

## 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	1.5 (01-07-2008)
Time of report generation	16JUL2008 06:02:45
Data source version	SCIA-OL/3.01-R
Processing scope for products	28JUN2008 00:00:00 to 29JUN2008 00:00:00
Start time of first product within scope	27JUN2008 23:46:22
Stop time of last product within scope	29JUN2008 00:09:59
Total number of level 2 products	14
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__2PRDPA20080627_234622_000033122069_00460_33079_2614.N1	27JUN2008 23:46:22	28JUN2008 00:41:35	0	GOOD
1	SCI_OL__2PRDPA20080628_012658_000033252069_00461_33080_2616.N1	28JUN2008 01:26:58	28JUN2008 02:22:24	0	GOOD
2	SCI_OL__2PRDPA20080628_044810_000033252069_00463_33082_2618.N1	28JUN2008 04:48:10	28JUN2008 05:43:36	0	GOOD
3	SCI_OL__2PRDPA20080628_062846_000033122069_00464_33083_2620.N1	28JUN2008 06:28:46	28JUN2008 07:23:59	0	GOOD
4	SCI_OL__2PRDPA20080628_080922_000033252069_00465_33084_2623.N1	28JUN2008 08:09:22	28JUN2008 09:04:48	0	GOOD
5	SCI_OL__2PRDPA20080628_094958_000033122069_00466_33085_2625.N1	28JUN2008 09:49:58	28JUN2008 10:45:11	0	GOOD
6	SCI_OL__2PRDPA20080628_113034_000033122069_00467_33086_2627.N1	28JUN2008 11:30:34	28JUN2008 12:25:47	0	GOOD
7	SCI_OL__2PRDPA20080628_131110_000033122069_00468_33087_2629.N1	28JUN2008 13:11:10	28JUN2008 14:06:23	0	GOOD
8	SCI_OL__2PRDPA20080628_145146_000033252069_00469_33088_2630.N1	28JUN2008 14:51:46	28JUN2008 15:47:11	0	GOOD
9	SCI_OL__2PRDPA20080628_163222_000033122069_00470_33089_2633.N1	28JUN2008 16:32:22	28JUN2008 17:27:35	0	GOOD
10	SCI_OL__2PRDPA20080628_181218_000033812069_00471_33090_2634.N1	28JUN2008 18:12:18	28JUN2008 19:08:39	0	GOOD
11	SCI_OL__2PRDPA20080628_195254_000033682069_00472_33091_2637.N1	28JUN2008 19:52:54	28JUN2008 20:49:02	0	GOOD
12	SCI_OL__2PRDPA20080628_213410_000033252069_00473_33092_2638.N1	28JUN2008 21:34:10	28JUN2008 22:29:35	0	GOOD
13	SCI_OL__2PRDPA20080628_231446_000033122069_00474_33093_2640.N1	28JUN2008 23:14:46	29JUN2008 00:09:59	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: 136760

Total number of cloud data DSRs with good quality flag (=0): 136760 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	136760	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	136760	0.17300	0.12500	0.12500	0.25000	0.060796	s
CL_FRAC	136760	0.28968	0.20710	0.0000	1.0000	0.28849	-
CL_FRAC_ERR	136760	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	136760	5.5361	4.0000	4.0000	8.0000	1.9455	

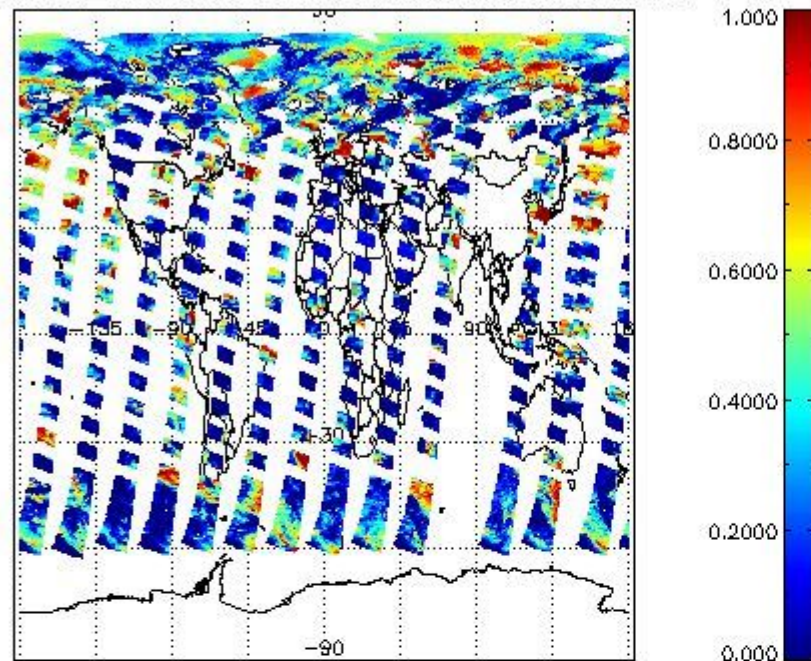
PMD_READ_CL[0]	136760	0.19509	0.0000	0.0000	8.0000	1.0142	-
PMD_READ_CL[1]	136760	1.8119	0.0000	0.0000	8.0000	2.5735	-
CL_TOP_HEIGHT	119462	3.0213	1.1030	0.0000	17.000	3.7119	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	119462	54.103	47.422	0.0000	101.00	44.986	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	136760	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	136760	11001101	11000100	11000000	11100000	3631.6	flags
AERO_ABSO_IND	136760	3.3177	3.6961	-1.3258	12.972	2.2025	
AERO_IND_DIAG	136760	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	136760	01011011	00000000	00000000	11000000	24552.	flags

Time and geolocation plots:

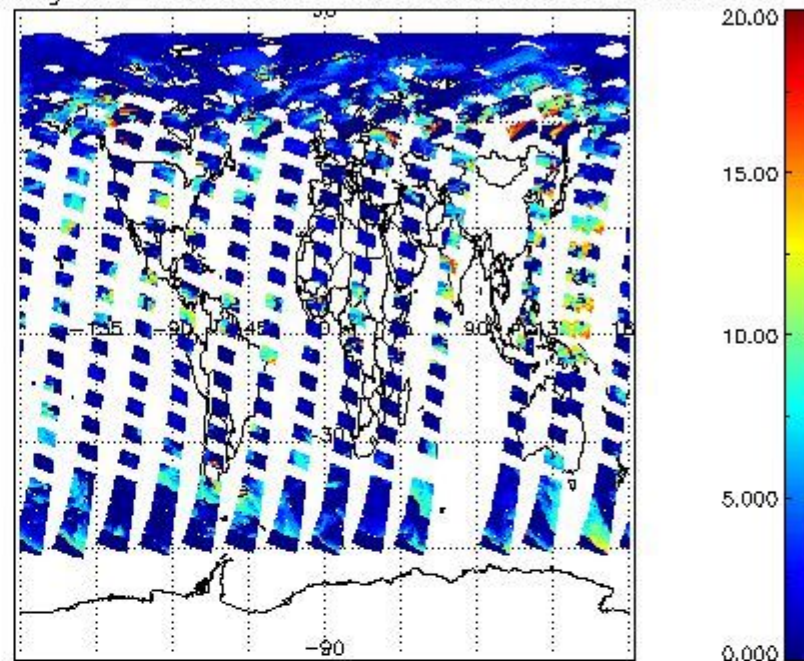
Plots are available for the following parameters:

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

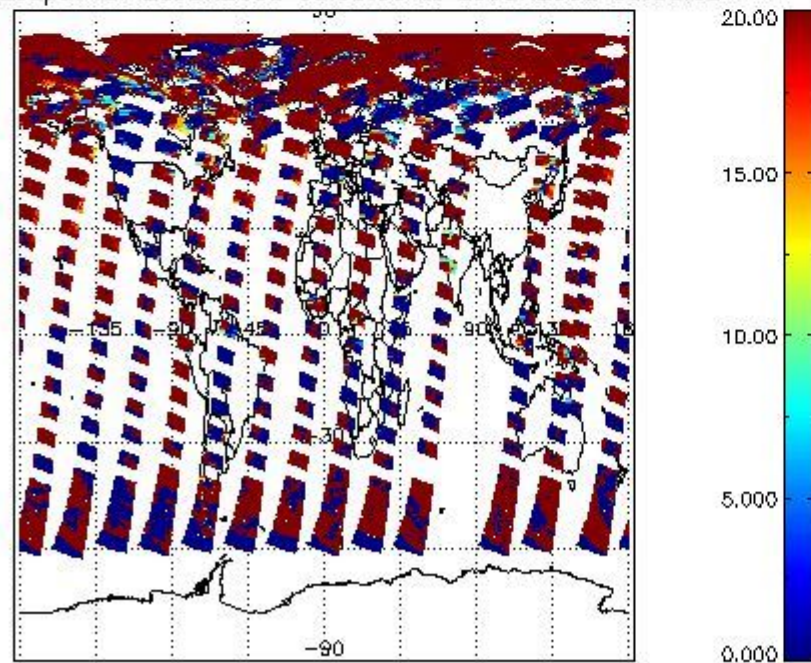
cL\_frac for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



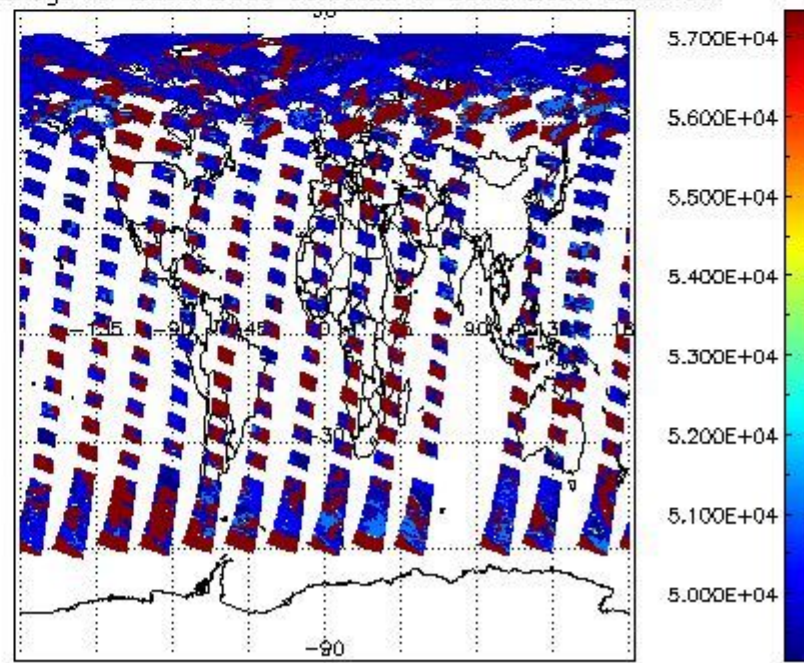
cL\_top\_height for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



