

## 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	25FEB2008 06:03:29
Data source version	SCIA-OL/3.01-R
Processing scope for products	02FEB2008 00:00:00 to 03FEB2008 00:00:00
Start time of first product within scope	02FEB2008 00:19:00
Stop time of last product within scope	03FEB2008 00:42:42
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__2PRDPA20080202_001900_000033252065_00360_30975_2388.N1	02FEB2008 00:19:00	02FEB2008 01:14:25	0	GOOD
1	SCI_OL__2PRDPA20080202_020044_000032692065_00361_30976_2390.N1	02FEB2008 02:00:44	02FEB2008 02:55:13	0	GOOD
2	SCI_OL__2PRDPA20080202_034011_000033252065_00362_30977_2393.N1	02FEB2008 03:40:11	02FEB2008 04:35:36	0	GOOD
3	SCI_OL__2PRDPA20080202_052155_000032692065_00363_30978_2394.N1	02FEB2008 05:21:55	02FEB2008 06:16:25	0	GOOD
4	SCI_OL__2PRDPA20080202_070122_000033252065_00364_30979_2397.N1	02FEB2008 07:01:22	02FEB2008 07:56:47	0	GOOD
5	SCI_OL__2PRDPA20080202_084306_000032692065_00365_30980_2398.N1	02FEB2008 08:43:06	02FEB2008 09:37:36	0	GOOD
6	SCI_OL__2PRDPA20080202_102233_000033252065_00366_30981_2400.N1	02FEB2008 10:22:33	02FEB2008 11:17:58	0	GOOD
7	SCI_OL__2PRDPA20080202_120417_000032692065_00367_30982_2403.N1	02FEB2008 12:04:17	02FEB2008 12:58:46	0	GOOD
8	SCI_OL__2PRDPA20080202_134344_000033252065_00368_30983_2404.N1	02FEB2008 13:43:44	02FEB2008 14:39:09	0	GOOD
9	SCI_OL__2PRDPA20080202_152528_000032692065_00369_30984_2406.N1	02FEB2008 15:25:28	02FEB2008 16:19:57	0	GOOD
10	SCI_OL__2PRDPA20080202_170455_000033252065_00370_30985_2409.N1	02FEB2008 17:04:55	02FEB2008 18:00:20	0	GOOD
11	SCI_OL__2PRDPA20080202_184543_000033292065_00371_30986_2411.N1	02FEB2008 18:45:43	02FEB2008 19:41:13	0	GOOD
12	SCI_OL__2PRDPA20080202_202539_000033812065_00372_30987_2413.N1	02FEB2008 20:25:39	02FEB2008 21:22:00	0	GOOD
13	SCI_OL__2PRDPA20080202_220750_000032692065_00373_30988_2414.N1	02FEB2008 22:07:50	02FEB2008 23:02:20	0	GOOD
14	SCI_OL__2PRDPA20080202_234717_000033252065_00374_30989_2417.N1	02FEB2008 23:47:17	03FEB2008 00:42:42	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: 148720

Total number of cloud data DSRs with good quality flag (=0): 148720 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	148720	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	148720	0.16871	0.12500	0.12500	0.25000	0.059608	s
SURFACE_PRES	148720	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	148720	0.41891	0.39899	0.0000	1.0000	0.27151	-

CL_FRAC_ERR	148720	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	148720	5.3986	4.0000	4.0000	8.0000	1.9074	
PMD_READ_CL[0]	148720	0.21050	0.0000	0.0000	8.0000	1.0422	-
PMD_READ_CL[1]	148720	0.53313	0.0000	0.0000	8.0000	1.6384	-
CL_TOP_HEIGHT	121764	4.1640	3.1075	0.0000	17.000	3.6492	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	121764	54.155	43.953	0.0000	101.00	39.691	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	148720	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	148720	11001001	11000100	11000000	11100000	3161.8	flags
AERO_ABSO_IND	148720	2.7072	3.0220	-2.0409	13.338	1.9643	
AERO_IND_DIAG	148720	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	148720	01010101	00000000	00000000	11000000	24430.	flags

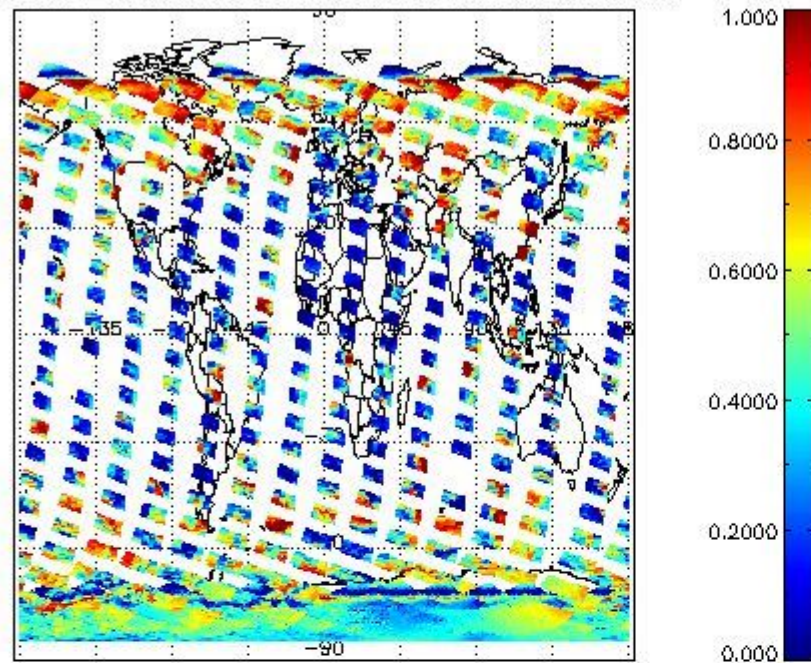
Time and geolocation plots:

Plots are available for the following parameters:

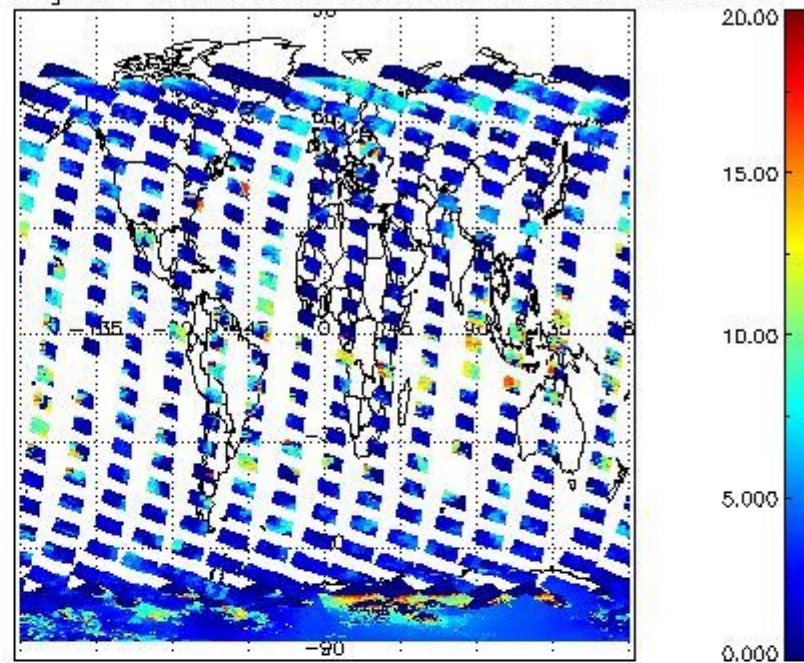
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



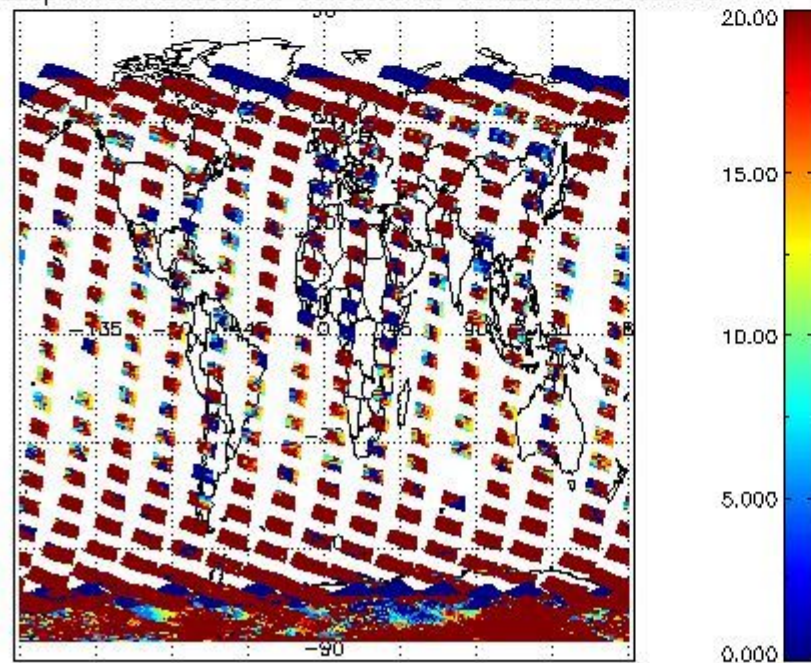
cL\_frac for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



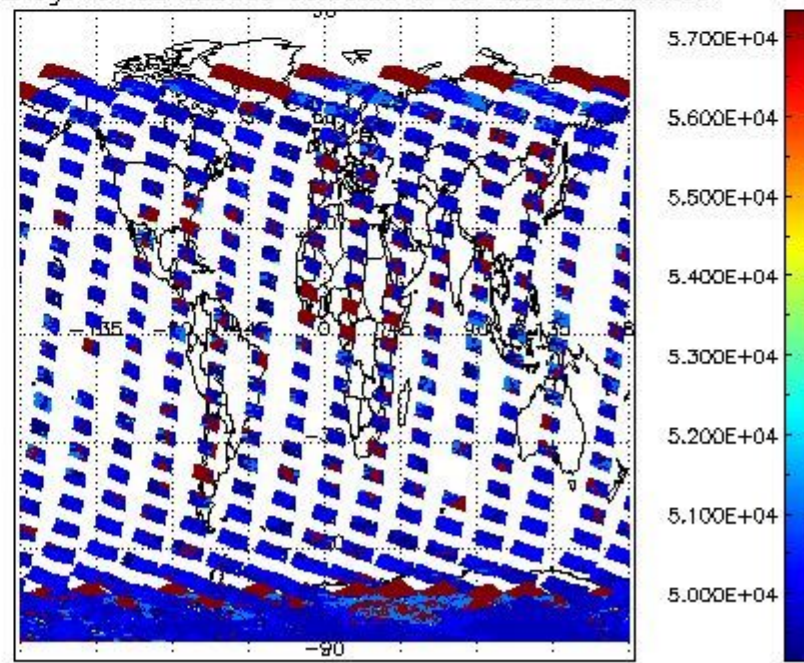
cL\_top\_height for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



