

## 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	16FEB2009 06:02:49
Data source version	SCIA-OL/3.01-R
Processing scope for products	29JAN2009 00:00:00 to 30JAN2009 00:00:00
Start time of first product within scope	28JAN2009 23:01:39
Stop time of last product within scope	30JAN2009 01:06:10
Total number of level 2 products	16
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__2PRDPA20090128_230139_000033252076_00030_36156_2117.N1</a>	28JAN2009 23:01:39	28JAN2009 23:57:04	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20090129_004323_000032692076_00031_36157_2118.N1</a>	29JAN2009 00:43:23	29JAN2009 01:37:52	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20090129_022250_000033252076_00032_36158_2119.N1</a>	29JAN2009 02:22:50	29JAN2009 03:18:15	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20090129_040434_000032692076_00033_36159_2120.N1</a>	29JAN2009 04:04:34	29JAN2009 04:59:04	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20090129_054401_000033252076_00034_36160_2121.N1</a>	29JAN2009 05:44:01	29JAN2009 06:39:26	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20090129_072545_000032692076_00035_36161_2122.N1</a>	29JAN2009 07:25:45	29JAN2009 08:20:15	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20090129_090512_000033252076_00036_36162_2123.N1</a>	29JAN2009 09:05:12	29JAN2009 10:00:37	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20090129_104656_000032692076_00037_36163_2128.N1</a>	29JAN2009 10:46:56	29JAN2009 11:41:26	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20090129_122623_000033252076_00038_36164_2129.N1</a>	29JAN2009 12:26:23	29JAN2009 13:21:48	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20090129_140807_000032692076_00039_36165_2130.N1</a>	29JAN2009 14:08:07	29JAN2009 15:02:37	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20090129_154734_000033252076_00040_36166_2131.N1</a>	29JAN2009 15:47:34	29JAN2009 16:43:00	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20090129_172822_000033292076_00041_36167_2132.N1</a>	29JAN2009 17:28:22	29JAN2009 18:23:51	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20090129_190818_000033812076_00042_36168_2133.N1</a>	29JAN2009 19:08:18	29JAN2009 20:04:40	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20090129_205029_000032692076_00043_36169_2134.N1</a>	29JAN2009 20:50:29	29JAN2009 21:44:59	0	GOOD
14	<a href="#">SCI_OL__2PRDPA20090129_222956_000033252076_00044_36170_2135.N1</a>	29JAN2009 22:29:56	29JAN2009 23:25:22	0	GOOD
15	<a href="#">SCI_OL__2PRDPA20090130_001140_000032692076_00045_36171_2136.N1</a>	30JAN2009 00:11:40	30JAN2009 01:06:10	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: 146900

Total number of cloud data DSRs with good quality flag (=0): 146900 (100.0 %)

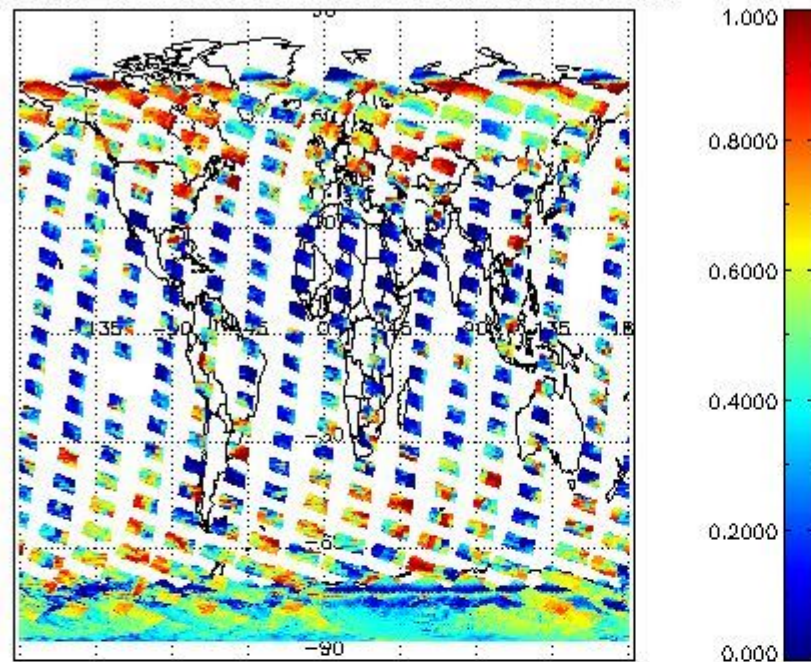
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	146900	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	146900	0.16947	0.12500	0.12500	0.25000	0.059843	s
CL_FRAC	146900	0.41540	0.40271	0.0000	1.0000	0.26986	-
CL_FRAC_ERR	146900	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	146900	5.4230	4.0000	4.0000	8.0000	1.9150	
PMD_READ_CL[0]	146900	0.17664	0.0000	0.0000	8.0000	0.90861	-
PMD_READ_CL[1]	146900	0.61868	0.0000	0.0000	8.0000	1.7700	-
CL_TOP_HEIGHT	121985	4.3161	3.0711	0.0000	17.000	3.9846	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	121985	53.935	42.802	0.0000	101.00	39.599	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	146900	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	146900	11001001	11000100	11000000	11100000	3138.4	flags
AERO_ABSO_IND	146900	3.1976	3.6486	-1.2759	16.844	2.2914	
AERO_IND_DIAG	146900	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	146900	01010110	00000000	00000000	11000000	24457.	flags

### Time and geolocation plots:

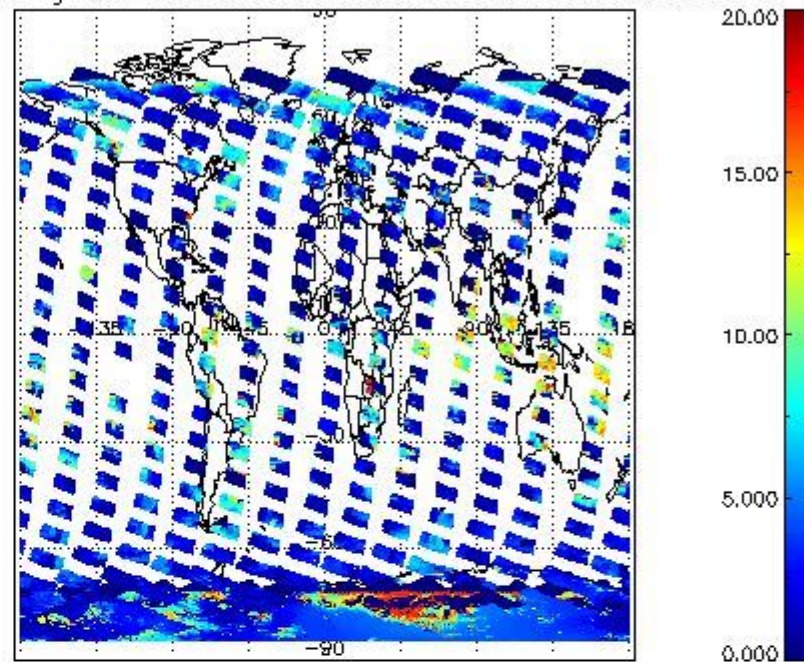
Plots are available for the following parameters:

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

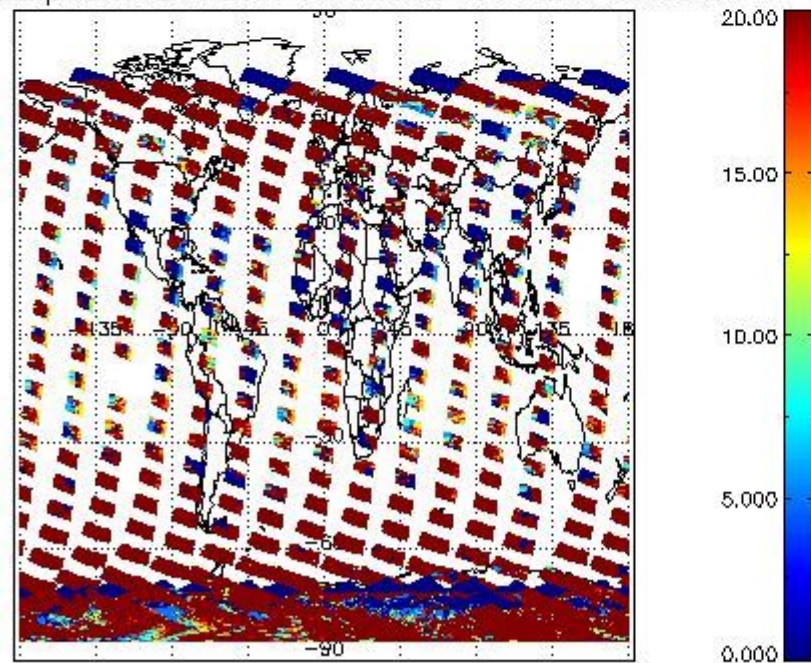
cL\_frac for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



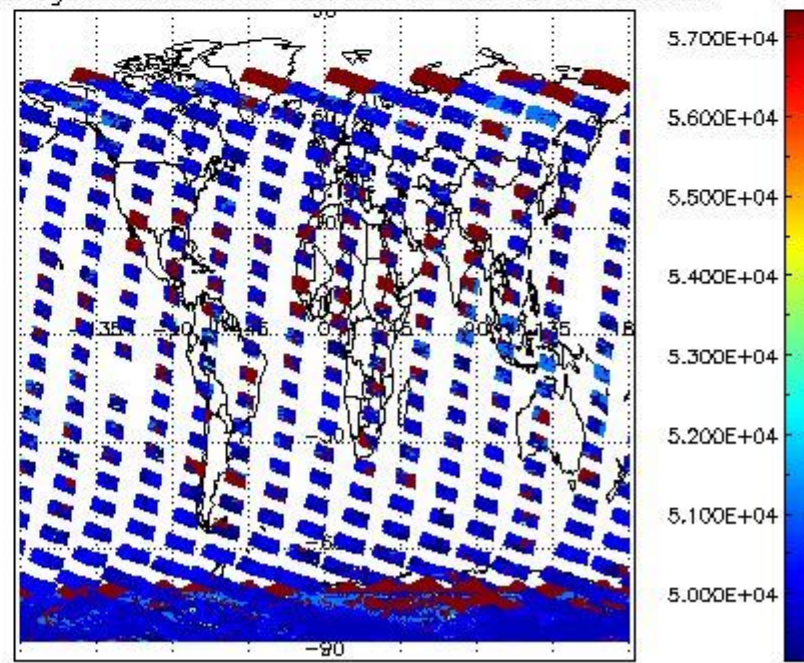
cL\_top\_height for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



