

## 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	31JAN2011 12:48:44
Data source version	SCIA-OL/5.01-N
Processing scope for products	25JAN2011 00:00:00 to 26JAN2011 00:00:00
Start time of first product within scope	24JAN2011 22:59:14
Stop time of last product within scope	26JAN2011 01:02:23
Total number of level 2 products	17
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__2PNDPA20110124_225914_000035993098_00417_46552_1422.N1</a>	24JAN2011 22:59:14	24JAN2011 23:59:13	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110125_003928_000035843098_00418_46553_1423.N1</a>	25JAN2011 00:39:28	25JAN2011 01:39:12	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110125_021941_000021913098_00419_46554_1424.N1</a>	<b>25JAN2011 02:19:41</b>	<b>25JAN2011 02:56:13</b>	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110125_025710_000061323098_00420_46555_1425.N1</a>	<b>25JAN2011 02:57:10</b>	<b>25JAN2011 04:39:23</b>	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110125_043927_000059563098_00421_46556_1426.N1</a>	25JAN2011 04:39:27	25JAN2011 06:18:43	0	GOOD

5	SCI_OL__2PNDPA20110125_061846_000039093098_00422_46557_1437.N1	25JAN2011 06:18:46	25JAN2011 07:23:55	0	GOOD
6	SCI_OL__2PNDPA20110125_072508_000061323098_00423_46558_1427.N1	25JAN2011 07:25:08	25JAN2011 09:07:20	0	GOOD
7	SCI_OL__2PNDPA20110125_090724_000060103098_00424_46559_1438.N1	25JAN2011 09:07:24	25JAN2011 10:47:34	0	GOOD
8	SCI_OL__2PNDPA20110125_104738_000058873098_00425_46560_1428.N1	25JAN2011 10:47:38	25JAN2011 12:25:45	0	GOOD
9	SCI_OL__2PNDPA20110125_122657_000057643098_00426_46561_1429.N1	25JAN2011 12:26:57	25JAN2011 14:03:01	0	GOOD
10	SCI_OL__2PNDPA20110125_140305_000034763098_00427_46562_1430.N1	25JAN2011 14:03:05	25JAN2011 15:01:01	0	GOOD
11	SCI_OL__2PNDPA20110125_154130_000035993098_00428_46563_1431.N1	25JAN2011 15:41:30	25JAN2011 16:41:30	0	GOOD
12	SCI_OL__2PNDPA20110125_172206_000035843098_00429_46564_1432.N1	25JAN2011 17:22:06	25JAN2011 18:21:51	0	GOOD
13	SCI_OL__2PNDPA20110125_190220_000035993098_00430_46565_1433.N1	25JAN2011 19:02:20	25JAN2011 20:02:19	0	GOOD
14	SCI_OL__2PNDPA20110125_204212_000035843098_00431_46566_1434.N1	25JAN2011 20:42:12	25JAN2011 21:41:56	0	GOOD
15	SCI_OL__2PNDPA20110125_222225_000035993098_00431_46566_1435.N1	25JAN2011 22:22:25	25JAN2011 23:22:24	0	GOOD
16	SCI_OL__2PNDPA20110126_000239_000035843099_00001_46567_1436.N1	26JAN2011 00:02:39	26JAN2011 01:02:23	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: 168740

Total number of cloud data DSRs with good quality flag (=0): 168740 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	168740	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	168740	0.16410	0.12500	0.12500	0.25000	0.057954	s
CL_FRAC	168740	0.43070	0.42306	0.0000	1.0000	0.28363	-
CL_FRAC_ERR	168740	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	168740	5.2512	4.0000	4.0000	8.0000	1.8545	
PMD_READ_CL[0]	168740	0.37932	0.0000	0.0000	8.0000	1.1349	-
PMD_READ_CL[1]	168740	0.97403	0.0000	0.0000	8.0000	2.2818	-
CL_TOP_HEIGHT	130052	3.8995	3.0964	0.0000	17.000	3.5176	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	130052	58.372	57.972	0.0000	101.00	40.442	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	168740	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	168740	11001100	11000100	11000000	11100000	3496.0	flags
AERO_ABSO_IND	168740	0.43934	0.0000	0.0000	5.8943	0.77208	
AERO_IND_DIAG	168740	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	168740	01010001	00000000	00000000	11000000	24286.	flags

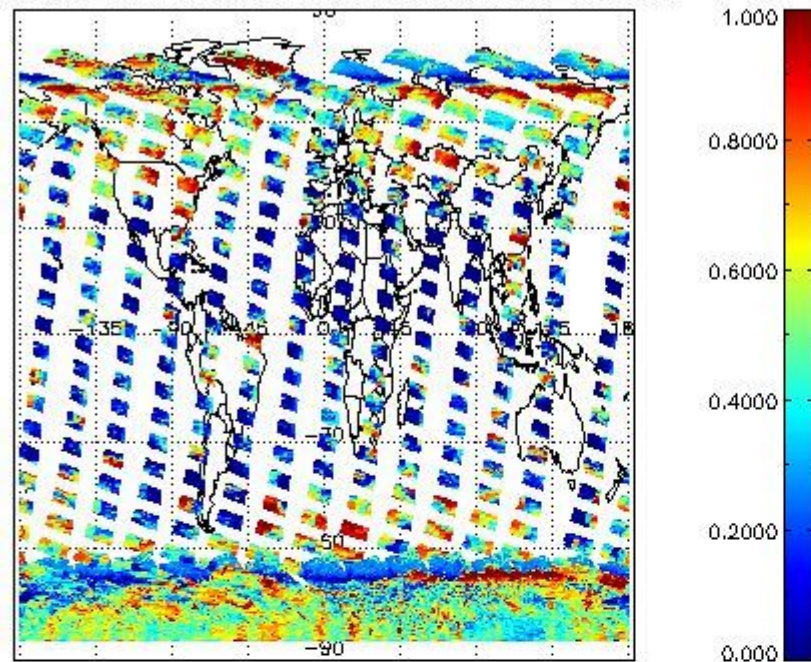
#### Time and geolocation plots:

Plots are available for the following parameters:

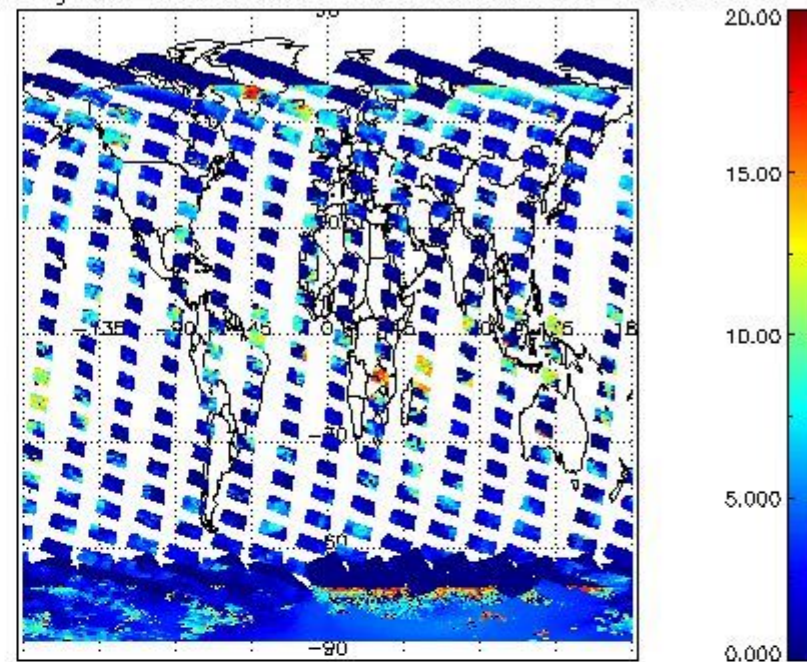
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



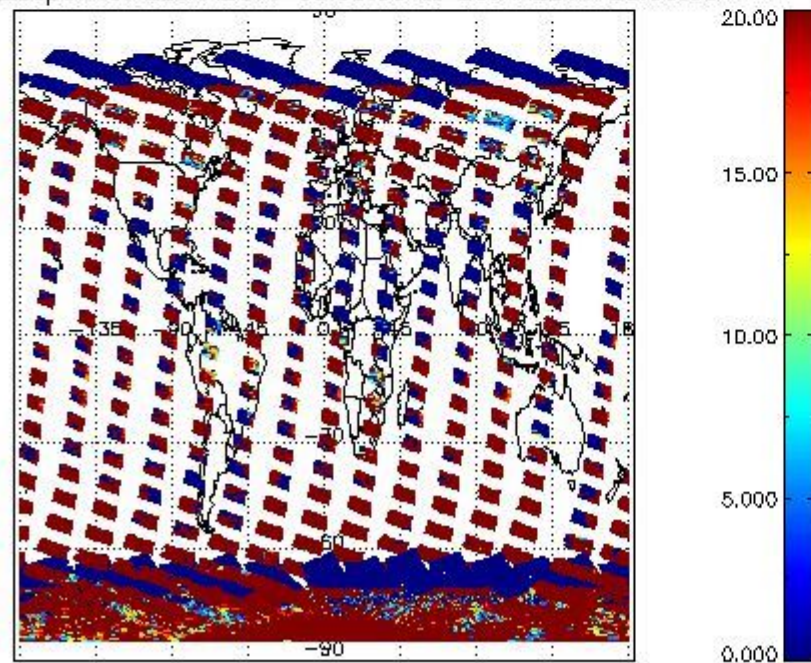
cL\_frac for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



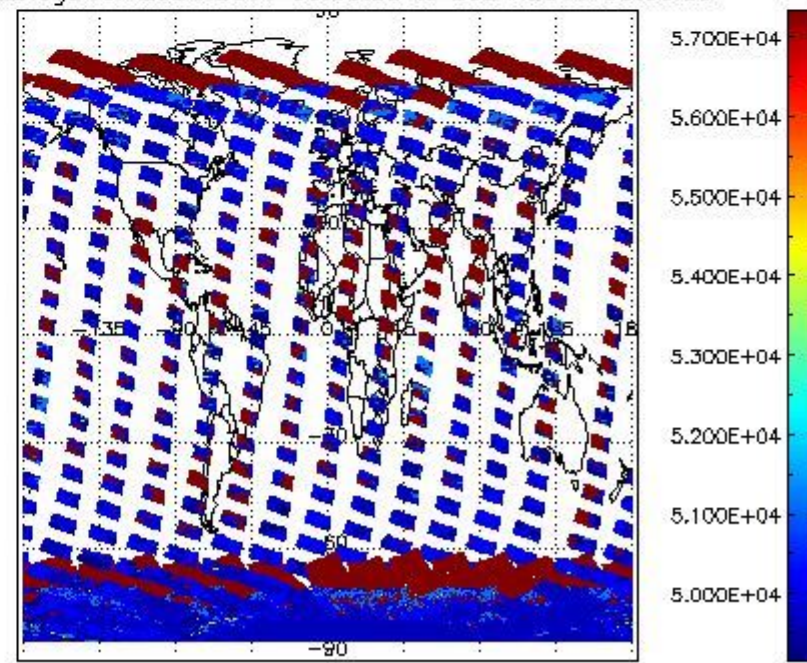
cL\_top\_height for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



cLopt\_depth for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



cloud\_flags for 25JAN2011 00:00:00 to 26JAN2011 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:

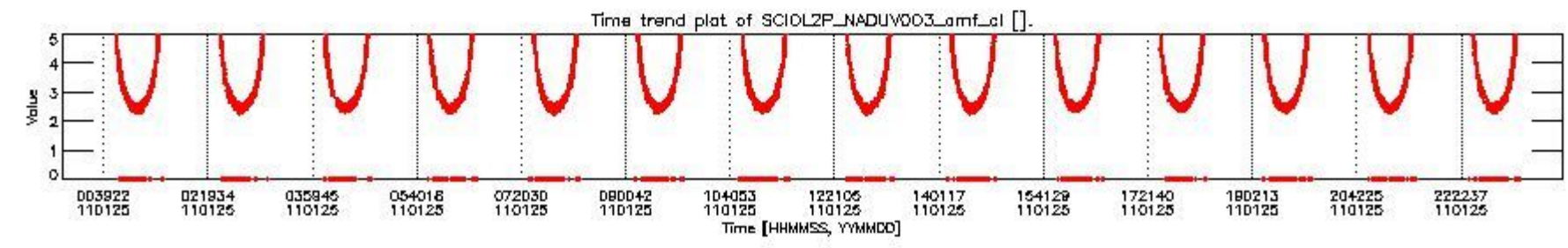
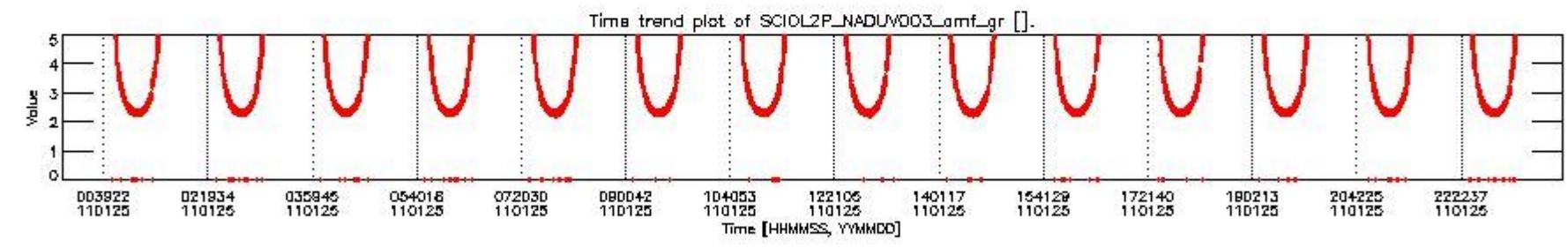
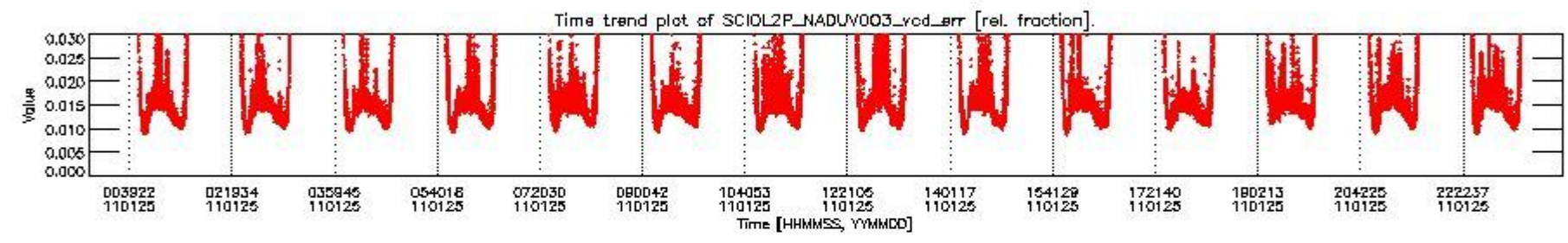
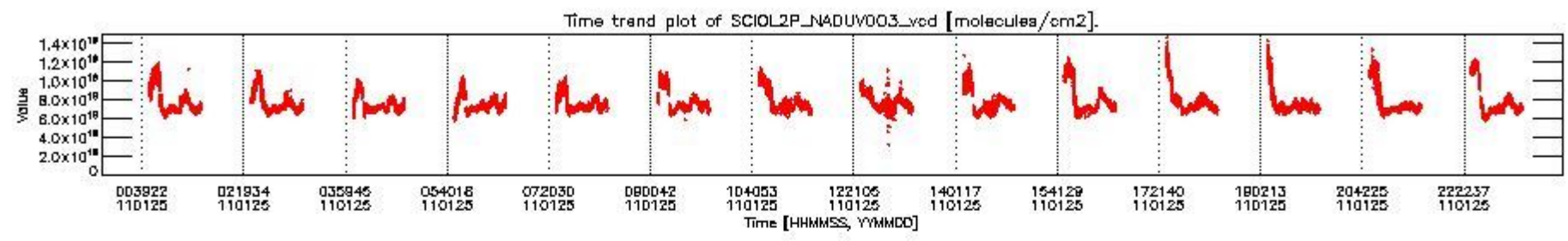
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

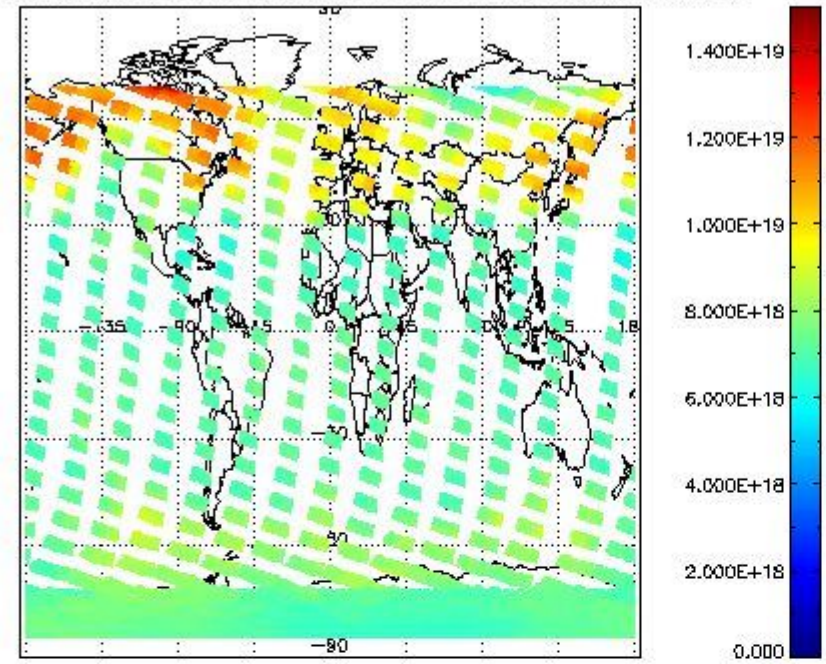
#### 2.2.2.1 O3 (UV0)



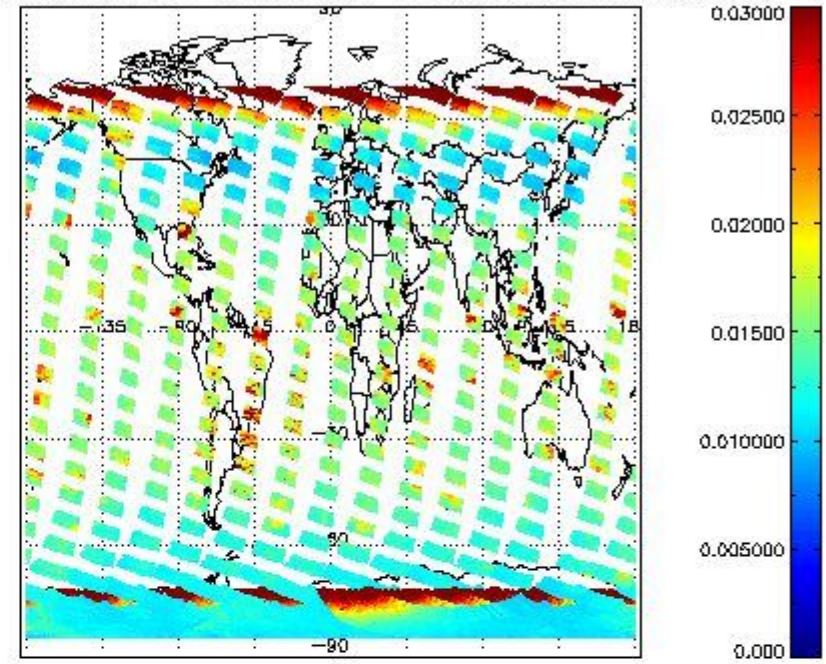




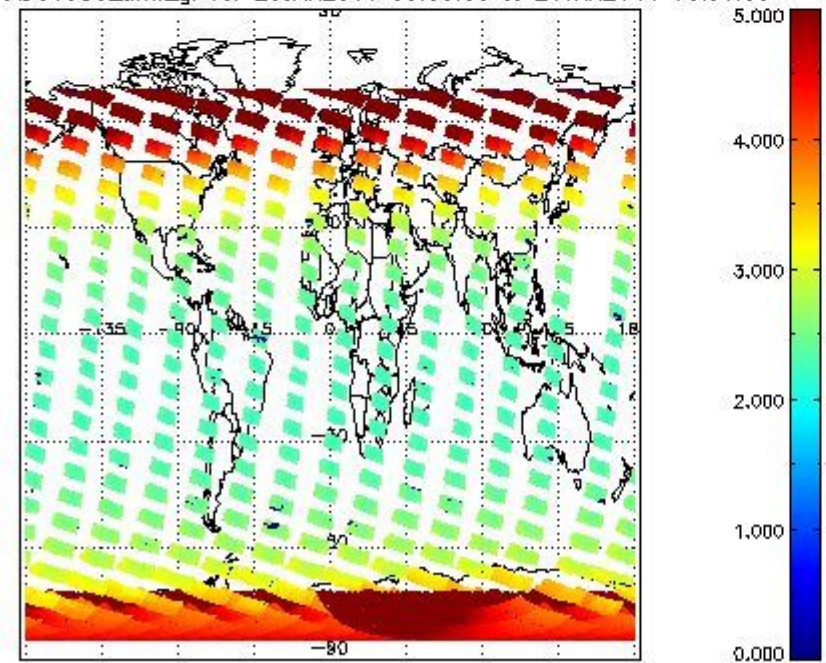
SCIOL2P\_NADUV003\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



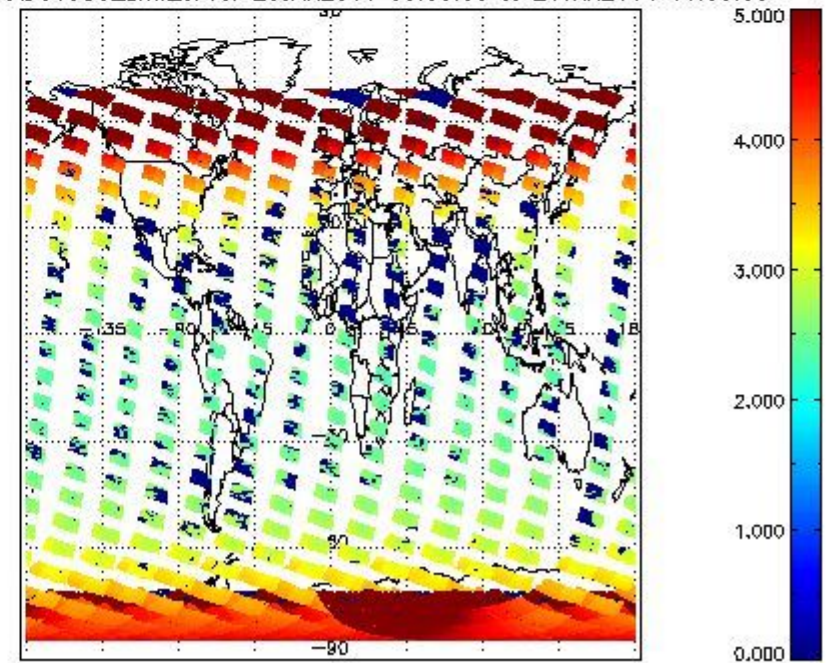
SCIOL2P\_NADUV003\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

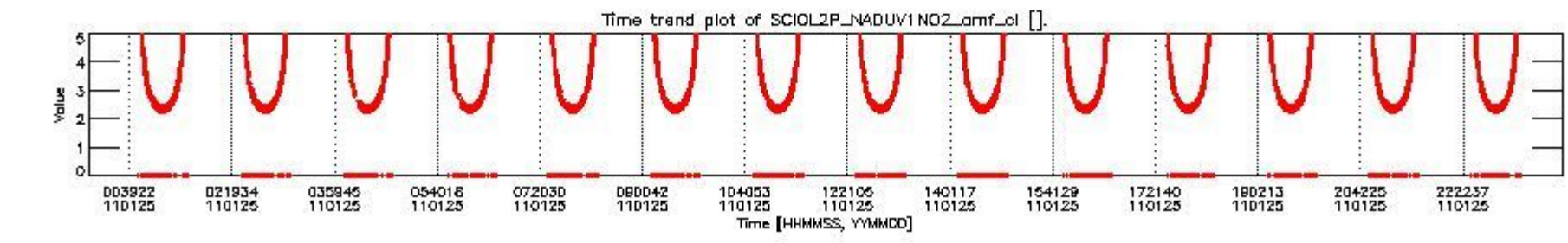
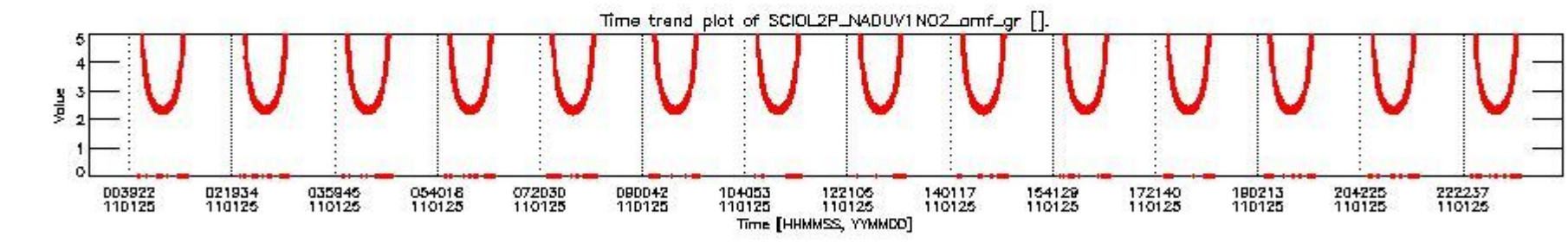
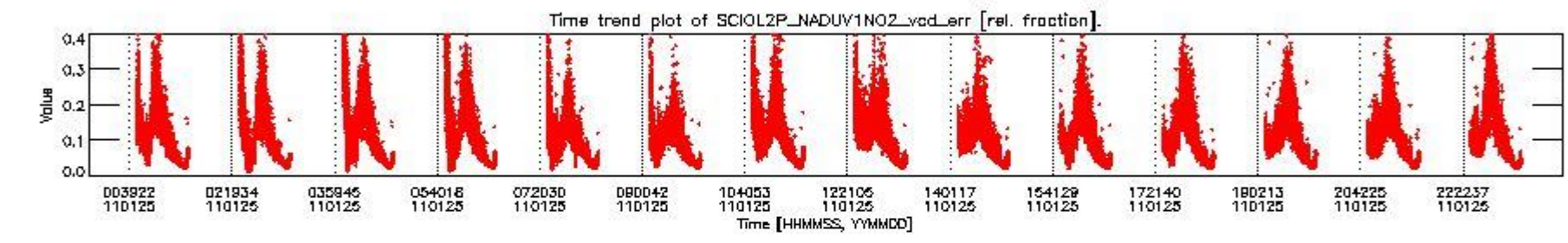
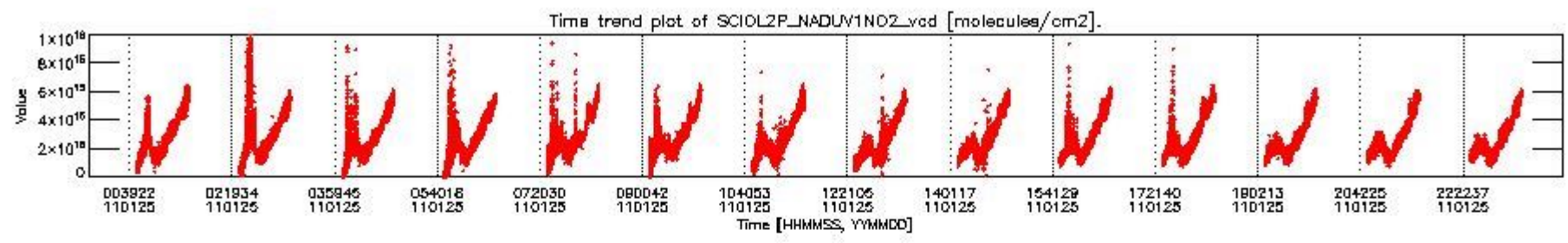


SCIOL2P\_NADUV003\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



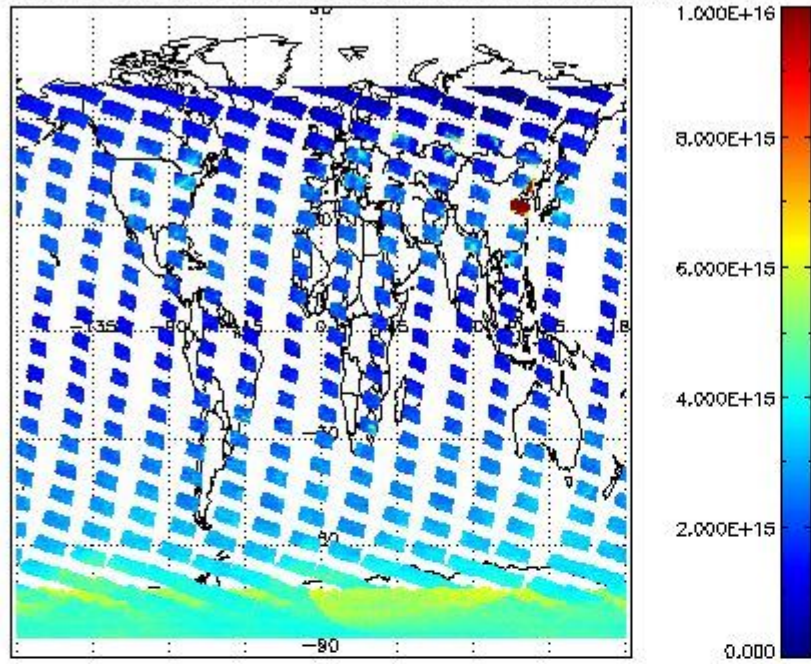
2.2.2.2 NO2 (UV1)



