

## 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	14MAY2011 03:35:13
Data source version	SCIA-OL/5.01-U
Processing scope for products	24APR2011 00:00:00 to 25APR2011 00:00:00
Start time of first product within scope	23APR2011 23:28:29
Stop time of last product within scope	24APR2011 23:50:31
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__2PUDPA20110423_232829_000035303101_00404_47832_4301.N1</a>	23APR2011 23:28:29	24APR2011 00:27:20	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110424_010843_000035163101_00405_47833_4297.N1</a>	24APR2011 01:08:43	24APR2011 02:07:19	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110424_024857_000035303101_00406_47834_4305.N1</a>	24APR2011 02:48:57	24APR2011 03:47:47	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110424_042910_000035163101_00407_47835_4306.N1</a>	24APR2011 04:29:10	24APR2011 05:27:46	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110424_060924_000035303101_00408_47836_4307.N1</a>	24APR2011 06:09:24	24APR2011 07:08:15	0	GOOD

5	SCI_OL__2PUDPA20110424_074938_000035163101_00409_47837_4308.N1	24APR2011 07:49:38	24APR2011 08:48:14	0	GOOD
6	SCI_OL__2PUDPA20110424_092951_000035303101_00410_47838_4309.N1	24APR2011 09:29:51	24APR2011 10:28:42	0	GOOD
7	SCI_OL__2PUDPA20110424_111005_000035163101_00411_47839_4310.N1	24APR2011 11:10:05	24APR2011 12:08:41	0	GOOD
8	SCI_OL__2PUDPA20110424_125018_000035303101_00412_47840_4311.N1	24APR2011 12:50:18	24APR2011 13:49:09	0	GOOD
9	SCI_OL__2PUDPA20110424_143032_000035163101_00413_47841_4313.N1	24APR2011 14:30:32	24APR2011 15:29:08	0	GOOD
10	SCI_OL__2PUDPA20110424_161046_000035303101_00414_47842_4314.N1	24APR2011 16:10:46	24APR2011 17:09:36	0	GOOD
11	SCI_OL__2PUDPA20110424_175149_000034783101_00415_47843_4315.N1	24APR2011 17:51:49	24APR2011 18:49:47	0	GOOD
12	SCI_OL__2PUDPA20110424_193125_000035303101_00416_47844_4316.N1	24APR2011 19:31:25	24APR2011 20:30:15	0	GOOD
13	SCI_OL__2PUDPA20110424_211127_000035163101_00417_47845_4317.N1	24APR2011 21:11:27	24APR2011 22:10:03	0	GOOD
14	SCI_OL__2PUDPA20110424_225140_000035303101_00418_47846_4318.N1	24APR2011 22:51:40	24APR2011 23:50:31	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: 172084

Total number of cloud data DSRs with good quality flag (=0): 172084 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	172084	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	172084	0.16463	0.12500	0.12500	0.25000	0.058167	s
CL_FRAC	172084	0.42284	0.39528	0.0000	1.0000	0.31731	
CL_FRAC_ERR	172084	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	172084	5.2683	4.0000	4.0000	8.0000	1.8614	
PMD_READ_CL[0]	172084	0.46831	0.0000	0.0000	8.0000	1.3256	-
PMD_READ_CL[1]	172084	1.2271	0.0000	0.0000	8.0000	2.5044	-
CL_TOP_HEIGHT	136448	3.2160	1.5440	0.0000	17.000	3.4533	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	136448	70.351	101.00	0.0000	101.00	40.436	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	172084	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	172084	11001100	11000100	11000000	11100000	3531.0	
AERO_ABSO_IND	172084	0.25366	0.0000	0.0000	4.8635	0.51842	
AERO_IND_DIAG	172084	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	172084	01010010	00000000	00000000	11000000	24318.	

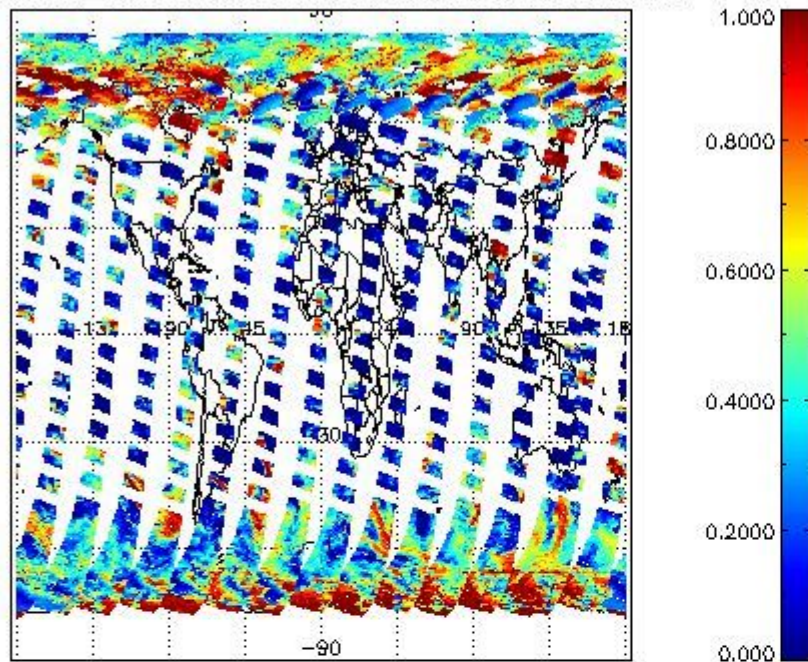
#### Time and geolocation plots:

Plots are available for the following parameters:

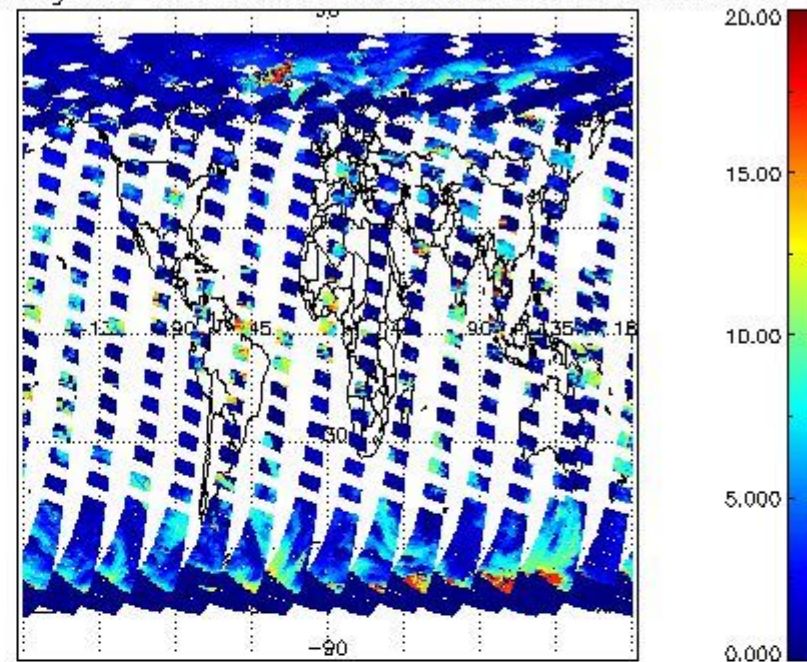
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



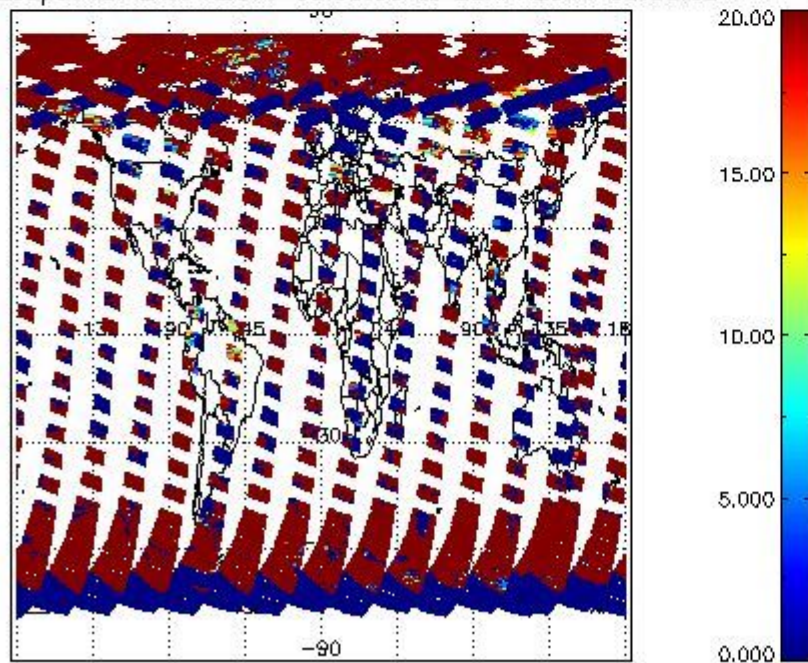
cL\_frac for 24APR2011 00:00:00 to 25APR2011 00:00:00



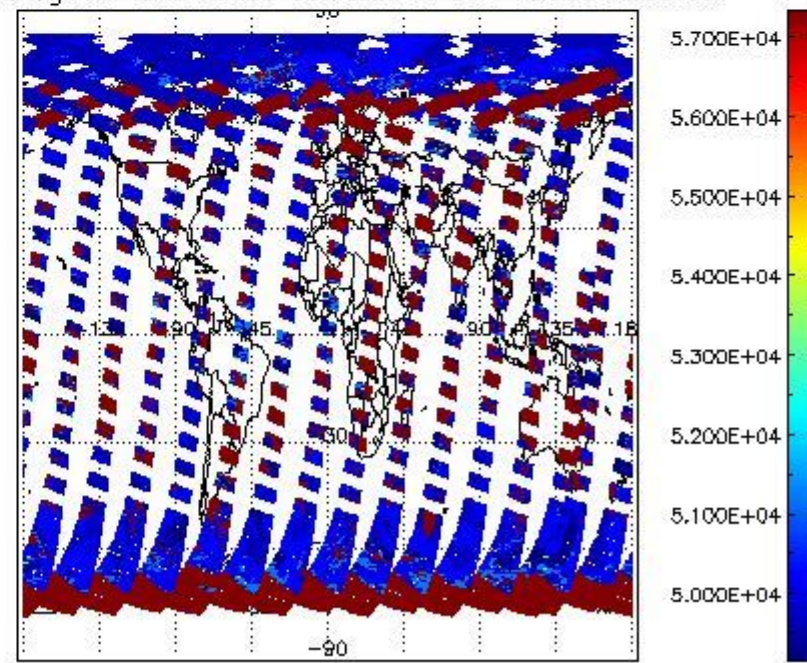
cL\_top\_height for 24APR2011 00:00:00 to 25APR2011 00:00:00



cL\_opt\_depth for 24APR2011 00:00:00 to 25APR2011 00:00:00



cloud\_flags for 24APR2011 00:00:00 to 25APR2011 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:

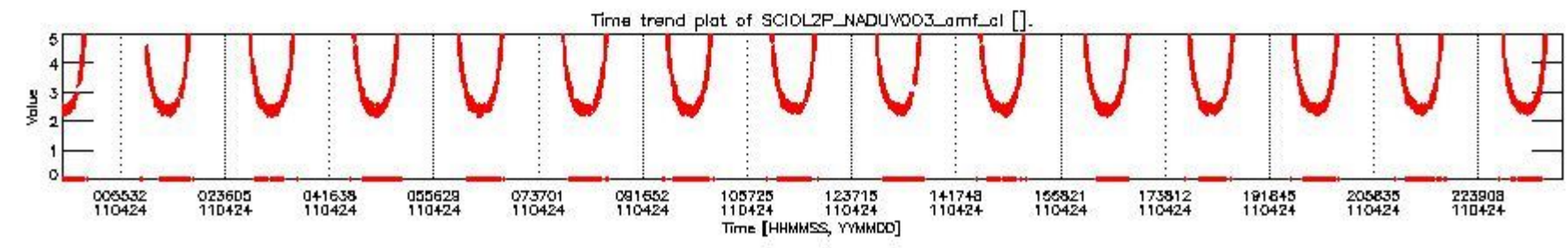
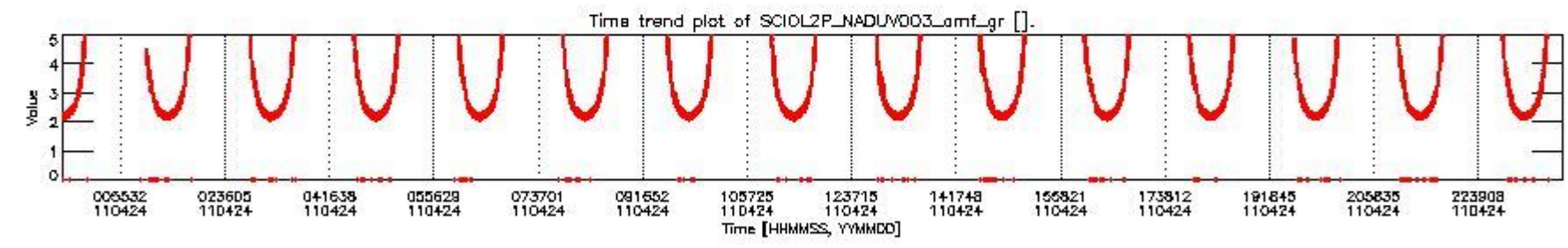
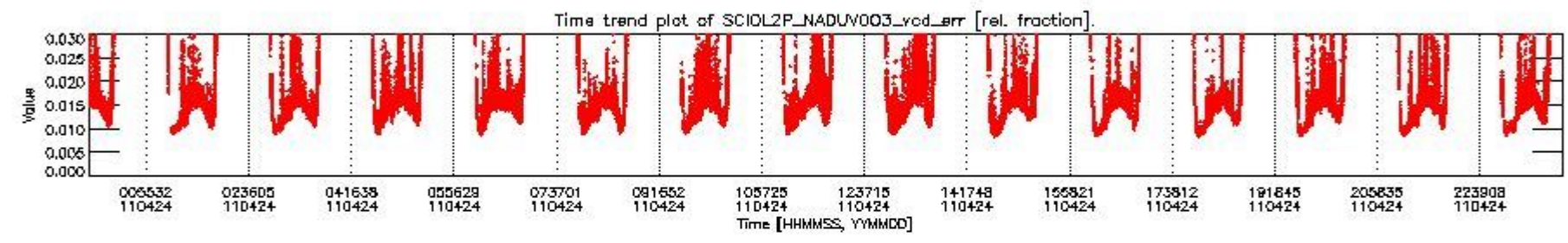
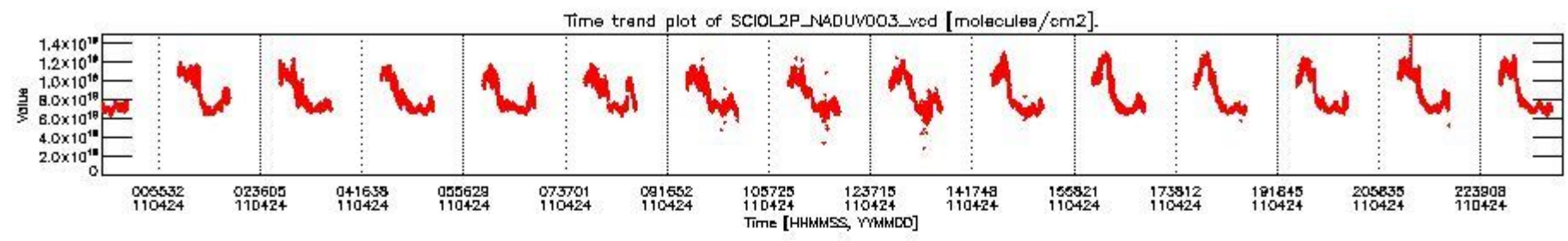
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

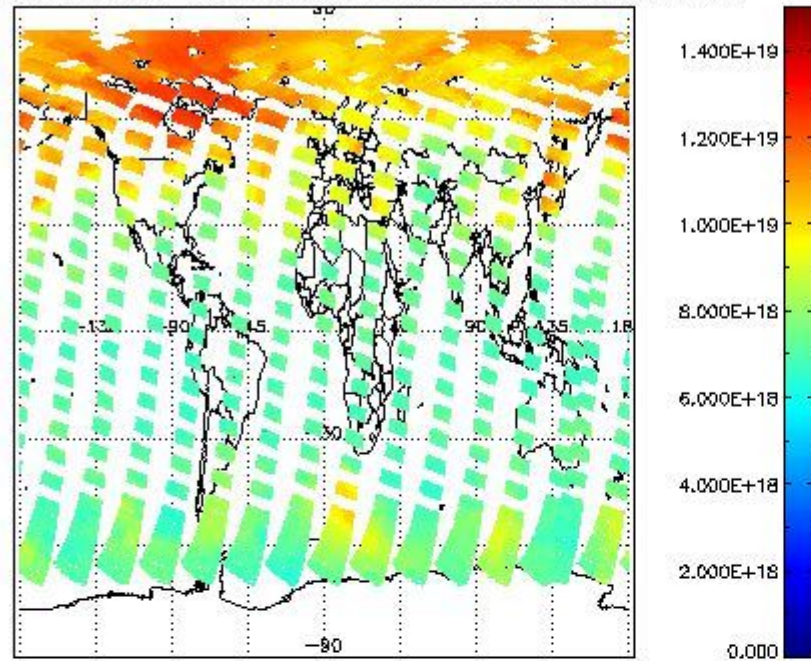
#### 2.2.2.1 O3 (UV0)



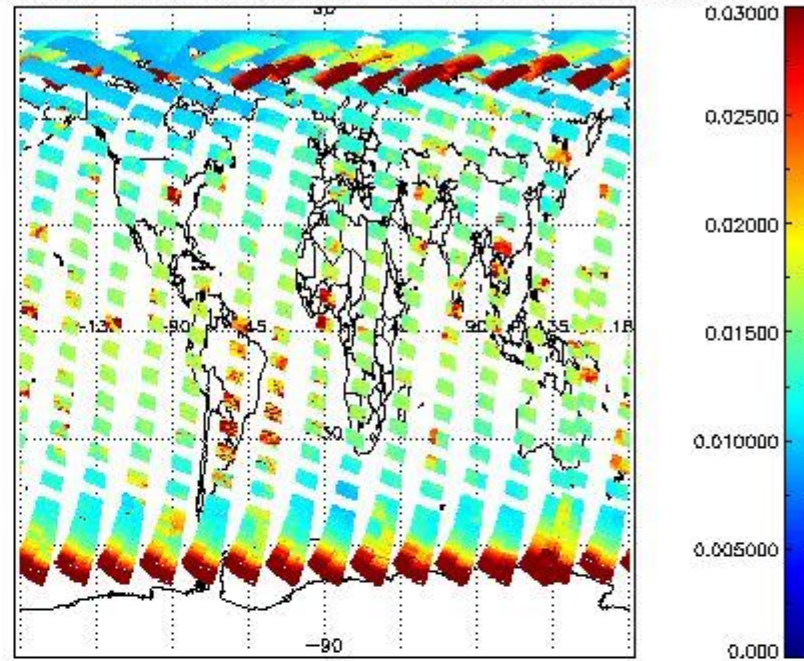




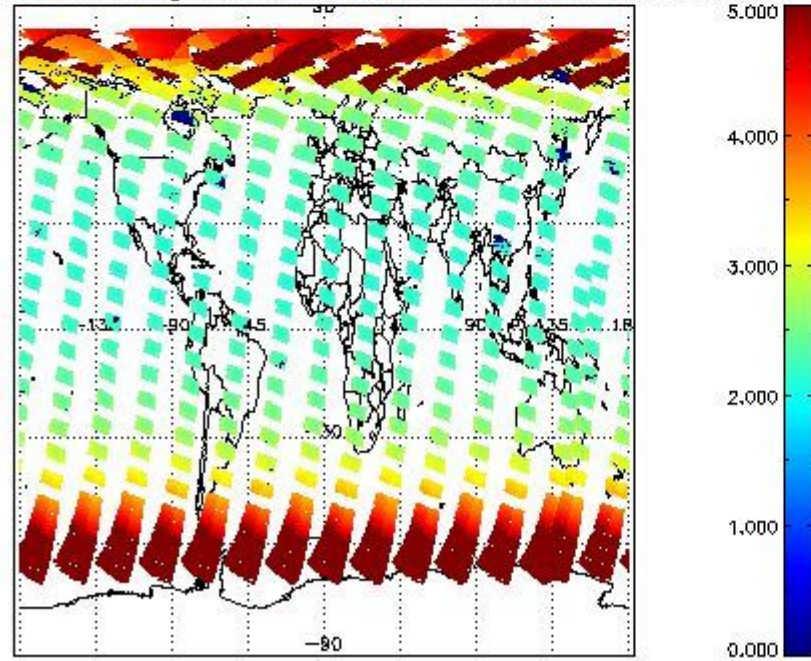
SCIOL2P\_NADUV003\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



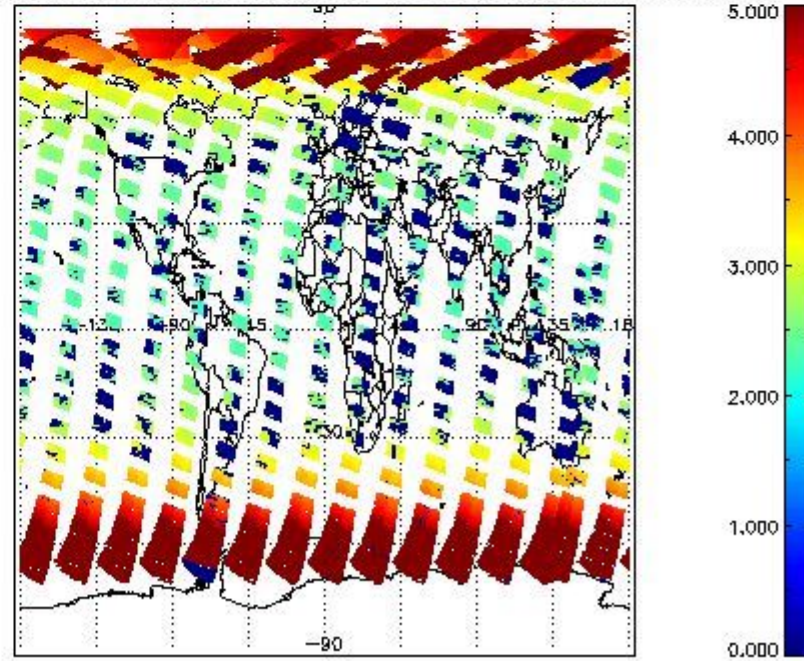
SCIOL2P\_NADUV003\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

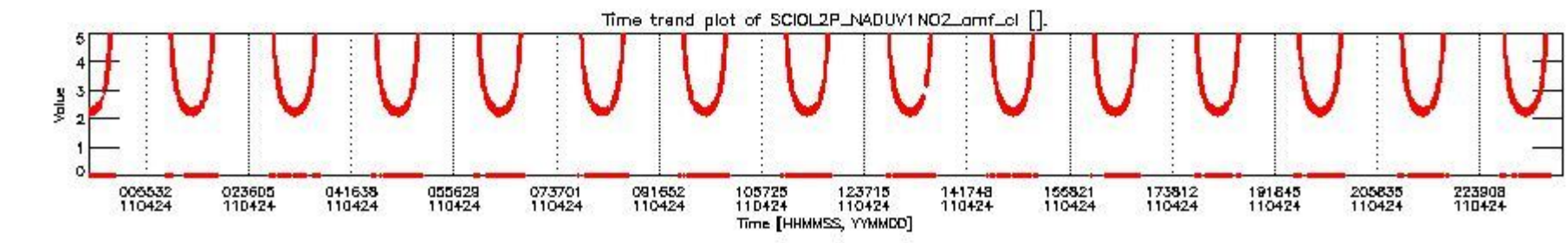
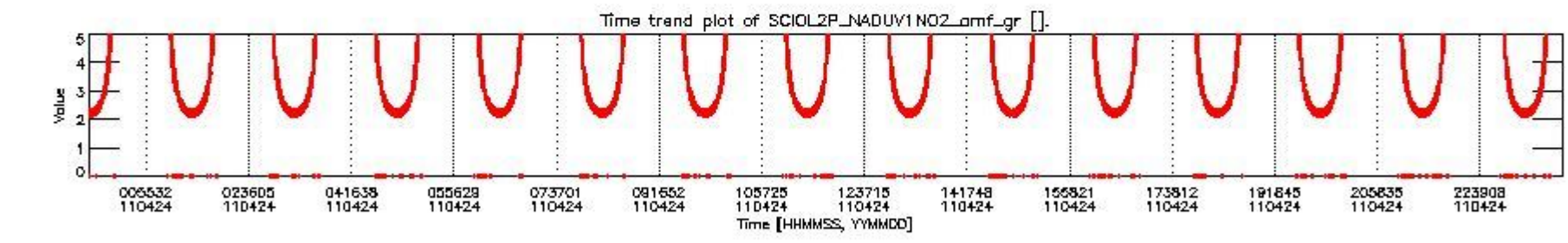
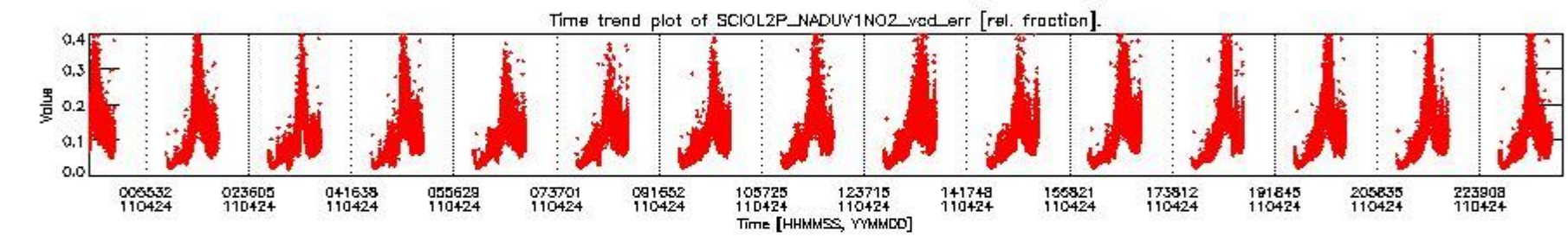
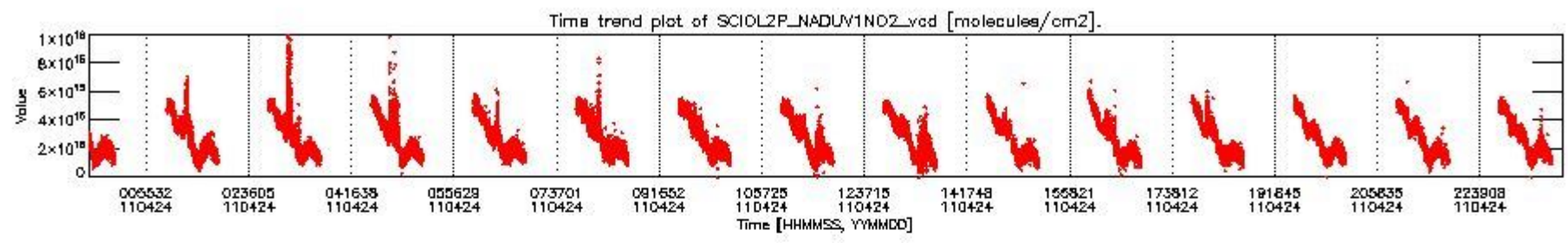


SCIOL2P\_NADUV003\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



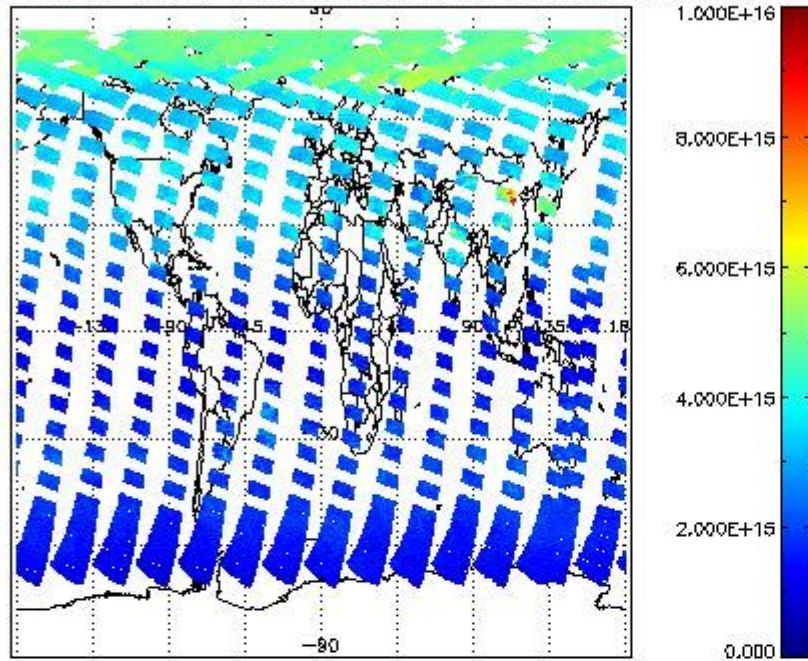
2.2.2.2 NO2 (UV1)