cL\_opt\_depth for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



cloud\_flags for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



### 2.2.2 Nadir

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

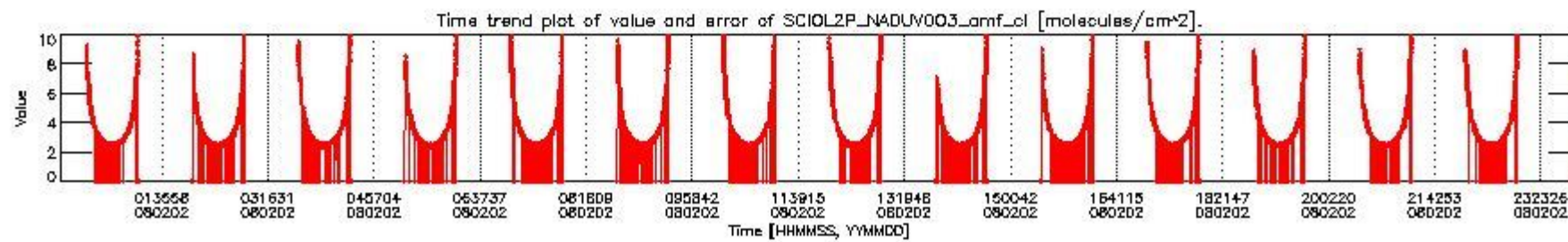
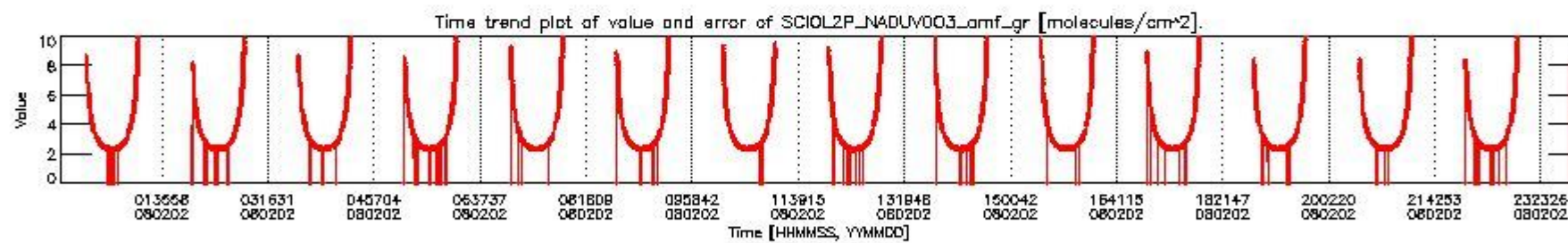
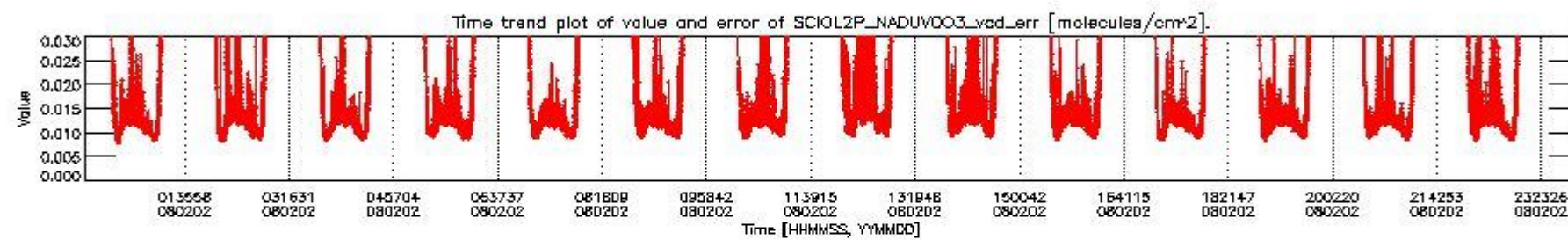
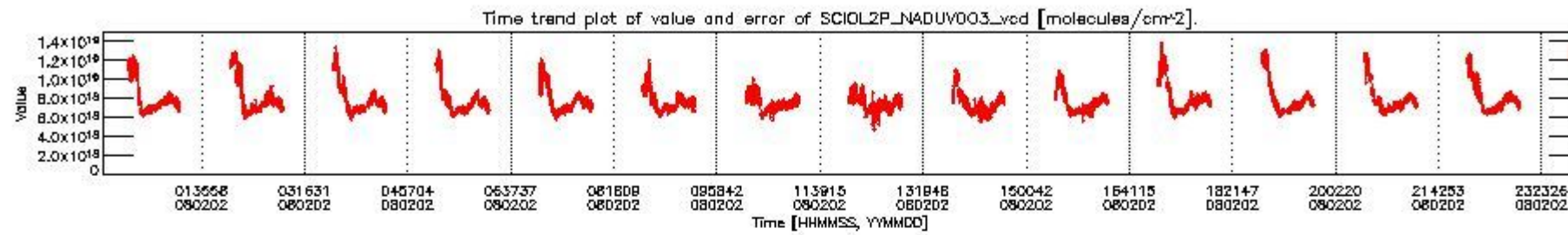
The following data items are currently included into this section:

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



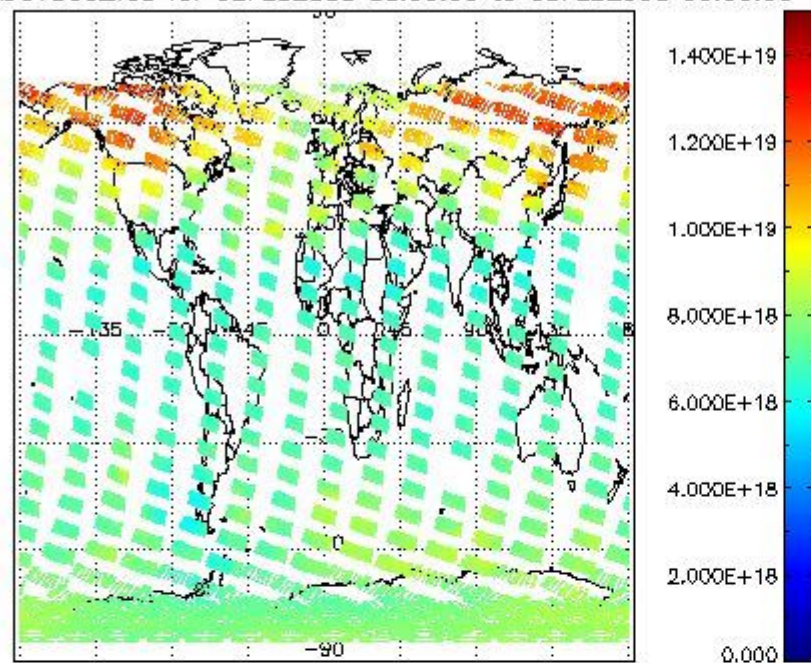
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

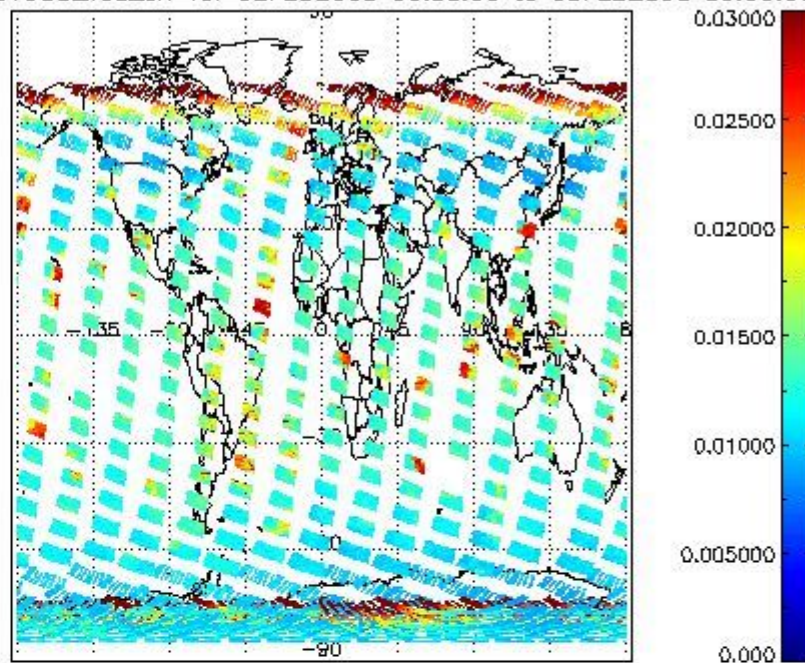




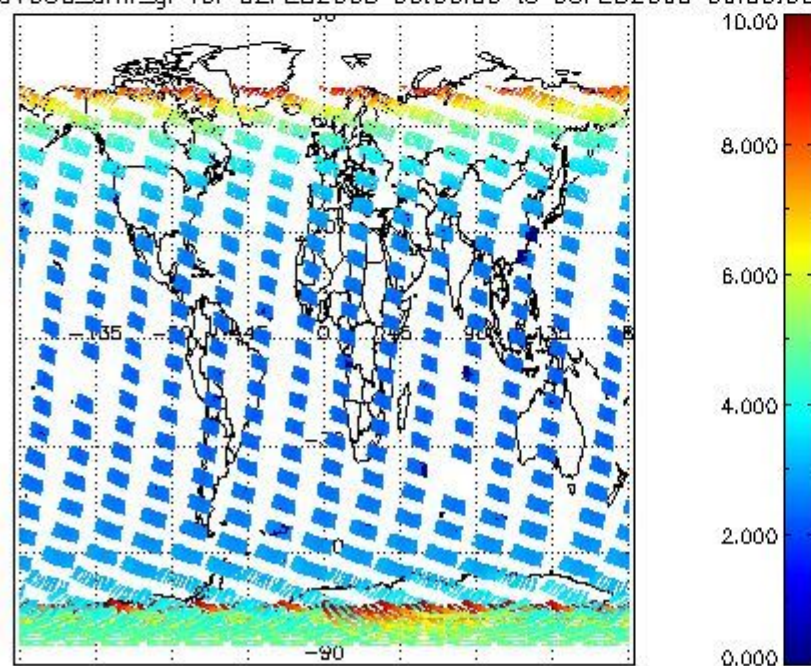
SCIOL2P\_NADUV003\_vcd for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



