

## 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	28MAY2008 17:58:56
Data source version	SCIA-OL/3.01-R
Processing scope for products	23DEC2002 00:00:00 to 24DEC2002 00:00:00
Start time of first product within scope	22DEC2002 23:57:47
Stop time of last product within scope	24DEC2002 00:21:34
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__2PRDPA20021222_235747_000033242012_00188_04250_1723.N1	22DEC2002 23:57:47	23DEC2002 00:53:11	0	GOOD
1	SCI_OL__2PRDPA20021223_013823_000033242012_00189_04251_1726.N1	23DEC2002 01:38:23	23DEC2002 02:33:47	0	GOOD
2	SCI_OL__2PRDPA20021223_031859_000033242012_00190_04252_1946.N1	23DEC2002 03:18:59	23DEC2002 04:14:23	0	GOOD
3	SCI_OL__2PRDPA20021223_045935_000033242012_00191_04253_1899.N1	23DEC2002 04:59:35	23DEC2002 05:54:59	0	GOOD
4	SCI_OL__2PRDPA20021223_064011_000033242012_00192_04254_1941.N1	23DEC2002 06:40:11	23DEC2002 07:35:35	0	GOOD
5	SCI_OL__2PRDPA20021223_082047_000033242012_00193_04255_1835.N1	23DEC2002 08:20:47	23DEC2002 09:16:11	0	GOOD
6	SCI_OL__2PRDPA20021223_100123_000033242012_00194_04256_1844.N1	23DEC2002 10:01:23	23DEC2002 10:56:47	0	GOOD
7	SCI_OL__2PRDPA20021223_114158_000033242012_00195_04257_1745.N1	23DEC2002 11:41:58	23DEC2002 12:37:23	0	GOOD
8	SCI_OL__2PRDPA20021223_132234_000033242012_00196_04258_1879.N1	23DEC2002 13:22:34	23DEC2002 14:17:59	0	GOOD
9	SCI_OL__2PRDPA20021223_150310_000033242012_00197_04259_1951.N1	23DEC2002 15:03:10	23DEC2002 15:58:34	0	GOOD
10	SCI_OL__2PRDPA20021223_164346_000033242012_00198_04260_1803.N1	23DEC2002 16:43:46	23DEC2002 17:39:10	0	GOOD
11	SCI_OL__2PRDPA20021223_182422_000033242012_00199_04261_1890.N1	23DEC2002 18:24:22	23DEC2002 19:19:46	0	GOOD
12	SCI_OL__2PRDPA20021223_200442_000033782012_00200_04262_1774.N1	23DEC2002 20:04:42	23DEC2002 21:01:01	0	GOOD
13	SCI_OL__2PRDPA20021223_214558_000033242012_00201_04263_1808.N1	23DEC2002 21:45:58	23DEC2002 22:41:23	0	GOOD
14	SCI_OL__2PRDPA20021223_232610_000033242012_00202_04264_1765.N1	23DEC2002 23:26:10	24DEC2002 00:21:34	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: 112432

Total number of cloud data DSRs with good quality flag (=0): 112432 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	112432	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	112432	0.21656	0.25000	0.12500	0.50000	0.078297	s
SURFACE_PRES	112432	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	112432	0.45306	0.45657	0.0000	1.0000	0.27038	-

CL_FRAC_ERR	112432	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	112432	6.9298	8.0000	4.0000	16.000	2.5055	
PMD_READ_CL[0]	112432	0.33828	0.0000	0.0000	16.000	1.4191	-
PMD_READ_CL[1]	112432	0.27983	0.0000	0.0000	16.000	1.3181	-
CL_TOP_HEIGHT	103582	4.3094	3.2635	0.0000	17.000	3.6711	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	103582	56.034	45.178	0.0000	101.00	40.210	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	112432	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	112432	11000101	11000010	11000000	11100000	2275.2	flags
AERO_ABSO_IND	112432	-0.078548	-0.084109	-4.3275	11.660	1.1776	
AERO_IND_DIAG	112432	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	112432	01101010	11000000	00000000	11000000	24421.	flags

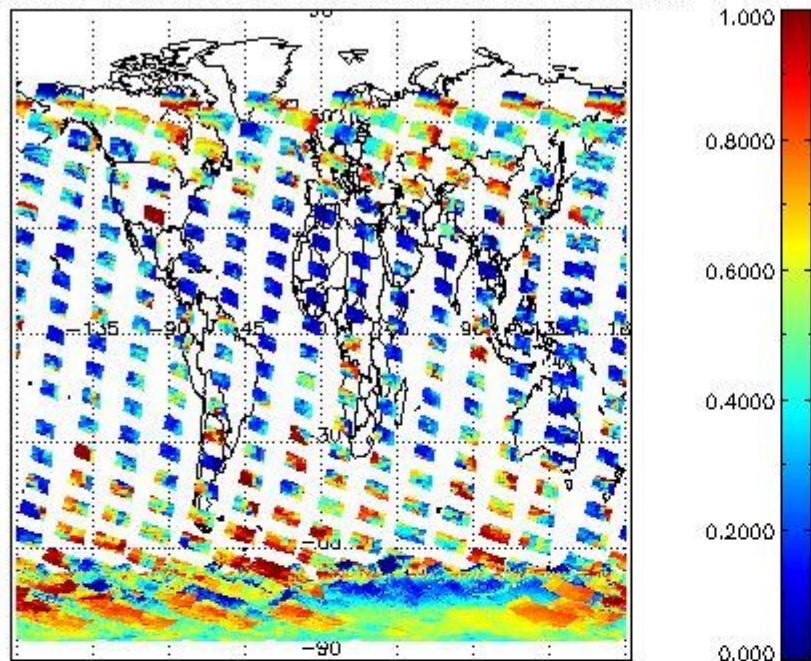
Time and geolocation plots:

Plots are available for the following parameters:

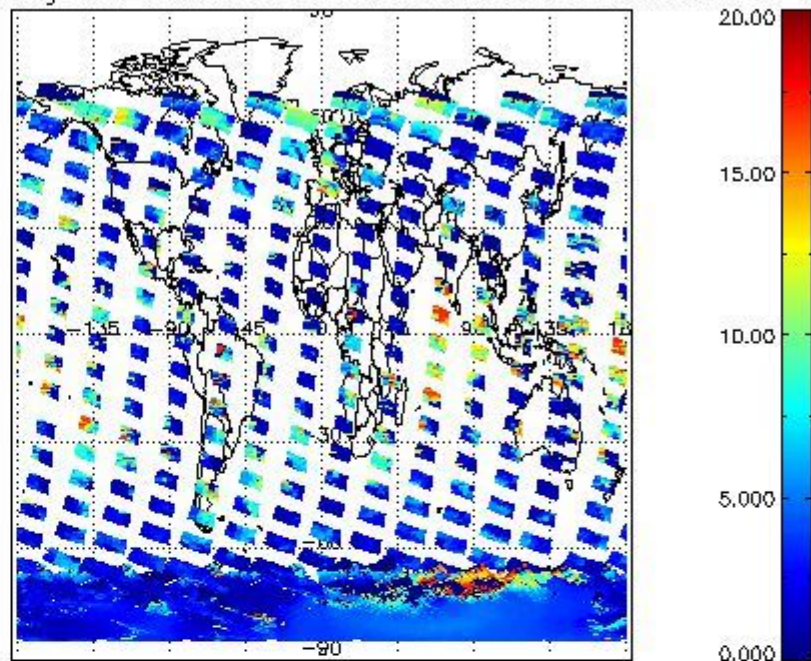
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



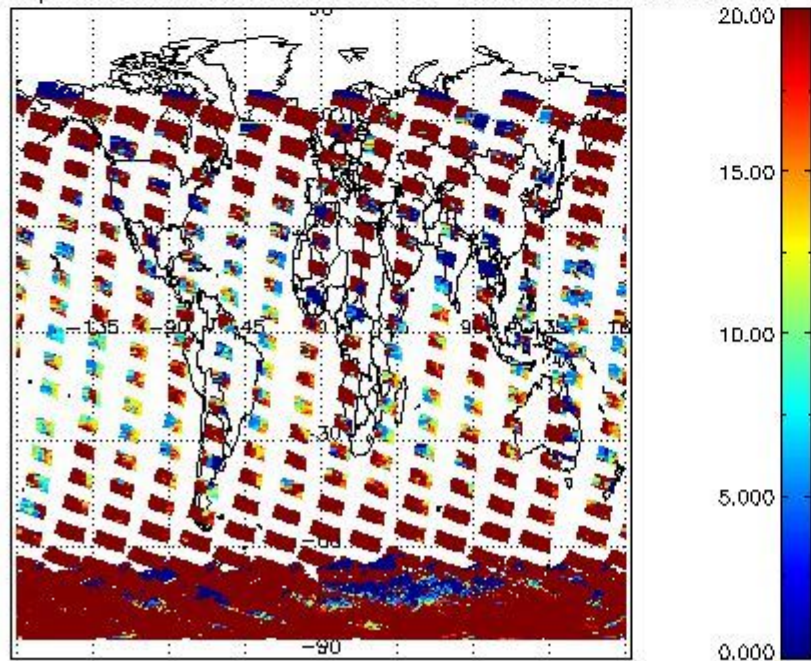
cL\_frac for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



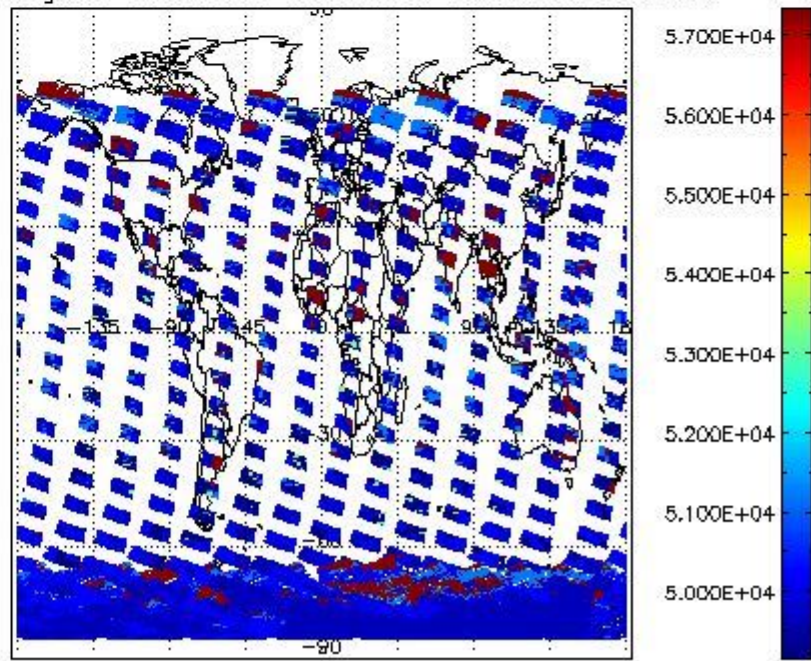
cL\_top\_height for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



