

## 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	1.12 (24-06-2010)
Time of report generation	13MAR2011 03:24:26
Data source version	SCIA-OL/5.01-U
Processing scope for products	23FEB2011 00:00:00 to 24FEB2011 00:00:00
Start time of first product within scope	22FEB2011 23:33:34
Stop time of last product within scope	23FEB2011 23:56:43
Total number of level 2 products	14
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	<a href="#">SCI_OL__2PUDPA20110222_233334_000035993099_00404_46970_3457.N1</a>	22FEB2011 23:33:34	23FEB2011 00:33:33	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110223_011348_000035843099_00405_46971_3458.N1</a>	23FEB2011 01:13:48	23FEB2011 02:13:32	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110223_025401_000023683099_00406_46972_3459.N1</a>	<b>23FEB2011 02:54:01</b>	<b>23FEB2011 03:33:29</b>	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110223_065603_000011043099_00408_46974_3460.N1</a>	<b>23FEB2011 06:56:03</b>	<b>23FEB2011 07:14:27</b>	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110223_075442_000035843099_00409_46975_3461.N1</a>	23FEB2011 07:54:42	23FEB2011 08:54:27	0	GOOD

5	SCI_OL__2PUDPA20110223_093455_000035993099_00410_46976_3462.N1	23FEB2011 09:34:55	23FEB2011 10:34:54	0	GOOD
6	SCI_OL__2PUDPA20110223_111509_000035843099_00411_46977_3463.N1	23FEB2011 11:15:09	23FEB2011 12:14:53	0	GOOD
7	SCI_OL__2PUDPA20110223_125522_000035993099_00412_46978_3464.N1	23FEB2011 12:55:22	23FEB2011 13:55:21	0	GOOD
8	SCI_OL__2PUDPA20110223_143536_000035843099_00413_46979_3465.N1	23FEB2011 14:35:36	23FEB2011 15:35:21	0	GOOD
9	SCI_OL__2PUDPA20110223_161549_000035993099_00414_46980_3466.N1	23FEB2011 16:15:49	23FEB2011 17:15:48	0	GOOD
10	SCI_OL__2PUDPA20110223_175624_000035843099_00415_46981_3467.N1	23FEB2011 17:56:24	23FEB2011 18:56:09	0	GOOD
11	SCI_OL__2PUDPA20110223_193638_000035993099_00416_46982_3468.N1	23FEB2011 19:36:38	23FEB2011 20:36:37	0	GOOD
12	SCI_OL__2PUDPA20110223_211630_000035843099_00417_46983_3469.N1	23FEB2011 21:16:30	23FEB2011 22:16:15	0	GOOD
13	SCI_OL__2PUDPA20110223_225644_000035993099_00418_46984_3470.N1	23FEB2011 22:56:44	23FEB2011 23:56:43	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: 152620

Total number of cloud data DSRs with good quality flag (=0): 152620 (100.0 %)

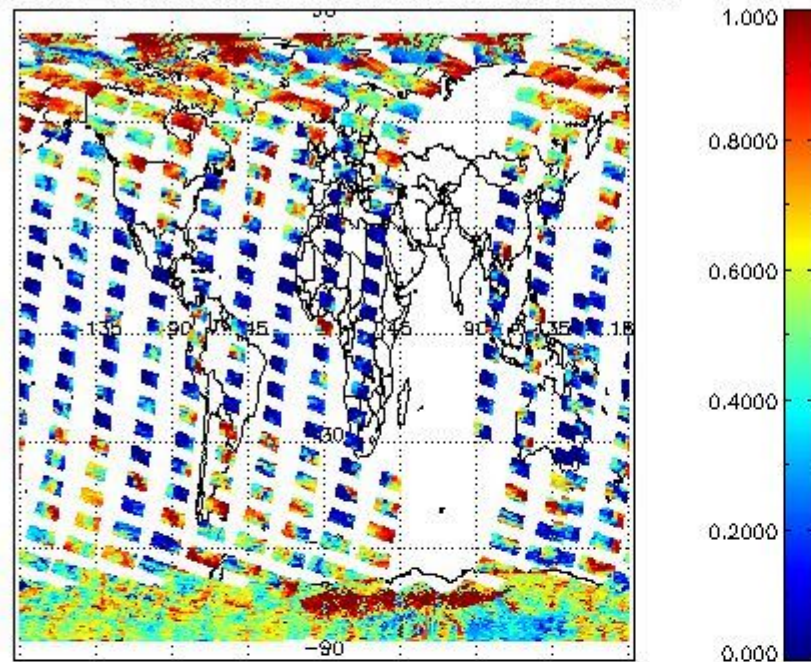
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	152620	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	152620	0.16397	0.12500	0.12500	0.25000	0.057901	s
CL_FRAC	152620	0.48737	0.49484	0.0000	1.0000	0.30615	-
CL_FRAC_ERR	152620	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	152620	5.2470	4.0000	4.0000	8.0000	1.8528	
PMD_READ_CL[0]	152620	0.53961	0.0000	0.0000	8.0000	1.3214	-
PMD_READ_CL[1]	152620	0.97174	0.0000	0.0000	8.0000	2.3115	-
CL_TOP_HEIGHT	116287	3.8417	2.4782	0.0000	17.000	3.7716	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	116287	62.425	76.314	0.0000	101.00	40.362	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	152620	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	152620	11001100	11000100	11000000	11100000	3504.8	flags
AERO_ABSO_IND	152620	0.45222	0.0000	0.0000	5.6339	0.77254	
AERO_IND_DIAG	152620	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	152620	01010000	00000000	00000000	11000000	24264.	flags

#### Time and geolocation plots:

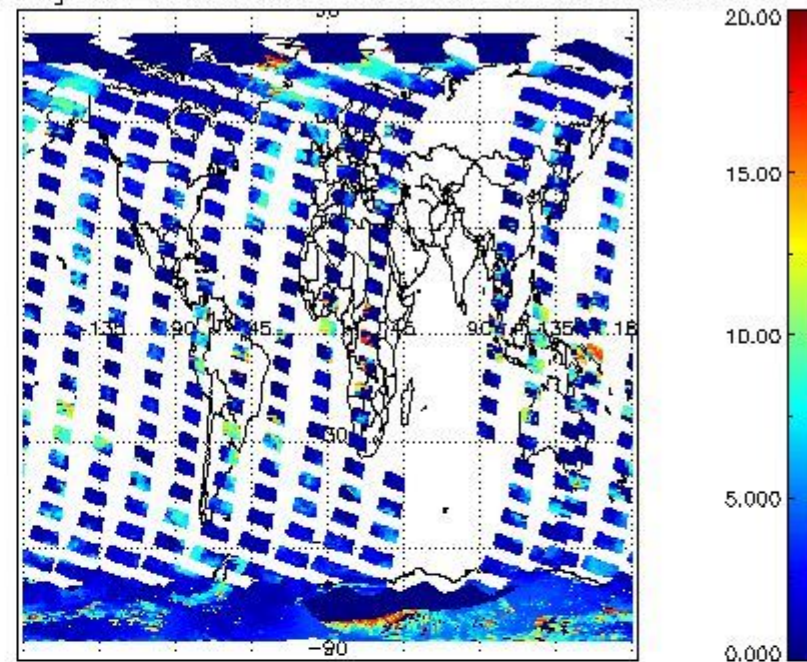
Plots are available for the following parameters:

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

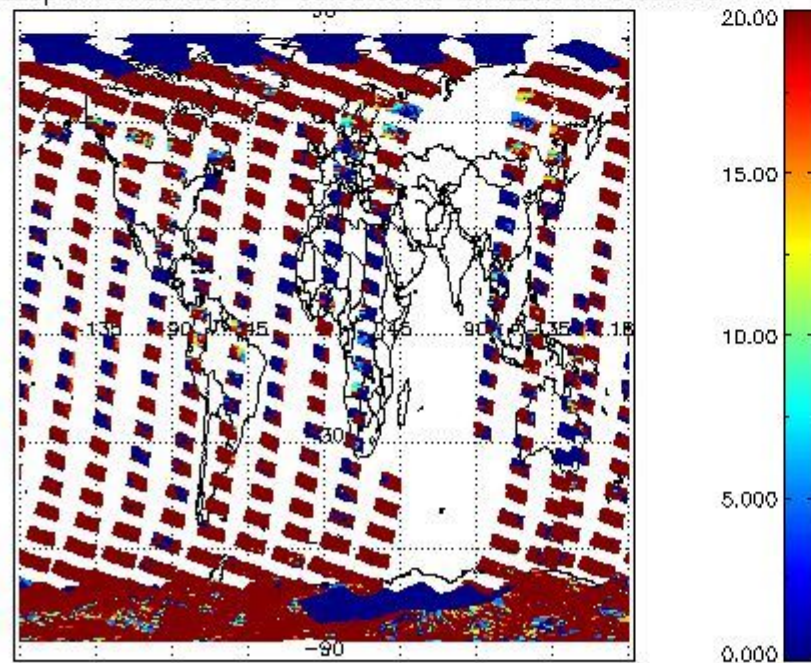
cL\_frae for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



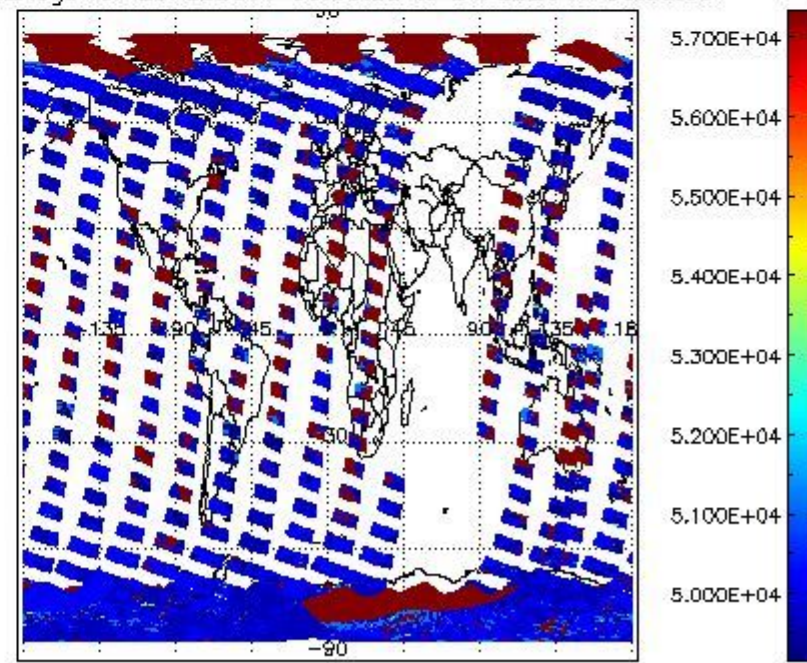
cL\_top\_height for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



cL\_opt\_depth for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



cloud\_flags for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



## 2.2.2 Nadir

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

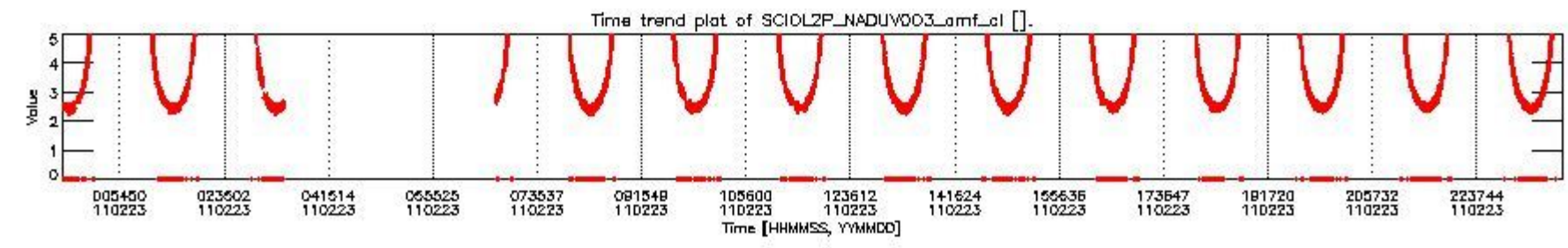
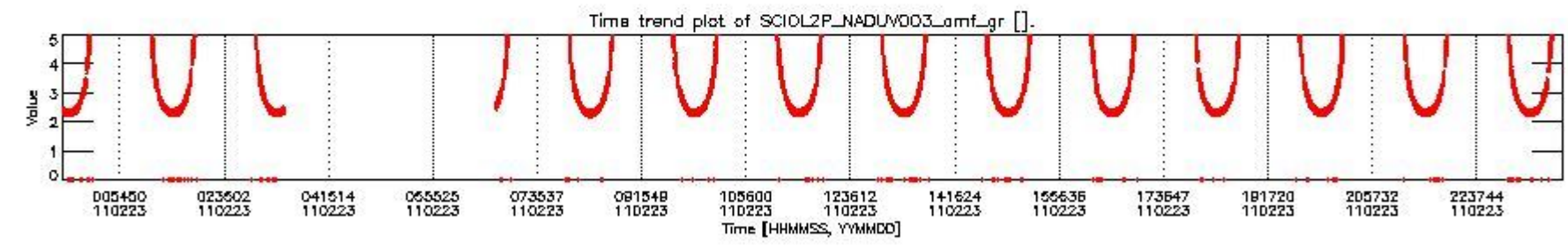
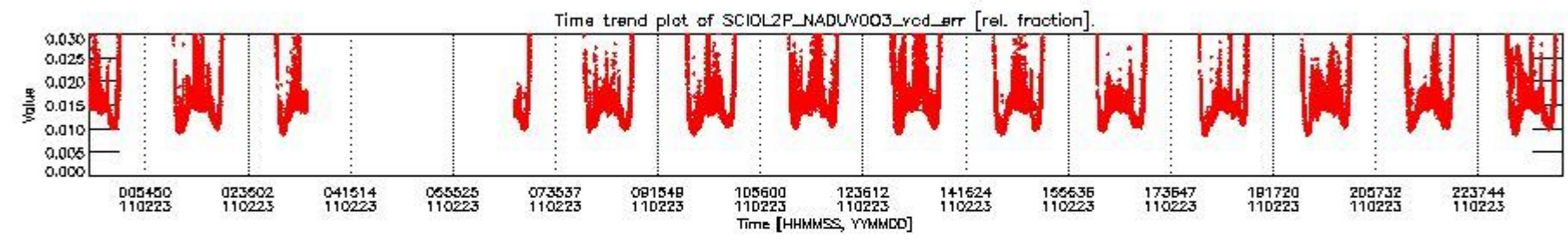
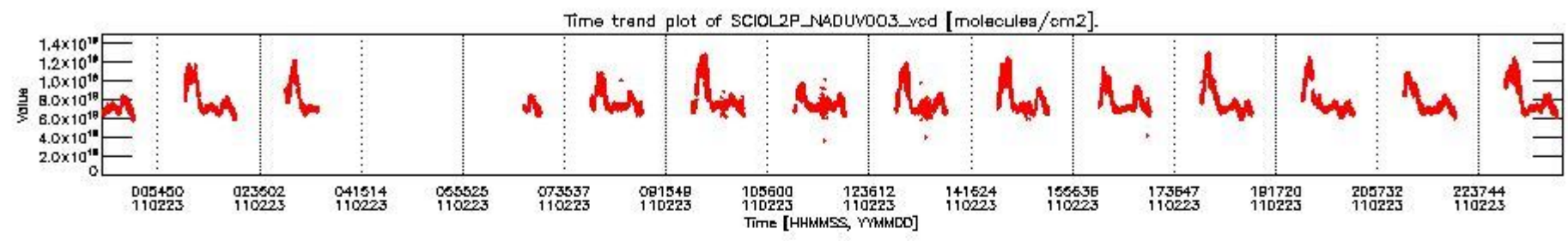
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

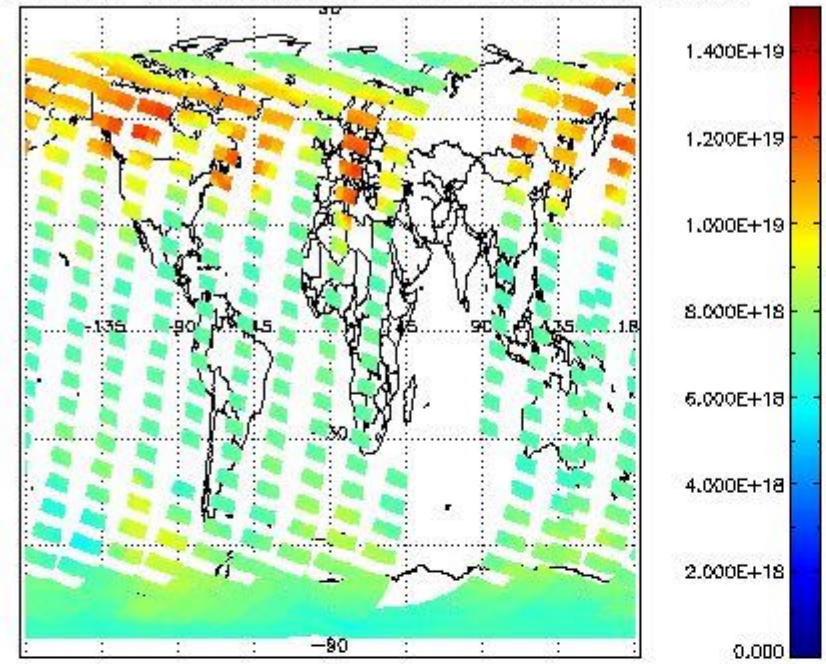
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr
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.

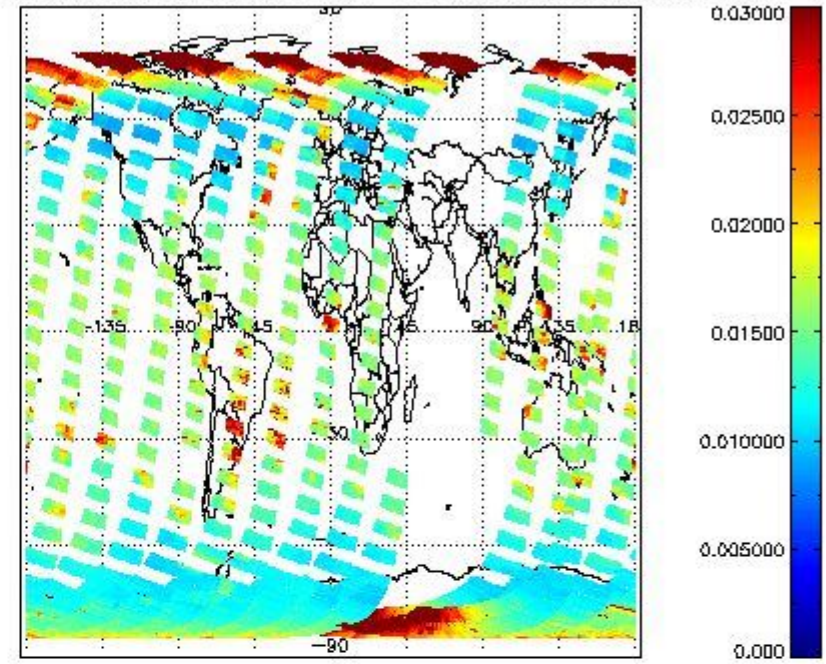
#### 2.2.2.1 O3 (UV0)



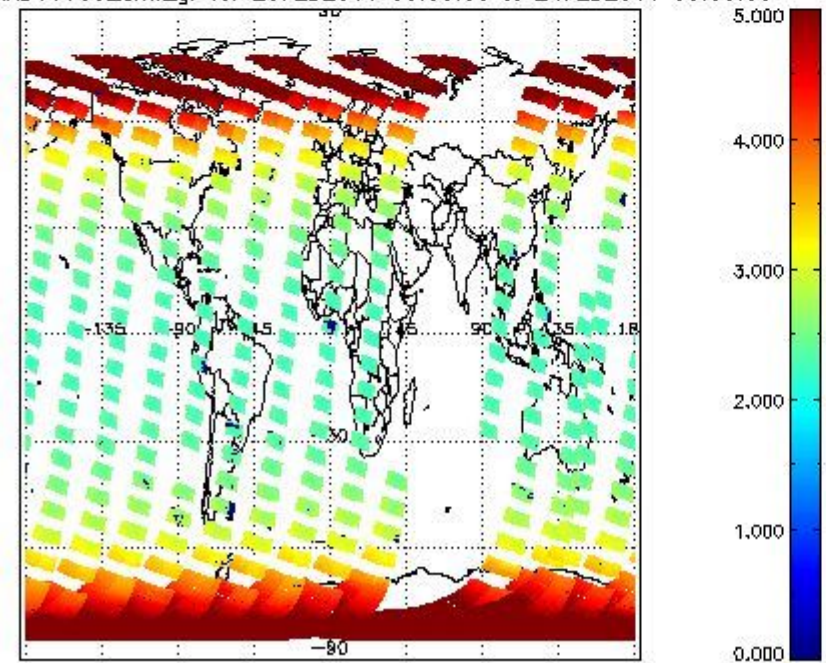
SCIOL2P\_NADUV003\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



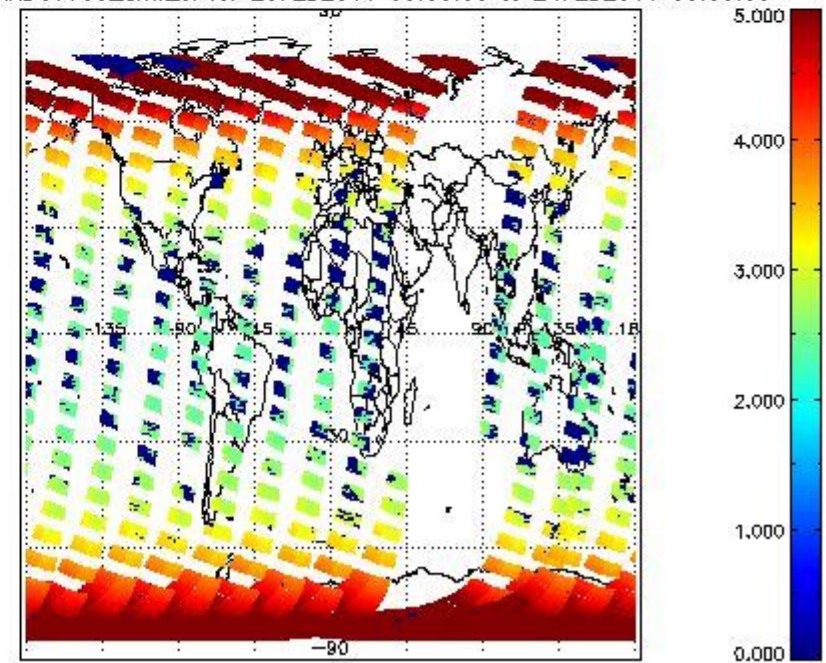
SCIOL2P\_NADUV003\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



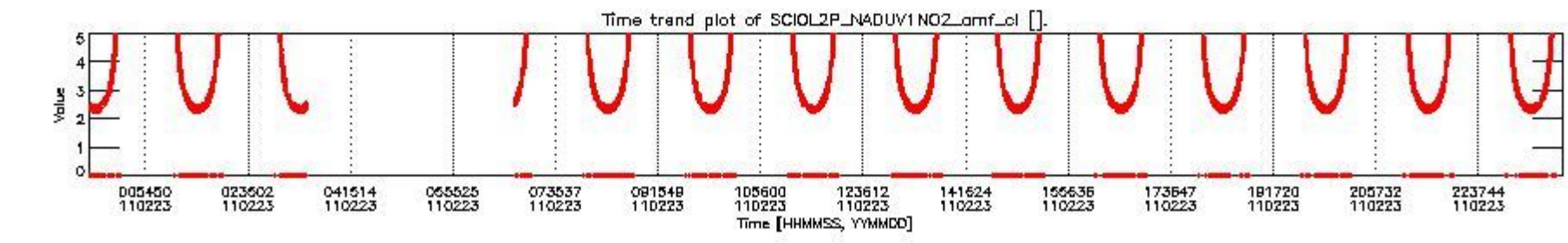
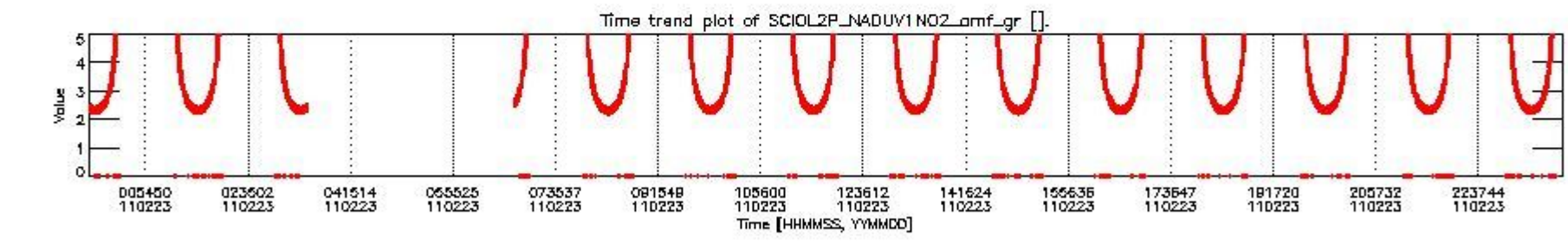
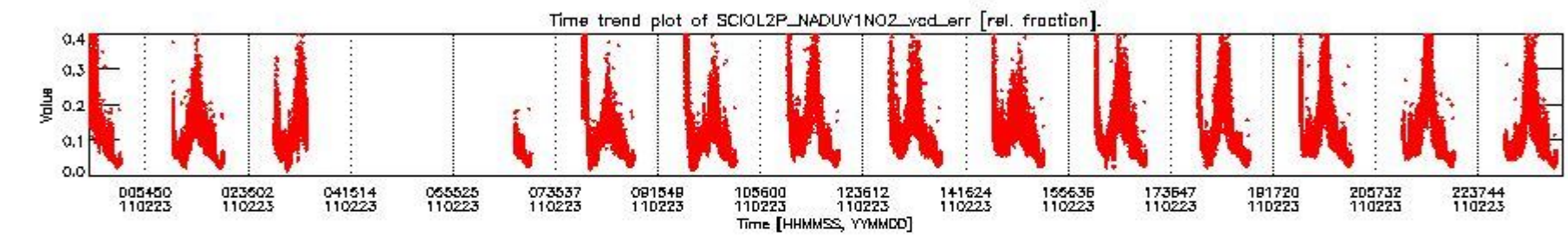
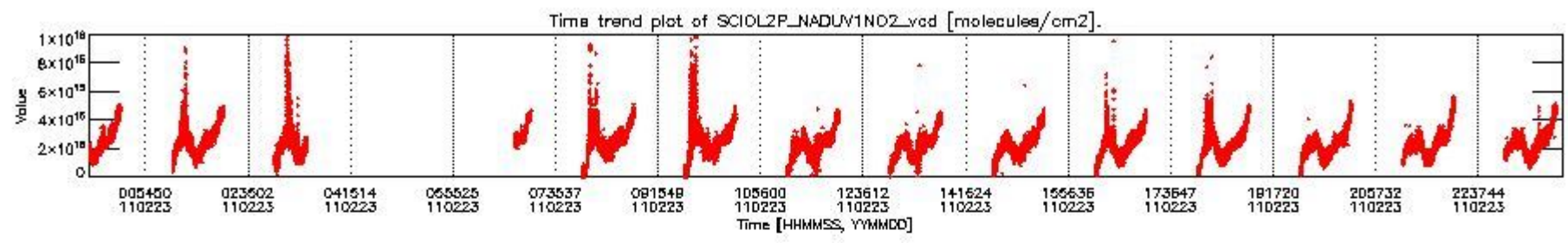
SCIOL2P\_NADUV003\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

