

2. SCIAMACHY Daily Report for Level 2 products

[2.1. General Info](#)

[2.2 Product Quality Indicators](#)

- [2.2.1 Cloud parameters](#)
- [2.2.2 Nadir](#)
 - [2.2.2.1 O3 \(UV0\)](#)
 - [2.2.2.2 NO2 \(UV1\)](#)
 - [2.2.2.3 BrO \(UV3\)](#)
 - [2.2.2.4 SO2 \(UV5\)](#)
 - [2.2.2.5 SO2 \(UV7\)](#)
 - [2.2.2.6 OCIO \(UV6\)](#)
 - [2.2.2.7 H2O \(UV8\)](#)
 - [2.2.2.8 CO \(IR3\)](#)
- [2.2.3 Limb](#)
 - [2.2.3.1 O3 \(UV0\)](#)
 - [2.2.3.2 NO2 \(UV1\)](#)
 - [2.2.3.3 BrO \(UV3\)](#)

[2.3 ADF monitoring](#)

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	1.13 (28-02-2011)
Time of report generation	24FEB2012 17:14:59
Data source version	SCIA-OL/5.02-W
Processing scope for products	24SEP2002 00:00:00 to 25SEP2002 00:00:00
Start time of first product within scope	23SEP2002 22:36:45
Stop time of last product within scope	25SEP2002 00:44:56
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.

Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

Products are checked for a minimum duration of 3500.0000 seconds and a maximum duration of 6000.0000 seconds. Products failing the duration test are highlighted in bold, and their stop time is highlighted in red.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	SCI_OL__2PWDPA20020923_223645_000034612009_00402_02961_1832.N1	23SEP2002 22:36:45	23SEP2002 23:34:26	0	GOOD
1	SCI_OL__2PWDPA20020924_001721_000019532009_00403_02962_1833.N1	24SEP2002 00:17:21	24SEP2002 00:49:55	0	GOOD
2	SCI_OL__2PWDPA20020924_015758_000034612009_00404_02963_1834.N1	24SEP2002 01:57:58	24SEP2002 02:55:39	0	GOOD
3	SCI_OL__2PWDPA20020924_033834_000035442009_00405_02964_1835.N1	24SEP2002 03:38:34	24SEP2002 04:37:39	0	GOOD
4	SCI_OL__2PWDPA20020924_051911_000023362009_00406_02965_1836.N1	24SEP2002 05:19:11	24SEP2002 05:58:07	0	GOOD

5	SCI_OL__2PWDP20020924_070419_000032732009_00407_02966_1837.N1	24SEP2002 07:04:19	24SEP2002 07:58:52	0	GOOD
6	SCI_OL__2PWDP20020924_102100_000035442009_00409_02968_1838.N1	24SEP2002 10:21:00	24SEP2002 11:20:05	0	GOOD
7	SCI_OL__2PWDP20020924_184440_000034442009_00414_02973_3049.N1	24SEP2002 18:44:40	24SEP2002 19:42:05	0	GOOD
8	SCI_OL__2PWDP20020924_202459_000034612009_00415_02974_1840.N1	24SEP2002 20:24:59	24SEP2002 21:22:40	0	GOOD
9	SCI_OL__2PWDP20020924_220515_000034612009_00416_02975_1841.N1	24SEP2002 22:05:15	24SEP2002 23:02:57	0	GOOD
10	SCI_OL__2PWDP20020925_000733_000022432009_00417_02976_1842.N1	25SEP2002 00:07:33	25SEP2002 00:44:56	0	GOOD

2.2 Product Quality Indicators

2.2.1 Cloud parameters

This section 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: 150640

Total number of cloud data DSRs with good quality flag (=0): 150640 (100.0 %)

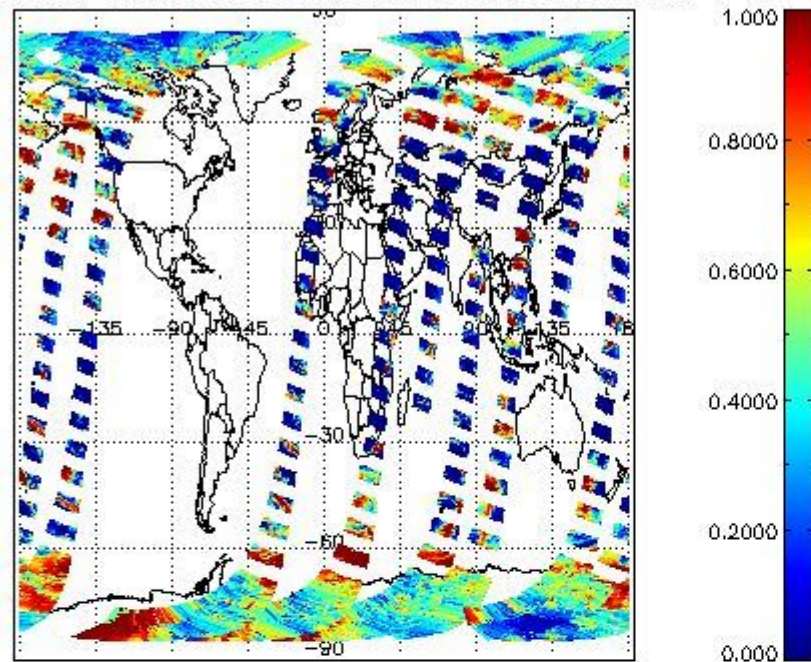
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	150640	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	150640	0.092572	0.062500	0.062500	1.0000	0.090179	s
CL_FRAC	150640	0.31883	0.17650	0.0000	1.0000	0.35066	
CL_FRAC_ERR	150640	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	150640	2.9623	2.0000	2.0000	32.000	2.8857	
PMD_READ_CL[0]	150640	0.30229	0.0000	0.0000	27.000	1.1024	-
PMD_READ_CL[1]	150640	0.81293	0.0000	0.0000	29.000	1.1049	-
CL_TOP_HEIGHT	138888	2.7636	1.1000	0.0000	17.000	3.8089	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	138888	34.275	20.738	0.0000	101.00	38.545	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	150640	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	150640	11001110	11000100	11000000	11100000	3709.1	
AERO_ABSO_IND	150640	0.26138	0.0000	0.0000	6.5215	0.50924	
AERO_IND_DIAG	150640	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	150640	00101110	00000000	00000000	11000000	21130.	

Time and geolocation plots:

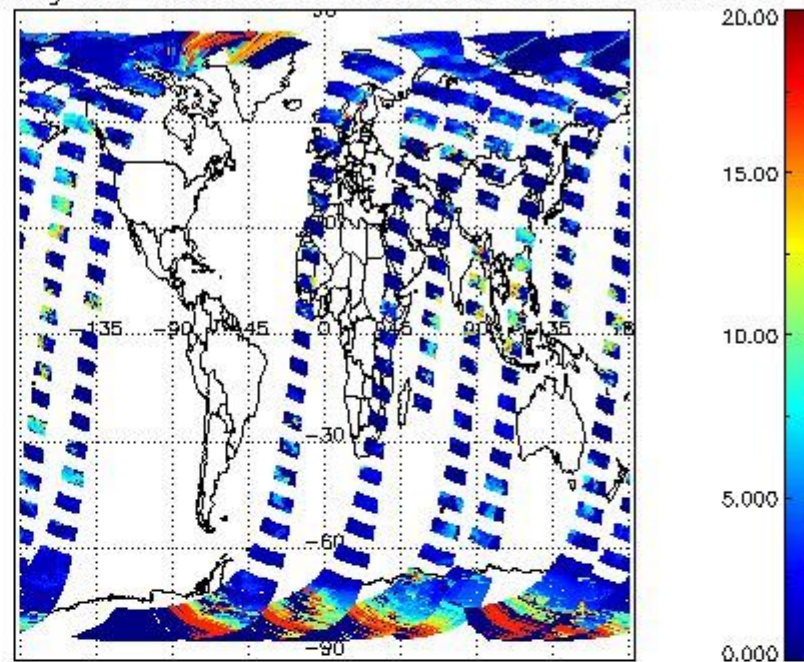
Plots are available for the following parameters:

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

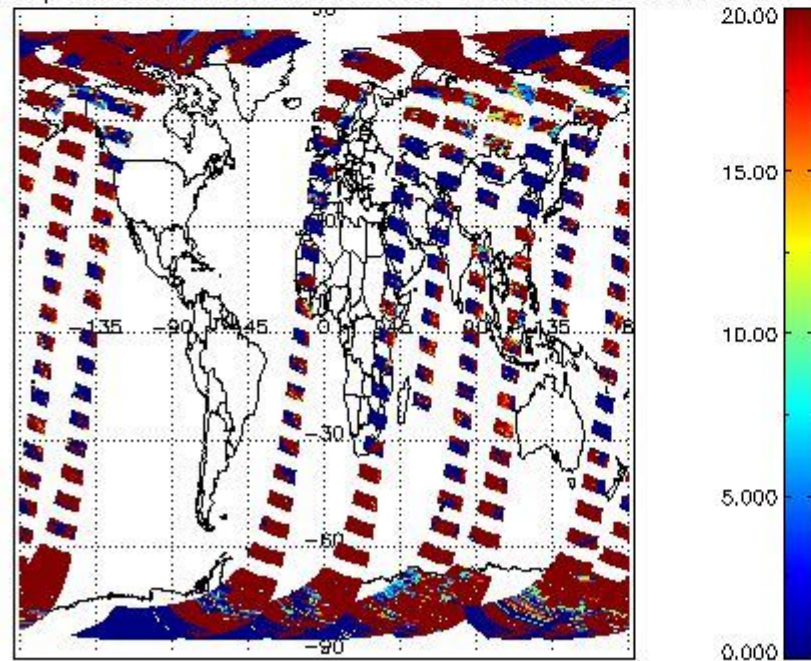
cL_frac for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



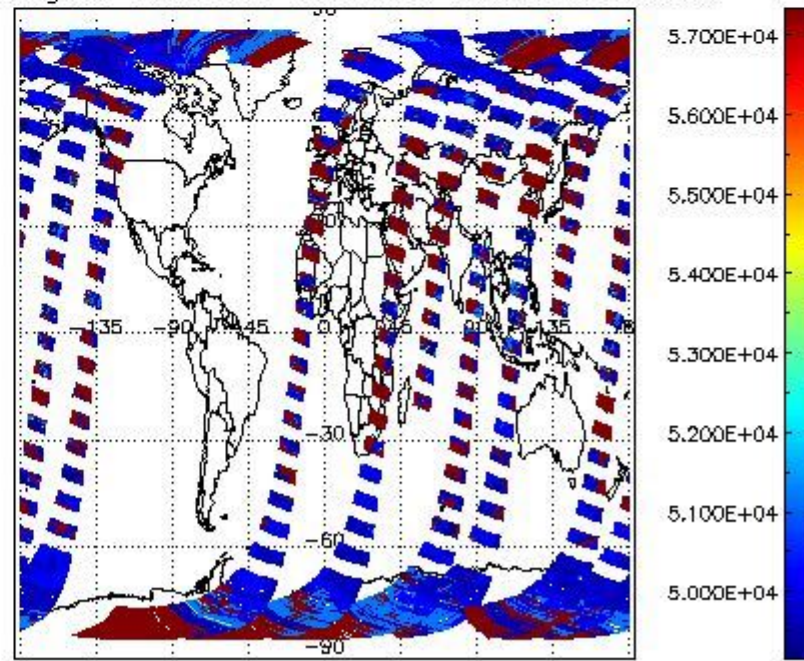
cL_top_height for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



cL_opt_depth for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



cloud_flags for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



2.2.2 Nadir

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

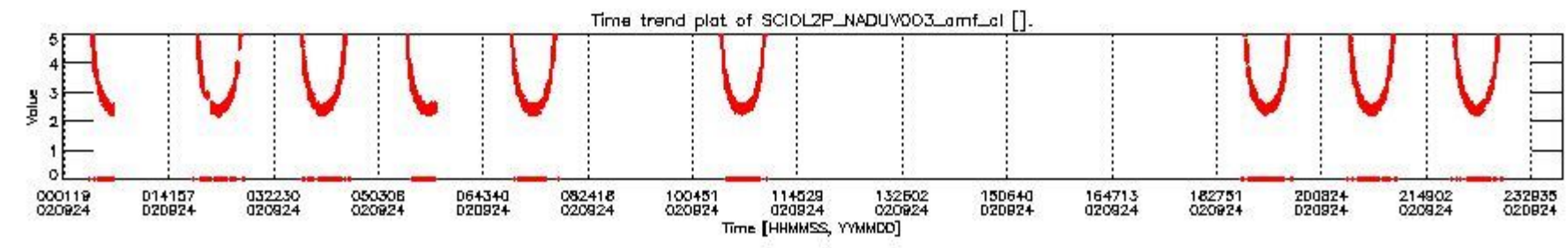
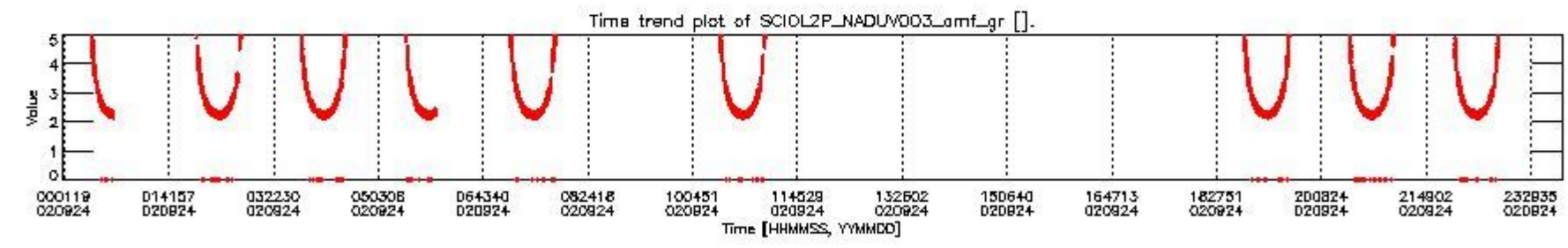
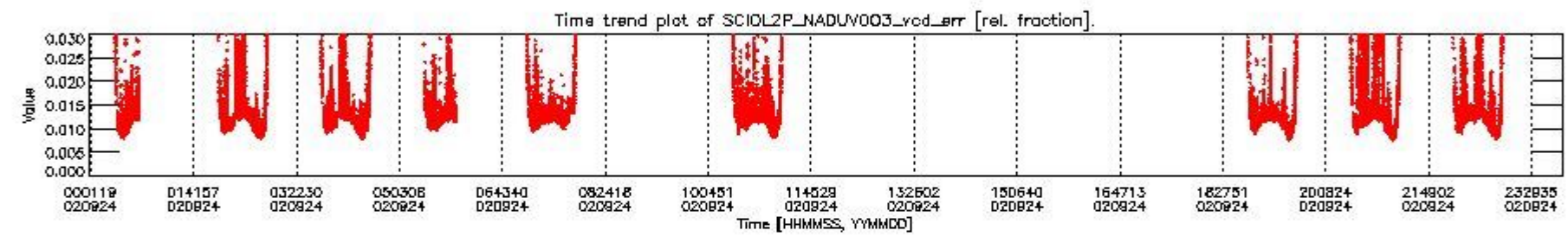
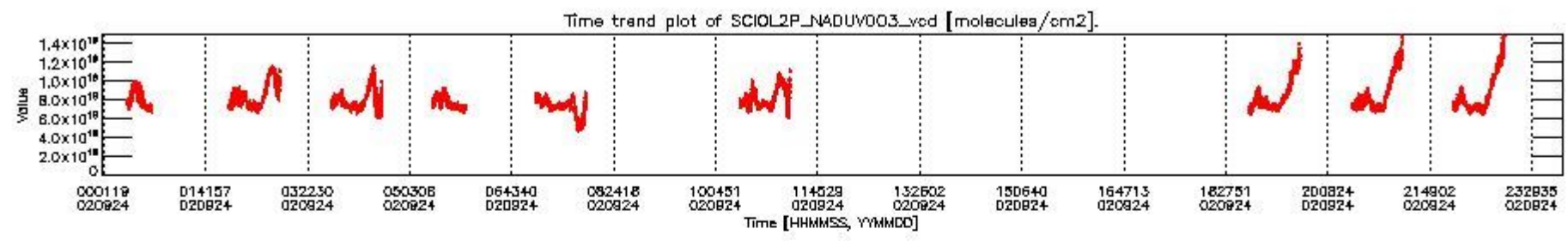
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

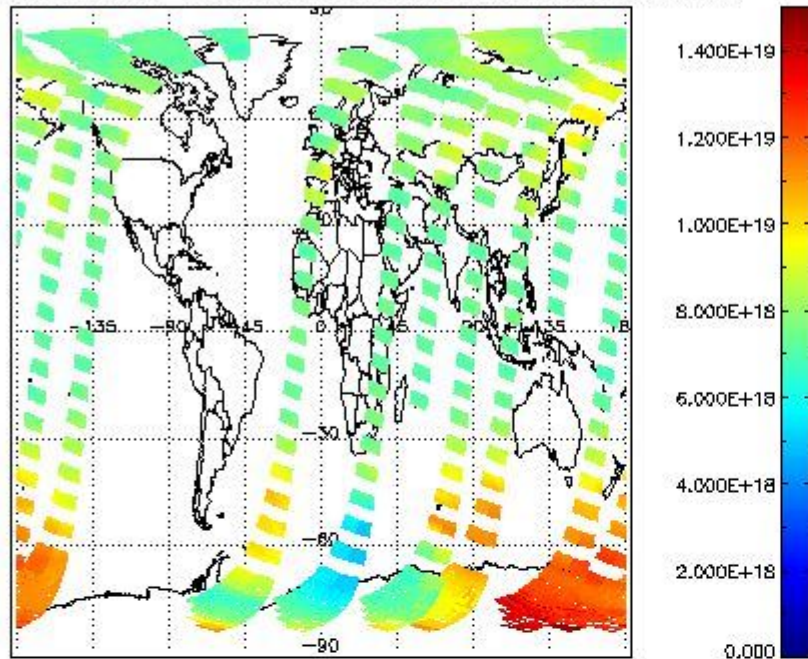
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr
15	SCIOL2P_NADUV5SO2_amf_cl
16	SCIOL2P_NADUV7SO2_vcd
17	SCIOL2P_NADUV7SO2_vcd_err
18	SCIOL2P_NADUV7SO2_amf_gr
19	SCIOL2P_NADUV7SO2_amf_cl
20	SCIOL2P_NADUV6OCL_slant_col_den
21	SCIOL2P_NADUV6OCL_err_slant_col
22	SCIOL2P_NADUV8H2O_vcd
23	SCIOL2P_NADUV8H2O_vcd_err
24	SCIOL2P_NADUV8H2O_amf_gr
25	SCIOL2P_NADIR3CO_vcd
26	SCIOL2P_NADIR3CO_vcd_err

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.

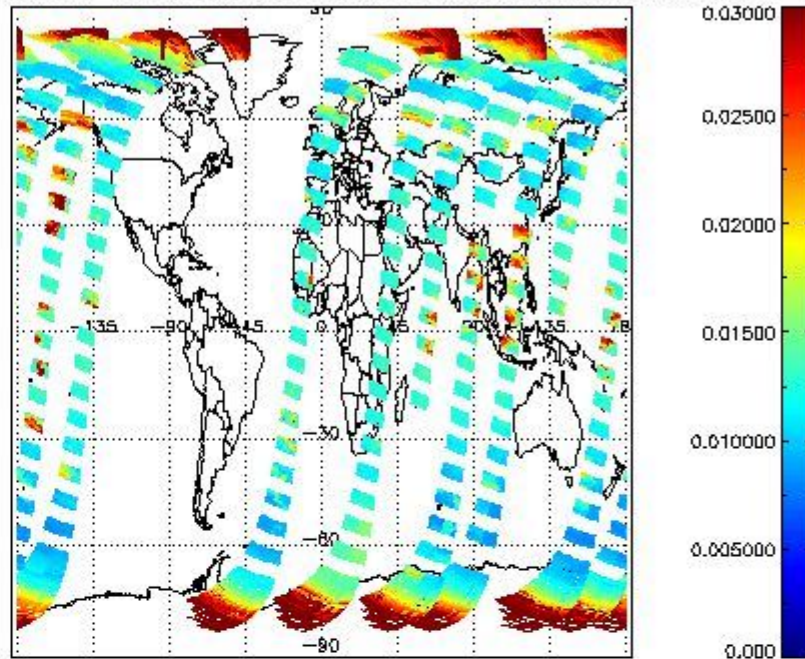
2.2.2.1 O3 (UV0)



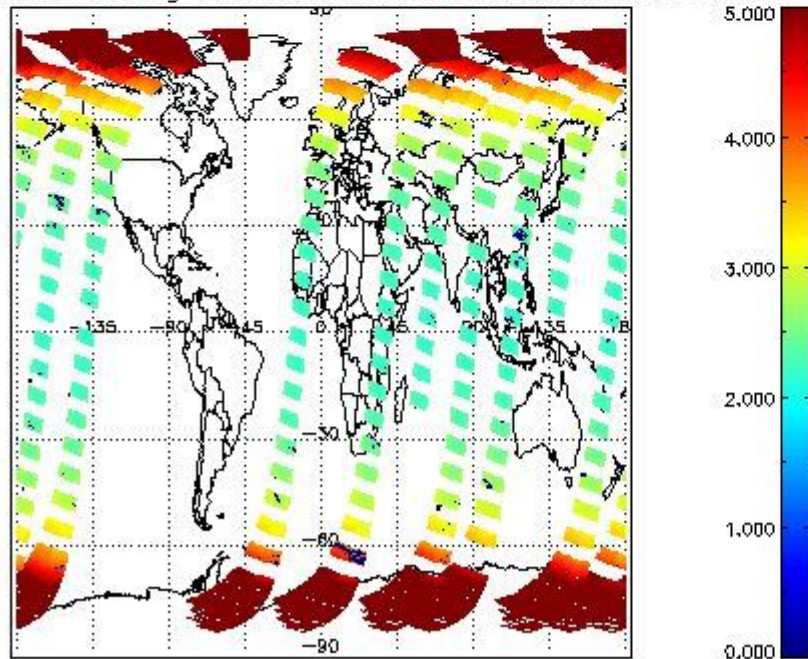
SCIOL2P_NADUV003_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



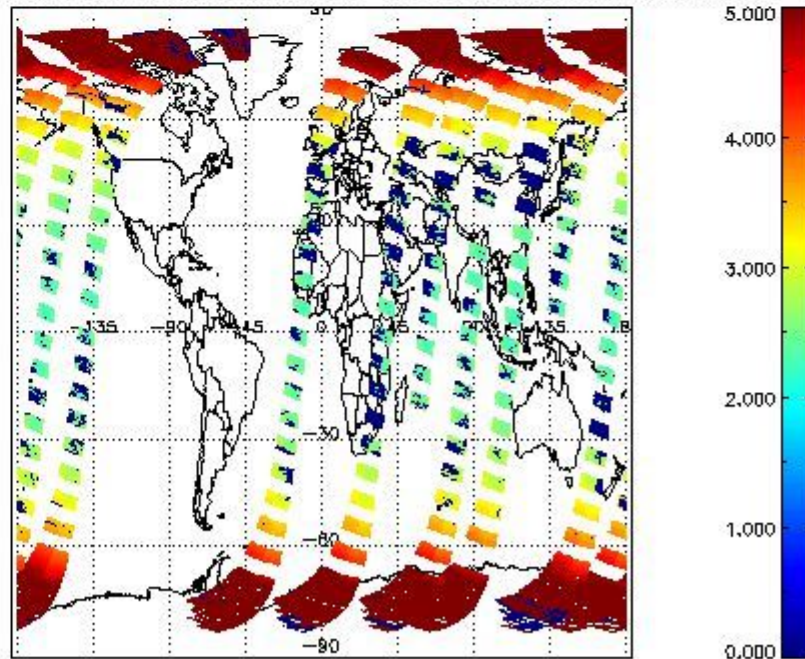
SCIOL2P_NADUV003_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



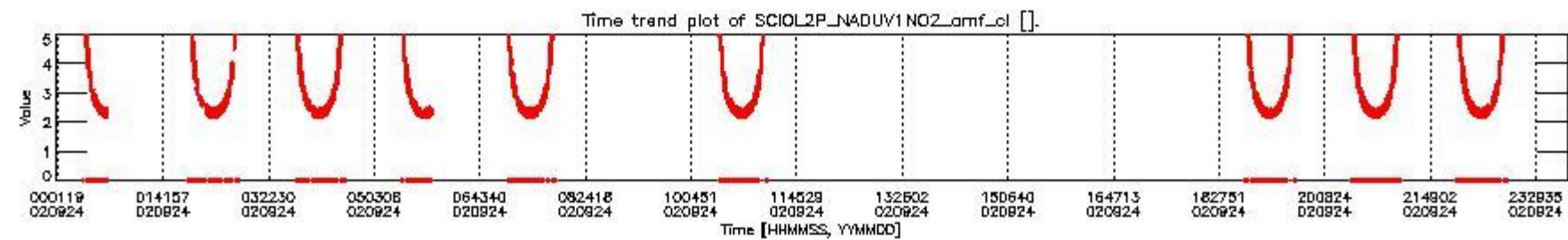
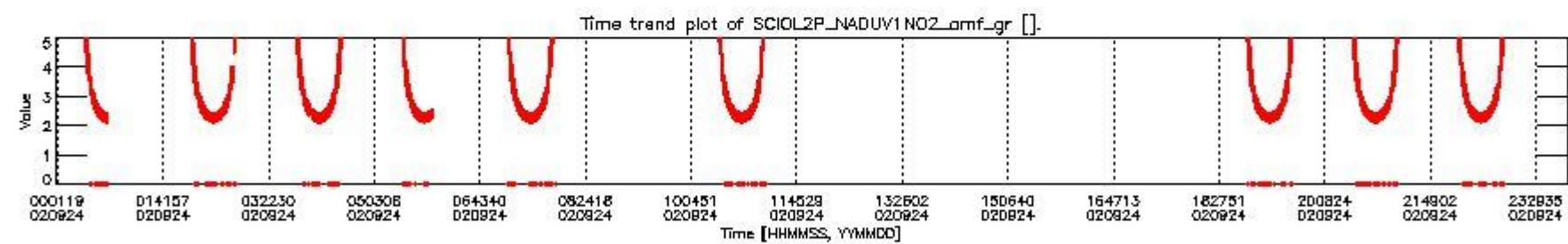
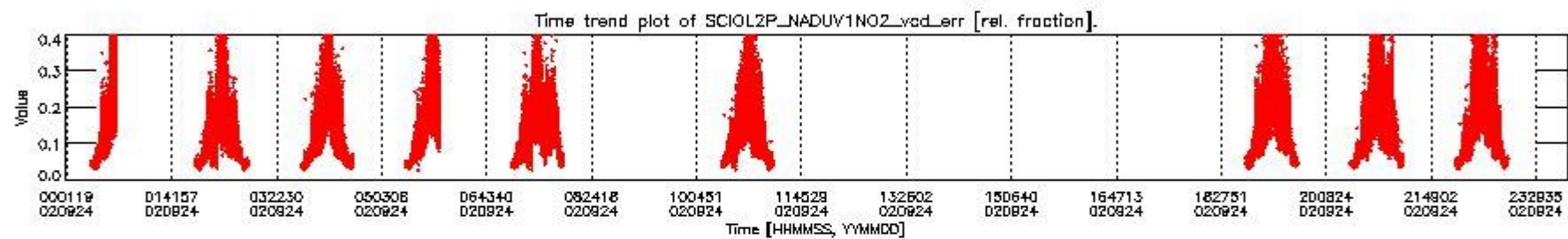
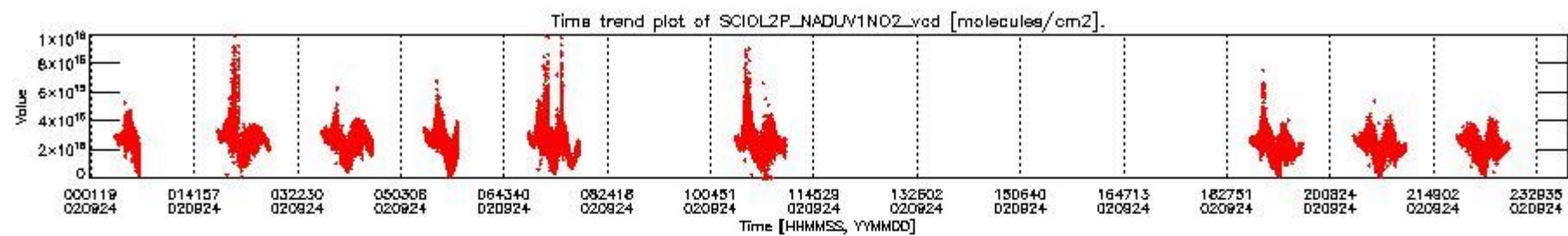
SCIOL2P_NADUV003_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



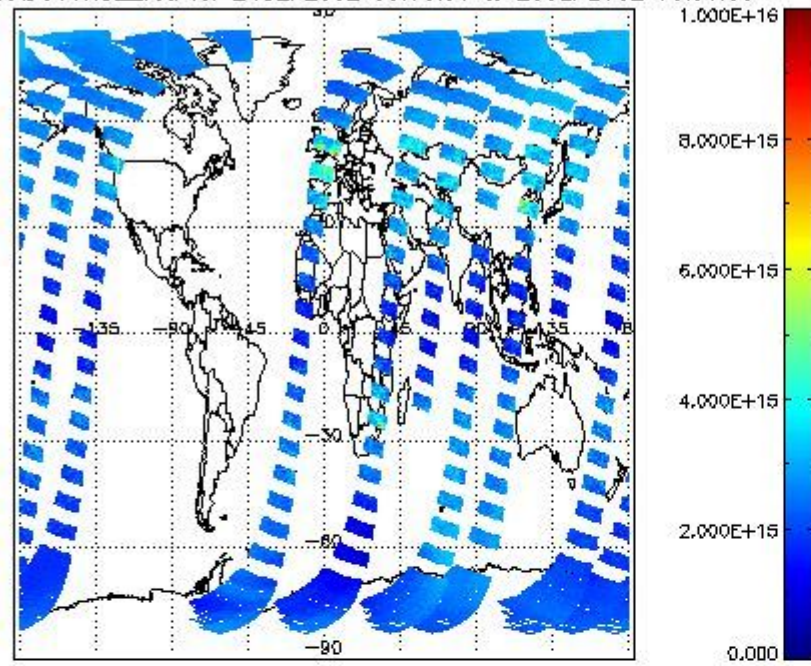
SCIOL2P_NADUV003_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



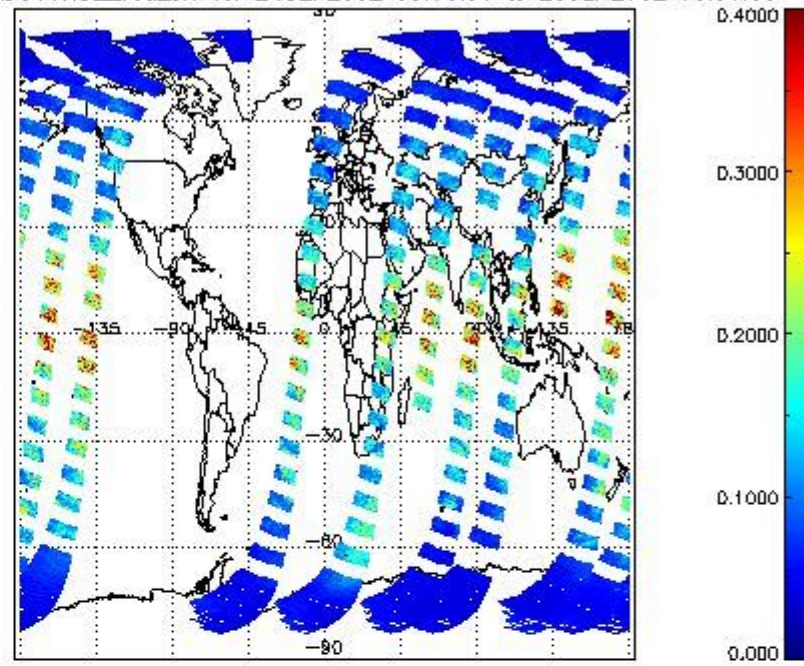
2.2.2.2 NO2 (UV1)



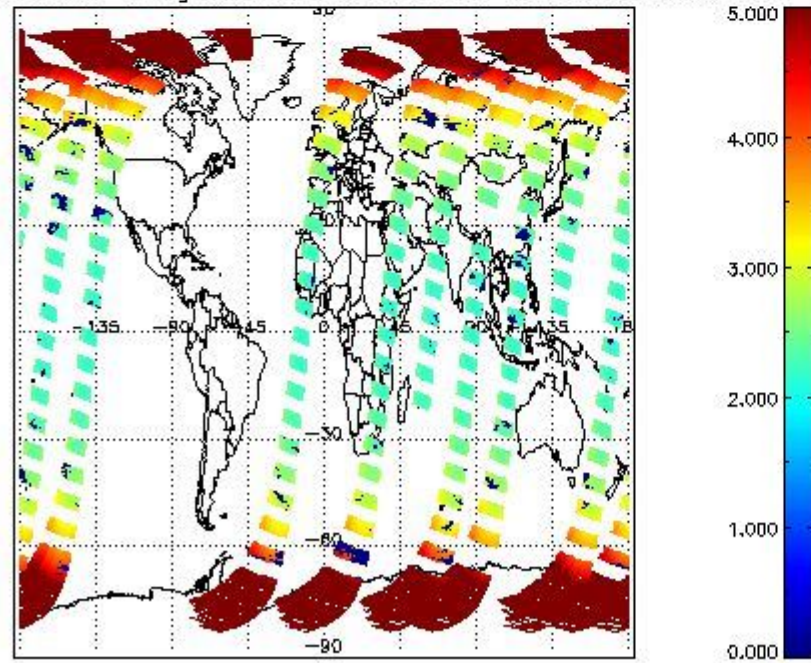
SCIOL2P_NADUV1N02_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



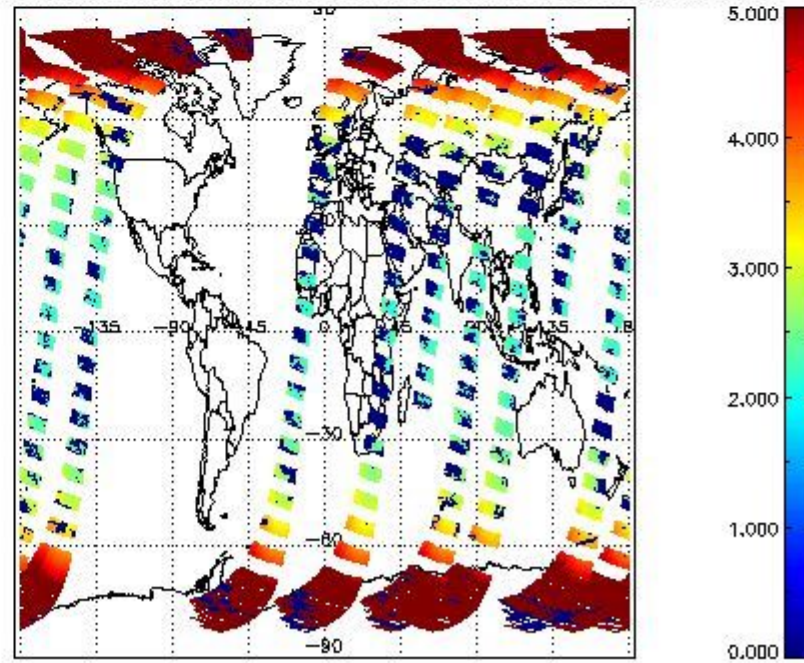
SCIOL2P_NADUV1N02_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



