

## 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	12JUN2008 13:25:54
Data source version	SCIA-OL/3.01-R
Processing scope for products	15NOV2002 00:00:00 to 16NOV2002 00:00:00
Start time of first product within scope	14NOV2002 23:50:46
Stop time of last product within scope	16NOV2002 00:14:38
Total number of level 2 products	15
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__2PRDPA20021114_235046_000033242011_00145_03706_1578.N1	14NOV2002 23:50:46	15NOV2002 00:46:11	0	GOOD
1	SCI_OL__2PRDPA20021115_013123_000033242011_00146_03707_1527.N1	15NOV2002 01:31:23	15NOV2002 02:26:47	0	GOOD
2	SCI_OL__2PRDPA20021115_031159_000033242011_00147_03708_1483.N1	15NOV2002 03:11:59	15NOV2002 04:07:23	0	GOOD
3	SCI_OL__2PRDPA20021115_045235_000033242011_00148_03709_4971.N1	15NOV2002 04:52:35	15NOV2002 05:47:59	0	GOOD
4	SCI_OL__2PRDPA20021115_063311_000033242011_00149_03710_1445.N1	15NOV2002 06:33:11	15NOV2002 07:28:36	0	GOOD
5	SCI_OL__2PRDPA20021115_081348_000033242011_00150_03711_1472.N1	15NOV2002 08:13:48	15NOV2002 09:09:12	0	GOOD
6	SCI_OL__2PRDPA20021115_095424_000033242011_00151_03712_1591.N1	15NOV2002 09:54:24	15NOV2002 10:49:48	0	GOOD
7	SCI_OL__2PRDPA20021115_113500_000033242011_00152_03713_1470.N1	15NOV2002 11:35:00	15NOV2002 12:30:24	0	GOOD
8	SCI_OL__2PRDPA20021115_131536_000033242011_00153_03714_1473.N1	15NOV2002 13:15:36	15NOV2002 14:11:01	0	GOOD
9	SCI_OL__2PRDPA20021115_145613_000033242011_00154_03715_1557.N1	15NOV2002 14:56:13	15NOV2002 15:51:37	0	GOOD
10	SCI_OL__2PRDPA20021115_163649_000033242011_00155_03716_1516.N1	15NOV2002 16:36:49	15NOV2002 17:32:13	0	GOOD
11	SCI_OL__2PRDPA20021115_181725_000033242011_00156_03717_1499.N1	15NOV2002 18:17:25	15NOV2002 19:12:50	0	GOOD
12	SCI_OL__2PRDPA20021115_195738_000033592011_00157_03718_1612.N1	15NOV2002 19:57:38	15NOV2002 20:53:37	0	GOOD
13	SCI_OL__2PRDPA20021115_213756_000033862011_00158_03719_1581.N1	15NOV2002 21:37:56	15NOV2002 22:34:23	0	GOOD
14	SCI_OL__2PRDPA20021115_231914_000033242011_00159_03720_3309.N1	15NOV2002 23:19:14	16NOV2002 00:14:38	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: 112181

Total number of cloud data DSRs with good quality flag (=0): 112181 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	112181	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	112181	0.21724	0.25000	0.12500	1.0000	0.080197	s
SURFACE_PRES	112181	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	112181	0.43646	0.41650	0.0000	1.0000	0.28040	-

CL_FRAC_ERR	112181	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	112181	6.9517	8.0000	4.0000	32.000	2.5663	
PMD_READ_CL[0]	112181	0.36334	0.0000	0.0000	32.000	1.4252	-
PMD_READ_CL[1]	112181	0.39430	0.0000	0.0000	24.000	1.4987	-
CL_TOP_HEIGHT	100342	4.4374	3.1390	0.0000	17.000	4.0242	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	100342	47.838	31.145	0.0000	101.00	38.538	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	112181	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	112181	11000111	11000100	11000000	11100000	2610.0	flags
AERO_ABSO_IND	112181	0.49189	0.37126	-4.5536	16.955	1.0364	
AERO_IND_DIAG	112181	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	112181	01101011	11000000	00000000	11000000	24391.	flags

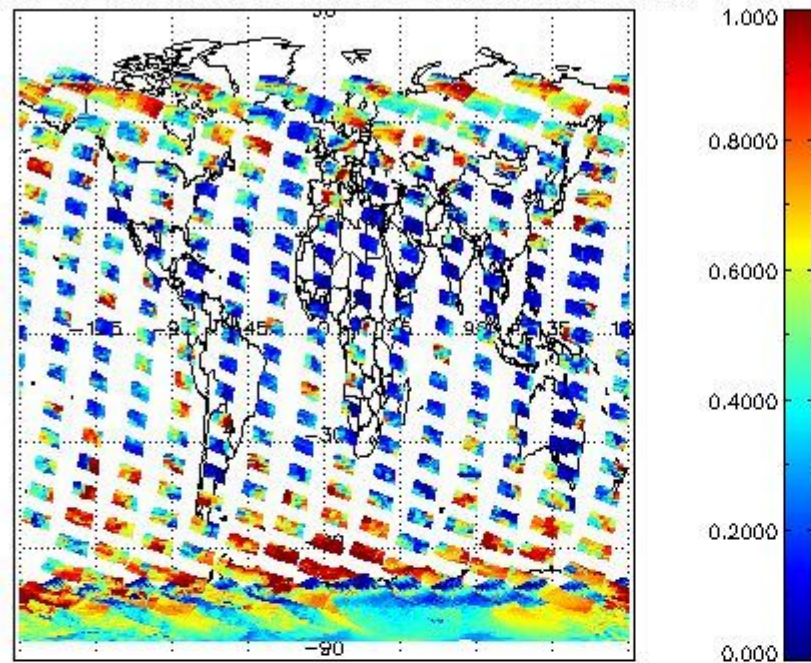
Time and geolocation plots:

Plots are available for the following parameters:

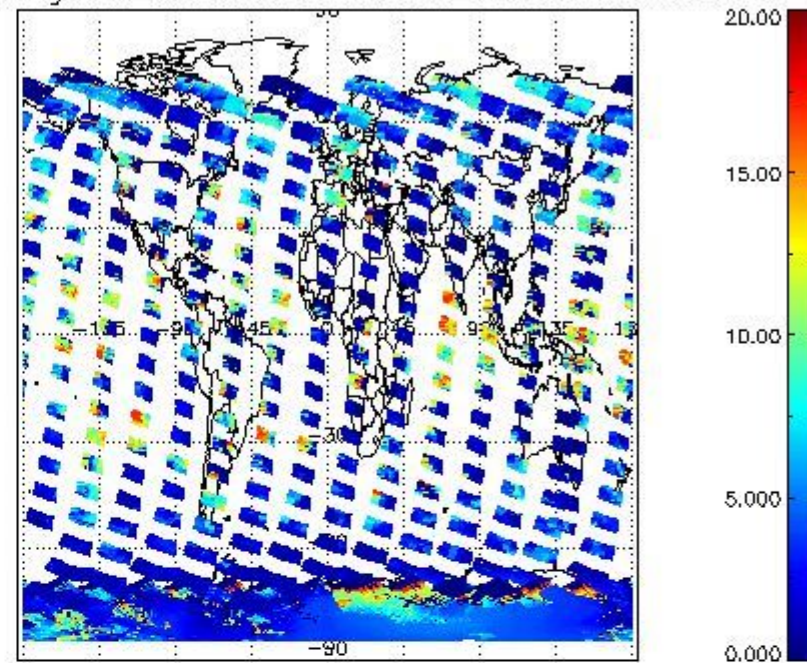
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



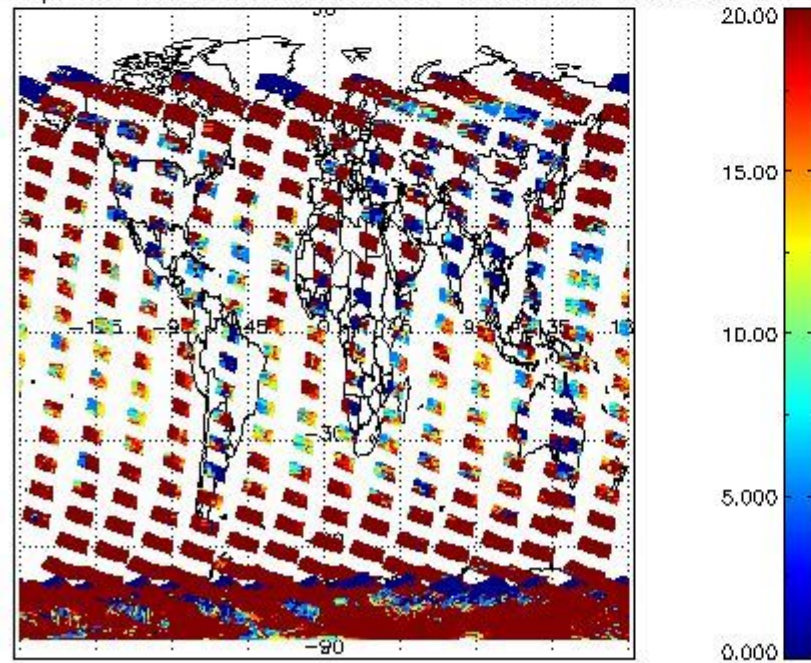
cLfrac for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



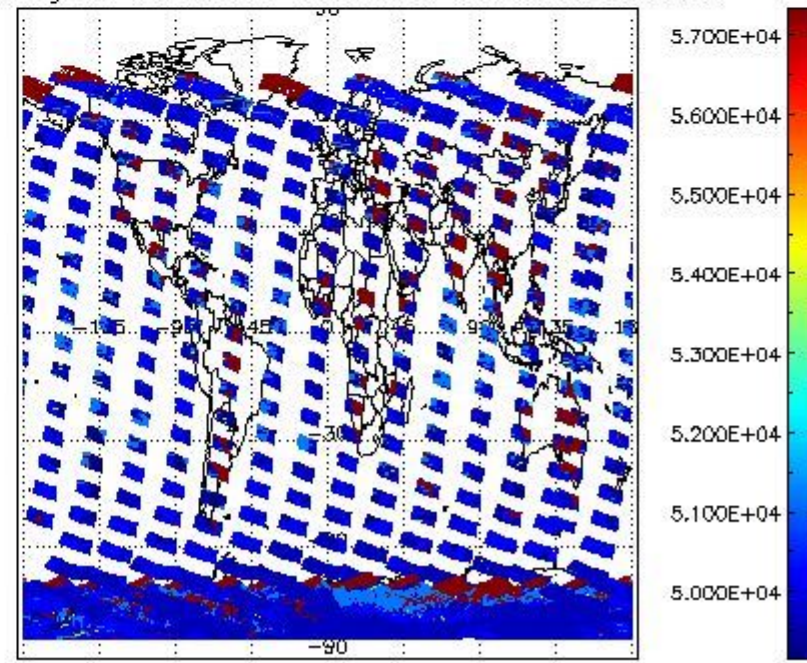
cL\_top\_height for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