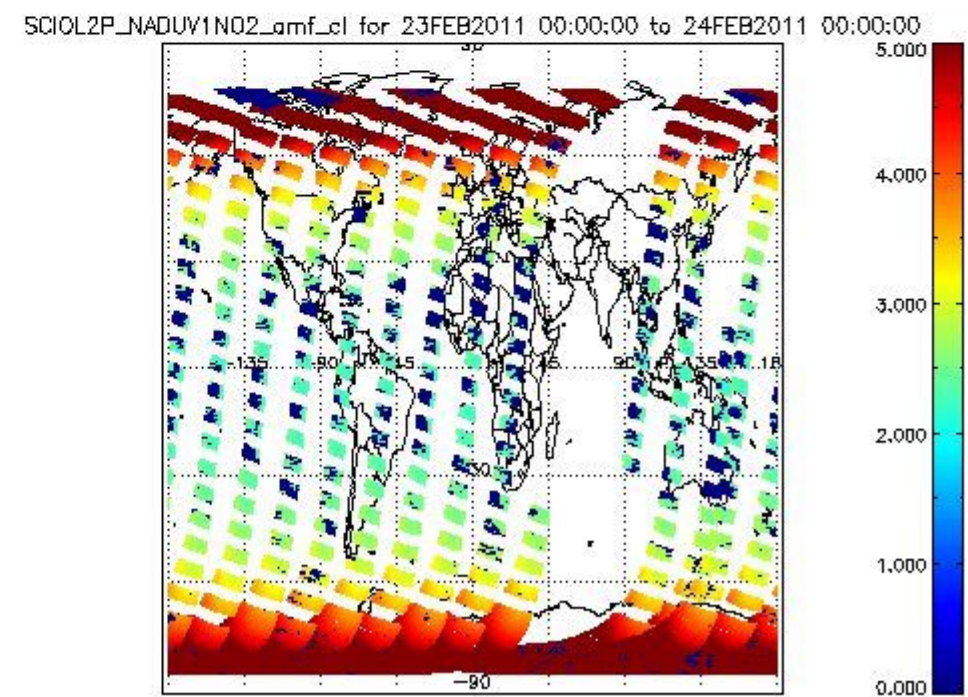
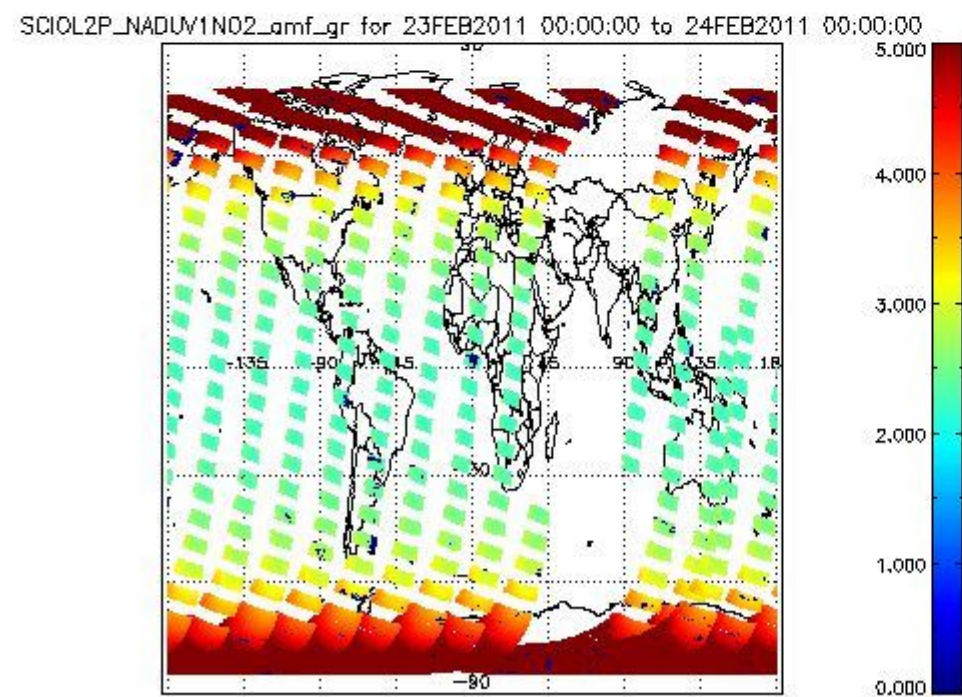
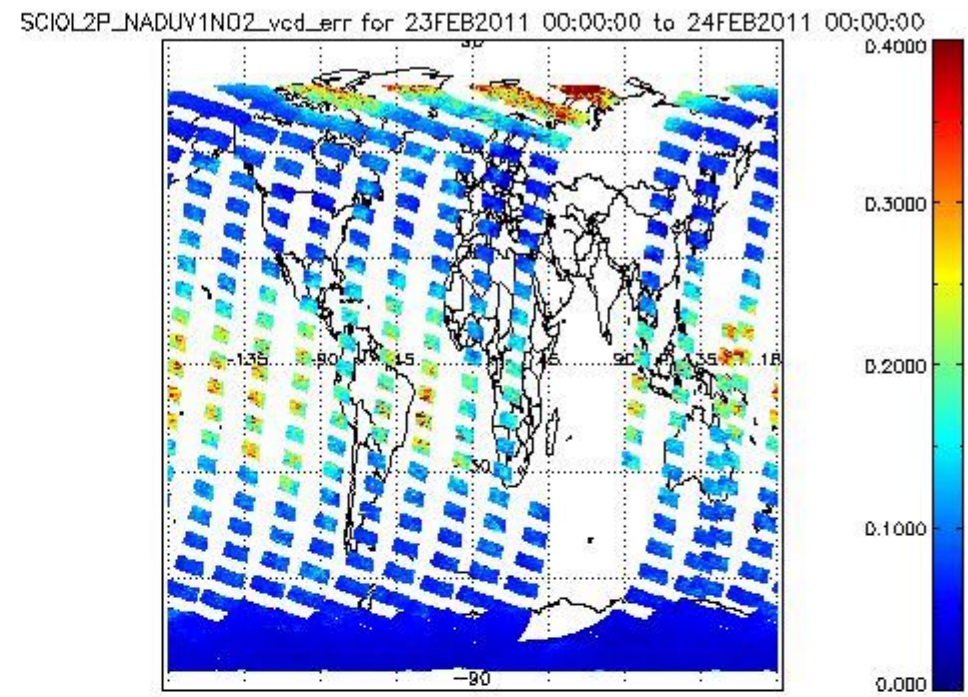
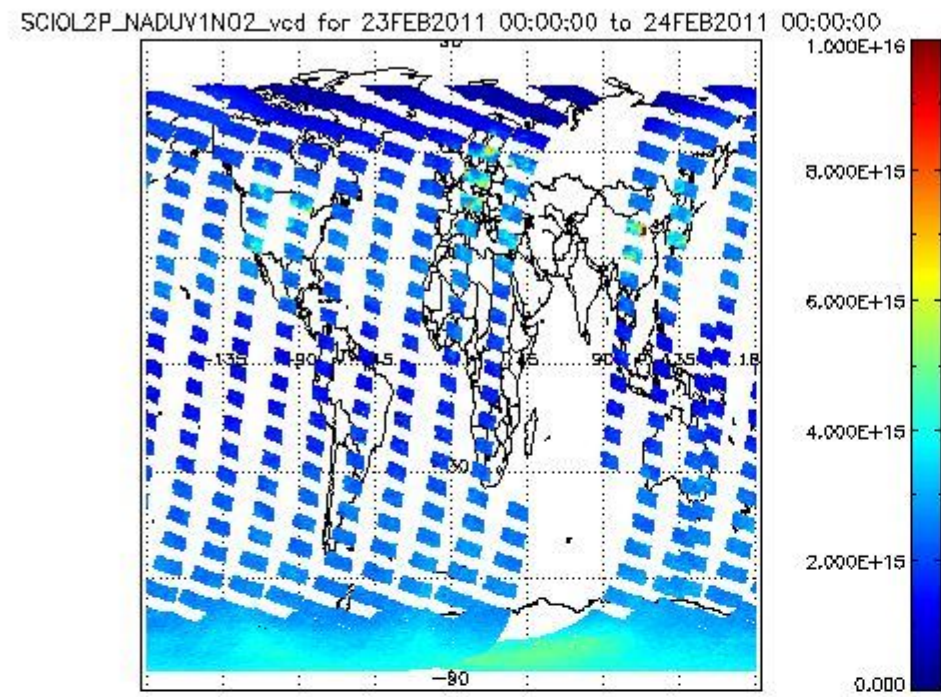


SCIOL2P\_NADUV003\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



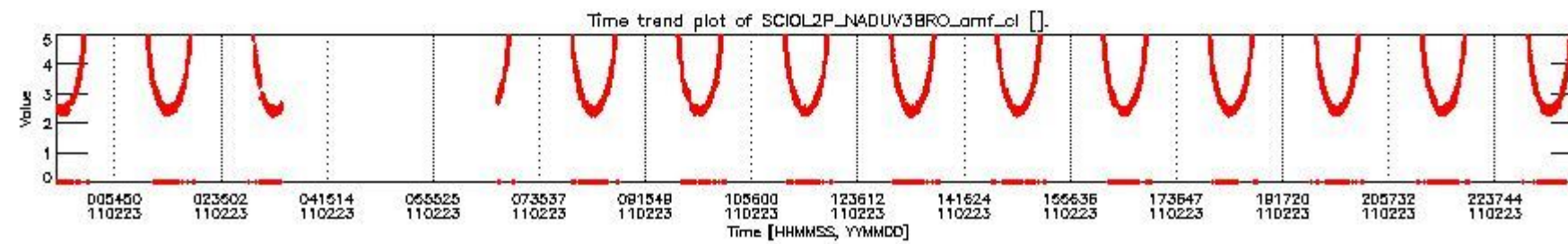
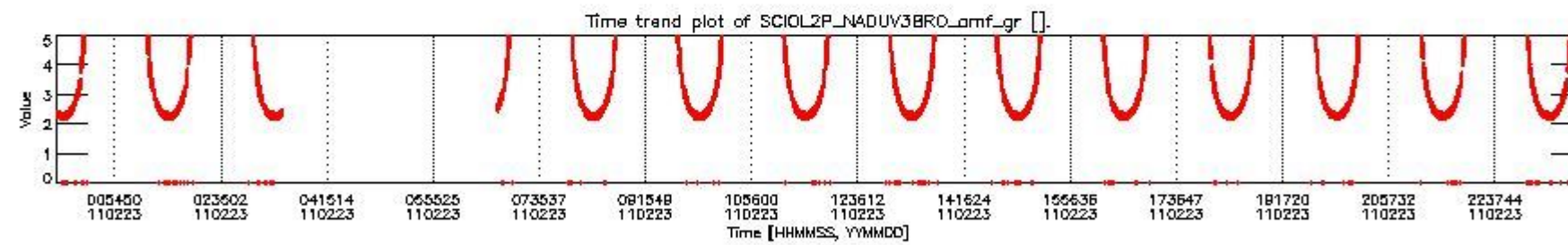
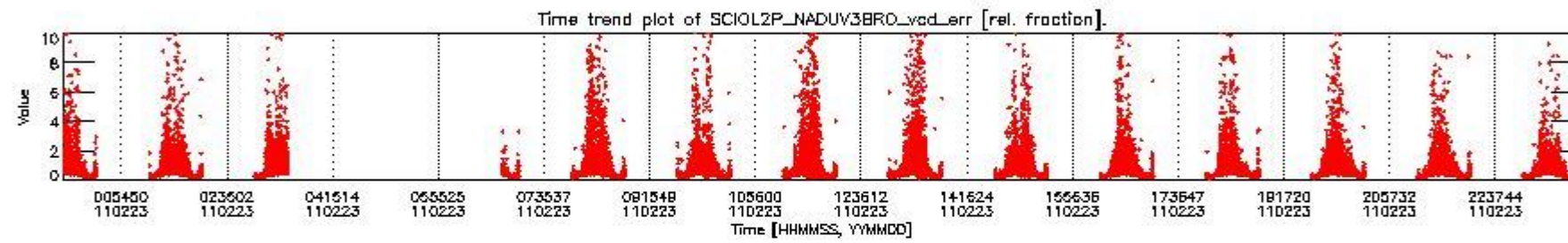
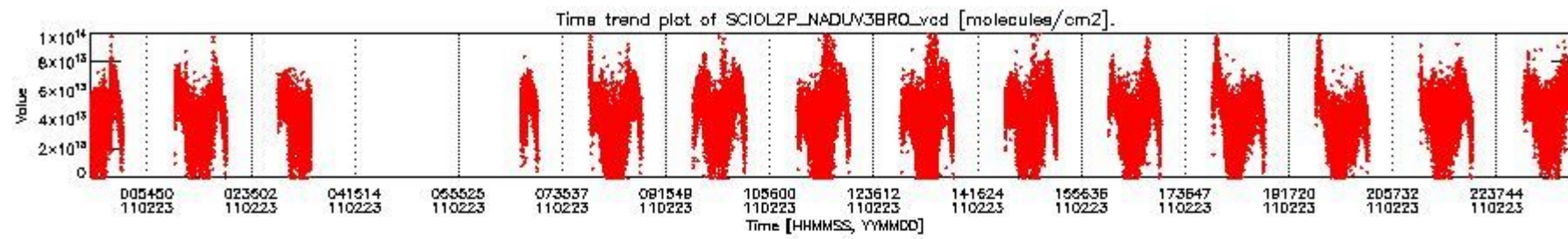
2.2.2.2 NO2 (UV1)



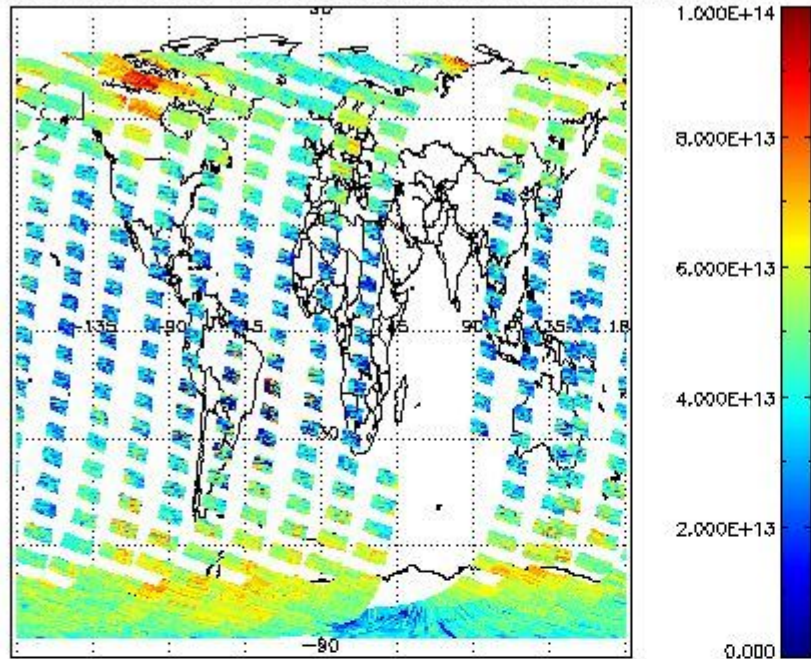


2.2.2.3 BrO (UV3)

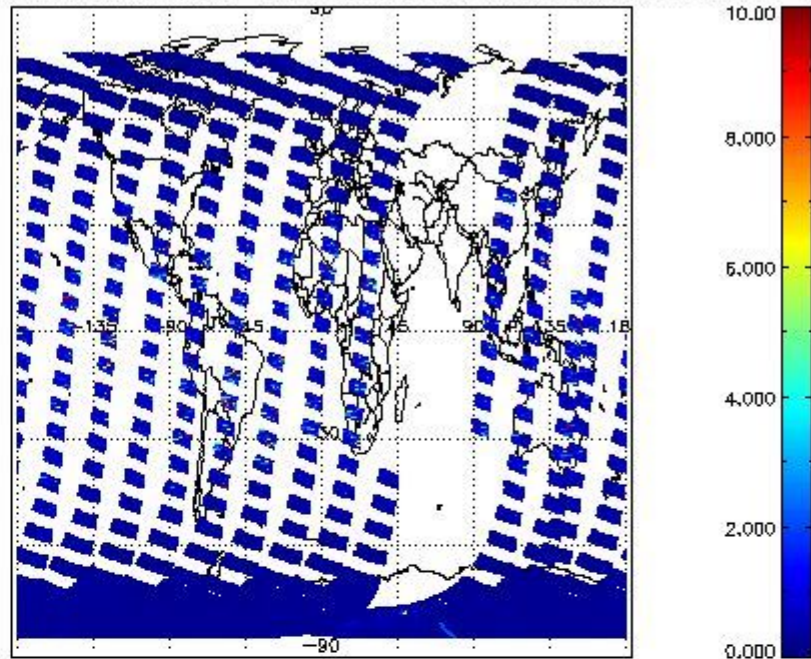




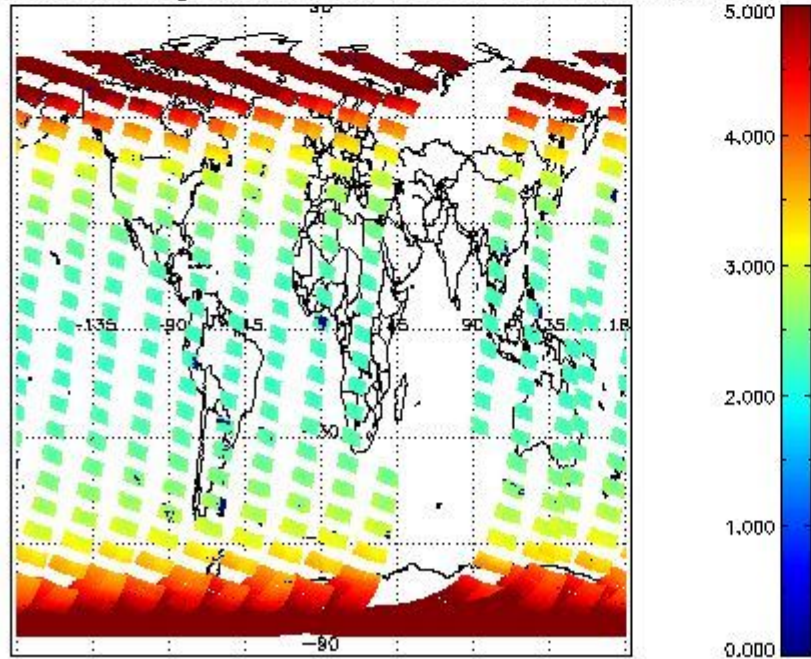
SCIOL2P\_NADUV3BRO\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



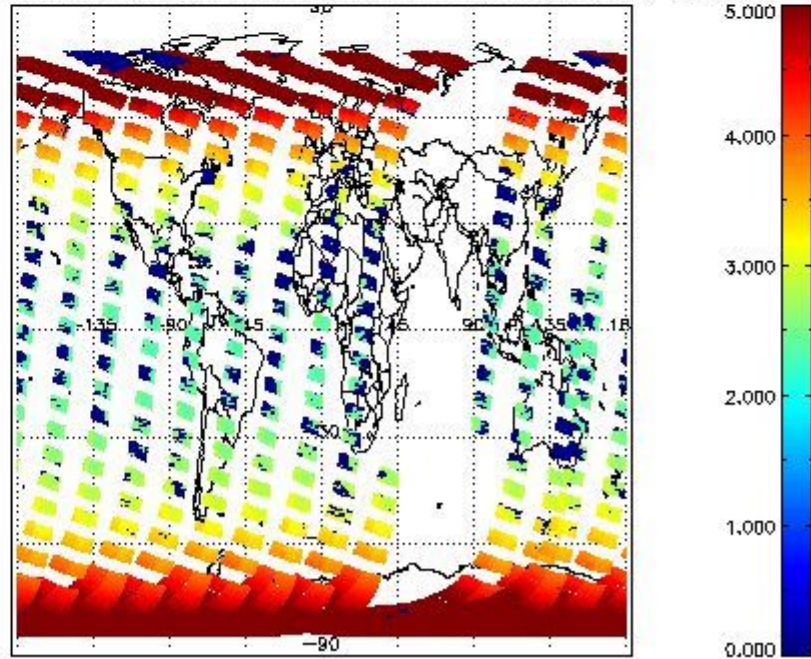
SCIOL2P\_NADUV3BRO\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



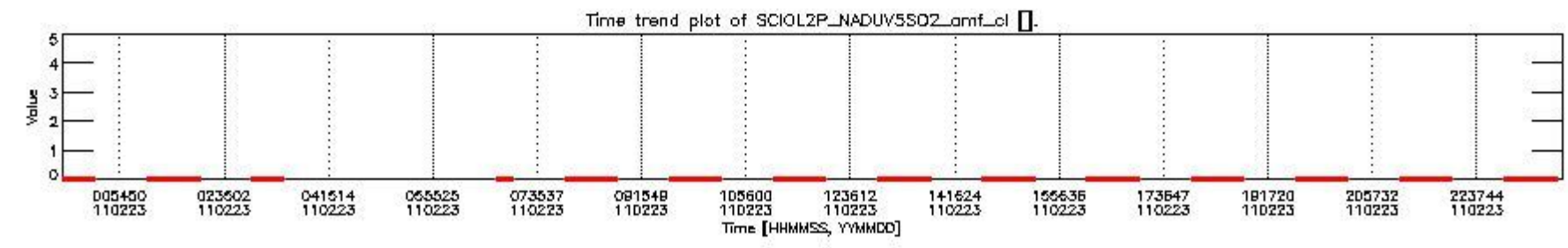
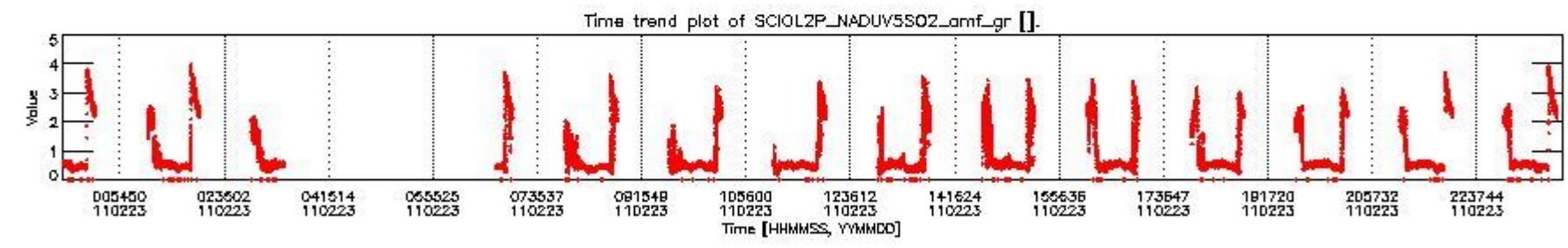
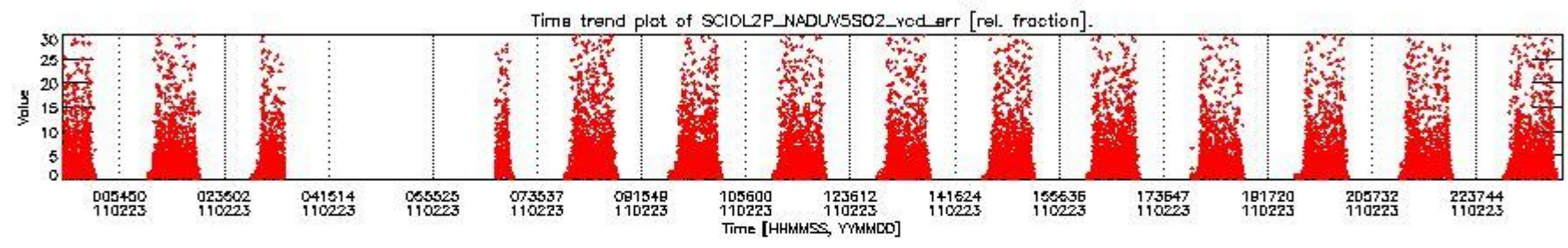
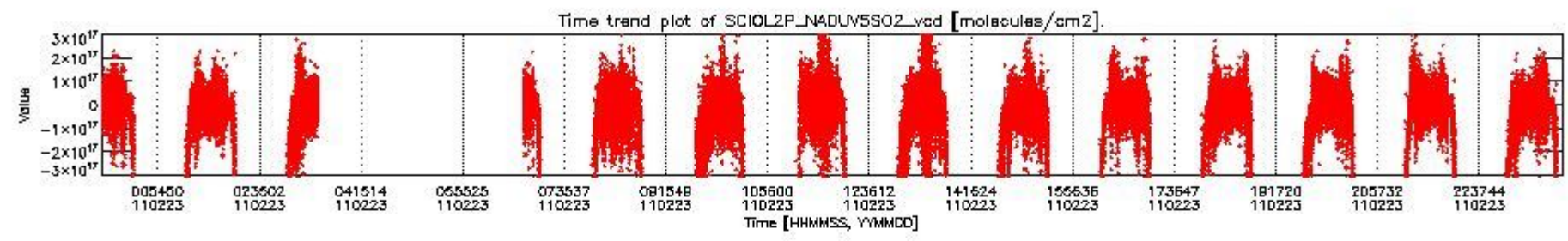
SCIOL2P\_NADUV3BRO\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



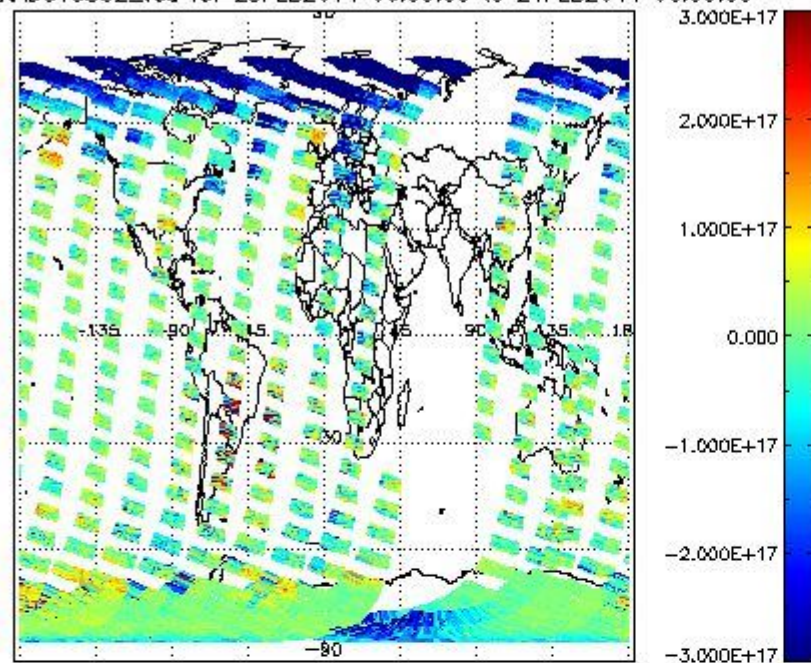
SCIOL2P\_NADUV3BRO\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



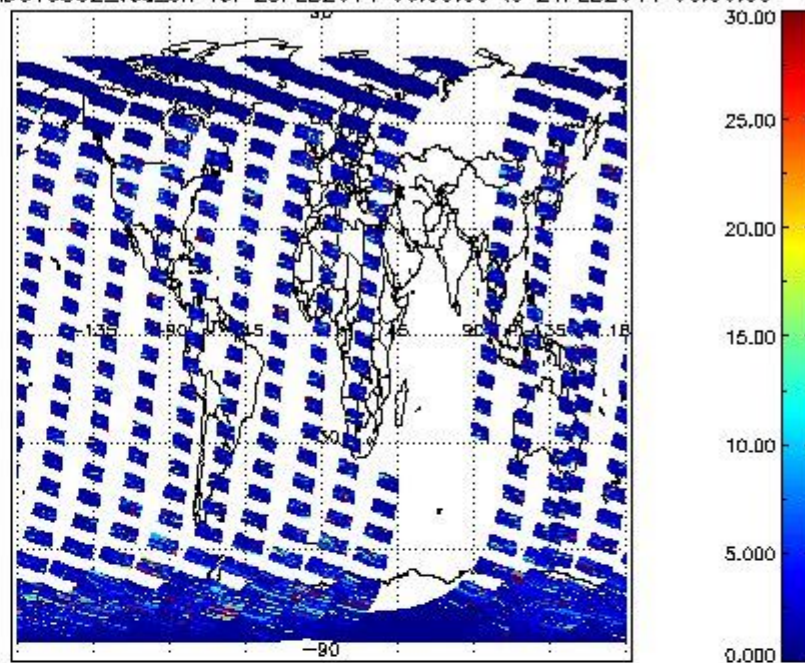
#### 2.2.2.4 SO2 (UV5)



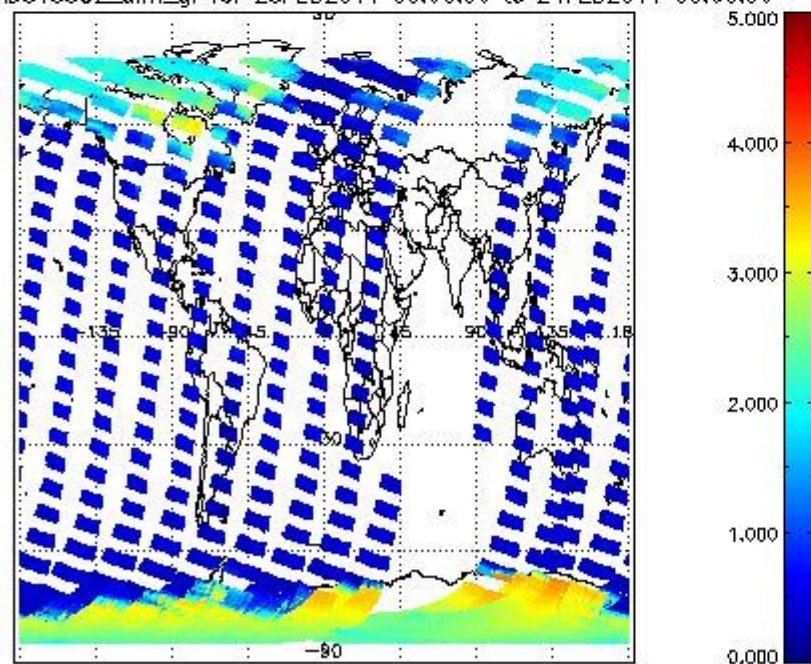
SCIOL2P\_NADUV5S02\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



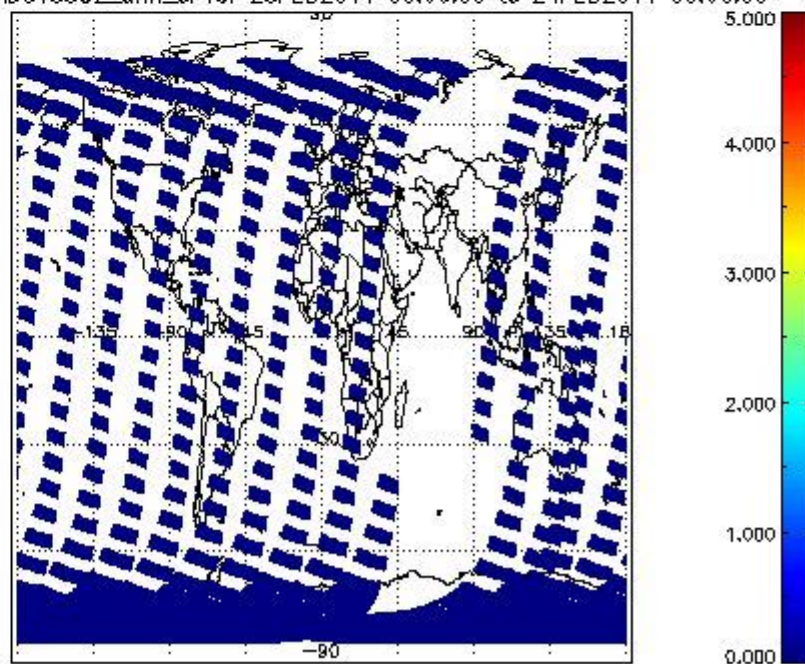
SCIOL2P\_NADUV5S02\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



