

## 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 14:40:55
Data source version	SCIA-OL/3.01-R
Processing scope for products	04NOV2002 00:00:00 to 05NOV2002 00:00:00
Start time of first product within scope	03NOV2002 22:55:11
Stop time of last product within scope	04NOV2002 23:19:04
Total number of level 2 products	15
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__2PRDPA20021103_225511_000033242010_00488_03548_4976.N1	03NOV2002 22:55:11	03NOV2002 23:50:36	0	GOOD
1	SCI_OL__2PRDPA20021104_003548_000033242010_00489_03549_1541.N1	04NOV2002 00:35:48	04NOV2002 01:31:12	0	GOOD
2	SCI_OL__2PRDPA20021104_021624_000033242010_00490_03550_1559.N1	04NOV2002 02:16:24	04NOV2002 03:11:48	0	GOOD
3	SCI_OL__2PRDPA20021104_035700_000032402010_00491_03551_1613.N1	04NOV2002 03:57:00	04NOV2002 04:51:01	0	GOOD
4	SCI_OL__2PRDPA20021104_053737_000033242010_00492_03552_1584.N1	04NOV2002 05:37:37	04NOV2002 06:33:01	0	GOOD
5	SCI_OL__2PRDPA20021104_071813_000033242010_00493_03553_4982.N1	04NOV2002 07:18:13	04NOV2002 08:13:37	0	GOOD
6	SCI_OL__2PRDPA20021104_085849_000033242010_00494_03554_1609.N1	04NOV2002 08:58:49	04NOV2002 09:54:13	0	GOOD
7	SCI_OL__2PRDPA20021104_103925_000033242010_00495_03555_4974.N1	04NOV2002 10:39:25	04NOV2002 11:34:50	0	GOOD
8	SCI_OL__2PRDPA20021104_122002_000033242010_00496_03556_4972.N1	04NOV2002 12:20:02	04NOV2002 13:15:26	0	GOOD
9	SCI_OL__2PRDPA20021104_140038_000033242010_00497_03557_4970.N1	04NOV2002 14:00:38	04NOV2002 14:56:02	0	GOOD
10	SCI_OL__2PRDPA20021104_154114_000033242010_00498_03558_1500.N1	04NOV2002 15:41:14	04NOV2002 16:36:39	0	GOOD
11	SCI_OL__2PRDPA20021104_172119_000033672010_00499_03559_1528.N1	04NOV2002 17:21:19	04NOV2002 18:17:26	0	GOOD
12	SCI_OL__2PRDPA20021104_190145_000033862010_00500_03560_1552.N1	04NOV2002 19:01:45	04NOV2002 19:58:12	0	GOOD
13	SCI_OL__2PRDPA20021104_204303_000033242010_00501_03561_1489.N1	04NOV2002 20:43:03	04NOV2002 21:38:28	0	GOOD
14	SCI_OL__2PRDPA20021104_222340_000033242011_00001_03562_1560.N1	04NOV2002 22:23:40	04NOV2002 23:19:04	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: 108300

Total number of cloud data DSRs with good quality flag (=0): 108300 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	108300	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	108300	0.21593	0.25000	0.12500	1.0000	0.079706	s
SURFACE_PRES	108300	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	108300	0.44163	0.42509	0.0000	1.0000	0.28250	-

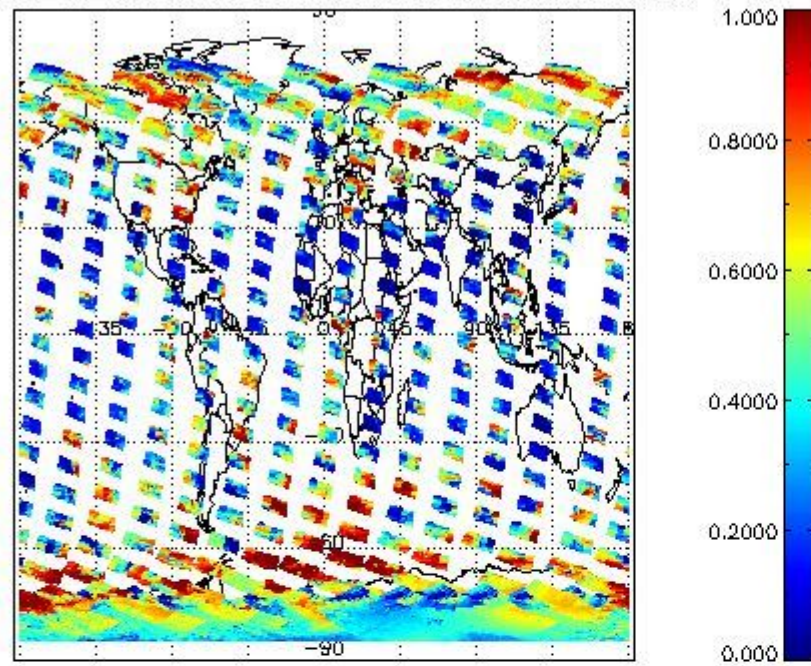
CL_FRAC_ERR	108300	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	108300	6.9097	8.0000	4.0000	32.000	2.5506	
PMD_READ_CL[0]	108300	0.41255	0.0000	0.0000	25.000	1.4966	-
PMD_READ_CL[1]	108300	0.43783	0.0000	0.0000	32.000	1.5765	-
CL_TOP_HEIGHT	98188	4.4115	3.1571	0.0000	17.000	4.0099	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	98188	46.962	31.742	0.0000	101.00	37.679	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	108300	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	108300	11000110	11000100	11000000	11100000	2541.3	flags
AERO_ABSO_IND	108300	0.47619	0.36177	-4.3829	10.066	1.0599	
AERO_IND_DIAG	108300	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	108300	01101001	11000000	00000000	11000000	24450.	flags

Time and geolocation plots:

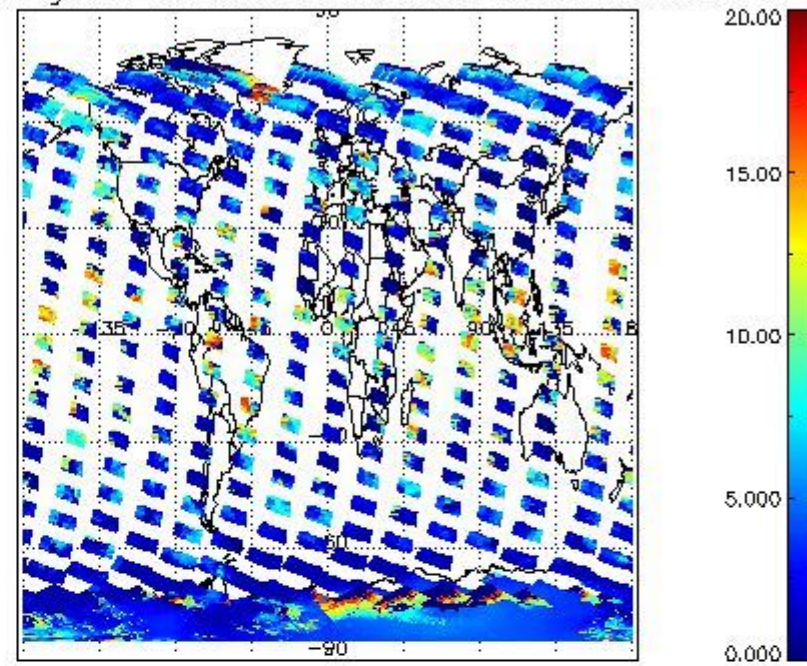
Plots are available for the following parameters:

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

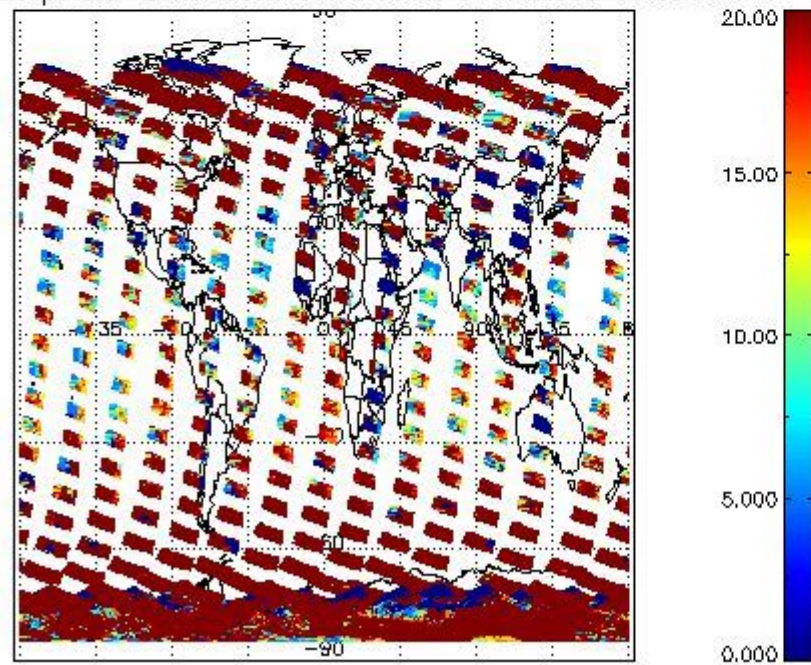
cLfrac for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



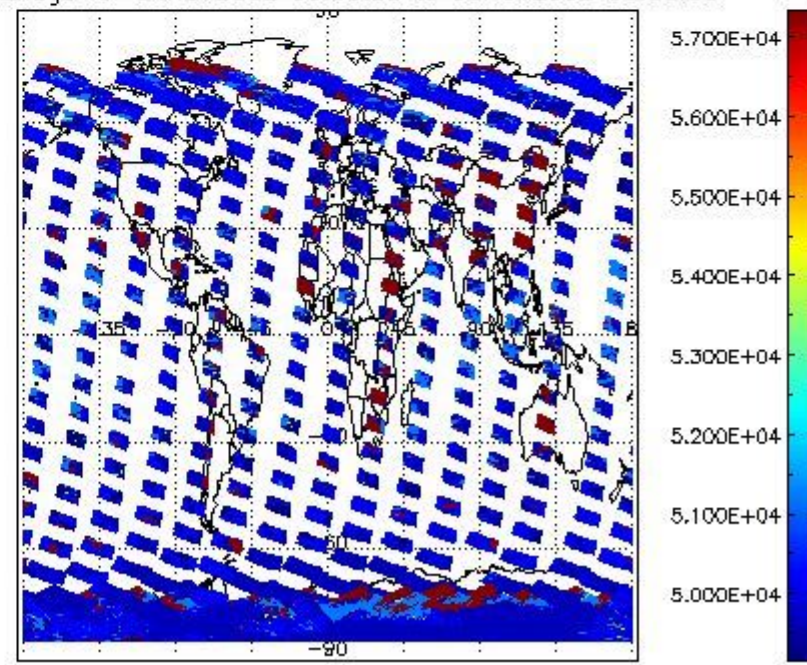
cL\_top\_height for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



