

## 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	17APR2008 15:09:37
Data source version	SCIA-OL/3.01-R
Processing scope for products	23MAR2008 00:00:00 to 24MAR2008 00:00:00
Start time of first product within scope	22MAR2008 23:00:40
Stop time of last product within scope	24MAR2008 01:06:06
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__2PRDPA20080322_230040_000033812067_00073_31690_5358.N1	22MAR2008 23:00:40	22MAR2008 23:57:01	0	GOOD
1	SCI_OL__2PRDPA20080323_004115_000033942067_00074_31691_5359.N1	23MAR2008 00:41:15	23MAR2008 01:37:49	0	GOOD
2	SCI_OL__2PRDPA20080323_022150_000033812067_00075_31692_5360.N1	23MAR2008 02:21:50	23MAR2008 03:18:12	0	GOOD
3	SCI_OL__2PRDPA20080323_040226_000033942067_00076_31693_5361.N1	23MAR2008 04:02:26	23MAR2008 04:59:00	0	GOOD
4	SCI_OL__2PRDPA20080323_072337_000033942067_00078_31695_5363.N1	23MAR2008 07:23:37	23MAR2008 08:20:11	0	GOOD
5	SCI_OL__2PRDPA20080323_090413_000033812067_00079_31696_5364.N1	23MAR2008 09:04:13	23MAR2008 10:00:34	0	GOOD
6	SCI_OL__2PRDPA20080323_104448_000033942067_00080_31697_5365.N1	23MAR2008 10:44:48	23MAR2008 11:41:22	0	GOOD
7	SCI_OL__2PRDPA20080323_122523_000033812067_00081_31698_5366.N1	23MAR2008 12:25:23	23MAR2008 13:21:45	0	GOOD
8	SCI_OL__2PRDPA20080323_140559_000033942067_00082_31699_5367.N1	23MAR2008 14:05:59	23MAR2008 15:02:33	0	GOOD
9	SCI_OL__2PRDPA20080323_154634_000033812067_00083_31700_5368.N1	23MAR2008 15:46:34	23MAR2008 16:42:56	0	GOOD
10	SCI_OL__2PRDPA20080323_172733_000033252067_00084_31701_5369.N1	23MAR2008 17:27:33	23MAR2008 18:22:59	0	GOOD
11	SCI_OL__2PRDPA20080323_190809_000033812067_00085_31702_5370.N1	23MAR2008 19:08:09	23MAR2008 20:04:30	0	GOOD
12	SCI_OL__2PRDPA20080323_204821_000033942067_00086_31703_5371.N1	23MAR2008 20:48:21	23MAR2008 21:44:55	0	GOOD
13	SCI_OL__2PRDPA20080323_222856_000033812067_00087_31704_5372.N1	23MAR2008 22:28:56	23MAR2008 23:25:18	0	GOOD
14	SCI_OL__2PRDPA20080324_000932_000033942067_00088_31705_5373.N1	24MAR2008 00:09:32	24MAR2008 01:06:06	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: 132860

Total number of cloud data DSRs with good quality flag (=0): 132860 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	132860	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	132860	0.17123	0.12500	0.12500	0.25000	0.060346	s
SURFACE_PRES	132860	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	132860	0.38365	0.35079	0.0000	1.0000	0.28753	-

CL_FRAC_ERR	132860	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	132860	5.4795	4.0000	4.0000	8.0000	1.9311	
PMD_READ_CL[0]	132860	0.22071	0.0000	0.0000	8.0000	0.97912	-
PMD_READ_CL[1]	132860	1.0222	0.0000	0.0000	8.0000	2.2389	-
CL_TOP_HEIGHT	113548	3.4723	1.7503	0.0000	17.000	3.8044	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	113548	61.038	73.732	0.0000	101.00	41.274	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	132860	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	132860	11001010	11000100	11000000	11100000	3236.4	flags
AERO_ABSO_IND	132860	2.9787	3.5246	-1.0546	14.687	2.0633	
AERO_IND_DIAG	132860	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	132860	01011000	00000000	00000000	11000000	24500.	flags

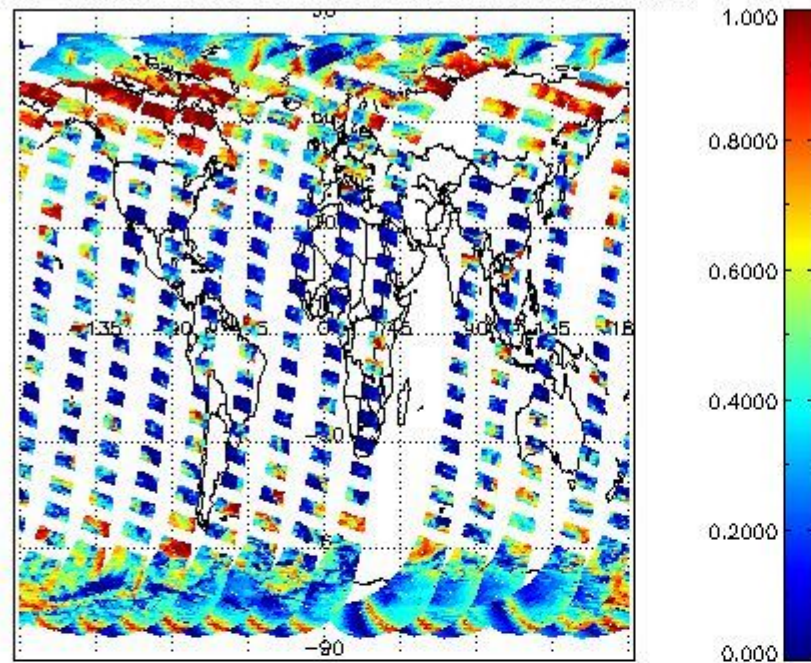
Time and geolocation plots:

Plots are available for the following parameters:

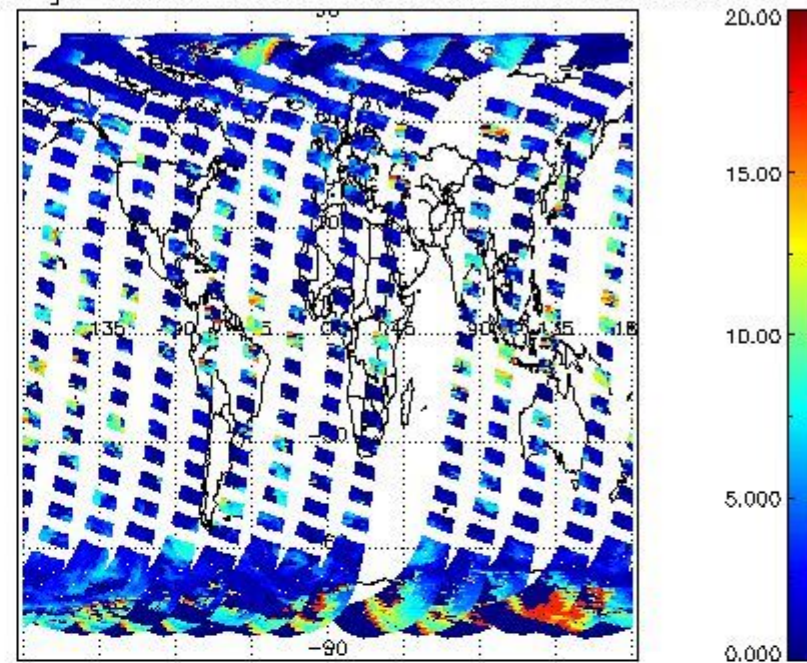
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



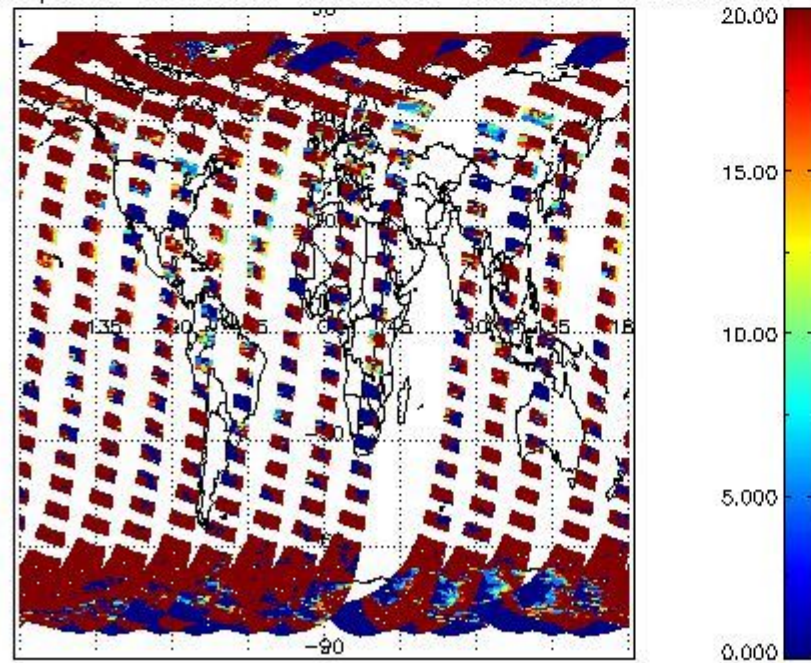
cL\_frac for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



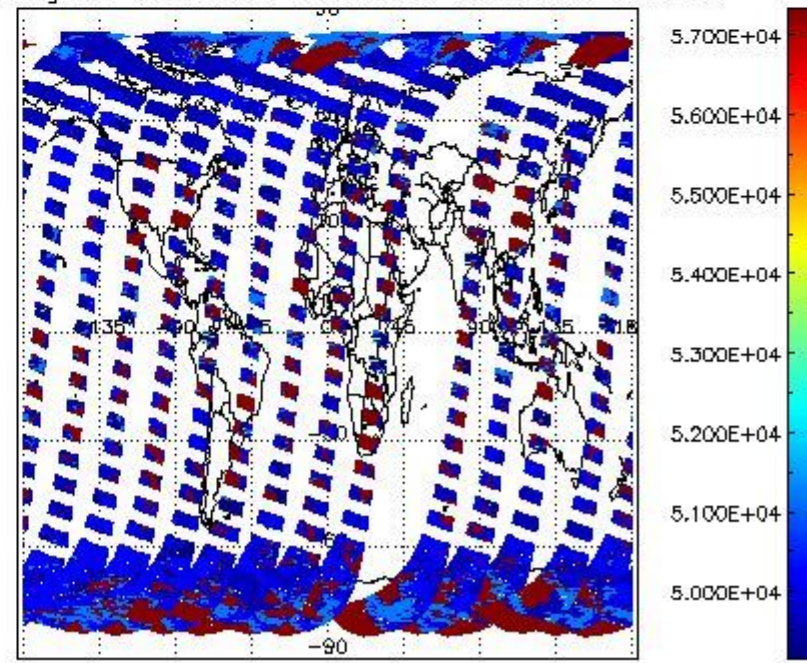
cL\_top\_height for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



