

## 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	19NOV2008 16:24:22
Data source version	SCIA-OL/3.01-R
Processing scope for products	14NOV2004 00:00:00 to 15NOV2004 00:00:00
Start time of first product within scope	14NOV2004 07:30:30
Stop time of last product within scope	14NOV2004 20:10:17
Total number of level 2 products	7
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__2PRDPA20041114_073030_000033252032_00078_14160_0448.N1</a>	14NOV2004 07:30:30	14NOV2004 08:25:55	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20041114_091106_000033812032_00079_14161_0474.N1</a>	14NOV2004 09:11:06	14NOV2004 10:07:27	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20041114_123218_000033812032_00081_14163_0523.N1</a>	14NOV2004 12:32:18	14NOV2004 13:28:40	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20041114_141255_000033252032_00082_14164_0522.N1</a>	14NOV2004 14:12:55	14NOV2004 15:08:20	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20041114_155331_000033812032_00083_14165_0493.N1</a>	14NOV2004 15:53:31	14NOV2004 16:49:53	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20041114_173400_000033862032_00084_14166_0554.N1</a>	14NOV2004 17:34:00	14NOV2004 18:30:26	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20041114_191504_000033122032_00085_14167_0463.N1</a>	14NOV2004 19:15:04	14NOV2004 20:10:17	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: 73840

Total number of cloud data DSRs with good quality flag (=0): 73840 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	73840	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	73840	0.16901	0.12500	0.12500	0.25000	0.059704	s

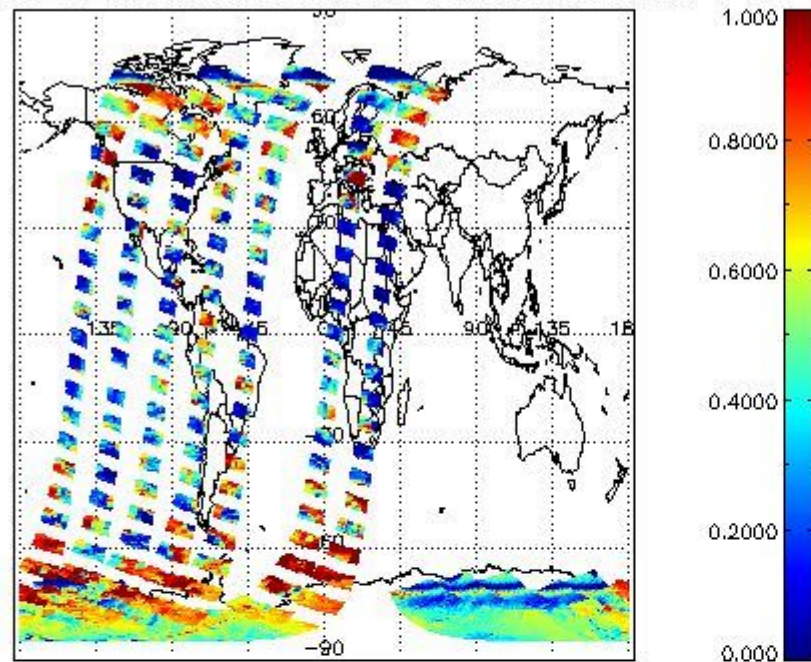
CL_FRAC	73840	0.45035	0.44839	0.0000	1.0000	0.29027	-
CL_FRAC_ERR	73840	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	73840	5.4085	4.0000	4.0000	8.0000	1.9105	
PMD_READ_CL[0]	73840	0.36960	0.0000	0.0000	8.0000	1.3236	-
PMD_READ_CL[1]	73840	0.46371	0.0000	0.0000	8.0000	1.4370	-
CL_TOP_HEIGHT	63370	4.4878	3.0612	0.0000	17.000	4.1018	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	63370	52.667	38.809	0.0000	101.00	40.025	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	73840	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	73840	11001001	11000100	11000000	11100000	3028.5	flags
AERO_ABSO_IND	73840	0.64654	0.34002	-3.6309	10.618	1.0295	
AERO_IND_DIAG	73840	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	73840	01010110	00000000	00000000	11000000	24448.	flags

### Time and geolocation plots:

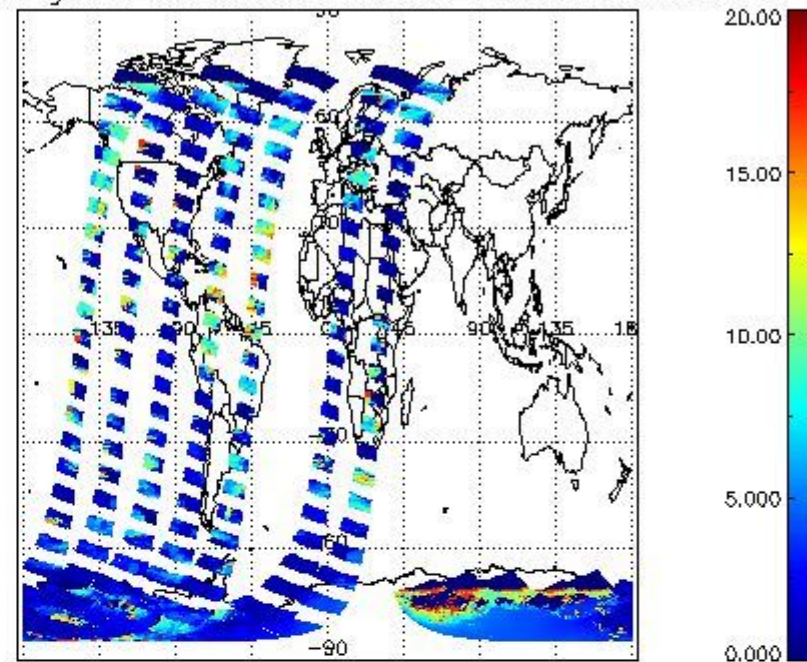
Plots are available for the following parameters:

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

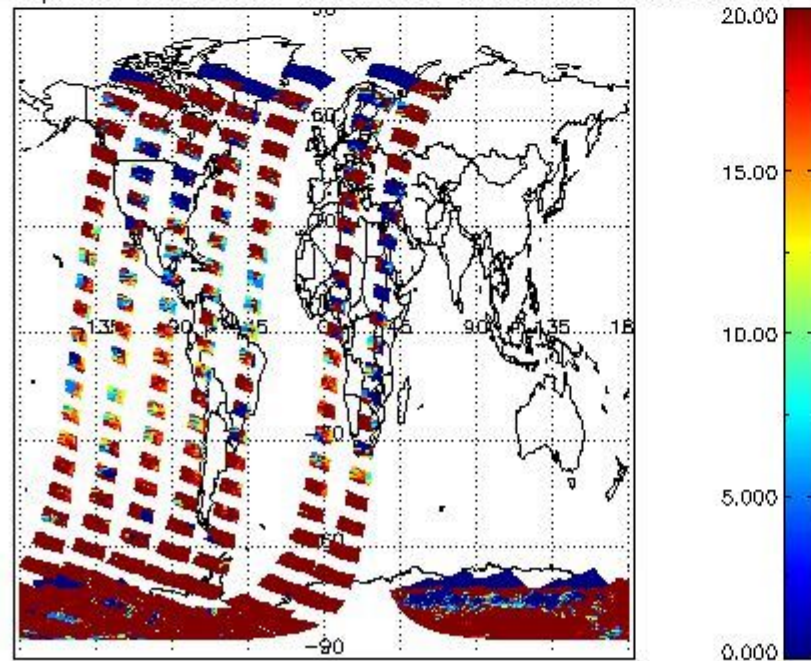
cLfrac for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



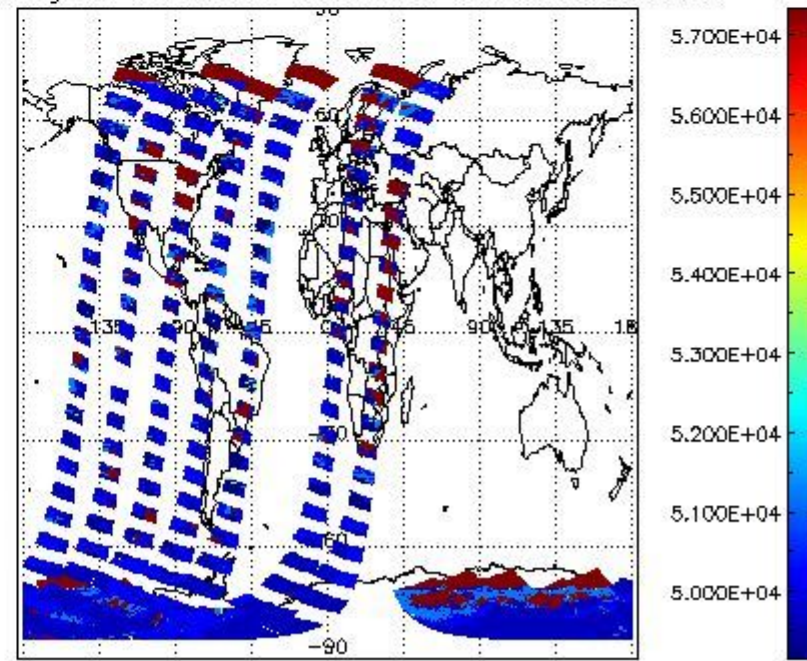
cL\_top\_height for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