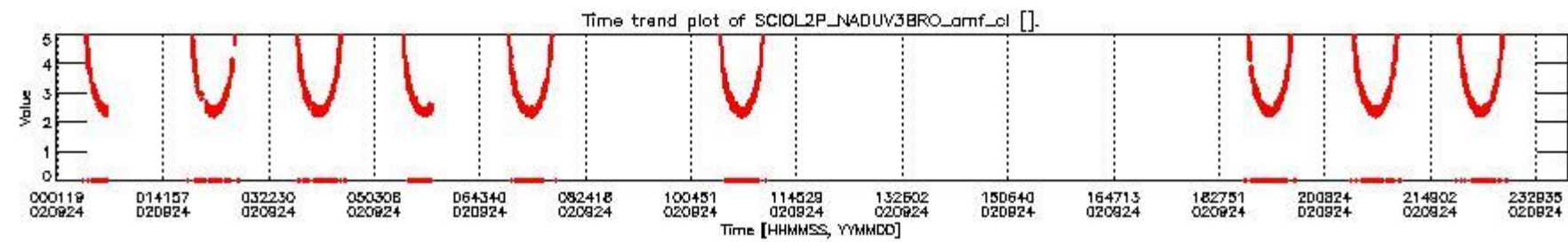
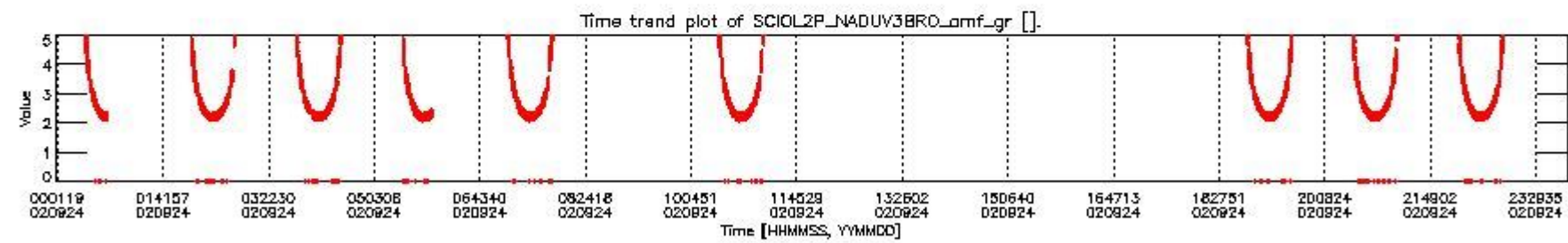
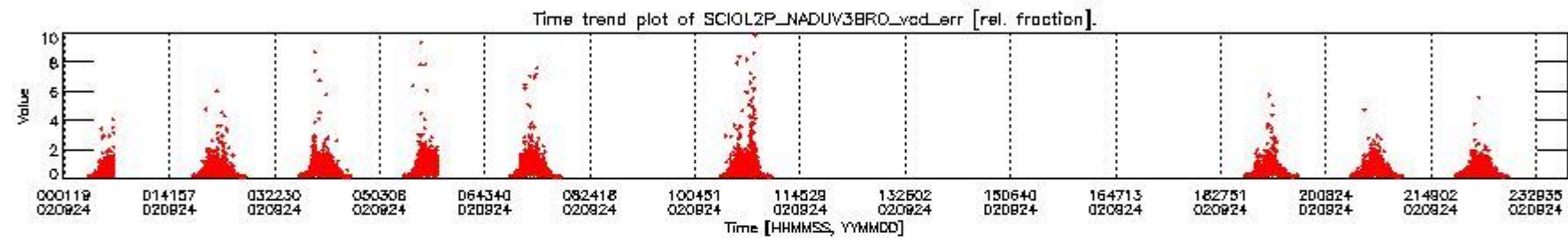
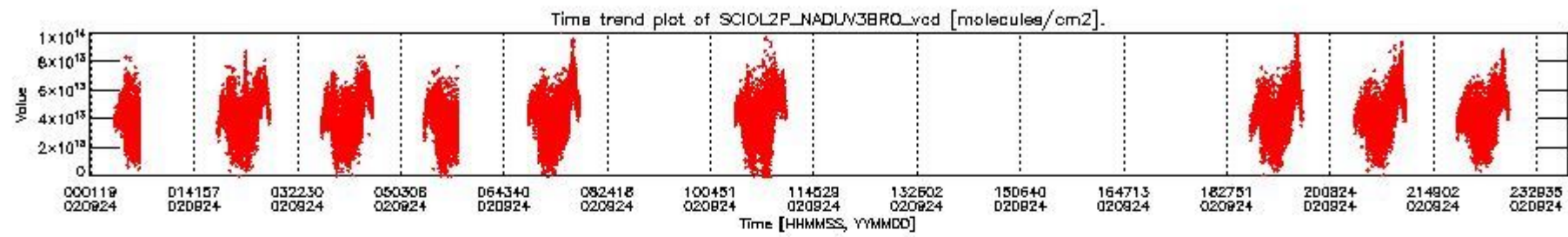
SCIOL2P_NADUV1N02_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



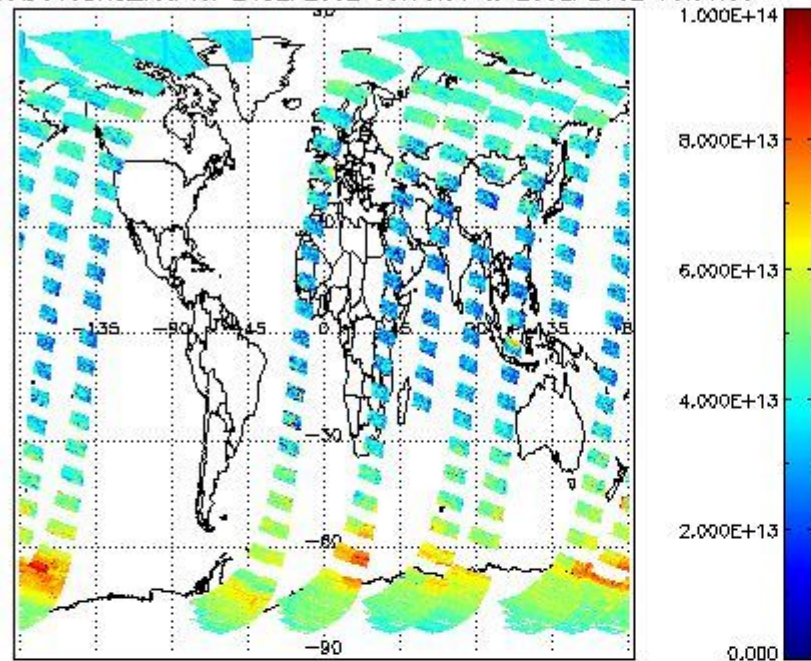
SCIOL2P_NADUV1N02_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



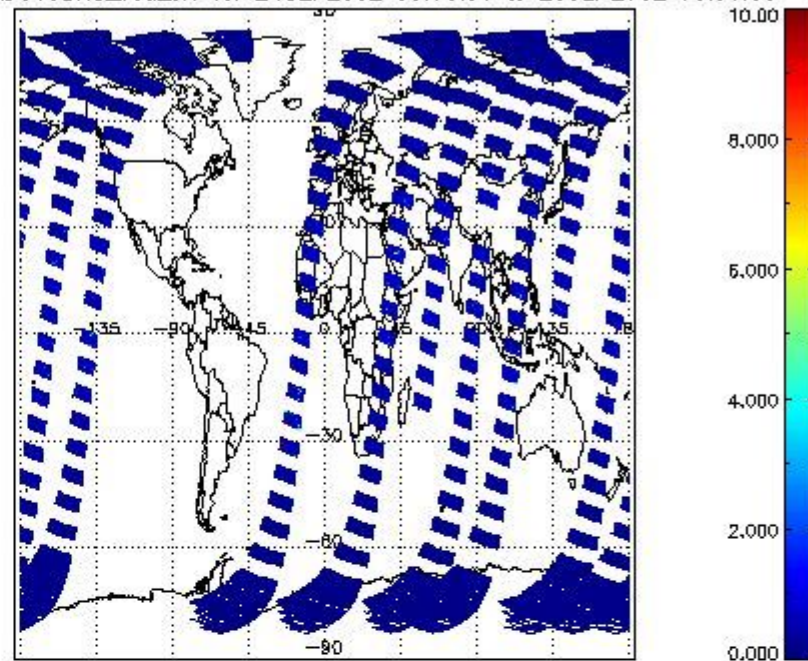
2.2.2.3 BrO (UV3)



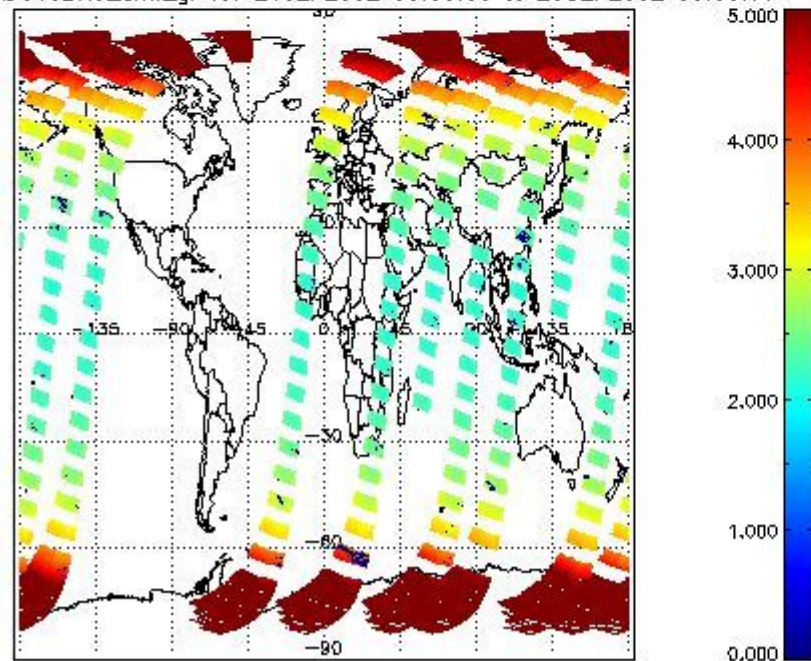
SCIOL2P_NADUV3BRO_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



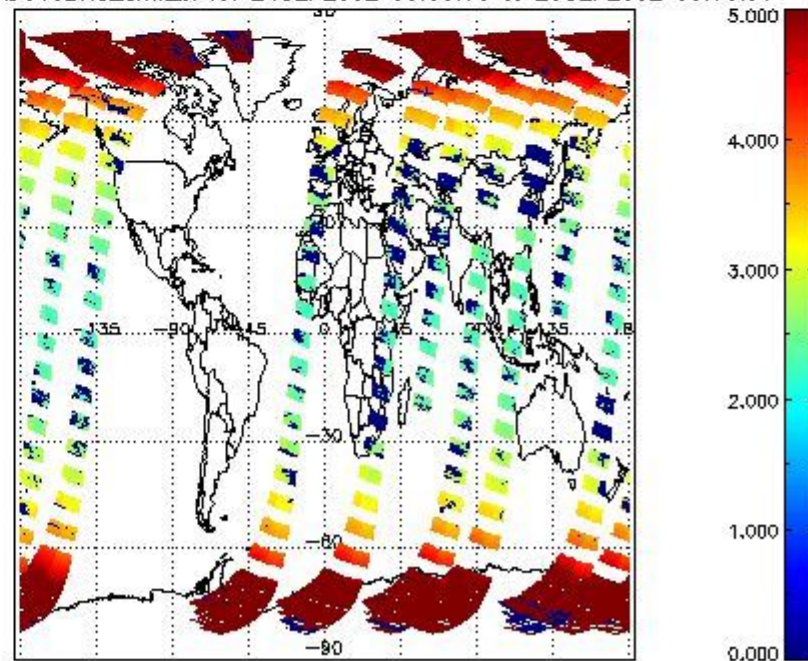
SCIOL2P_NADUV3BRO_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



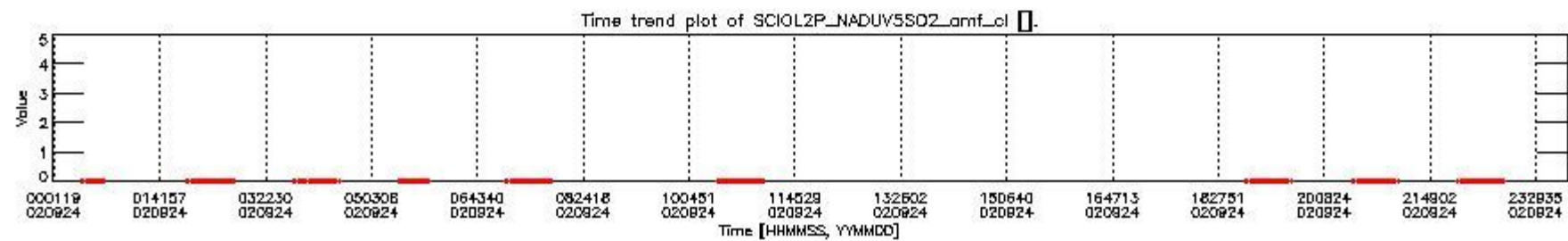
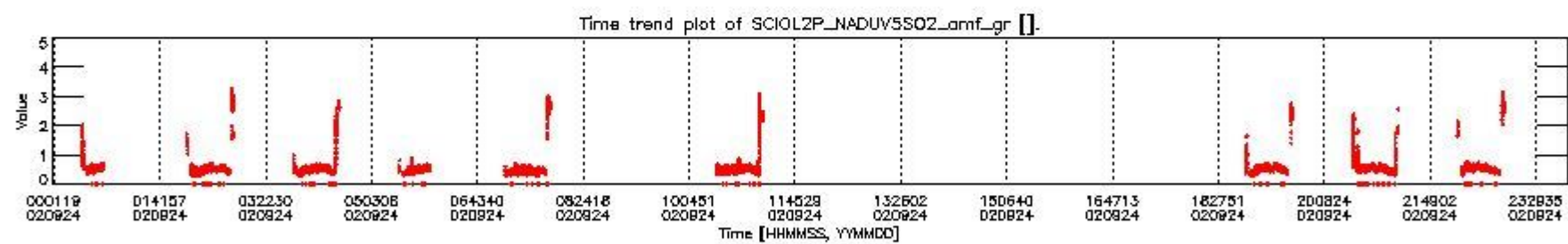
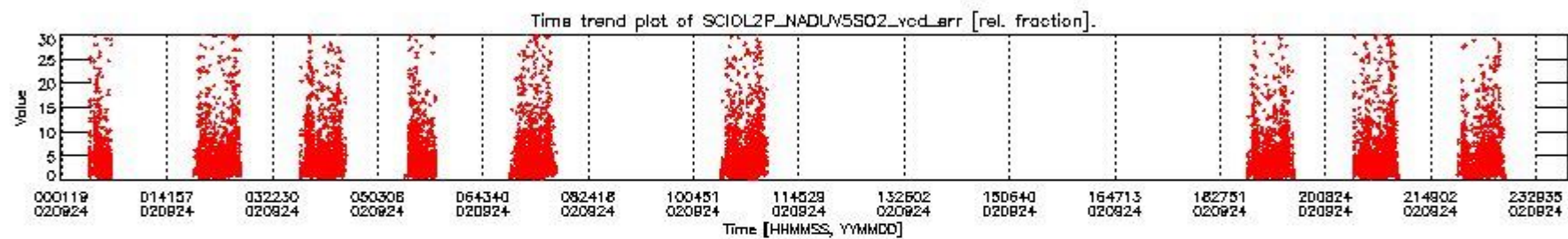
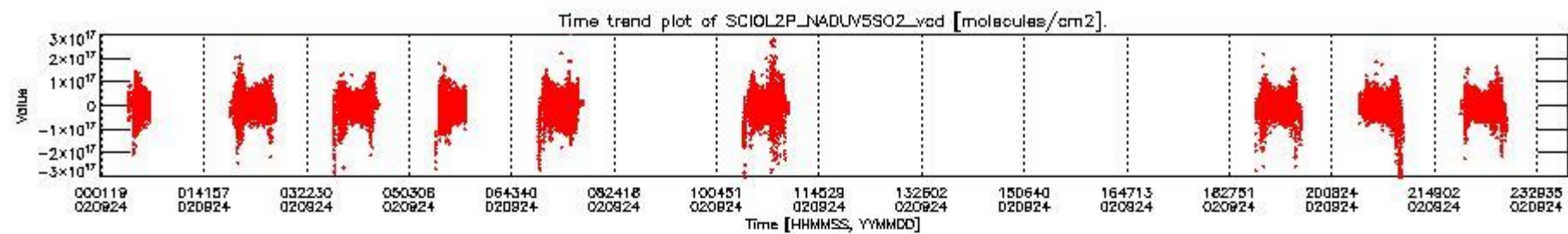
SCIOL2P_NADUV3BRO_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



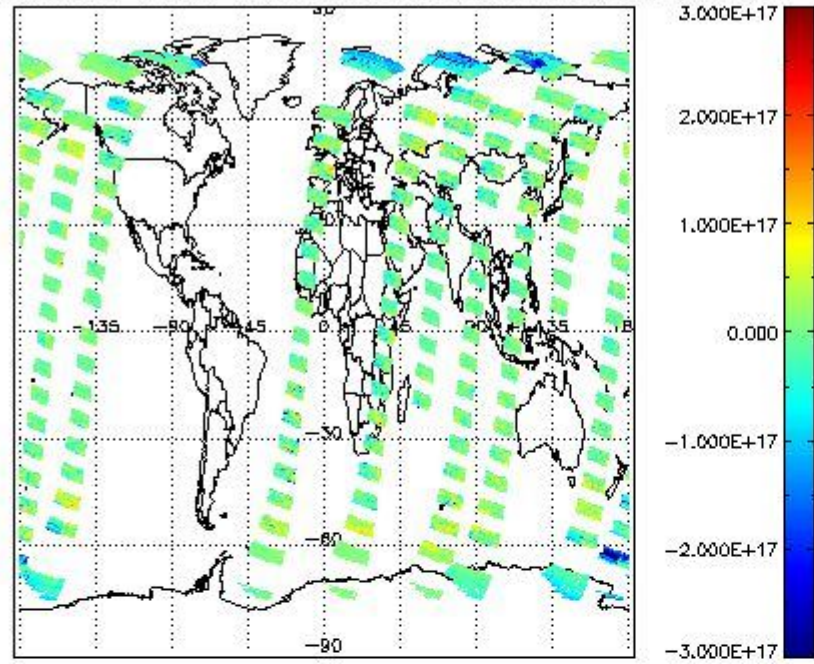
SCIOL2P_NADUV3BRO_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



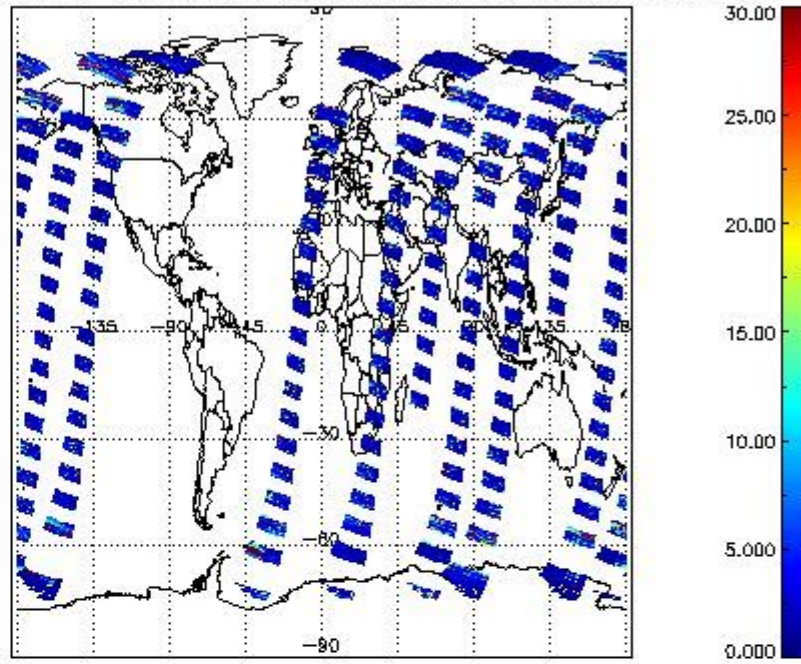
2.2.2.4 SO2 (UV5)



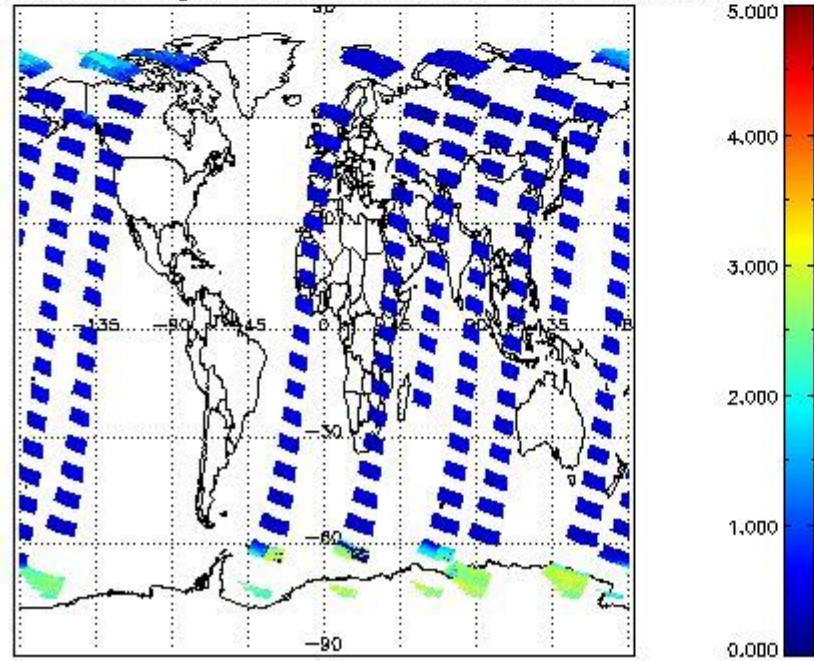
SCIOL2P_NADUV5S02_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



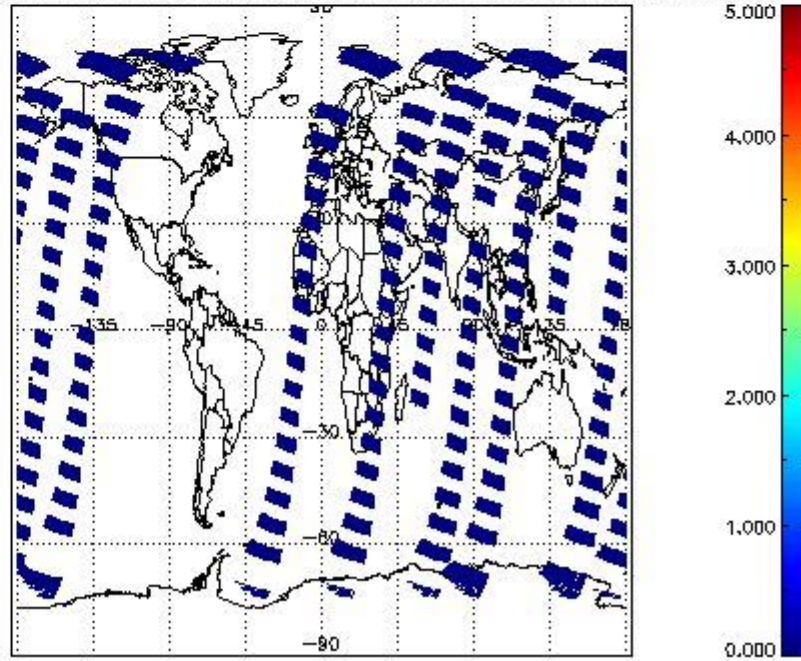
SCIOL2P_NADUV5S02_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



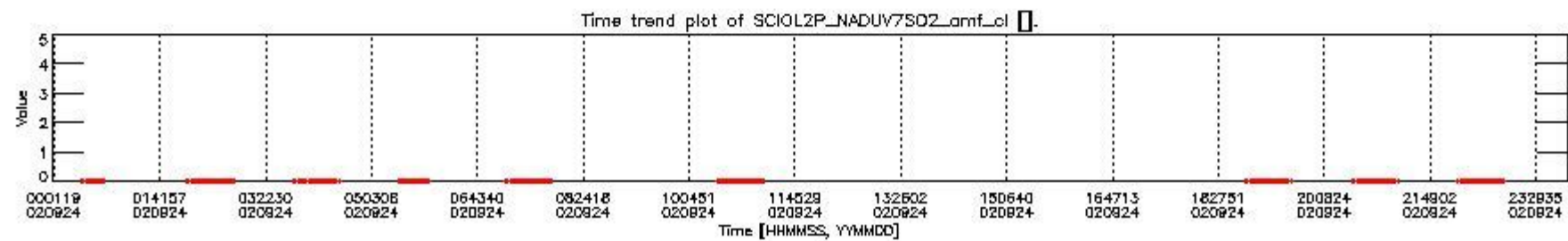
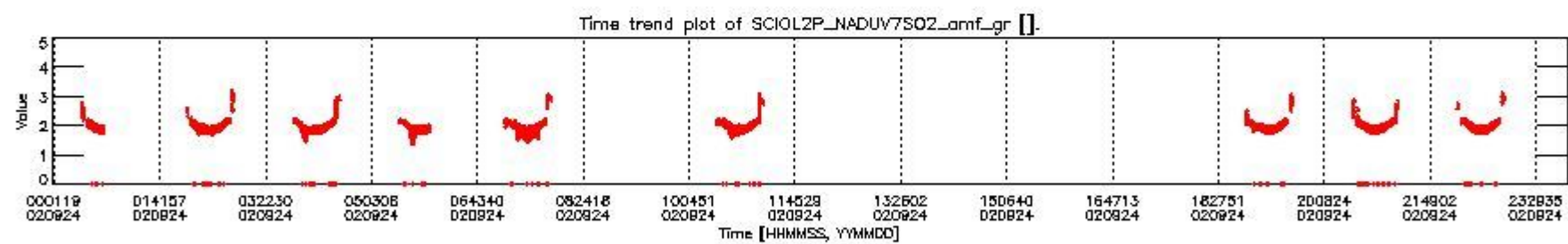
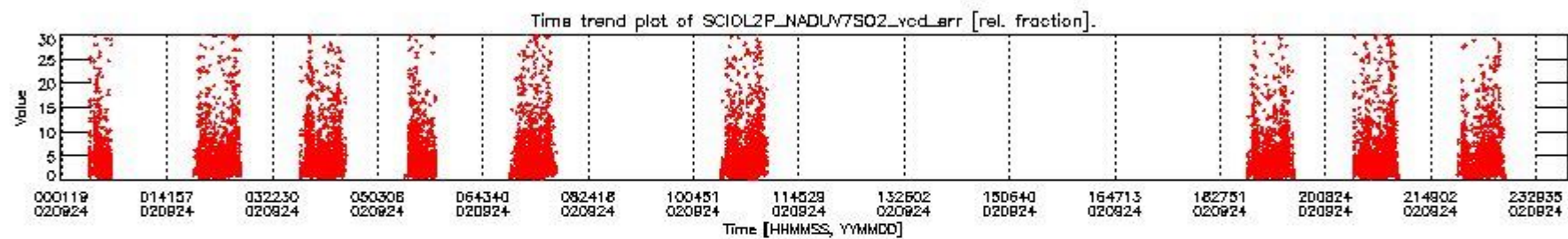
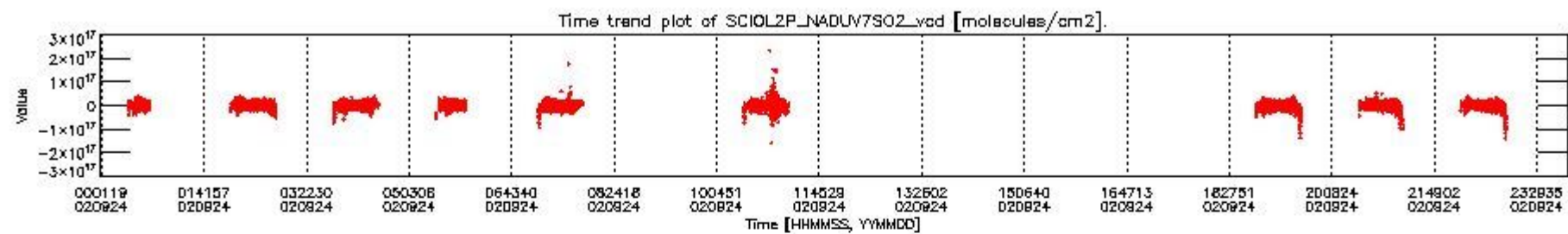
SCIOL2P_NADUV5S02_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



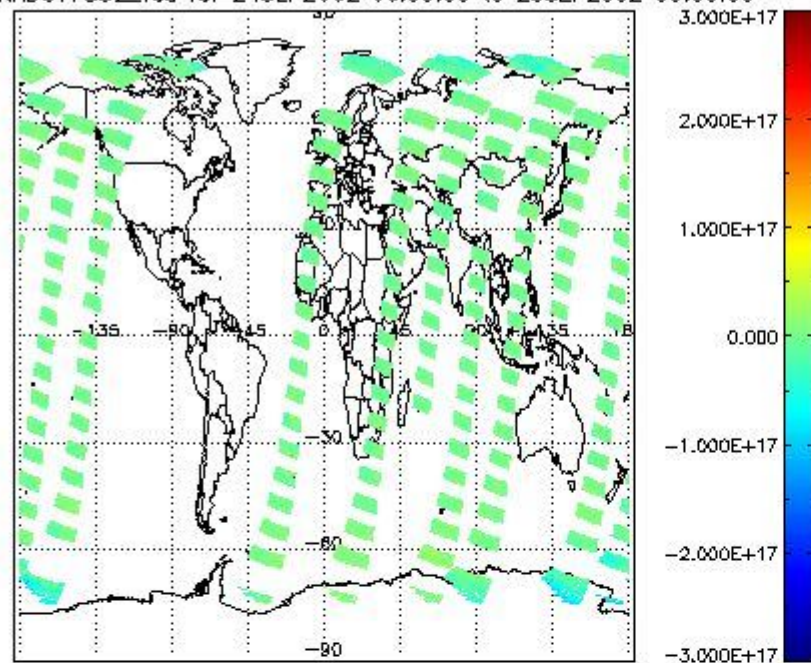
SCIOL2P_NADUV5S02_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



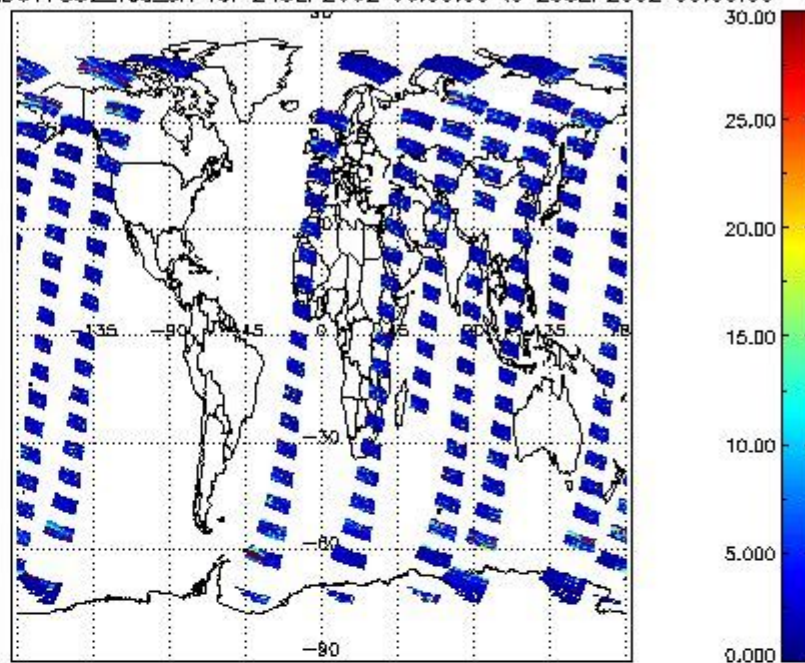
2.2.2.5 SO2 (UV7)



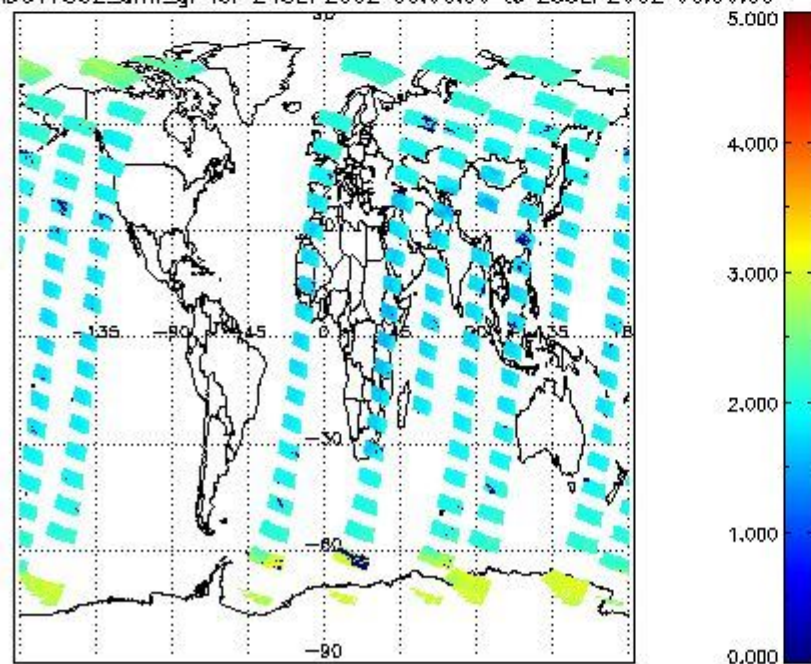
SCIOL2P_NADUV7S02_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



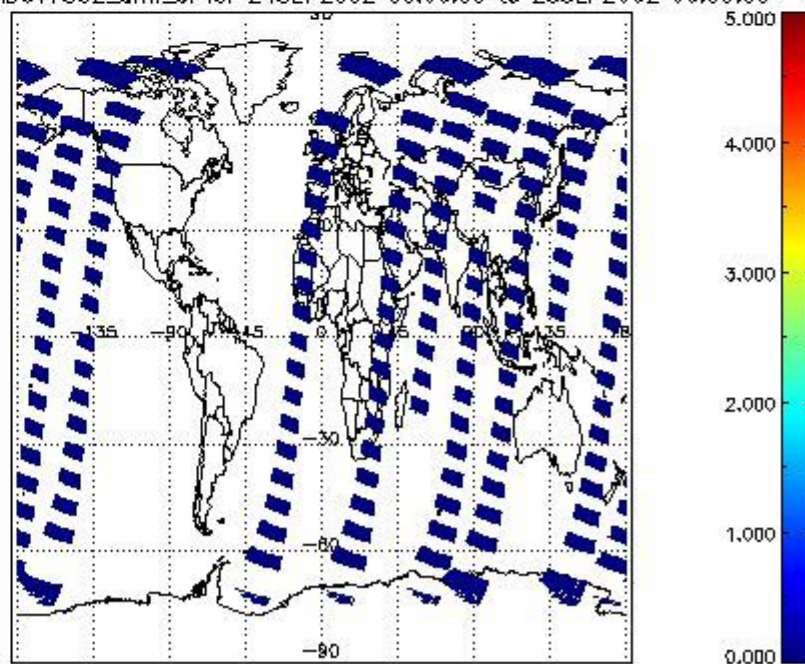
SCIOL2P_NADUV7S02_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



