

## 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	11JUL2011 03:00:28
Data source version	SCIA-OL/5.01-U
Processing scope for products	28JUN2011 00:00:00 to 29JUN2011 00:00:00
Start time of first product within scope	28JUN2011 11:24:52
Stop time of last product within scope	28JUN2011 22:24:52
Total number of level 2 products	5
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__2PUDPA20110628_112452_000035163104_00052_48773_5285.N1</a>	28JUN2011 11:24:52	28JUN2011 12:23:28	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110628_144520_000035163104_00054_48775_5282.N1</a>	28JUN2011 14:45:20	28JUN2011 15:43:56	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110628_162534_000035303104_00055_48776_5283.N1</a>	28JUN2011 16:25:34	28JUN2011 17:24:24	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110628_194611_000035303104_00057_48778_5284.N1</a>	28JUN2011 19:46:11	28JUN2011 20:45:02	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110628_212616_000035163104_00058_48779_5281.N1</a>	28JUN2011 21:26:16	28JUN2011 22:24:52	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: 59280

Total number of cloud data DSRs with good quality flag (=0): 59280 (100.0 %)

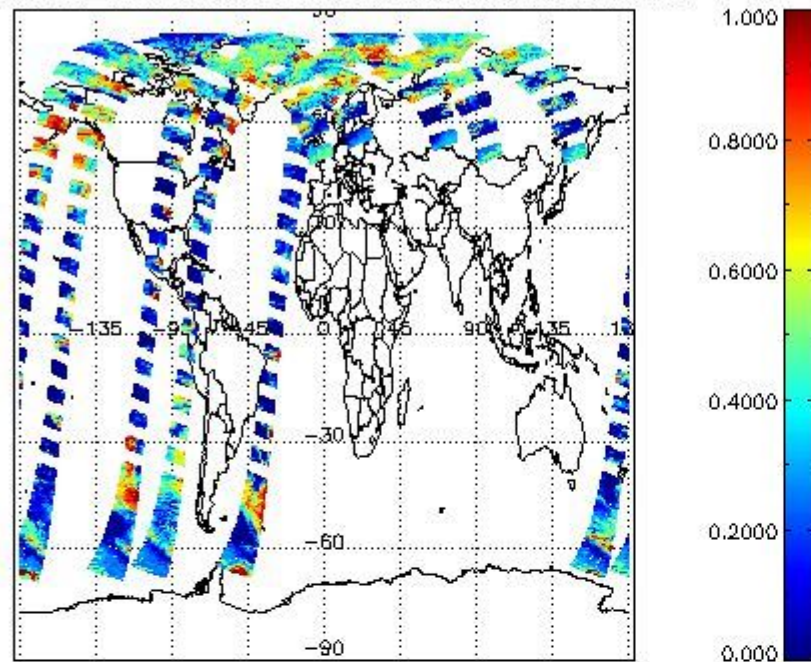
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	59280	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	59280	0.16447	0.12500	0.12500	0.25000	0.058104	s
CL_FRAC	59280	0.32285	0.27750	0.0000	1.0000	0.26770	
CL_FRAC_ERR	59280	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	59280	5.2632	4.0000	4.0000	8.0000	1.8593	
PMD_READ_CL[0]	59280	0.16633	0.0000	0.0000	8.0000	0.83733	-
PMD_READ_CL[1]	59280	1.2825	0.0000	0.0000	8.0000	2.3478	-
CL_TOP_HEIGHT	45020	3.1875	1.4600	0.0000	17.000	3.5216	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	45020	63.636	100.00	0.0000	101.00	42.567	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	59280	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	59280	11001110	11000100	11000000	11100000	3664.7	
AERO_ABSO_IND	59280	0.15668	0.0000	0.0000	7.7434	0.36923	
AERO_IND_DIAG	59280	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	59280	01010001	00000000	00000000	11000000	24300.	

#### Time and geolocation plots:

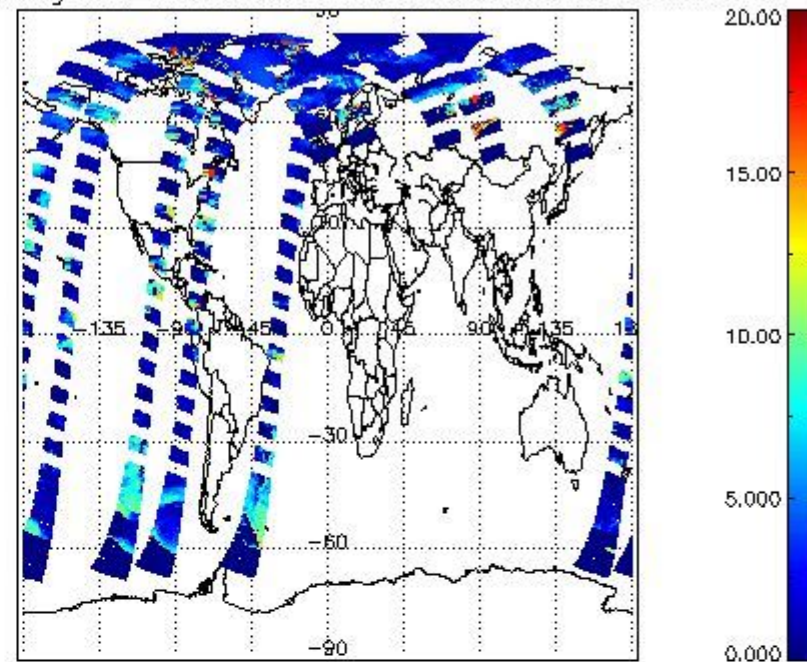
Plots are available for the following parameters:

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

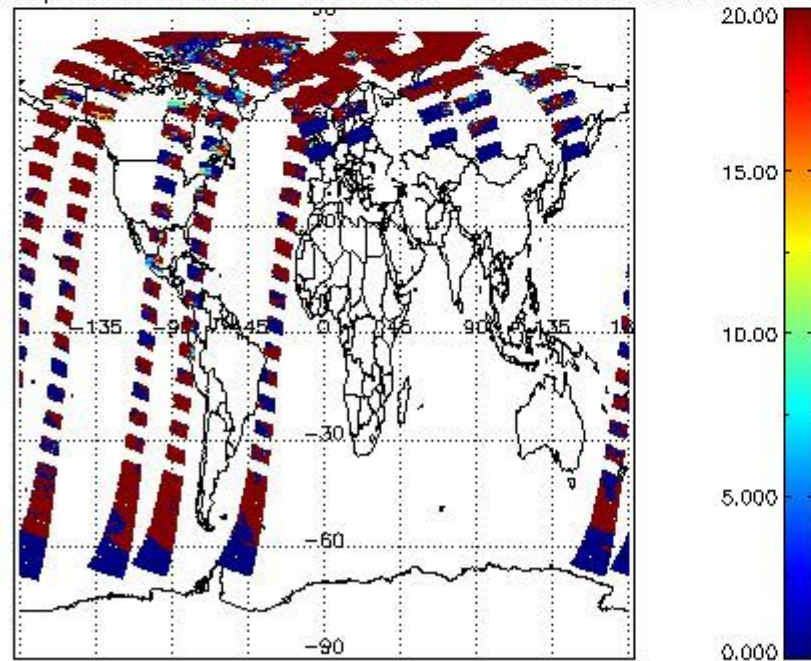
cL\_frac for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



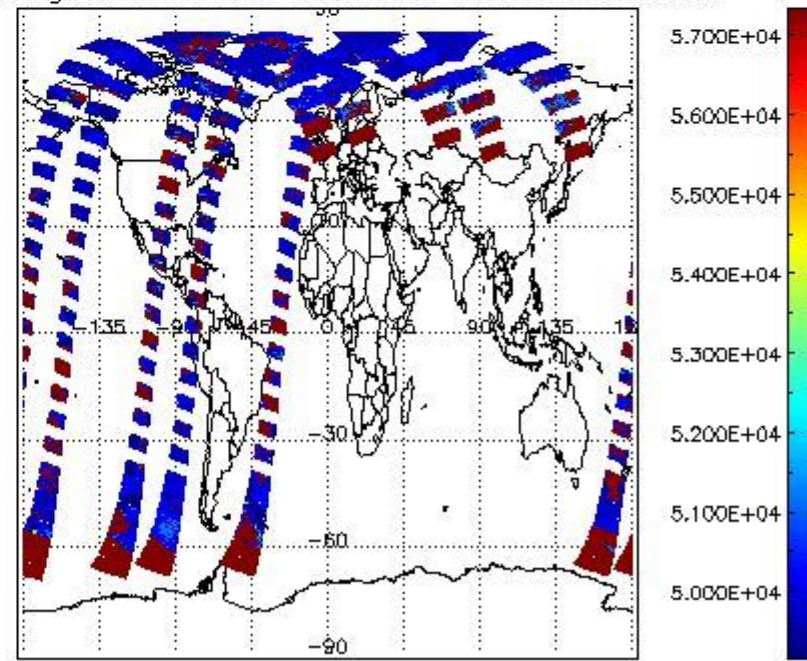
cL\_top\_height for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



cL\_opt\_depth for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



cloud\_flags for 28JUN2011 00:00:00 to 29JUN2011 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:

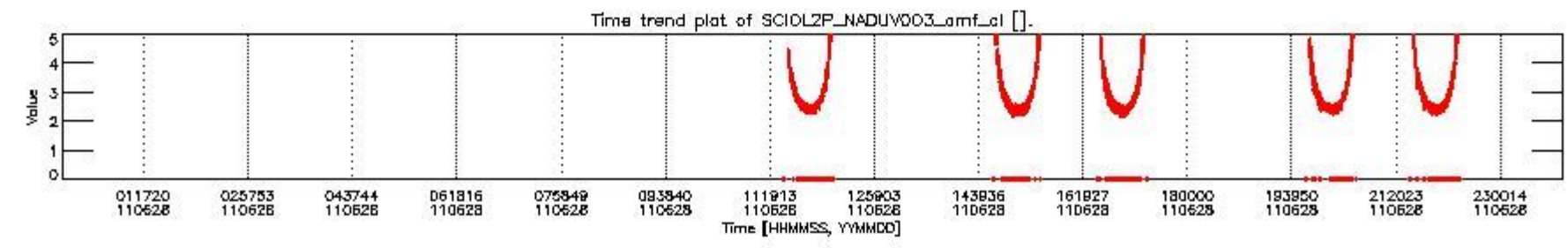
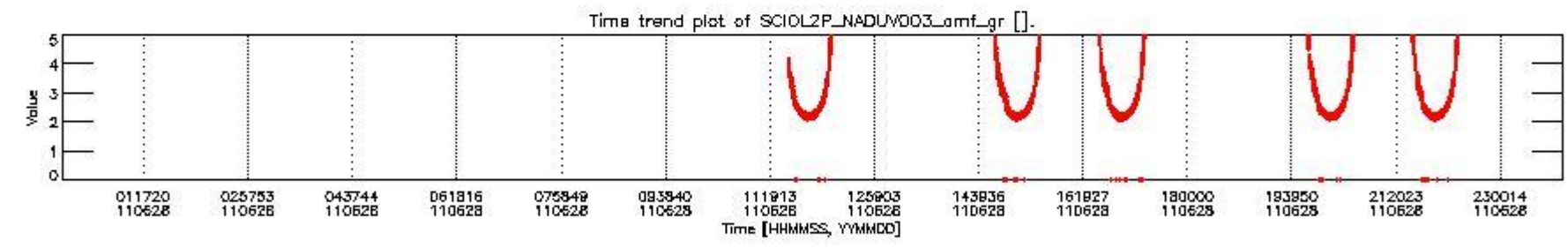
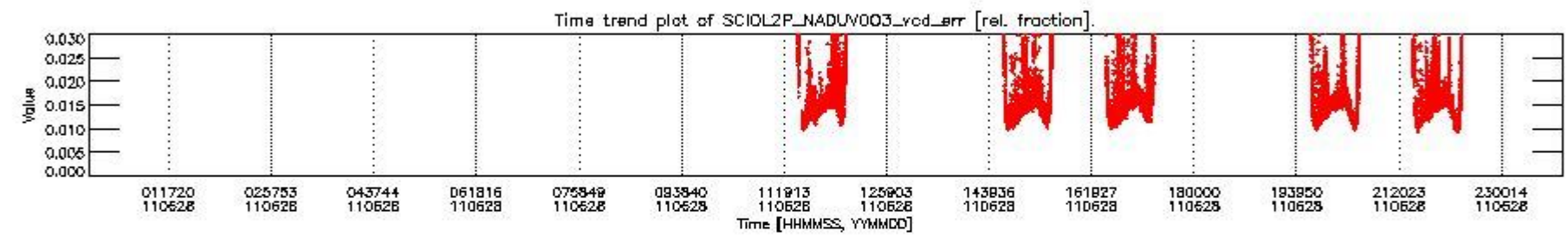
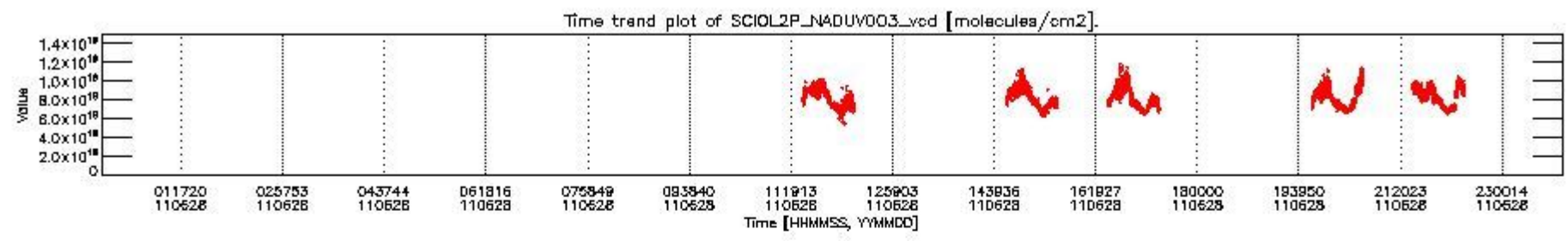
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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

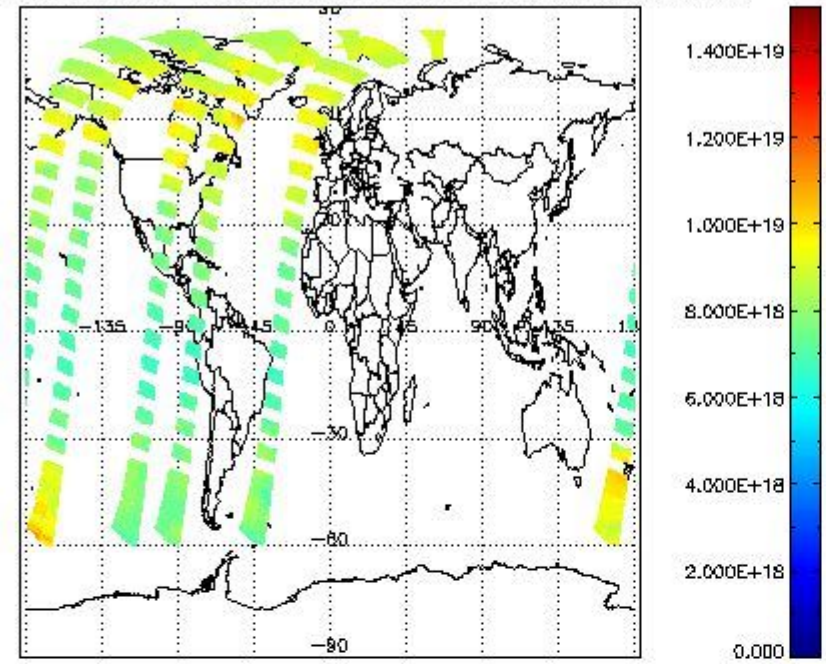
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing\_start time as suggested by the product sensing\_start time in the MPH.

#### 2.2.2.1 O3 (UV0)

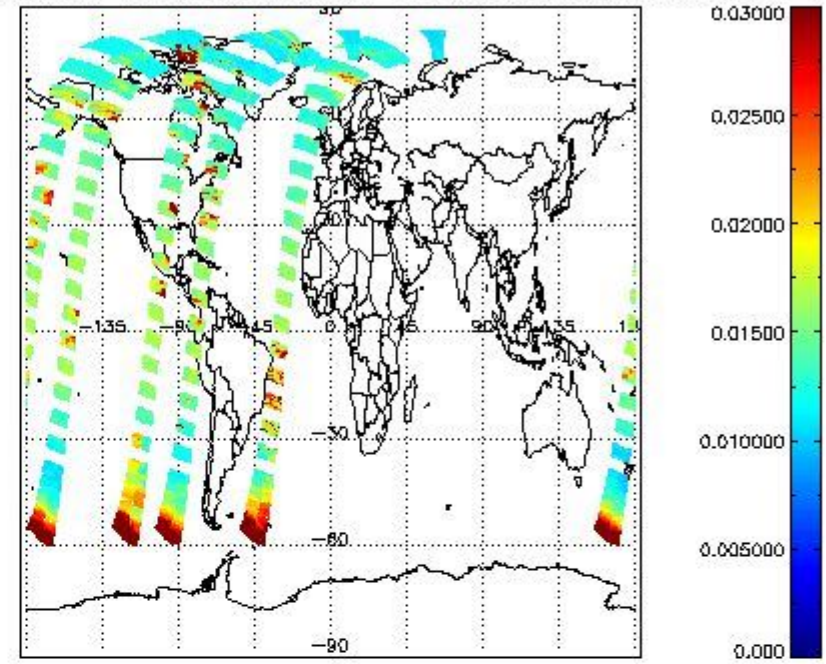




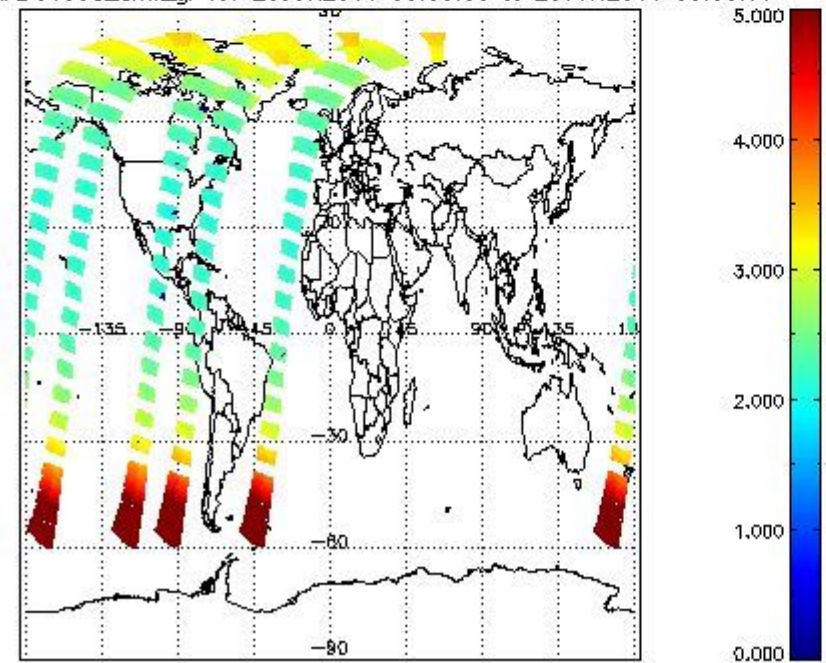
SCIOL2P\_NADUV003\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



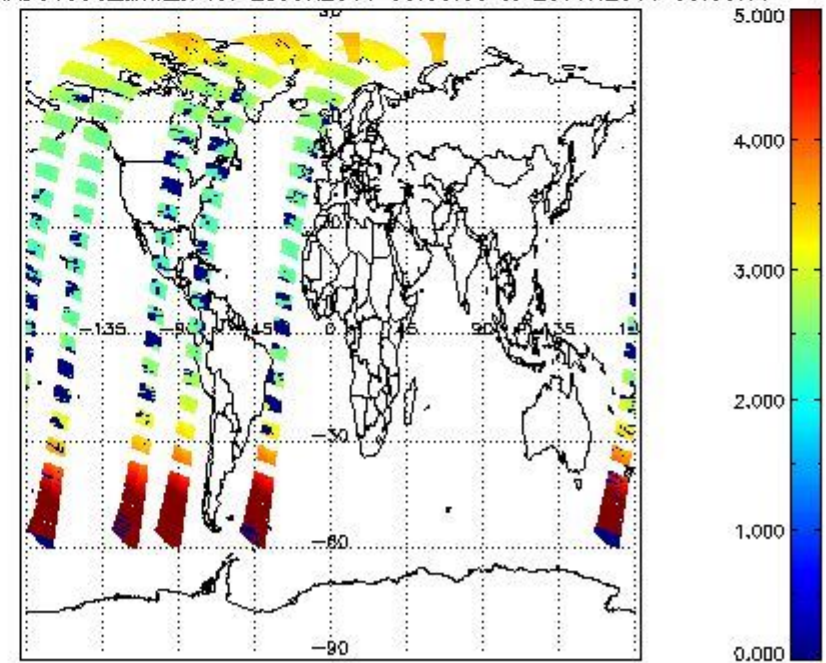
SCIOL2P\_NADUV003\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

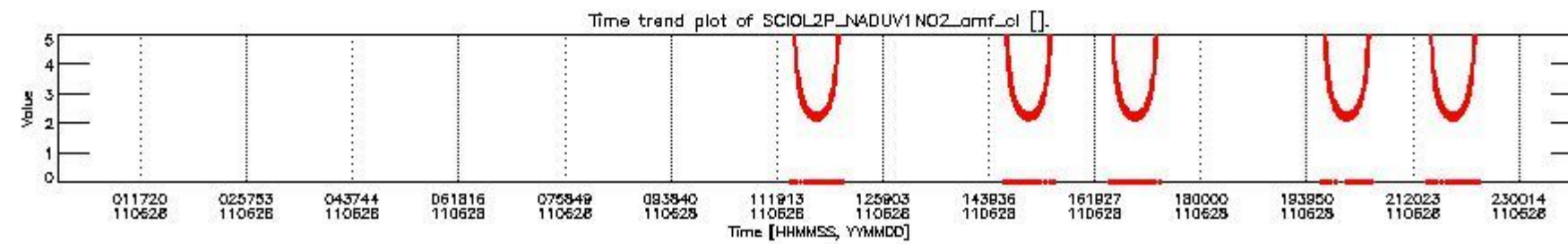
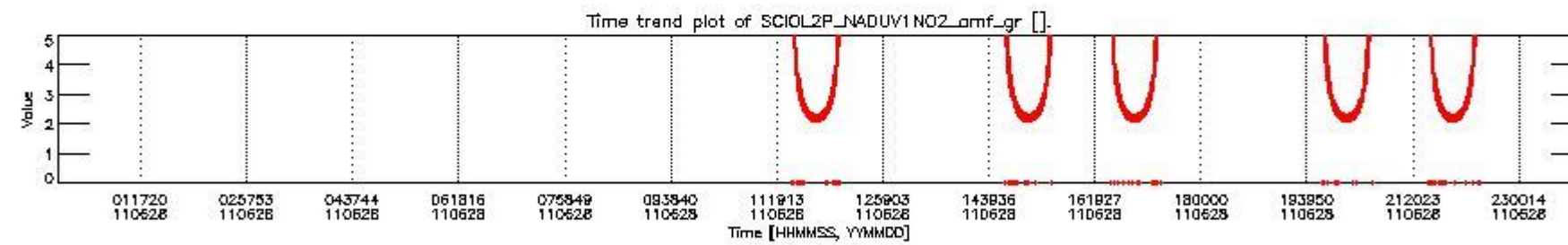
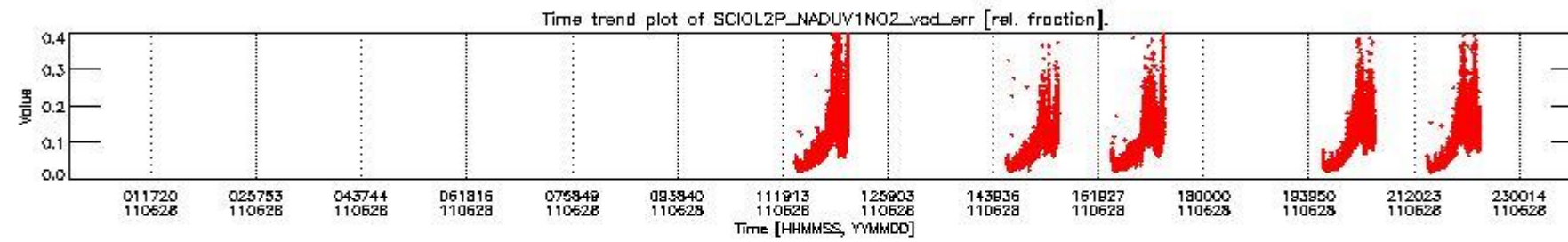
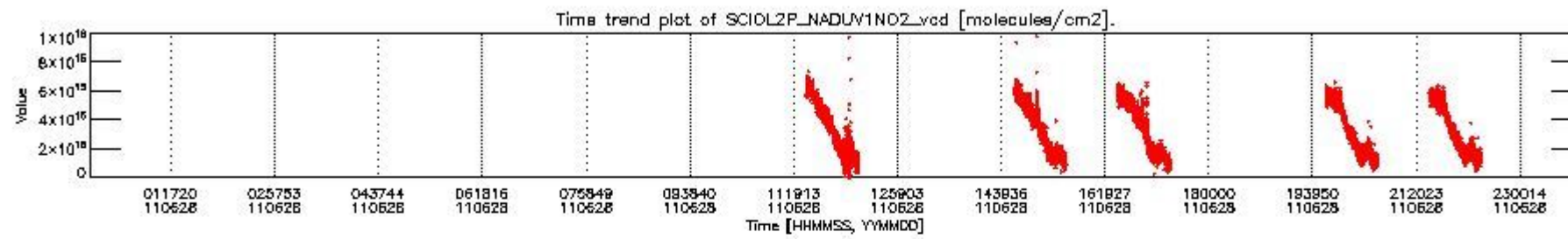


