

## 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 08:27:54
Data source version	SCIA-OL/3.01-R
Processing scope for products	16FEB2004 00:00:00 to 17FEB2004 00:00:00
Start time of first product within scope	15FEB2004 23:56:01
Stop time of last product within scope	16FEB2004 20:57:33
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__2PRDPA20040215_235601_000032372024_00188_10262_6710.N1	15FEB2004 23:56:01	16FEB2004 00:49:59	0	GOOD
1	SCI_OL__2PRDPA20040216_013513_000033772024_00189_10263_6803.N1	16FEB2004 01:35:13	16FEB2004 02:31:30	0	GOOD
2	SCI_OL__2PRDPA20040216_031712_000032372024_00190_10264_6718.N1	16FEB2004 03:17:12	16FEB2004 04:11:09	0	GOOD
3	SCI_OL__2PRDPA20040216_045624_000033772024_00191_10265_6759.N1	16FEB2004 04:56:24	16FEB2004 05:52:41	0	GOOD
4	SCI_OL__2PRDPA20040216_063823_000032372024_00192_10266_6747.N1	16FEB2004 06:38:23	16FEB2004 07:32:20	0	GOOD
5	SCI_OL__2PRDPA20040216_081735_000033772024_00193_10267_6650.N1	16FEB2004 08:17:35	16FEB2004 09:13:52	0	GOOD
6	SCI_OL__2PRDPA20040216_095934_000032372024_00194_10268_6735.N1	16FEB2004 09:59:34	16FEB2004 10:53:31	0	GOOD
7	SCI_OL__2PRDPA20040216_113846_000033772024_00195_10269_6890.N1	16FEB2004 11:38:46	16FEB2004 12:35:03	0	GOOD
8	SCI_OL__2PRDPA20040216_132045_000032372024_00196_10270_6693.N1	16FEB2004 13:20:45	16FEB2004 14:14:42	0	GOOD
9	SCI_OL__2PRDPA20040216_145956_000033772024_00197_10271_6743.N1	16FEB2004 14:59:56	16FEB2004 15:56:13	0	GOOD
10	SCI_OL__2PRDPA20040216_164155_000032372024_00198_10272_6815.N1	16FEB2004 16:41:55	16FEB2004 17:35:53	0	GOOD
11	SCI_OL__2PRDPA20040216_182036_000033642024_00199_10273_6731.N1	16FEB2004 18:20:36	16FEB2004 19:16:41	0	GOOD
12	SCI_OL__2PRDPA20040216_200116_000033772024_00200_10274_6826.N1	16FEB2004 20:01:16	16FEB2004 20:57:33	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: 105268

Total number of cloud data DSRs with good quality flag (=0): 105268 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	105268	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	105268	0.21803	0.25000	0.12500	1.0000	0.096514	s
CL_FRAC	105268	0.47338	0.46620	0.0000	1.0000	0.28346	-
CL_FRAC_ERR	105268	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	105268	6.9771	8.0000	4.0000	32.000	3.0885	
PMD_READ_CL[0]	105268	0.36721	0.0000	0.0000	19.000	1.3624	-

PMD_READ_CL[1]	105268	0.25944	0.0000	0.0000	32.000	1.3863	-
CL_TOP_HEIGHT	95016	4.1363	2.7200	0.0000	17.000	3.7214	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	95016	48.262	34.380	0.0000	101.00	38.104	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	105268	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	105268	11000110	11000100	11000000	11100000	2401.1	flags
AERO_ABSO_IND	105268	0.73473	0.49411	-4.4249	15.761	1.1868	
AERO_IND_DIAG	105268	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	105268	01100111	11000000	00000000	11000000	24498.	flags

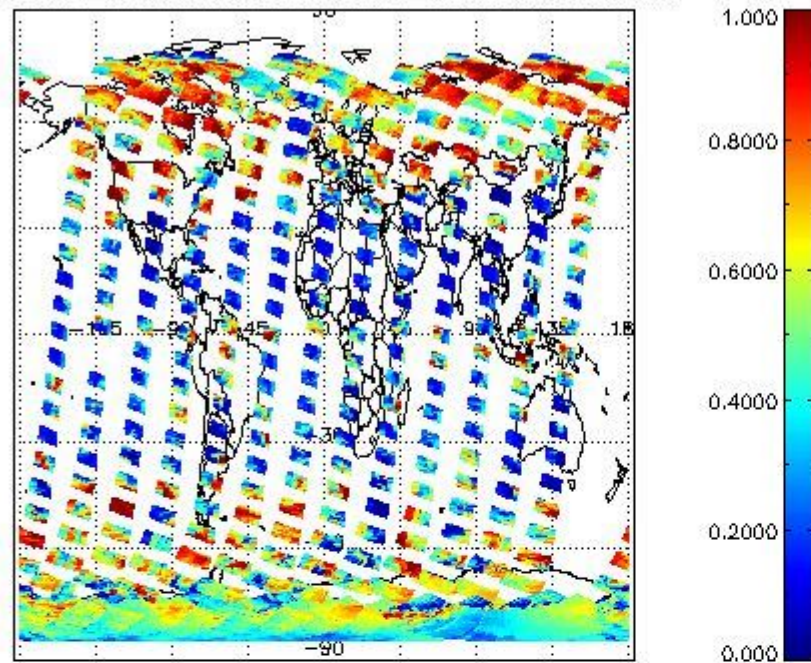
Time and geolocation plots:

Plots are available for the following parameters:

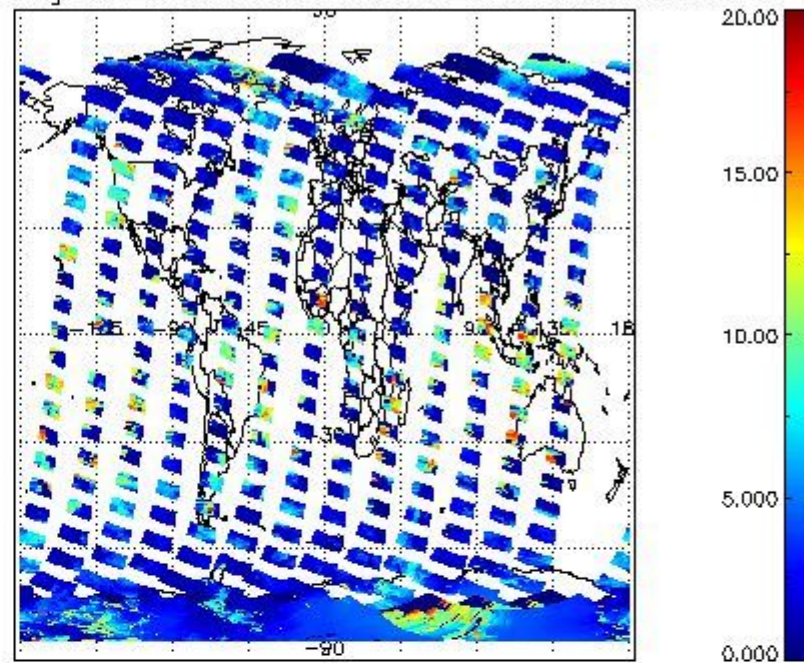
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



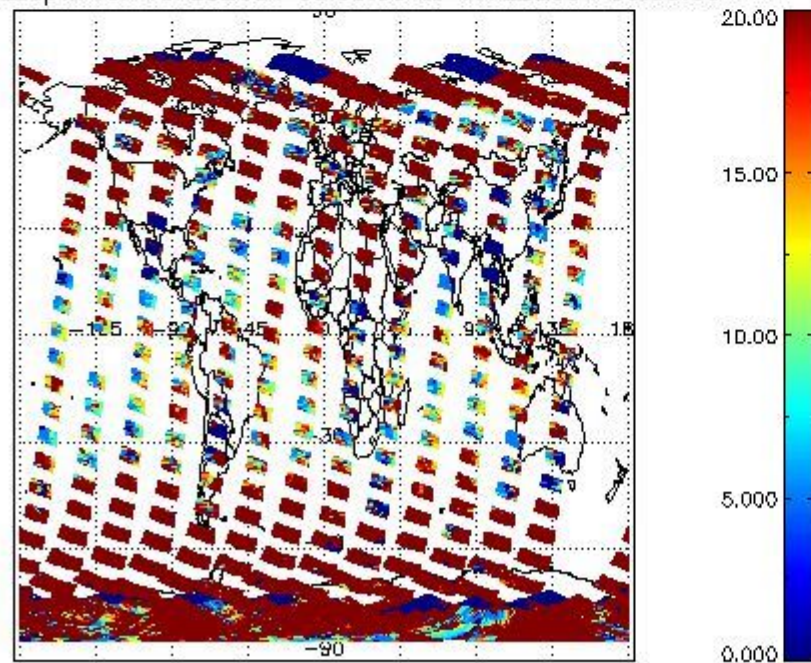
cL\_frac for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



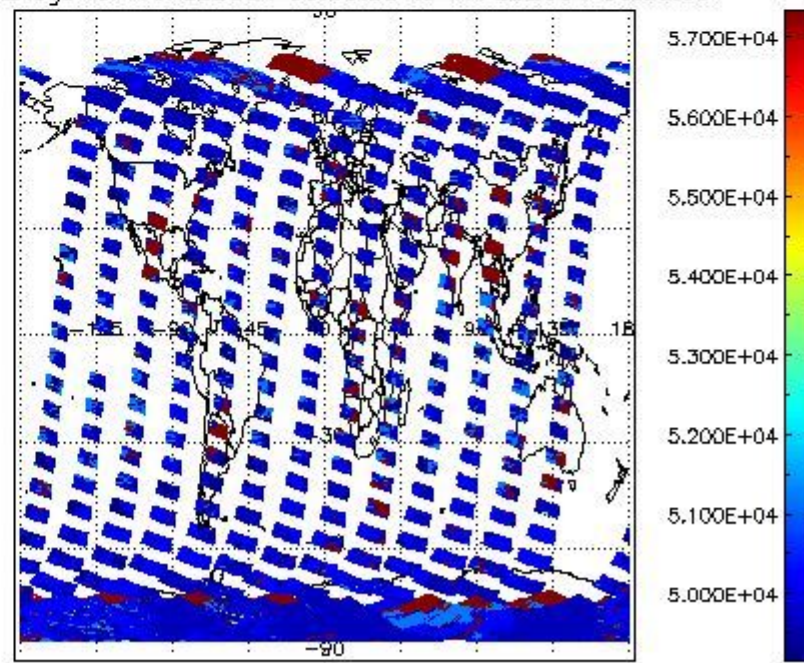
cL\_top\_height for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



