

## 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	31JUL2008 12:10:17
Data source version	SCIA-OL/3.01-R
Processing scope for products	02FEB2004 00:00:00 to 03FEB2004 00:00:00
Start time of first product within scope	01FEB2004 22:55:47
Stop time of last product within scope	03FEB2004 01:01:02
Total number of level 2 products	16
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__2PRDPA20040201_225547_000033112023_00488_10061_6581.N1	01FEB2004 22:55:47	01FEB2004 23:50:58	0	GOOD
1	SCI_OL__2PRDPA20040202_003622_000033102023_00489_10062_6508.N1	02FEB2004 00:36:22	02FEB2004 01:31:33	0	GOOD
2	SCI_OL__2PRDPA20040202_021658_000033102023_00490_10063_6586.N1	02FEB2004 02:16:58	02FEB2004 03:12:09	0	GOOD
3	SCI_OL__2PRDPA20040202_035733_000033102023_00491_10064_6598.N1	02FEB2004 03:57:33	02FEB2004 04:52:44	0	GOOD
4	SCI_OL__2PRDPA20040202_053809_000033102023_00492_10065_6521.N1	02FEB2004 05:38:09	02FEB2004 06:33:19	0	GOOD
5	SCI_OL__2PRDPA20040202_071845_000033092023_00493_10066_6570.N1	02FEB2004 07:18:45	02FEB2004 08:13:54	0	GOOD
6	SCI_OL__2PRDPA20040202_085920_000033092023_00494_10067_6515.N1	02FEB2004 08:59:20	02FEB2004 09:54:29	0	GOOD
7	SCI_OL__2PRDPA20040202_103955_000033082023_00495_10068_6539.N1	02FEB2004 10:39:55	02FEB2004 11:35:04	0	GOOD
8	SCI_OL__2PRDPA20040202_122031_000033072023_00496_10069_6507.N1	02FEB2004 12:20:31	02FEB2004 13:15:38	0	GOOD
9	SCI_OL__2PRDPA20040202_140106_000033062023_00497_10070_6590.N1	02FEB2004 14:01:06	02FEB2004 14:56:13	0	GOOD
10	SCI_OL__2PRDPA20040202_154142_000033052023_00498_10071_6629.N1	02FEB2004 15:41:42	02FEB2004 16:36:48	0	GOOD
11	SCI_OL__2PRDPA20040202_172146_000033062023_00499_10072_6523.N1	02FEB2004 17:21:46	02FEB2004 18:17:47	0	GOOD
12	SCI_OL__2PRDPA20040202_190226_000033302023_00500_10073_6498.N1	02FEB2004 19:02:26	02FEB2004 19:57:56	0	GOOD
13	SCI_OL__2PRDPA20040202_204329_000033012023_00501_10074_6610.N1	02FEB2004 20:43:29	02FEB2004 21:38:30	0	GOOD
14	SCI_OL__2PRDPA20040202_222404_000033832024_00001_10075_6543.N1	02FEB2004 22:24:04	02FEB2004 23:20:28	0	GOOD
15	SCI_OL__2PRDPA20040203_000439_000033822024_00002_10076_6501.N1	03FEB2004 00:04:39	03FEB2004 01:01:02	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: 98360

Total number of cloud data DSRs with good quality flag (=0): 98360 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	98360	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	98360	0.21040	0.25000	0.12500	0.50000	0.078274	s
CL_FRAC	98360	0.48668	0.49720	0.0000	1.0000	0.28650	-

CL_FRAC_ERR	98360	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	98360	6.7328	8.0000	4.0000	16.000	2.5048	
PMD_READ_CL[0]	98360	0.40356	0.0000	0.0000	16.000	1.4636	-
PMD_READ_CL[1]	98360	0.21895	0.0000	0.0000	16.000	1.1335	-
CL_TOP_HEIGHT	91614	4.2111	2.6799	0.0000	17.000	3.8990	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	91614	46.779	30.632	0.0000	101.00	37.818	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	98360	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	98360	11000101	11000010	11000000	11100000	2126.3	flags
AERO_ABSO_IND	98360	0.70399	0.40171	-3.9177	11.849	1.2603	
AERO_IND_DIAG	98360	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	98360	01110101	11000000	00000000	11000000	23930.	flags

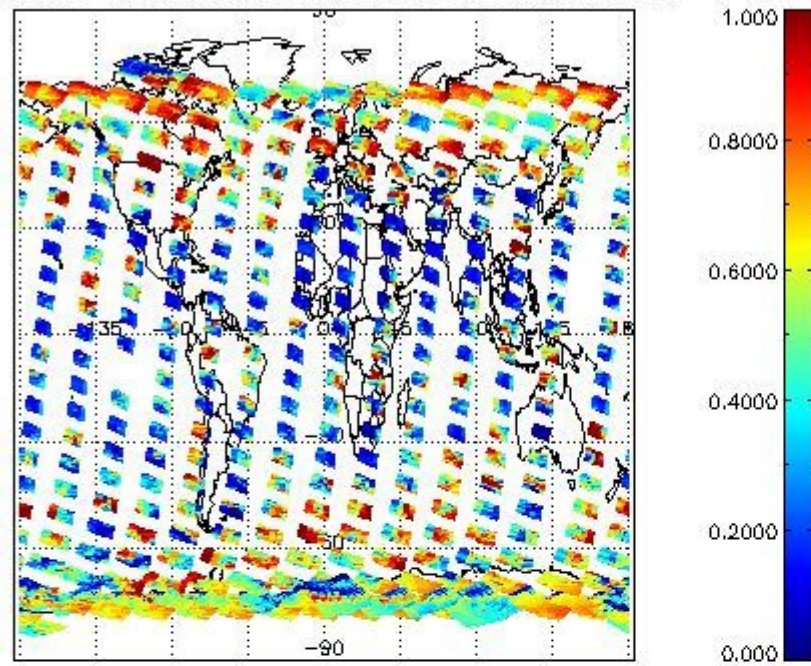
Time and geolocation plots:

Plots are available for the following parameters:

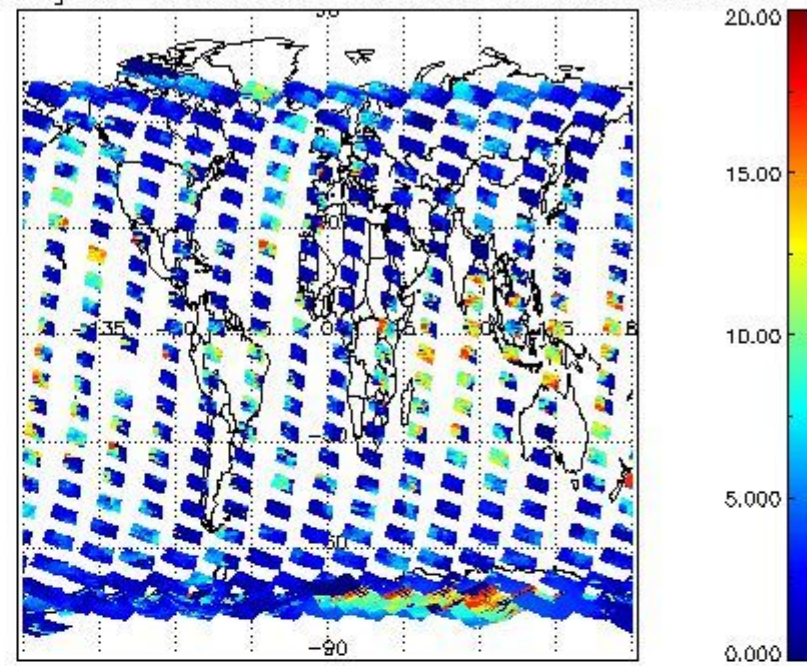
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



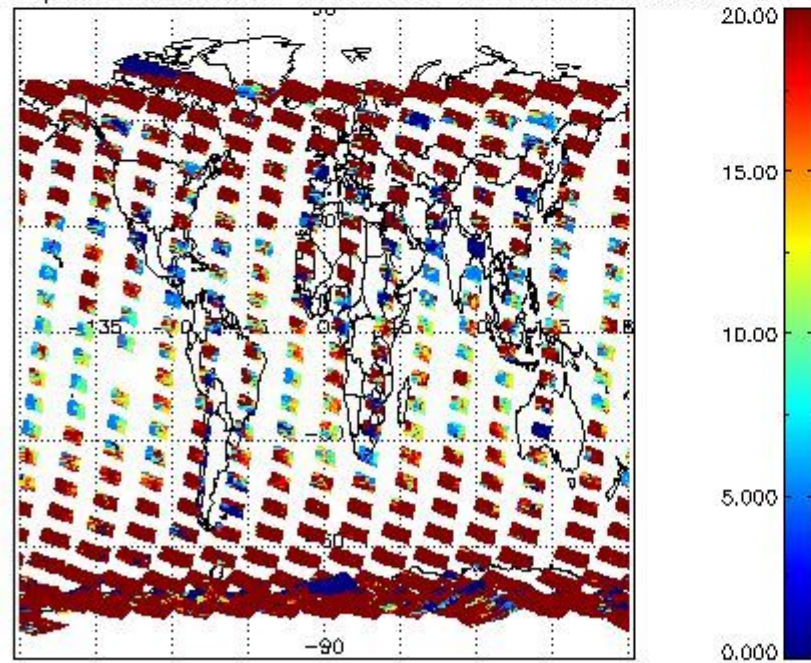
cLfrac for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



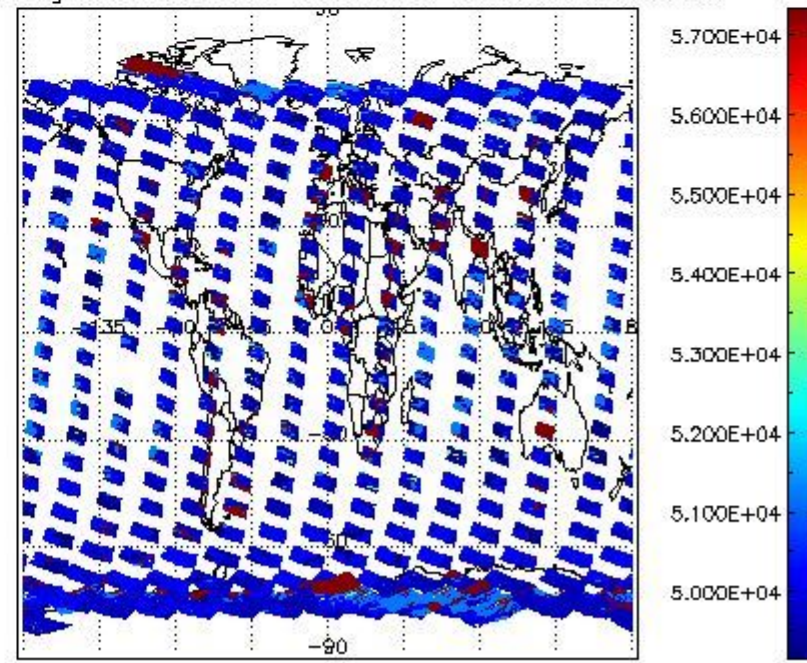
cL\_top\_height for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