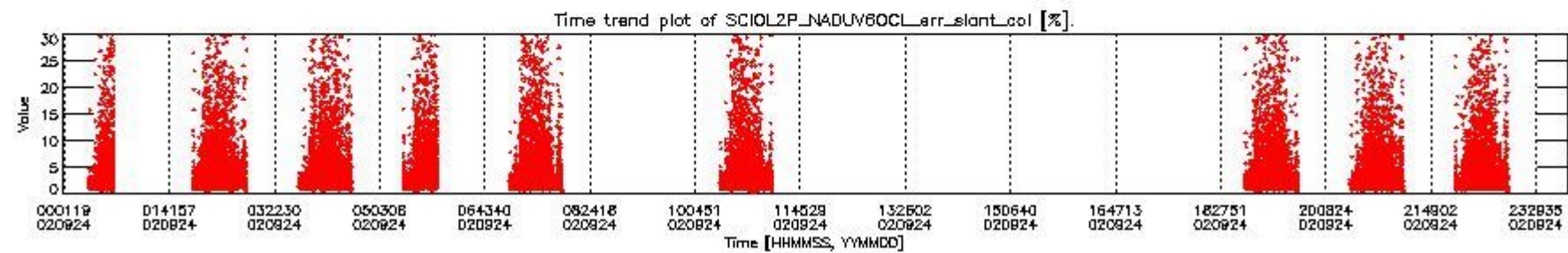
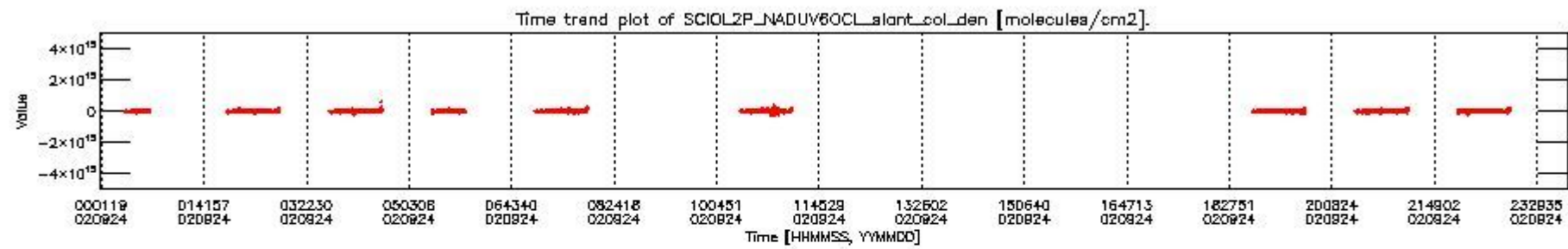
SCIOL2P_NADUV7S02_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



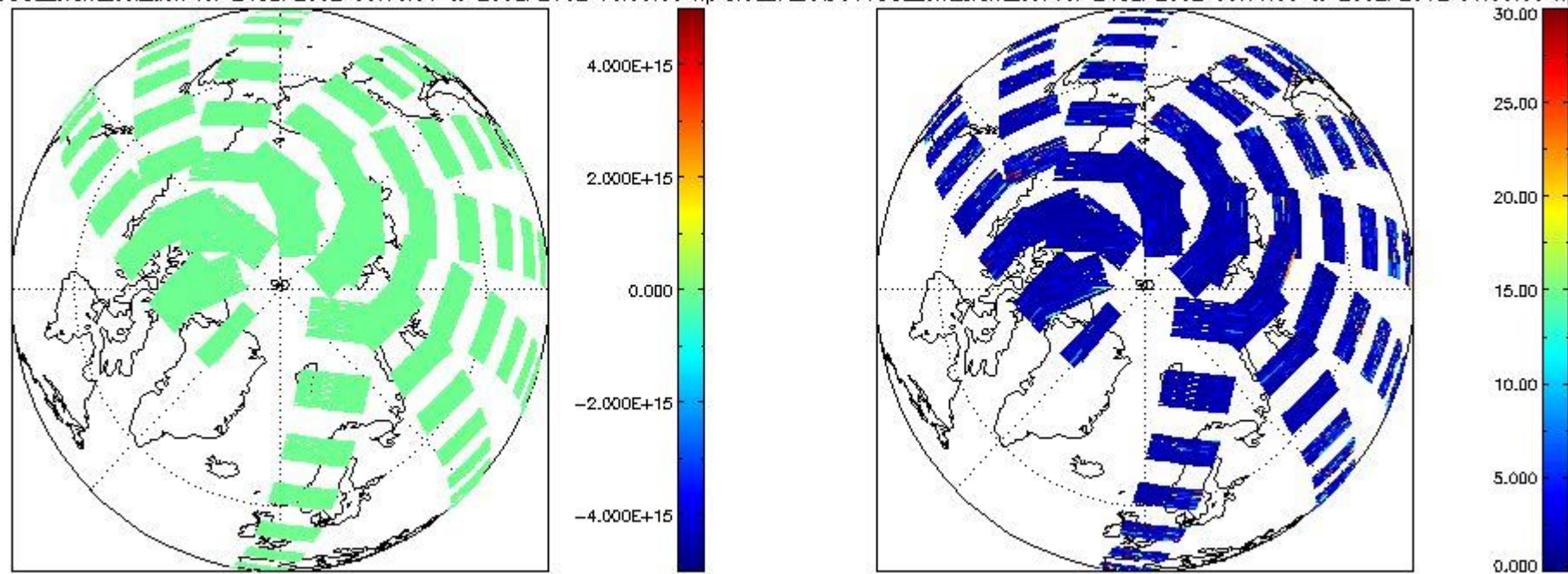
SCIOL2P_NADUV7S02_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



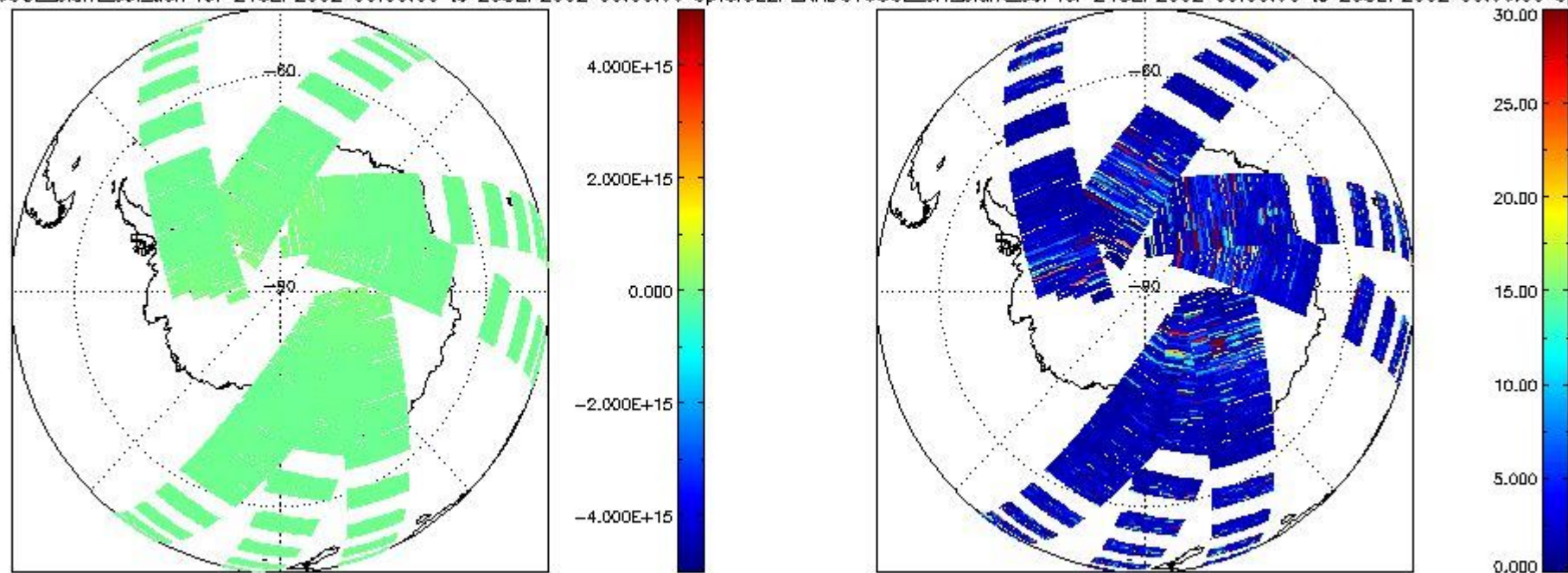
2.2.2.6 OCIO (UV6)



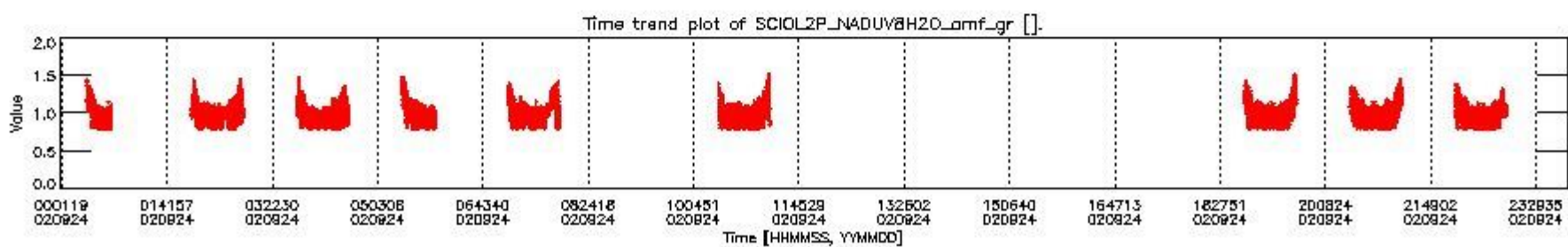
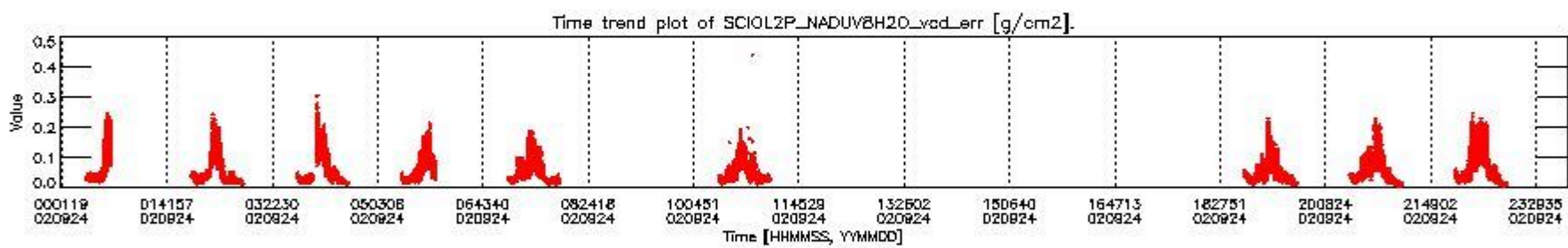
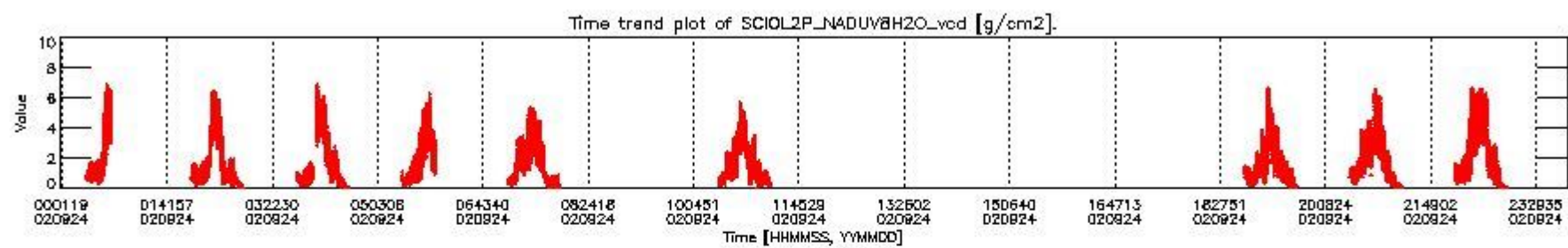
CIOL2P_NADUV60CLslant_col_den for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 np; CIOL2P_NADUV60CLerr_slant_col for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 np



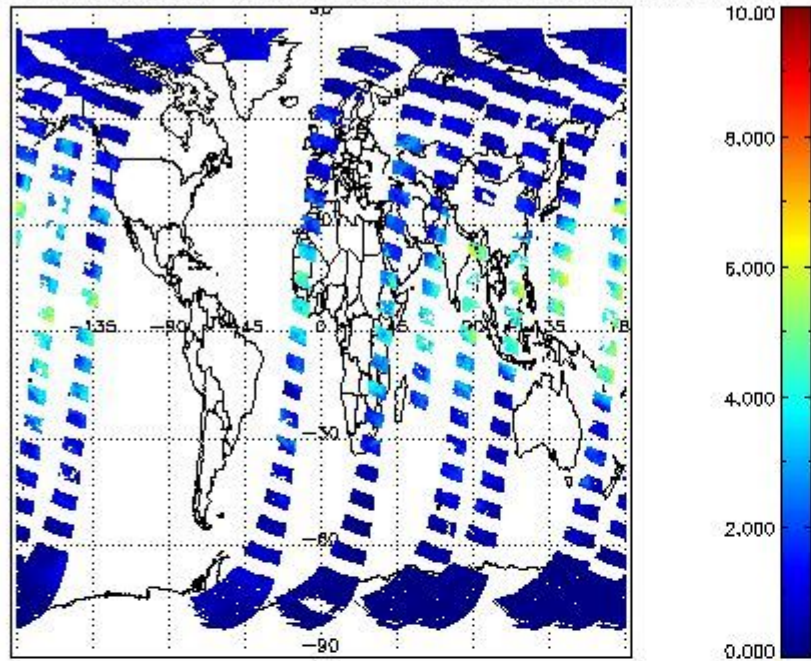
CIOL2P_NADUV60CL_slant_col_den for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 sp CIOL2P_NADUV60CL_err_slant_col for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 sp



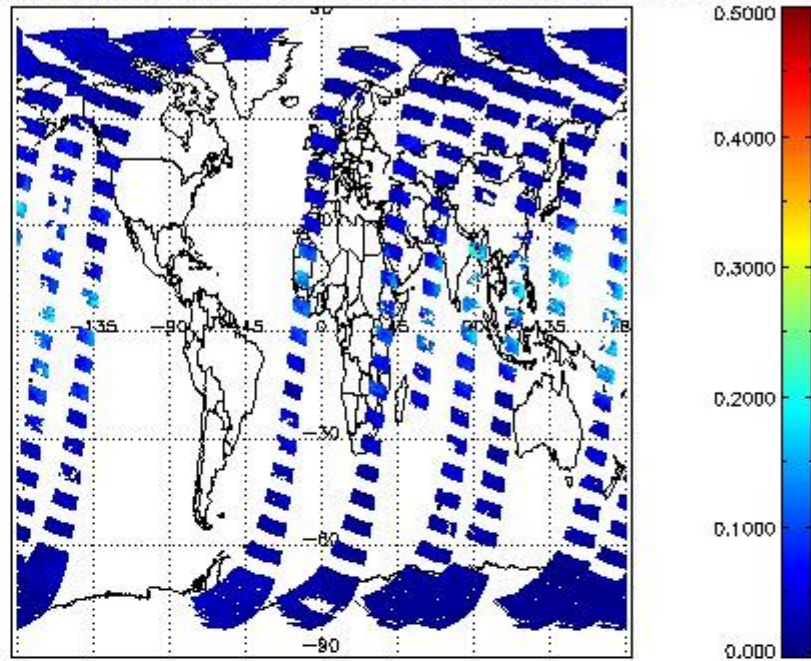
2.2.2.7 H₂O (UV8)



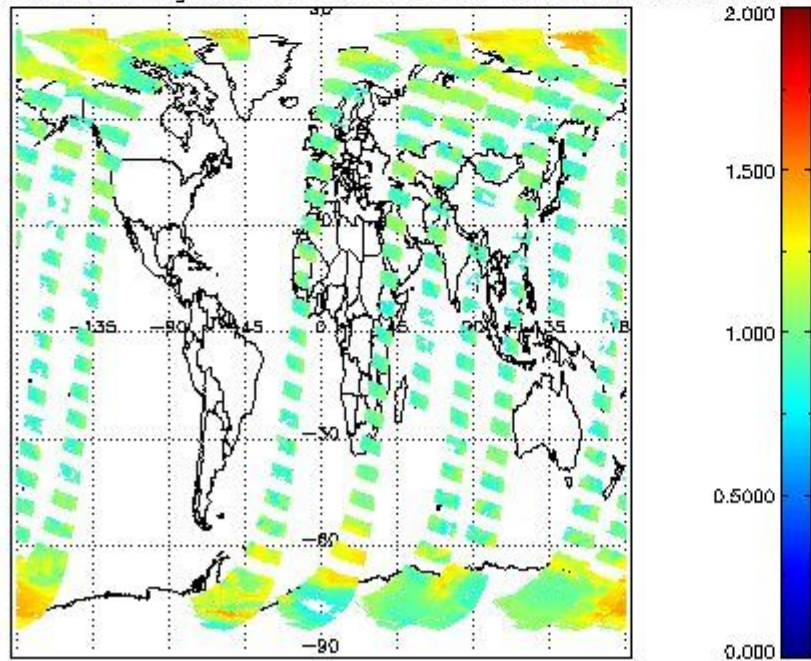
SCIOL2P_NADUV8H2O_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



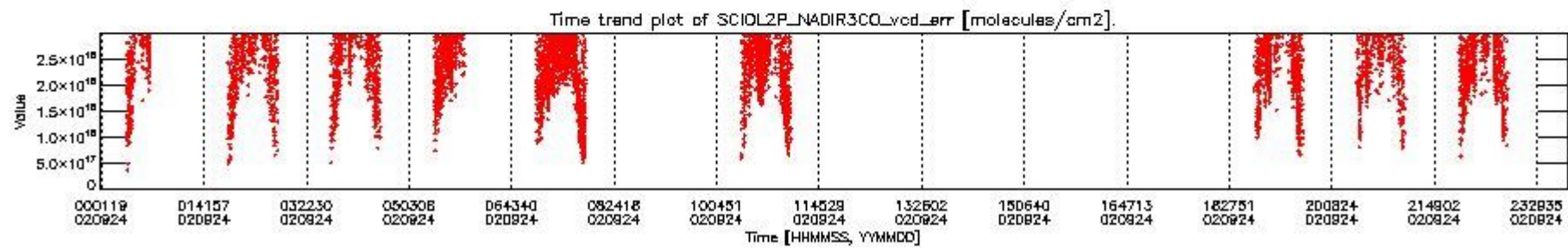
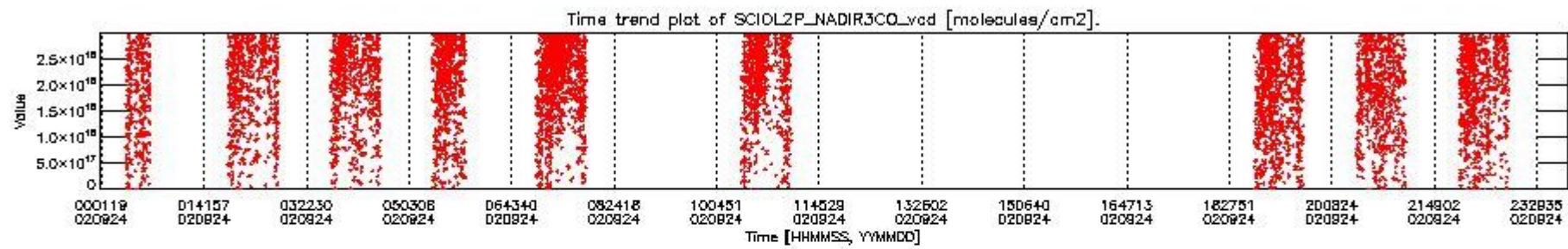
SCIOL2P_NADUV8H2O_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



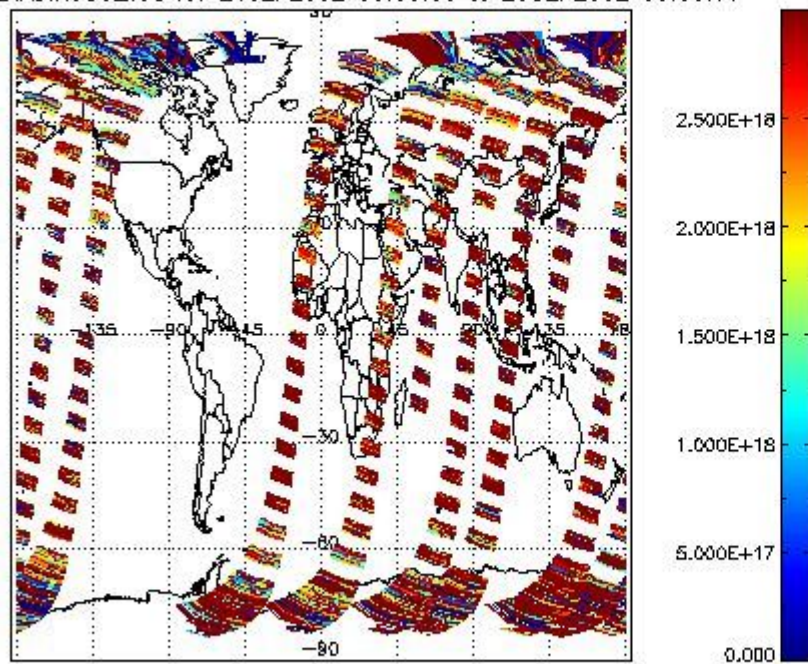
SCIOL2P_NADUV8H2O_arnf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



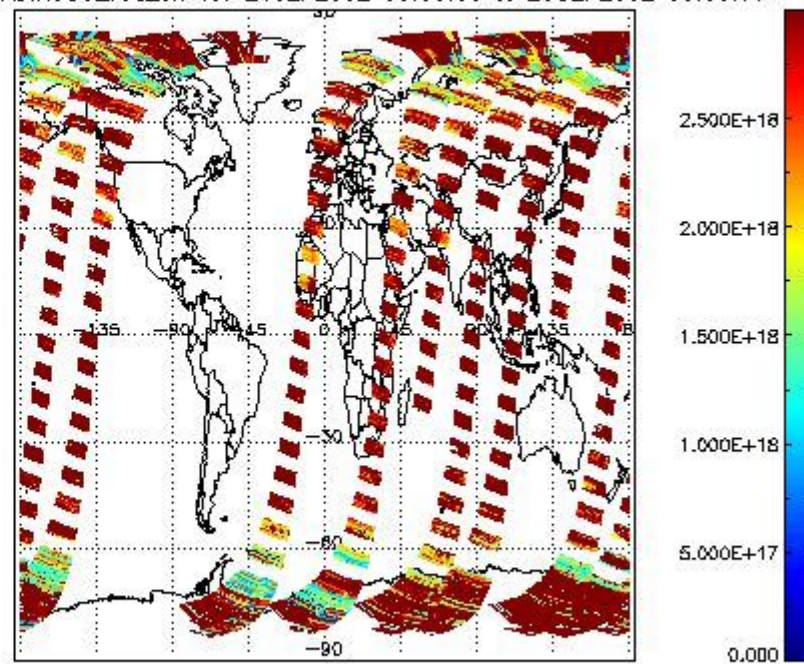
2.2.2.8 CO (IR3)



SCIDL2P_NADIR3CO_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



SCIDL2P_NADIR3CO_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



2.2.3 Limb

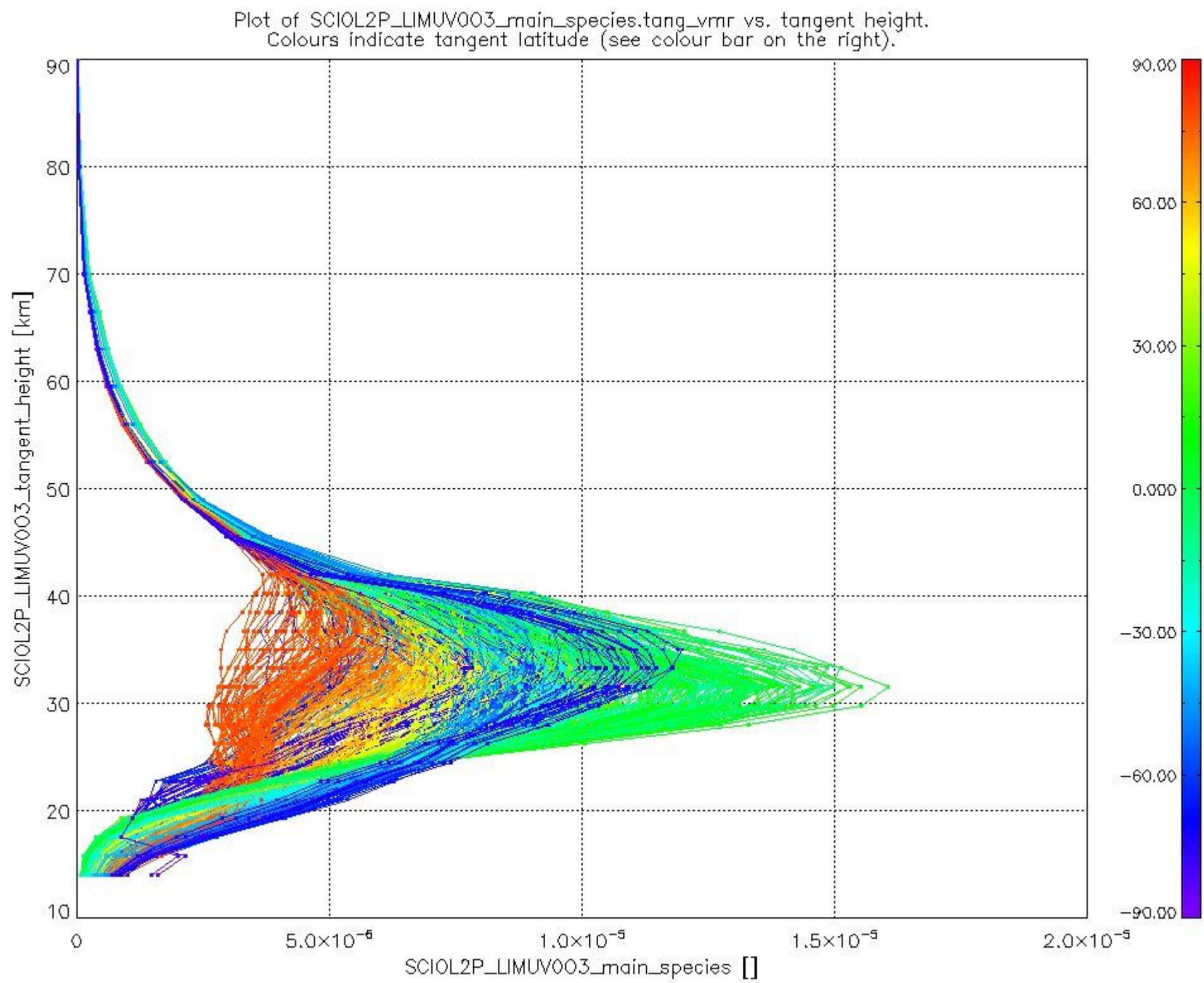
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species

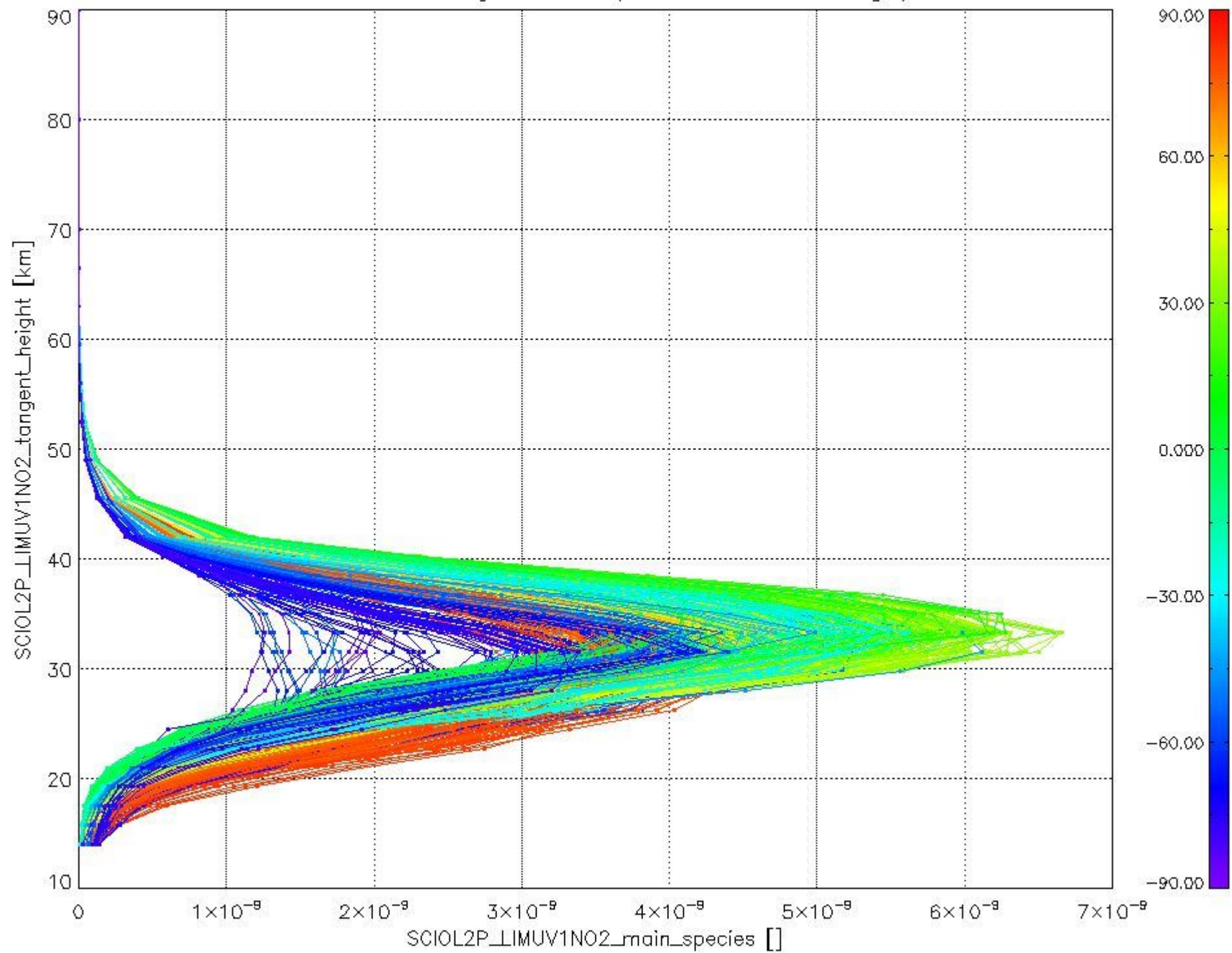
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



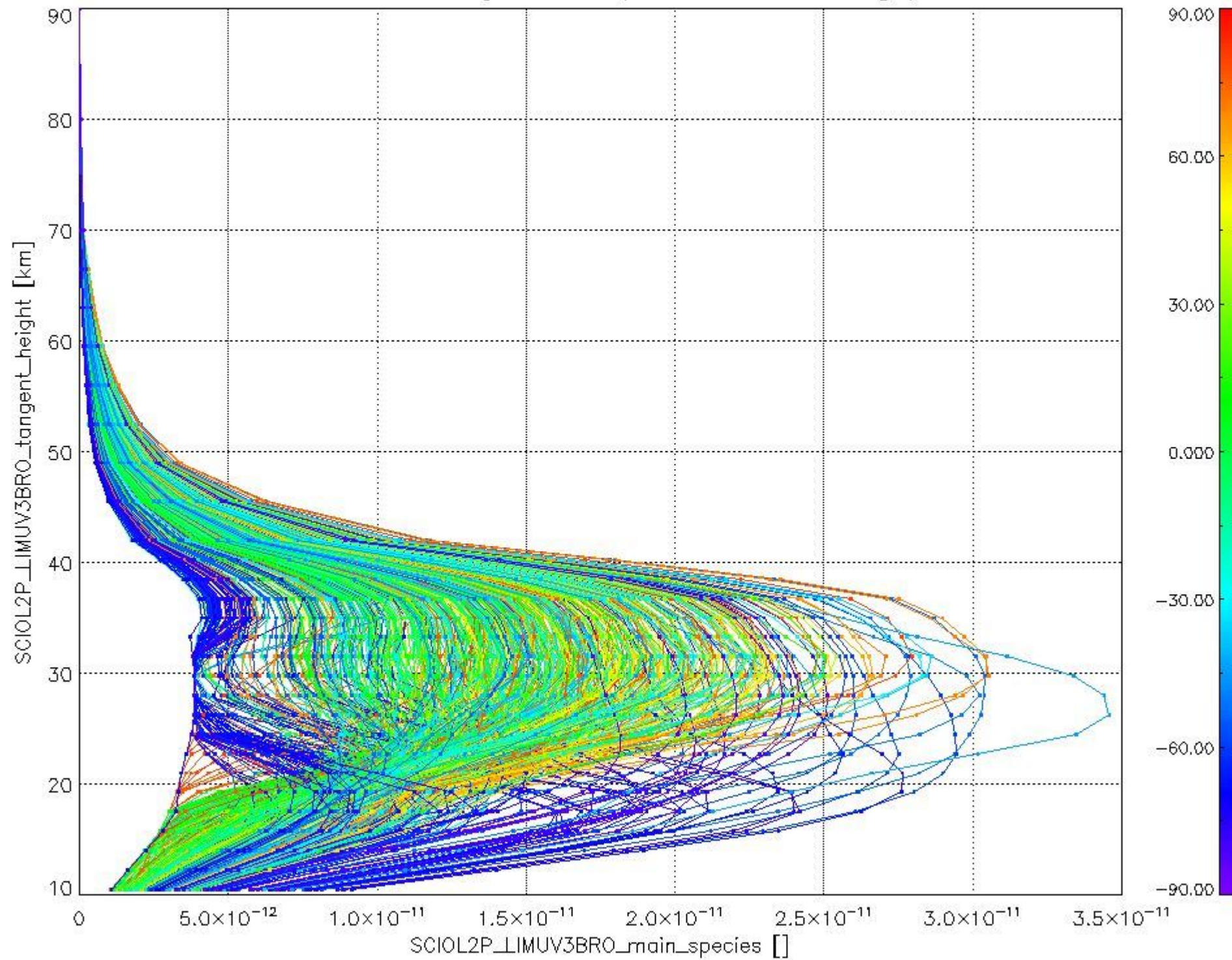
2.2.3.2 NO2 (UV1)

Plot of SCIOL2P_LIMUV1NO2_main_species.tang_vmr vs. tangent height.
 Colours indicate tangent latitude (see colour bar on the right).