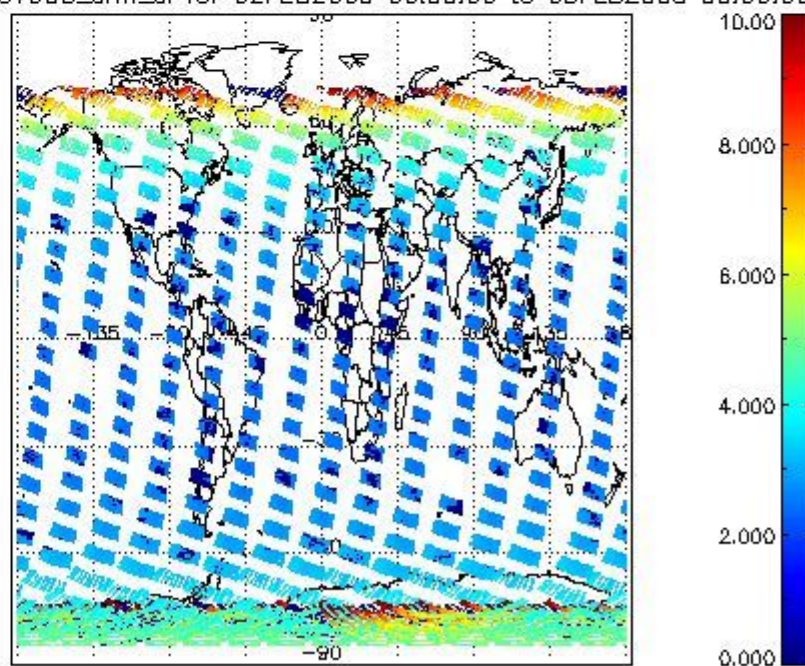
SCIOL2P\_NADUV003\_vcd\_err for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



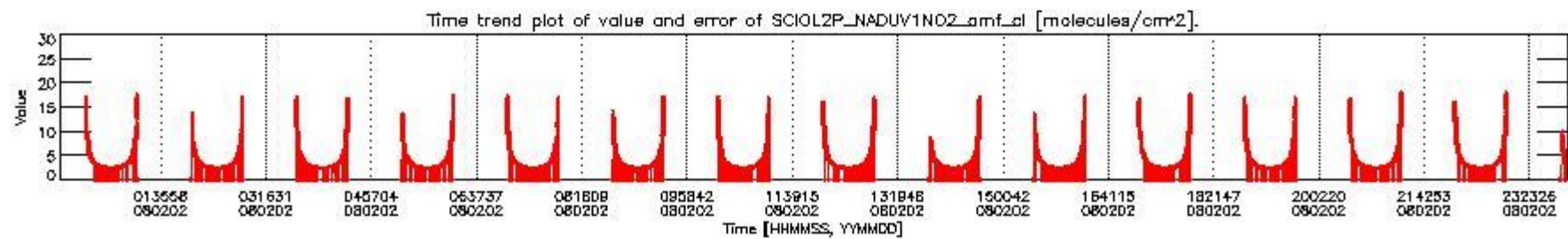
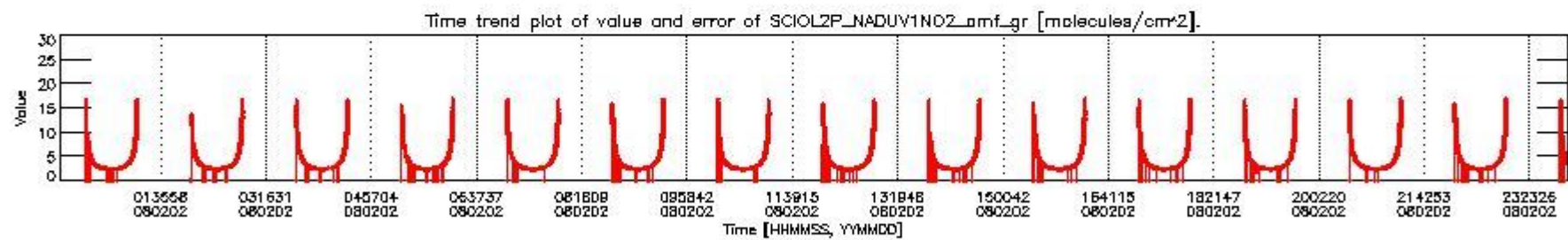
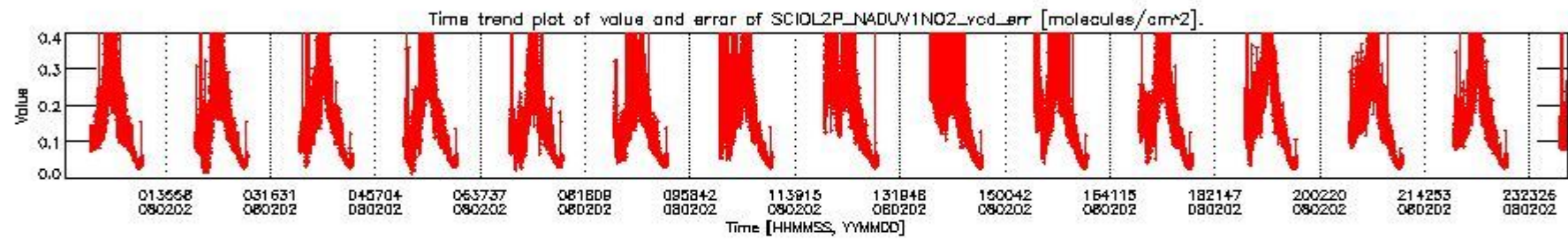
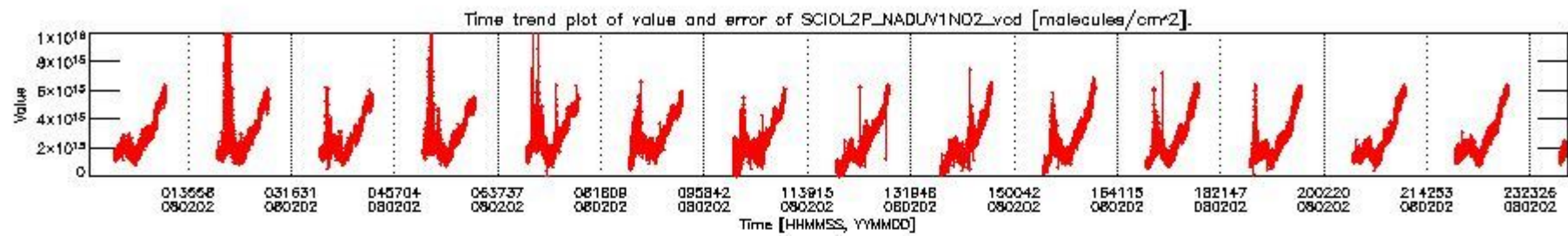
SCIOL2P\_NADUV003\_amf\_gr for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



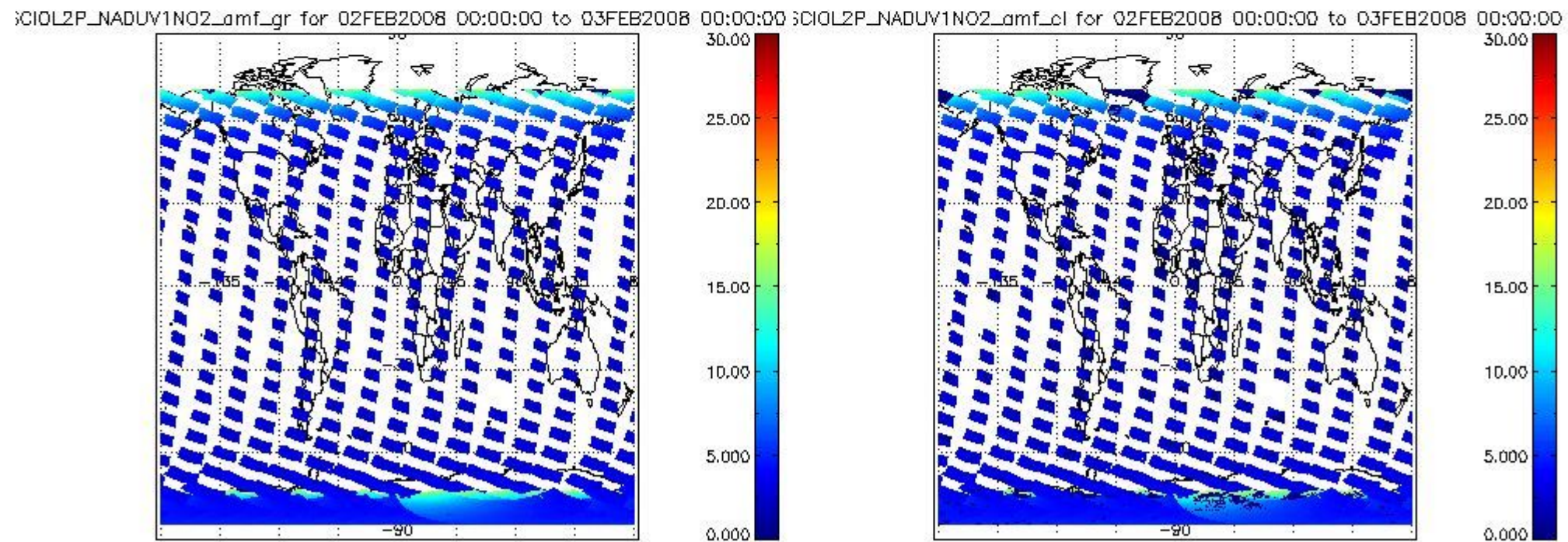
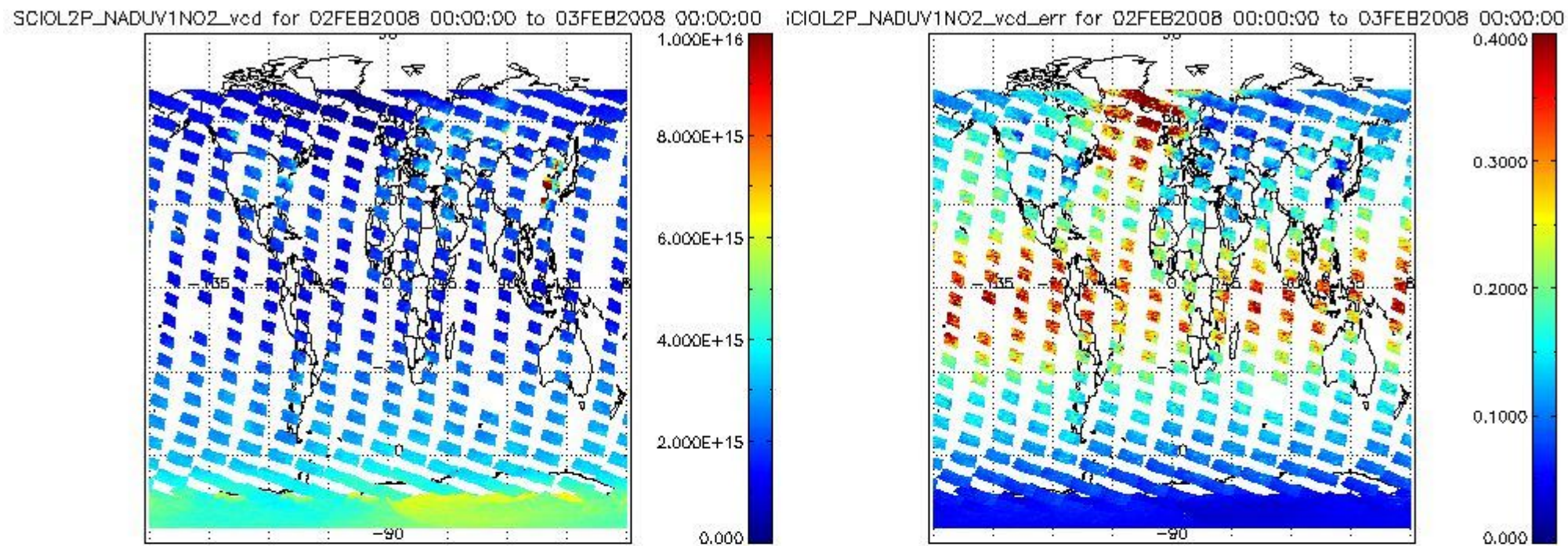
SCIOL2P\_NADUV003\_amf\_cl for 02FEB2008 00:00:00 to 03FEB2008 00:00:00