cL\_opt\_depth for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



cloud\_flags for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



### 2.2.2 Nadir

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

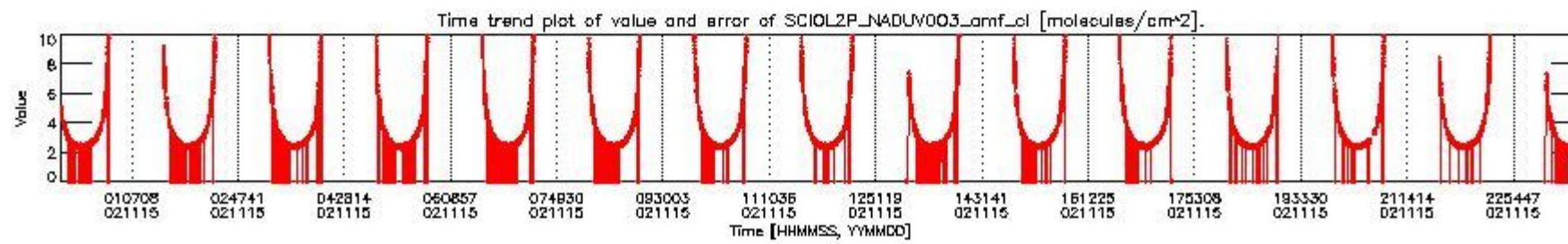
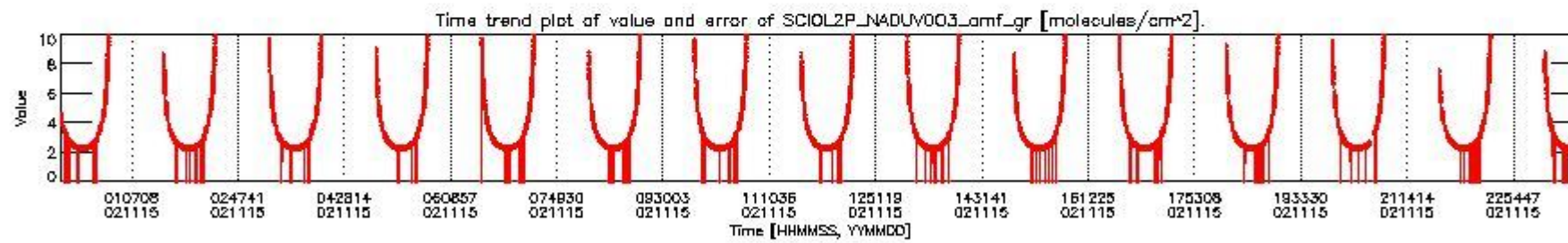
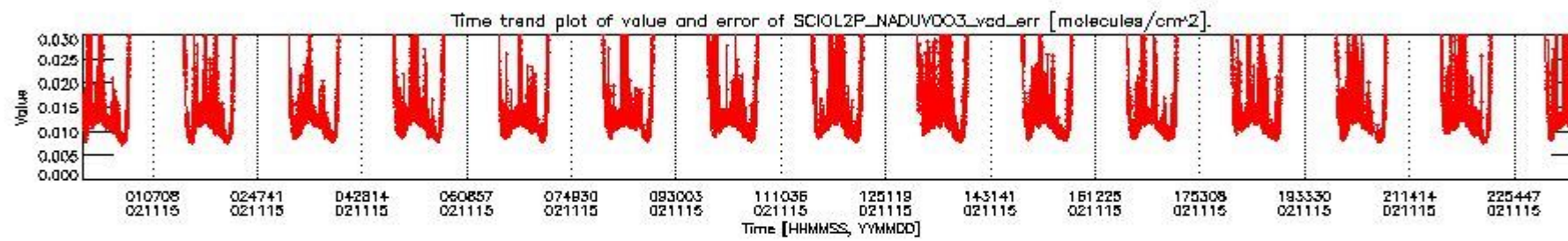
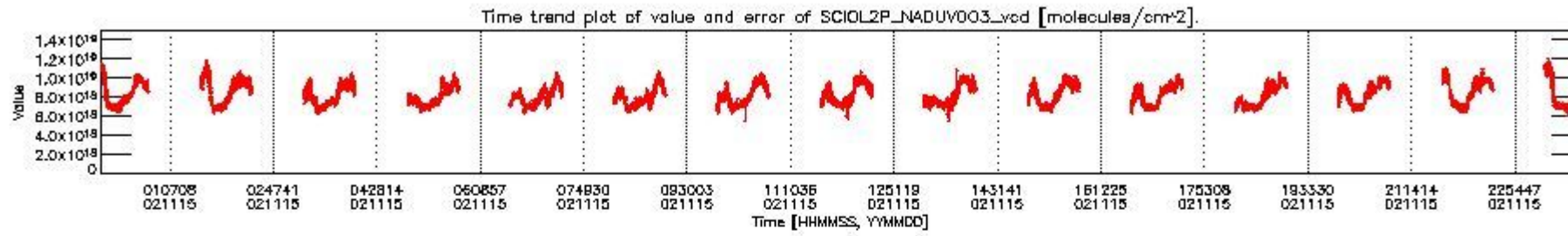
The following data items are currently included into this section:

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



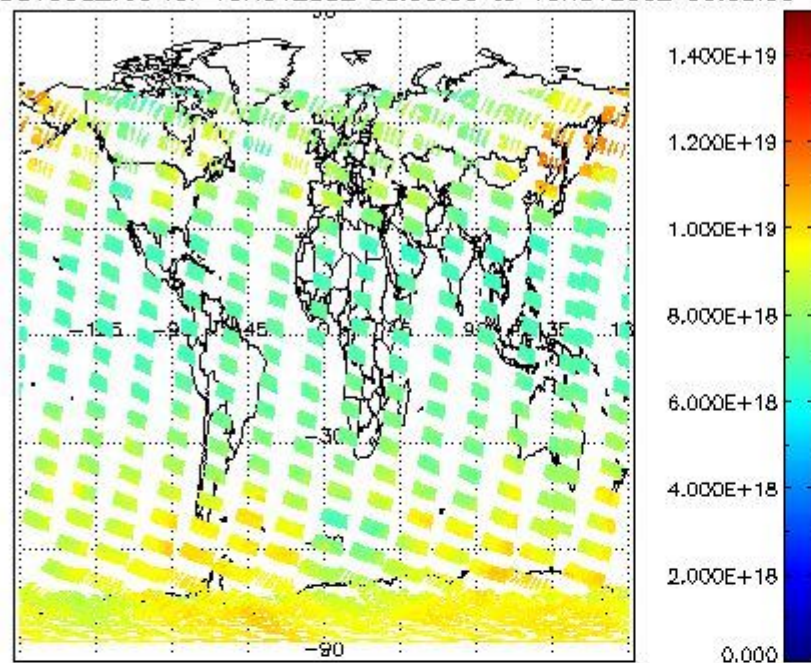
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

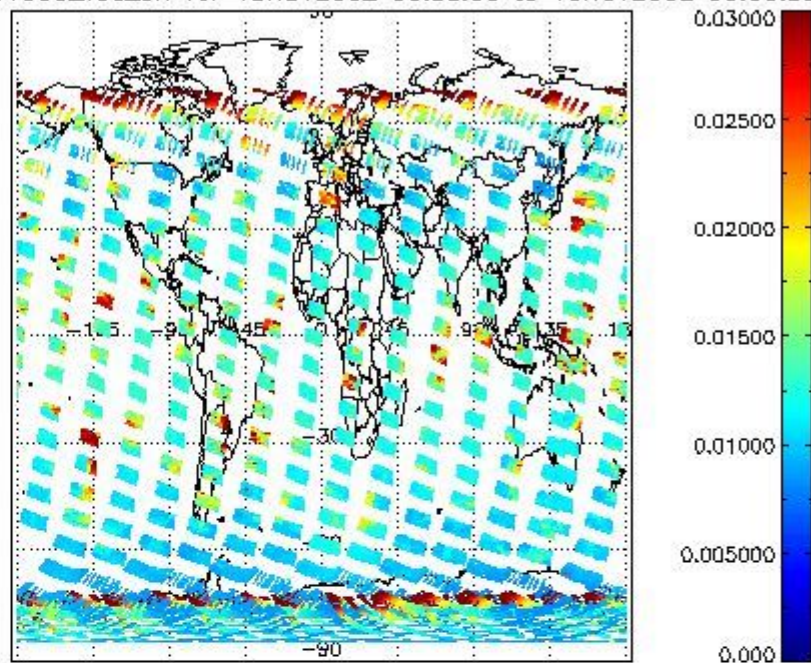




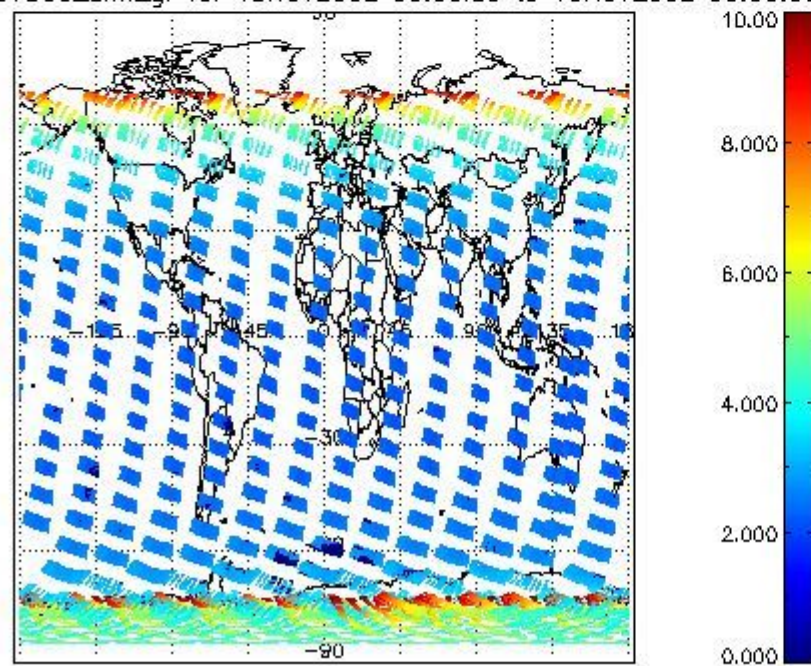
SCIOL2P\_NADUV003\_vcd for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



