

## 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	14JUN2008 10:00:58
Data source version	SCIA-OL/3.01-R
Processing scope for products	20OCT2002 00:00:00 to 21OCT2002 00:00:00
Start time of first product within scope	20OCT2002 00:05:26
Stop time of last product within scope	21OCT2002 00:29:25
Total number of level 2 products	12
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__2PRDPA20021020_000526_000033242010_00274_03334_1218.N1	20OCT2002 00:05:26	20OCT2002 01:00:51	0	GOOD
1	SCI_OL__2PRDPA20021020_014603_000033242010_00275_03335_1411.N1	20OCT2002 01:46:03	20OCT2002 02:41:27	0	GOOD
2	SCI_OL__2PRDPA20021020_032639_000033242010_00276_03336_1195.N1	20OCT2002 03:26:39	20OCT2002 04:22:03	0	GOOD
3	SCI_OL__2PRDPA20021020_064752_000033242010_00278_03338_1382.N1	20OCT2002 06:47:52	20OCT2002 07:43:17	0	GOOD
4	SCI_OL__2PRDPA20021020_082829_000033242010_00279_03339_1148.N1	20OCT2002 08:28:29	20OCT2002 09:23:53	0	GOOD
5	SCI_OL__2PRDPA20021020_100905_000033242010_00280_03340_1284.N1	20OCT2002 10:09:05	20OCT2002 11:04:29	0	GOOD
6	SCI_OL__2PRDPA20021020_114941_000033242010_00281_03341_1233.N1	20OCT2002 11:49:41	20OCT2002 12:45:06	0	GOOD
7	SCI_OL__2PRDPA20021020_133018_000033242010_00282_03342_1079.N1	20OCT2002 13:30:18	20OCT2002 14:25:42	0	GOOD
8	SCI_OL__2PRDPA20021020_151054_000033242010_00283_03343_1100.N1	20OCT2002 15:10:54	20OCT2002 16:06:19	0	GOOD
9	SCI_OL__2PRDPA20021020_165131_000033242010_00284_03344_1333.N1	20OCT2002 16:51:31	20OCT2002 17:46:55	0	GOOD
10	SCI_OL__2PRDPA20021020_183208_000033232010_00285_03345_1403.N1	20OCT2002 18:32:08	20OCT2002 19:27:31	0	GOOD
11	SCI_OL__2PRDPA20021020_233803_000030812010_00288_03348_1213.N1	20OCT2002 23:38:03	21OCT2002 00:29:25	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: 88235

Total number of cloud data DSRs with good quality flag (=0): 88235 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	88235	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	88235	0.22008	0.25000	0.12500	1.0000	0.079561	s
SURFACE_PRES	88235	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	88235	0.43389	0.40574	0.0000	1.0000	0.28922	-
CL_FRAC_ERR	88235	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	88235	7.0426	8.0000	4.0000	32.000	2.5459	
PMD_READ_CL[0]	88235	0.40019	0.0000	0.0000	16.000	1.4205	-

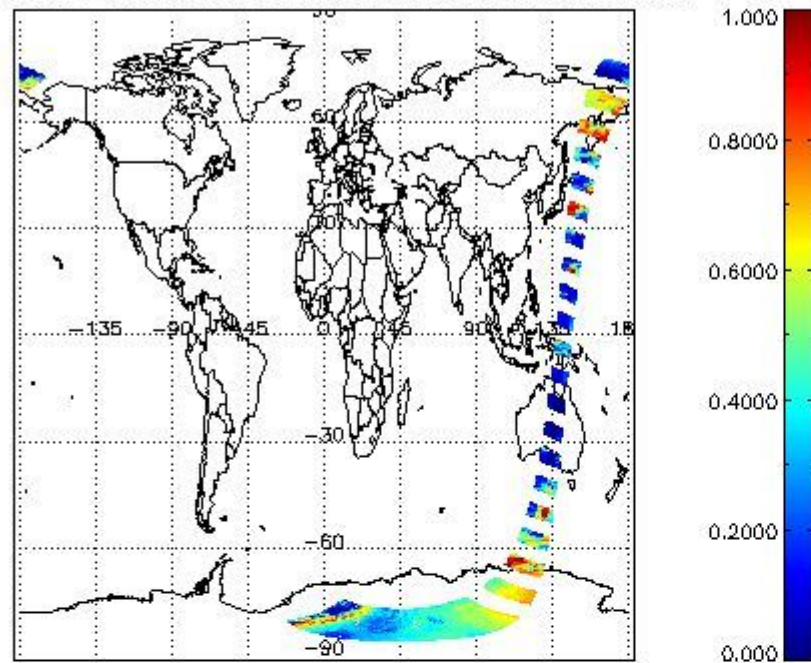
PMD_READ_CL[1]	88235	0.45948	0.0000	0.0000	26.000	1.6285	-
CL_TOP_HEIGHT	78875	4.1474	2.2906	0.0000	17.000	4.1603	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	78875	46.513	30.784	0.0000	101.00	38.241	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	88235	11100000	11100000	11100000	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	88235	11000111	11000100	11000000	11100000	2658.4	flags
AERO_ABSO_IND	88235	0.34819	0.13440	-5.2932	9.7300	0.96459	
AERO_IND_DIAG	88235	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	88235	01100100	11000000	00000000	11000000	24547.	flags

Time and geolocation plots:

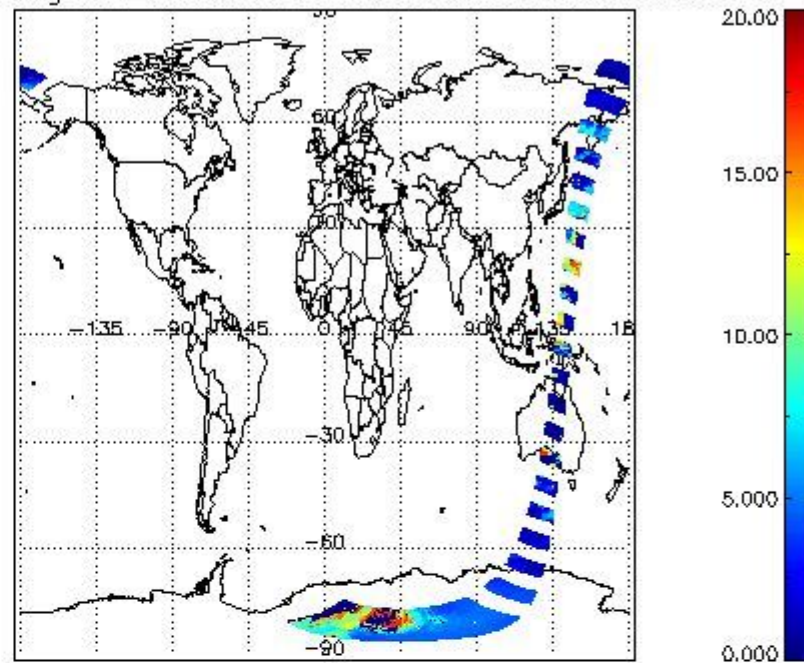
Plots are available for the following parameters:

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

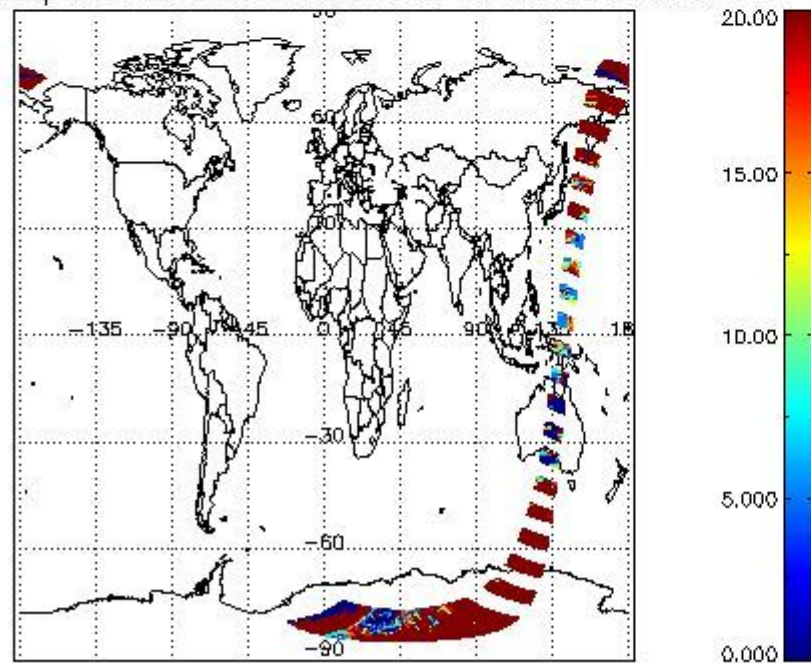
cLfrac for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



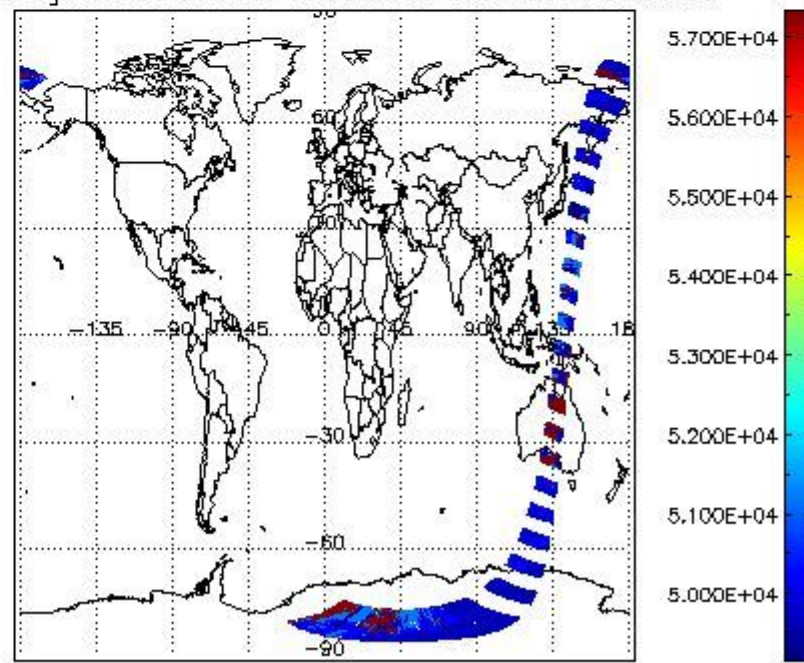
cL\_top\_height for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



