

## 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	04AUG2008 15:06:33
Data source version	SCIA-OL/3.01-R
Processing scope for products	23FEB2004 00:00:00 to 24FEB2004 00:00:00
Start time of first product within scope	22FEB2004 23:35:05
Stop time of last product within scope	23FEB2004 23:57:19
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__2PRDPA20040222_233505_000032372024_00288_10362_6667.N1	22FEB2004 23:35:05	23FEB2004 00:29:03	0	GOOD
1	SCI_OL__2PRDPA20040223_0111417_000033772024_00289_10363_6642.N1	23FEB2004 01:14:17	23FEB2004 02:10:34	0	GOOD
2	SCI_OL__2PRDPA20040223_043528_000033772024_00291_10365_6730.N1	23FEB2004 04:35:28	23FEB2004 05:31:45	0	GOOD
3	SCI_OL__2PRDPA20040223_061727_000032372024_00292_10366_6659.N1	23FEB2004 06:17:27	23FEB2004 07:11:24	0	GOOD
4	SCI_OL__2PRDPA20040223_075639_000033772024_00293_10367_6719.N1	23FEB2004 07:56:39	23FEB2004 08:52:56	0	GOOD
5	SCI_OL__2PRDPA20040223_093838_000032372024_00294_10368_6820.N1	23FEB2004 09:38:38	23FEB2004 10:32:35	0	GOOD
6	SCI_OL__2PRDPA20040223_111749_000033772024_00295_10369_6884.N1	23FEB2004 11:17:49	23FEB2004 12:14:07	0	GOOD
7	SCI_OL__2PRDPA20040223_125948_000032372024_00296_10370_6750.N1	23FEB2004 12:59:48	23FEB2004 13:53:46	0	GOOD
8	SCI_OL__2PRDPA20040223_143900_000033772024_00297_10371_6673.N1	23FEB2004 14:39:00	23FEB2004 15:35:17	0	GOOD
9	SCI_OL__2PRDPA20040223_162059_000032372024_00298_10372_6739.N1	23FEB2004 16:20:59	23FEB2004 17:14:57	0	GOOD
10	SCI_OL__2PRDPA20040223_175939_000033642024_00299_10373_6656.N1	23FEB2004 17:59:39	23FEB2004 18:55:43	0	GOOD
11	SCI_OL__2PRDPA20040223_194019_000033772024_00300_10374_6794.N1	23FEB2004 19:40:19	23FEB2004 20:36:36	0	GOOD
12	SCI_OL__2PRDPA20040223_212122_000033772024_00301_10375_6821.N1	23FEB2004 21:21:22	23FEB2004 22:17:39	0	GOOD
13	SCI_OL__2PRDPA20040223_230321_000032372024_00302_10376_6812.N1	23FEB2004 23:03:21	23FEB2004 23:57:19	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: 110021

Total number of cloud data DSRs with good quality flag (=0): 110021 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	110021	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	110021	0.21951	0.25000	0.12500	1.0000	0.098483	s
CL_FRAC	110021	0.44804	0.42007	0.0000	1.0000	0.28827	-
CL_FRAC_ERR	110021	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	110021	7.0242	8.0000	4.0000	32.000	3.1514	

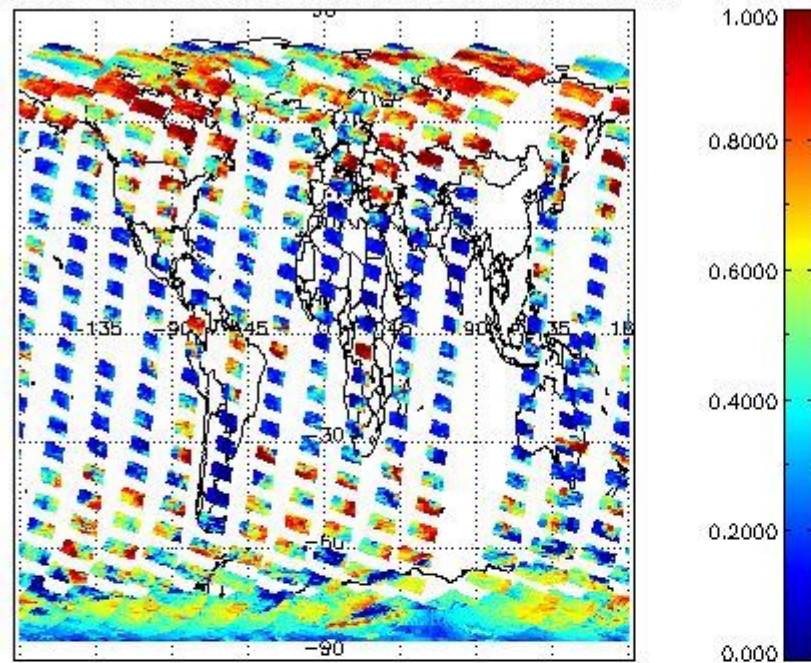
PMD_READ_CL[0]	110021	0.37286	0.0000	0.0000	26.000	1.3647	-
PMD_READ_CL[1]	110021	0.33537	0.0000	0.0000	32.000	1.4659	-
CL_TOP_HEIGHT	100568	4.2160	2.4680	0.0000	17.000	4.0475	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	100568	47.843	33.221	0.0000	101.00	38.538	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	110021	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	110021	11000110	11000100	11000000	11100000	2401.8	flags
AERO_ABSO_IND	110021	0.73868	0.52497	-4.2882	18.510	1.1780	
AERO_IND_DIAG	110021	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	110021	01100111	11000000	00000000	11000000	24491.	flags

Time and geolocation plots:

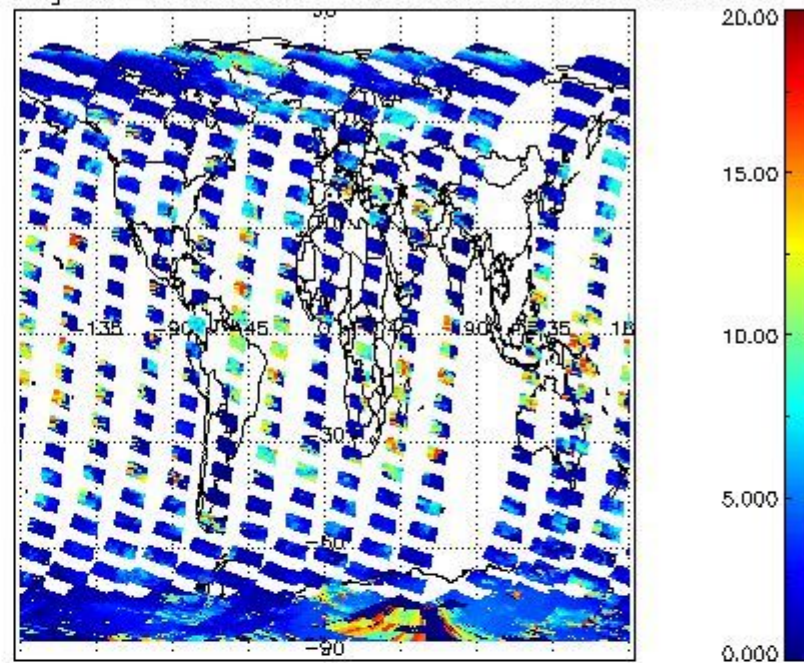
Plots are available for the following parameters:

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

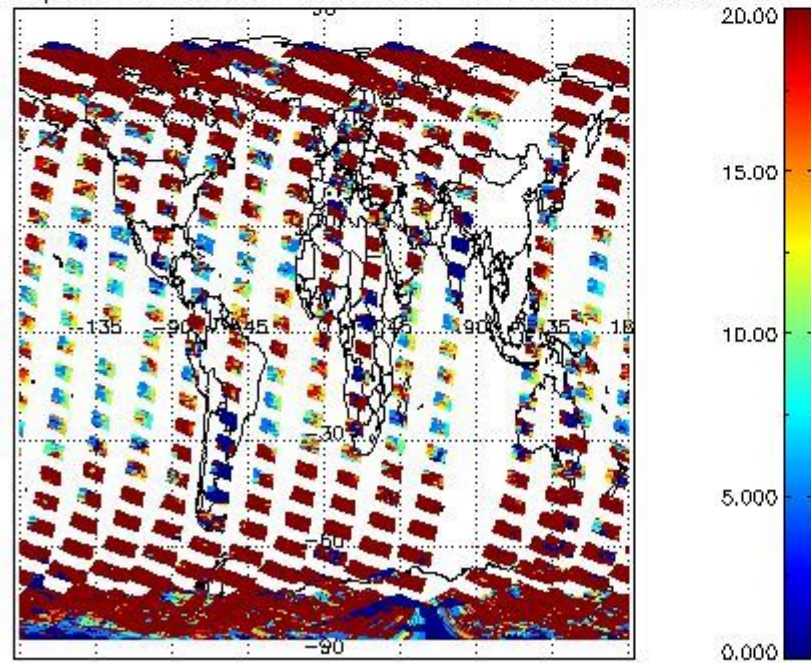
cLfrac for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



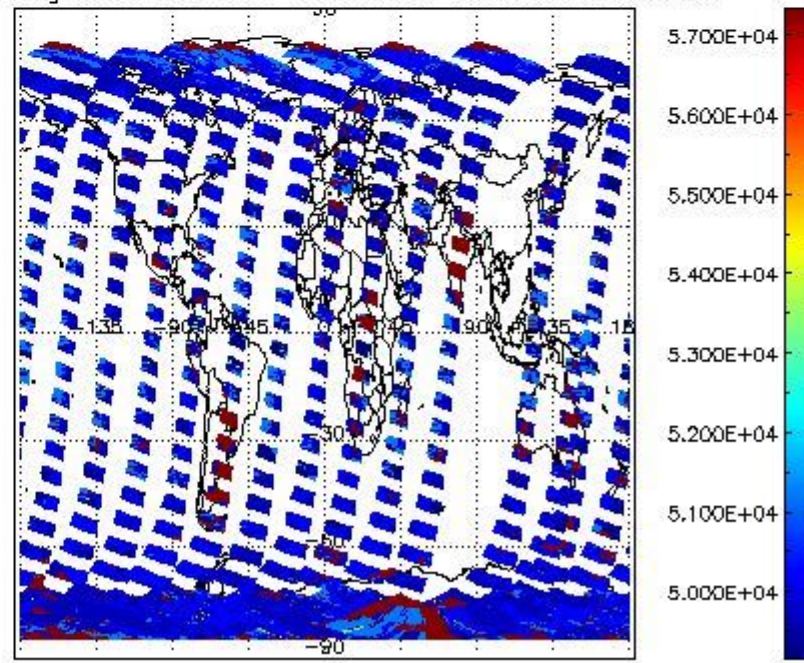
cL\_top\_height for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