cL\_opt\_depth for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



cloud\_flags for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



### 2.2.2 Nadir

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

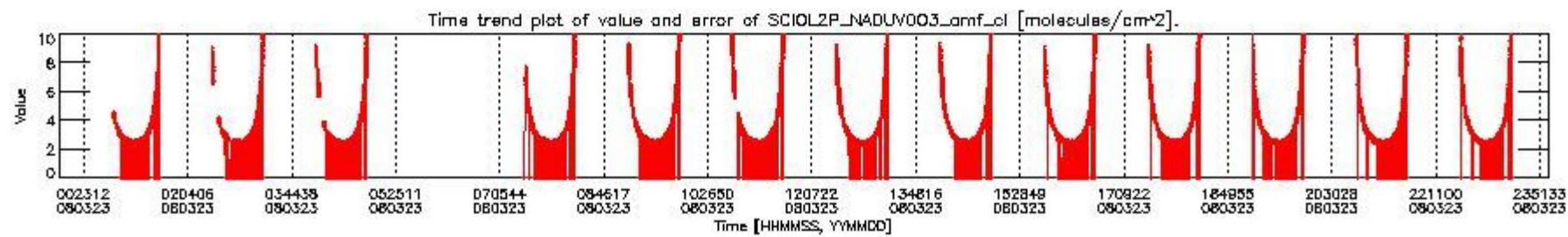
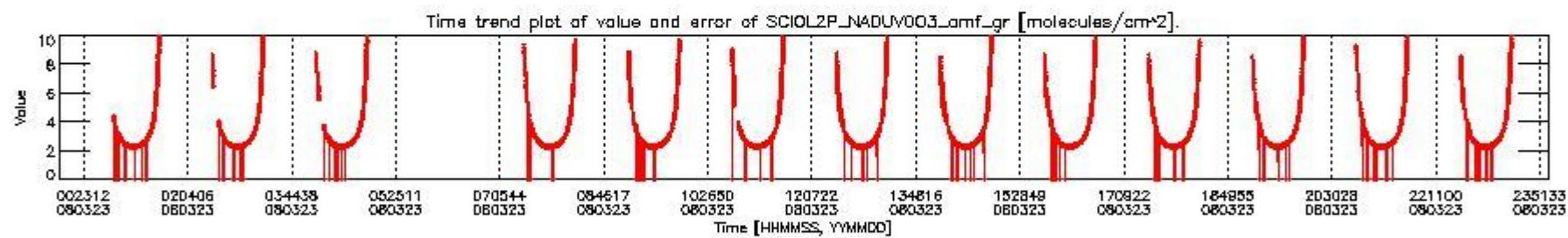
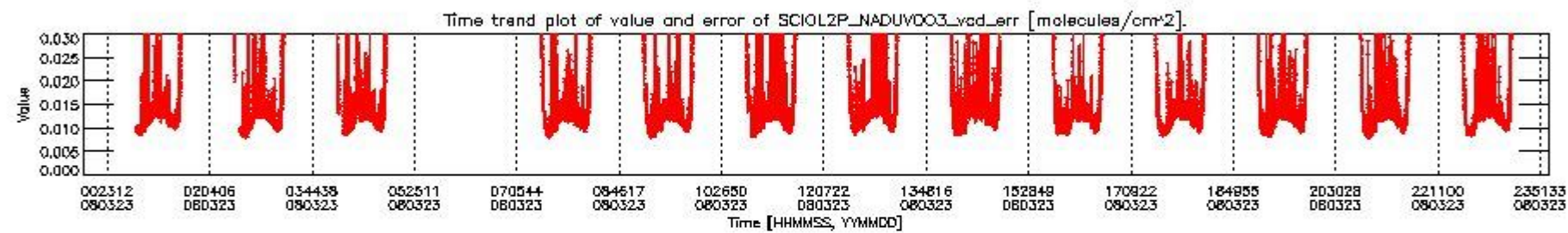
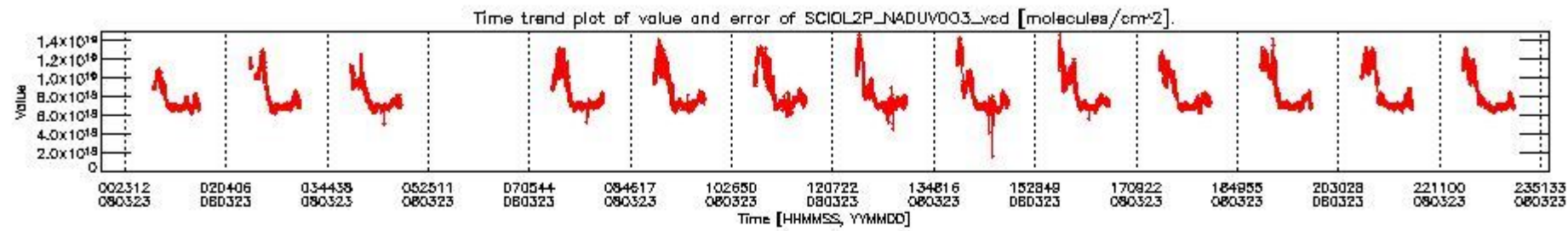
The following data items are currently included into this section:

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



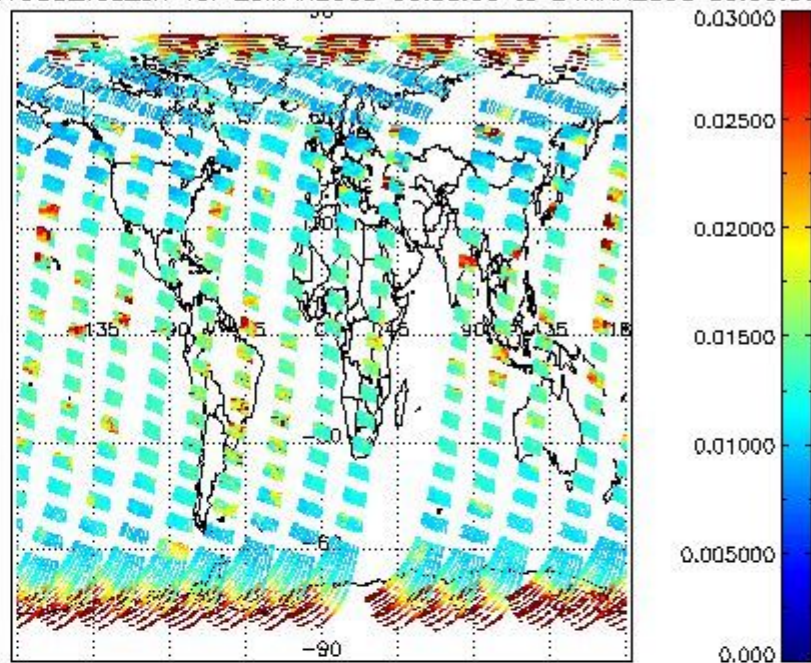
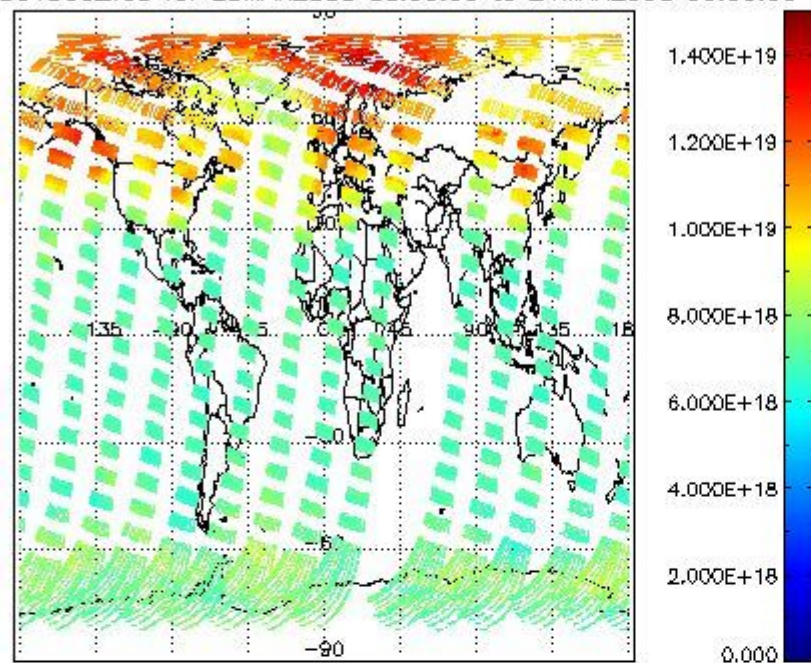
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

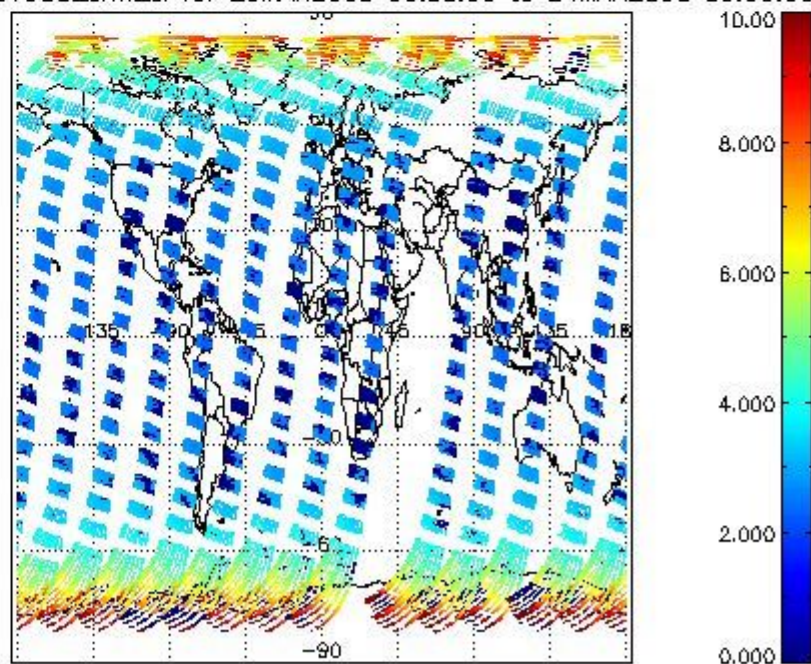
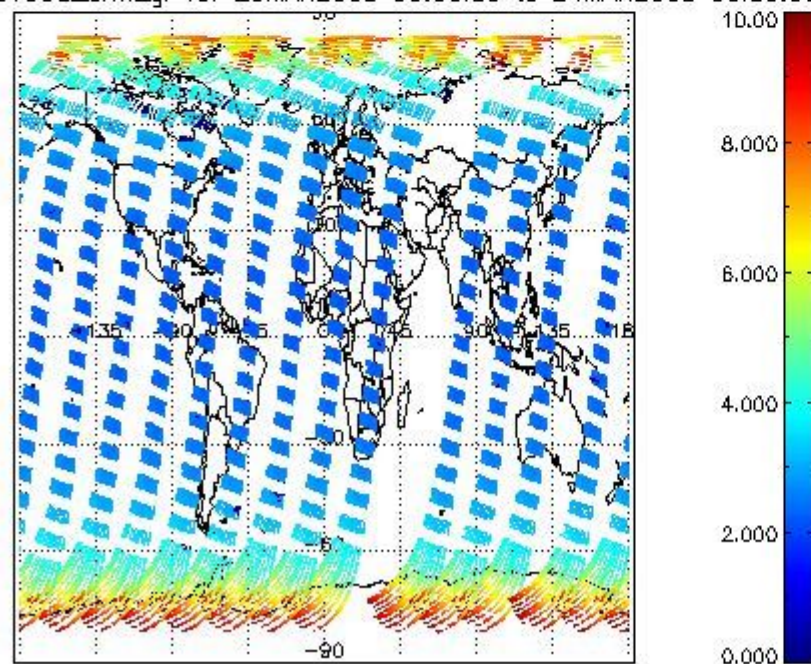