cLopt\_depth for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



cloud\_flags for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



### 2.2.2 Nadir

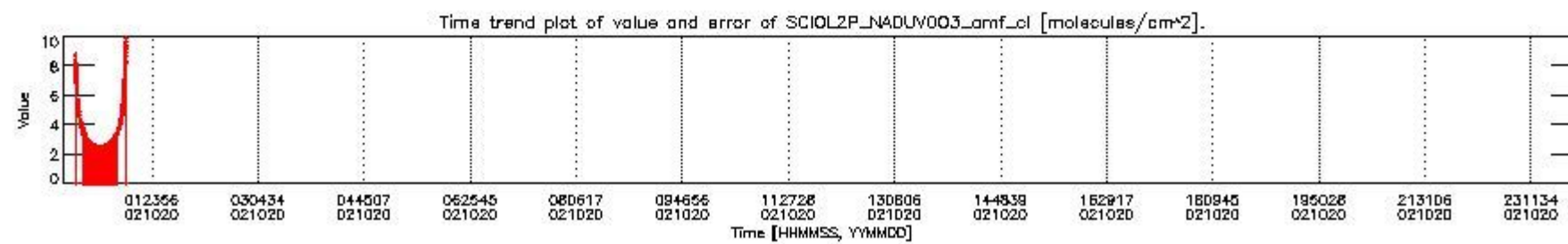
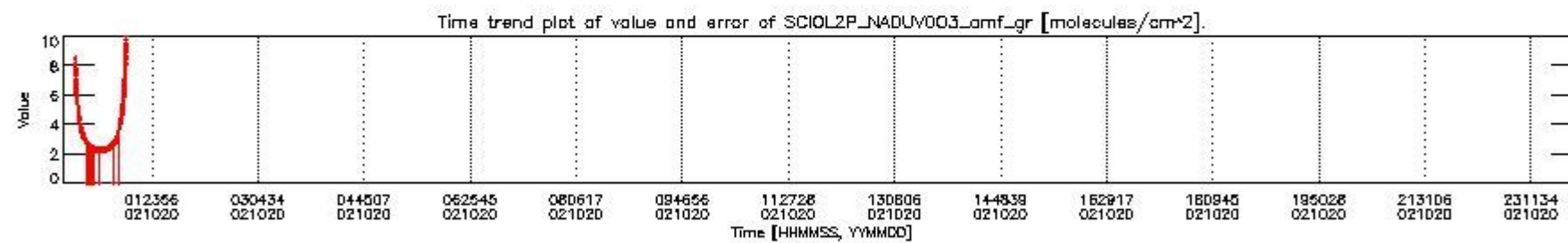
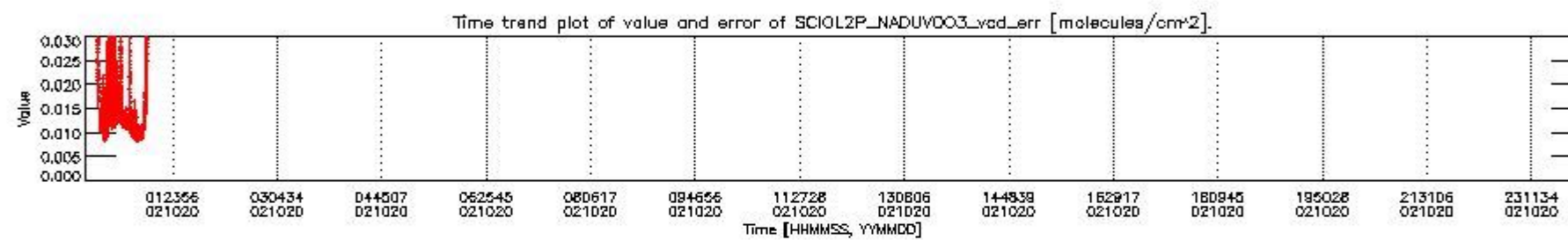
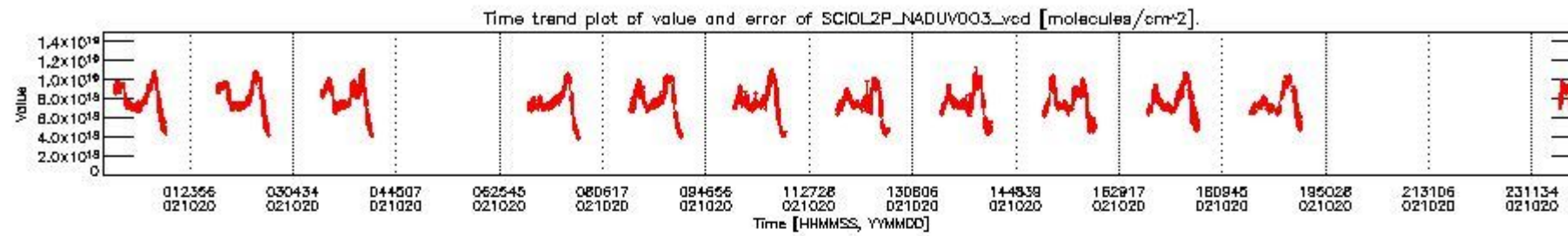
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

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

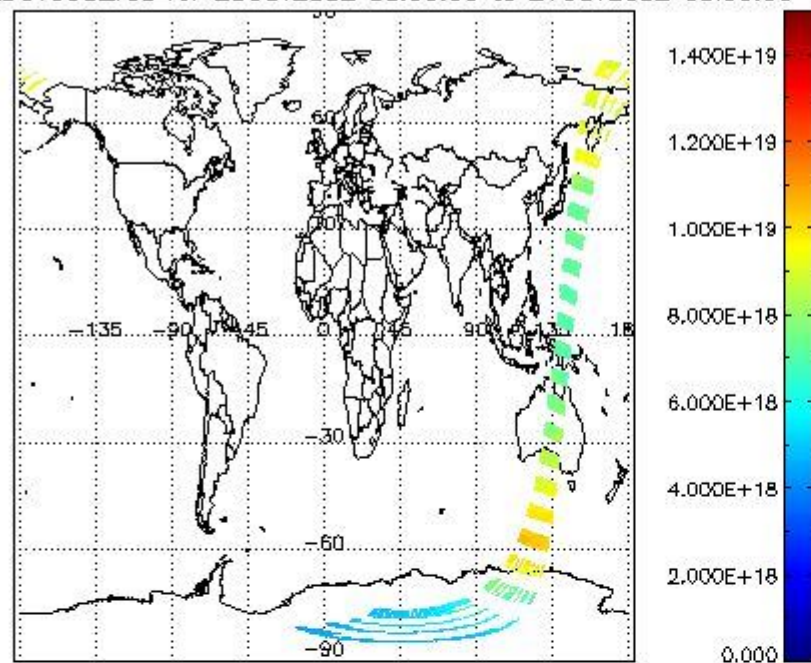
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

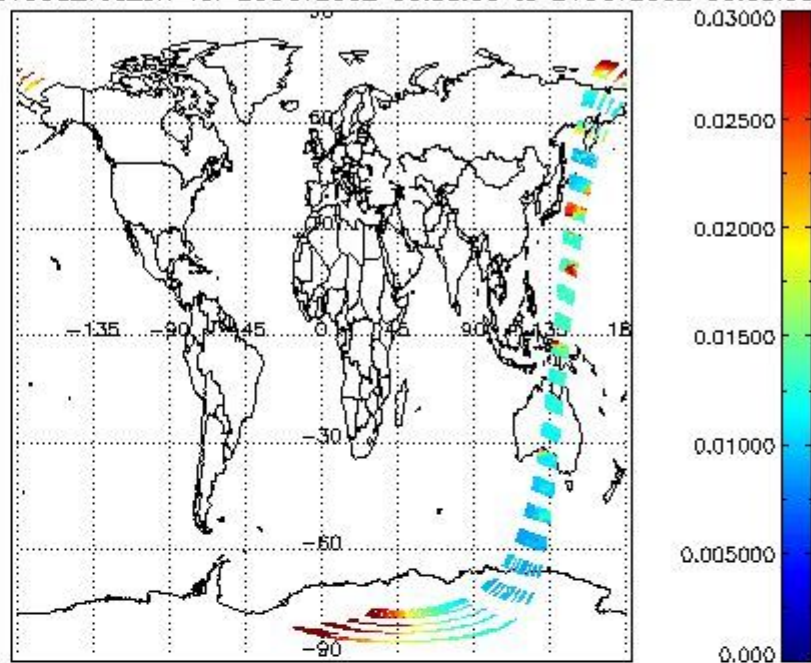




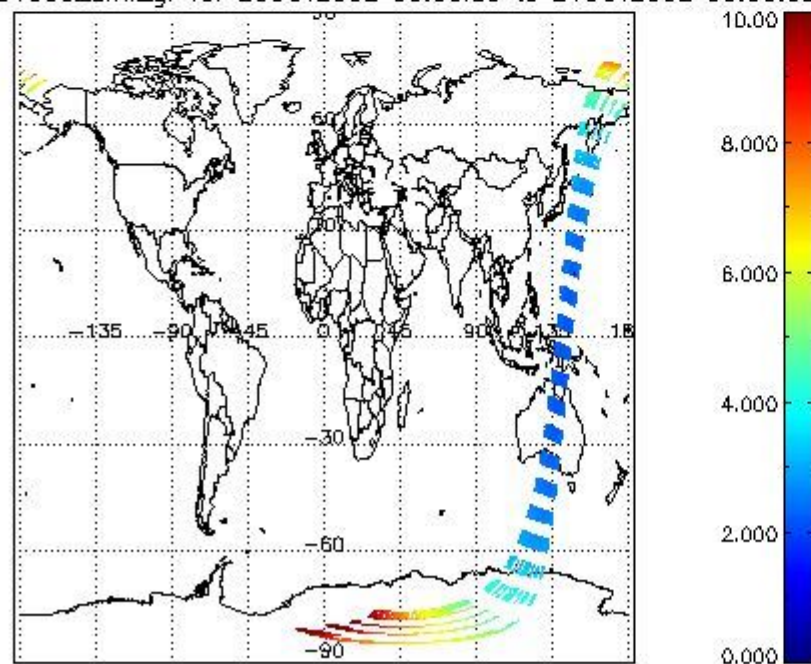
SCIOL2P\_NADUV003\_vcd for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



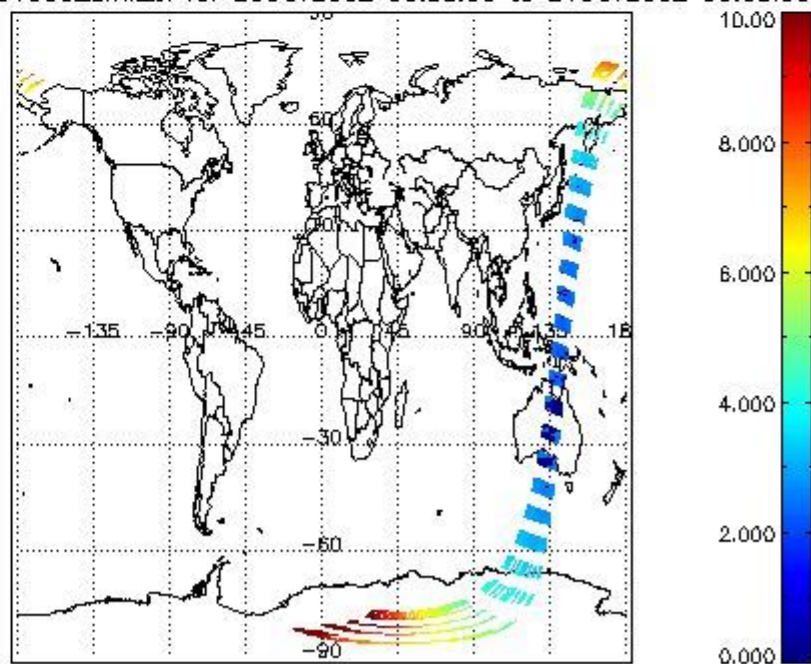
SCIOL2P\_NADUV003\_vcd\_err for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