cLopt\_depth for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



cloud\_flags for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



### 2.2.2 Nadir

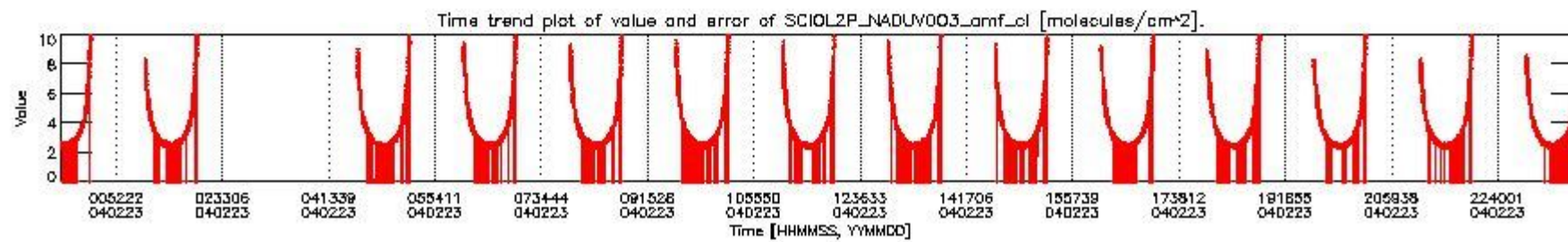
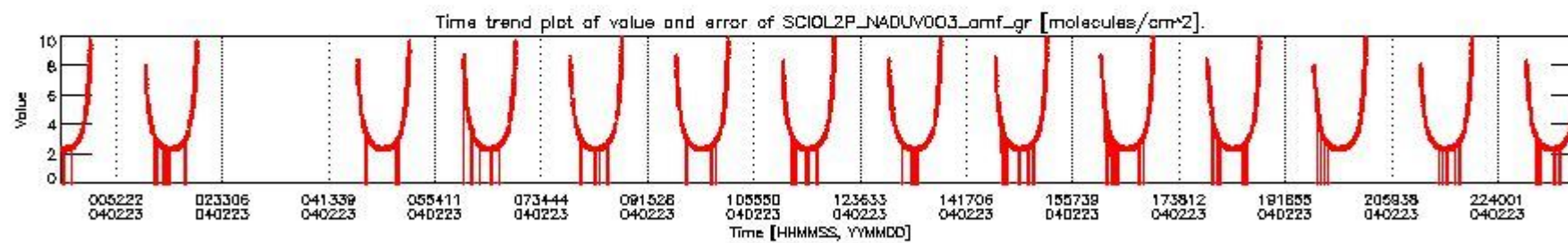
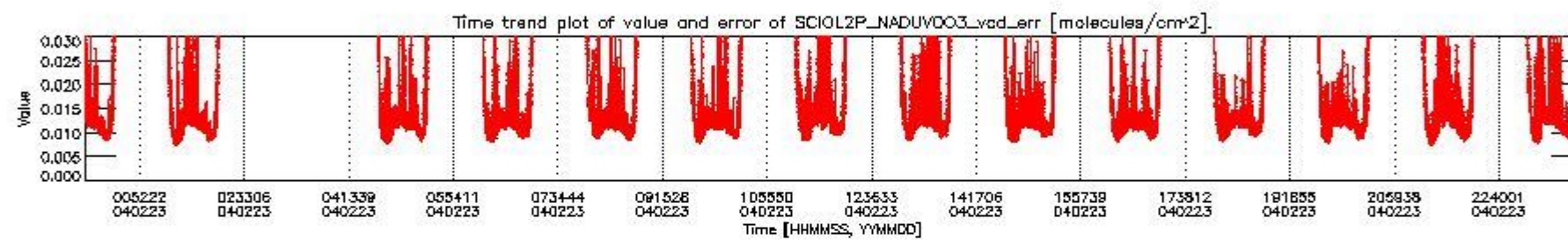
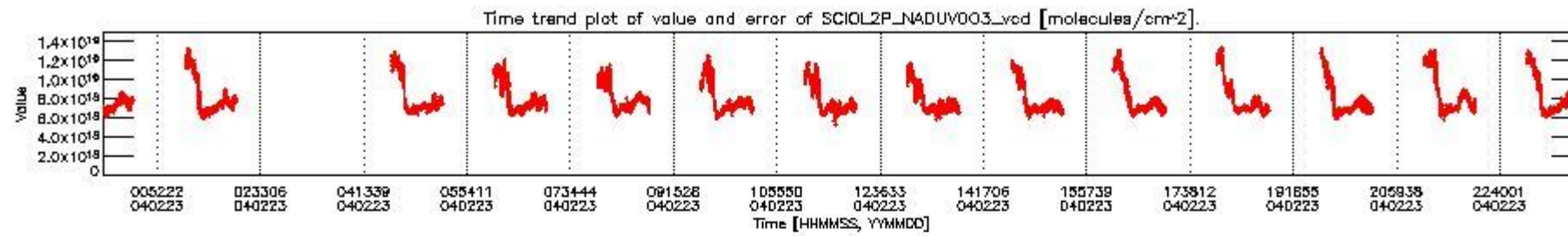
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

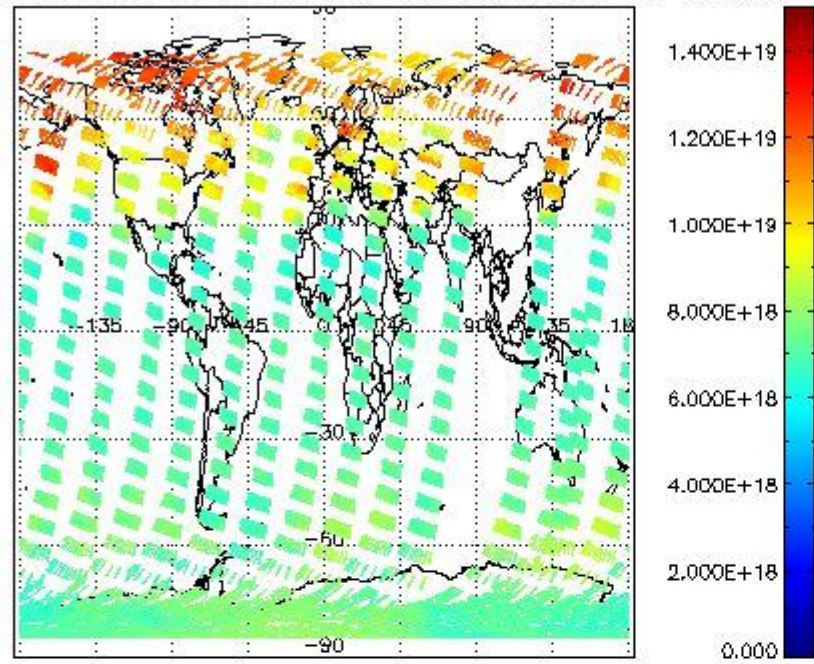
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr
3	SCIOL2P_NADUV003_amf_cl

4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

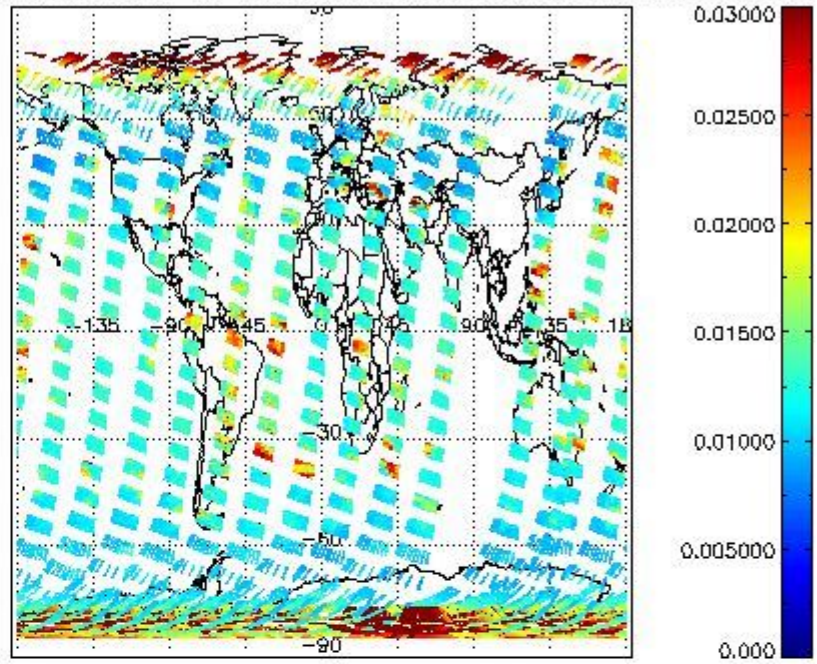
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in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



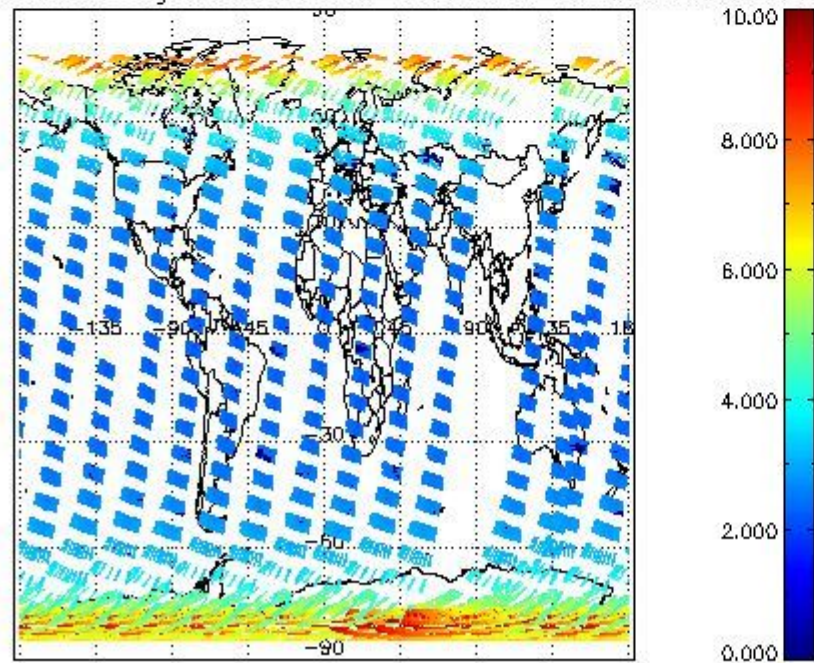
SCIOL2P\_NADUV003\_vcd for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