cLopt\_depth for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



cloud\_flags for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



### 2.2.2 Nadir

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

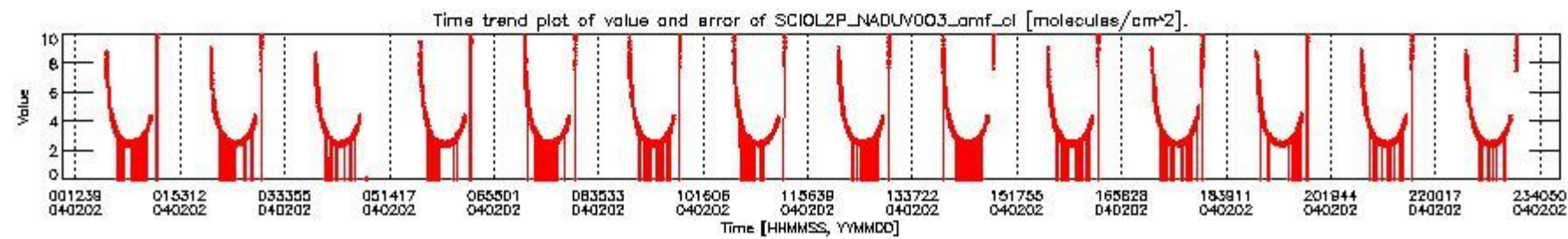
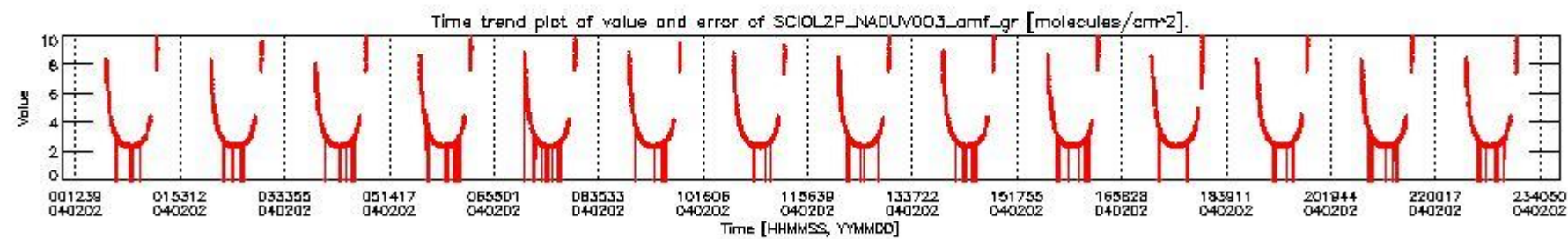
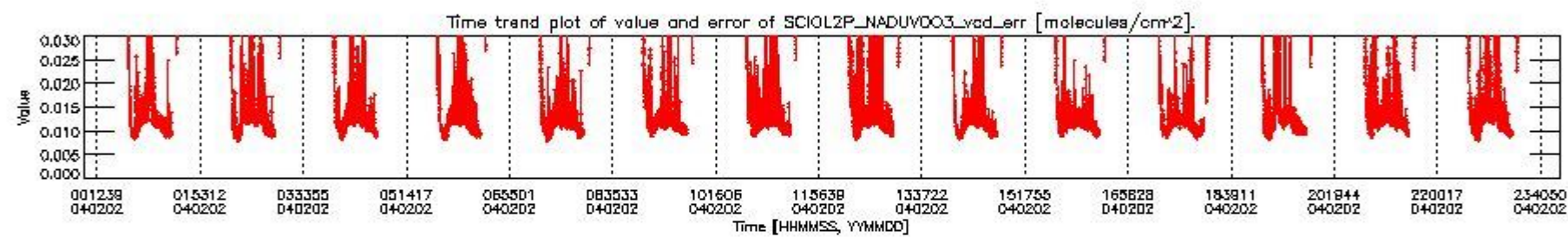
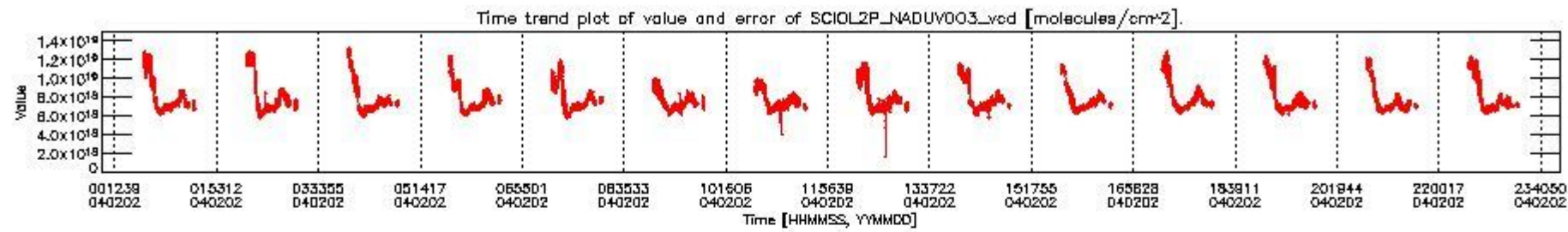
The following data items are currently included into this section:

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



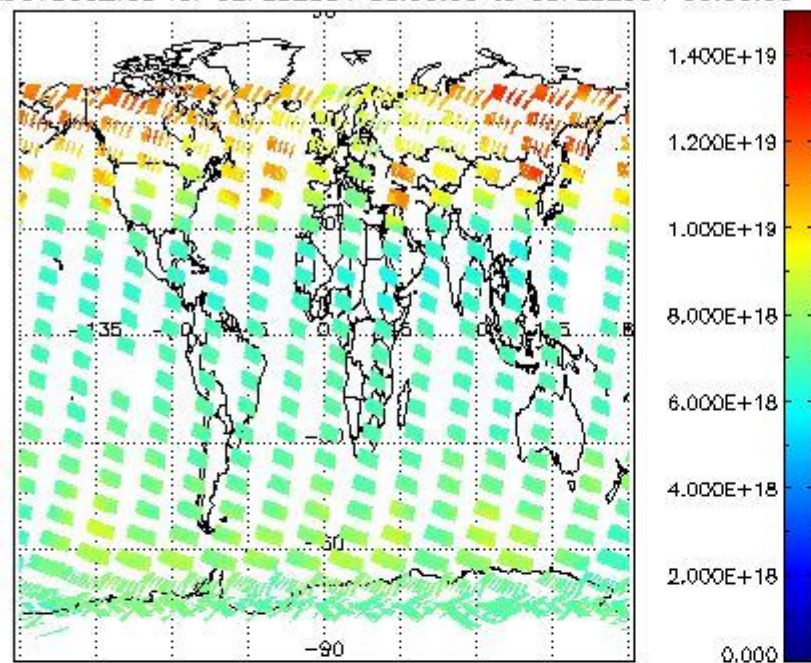
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

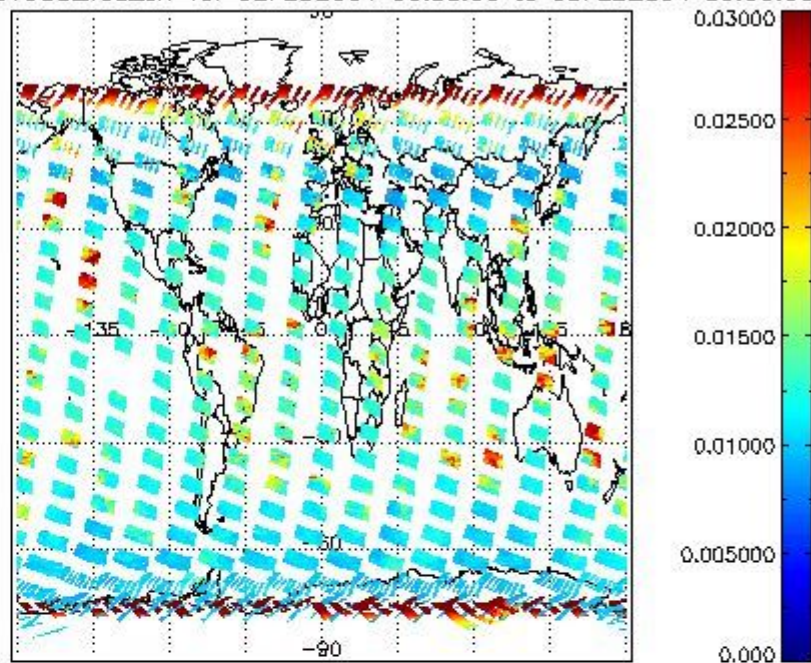




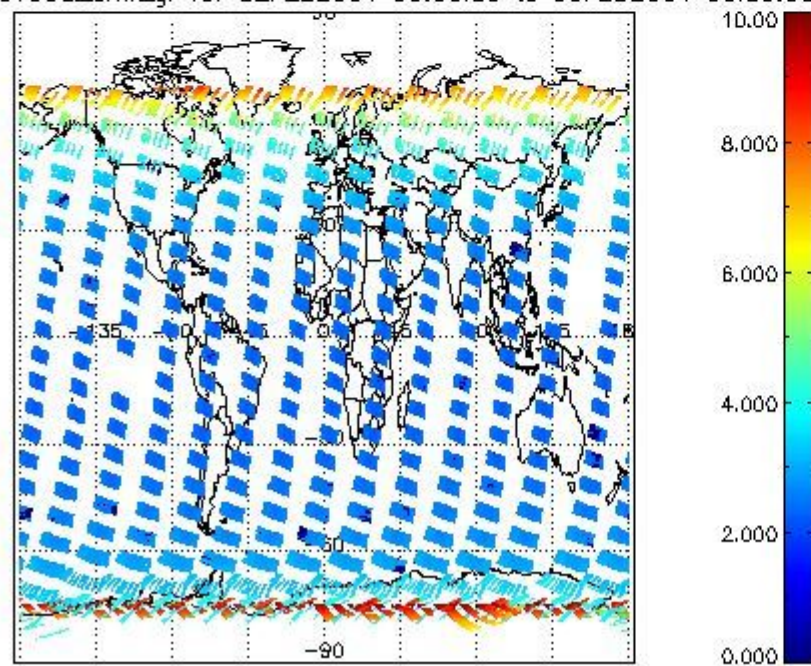
SCIOL2P\_NADUV003\_vcd for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



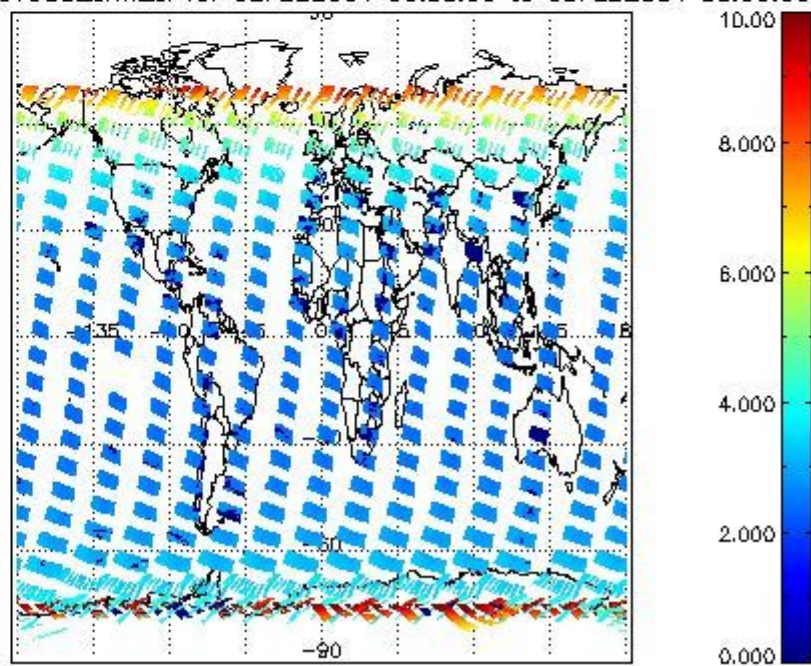
SCIOL2P\_NADUV003\_vcd\_err for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