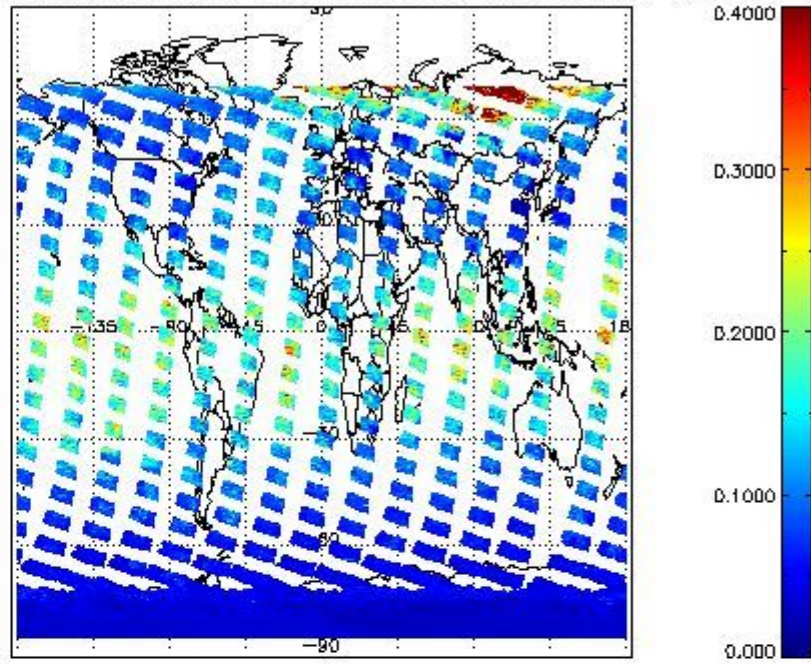




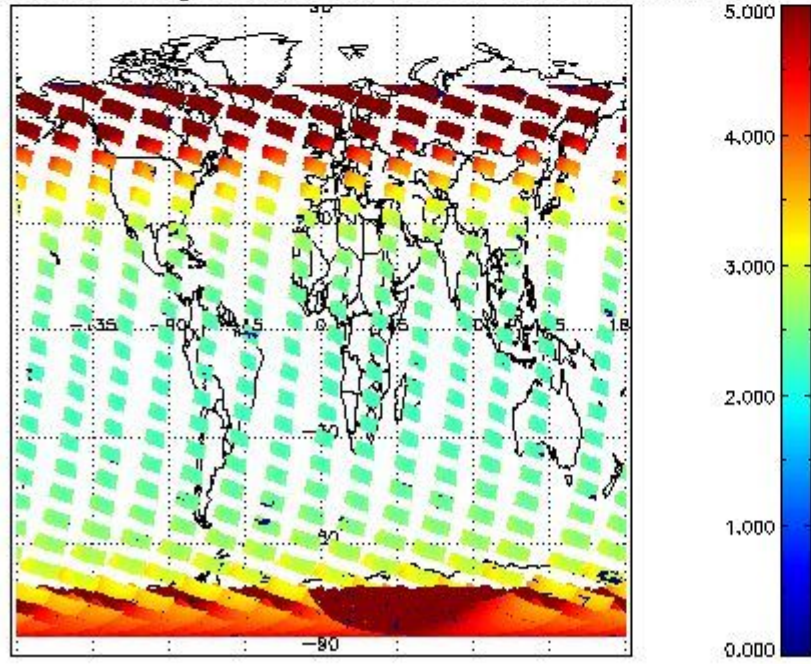
SCIOL2P\_NADUV1NO2\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



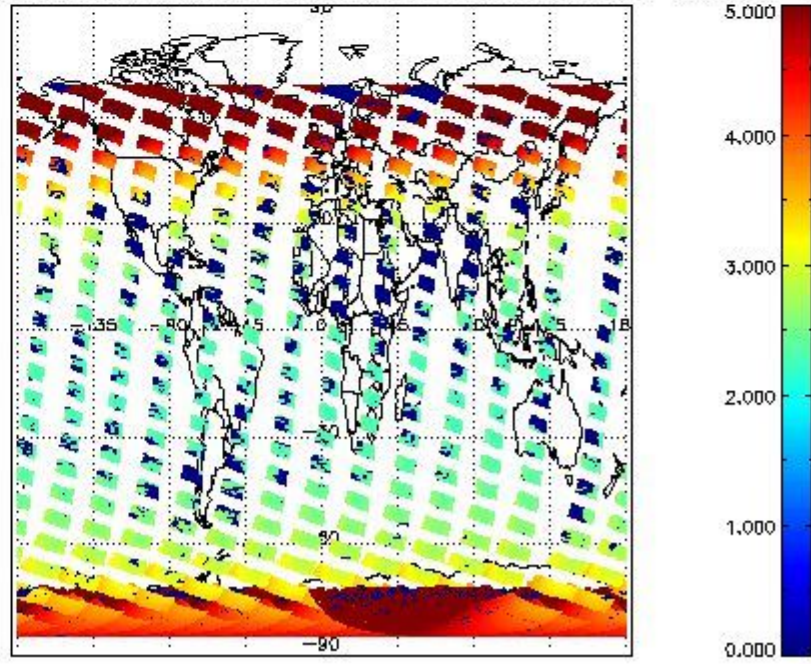
SCIOL2P\_NADUV1NO2\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

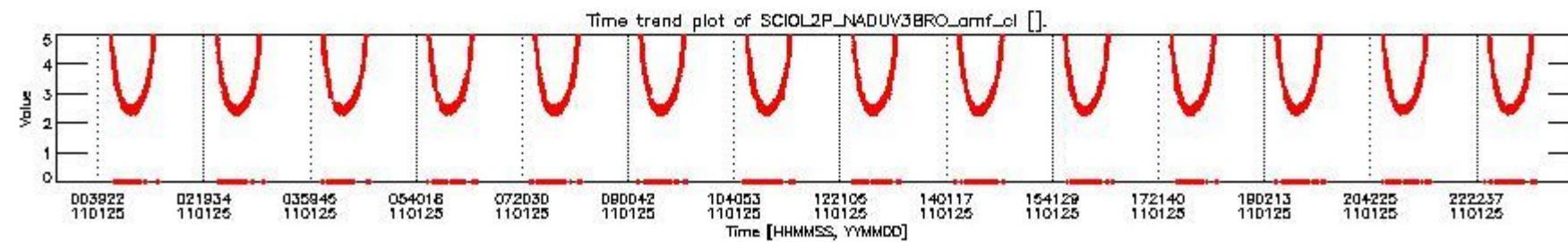
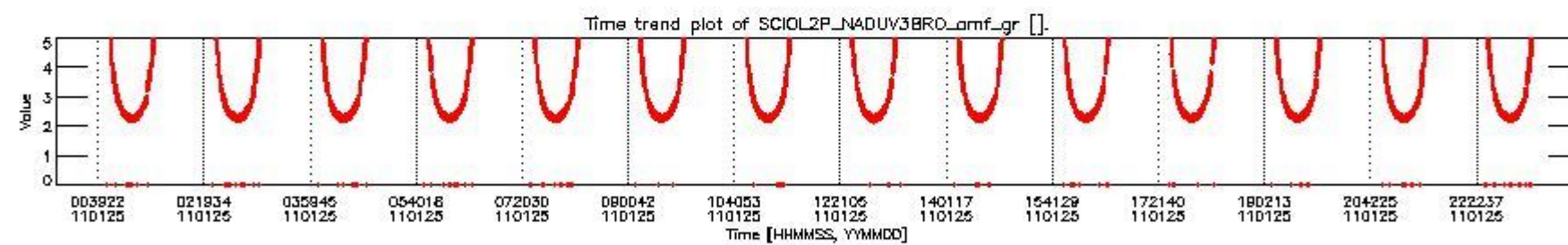
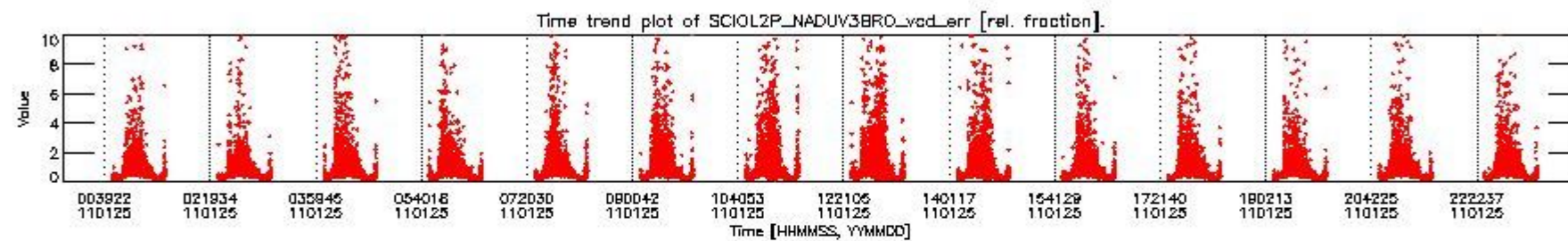
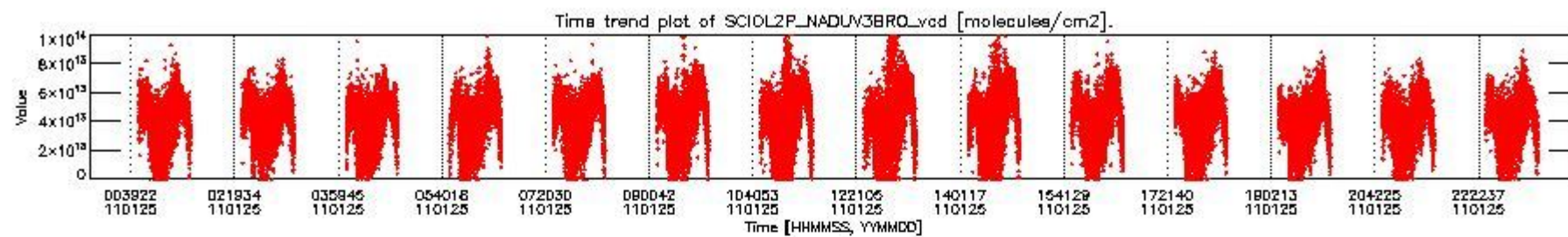


SCIOL2P\_NADUV1NO2\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



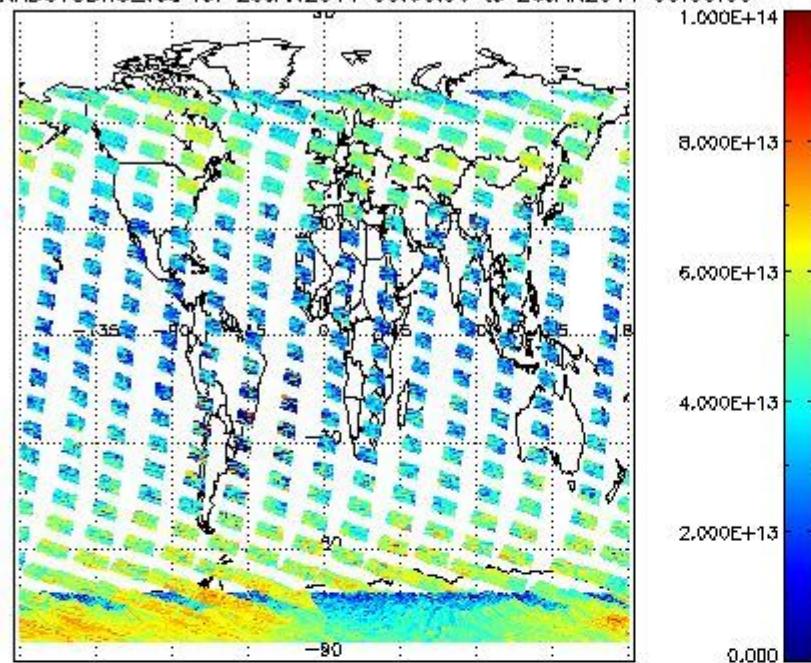
### 2.2.2.3 BrO (UV3)



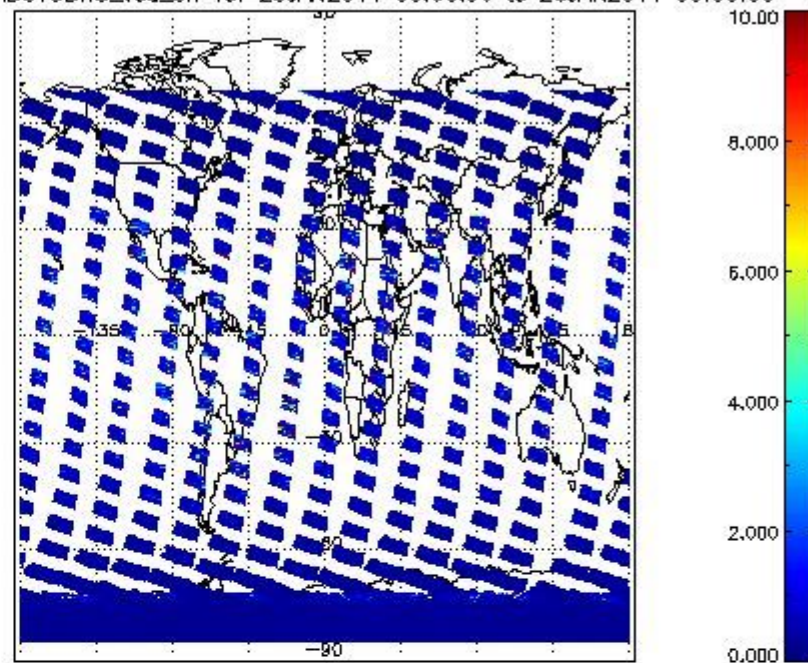




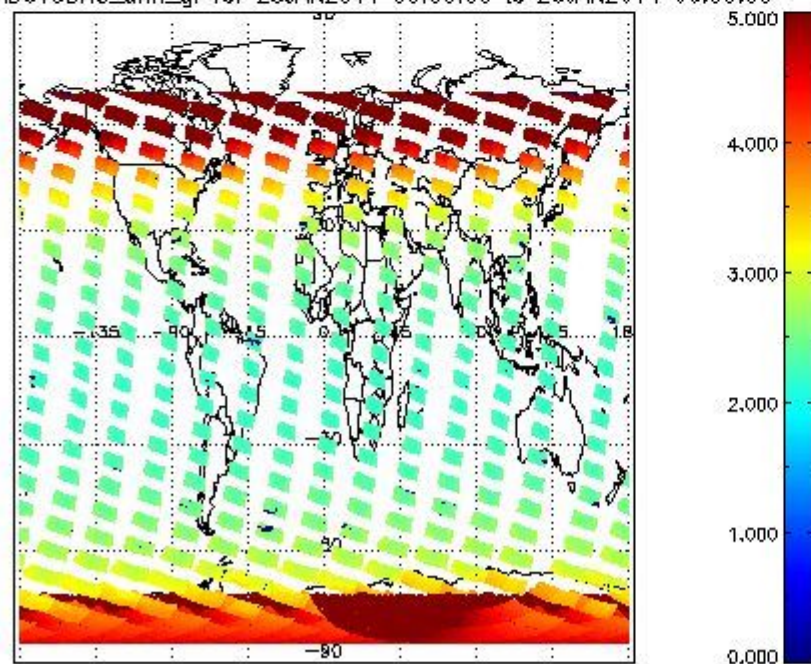
SCIOL2P\_NADUV3BRO\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



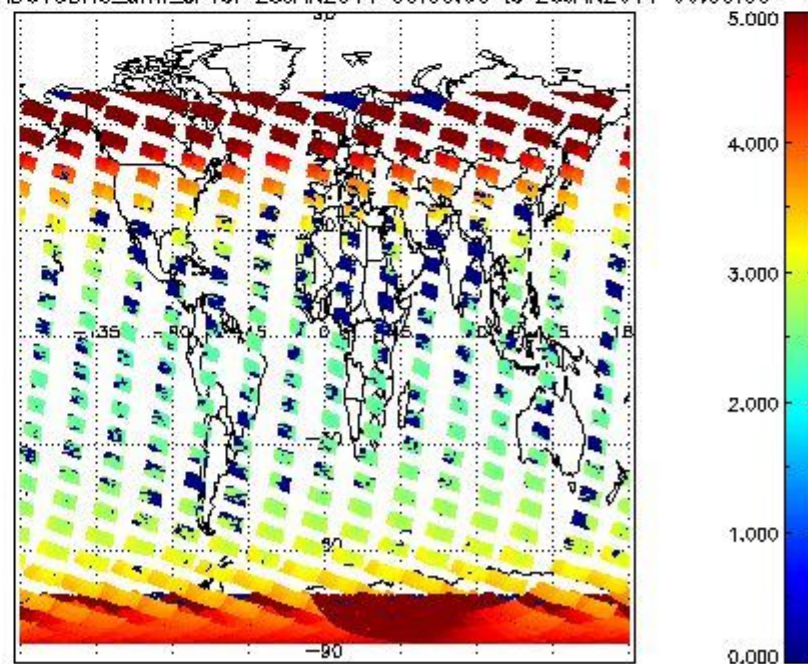
SCIOL2P\_NADUV3BRO\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

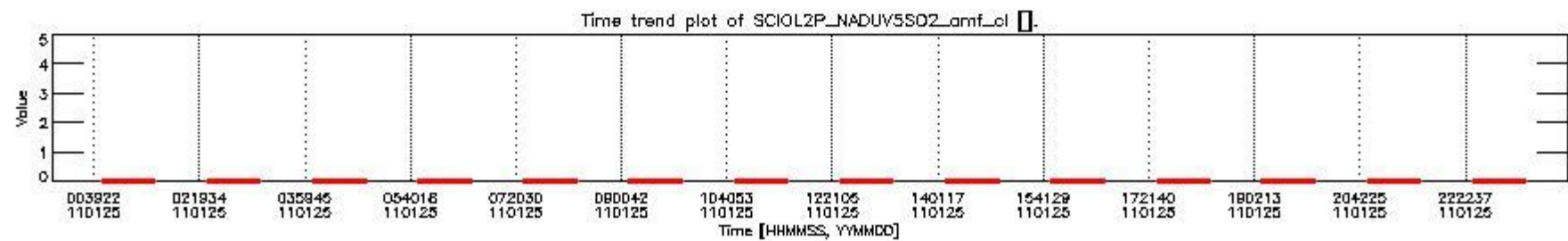
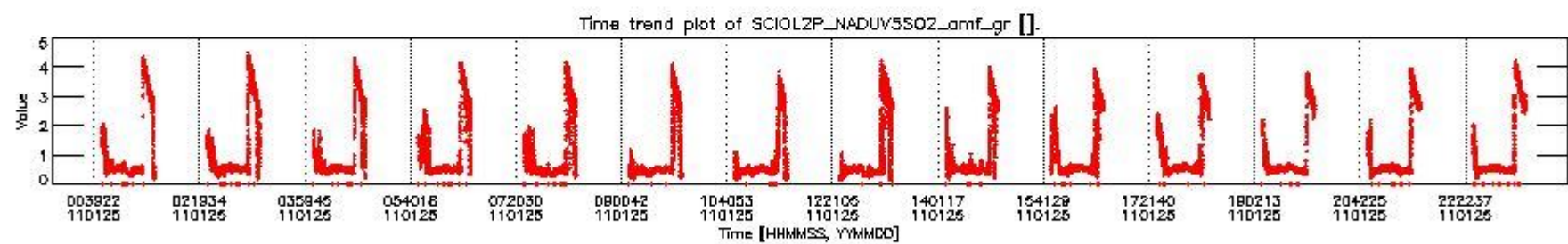
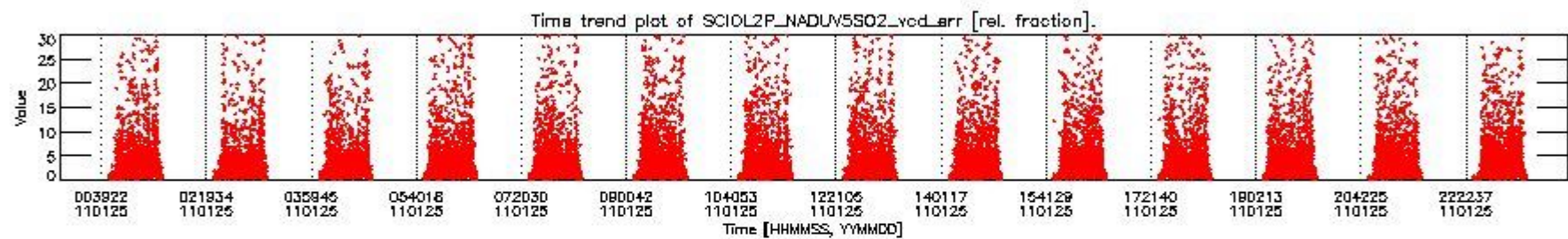
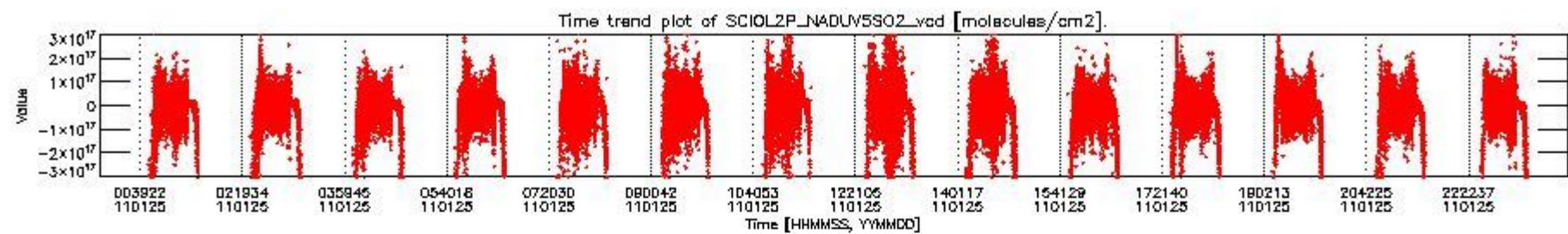


SCIOL2P\_NADUV3BRO\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



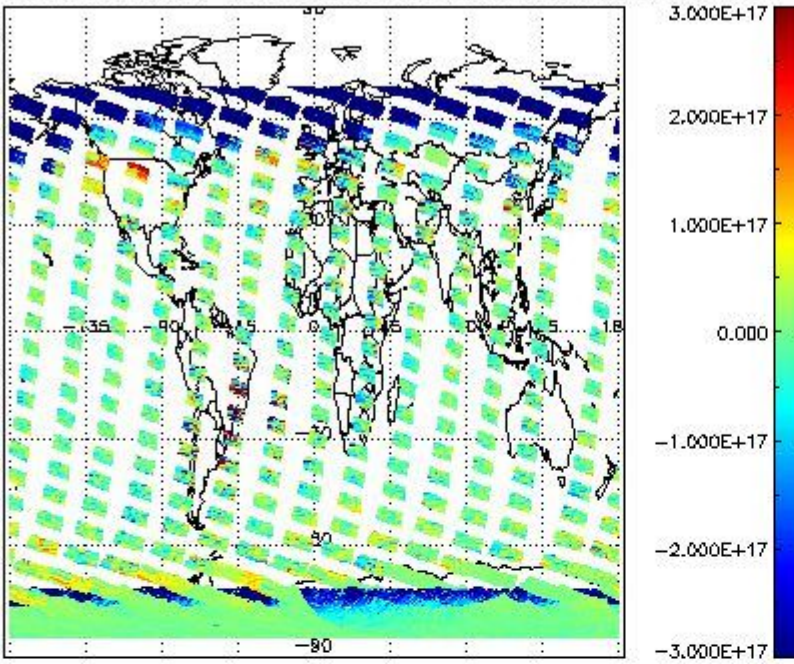
2.2.2.4 SO2 (UV5)



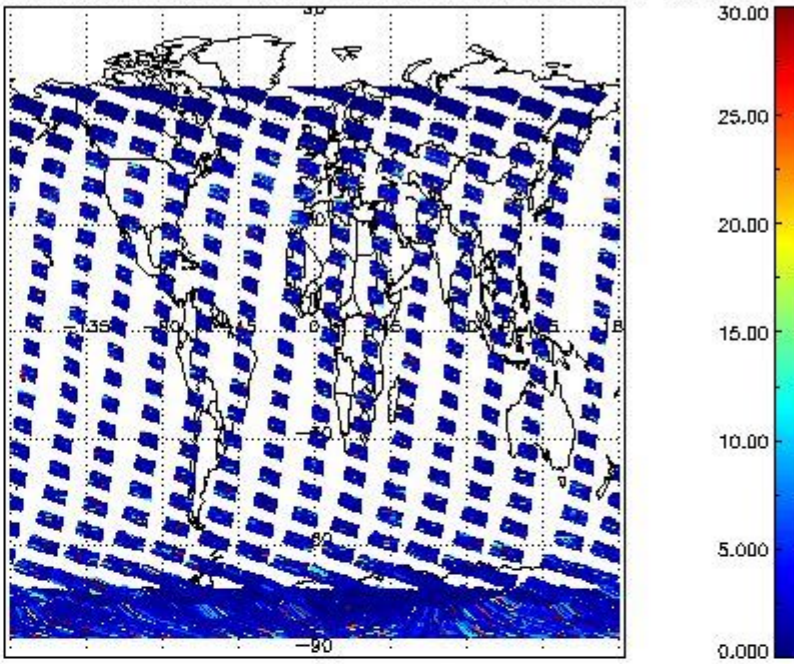




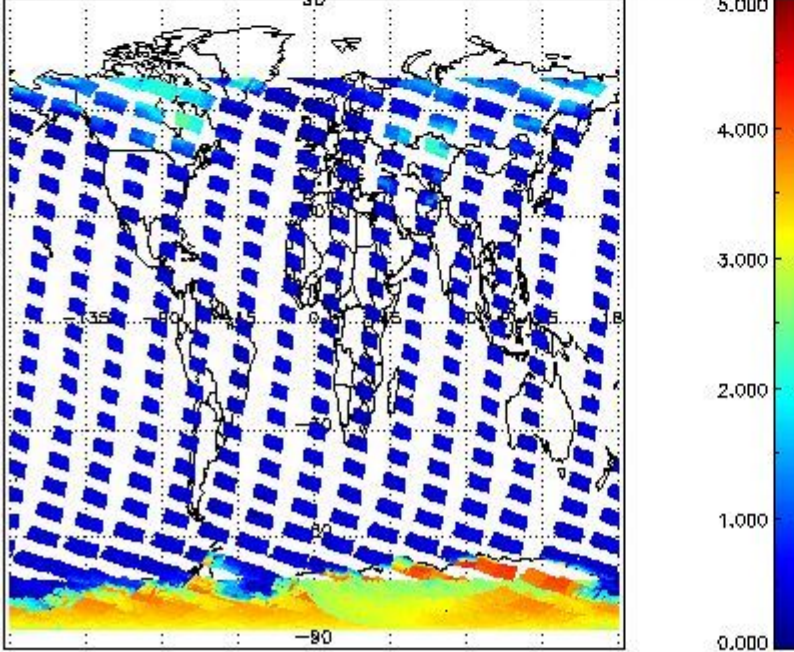
SCIOL2P\_NADUV5SO2\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



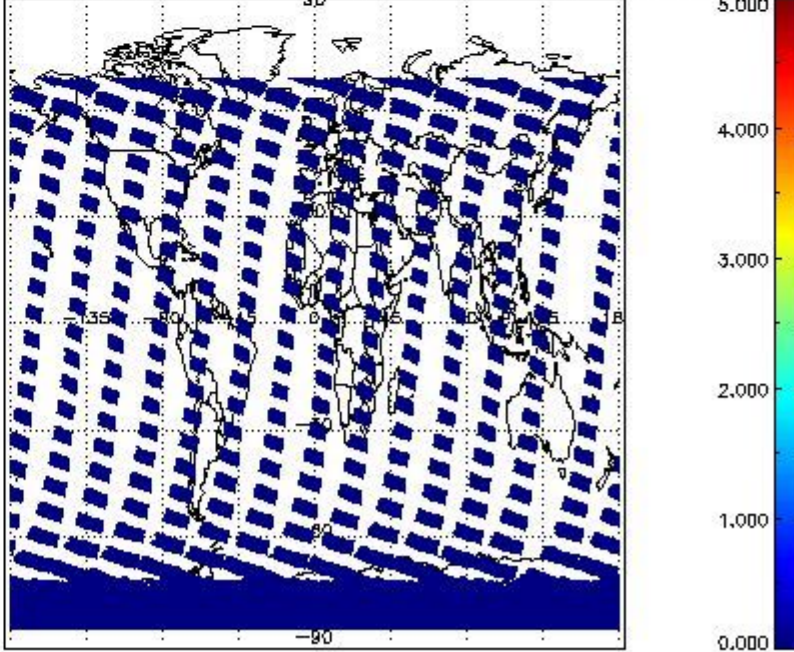
SCIOL2P\_NADUV5SO2\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADUV5SO2\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