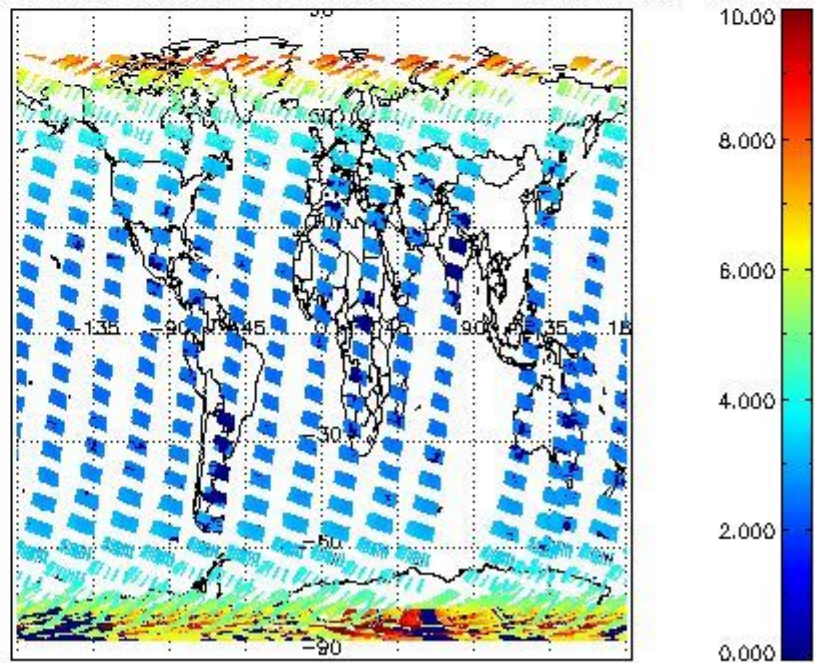
SCIOL2P\_NADUV003\_vcd\_err for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

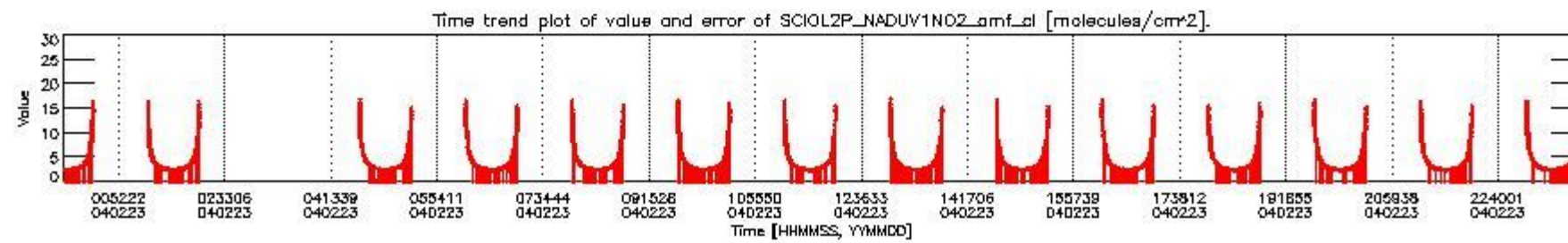
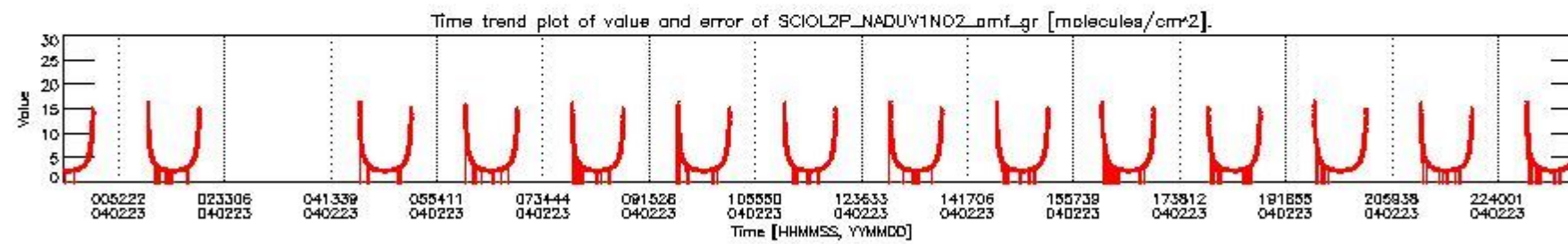
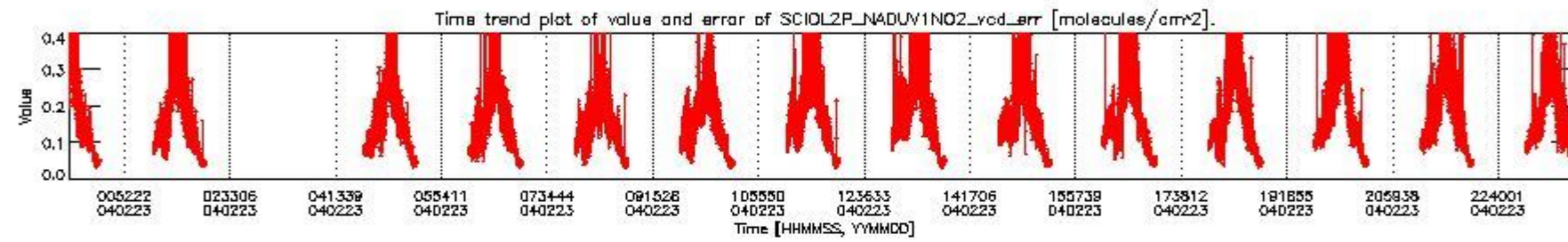
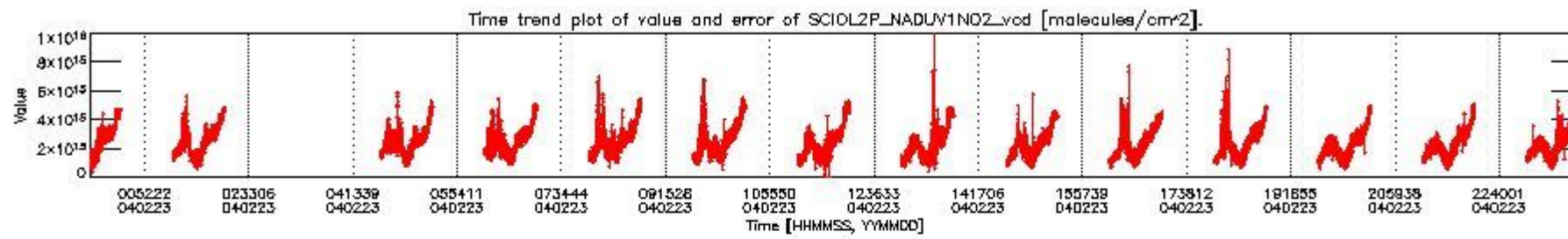


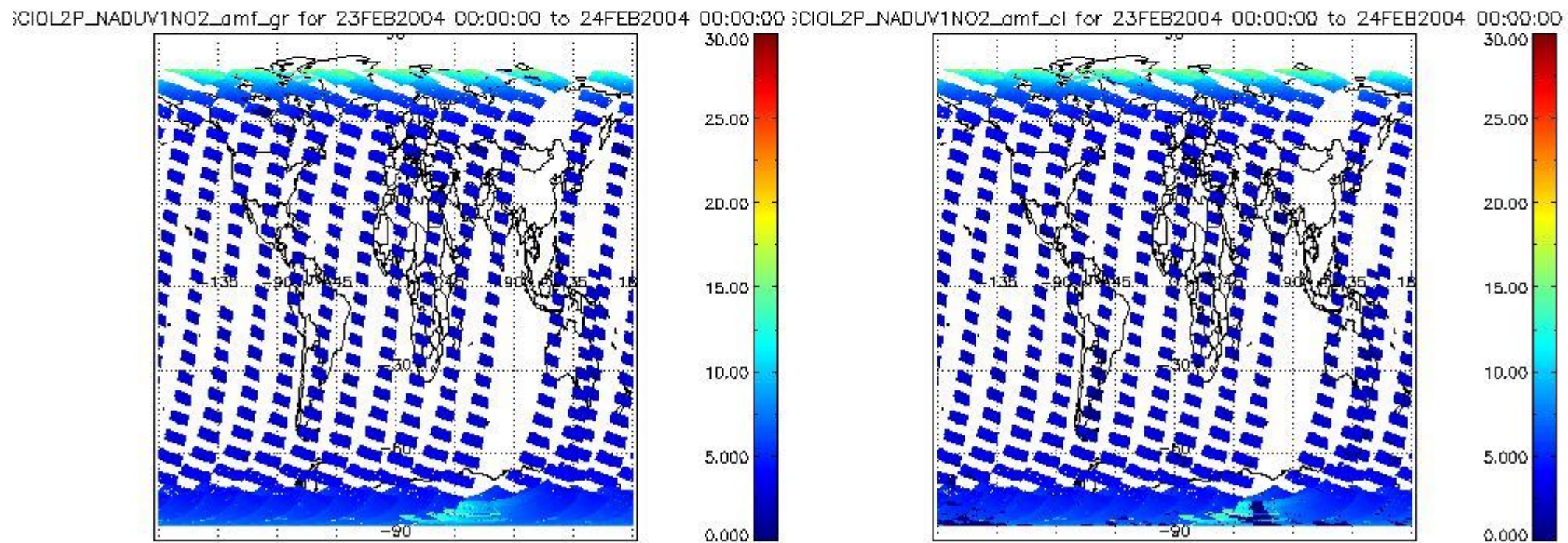
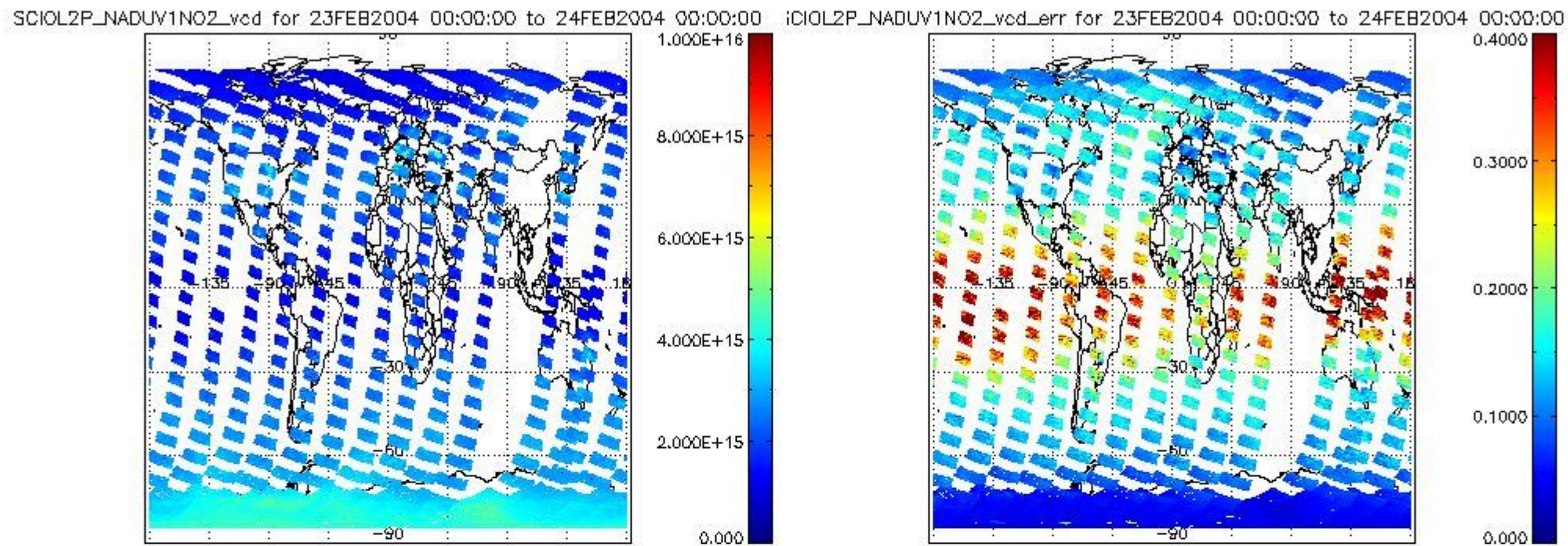
SCIOL2P\_NADUV003\_amf\_gr for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



