

## 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	1.4 (06-11-2007)
Time of report generation	10APR2008 06:09:33
Data source version	SCIA-OL/3.01-R
Processing scope for products	19MAR2008 00:00:00 to 20MAR2008 00:00:00
Start time of first product within scope	18MAR2008 23:26:57
Stop time of last product within scope	19MAR2008 23:51:55
Total number of level 2 products	11
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__2PRDPA20080318_232657_000033872067_00016_31633_4849.N1	18MAR2008 23:26:57	19MAR2008 00:23:24	0	GOOD
1	SCI_OL__2PRDPA20080319_010733_000033782067_00017_31634_4920.N1	19MAR2008 01:07:33	19MAR2008 02:03:52	0	GOOD
2	SCI_OL__2PRDPA20080319_024808_000033702067_00018_31635_4921.N1	19MAR2008 02:48:08	19MAR2008 03:44:19	0	GOOD
3	SCI_OL__2PRDPA20080319_042844_000033622067_00019_31636_4922.N1	19MAR2008 04:28:44	19MAR2008 05:24:46	0	GOOD
4	SCI_OL__2PRDPA20080319_060919_000033532067_00020_31637_4923.N1	19MAR2008 06:09:19	19MAR2008 07:05:13	0	GOOD
5	SCI_OL__2PRDPA20080319_074955_000033452067_00021_31638_4924.N1	19MAR2008 07:49:55	19MAR2008 08:45:40	0	GOOD
6	SCI_OL__2PRDPA20080319_093030_000034052067_00022_31639_4925.N1	19MAR2008 09:30:30	19MAR2008 10:27:15	0	GOOD
7	SCI_OL__2PRDPA20080319_175352_000033472067_00027_31644_5025.N1	19MAR2008 17:53:52	19MAR2008 18:49:40	0	GOOD
8	SCI_OL__2PRDPA20080319_193427_000033272067_00028_31645_5026.N1	19MAR2008 19:34:27	19MAR2008 20:29:55	0	GOOD
9	SCI_OL__2PRDPA20080319_211439_000034102067_00029_31646_5027.N1	19MAR2008 21:14:39	19MAR2008 22:11:29	0	GOOD
10	SCI_OL__2PRDPA20080319_225514_000034012067_00030_31647_5028.N1	19MAR2008 22:55:14	19MAR2008 23:51:55	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: 84744

Total number of cloud data DSRs with good quality flag (=0): 84744 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	84744	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	84744	0.18097	0.12500	0.12500	0.25000	0.062158	s
SURFACE_PRES	84744	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	84744	0.40529	0.36687	0.0000	1.0000	0.30383	-
CL_FRAC_ERR	84744	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	84744	5.7910	4.0000	4.0000	8.0000	1.9891	-
PMD_READ_CL[0]	84744	0.29261	0.0000	0.0000	8.0000	1.1986	-
PMD_READ_CL[1]	84744	0.99424	0.0000	0.0000	8.0000	2.2091	-

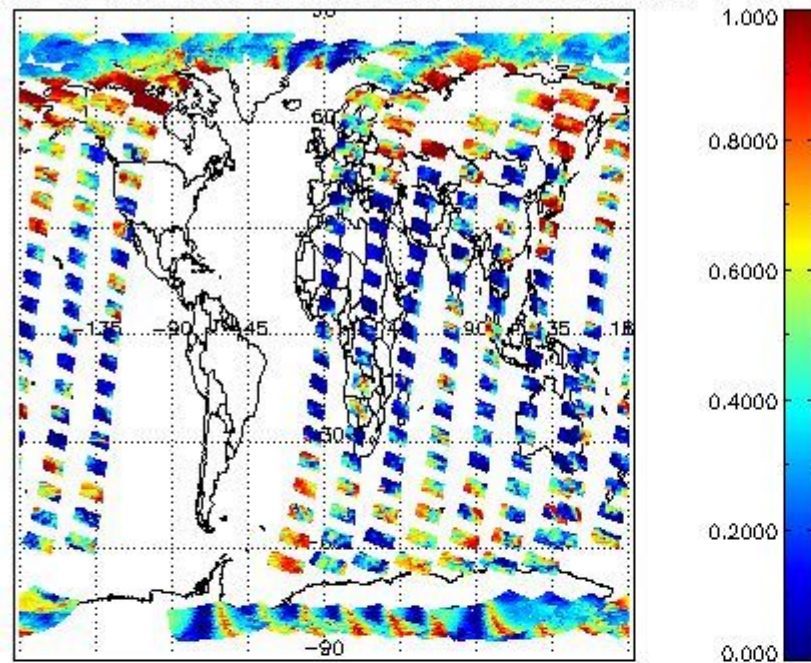
CL_TOP_HEIGHT	71213	3.4794	1.6369	0.0000	17.000	3.8509	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	71213	56.839	49.336	0.0000	101.00	39.831	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	84744	11100000	11100000	11100000	11100000	0.0000	flags. Bit definition = 0: low or high cloud; 1: ice or water cloud; 2: thick or thin cloud; 3-15: not used
CLOUD_FLAGS	84744	11001010	11000100	11000000	11100000	3266.2	flags
AERO_ABSO_IND	84744	3.2019	3.6237	-1.5464	14.259	1.9284	
AERO_IND_DIAG	84744	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	84744	01100110	11000000	00000000	11000000	24514.	flags

Time and geolocation plots:

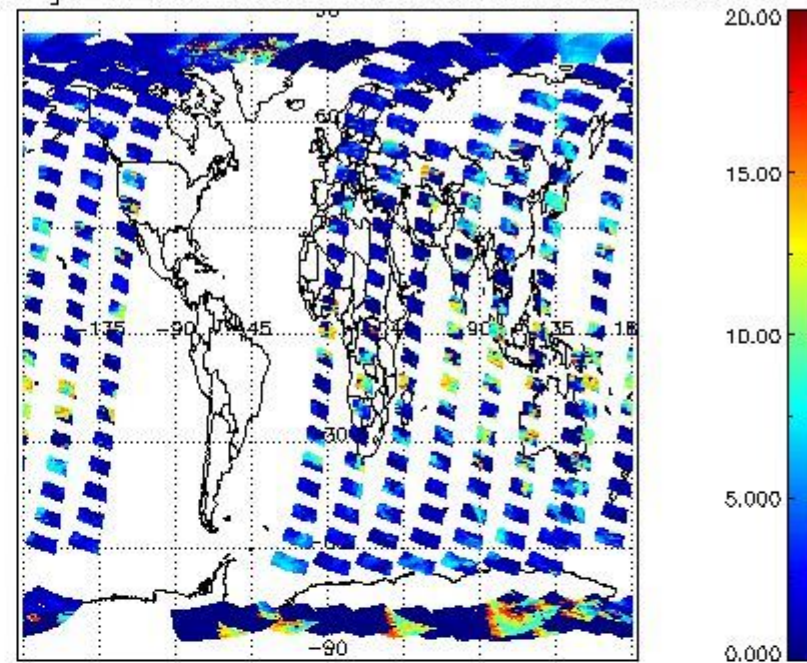
Plots are available for the following parameters:

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

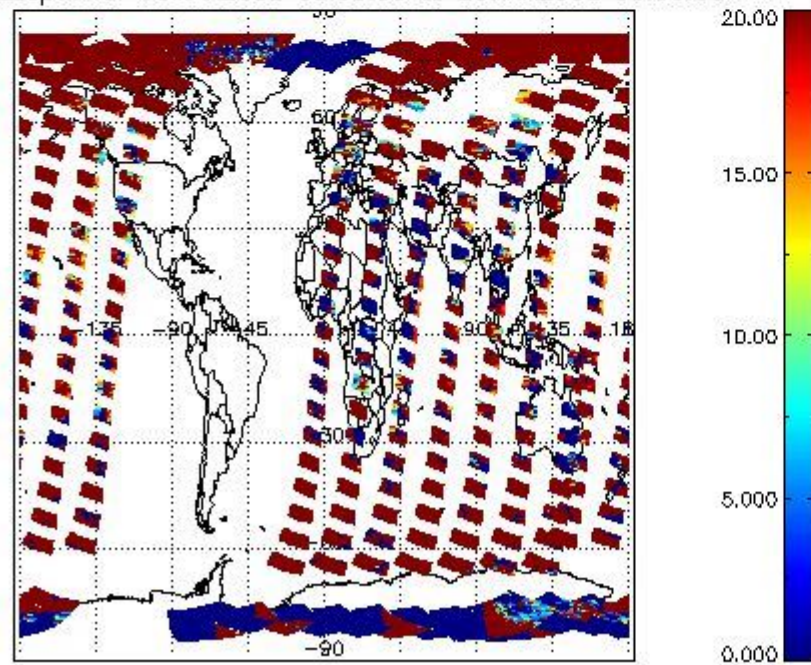
cLfrac for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