cLopt\_depth for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



cloud\_flags for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



## 2.2.2 Nadir

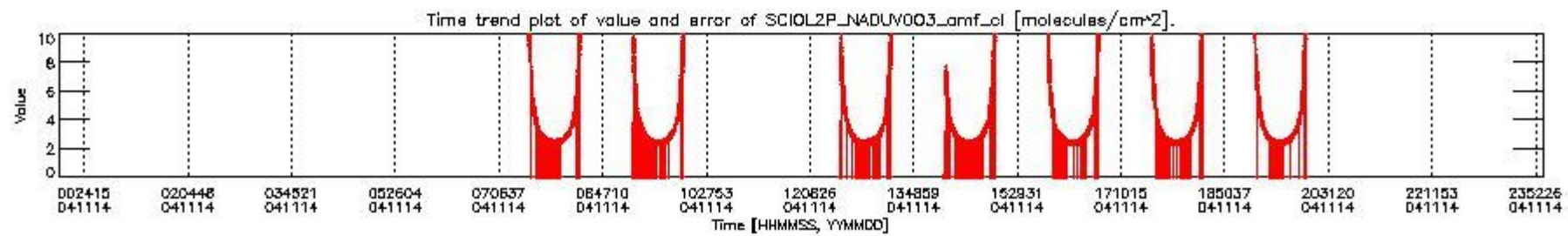
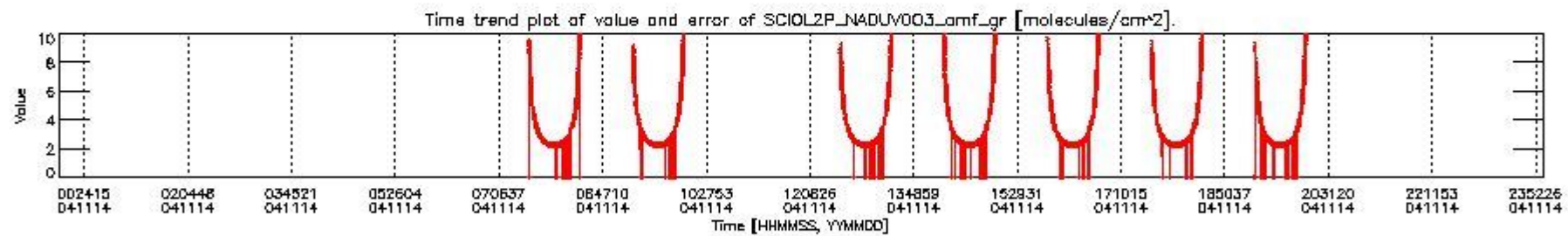
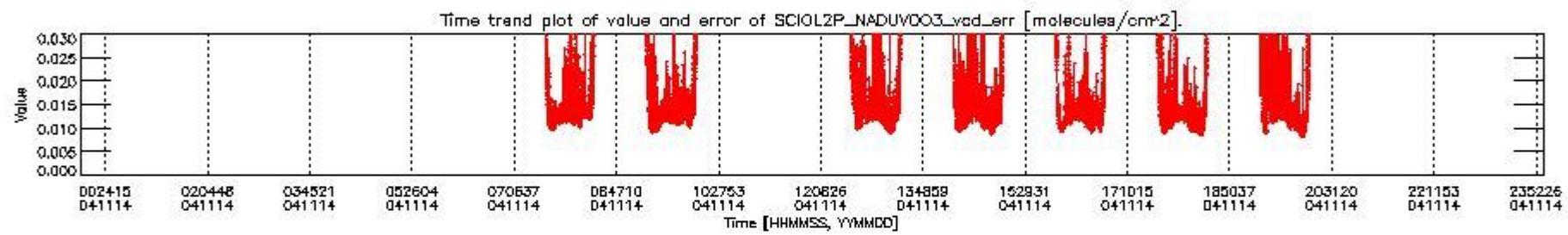
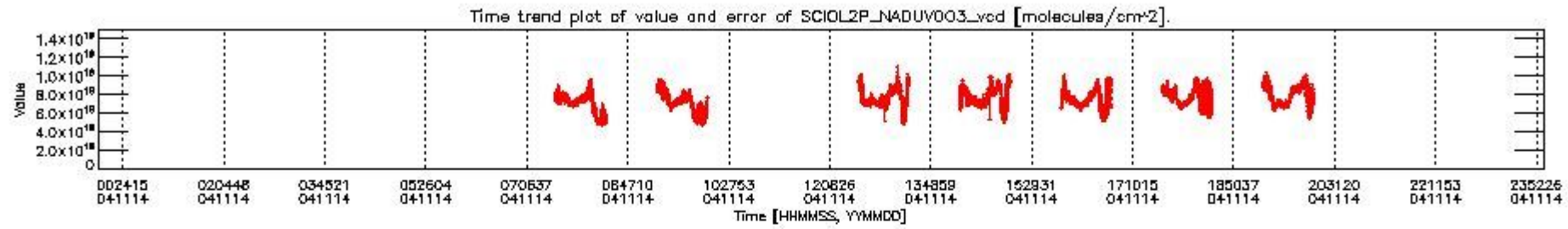
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

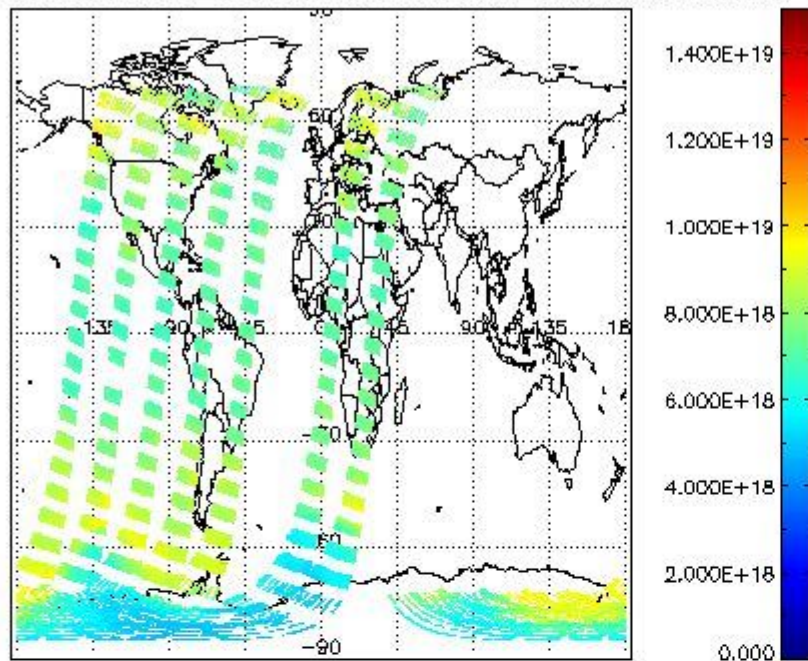
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

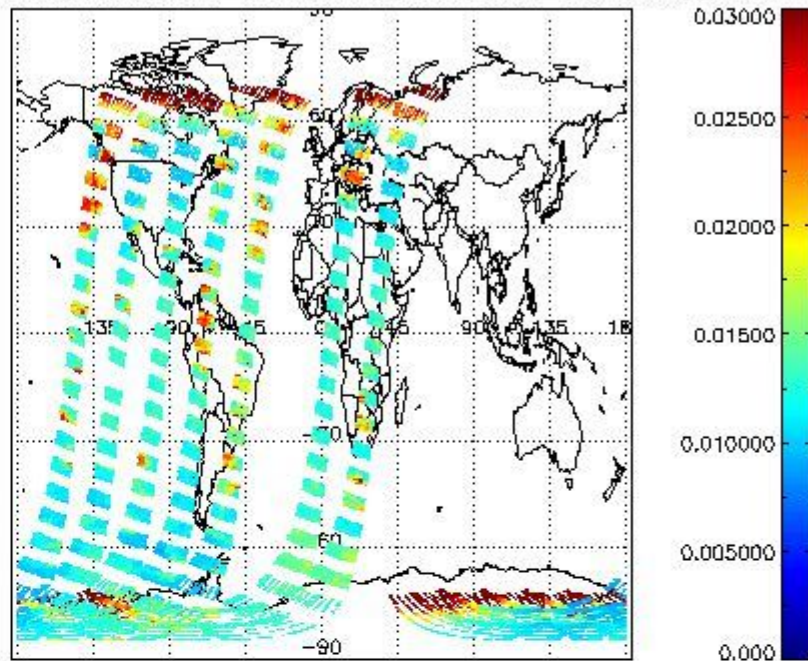
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



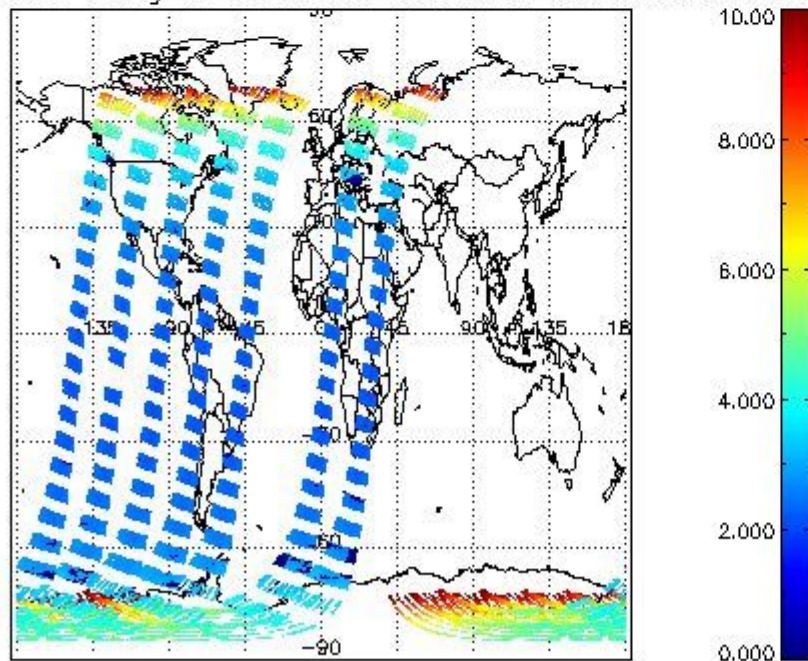
SCIOL2P\_NADUV003\_vcd for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



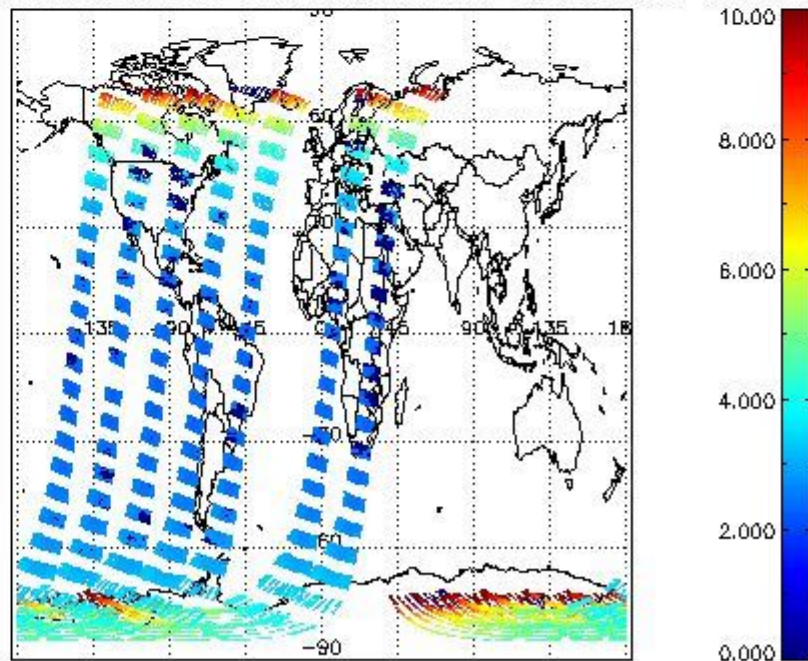
SCIOL2P\_NADUV003\_vcd\_err for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