SCIOL2P\_NADUV003\_amf\_cl for 23FEB2004 00:00:00 to 24FEB2004 00:00:00







### 2.2.3 Limb

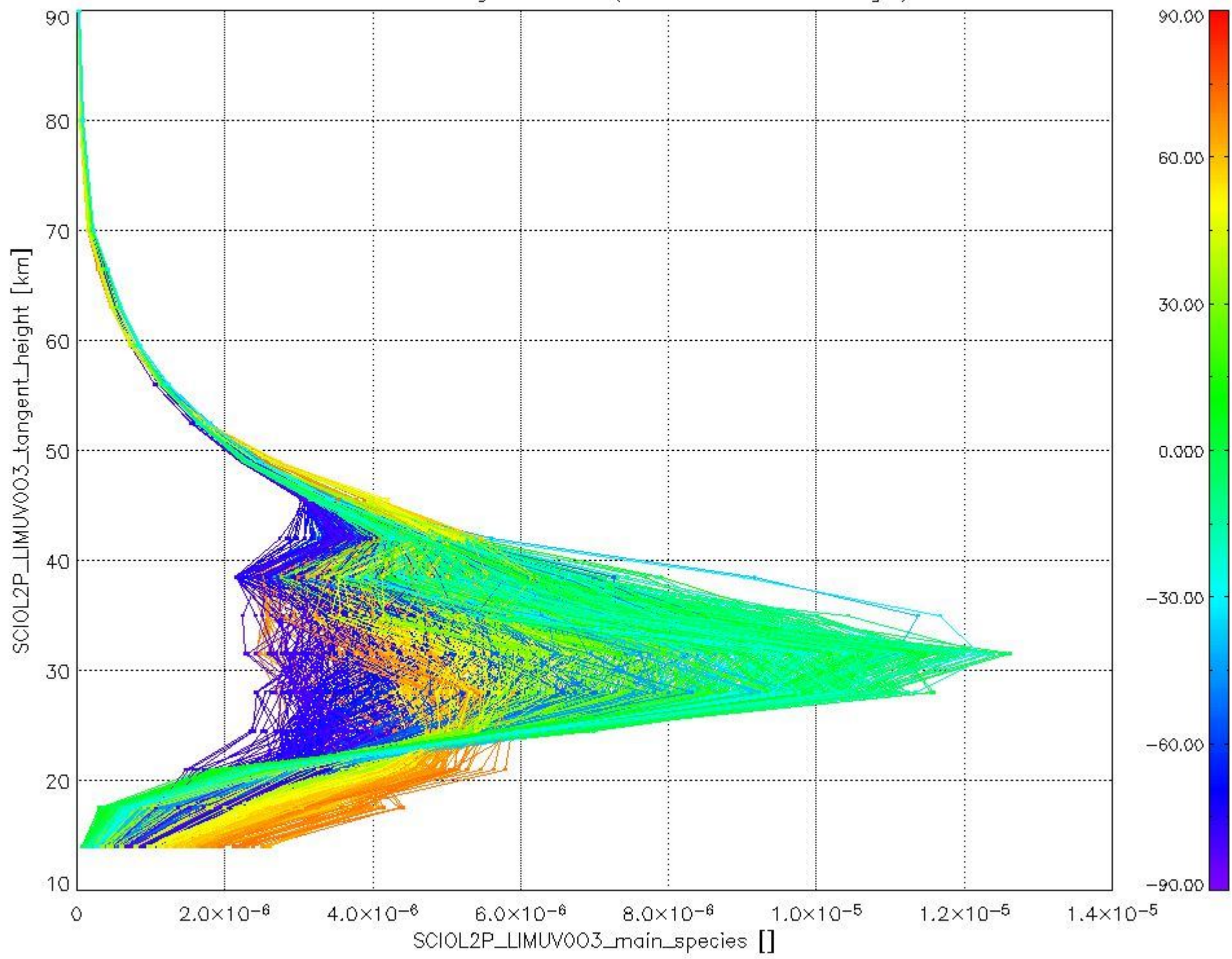
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

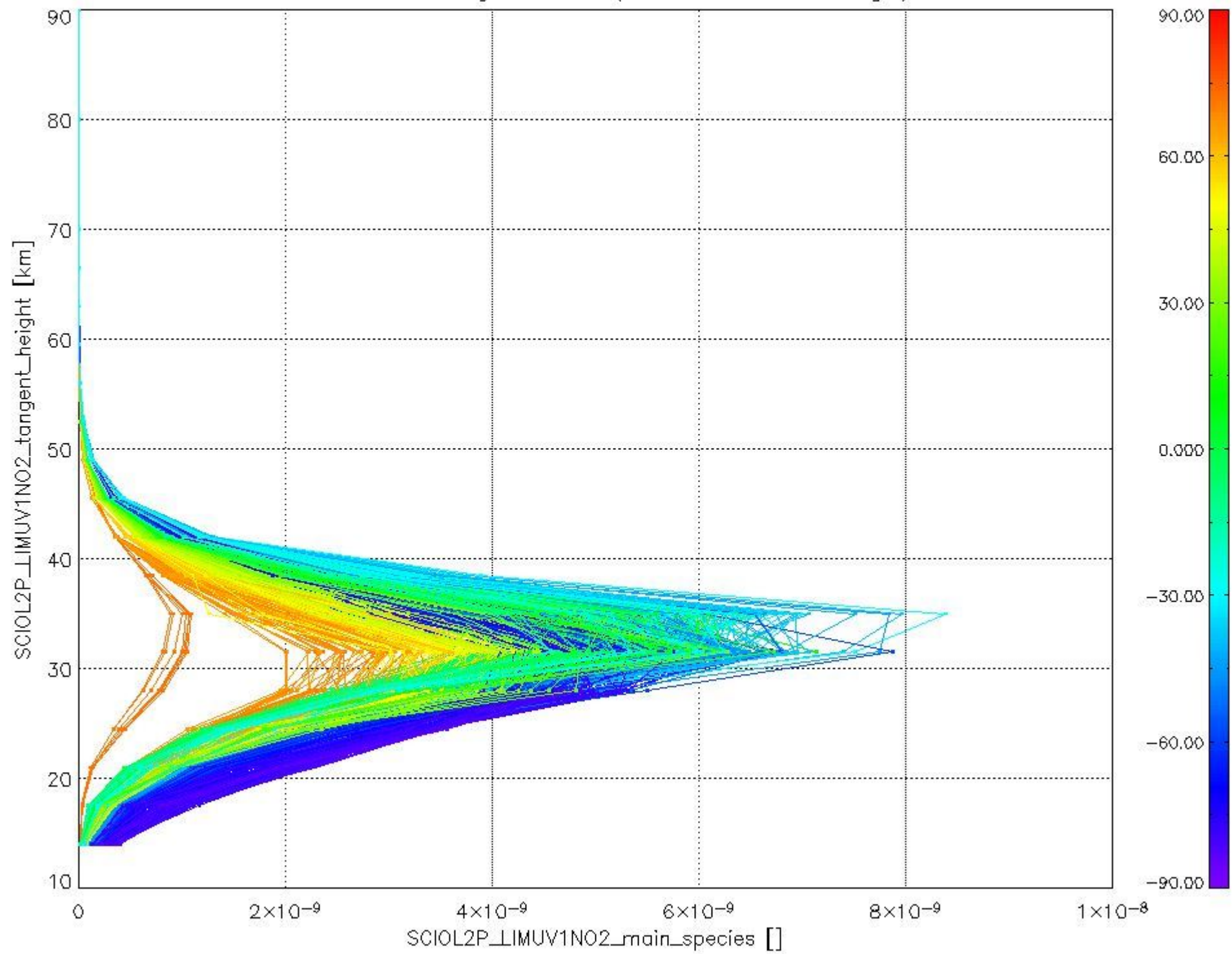
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





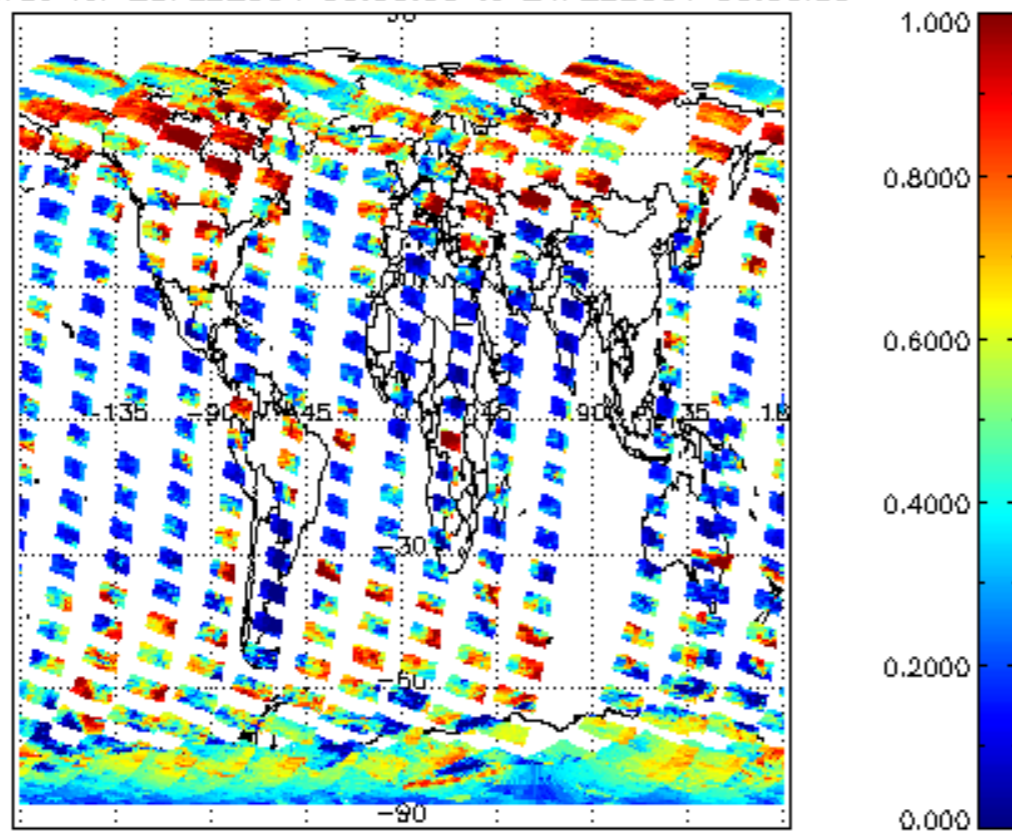
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



