

## 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	27JUN2008 06:02:56
Data source version	SCIA-OL/3.01-R
Processing scope for products	09JUN2008 00:00:00 to 10JUN2008 00:00:00
Start time of first product within scope	08JUN2008 23:43:45
Stop time of last product within scope	10JUN2008 00:07:19
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__2PRDPA20080608_234345_000033122069_00188_32807_1297.N1	08JUN2008 23:43:45	09JUN2008 00:38:58	0	GOOD
1	SCI_OL__2PRDPA20080609_012420_000033252069_00189_32808_1299.N1	09JUN2008 01:24:20	09JUN2008 02:19:46	0	GOOD
2	SCI_OL__2PRDPA20080609_030456_000033122069_00190_32809_1302.N1	09JUN2008 03:04:56	09JUN2008 04:00:09	0	GOOD
3	SCI_OL__2PRDPA20080609_044532_000033252069_00191_32810_1303.N1	09JUN2008 04:45:32	09JUN2008 05:40:58	0	GOOD
4	SCI_OL__2PRDPA20080609_062608_000033122069_00192_32811_1318.N1	09JUN2008 06:26:08	09JUN2008 07:21:21	0	GOOD
5	SCI_OL__2PRDPA20080609_080644_000033252069_00193_32812_1320.N1	09JUN2008 08:06:44	09JUN2008 09:02:09	0	GOOD
6	SCI_OL__2PRDPA20080609_094720_000033122069_00194_32813_1321.N1	09JUN2008 09:47:20	09JUN2008 10:42:32	0	GOOD
7	SCI_OL__2PRDPA20080609_112755_000033252069_00195_32814_1323.N1	09JUN2008 11:27:55	09JUN2008 12:23:21	0	GOOD
8	SCI_OL__2PRDPA20080609_130831_000033122069_00196_32815_1364.N1	09JUN2008 13:08:31	09JUN2008 14:03:44	0	GOOD
9	SCI_OL__2PRDPA20080609_144907_000033252069_00197_32816_1397.N1	09JUN2008 14:49:07	09JUN2008 15:44:32	0	GOOD
10	SCI_OL__2PRDPA20080609_162943_000033122069_00198_32817_1398.N1	09JUN2008 16:29:43	09JUN2008 17:24:56	0	GOOD
11	SCI_OL__2PRDPA20080609_180938_000033812069_00199_32818_1400.N1	09JUN2008 18:09:38	09JUN2008 19:05:59	0	GOOD
12	SCI_OL__2PRDPA20080609_195014_000033682069_00200_32819_1403.N1	09JUN2008 19:50:14	09JUN2008 20:46:22	0	GOOD
13	SCI_OL__2PRDPA20080609_213130_000033252069_00201_32820_1404.N1	09JUN2008 21:31:30	09JUN2008 22:26:56	0	GOOD
14	SCI_OL__2PRDPA20080609_231206_000033122069_00202_32821_1406.N1	09JUN2008 23:12:06	10JUN2008 00:07:19	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: 147615

Total number of cloud data DSRs with good quality flag (=0): 147615 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	147615	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	147615	0.17234	0.12500	0.12500	0.25000	0.060633	s
SURFACE_PRES	147615	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	147615	0.33831	0.28748	0.0000	1.0000	0.30113	-

CL_FRAC_ERR	147615	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	147615	5.5148	4.0000	4.0000	8.0000	1.9402	
PMD_READ_CL[0]	147615	0.28067	0.0000	0.0000	8.0000	1.2455	-
PMD_READ_CL[1]	147615	1.6009	0.0000	0.0000	8.0000	2.5749	-
CL_TOP_HEIGHT	131674	3.1576	1.1510	0.0000	17.000	3.7519	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	131674	58.852	80.771	0.0000	101.00	44.161	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	147615	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	147615	11001011	11000100	11000000	11100000	3482.8	flags
AERO_ABSO_IND	147615	3.2141	3.5808	-1.3411	13.253	2.1214	
AERO_IND_DIAG	147615	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	147615	01011011	00000000	00000000	11000000	24544.	flags

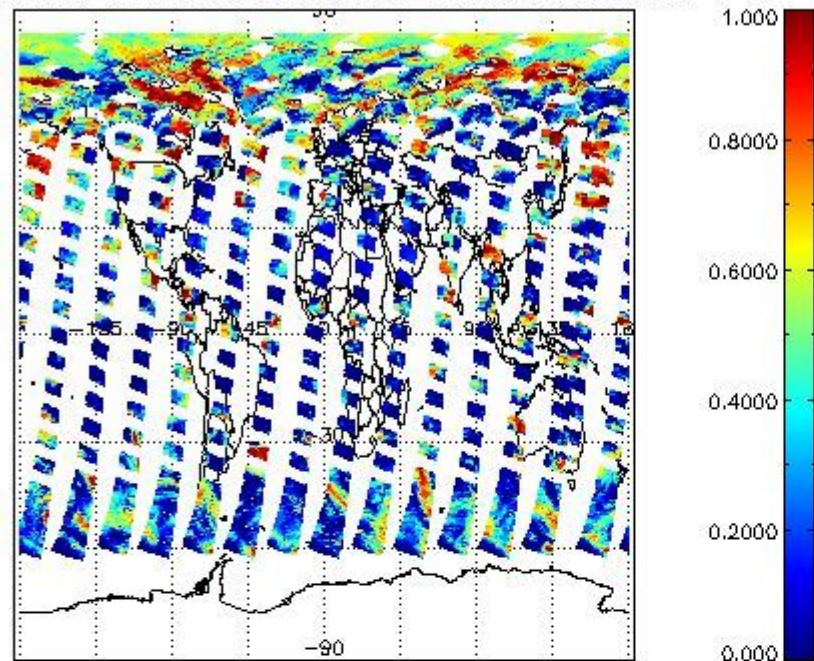
Time and geolocation plots:

Plots are available for the following parameters:

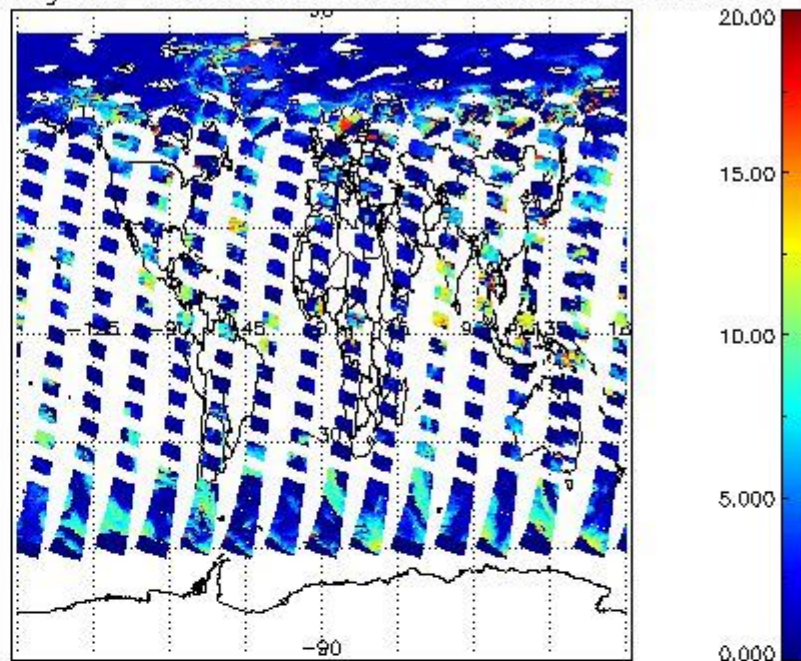
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



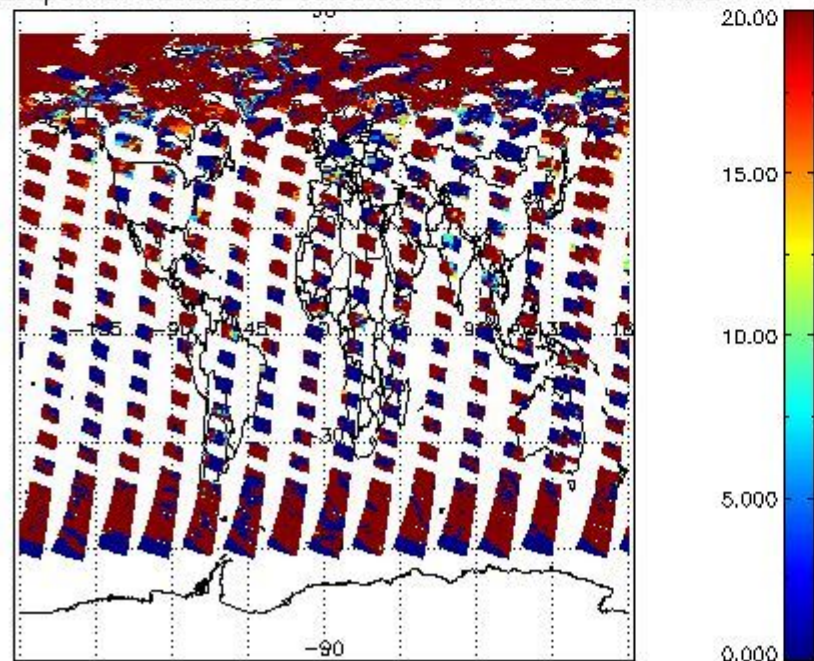
cL\_frac for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



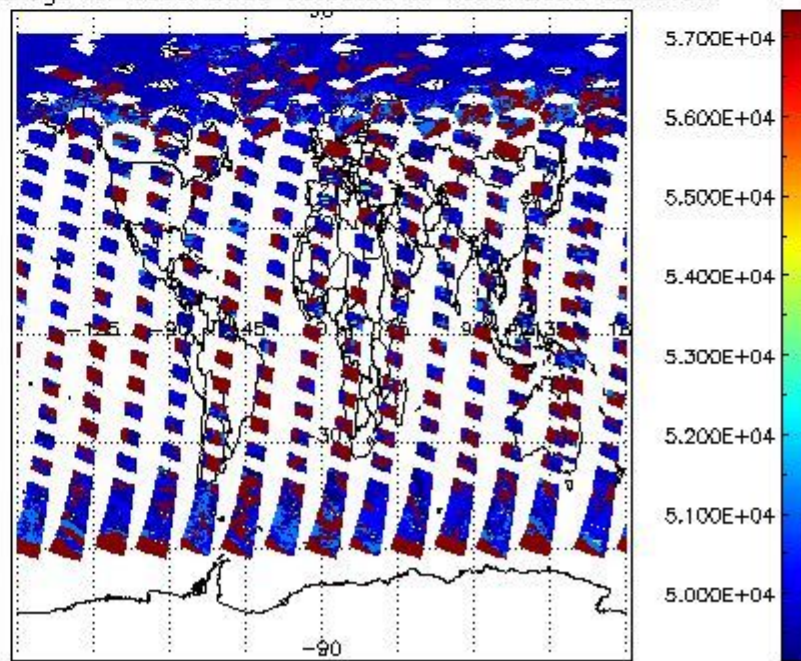
cL\_top\_height for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