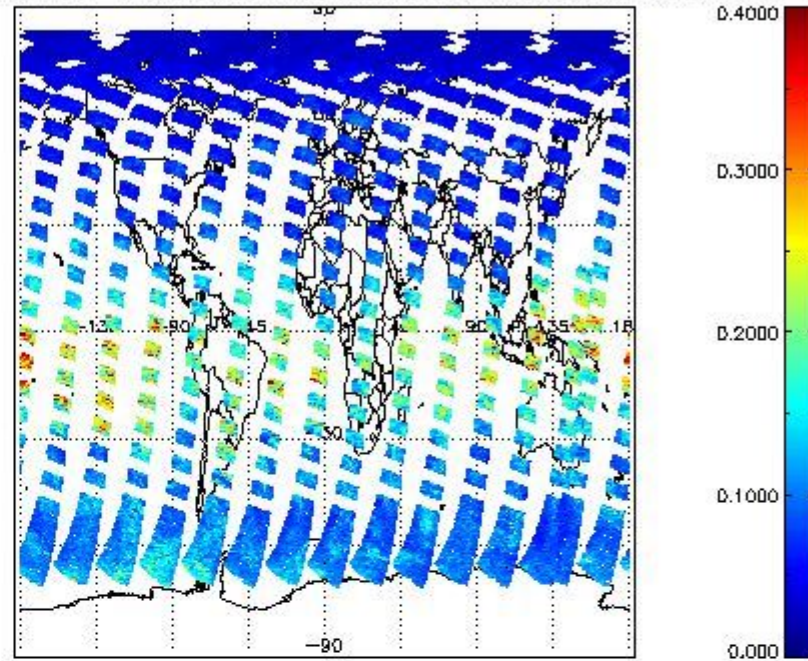




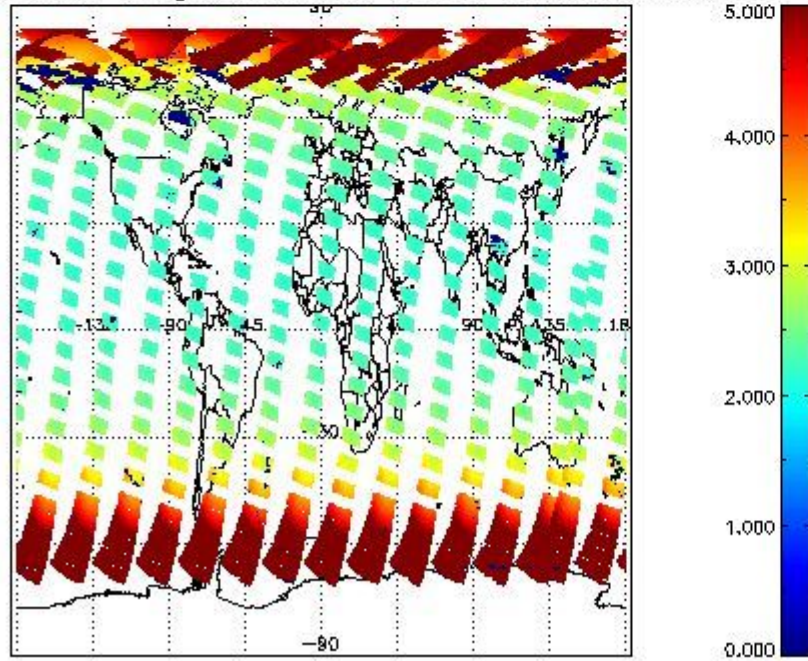
SCIOL2P\_NADUV1NO2\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



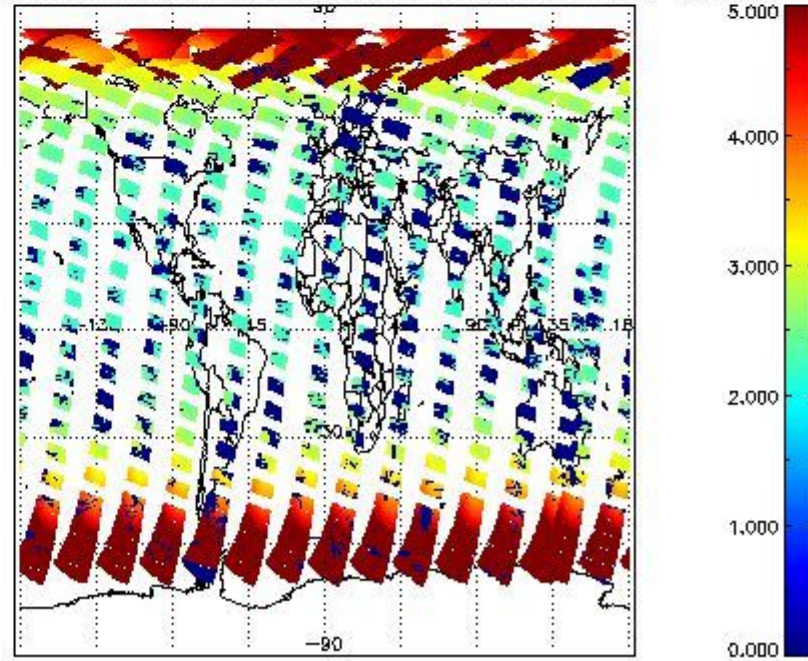
SCIOL2P\_NADUV1NO2\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

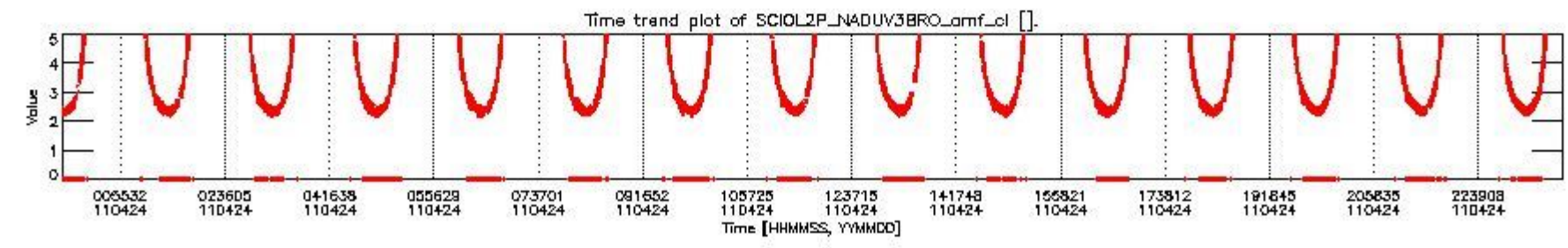
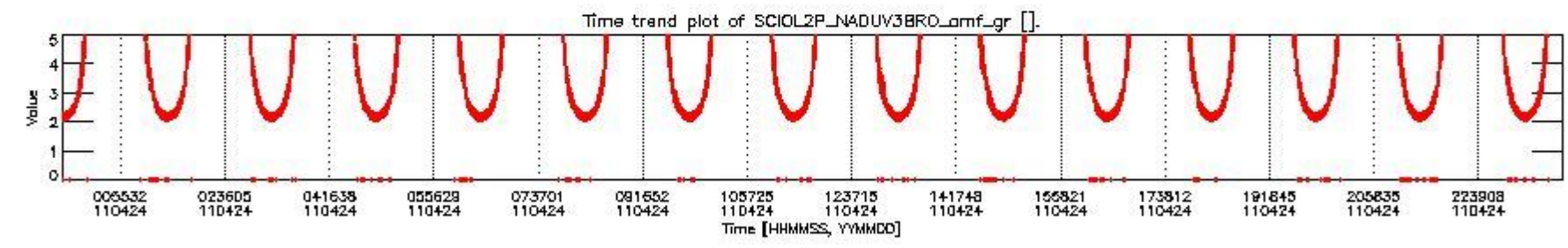
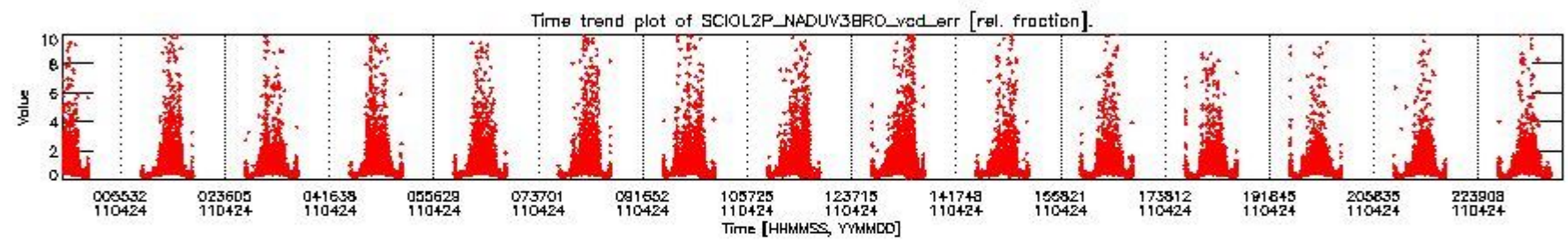
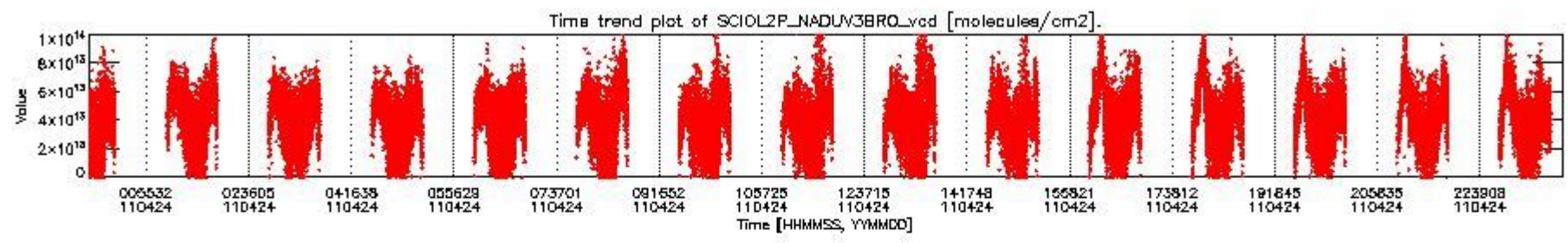


SCIOL2P\_NADUV1NO2\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



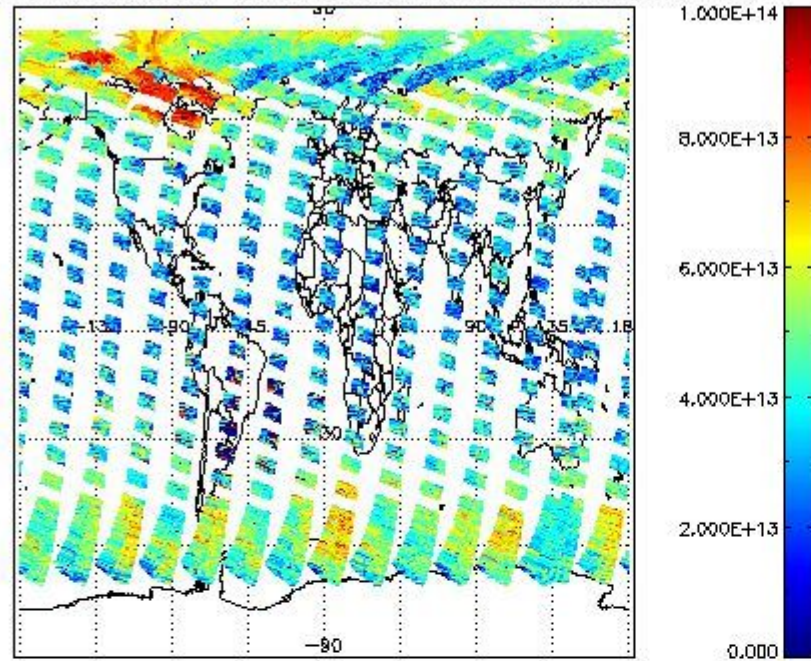
2.2.2.3 BrO (UV3)



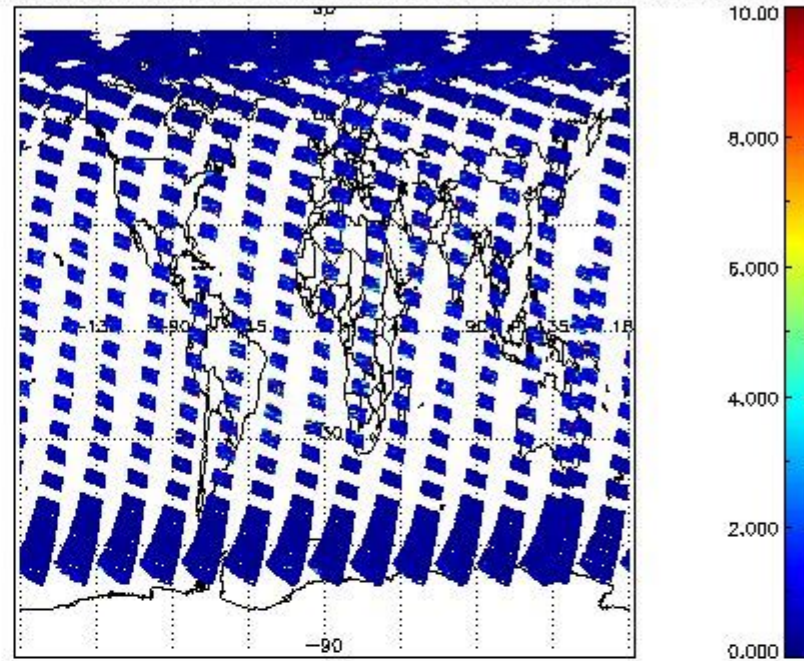




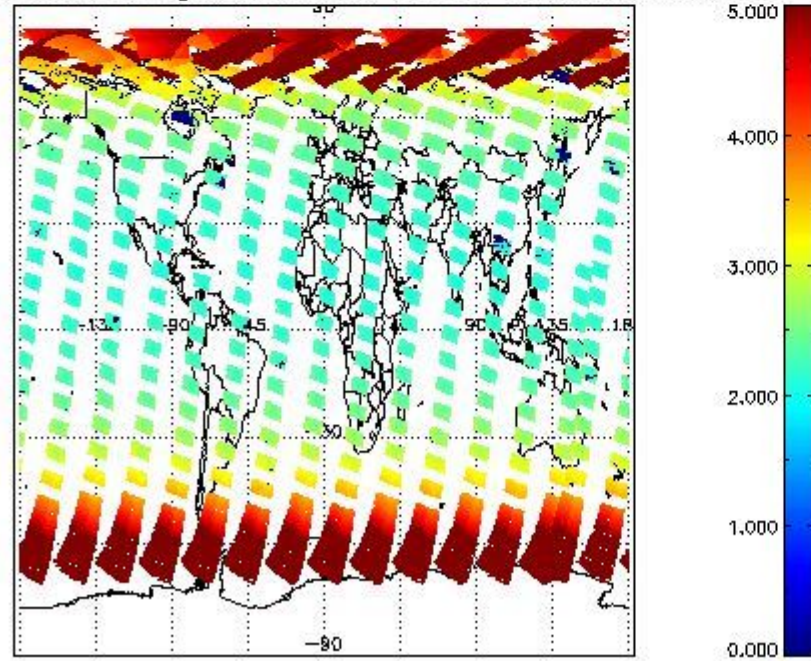
SCIOL2P\_NADUV3BRO\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



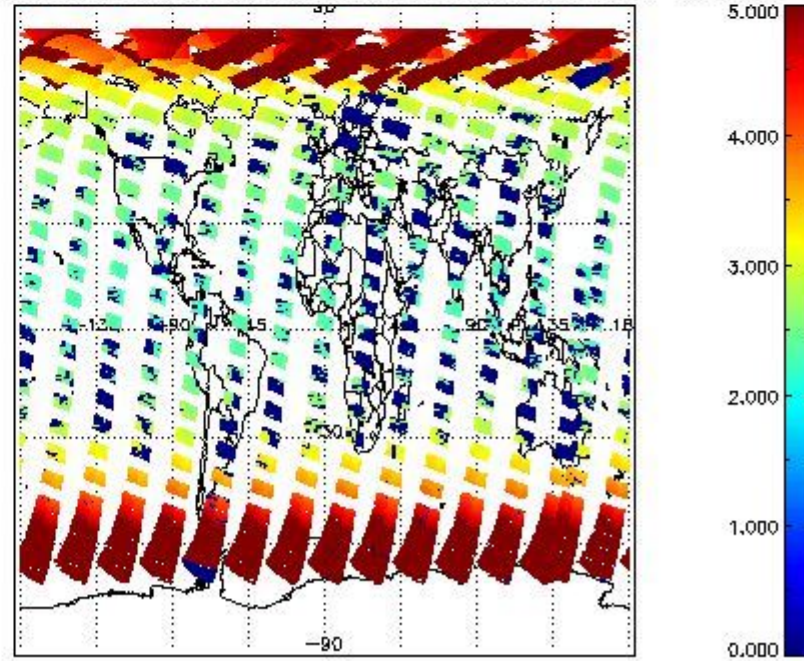
SCIOL2P\_NADUV3BRO\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

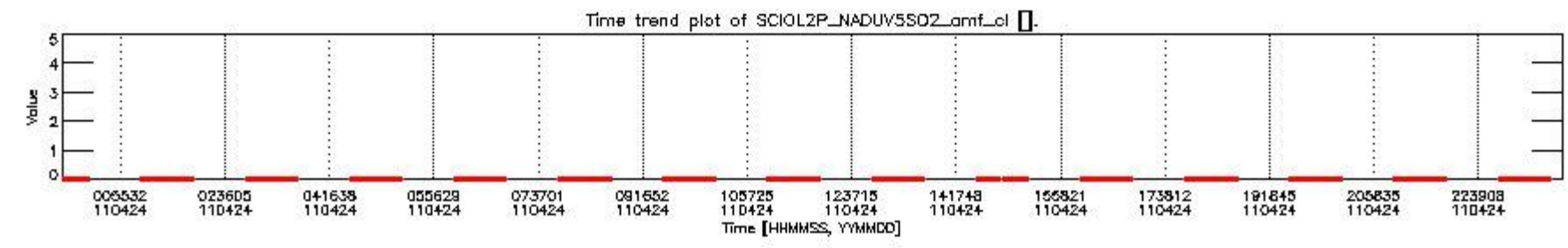
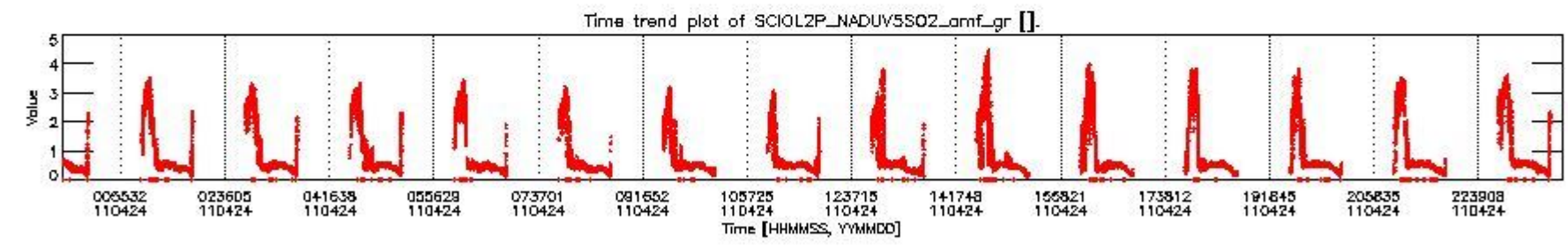
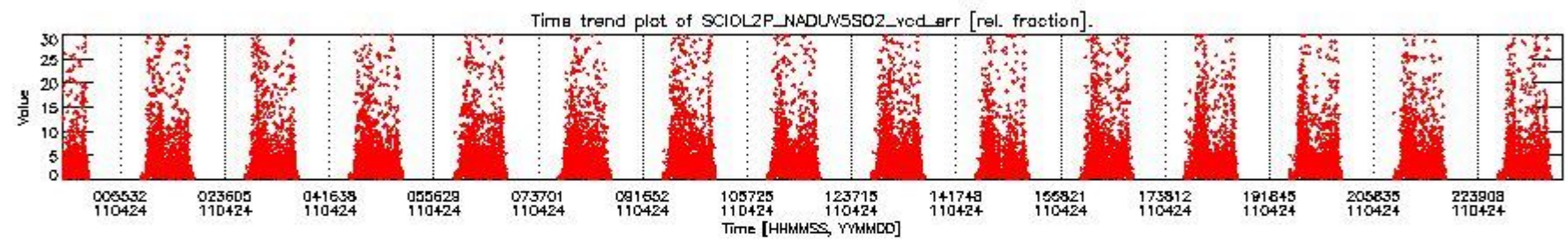
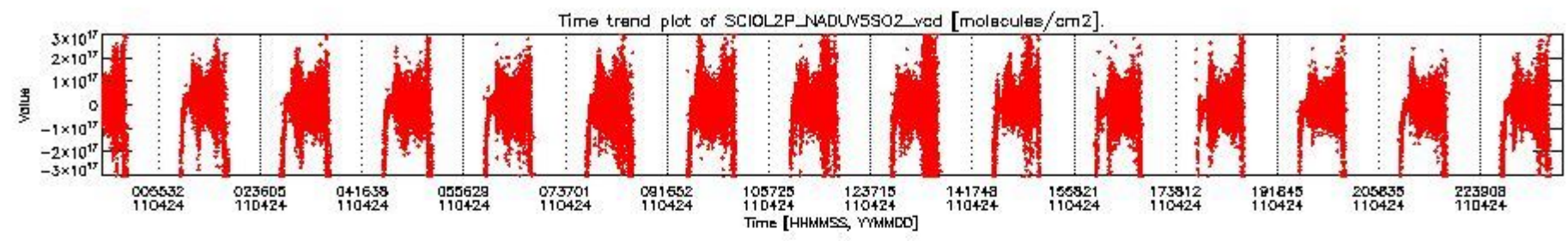


SCIOL2P\_NADUV3BRO\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



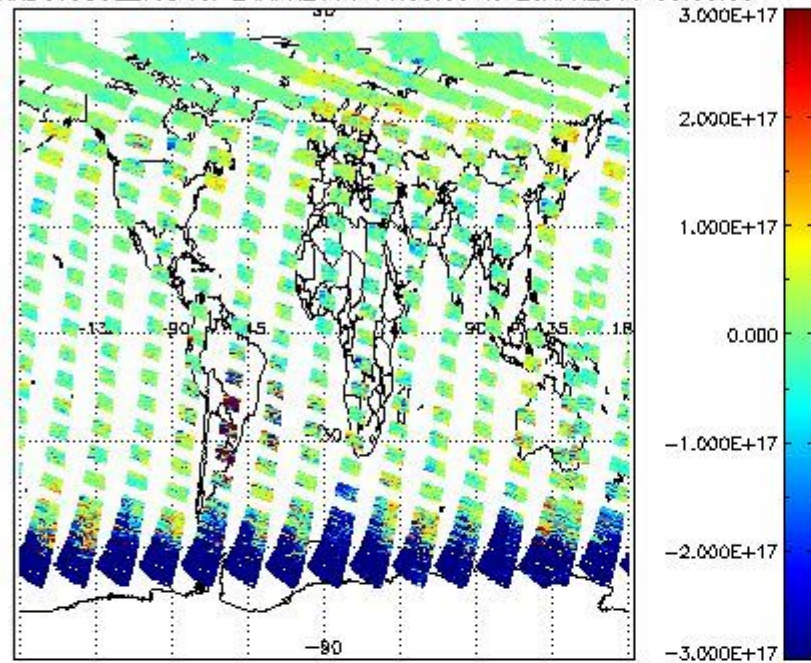
2.2.2.4 SO2 (UV5)



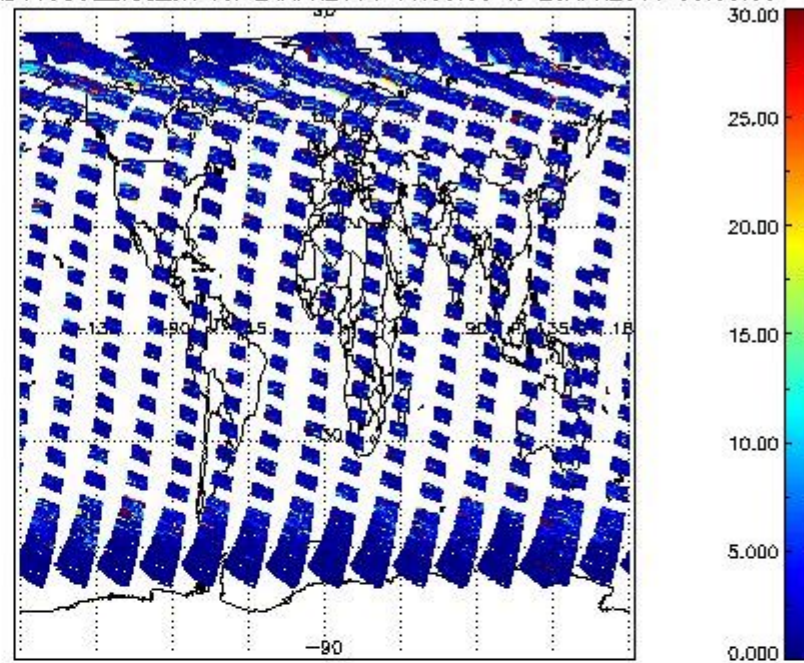




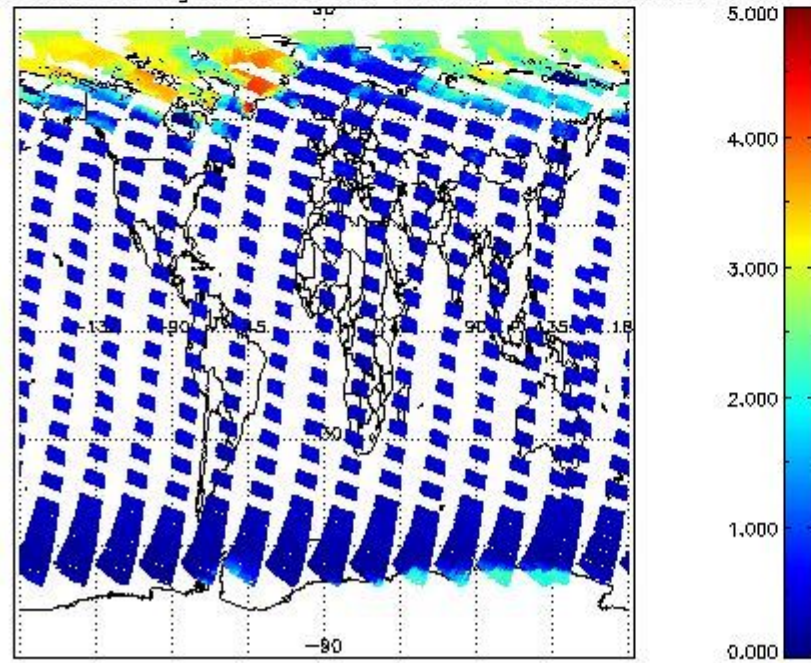
SCIOL2P\_NADUV5S02\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



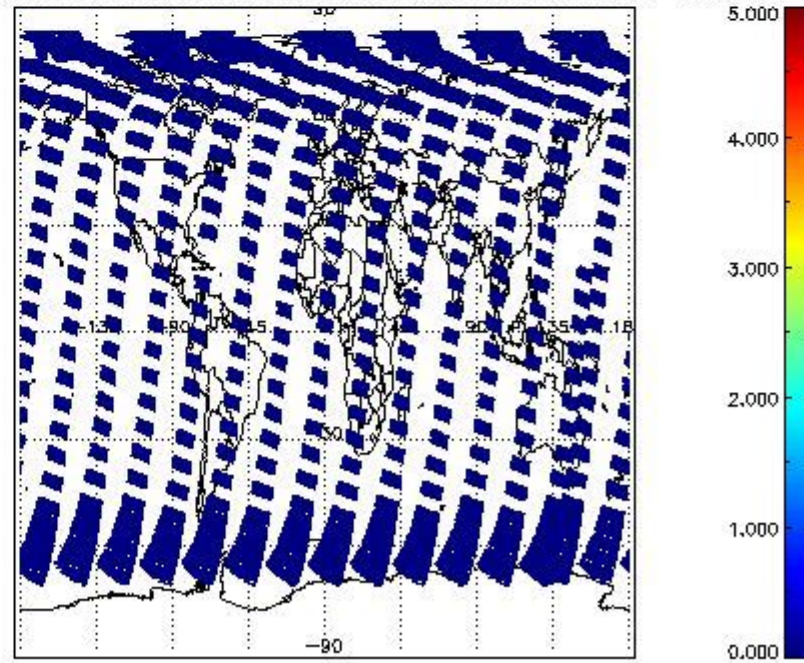
SCIOL2P\_NADUV5S02\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