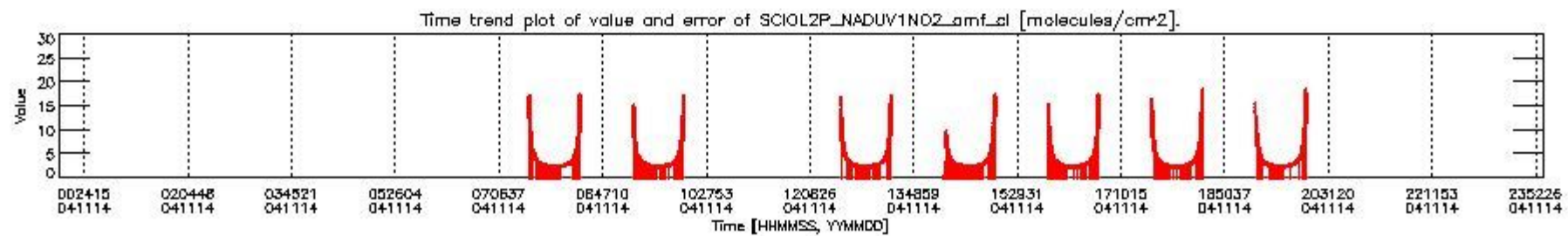
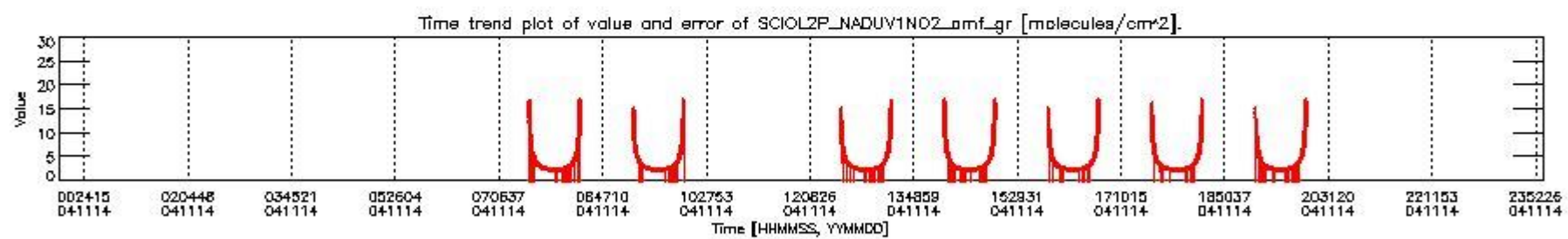
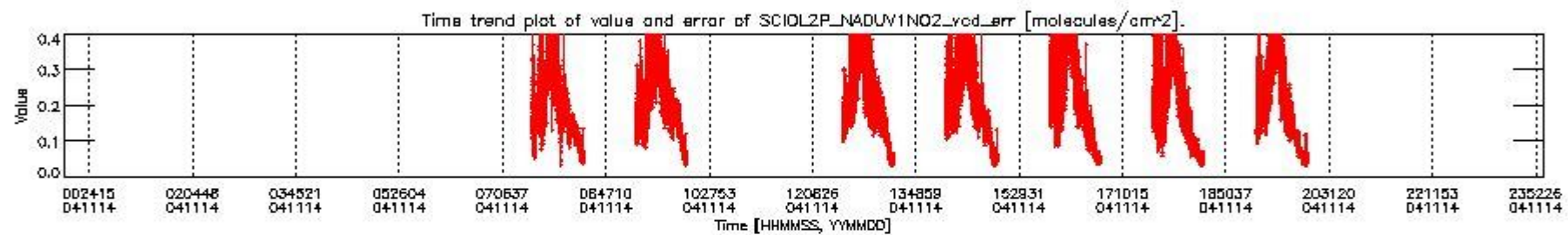
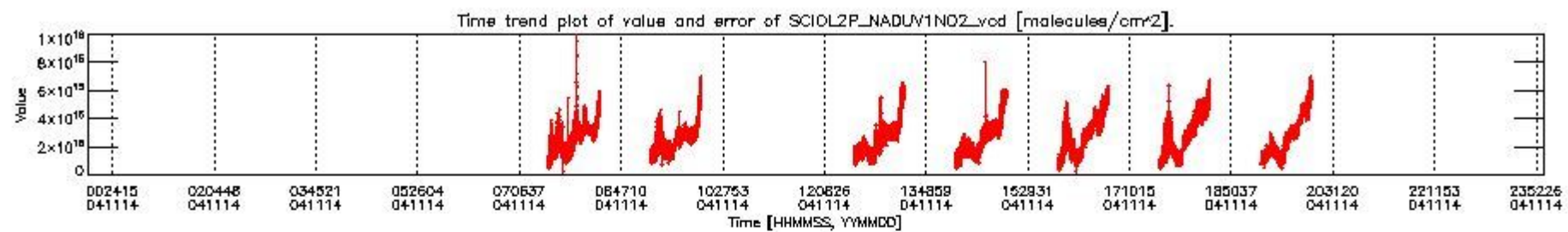


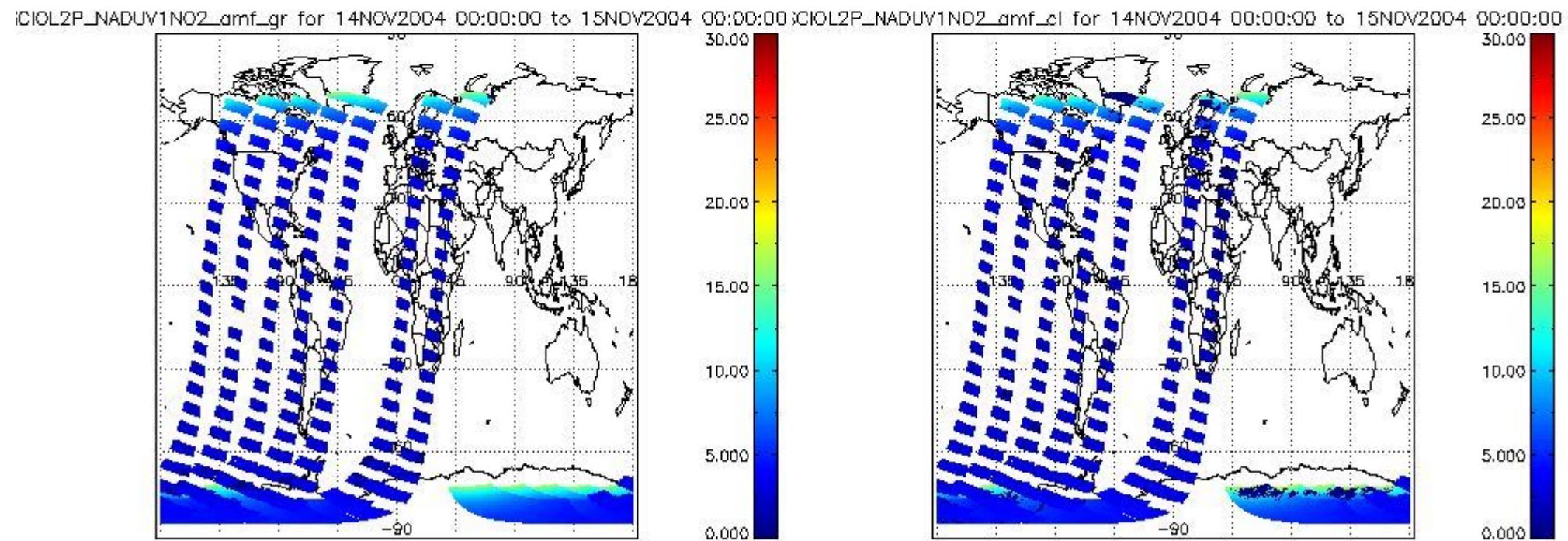
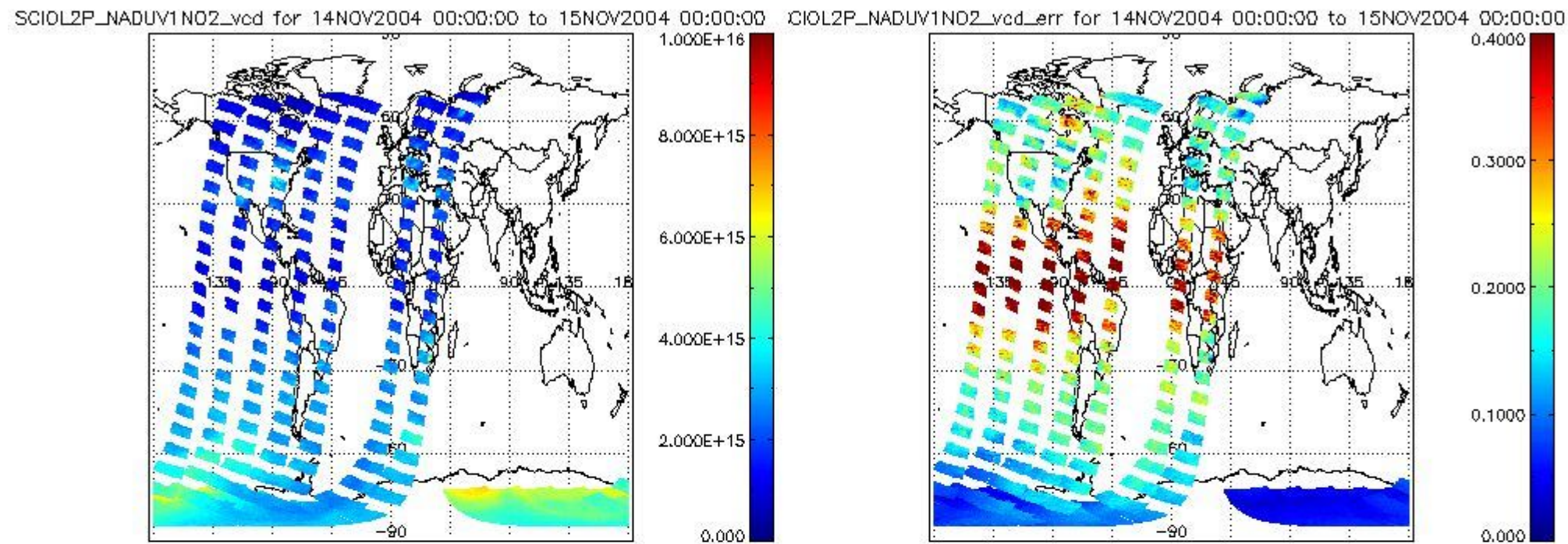
SCIOL2P\_NADUV003\_amf\_gr for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 14NOV2004 00:00:00 to 15NOV2004 00:00:00







