

## 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	1.13 (28-02-2011)
Time of report generation	05MAR2012 03:19:01
Data source version	SCIA-OL/5.02-W
Processing scope for products	21FEB2012 00:00:00 to 22FEB2012 00:00:00
Start time of first product within scope	20FEB2012 23:27:56
Stop time of last product within scope	21FEB2012 23:49:55
Total number of level 2 products	15
Number of level 2 products with errors	0

### 2.1.2 Summary per product

The following table shows a summary for each product used in this report.

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__2PWDPA20120220_232756_000035303112_00016_52185_3680.N1</a>	20FEB2012 23:27:56	21FEB2012 00:26:47	0	GOOD
1	<a href="#">SCI_OL__2PWDPA20120221_010810_000035163112_00017_52186_3681.N1</a>	21FEB2012 01:08:10	21FEB2012 02:06:46	0	GOOD
2	<a href="#">SCI_OL__2PWDPA20120221_024823_000035303112_00018_52187_3682.N1</a>	21FEB2012 02:48:23	21FEB2012 03:47:13	0	GOOD
3	<a href="#">SCI_OL__2PWDPA20120221_042836_000035163112_00019_52188_3683.N1</a>	21FEB2012 04:28:36	21FEB2012 05:27:13	0	GOOD
4	<a href="#">SCI_OL__2PWDPA20120221_060850_000035303112_00020_52189_3684.N1</a>	21FEB2012 06:08:50	21FEB2012 07:07:41	0	GOOD

5	SCI_OL__2PWDPA20120221_074903_000035163112_00021_52190_3687.N1	21FEB2012 07:49:03	21FEB2012 08:47:40	0	GOOD
6	SCI_OL__2PWDPA20120221_092917_000035303112_00022_52191_3688.N1	21FEB2012 09:29:17	21FEB2012 10:28:07	0	GOOD
7	SCI_OL__2PWDPA20120221_110930_000035163112_00023_52192_3689.N1	21FEB2012 11:09:30	21FEB2012 12:08:06	0	GOOD
8	SCI_OL__2PWDPA20120221_124944_000035303112_00024_52193_3690.N1	21FEB2012 12:49:44	21FEB2012 13:48:34	0	GOOD
9	SCI_OL__2PWDPA20120221_142957_000035163112_00025_52194_3691.N1	21FEB2012 14:29:57	21FEB2012 15:28:33	0	GOOD
10	SCI_OL__2PWDPA20120221_161011_000035303112_00026_52195_3692.N1	21FEB2012 16:10:11	21FEB2012 17:09:01	0	GOOD
11	SCI_OL__2PWDPA20120221_175130_000034863112_00027_52196_3693.N1	21FEB2012 17:51:30	21FEB2012 18:49:37	0	GOOD
12	SCI_OL__2PWDPA20120221_193058_000035303112_00028_52197_3694.N1	21FEB2012 19:30:58	21FEB2012 20:29:48	0	GOOD
13	SCI_OL__2PWDPA20120221_211051_000035163112_00029_52198_3695.N1	21FEB2012 21:10:51	21FEB2012 22:09:27	0	GOOD
14	SCI_OL__2PWDPA20120221_225104_000035303112_00030_52199_3696.N1	21FEB2012 22:51:04	21FEB2012 23:49:55	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: 165451

Total number of cloud data DSRs with good quality flag (=0): 165451 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	165451	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	165451	0.16632	0.12500	0.12500	0.25000	0.058802	s
CL_FRAC	165451	0.46118	0.44975	0.0000	1.0000	0.31781	
CL_FRAC_ERR	165451	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	165451	5.3222	4.0000	4.0000	8.0000	1.8817	
PMD_READ_CL[0]	165451	0.58952	0.0000	0.0000	8.0000	1.4654	-
PMD_READ_CL[1]	165451	1.1724	0.0000	0.0000	8.0000	2.4840	-
CL_TOP_HEIGHT	131392	3.7909	2.6082	0.0000	17.000	3.7231	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	131392	54.870	46.966	0.0000	101.00	40.375	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	165451	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	165451	11001100	11000100	11000000	11100000	3477.5	
AERO_ABSO_IND	165451	0.083116	0.0000	0.0000	10.177	0.28103	
AERO_IND_DIAG	165451	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	165451	01010110	00000000	00000000	11000000	24446.	

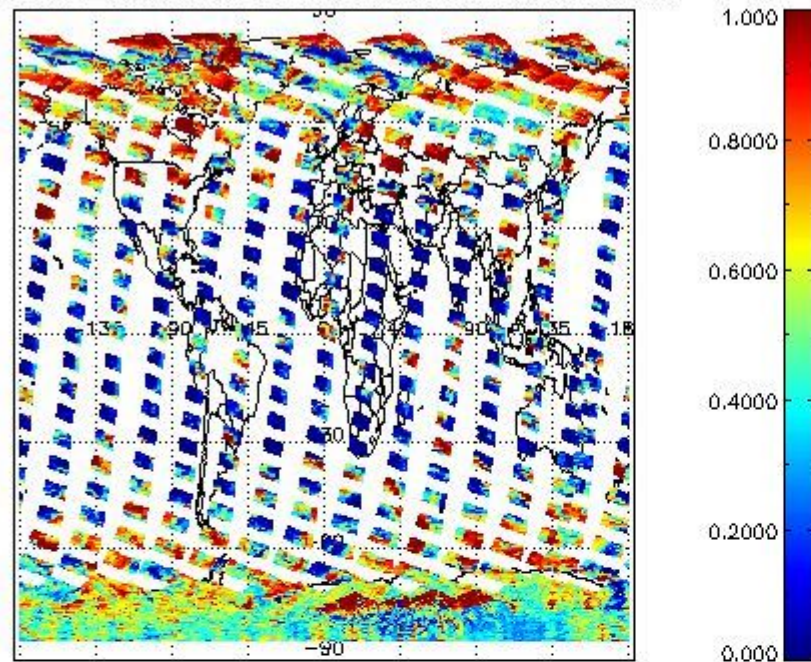
#### Time and geolocation plots:

Plots are available for the following parameters:

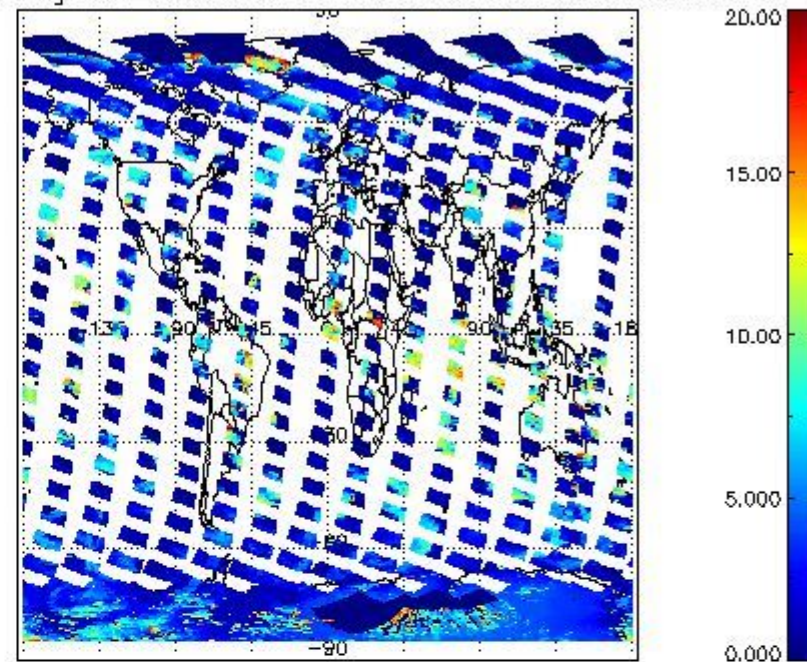
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



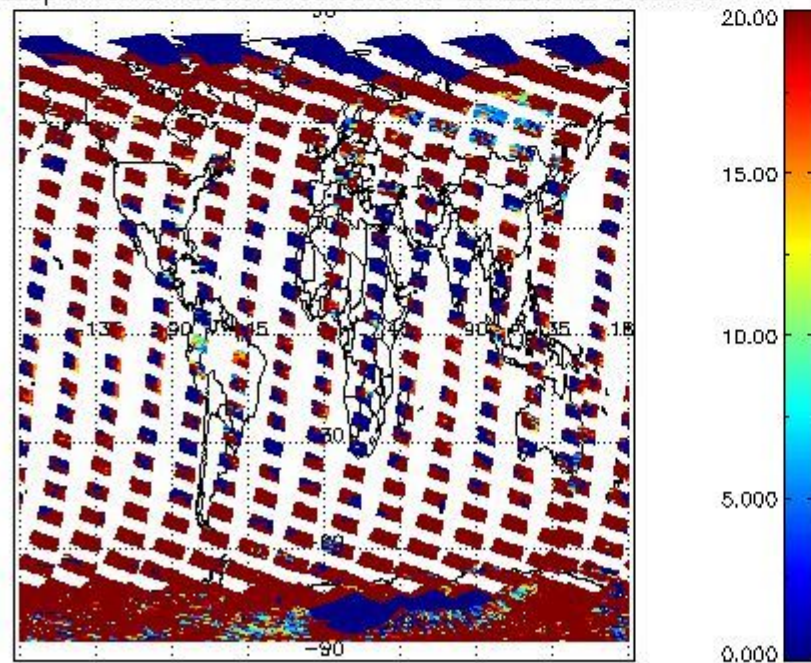
cL\_frae for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



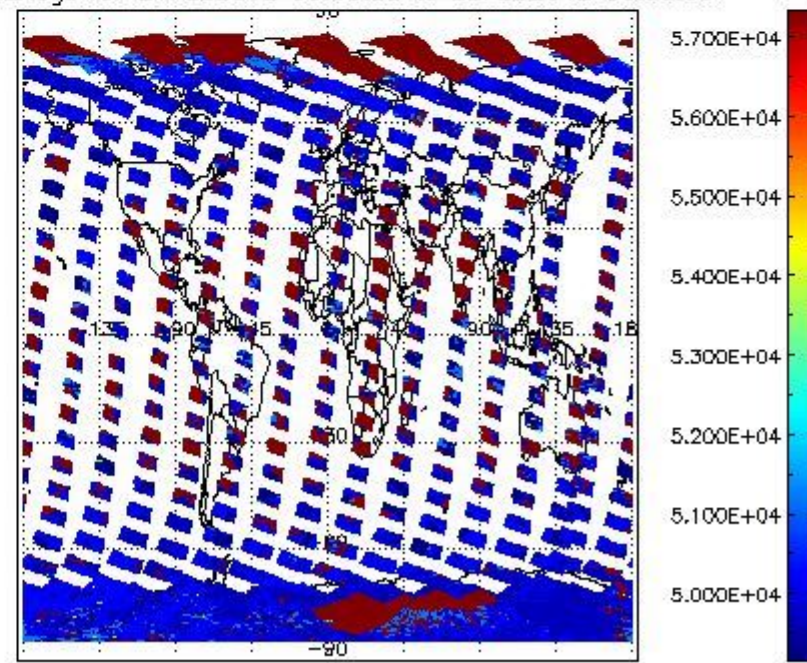
cL\_top\_height for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



cL\_opt\_depth for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



cloud\_flags for 21FEB2012 00:00:00 to 22FEB2012 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:

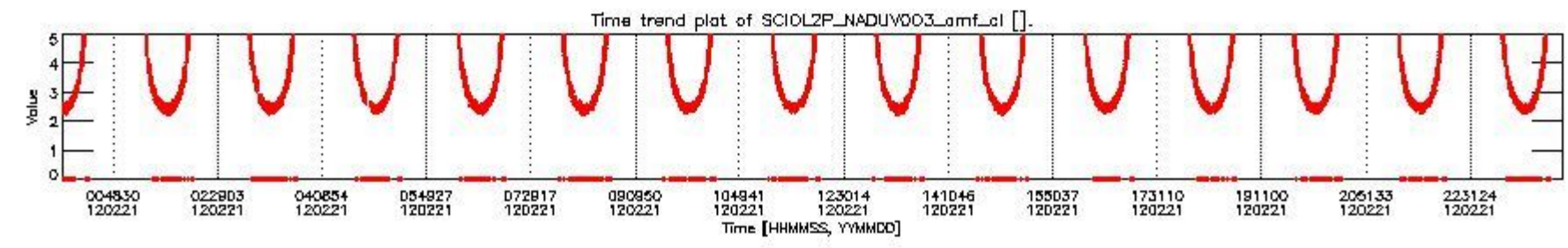
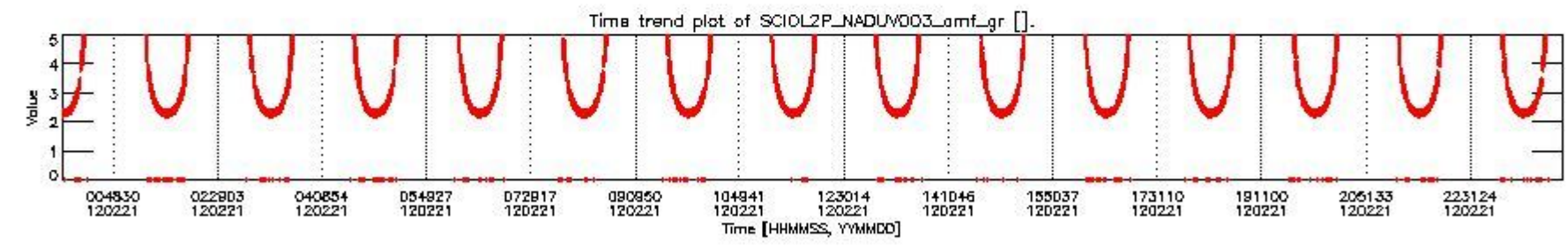
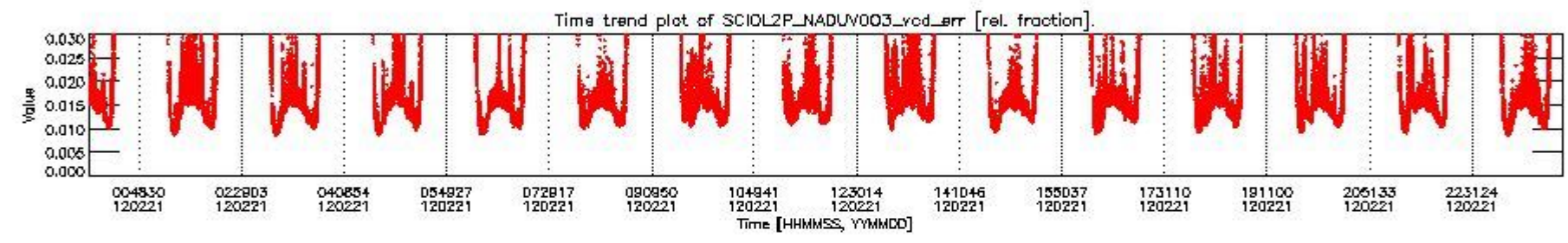
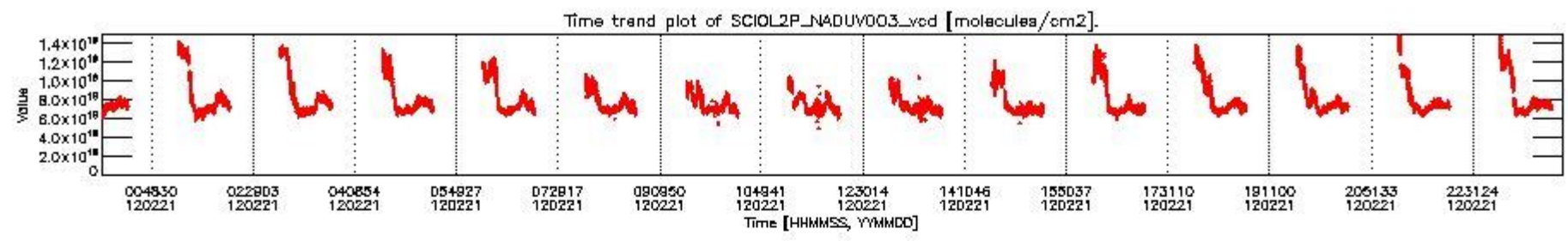
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

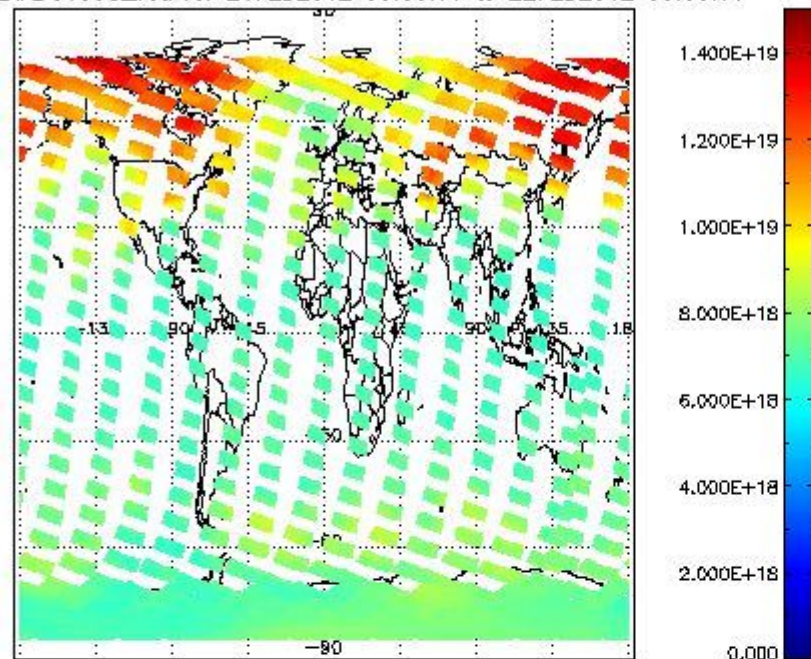
#### 2.2.2.1 O3 (UV0)



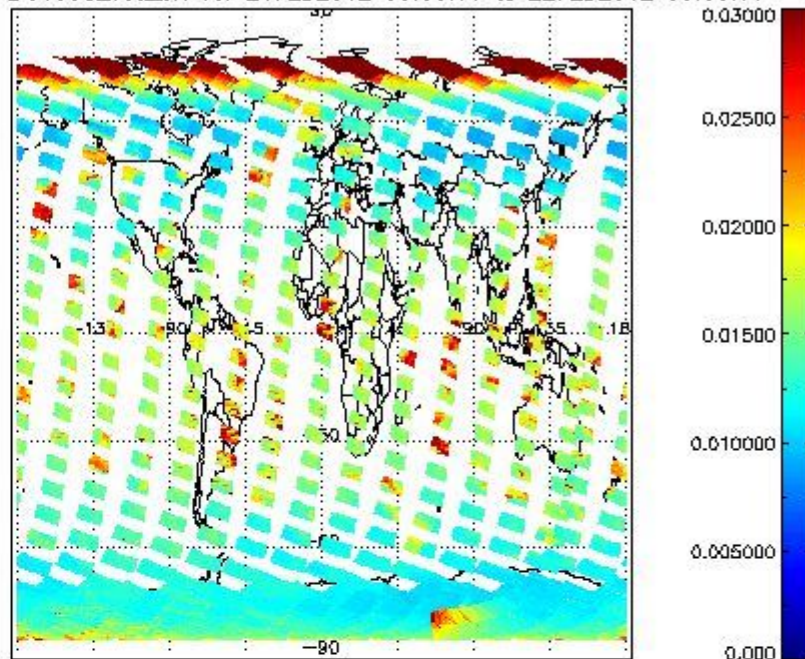




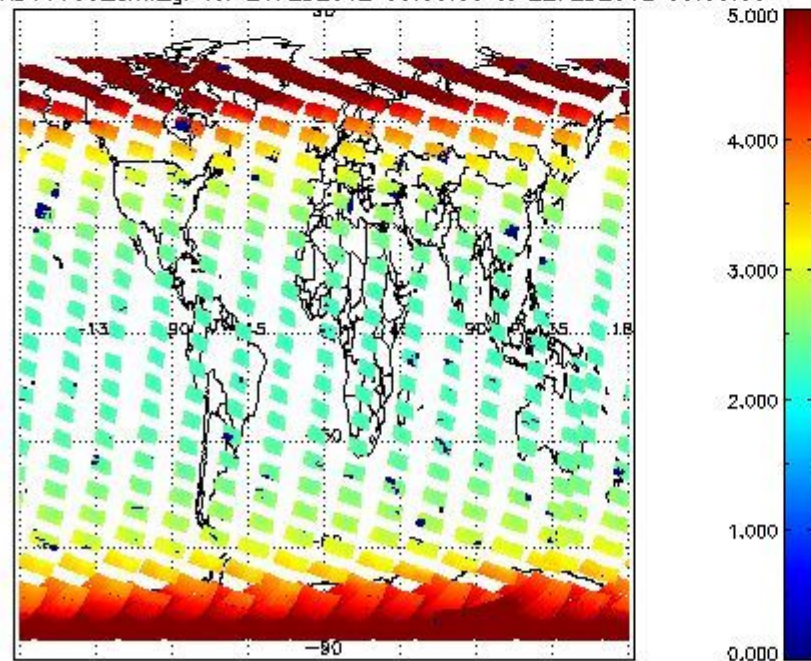
SCIOL2P\_NADUV003\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



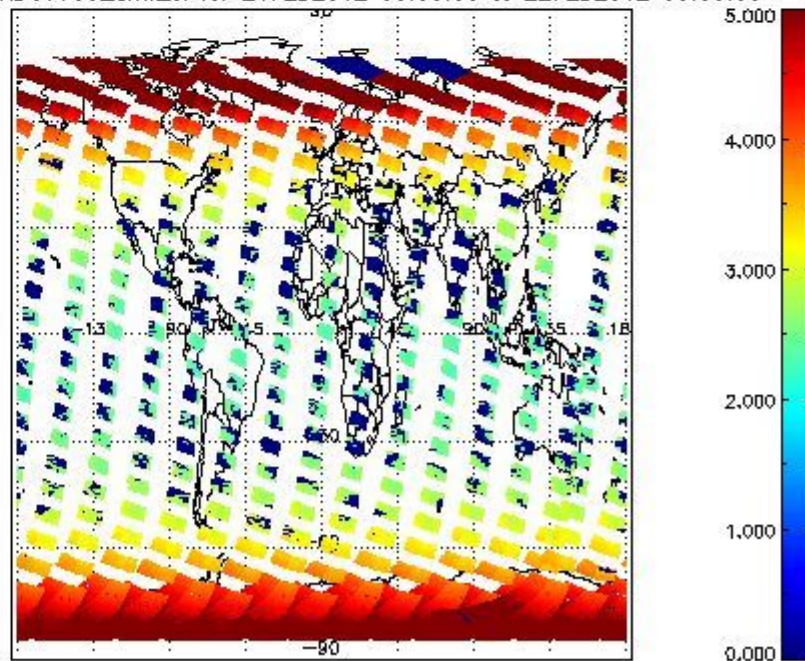
SCIOL2P\_NADUV003\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

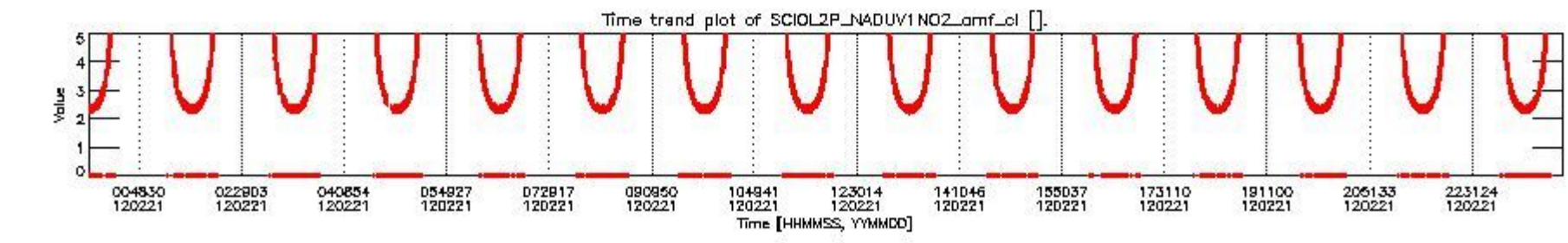
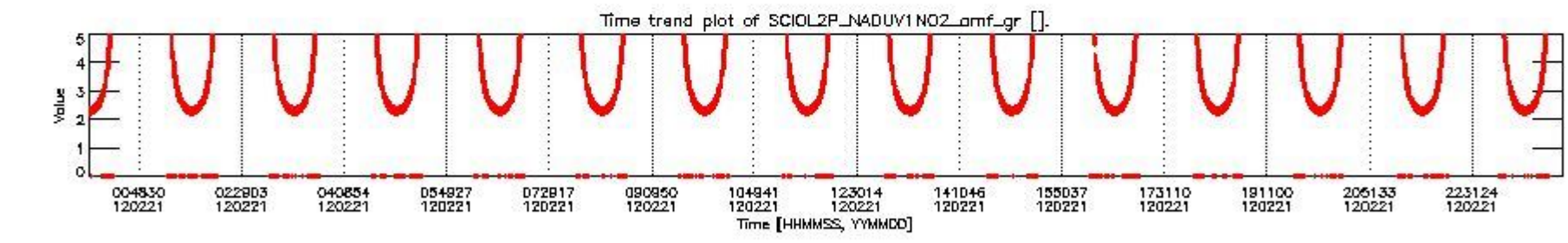
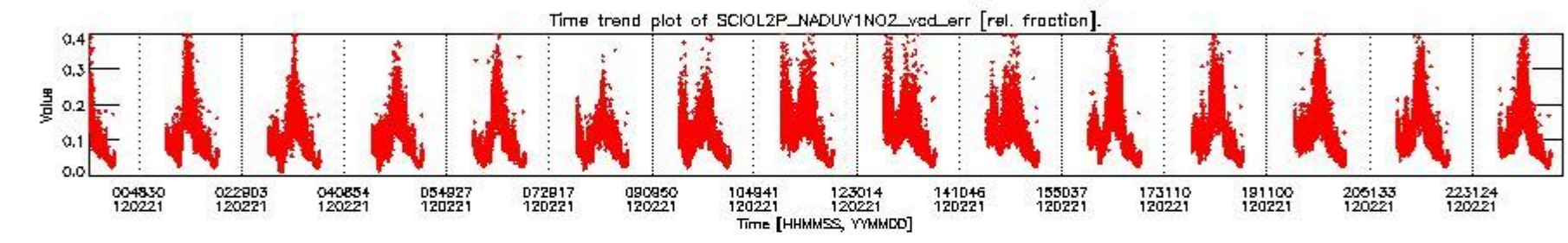
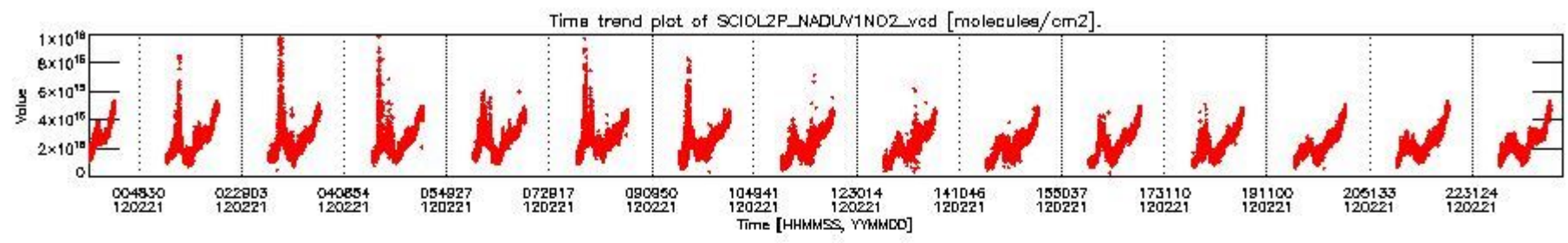


SCIOL2P\_NADUV003\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



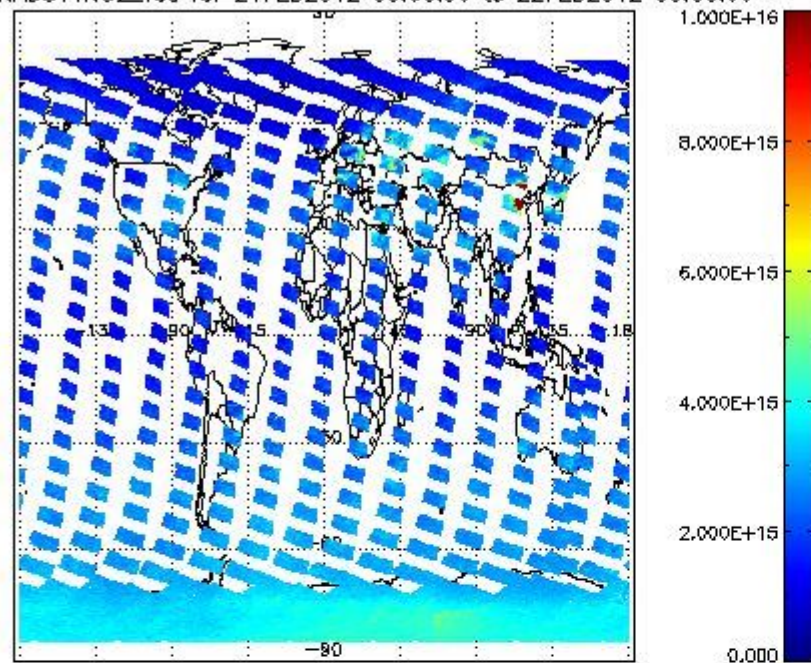
2.2.2.2 NO2 (UV1)