### 2.2.3 Limb

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

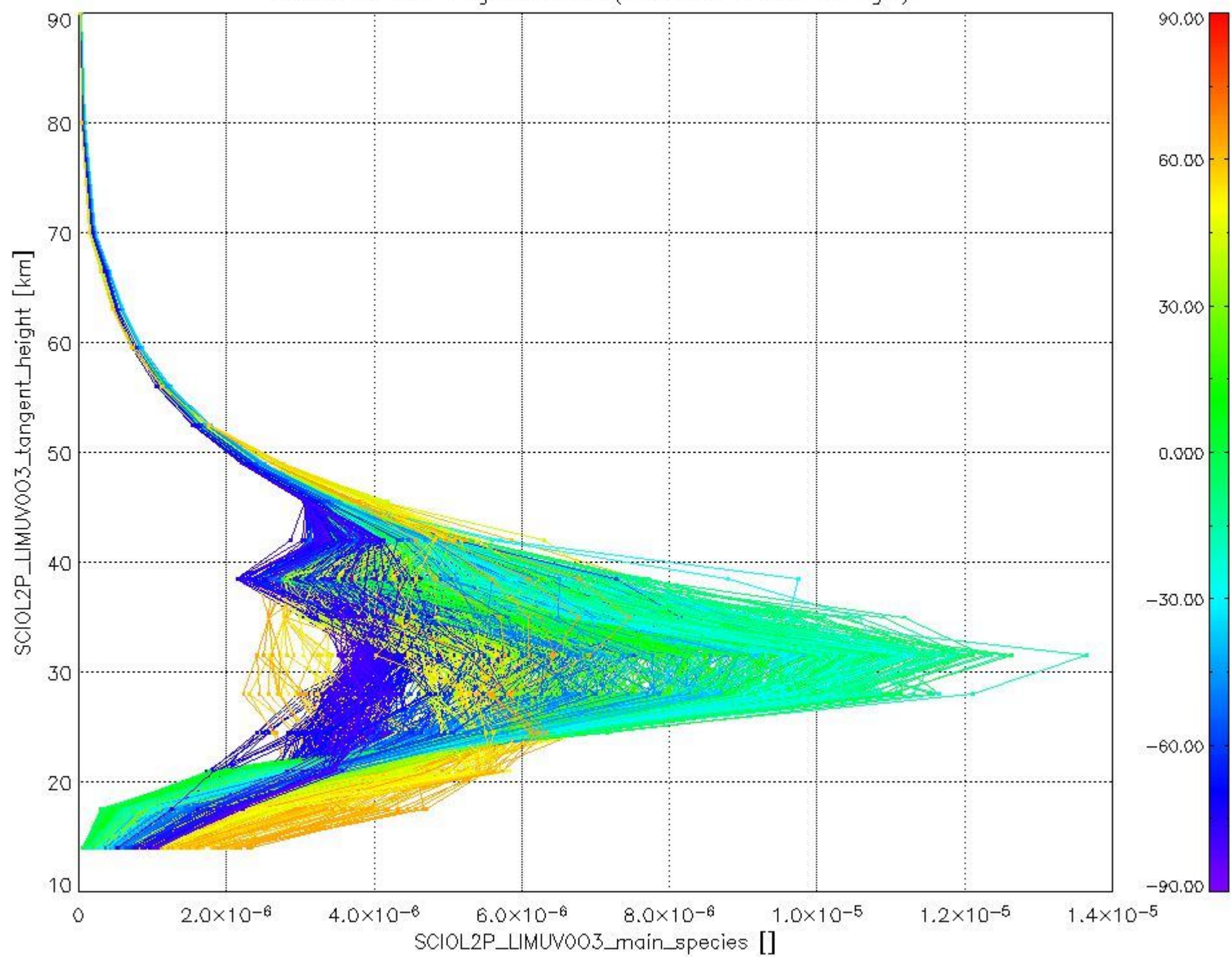
The following data items are currently included into this section:

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.

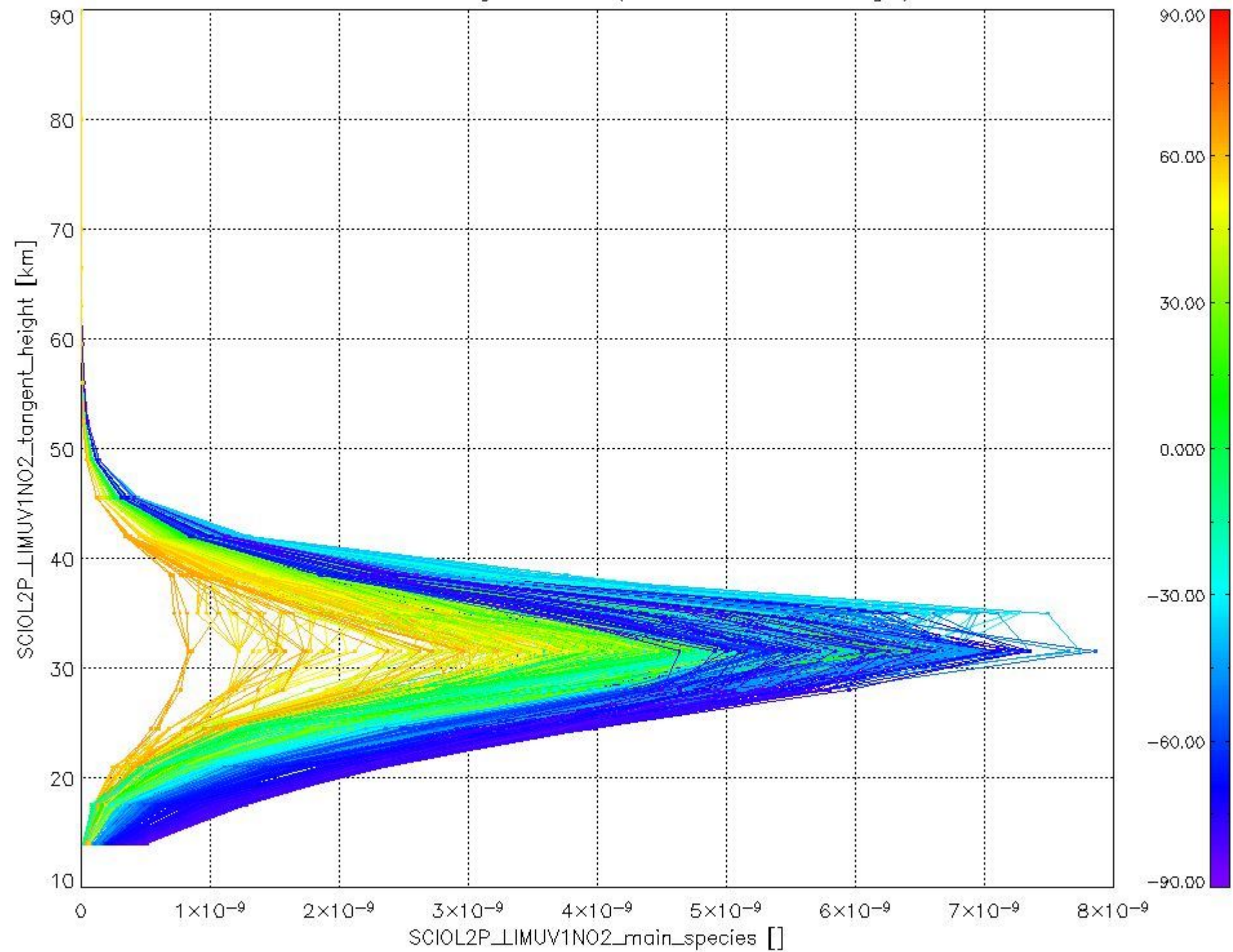


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





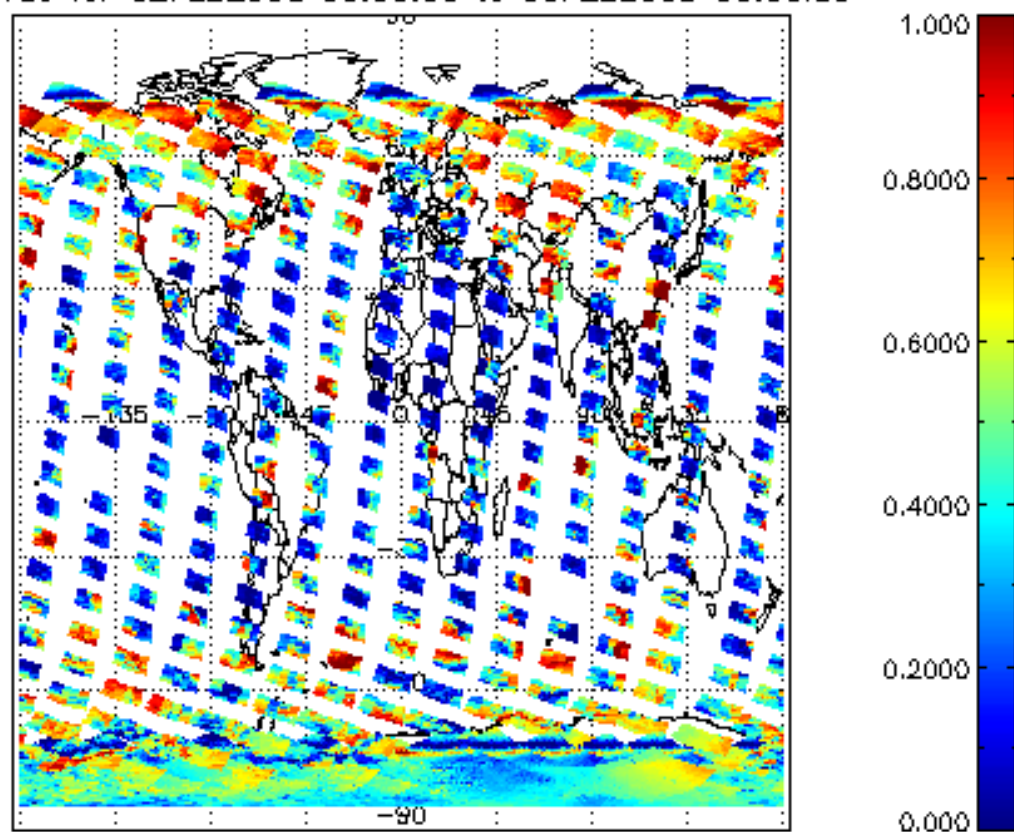
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



