

## 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 14:51:19
Data source version	SCIA-OL/3.01-R
Processing scope for products	21MAR2008 00:00:00 to 22MAR2008 00:00:00
Start time of first product within scope	21MAR2008 00:13:45
Stop time of last product within scope	22MAR2008 00:28:44
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__2PRDPA20080321_001345_000027382067_00045_31662_5216.N1	21MAR2008 00:13:45	21MAR2008 00:59:24	0	GOOD
1	SCI_OL__2PRDPA20080321_014442_000033702067_00046_31663_5198.N1	21MAR2008 01:44:42	21MAR2008 02:40:52	0	GOOD
2	SCI_OL__2PRDPA20080321_032517_000033942067_00047_31664_5199.N1	21MAR2008 03:25:17	21MAR2008 04:21:51	0	GOOD
3	SCI_OL__2PRDPA20080321_050553_000033812067_00048_31665_5347.N1	21MAR2008 05:05:53	21MAR2008 06:02:14	0	GOOD
4	SCI_OL__2PRDPA20080321_064628_000033942067_00049_31666_5348.N1	21MAR2008 06:46:28	21MAR2008 07:43:02	0	GOOD
5	SCI_OL__2PRDPA20080321_082704_000033812067_00050_31667_5189.N1	21MAR2008 08:27:04	21MAR2008 09:23:25	0	GOOD
6	SCI_OL__2PRDPA20080321_100739_000033942067_00051_31668_5190.N1	21MAR2008 10:07:39	21MAR2008 11:04:13	0	GOOD
7	SCI_OL__2PRDPA20080321_114814_000033812067_00052_31669_5200.N1	21MAR2008 11:48:14	21MAR2008 12:44:36	0	GOOD
8	SCI_OL__2PRDPA20080321_132850_000033942067_00053_31670_5195.N1	21MAR2008 13:28:50	21MAR2008 14:25:24	0	GOOD
9	SCI_OL__2PRDPA20080321_150925_000033812067_00054_31671_5187.N1	21MAR2008 15:09:25	21MAR2008 16:05:47	0	GOOD
10	SCI_OL__2PRDPA20080321_165001_000033942067_00055_31672_5188.N1	21MAR2008 16:50:01	21MAR2008 17:46:35	0	GOOD
11	SCI_OL__2PRDPA20080321_183100_000033702067_00056_31673_5192.N1	21MAR2008 18:31:00	21MAR2008 19:27:11	0	GOOD
12	SCI_OL__2PRDPA20080321_201136_000033812067_00057_31674_5193.N1	21MAR2008 20:11:36	21MAR2008 21:07:57	0	GOOD
13	SCI_OL__2PRDPA20080321_215147_000033942067_00058_31675_5204.N1	21MAR2008 21:51:47	21MAR2008 22:48:22	0	GOOD
14	SCI_OL__2PRDPA20080321_233223_000033812067_00059_31676_5217.N1	21MAR2008 23:32:23	22MAR2008 00:28:44	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: 145288

Total number of cloud data DSRs with good quality flag (=0): 145288 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	145288	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	145288	0.17708	0.12500	0.12500	0.25000	0.061625	s
SURFACE_PRES	145288	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	145288	0.40252	0.36867	0.0000	1.0000	0.29592	-

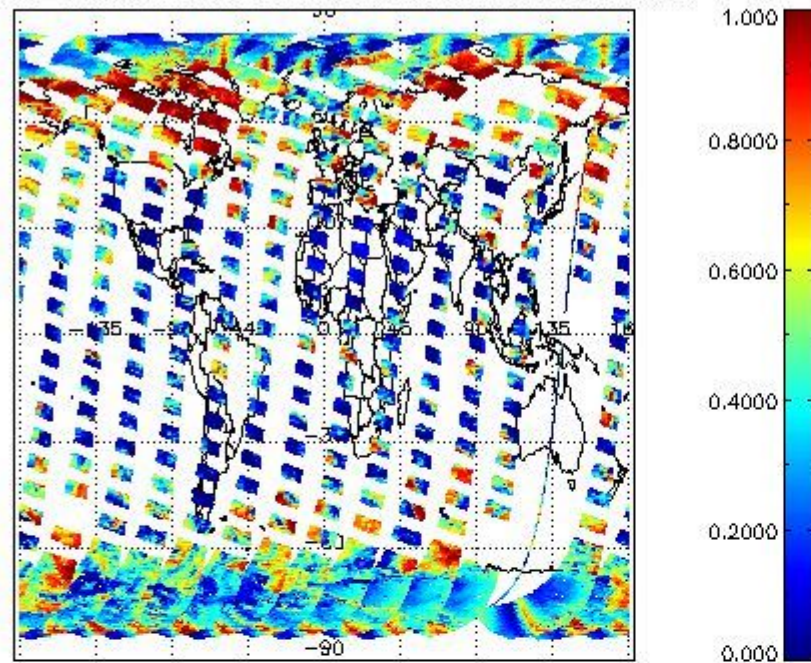
CL_FRAC_ERR	145288	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	145288	5.6664	4.0000	4.0000	8.0000	1.9720	
PMD_READ_CL[0]	145288	0.27412	0.0000	0.0000	8.0000	1.1634	-
PMD_READ_CL[1]	145288	0.98897	0.0000	0.0000	8.0000	2.2769	-
CL_TOP_HEIGHT	121807	3.4007	1.6798	0.0000	17.000	3.7901	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	121807	59.352	61.002	0.0000	101.00	41.005	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	145288	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	145288	11001010	11000100	11000000	11100000	3292.4	flags
AERO_ABSO_IND	145288	2.9790	3.4803	-1.7226	13.224	2.0048	
AERO_IND_DIAG	145288	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	145288	01011111	00000000	00000000	11000000	24575.	flags

Time and geolocation plots:

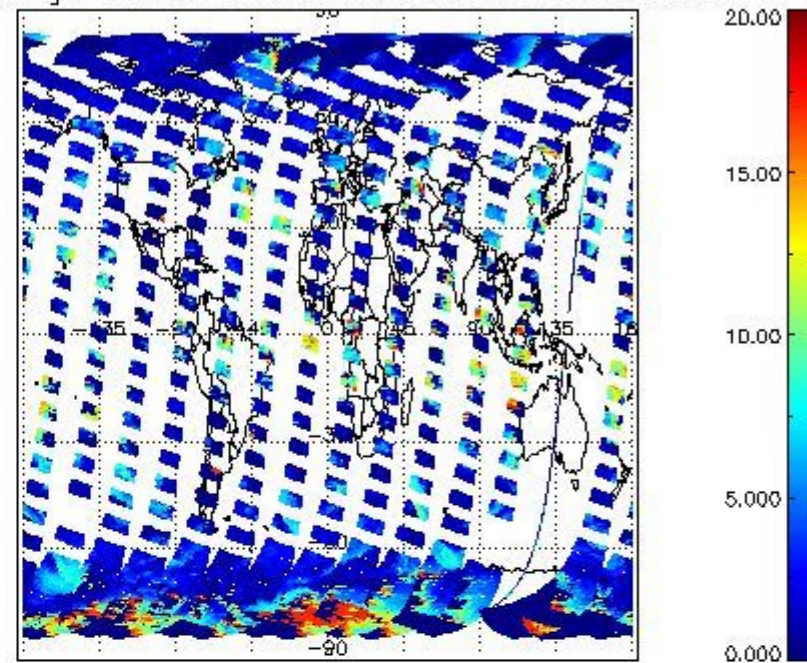
Plots are available for the following parameters:

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

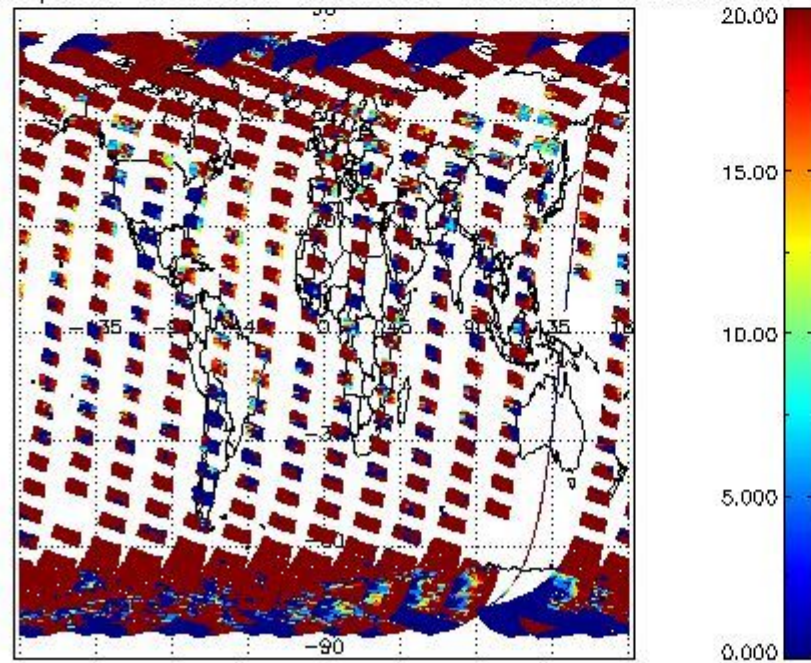
cLfrac for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



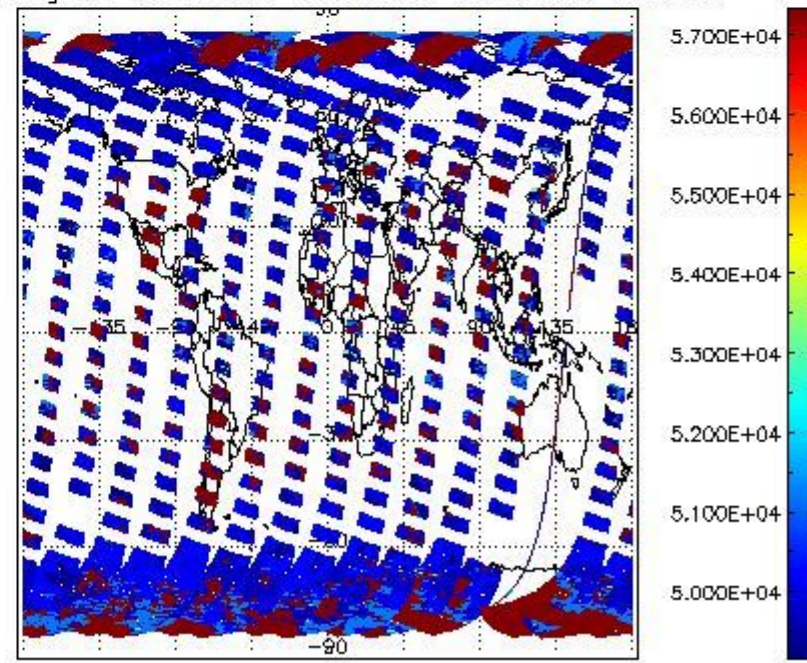
cLtop\_height for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