cL\_opt\_depth for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



cloud\_flags for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



### 2.2.2 Nadir

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

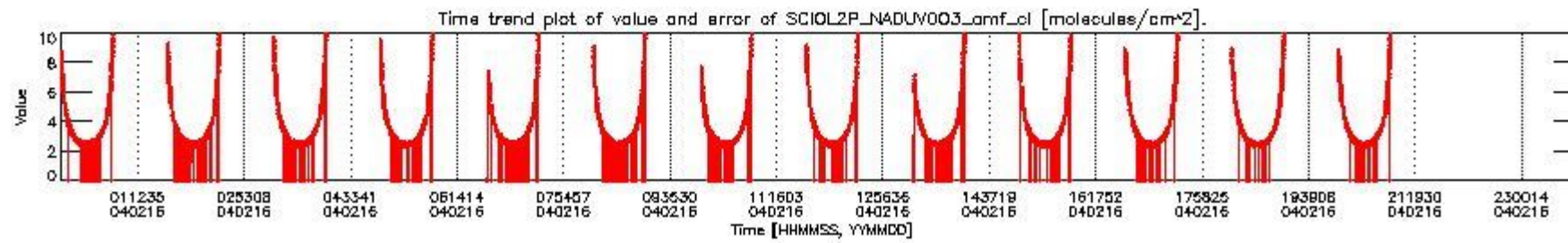
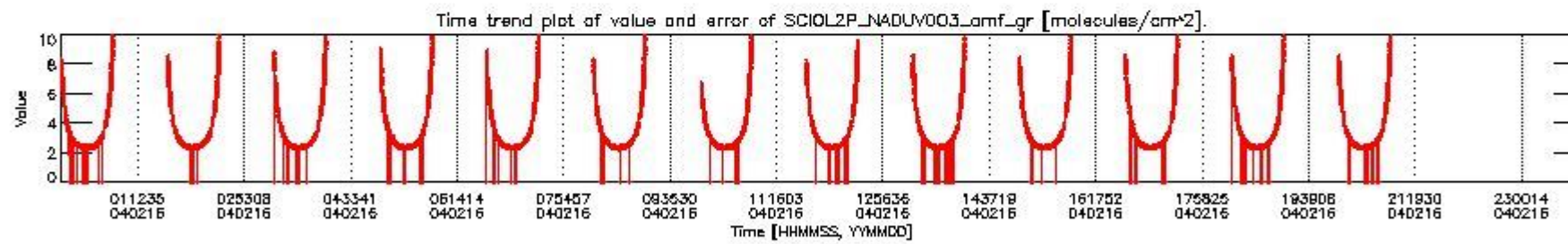
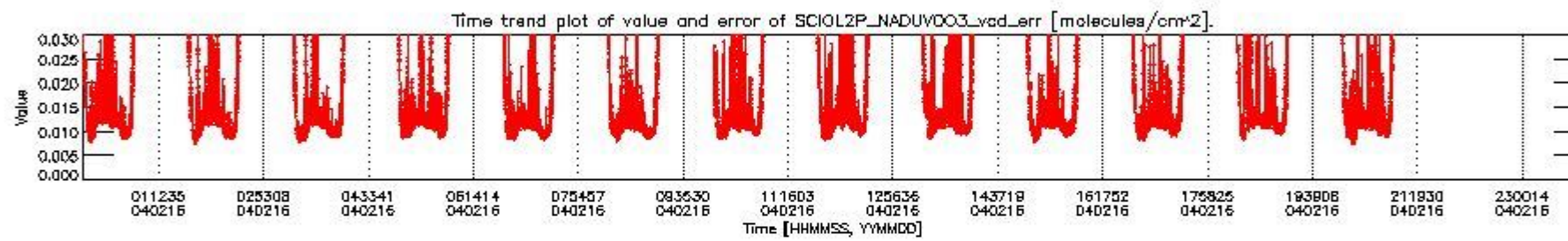
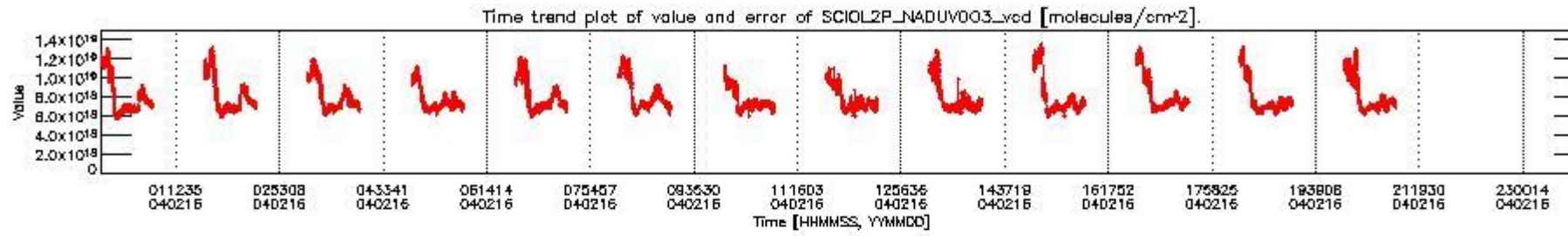
The following data items are currently included into this section:

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



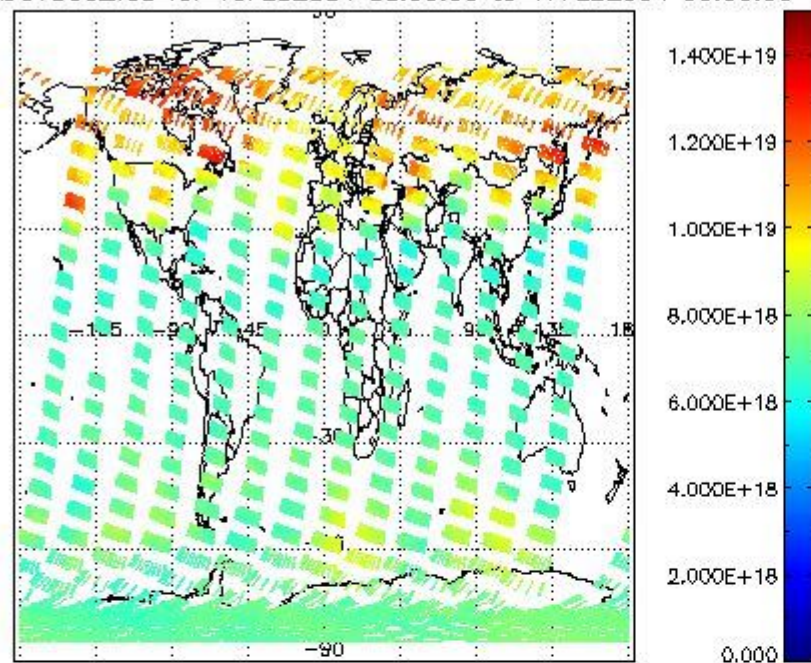
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

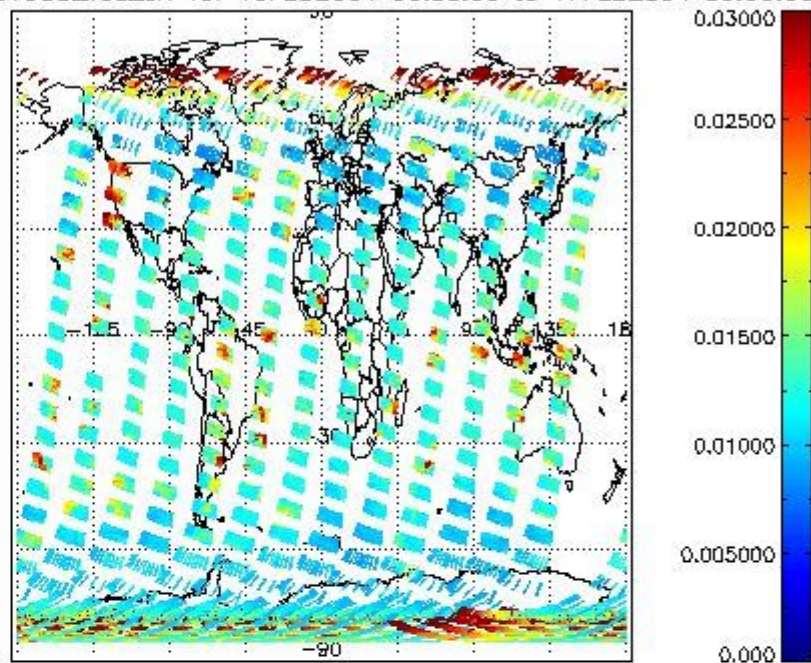




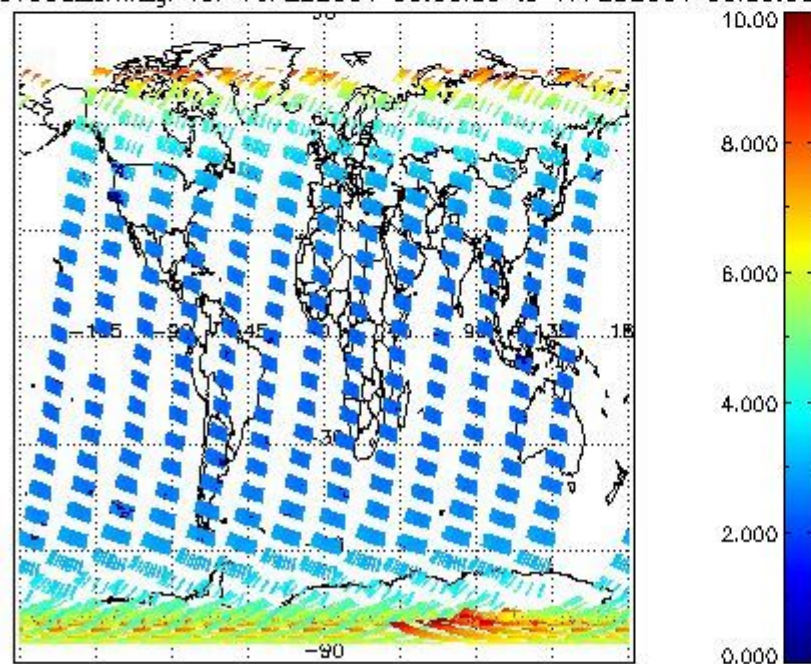
SCIOL2P\_NADUV003\_vcd for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



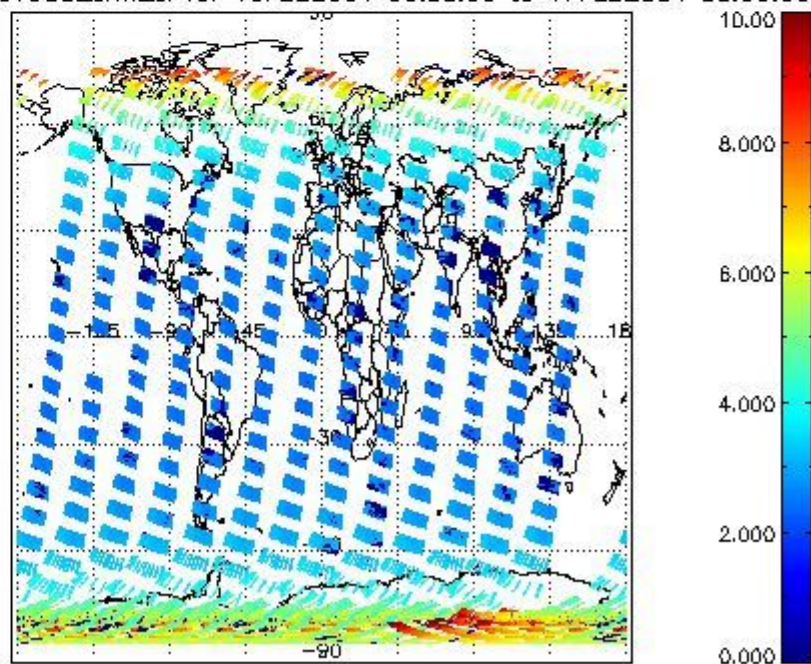
SCIOL2P\_NADUV003\_vcd\_err for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



