

## 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	22MAR2008 14:00:10
Data source version	SCIA-OL/3.01-R
Processing scope for products	28FEB2008 00:00:00 to 29FEB2008 00:00:00
Start time of first product within scope	28FEB2008 00:00:01
Stop time of last product within scope	29FEB2008 00:22:47
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__2PRDPA20080228_000001_000032692066_00231_31347_3925.N1	28FEB2008 00:00:01	28FEB2008 00:54:30	0	GOOD
1	SCI_OL__2PRDPA20080228_013927_000033252066_00232_31348_3926.N1	28FEB2008 01:39:27	28FEB2008 02:34:53	0	GOOD
2	SCI_OL__2PRDPA20080228_032111_000032692066_00233_31349_3939.N1	28FEB2008 03:21:11	28FEB2008 04:15:41	0	GOOD
3	SCI_OL__2PRDPA20080228_050038_000033252066_00234_31350_3940.N1	28FEB2008 05:00:38	28FEB2008 05:56:04	0	GOOD
4	SCI_OL__2PRDPA20080228_064223_000032692066_00235_31351_3942.N1	28FEB2008 06:42:23	28FEB2008 07:36:52	0	GOOD
5	SCI_OL__2PRDPA20080228_082149_000033252066_00236_31352_3943.N1	28FEB2008 08:21:49	28FEB2008 09:17:15	0	GOOD
6	SCI_OL__2PRDPA20080228_100333_000032692066_00237_31353_3944.N1	28FEB2008 10:03:33	28FEB2008 10:58:03	0	GOOD
7	SCI_OL__2PRDPA20080228_114300_000033252066_00238_31354_3945.N1	28FEB2008 11:43:00	28FEB2008 12:38:26	0	GOOD
8	SCI_OL__2PRDPA20080228_132444_000032692066_00239_31355_3946.N1	28FEB2008 13:24:44	28FEB2008 14:19:14	0	GOOD
9	SCI_OL__2PRDPA20080228_150411_000033252066_00240_31356_3947.N1	28FEB2008 15:04:11	28FEB2008 15:59:37	0	GOOD
10	SCI_OL__2PRDPA20080228_164555_000032692066_00241_31357_3948.N1	28FEB2008 16:45:55	28FEB2008 17:40:25	0	GOOD
11	SCI_OL__2PRDPA20080228_182454_000033812066_00242_31358_3949.N1	28FEB2008 18:24:54	28FEB2008 19:21:15	0	GOOD
12	SCI_OL__2PRDPA20080228_200529_000033942066_00243_31359_3966.N1	28FEB2008 20:05:29	28FEB2008 21:02:03	0	GOOD
13	SCI_OL__2PRDPA20080228_214633_000033252066_00244_31360_3967.N1	28FEB2008 21:46:33	28FEB2008 22:41:59	0	GOOD
14	SCI_OL__2PRDPA20080228_232817_000032692066_00245_31361_3968.N1	28FEB2008 23:28:17	29FEB2008 00:22:47	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: 152360

Total number of cloud data DSRs with good quality flag (=0): 152360 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	152360	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	152360	0.17022	0.12500	0.12500	0.25000	0.060064	s
SURFACE_PRES	152360	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	152360	0.40331	0.36991	0.0000	1.0000	0.28454	-

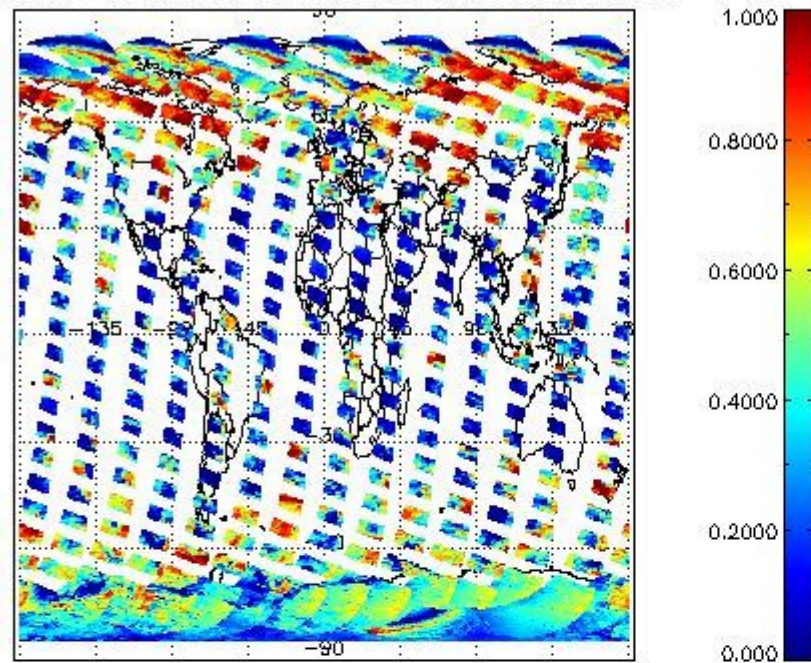
CL_FRAC_ERR	152360	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	152360	5.4471	4.0000	4.0000	8.0000	1.9221	
PMD_READ_CL[0]	152360	0.20975	0.0000	0.0000	8.0000	0.99229	-
PMD_READ_CL[1]	152360	0.67972	0.0000	0.0000	8.0000	1.8323	-
CL_TOP_HEIGHT	127552	3.9798	2.3797	0.0000	17.000	3.9583	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	127552	56.497	49.946	0.0000	101.00	40.380	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	152360	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	152360	11001001	11000100	11000000	11100000	3144.2	flags
AERO_ABSO_IND	152360	2.8553	3.2897	-2.0074	15.638	1.9932	
AERO_IND_DIAG	152360	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	152360	01010111	00000000	00000000	11000000	24477.	flags

Time and geolocation plots:

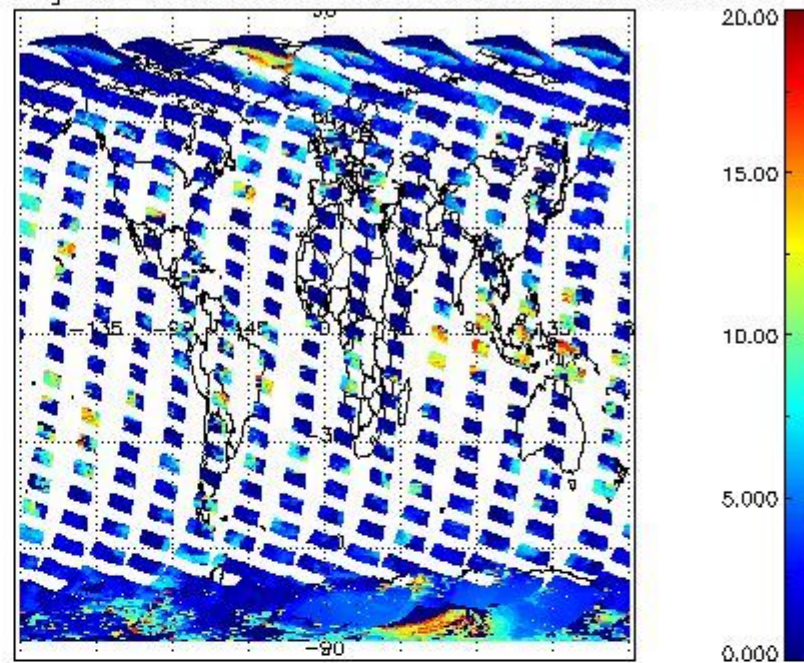
Plots are available for the following parameters:

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

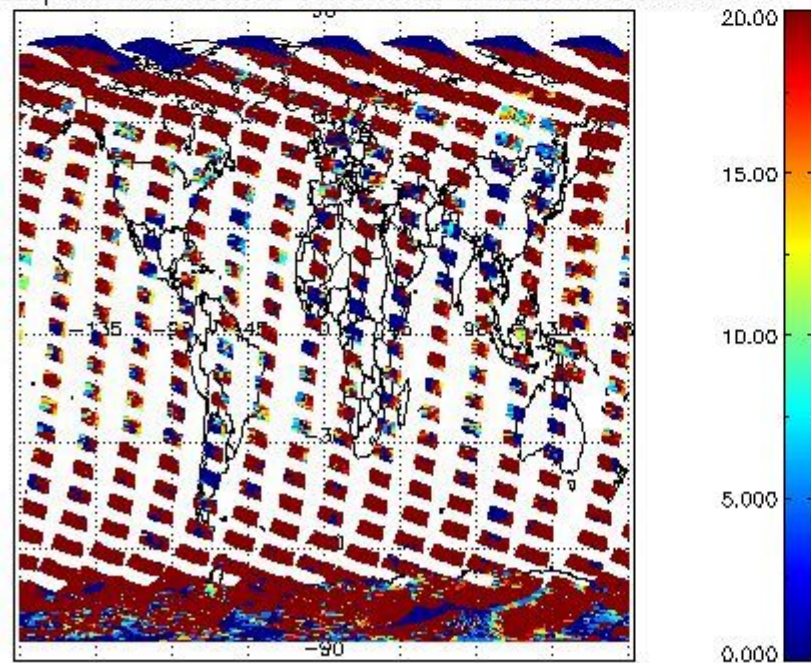
cL\_frac for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



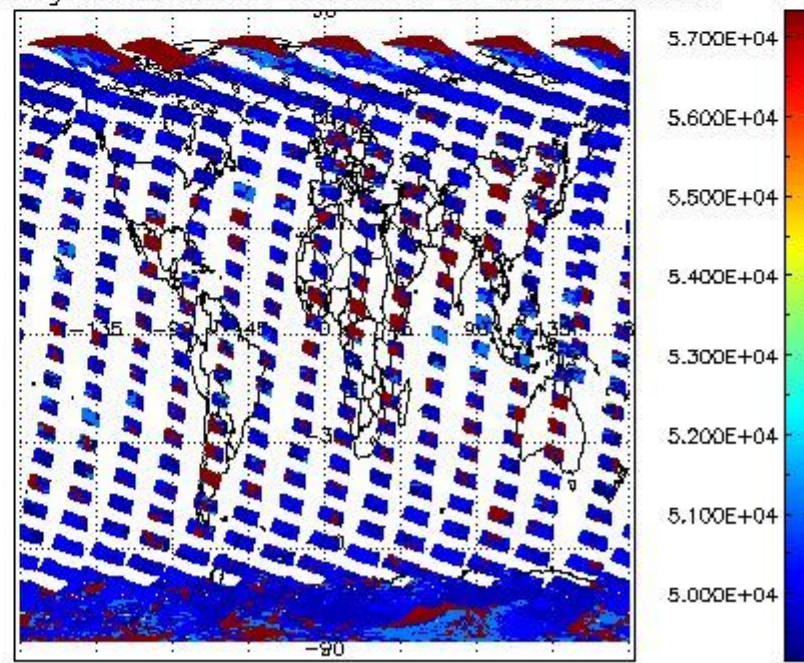
cL\_top\_height for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