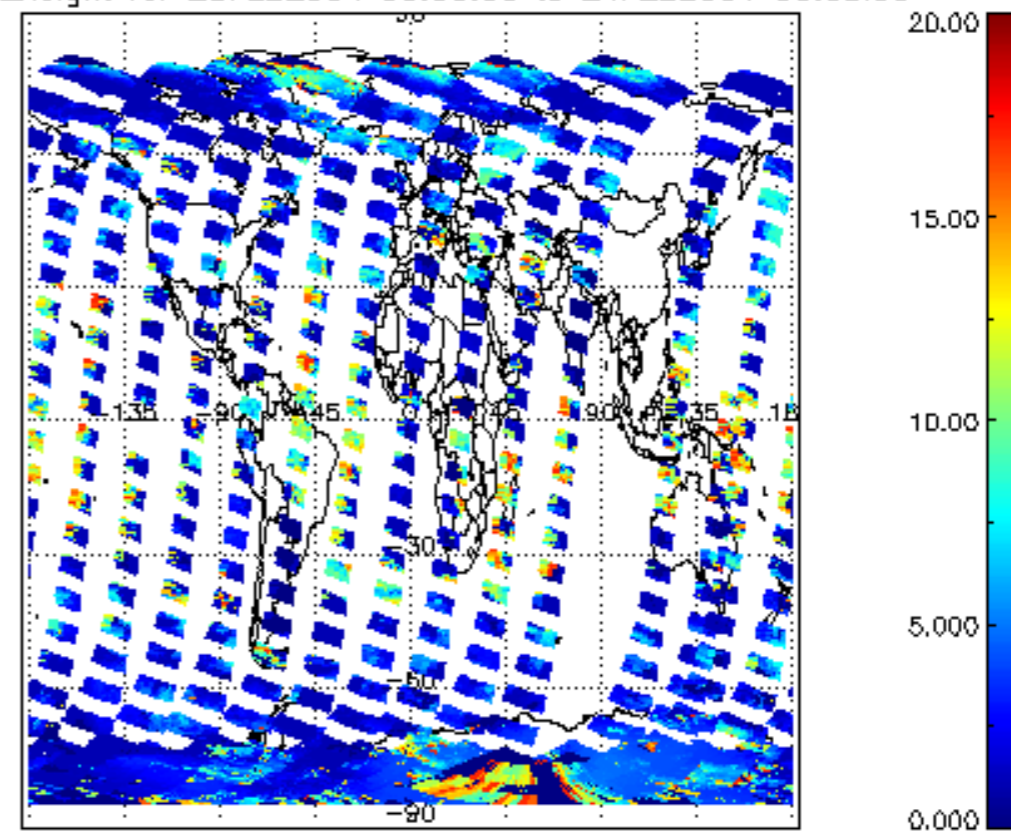
### 2.3 ADF monitoring

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

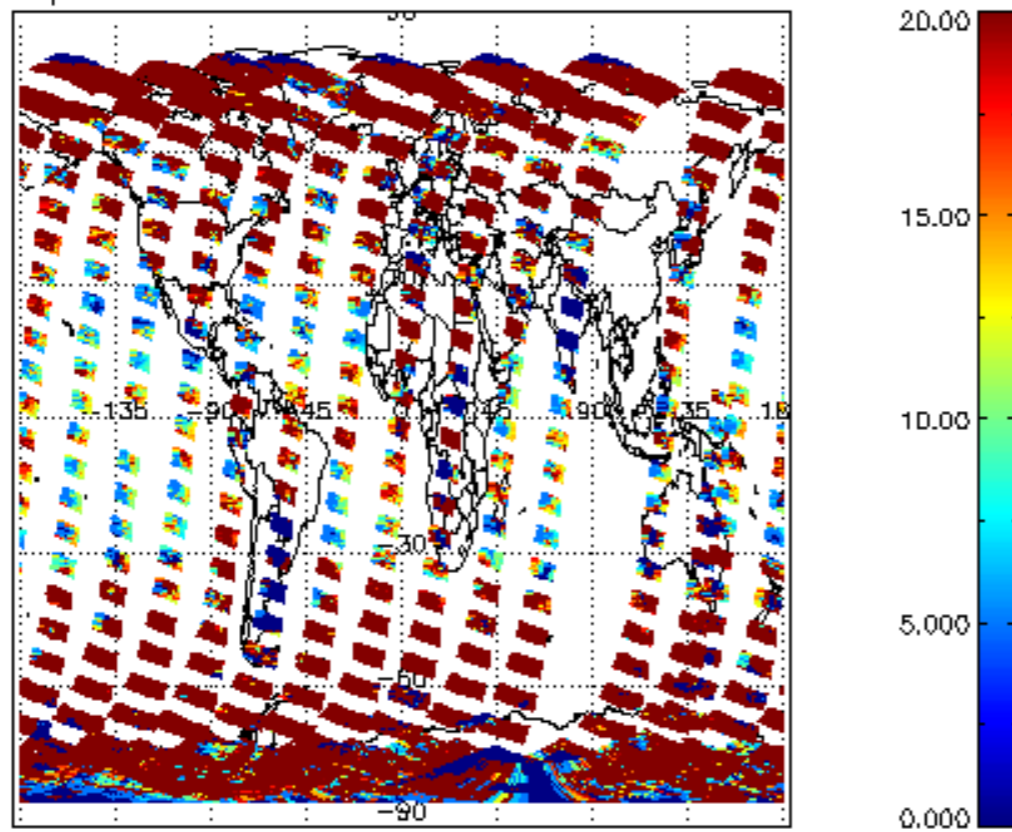
cl\_frac for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



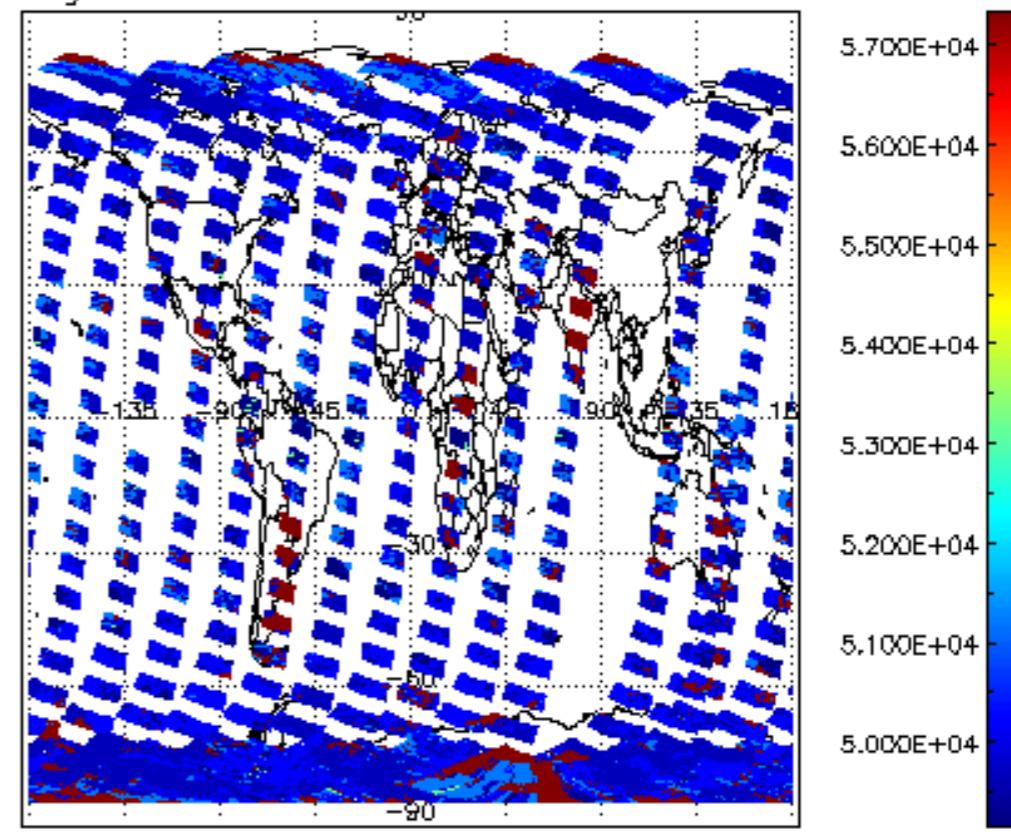
cl\_top\_height for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

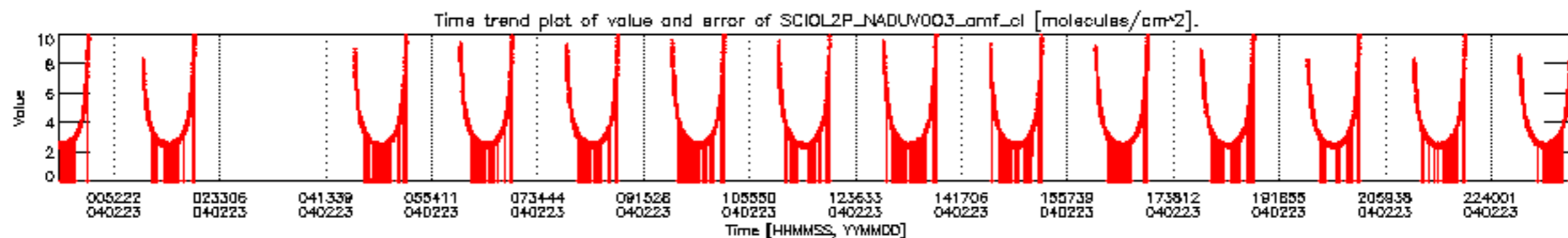
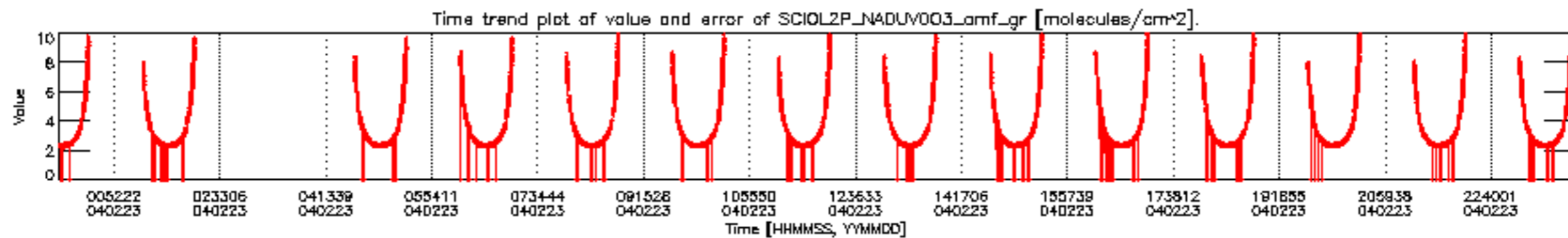
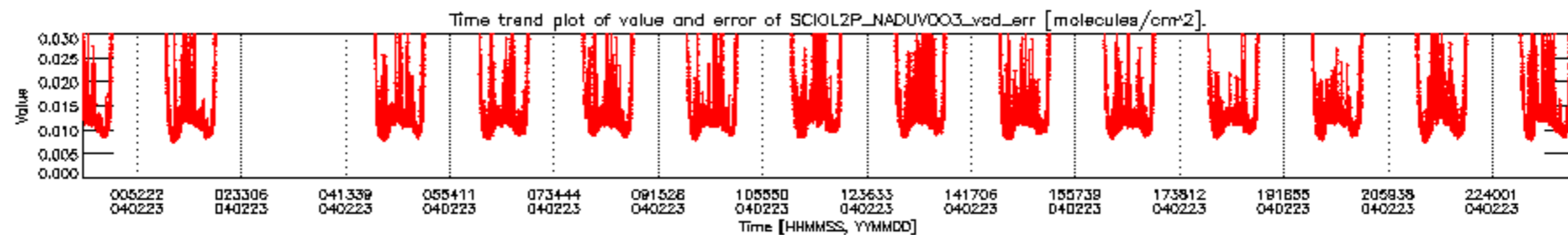
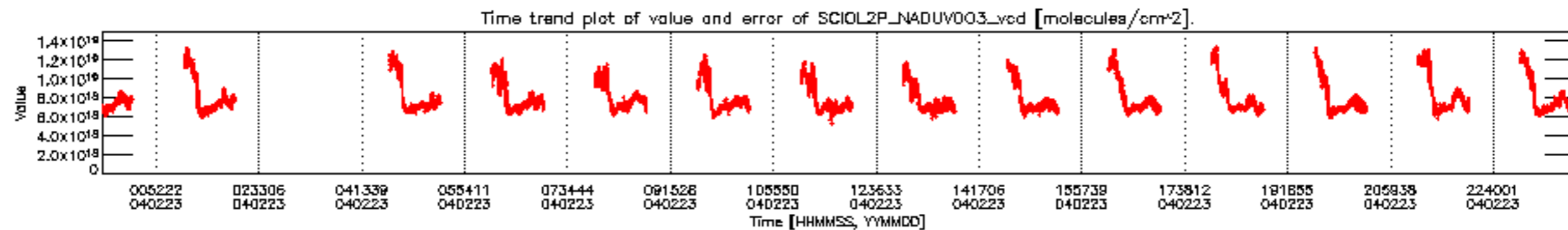


