

## 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	11JUN2008 19:34:12
Data source version	SCIA-OL/3.01-R
Processing scope for products	09NOV2002 00:00:00 to 10NOV2002 00:00:00
Start time of first product within scope	08NOV2002 23:38:45
Stop time of last product within scope	09NOV2002 20:41:36
Total number of level 2 products	12
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__2PRDPA20021108_233845_000033242011_00059_03620_1460.N1	08NOV2002 23:38:45	09NOV2002 00:34:09	0	GOOD
1	SCI_OL__2PRDPA20021109_011921_000033242011_00060_03621_1553.N1	09NOV2002 01:19:21	09NOV2002 02:14:45	0	GOOD
2	SCI_OL__2PRDPA20021109_025957_000033242011_00061_03622_1590.N1	09NOV2002 02:59:57	09NOV2002 03:55:21	0	GOOD
3	SCI_OL__2PRDPA20021109_062110_000033242011_00063_03624_1512.N1	09NOV2002 06:21:10	09NOV2002 07:16:34	0	GOOD
4	SCI_OL__2PRDPA20021109_080146_000033242011_00064_03625_1497.N1	09NOV2002 08:01:46	09NOV2002 08:57:11	0	GOOD
5	SCI_OL__2PRDPA20021109_094223_000033242011_00065_03626_1507.N1	09NOV2002 09:42:23	09NOV2002 10:37:47	0	GOOD
6	SCI_OL__2PRDPA20021109_112259_000033242011_00066_03627_1542.N1	09NOV2002 11:22:59	09NOV2002 12:18:23	0	GOOD
7	SCI_OL__2PRDPA20021109_130335_000033242011_00067_03628_1502.N1	09NOV2002 13:03:35	09NOV2002 13:58:59	0	GOOD
8	SCI_OL__2PRDPA20021109_144411_000033242011_00068_03629_1548.N1	09NOV2002 14:44:11	09NOV2002 15:39:36	0	GOOD
9	SCI_OL__2PRDPA20021109_162448_000033242011_00069_03630_1547.N1	09NOV2002 16:24:48	09NOV2002 17:20:12	0	GOOD
10	SCI_OL__2PRDPA20021109_180524_000033242011_00070_03631_1563.N1	09NOV2002 18:05:24	09NOV2002 19:00:49	0	GOOD
11	SCI_OL__2PRDPA20021109_194529_000033672011_00071_03632_1539.N1	09NOV2002 19:45:29	09NOV2002 20:41:36	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: 90940

Total number of cloud data DSRs with good quality flag (=0): 90940 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	90940	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	90940	0.21597	0.25000	0.12500	1.0000	0.080482	s
SURFACE_PRES	90940	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	90940	0.45491	0.43316	0.0000	1.0000	0.28900	-
CL_FRAC_ERR	90940	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	90940	6.9109	8.0000	4.0000	32.000	2.5754	-
PMD_READ_CL[0]	90940	0.42855	0.0000	0.0000	32.000	1.5115	-

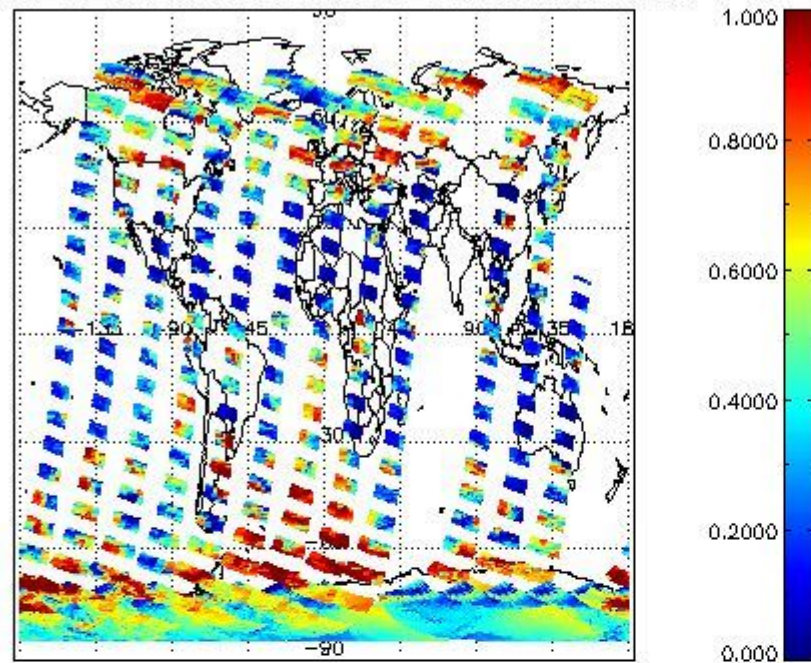
PMD_READ_CL[1]	90940	0.41421	0.0000	0.0000	30.000	1.5572	-
CL_TOP_HEIGHT	82490	4.1894	2.9167	0.0000	17.000	3.8510	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	82490	49.621	35.067	0.0000	101.00	38.354	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	90940	11100000	11100000	11100000	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	90940	11000110	11000100	11000000	11100000	2494.6	flags
AERO_ABSO_IND	90940	0.45587	0.35059	-4.2290	8.1444	0.96193	
AERO_IND_DIAG	90940	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	90940	01101001	11000000	00000000	11000000	24456.	flags

Time and geolocation plots:

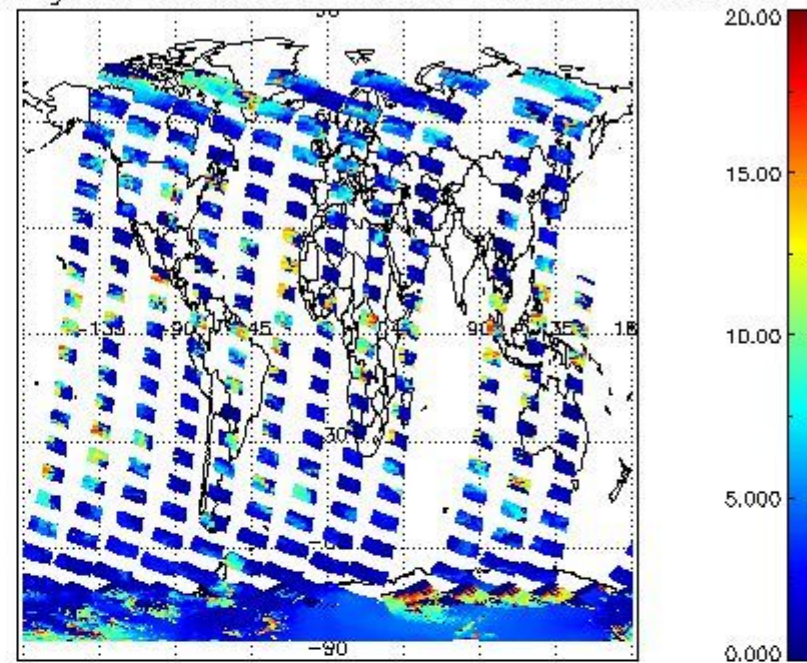
Plots are available for the following parameters:

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

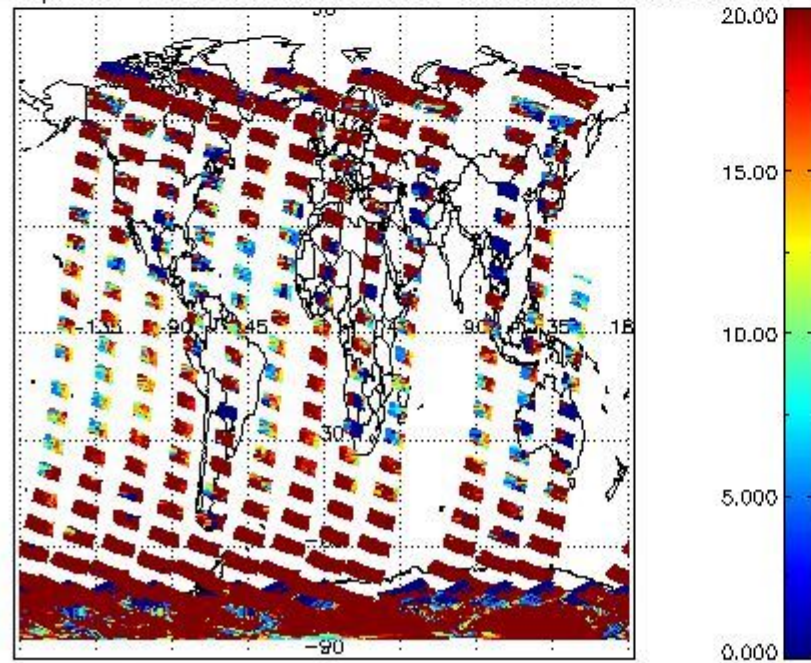
cLfrac for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



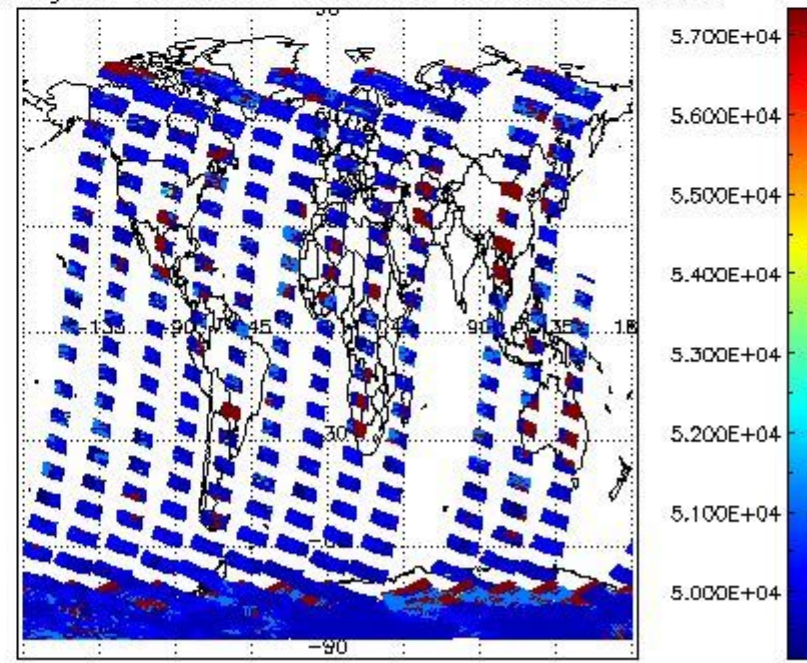
cL\_top\_height for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