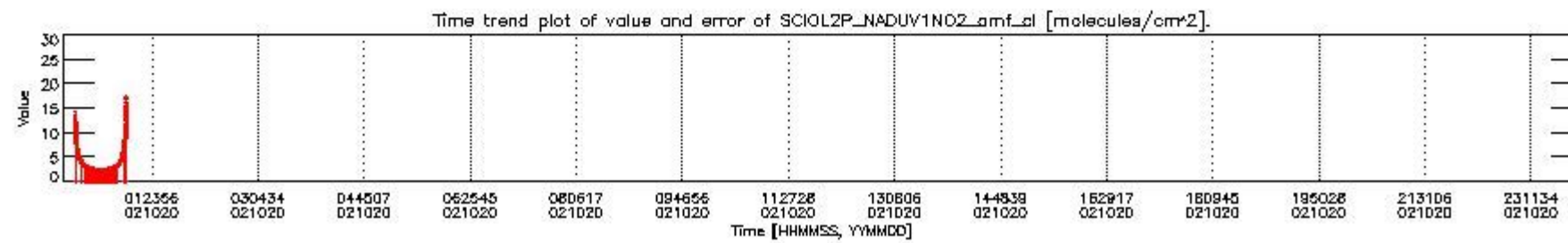
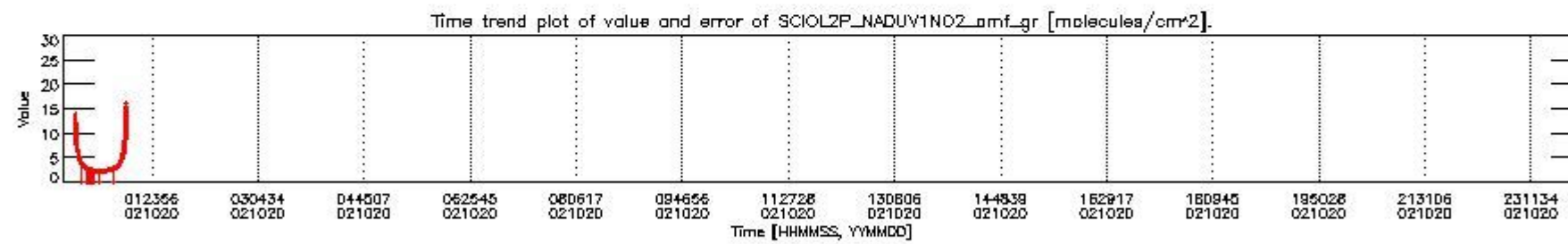
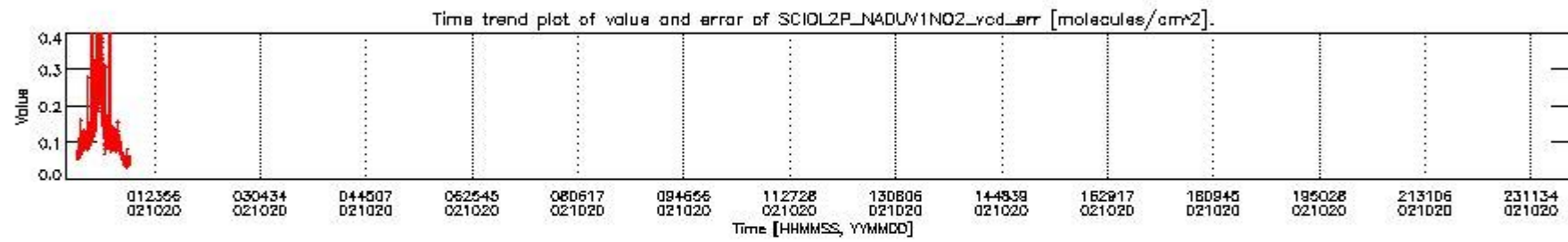
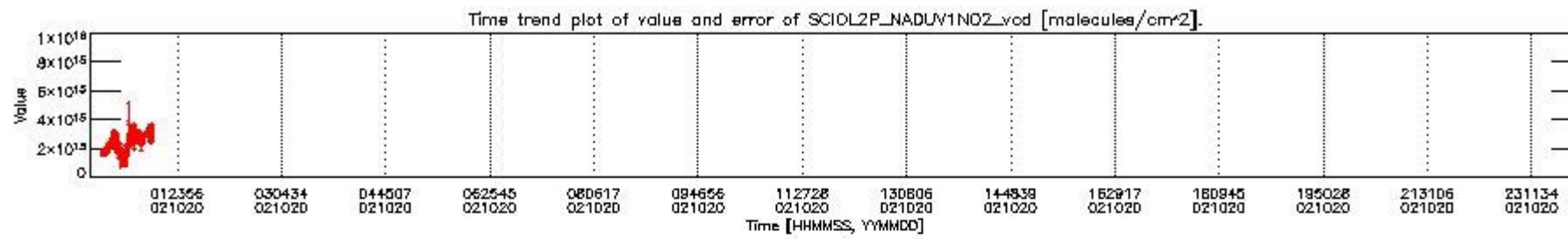


SCIOL2P\_NADUV003\_amf\_gr for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

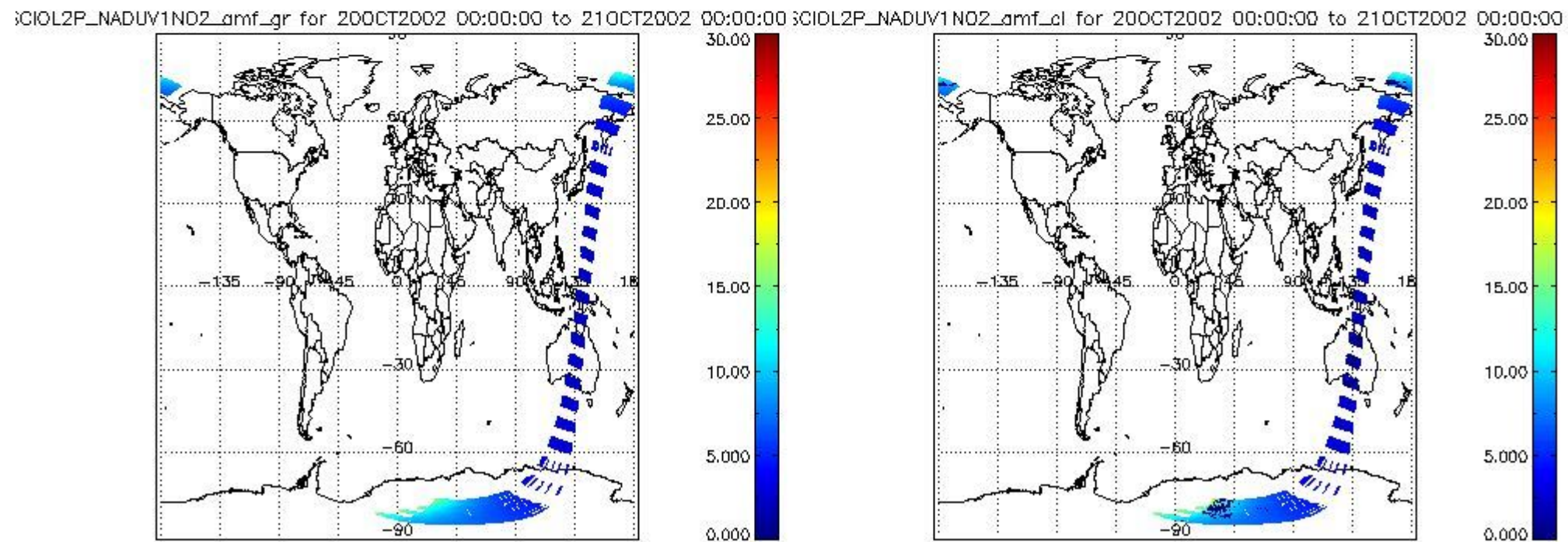
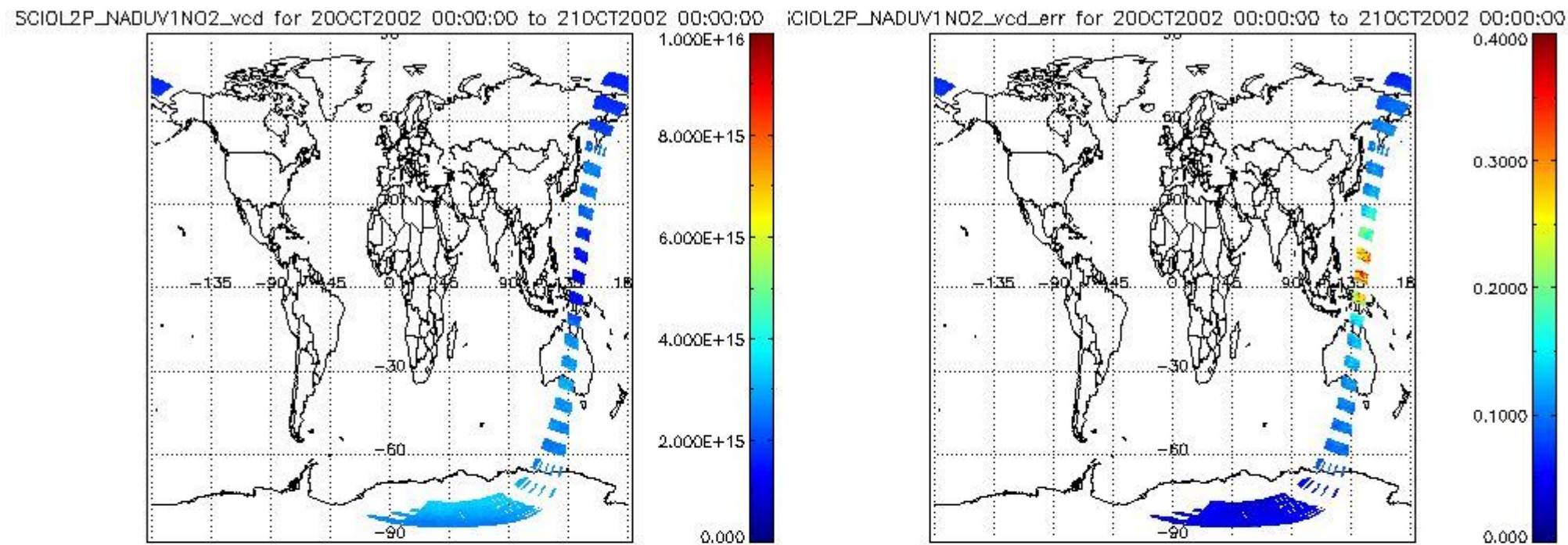