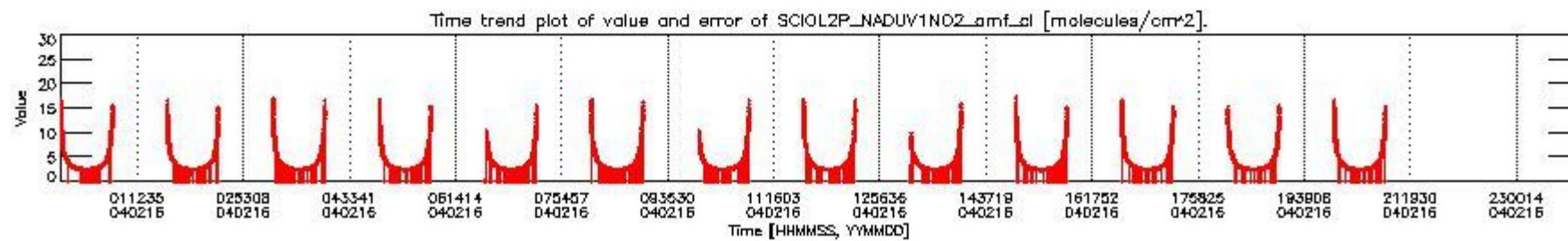
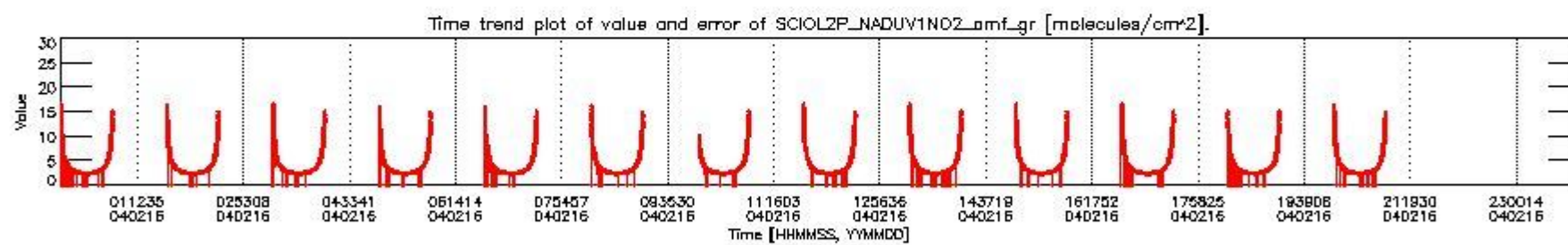
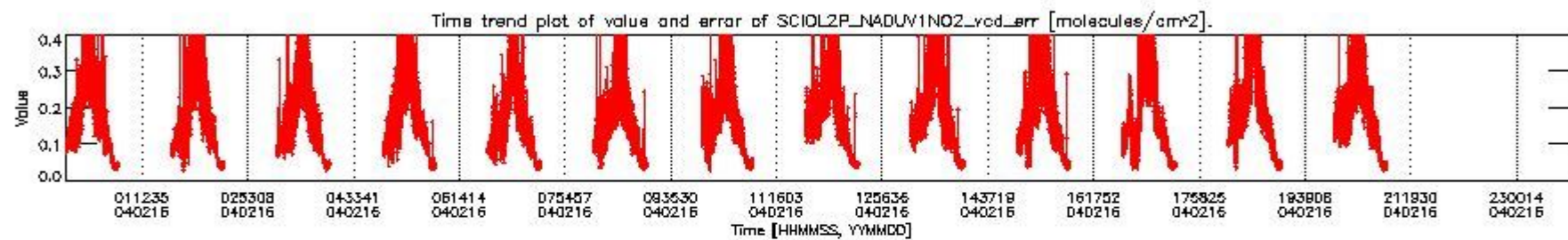
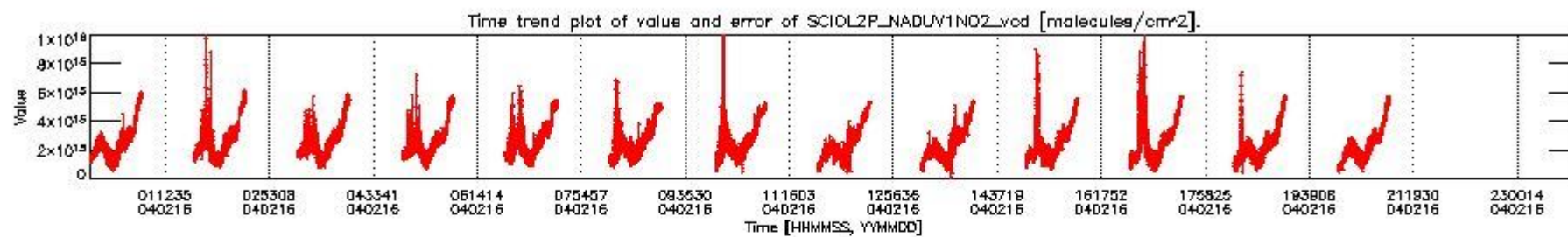
SCIOL2P\_NADUV003\_amf\_gr for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



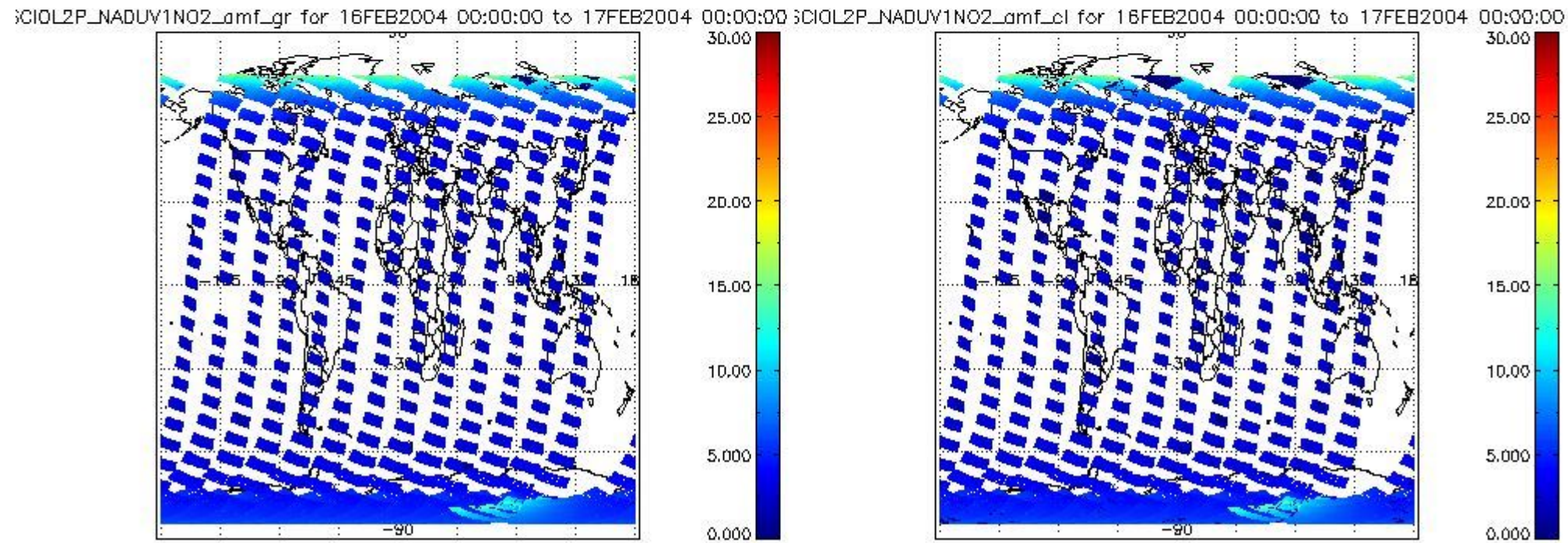
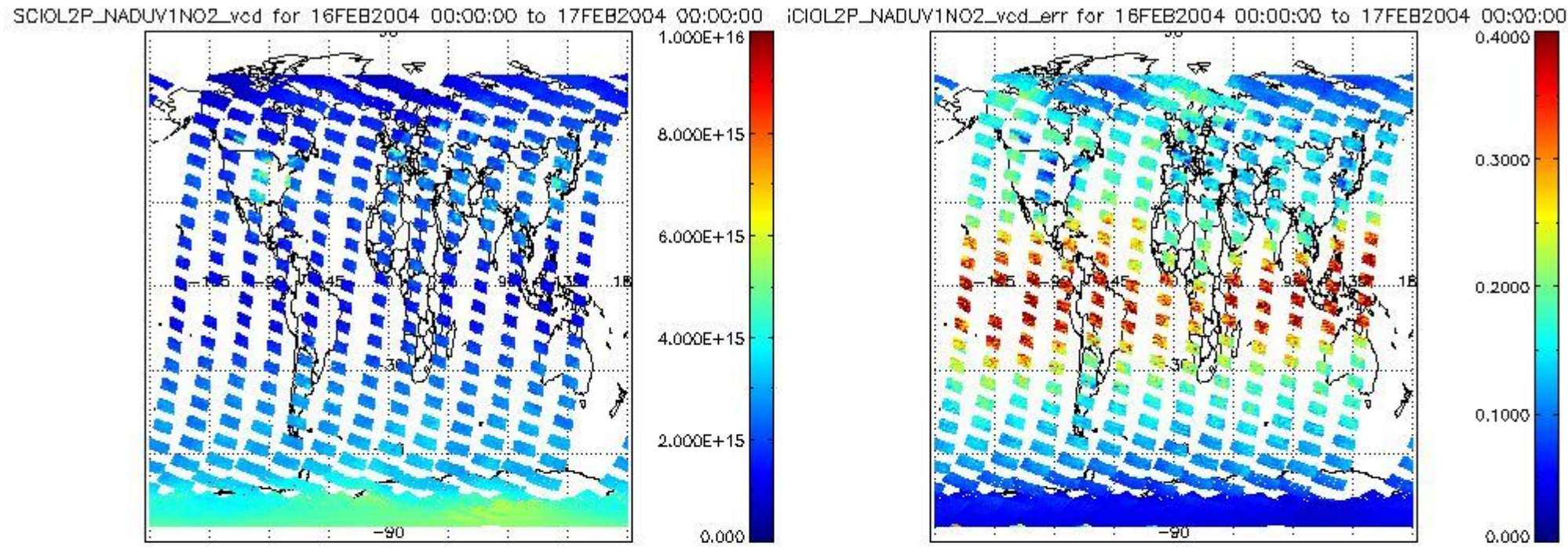
SCIOL2P\_NADUV003\_amf\_cl for 16FEB2004 00:00:00 to 17FEB2004 00:00:00