cL\_opt\_depth for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



cloud\_flags for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



### 2.2.2 Nadir

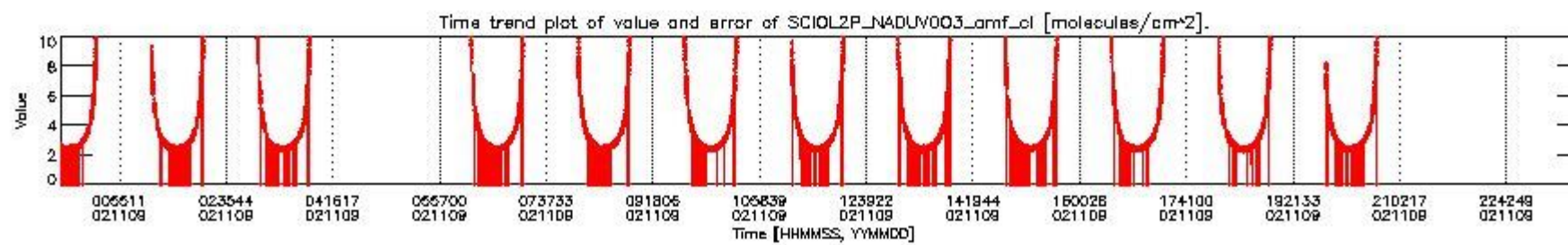
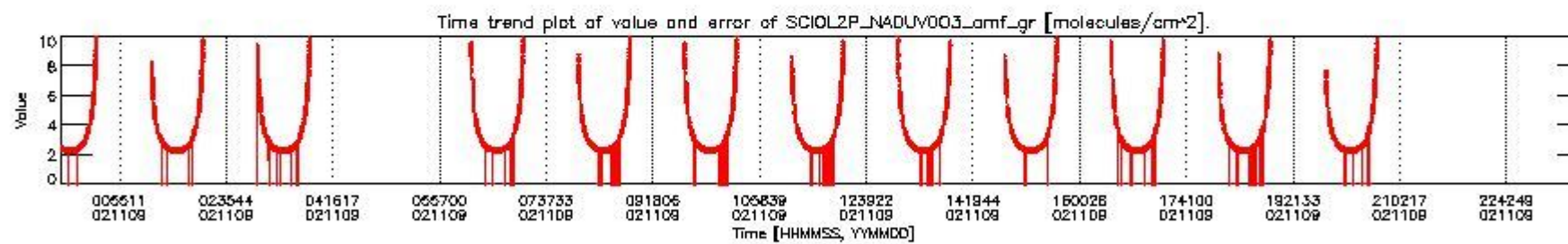
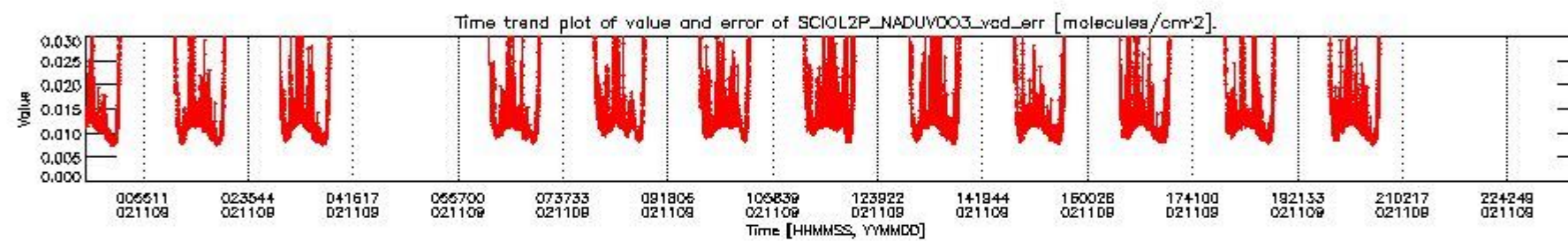
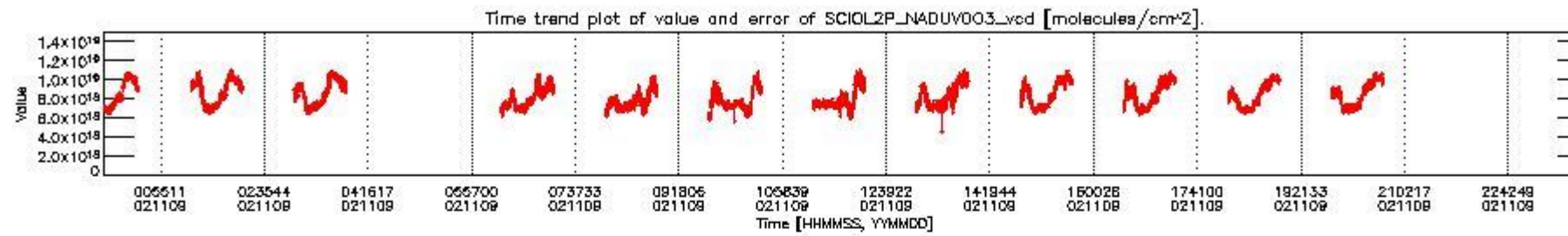
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

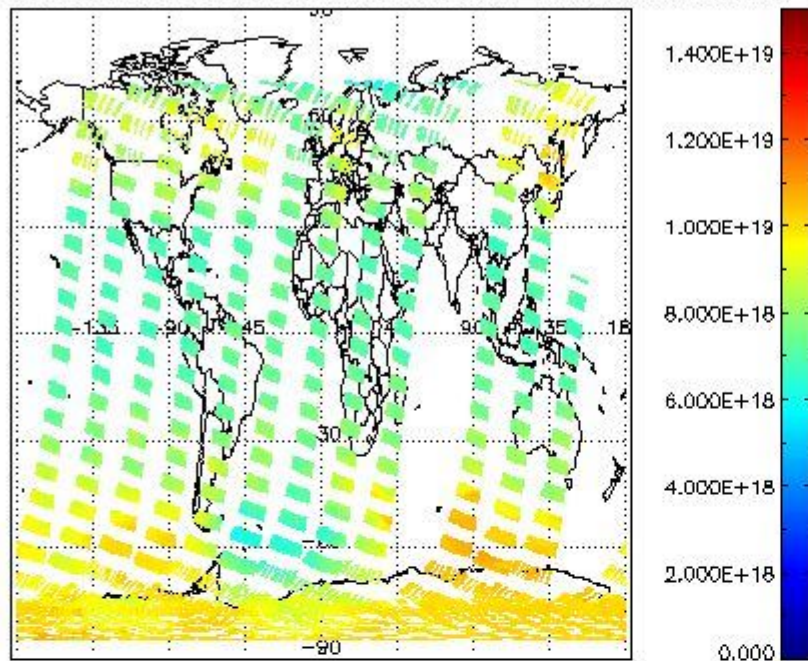
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

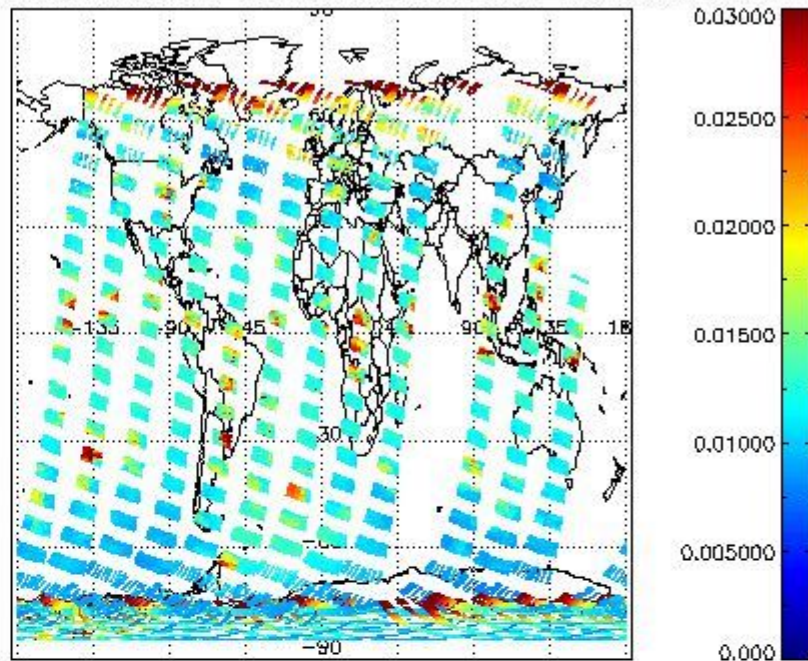
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



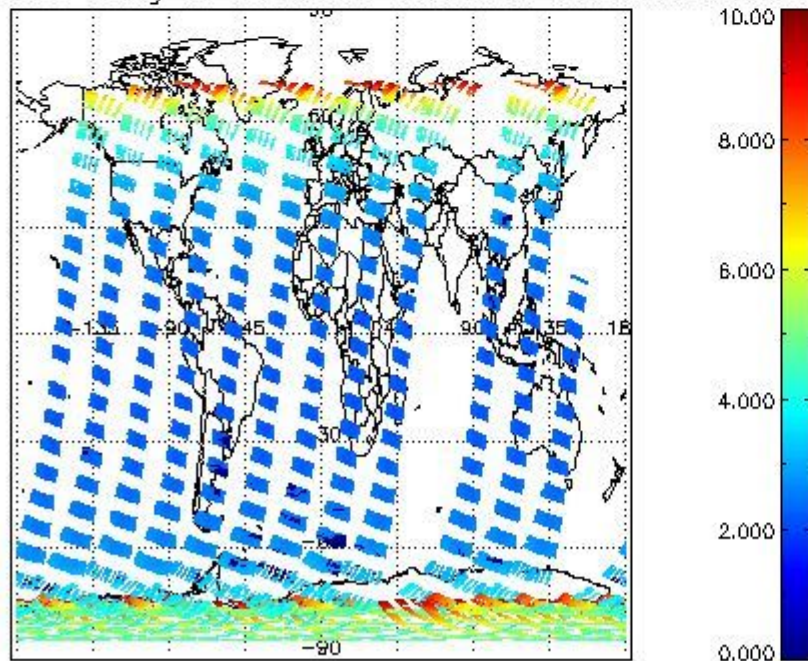
SCIOL2P\_NADUV003\_vcd for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



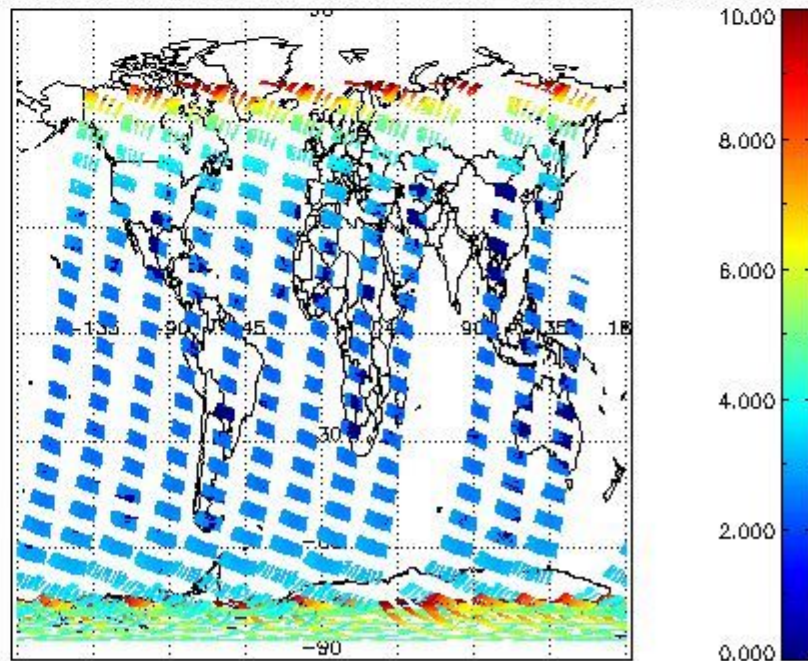
SCIOL2P\_NADUV003\_vcd\_err for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