SCIOL2P\_NADUV003\_amf\_sl for 20OCT2002 00:00:00 to 21OCT2002 00:00:00









### 2.2.3 Limb

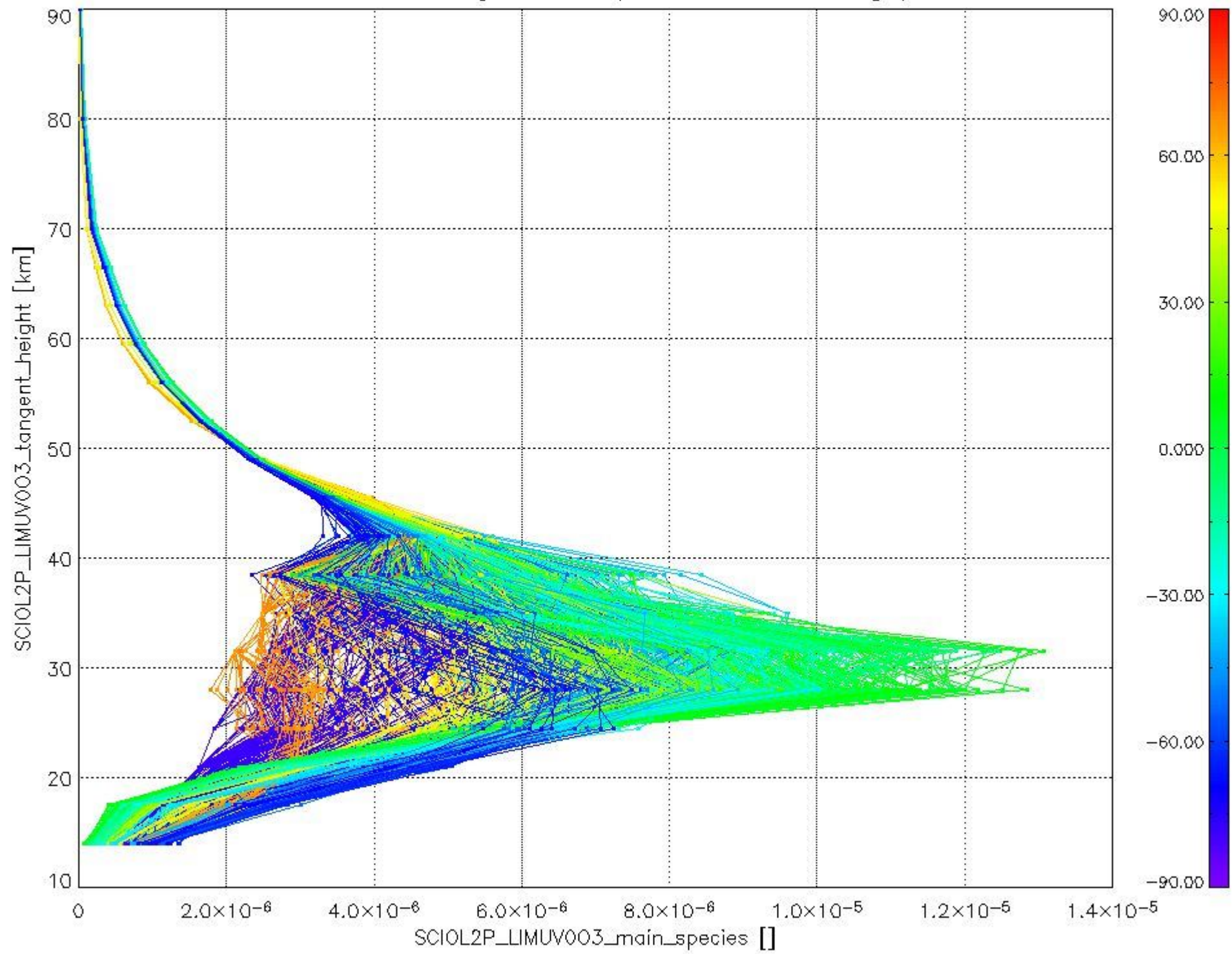
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV003_main_species
1	SCIOL2PLIMUV1NO2_main_species

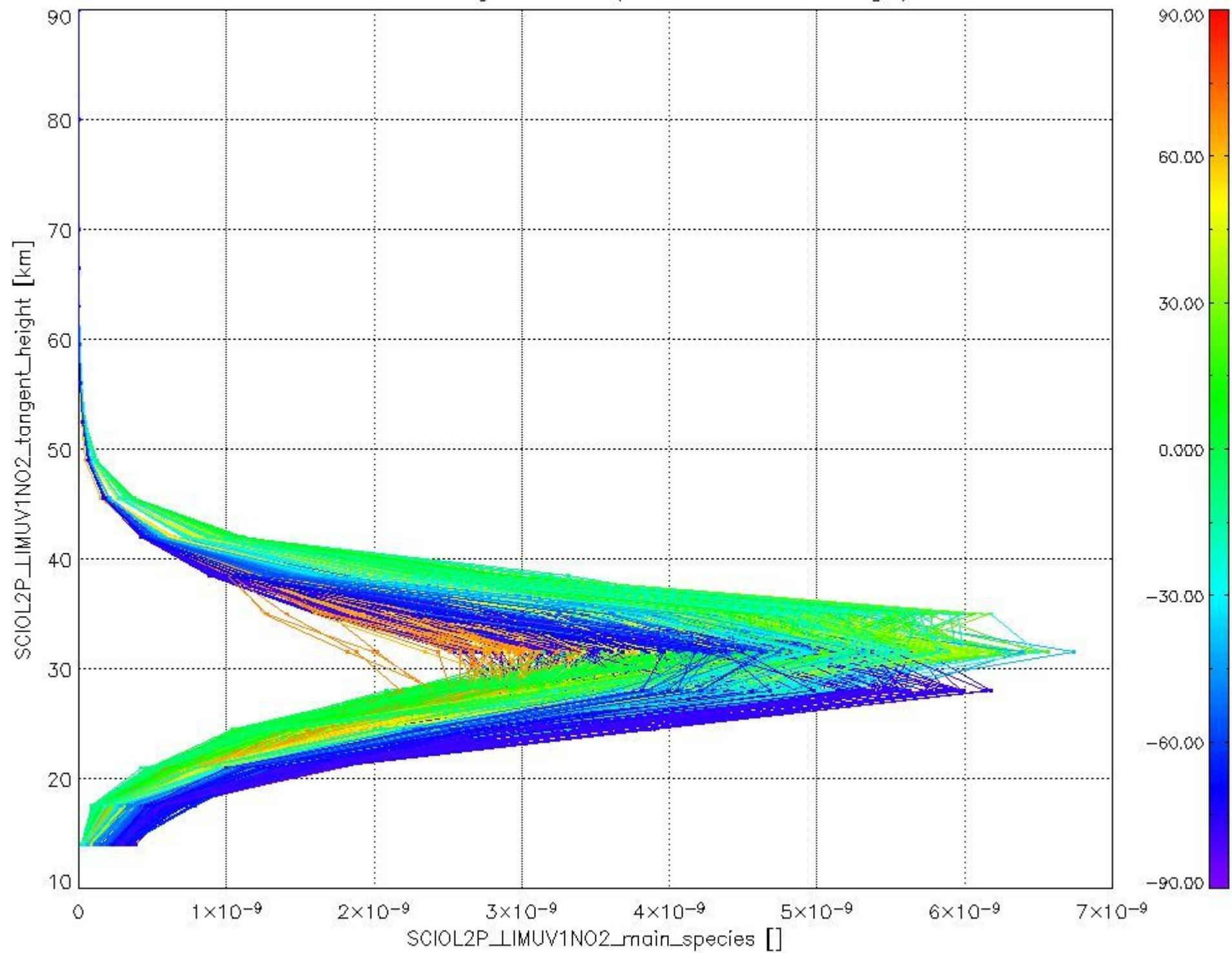
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

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





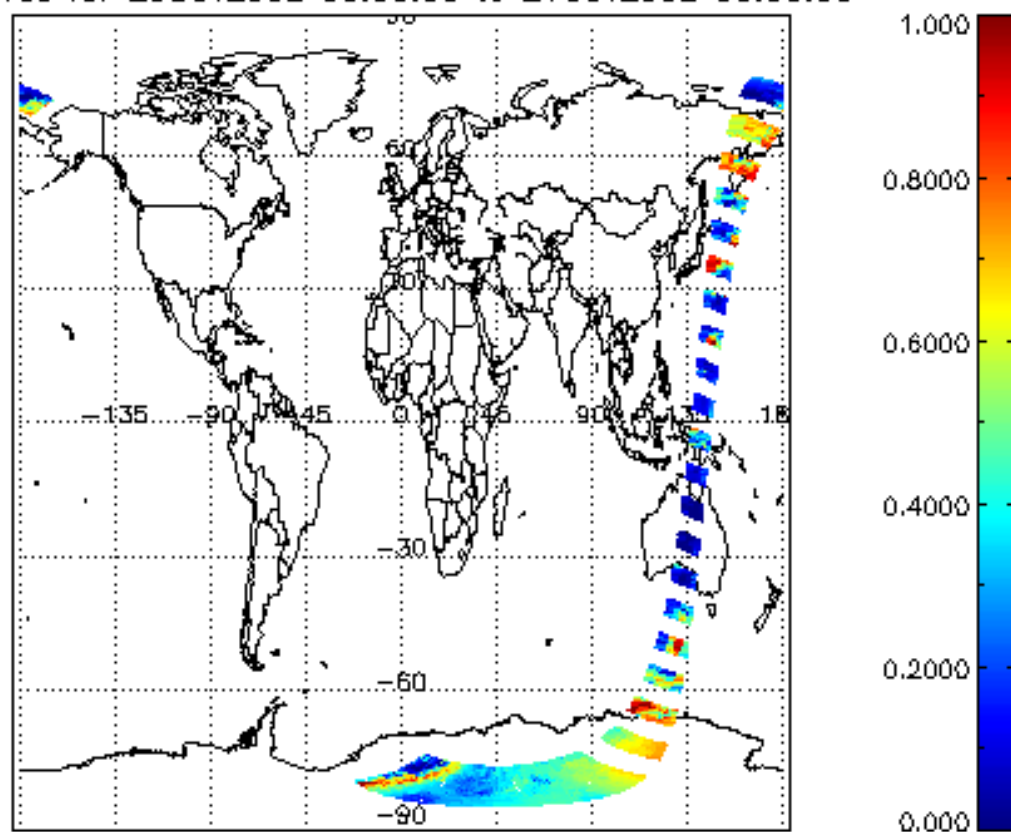
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