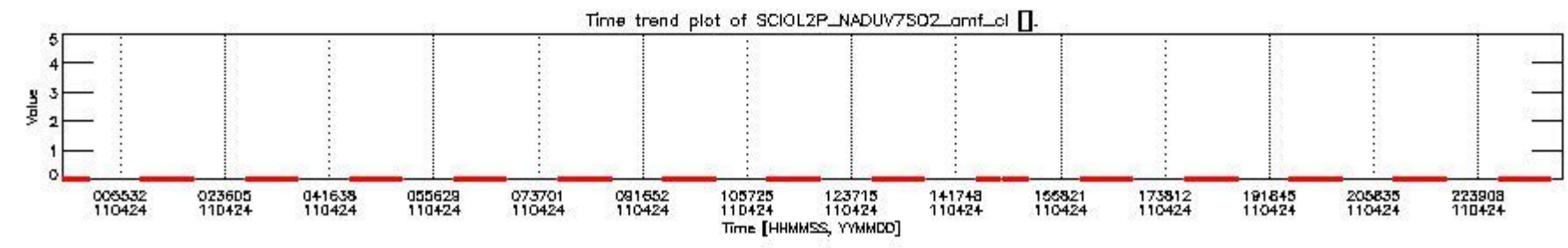
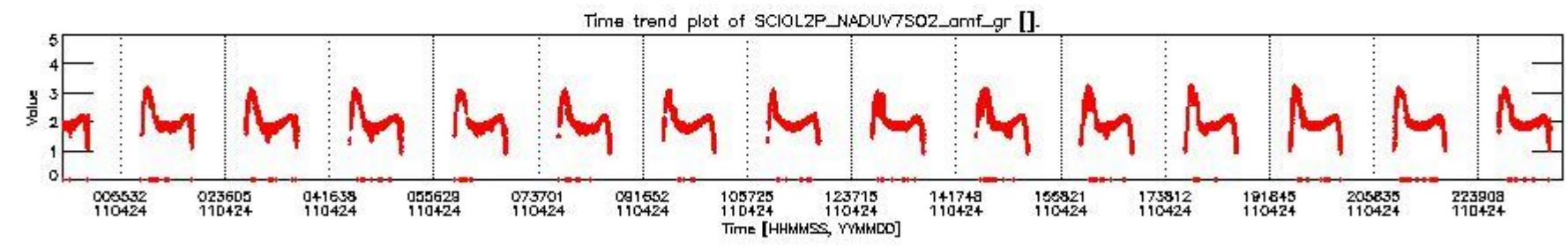
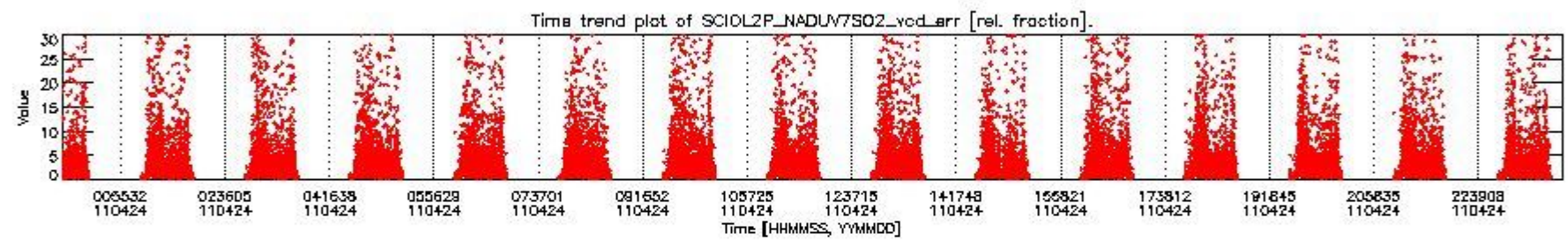
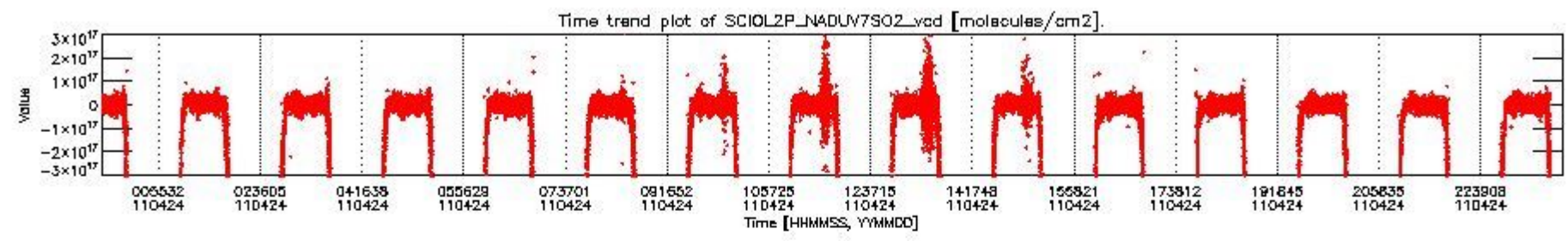


SCIOL2P\_NADUV5S02\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



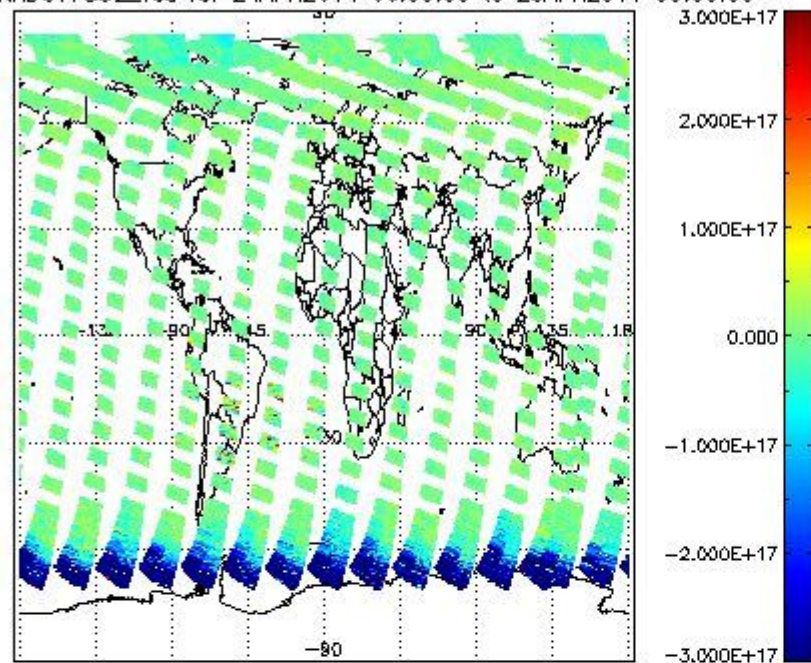
### 2.2.2.5 SO2 (UV7)



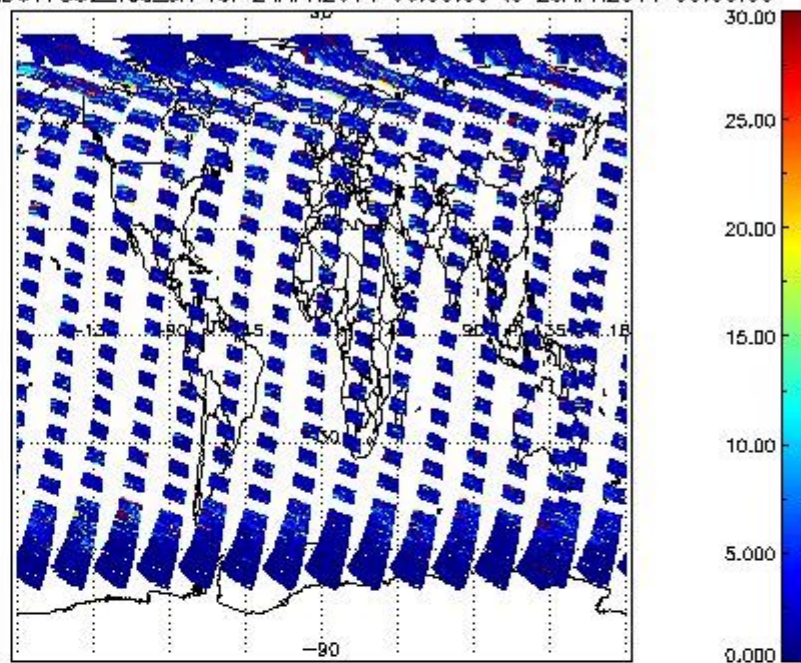




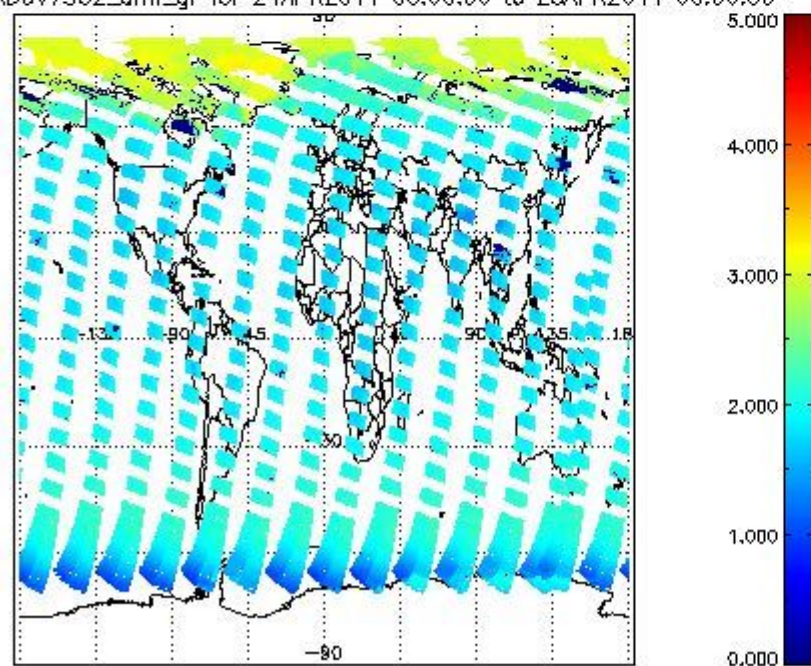
SCIOL2P\_NADUV7S02\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



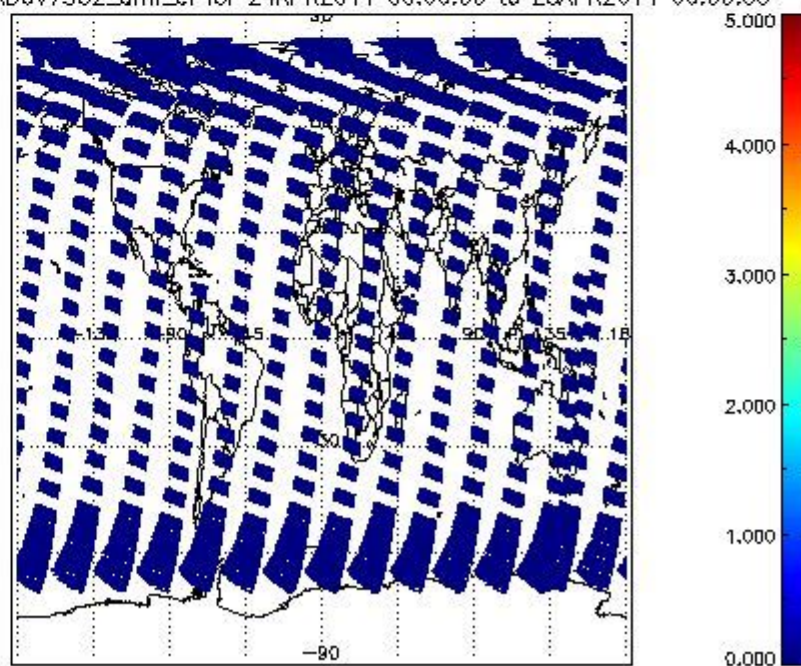
SCIOL2P\_NADUV7S02\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

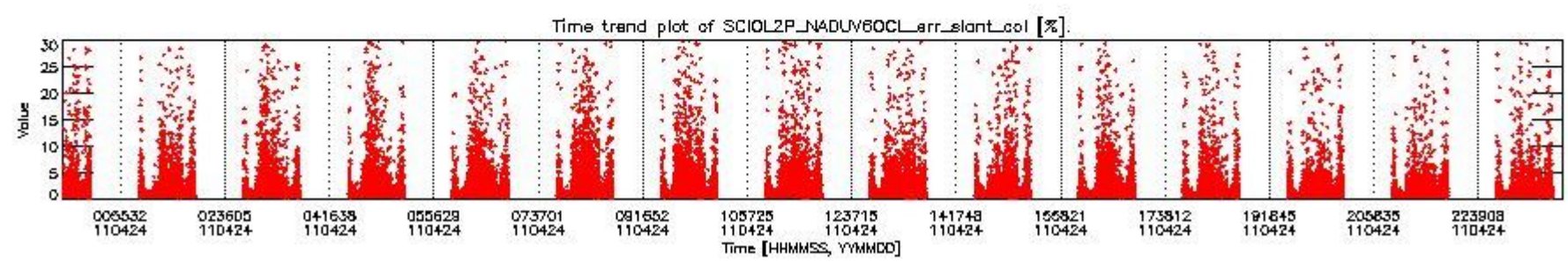
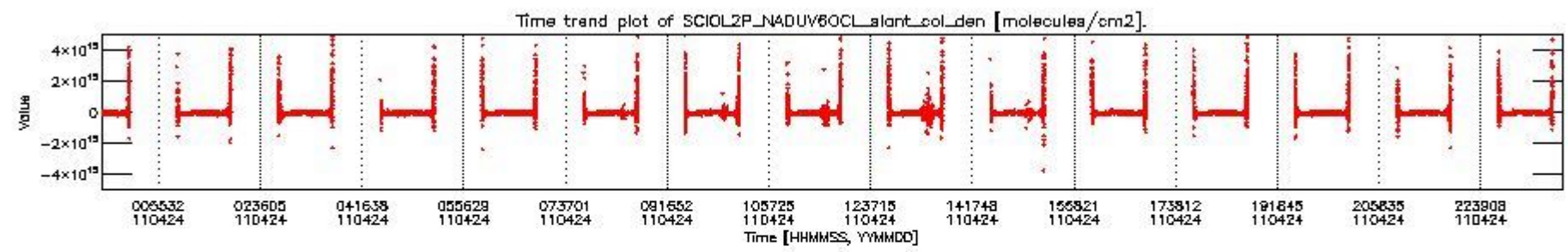


SCIOL2P\_NADUV7S02\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00

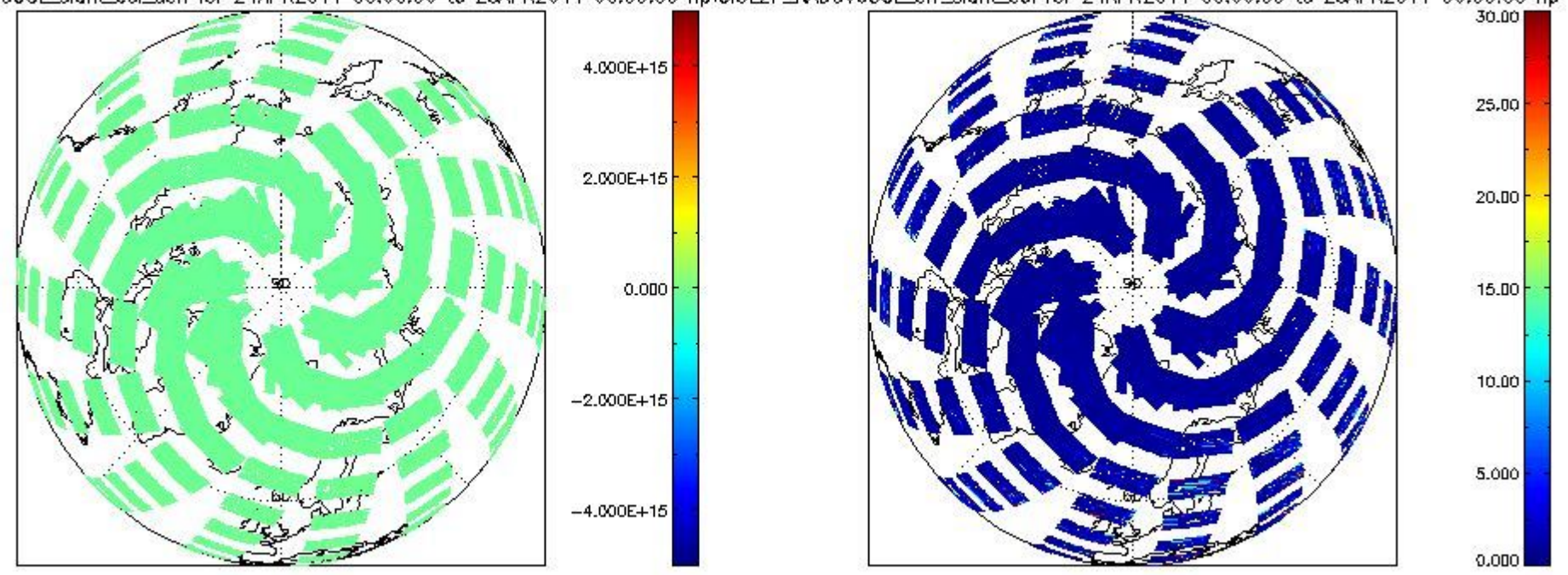


2.2.2.6 OCIO (UV6)



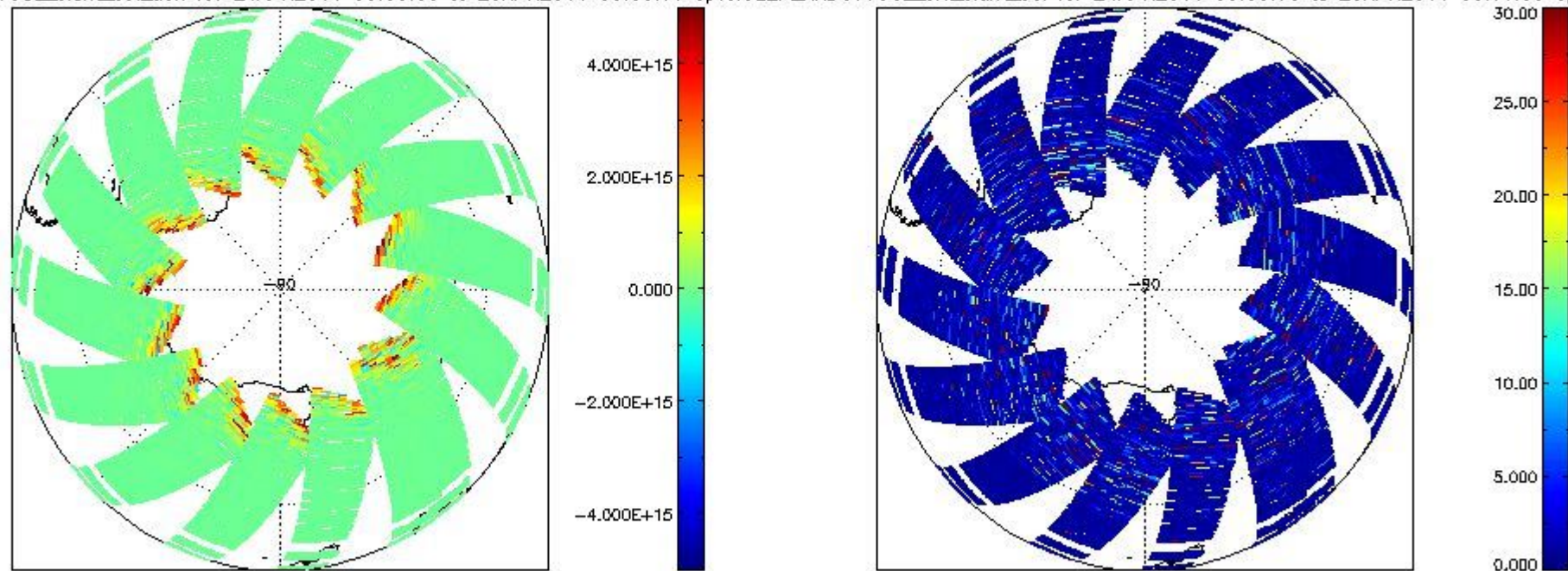


CIOL2P\_NADUV60CLslant\_col\_den for 24APR2011 00:00:00 to 25APR2011 00:00:00 np; CIOL2P\_NADUV60CLerr\_slant\_col for 24APR2011 00:00:00 to 25APR2011 00:00:00 np

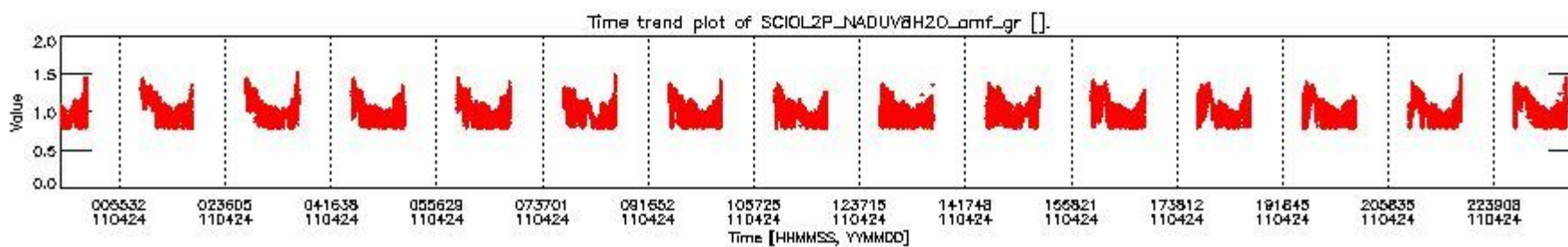
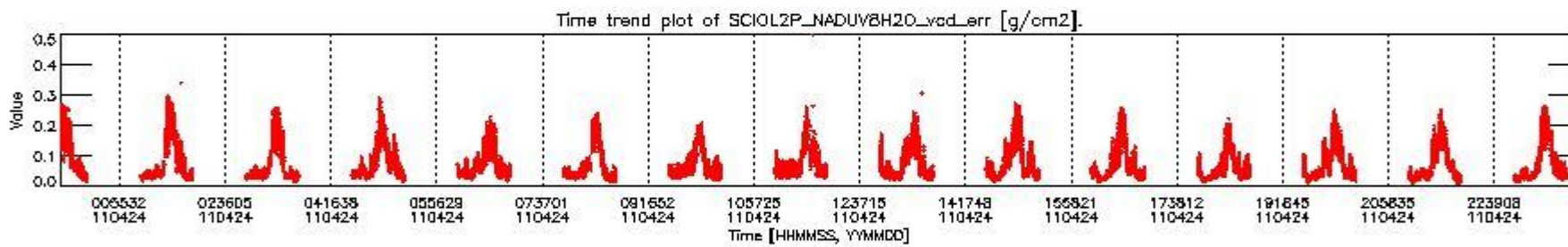
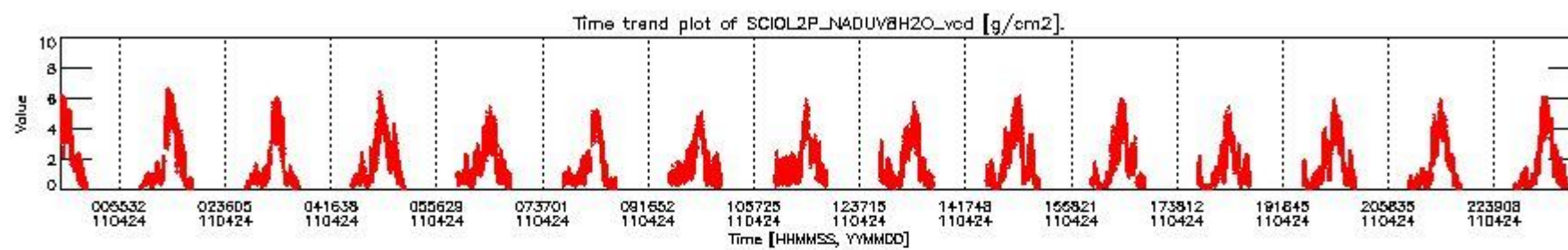




CIOL2P\_NADUV60CL\_slant\_col\_den for 24APR2011 00:00:00 to 25APR2011 00:00:00 sp | CIOL2P\_NADUV60CL\_err\_slant\_col for 24APR2011 00:00:00 to 25APR2011 00:00:00 sp

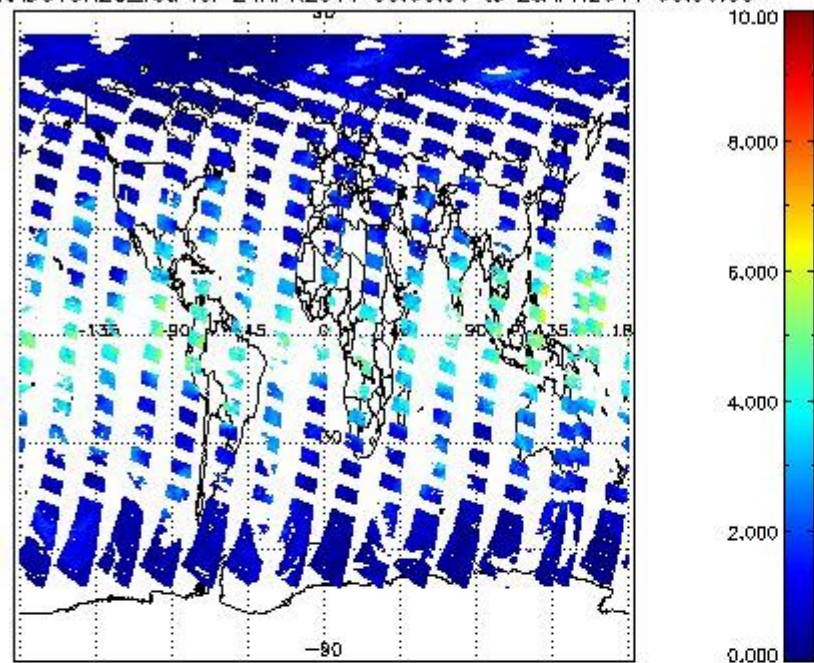


### 2.2.2.7 H2O (UV8)

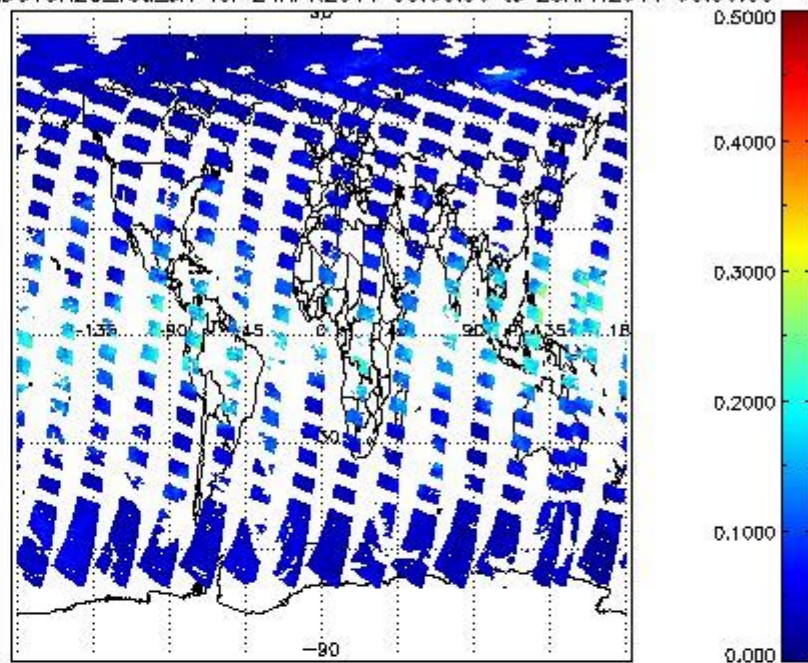




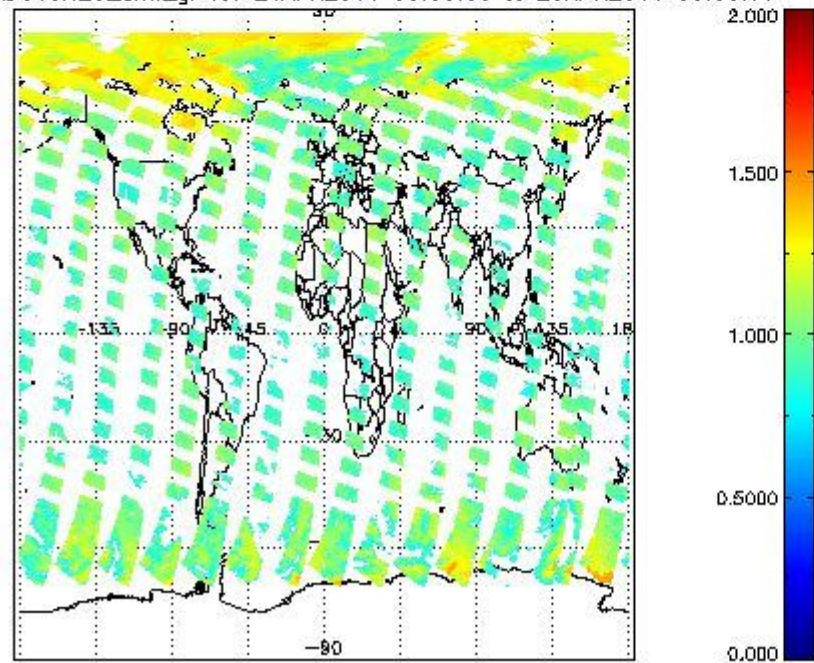
SCIOL2P\_NADUV8H2O\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADUV8H2O\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