cL\_opt\_depth for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



cloud\_flags for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



### 2.2.2 Nadir

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

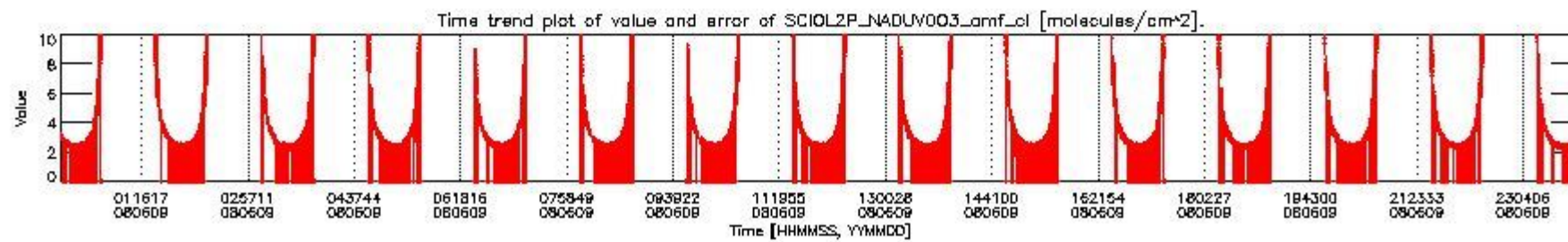
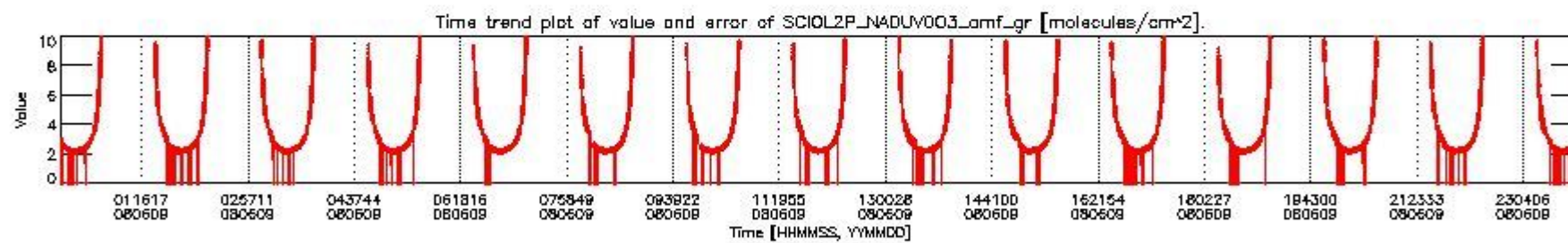
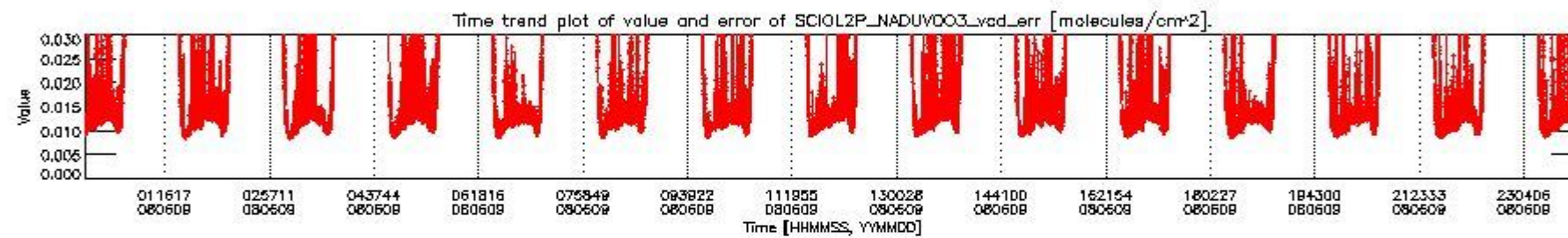
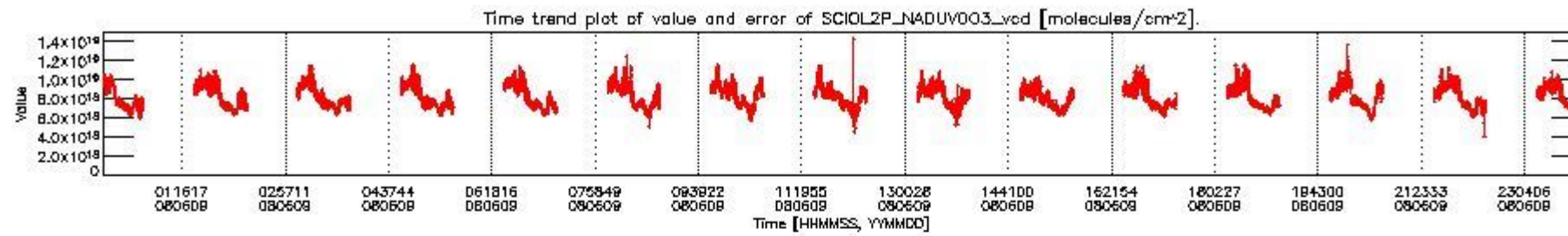
The following data items are currently included into this section:

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



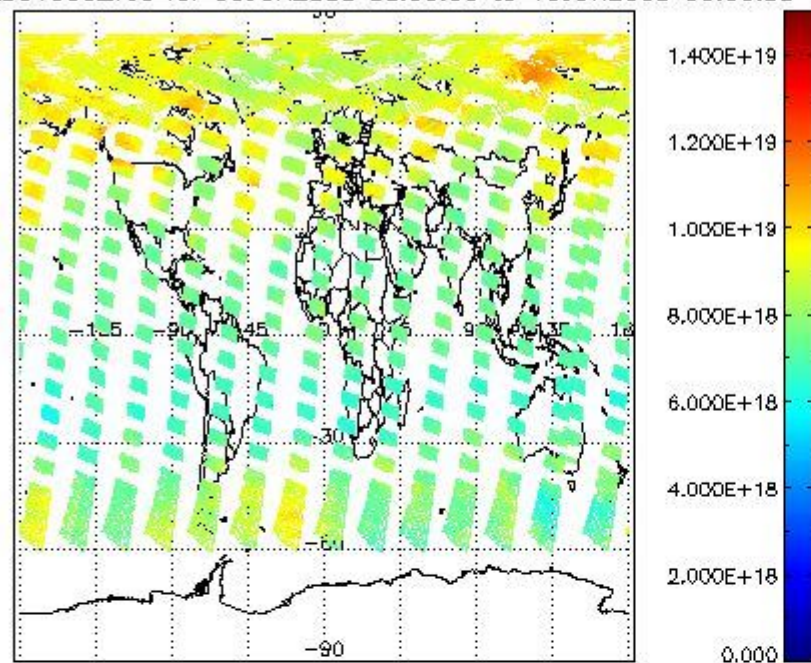
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

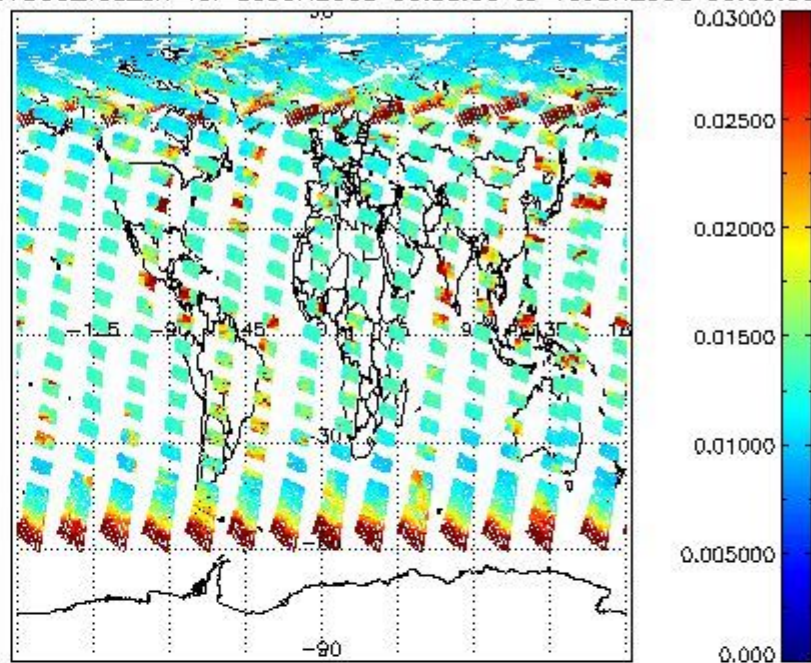




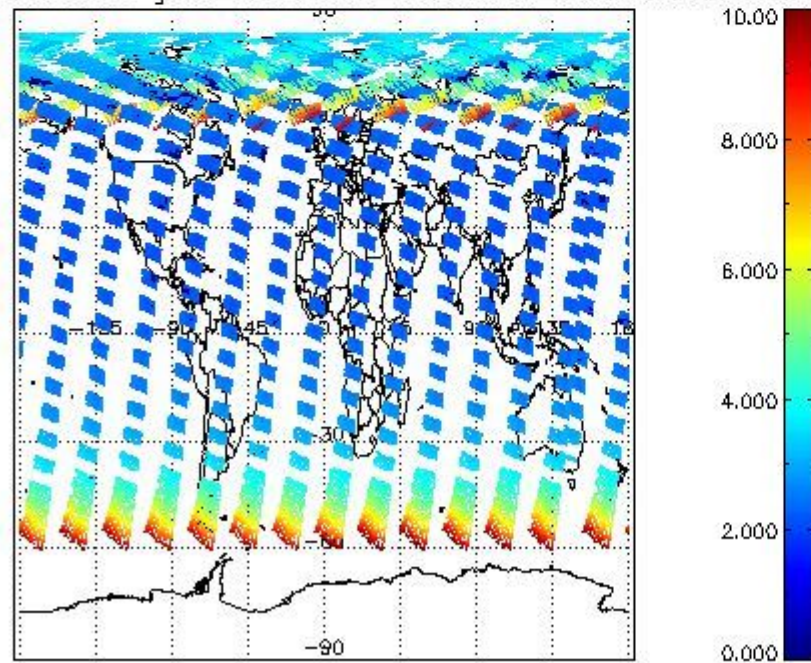
SCIOL2P\_NADUV003\_vcd for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



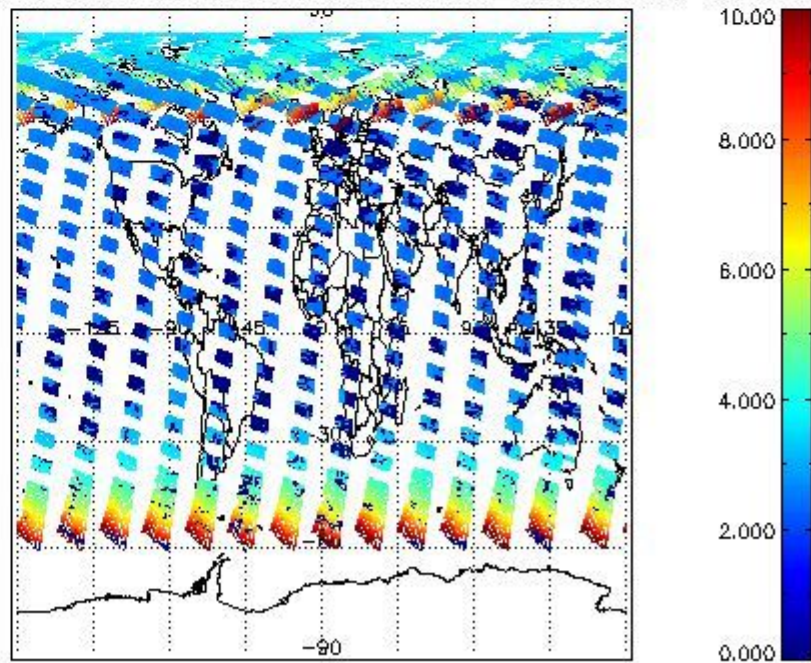
SCIOL2P\_NADUV003\_vcd\_err for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