SCIOL2P\_NADUV003\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

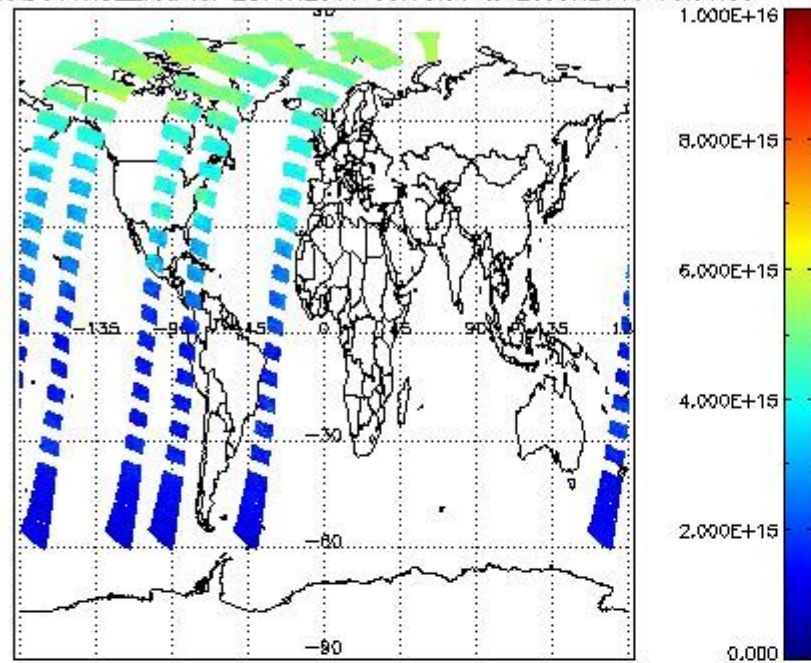


2.2.2.2 NO2 (UV1)

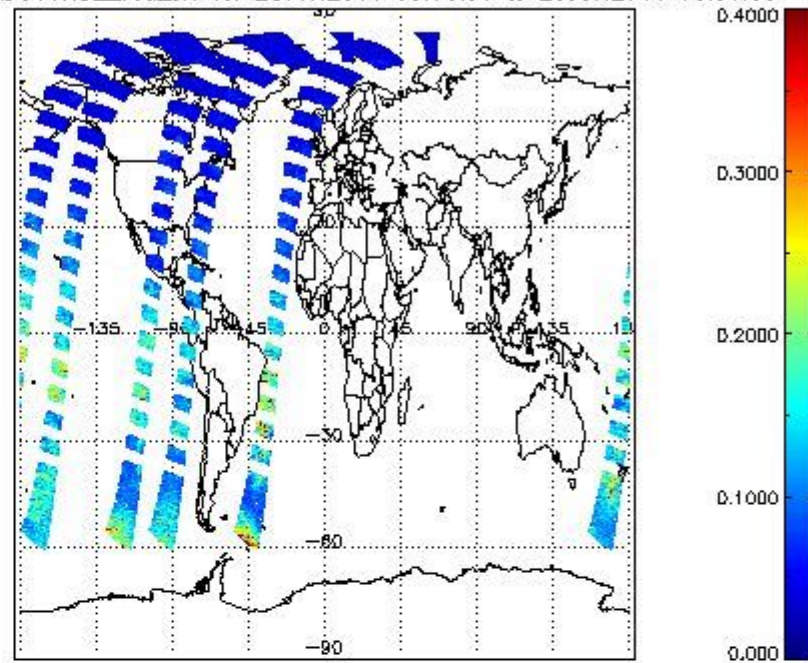




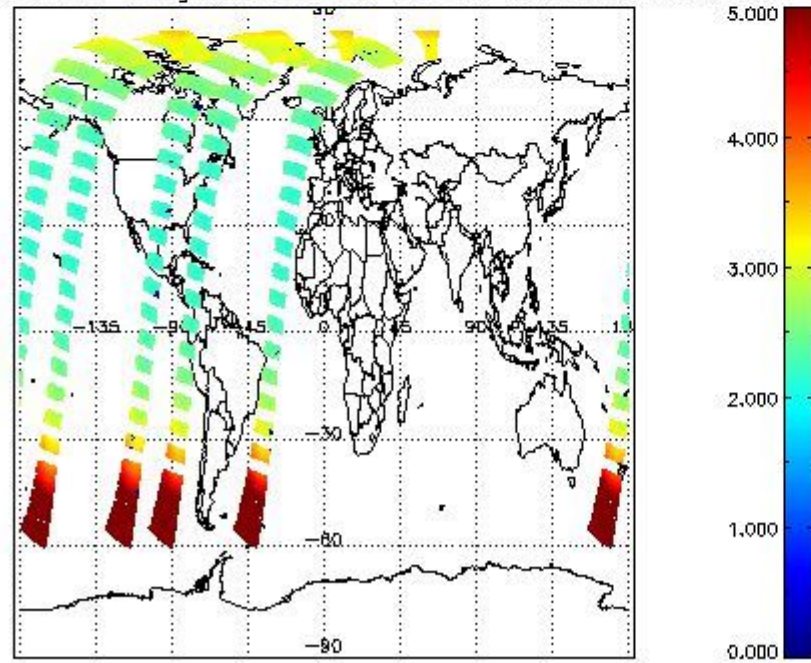
SCIOL2P\_NADUV1NO2\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



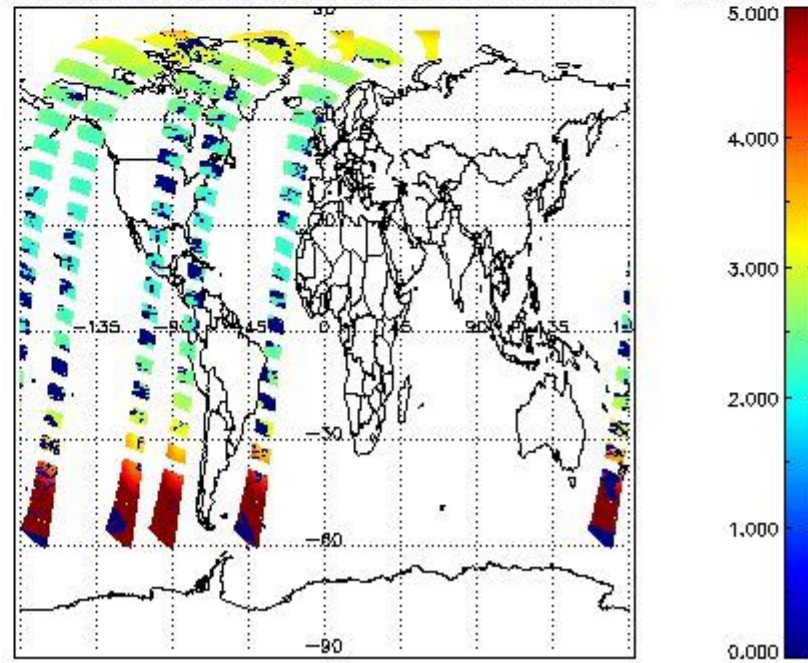
SCIOL2P\_NADUV1NO2\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

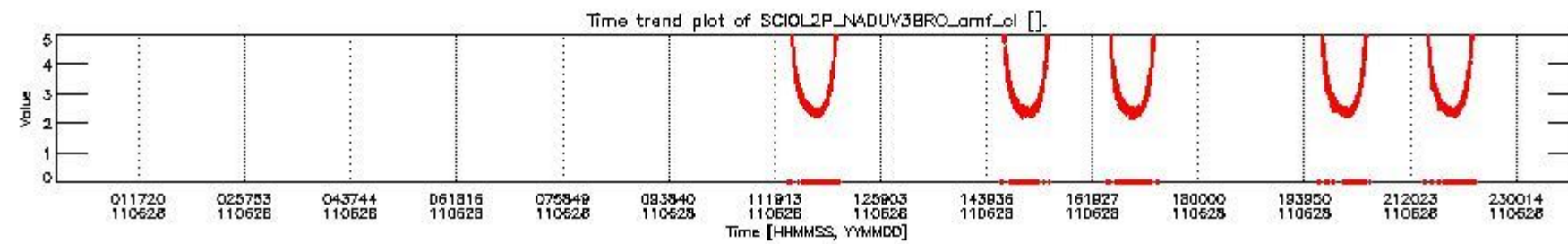
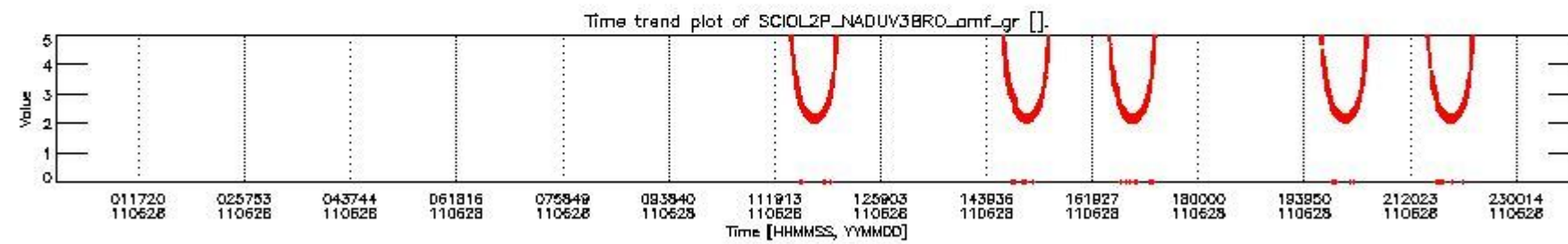
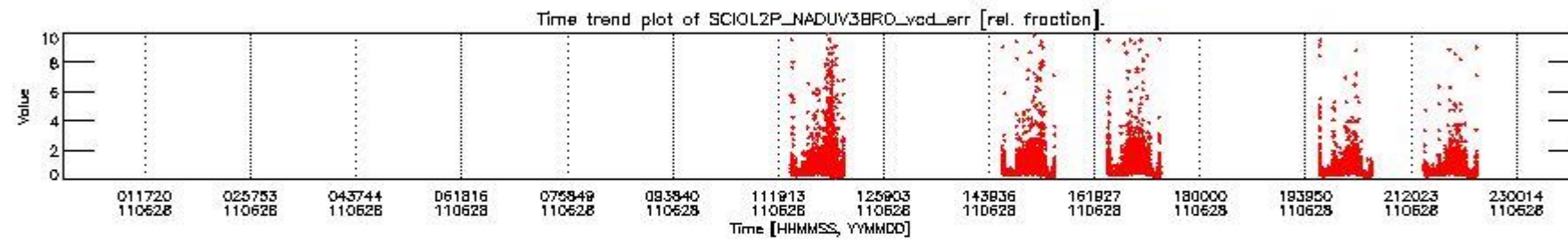
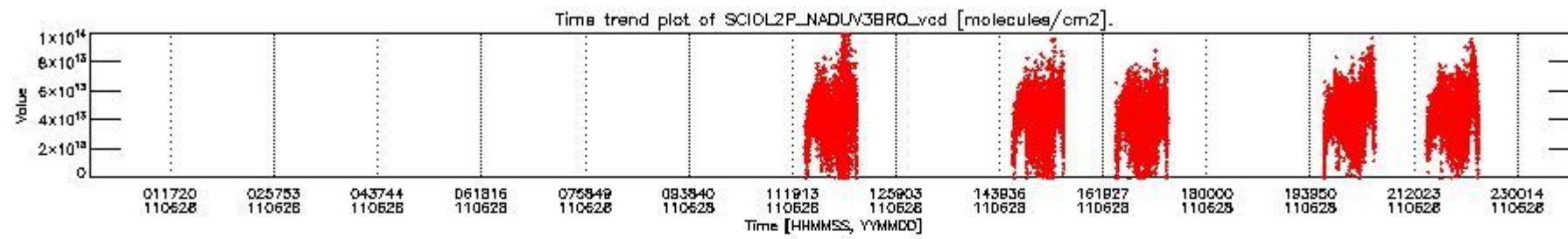


SCIOL2P\_NADUV1NO2\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

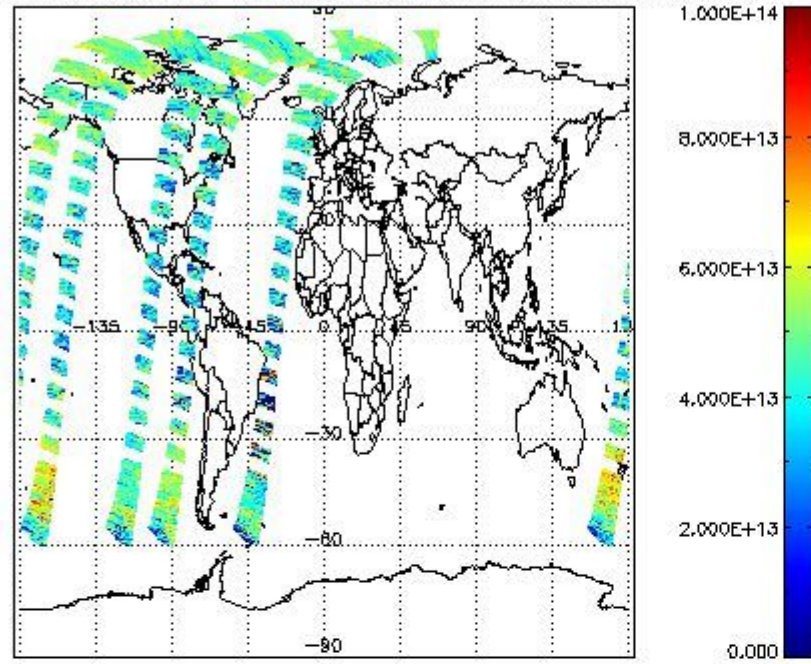


2.2.2.3 BrO (UV3)

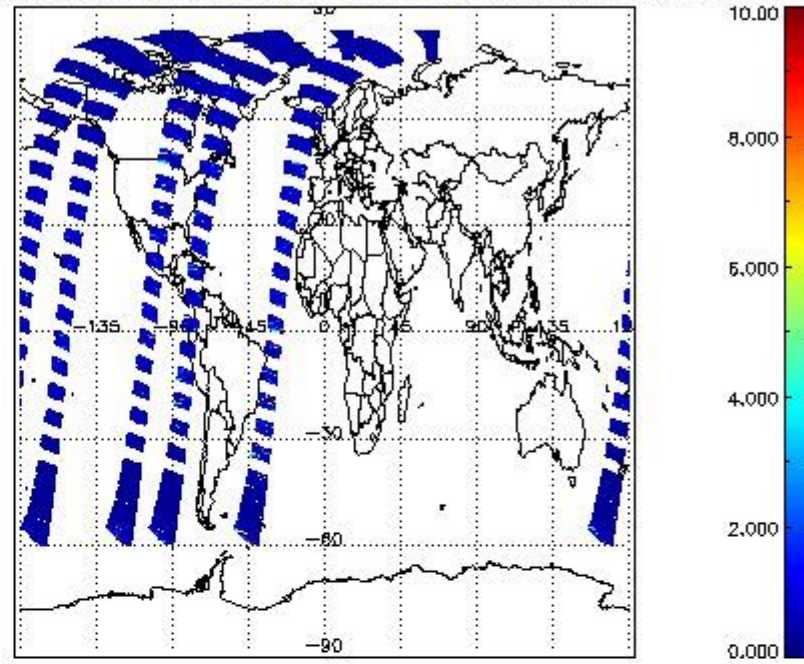




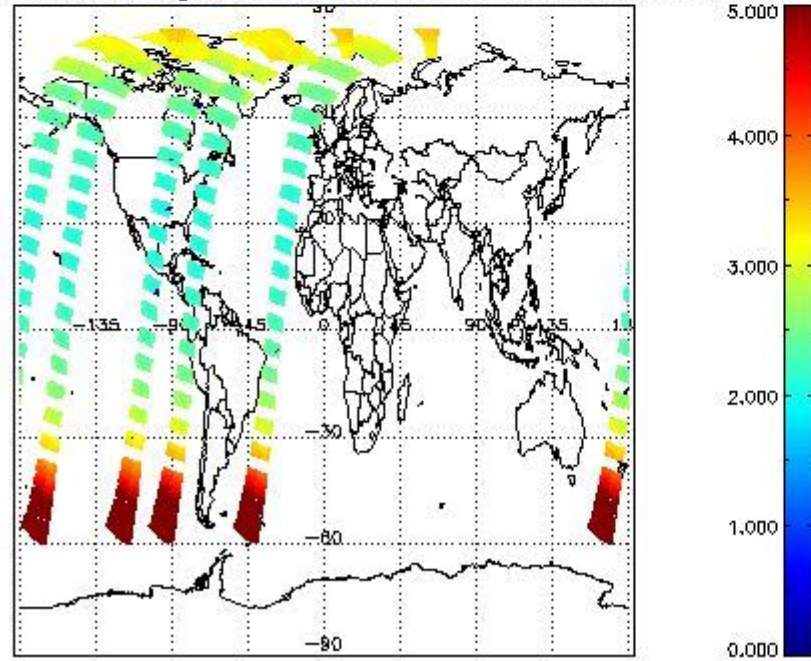
SCIOL2P\_NADUV3BRO\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



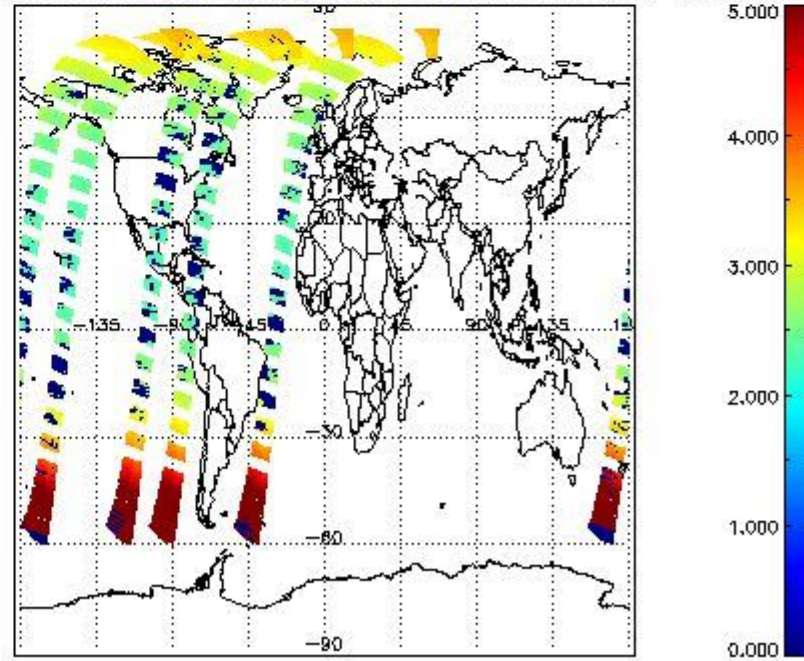
SCIOL2P\_NADUV3BRO\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

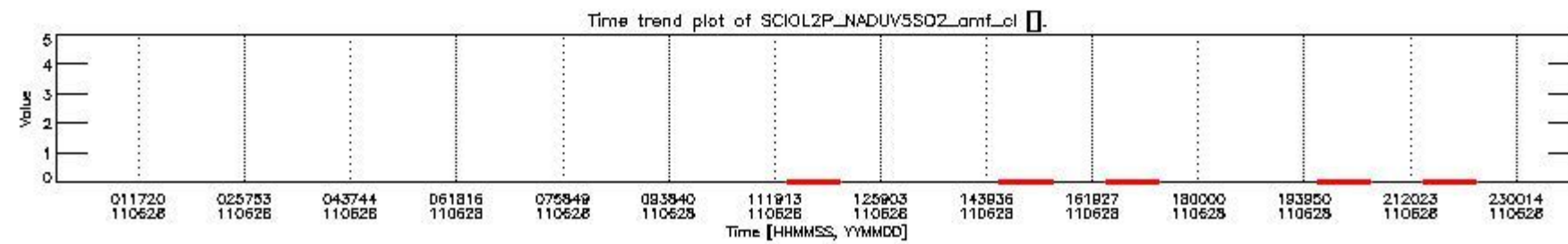
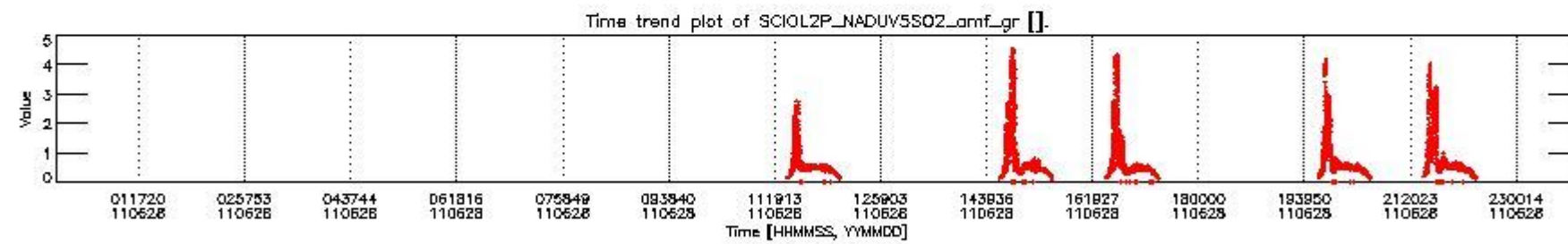
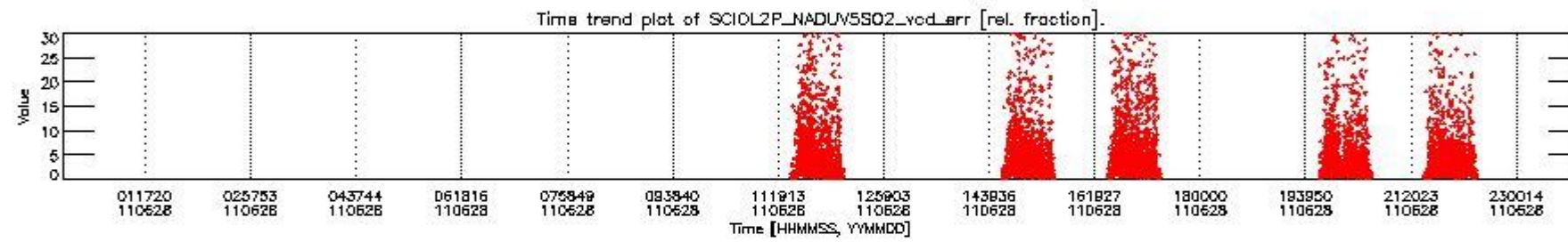
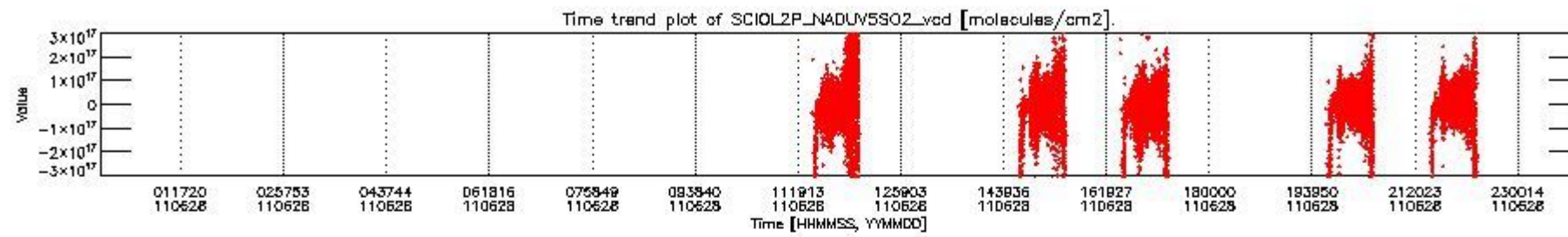


SCIOL2P\_NADUV3BRO\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

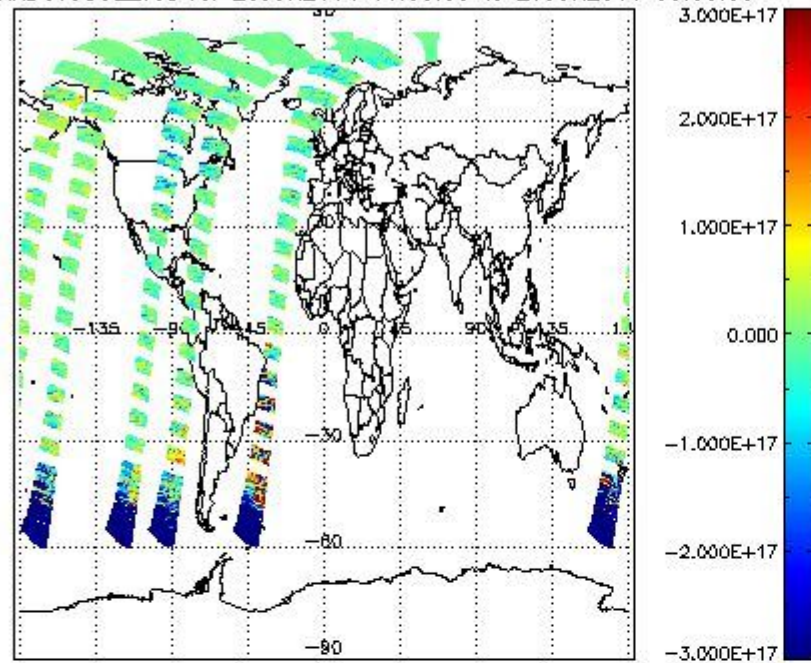


#### 2.2.2.4 SO2 (UV5)

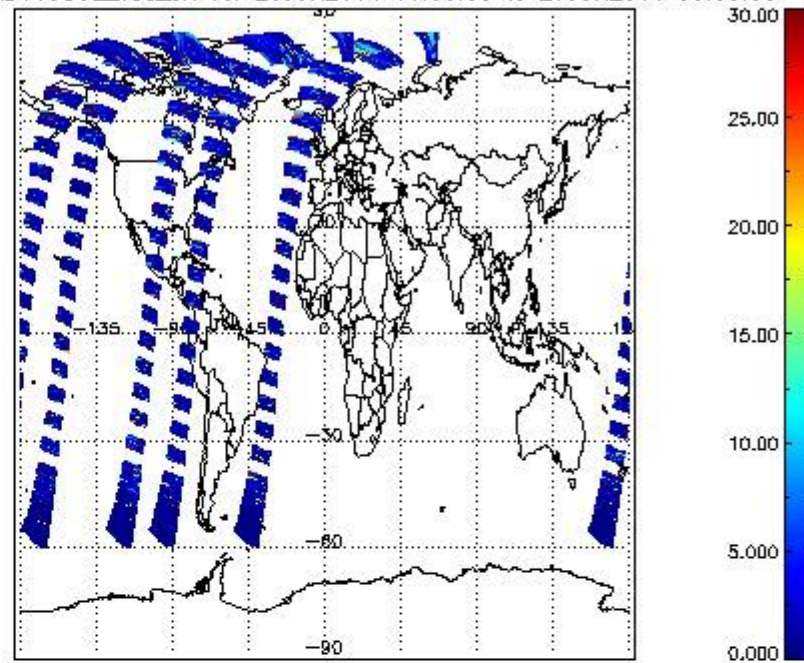




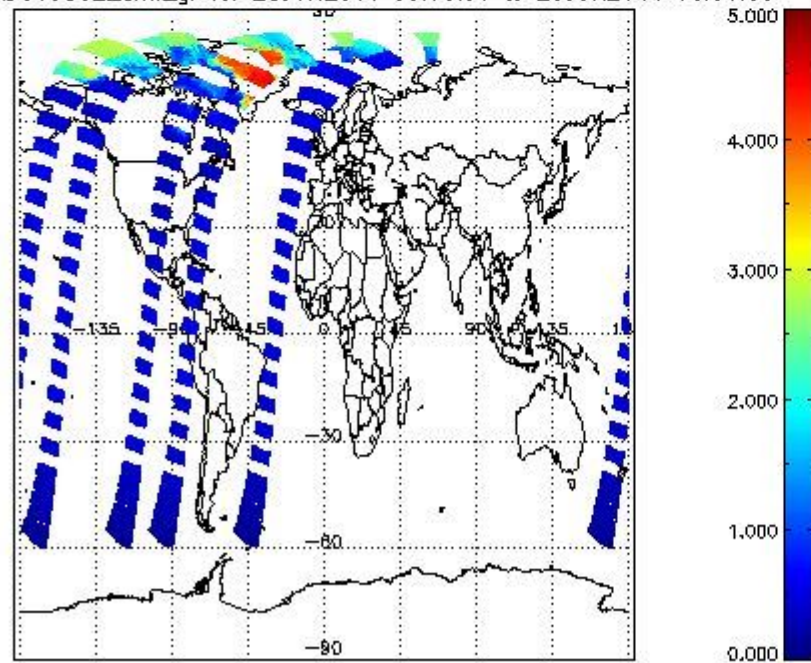
SCIOL2P\_NADUV5S02\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



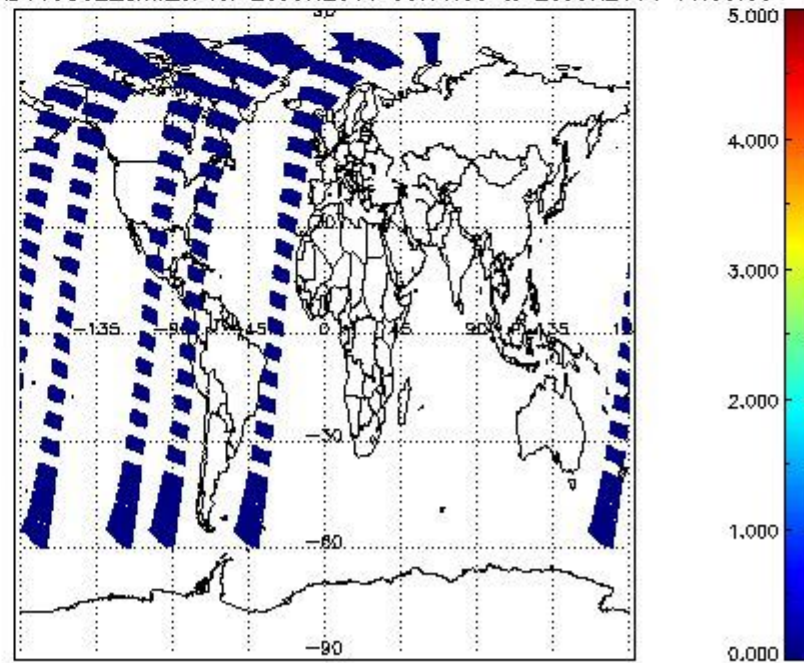
SCIOL2P\_NADUV5S02\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

