

## 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	18JUL2008 06:03:25
Data source version	SCIA-OL/3.01-R
Processing scope for products	30JUN2008 00:00:00 to 01JUL2008 00:00:00
Start time of first product within scope	29JUN2008 22:43:09
Stop time of last product within scope	30JUN2008 21:26:22
Total number of level 2 products	13
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__2PRDPA20080629_224309_000033122069_00488_33107_2668.N1	29JUN2008 22:43:09	29JUN2008 23:38:22	0	GOOD
1	SCI_OL__2PRDPA20080630_002345_000033252069_00489_33108_2671.N1	30JUN2008 00:23:45	30JUN2008 01:19:11	0	GOOD
2	SCI_OL__2PRDPA20080630_020421_000033122069_00490_33109_2672.N1	30JUN2008 02:04:21	30JUN2008 02:59:34	0	GOOD
3	SCI_OL__2PRDPA20080630_034457_000033252069_00491_33110_2674.N1	30JUN2008 03:44:57	30JUN2008 04:40:22	0	GOOD
4	SCI_OL__2PRDPA20080630_052533_000033122069_00492_33111_2678.N1	30JUN2008 05:25:33	30JUN2008 06:20:46	0	GOOD
5	SCI_OL__2PRDPA20080630_070609_000033252069_00493_33112_2732.N1	30JUN2008 07:06:09	30JUN2008 08:01:35	0	GOOD
6	SCI_OL__2PRDPA20080630_084645_000033122069_00494_33113_2734.N1	30JUN2008 08:46:45	30JUN2008 09:41:58	0	GOOD
7	SCI_OL__2PRDPA20080630_102721_000033252069_00495_33114_2736.N1	30JUN2008 10:27:21	30JUN2008 11:22:46	0	GOOD
8	SCI_OL__2PRDPA20080630_120757_000033122069_00496_33115_2738.N1	30JUN2008 12:07:57	30JUN2008 13:03:10	0	GOOD
9	SCI_OL__2PRDPA20080630_152909_000033122069_00498_33117_2741.N1	30JUN2008 15:29:09	30JUN2008 16:24:21	0	GOOD
10	SCI_OL__2PRDPA20080630_170933_000033052069_00499_33118_2746.N1	30JUN2008 17:09:33	30JUN2008 18:04:38	0	GOOD
11	SCI_OL__2PRDPA20080630_185036_000033252069_00500_33119_2747.N1	30JUN2008 18:50:36	30JUN2008 19:46:02	0	GOOD
12	SCI_OL__2PRDPA20080630_203057_000033252069_00501_33120_2749.N1	30JUN2008 20:30:57	30JUN2008 21:26:22	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: 121680

Total number of cloud data DSRs with good quality flag (=0): 121680 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	121680	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	121680	0.17094	0.12500	0.12500	0.25000	0.060267	s
CL_FRAC	121680	0.27375	0.19329	0.0000	1.0000	0.27697	-
CL_FRAC_ERR	121680	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	121680	5.4701	4.0000	4.0000	8.0000	1.9285	
PMD_READ_CL[0]	121680	0.16308	0.0000	0.0000	8.0000	0.92158	-

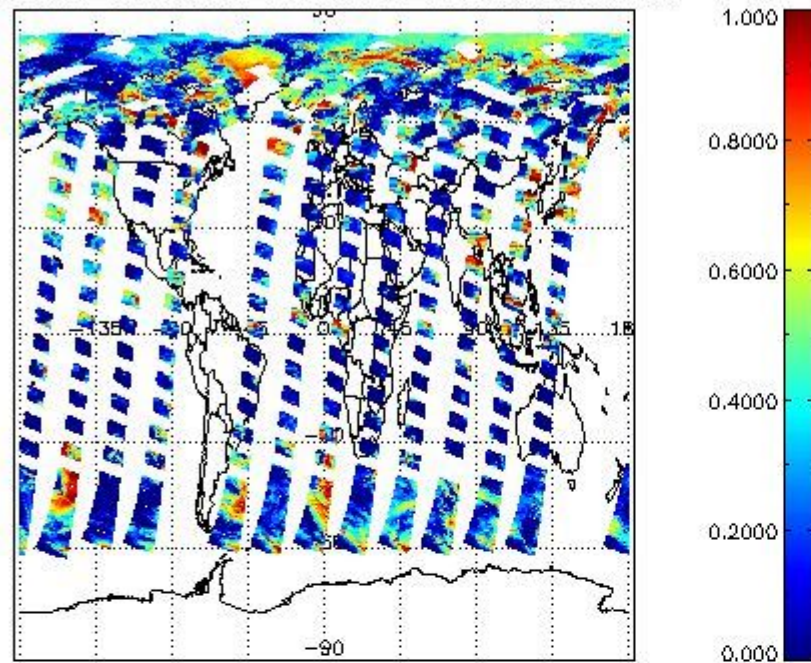
PMD_READ_CL[1]	121680	1.8858	0.0000	0.0000	8.0000	2.6574	-
CL_TOP_HEIGHT	106142	2.9233	1.1000	0.0000	17.000	3.6550	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	106142	55.928	67.639	0.0000	101.00	45.816	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	121680	11100000	11100000	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	121680	11001101	11000100	11000000	11100000	3651.1	flags
AERO_ABSO_IND	121680	3.3830	3.7772	-1.5035	12.475	2.2706	
AERO_IND_DIAG	121680	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	121680	01011001	00000000	00000000	11000000	24513.	flags

Time and geolocation plots:

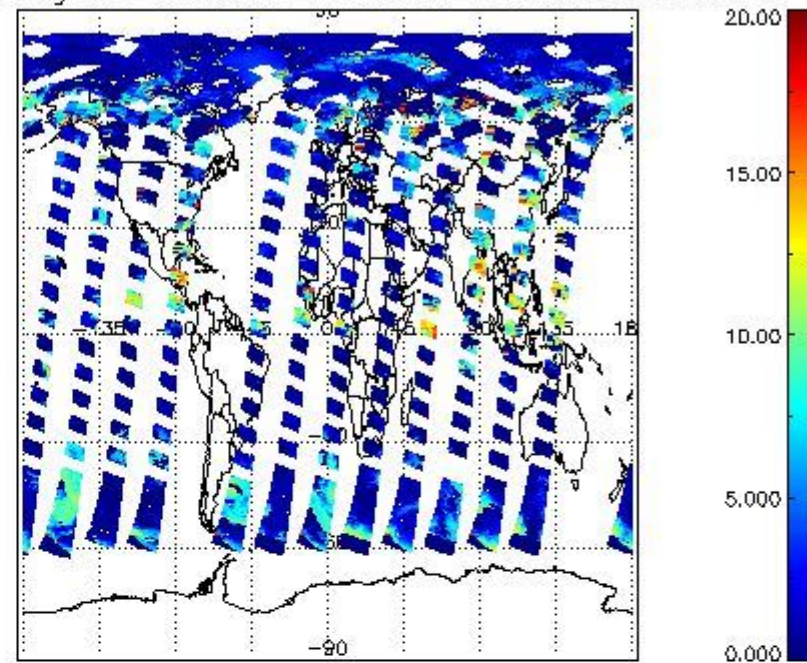
Plots are available for the following parameters:

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

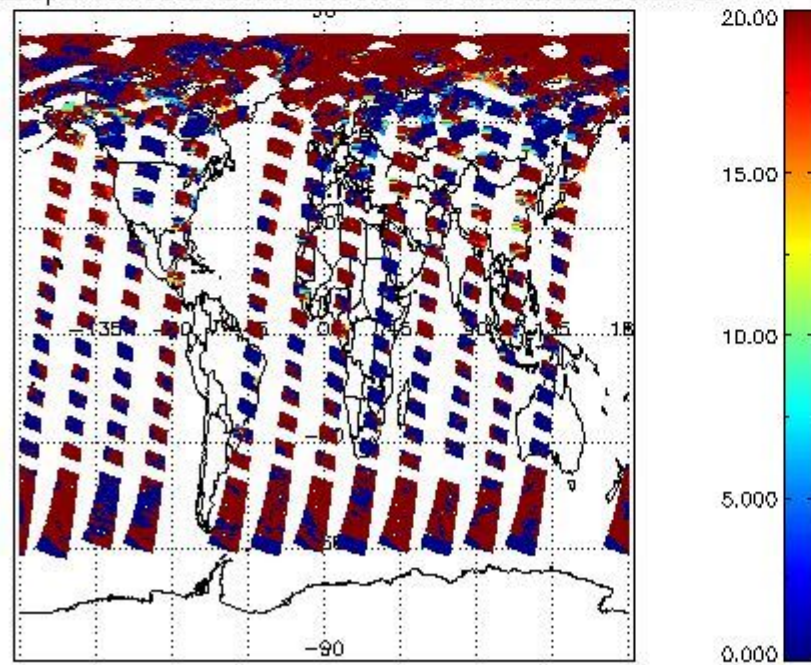
cLfrac for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



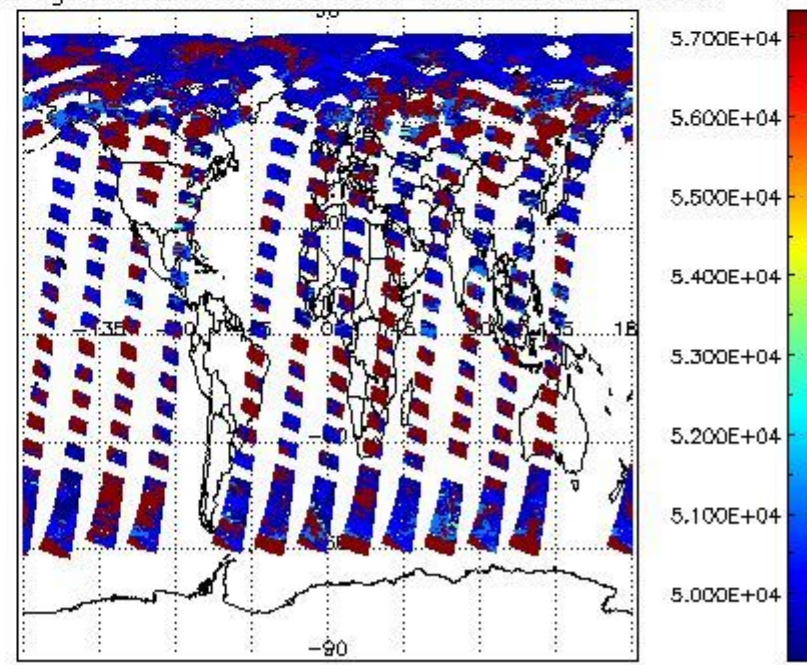
cL\_top\_height for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