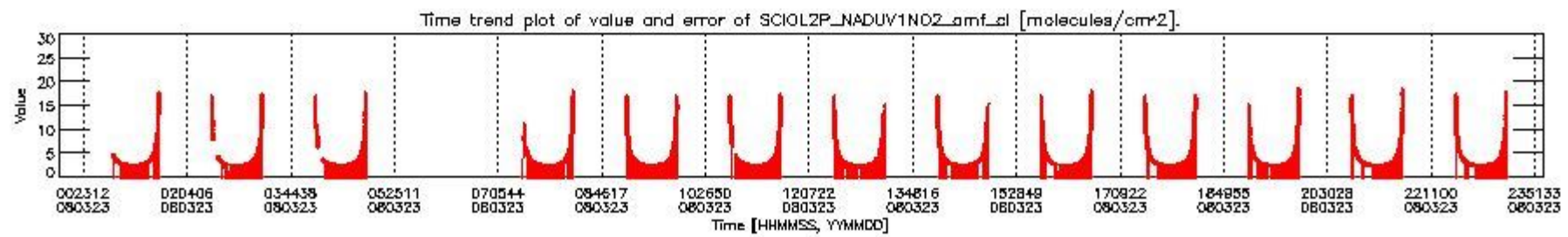
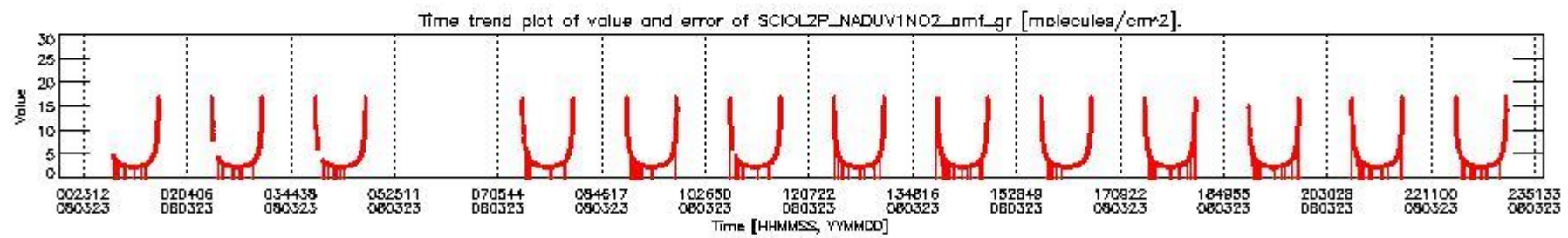
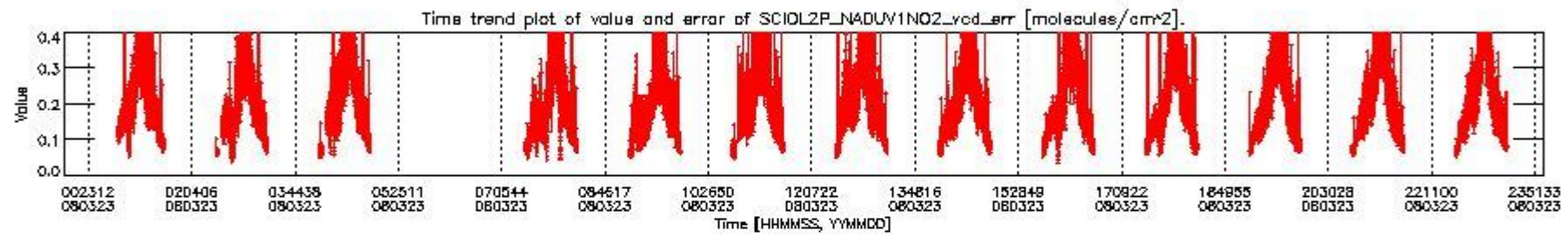
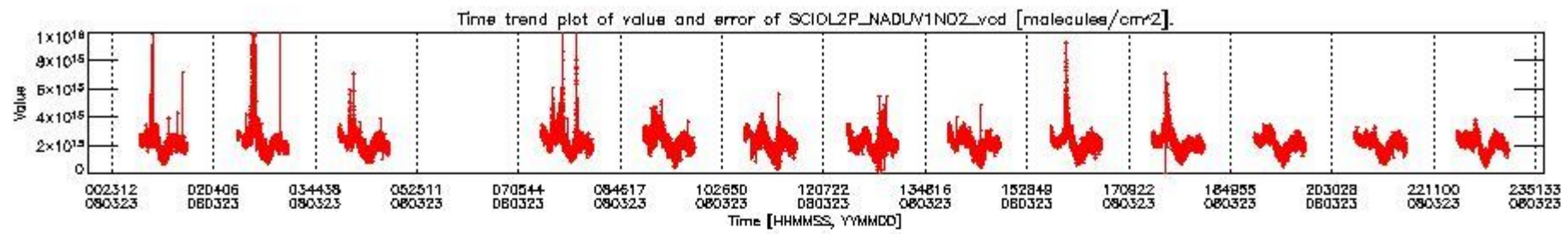
SCIOL2P\_NADUV003\_vcd for 23MAR2008 00:00:00 to 24MAR2008 00:00:00    SCIOL2P\_NADUV003\_vcd\_err for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



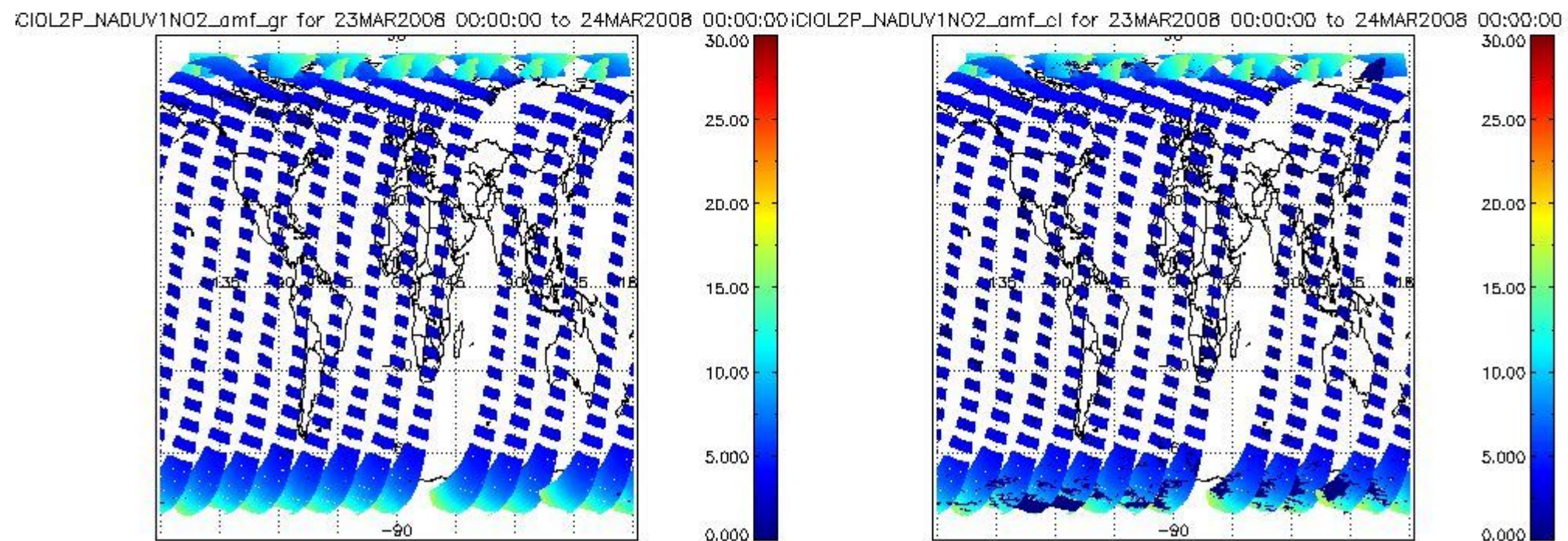
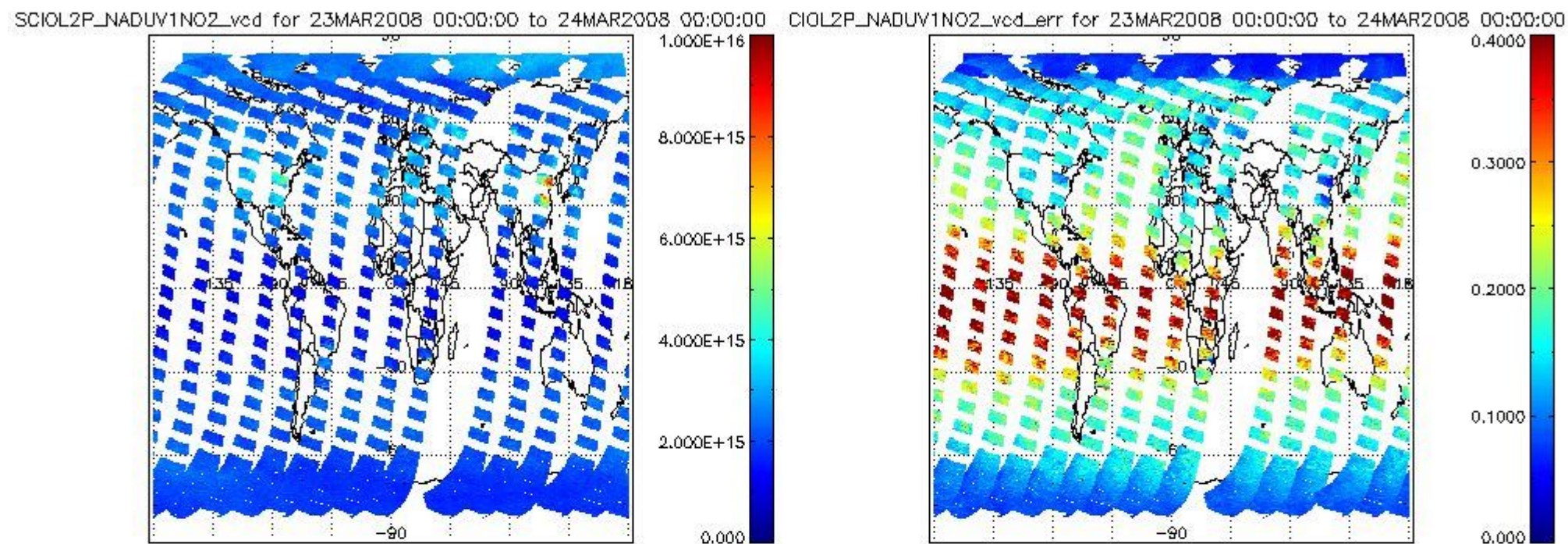
SCIOL2P\_NADUV003\_amf\_gr for 23MAR2008 00:00:00 to 24MAR2008 00:00:00    SCIOL2P\_NADUV003\_amf\_cl for 23MAR2008 00:00:00 to 24MAR2008 00:00:00