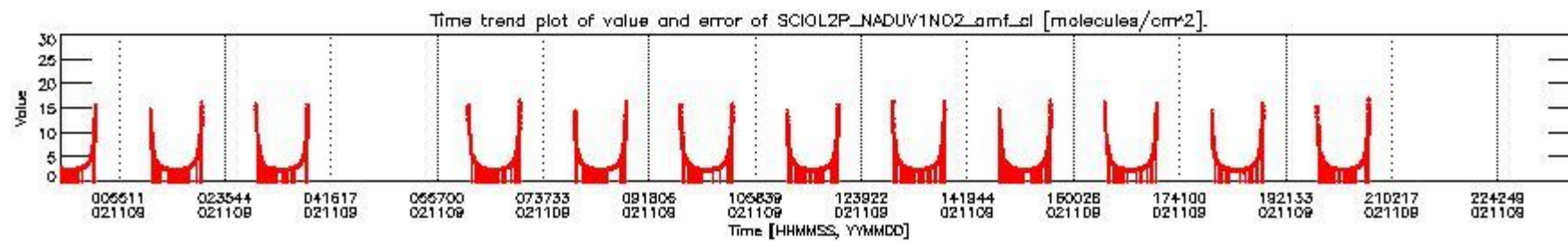
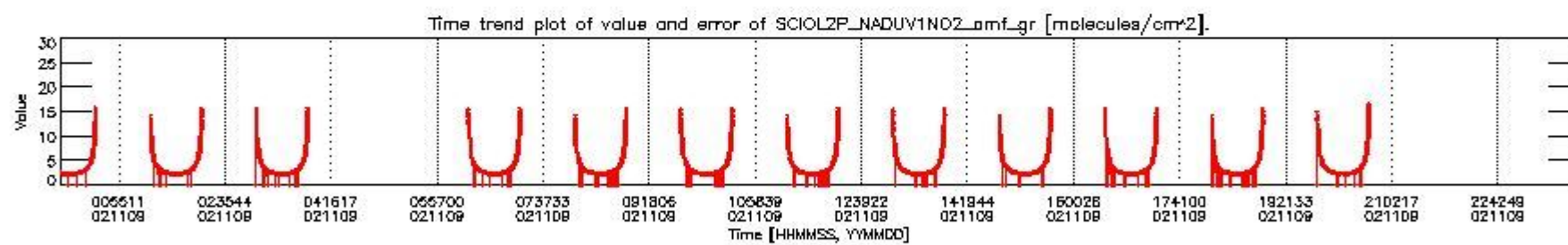
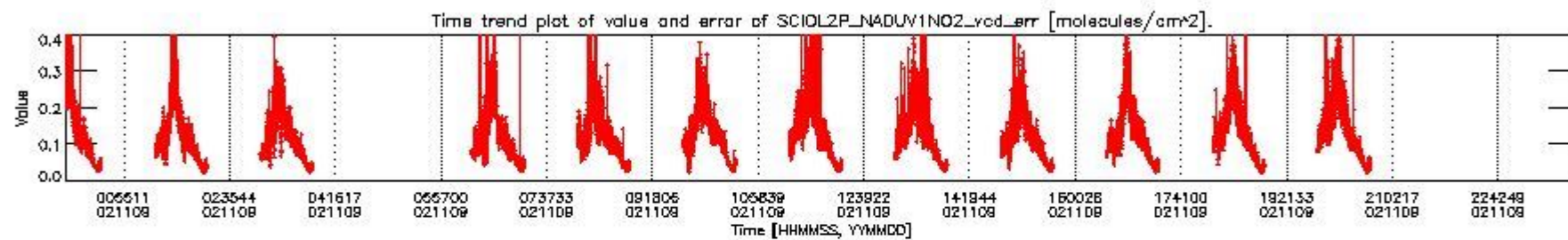
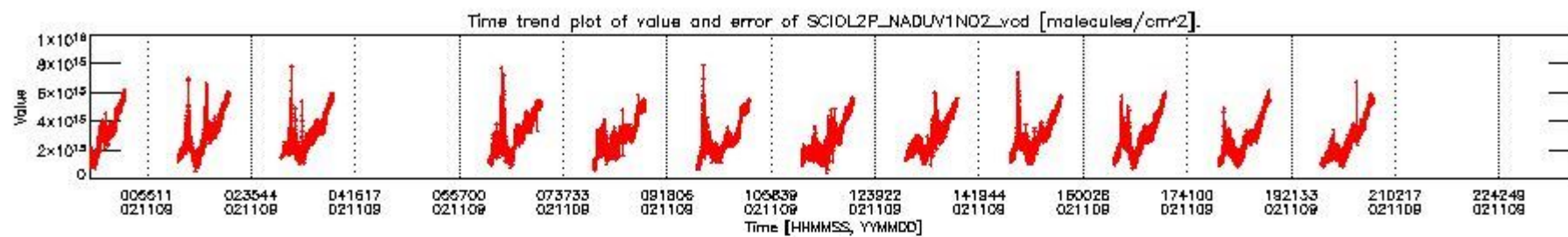


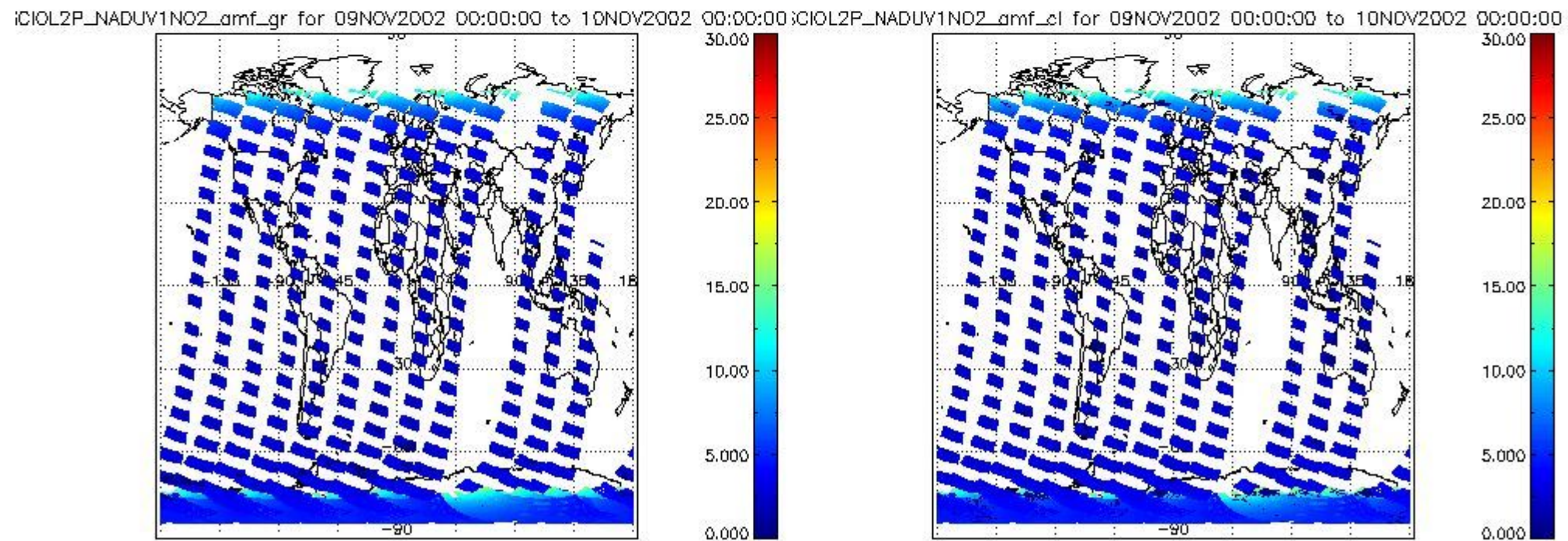
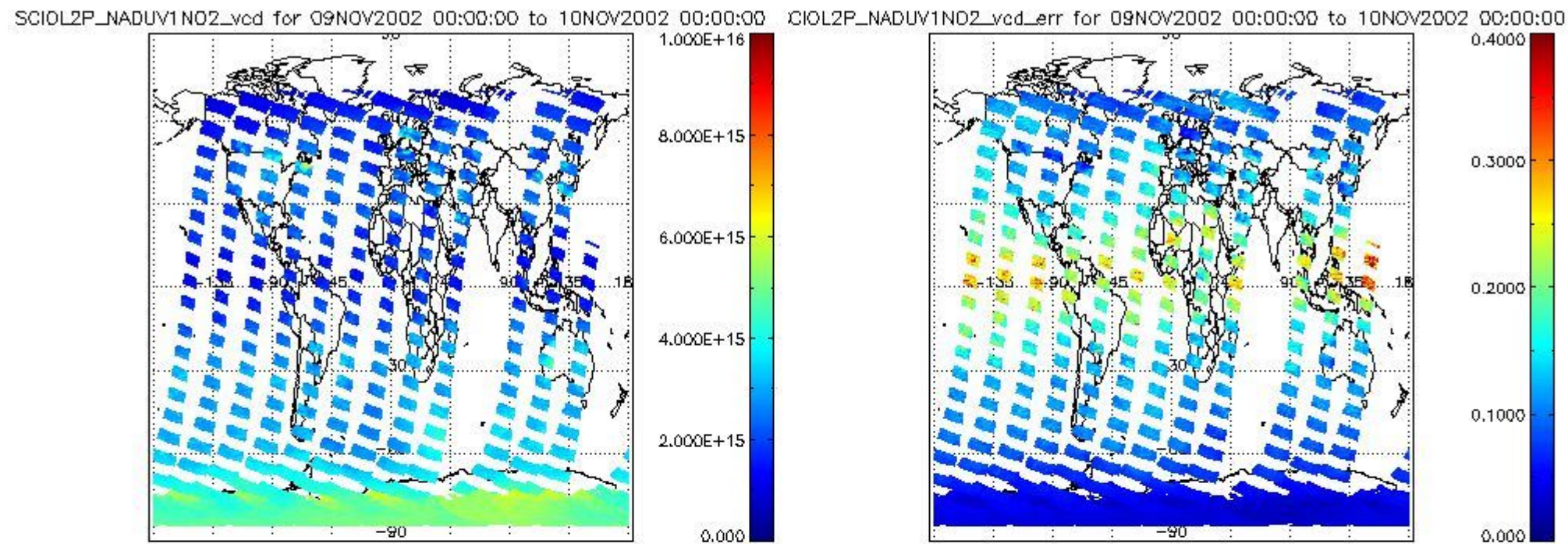
SCIOL2P\_NADUV003\_amf\_gr for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 09NOV2002 00:00:00 to 10NOV2002 00:00:00