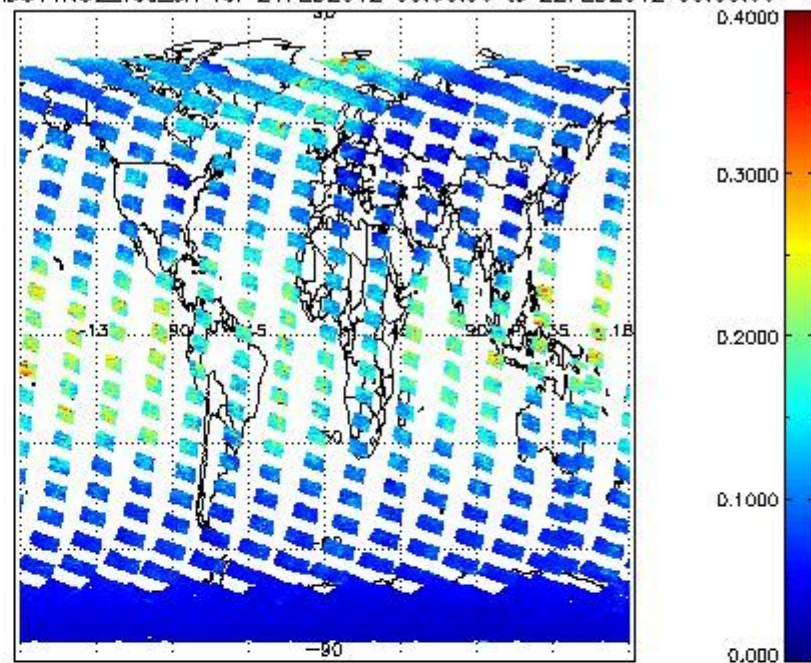




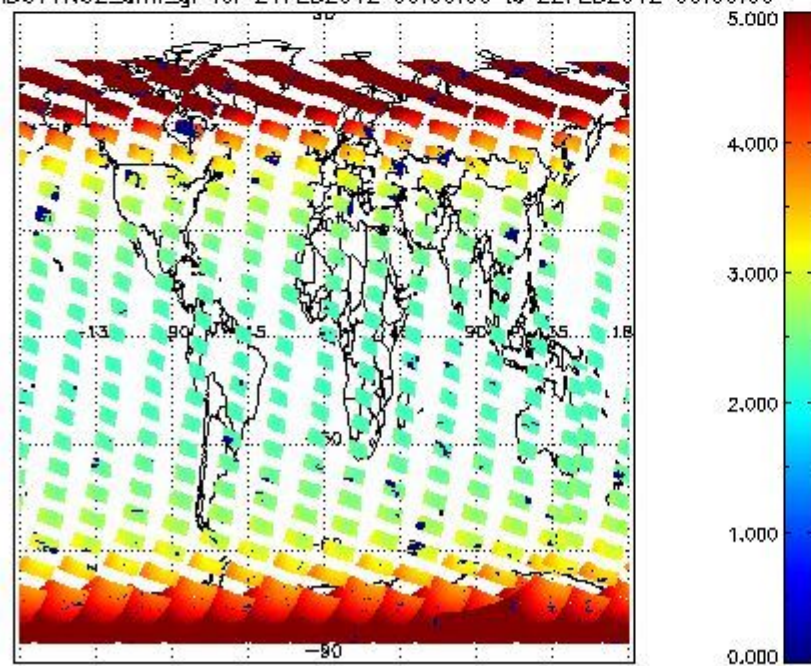
SCIOL2P\_NADUV1N02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



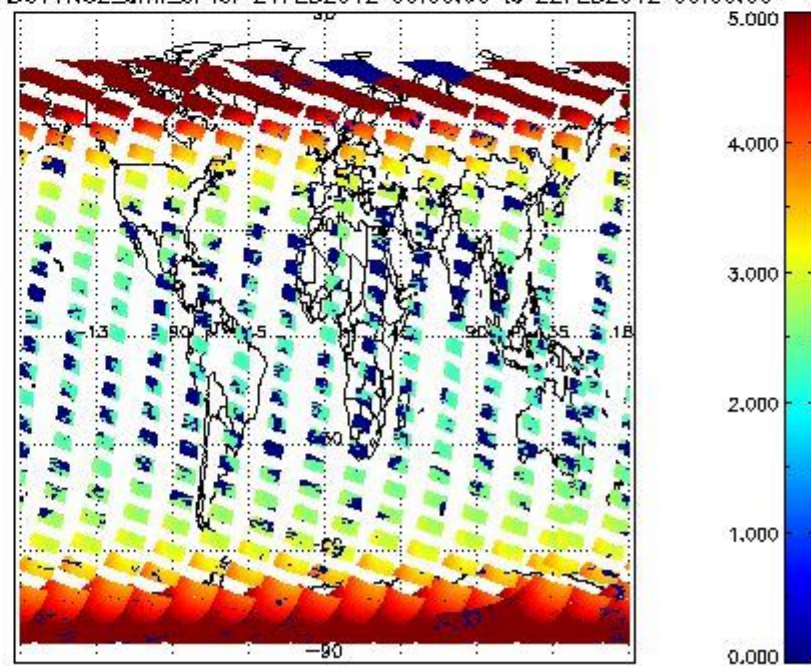
SCIOL2P\_NADUV1N02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV1N02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

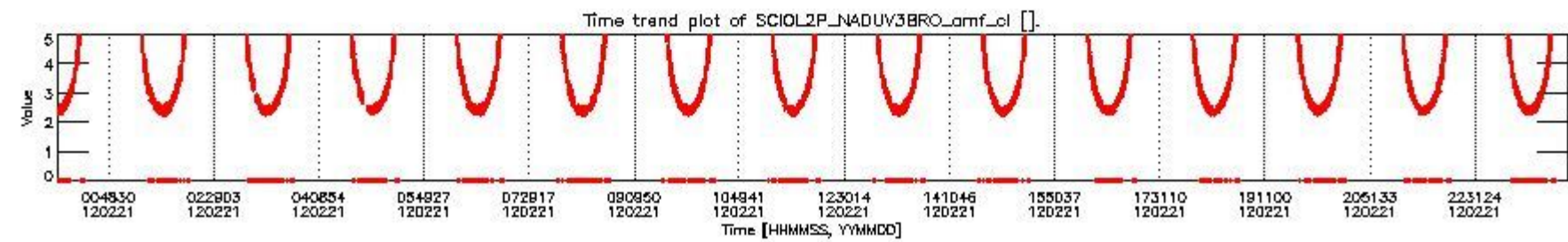
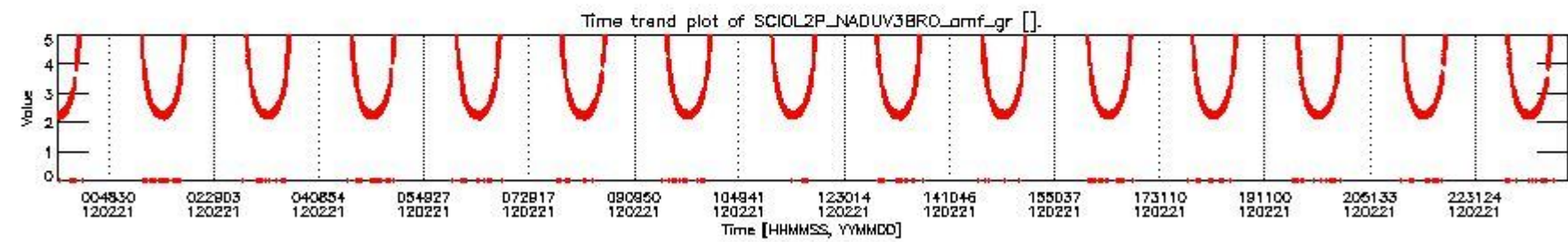
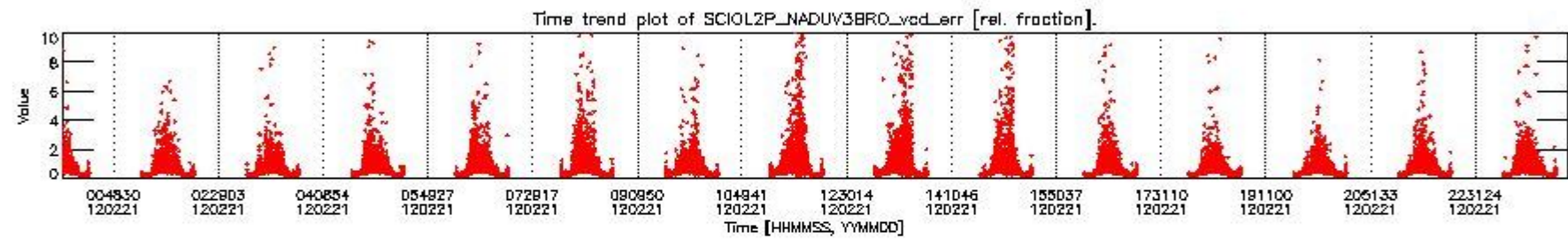
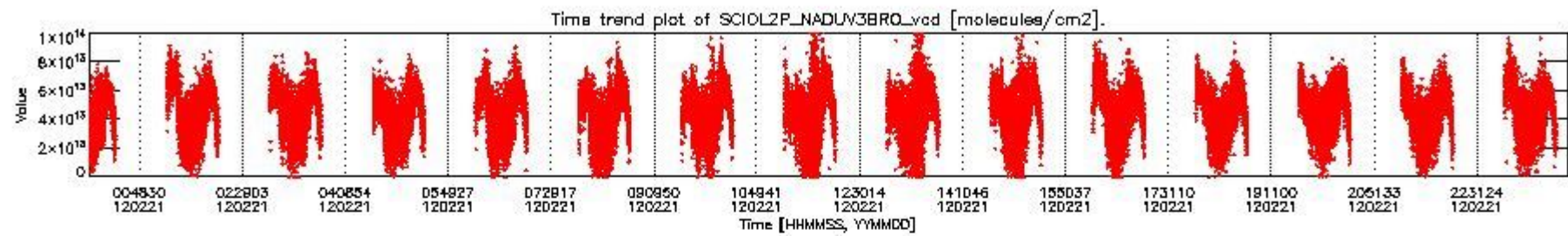


SCIOL2P\_NADUV1N02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



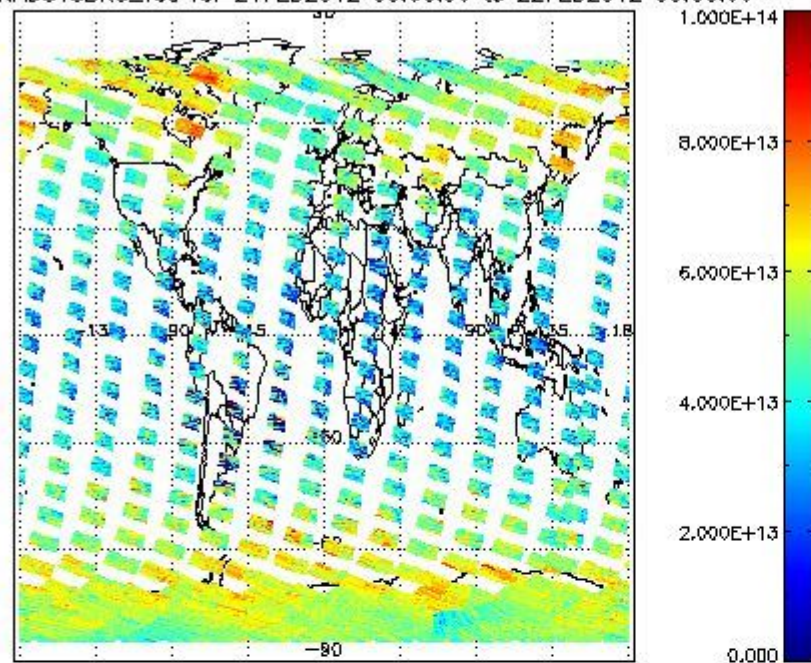
2.2.2.3 BrO (UV3)



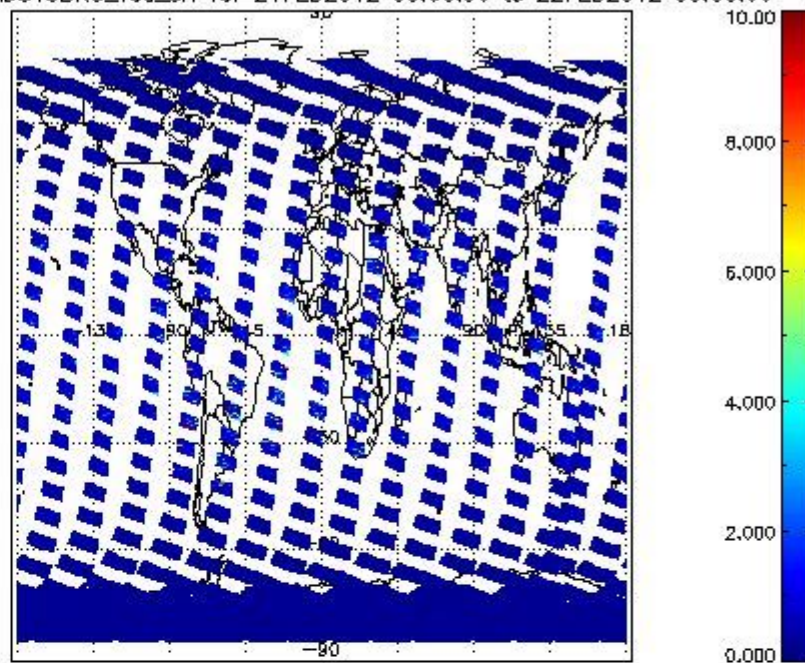




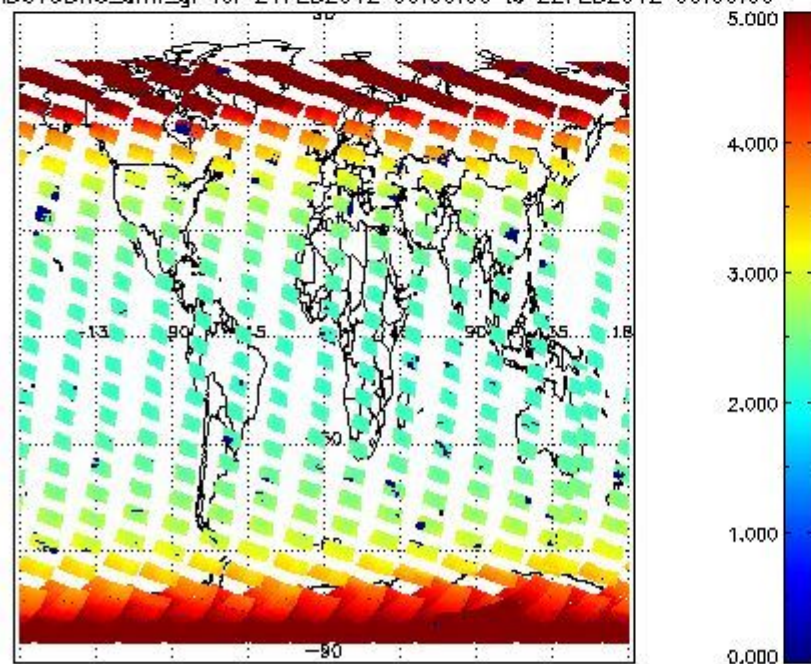
SCIOL2P\_NADUV3BRO\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



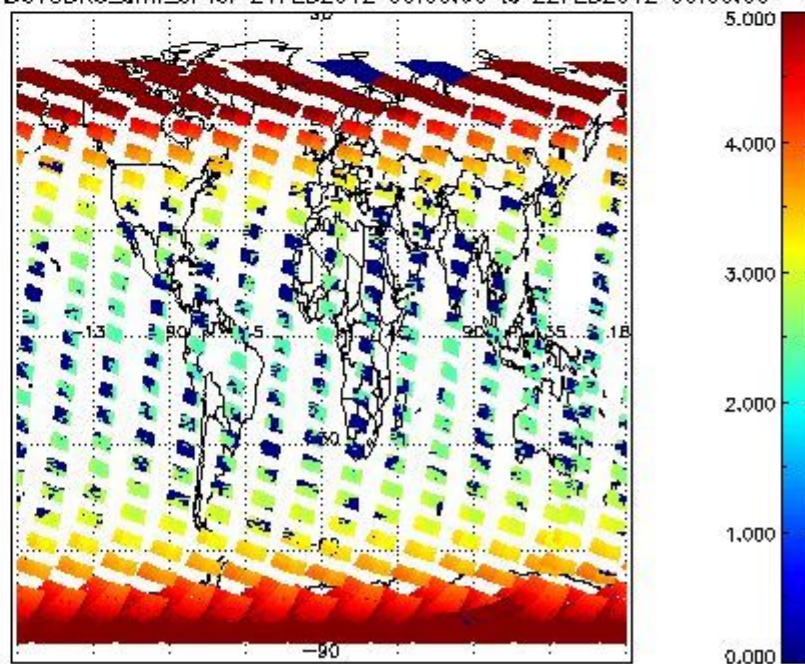
SCIOL2P\_NADUV3BRO\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

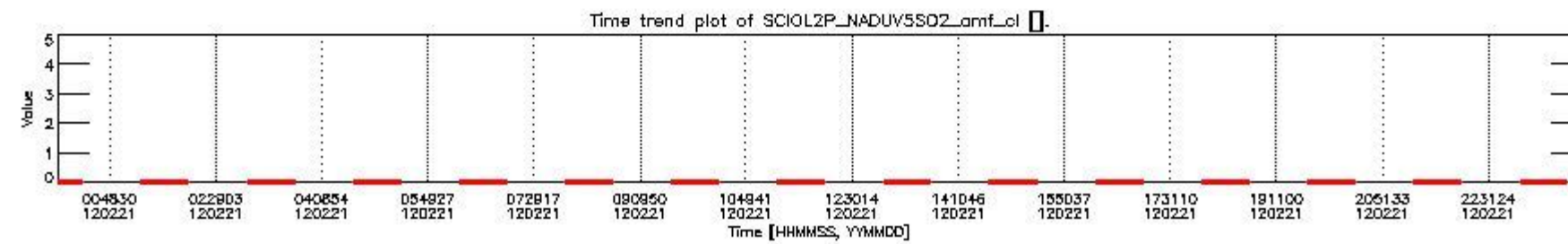
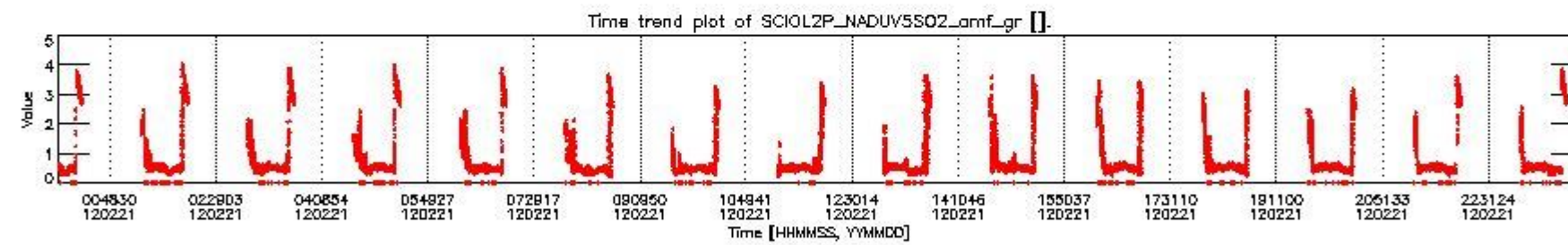
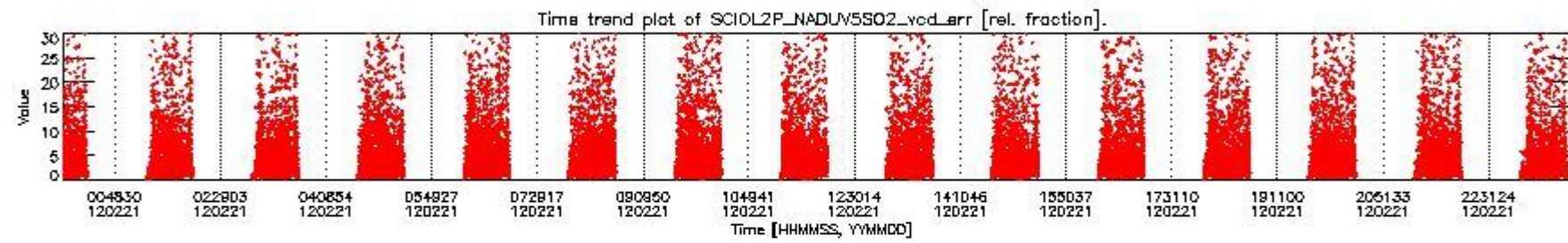
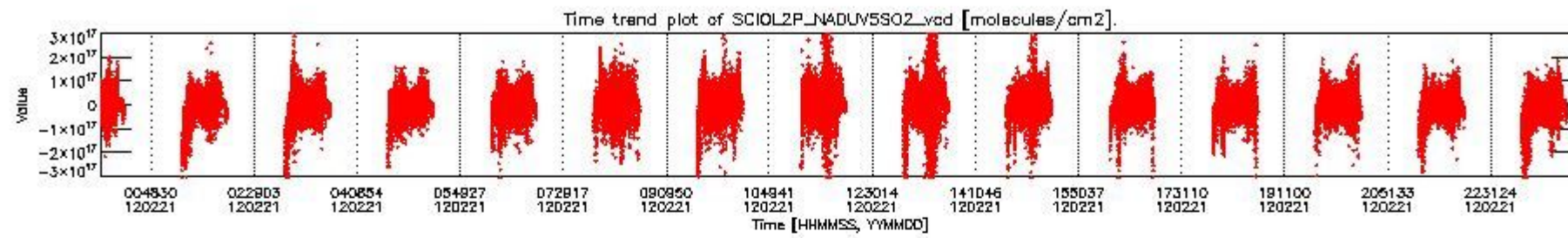


SCIOL2P\_NADUV3BRO\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



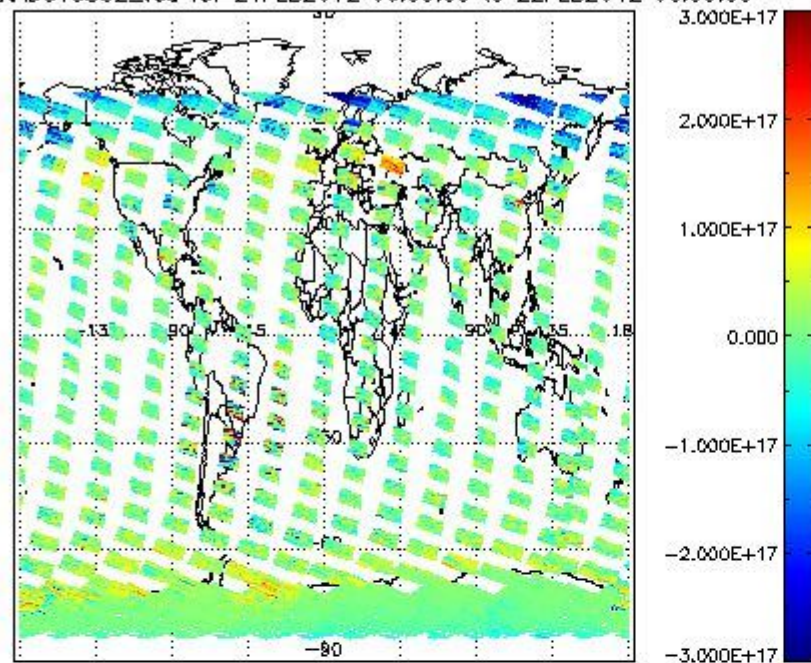
2.2.2.4 SO2 (UV5)



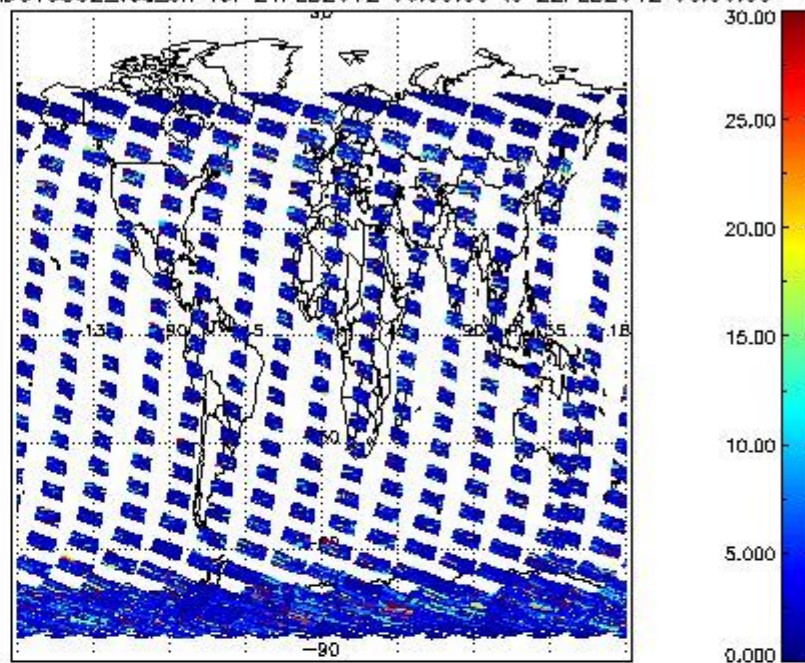




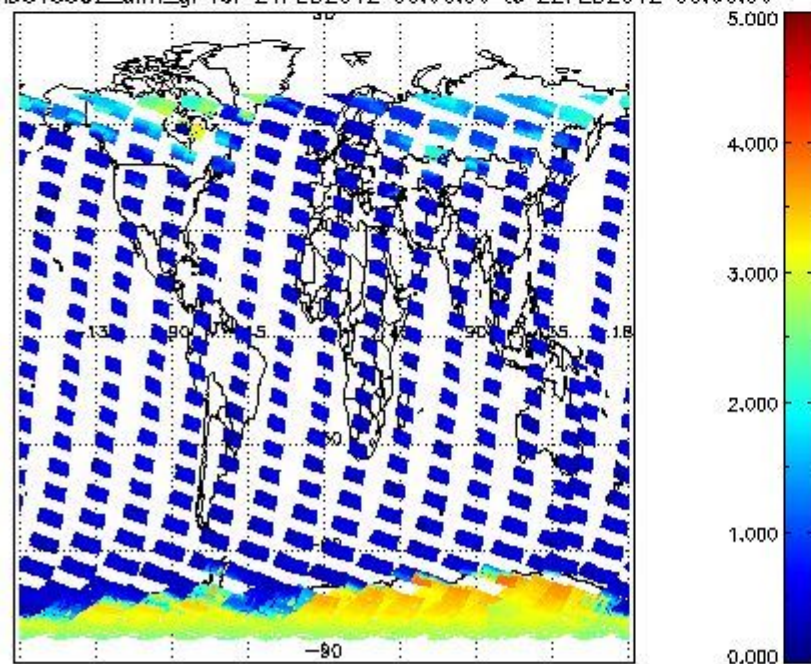
SCIOL2P\_NADUV5S02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



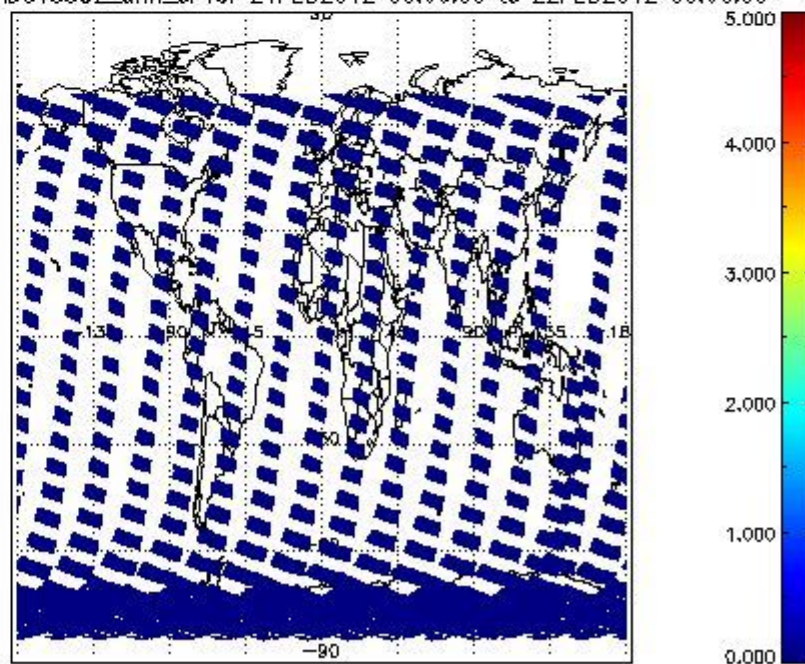
SCIOL2P\_NADUV5S02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