cL\_opt\_depth for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



cloud\_flags for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



### 2.2.2 Nadir

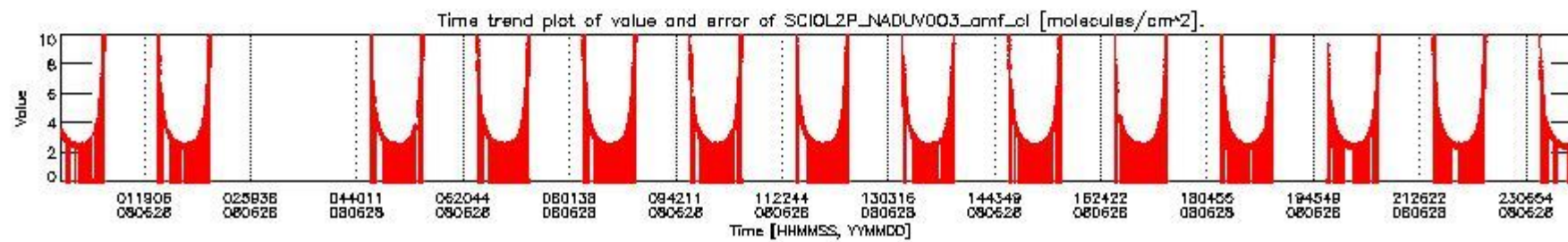
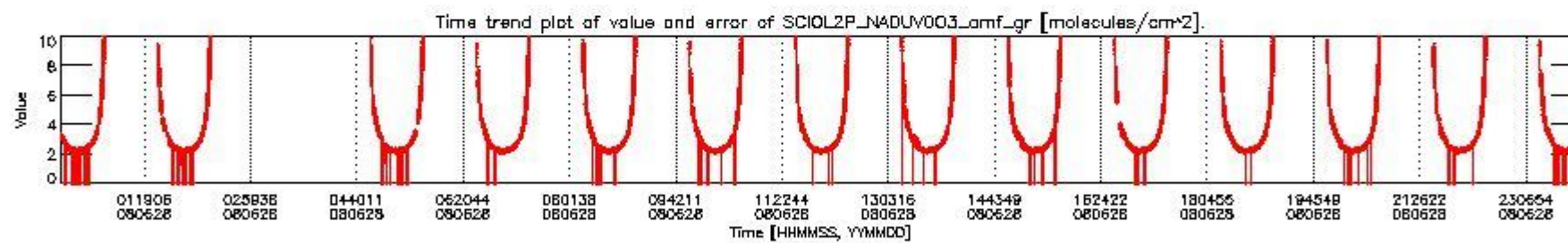
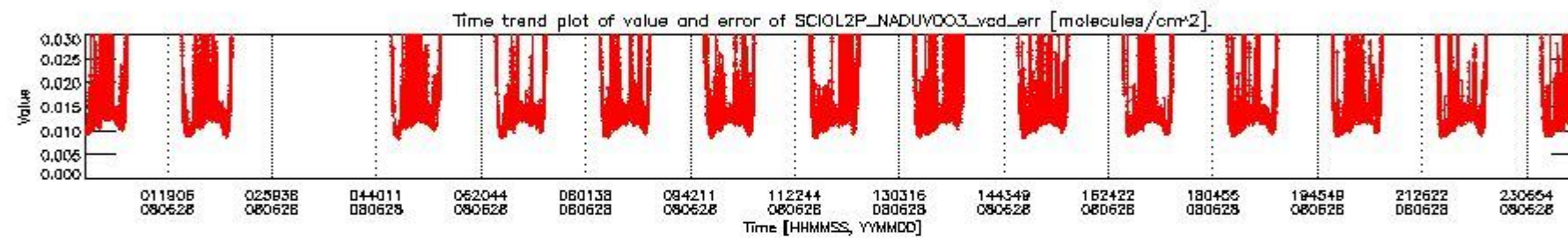
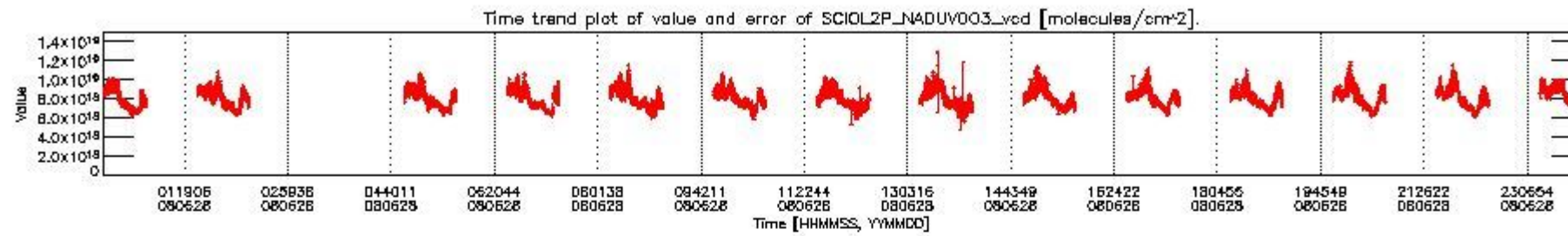
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

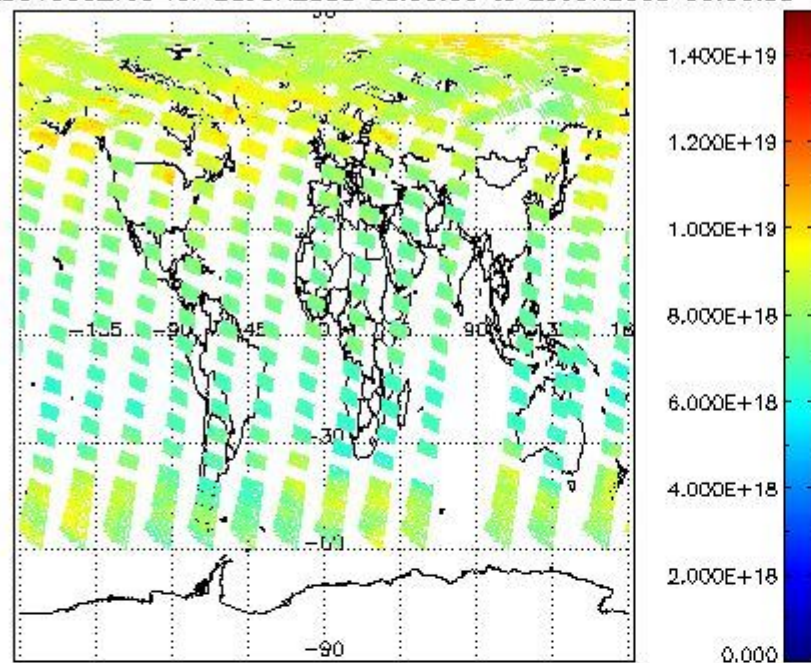
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

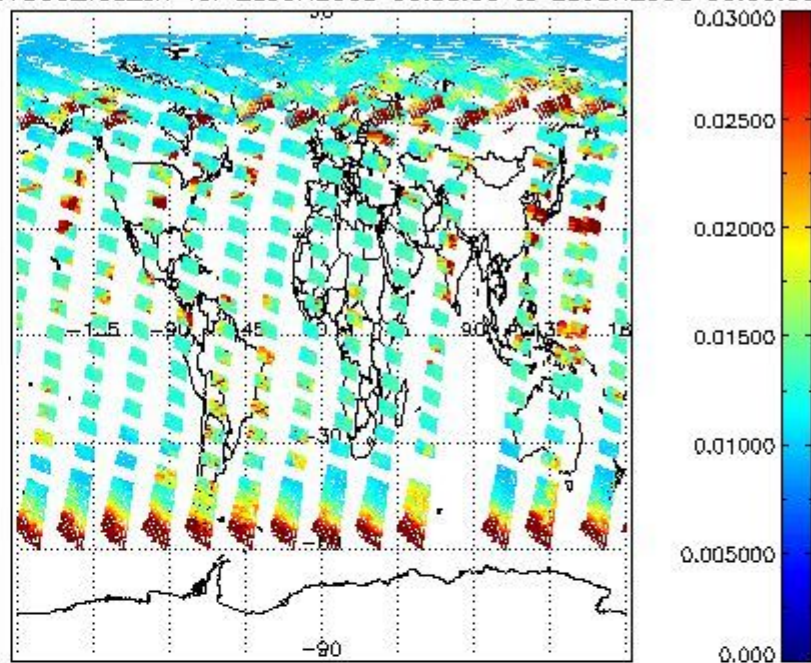
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



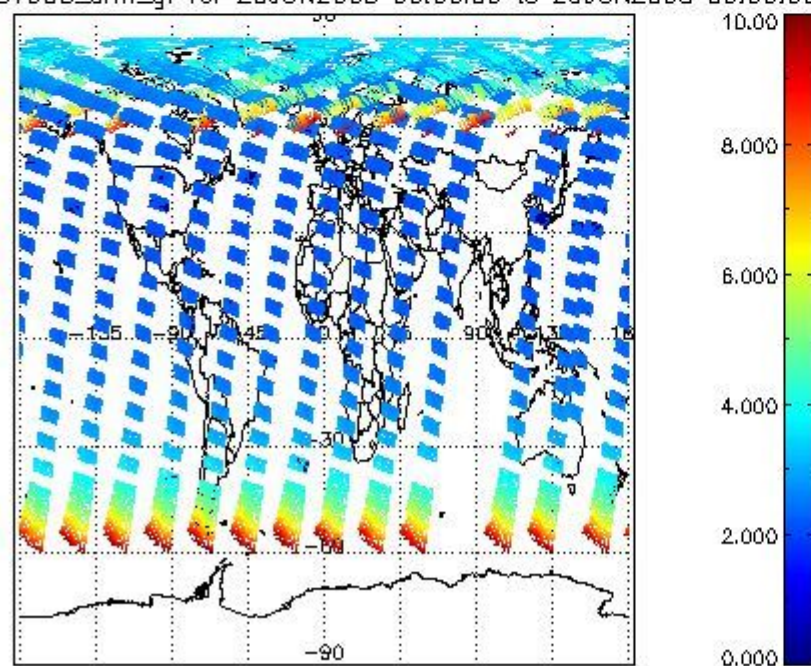
SCIOL2P\_NADUV003\_vcd for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



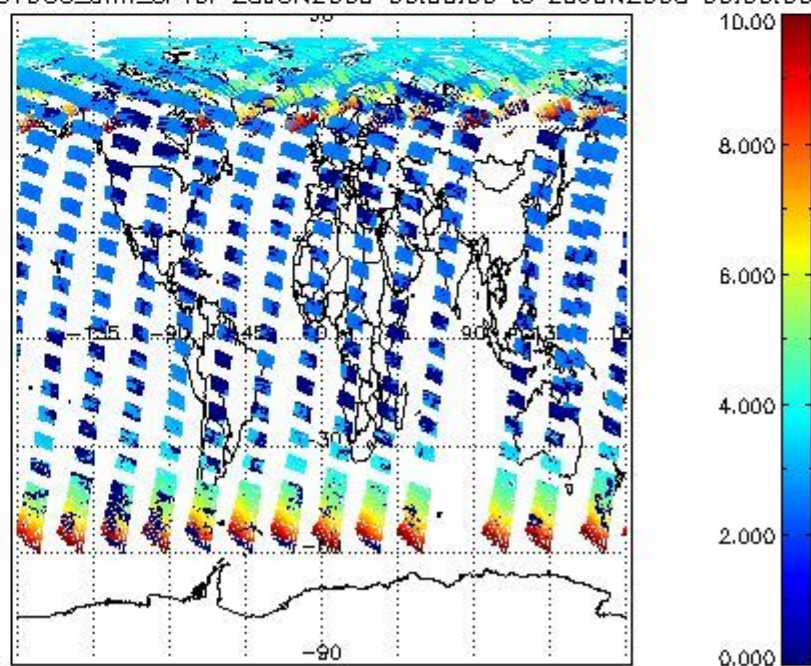
SCIOL2P\_NADUV003\_vcd\_err for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