2.2.3.3 BrO (UV3)

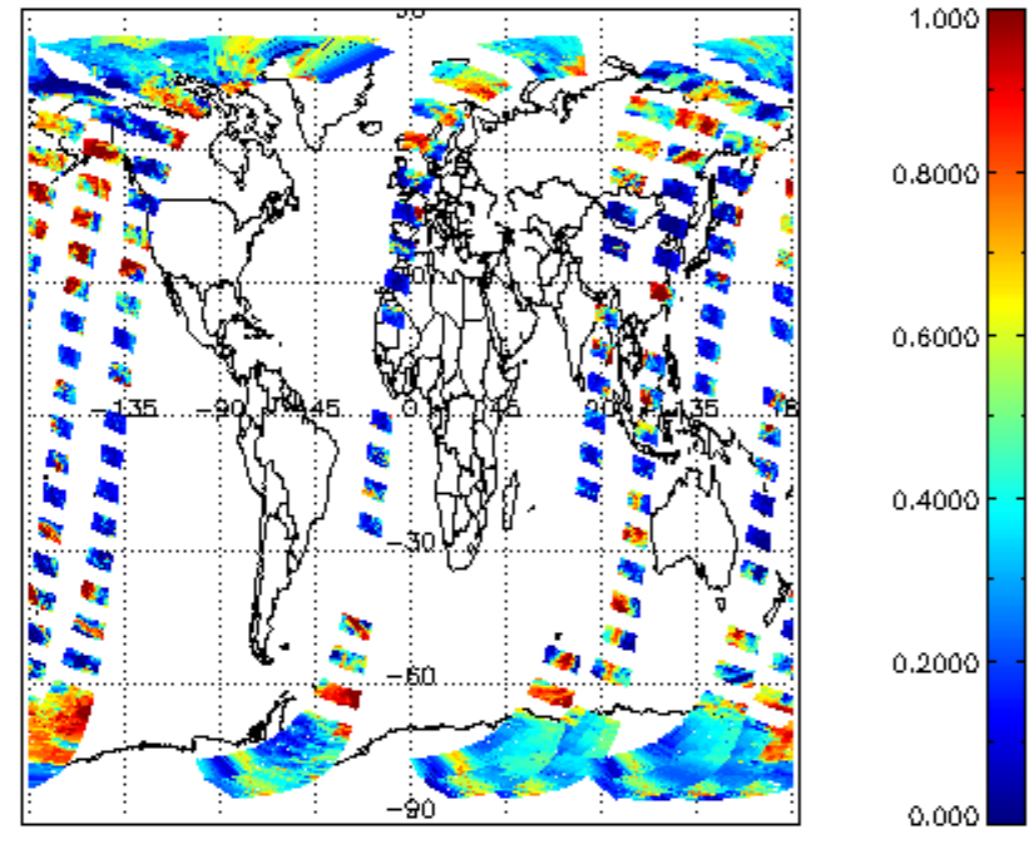
Plot of SCIOL2P_LIMUV3BRO_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



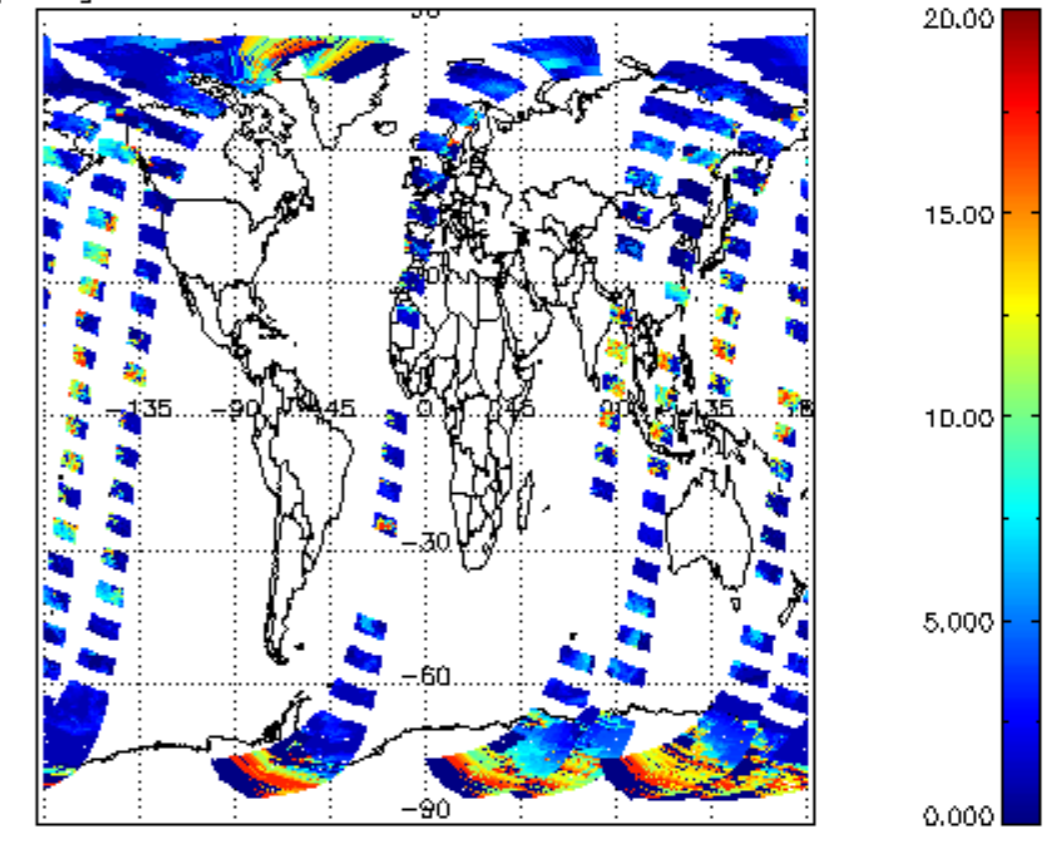
2.3 ADF monitoring

Number	ADF
	IN_ (INITIALISATION_FILE)
0	SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959
	ECF (ECMWF_FILE)
1	NOT USED
	MF1 (M_FACTOR_FILE)
2	SCI_MF1_AXNIEC20100218_135103_20020923_170748_20020925_170748
3	SCI_MF1_AXNIEC20100218_135205_20020924_095347_20020926_095347

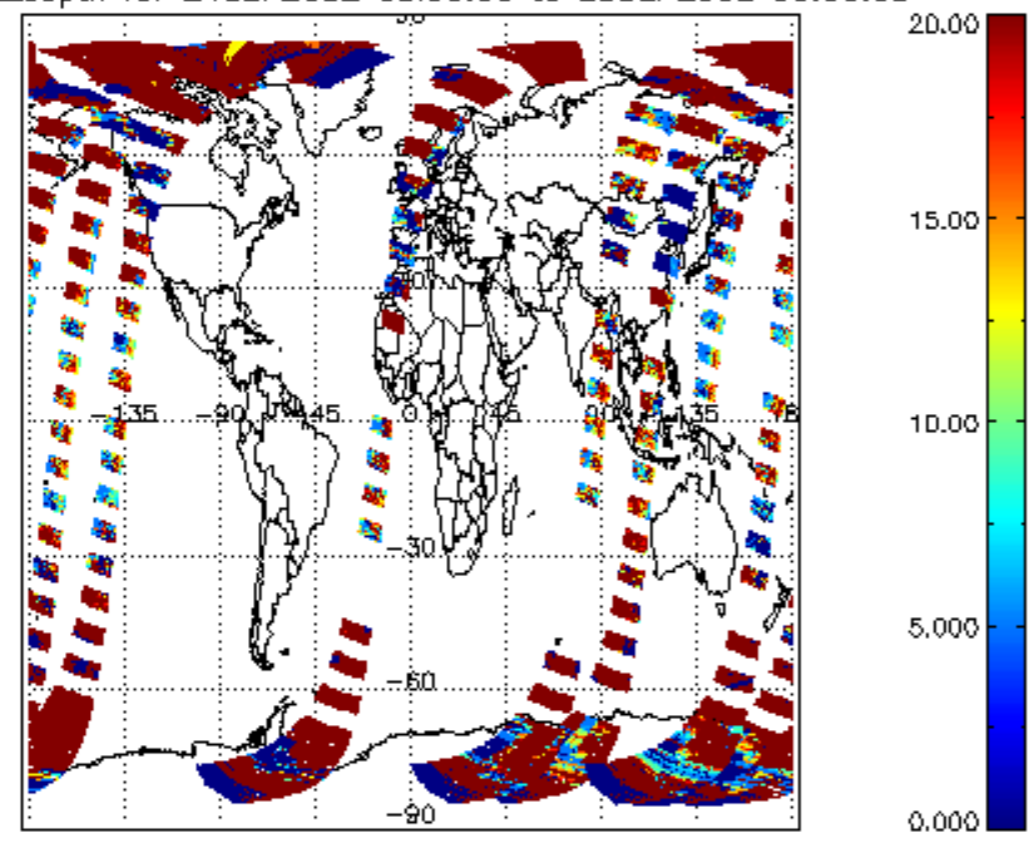
cl_frac for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



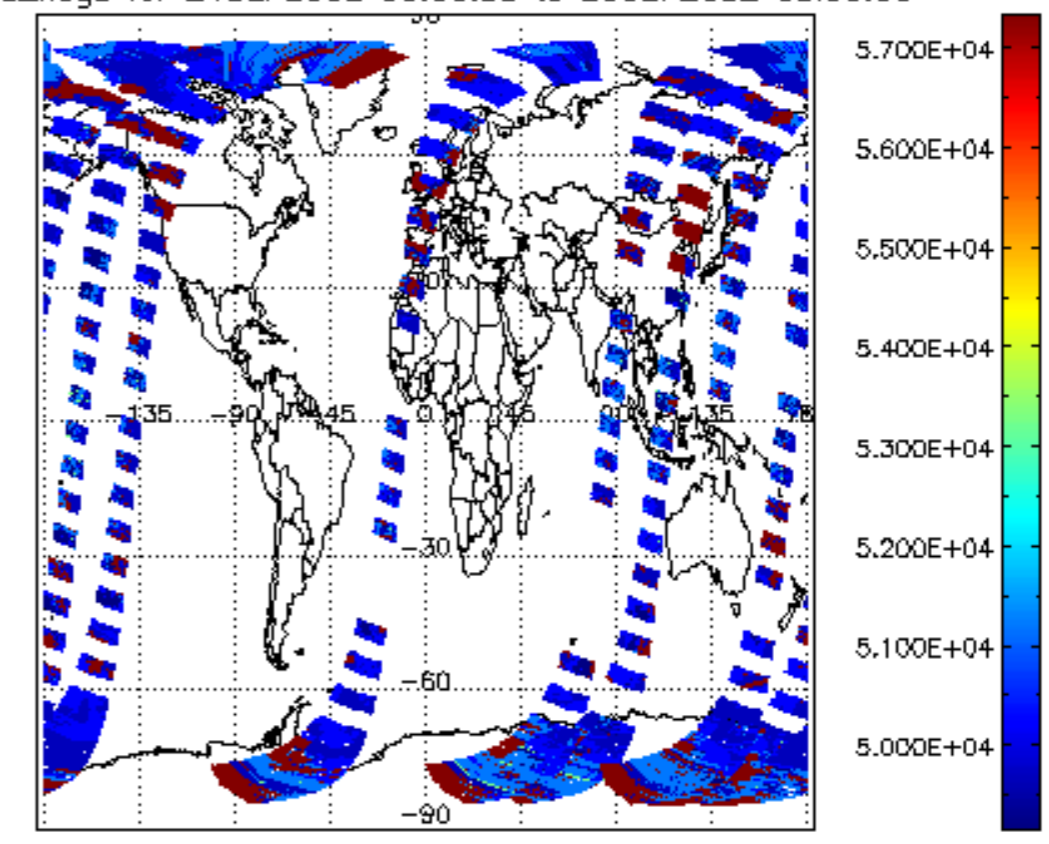
cl_top_height for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

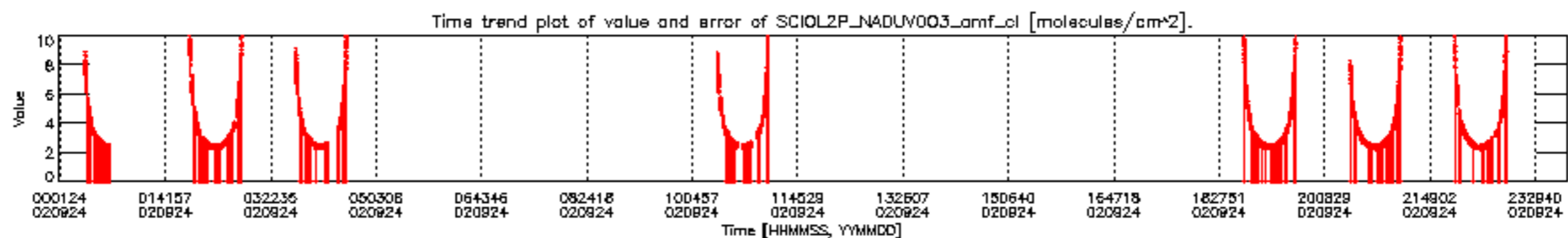
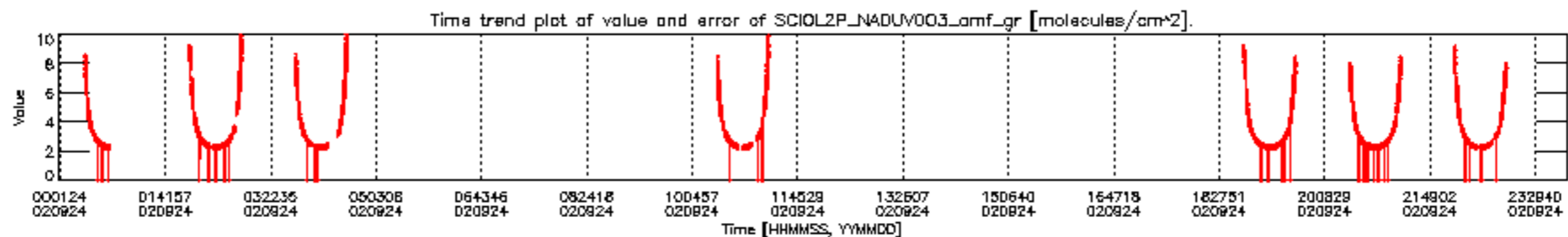
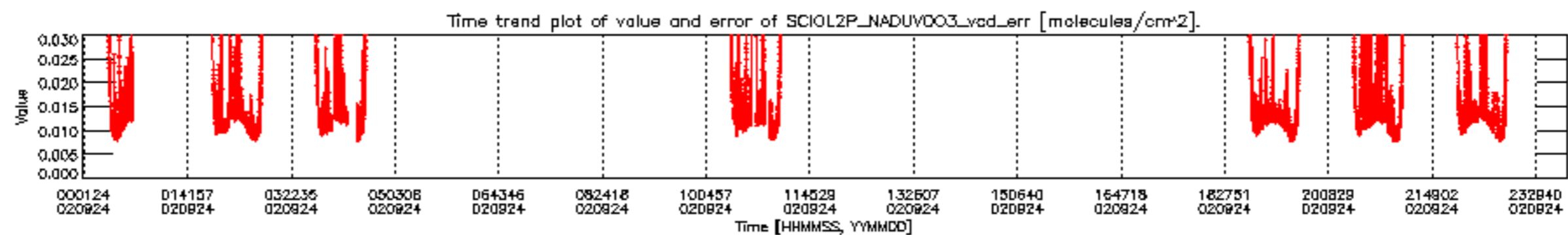
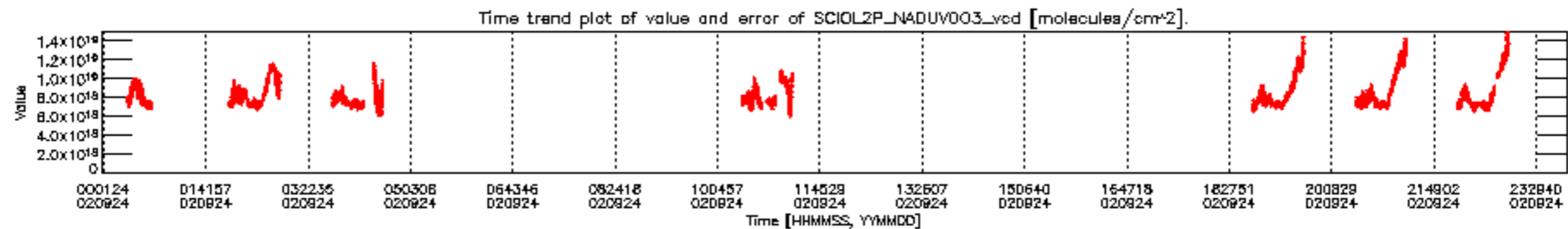


cl_opt_depth for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

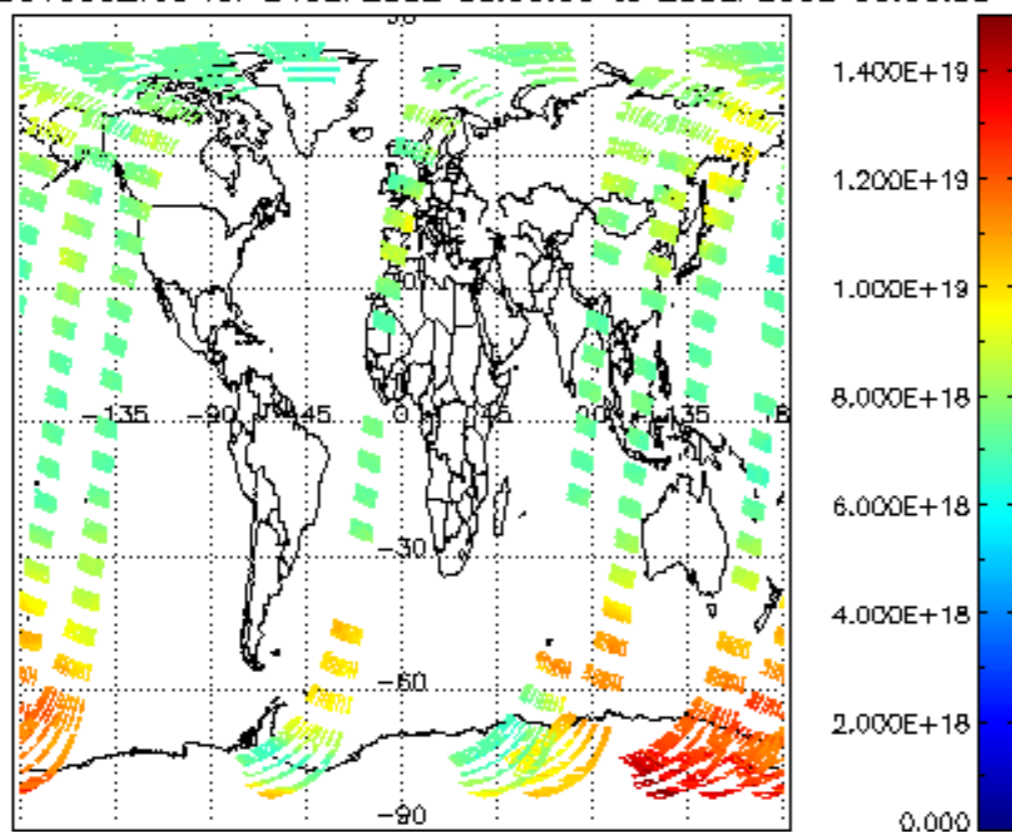


cloud_flags for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

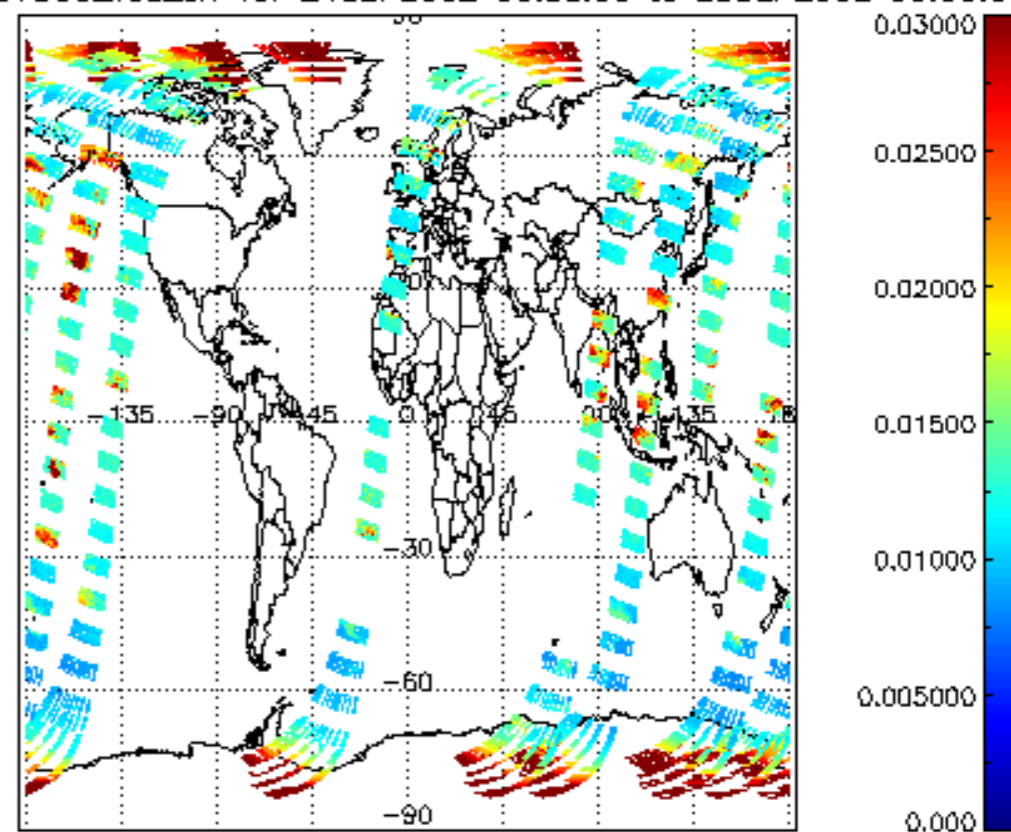




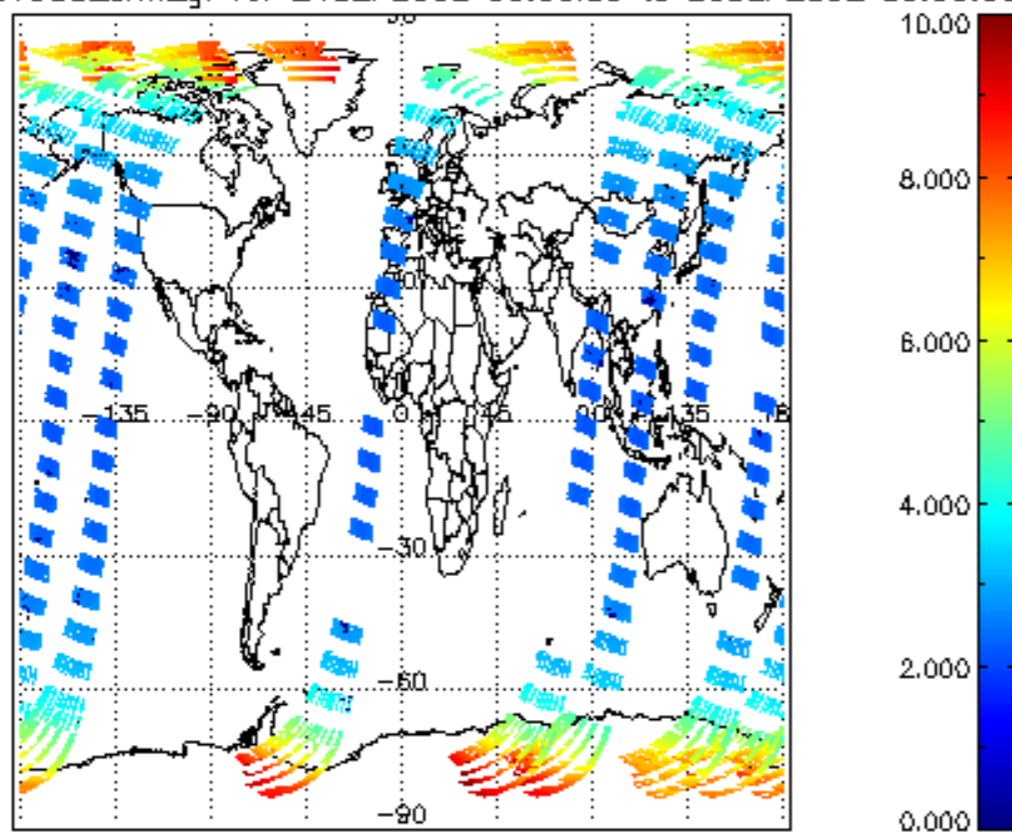
SCIOL2P_NADUV003_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



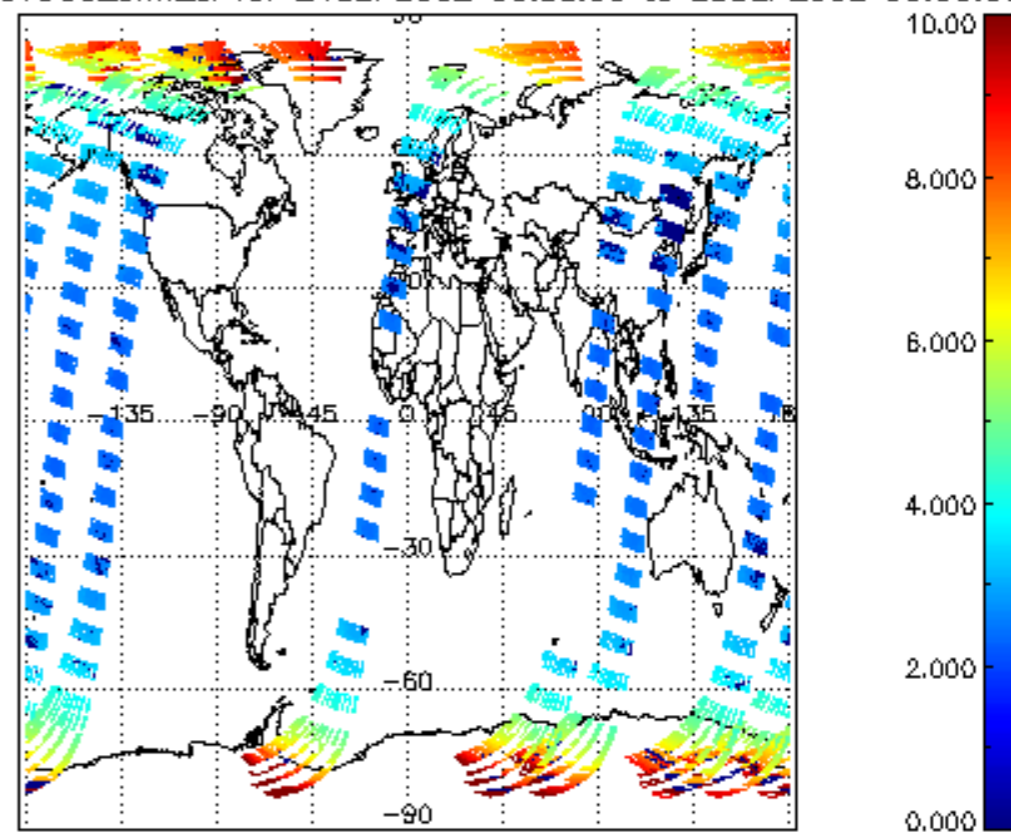
SCIOL2P_NADUV003_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

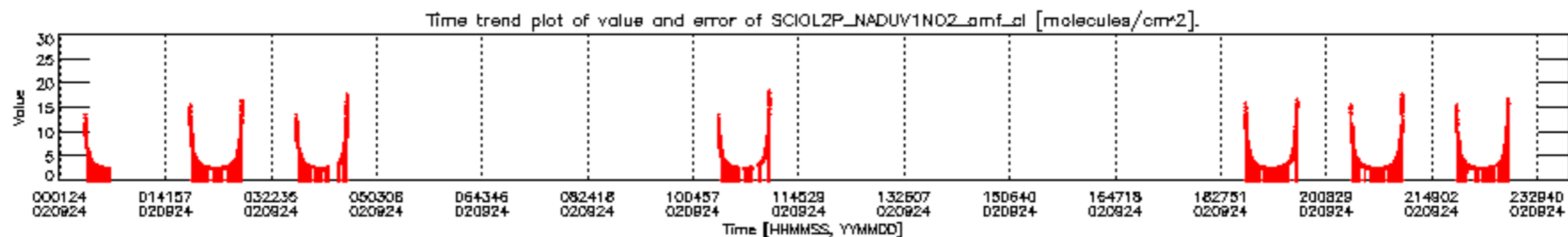
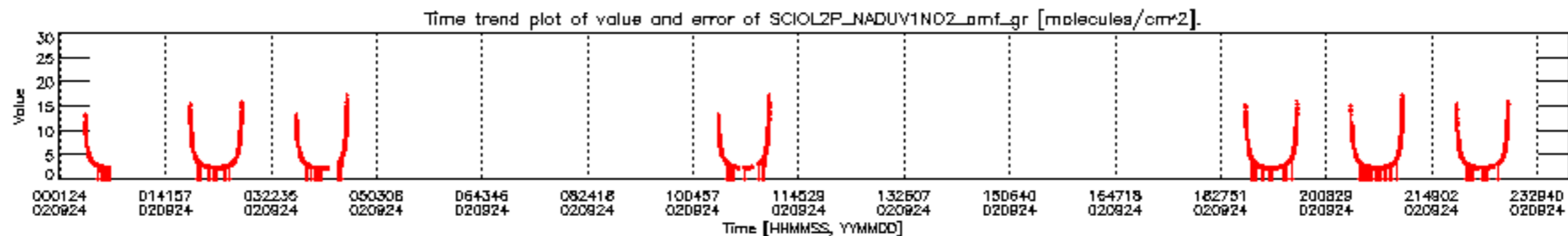
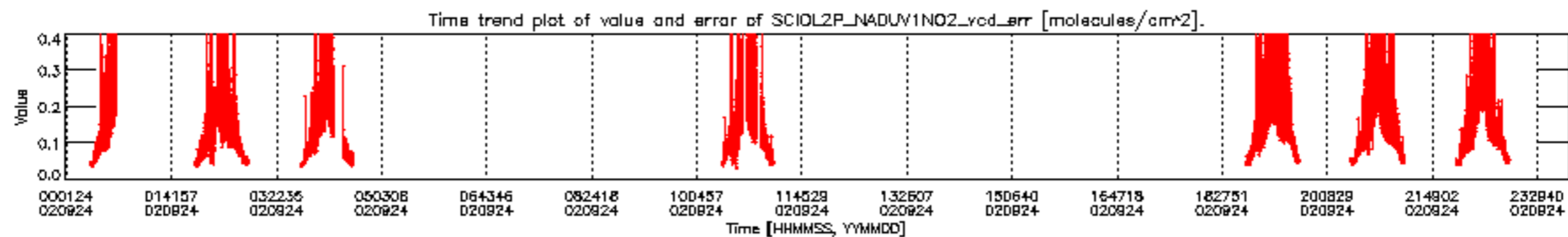
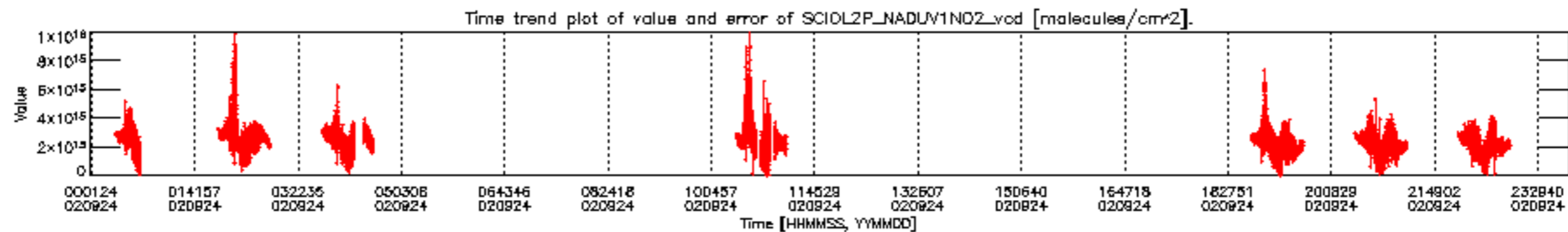