cL\_opt\_depth for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



cloud\_flags for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



### 2.2.2 Nadir

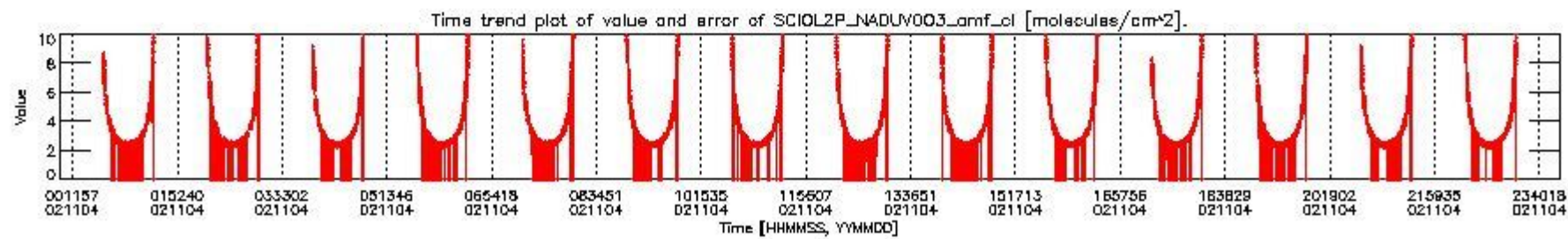
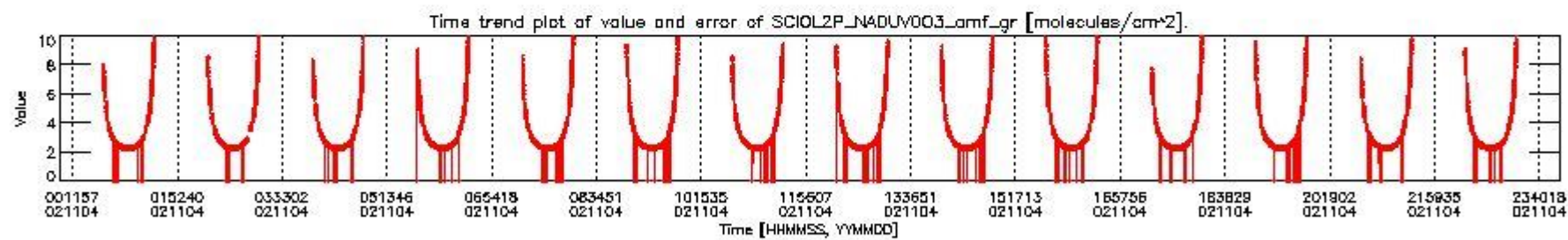
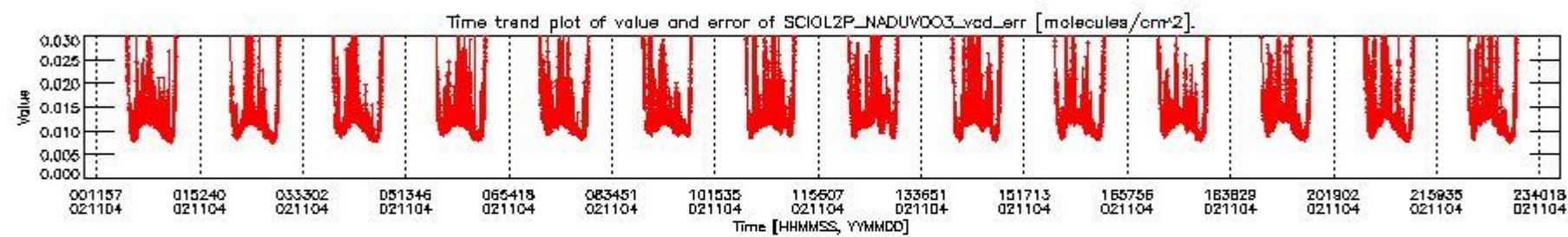
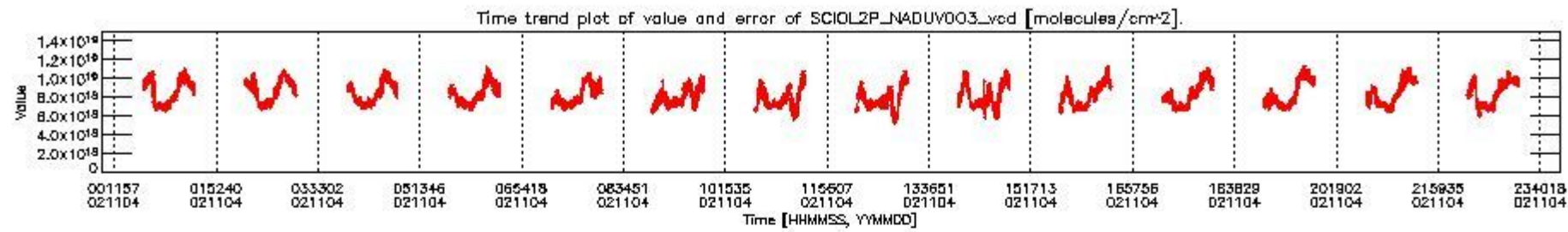
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

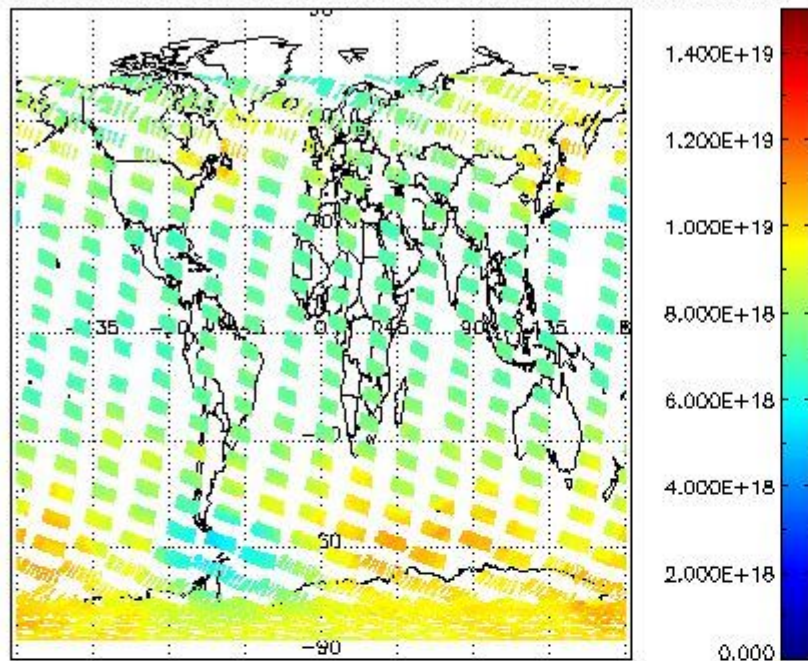
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

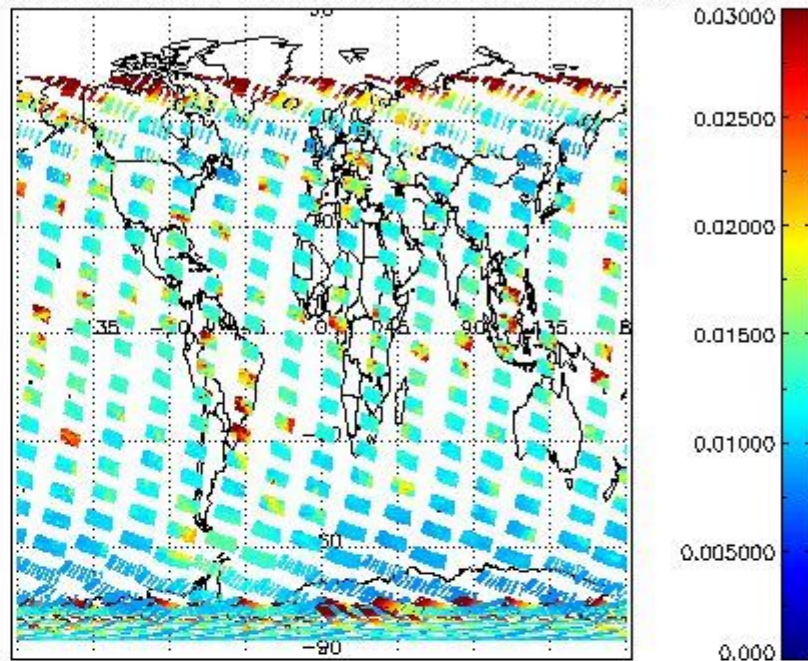
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



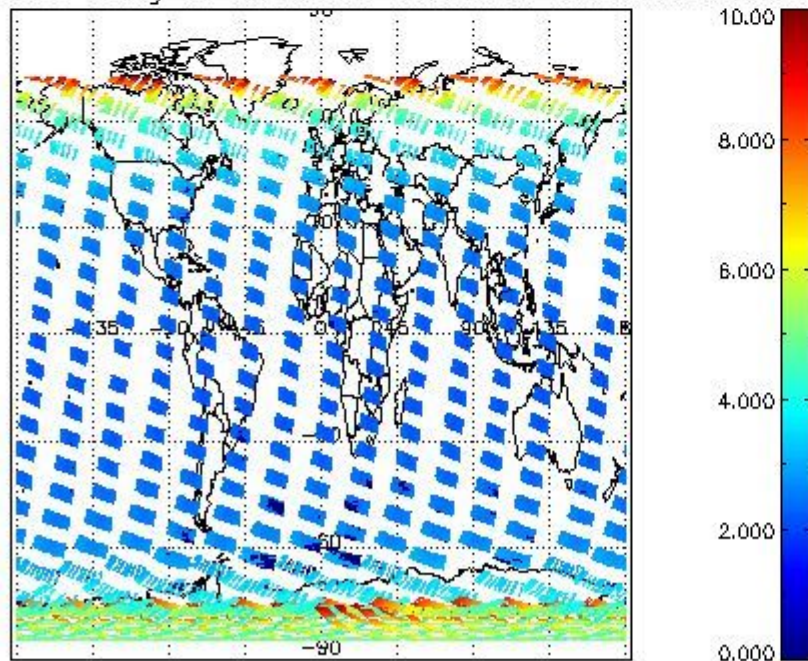
SCIOL2P\_NADUV003\_vcd for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