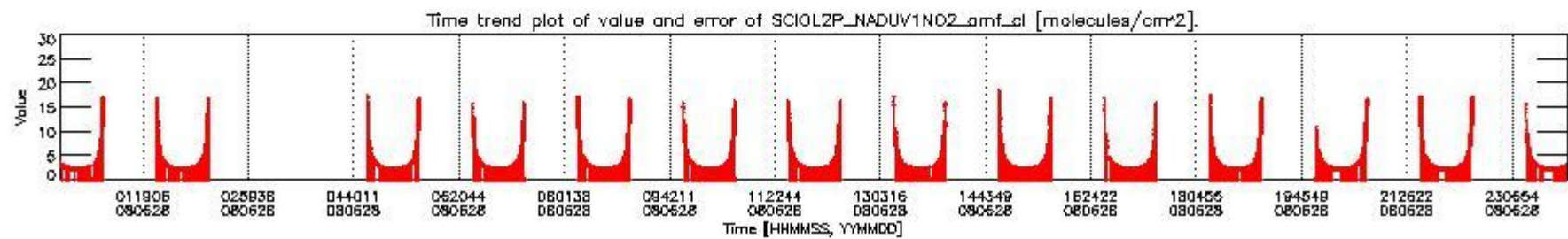
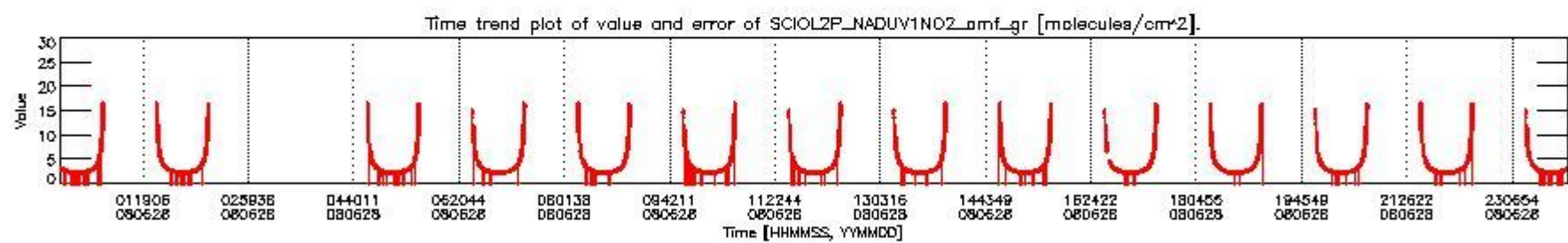
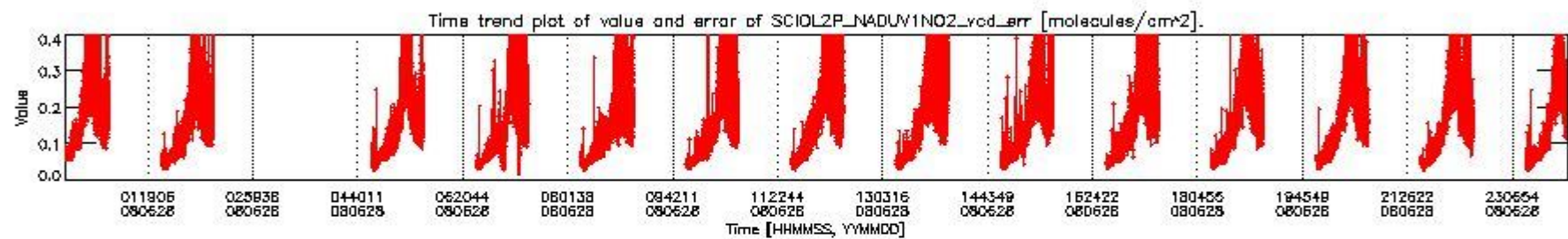
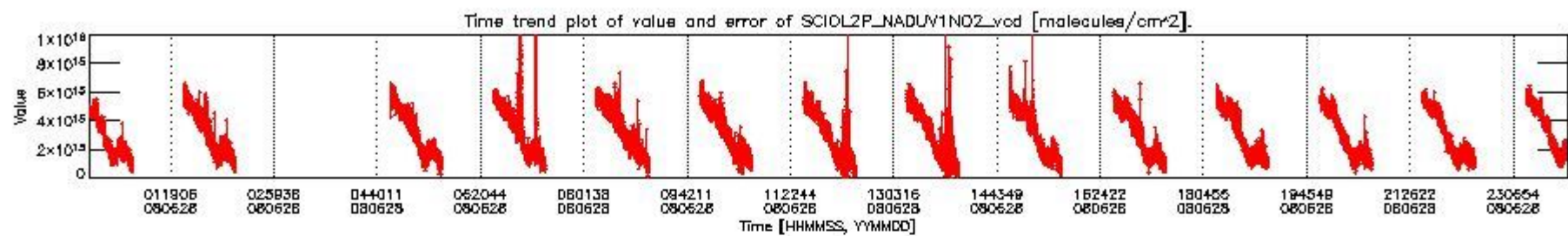


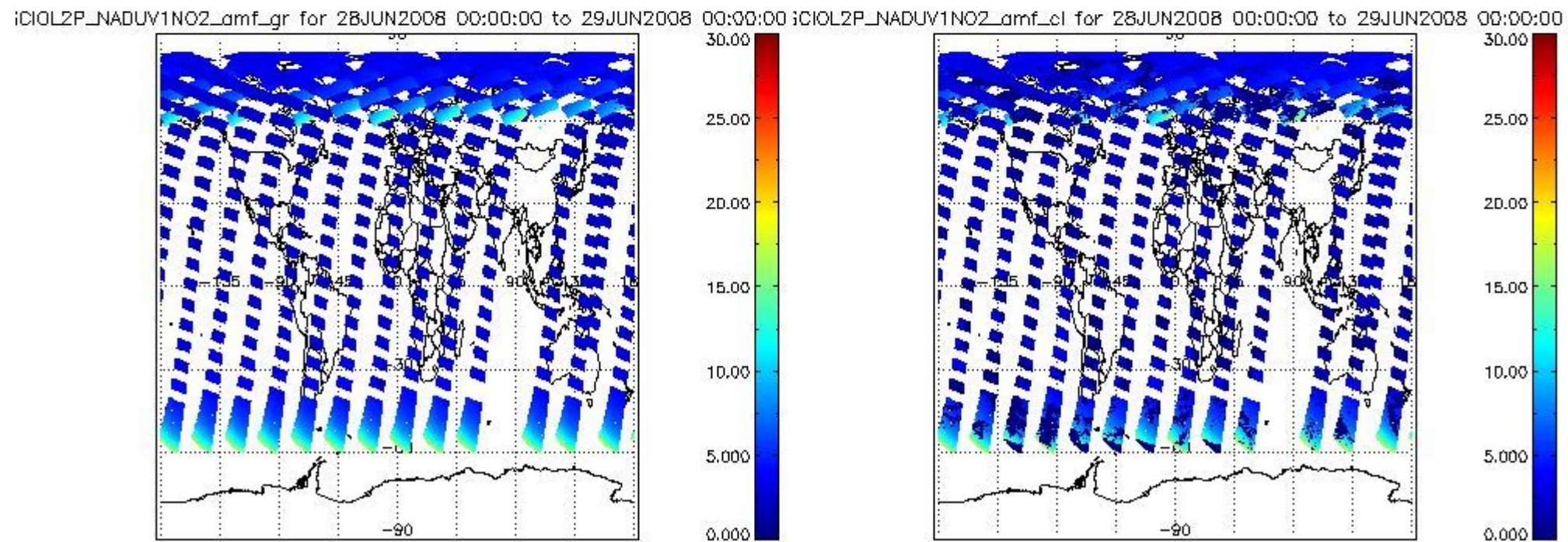
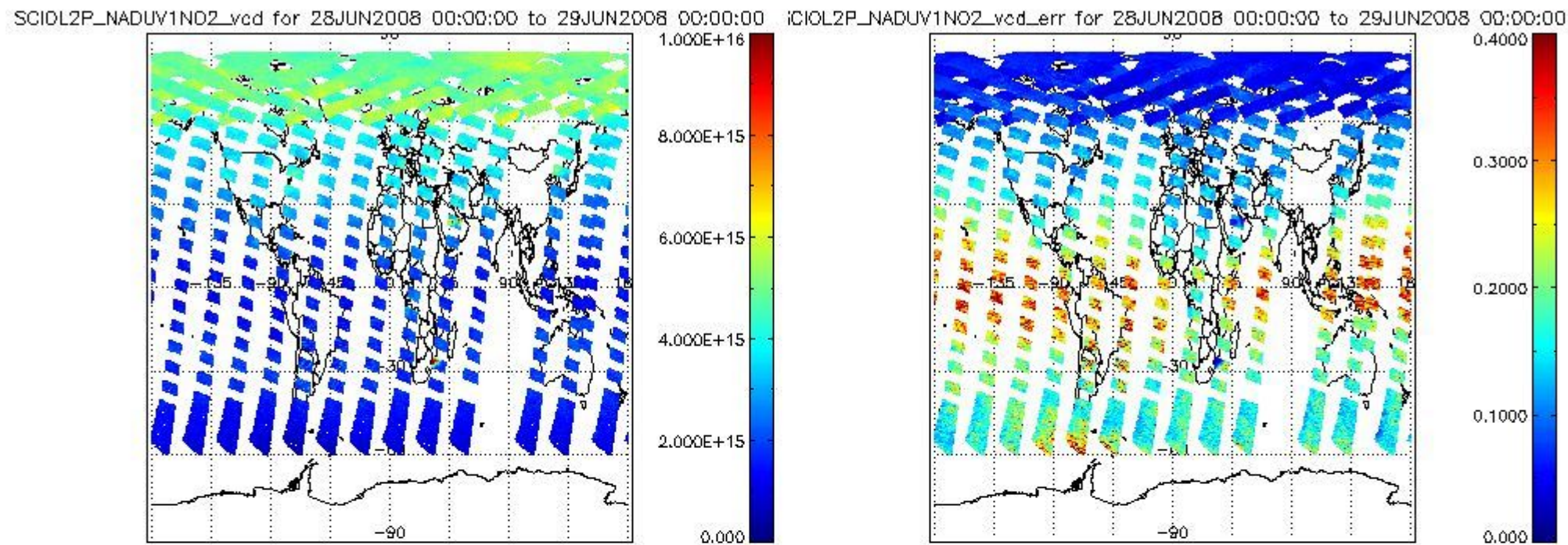
SCIOL2P\_NADUV003\_amf\_gr for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 28JUN2008 00:00:00 to 29JUN2008 00:00:00