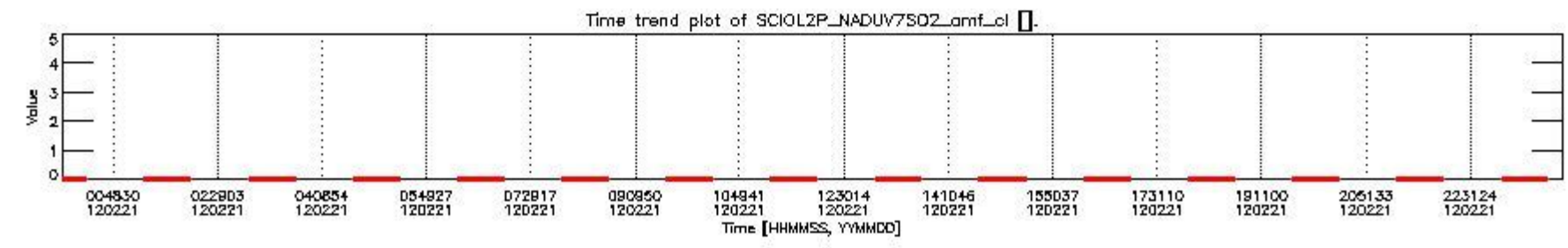
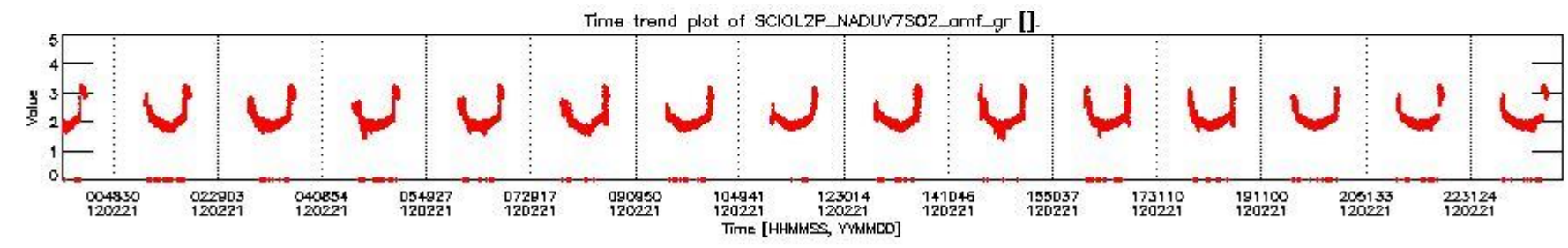
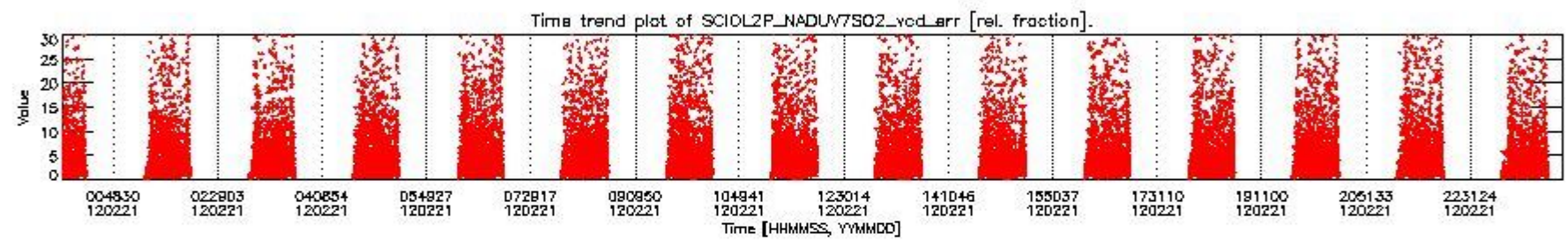
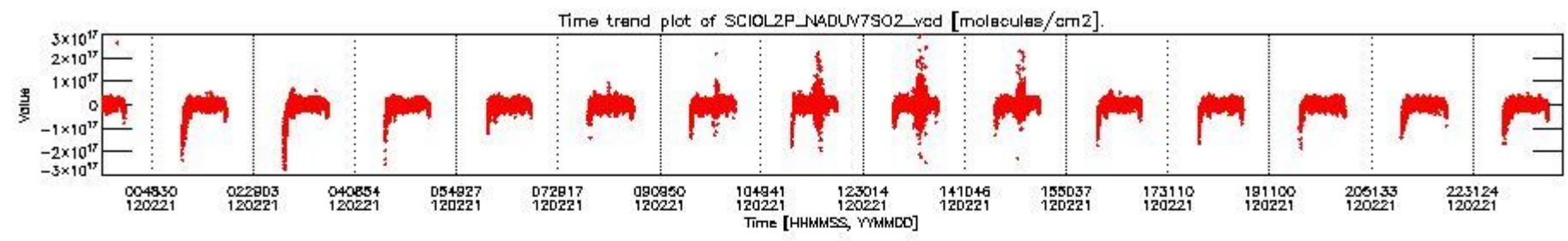


SCIOL2P\_NADUV5S02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



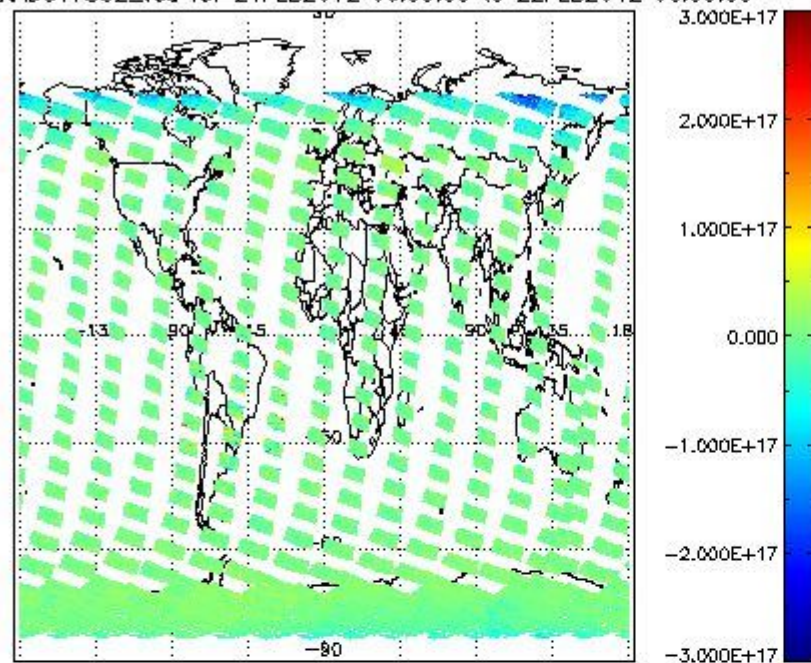
2.2.2.5 SO2 (UV7)



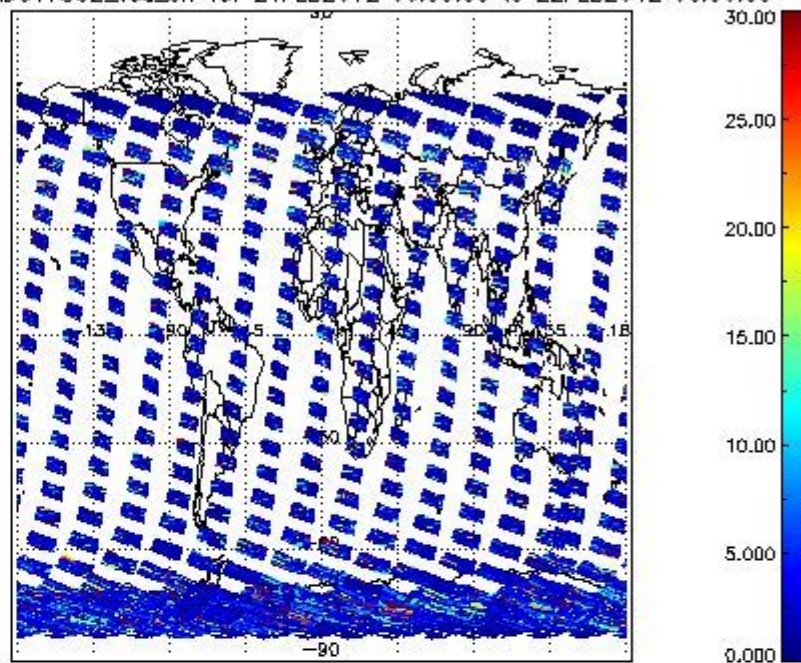




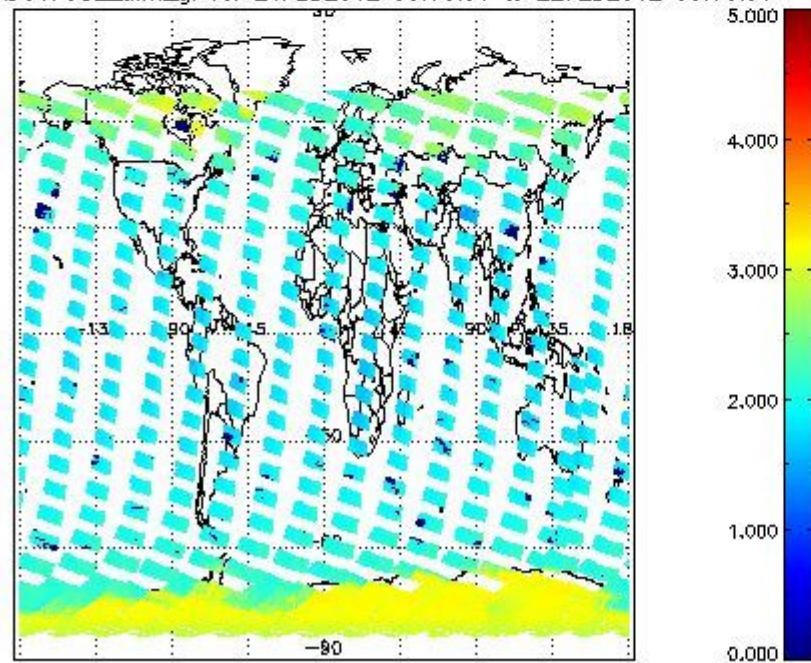
SCIOL2P\_NADUV7S02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



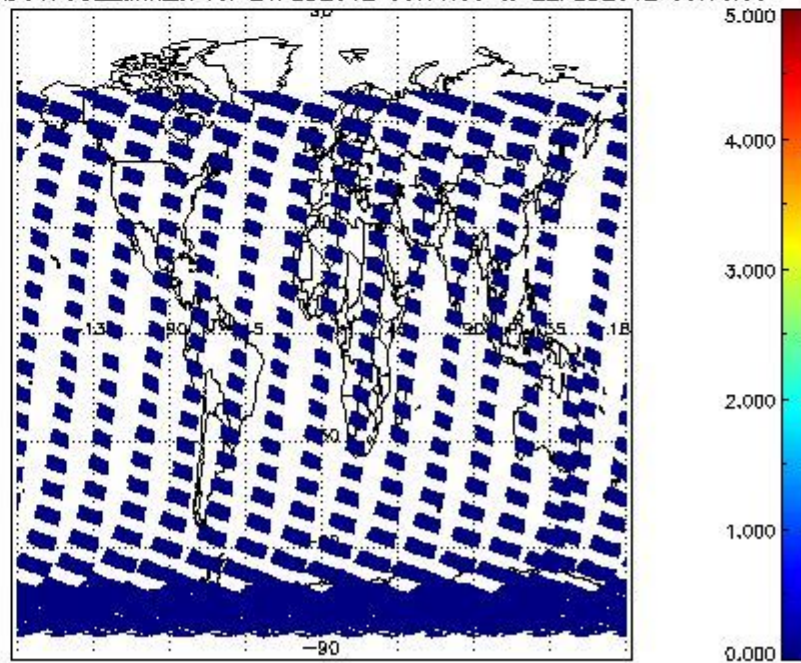
SCIOL2P\_NADUV7S02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

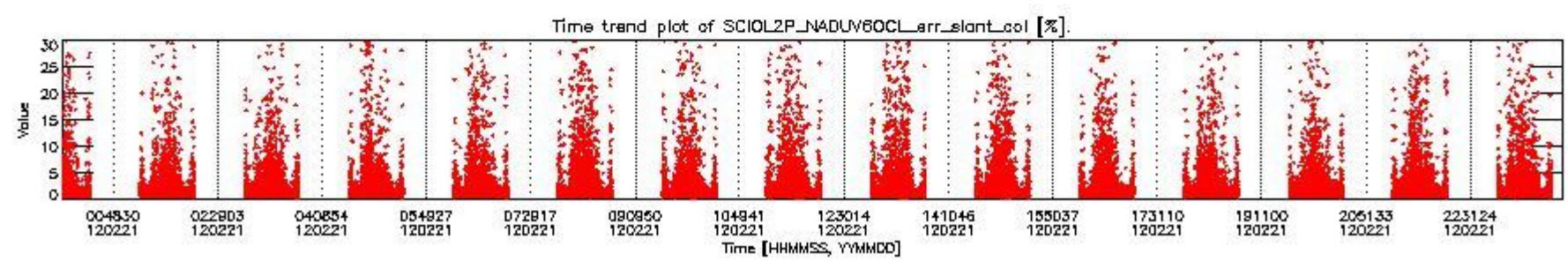
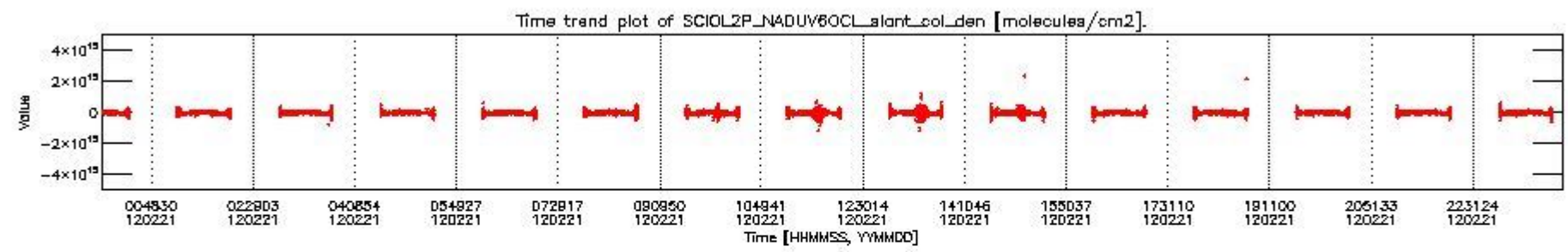


SCIOL2P\_NADUV7S02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

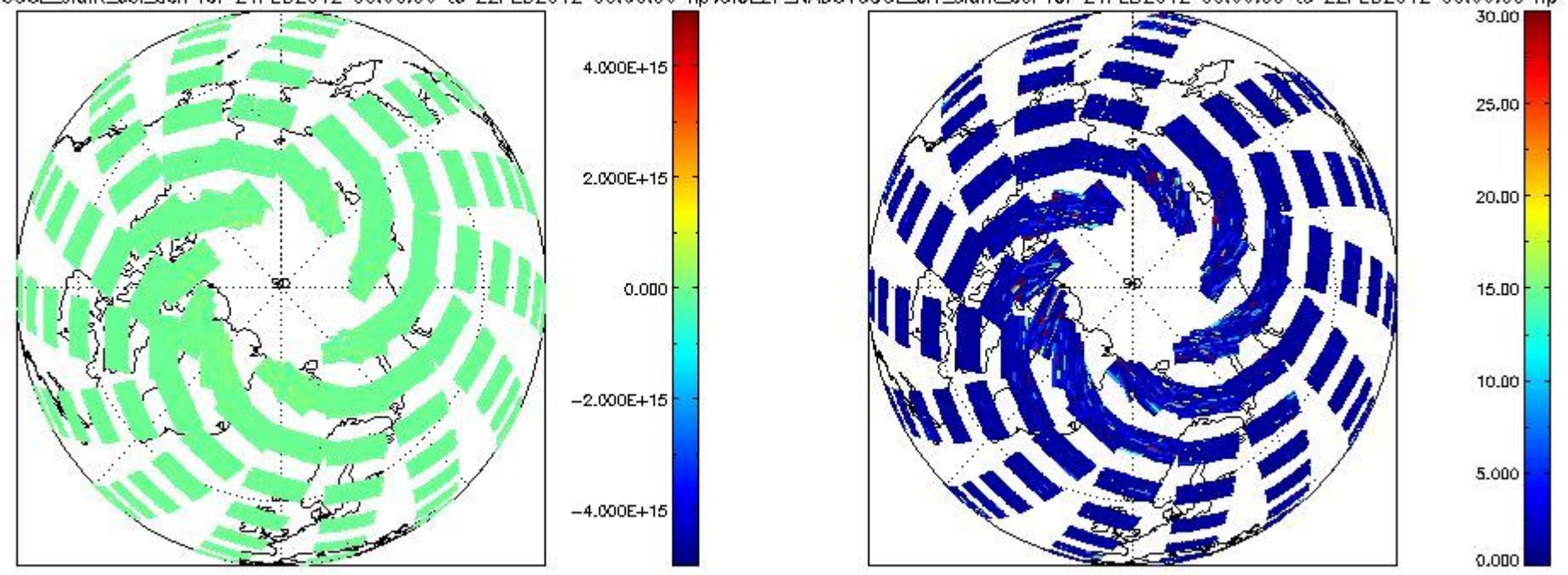


2.2.2.6 OCIO (UV6)



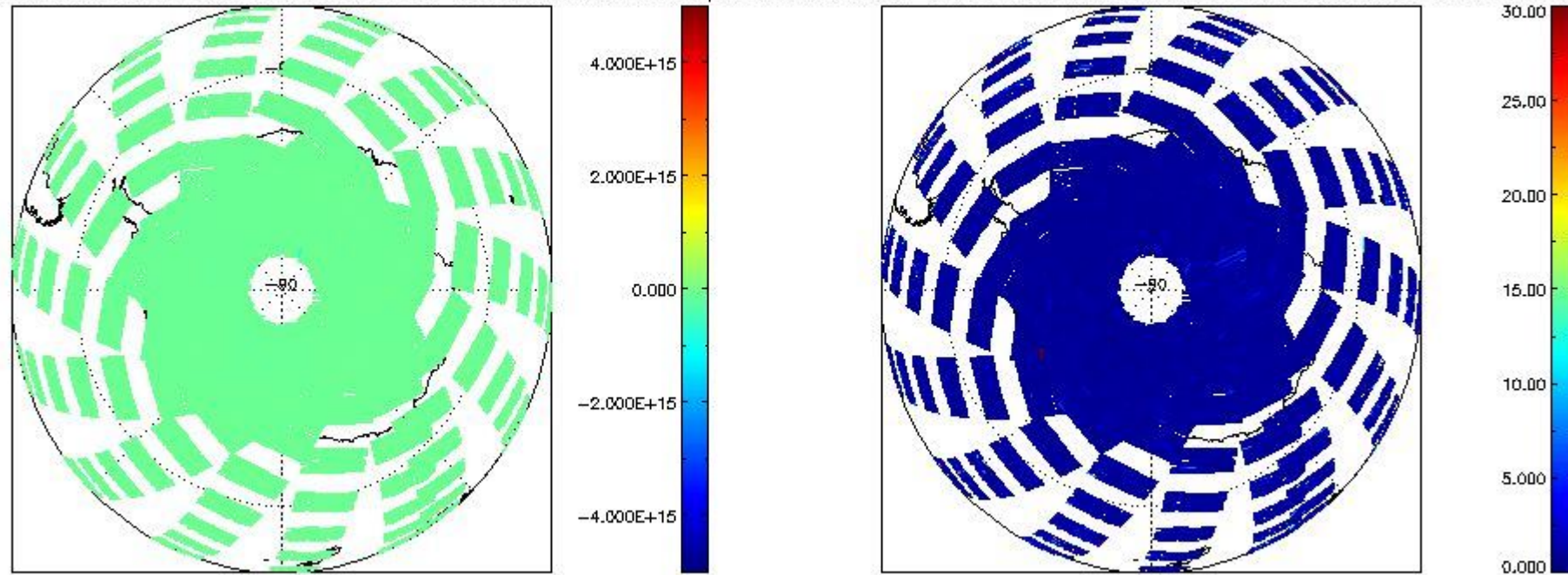


CIOL2P\_NADUV60CL\_slant\_col\_den for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 np; CIOL2P\_NADUV60CL\_err\_slant\_col for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 np

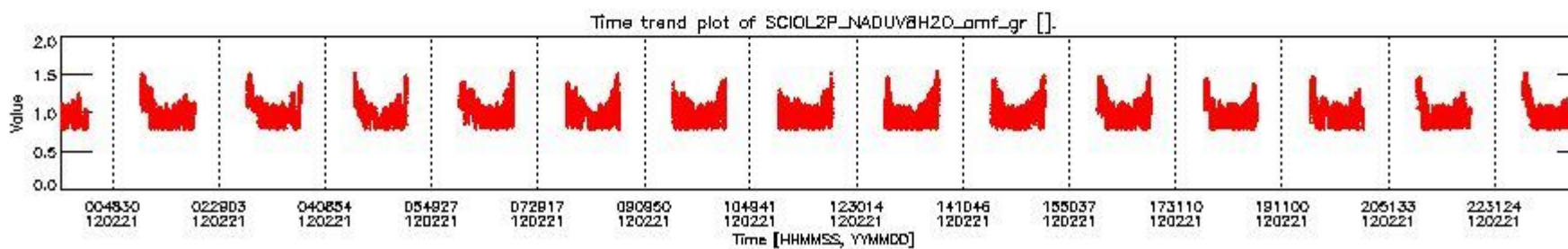
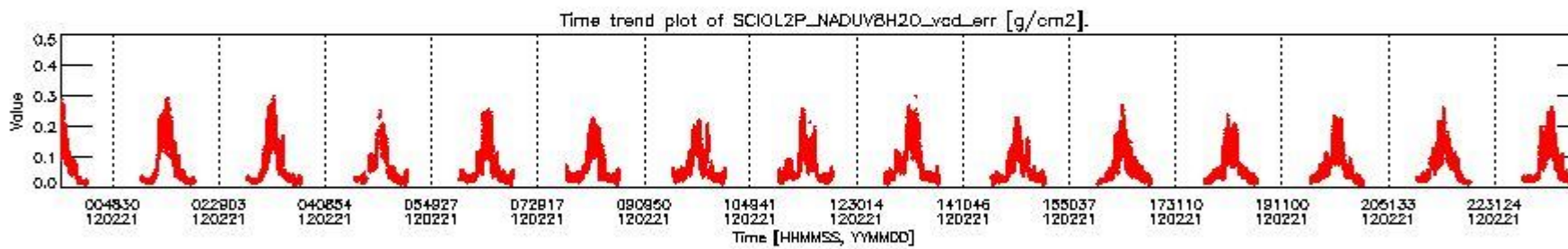
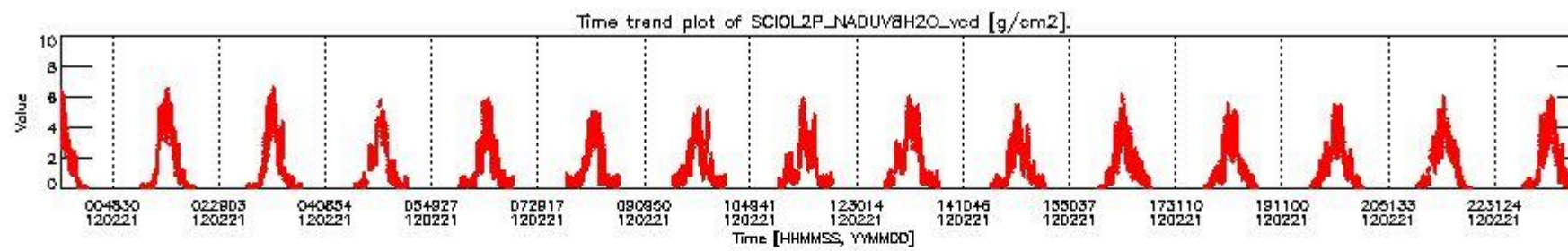




CIOL2P\_NADUV60CL\_slant\_col\_den for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 sp;CIOL2P\_NADUV60CL\_err\_slant\_col for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 sp

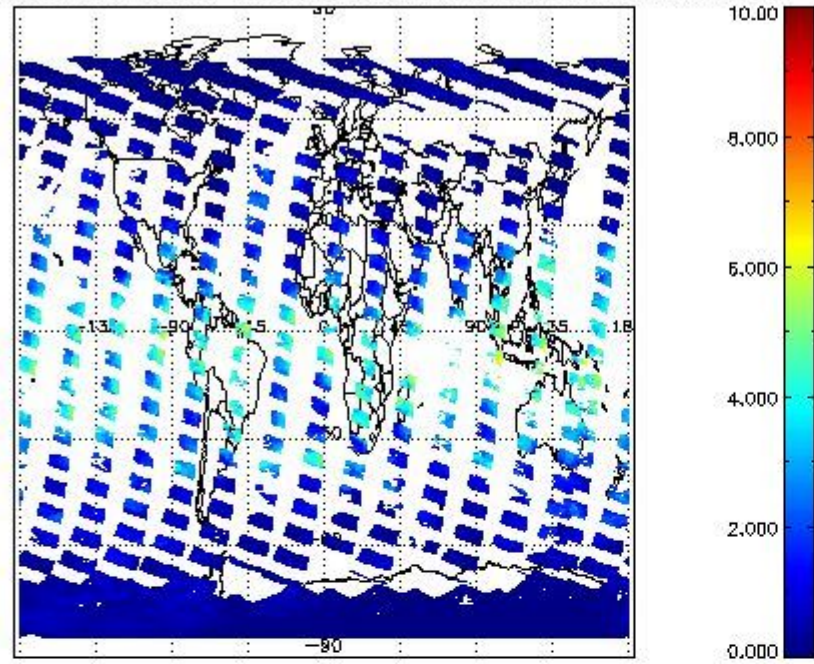


### 2.2.2.7 H2O (UV8)

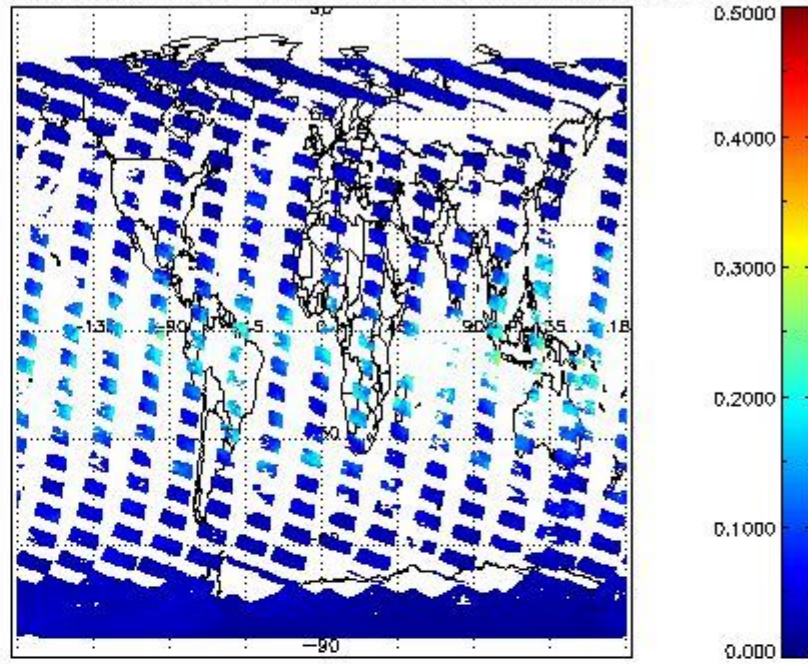




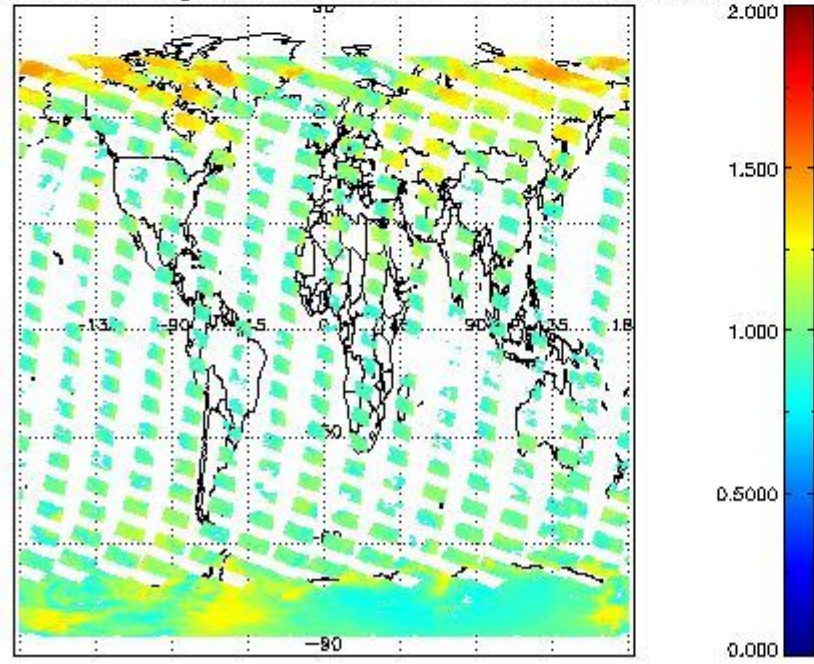
SCIOL2P\_NADUV8H2O\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADUV8H2O\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