cLopt\_depth for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



cloud\_flags for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



## 2.2.2 Nadir

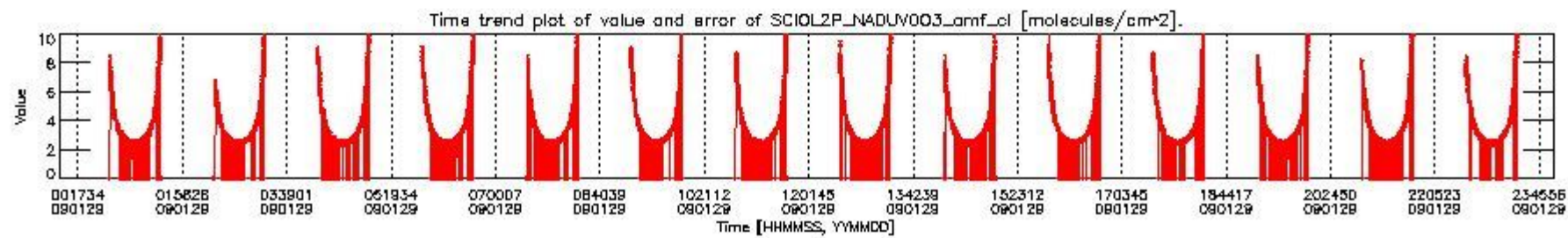
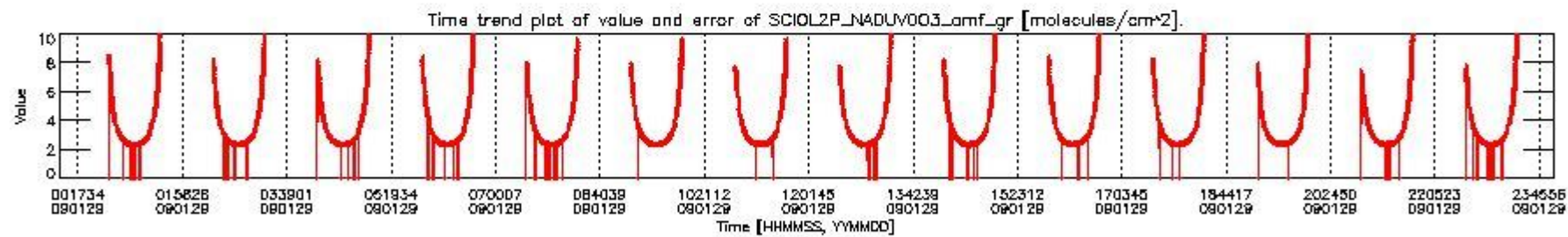
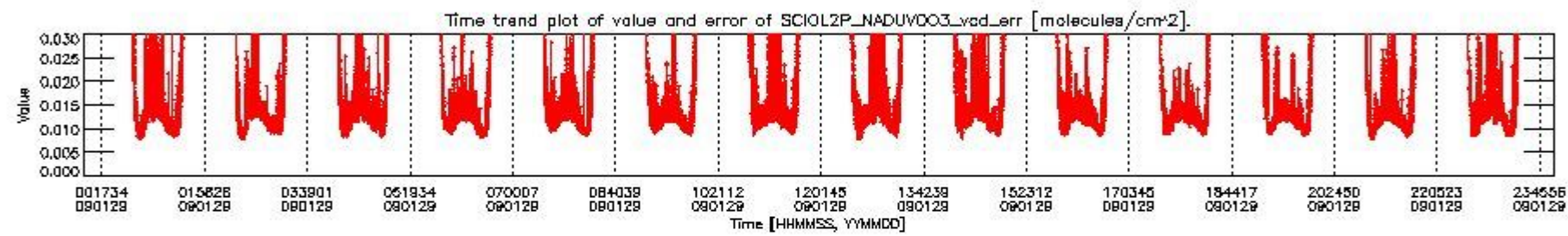
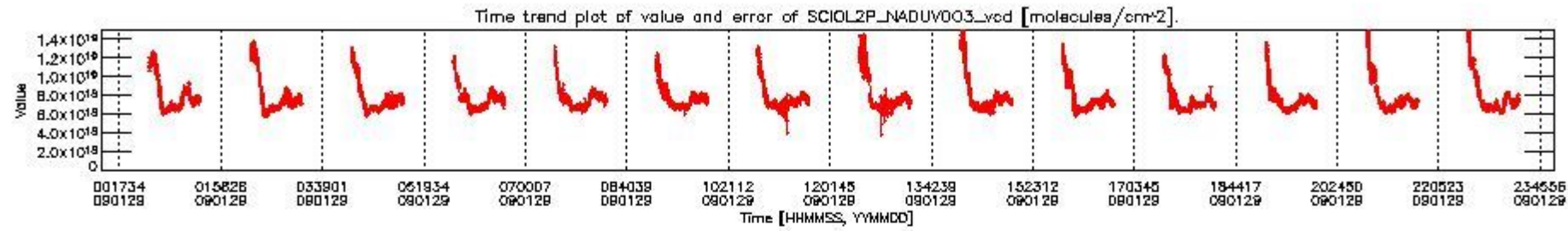
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

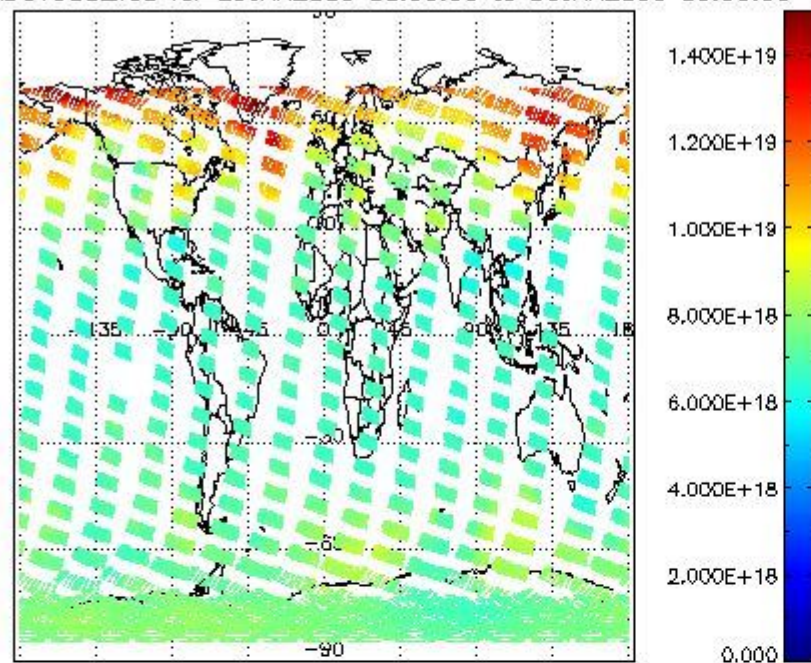
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

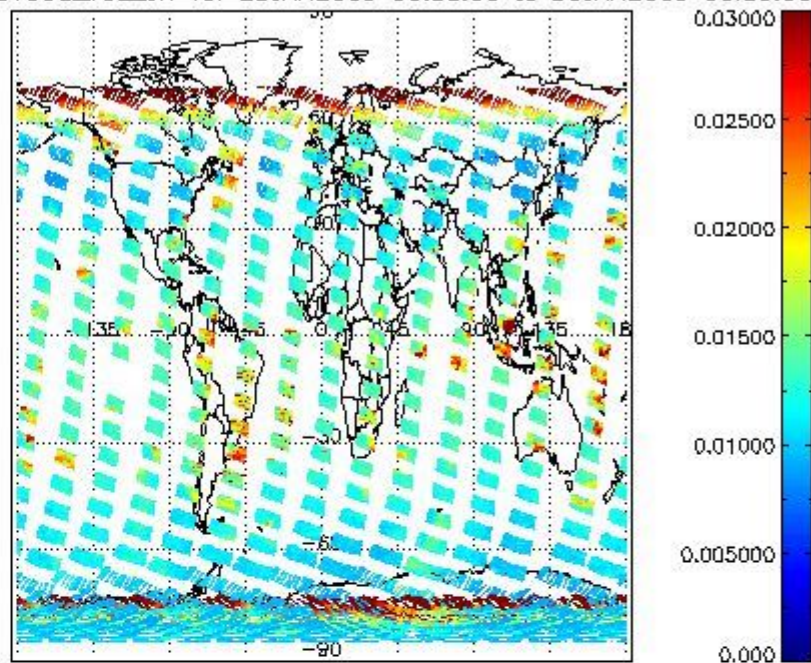
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



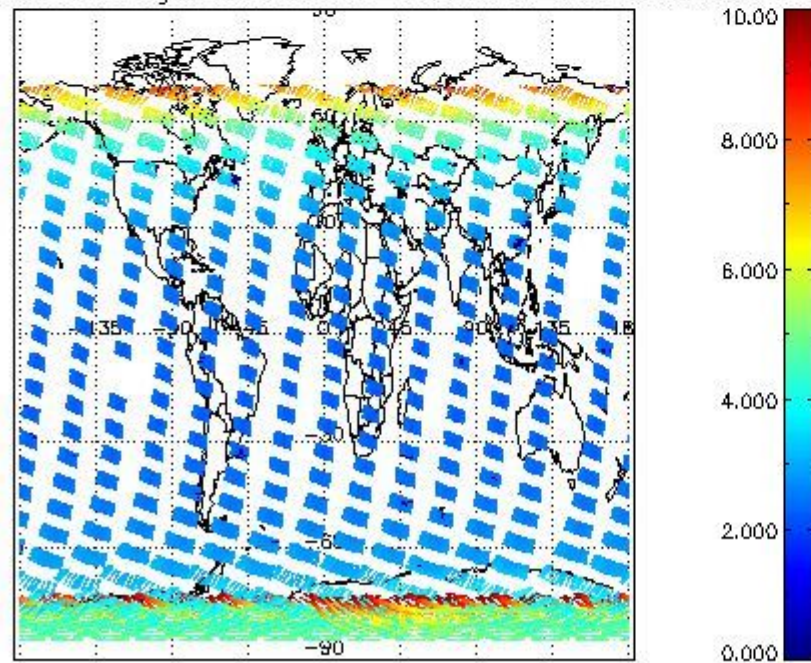
SCIOL2P\_NADUV003\_vcd for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



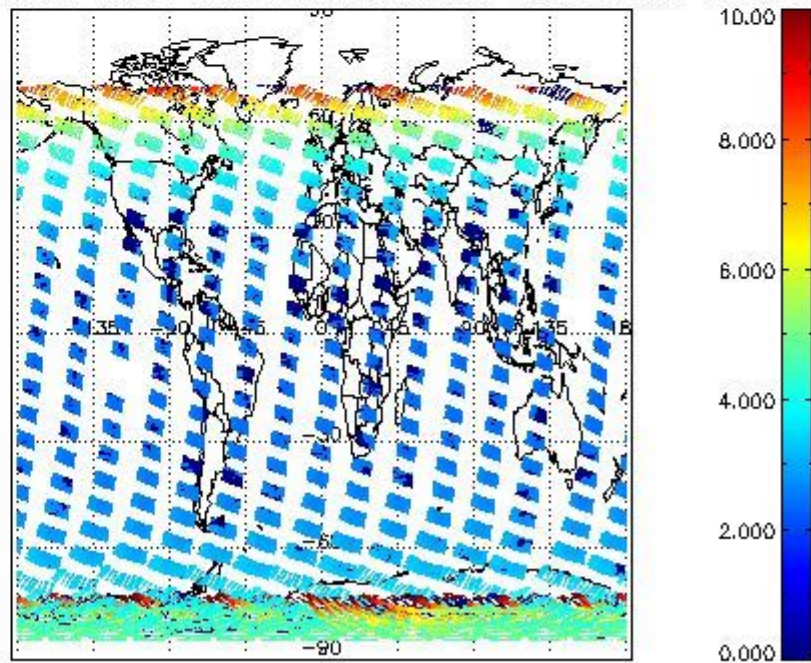
SCIOL2P\_NADUV003\_vcd\_err for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