cl\_opt\_depth for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

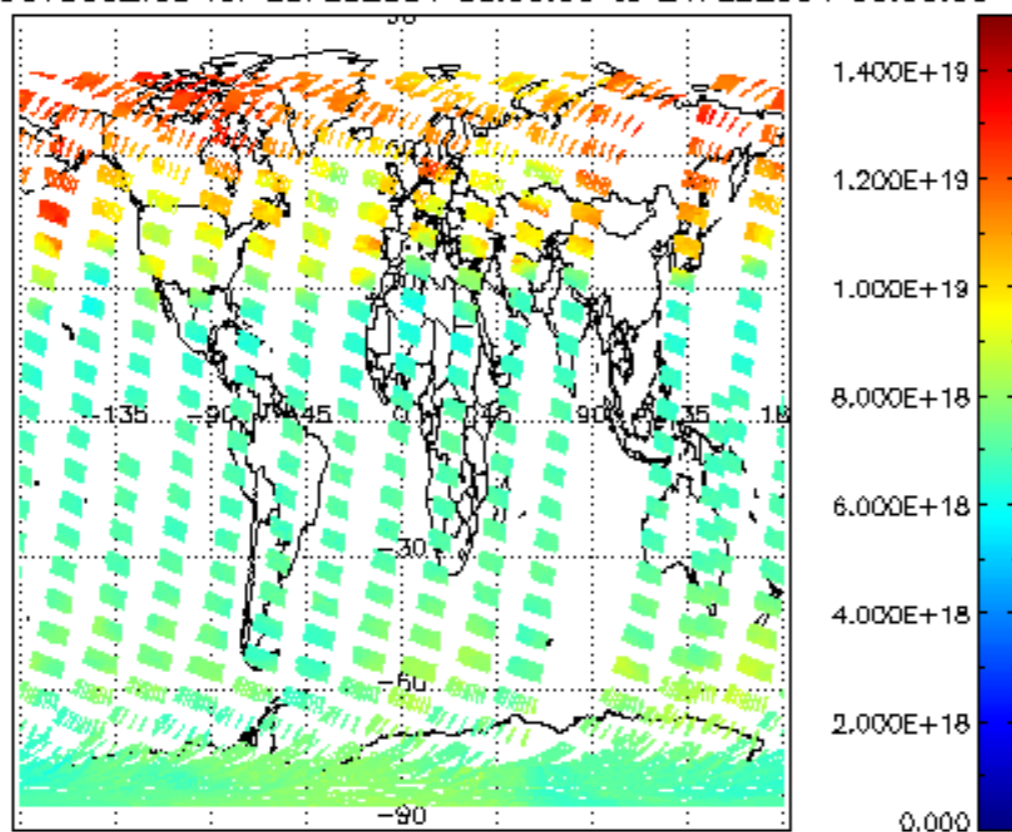


cloud\_flags for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

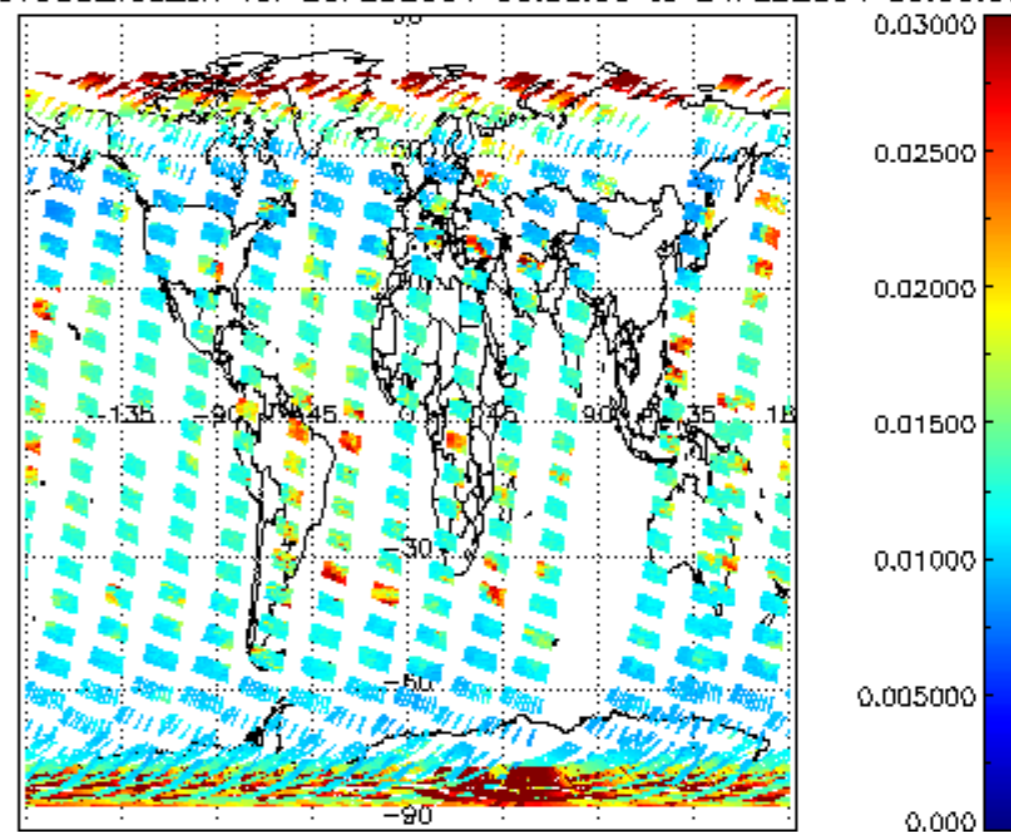




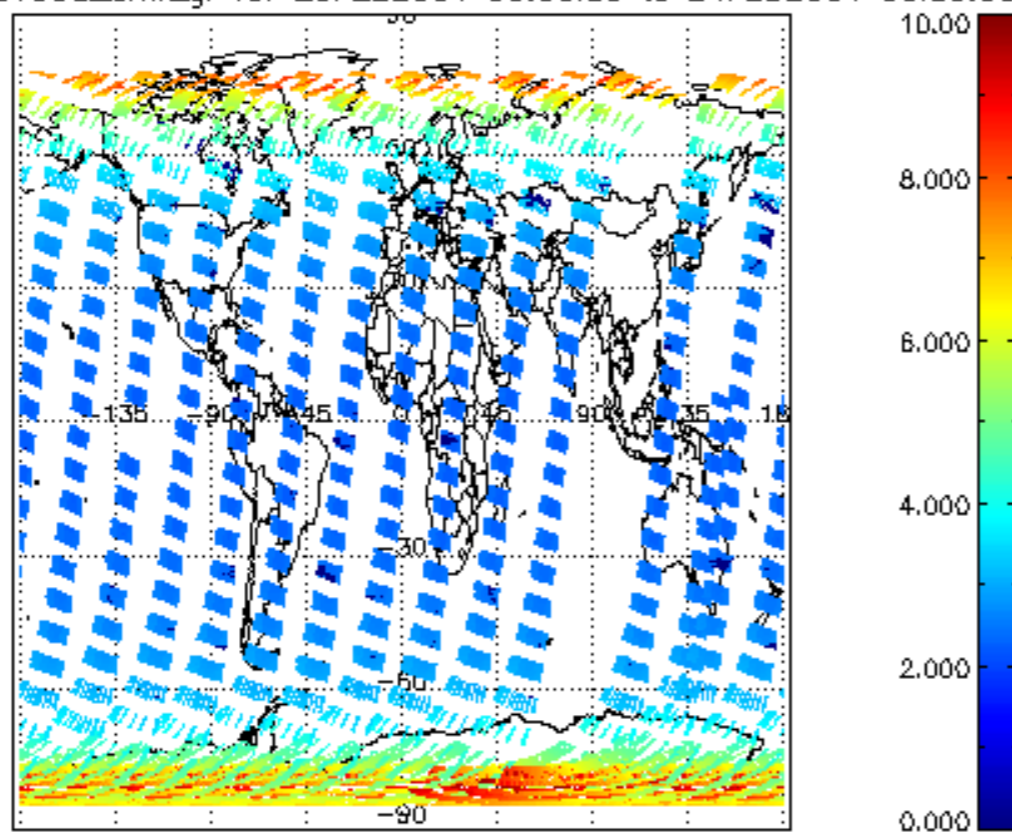
SCIOL2P\_NADUV003\_vcd for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