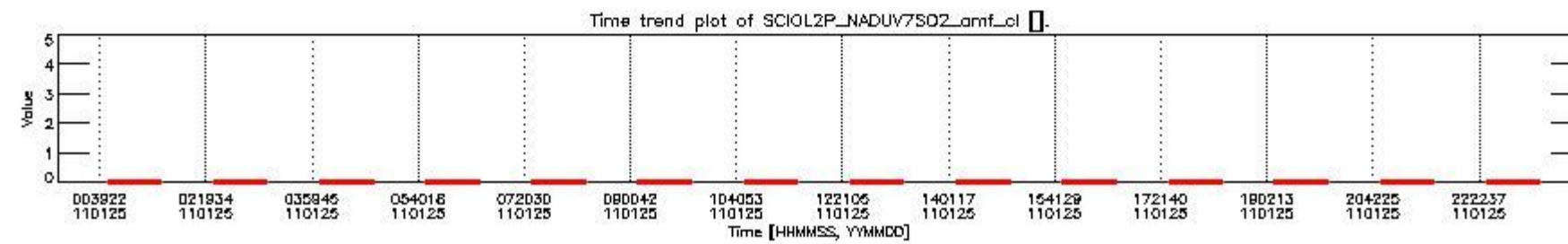
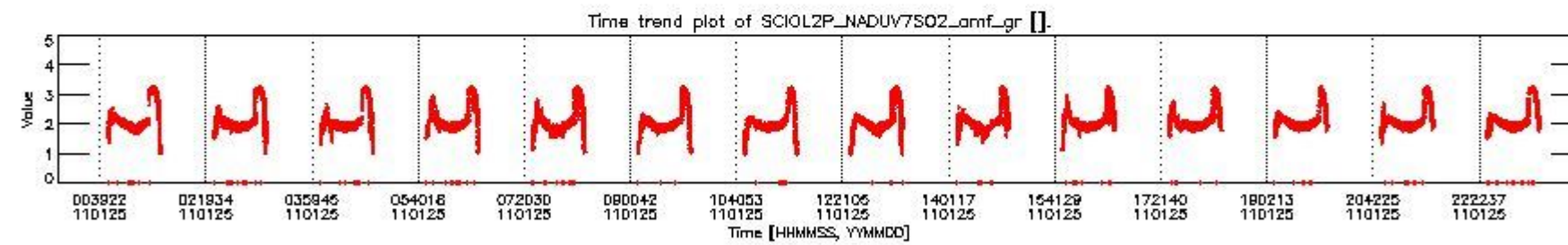
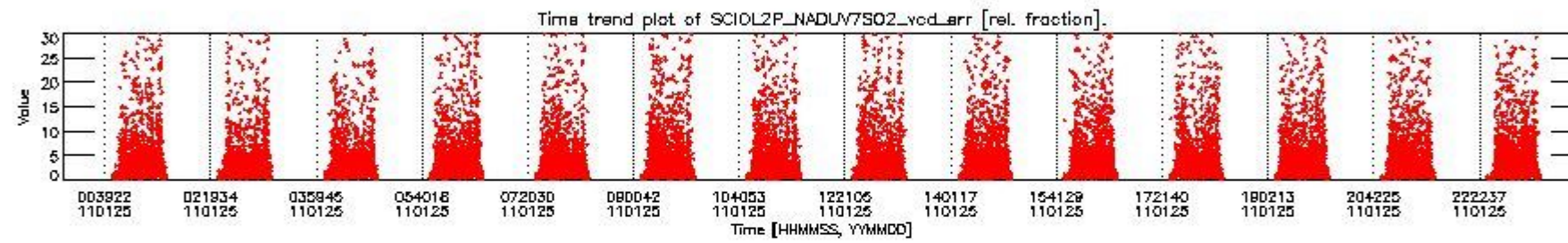
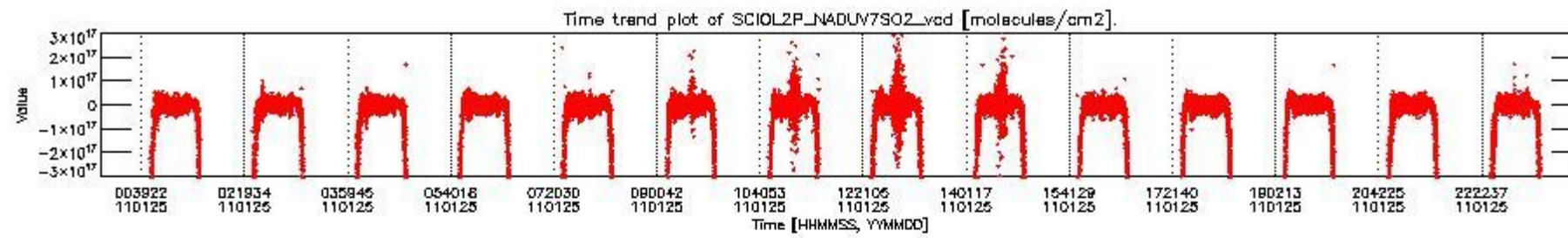


SCIOL2P\_NADUV5SO2\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

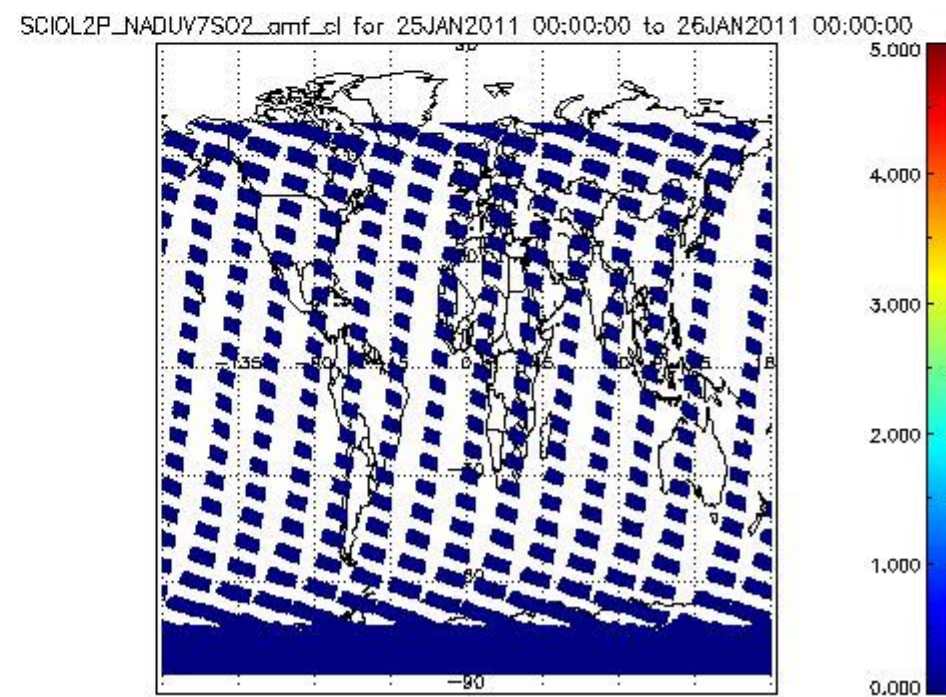
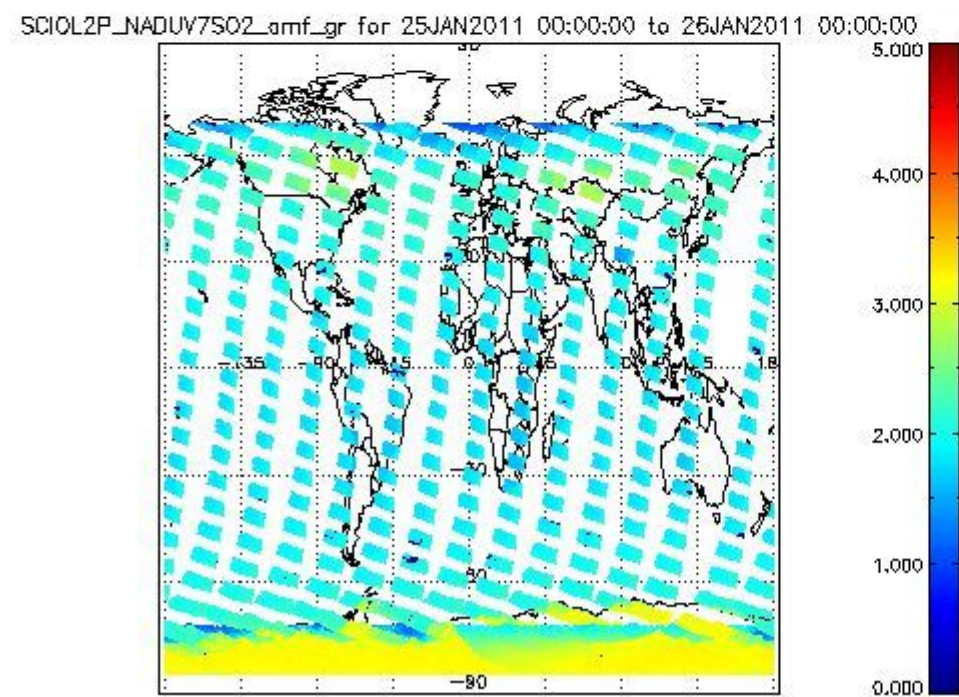
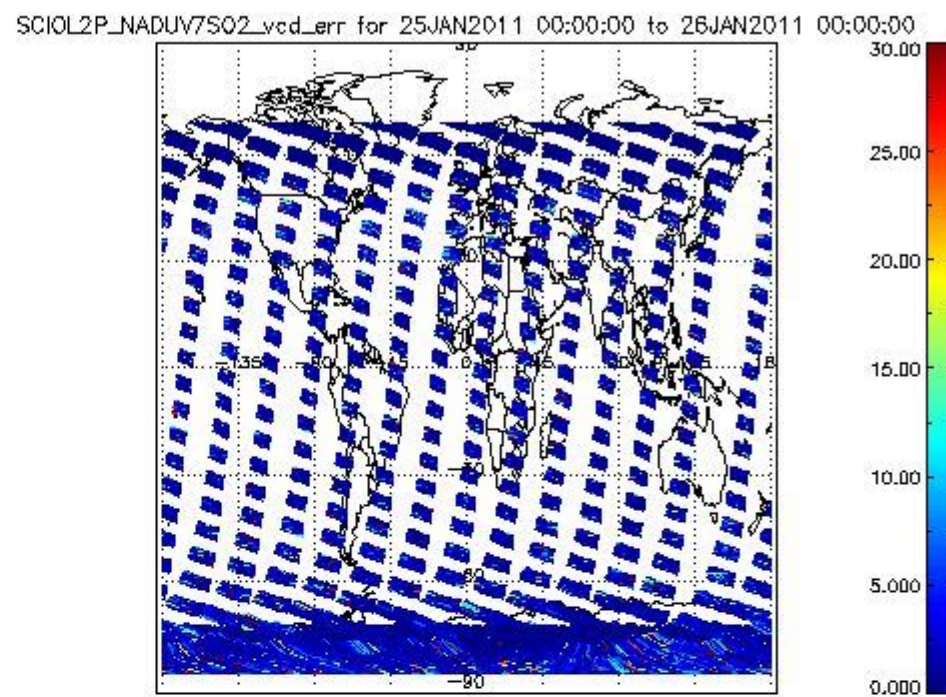
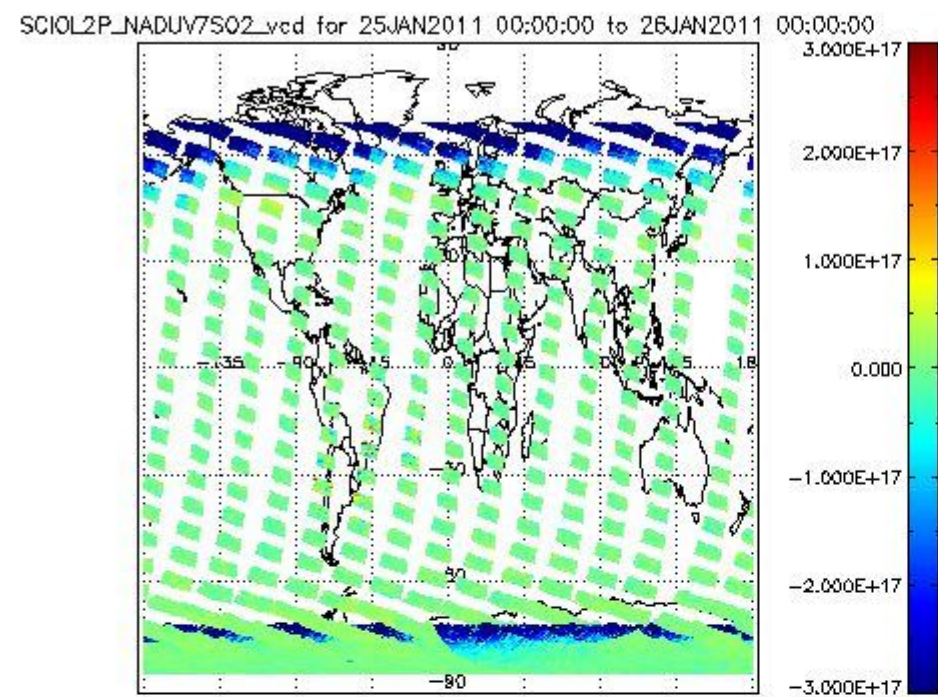


2.2.2.5 SO2 (UV7)



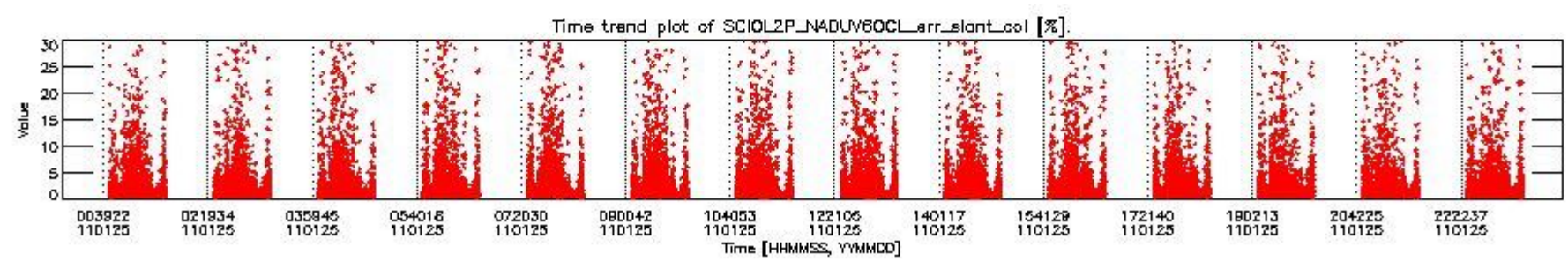
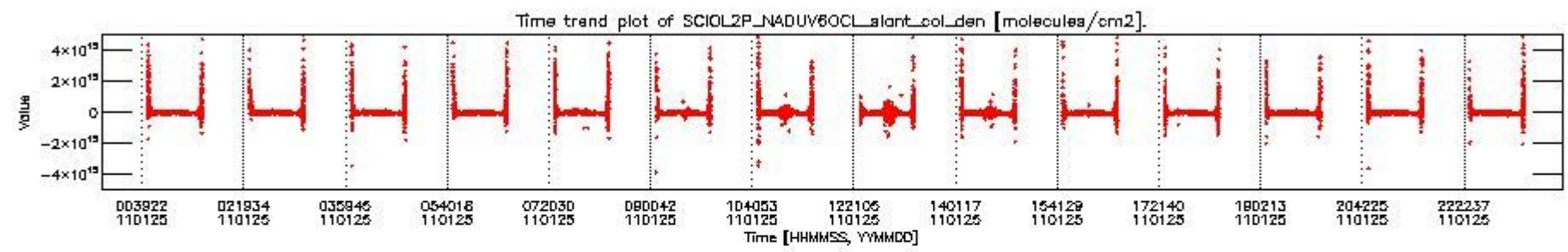




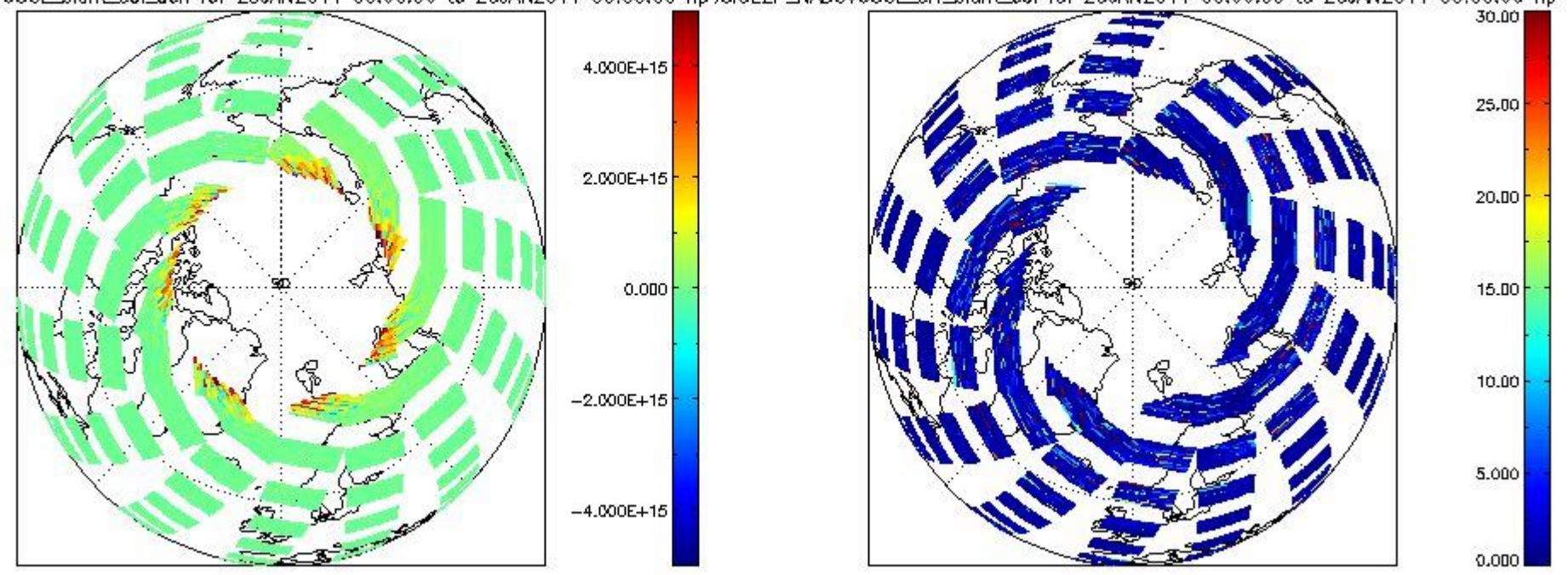


2.2.2.6 OCIO (UV6)



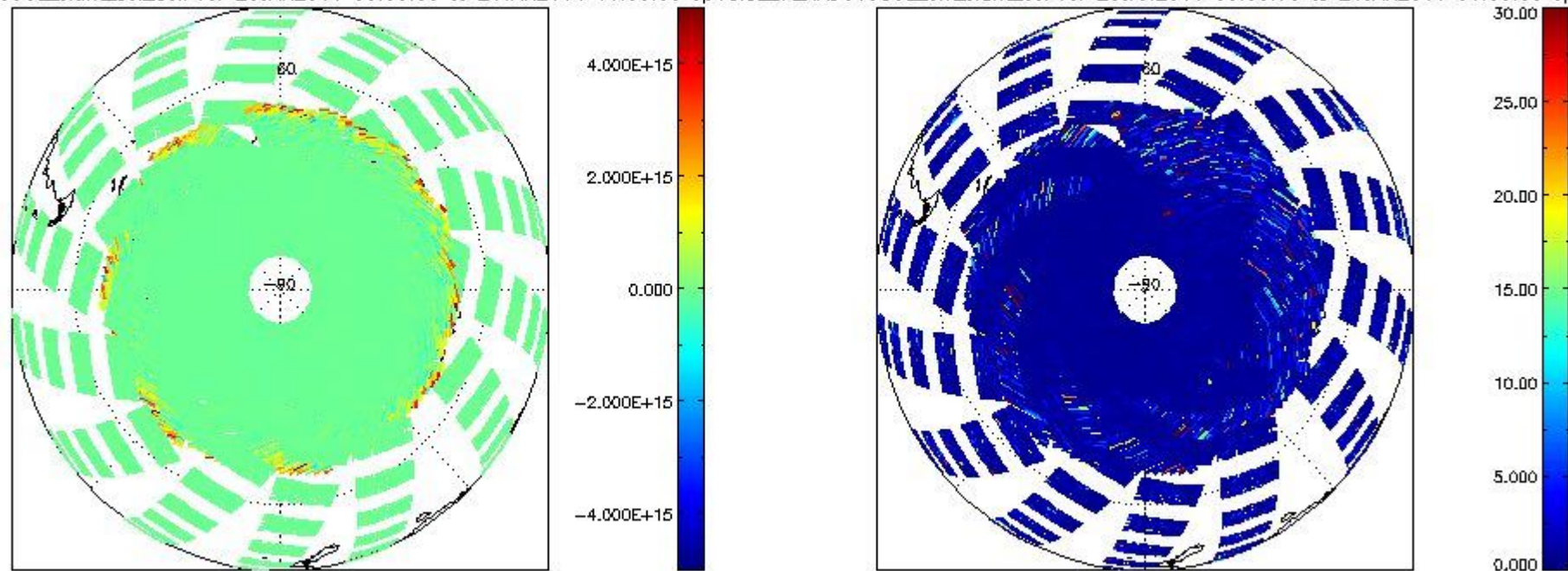


SCIOI2P\_NADUV60CL\_slant\_col\_den for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 np; SCIOI2P\_NADUV60CL\_err\_slant\_col for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 np

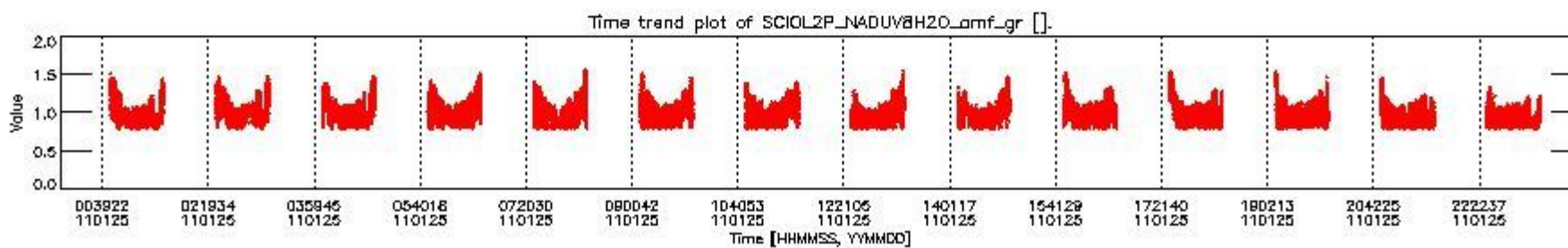
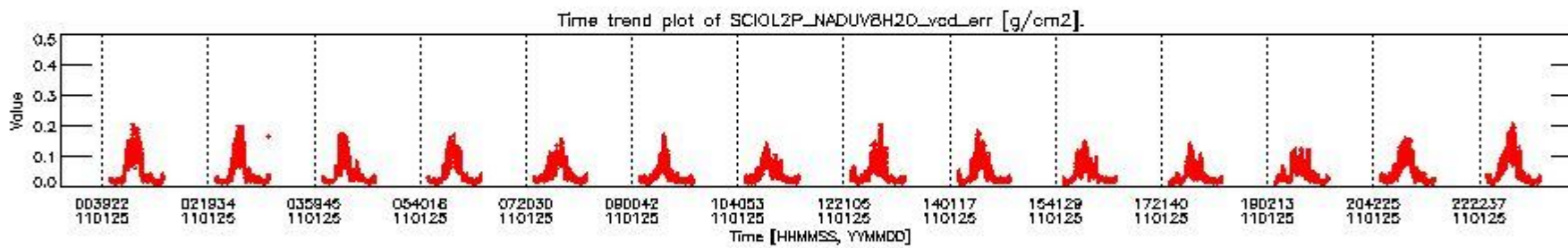
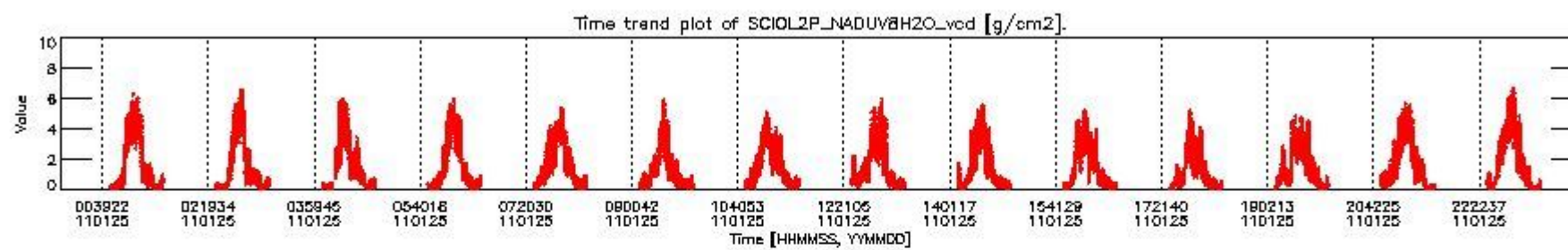




SCIOL2P\_NADUV6OCL\_slant\_col\_den for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 sp SCIOL2P\_NADUV6OCL\_err\_slant\_col for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 sp

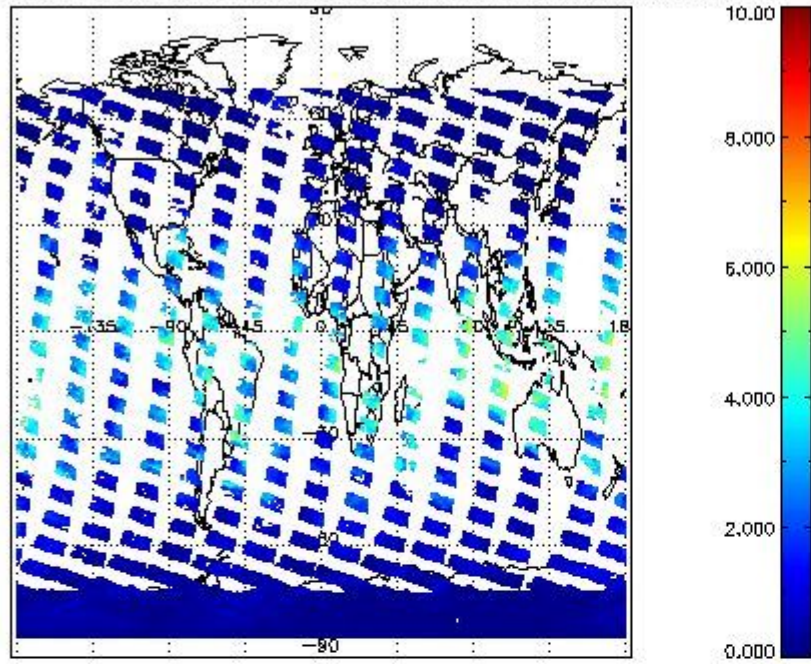


### 2.2.2.7 H2O (UV8)

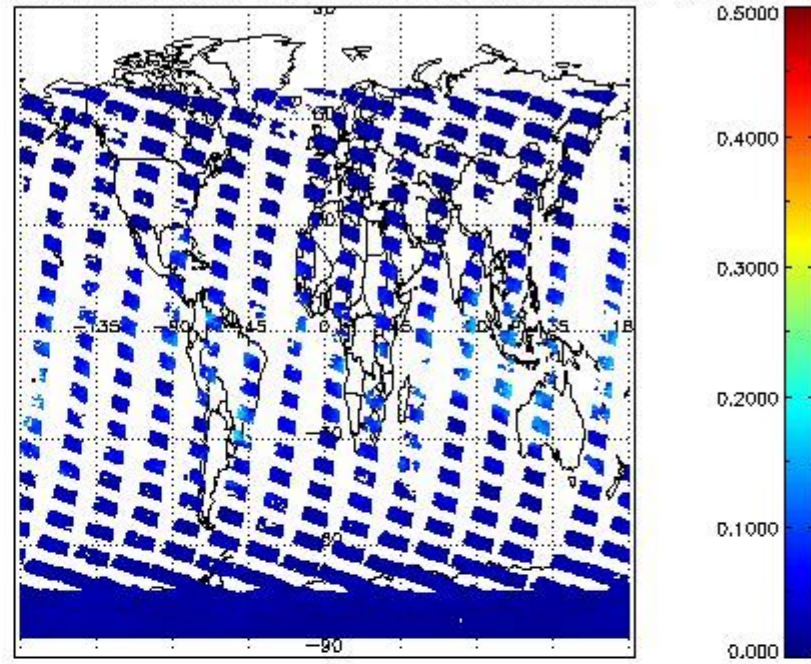




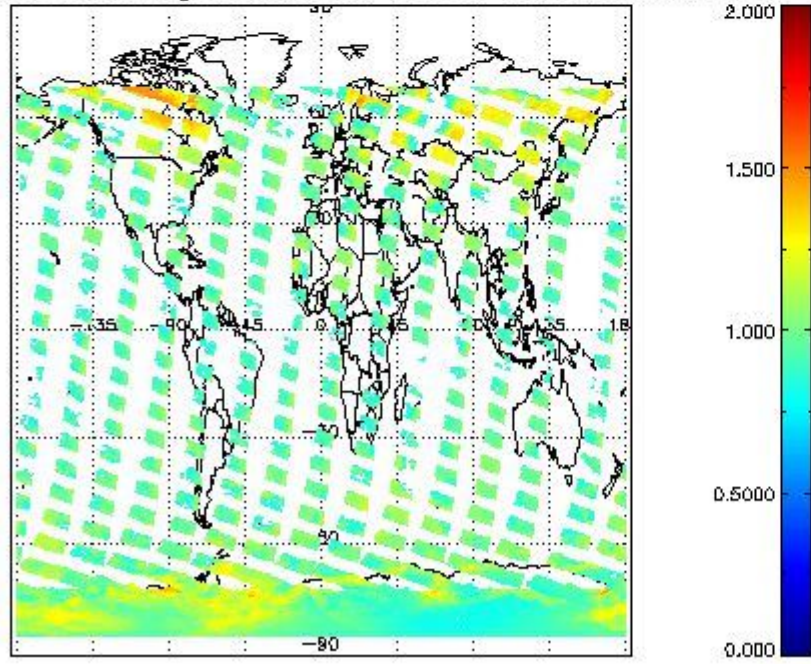
SCIOL2P\_NADUV8H20\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADUV8H20\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