### 2.2.3 Limb

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

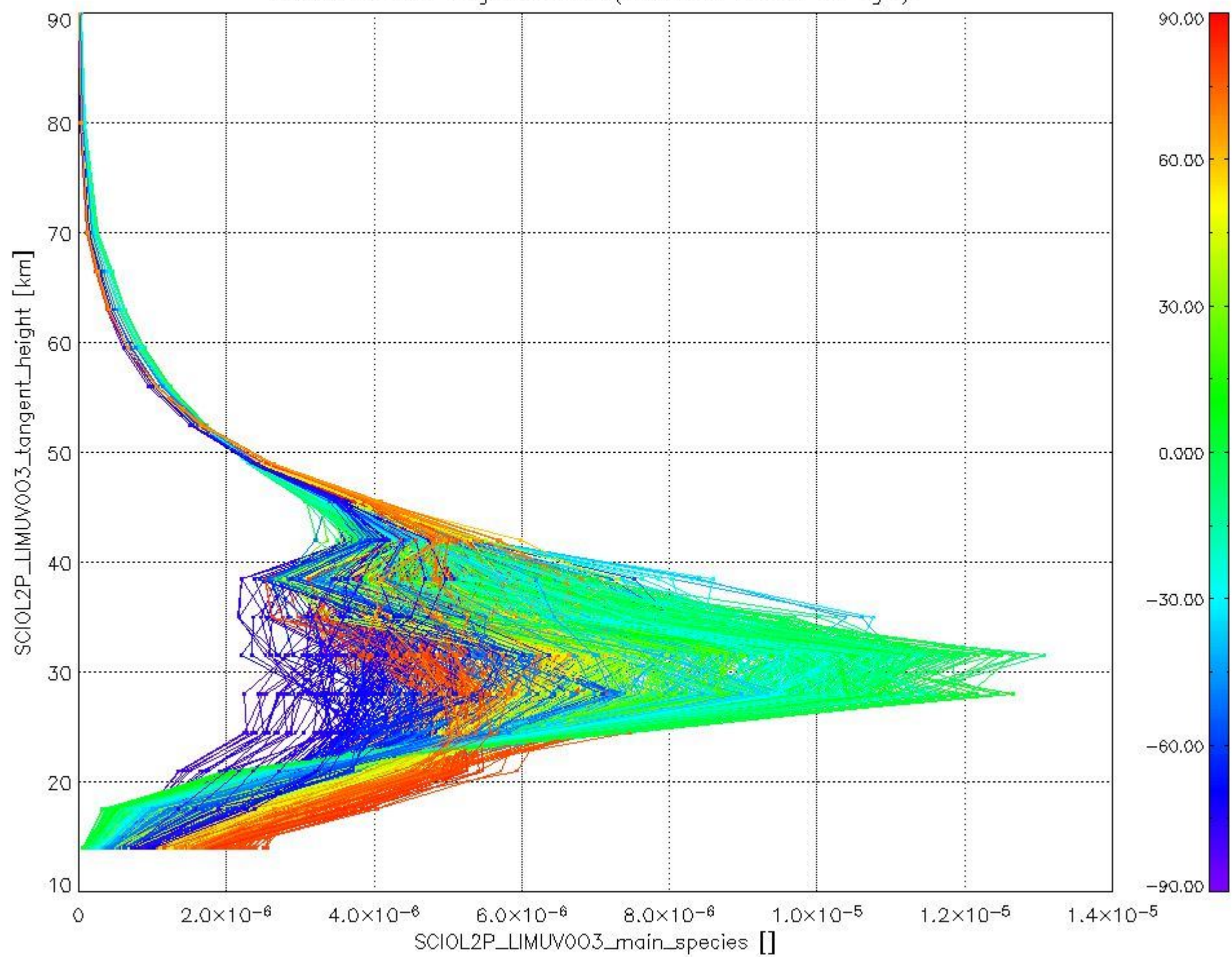
The following data items are currently included into this section:

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.

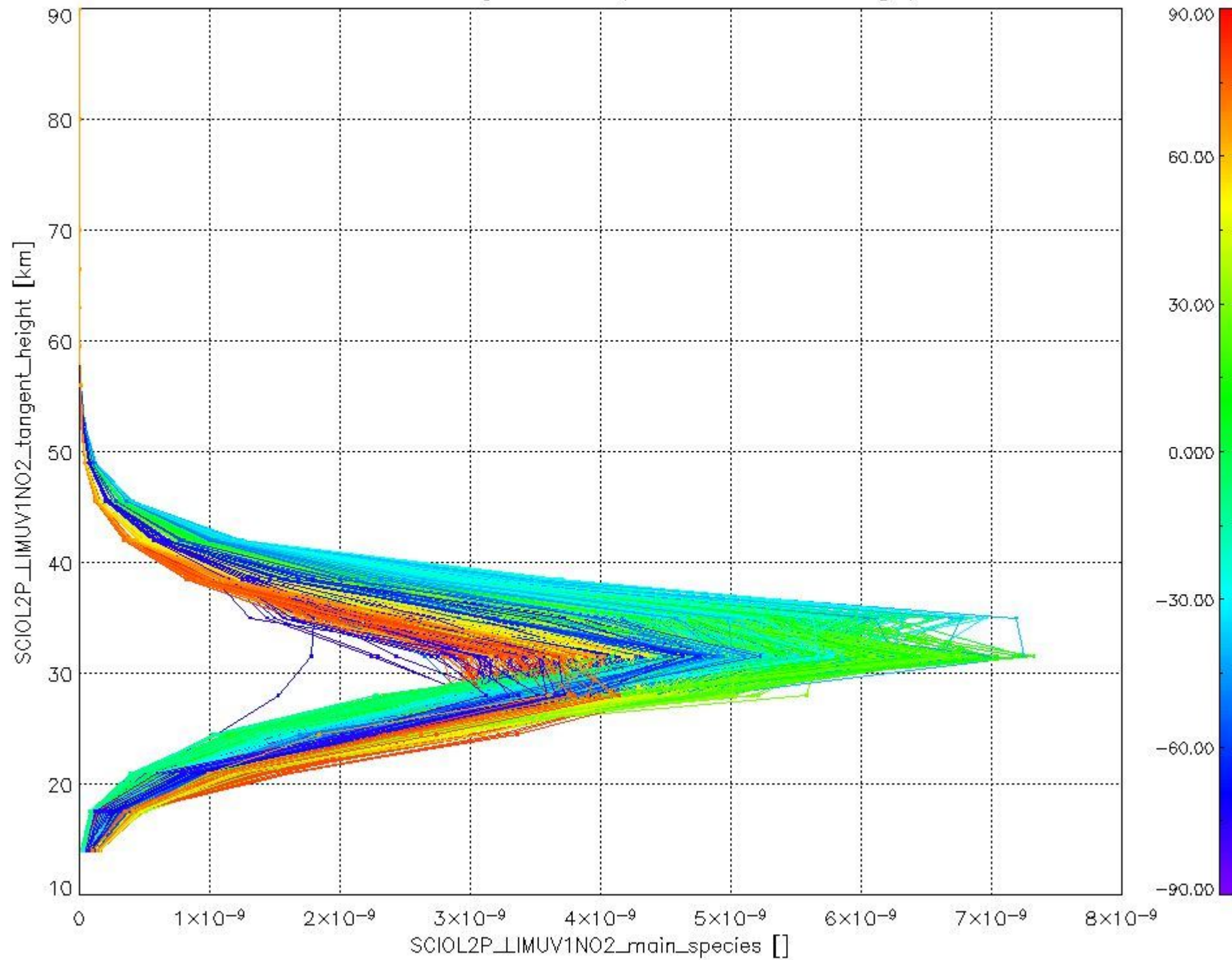


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





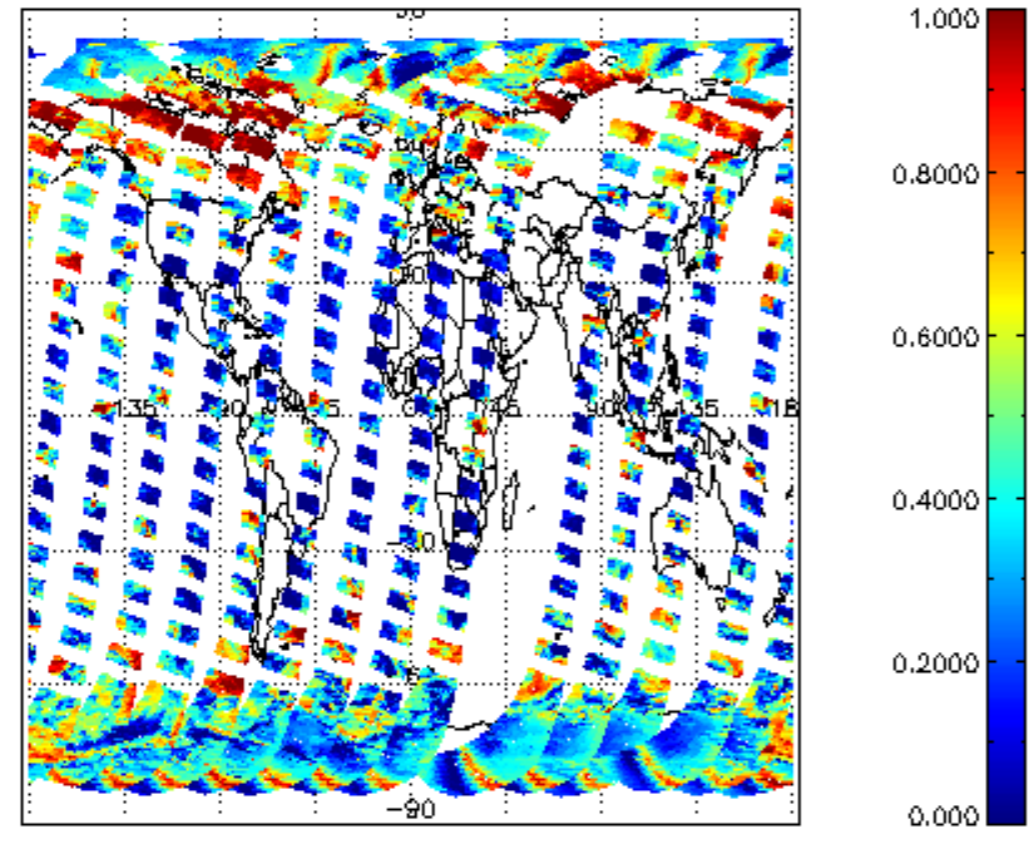
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



