

## 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	18JUN2011 03:17:41
Data source version	SCIA-OL/5.01-U
Processing scope for products	05JUN2011 00:00:00 to 06JUN2011 00:00:00
Start time of first product within scope	04JUN2011 22:46:28
Stop time of last product within scope	06JUN2011 00:48:46
Total number of level 2 products	16
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__2PUDPA20110604_224628_000035163103_00145_48435_4942.N1</a>	04JUN2011 22:46:28	04JUN2011 23:45:04	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110605_002642_000035303103_00146_48436_4947.N1</a>	05JUN2011 00:26:42	05JUN2011 01:25:32	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110605_020656_000035163103_00147_48437_4943.N1</a>	05JUN2011 02:06:56	05JUN2011 03:05:32	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110605_034709_000035303103_00148_48438_4944.N1</a>	05JUN2011 03:47:09	05JUN2011 04:46:00	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110605_052723_000035163103_00149_48439_4945.N1</a>	05JUN2011 05:27:23	05JUN2011 06:26:00	0	GOOD

5	SCI_OL__2PUDPA20110605_070737_000035303103_00150_48440_4956.N1	05JUN2011 07:07:37	05JUN2011 08:06:28	0	GOOD
6	SCI_OL__2PUDPA20110605_084751_000035163103_00151_48441_4957.N1	05JUN2011 08:47:51	05JUN2011 09:46:27	0	GOOD
7	SCI_OL__2PUDPA20110605_102805_000035303103_00152_48442_4954.N1	05JUN2011 10:28:05	05JUN2011 11:26:55	0	GOOD
8	SCI_OL__2PUDPA20110605_120819_000035163103_00153_48443_4958.N1	05JUN2011 12:08:19	05JUN2011 13:06:55	0	GOOD
9	SCI_OL__2PUDPA20110605_134832_000035303103_00154_48444_4973.N1	05JUN2011 13:48:32	05JUN2011 14:47:23	0	GOOD
10	SCI_OL__2PUDPA20110605_152846_000035163103_00155_48445_4955.N1	05JUN2011 15:28:46	05JUN2011 16:27:22	0	GOOD
11	SCI_OL__2PUDPA20110605_170945_000034623103_00156_48446_4952.N1	05JUN2011 17:09:45	05JUN2011 18:07:28	0	GOOD
12	SCI_OL__2PUDPA20110605_184923_000035163103_00157_48447_4953.N1	05JUN2011 18:49:23	05JUN2011 19:47:59	0	GOOD
13	SCI_OL__2PUDPA20110605_202928_000035303103_00158_48448_4951.N1	05JUN2011 20:29:28	05JUN2011 21:28:19	0	GOOD
14	SCI_OL__2PUDPA20110605_220942_000035163103_00159_48449_4977.N1	05JUN2011 22:09:42	05JUN2011 23:08:18	0	GOOD
15	SCI_OL__2PUDPA20110605_234956_000035303103_00160_48450_4971.N1	05JUN2011 23:49:56	06JUN2011 00:48:46	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: 166140

Total number of cloud data DSRs with good quality flag (=0): 166140 (100.0 %)

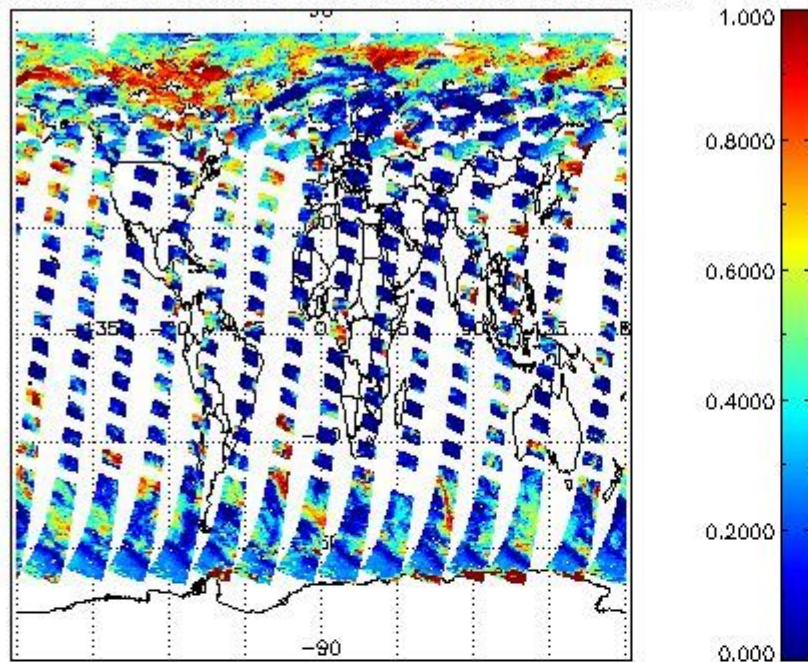
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	166140	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	166140	0.16432	0.12500	0.12500	0.25000	0.058042	s
CL_FRAC	166140	0.33585	0.28036	0.0000	1.0000	0.29067	
CL_FRAC_ERR	166140	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	166140	5.2582	4.0000	4.0000	8.0000	1.8574	
PMD_READ_CL[0]	166140	0.29754	0.0000	0.0000	8.0000	1.1531	-
PMD_READ_CL[1]	166140	1.4372	0.0000	0.0000	8.0000	2.5633	-
CL_TOP_HEIGHT	128277	3.1703	1.2070	0.0000	17.000	3.5972	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	128277	63.018	100.00	0.0000	101.00	43.492	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	166140	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	166140	11001110	11000100	11000000	11100000	3671.5	
AERO_ABSO_IND	166140	0.17487	0.0000	0.0000	10.027	0.48302	
AERO_IND_DIAG	166140	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	166140	01010001	00000000	00000000	11000000	24307.	

#### Time and geolocation plots:

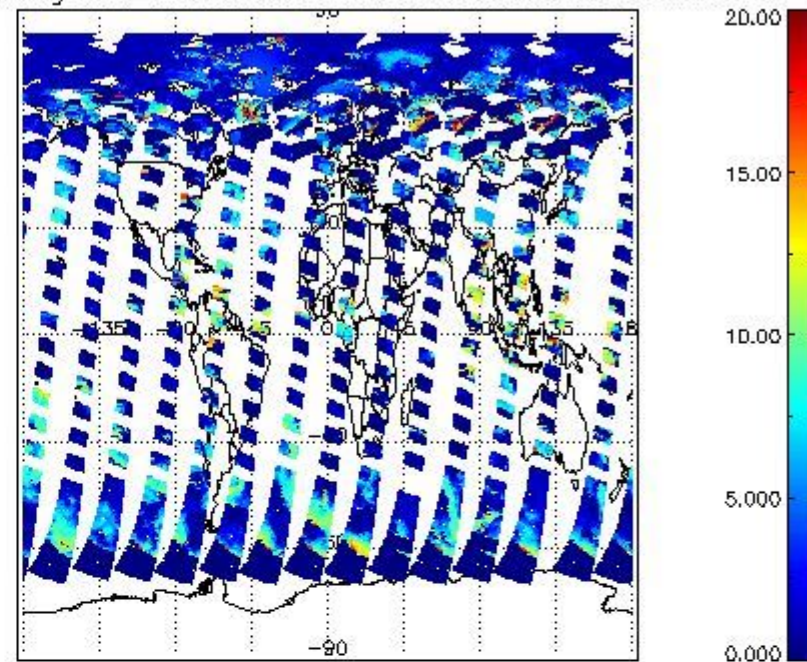
Plots are available for the following parameters:

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

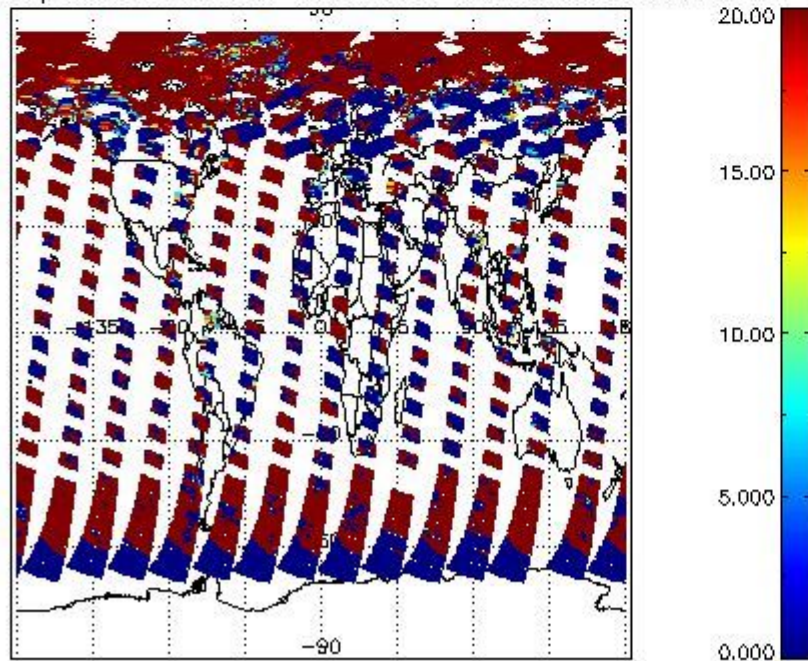
cL\_frac for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