cL\_opt\_depth for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



cloud\_flags for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



### 2.2.2 Nadir

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

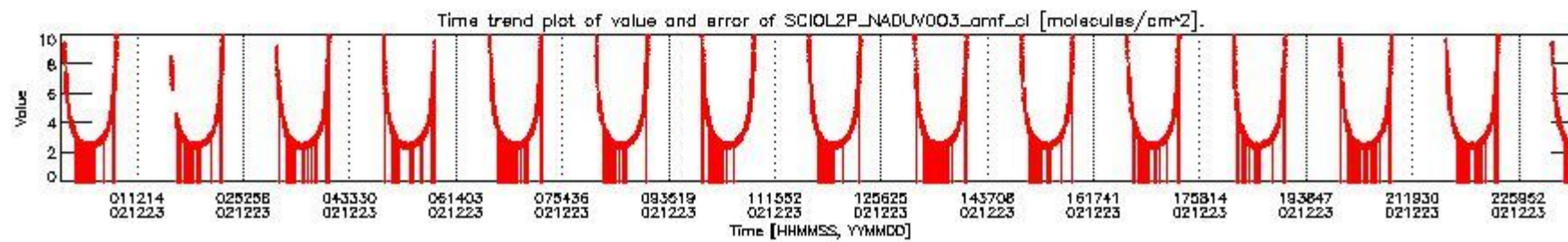
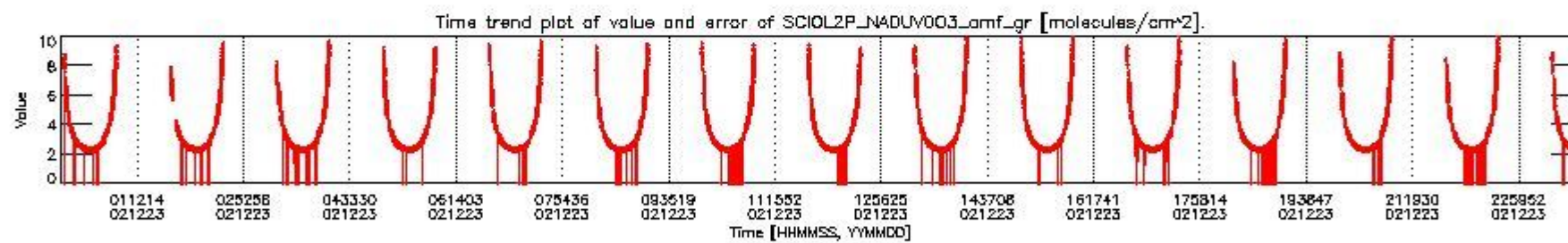
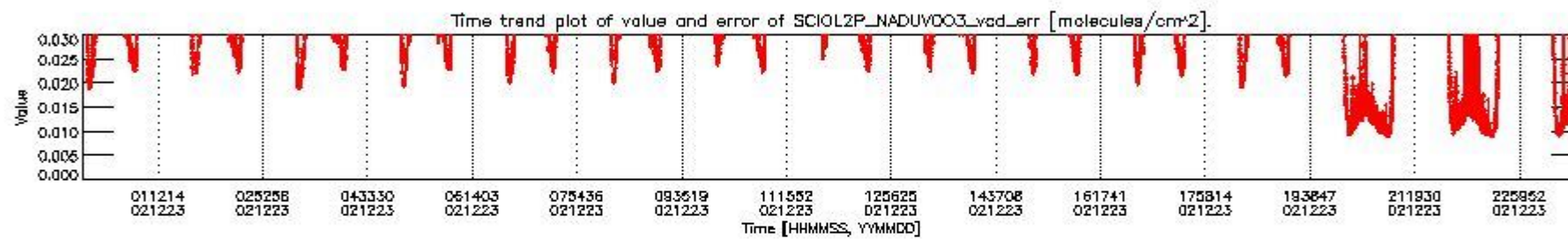
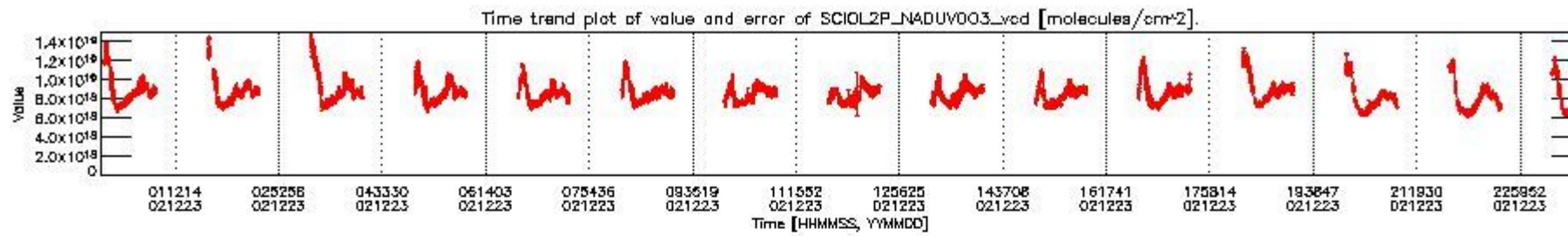
The following data items are currently included into this section:

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



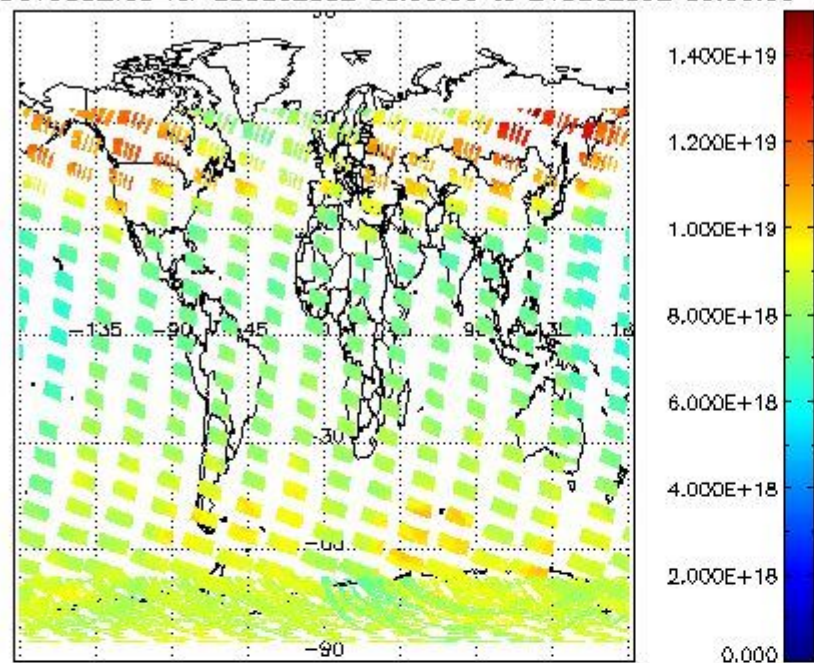
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

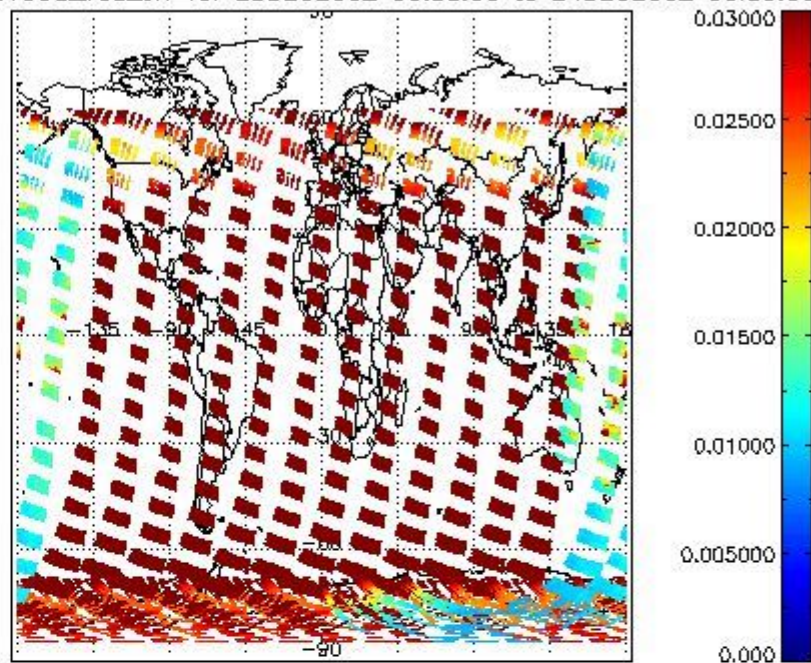




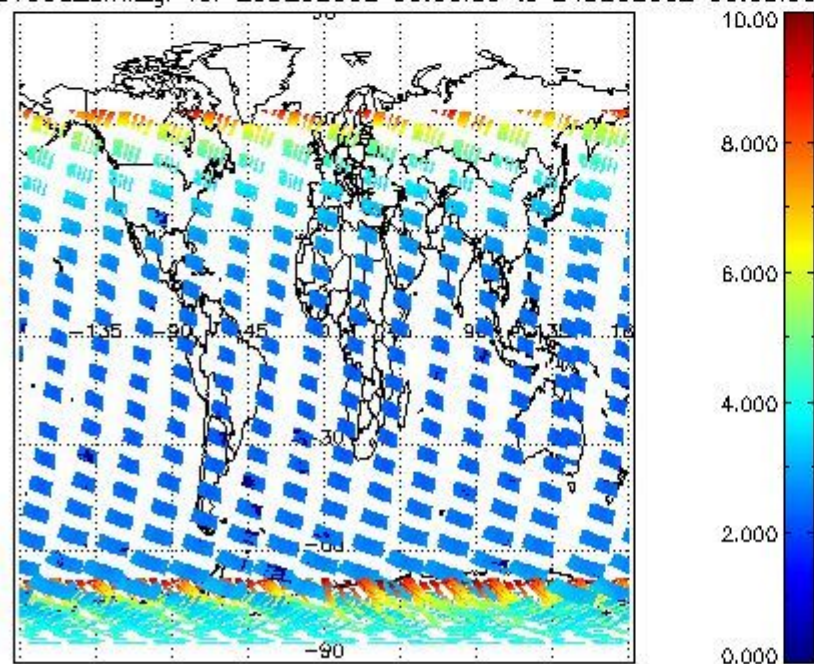
SCIOL2P\_NADUV003\_vcd for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