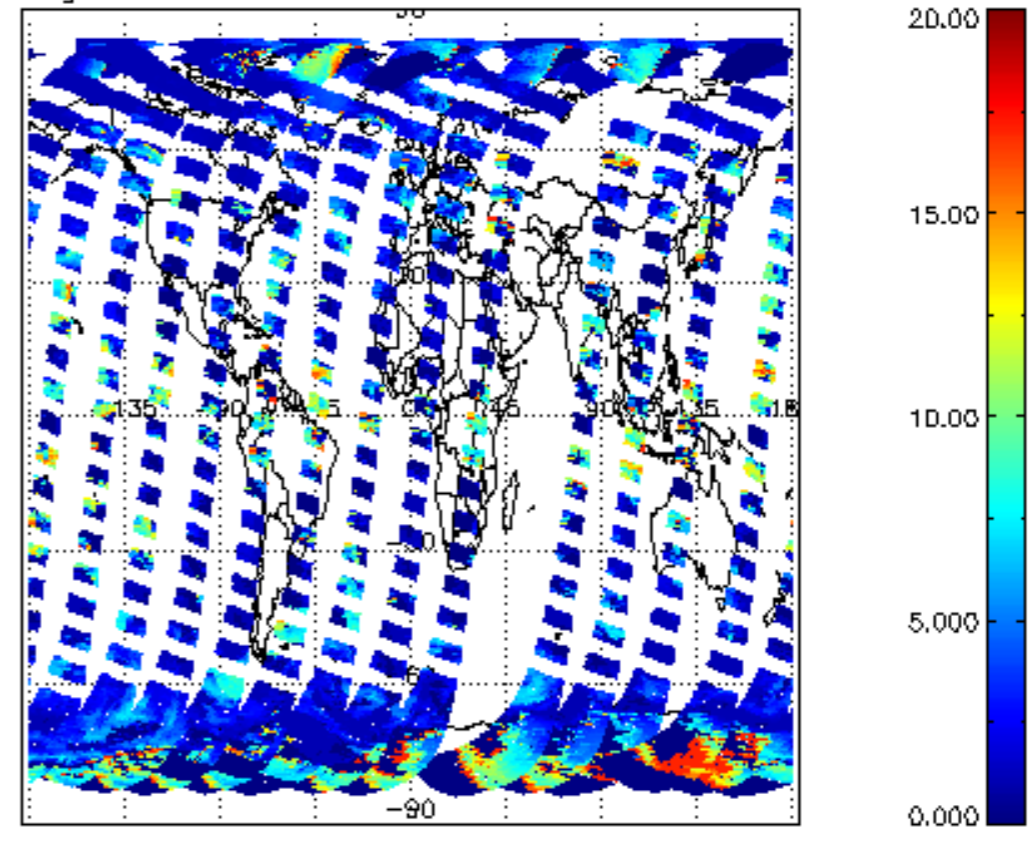
### 2.3 ADF monitoring

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

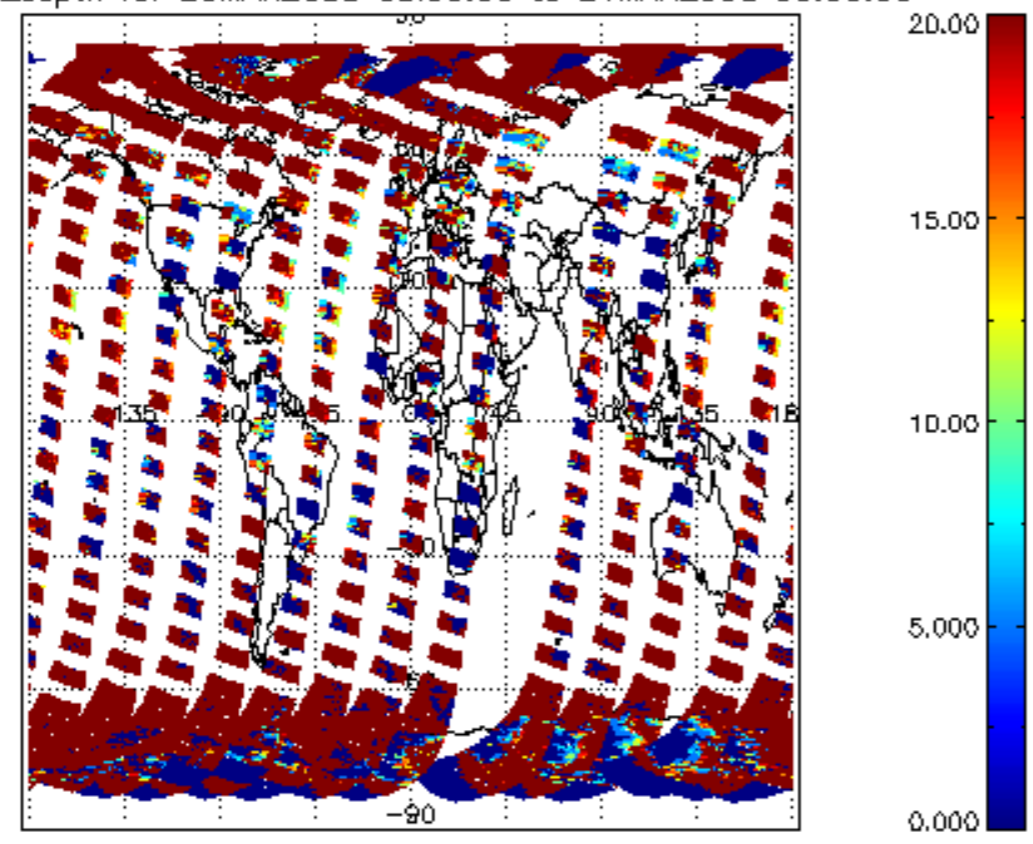
cL\_frac for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



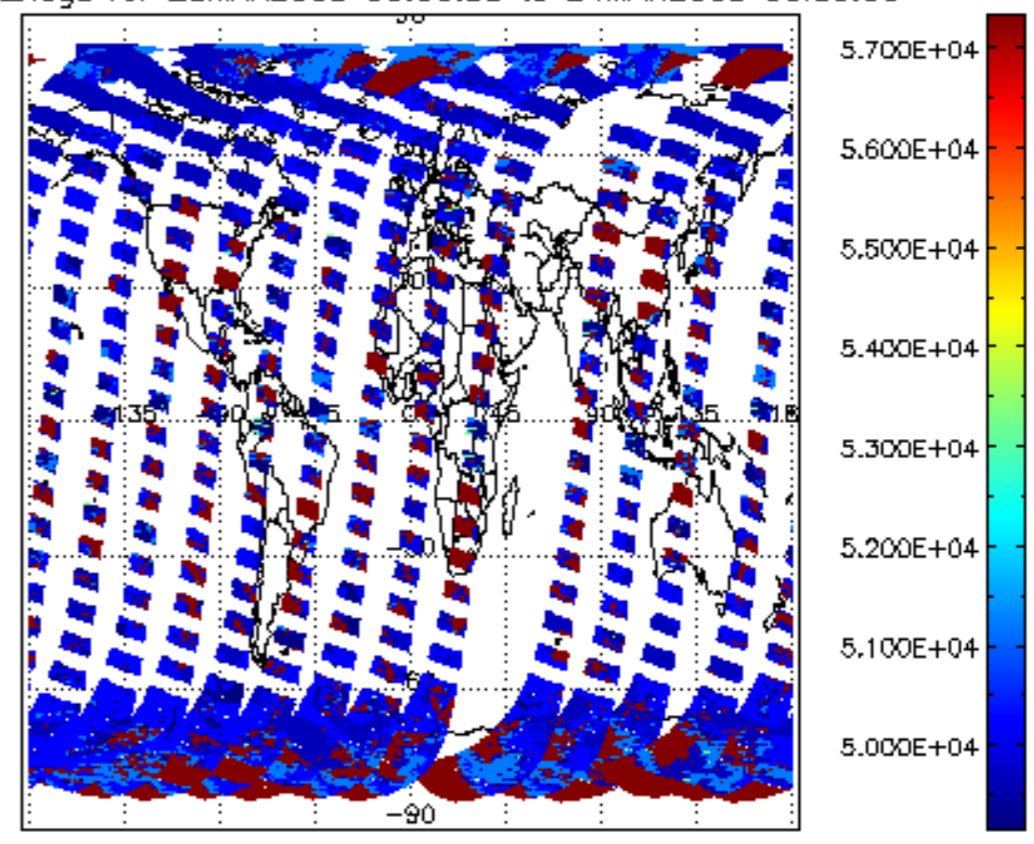
cL\_top\_height for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



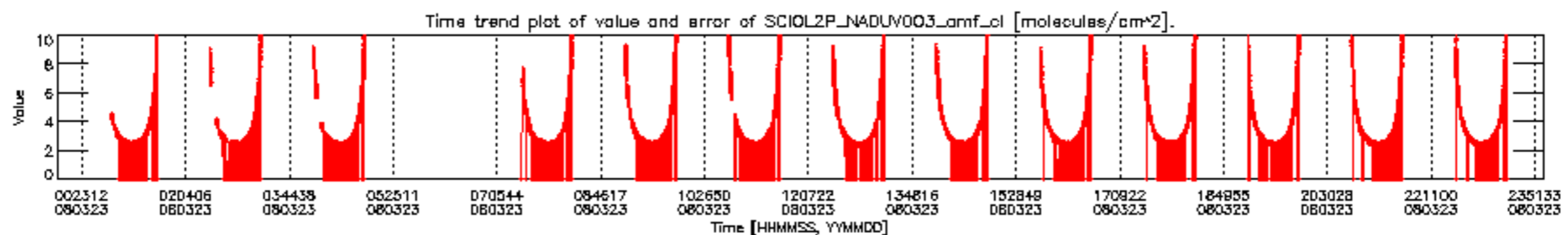
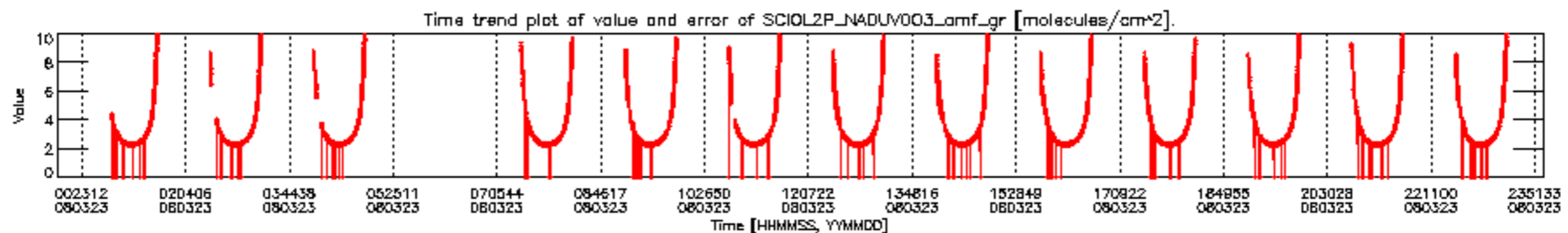
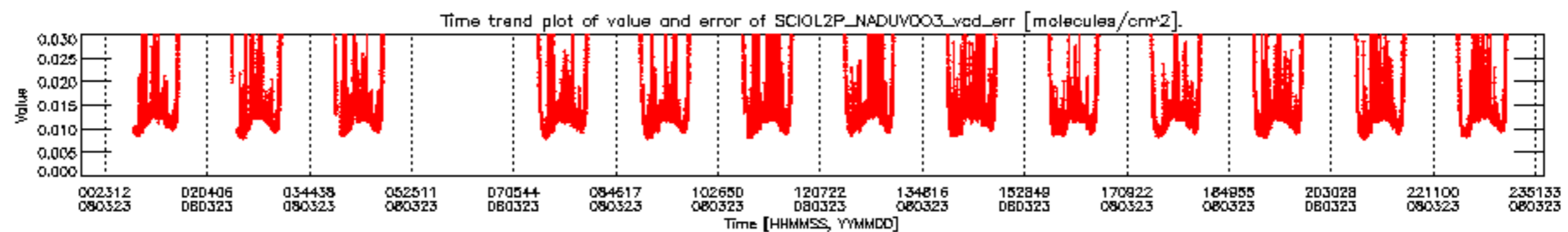
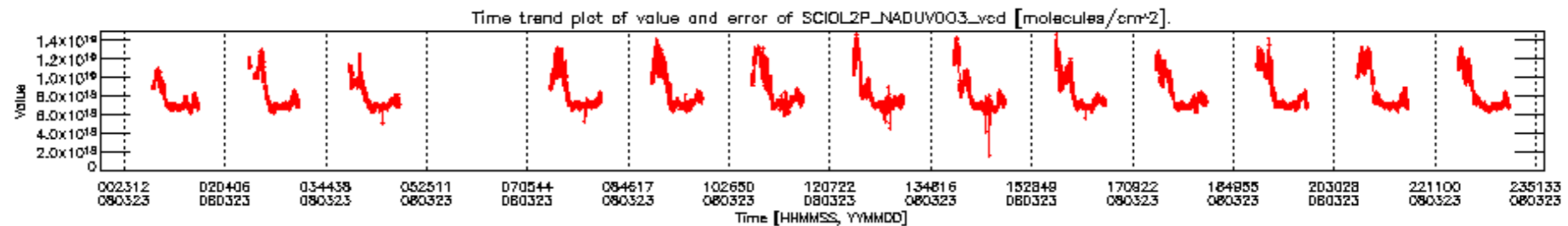
cL\_opt\_depth for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