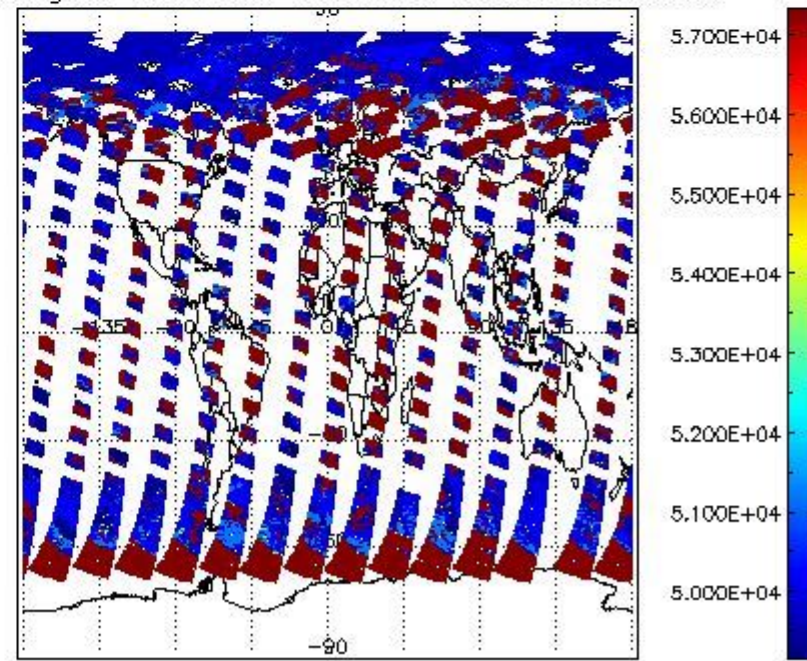
cL\_top\_height for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



cL\_opt\_depth for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



cloud\_flags for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



## 2.2.2 Nadir

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

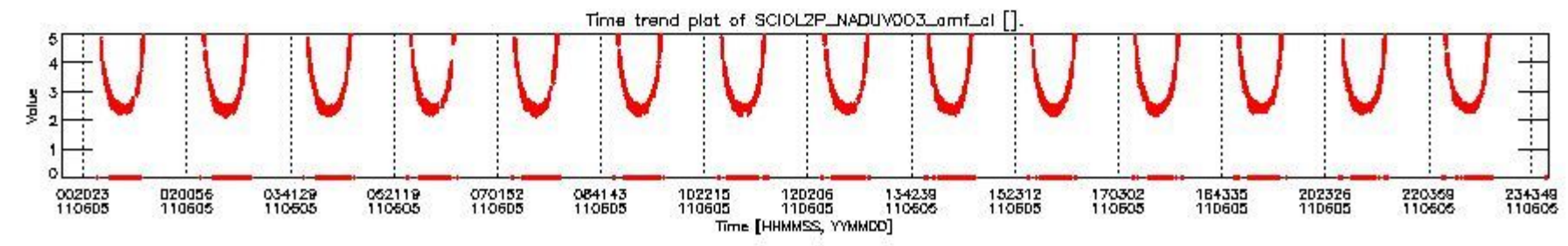
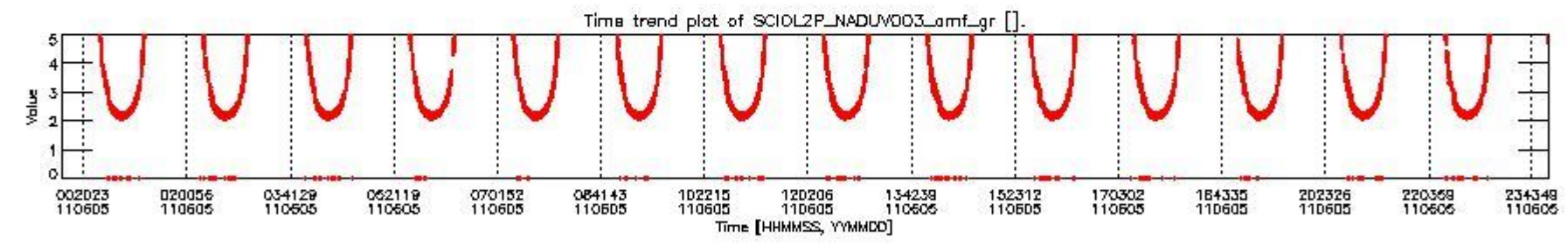
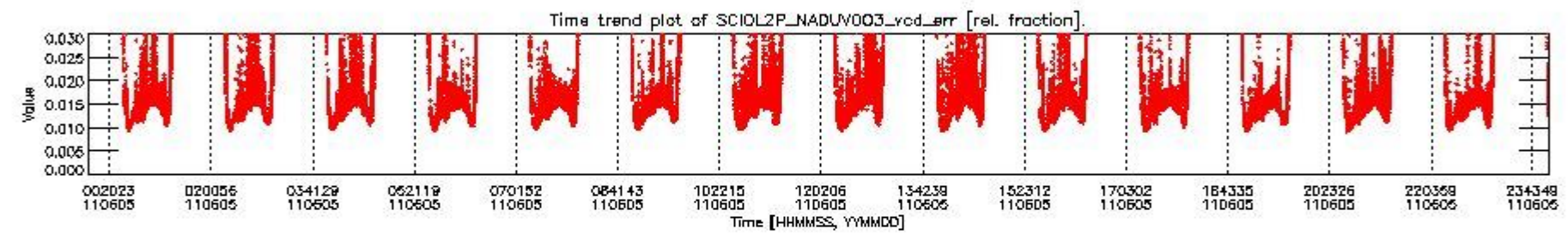
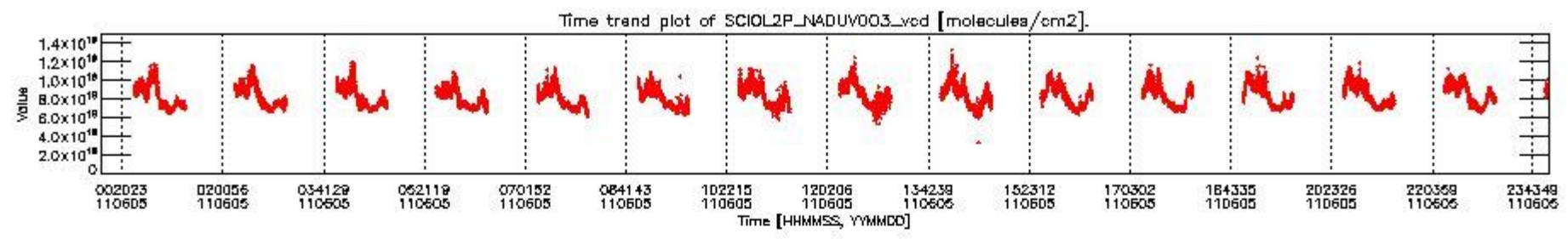
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

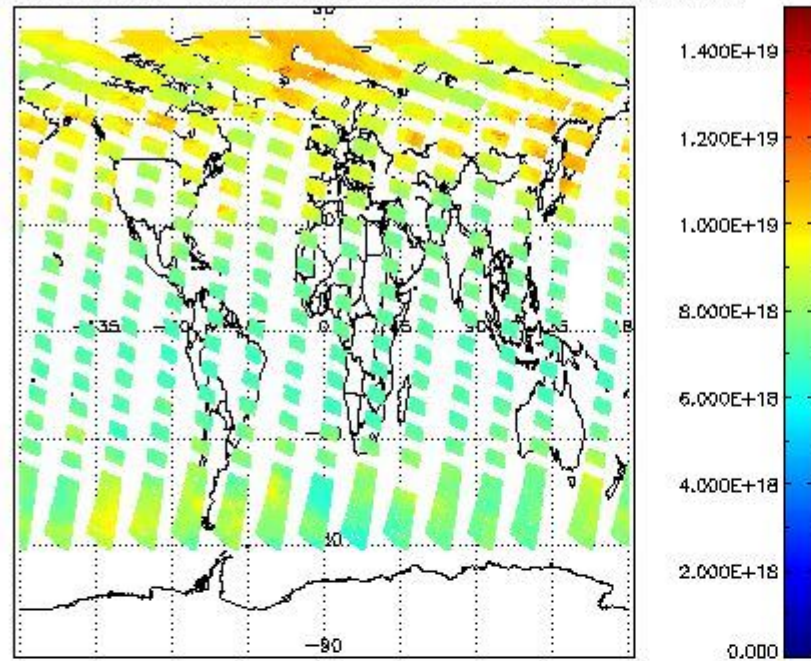
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr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