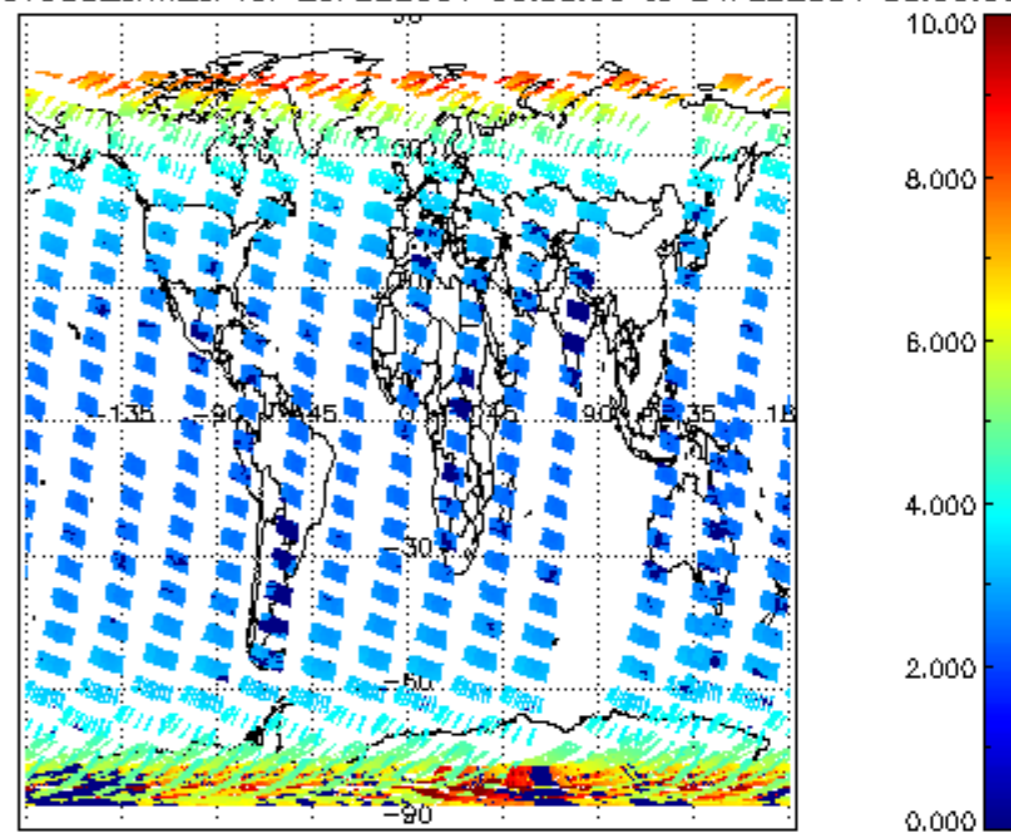
SCIOL2P\_NADUV003\_vcd\_err for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

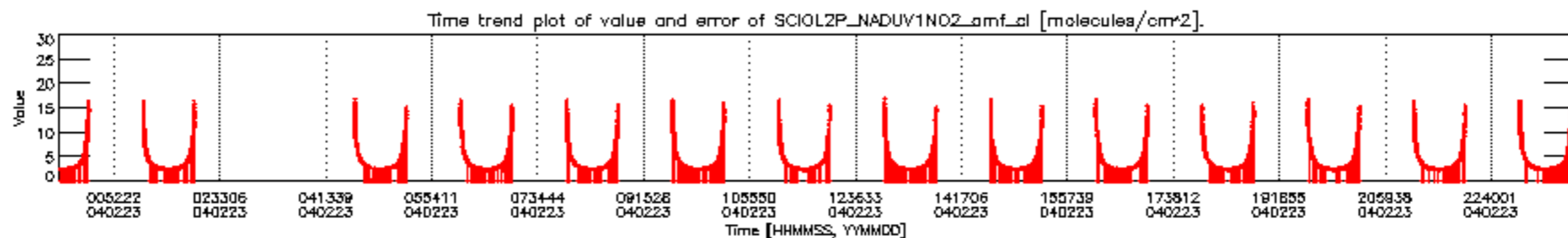
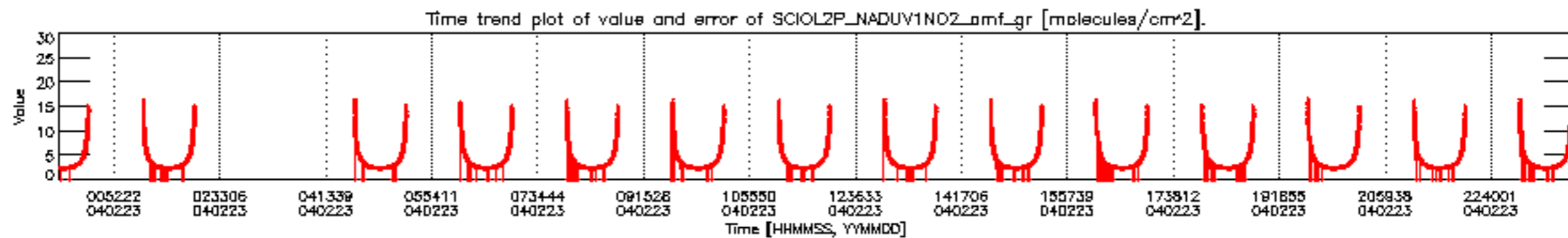
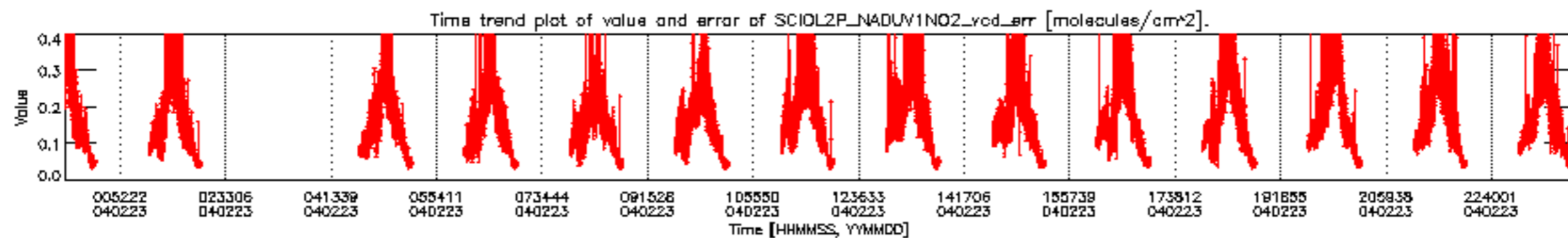
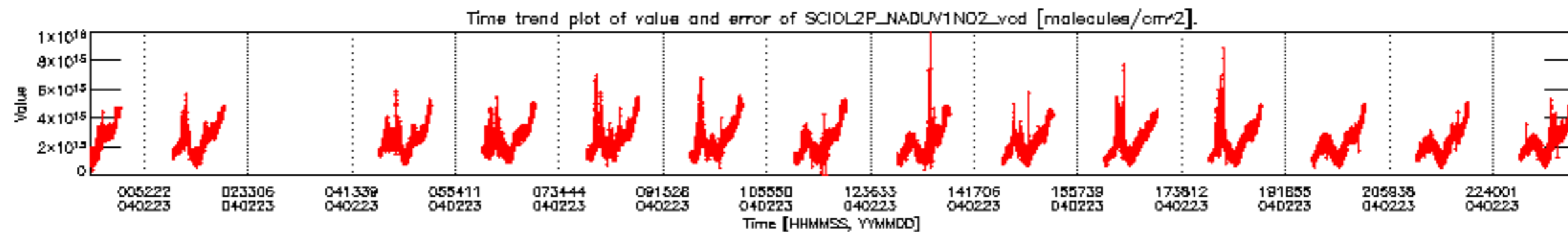


SCIOL2P\_NADUV003\_amf\_gr for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