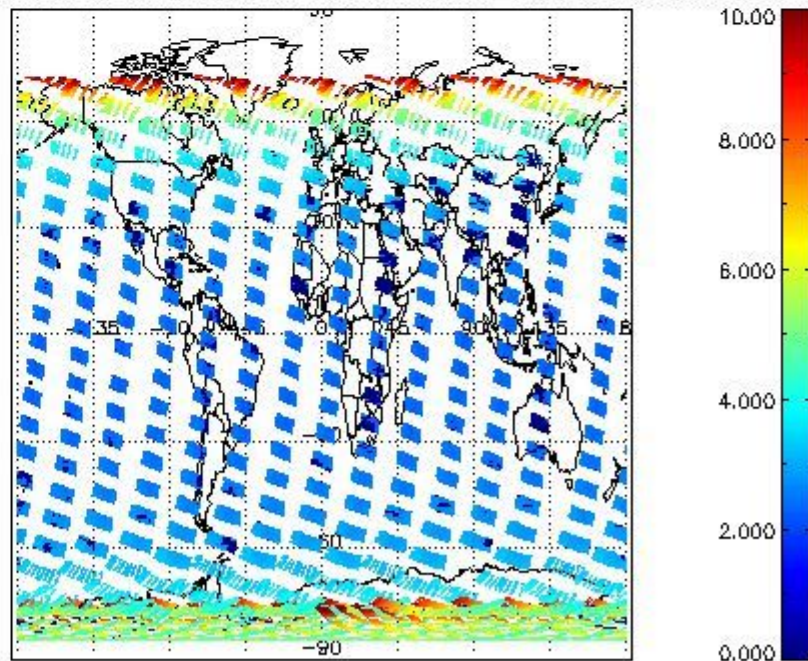
SCIOL2P\_NADUV003\_vcd\_err for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

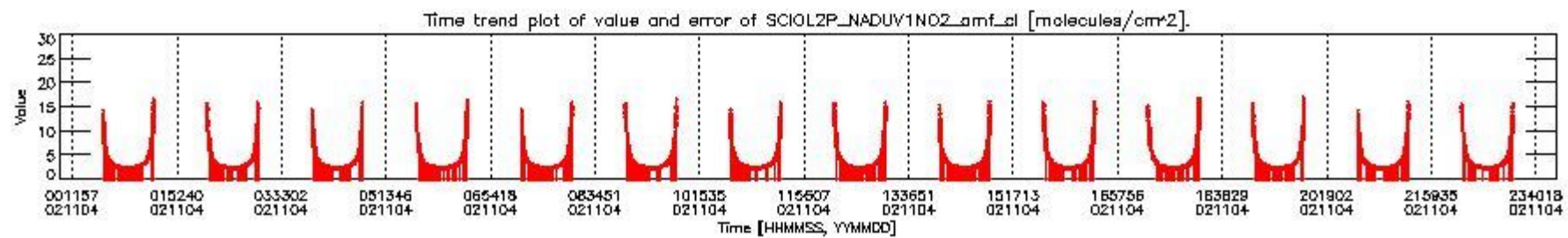
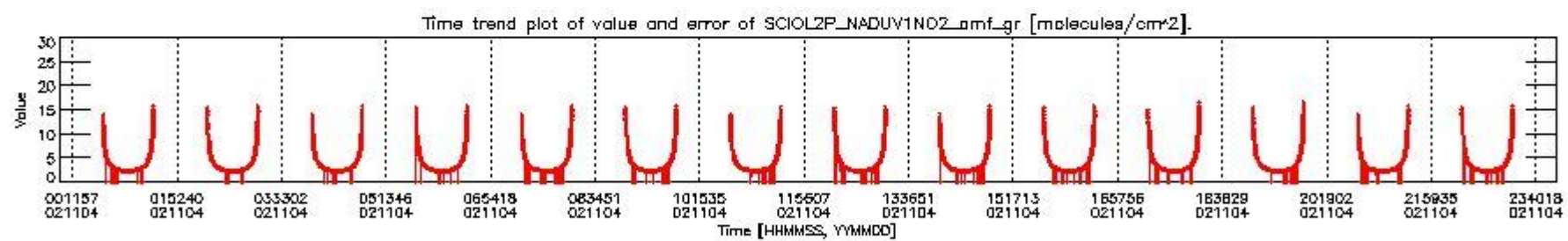
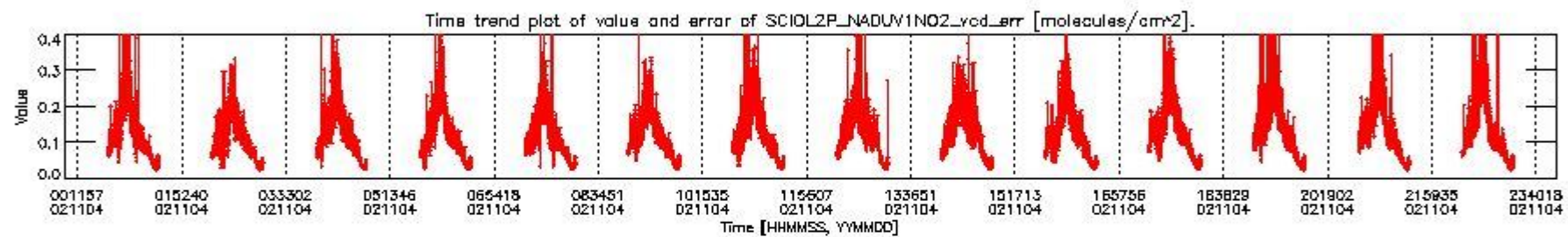
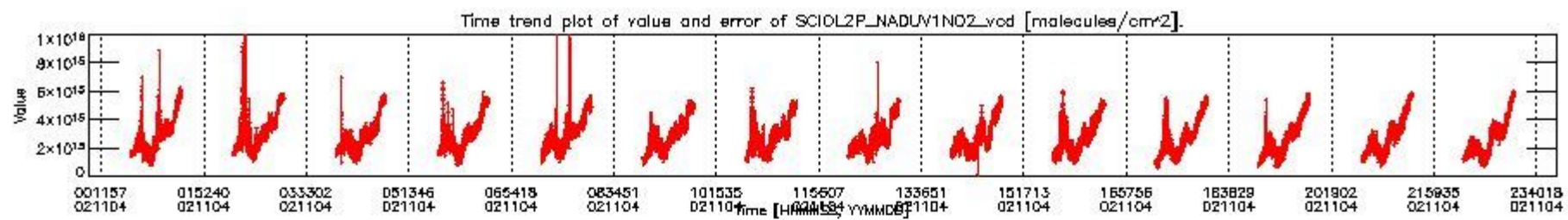


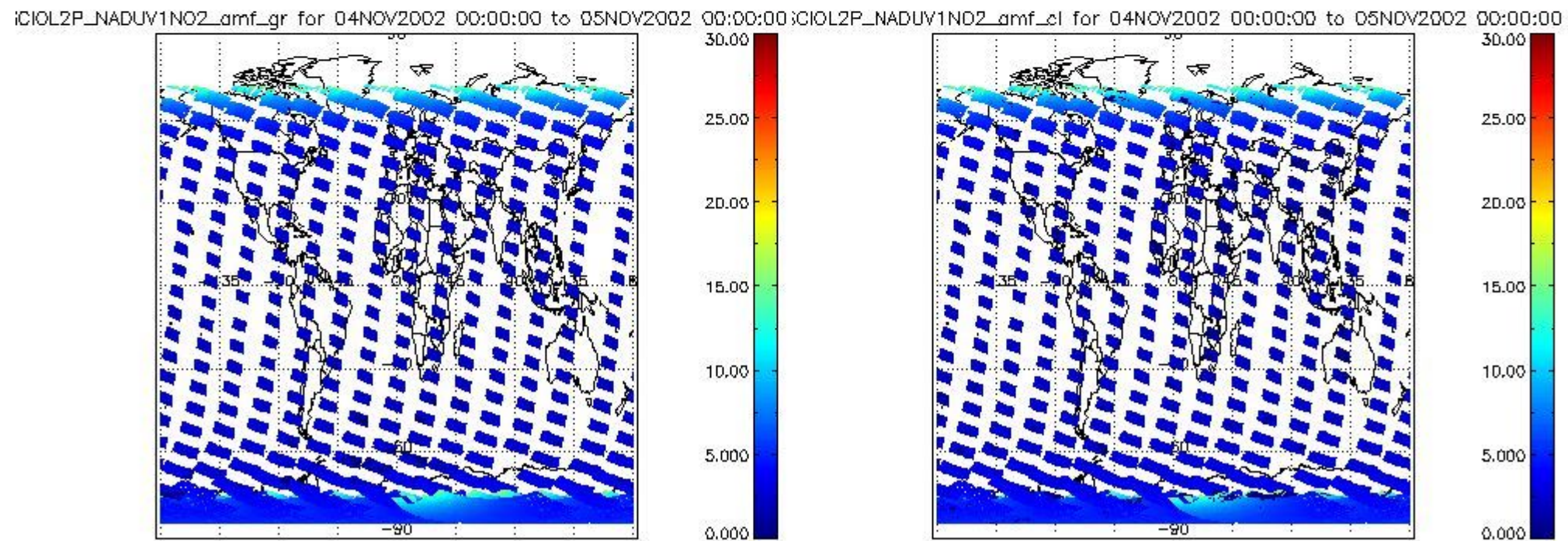
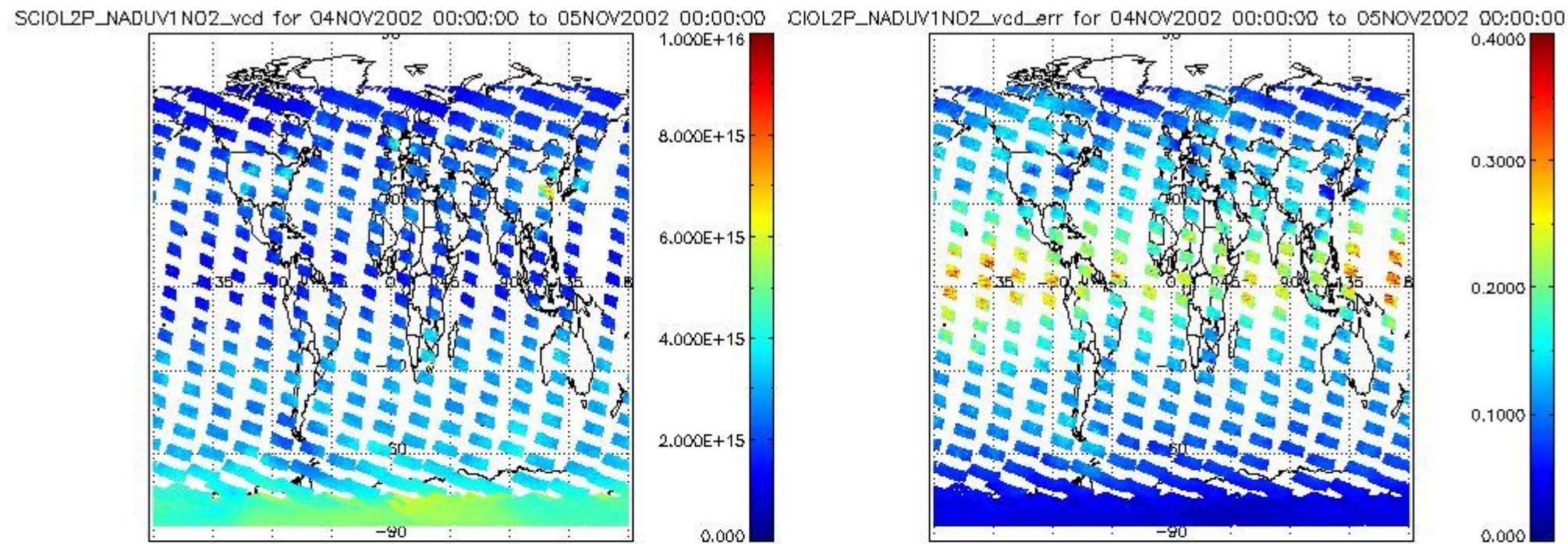
SCIOL2P\_NADUV003\_amf\_gr for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 04NOV2002 00:00:00 to 05NOV2002 00:00:00