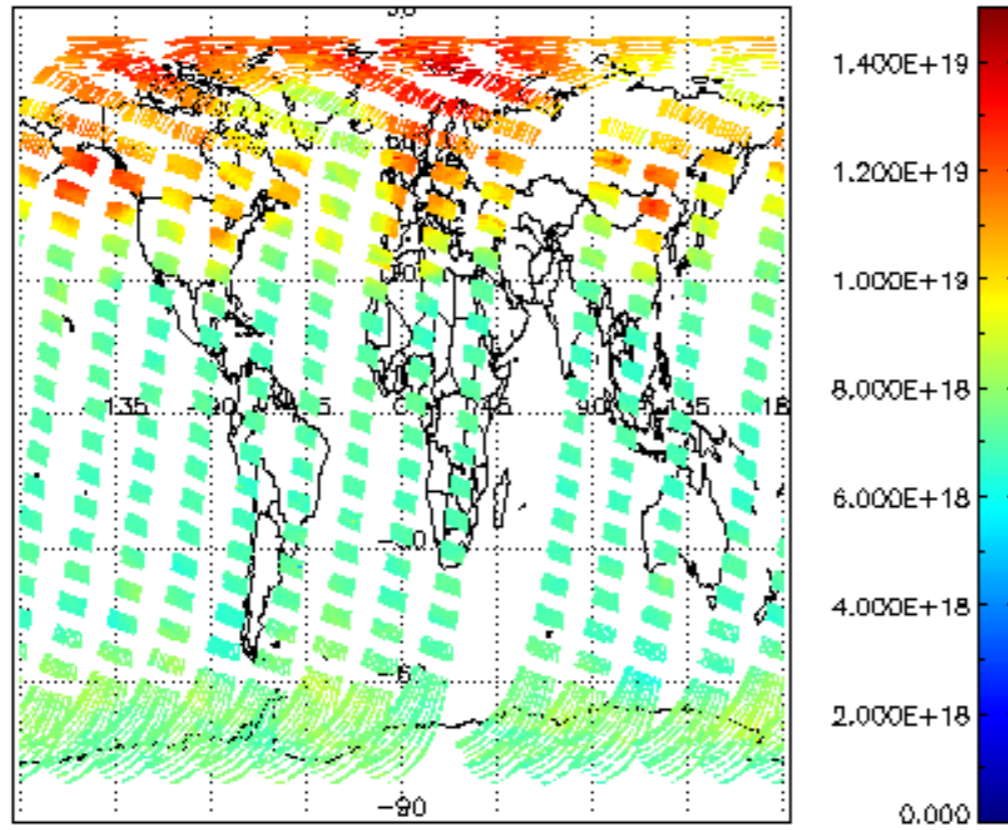
cloud\_flags for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



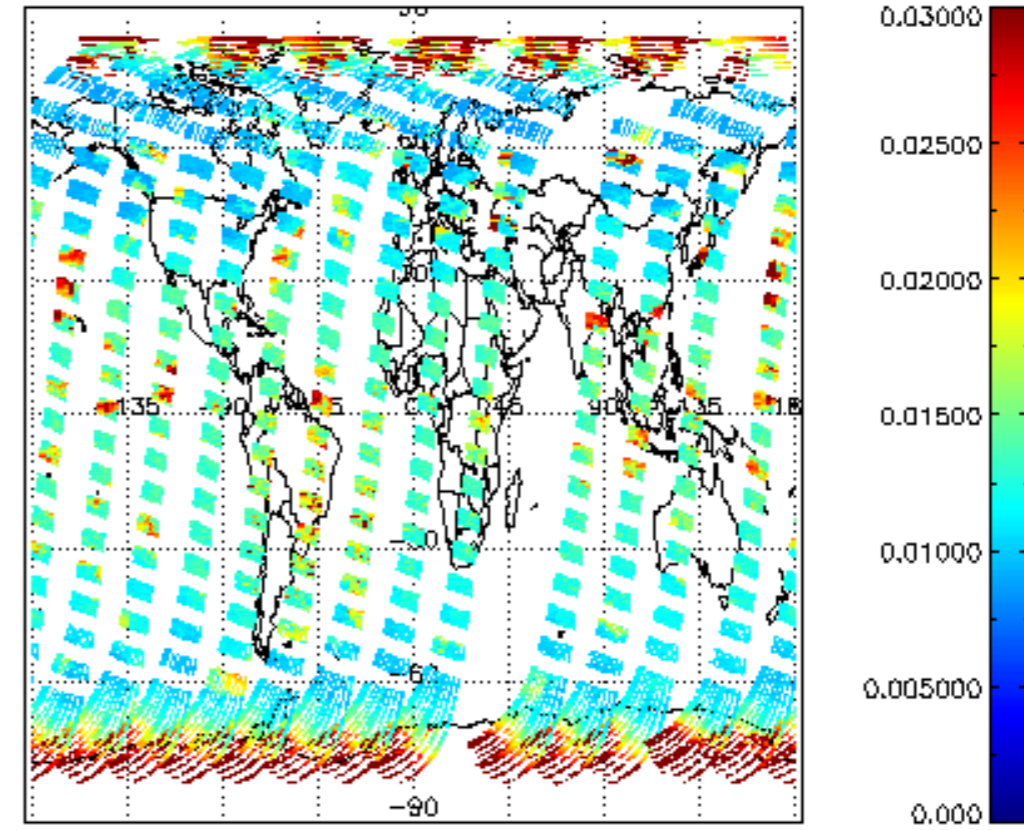




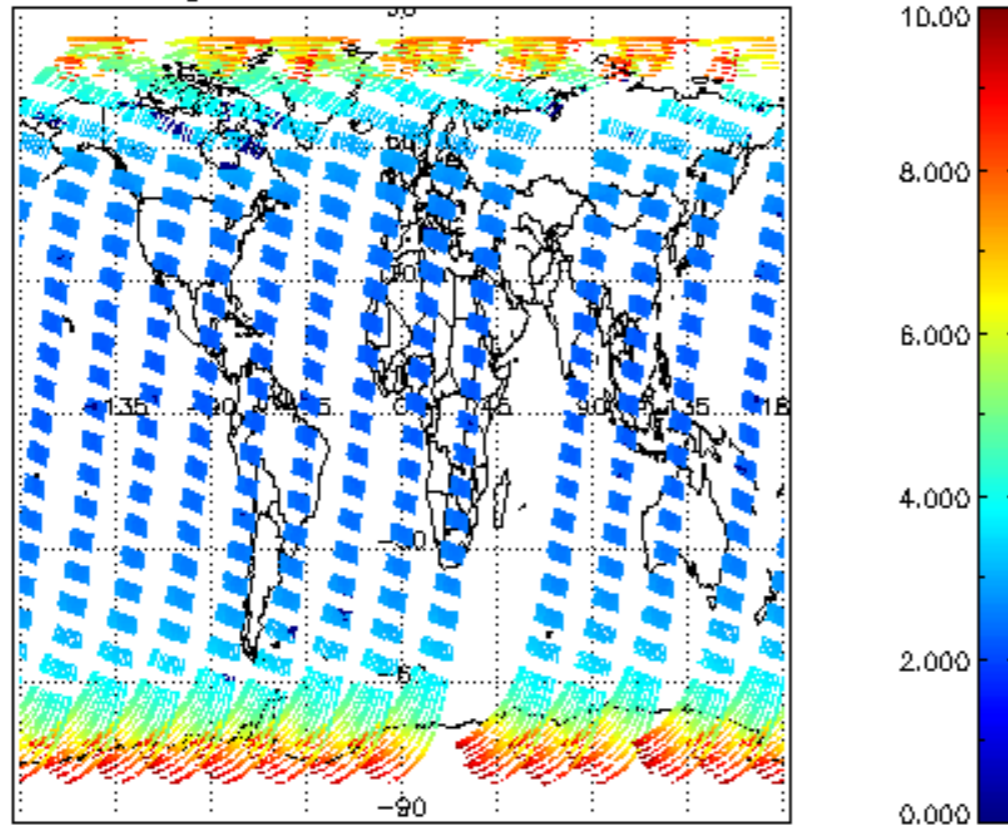
SCIOL2P\_NADUV003\_vcd for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