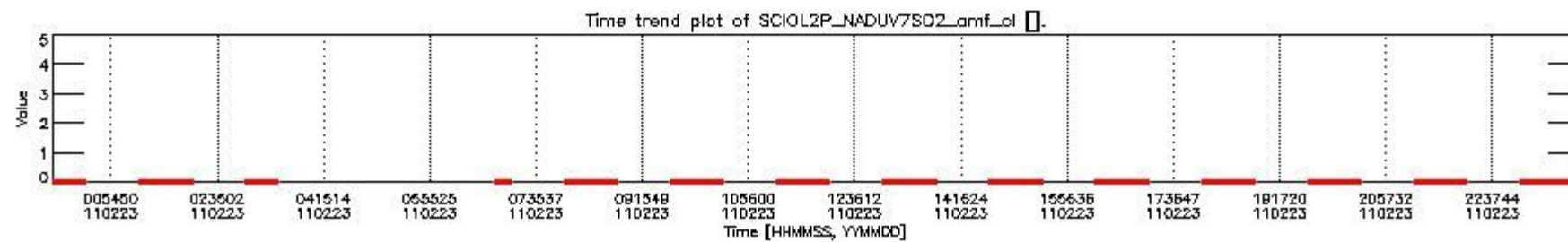
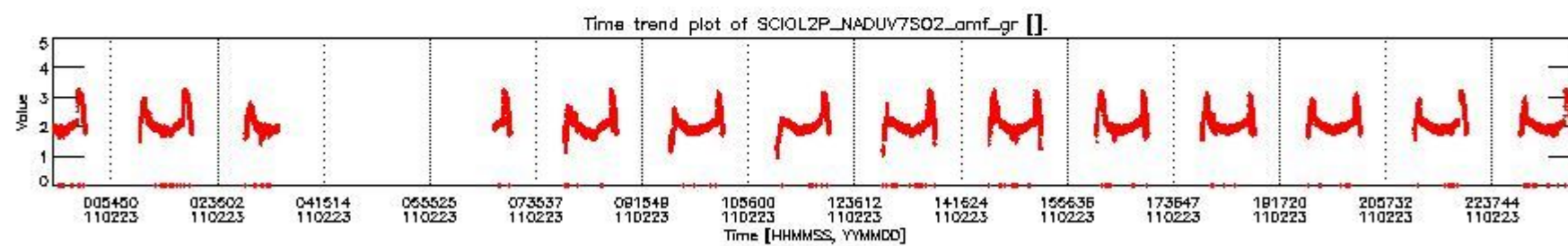
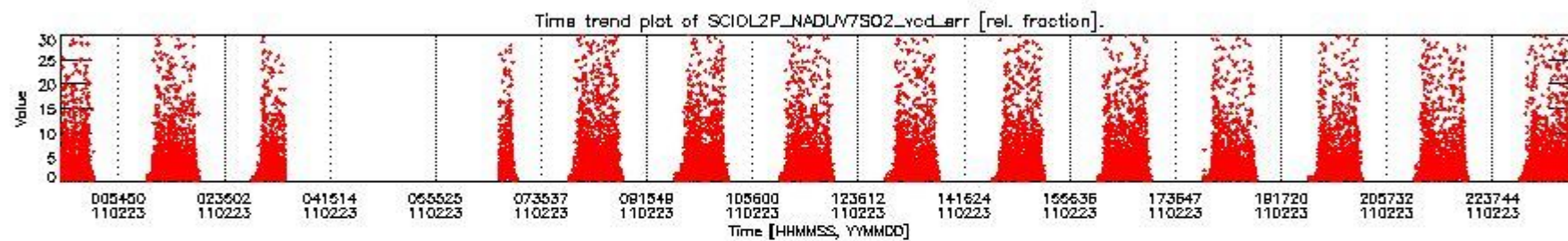
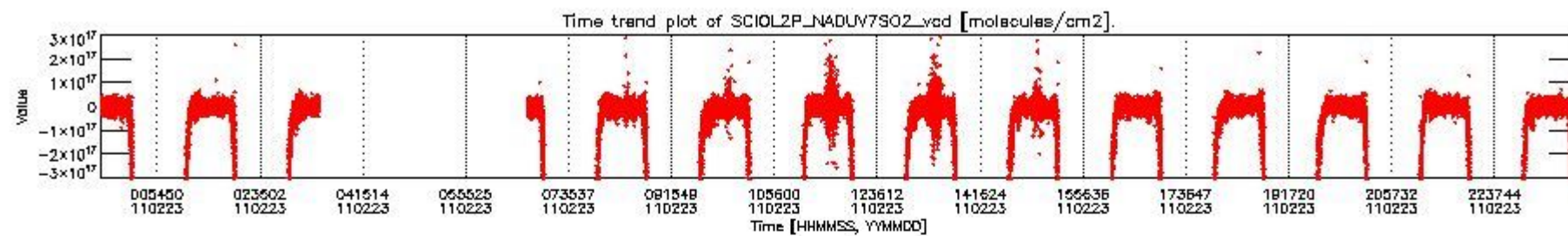
SCIOL2P\_NADUV5S02\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



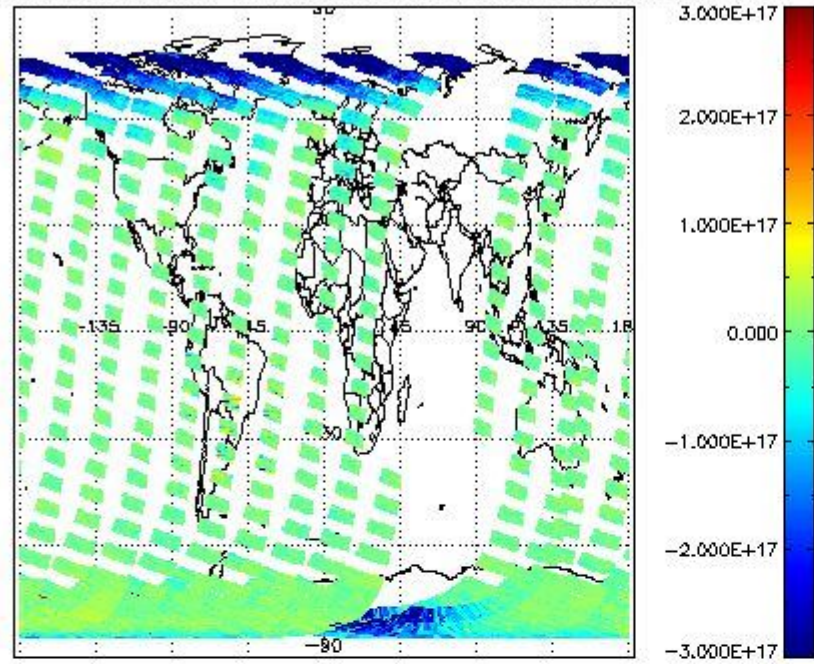
SCIOL2P\_NADUV5S02\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



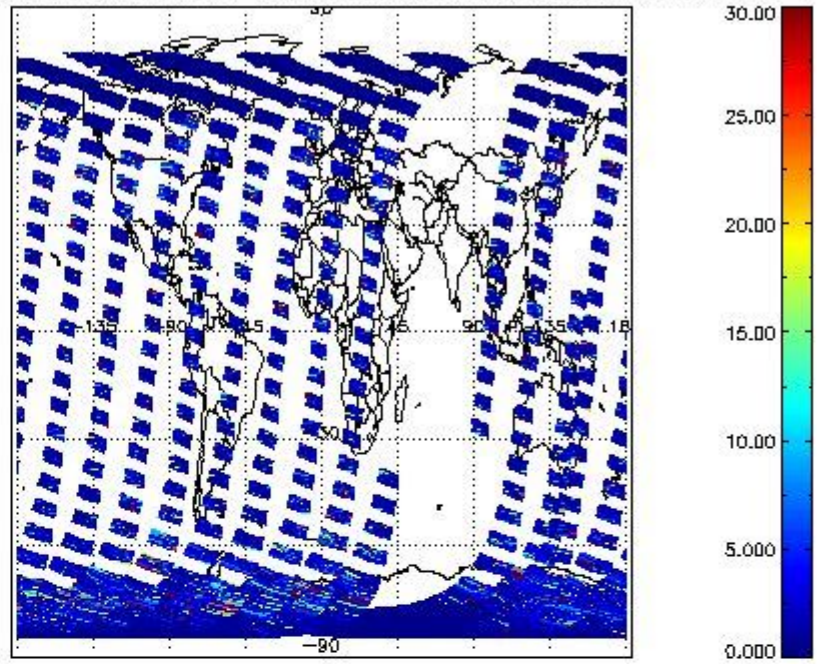
2.2.2.5 SO2 (UV7)



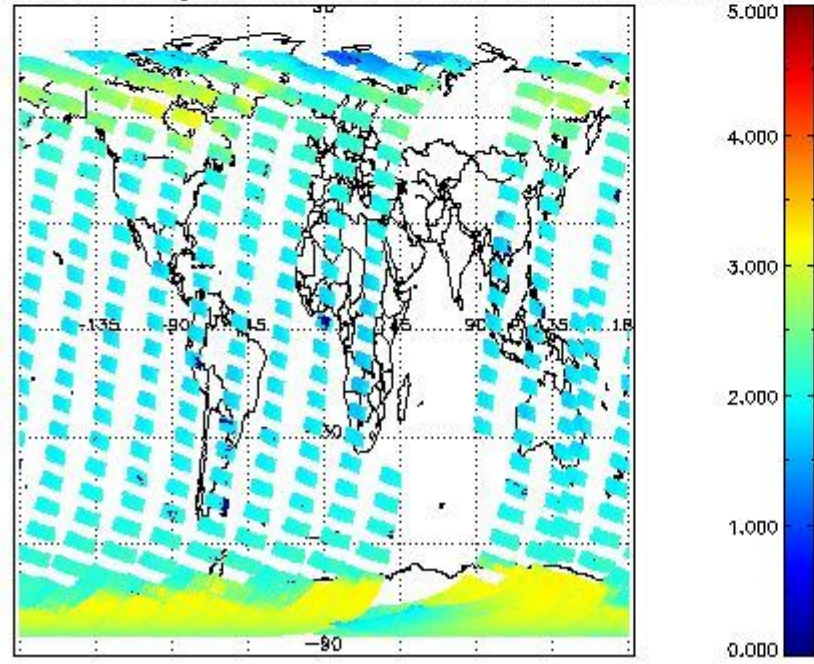
SCIOL2P\_NADUV7S02\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



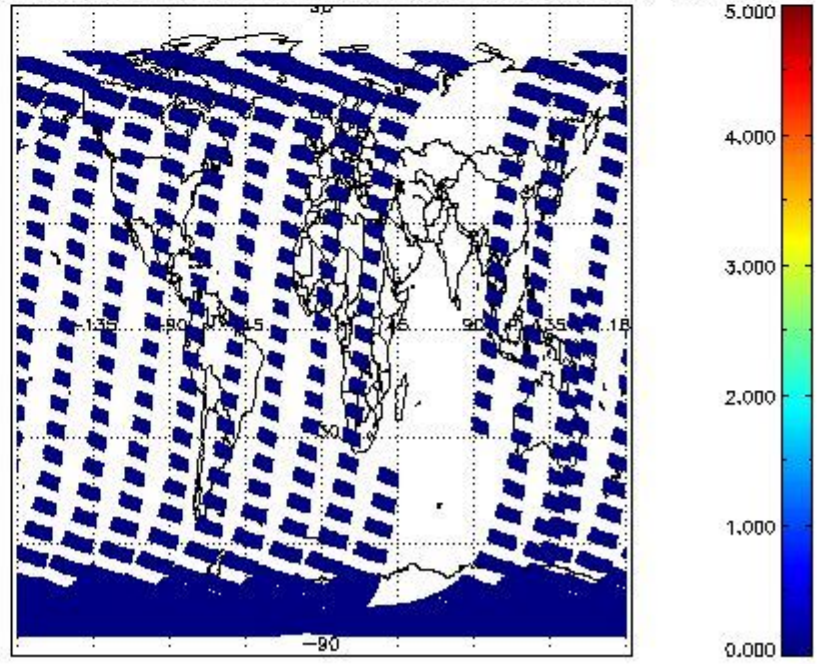
SCIOL2P\_NADUV7S02\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



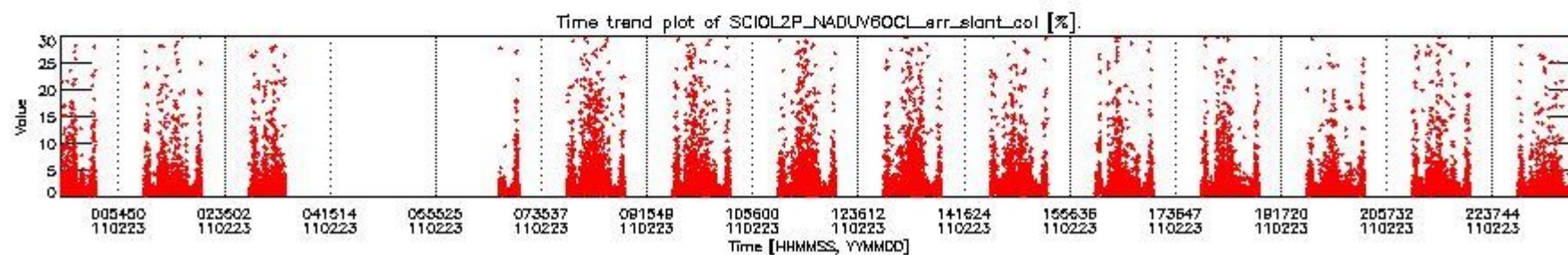
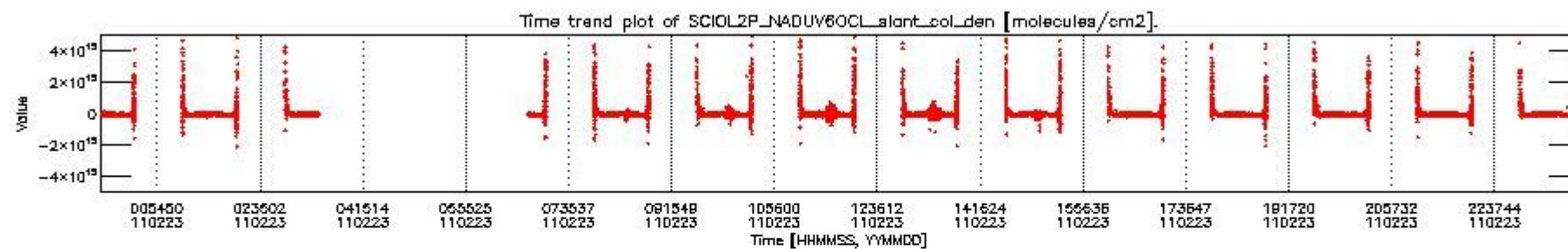
SCIOL2P\_NADUV7S02\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



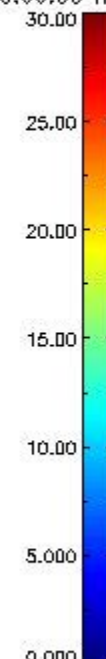
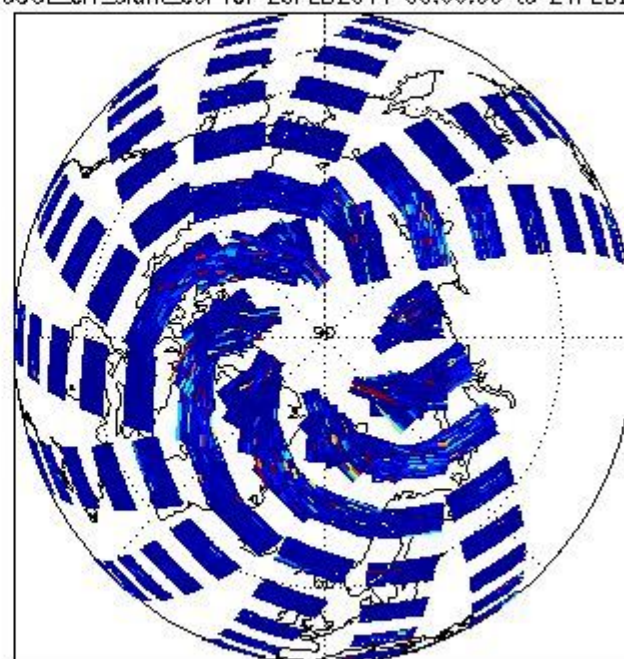
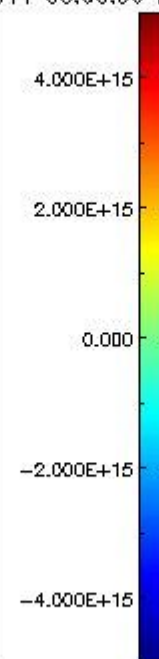
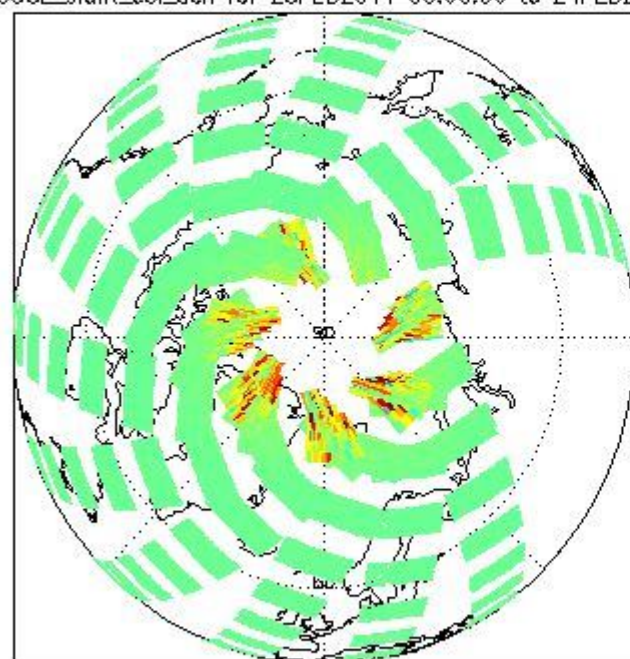
SCIOL2P\_NADUV7S02\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



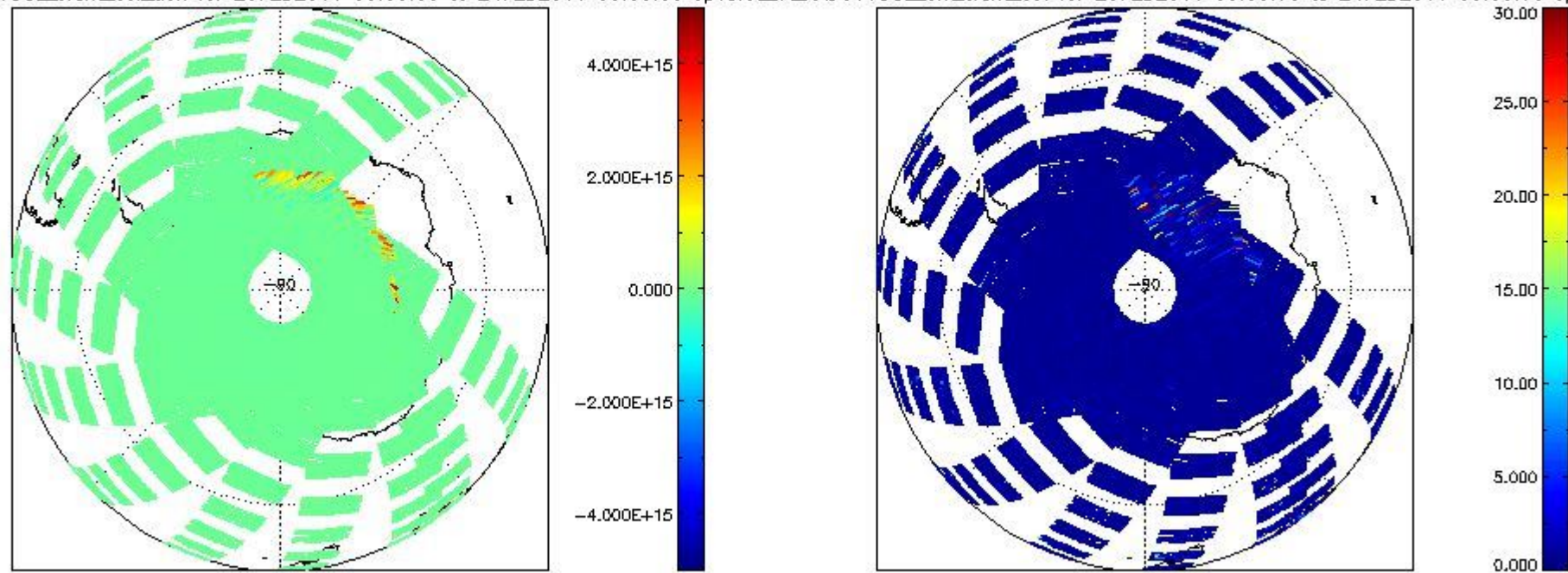
2.2.2.6 OCIO (UV6)



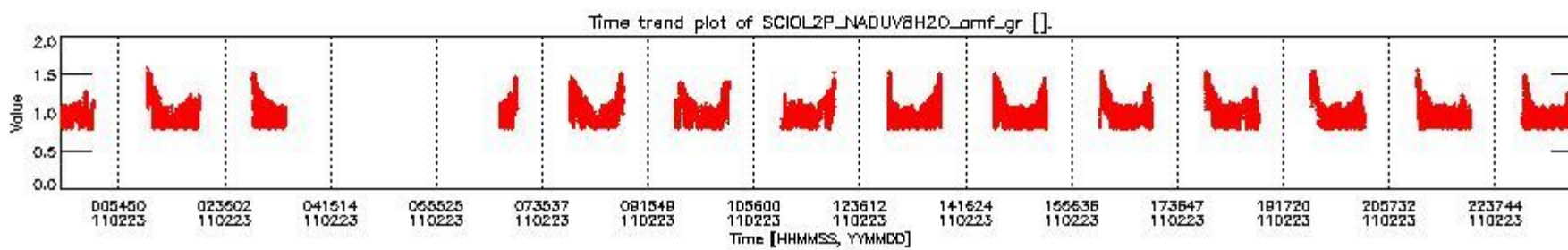
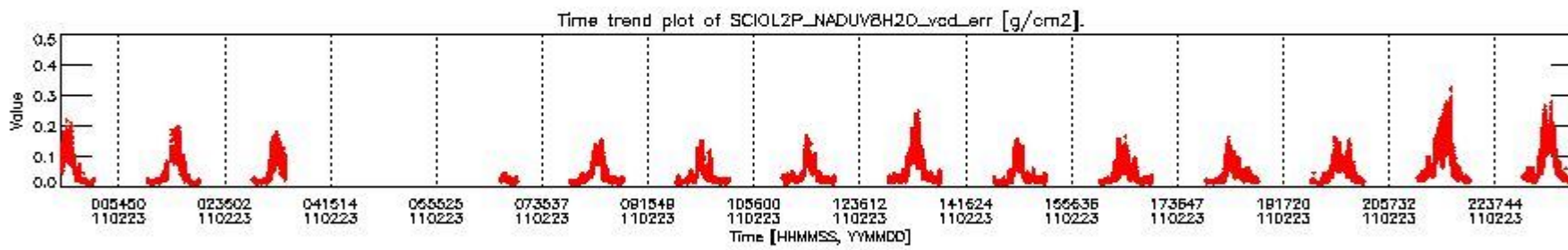
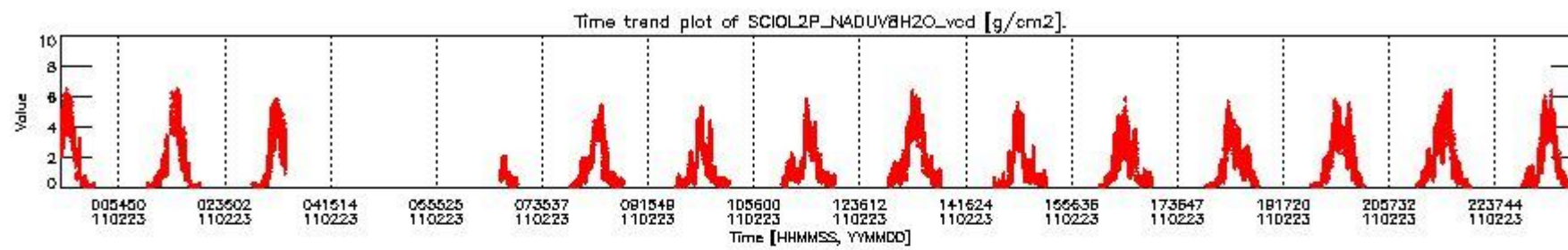
CIOL2P\_NADUV6OCL\_slant\_col\_den for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 np



CIOL2P\_NADUV6OCL\_slant\_col\_den for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 sp;CIOL2P\_NADUV6OCL\_err\_slant\_col for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 sp

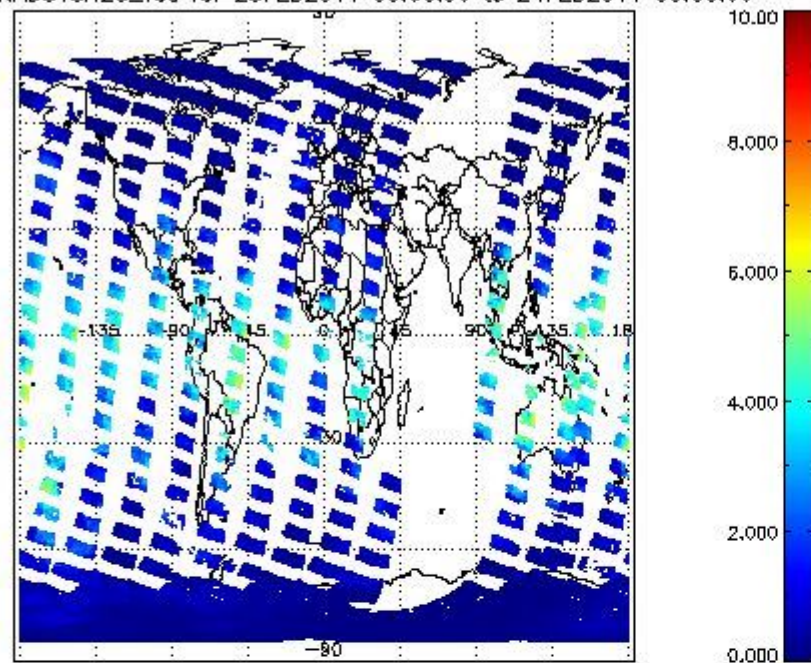


### 2.2.2.7 H2O (UV8)

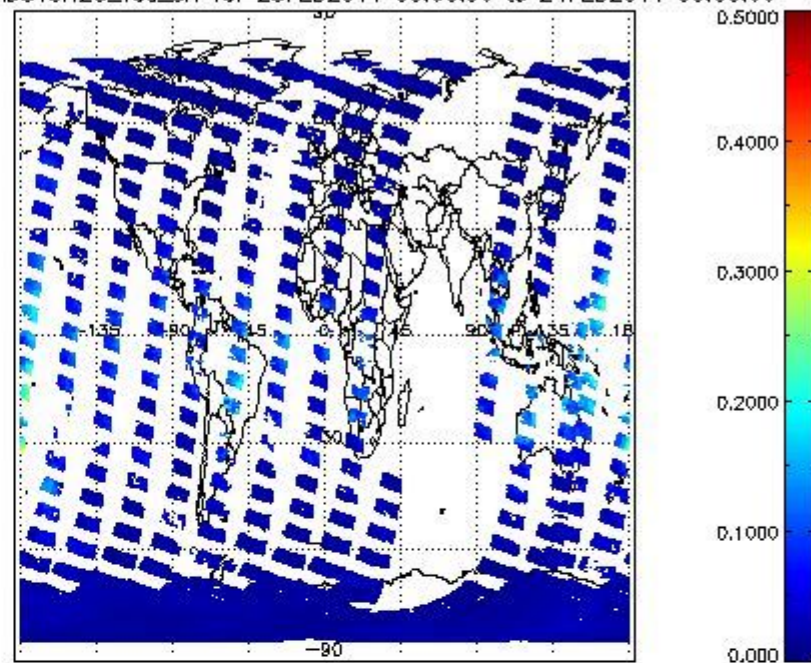




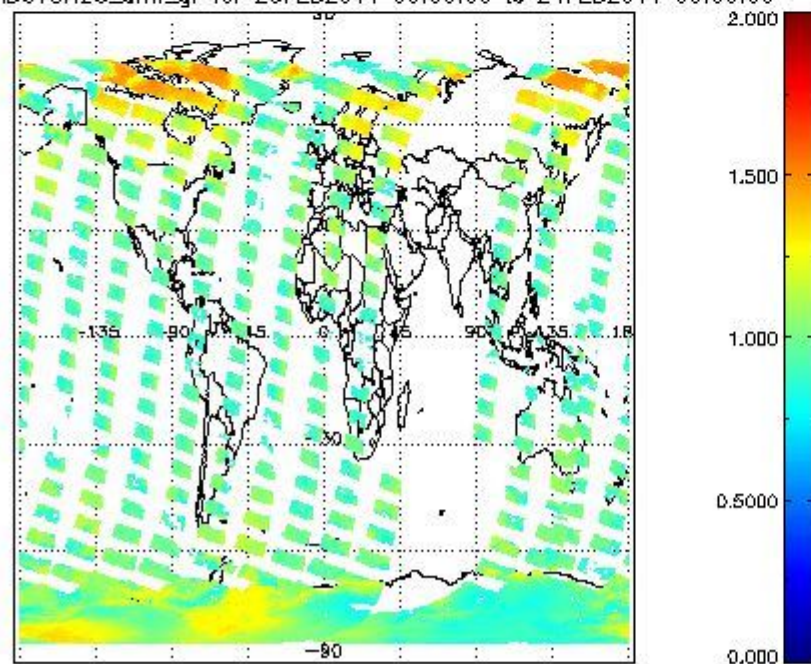
SCIOL2P\_NADUV8H2O\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