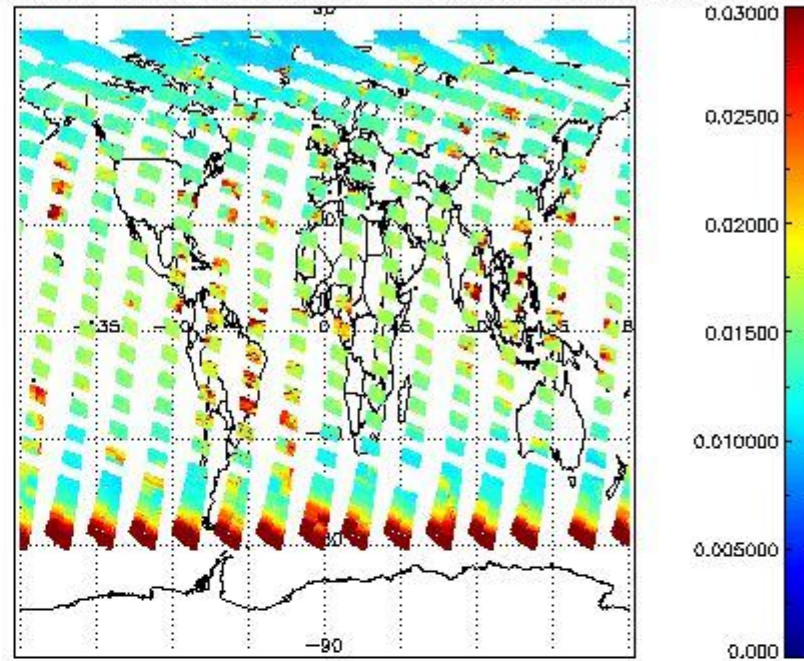
#### 2.2.2.1 O3 (UV0)



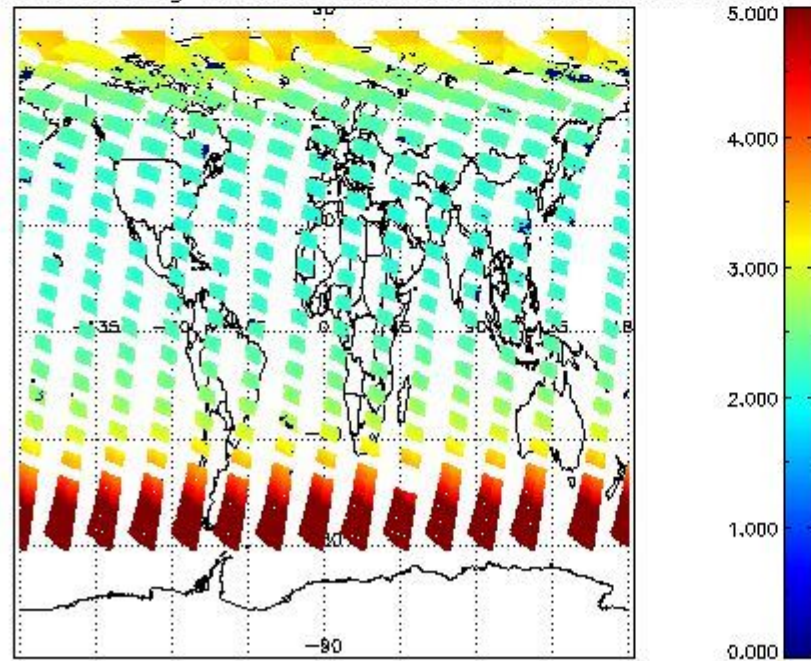
SCIOL2P\_NADUV003\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



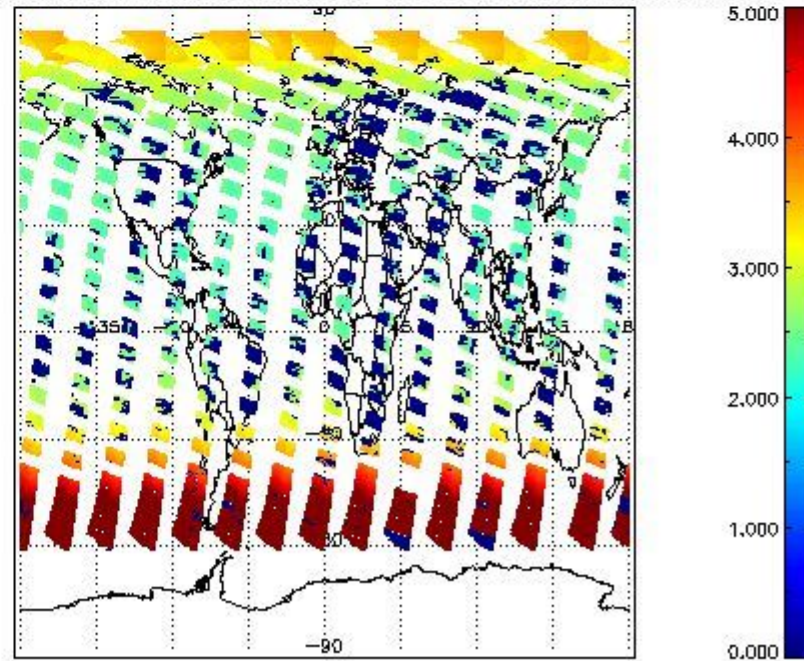
SCIOL2P\_NADUV003\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



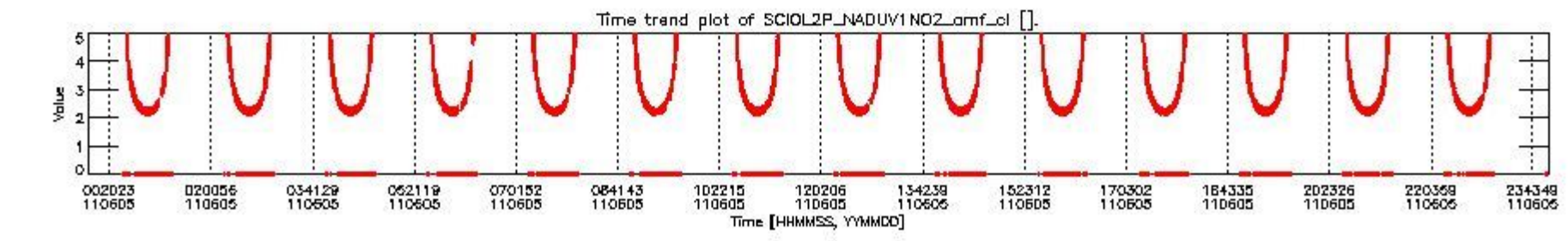
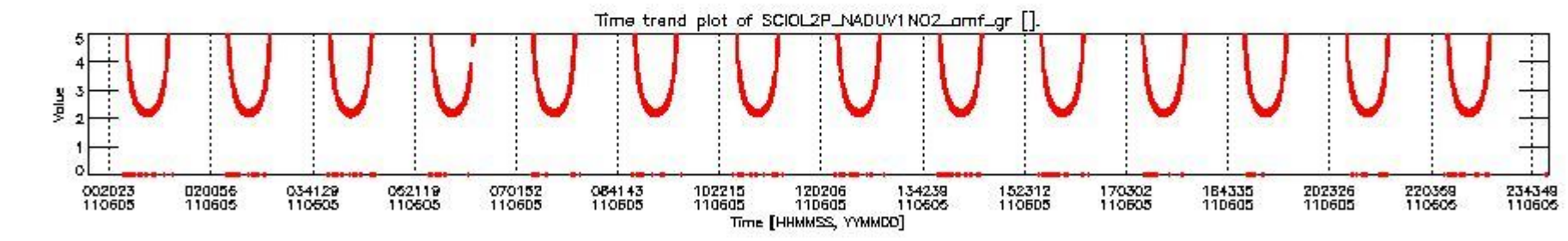
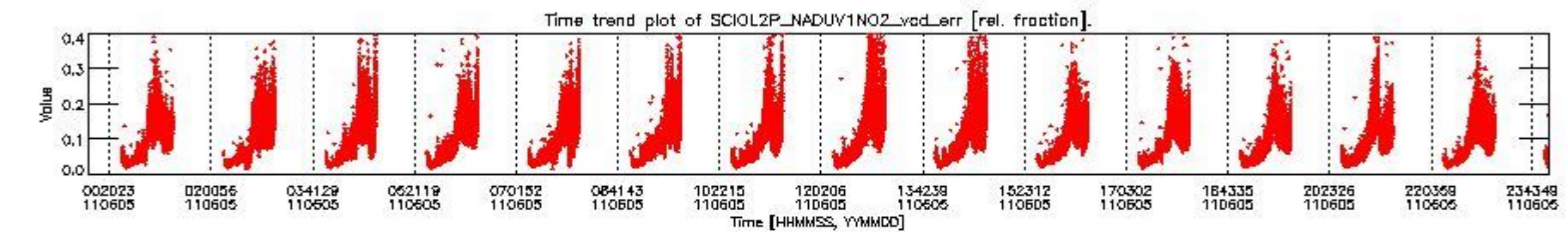
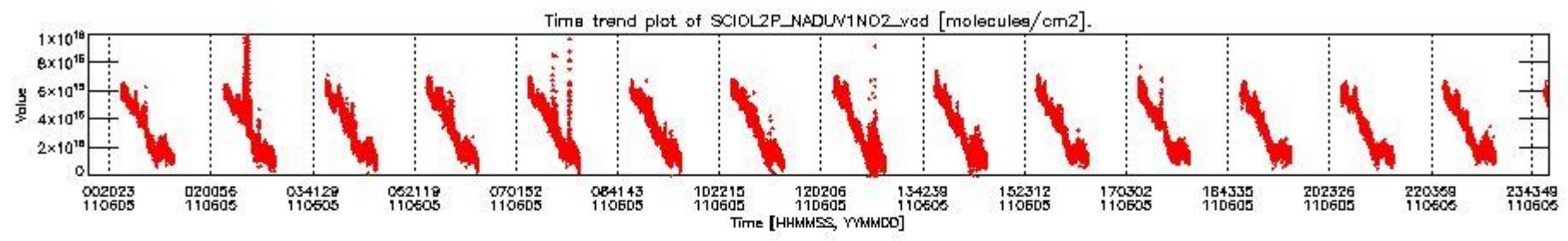
SCIOL2P\_NADUV003\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