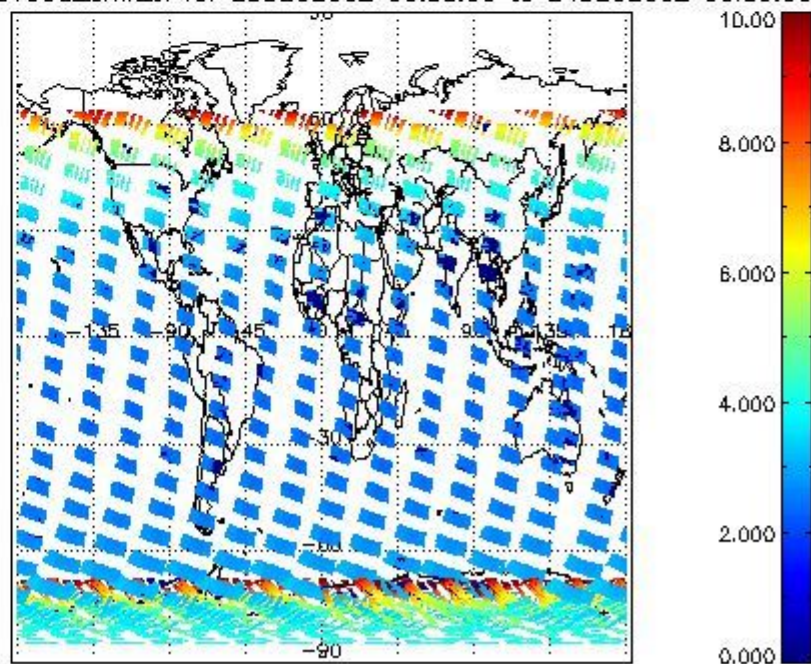
SCIOL2P\_NADUV003\_vcd\_err for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



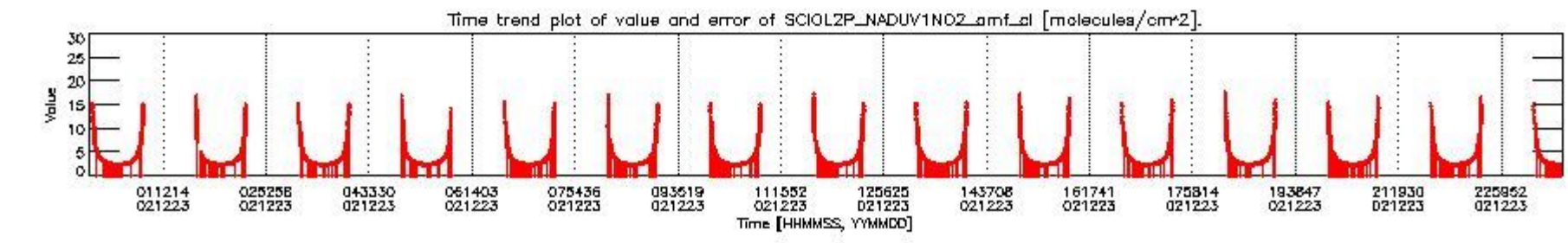
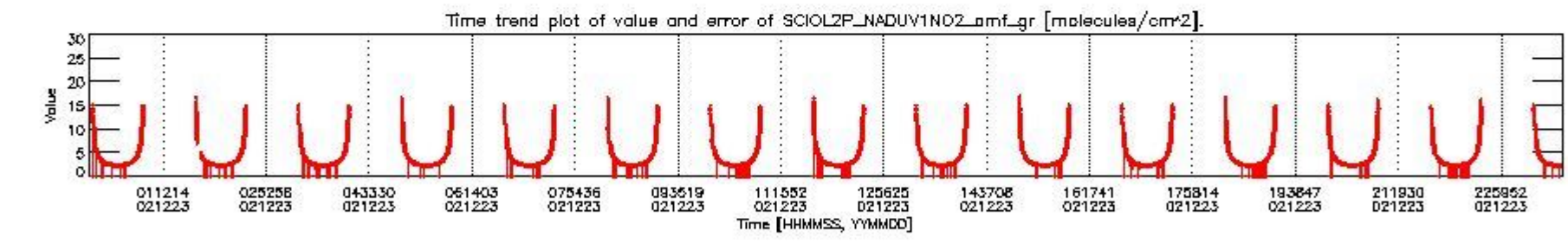
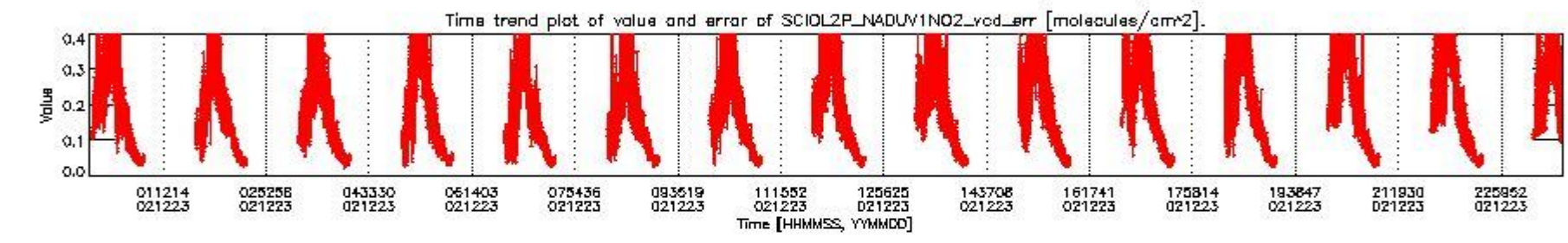
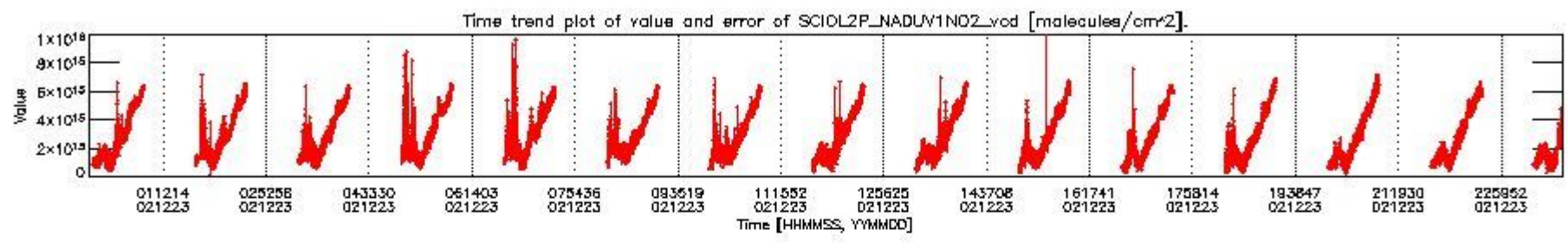
SCIOL2P\_NADUV003\_amf\_gr for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



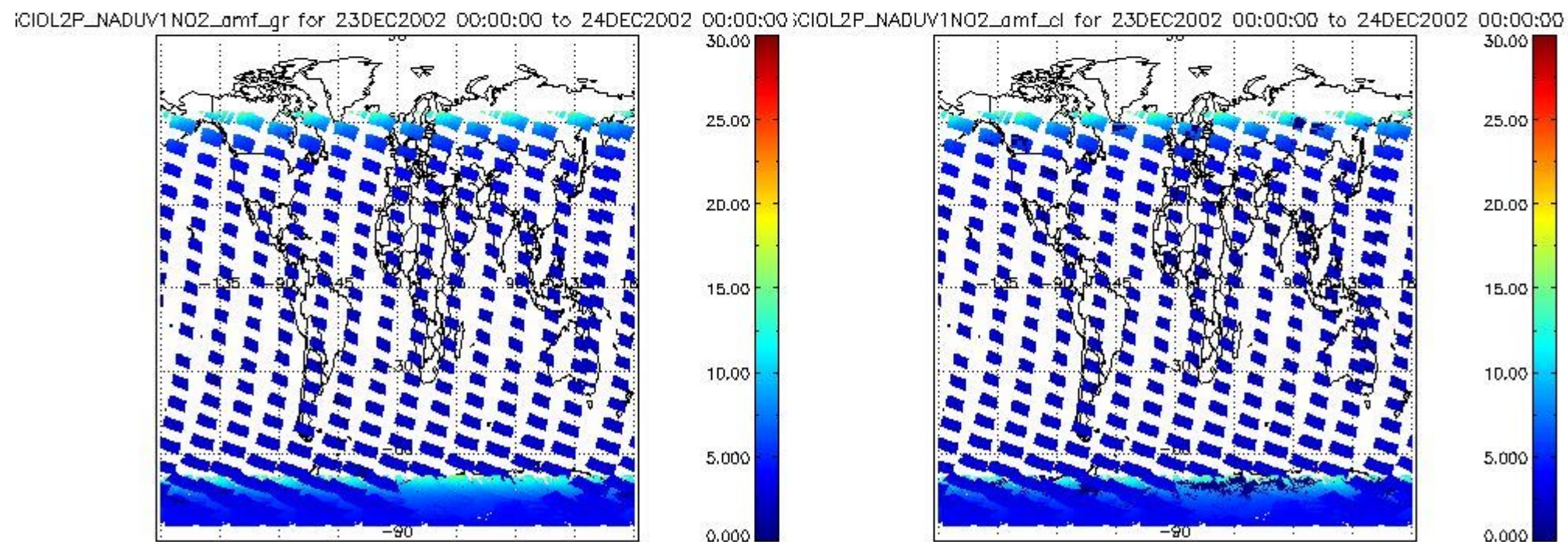
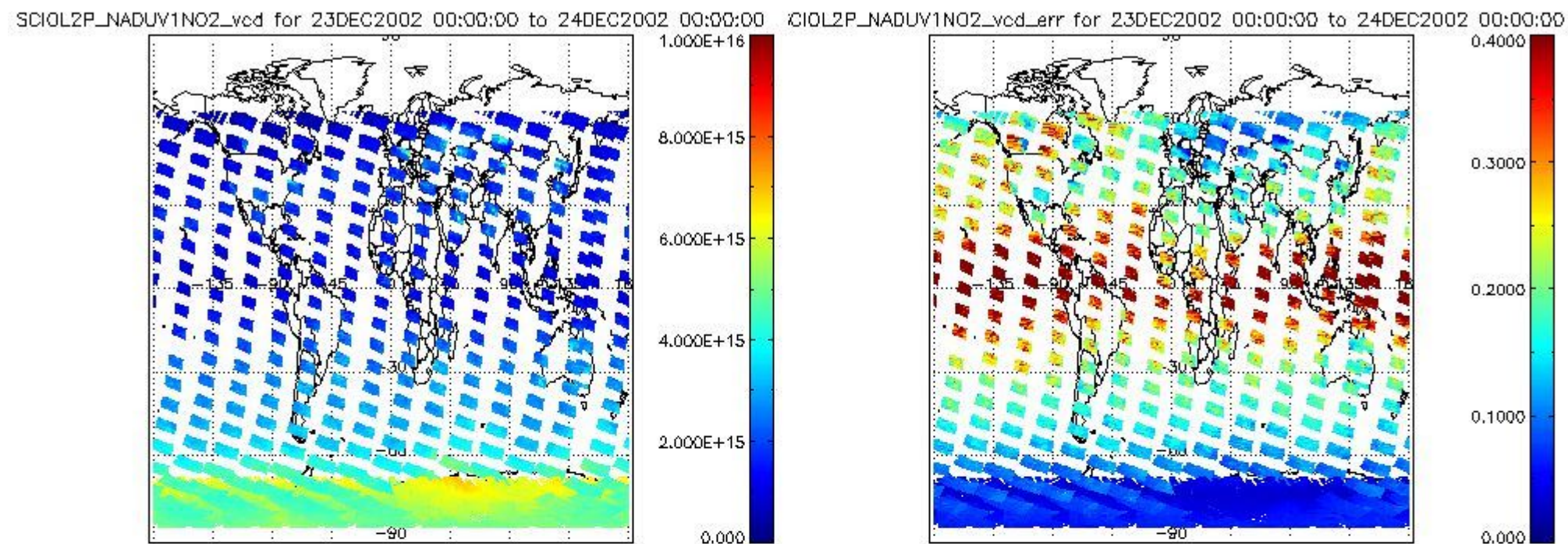
SCIOL2P\_NADUV003\_amf\_sl for 23DEC2002 00:00:00 to 24DEC2002 00:00:00











