

## 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	1.6 (28-07-2008)
Time of report generation	05JUN2009 16:11:28
Data source version	SCIA-OL/3.01-R
Processing scope for products	21APR2009 00:00:00 to 22APR2009 00:00:00
Start time of first product within scope	20APR2009 23:15:03
Stop time of last product within scope	21APR2009 23:38:34
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.

Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	<a href="#">SCI_OL__2PRDPA20090420_231503_000033122078_00202_37330_2144.N1</a>	20APR2009 23:15:03	21APR2009 00:10:16	0	GOOD
1	<a href="#">SCI_OL__2PRDPA20090421_005538_000033252078_00203_37331_2145.N1</a>	21APR2009 00:55:38	21APR2009 01:51:04	0	GOOD
2	<a href="#">SCI_OL__2PRDPA20090421_023614_000033122078_00204_37332_2146.N1</a>	21APR2009 02:36:14	21APR2009 03:31:27	0	GOOD
3	<a href="#">SCI_OL__2PRDPA20090421_041650_000033252078_00205_37333_2147.N1</a>	21APR2009 04:16:50	21APR2009 05:12:15	0	GOOD
4	<a href="#">SCI_OL__2PRDPA20090421_055725_000033122078_00206_37334_2148.N1</a>	21APR2009 05:57:25	21APR2009 06:52:38	0	GOOD
5	<a href="#">SCI_OL__2PRDPA20090421_073801_000033252078_00207_37335_2149.N1</a>	21APR2009 07:38:01	21APR2009 08:33:26	0	GOOD
6	<a href="#">SCI_OL__2PRDPA20090421_091836_000033122078_00208_37336_2150.N1</a>	21APR2009 09:18:36	21APR2009 10:13:49	0	GOOD
7	<a href="#">SCI_OL__2PRDPA20090421_105912_000033252078_00209_37337_2151.N1</a>	21APR2009 10:59:12	21APR2009 11:54:37	0	GOOD
8	<a href="#">SCI_OL__2PRDPA20090421_123947_000033122078_00210_37338_2152.N1</a>	21APR2009 12:39:47	21APR2009 13:35:00	0	GOOD
9	<a href="#">SCI_OL__2PRDPA20090421_160059_000033122078_00212_37340_2153.N1</a>	21APR2009 16:00:59	21APR2009 16:56:11	0	GOOD
10	<a href="#">SCI_OL__2PRDPA20090421_174152_000033252078_00213_37341_2154.N1</a>	21APR2009 17:41:52	21APR2009 18:37:18	0	GOOD
11	<a href="#">SCI_OL__2PRDPA20090421_192228_000033122078_00214_37342_2155.N1</a>	21APR2009 19:22:28	21APR2009 20:17:41	0	GOOD
12	<a href="#">SCI_OL__2PRDPA20090421_210245_000033252078_00215_37343_2156.N1</a>	21APR2009 21:02:45	21APR2009 21:58:11	0	GOOD
13	<a href="#">SCI_OL__2PRDPA20090421_224321_000033122078_00216_37344_2157.N1</a>	21APR2009 22:43:21	21APR2009 23:38:34	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: 137020

Total number of cloud data DSRs with good quality flag (=0): 137020 (100.0 %)

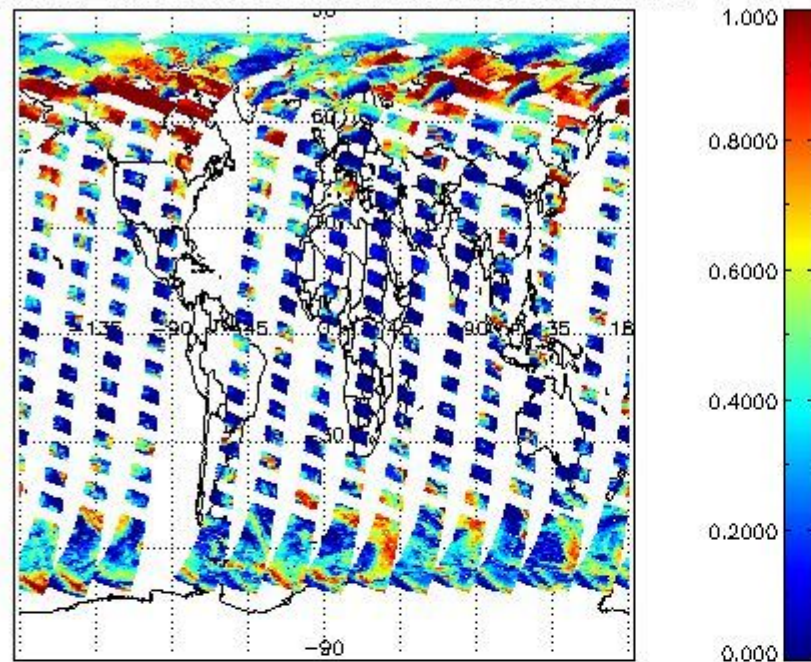
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	137020	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	137020	0.16935	0.12500	0.12500	0.25000	0.059808	s
CL_FRAC	137020	0.37394	0.34751	0.0000	1.0000	0.30791	-
CL_FRAC_ERR	137020	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	137020	5.4194	4.0000	4.0000	8.0000	1.9139	
PMD_READ_CL[0]	137020	0.31009	0.0000	0.0000	8.0000	1.2020	-
PMD_READ_CL[1]	137020	1.4673	0.0000	0.0000	8.0000	2.6171	-
CL_TOP_HEIGHT	122675	2.8744	1.3446	0.0000	17.000	3.2796	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	122675	65.830	100.00	0.0000	101.00	42.600	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	137020	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	137020	11001010	11000100	11000000	11100000	3342.4	flags
AERO_ABSO_IND	137020	3.7973	4.5391	-0.98681	15.260	2.4513	
AERO_IND_DIAG	137020	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	137020	01010111	00000000	00000000	11000000	24469.	flags

### Time and geolocation plots:

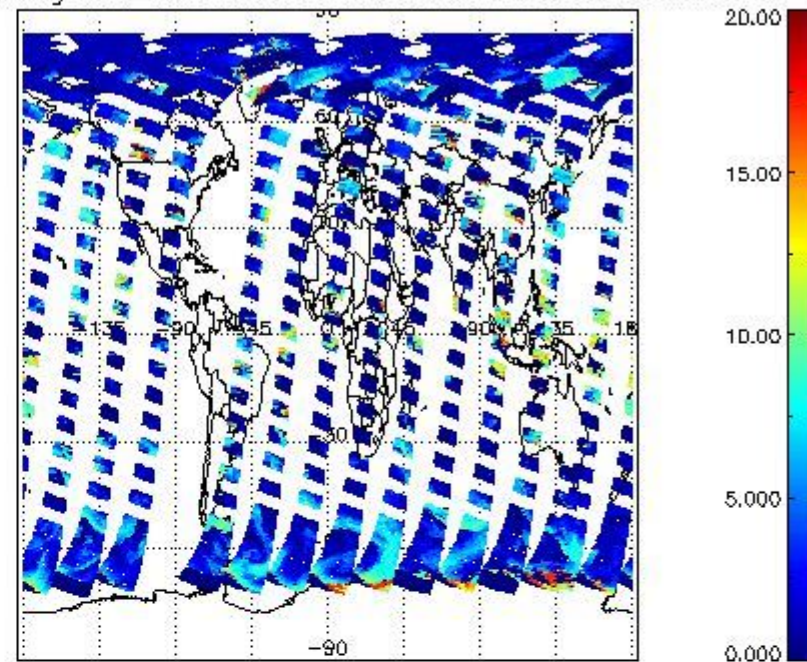
Plots are available for the following parameters:

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

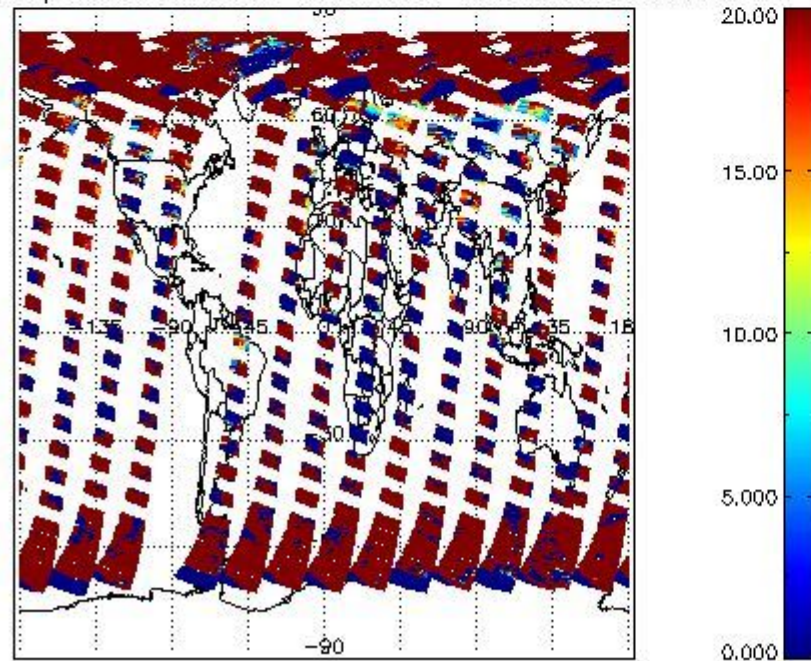
cL\_frac for 21APR2009 00:00:00 to 22APR2009 00:00:00



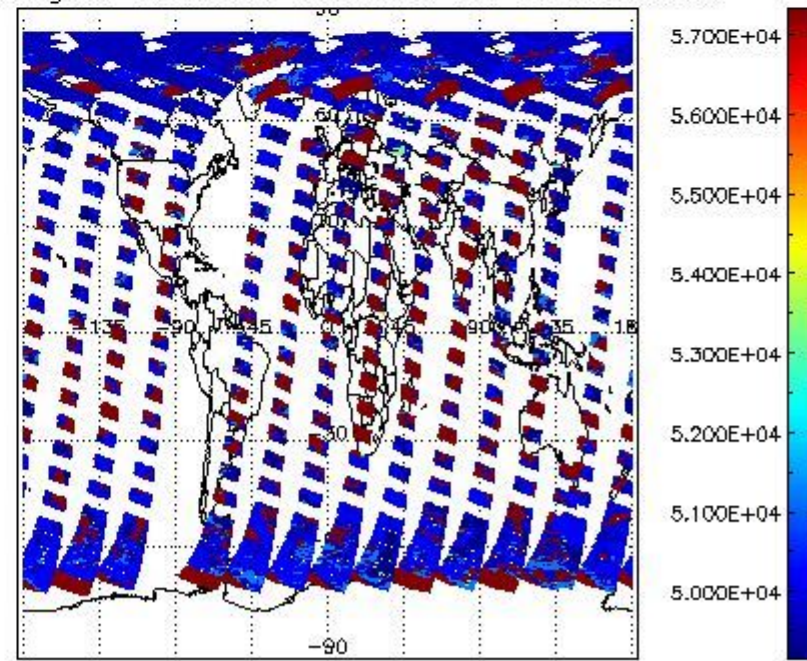
cL\_top\_height for 21APR2009 00:00:00 to 22APR2009 00:00:00