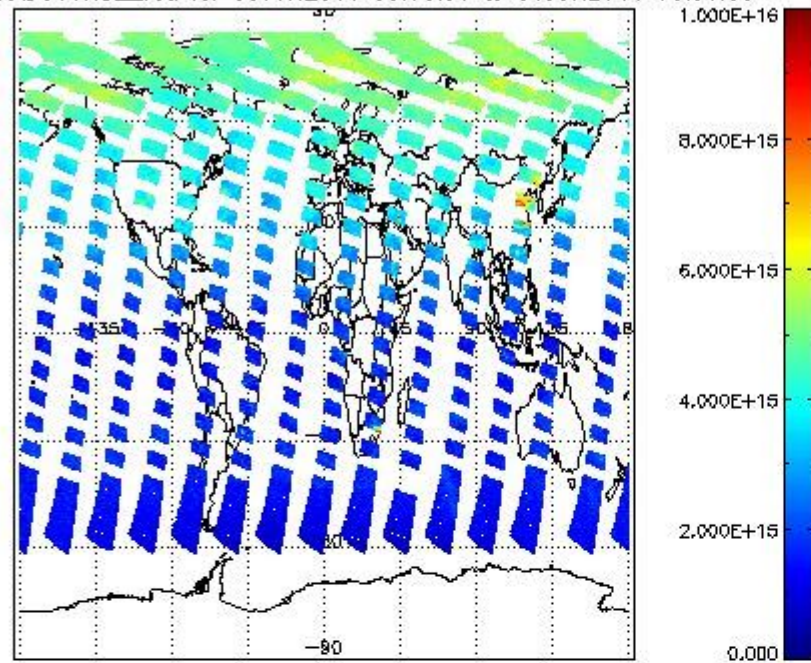
SCIOL2P\_NADUV003\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



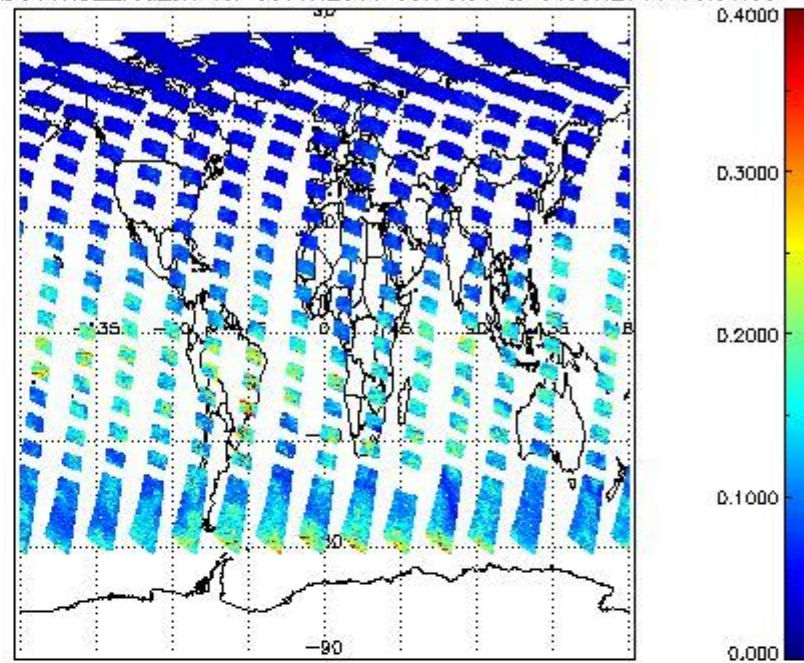
2.2.2.2 NO2 (UV1)



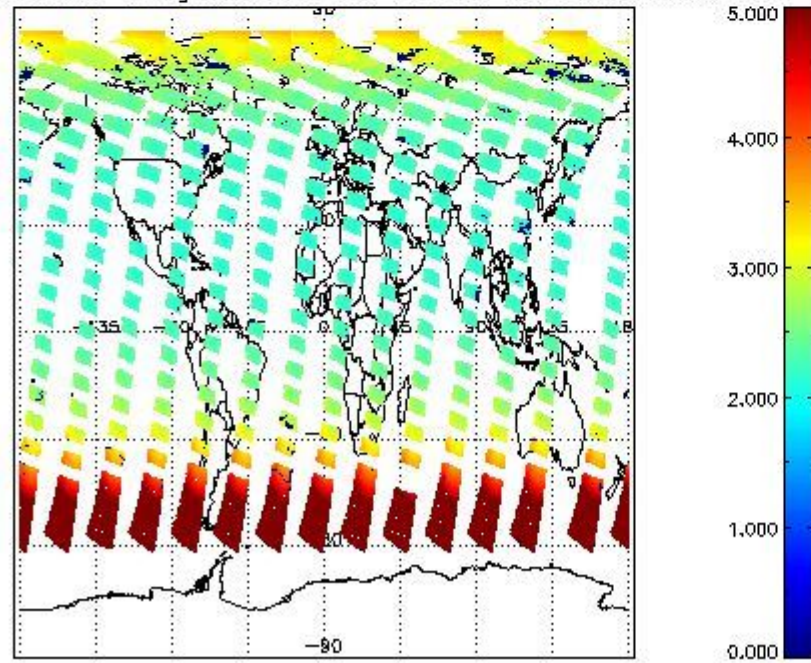
SCIOL2P\_NADUV1NO2\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



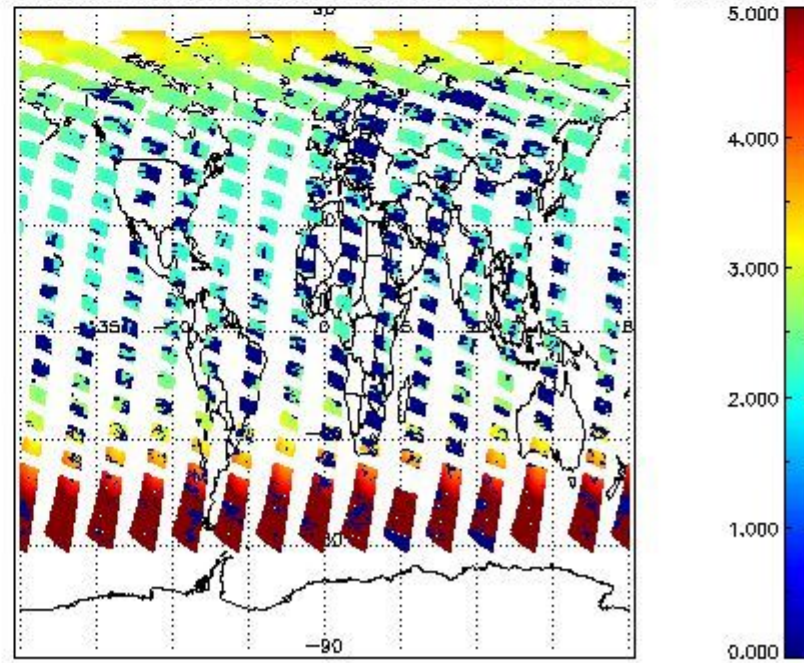
SCIOL2P\_NADUV1NO2\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