cLopt\_depth for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



cloud\_flags for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



### 2.2.2 Nadir

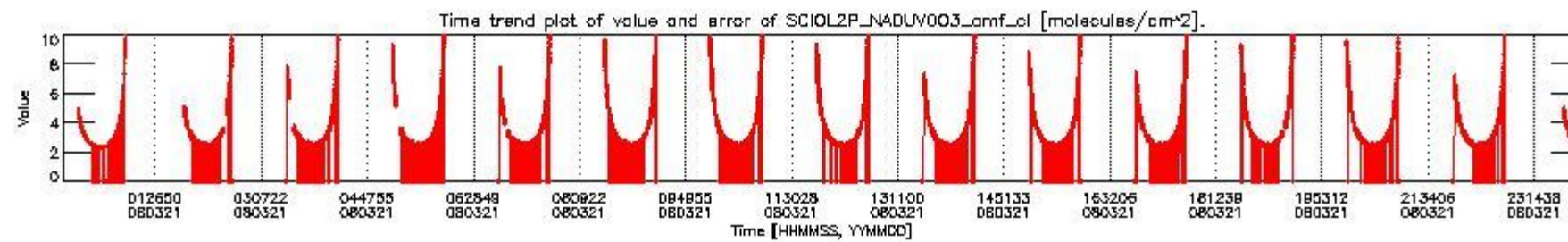
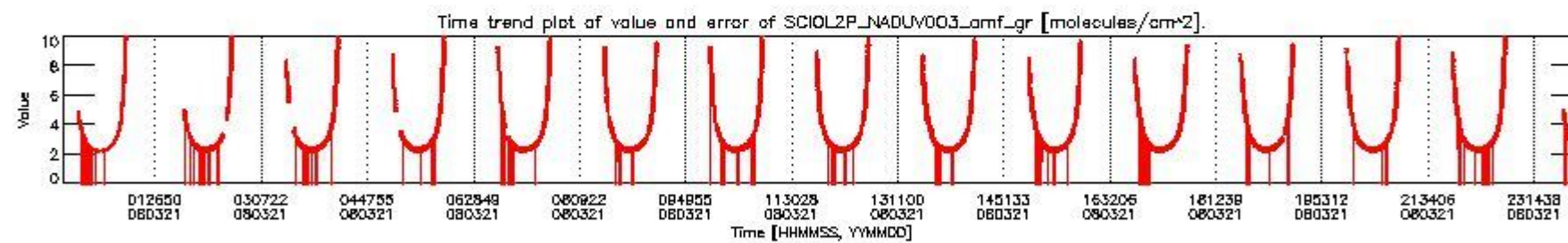
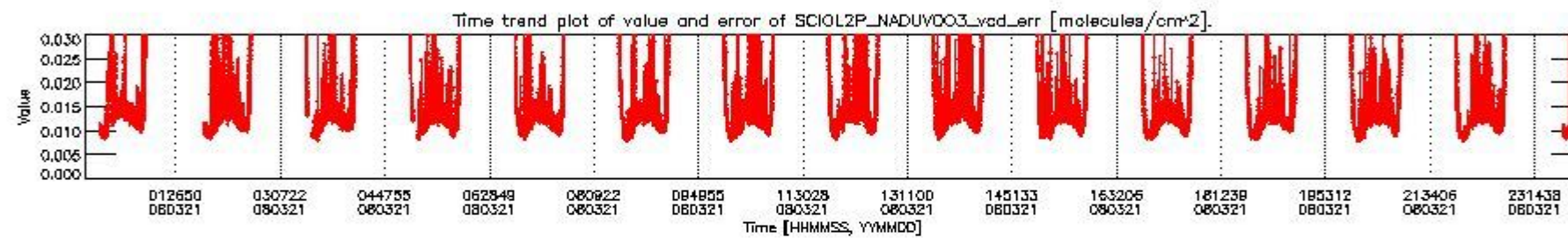
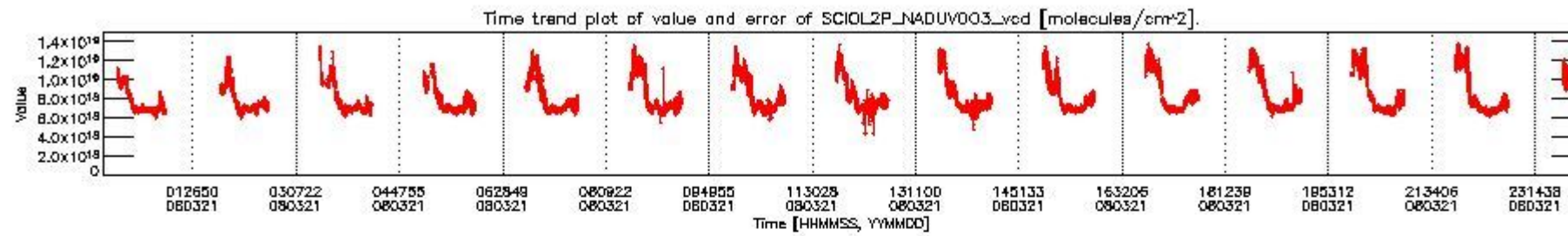
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

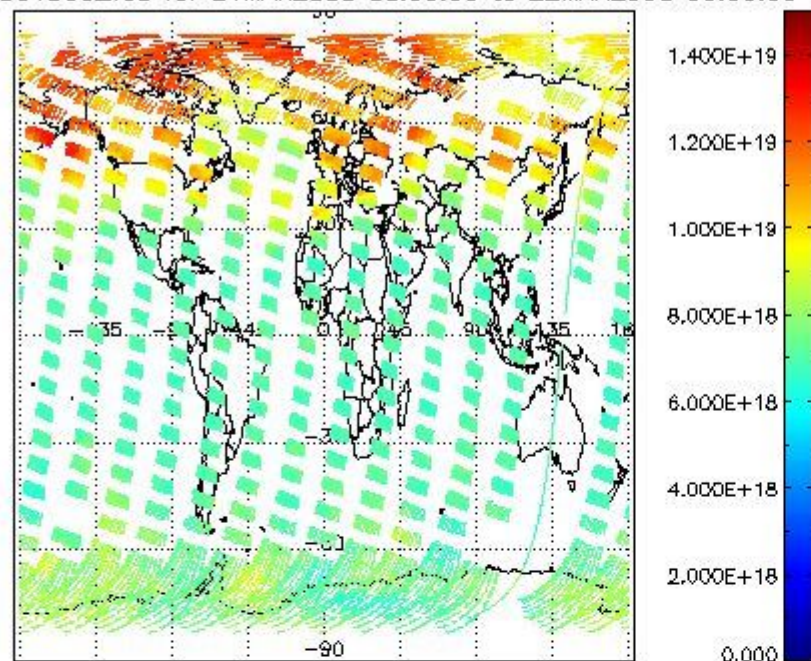
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

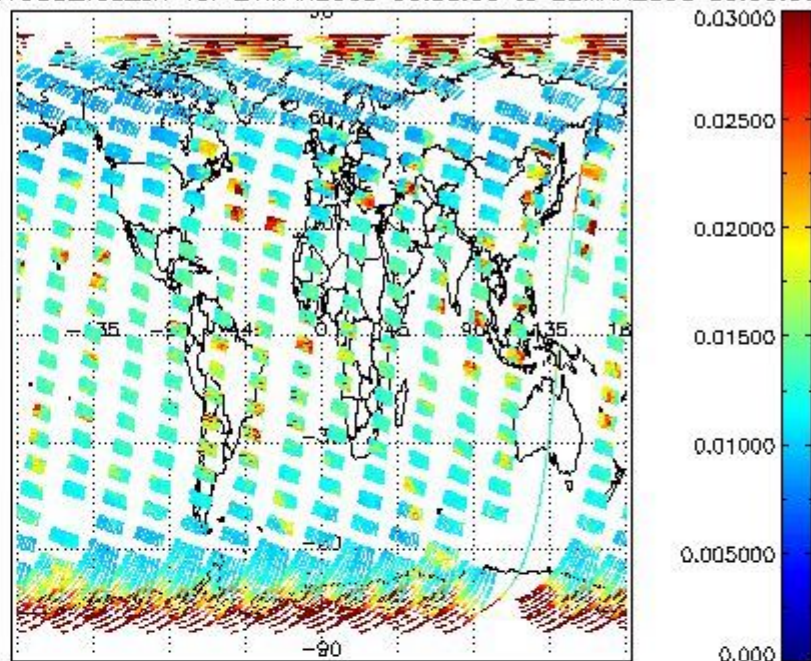
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



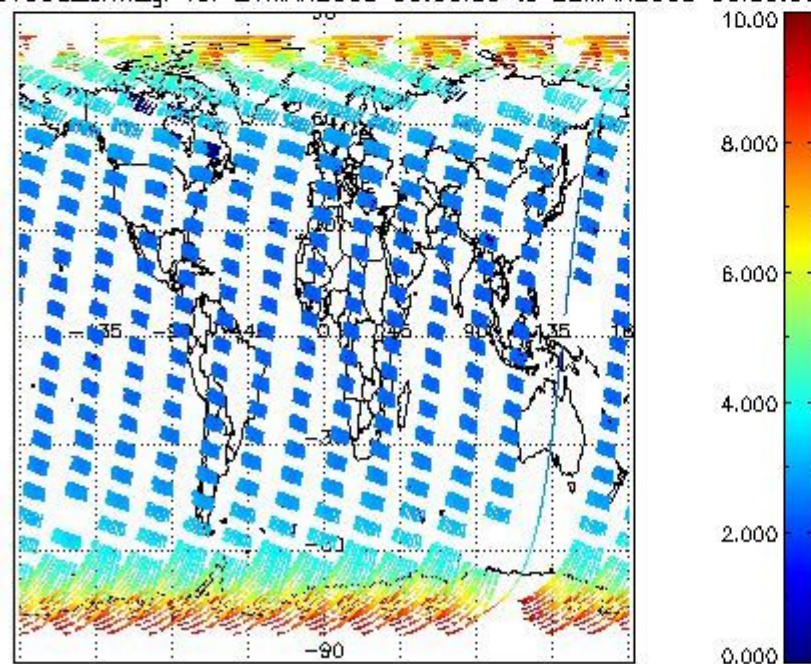
SCIOL2P\_NADUV003\_vcd for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



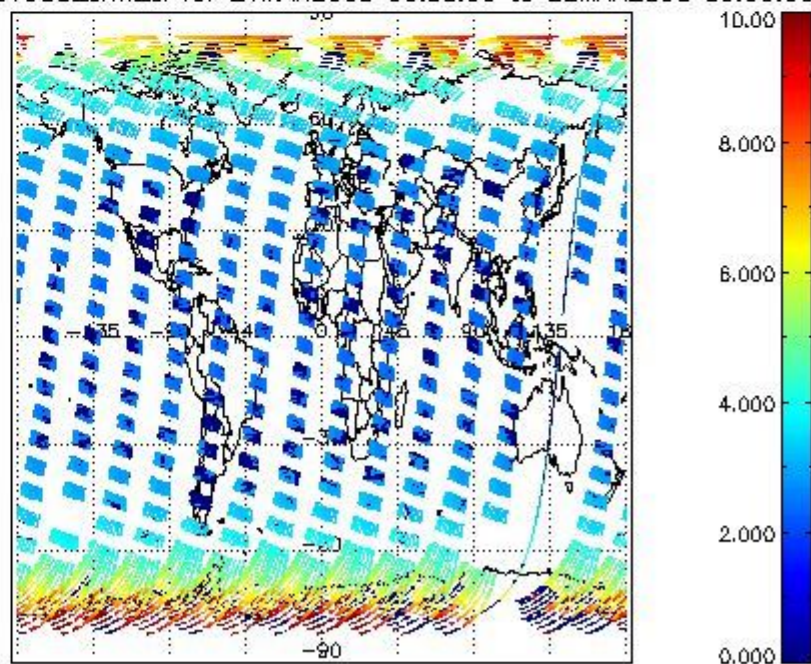
SCIOL2P\_NADUV003\_vcd\_err for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