cL\_opt\_depth for 21APR2009 00:00:00 to 22APR2009 00:00:00



cloud\_flags for 21APR2009 00:00:00 to 22APR2009 00:00:00



## 2.2.2 Nadir

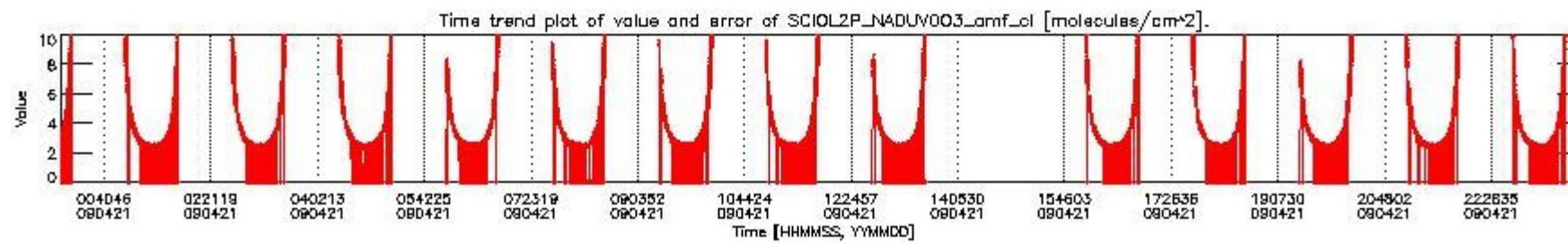
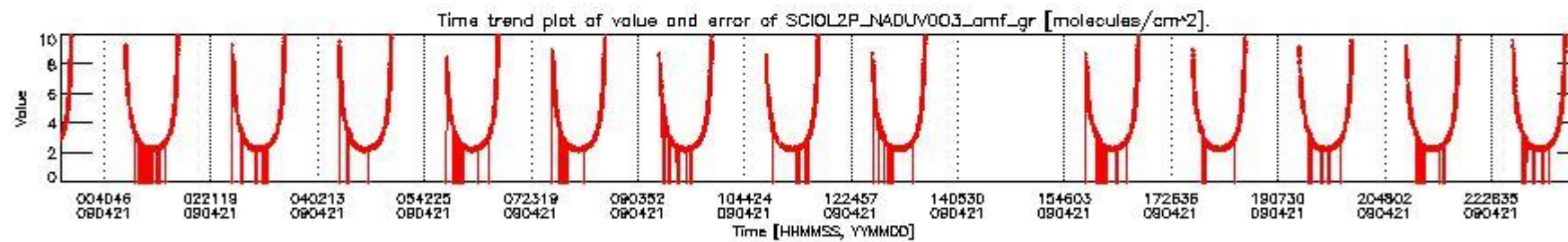
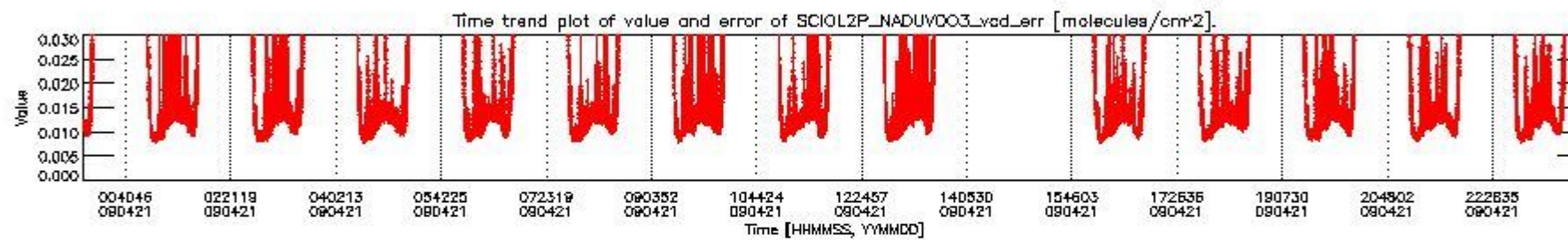
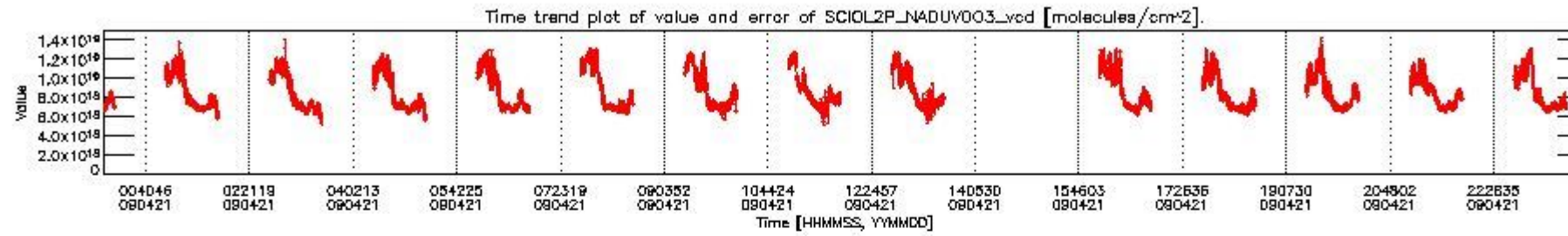
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

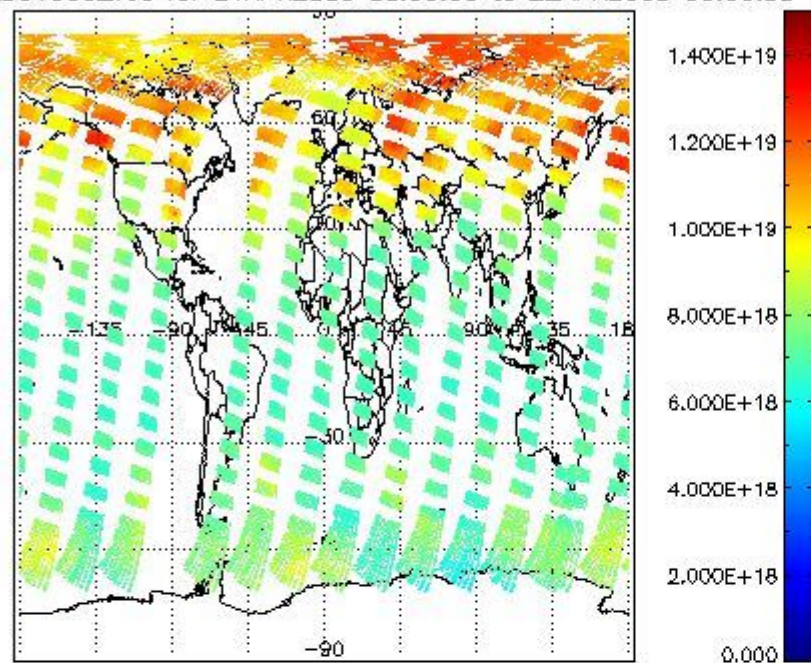
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

3	SCIOL2P_NADUV003_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

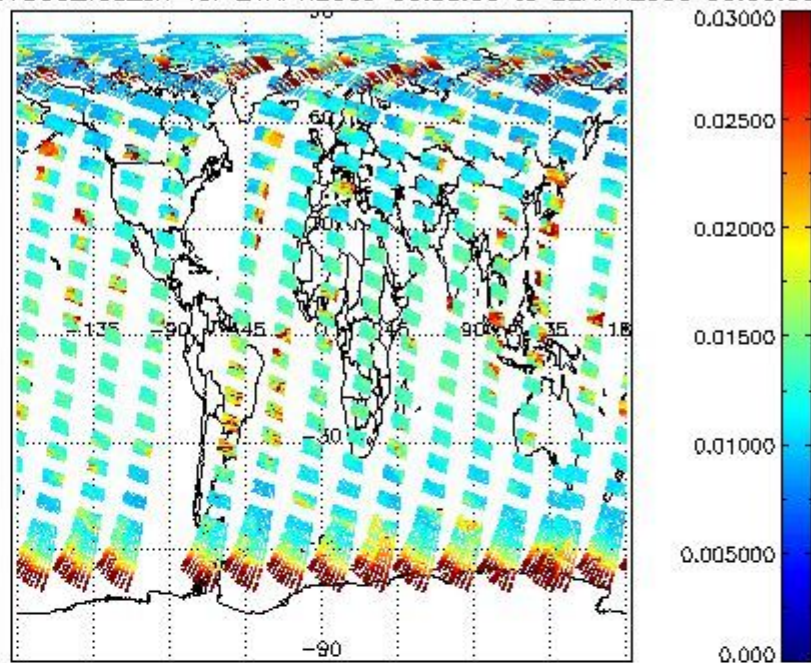
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



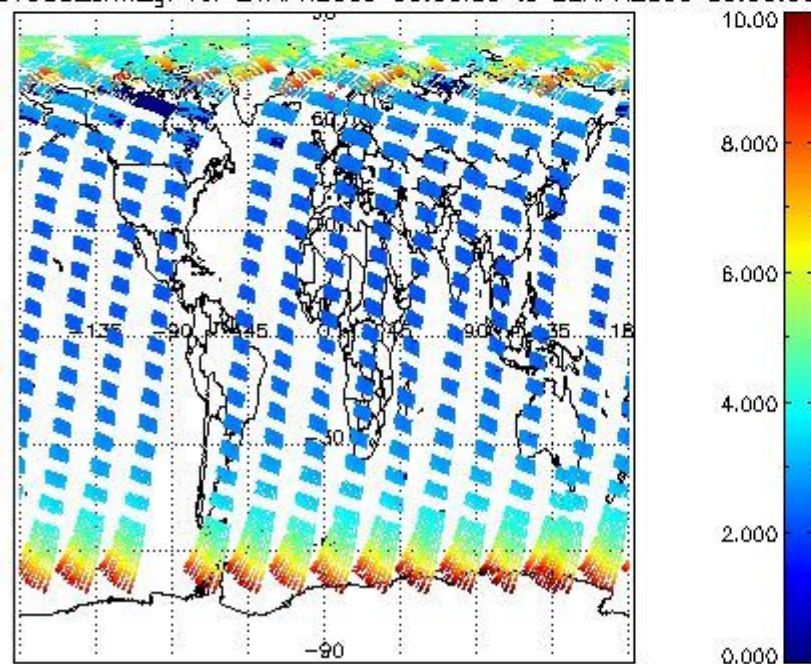
SCIOL2P\_NADUV003\_vcd for 21APR2009 00:00:00 to 22APR2009 00:00:00