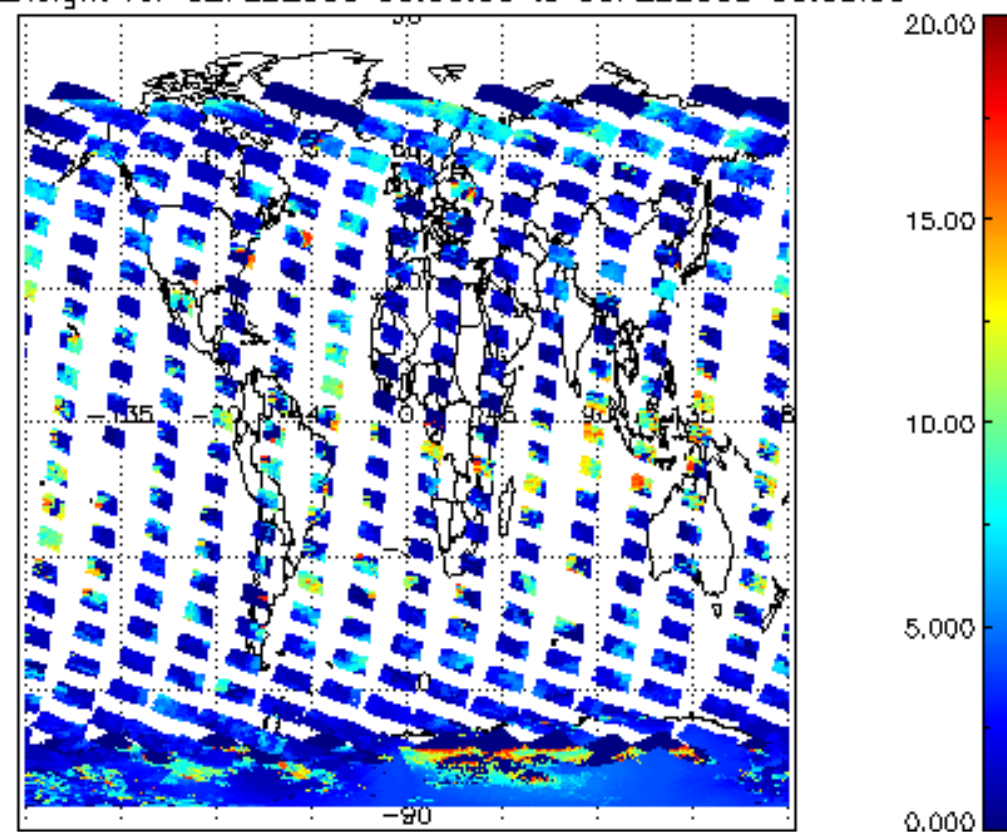
### 2.3 ADF monitoring

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

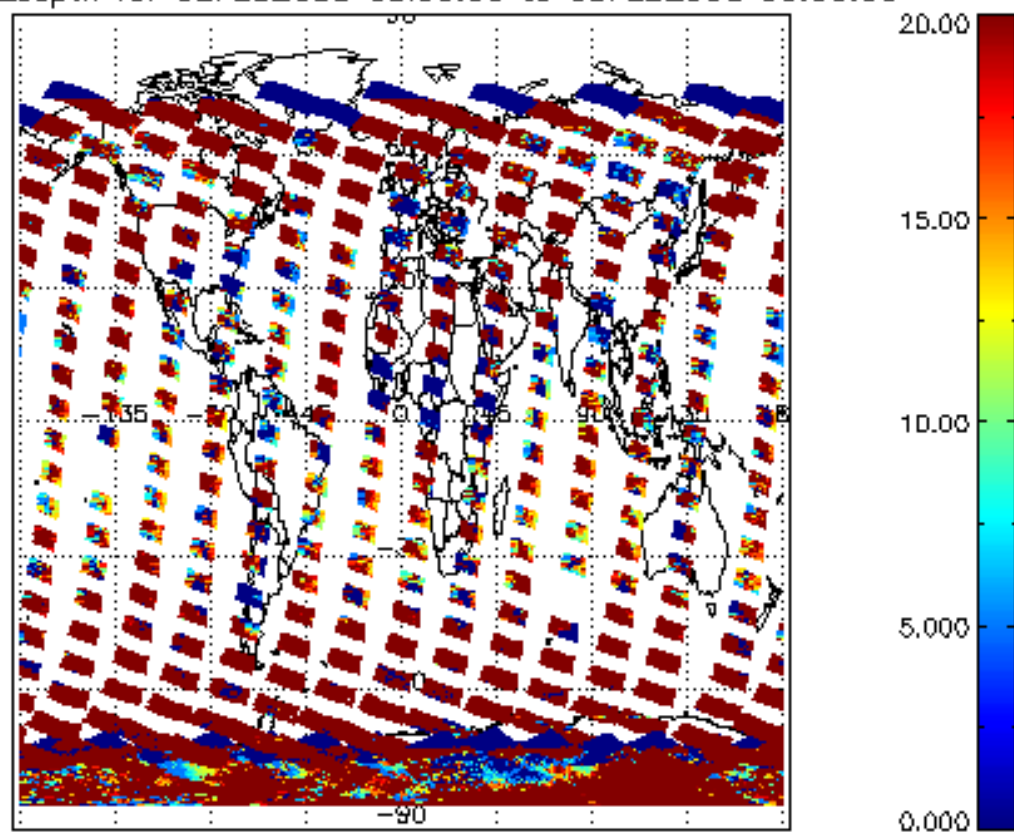
cl\_frac for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



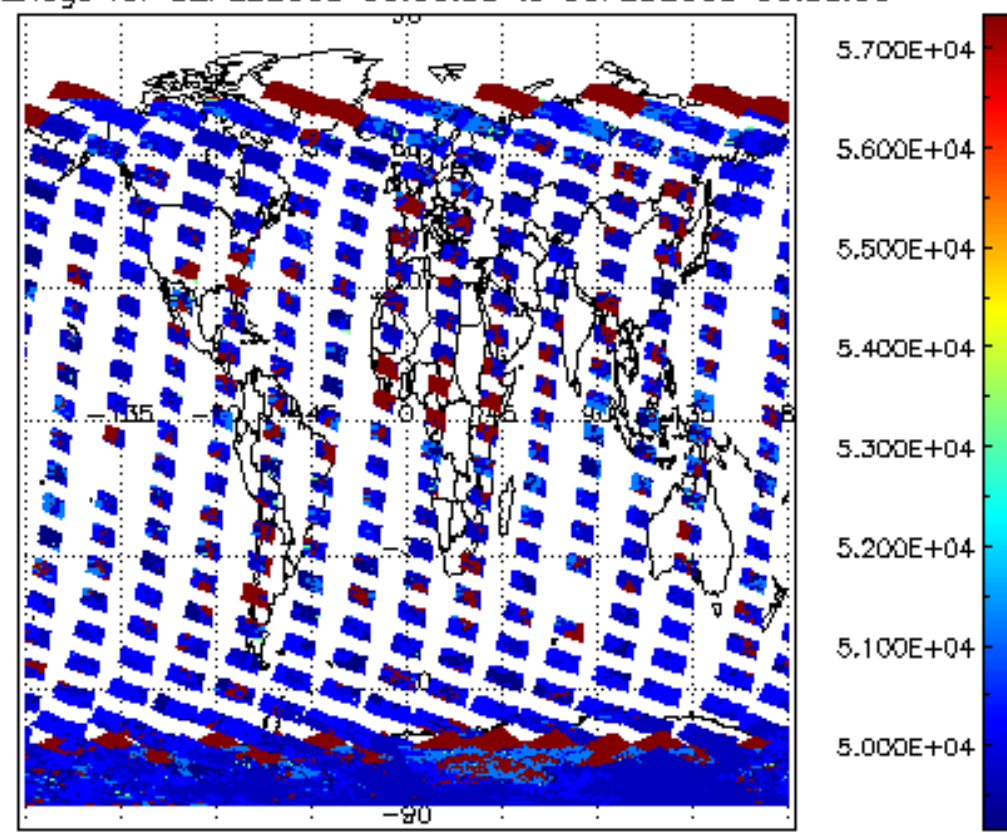
cl\_top\_height for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



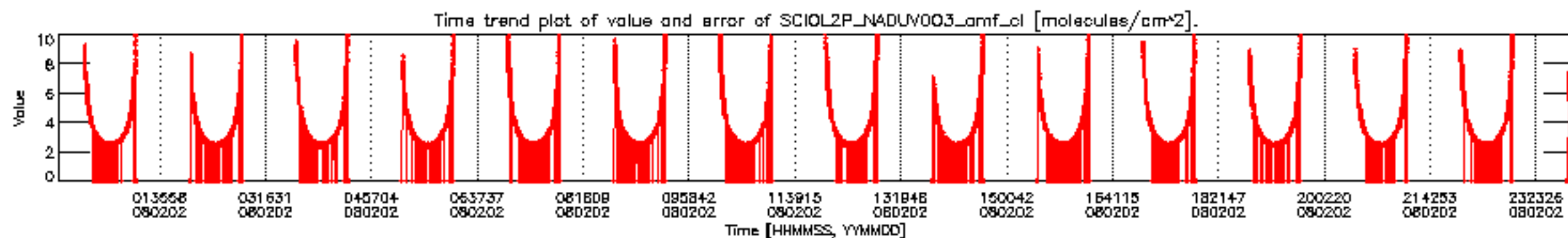
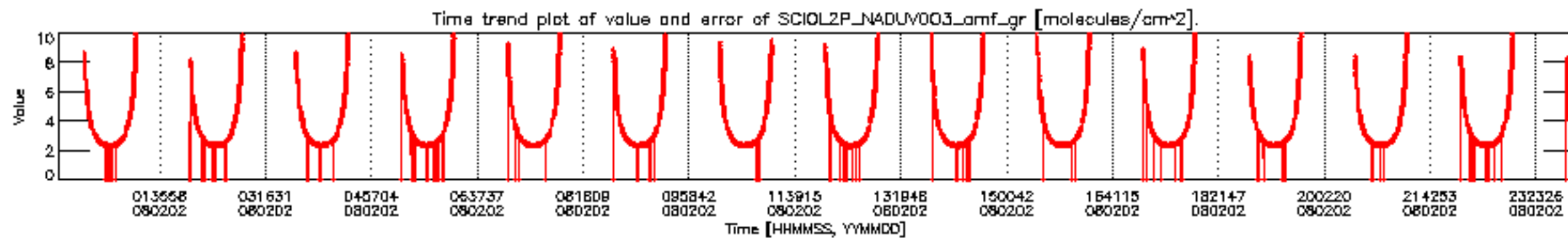
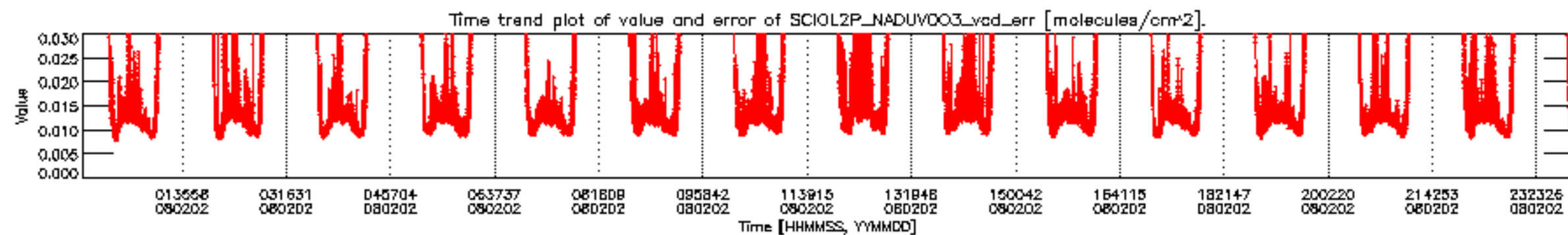
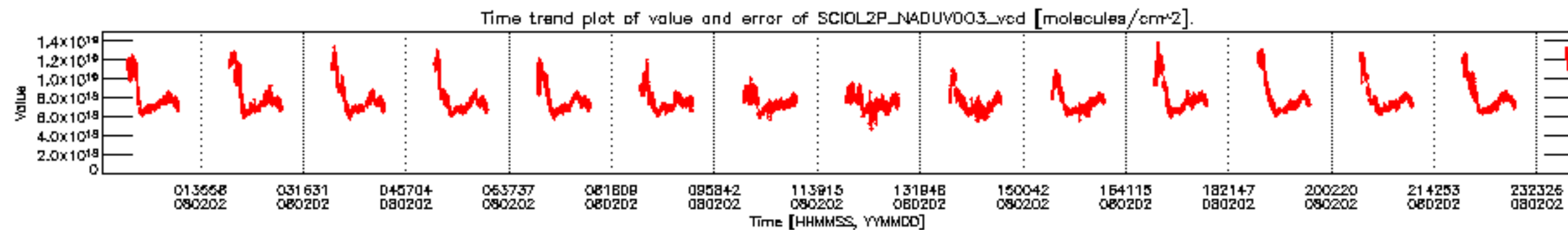
cl\_opt\_depth for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