cLopt\_depth for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



cloud\_flags for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



### 2.2.2 Nadir

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

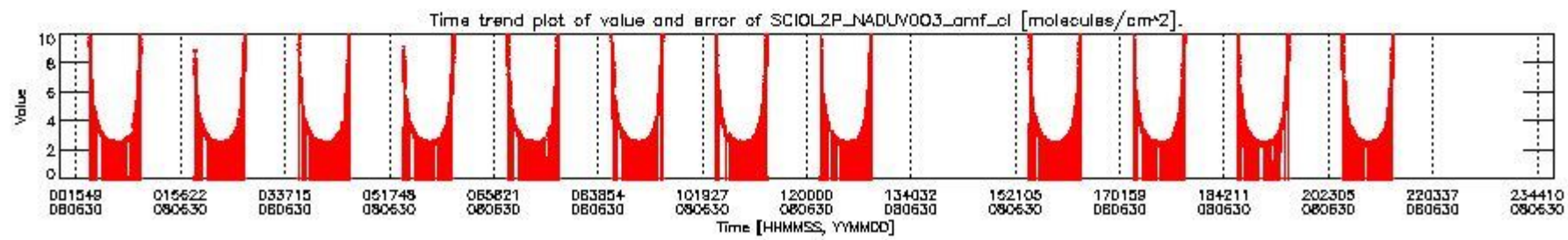
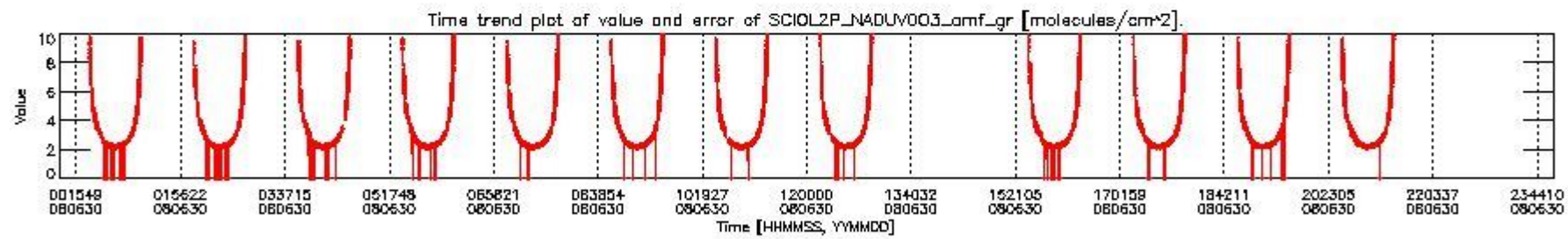
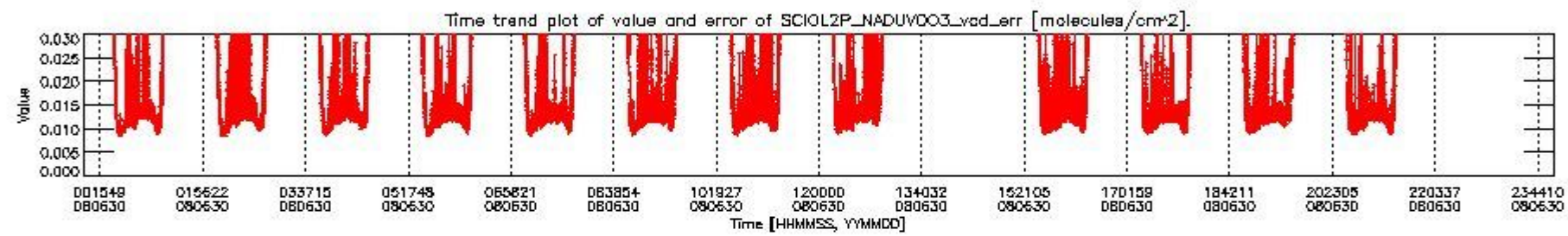
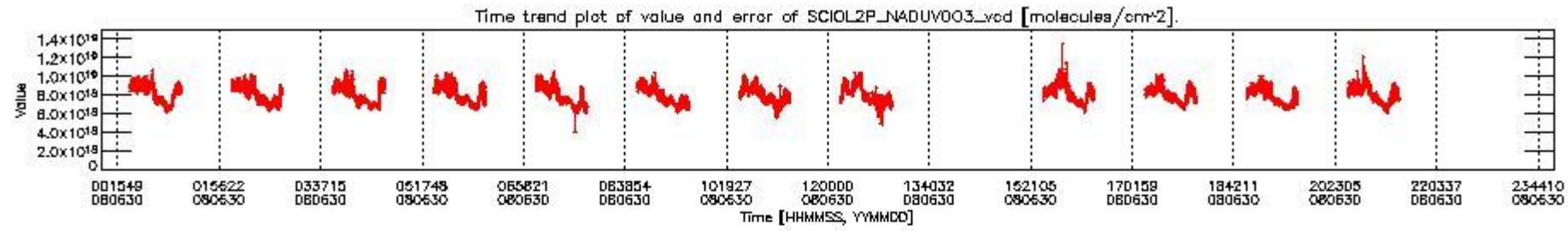
The following data items are currently included into this section:

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



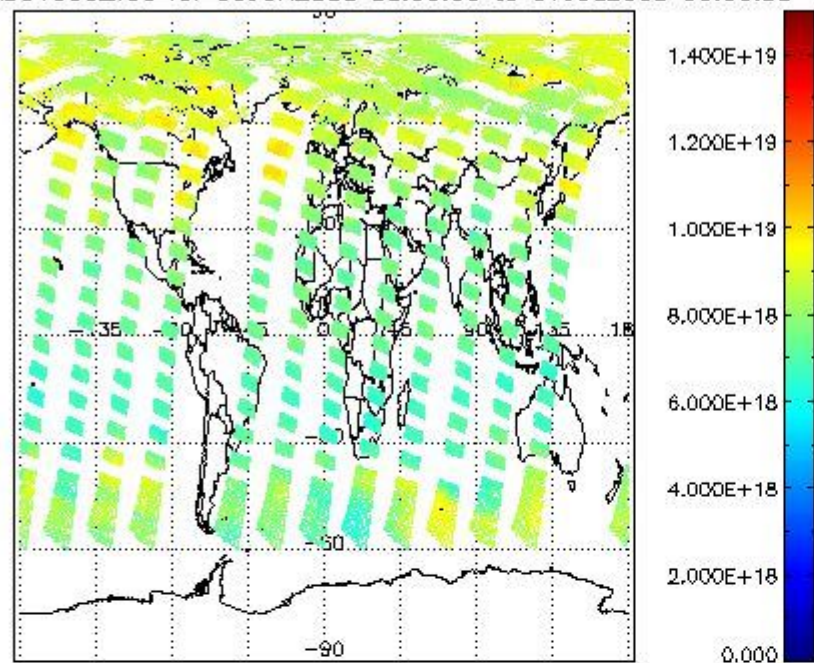
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

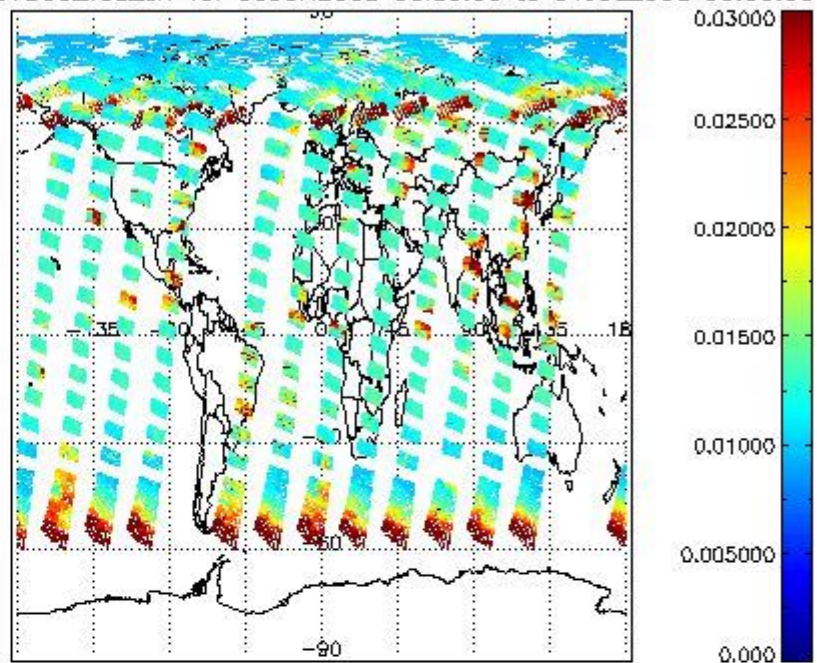




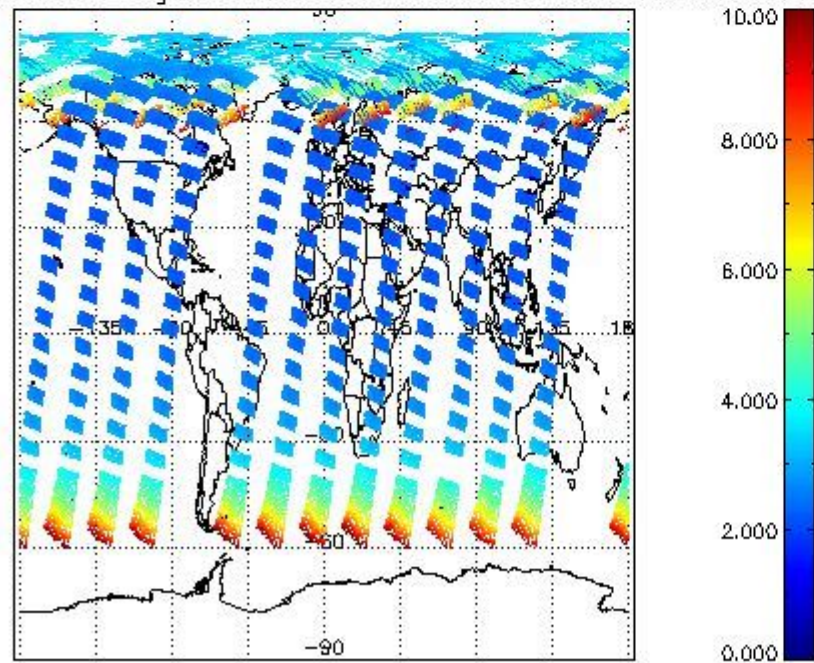
SCIOL2P\_NADUV003\_vcd for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



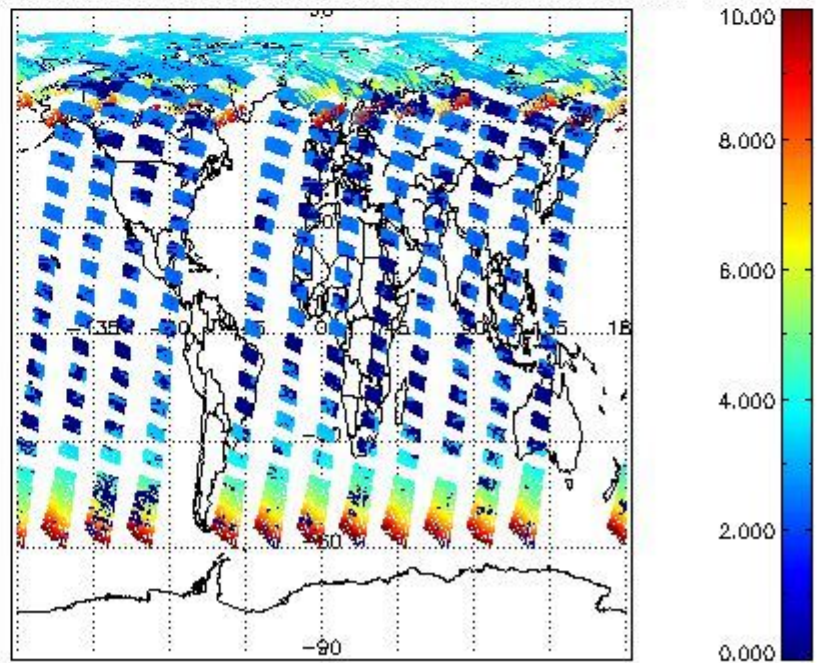
SCIOL2P\_NADUV003\_vcd\_err for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