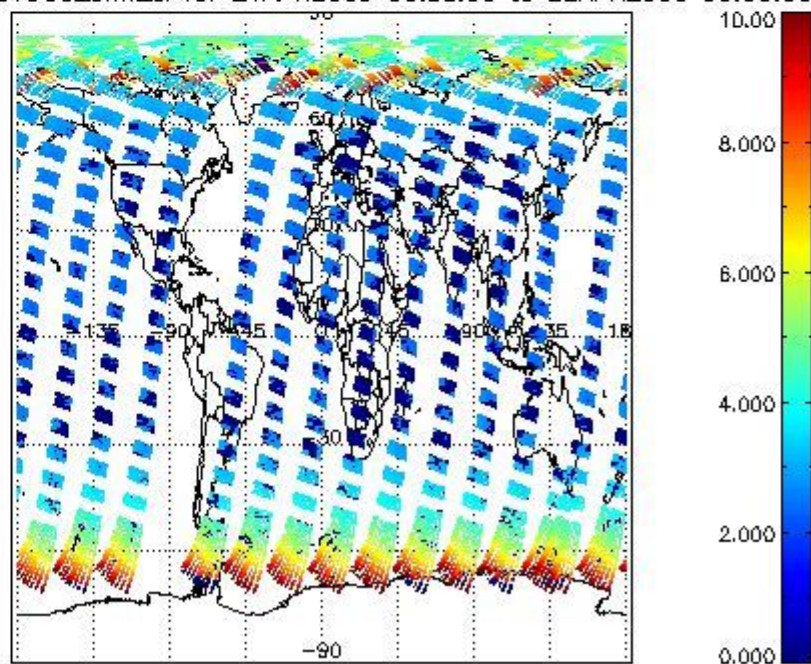
SCIOL2P\_NADUV003\_vcd\_err for 21APR2009 00:00:00 to 22APR2009 00:00:00

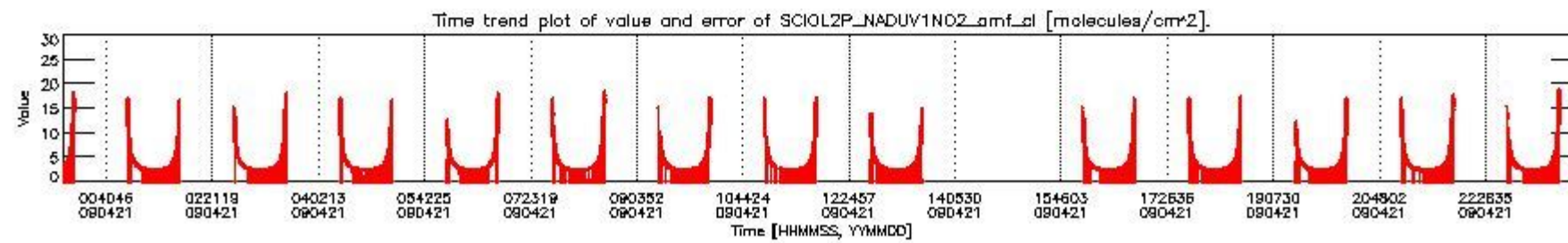
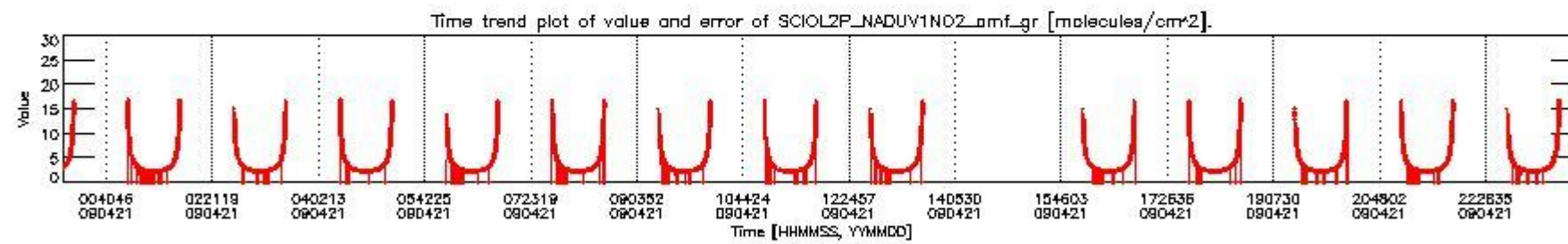
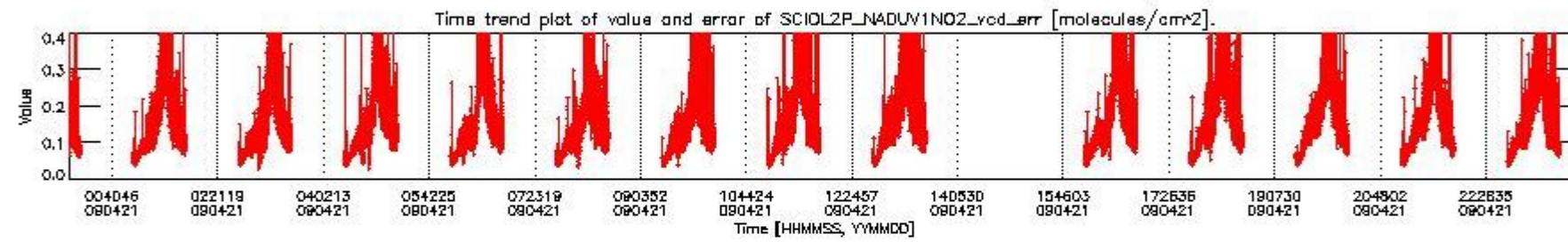
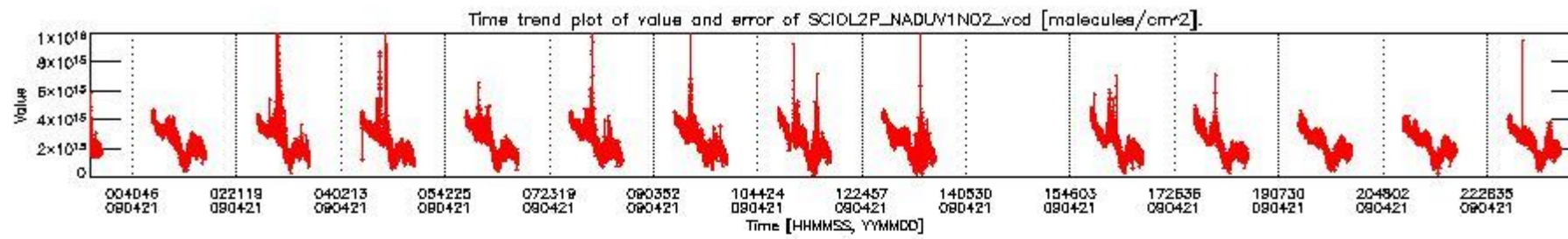


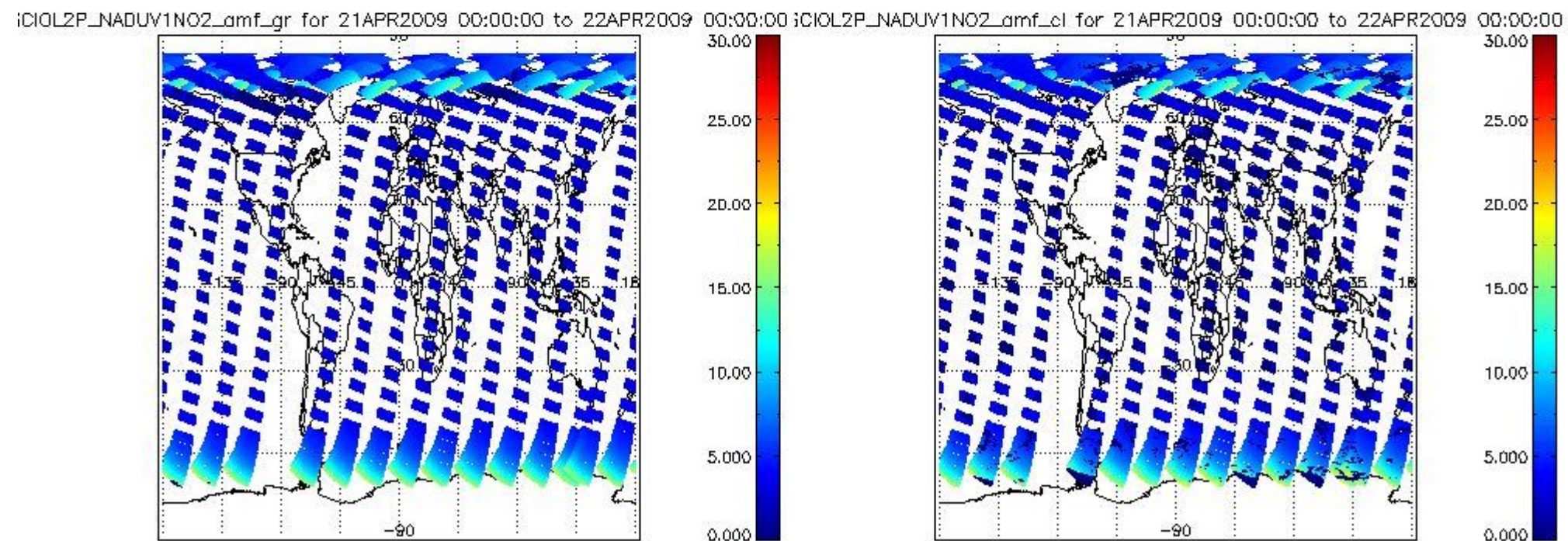
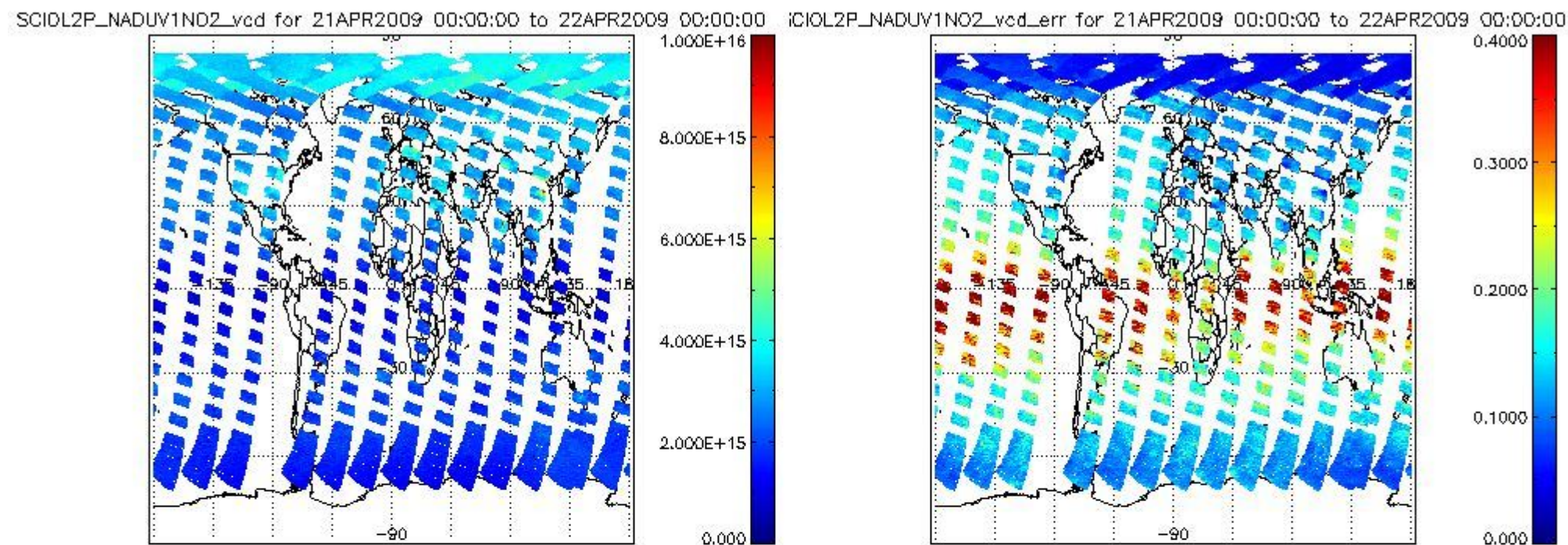
SCIOL2P\_NADUV003\_amf\_gr for 21APR2009 00:00:00 to 22APR2009 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 21APR2009 00:00:00 to 22APR2009 00:00:00