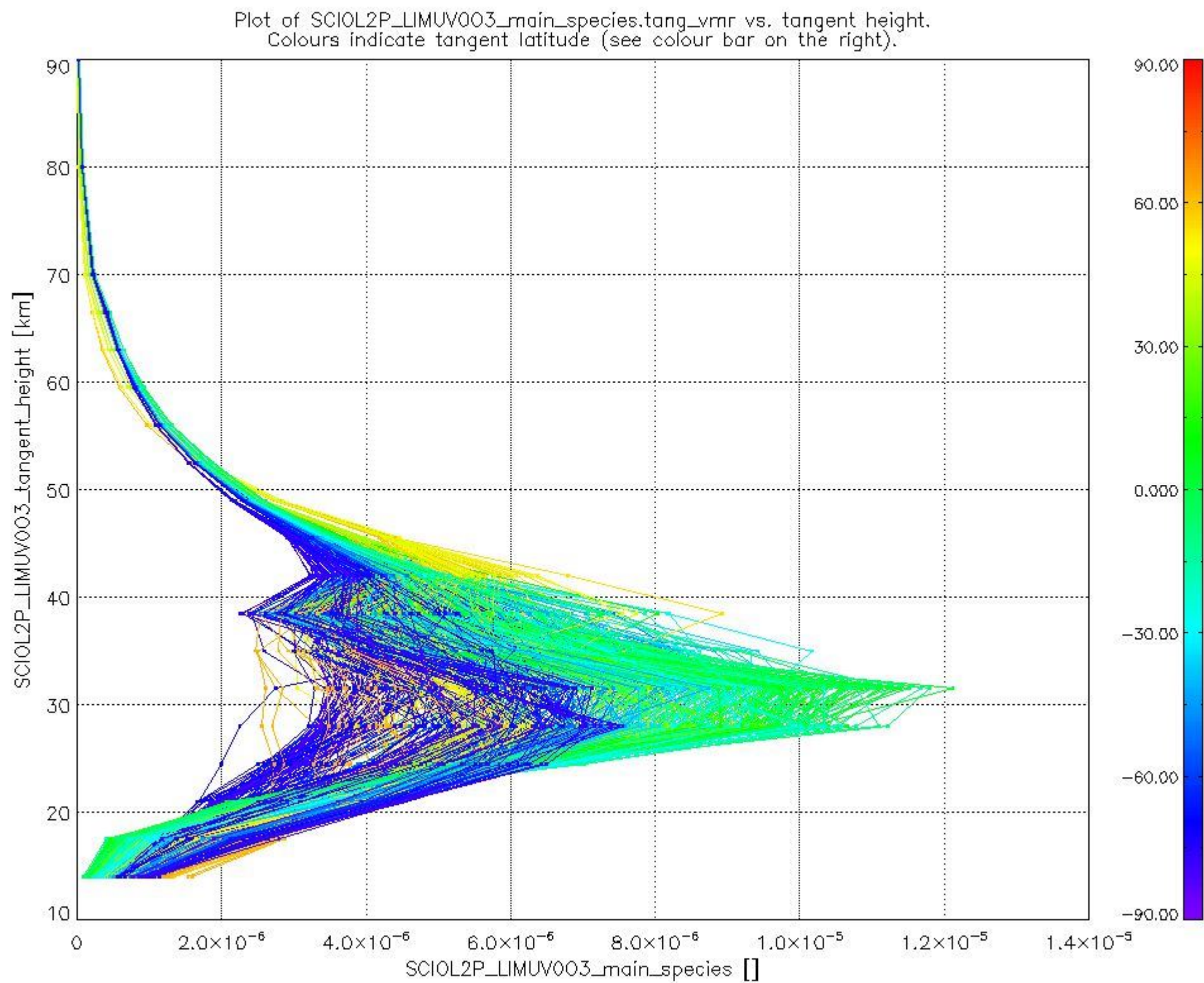
### 2.2.3 Limb

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:

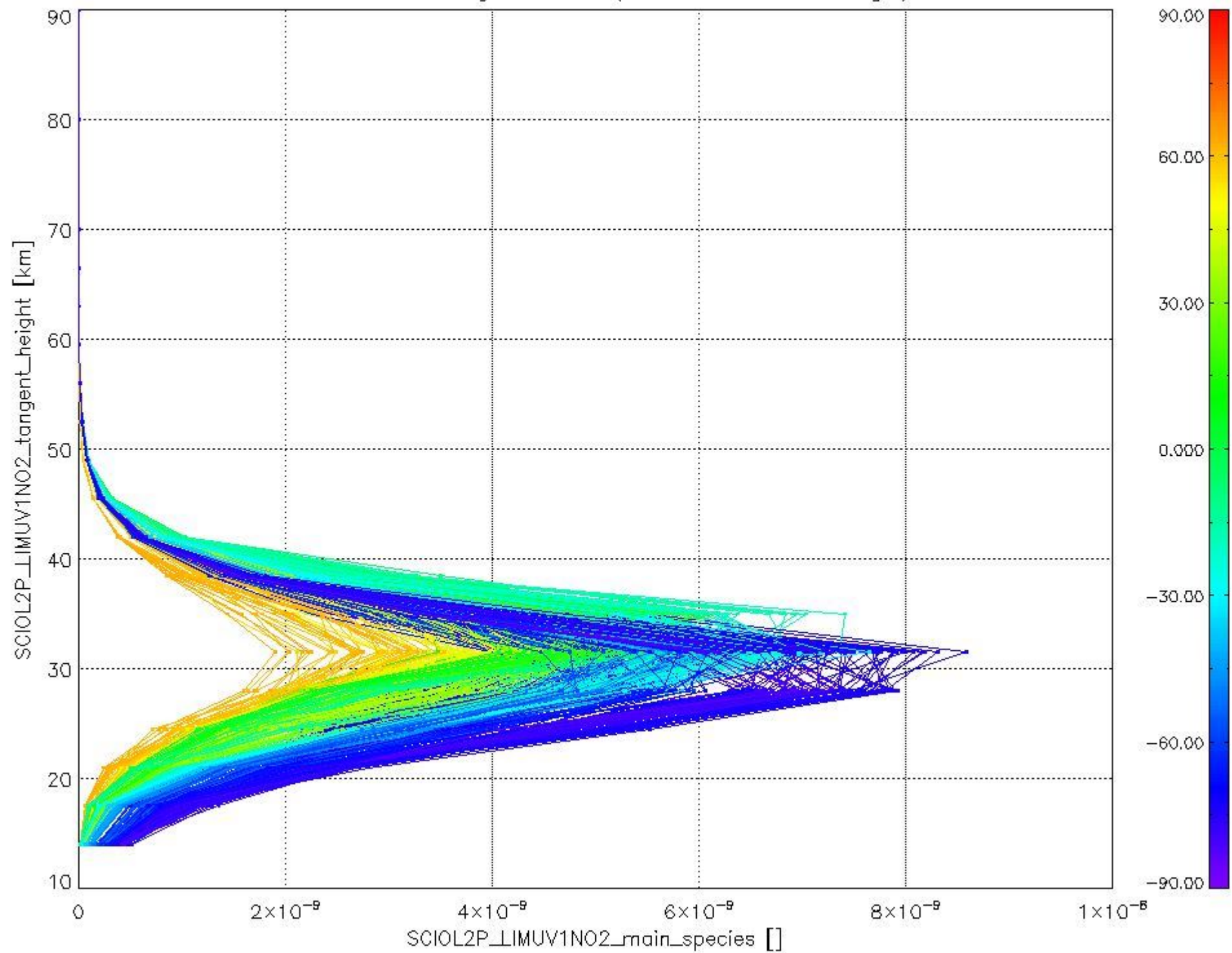
Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

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





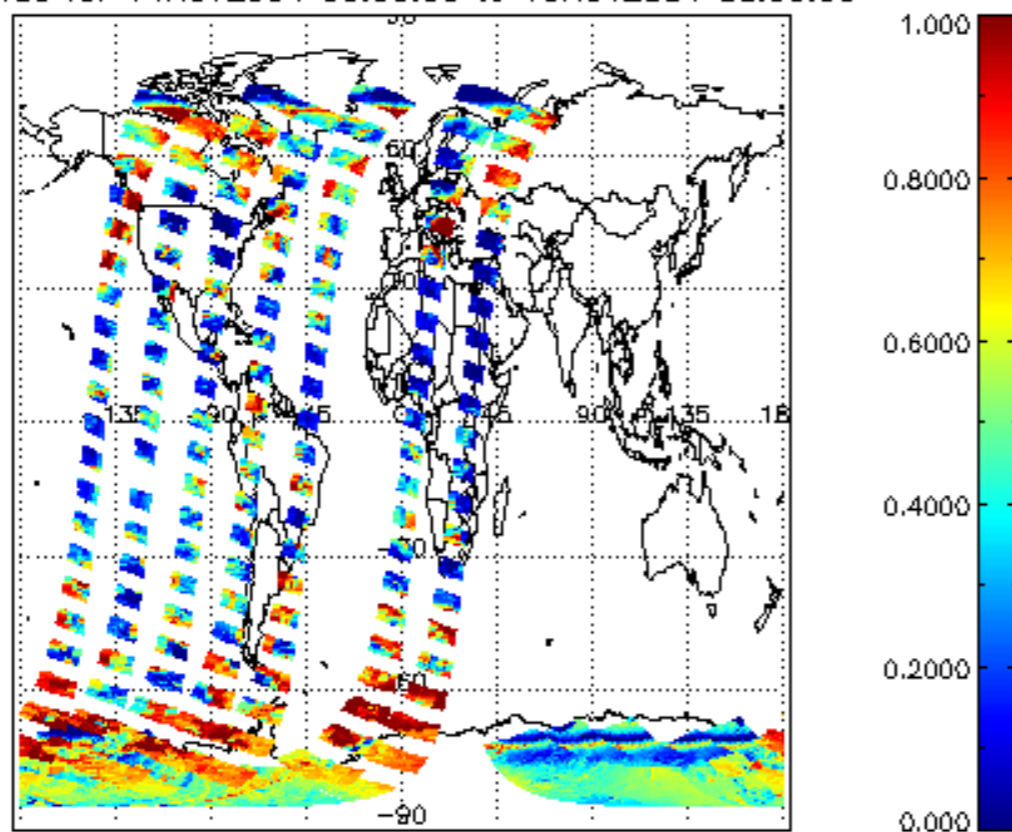
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