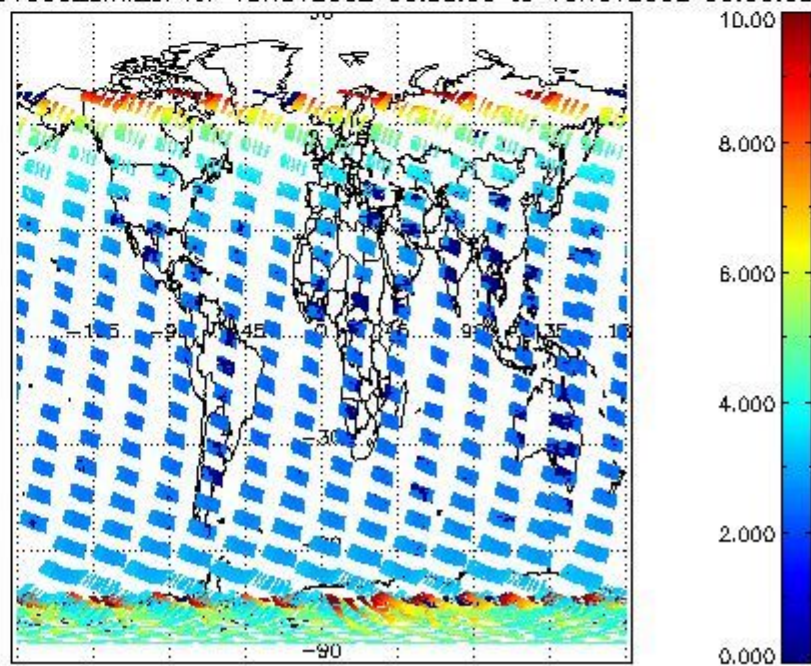
SCIOL2P\_NADUV003\_vcd\_err for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



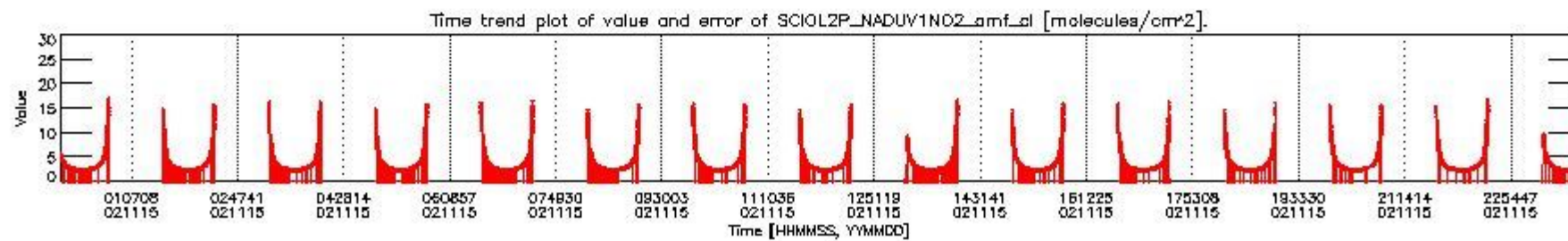
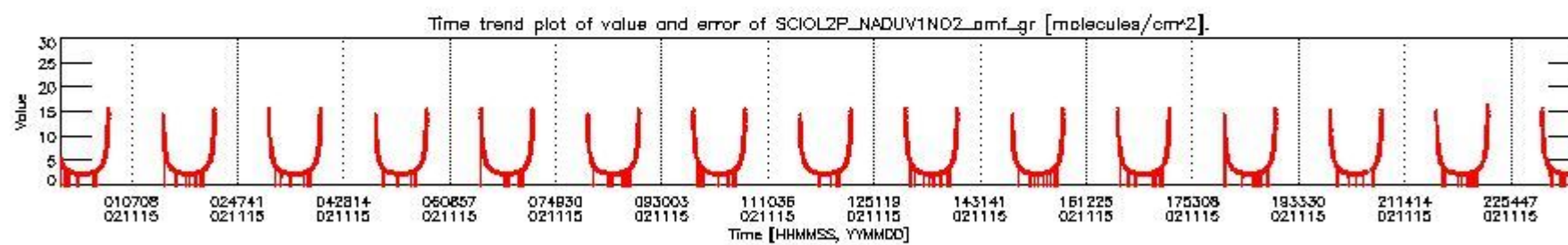
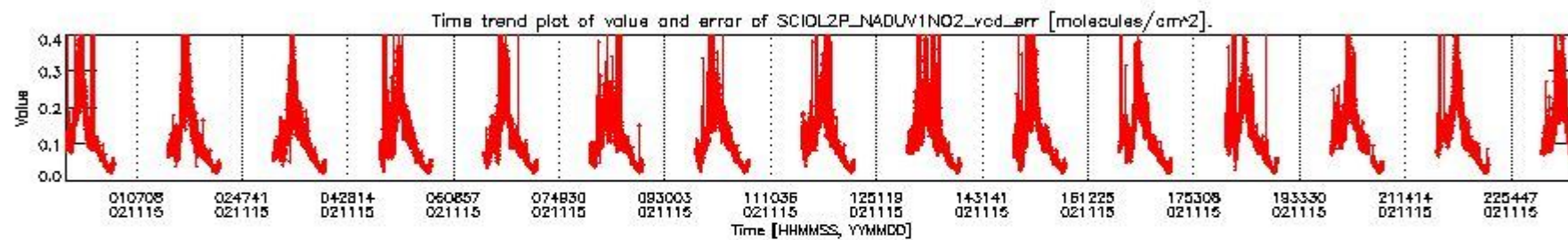
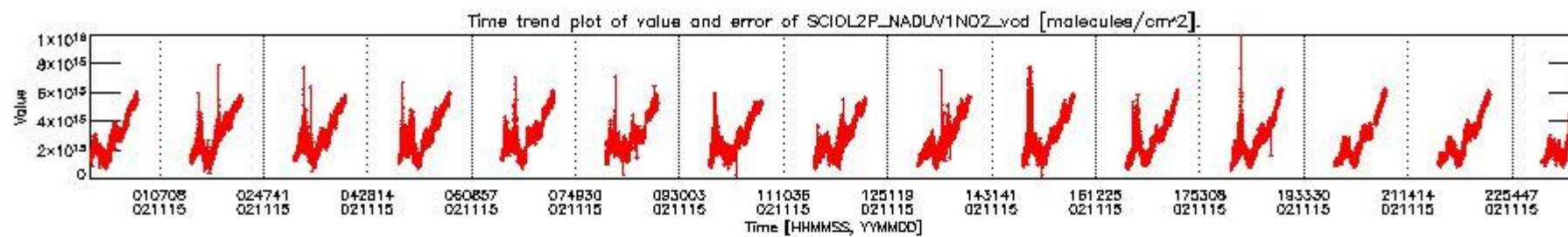
SCIOL2P\_NADUV003\_amf\_gr for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



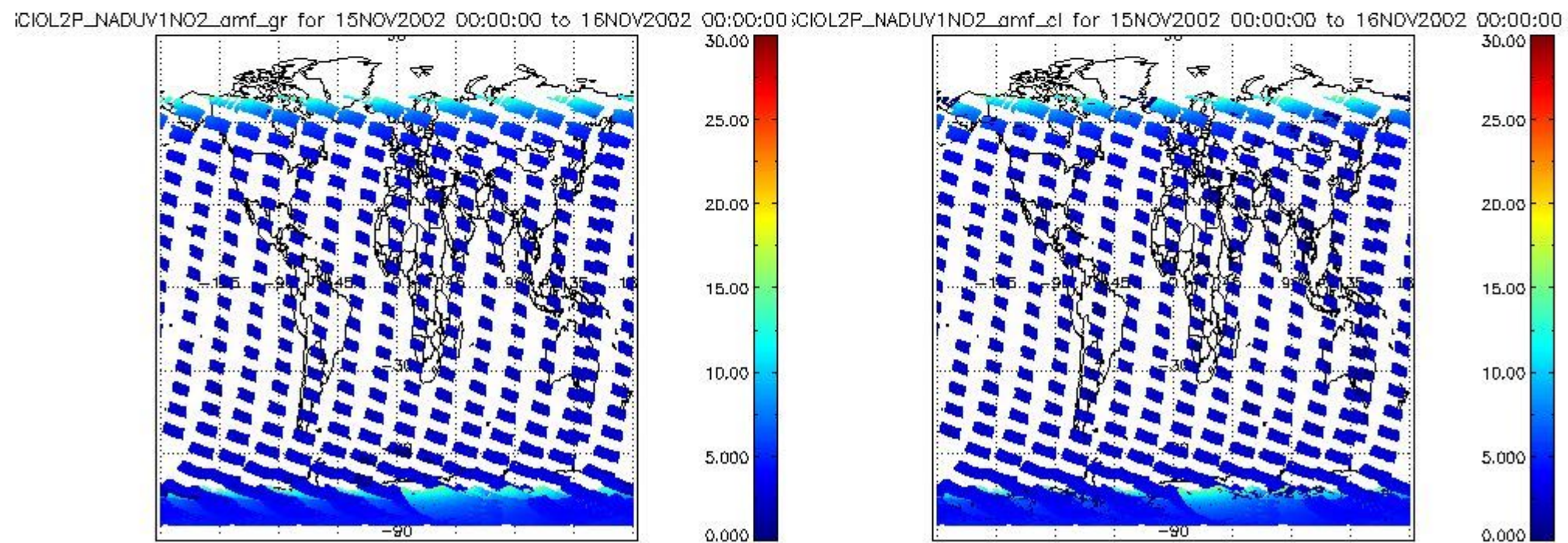
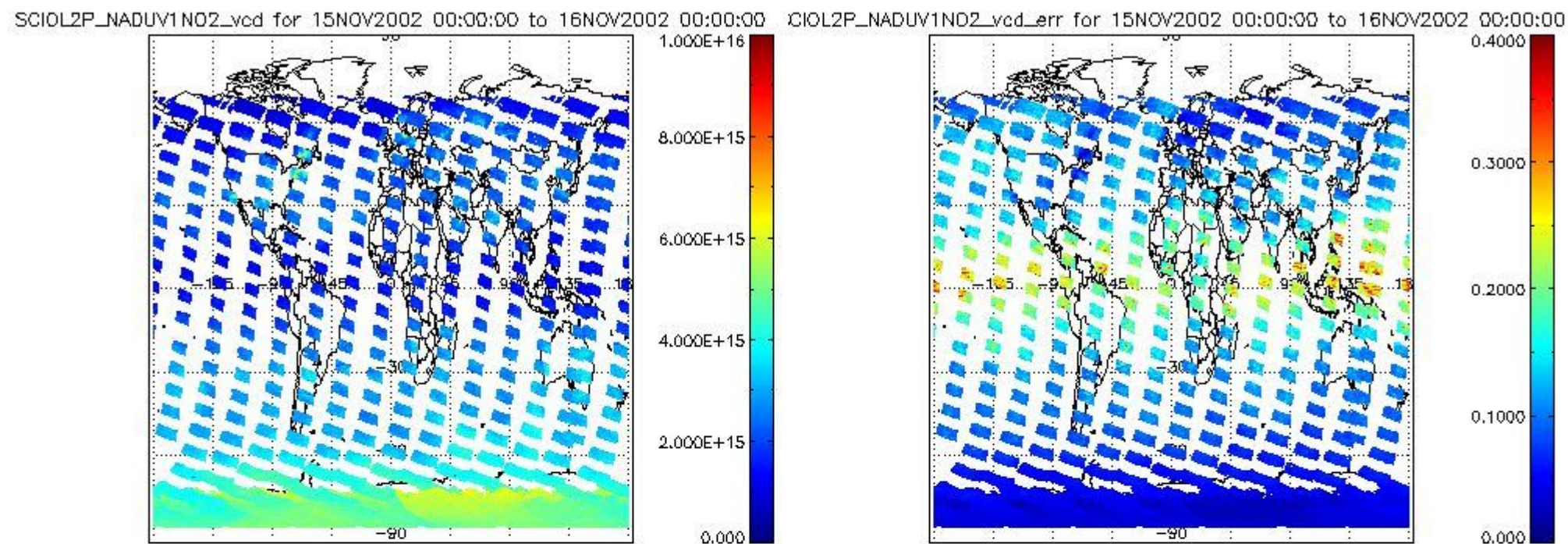
SCIOL2P\_NADUV003\_amf\_cl for 15NOV2002 00:00:00 to 16NOV2002 00:00:00