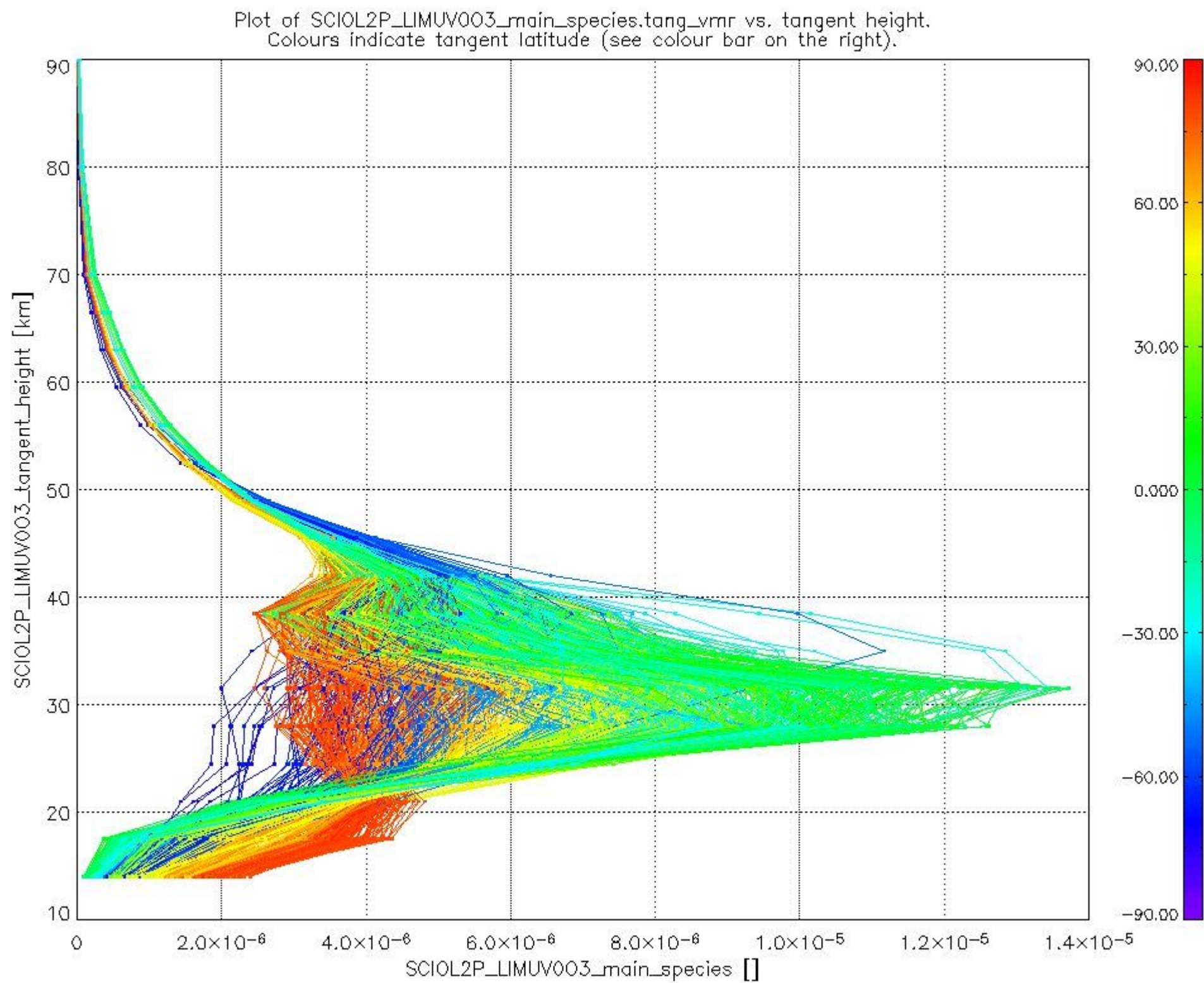
### 2.2.3 Limb

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:

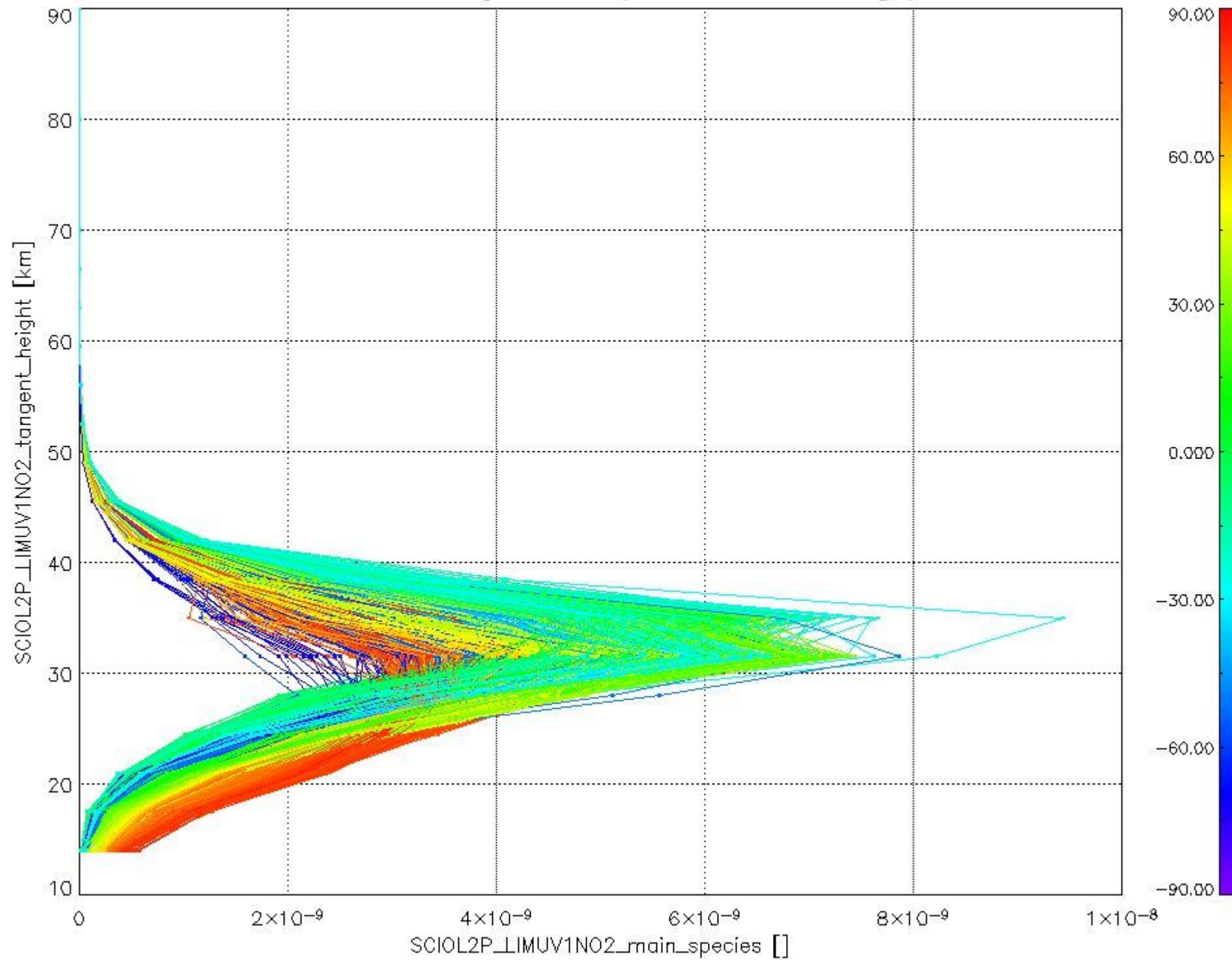
Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

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





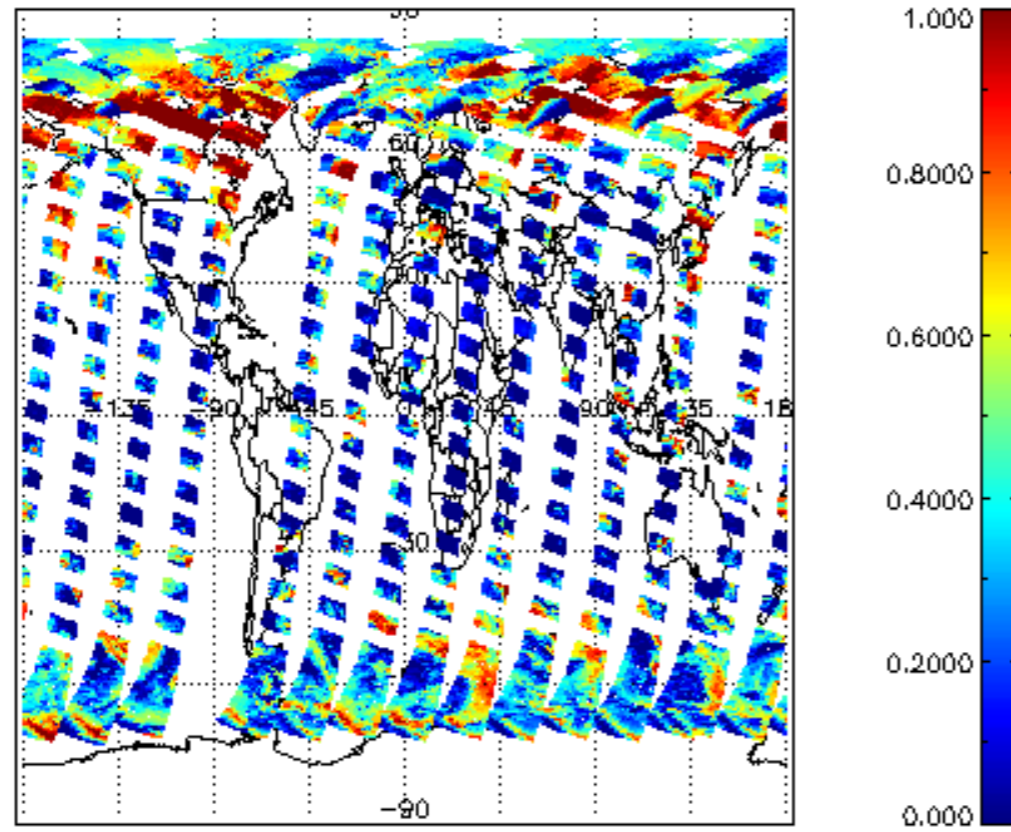
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



