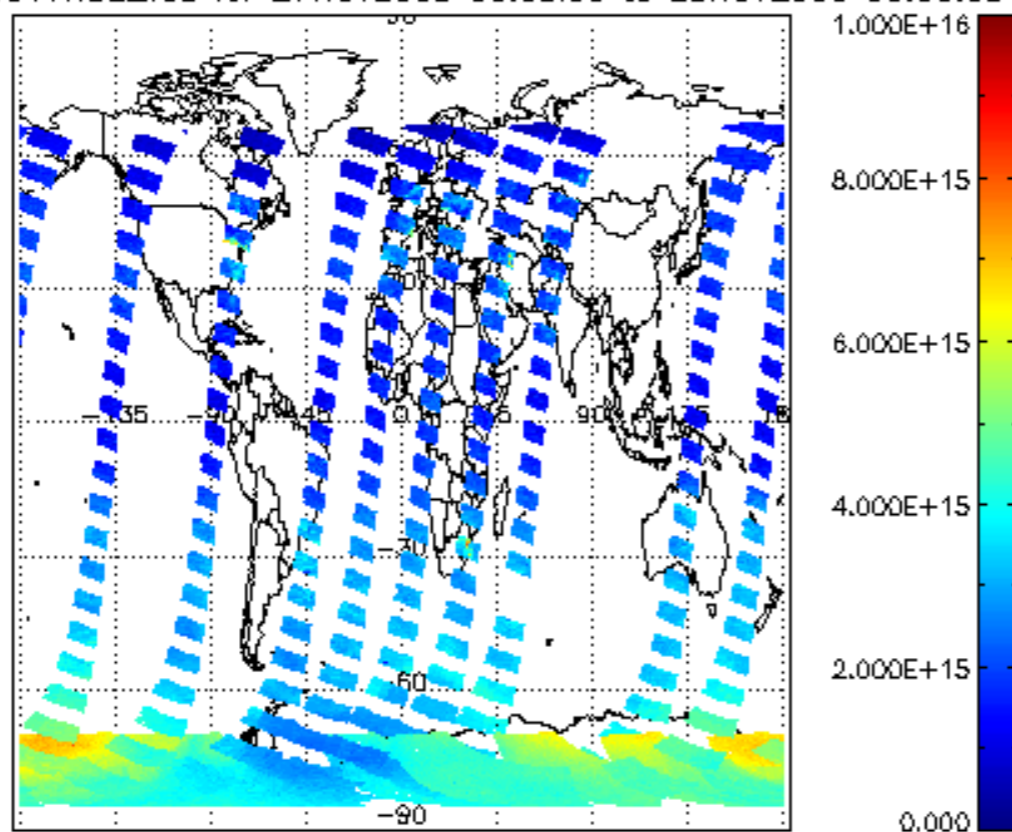


SCIOL2P\_NADUV003\_amf\_cl for 27NOV2008 00:00:00 to 28NOV2008 00:00:00

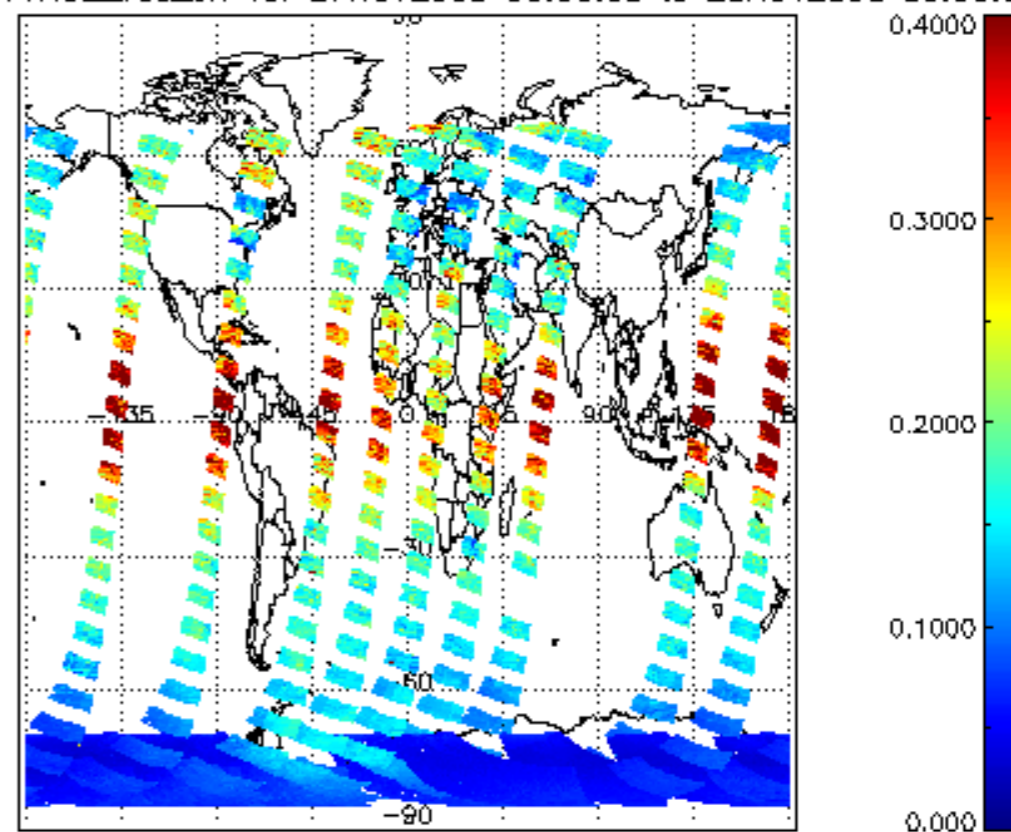