### 2.2.3 Limb

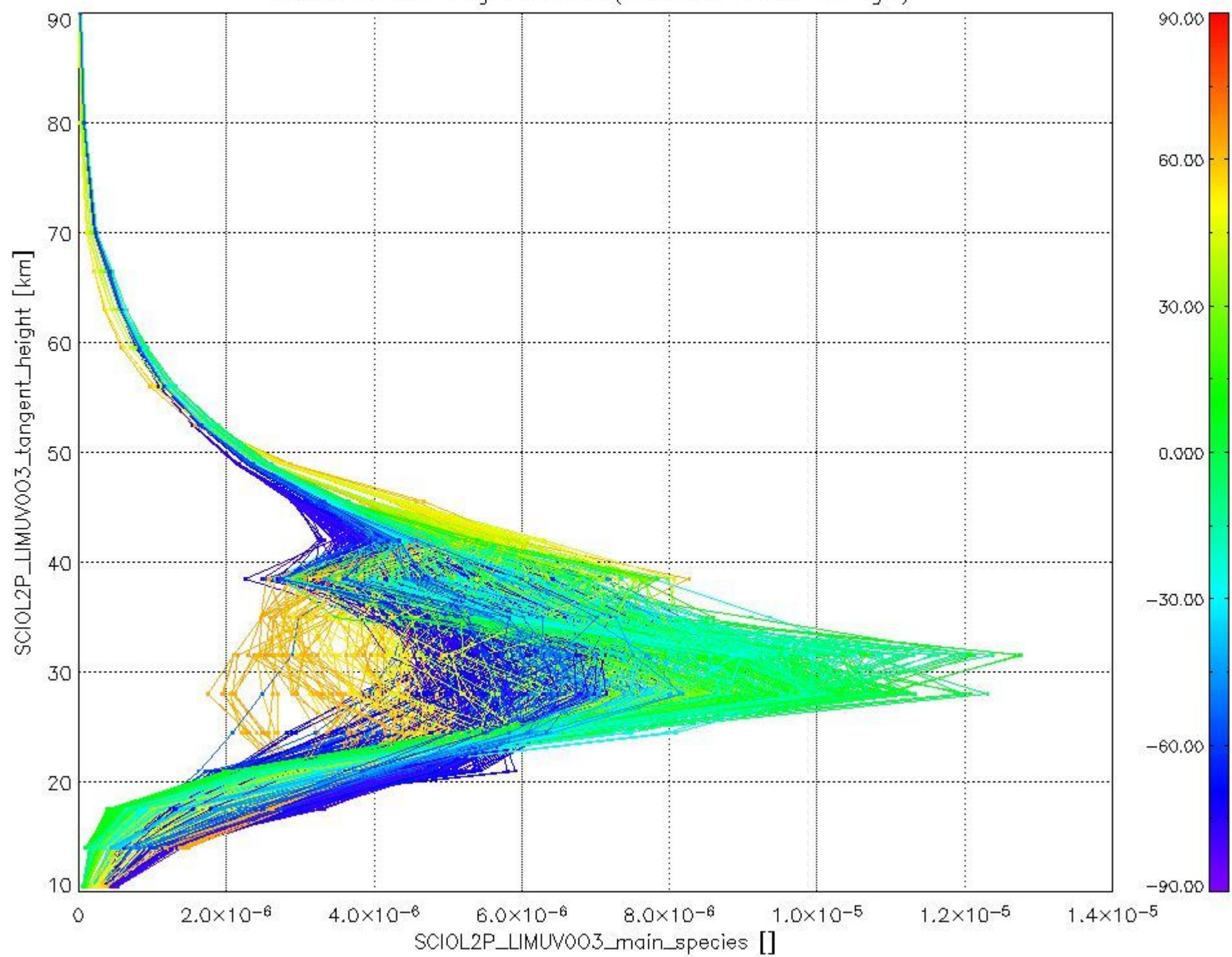
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

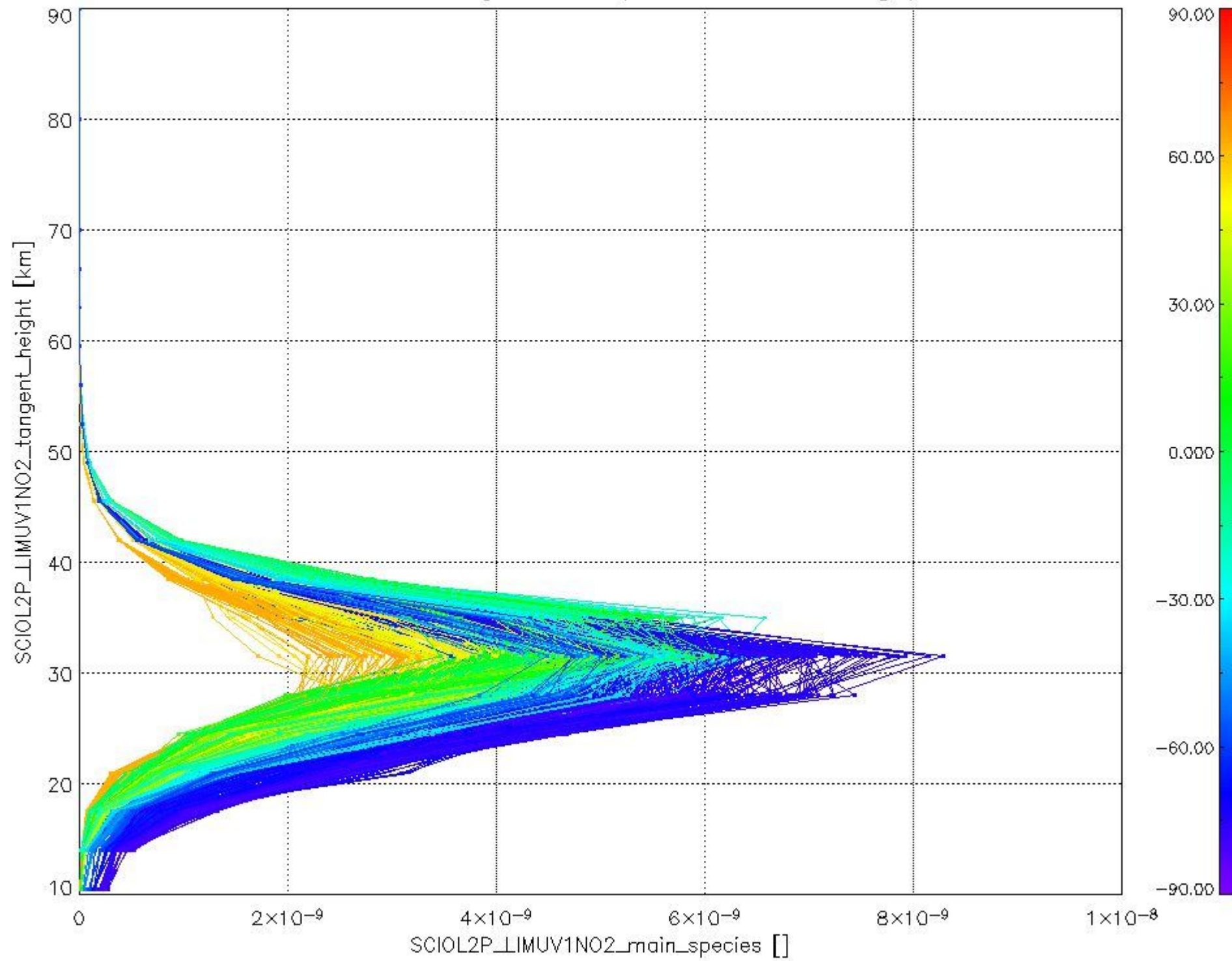
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





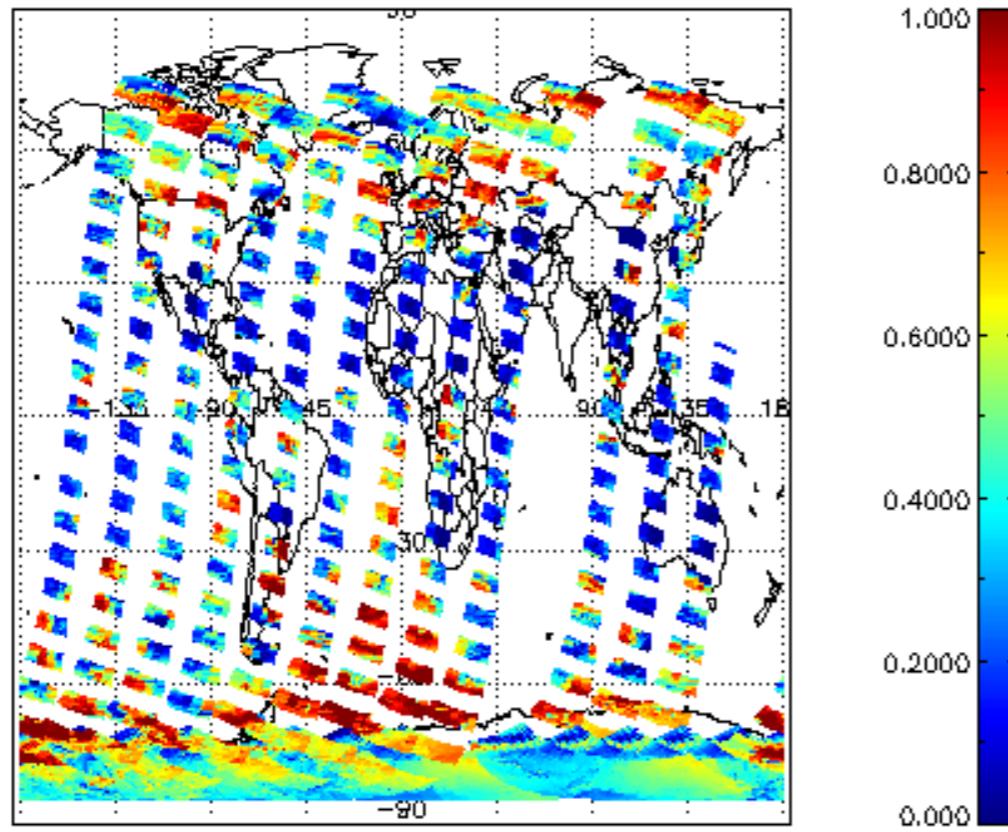
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