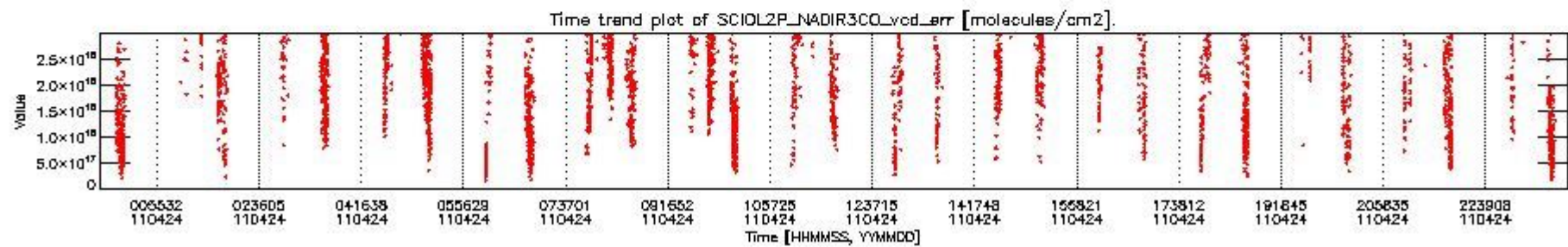
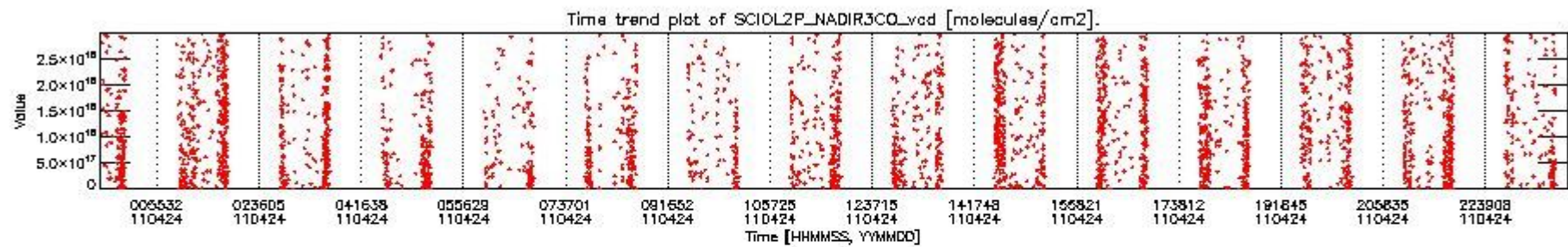


SCIOL2P\_NADUV8H2O\_arnf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00

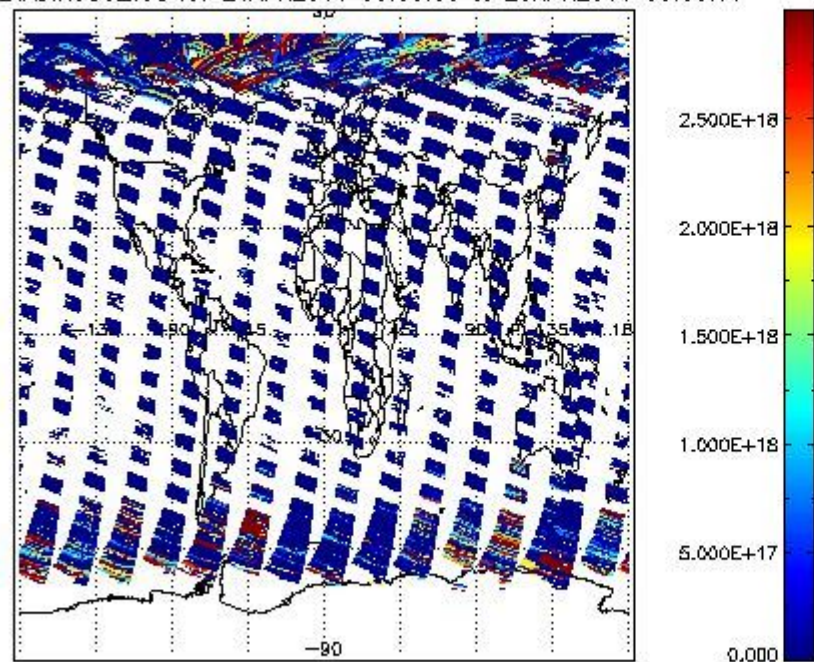


2.2.2.8 CO (IR3)

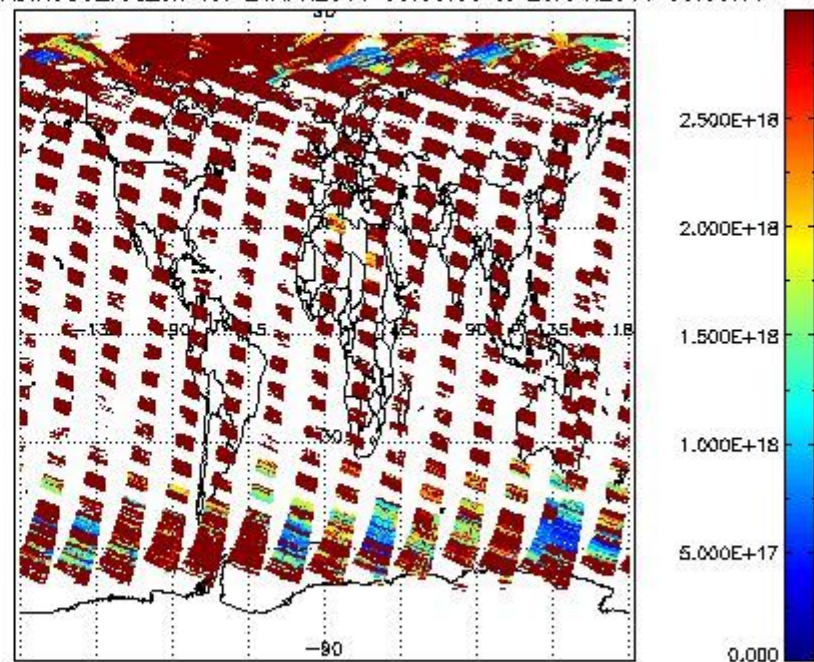




SCIOL2P\_NADIR3CO\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 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.

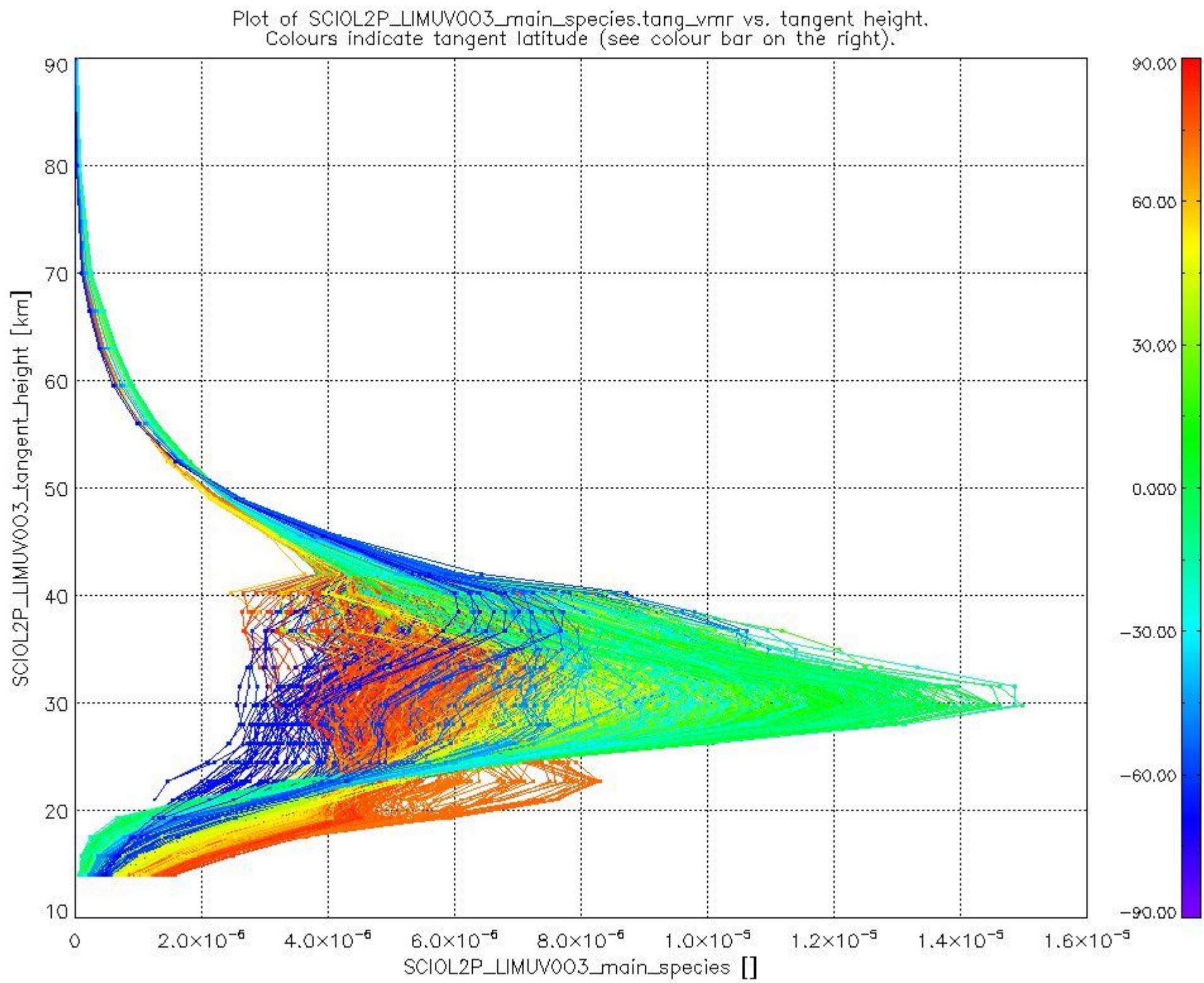
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_LIMUV003_main_species
1	SCIOL2P_LIMUV1NO2_main_species
2	SCIOL2P_LIMUV3BRO_main_species



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

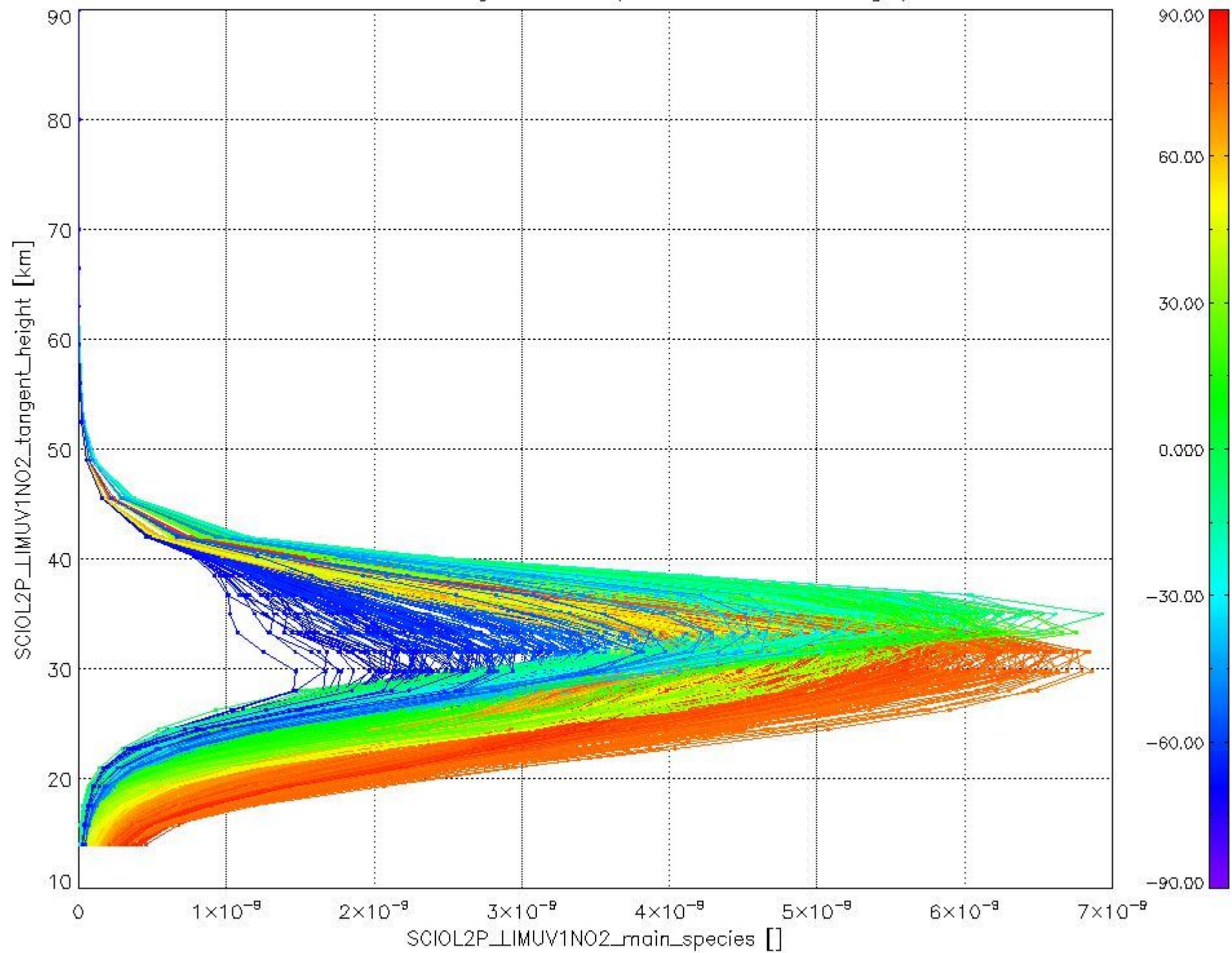
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



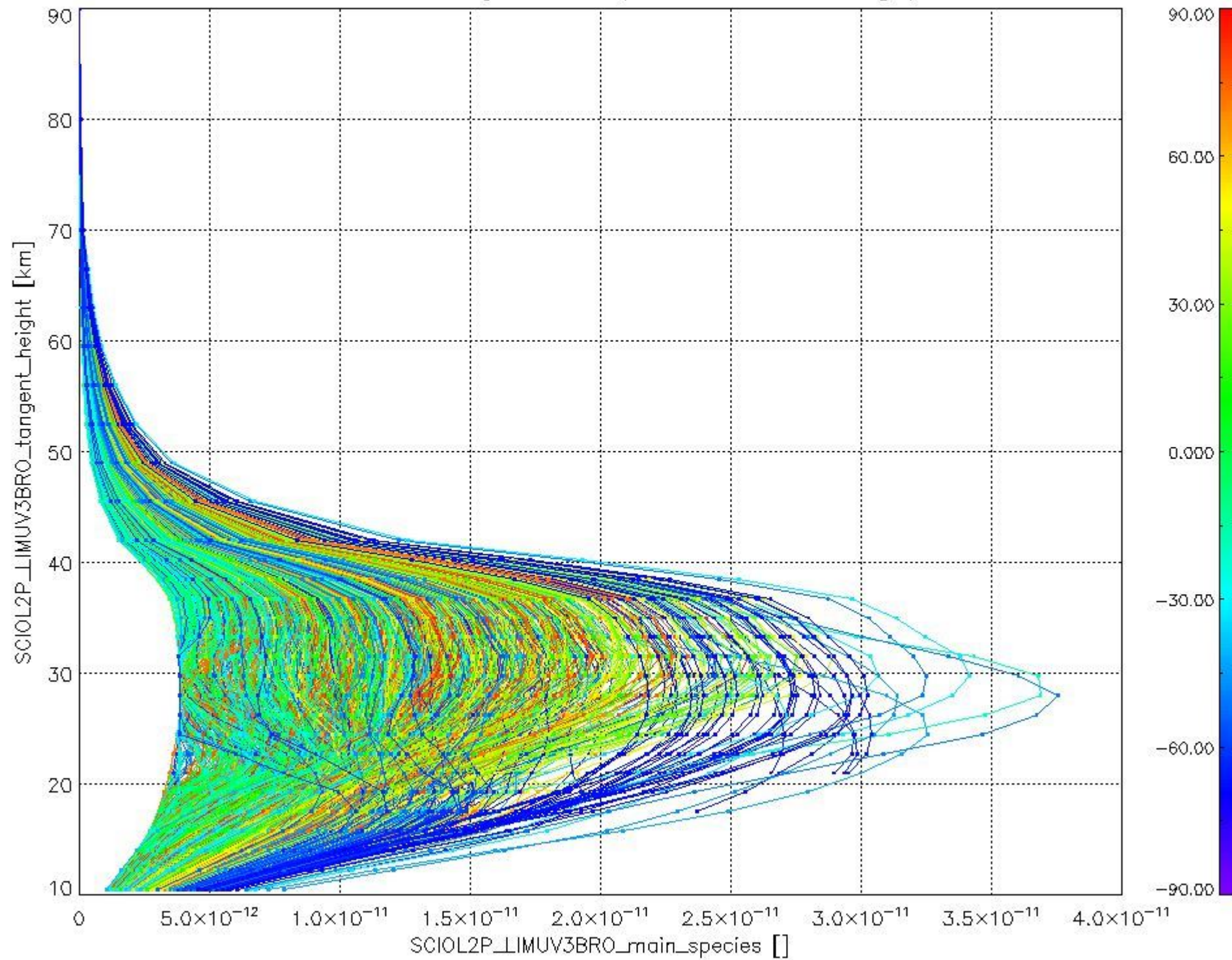
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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

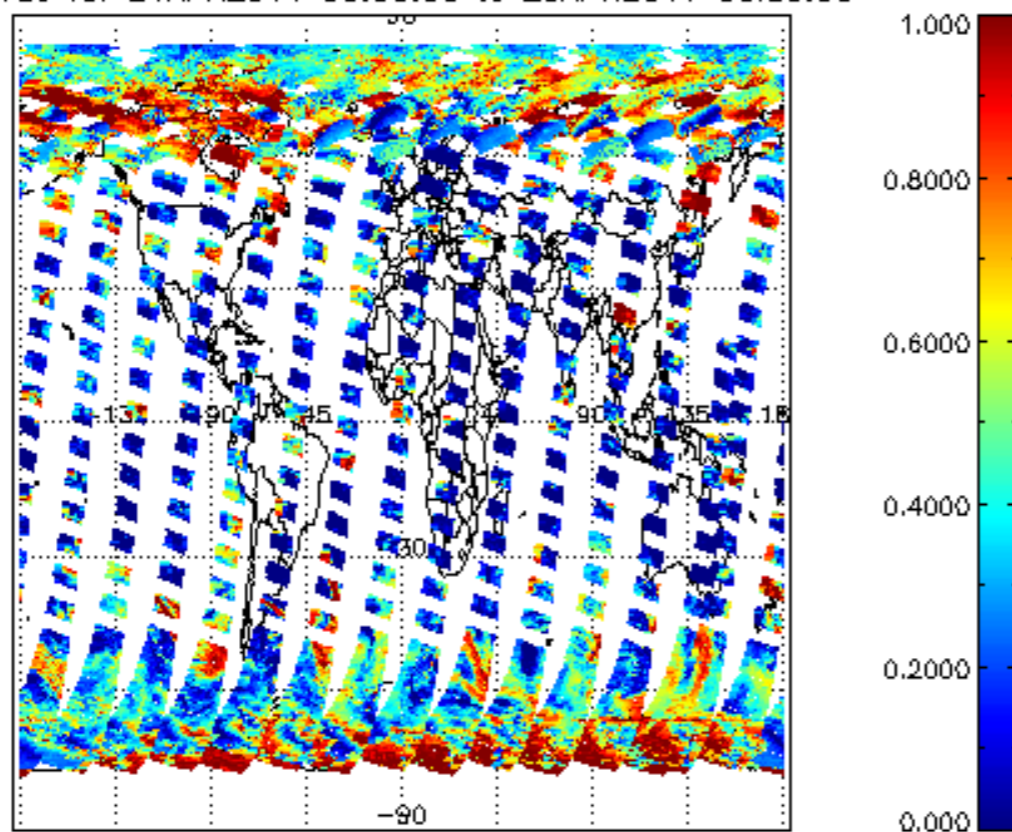
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110426_112015_20110423_194141_20110425_194141
3	SCI_MF1_AXVIEC20110426_112121_20110424_190456_20110426_190456



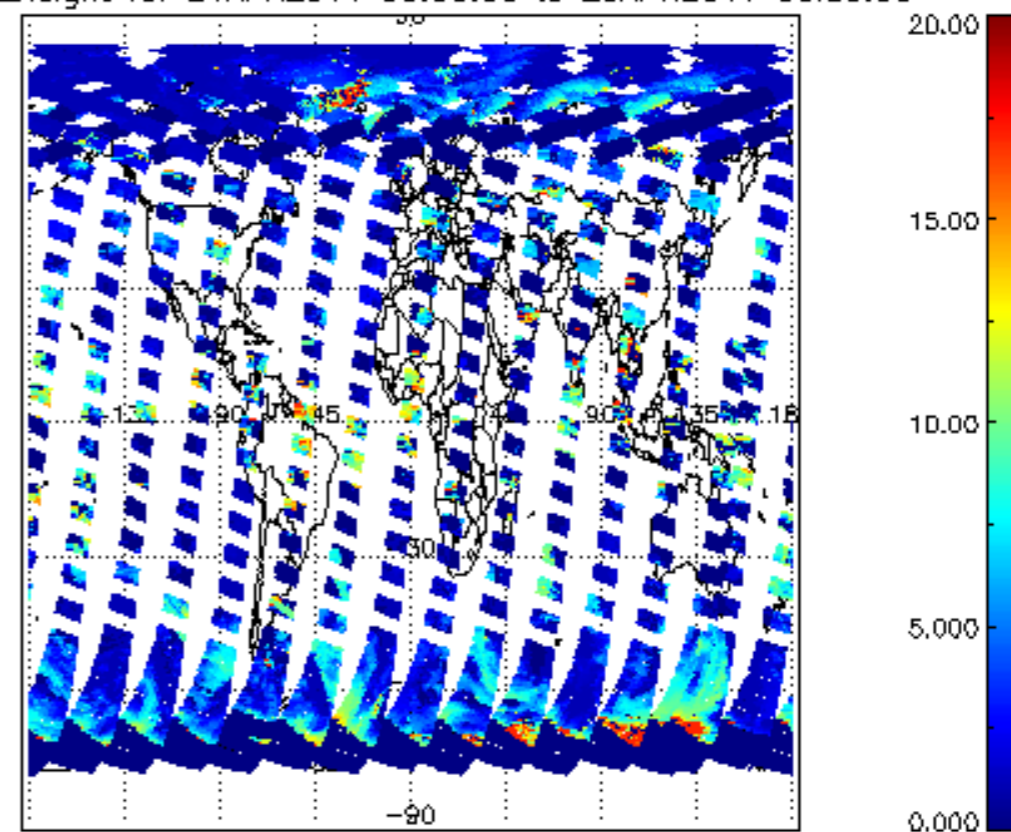




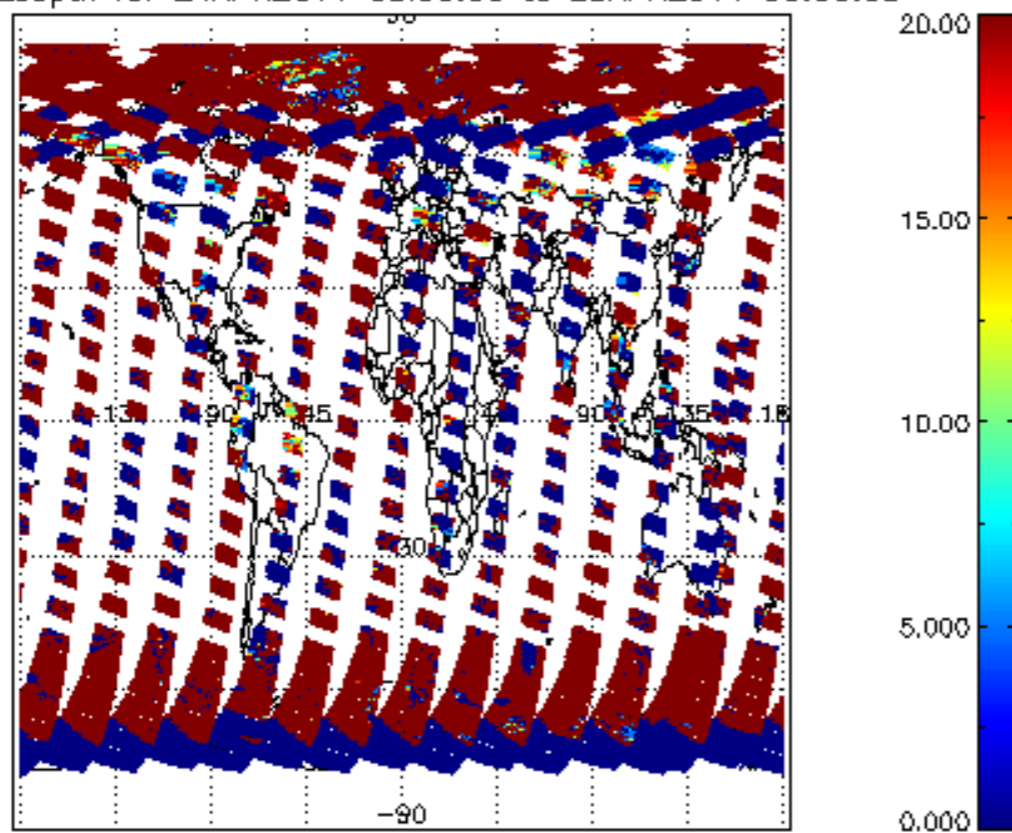
cL\_frac for 24APR2011 00:00:00 to 25APR2011 00:00:00



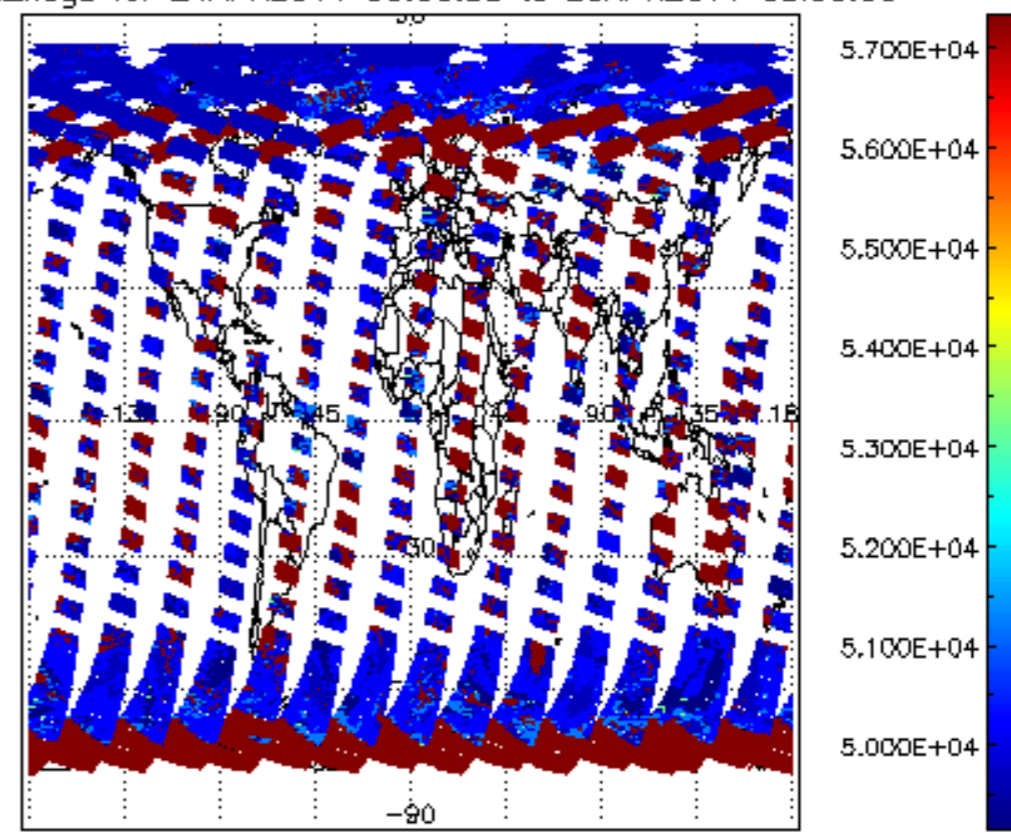
cL\_top\_height for 24APR2011 00:00:00 to 25APR2011 00:00:00