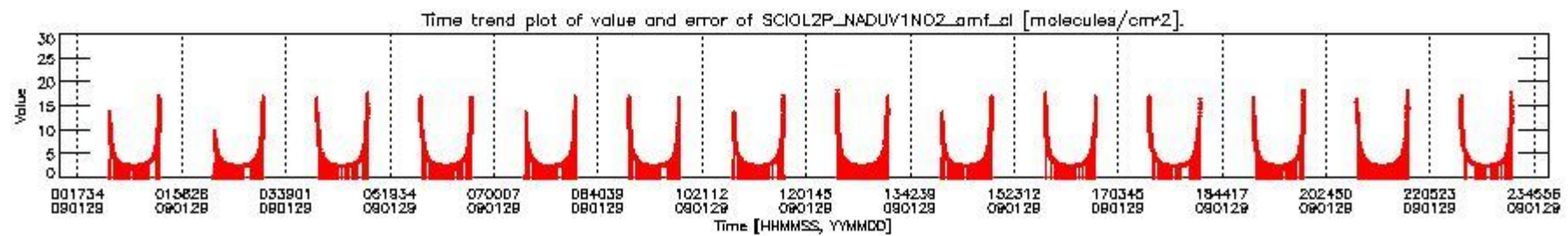
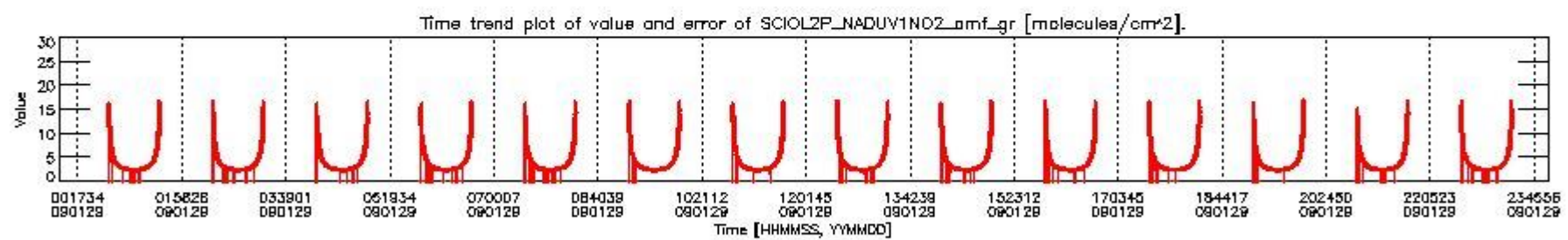
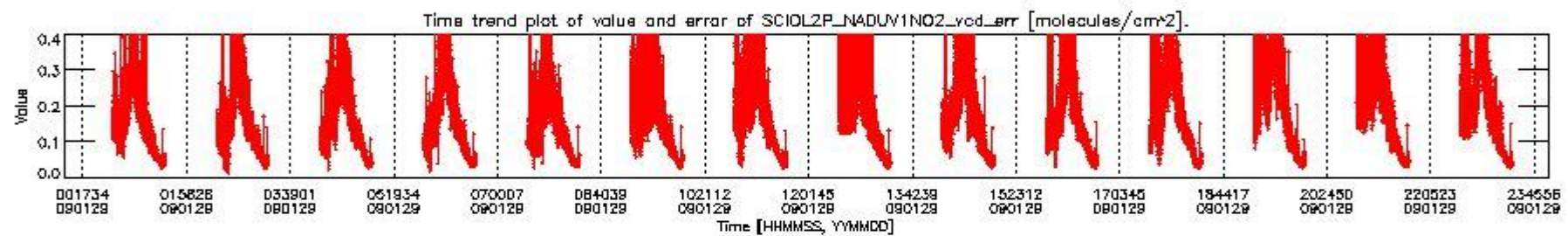
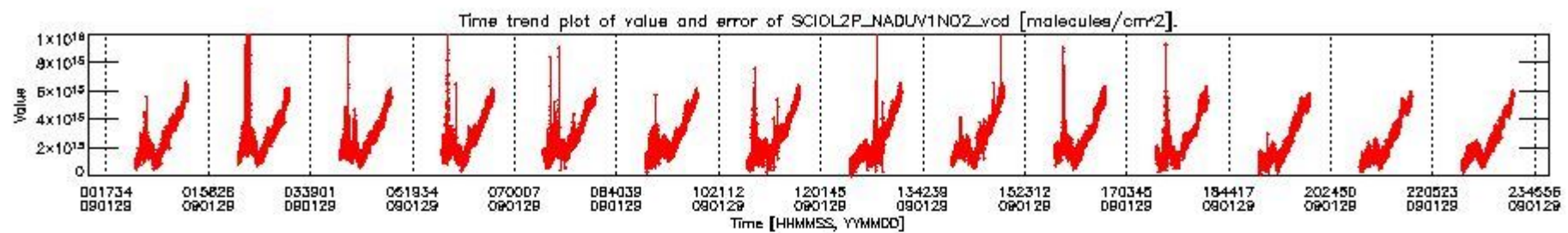


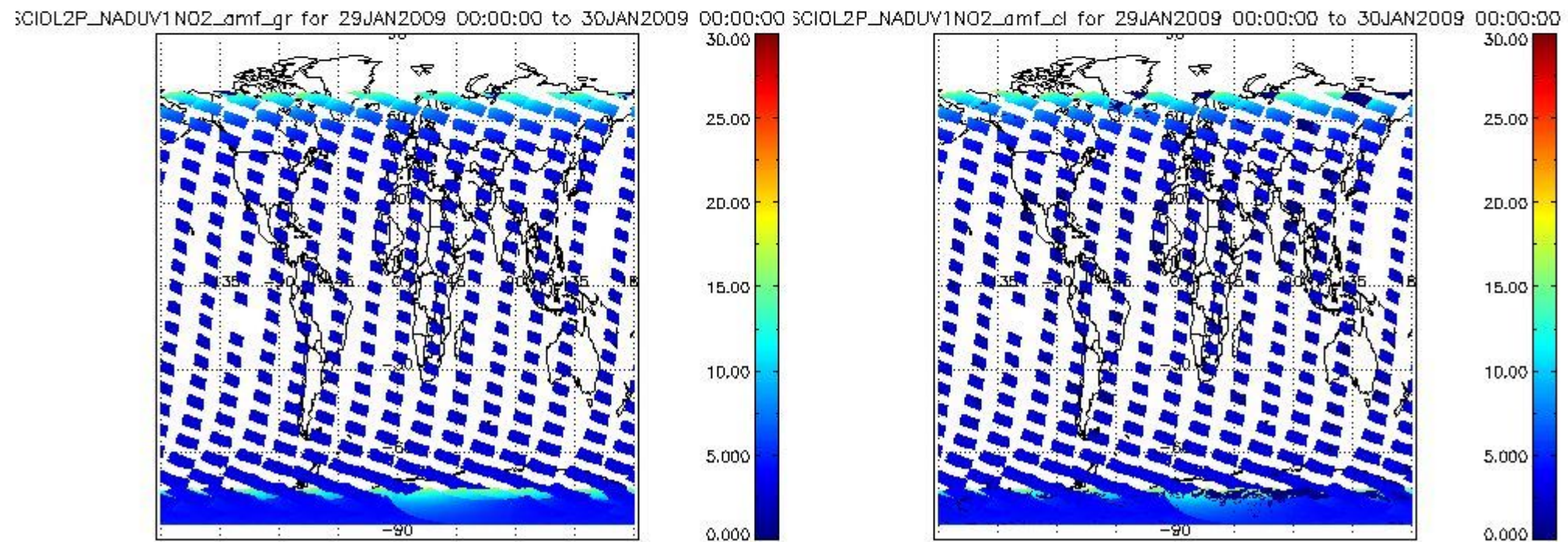
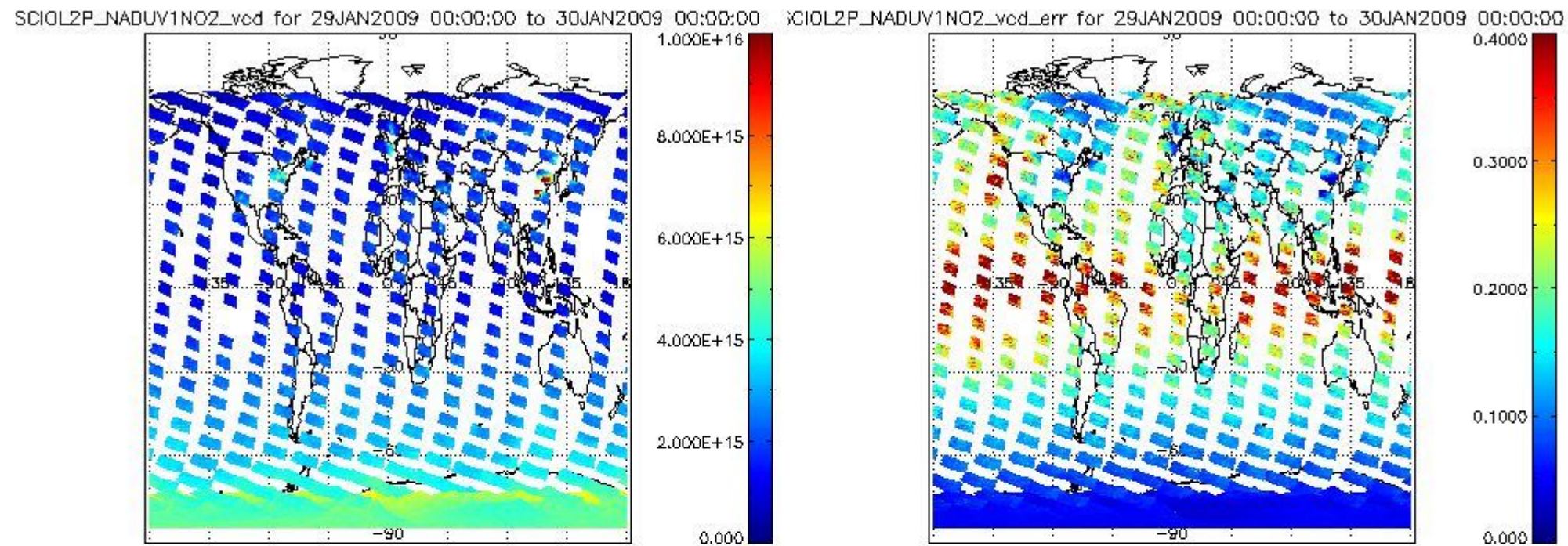
SCIOL2P\_NADUV003\_amf\_gr for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 29JAN2009 00:00:00 to 30JAN2009 00:00:00