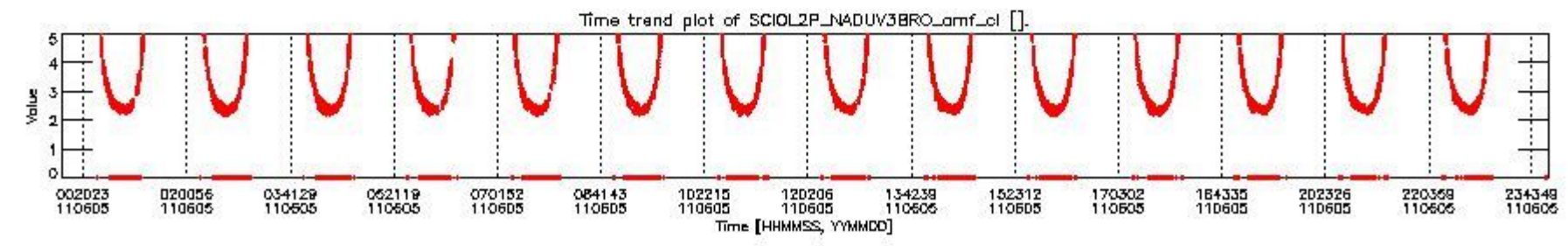
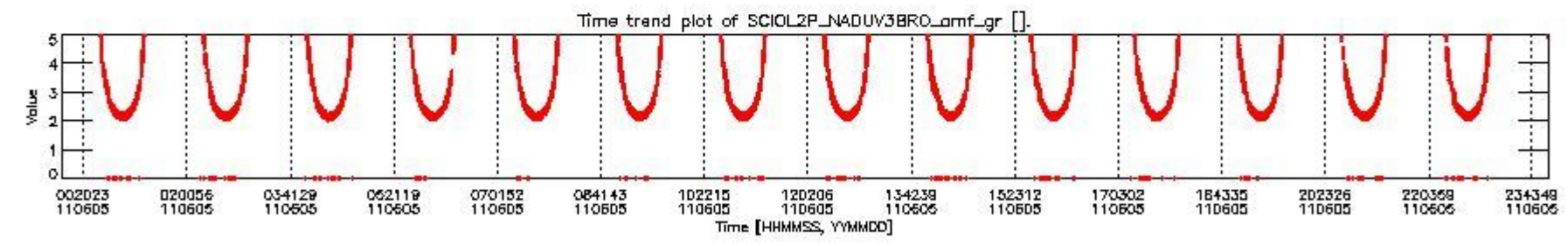
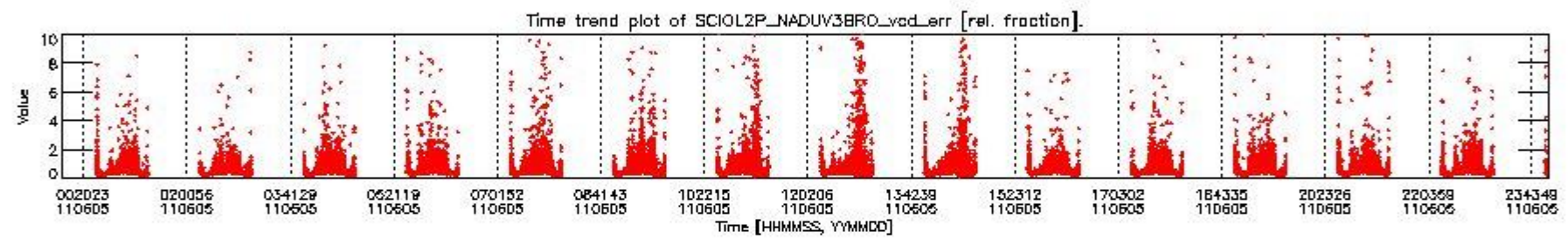
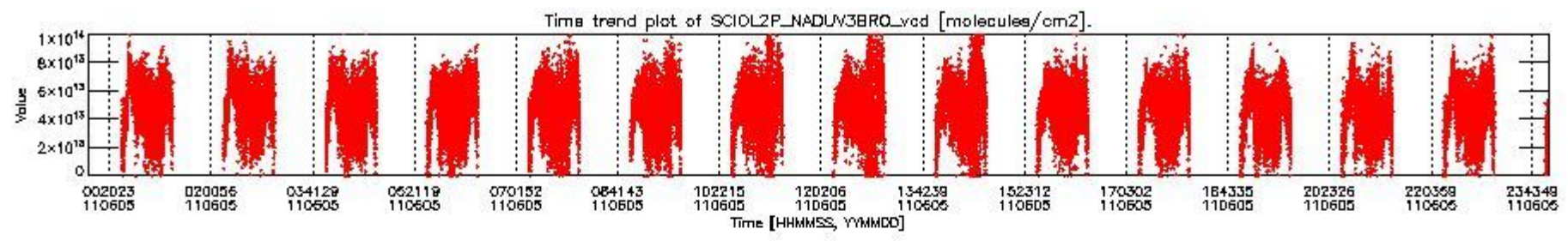