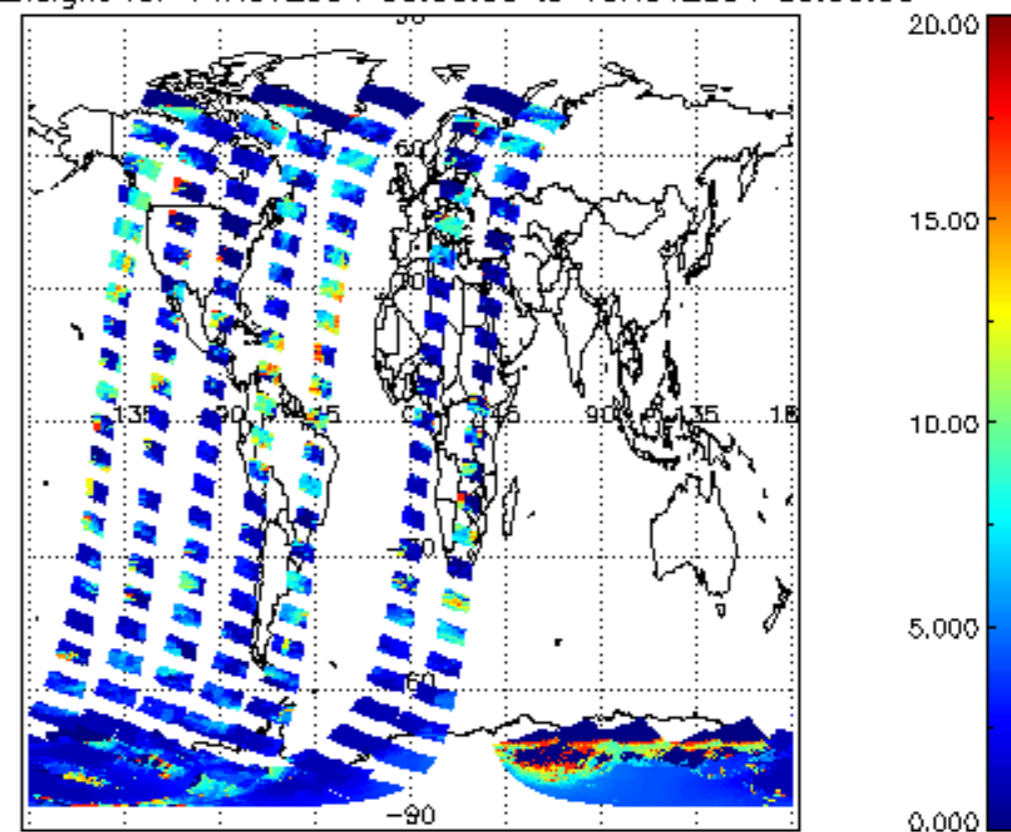
### 2.3 ADF monitoring

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

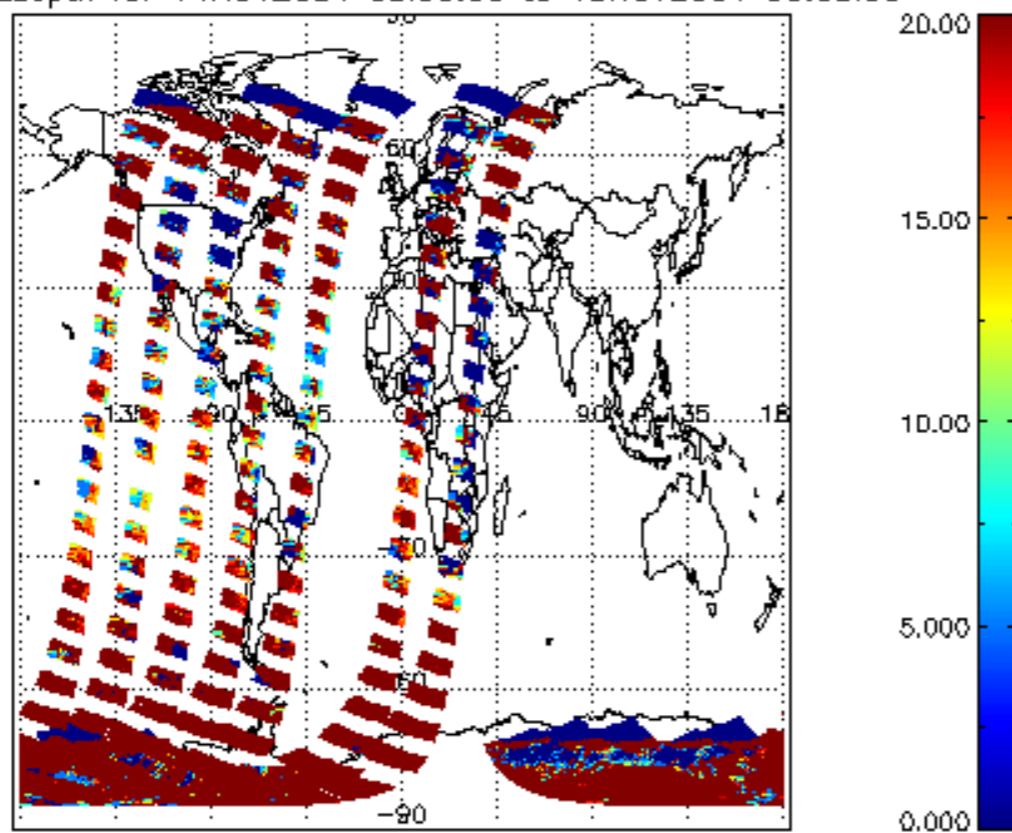
cLfrac for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



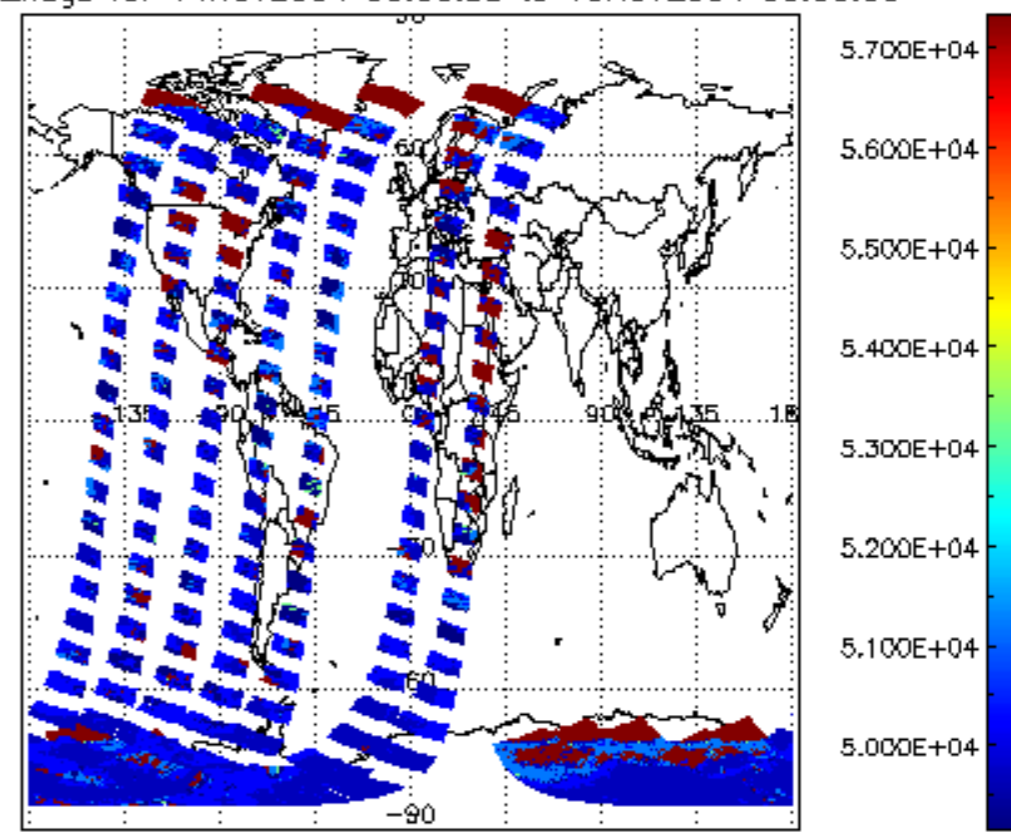
cL\_top\_height for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

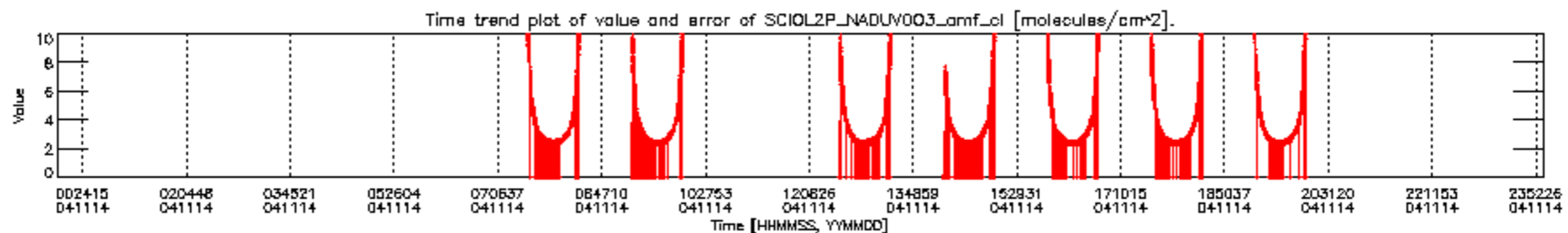
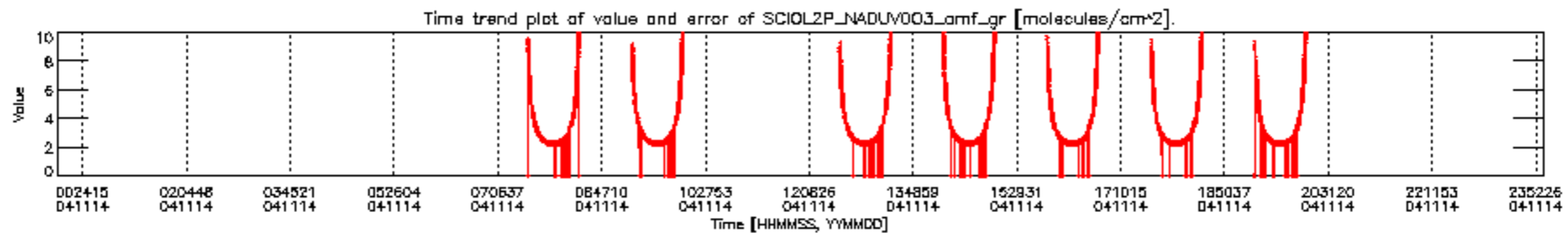
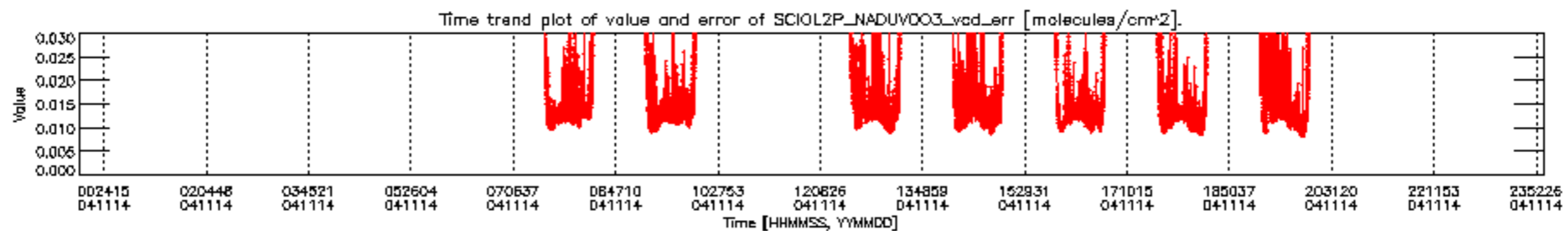
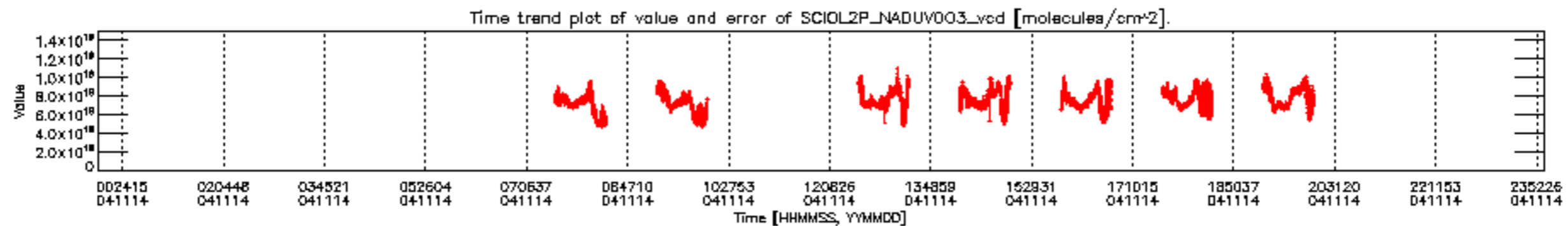


