

## 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	08JUL2008 06:02:32
Data source version	SCIA-OL/3.01-R
Processing scope for products	20JUN2008 00:00:00 to 21JUN2008 00:00:00
Start time of first product within scope	19JUN2008 22:57:33
Stop time of last product within scope	21JUN2008 01:01:44
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__2PRDPA20080619_225733_000033252069_00345_32964_2161.N1	19JUN2008 22:57:33	19JUN2008 23:52:58	0	GOOD
1	SCI_OL__2PRDPA20080620_003808_000033122069_00346_32965_2163.N1	20JUN2008 00:38:08	20JUN2008 01:33:21	0	GOOD
2	SCI_OL__2PRDPA20080620_021844_000033252069_00347_32966_2119.N1	20JUN2008 02:18:44	20JUN2008 03:14:10	0	GOOD
3	SCI_OL__2PRDPA20080620_035920_000033122069_00348_32967_2113.N1	20JUN2008 03:59:20	20JUN2008 04:54:33	0	GOOD
4	SCI_OL__2PRDPA20080620_053956_000033252069_00349_32968_2164.N1	20JUN2008 05:39:56	20JUN2008 06:35:22	0	GOOD
5	SCI_OL__2PRDPA20080620_072032_000033122069_00350_32969_2165.N1	20JUN2008 07:20:32	20JUN2008 08:15:45	0	GOOD
6	SCI_OL__2PRDPA20080620_090108_000033252069_00351_32970_2167.N1	20JUN2008 09:01:08	20JUN2008 09:56:34	0	GOOD
7	SCI_OL__2PRDPA20080620_104144_000033122069_00352_32971_2166.N1	20JUN2008 10:41:44	20JUN2008 11:36:57	0	GOOD
8	SCI_OL__2PRDPA20080620_154331_000033252069_00355_32974_2170.N1	20JUN2008 15:43:31	20JUN2008 16:38:57	0	GOOD
9	SCI_OL__2PRDPA20080620_172327_000033682069_00356_32975_2172.N1	20JUN2008 17:23:27	20JUN2008 18:19:35	0	GOOD
10	SCI_OL__2PRDPA20080620_190403_000033812069_00357_32976_2174.N1	20JUN2008 19:04:03	20JUN2008 20:00:24	0	GOOD
11	SCI_OL__2PRDPA20080620_204519_000033122069_00358_32977_2175.N1	20JUN2008 20:45:19	20JUN2008 21:40:32	0	GOOD
12	SCI_OL__2PRDPA20080620_222555_000033252069_00359_32978_2177.N1	20JUN2008 22:25:55	20JUN2008 23:21:21	0	GOOD
13	SCI_OL__2PRDPA20080621_000631_000033122069_00360_32979_2179.N1	21JUN2008 00:06:31	21JUN2008 01:01:44	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: 121940

Total number of cloud data DSRs with good quality flag (=0): 121940 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	121940	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	121940	0.17111	0.12500	0.12500	0.25000	0.060313	s
CL_FRAC	121940	0.28828	0.22649	0.0000	1.0000	0.27563	-
CL_FRAC_ERR	121940	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	121940	5.4755	4.0000	4.0000	8.0000	1.9300	

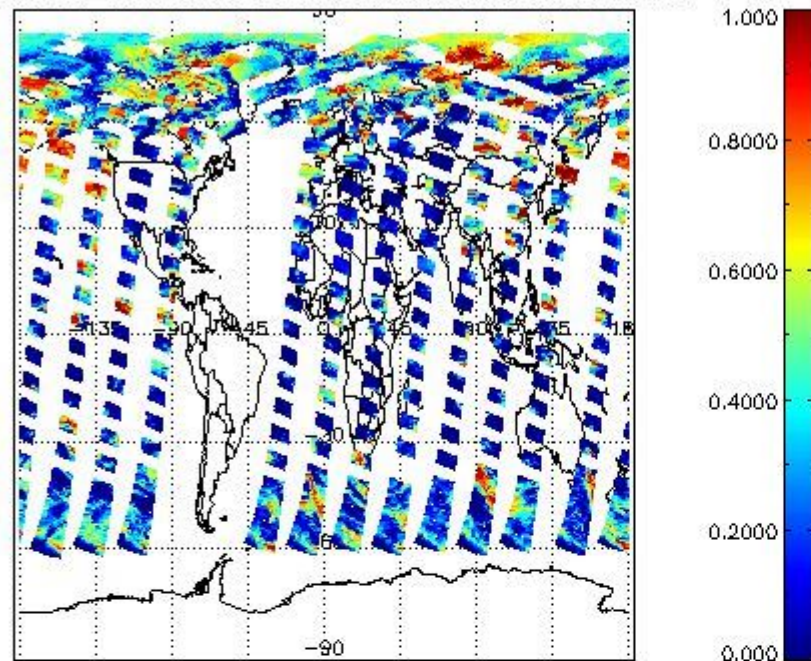
PMD_READ_CL[0]	121940	0.16609	0.0000	0.0000	8.0000	0.92845	-
PMD_READ_CL[1]	121940	1.7837	0.0000	0.0000	8.0000	2.6467	-
CL_TOP_HEIGHT	105726	2.8725	1.1118	0.0000	17.000	3.4717	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	105726	57.314	81.078	0.0000	101.00	45.357	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	121940	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	121940	11001101	11000100	11000000	11100000	3603.4	flags
AERO_ABSO_IND	121940	3.3007	3.7169	-1.9078	11.974	2.2151	
AERO_IND_DIAG	121940	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	121940	01011001	00000000	00000000	11000000	24515.	flags

Time and geolocation plots:

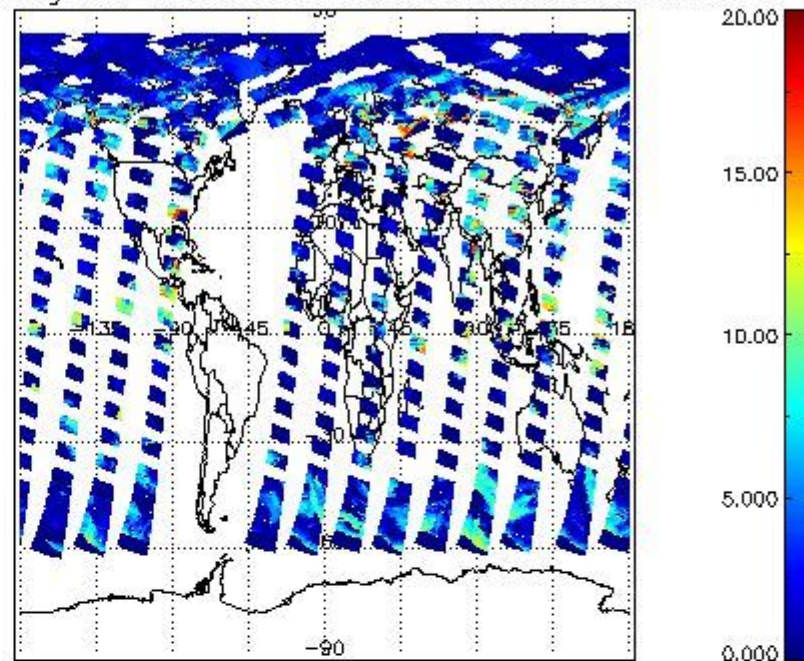
Plots are available for the following parameters:

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

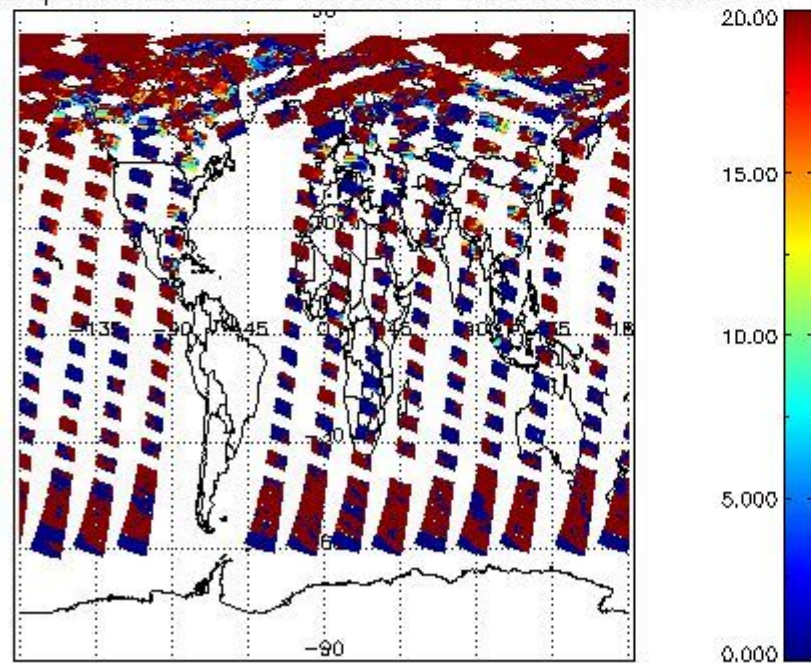
cL\_frac for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



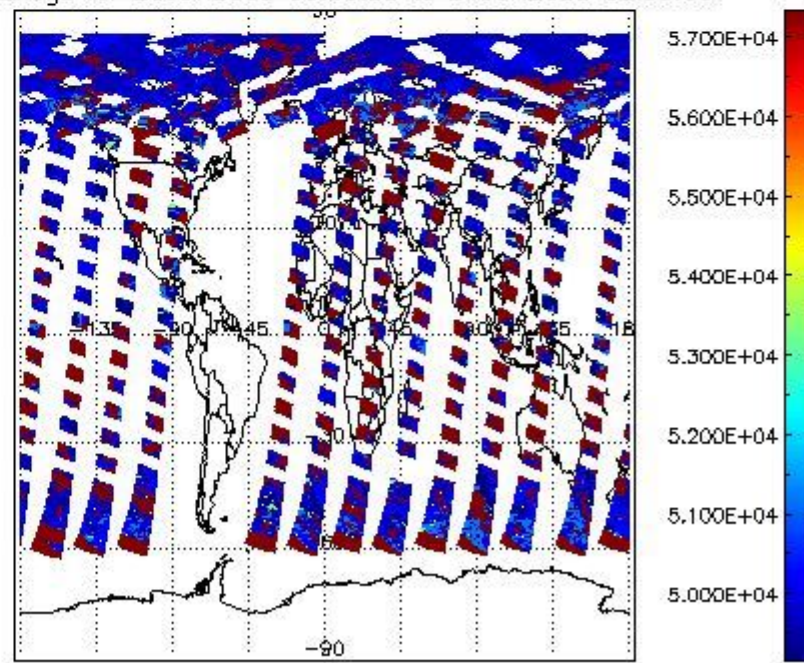
cL\_top\_height for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