### 2.2.3 Limb

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

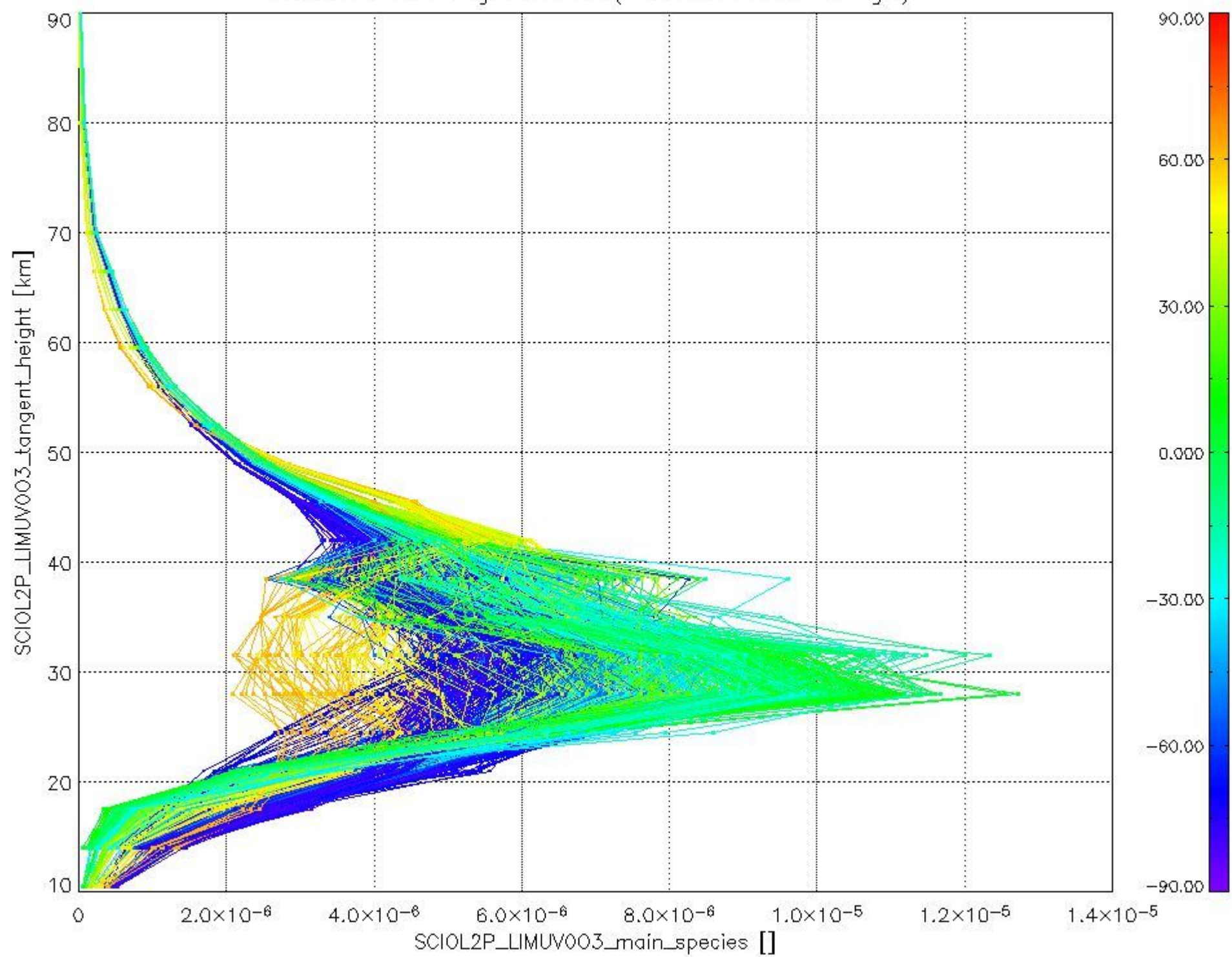
The following data items are currently included into this section:

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.

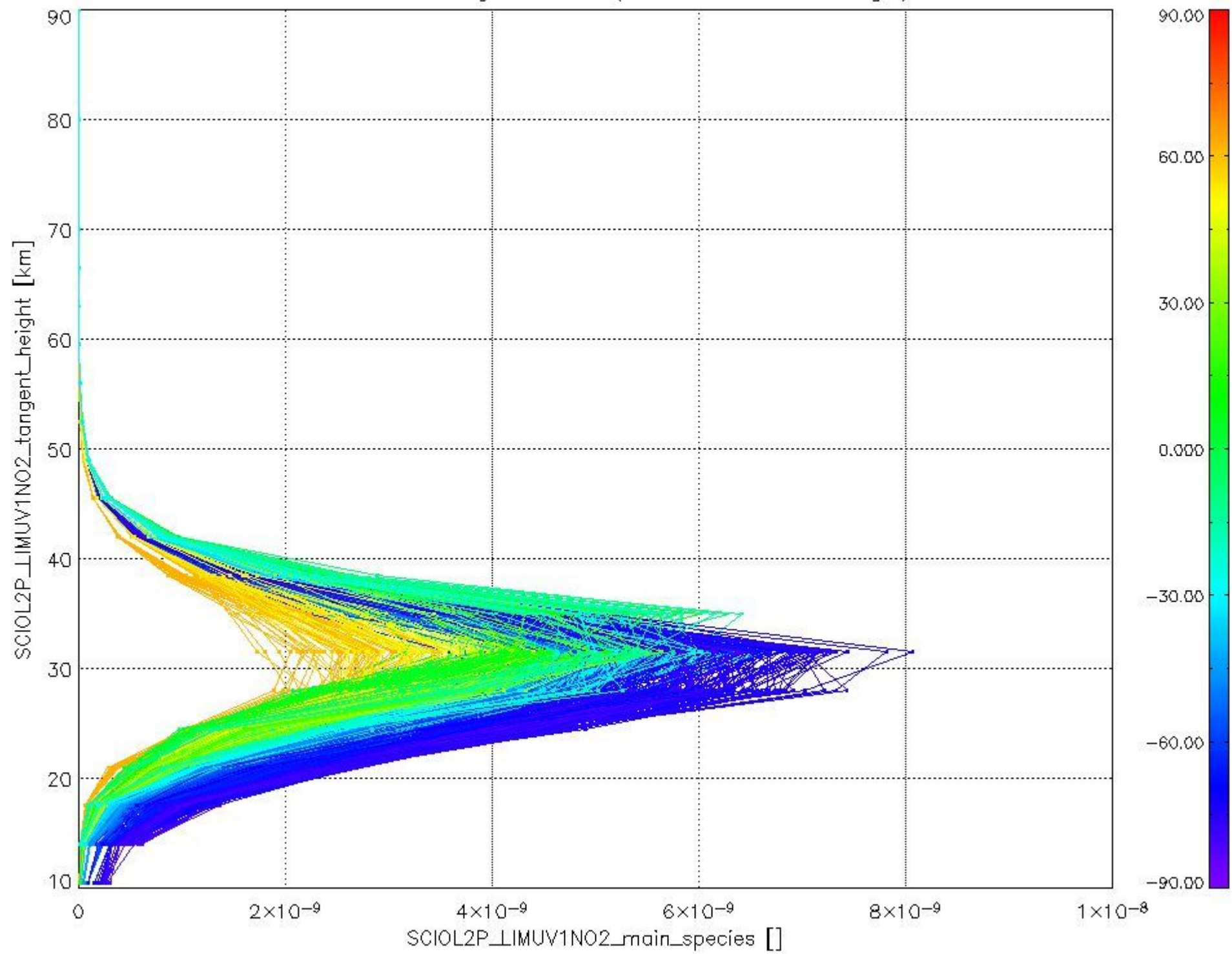


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





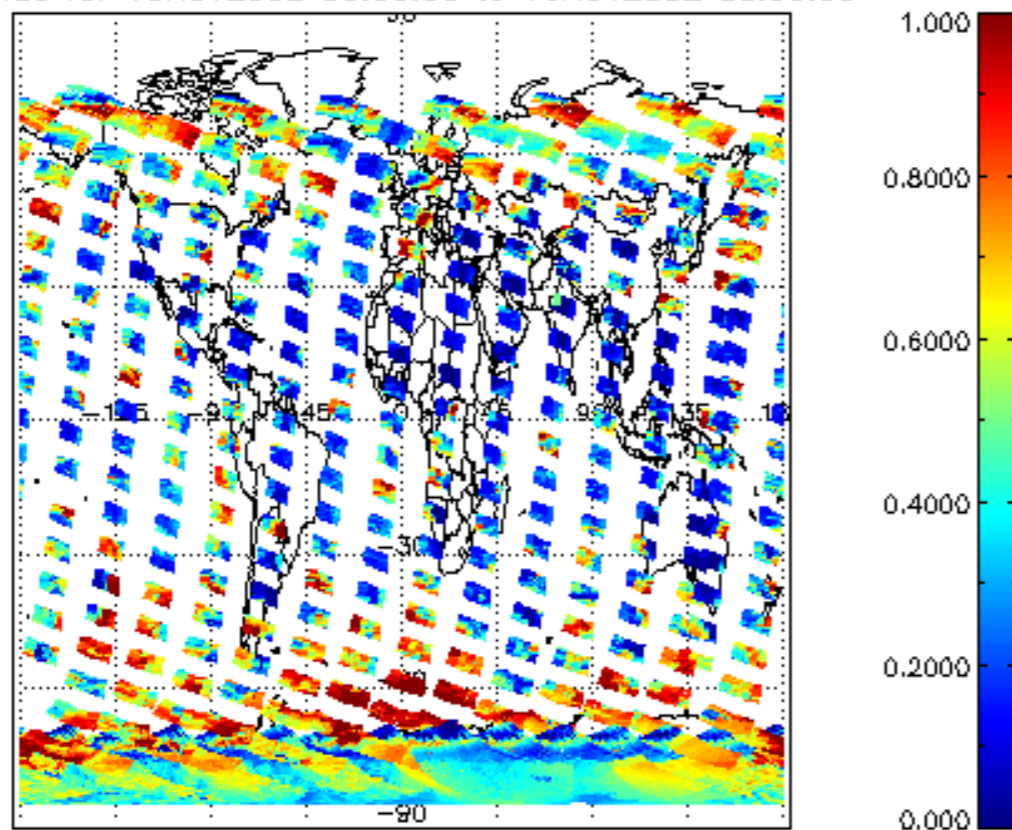
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