SCIOL2P_NADUV003_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

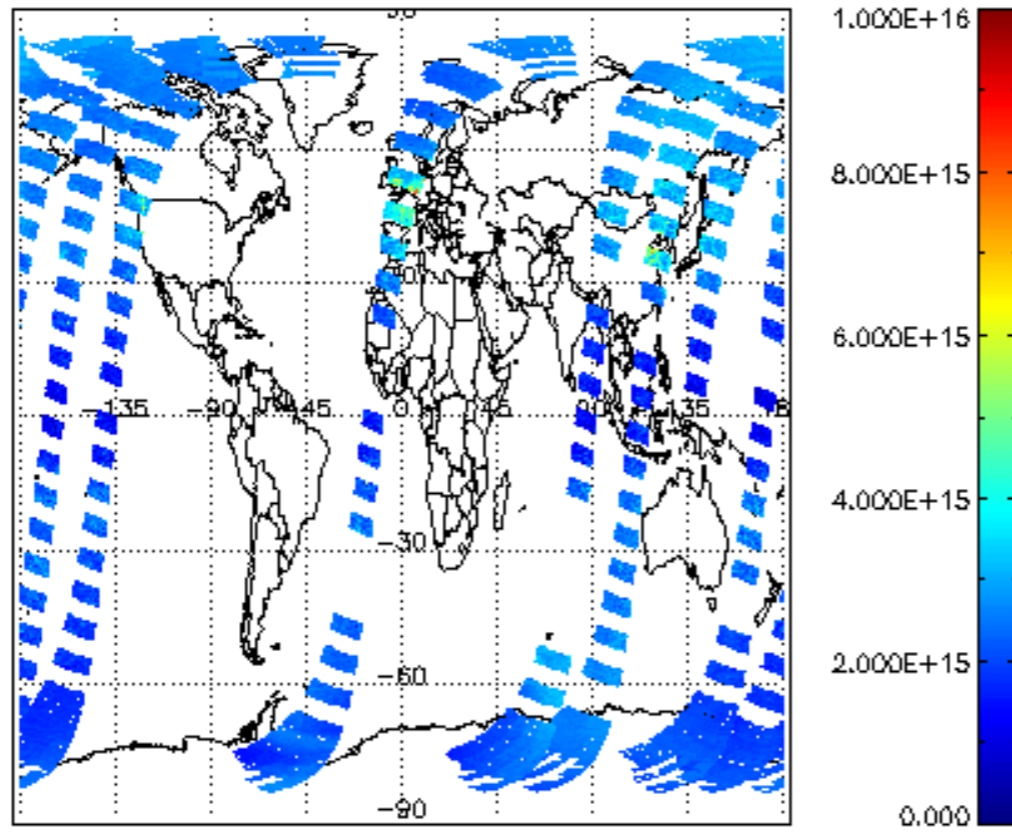


SCIOL2P_NADUV003_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

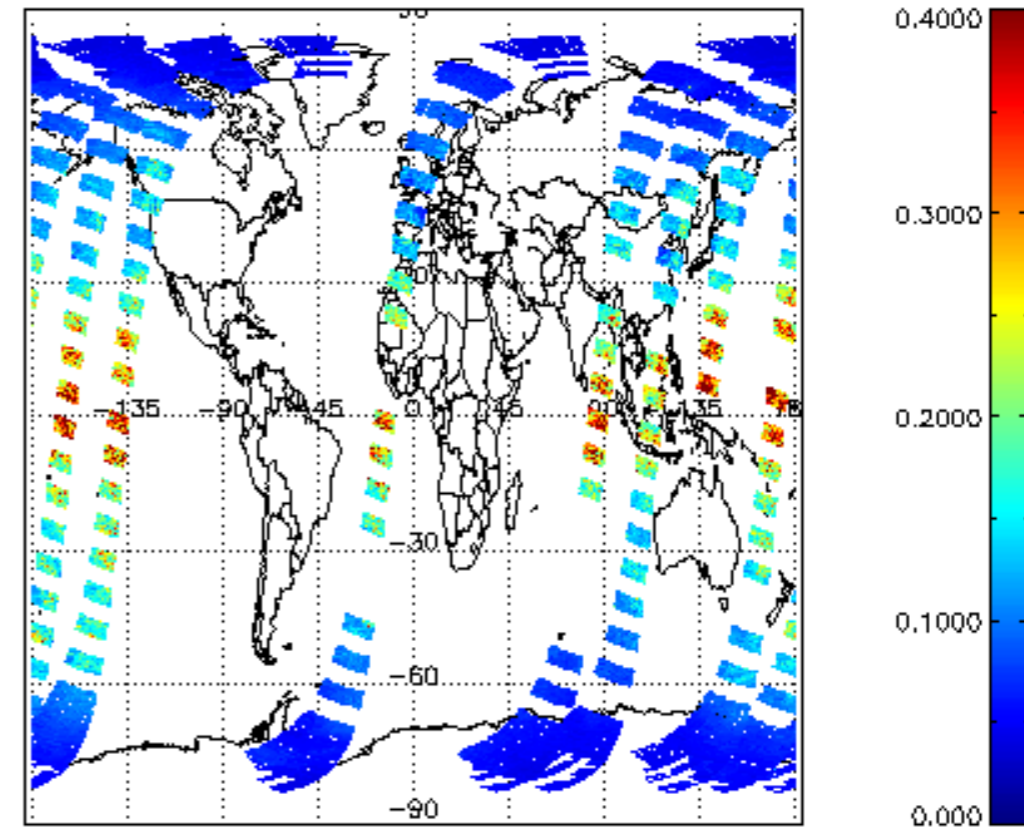




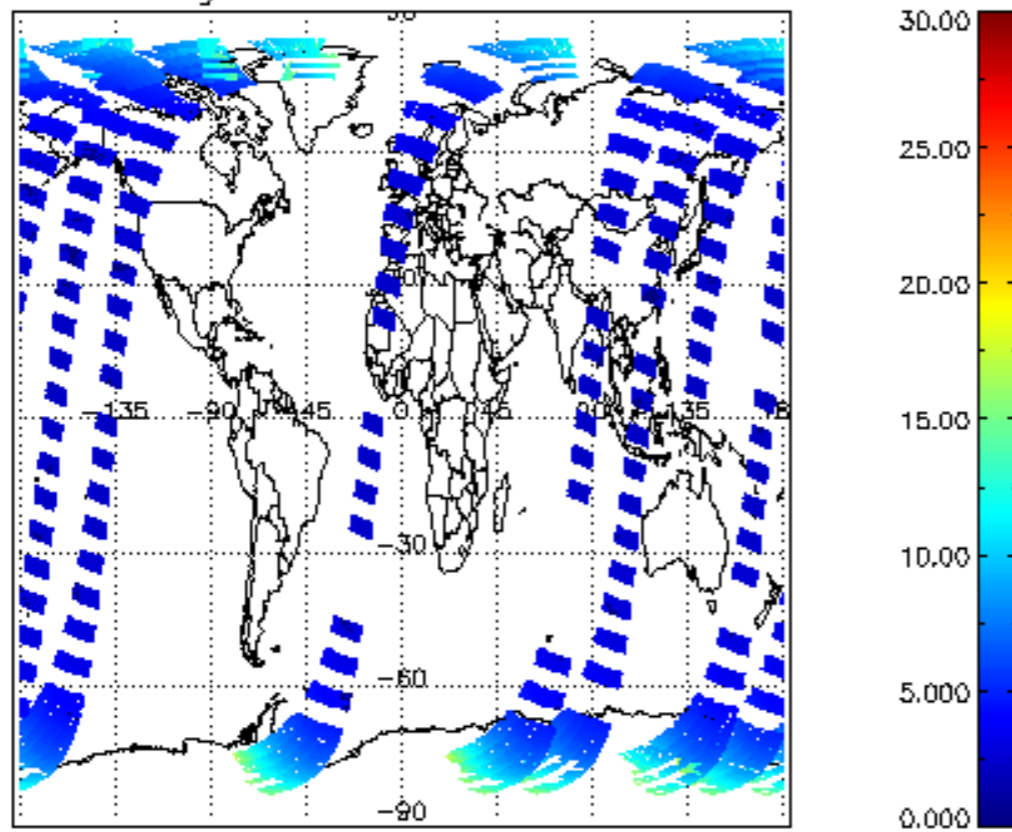
SCIOL2P_NADUV1NO2_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



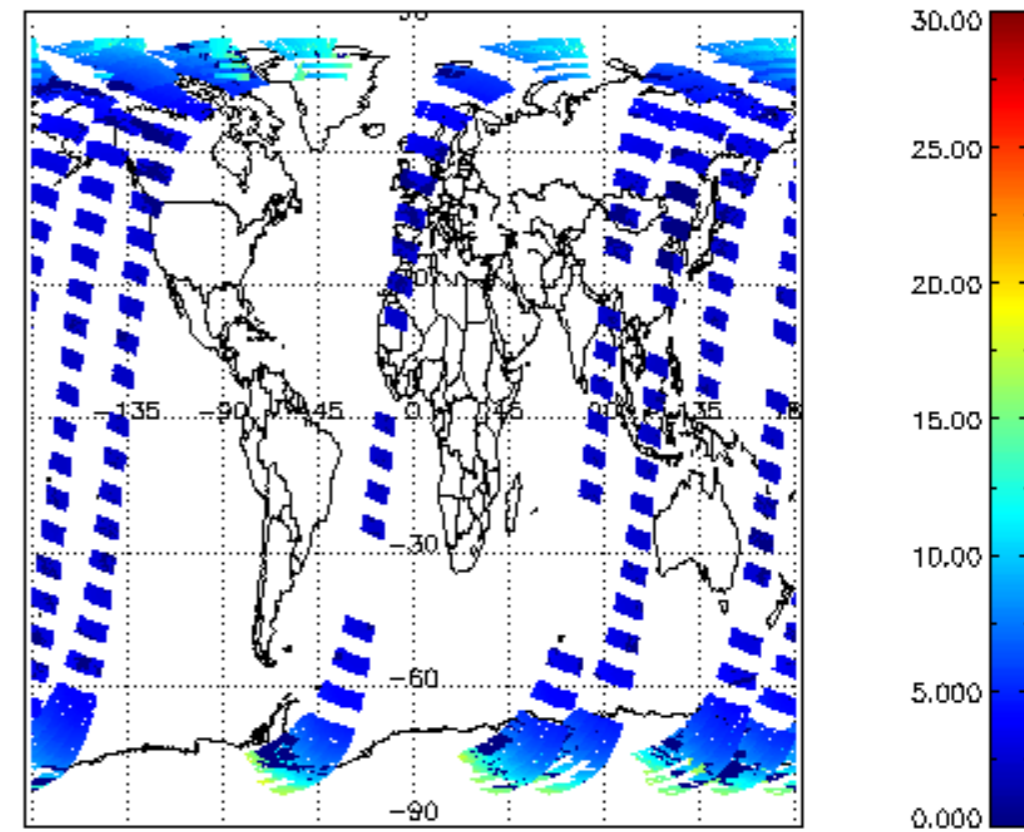
iCIOL2P_NADUV1NO2_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



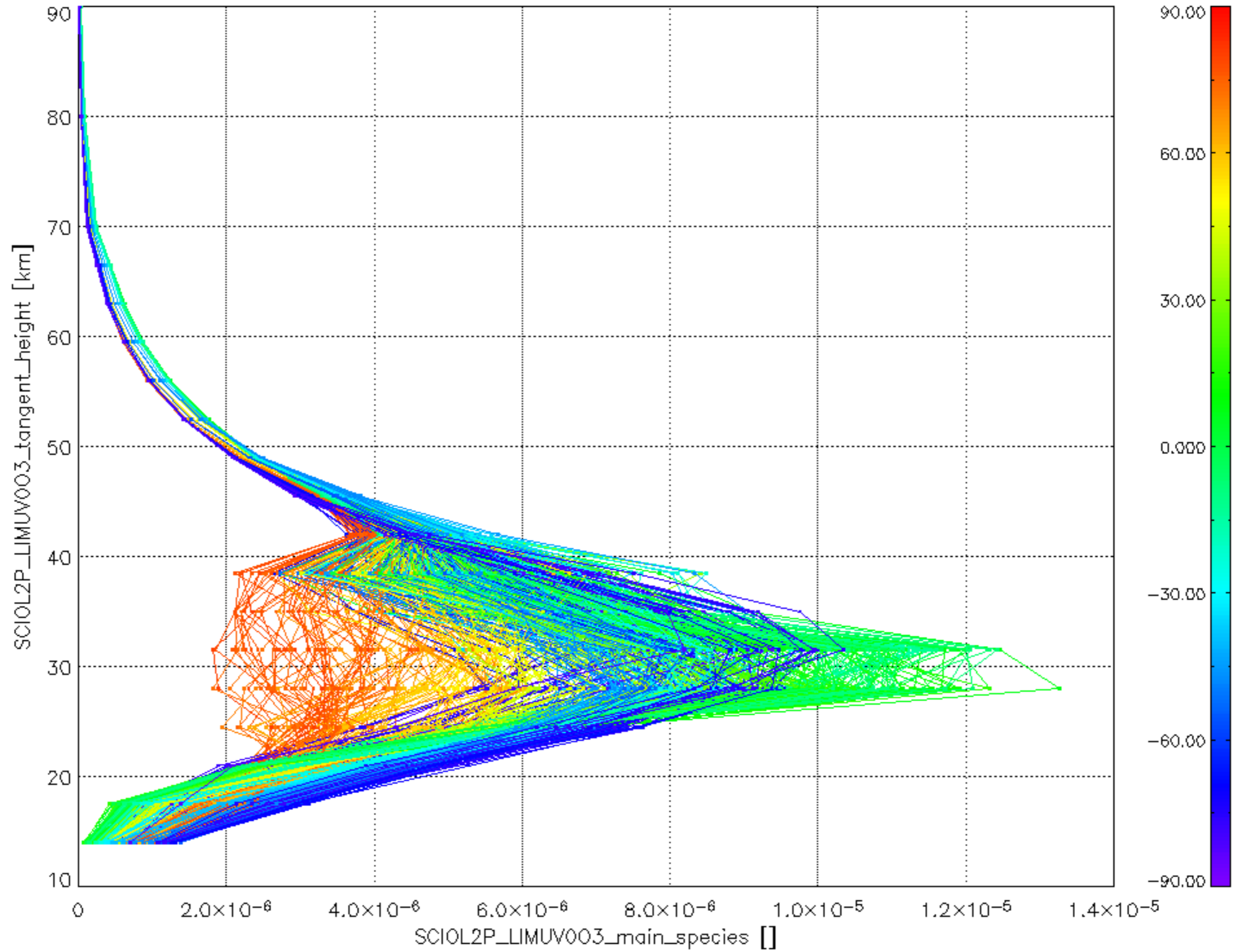
iCIOL2P_NADUV1NO2_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



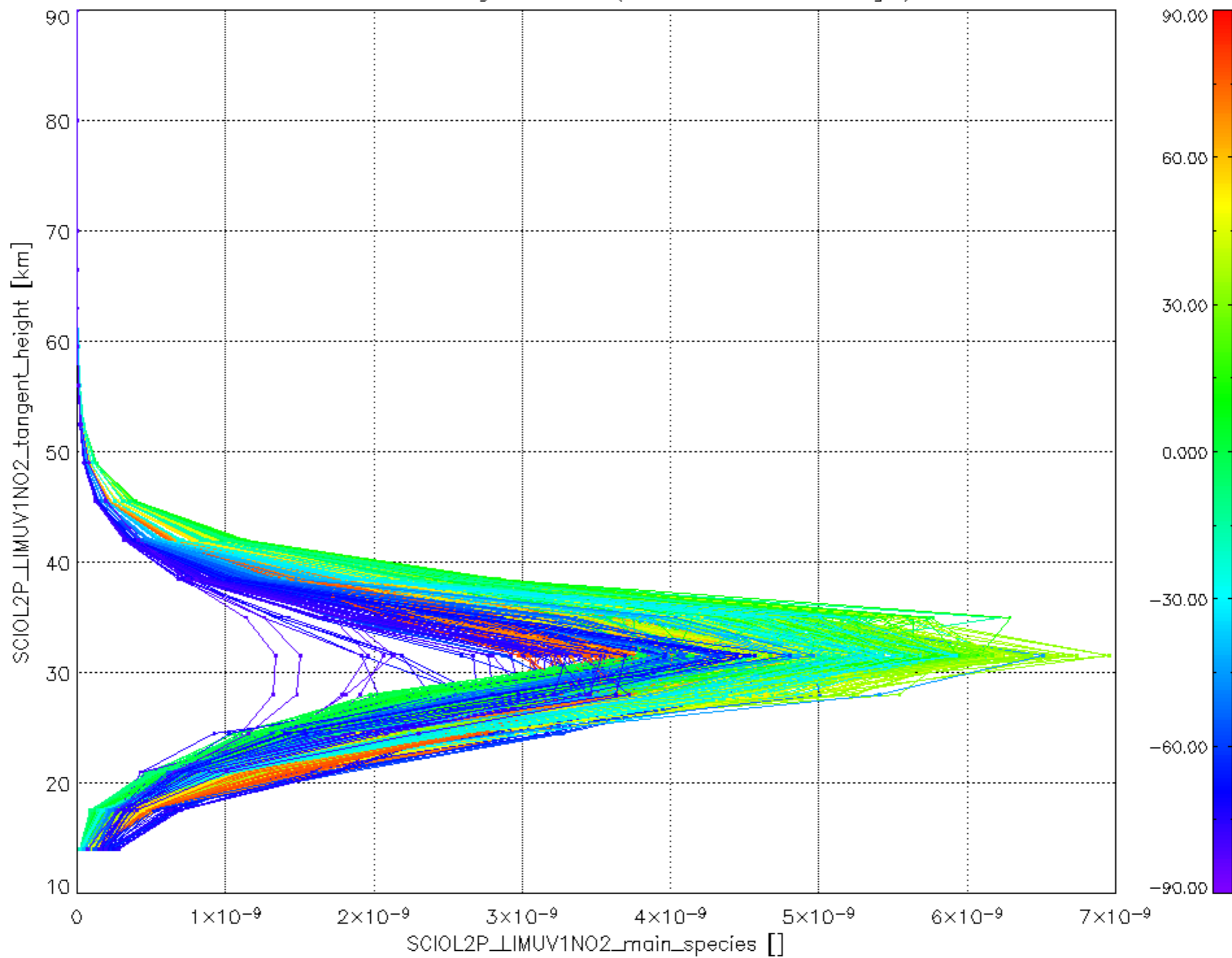
iCIOL2P_NADUV1NO2_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



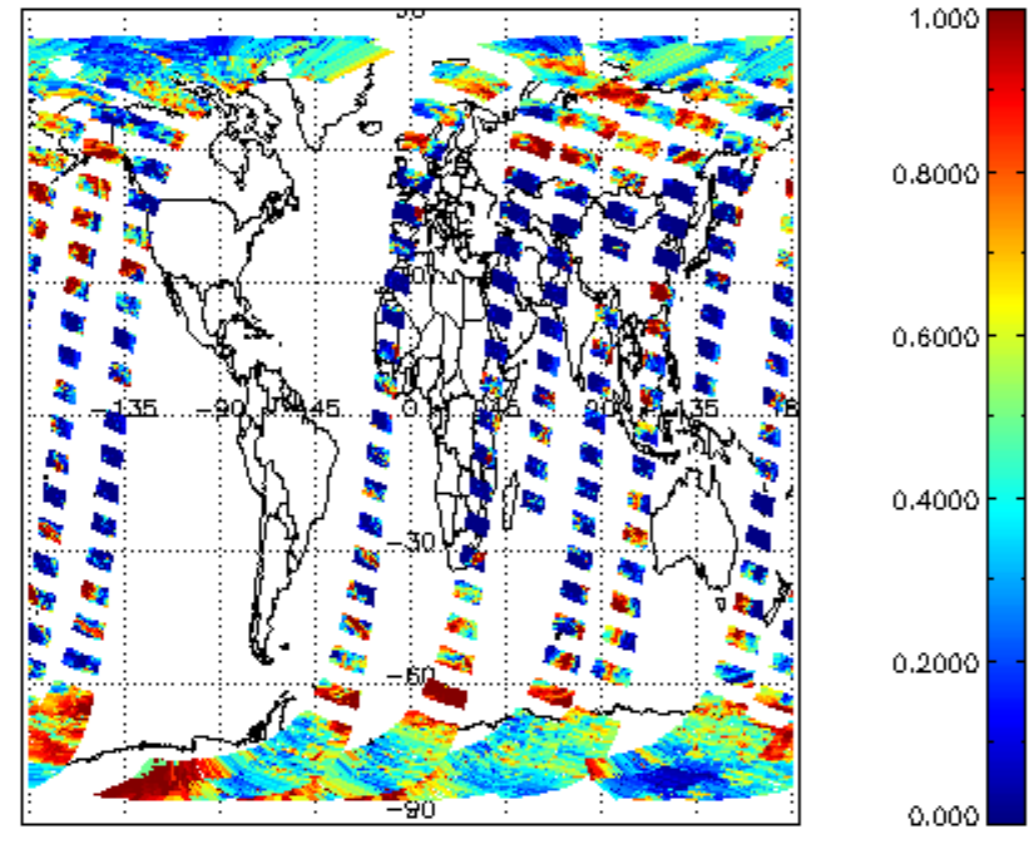
Plot of SCIOL2P_LIMUV003_main_species.tang_vmr vs. tangent height.
 Colours indicate tangent latitude (see colour bar on the right).



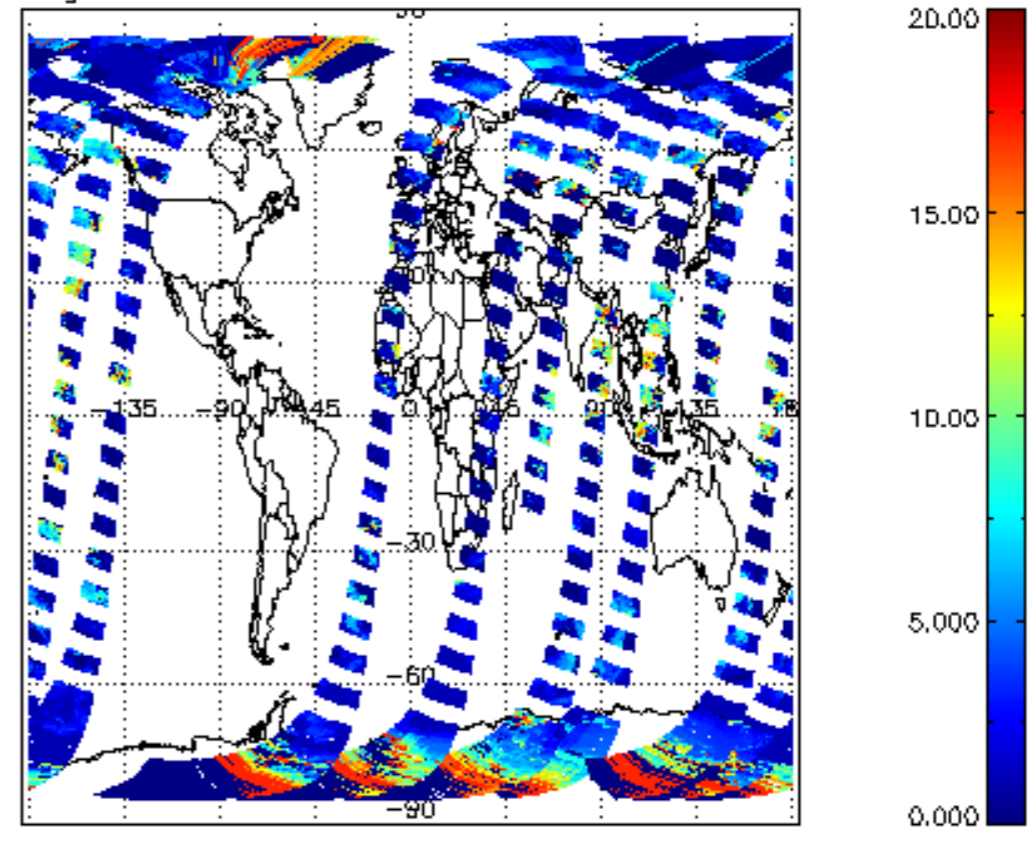
Plot of SCIOL2P_LIMUV1N02_main_species.tang_vmr vs. tangent height.
 Colours indicate tangent latitude (see colour bar on the right).



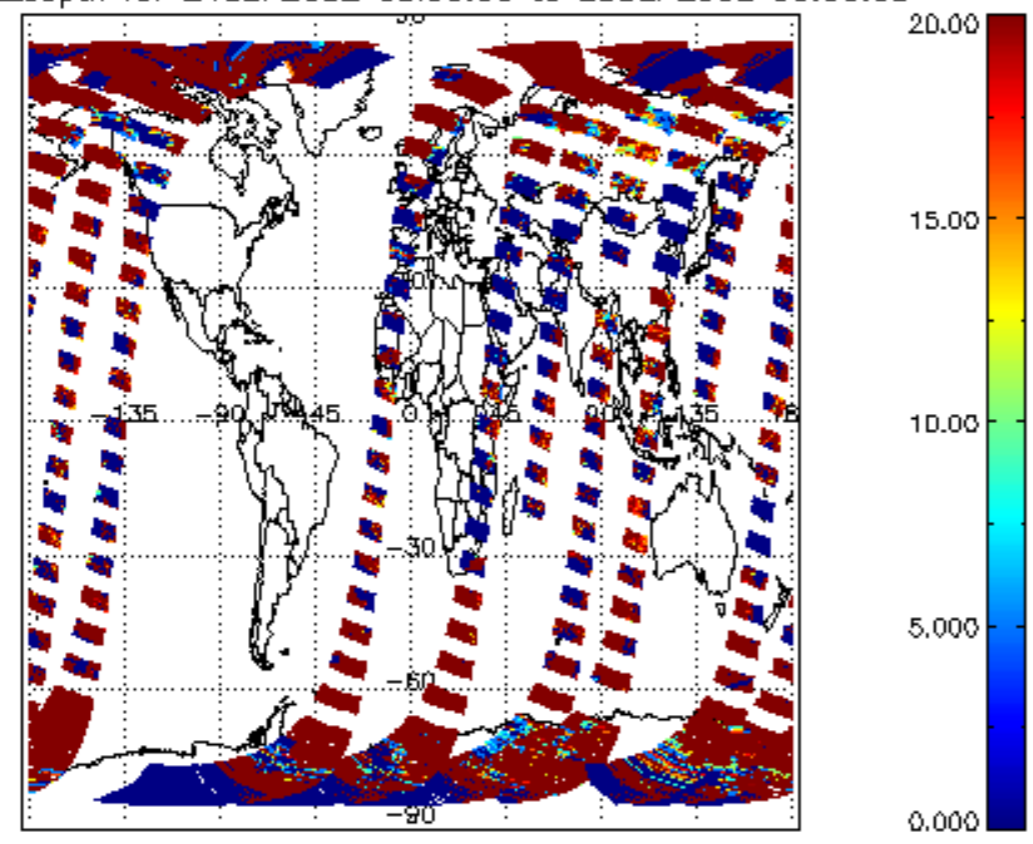
cl_frac for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



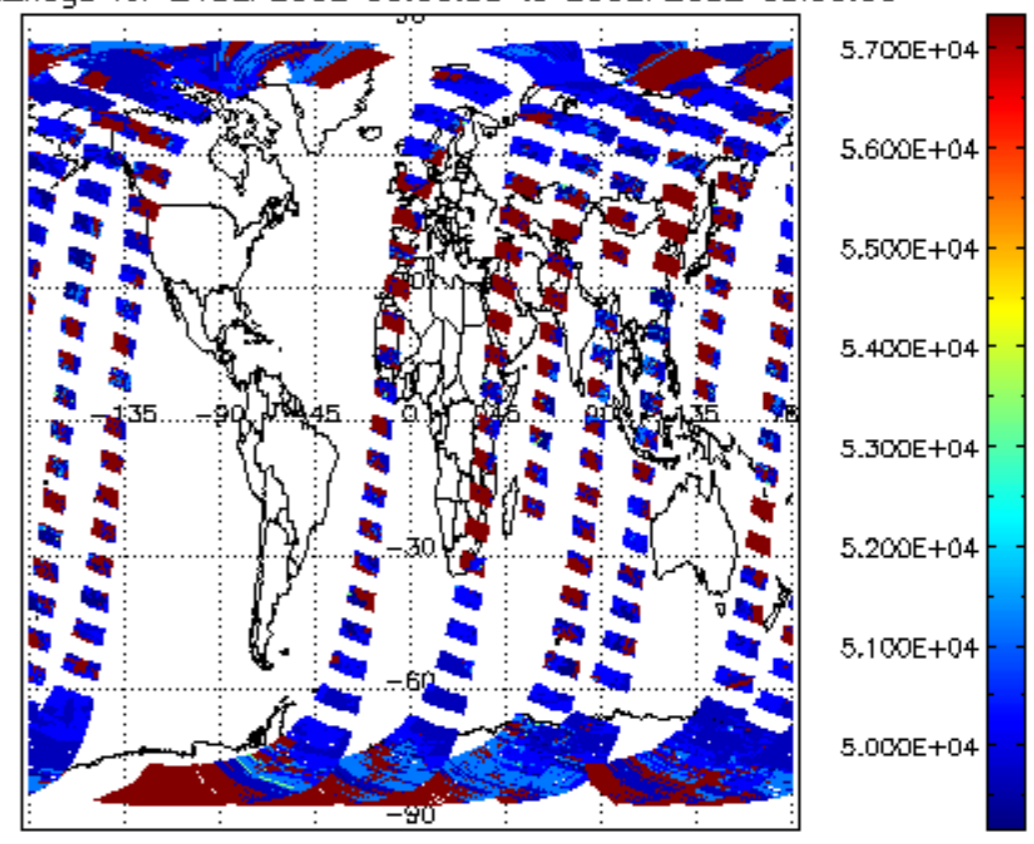
cl_top_height for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

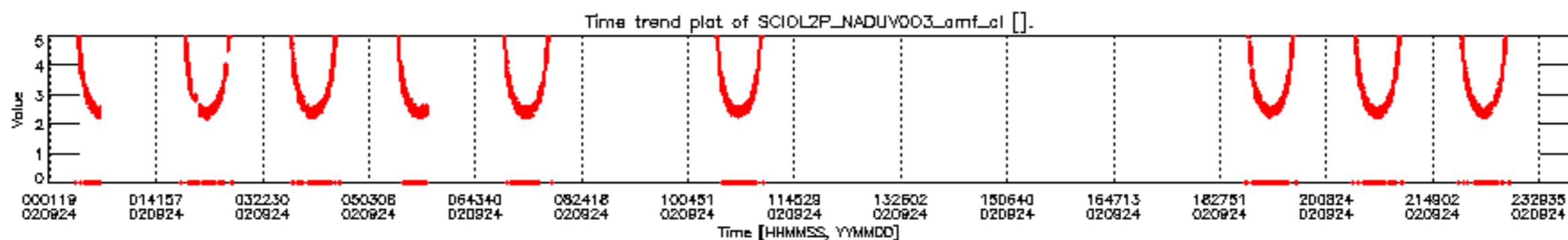
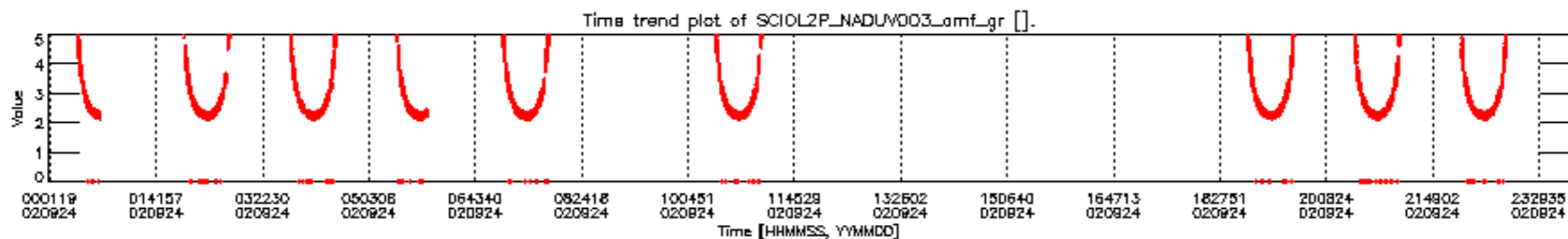
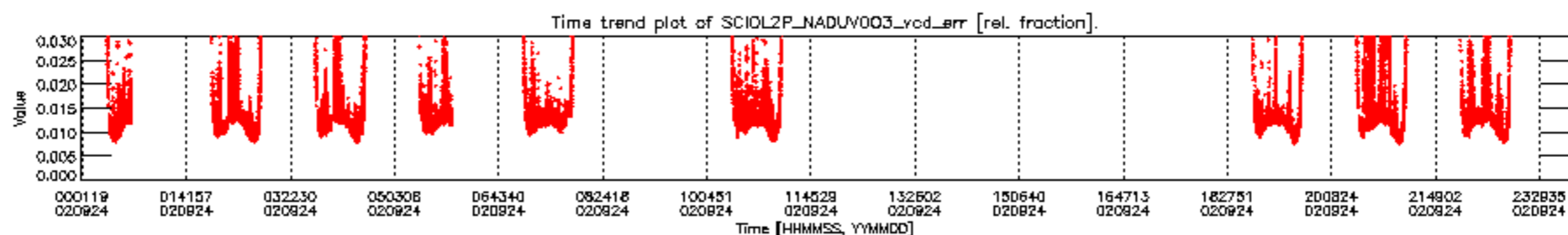
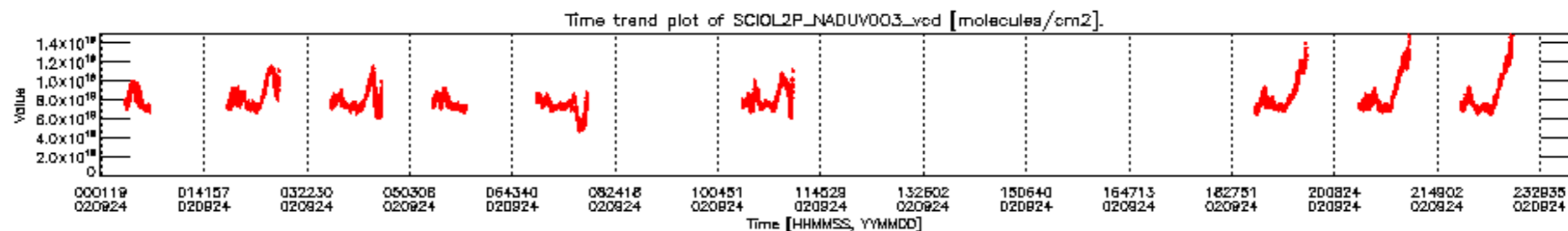


cl_opt_depth for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

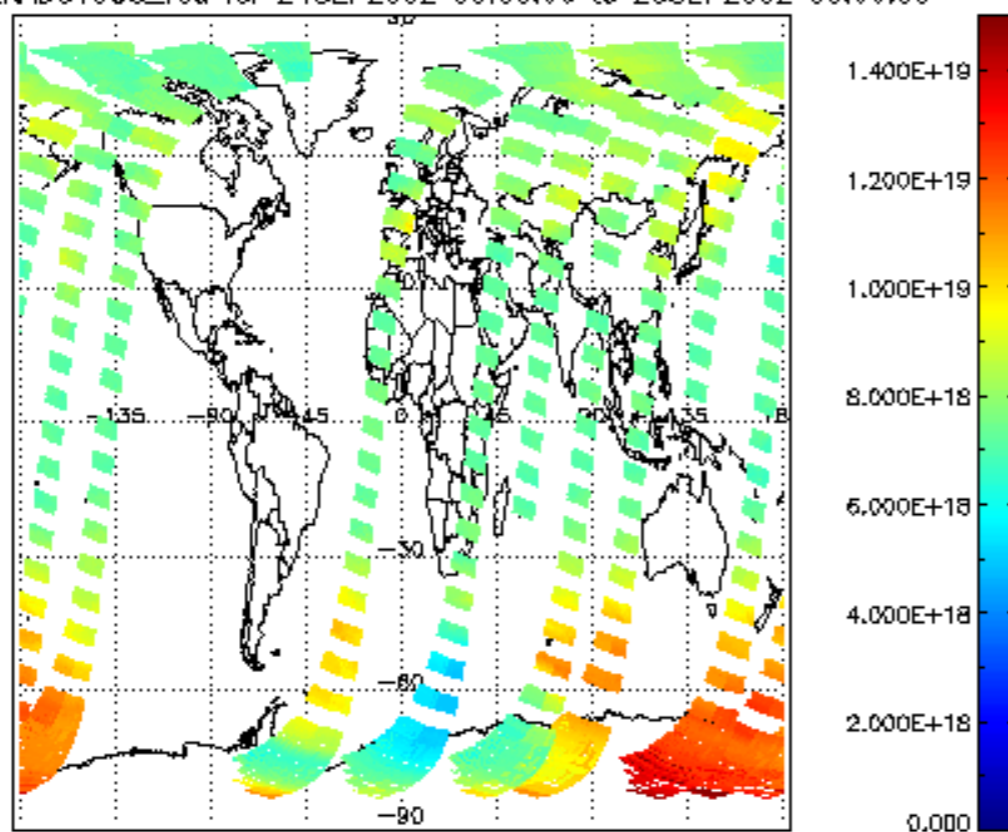


cloud_flags for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

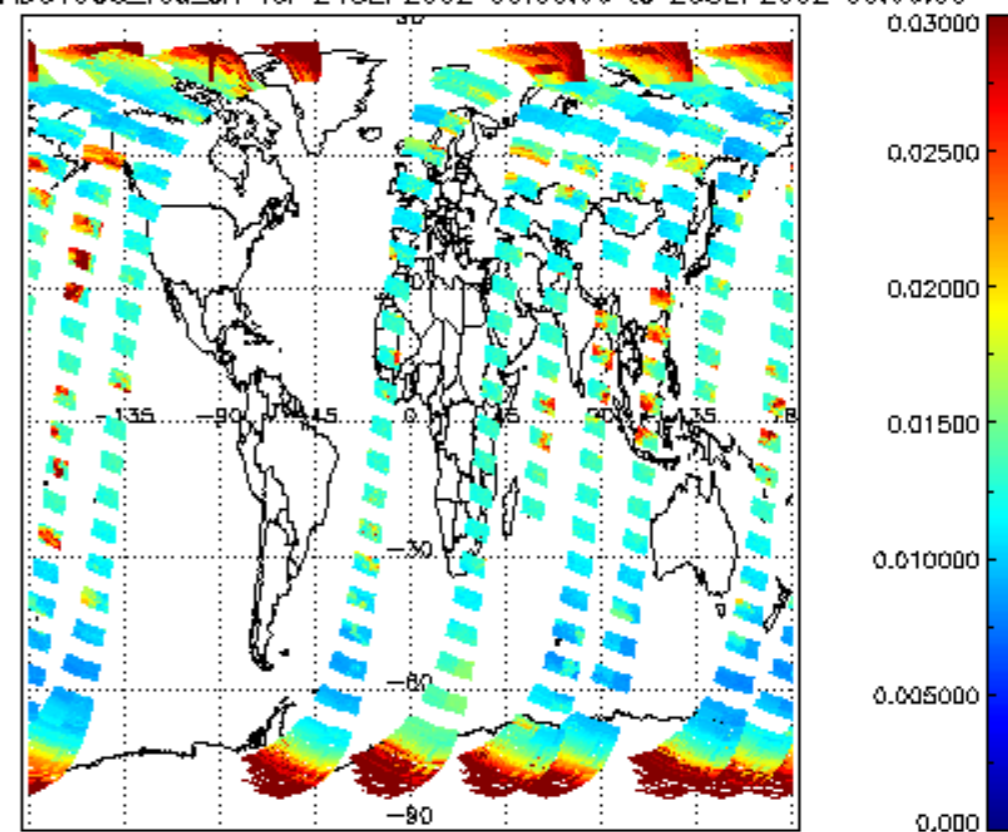




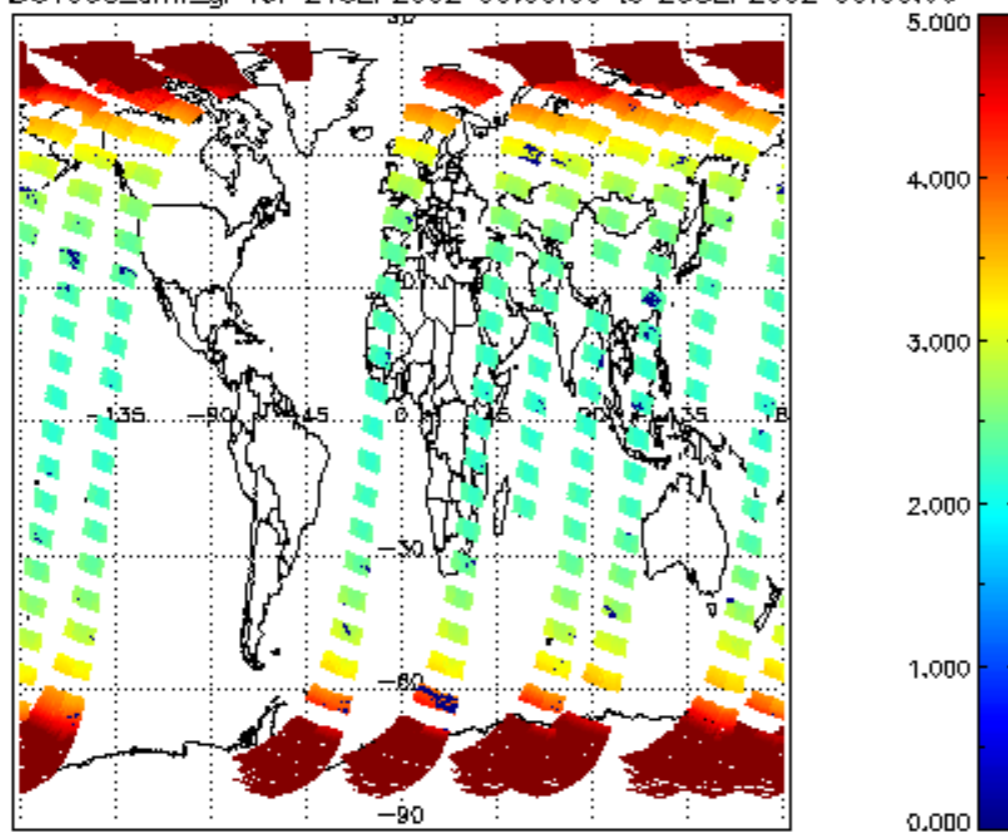
SCIOL2P_NADUV003_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