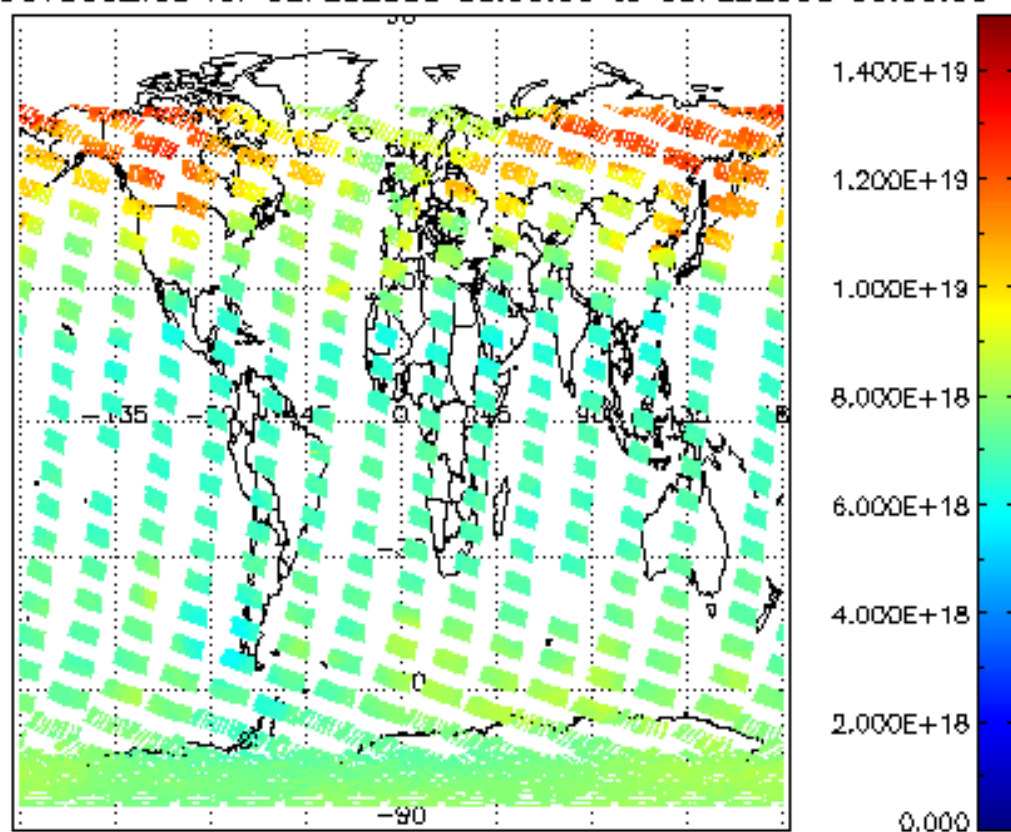
cloud\_flags for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



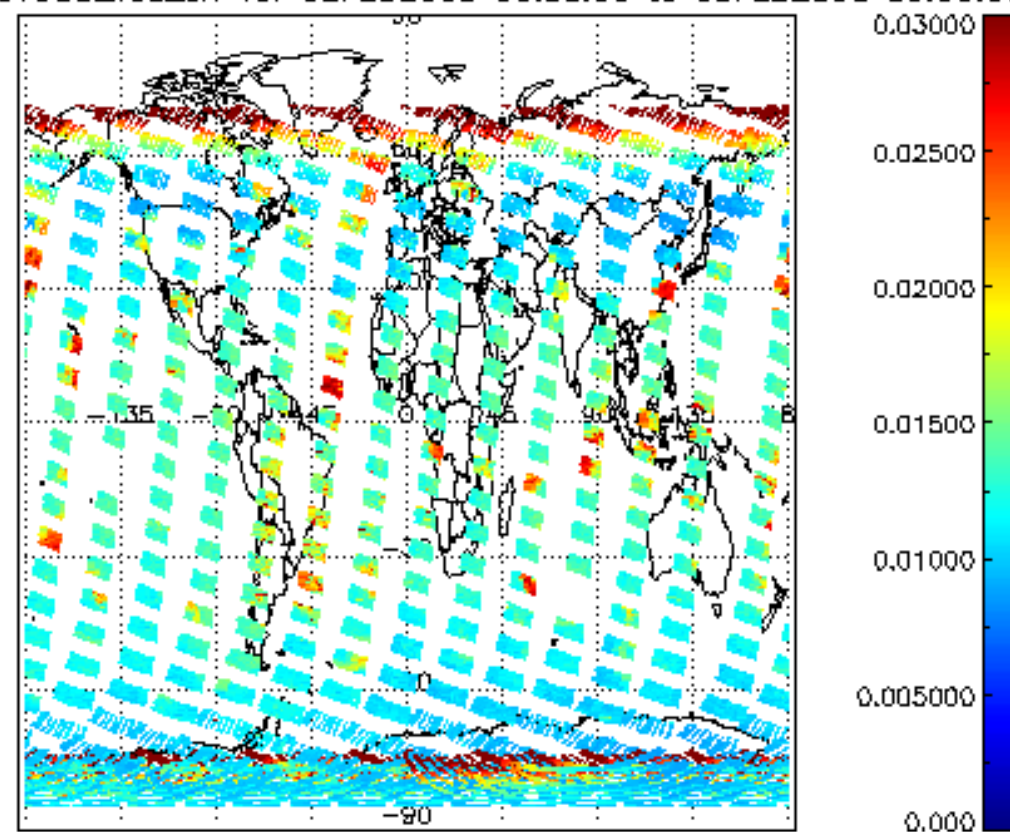




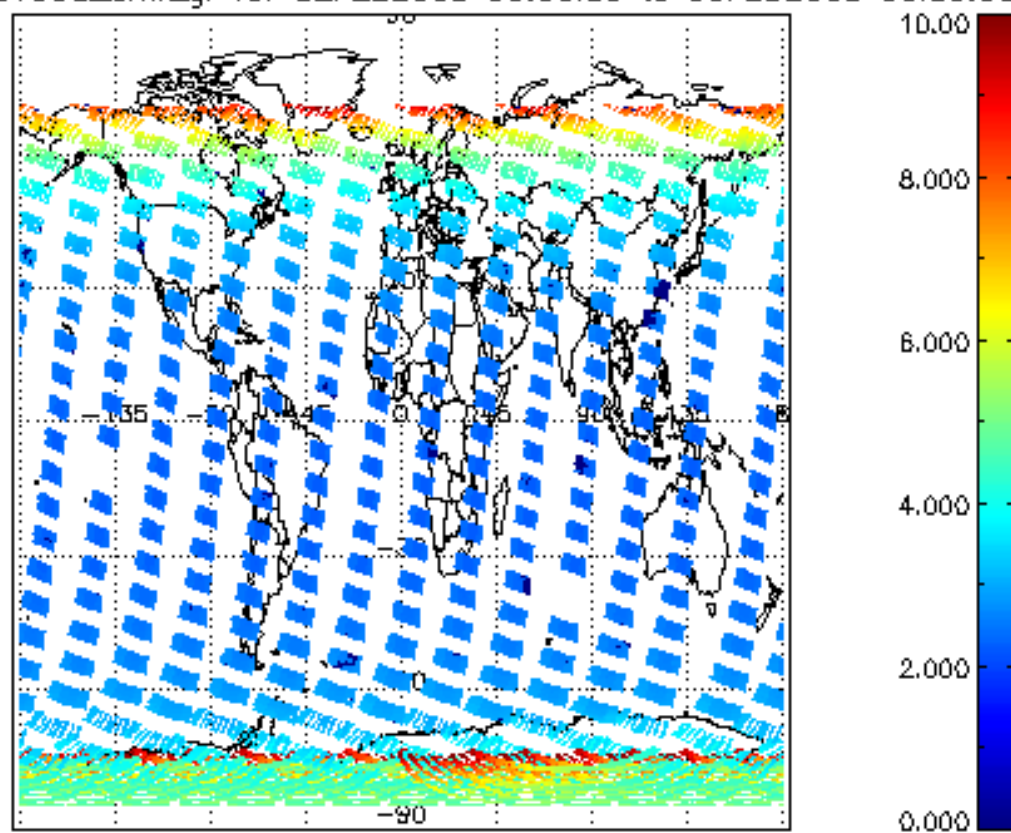
SCIOL2P\_NADUV003\_vcd for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