cL\_opt\_depth for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



cloud\_flags for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



### 2.2.2 Nadir

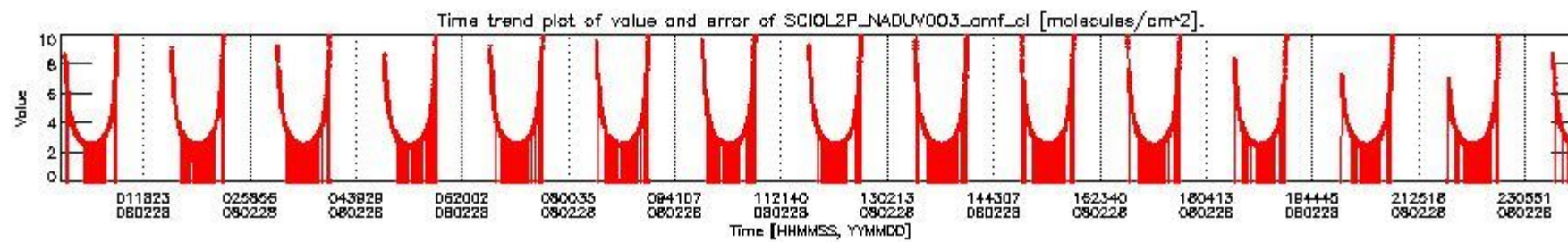
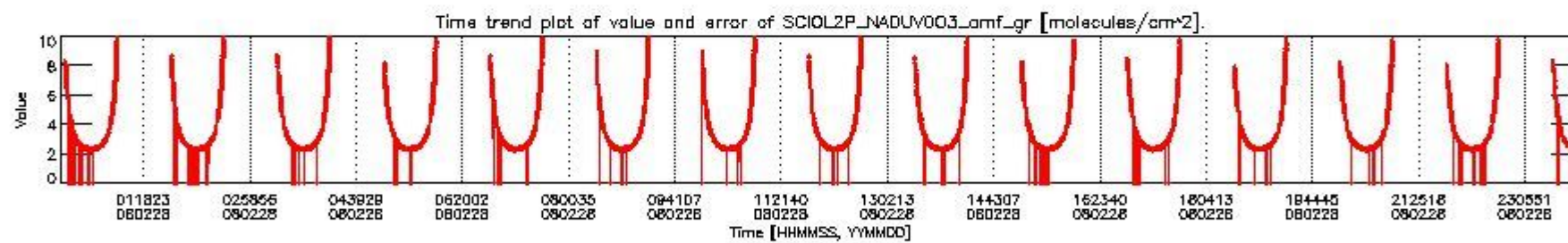
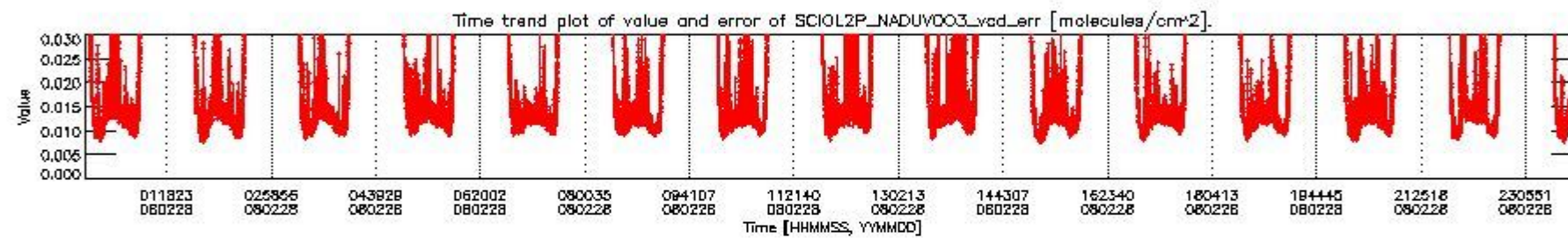
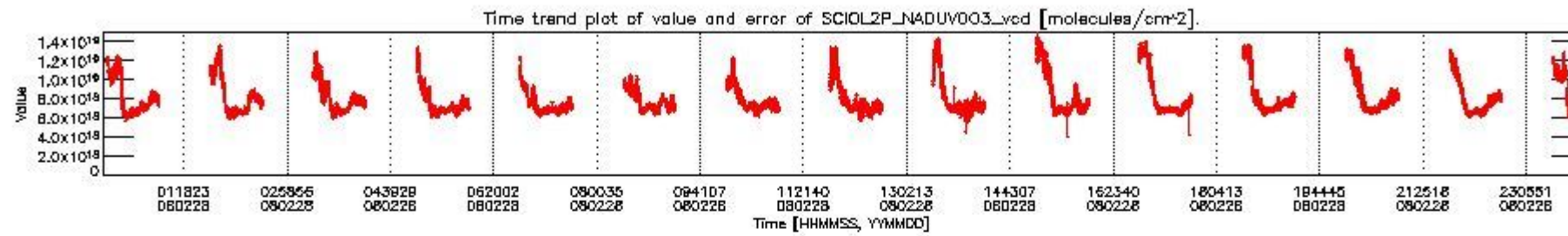
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

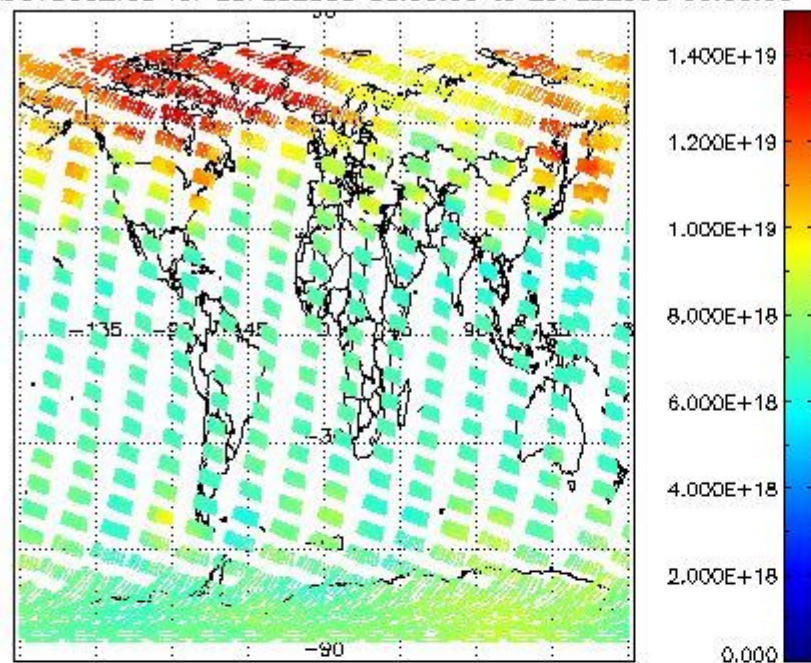
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

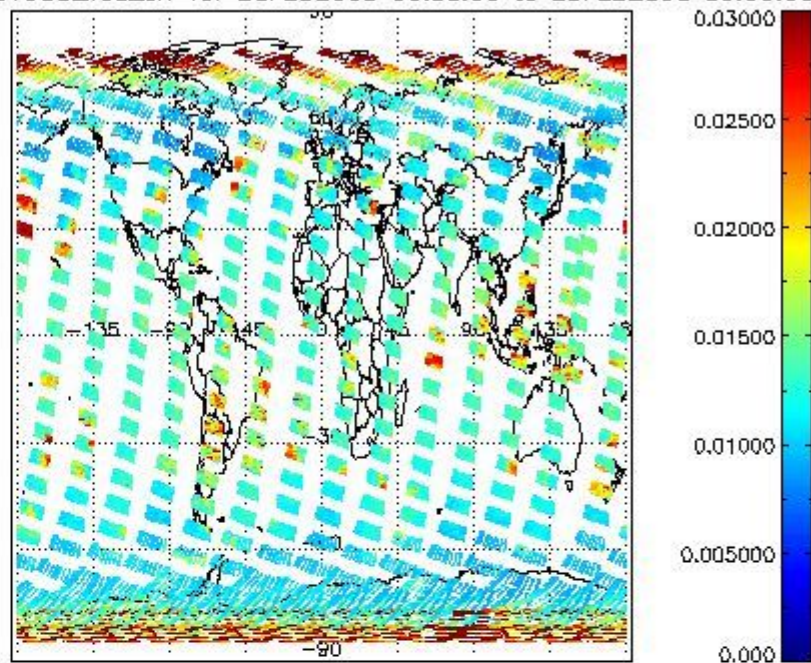
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



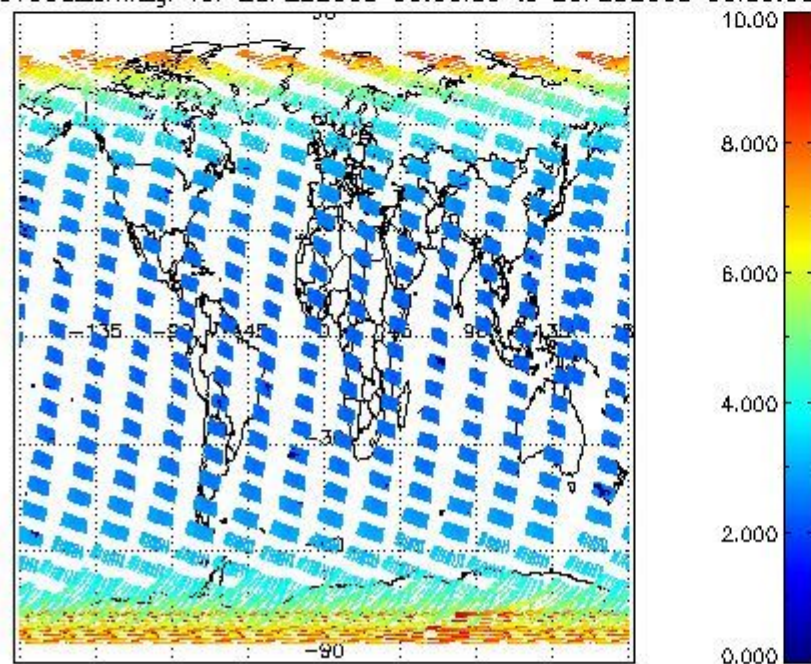
SCIOL2P\_NADUV003\_vcd for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