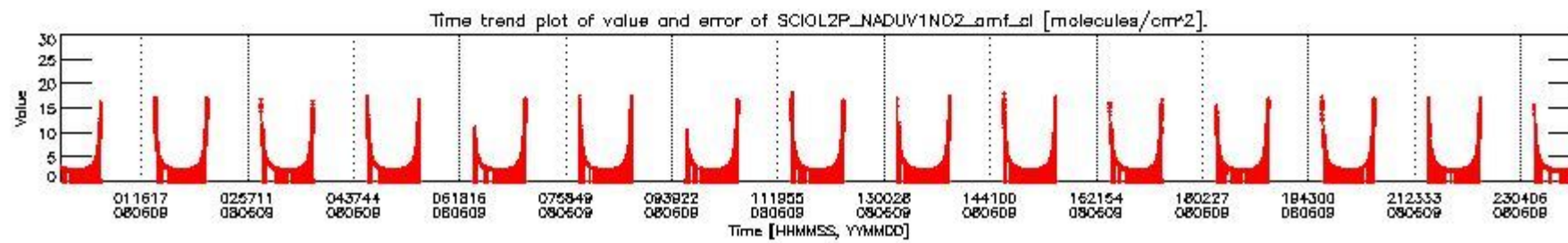
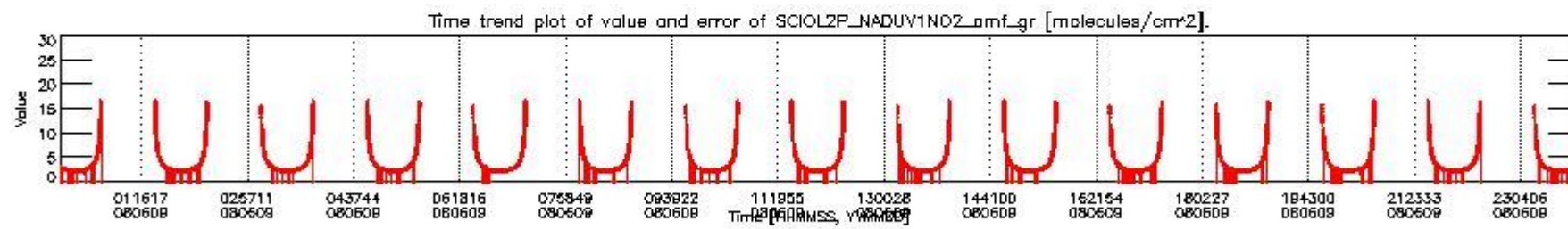
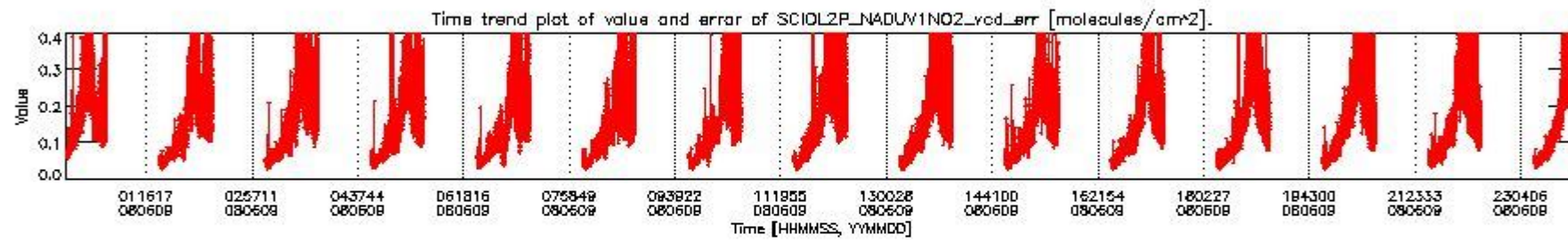
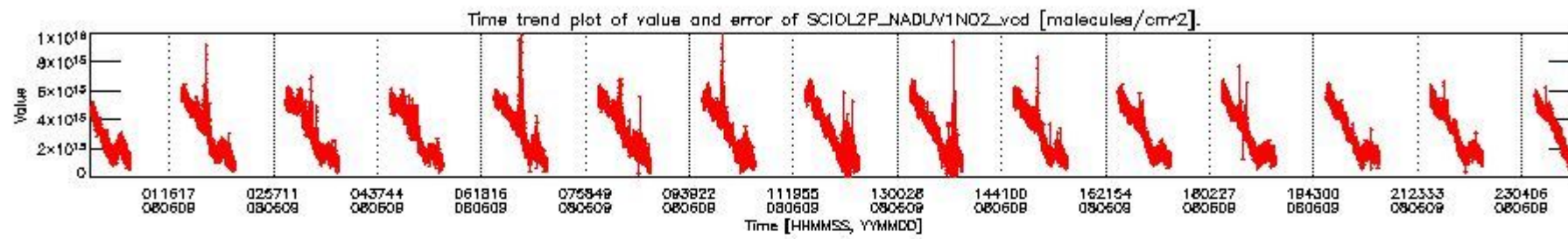
SCIOL2P\_NADUV003\_amf\_gr for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



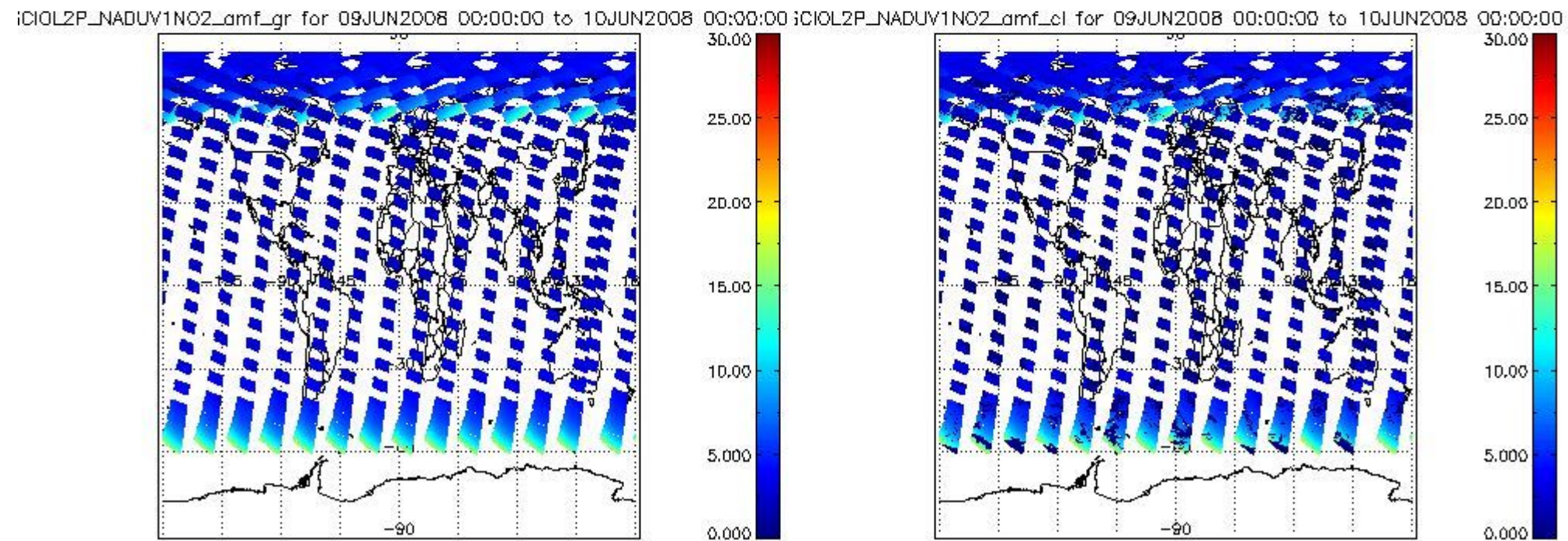
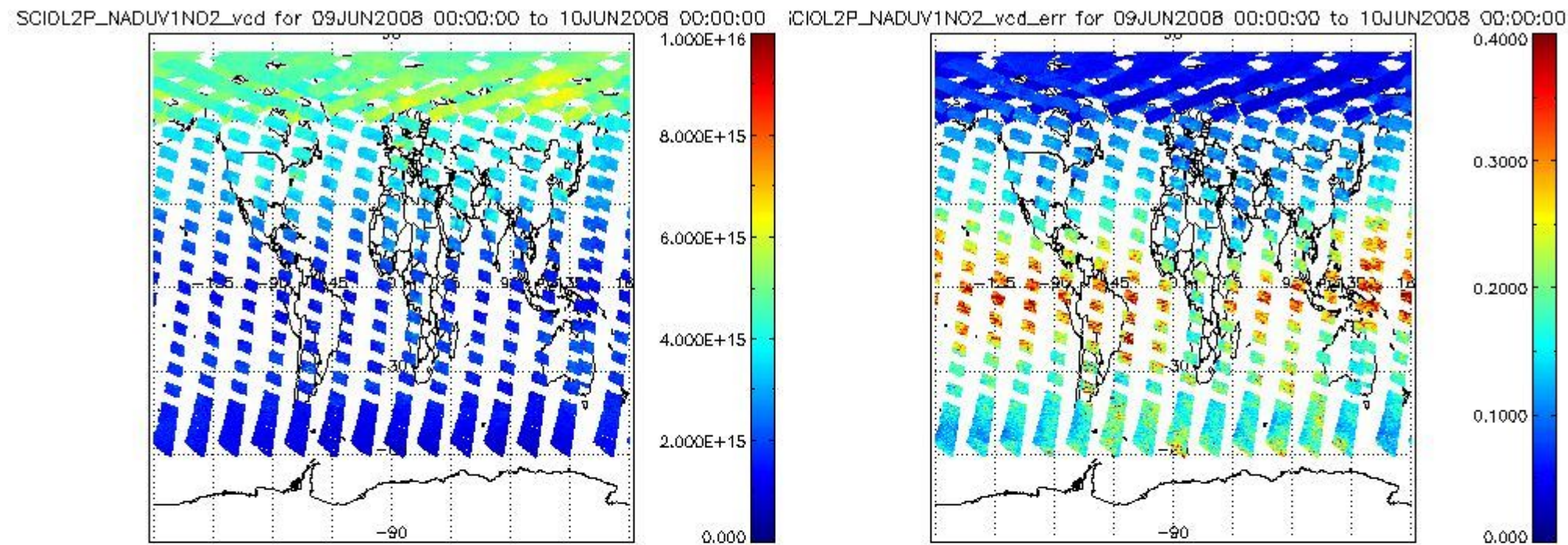
SCIOL2P\_NADUV003\_amf\_cl for 09JUN2008 00:00:00 to 10JUN2008 00:00:00