### 2.2.3 Limb

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

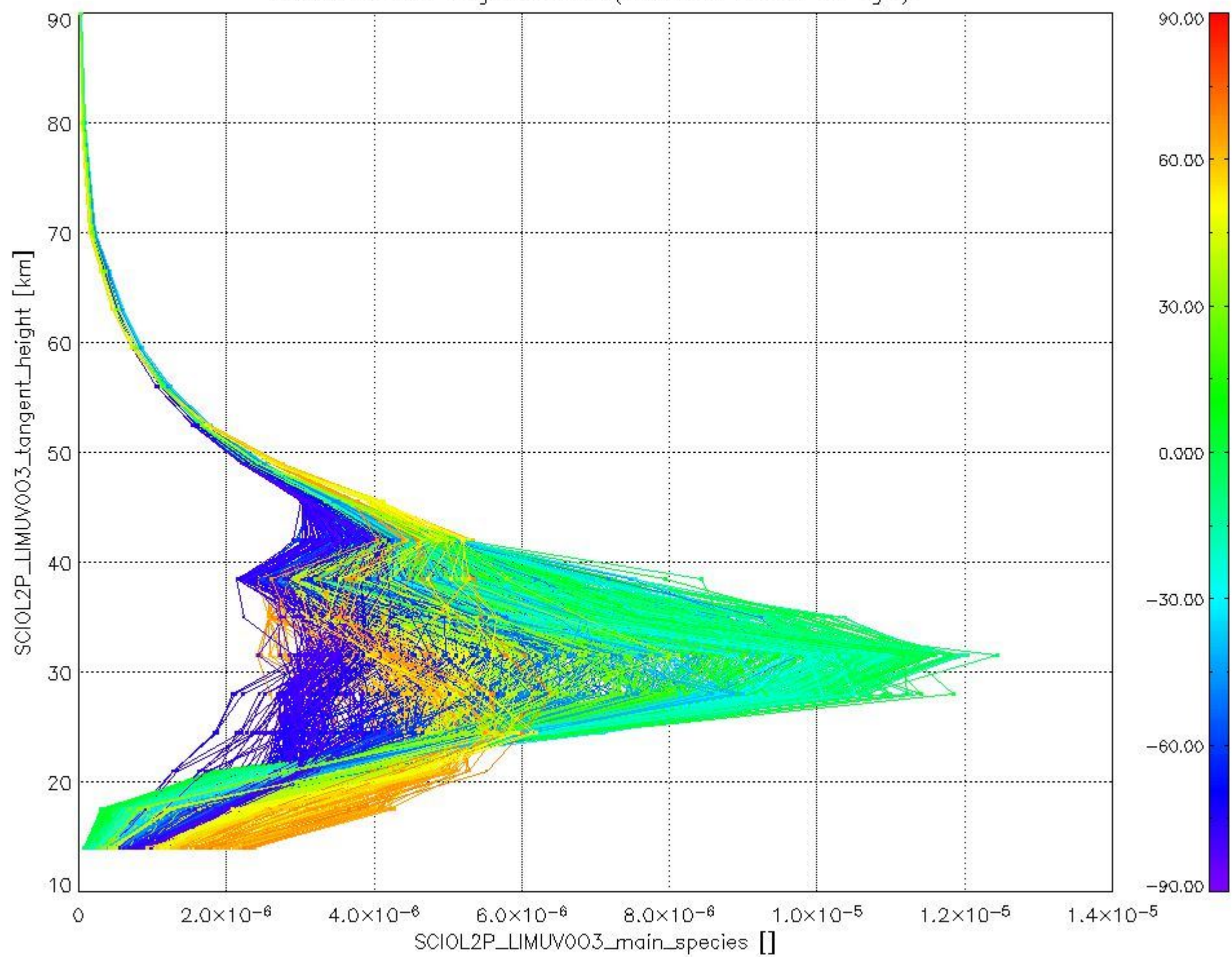
The following data items are currently included into this section:

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.

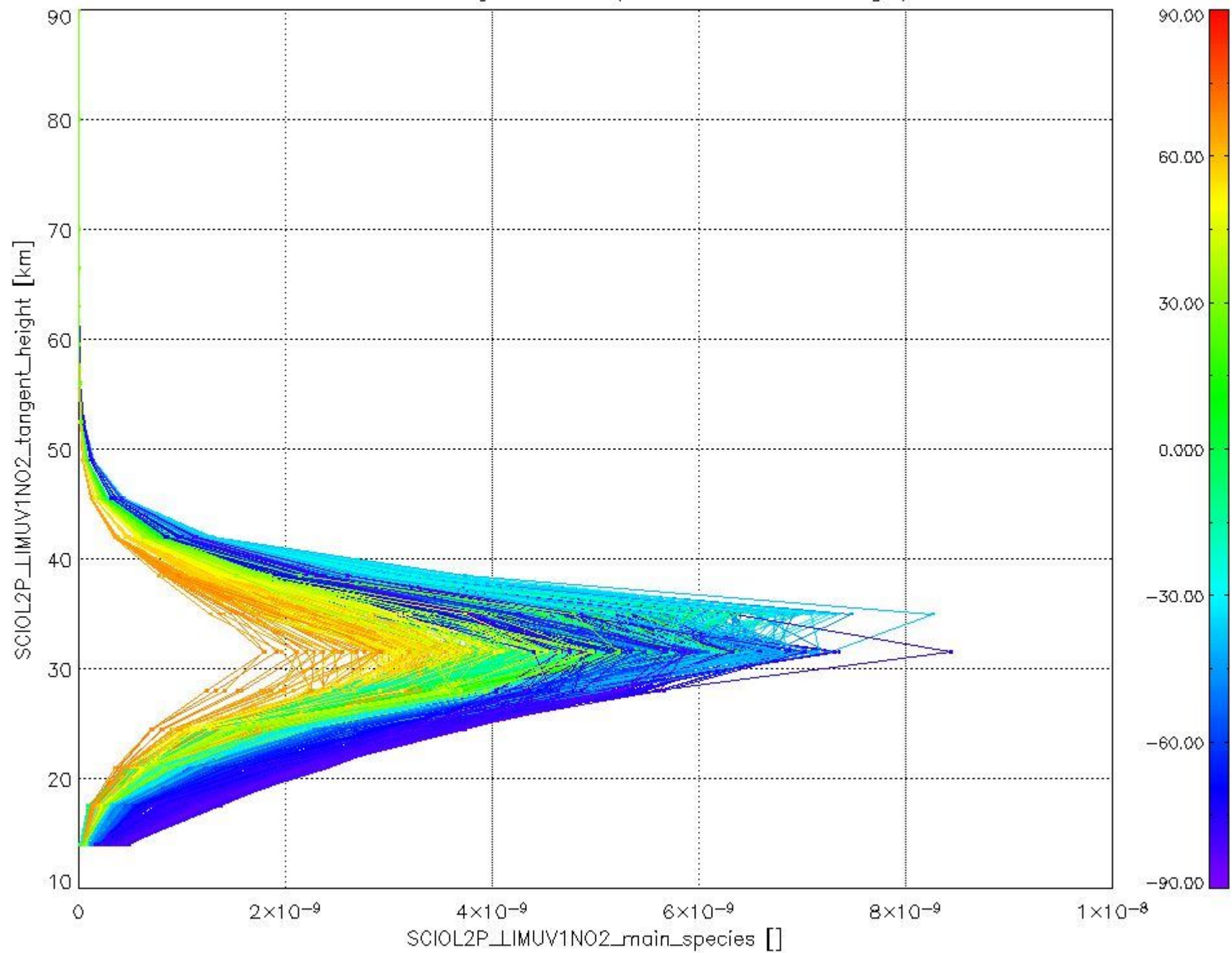


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





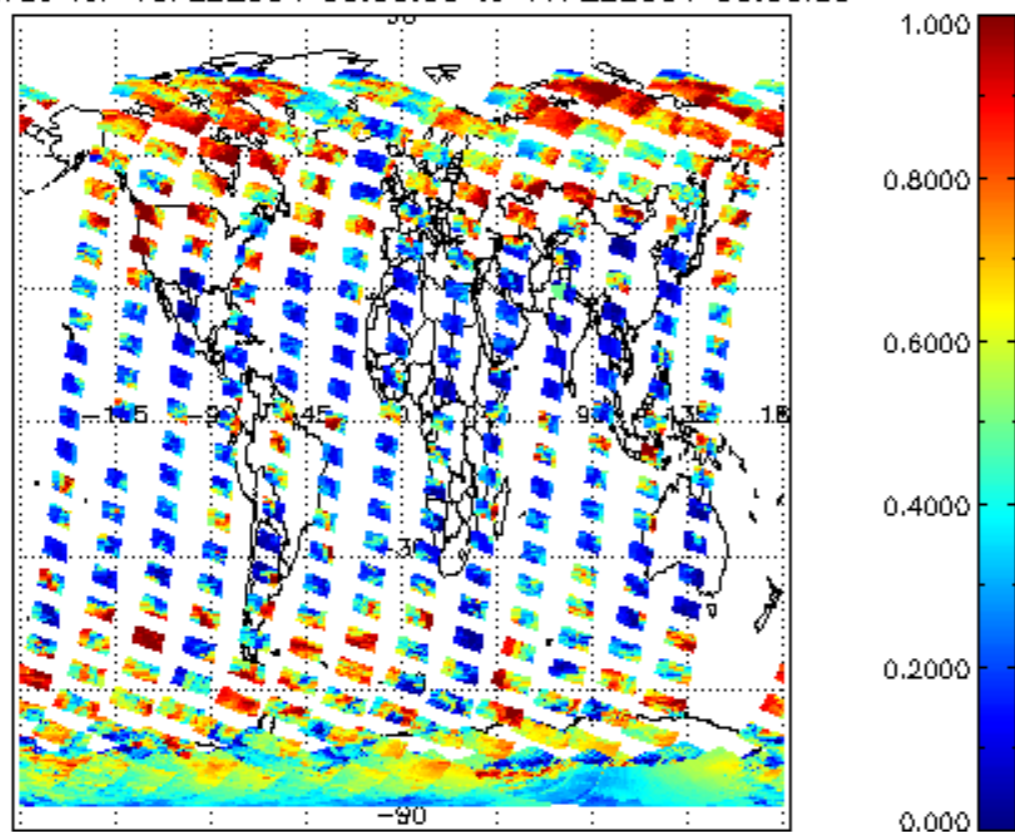
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