cL\_opt\_depth for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



cloud\_flags for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



### 2.2.2 Nadir

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

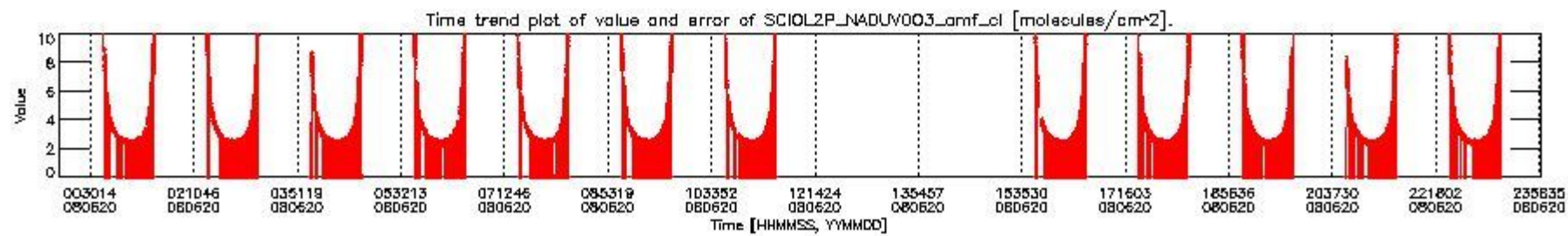
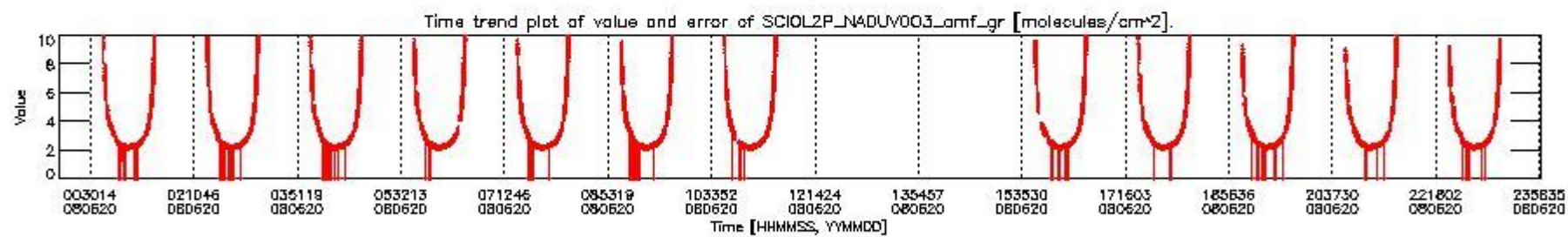
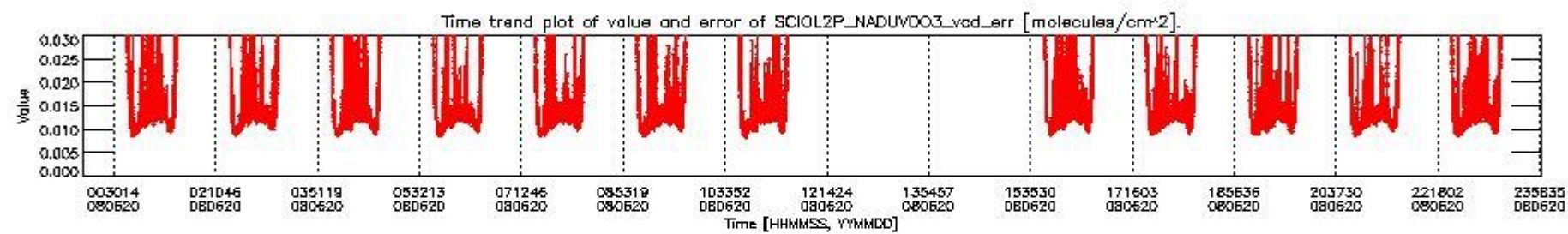
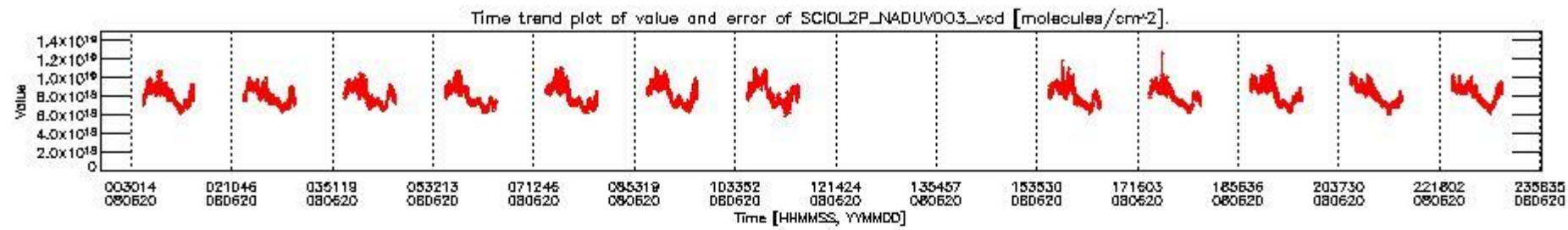
The following data items are currently included into this section:

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



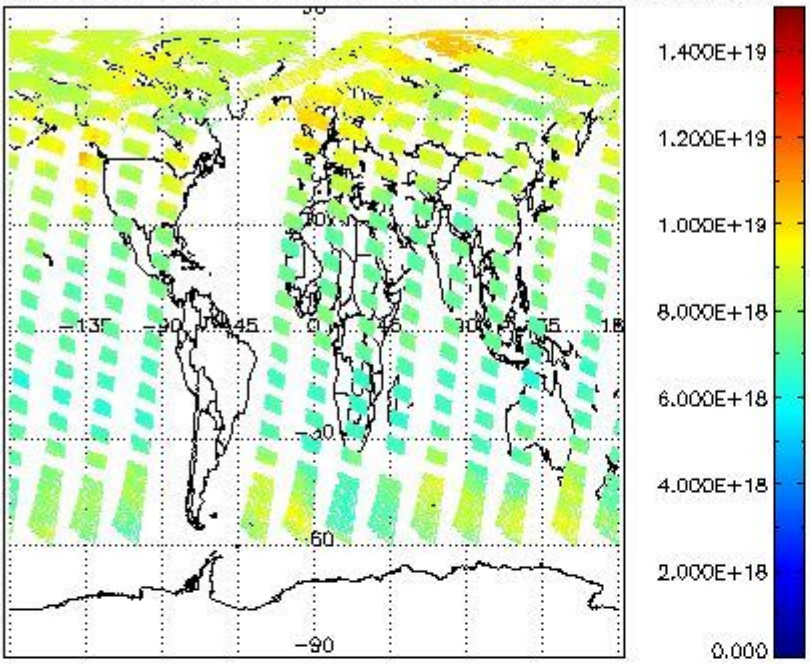
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

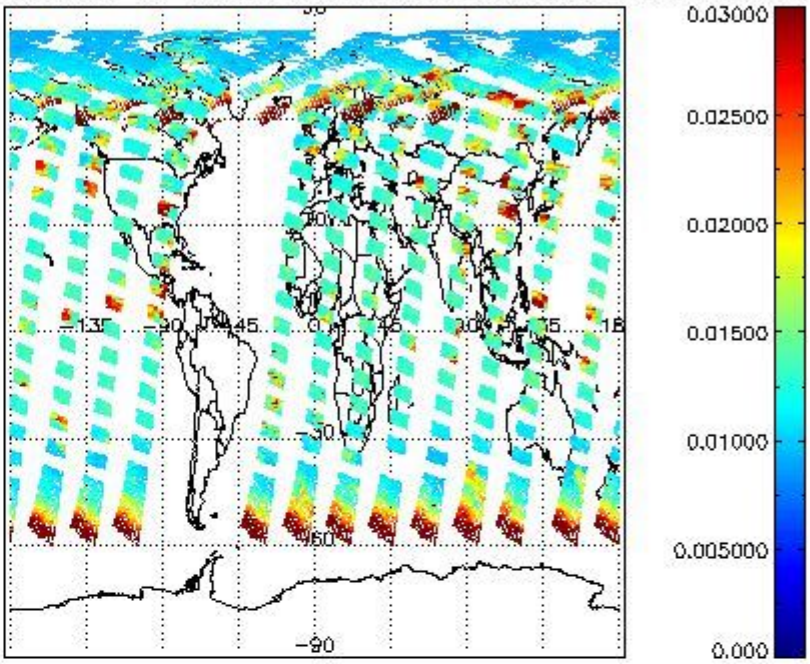




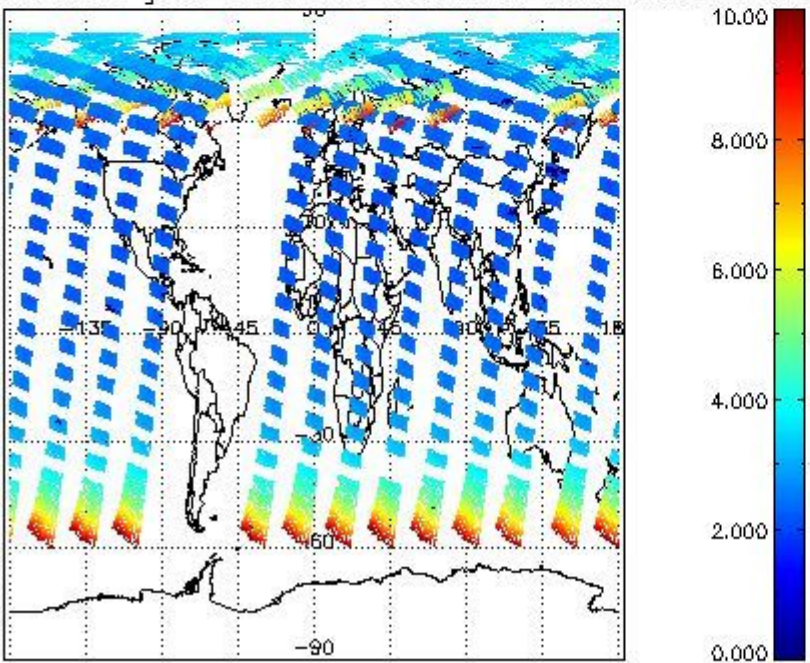
SCIOL2P\_NADUV003\_vcd for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



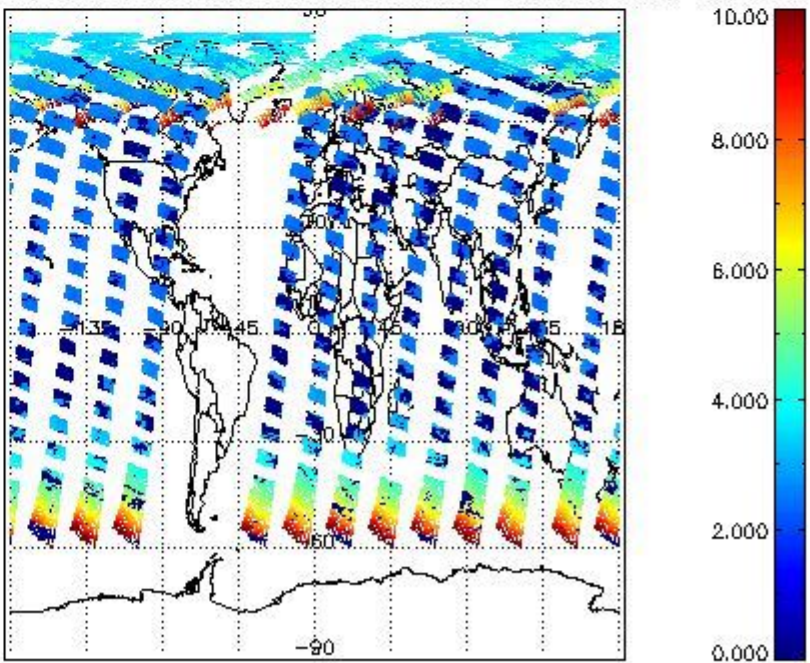
SCIOL2P\_NADUV003\_vcd\_err for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