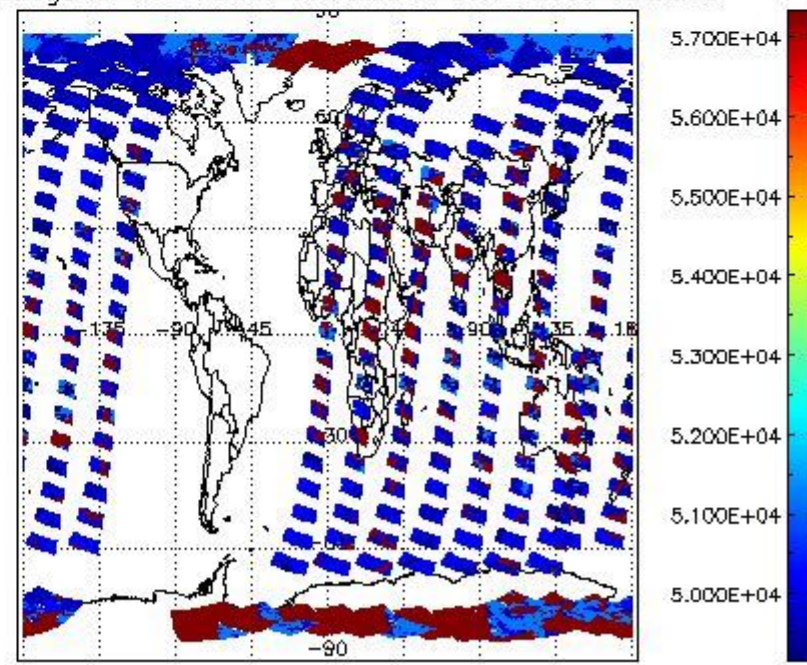
cLtop\_height for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



cLopt\_depth for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



cloud\_flags for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



### 2.2.2 Nadir

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

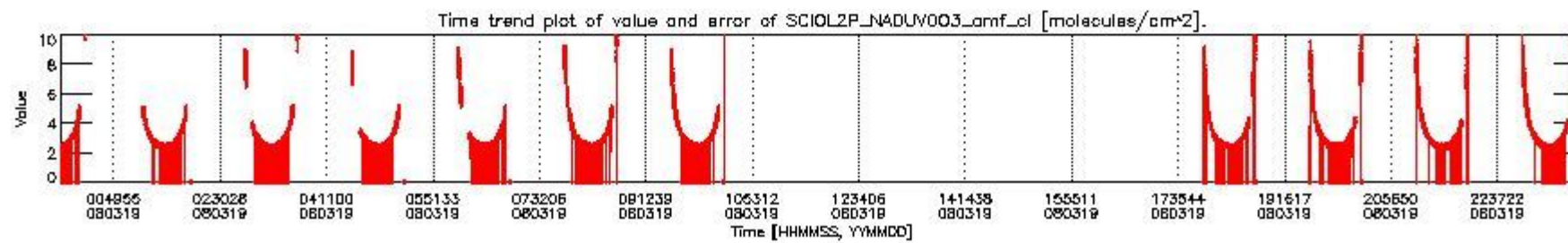
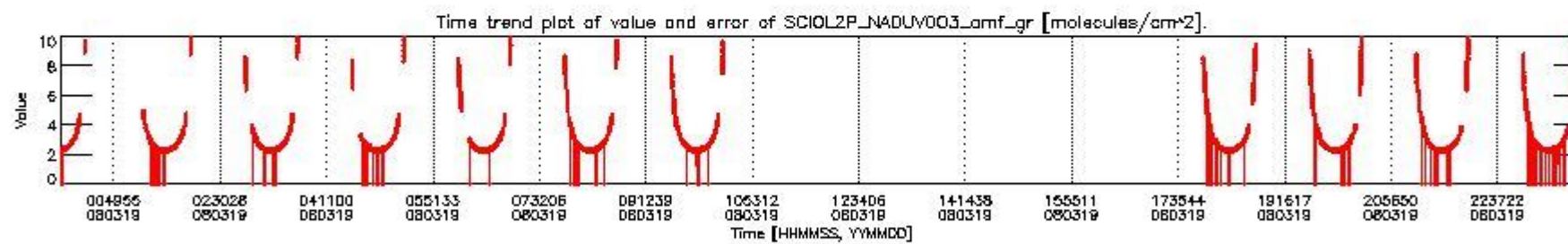
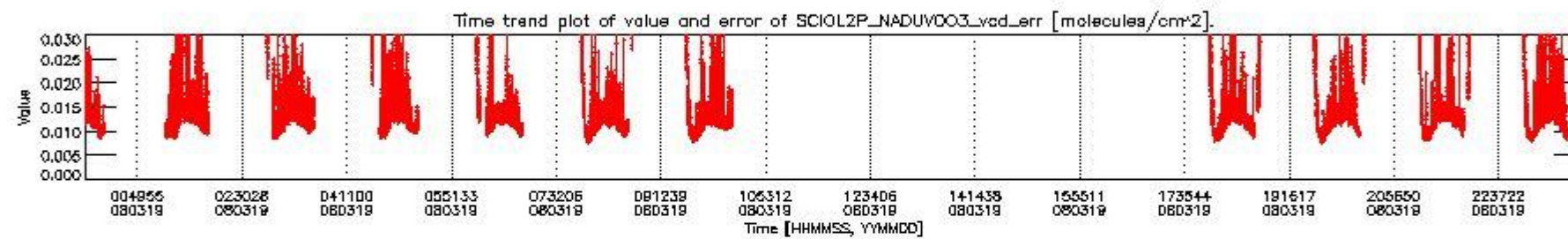
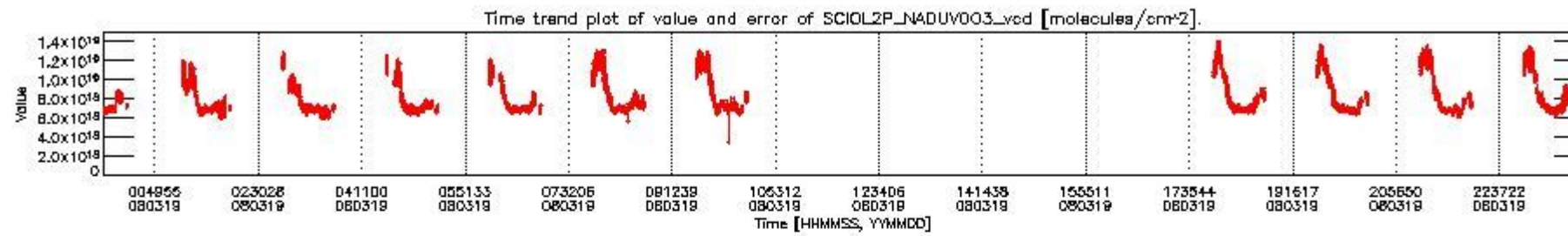
The following data items are currently included into this section:

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



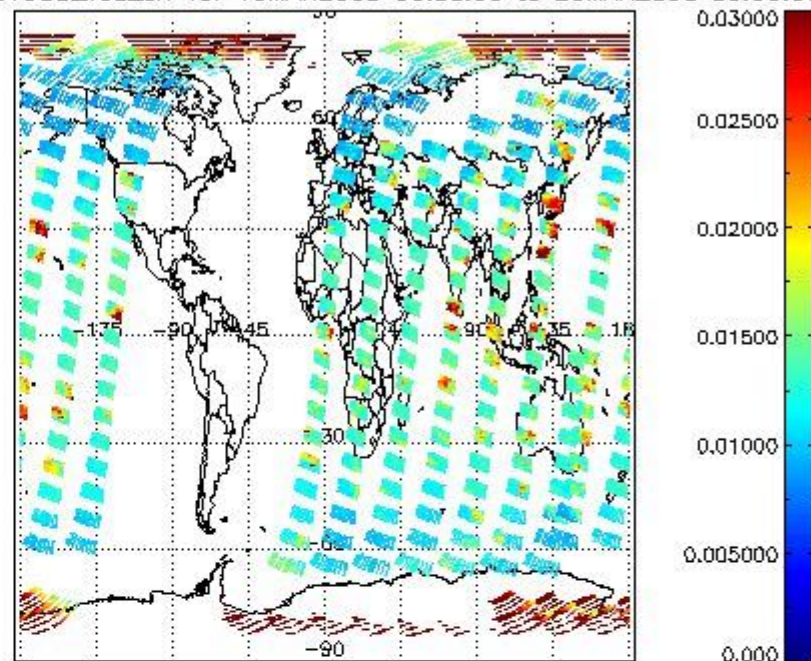
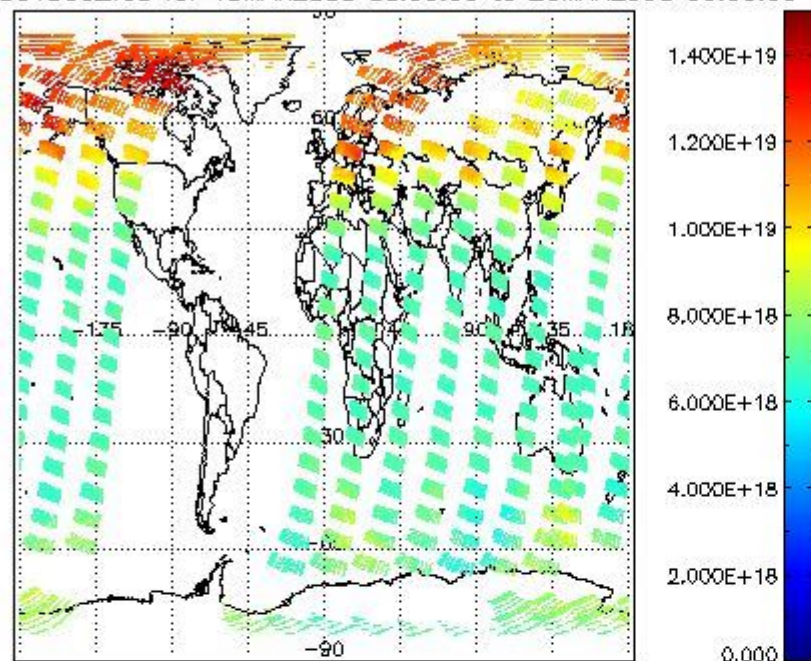
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