### 2.2.3 Limb

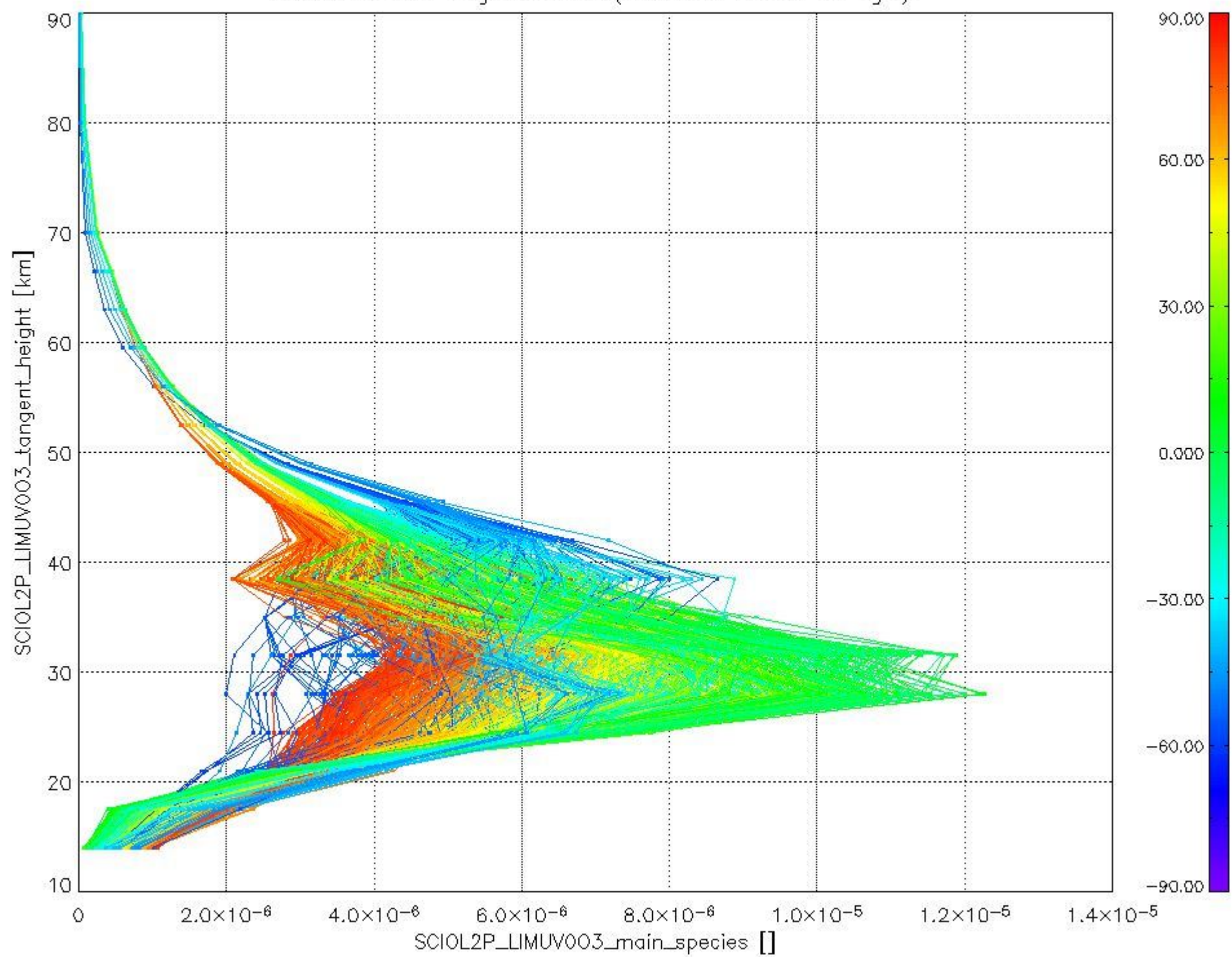
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

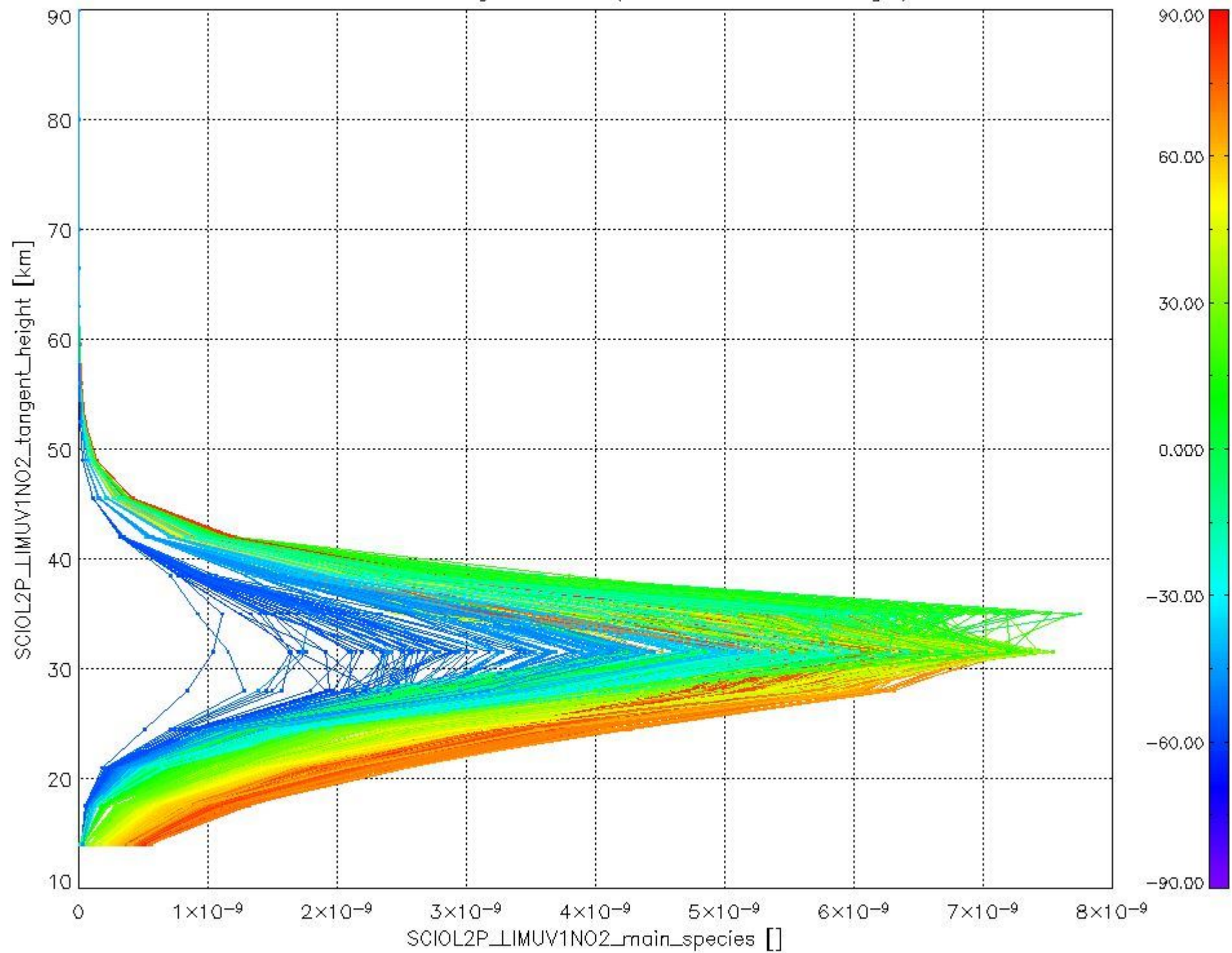
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





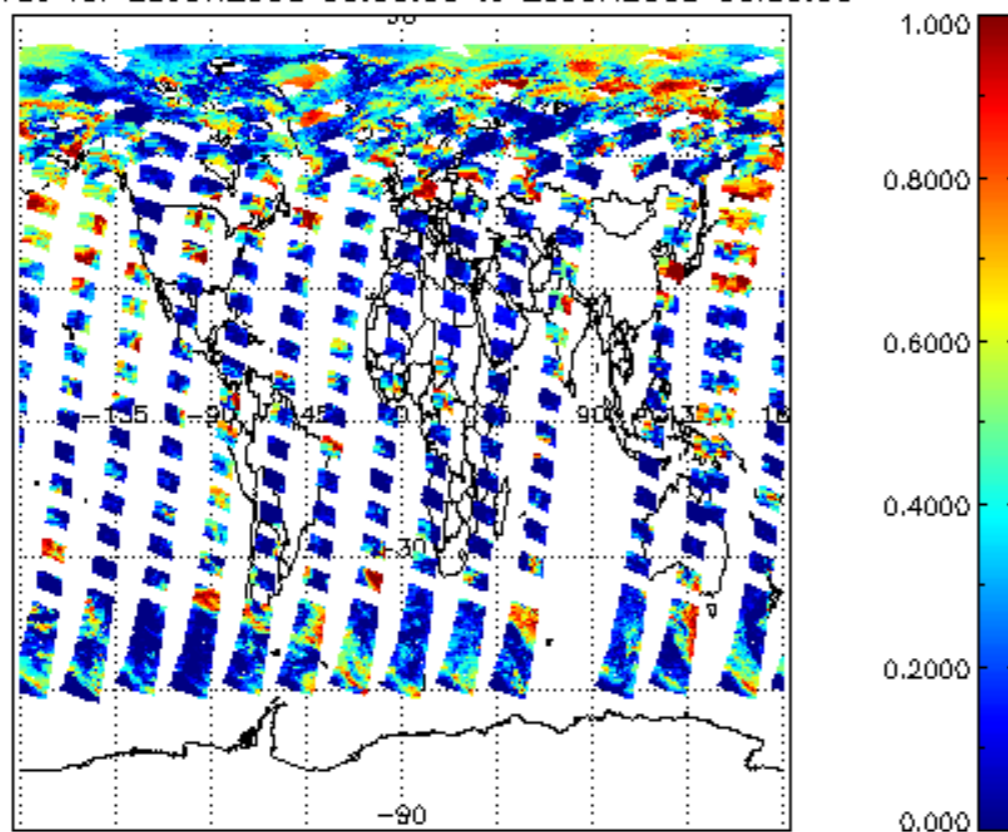
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