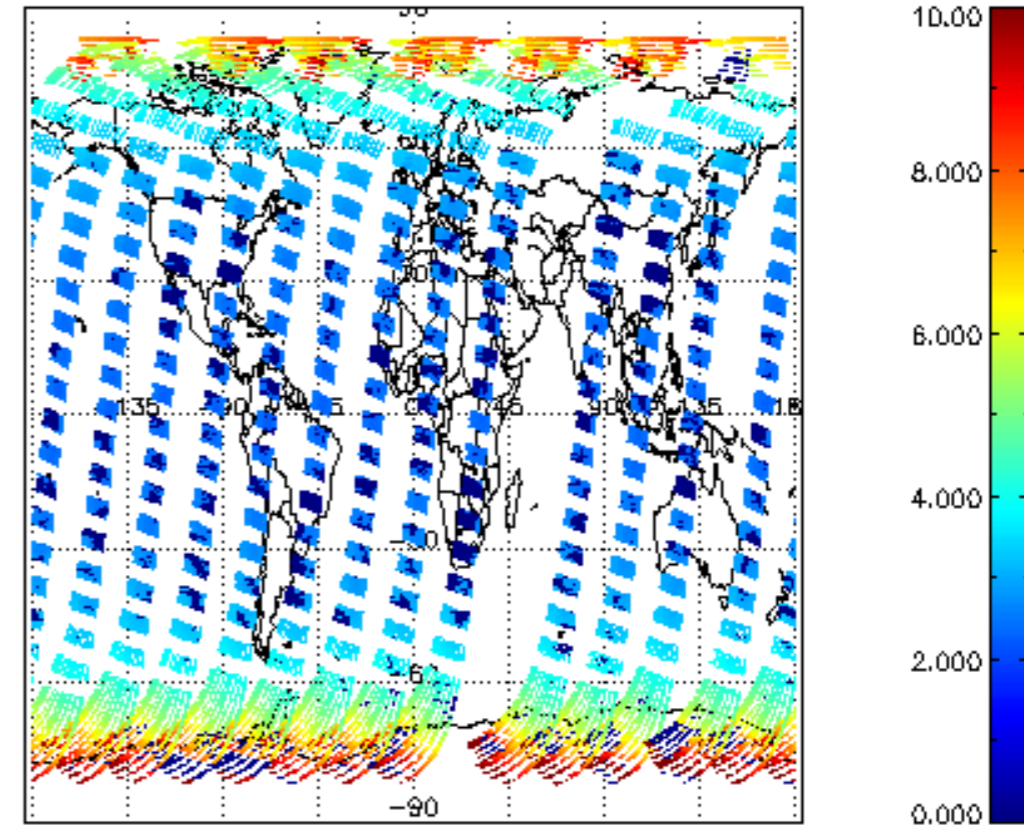
SCIOL2P\_NADUV003\_vcd\_err for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



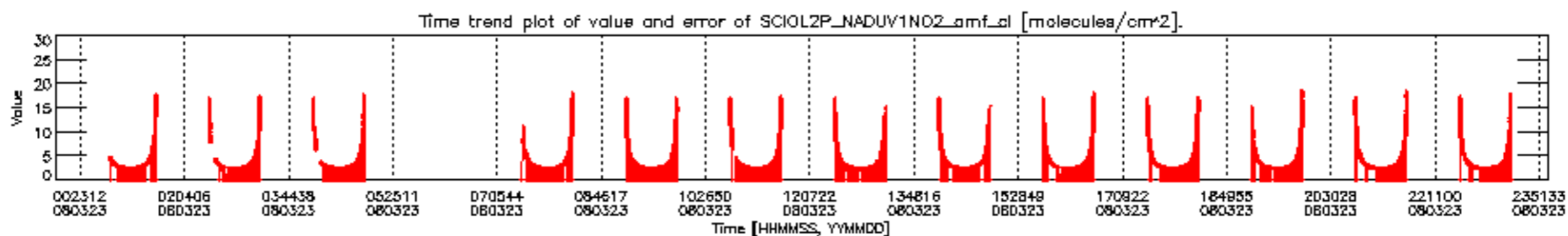
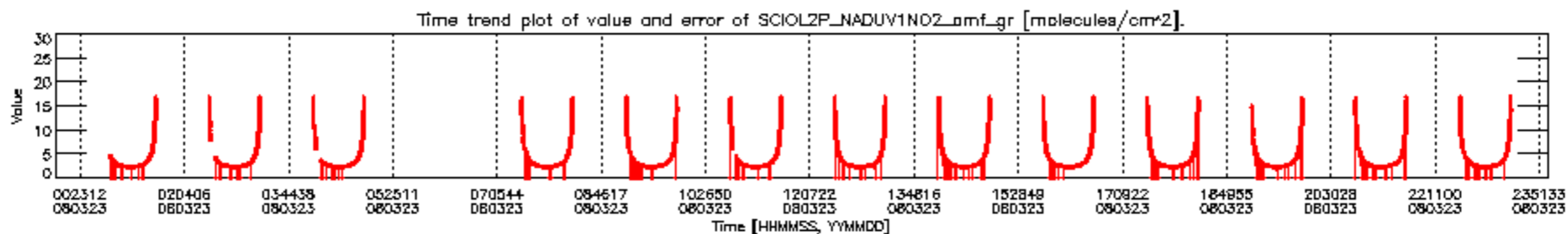
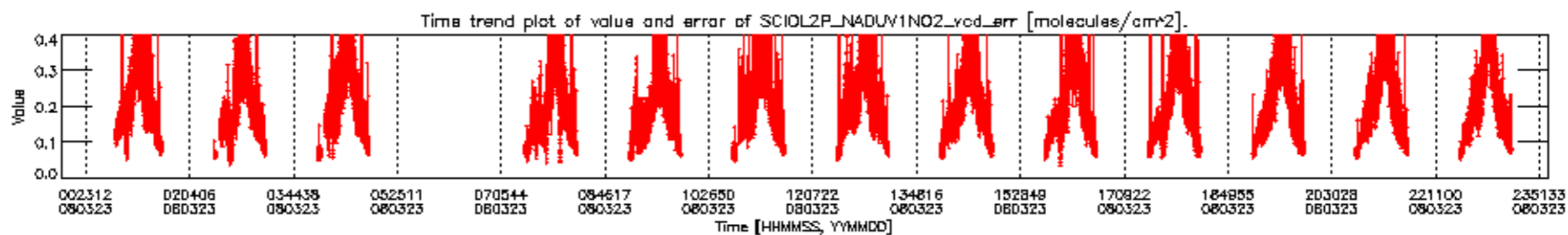
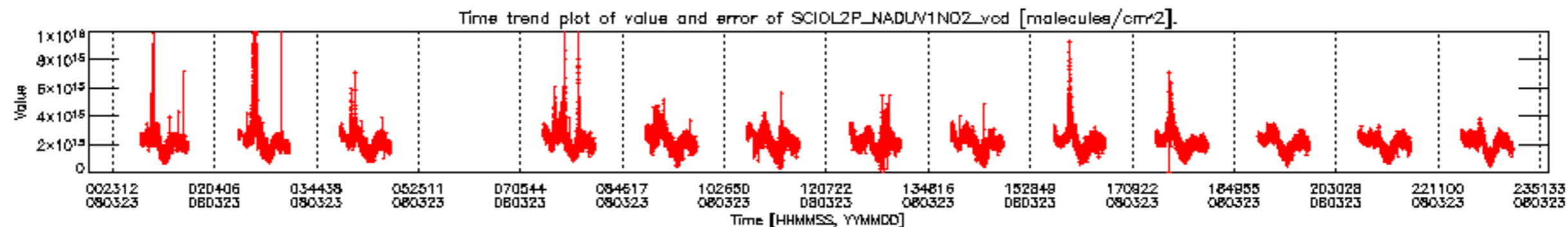
SCIOL2P\_NADUV003\_amf\_gr for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



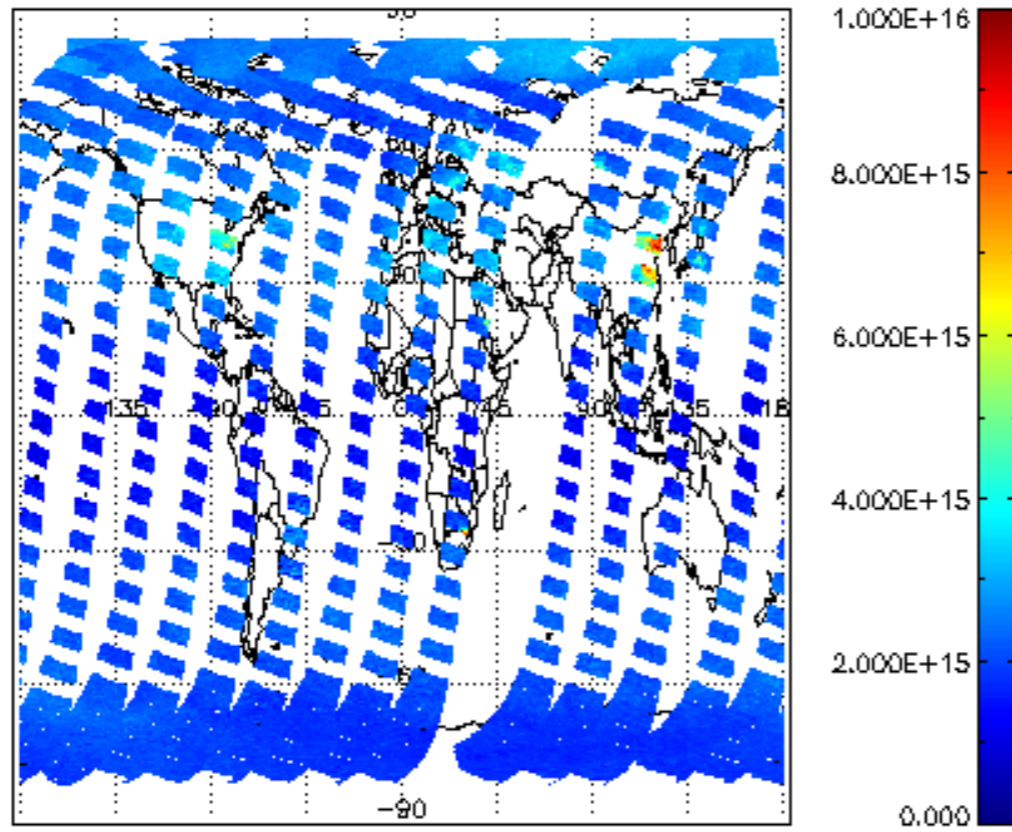
SCIOL2P\_NADUV003\_amf\_cl for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