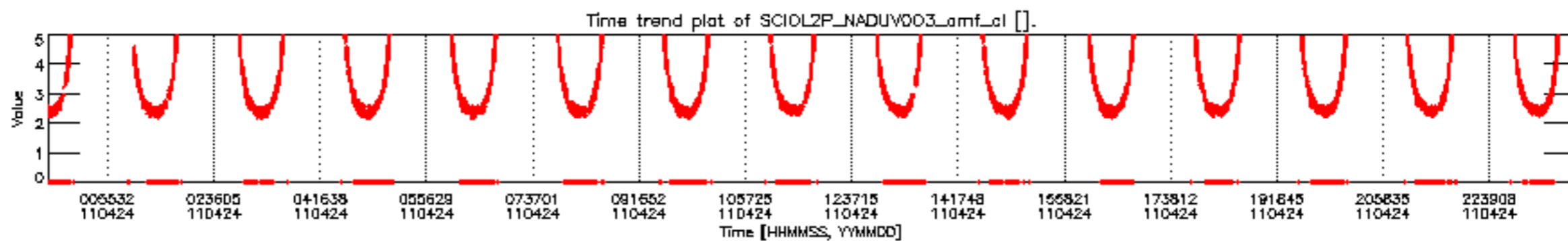
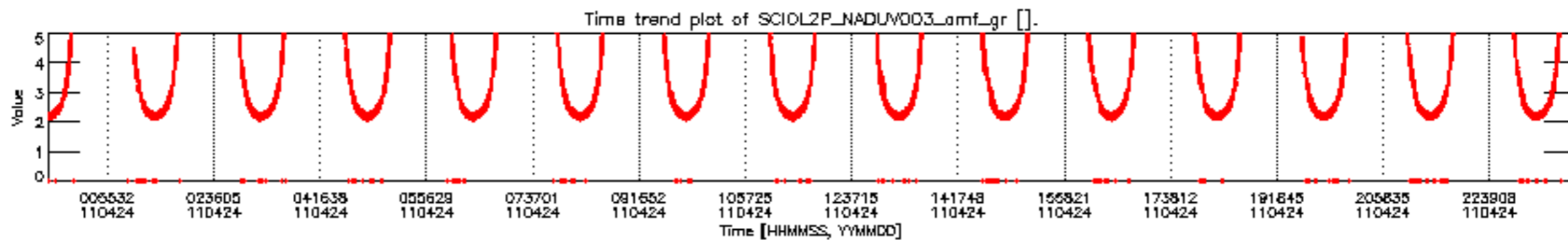
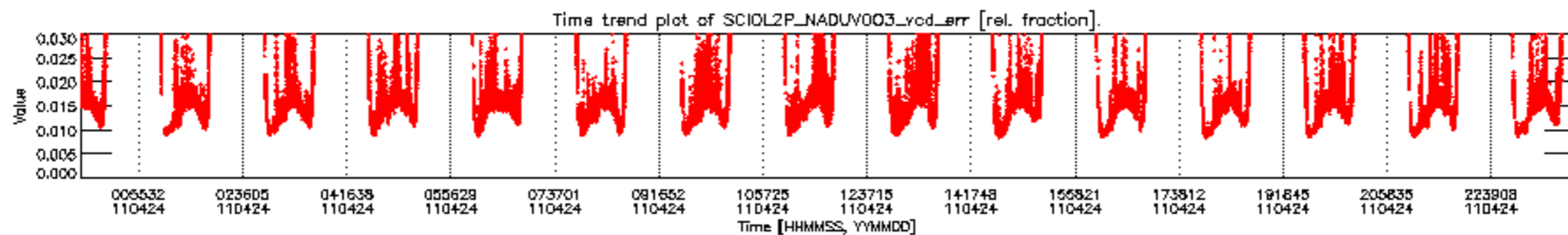
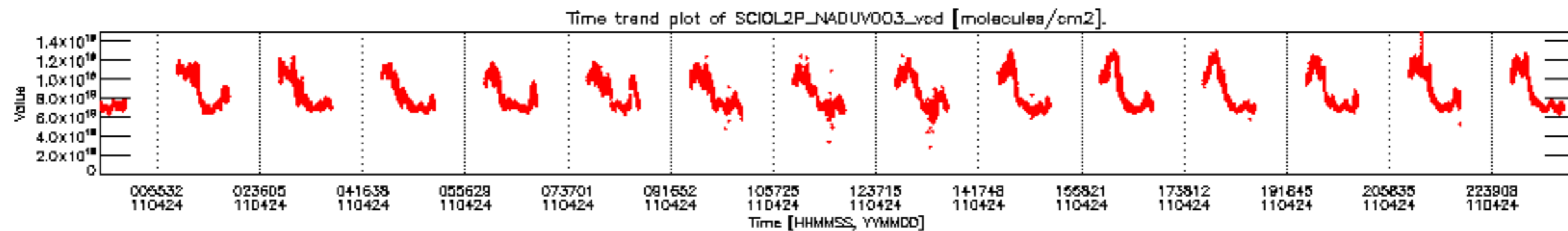


cL\_opt\_depth for 24APR2011 00:00:00 to 25APR2011 00:00:00



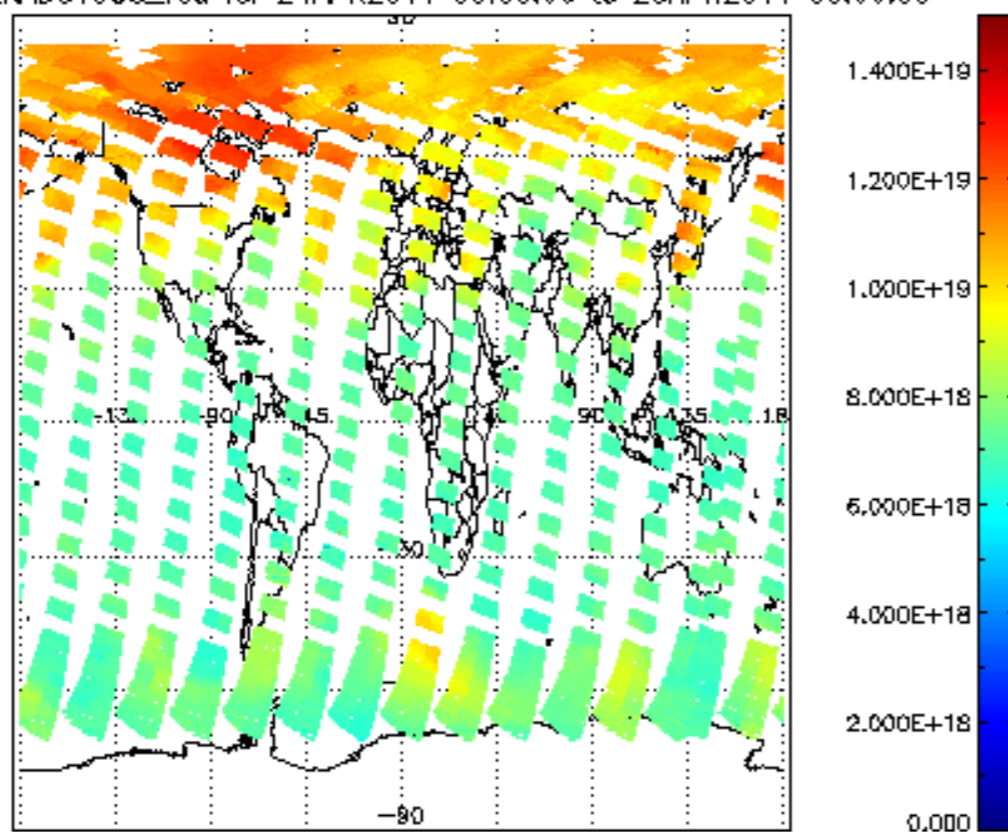
cloud\_flags for 24APR2011 00:00:00 to 25APR2011 00:00:00



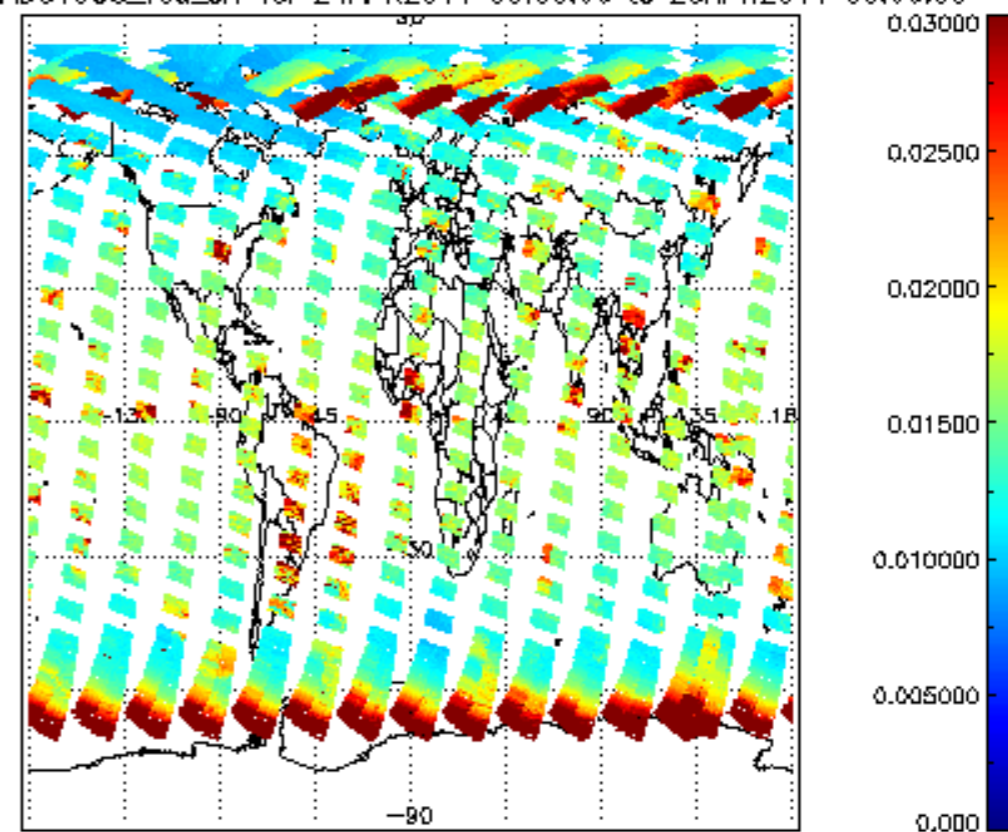




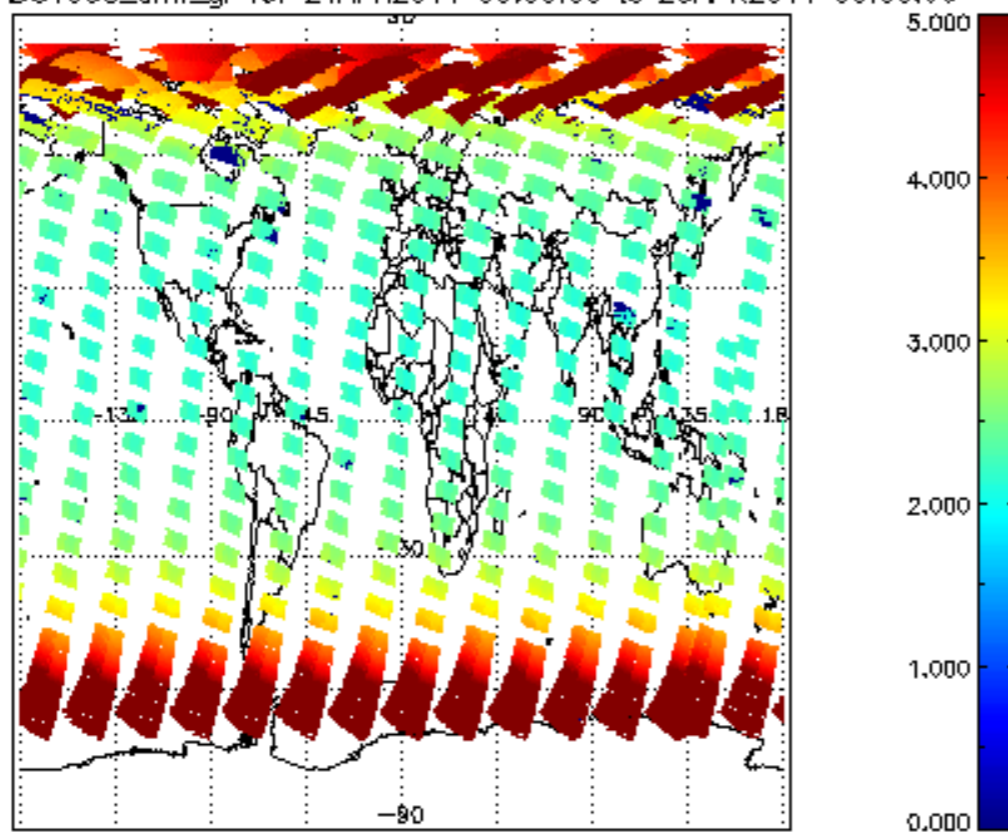
SCIOL2P\_NADUV003\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



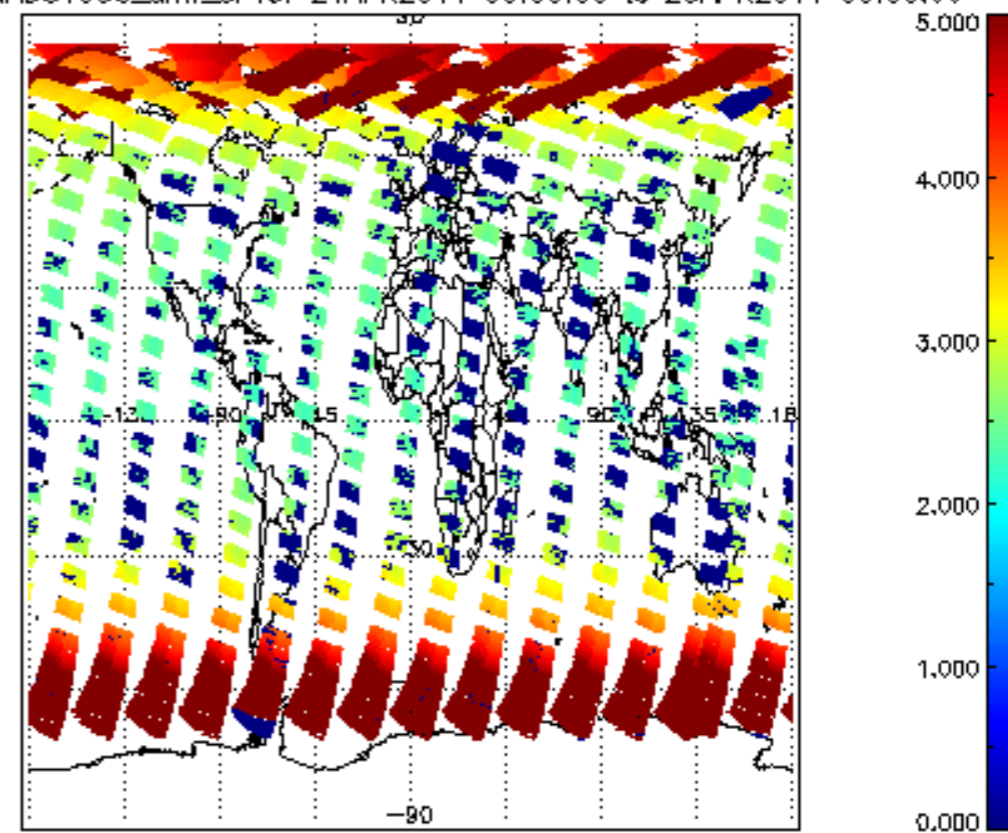
SCIOL2P\_NADUV003\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

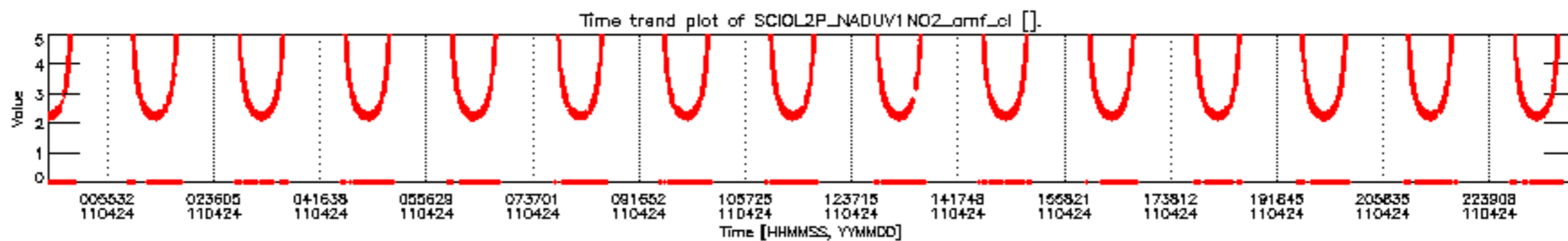
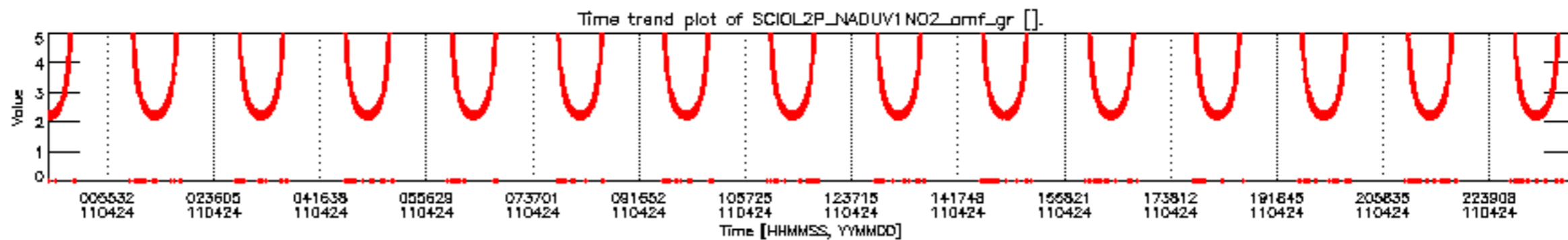
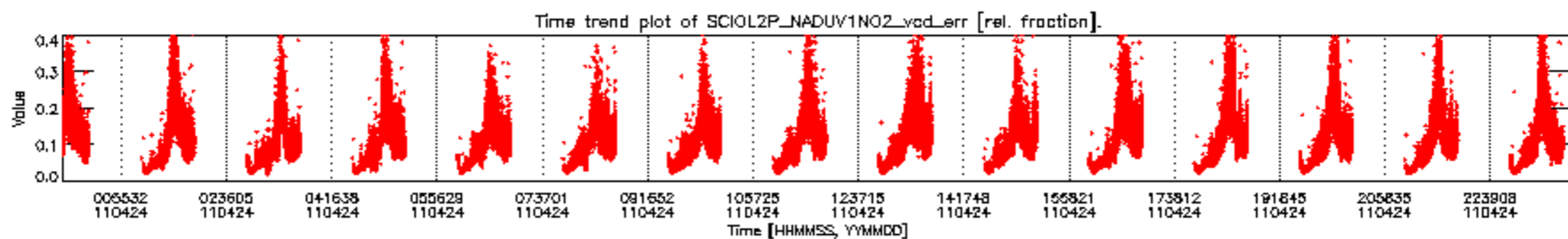
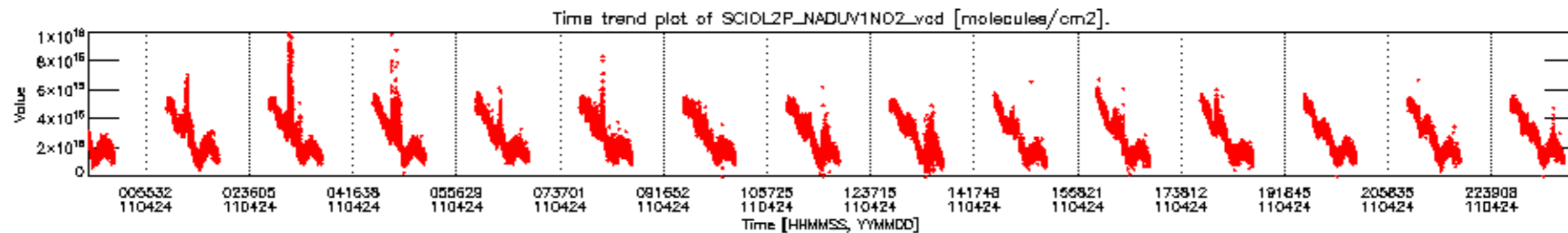


SCIOL2P\_NADUV003\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



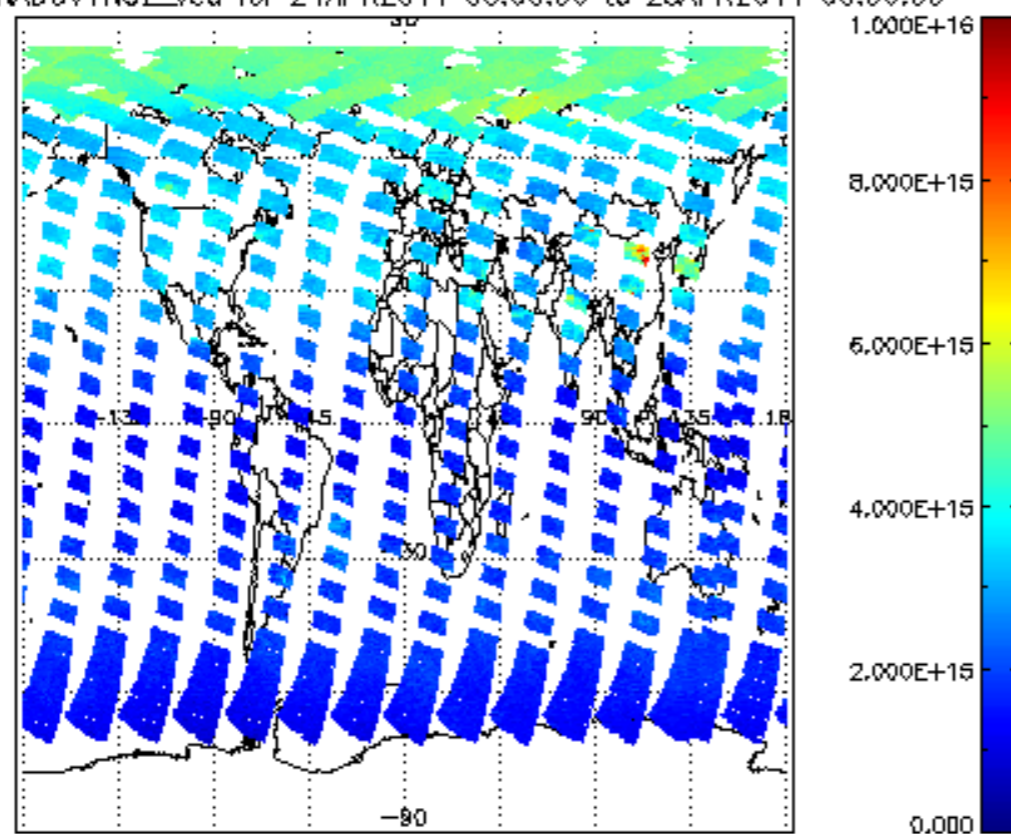
SCIOL2P\_NADUV003\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



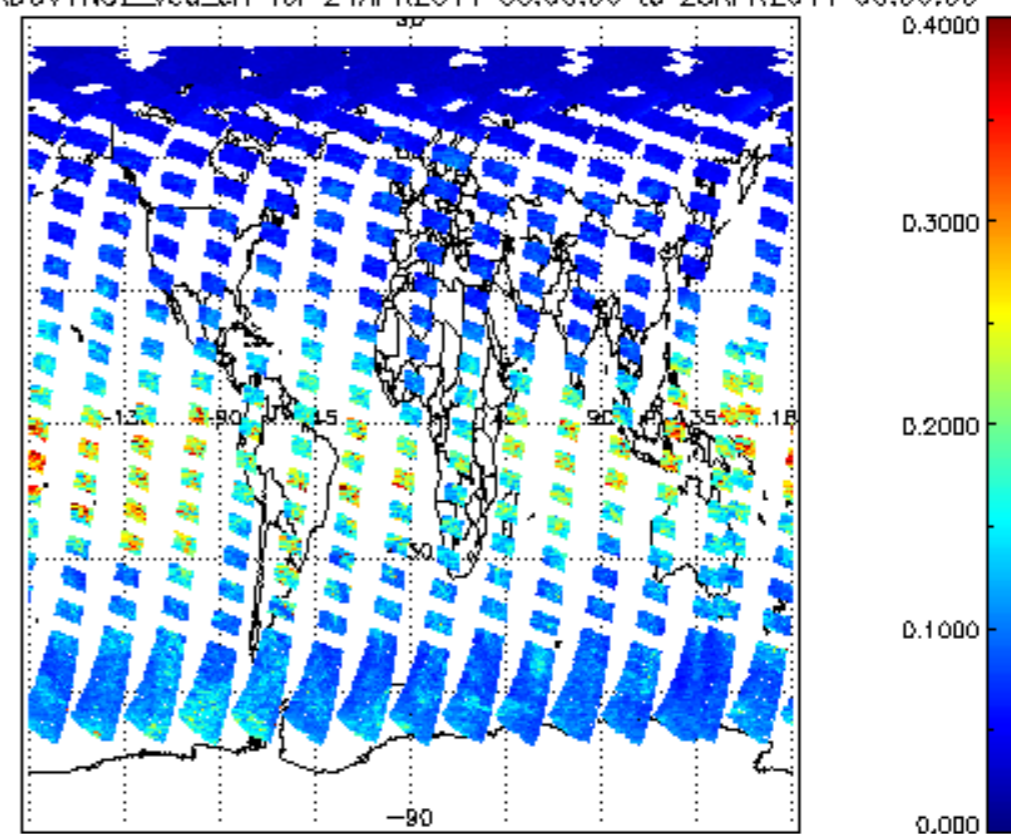




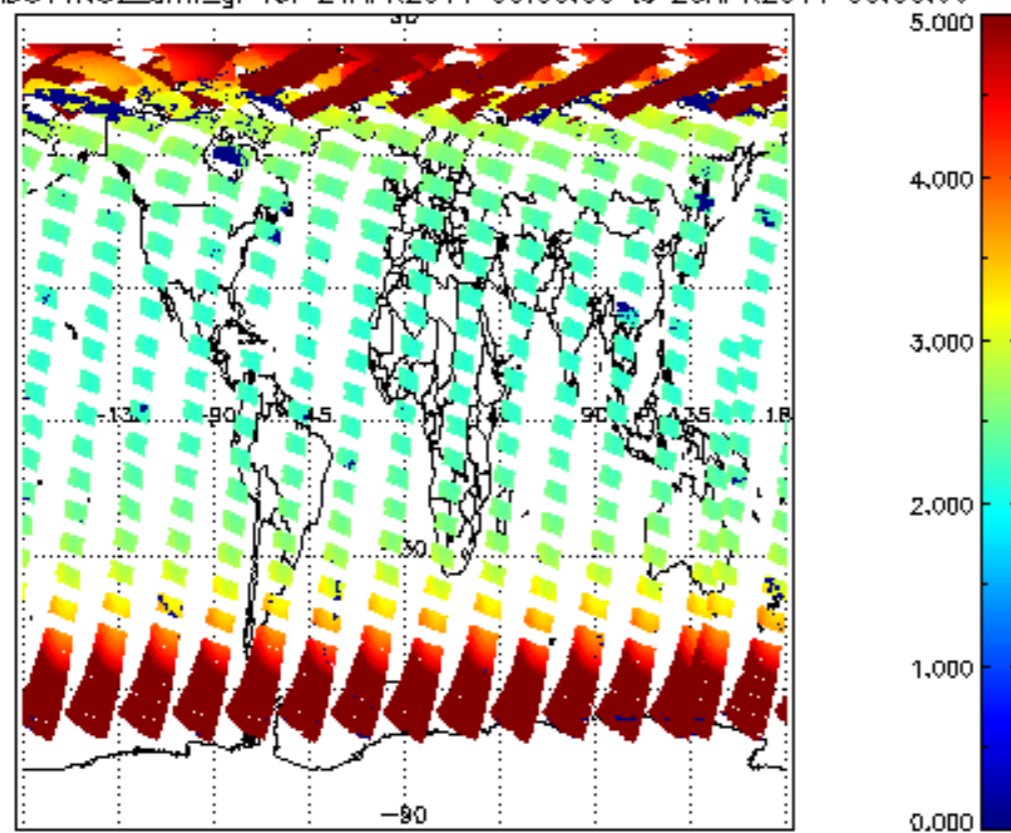
SCIOL2P\_NADUV1NO2\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



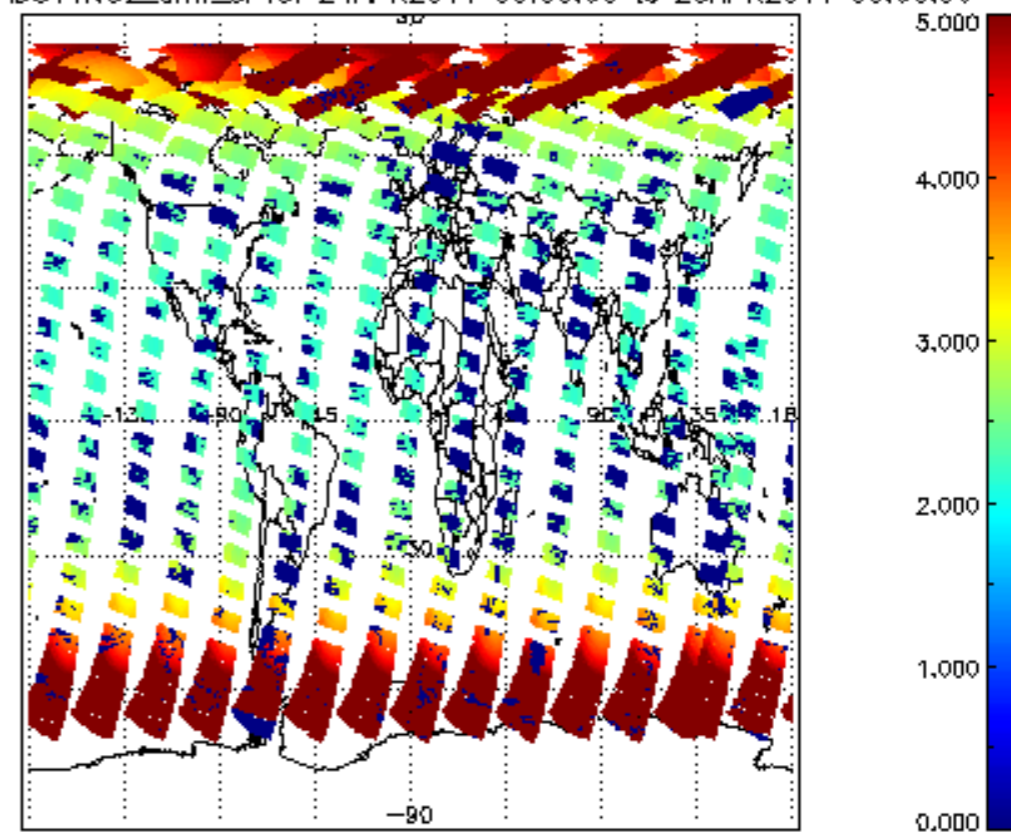
SCIOL2P\_NADUV1NO2\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