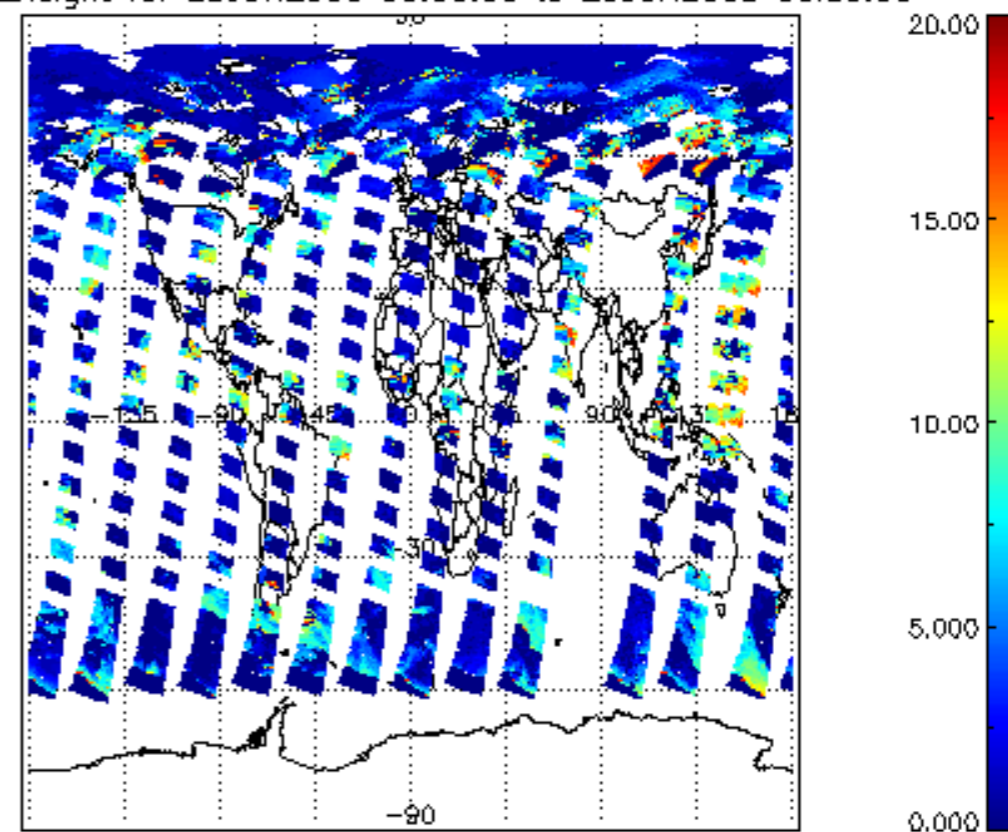
### 2.3 ADF monitoring

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

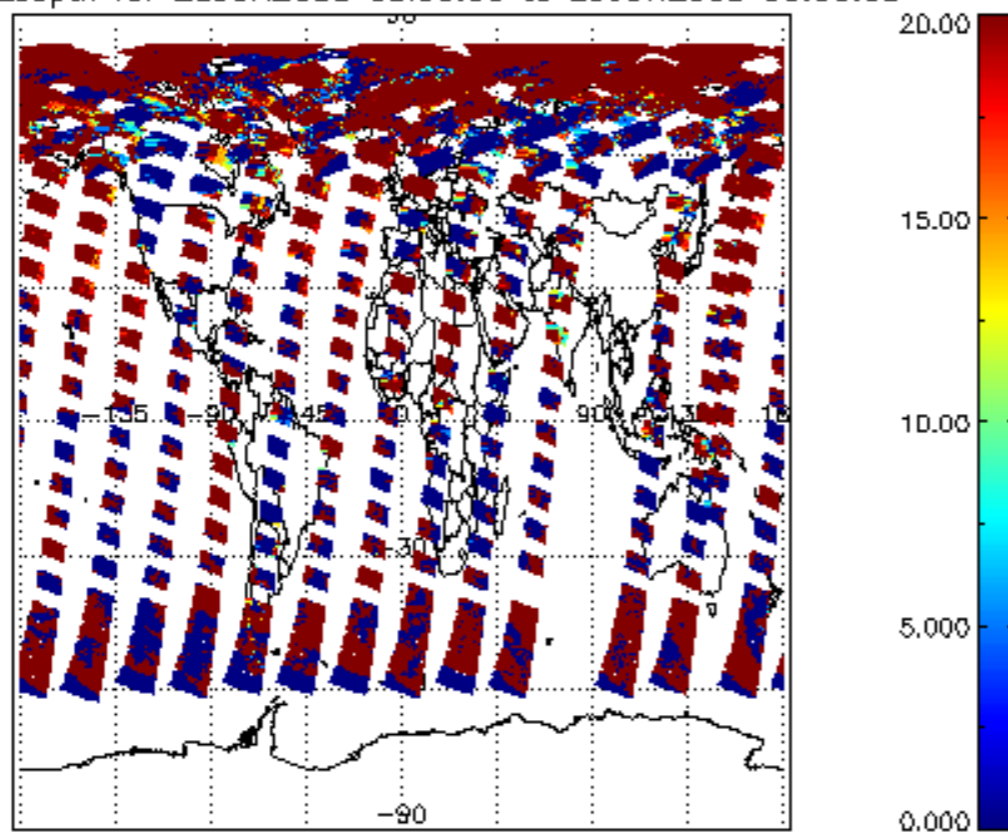
cl\_frac for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



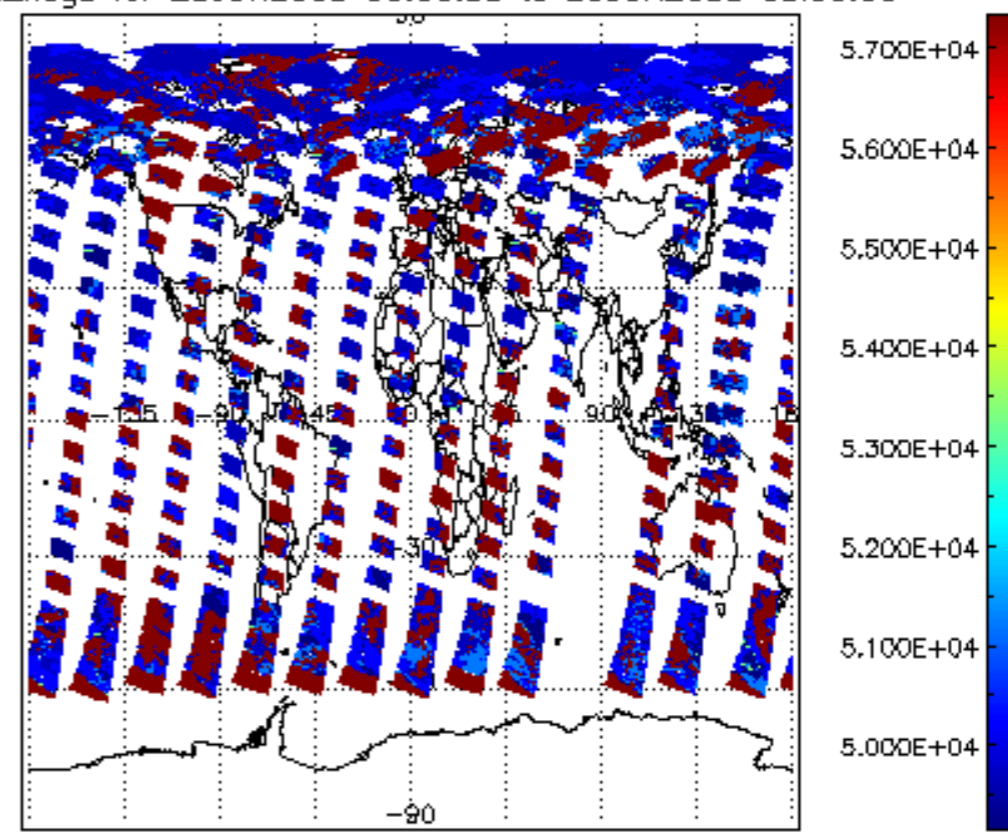
cl\_top\_height for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

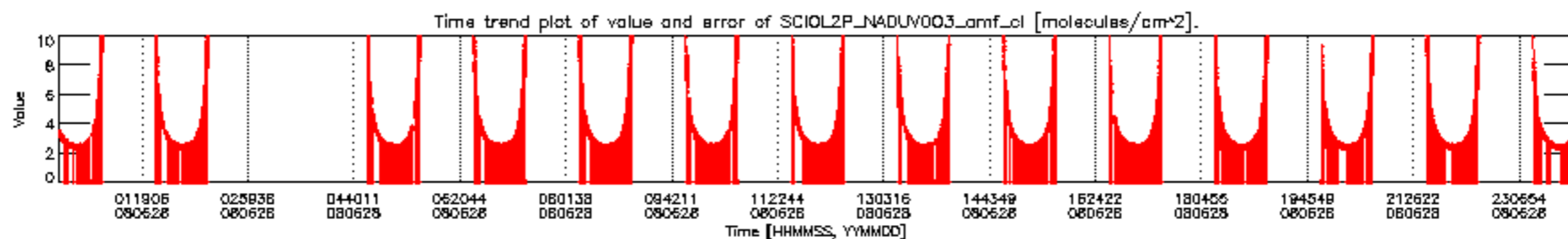
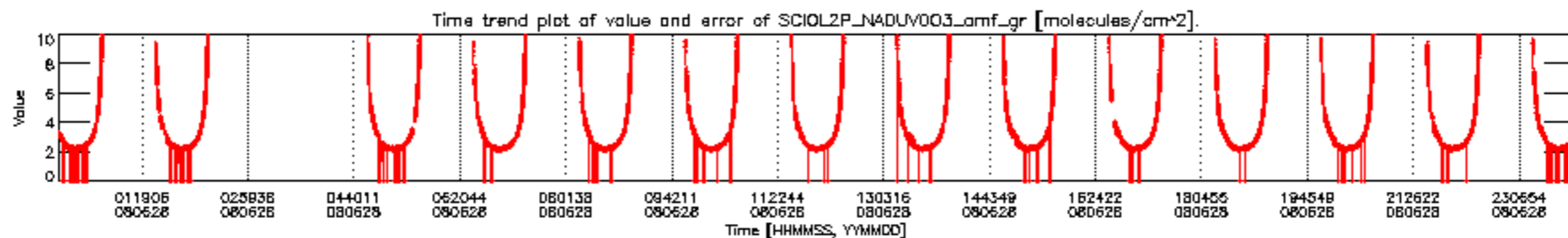
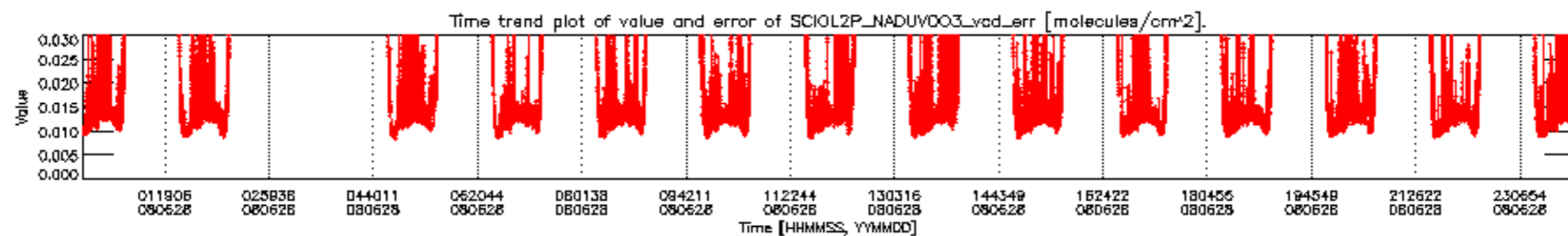
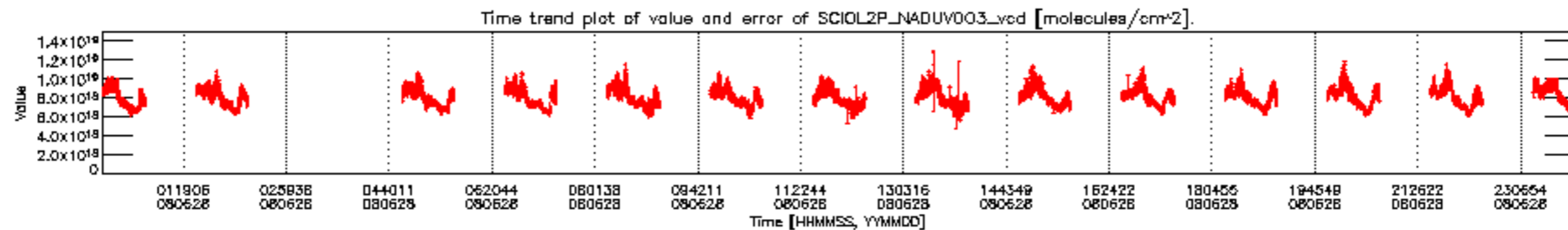