### 2.2.3 Limb

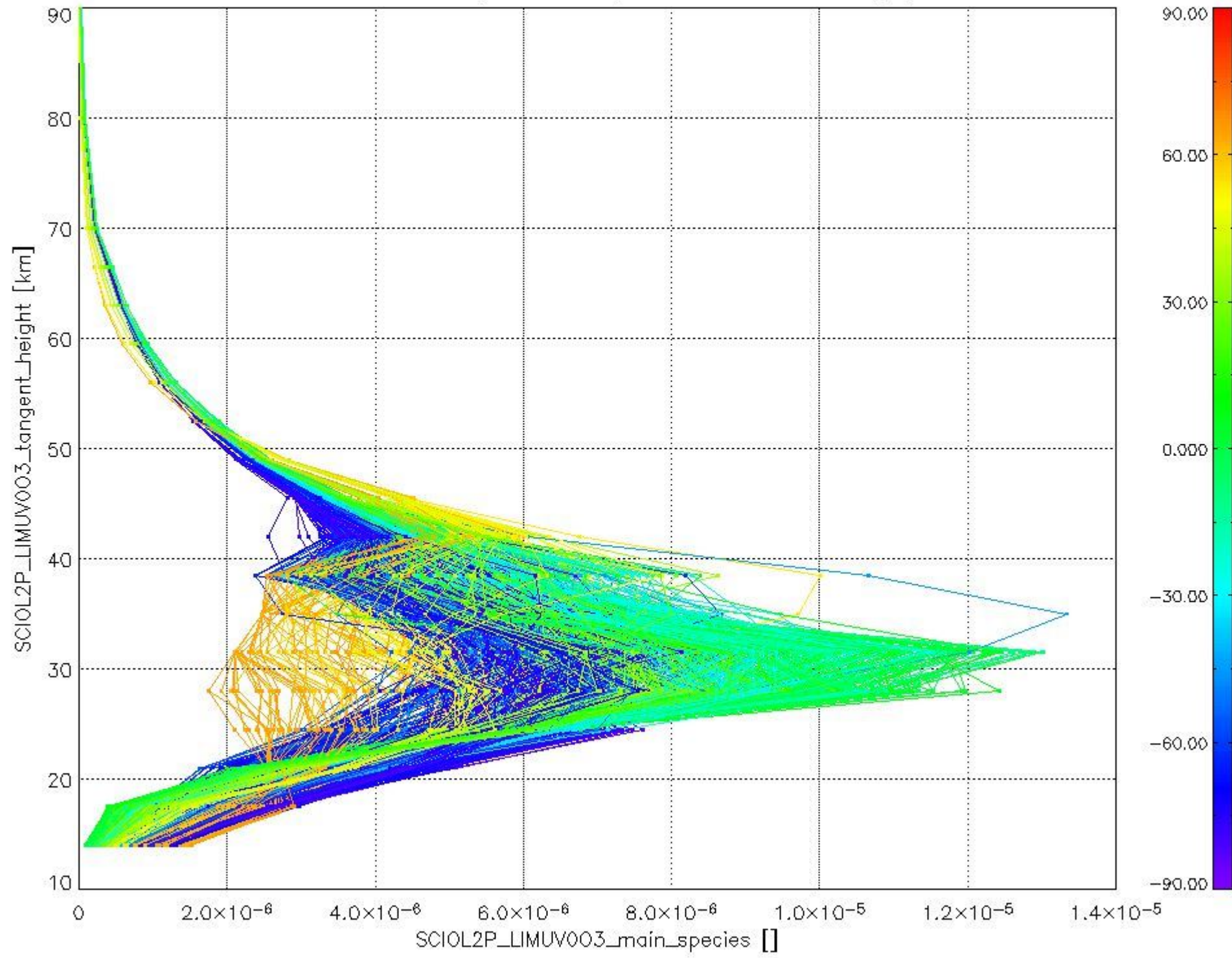
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

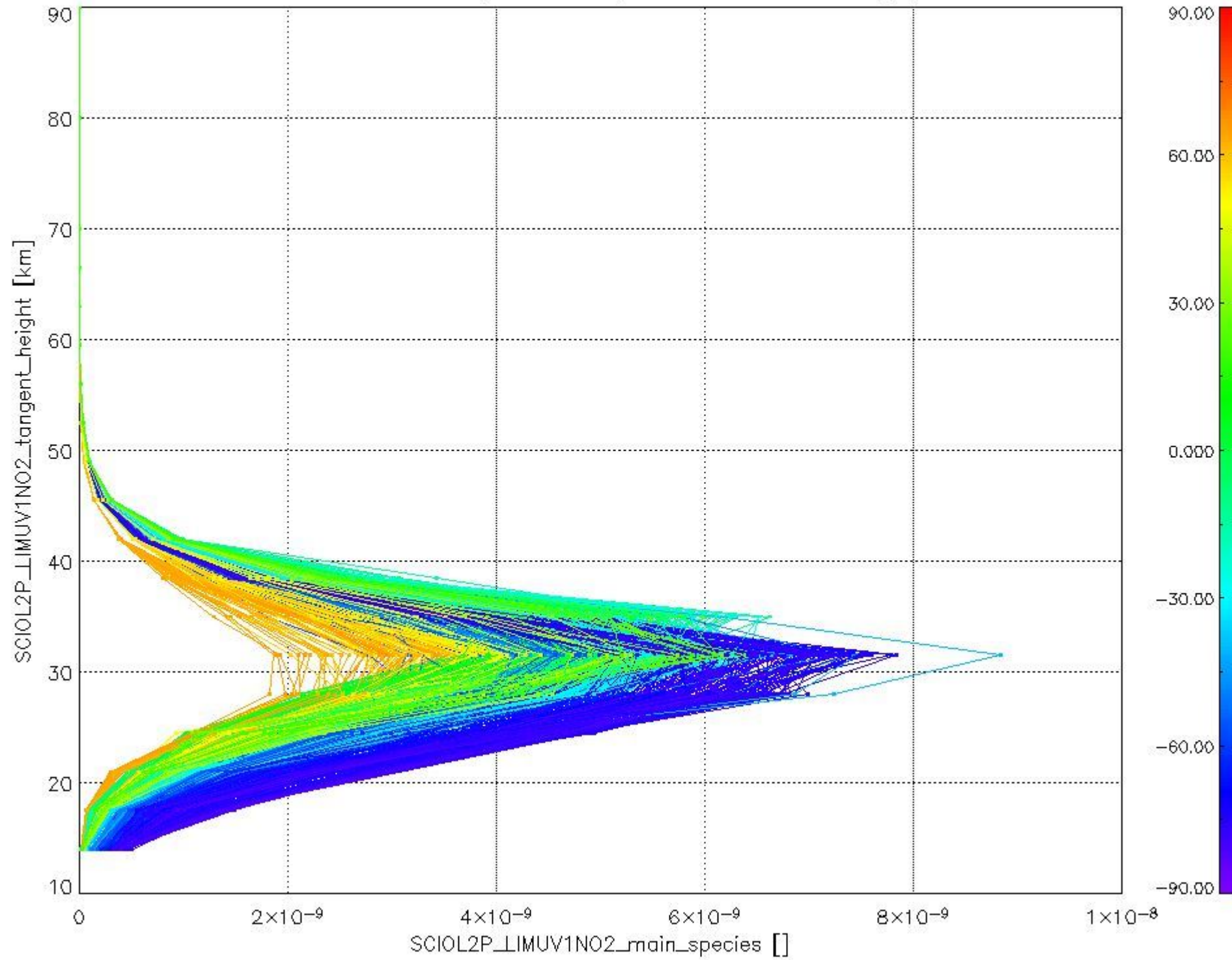
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





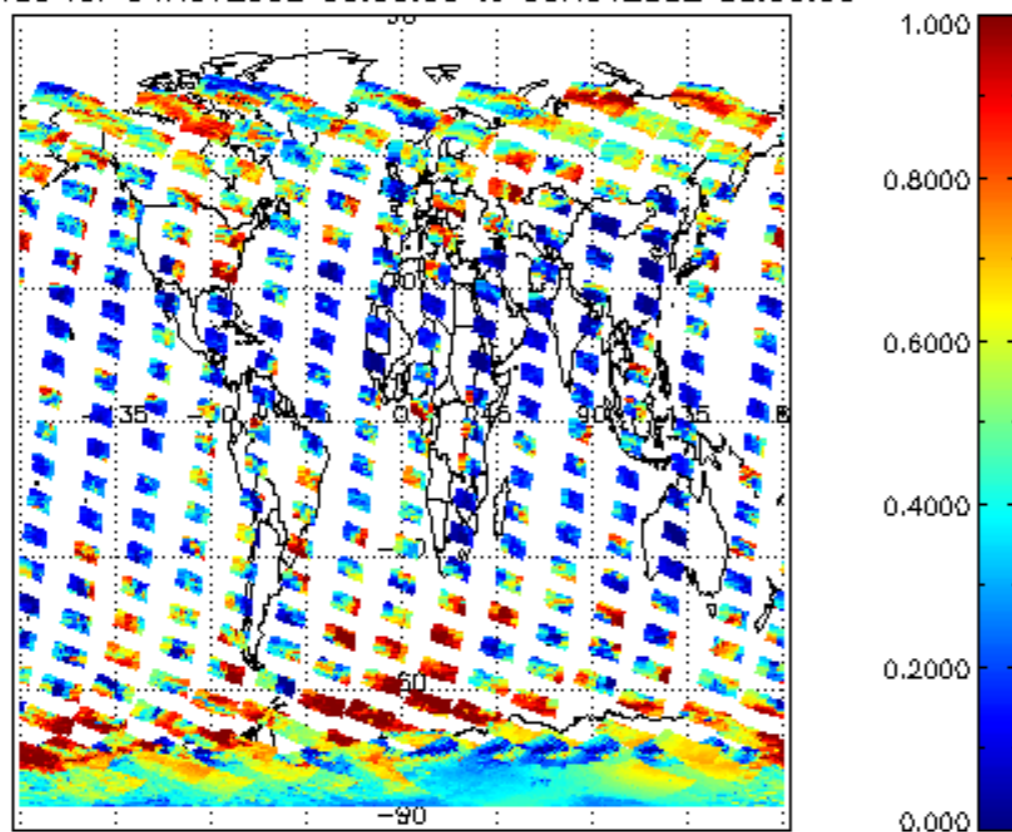
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