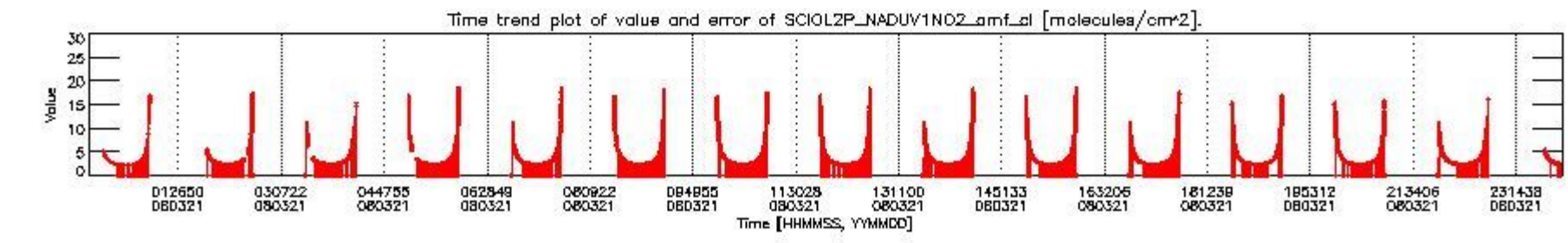
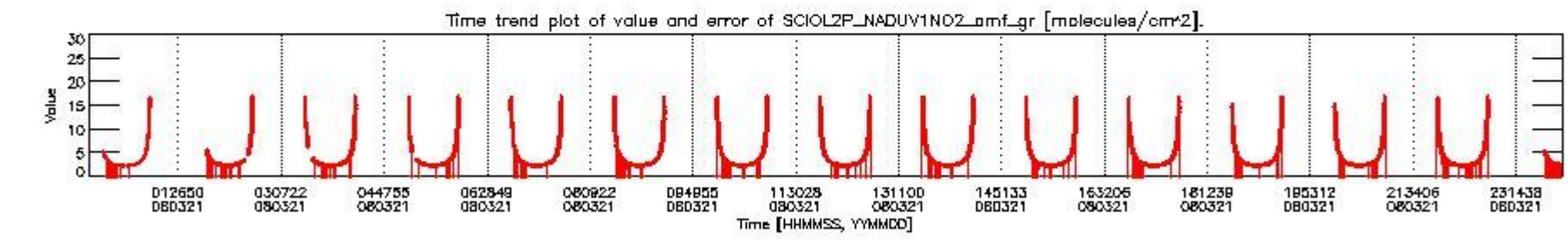
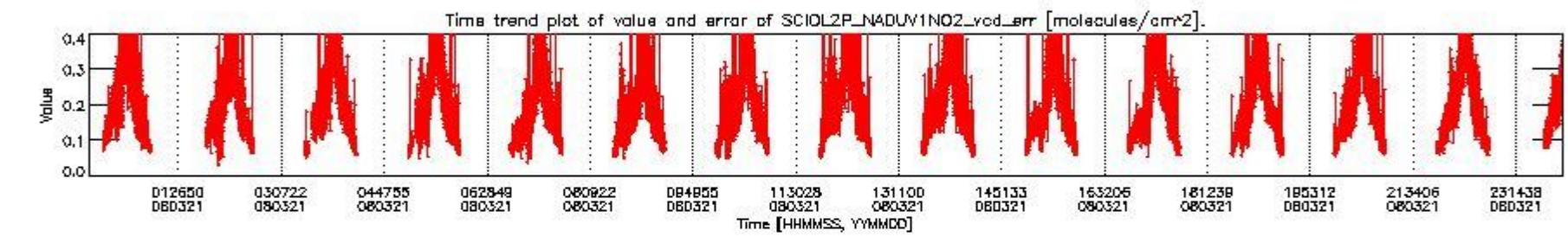
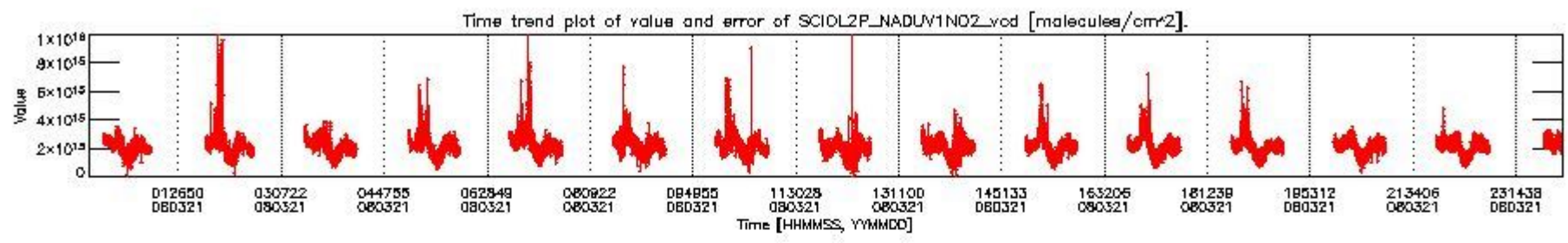


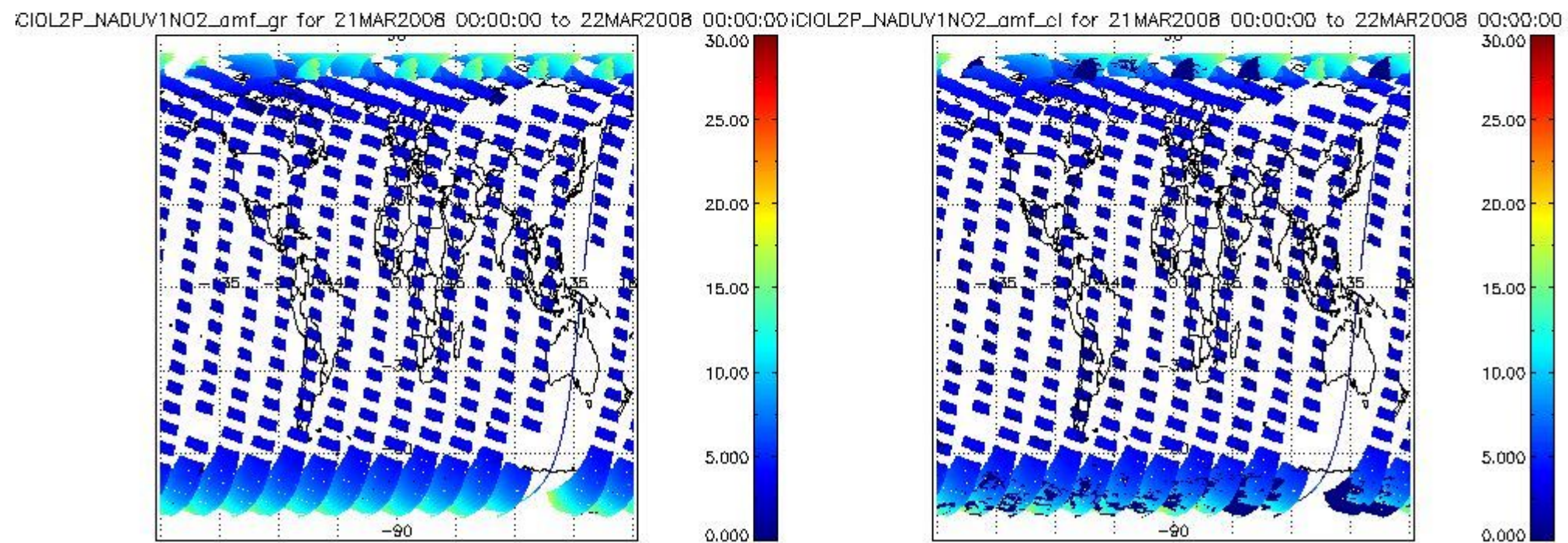
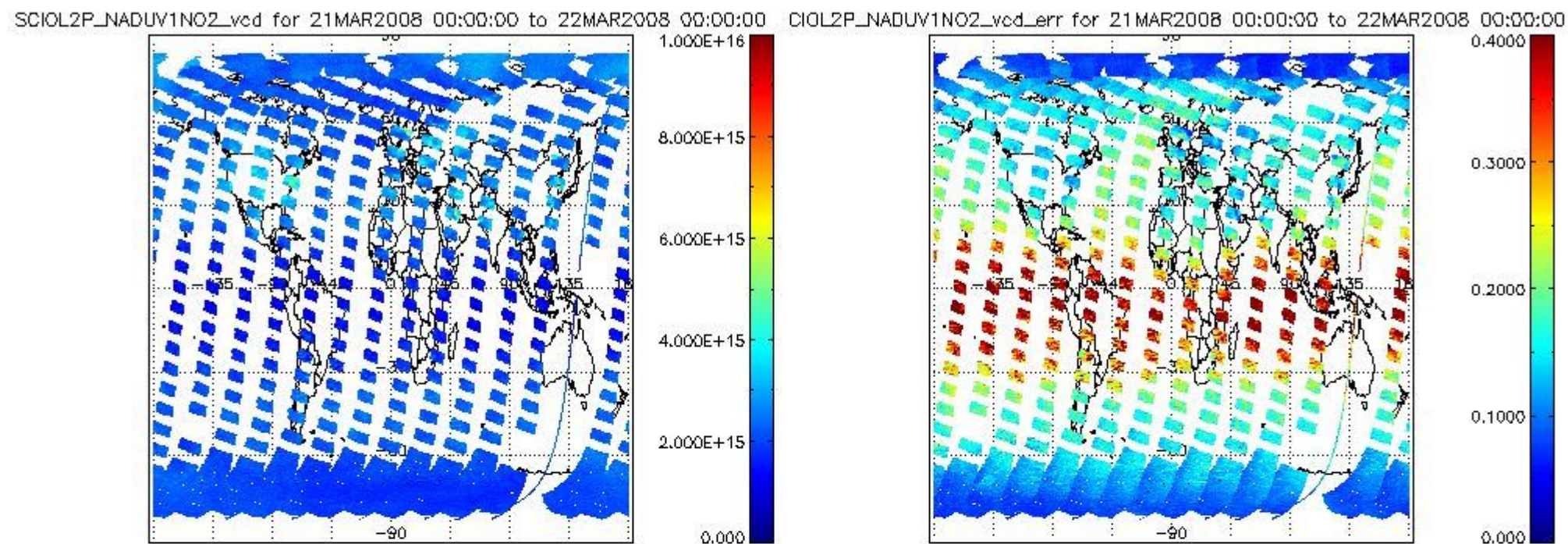
SCIOL2P\_NADUV003\_amf\_gr for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 21MAR2008 00:00:00 to 22MAR2008 00:00:00