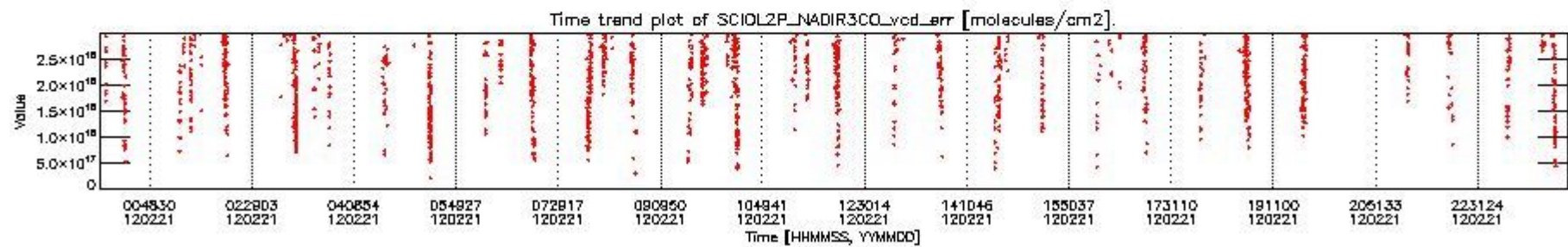
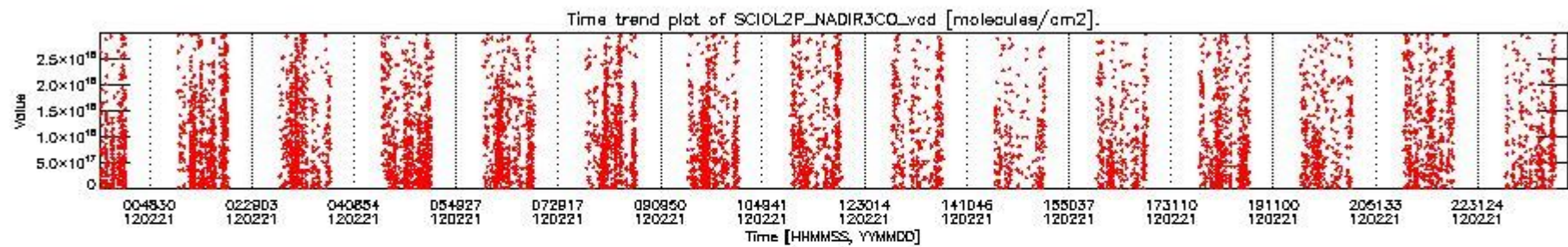


SCIOL2P\_NADUV8H2O\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

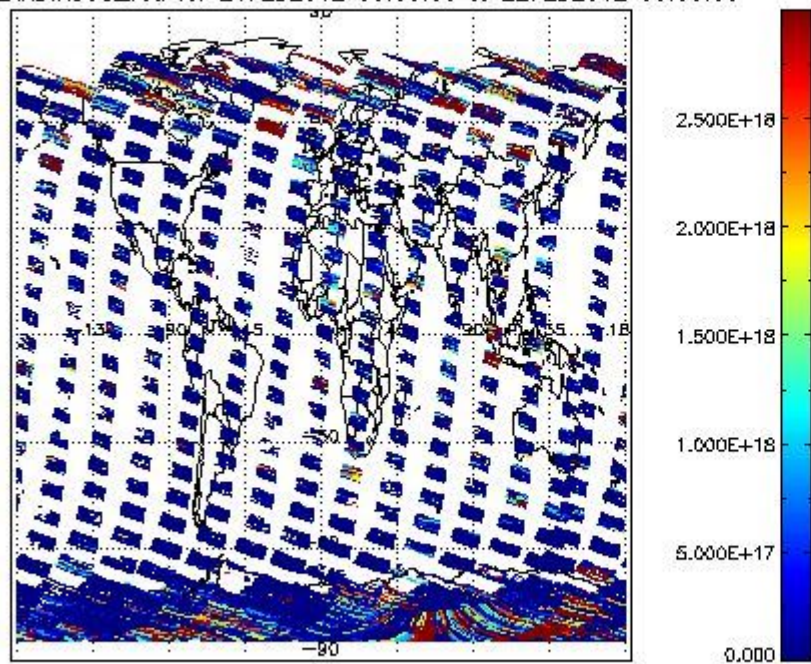


### 2.2.2.8 CO (IR3)

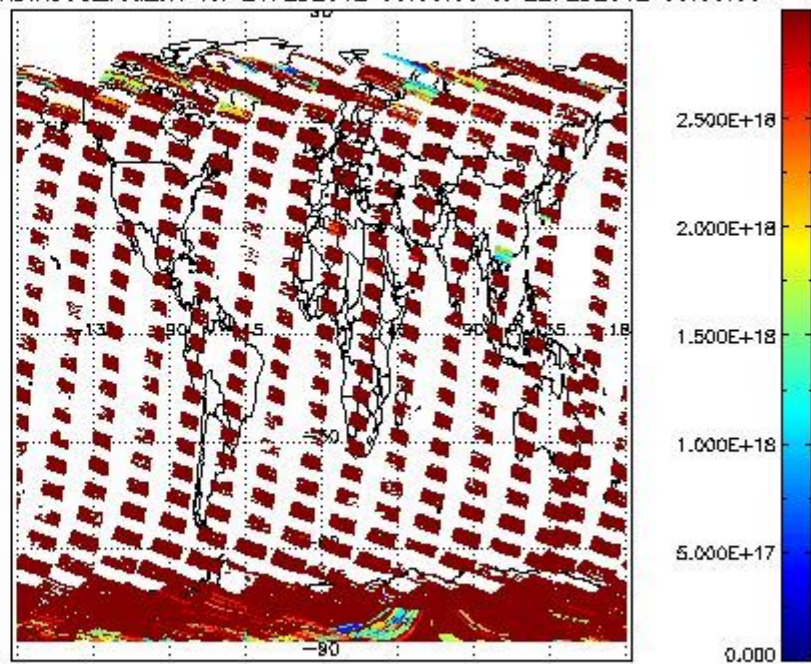




SCIDL2P\_NADIR3CO\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 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.

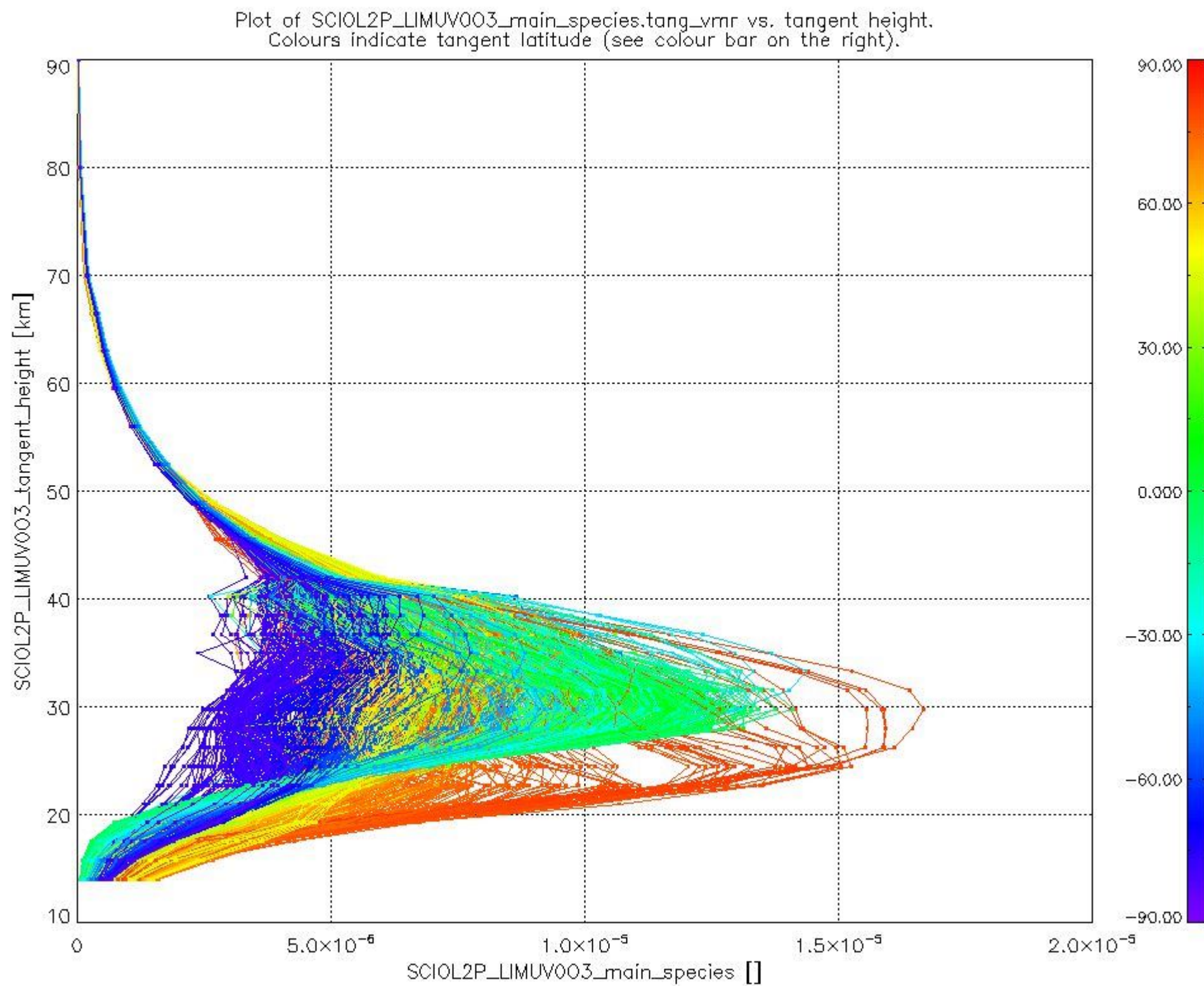
The following data items are currently included into this section:

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.

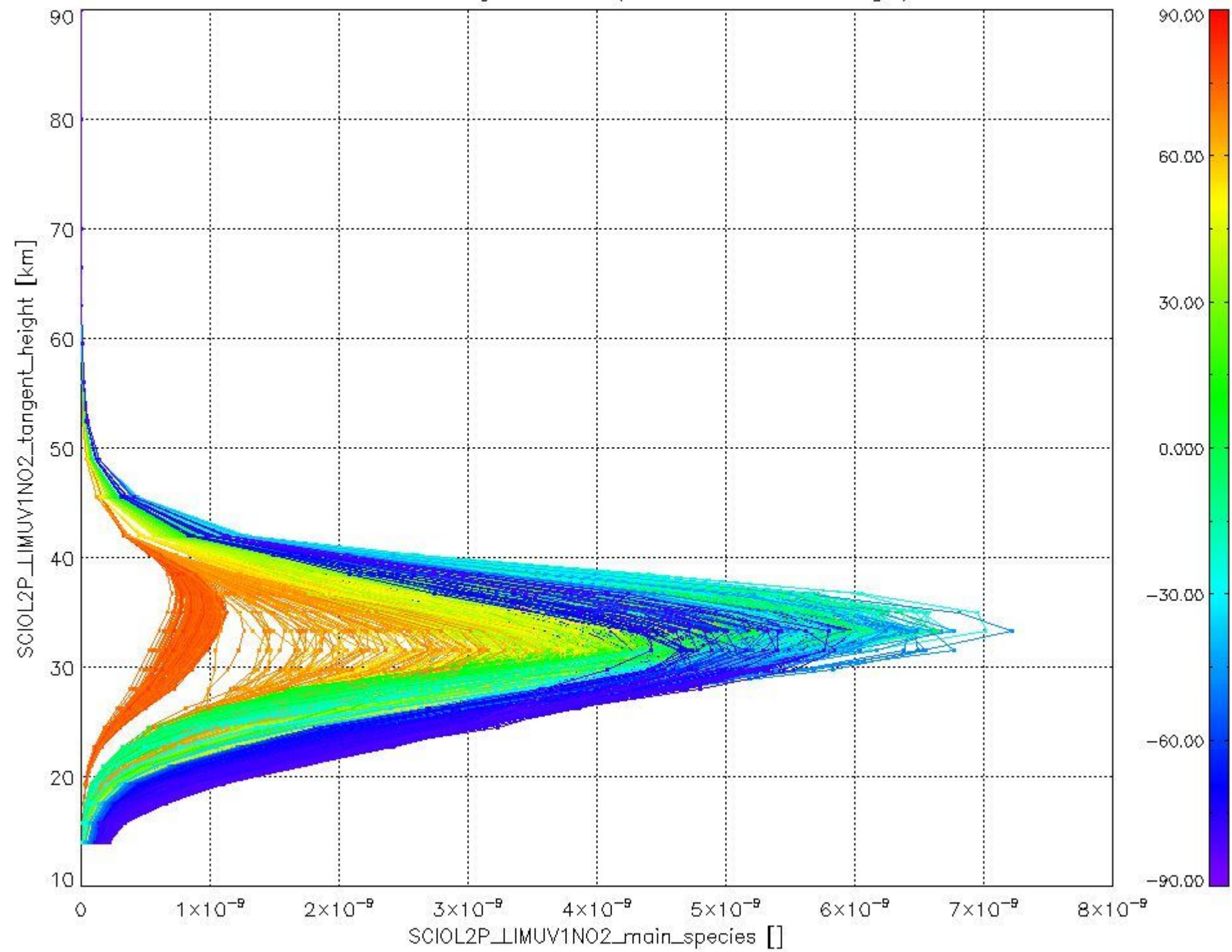
### 2.2.3.1 O3 (UV0)



### 2.2.3.2 NO2 (UV1)



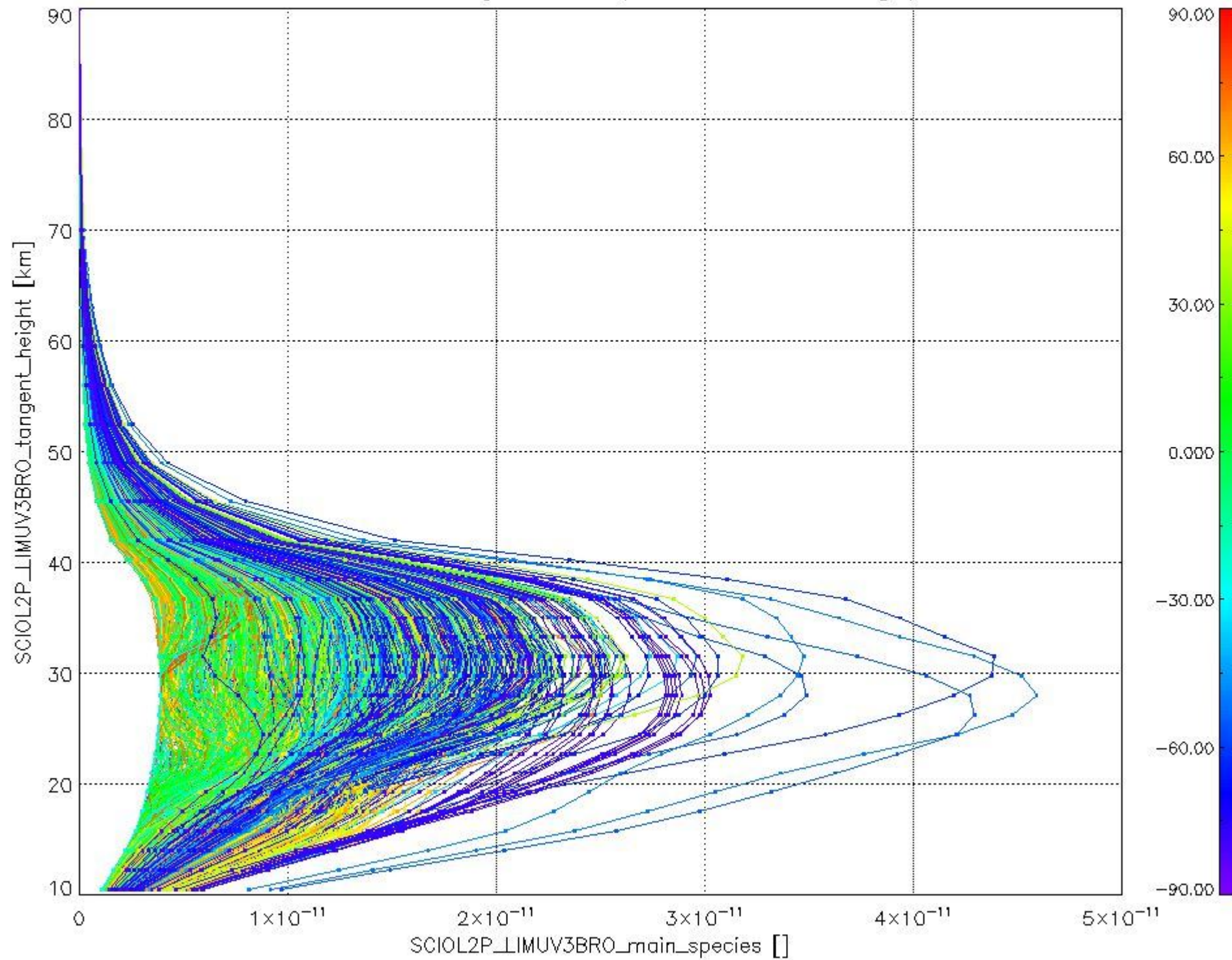
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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

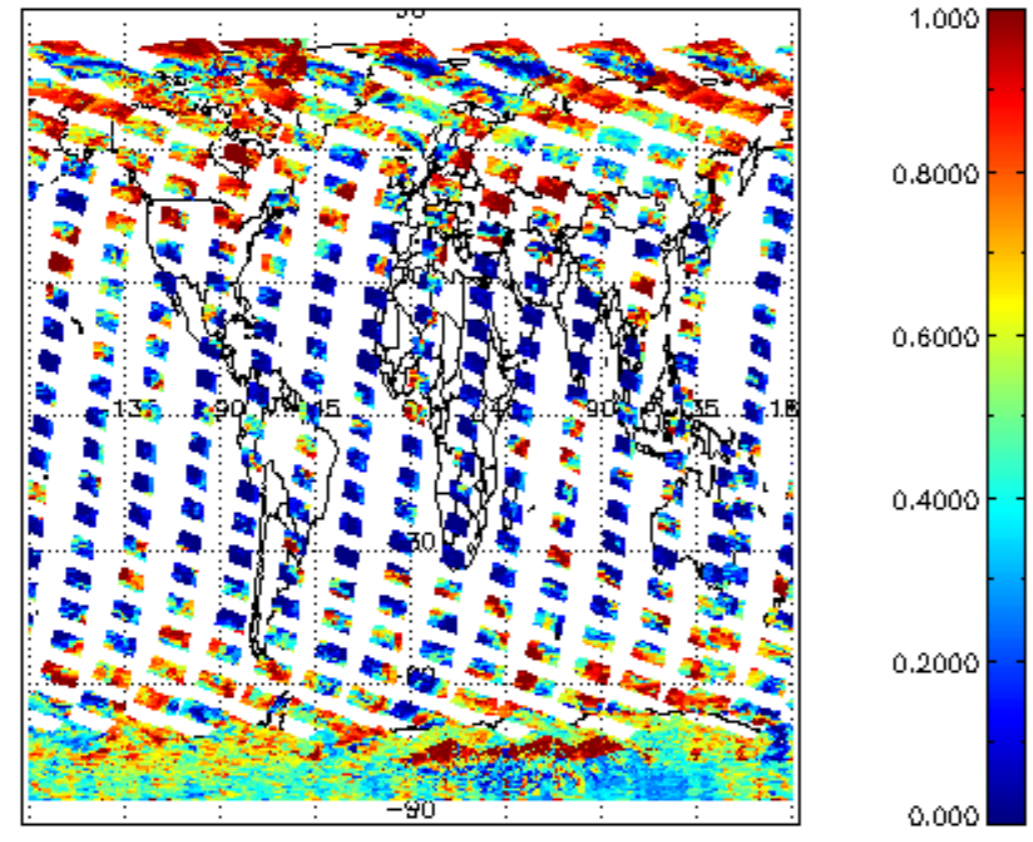
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20120222_092954_20120220_192949_20120222_192949
3	SCI_MF1_AXVIEC20120228_110003_20120221_185304_20120223_185304



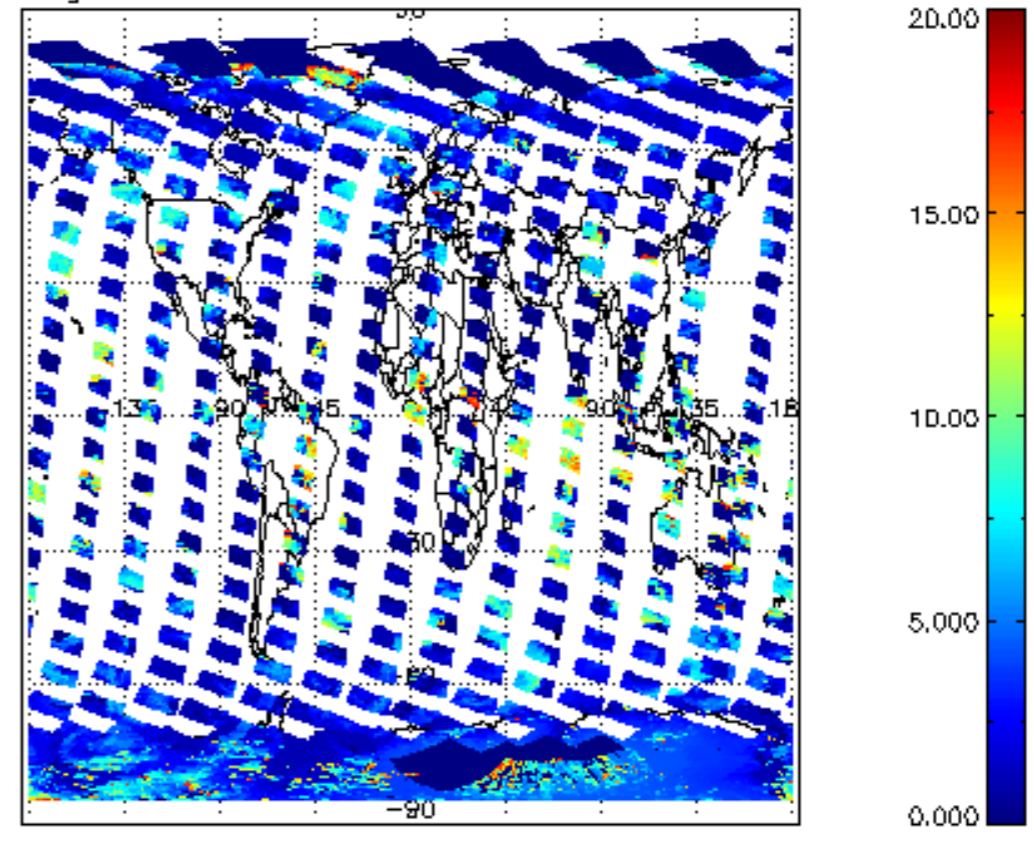




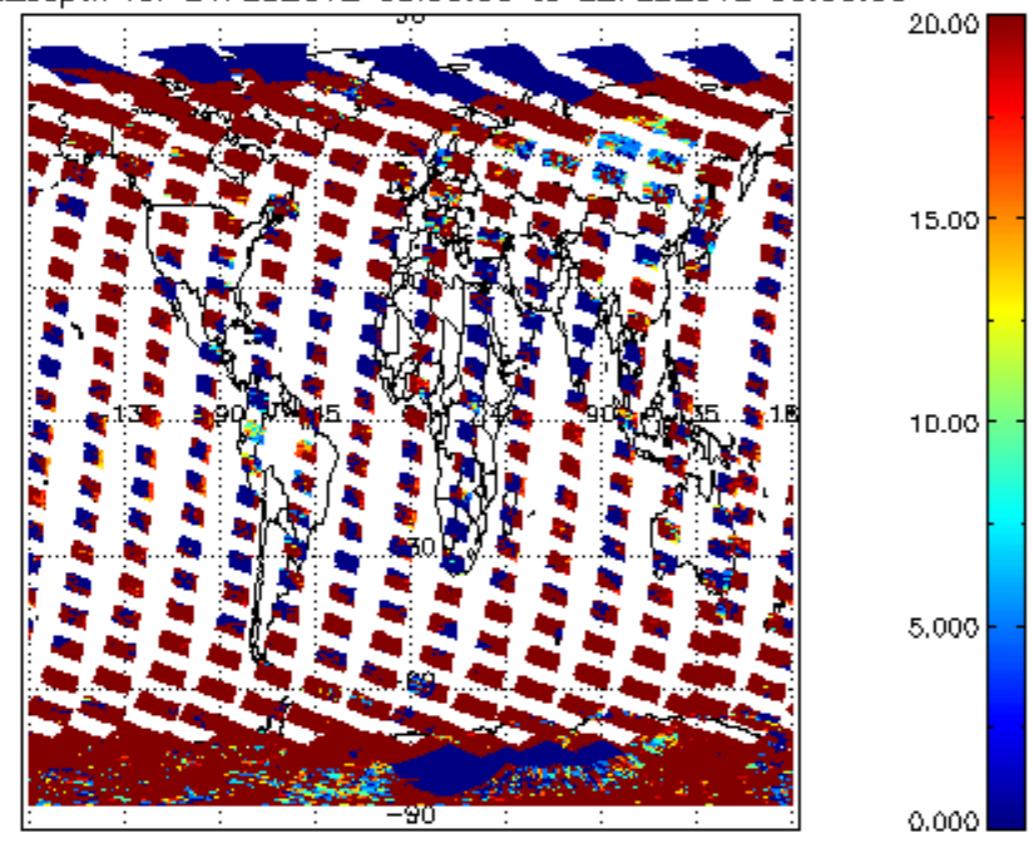
cl\_frac for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



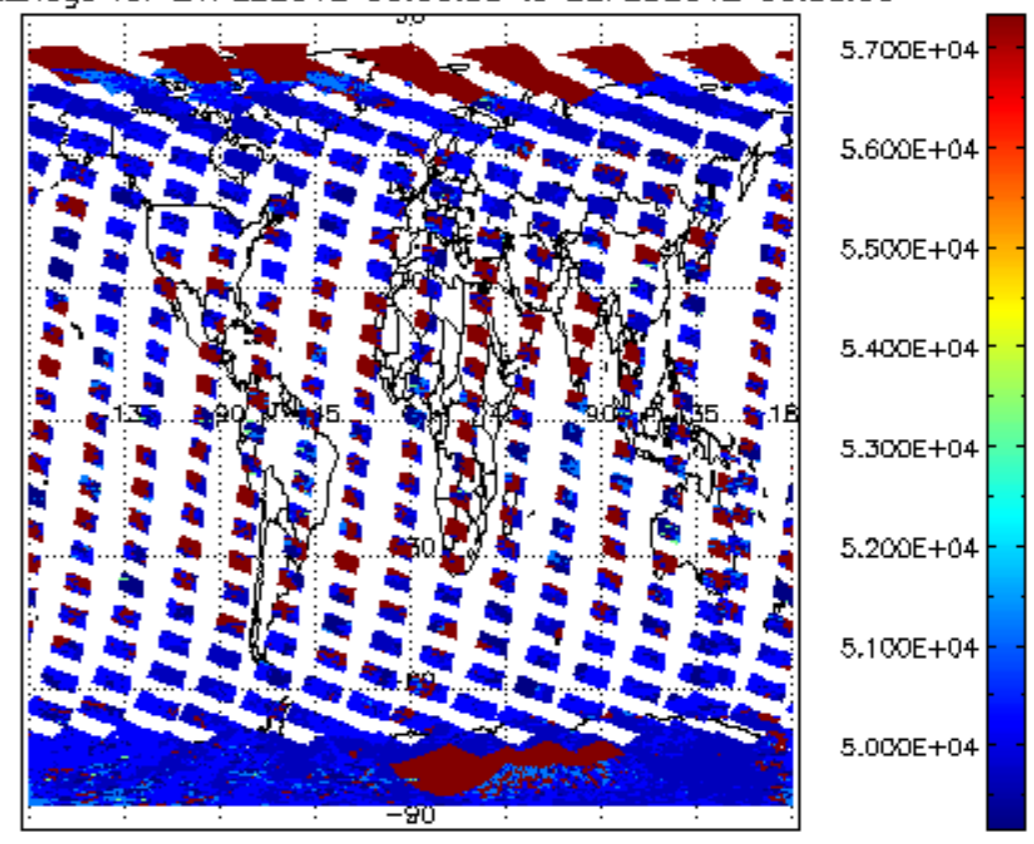
cl\_top\_height for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