### 2.2.3 Limb

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

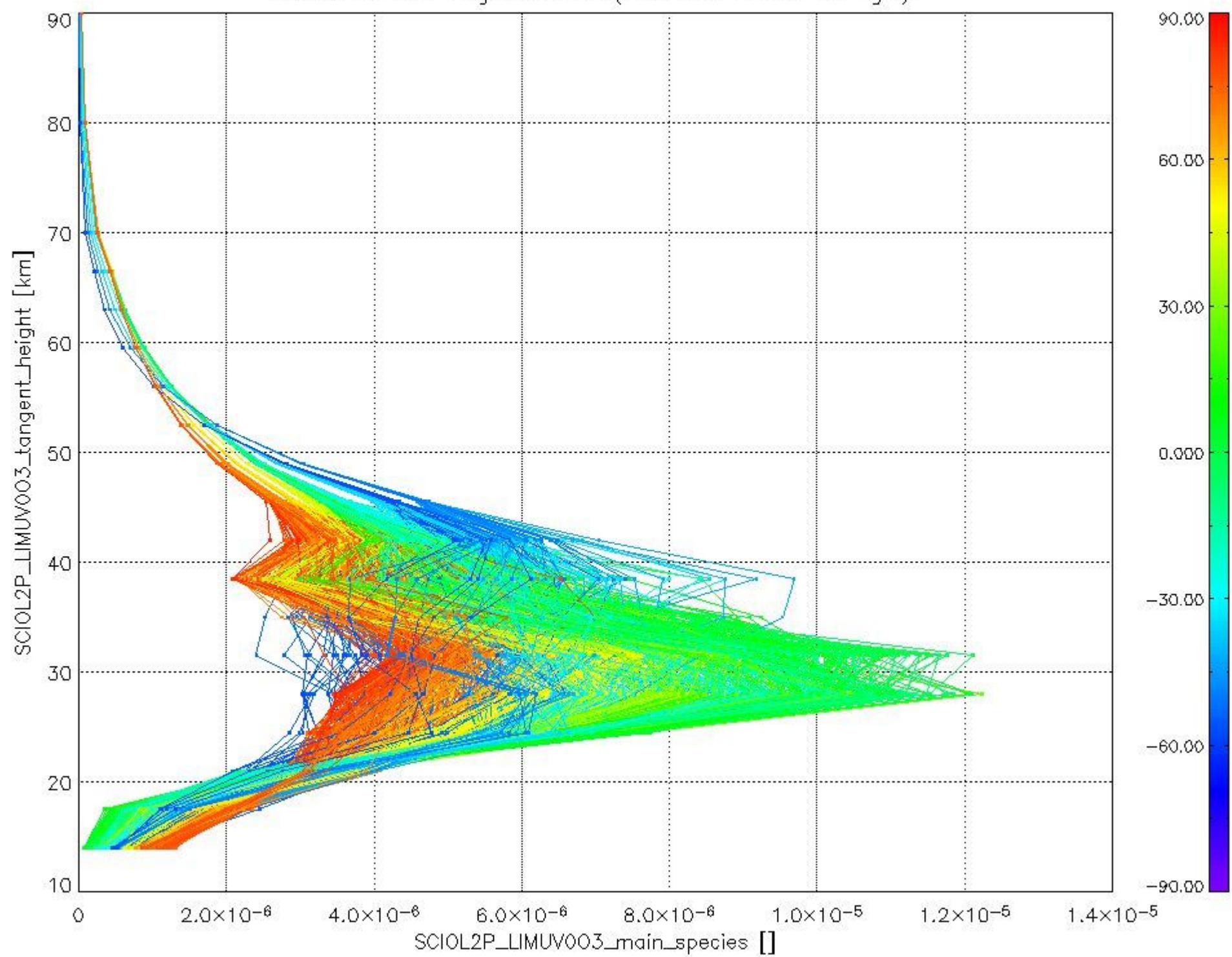
The following data items are currently included into this section:

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.

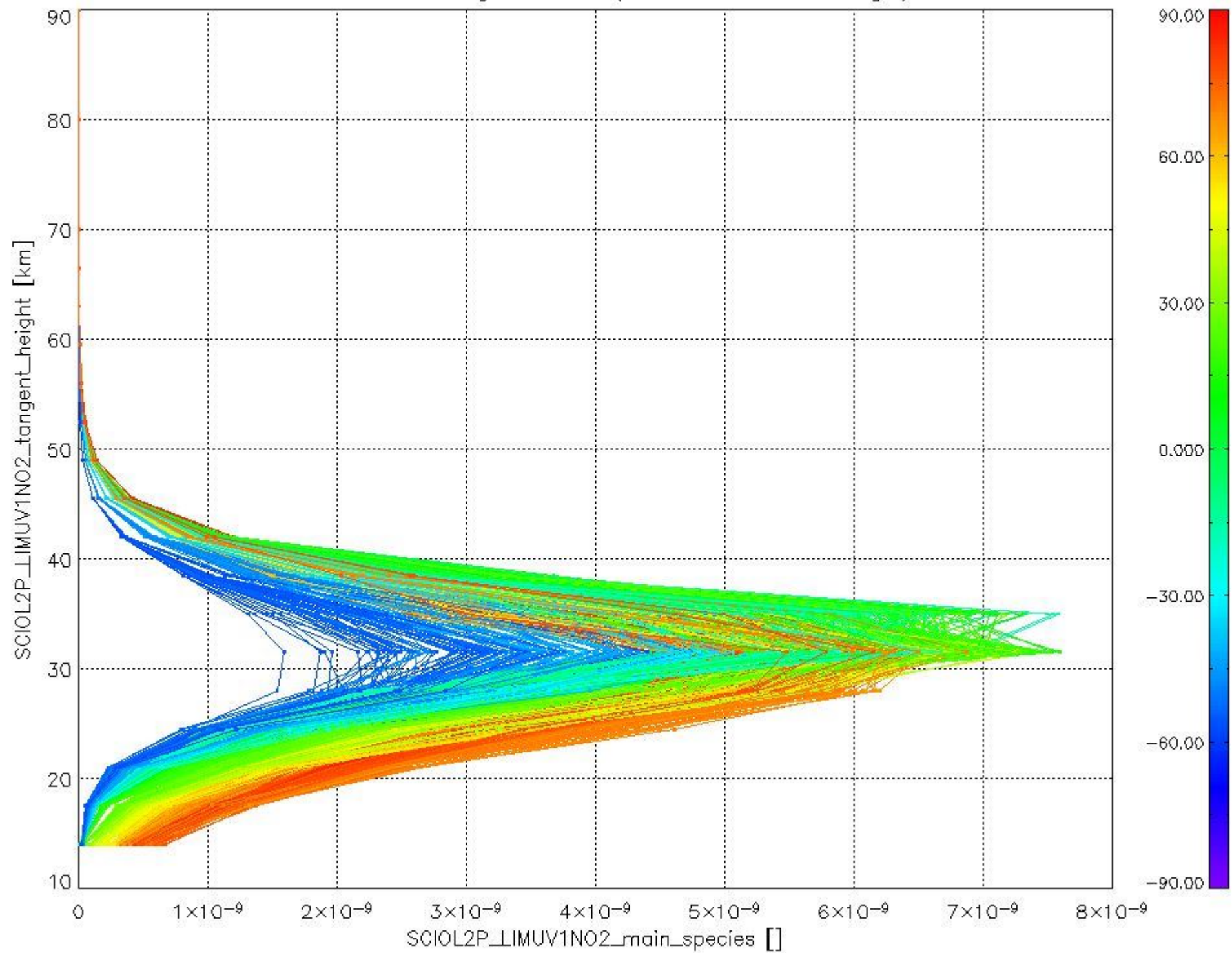


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





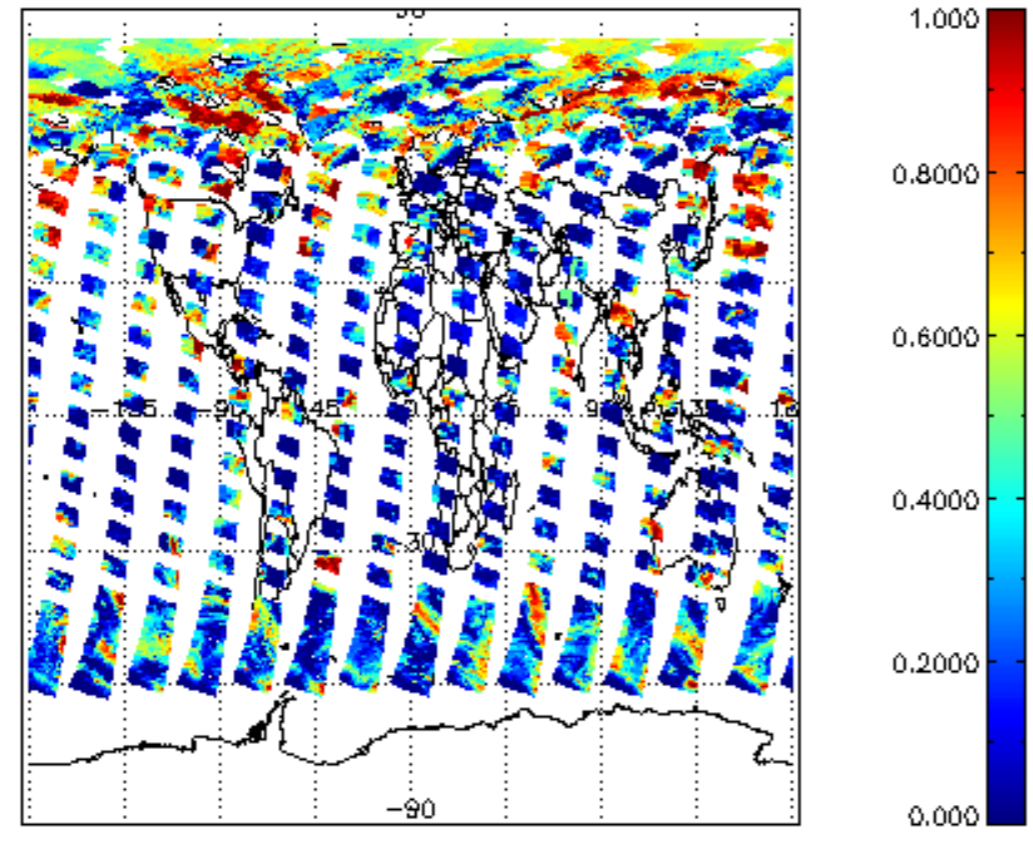
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