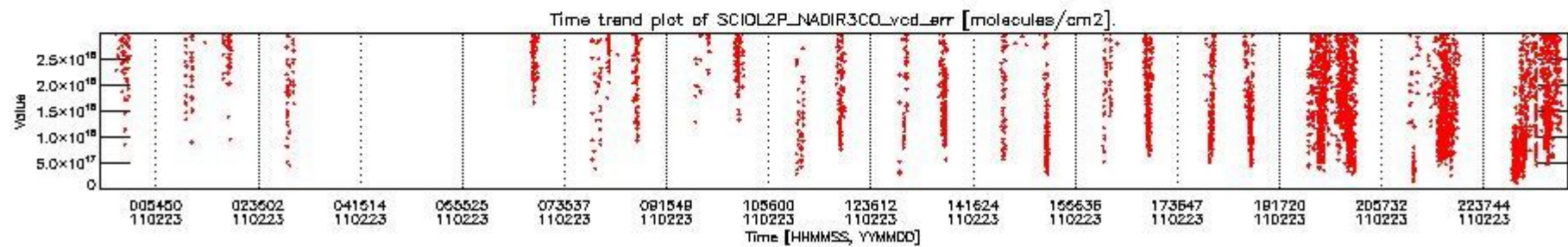
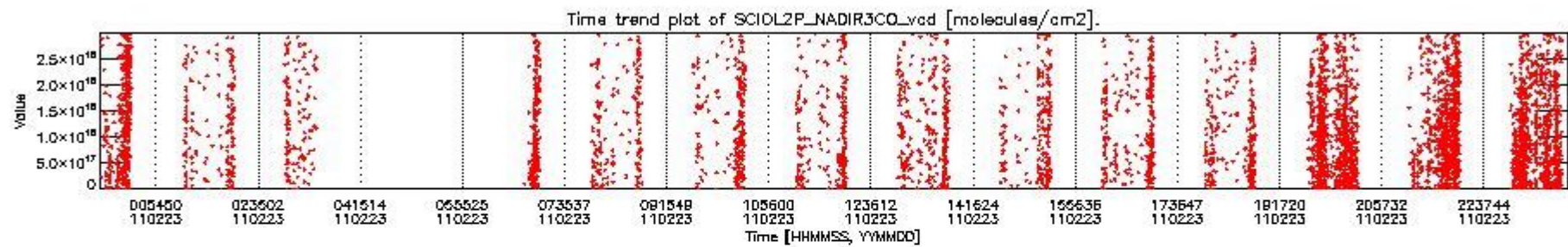
SCIOL2P\_NADUV8H2O\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



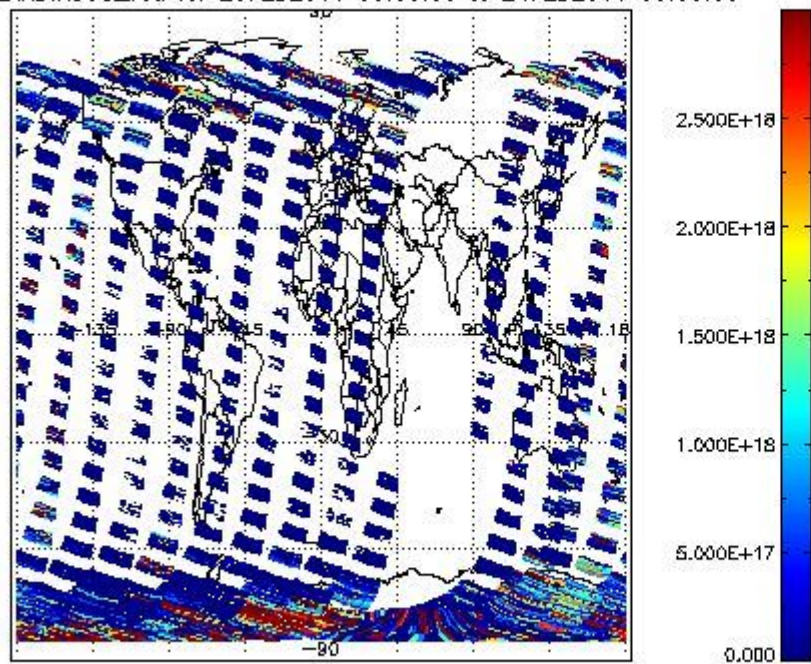
SCIOL2P\_NADUV8H2O\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



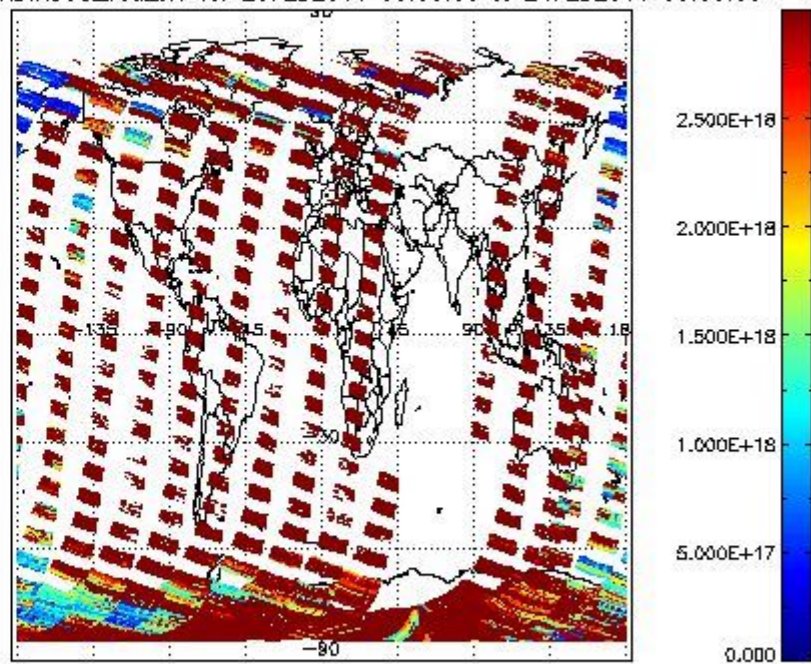
2.2.2.8 CO (IR3)



SCIO2P\_NADIR3CO\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



SCIO2P\_NADIR3CO\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



### 2.2.3 Limb

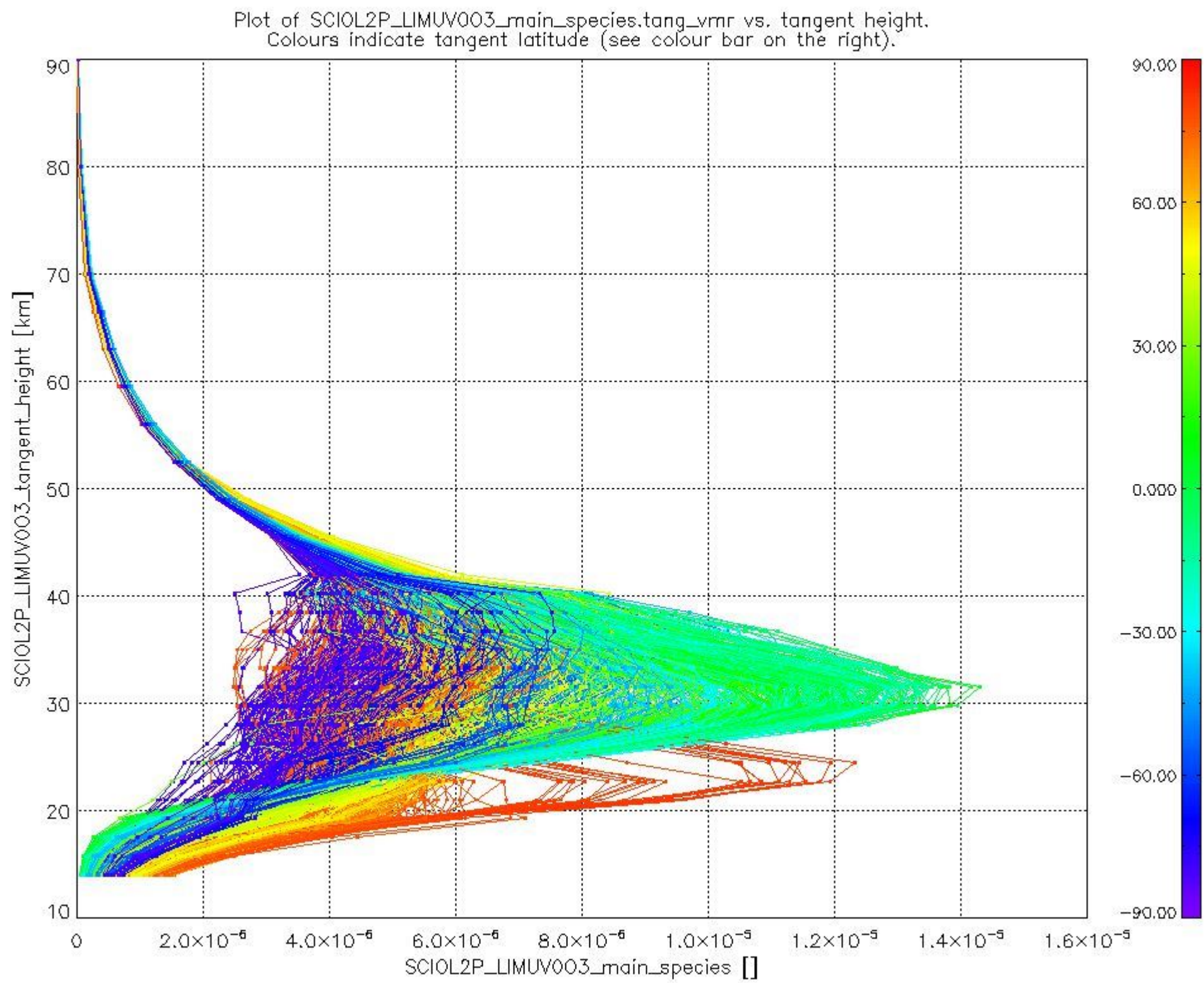
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIO2P_LIMUV003_main_species
1	SCIO2P_LIMUV1NO2_main_species
2	SCIO2P_LIMUV3BRO_main_species

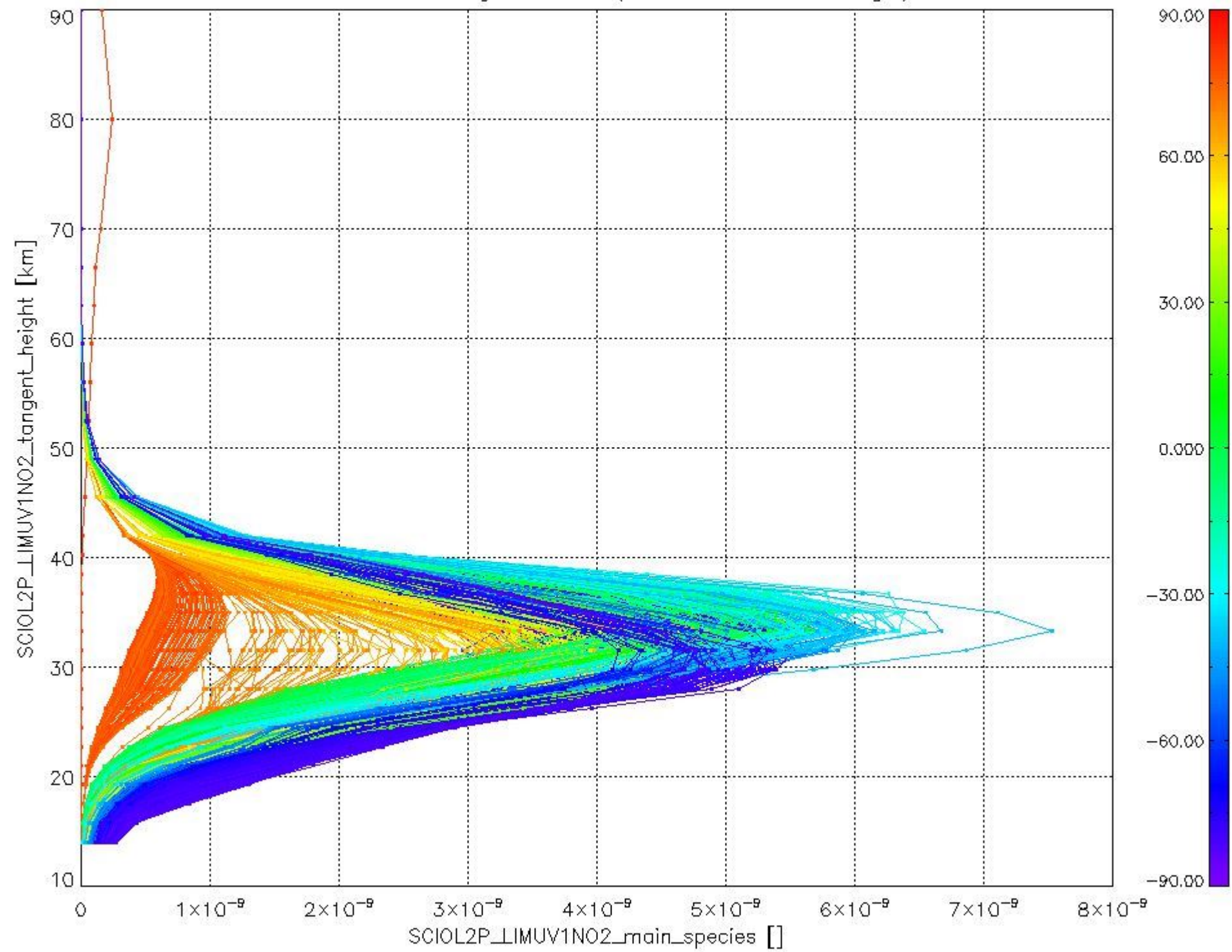
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



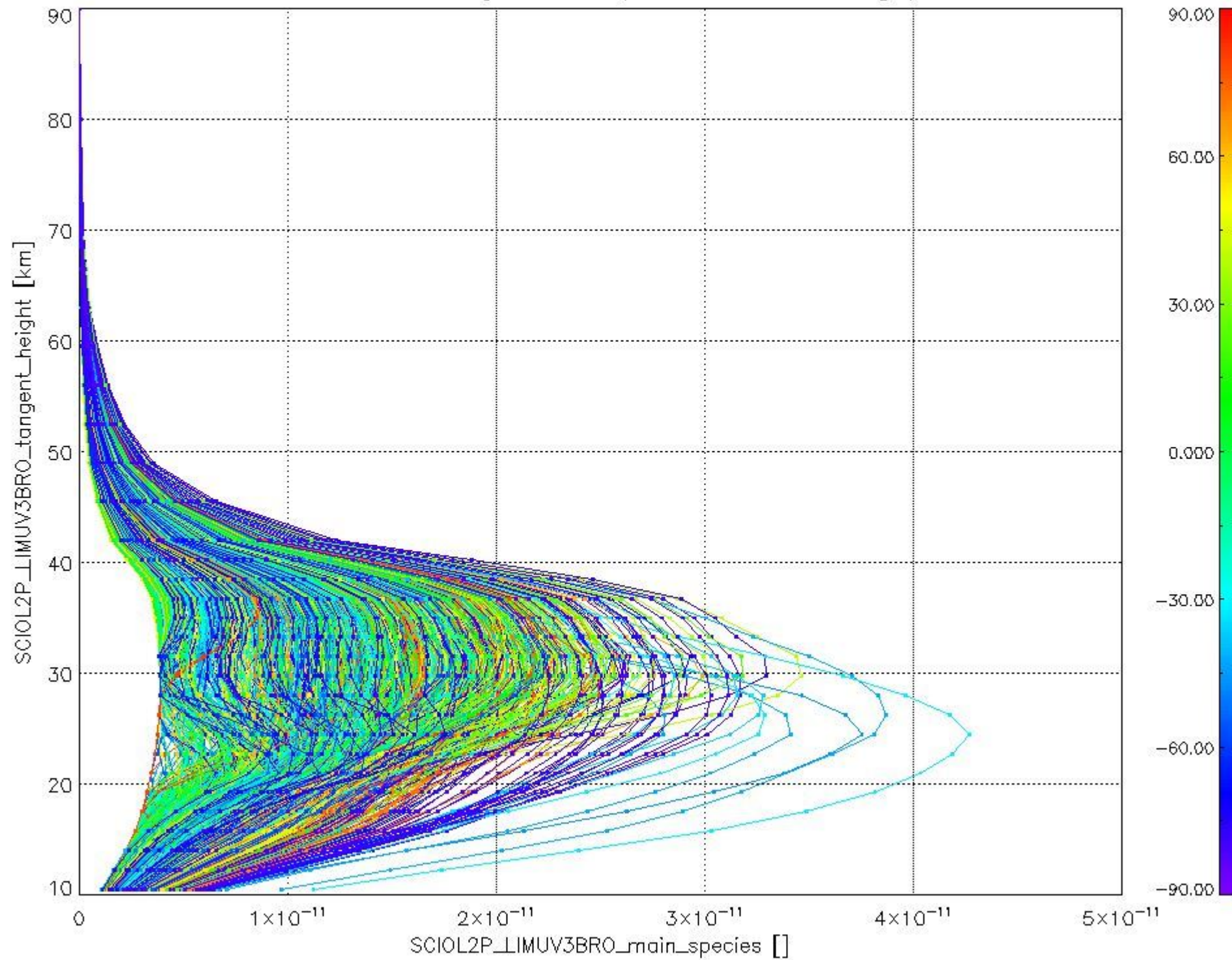
2.2.3.2 NO2 (UV1)

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).

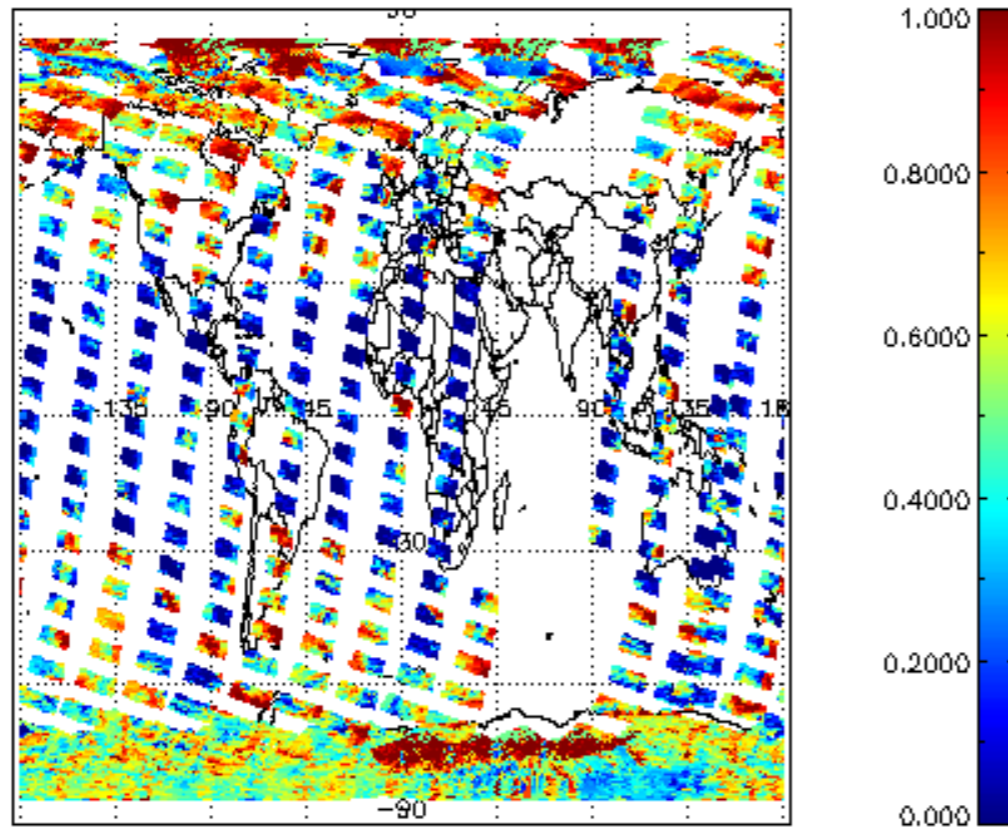


### 2.3 ADF monitoring

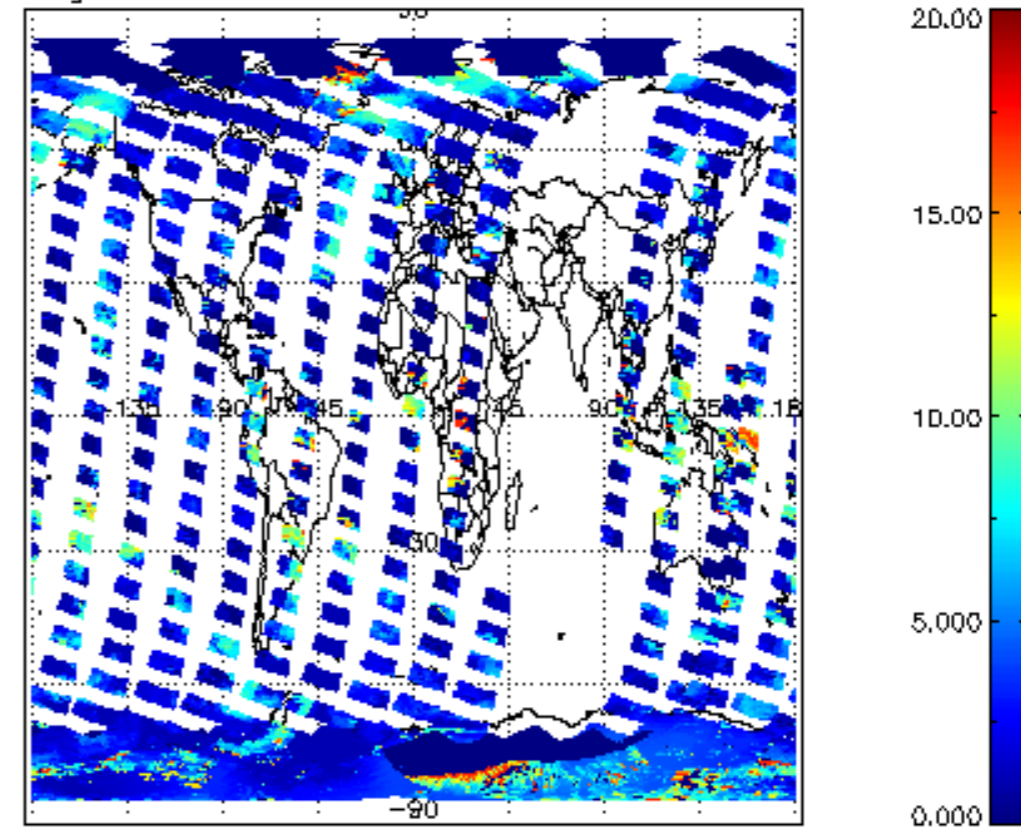
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110301_110036_20110222_194203_20110224_194203
3	SCI_MF1_AXVIEC20110301_110137_20110223_190518_20110225_190518



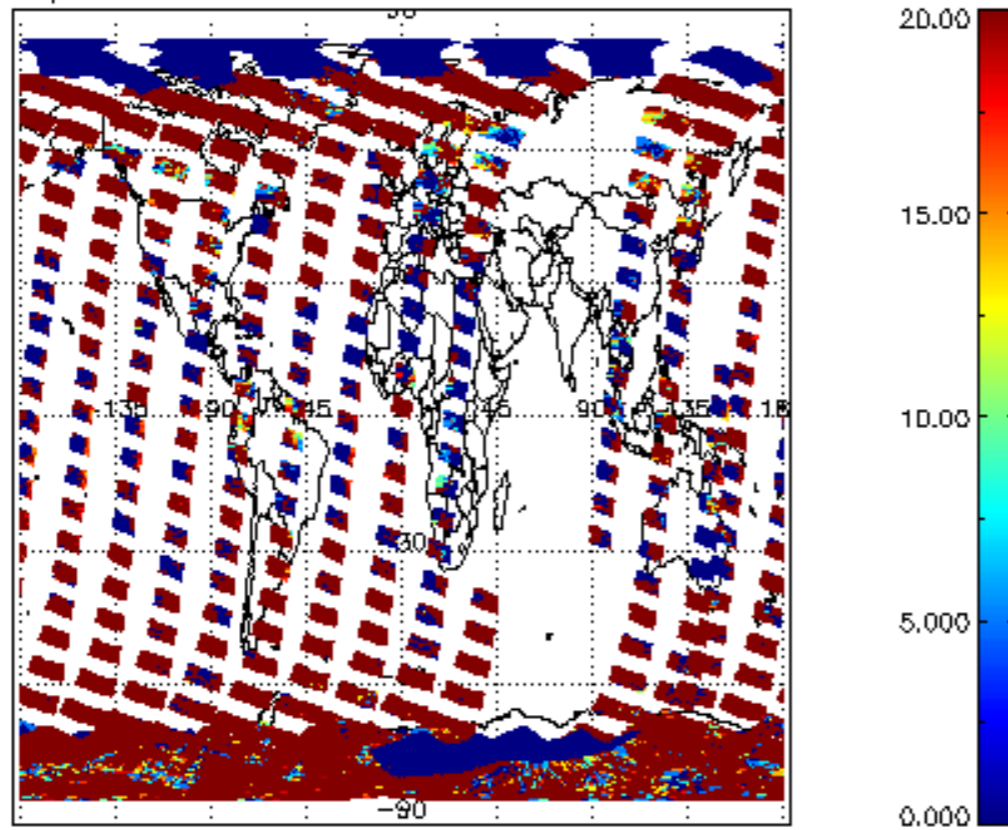
cl\_frac for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



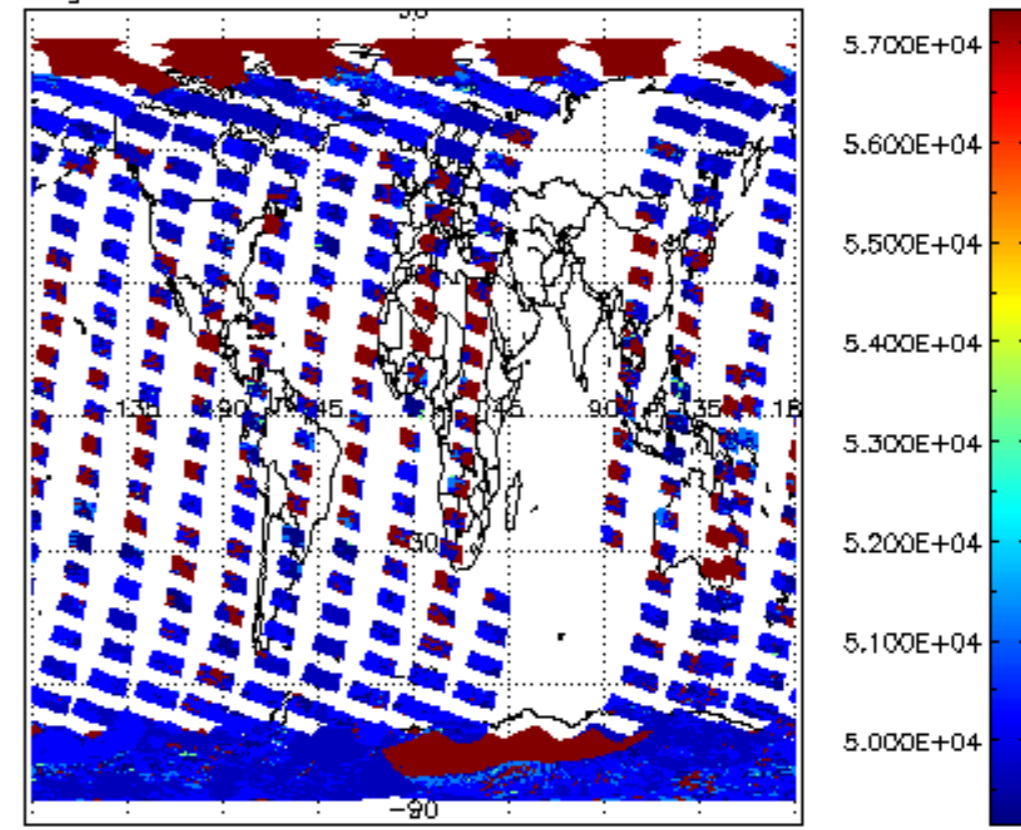
cl\_top\_height for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