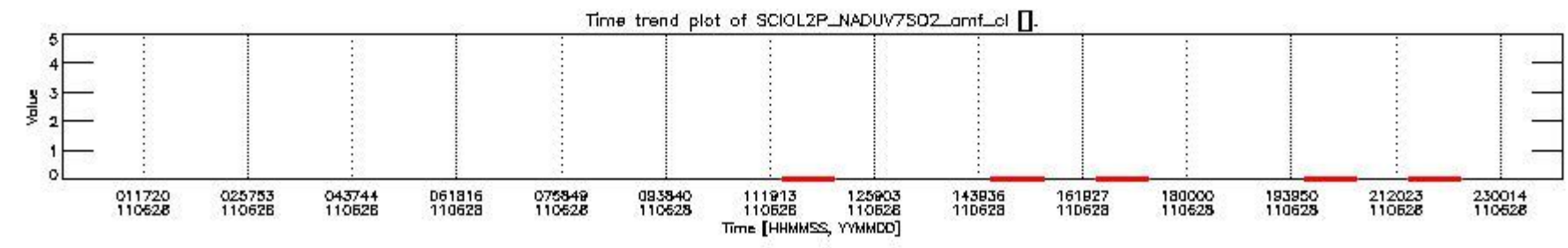
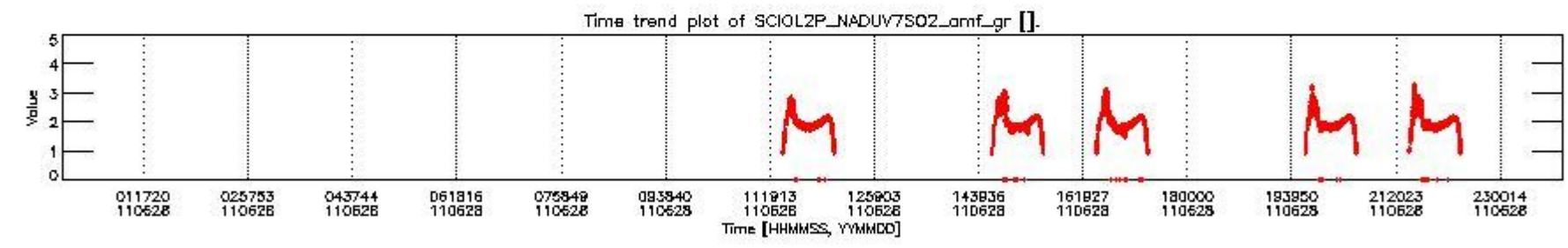
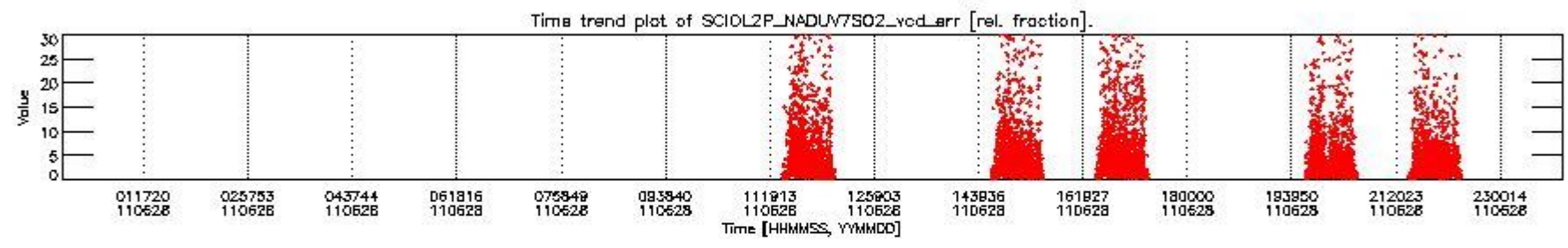
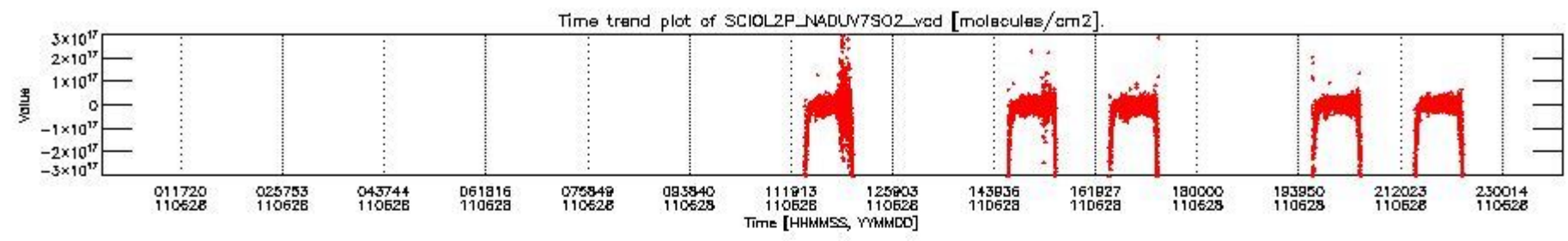


SCIOL2P\_NADUV5S02\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

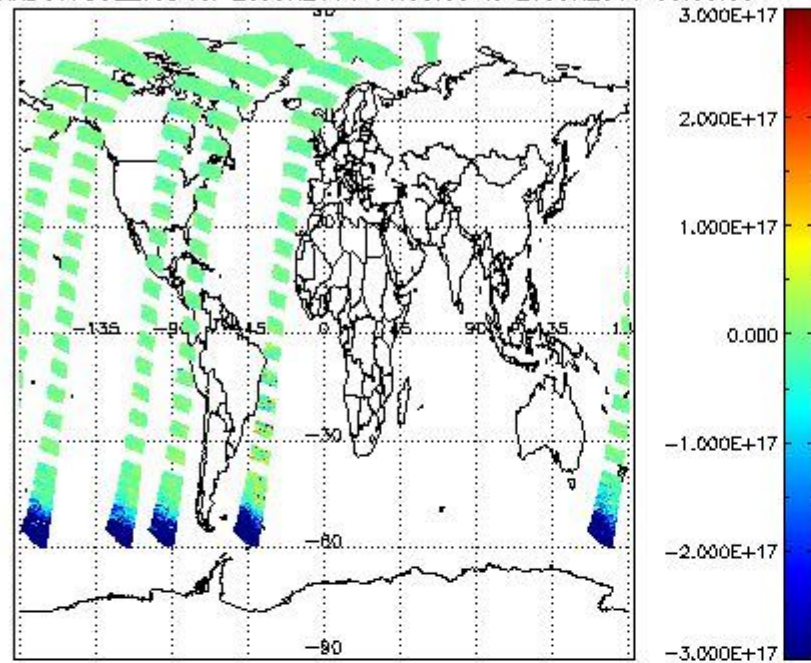


2.2.2.5 SO2 (UV7)

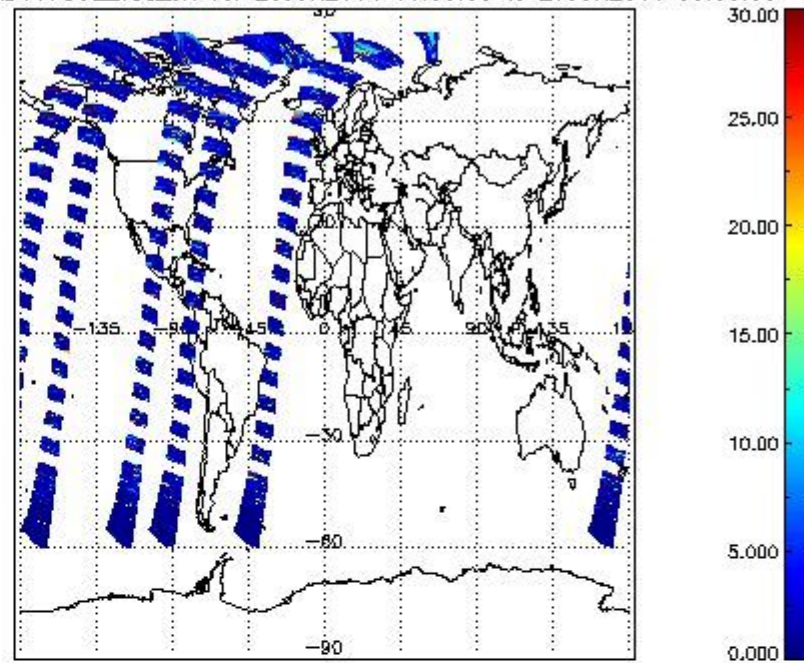




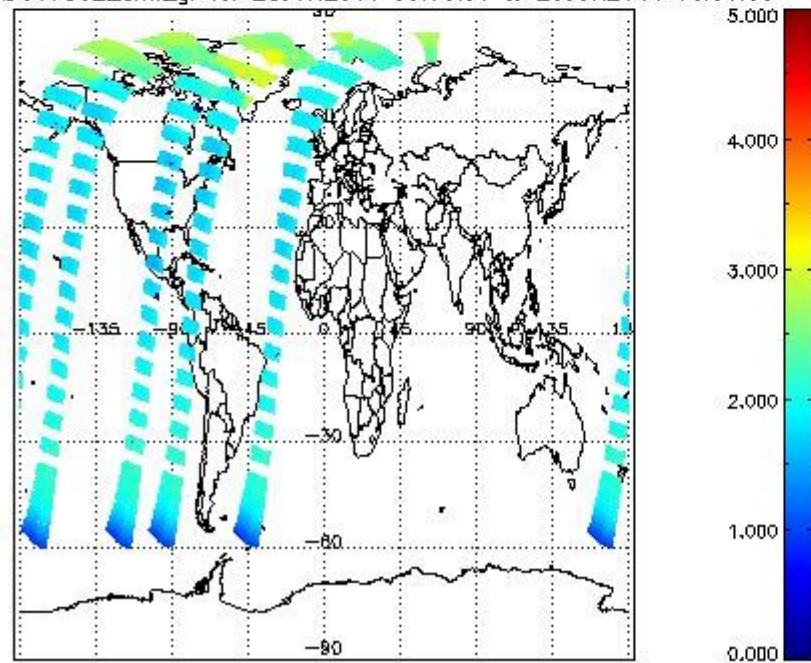
SCIOL2P\_NADUV7S02\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



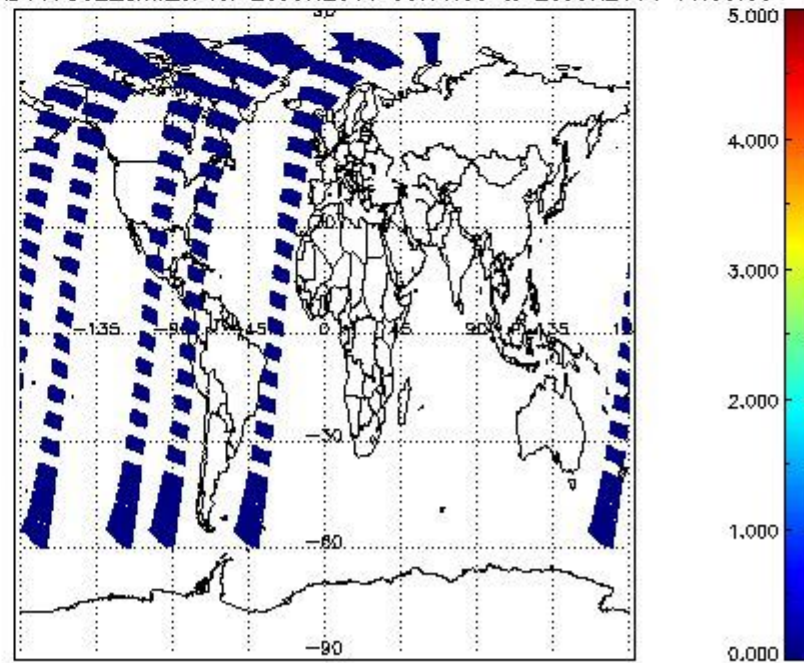
SCIOL2P\_NADUV7S02\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

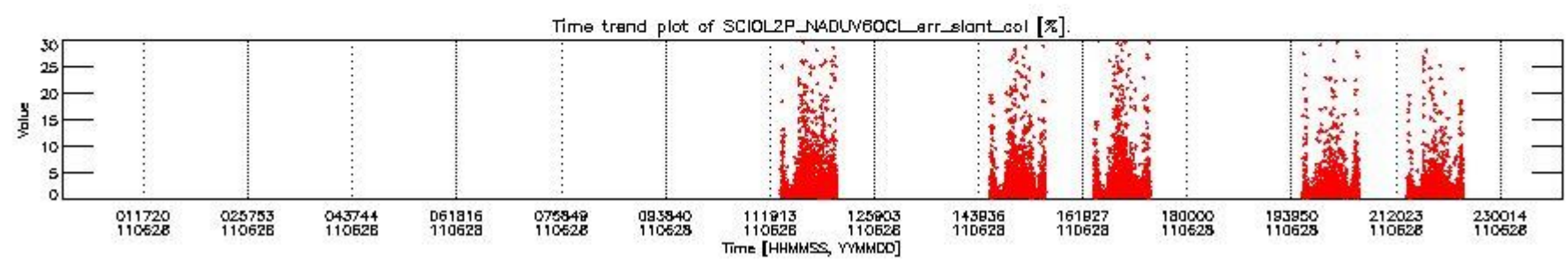
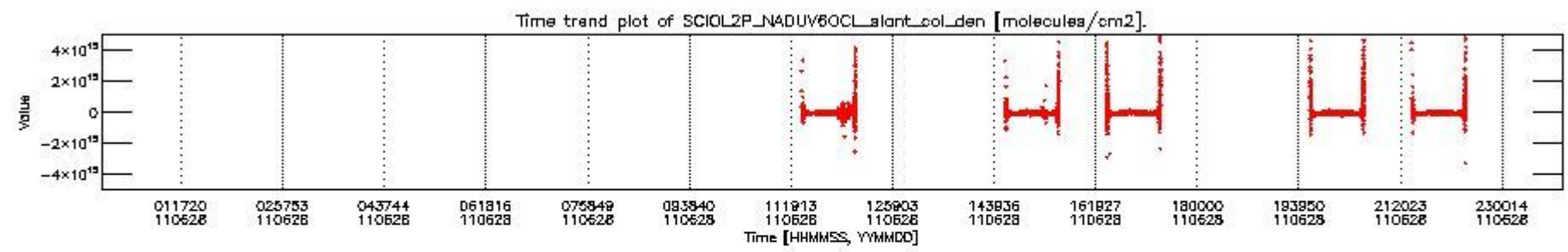


SCIOL2P\_NADUV7S02\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

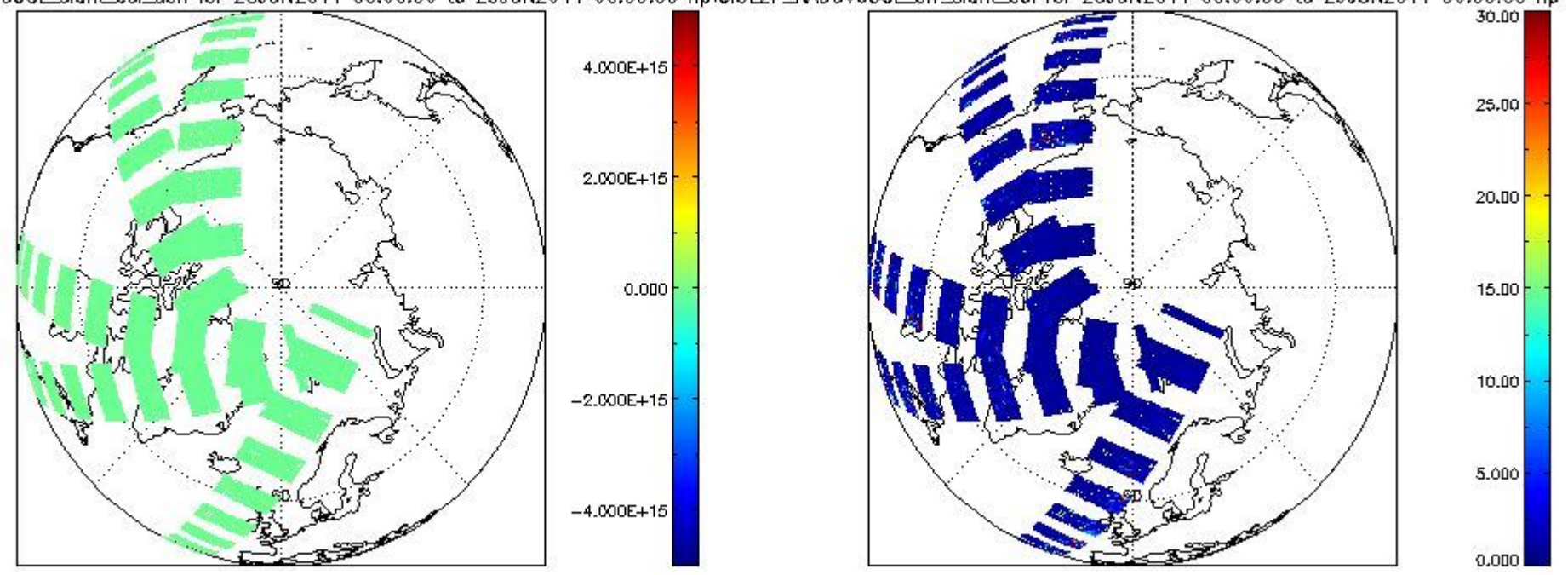


2.2.2.6 OCIO (UV6)

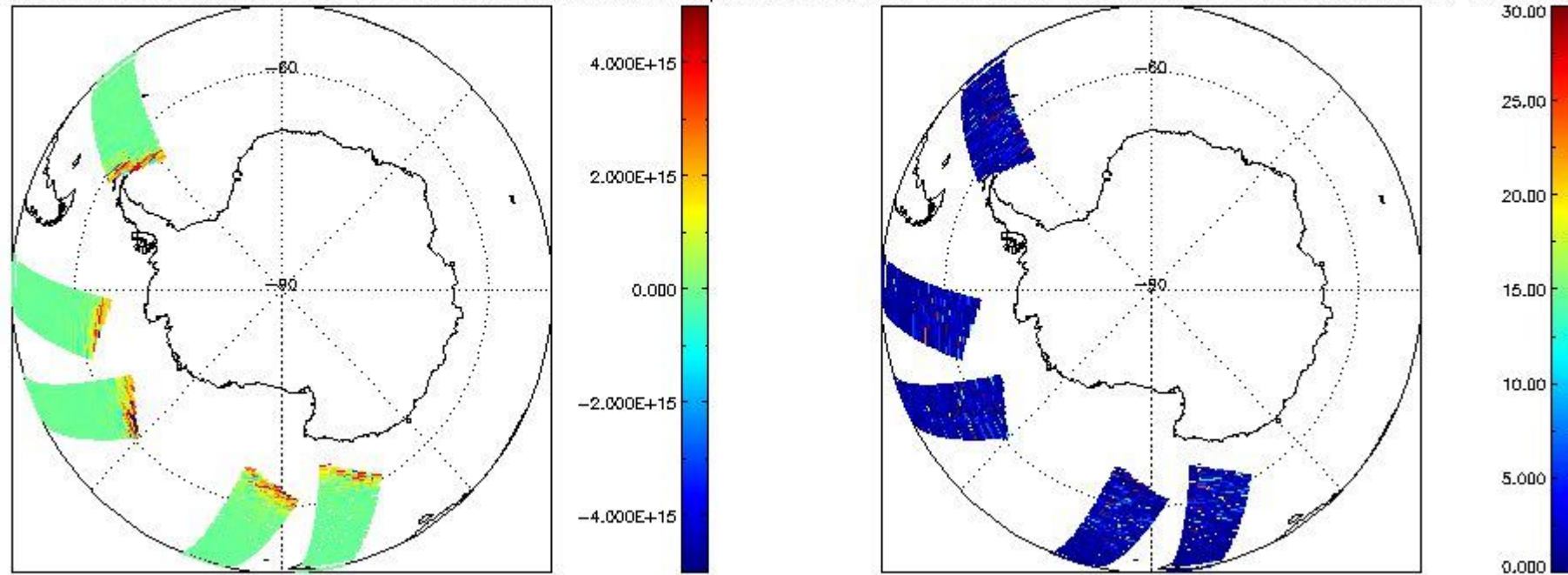




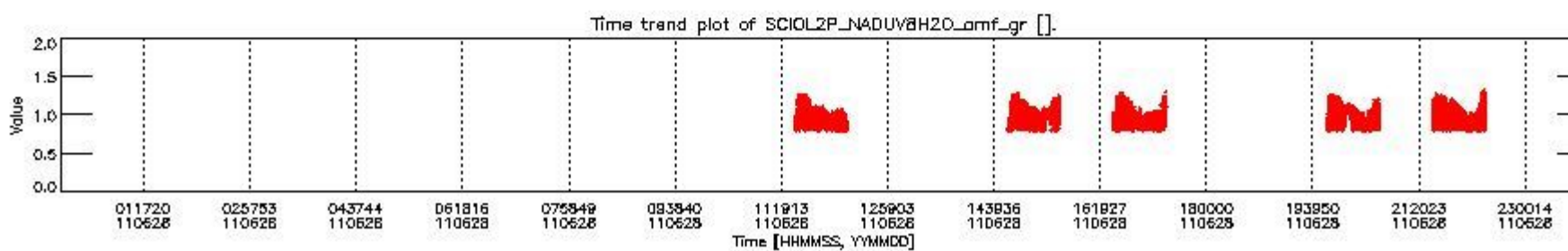
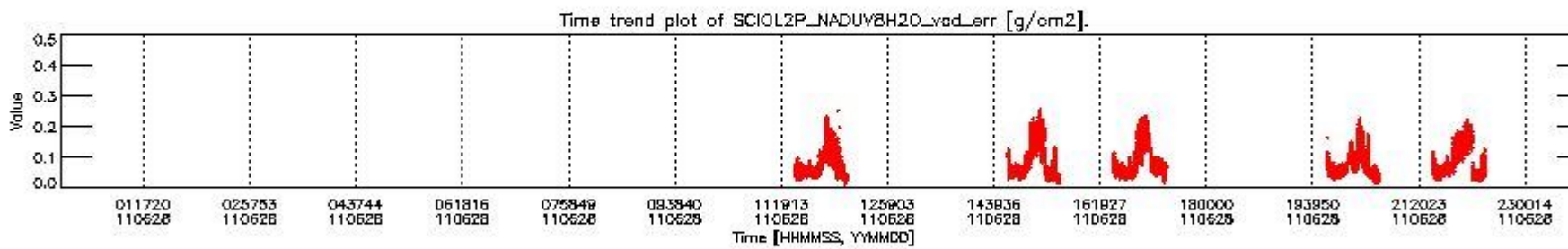
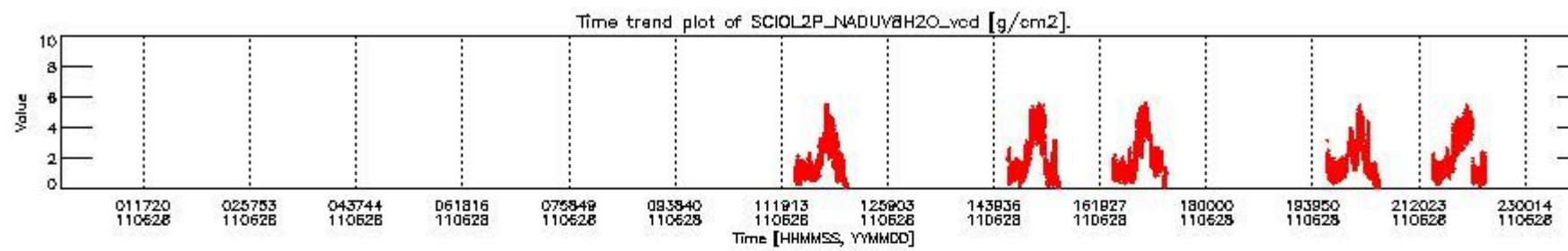
CIOL2P\_NADUV60CLslant\_col\_den for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 np; CIOL2P\_NADUV60CLarr\_slant\_col for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 np



CIOL2P\_NADUV60CL\_slant\_col\_den for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 sp; CIOL2P\_NADUV60CL\_err\_slant\_col for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 sp

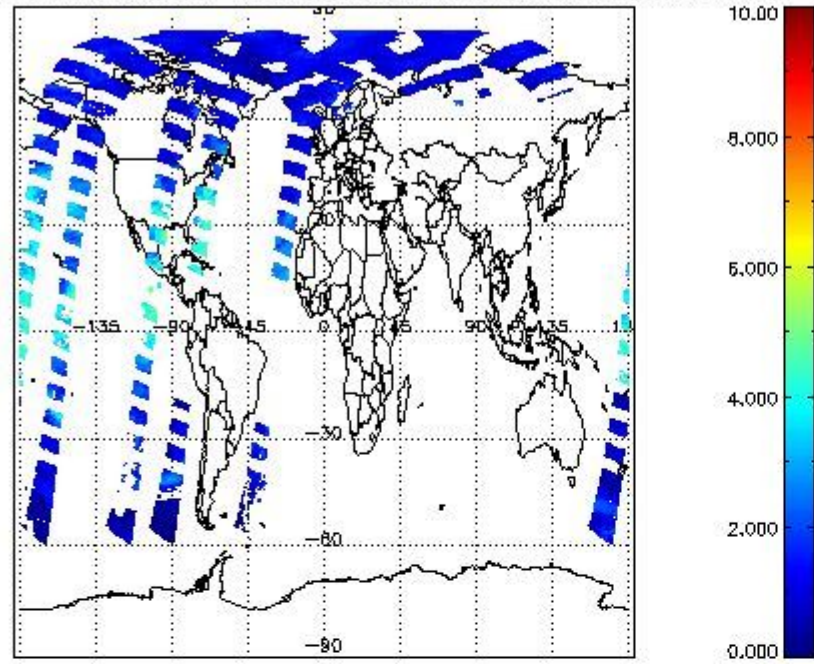


### 2.2.2.7 H<sub>2</sub>O (UV8)

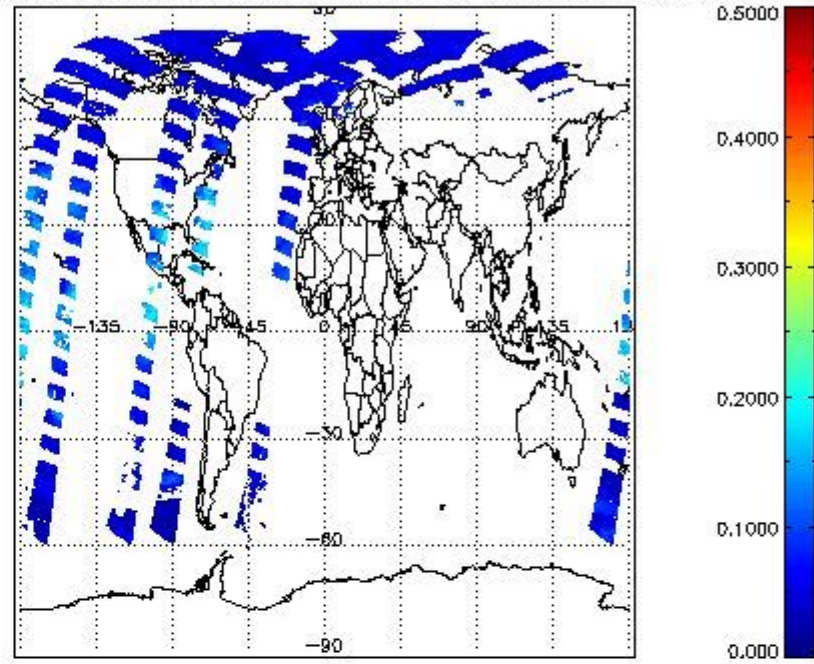




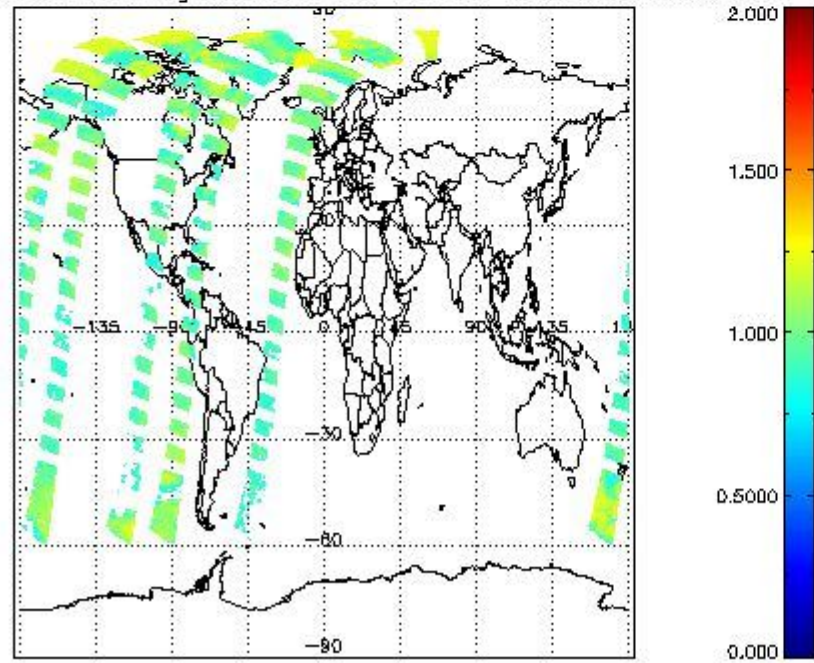
SCIOL2P\_NADUV8H2O\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