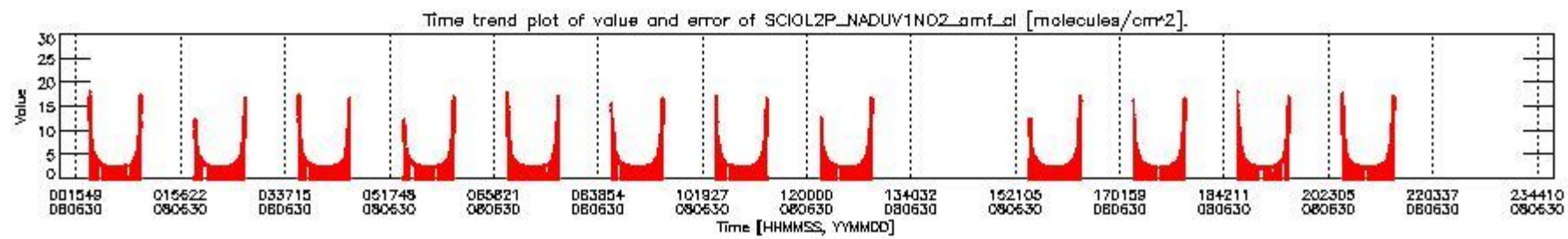
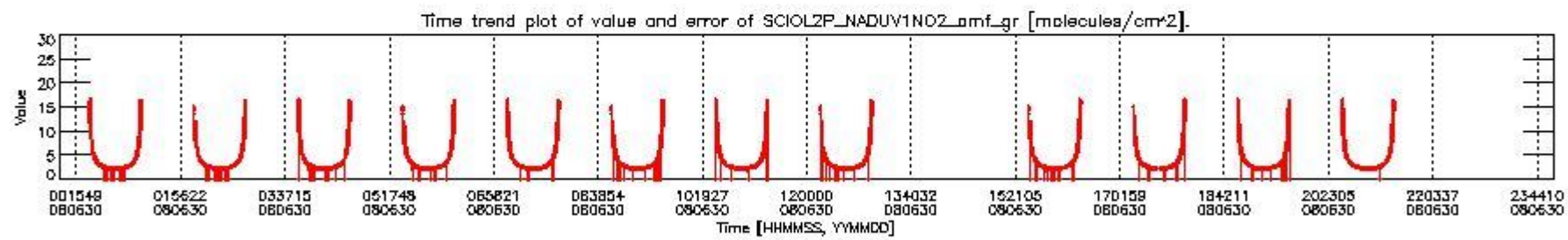
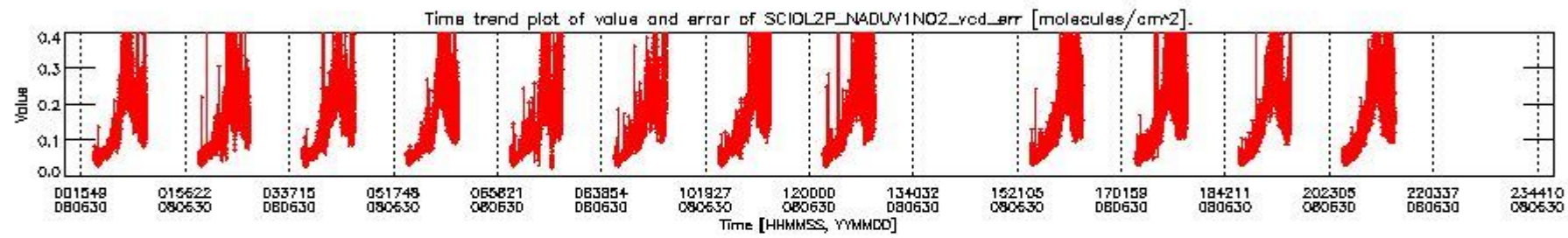
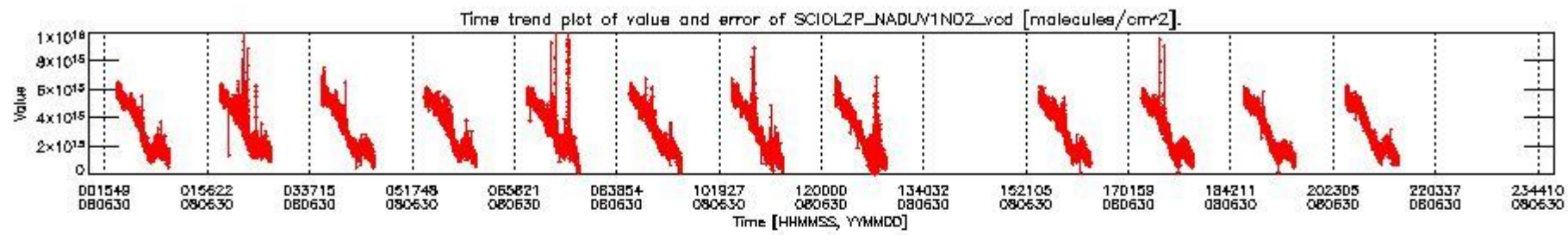
SCIOL2P\_NADUV003\_amf\_gr for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



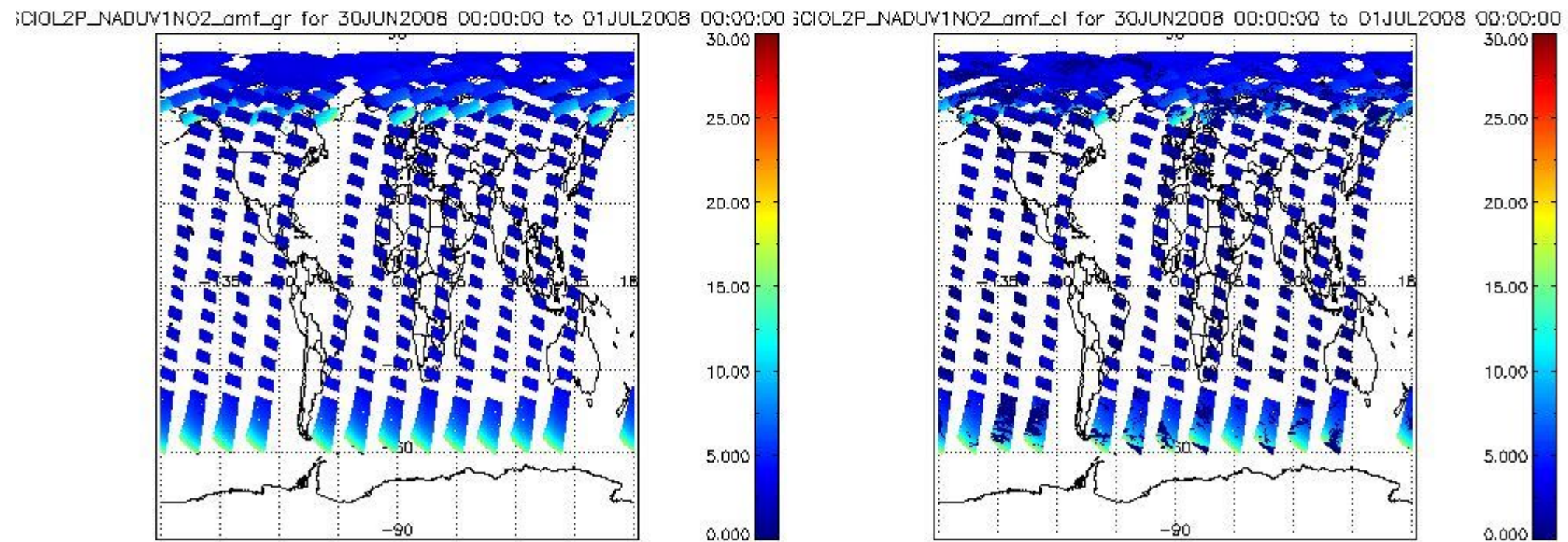
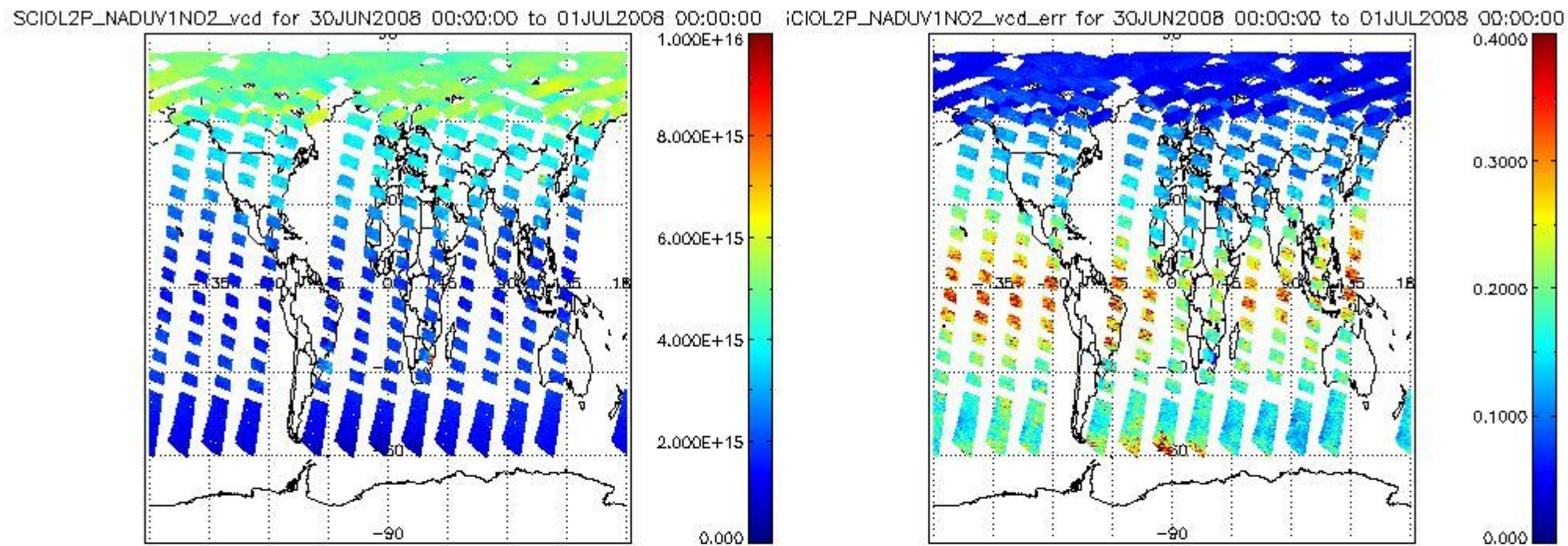
SCIOL2P\_NADUV003\_amf\_cl for 30JUN2008 00:00:00 to 01JUL2008 00:00:00