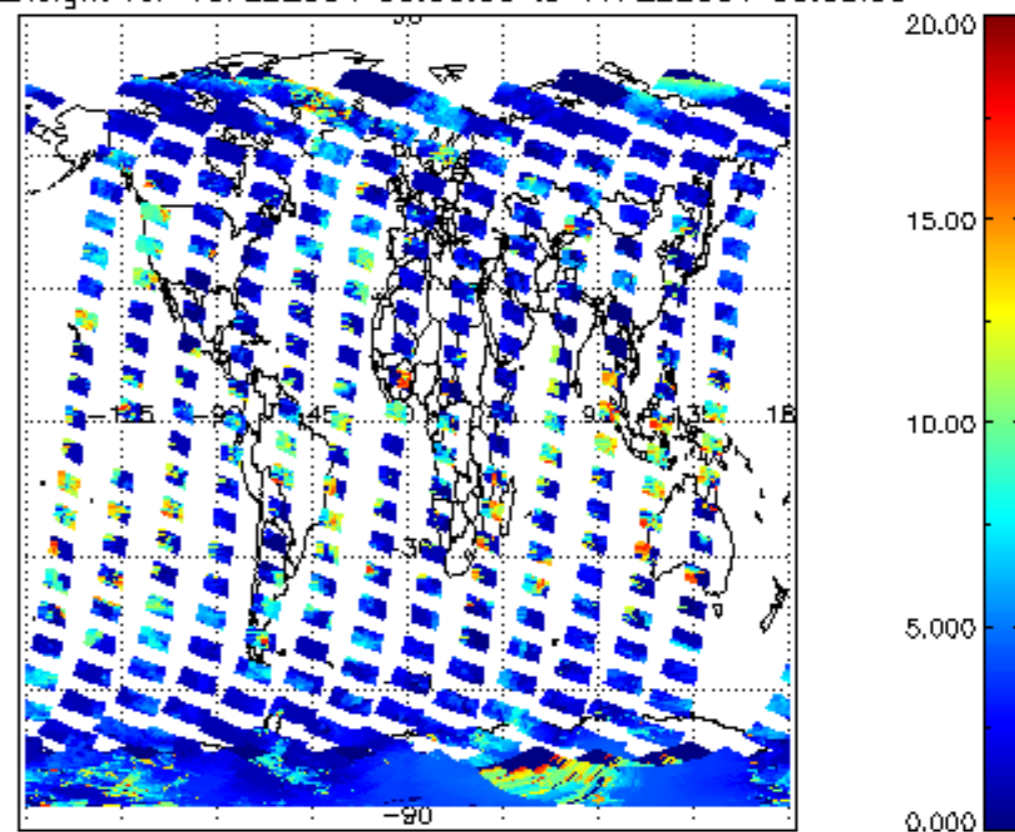
### 2.3 ADF monitoring

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

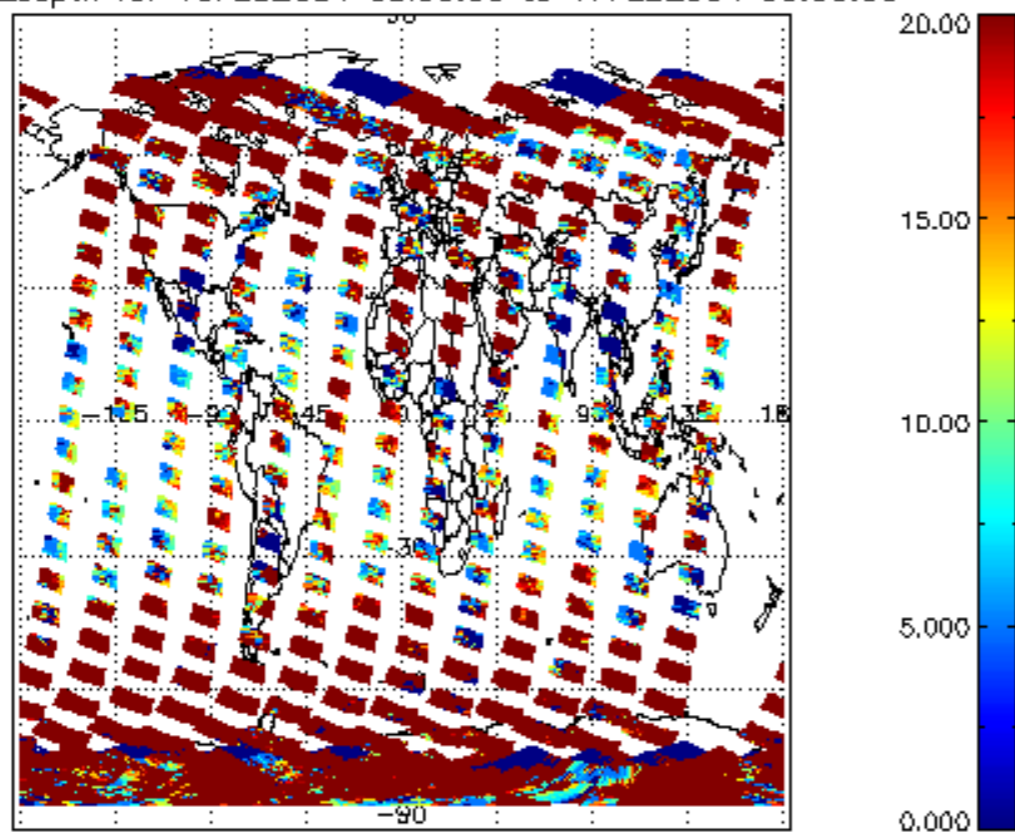
cl\_frac for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



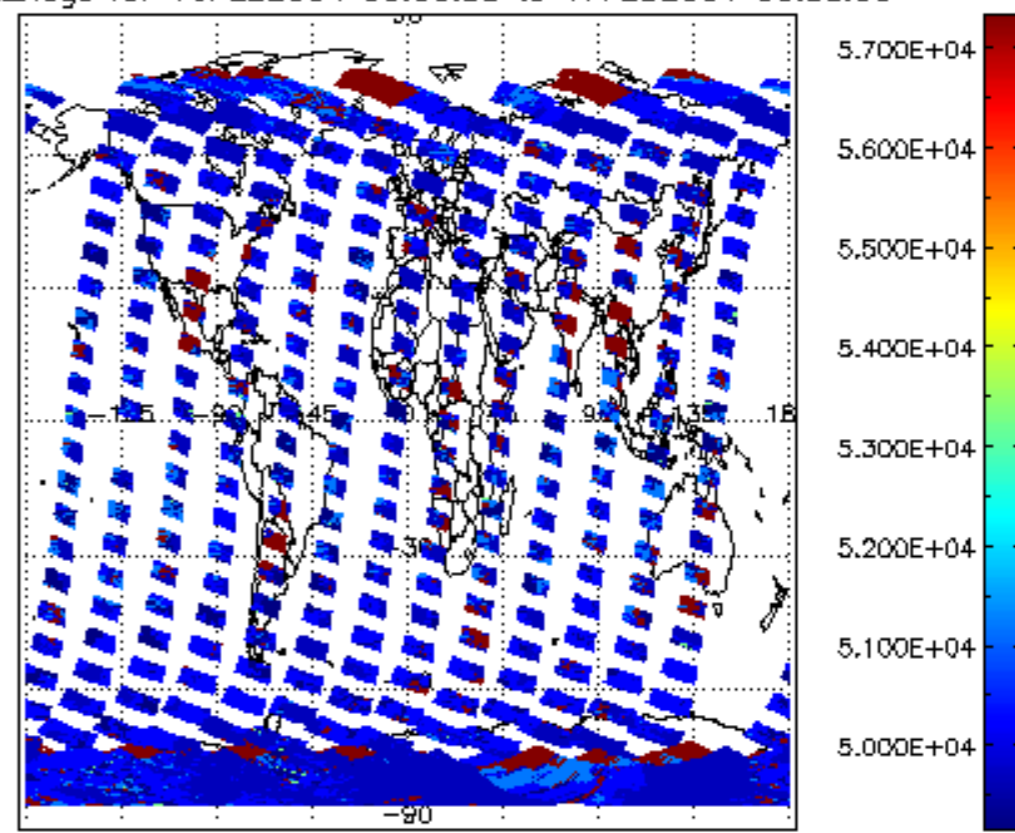
cl\_top\_height for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



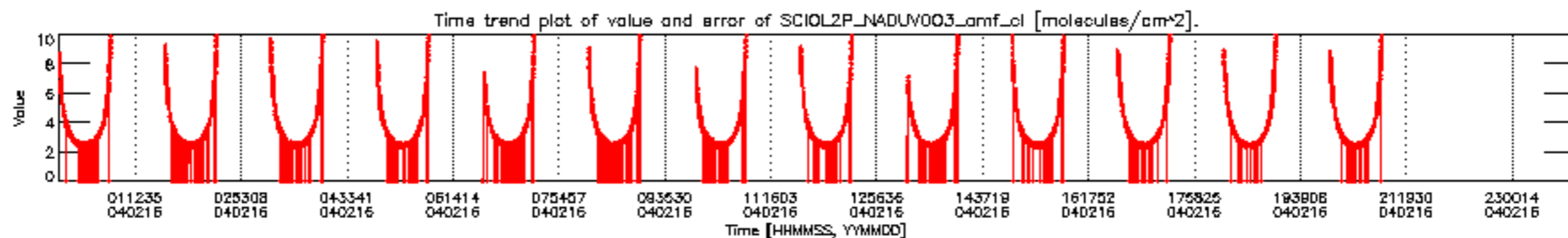
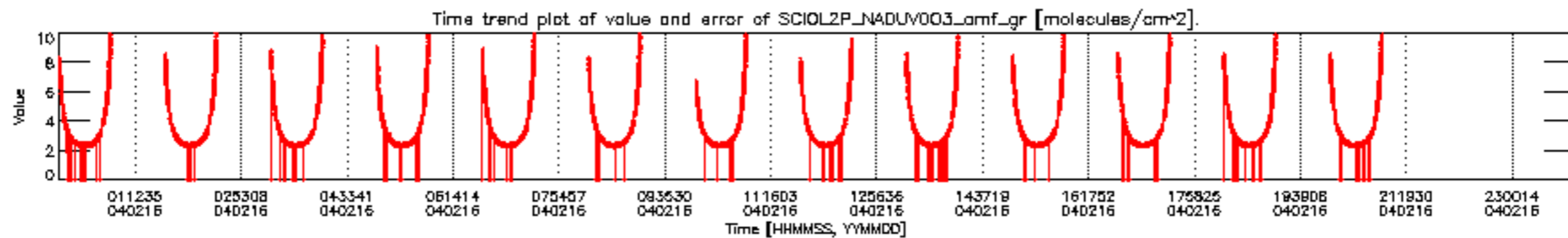
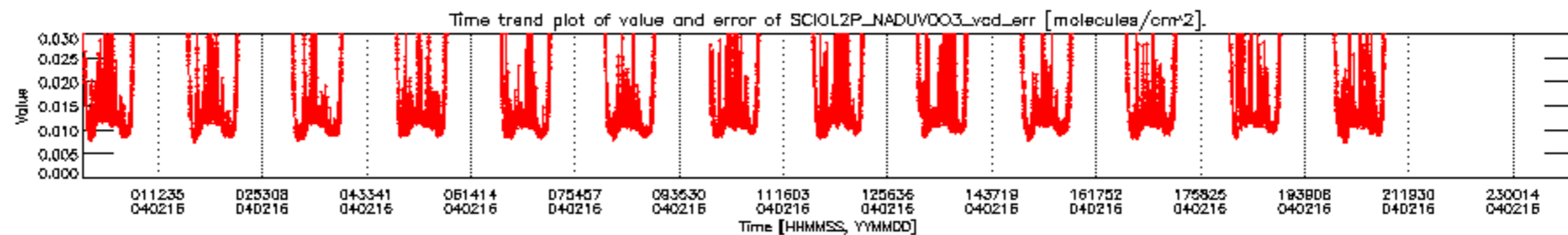
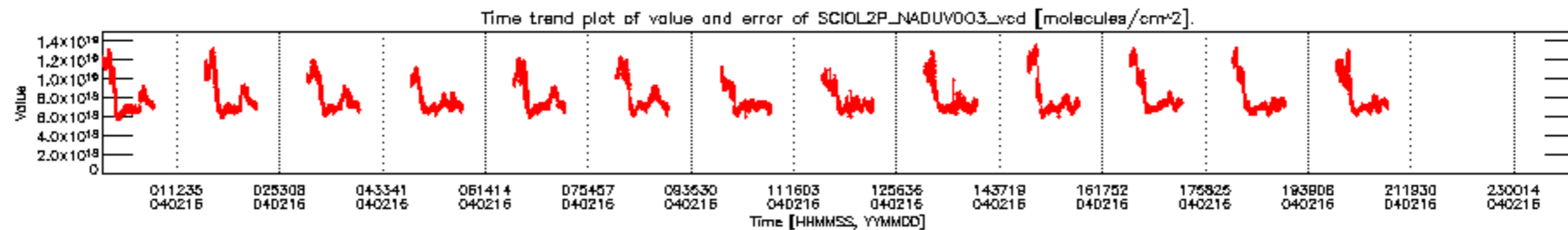
cl\_opt\_depth for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