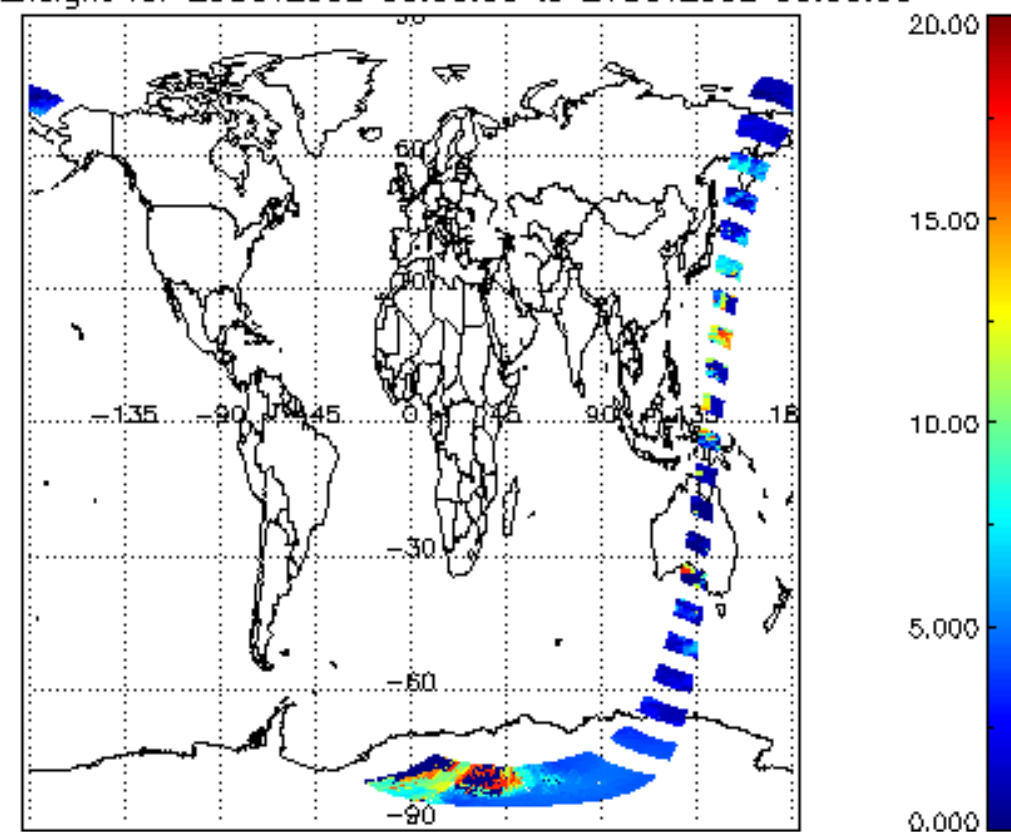
### 2.3 ADF monitoring

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

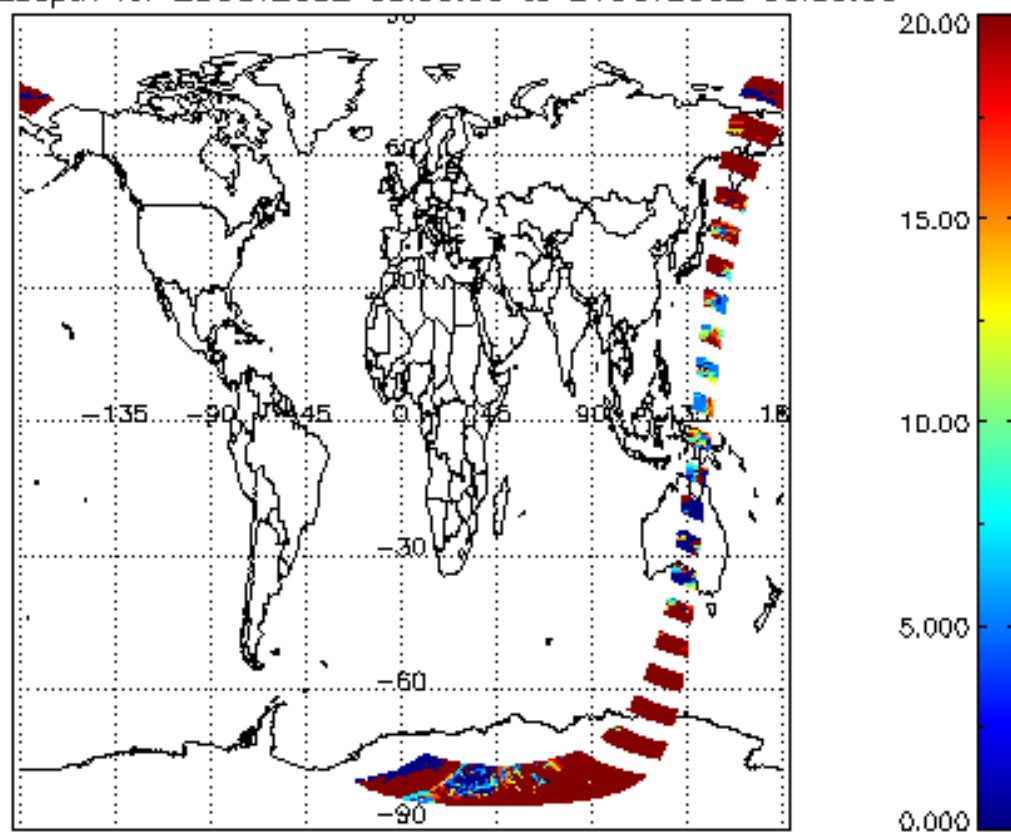
cl\_frac for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



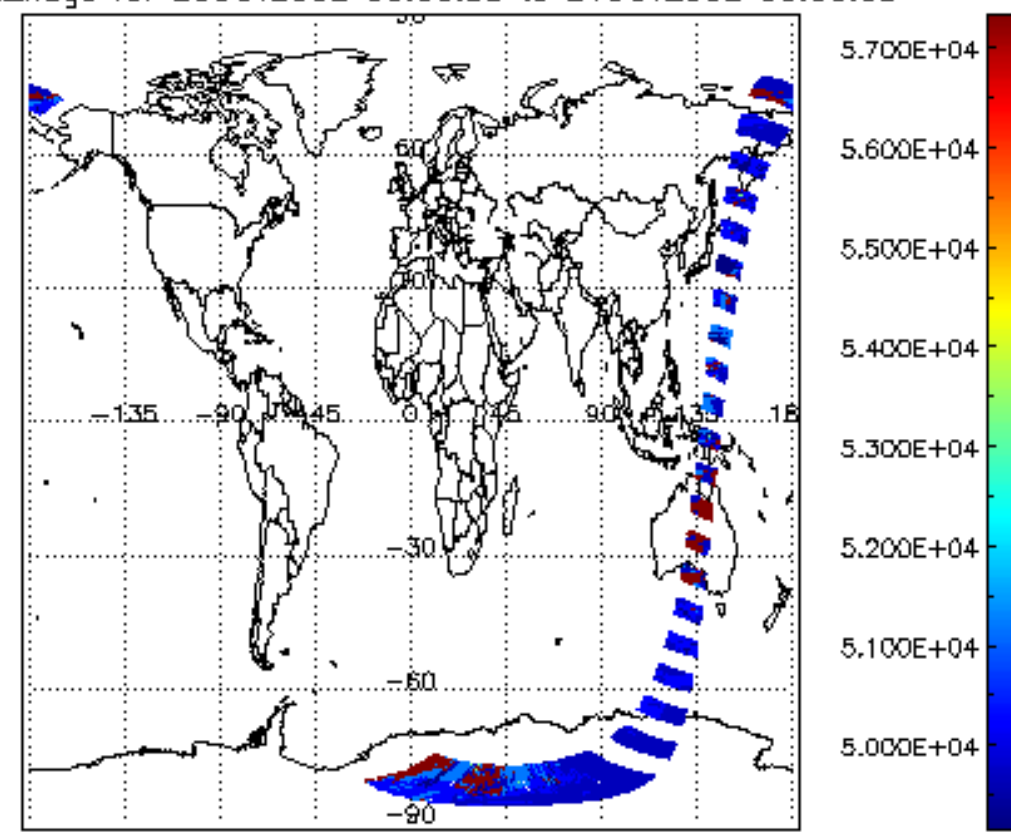
cl\_top\_height for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

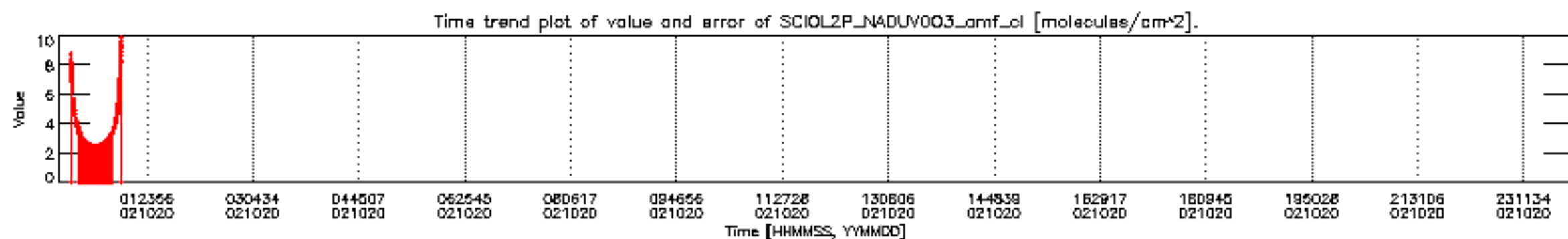
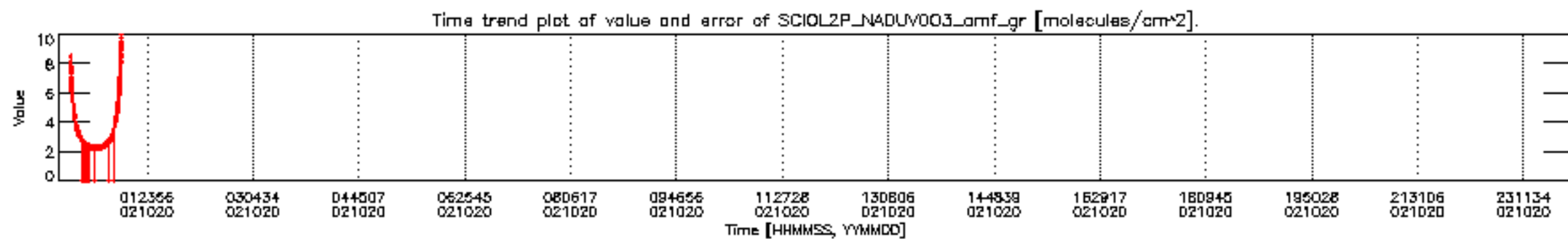
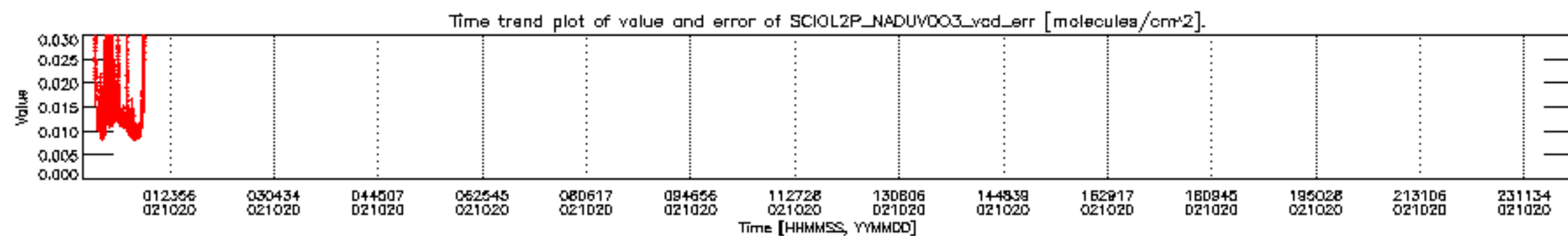
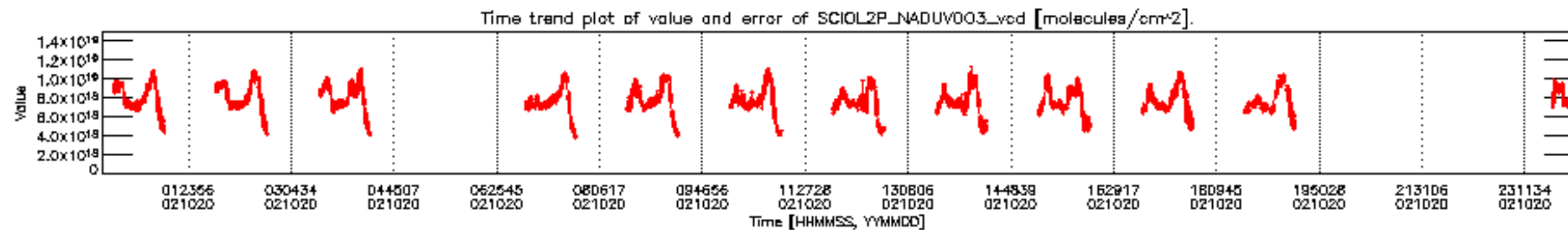