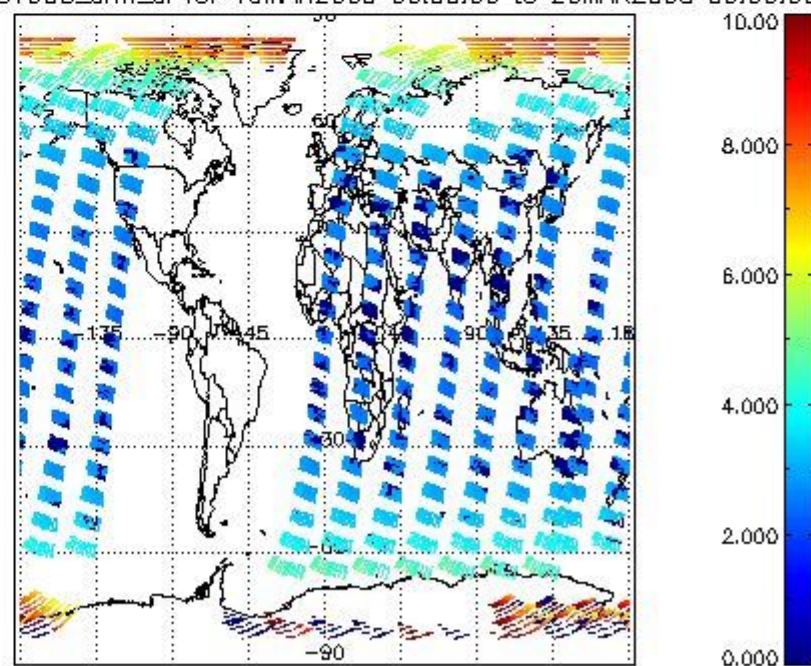
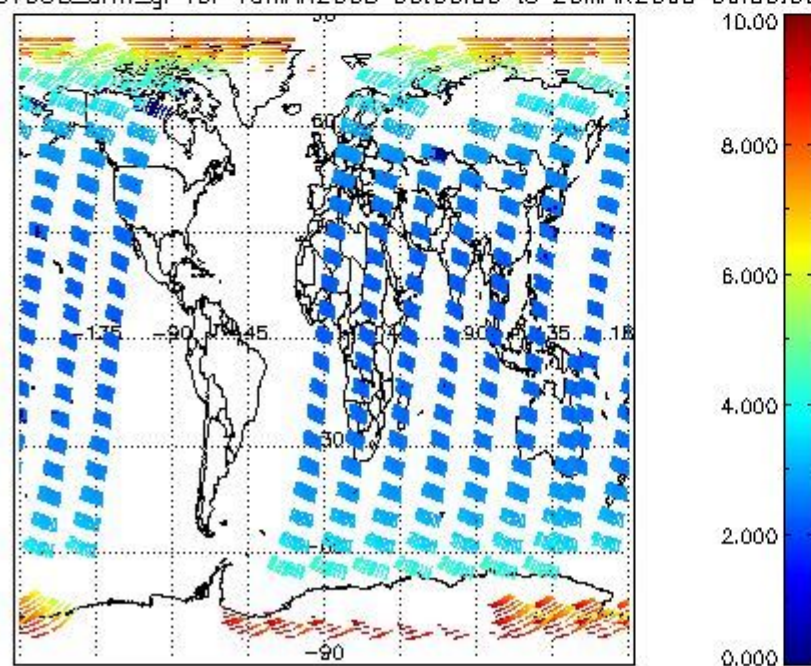




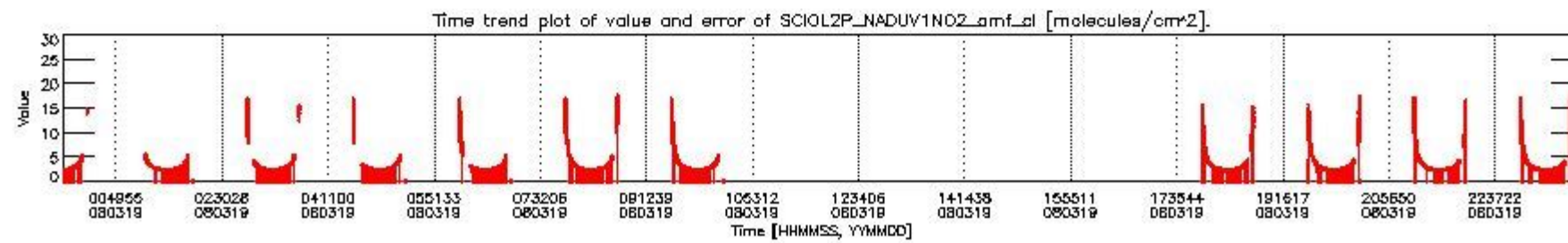
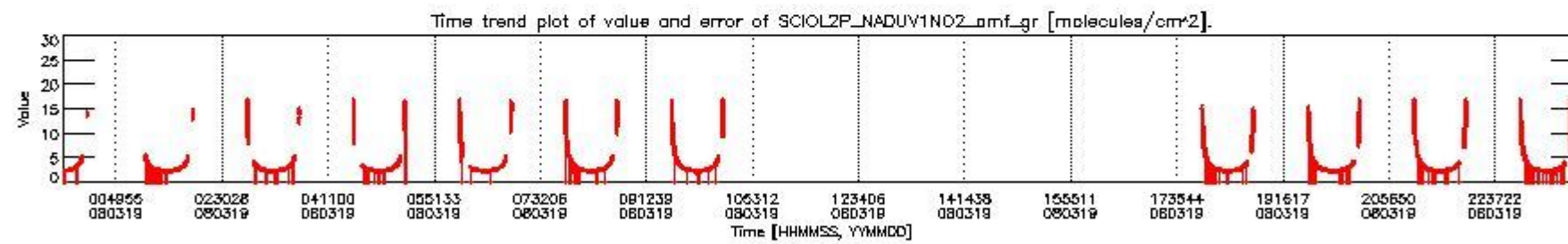
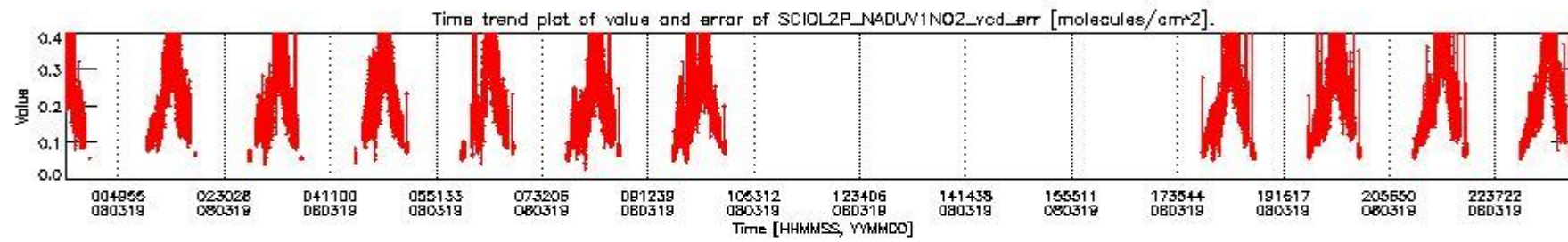
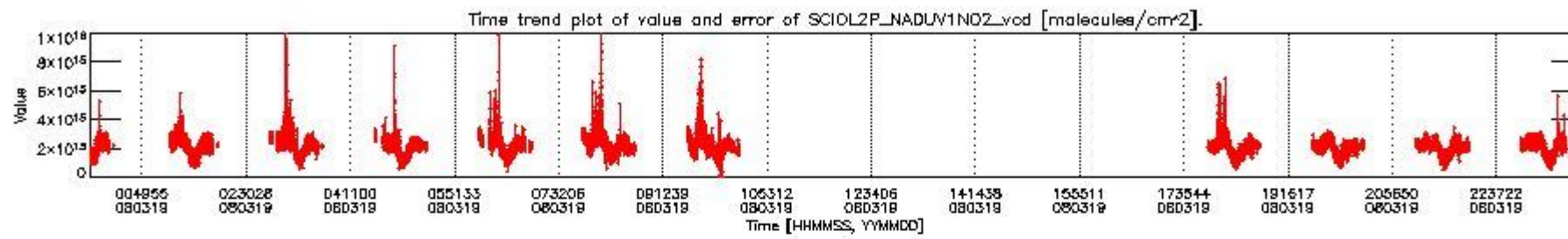
SCIOL2P\_NADUV003\_vcd for 19MAR2008 00:00:00 to 20MAR2008 00:00:00    SCIOL2P\_NADUV003\_vcd\_err for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