cl\_opt\_depth for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

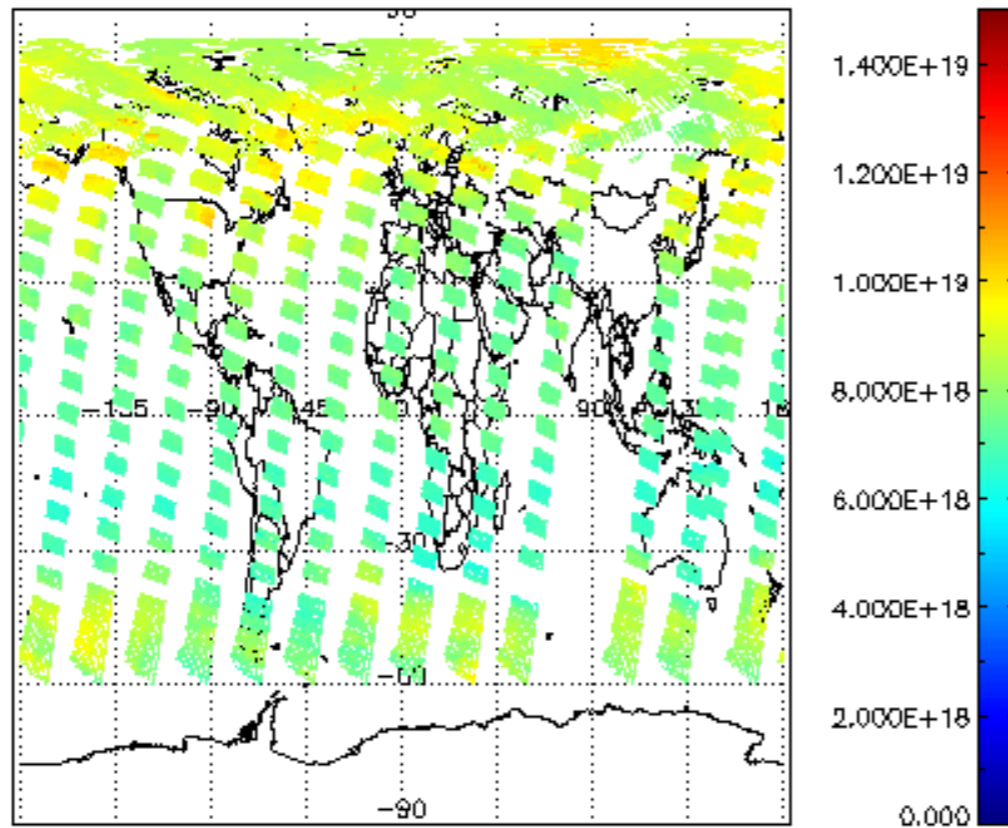


cloud\_flags for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

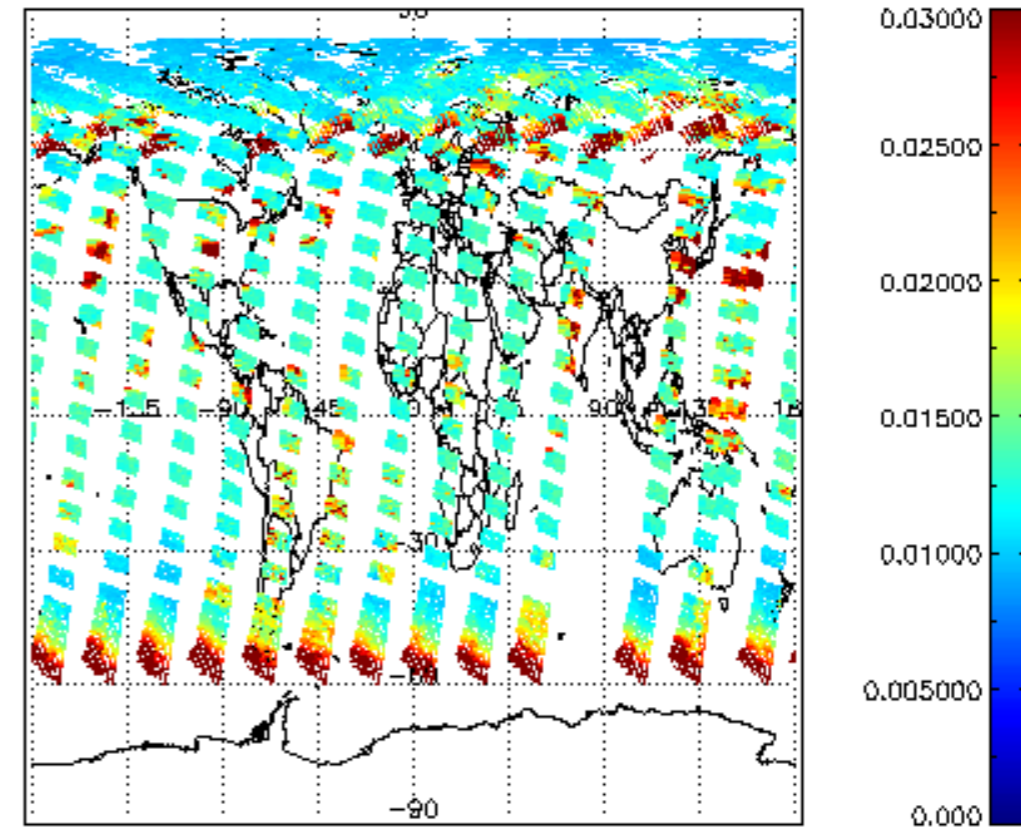




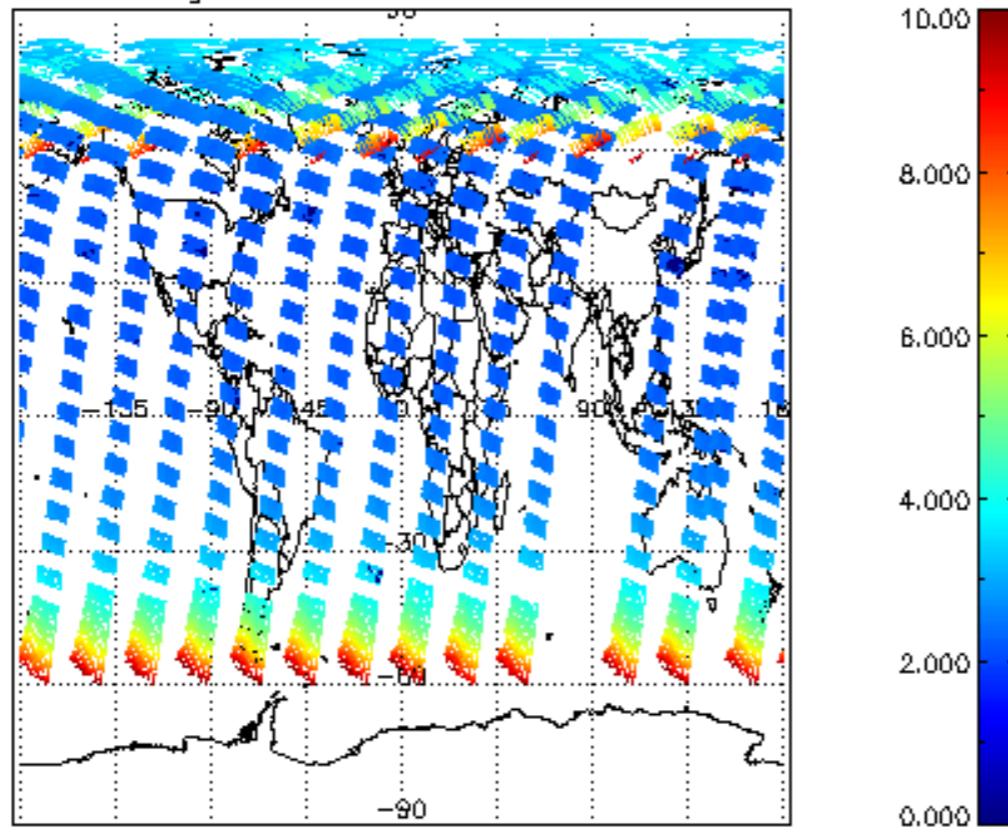
SCIOL2P\_NADUV003\_vcd for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