### 2.2.3 Limb

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

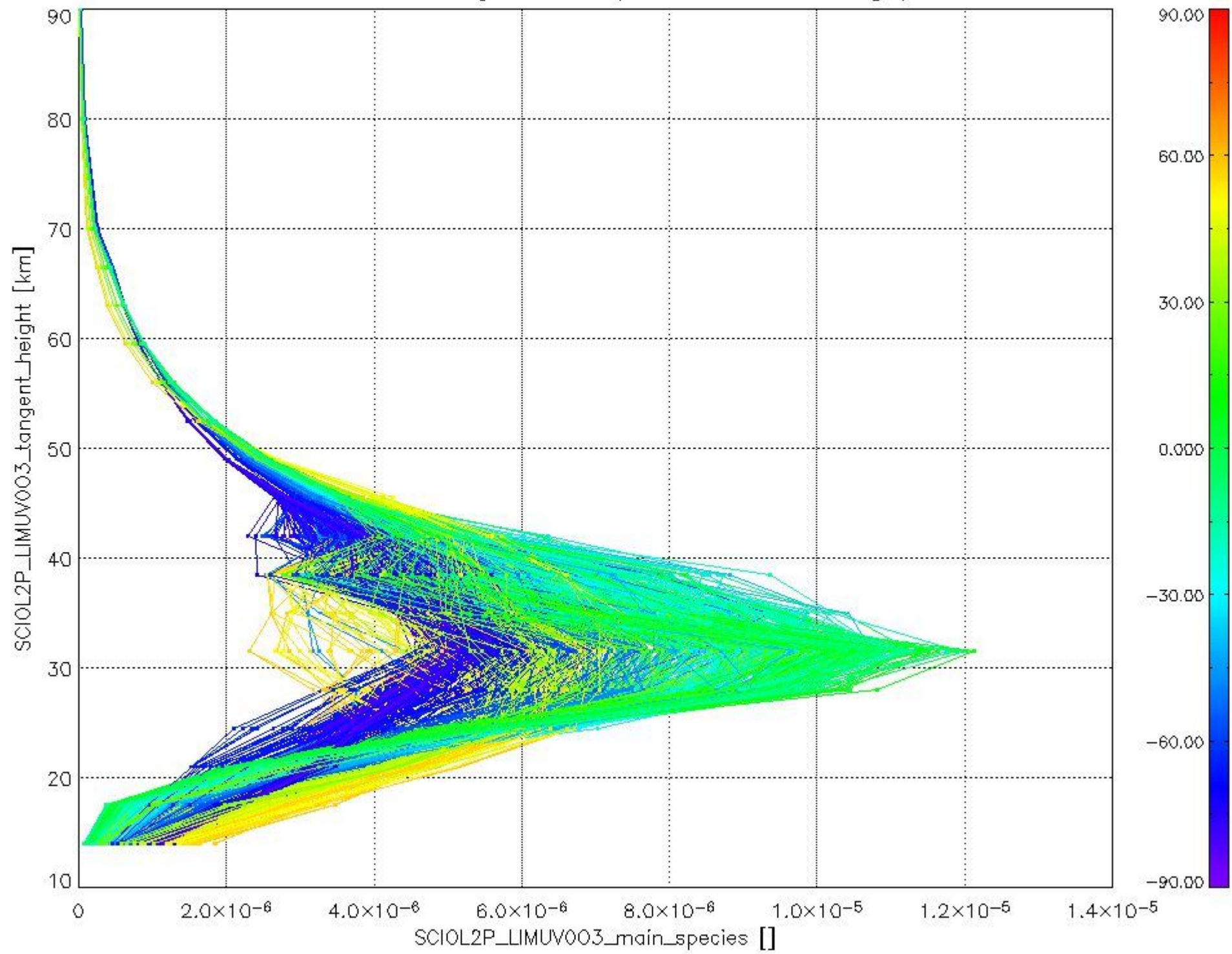
The following data items are currently included into this section:

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.

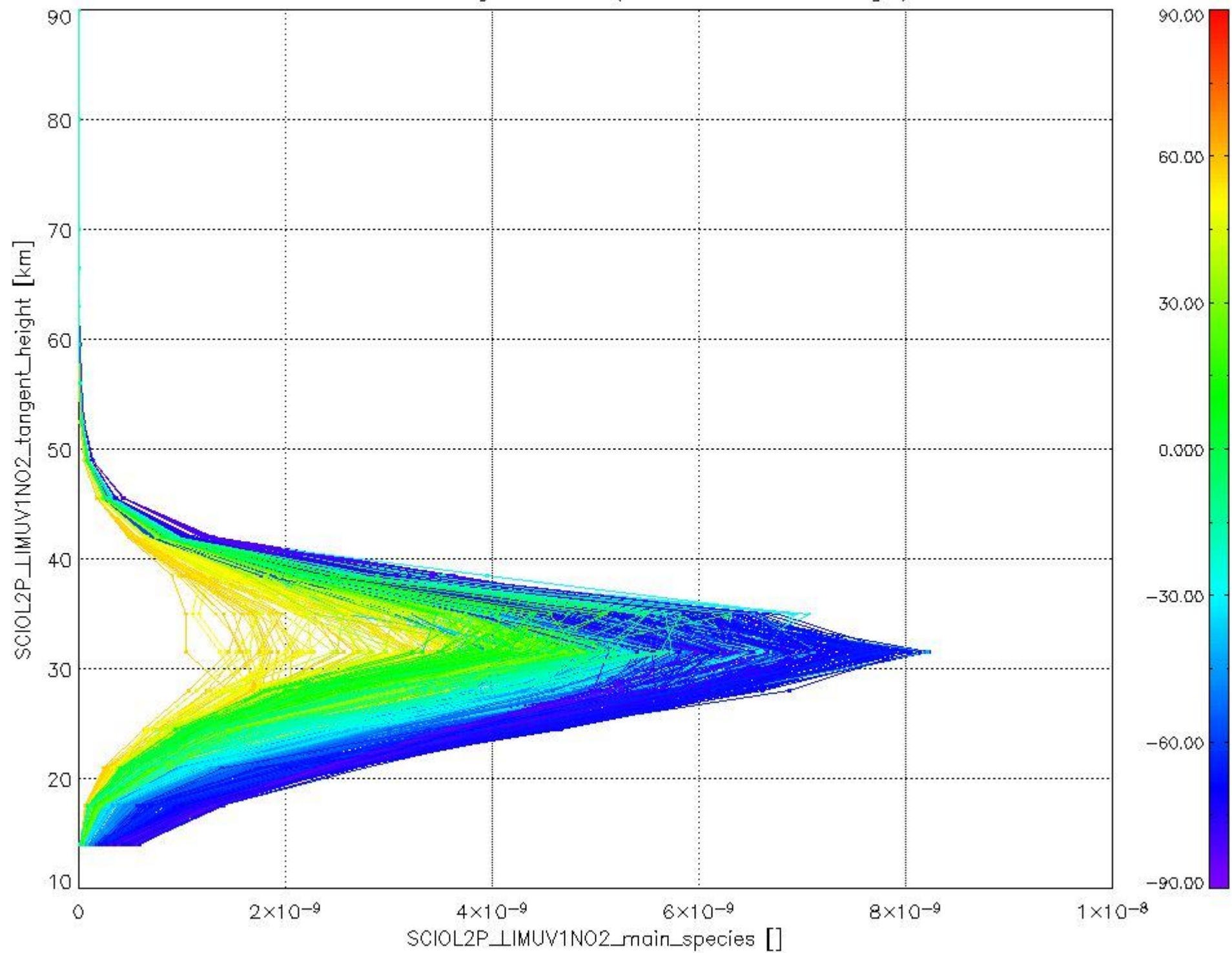


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





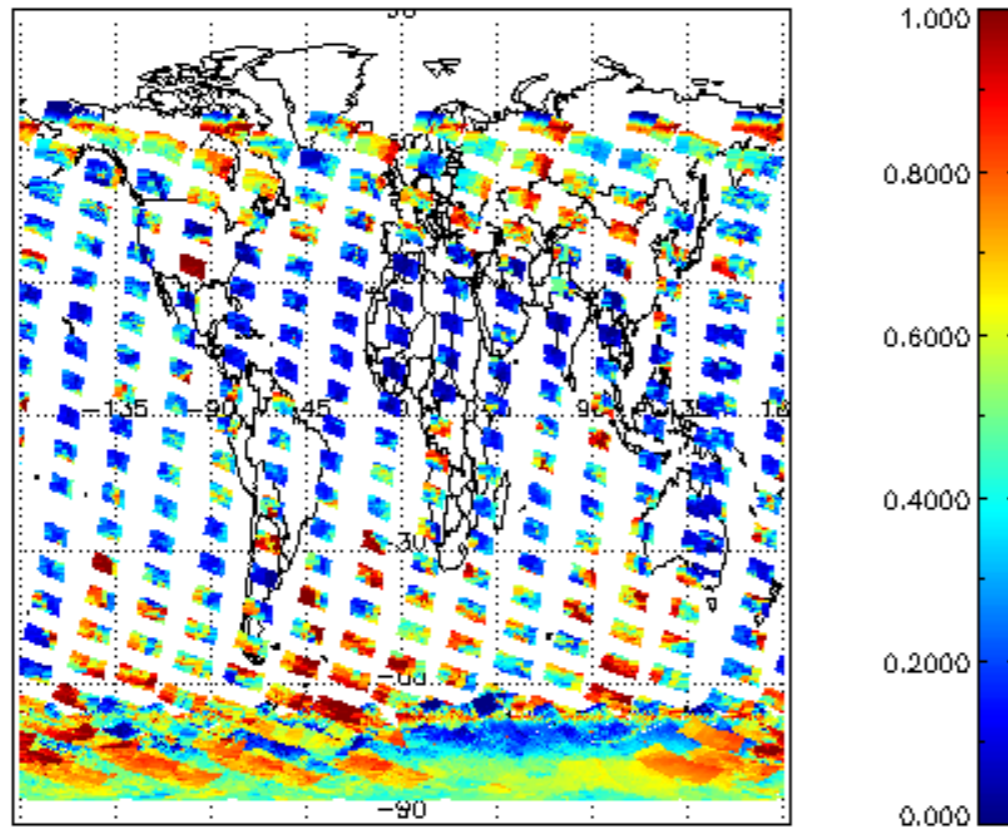
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