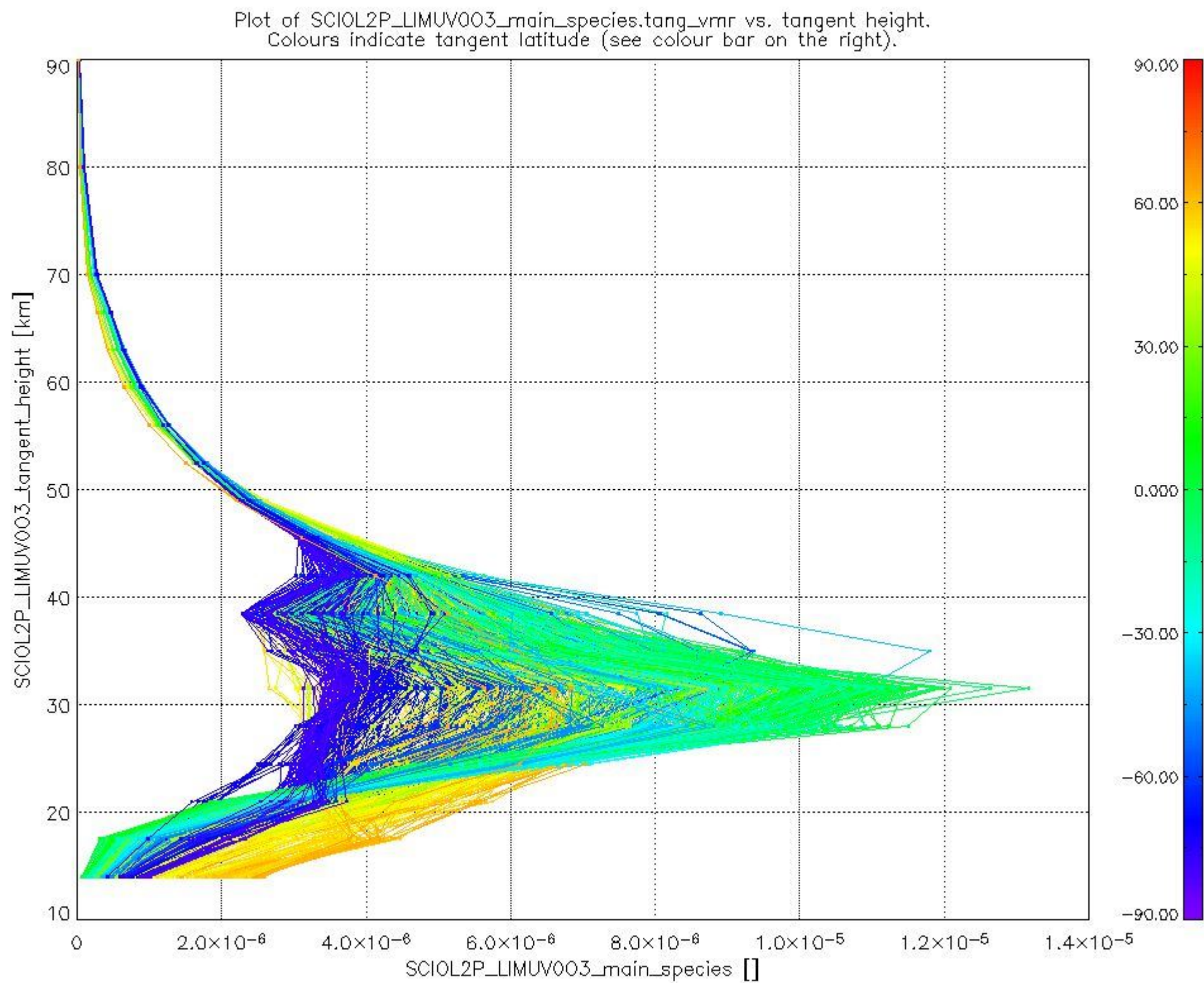
### 2.2.3 Limb

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:

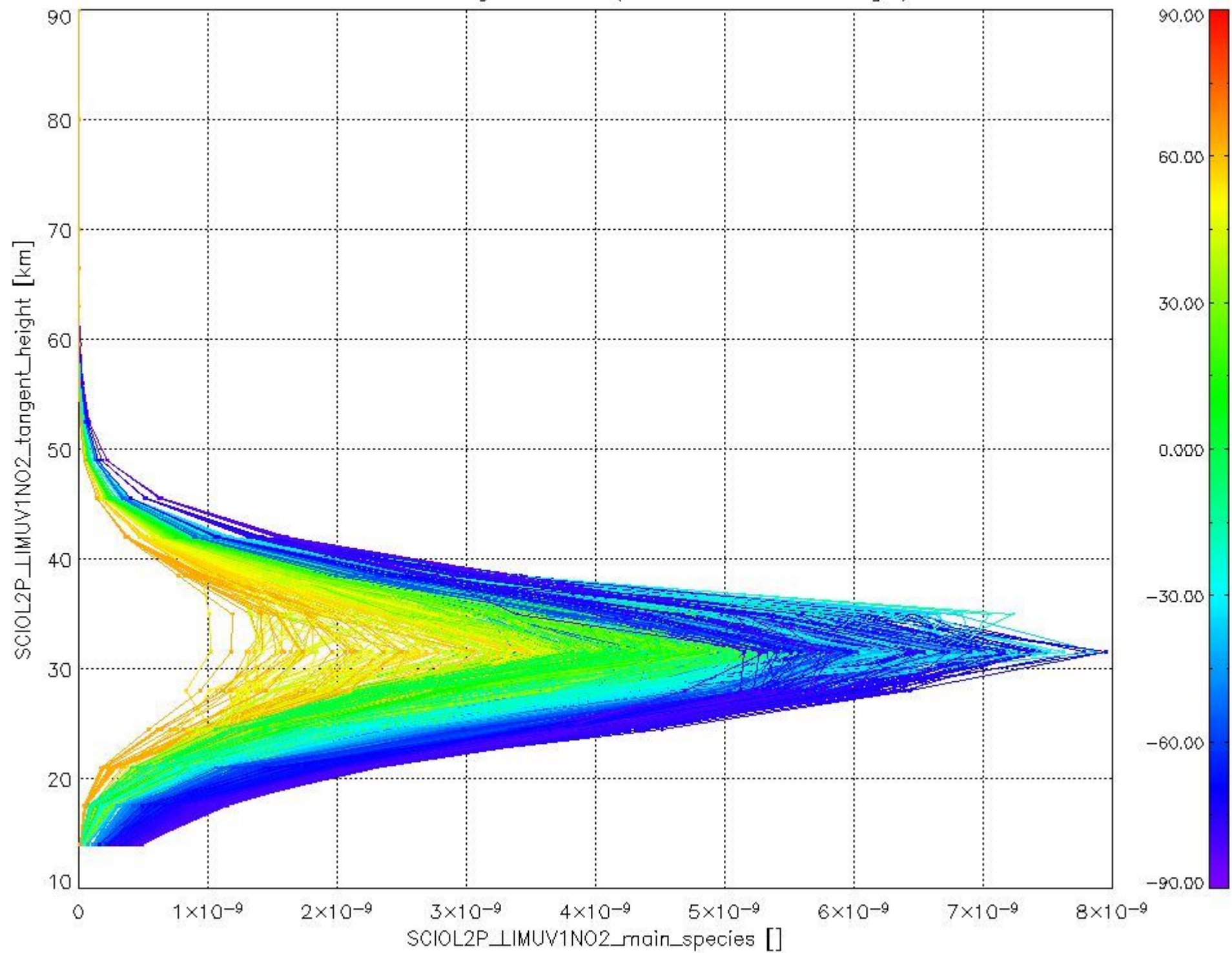
Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

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





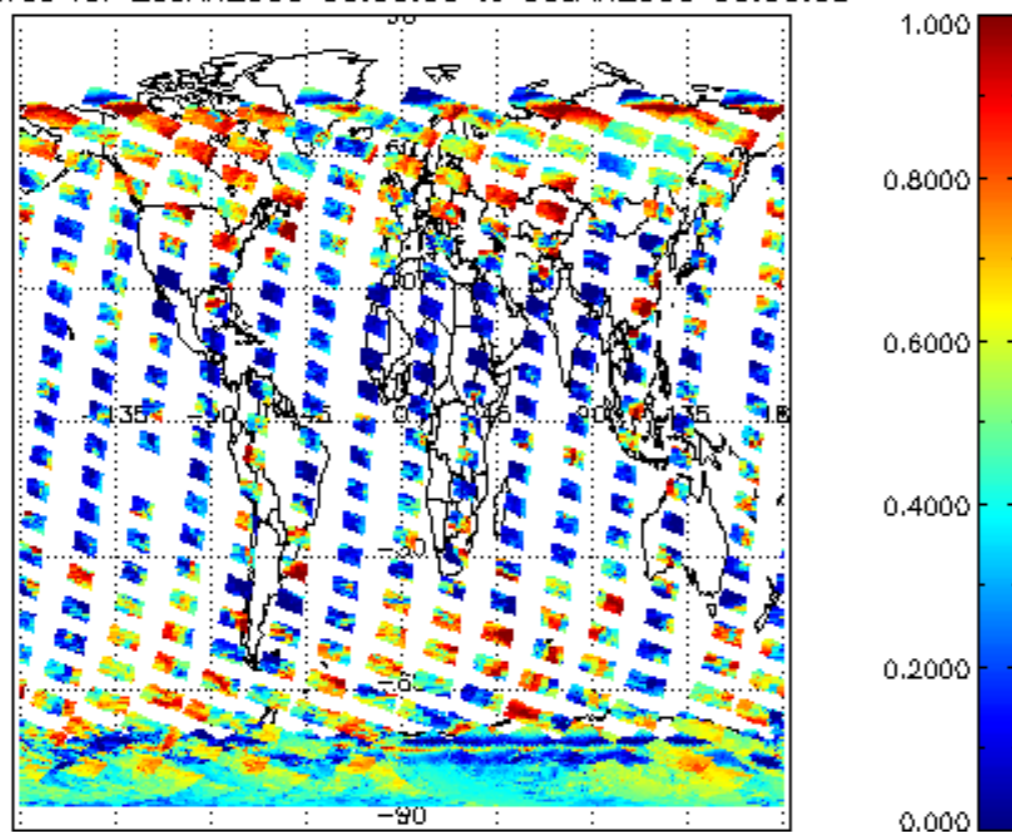
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