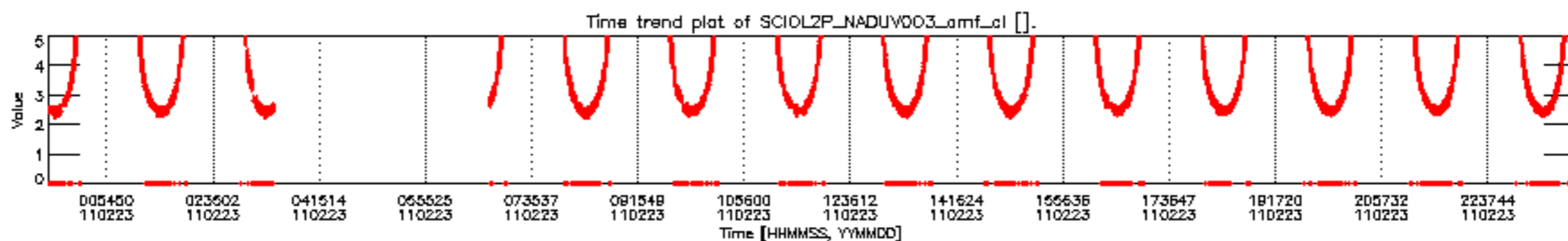
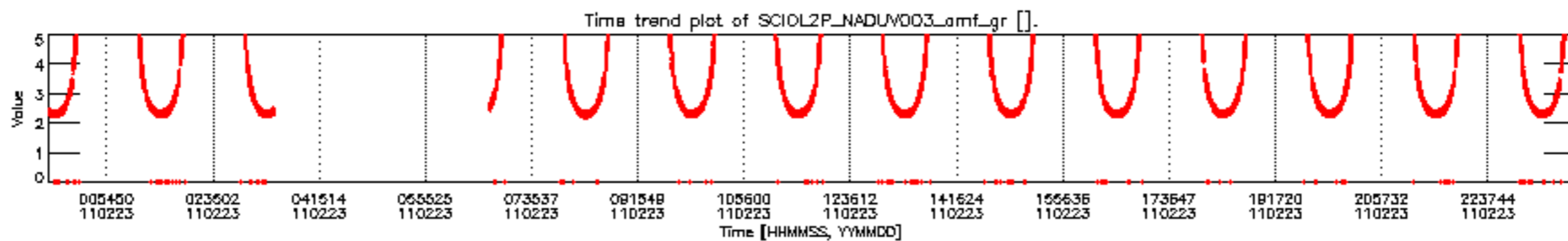
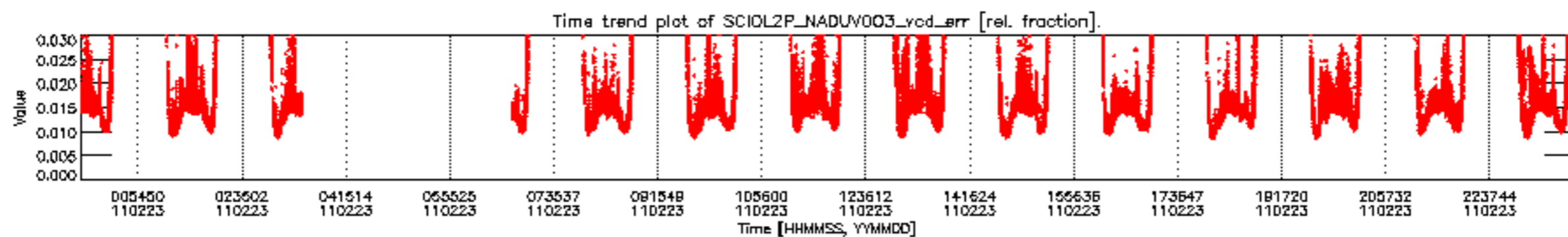
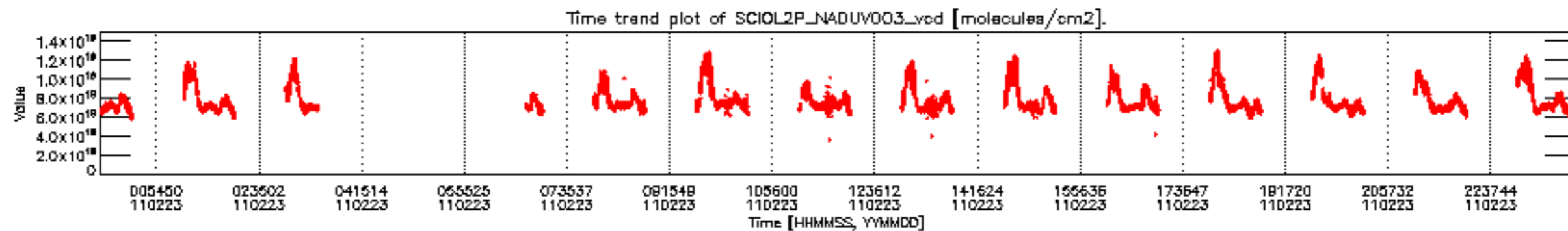


cl\_opt\_depth for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



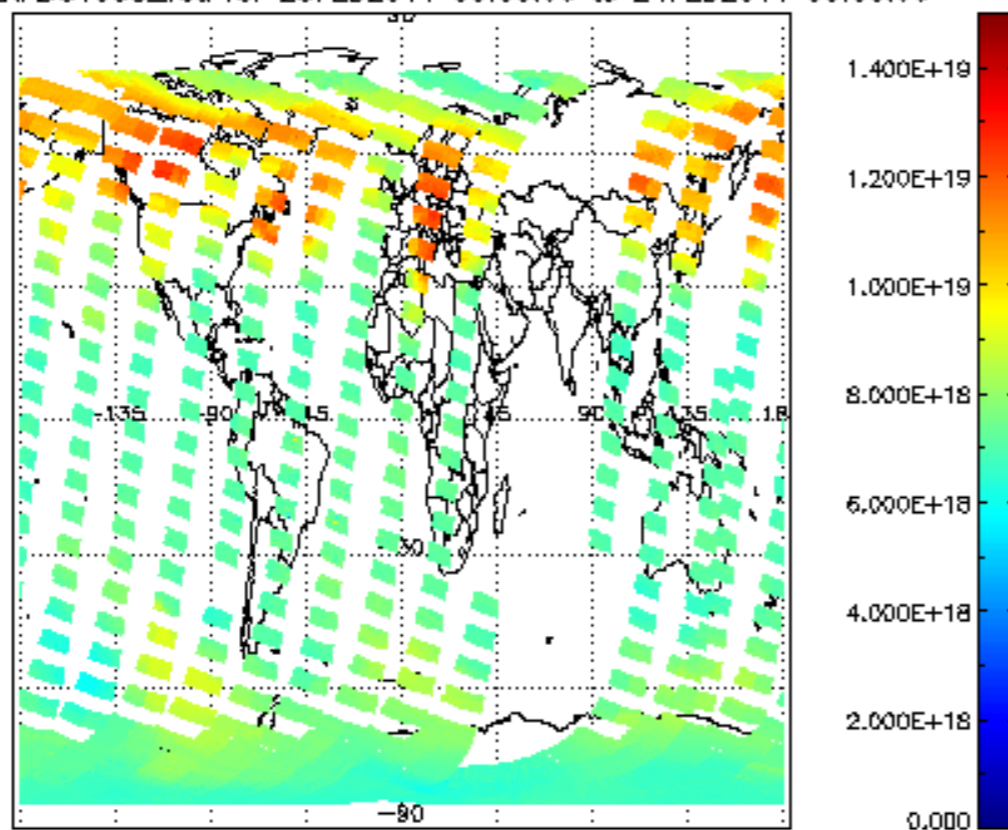
cloud\_flags for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



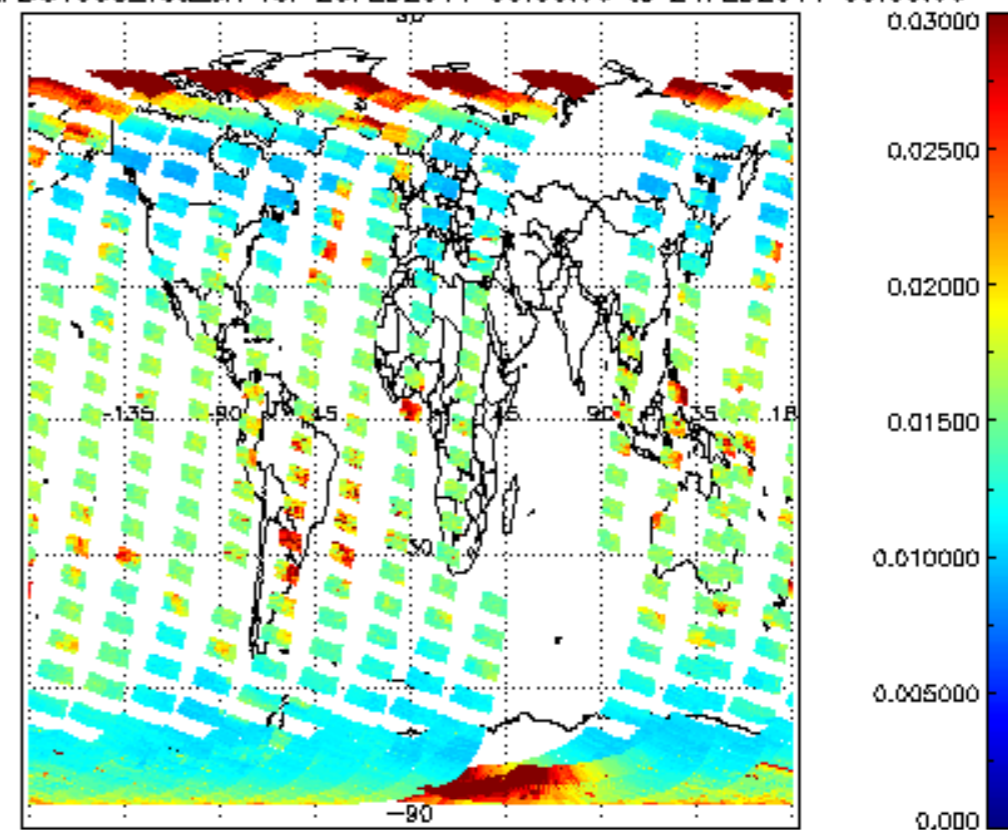




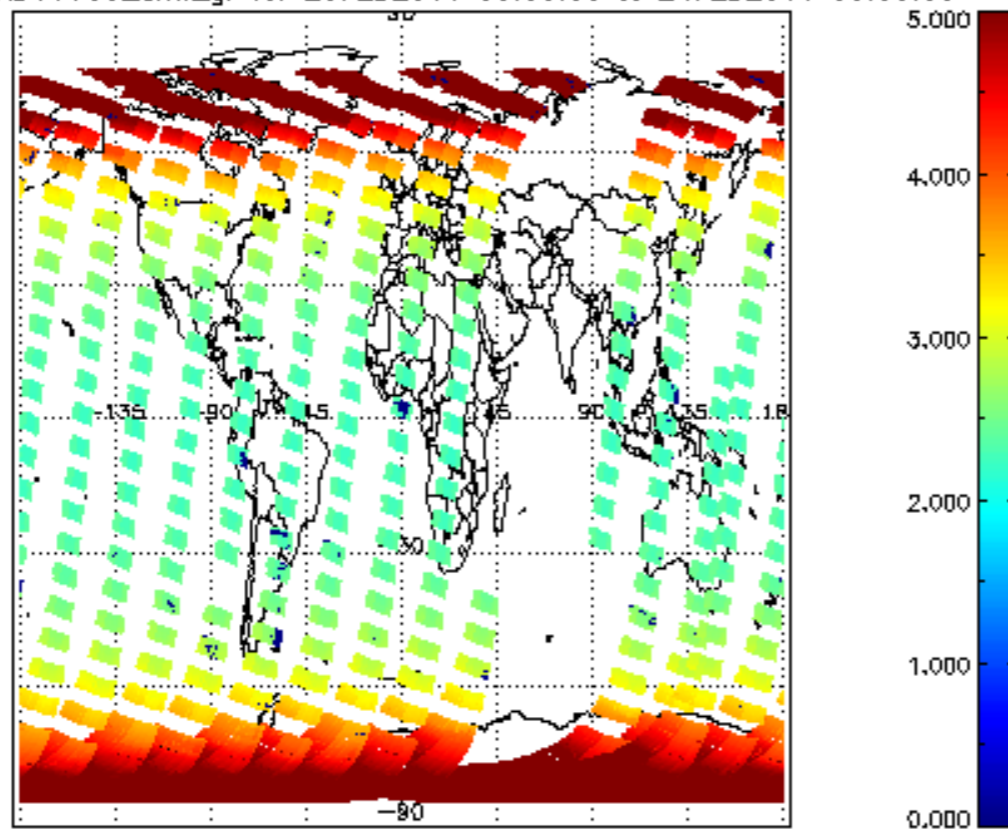
SCIOL2P\_NADUV003\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



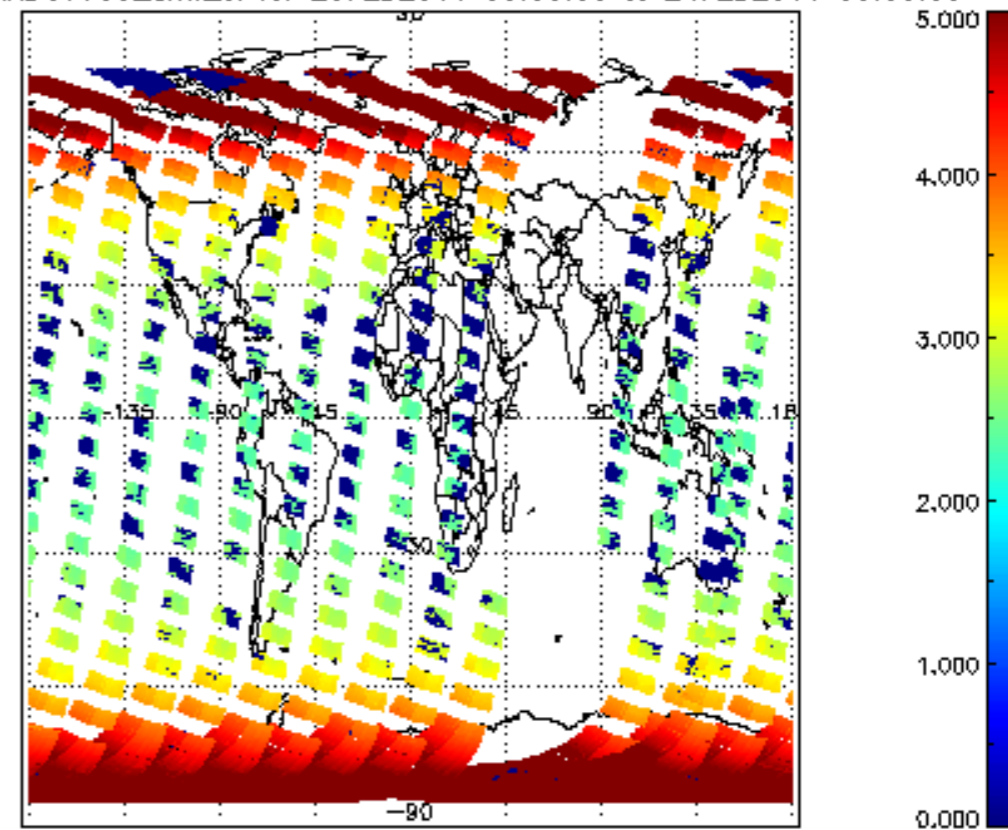
SCIOL2P\_NADUV003\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

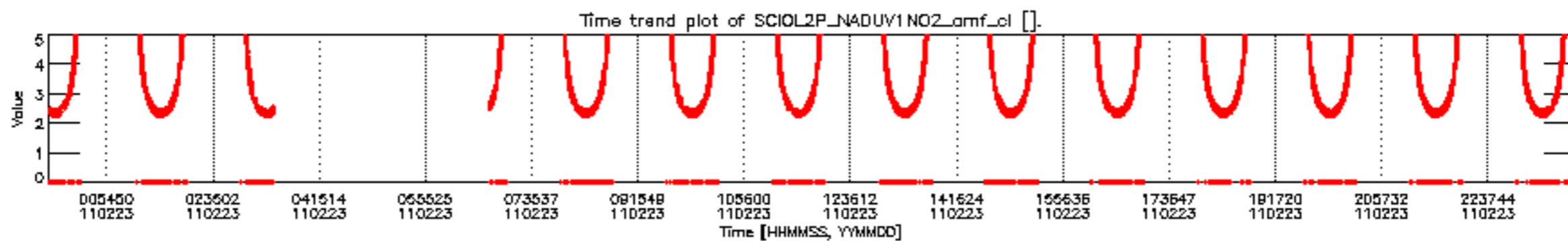
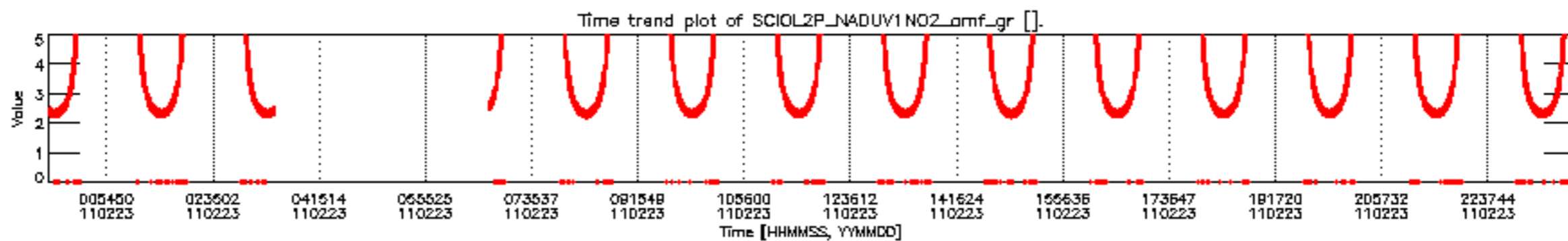
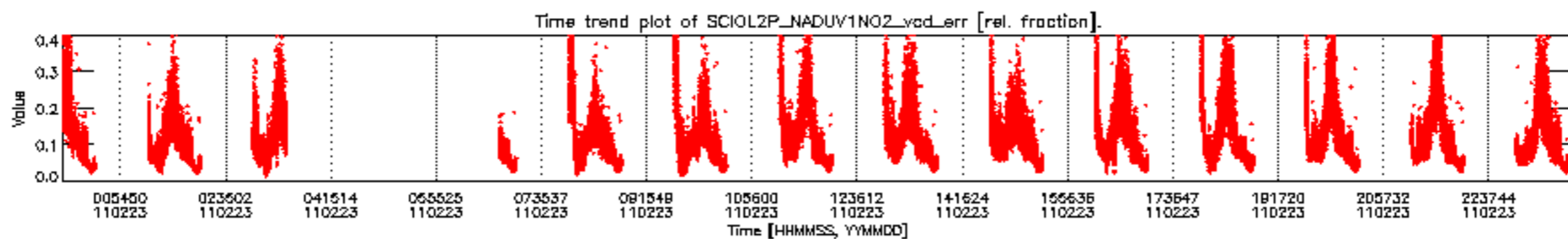
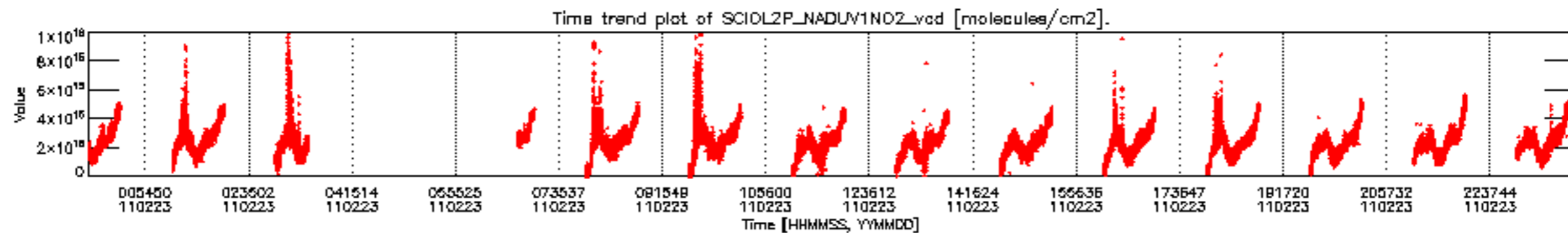


SCIOL2P\_NADUV003\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

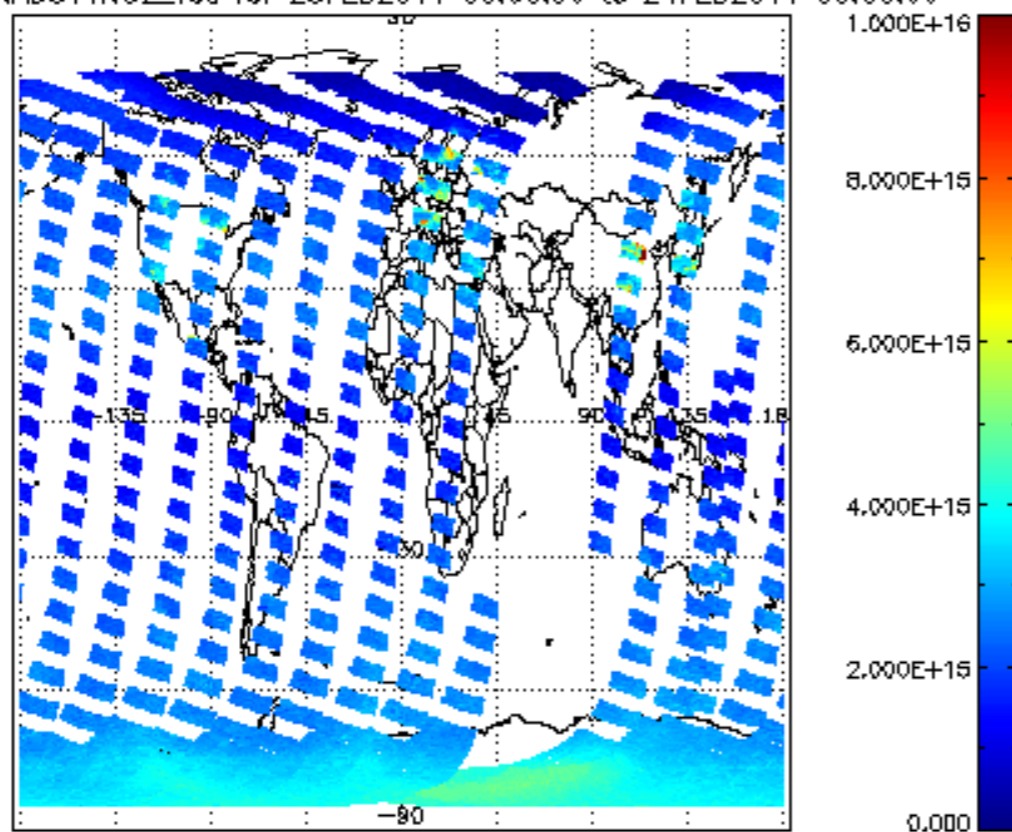


SCIOL2P\_NADUV003\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

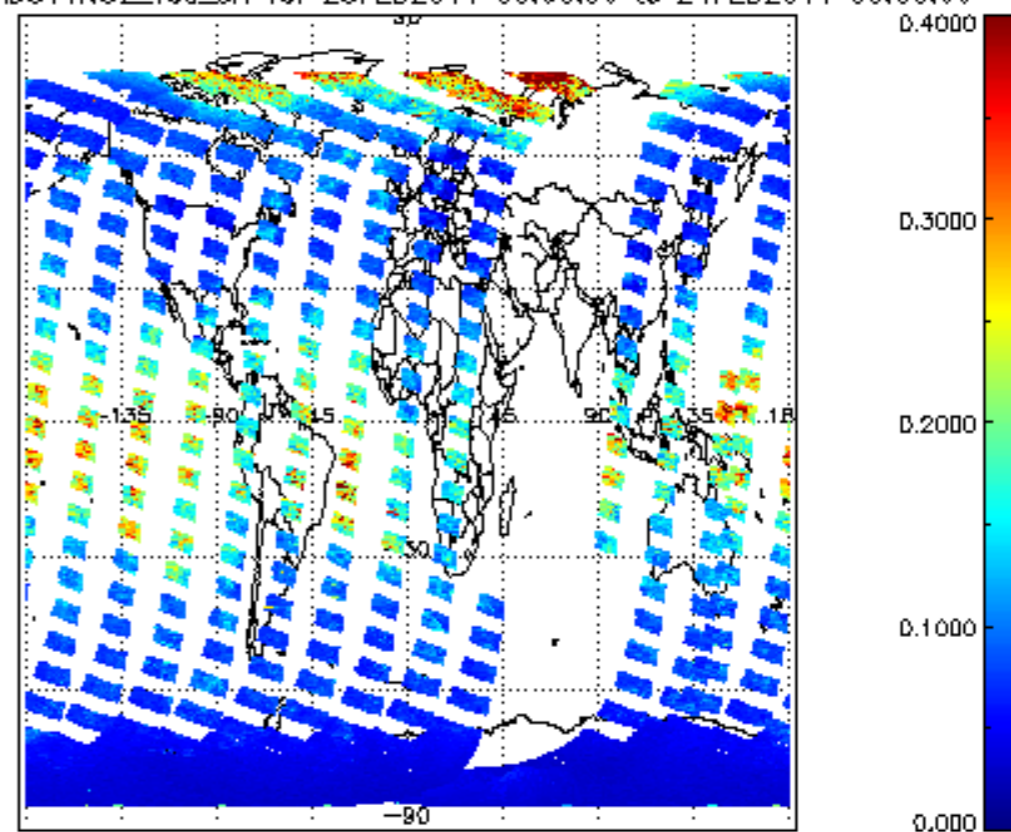




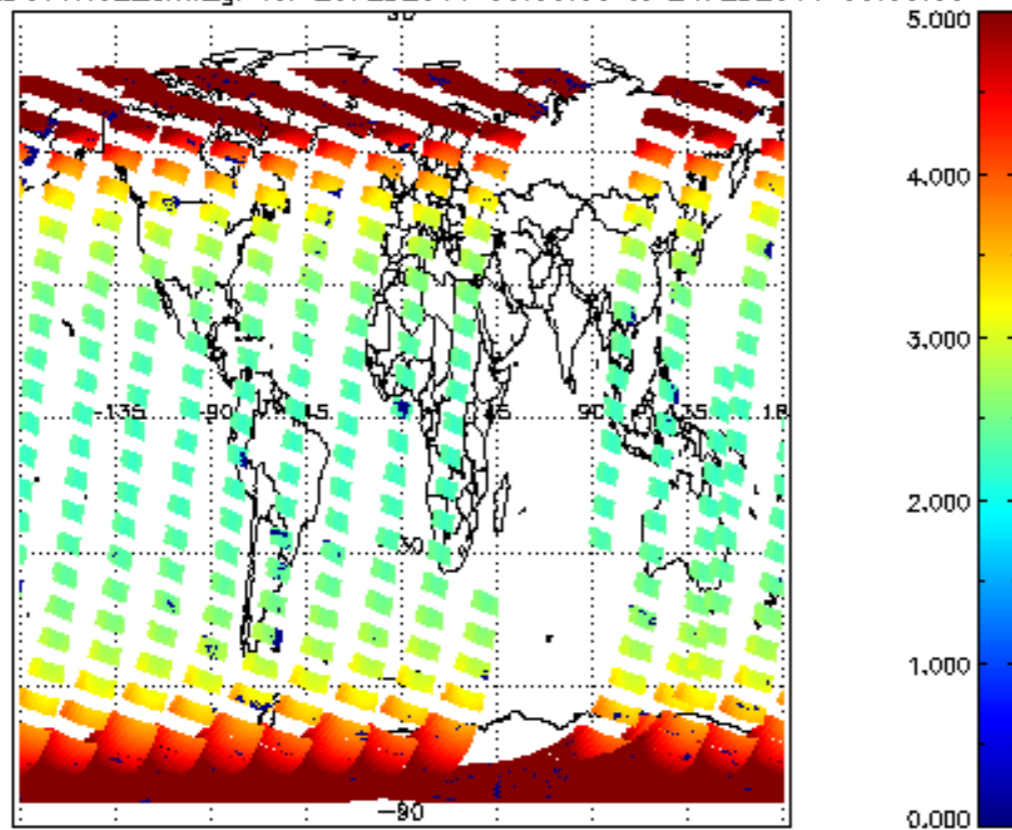
SCIOL2P\_NADUV1N02\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



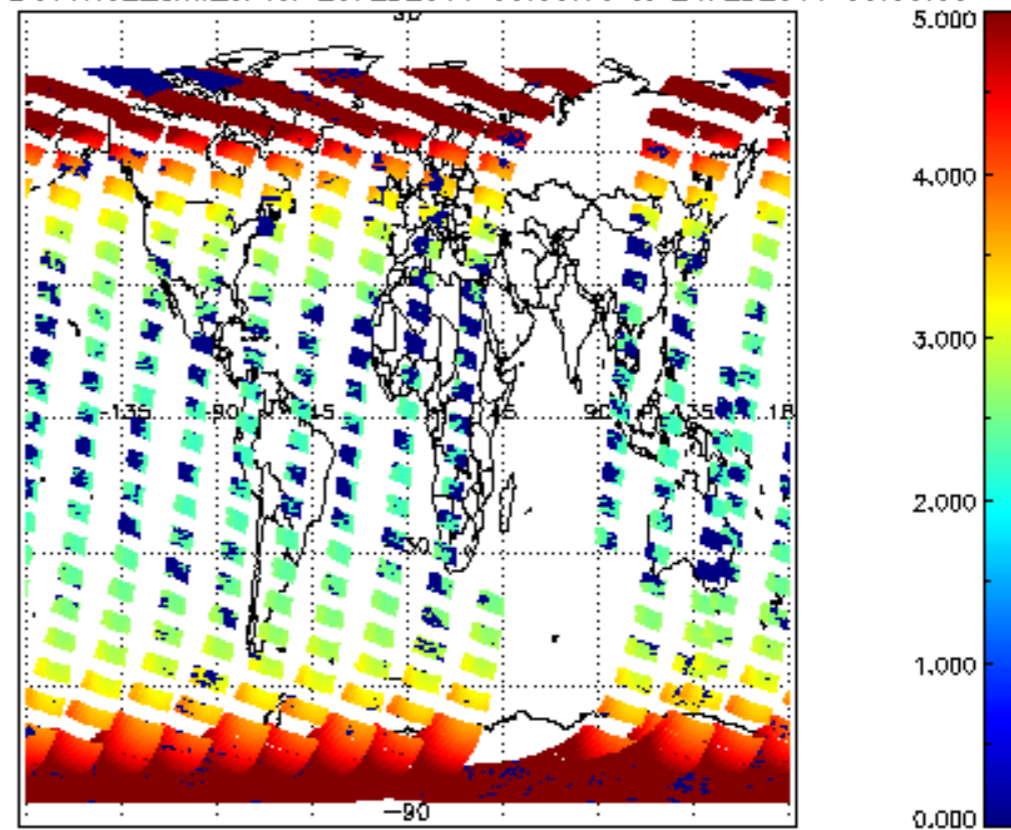
SCIOL2P\_NADUV1N02\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