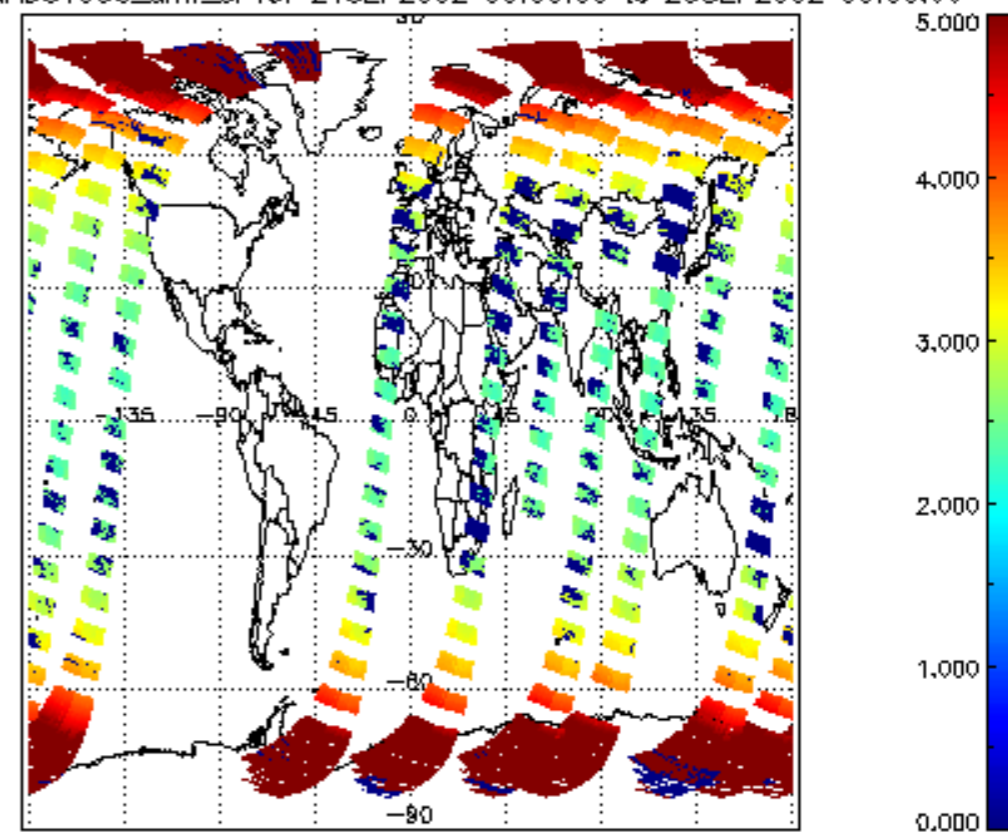
SCIOL2P_NADUV003_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

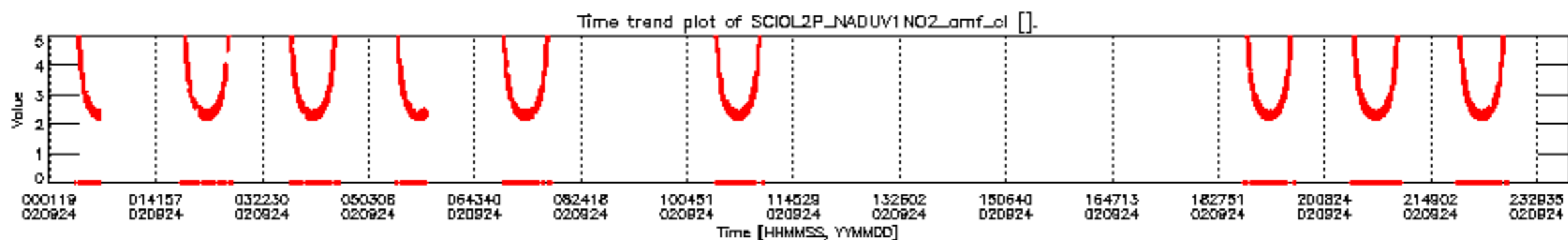
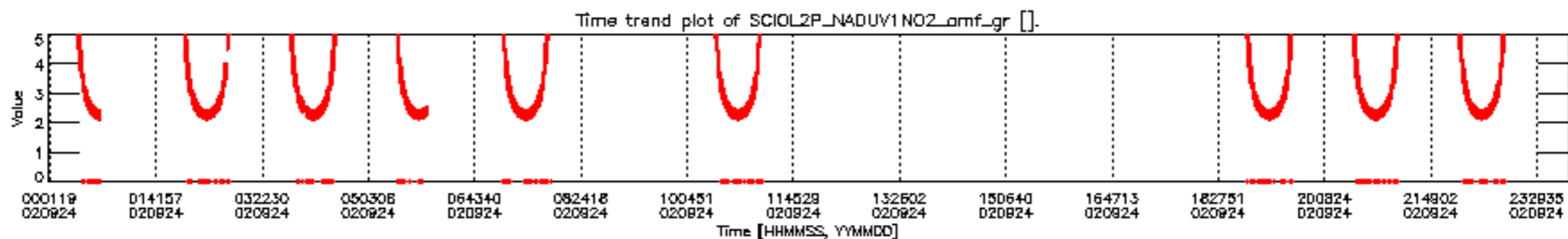
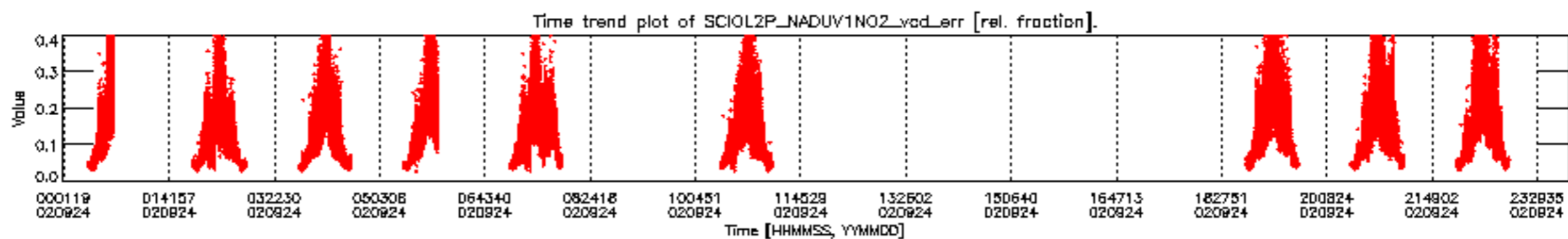
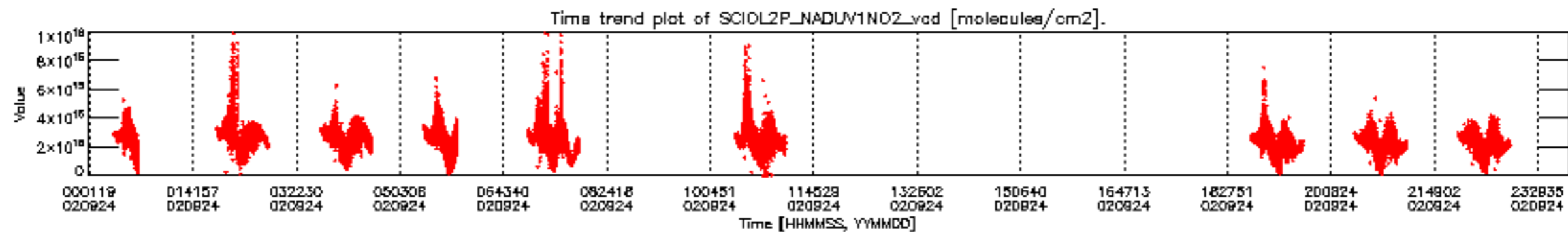


SCIOL2P_NADUV003_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

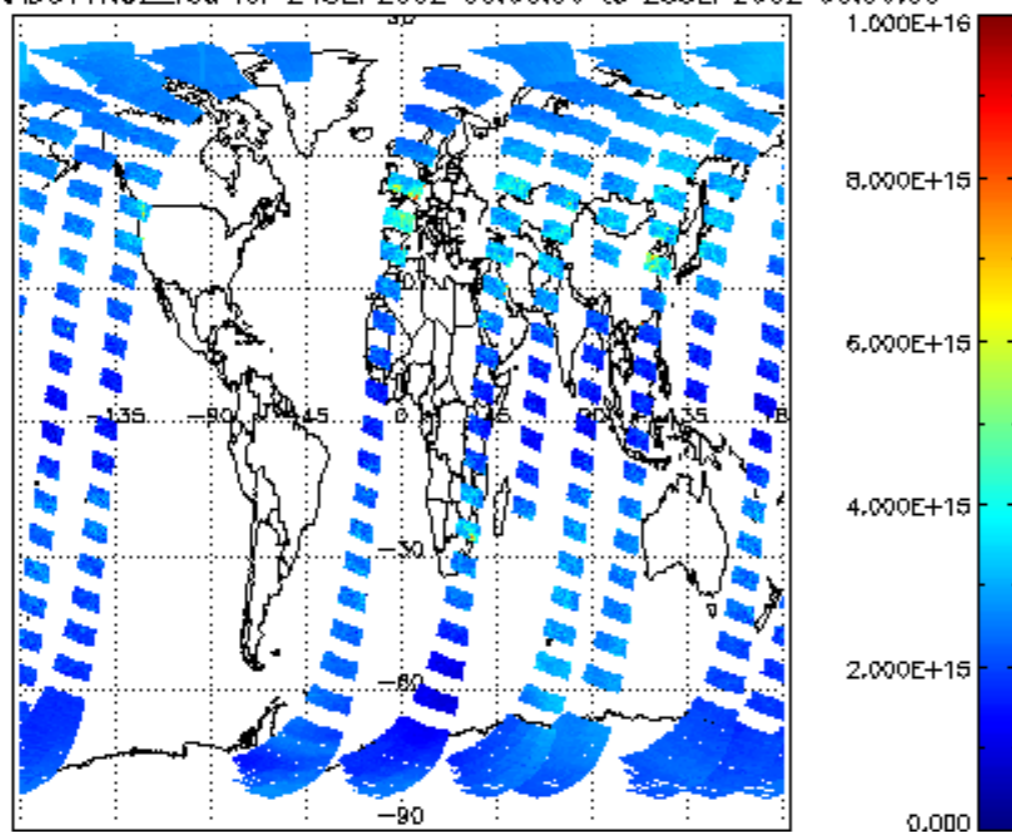


SCIOL2P_NADUV003_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

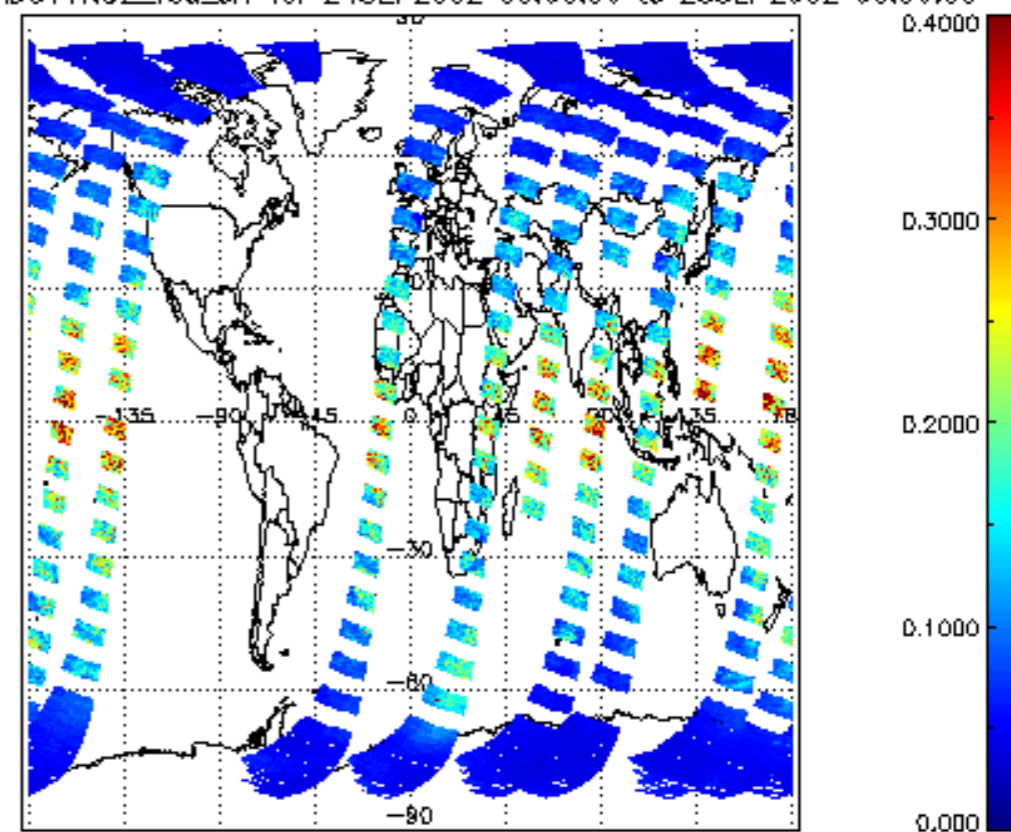




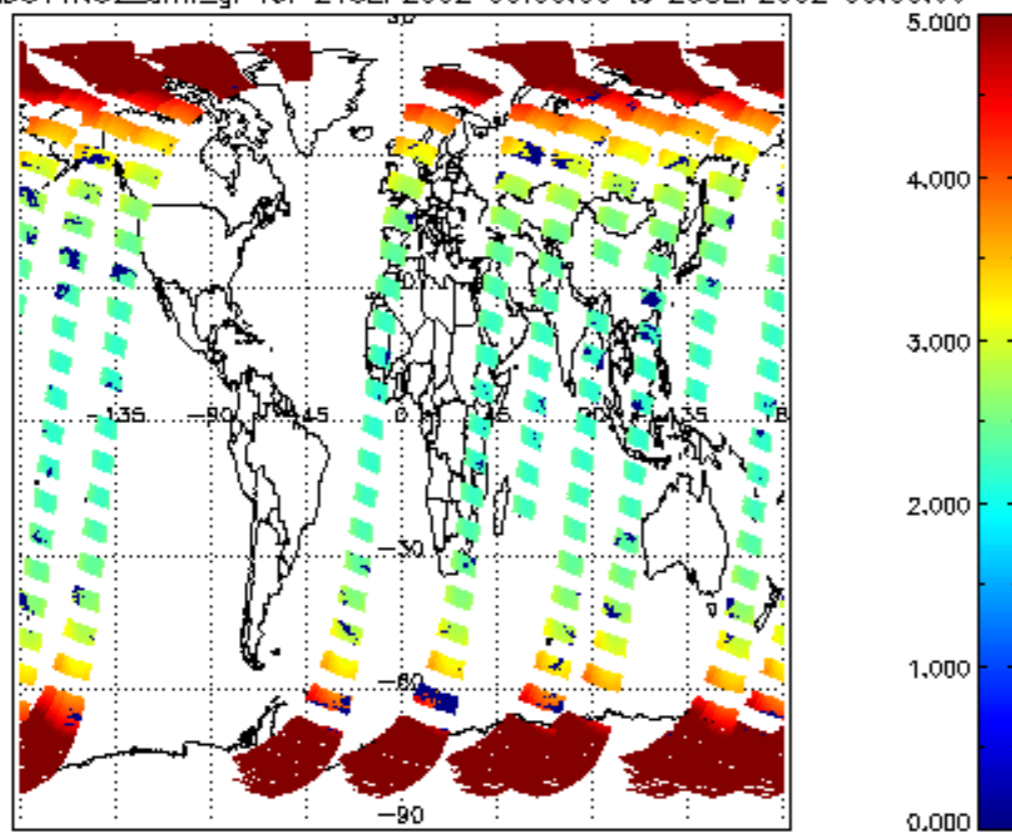
SCIOL2P_NADUV1NO2_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



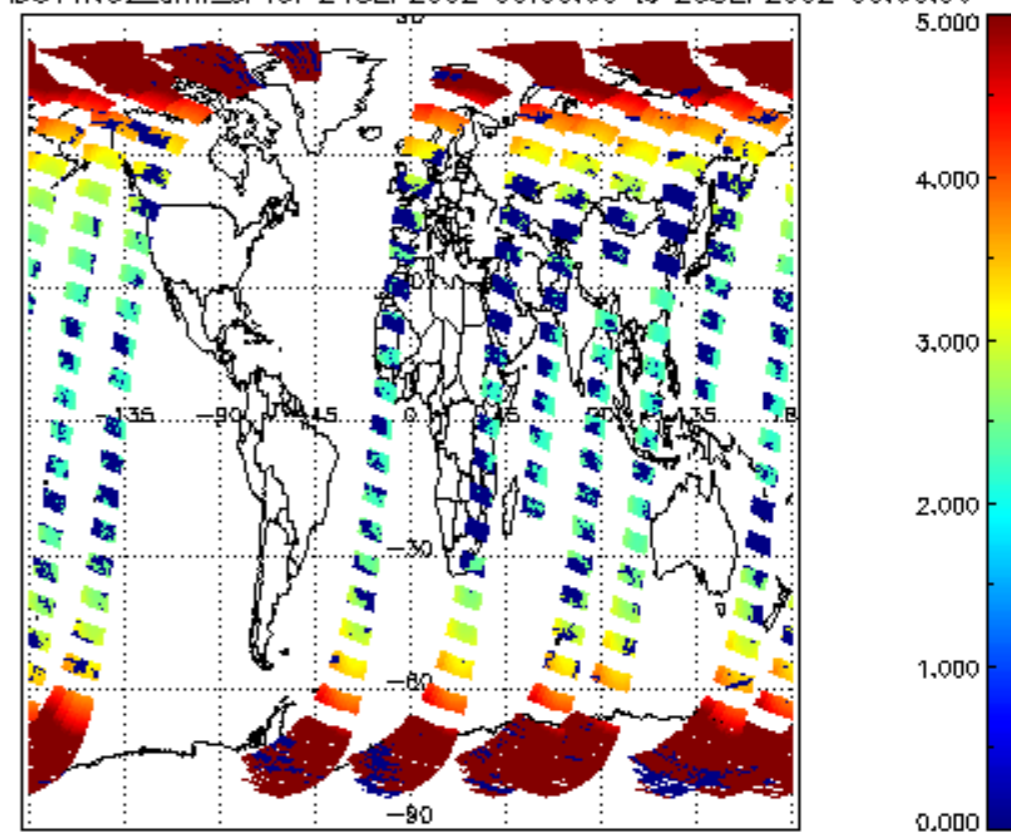
SCIOL2P_NADUV1NO2_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

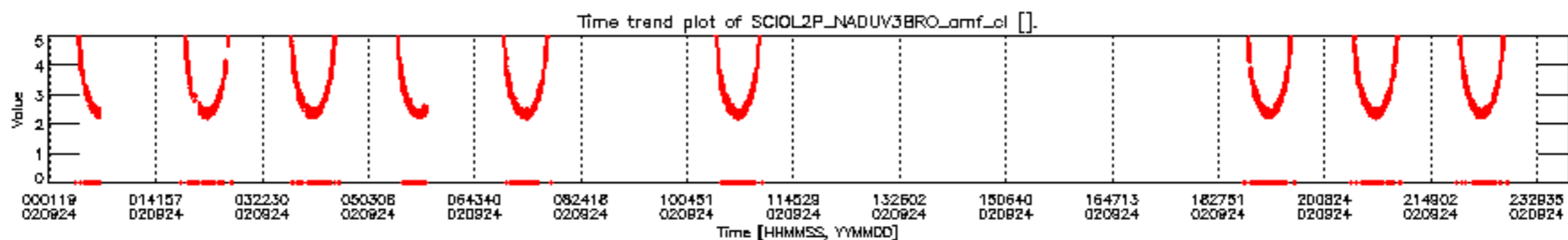
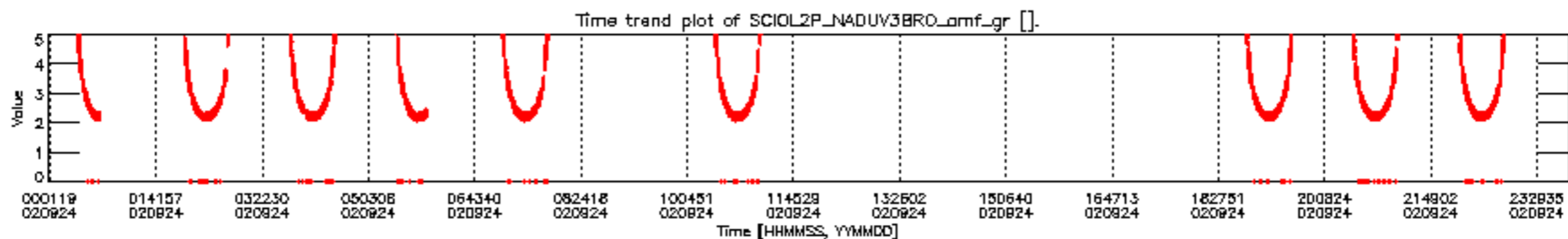
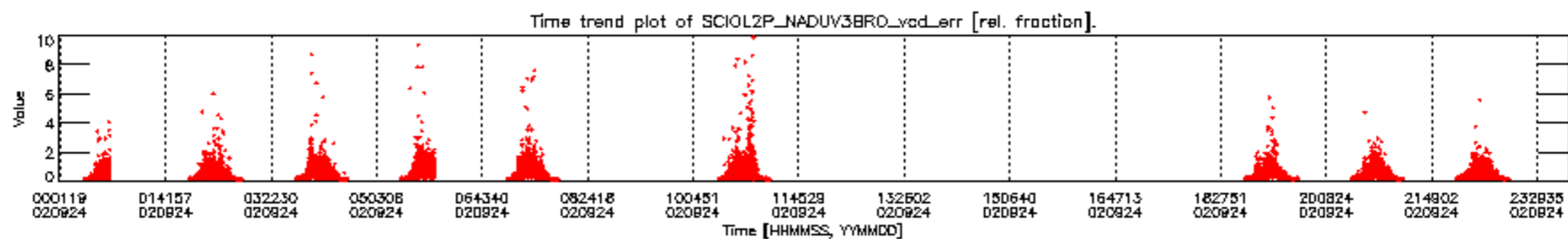
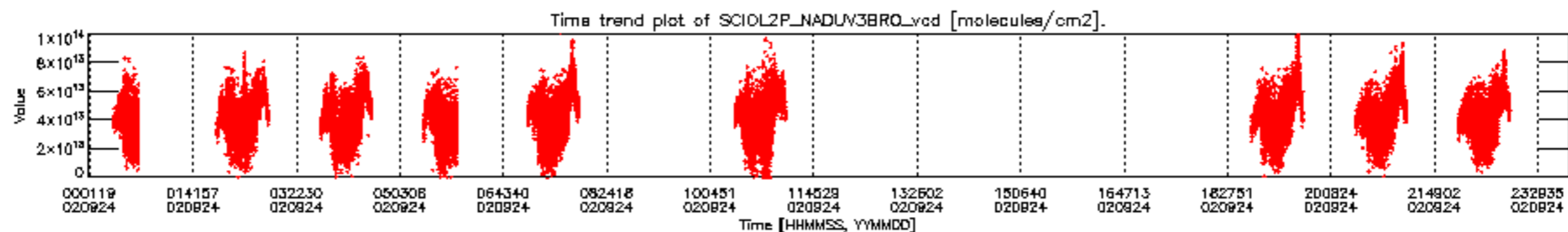


SCIOL2P_NADUV1NO2_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

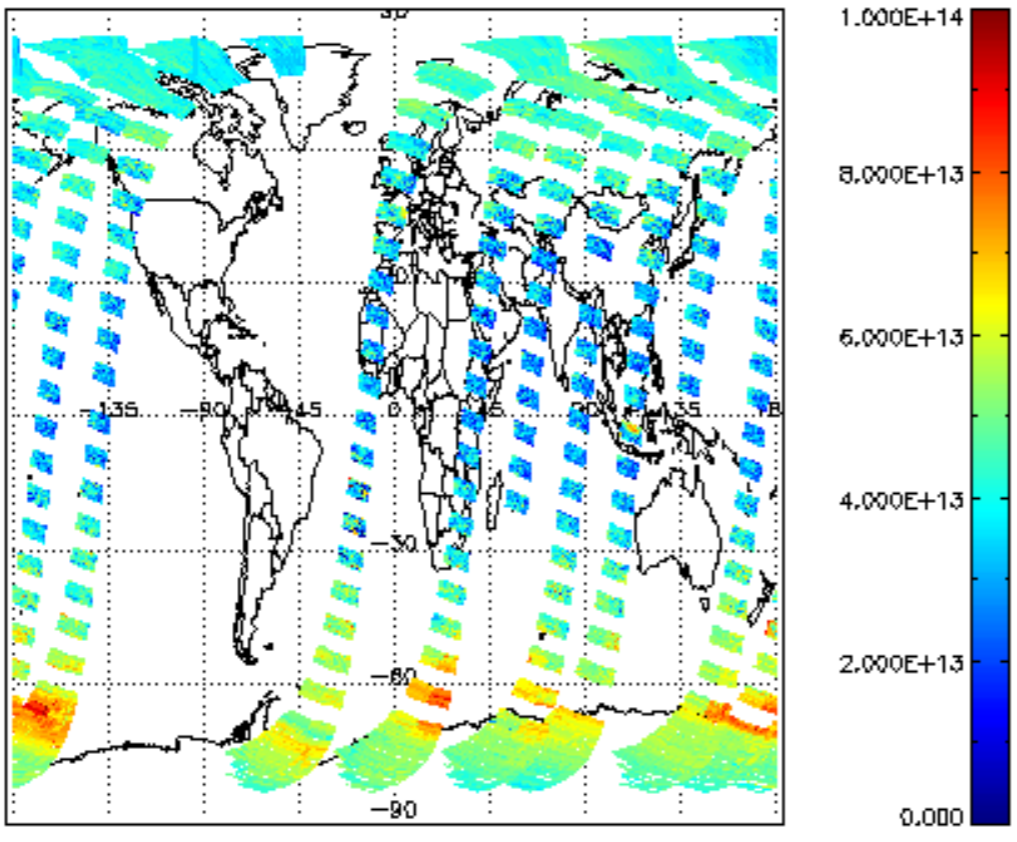


SCIOL2P_NADUV1NO2_amf_sl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

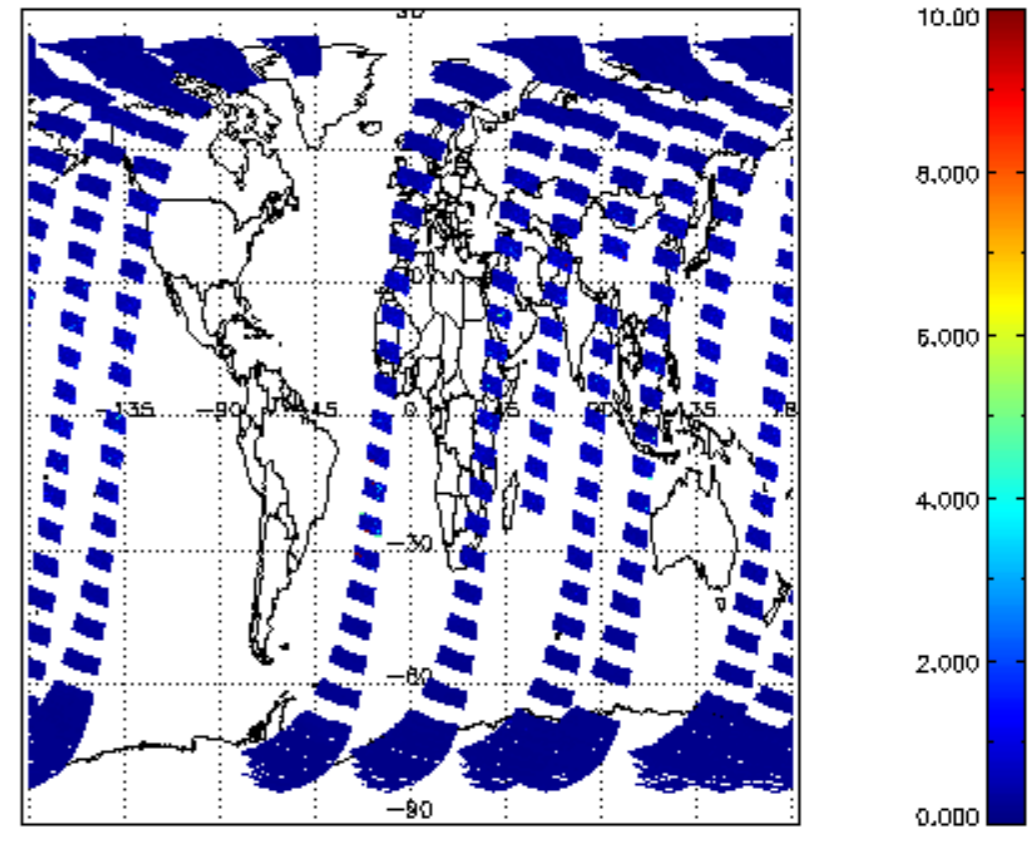




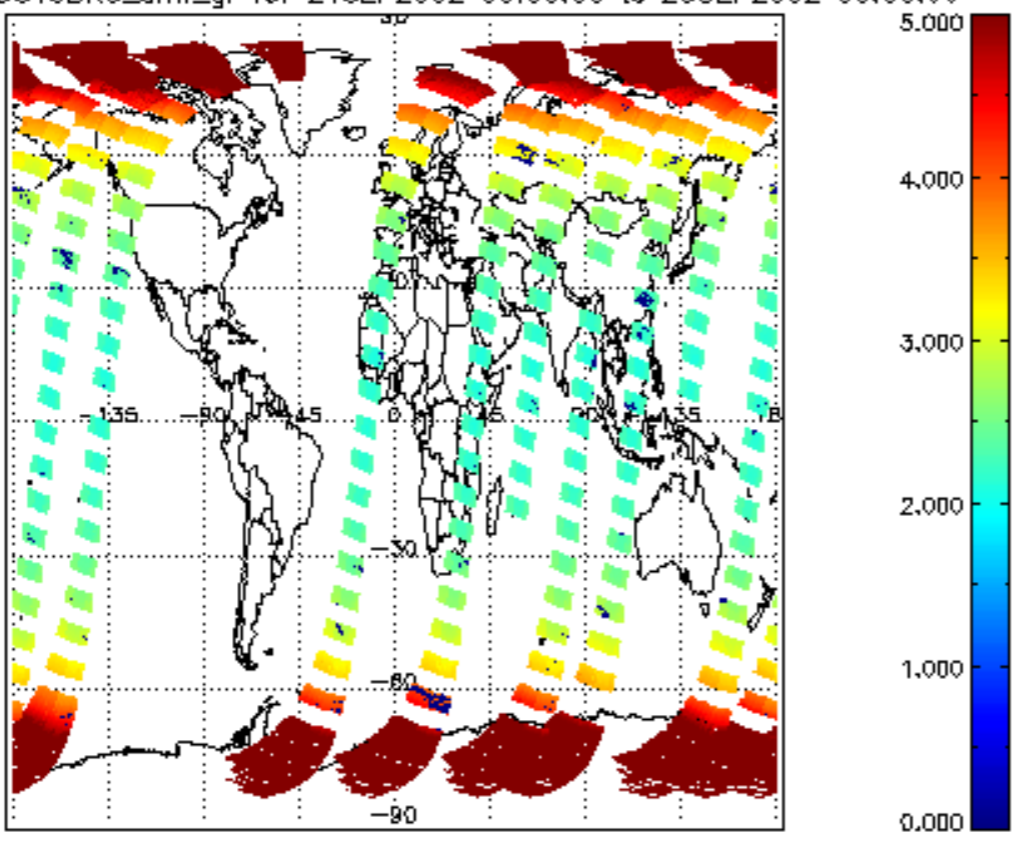
SCIOL2P_NADUV3BRO_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