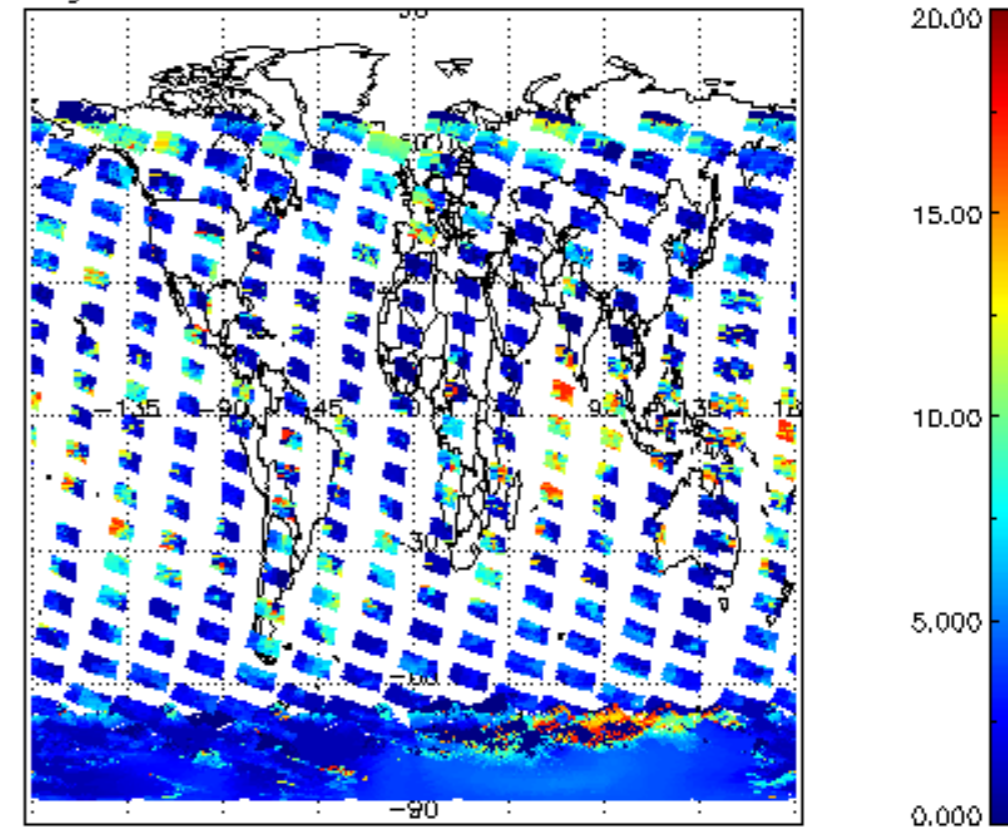
### 2.3 ADF monitoring

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

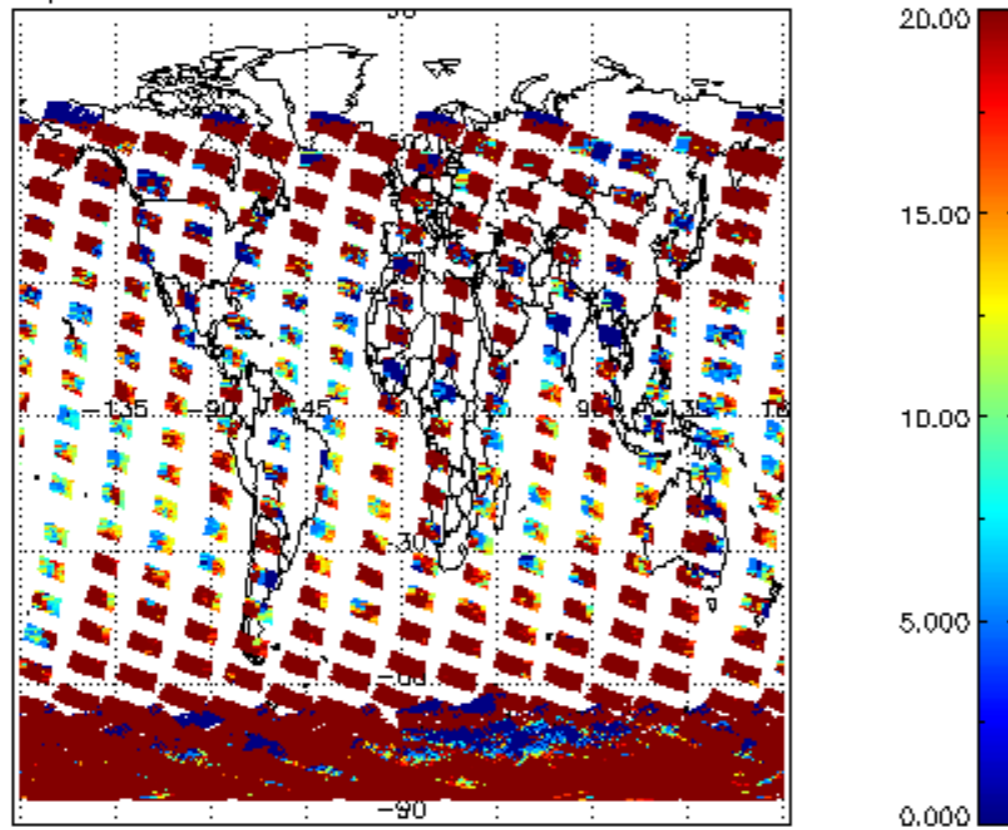
cI\_frac for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



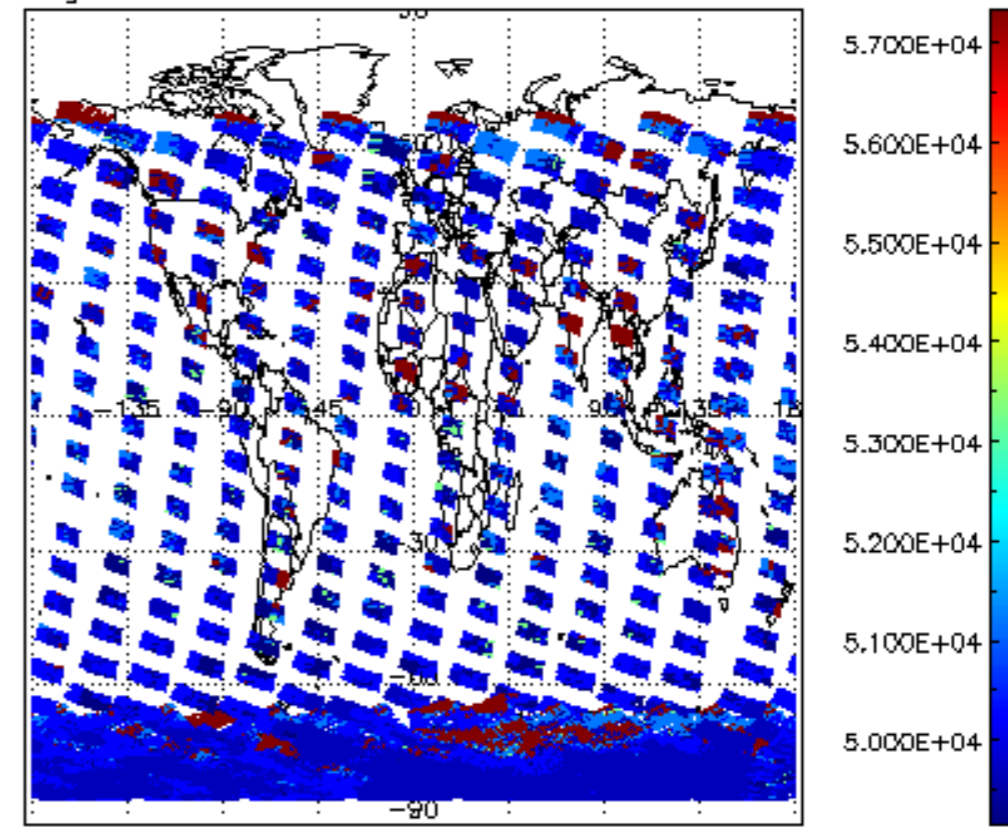
cI\_top\_height for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



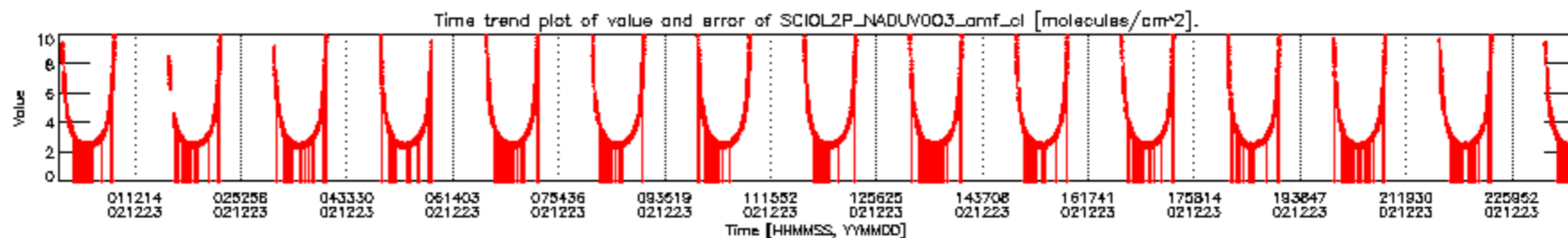
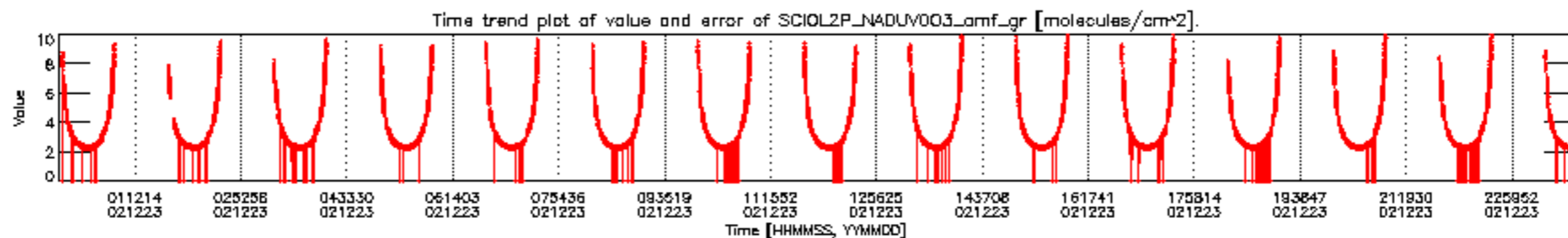
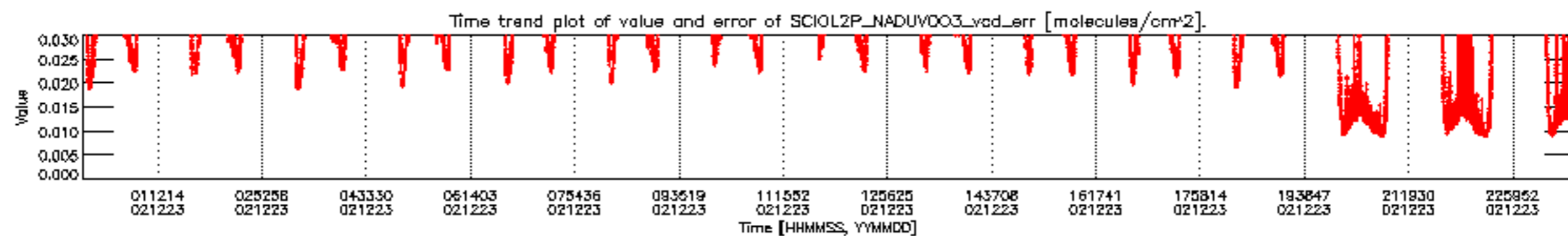
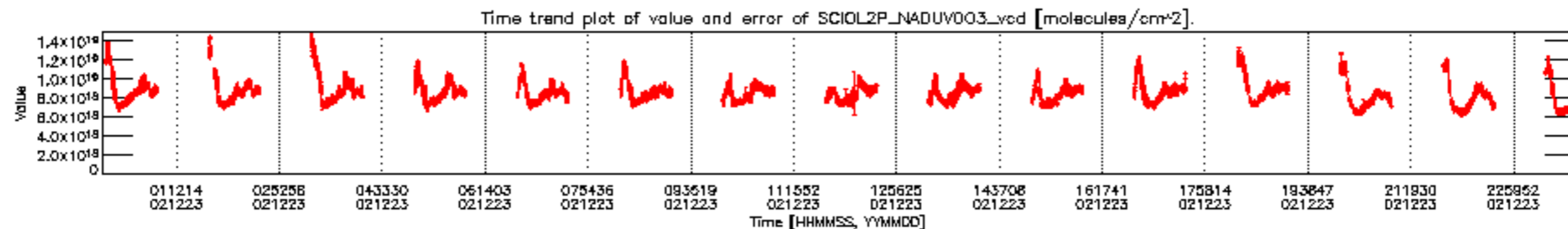
cI\_opt\_depth for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