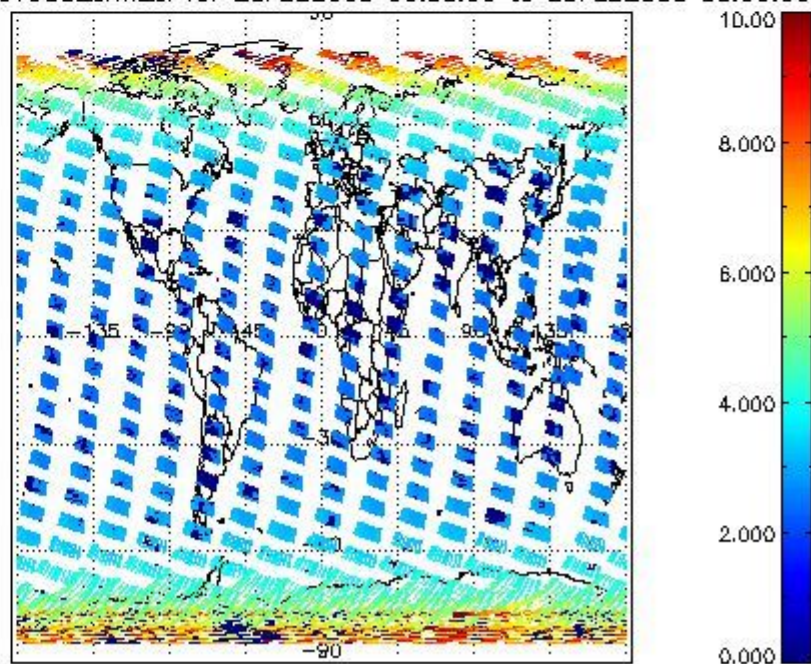
SCIOL2P\_NADUV003\_vcd\_err for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

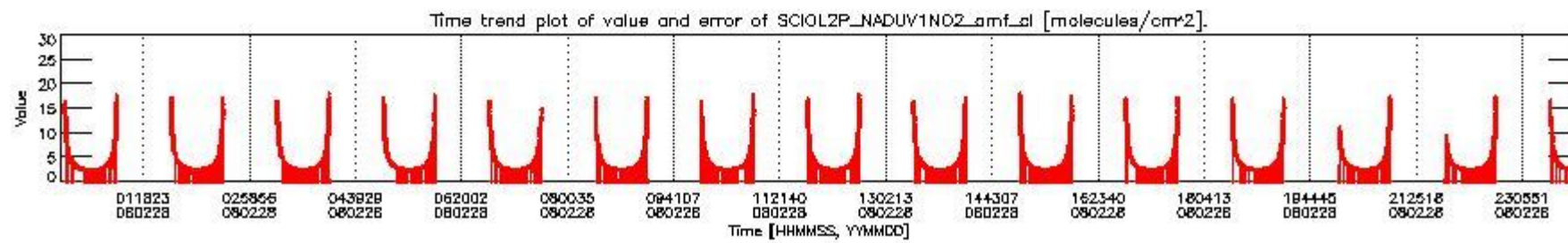
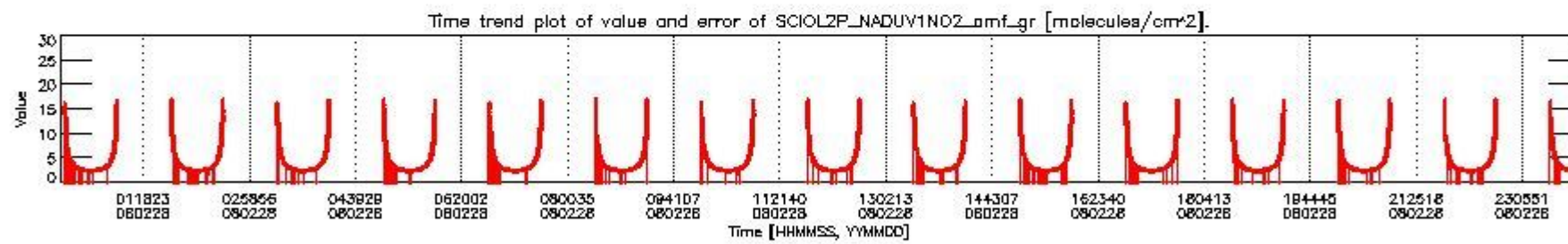
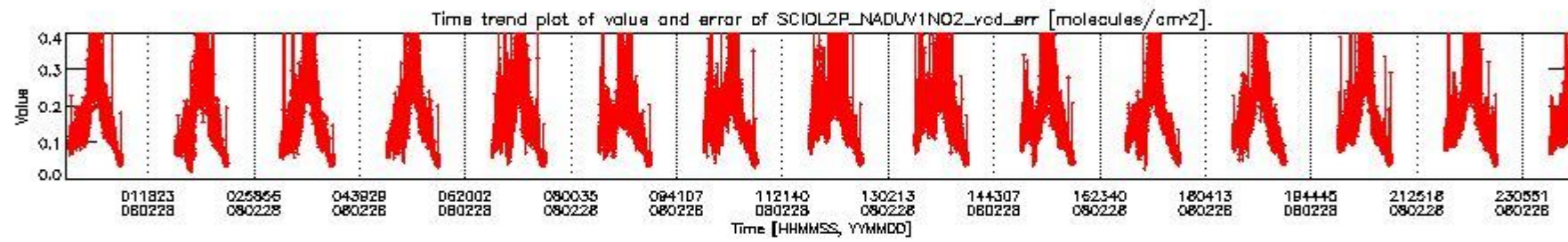
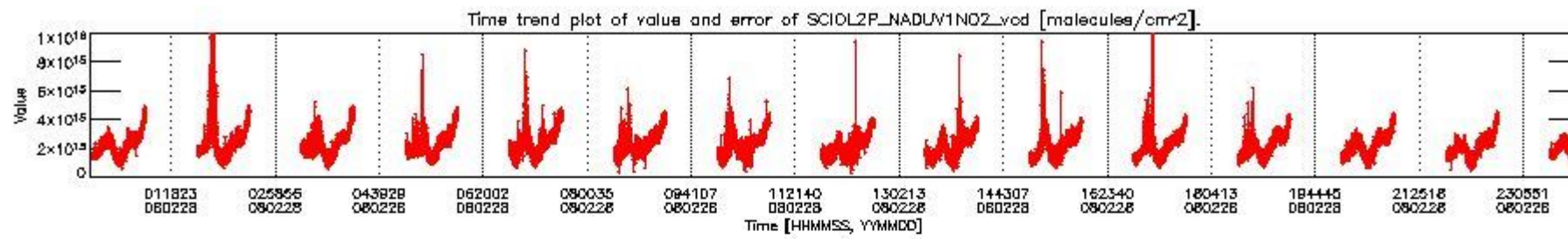


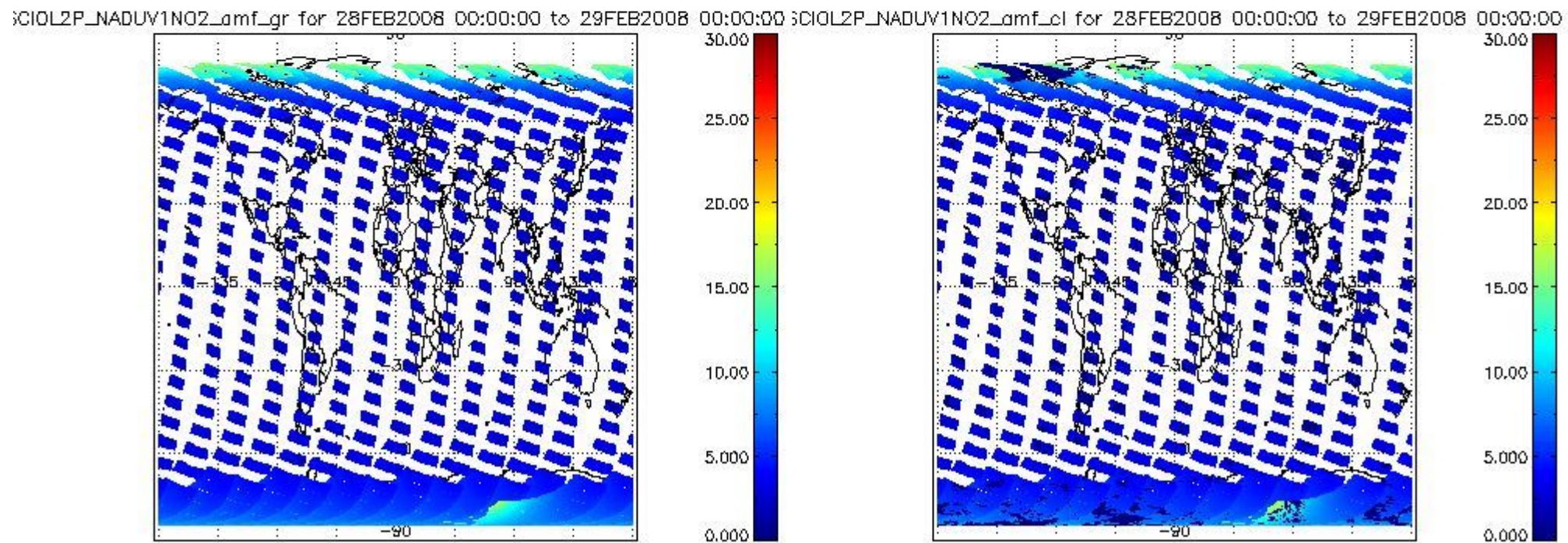
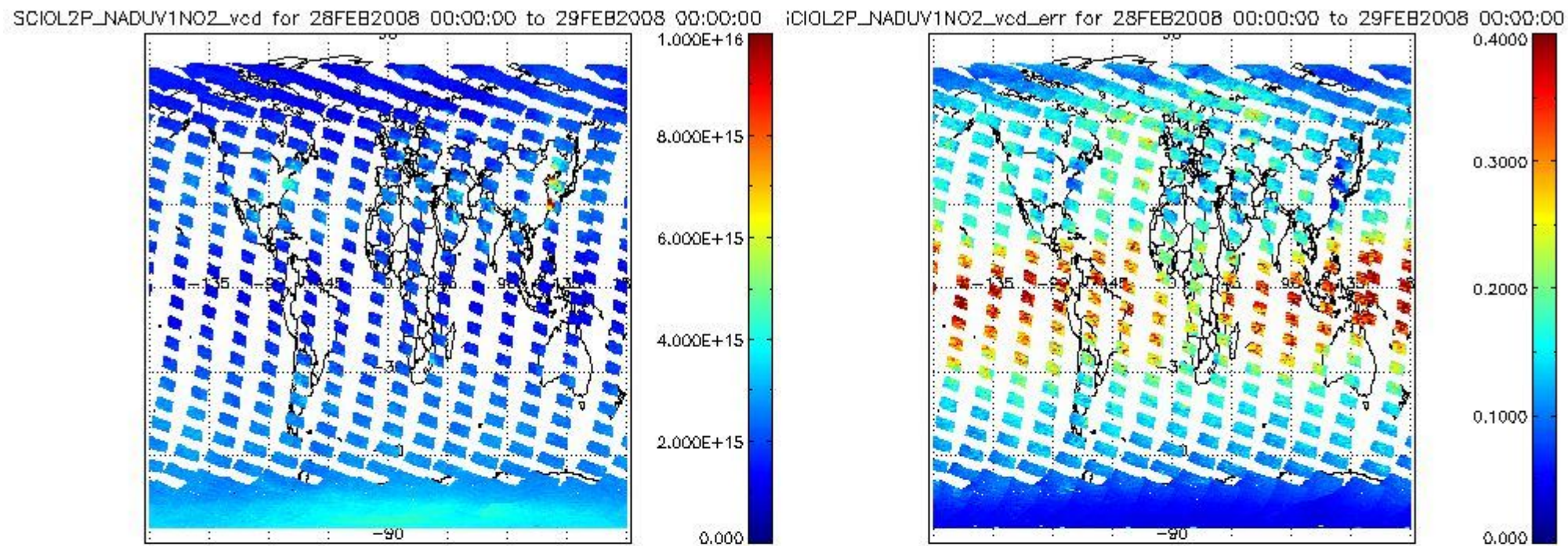
SCIOL2P\_NADUV003\_amf\_gr for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