### 2.2.3 Limb

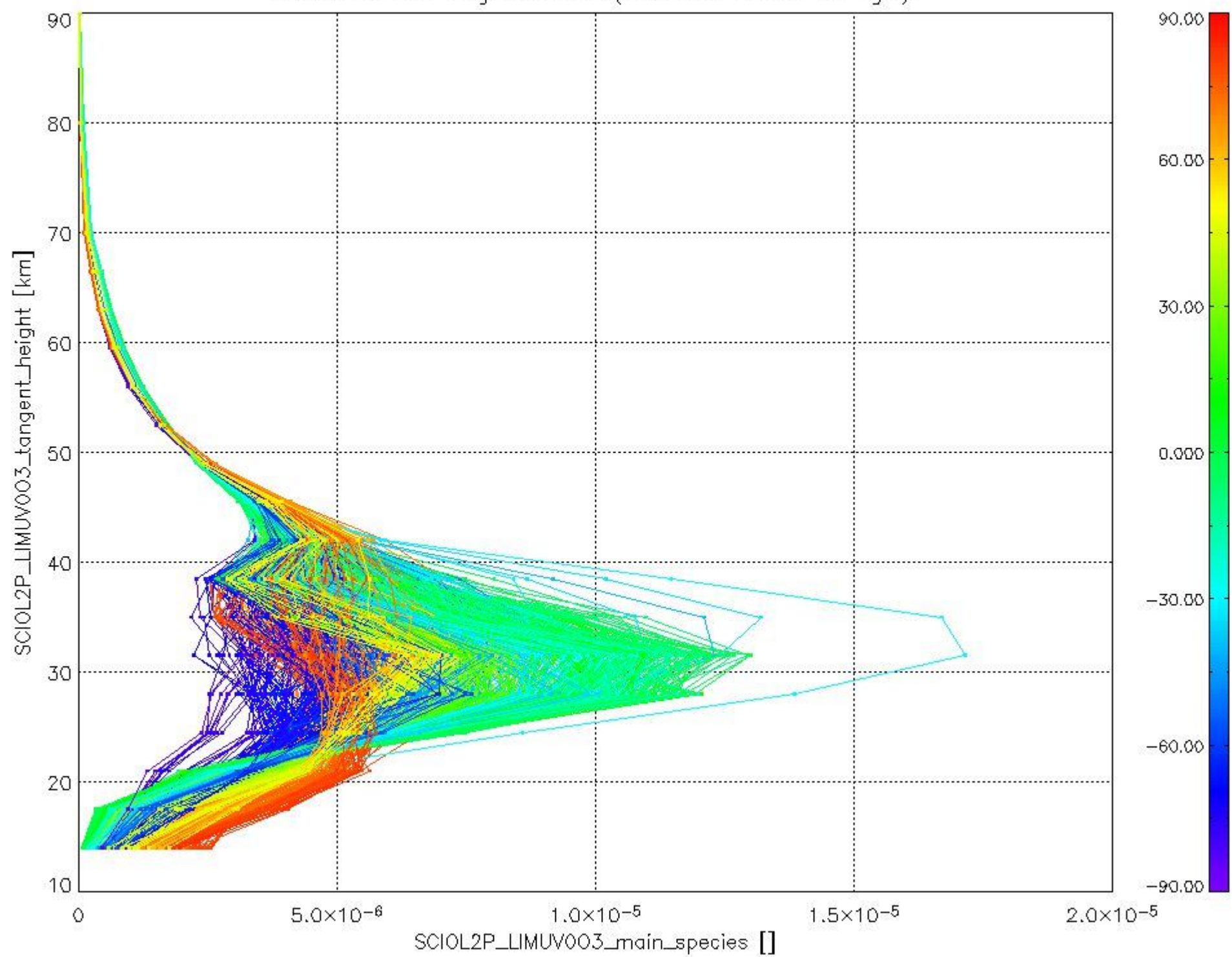
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

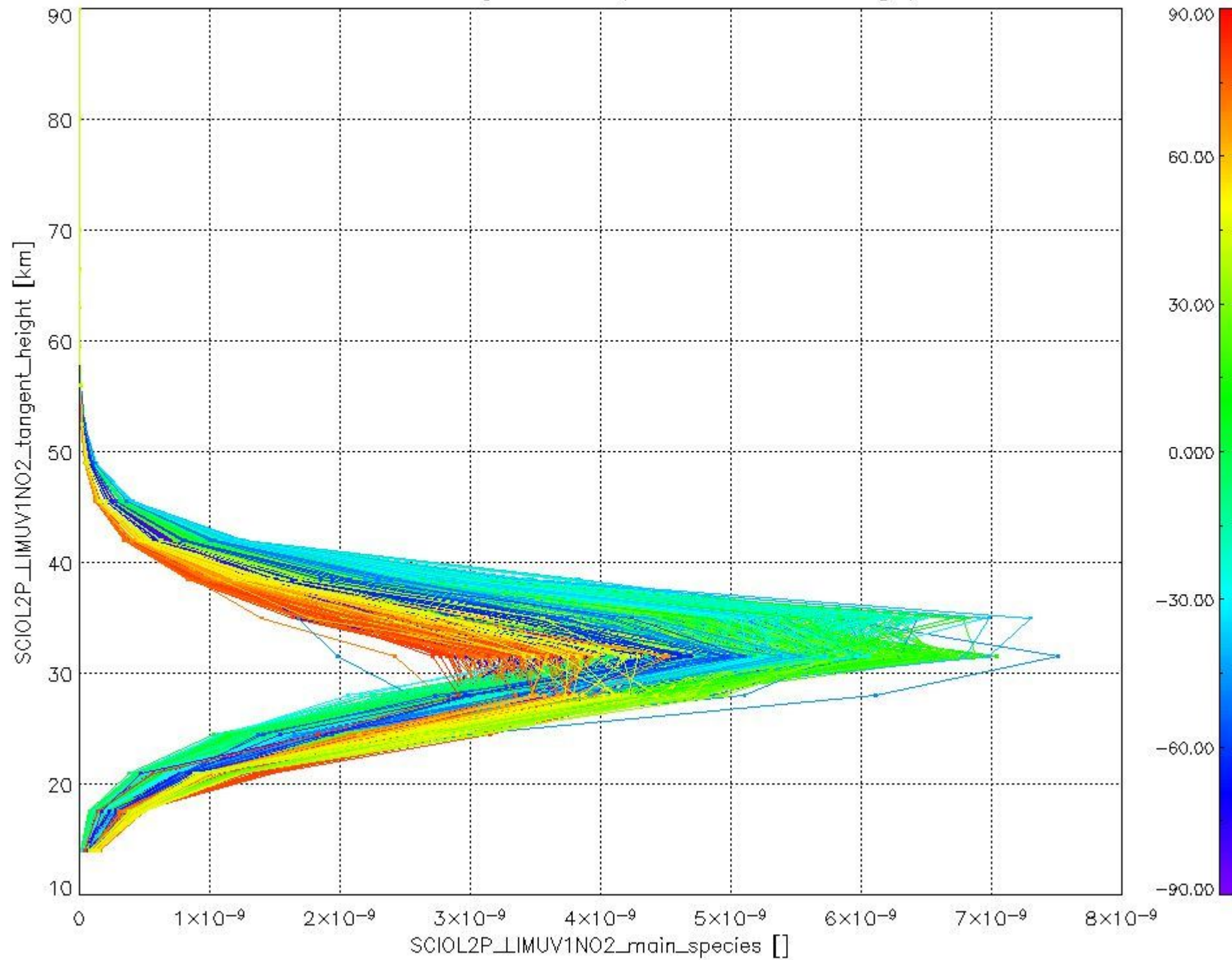
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





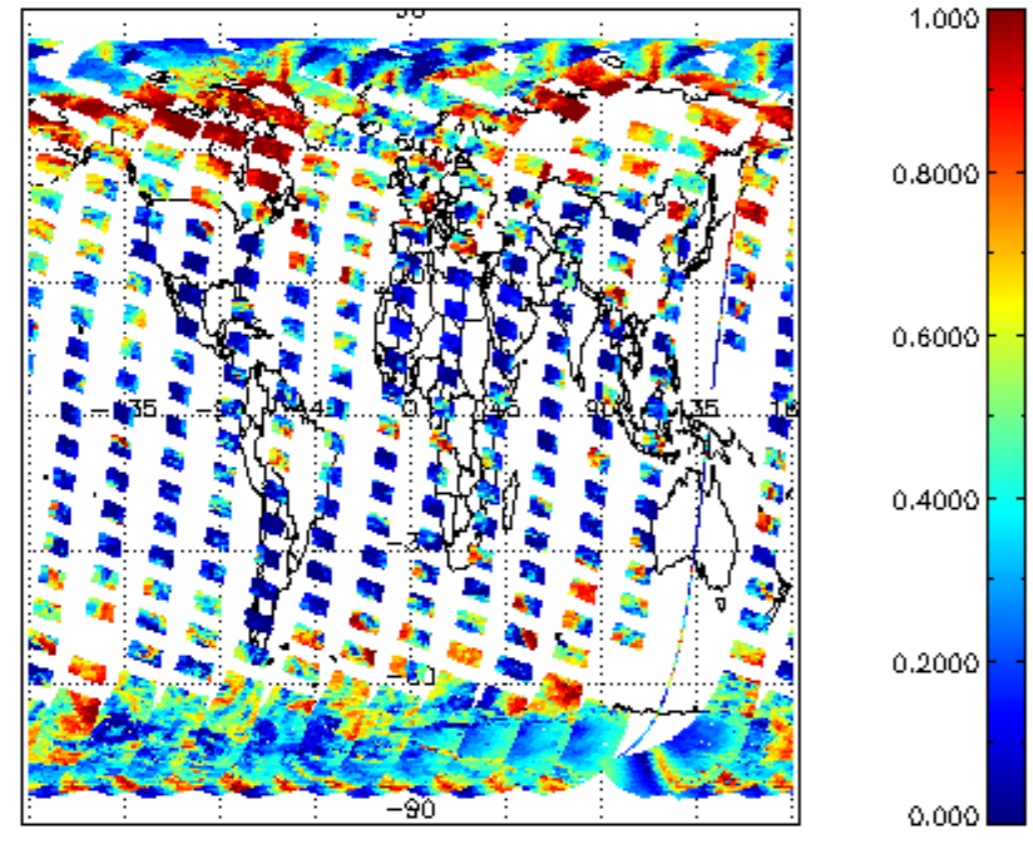
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