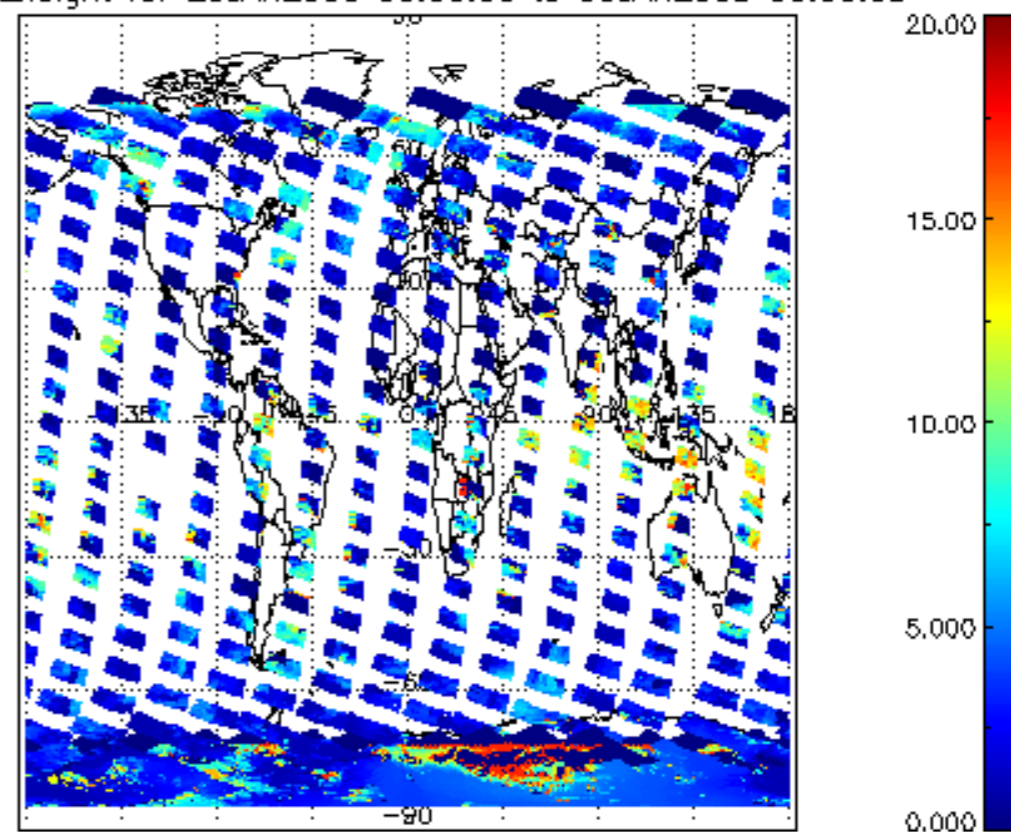
### 2.3 ADF monitoring

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

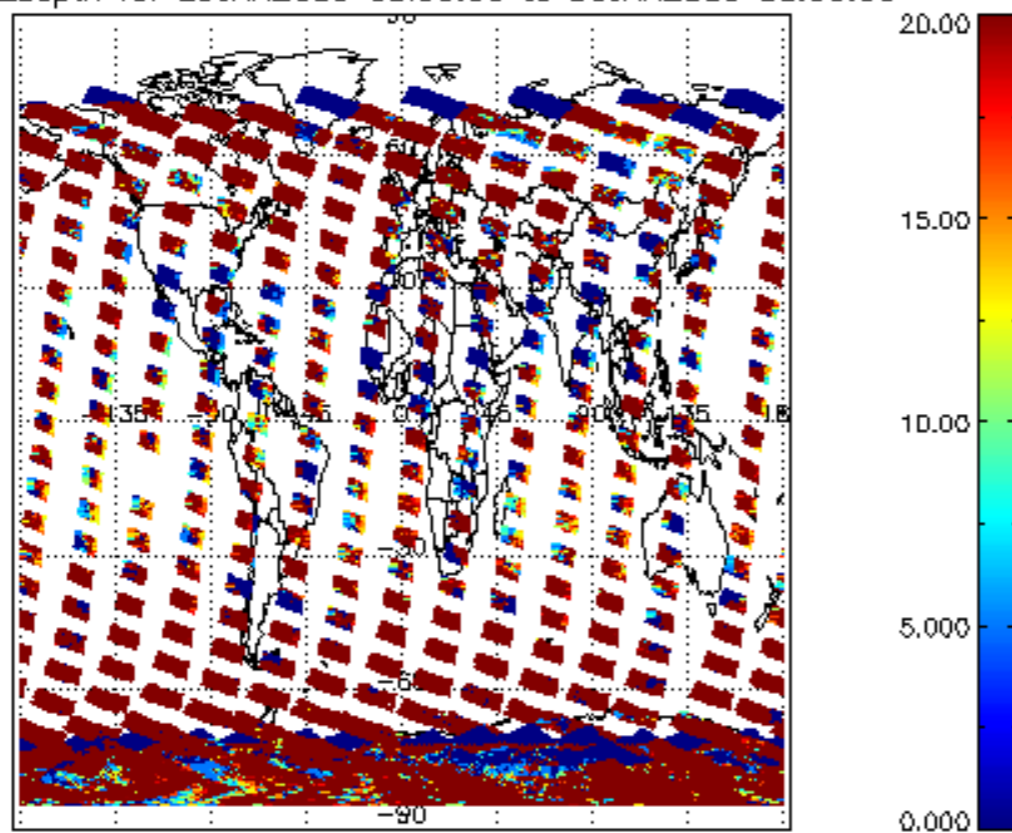
cL\_frac for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



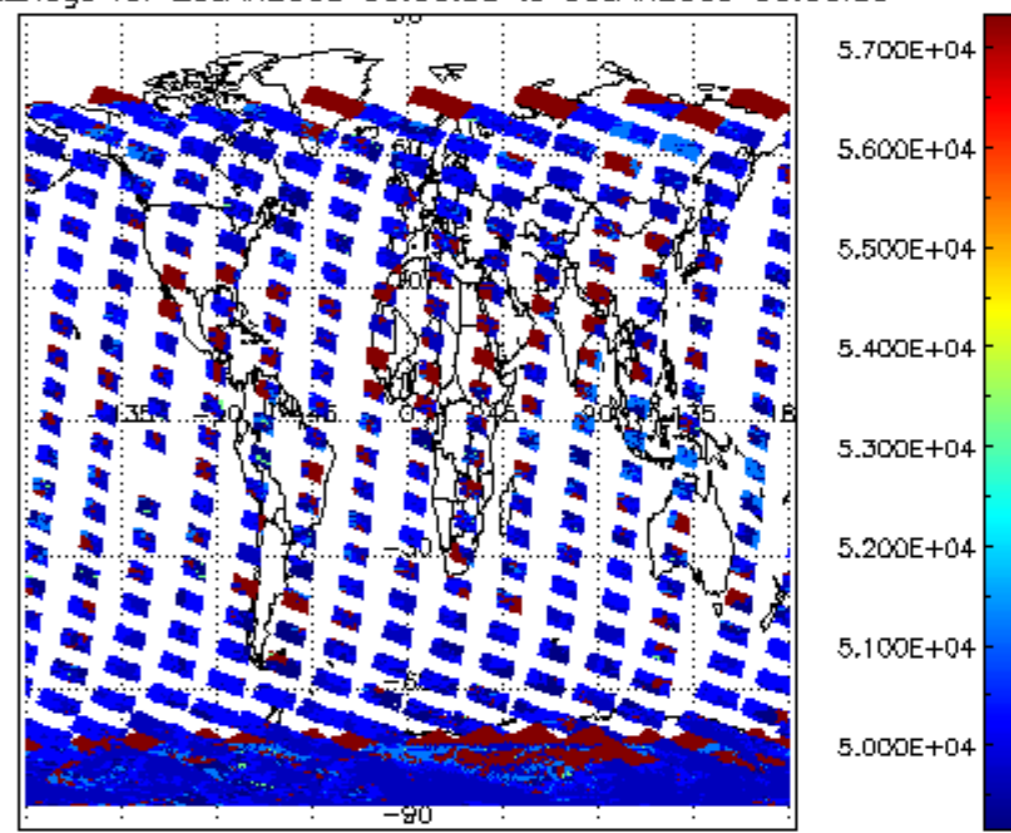
cL\_top\_height for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

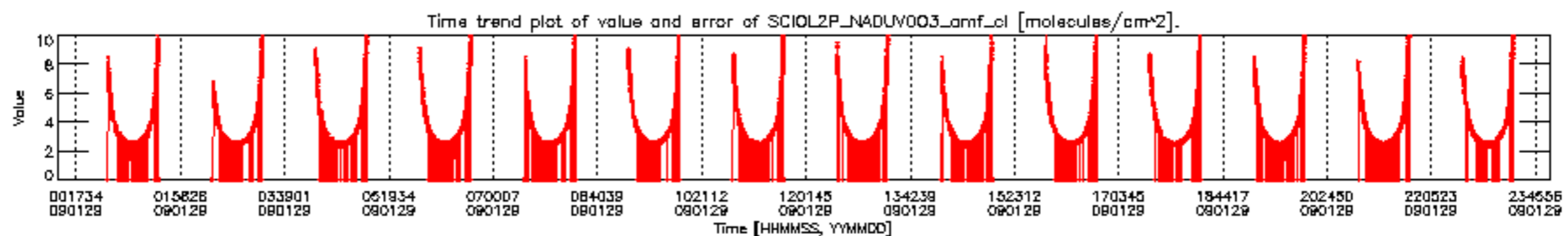
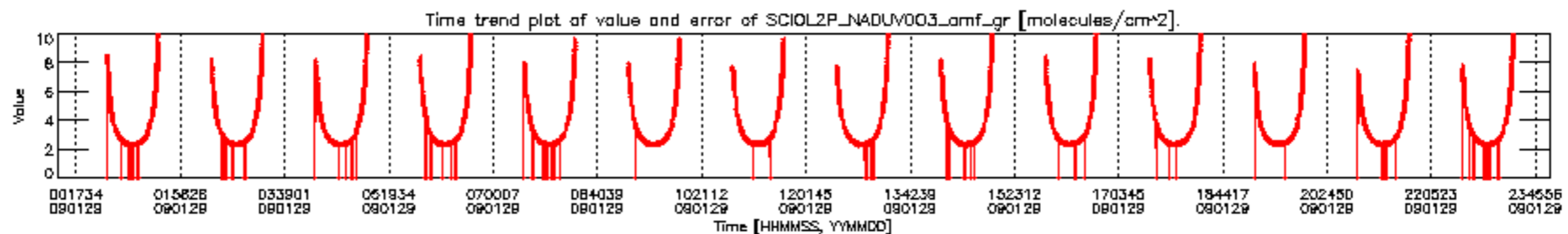
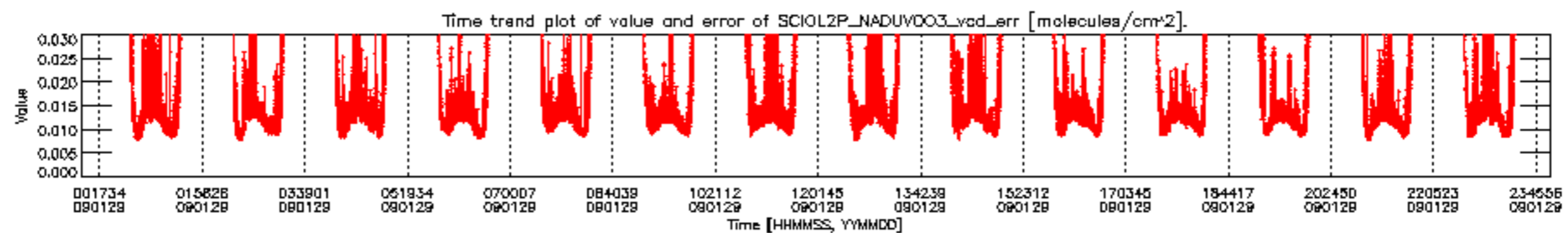
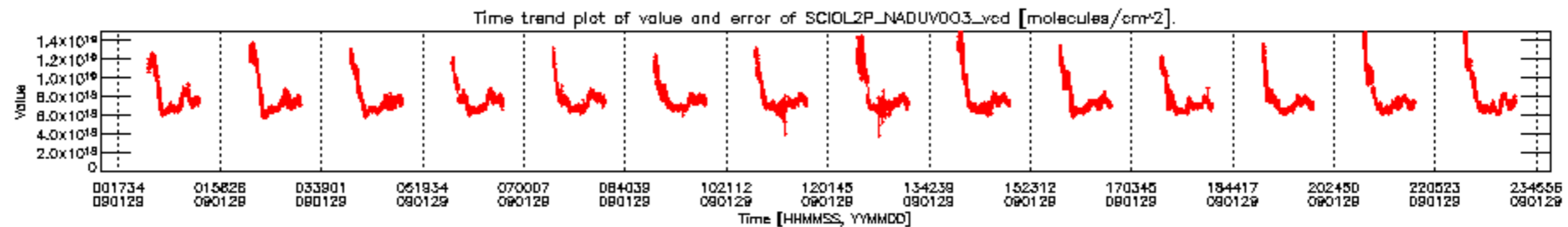