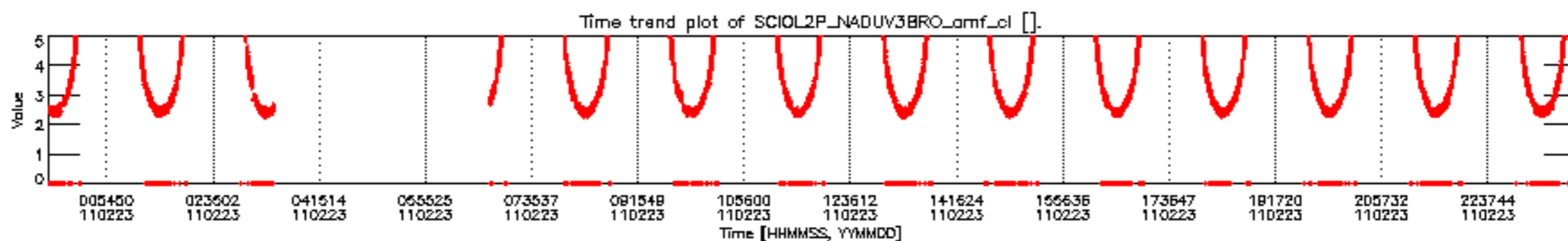
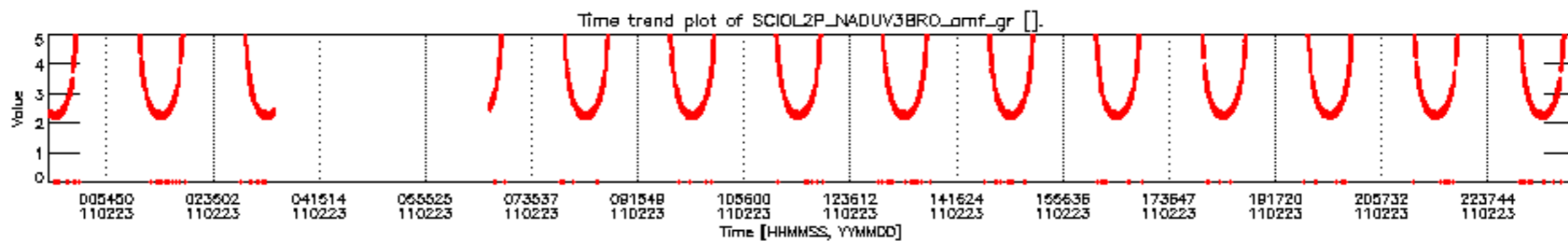
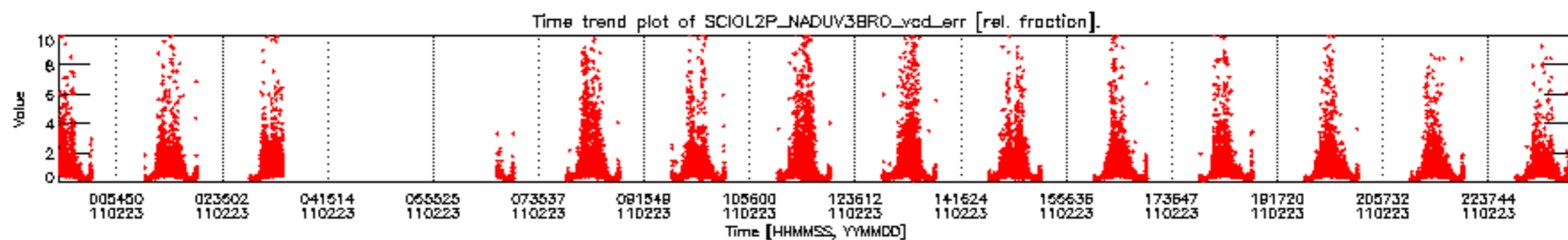
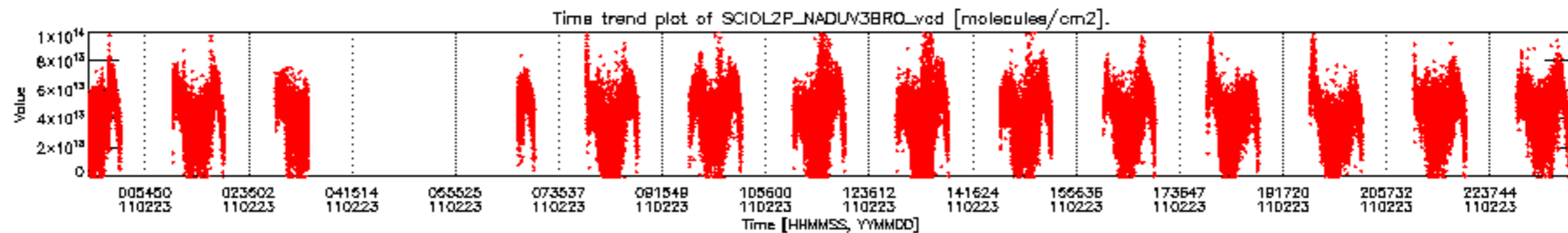


SCIOL2P\_NADUV1N02\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

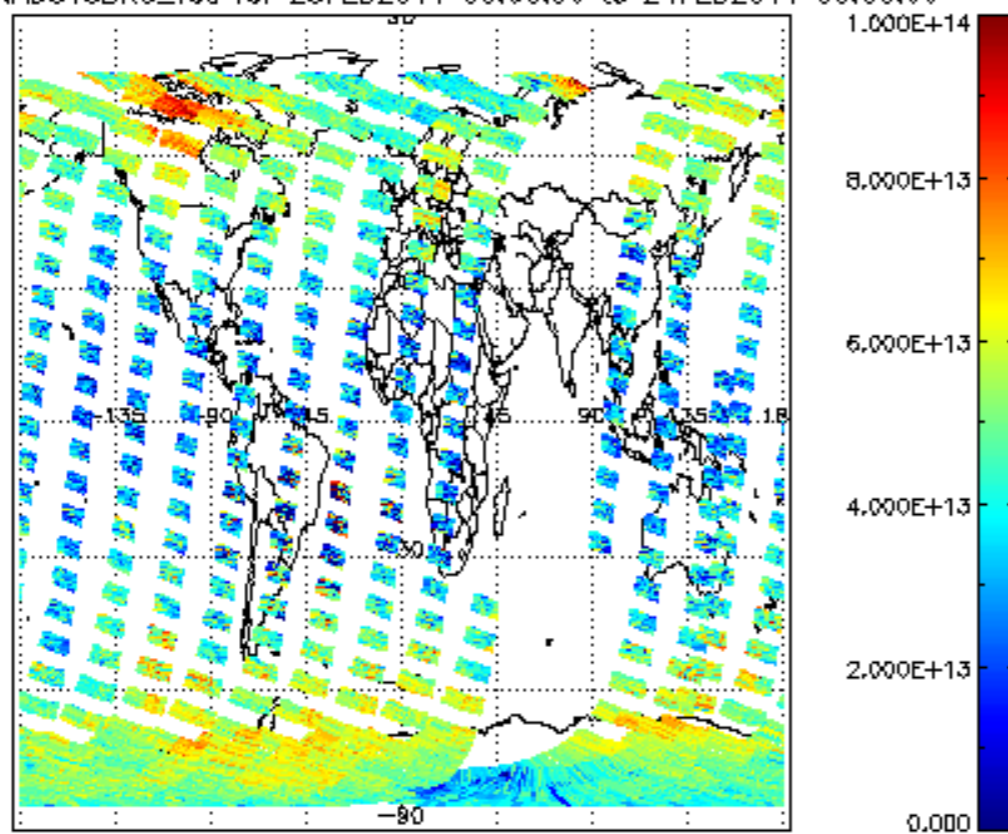


SCIOL2P\_NADUV1N02\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

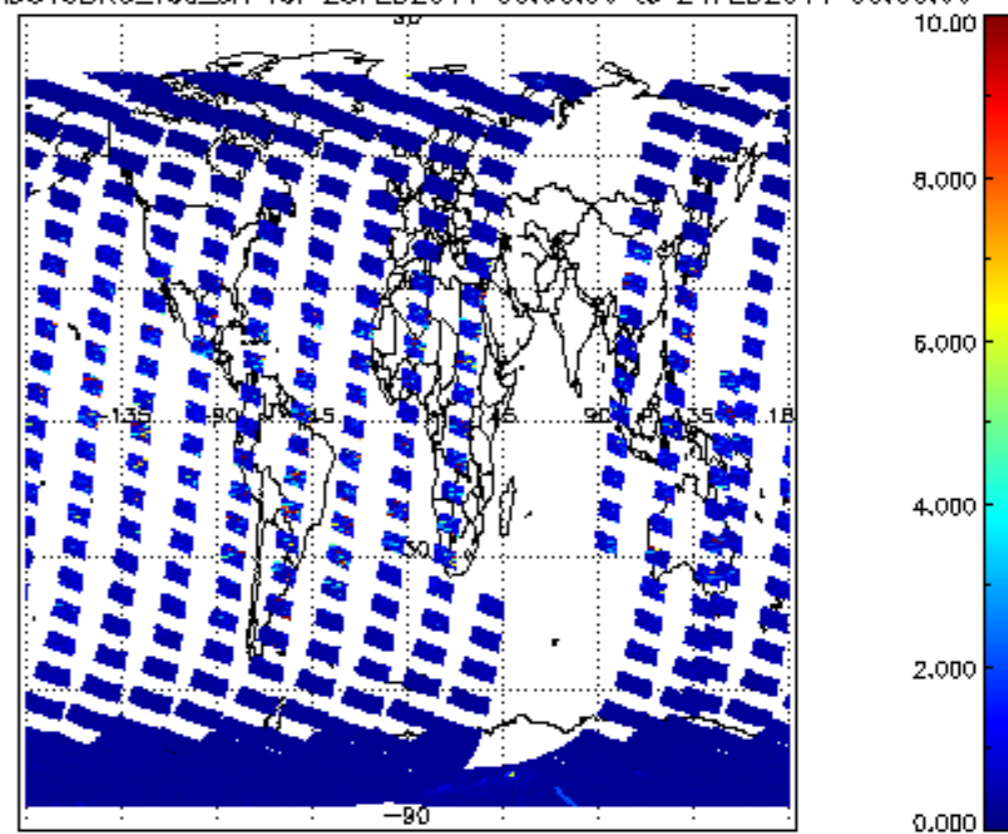




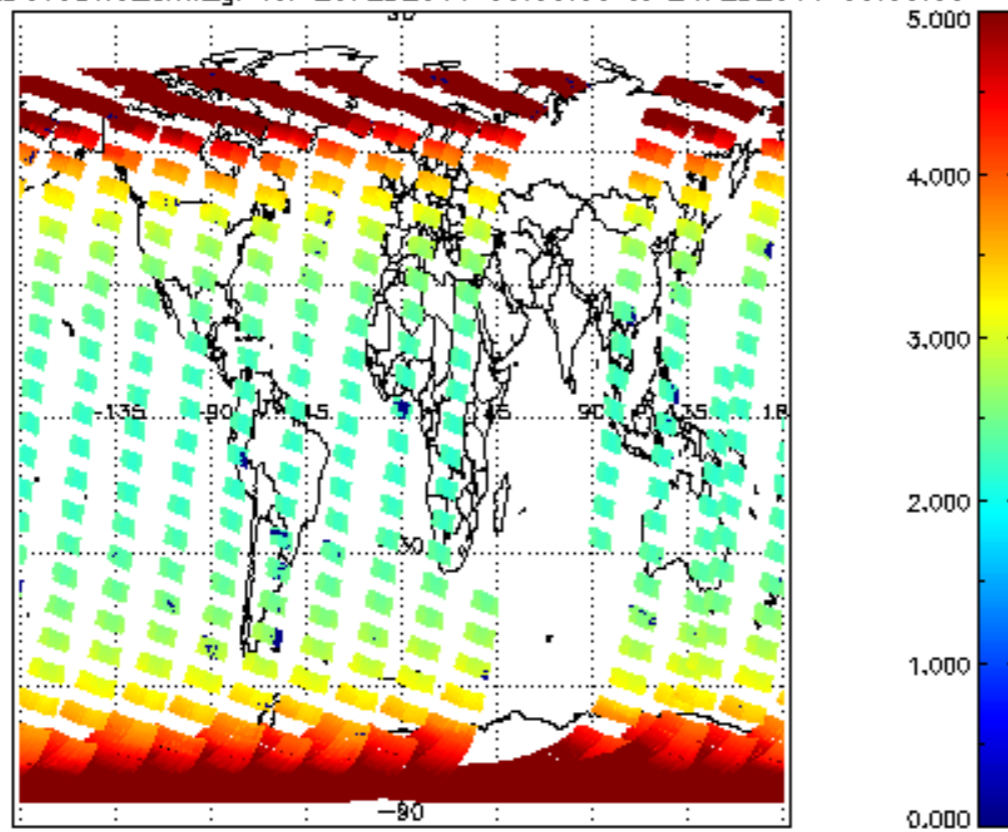
SCIOL2P\_NADUV3BRO\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



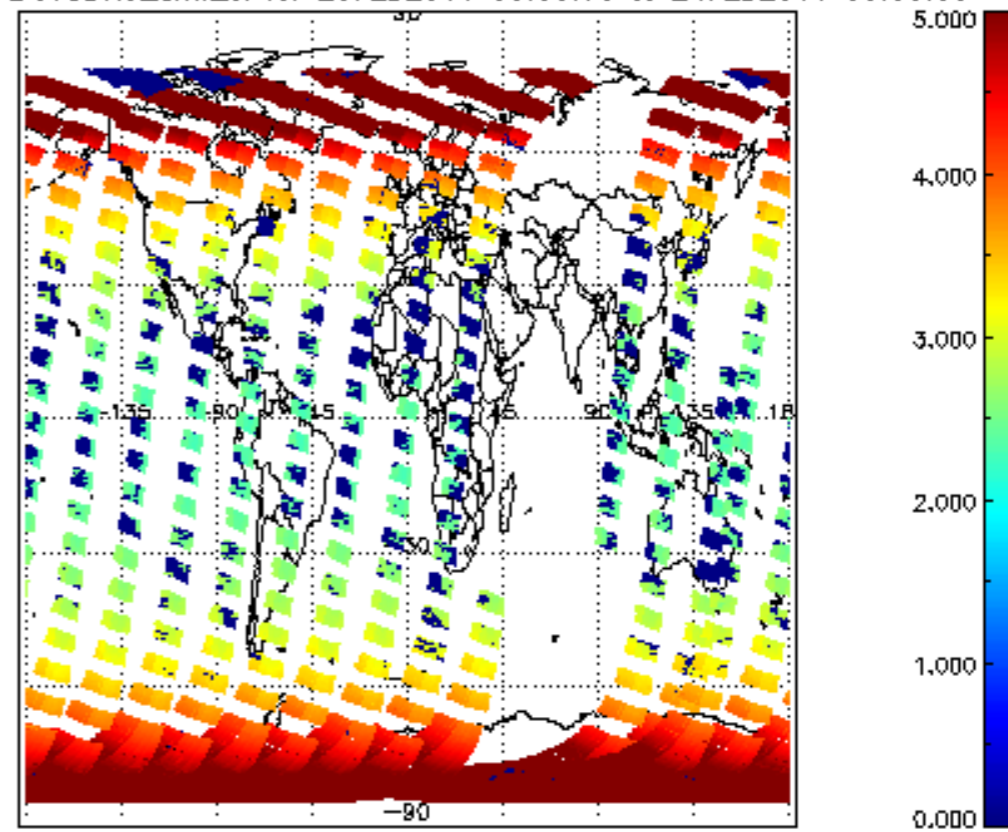
SCIOL2P\_NADUV3BRO\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

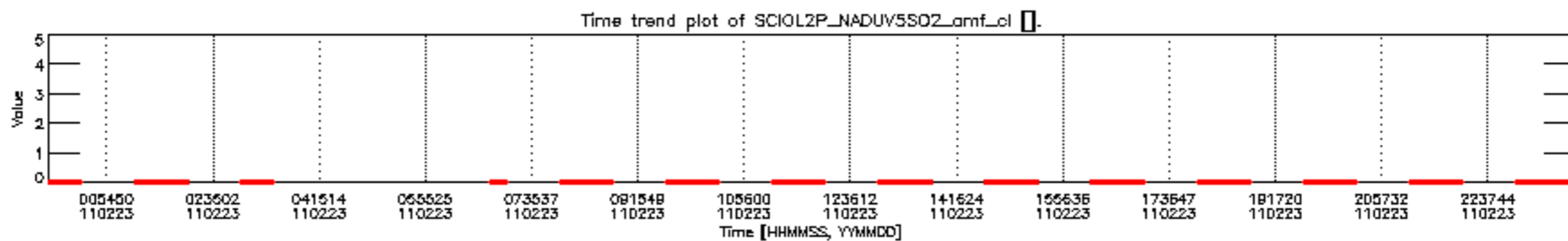
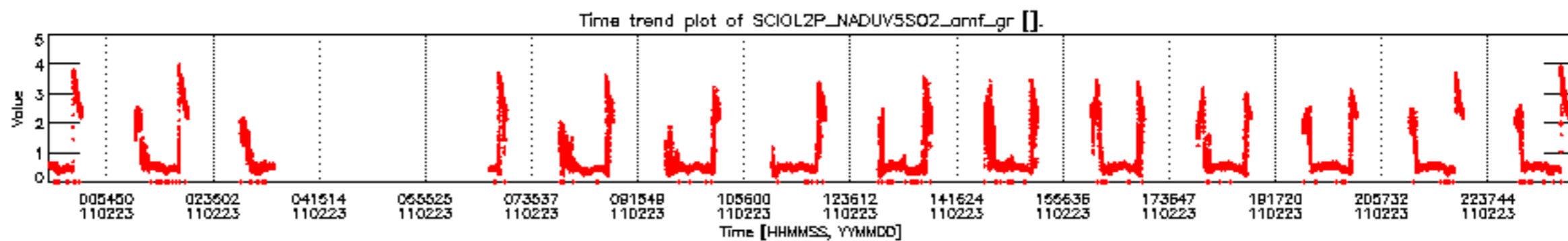
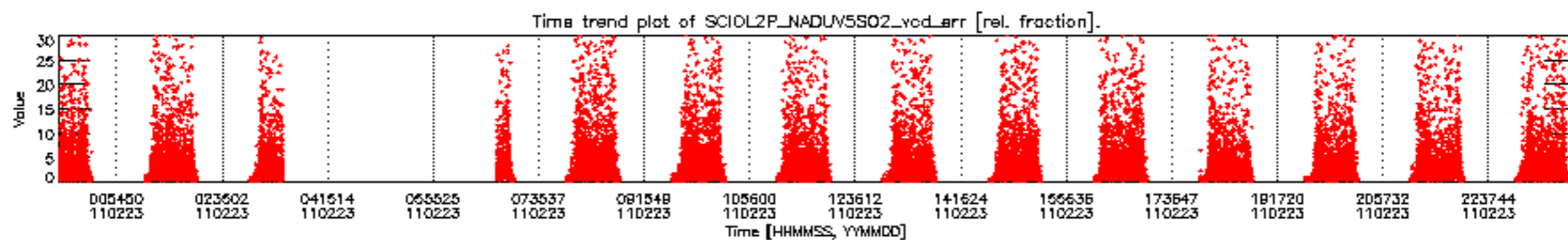
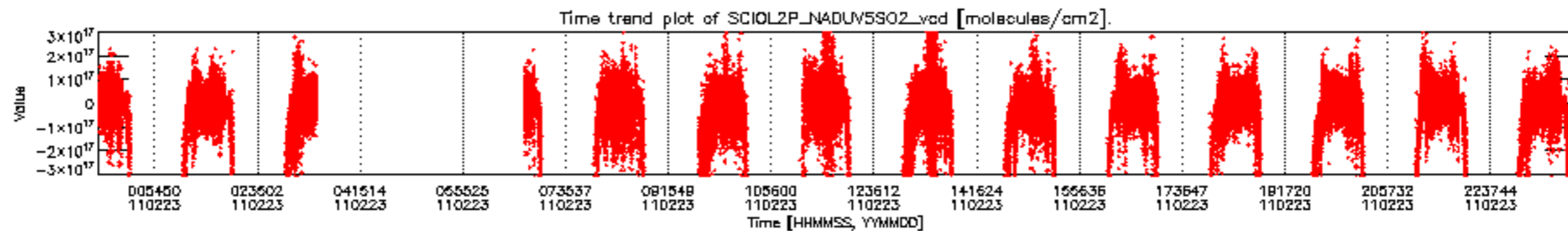


SCIOL2P\_NADUV3BRO\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

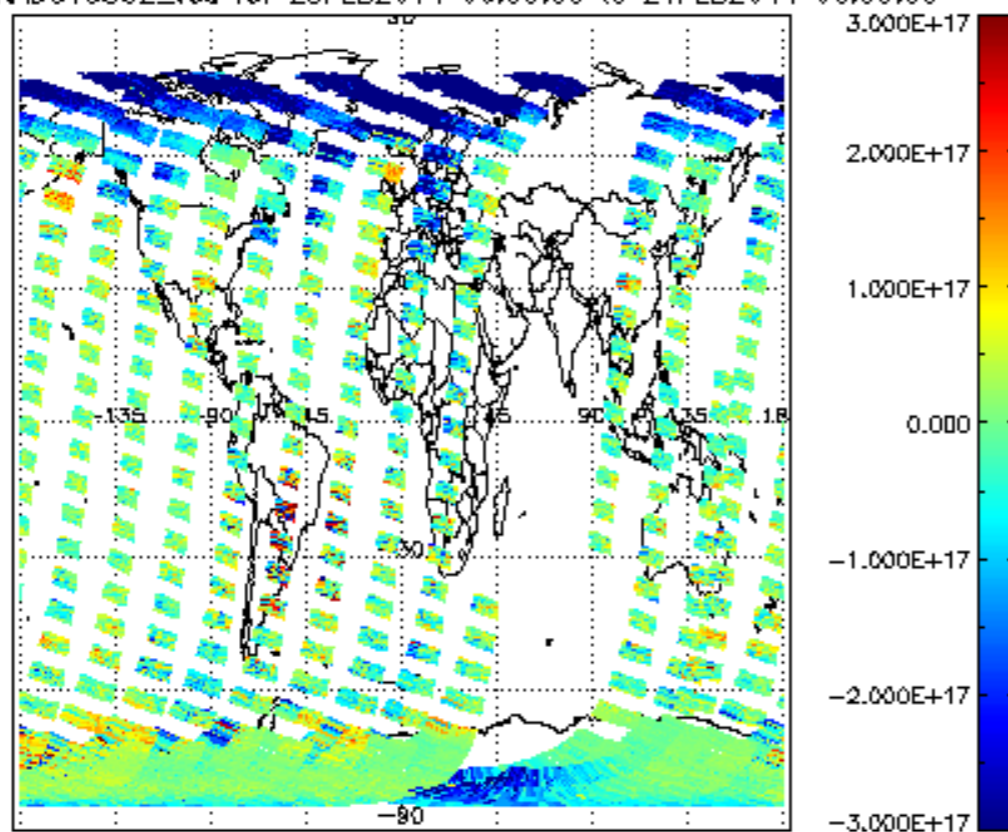


SCIOL2P\_NADUV3BRO\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

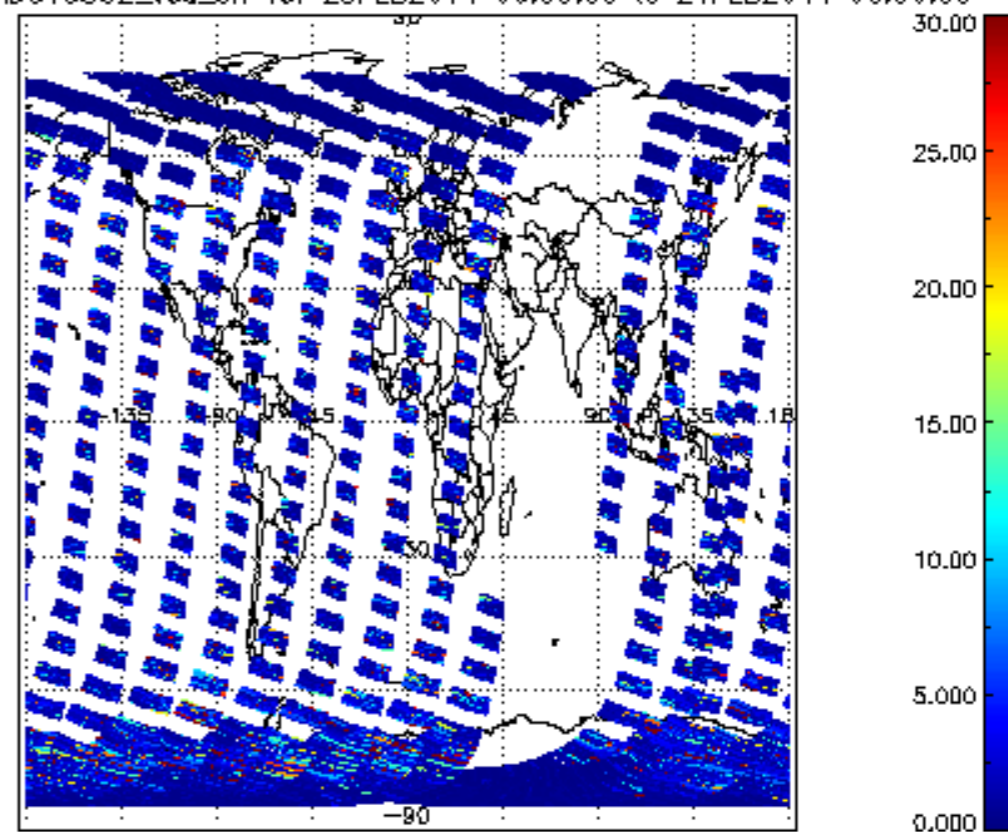




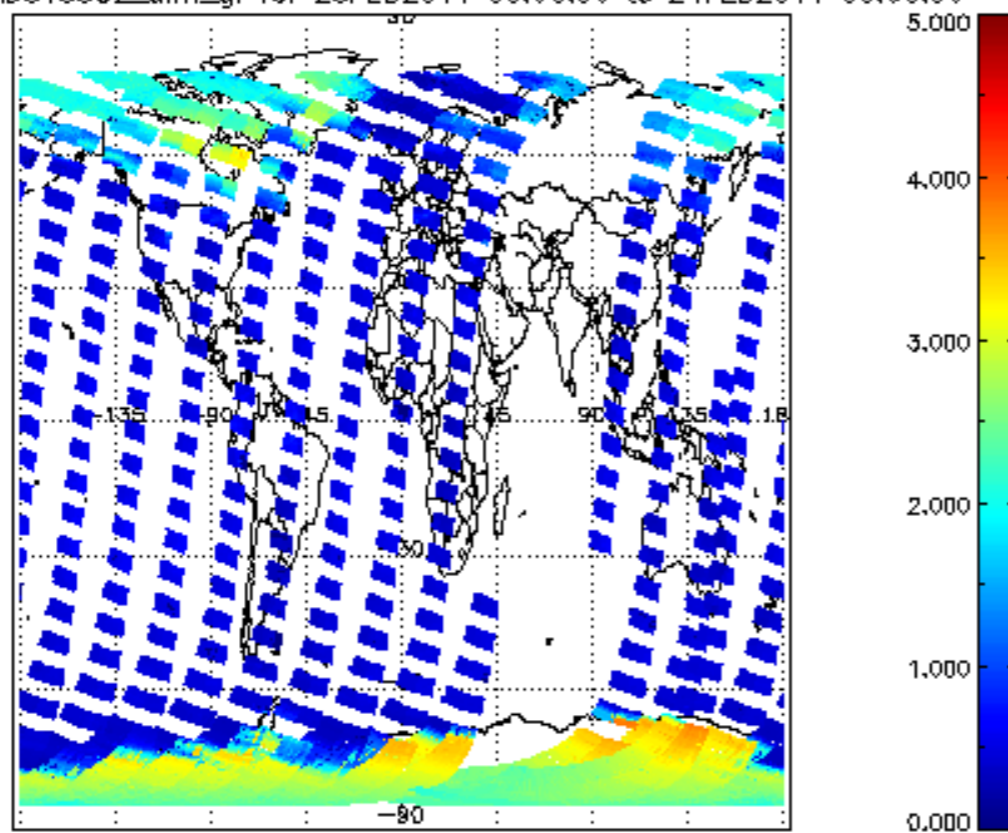
SCIOL2P\_NADUV5S02\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