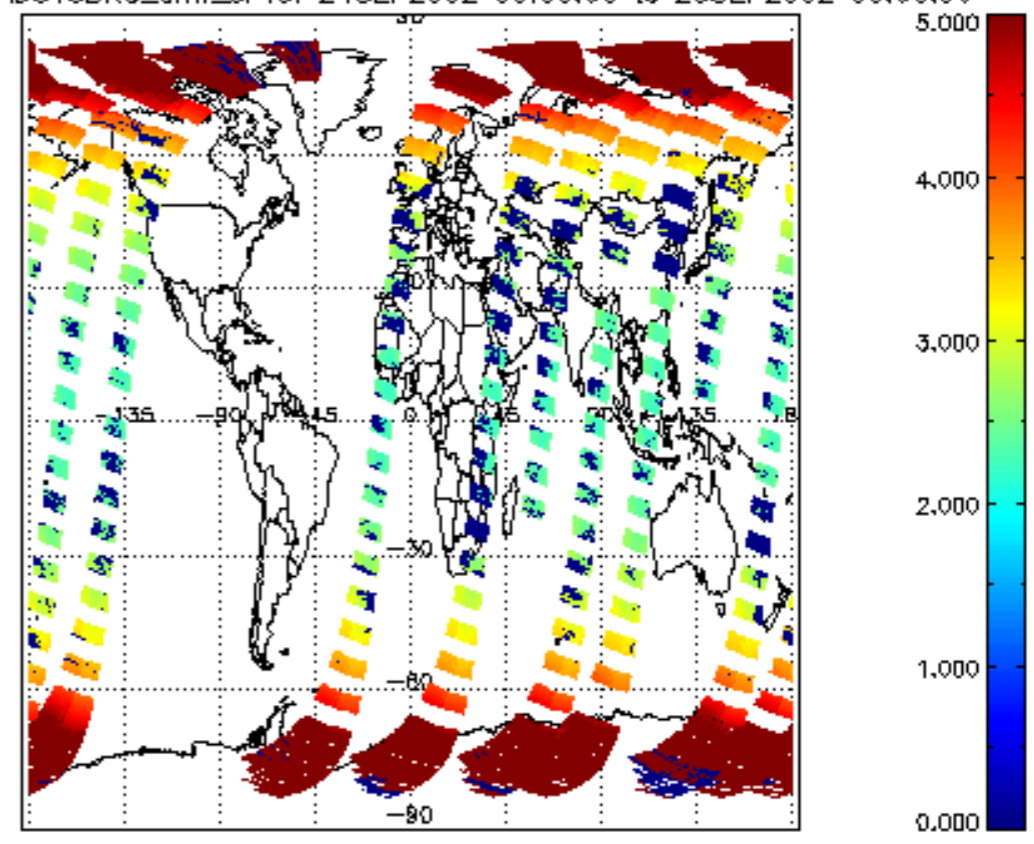
SCIOL2P_NADUV3BRO_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

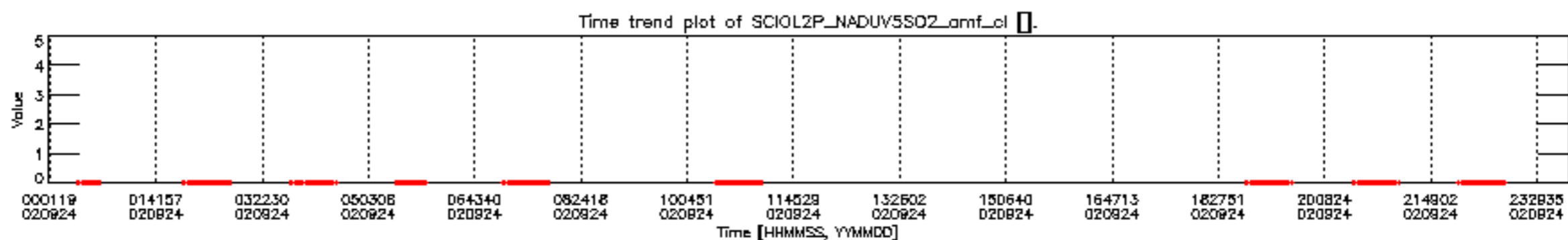
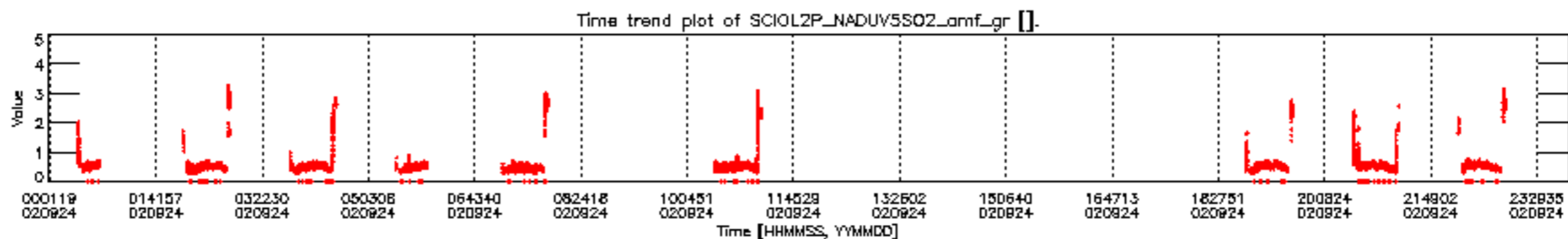
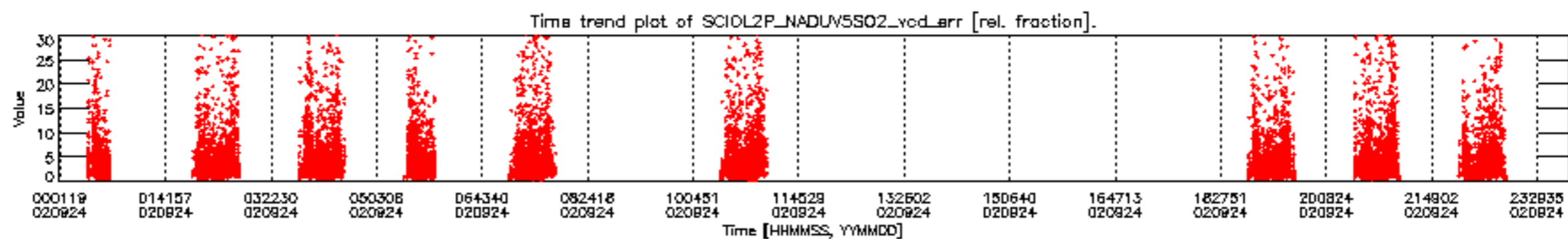
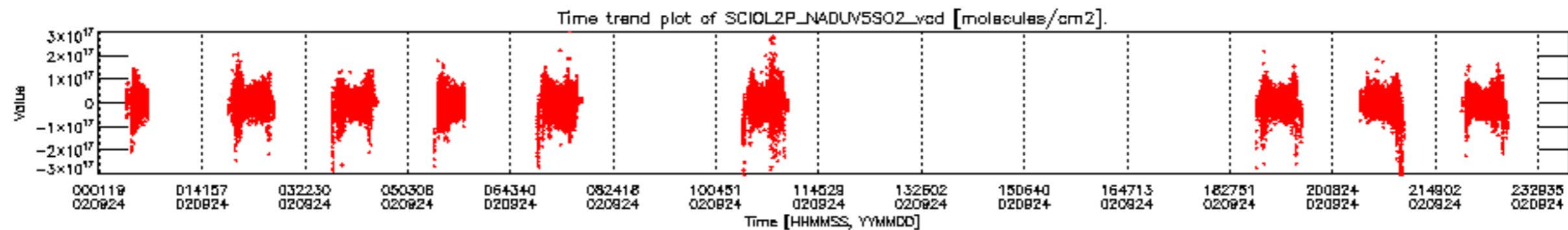


SCIOL2P_NADUV3BRO_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

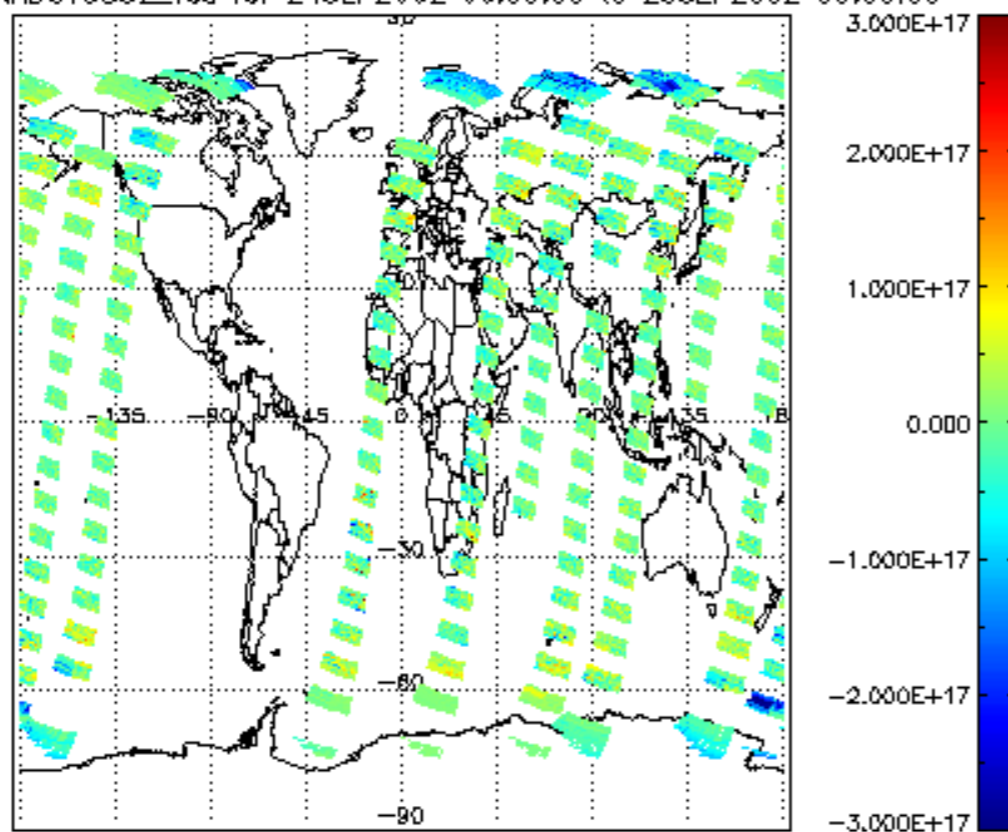


SCIOL2P_NADUV3BRO_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

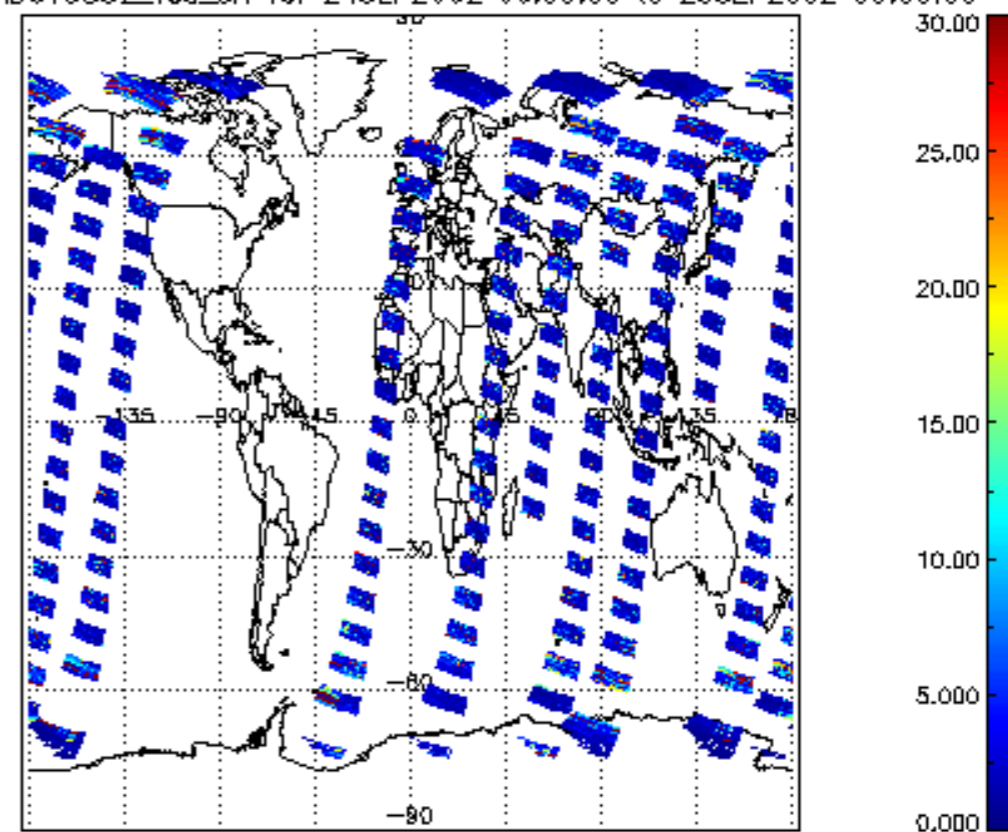




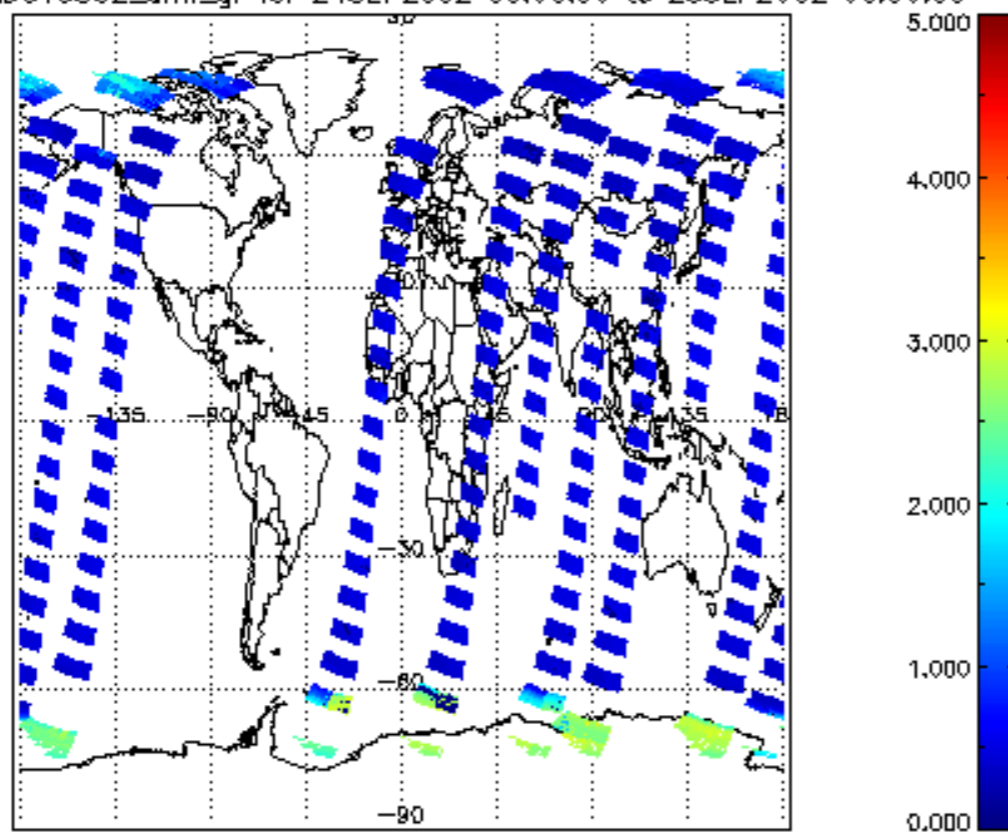
SCIOL2P_NADUV5S02_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



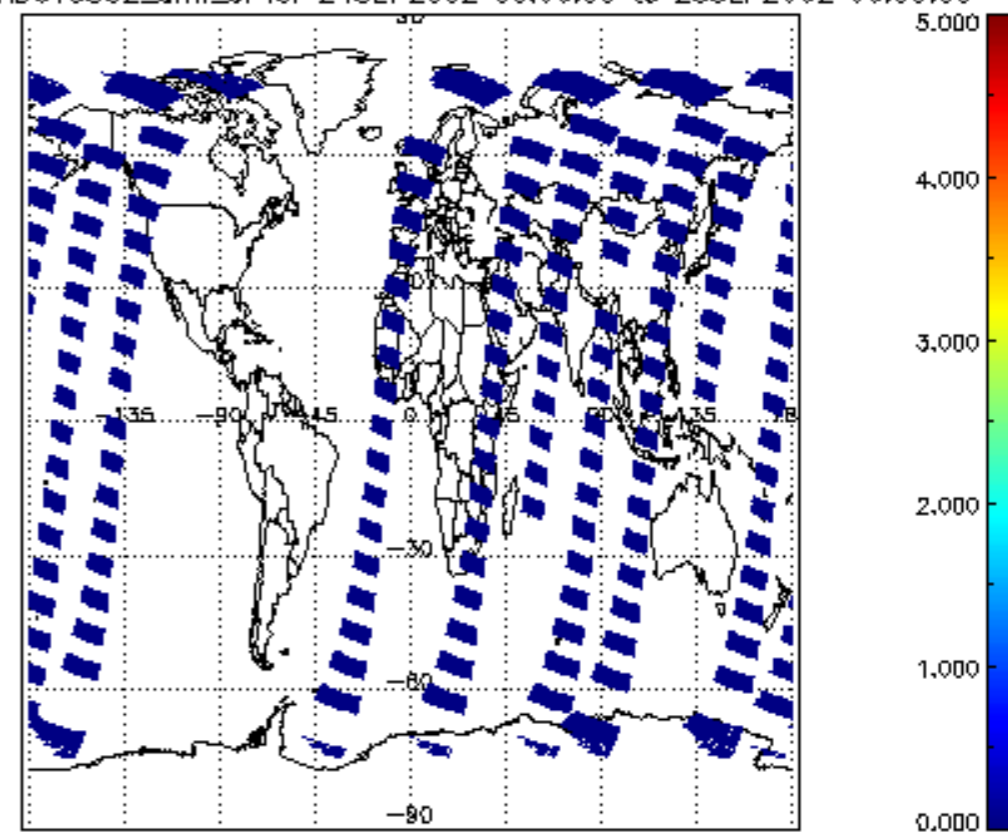
SCIOL2P_NADUV5S02_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

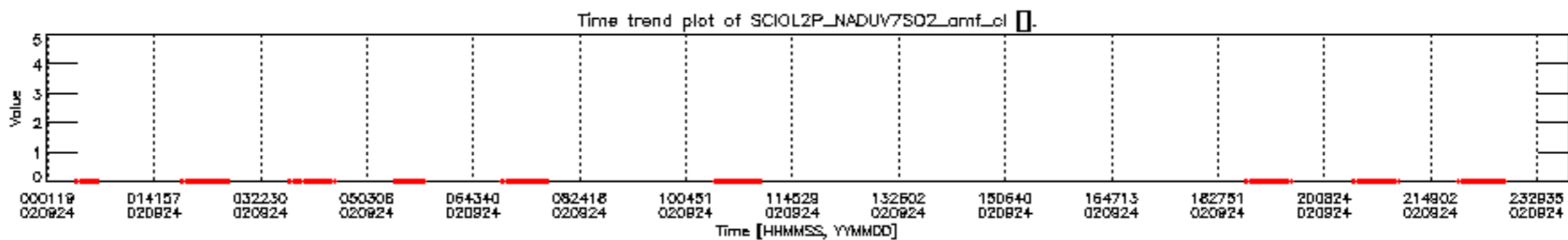
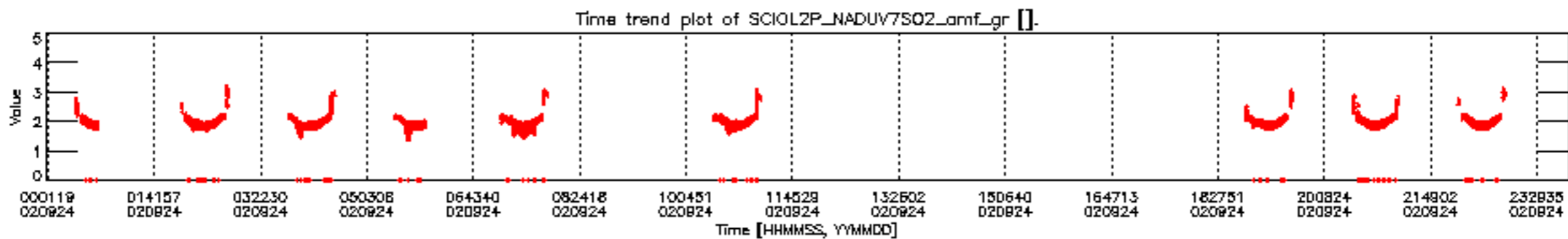
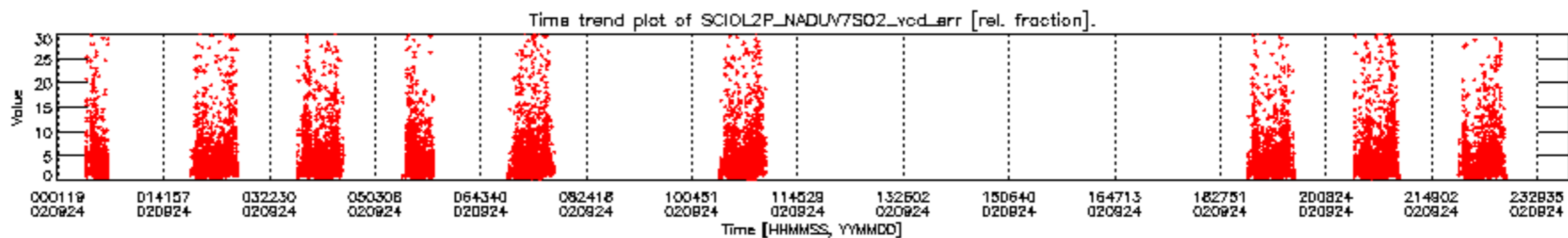
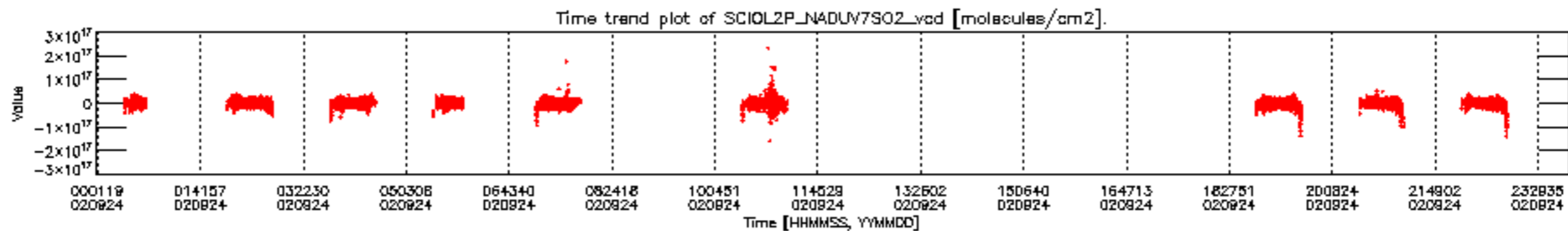


SCIOL2P_NADUV5S02_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

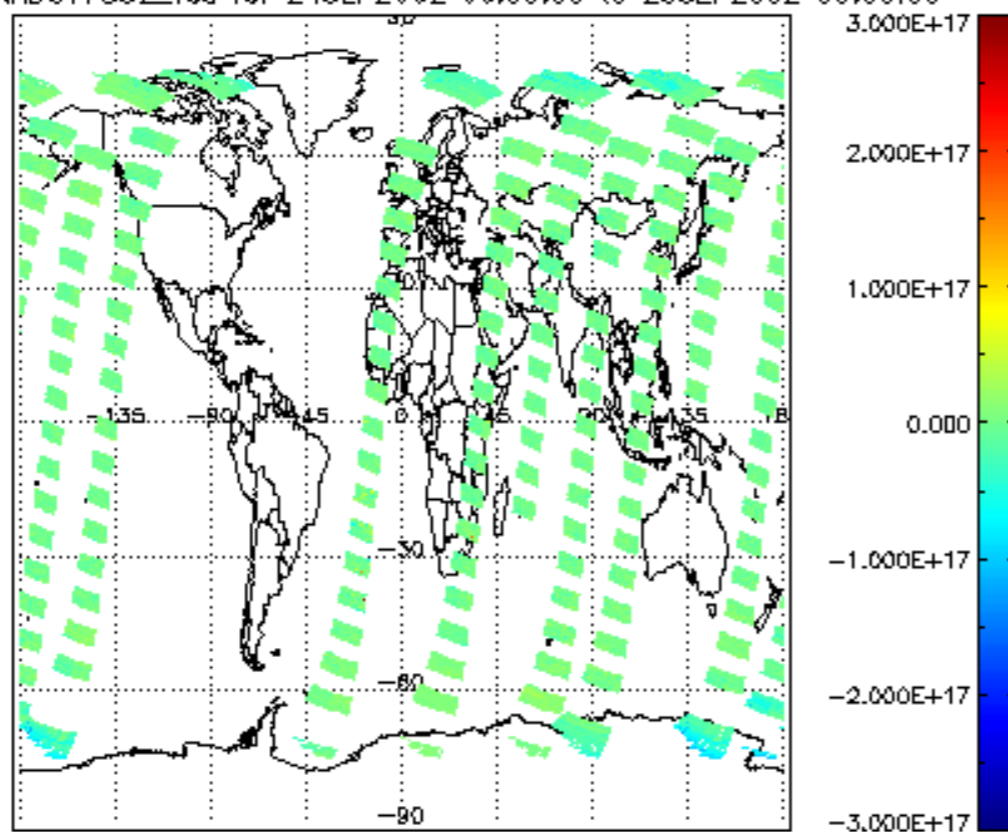


SCIOL2P_NADUV5S02_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

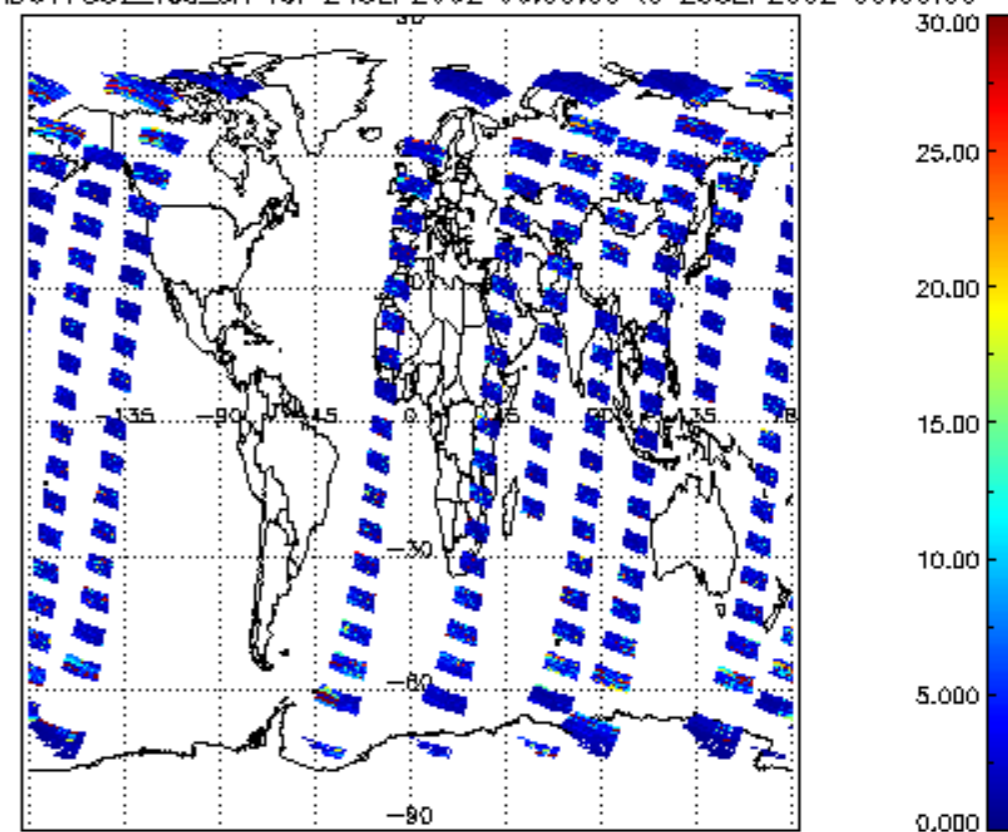




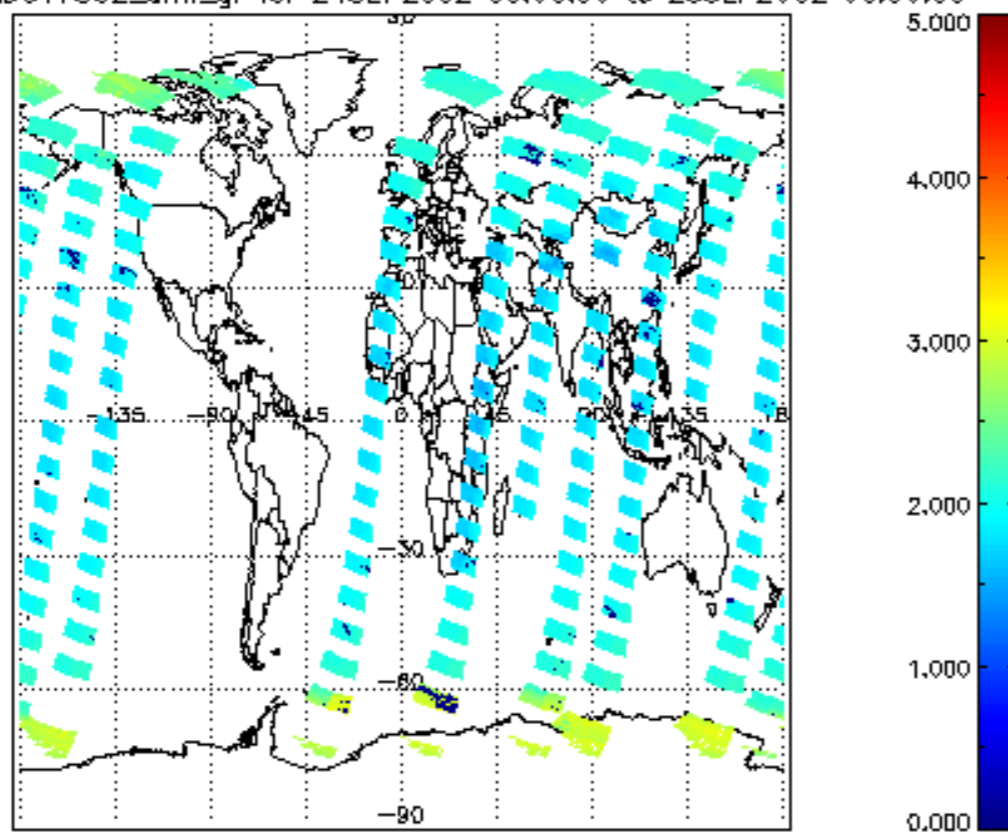
SCIOL2P_NADUV7S02_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



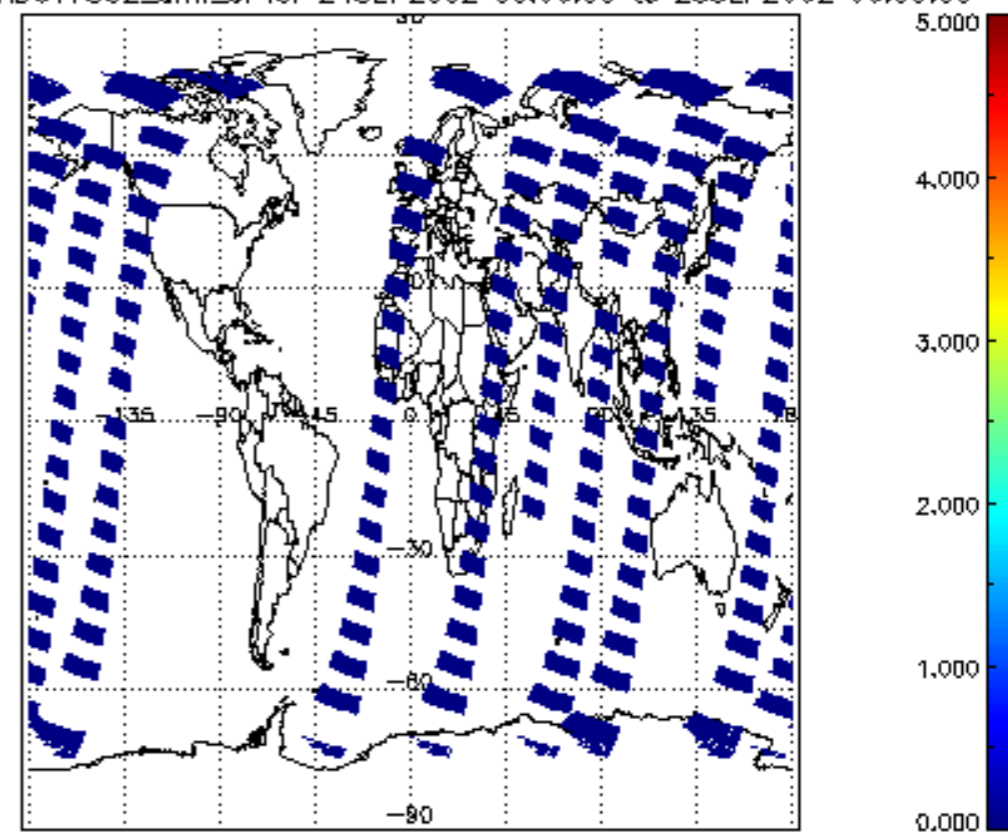
SCIOL2P_NADUV7S02_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

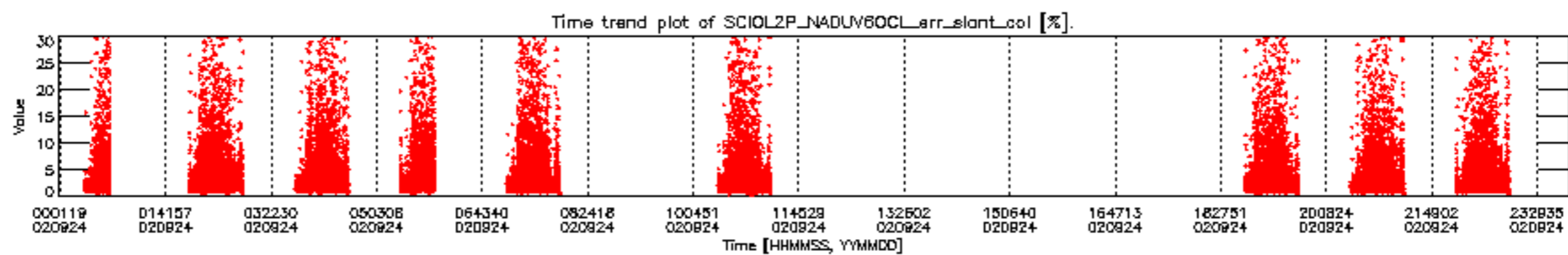
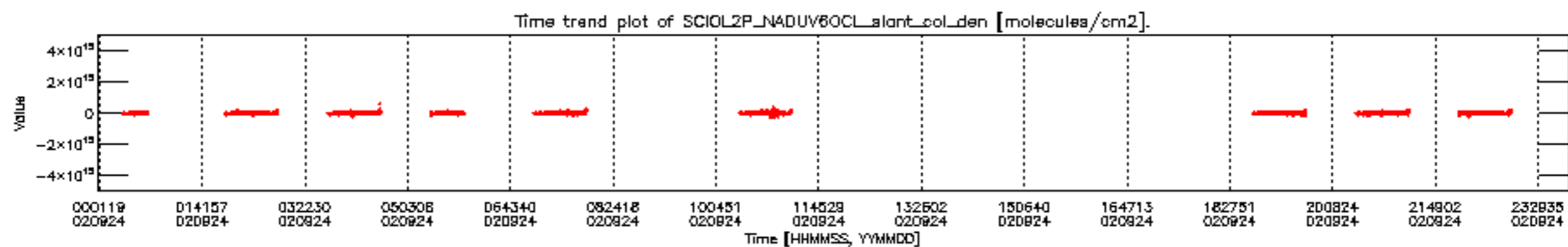