cLopt\_depth for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

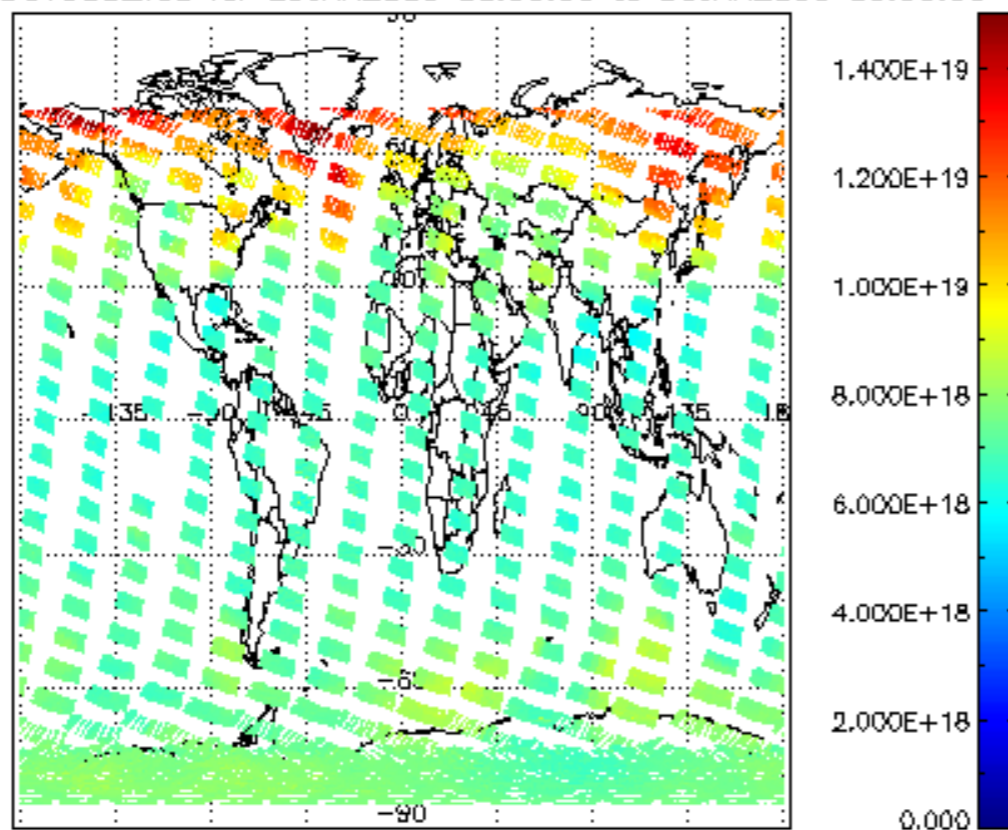


cloud\_flags for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

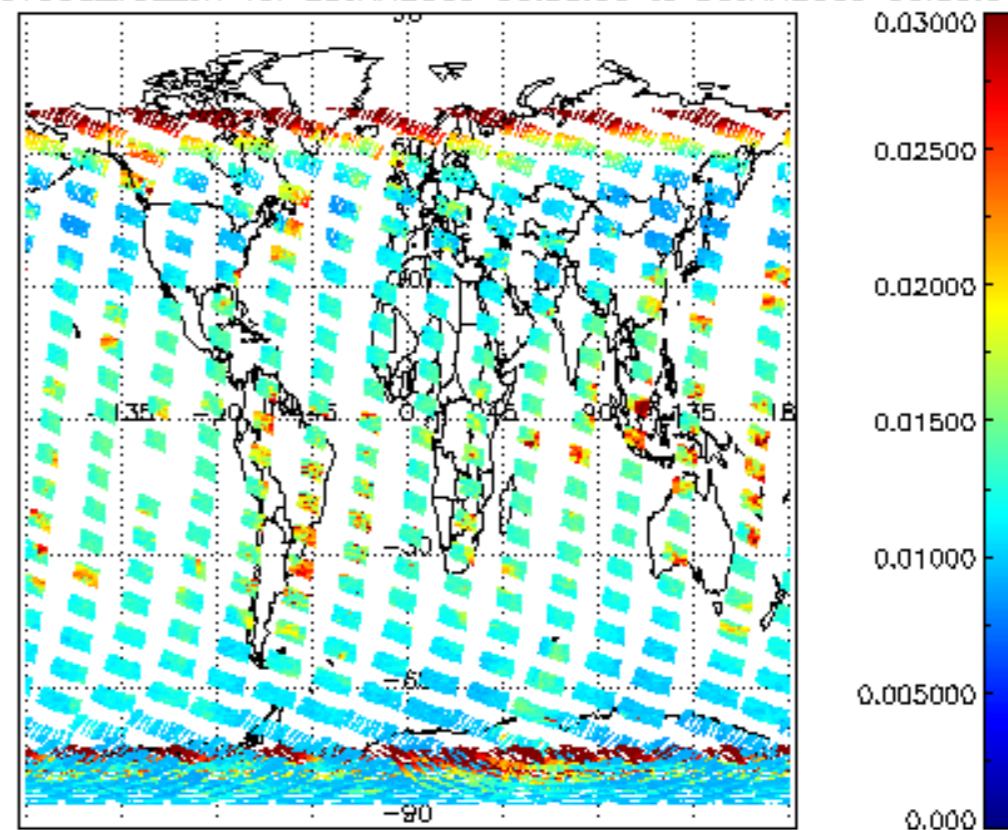




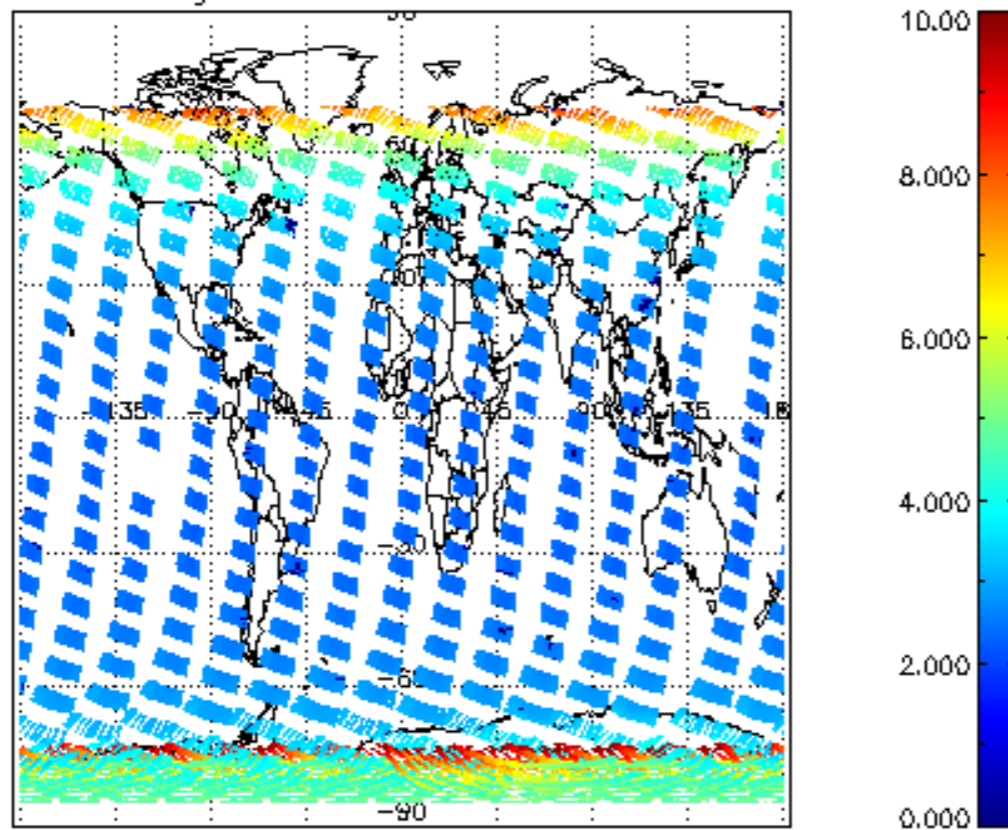
SCIOL2P\_NADUV003\_vcd for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