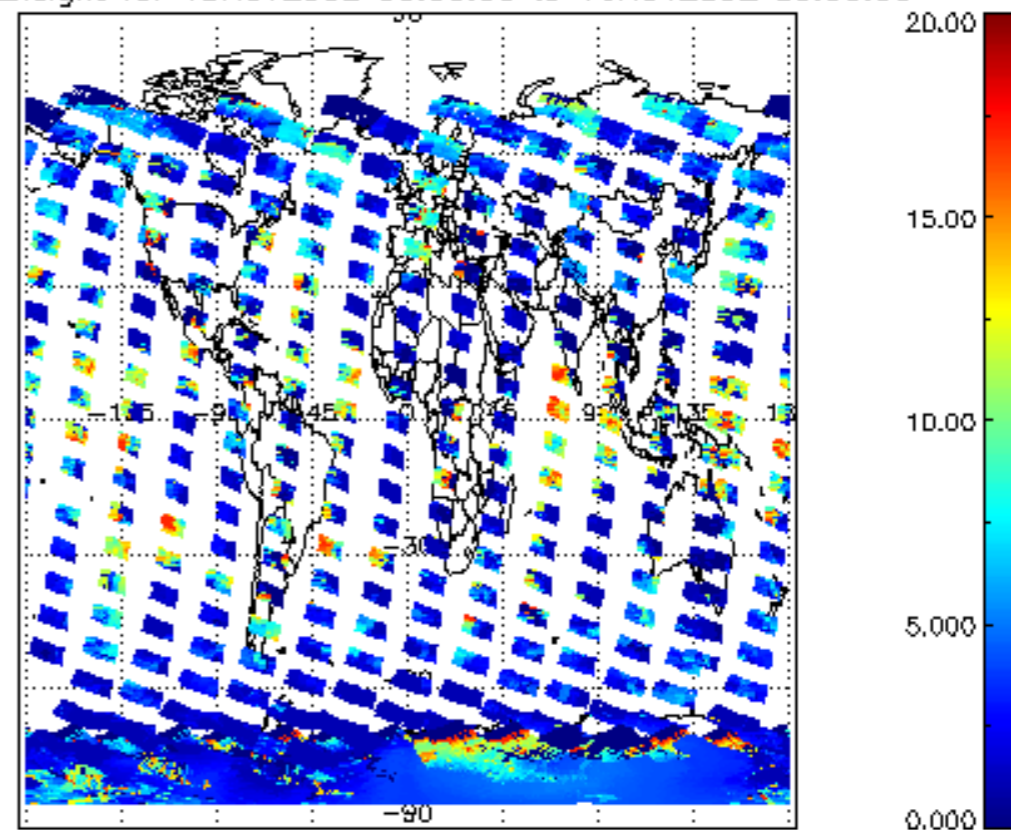
### 2.3 ADF monitoring

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

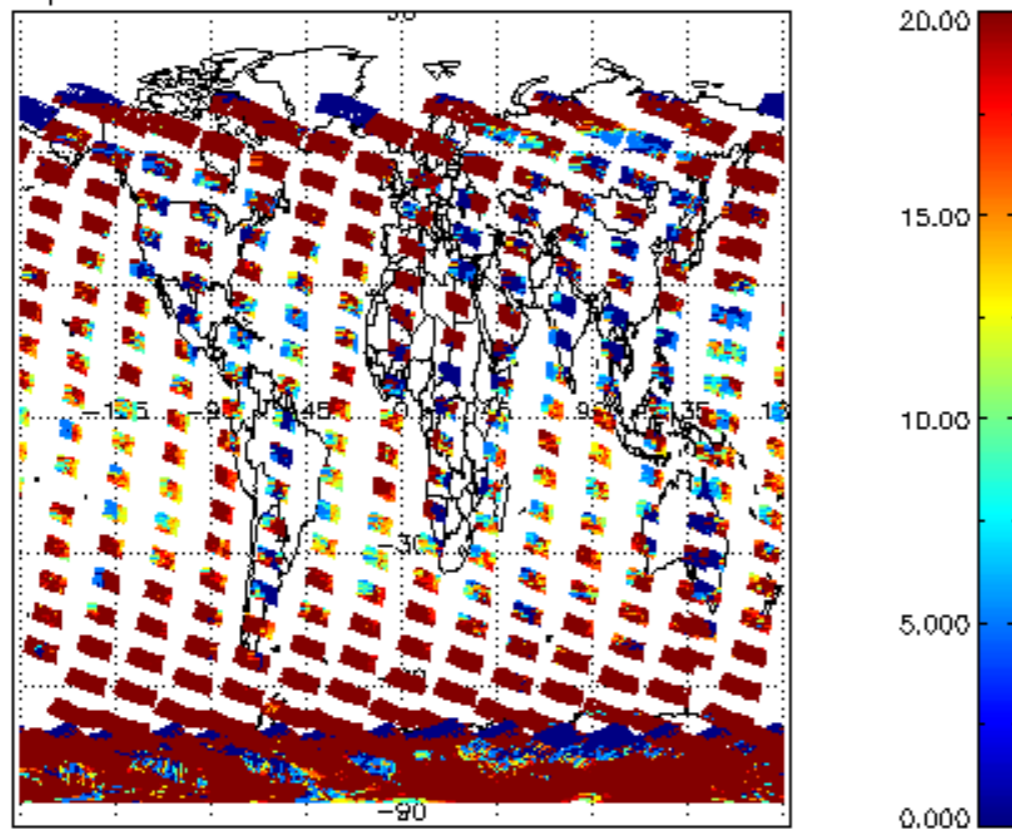
cLfrac for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



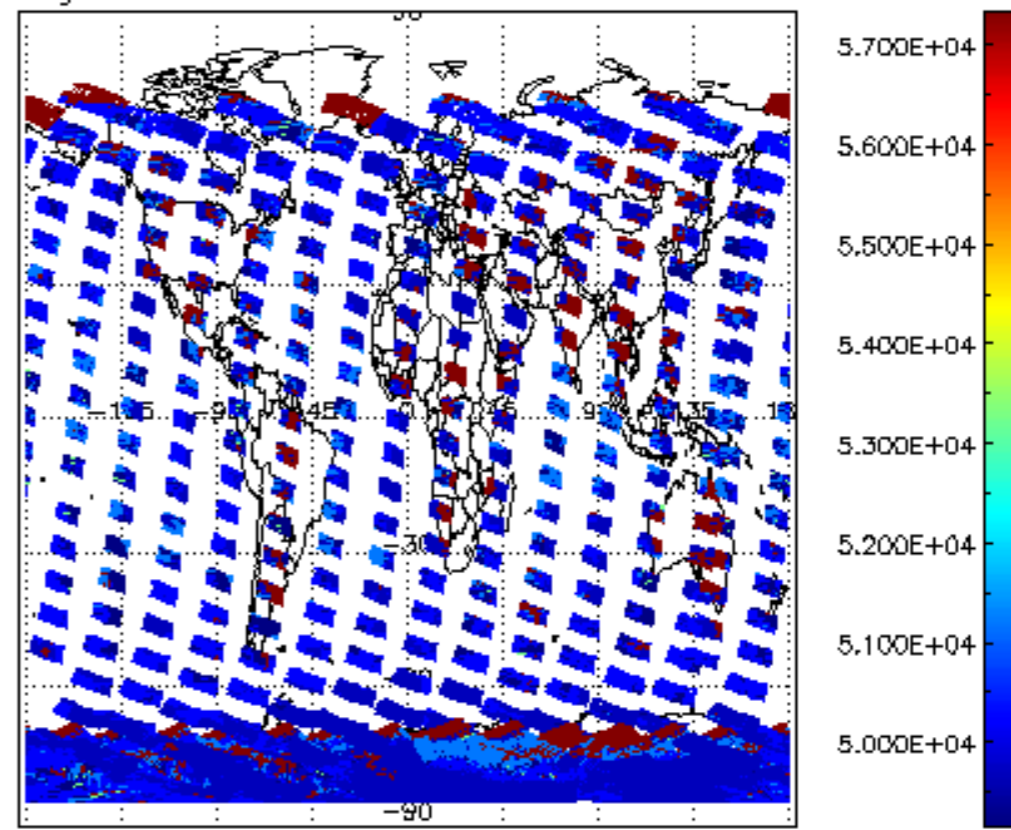
cL\_top\_height for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



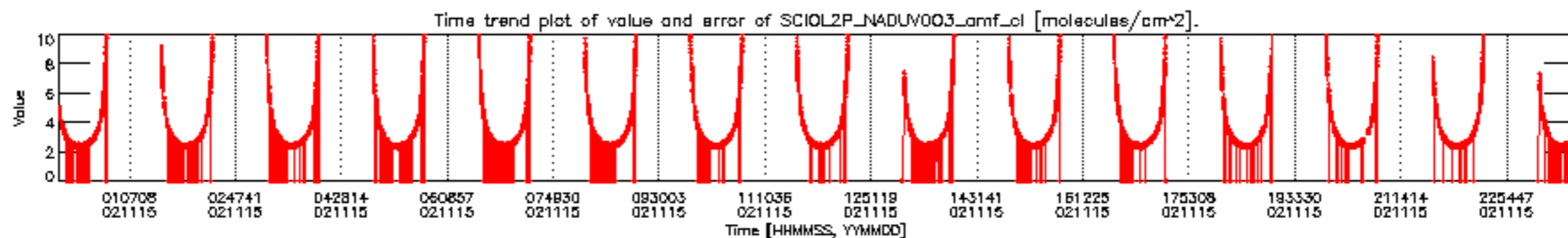
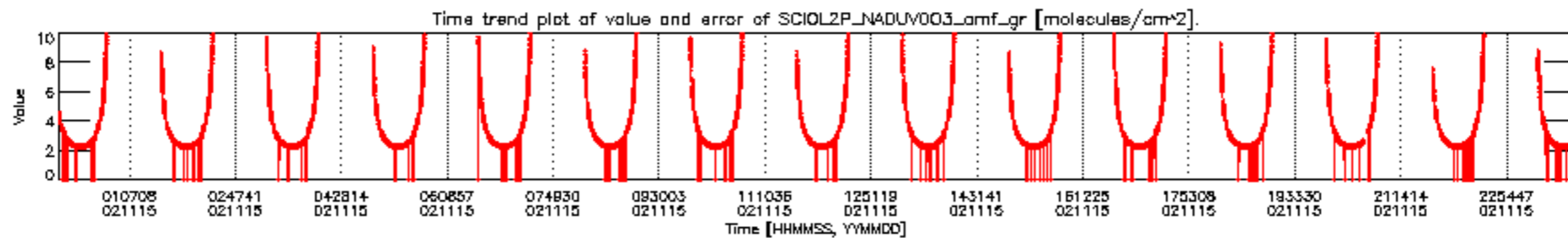
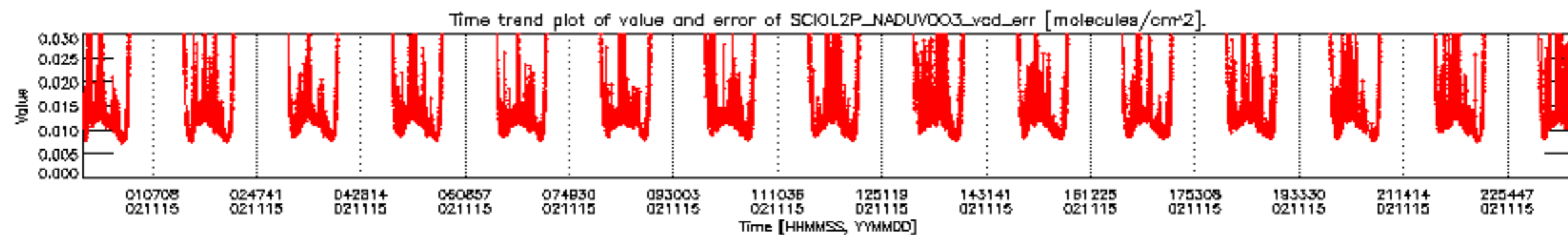
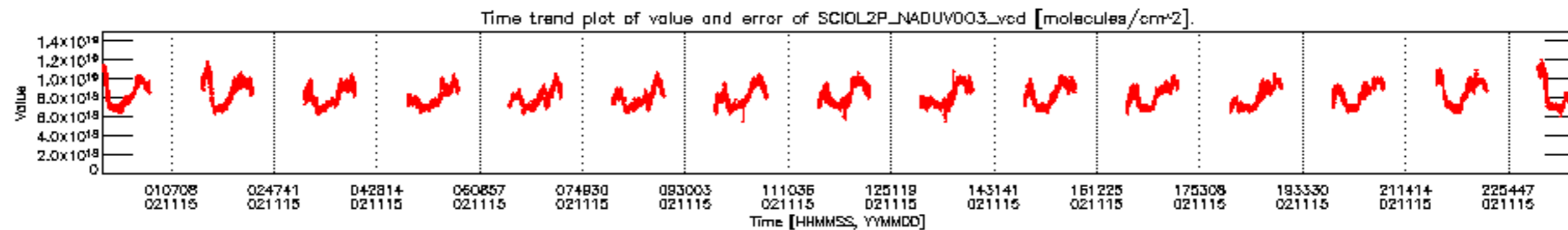
cL\_opt\_depth for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