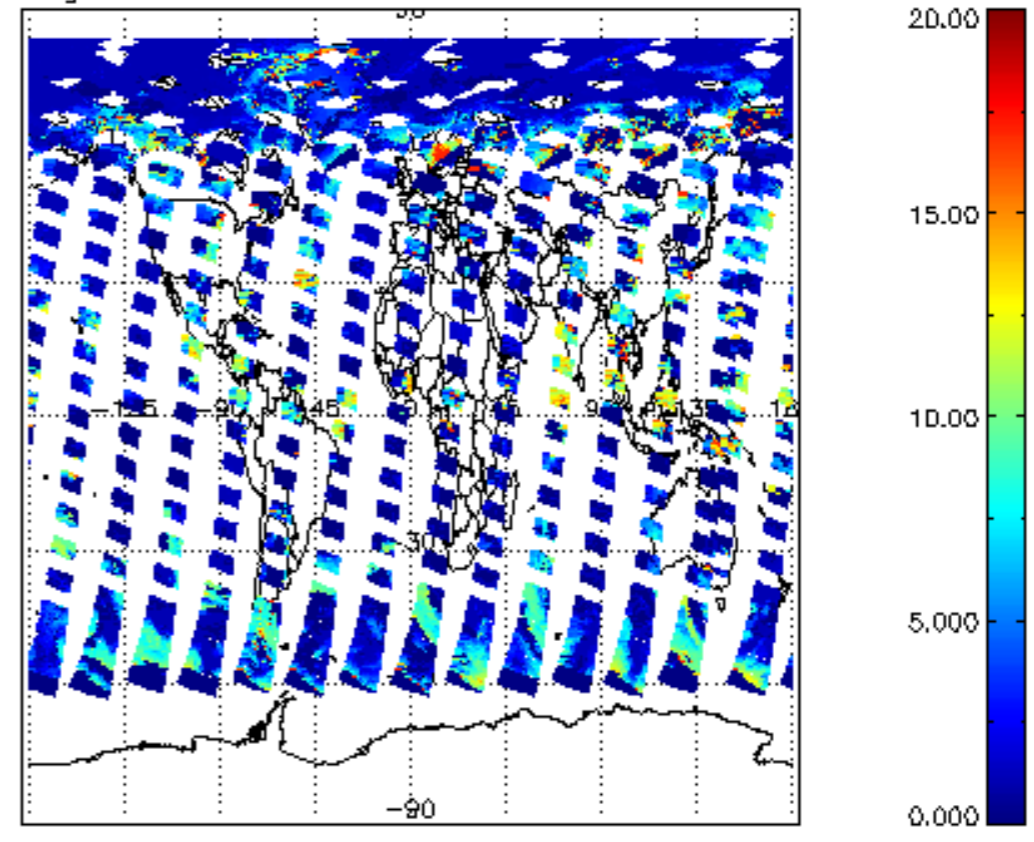
### 2.3 ADF monitoring

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

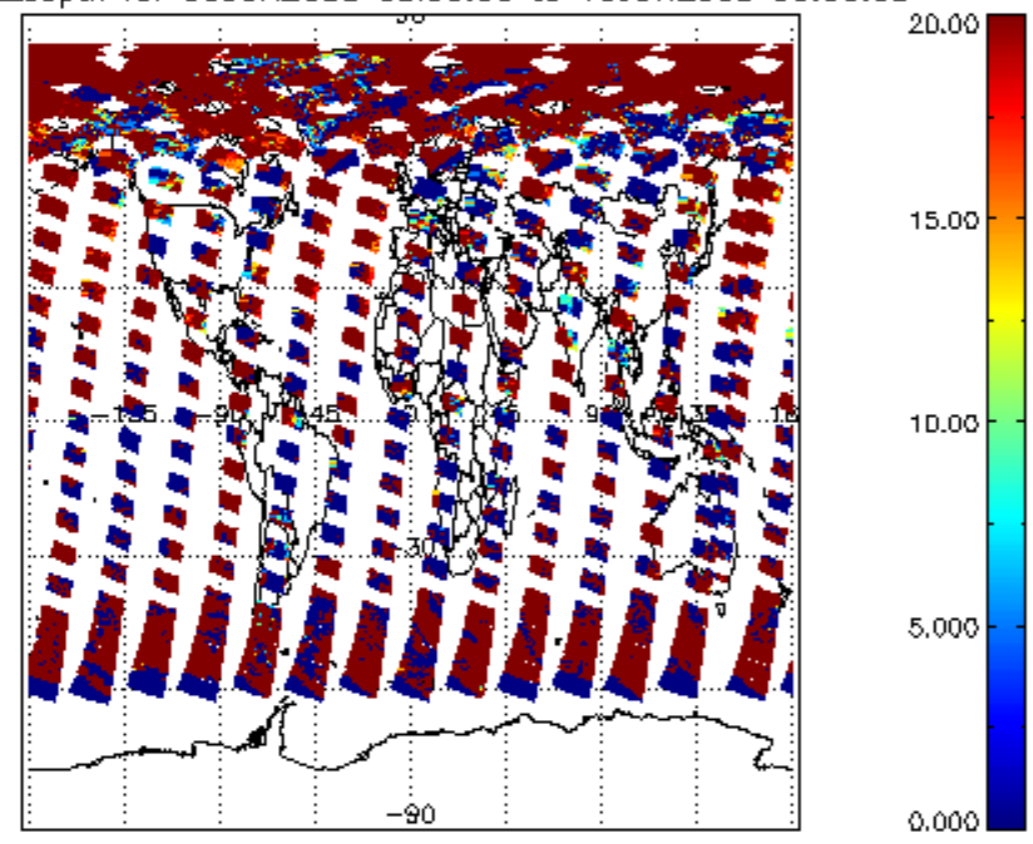
cl\_frac for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



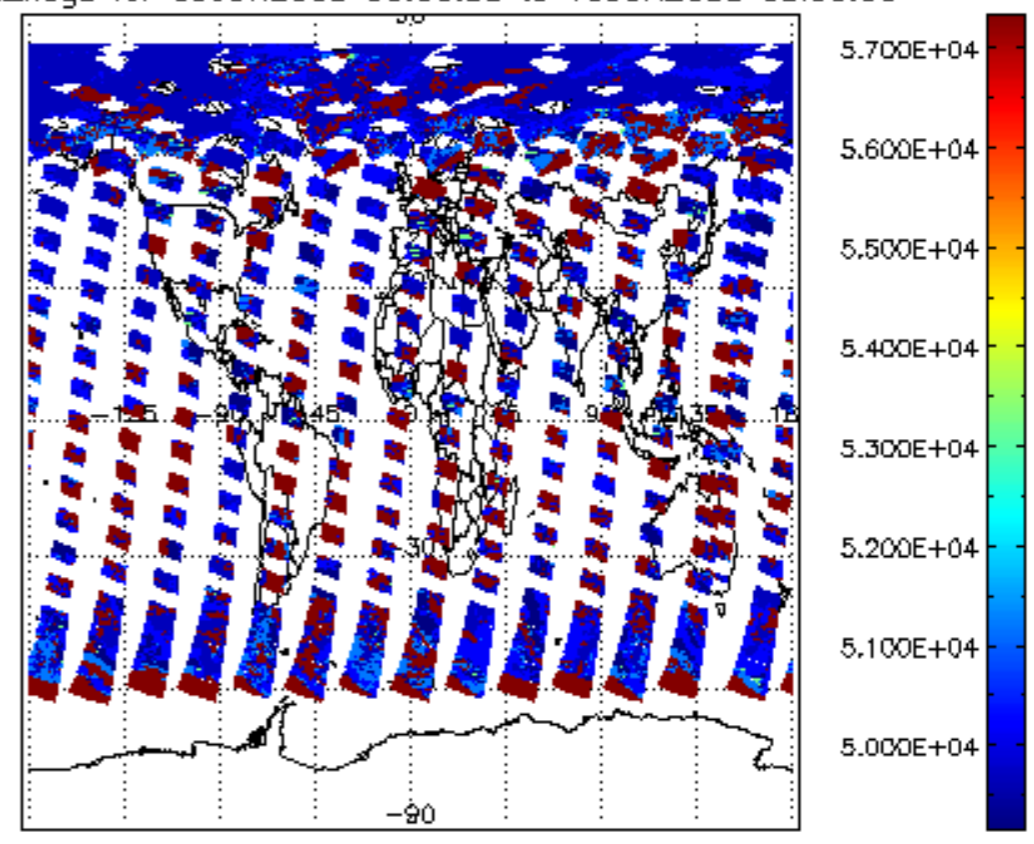
cl\_top\_height for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



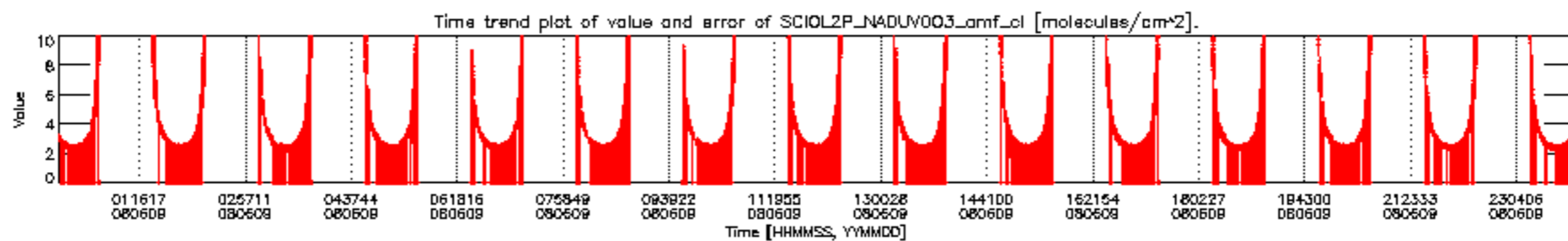
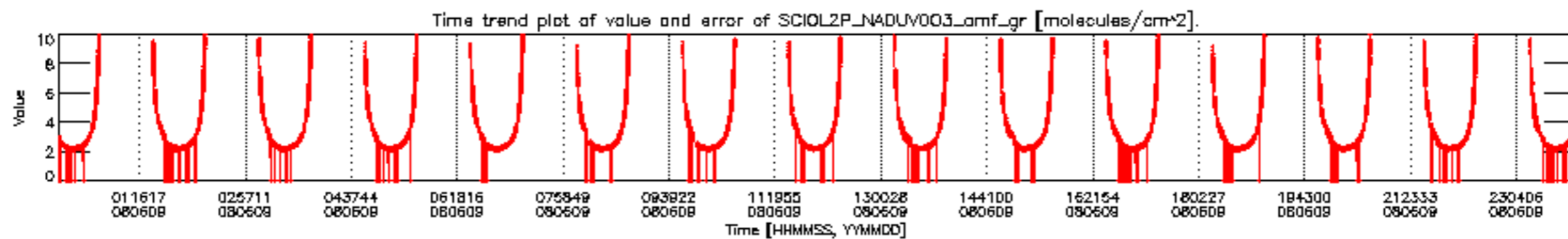
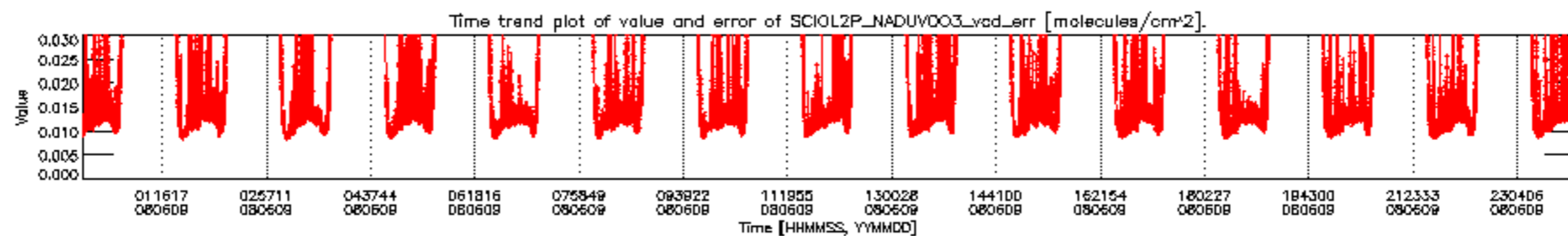
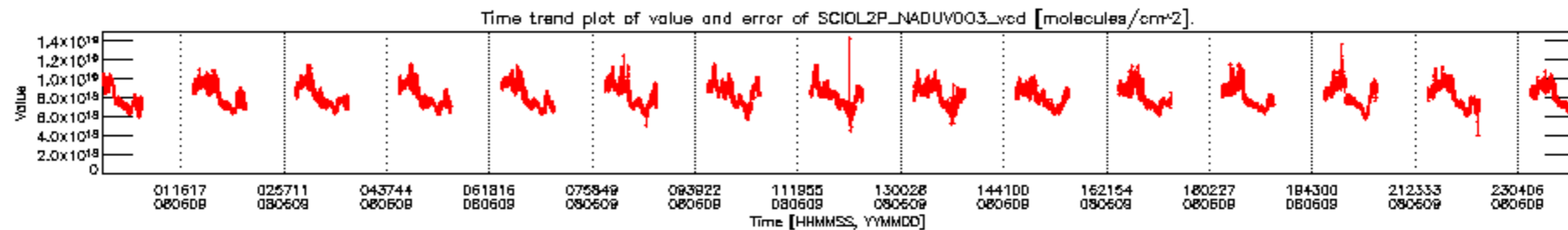
cl\_opt\_depth for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



