

## 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 13:21:43
Data source version	SCIA-OL/3.01-R
Processing scope for products	14NOV2002 00:00:00 to 15NOV2002 00:00:00
Start time of first product within scope	14NOV2002 10:25:56
Stop time of last product within scope	15NOV2002 00:46:11
Total number of level 2 products	7
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_102556_000033242011_00137_03698_1555.N1	14NOV2002 10:25:56	14NOV2002 11:21:21	0	GOOD
1	SCI_OL__2PRDPA20021114_120859_000031782011_00138_03699_1526.N1	14NOV2002 12:08:59	14NOV2002 13:01:57	0	GOOD
2	SCI_OL__2PRDPA20021114_134709_000033242011_00139_03700_1509.N1	14NOV2002 13:47:09	14NOV2002 14:42:33	0	GOOD
3	SCI_OL__2PRDPA20021114_184834_000033282011_00142_03703_1525.N1	14NOV2002 18:48:34	14NOV2002 19:44:02	0	GOOD
4	SCI_OL__2PRDPA20021114_202852_000033862011_00143_03704_1452.N1	14NOV2002 20:28:52	14NOV2002 21:25:19	0	GOOD
5	SCI_OL__2PRDPA20021114_221010_000033242011_00144_03705_1598.N1	14NOV2002 22:10:10	14NOV2002 23:05:35	0	GOOD
6	SCI_OL__2PRDPA20021114_235046_000033242011_00145_03706_1578.N1	14NOV2002 23:50:46	15NOV2002 00:46:11	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: 46520

Total number of cloud data DSRs with good quality flag (=0): 46520 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	46520	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	46520	0.22012	0.25000	0.12500	1.0000	0.092985	s
SURFACE_PRES	46520	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	46520	0.45206	0.42303	0.0000	1.0000	0.28266	-
CL_FRAC_ERR	46520	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	46520	7.0439	8.0000	4.0000	32.000	2.9755	
PMD_READ_CL[0]	46520	0.48095	0.0000	0.0000	32.000	1.6147	-
PMD_READ_CL[1]	46520	0.27618	0.0000	0.0000	31.000	1.2602	-
CL_TOP_HEIGHT	43065	4.7290	3.3160	0.0000	17.000	4.1677	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	43065	49.907	34.862	0.0000	101.00	37.975	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---

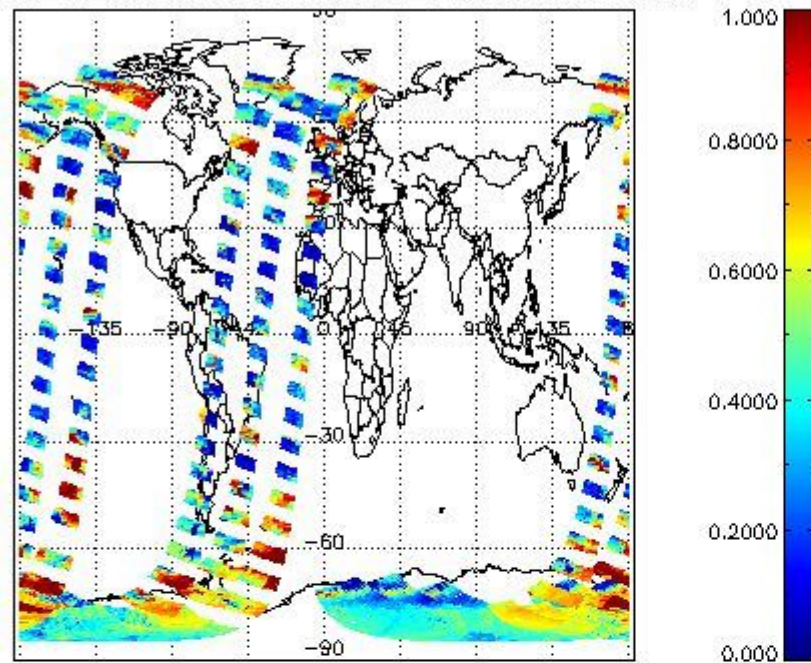
CL_TYPE_FLAGS	46520	11100000	11100000	11100000	11100000	0.0000	flags. Bit definition = 0: low or high cloud; 1: ice or water cloud; 2: thick or thin cloud; 3-15: not used
CLOUD_FLAGS	46520	11000101	11000010	11000000	11100000	2182.1	flags
AERO_ABSO_IND	46520	0.45527	0.34429	-4.6614	9.3643	0.99332	
AERO_IND_DIAG	46520	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	46520	01101000	11000000	00000000	11000000	24477.	flags

Time and geolocation plots:

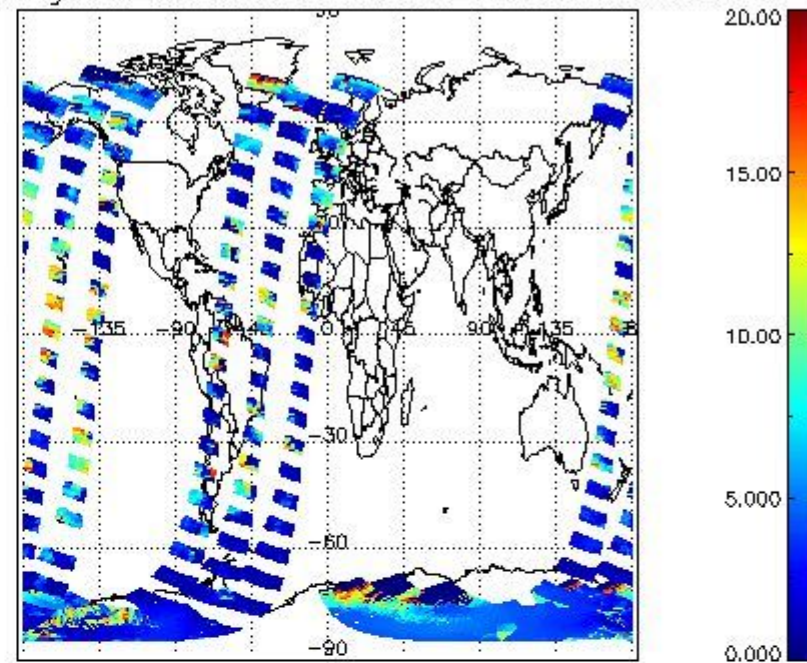
Plots are available for the following parameters:

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

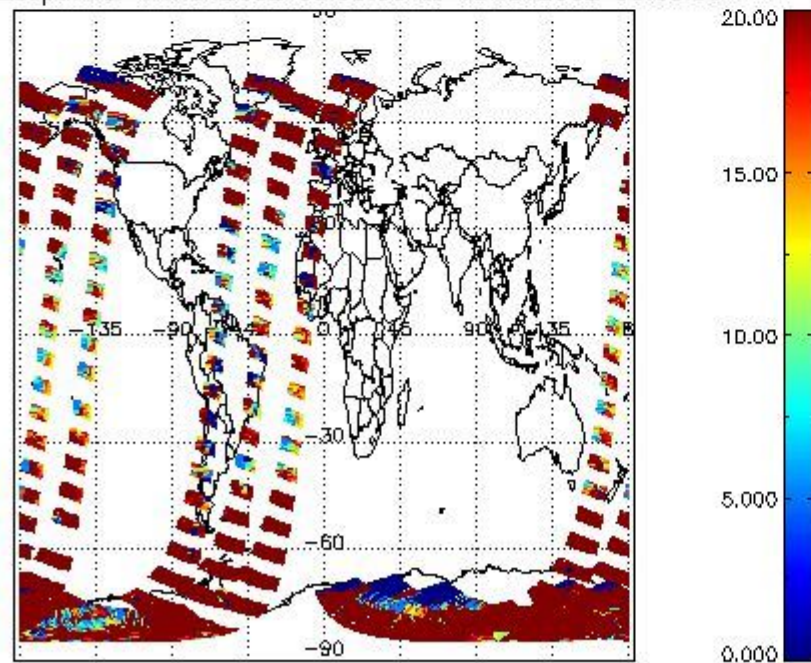
cLfrac for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



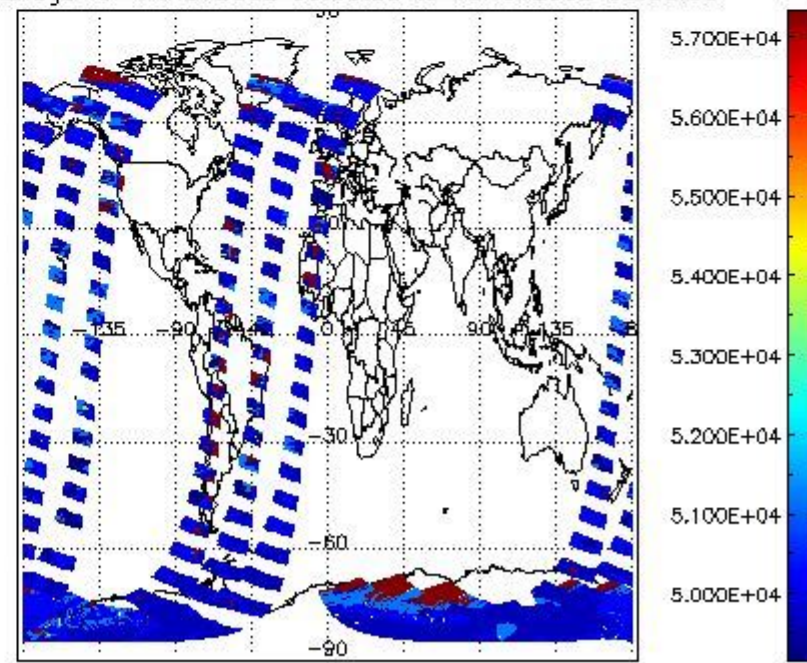
cL\_top\_height for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