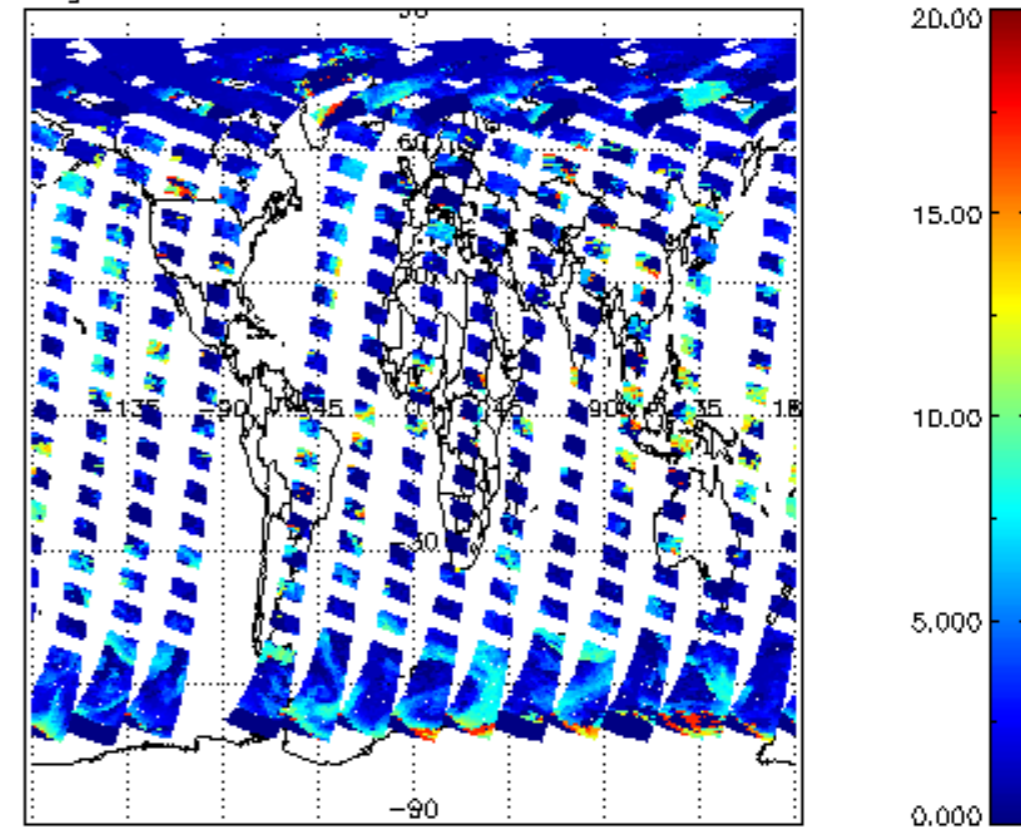
### 2.3 ADF monitoring

Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED

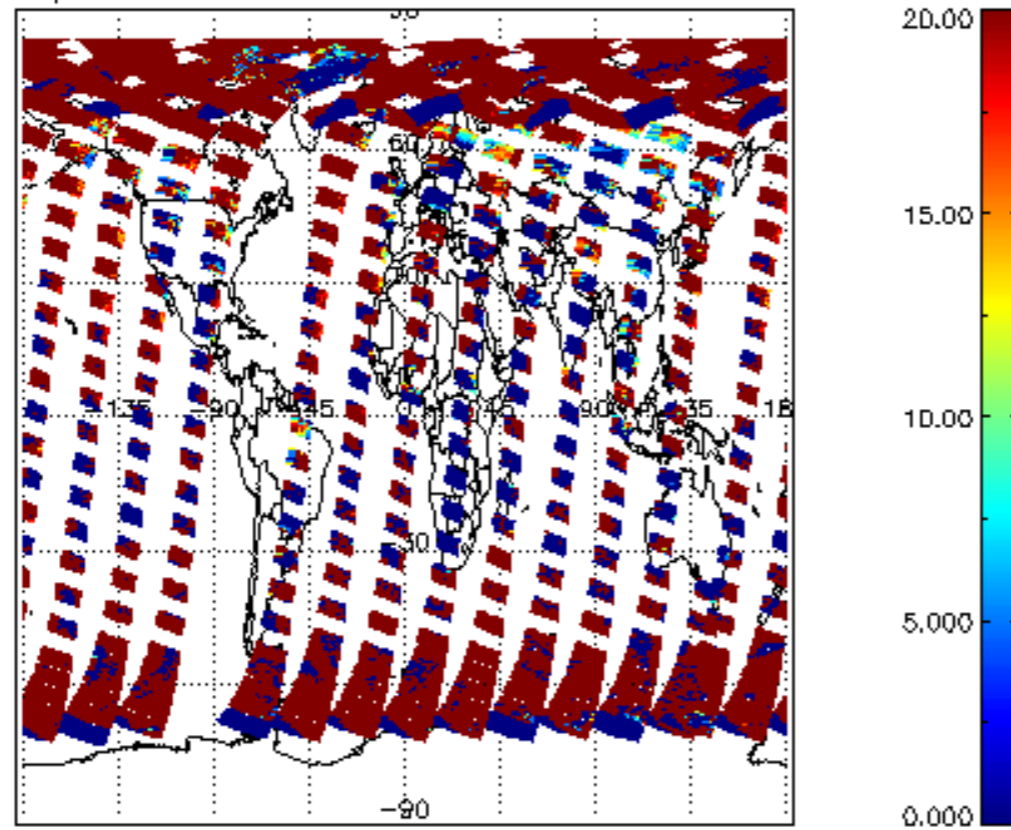
cl\_frac for 21APR2009 00:00:00 to 22APR2009 00:00:00



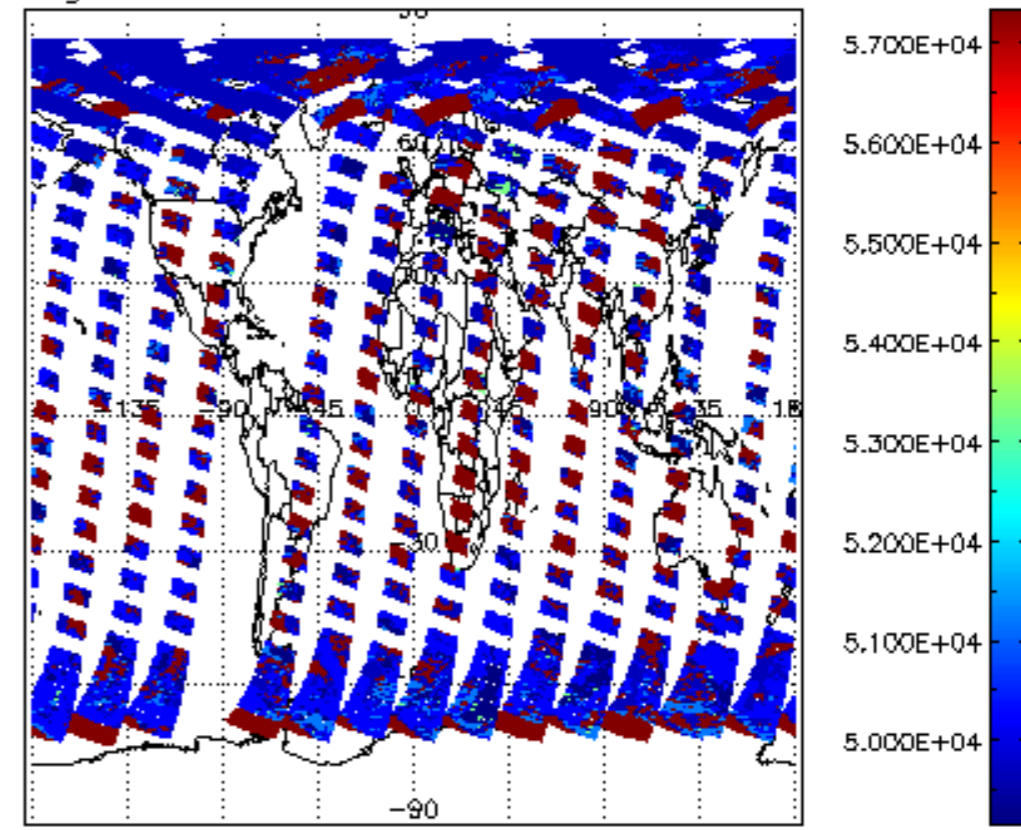
cl\_top\_height for 21APR2009 00:00:00 to 22APR2009 00:00:00

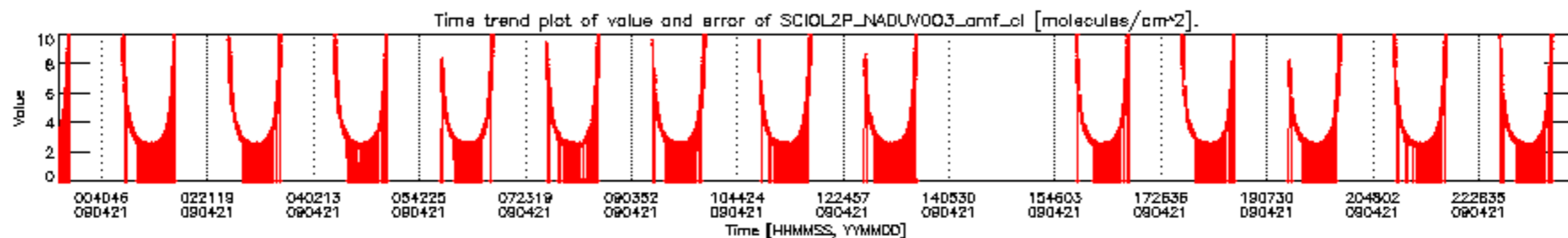
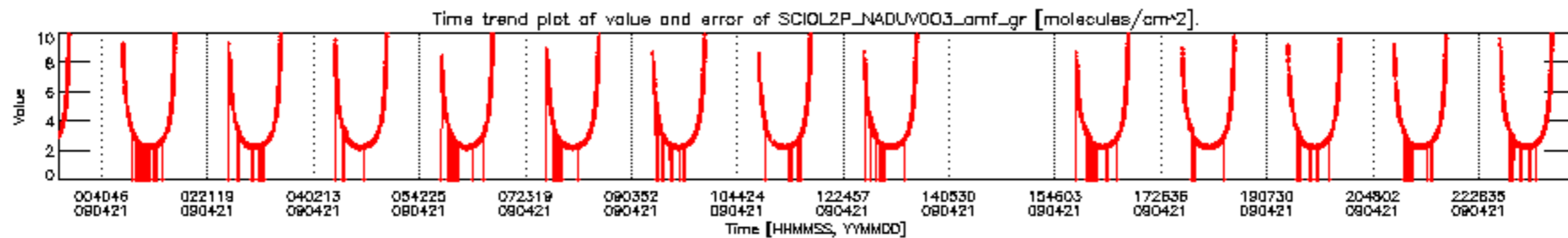
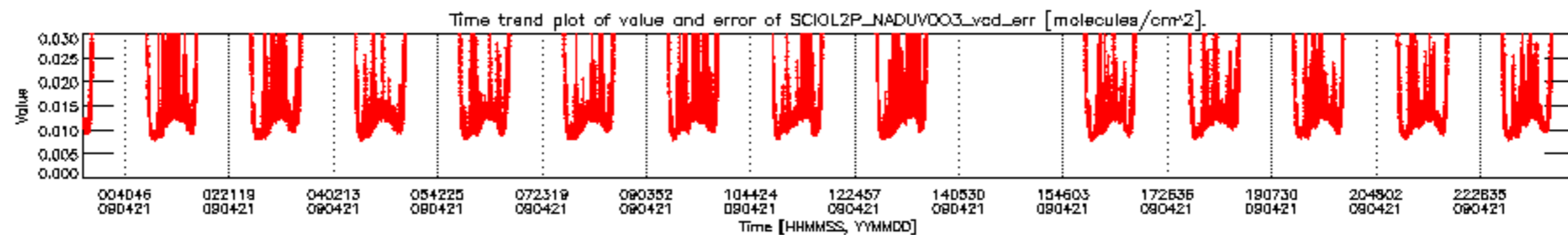
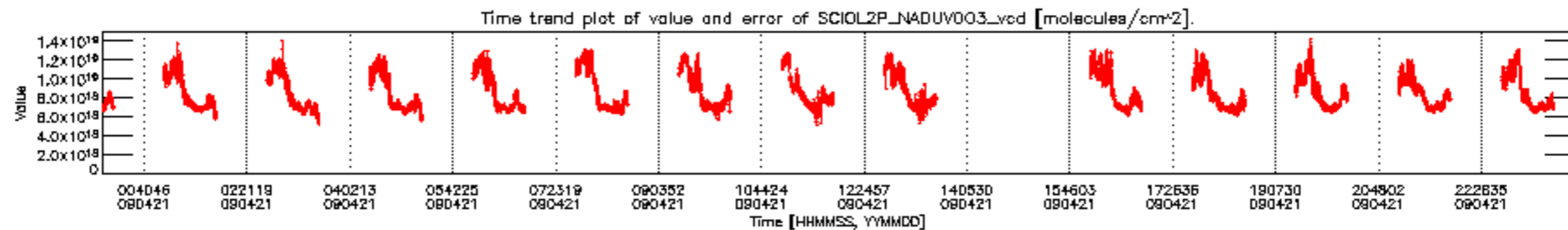