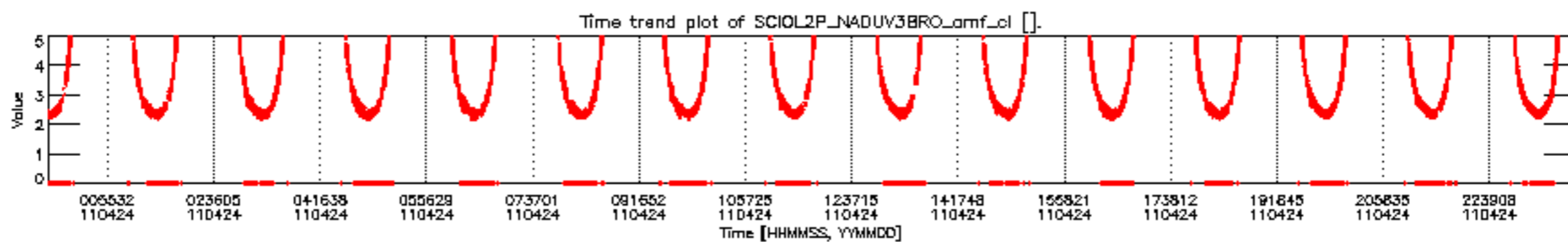
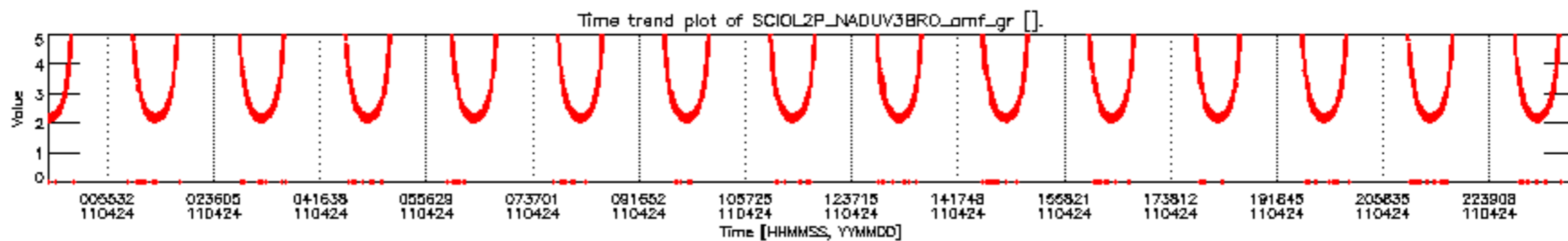
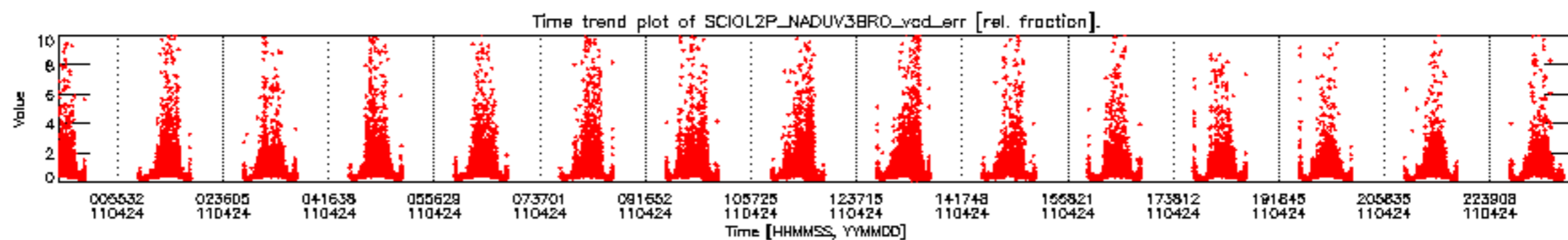
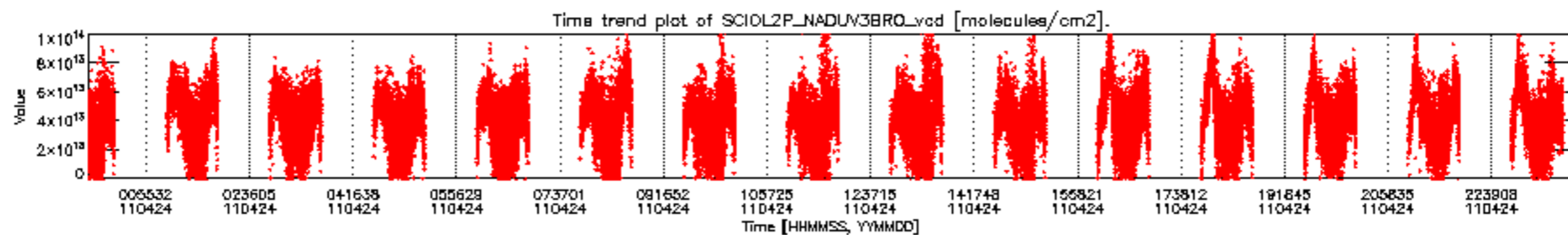


SCIOL2P\_NADUV1NO2\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



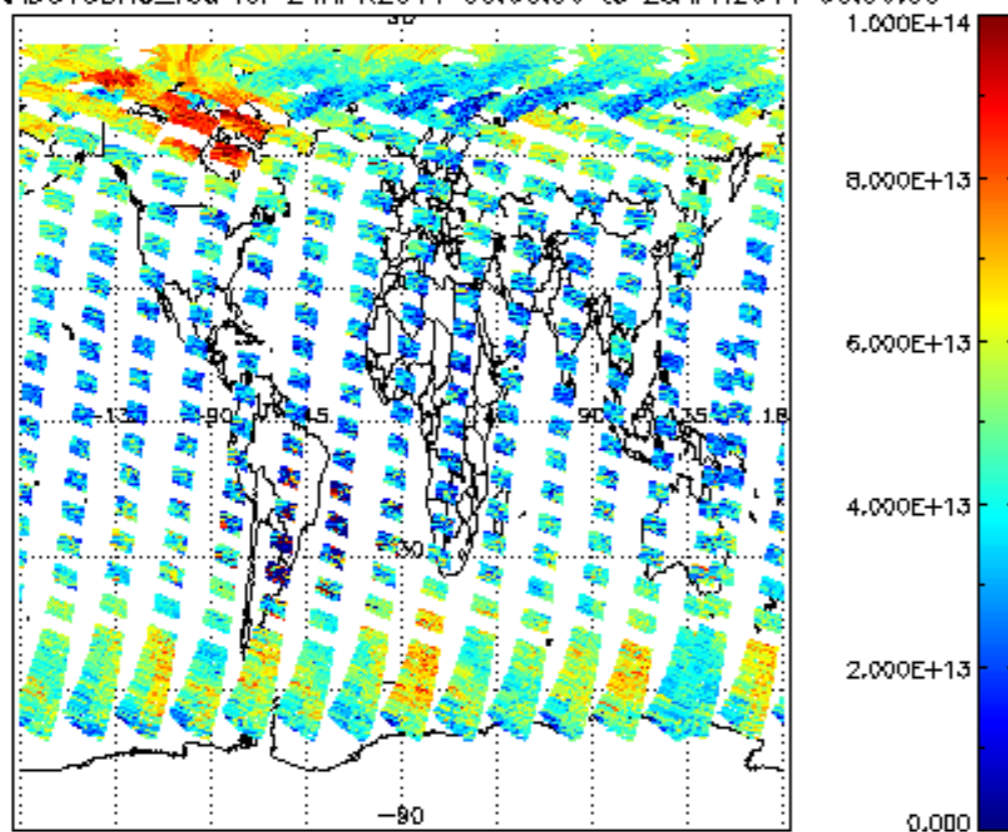
SCIOL2P\_NADUV1NO2\_amf\_sl for 24APR2011 00:00:00 to 25APR2011 00:00:00



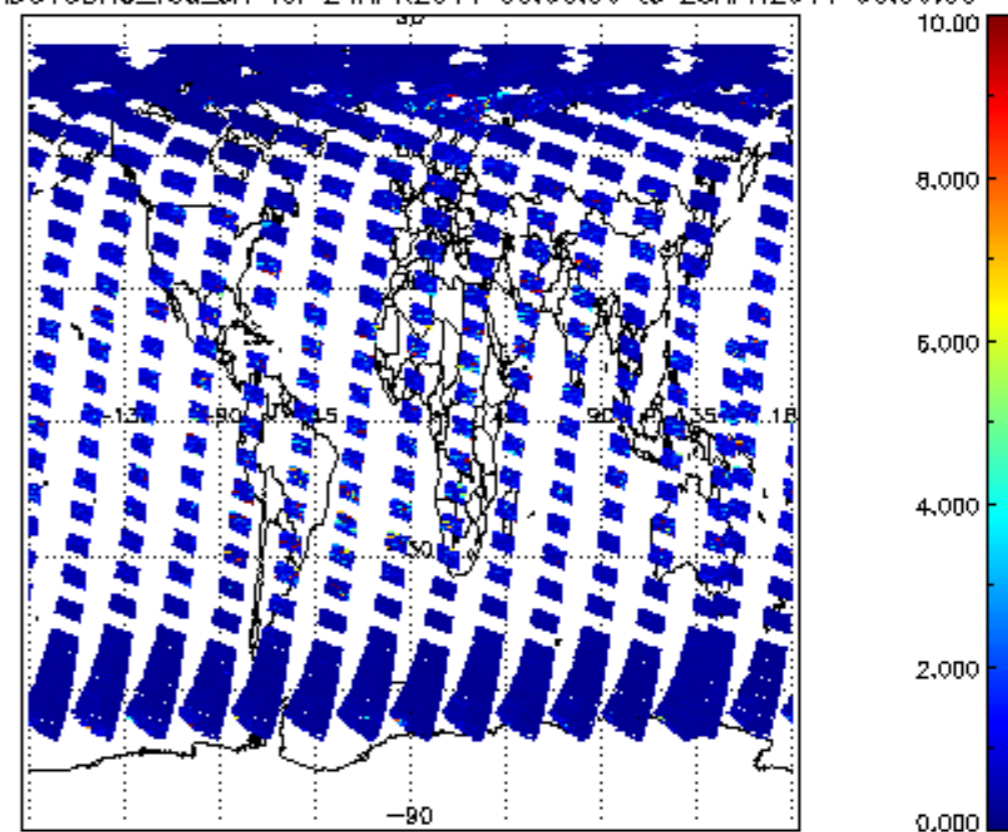




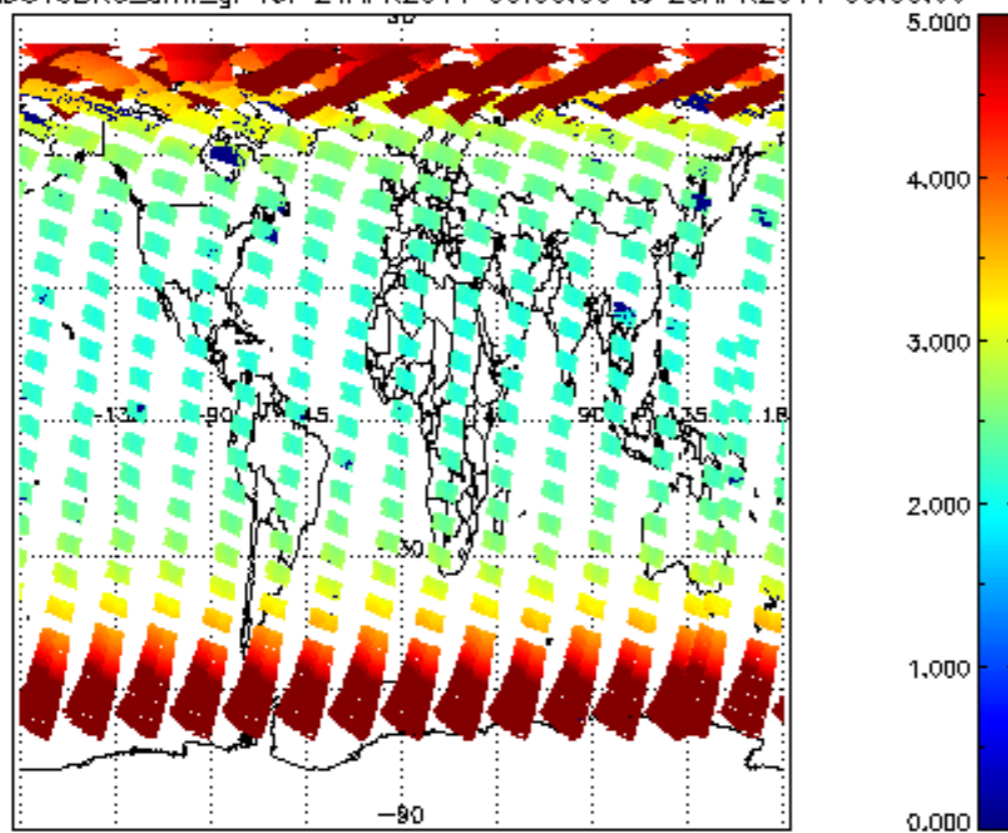
SCIOL2P\_NADUV3BRO\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



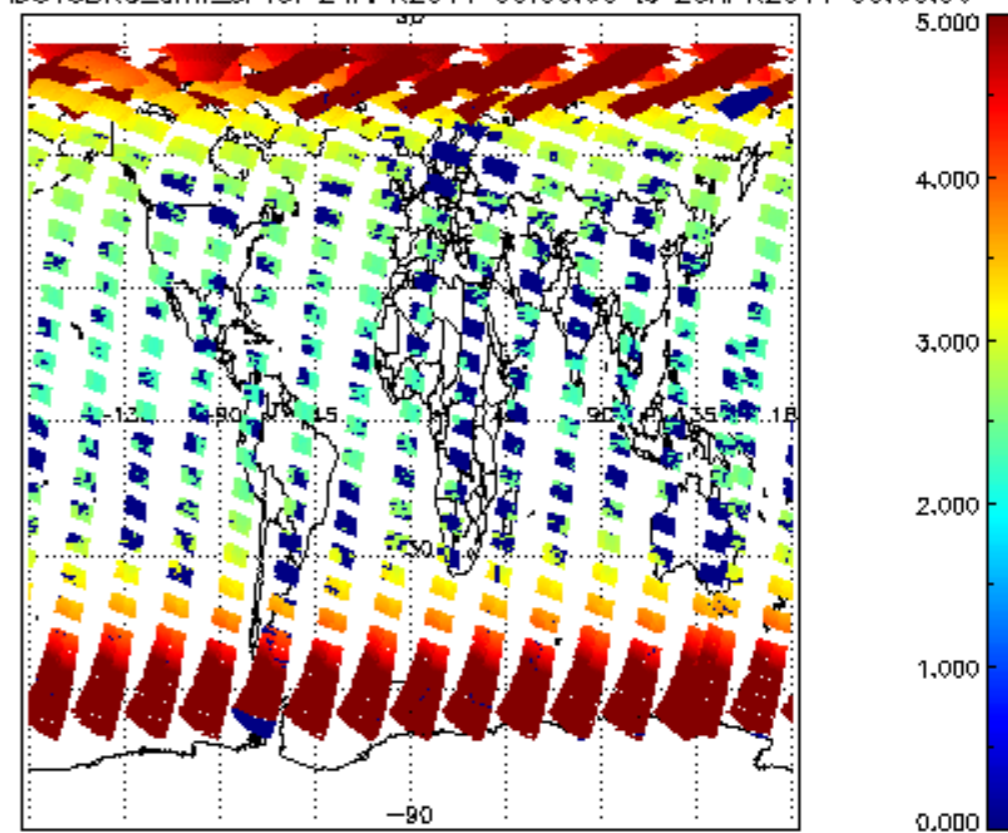
SCIOL2P\_NADUV3BRO\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

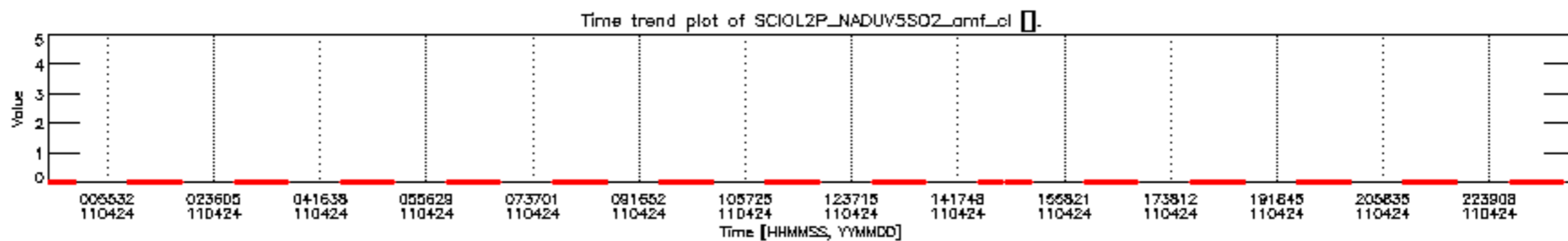
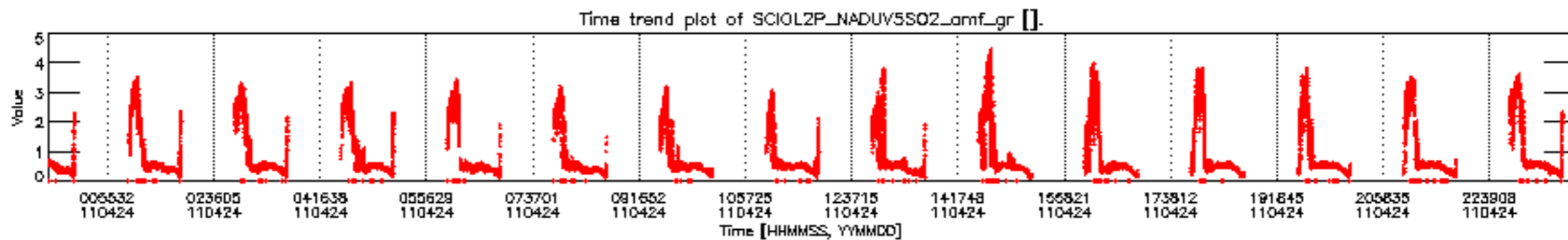
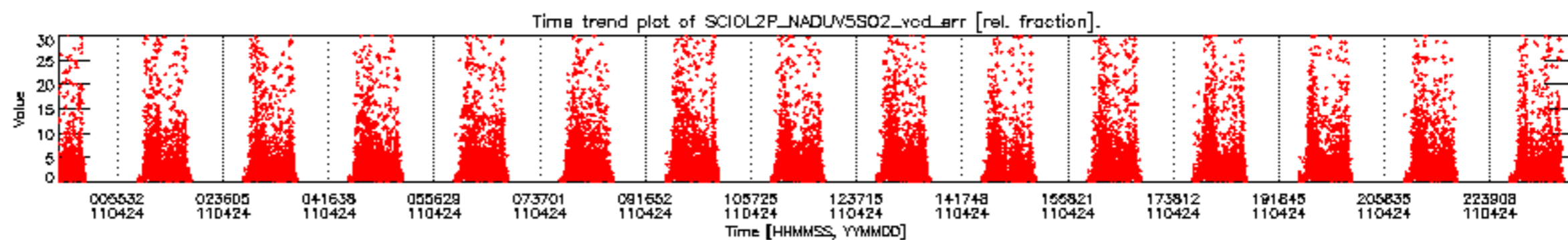
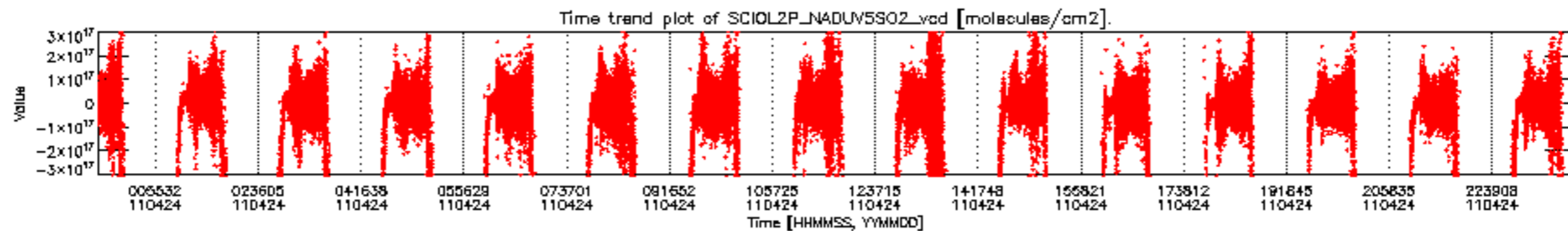


SCIOL2P\_NADUV3BRO\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



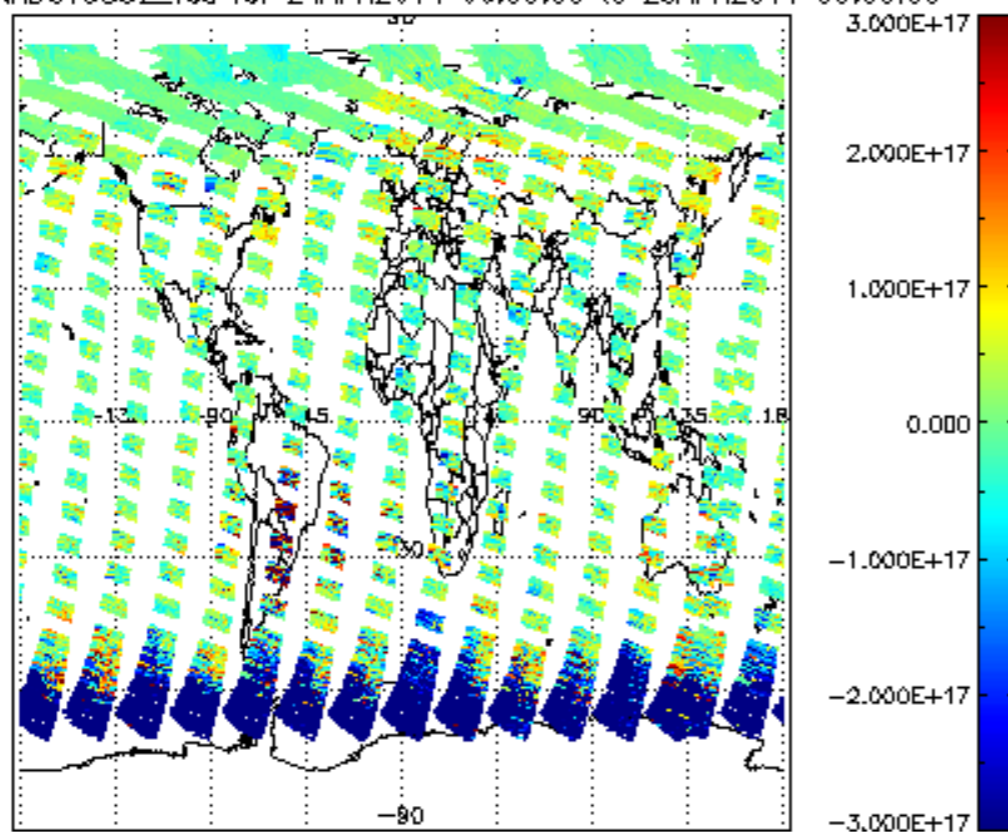
SCIOL2P\_NADUV3BRO\_amf\_sl for 24APR2011 00:00:00 to 25APR2011 00:00:00



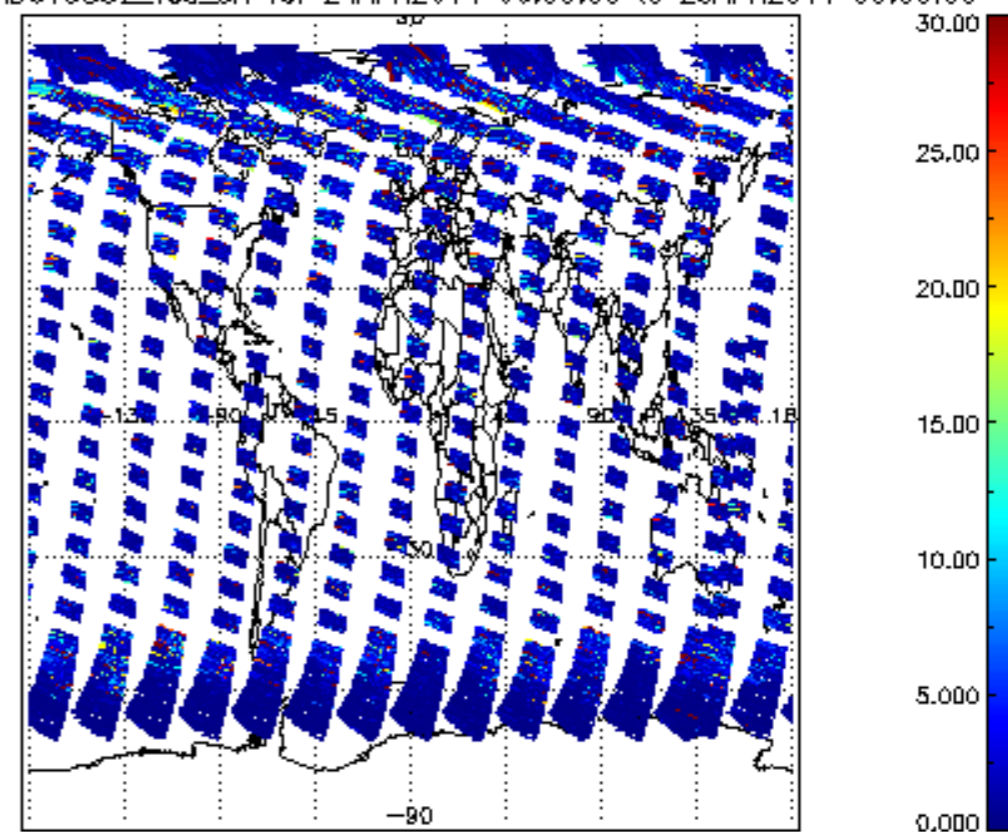




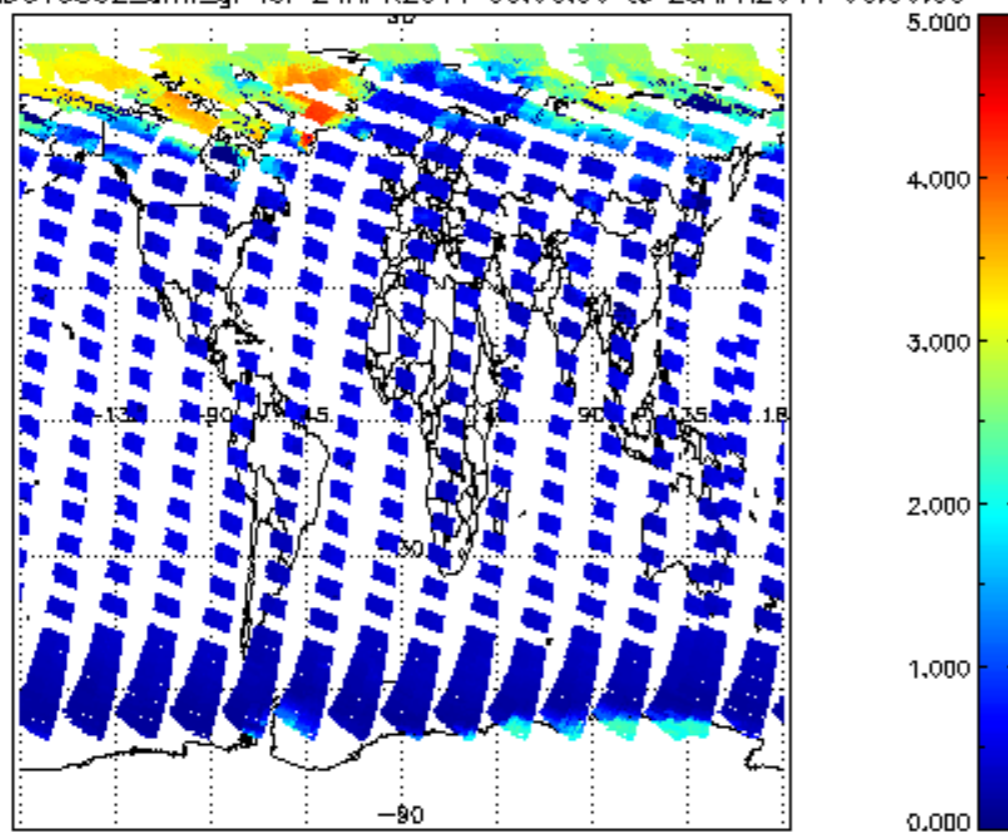
SCIOL2P\_NADUV5S02\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



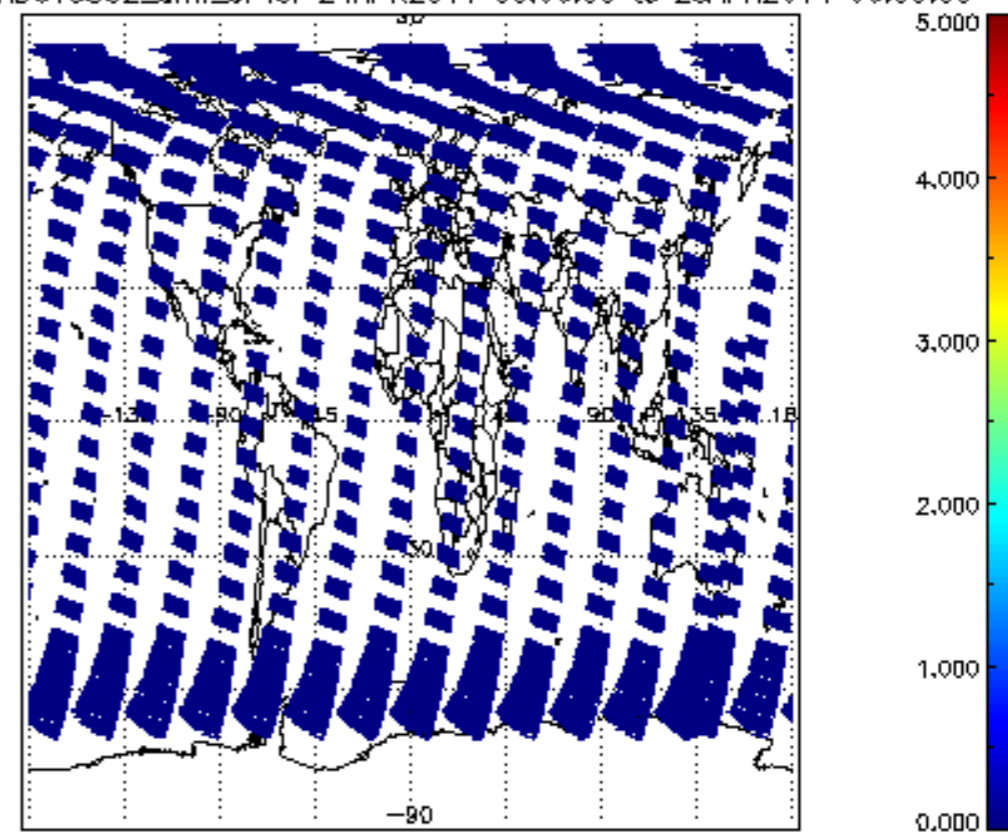
SCIOL2P\_NADUV5S02\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