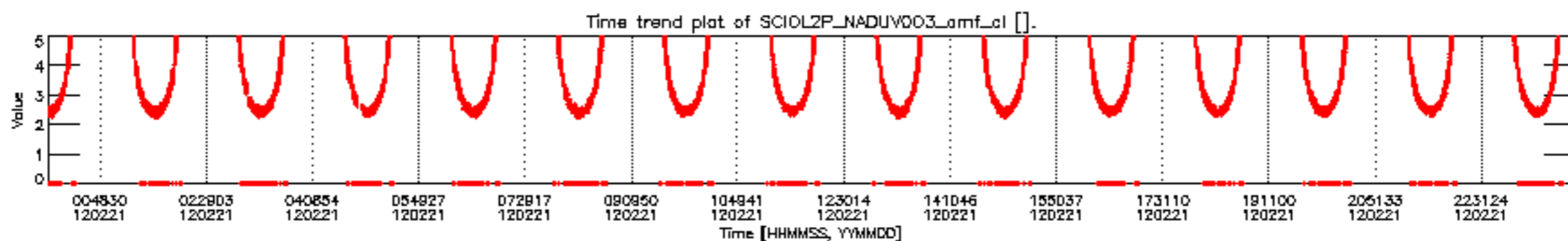
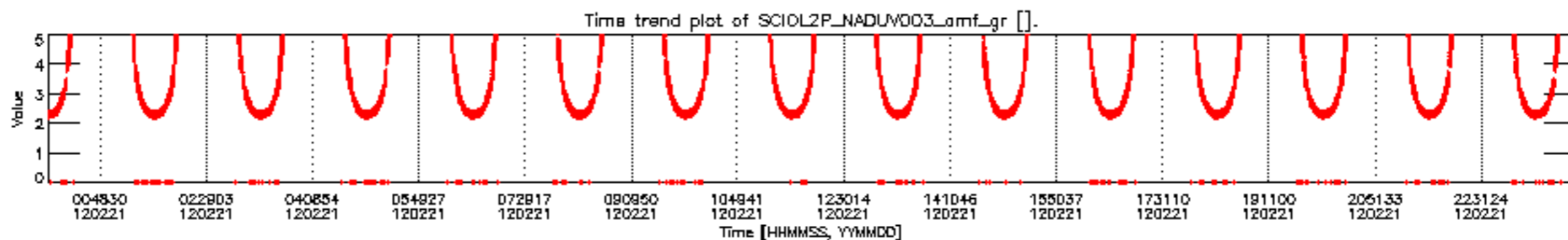
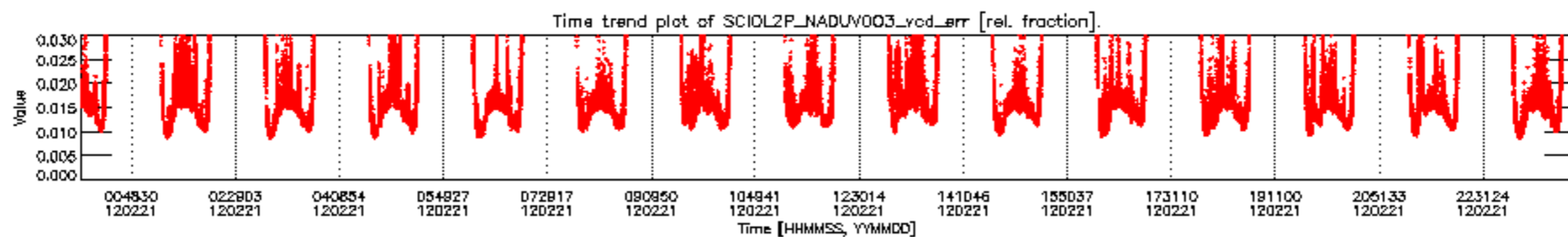
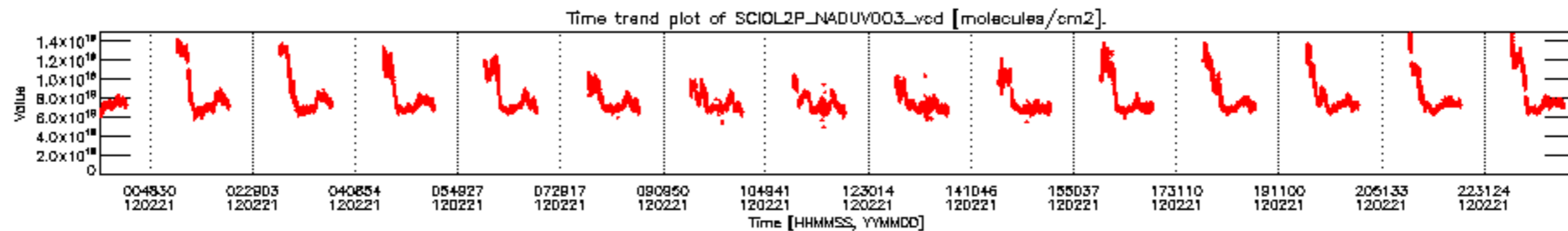
cl\_opt\_depth for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



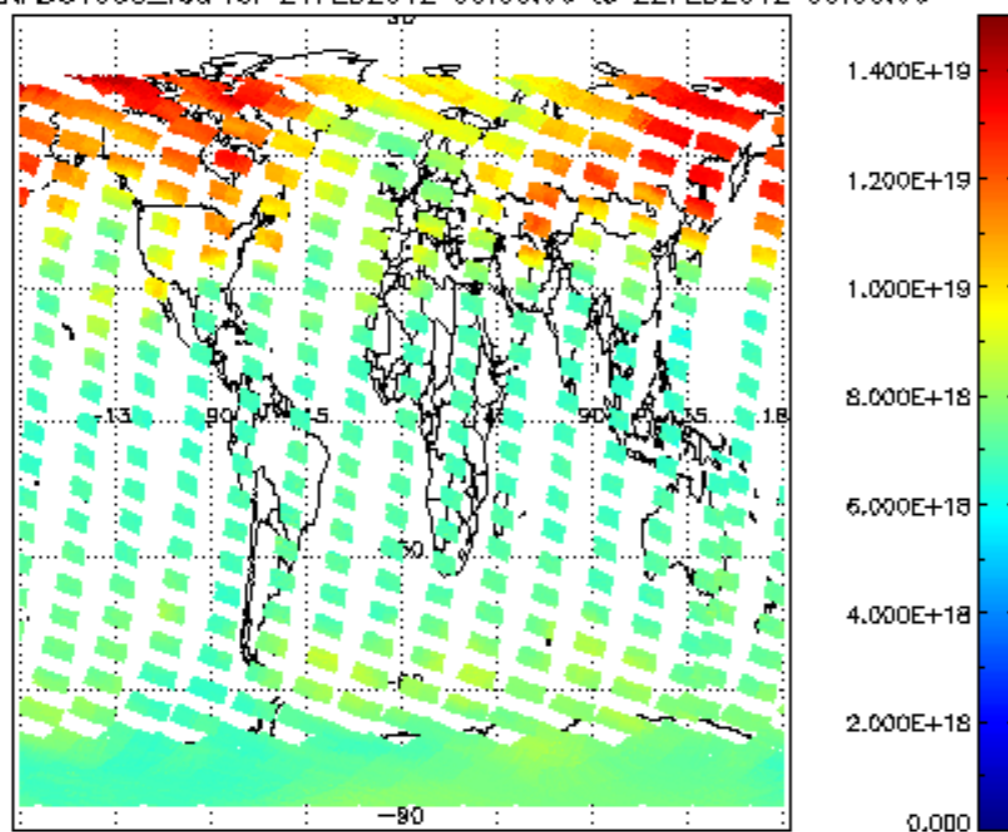
cloud\_flags for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



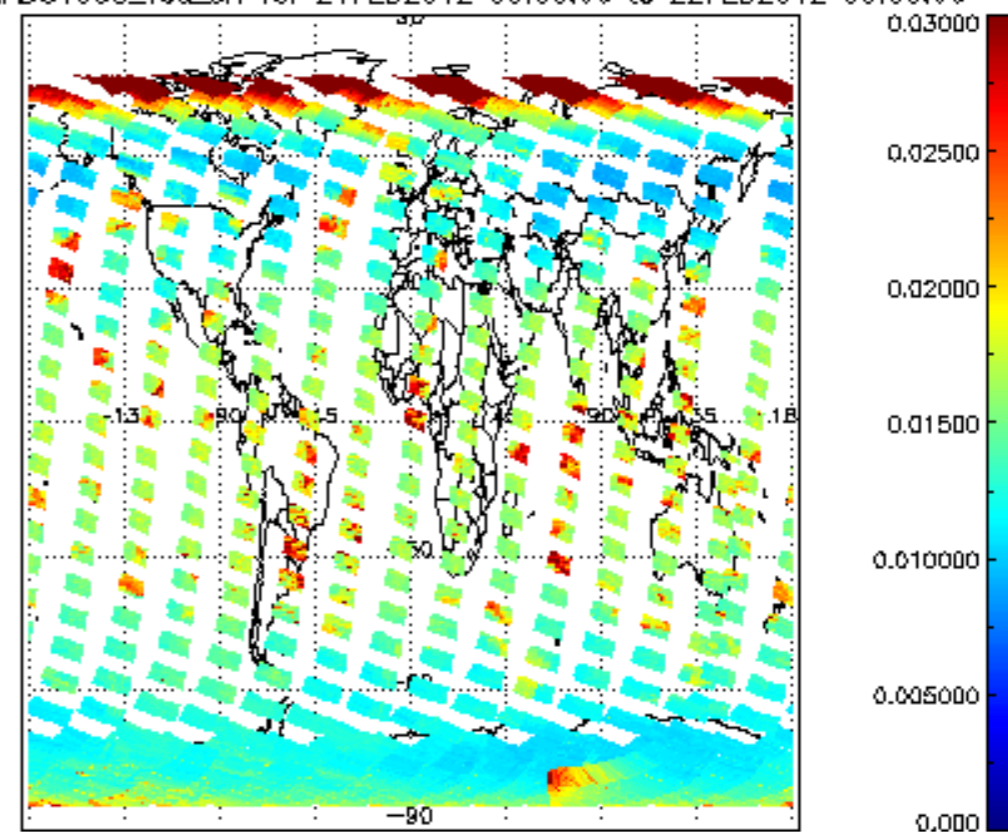




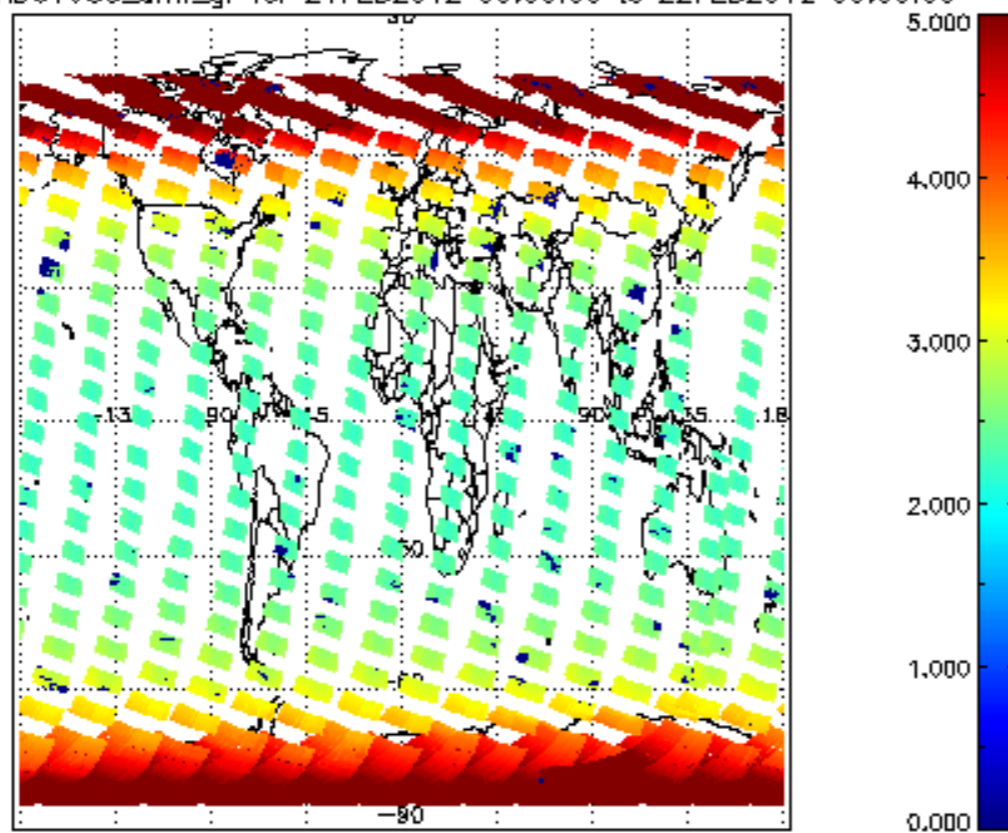
SCIOL2P\_NADUV003\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



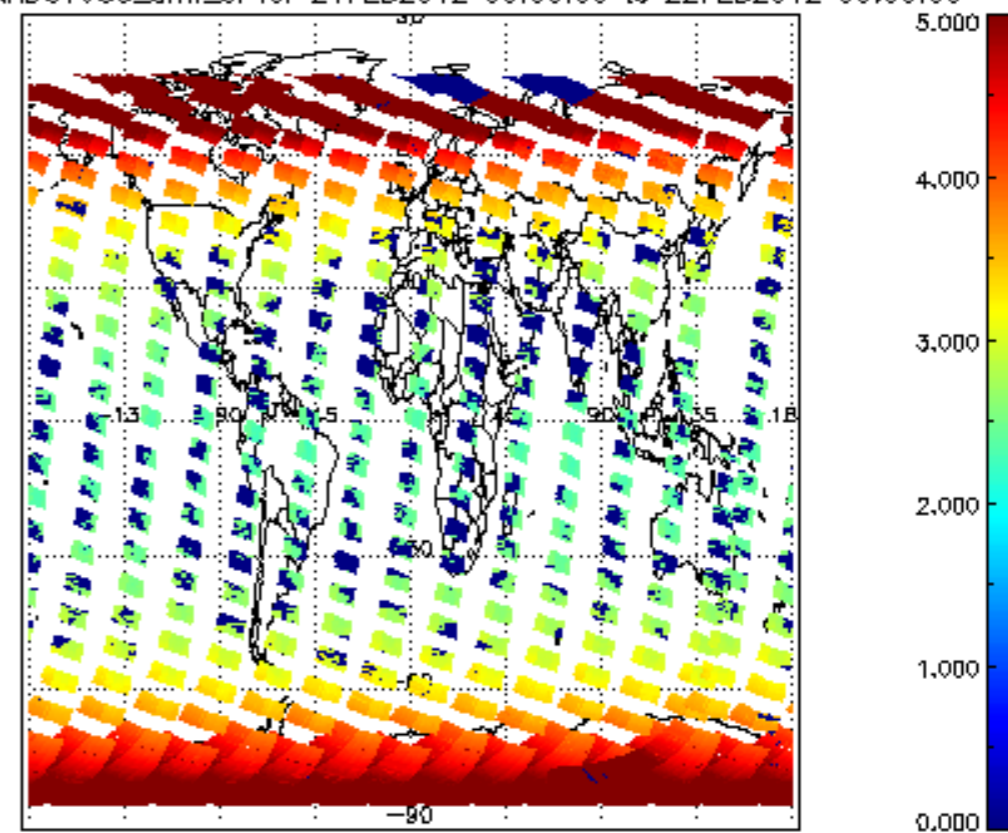
SCIOL2P\_NADUV003\_vcd\_Lerr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



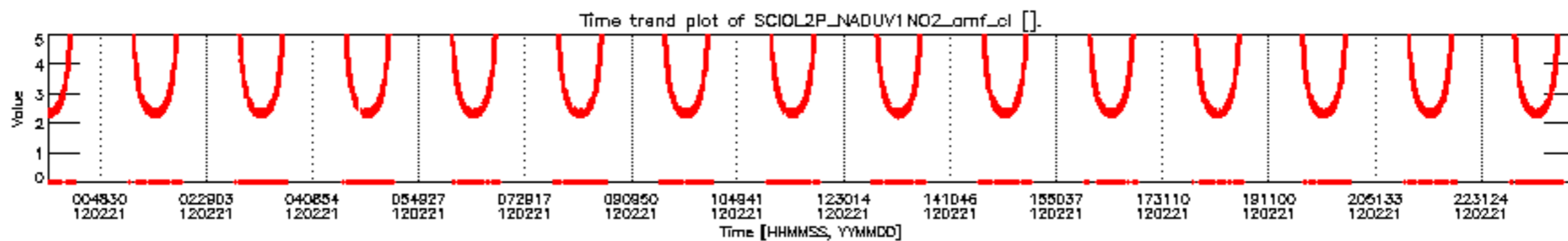
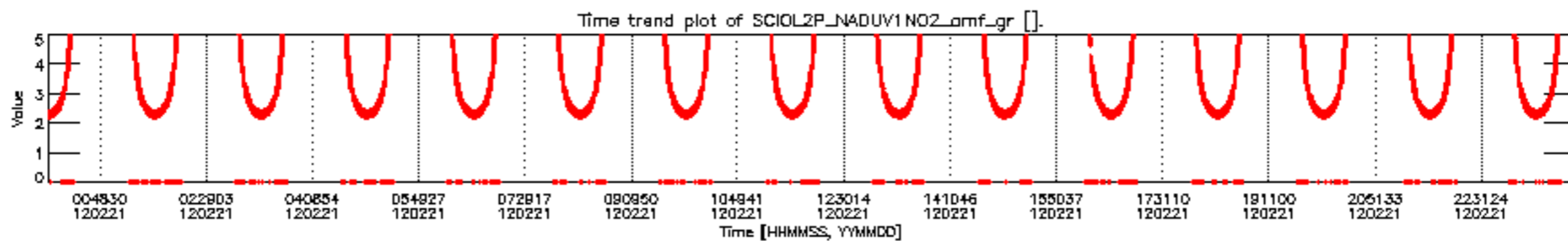
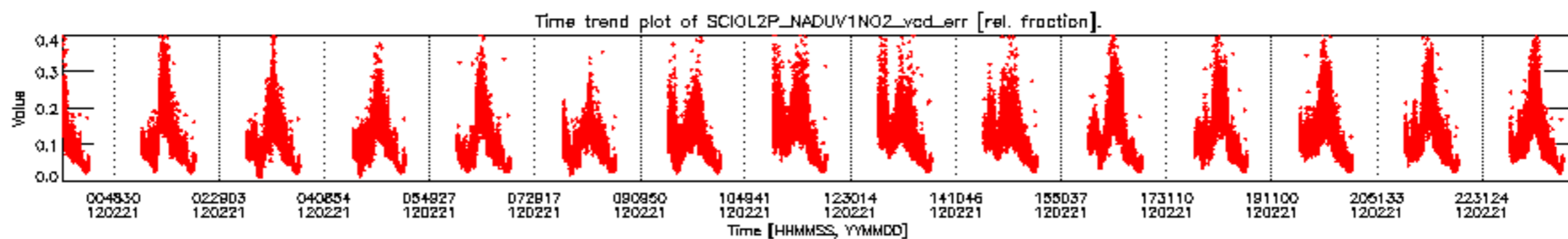
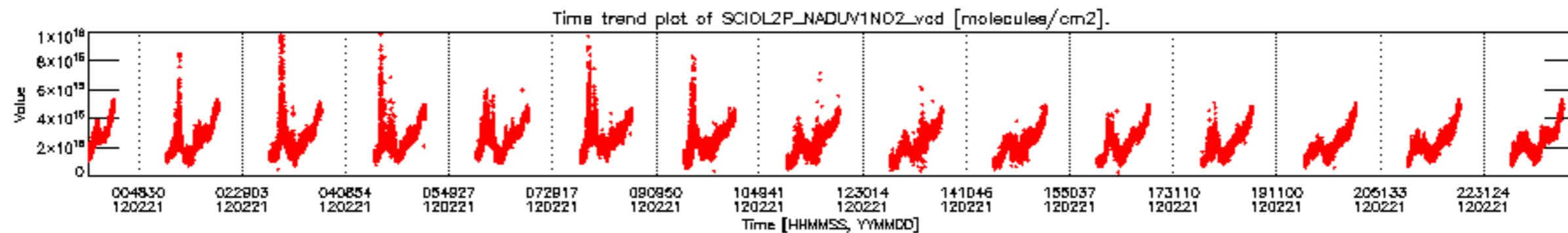
SCIOL2P\_NADUV003\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



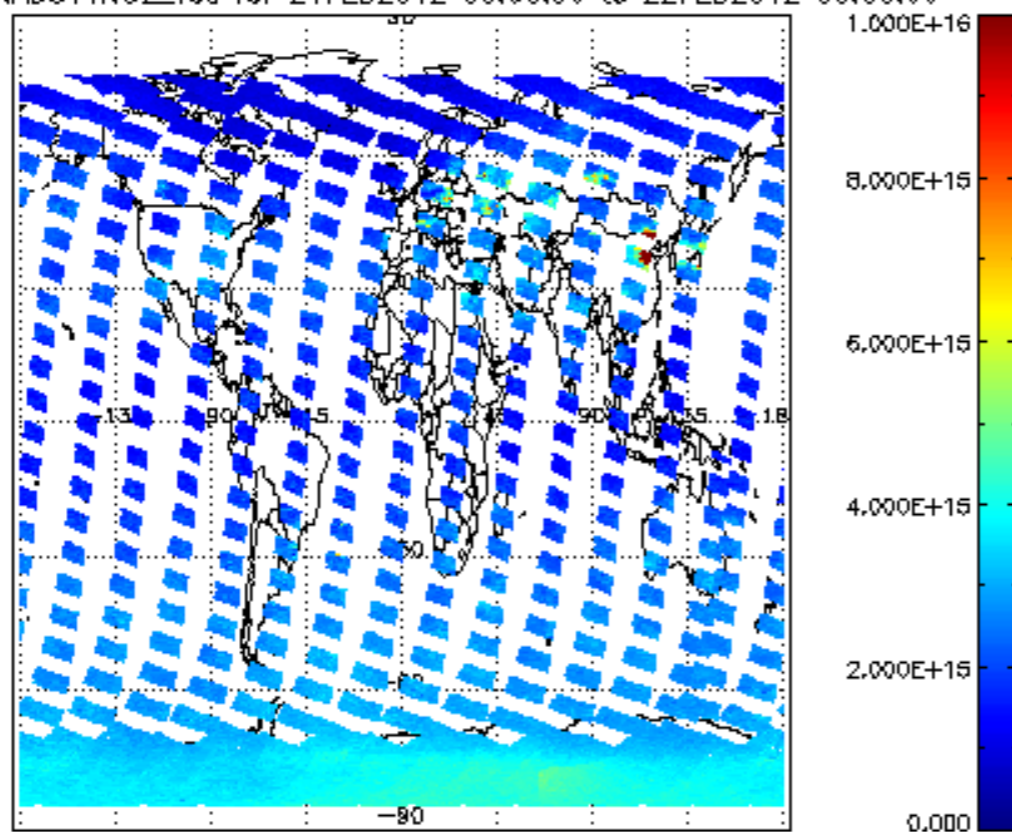
SCIOL2P\_NADUV003\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



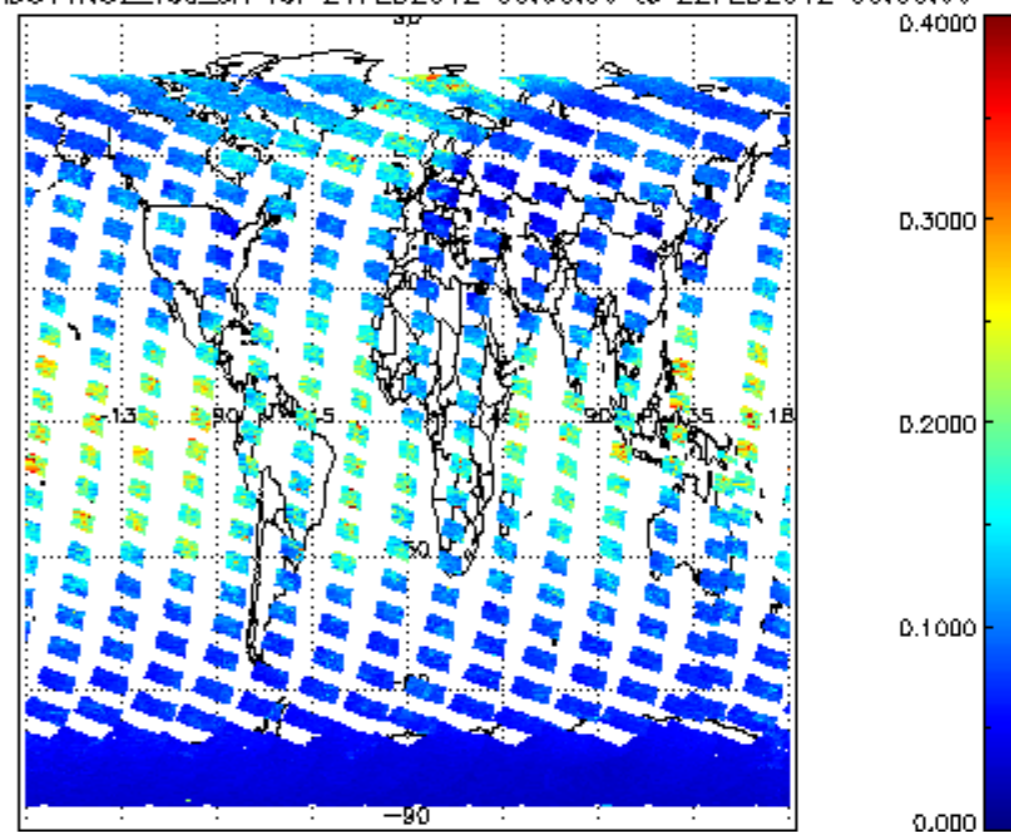




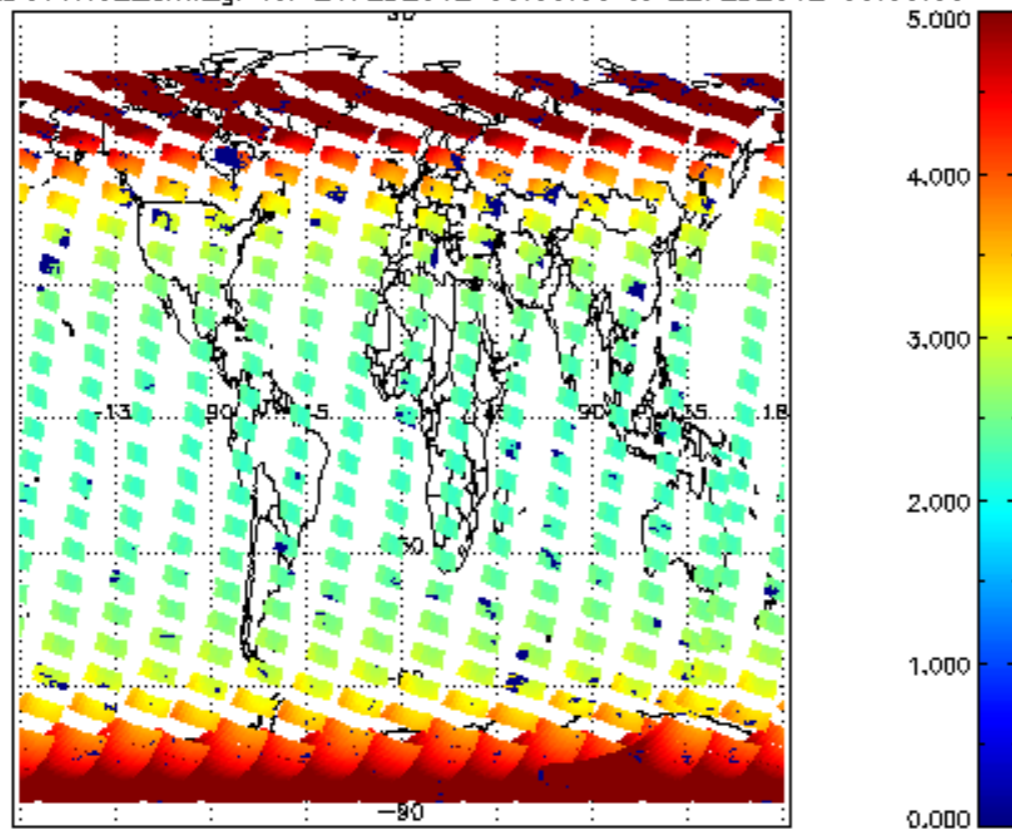
SCIOL2P\_NADUV1N02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



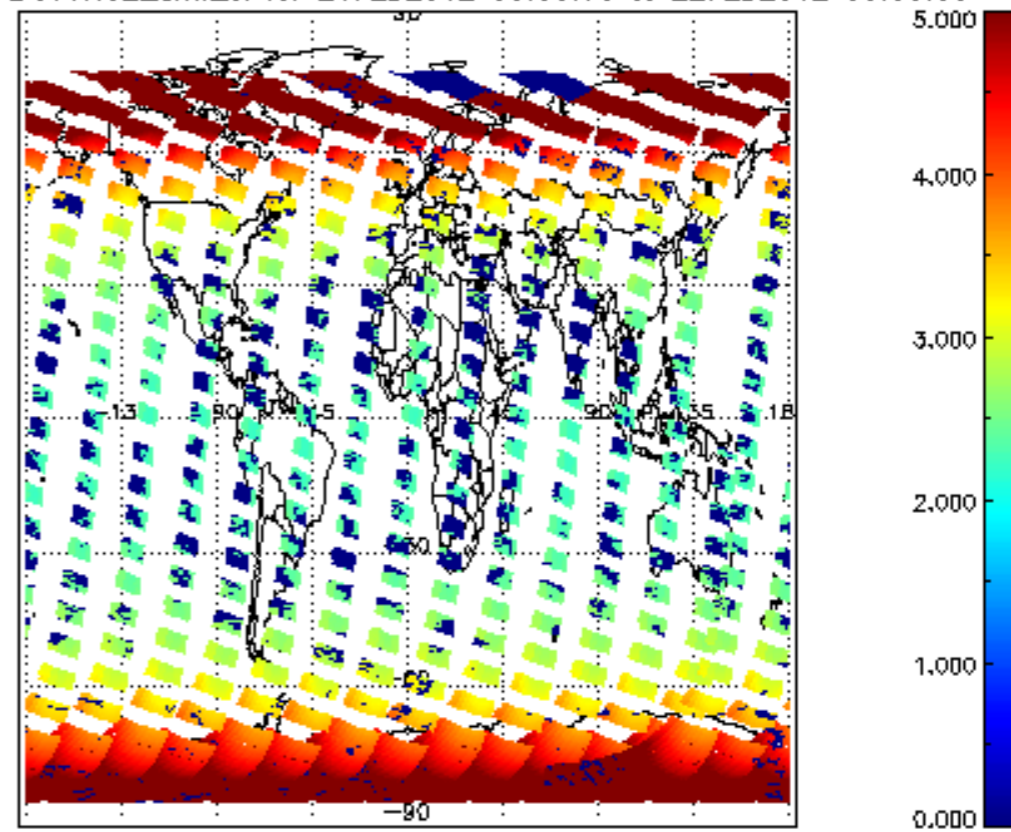
SCIOL2P\_NADUV1N02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