### 2.2.3 Limb

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

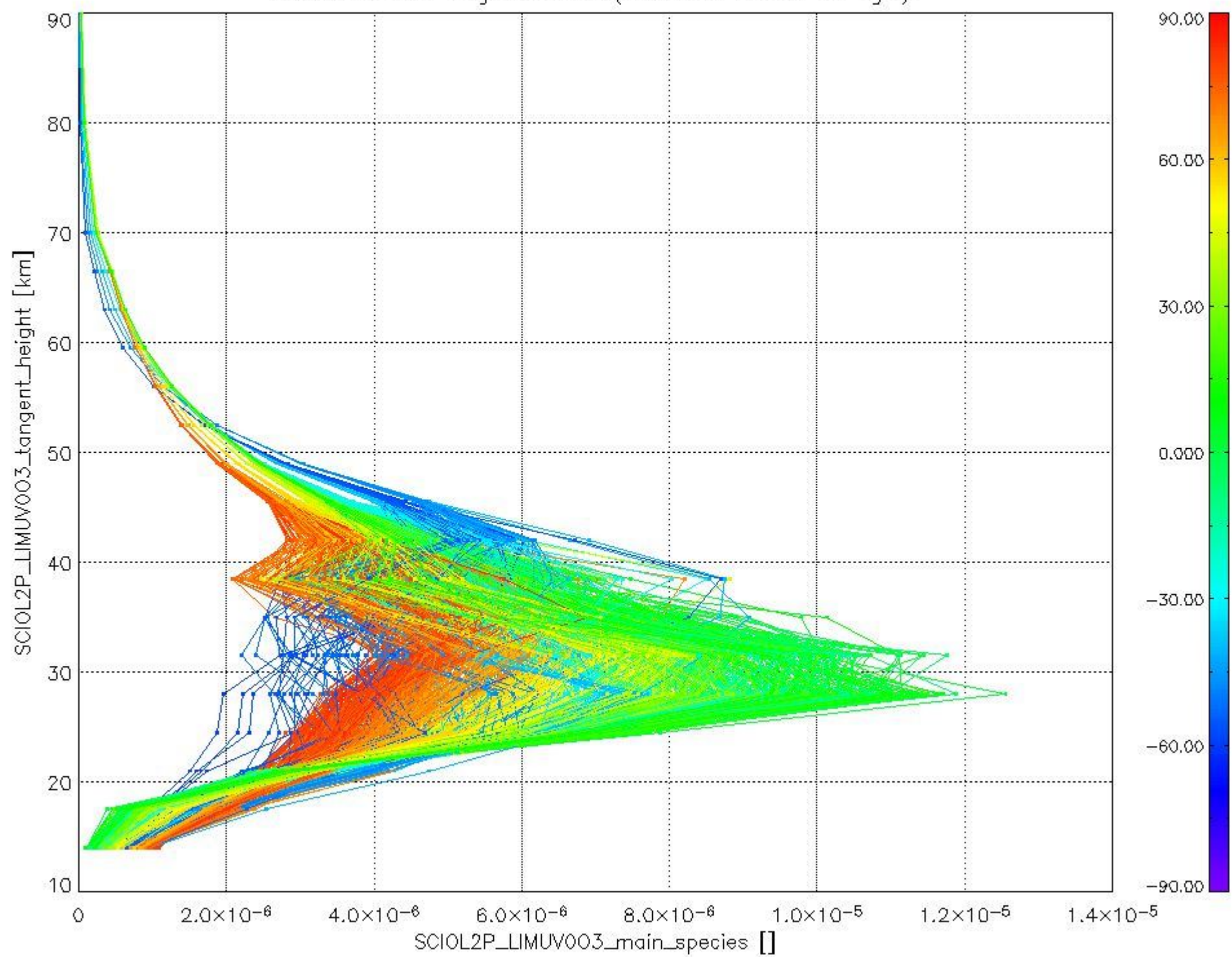
The following data items are currently included into this section:

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.

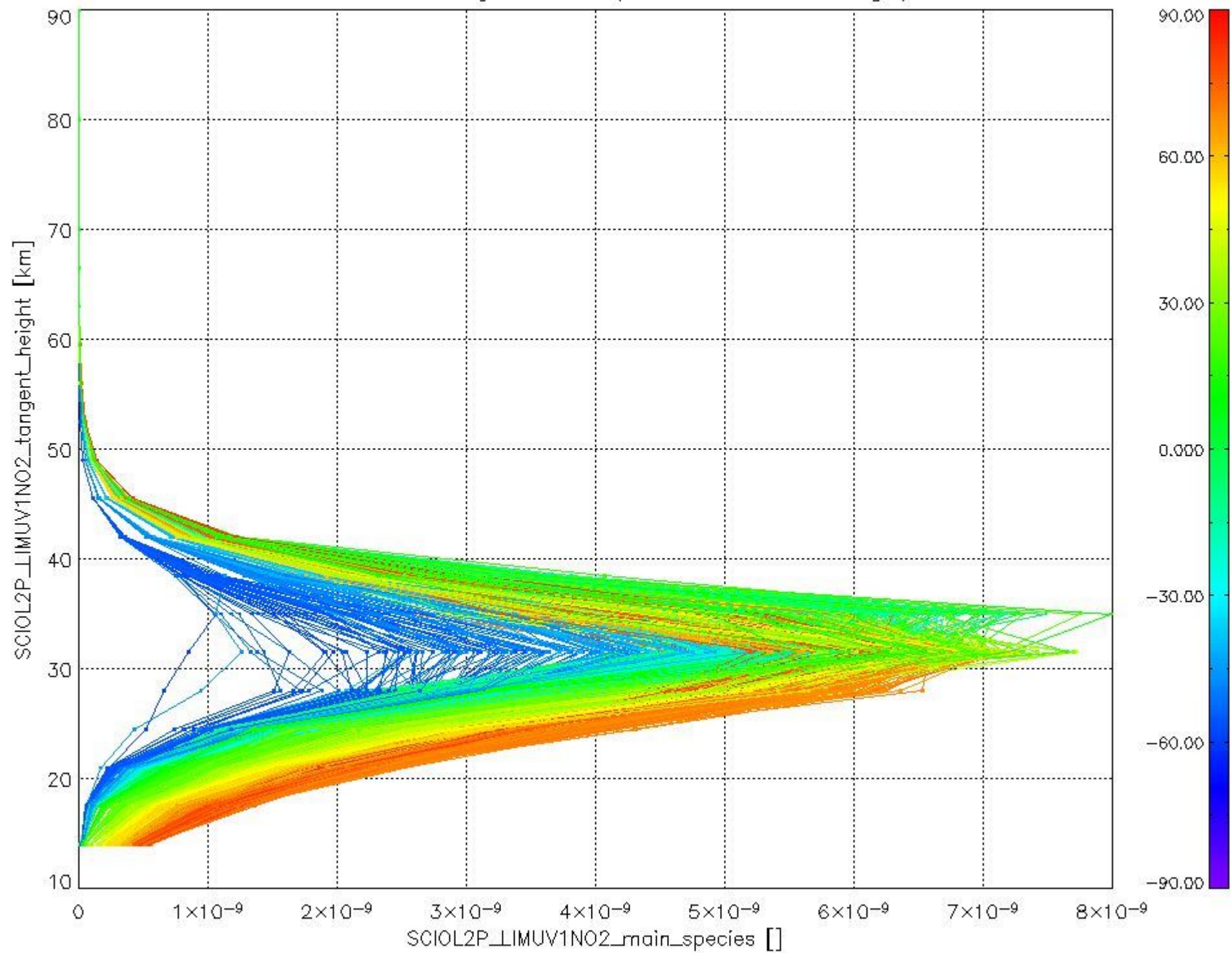


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





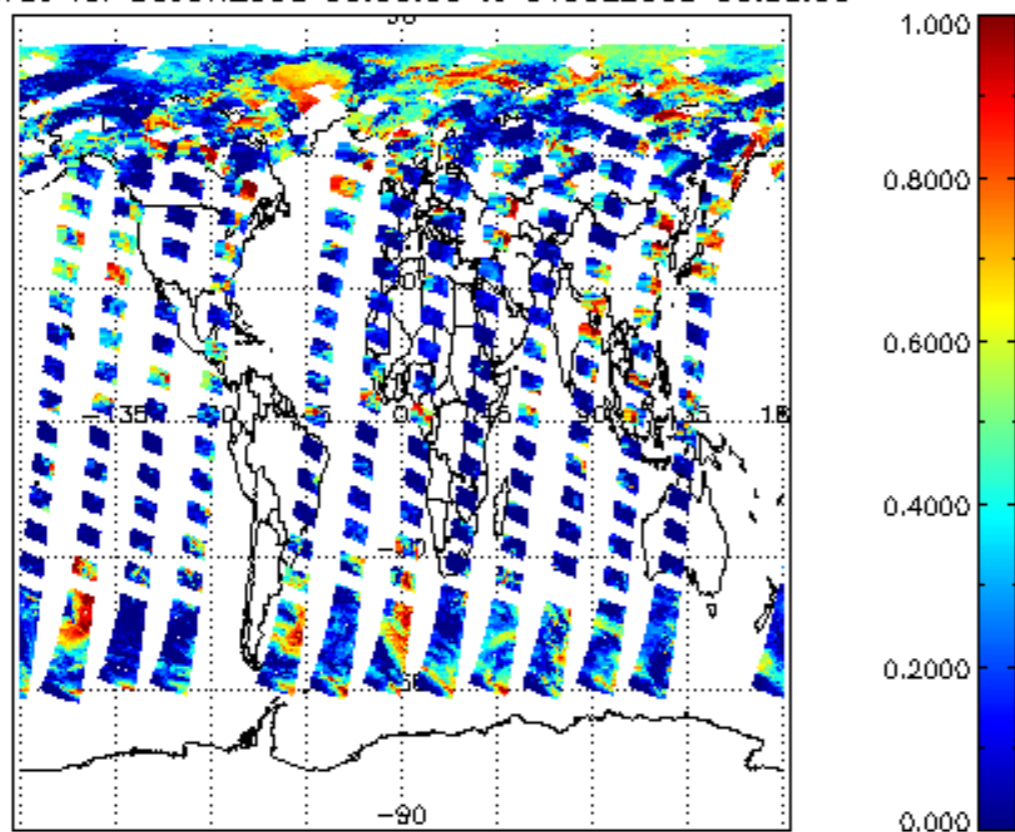
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