cL\_opt\_depth for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

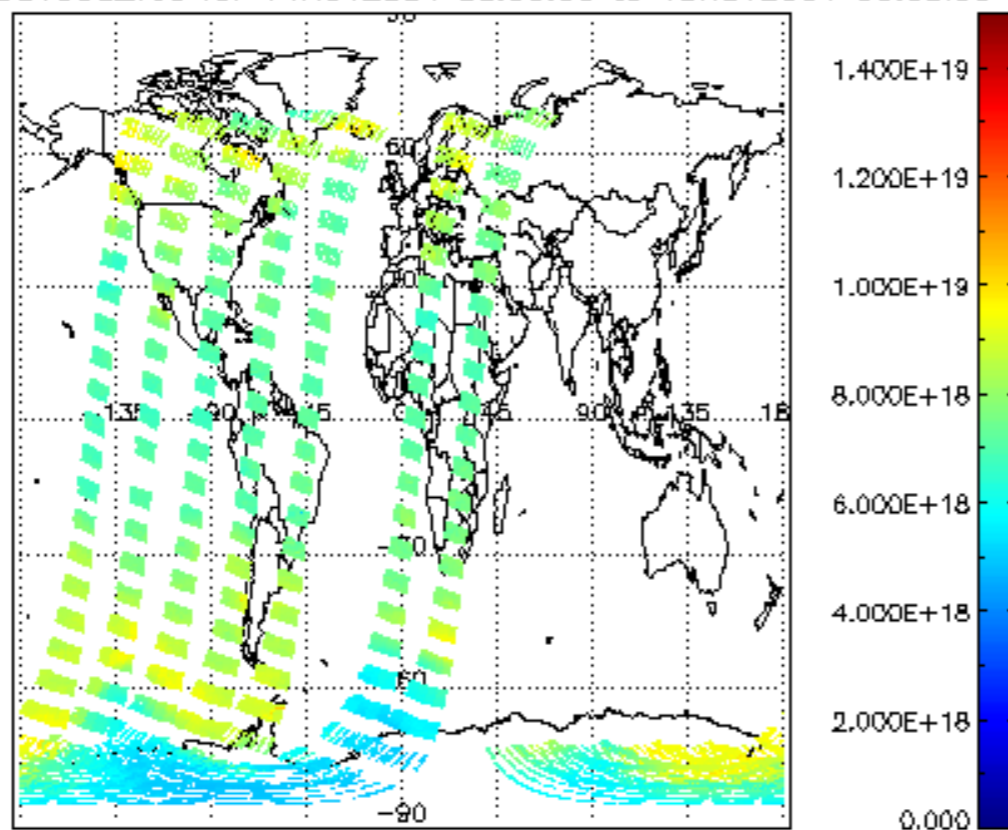


cloud\_flags for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

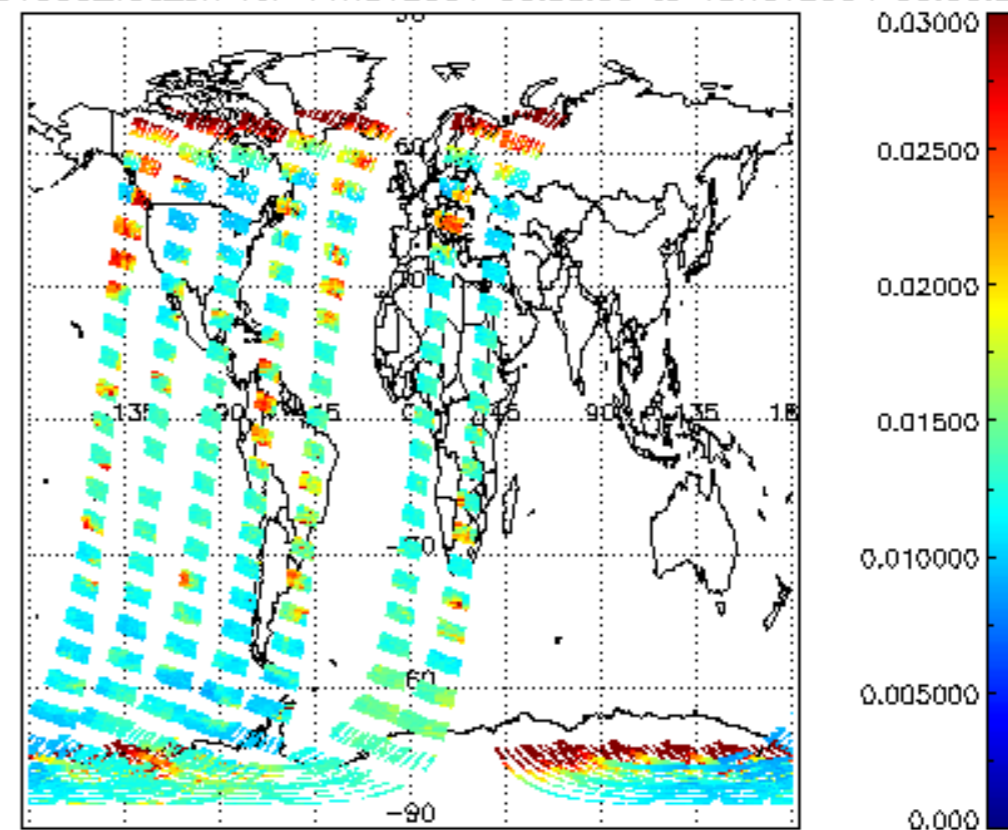




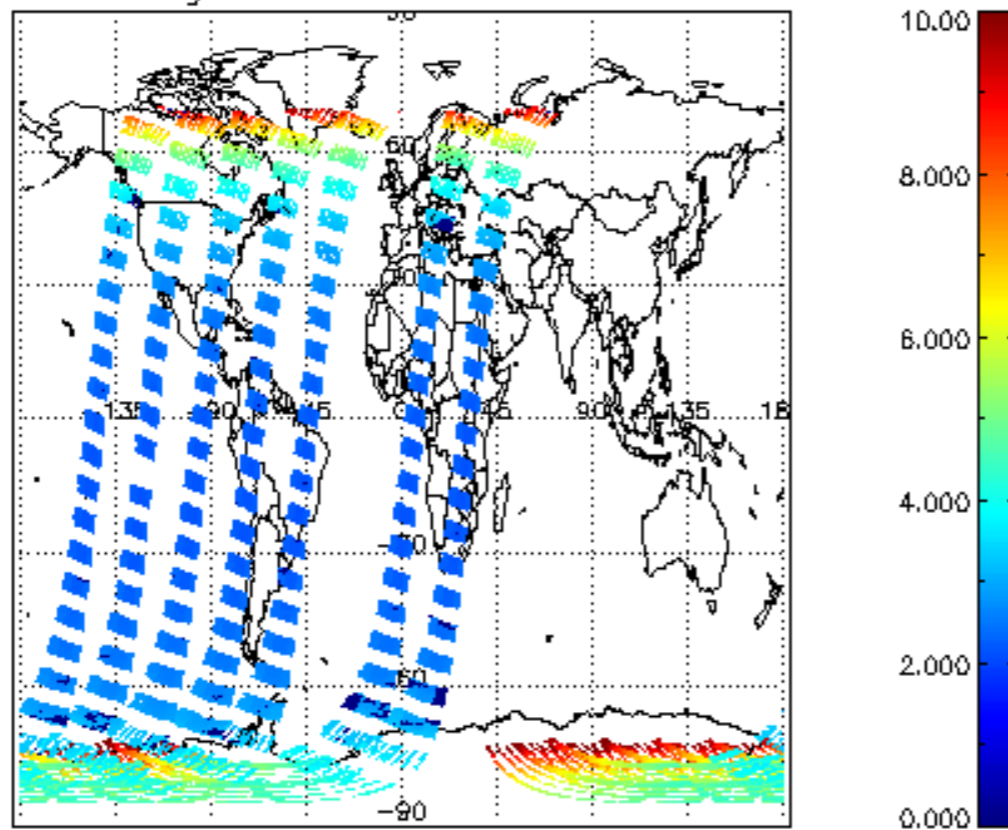
SCIOL2P\_NADUV003\_vcd for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