SCIOL2P\_NADUV003\_amf\_sl for 28FEB2008 00:00:00 to 29FEB2008 00:00:00







### 2.2.3 Limb

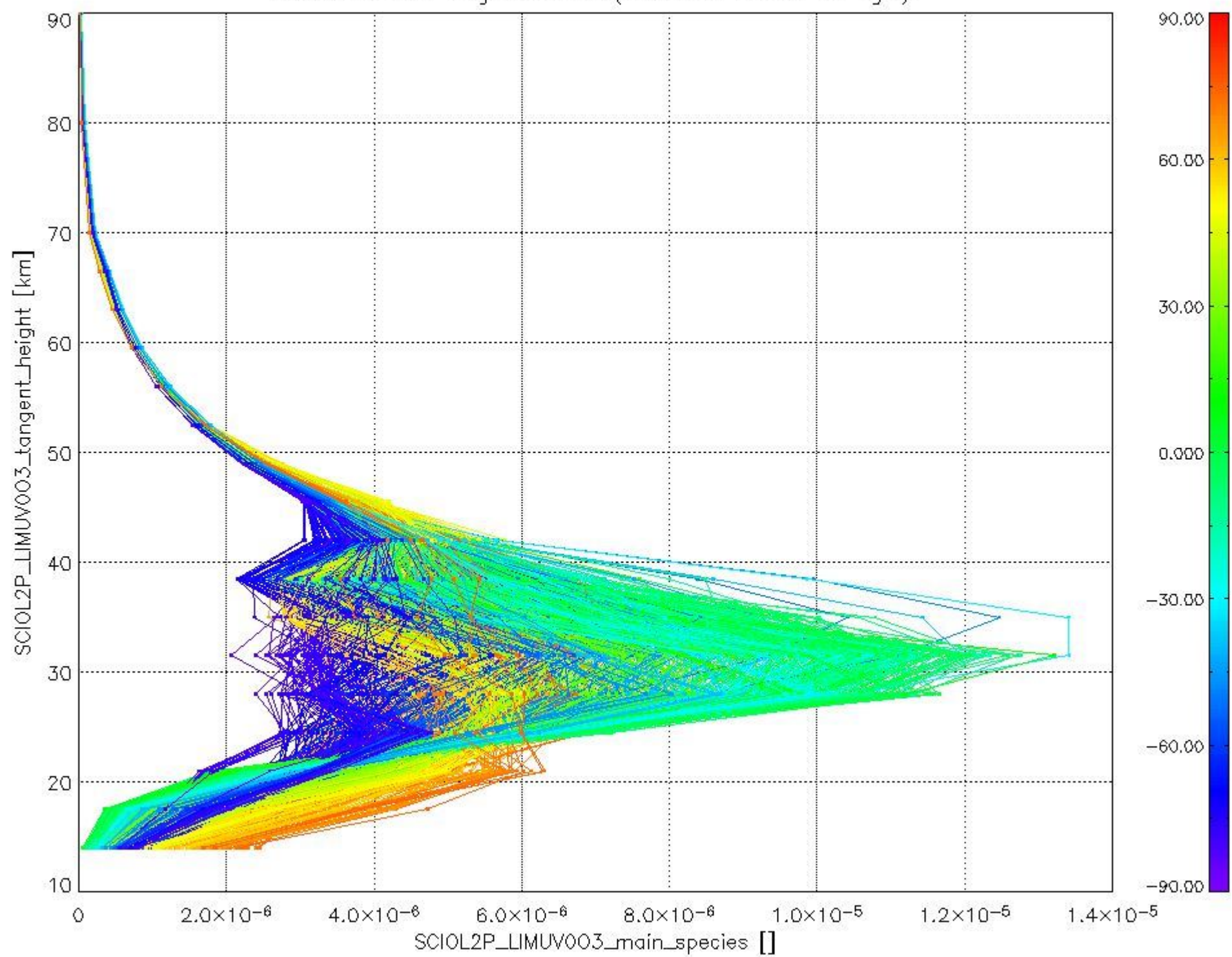
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

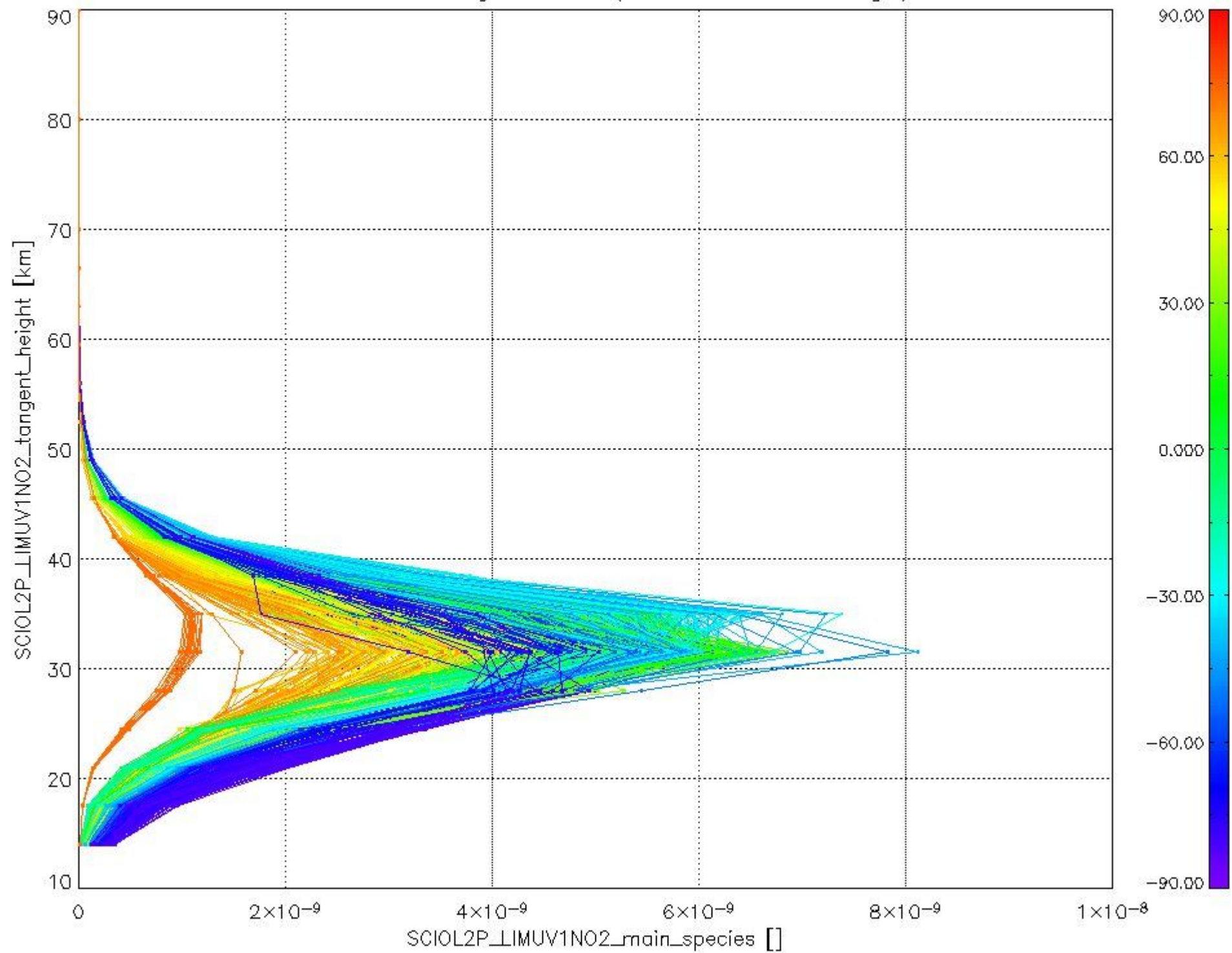
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





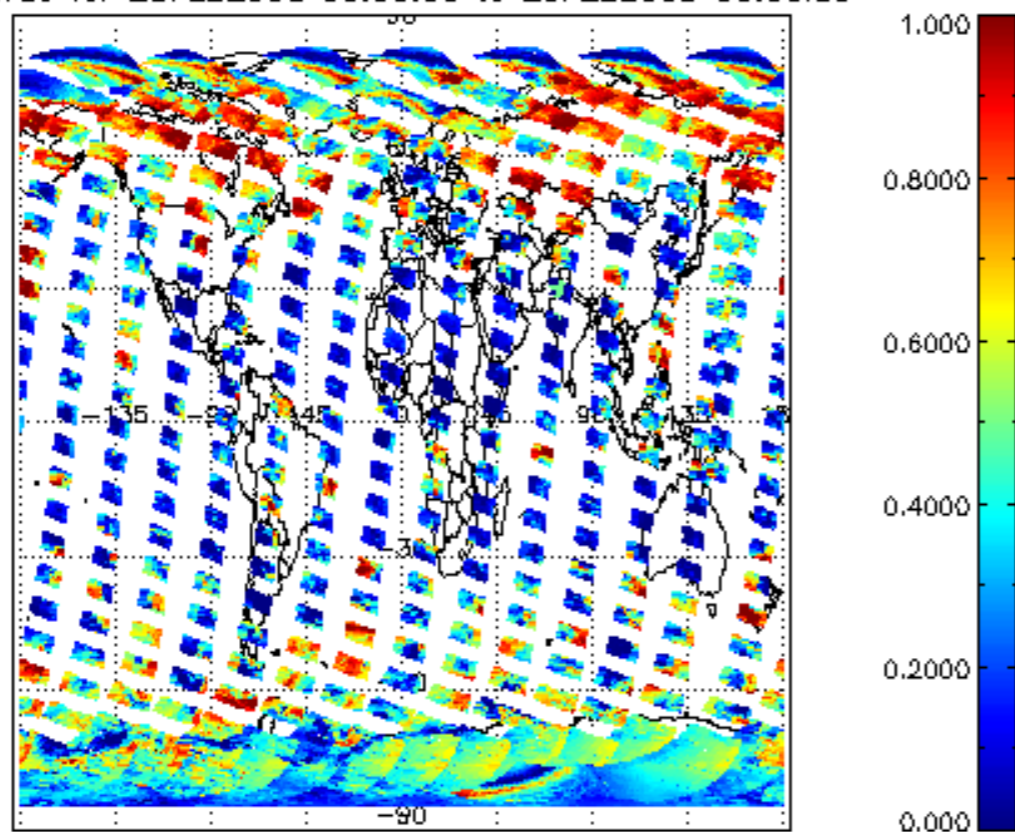
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