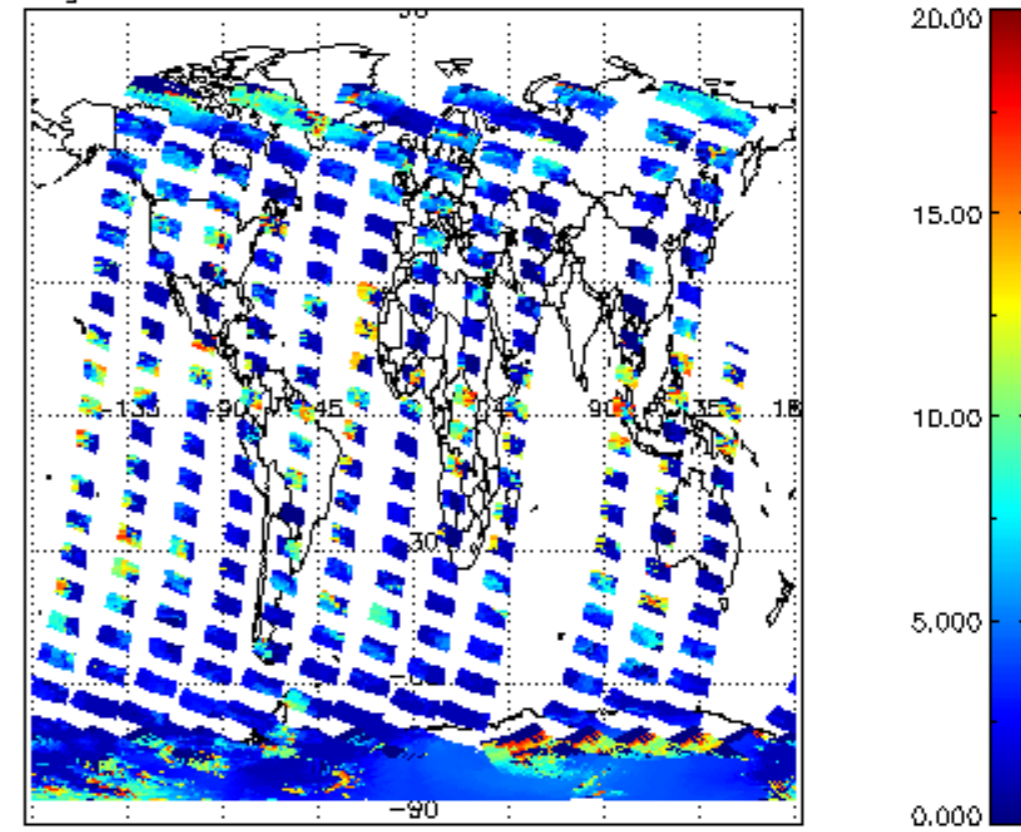
### 2.3 ADF monitoring

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

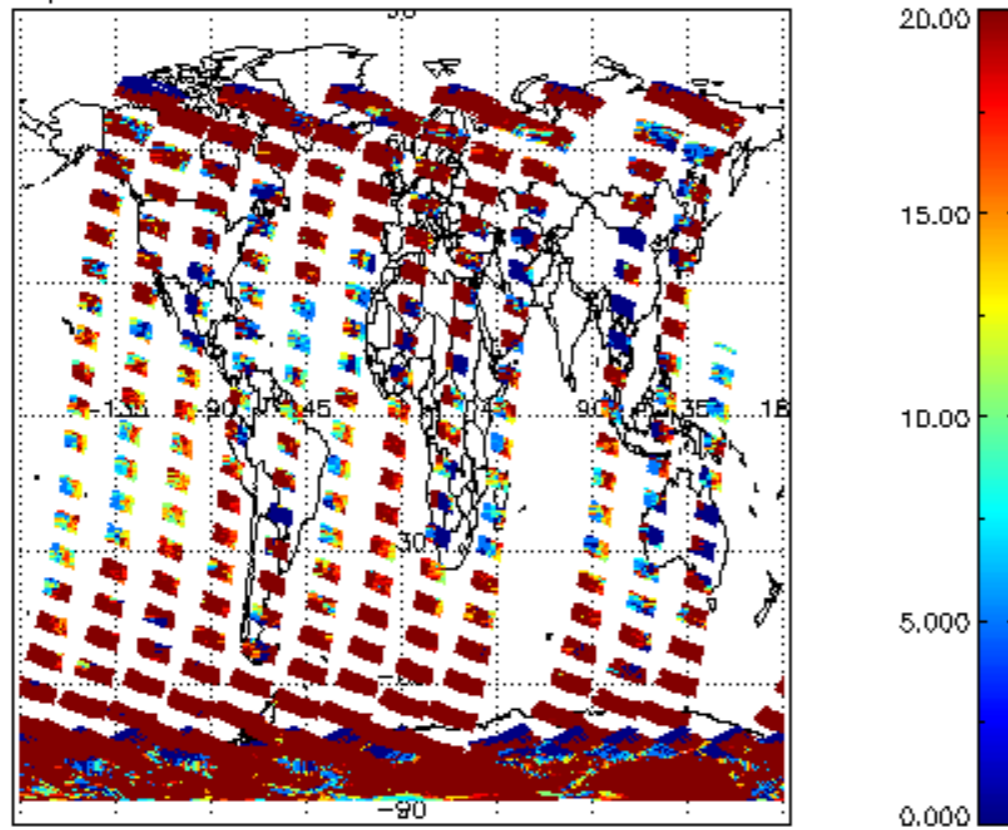
cLfrac for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



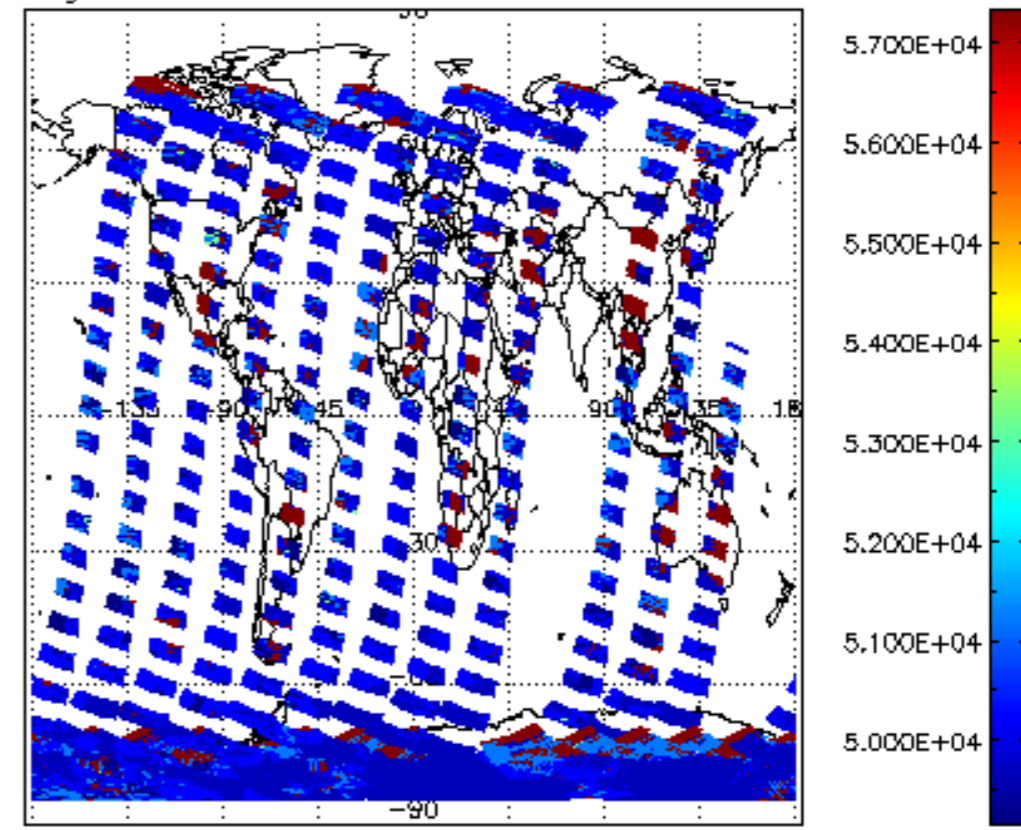
cL\_top\_height for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

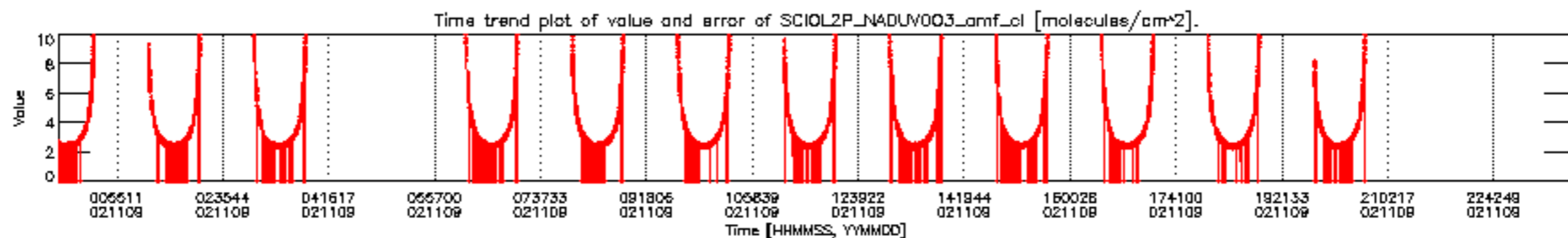
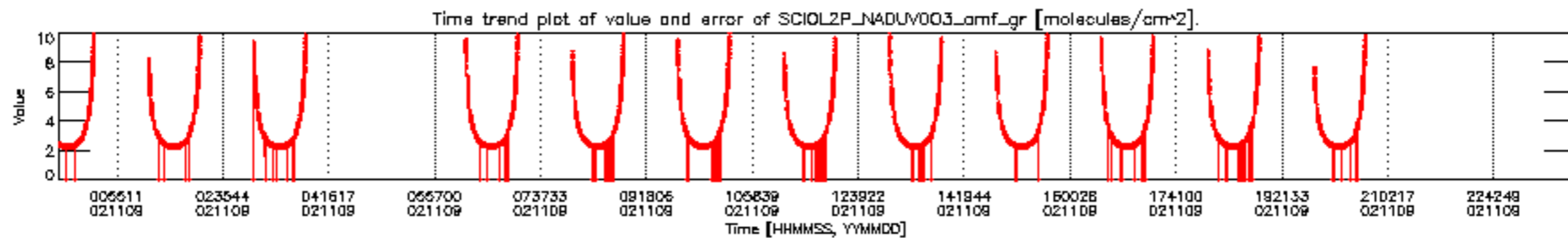
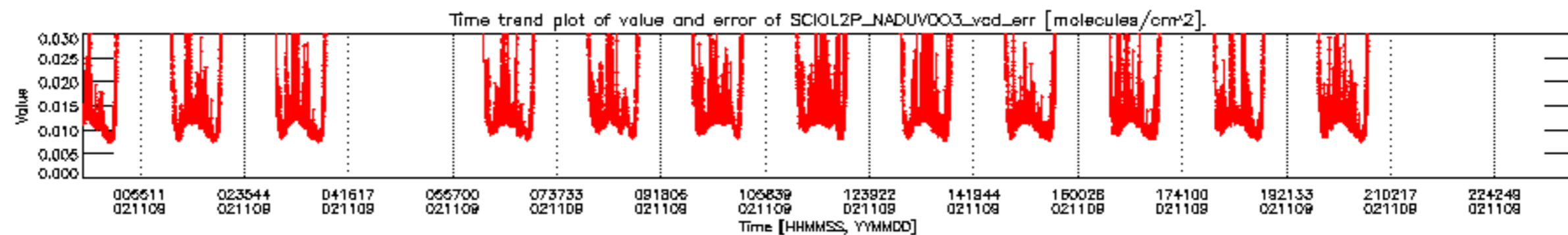
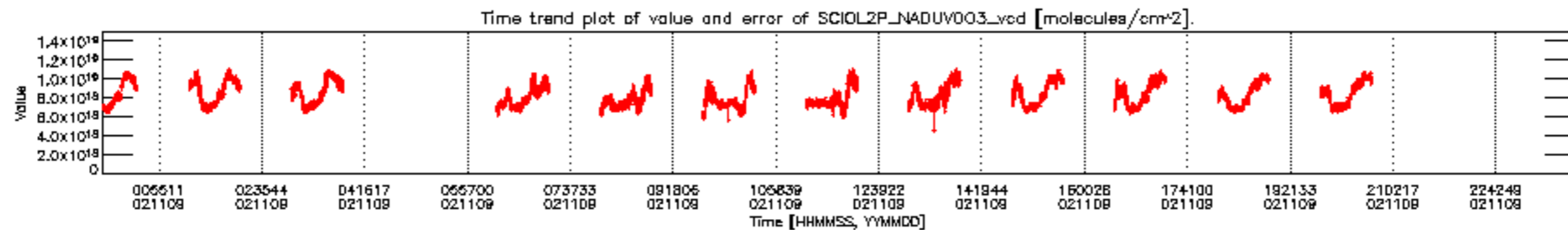