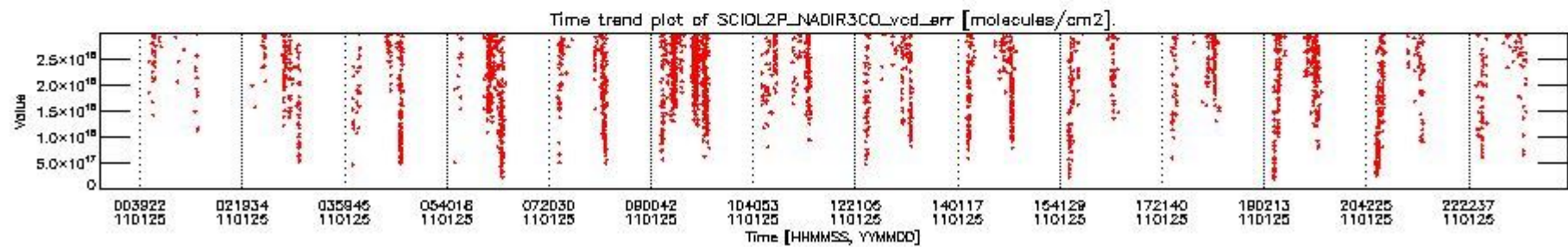
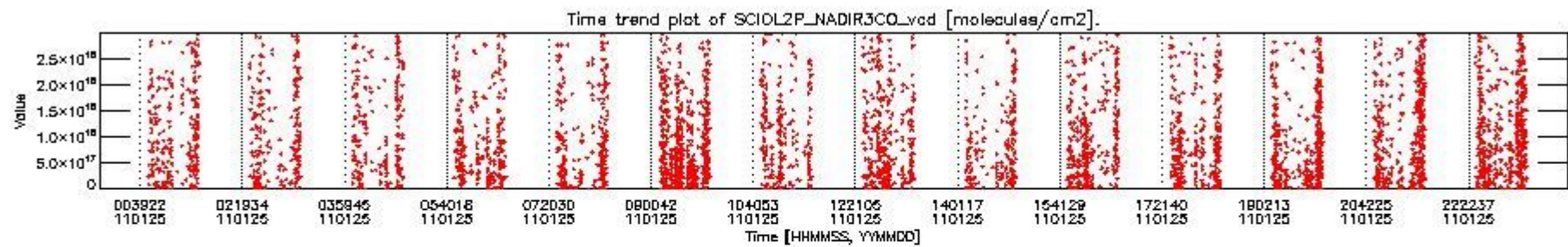


SCIOL2P\_NADUV8H20\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

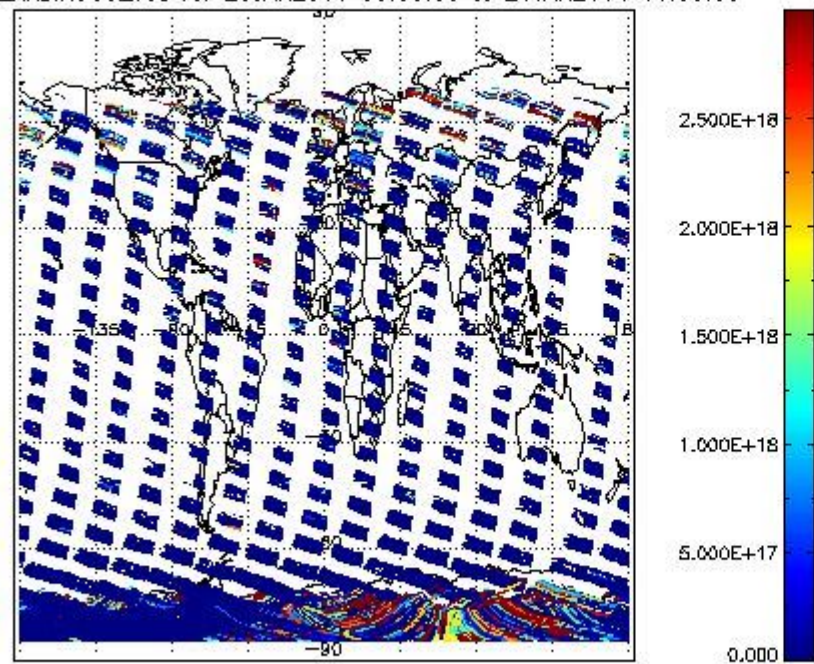


2.2.2.8 CO (IR3)

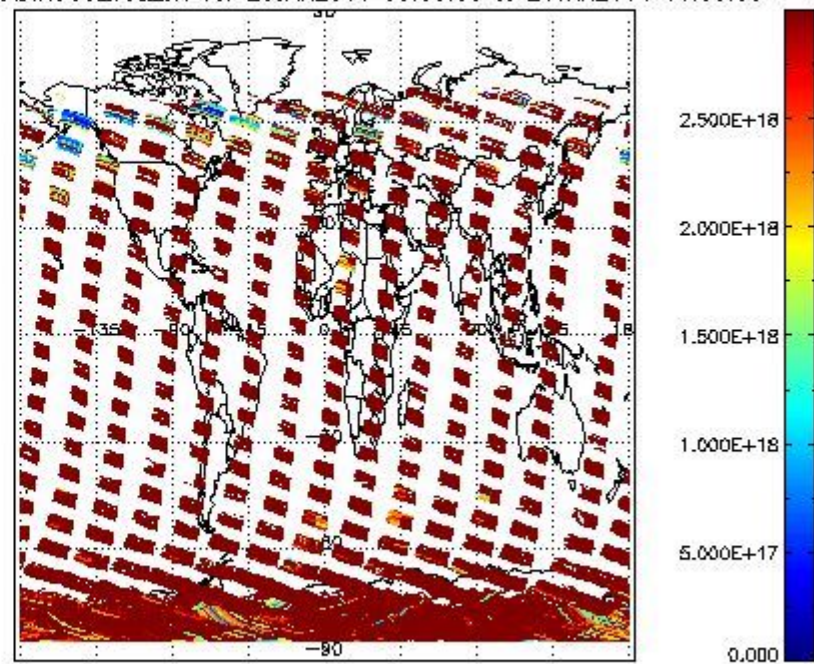




SCIDL2P\_NADIR3CO\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 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.

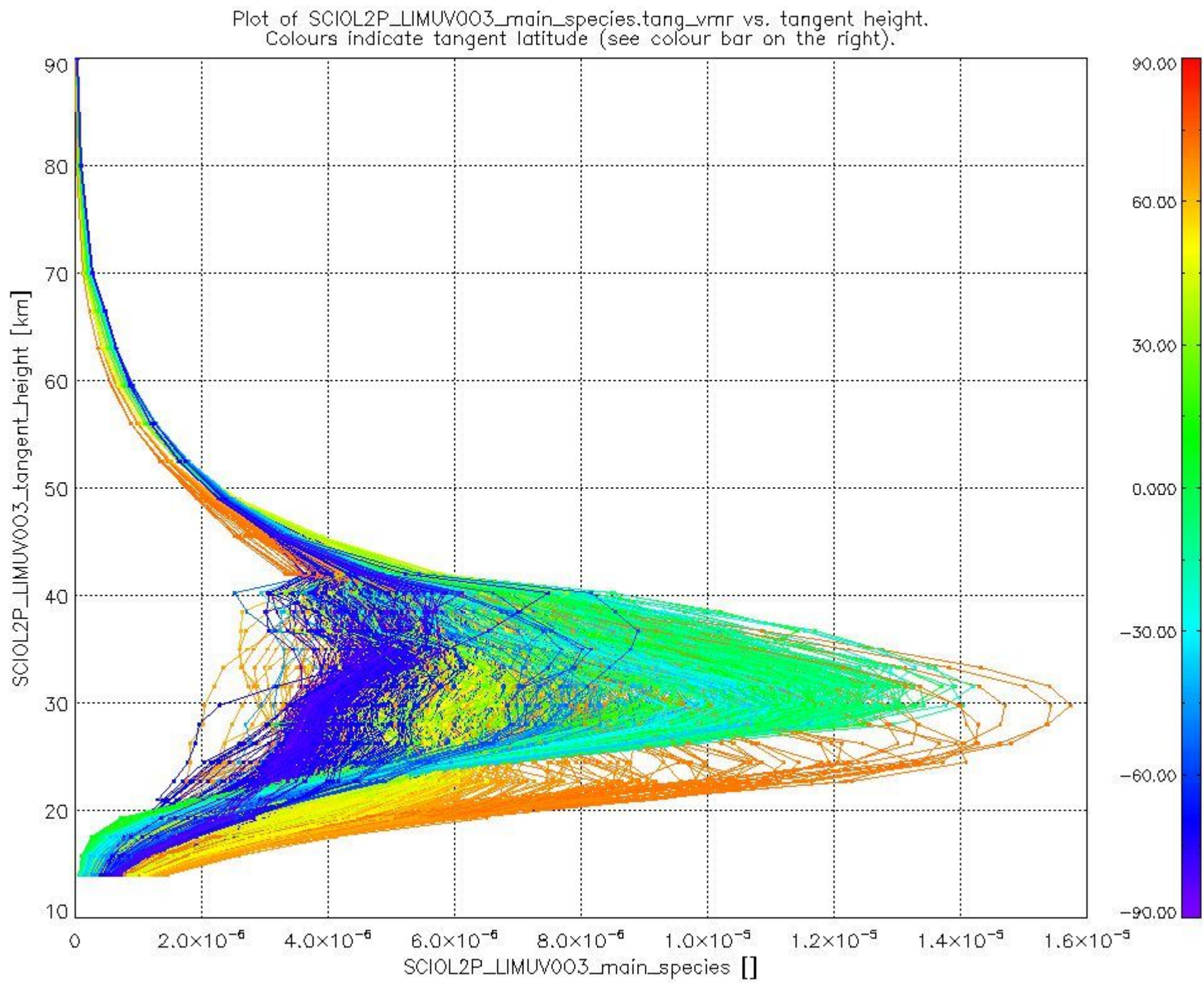
The following data items are currently included into this section:

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.

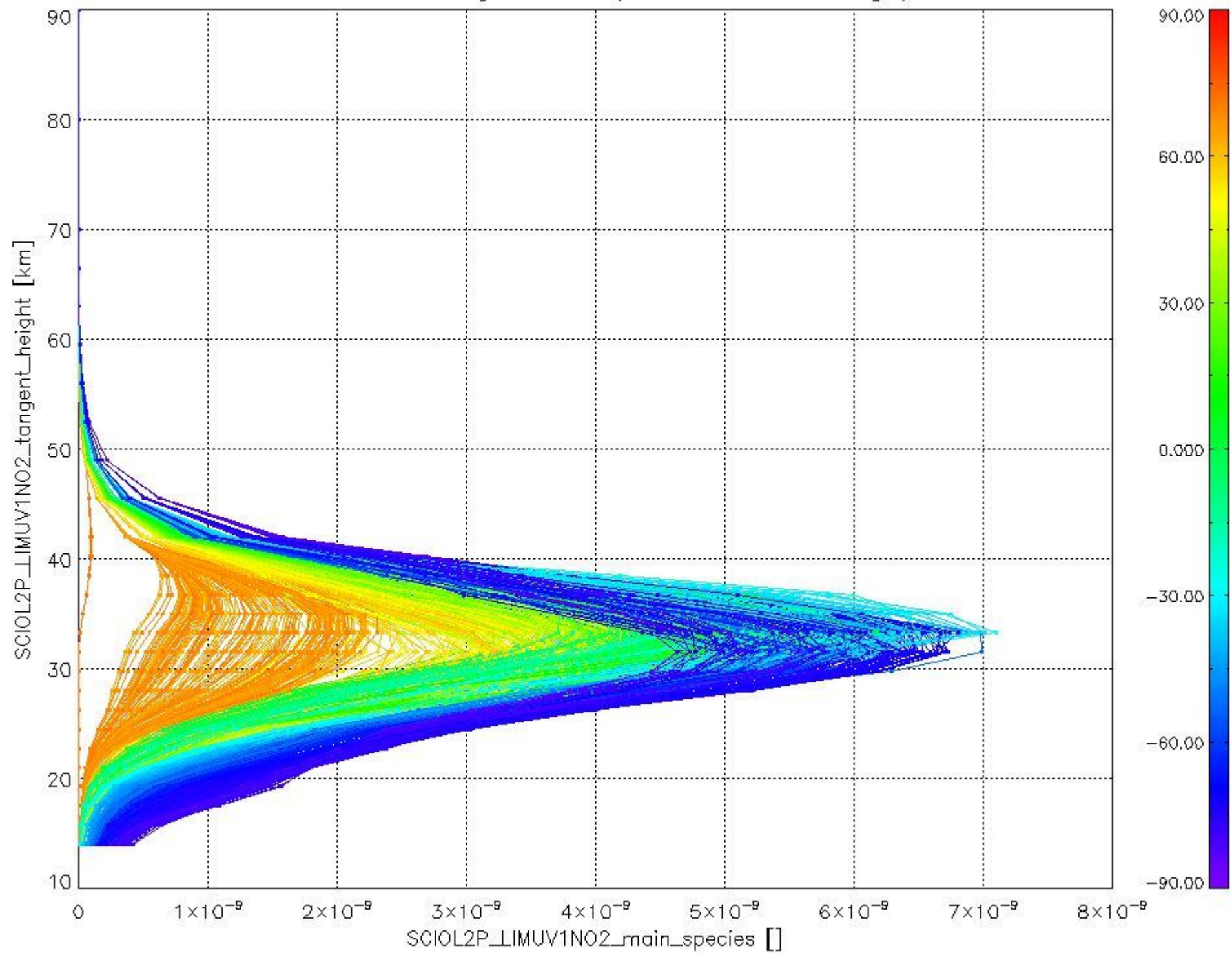
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



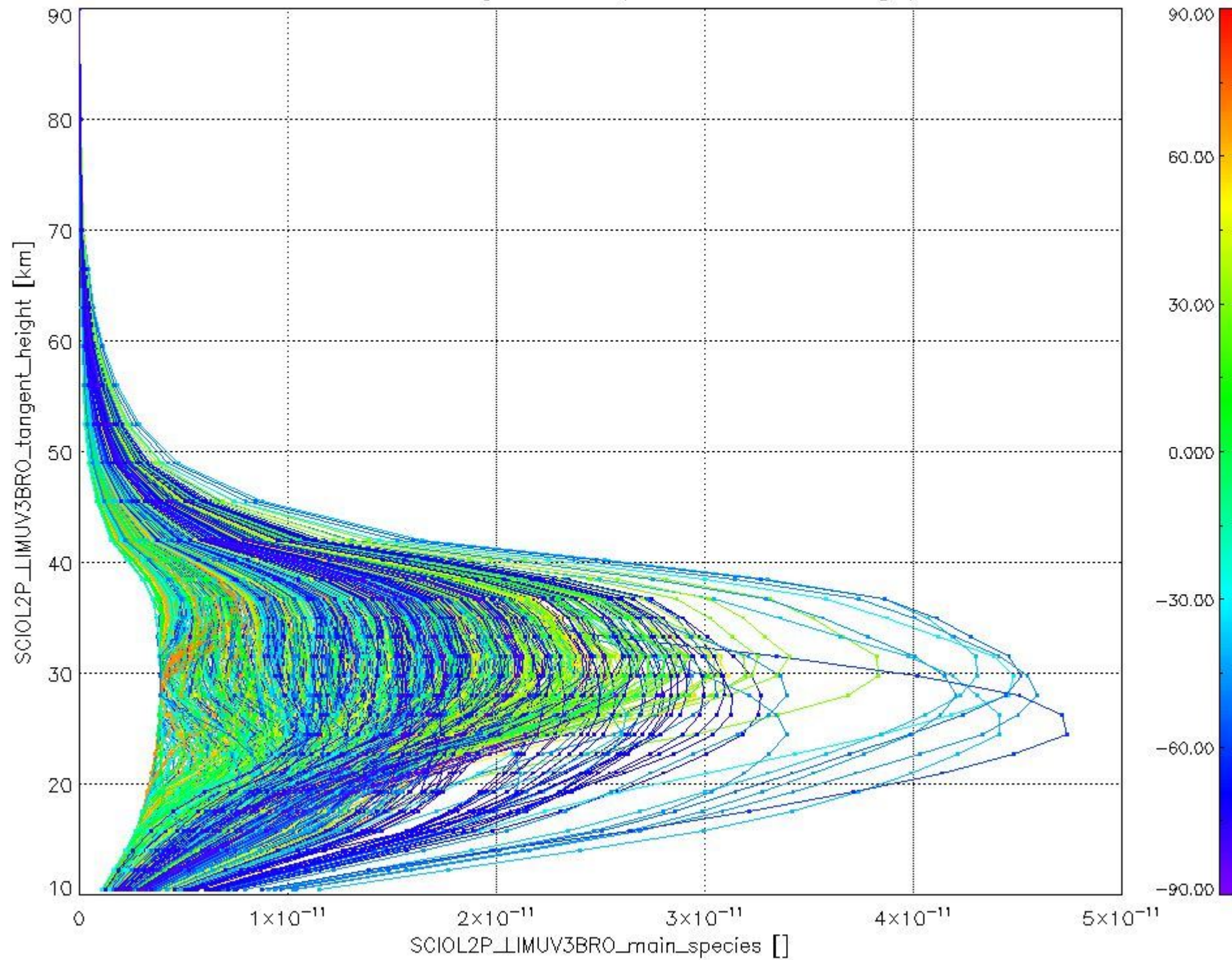
Plot of SCIO2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



### 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

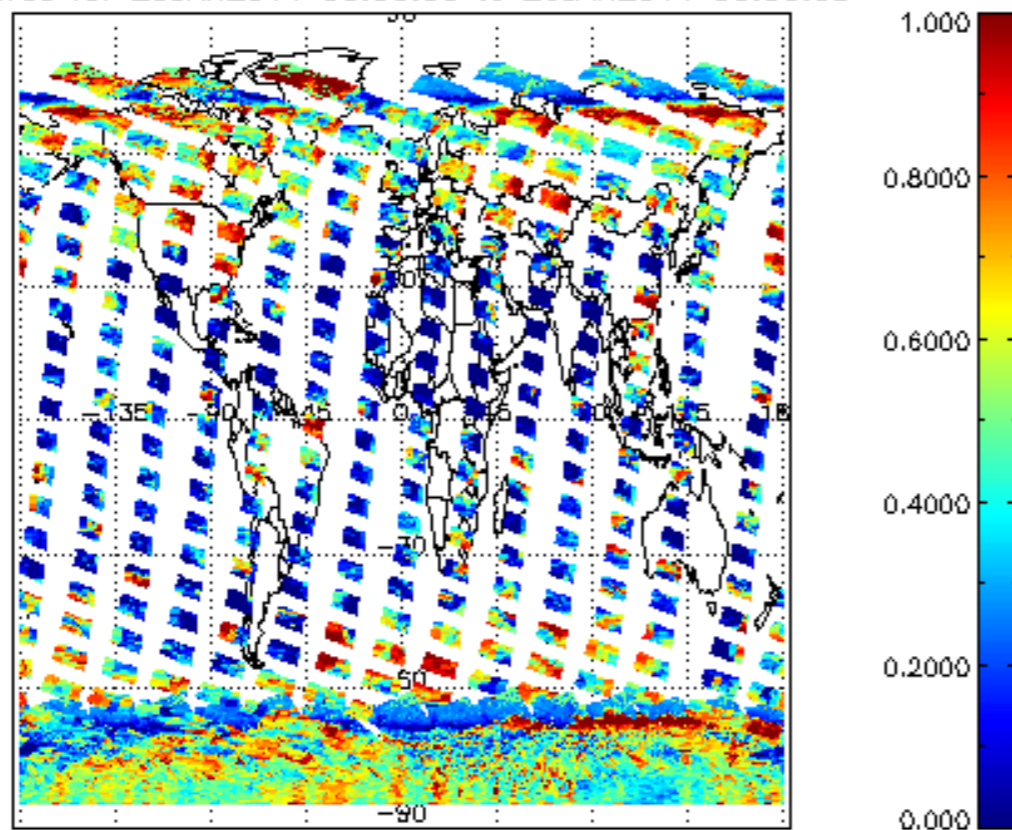
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110120_091454_20110124_190529_20110221_190529
3	SCI_MF1_AXVIEC20110125_150427_20110124_190529_20110126_190529
4	SCI_MF1_AXVIEC20110125_150535_20110125_182843_20110127_182843



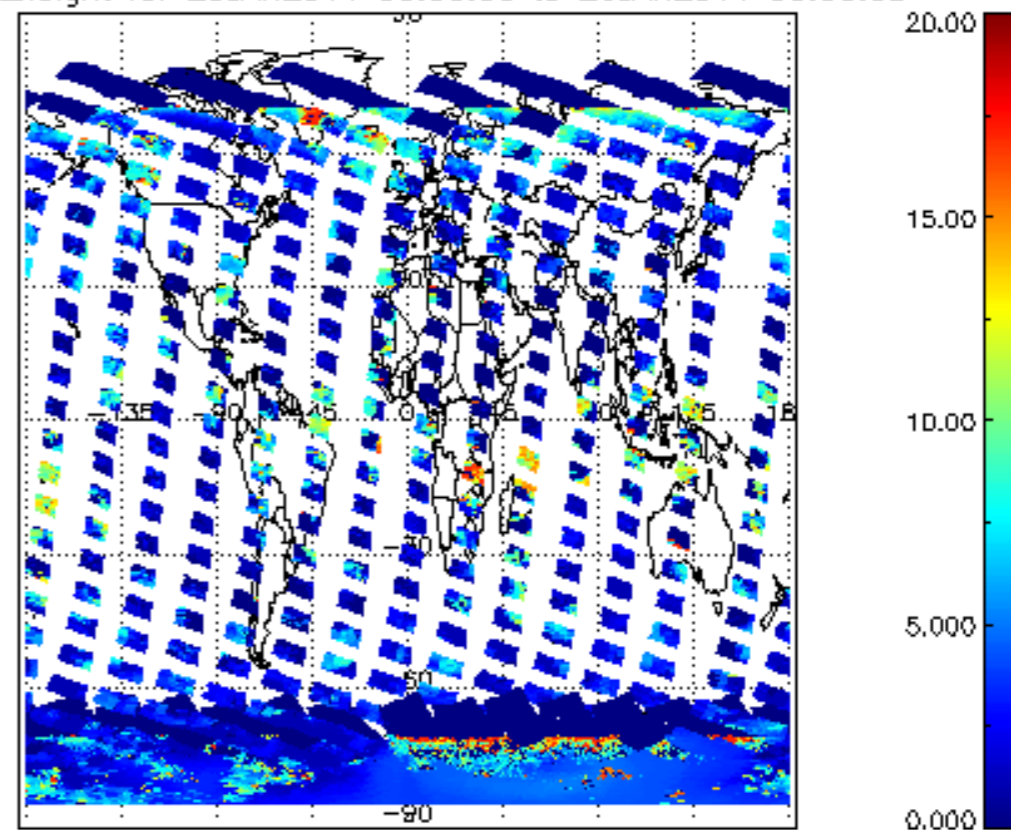




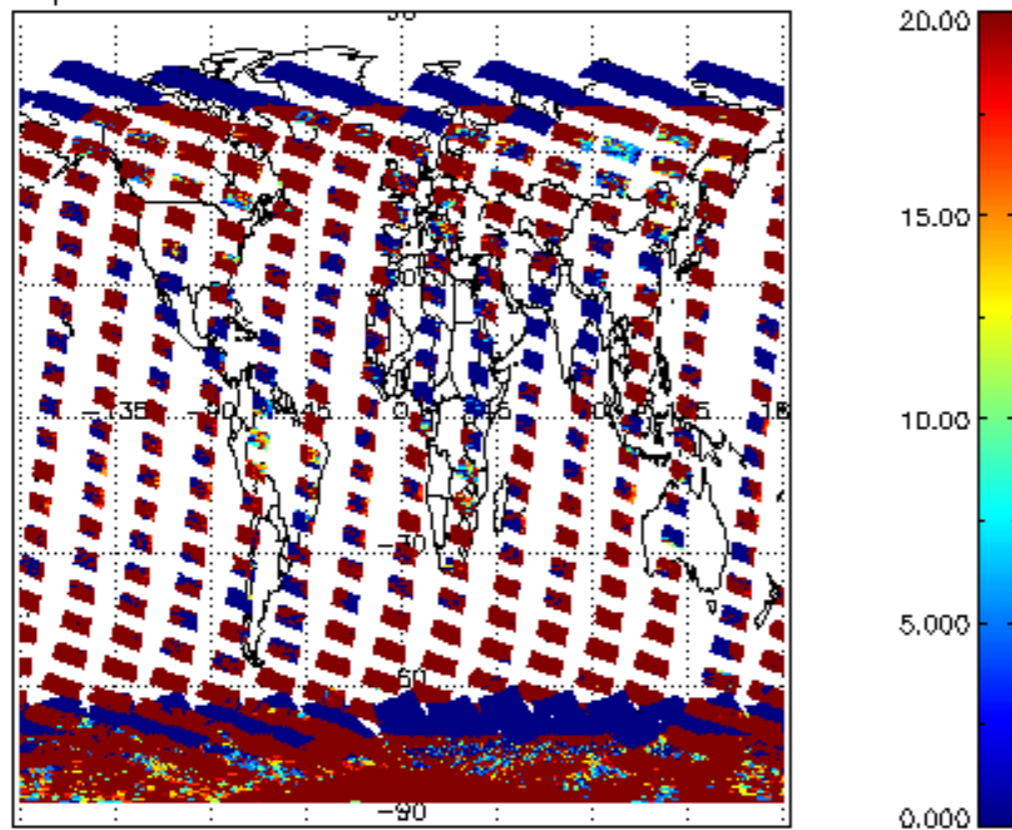
cL\_frac for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



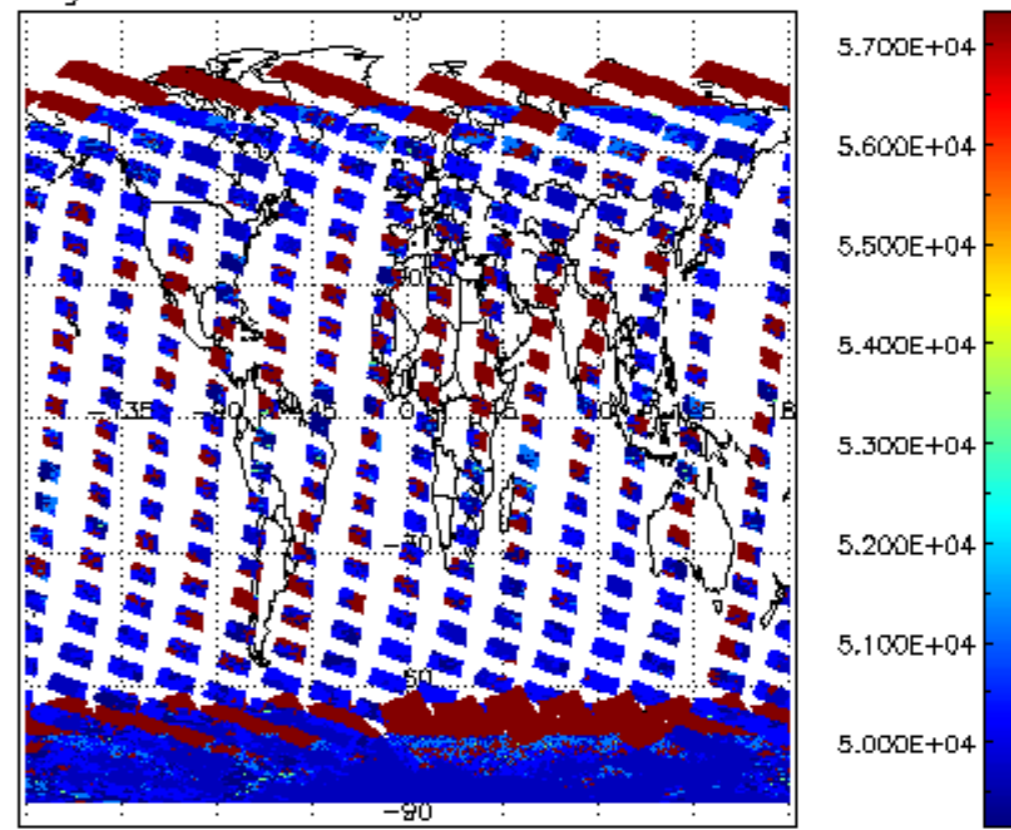
cL\_top\_height for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