SCIOL2P\_NADUV1NO2\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

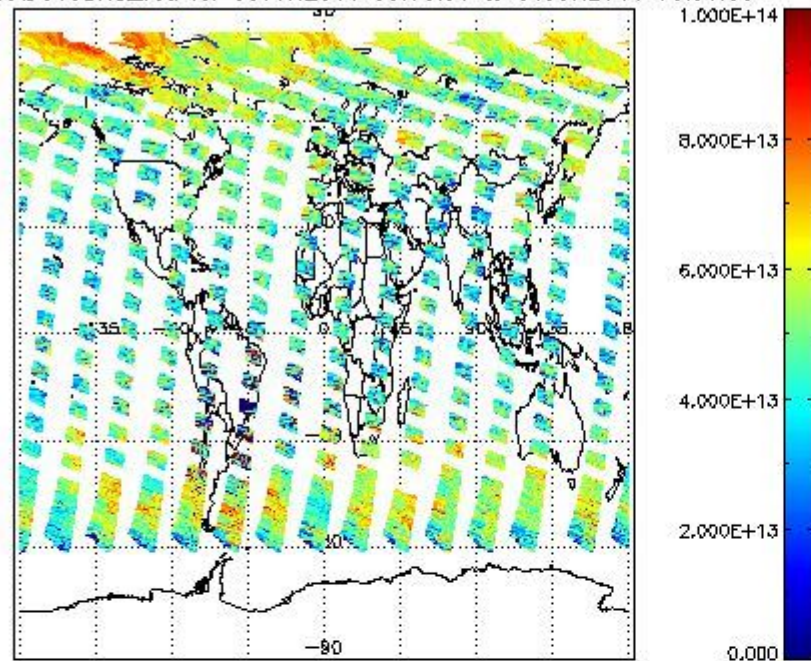


2.2.2.3 BrO (UV3)

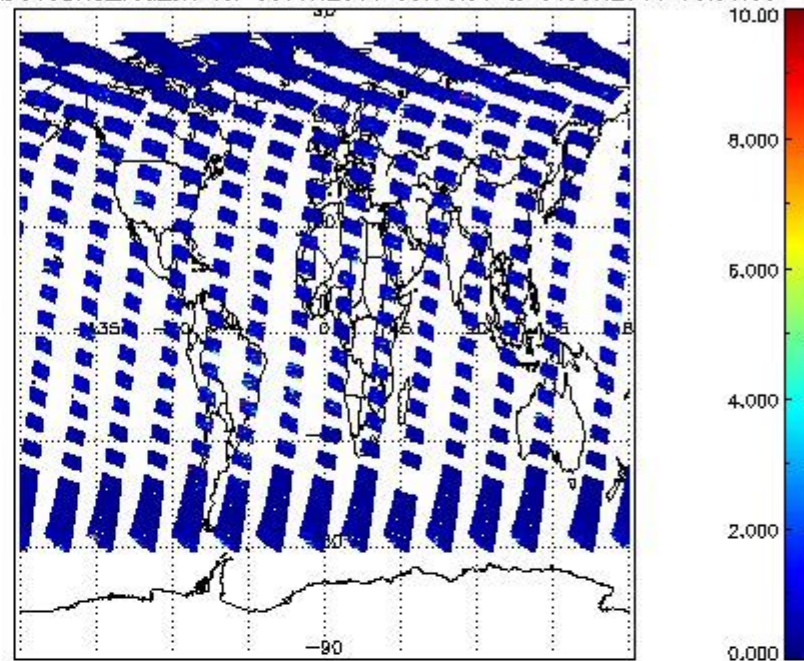




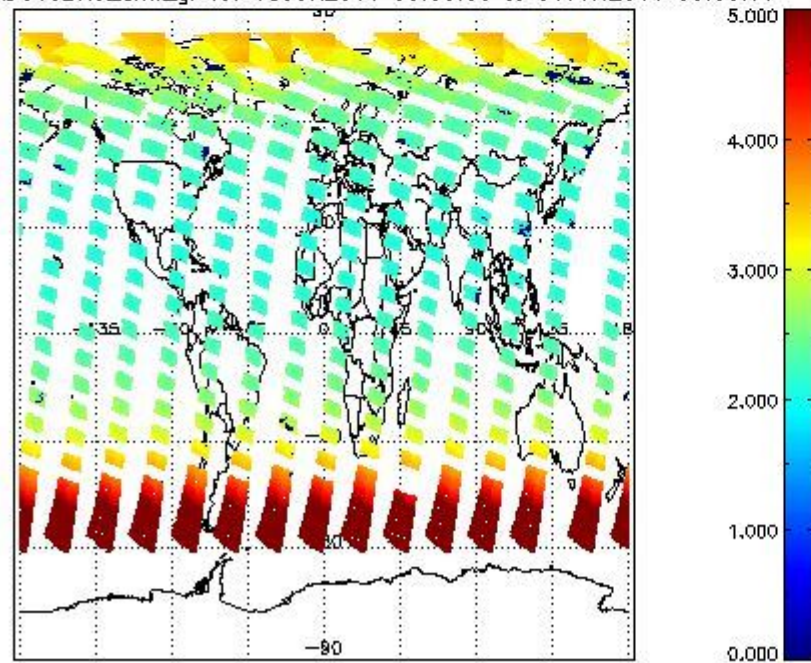
SCIOL2P\_NADUV3BRO\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



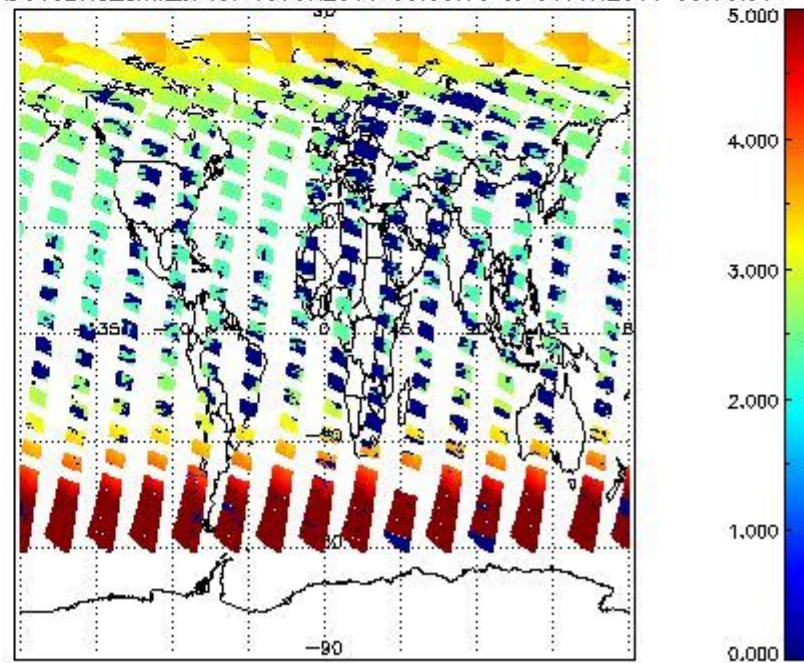
SCIOL2P\_NADUV3BRO\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



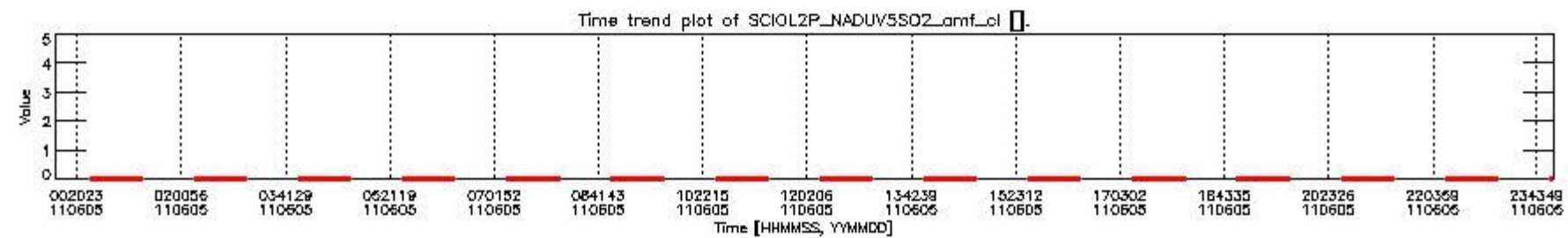
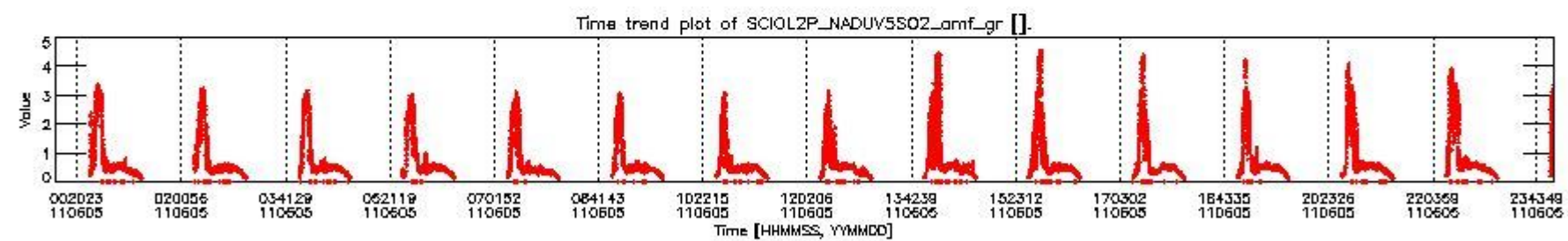
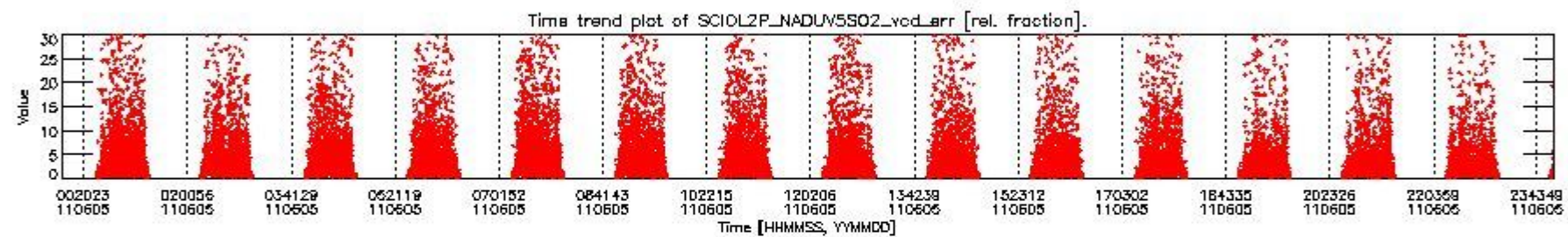
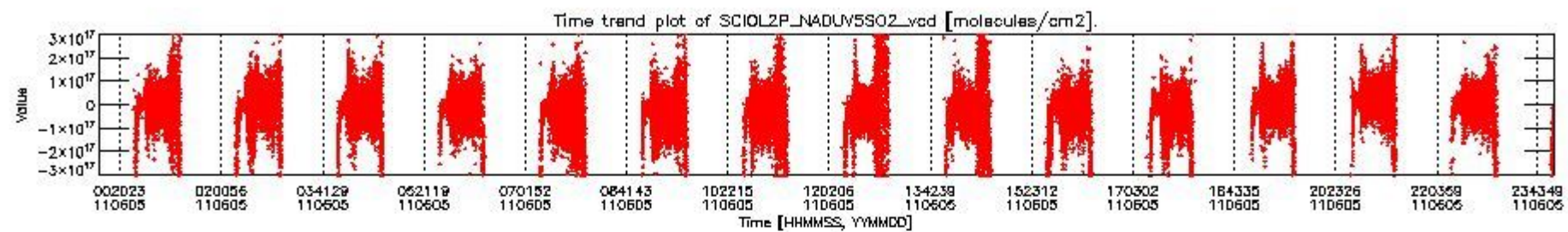
SCIOL2P\_NADUV3BRO\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