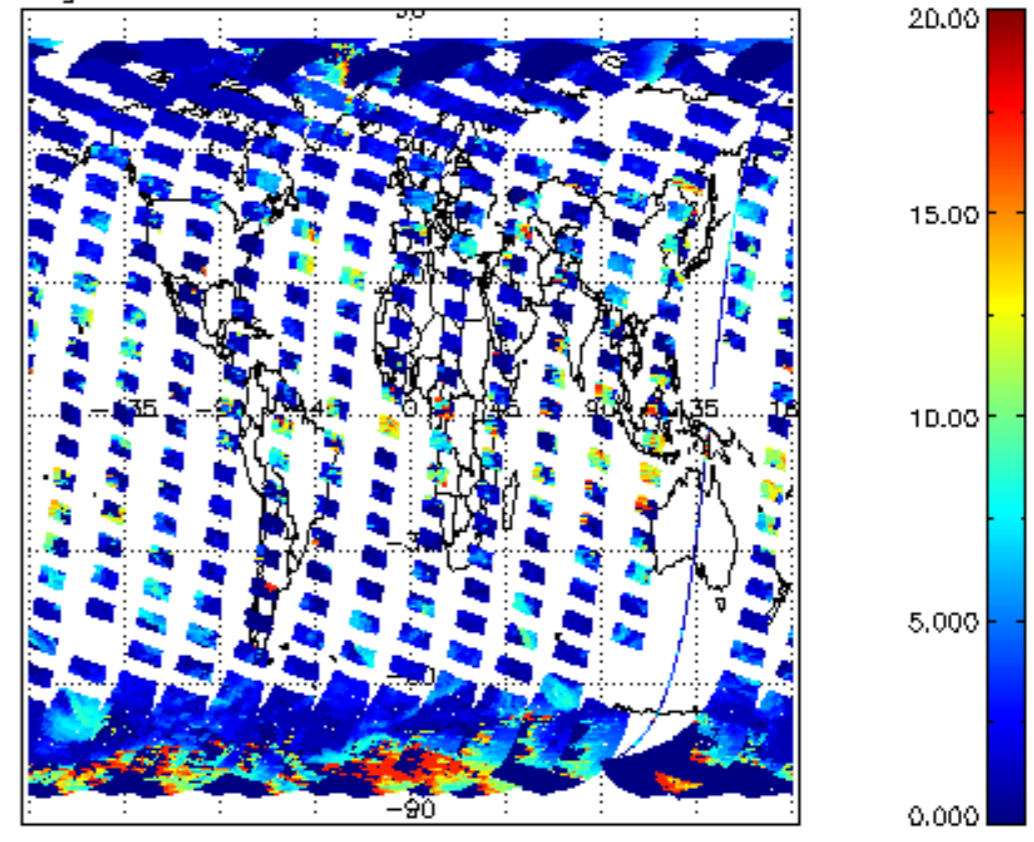
### 2.3 ADF monitoring

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

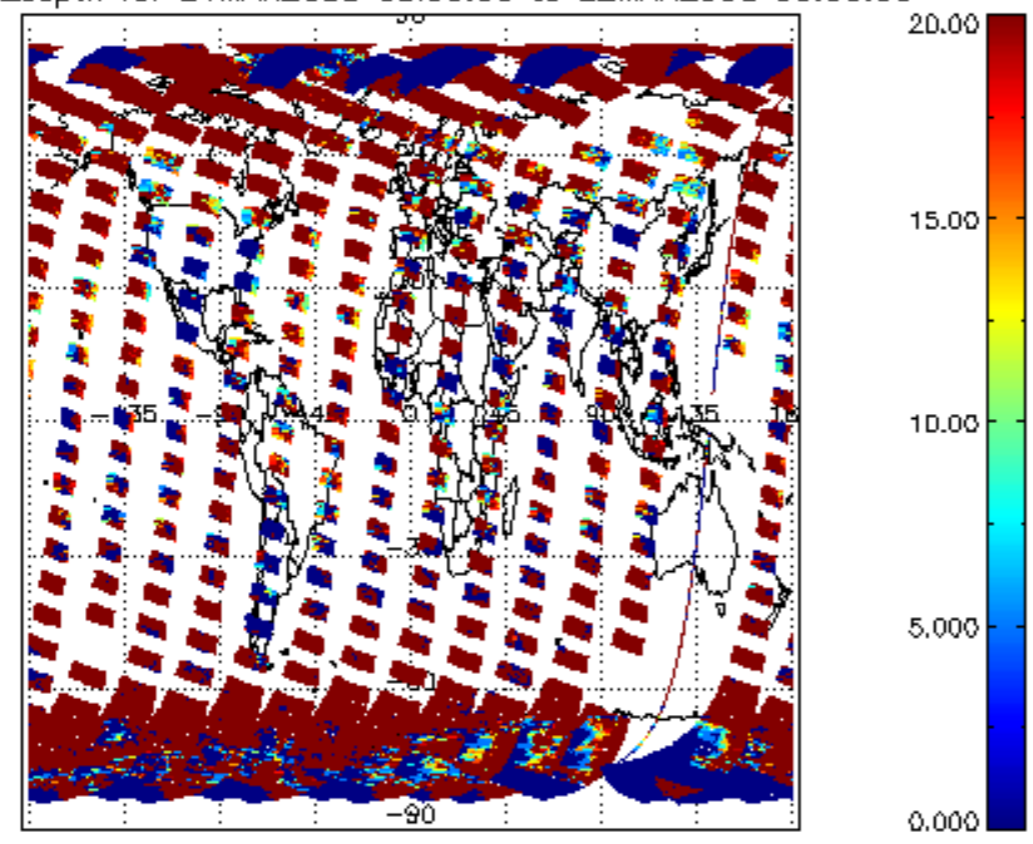
cL\_frac for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



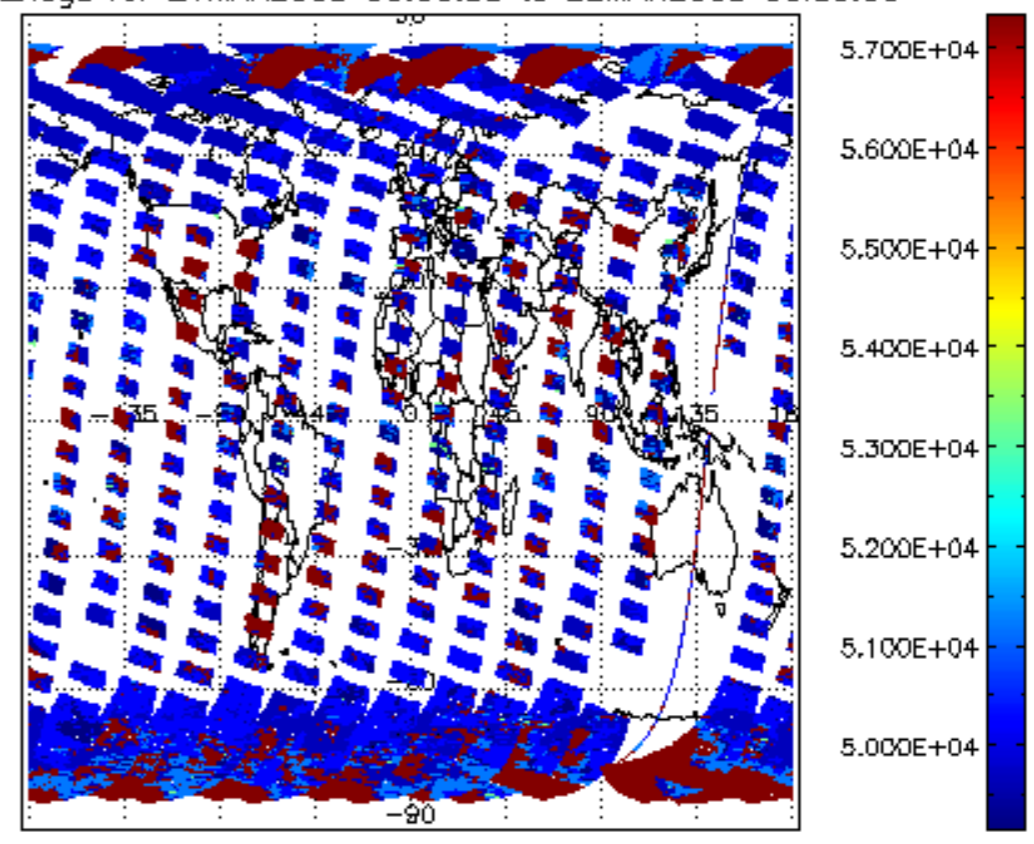
cL\_top\_height for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

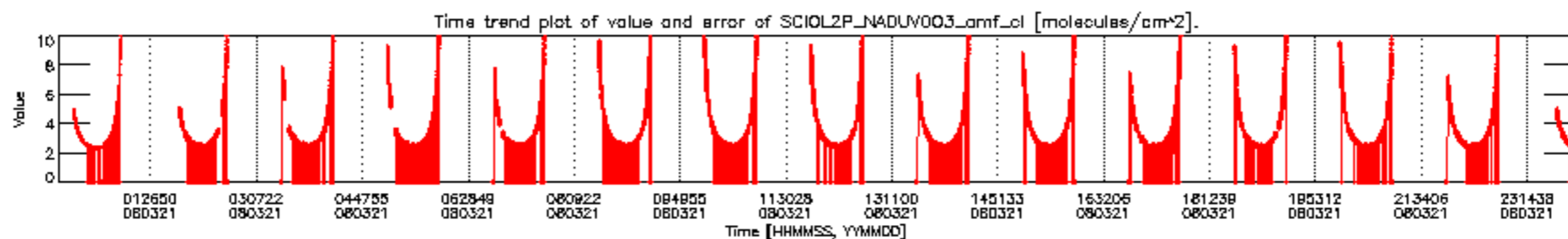
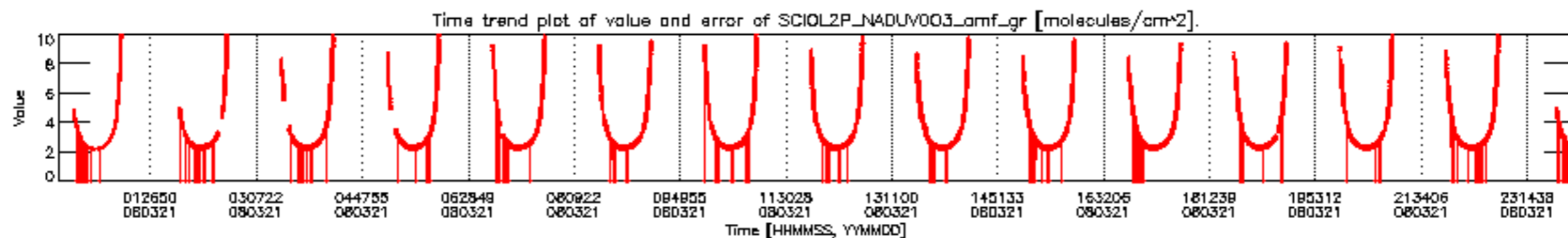
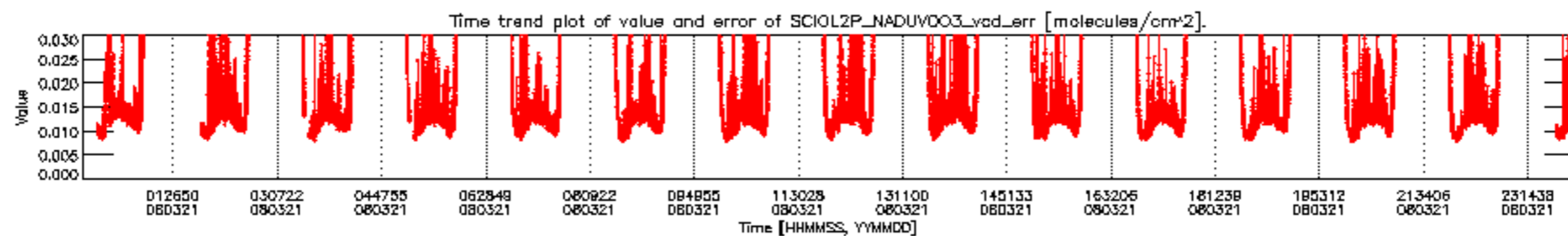
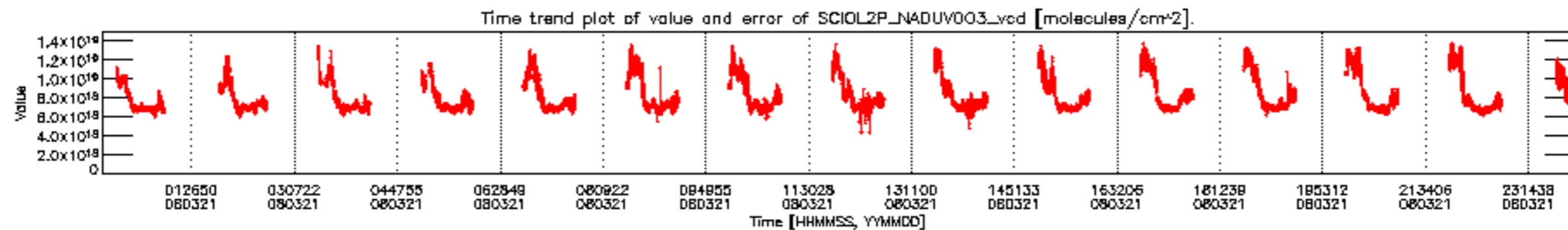