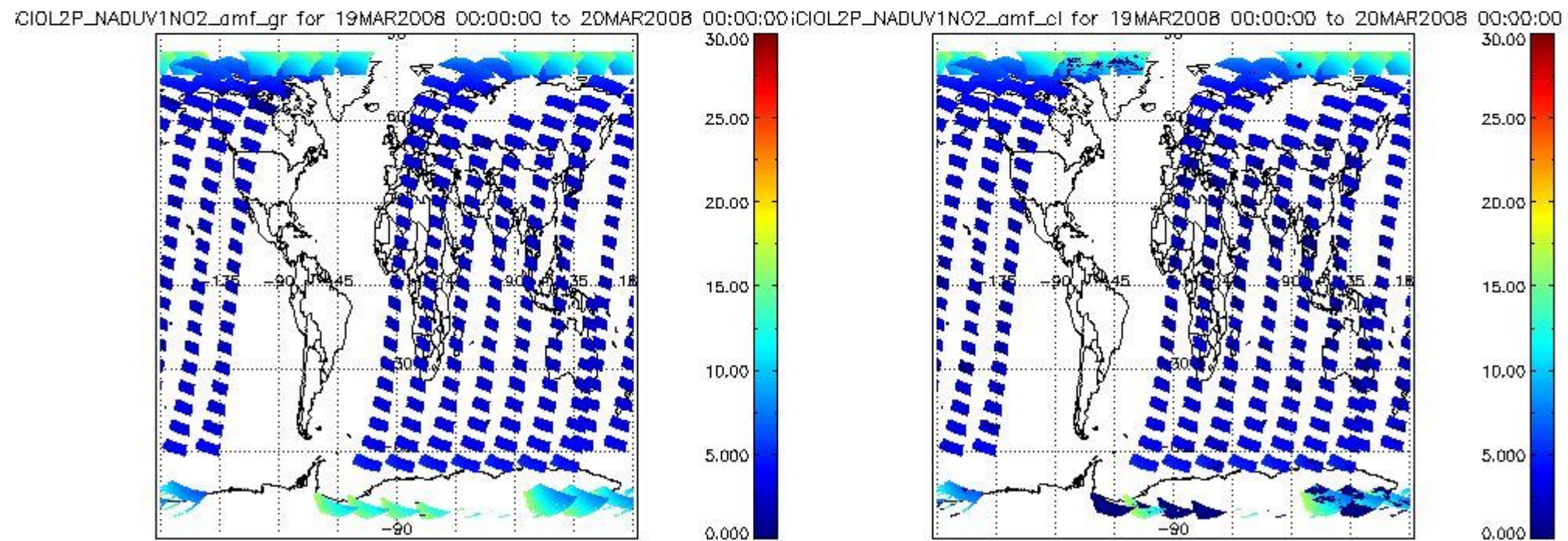
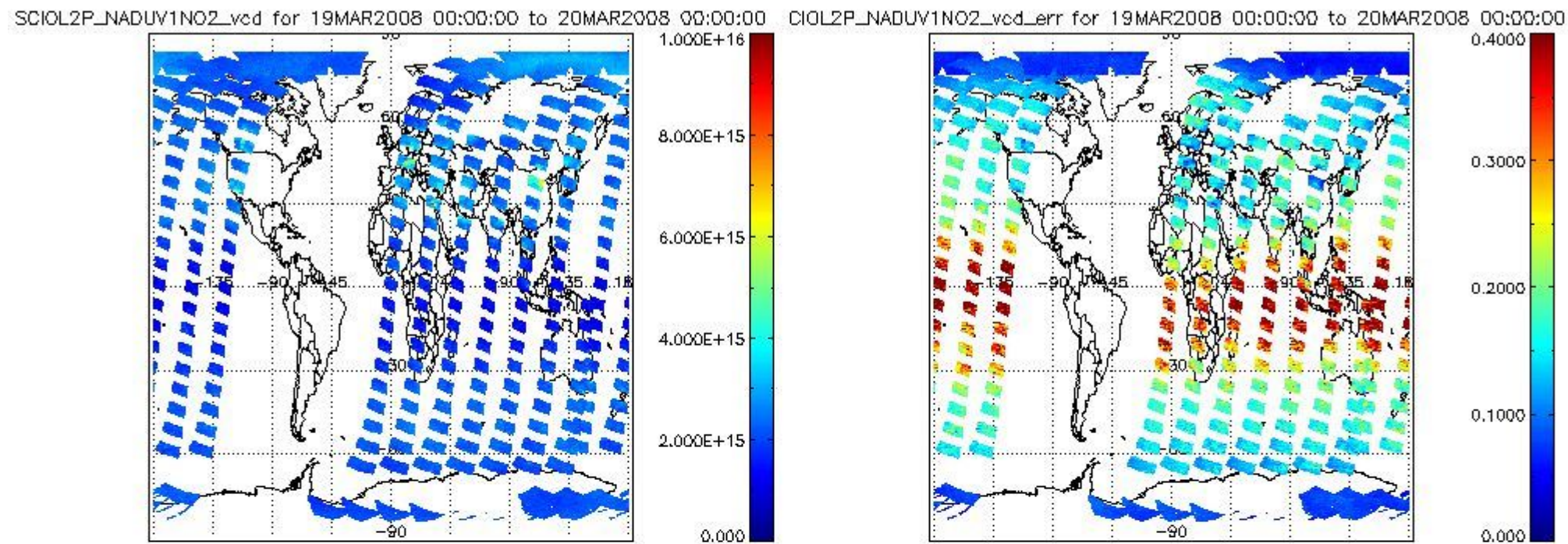
SCIOL2P\_NADUV003\_amf\_gr for 19MAR2008 00:00:00 to 20MAR2008 00:00:00    SCIOL2P\_NADUV003\_amf\_cl for 19MAR2008 00:00:00 to 20MAR2008 00:00:00











### 2.2.3 Limb

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

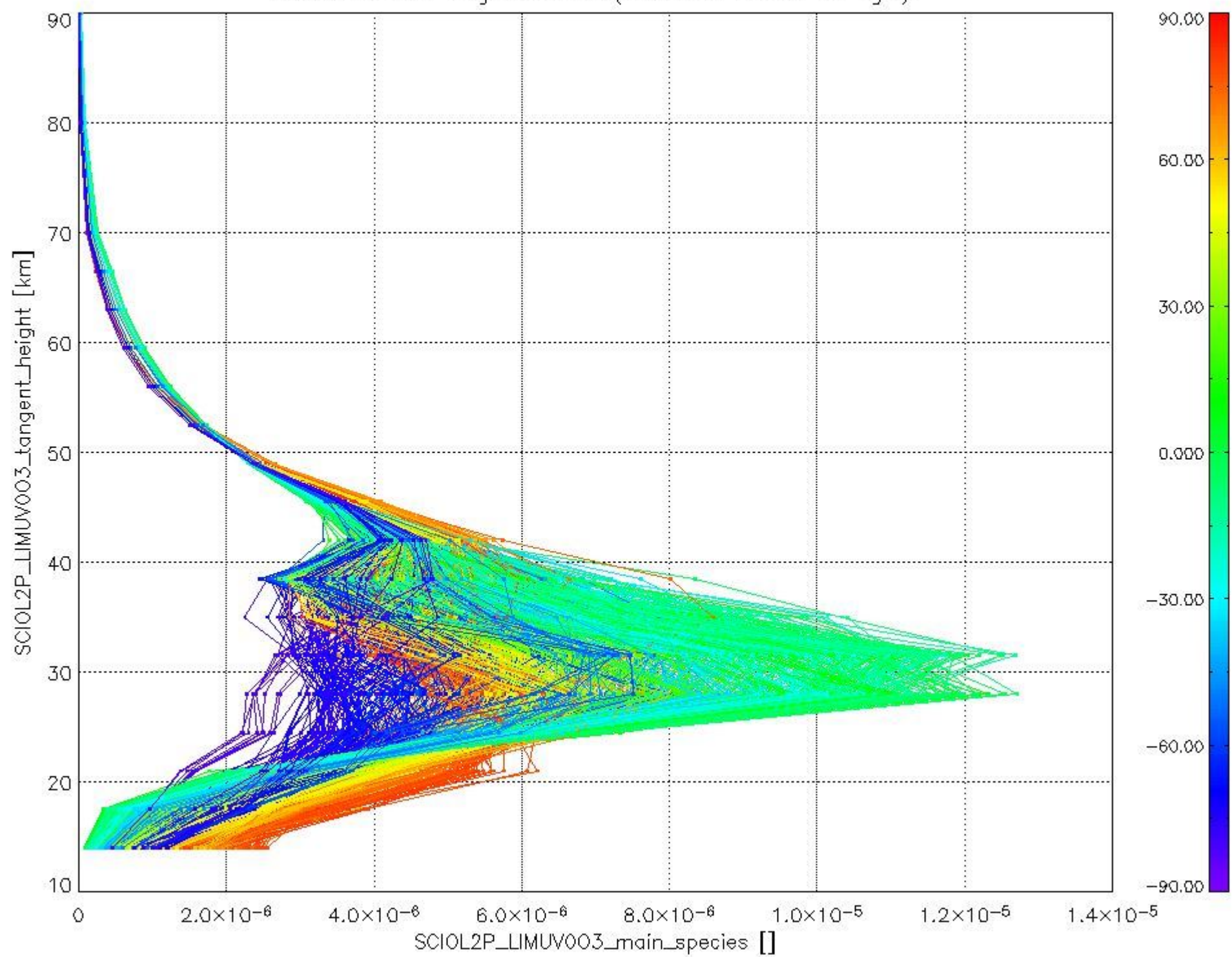
The following data items are currently included into this section:

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.