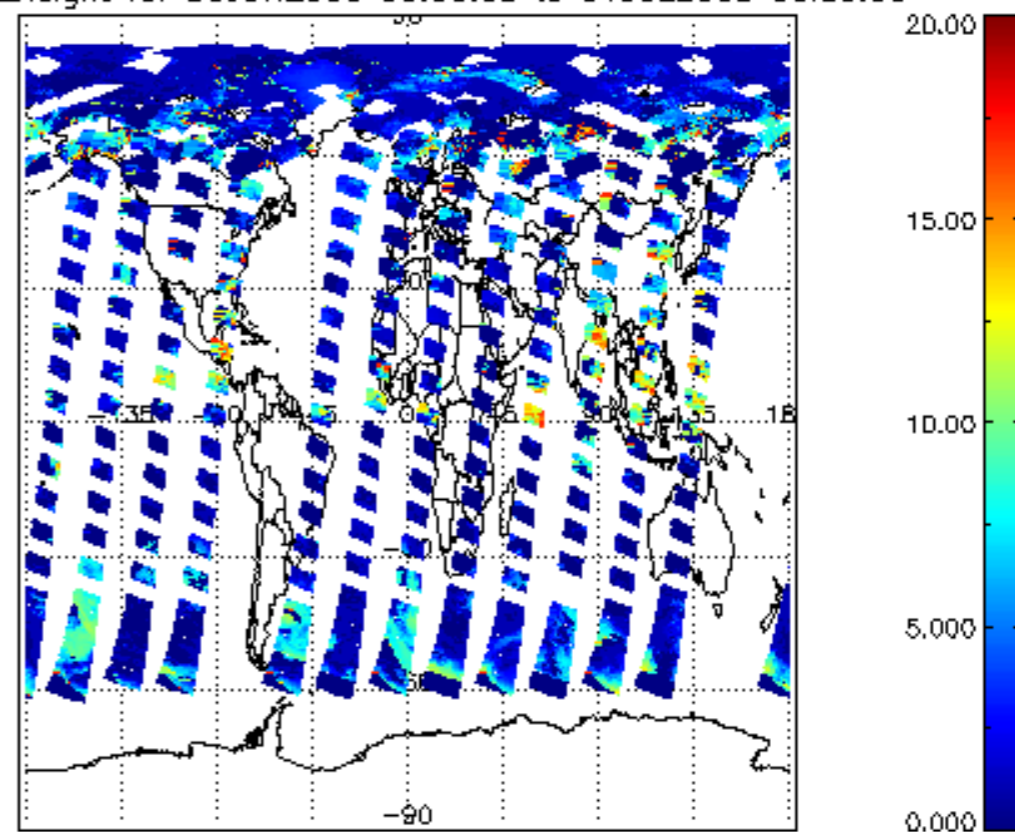
### 2.3 ADF monitoring

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

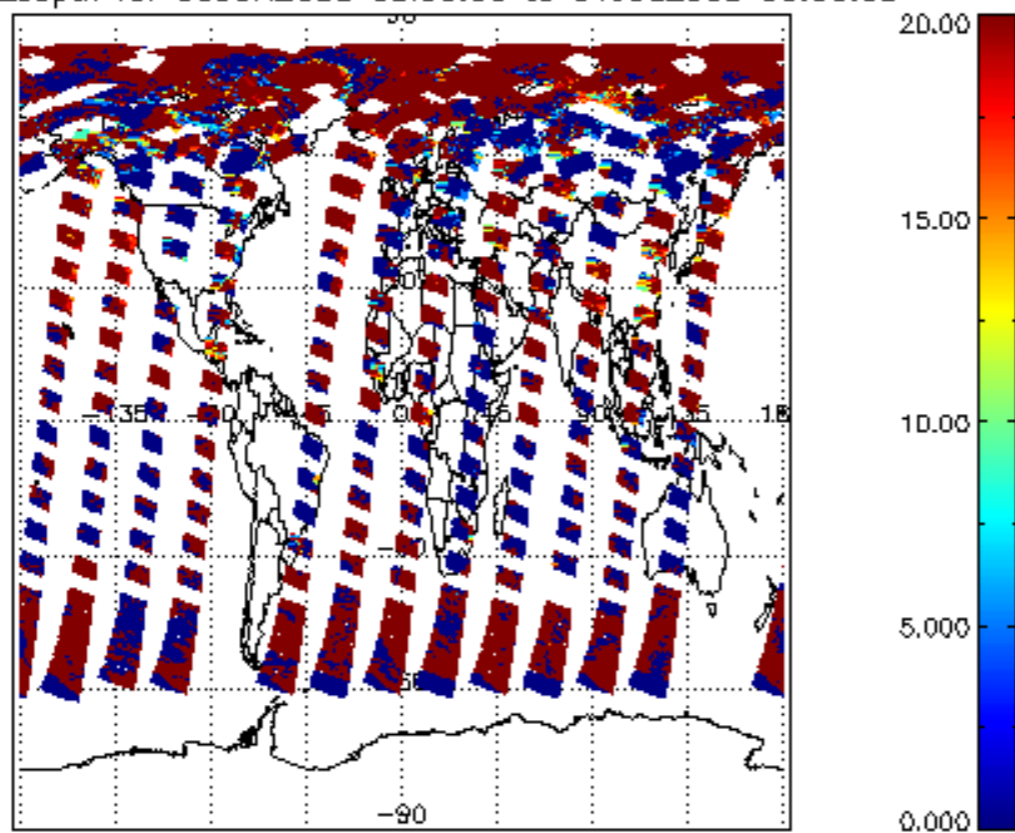
cl\_frac for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



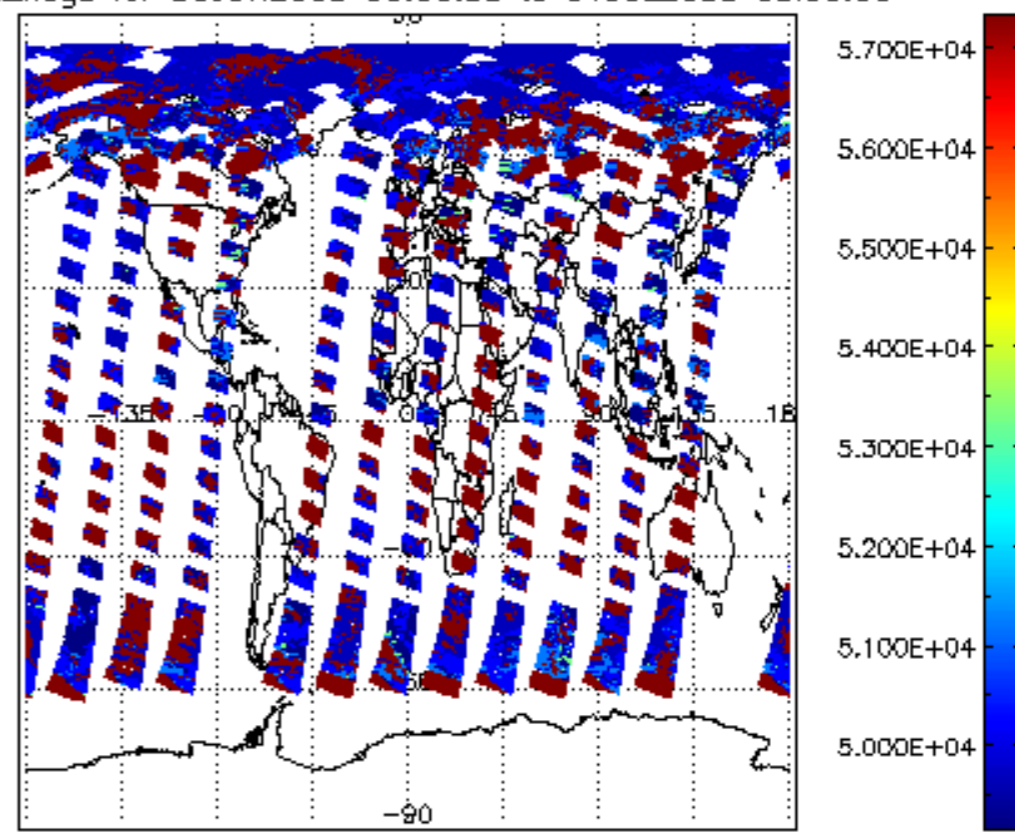
cl\_top\_height for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



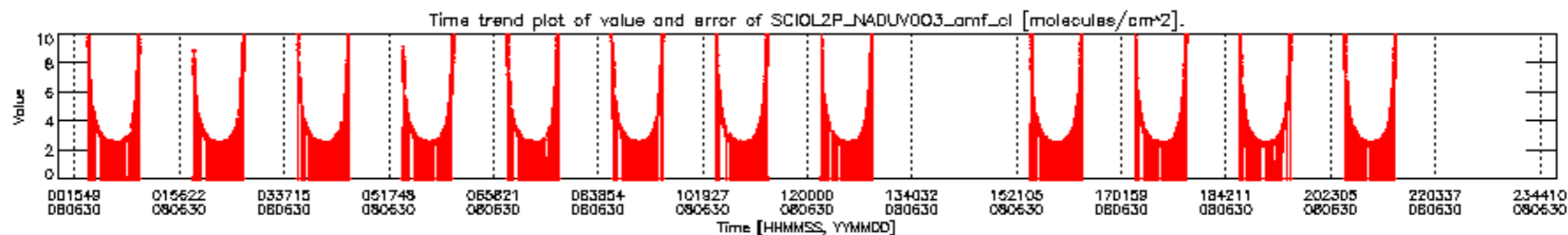
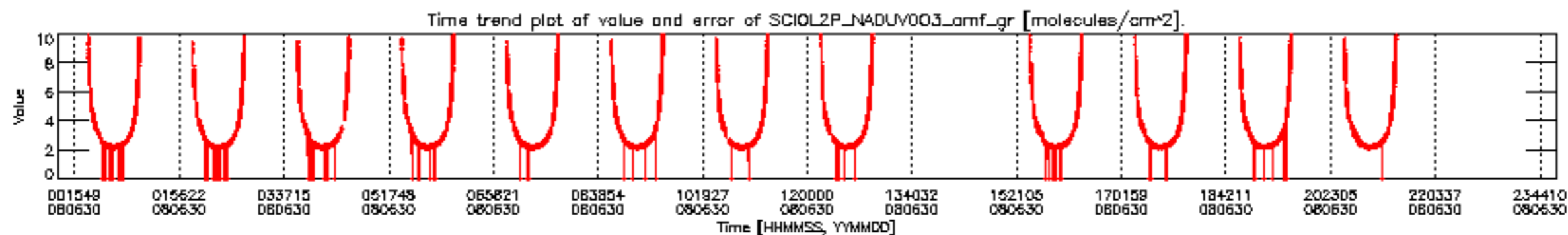
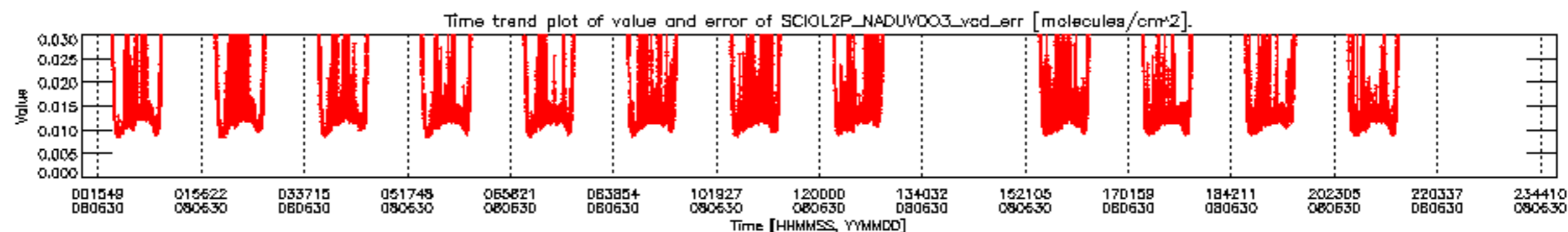
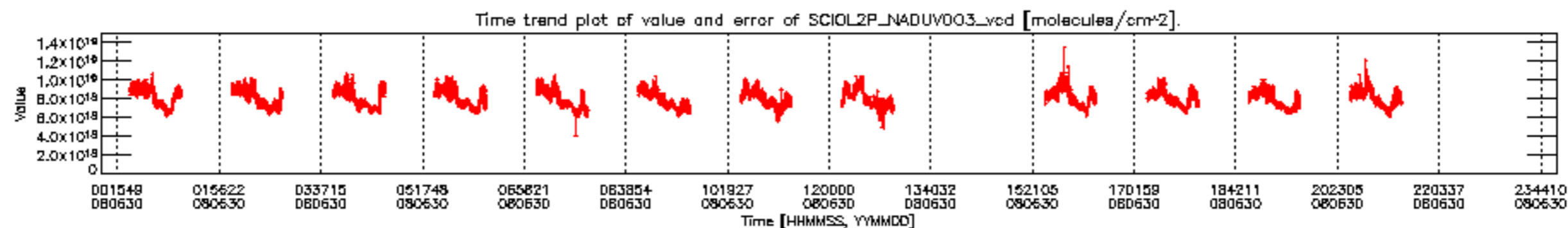
cl\_opt\_depth for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