cL\_opt\_depth for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

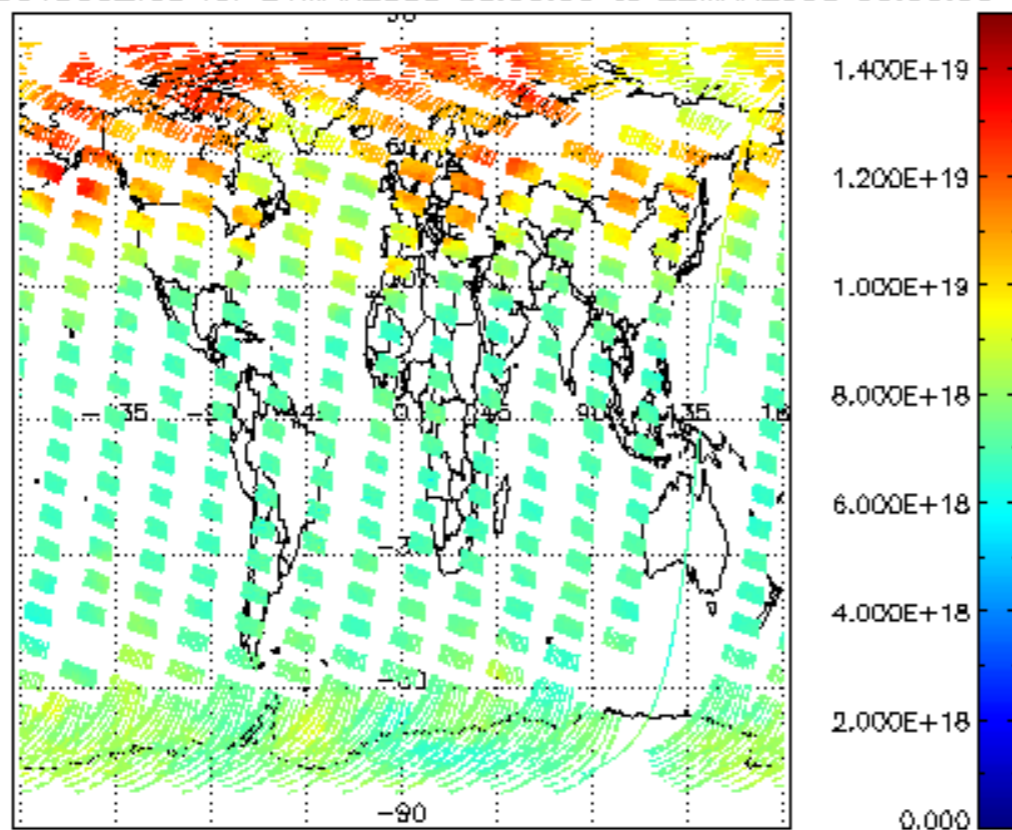


cloud\_flags for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

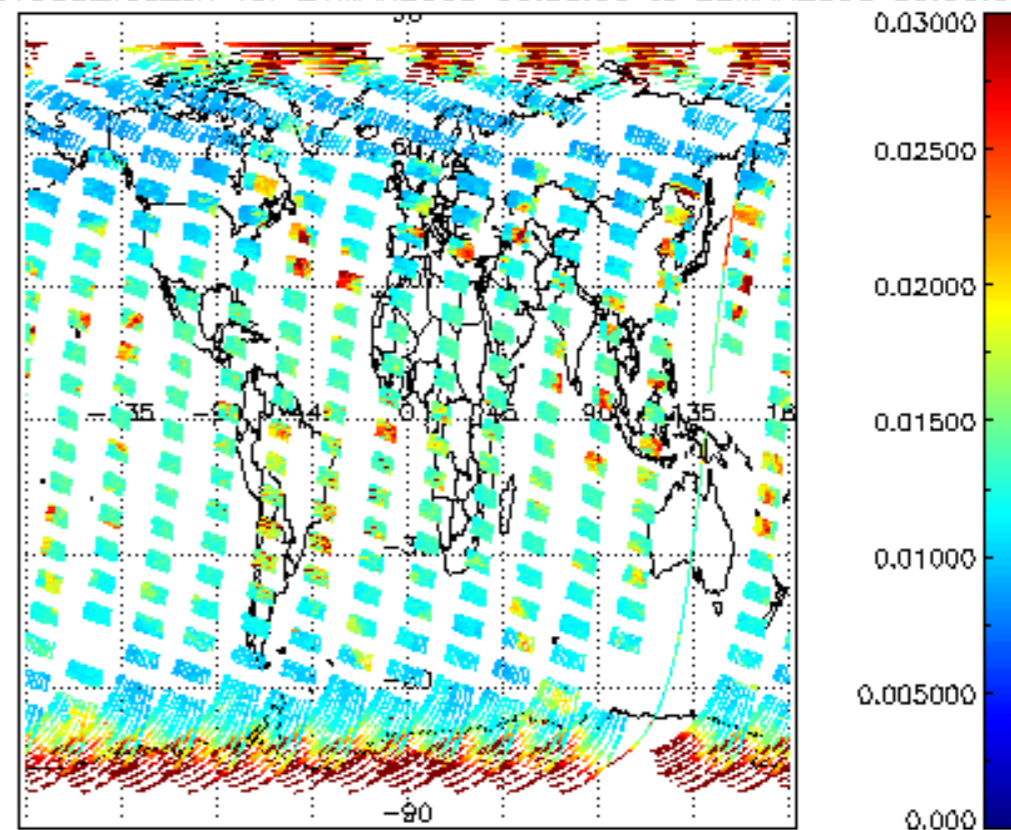




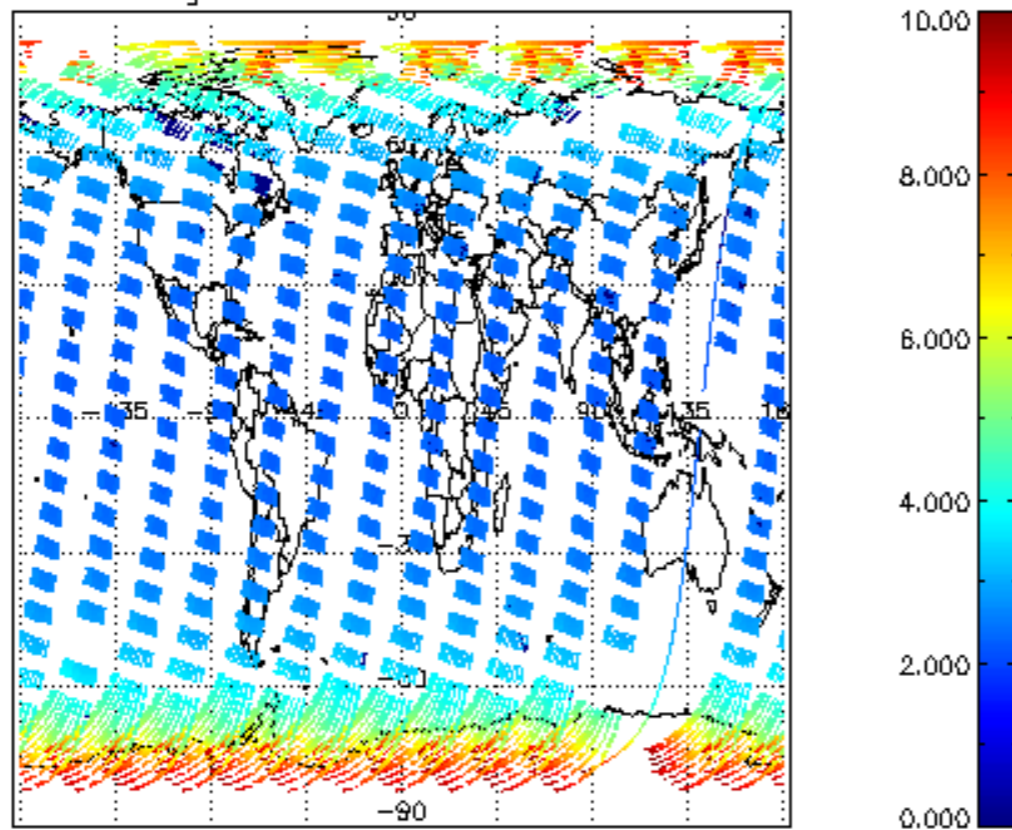
SCIOL2P\_NADUV003\_vcd for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