cl\_opt\_depth for 21APR2009 00:00:00 to 22APR2009 00:00:00

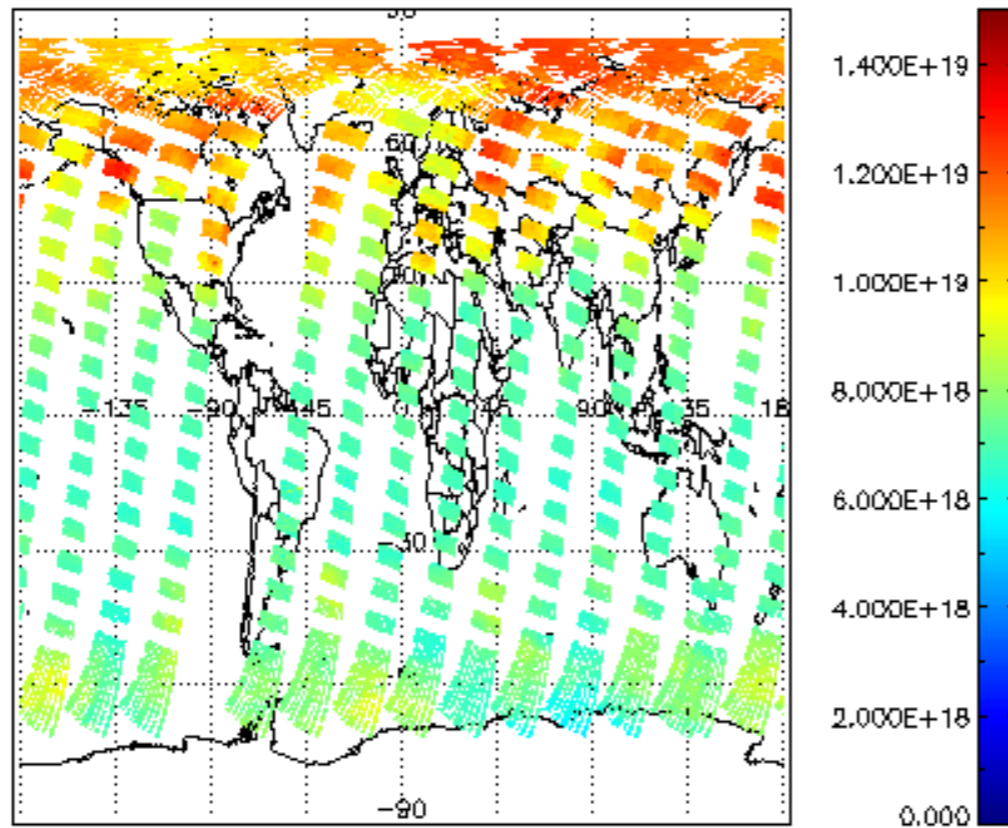


cloud\_flags for 21APR2009 00:00:00 to 22APR2009 00:00:00

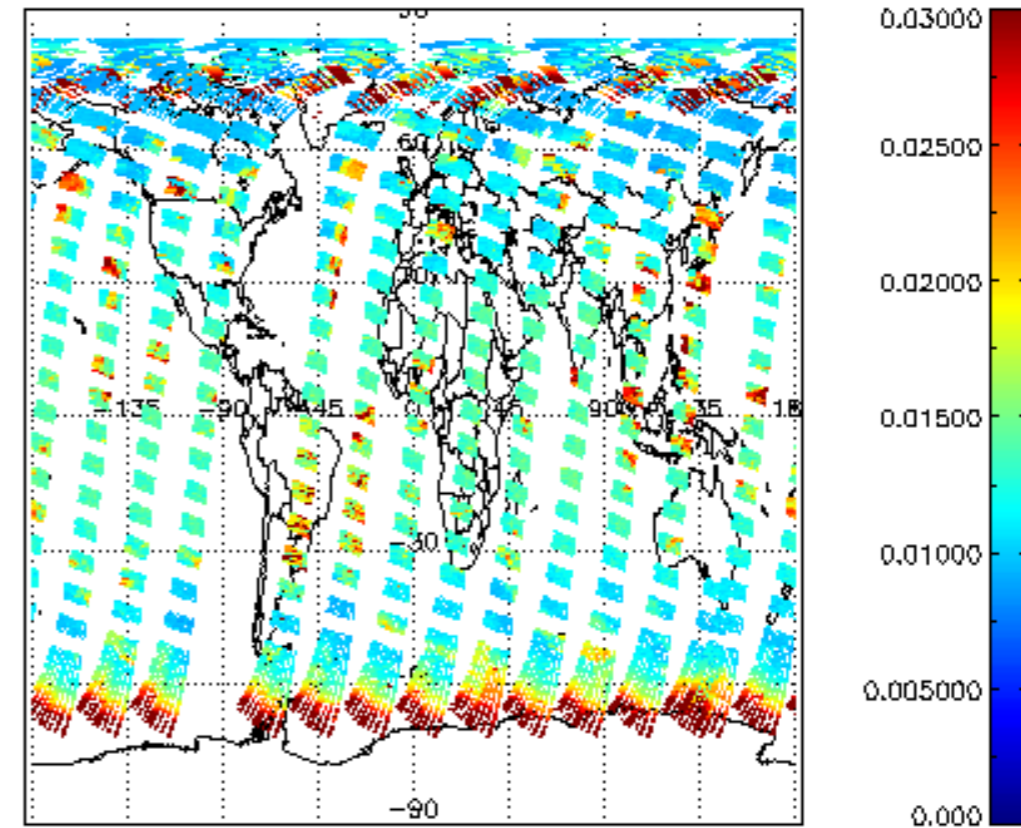




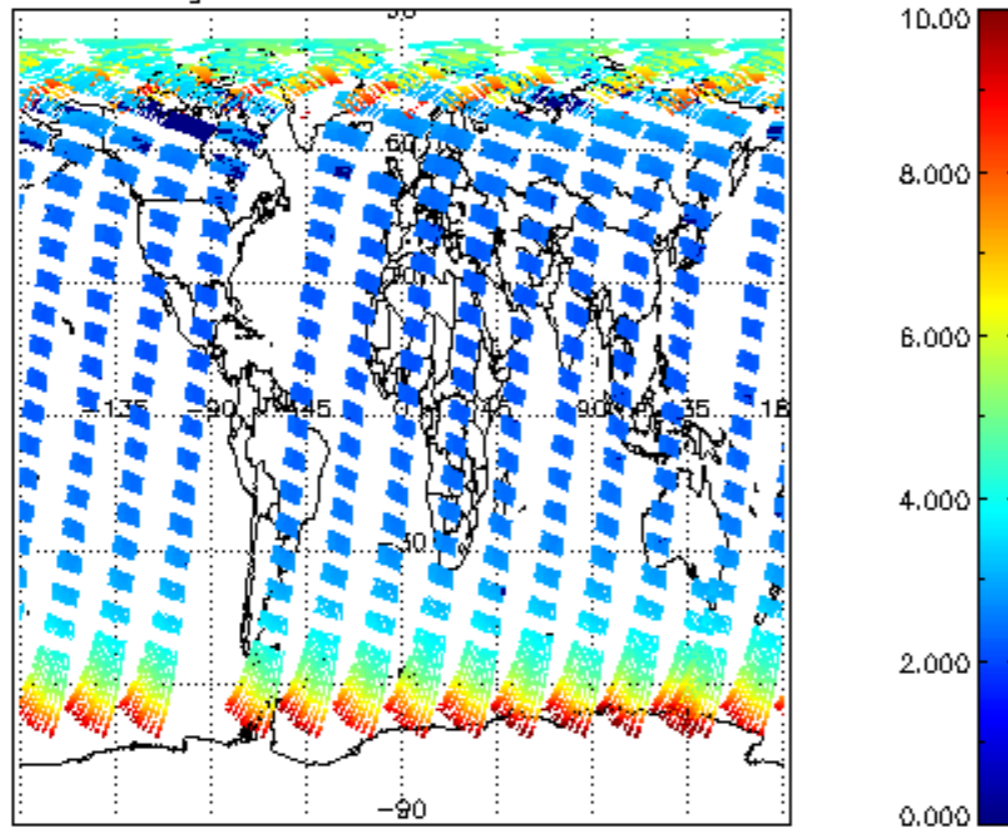
SCIOL2P\_NADUV003\_vcd for 21APR2009 00:00:00 to 22APR2009 00:00:00