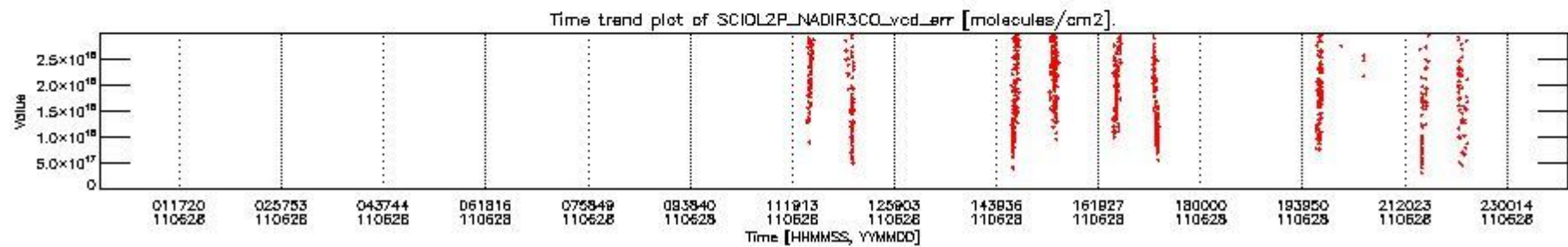
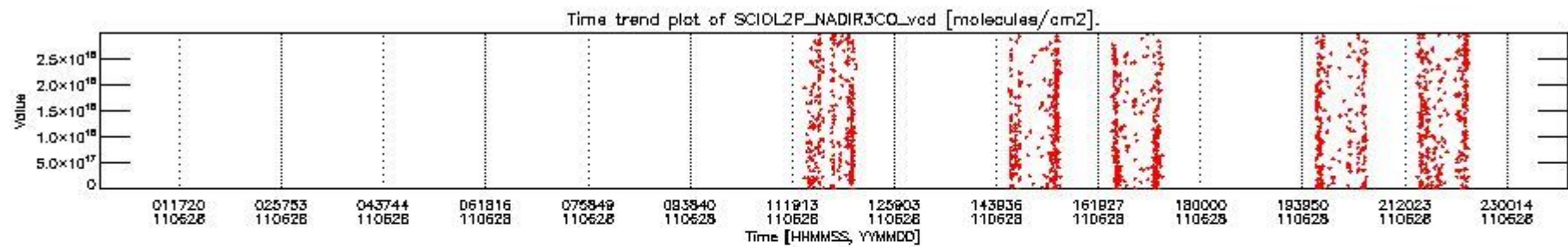
SCIOL2P\_NADUV8H2O\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



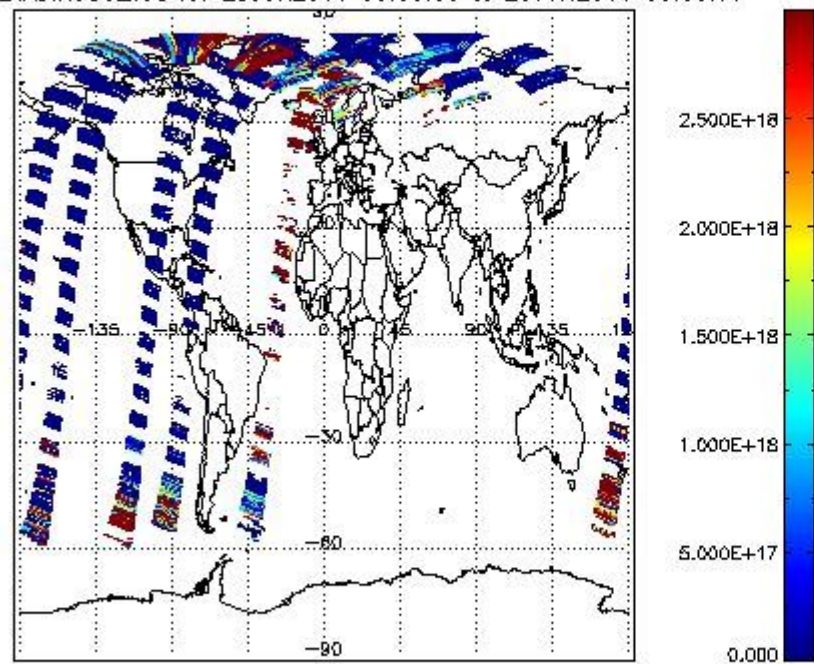
SCIOL2P\_NADUV8H2O\_arnf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



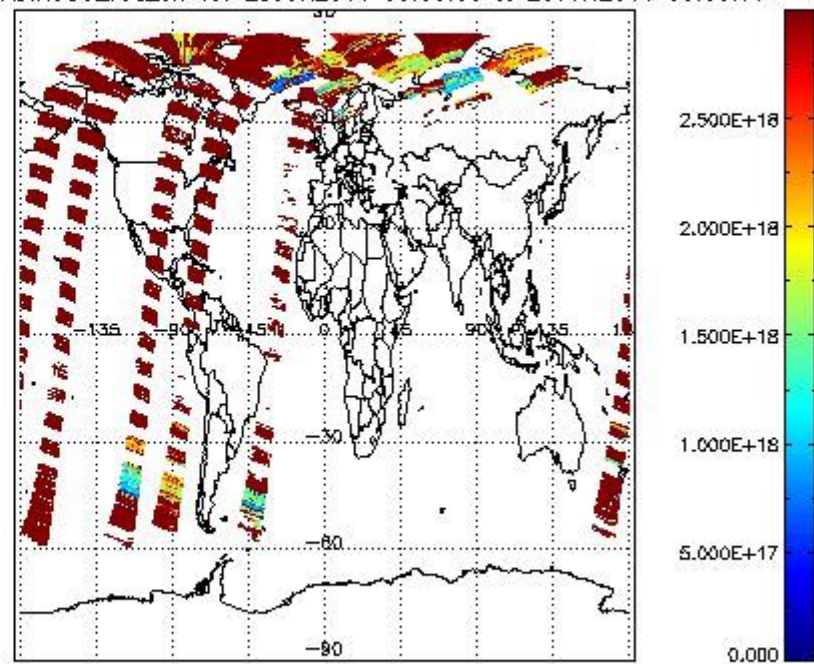
2.2.2.8 CO (IR3)



SCIDL2P\_NADIR3CO\_vcd for 2BJUN2011 00:00:00 to 29JUN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 2BJUN2011 00:00:00 to 29JUN2011 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.

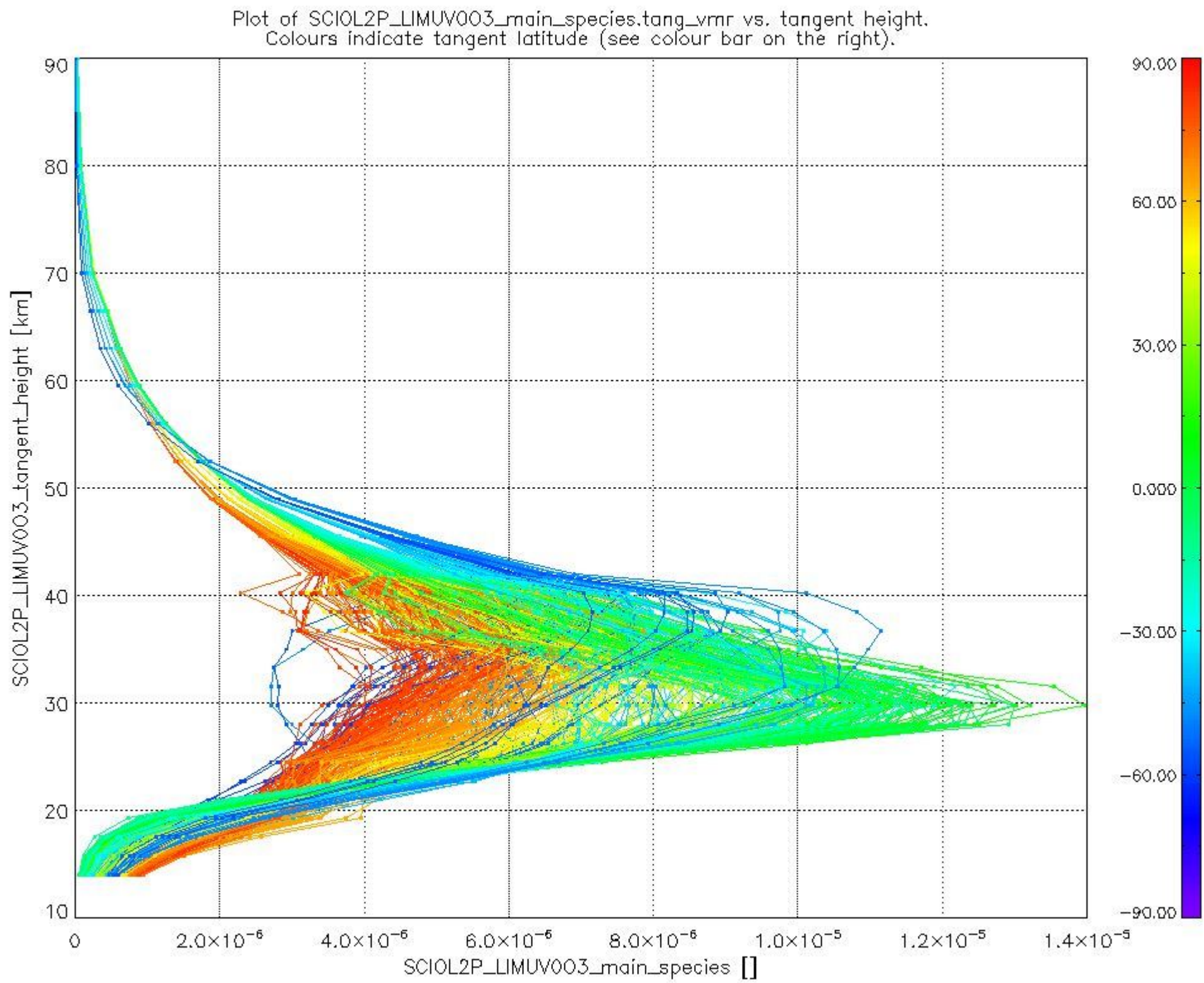
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



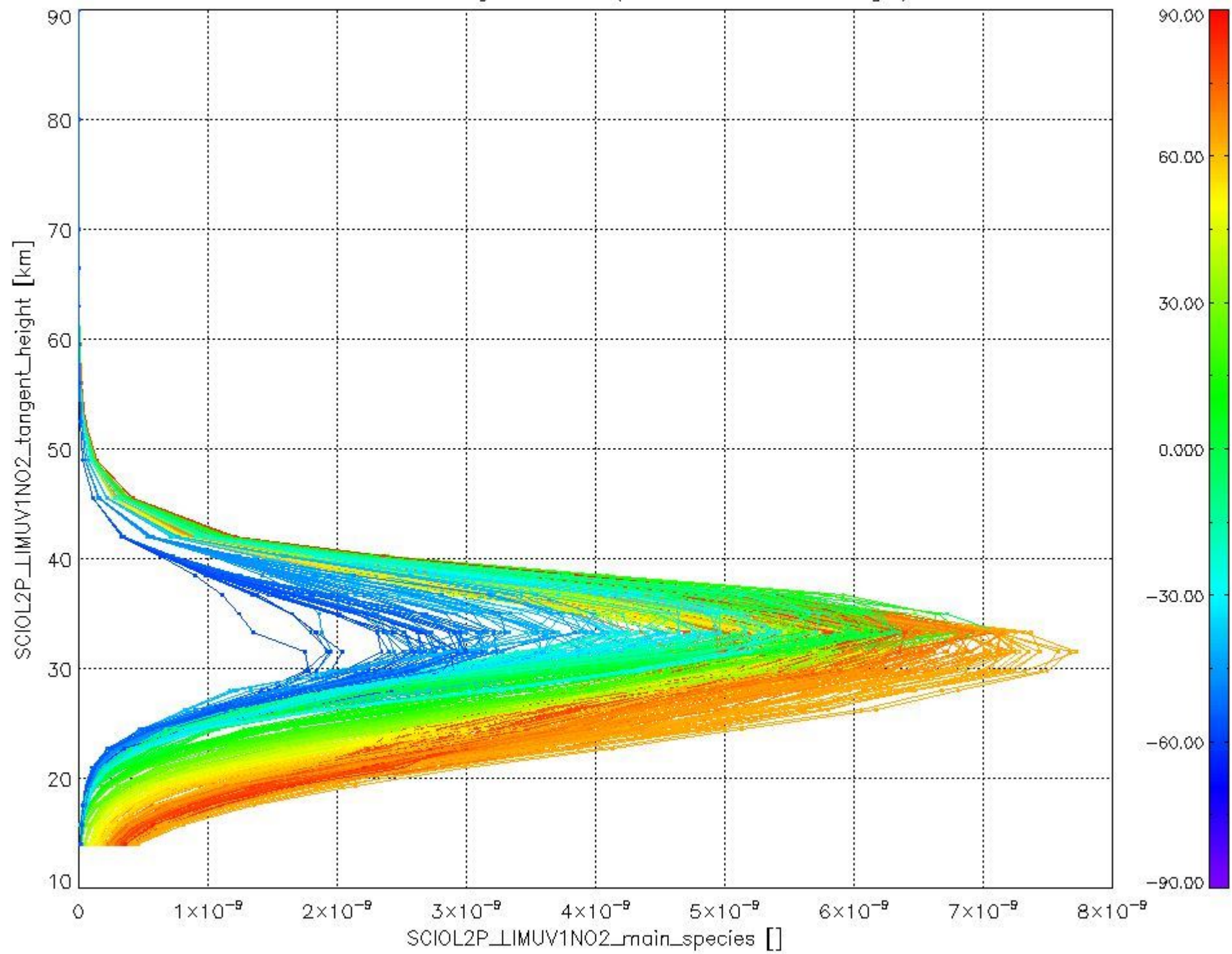
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)

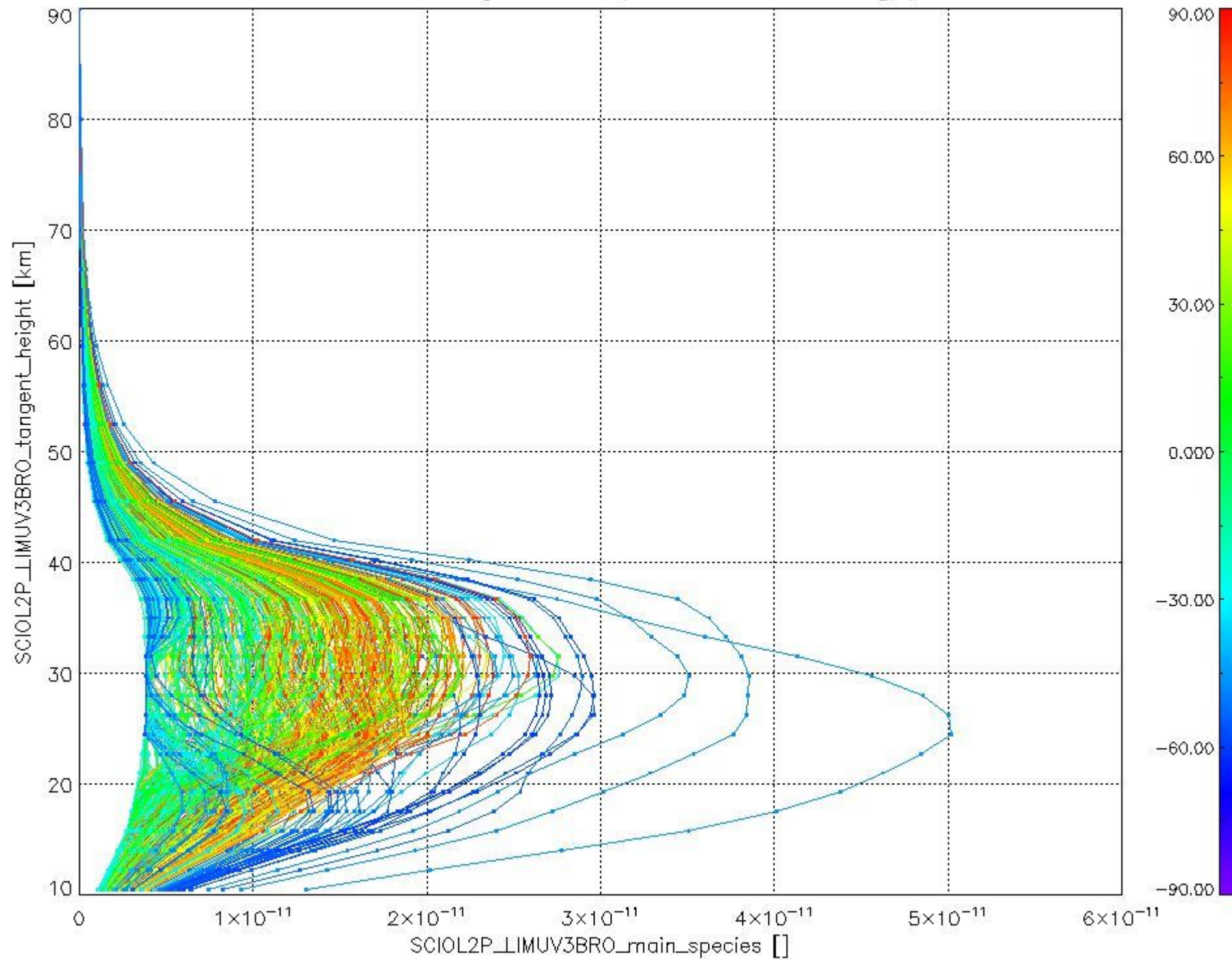
Plot of SCIO2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).



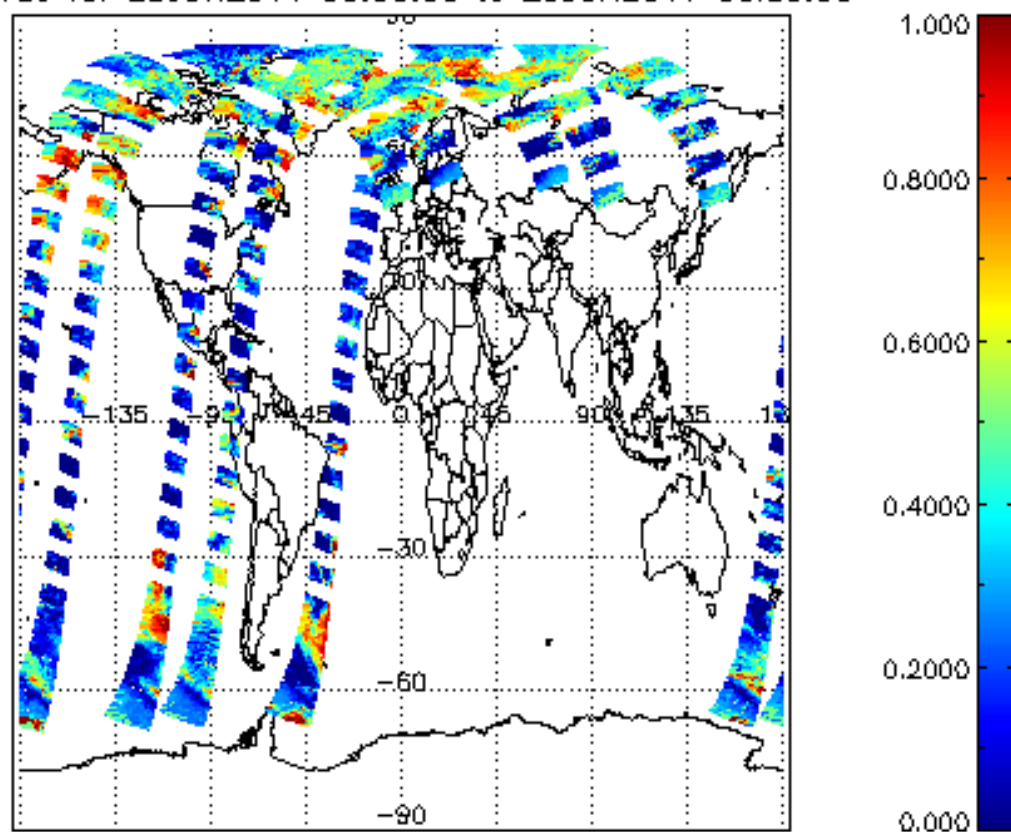
### 2.3 ADF monitoring

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_AXVIEC20110628_110655_20110627_181746_20110629_181746
3	SCI_MF1_AXVIEC20110705_110038_20110628_192114_20110630_192114

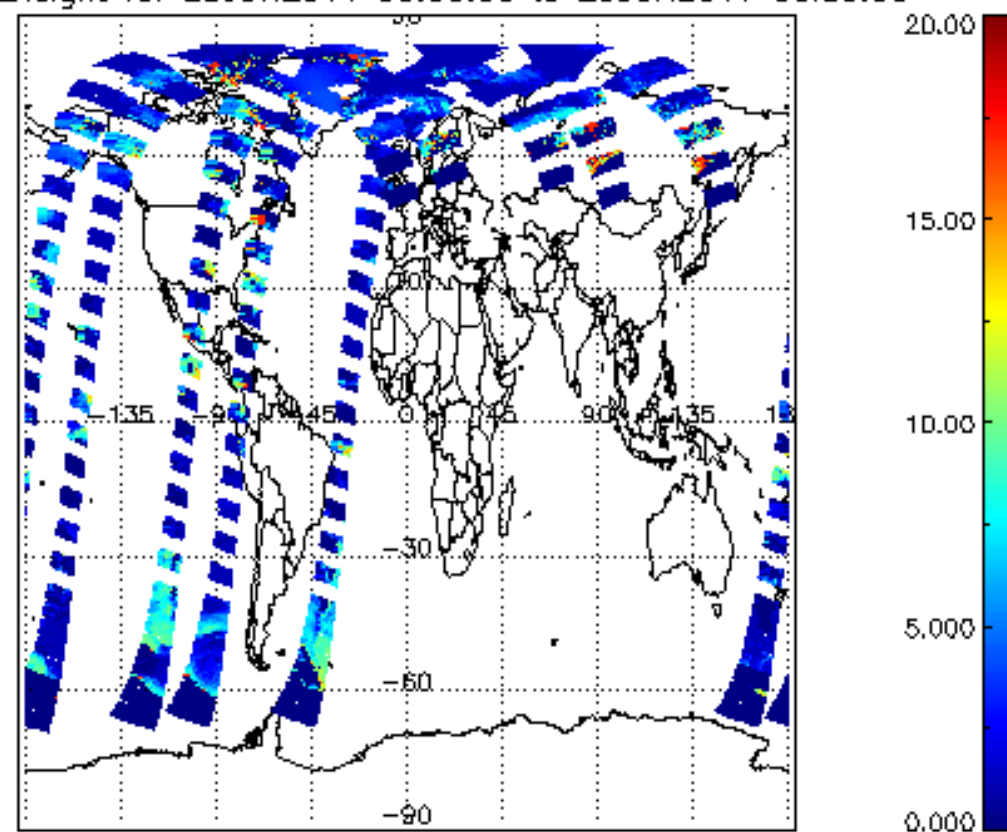




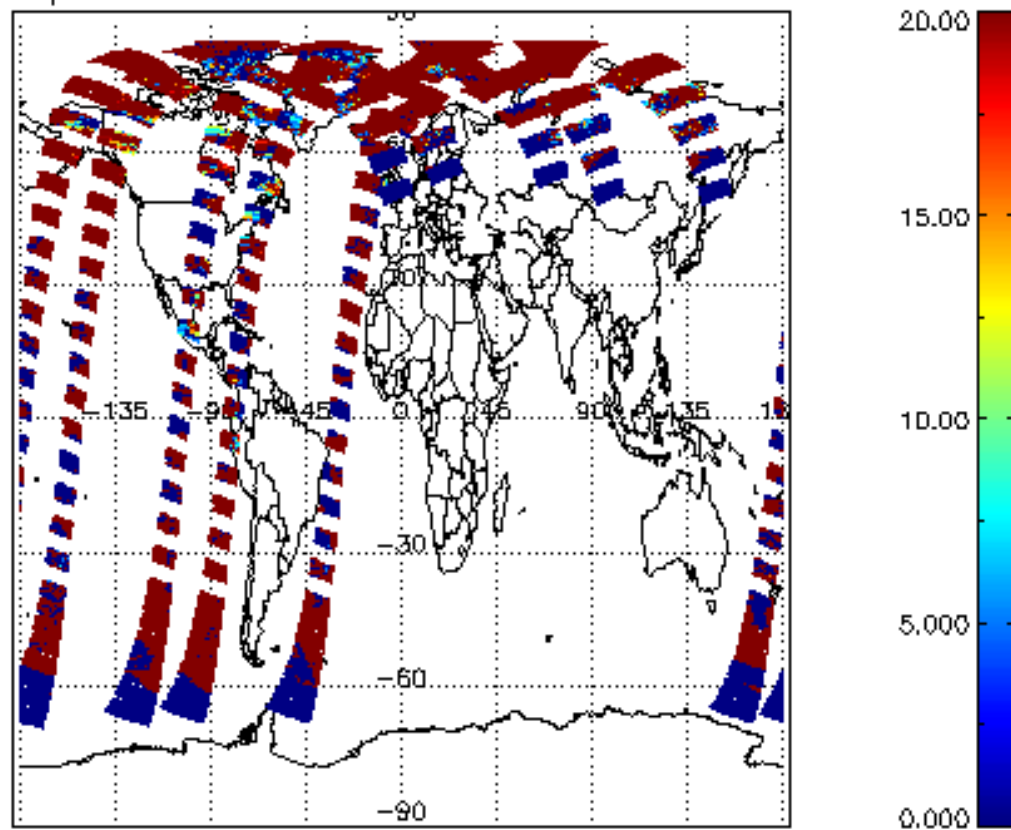
cl\_frac for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



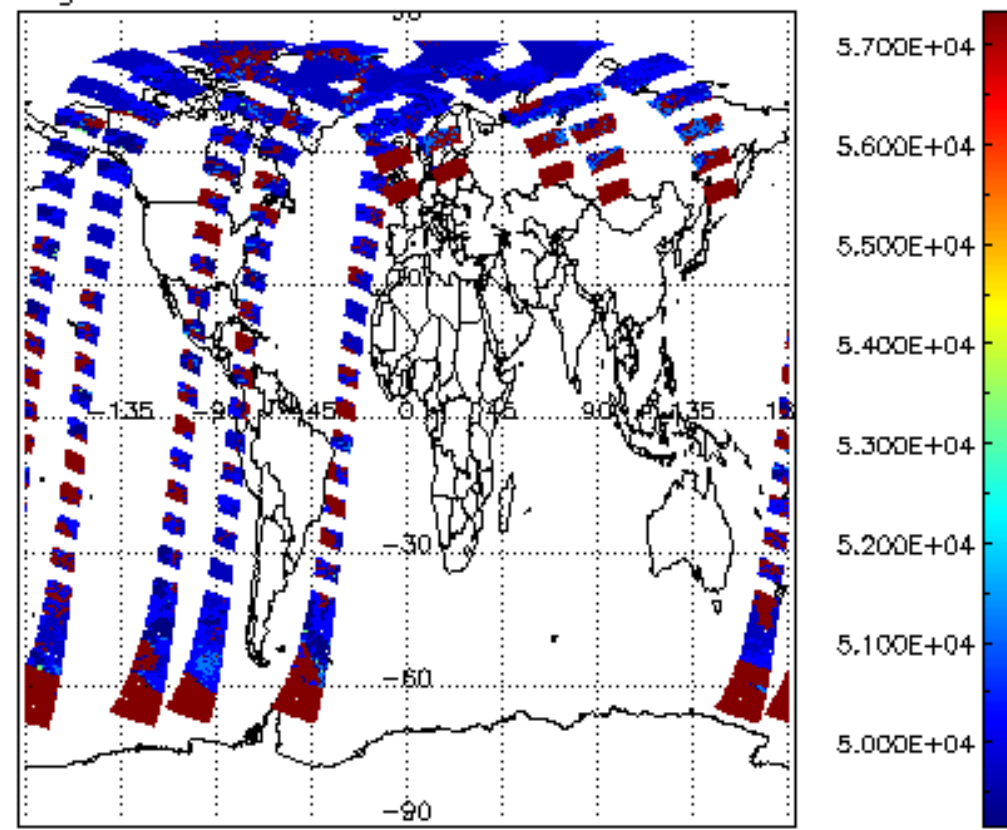
cl\_top\_height for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