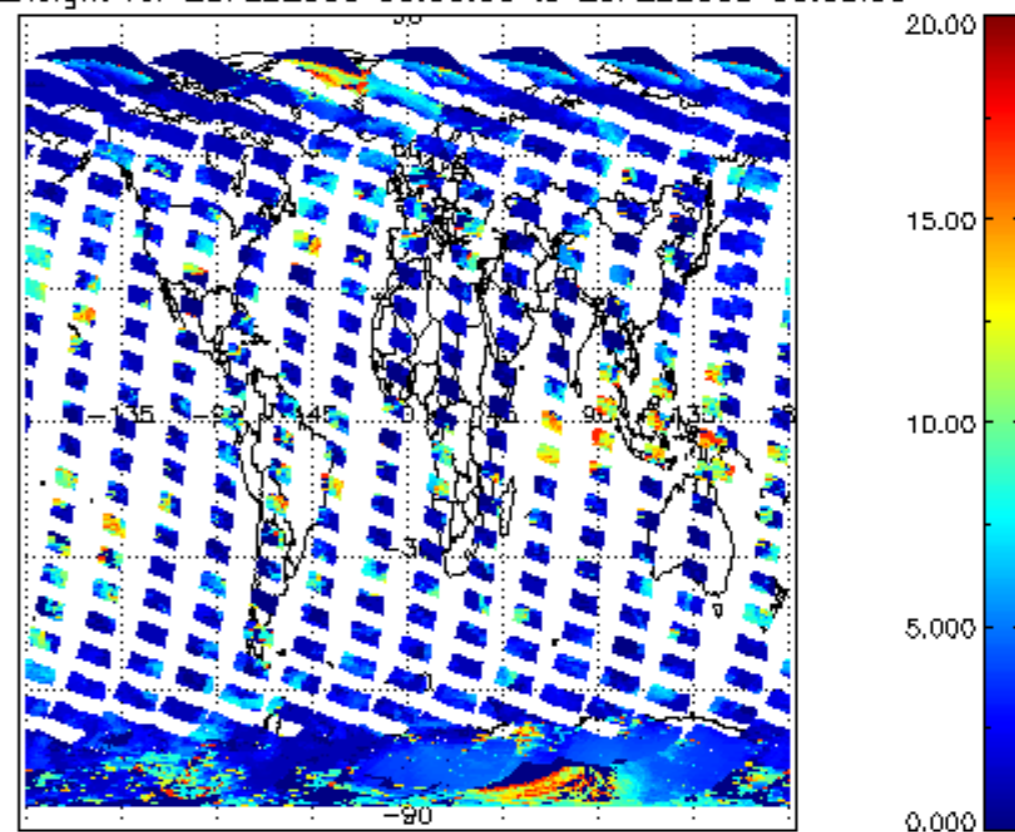
### 2.3 ADF monitoring

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

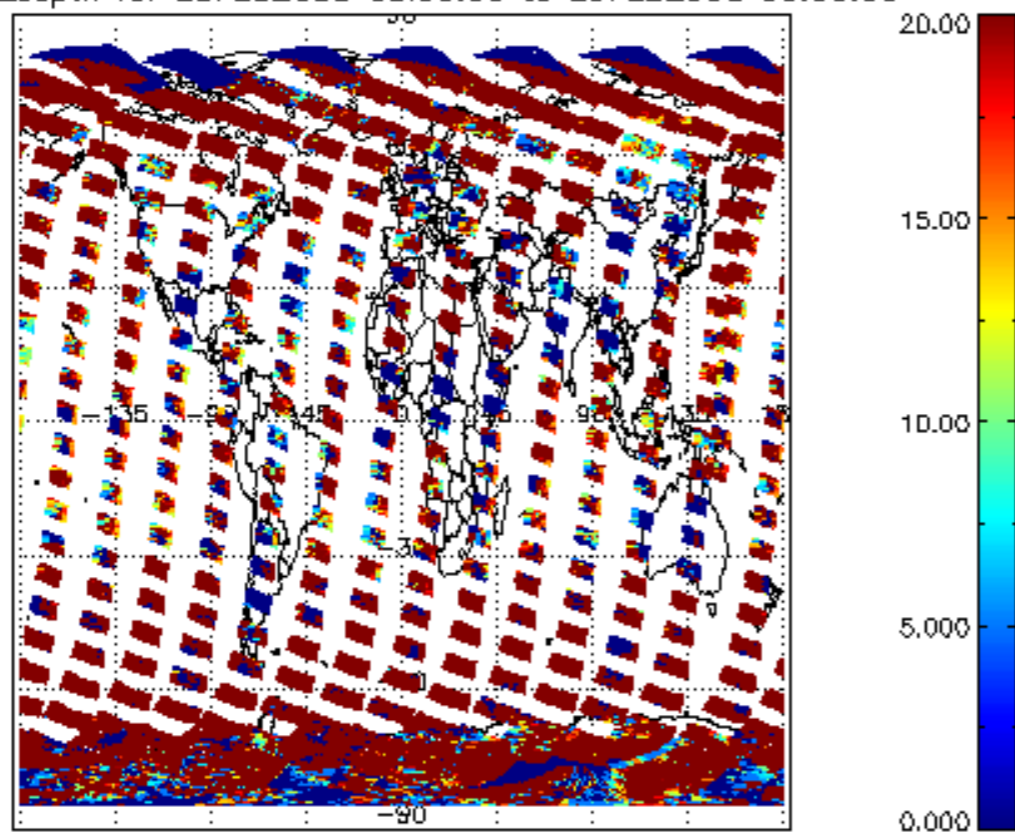
cl\_frac for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



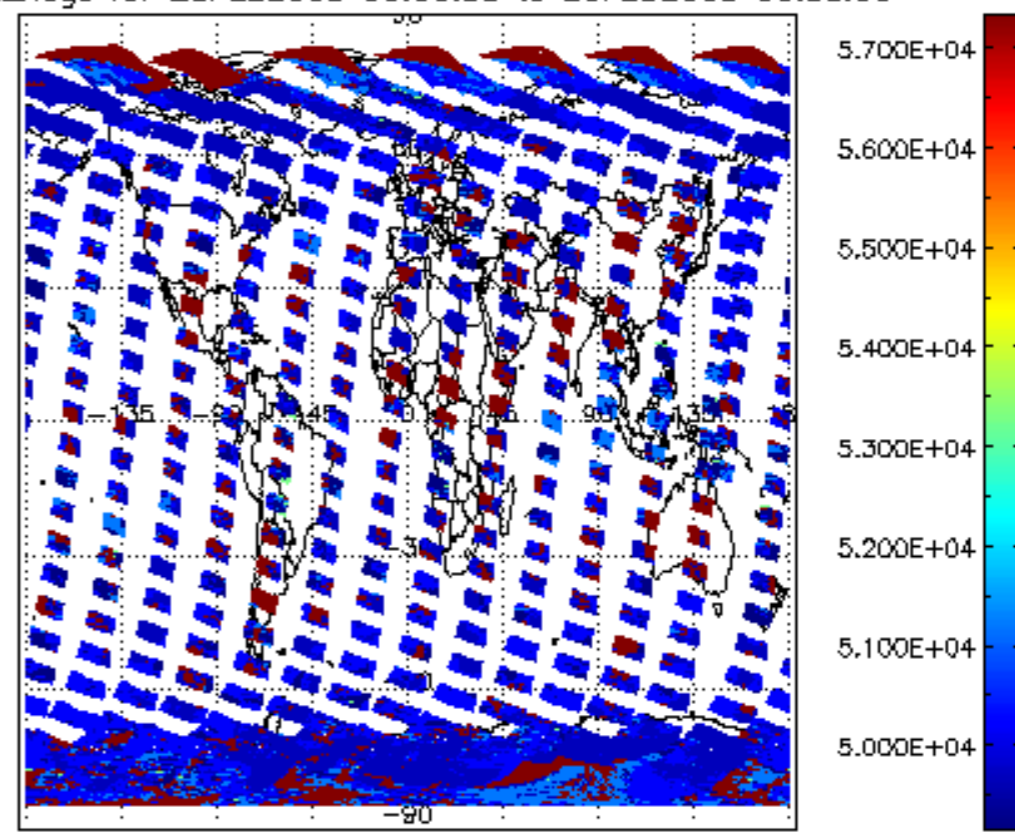
cl\_top\_height for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

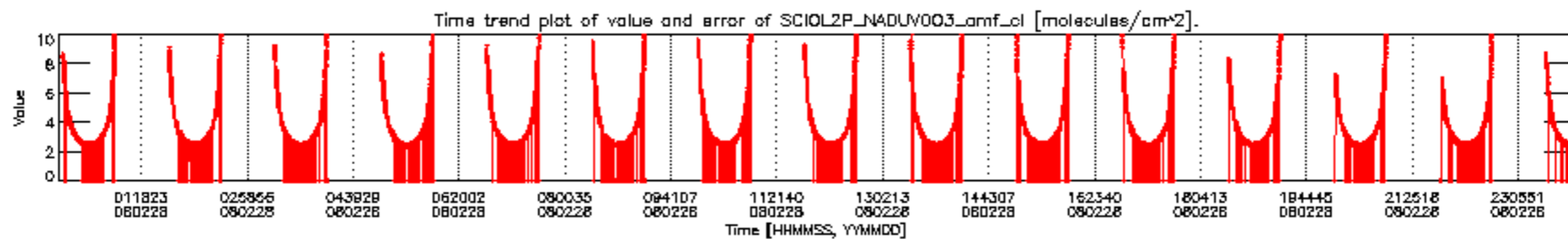
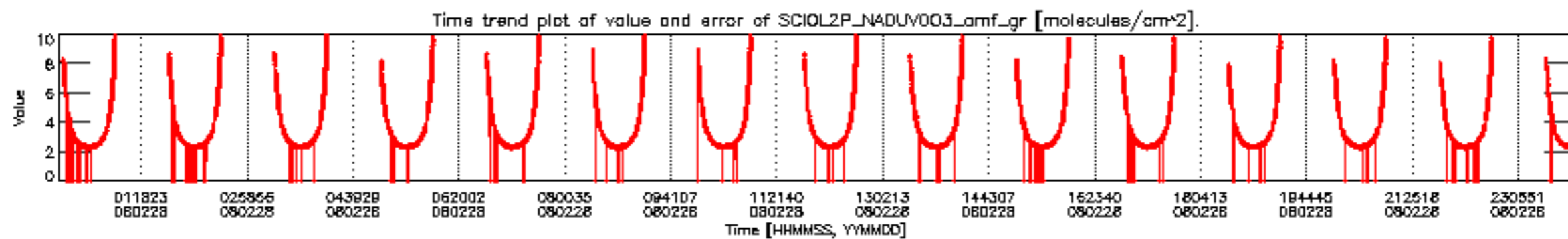
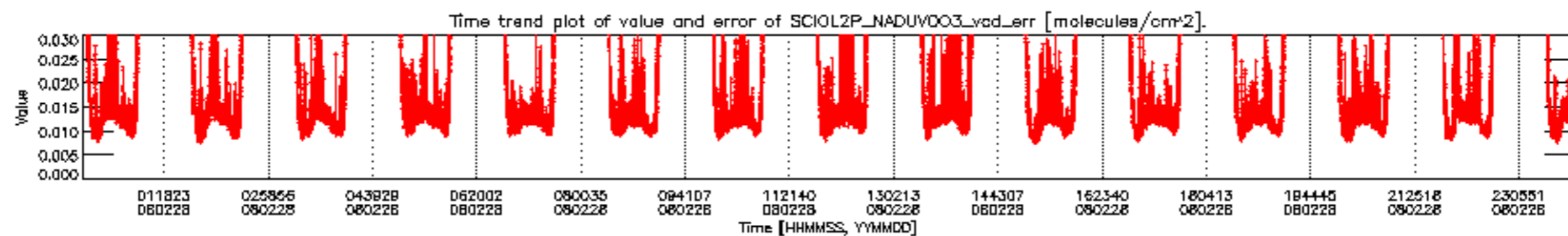
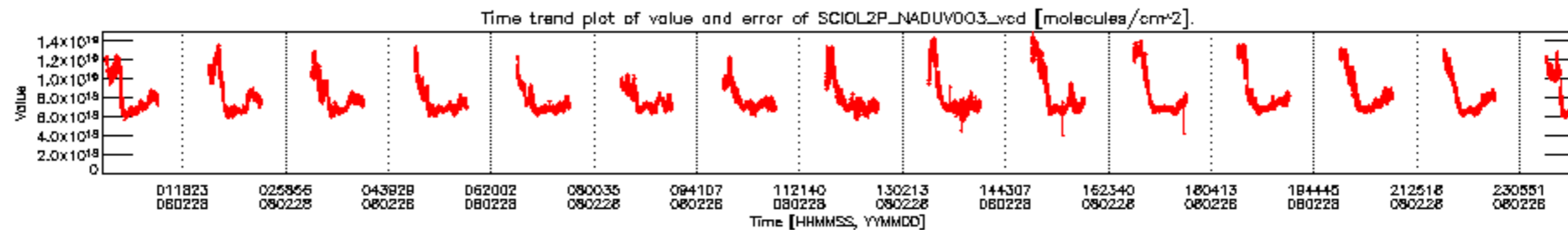