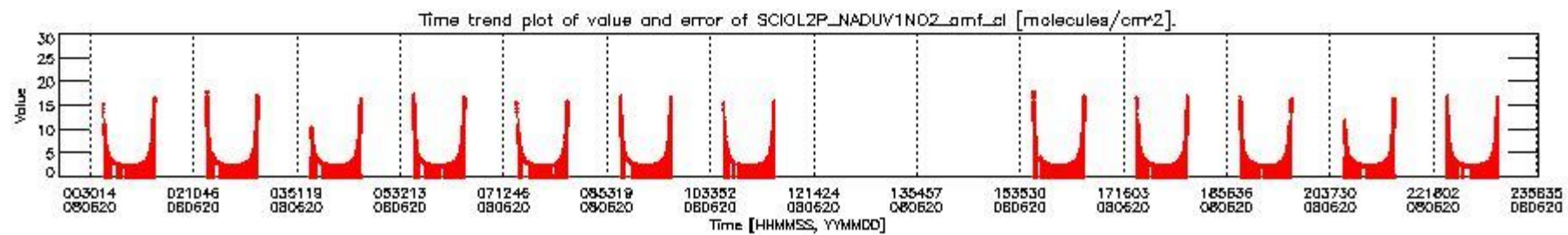
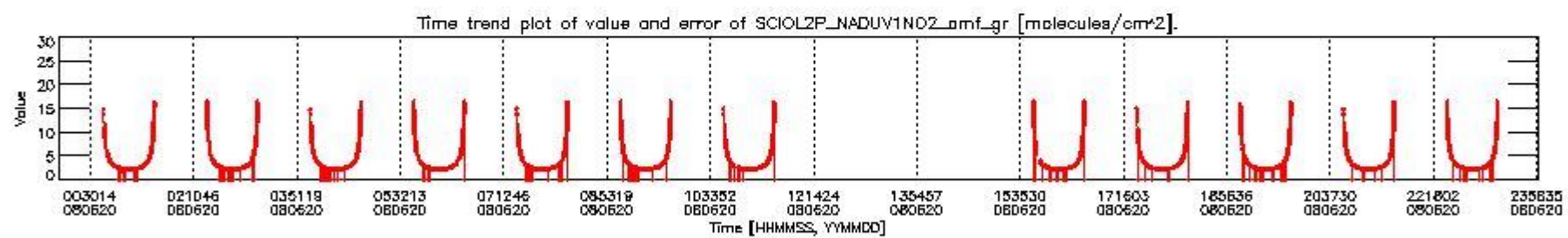
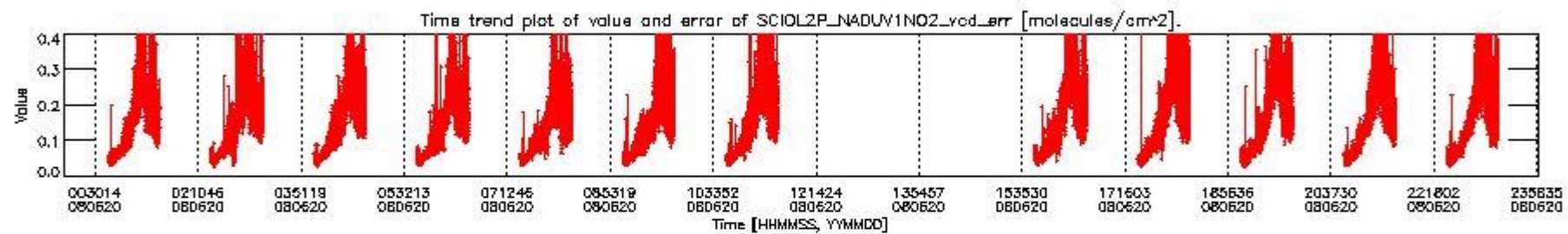
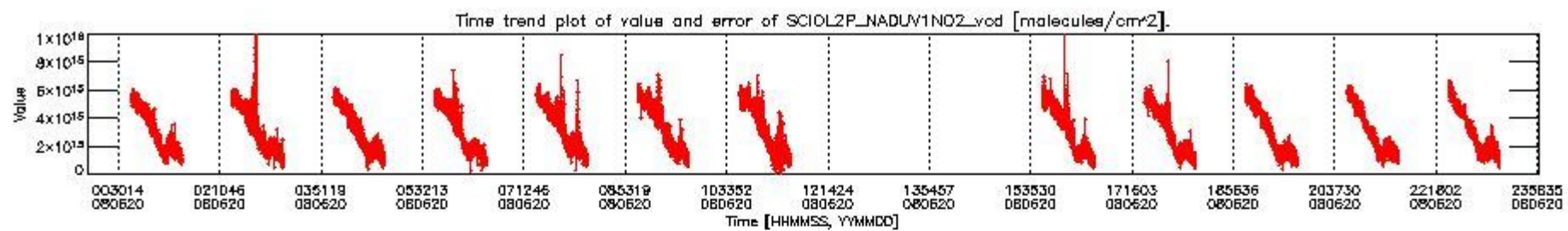
SCIOL2P\_NADUV003\_amf\_gr for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



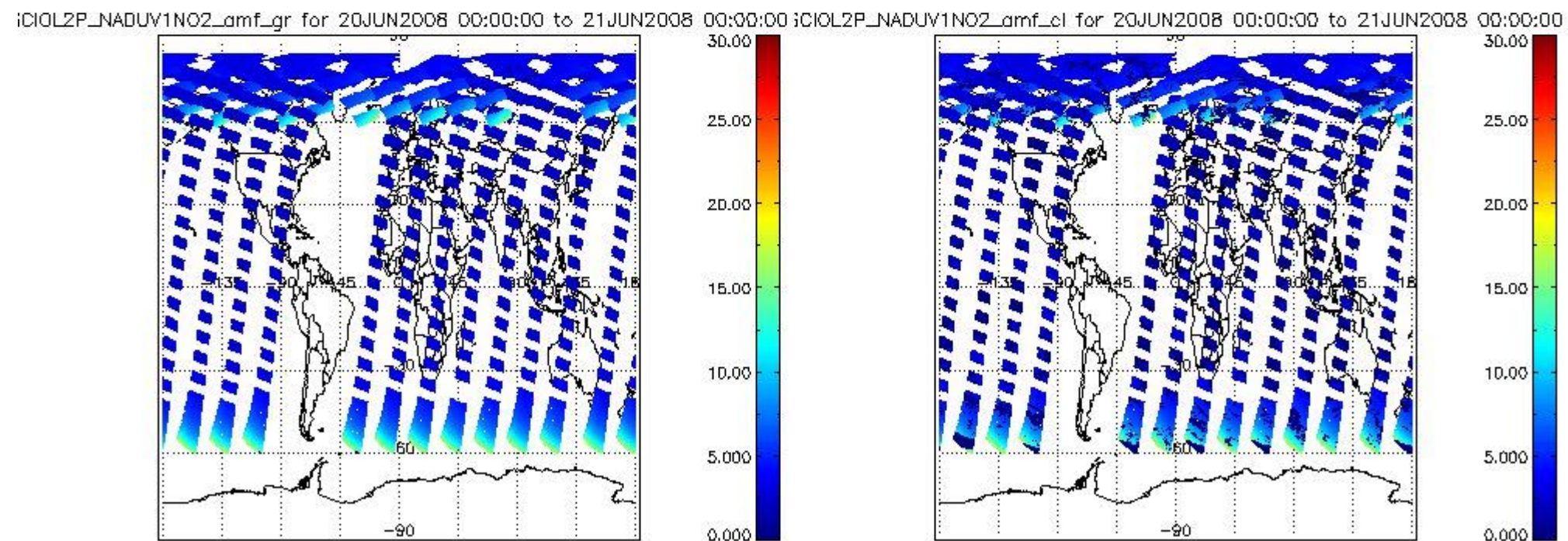
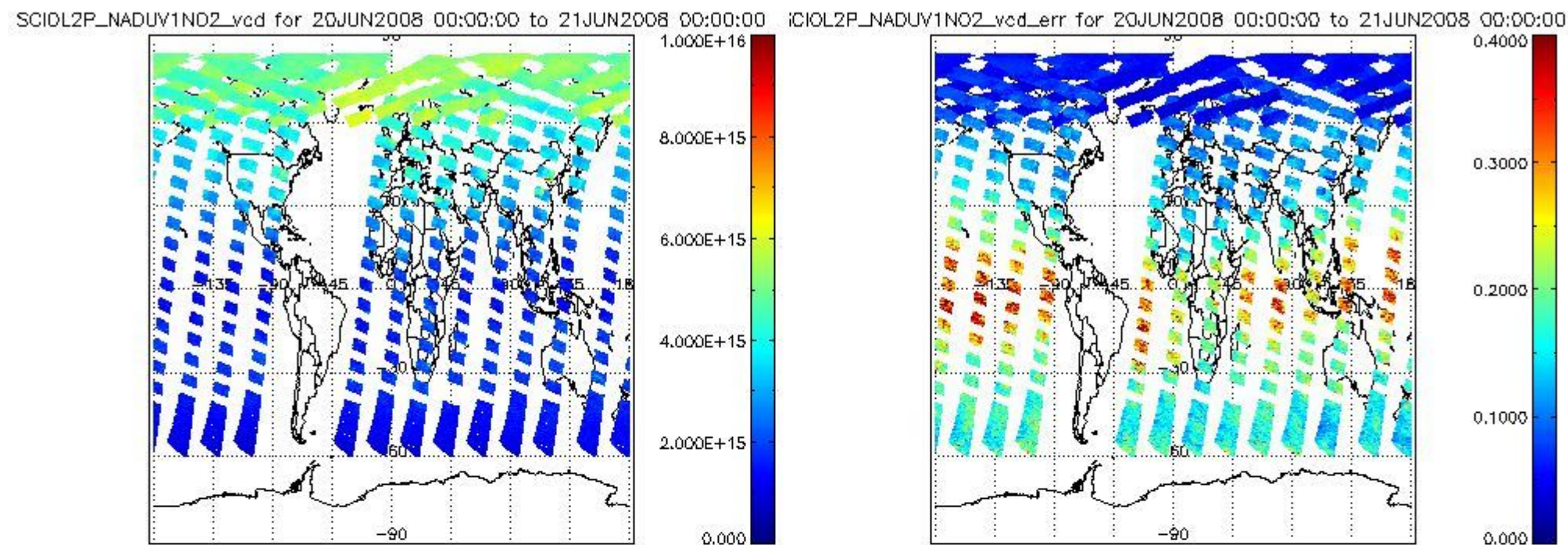
SCIOL2P\_NADUV003\_amf\_cl for 20JUN2008 00:00:00 to 21JUN2008 00:00:00