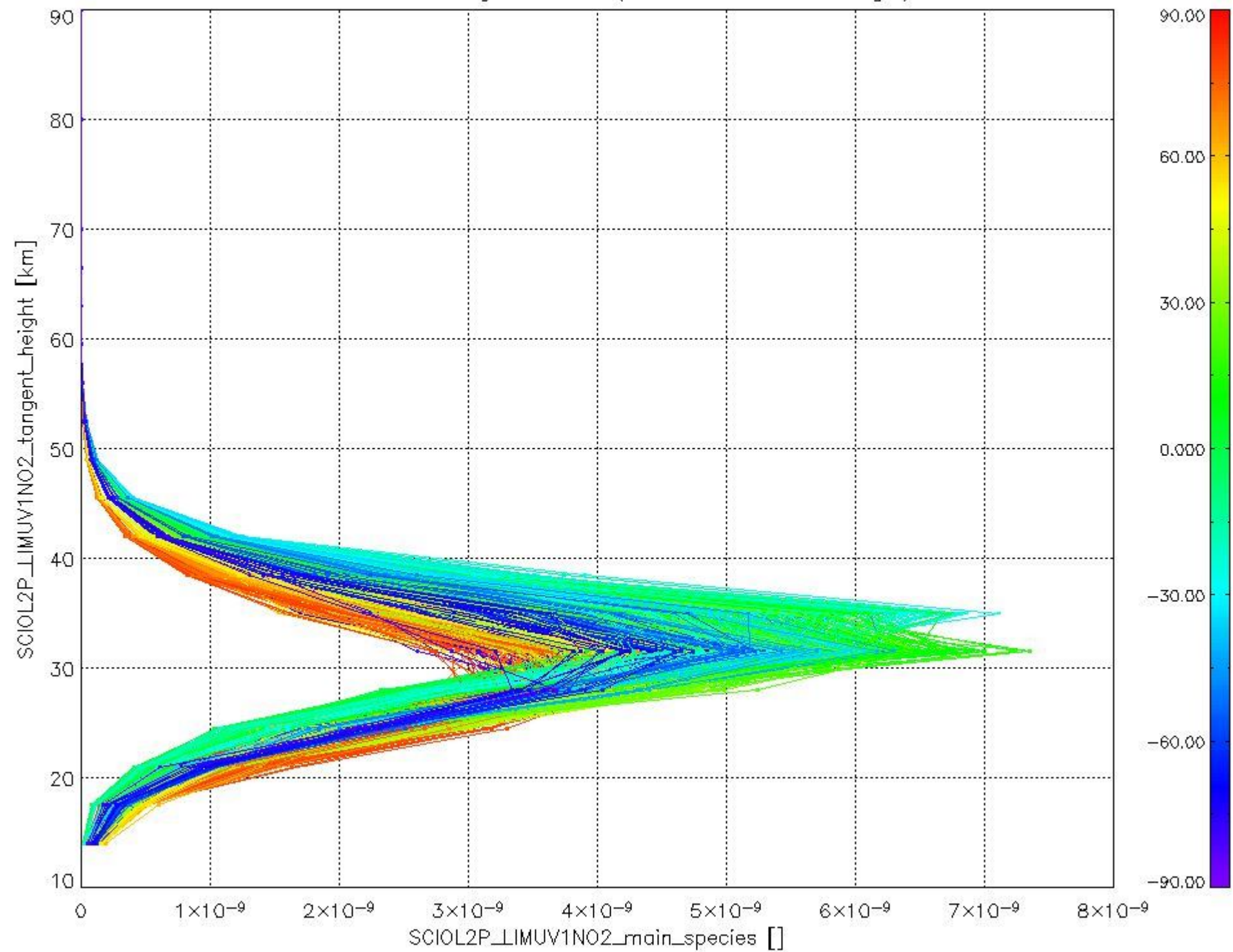


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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

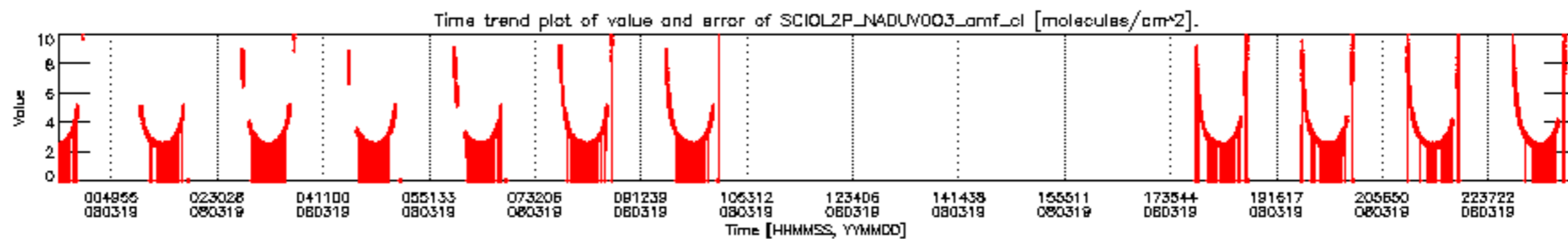
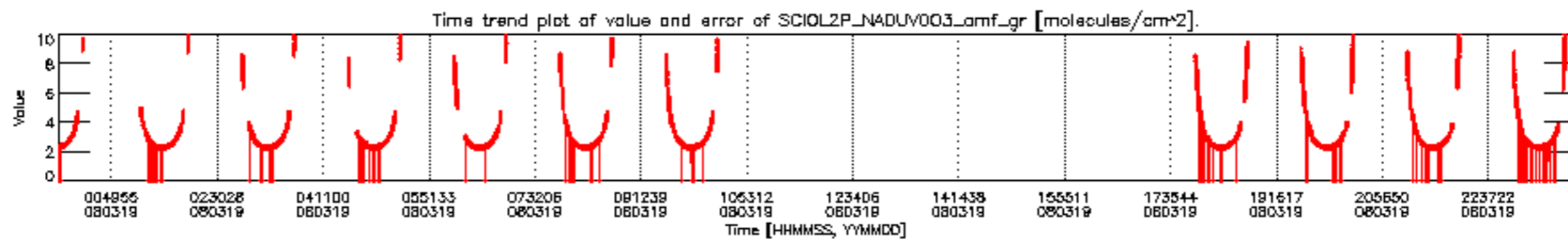
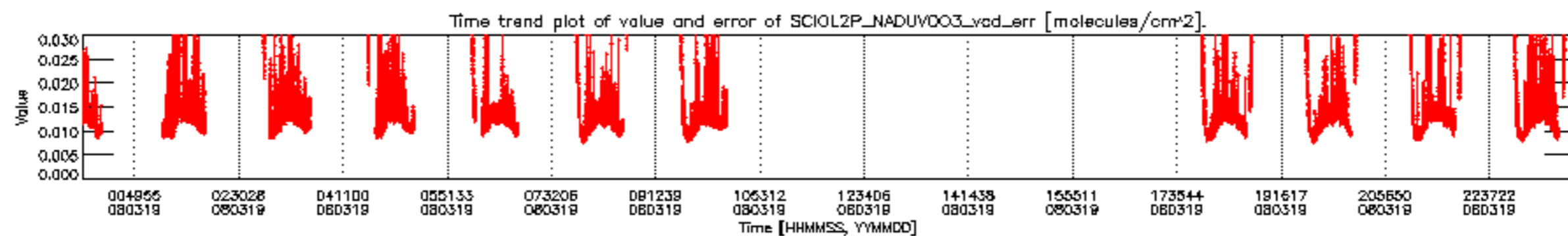
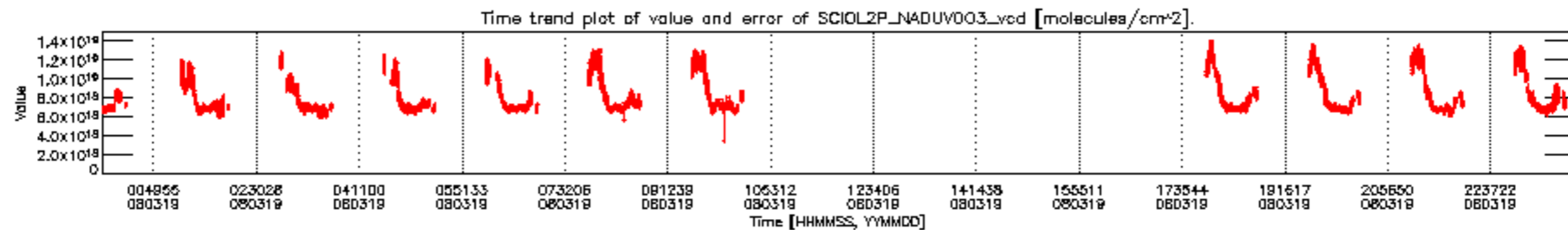


### 2.3 ADF monitoring

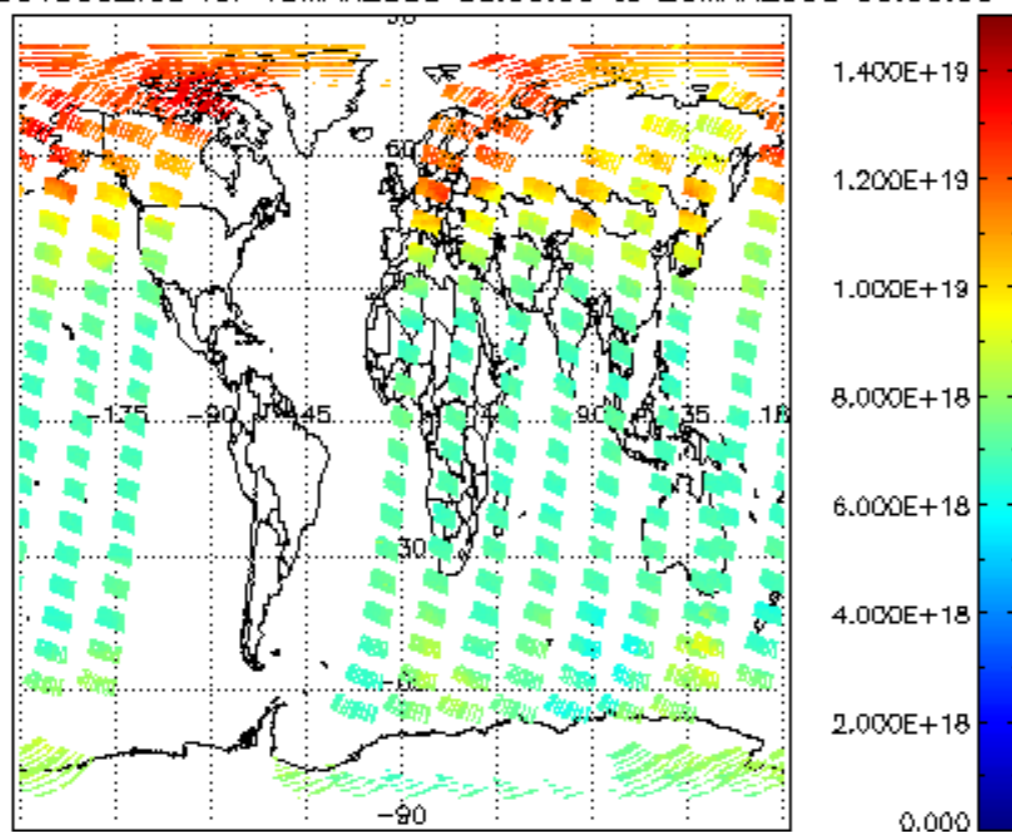
Number	ADF
	IN_ (INITIALISATION_FILE)
0	SCI_IN_AXNPDE20070629_092400_20070720_000000_20991231_235959
	ECF (ECMWF_FILE)
1	NOT USED