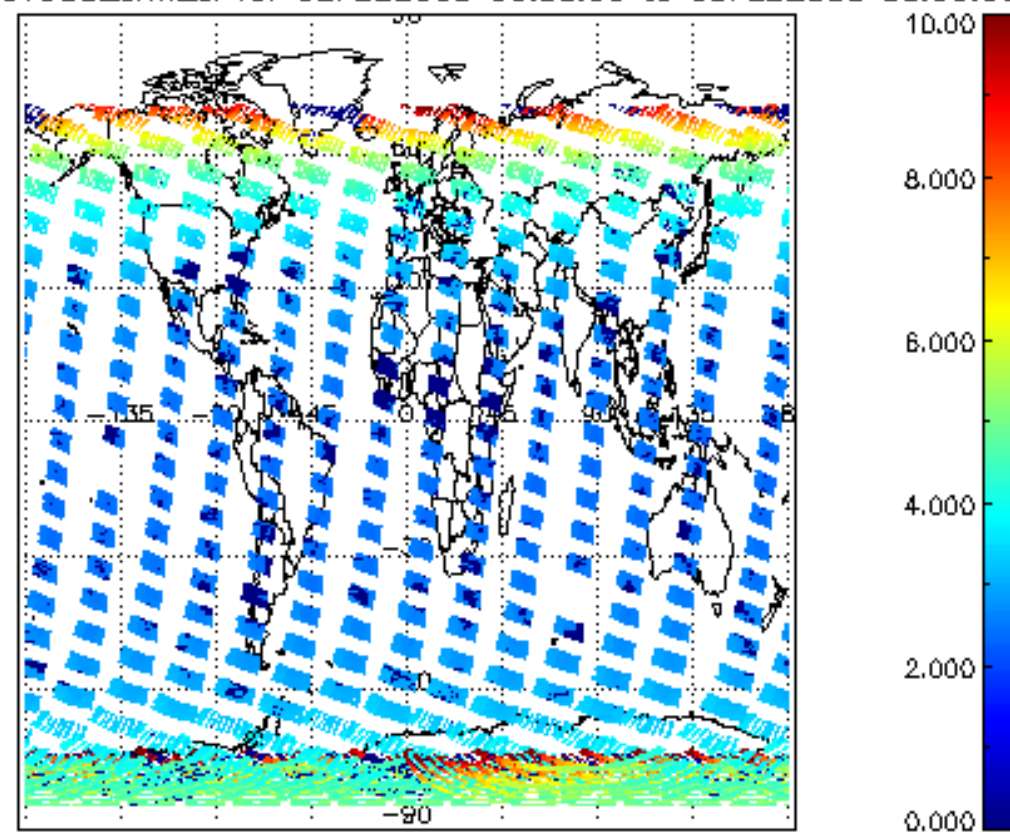
SCIOL2P\_NADUV003\_vcd\_err for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



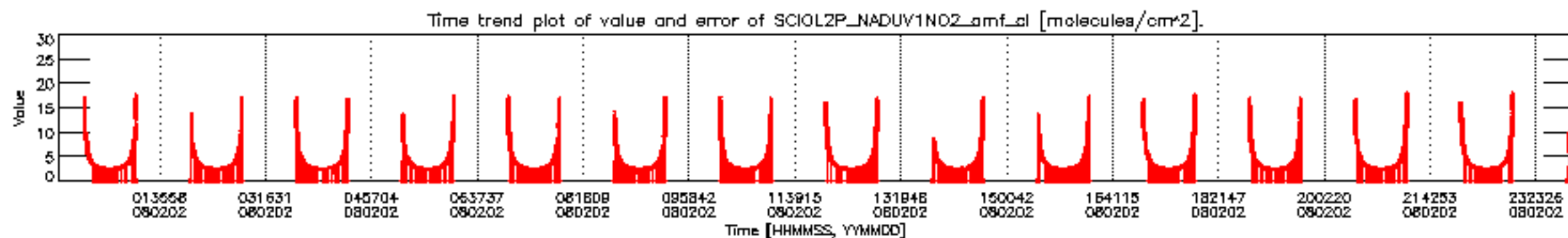
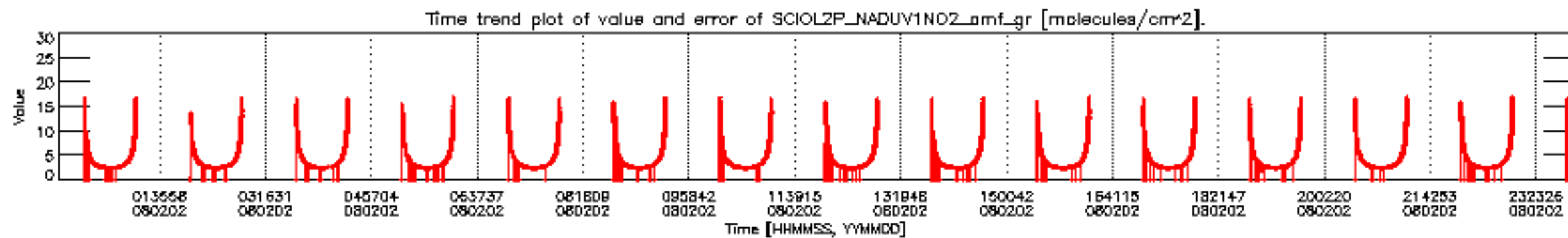
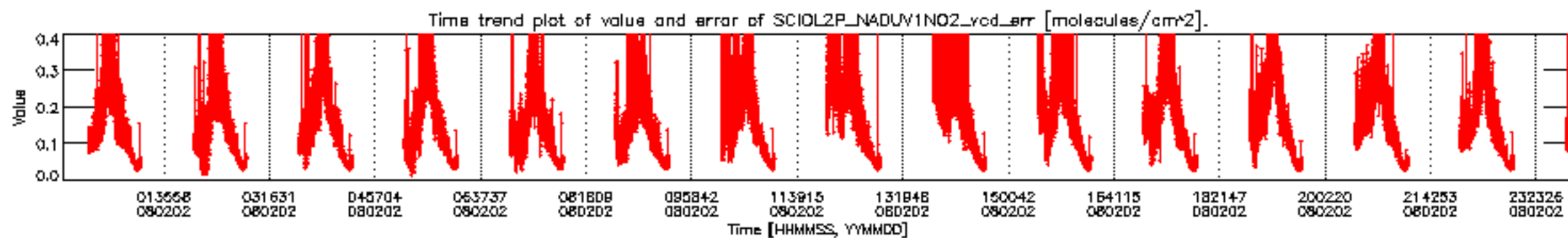
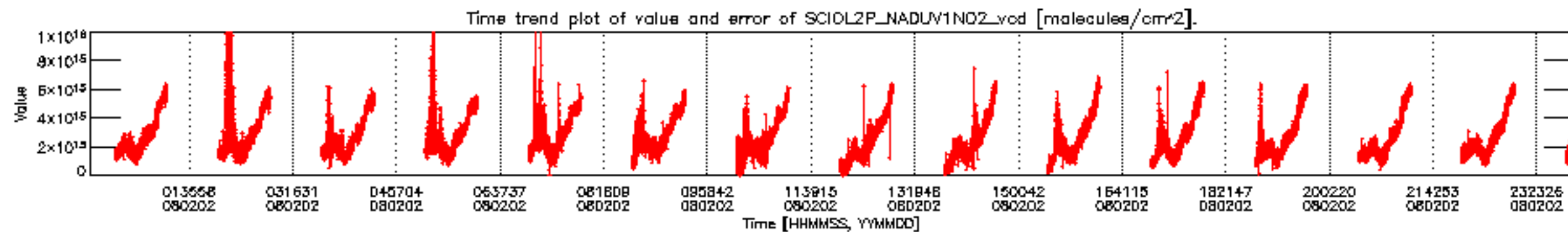
SCIOL2P\_NADUV003\_amf\_gr for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



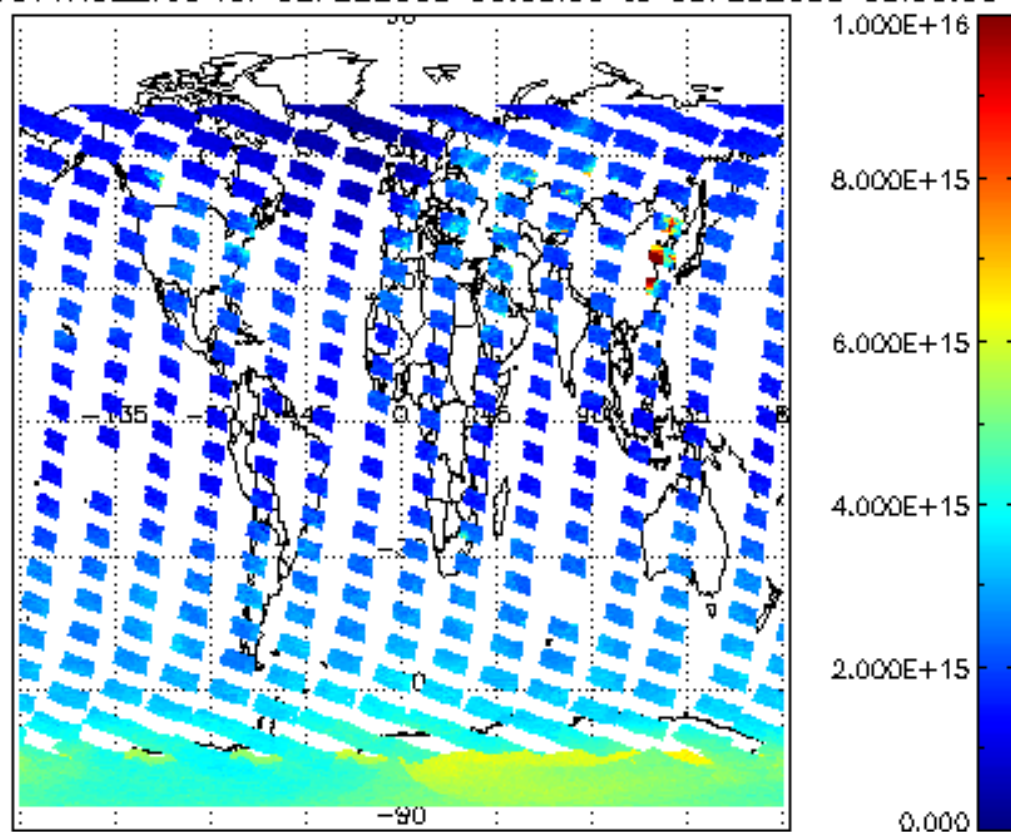
SCIOL2P\_NADUV003\_amf\_cl for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