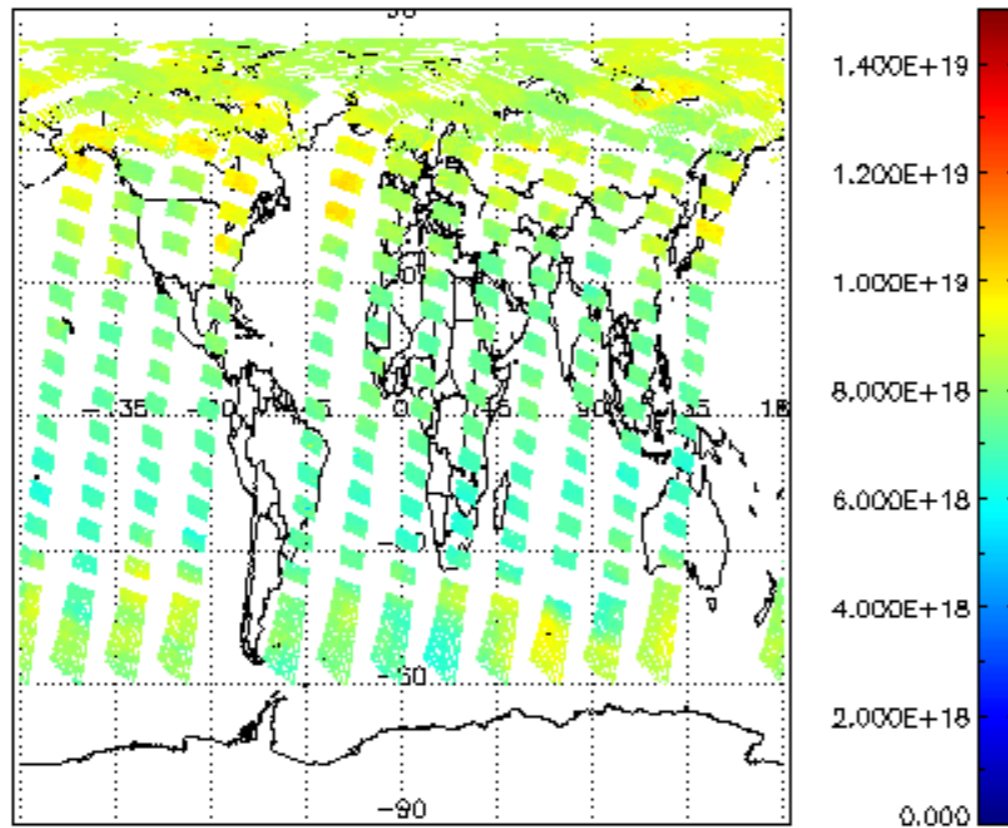
cloud\_flags for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



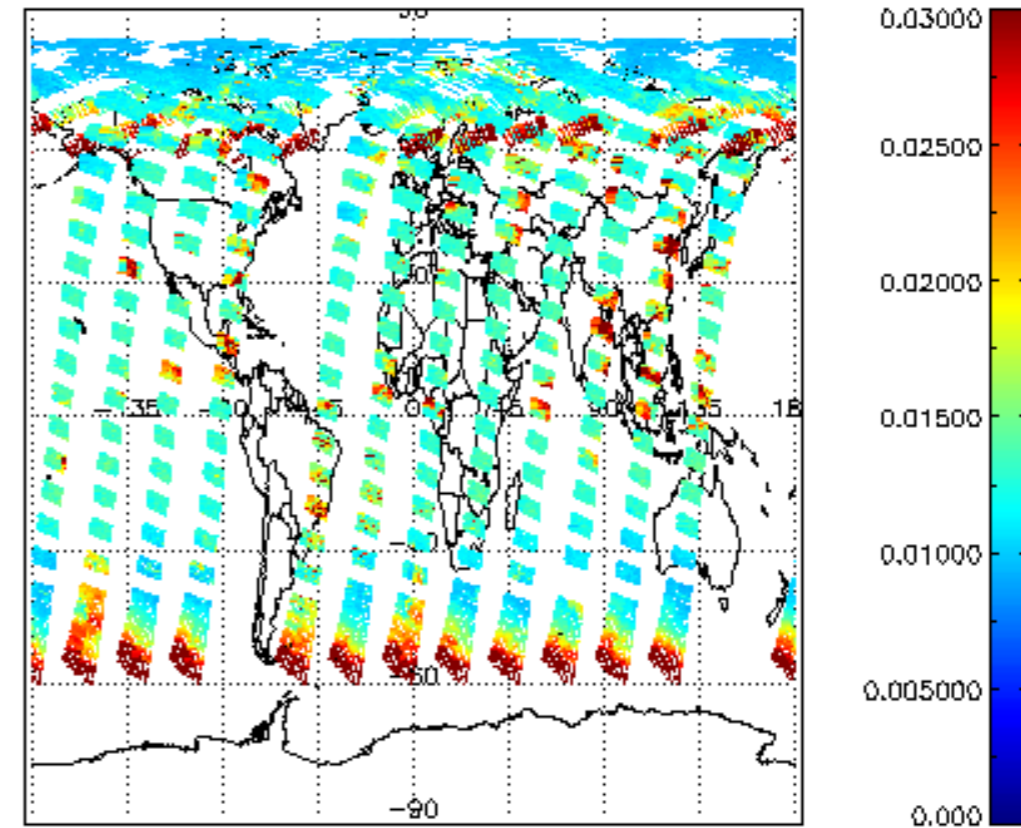




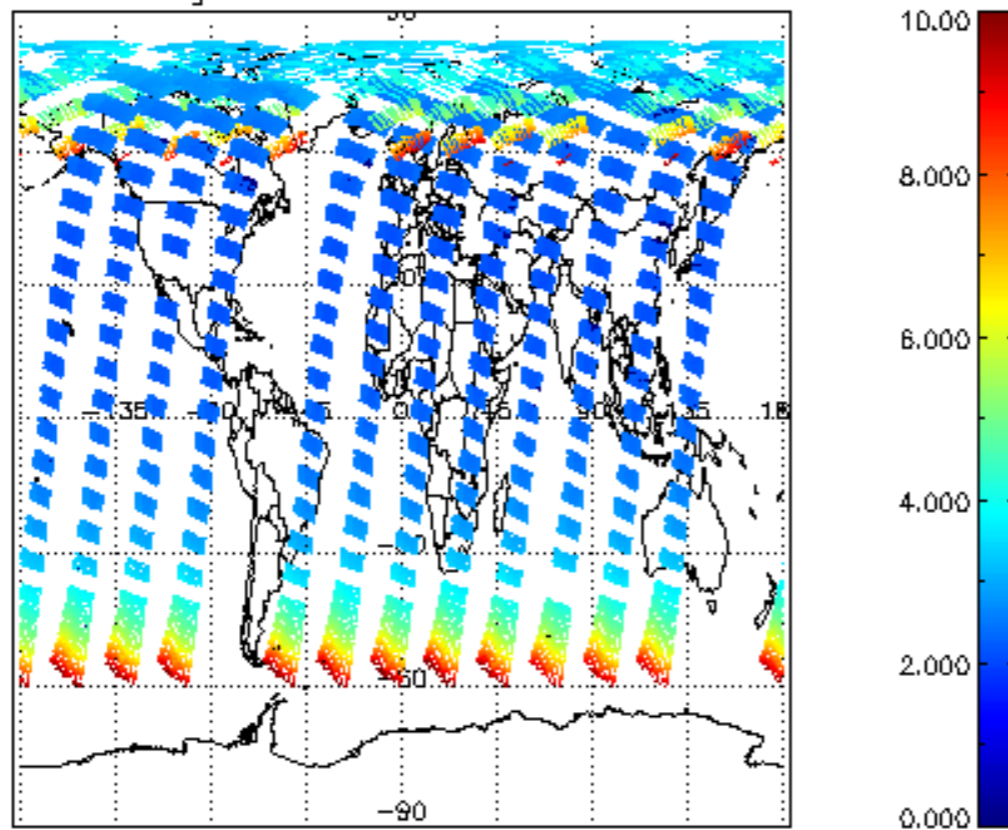
SCIOL2P\_NADUV003\_vcd for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