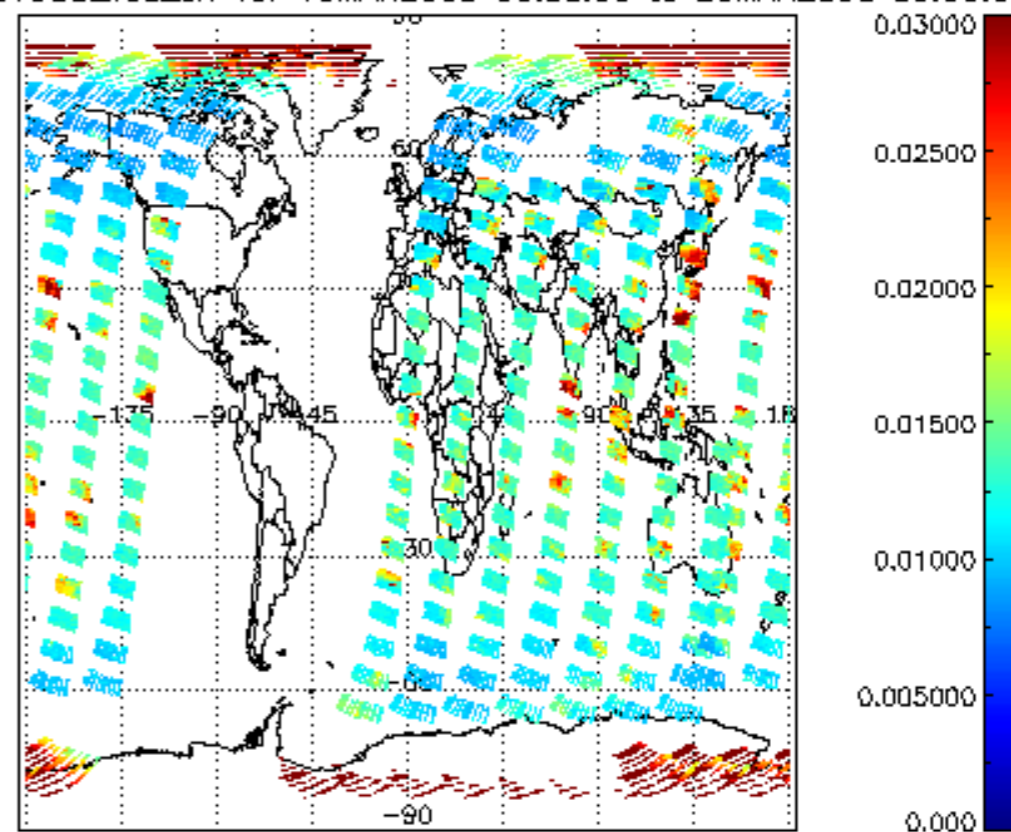




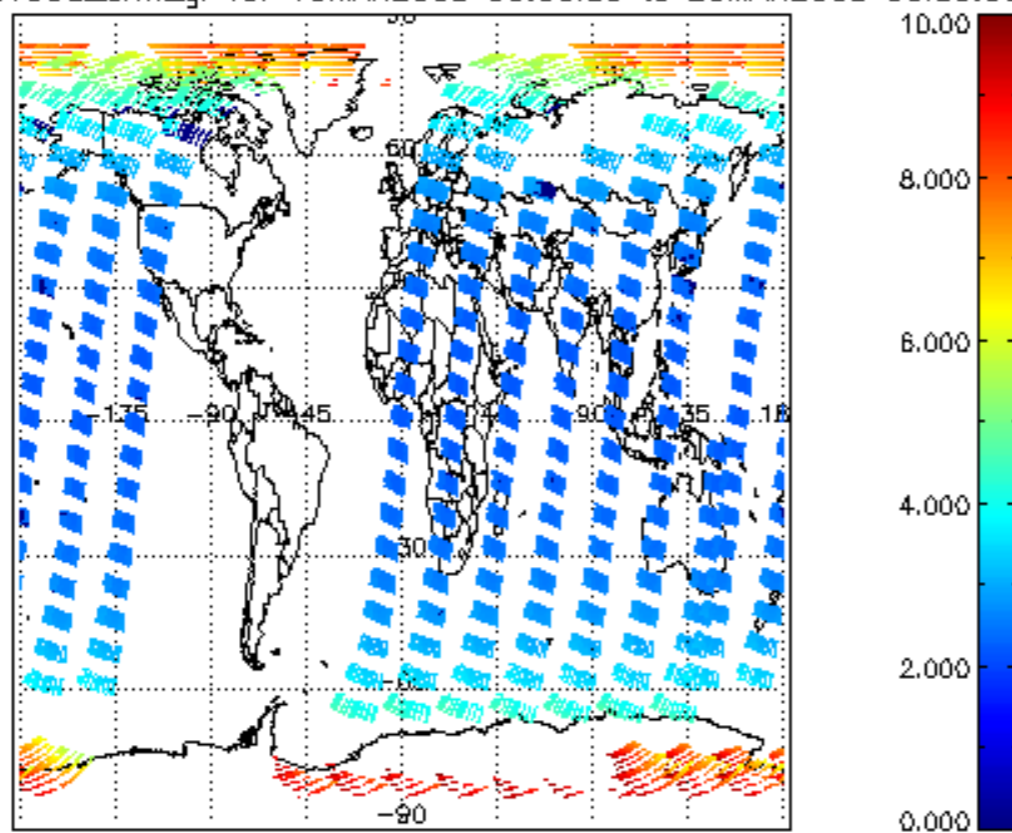
SCIOL2P\_NADUV003\_vcd for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



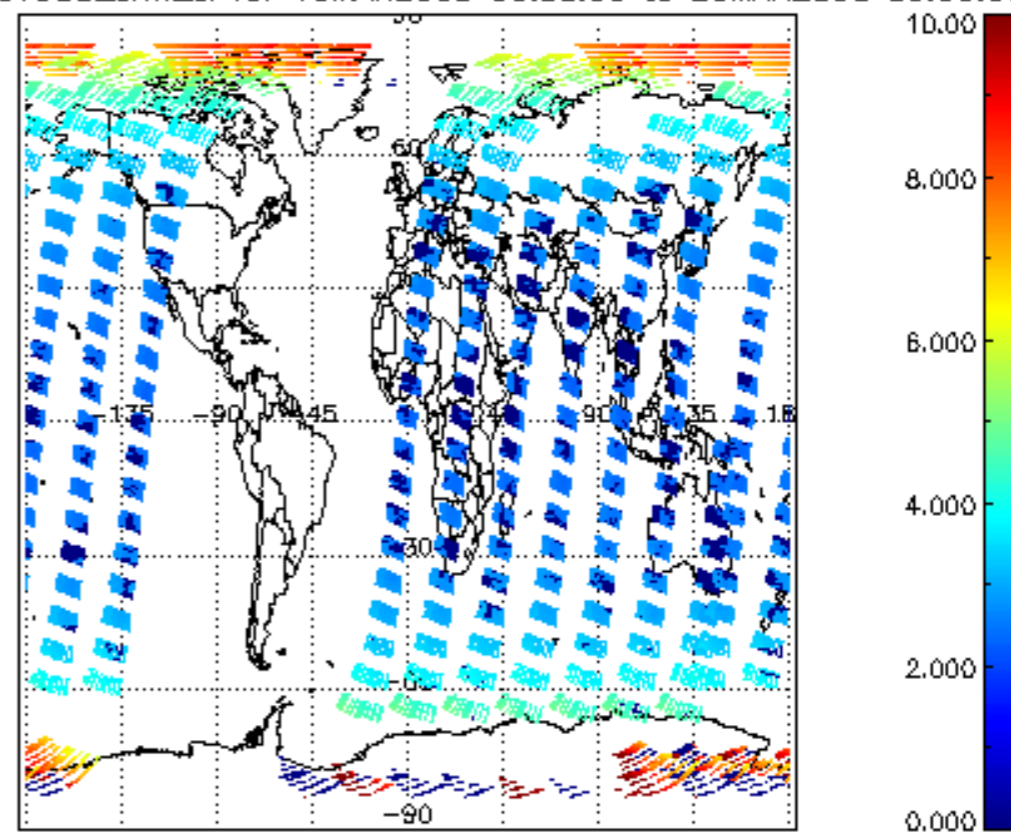
SCIOL2P\_NADUV003\_vcd\_err for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