cl\_opt\_depth for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

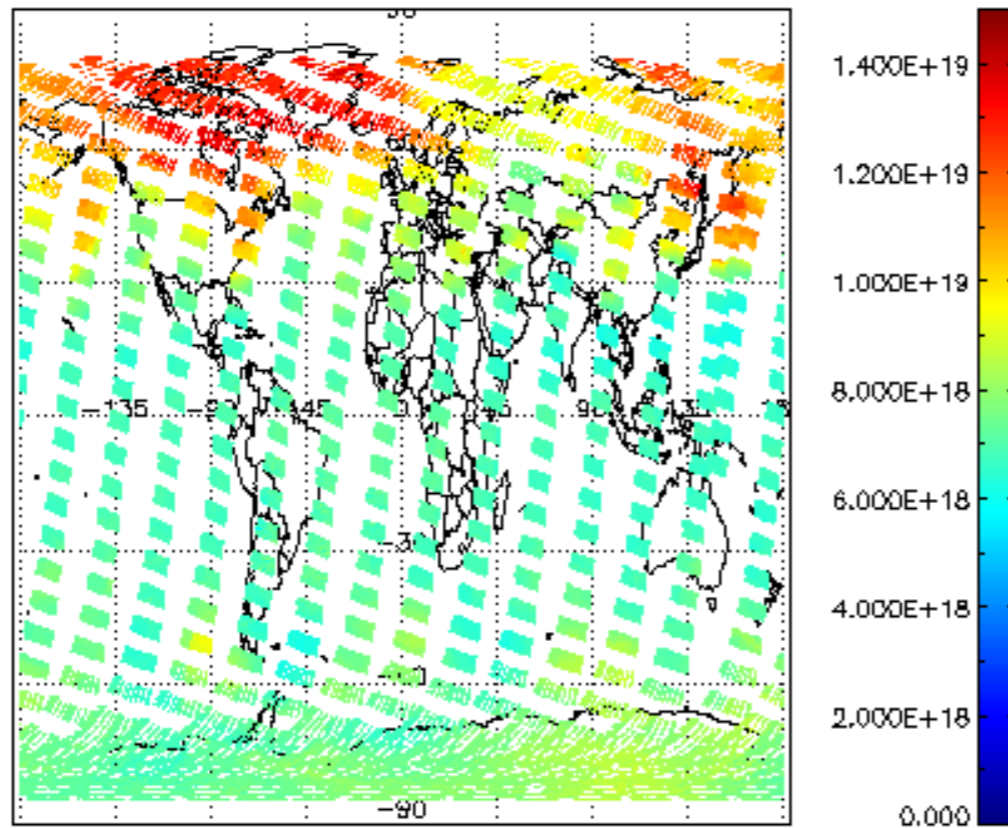


cloud\_flags for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

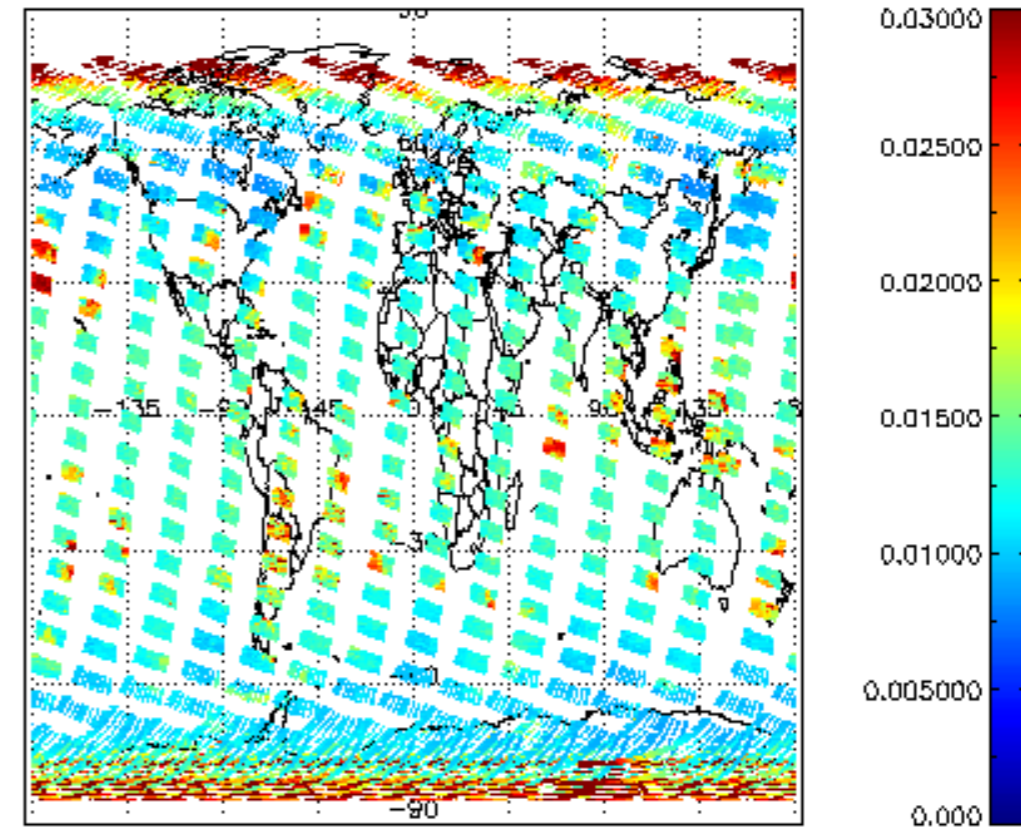




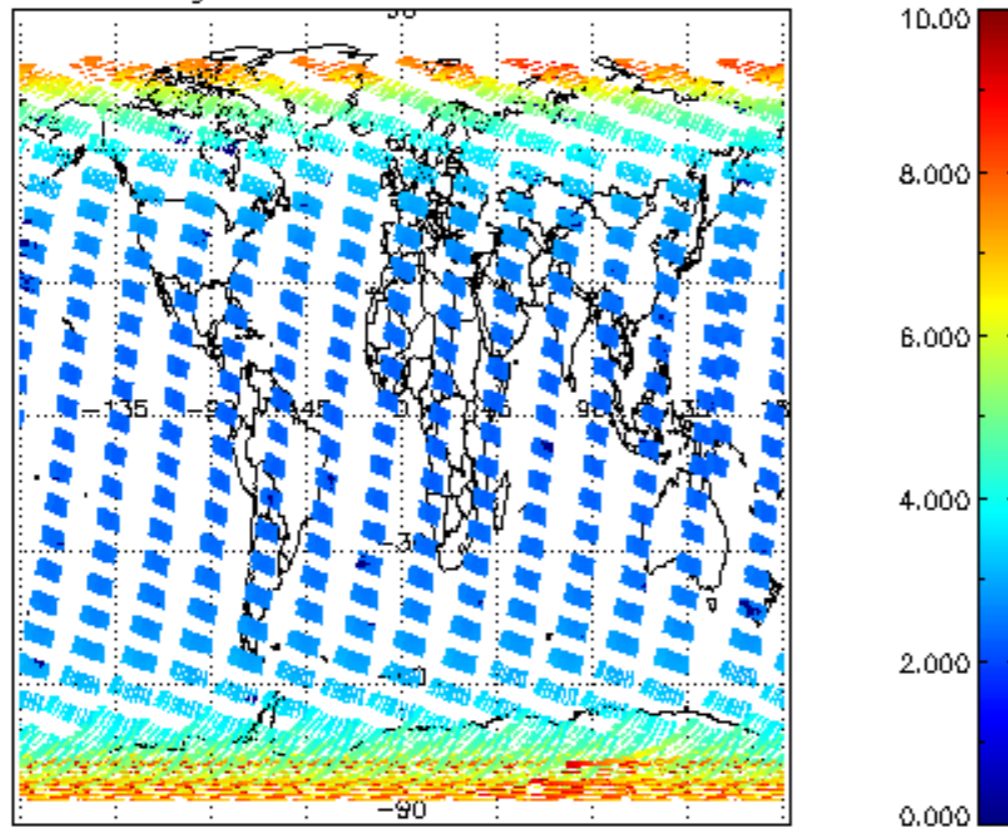
SCIOL2P\_NADUV003\_vcd for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