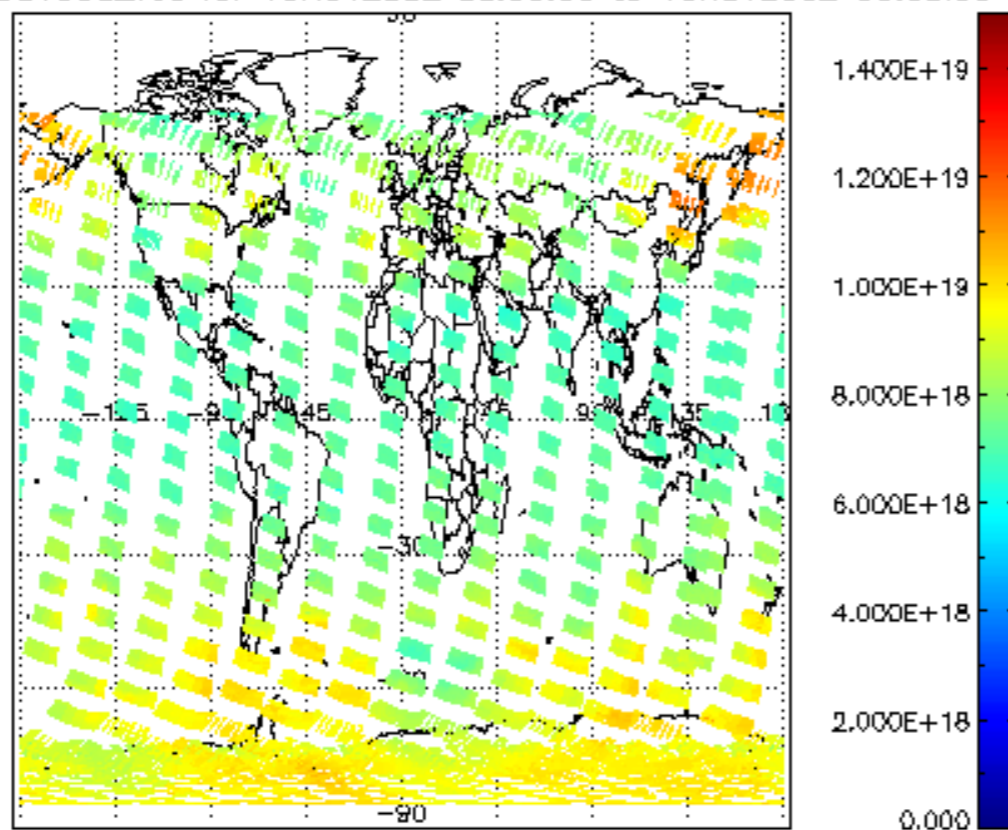
cloud\_flags for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



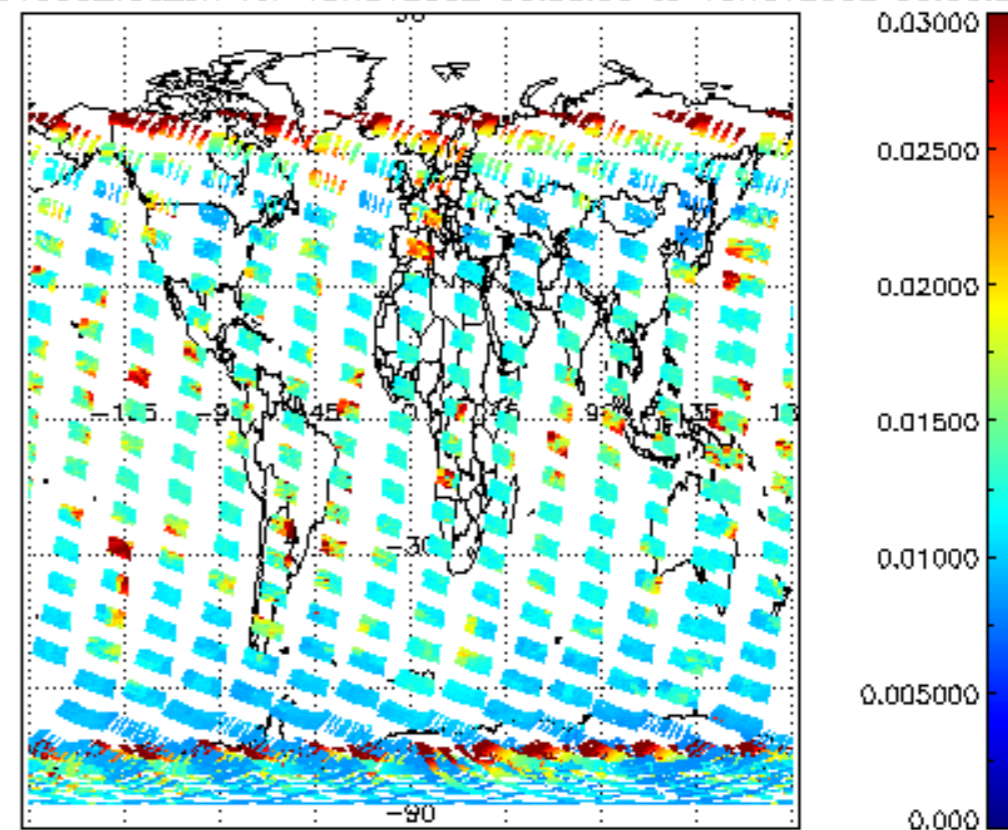




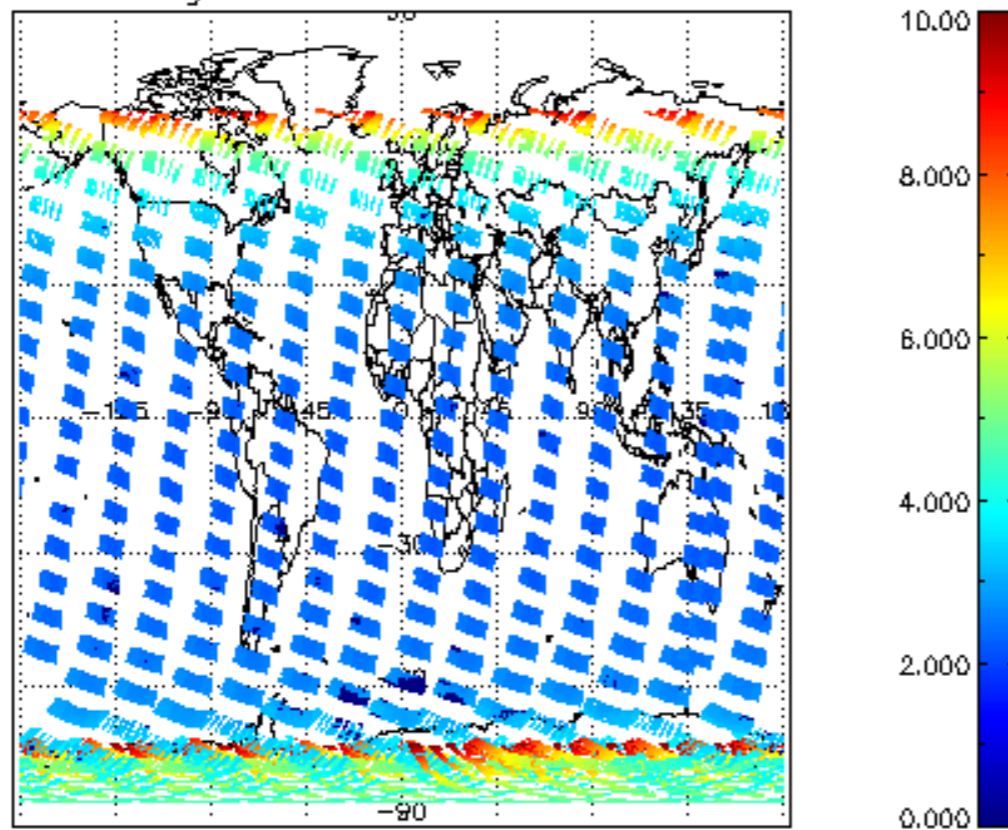
SCIOL2P\_NADUV003\_vcd for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