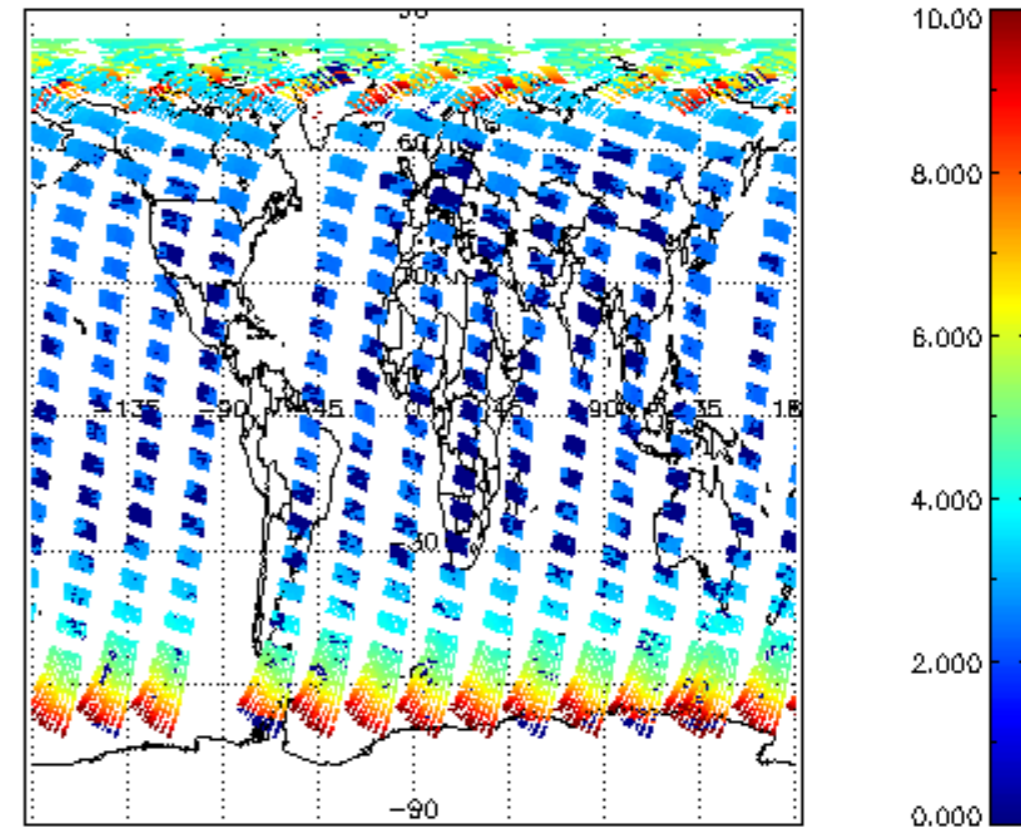
SCIOL2P\_NADUV003\_vcd\_err for 21APR2009 00:00:00 to 22APR2009 00:00:00

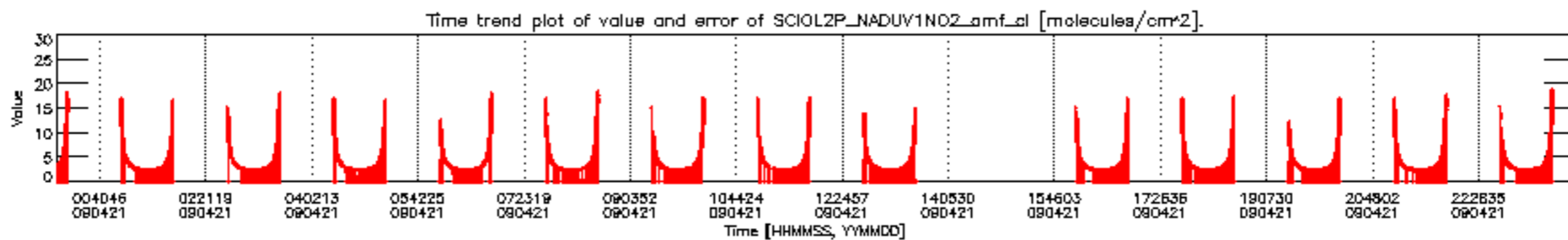
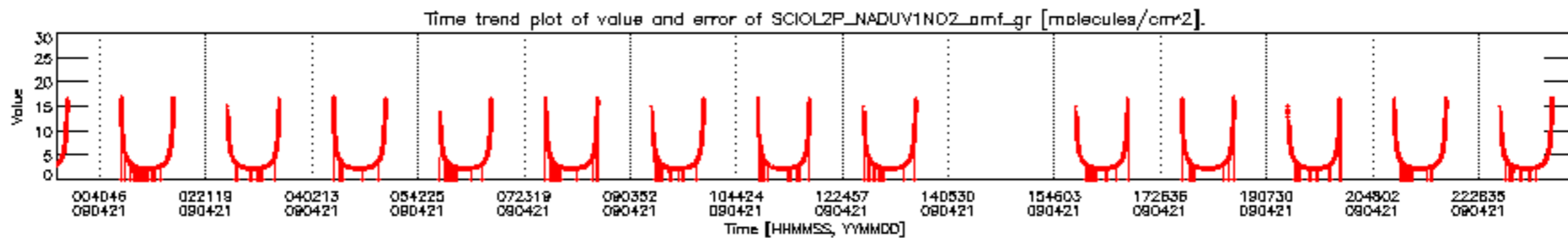
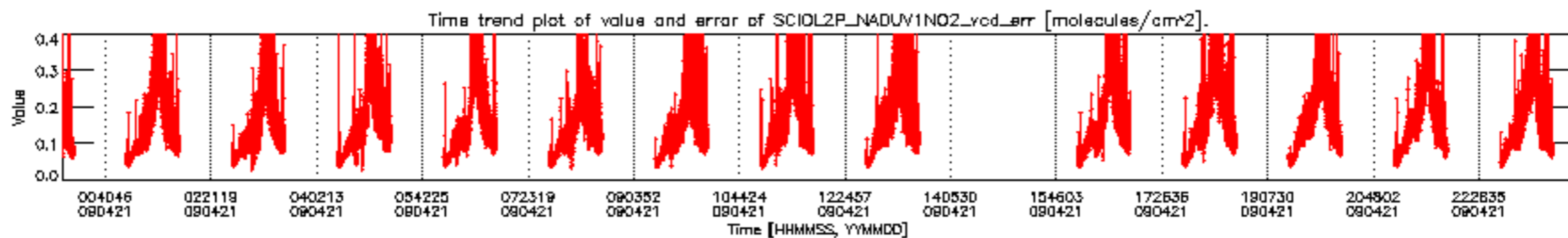
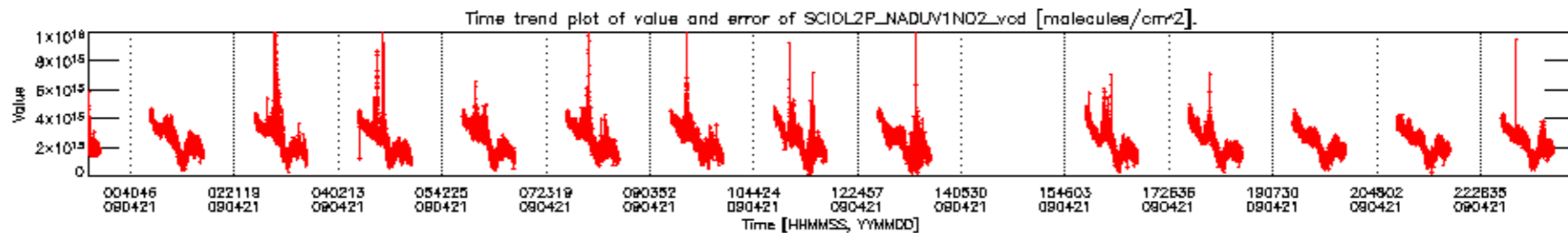