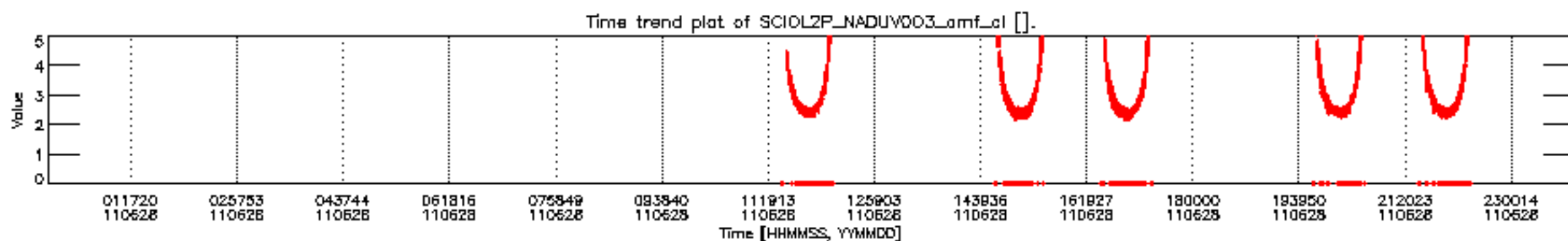
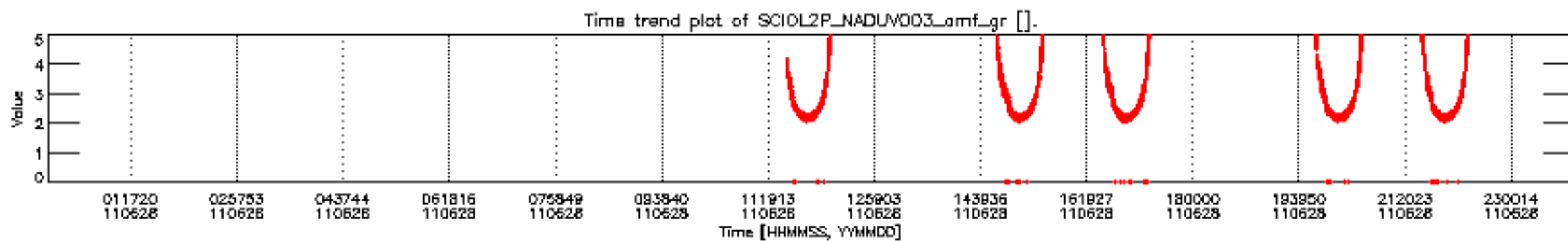
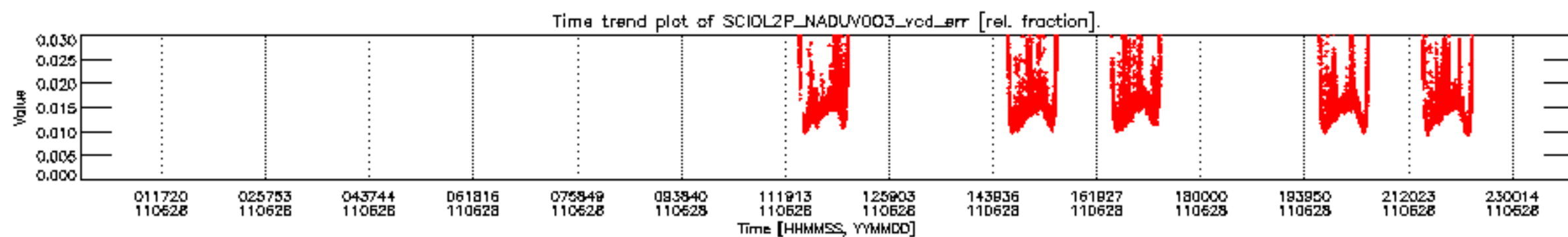
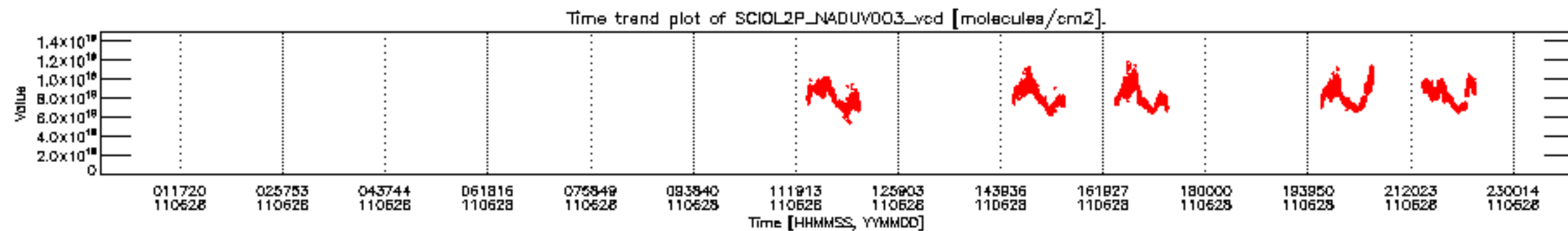


cl\_opt\_depth for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



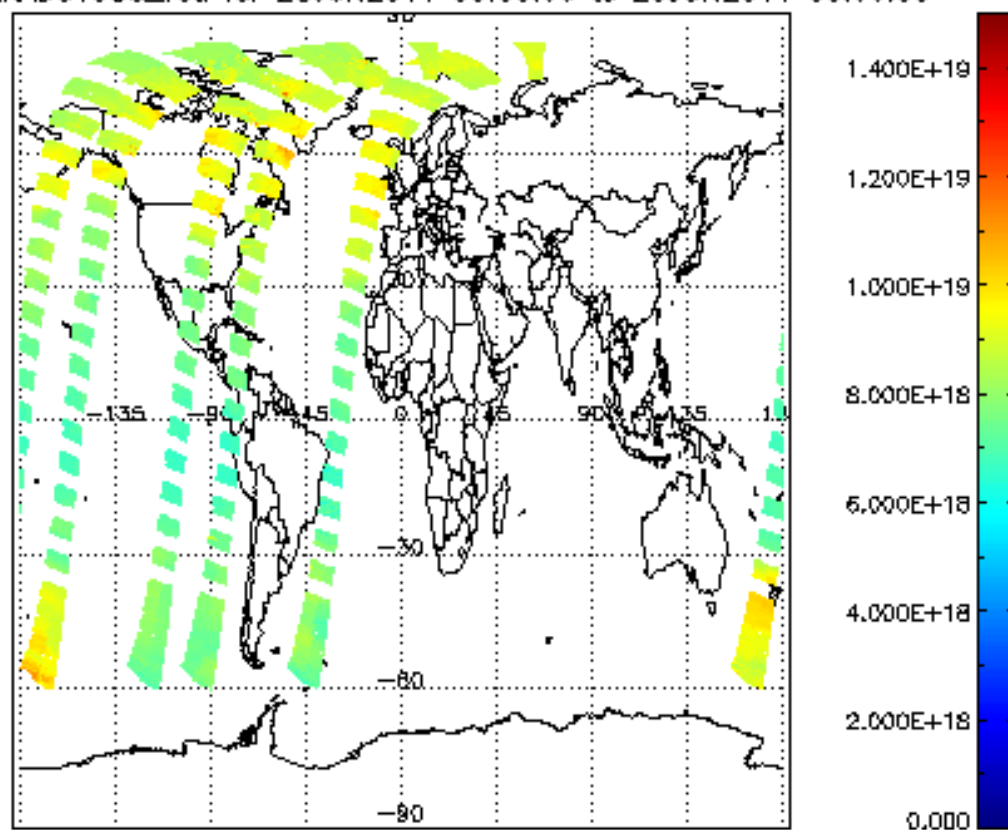
cloud\_flags for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



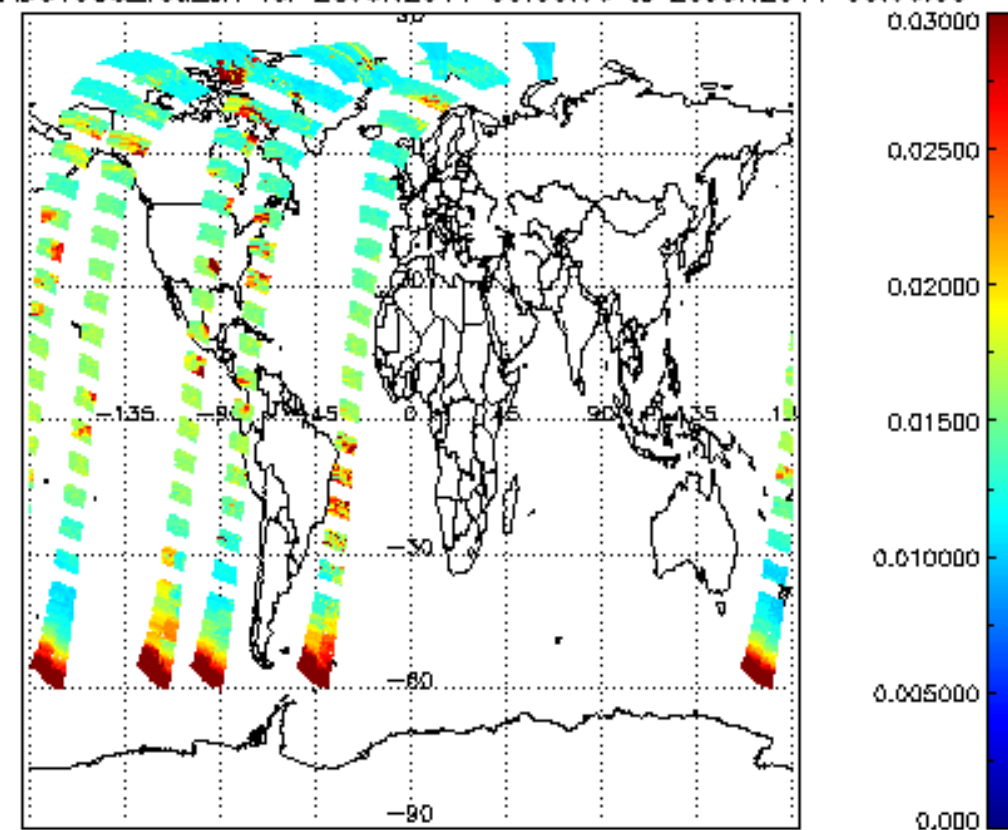




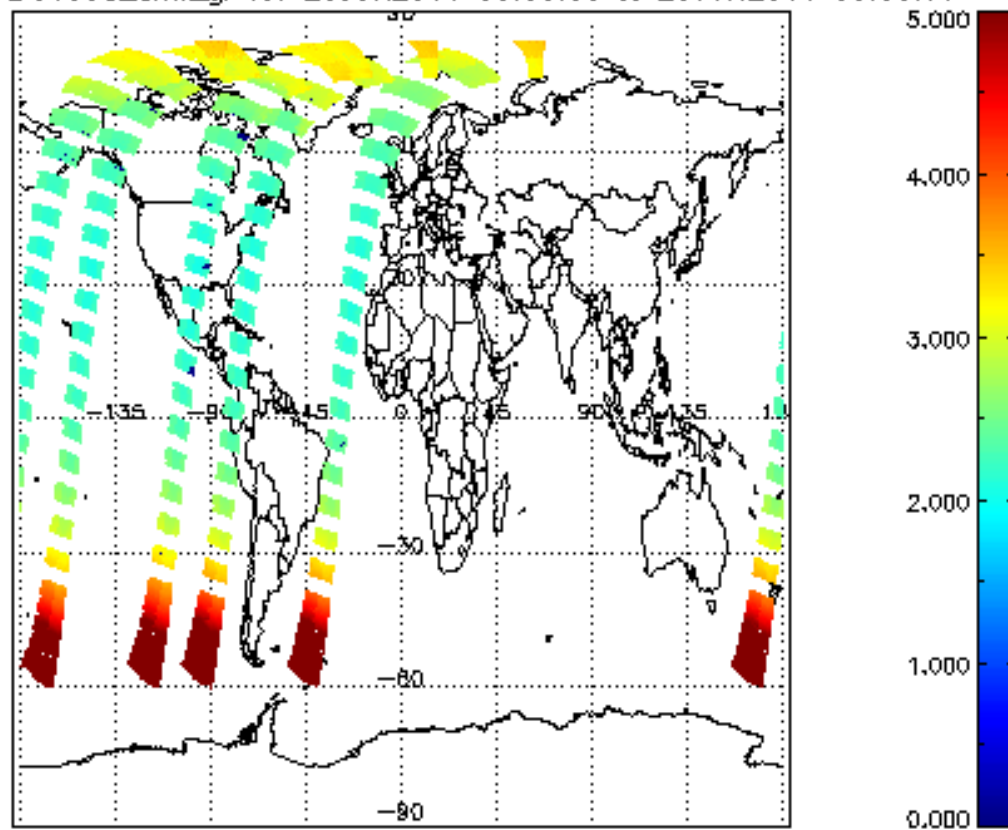
SCIOL2P\_NADUV003\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



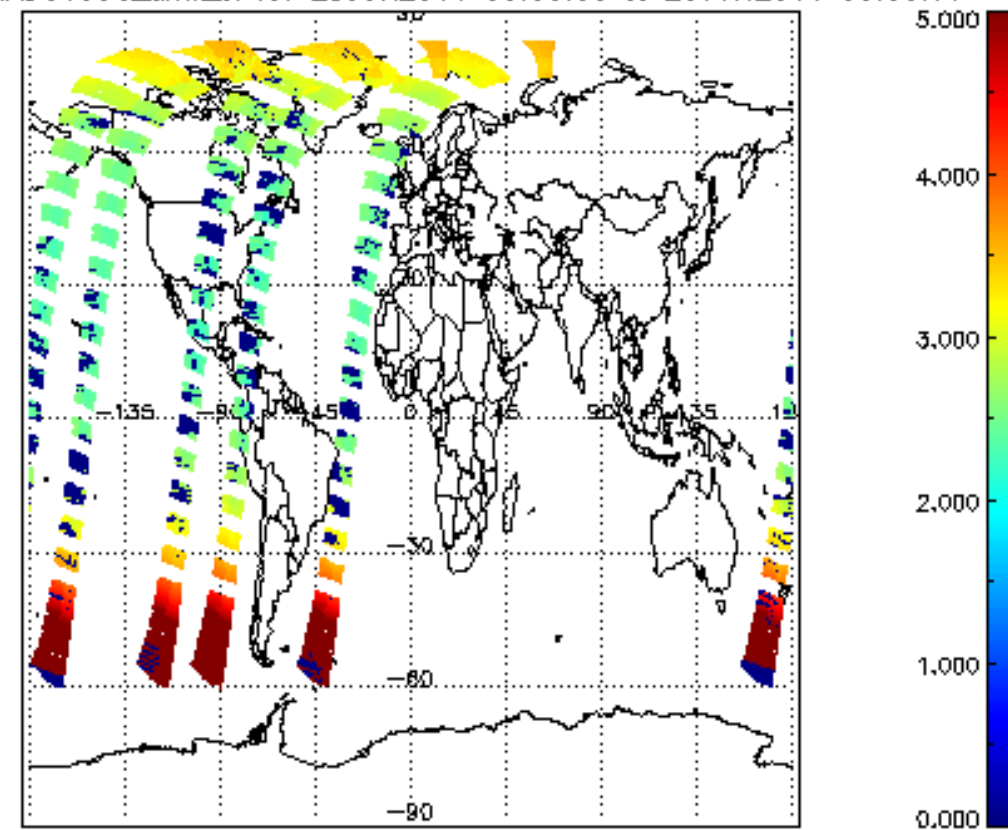
SCIOL2P\_NADUV003\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

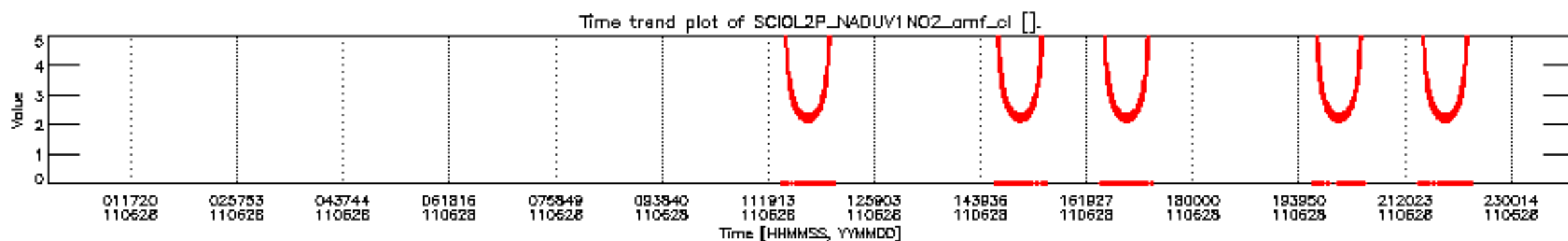
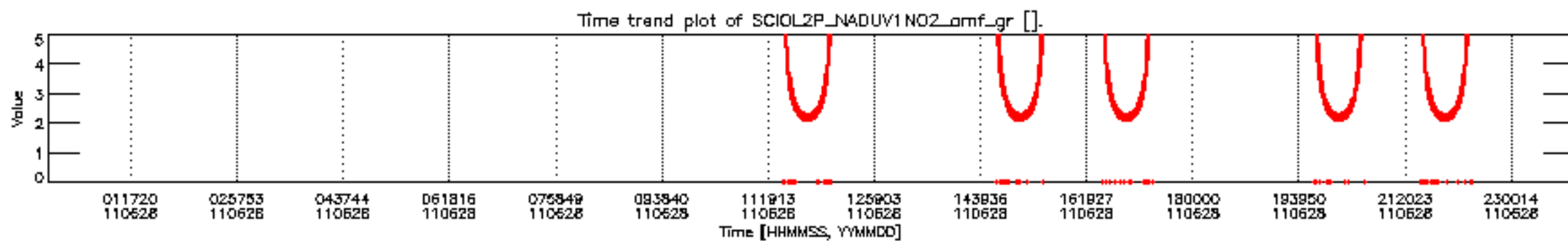
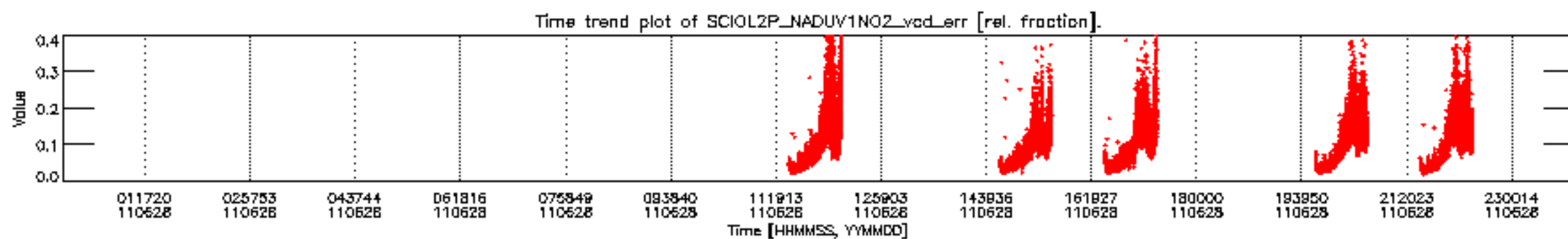
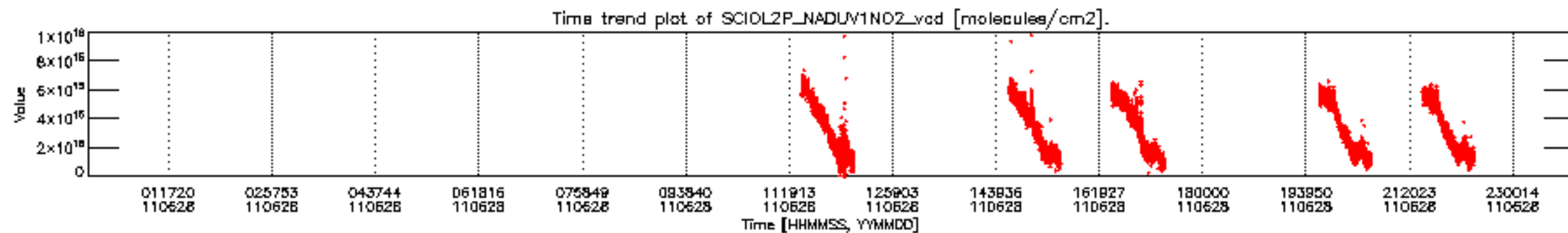


SCIOL2P\_NADUV003\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



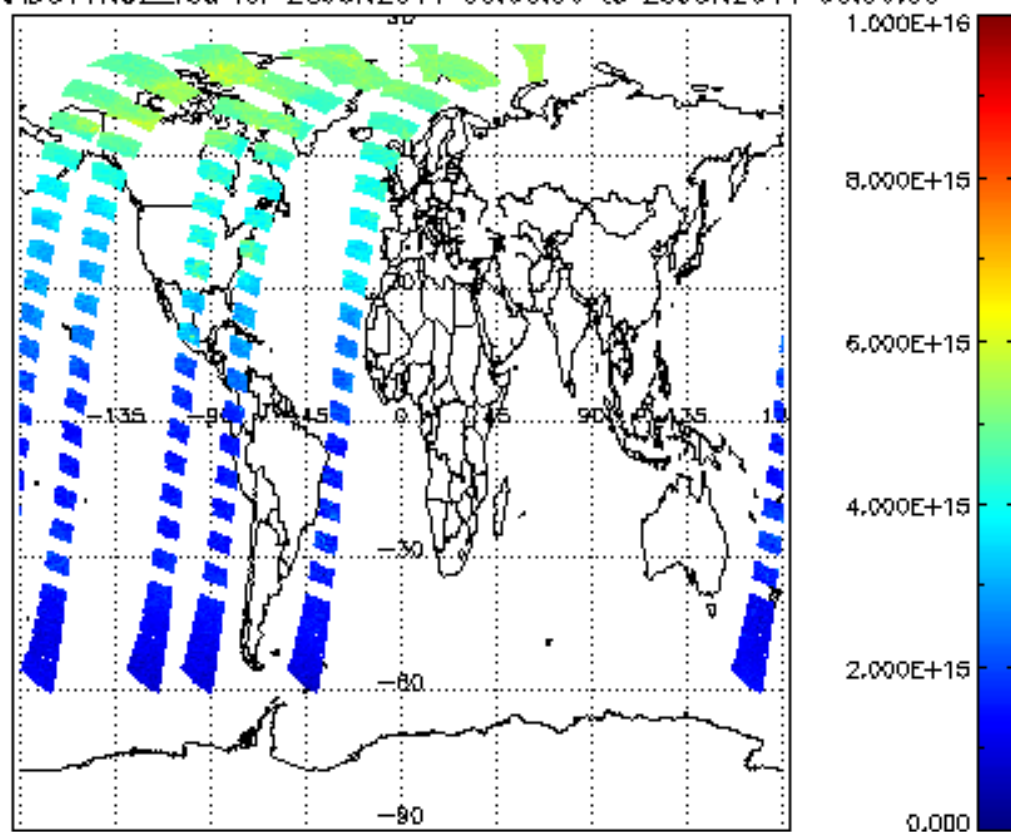
SCIOL2P\_NADUV003\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



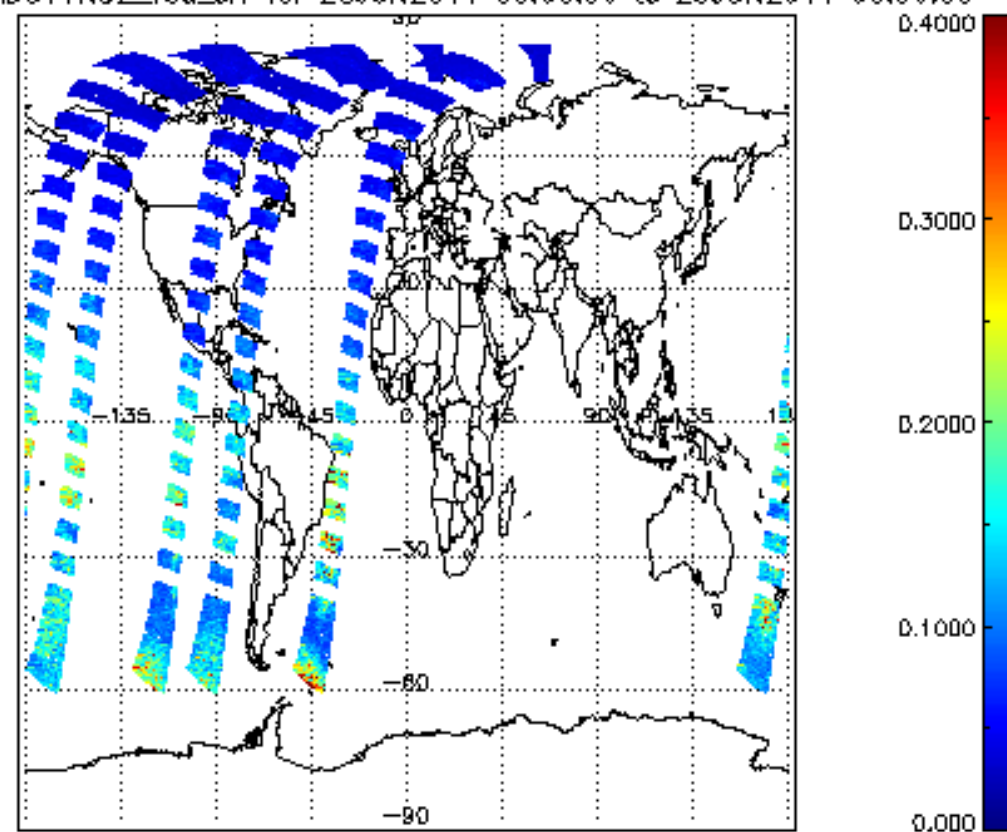




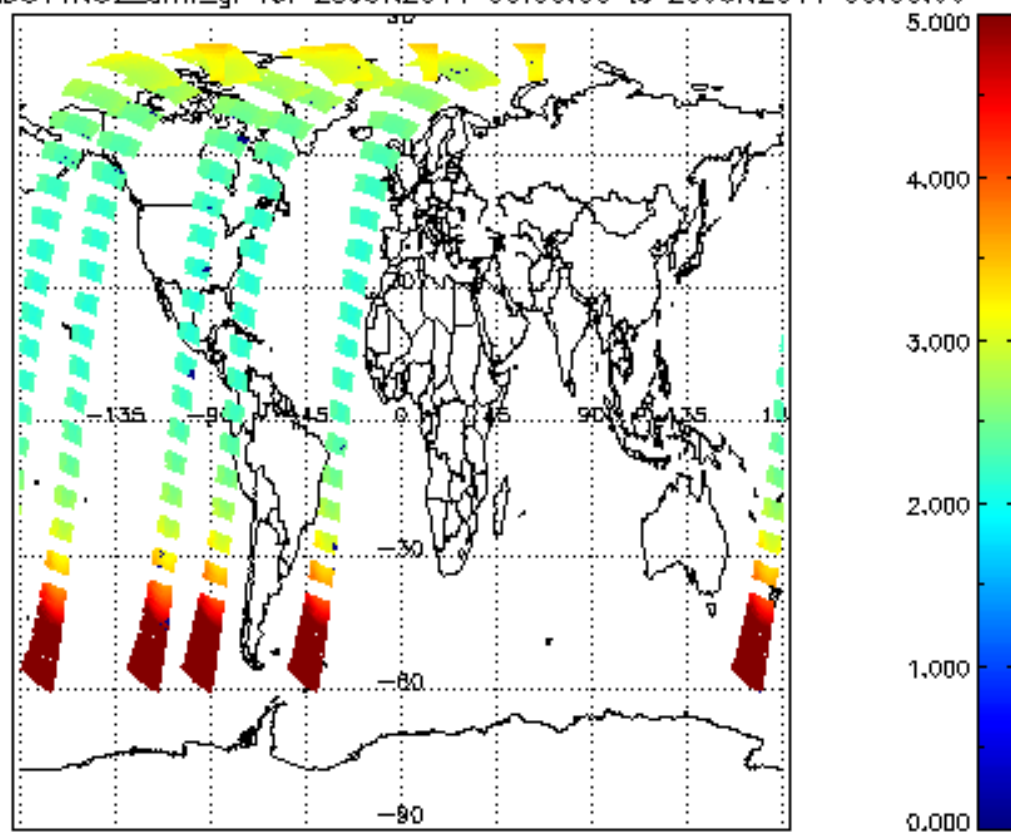
SCIOL2P\_NADUV1NO2\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