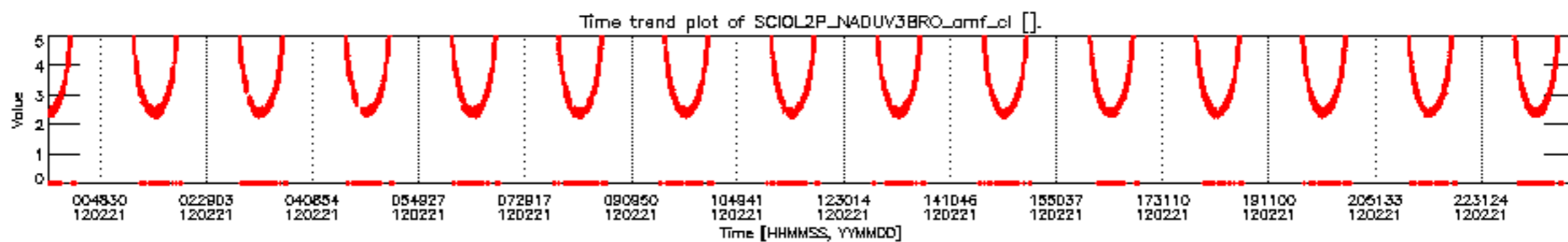
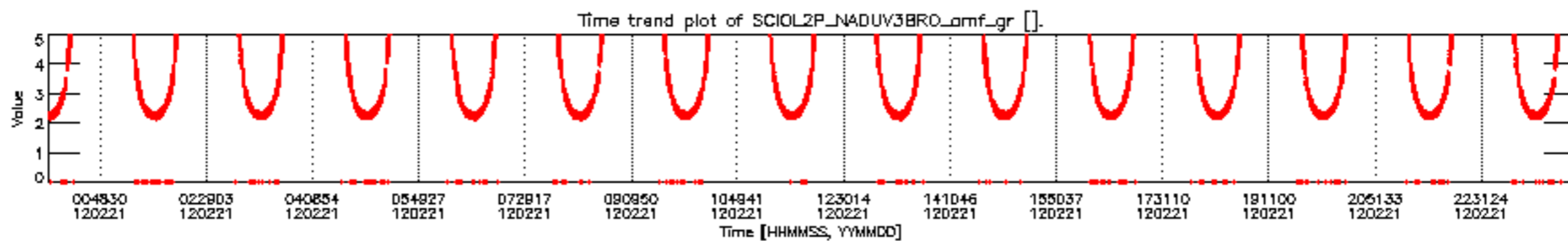
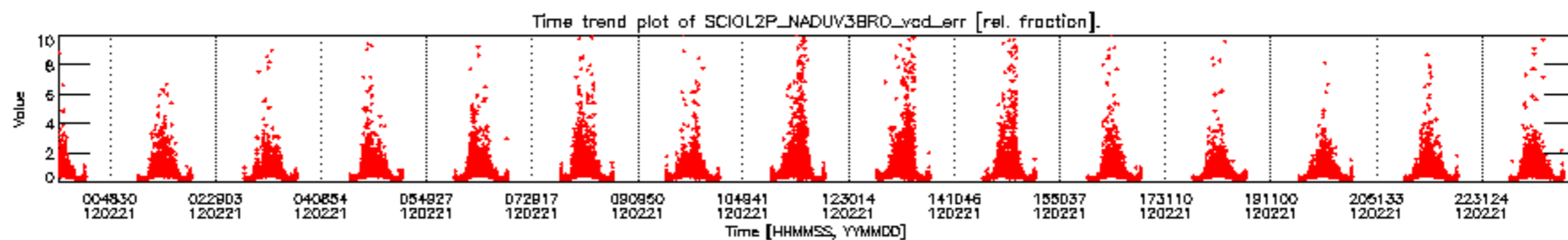
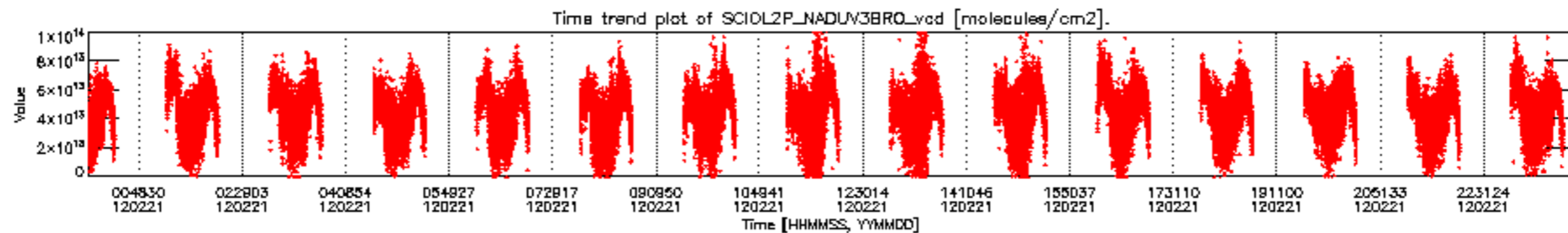
SCIOL2P\_NADUV1N02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



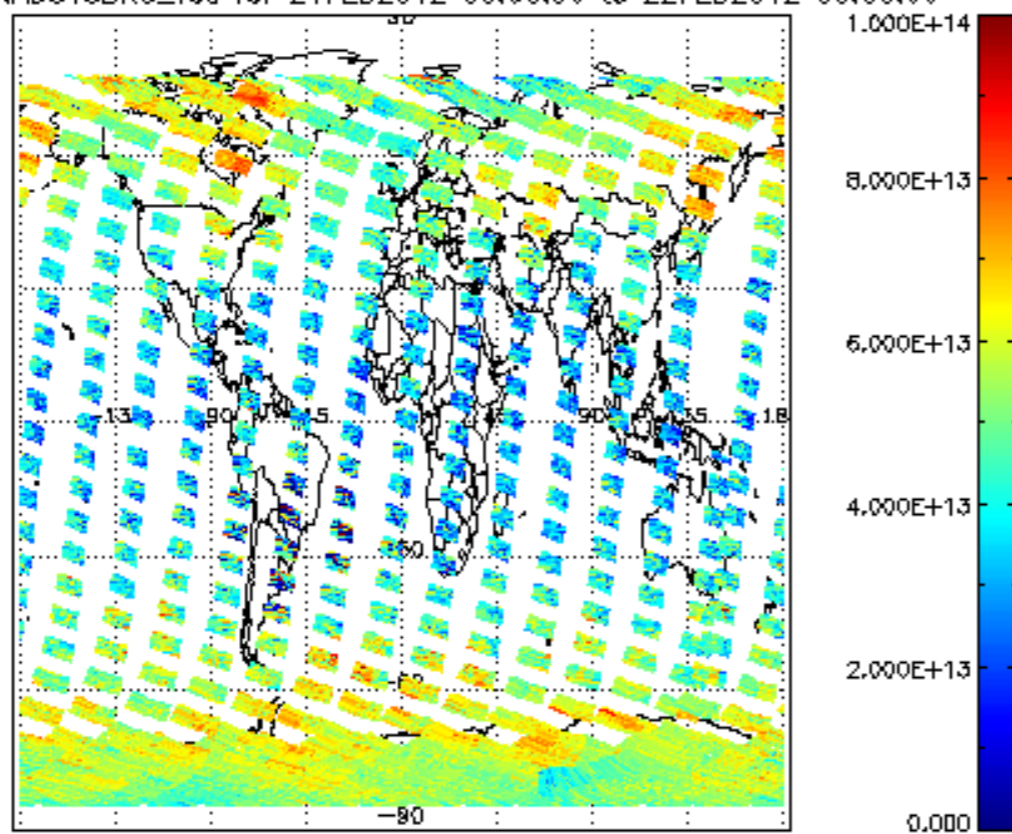
SCIOL2P\_NADUV1N02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



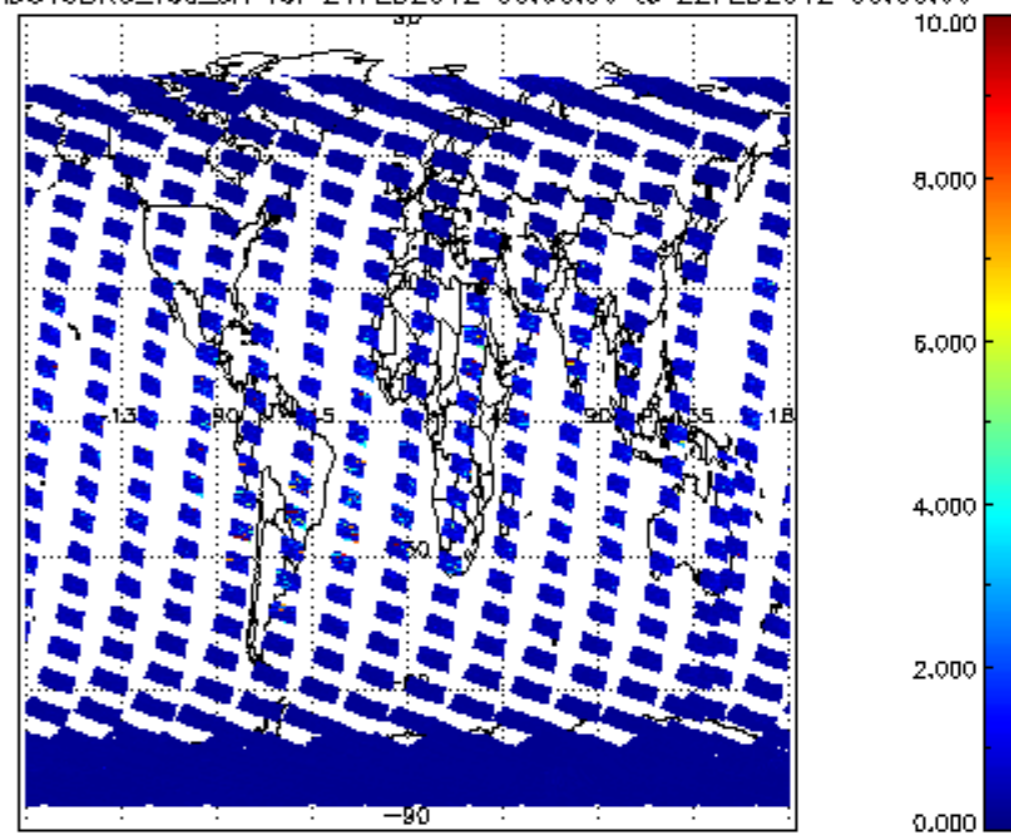




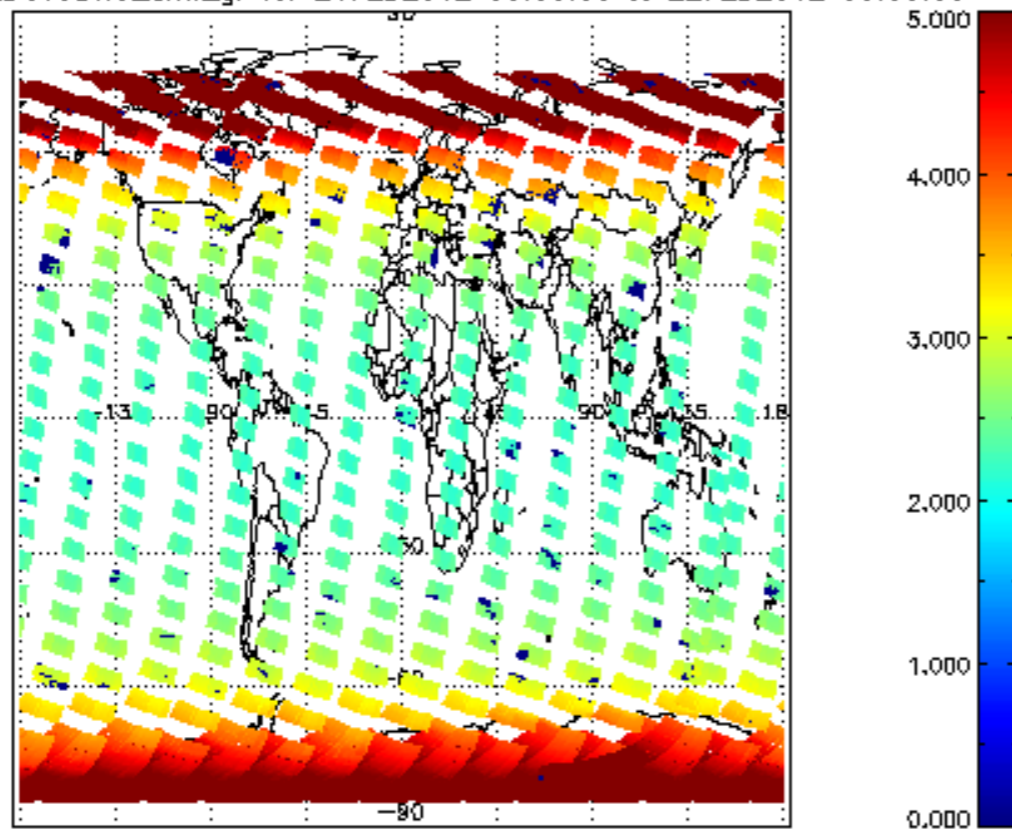
SCIOL2P\_NADUV3BRO\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



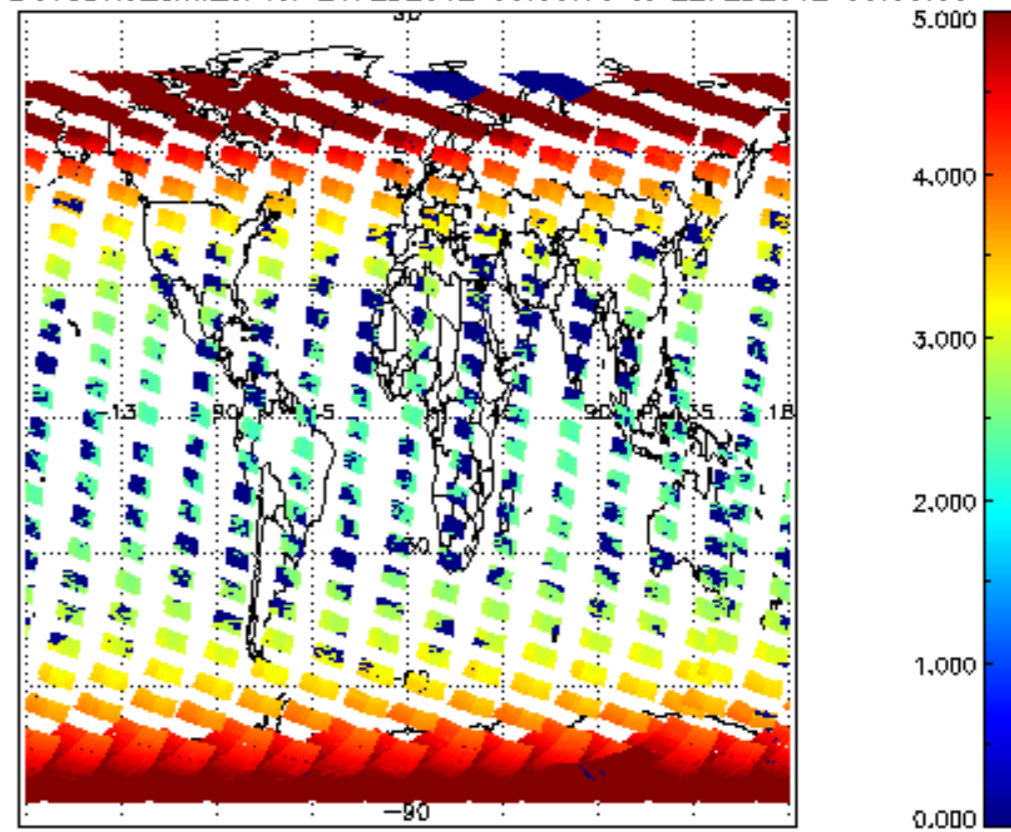
SCIOL2P\_NADUV3BRO\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



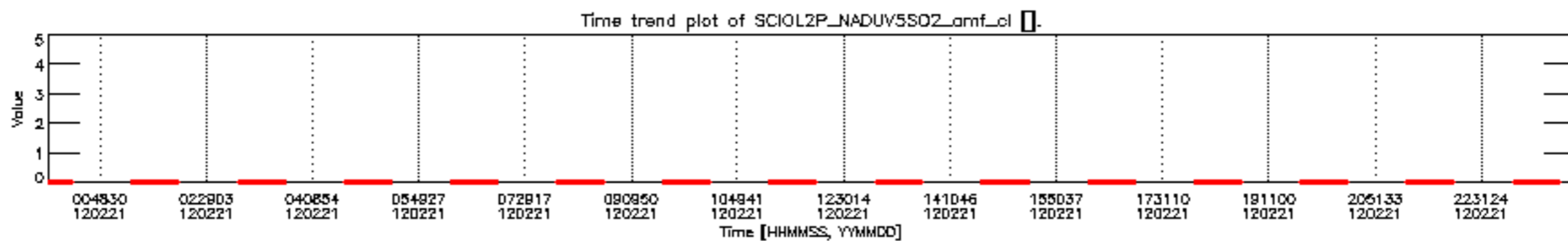
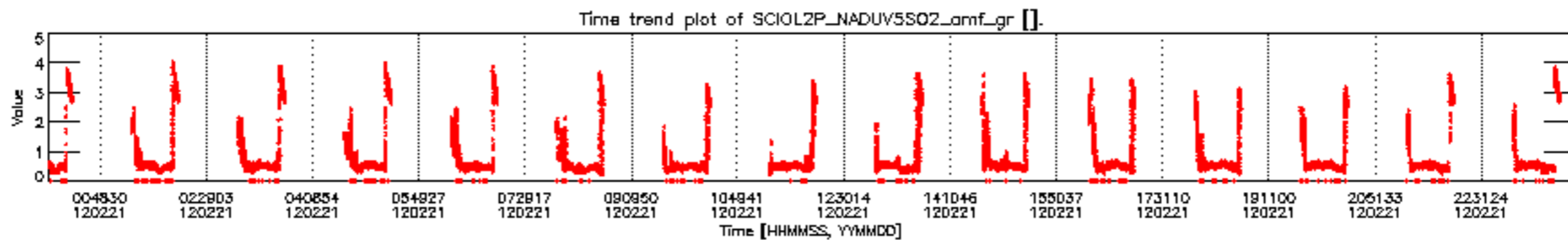
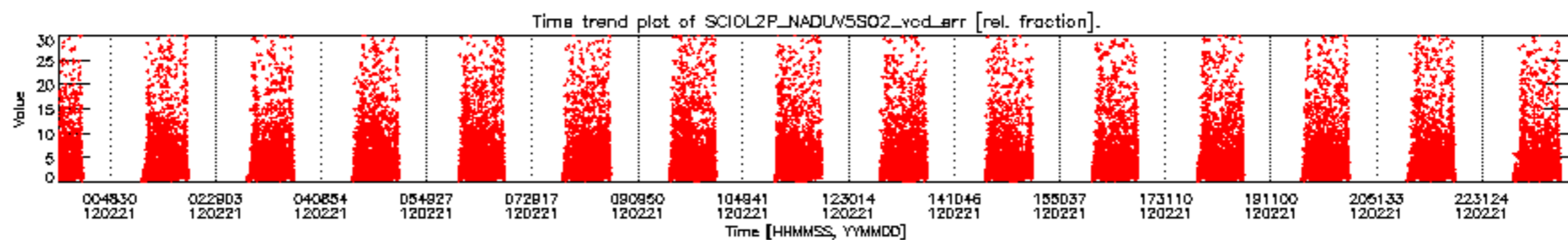
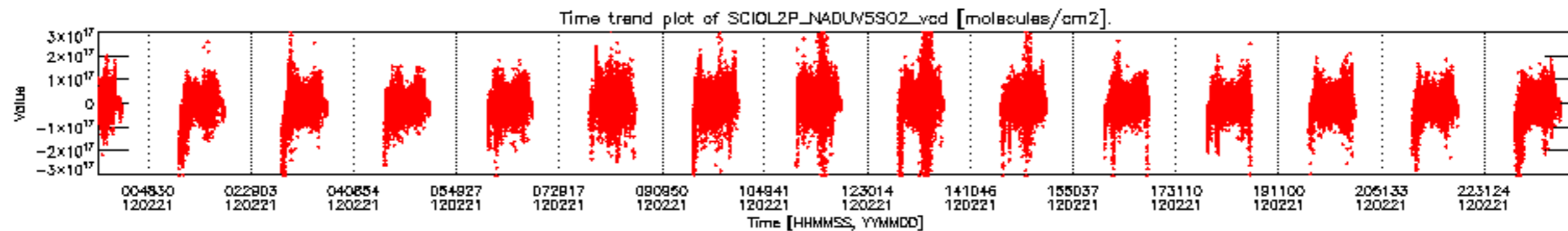
SCIOL2P\_NADUV3BRO\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



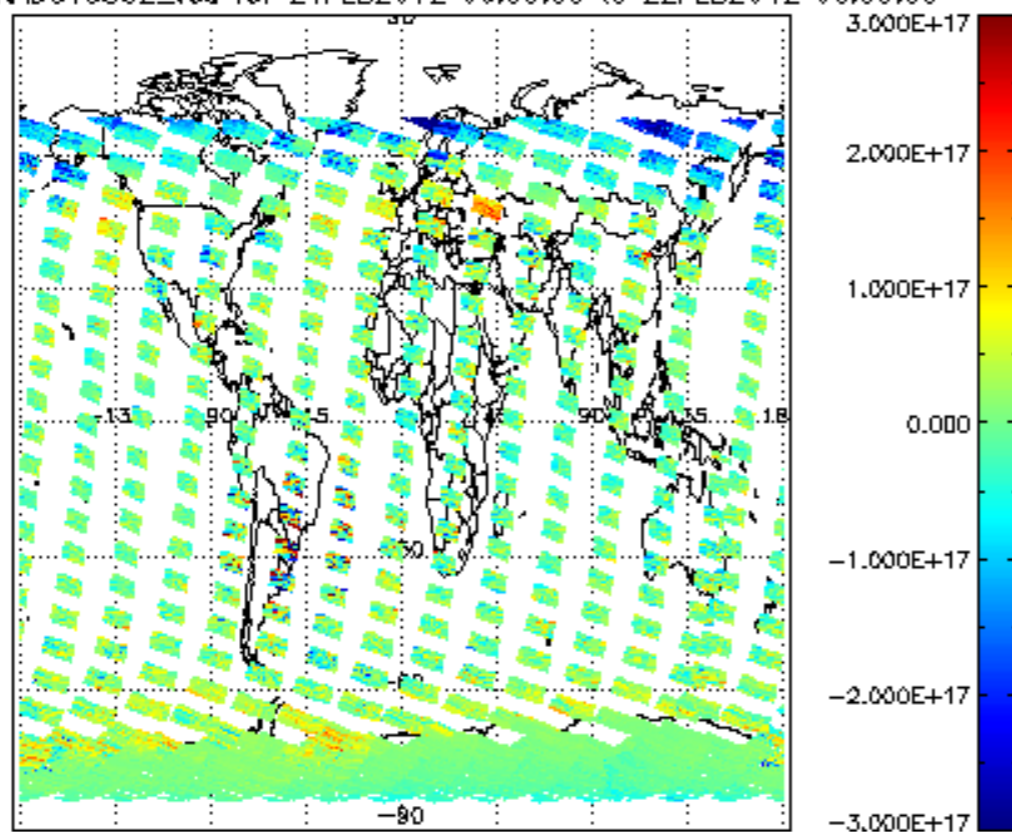
SCIOL2P\_NADUV3BRO\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



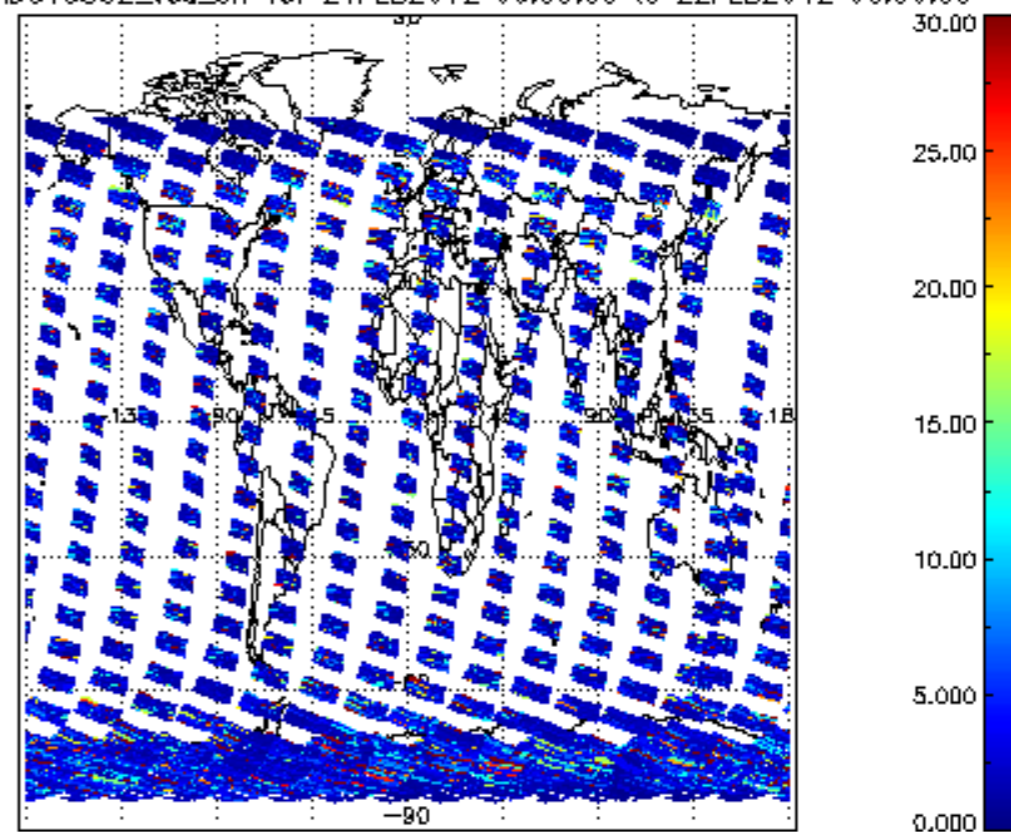




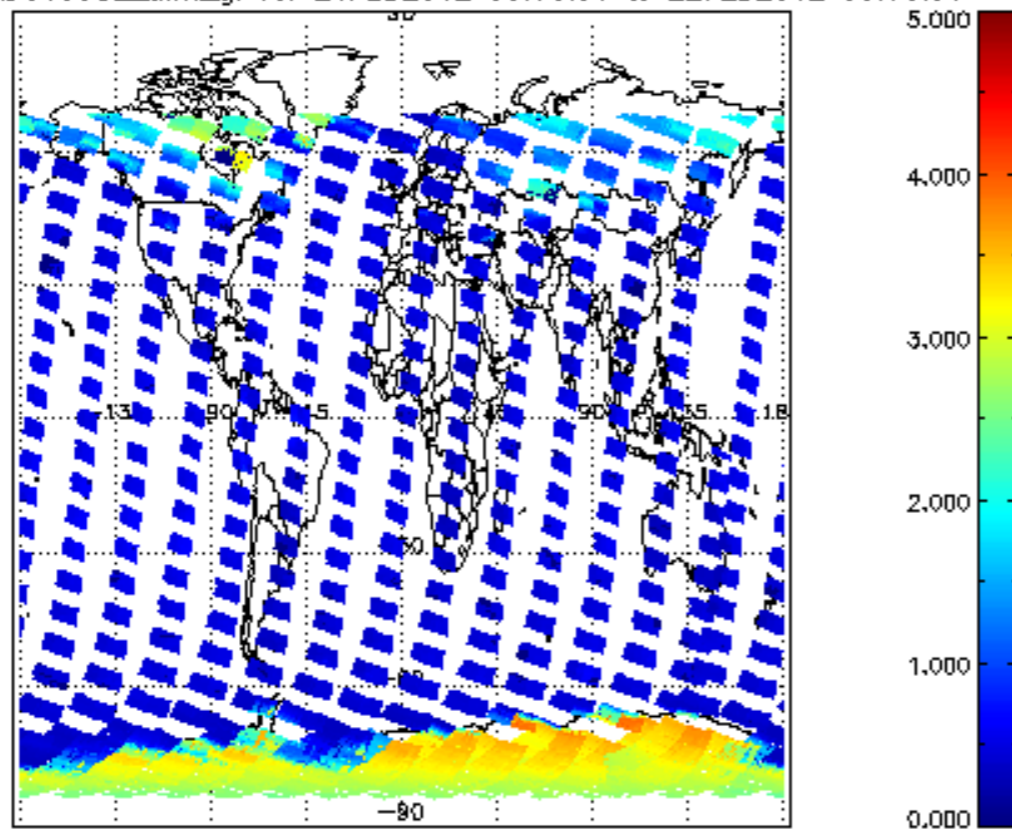
SCIOL2P\_NADUV5S02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