### 2.2.3 Limb

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

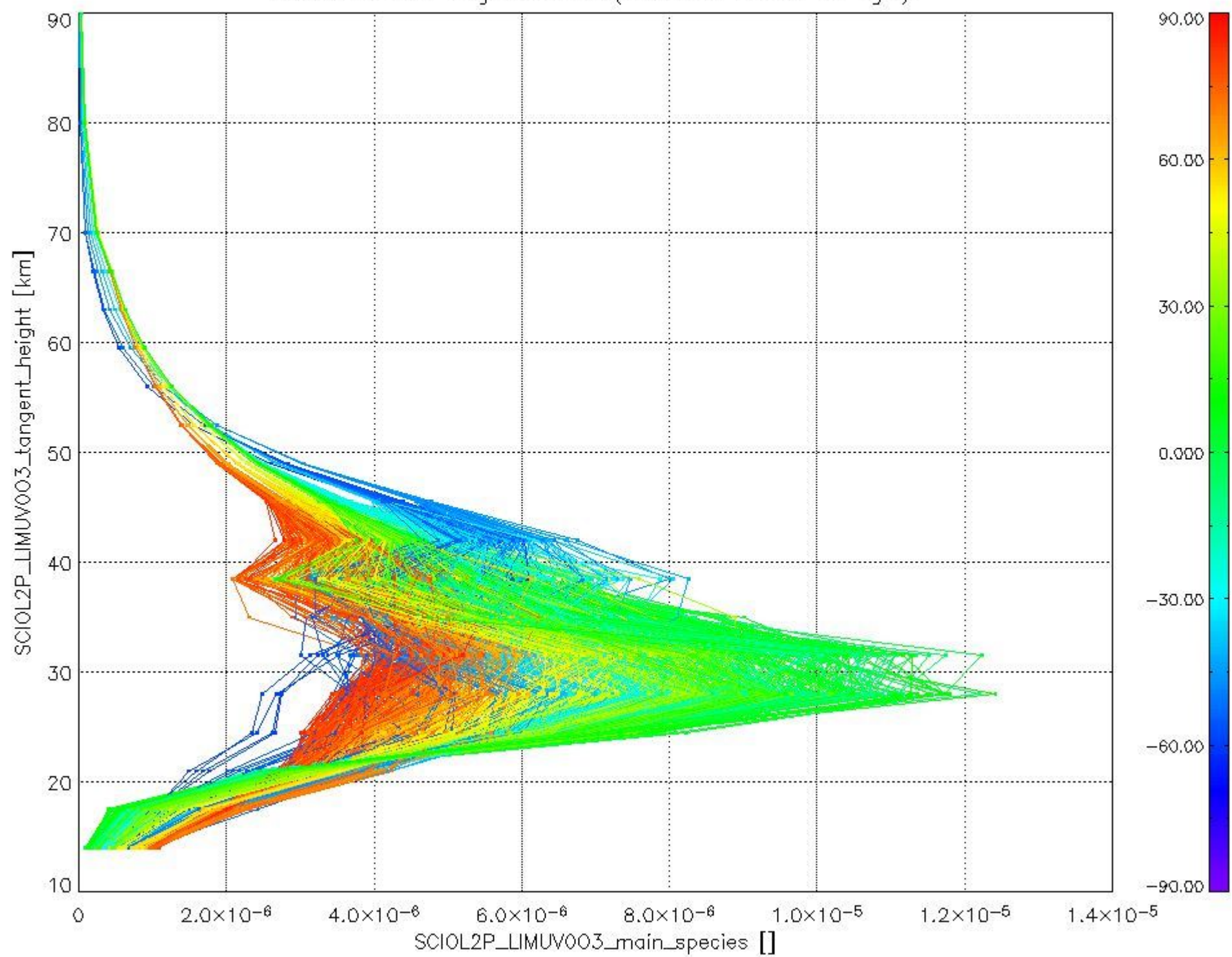
The following data items are currently included into this section:

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.

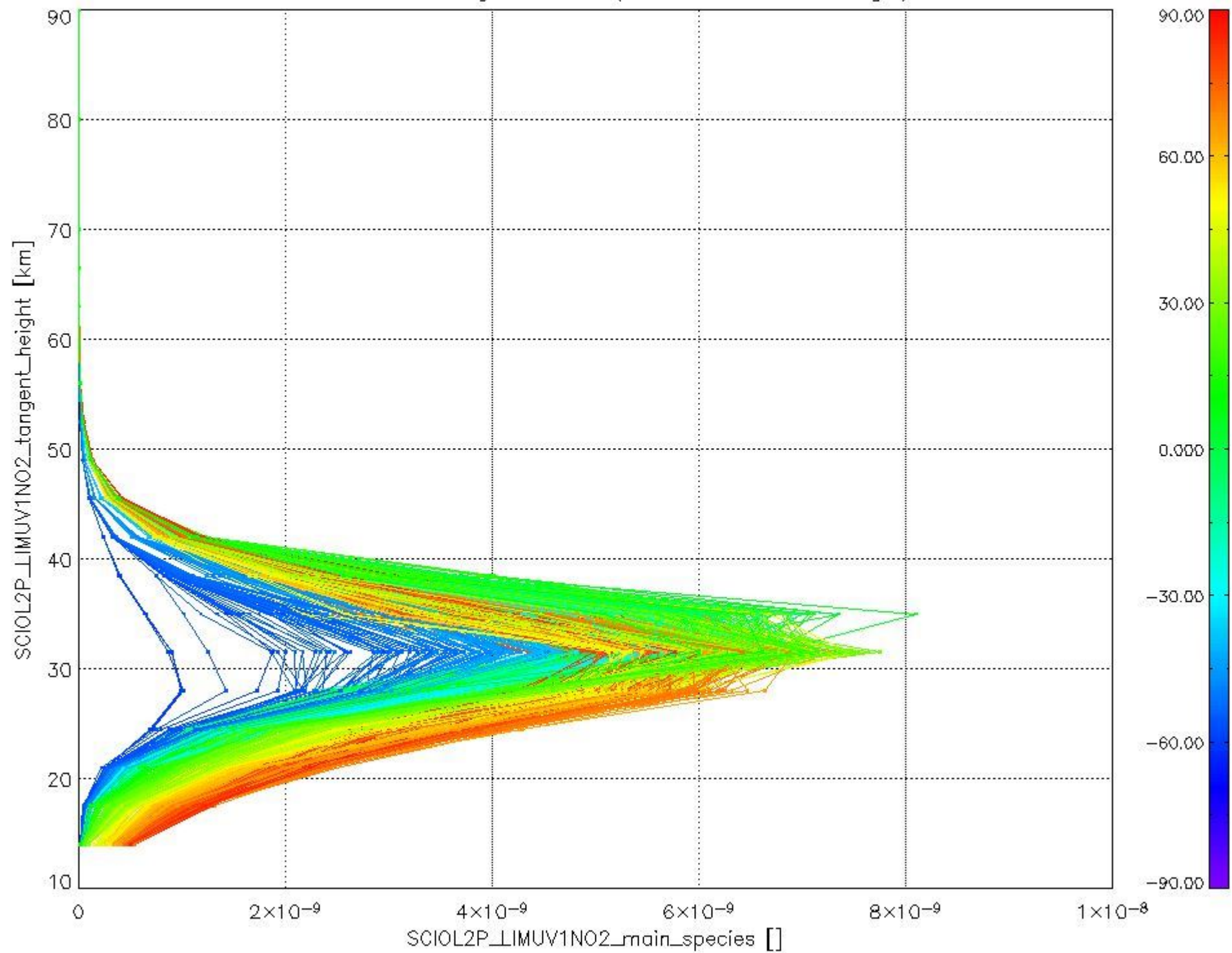


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





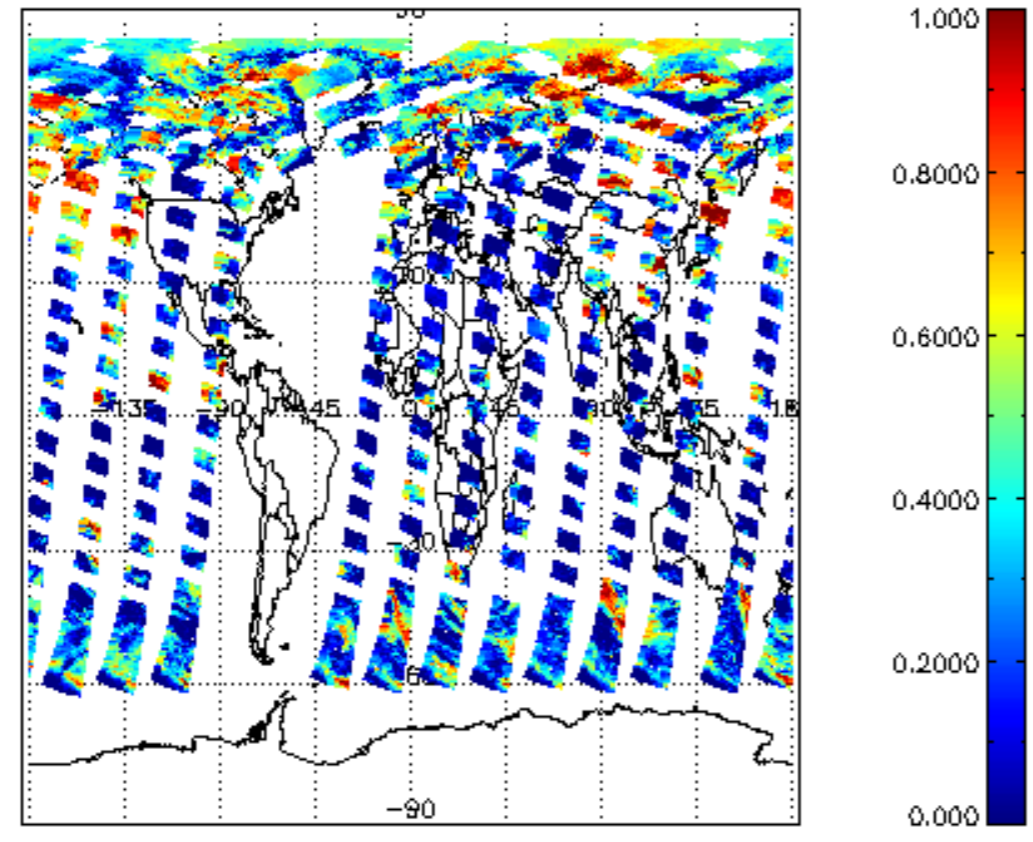
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