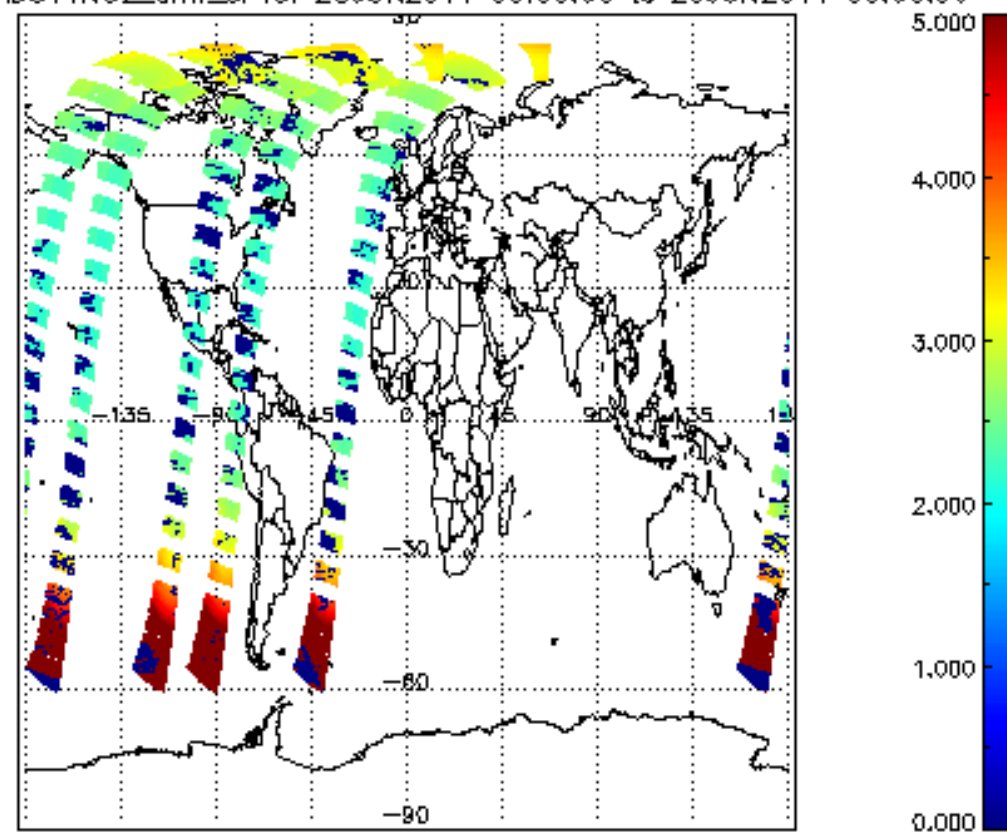
SCIOL2P\_NADUV1NO2\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

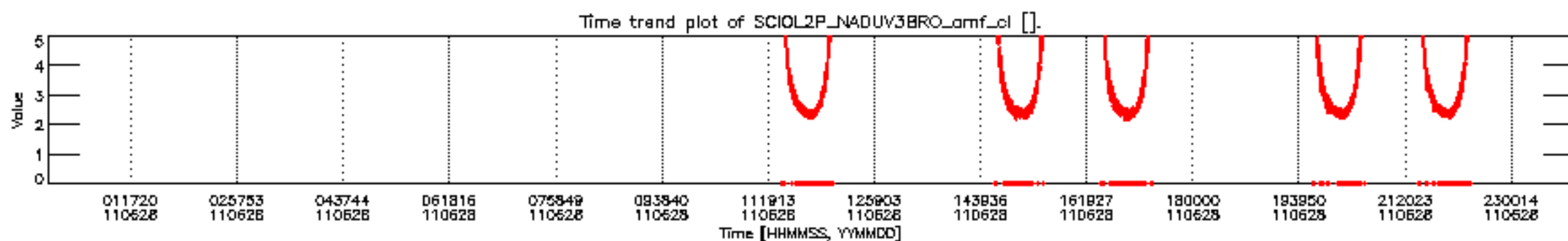
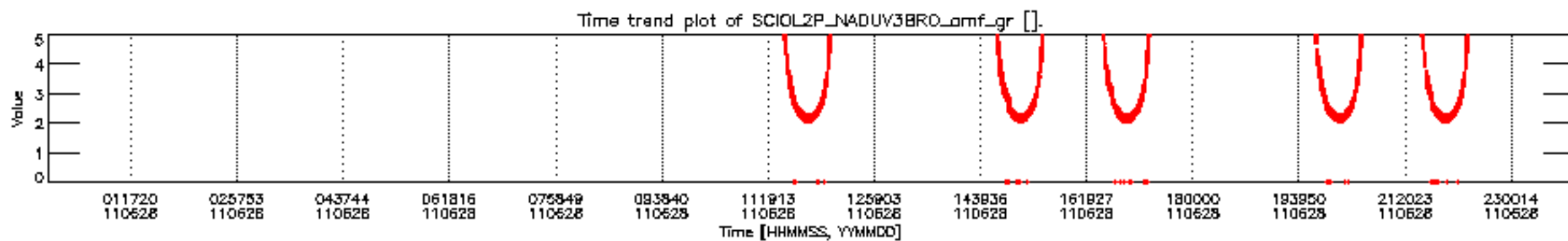
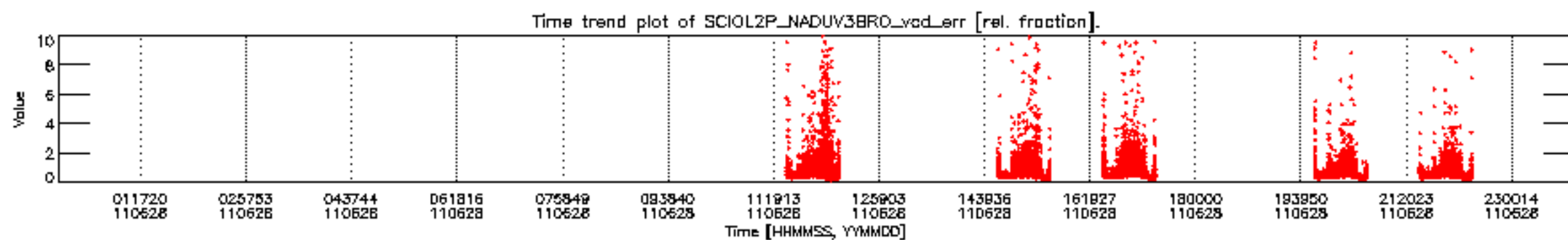
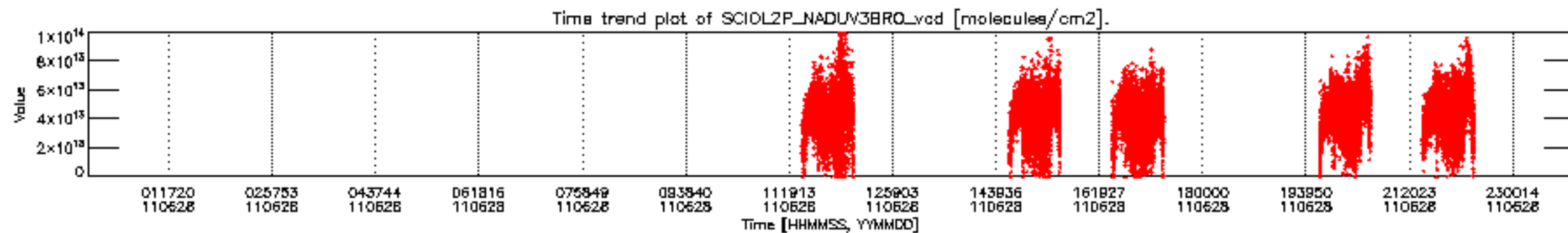


SCIOL2P\_NADUV1NO2\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



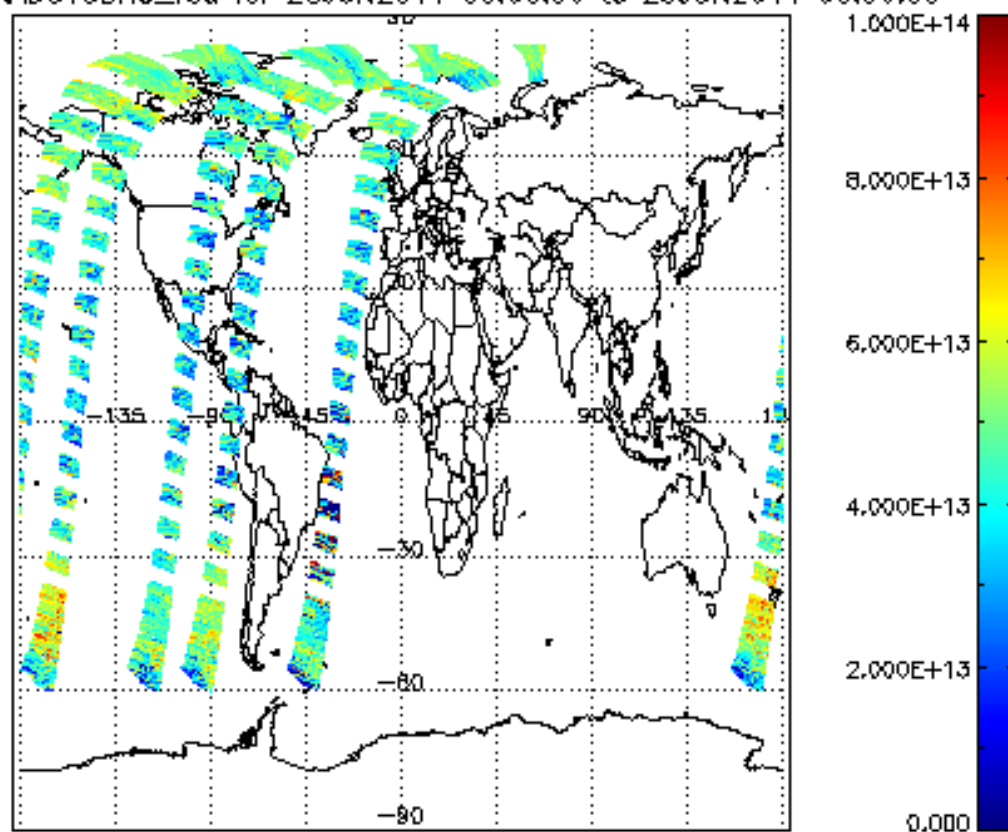
SCIOL2P\_NADUV1NO2\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



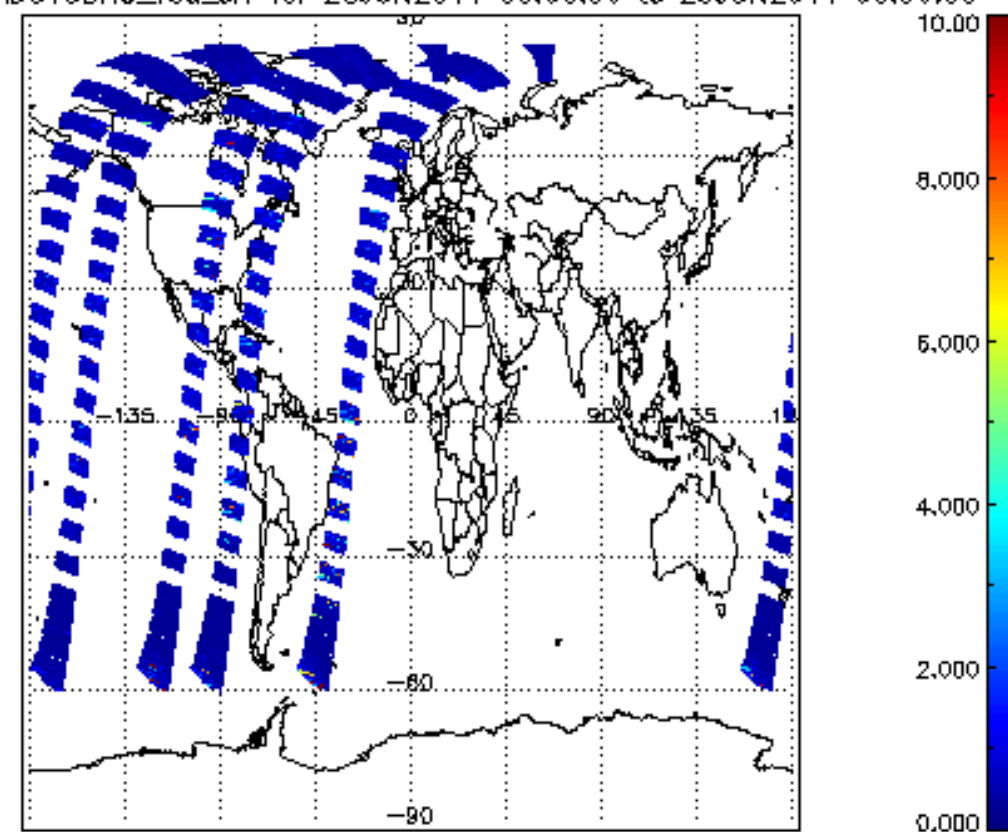




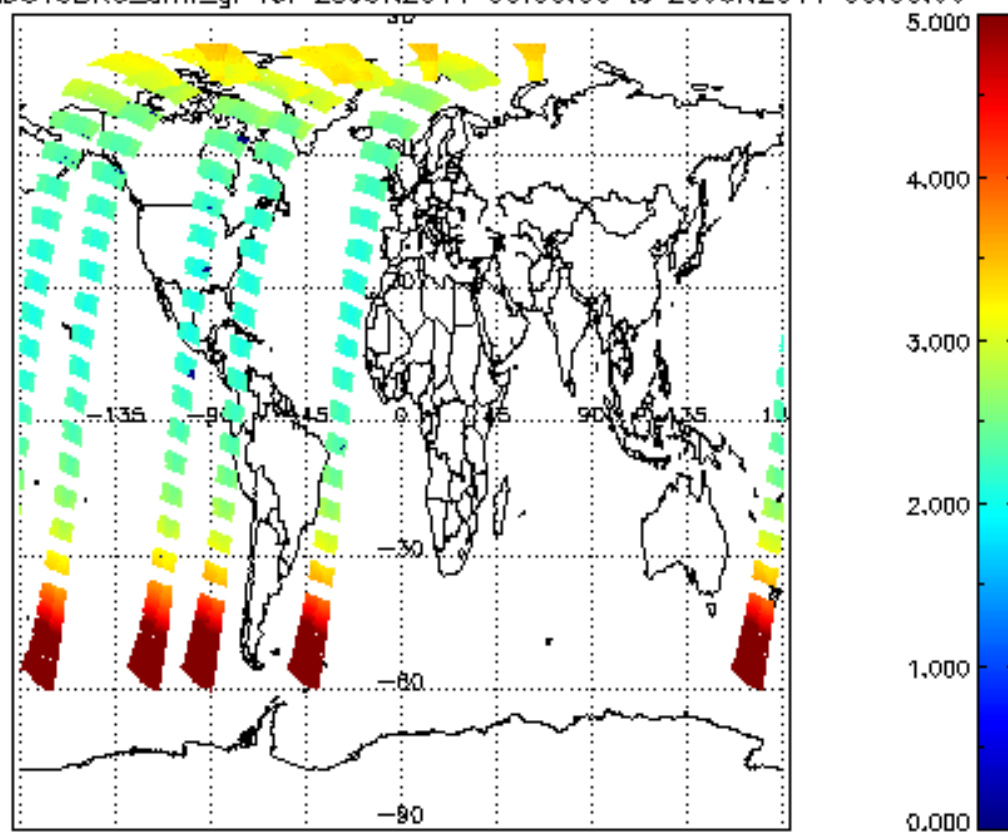
SCIOL2P\_NADUV3BRO\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



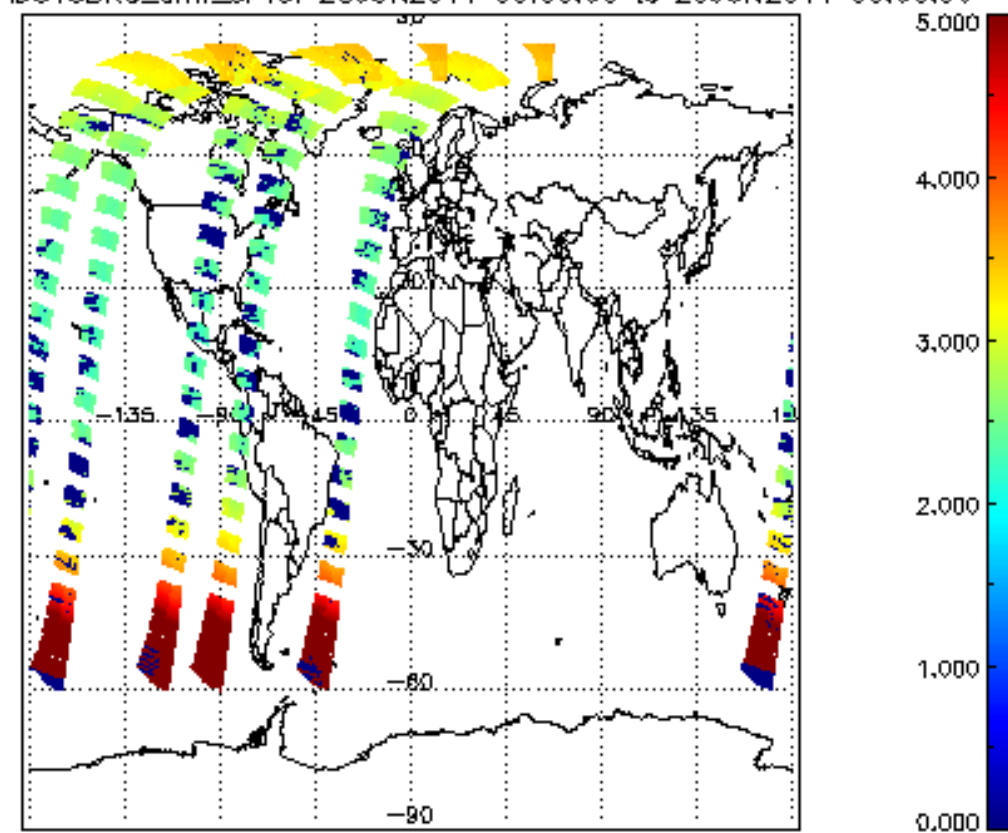
SCIOL2P\_NADUV3BRO\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



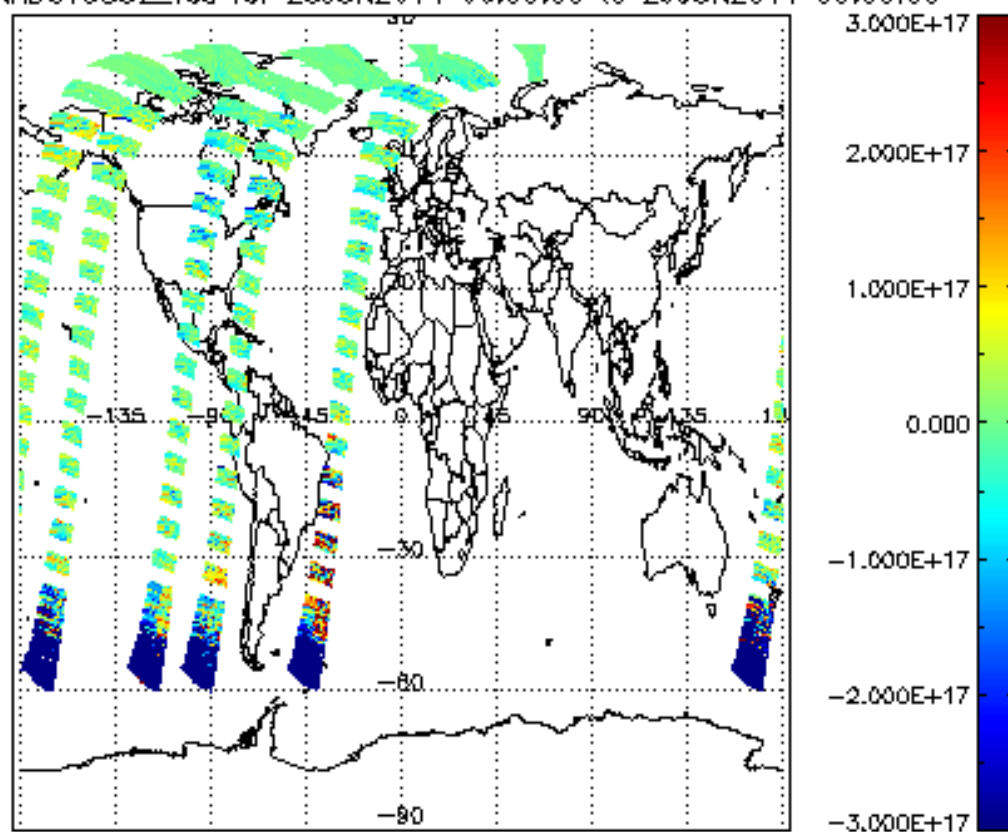
SCIOL2P\_NADUV3BRO\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



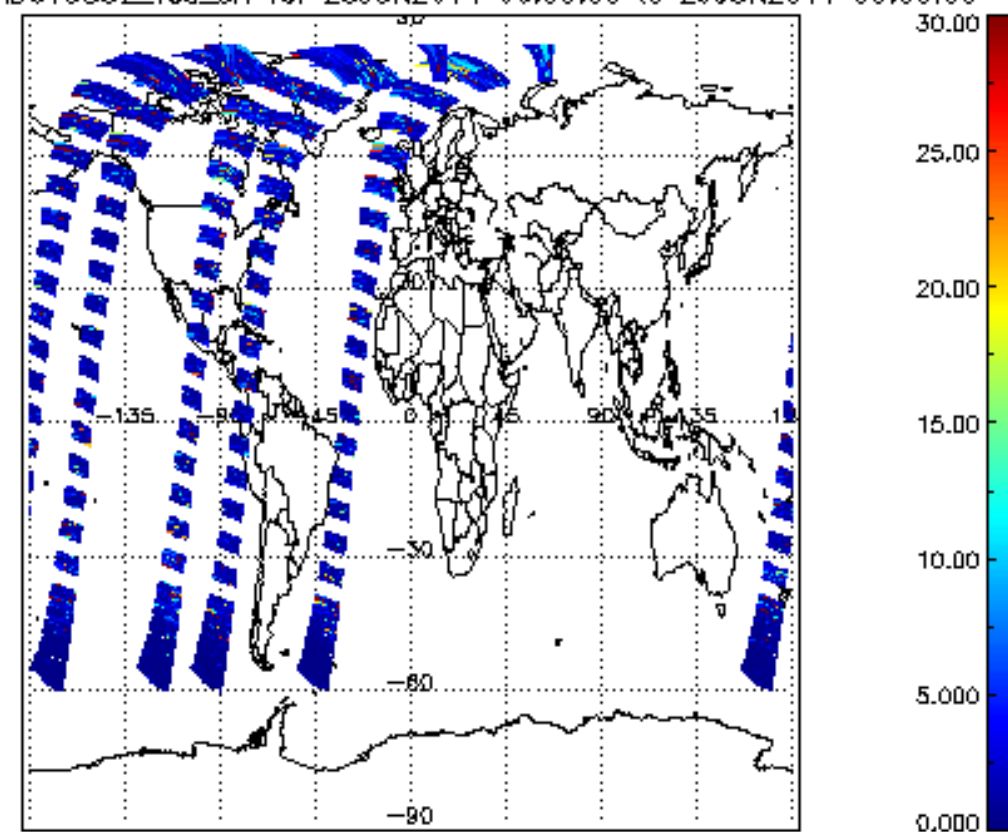




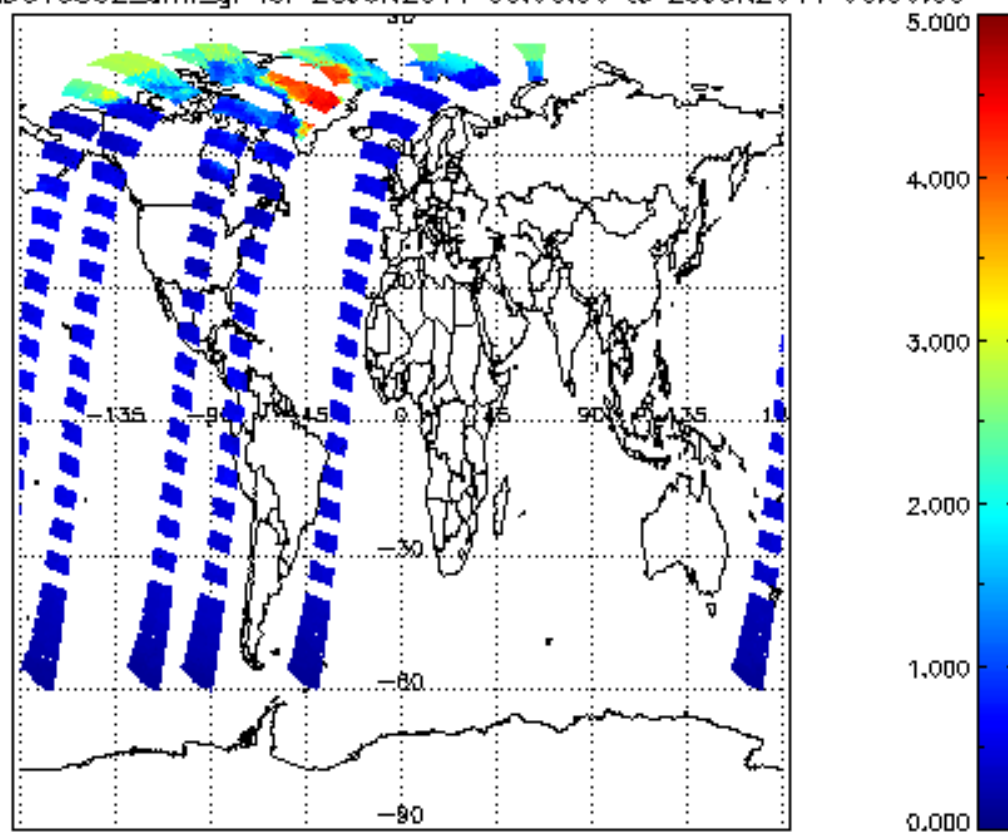
SCIOL2P\_NADUV5S02\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