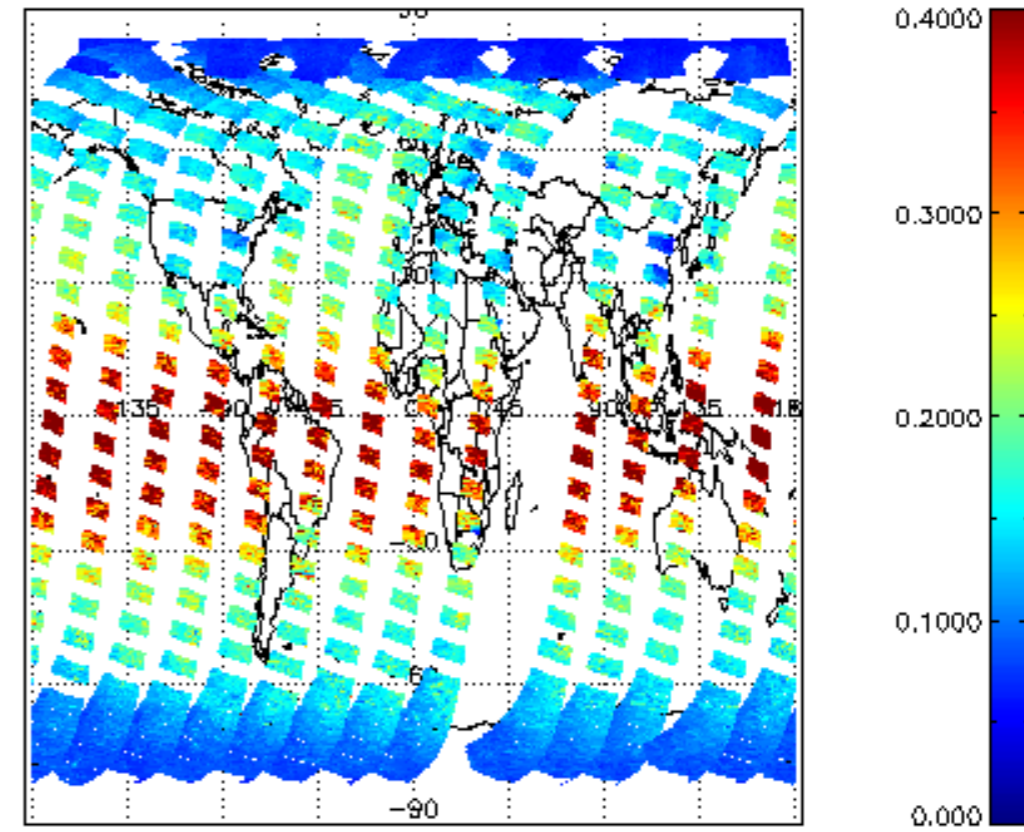




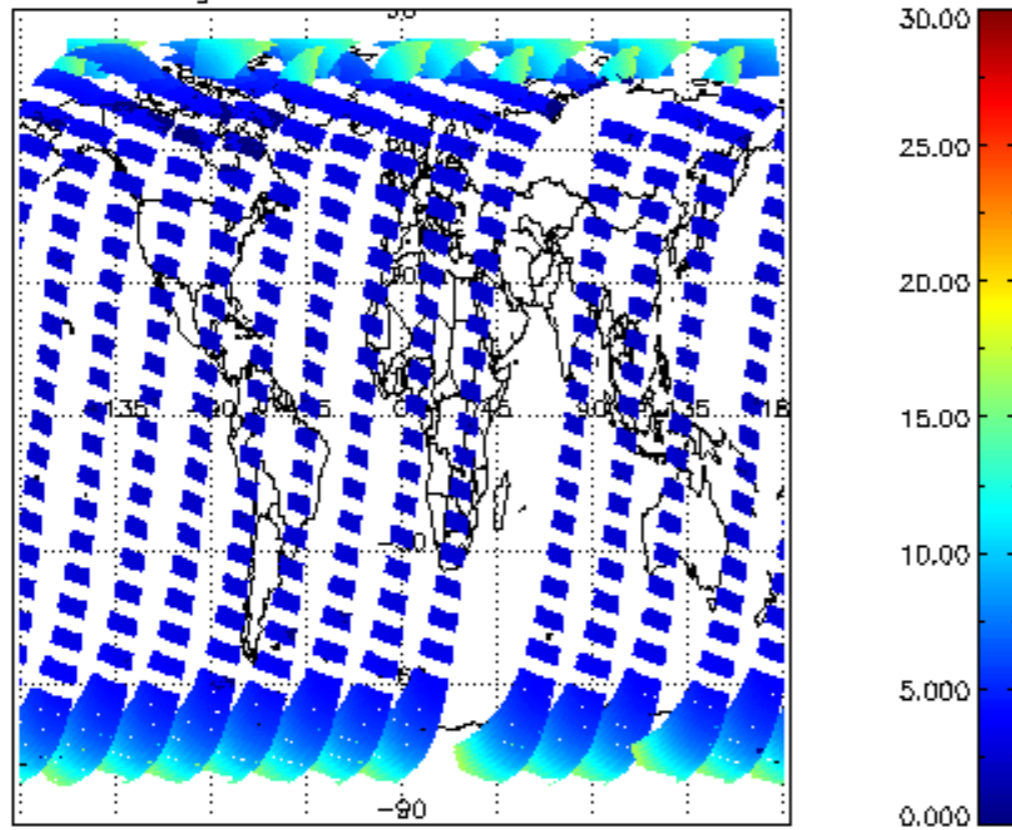
SCIOL2P\_NADUV1NO2\_vcd for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



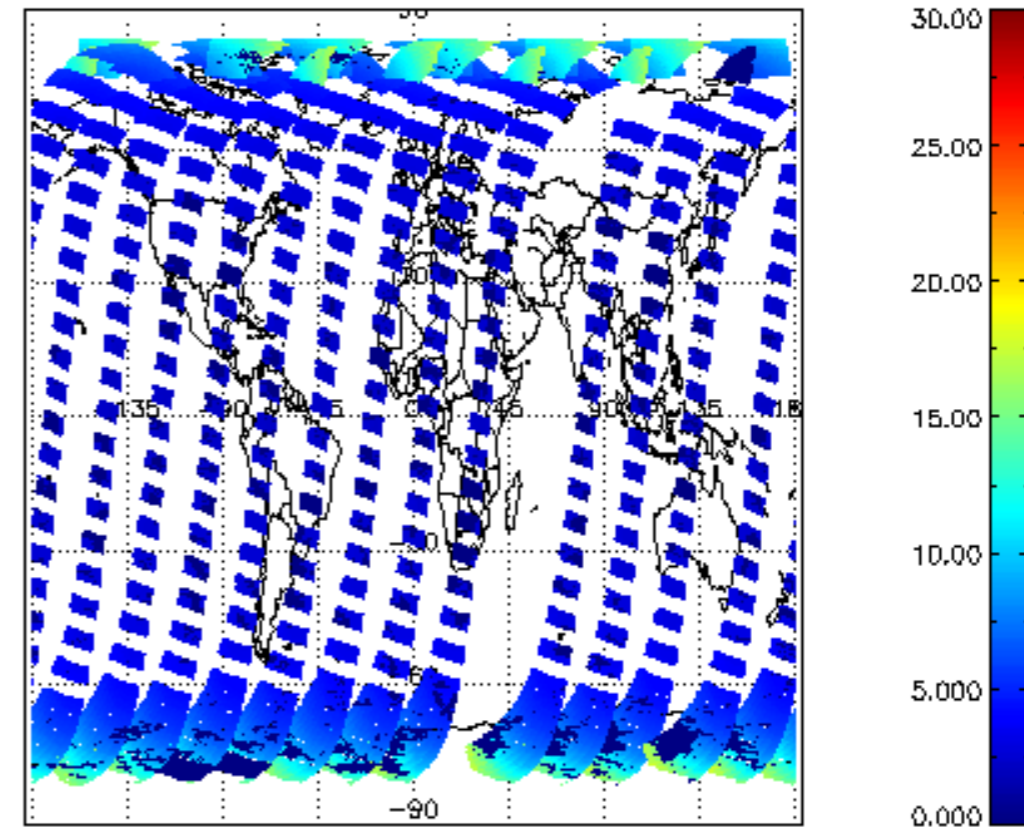
SCIOL2P\_NADUV1NO2\_vcd\_err for 23MAR2008 00:00:00 to 24MAR2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 23MAR2008 00:00:00 to 24MAR2008 00:00:00

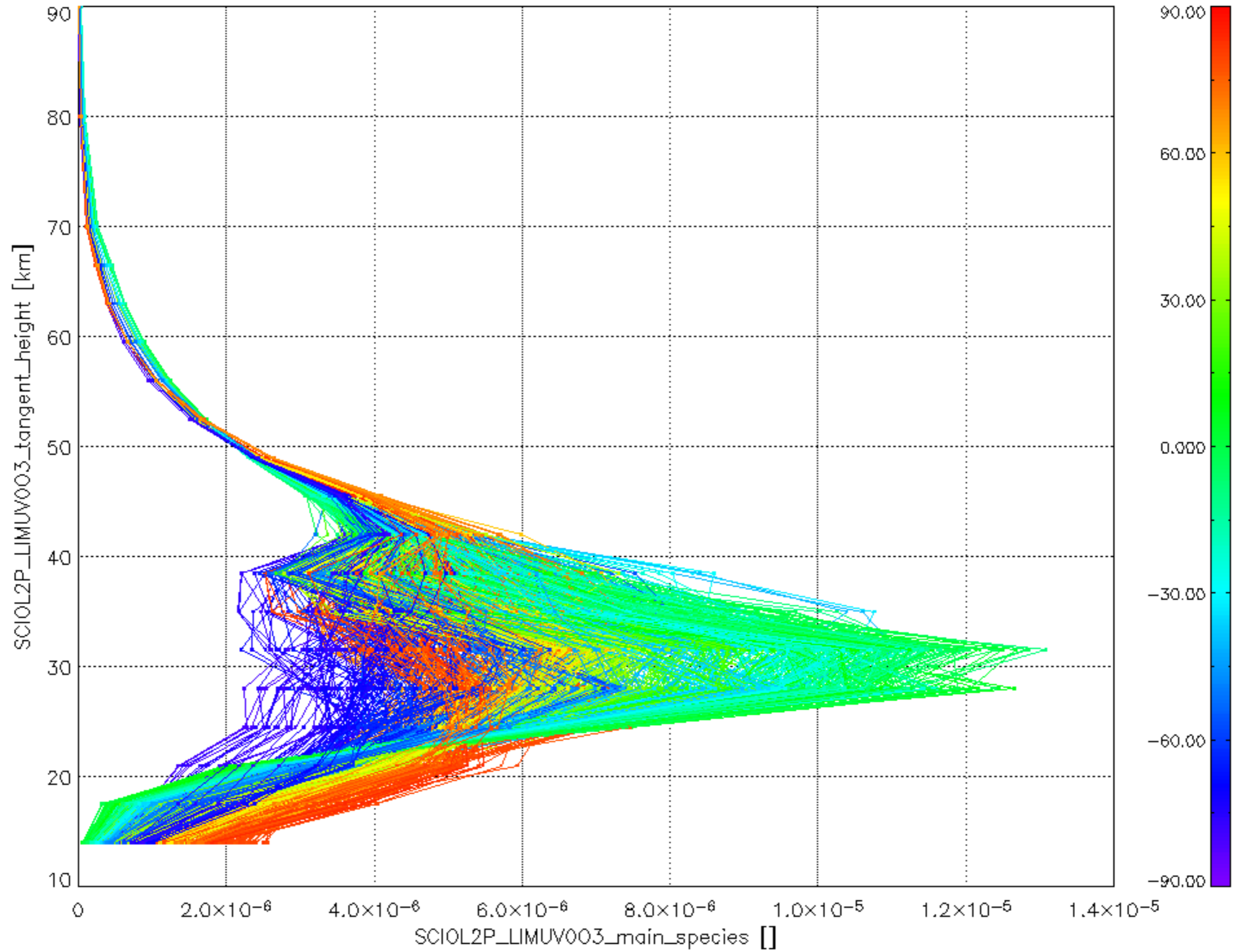


SCIOL2P\_NADUV1NO2\_amf\_cl for 23MAR2008 00:00:00 to 24MAR2008 00:00:00





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).