cL\_opt\_depth for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



cloud\_flags for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



### 2.2.2 Nadir

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

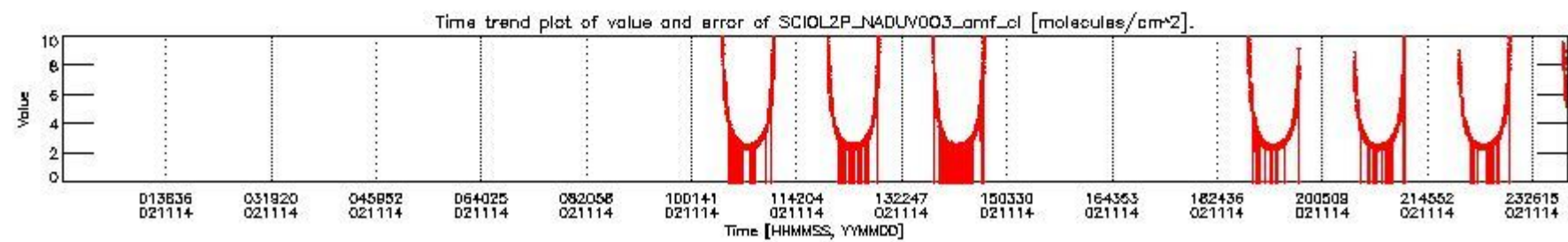
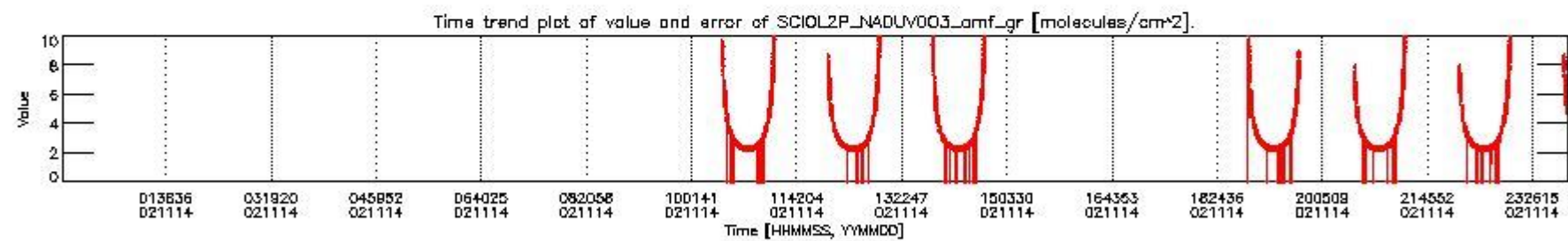
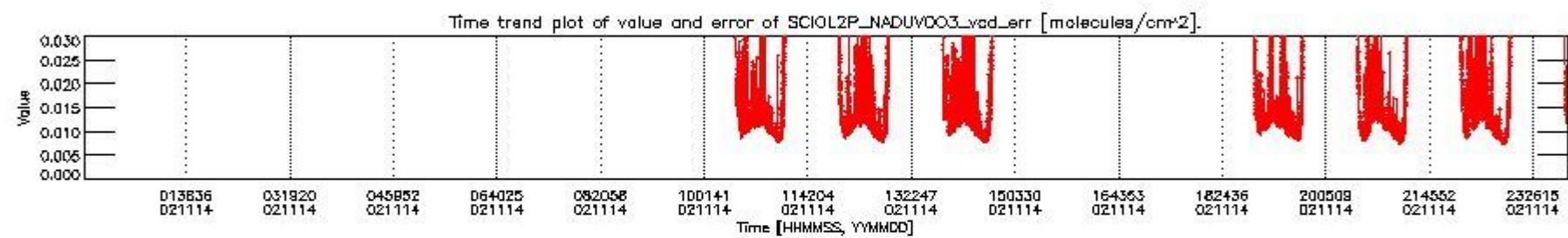
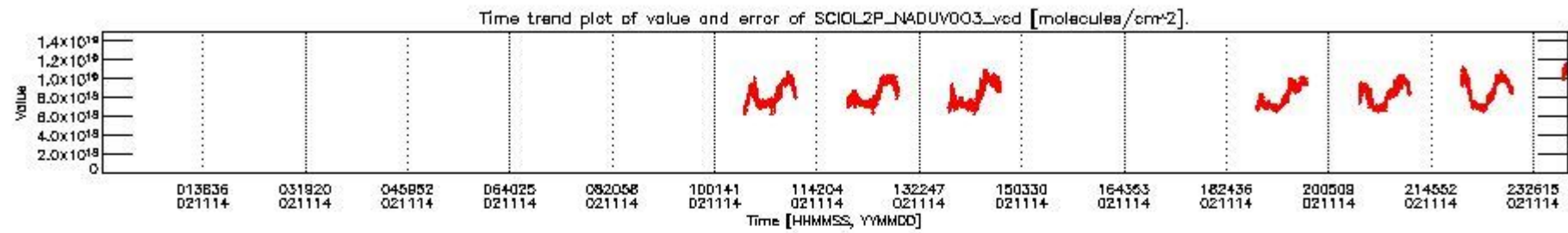
The following data items are currently included into this section:

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



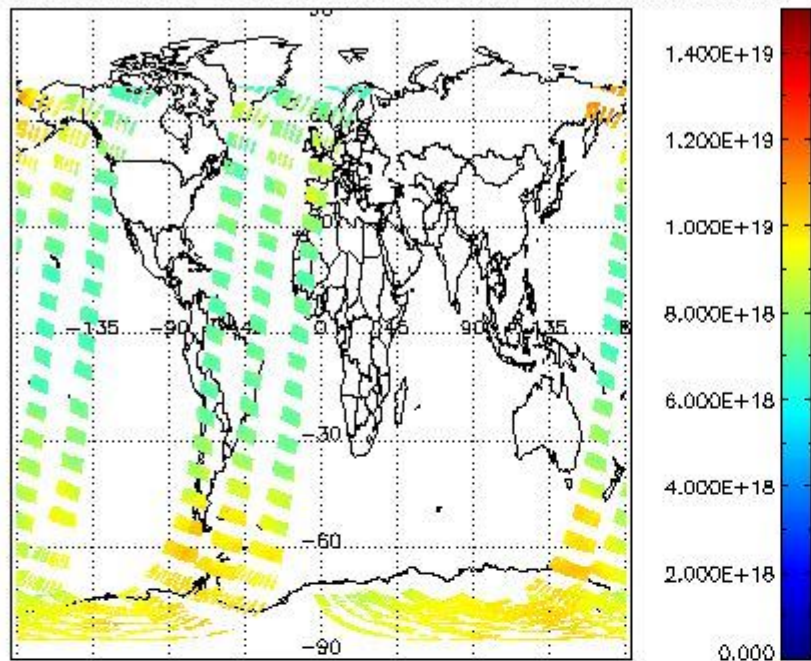
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

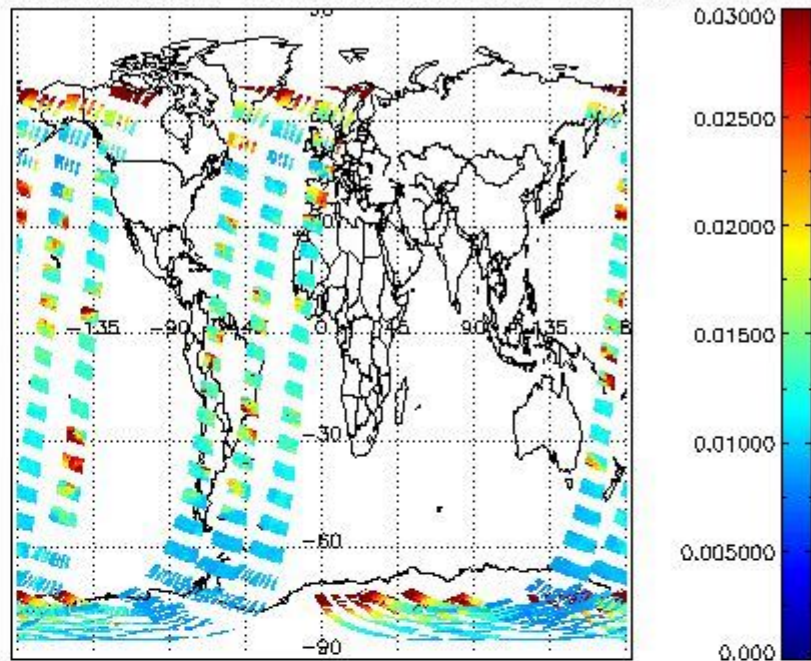




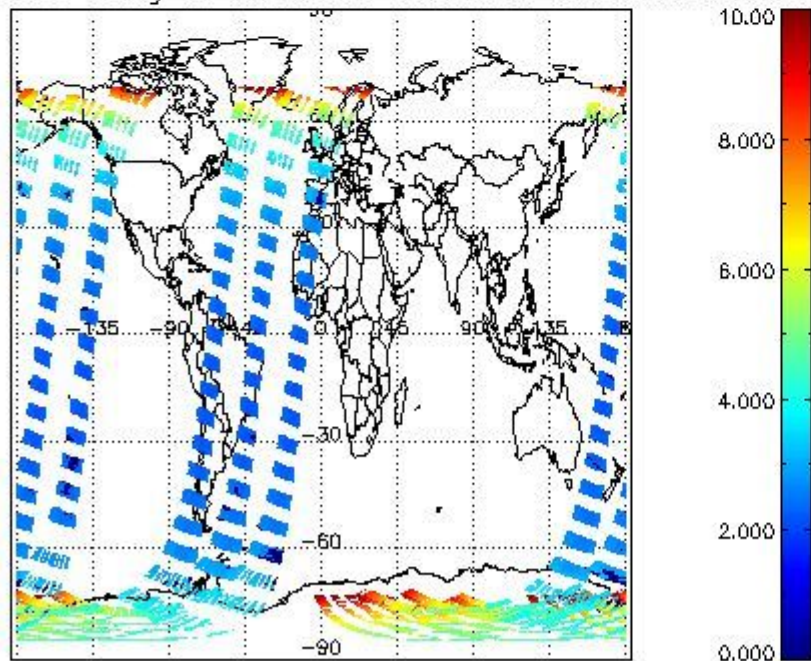
SCIOL2P\_NADUV003\_vcd for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



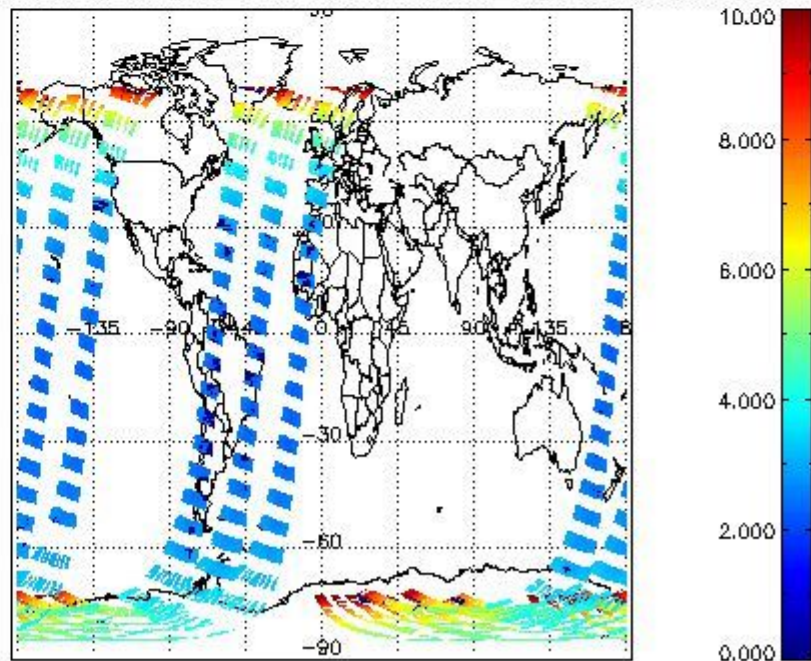
SCIOL2P\_NADUV003\_vcd\_err for 14NOV2002 00:00:00 to 15NOV2002 00:00:00