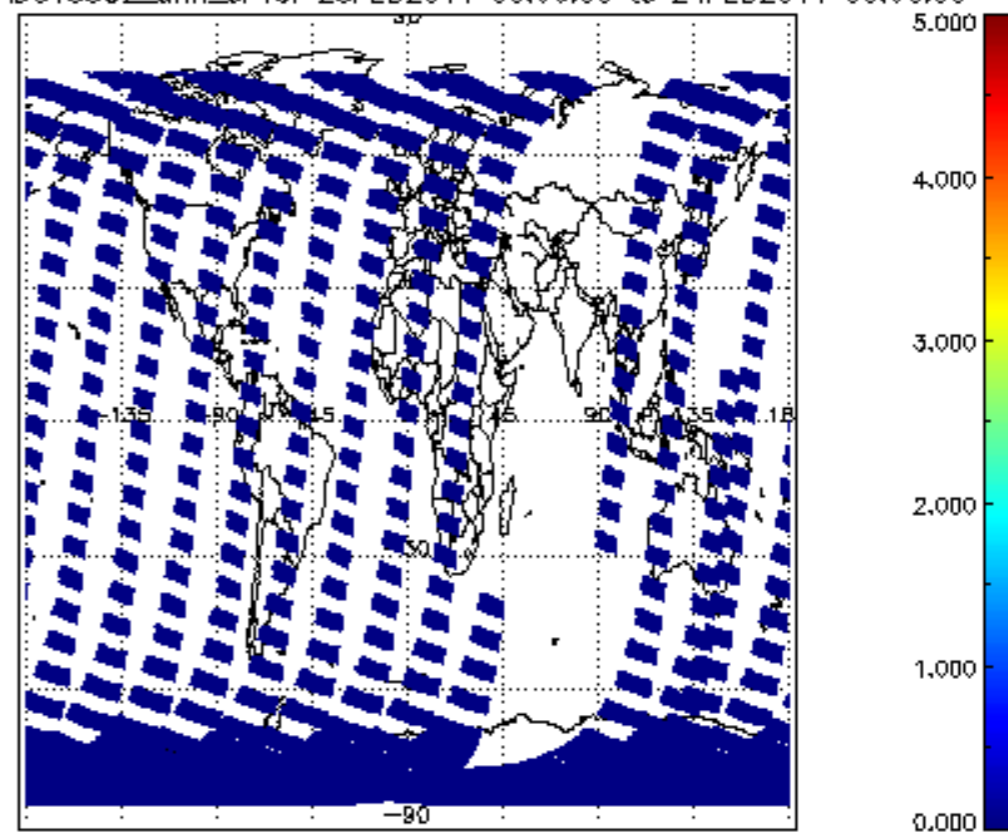
SCIOL2P\_NADUV5S02\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

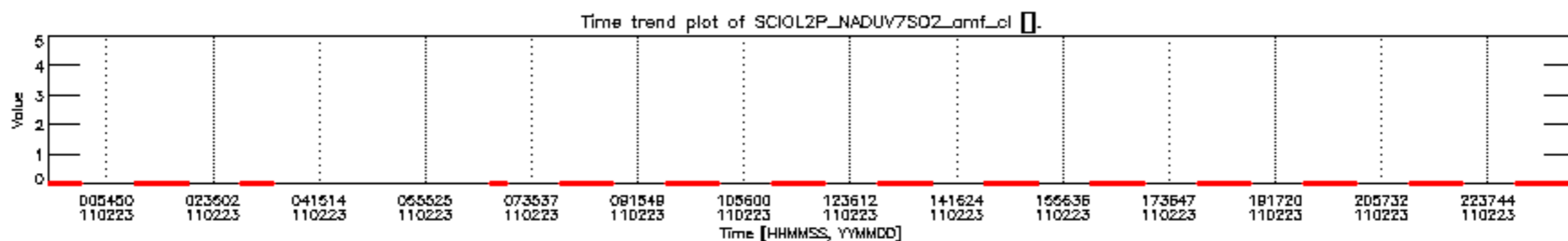
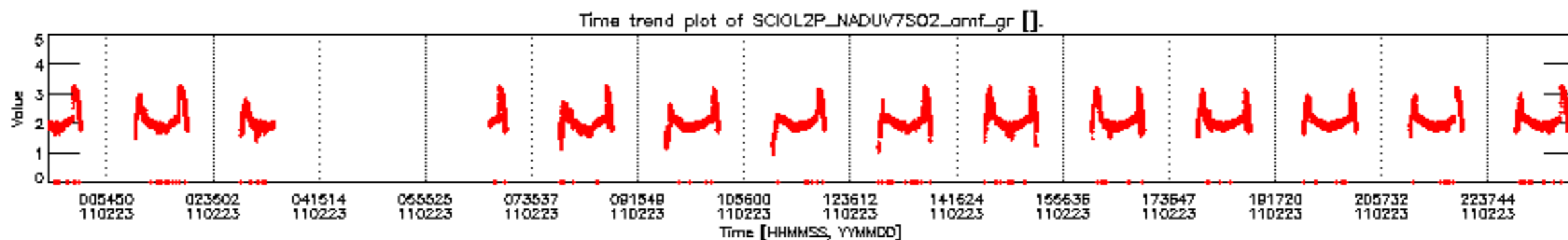
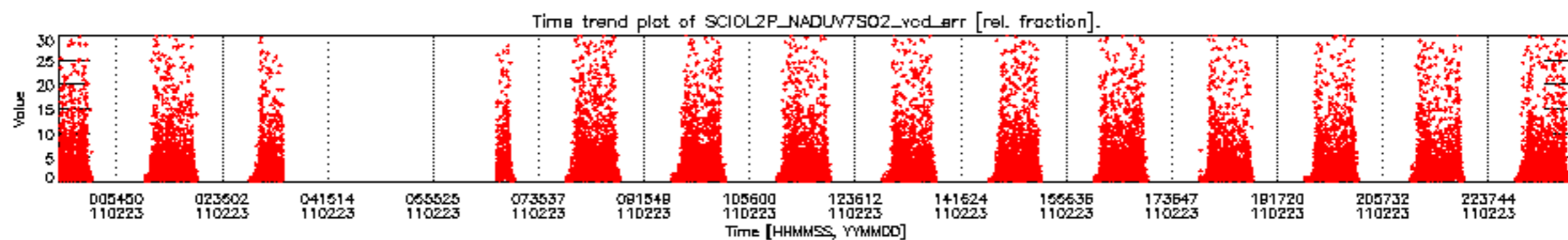
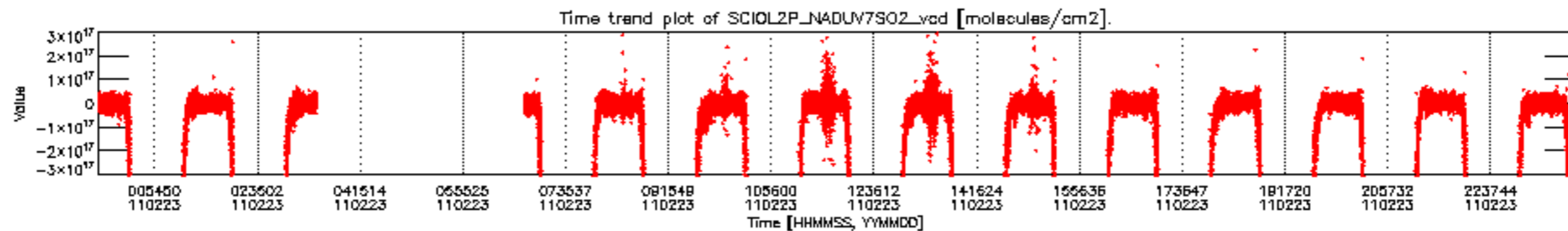


SCIOL2P\_NADUV5S02\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



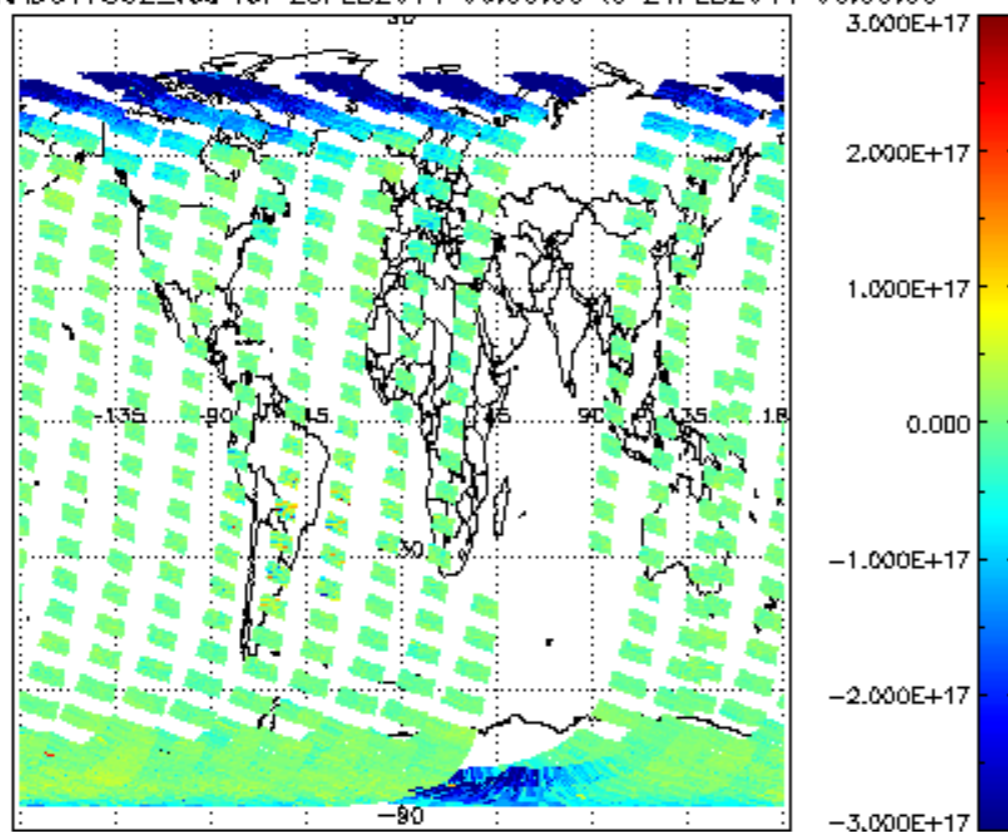
SCIOL2P\_NADUV5S02\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



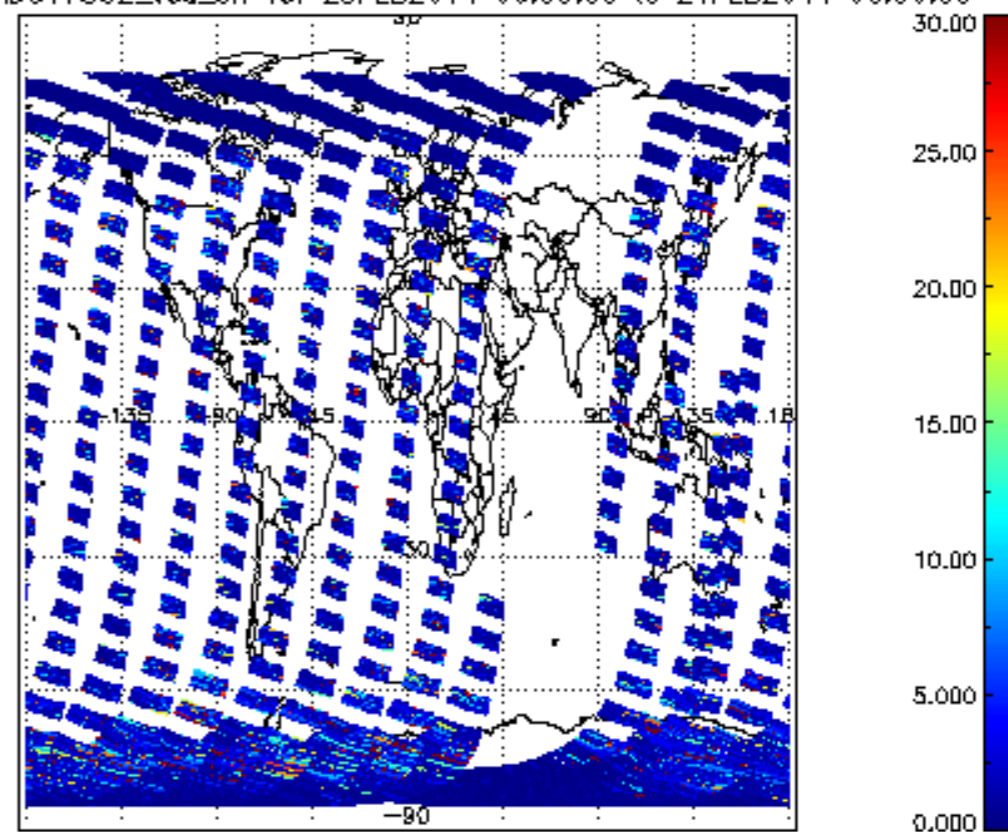




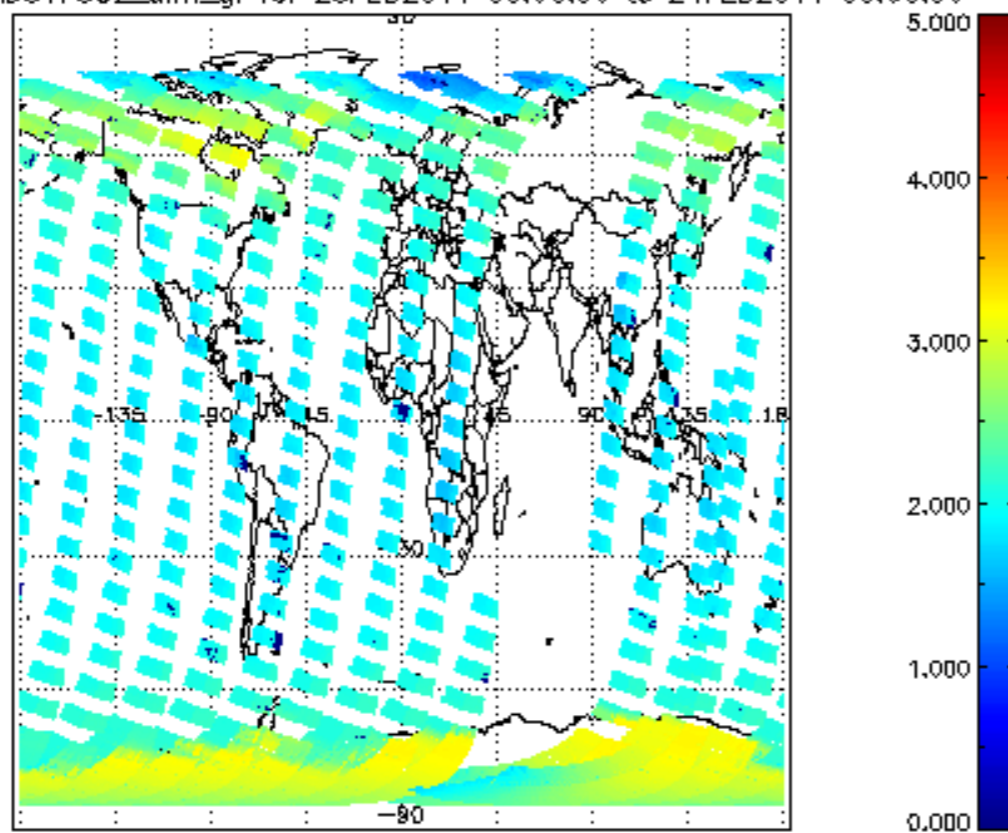
SCIOL2P\_NADUV7S02\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00



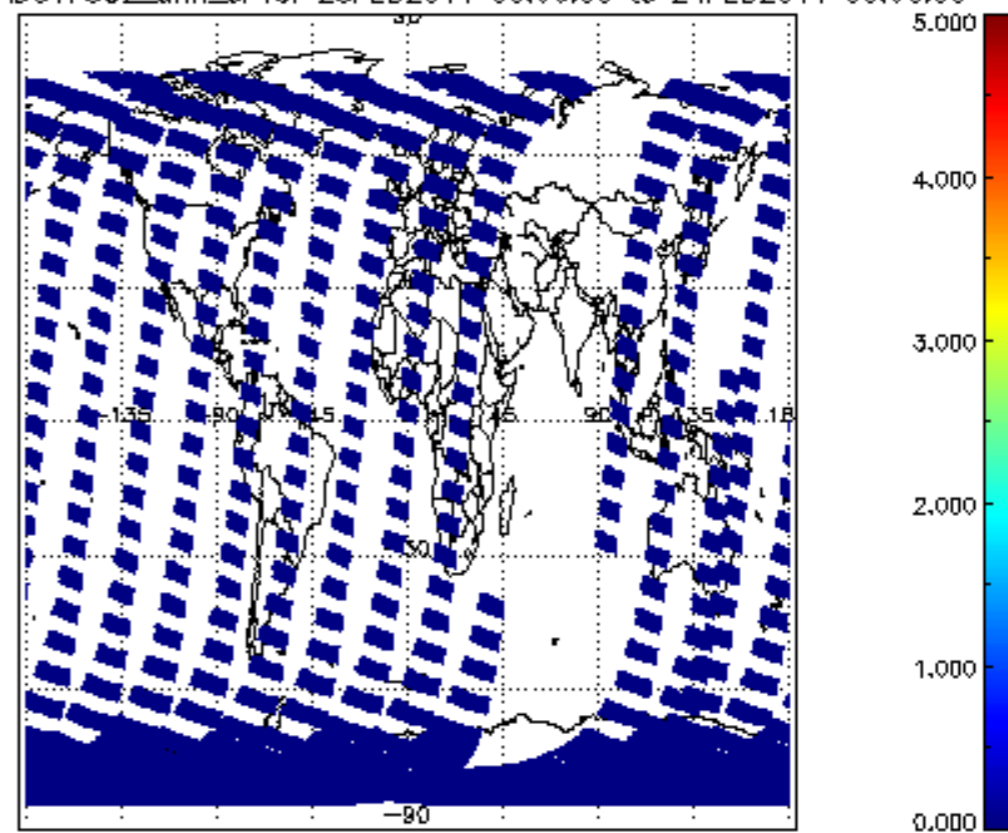
SCIOL2P\_NADUV7S02\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

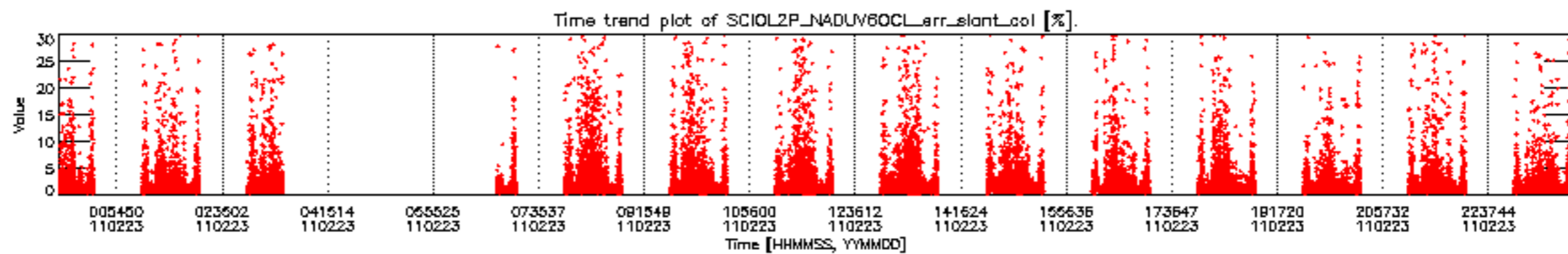
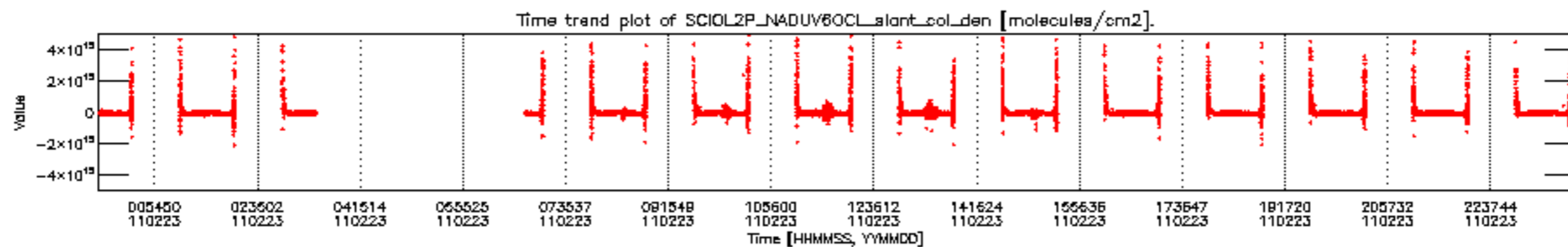


SCIOL2P\_NADUV7S02\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

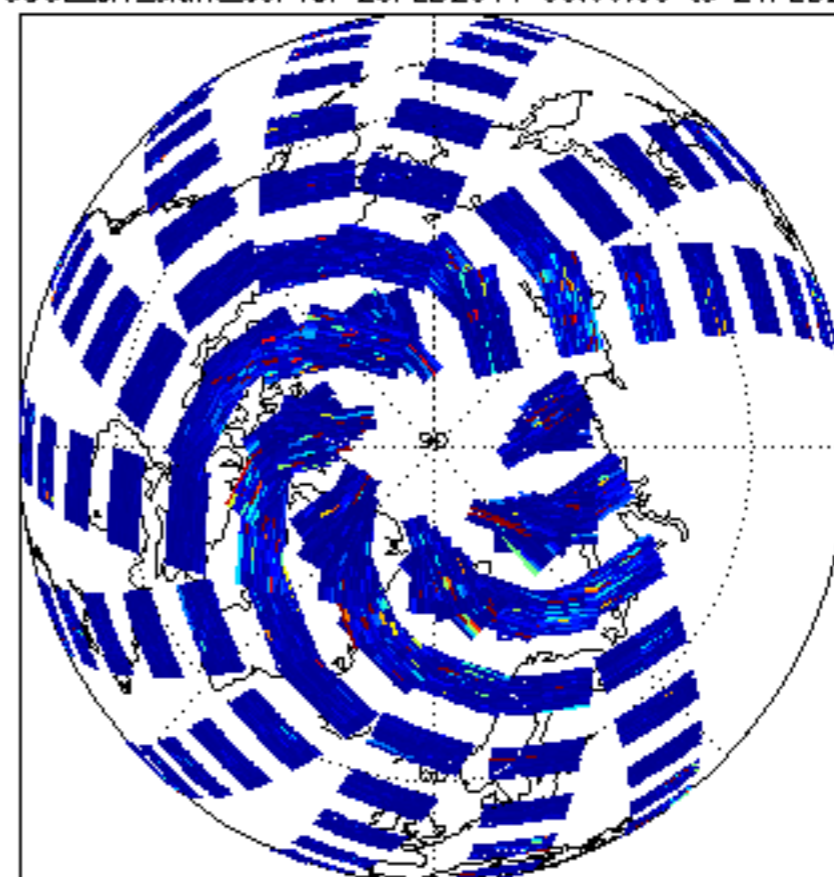
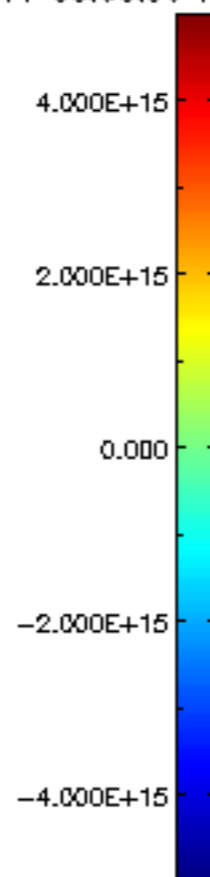
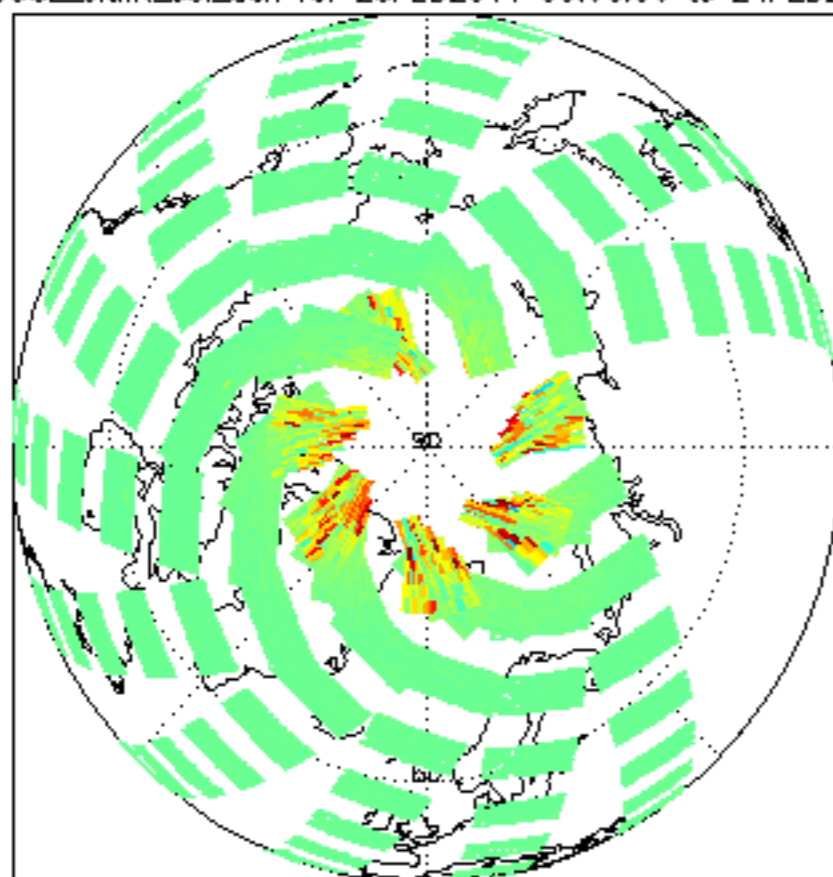


SCIOL2P\_NADUV7S02\_amf\_cl for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

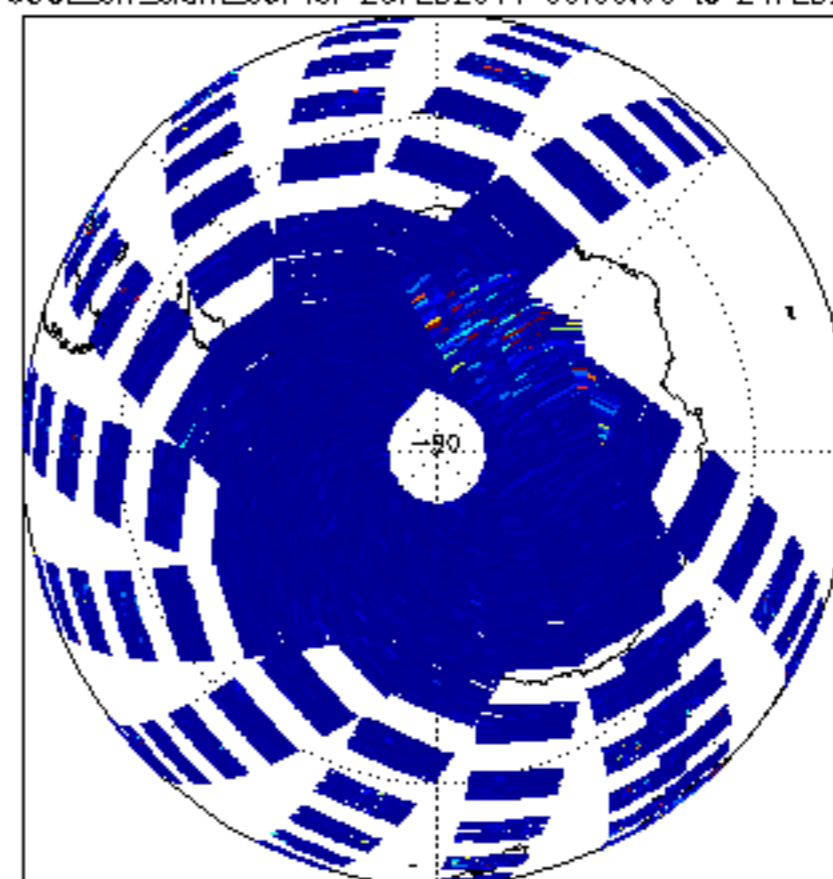
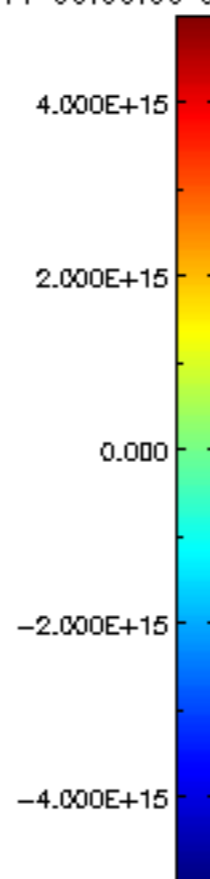
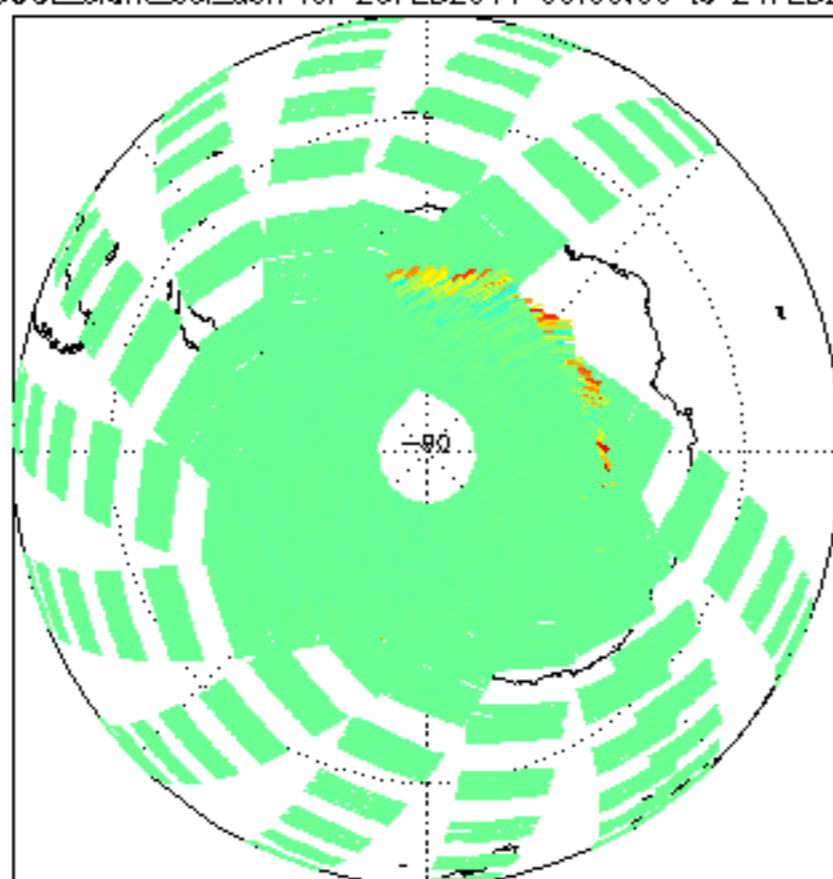