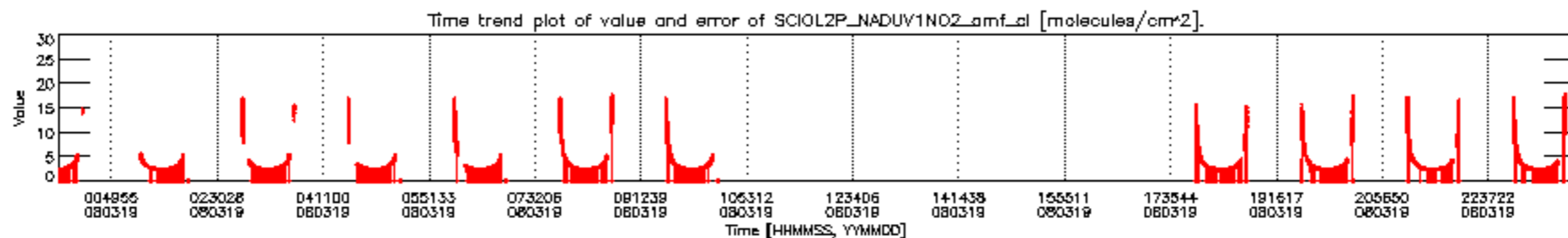
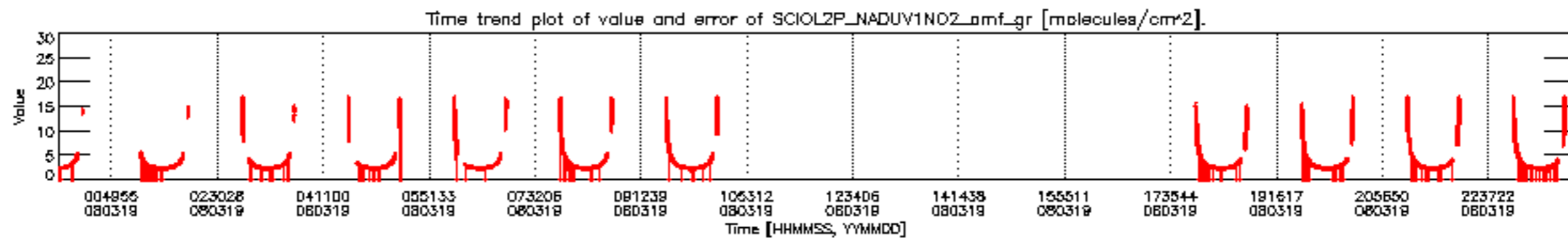
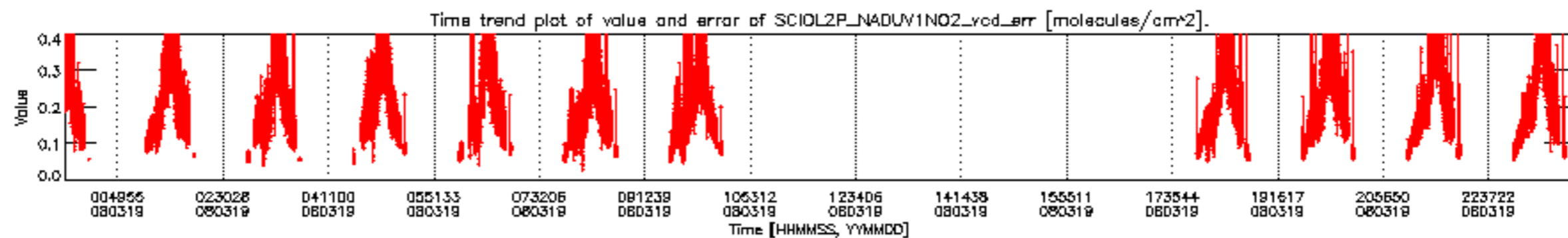
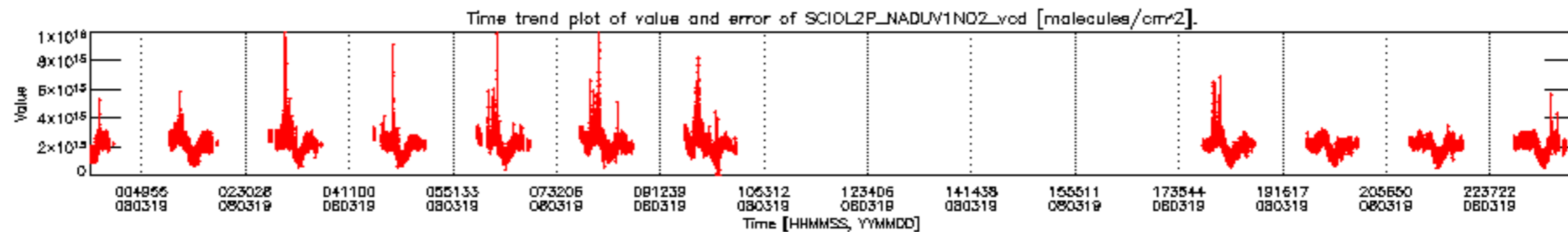
SCIOL2P\_NADUV003\_amf\_gr for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



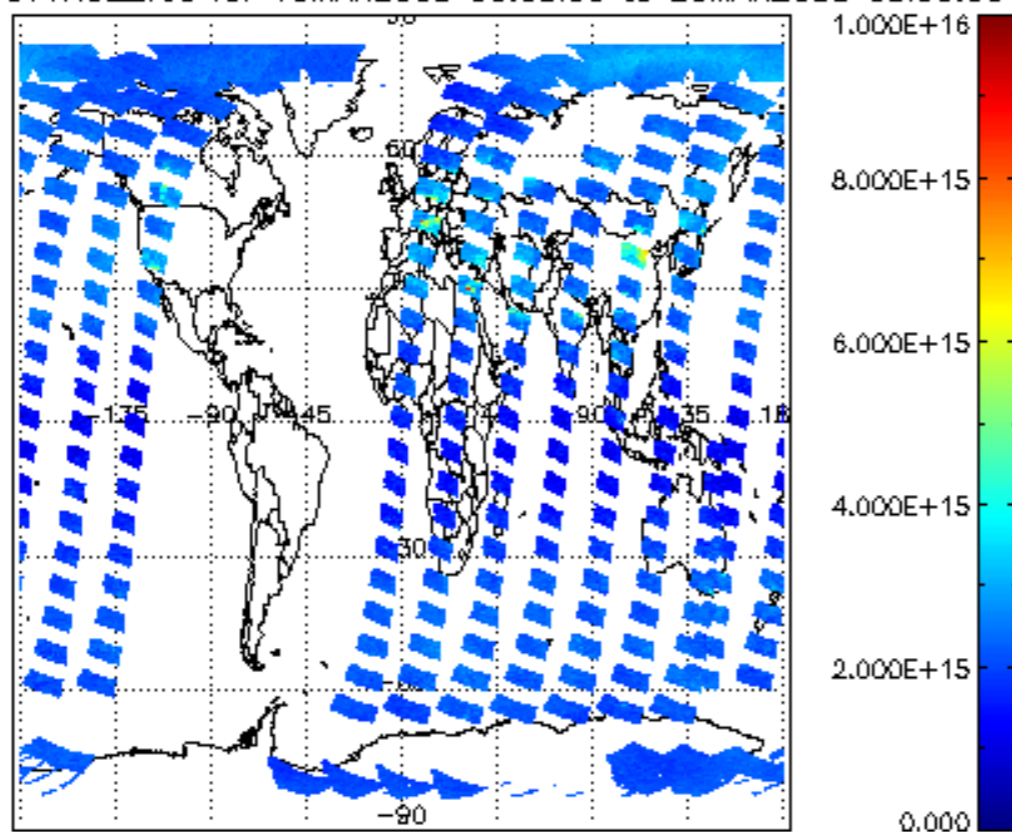
SCIOL2P\_NADUV003\_amf\_cl for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