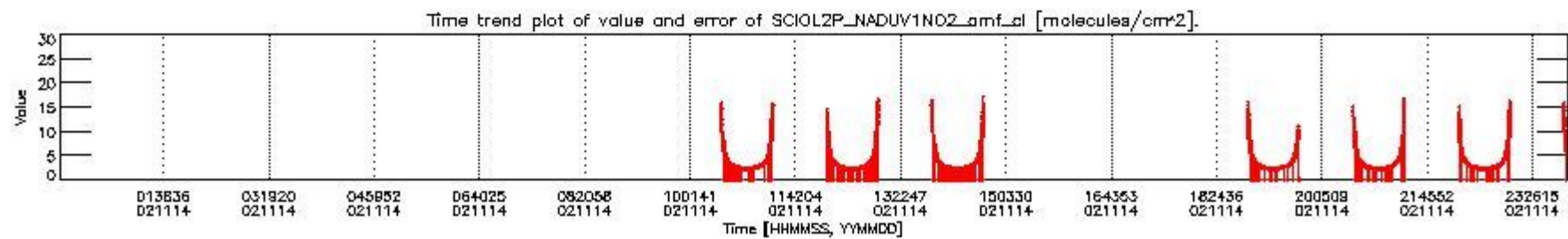
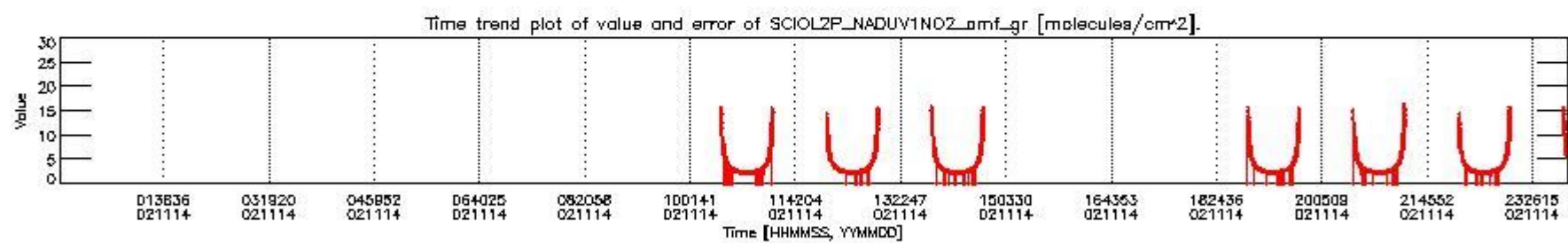
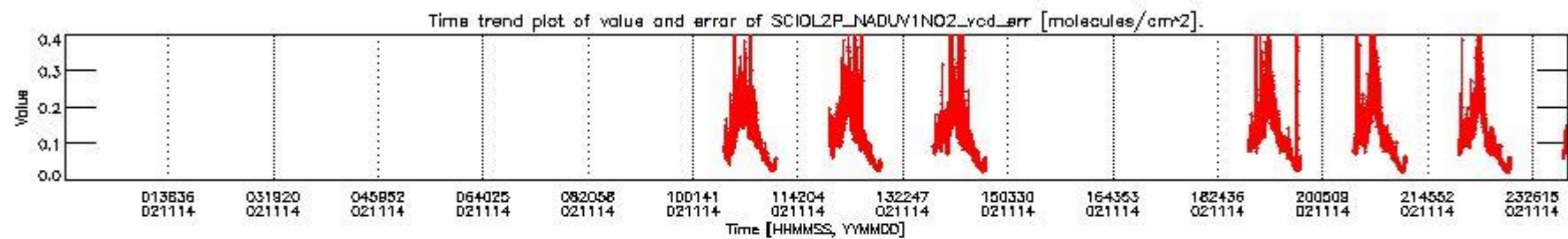
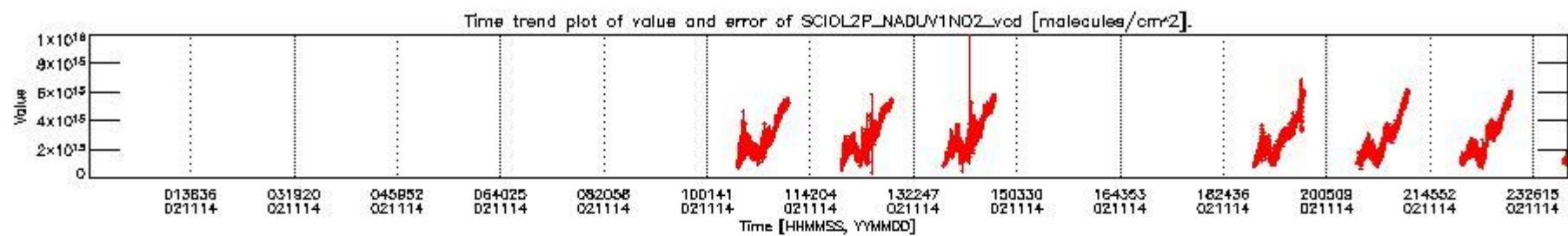


SCIOL2P\_NADUV003\_amf\_gr for 14NOV2002 00:00:00 to 15NOV2002 00:00:00

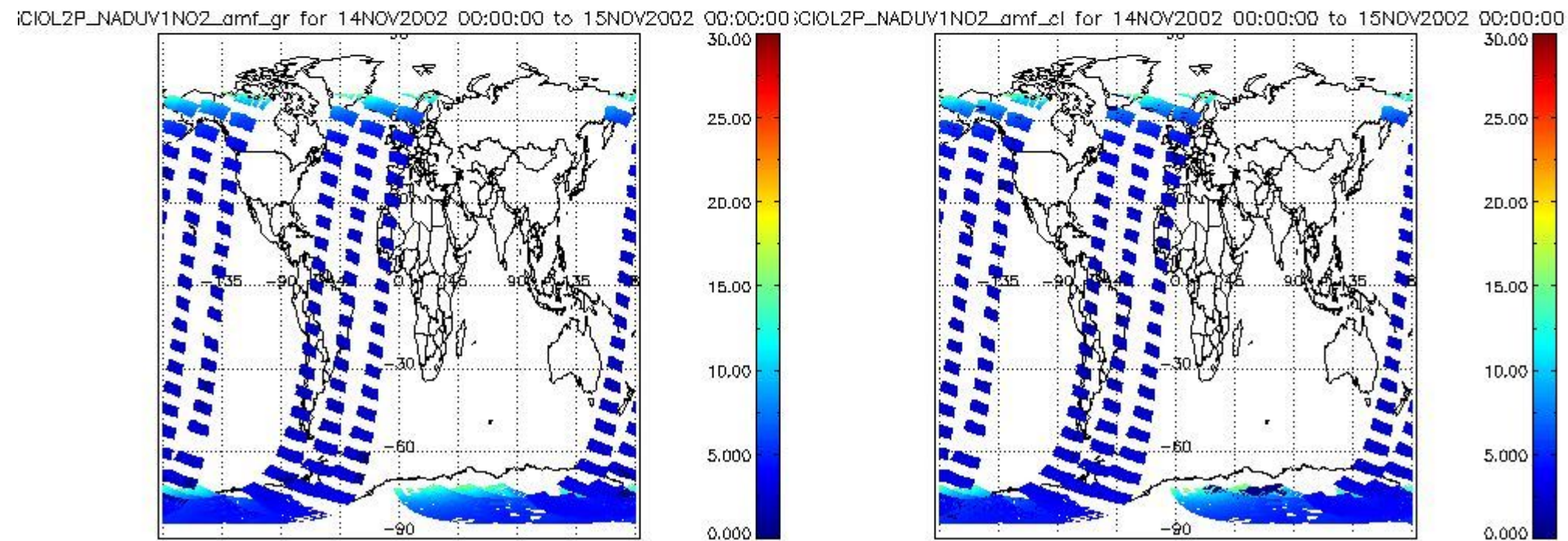
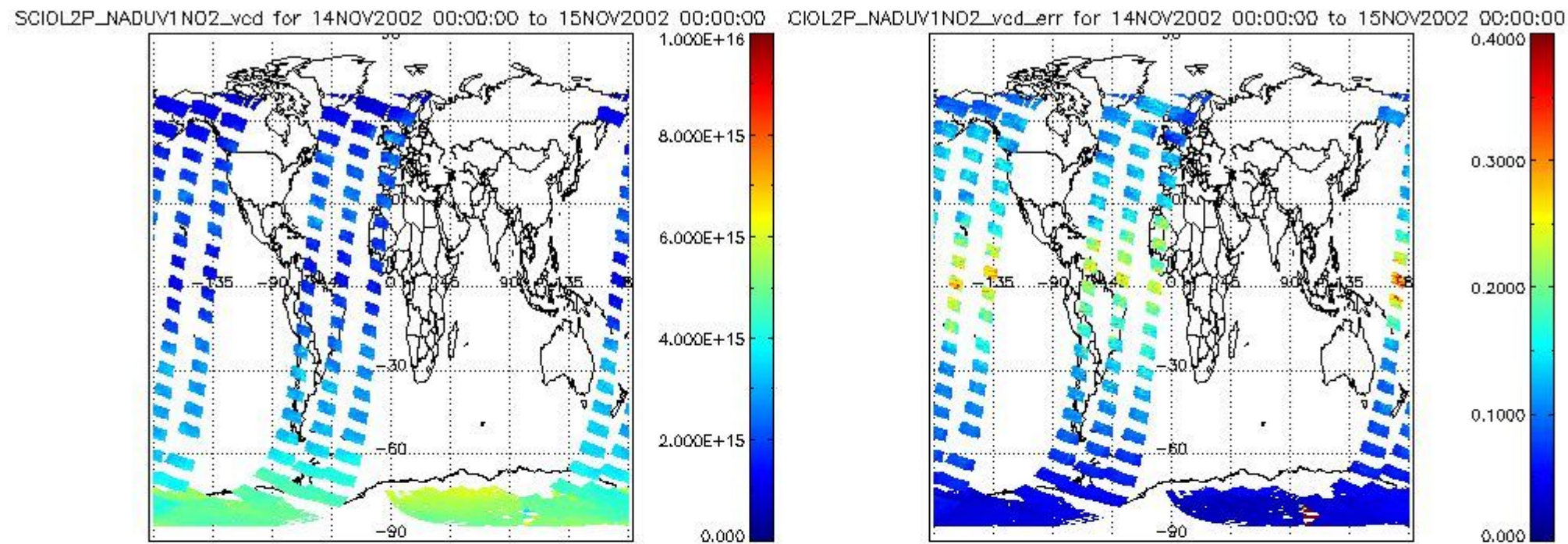