cl\_opt\_depth for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



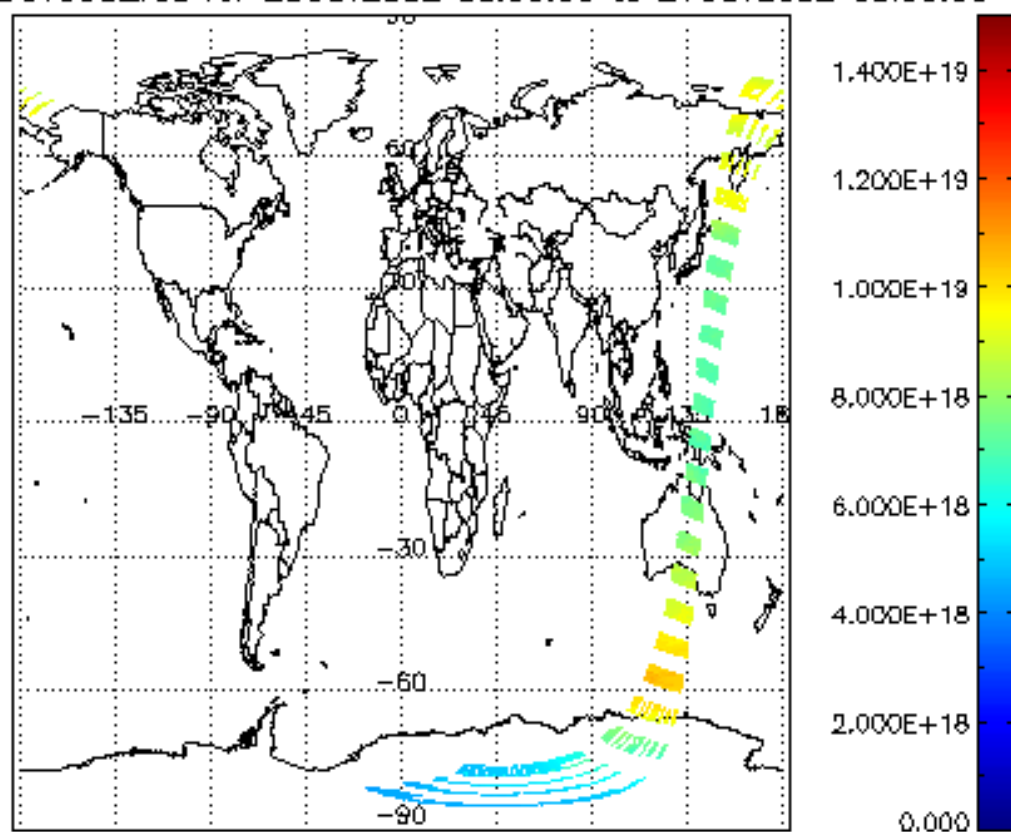
cloud\_flags for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



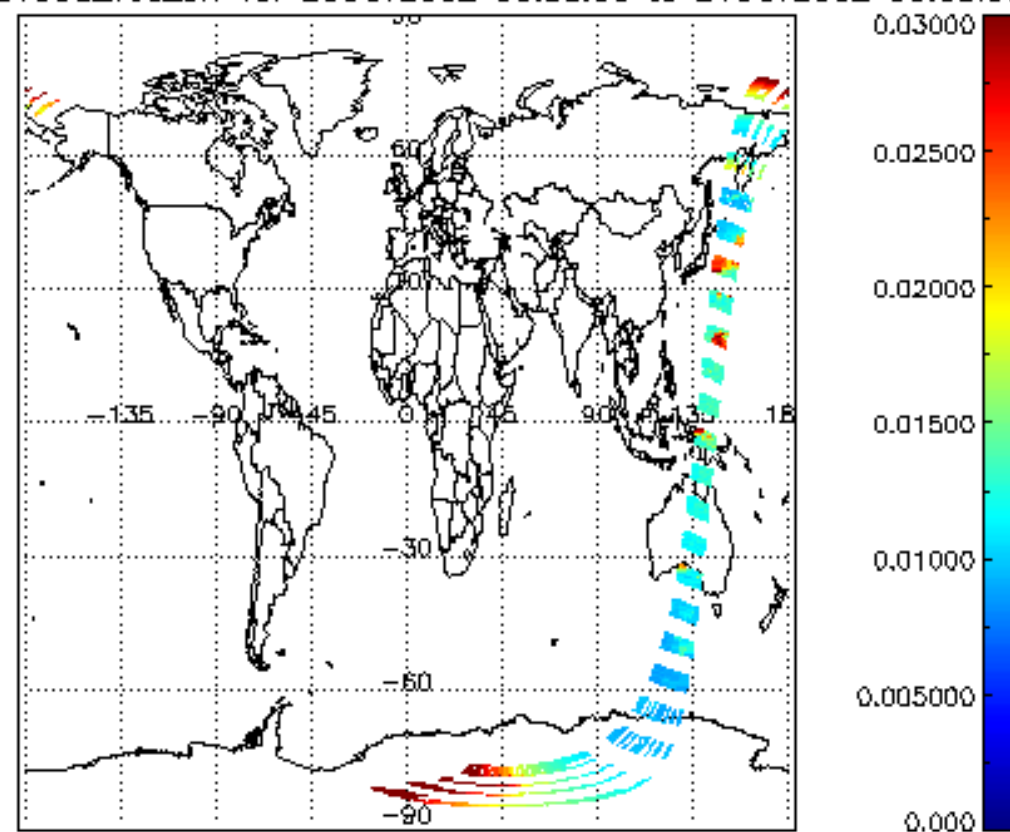




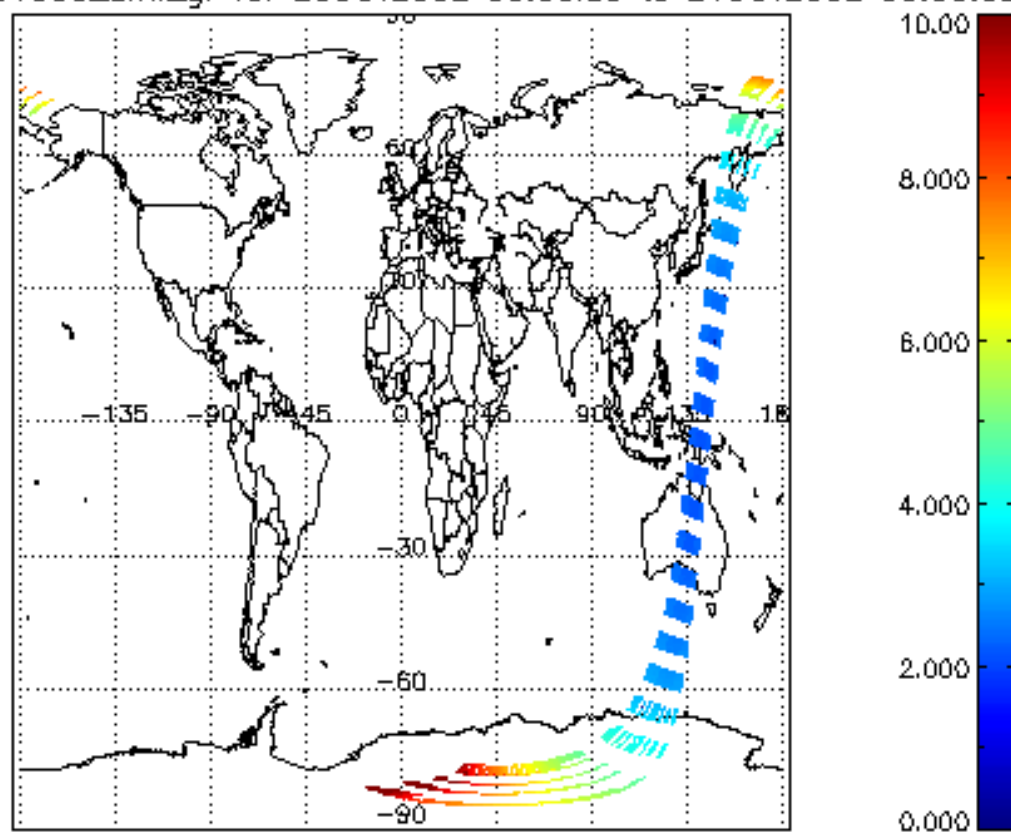
SCIOL2P\_NADUV003\_vcd for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