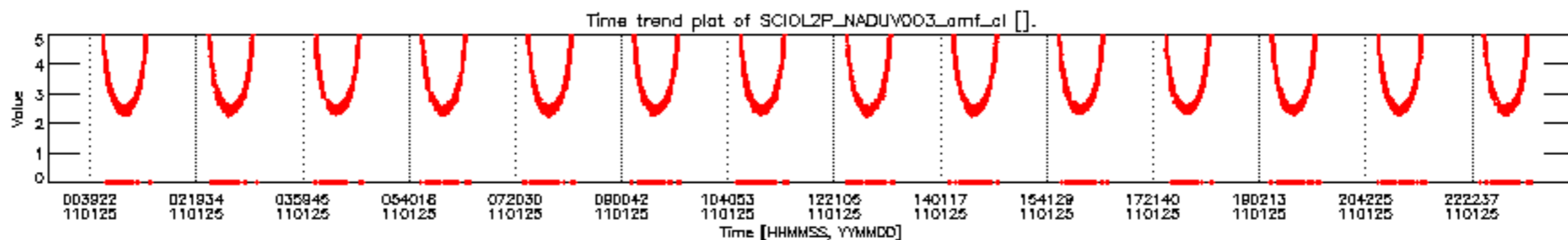
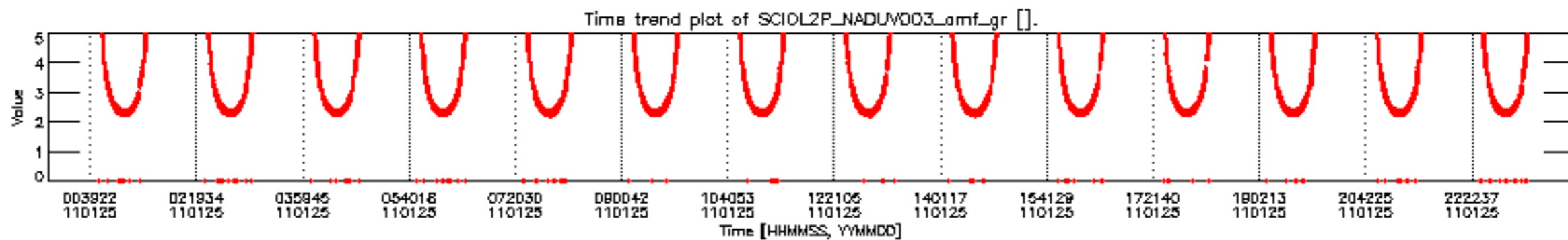
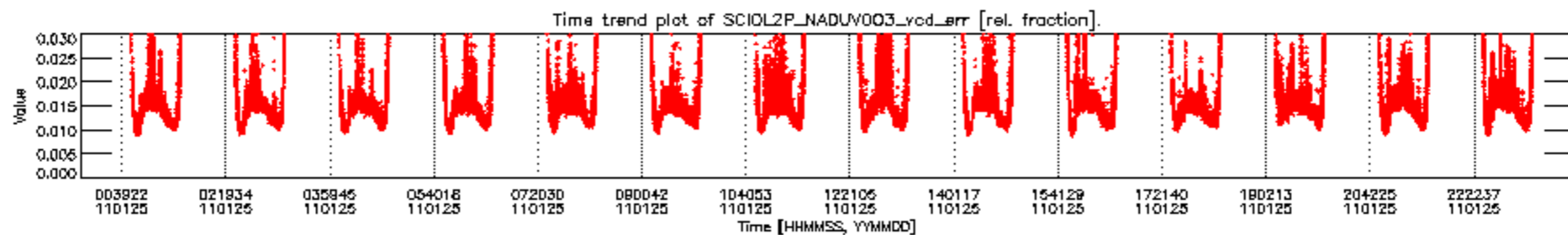
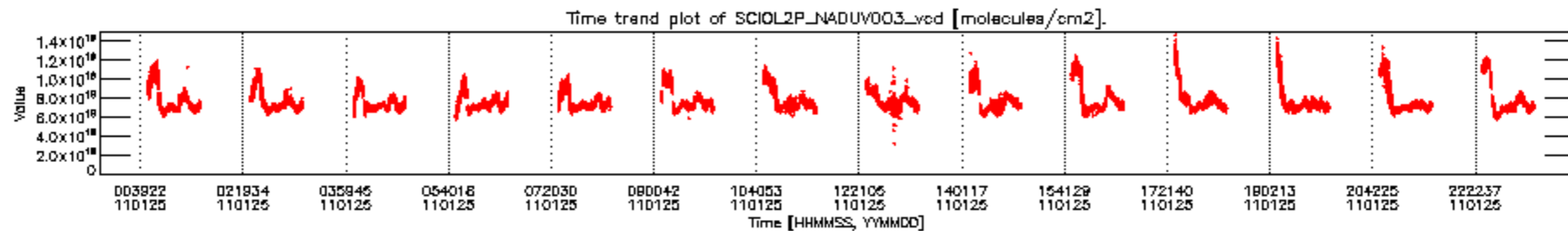
cLopt\_depth for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



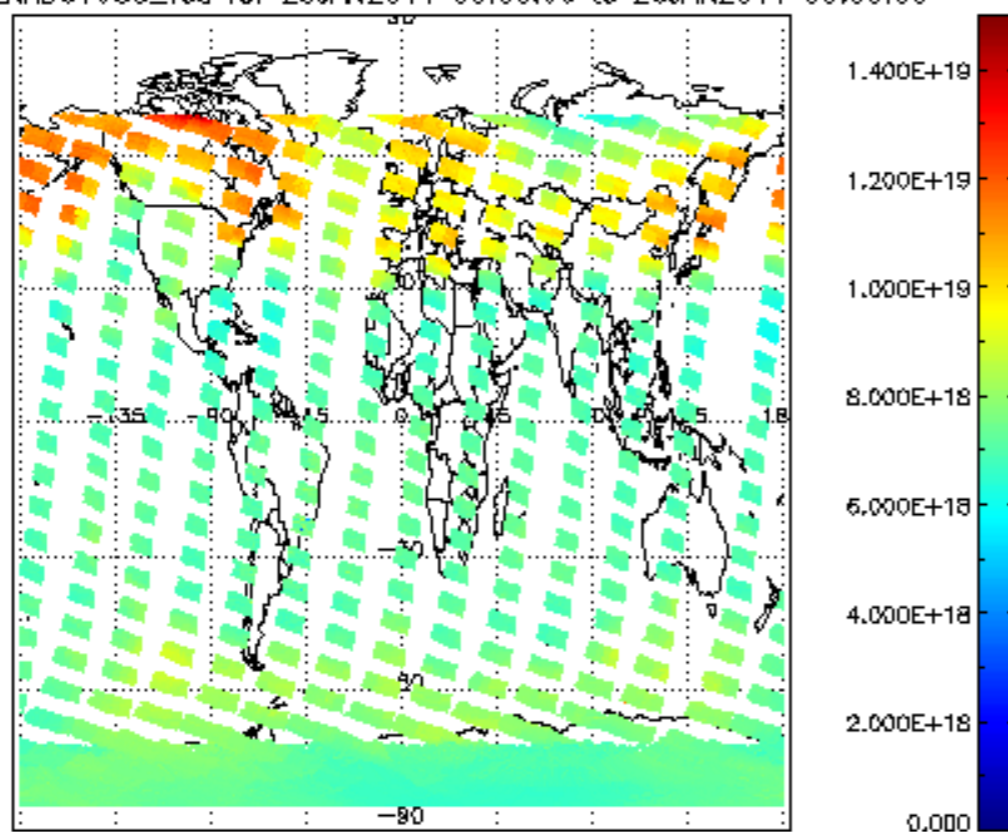
cloud\_flags for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



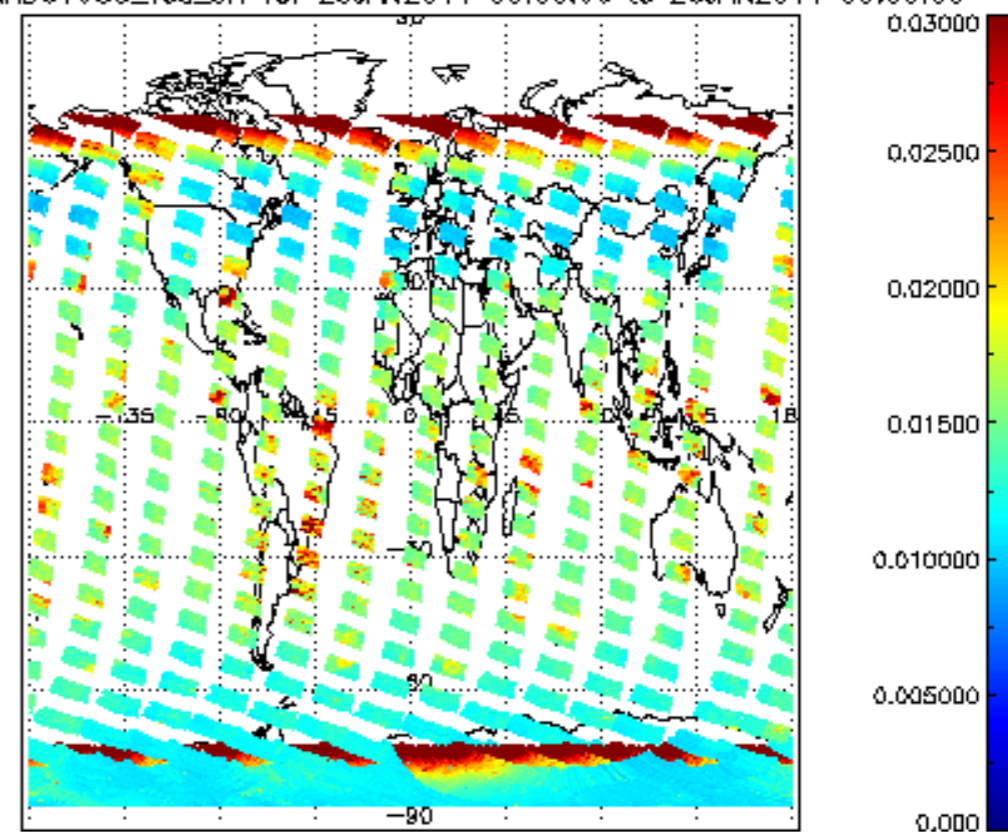




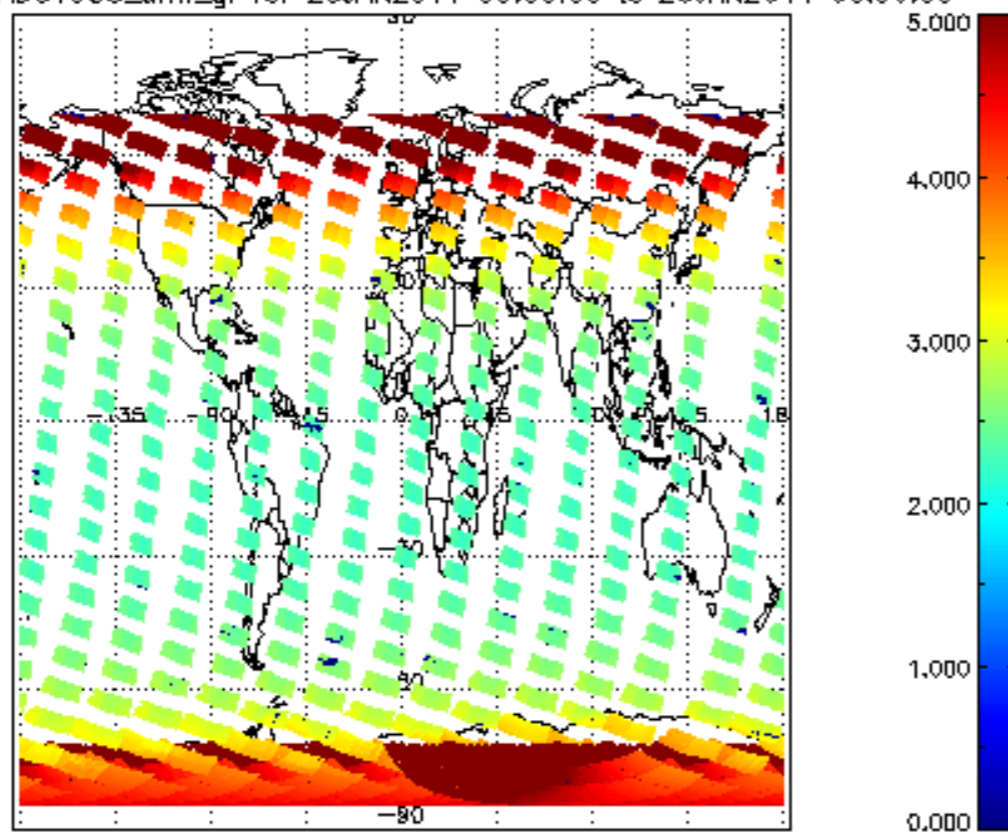
SCIOL2P\_NADUV003\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



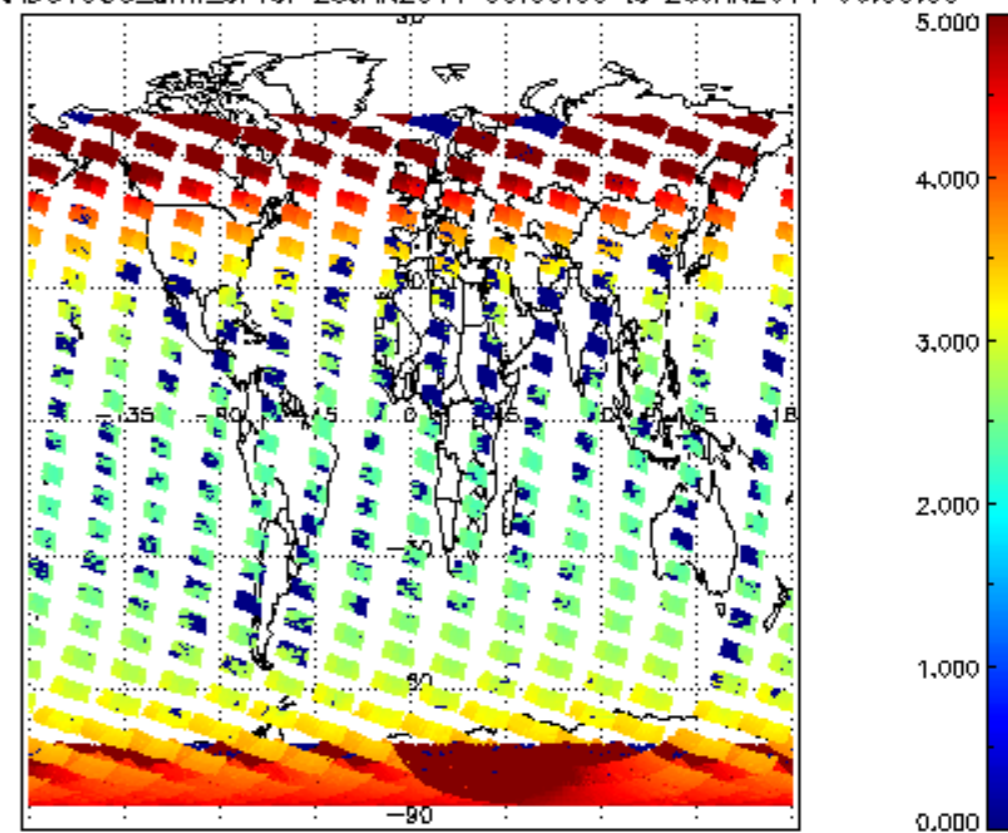
SCIOL2P\_NADUV003\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



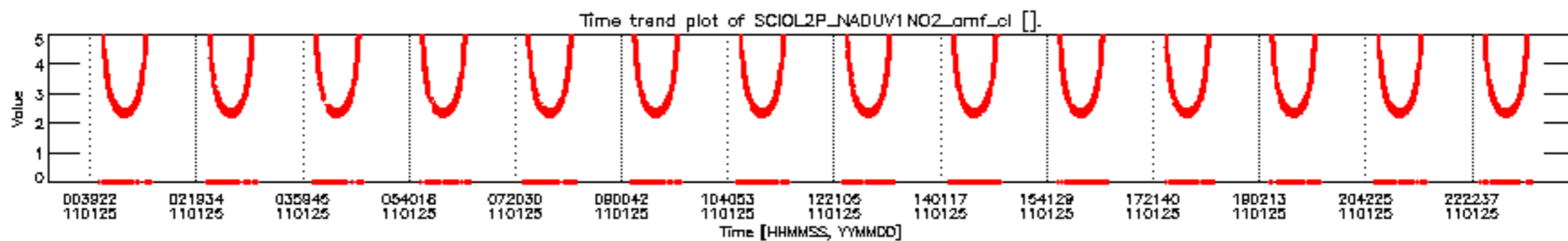
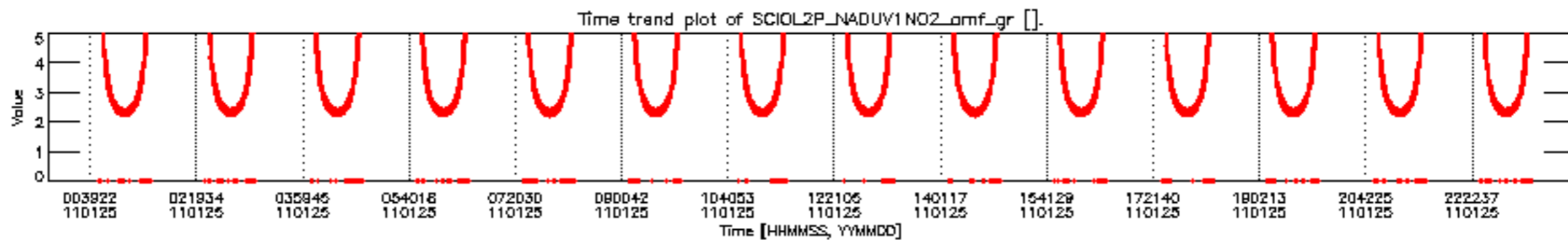
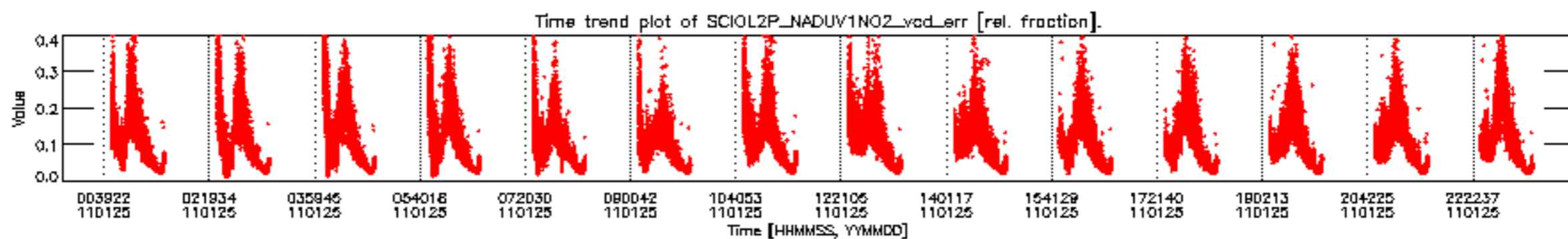
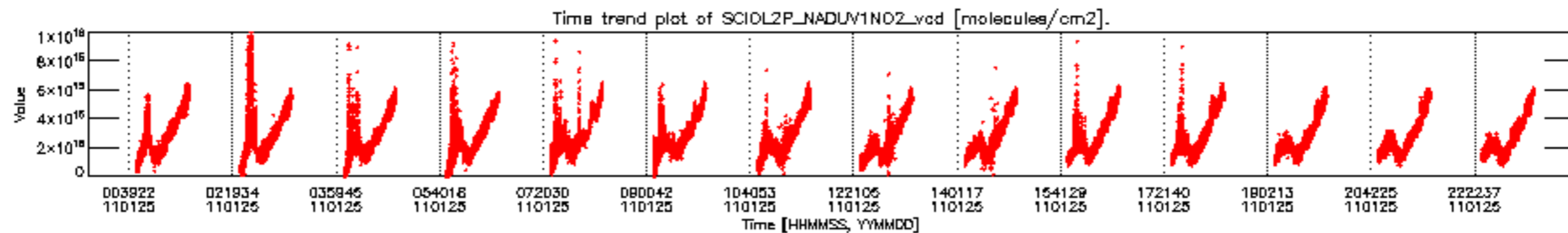
SCIOL2P\_NADUV003\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



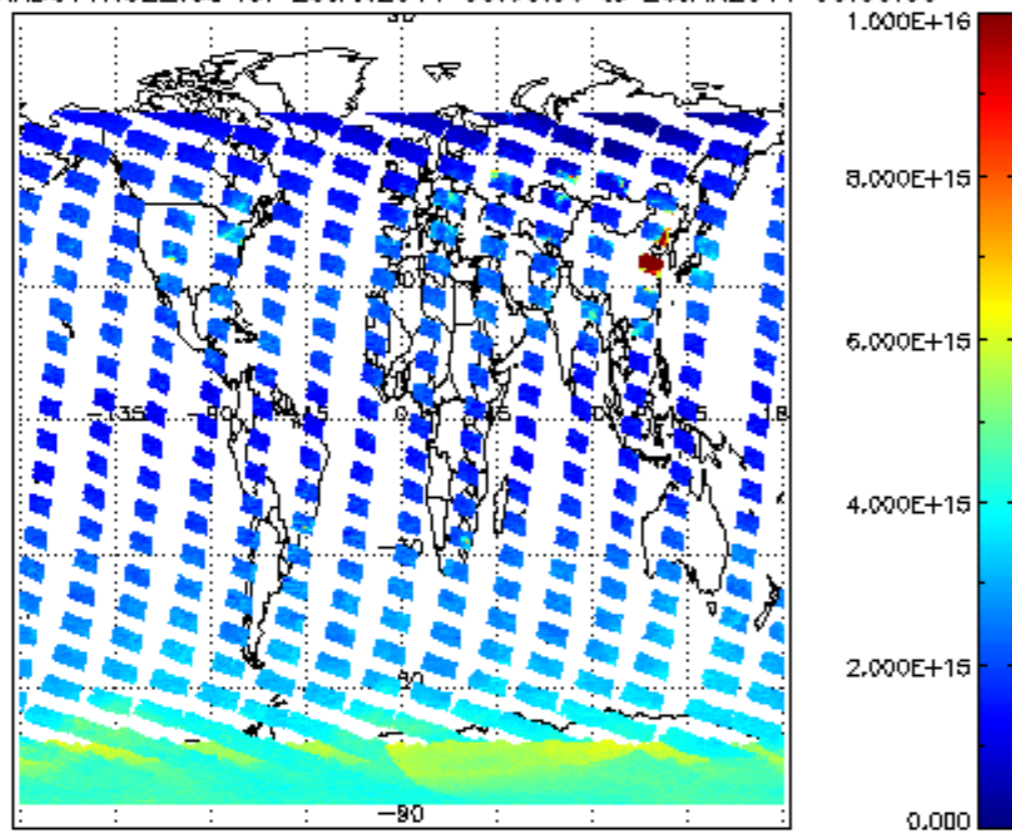
SCIOL2P\_NADUV003\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



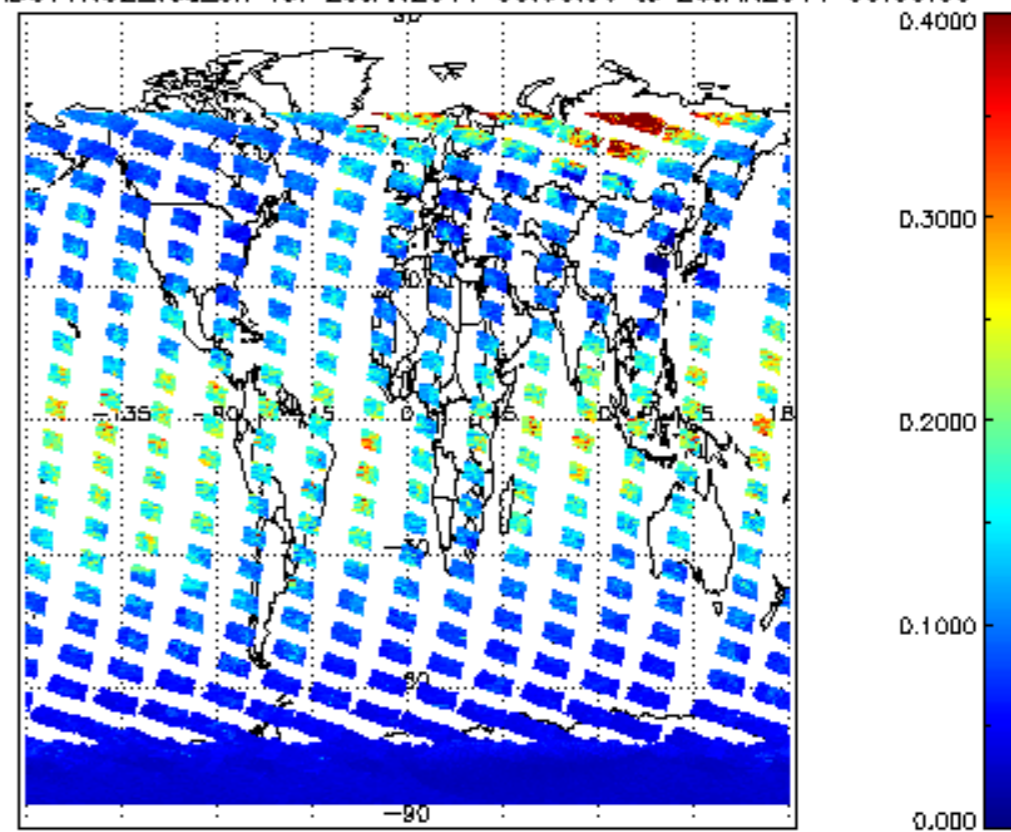




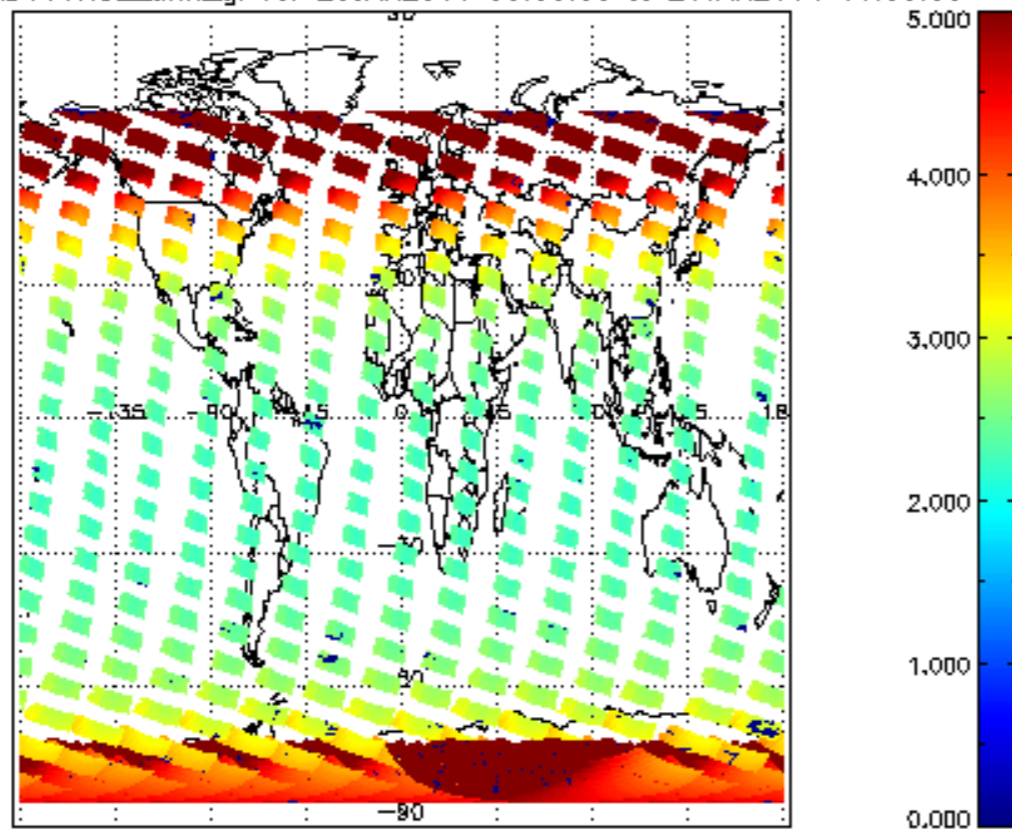
SCIOL2P\_NADUV1NO2\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



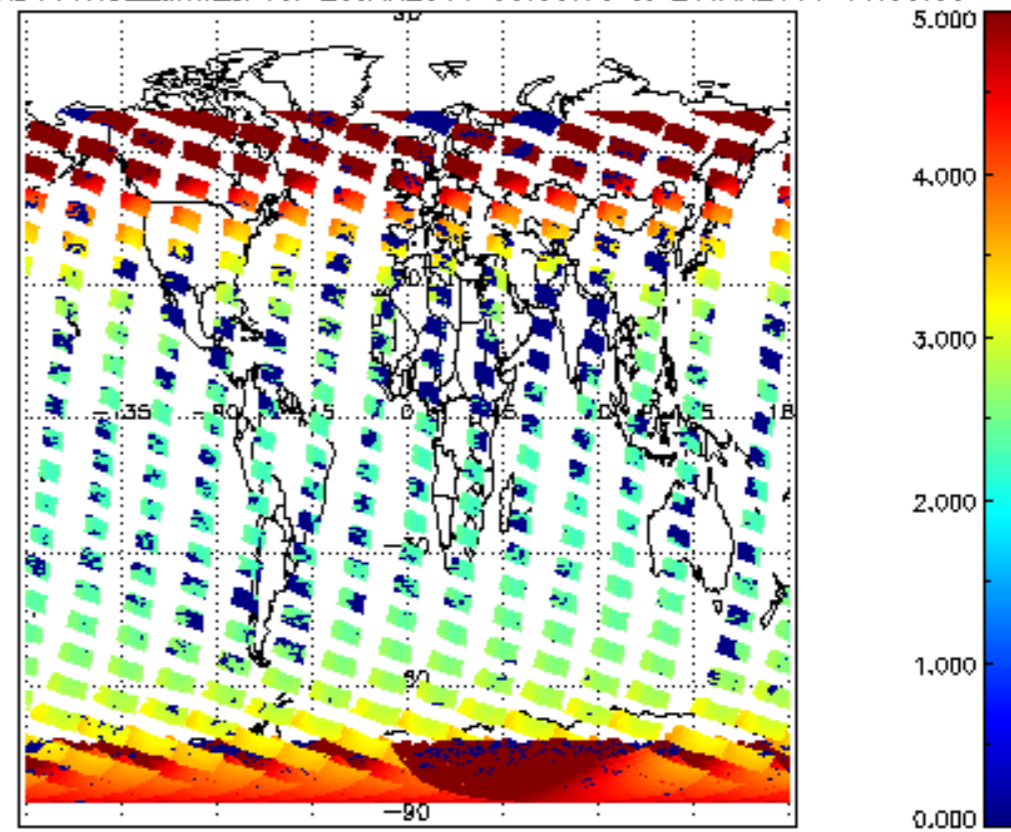
SCIOL2P\_NADUV1NO2\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