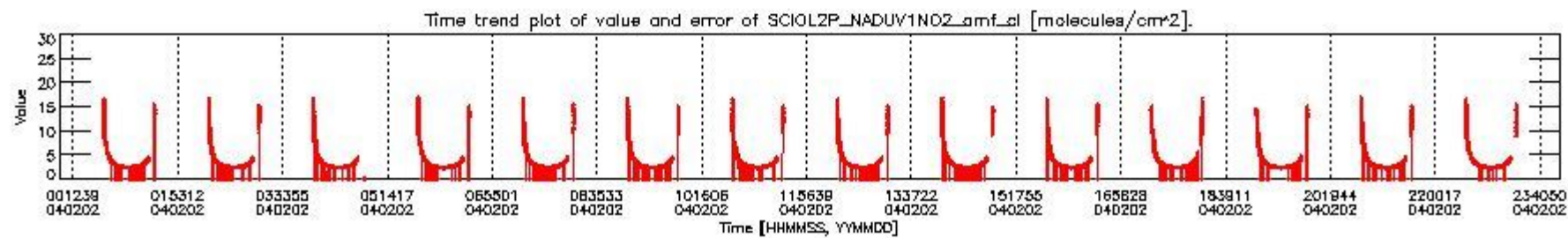
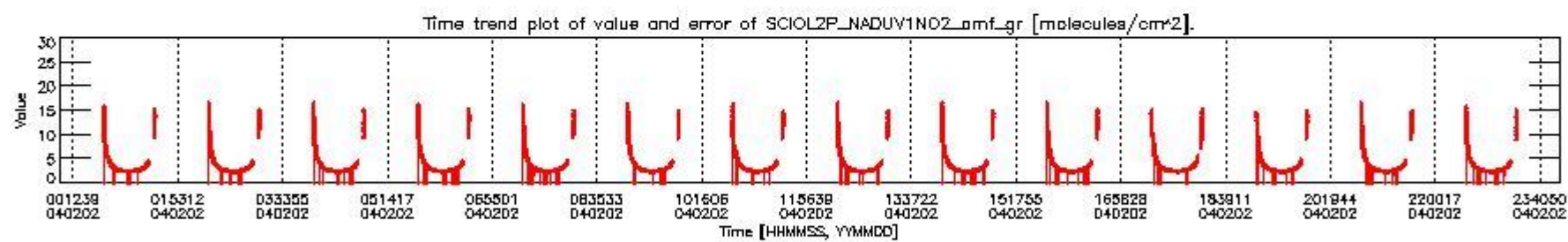
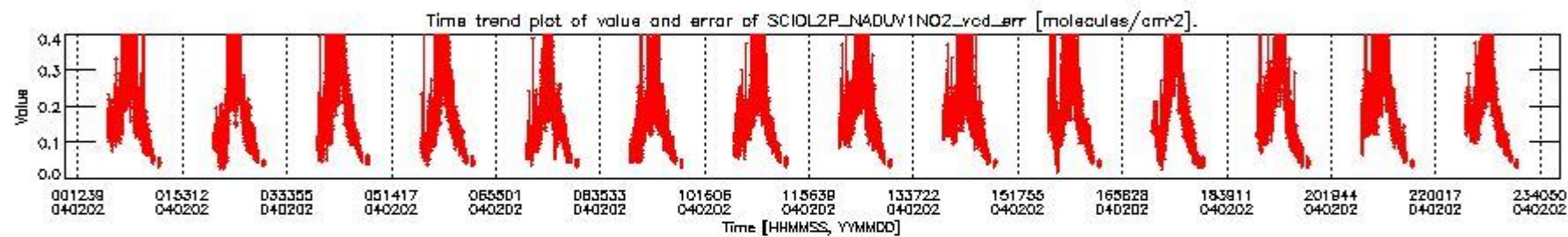
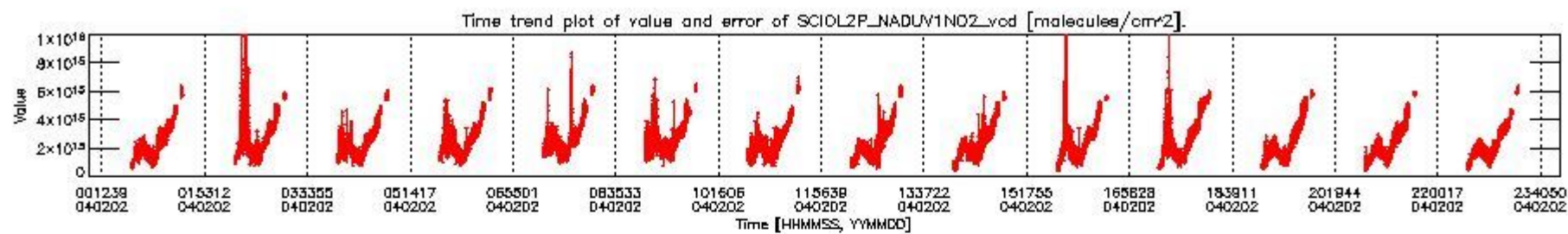
SCIOL2P\_NADUV003\_amf\_gr for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



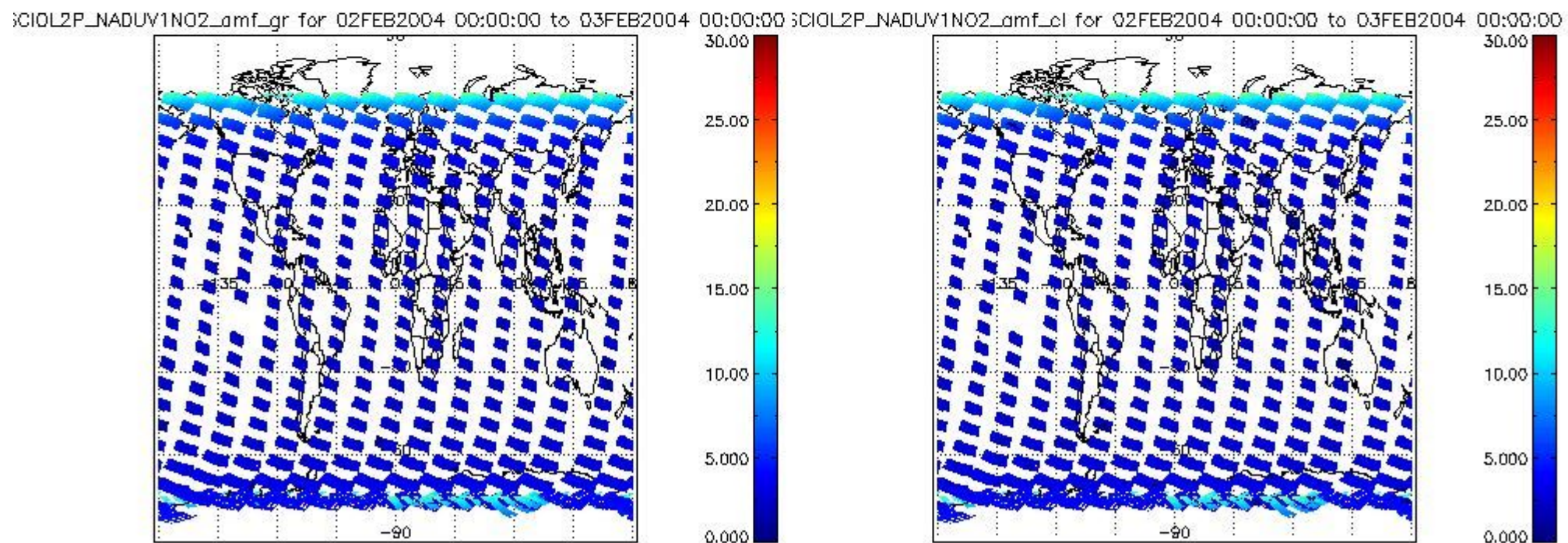
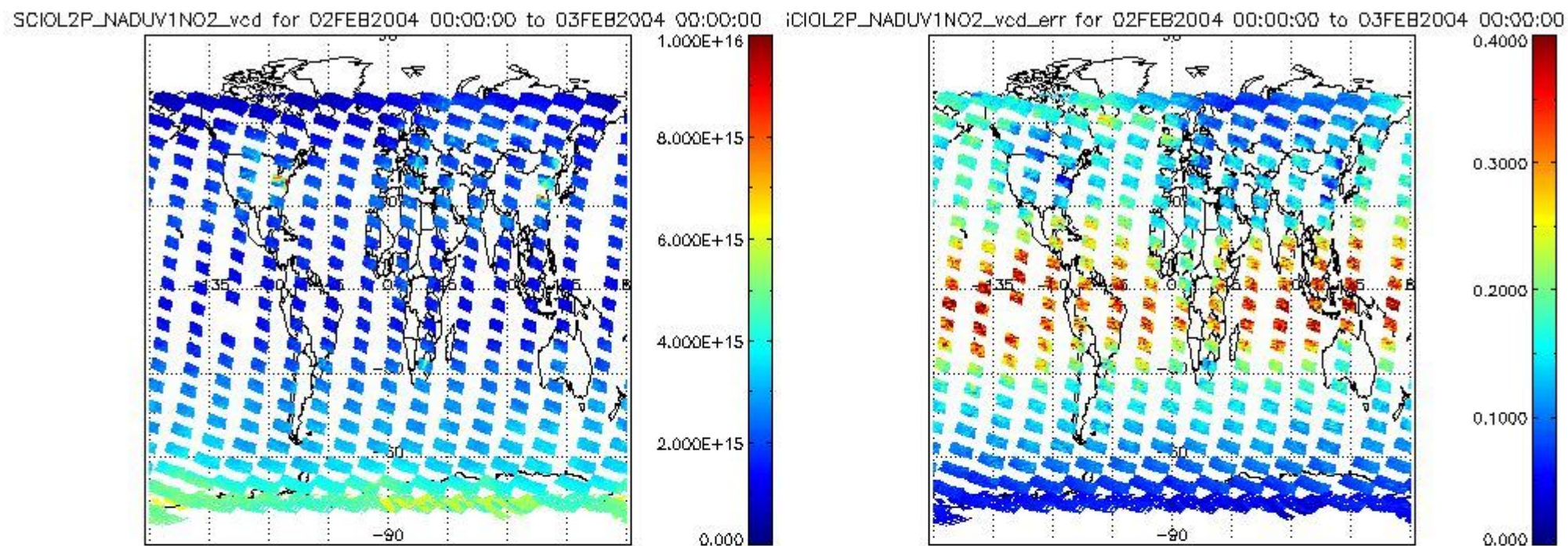
SCIOL2P\_NADUV003\_amf\_cl for 02FEB2004 00:00:00 to 03FEB2004 00:00:00