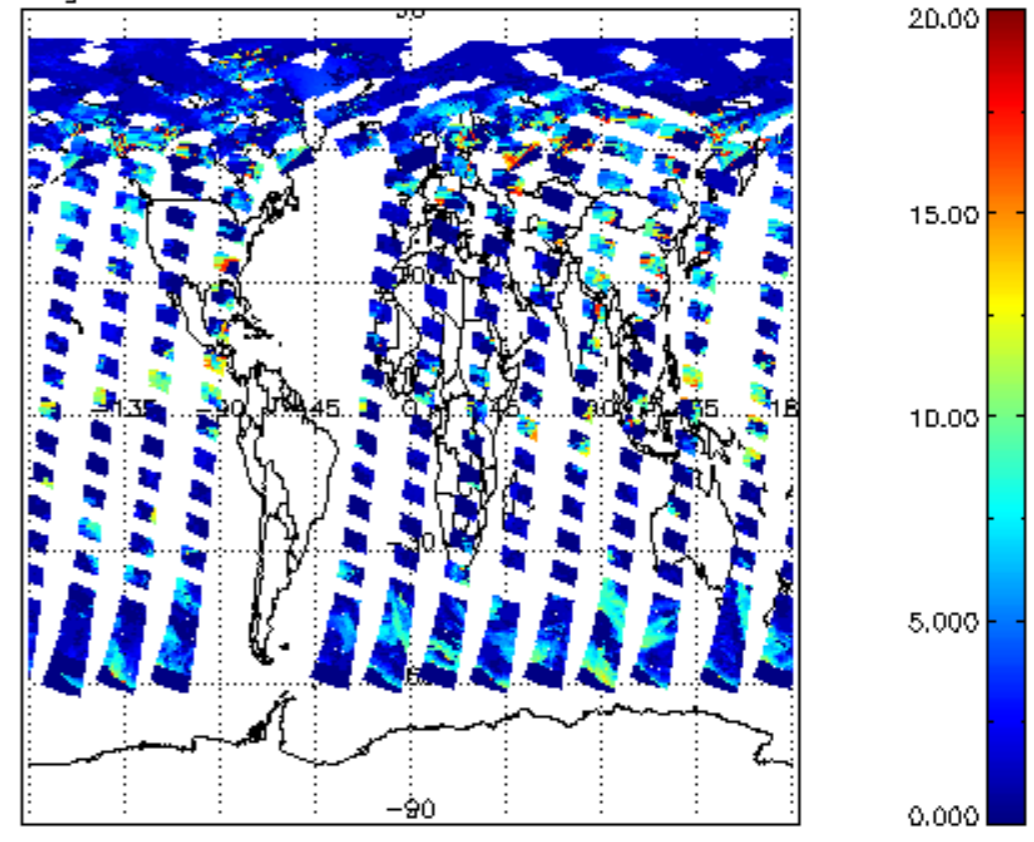
### 2.3 ADF monitoring

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

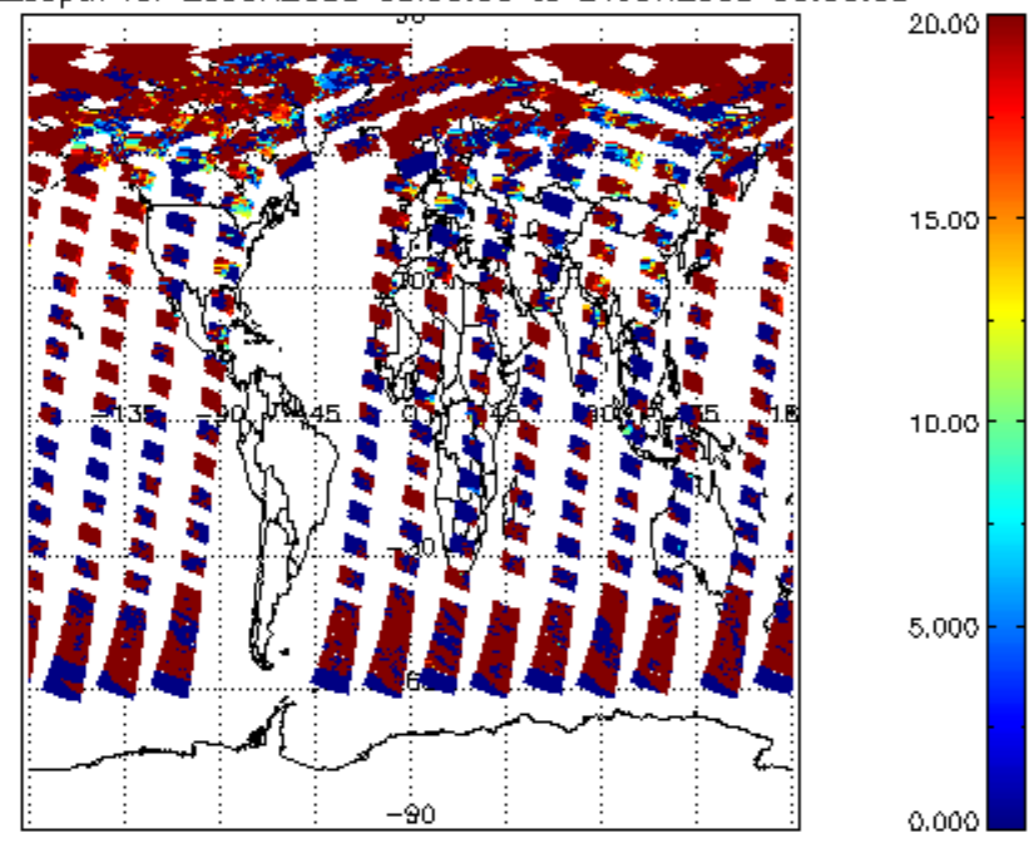
cl\_frac for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



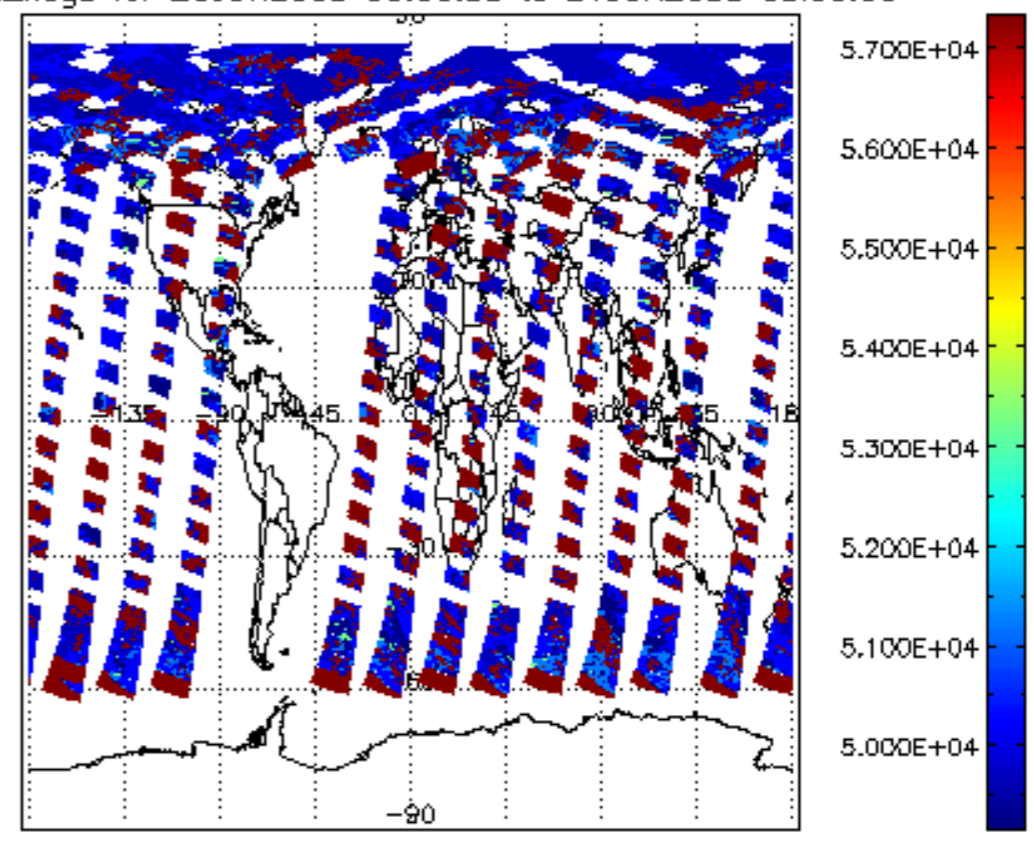
cl\_top\_height for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



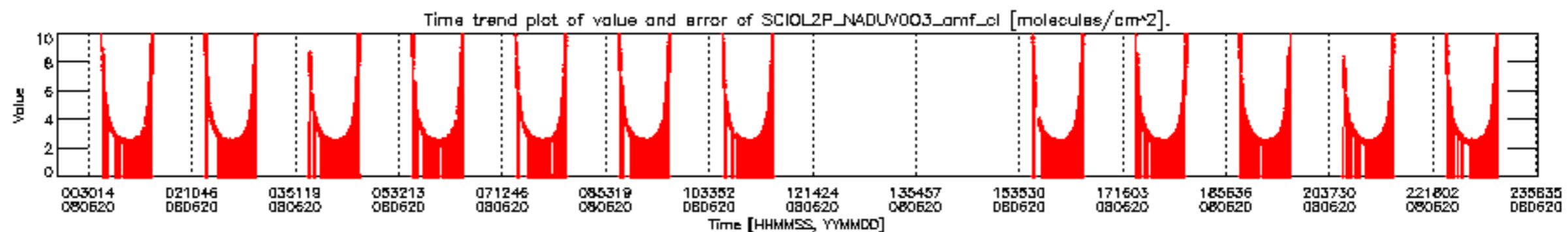
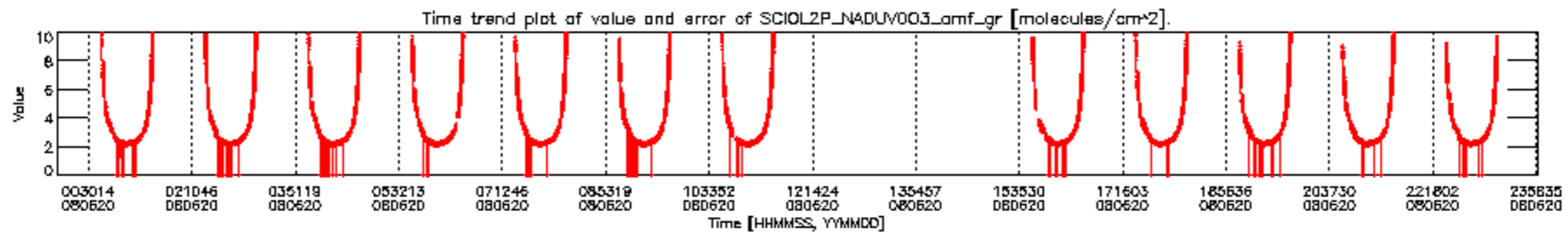
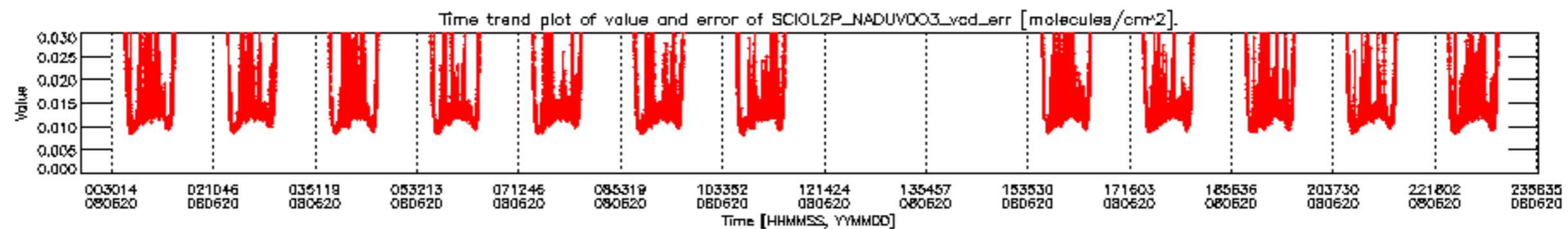
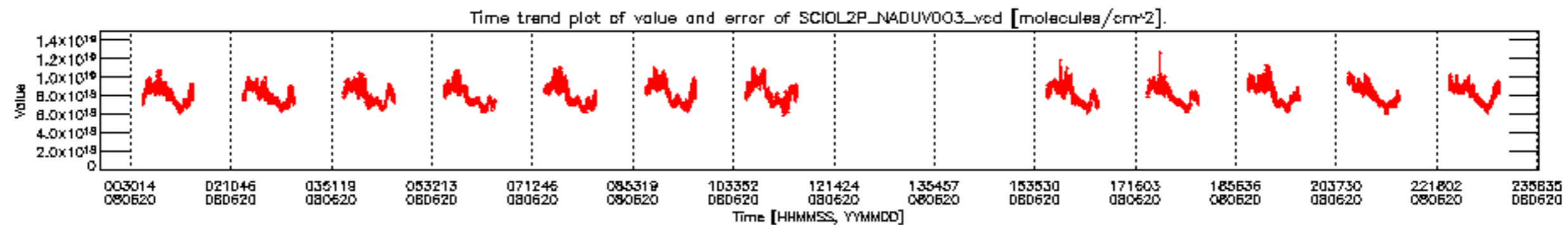
cl\_opt\_depth for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