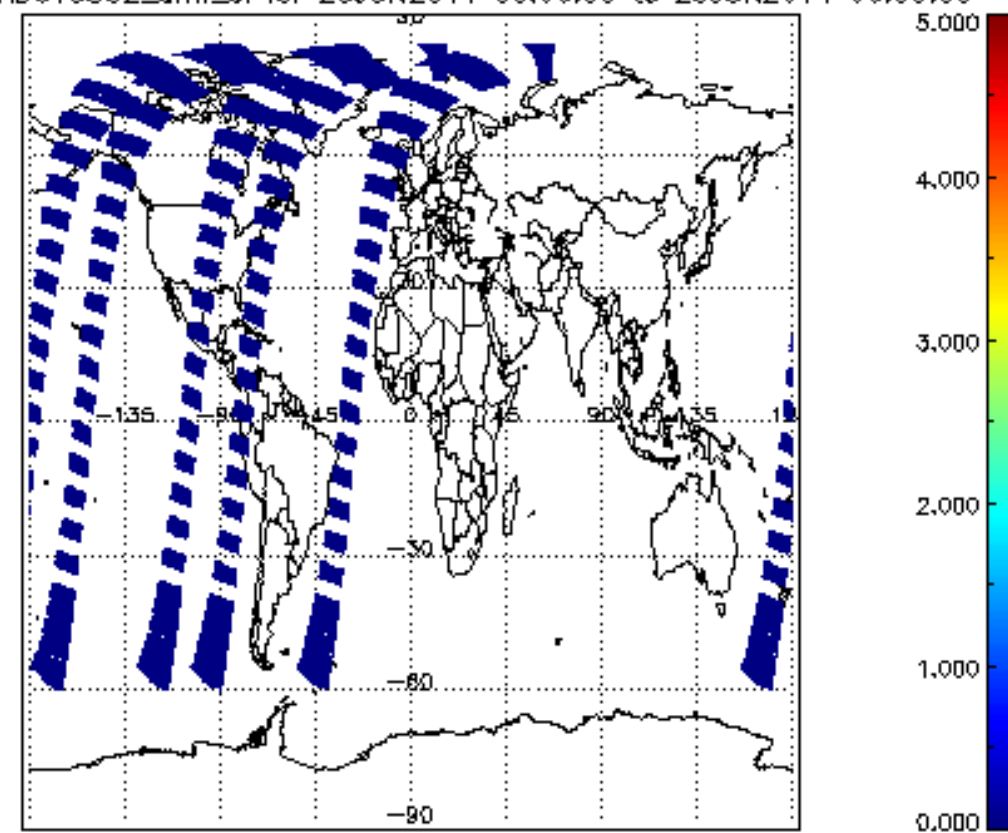
SCIOL2P\_NADUV5S02\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

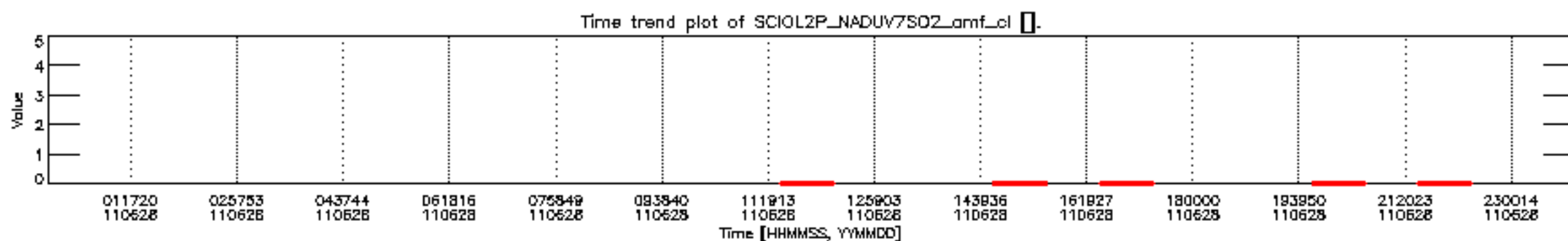
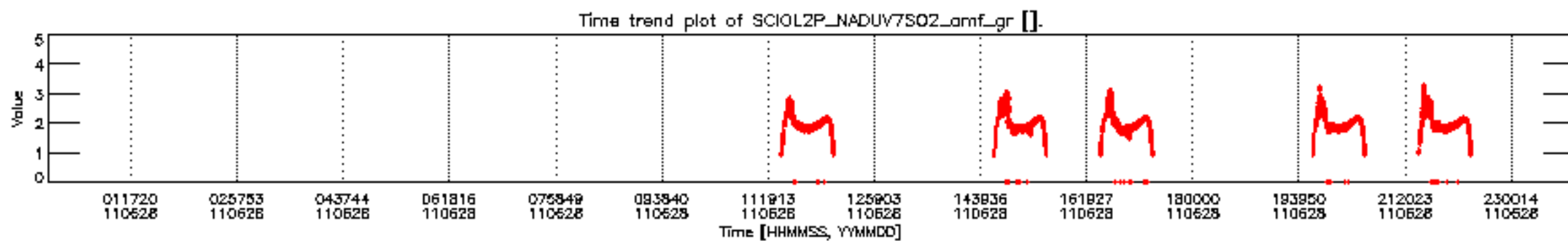
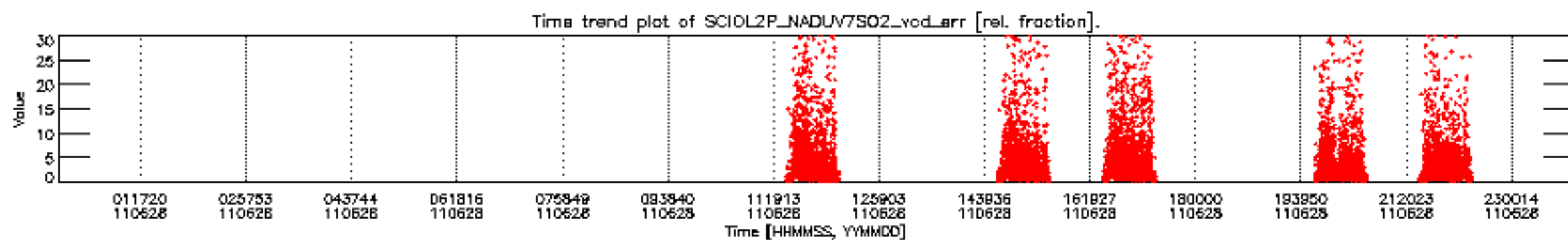
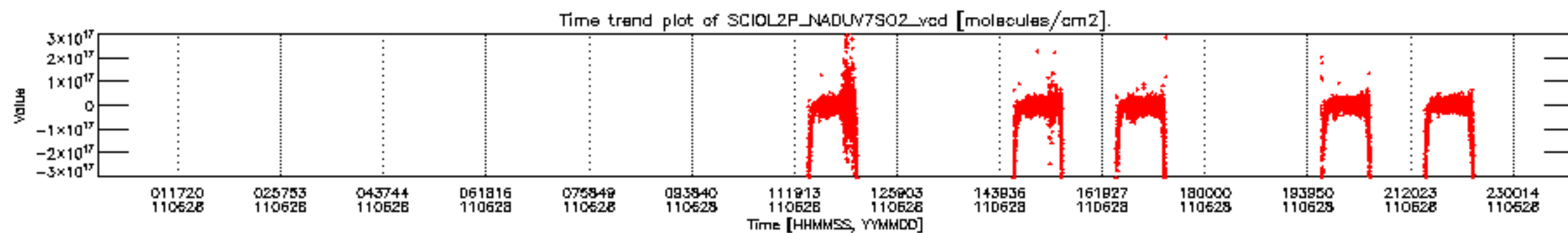


SCIOL2P\_NADUV5S02\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



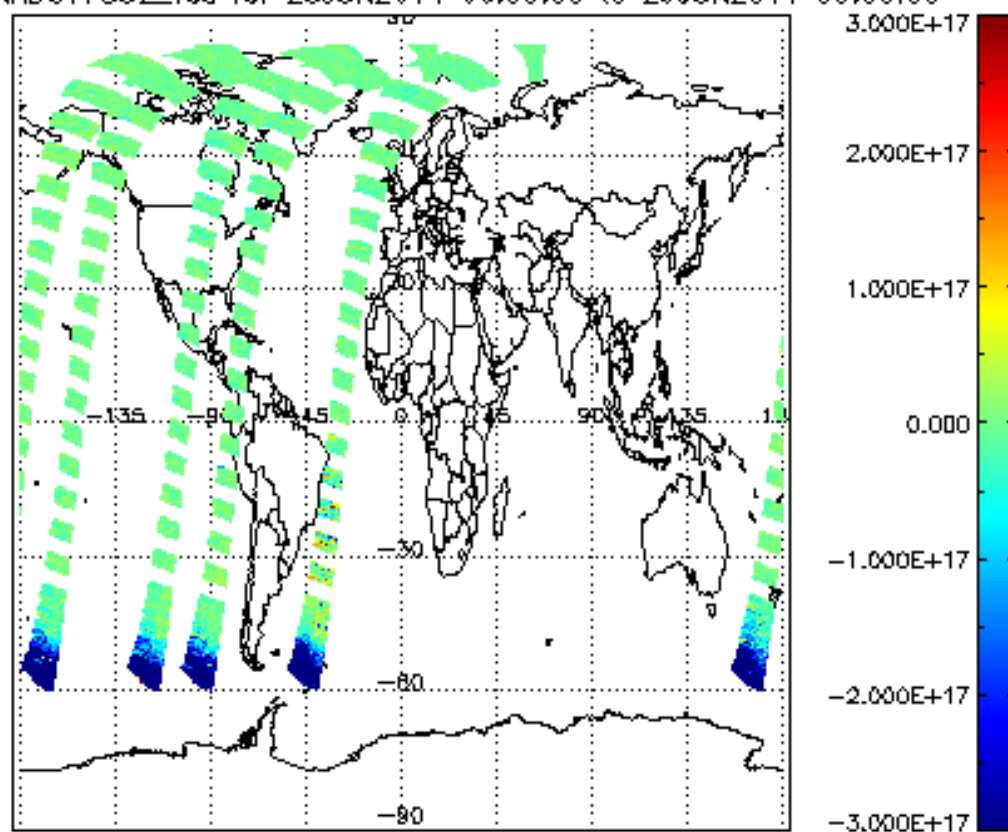
SCIOL2P\_NADUV5S02\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



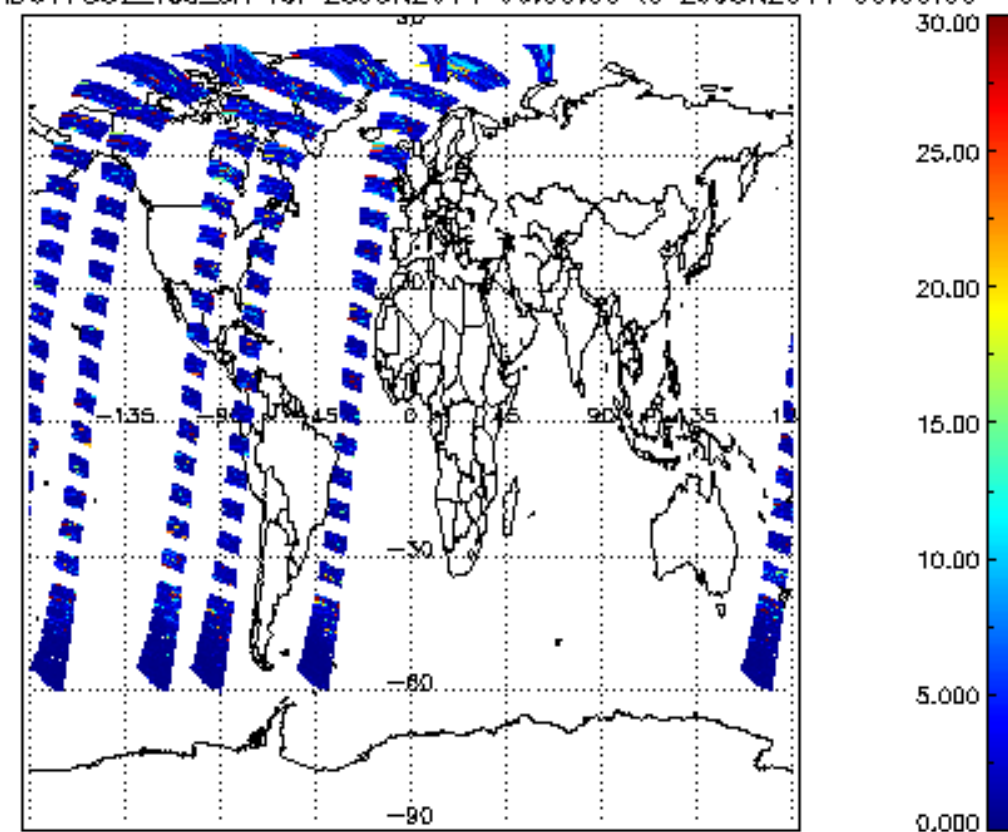




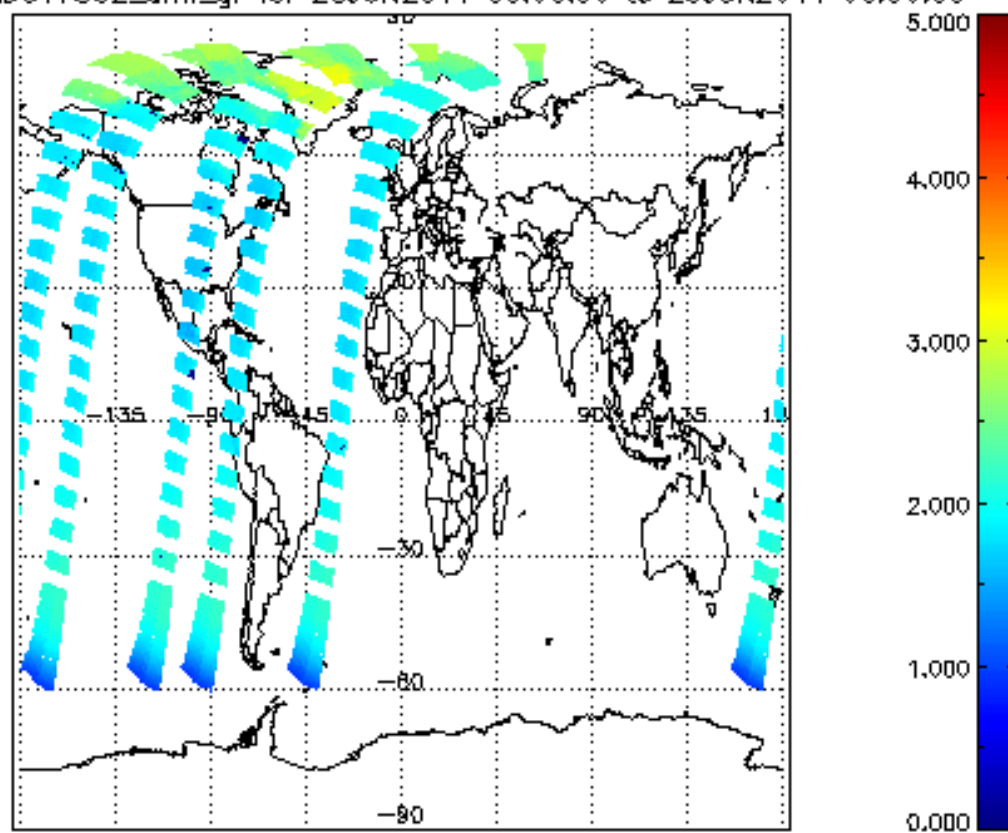
SCIOL2P\_NADUV7S02\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



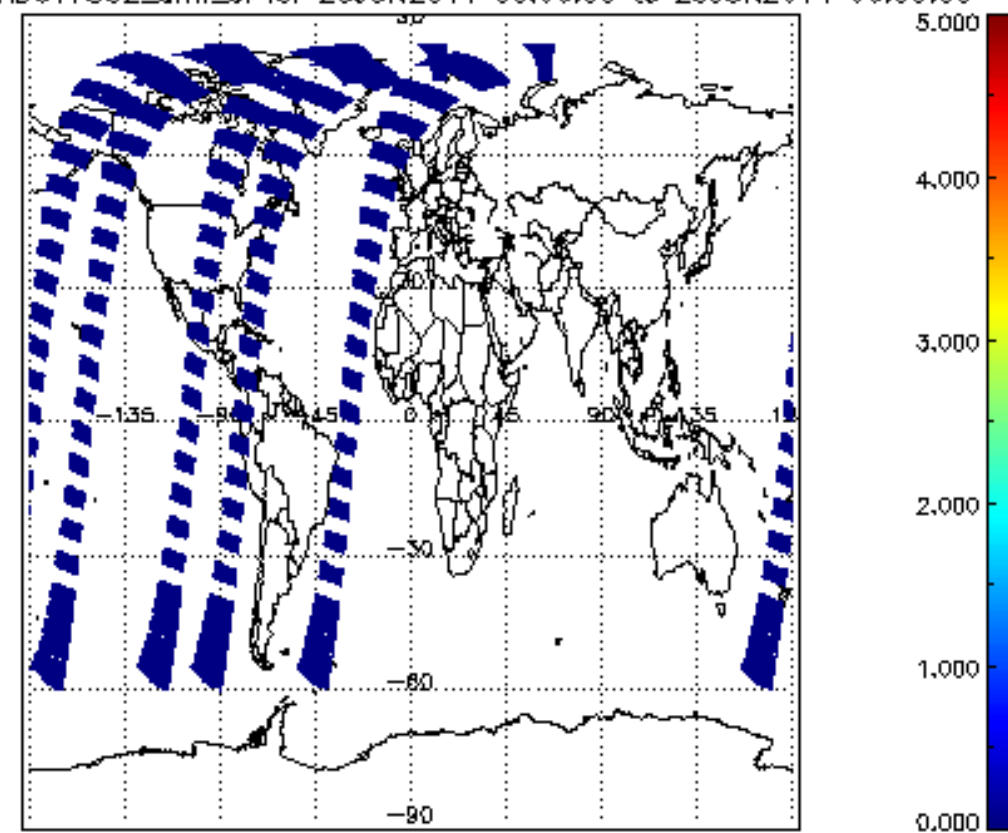
SCIOL2P\_NADUV7S02\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

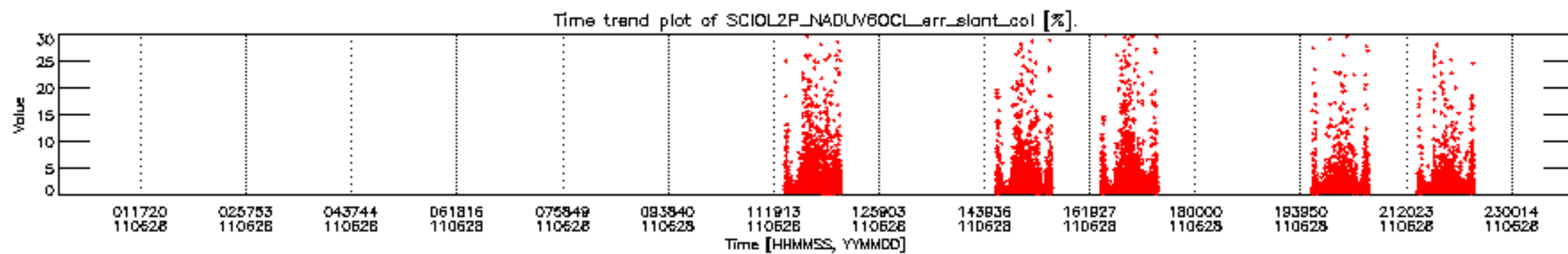
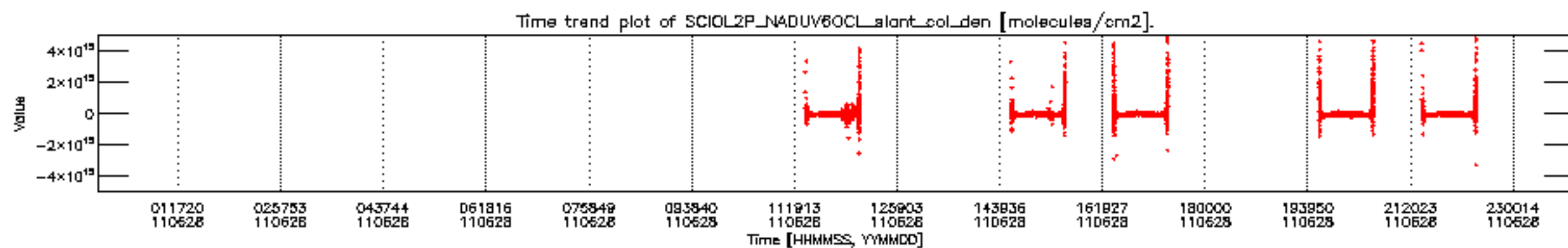


SCIOL2P\_NADUV7S02\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



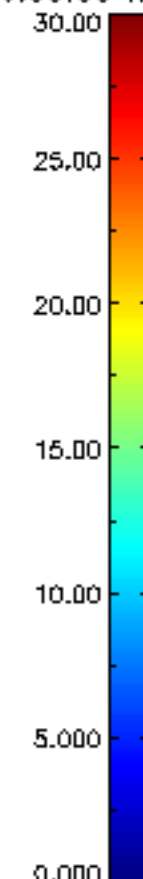
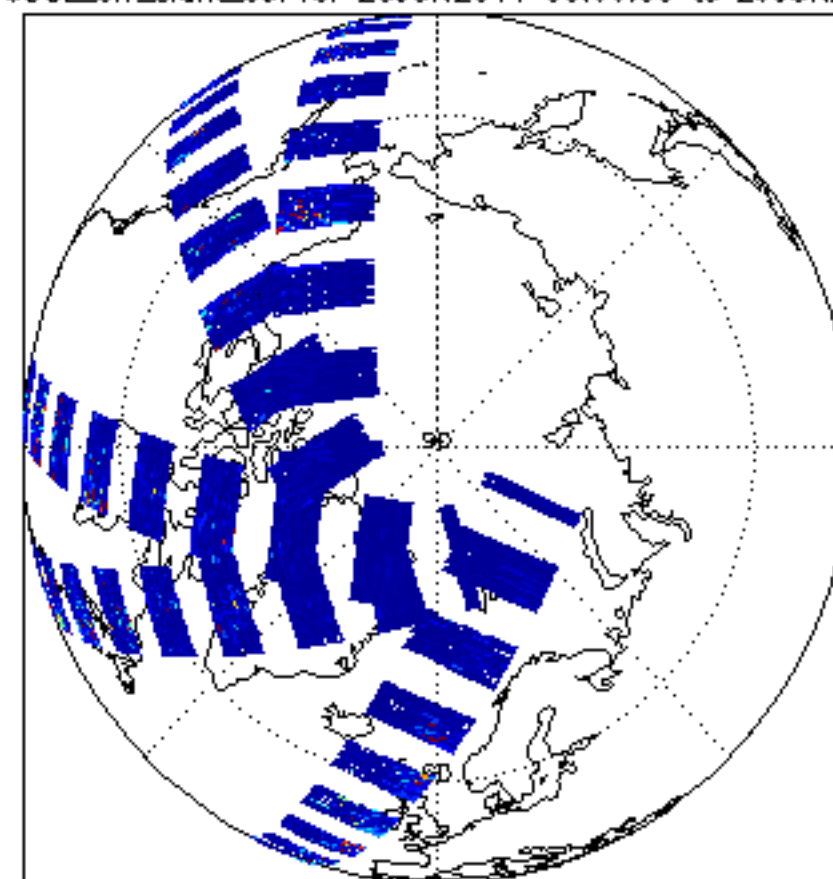
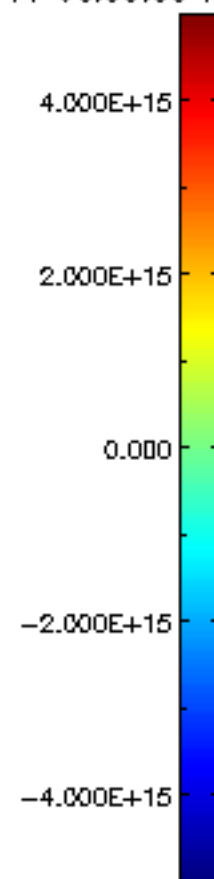
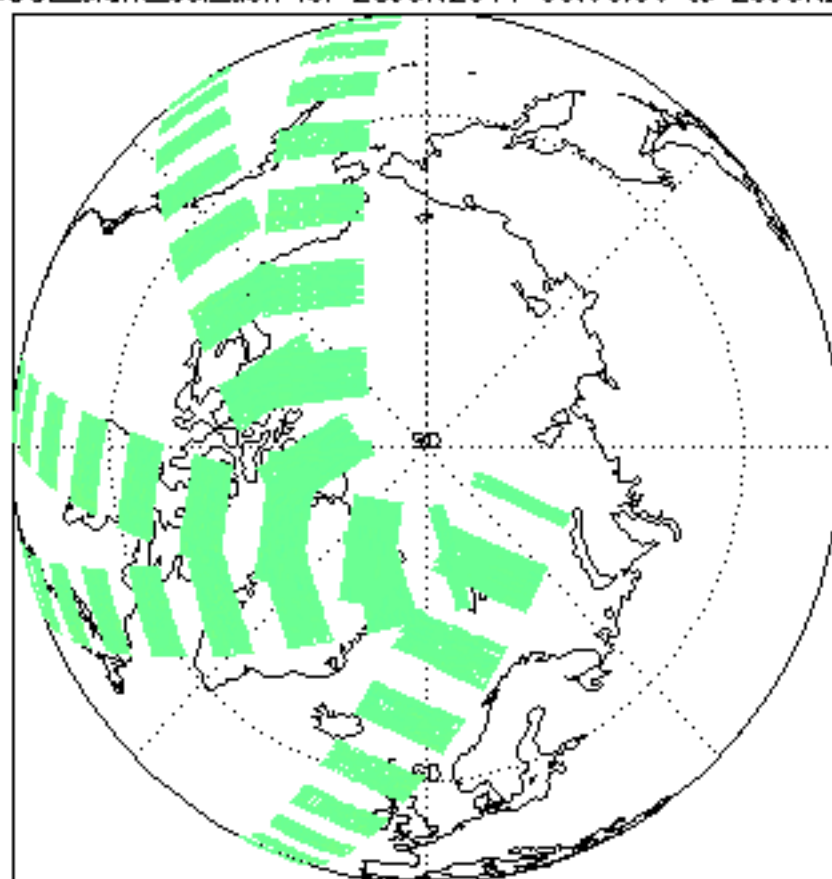
SCIOL2P\_NADUV7S02\_amf\_cl for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