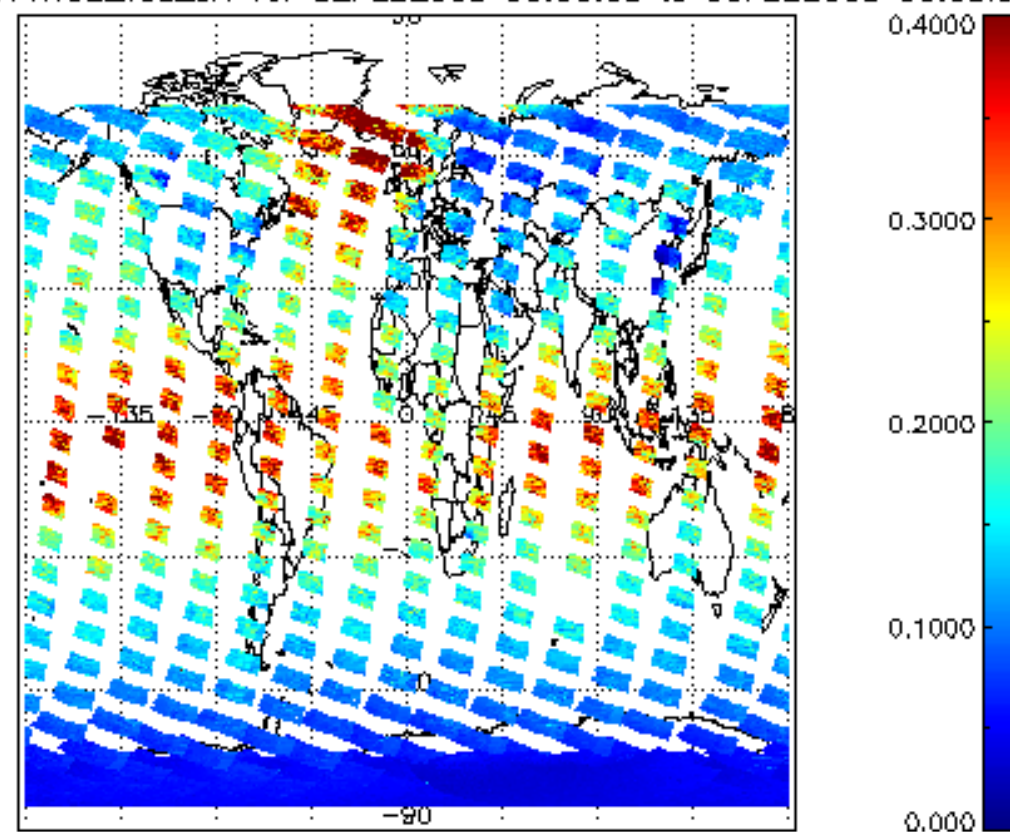




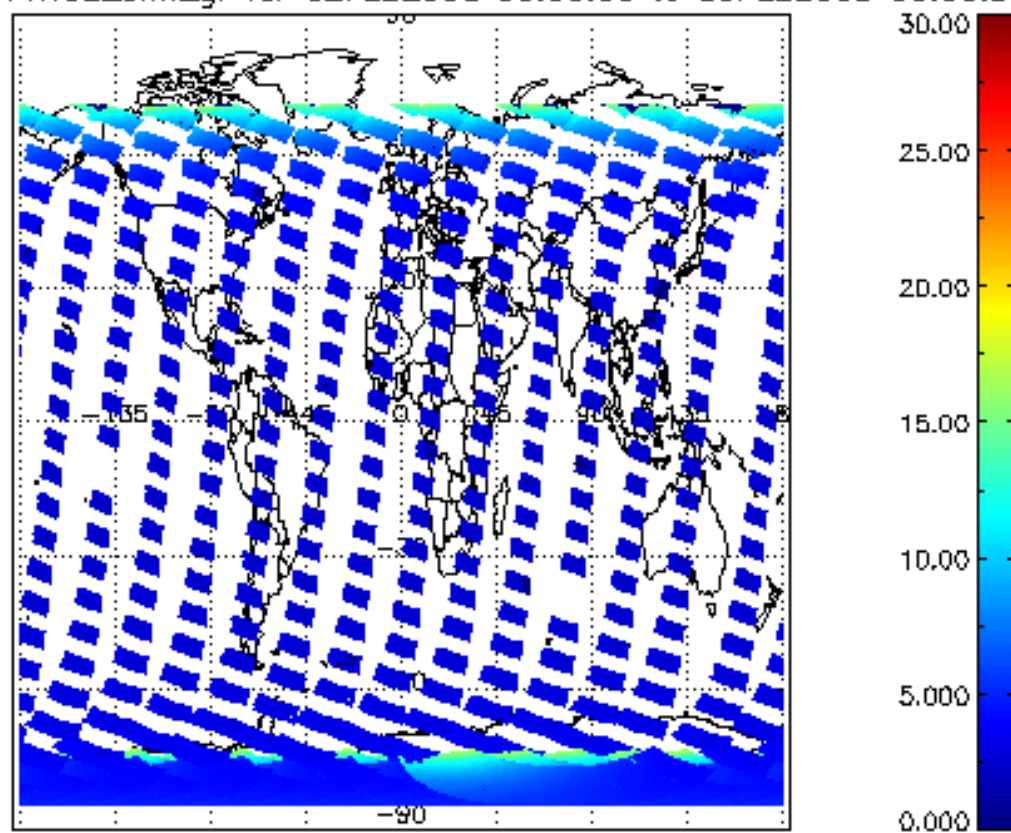
SCIOL2P\_NADUV1NO2\_vcd for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



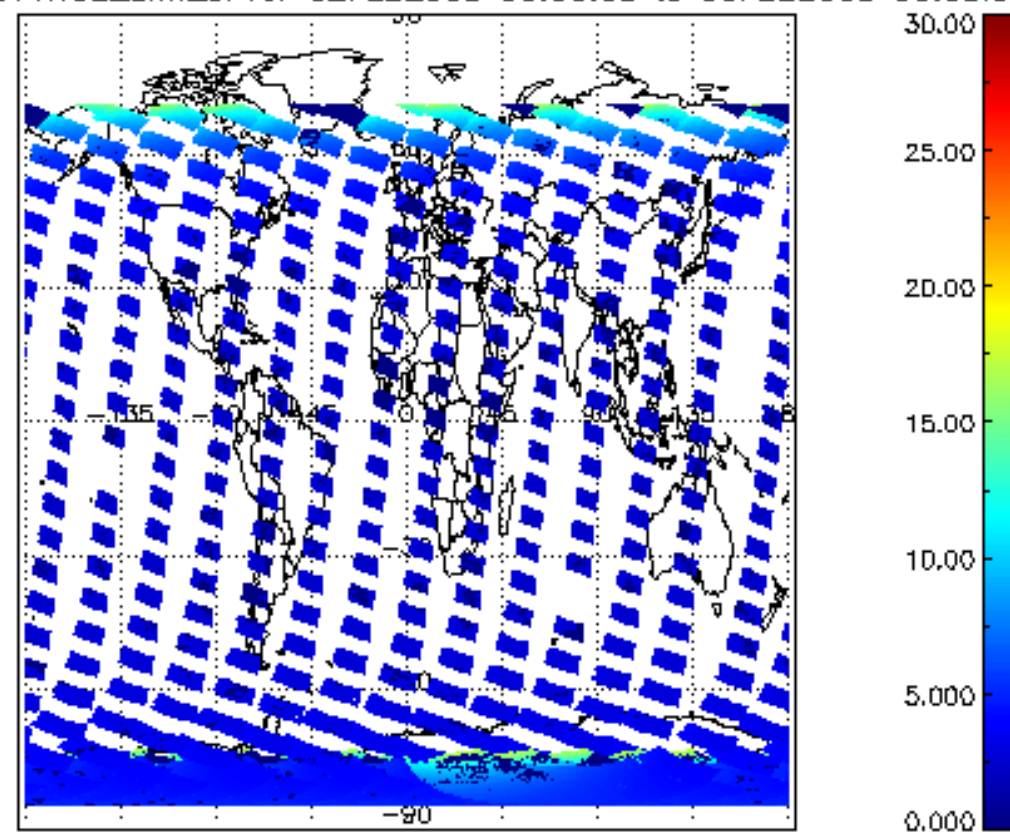
SCIOL2P\_NADUV1NO2\_vcd\_err for 02FEB2008 00:00:00 to 03FEB2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 02FEB2008 00:00:00 to 03FEB2008 00:00:00

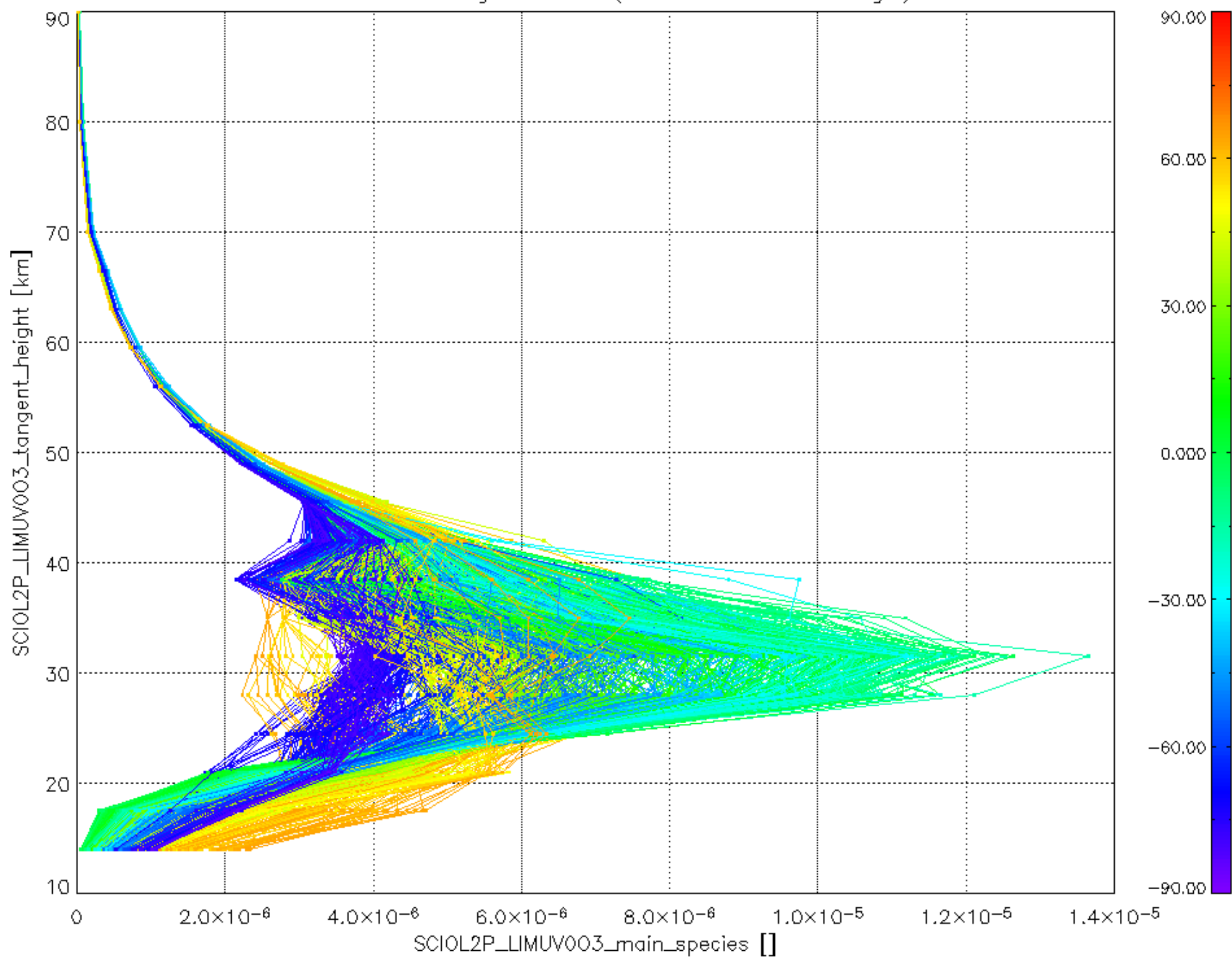


SCIOL2P\_NADUV1NO2\_amf\_cl for 02FEB2008 00:00:00 to 03FEB2008 00:00:00





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).