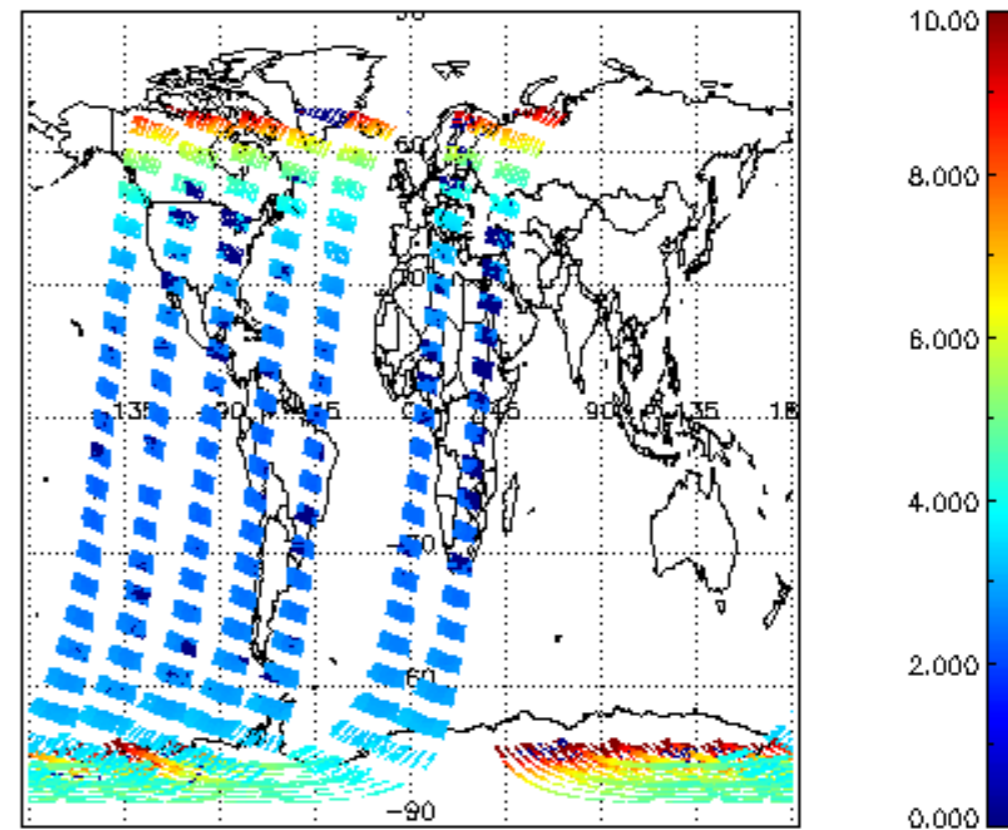
SCIOL2P\_NADUV003\_vcd\_err for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

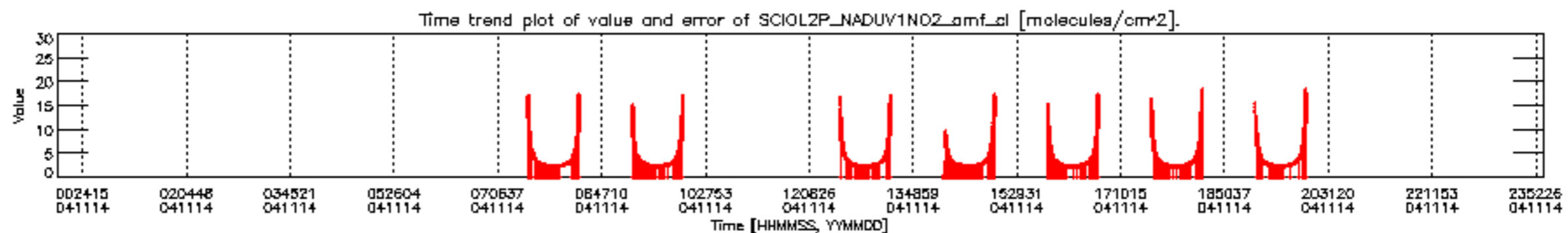
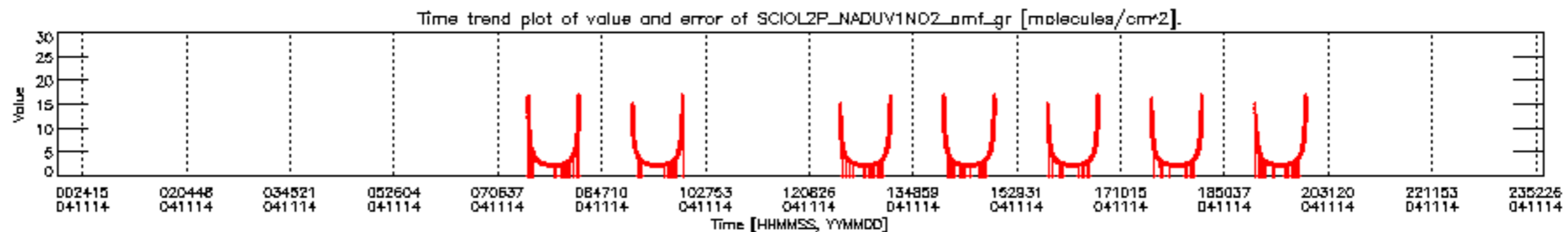
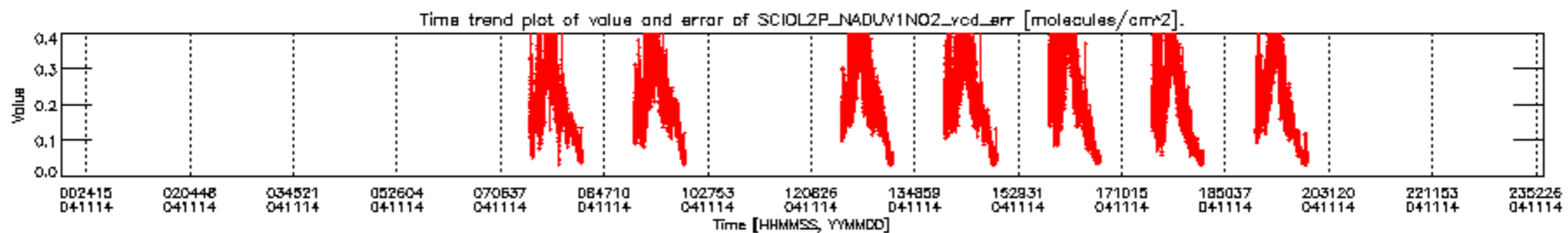
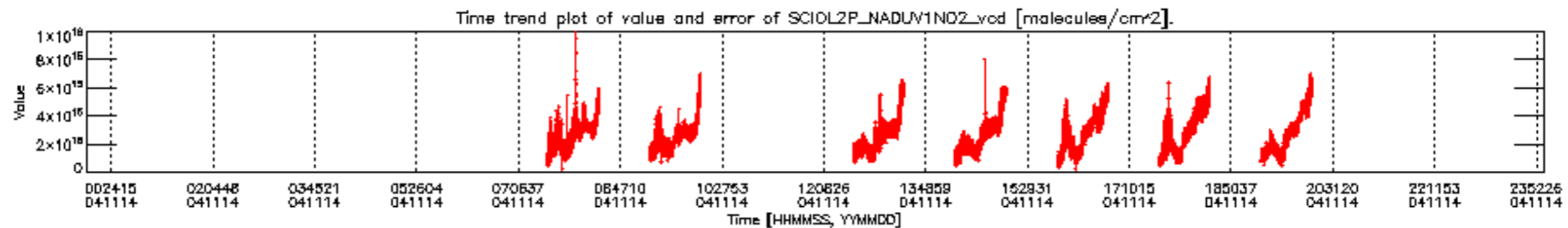


SCIOL2P\_NADUV003\_amf\_gr for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