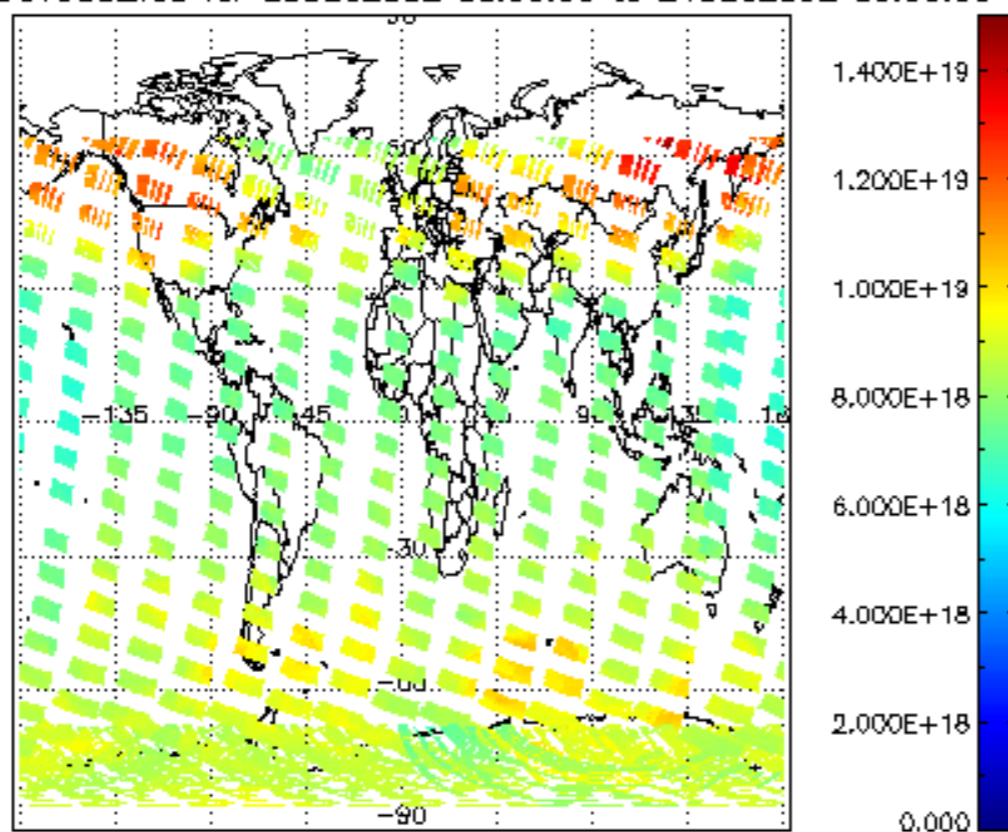
cloud\_flags for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



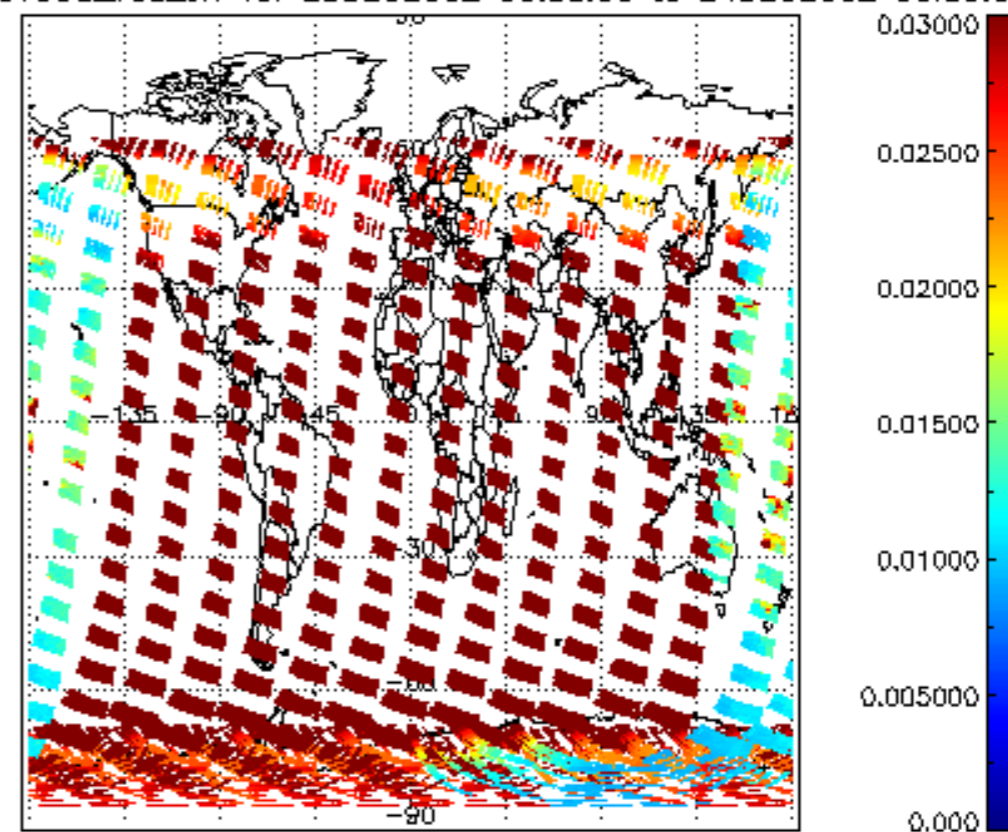




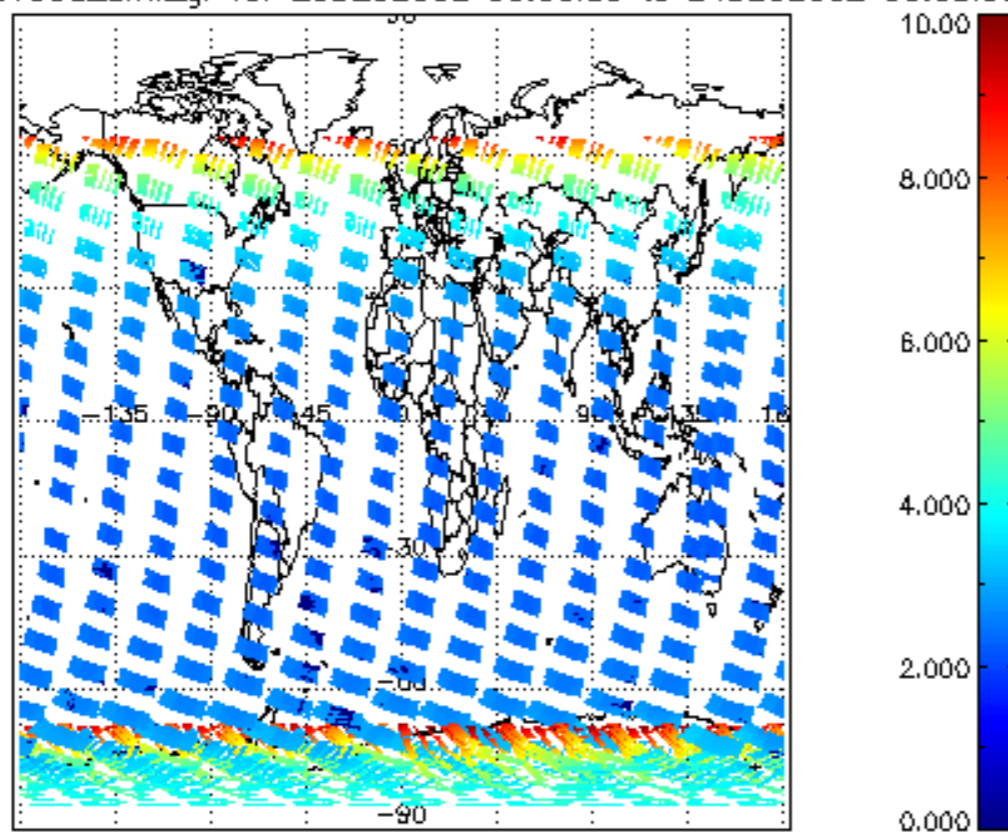
SCIOL2P\_NADUV003\_vcd for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