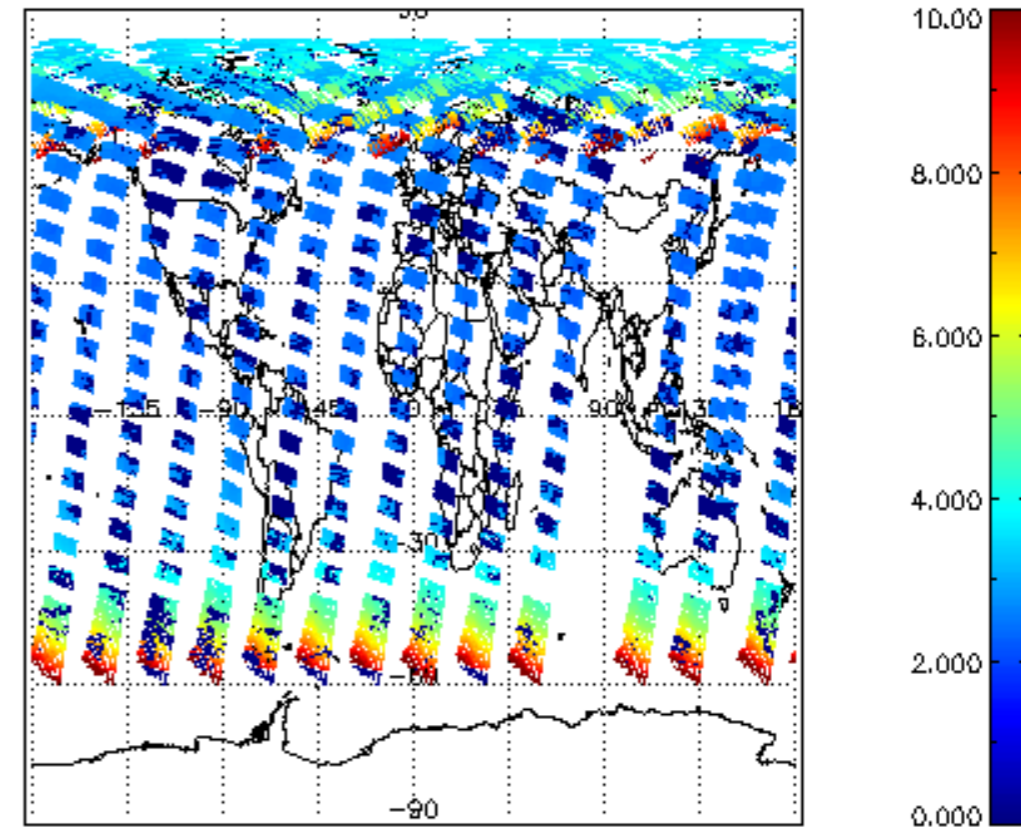
SCIOL2P\_NADUV003\_vcd\_err for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

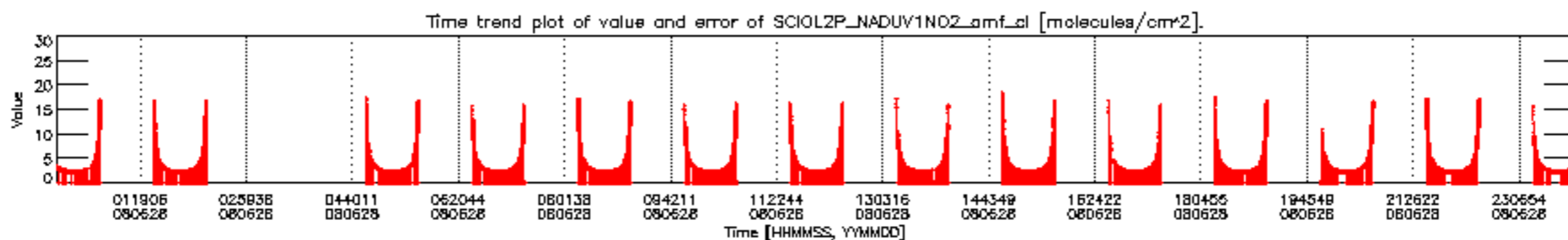
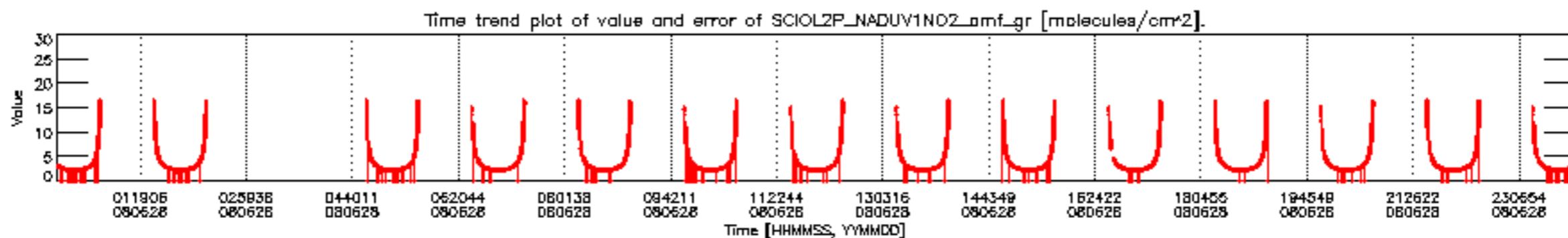
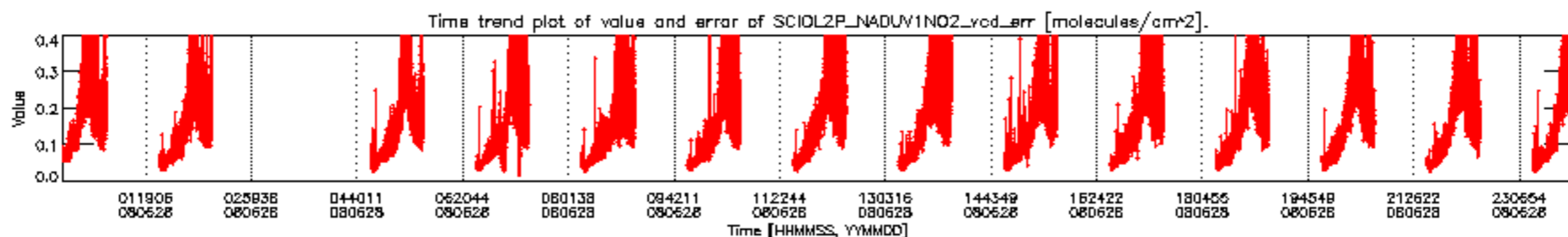
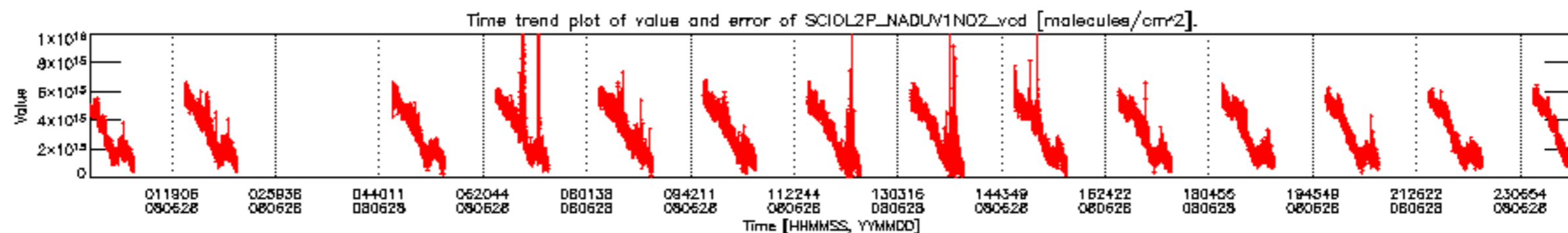


SCIOL2P\_NADUV003\_amf\_gr for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