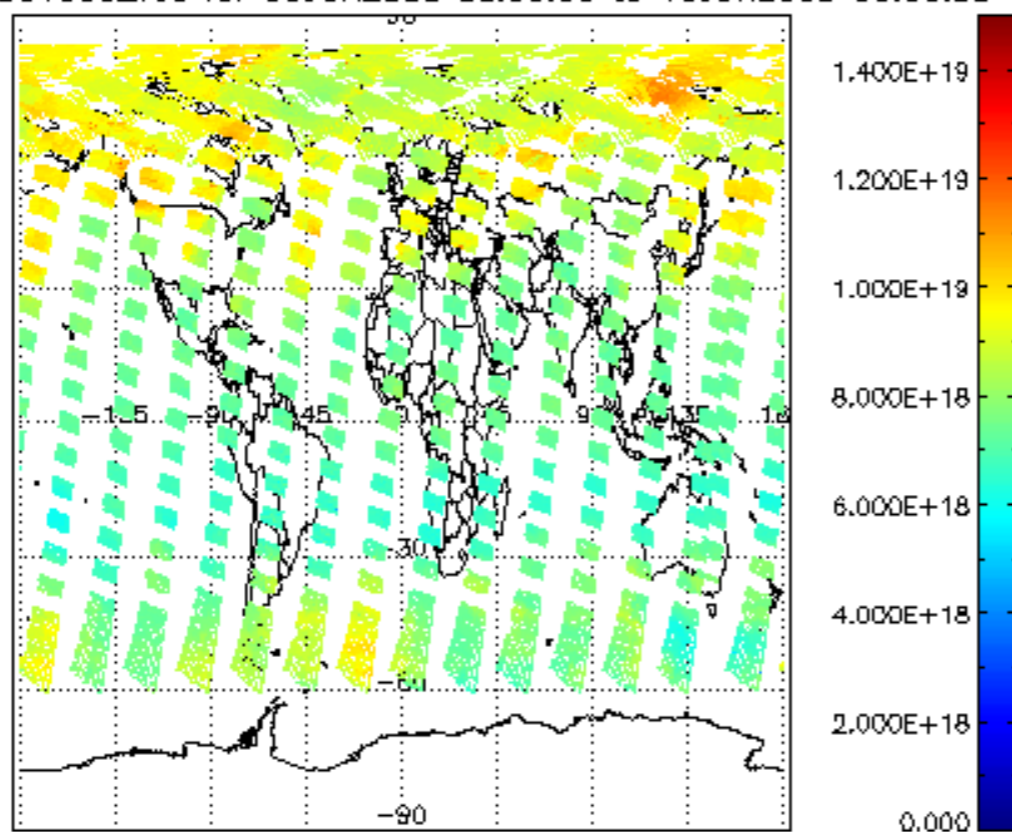
cloud\_flags for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



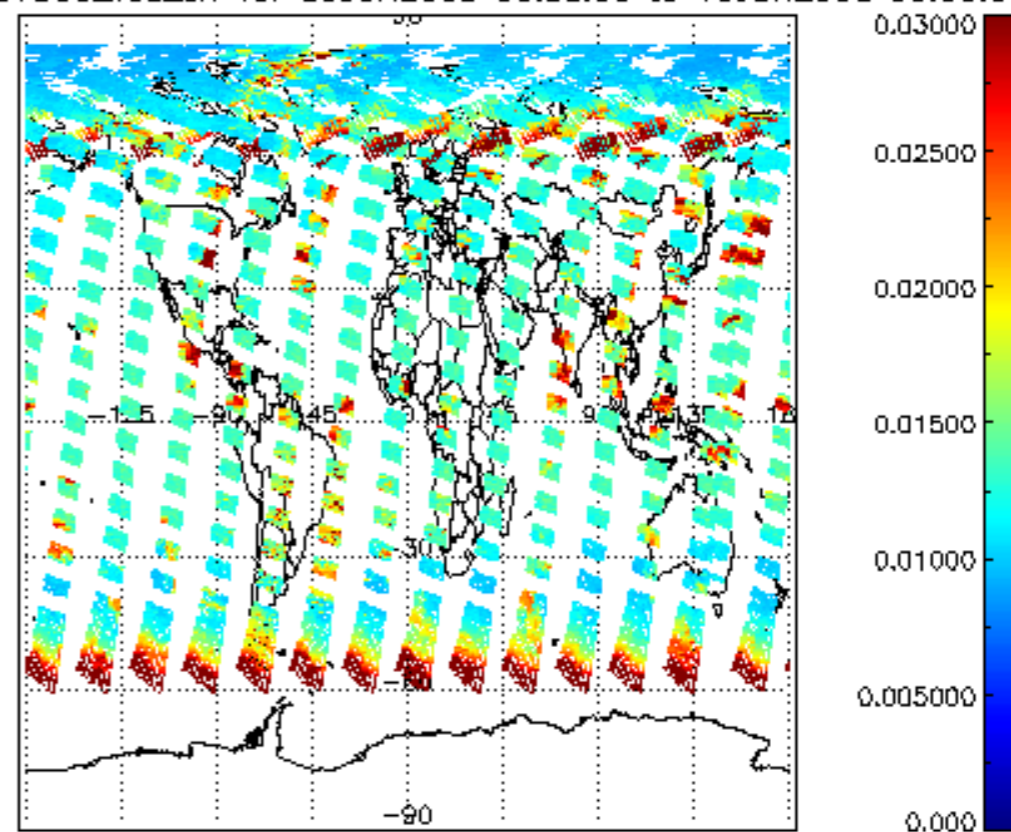




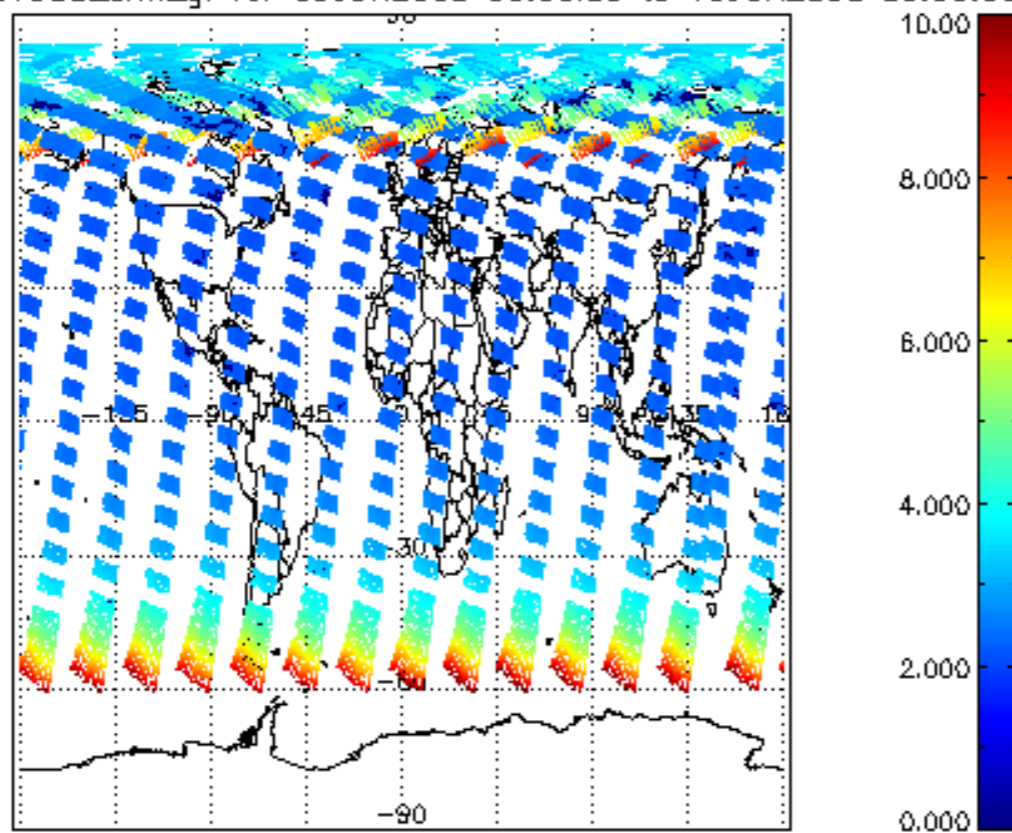
SCIOL2P\_NADUV003\_vcd for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