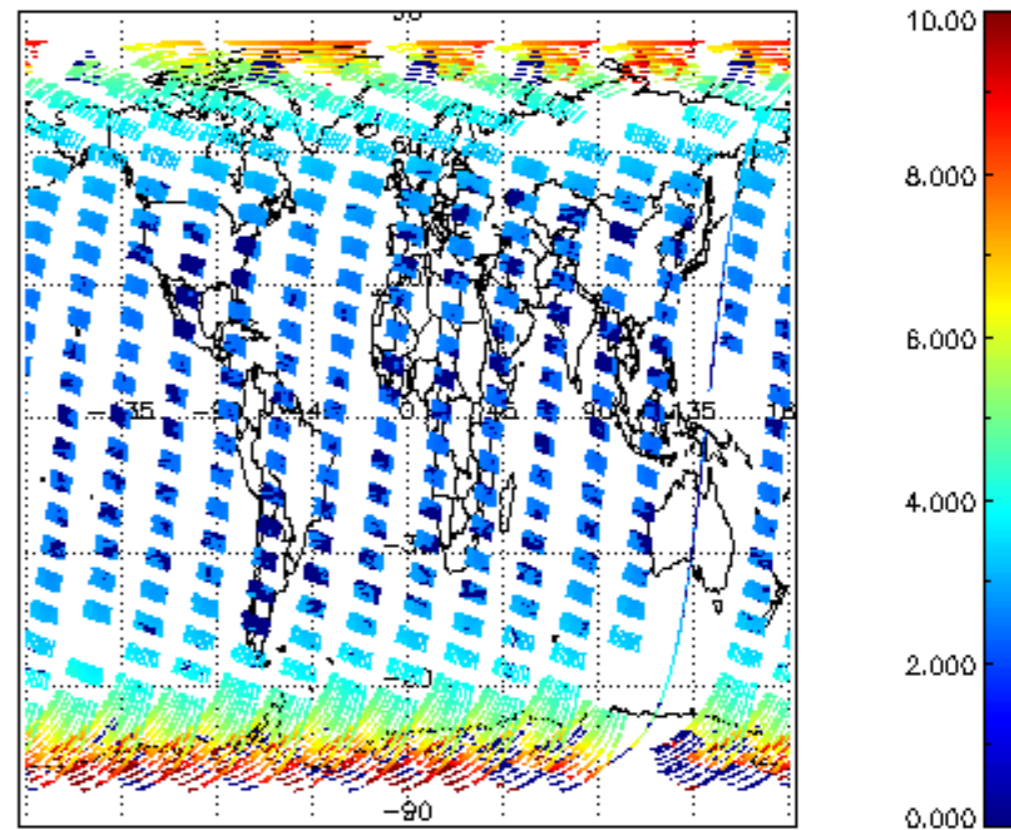
SCIOL2P\_NADUV003\_vcd\_err for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

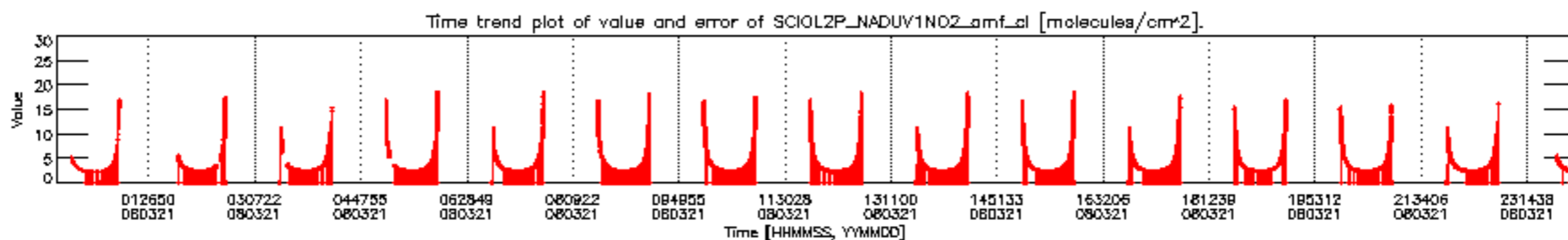
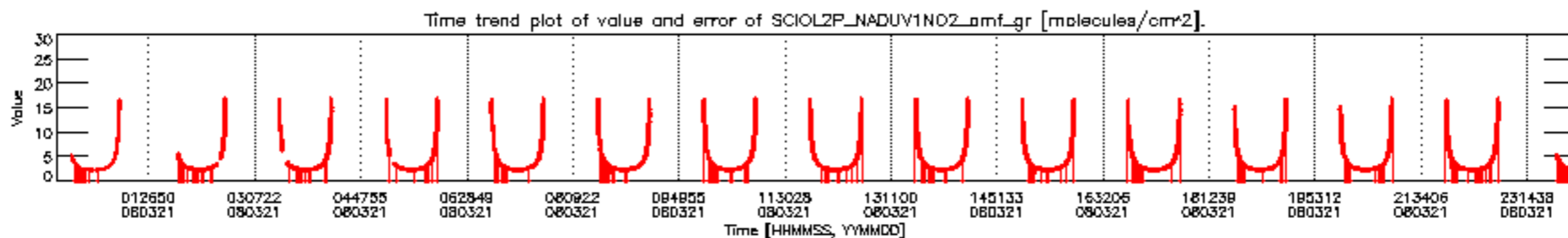
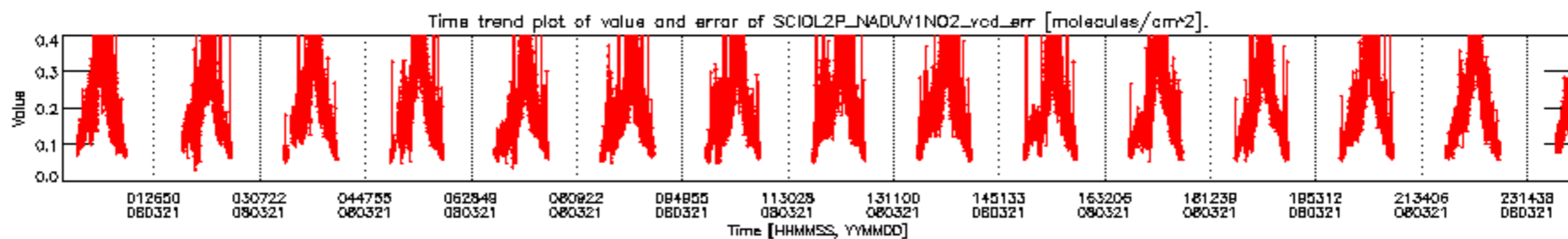
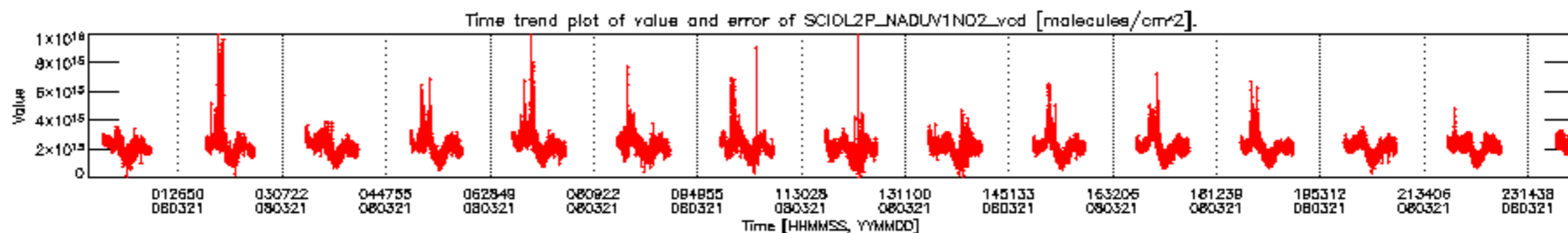


SCIOL2P\_NADUV003\_amf\_gr for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