cL\_opt\_depth for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

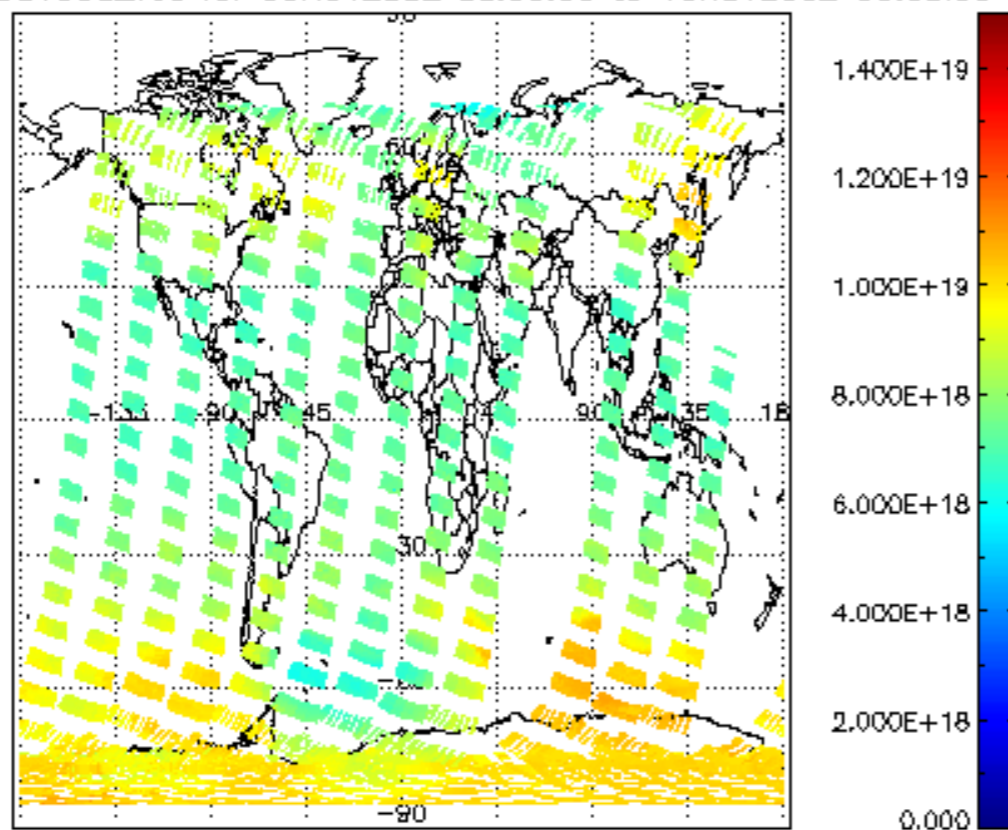


cloud\_flags for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

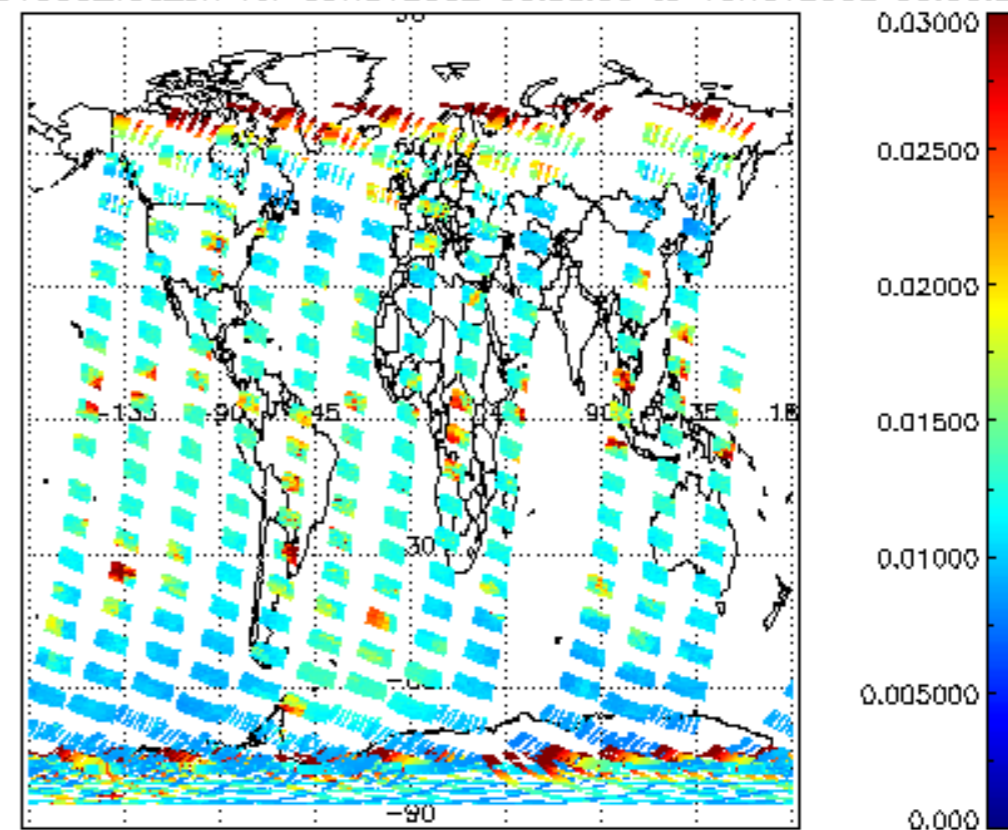




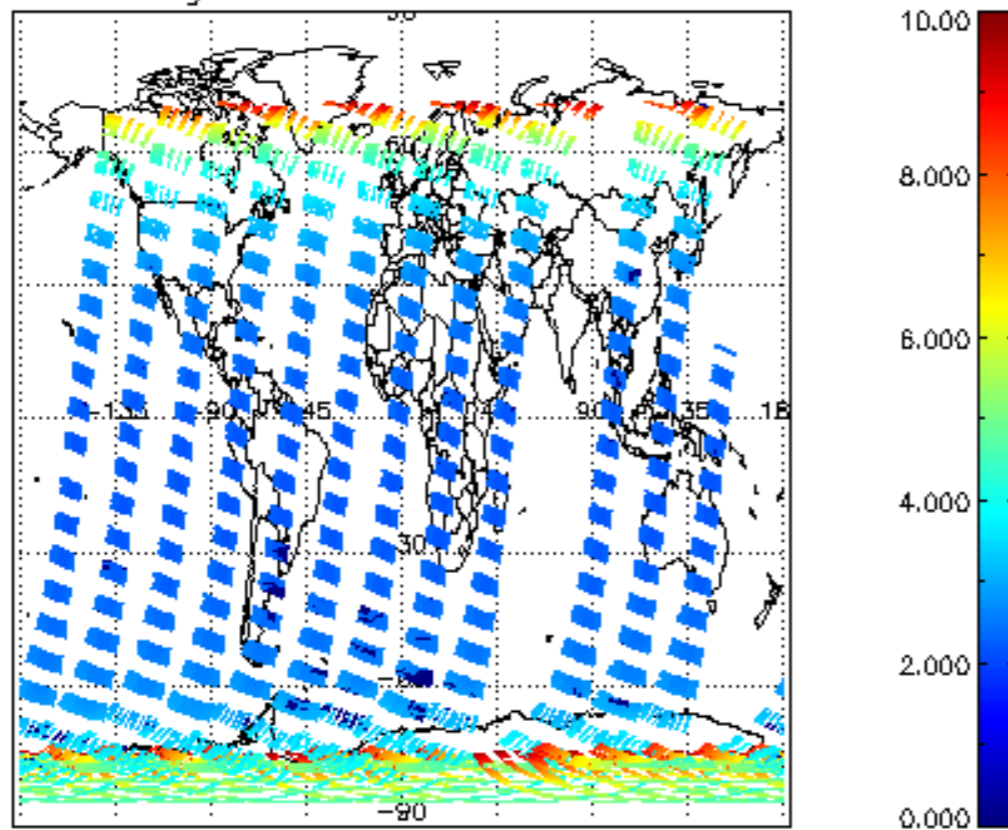
SCIOL2P\_NADUV003\_vcd for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