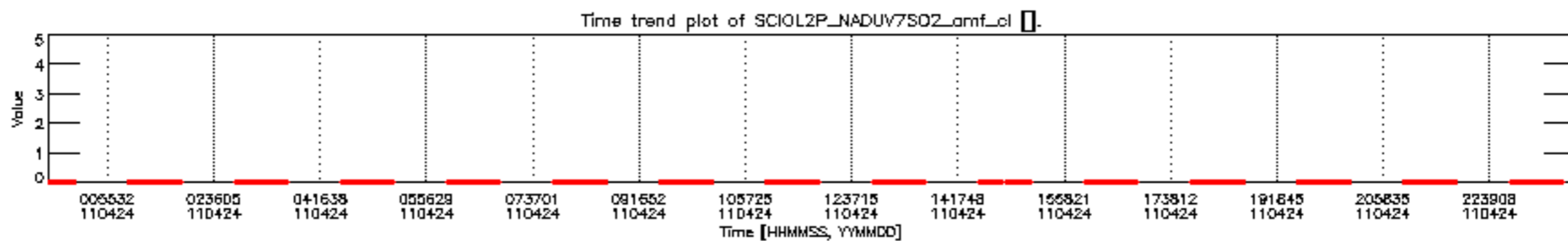
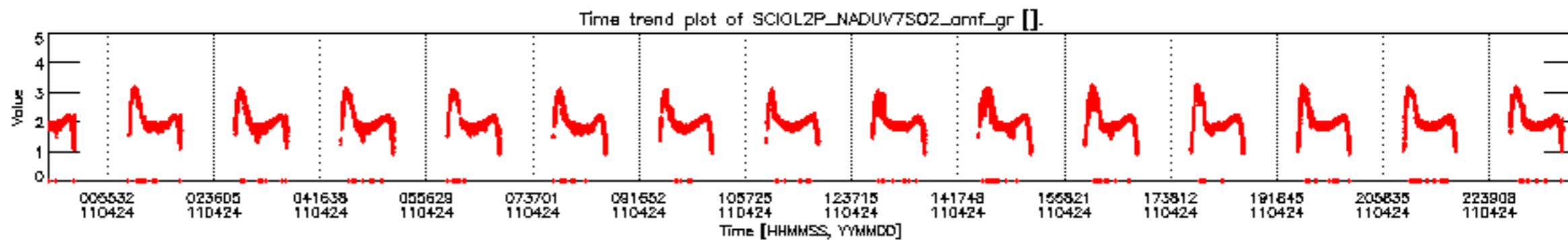
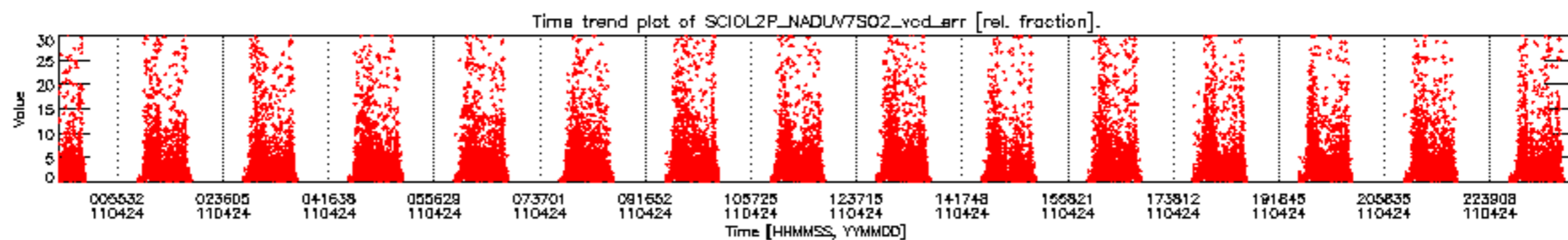
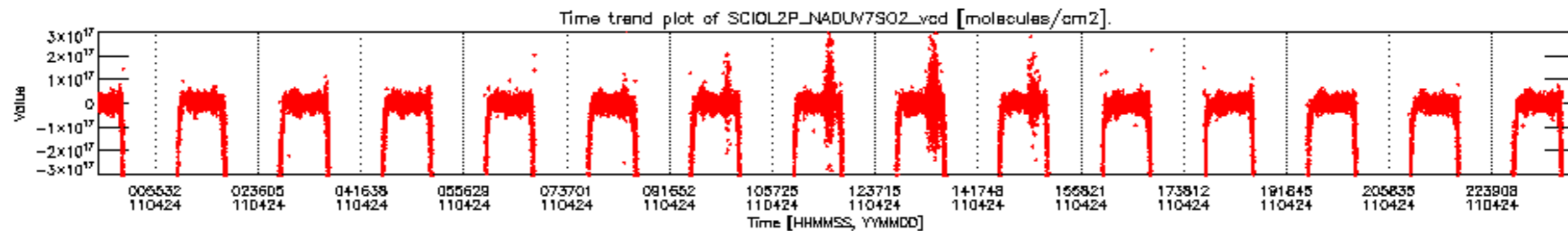


SCIOL2P\_NADUV5S02\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



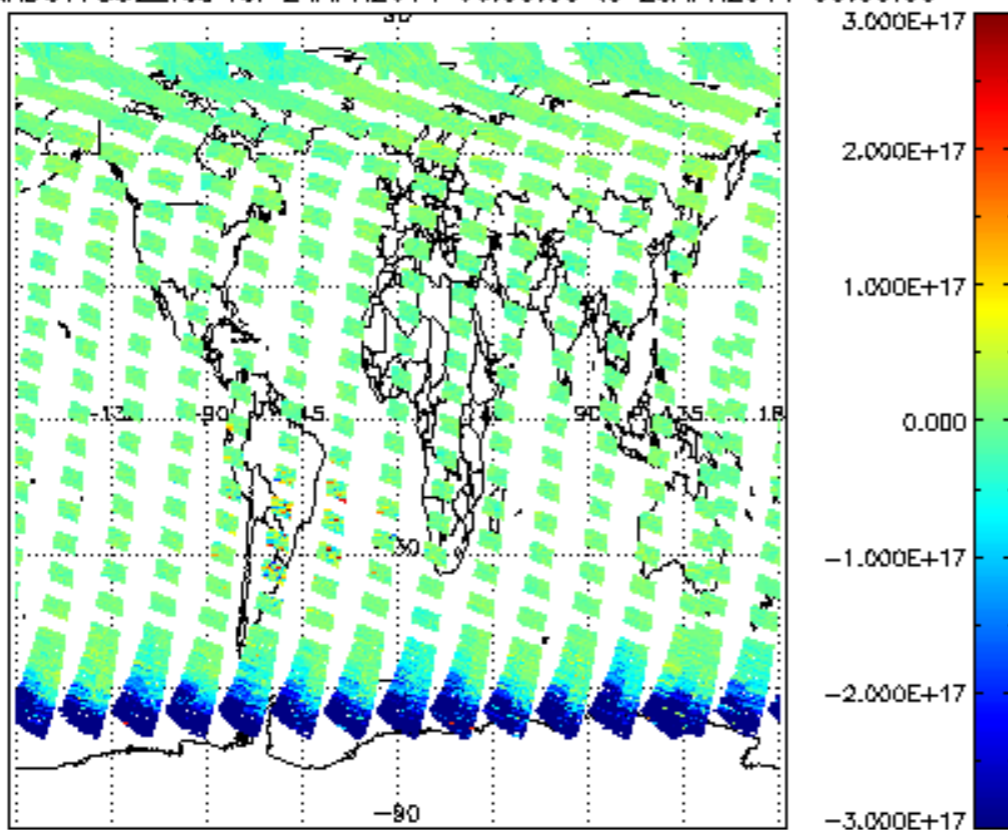
SCIOL2P\_NADUV5S02\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



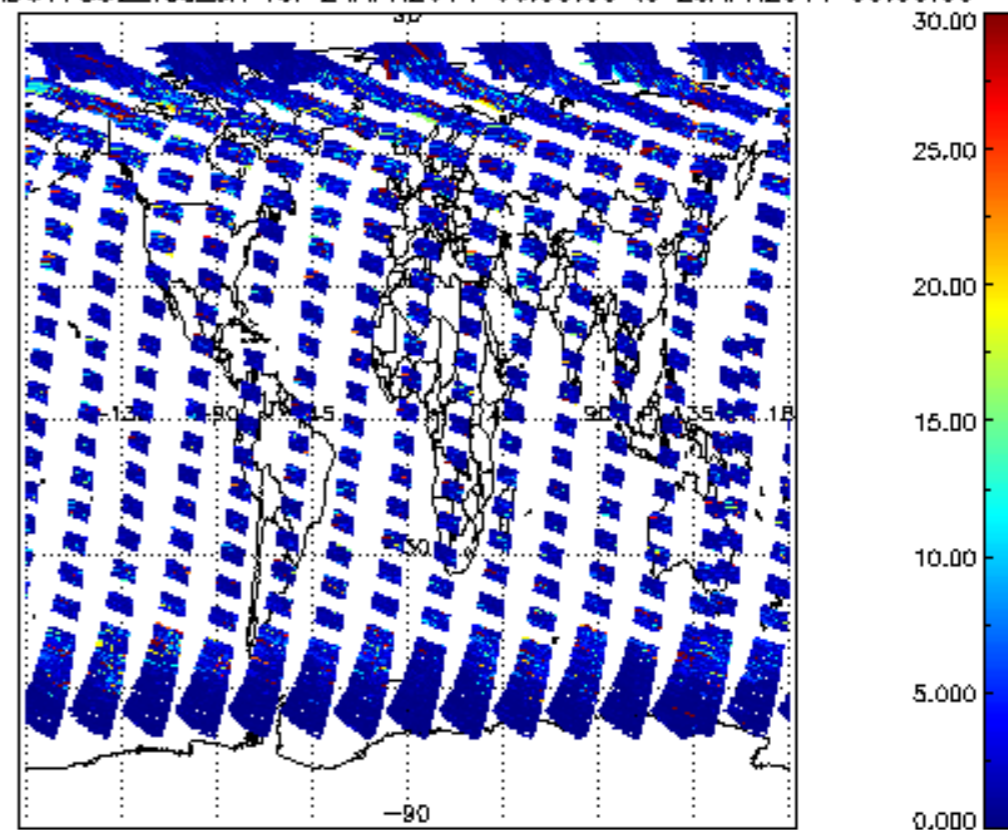




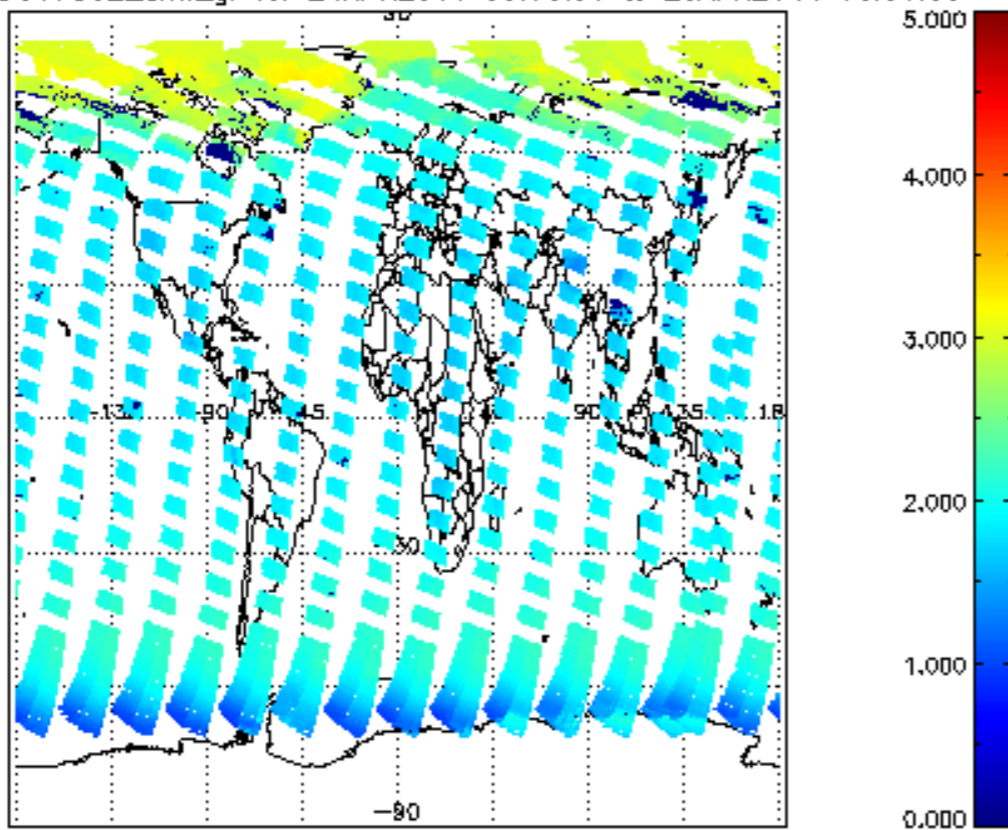
SCIOL2P\_NADUV7S02\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



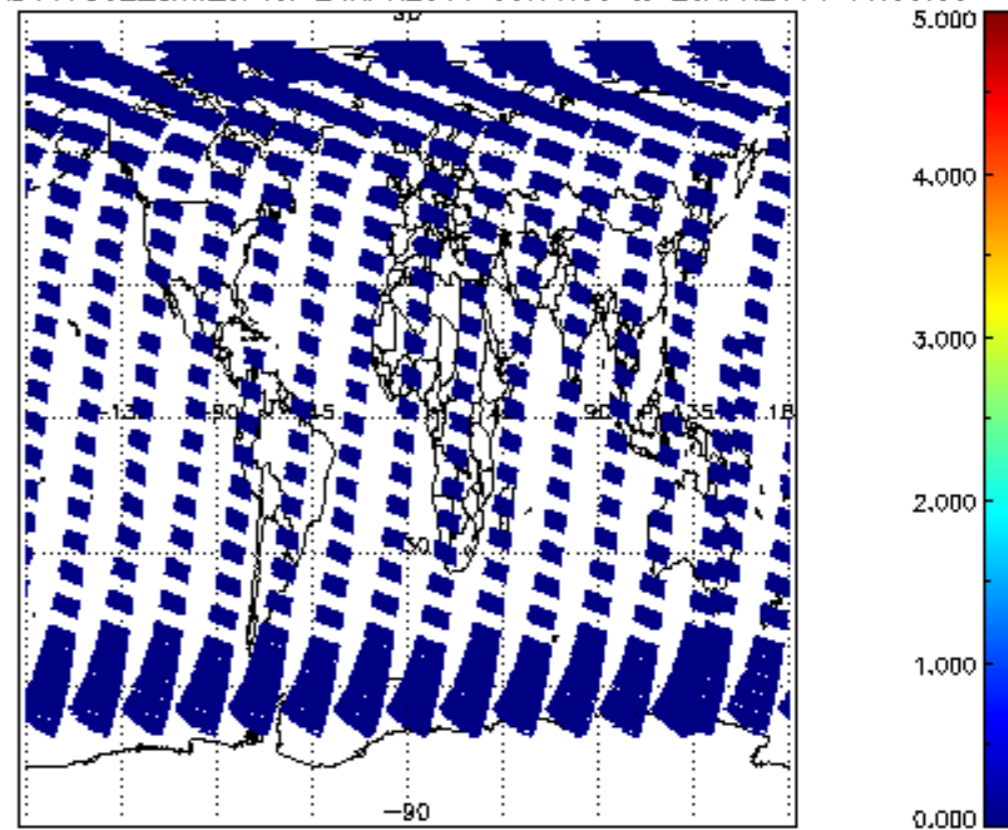
SCIOL2P\_NADUV7S02\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

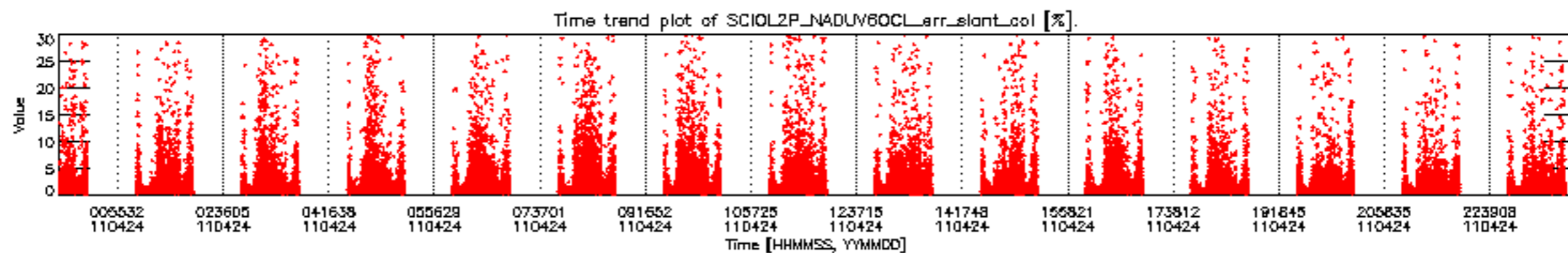
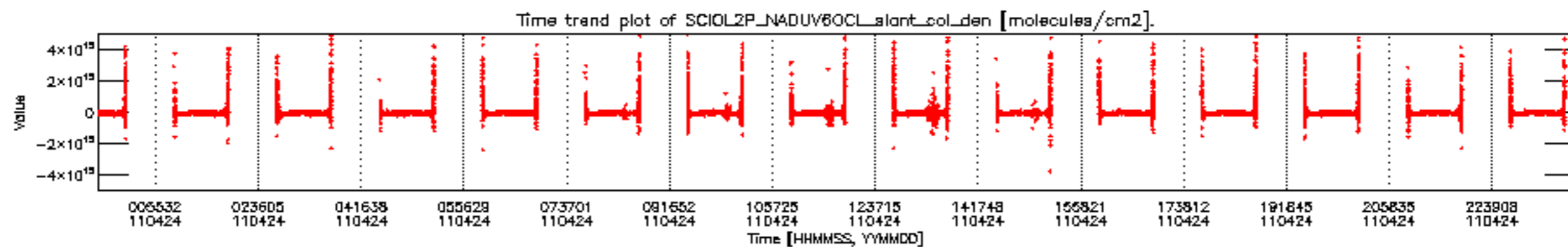


SCIOL2P\_NADUV7S02\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



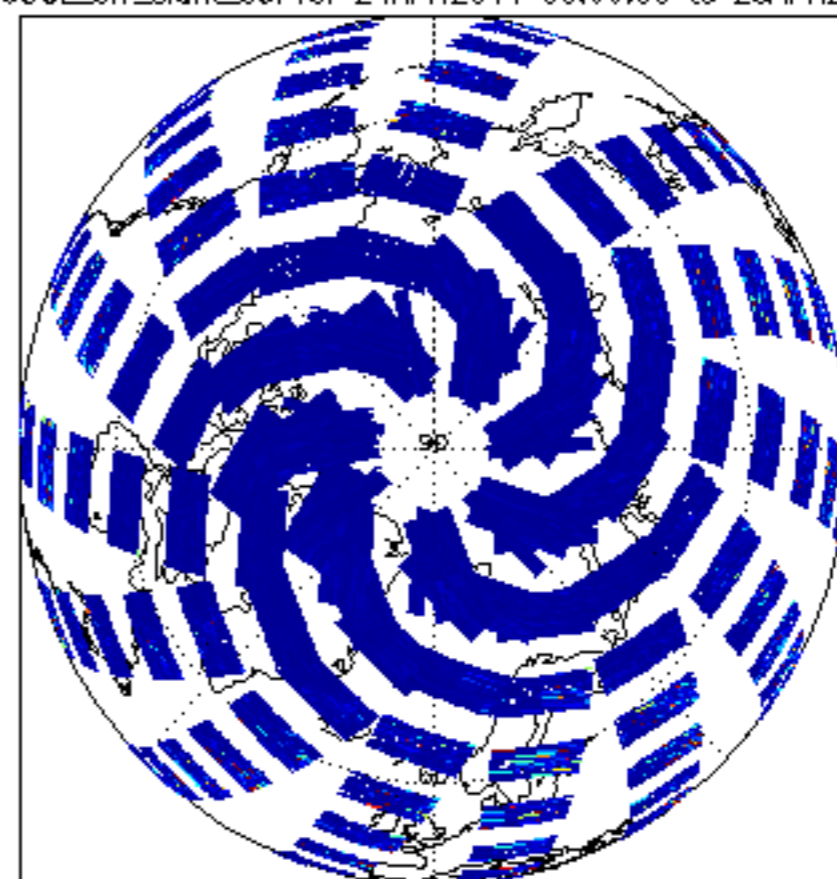
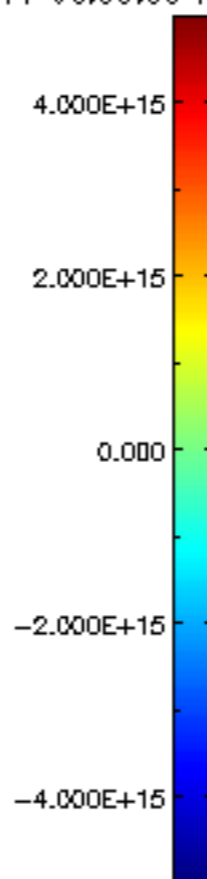
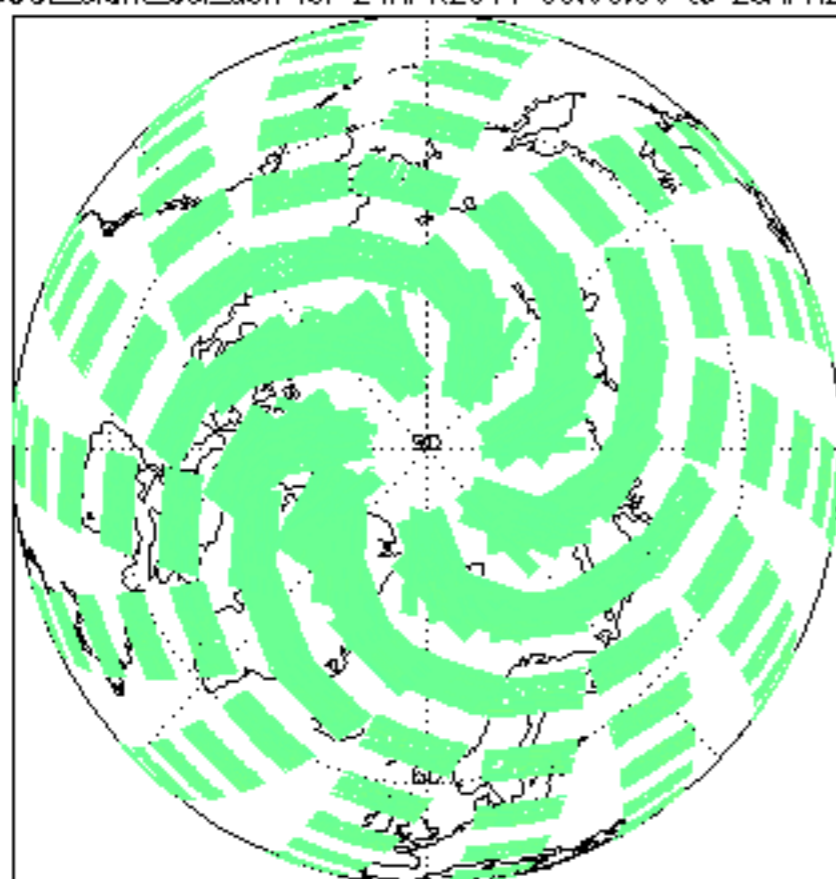
SCIOL2P\_NADUV7S02\_amf\_cl for 24APR2011 00:00:00 to 25APR2011 00:00:00



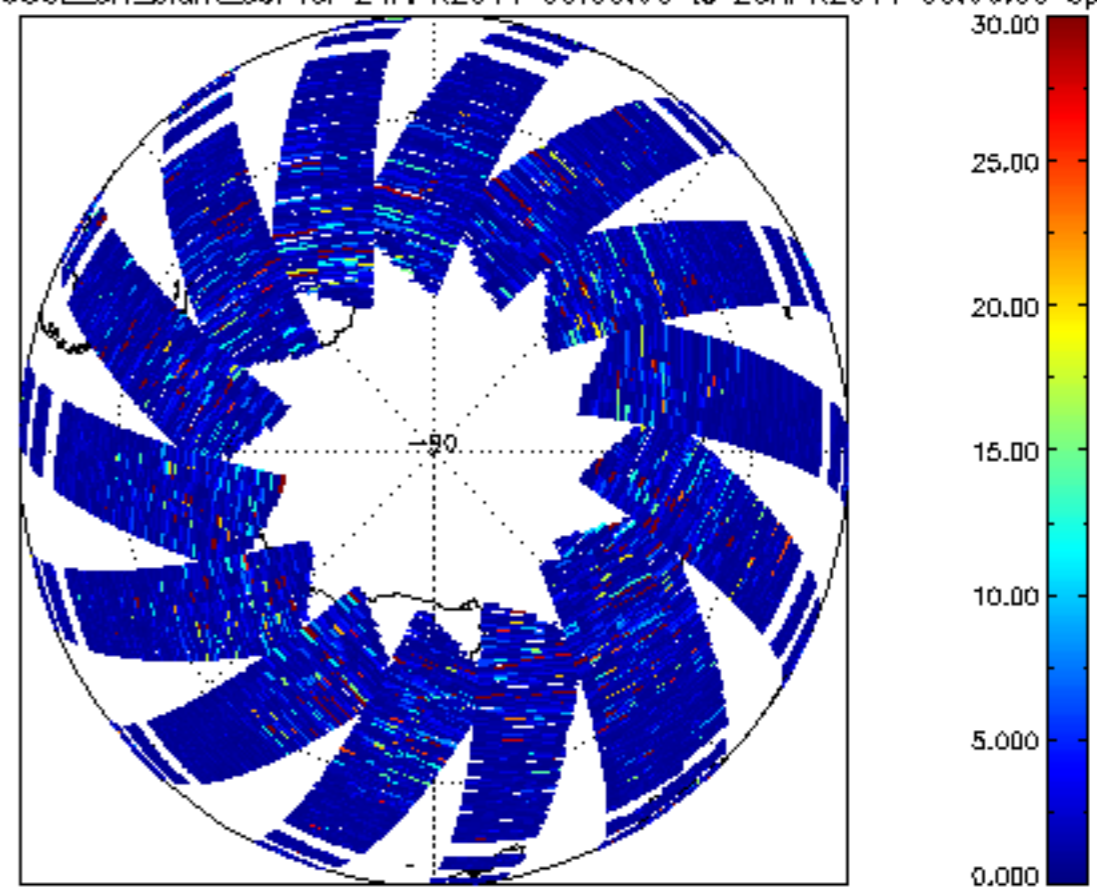
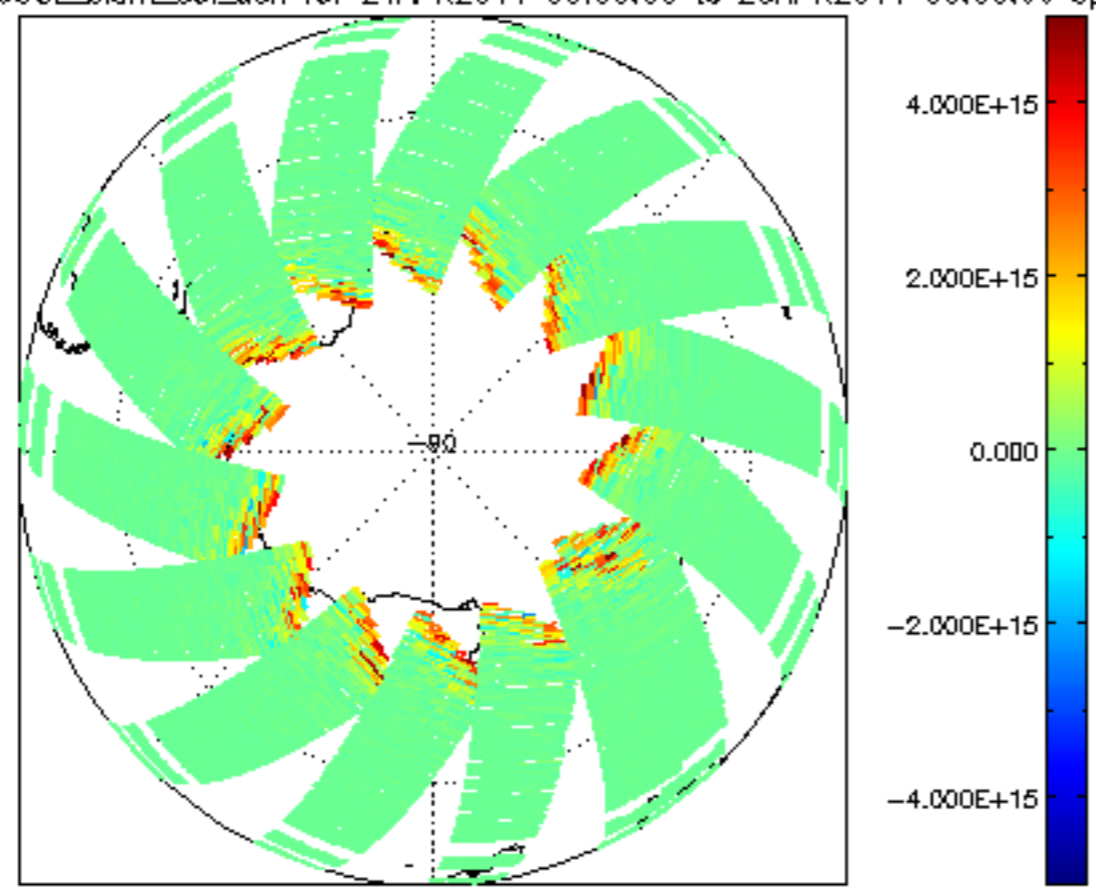