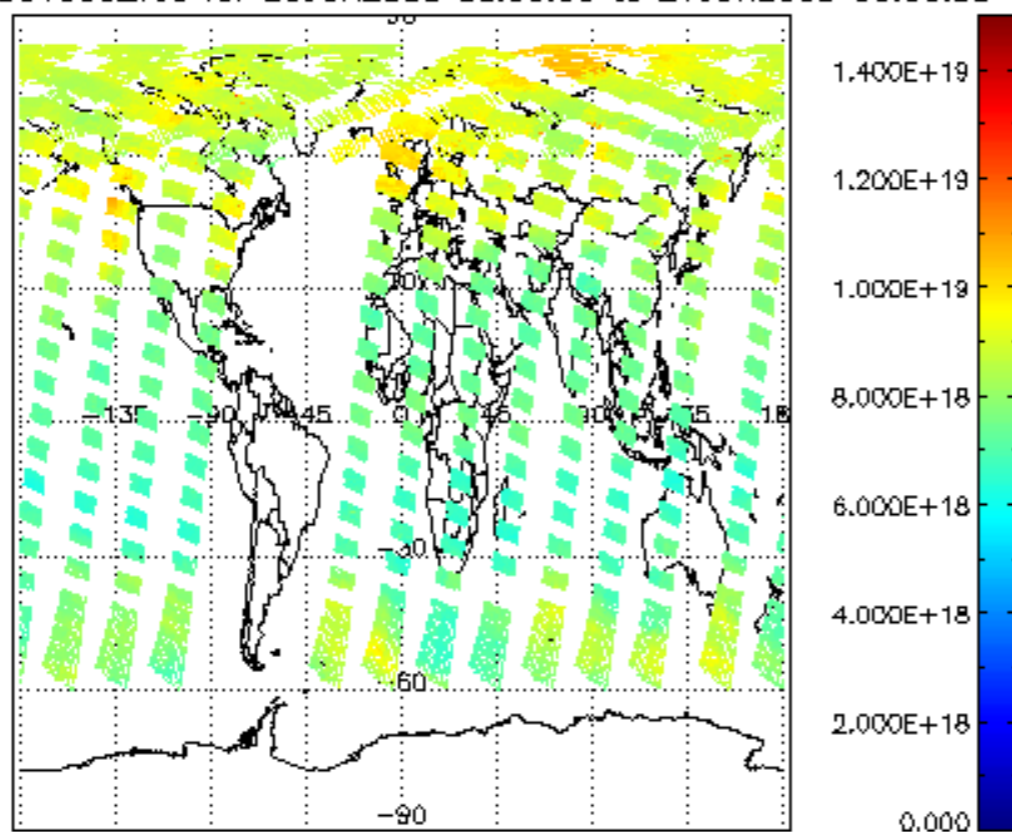
cloud\_flags for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



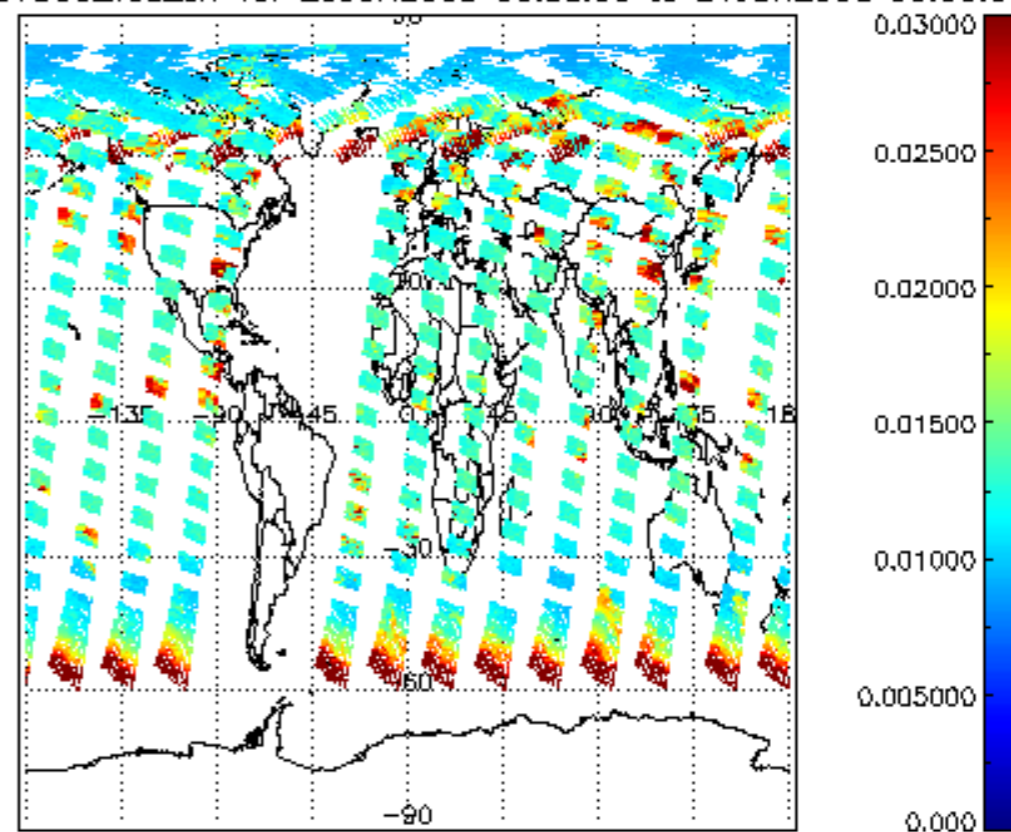




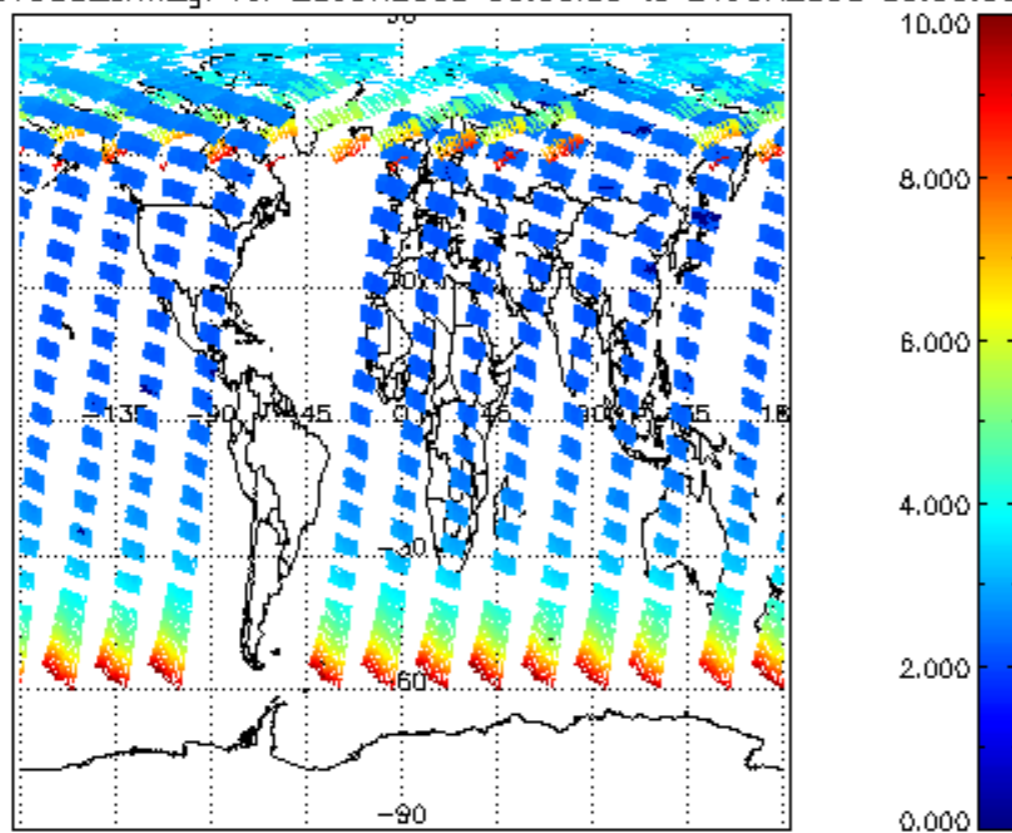
SCIOL2P\_NADUV003\_vcd for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