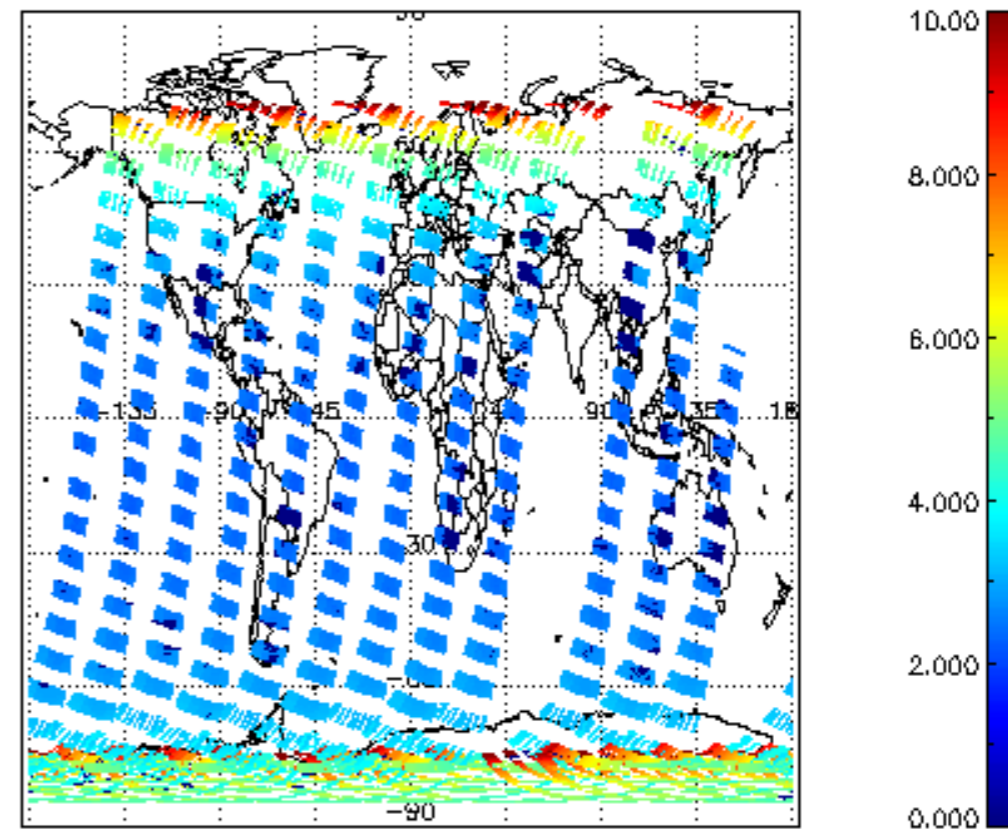
SCIOL2P\_NADUV003\_vcd\_err for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

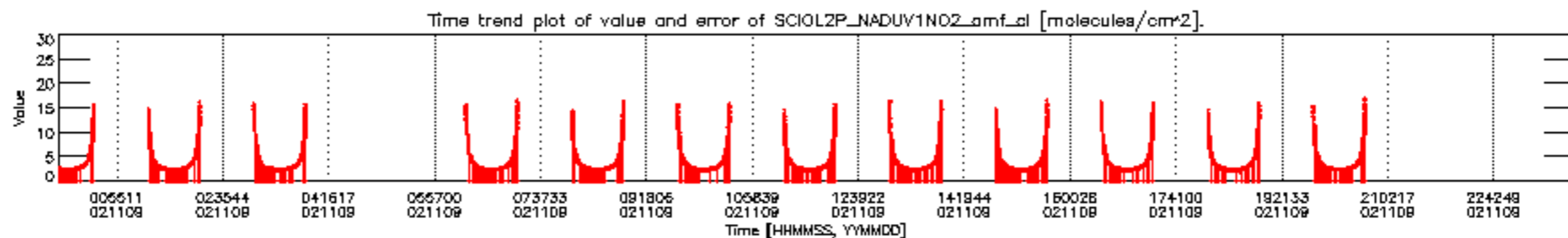
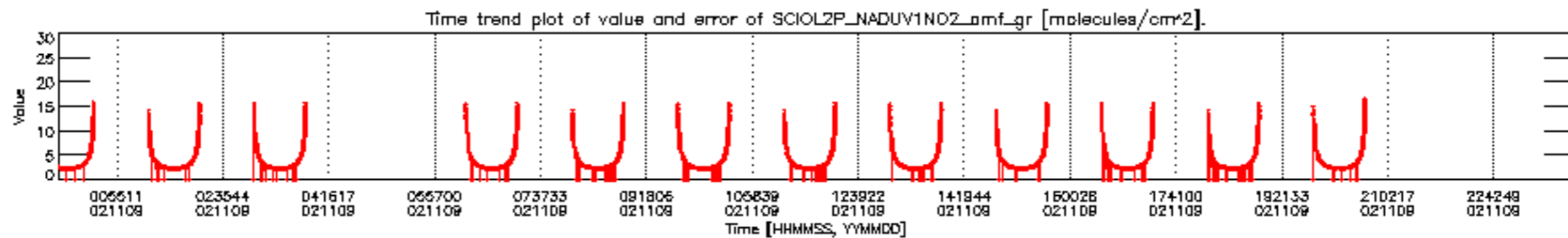
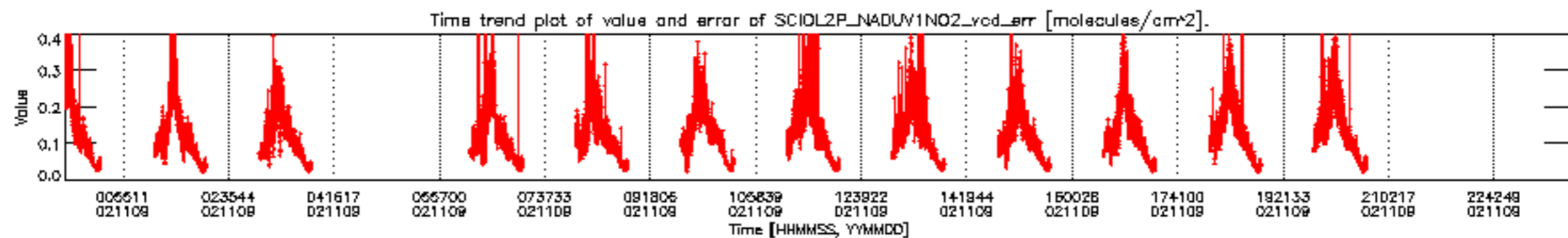
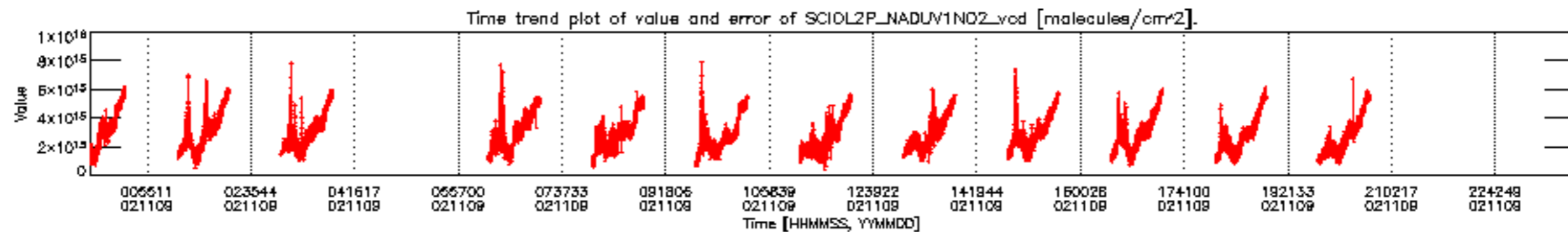


SCIOL2P\_NADUV003\_amf\_gr for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