SCIOL2P\_NADUV003\_amf\_err for 14NOV2002 00:00:00 to 15NOV2002 00:00:00









### 2.2.3 Limb

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

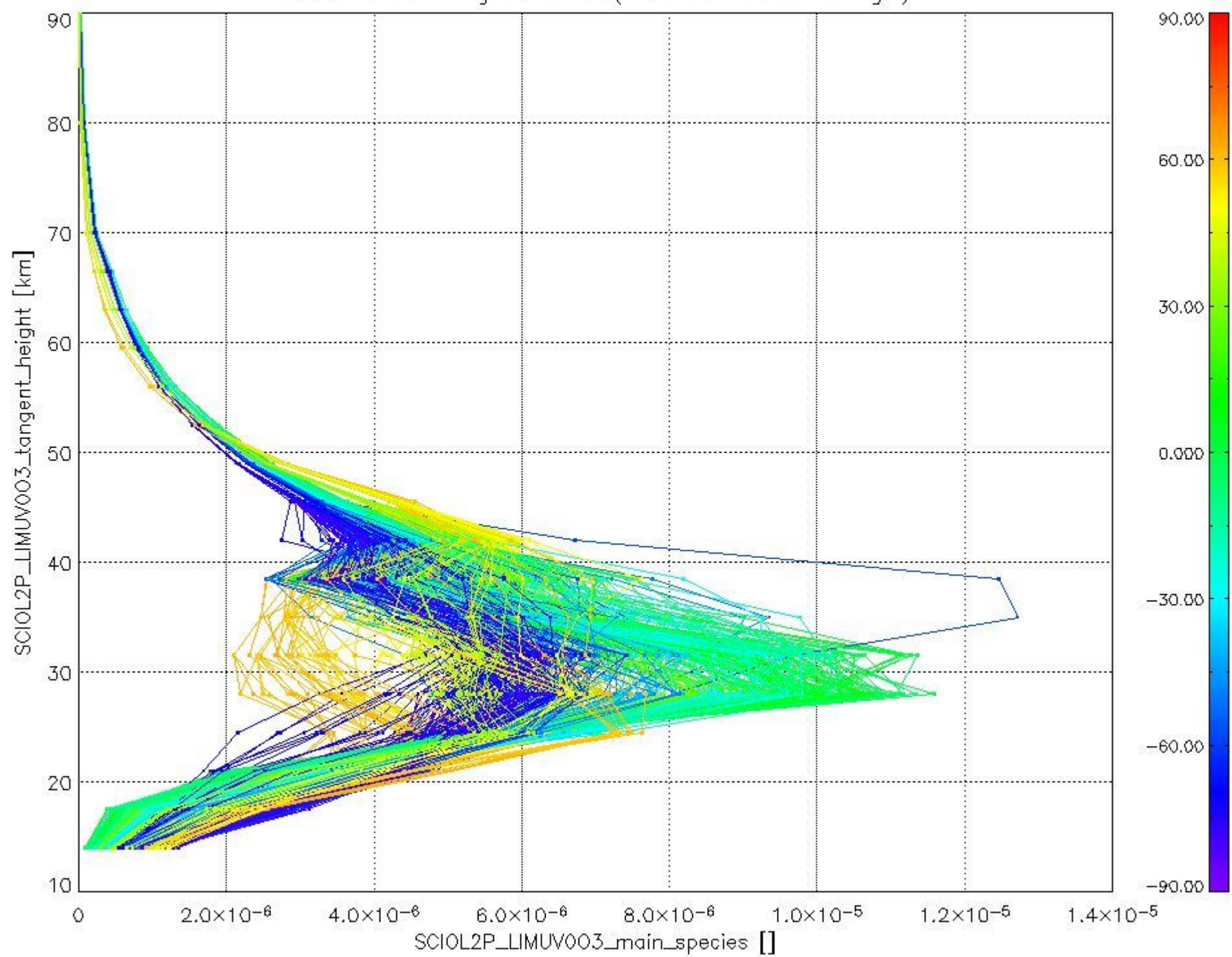
The following data items are currently included into this section:

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.

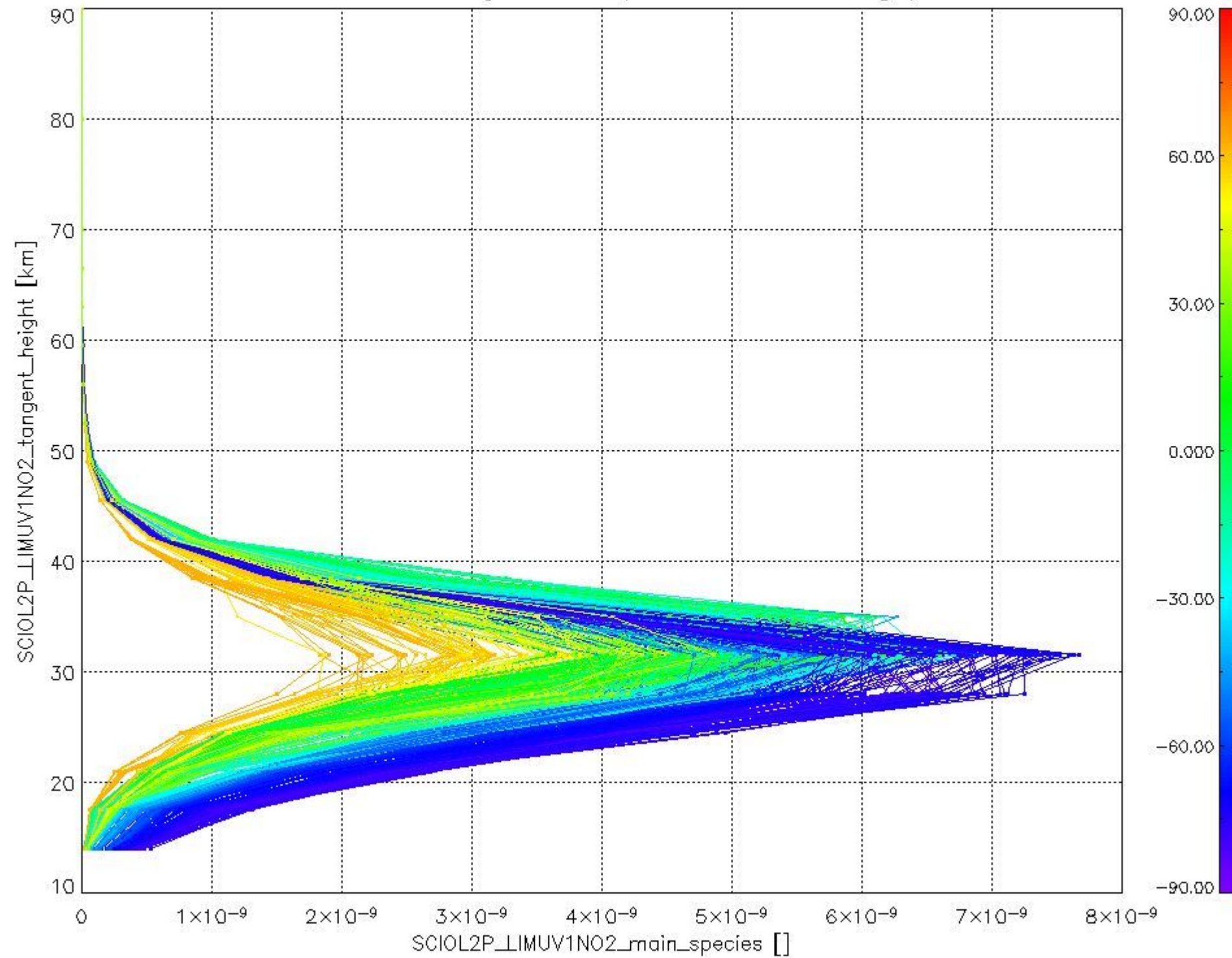


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





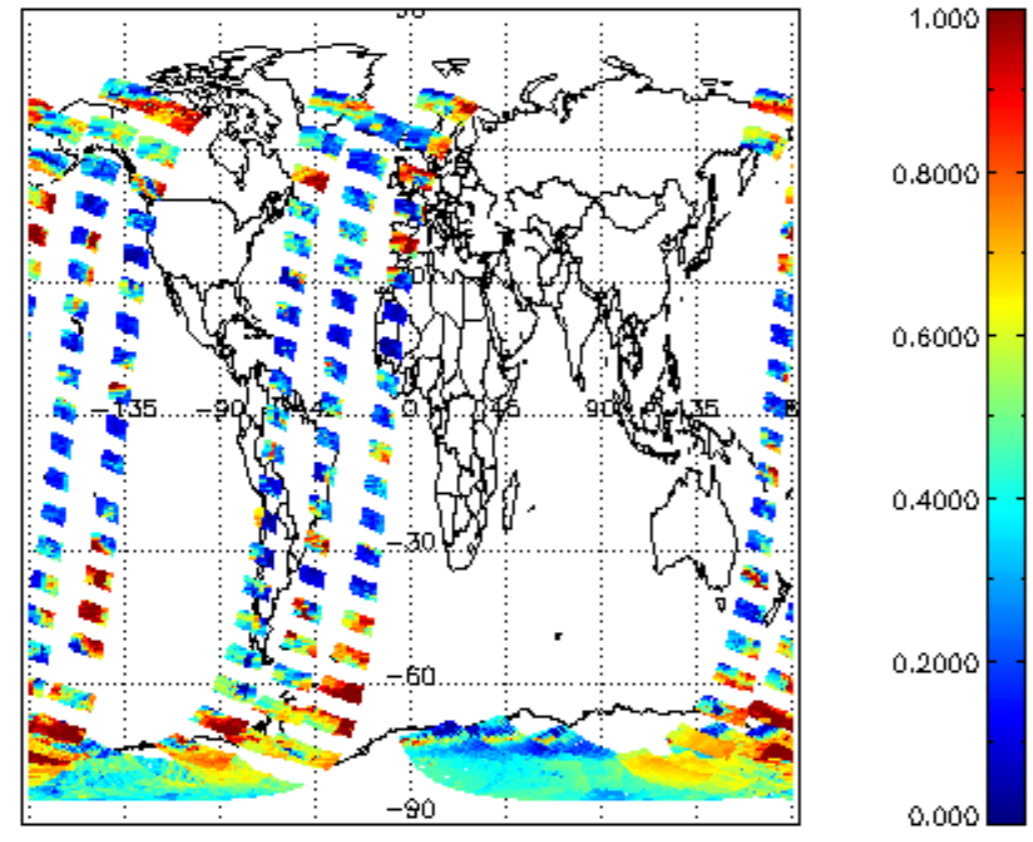
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