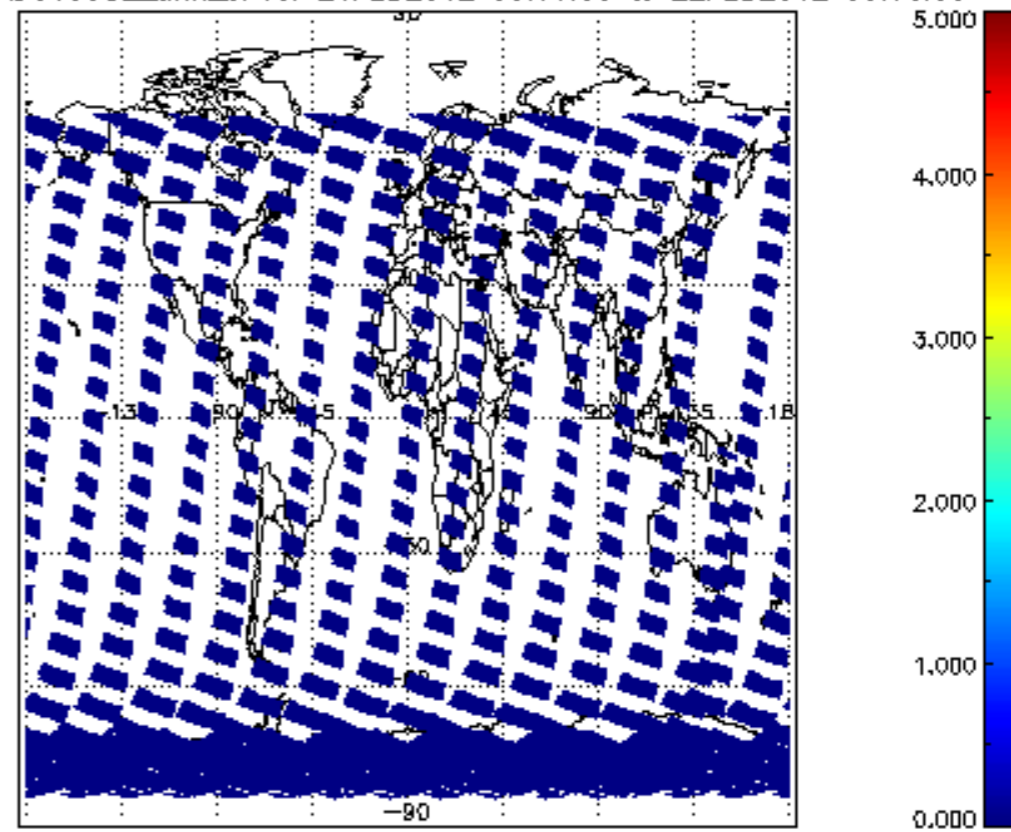
SCIOL2P\_NADUV5S02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



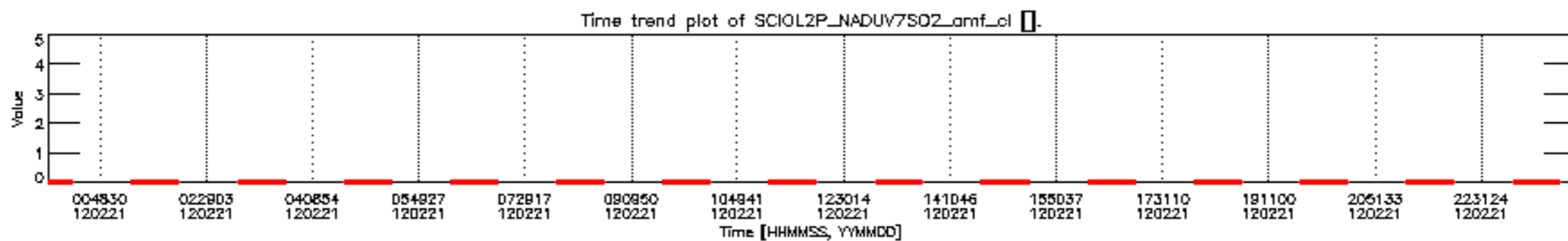
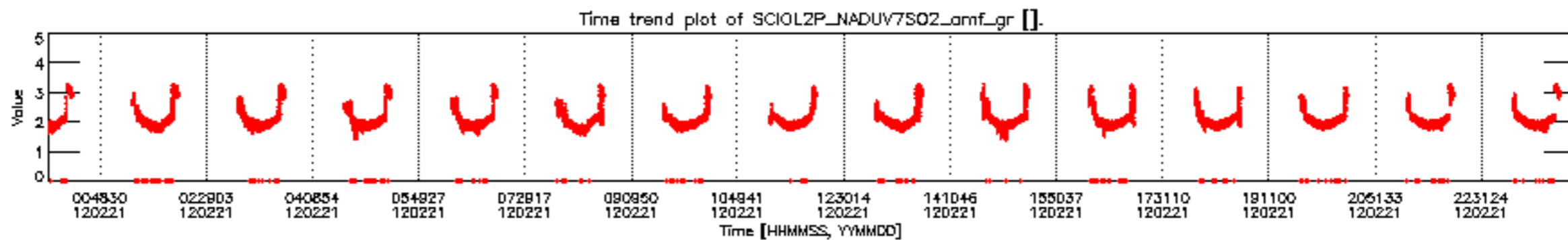
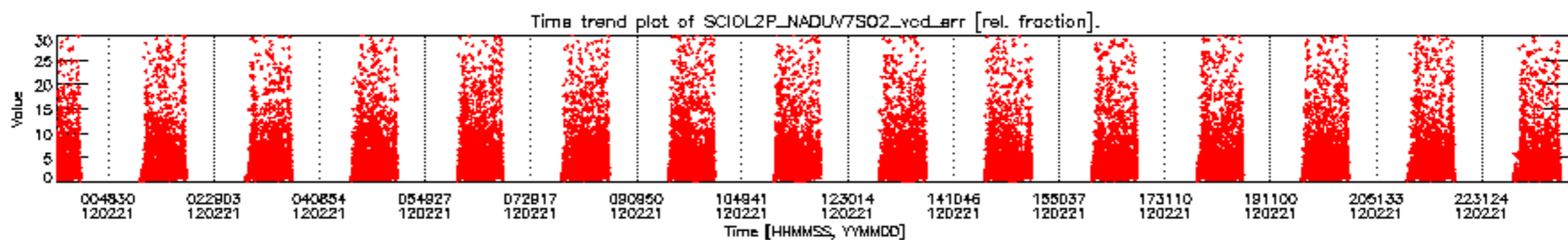
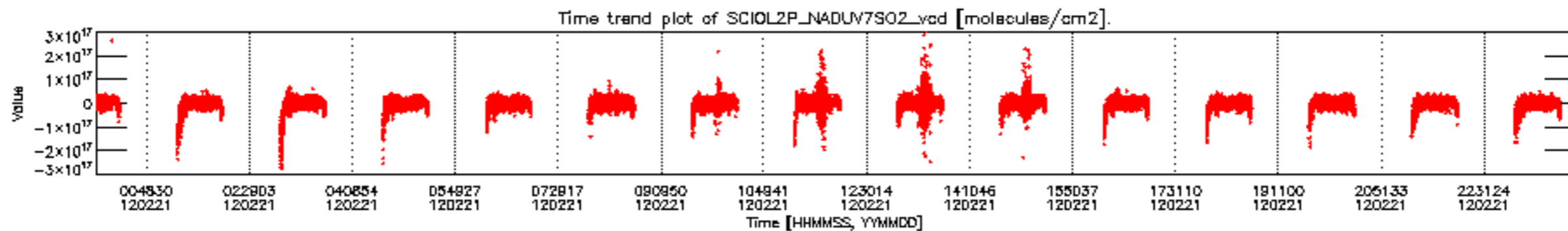
SCIOL2P\_NADUV5S02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



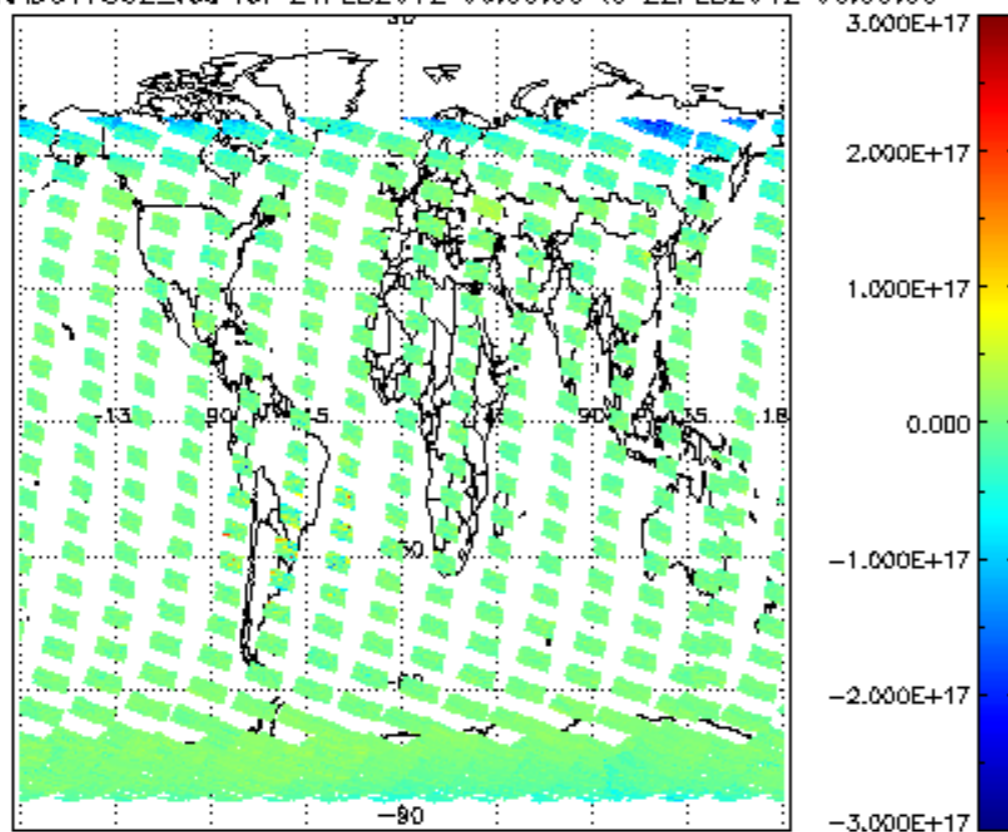
SCIOL2P\_NADUV5S02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



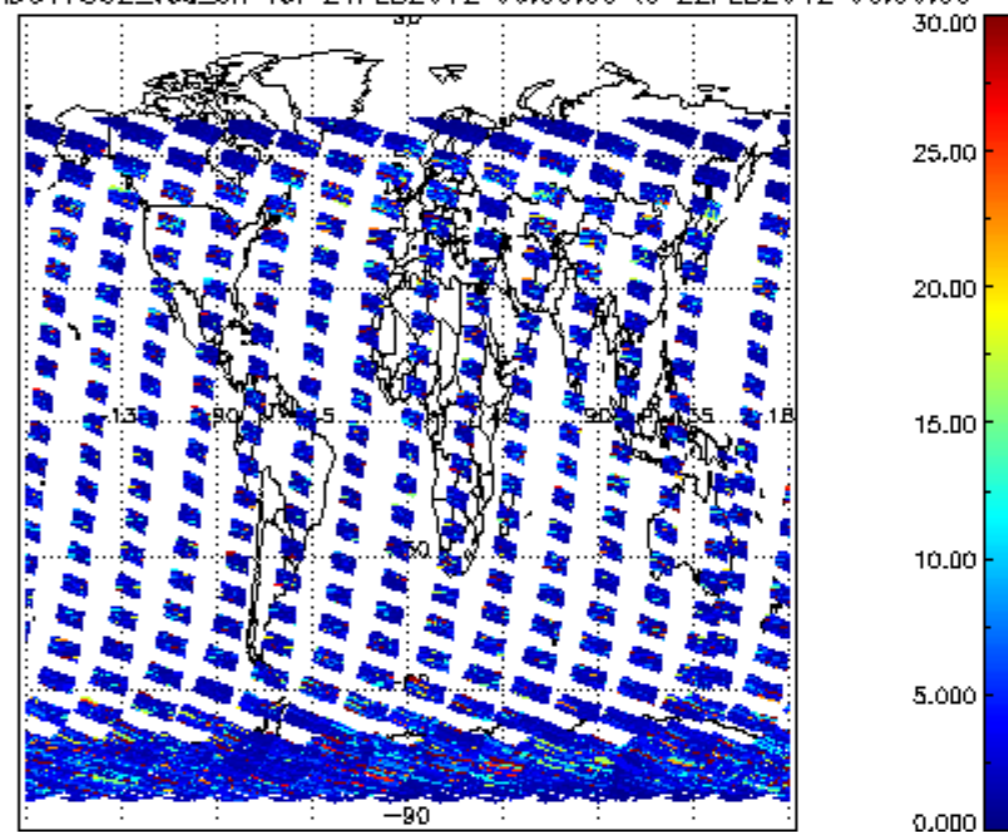




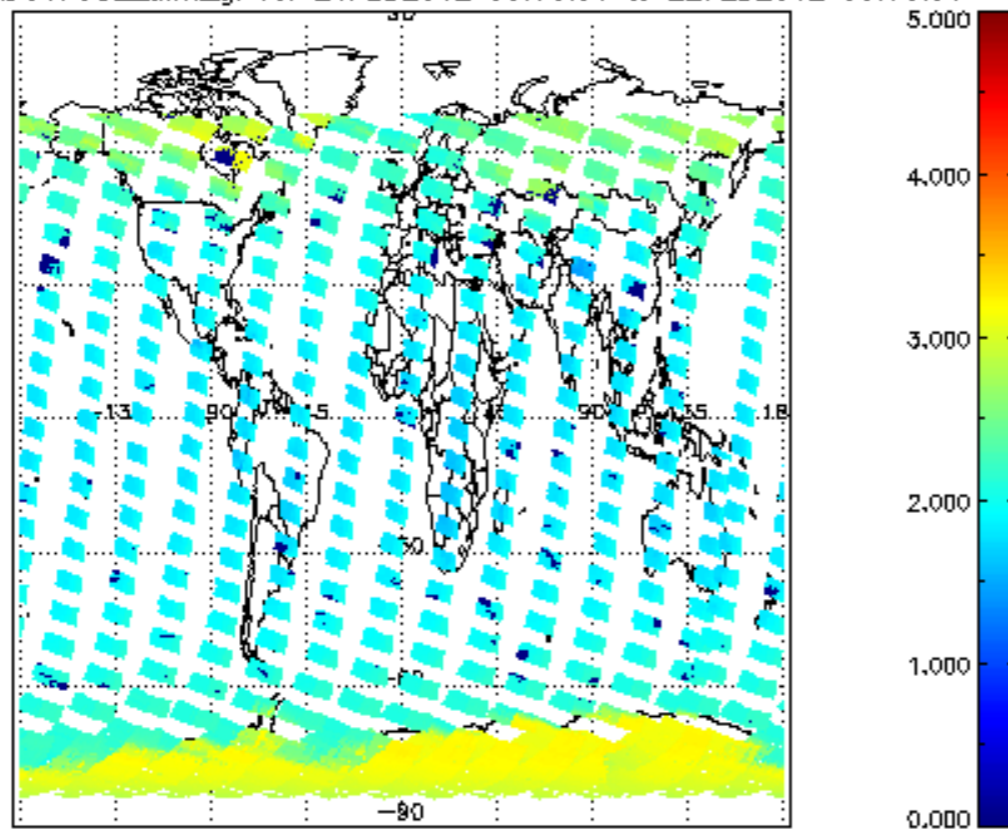
SCIOL2P\_NADUV7S02\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



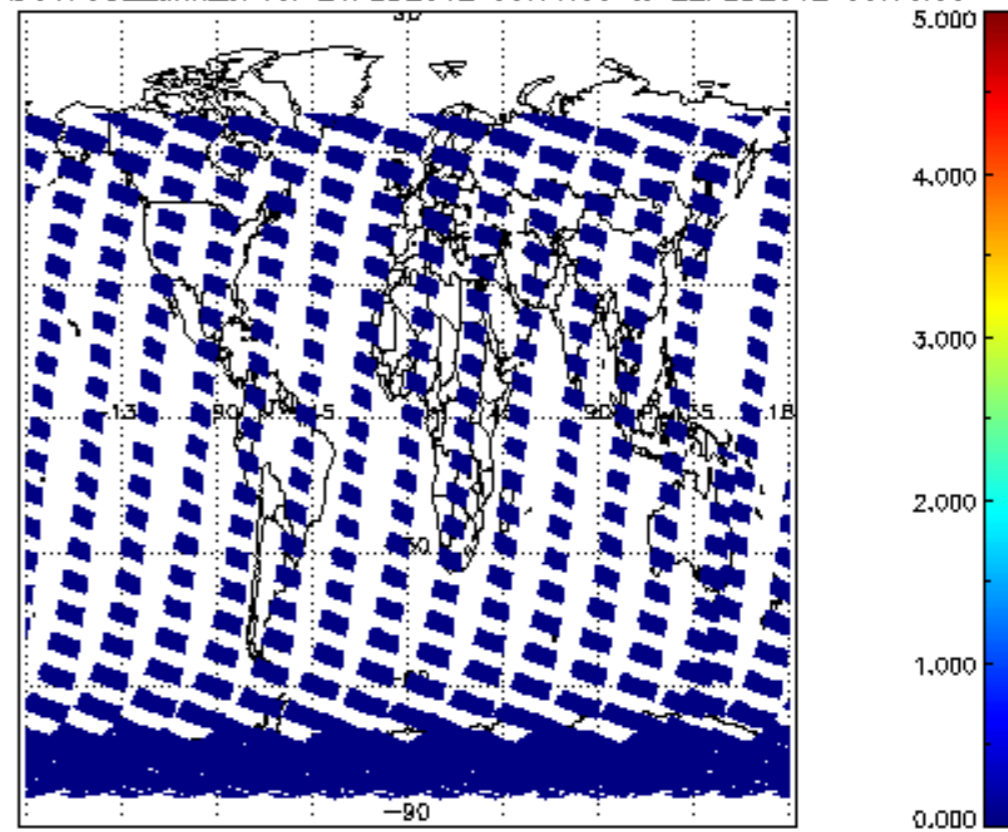
SCIOL2P\_NADUV7S02\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



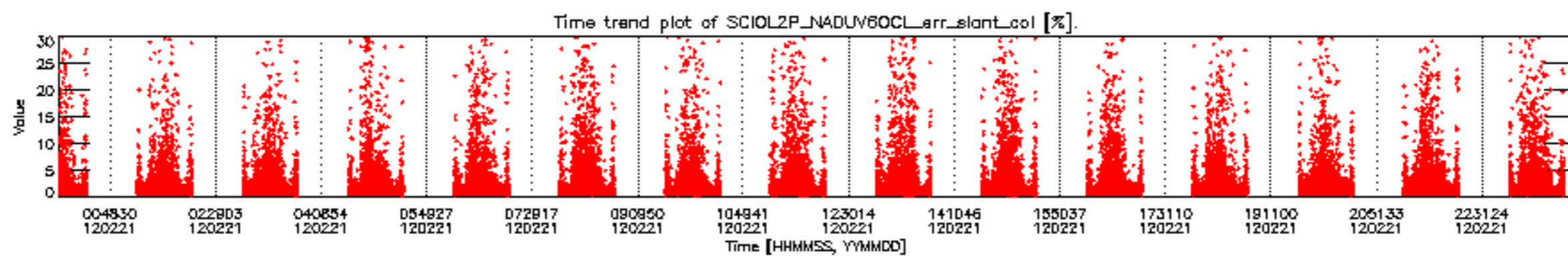
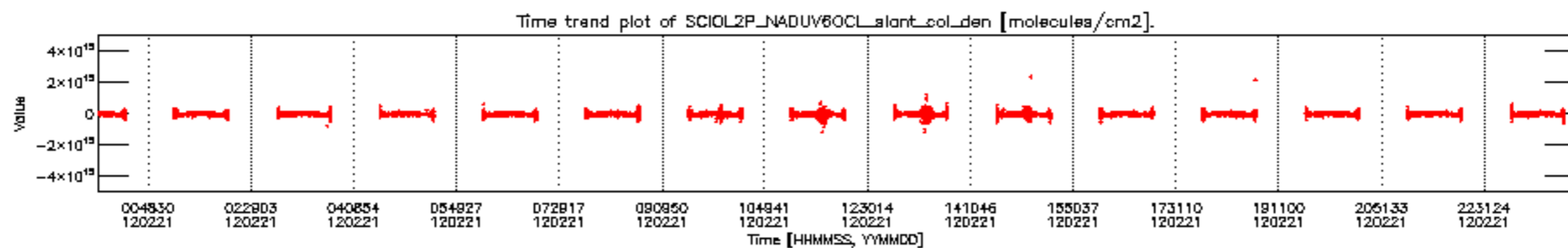
SCIOL2P\_NADUV7S02\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



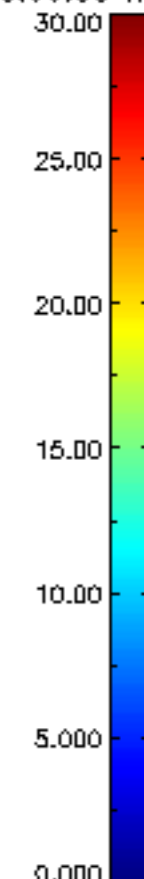
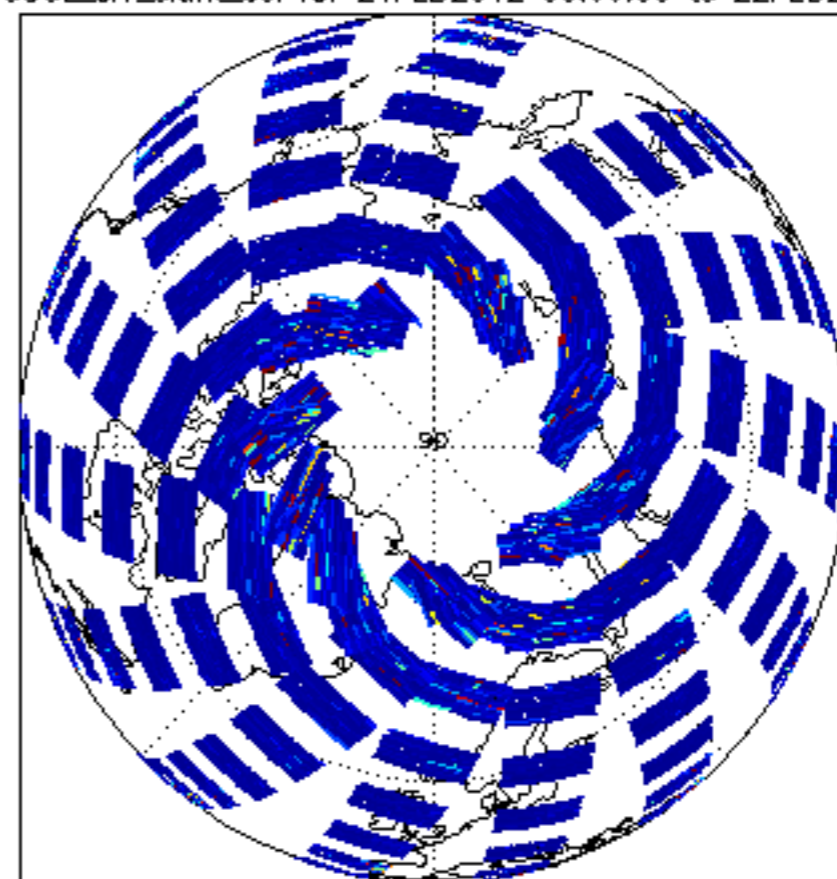
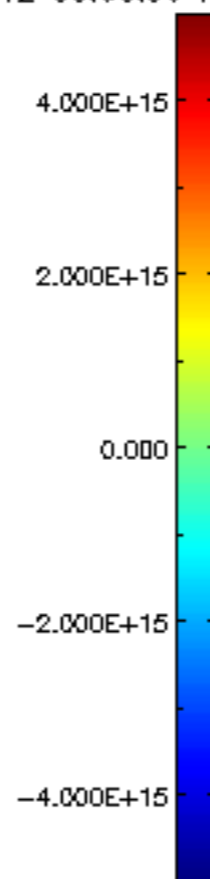
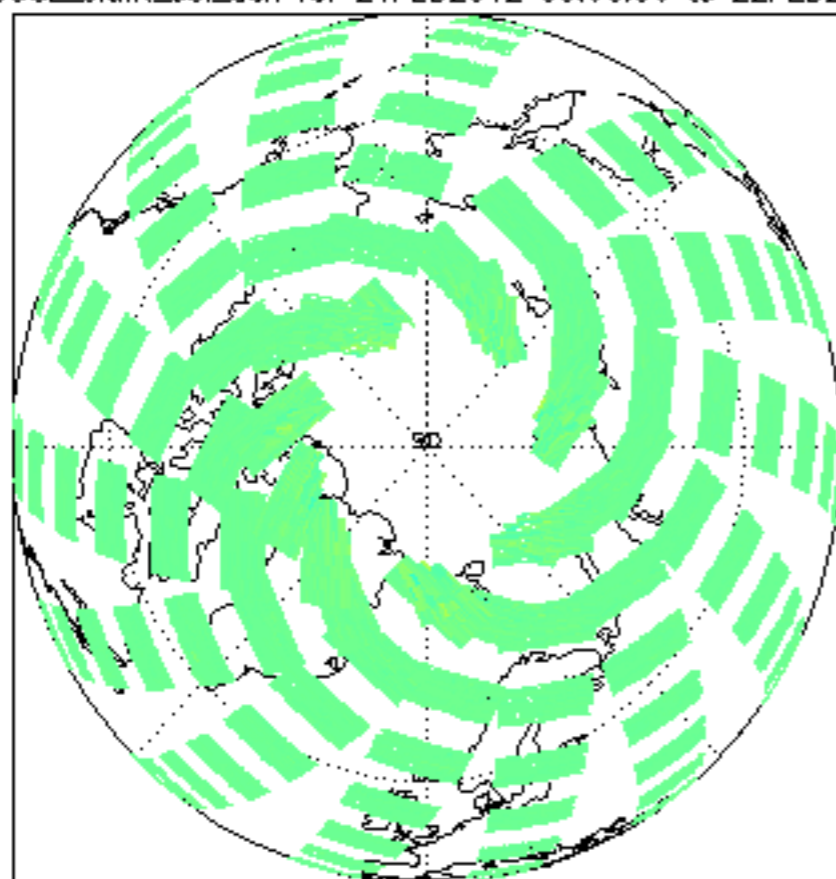
SCIOL2P\_NADUV7S02\_amf\_cl for 21FEB2012 00:00:00 to 22FEB2012 00:00:00





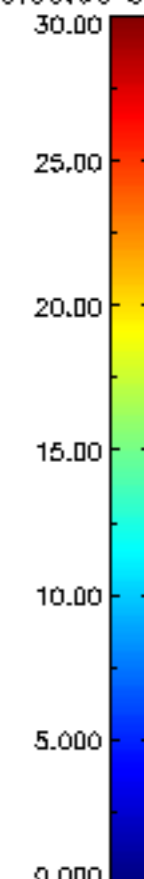
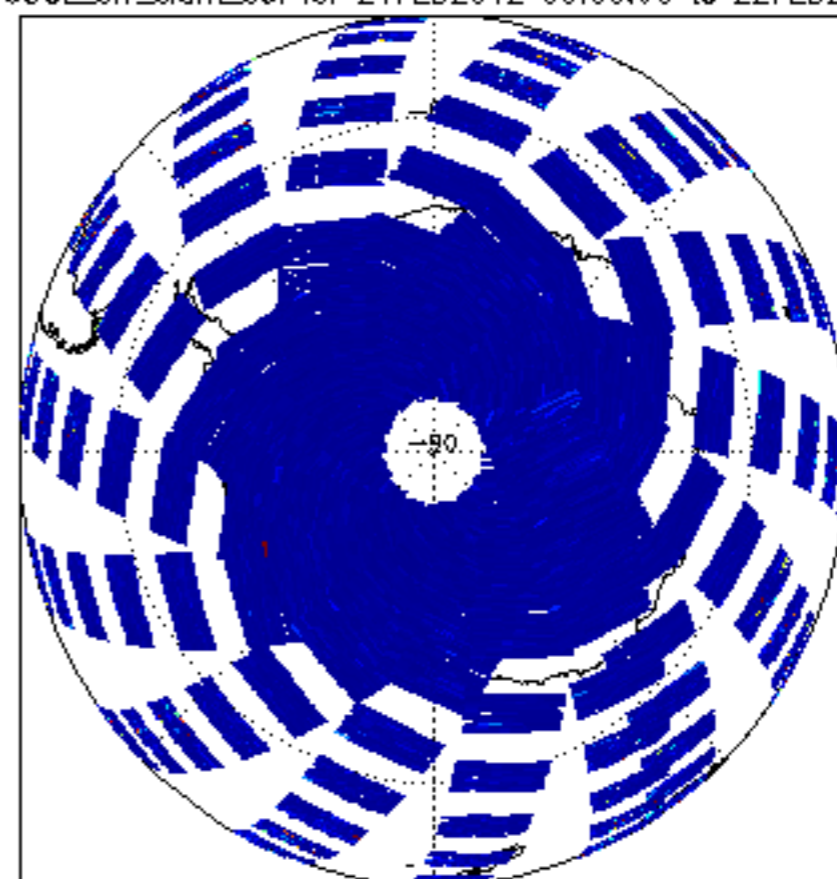
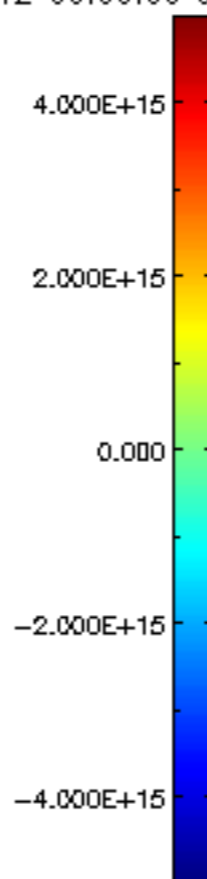
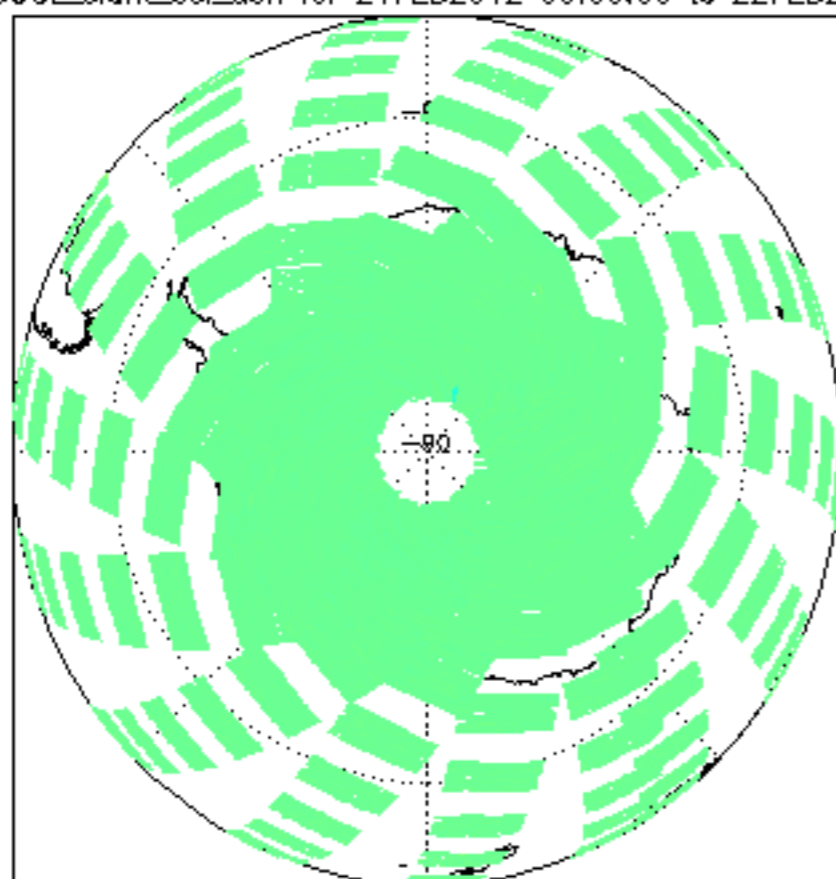