SCIOL2P_NADUV7S02_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

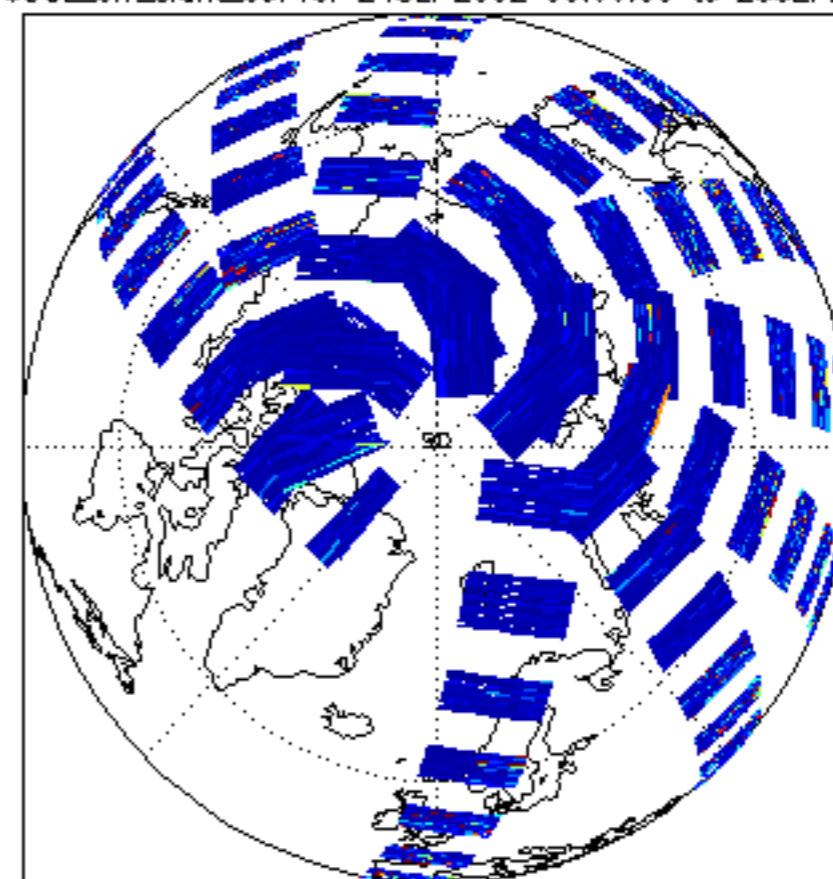
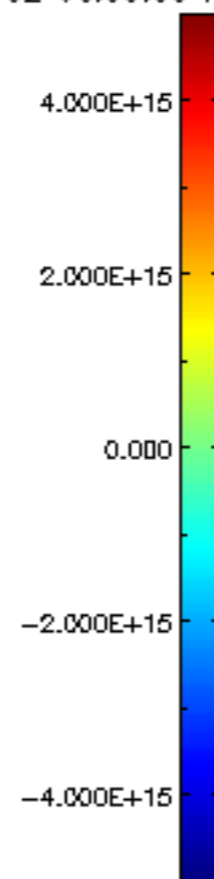
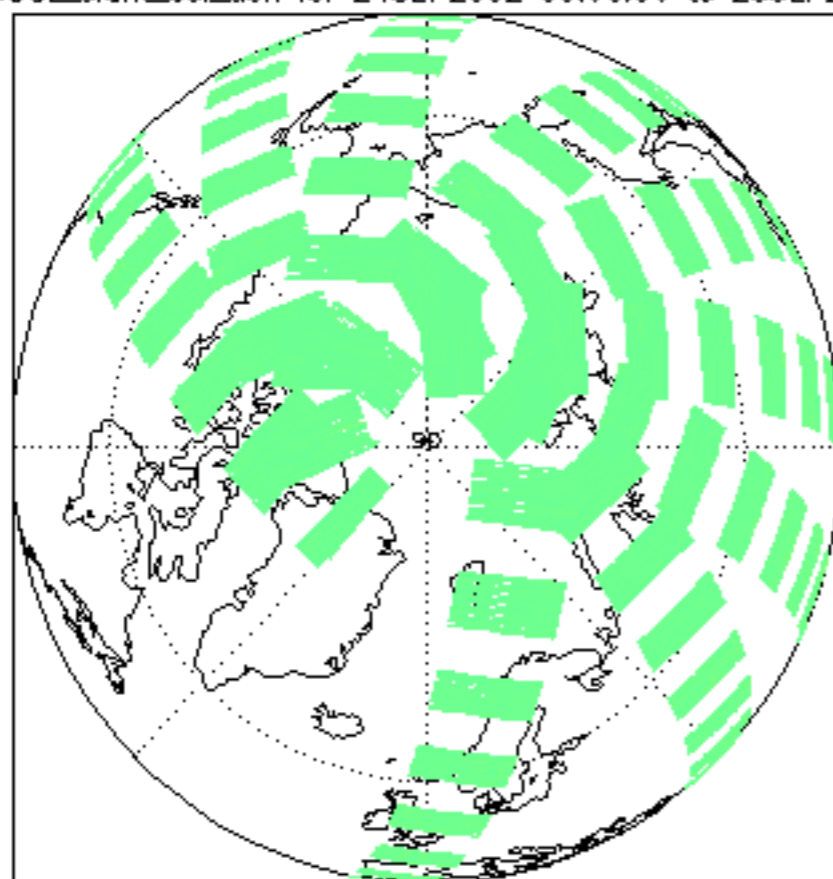


SCIOL2P_NADUV7S02_amf_cl for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

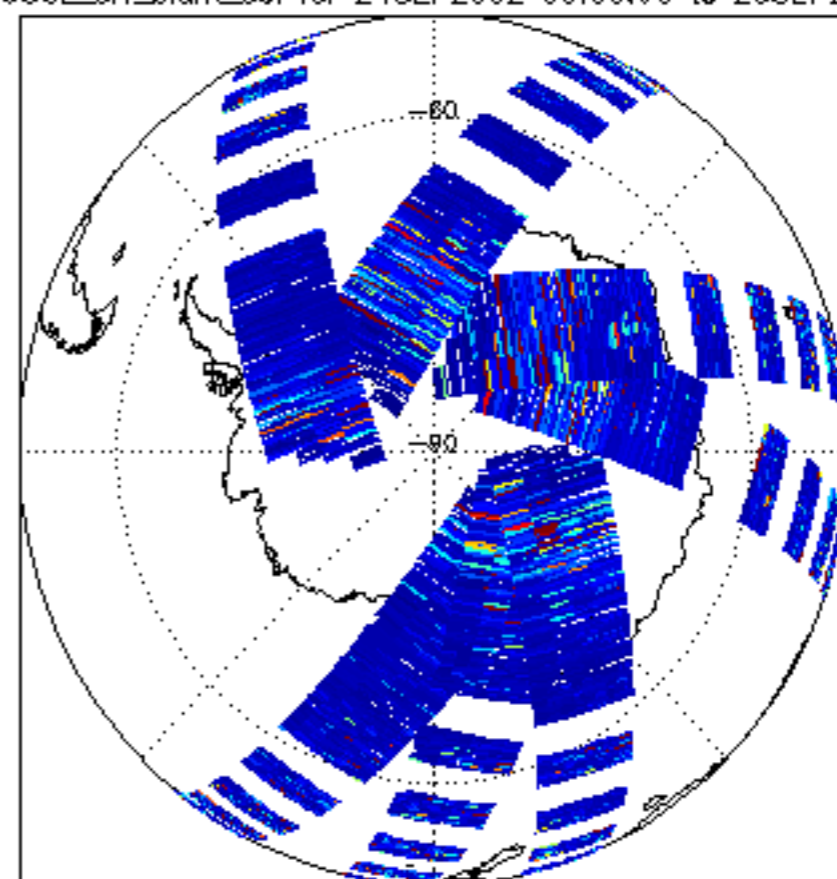
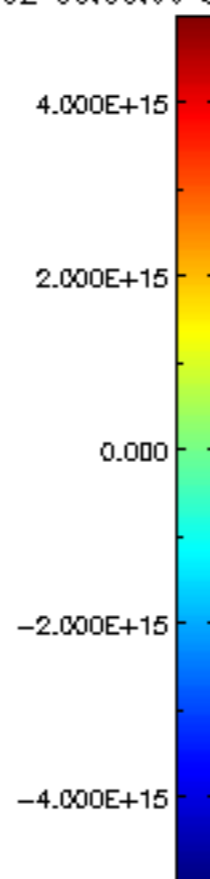
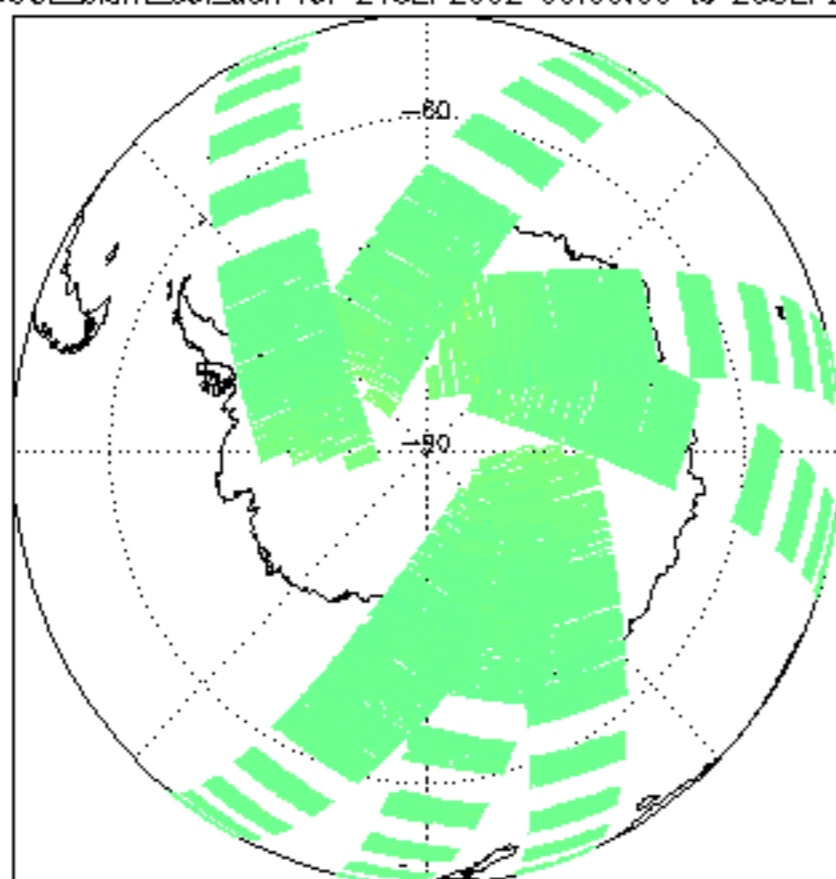




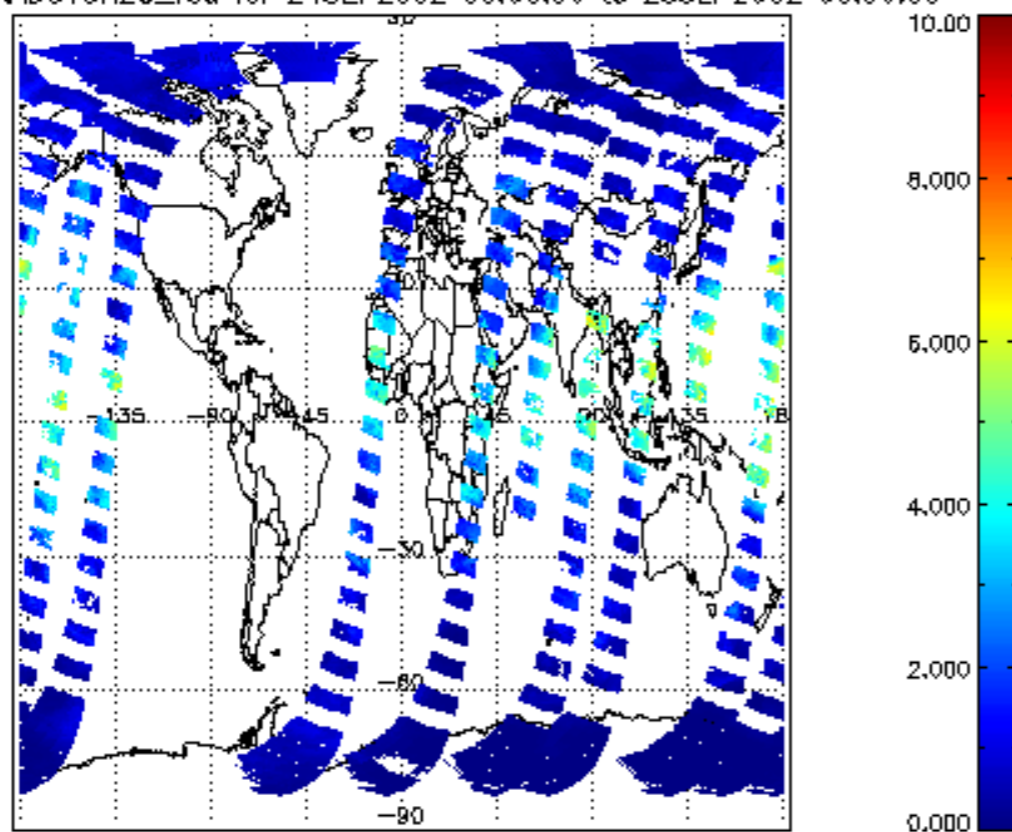
CIOL2P_NADUV60CL_slant_col_den for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 np iCIOL2P_NADUV60CL_err_slant_col for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 np



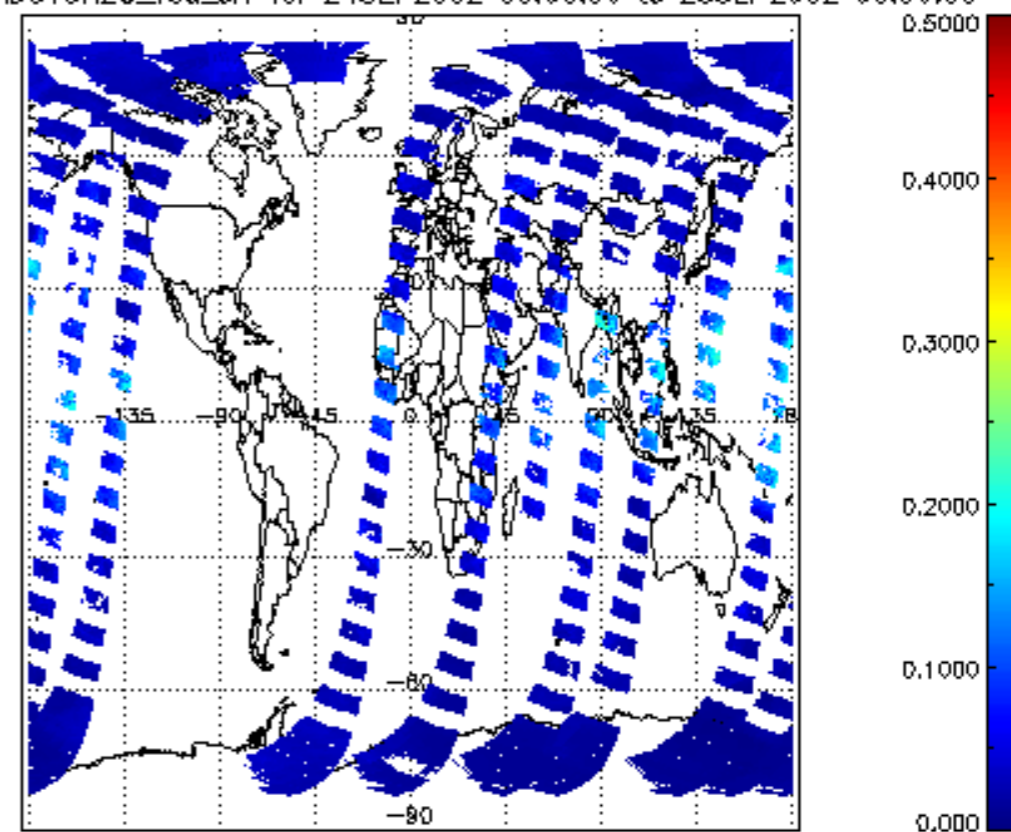
CIOL2P_NADUV60CL_slant_col_den for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 sp iCIOL2P_NADUV60CL_err_slant_col for 24SEP2002 00:00:00 to 25SEP2002 00:00:00 sp



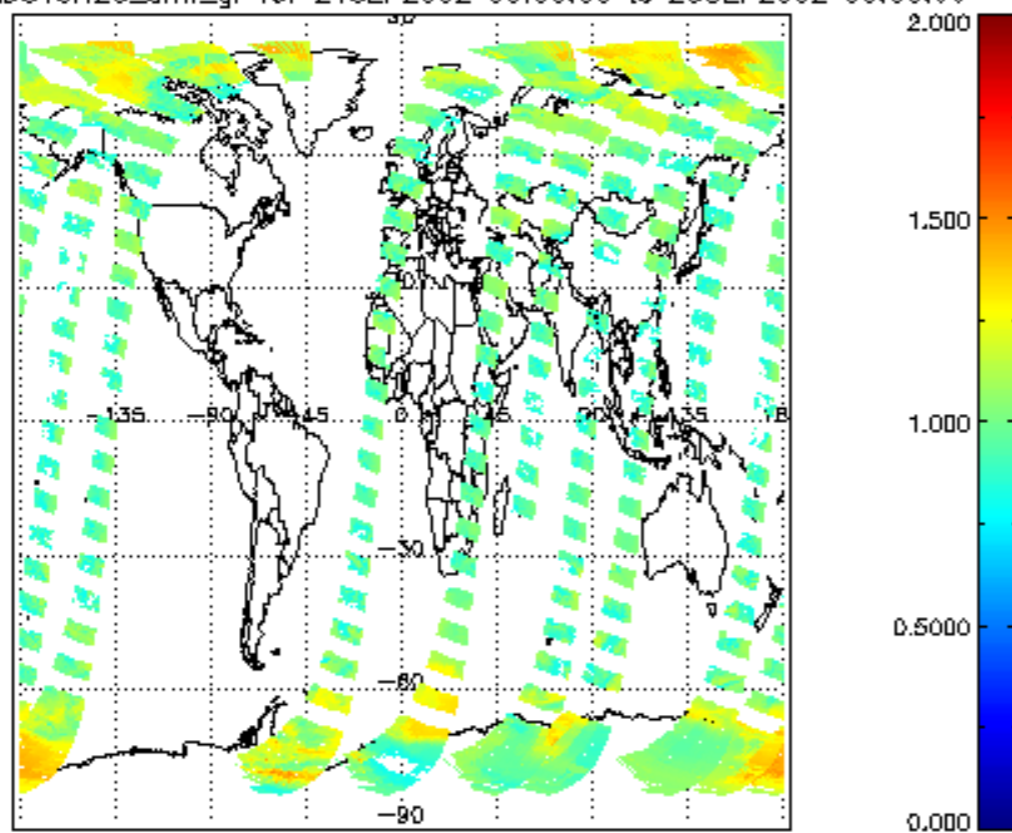
SCIOL2P_NADUV8H2O_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

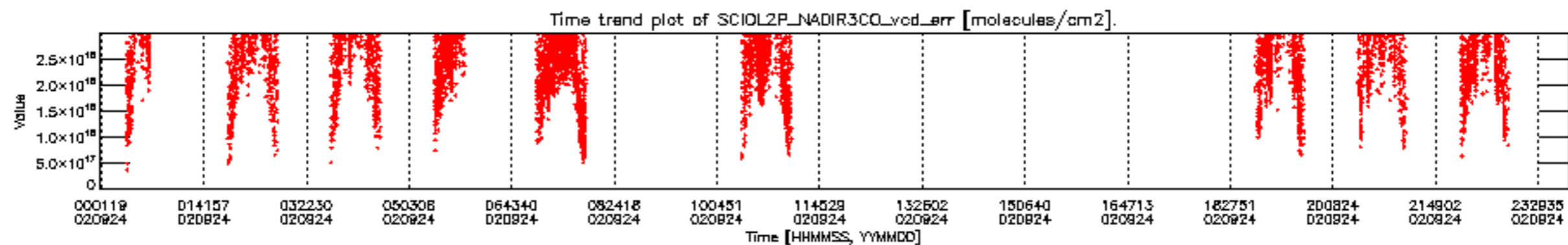
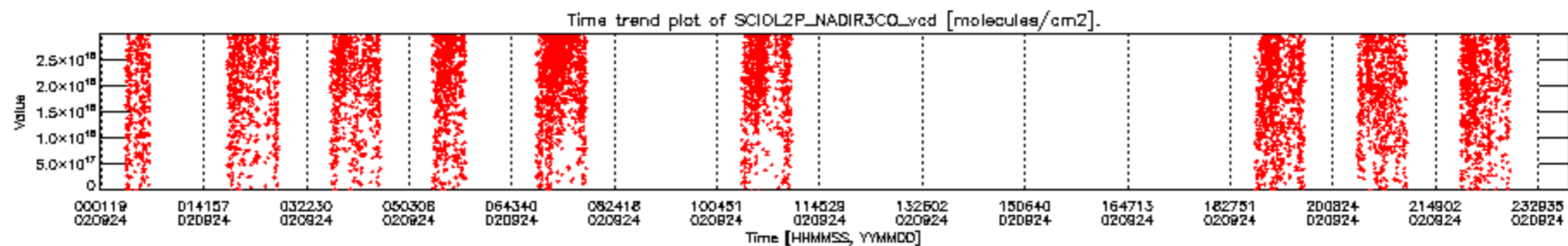


SCIOL2P_NADUV8H2O_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

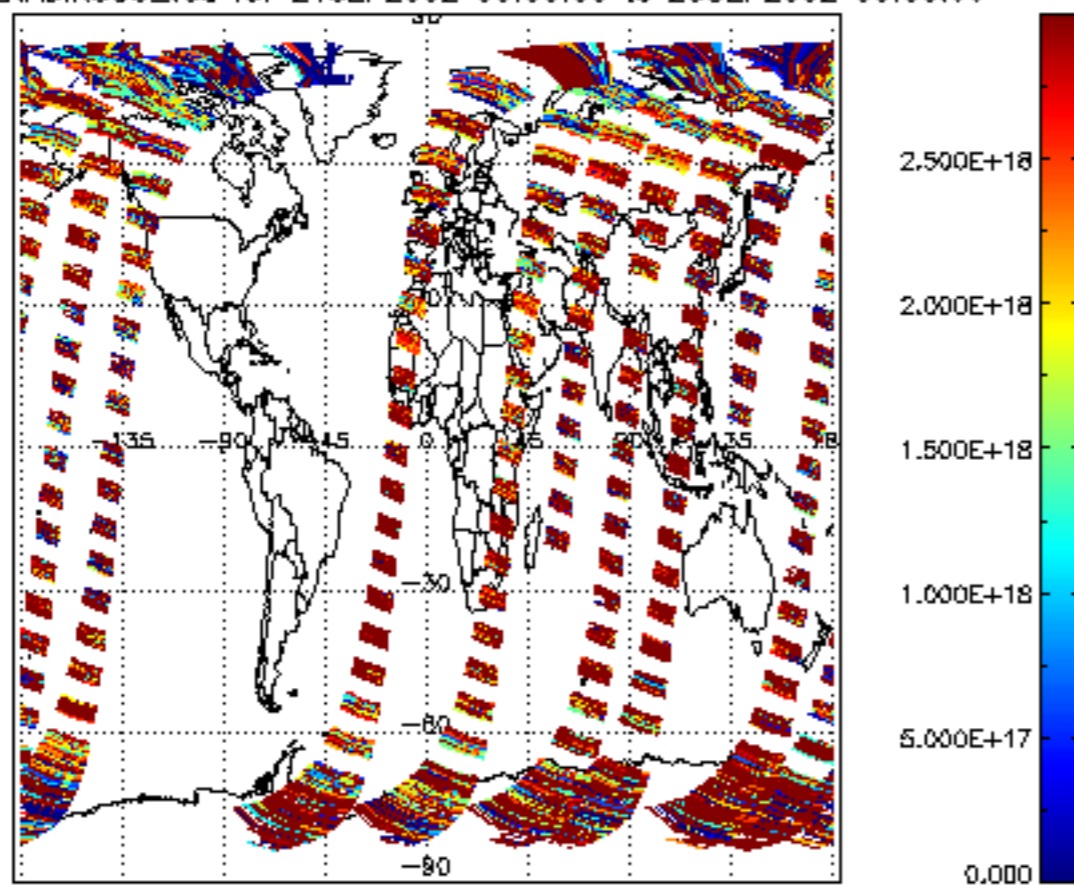


SCIOL2P_NADUV8H2O_amf_gr for 24SEP2002 00:00:00 to 25SEP2002 00:00:00

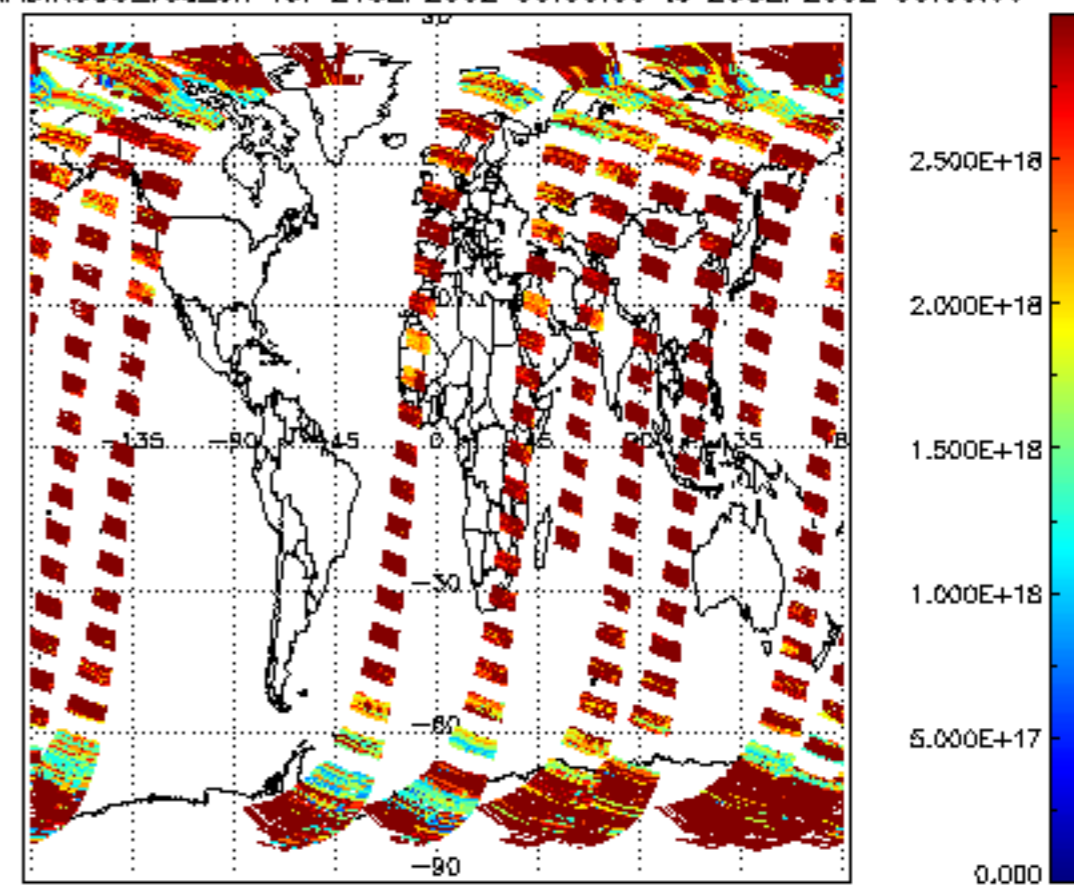




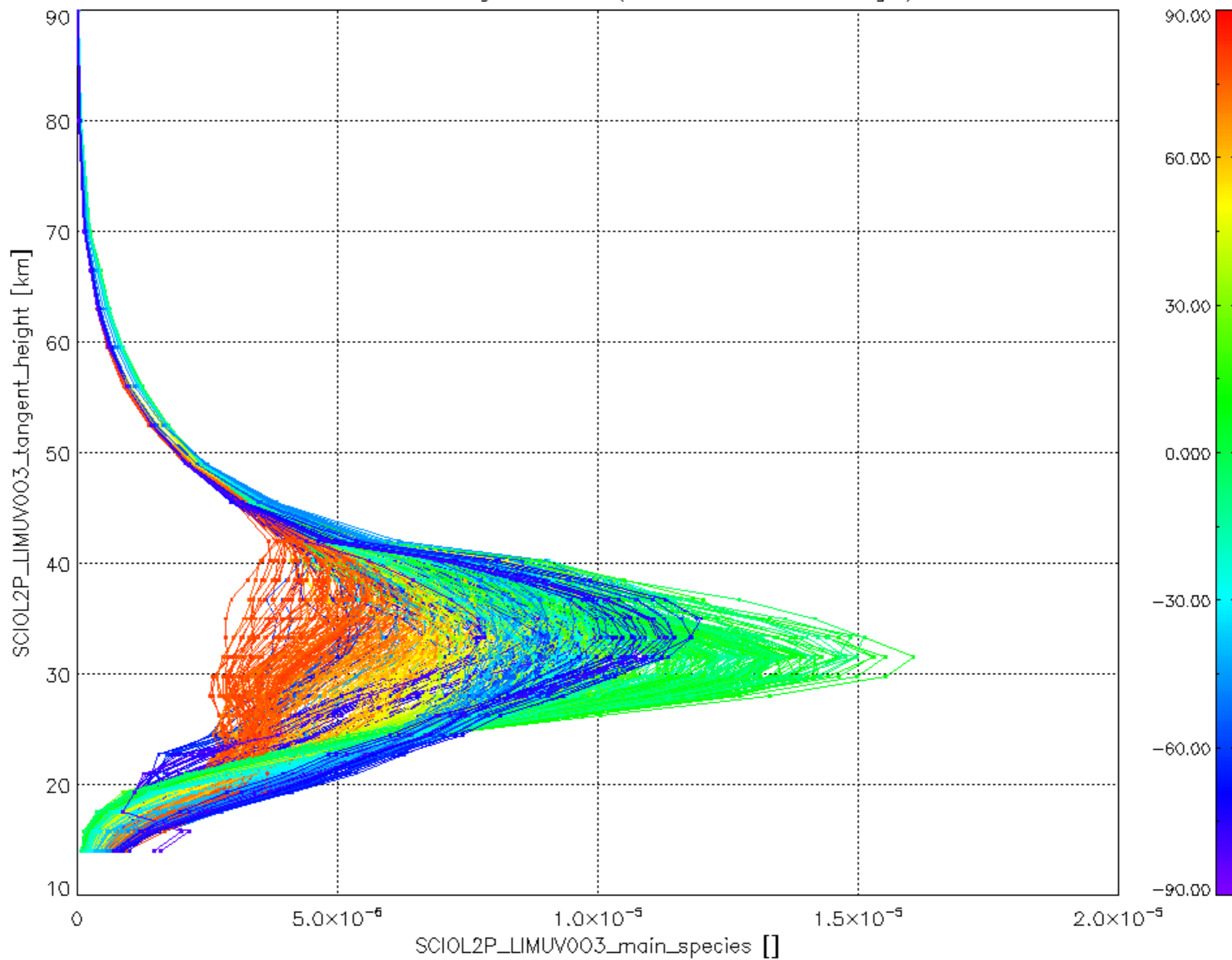
SCIOL2P_NADIR3CO_vcd for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



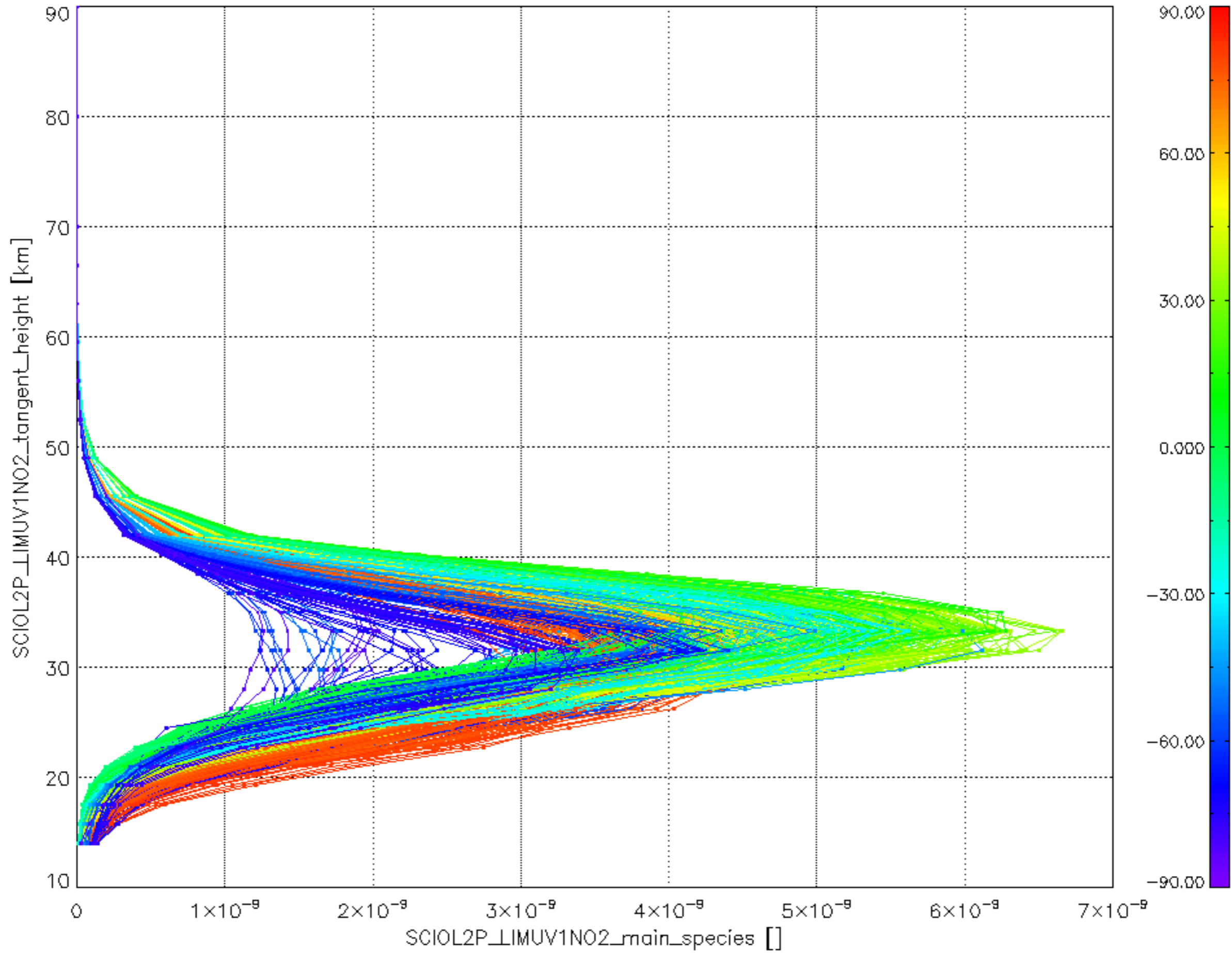
SCIOL2P_NADIR3CO_vcd_err for 24SEP2002 00:00:00 to 25SEP2002 00:00:00



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).



Plot of SCIOL2P_LIMUV3BRO_main_species.tang_vmr vs. tangent height.
 Colours indicate tangent latitude (see colour bar on the right).