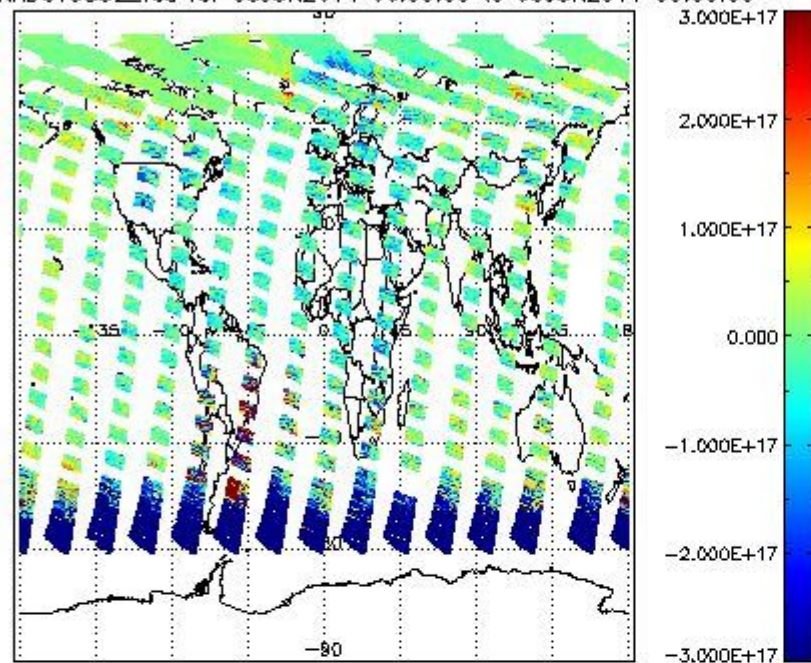
SCIOL2P\_NADUV3BRO\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



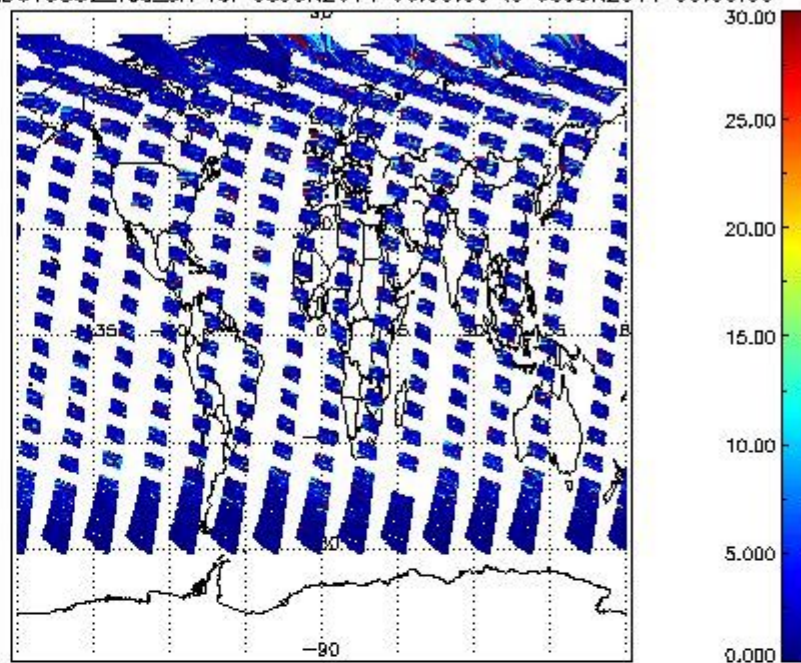
#### 2.2.2.4 SO2 (UV5)



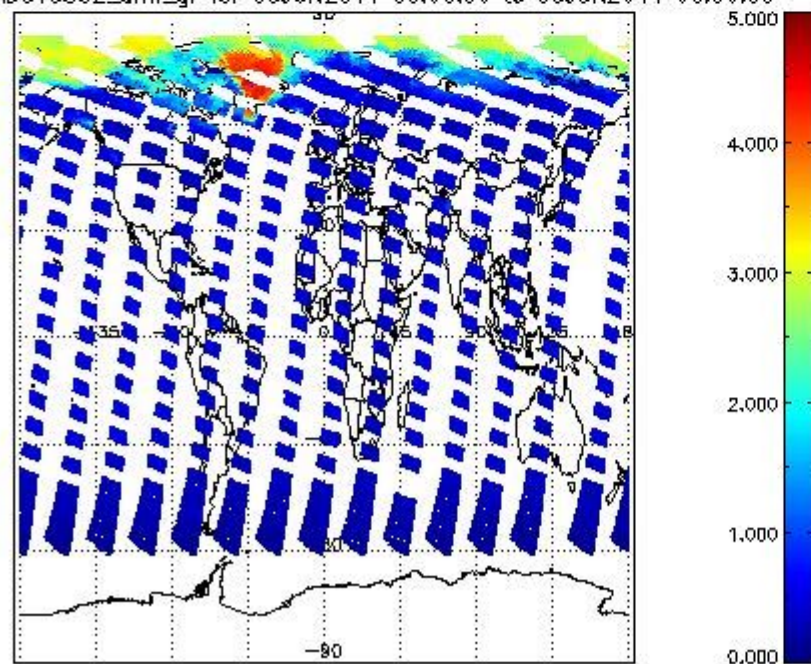
SCIOL2P\_NADUV5S02\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



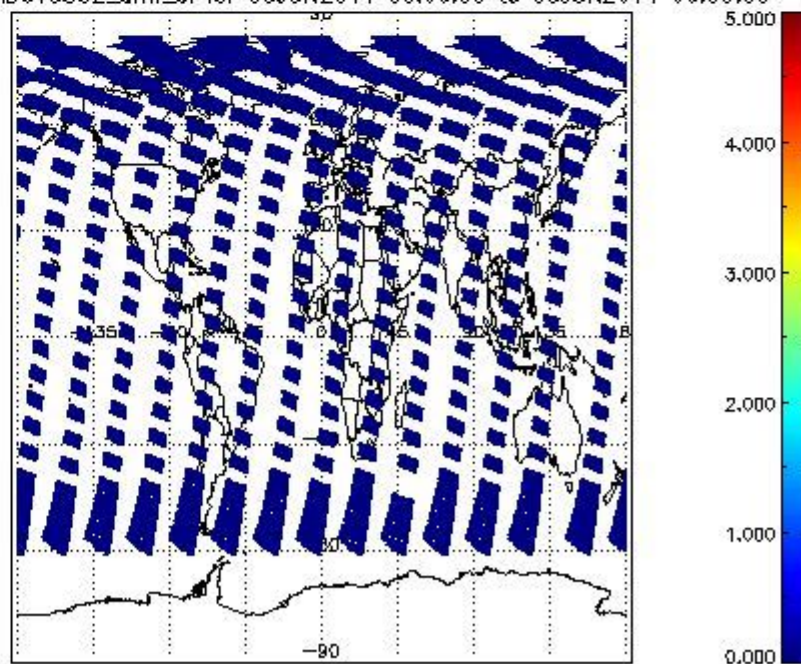
SCIOL2P\_NADUV5S02\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