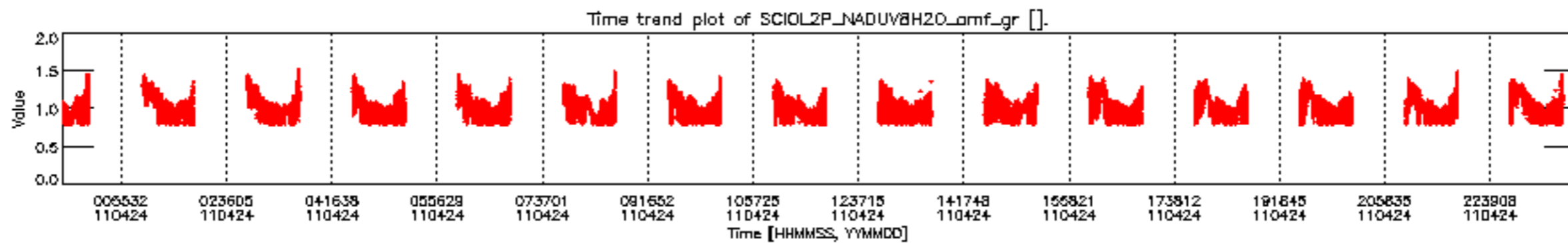
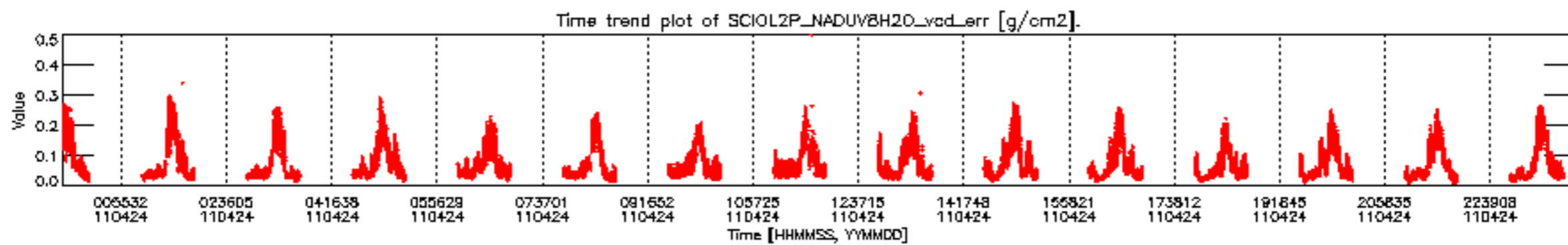
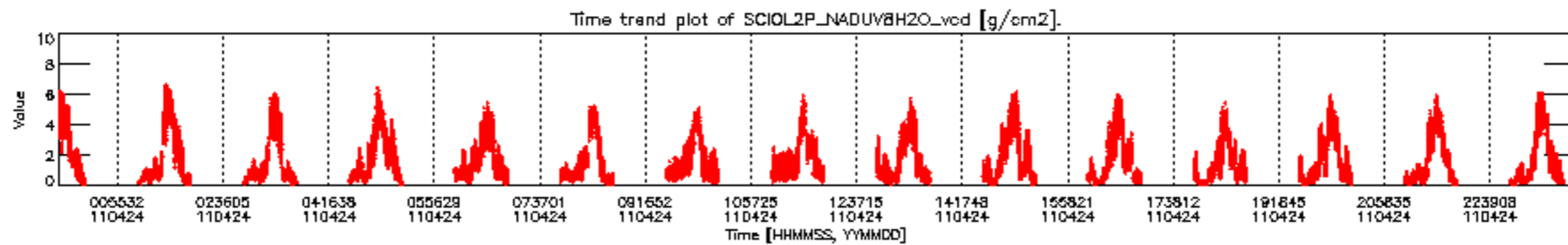
CIOL2P\_NADUV6OCL\_slant\_col\_den for 24APR2011 00:00:00 to 25APR2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 24APR2011 00:00:00 to 25APR2011 00:00:00 np



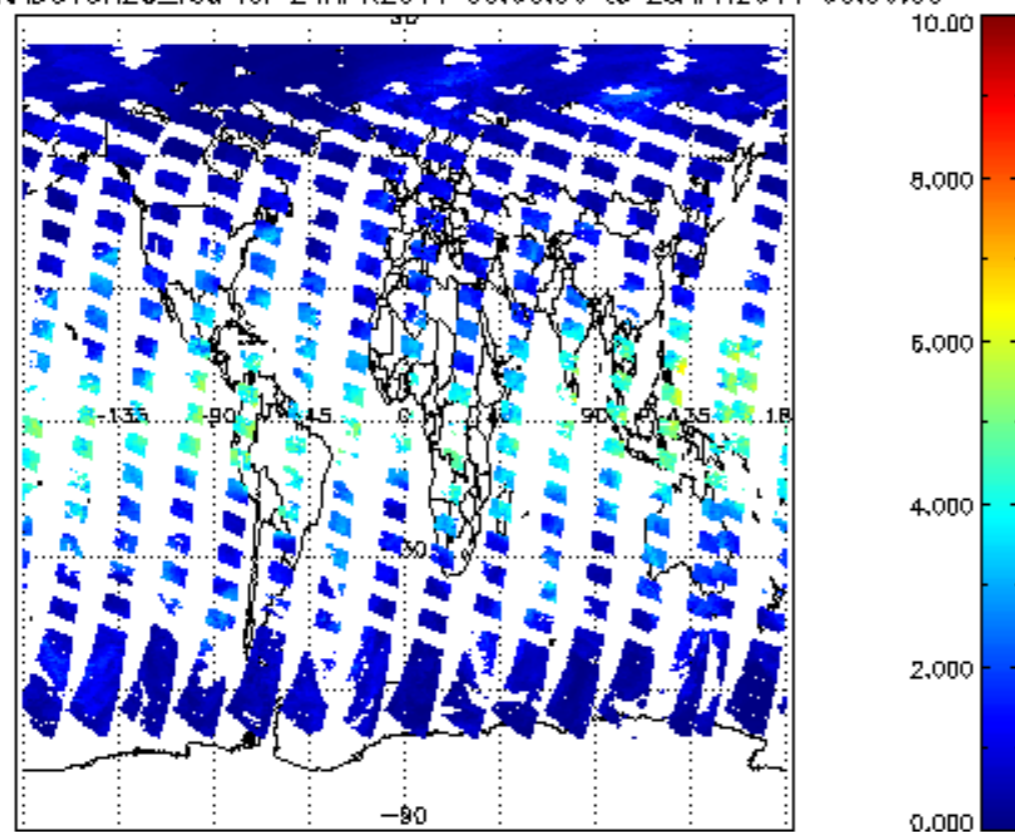
CIOL2P\_NADUV60CL\_slant\_col\_den for 24APR2011 00:00:00 to 25APR2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 24APR2011 00:00:00 to 25APR2011 00:00:00 sp



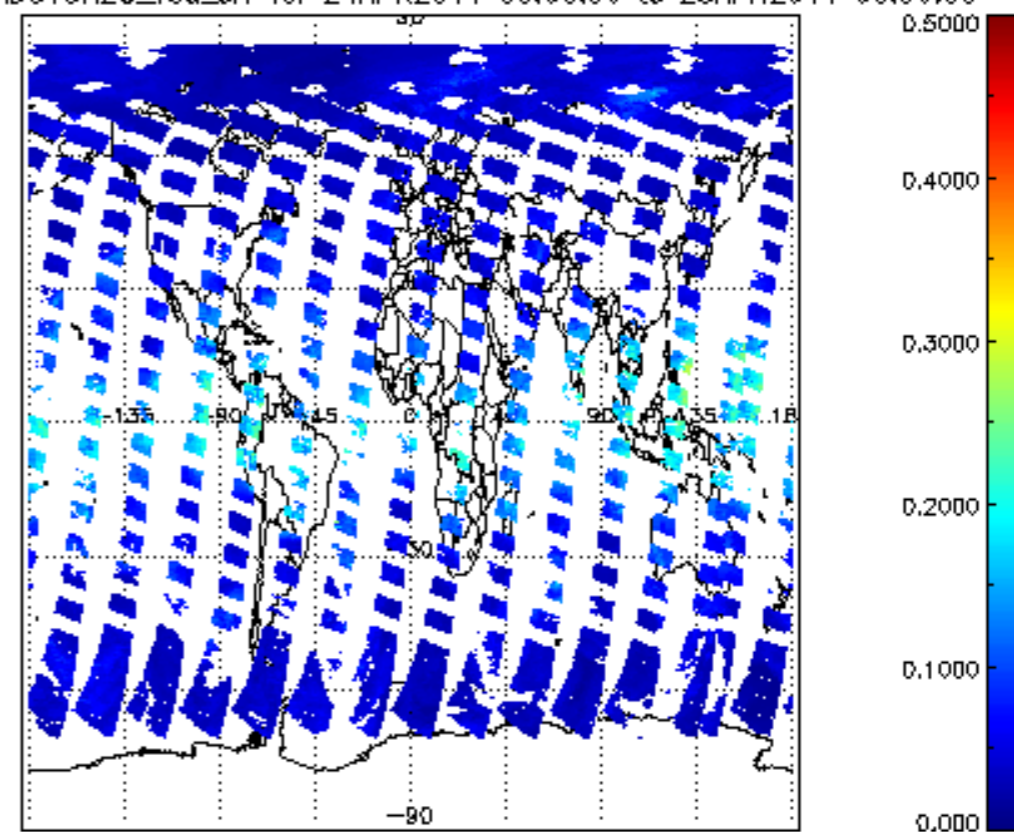




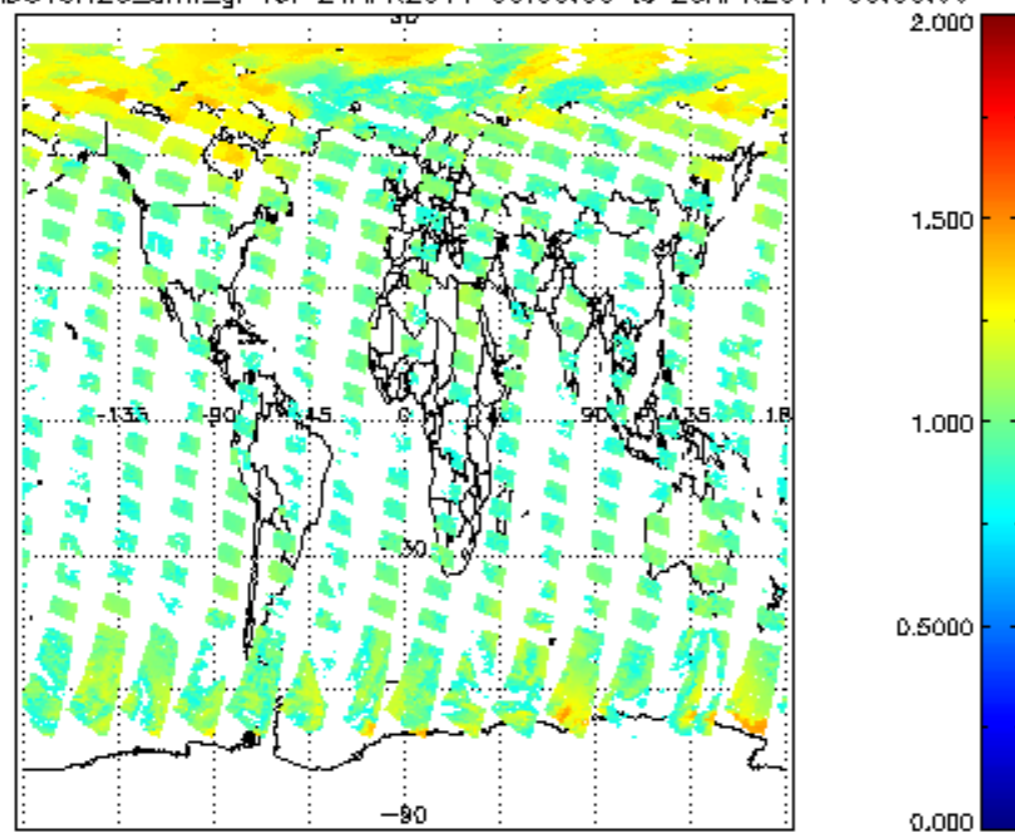
SCIOL2P\_NADUV8H20\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00



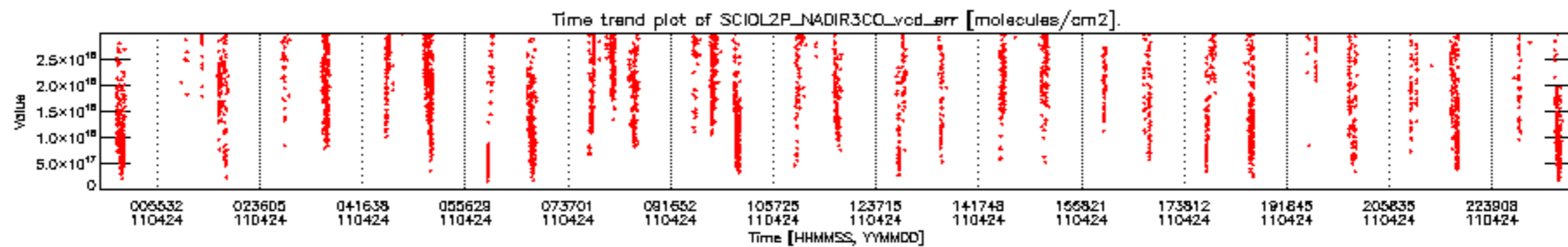
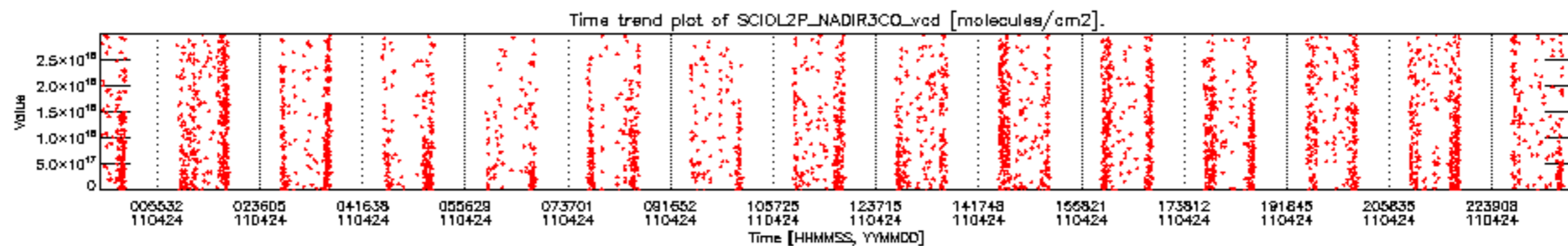
SCIOL2P\_NADUV8H20\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00



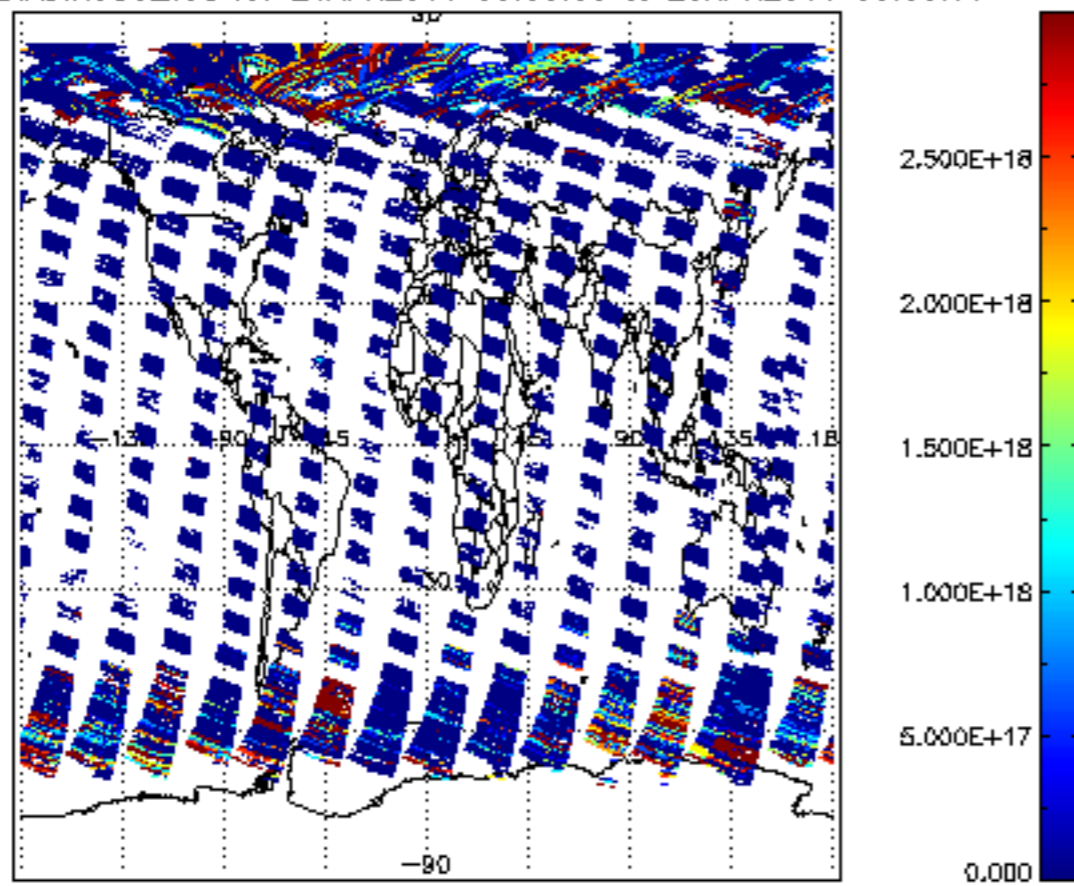
SCIOL2P\_NADUV8H20\_amf\_gr for 24APR2011 00:00:00 to 25APR2011 00:00:00



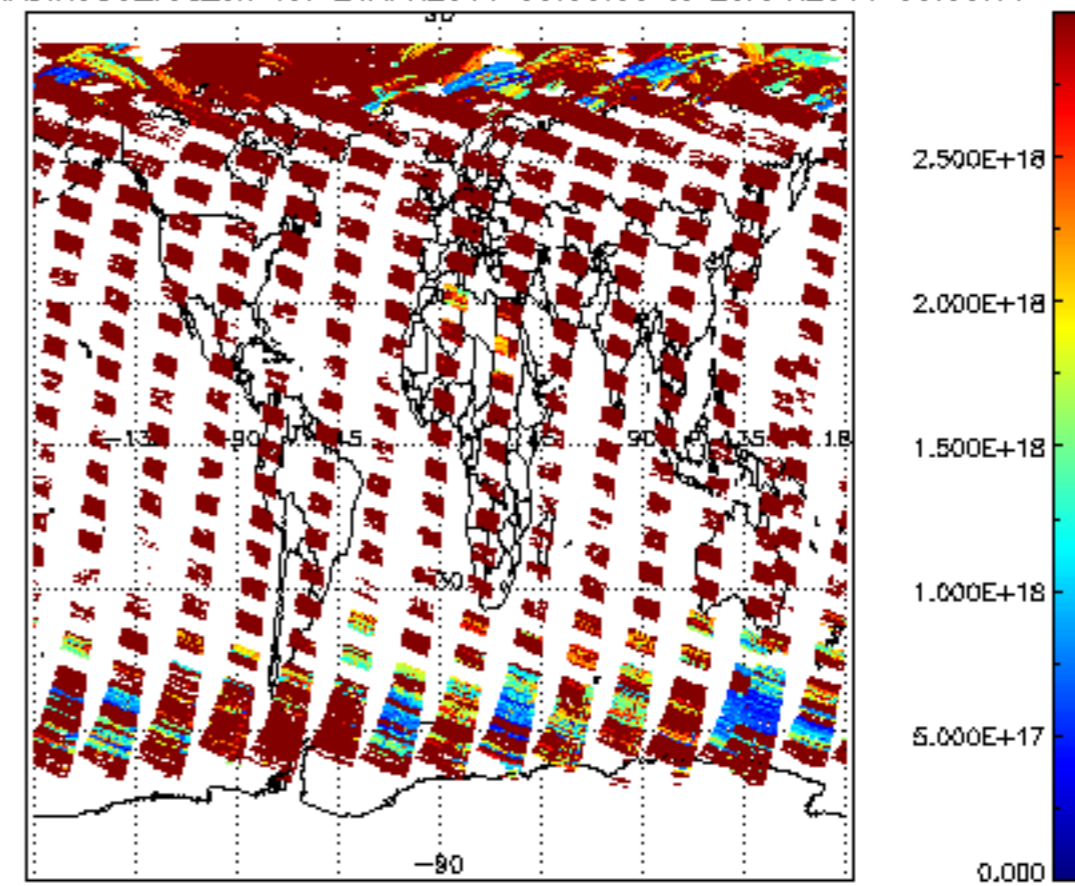




SCIOL2P\_NADIR3CO\_vcd for 24APR2011 00:00:00 to 25APR2011 00:00:00

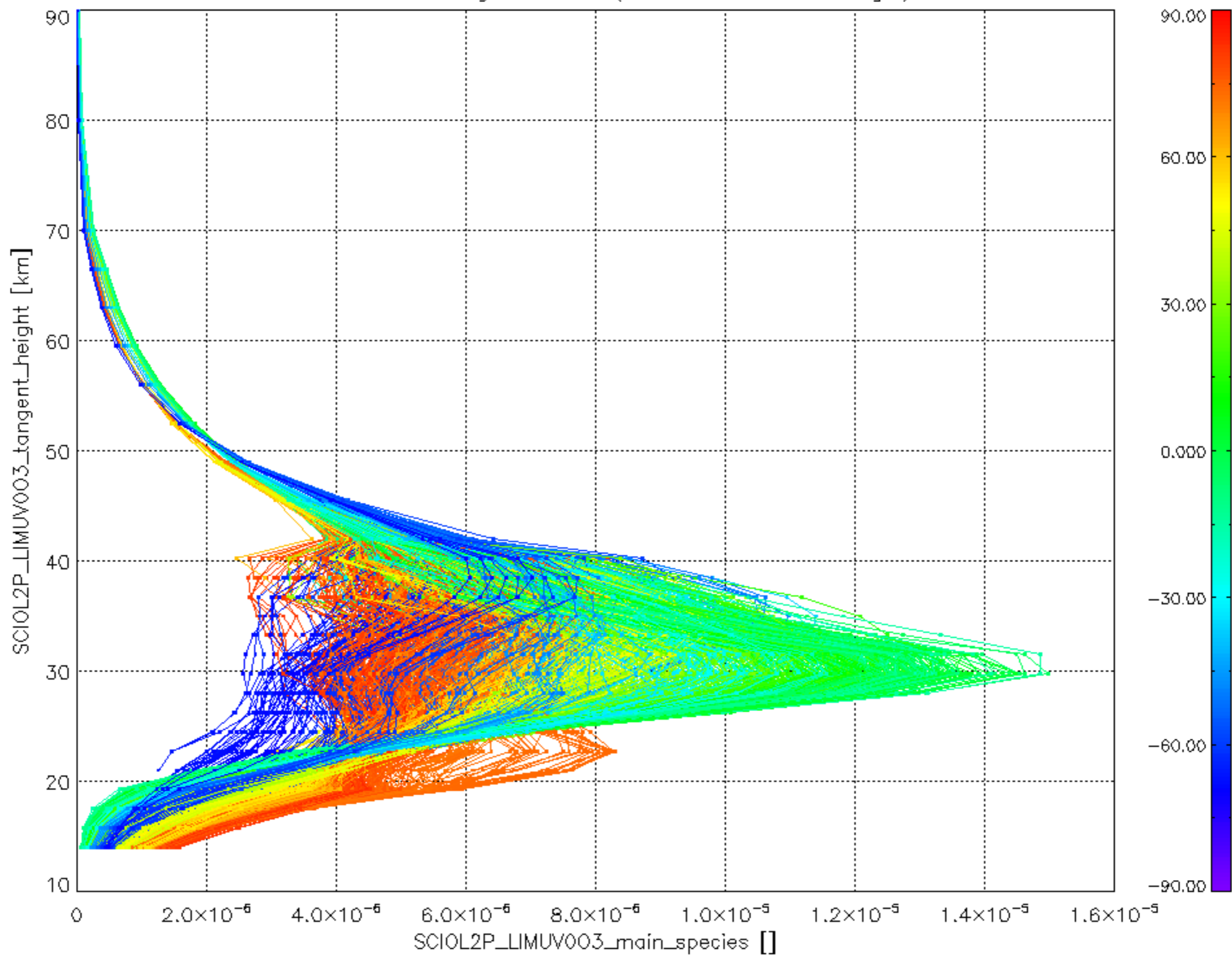


SCIOL2P\_NADIR3CO\_vcd\_err for 24APR2011 00:00:00 to 25APR2011 00:00:00

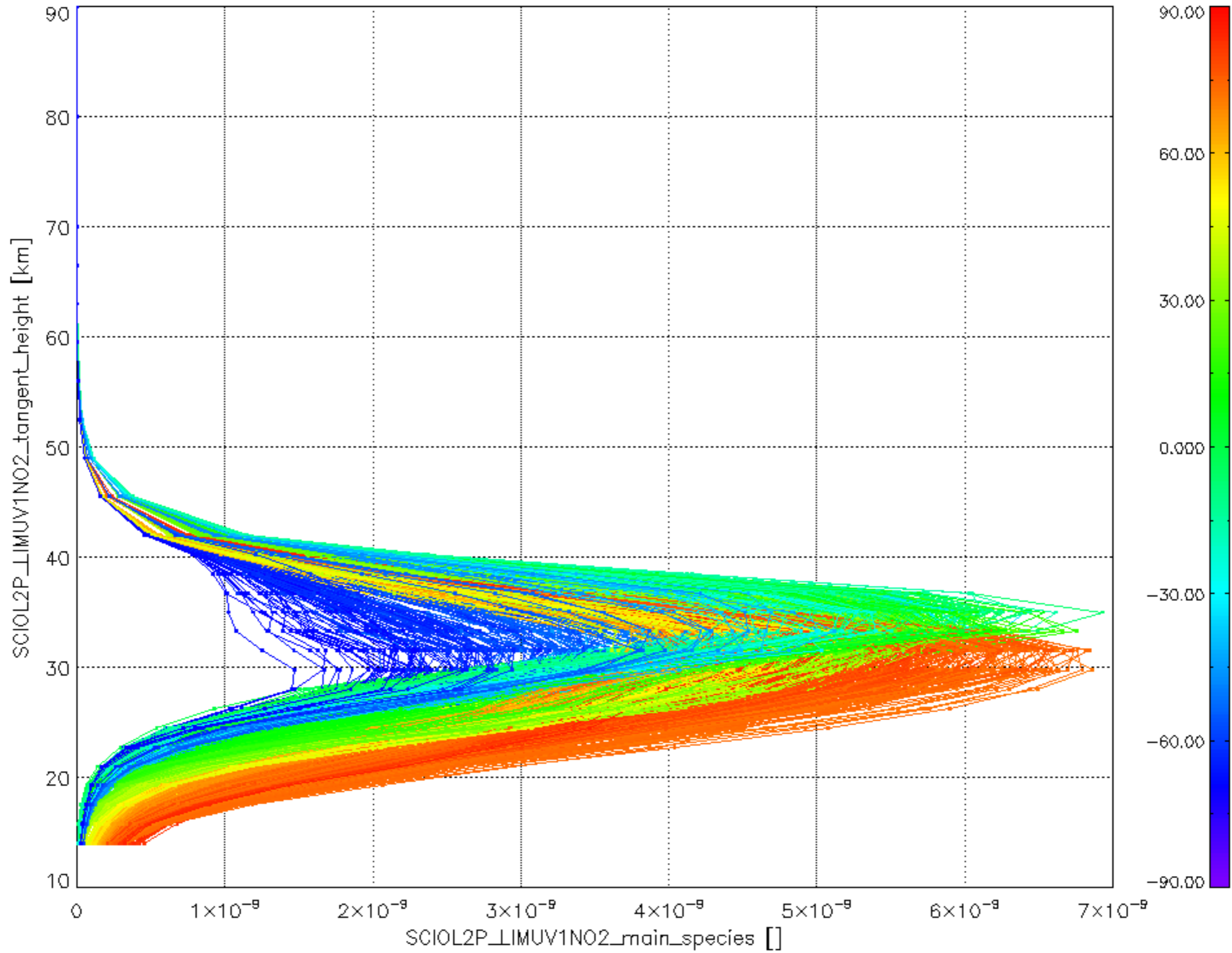




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