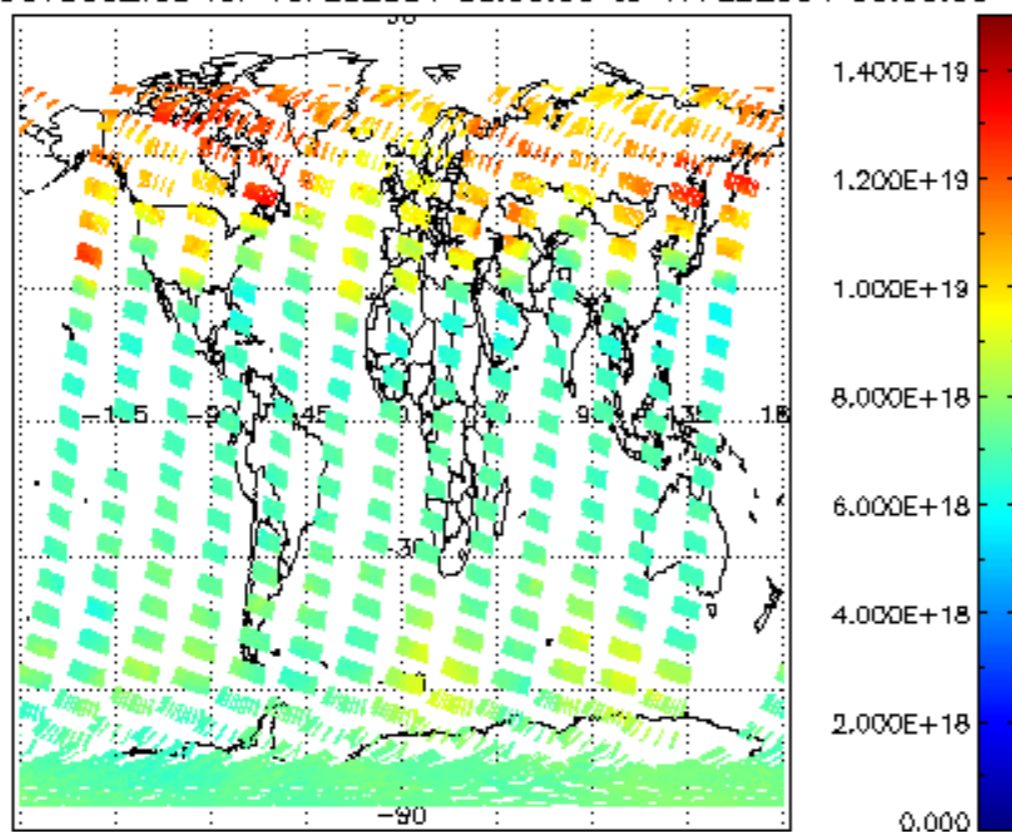
cloud\_flags for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



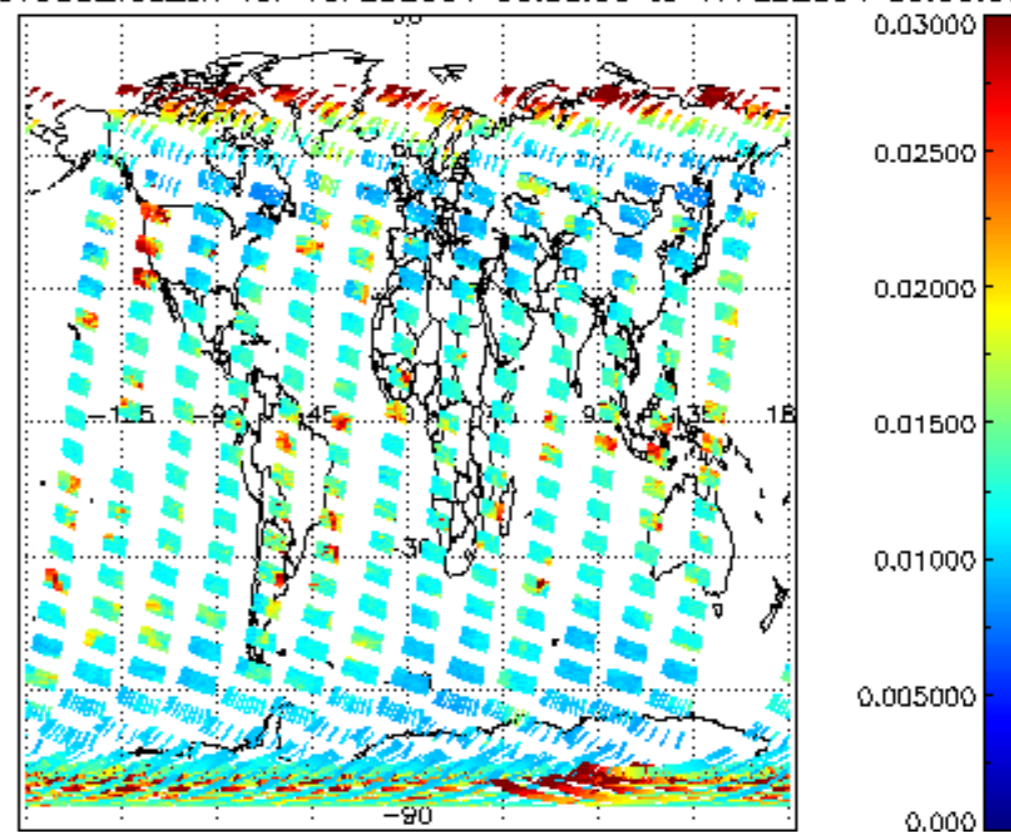




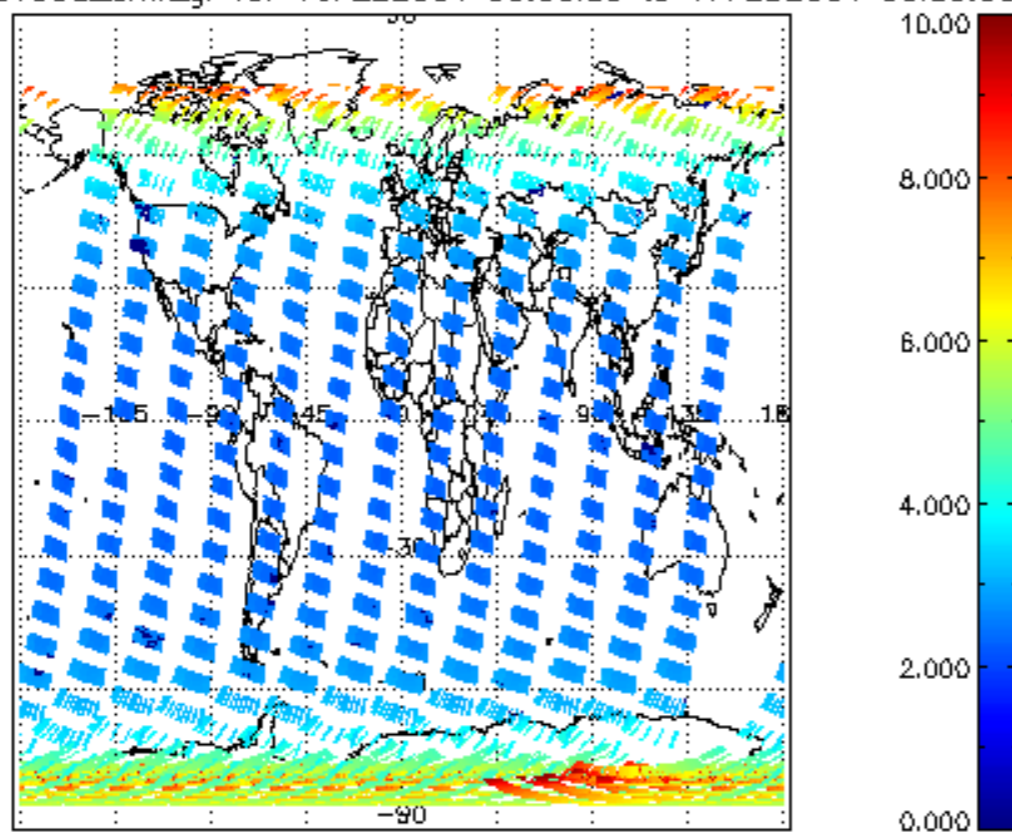
SCIOL2P\_NADUV003\_vcd for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