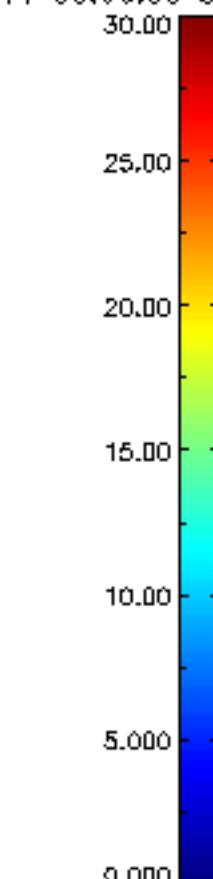
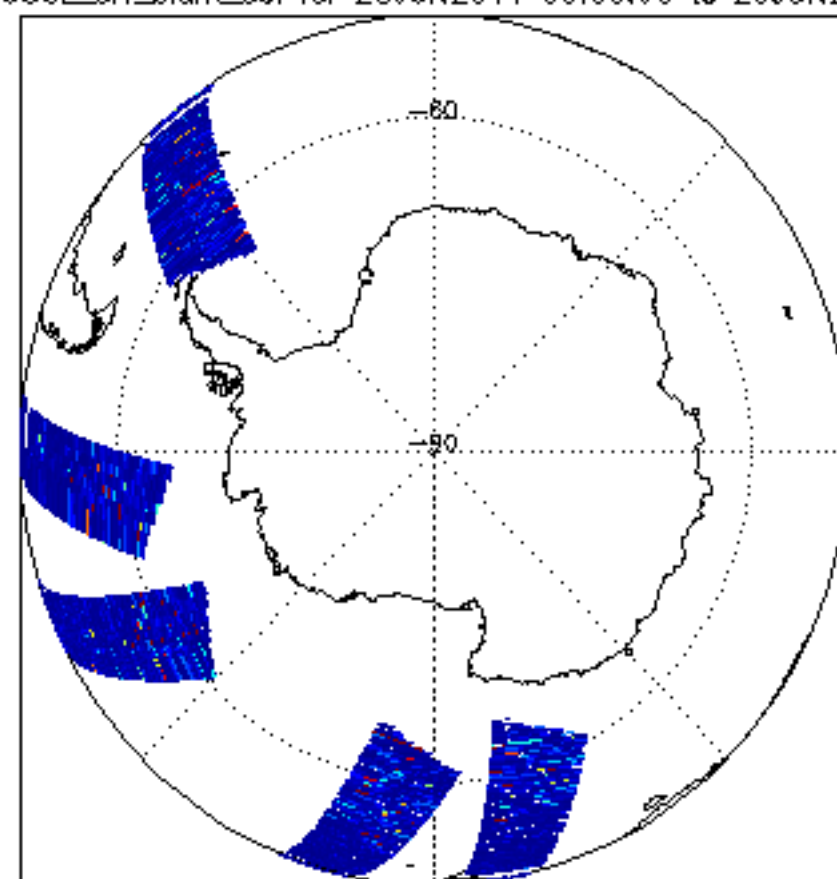
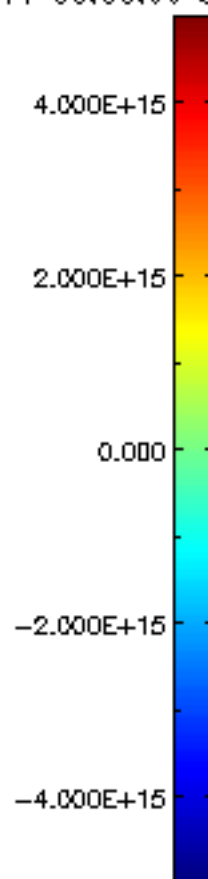
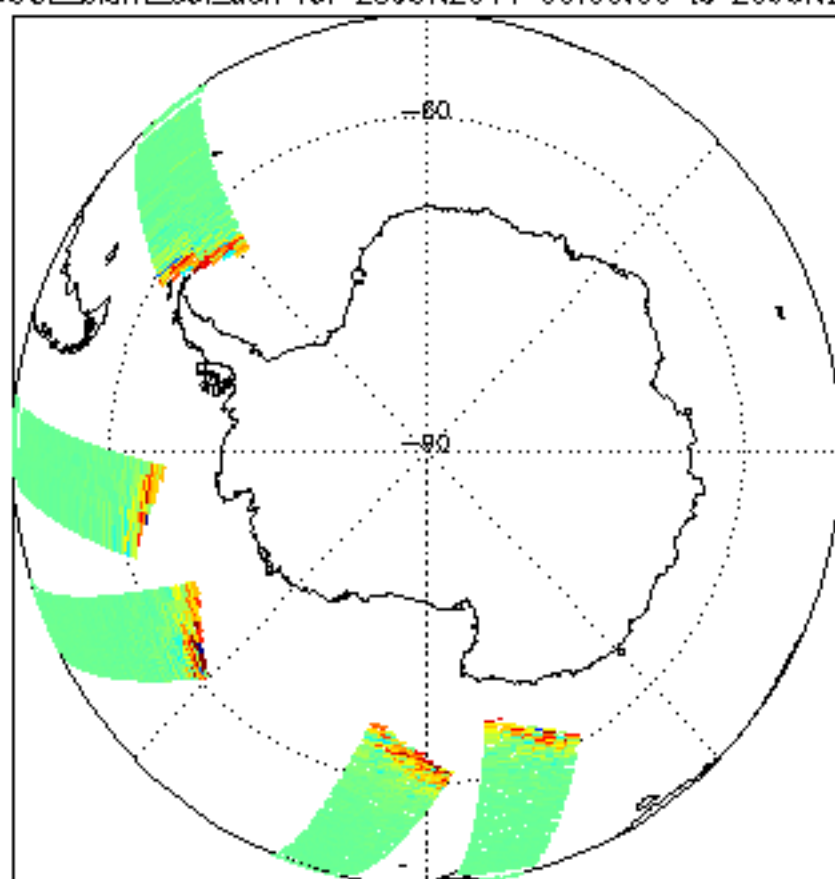




CIOL2P\_NADUV6OCL\_slant\_col\_den for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 np



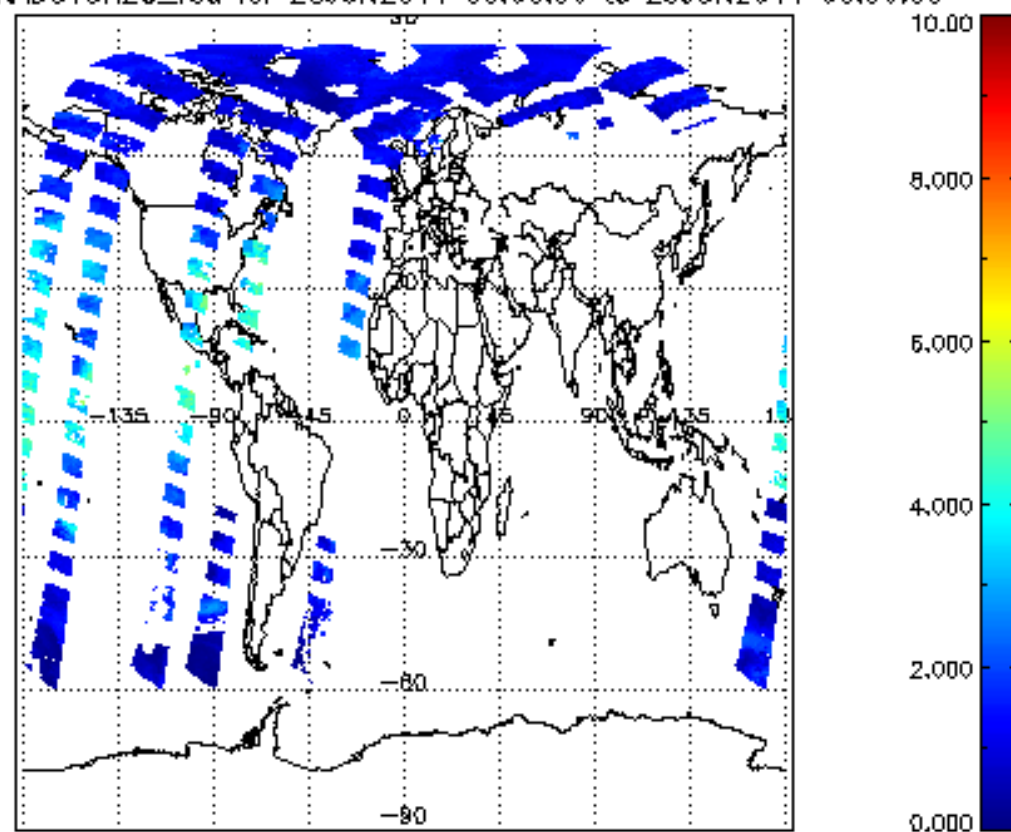
CIOL2P\_NADUV60CL\_slant\_col\_den for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 28JUN2011 00:00:00 to 29JUN2011 00:00:00 sp



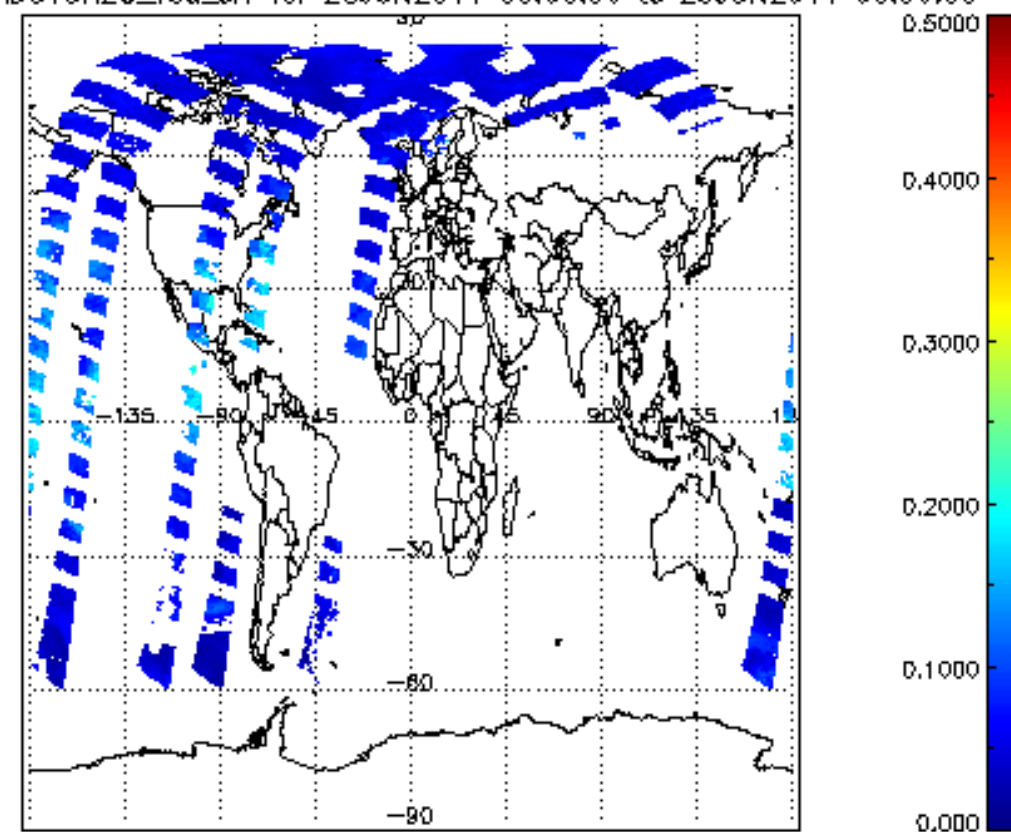




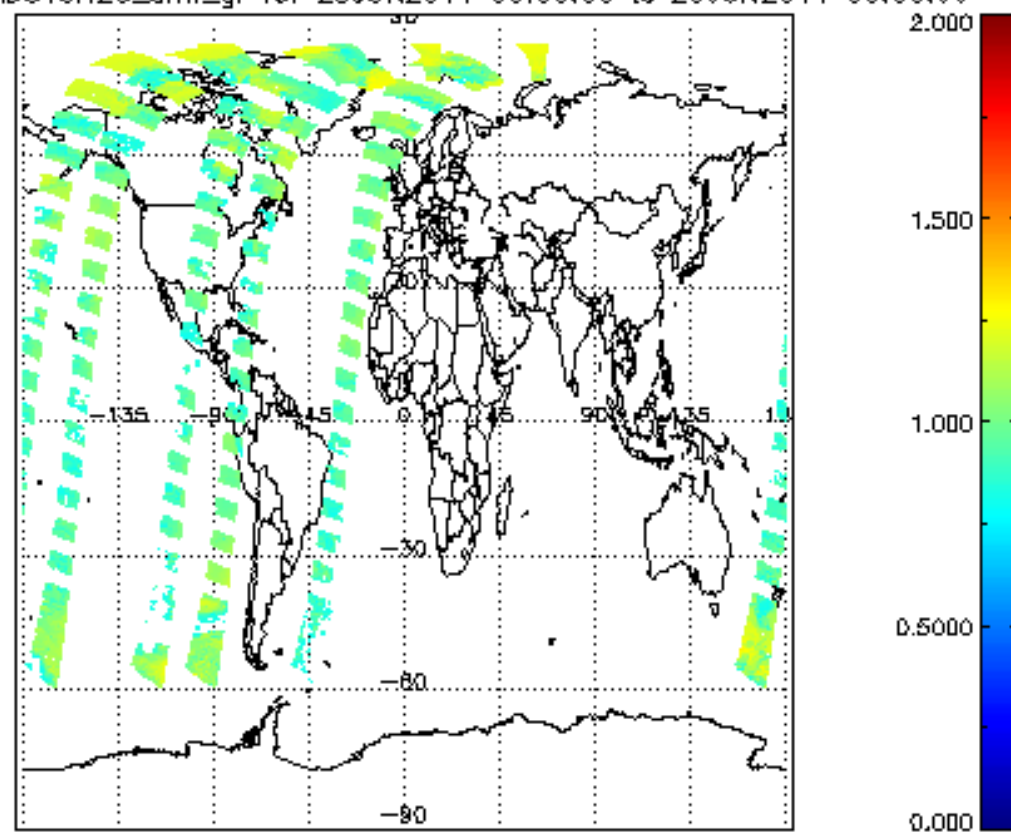
SCIOL2P\_NADUV8H2O\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



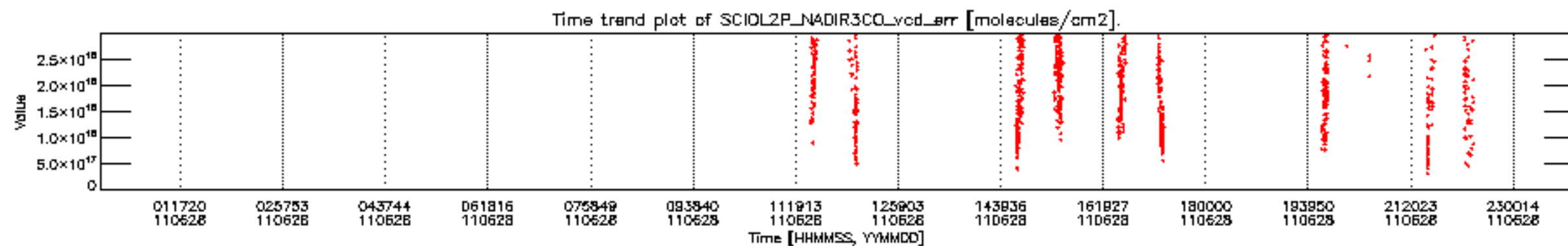
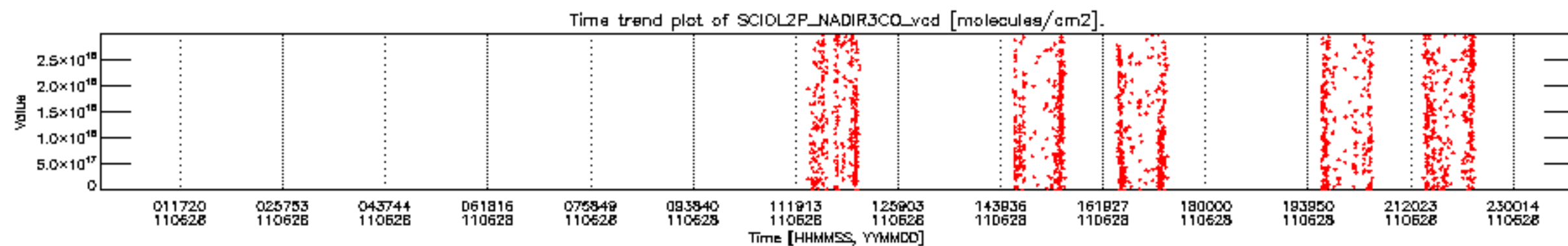
SCIOL2P\_NADUV8H2O\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



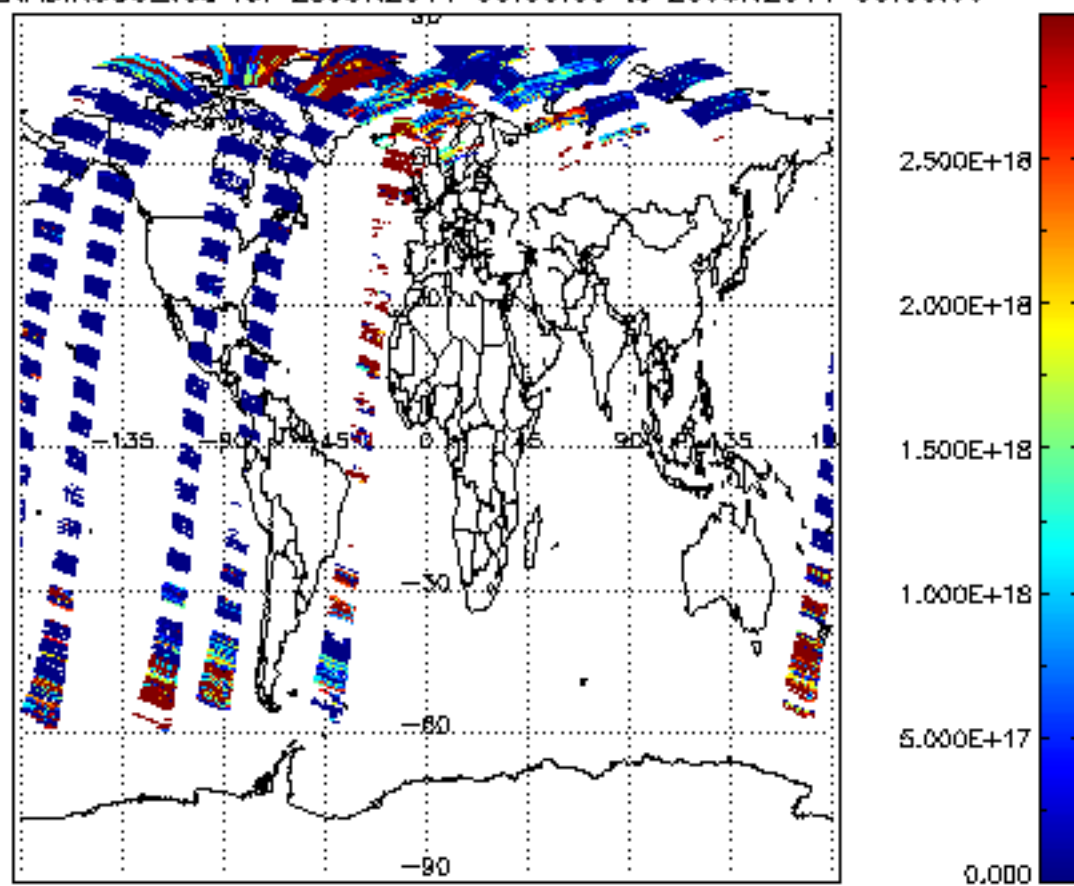
SCIOL2P\_NADUV8H2O\_amf\_gr for 28JUN2011 00:00:00 to 29JUN2011 00:00:00



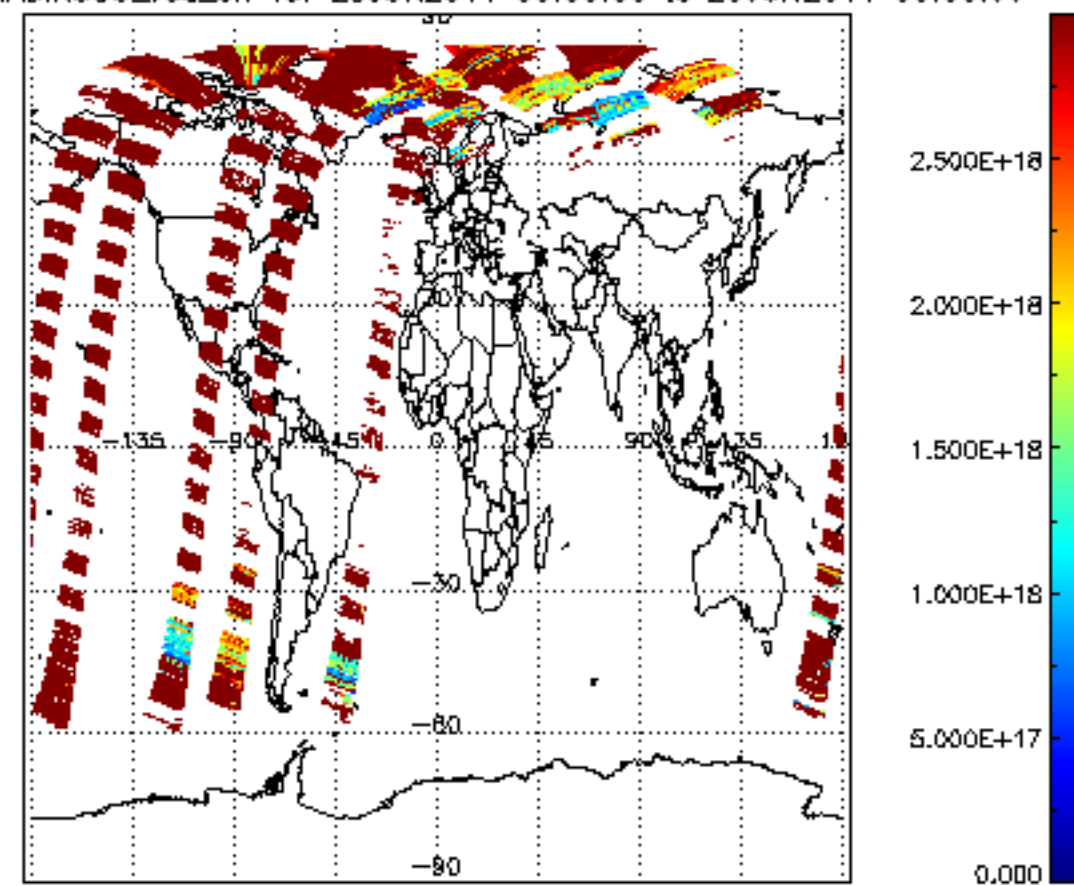




SCIOL2P\_NADIR3CO\_vcd for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

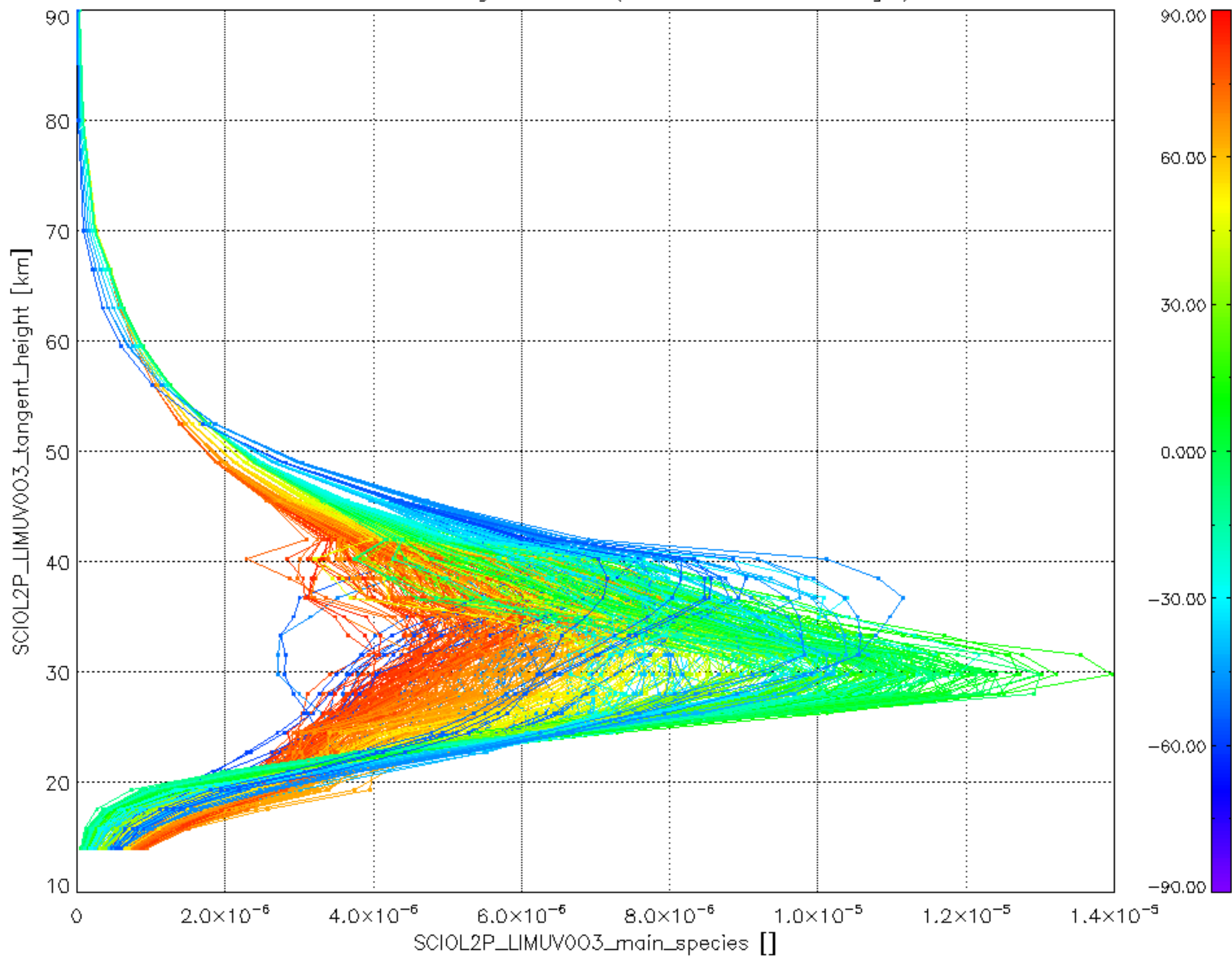


SCIOL2P\_NADIR3CO\_vcd\_err for 28JUN2011 00:00:00 to 29JUN2011 00:00:00

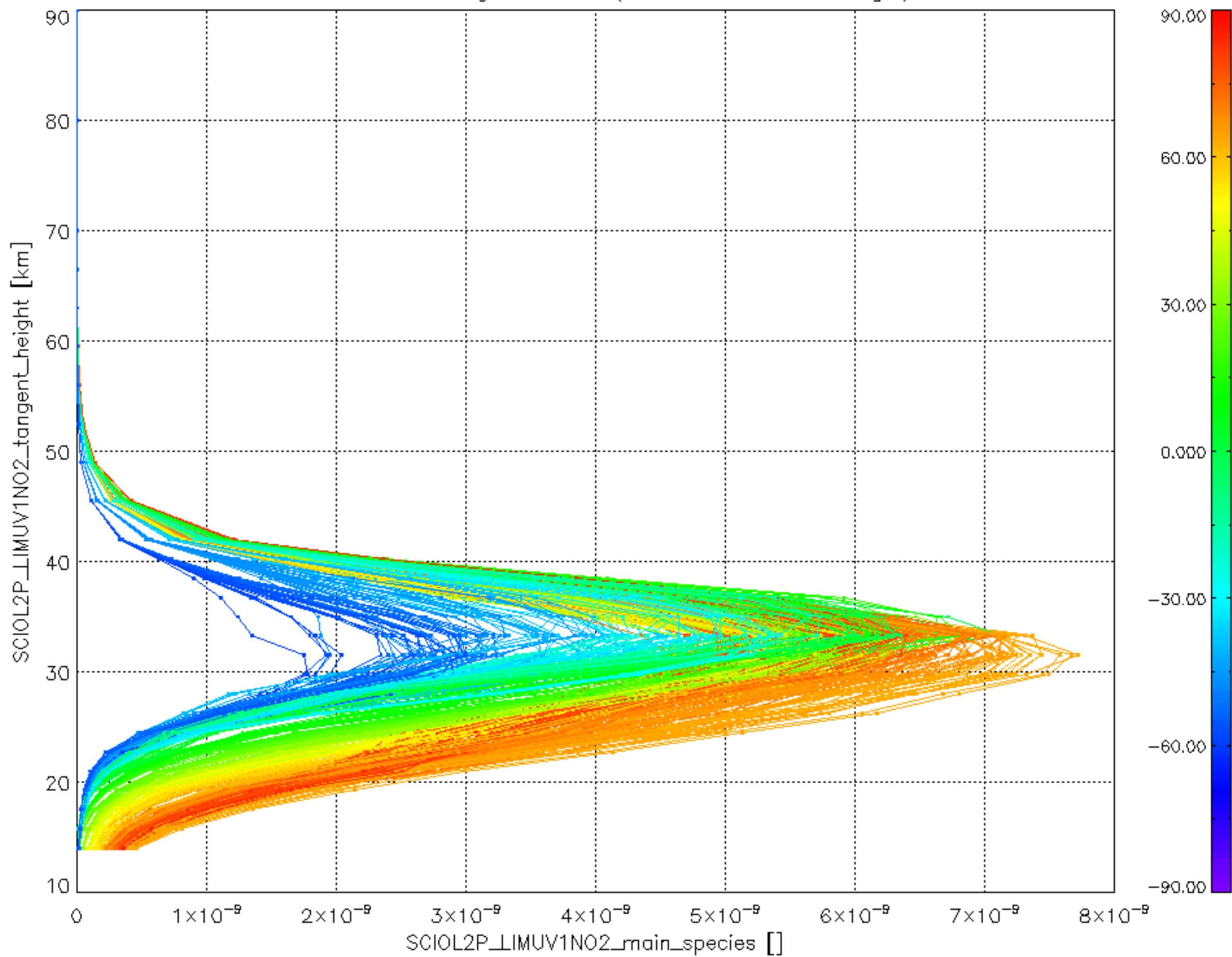




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