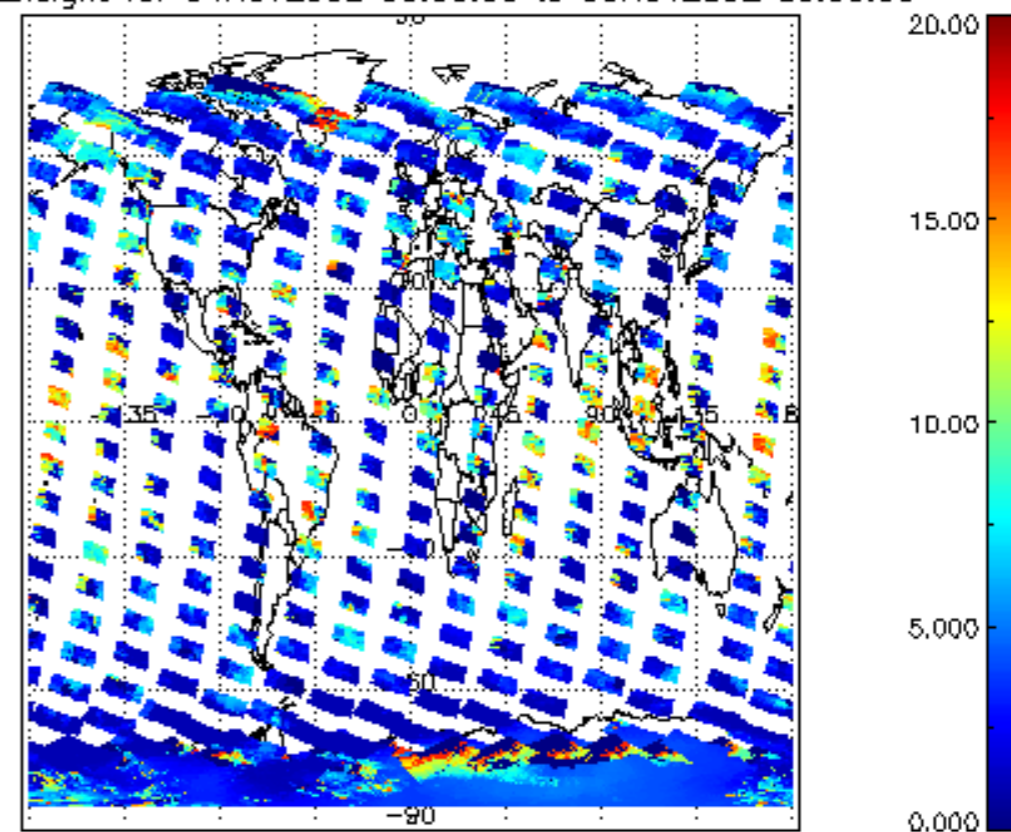
### 2.3 ADF monitoring

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

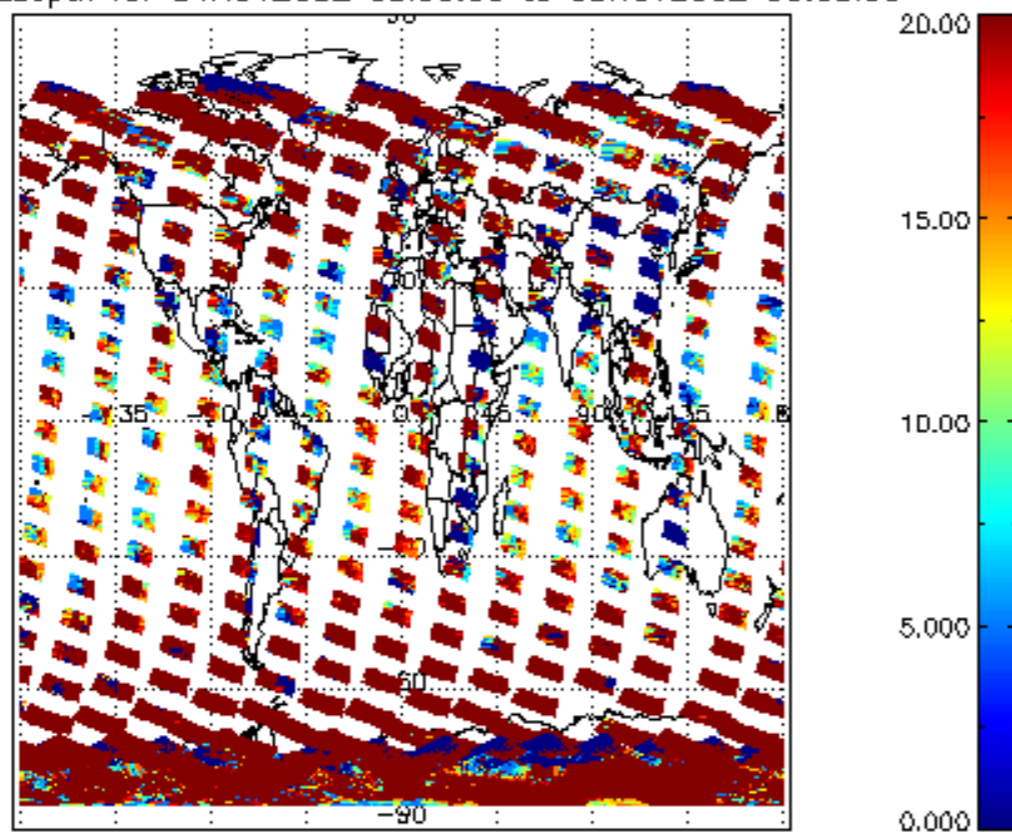
cLfrac for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



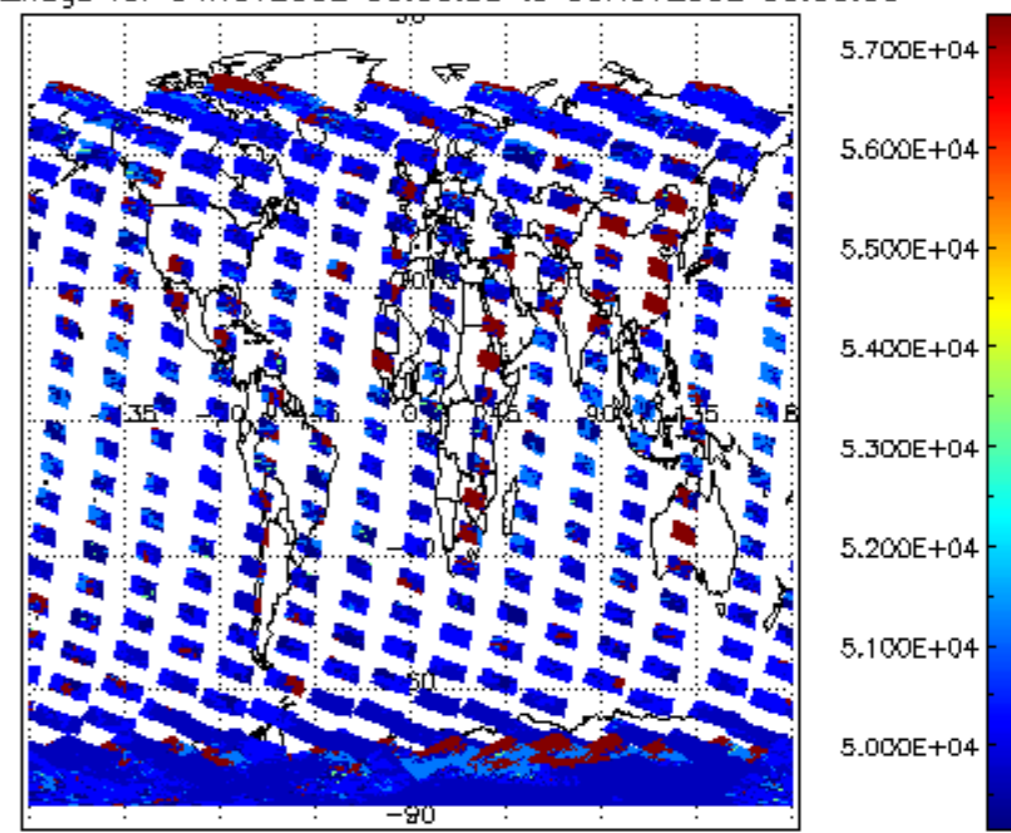
cL\_top\_height for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

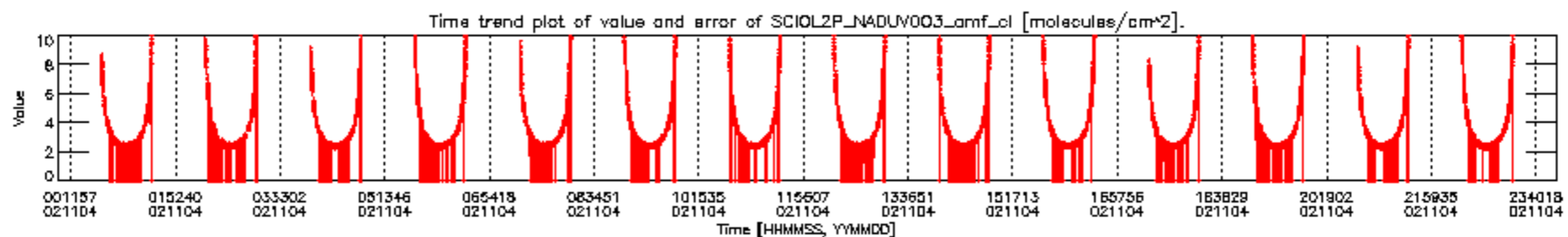
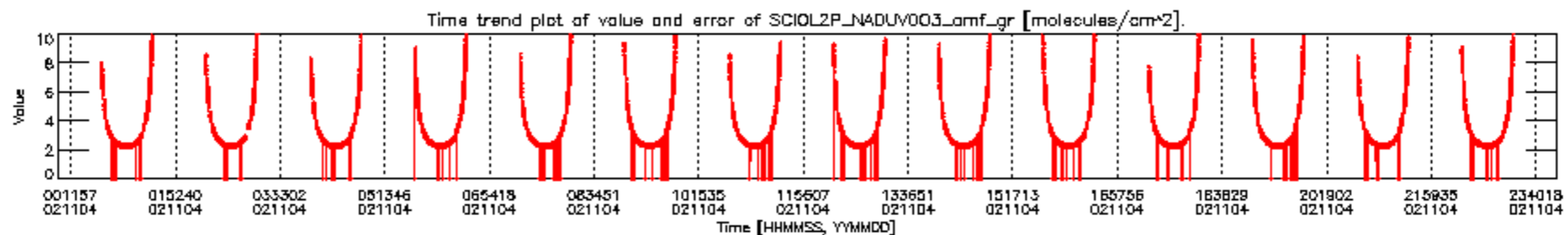
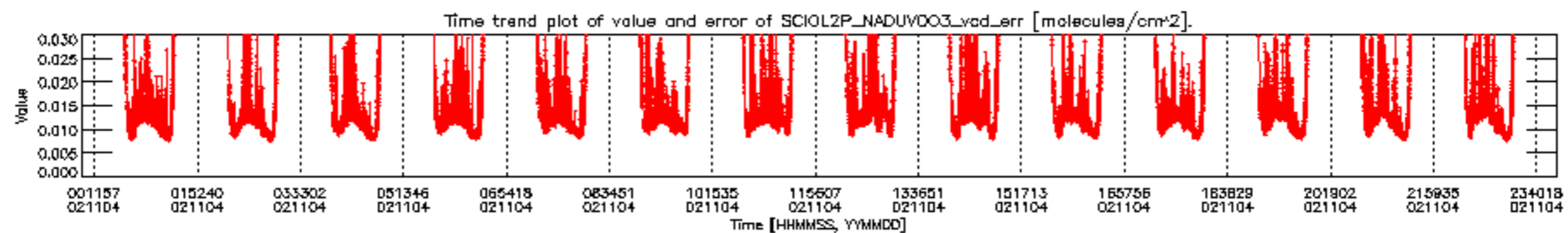
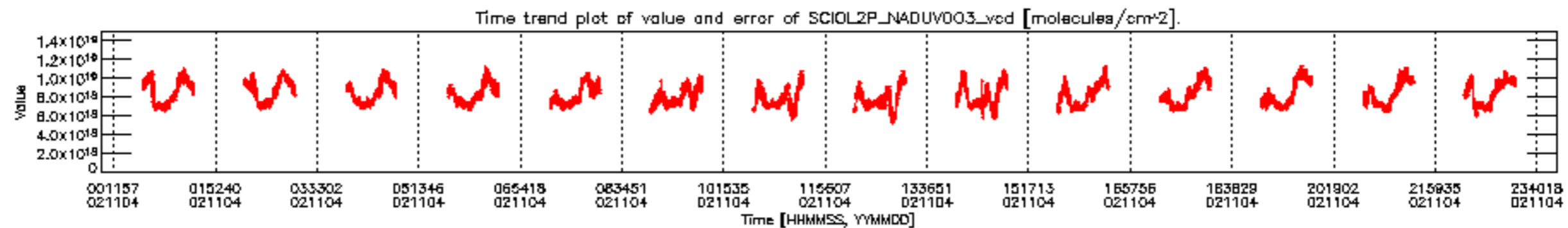