### 2.2.3 Limb

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

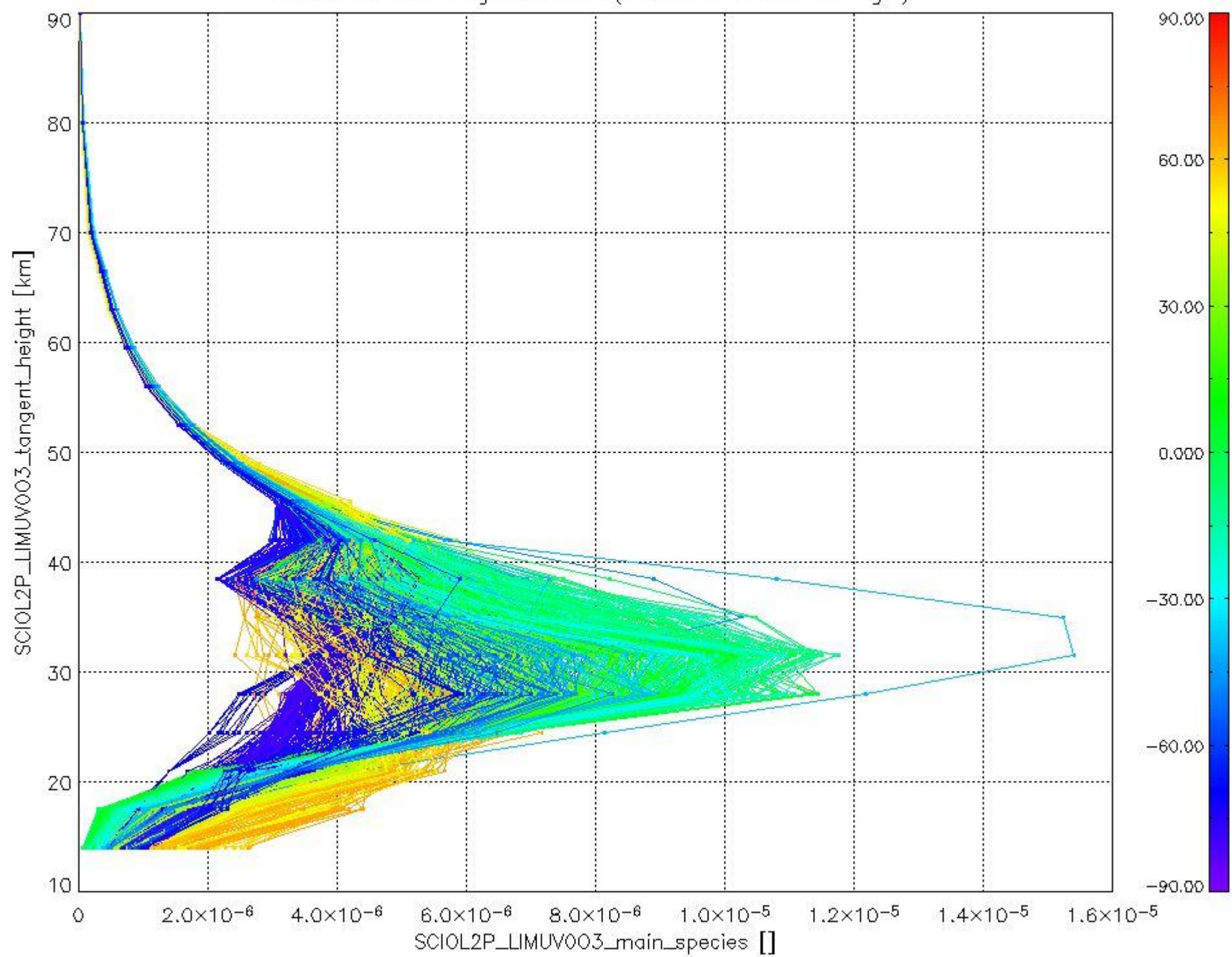
The following data items are currently included into this section:

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.

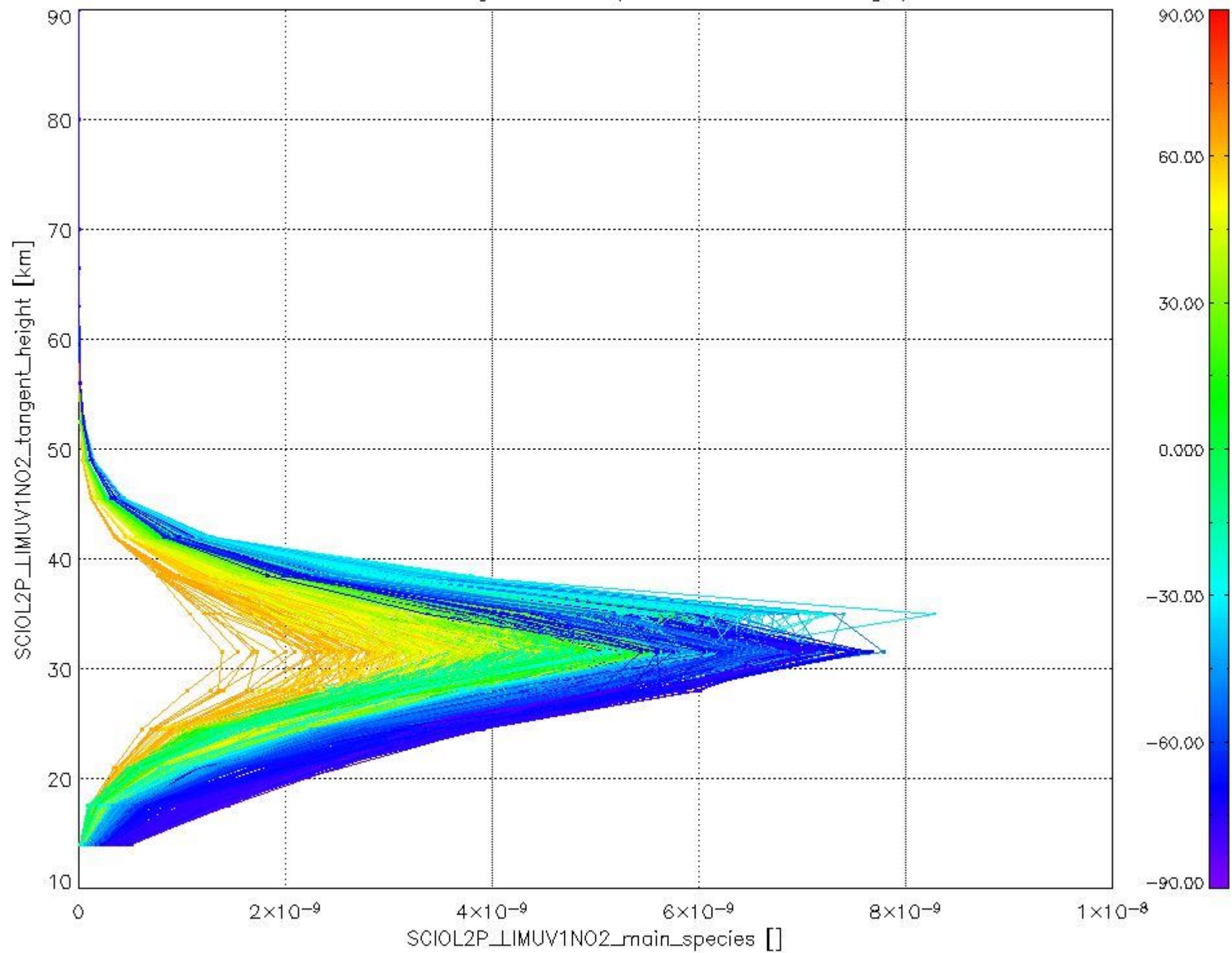


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





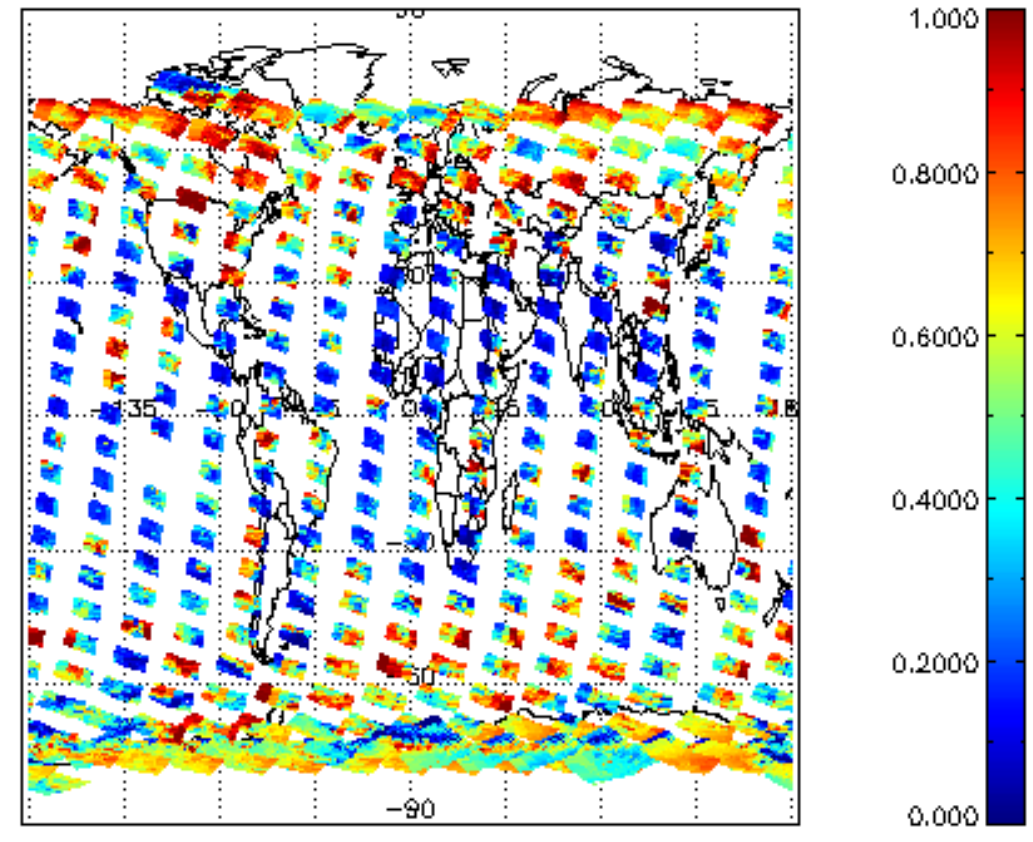
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