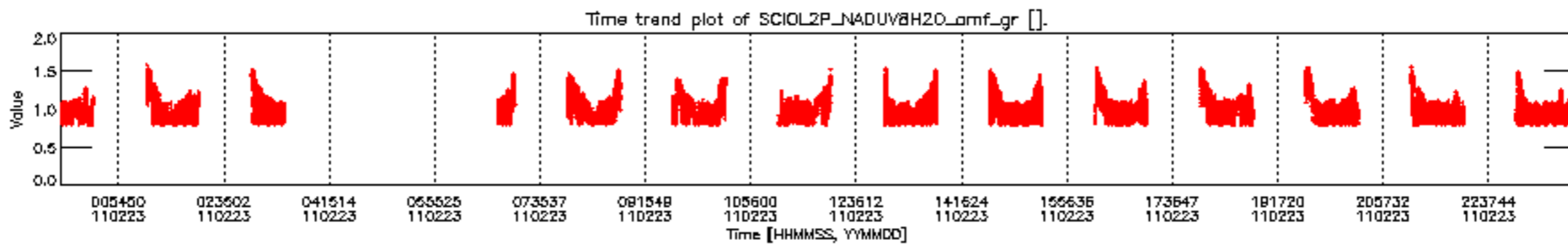
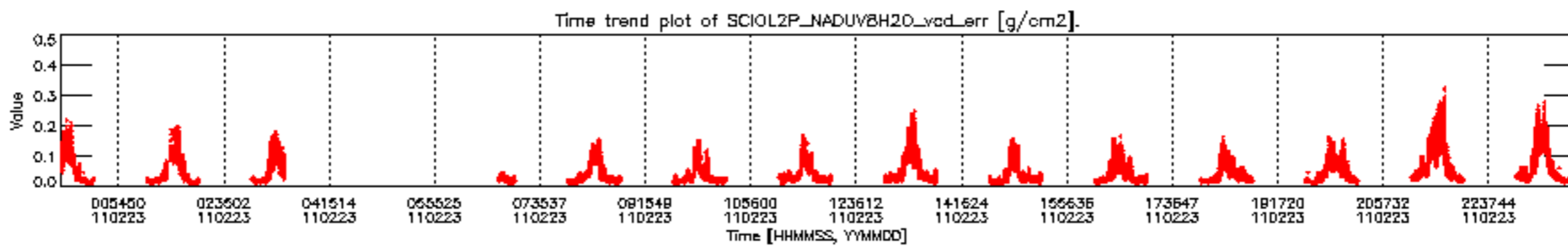
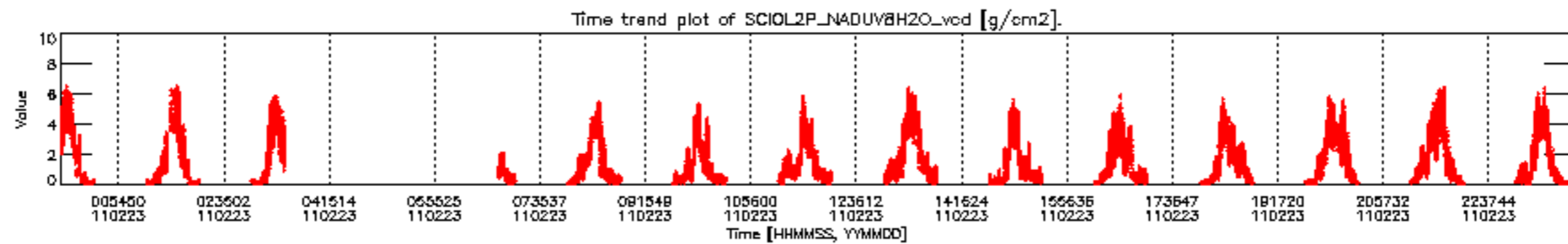


CIOL2P\_NADUV60CL\_slant\_col\_den for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 np; CIOL2P\_NADUV60CL\_err\_slant\_col for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 np

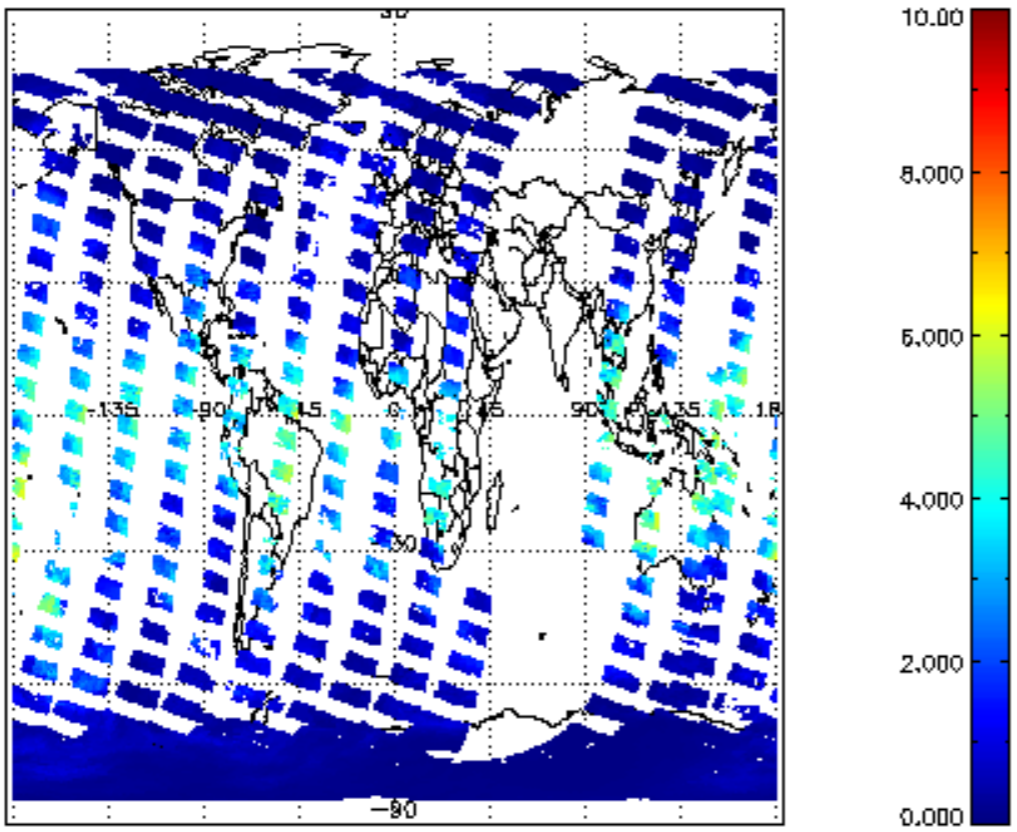


CIOL2P\_NADUV6OCL\_slant\_col\_den for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 23FEB2011 00:00:00 to 24FEB2011 00:00:00 sp

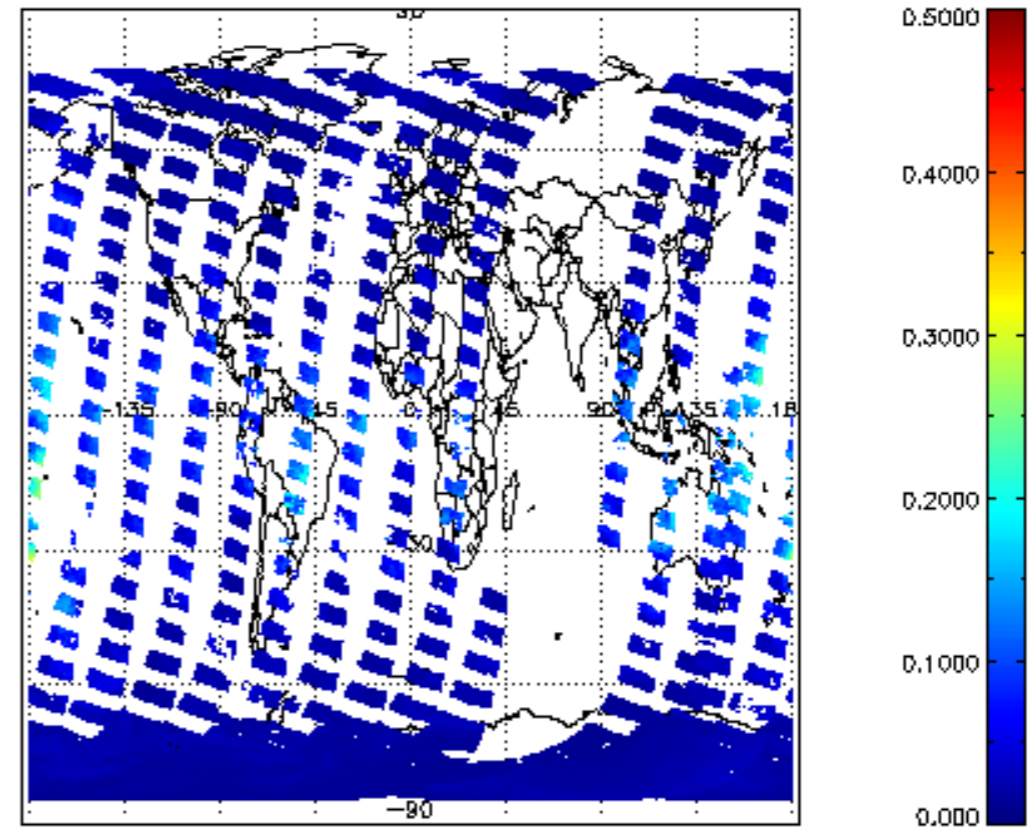




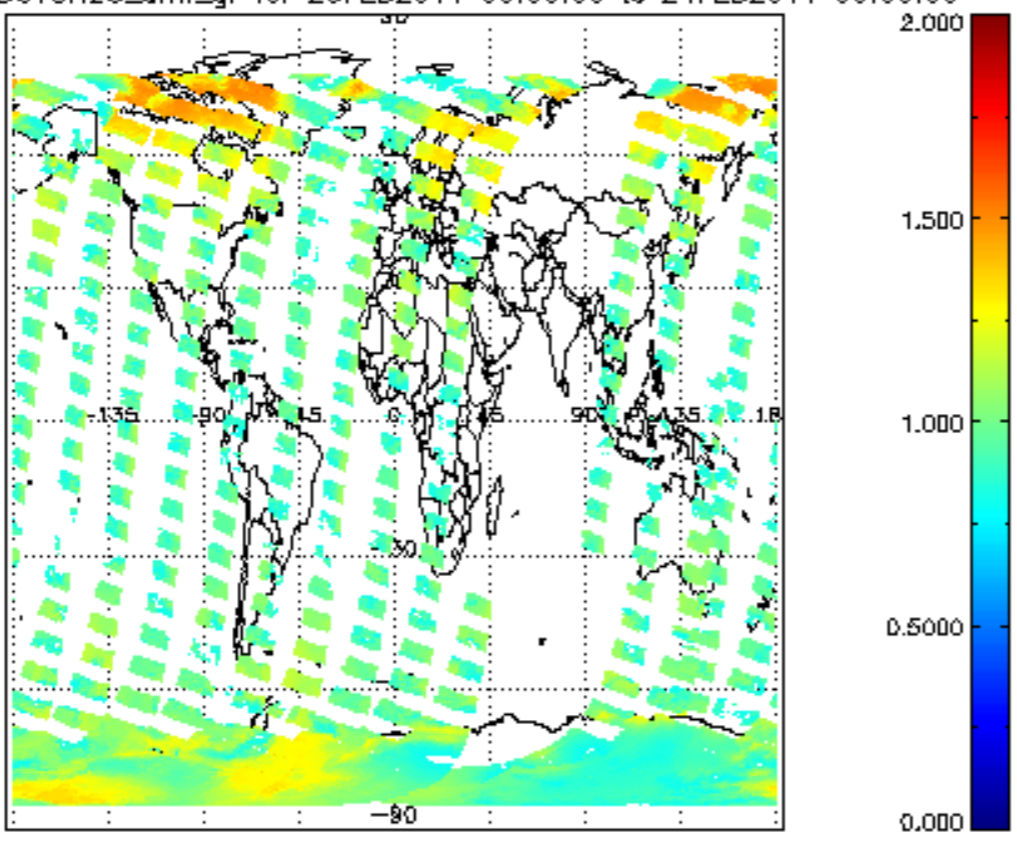
SCIOL2P\_NADUV8H20\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

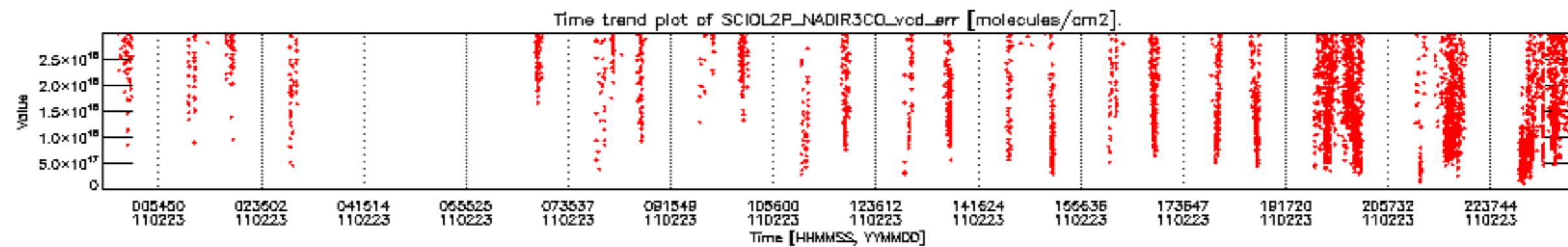
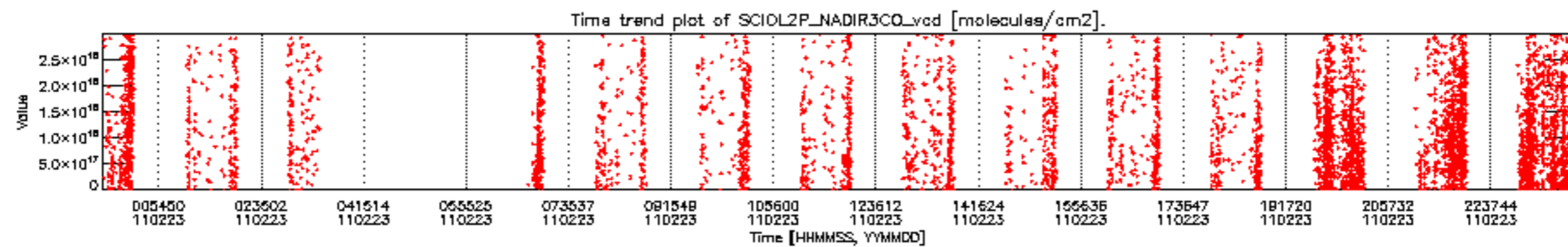


SCIOL2P\_NADUV8H20\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

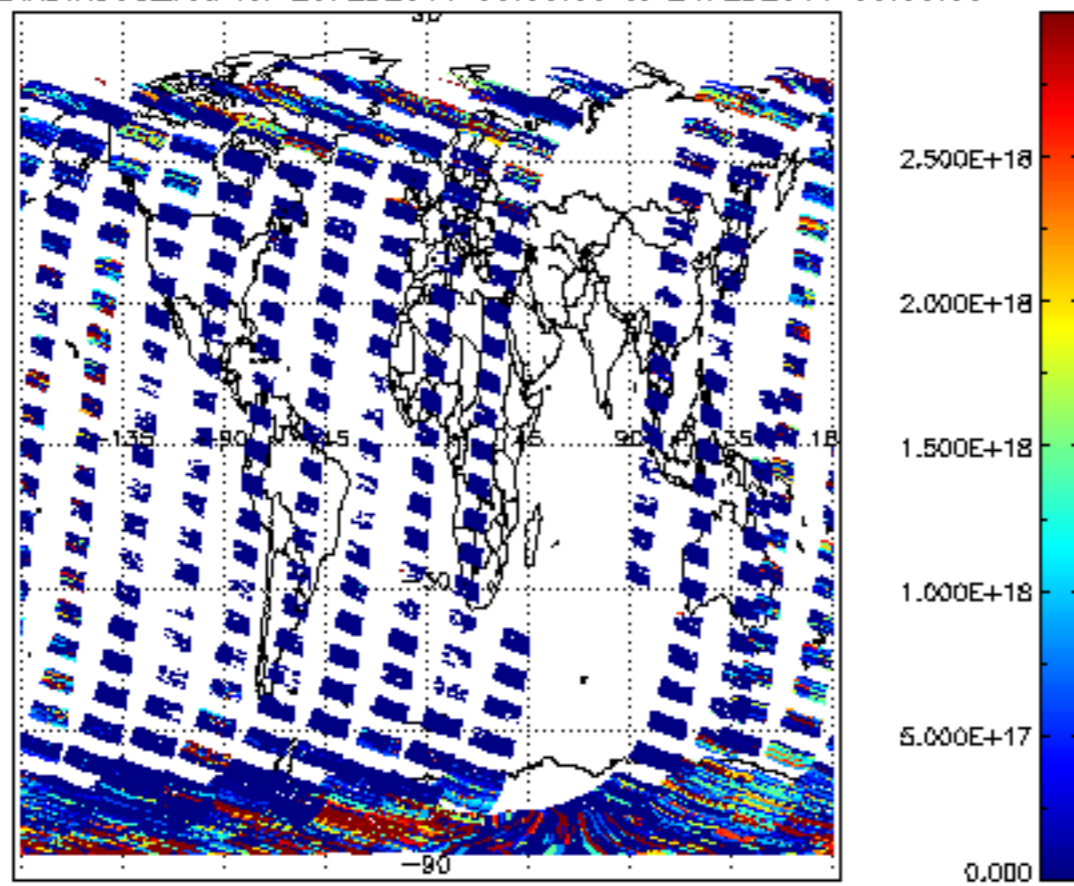


SCIOL2P\_NADUV8H20\_amf\_gr for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

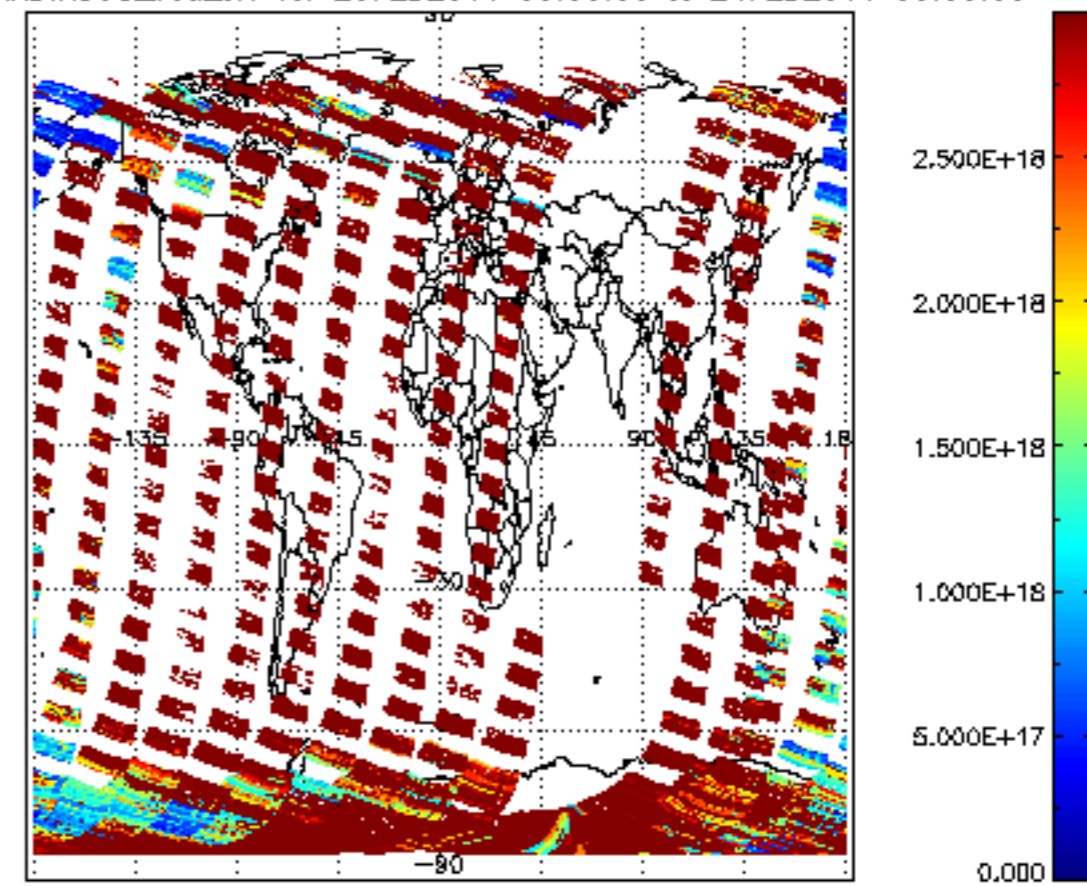




SCIOL2P\_NADIR3CO\_vcd for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

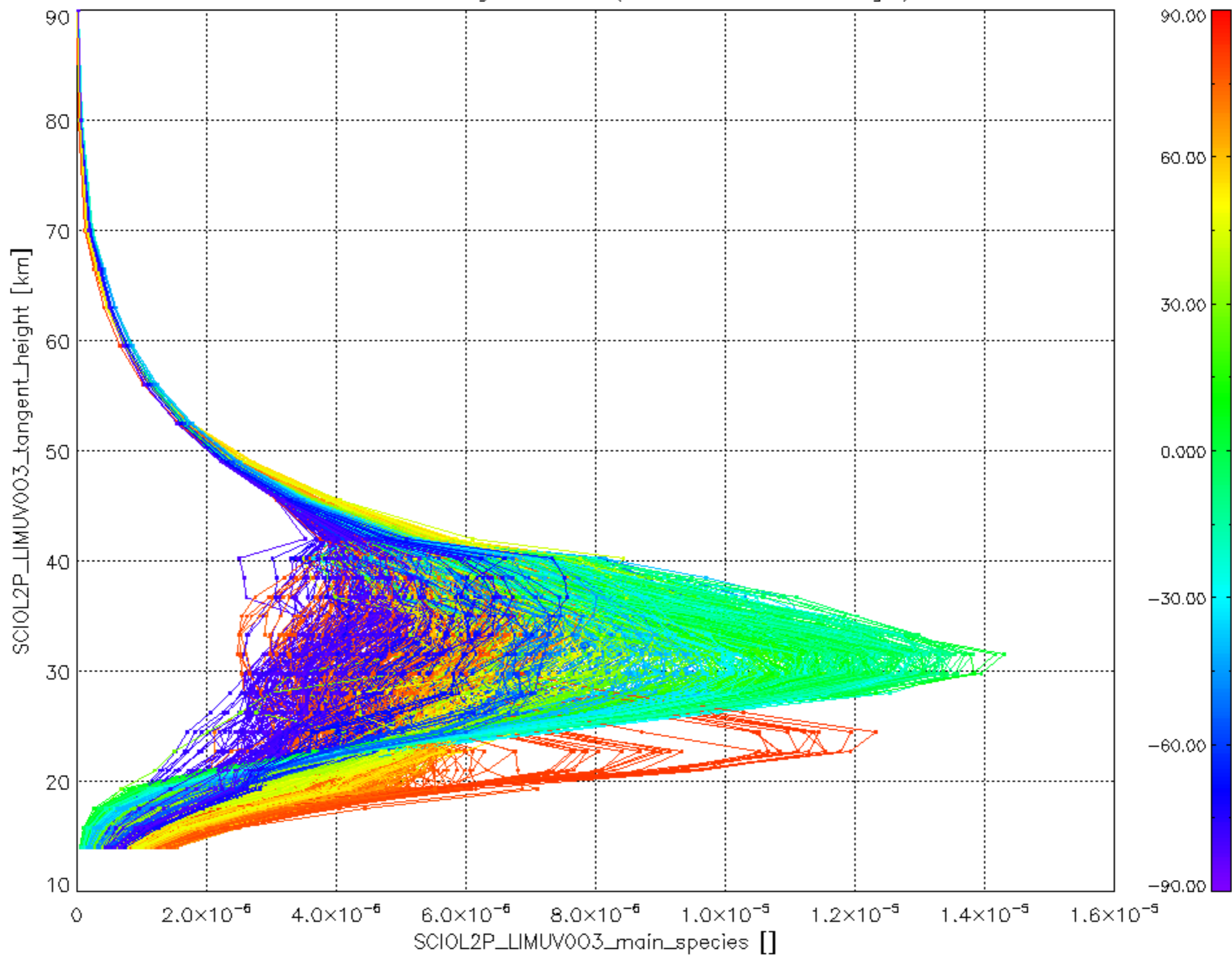


SCIOL2P\_NADIR3CO\_vcd\_err for 23FEB2011 00:00:00 to 24FEB2011 00:00:00

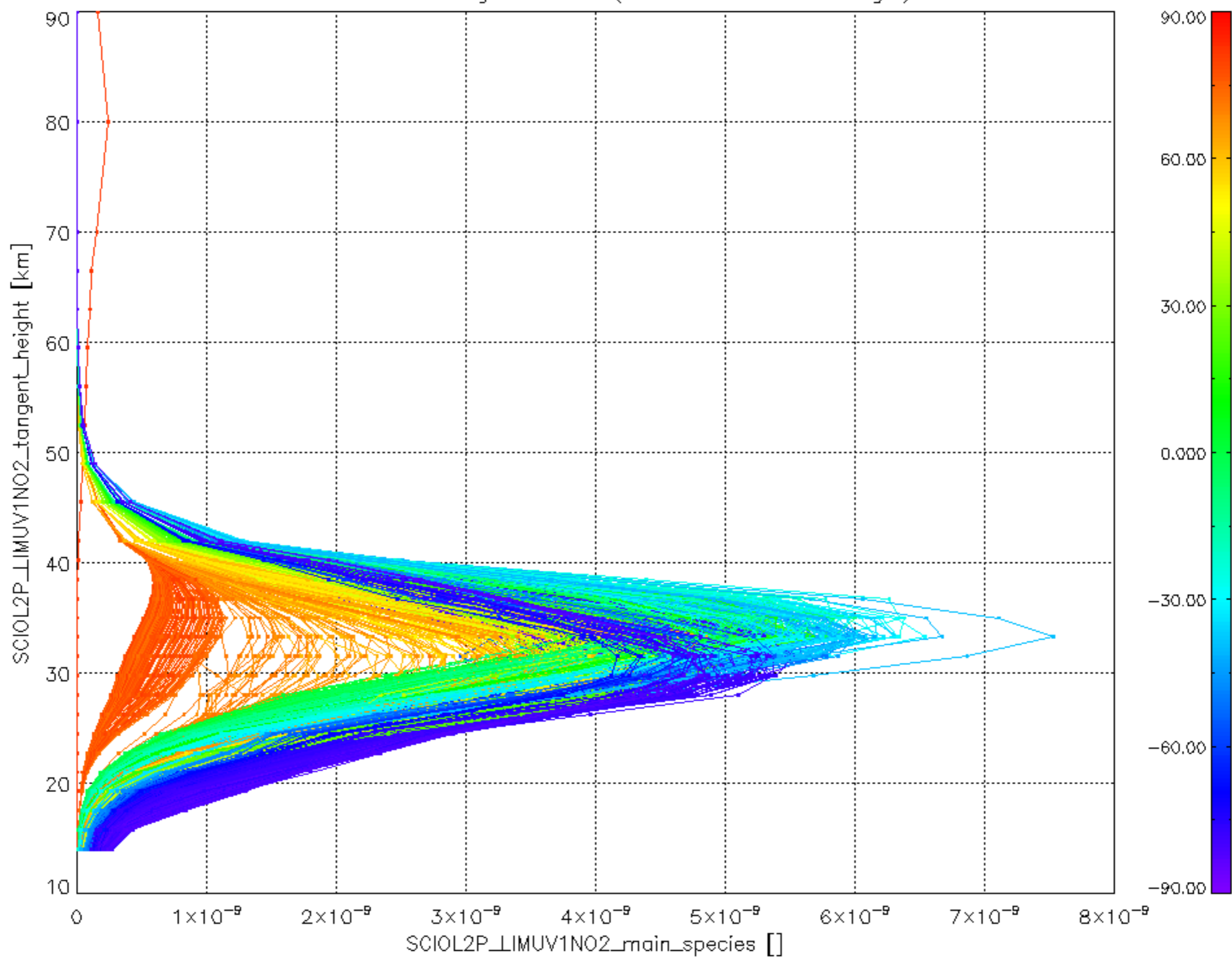




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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



Plot of SCIOL2P\_LIMUV3BRO\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).