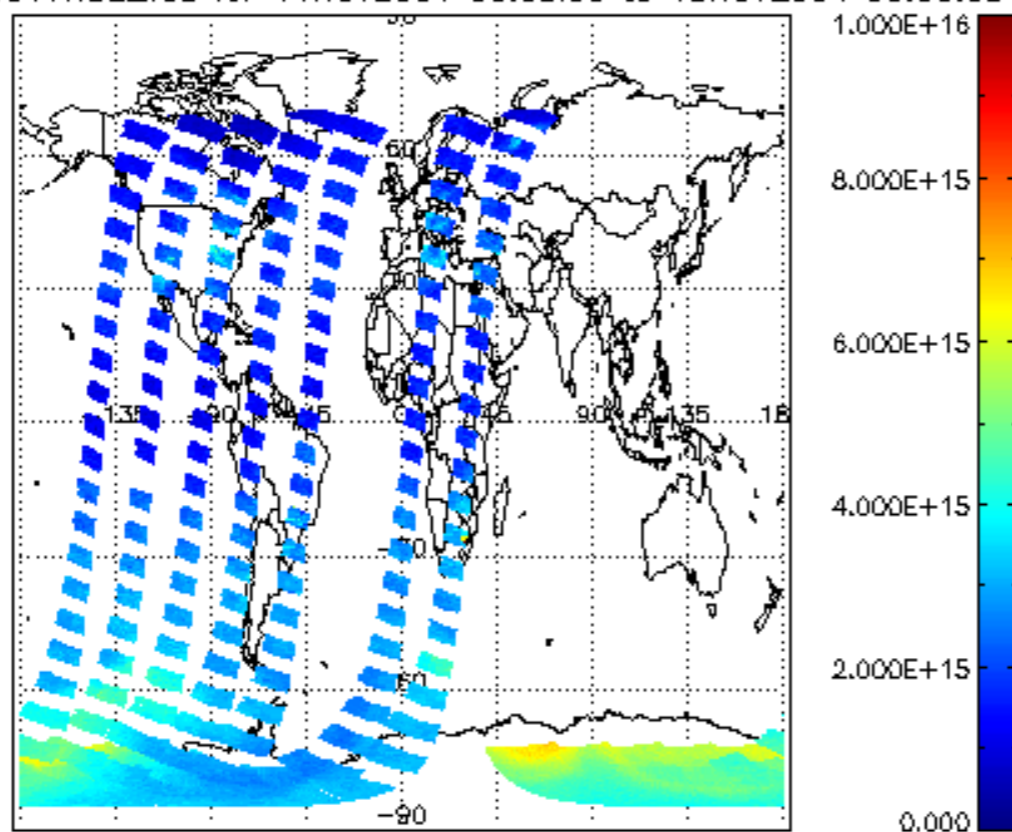


SCIOL2P\_NADUV003\_amf\_cl for 14NOV2004 00:00:00 to 15NOV2004 00:00:00

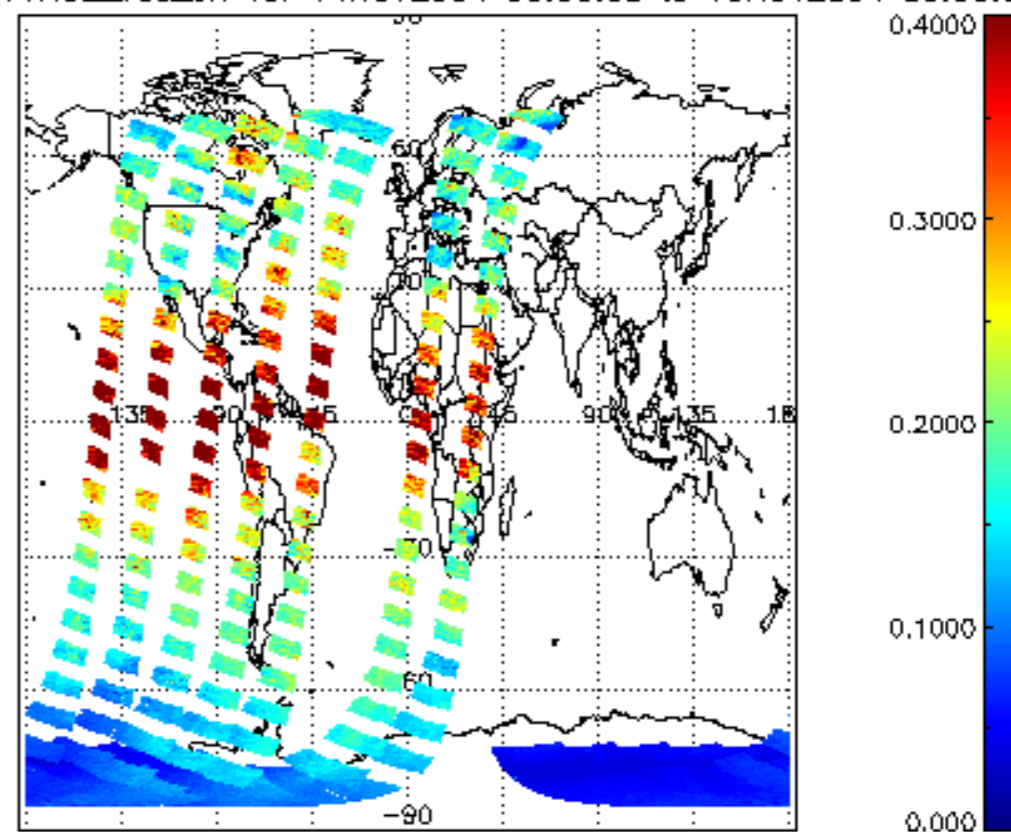




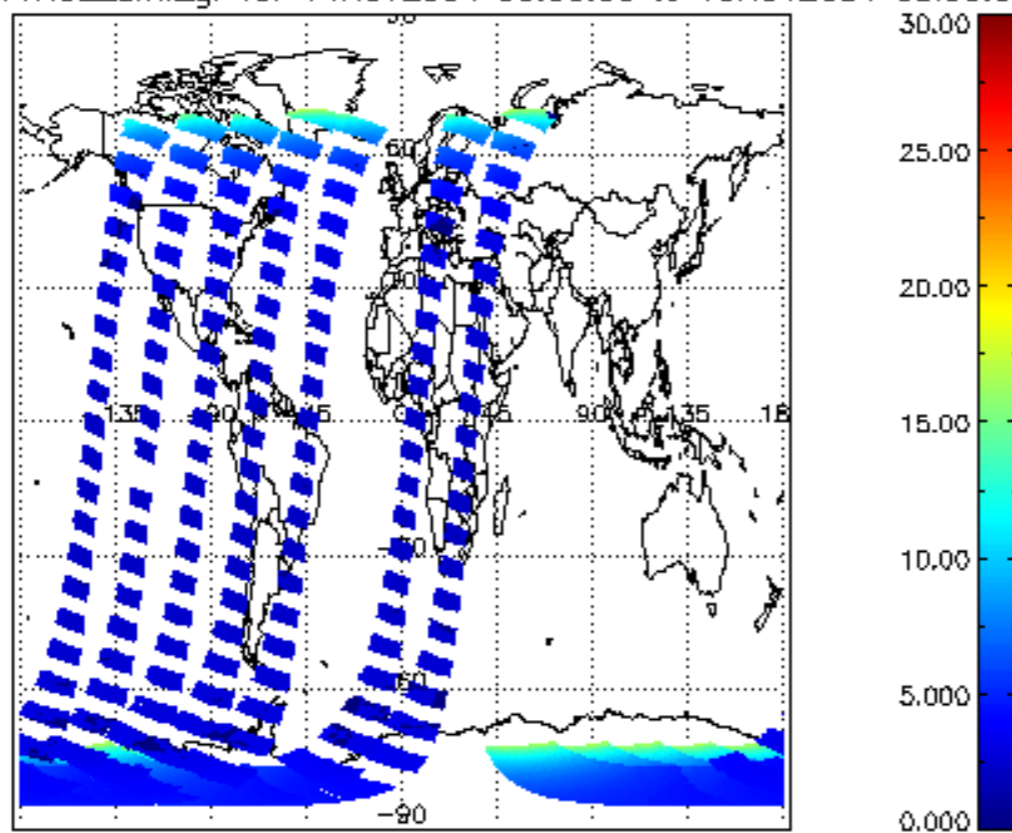
SCIOL2P\_NADUV1NO2\_vcd for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



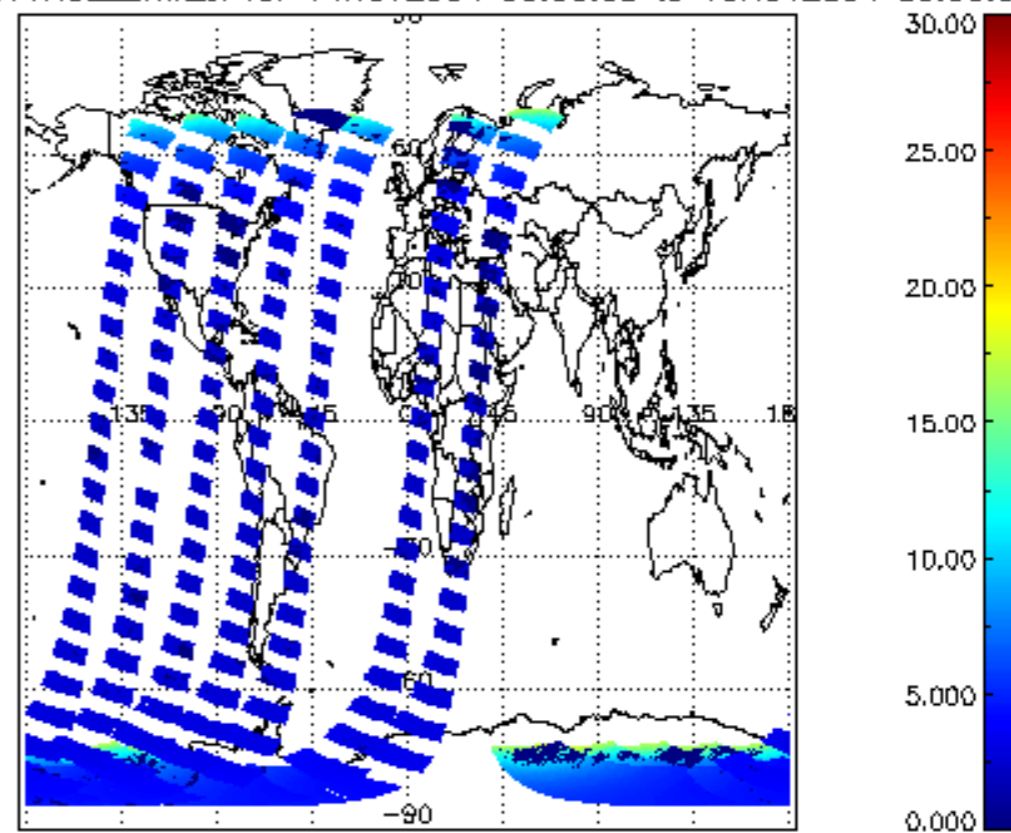
SCIOL2P\_NADUV1NO2\_vcd\_err for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



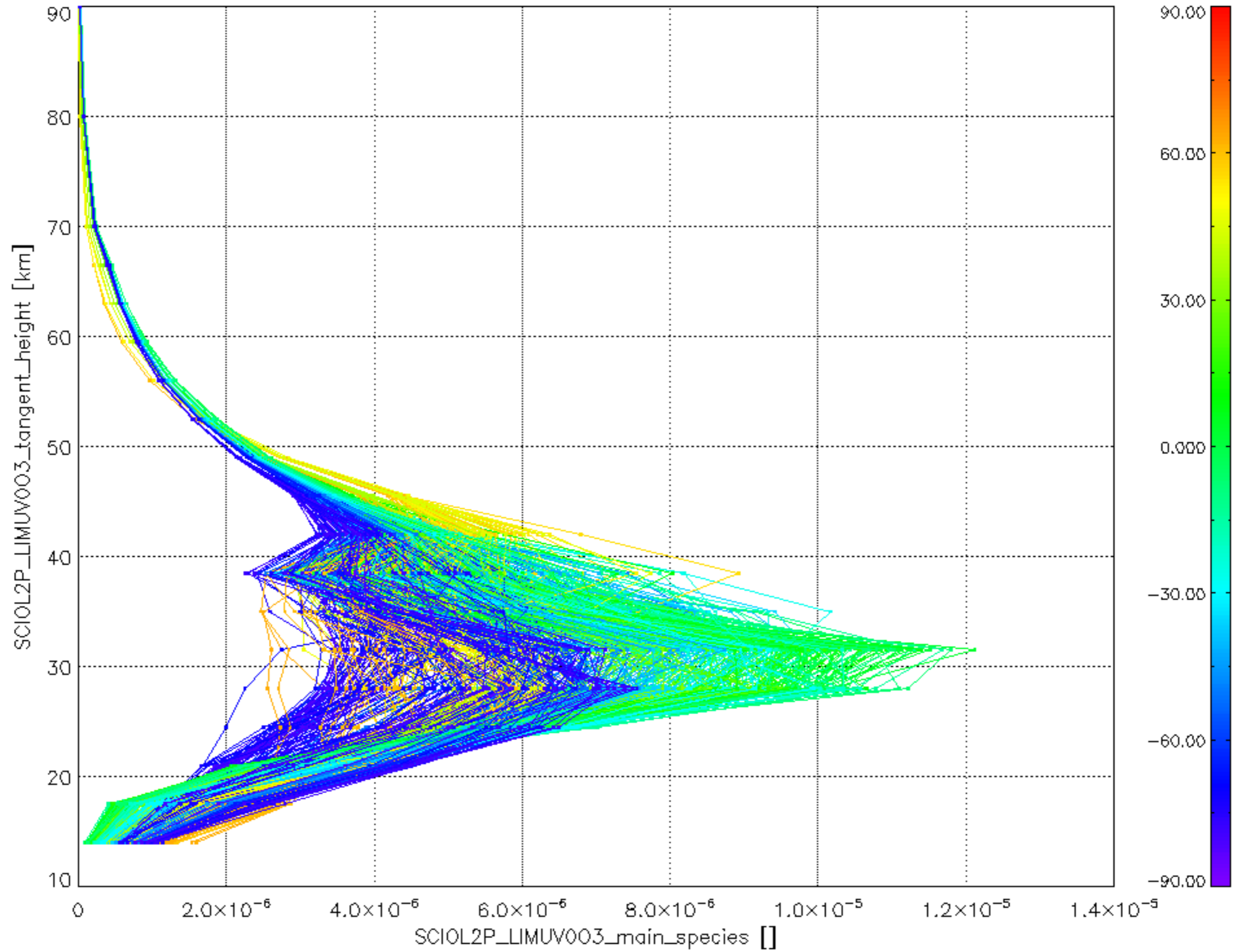
SCIOL2P\_NADUV1NO2\_amf\_gr for 14NOV2004 00:00:00 to 15NOV2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 14NOV2004 00:00:00 to 15NOV2004 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).