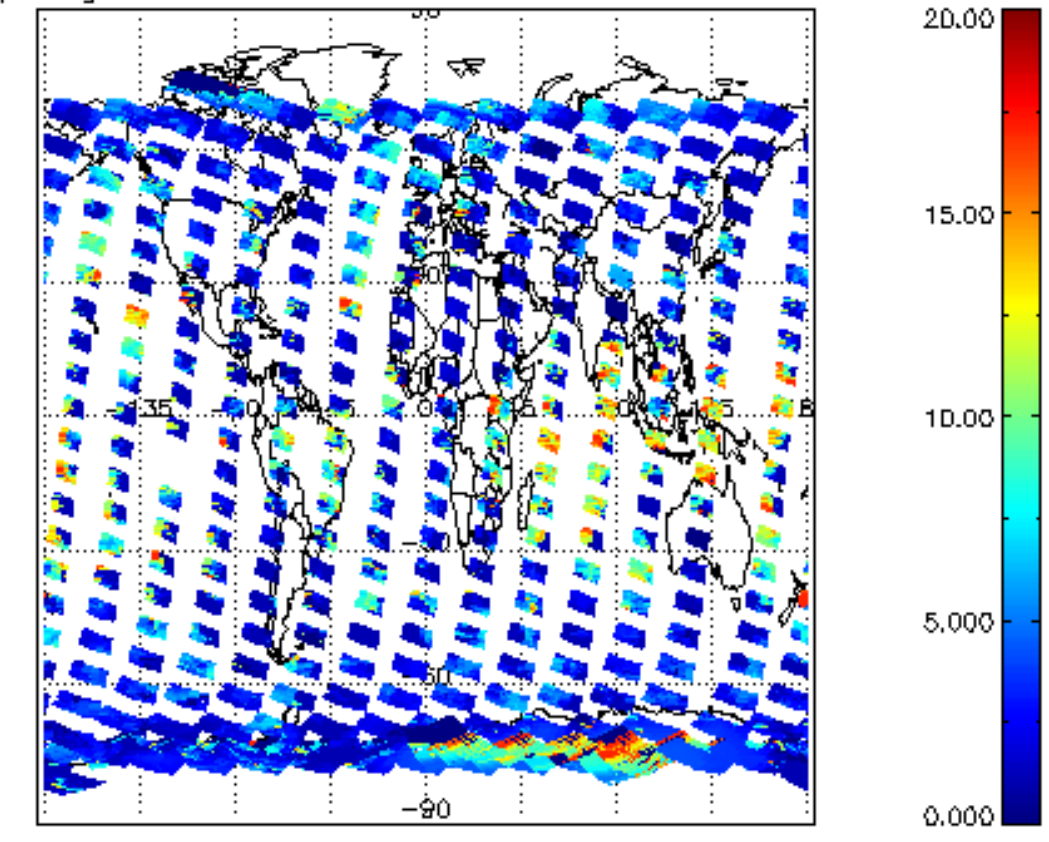
### 2.3 ADF monitoring

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

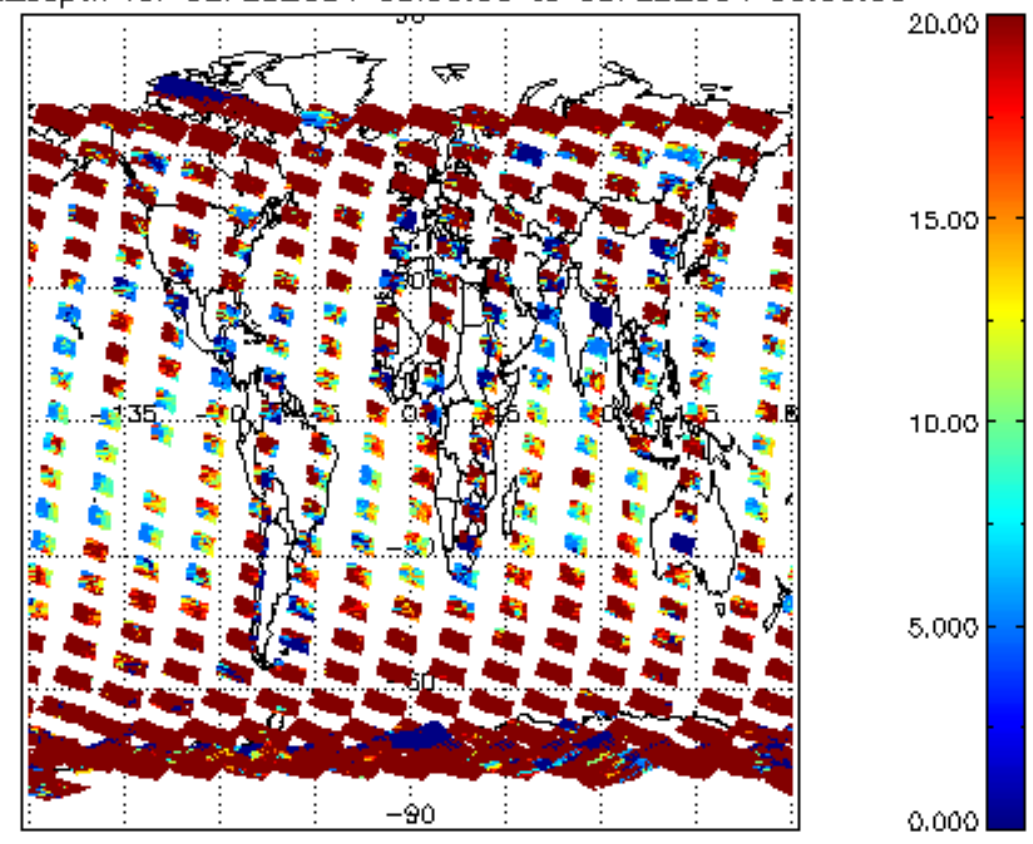
cl\_frac for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



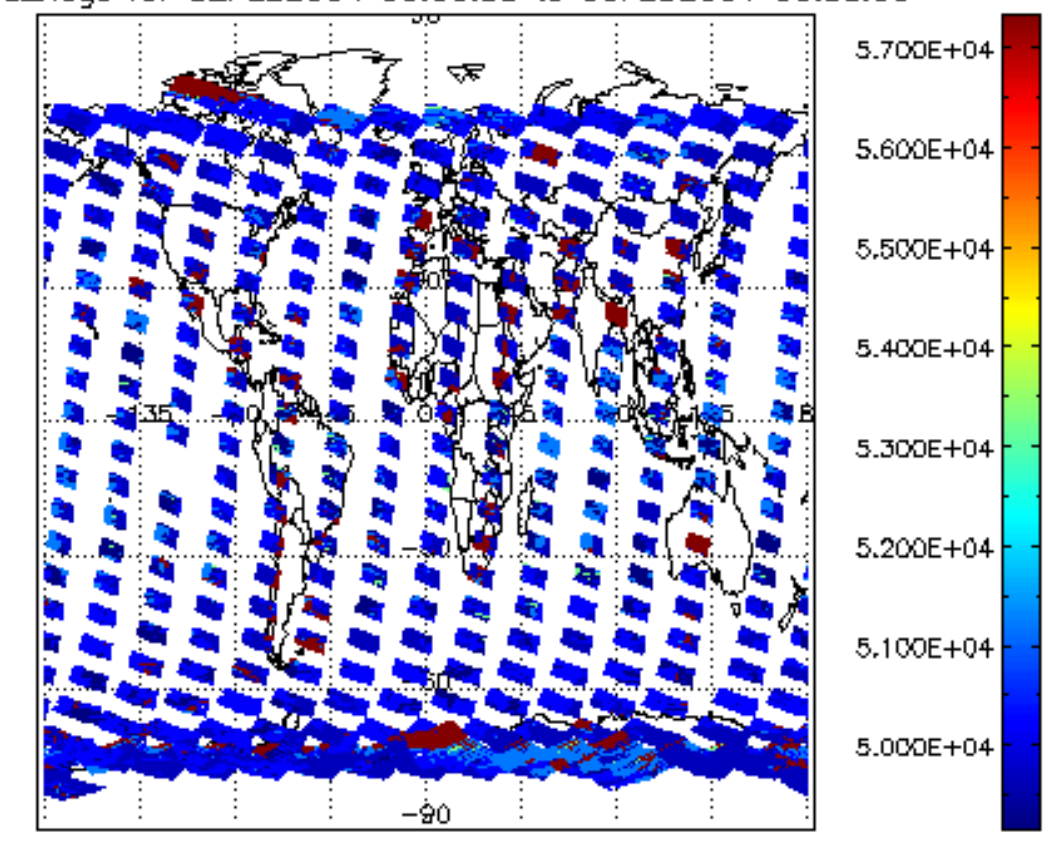
cl\_top\_height for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



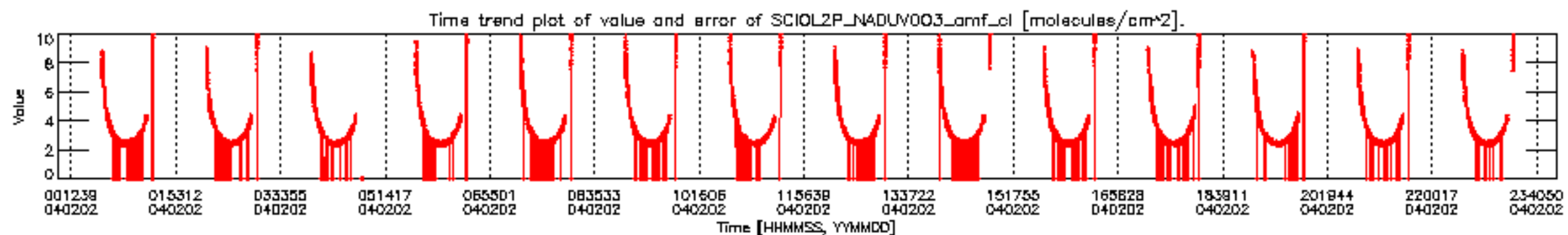
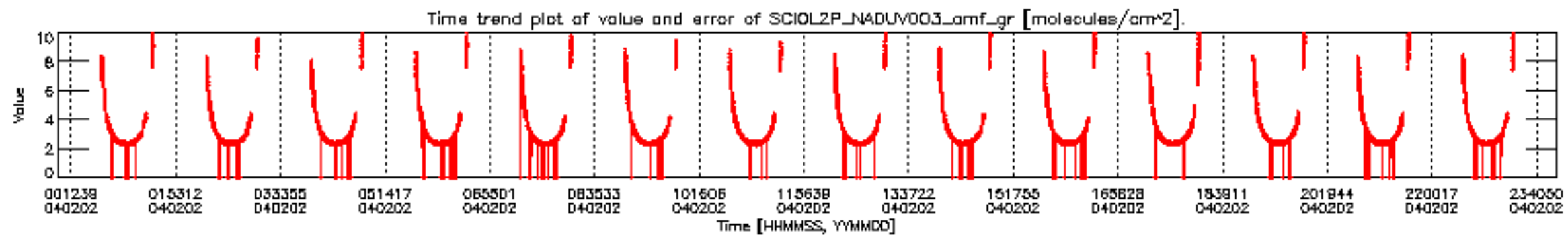
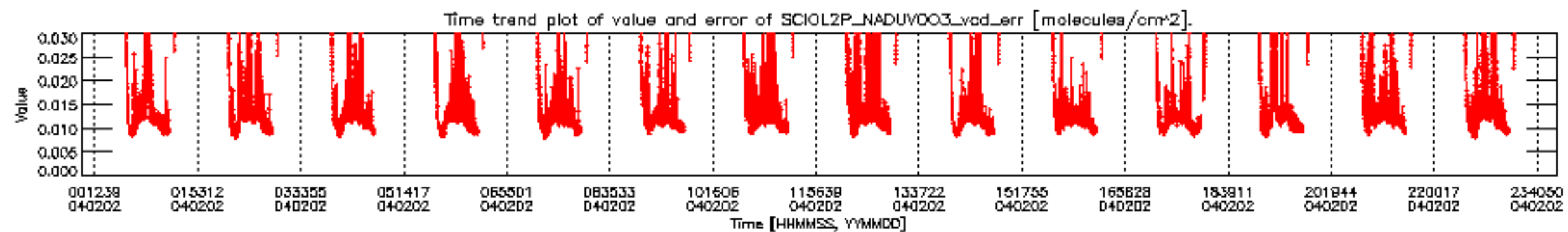
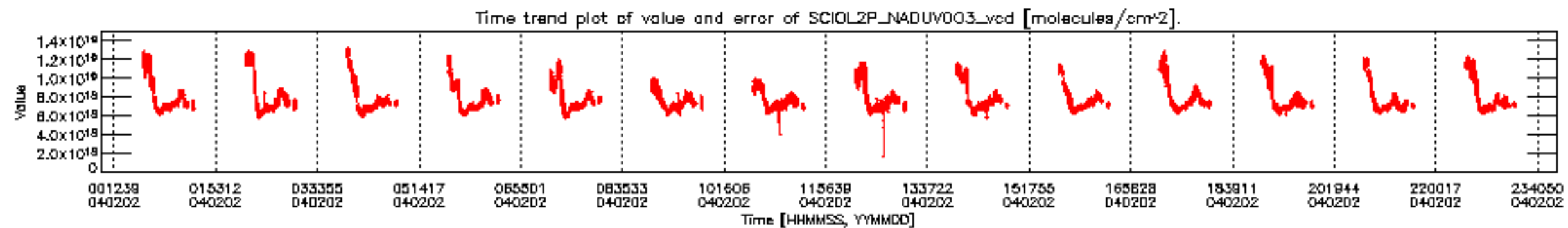
cl\_opt\_depth for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