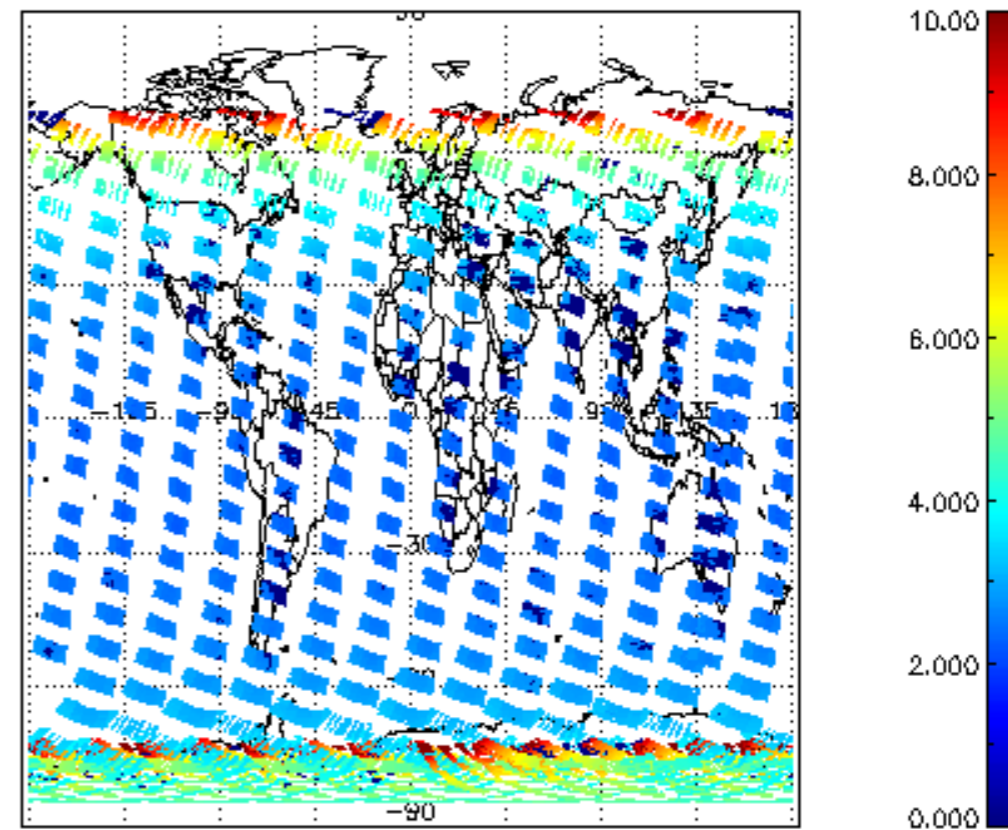
SCIOL2P\_NADUV003\_vcd\_err for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



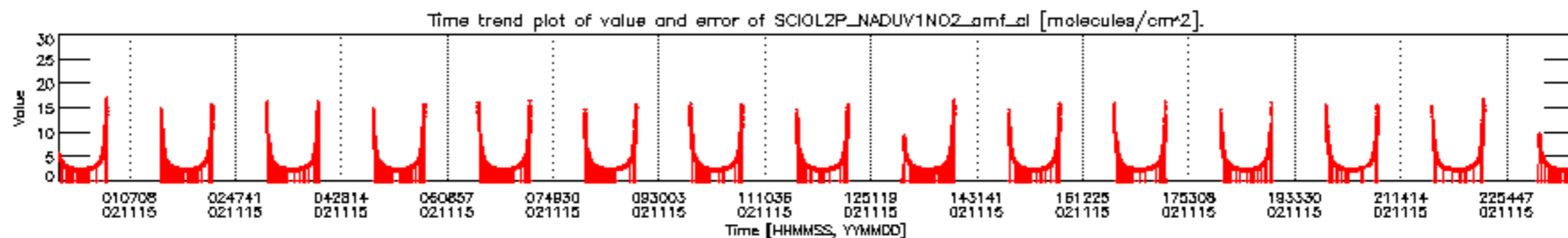
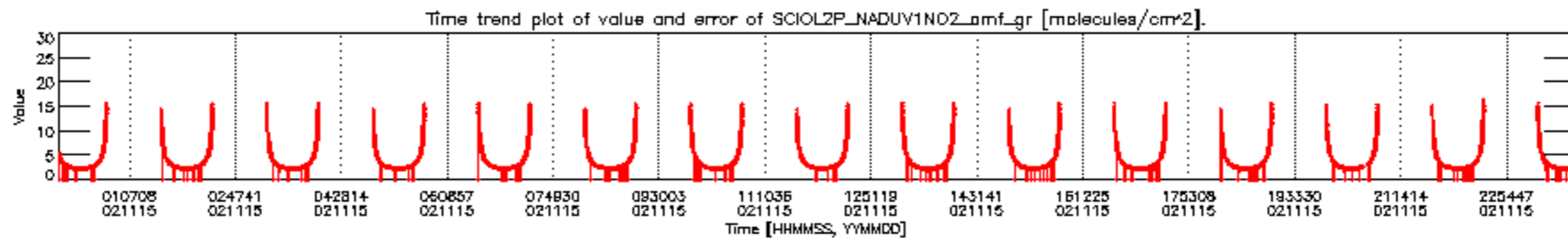
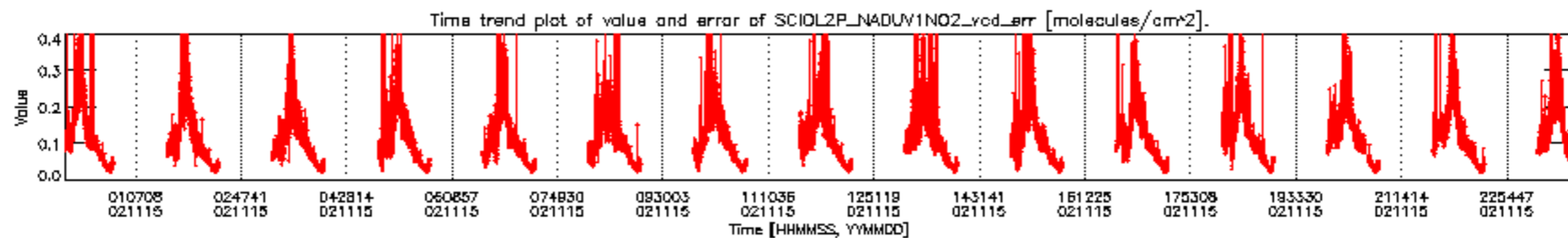
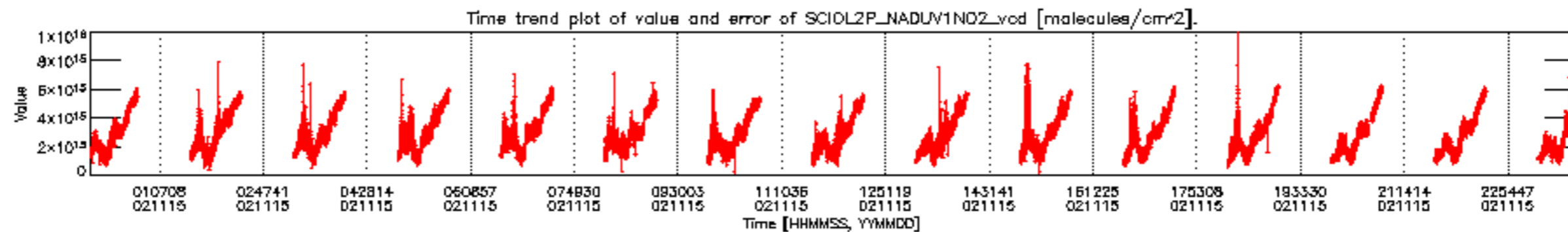
SCIOL2P\_NADUV003\_amf\_gr for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



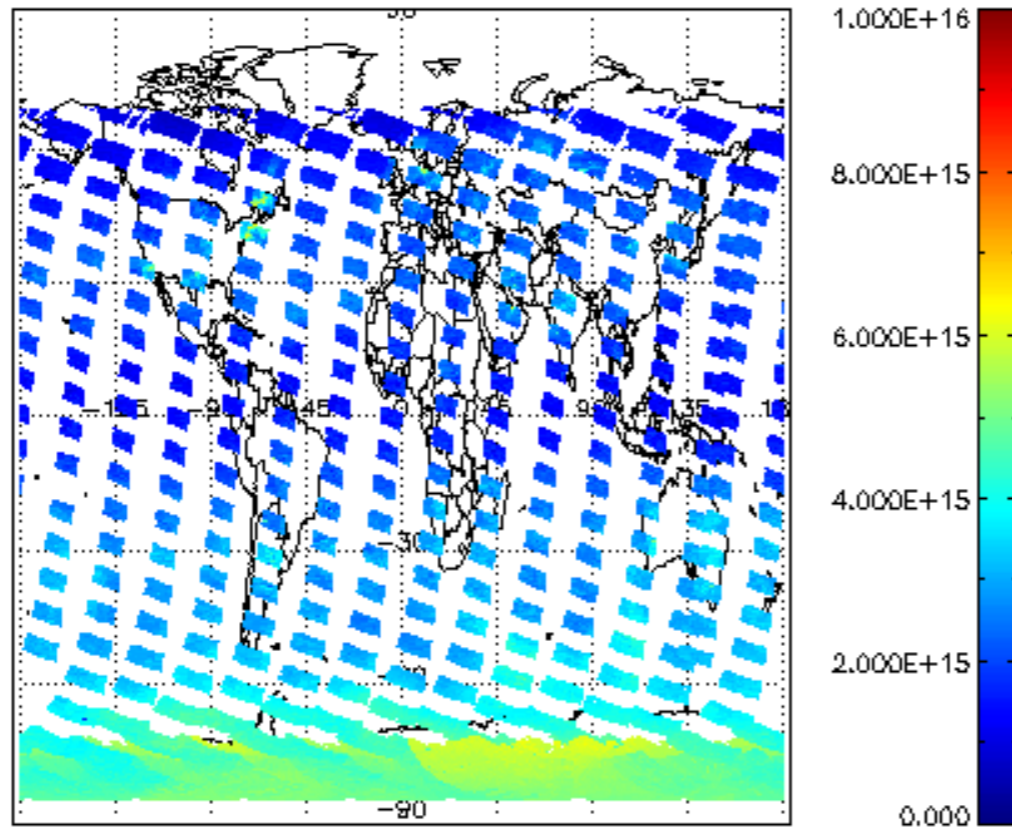
SCIOL2P\_NADUV003\_amf\_cl for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