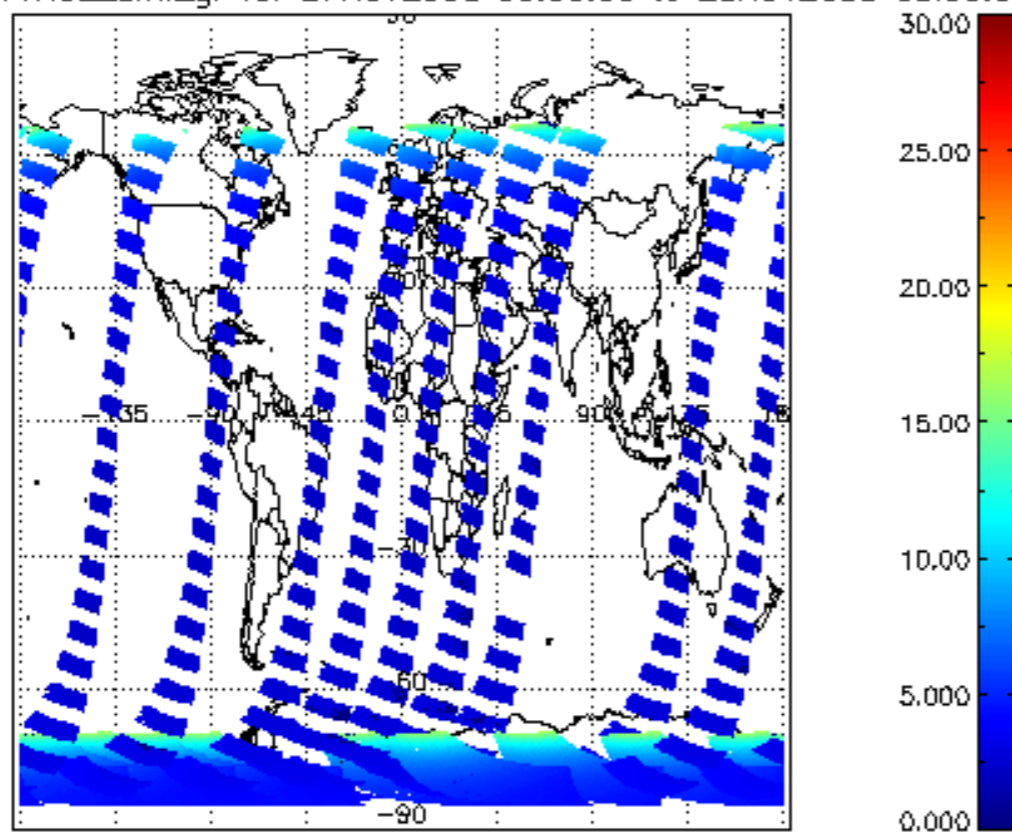
SCIOL2P\_NADUV1NO2\_vcd for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



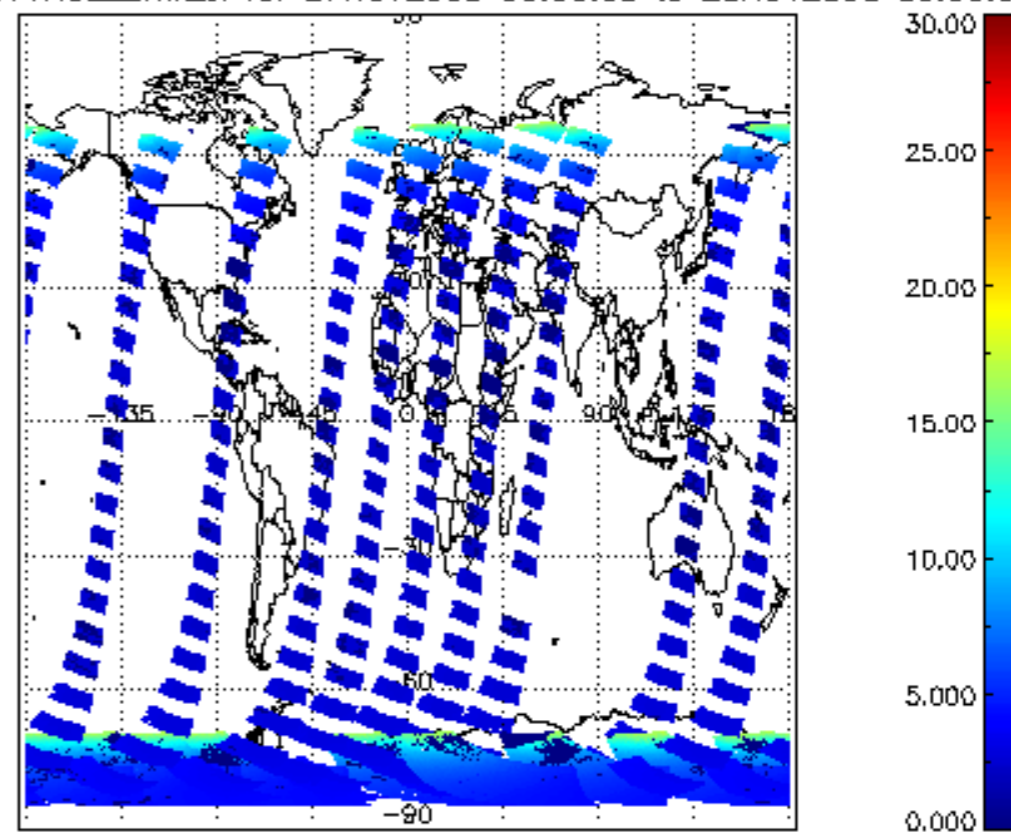