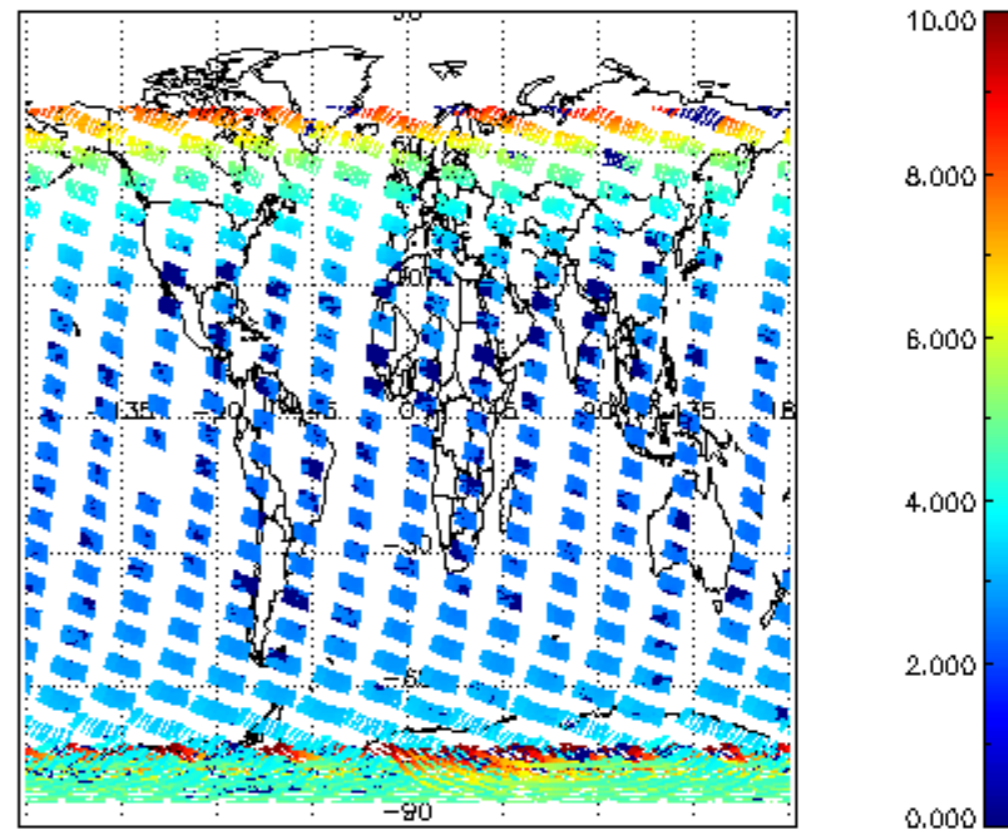
SCIOL2P\_NADUV003\_vcd\_err for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

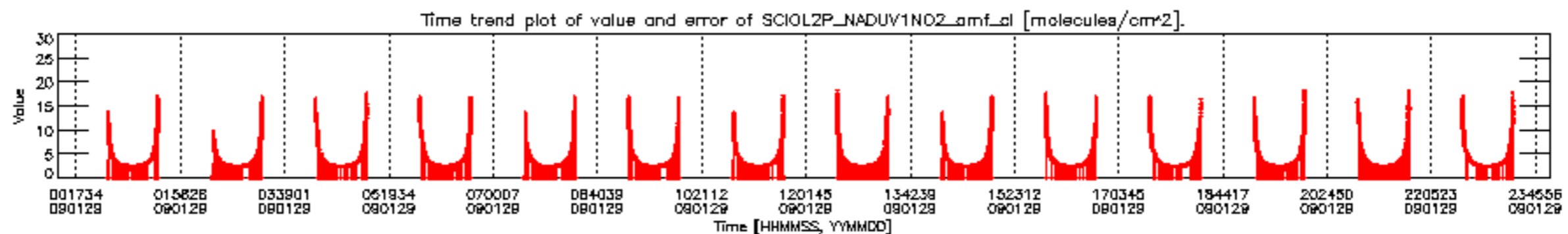
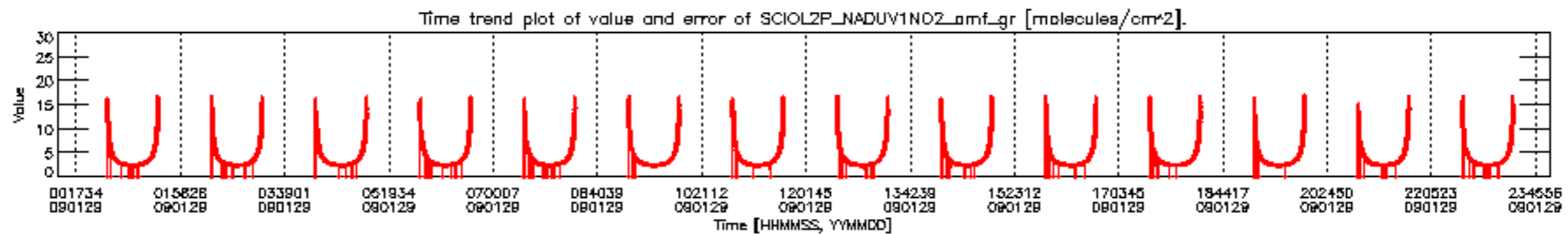
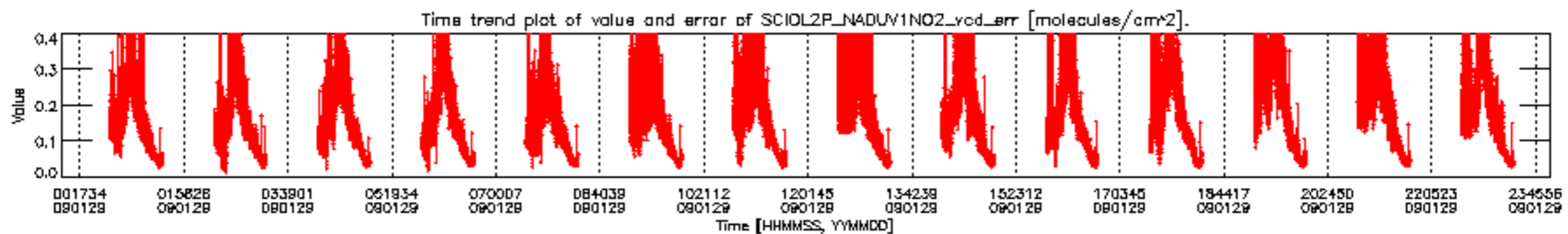
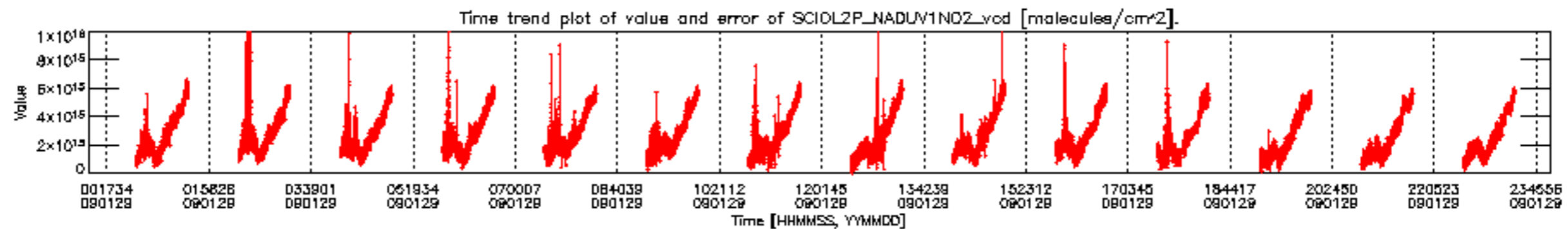


SCIOL2P\_NADUV003\_amf\_gr for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