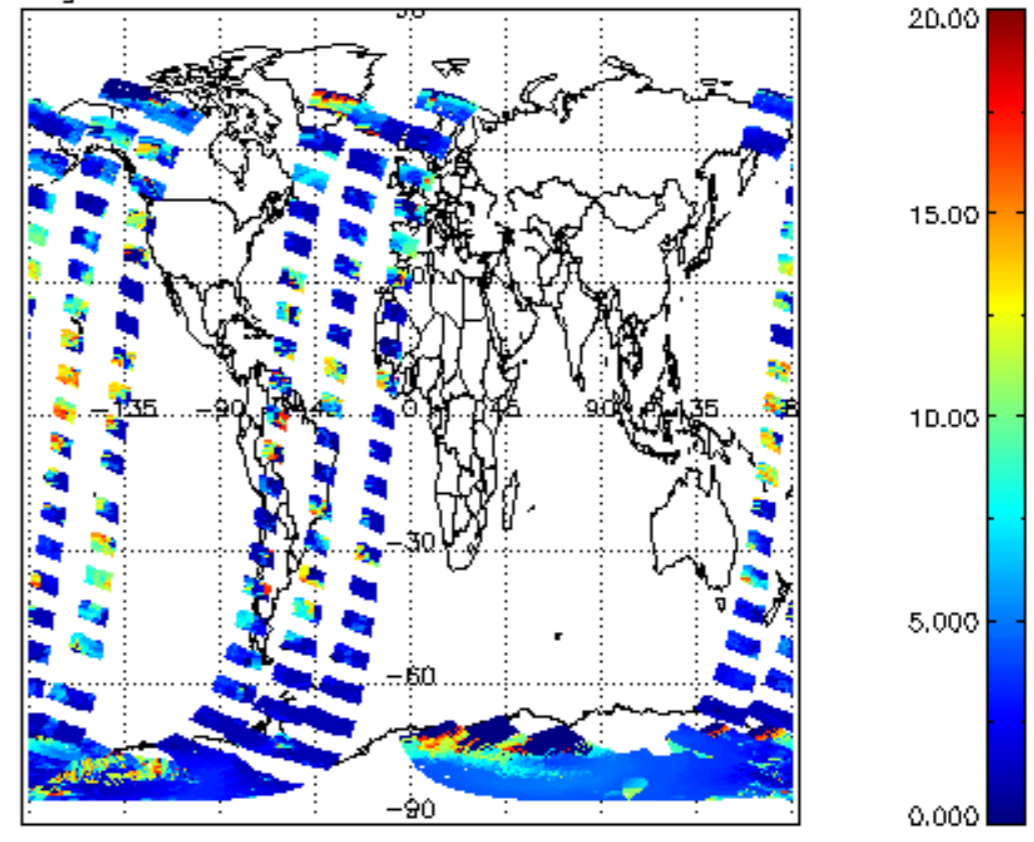
### 2.3 ADF monitoring

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

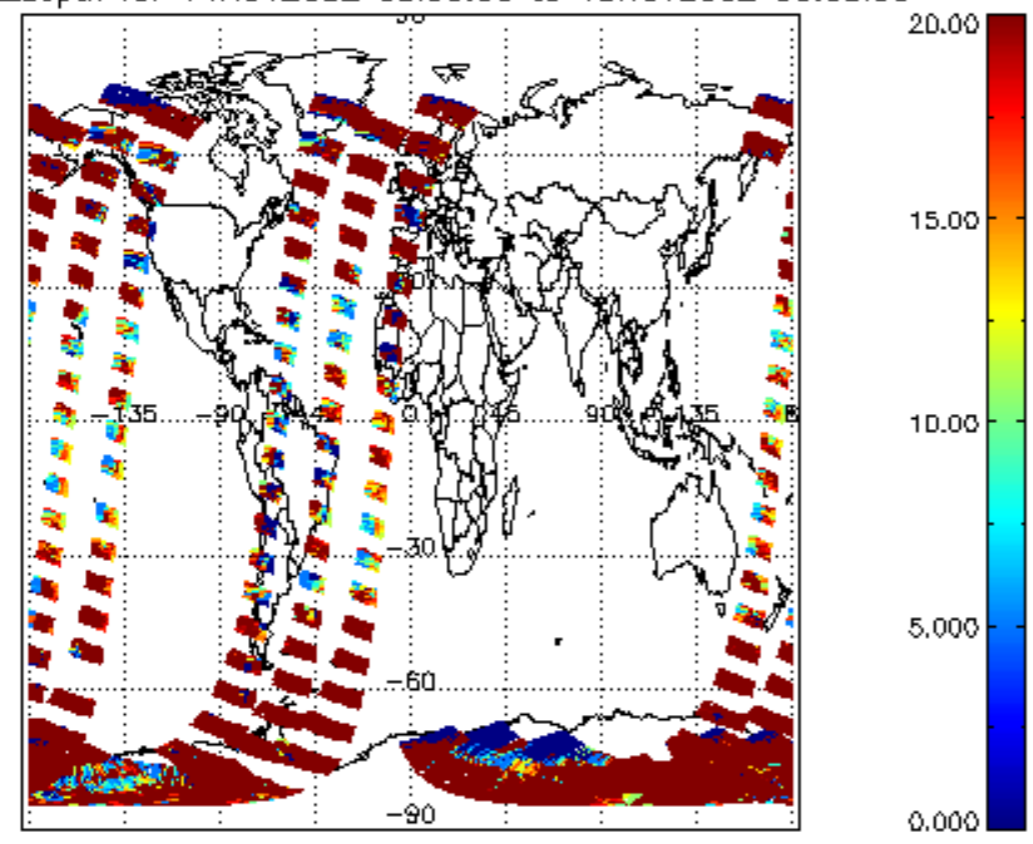
cLfrac for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



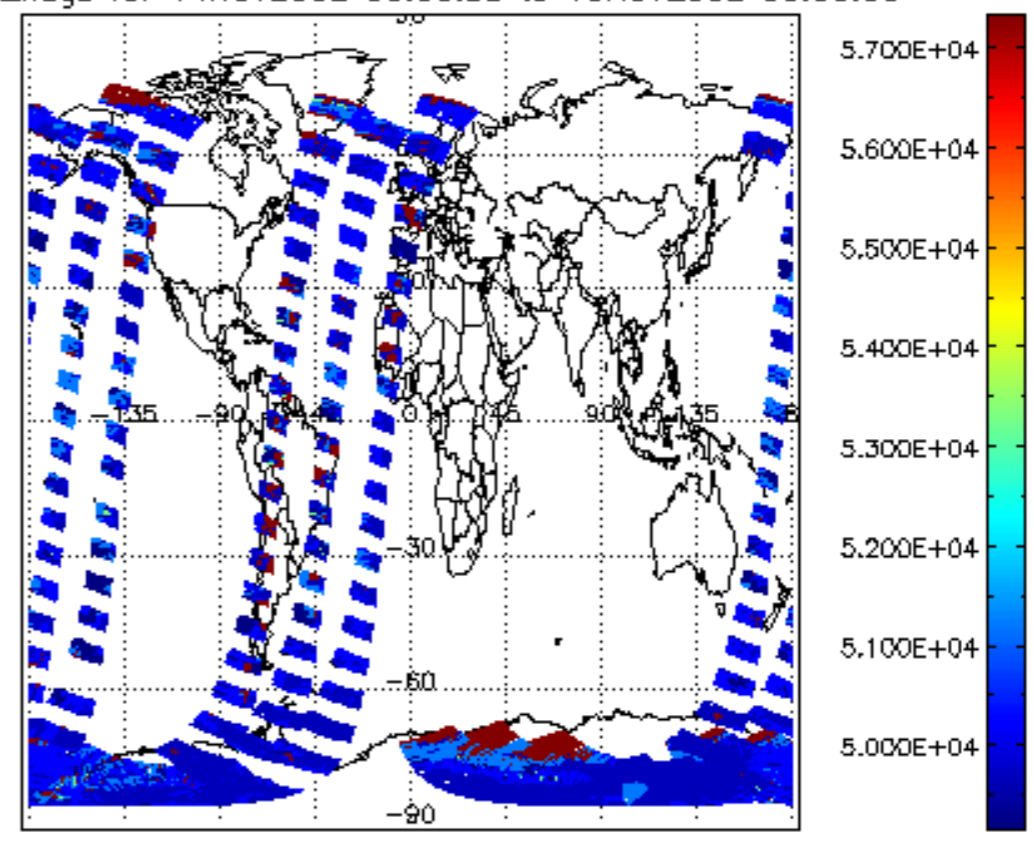
cL\_top\_height for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



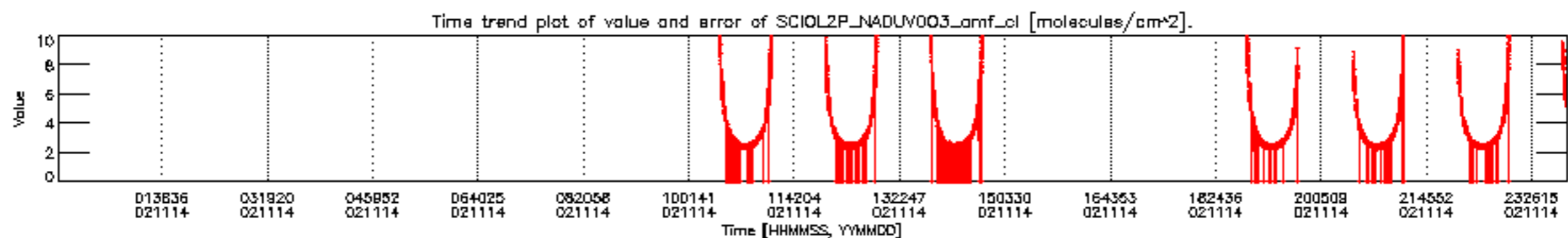
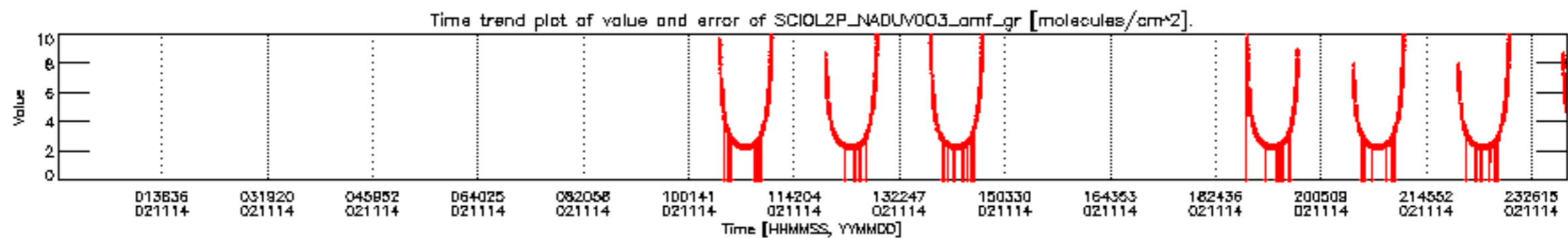
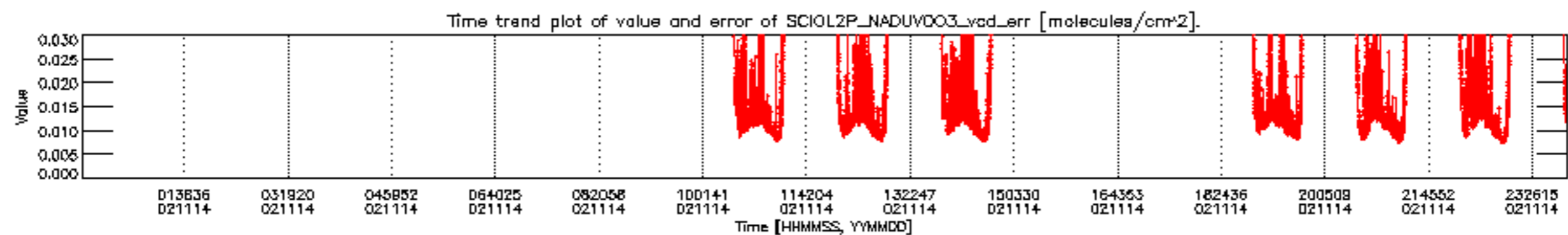
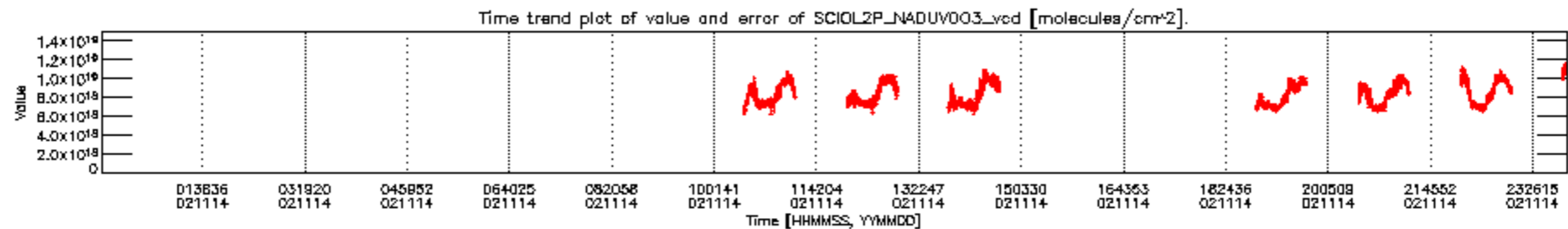
cL\_opt\_depth for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