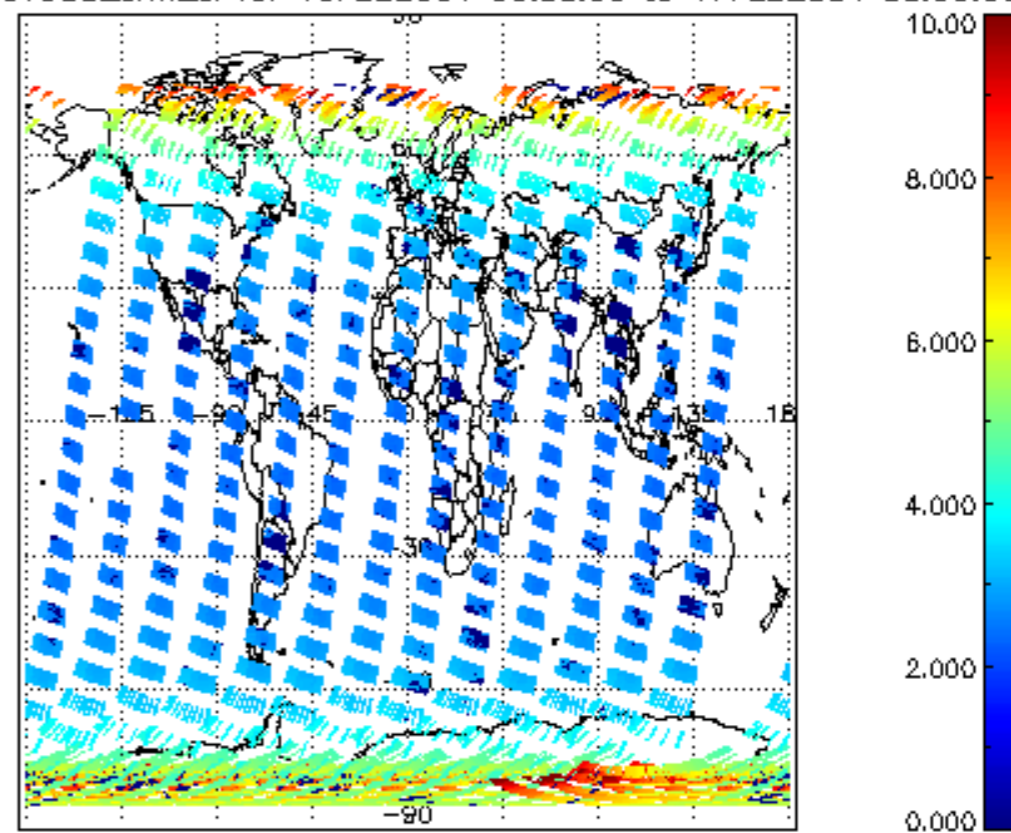
SCIOL2P\_NADUV003\_vcd\_err for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



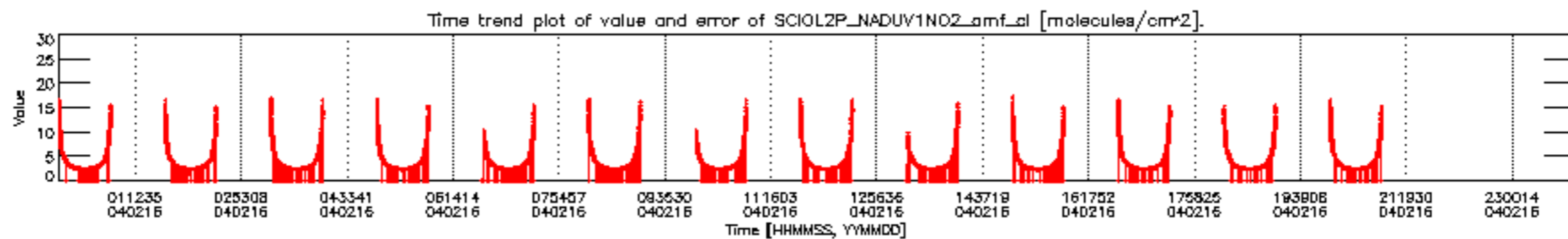
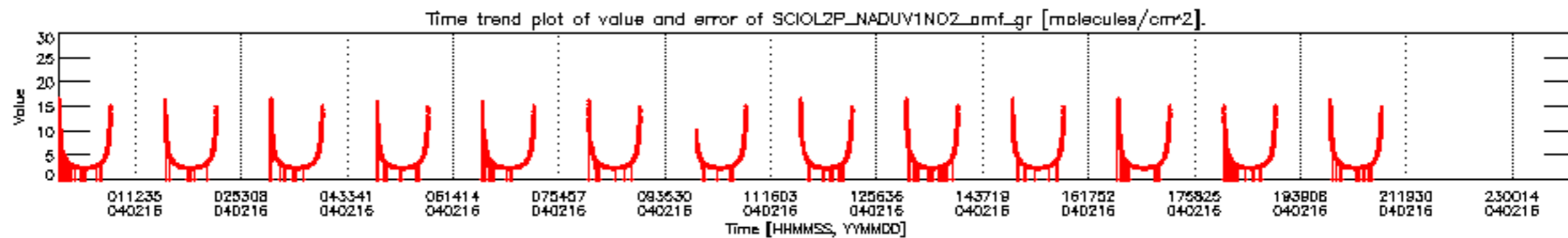
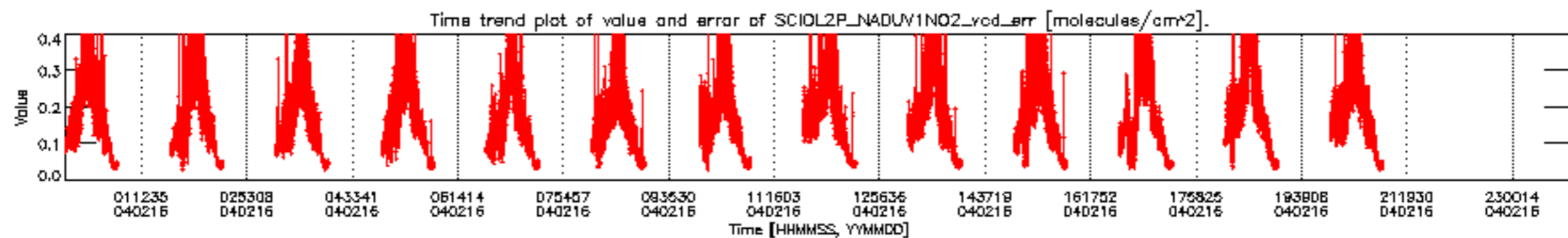
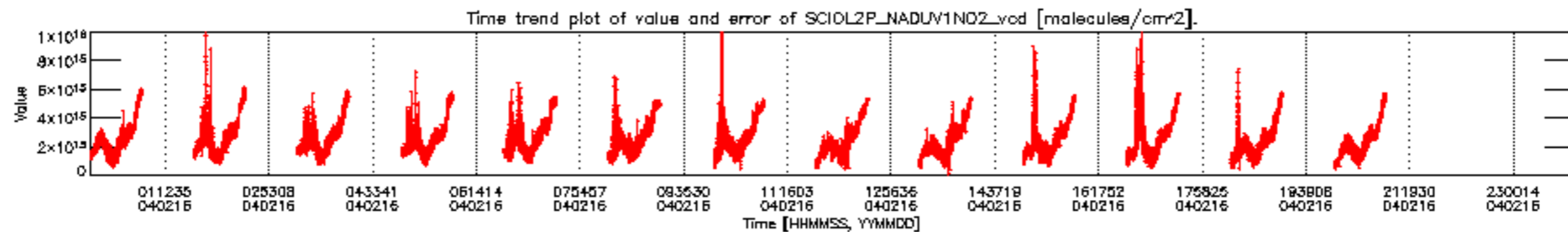
SCIOL2P\_NADUV003\_amf\_gr for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



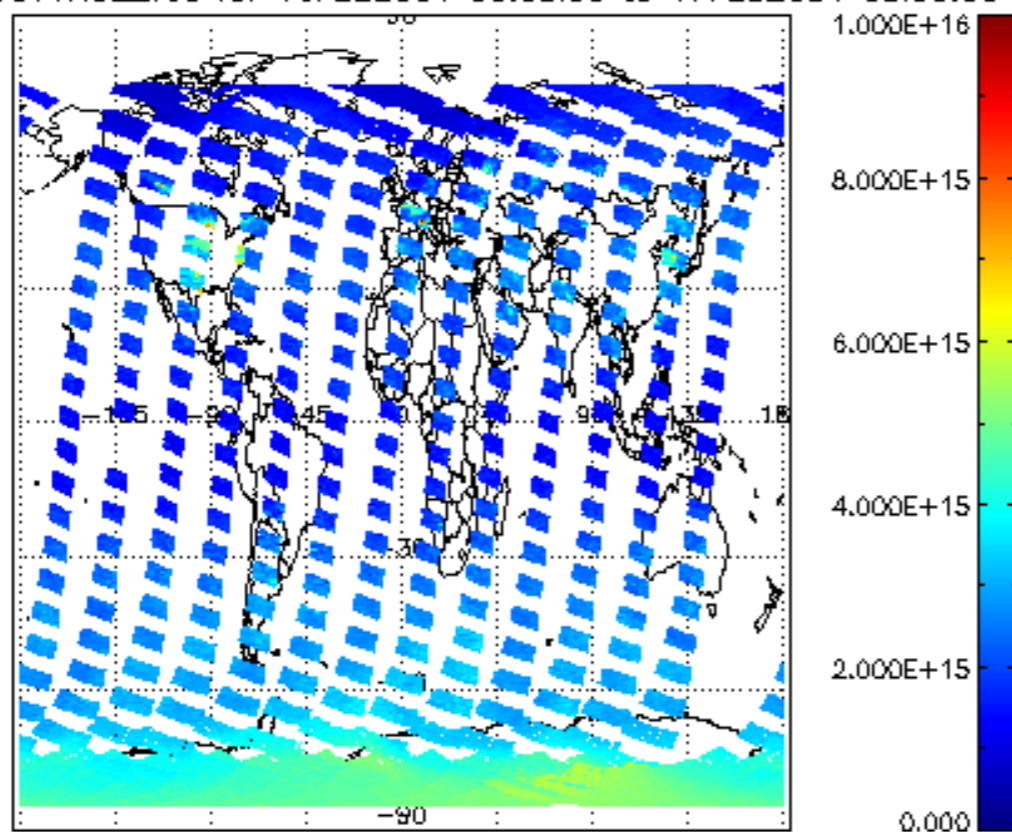
SCIOL2P\_NADUV003\_amf\_cl for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