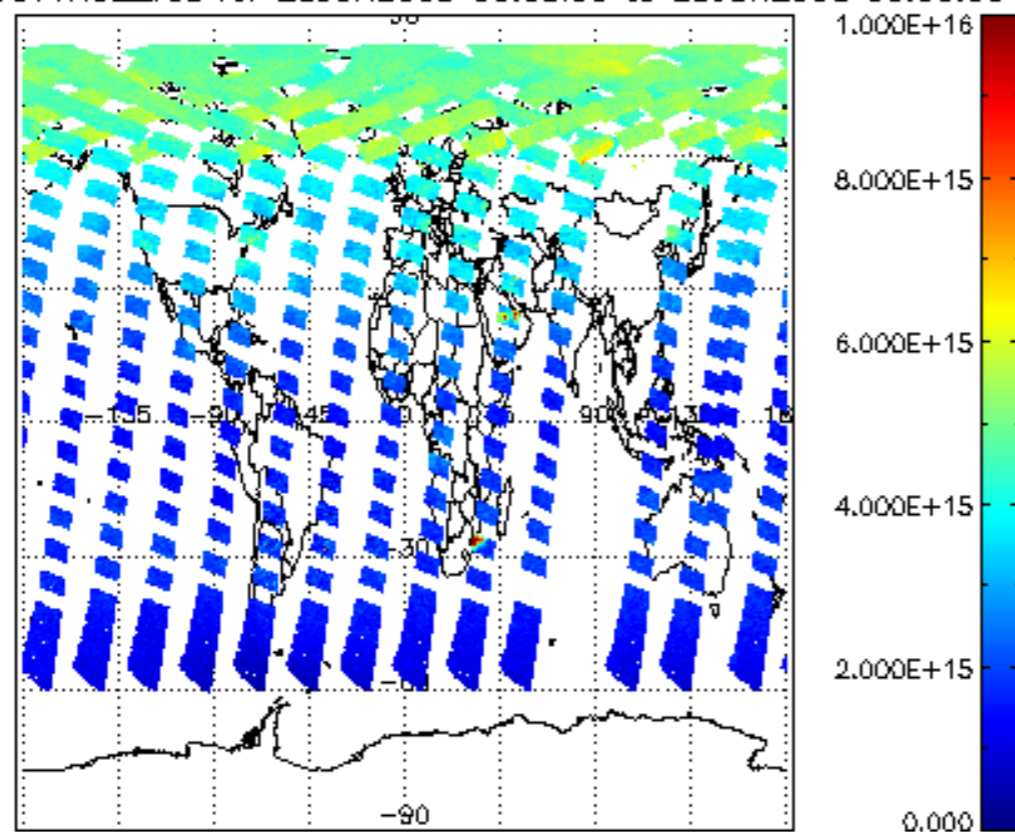


SCIOL2P\_NADUV003\_amf\_cl for 28JUN2008 00:00:00 to 29JUN2008 00:00:00

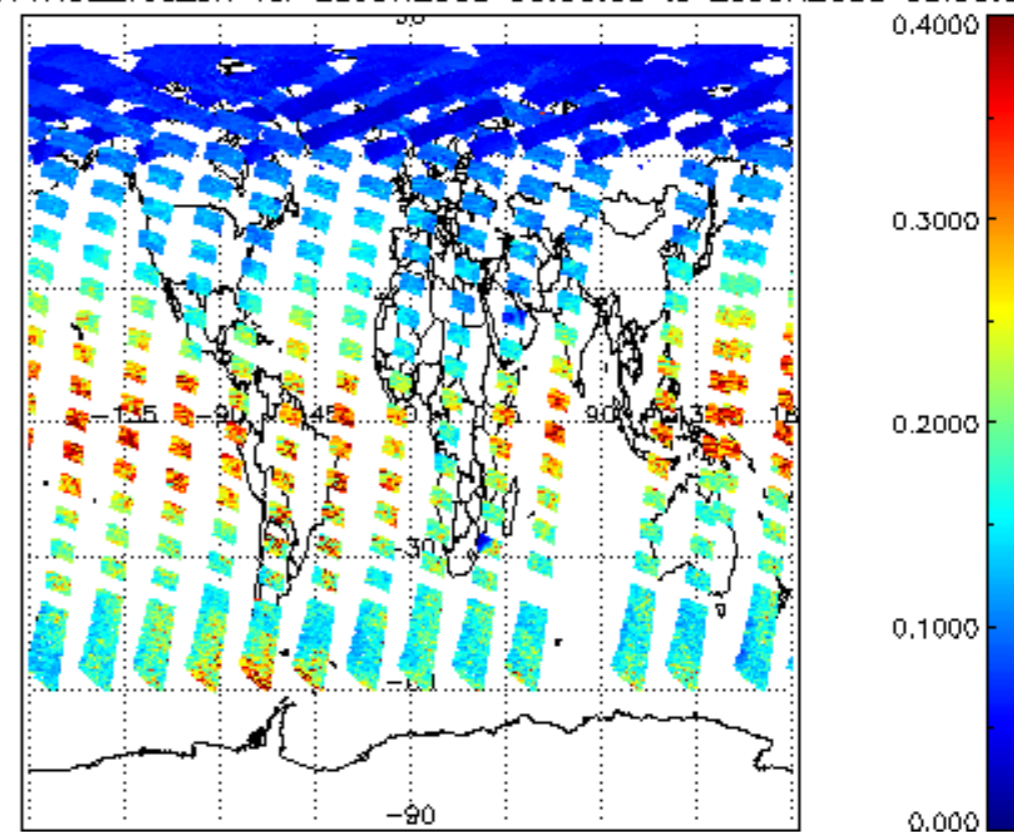




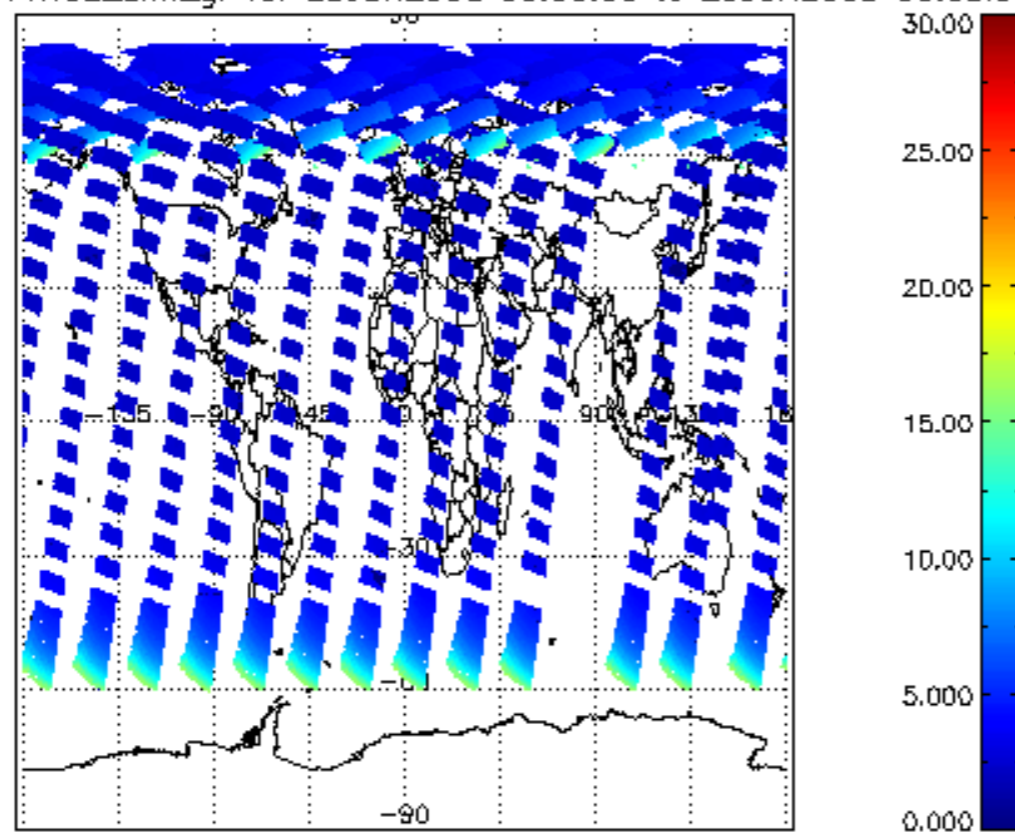
SCIOL2P\_NADUV1NO2\_vcd for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



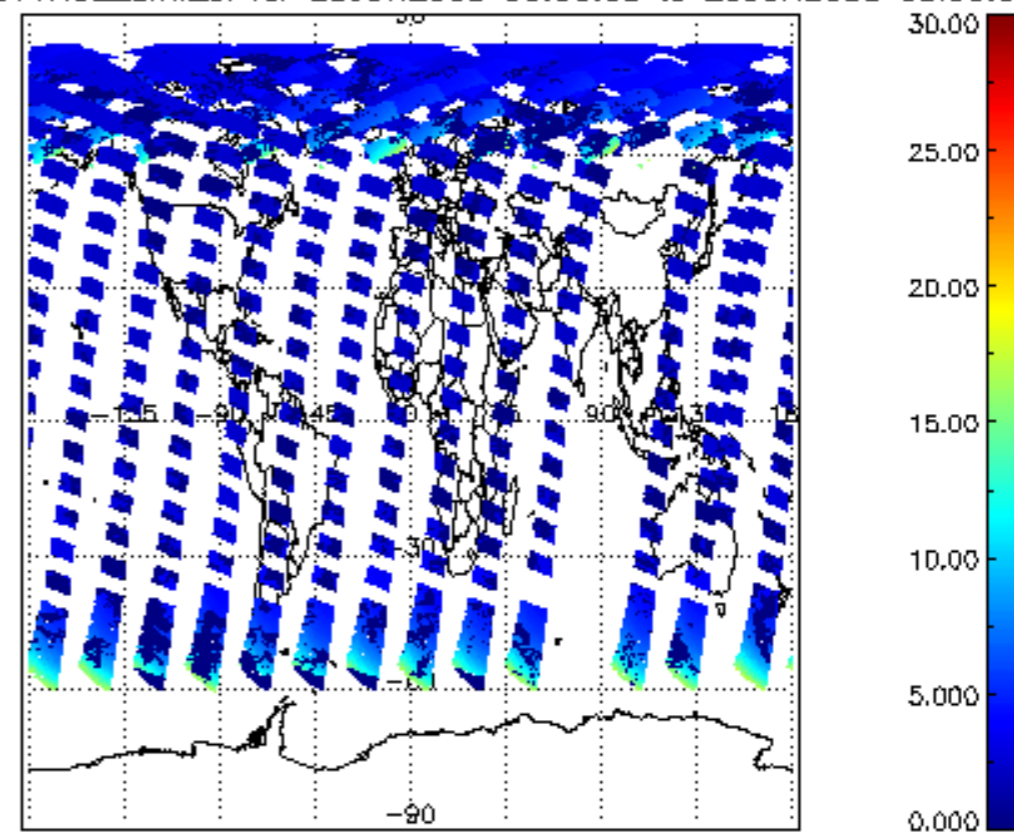
iCIOL2P\_NADUV1NO2\_vcd\_err for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



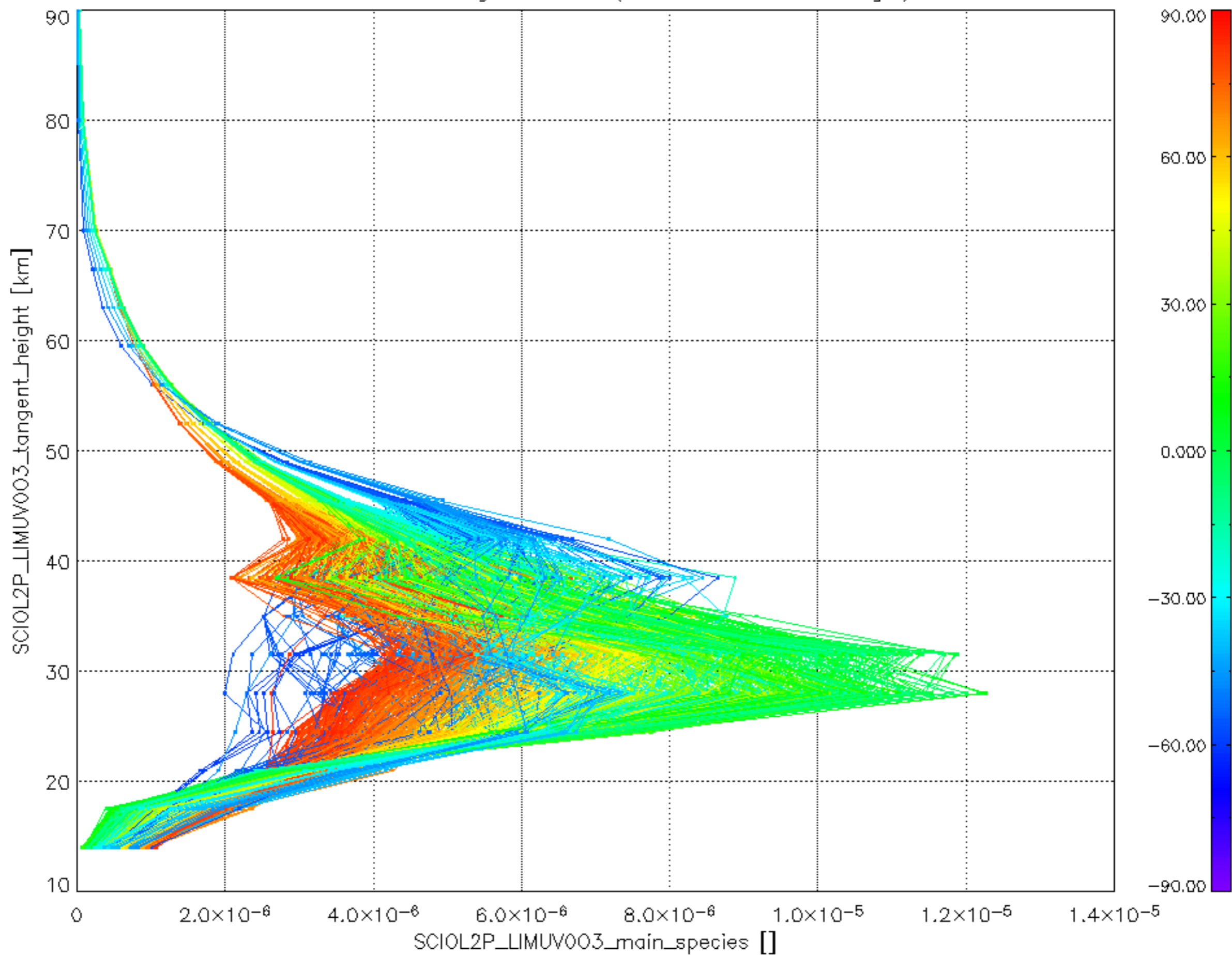
iCIOL2P\_NADUV1NO2\_amf\_gr for 28JUN2008 00:00:00 to 29JUN2008 00:00:00



iCIOL2P\_NADUV1NO2\_amf\_cl for 28JUN2008 00:00:00 to 29JUN2008 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).