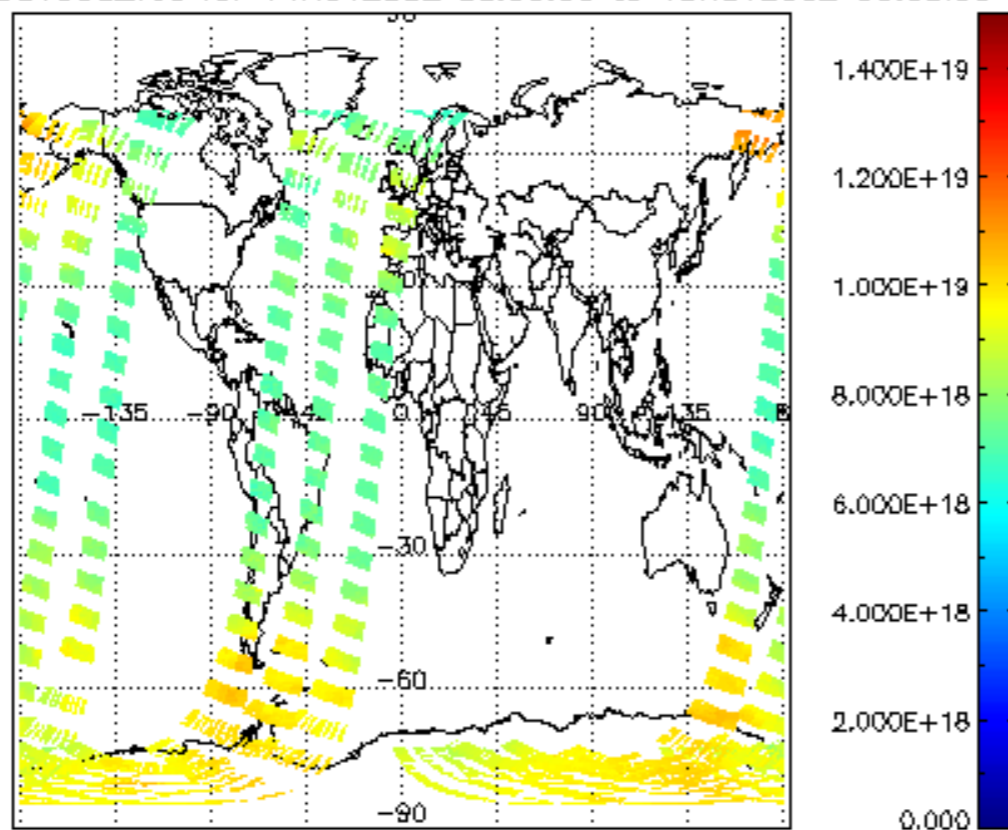
cloud\_flags for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



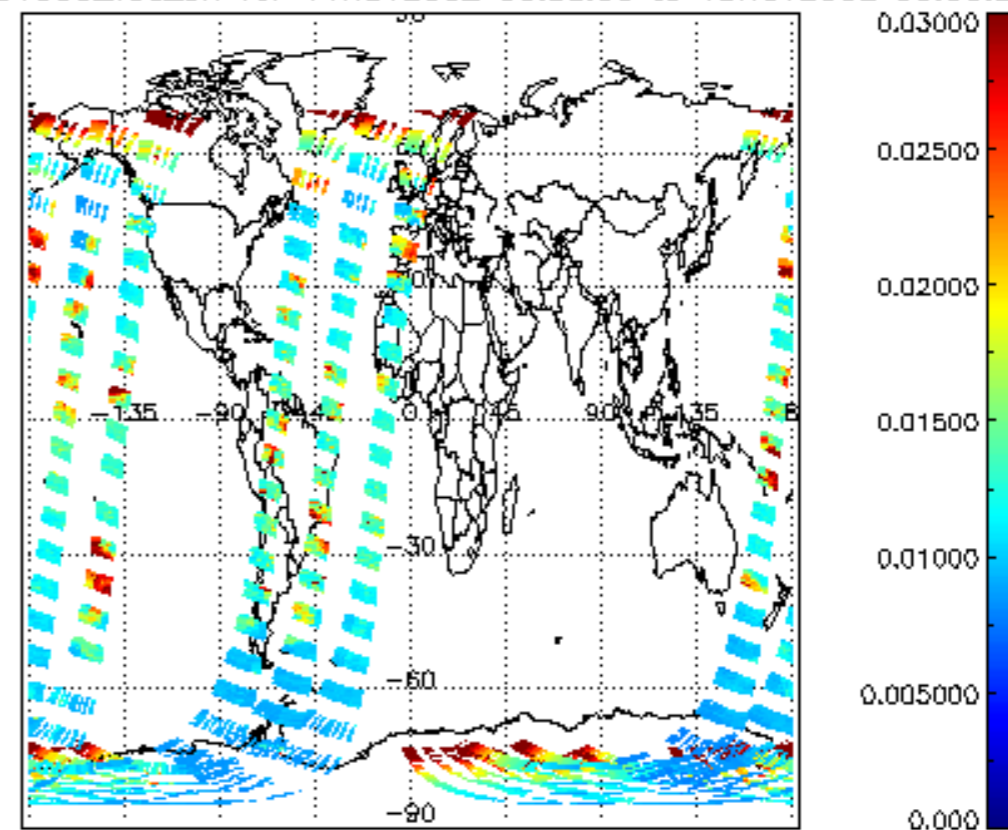




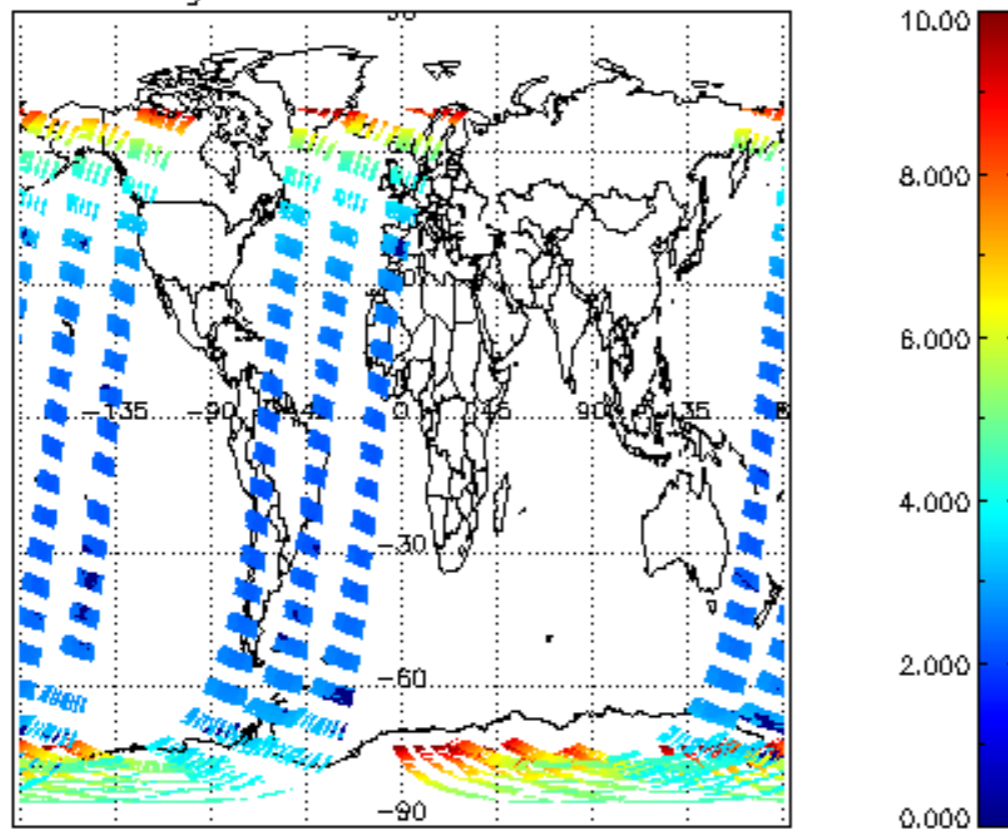
SCIOL2P\_NADUV003\_vcd for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