cL\_opt\_depth for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

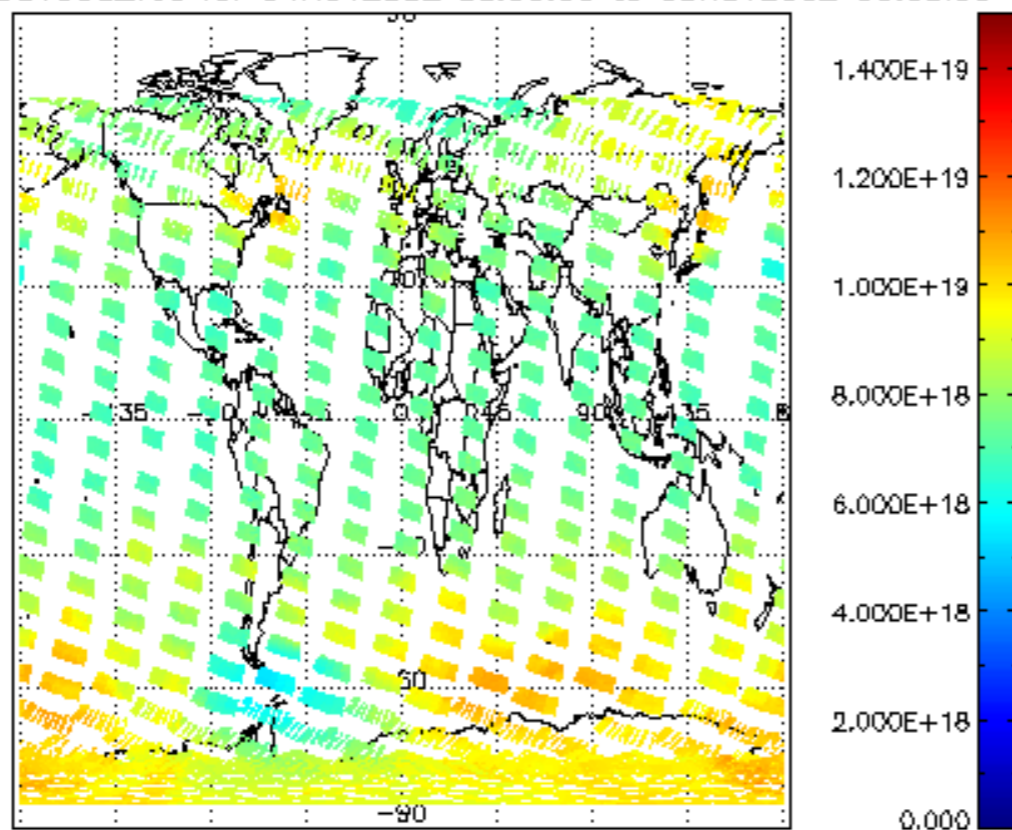


cloud\_flags for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

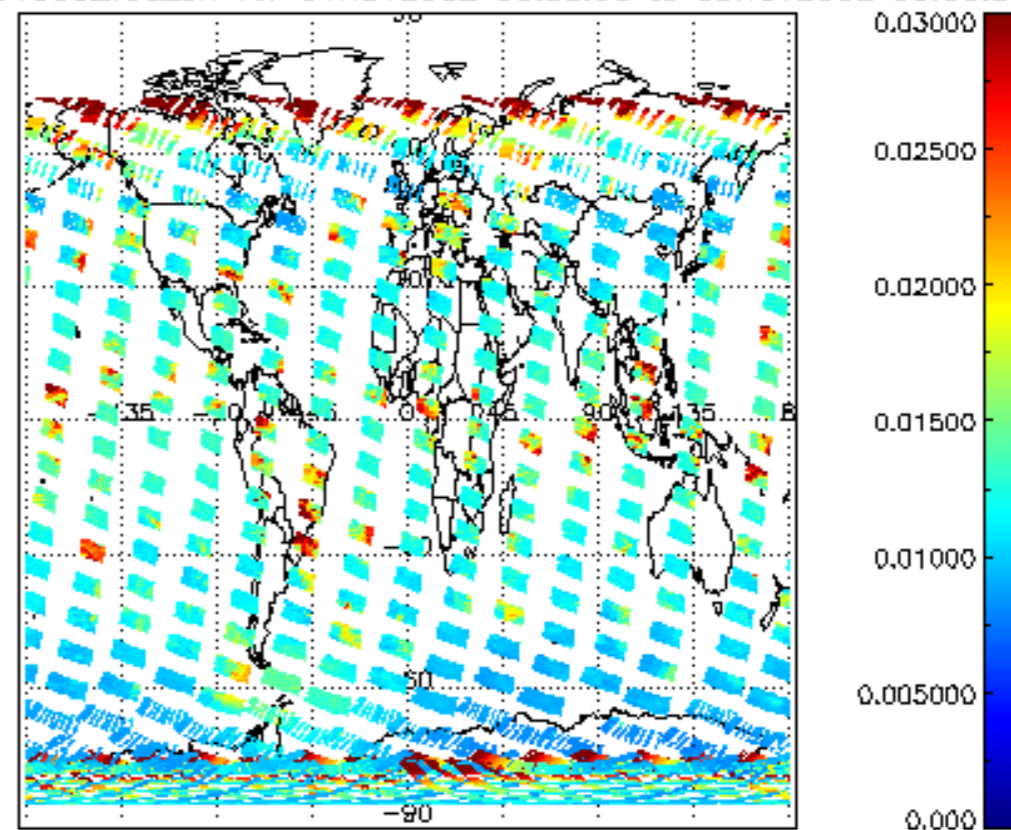




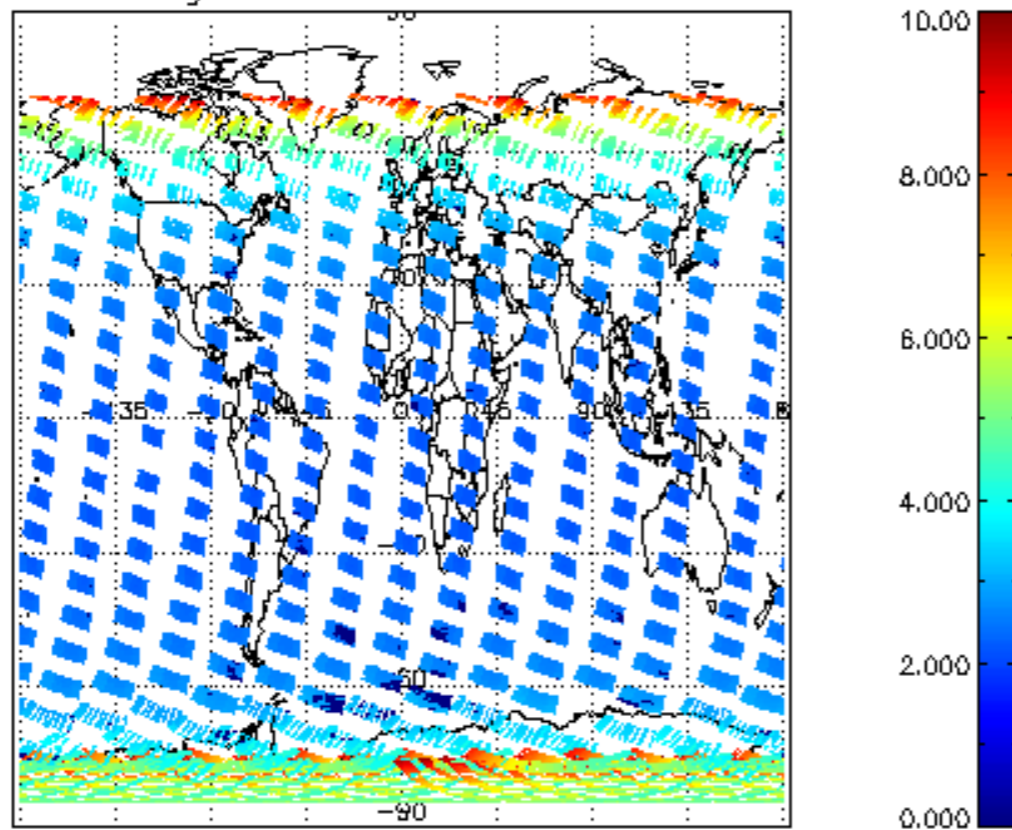
SCIOL2P\_NADUV003\_vcd for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