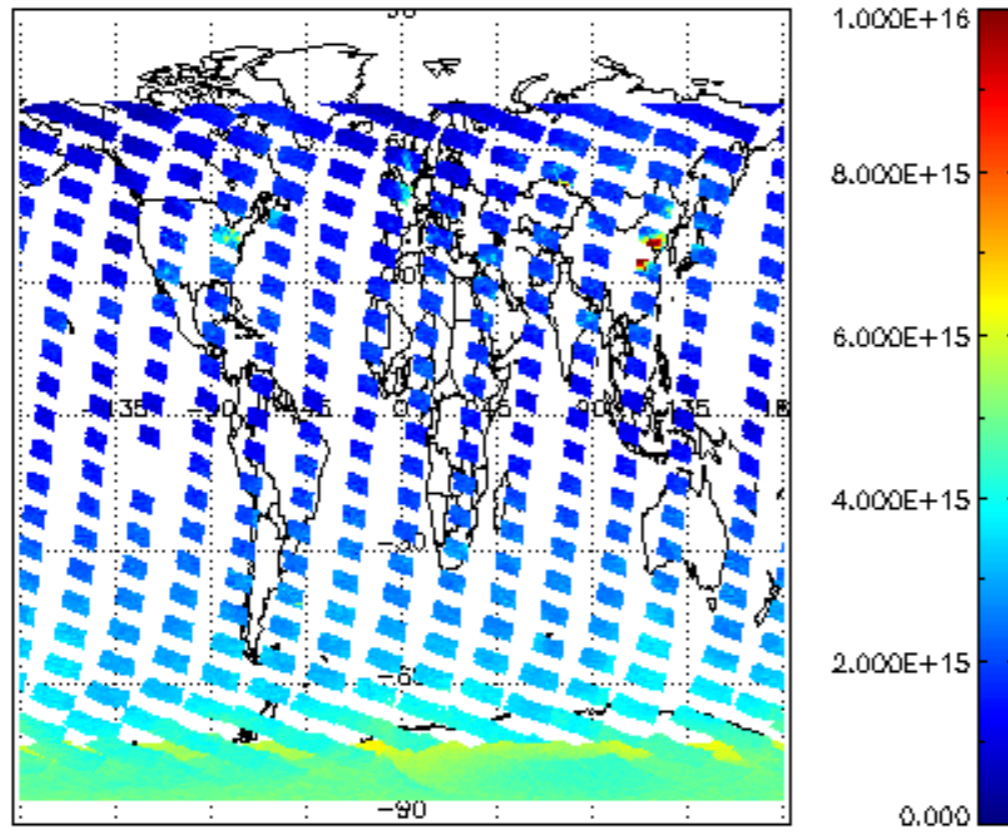


SCIOL2P\_NADUV003\_amf\_cl for 29JAN2009 00:00:00 to 30JAN2009 00:00:00

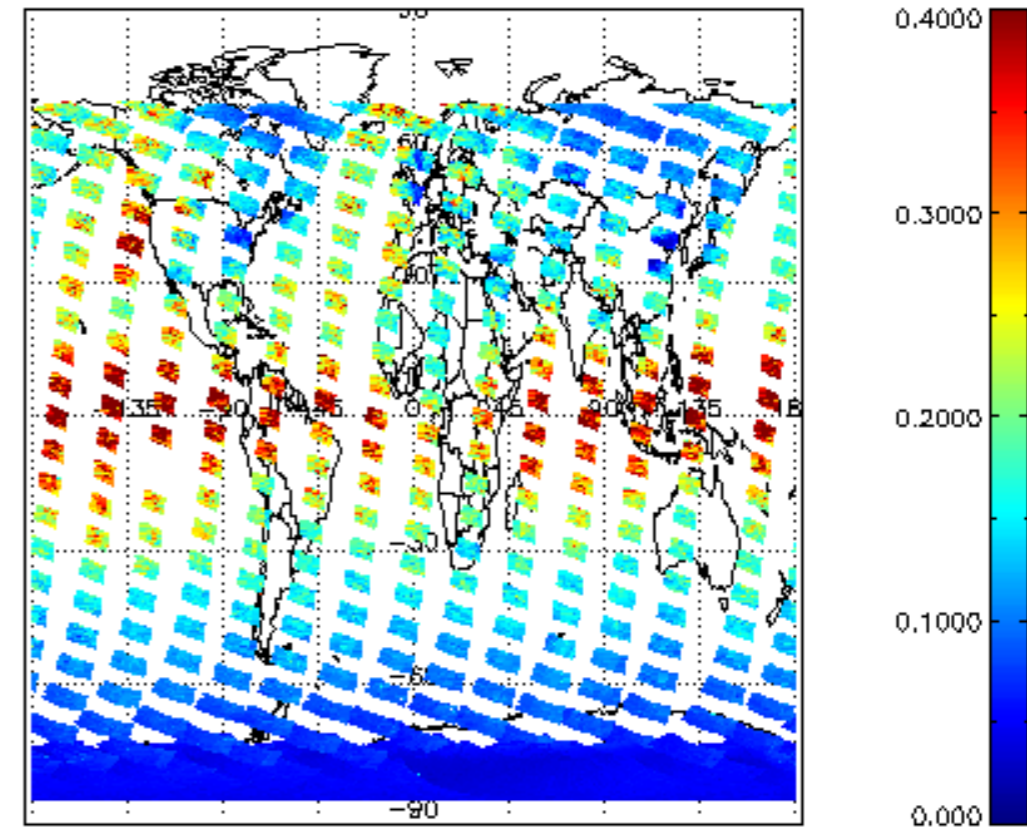




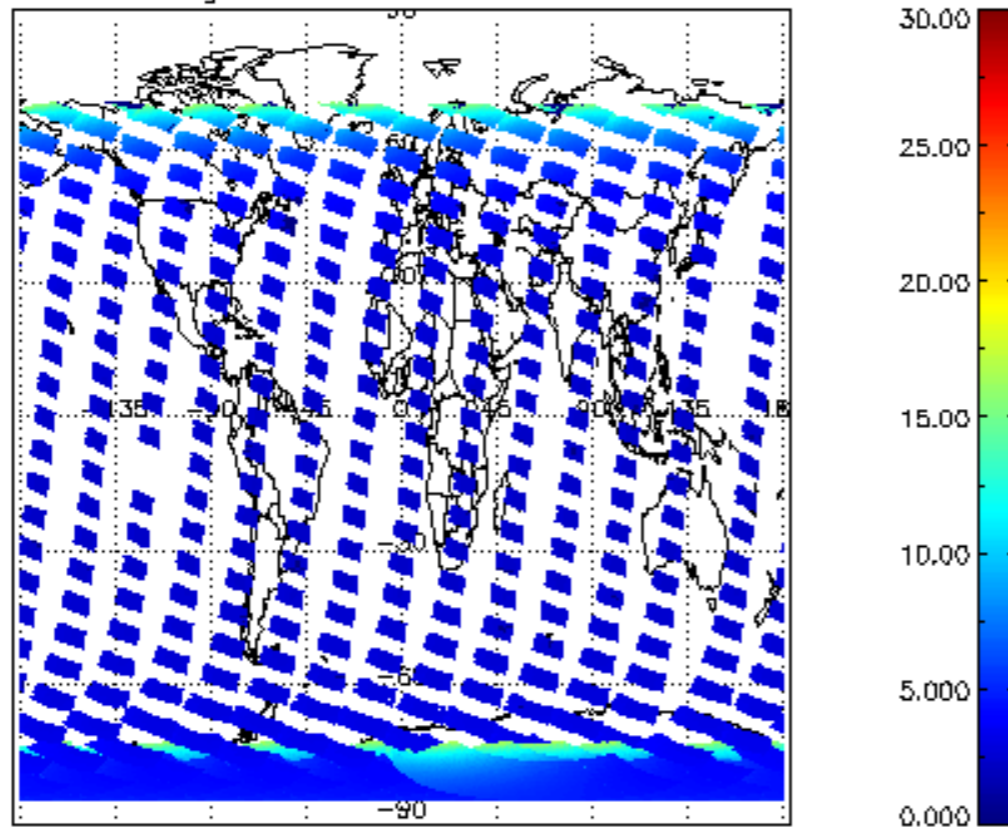
SCIOL2P\_NADUV1NO2\_vcd for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



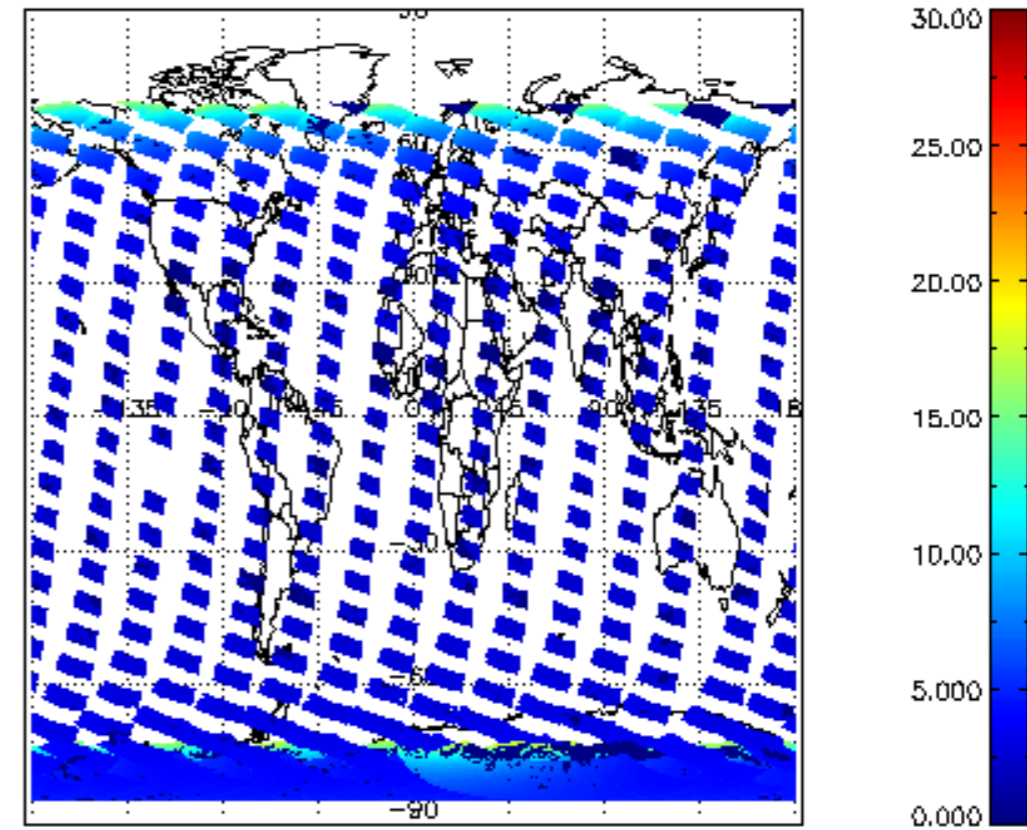
SCIOL2P\_NADUV1NO2\_vcd\_err for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



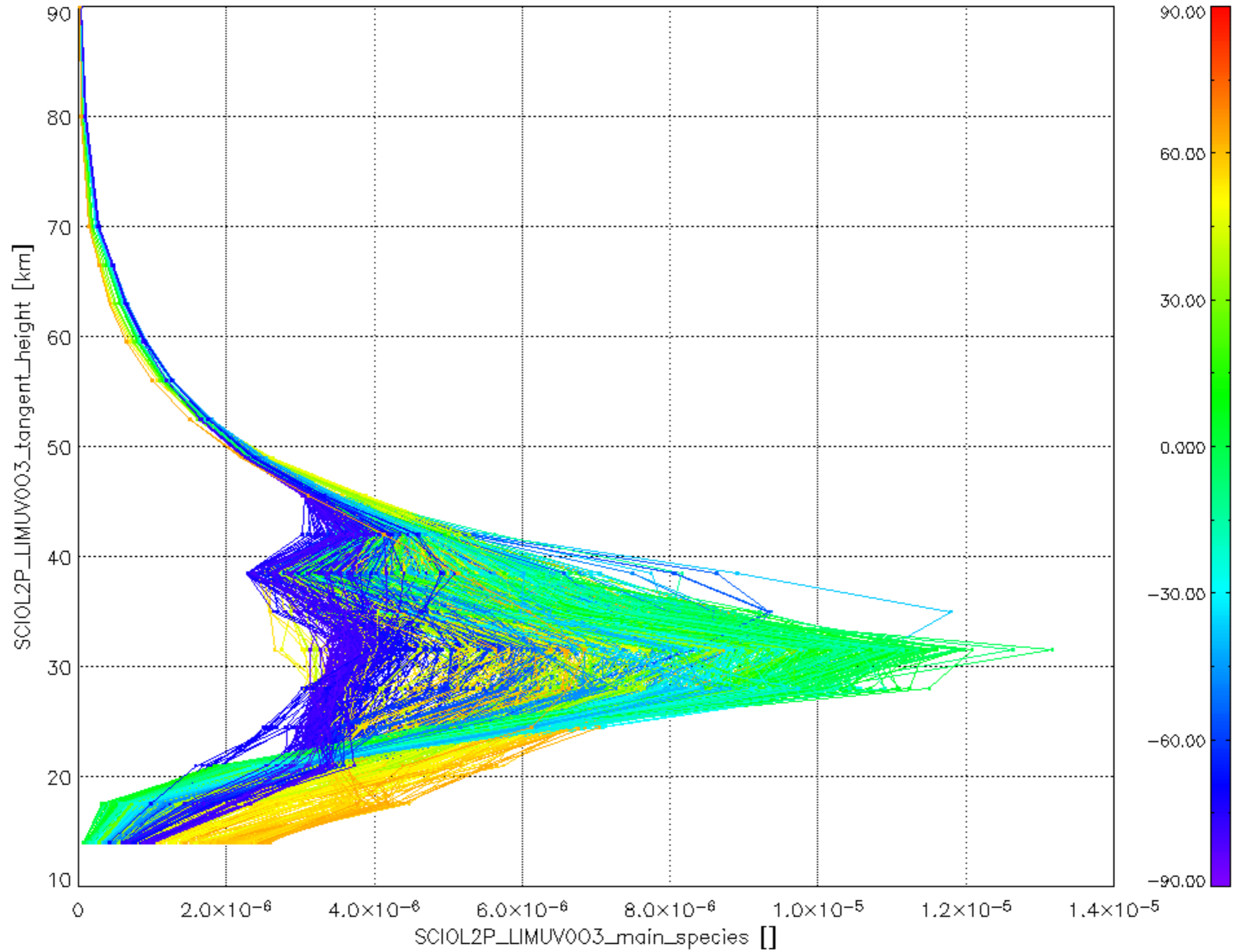
SCIOL2P\_NADUV1NO2\_amf\_gr for 29JAN2009 00:00:00 to 30JAN2009 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 29JAN2009 00:00:00 to 30JAN2009 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).