SCIOL2P\_NADUV003\_amf\_gr for 21APR2009 00:00:00 to 22APR2009 00:00:00

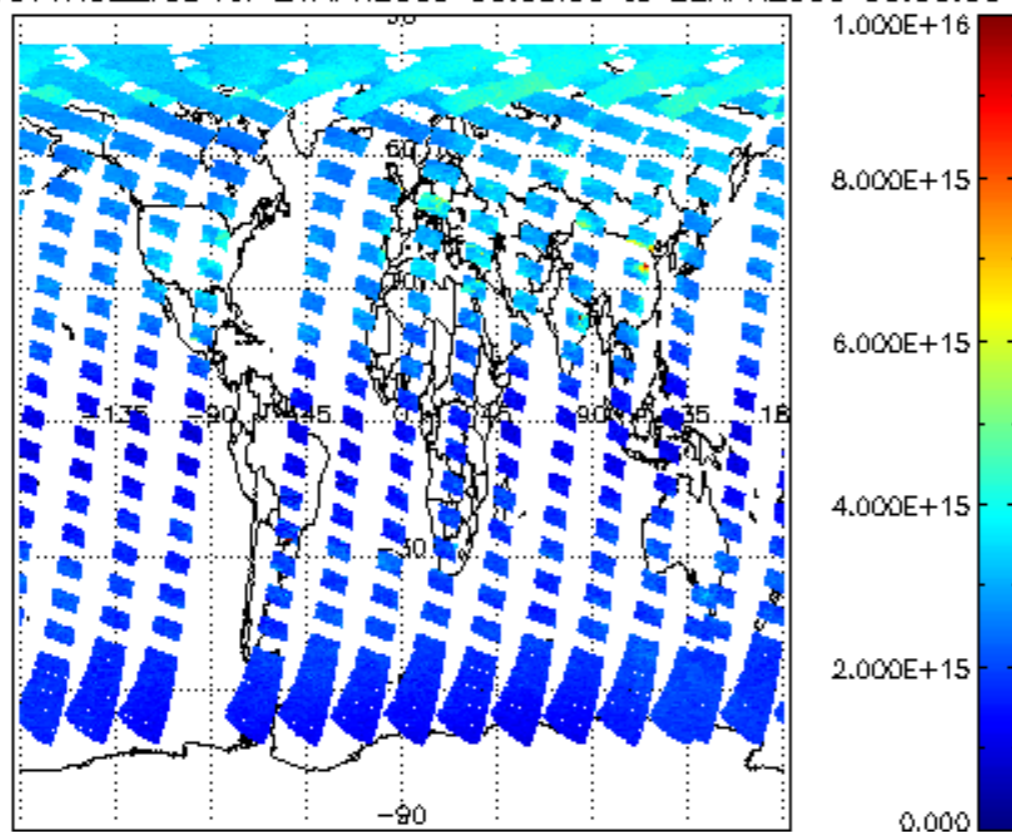


SCIOL2P\_NADUV003\_amf\_cl for 21APR2009 00:00:00 to 22APR2009 00:00:00

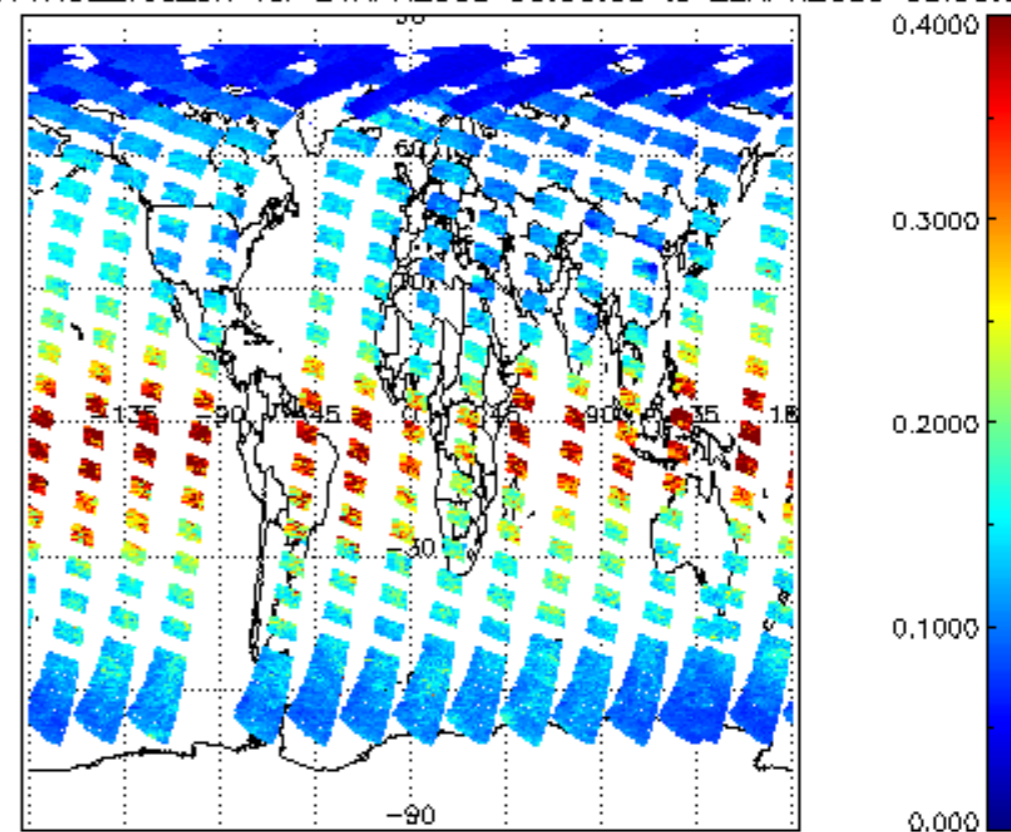




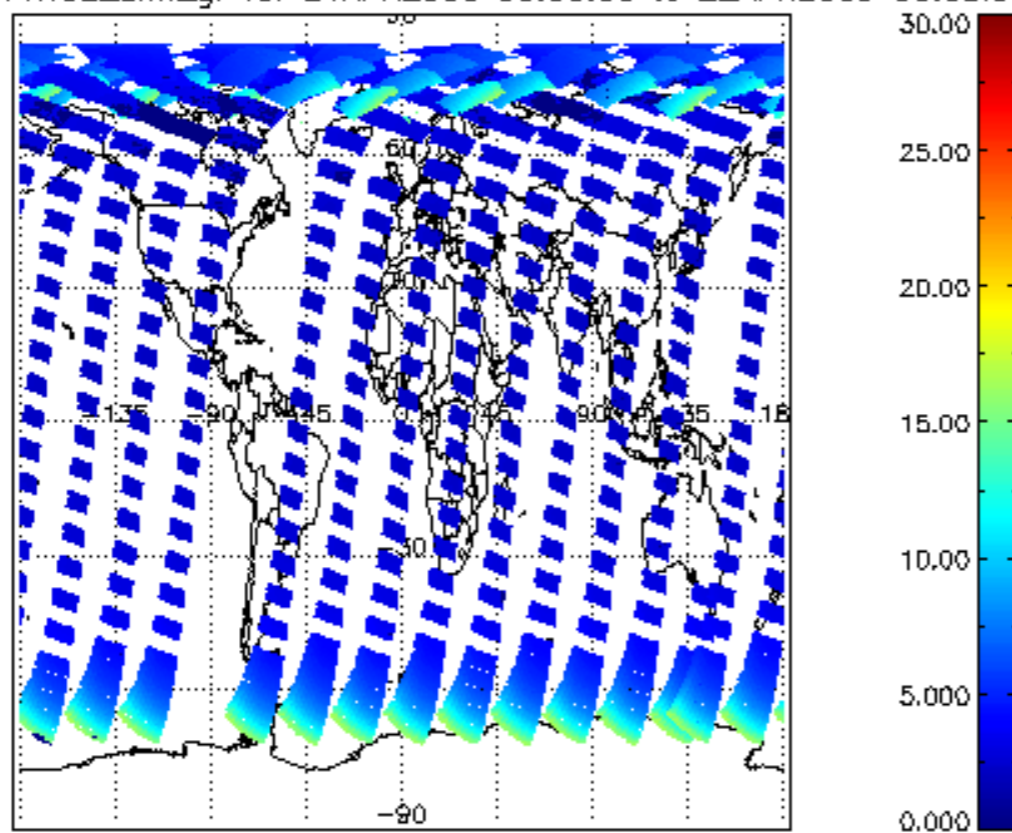
SCIOL2P\_NADUV1NO2\_vcd for 21APR2009 00:00:00 to 22APR2009 00:00:00



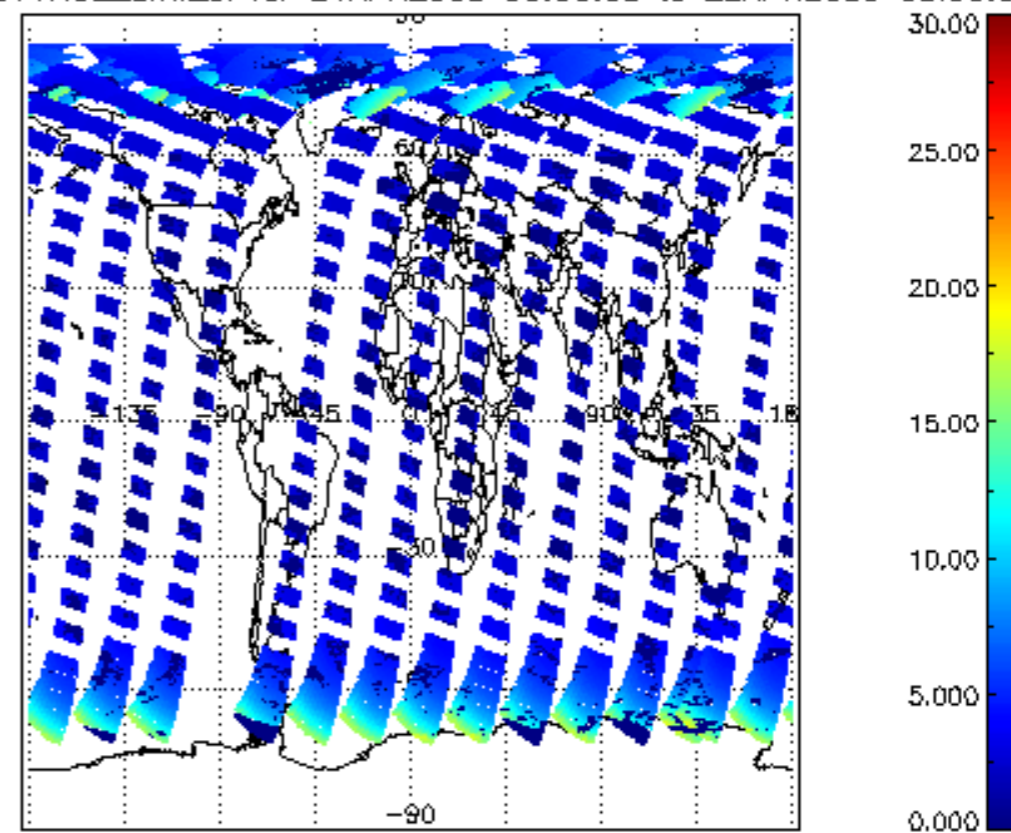
iCIOL2P\_NADUV1NO2\_vcd\_err for 21APR2009 00:00:00 to 22APR2009 00:00:00



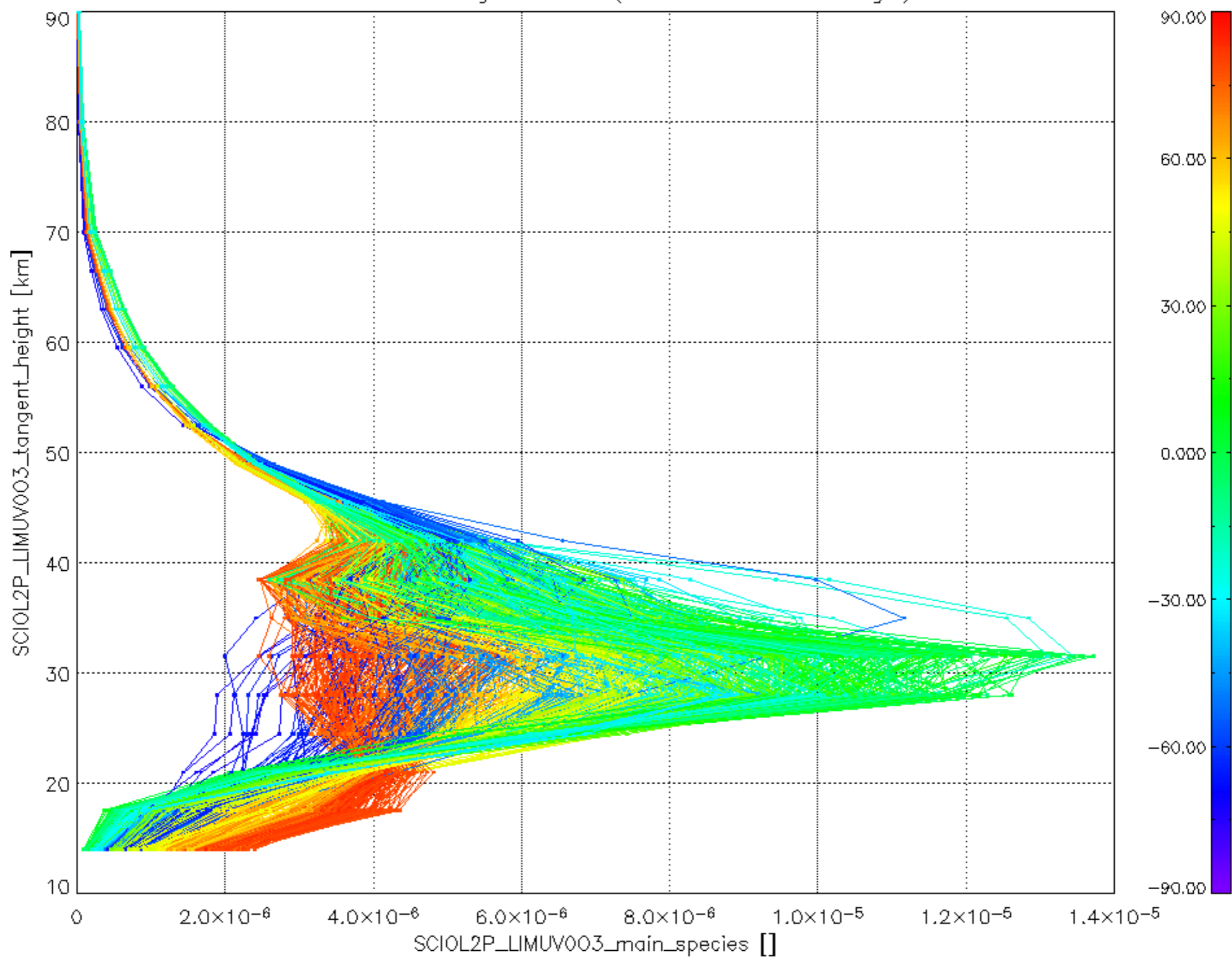
iCIOL2P\_NADUV1NO2\_amf\_gr for 21APR2009 00:00:00 to 22APR2009 00:00:00



iCIOL2P\_NADUV1NO2\_amf\_cl for 21APR2009 00:00:00 to 22APR2009 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).