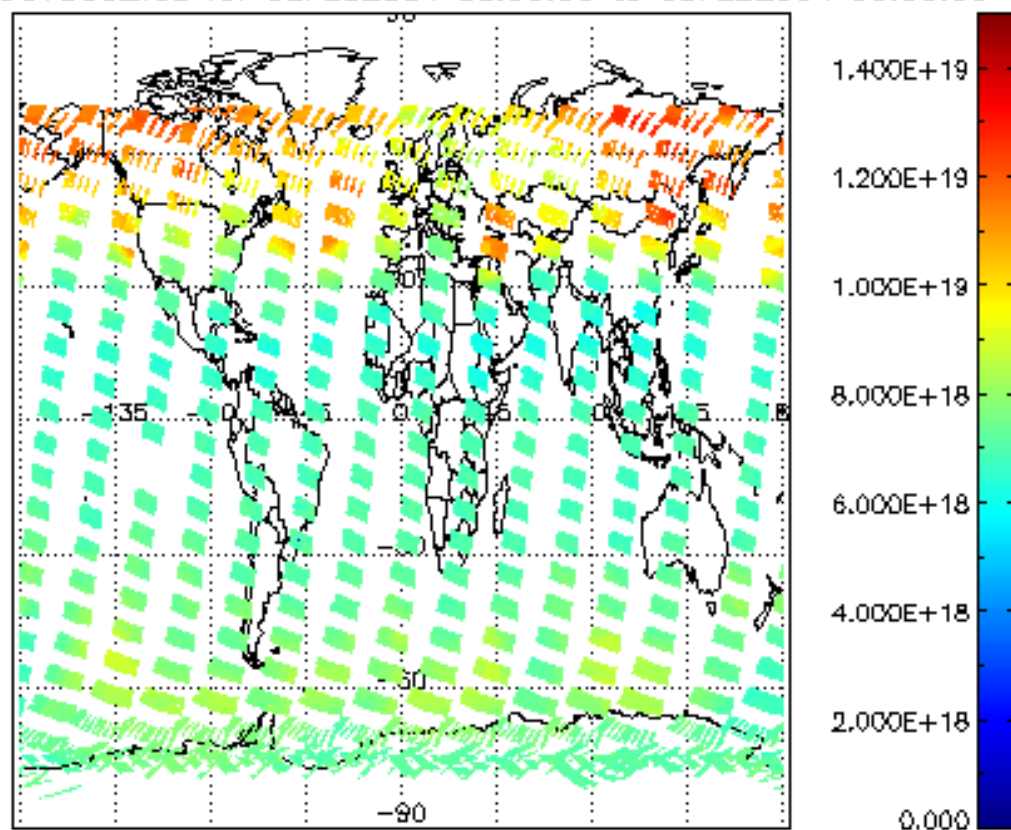
cloud\_flags for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



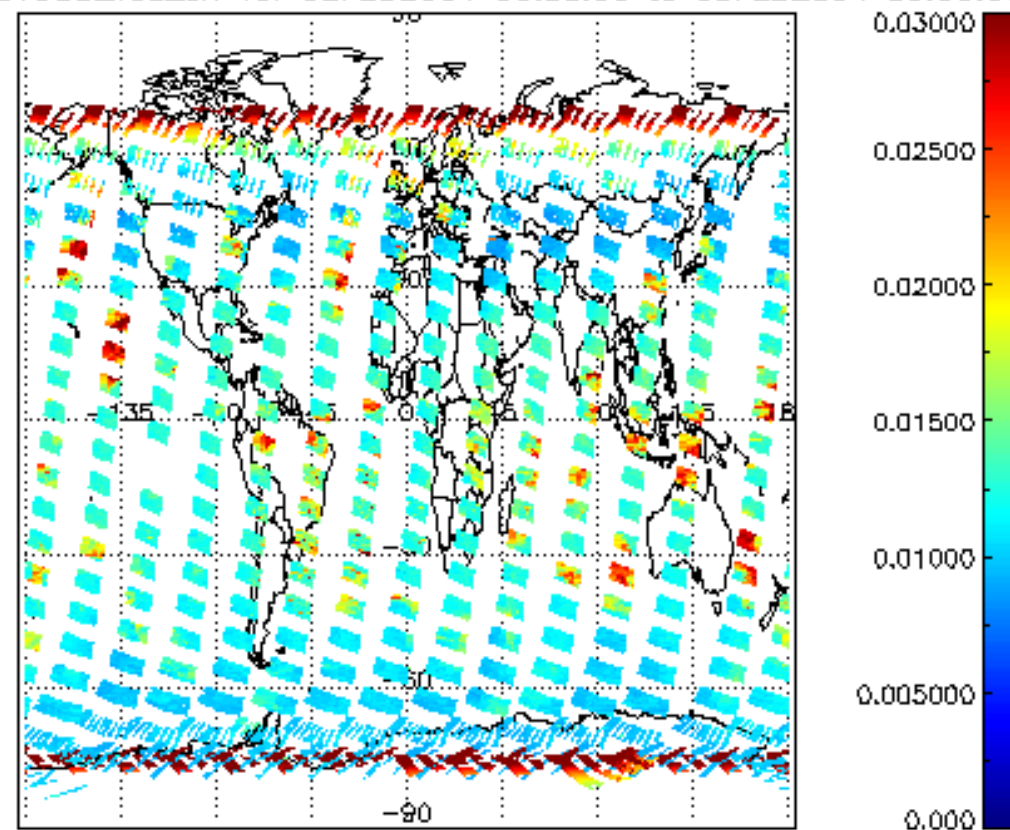




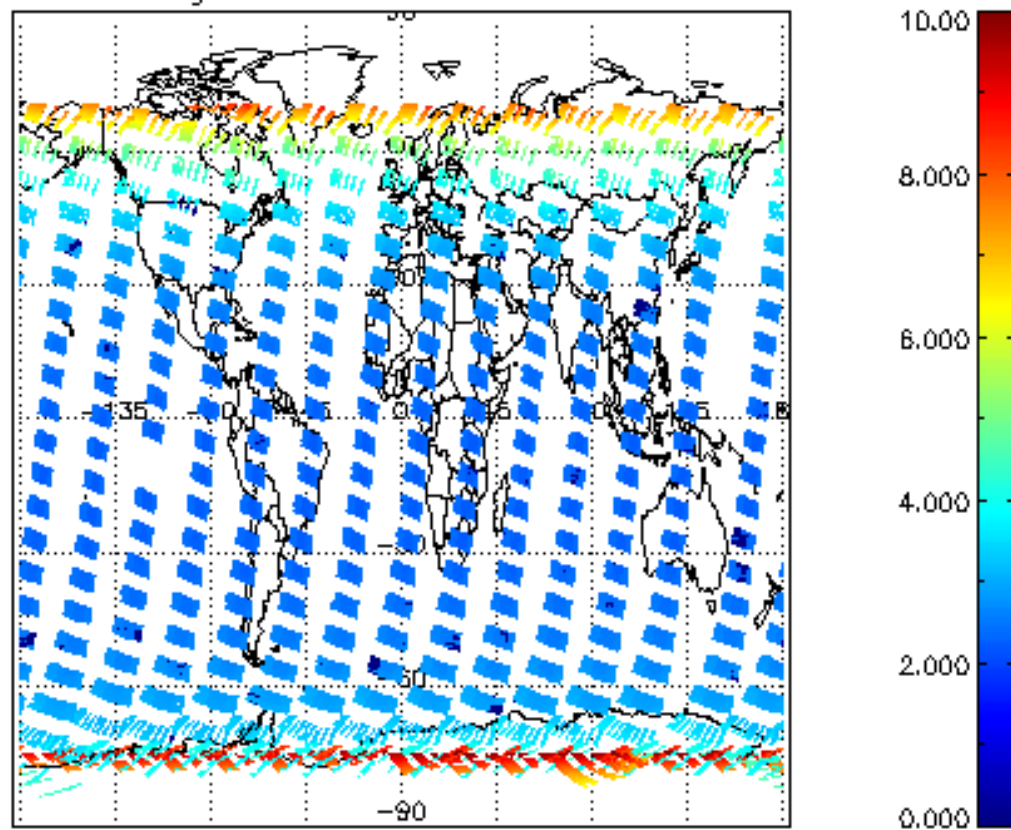
SCIOL2P\_NADUV003\_vcd for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