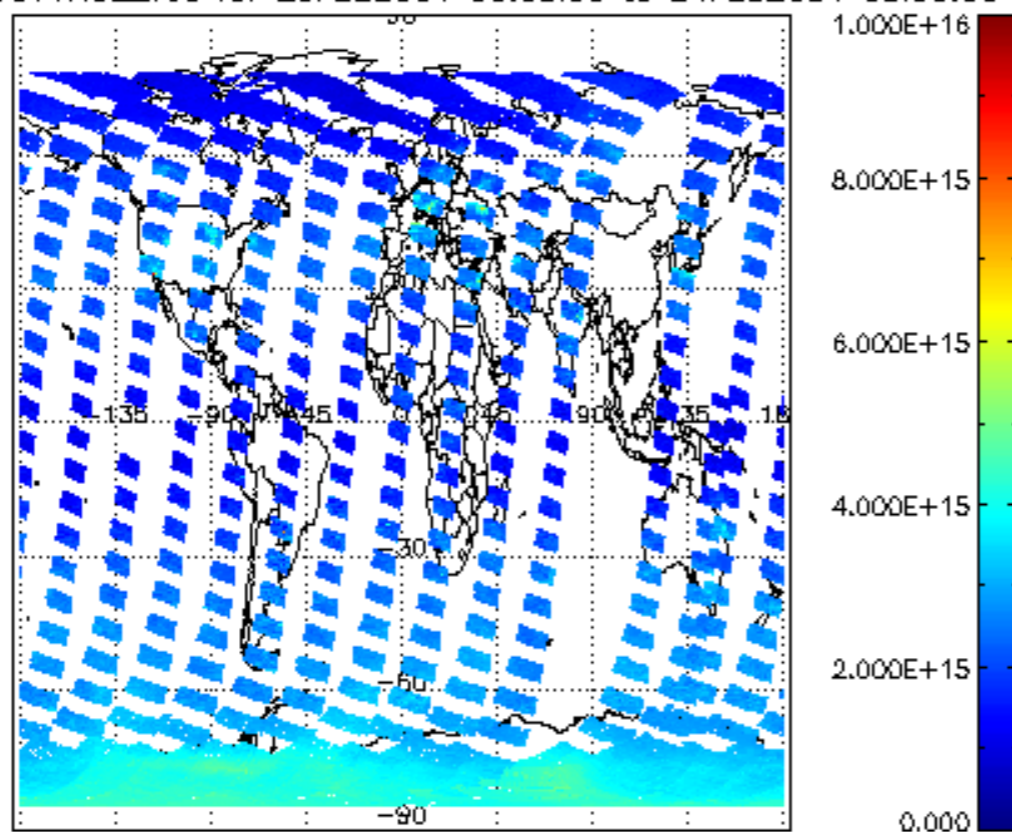


SCIOL2P\_NADUV003\_amf\_cl for 23FEB2004 00:00:00 to 24FEB2004 00:00:00

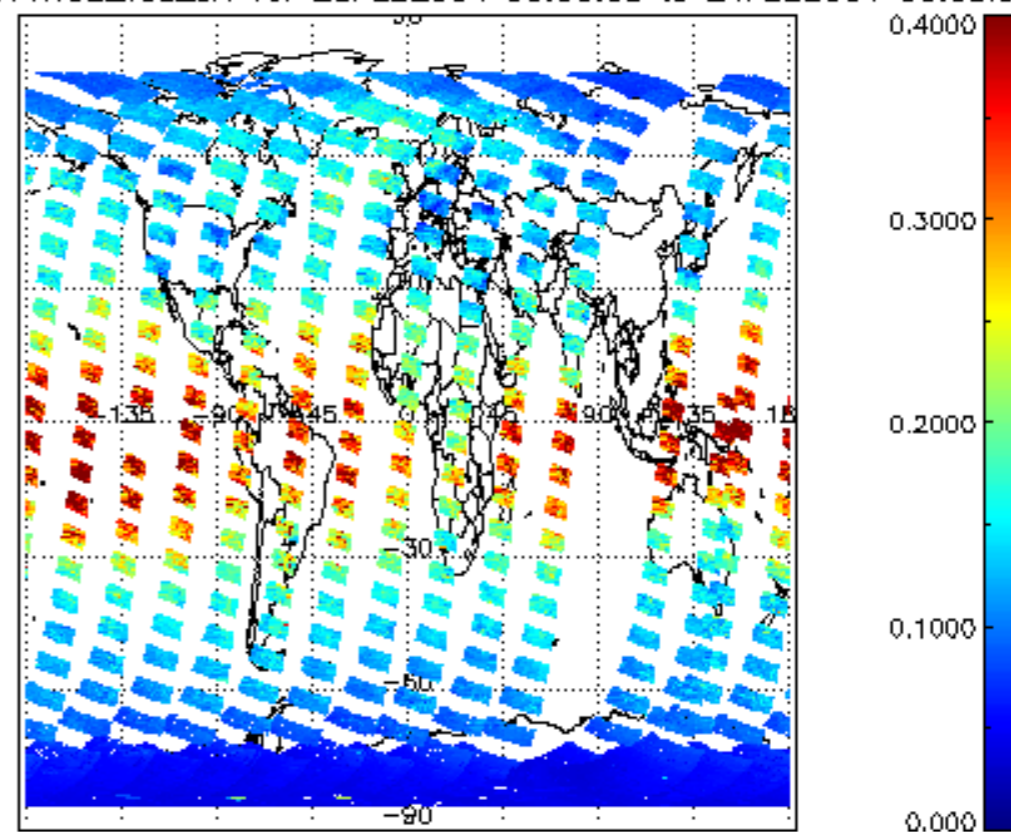




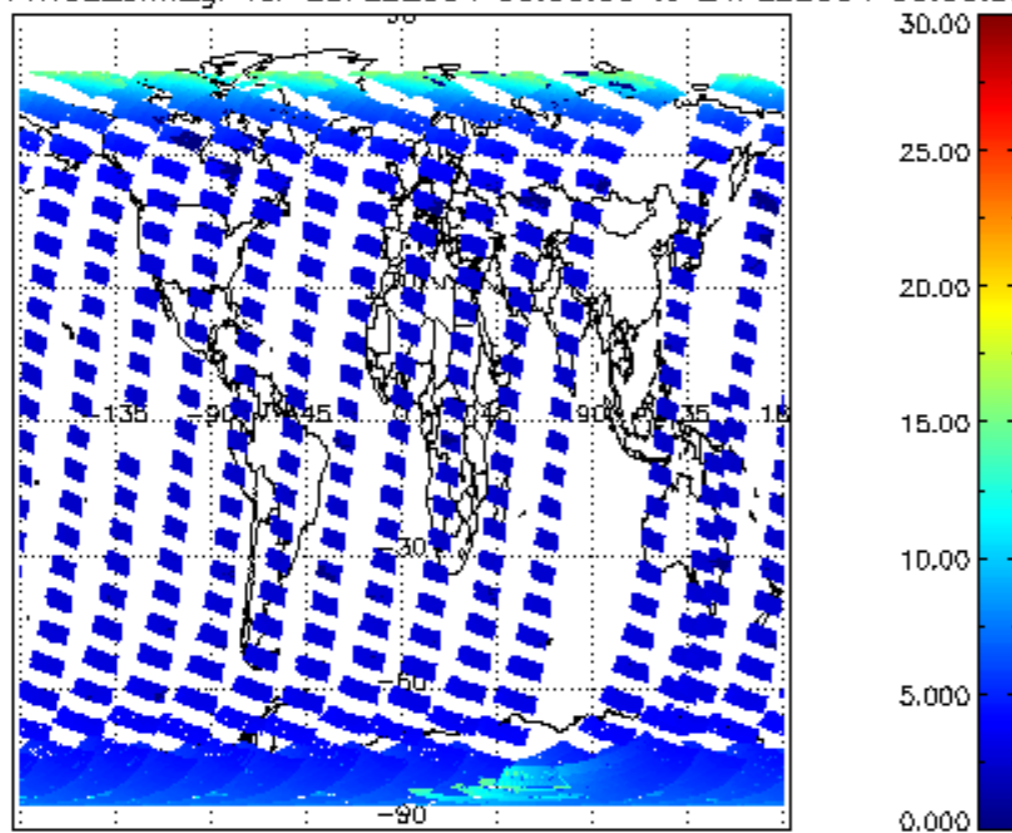
SCIOL2P\_NADUV1NO2\_vcd for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



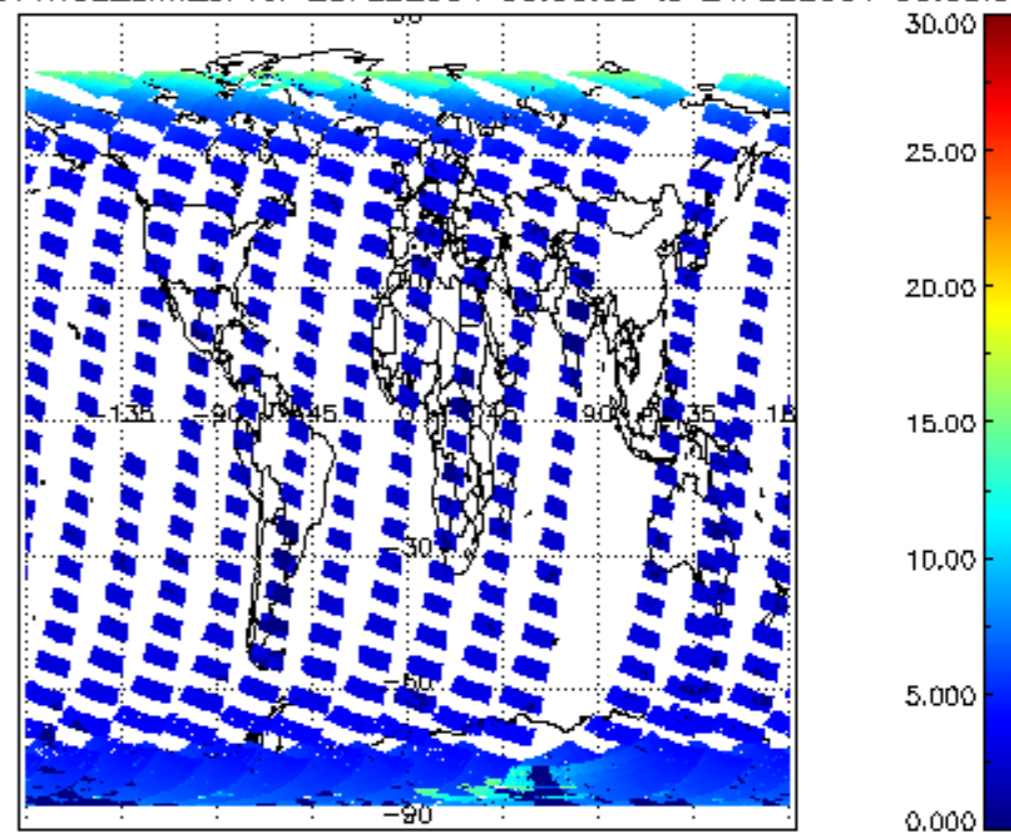
SCIOL2P\_NADUV1NO2\_vcd\_err for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



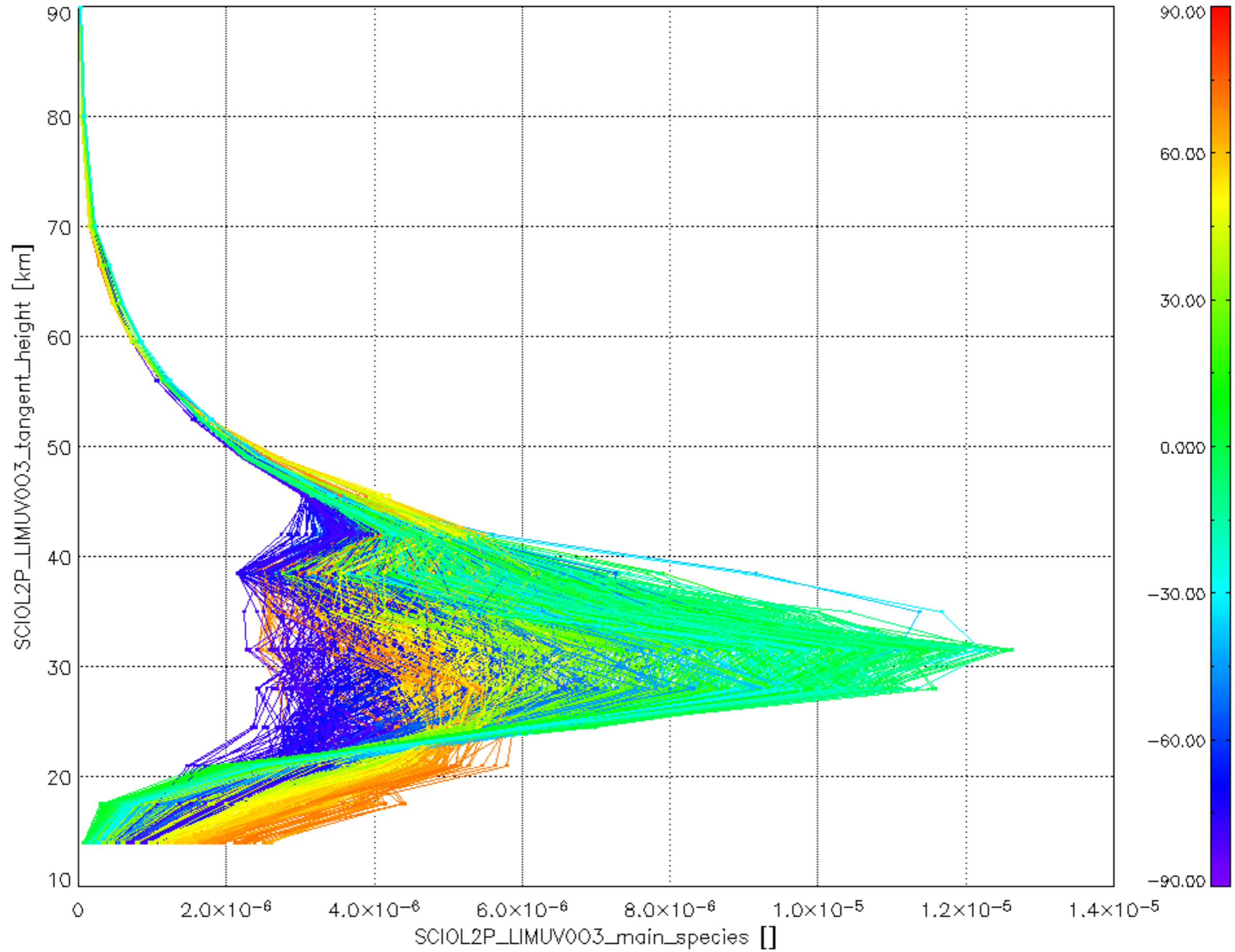
SCIOL2P\_NADUV1NO2\_amf\_gr for 23FEB2004 00:00:00 to 24FEB2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 23FEB2004 00:00:00 to 24FEB2004 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).