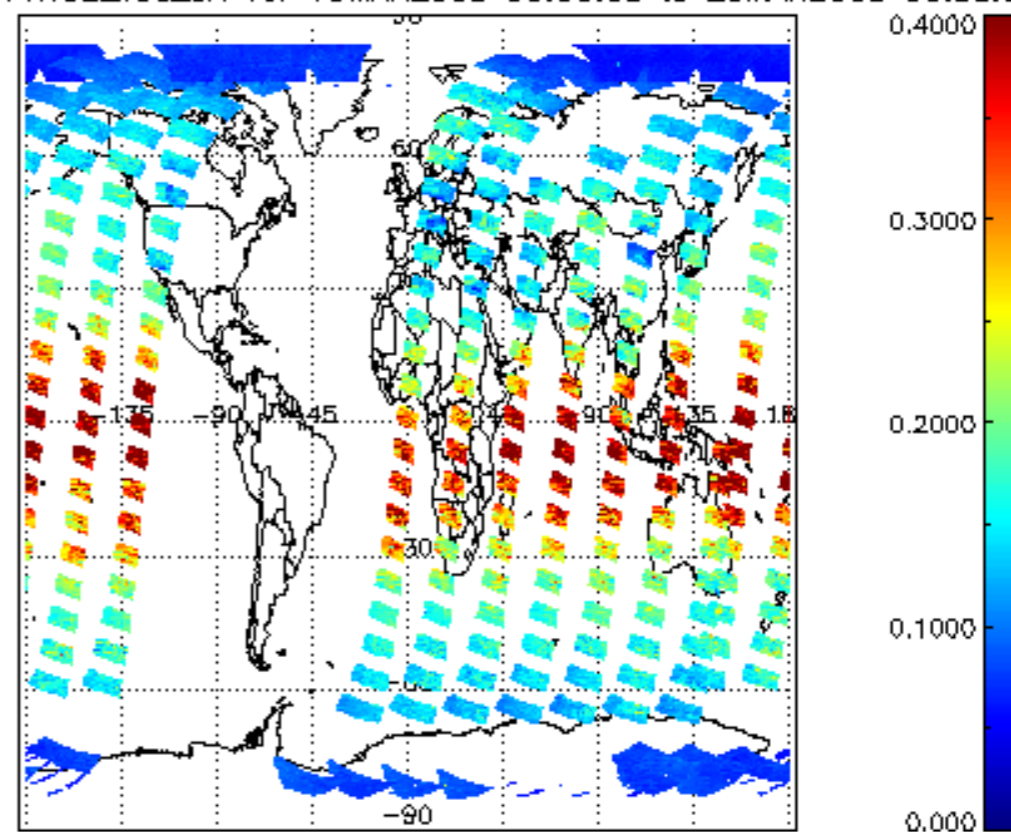




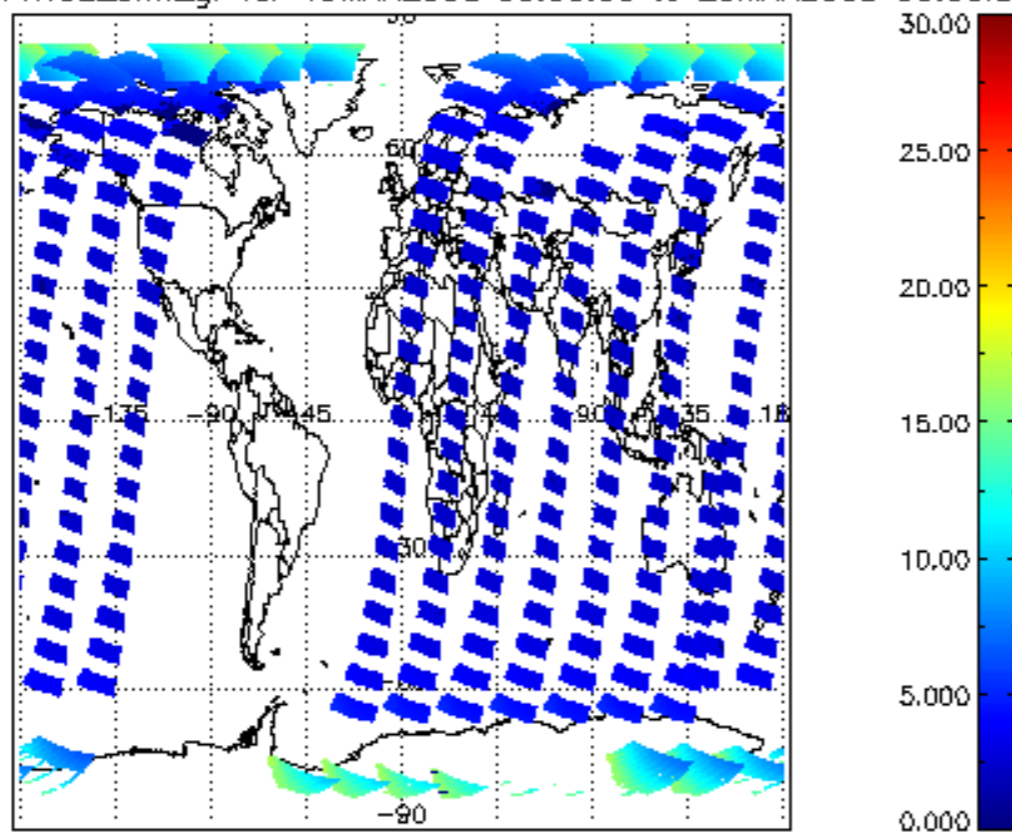
SCIOL2P\_NADUV1NO2\_vcd for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



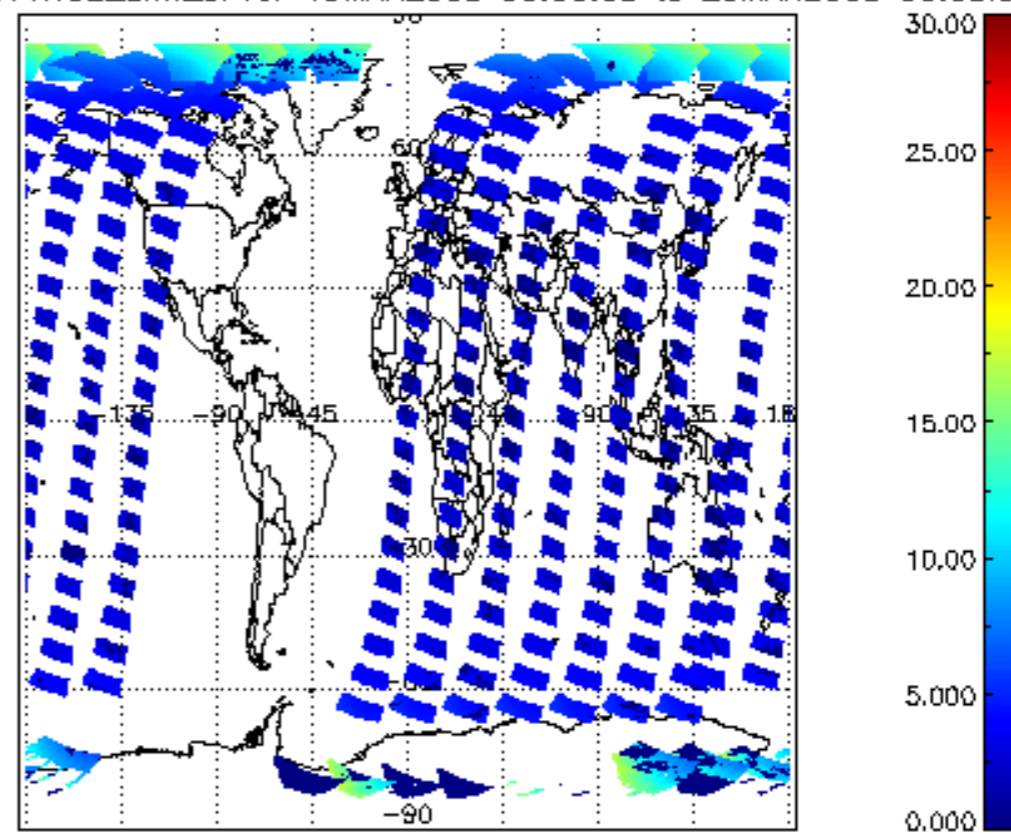
CIOL2P\_NADUV1NO2\_vcd\_err for 19MAR2008 00:00:00 to 20MAR2008 00:00:00



CIOL2P\_NADUV1NO2\_amf\_gr for 19MAR2008 00:00:00 to 20MAR2008 00:00:00

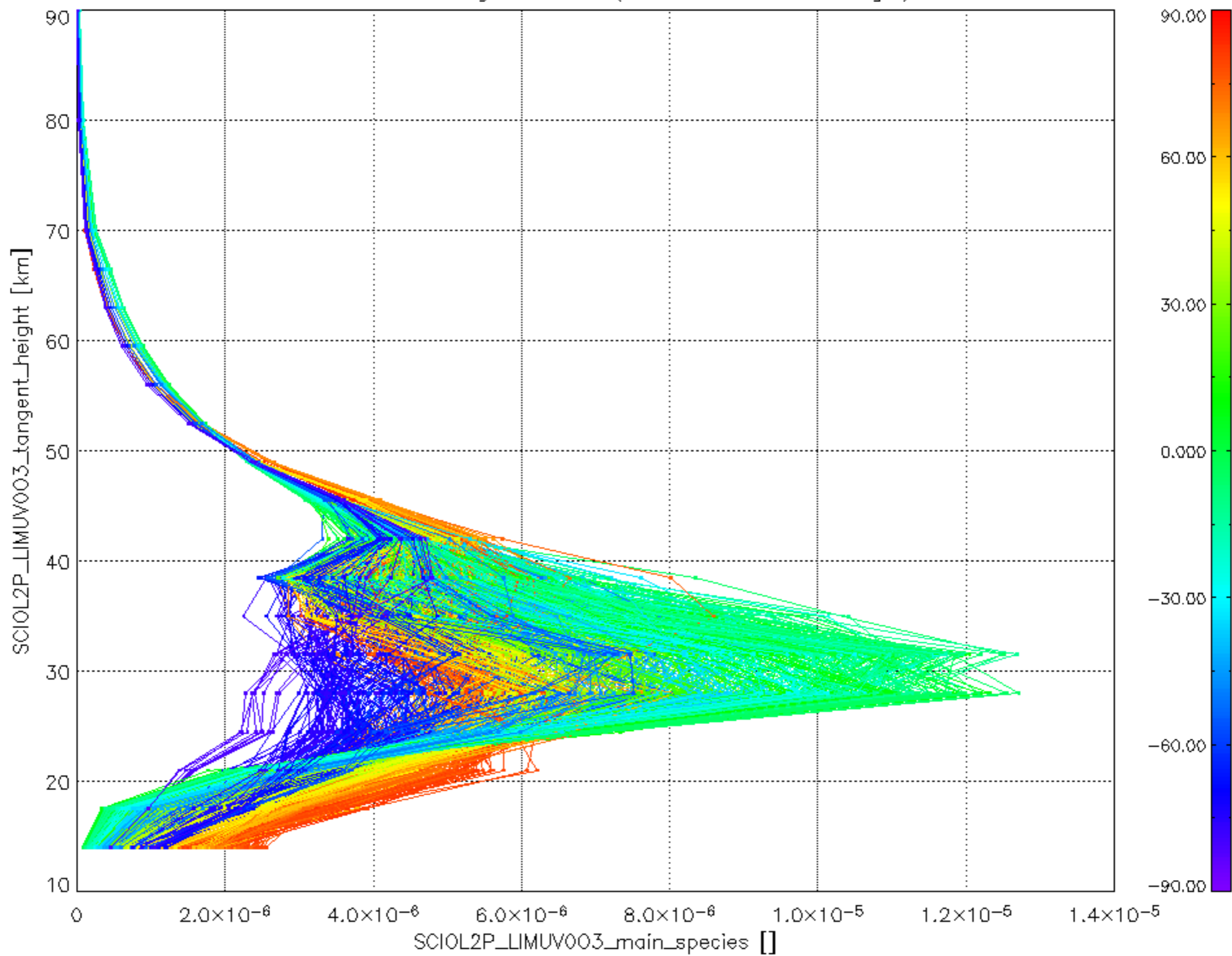


CIOL2P\_NADUV1NO2\_amf\_cl for 19MAR2008 00:00:00 to 20MAR2008 00:00:00





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



Plot of SCIOL2P\_LIMUV1N02\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).