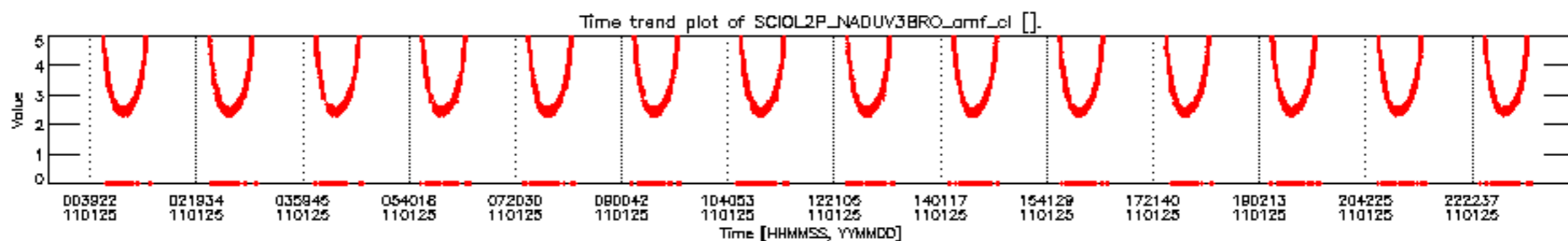
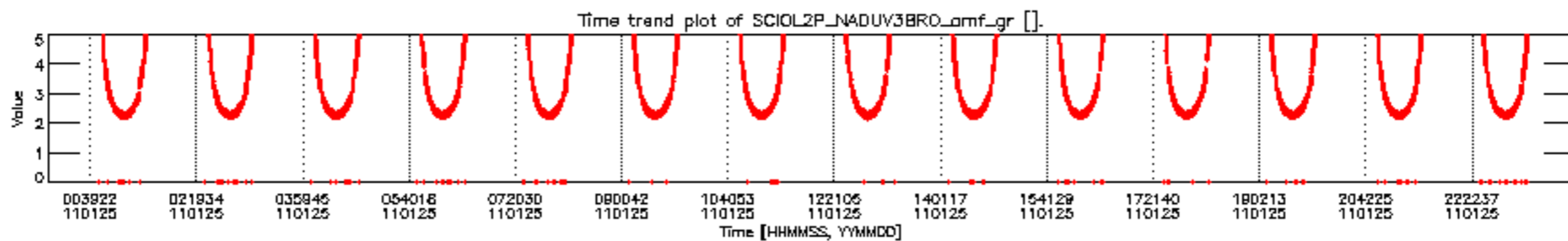
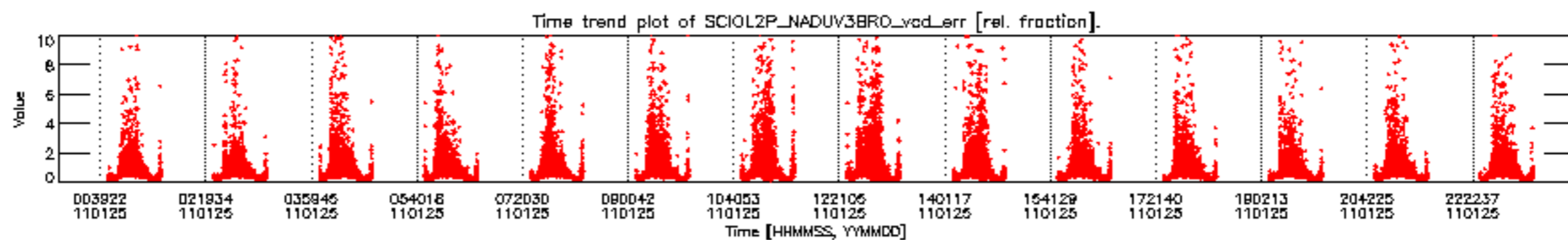
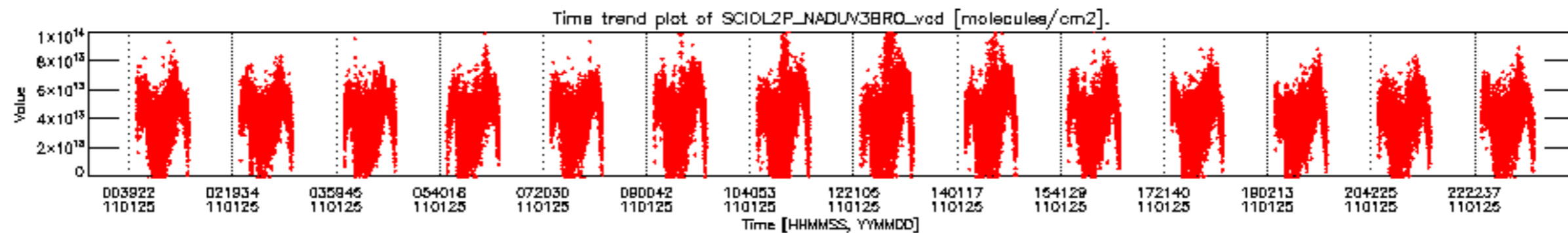
SCIOL2P\_NADUV1NO2\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



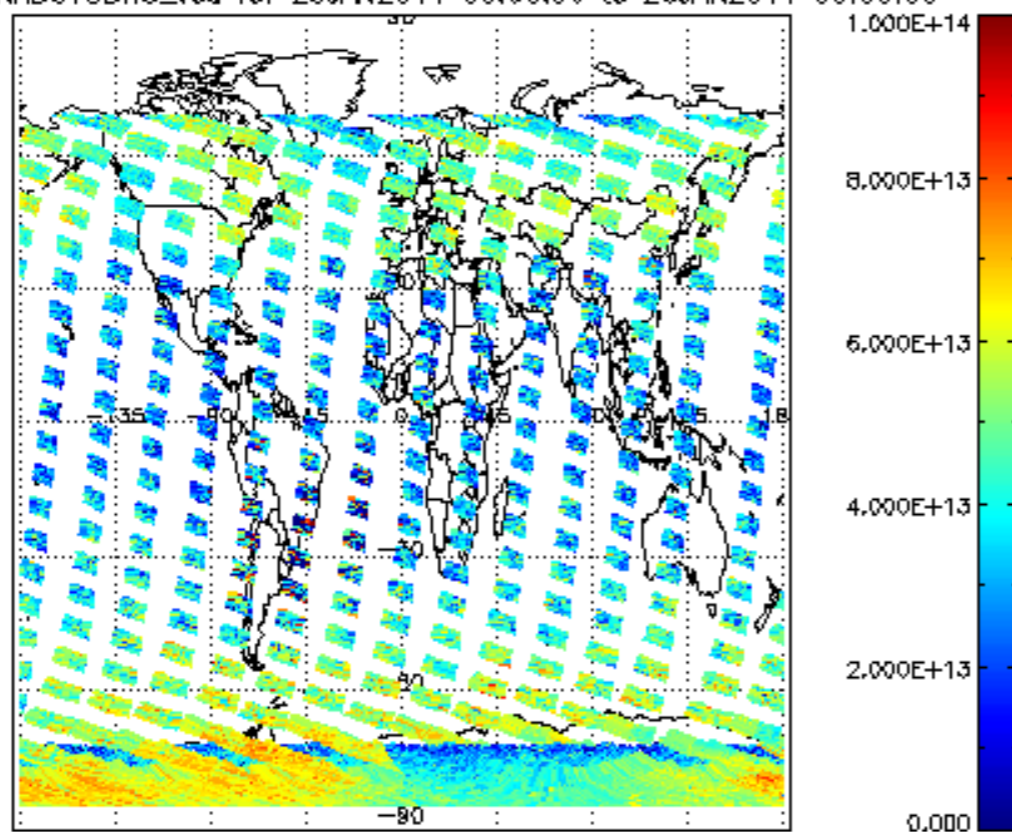
SCIOL2P\_NADUV1NO2\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



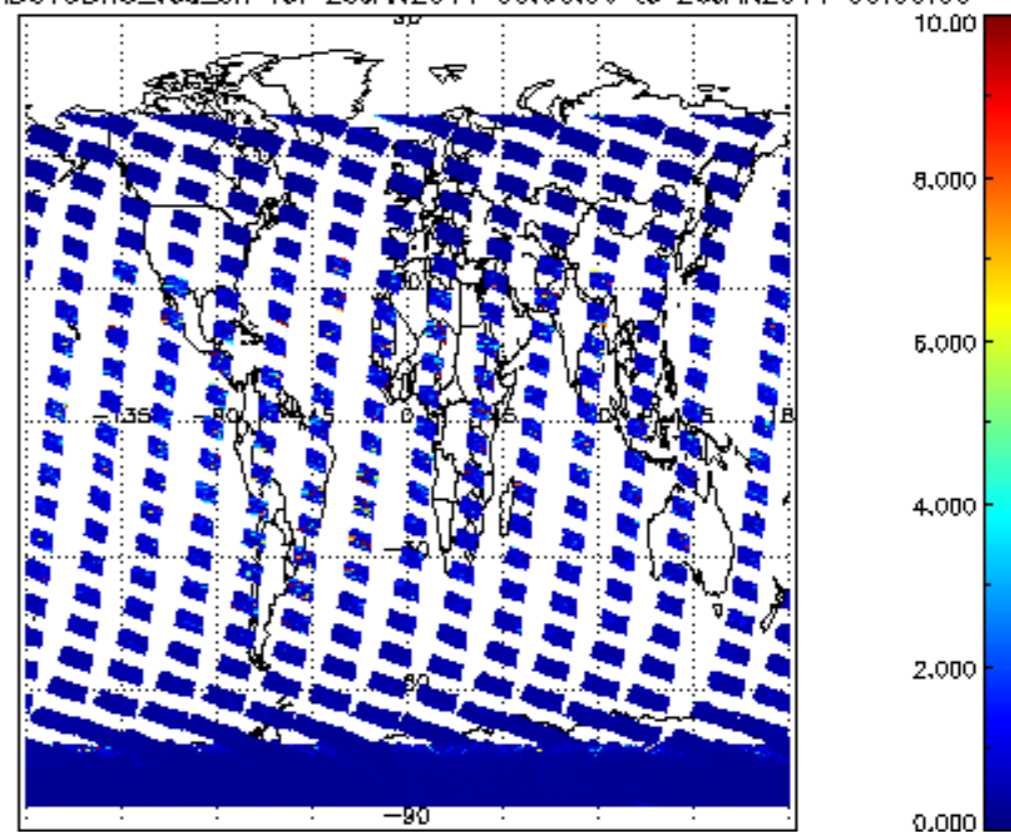




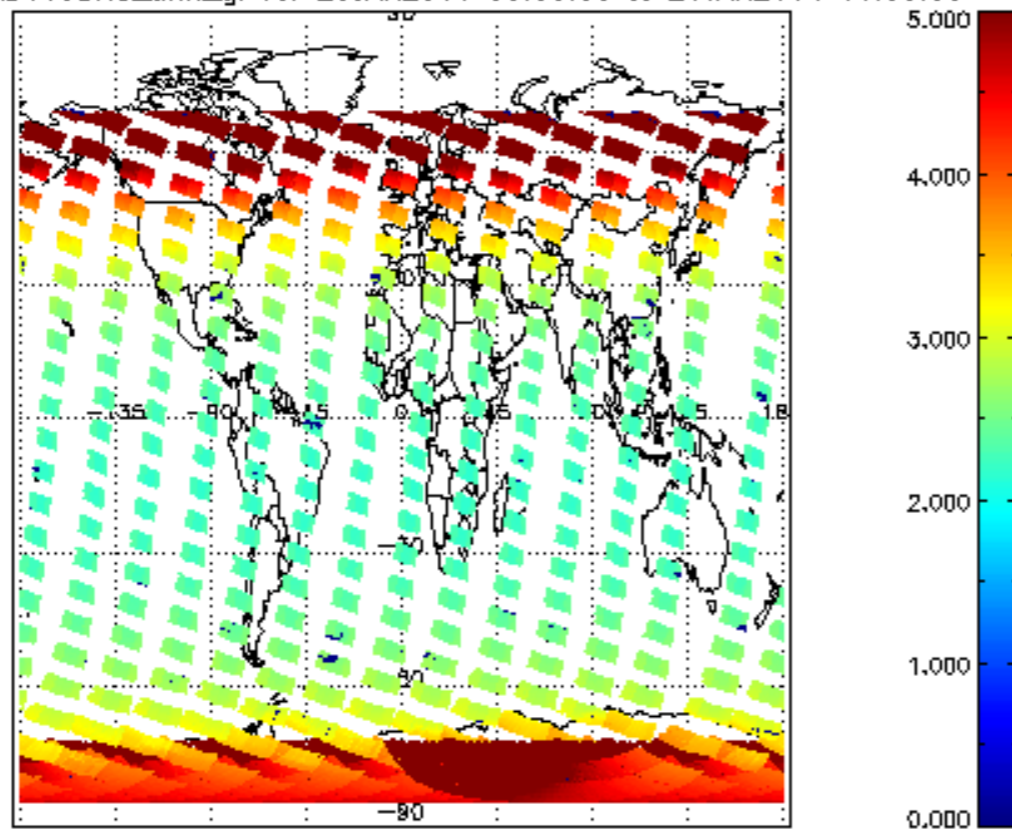
SCIOL2P\_NADUV3BRO\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



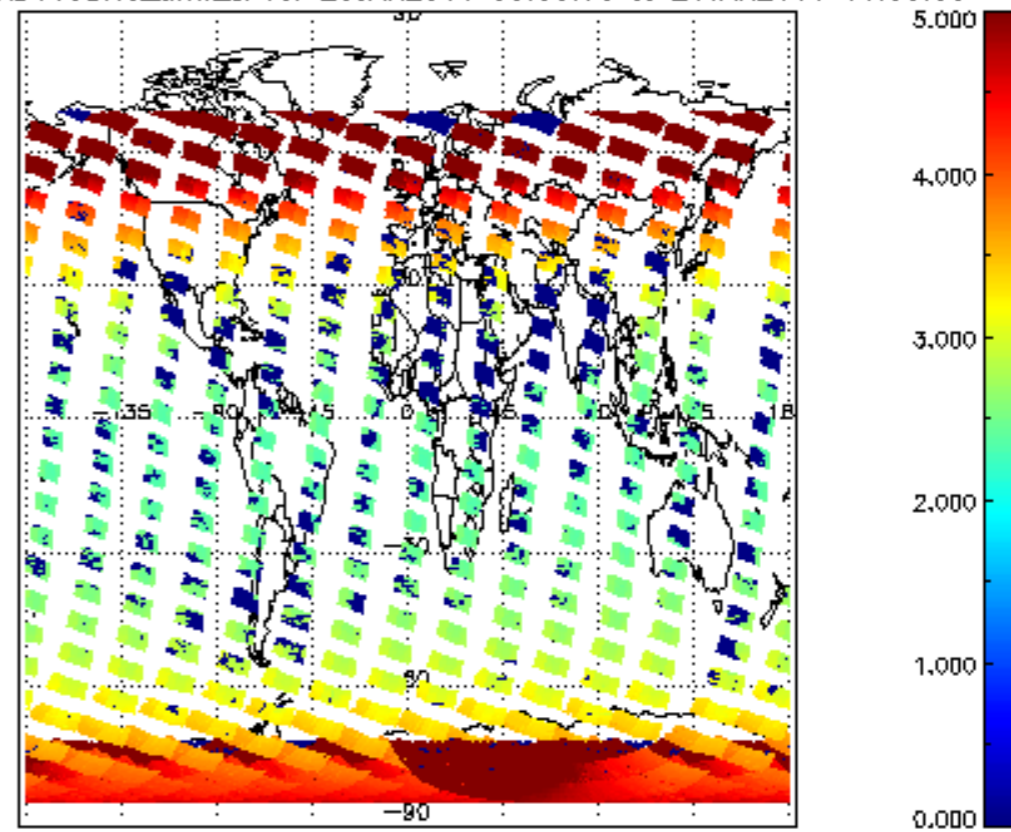
SCIOL2P\_NADUV3BRO\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



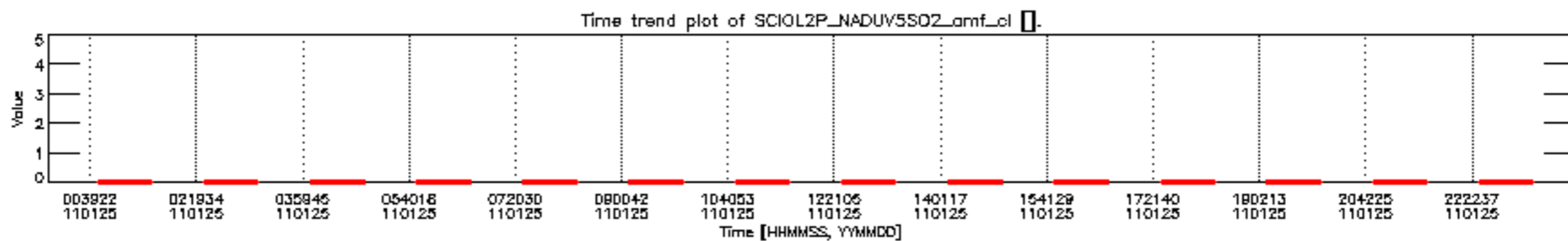
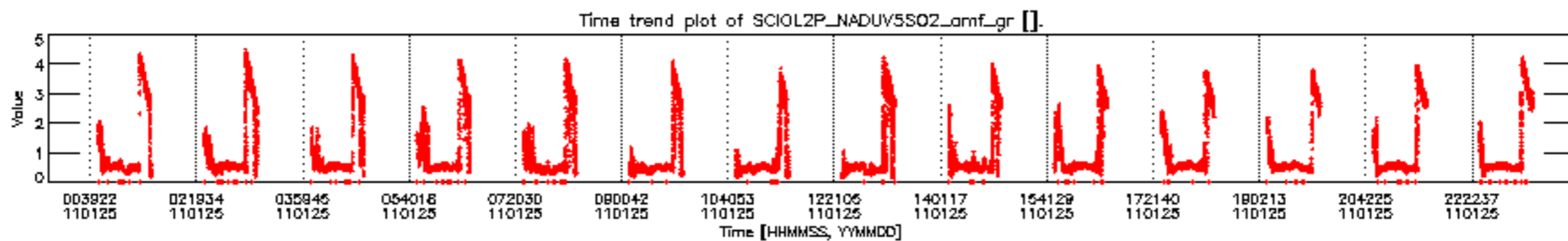
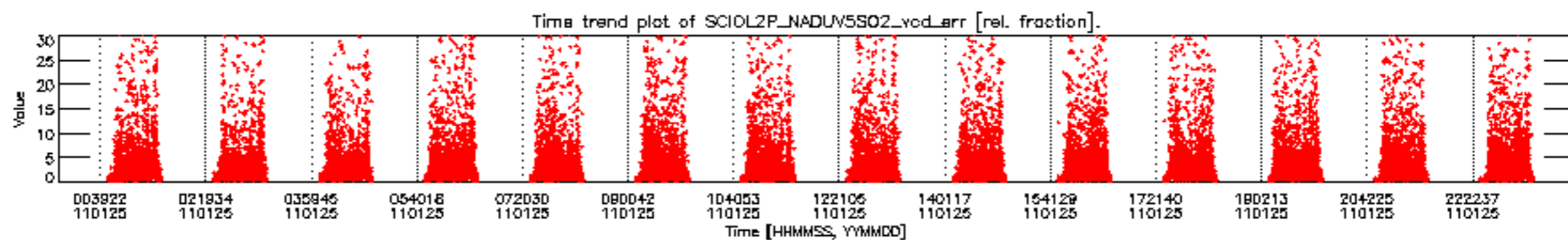
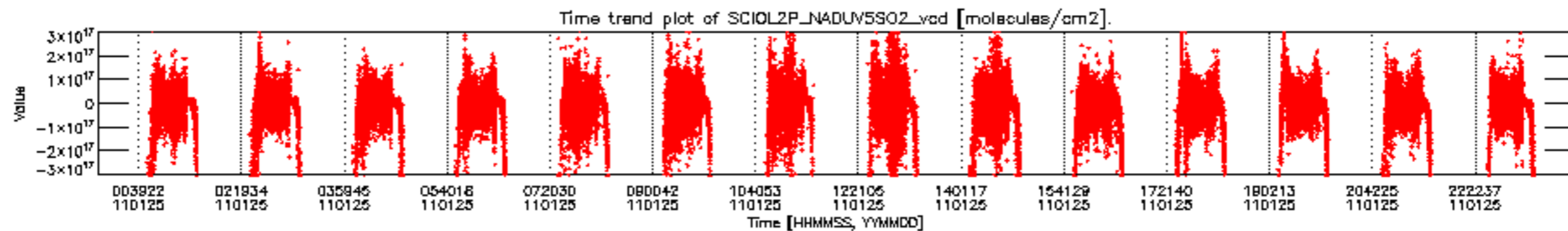
SCIOL2P\_NADUV3BRO\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



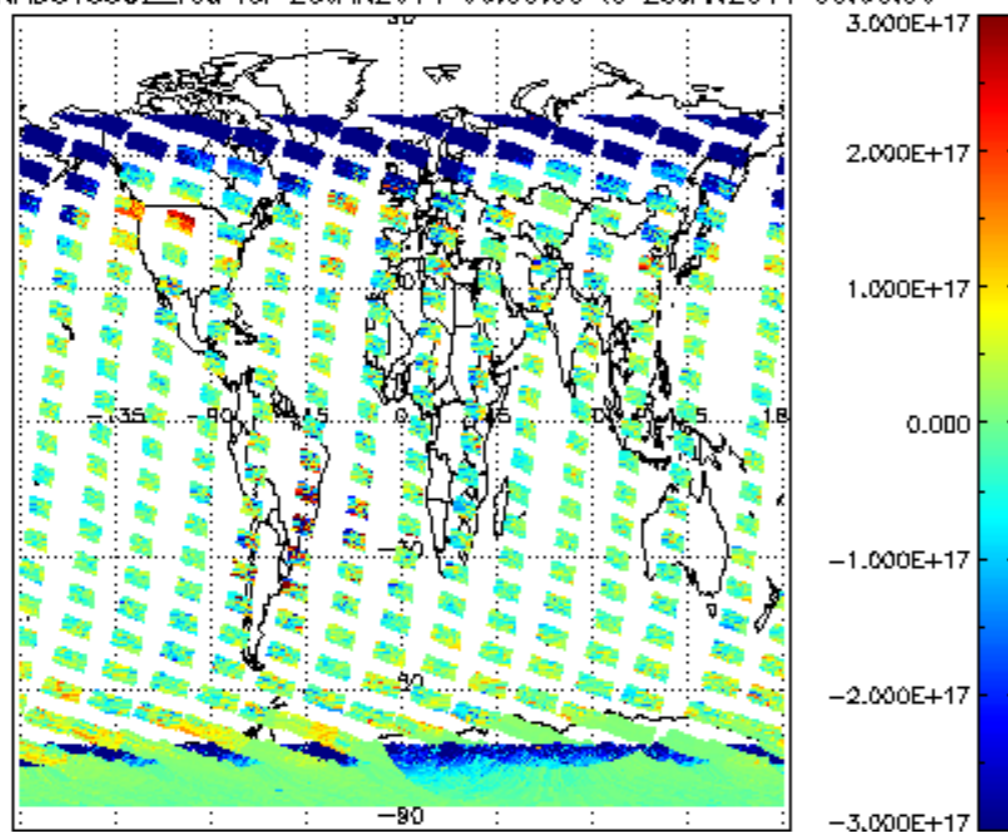
SCIOL2P\_NADUV3BRO\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



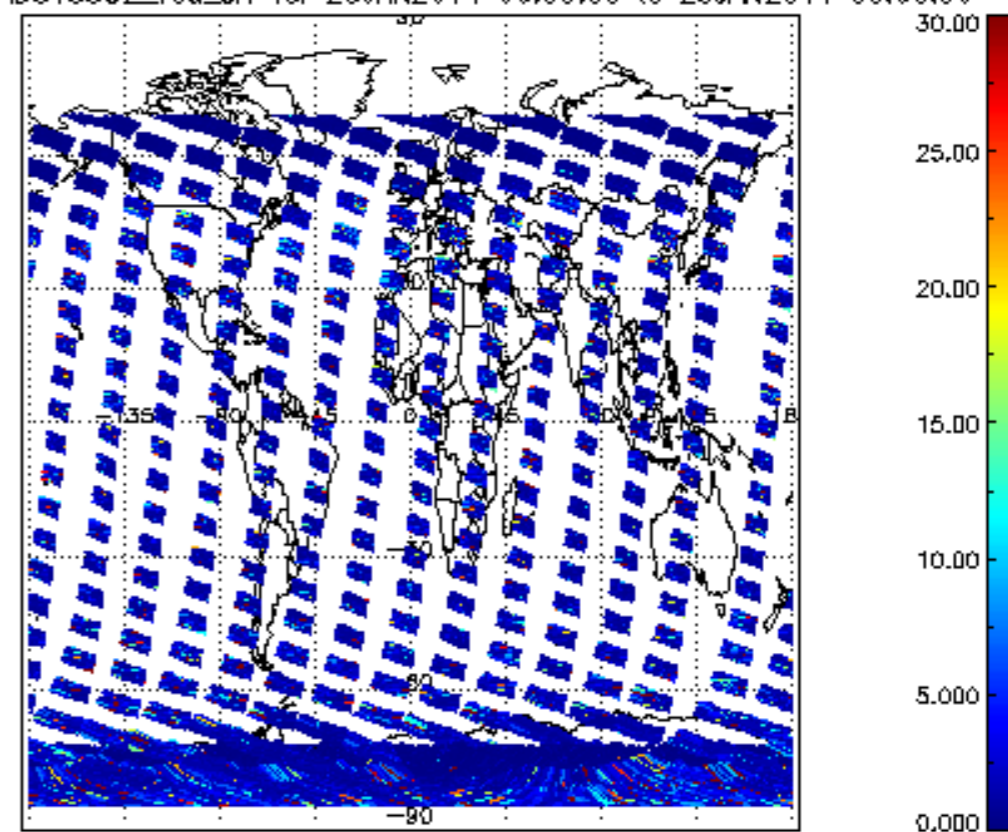




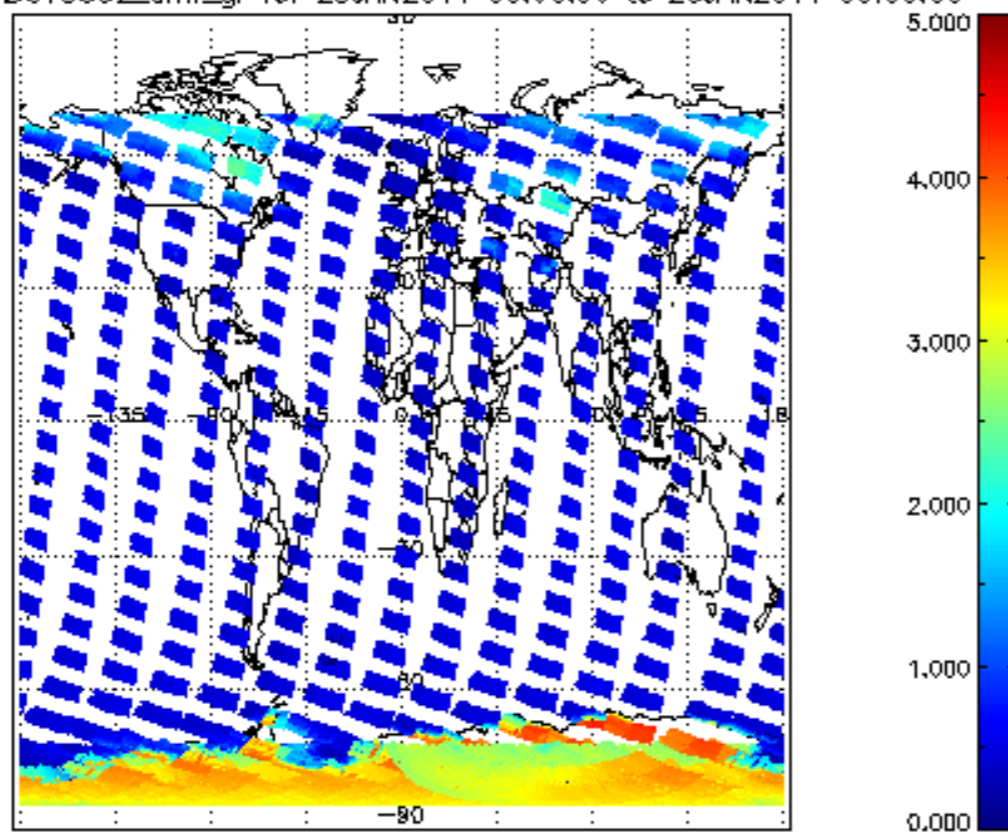
SCIOL2P\_NADUV5S02\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