SCIOL2P\_NADUV1NO2\_vcd\_err for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



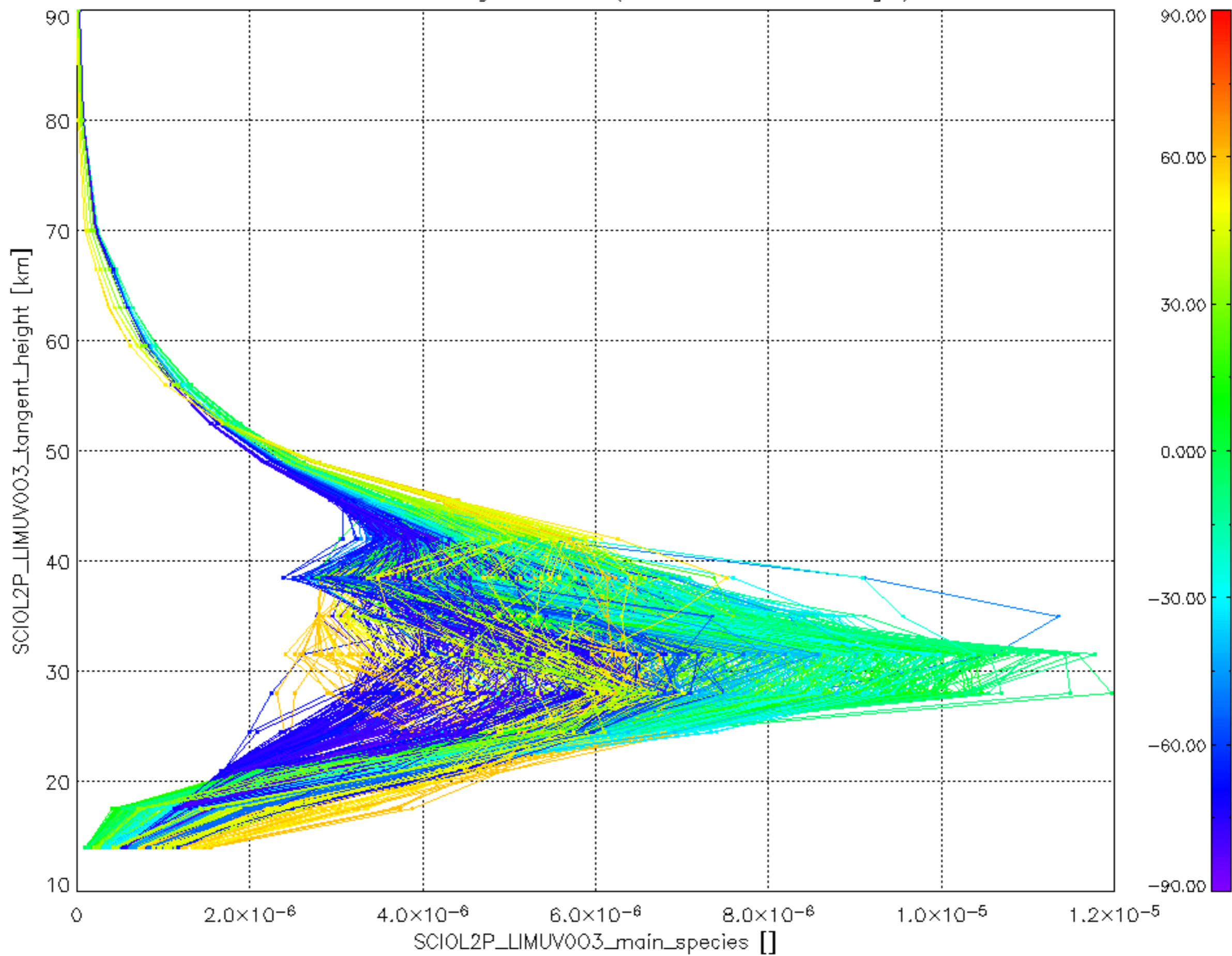
SCIOL2P\_NADUV1NO2\_amf\_gr for 27NOV2008 00:00:00 to 28NOV2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 27NOV2008 00:00:00 to 28NOV2008 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).