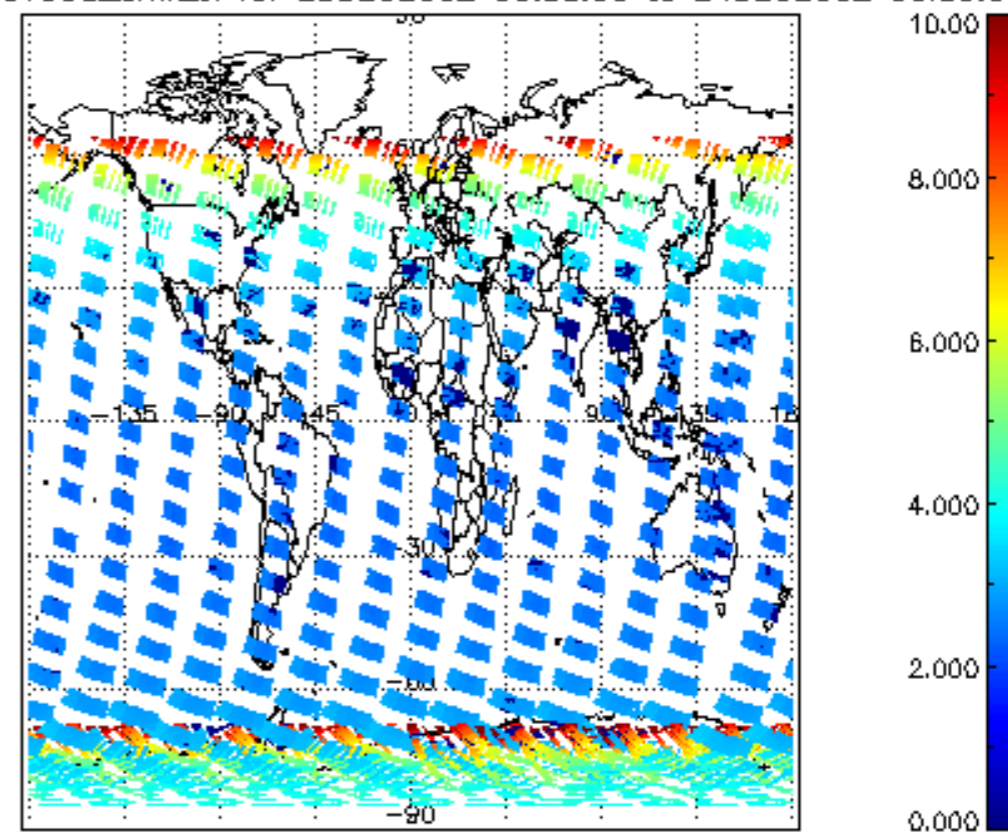
SCIOL2P\_NADUV003\_vcd\_err for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



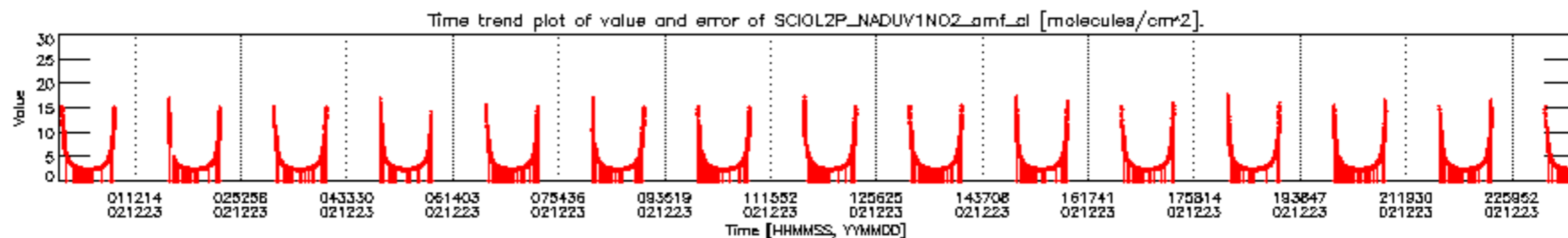
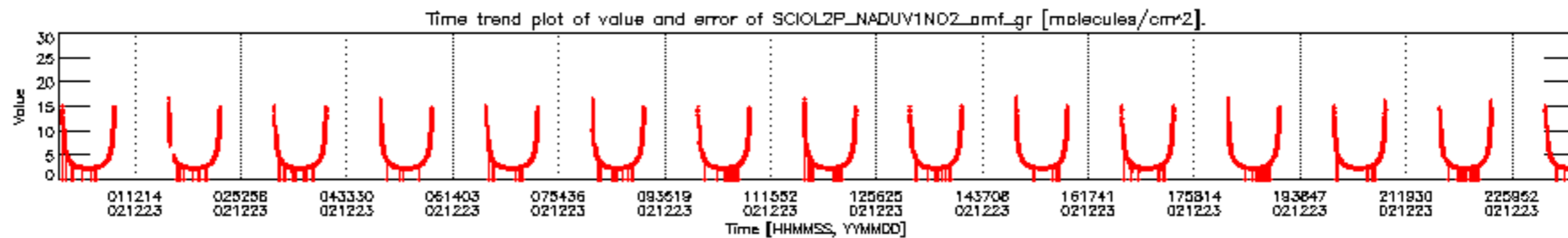
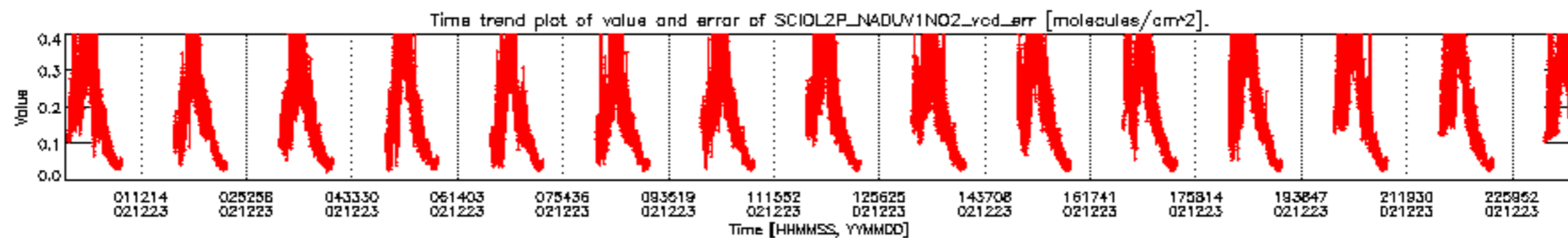
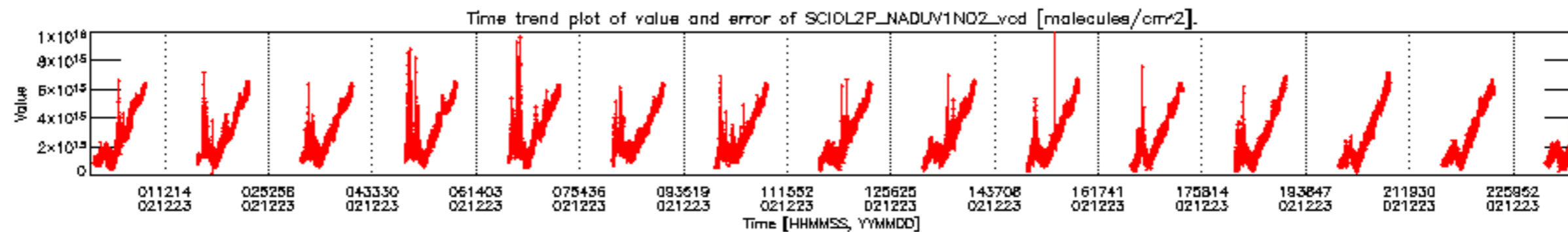
SCIOL2P\_NADUV003\_amf\_gr for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



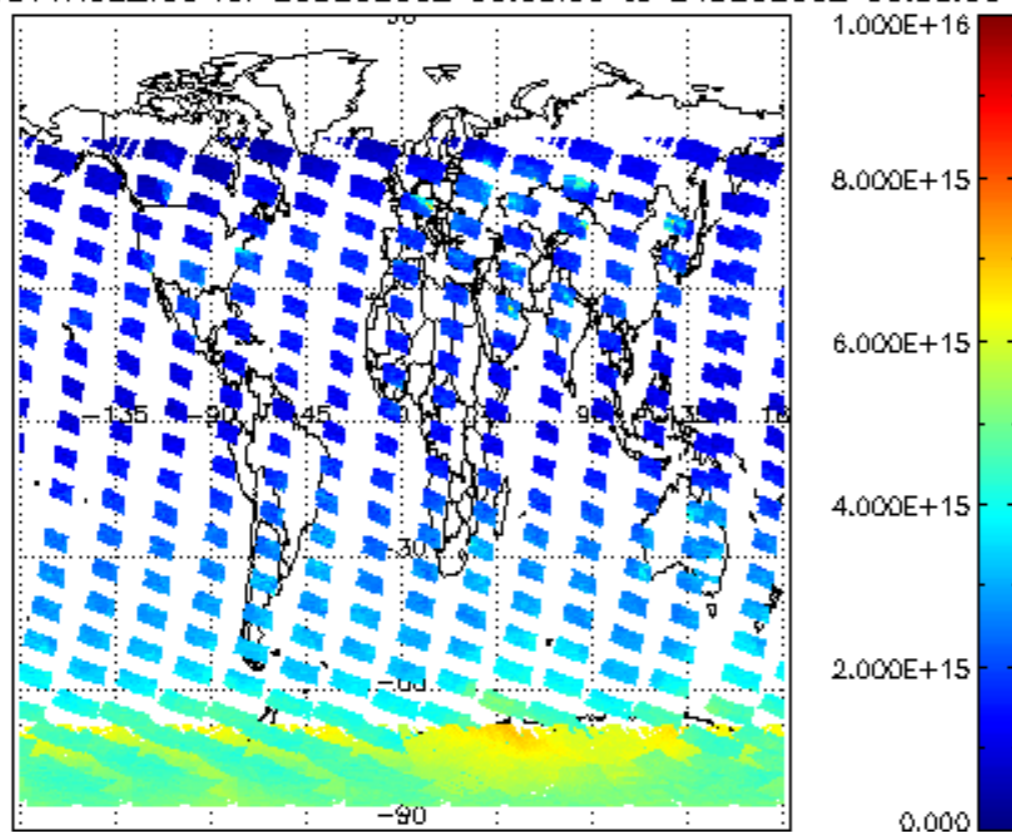
SCIOL2P\_NADUV003\_amf\_cl for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