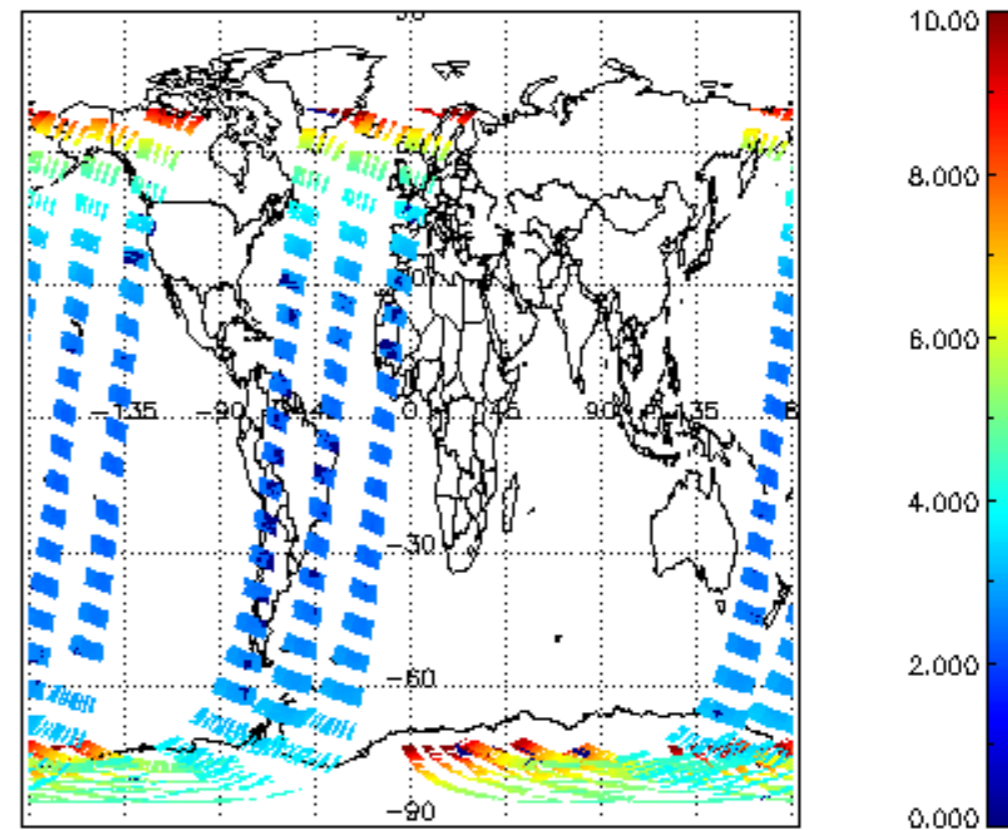
SCIOL2P\_NADUV003\_vcd\_err for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



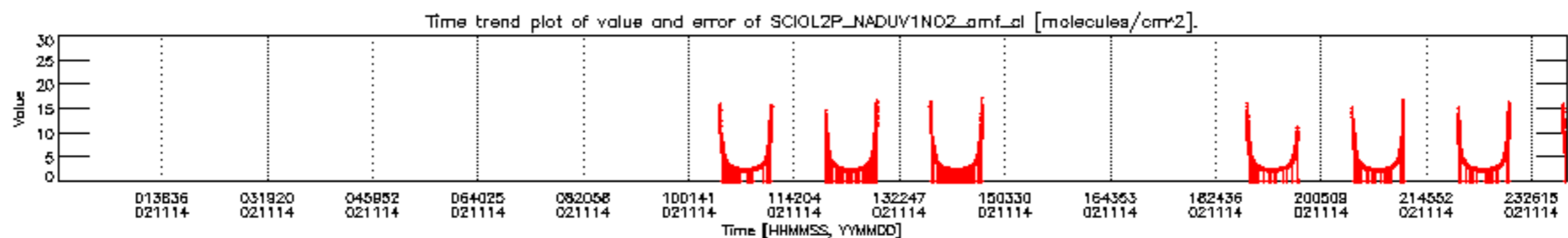
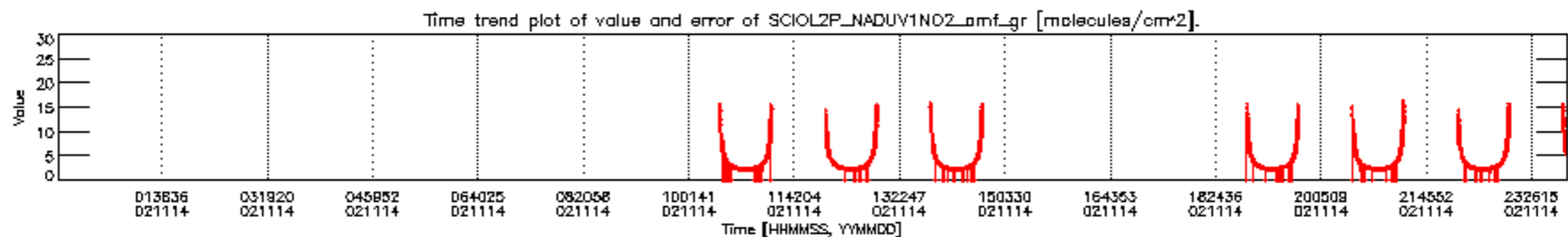
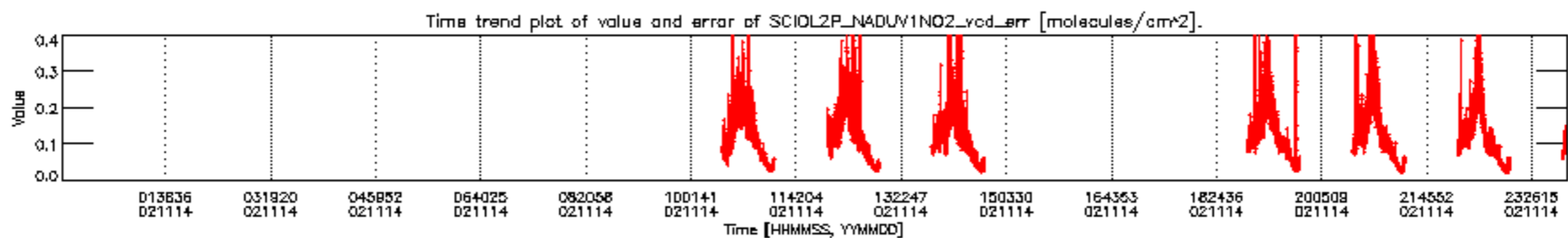
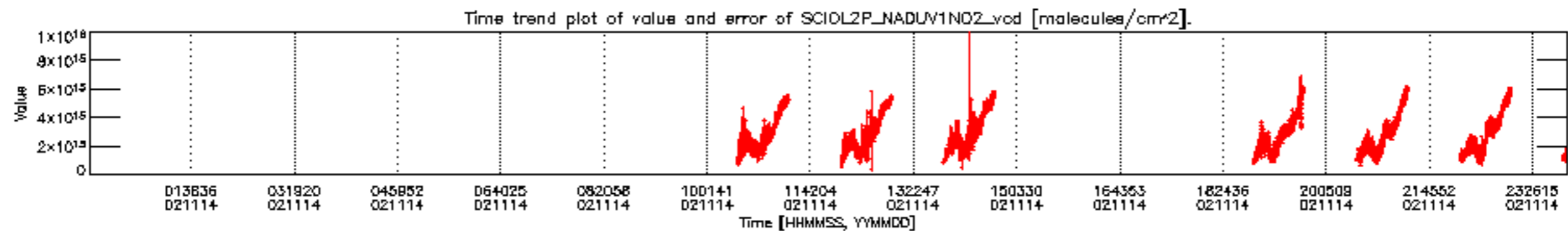
SCIOL2P\_NADUV003\_amf\_gr for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



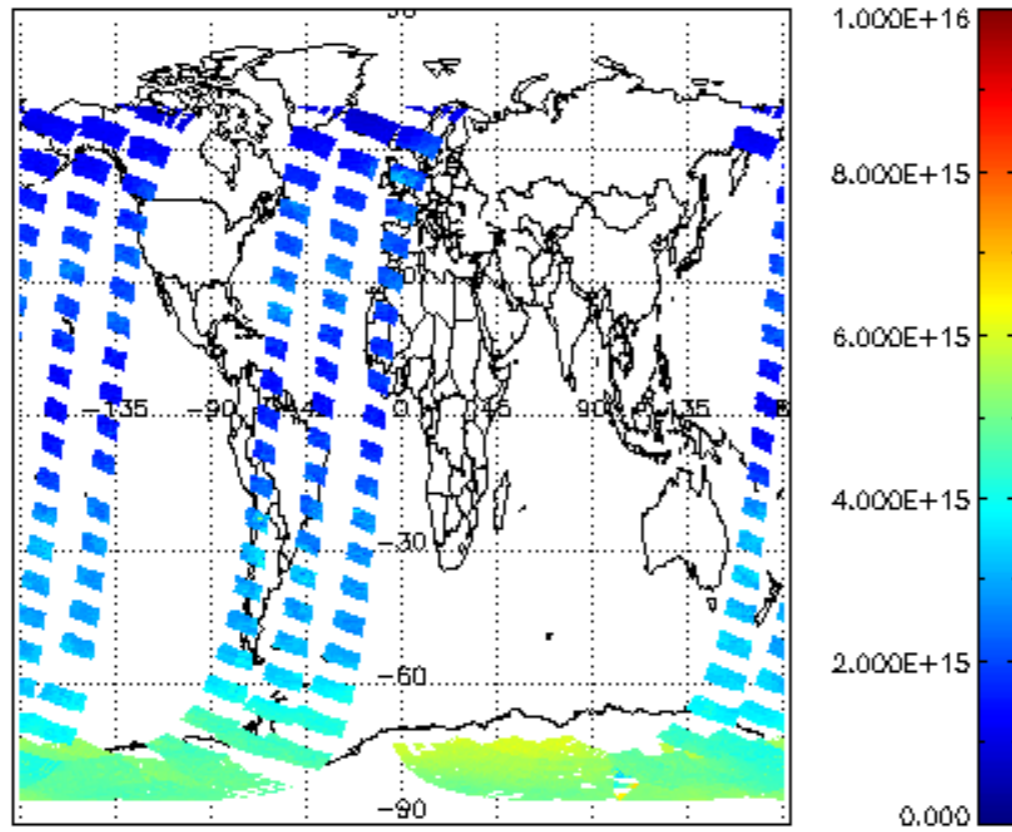
SCIOL2P\_NADUV003\_amf\_cl for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