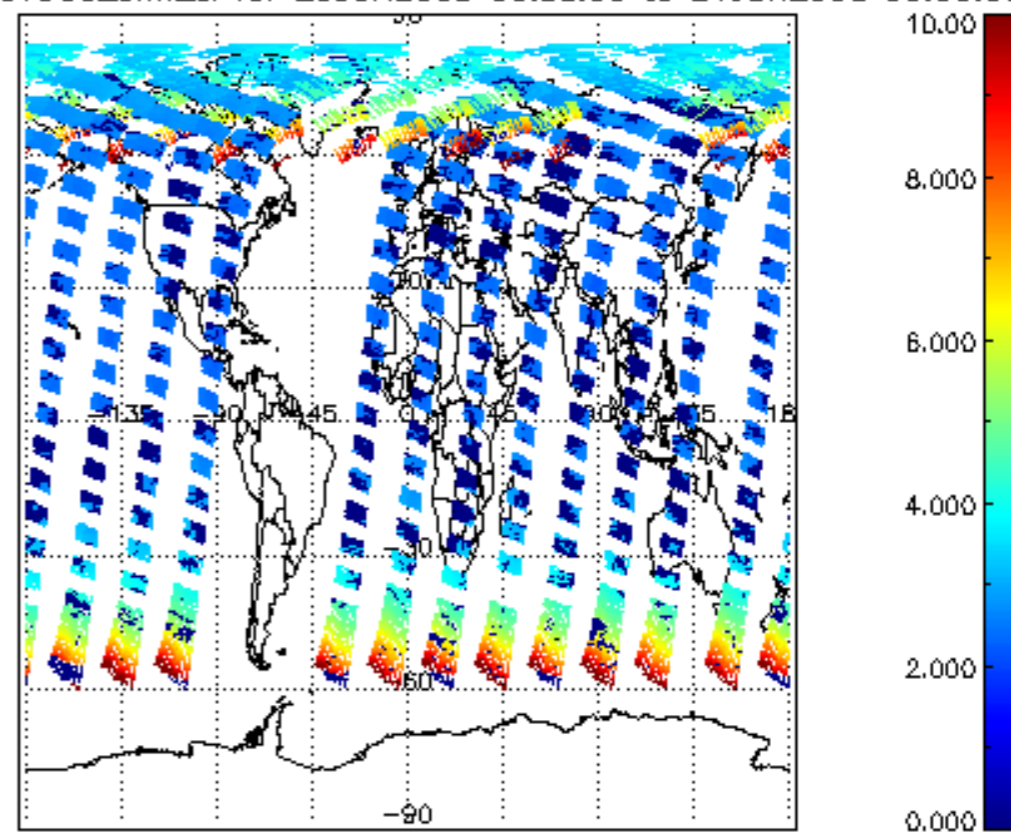
SCIOL2P\_NADUV003\_vcd\_err for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



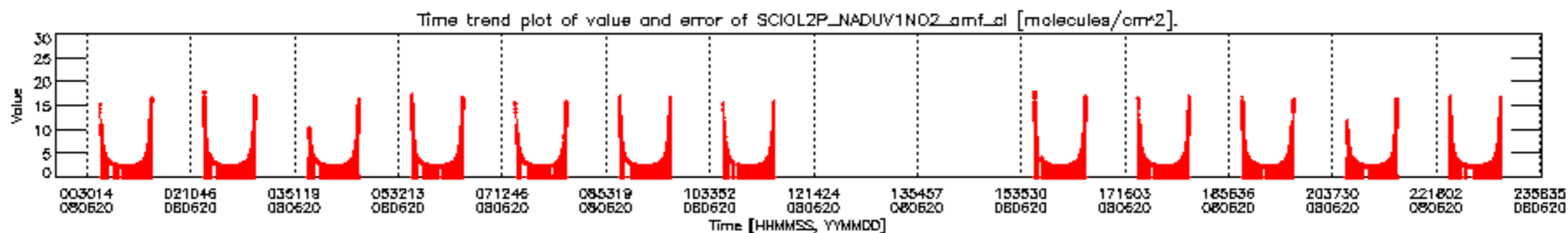
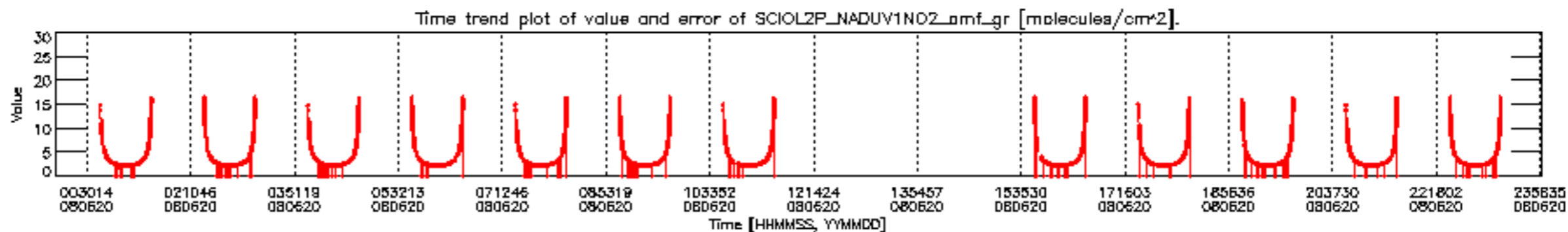
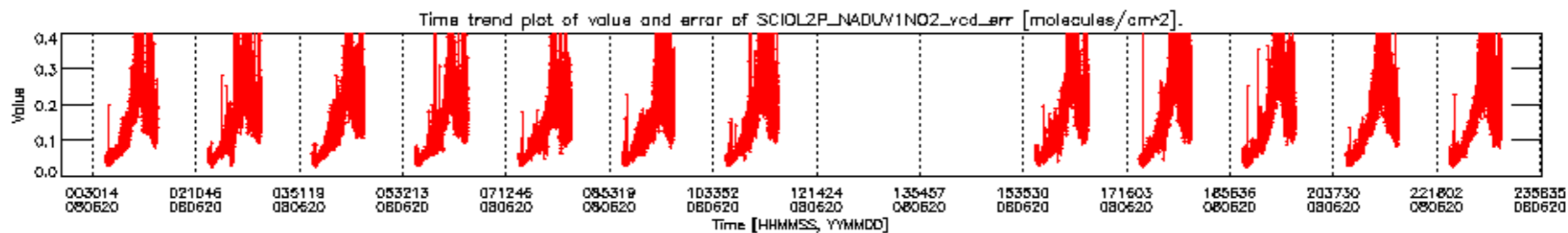
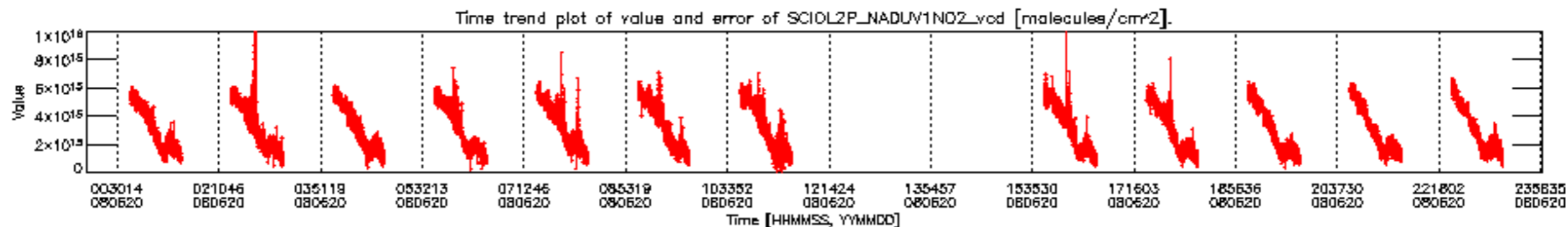
SCIOL2P\_NADUV003\_amf\_gr for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



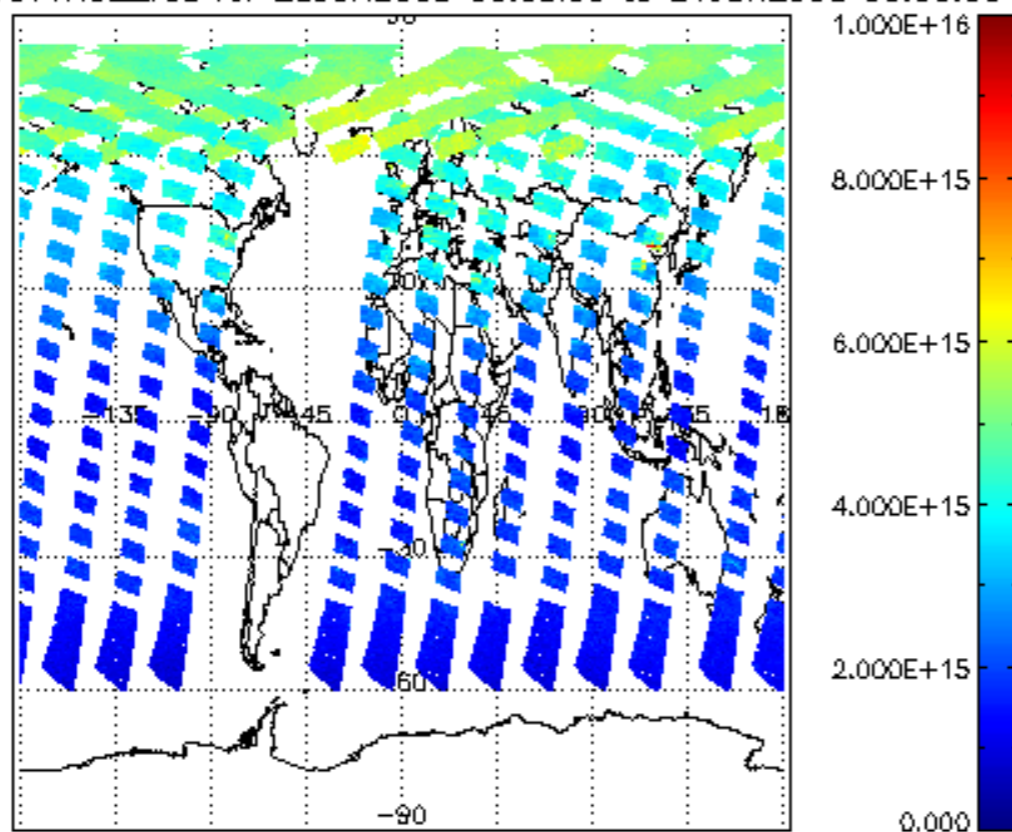
SCIOL2P\_NADUV003\_amf\_cl for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