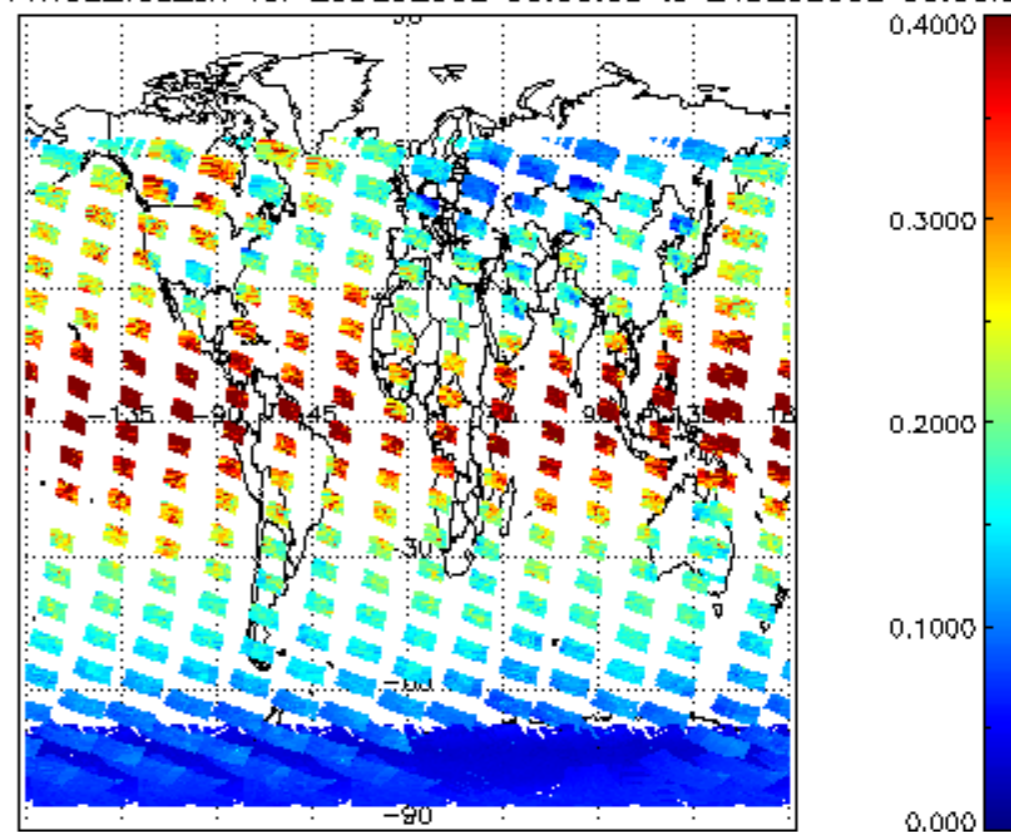




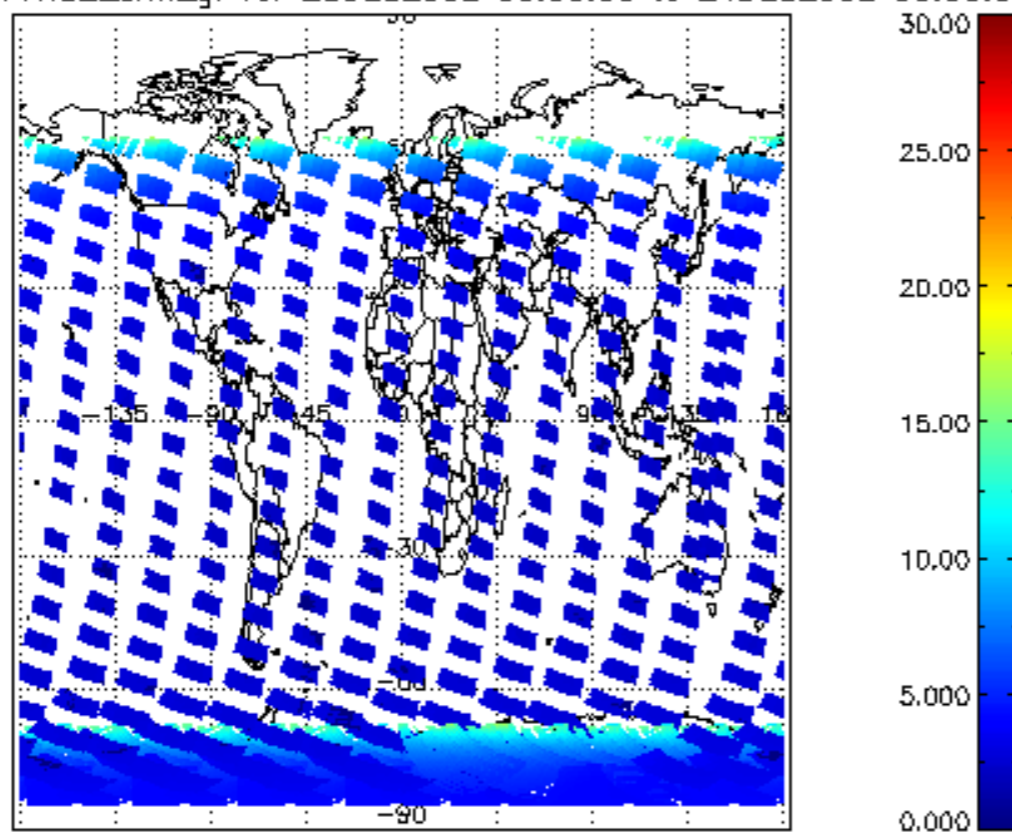
SCIOL2P\_NADUV1NO2\_vcd for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



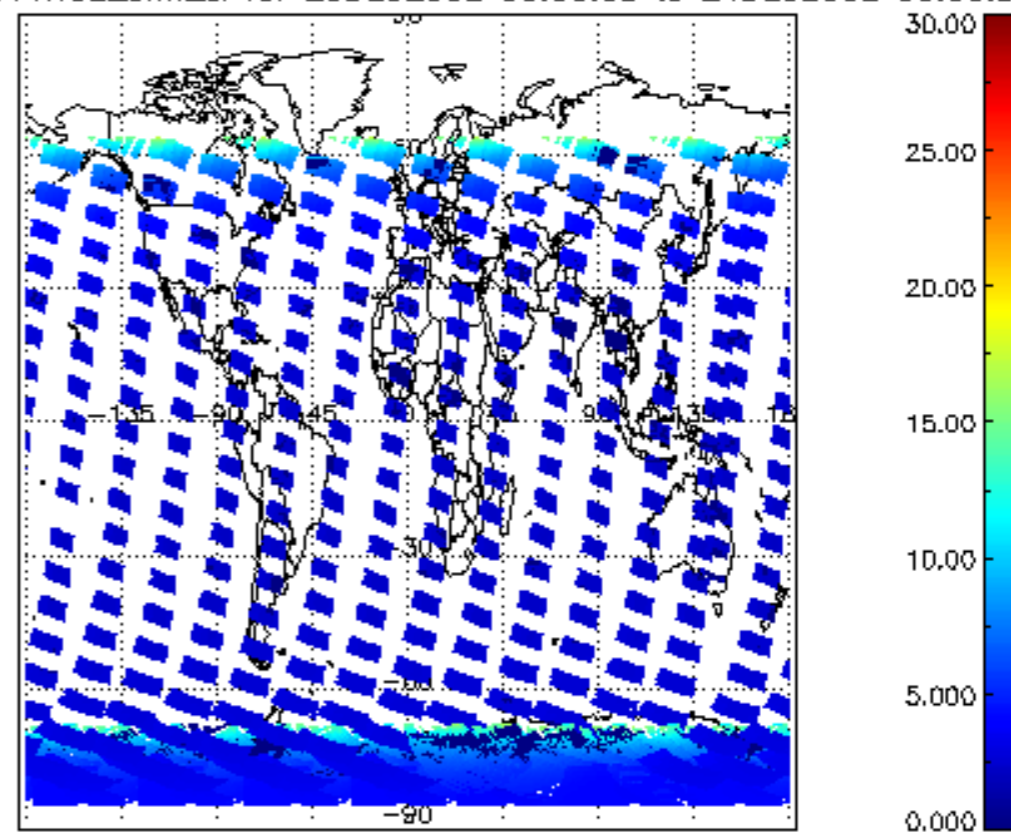
SCIOL2P\_NADUV1NO2\_vcd\_err for 23DEC2002 00:00:00 to 24DEC2002 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 23DEC2002 00:00:00 to 24DEC2002 00:00:00

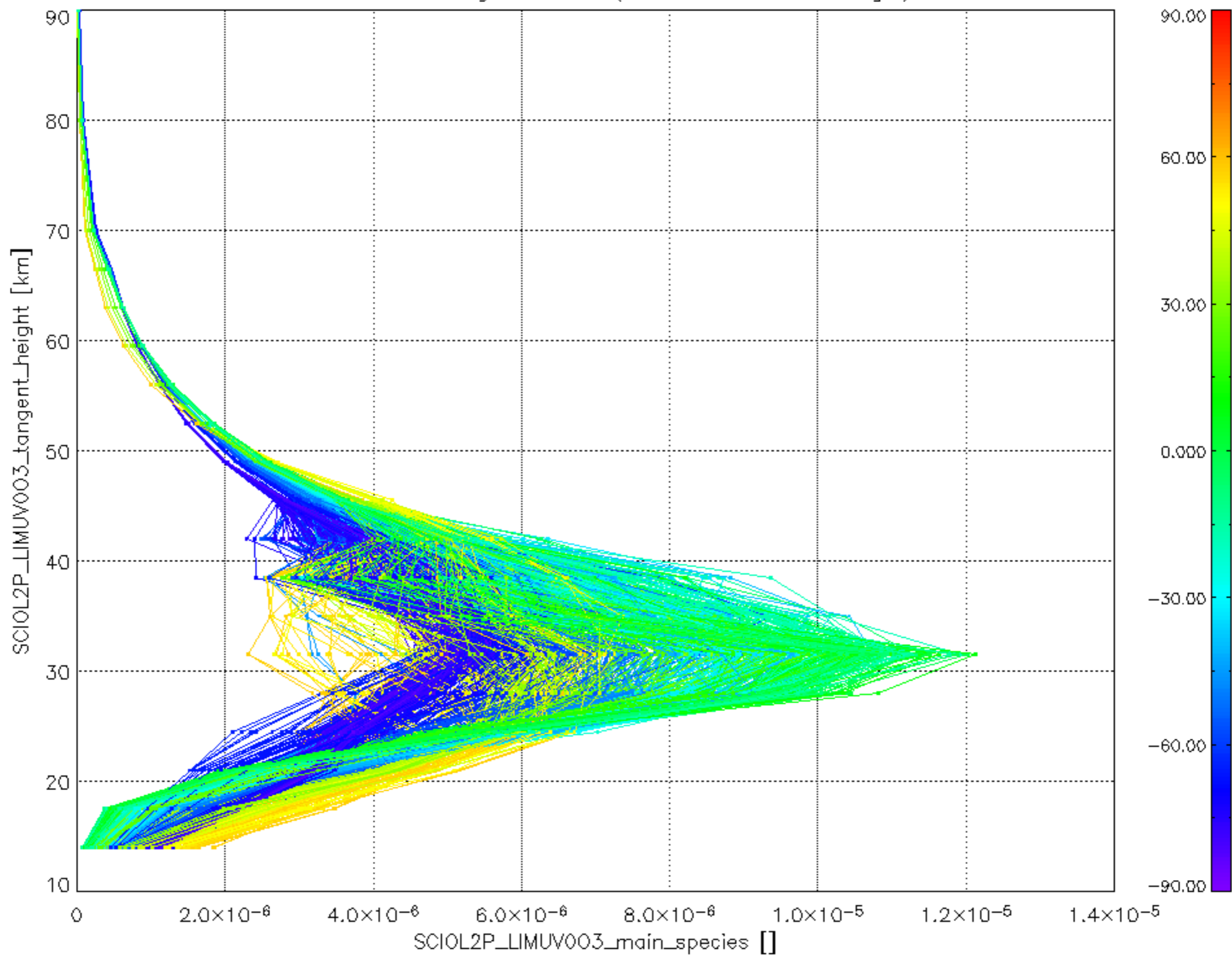


SCIOL2P\_NADUV1NO2\_amf\_cl for 23DEC2002 00:00:00 to 24DEC2002 00:00:00





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).