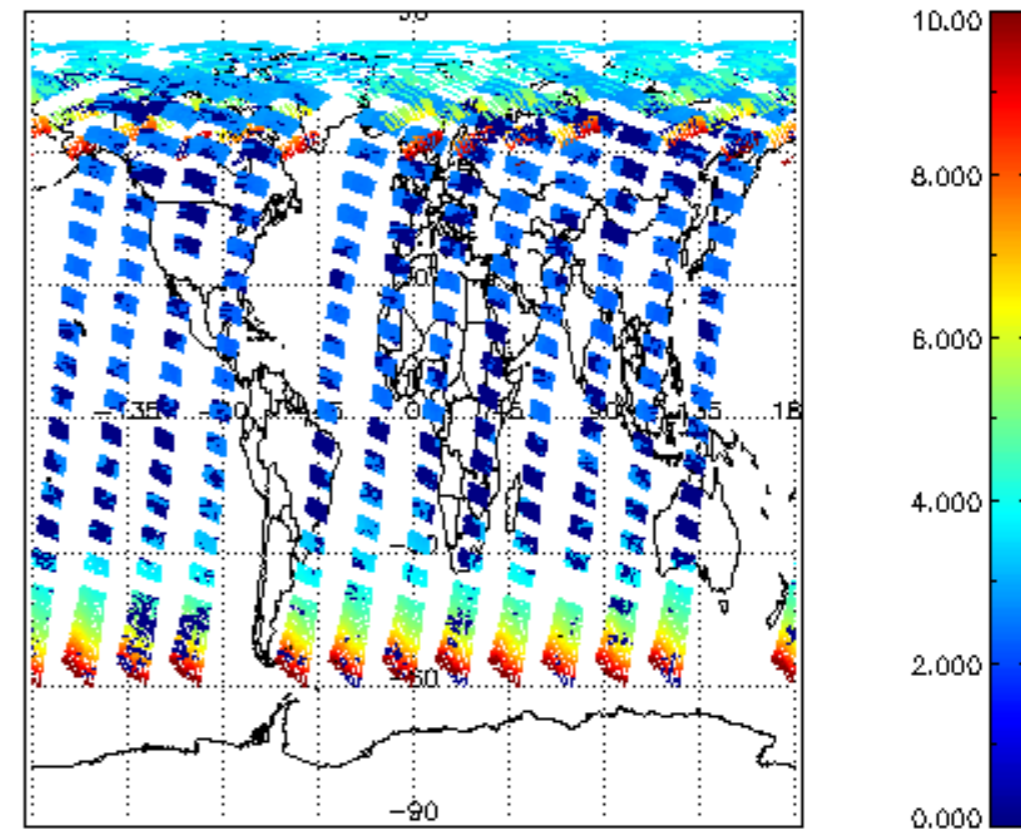
SCIOL2P\_NADUV003\_vcd\_err for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



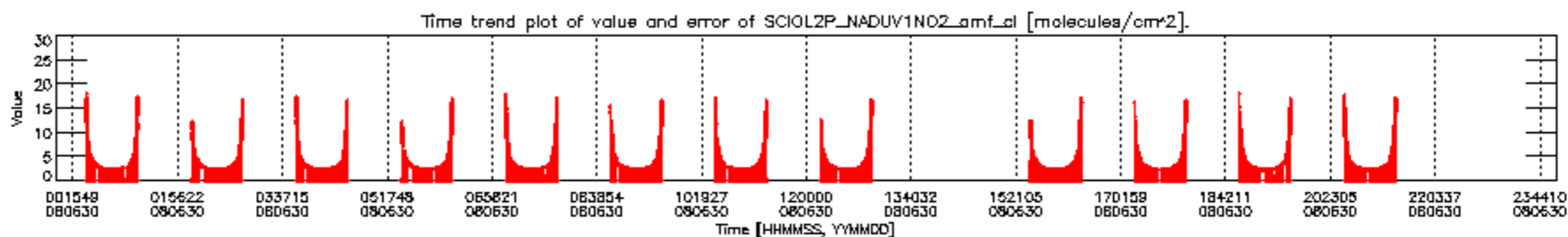
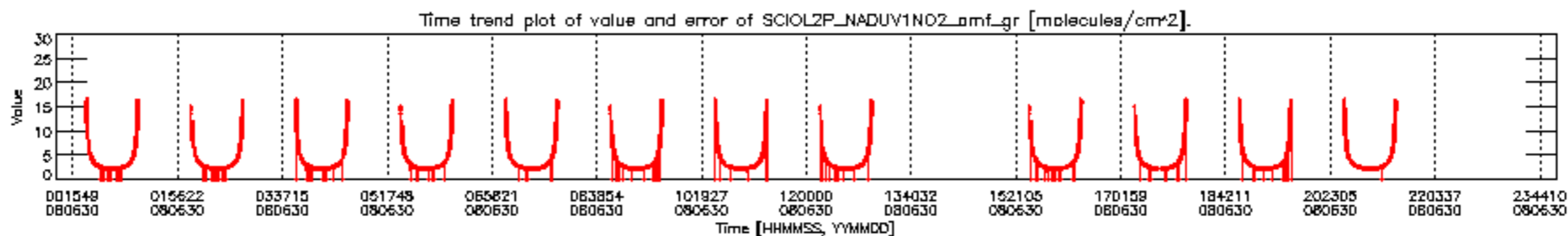
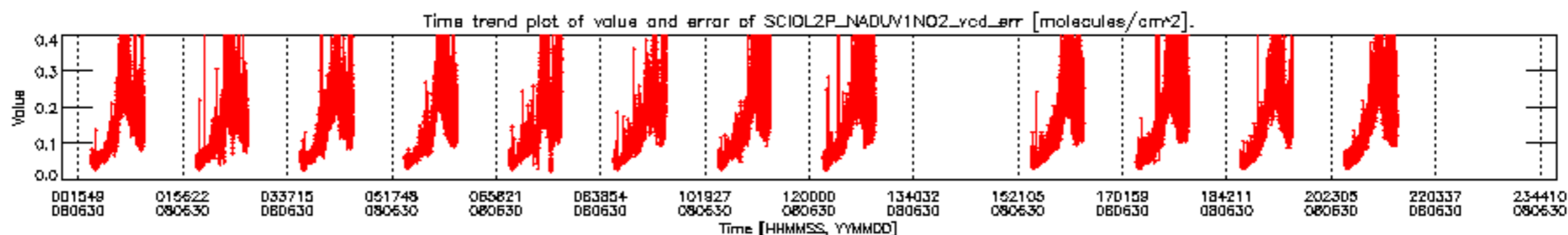
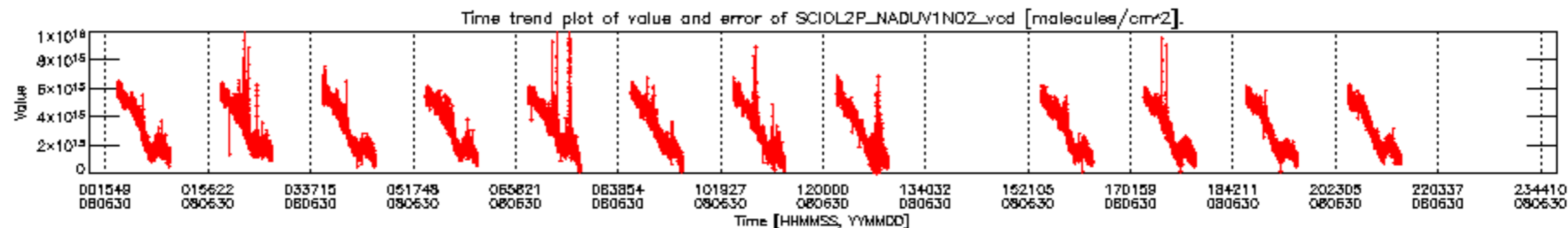
SCIOL2P\_NADUV003\_amf\_gr for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



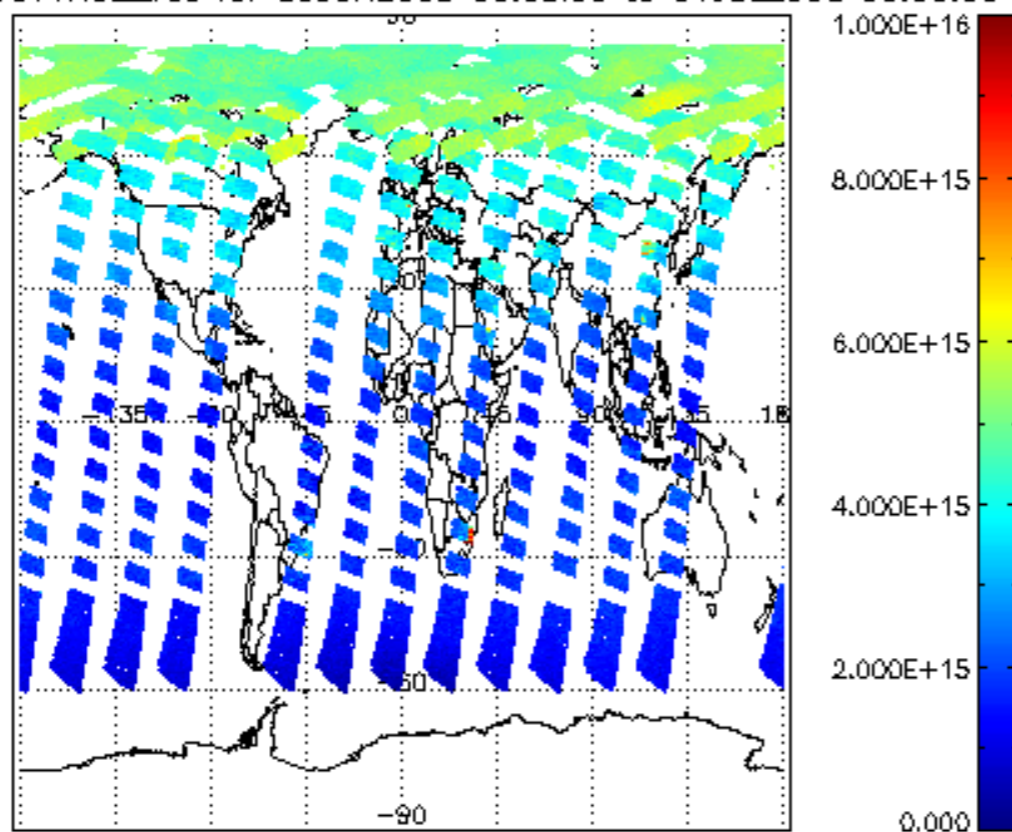
SCIOL2P\_NADUV003\_amf\_cl for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