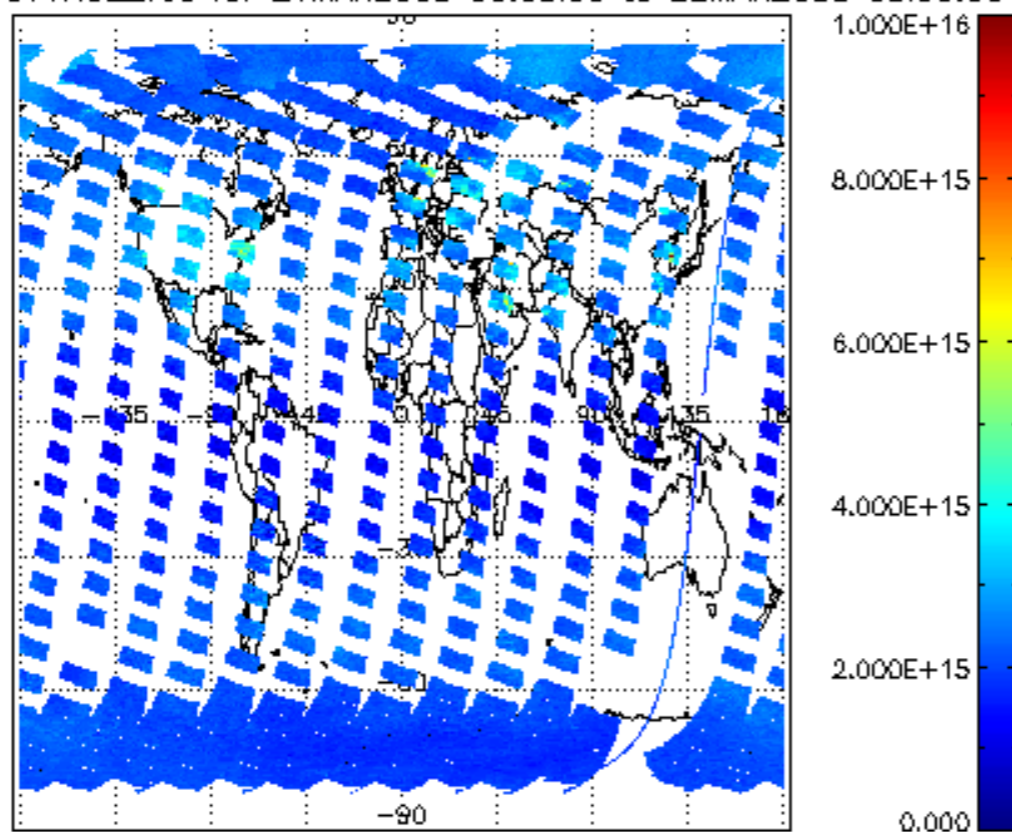


SCIOL2P\_NADUV003\_amf\_cl for 21MAR2008 00:00:00 to 22MAR2008 00:00:00

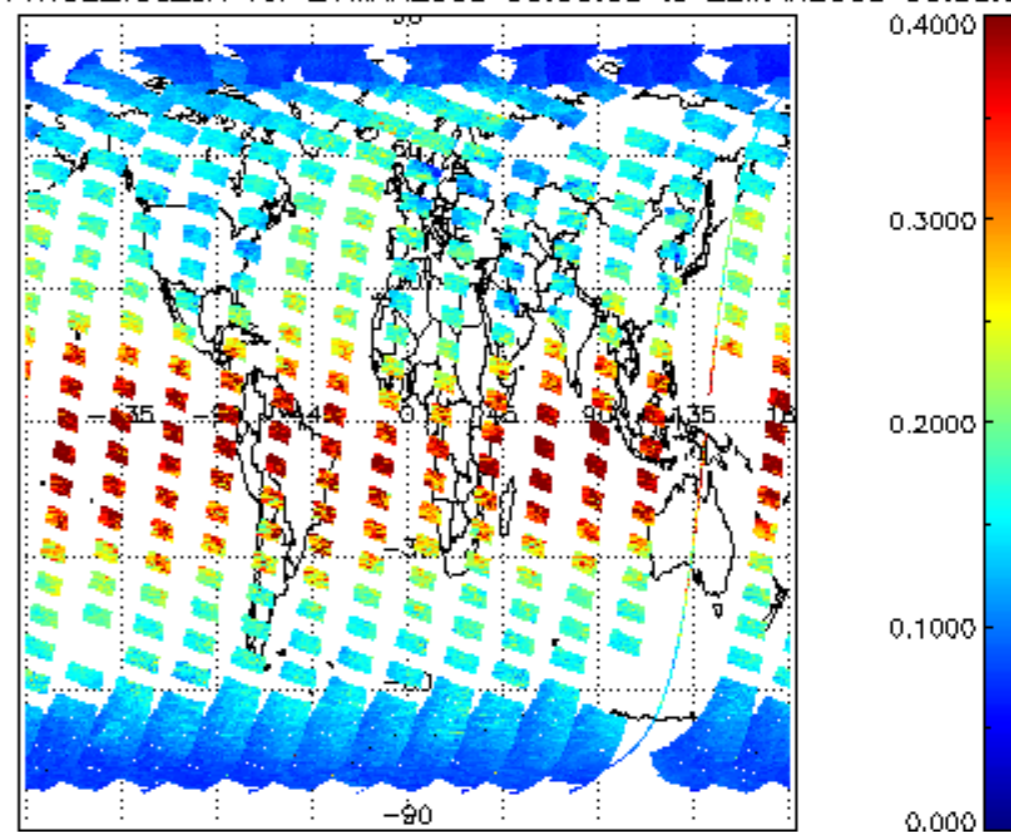




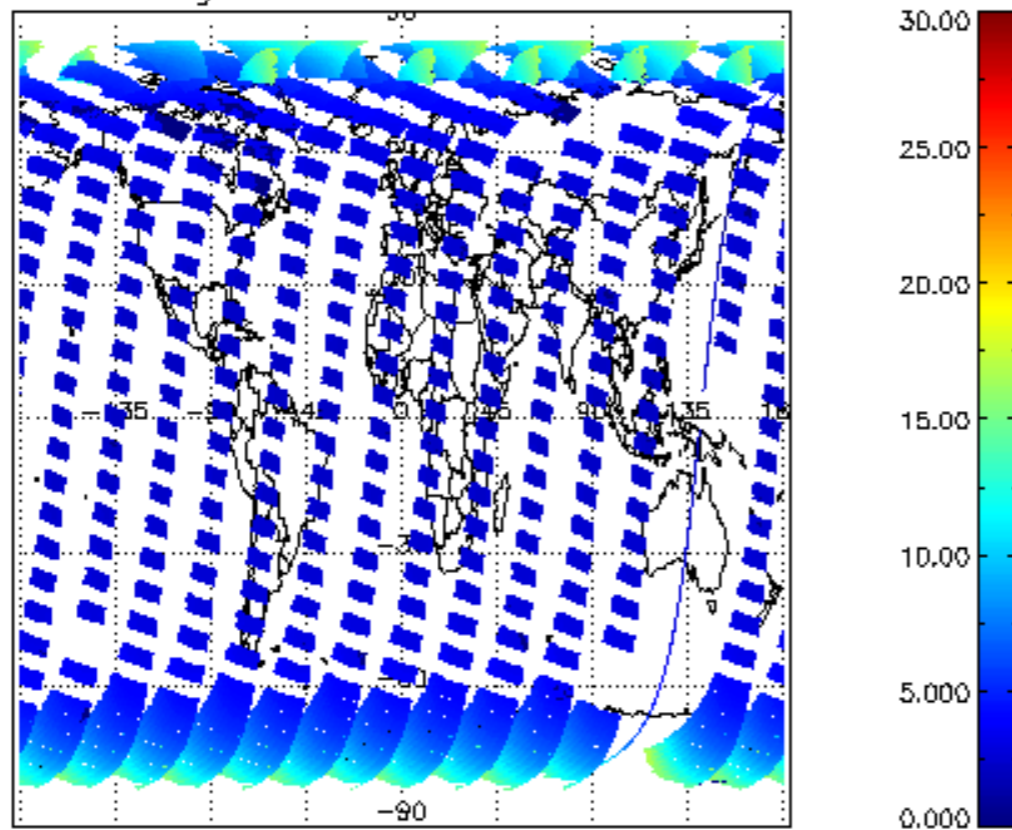
SCIOL2P\_NADUV1NO2\_vcd for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



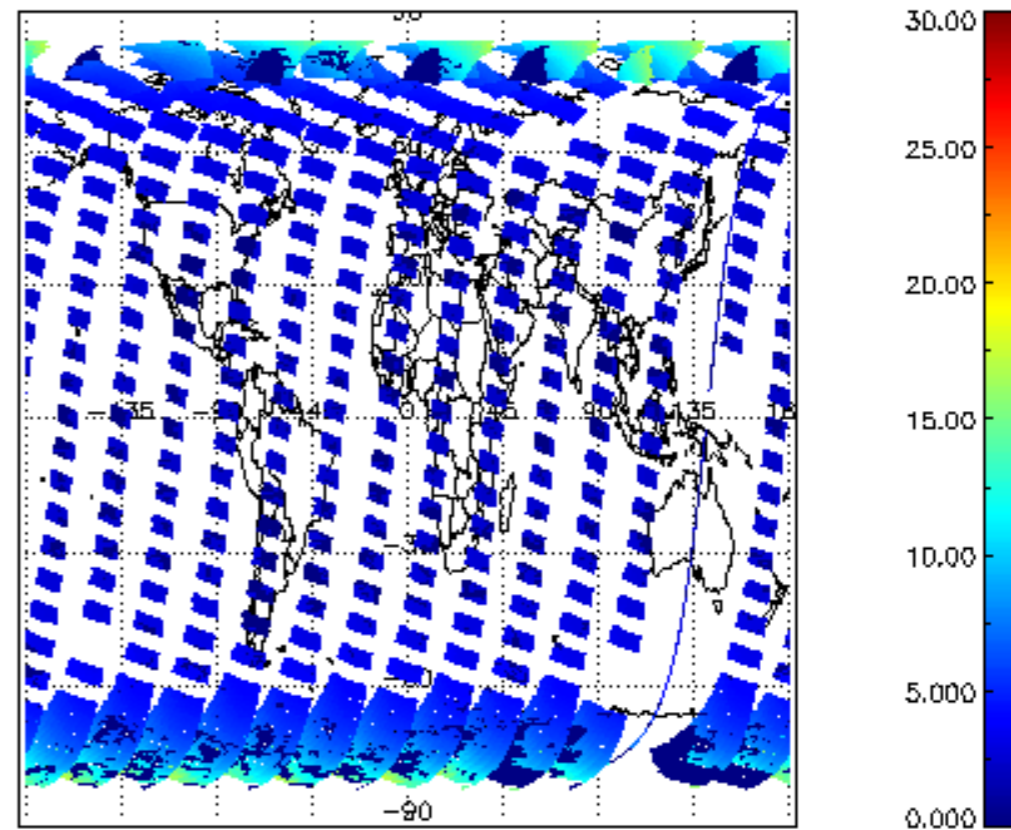
SCIOL2P\_NADUV1NO2\_vcd\_err for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



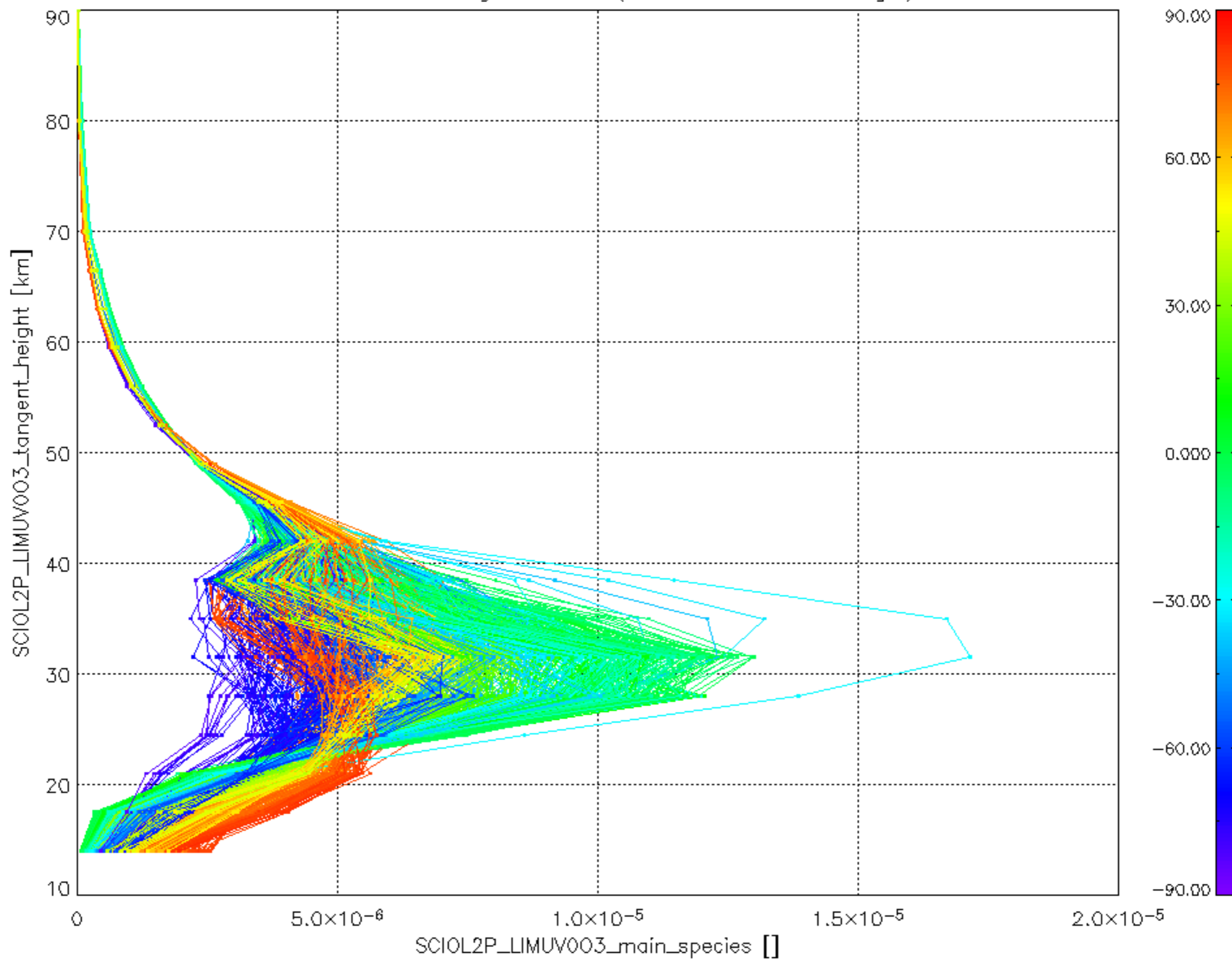
SCIOL2P\_NADUV1NO2\_amf\_gr for 21MAR2008 00:00:00 to 22MAR2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 21MAR2008 00:00:00 to 22MAR2008 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\_LIMUV1N02\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).