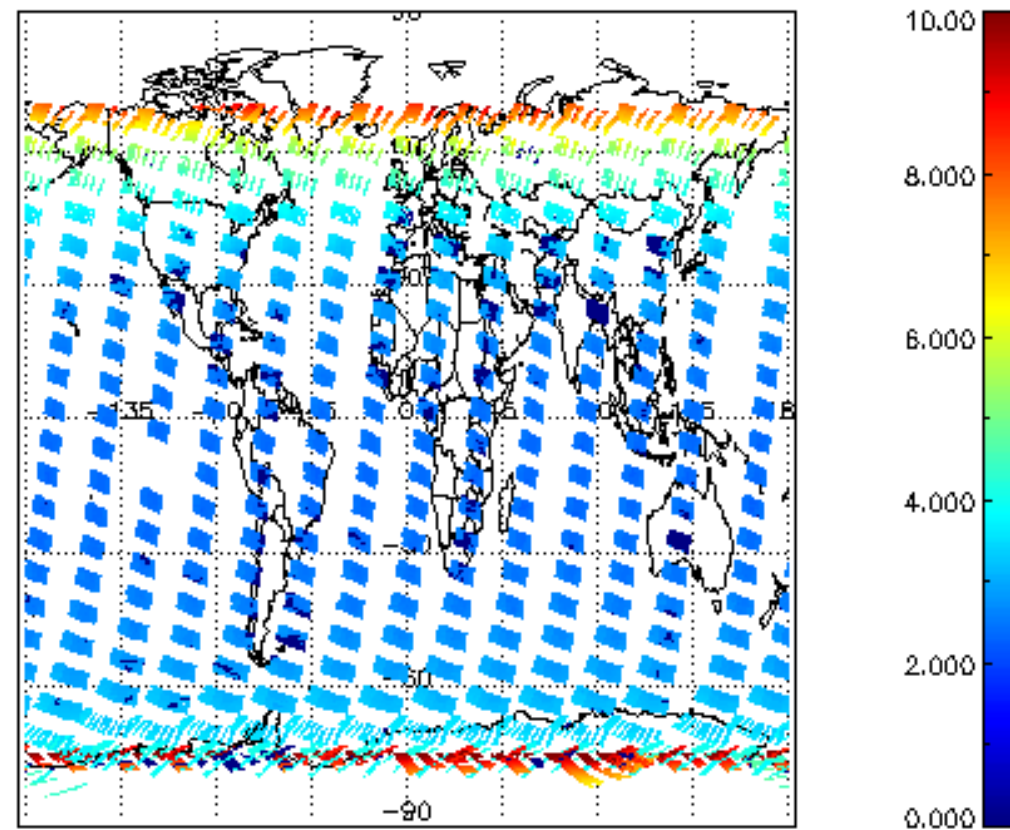
SCIOL2P\_NADUV003\_vcd\_err for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



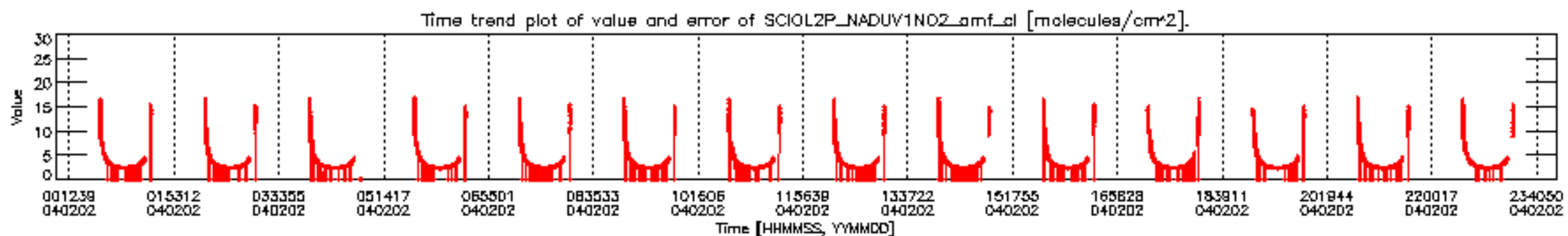
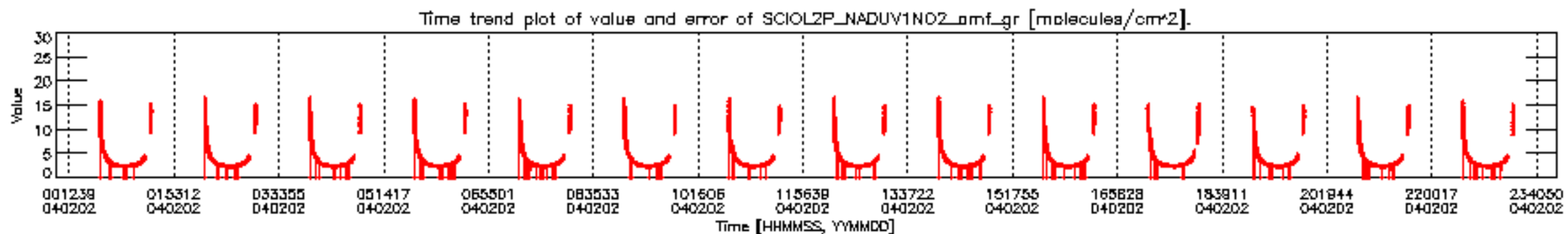
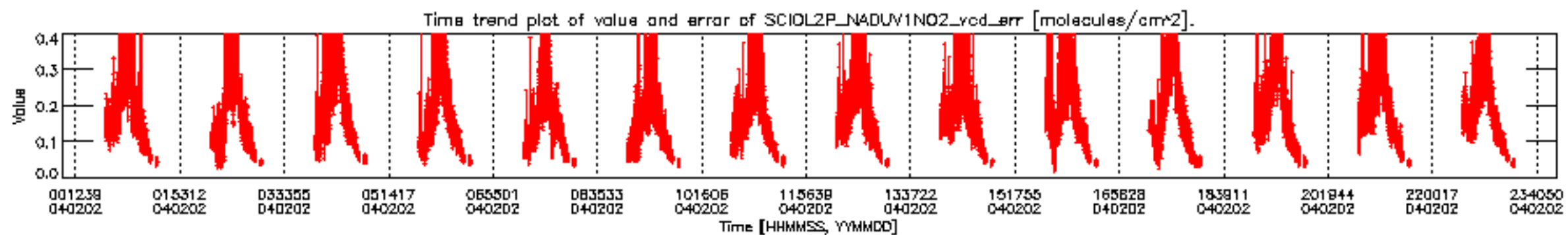
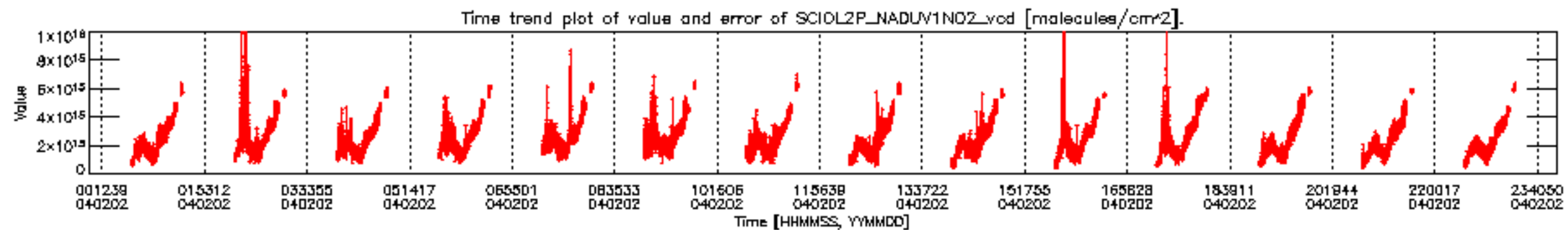
SCIOL2P\_NADUV003\_amf\_gr for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



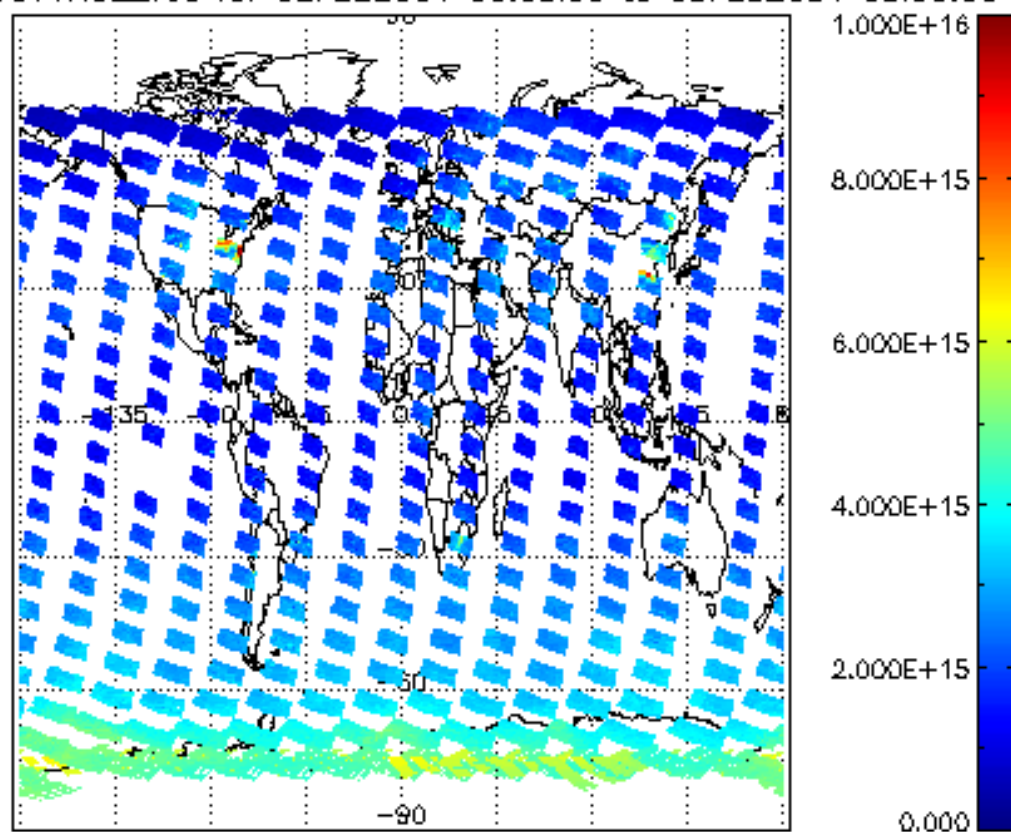
SCIOL2P\_NADUV003\_amf\_cl for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