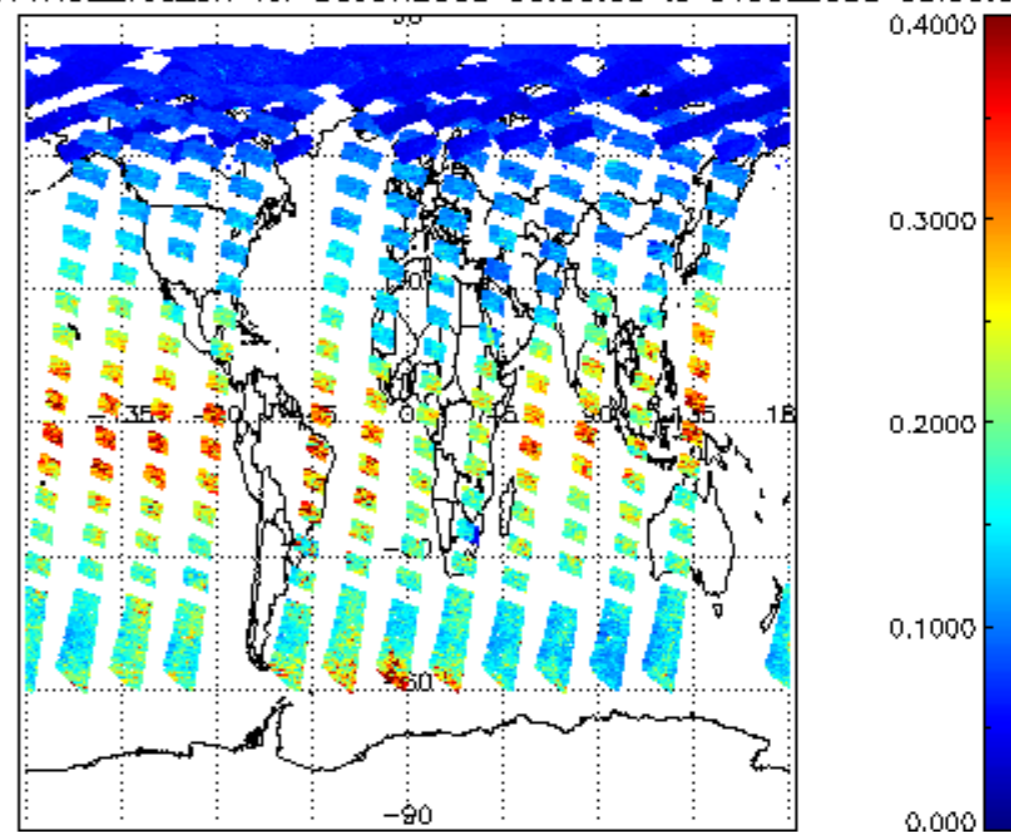




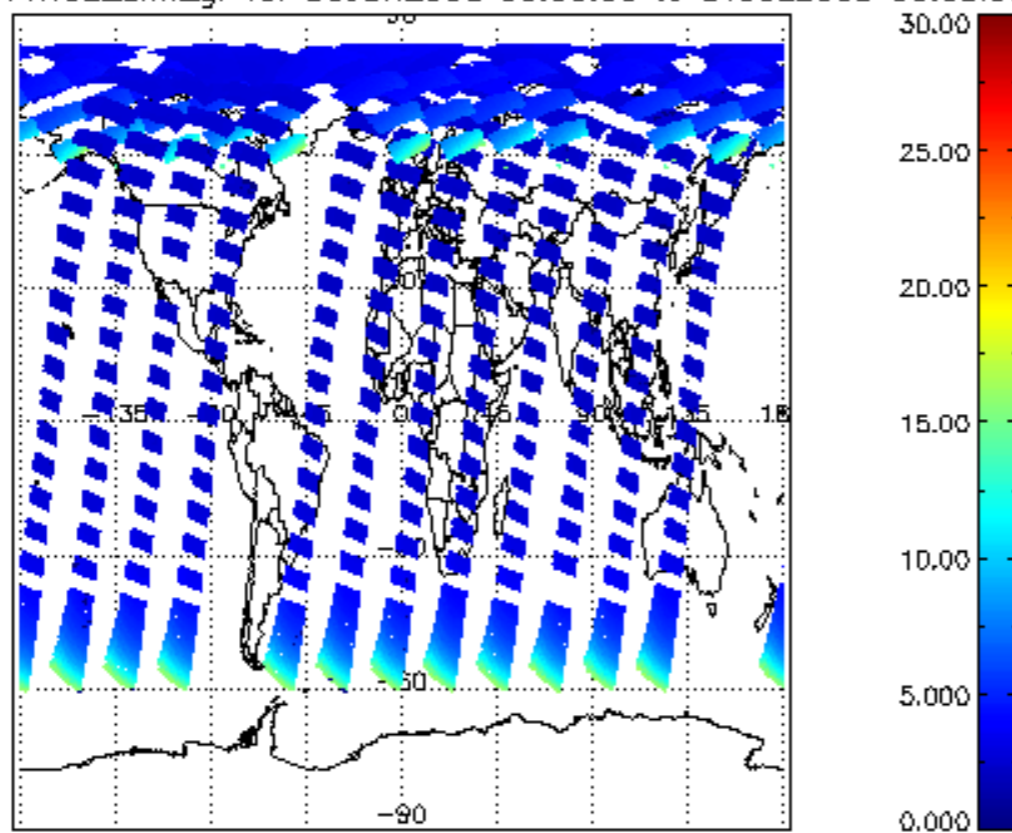
SCIOL2P\_NADUV1NO2\_vcd for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



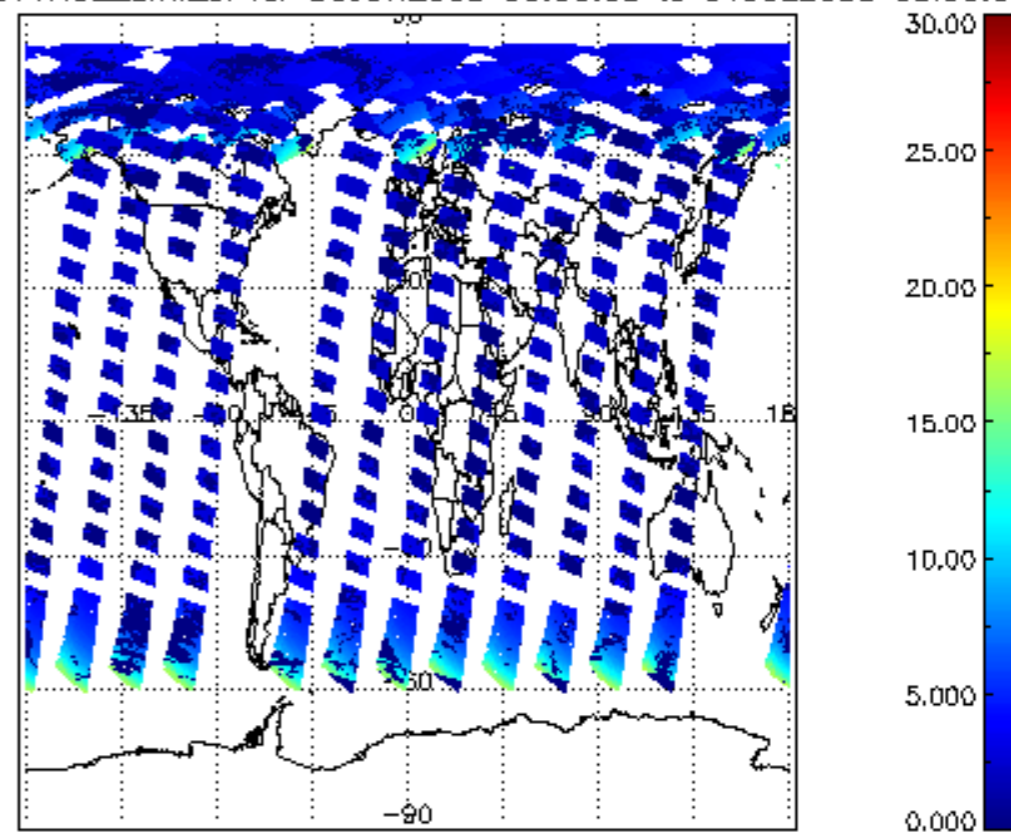
SCIOL2P\_NADUV1NO2\_vcd\_err for 30JUN2008 00:00:00 to 01JUL2008 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 30JUN2008 00:00:00 to 01JUL2008 00:00:00

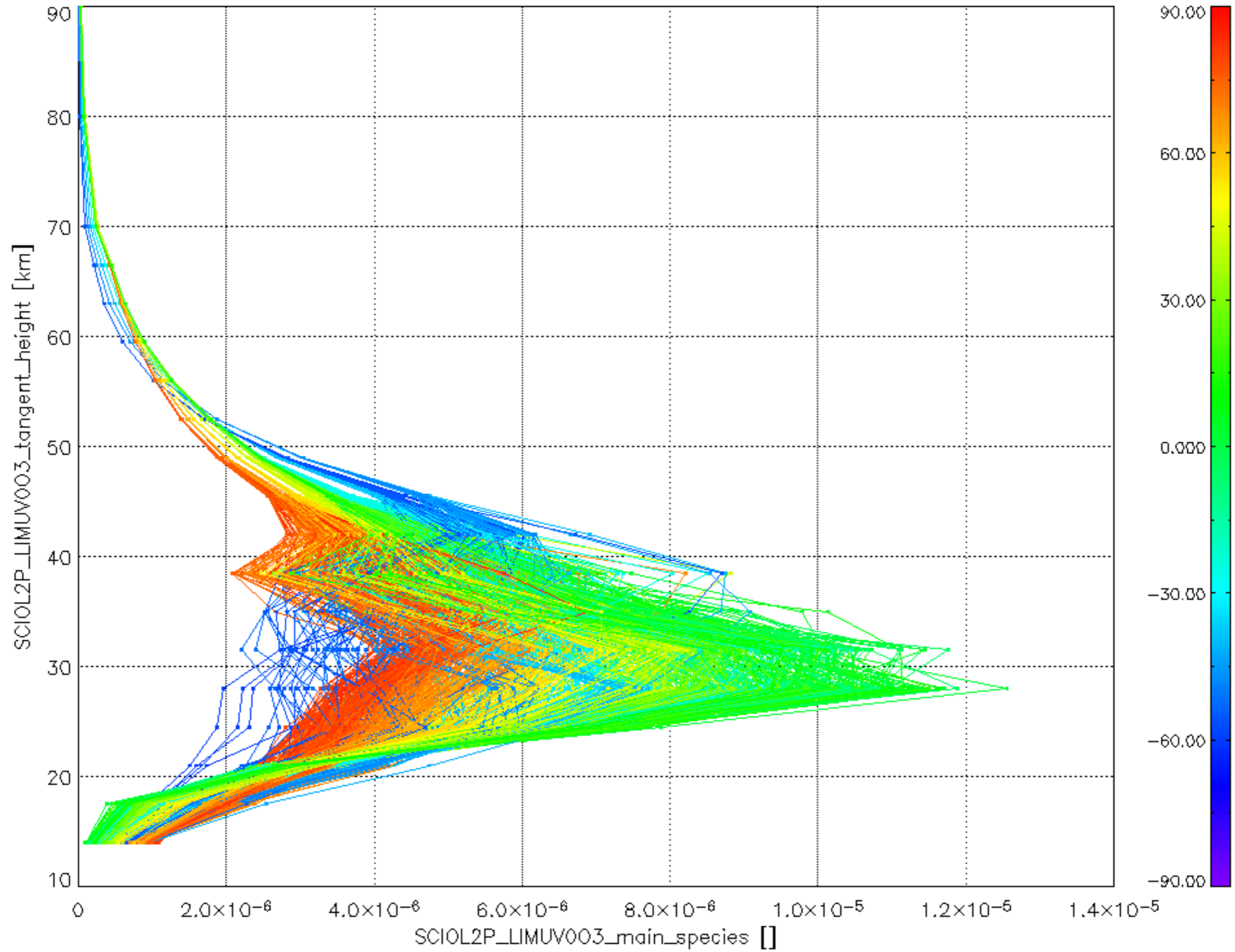


SCIOL2P\_NADUV1NO2\_amf\_el for 30JUN2008 00:00:00 to 01JUL2008 00:00:00





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).