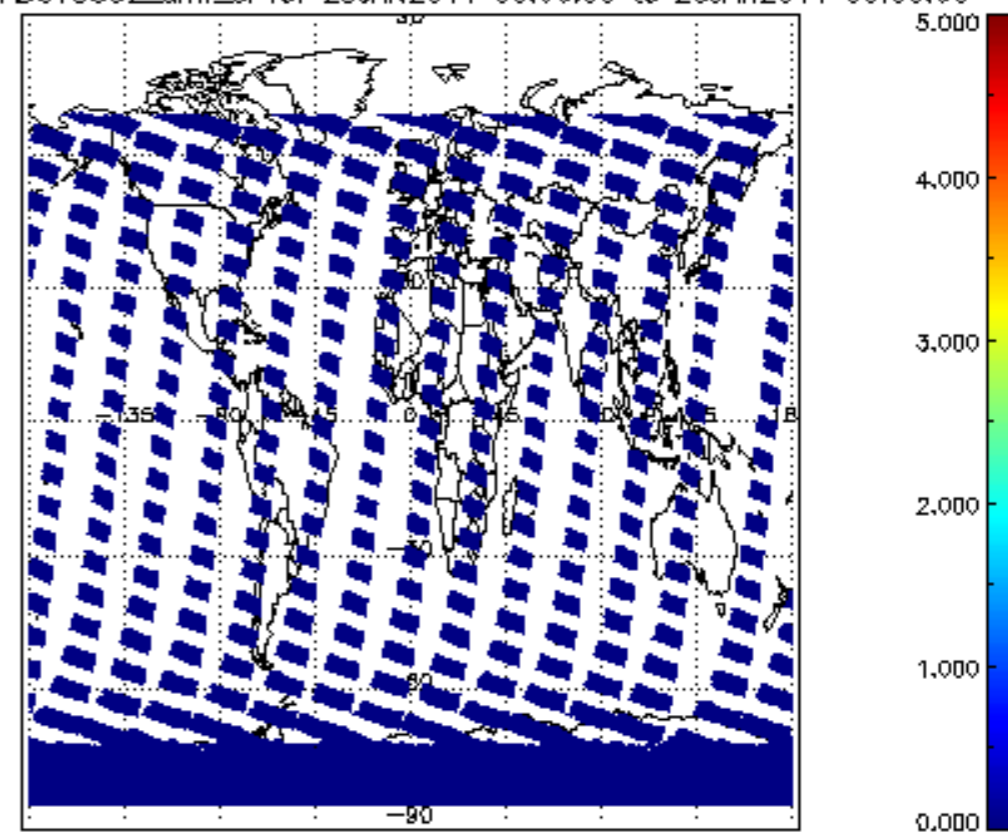
SCIOL2P\_NADUV5S02\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



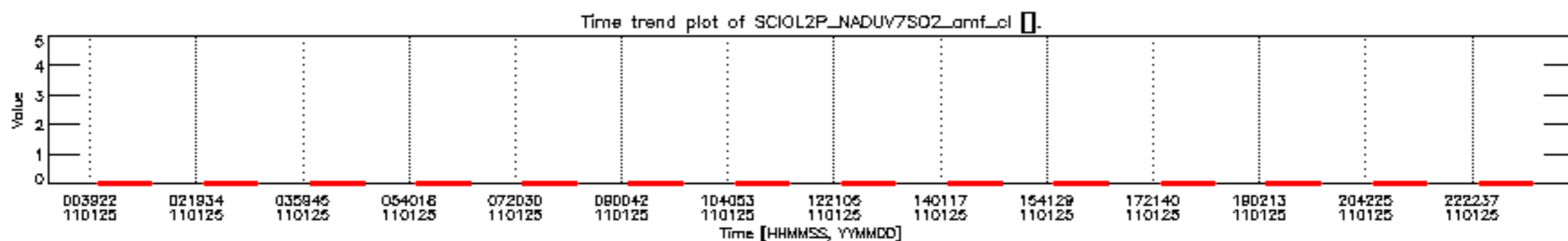
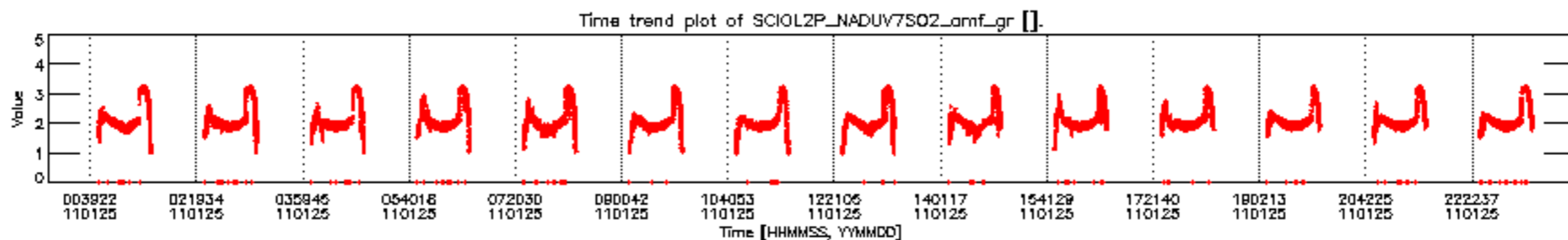
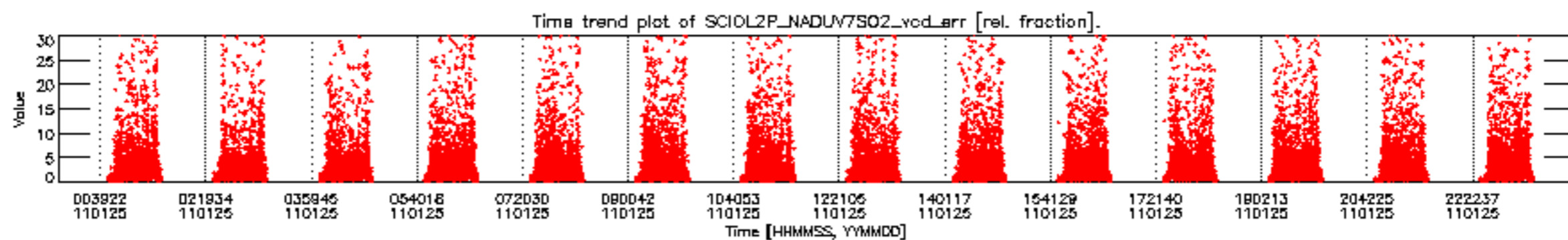
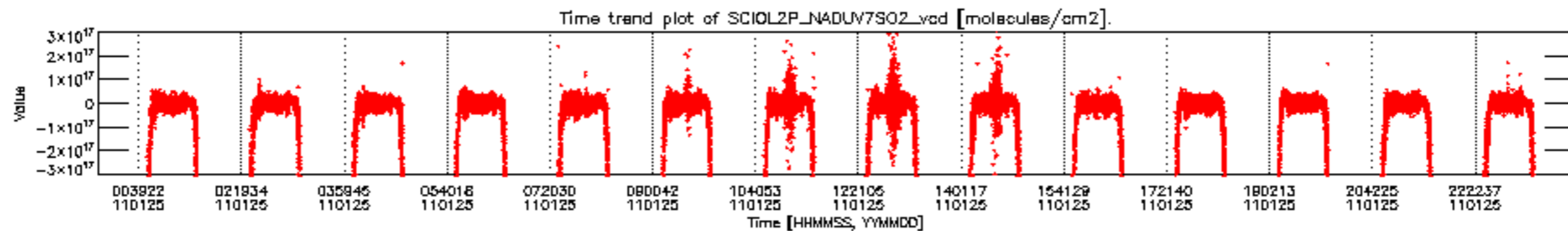
SCIOL2P\_NADUV5S02\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



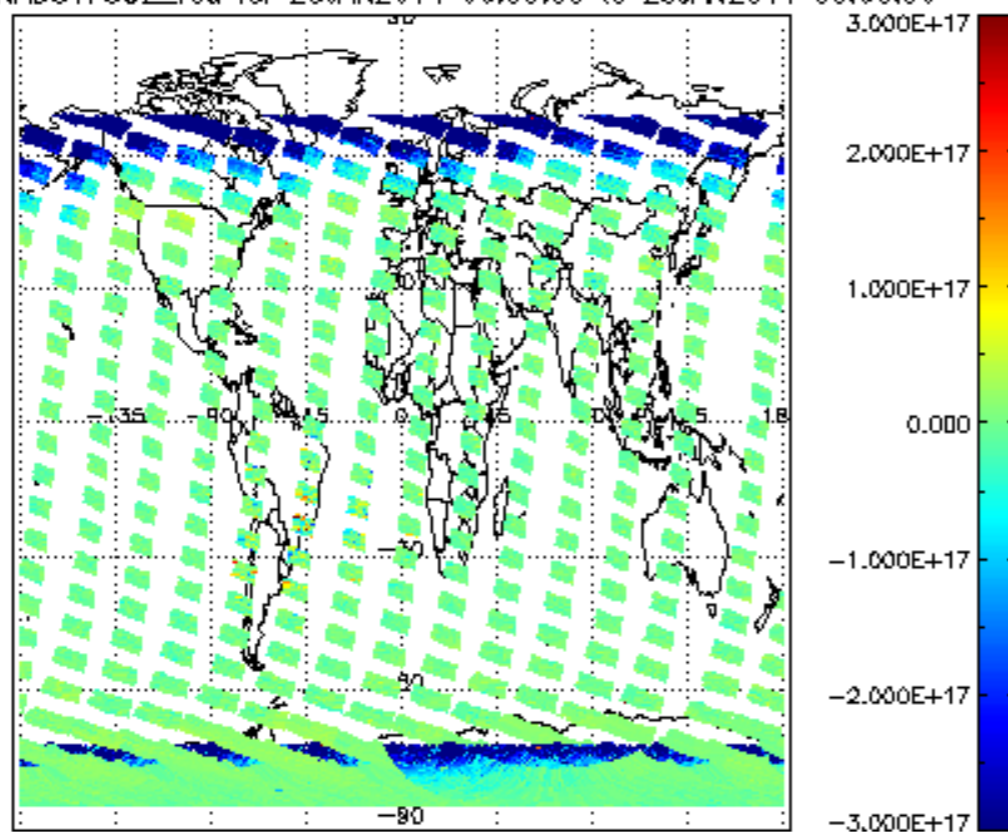
SCIOL2P\_NADUV5S02\_amf\_cl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



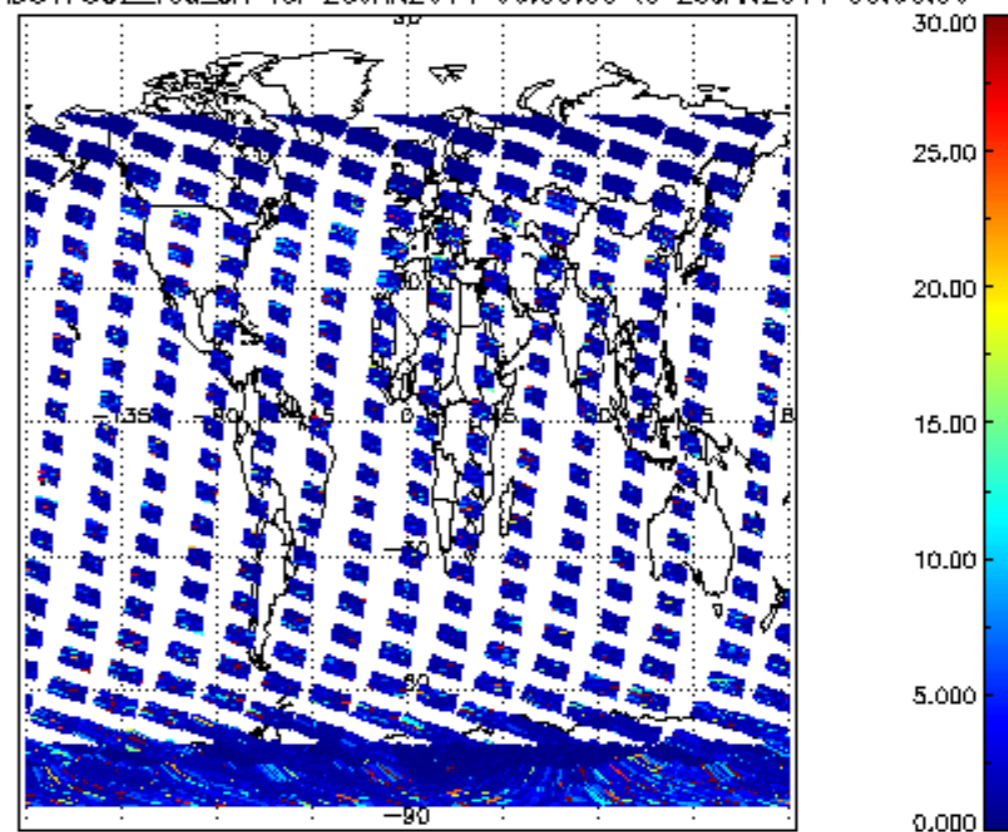




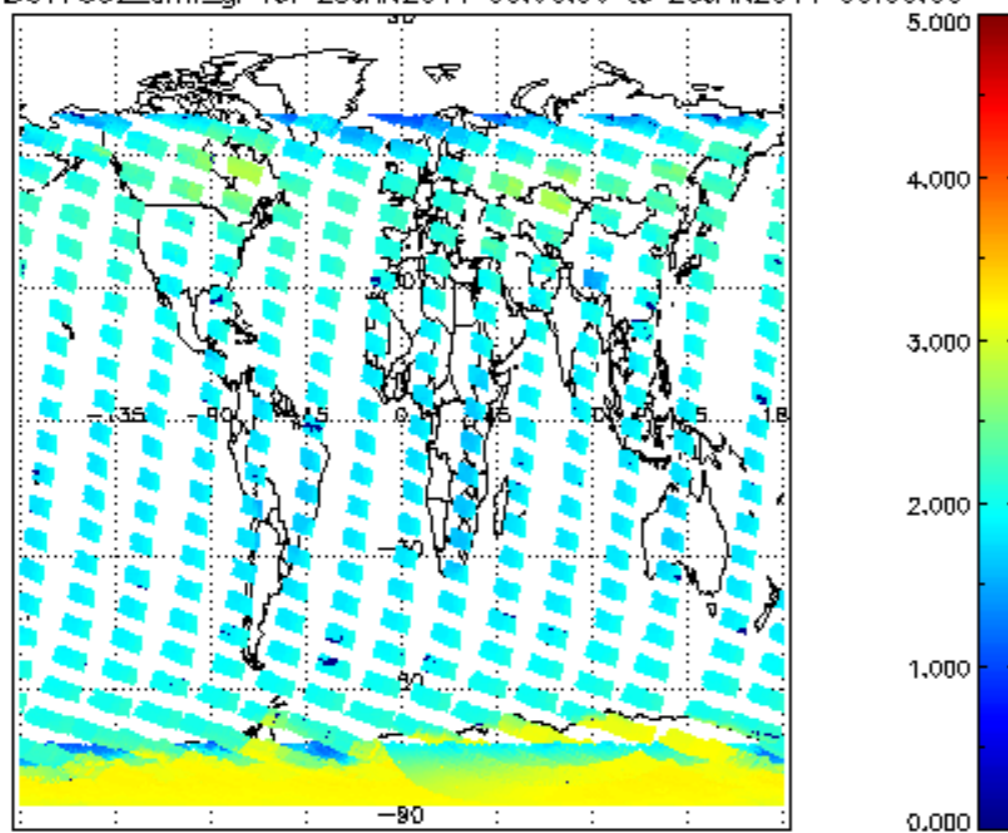
SCIOL2P\_NADUV7S02\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



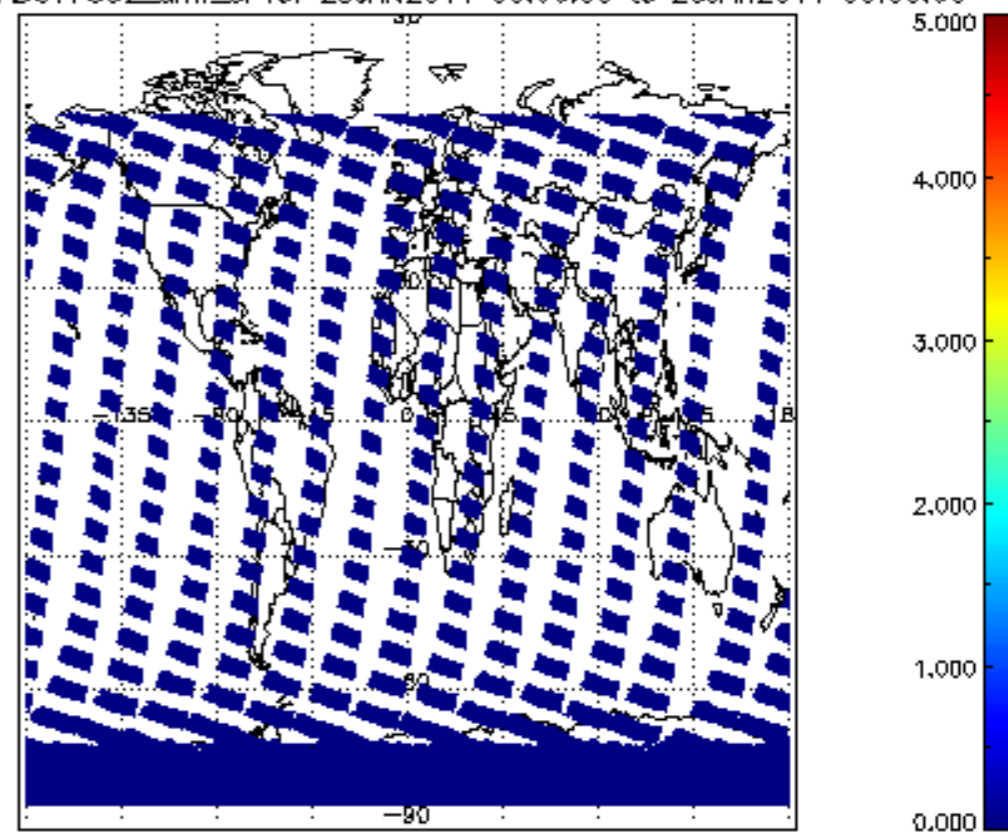
SCIOL2P\_NADUV7S02\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



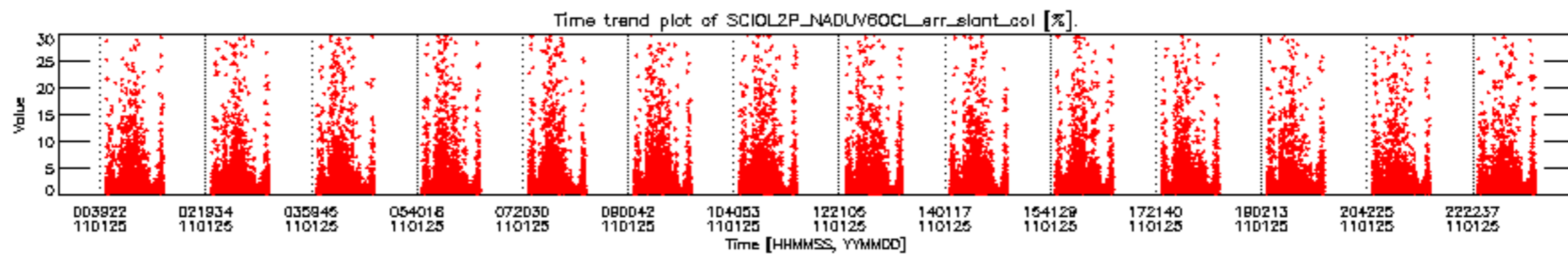
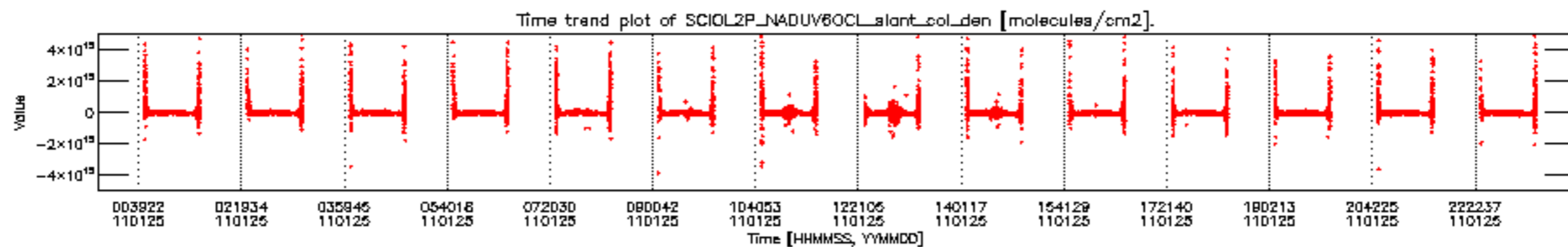
SCIOL2P\_NADUV7S02\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



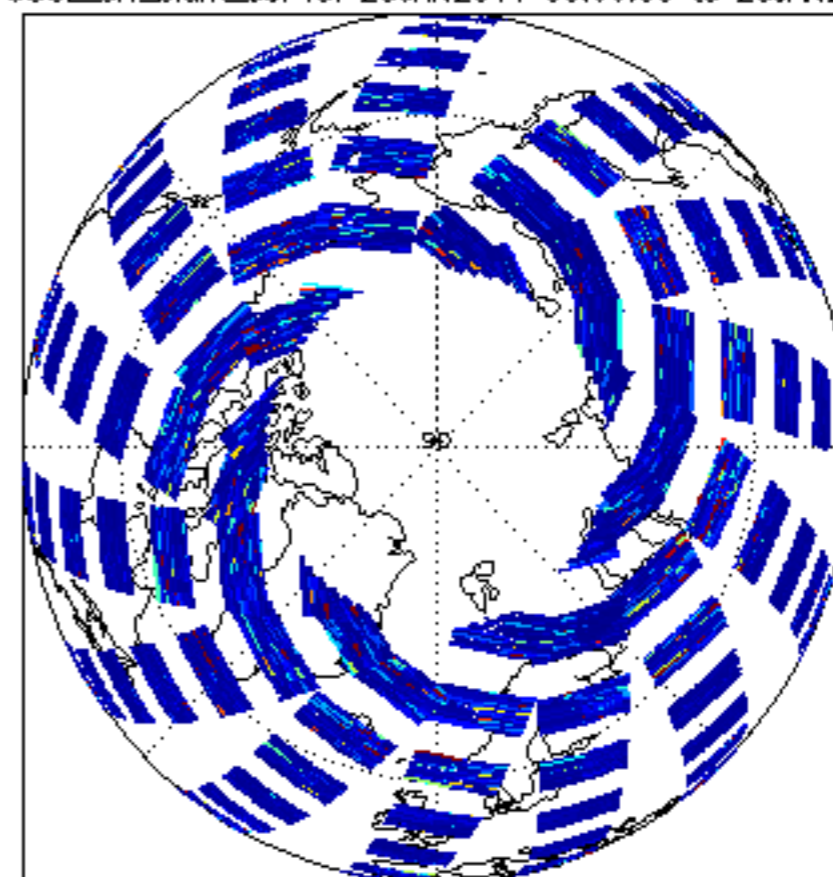
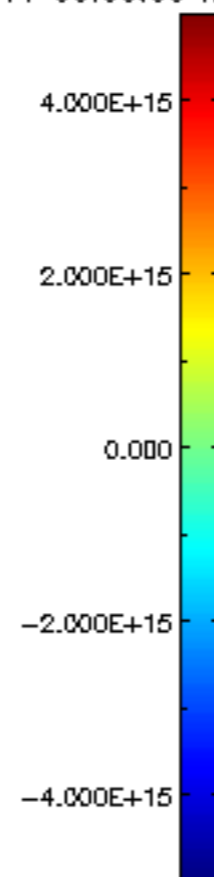
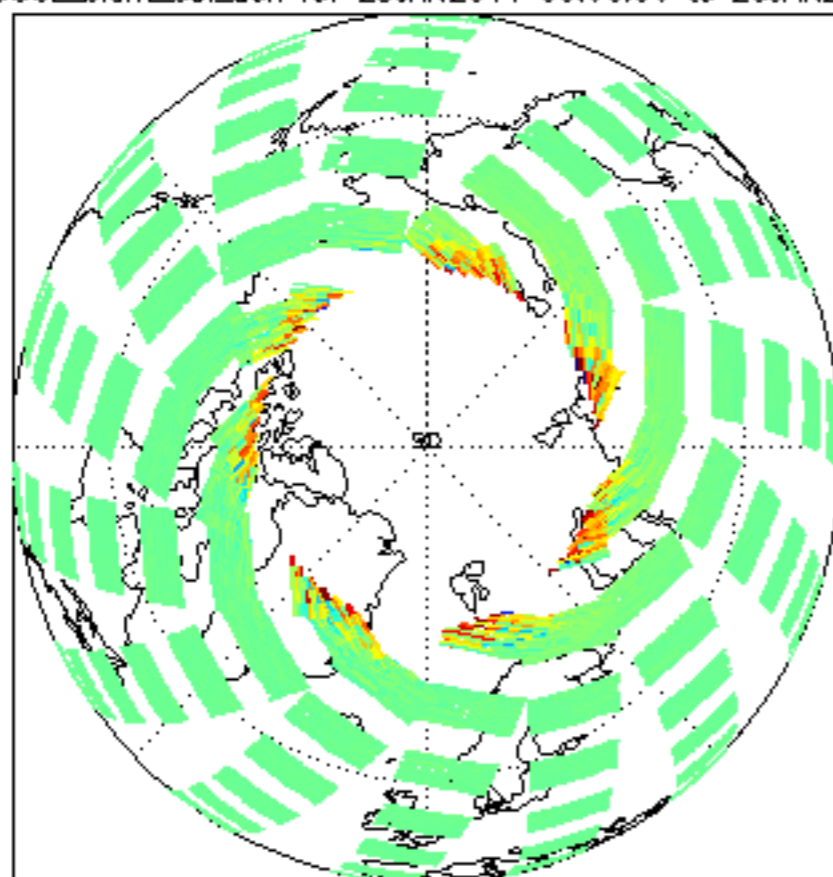
SCIOL2P\_NADUV7S02\_amf\_sl for 25JAN2011 00:00:00 to 26JAN2011 00:00:00





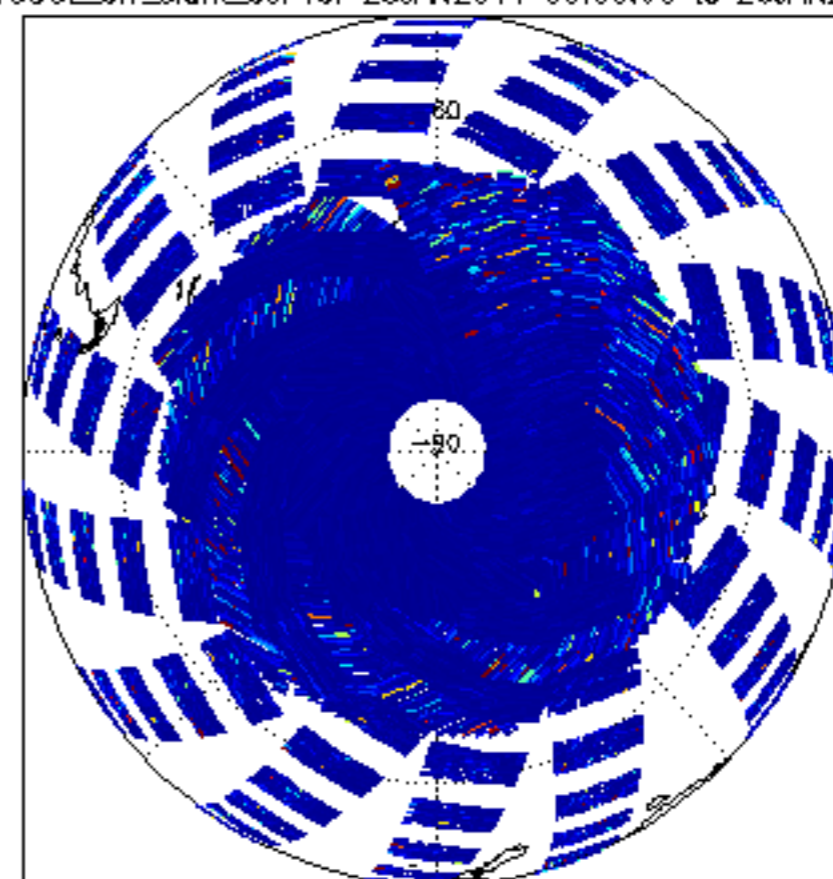
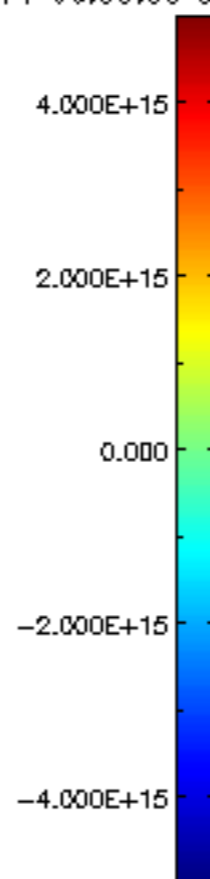
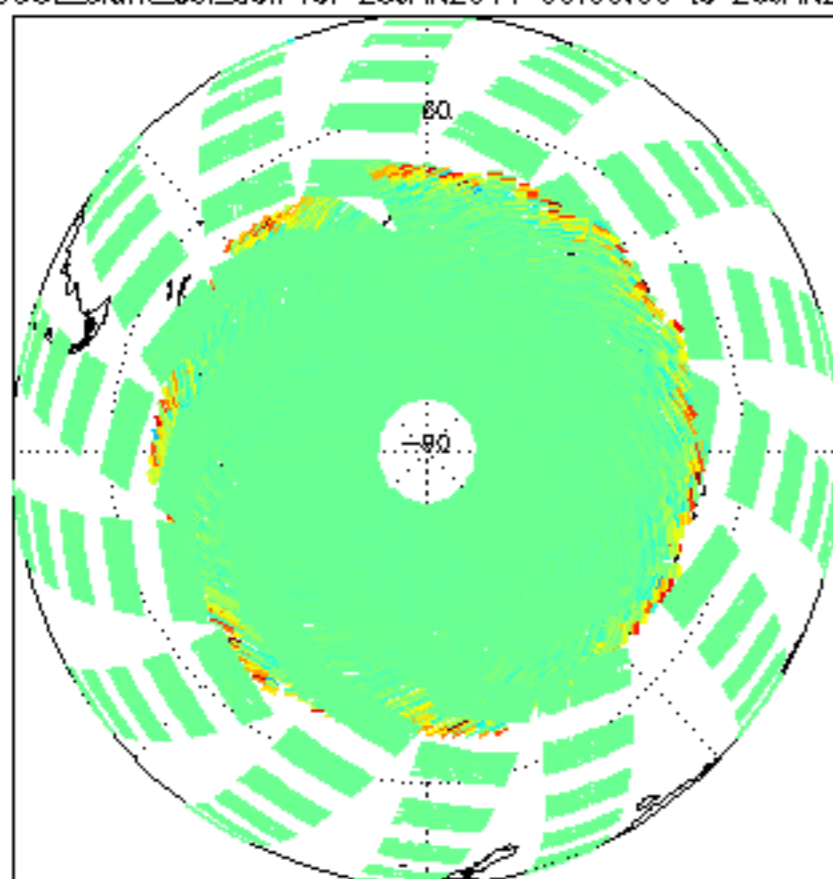