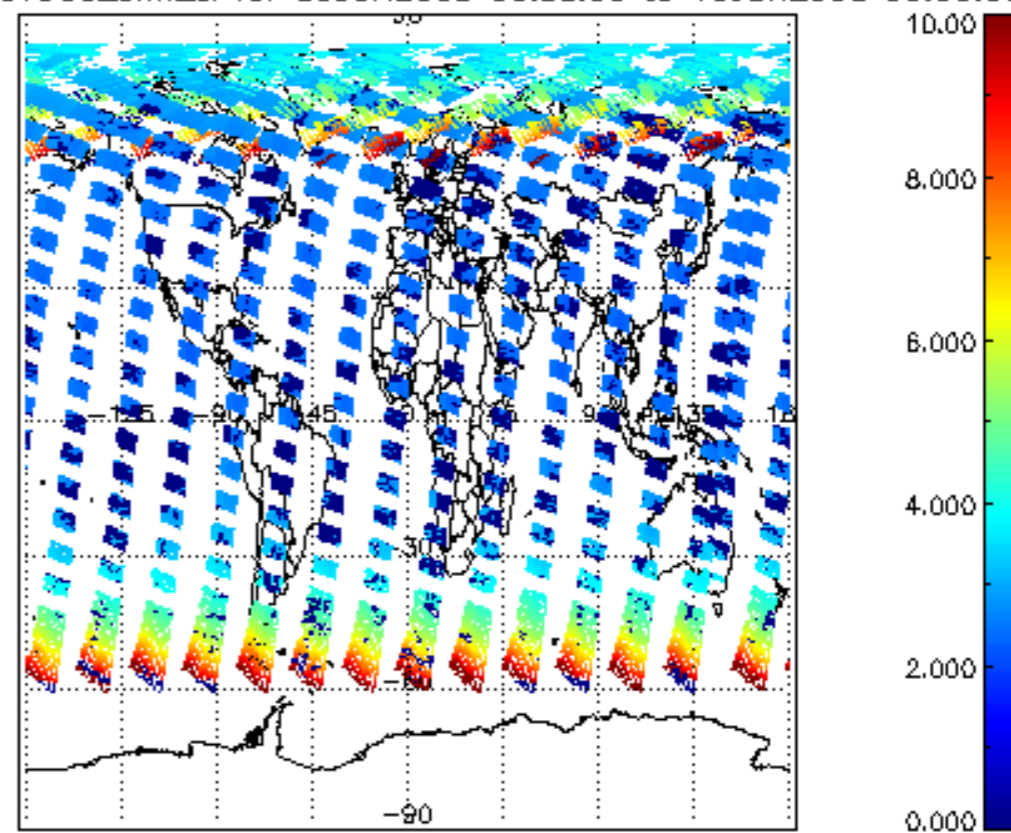
SCIOL2P\_NADUV003\_vcd\_err for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



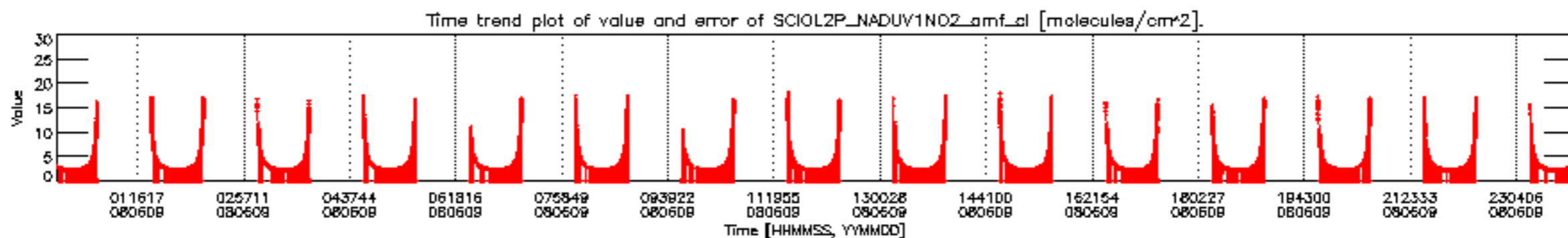
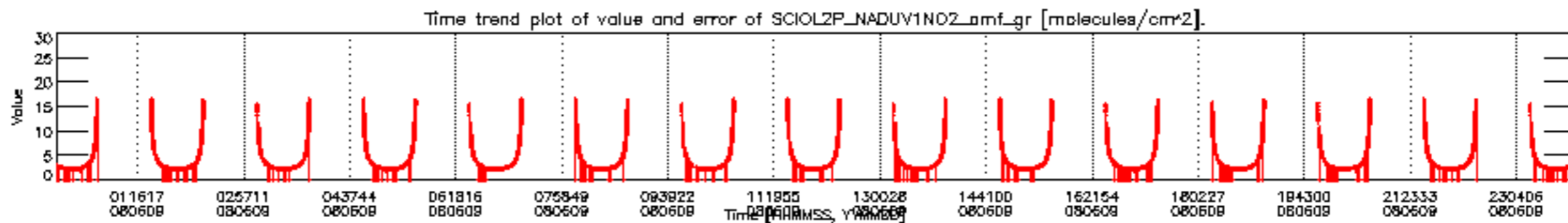
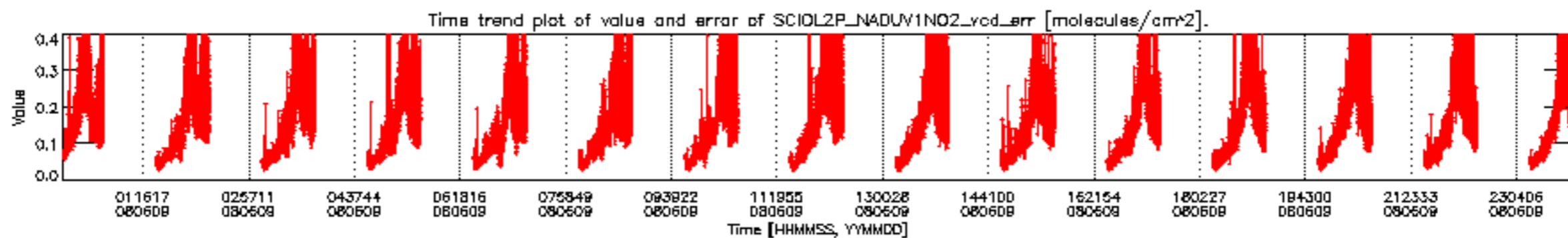
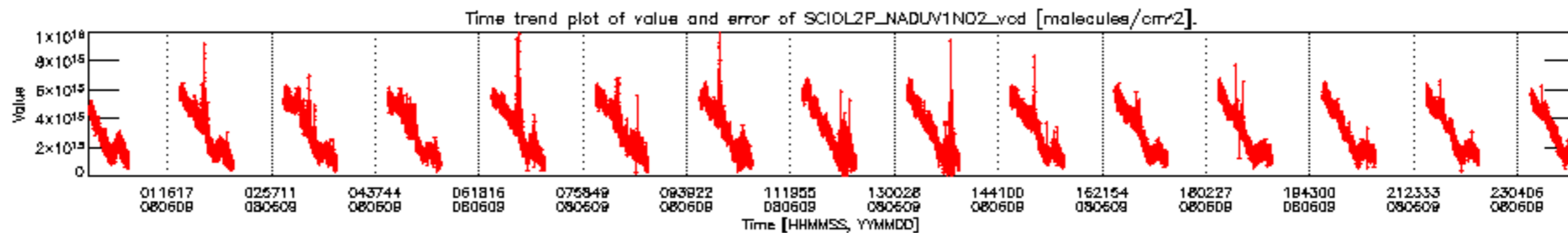
SCIOL2P\_NADUV003\_amf\_gr for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



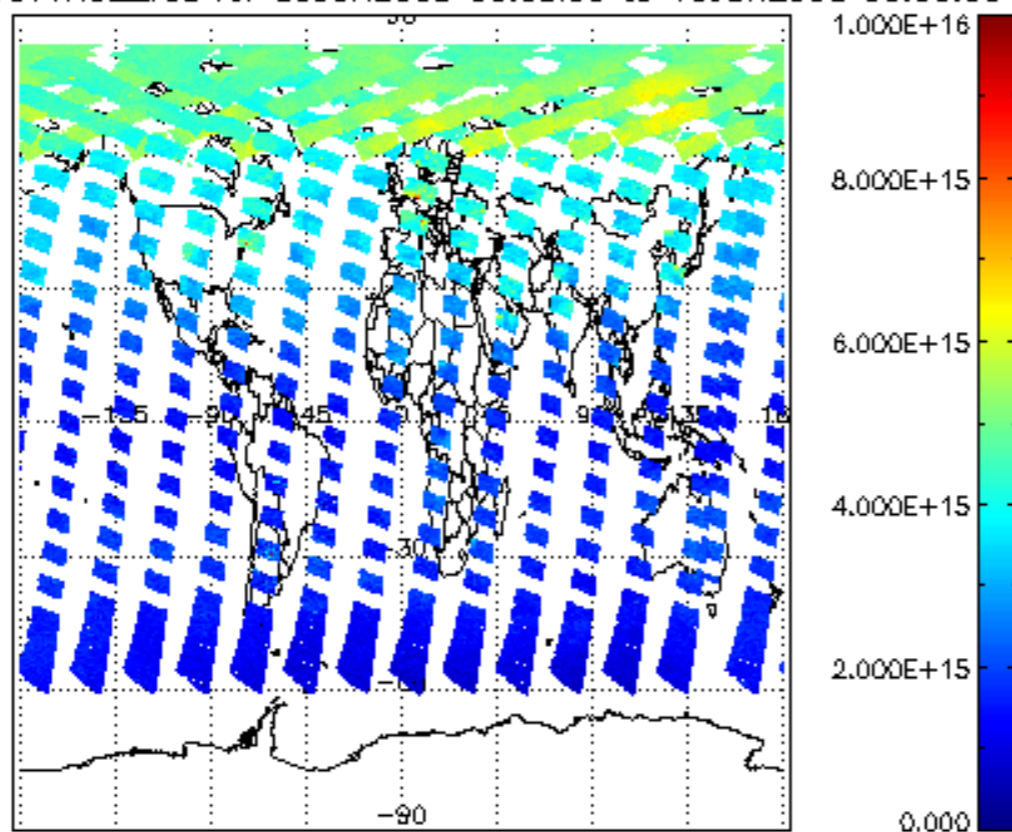
SCIOL2P\_NADUV003\_amf\_cl for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