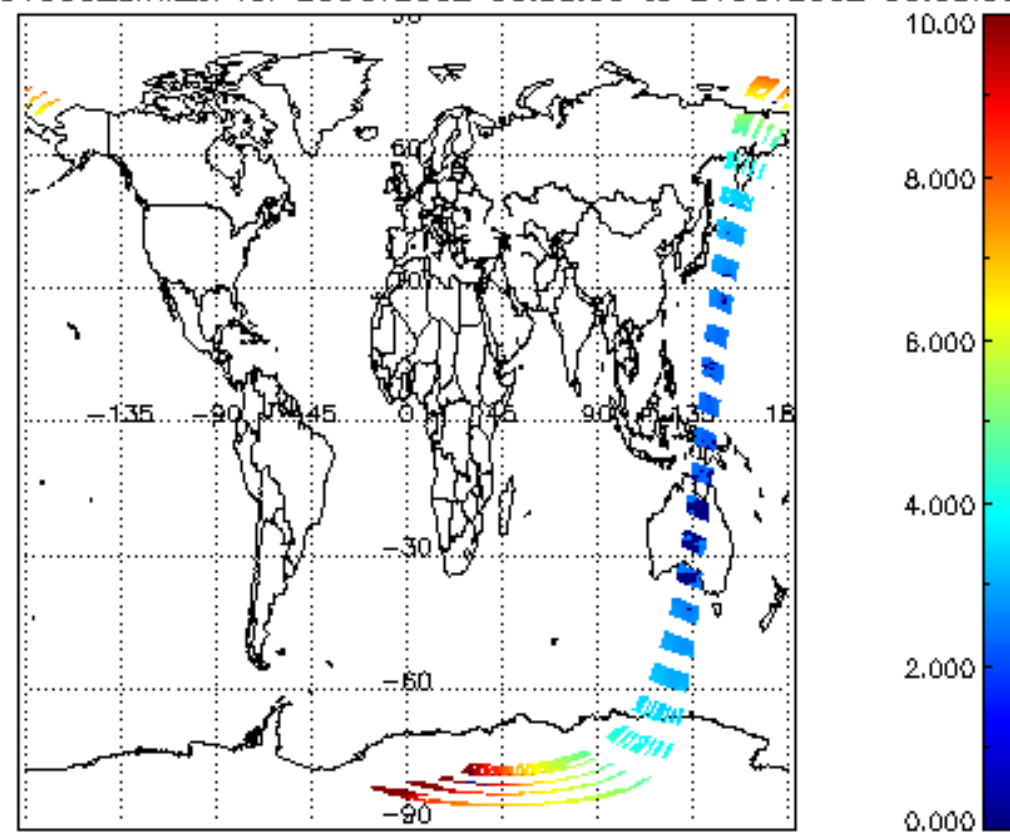
SCIOL2P\_NADUV003\_vcd\_err for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

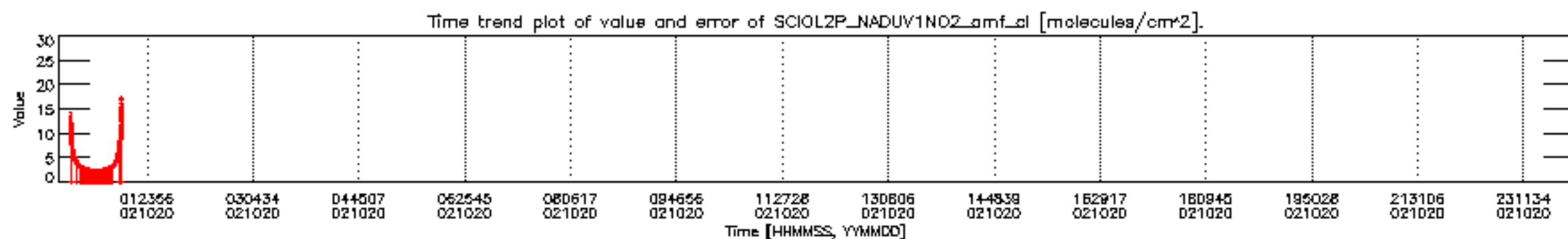
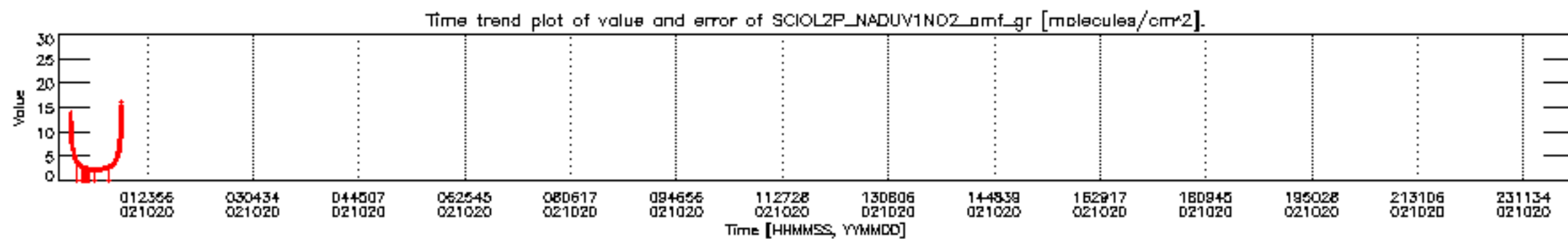
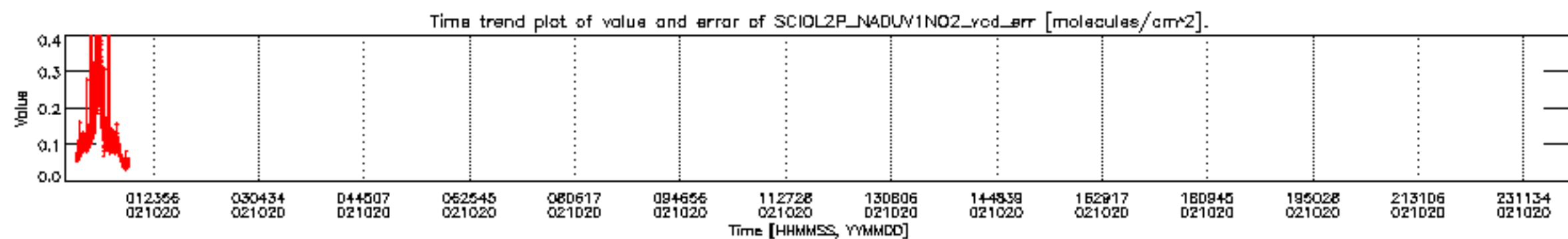
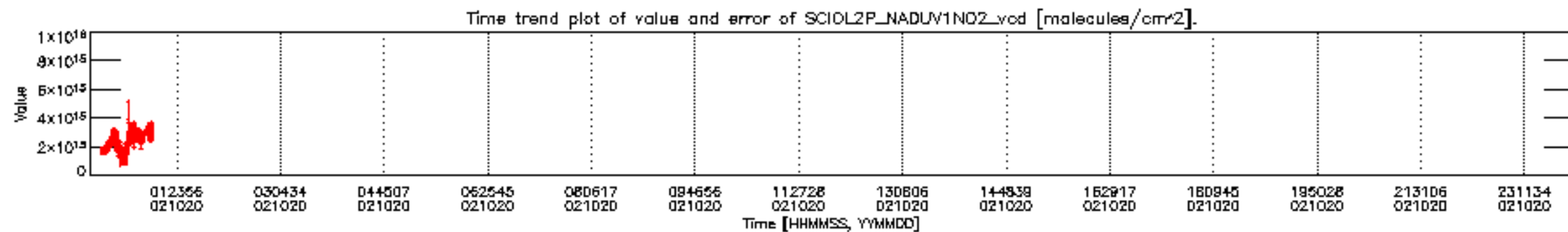


SCIOL2P\_NADUV003\_amf\_gr for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

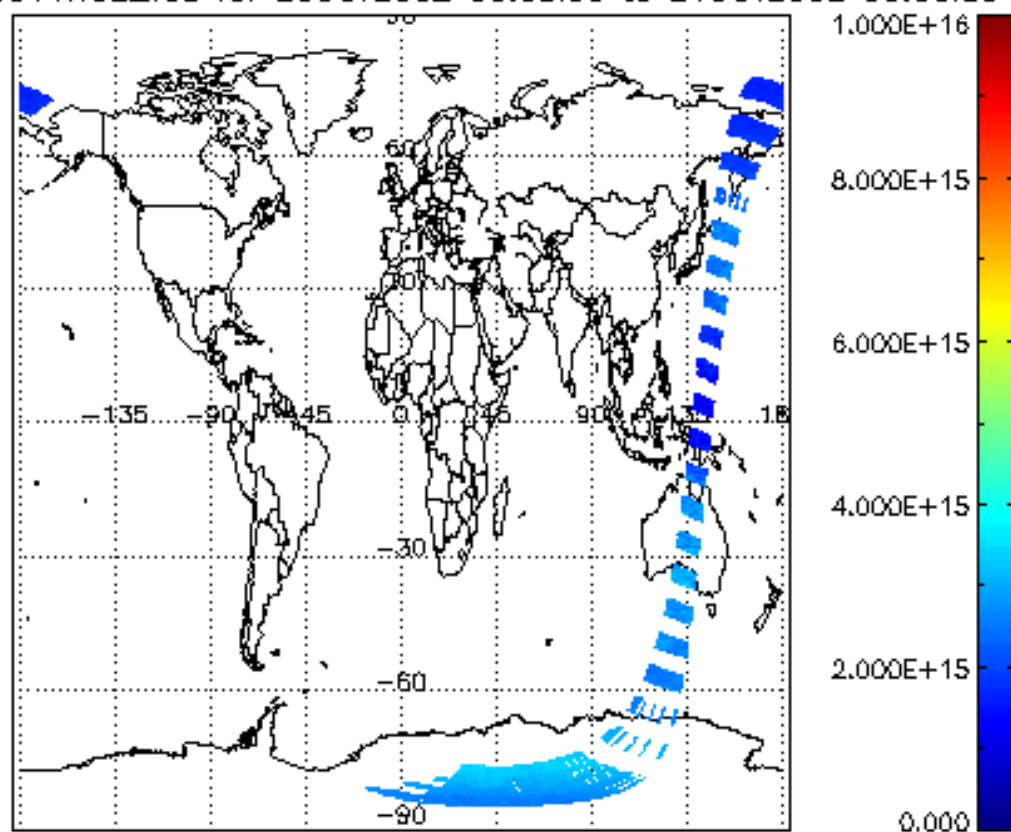


SCIOL2P\_NADUV003\_amf\_cl for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