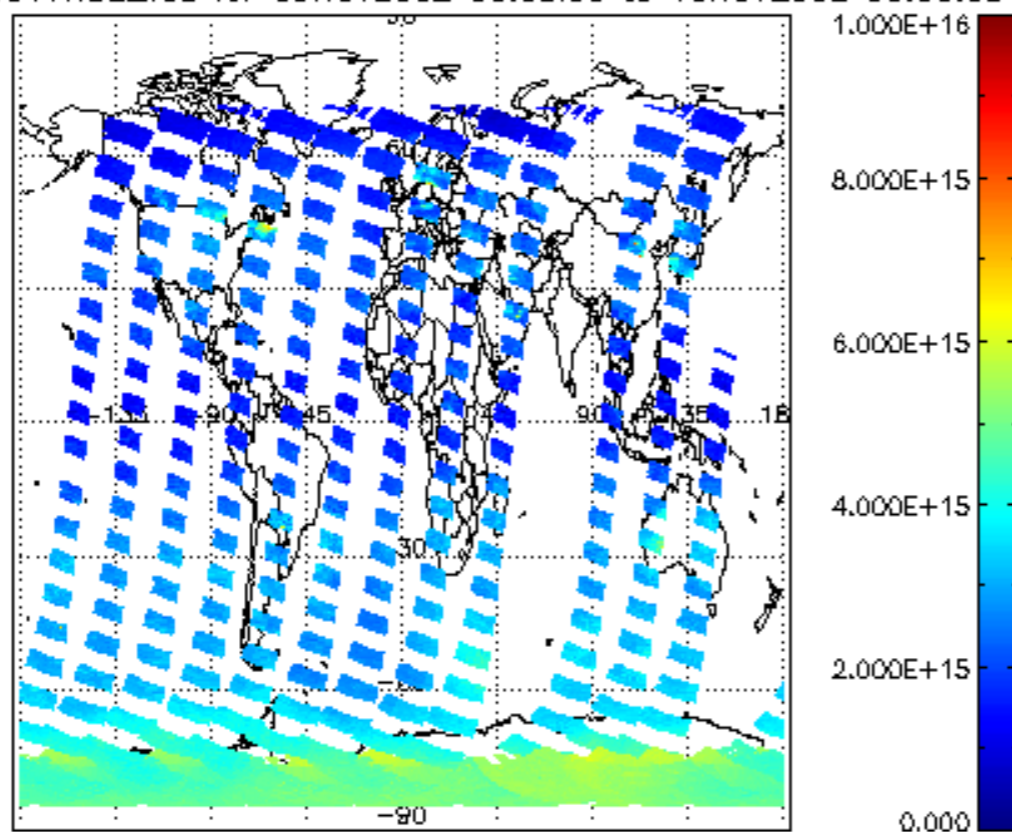


SCIOL2P\_NADUV003\_amf\_cl for 09NOV2002 00:00:00 to 10NOV2002 00:00:00

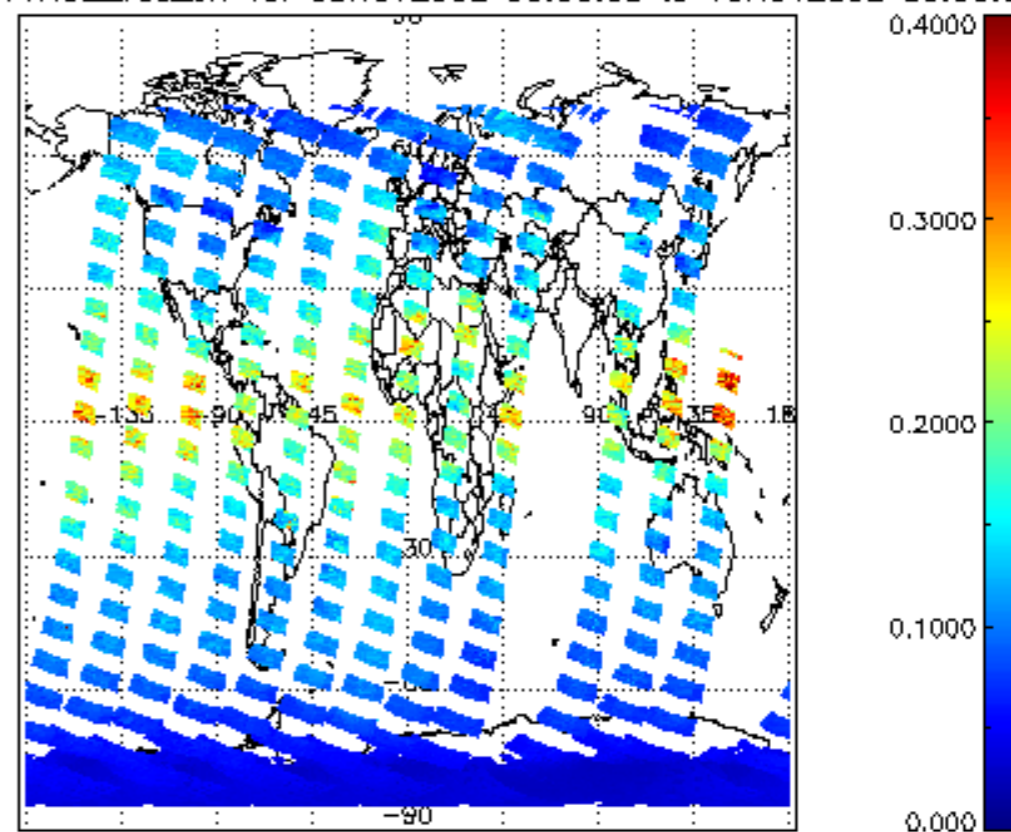




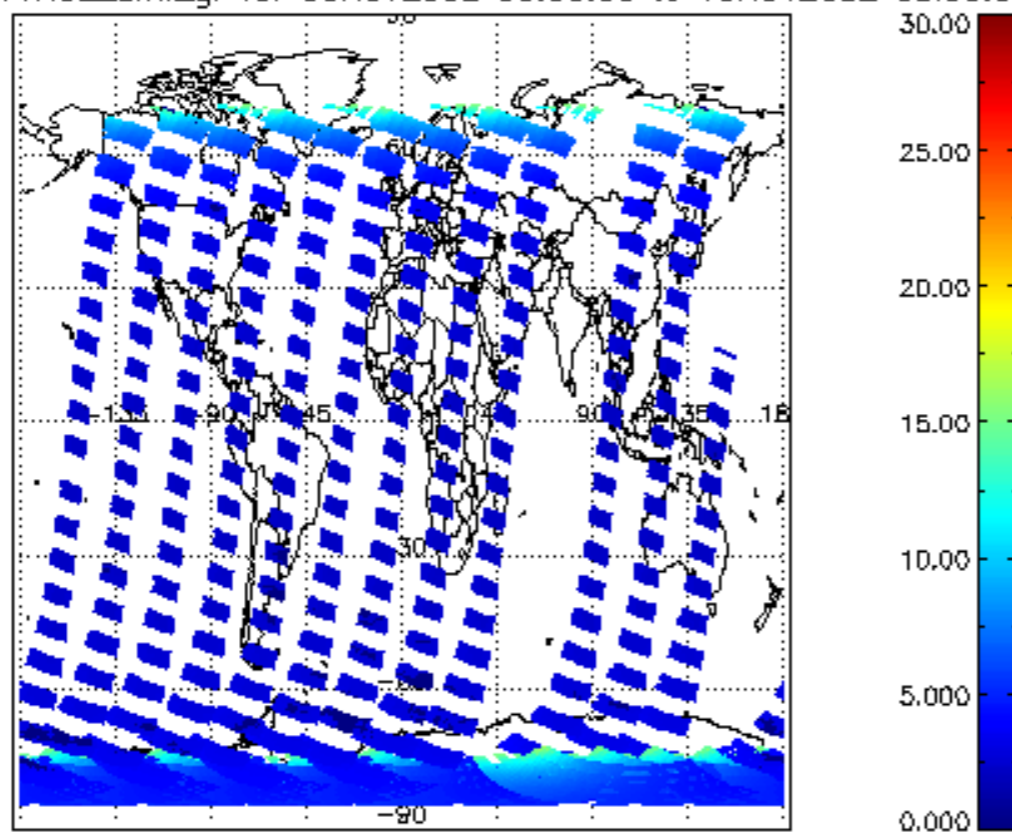
SCIOL2P\_NADUV1NO2\_vcd for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



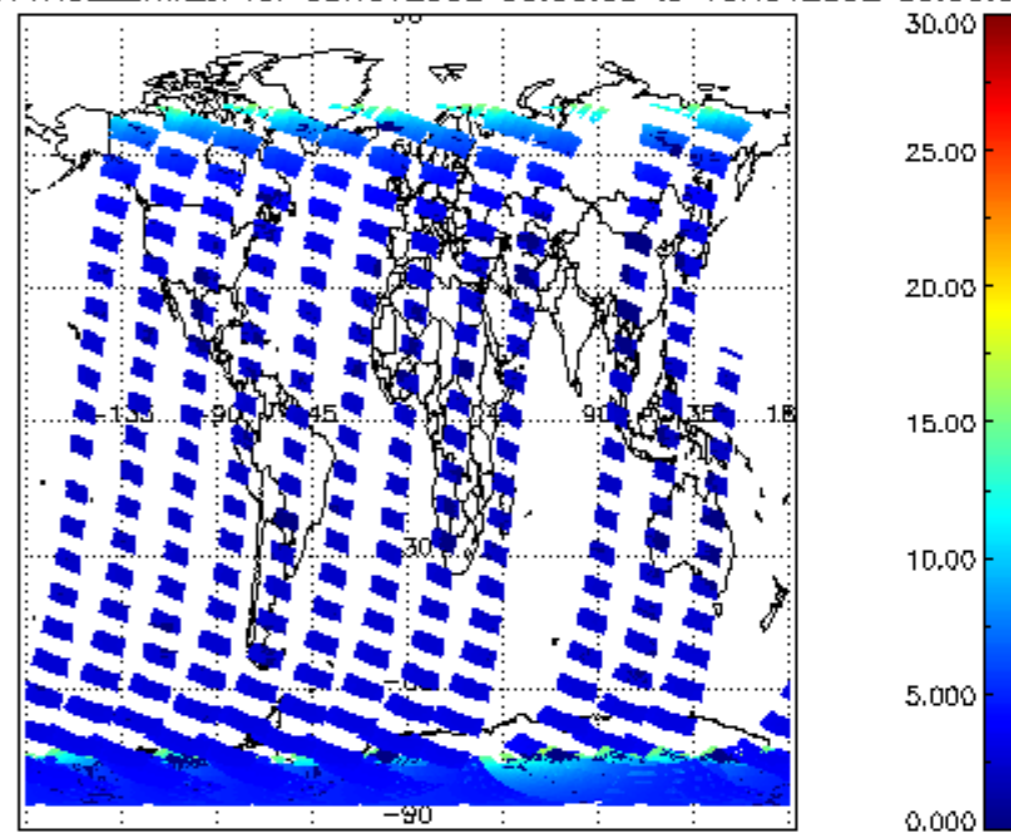
SCIOL2P\_NADUV1NO2\_vcd\_err for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



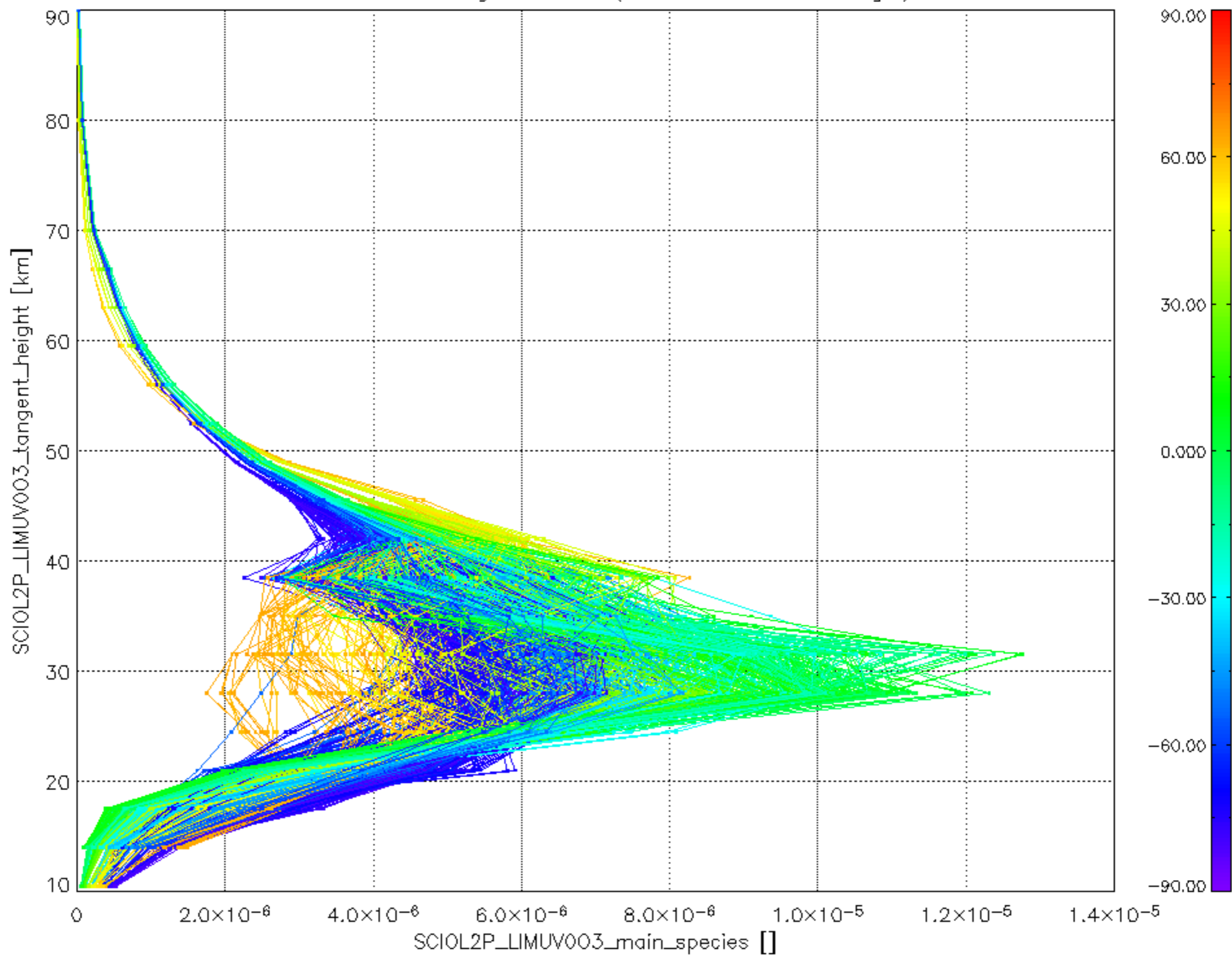
SCIOL2P\_NADUV1NO2\_amf\_gr for 09NOV2002 00:00:00 to 10NOV2002 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 09NOV2002 00:00:00 to 10NOV2002 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).