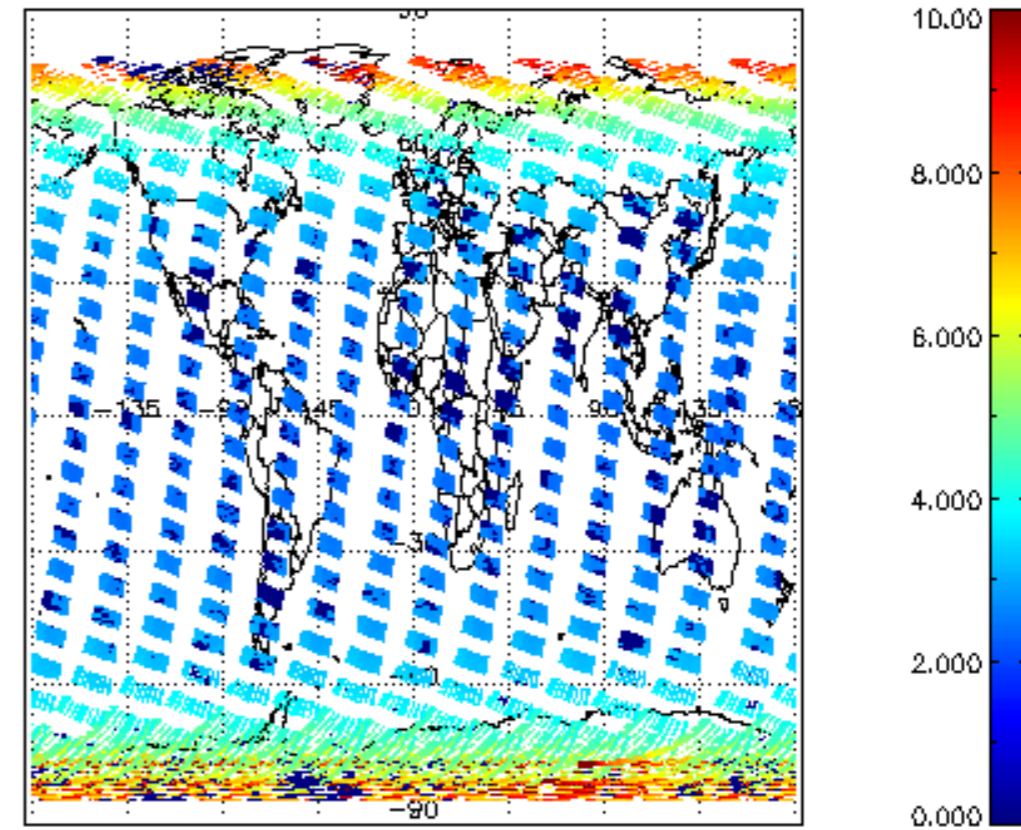
SCIOL2P\_NADUV003\_vcd\_err for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

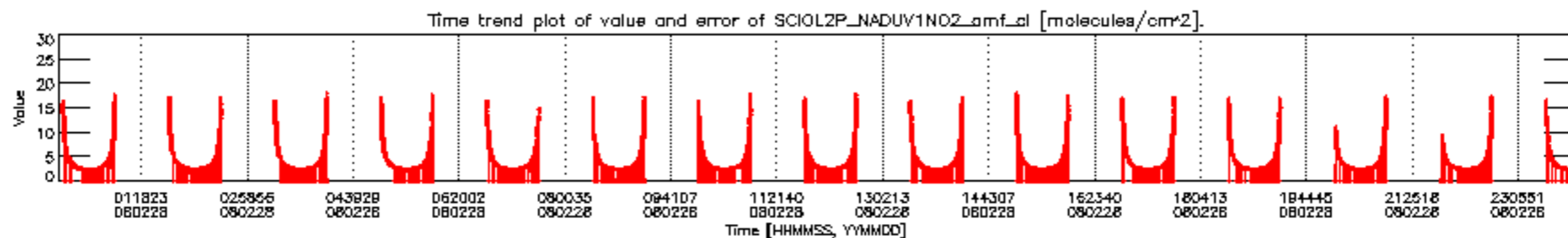
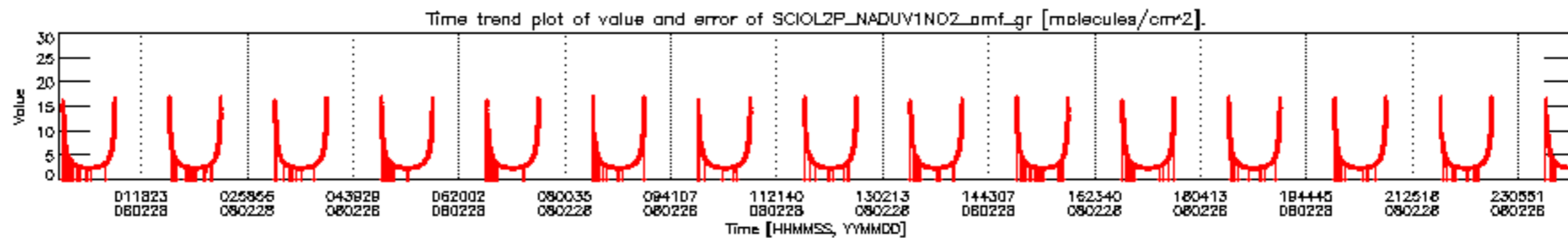
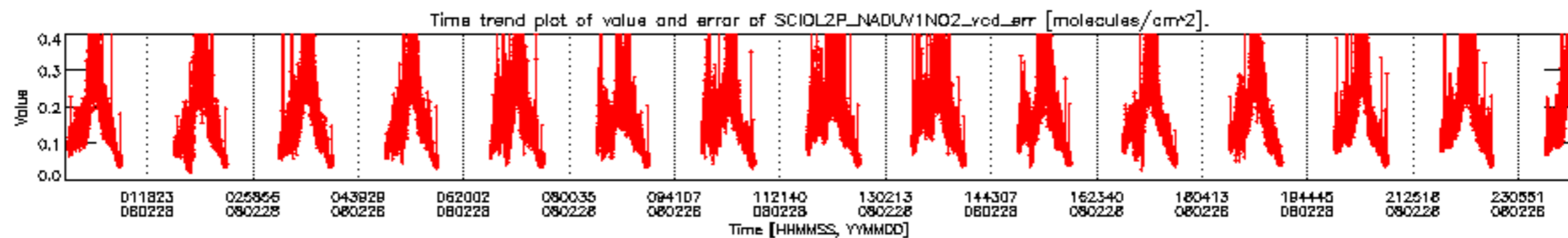
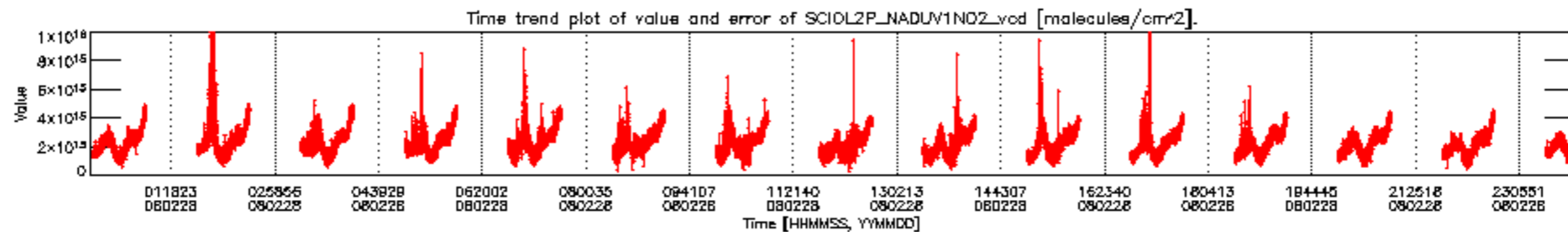


SCIOL2P\_NADUV003\_amf\_gr for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