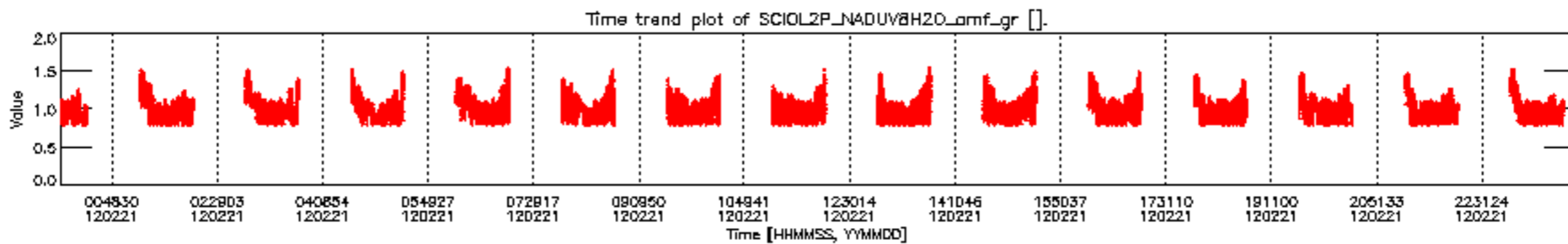
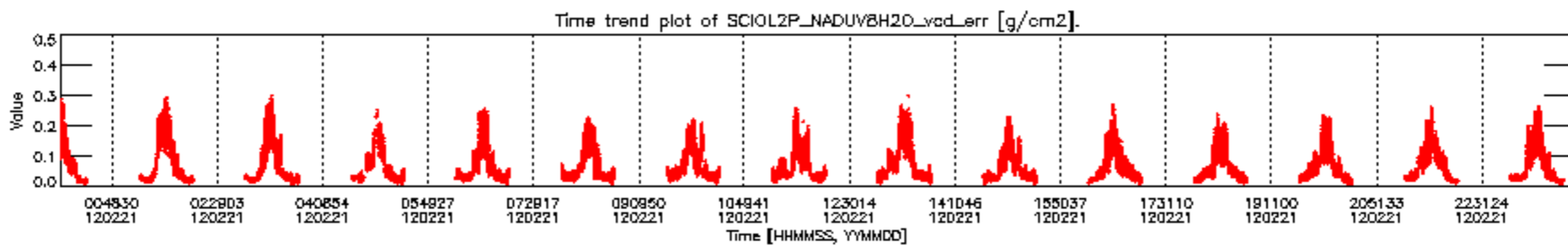
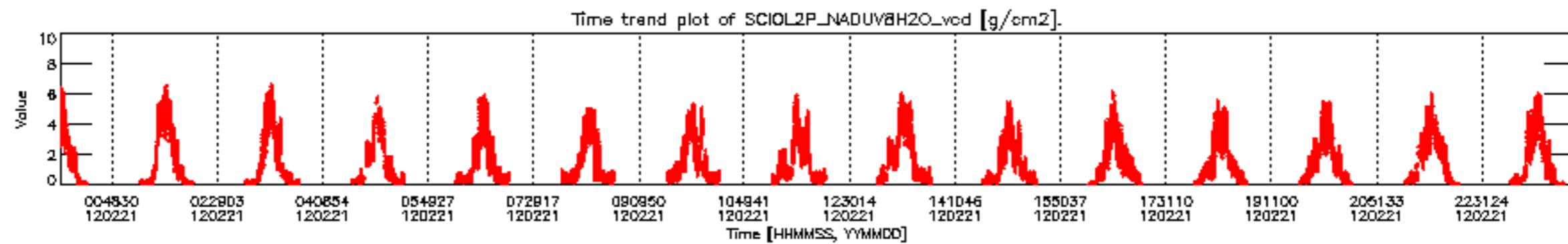
CIOL2P\_NADUV6OCL\_slant\_col\_den for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 np





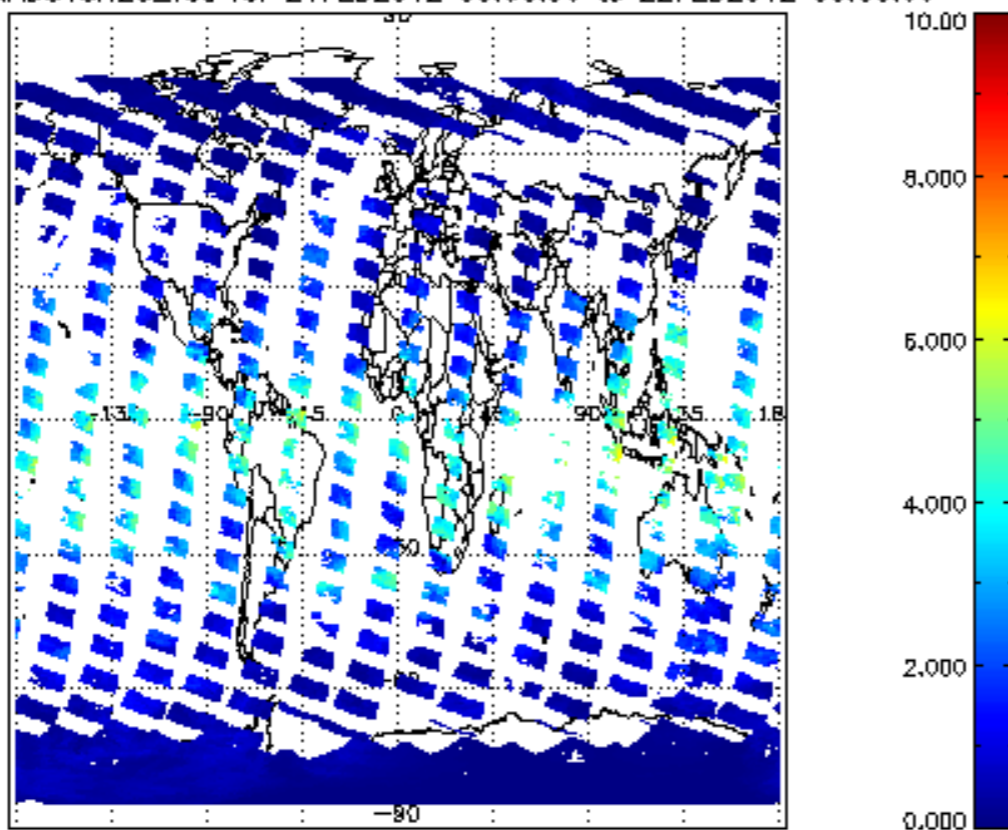
CIOL2P\_NADUV6OCL\_slant\_col\_den for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 21FEB2012 00:00:00 to 22FEB2012 00:00:00 sp



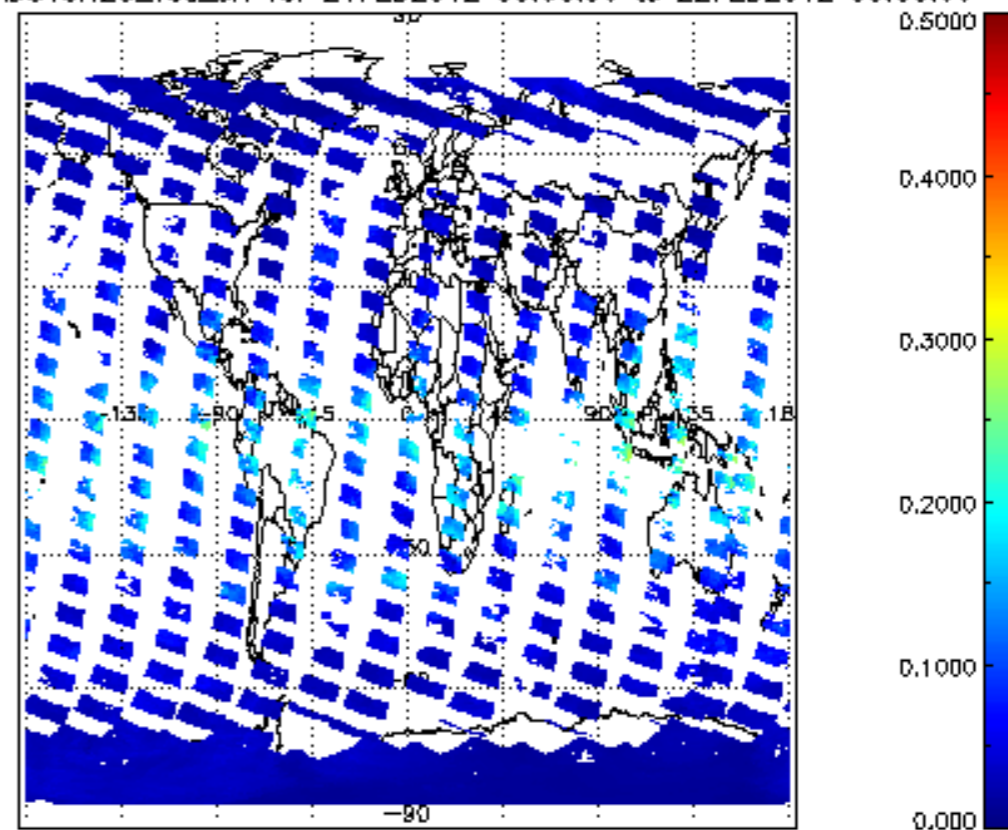




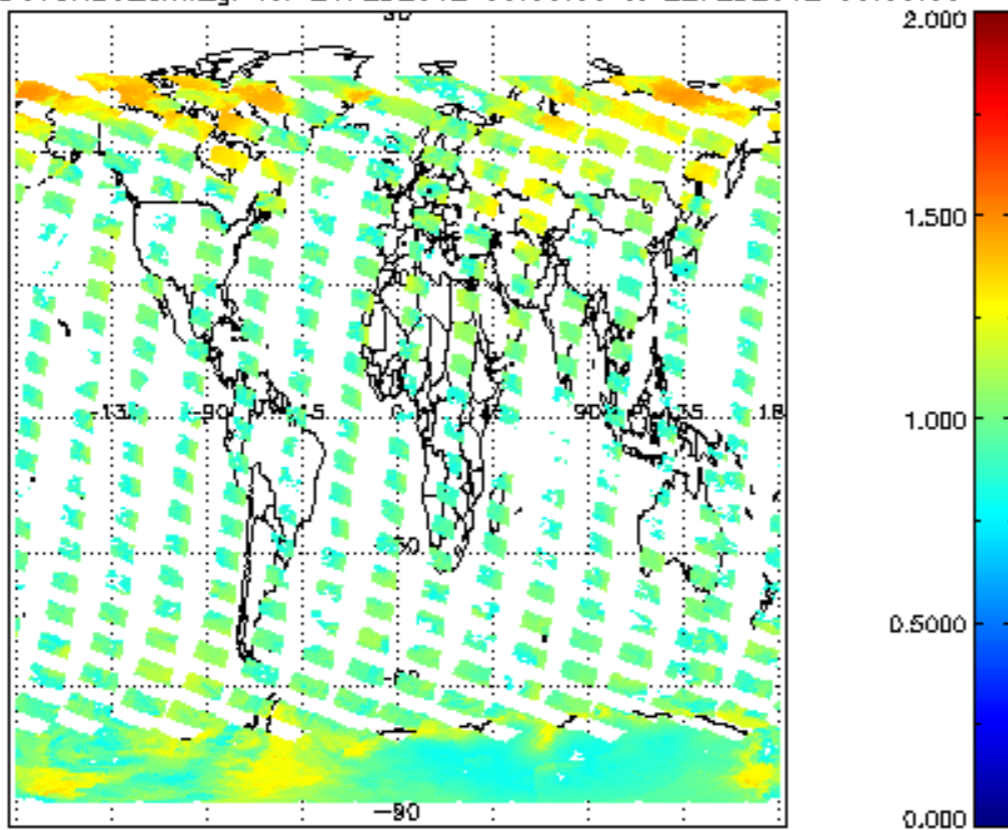
SCIOL2P\_NADUV8H2O\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

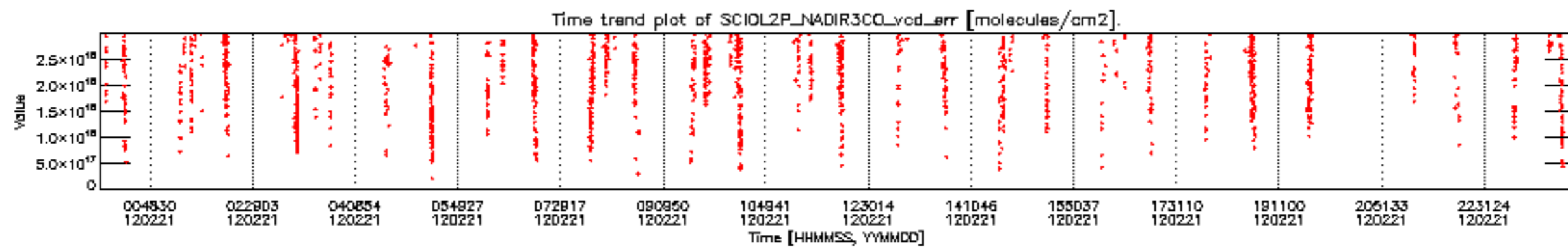
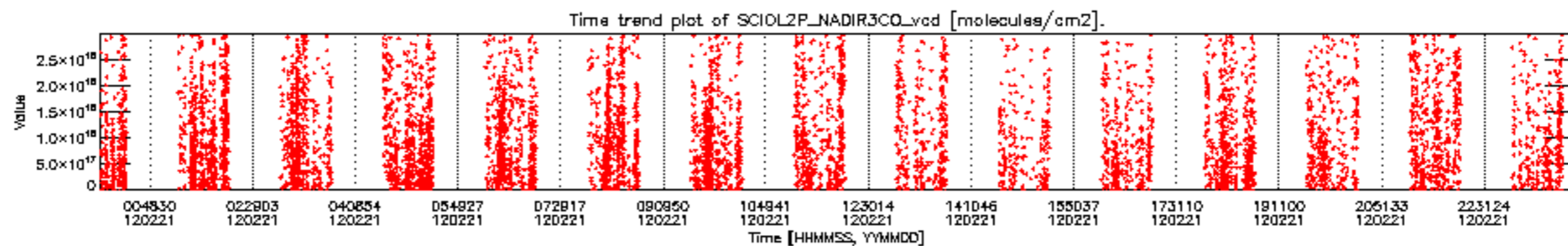


SCIOL2P\_NADUV8H2O\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



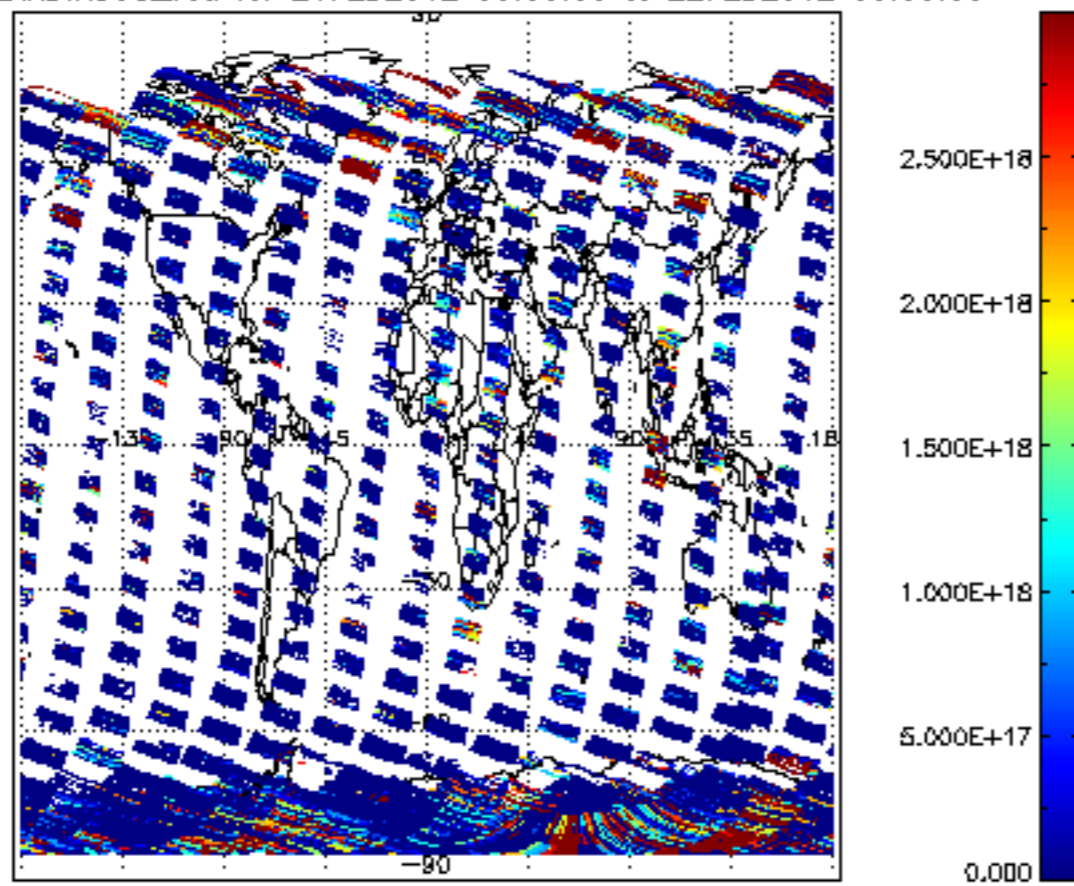
SCIOL2P\_NADUV8H2O\_amf\_gr for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



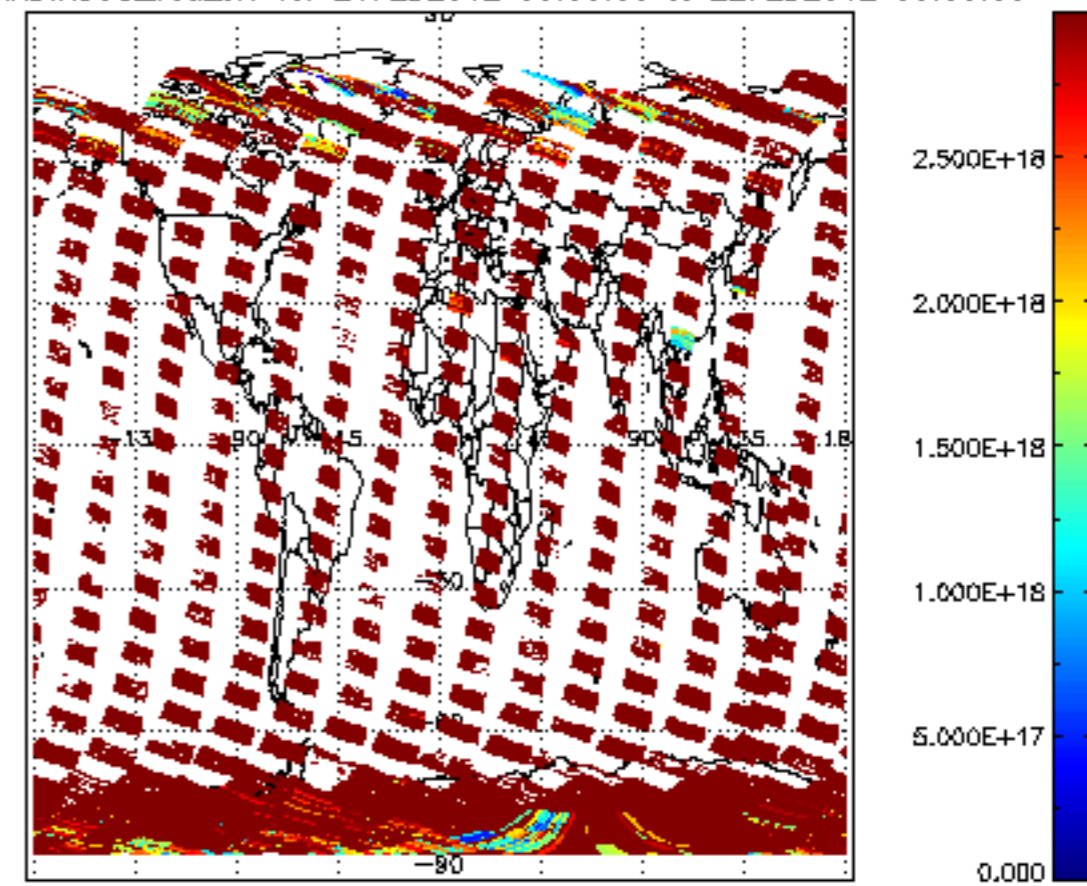




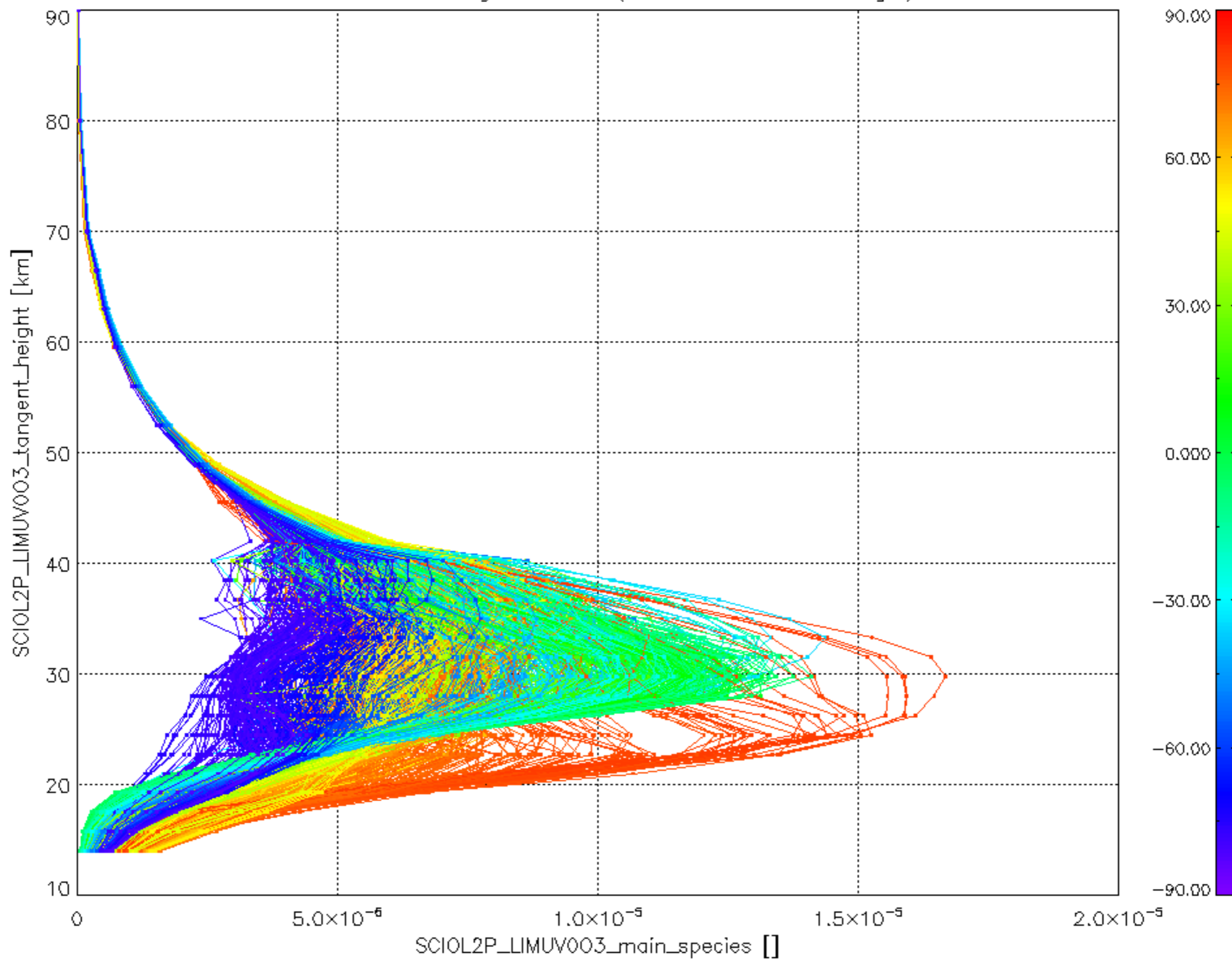
SCIOL2P\_NADIR3CO\_vcd for 21FEB2012 00:00:00 to 22FEB2012 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 21FEB2012 00:00:00 to 22FEB2012 00:00:00

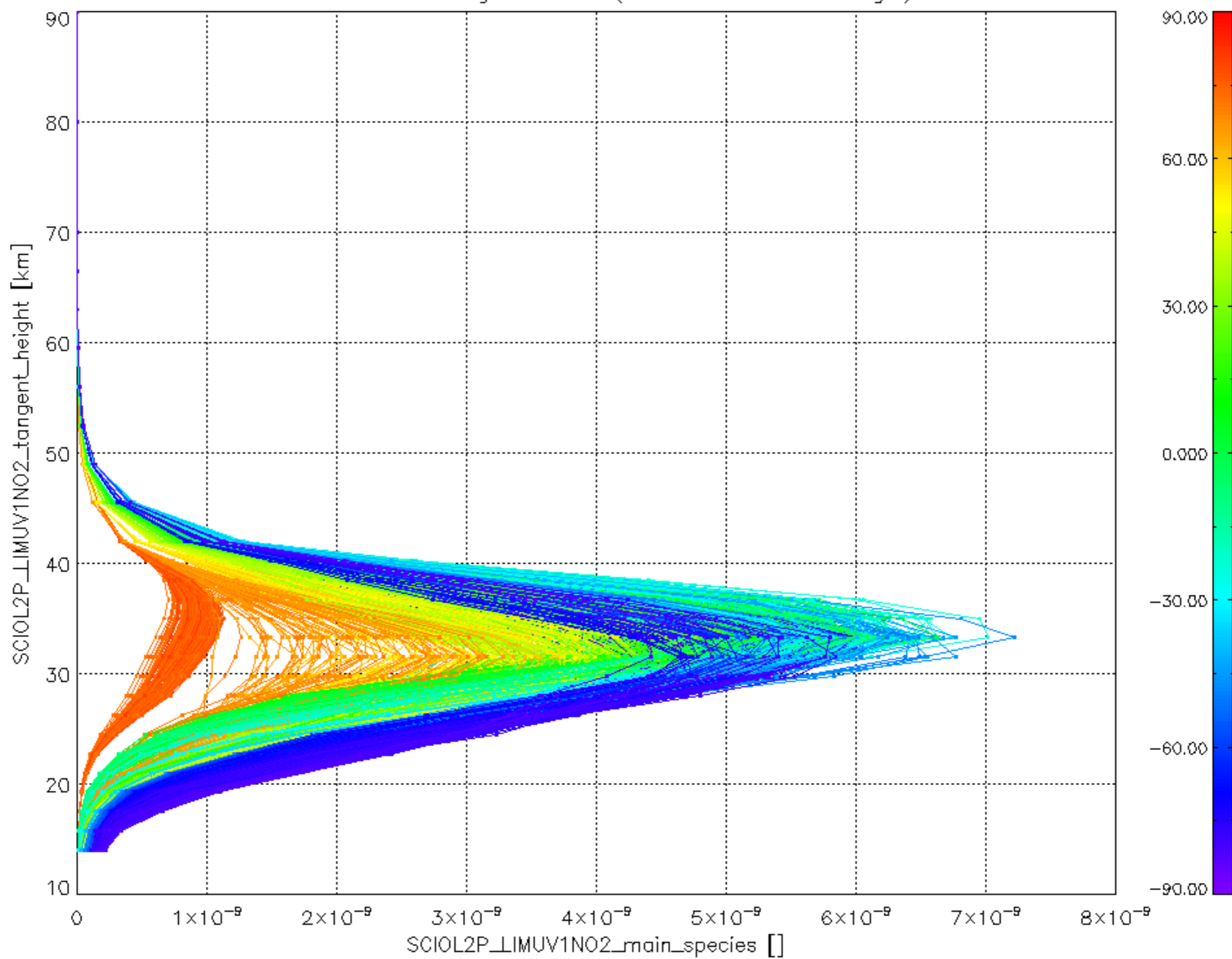


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