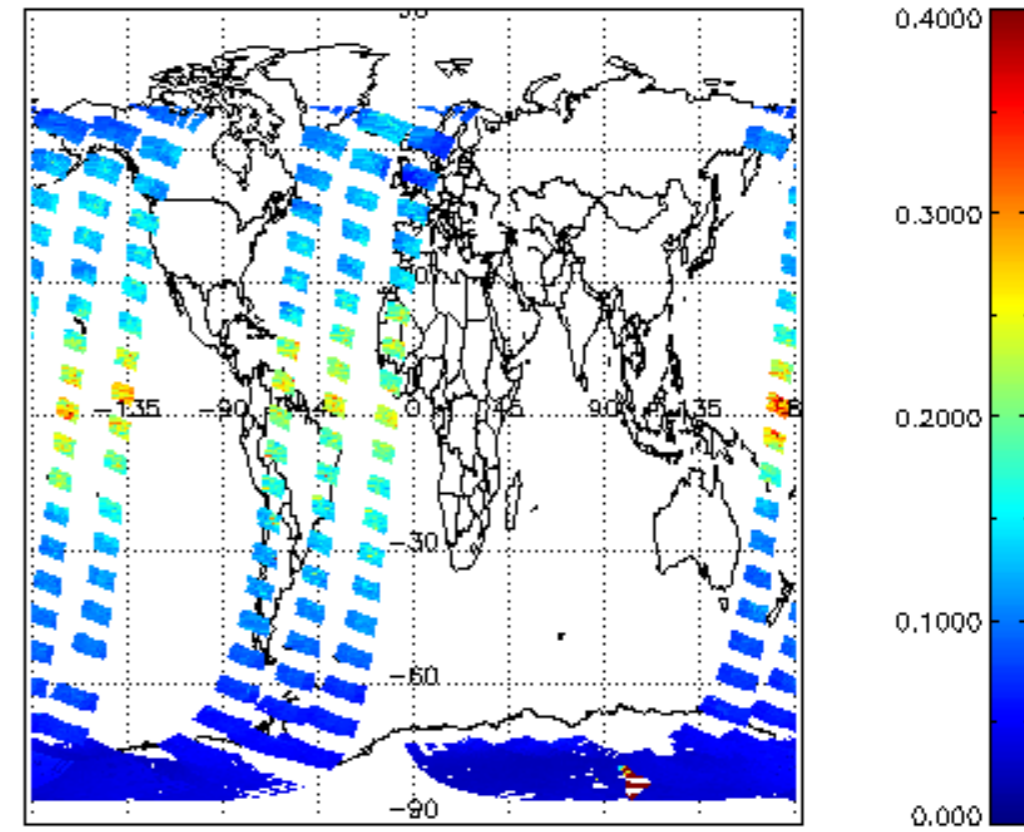




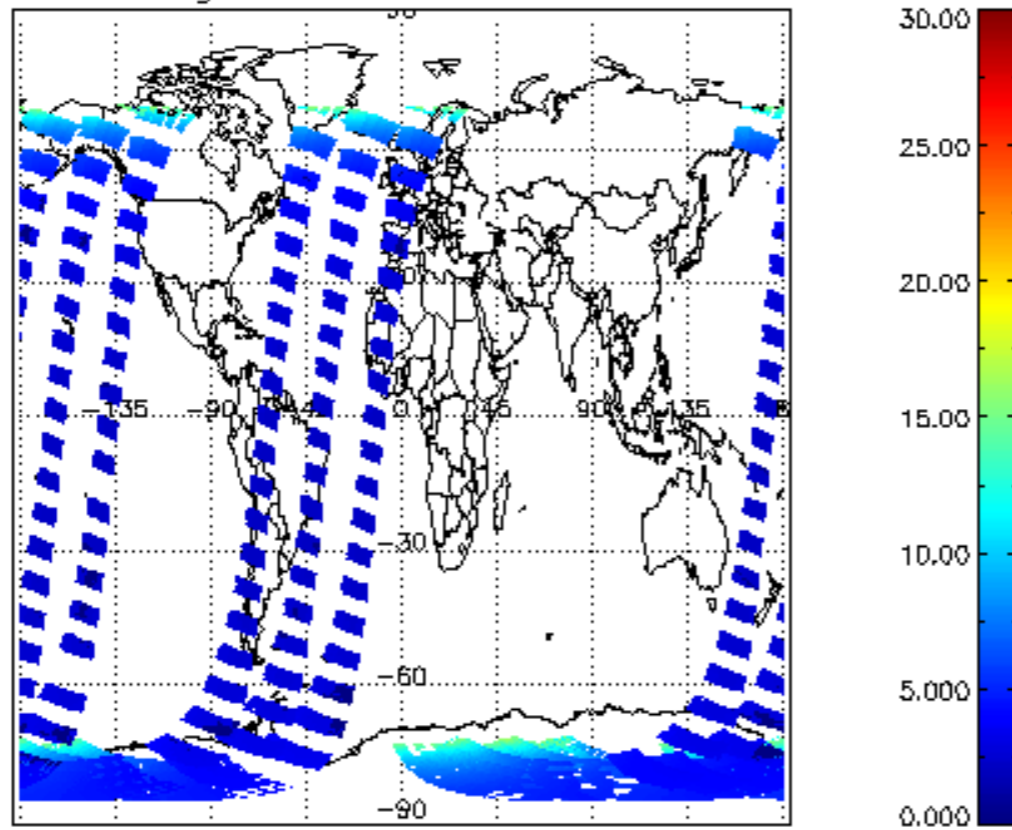
SCIOL2P\_NADUV1NO2\_vcd for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



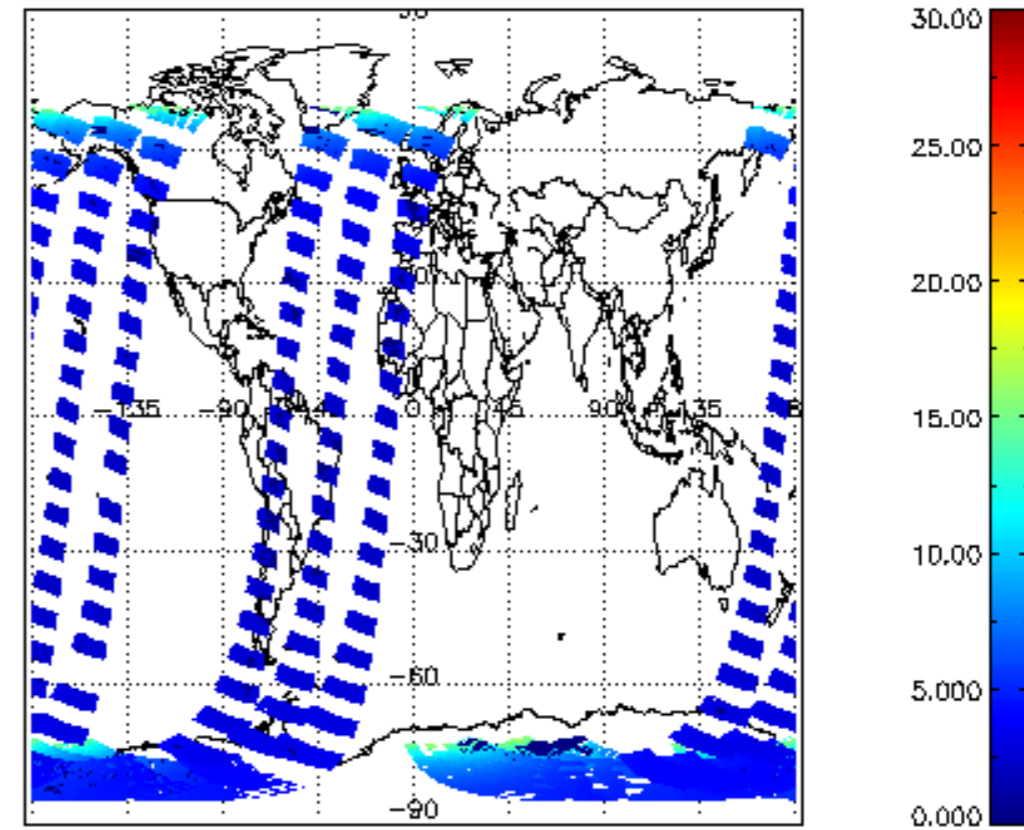
SCIOL2P\_NADUV1NO2\_vcd\_err for 14NOV2002 00:00:00 to 15NOV2002 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 14NOV2002 00:00:00 to 15NOV2002 00:00:00

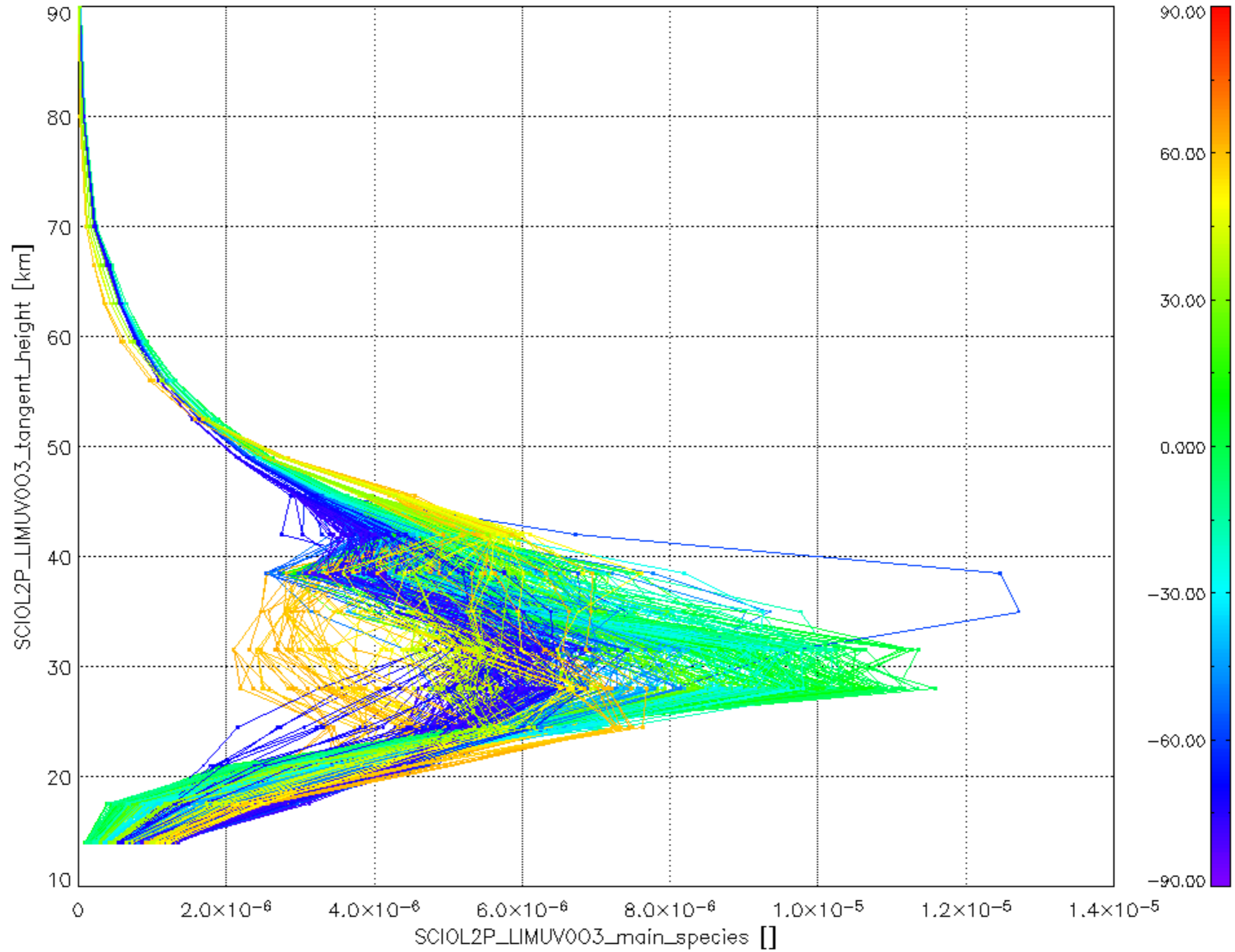


SCIOL2P\_NADUV1NO2\_amf\_cl for 14NOV2002 00:00:00 to 15NOV2002 00:00:00





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).