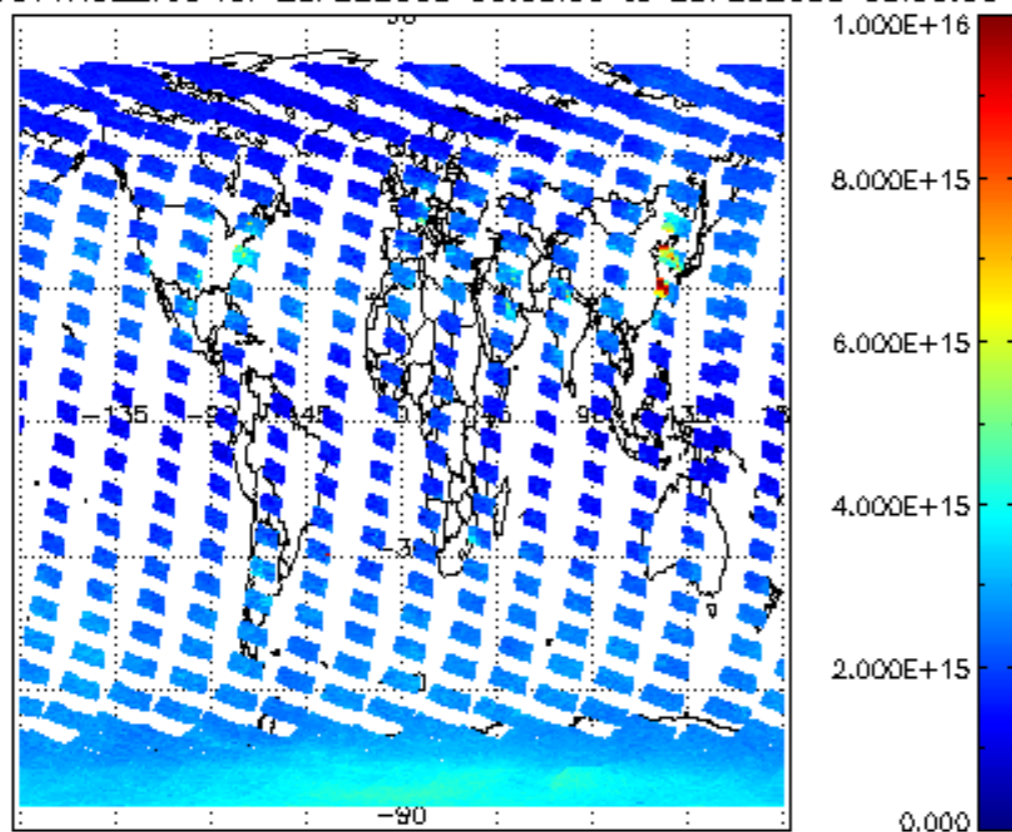


SCIOL2P\_NADUV003\_amf\_cl for 28FEB2008 00:00:00 to 29FEB2008 00:00:00

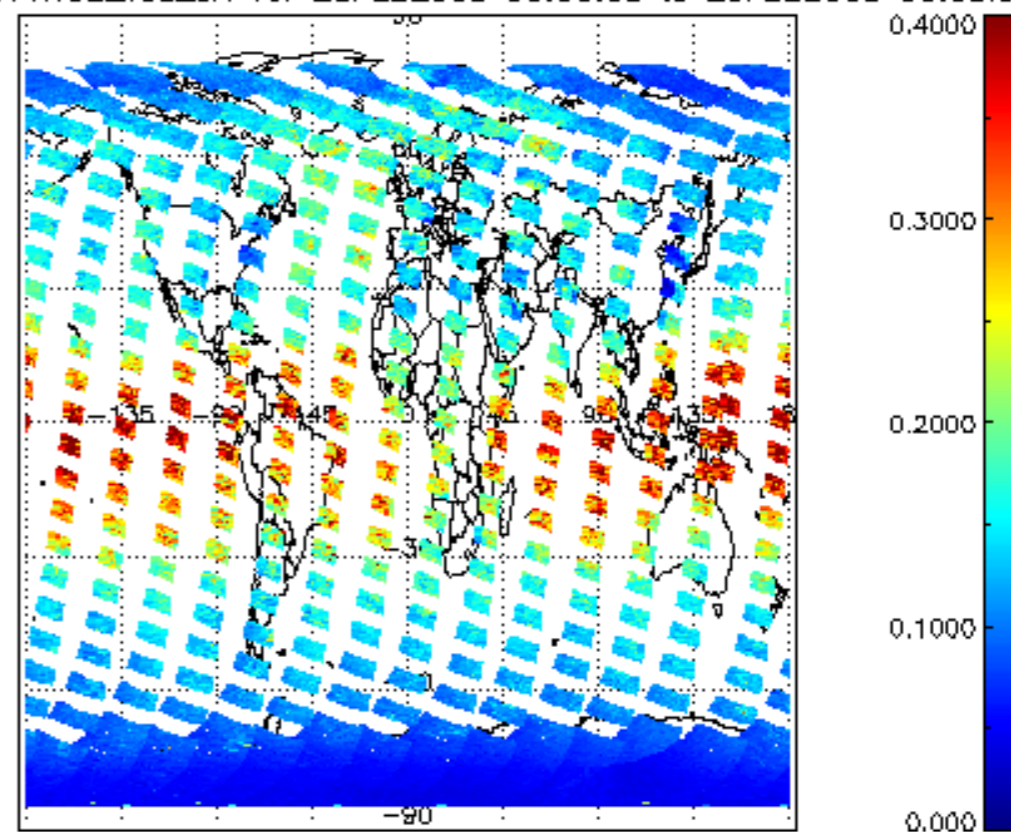




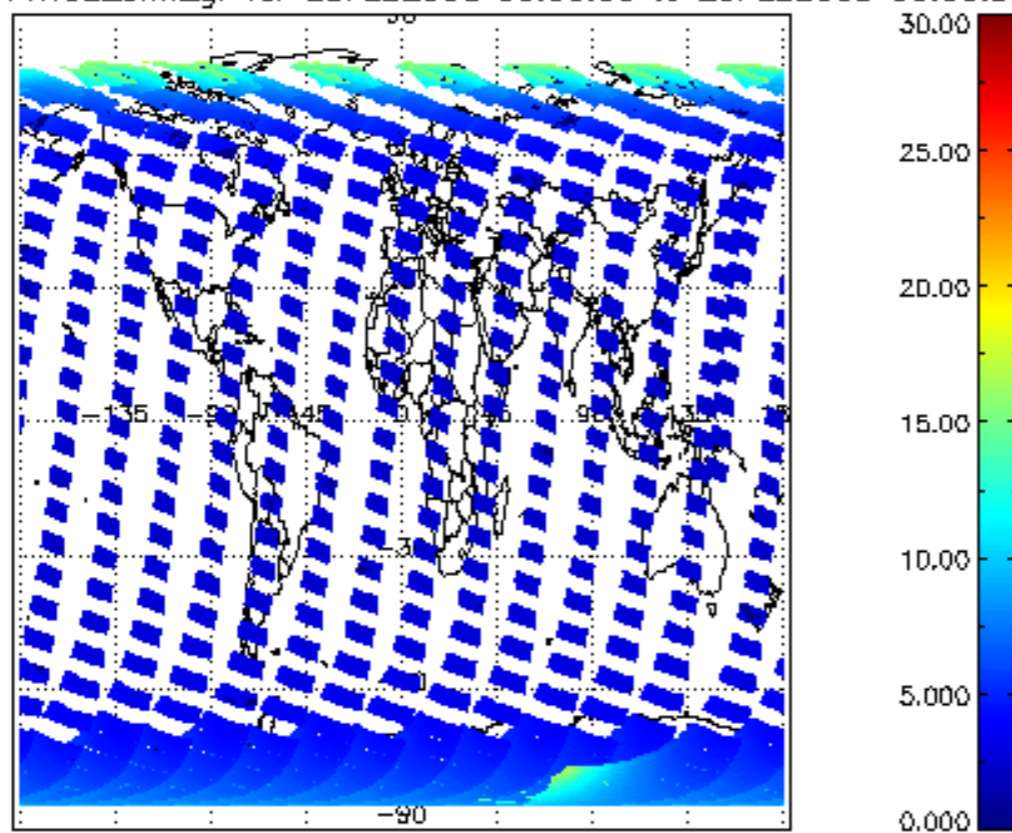
SCIOL2P\_NADUV1NO2\_vcd for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



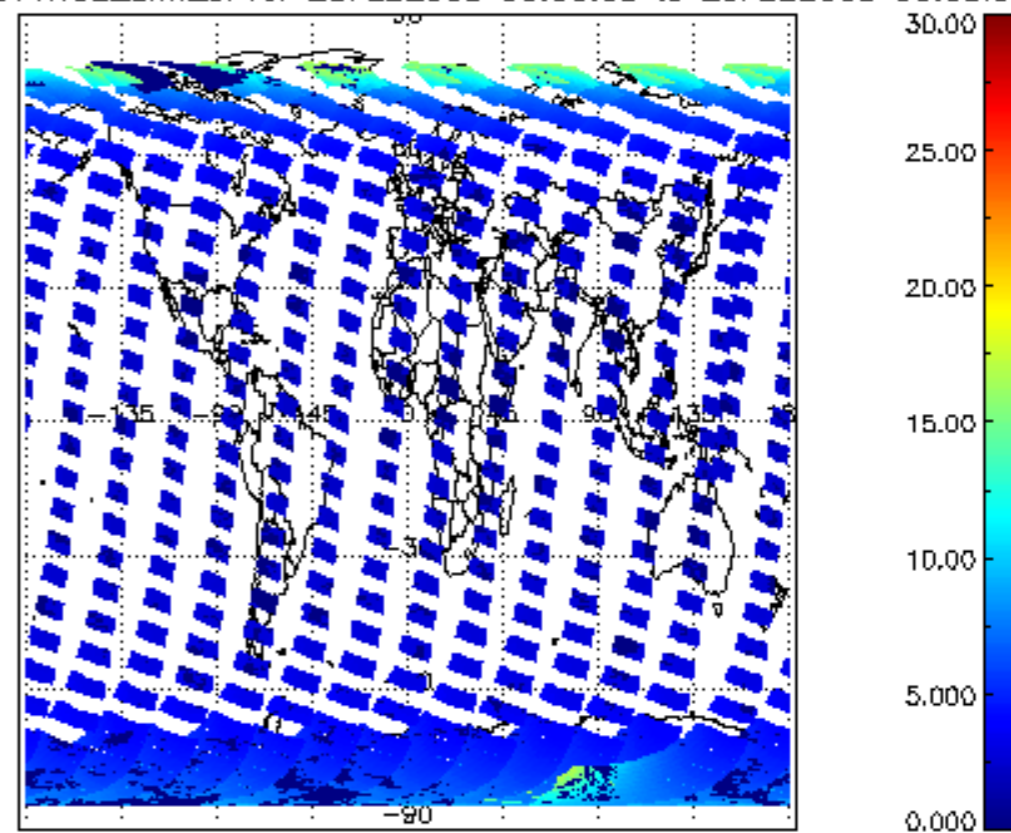
SCIOL2P\_NADUV1NO2\_vcd\_err for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



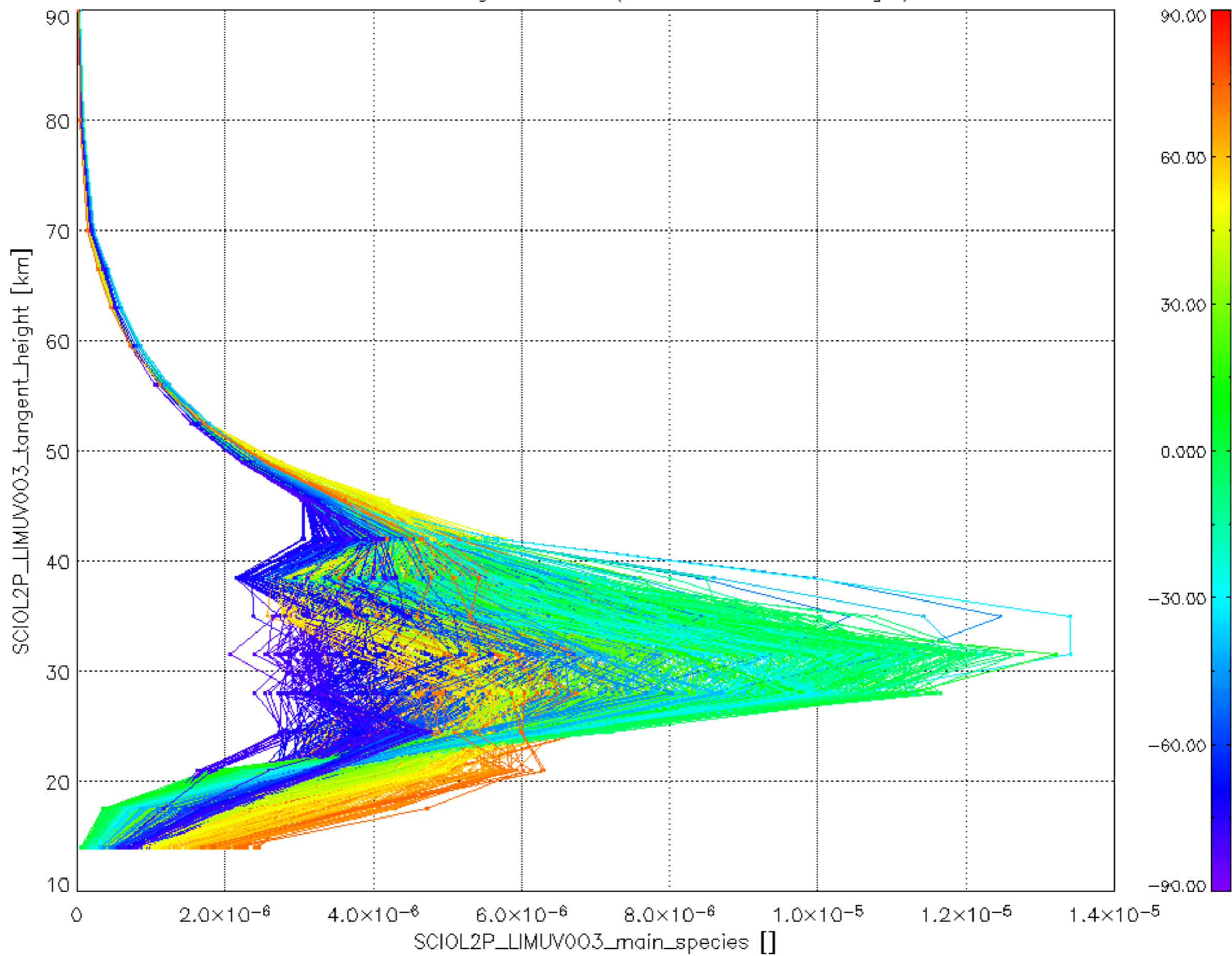
SCIOL2P\_NADUV1NO2\_amf\_gr for 28FEB2008 00:00:00 to 29FEB2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 28FEB2008 00:00:00 to 29FEB2008 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).