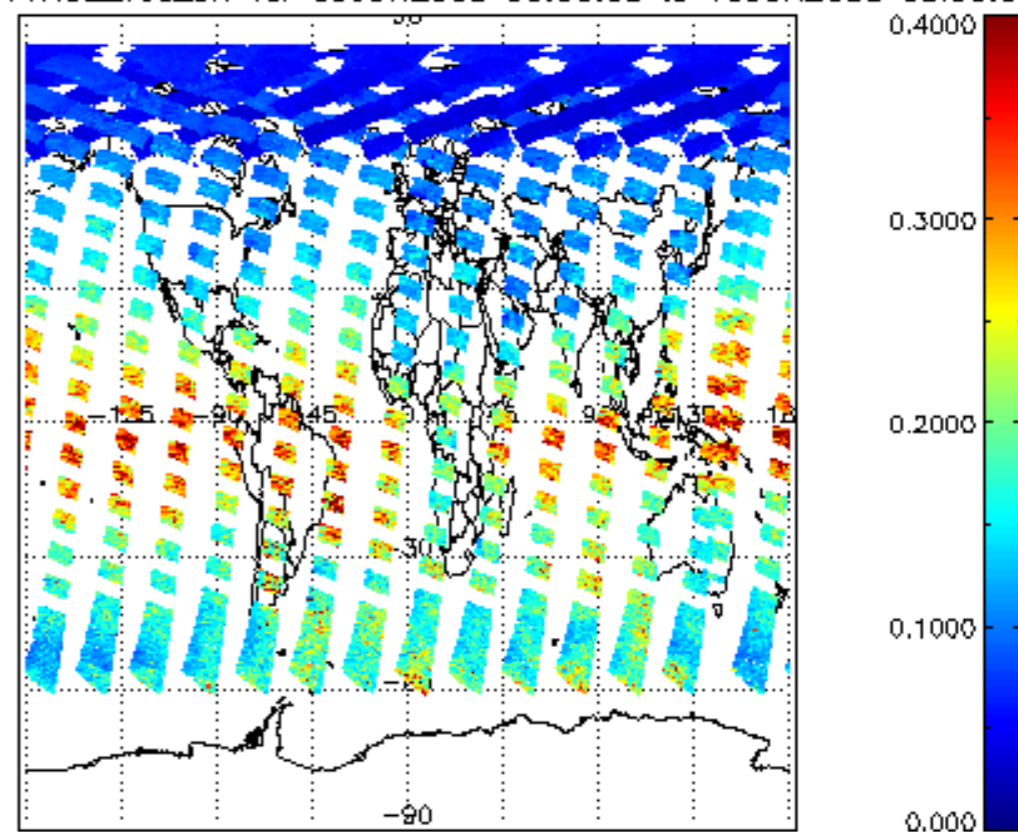




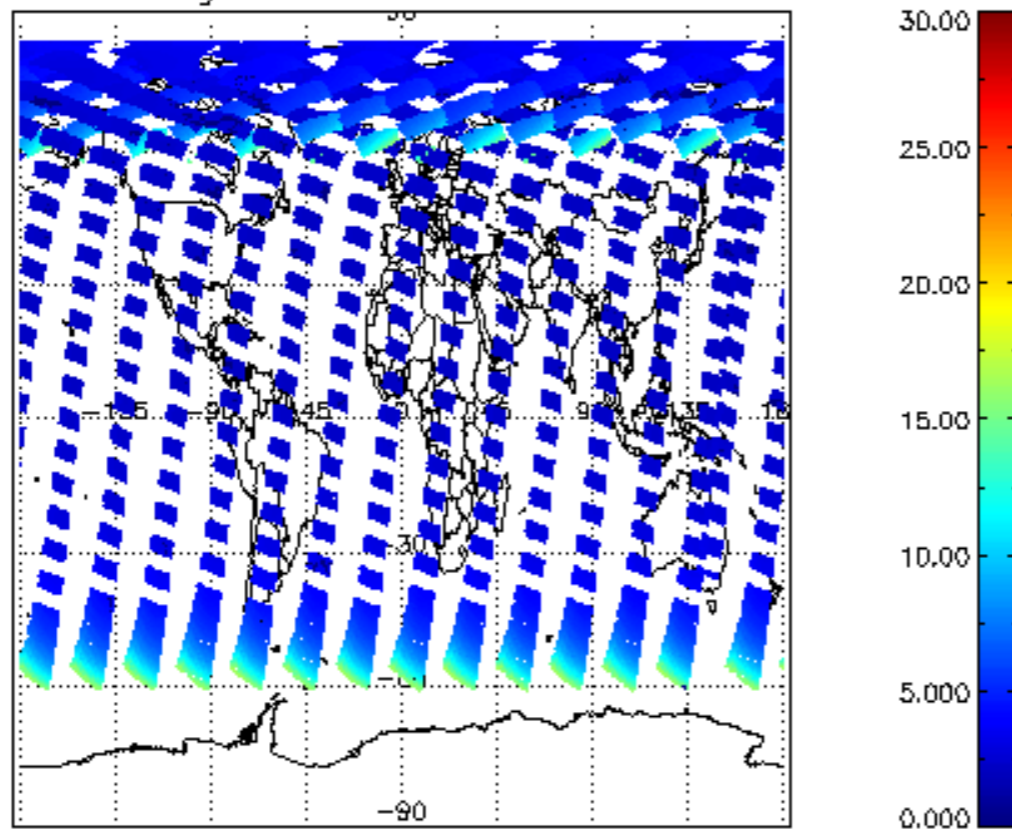
SCIOL2P\_NADUV1NO2\_vcd for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



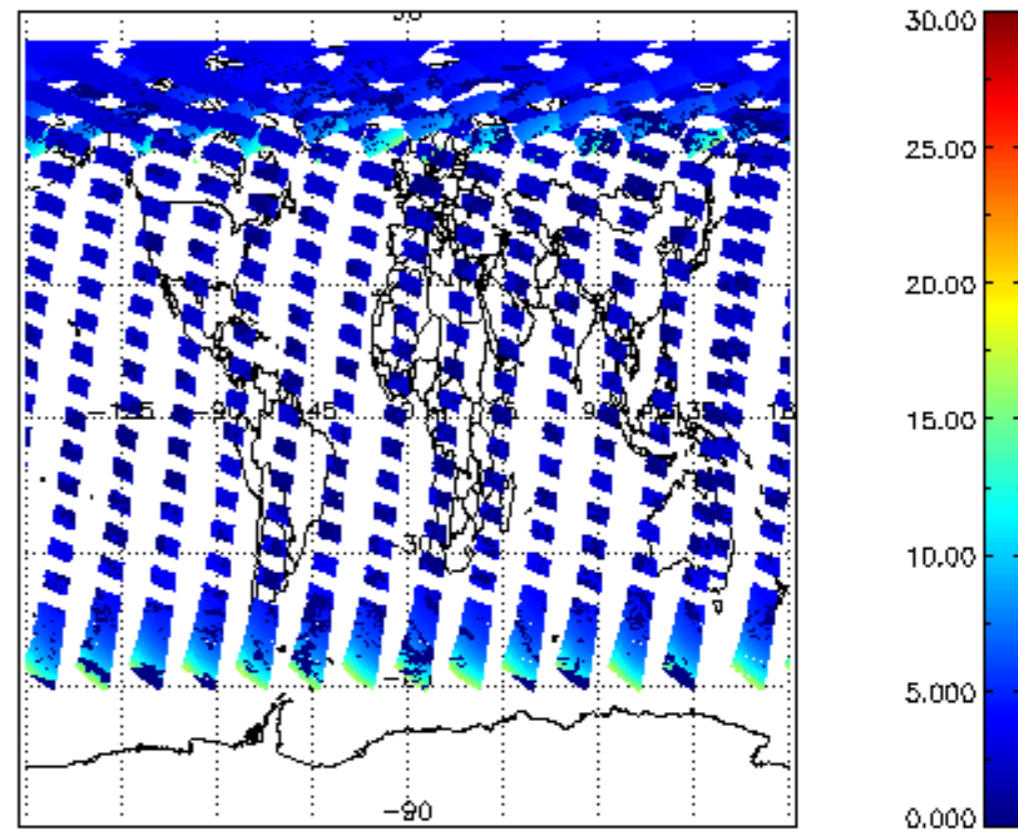
iCIOL2P\_NADUV1NO2\_vcd\_err for 09JUN2008 00:00:00 to 10JUN2008 00:00:00



iCIOL2P\_NADUV1NO2\_amf\_gr for 09JUN2008 00:00:00 to 10JUN2008 00:00:00

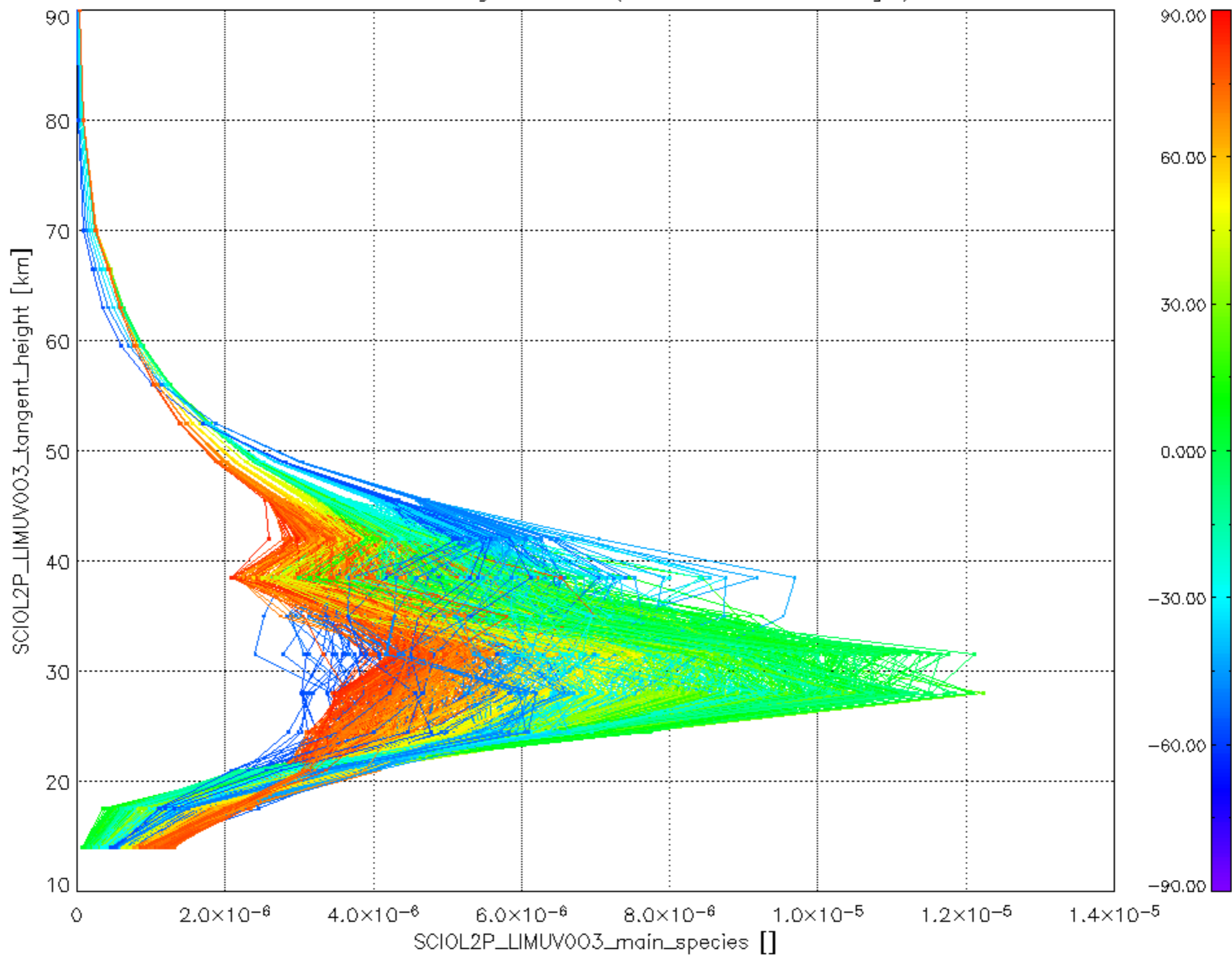


iCIOL2P\_NADUV1NO2\_amf\_cl for 09JUN2008 00:00:00 to 10JUN2008 00:00:00





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).