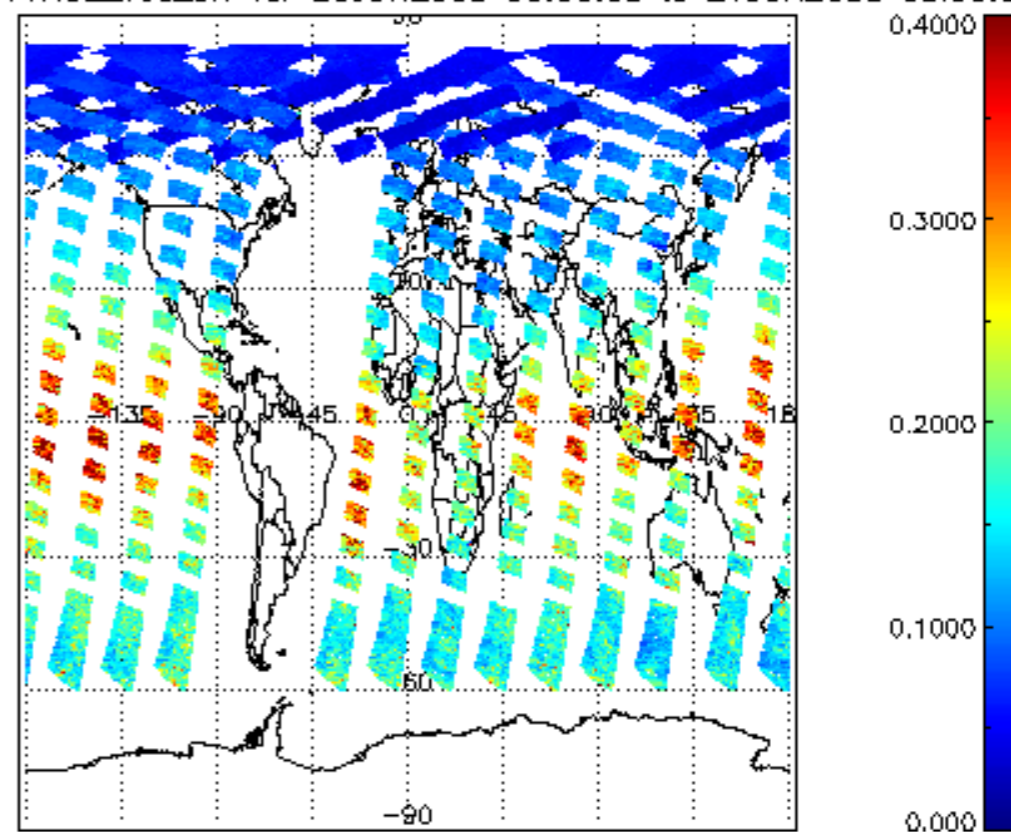




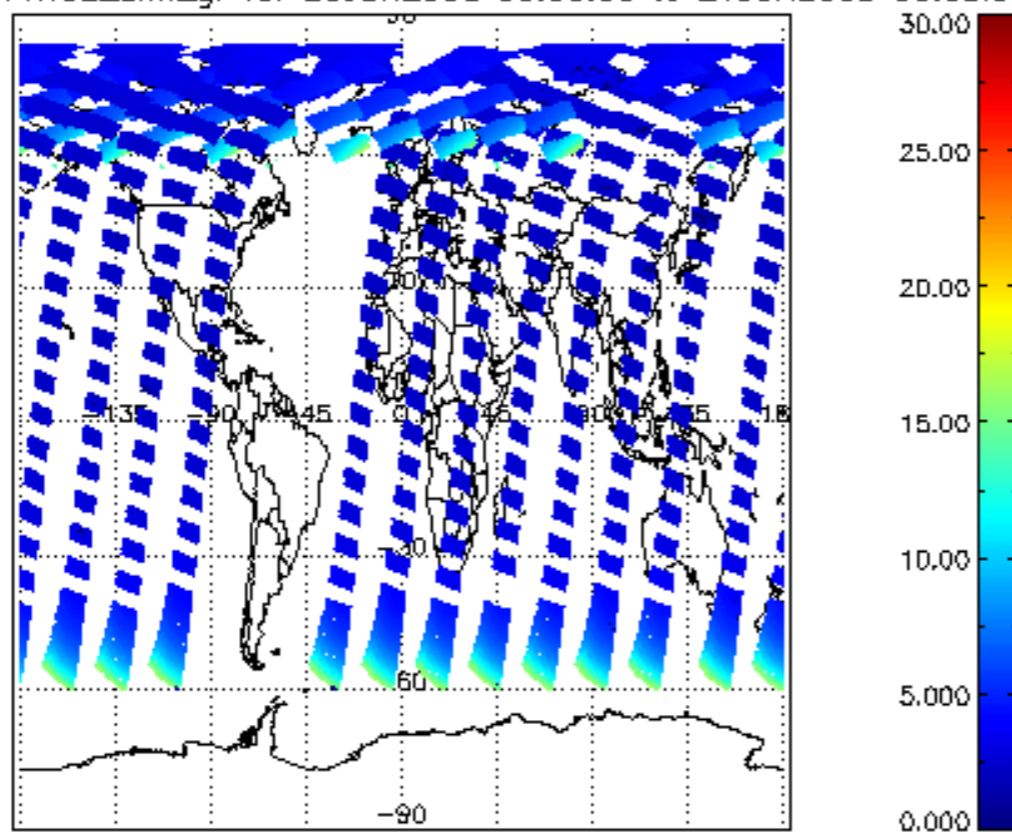
SCIOL2P\_NADUV1NO2\_vcd for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



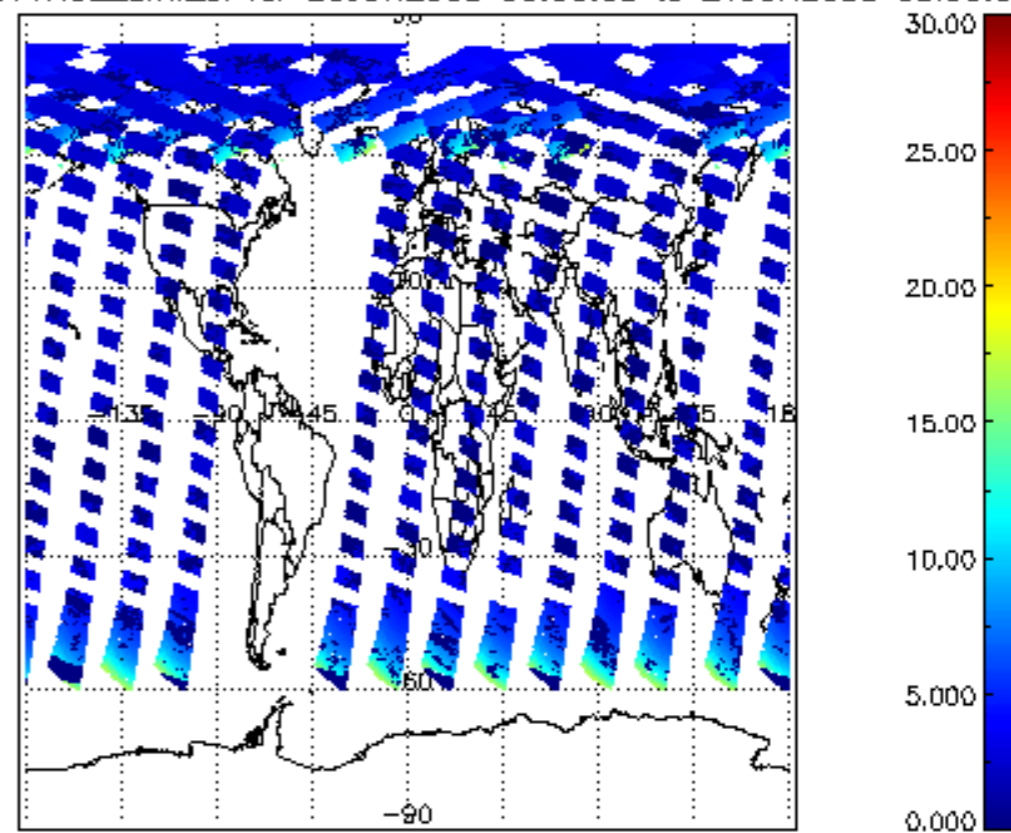
iCIOL2P\_NADUV1NO2\_vcd\_err for 20JUN2008 00:00:00 to 21JUN2008 00:00:00



iCIOL2P\_NADUV1NO2\_amf\_gr for 20JUN2008 00:00:00 to 21JUN2008 00:00:00

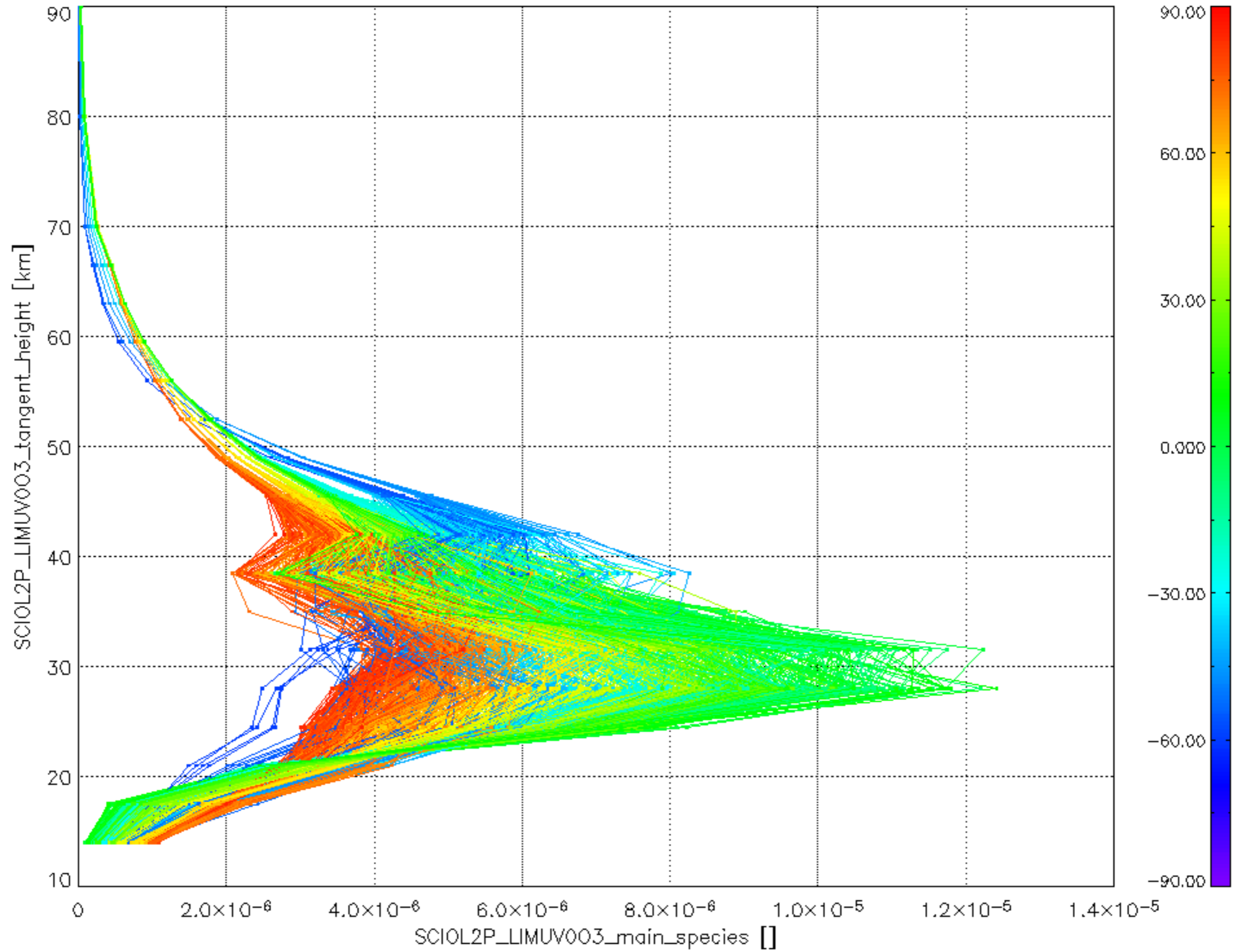


iCIOL2P\_NADUV1NO2\_amf\_cl for 20JUN2008 00:00:00 to 21JUN2008 00:00:00





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).