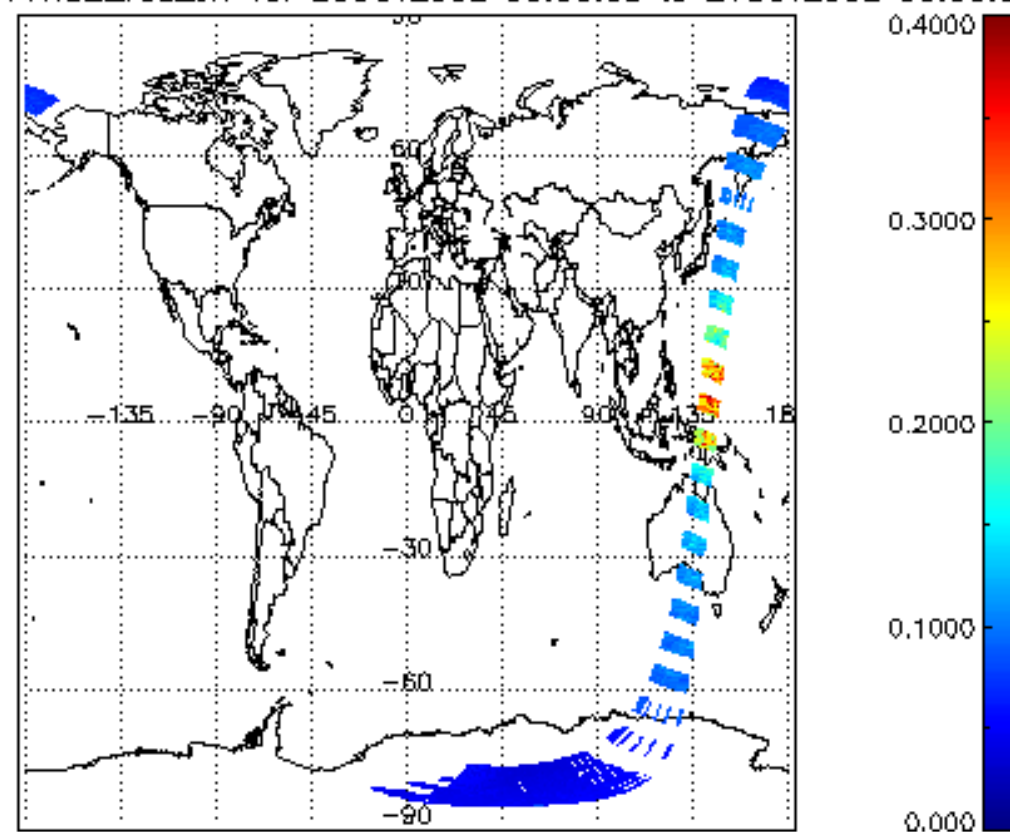




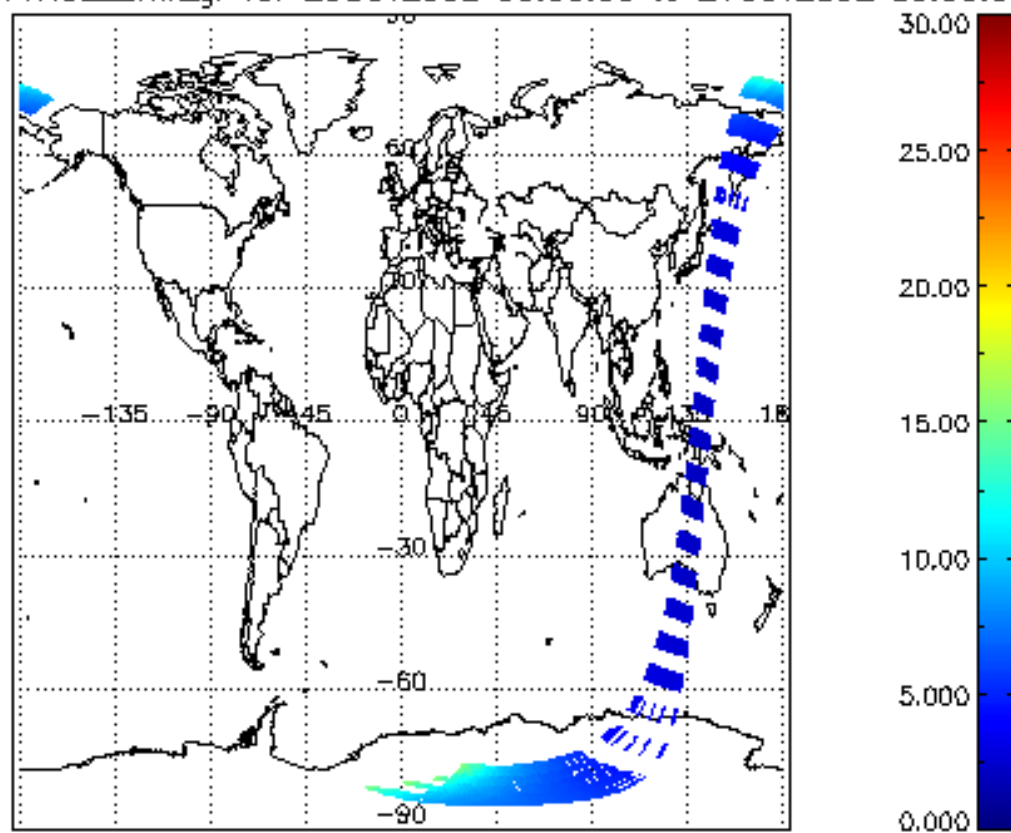
SCIOL2P\_NADUV1NO2\_vcd for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



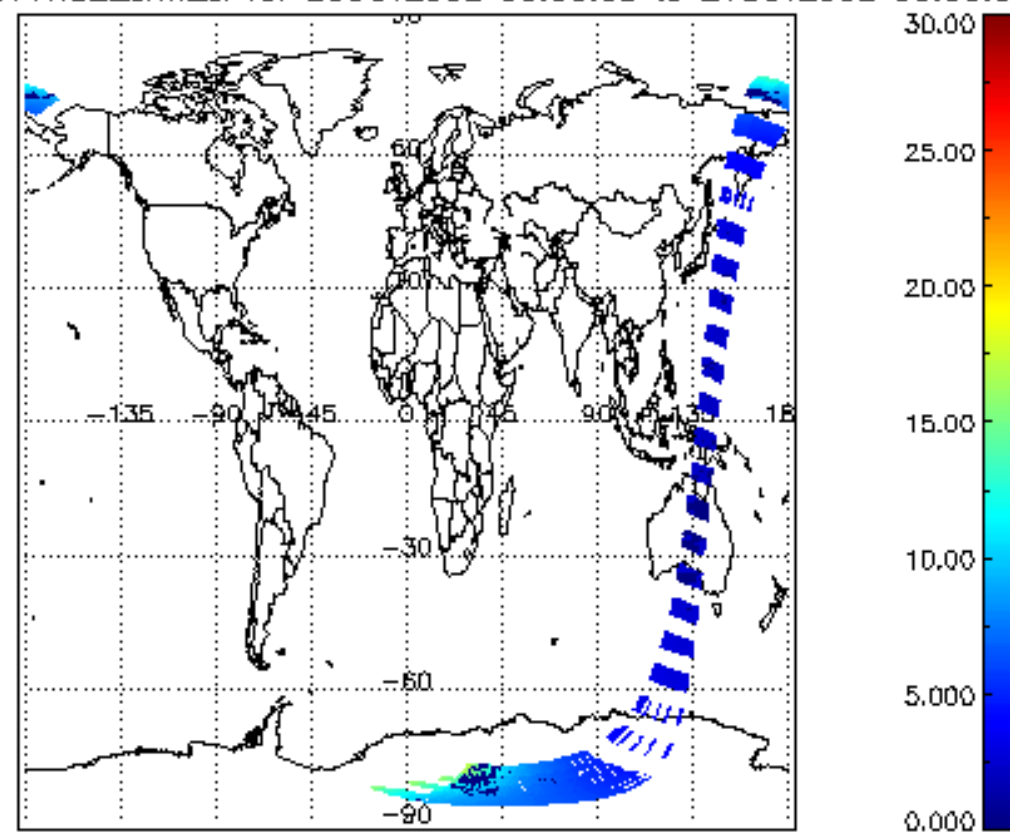
ICIOL2P\_NADUV1NO2\_vcd\_err for 20OCT2002 00:00:00 to 21OCT2002 00:00:00



ICIOL2P\_NADUV1NO2\_amf\_gr for 20OCT2002 00:00:00 to 21OCT2002 00:00:00

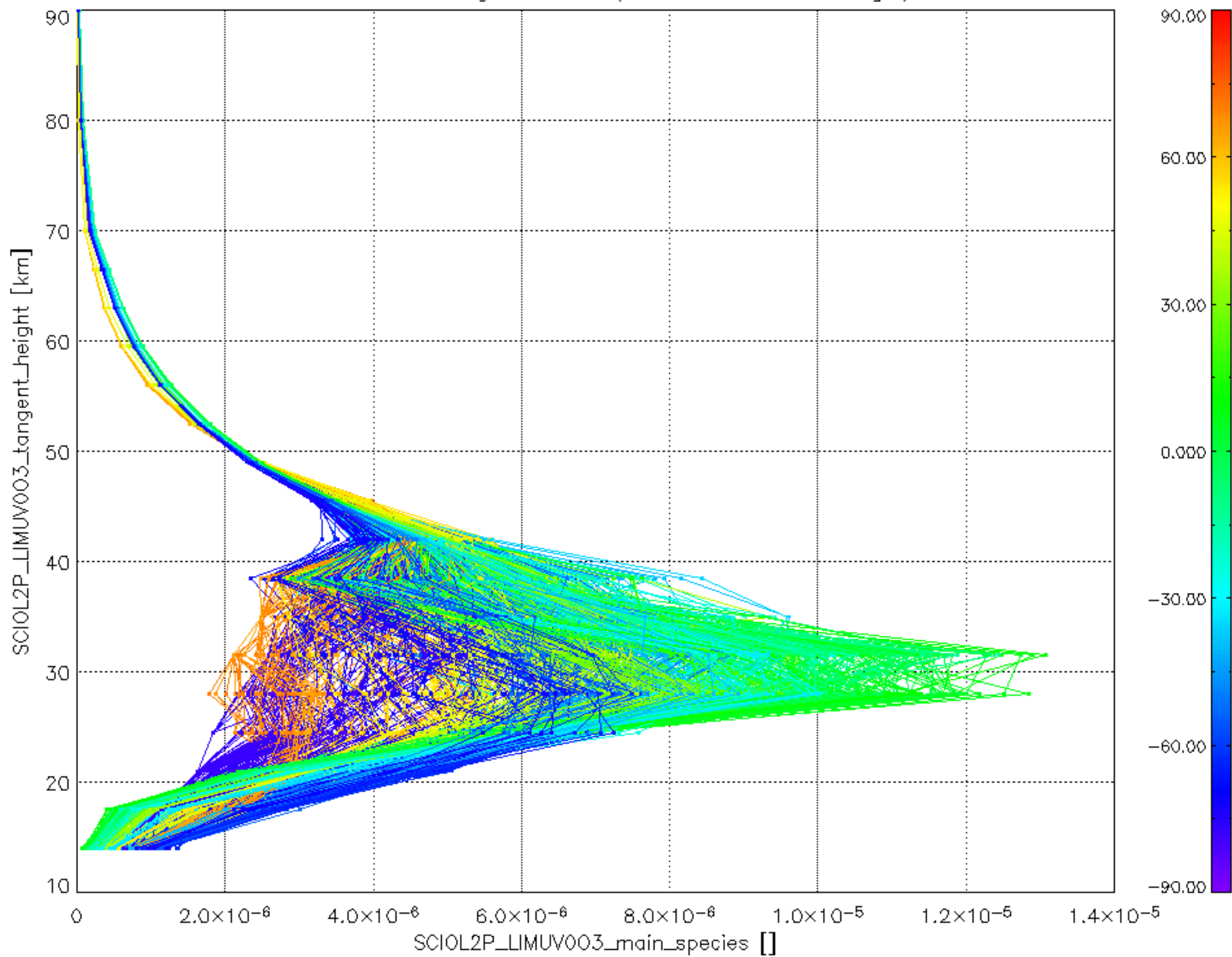


ICIOL2P\_NADUV1NO2\_amf\_cl for 20OCT2002 00:00:00 to 21OCT2002 00:00:00





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).