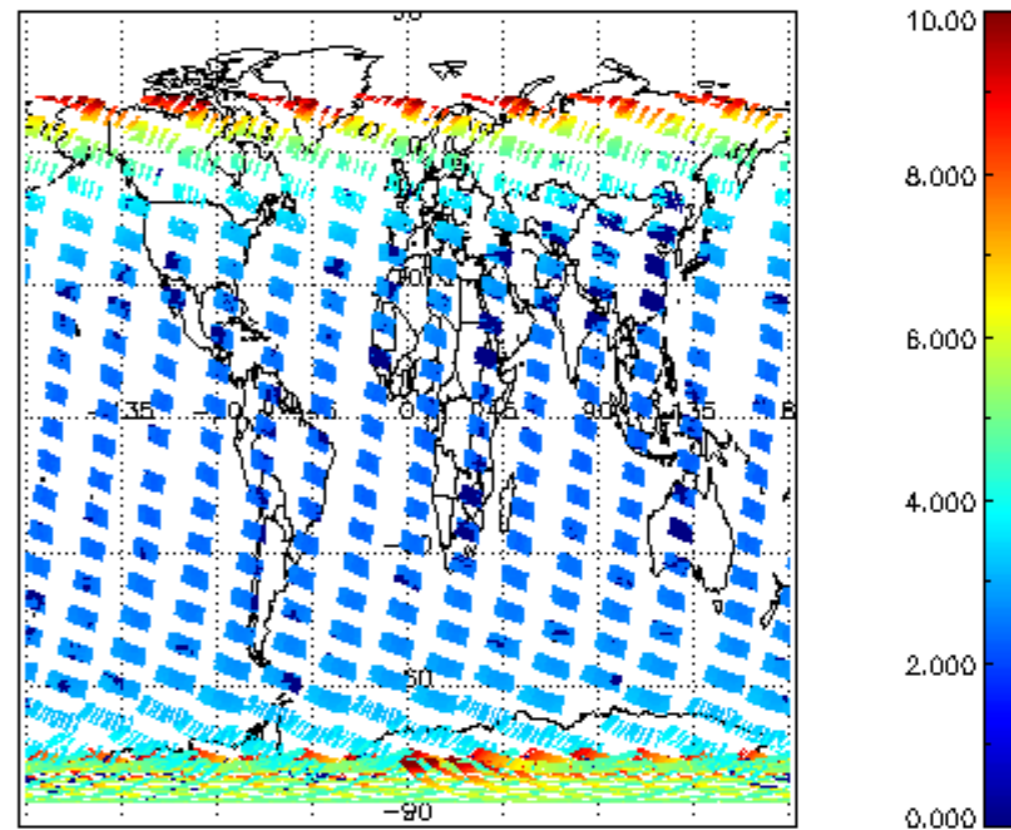
SCIOL2P\_NADUV003\_vcd\_err for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

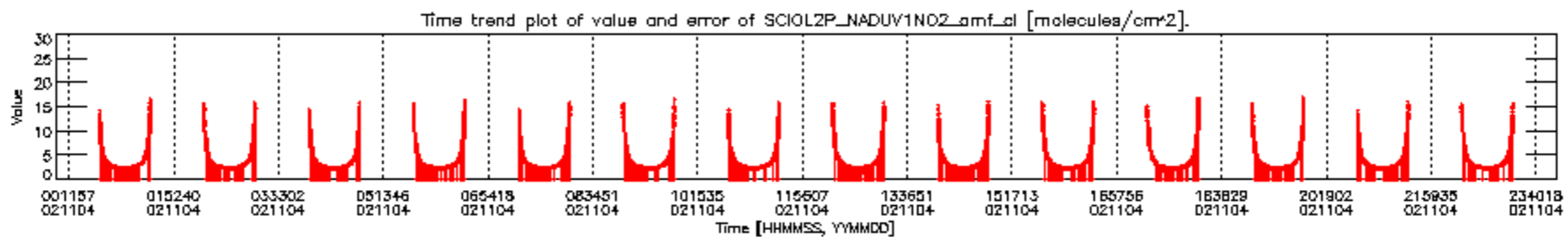
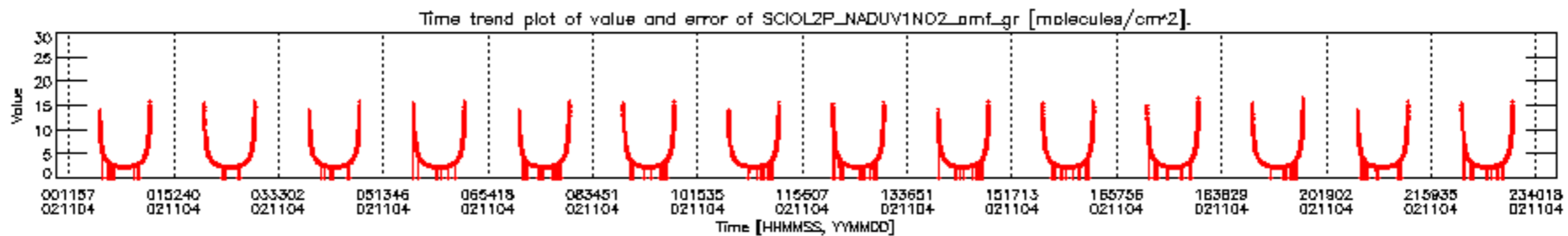
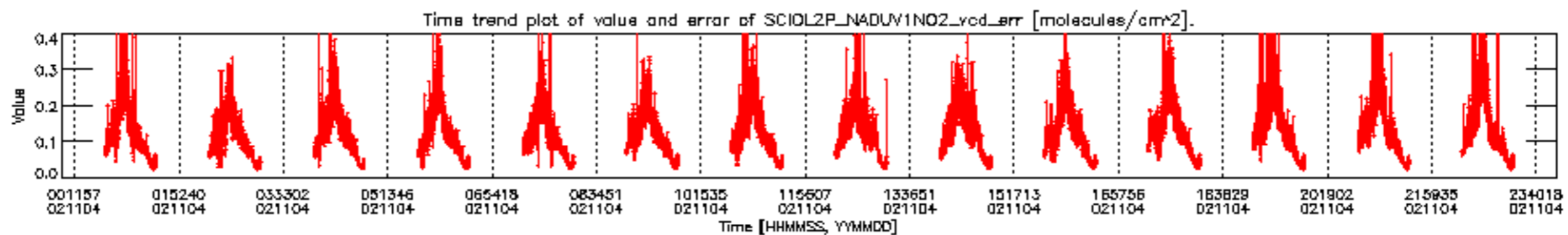
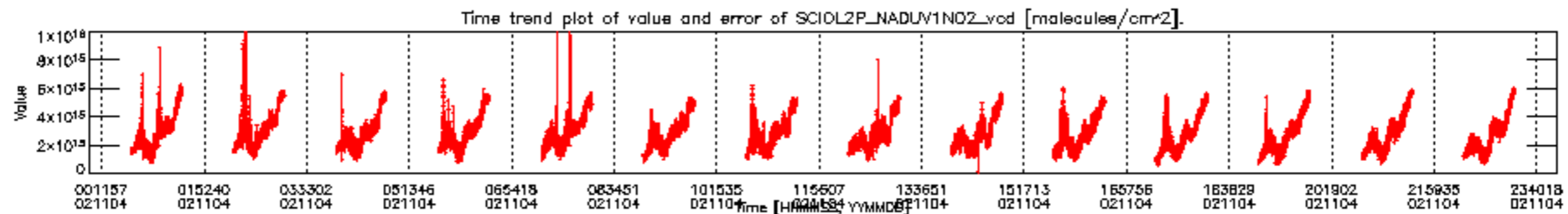


SCIOL2P\_NADUV003\_amf\_gr for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