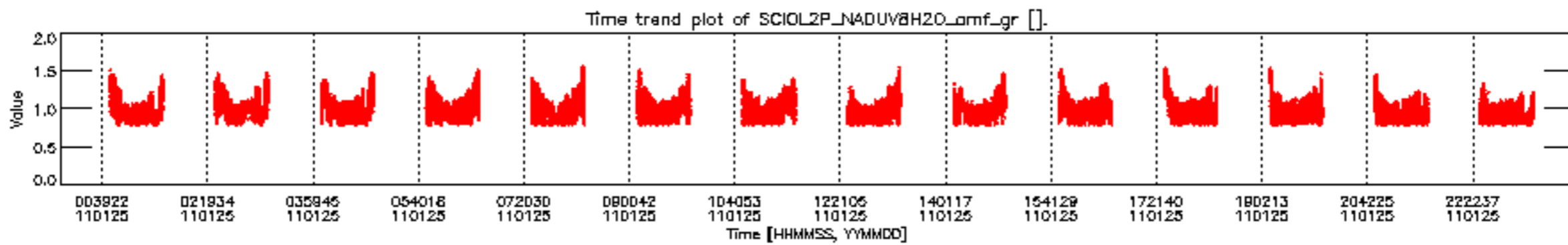
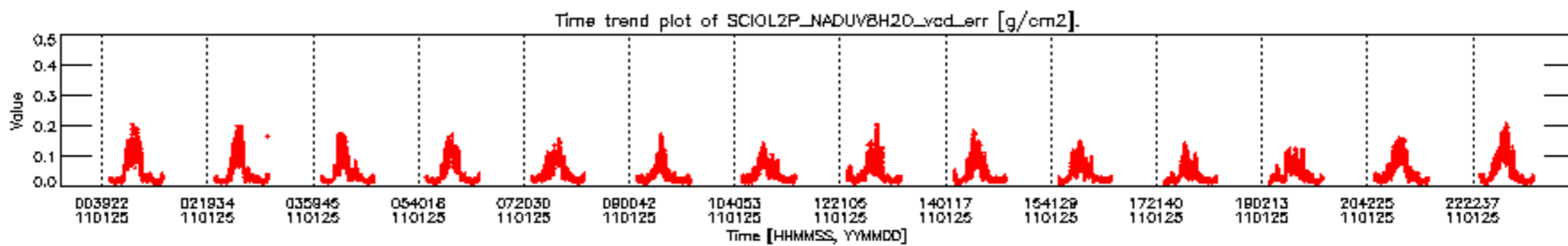
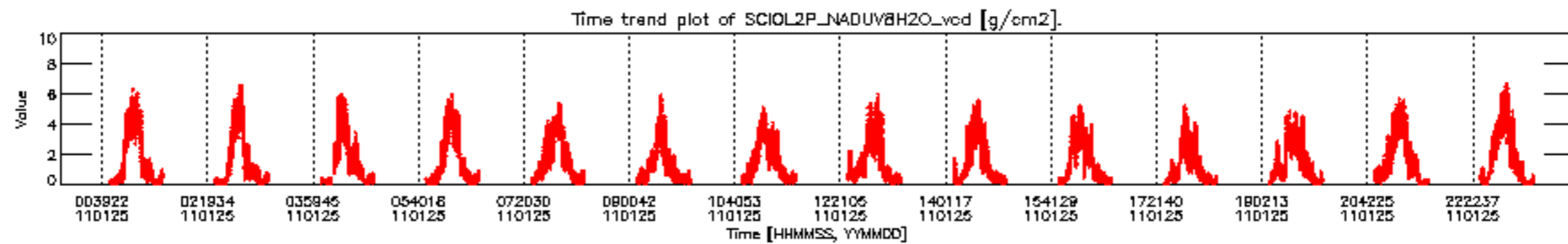
ICIOL2P\_NADUV60CL\_slant\_col\_den for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 np;ICIOL2P\_NADUV60CL\_err\_slant\_col for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 np





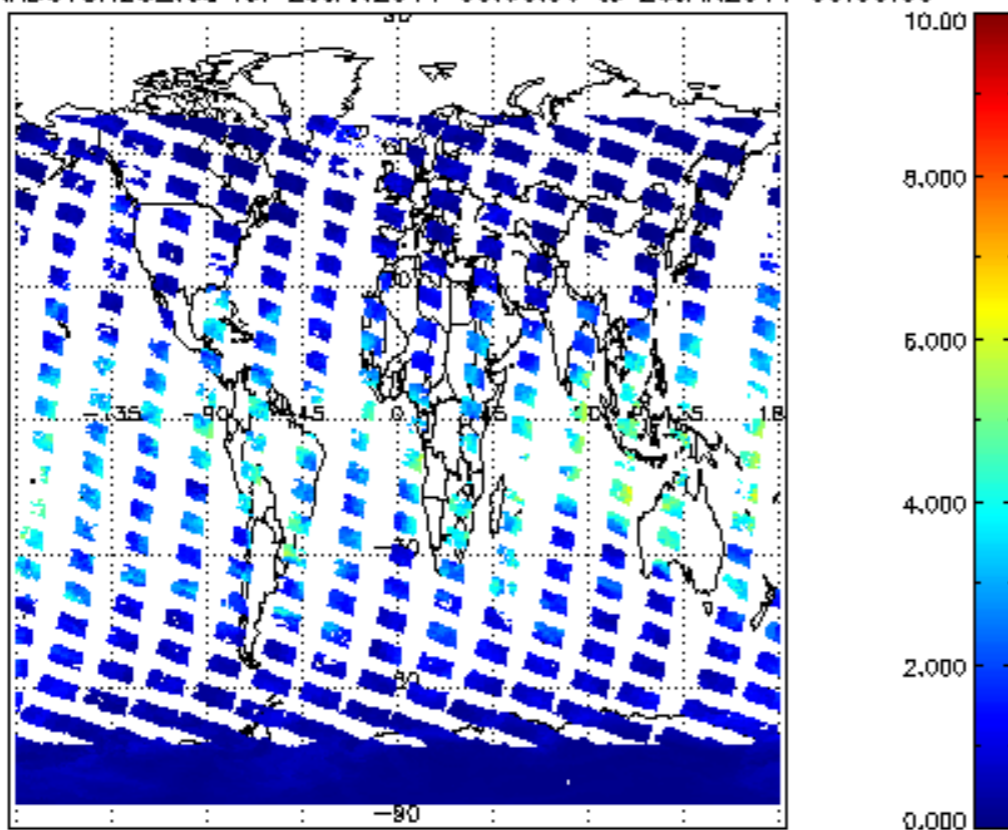
iCIOL2P\_NADUV6OCL\_slant\_col\_den for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 sp iCIOL2P\_NADUV6OCL\_err\_slant\_col for 25JAN2011 00:00:00 to 26JAN2011 00:00:00 sp



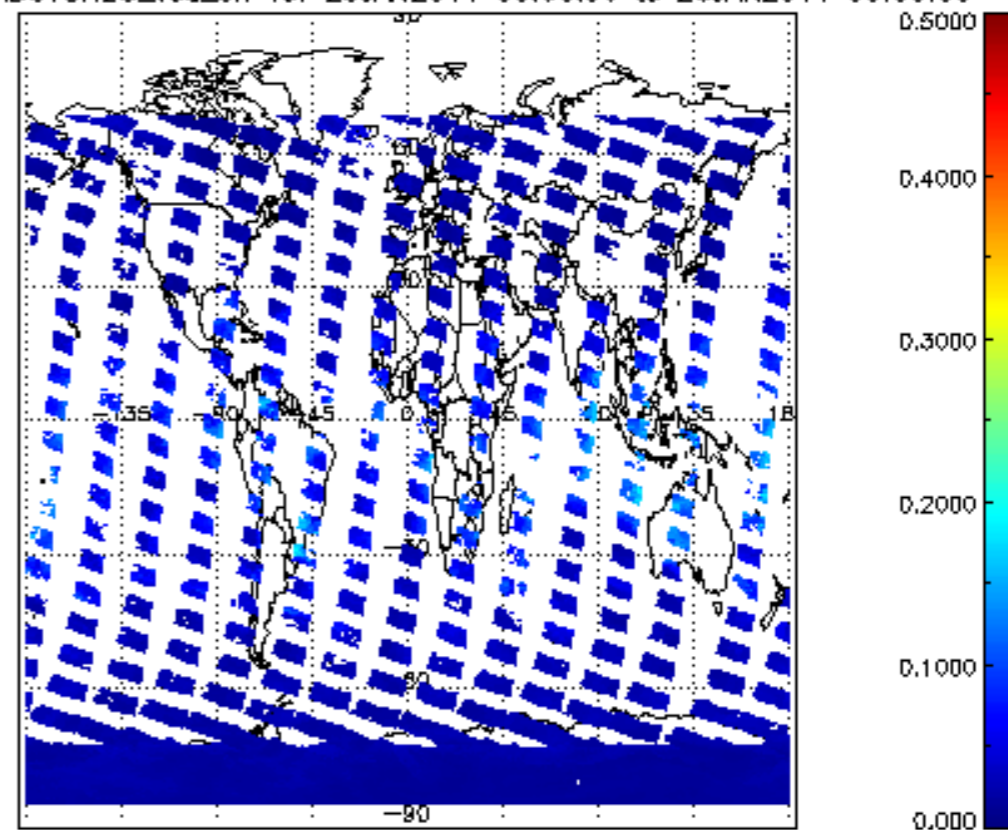




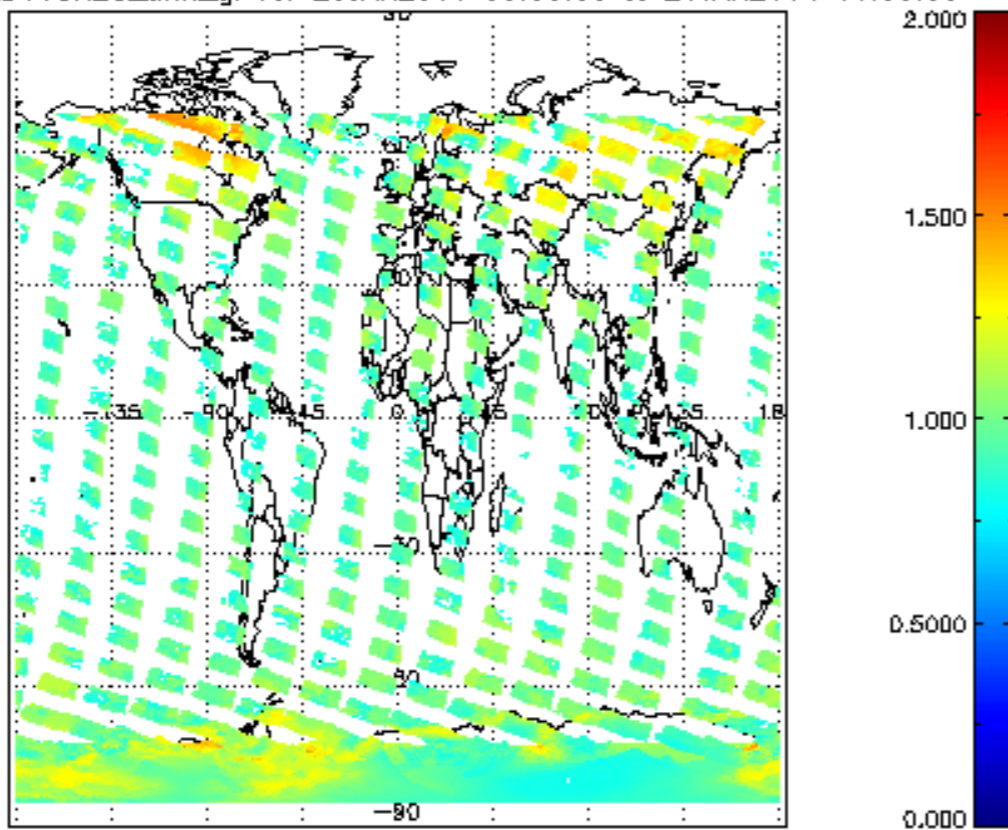
SCIOL2P\_NADUV8H20\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

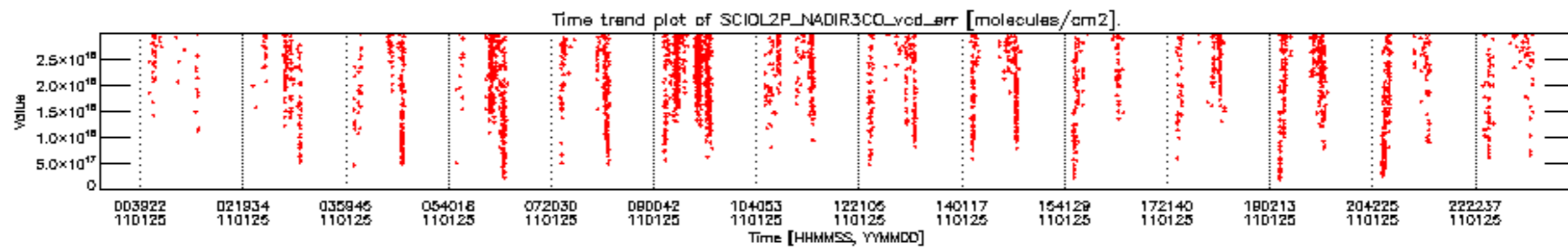
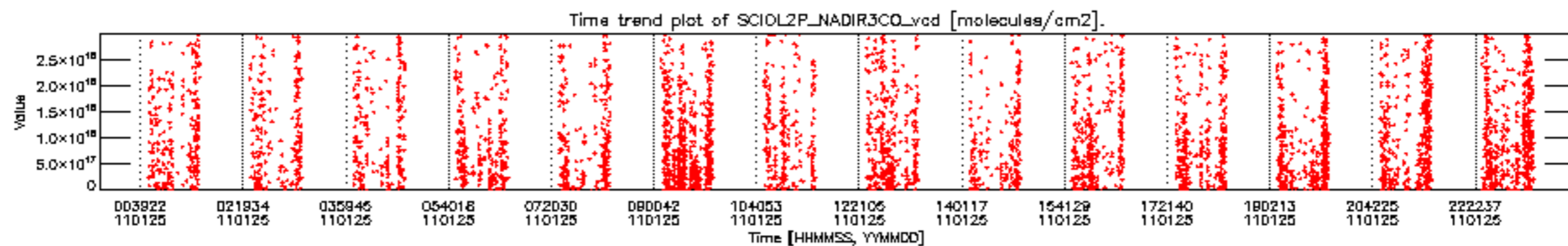


SCIOL2P\_NADUV8H20\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



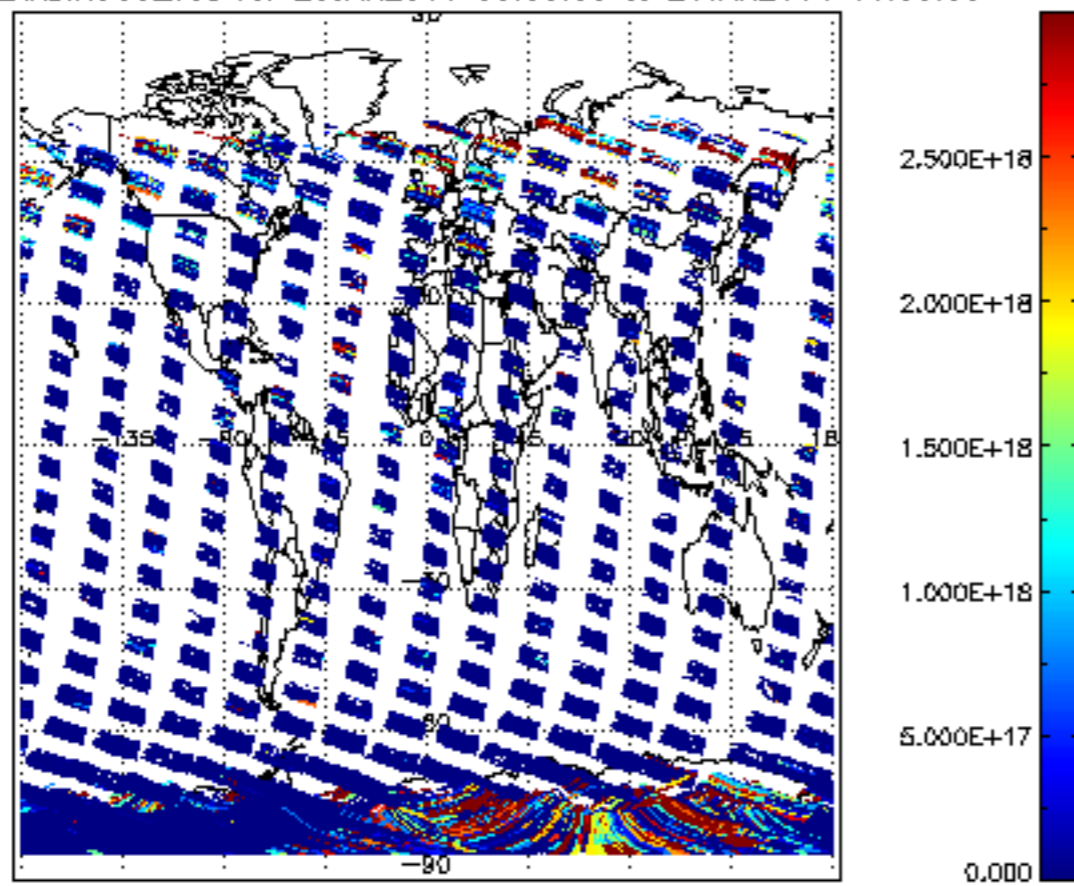
SCIOL2P\_NADUV8H20\_amf\_gr for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



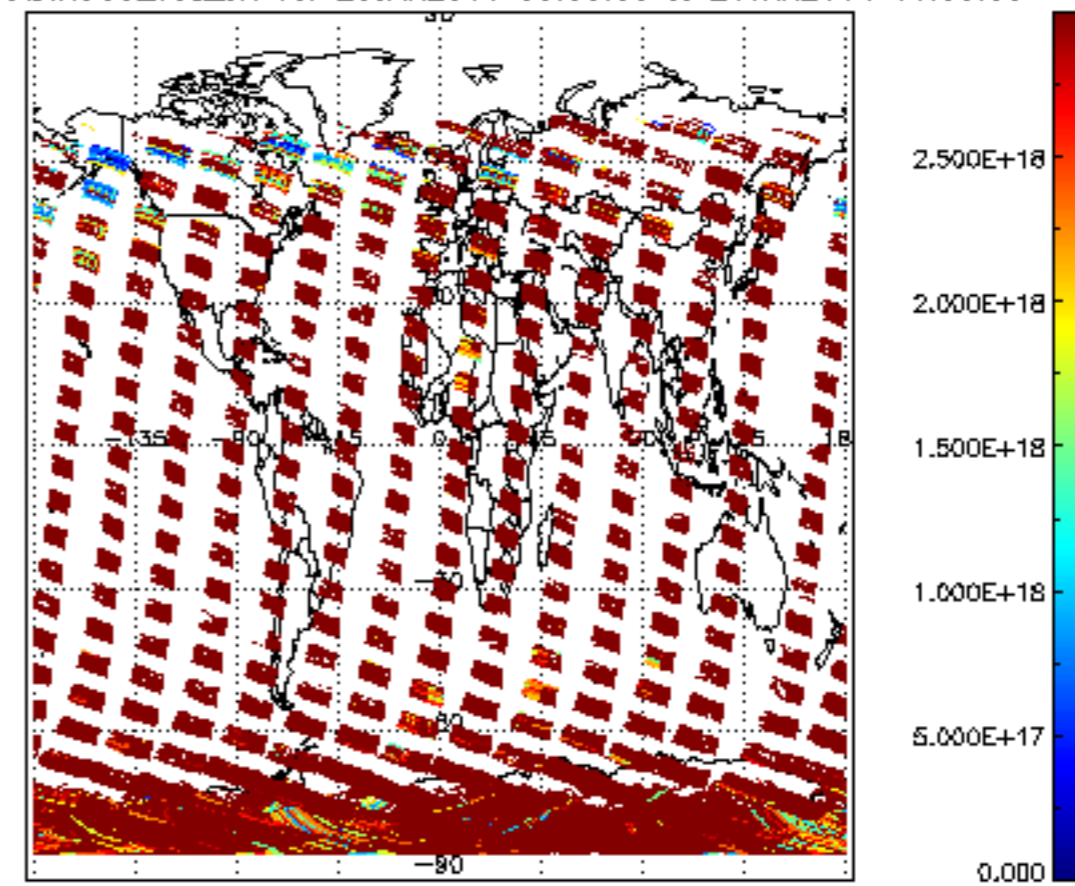




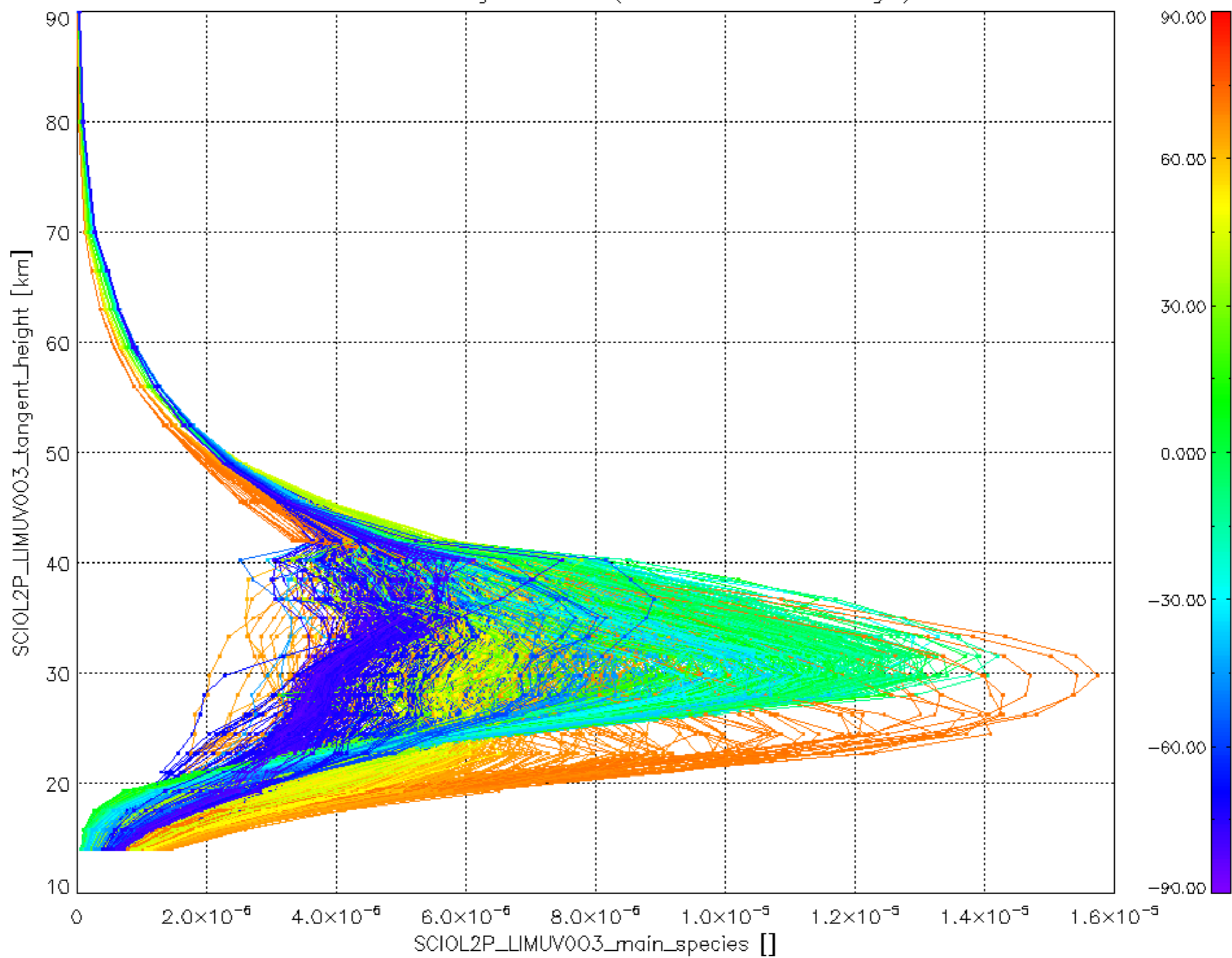
SCIOL2P\_NADIR3CO\_vcd for 25JAN2011 00:00:00 to 26JAN2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 25JAN2011 00:00:00 to 26JAN2011 00:00:00

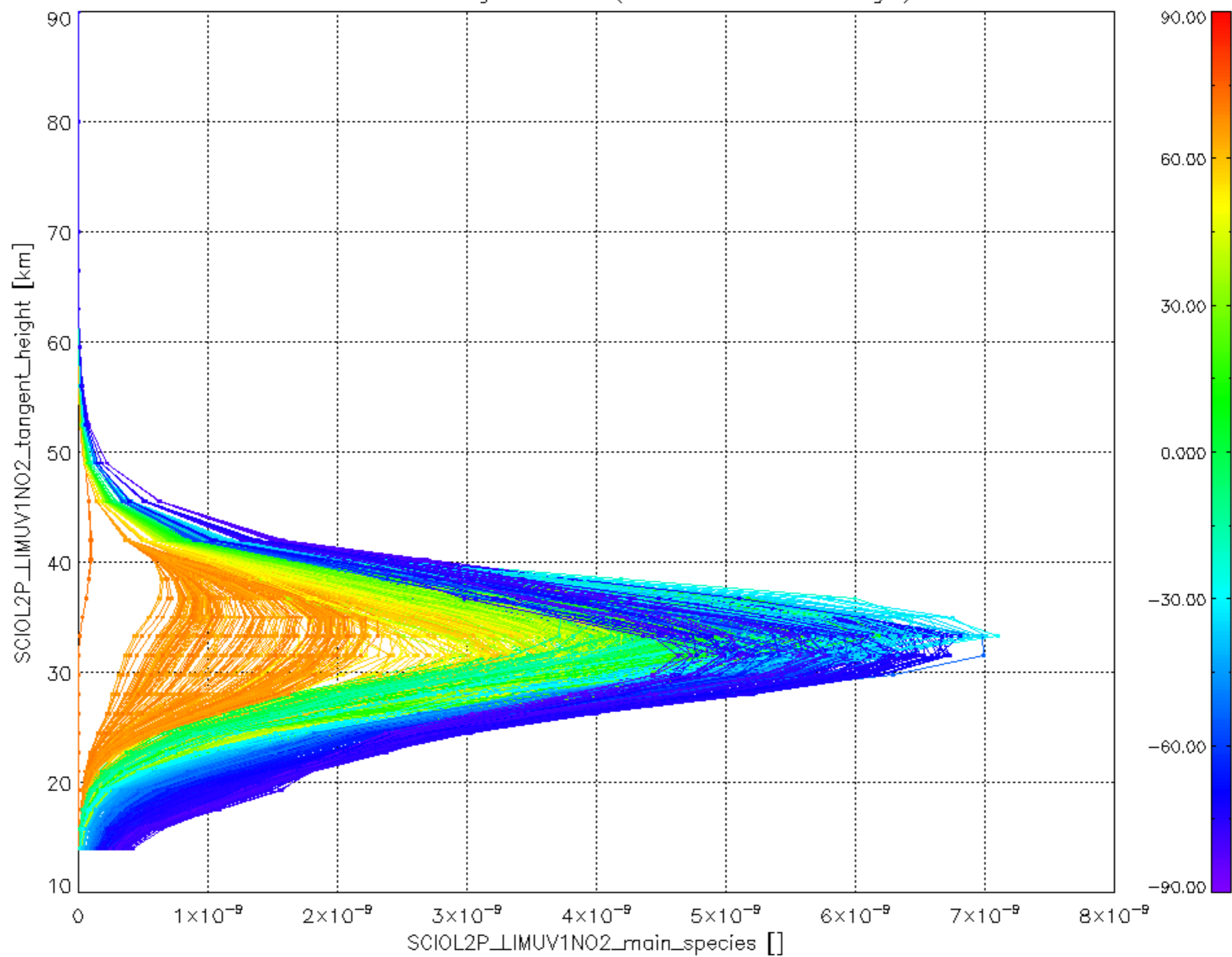


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