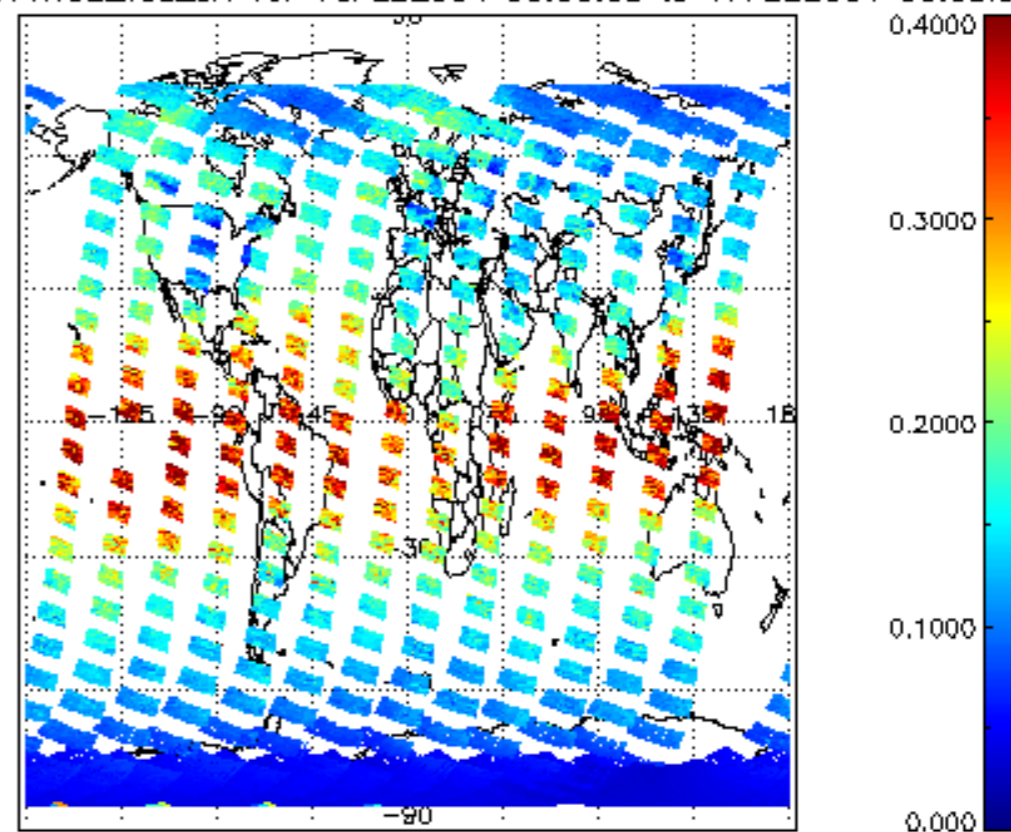




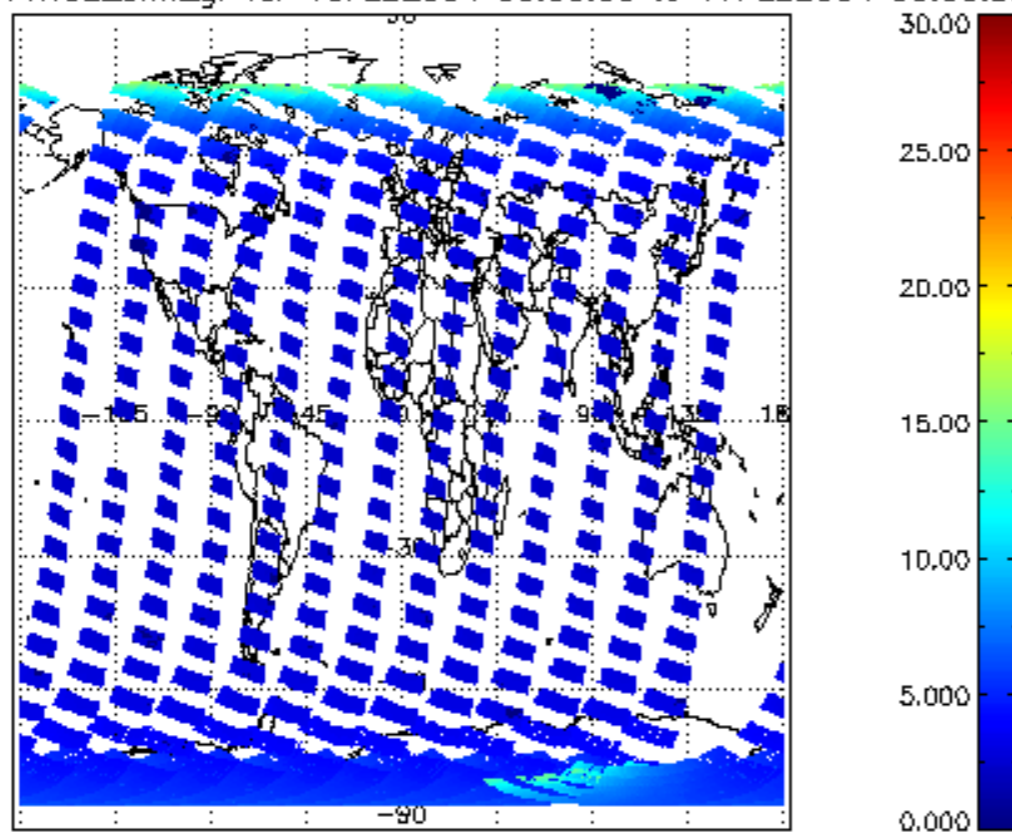
SCIOL2P\_NADUV1NO2\_vcd for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



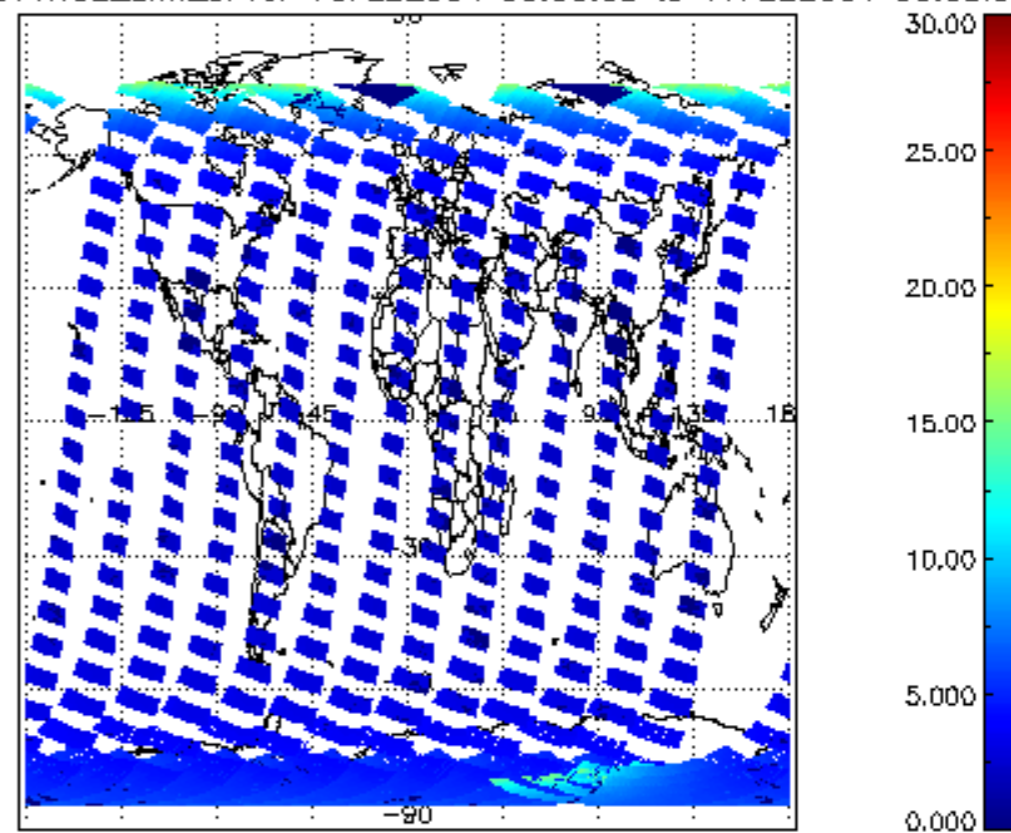
SCIOL2P\_NADUV1NO2\_vcd\_err for 16FEB2004 00:00:00 to 17FEB2004 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 16FEB2004 00:00:00 to 17FEB2004 00:00:00

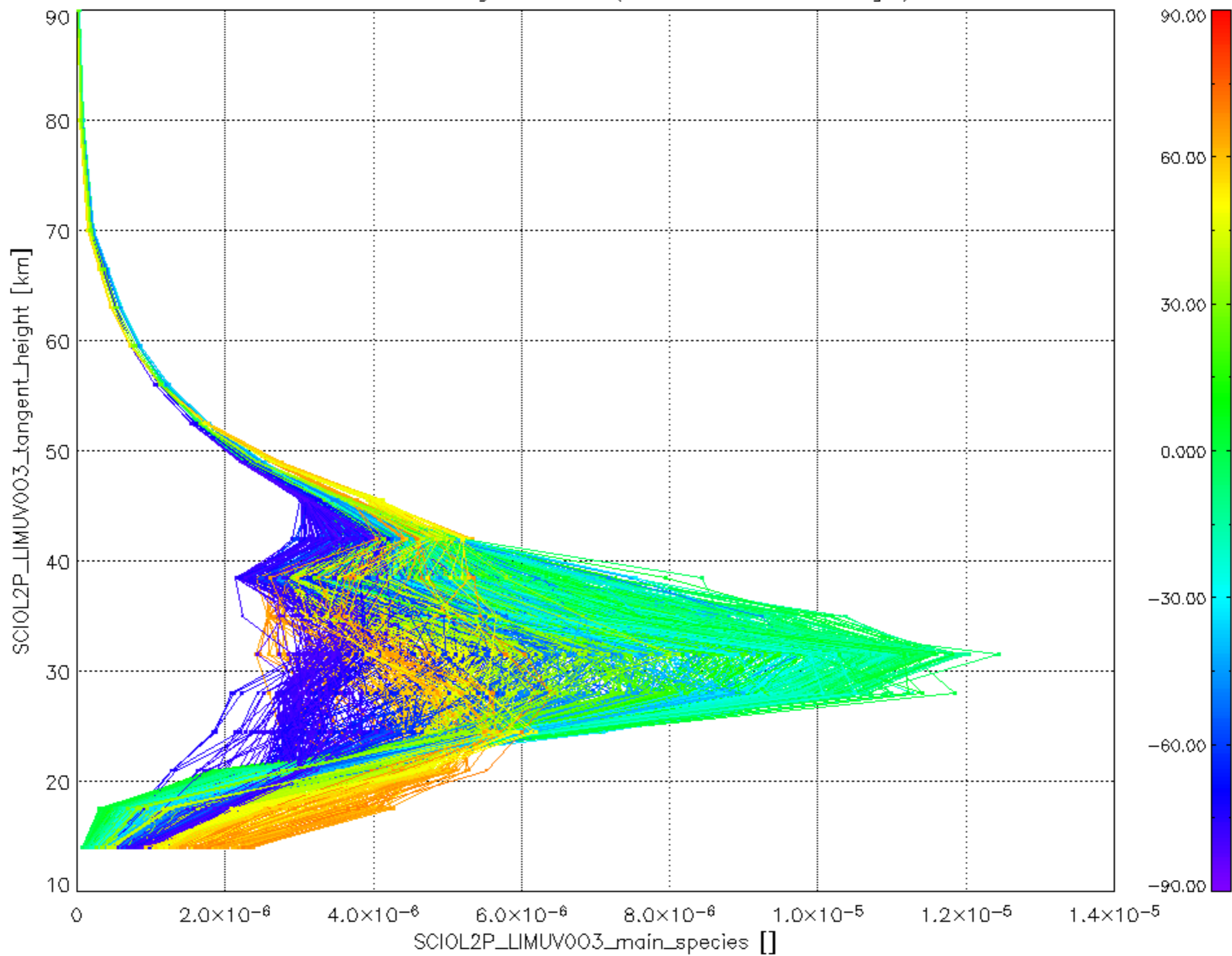


SCIOL2P\_NADUV1NO2\_amf\_cl for 16FEB2004 00:00:00 to 17FEB2004 00:00:00





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).