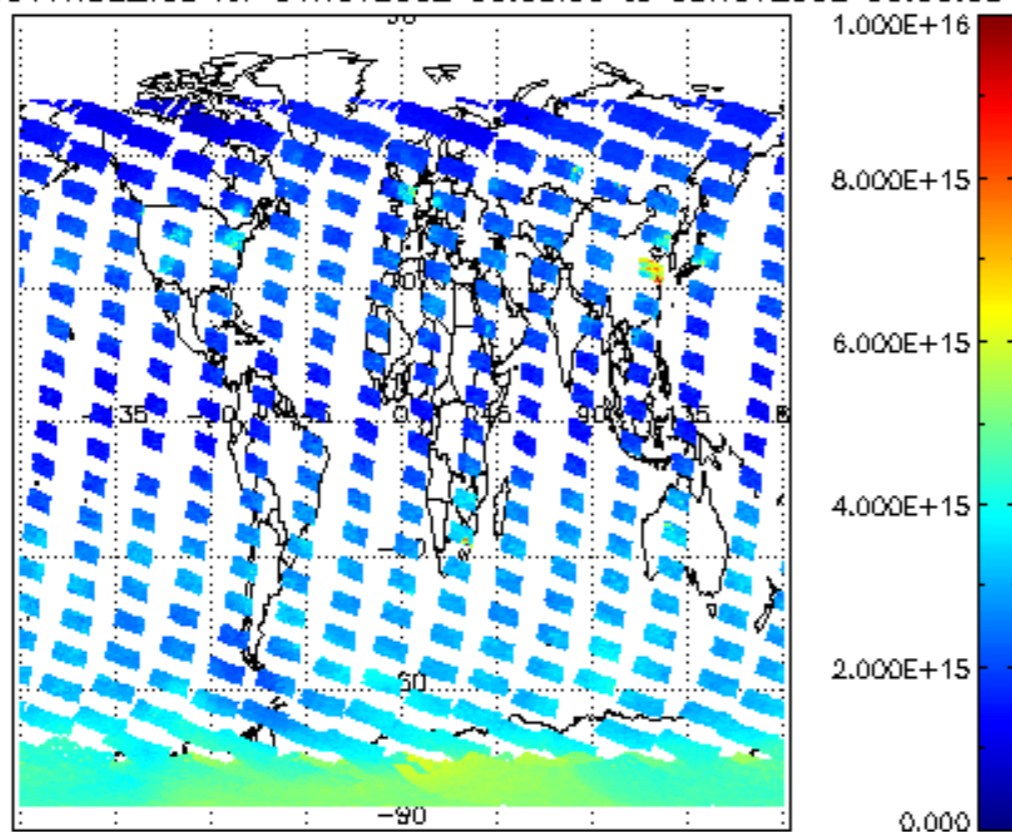


SCIOL2P\_NADUV003\_amf\_cl for 04NOV2002 00:00:00 to 05NOV2002 00:00:00

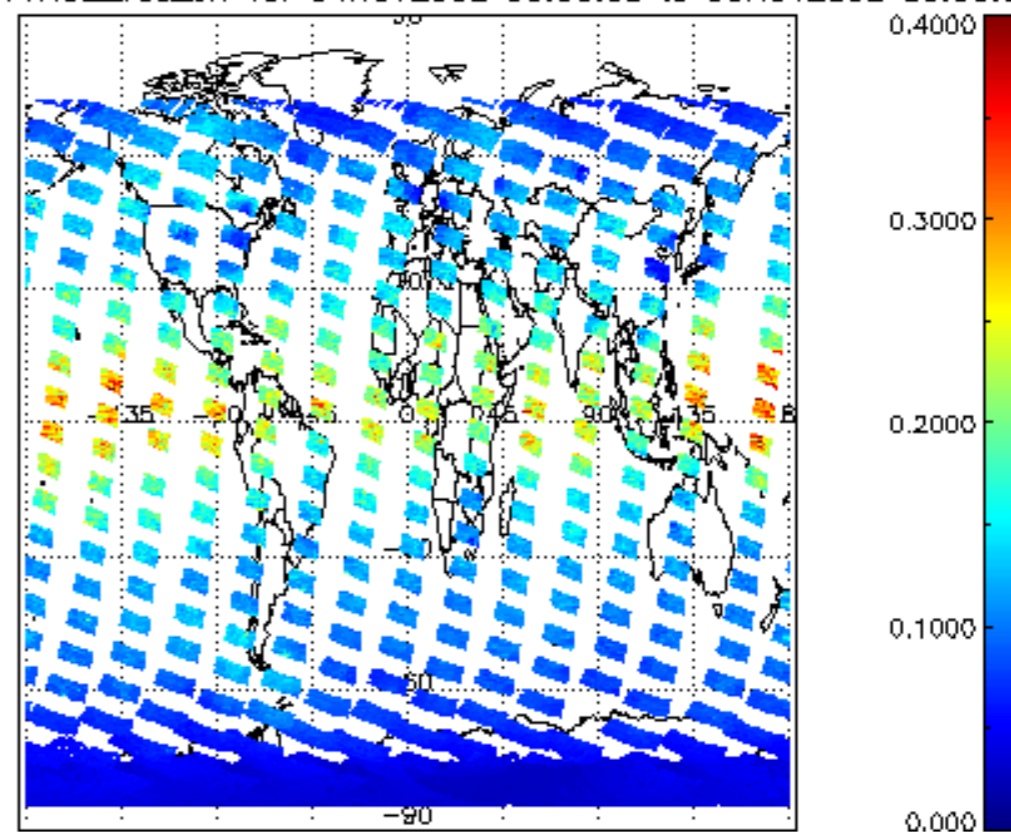




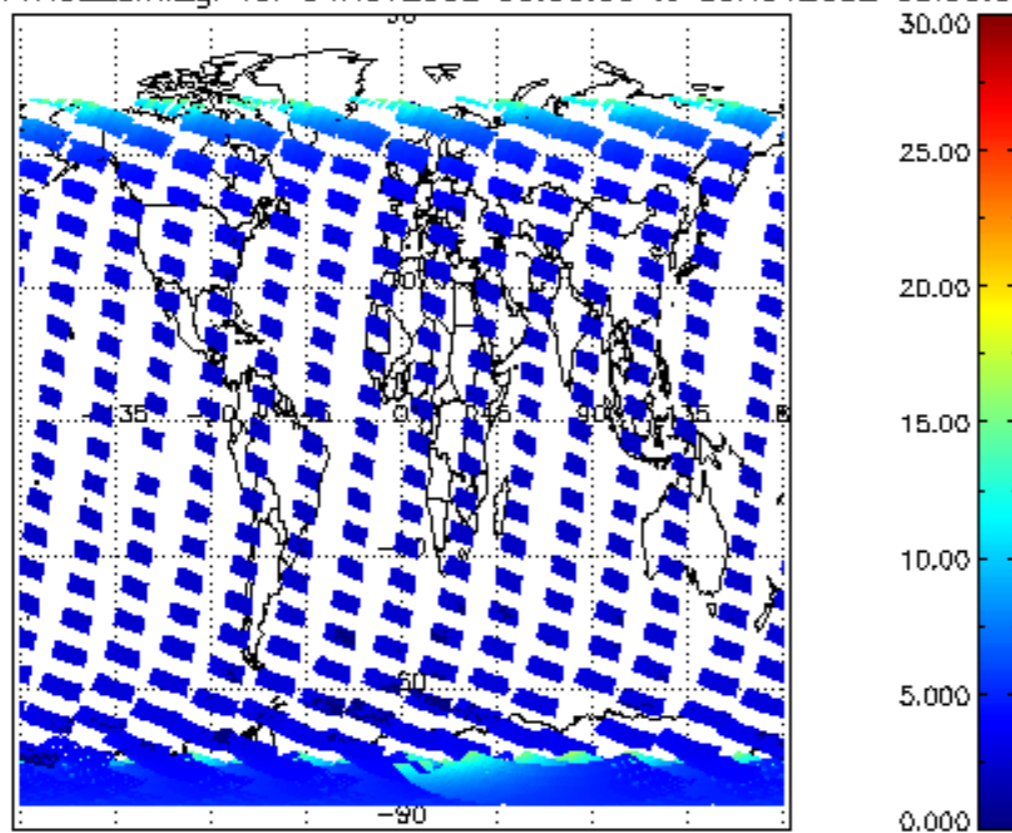
SCIOL2P\_NADUV1NO2\_vcd for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



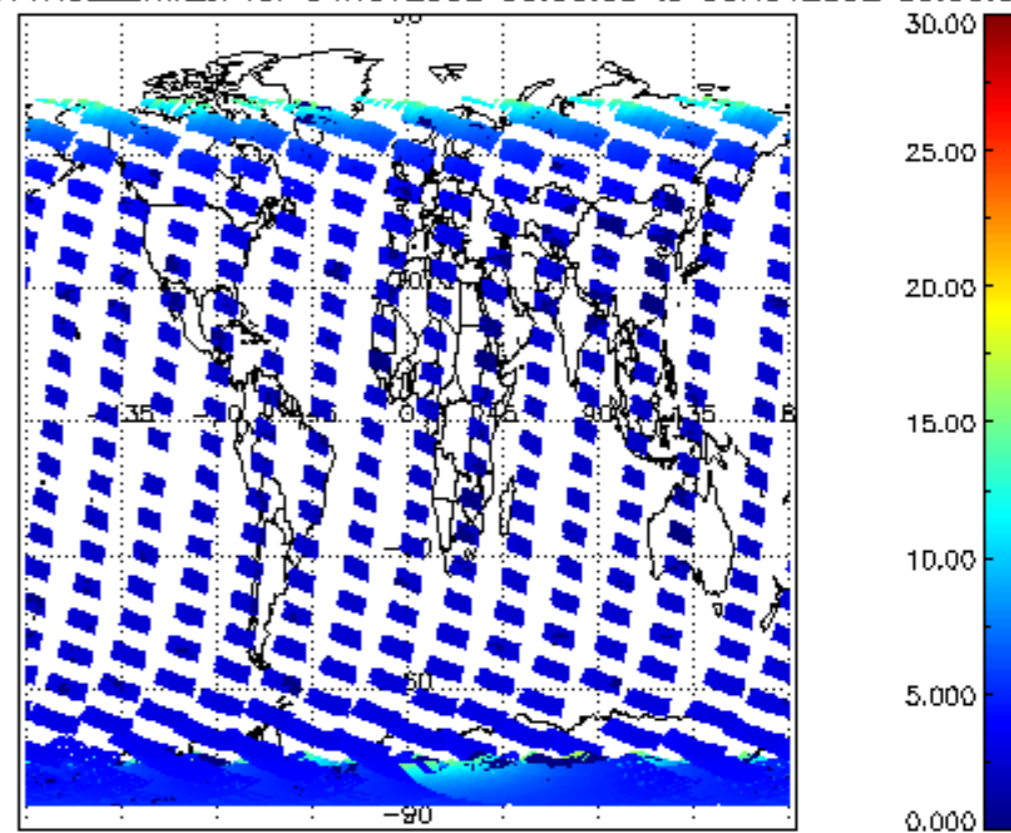
SCIOL2P\_NADUV1NO2\_vcd\_err for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



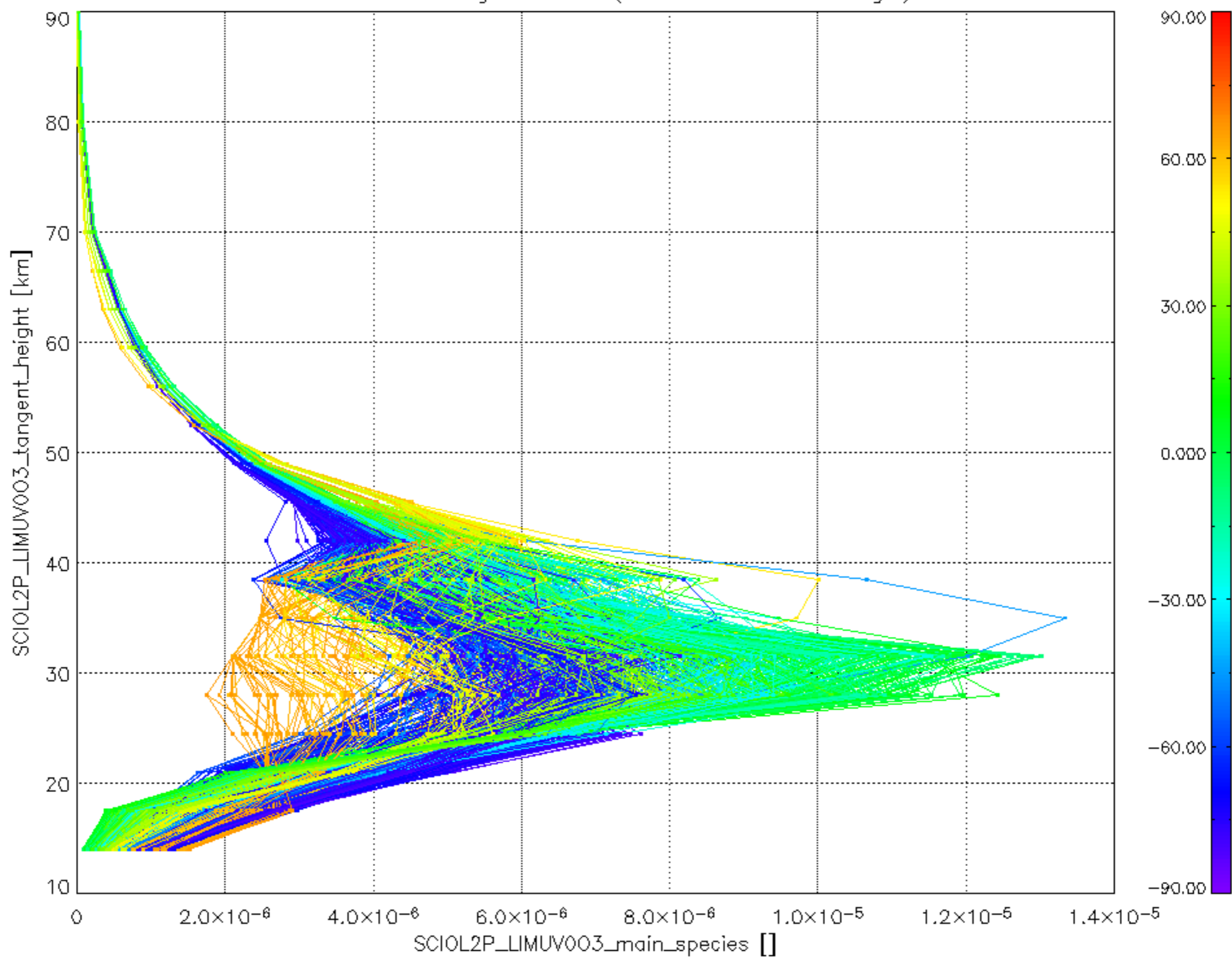
SCIOL2P\_NADUV1NO2\_amf\_gr for 04NOV2002 00:00:00 to 05NOV2002 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 04NOV2002 00:00:00 to 05NOV2002 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).