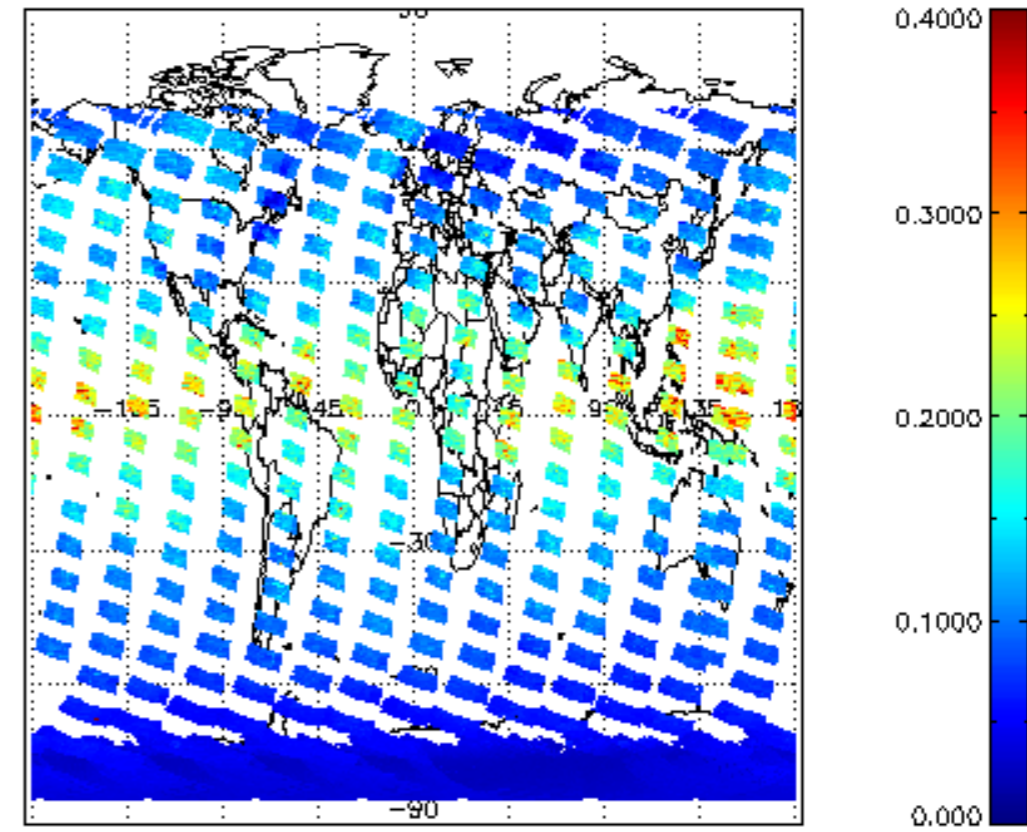




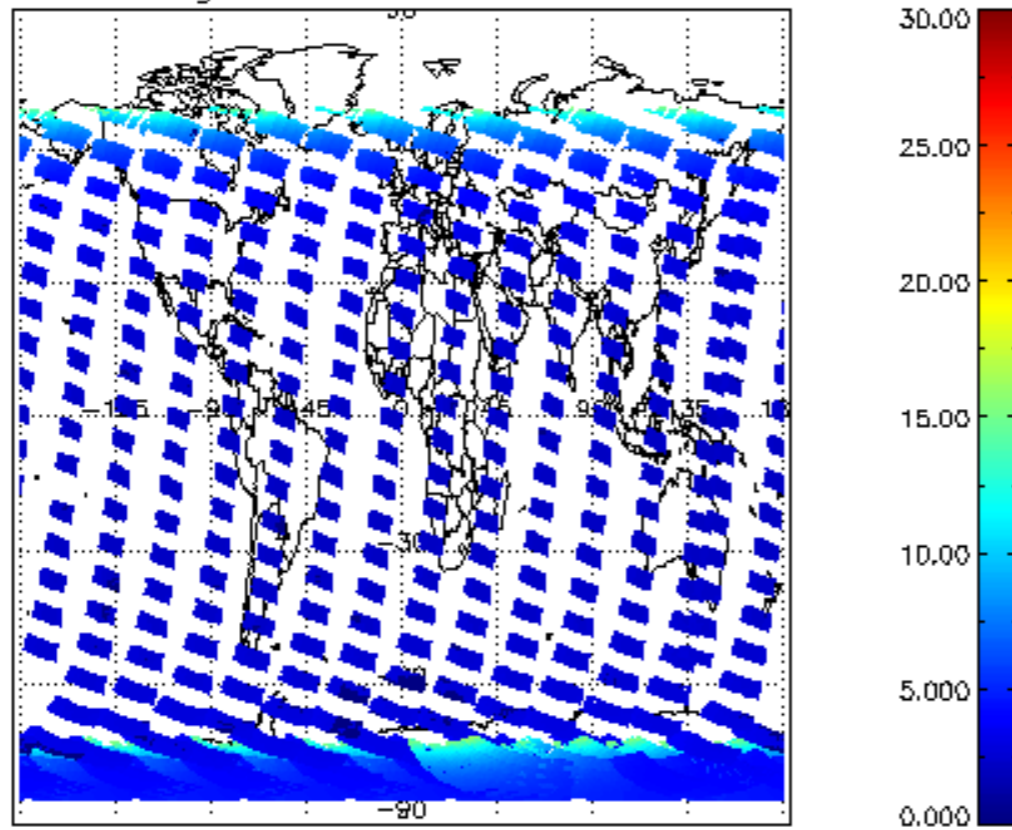
SCIOL2P\_NADUV1NO2\_vcd for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



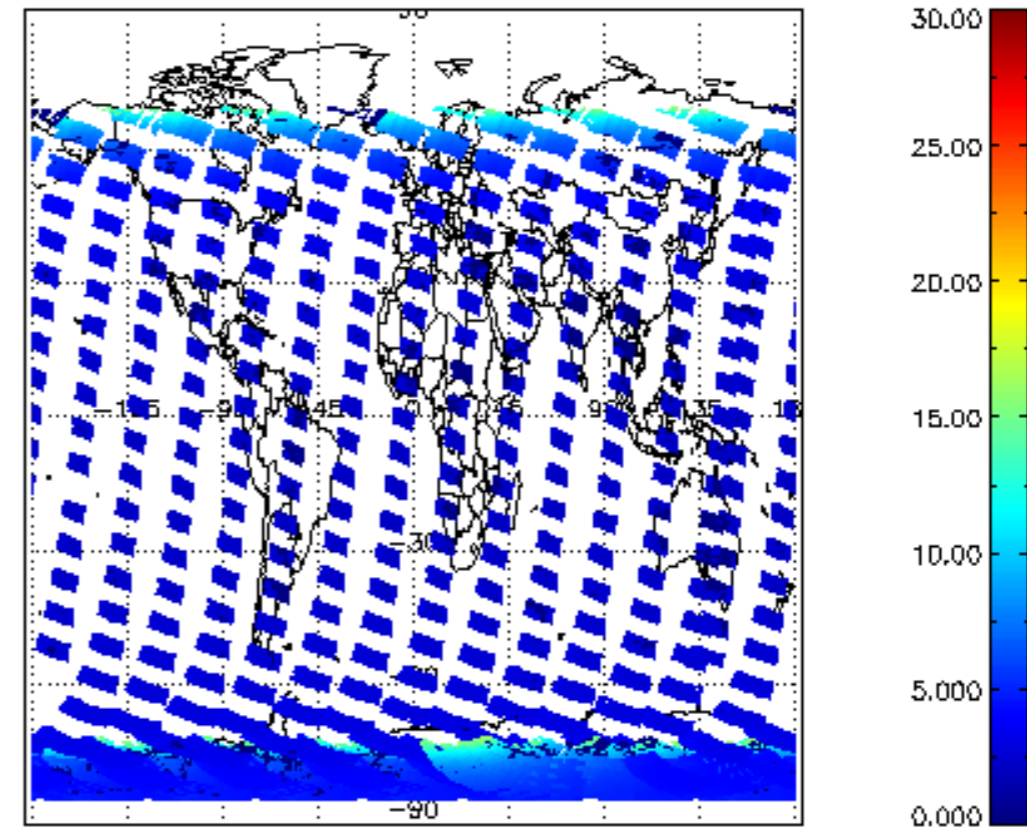
SCIOL2P\_NADUV1NO2\_vcd\_err for 15NOV2002 00:00:00 to 16NOV2002 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 15NOV2002 00:00:00 to 16NOV2002 00:00:00

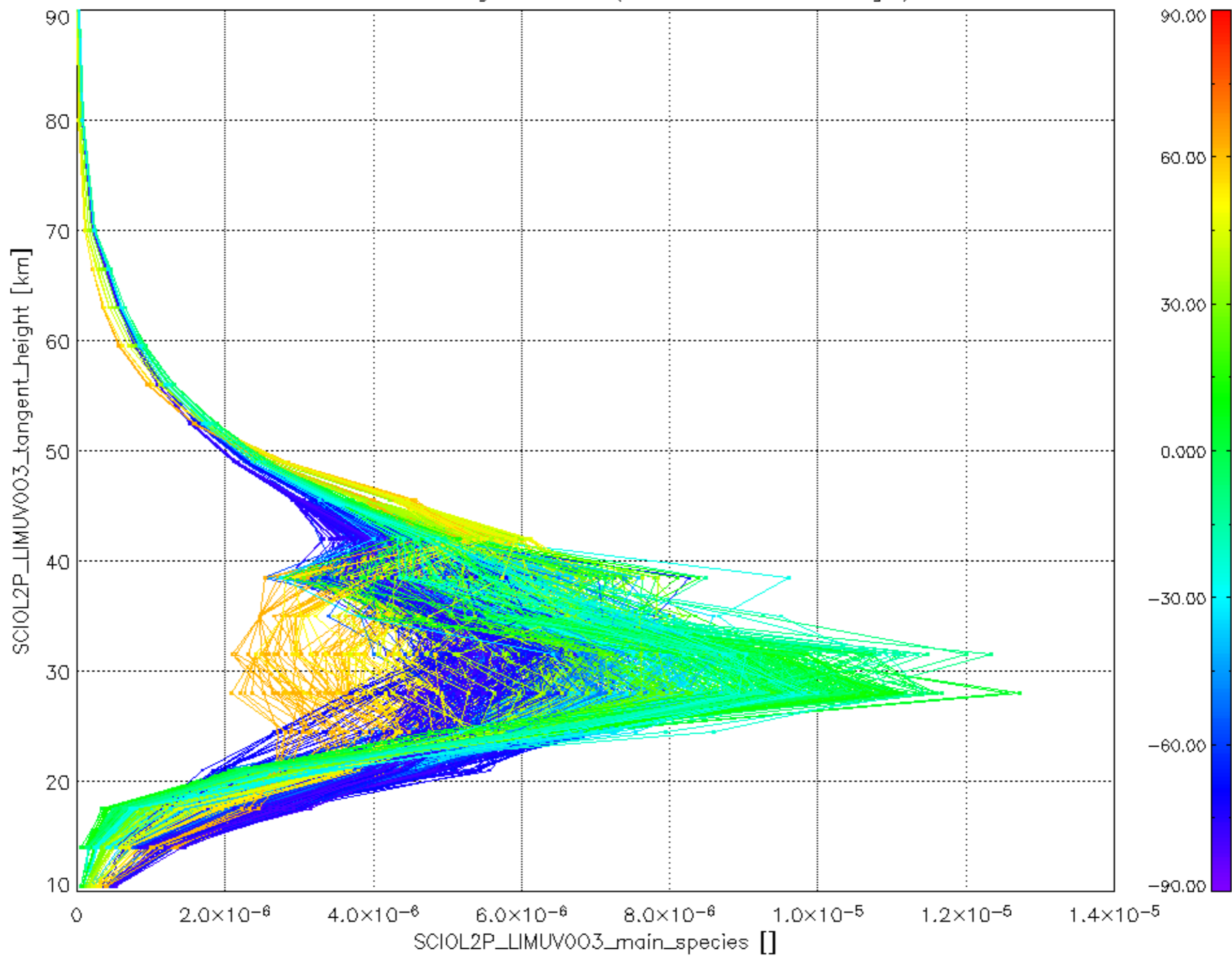


SCIOL2P\_NADUV1NO2\_amf\_cl for 15NOV2002 00:00:00 to 16NOV2002 00:00:00





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).