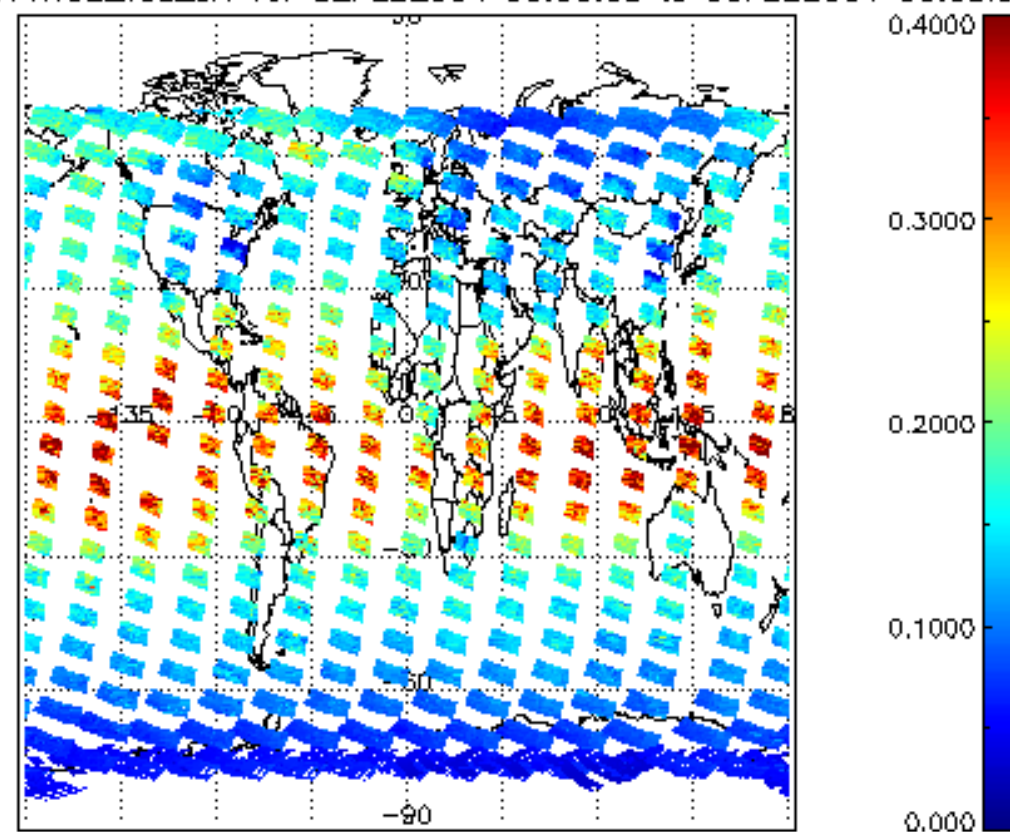




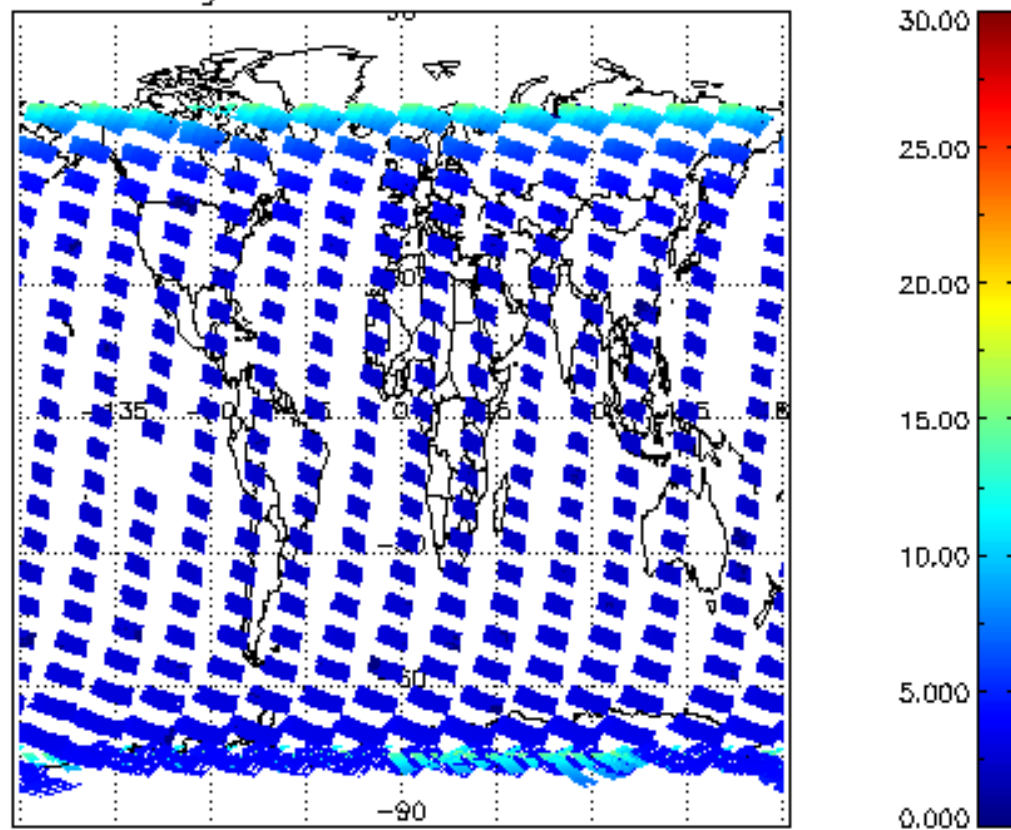
SCIOL2P\_NADUV1NO2\_vcd for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



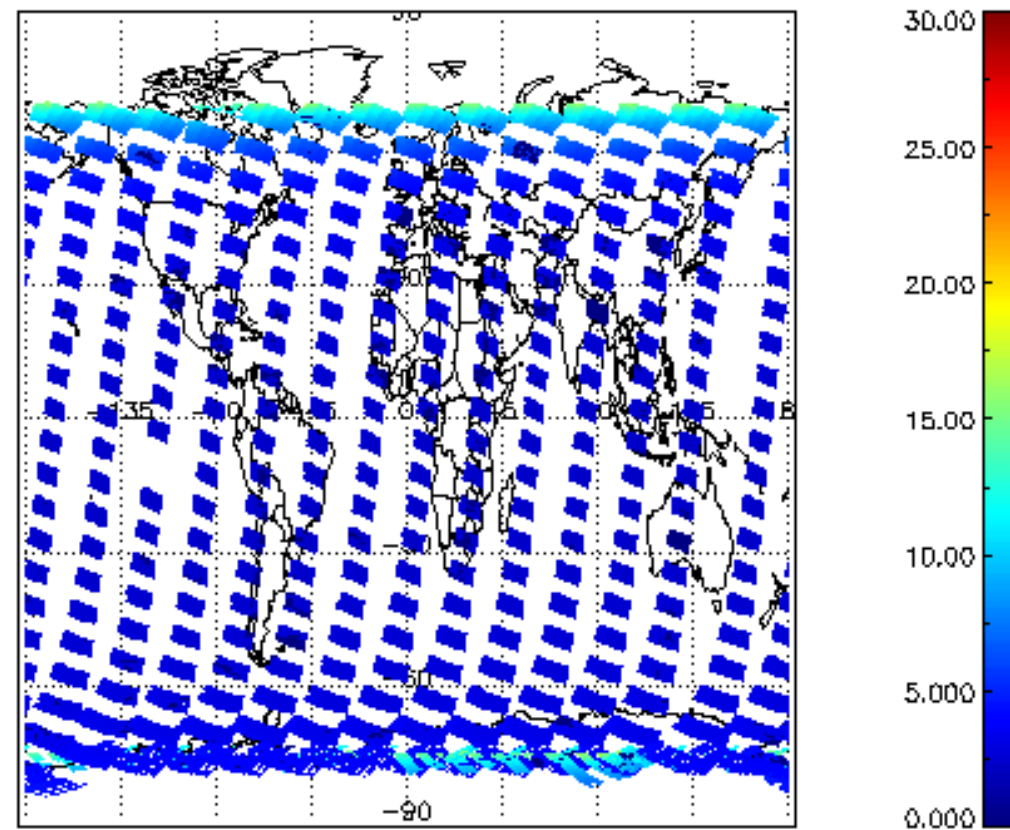
SCIOL2P\_NADUV1NO2\_vcd\_err for 02FEB2004 00:00:00 to 03FEB2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 02FEB2004 00:00:00 to 03FEB2004 00:00:00

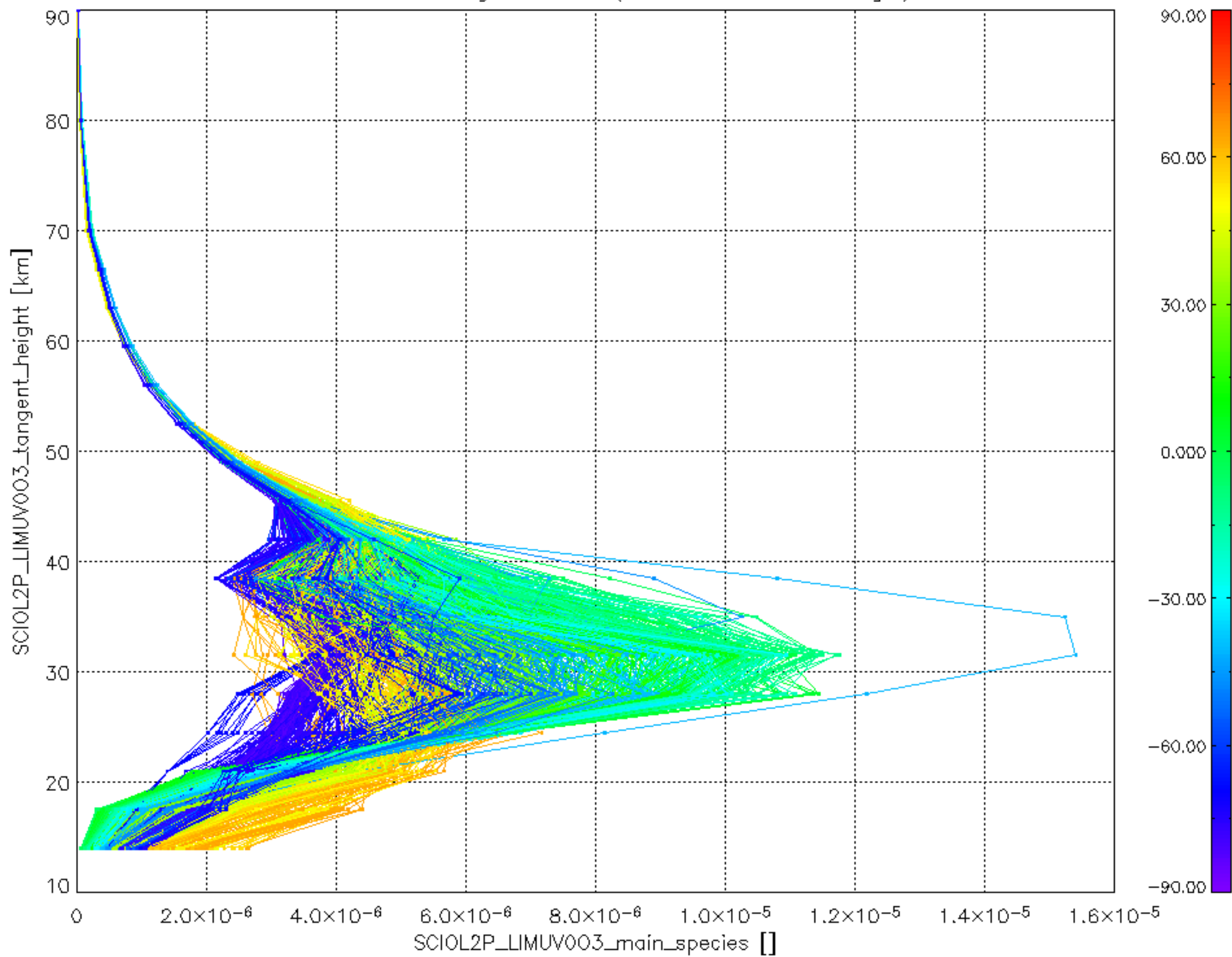


SCIOL2P\_NADUV1NO2\_amf\_cl for 02FEB2004 00:00:00 to 03FEB2004 00:00:00





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).