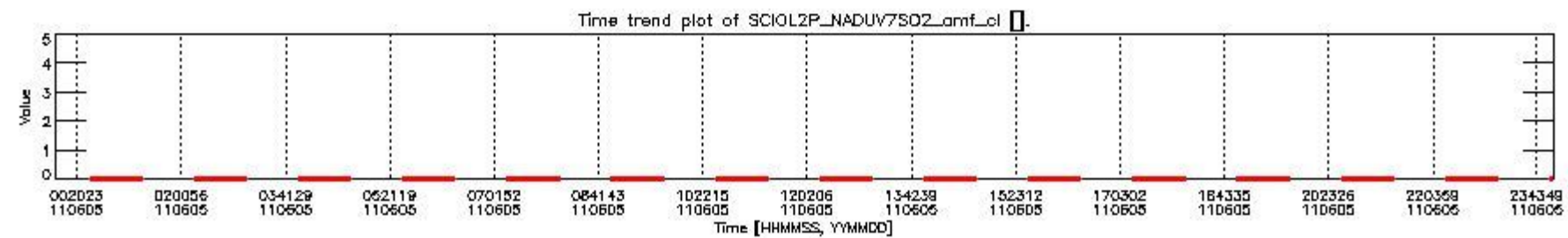
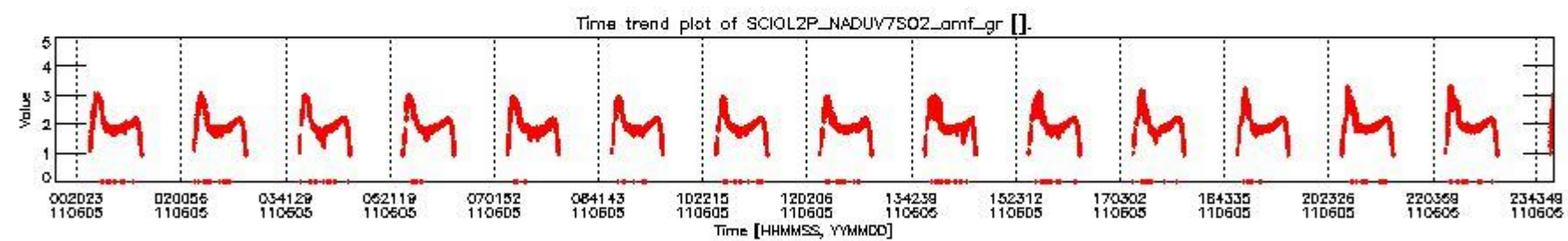
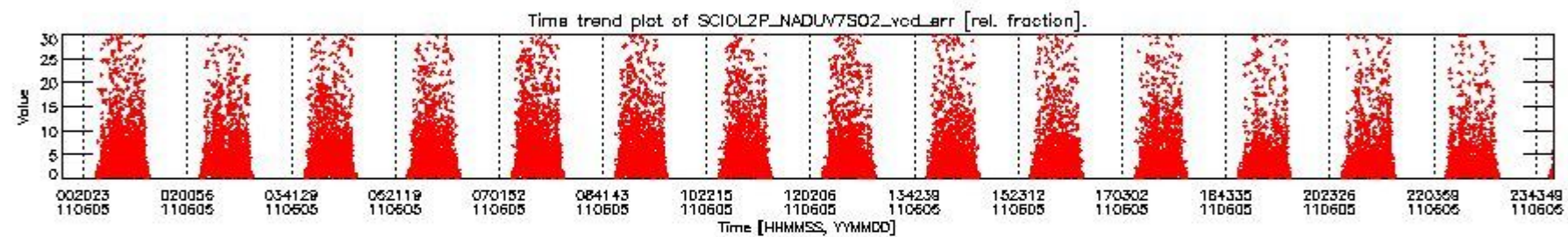
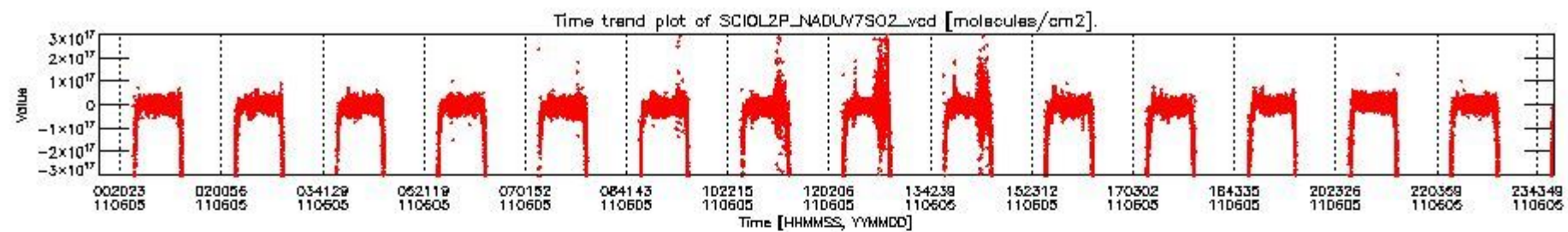
SCIOL2P\_NADUV5S02\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



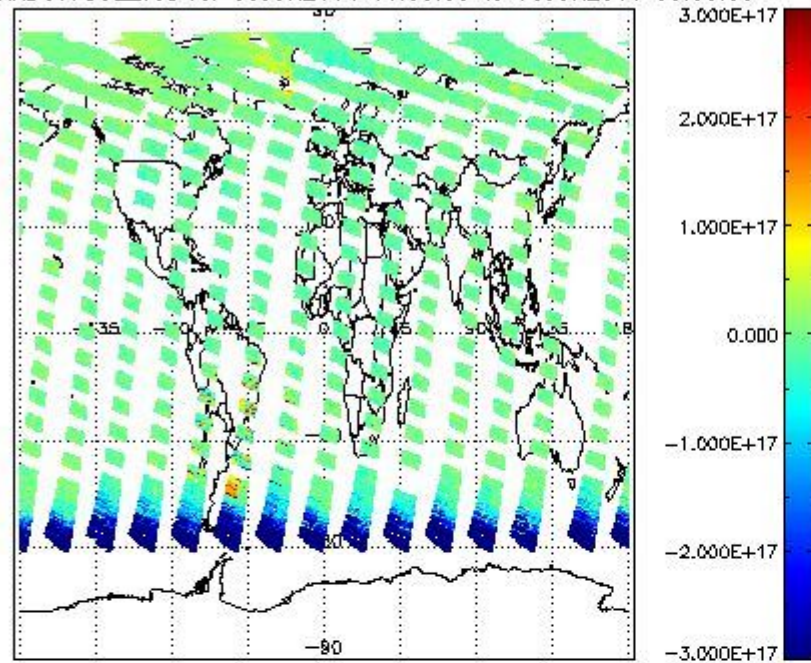
SCIOL2P\_NADUV5S02\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



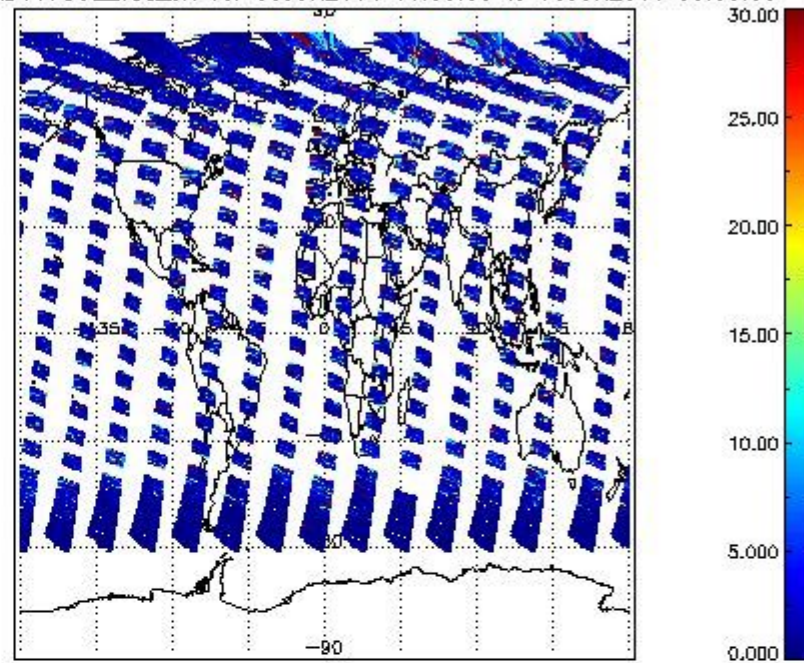
2.2.2.5 SO2 (UV7)



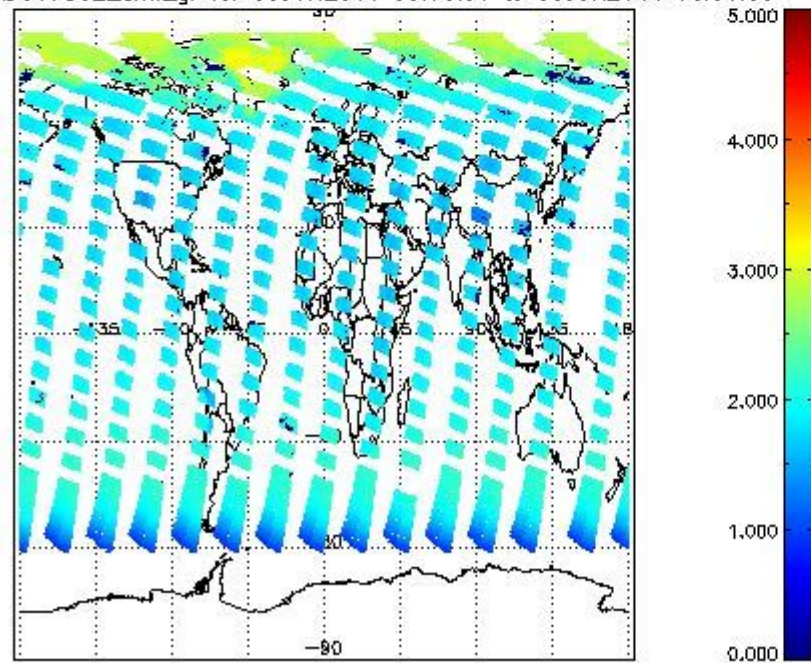
SCIOL2P\_NADUV7S02\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



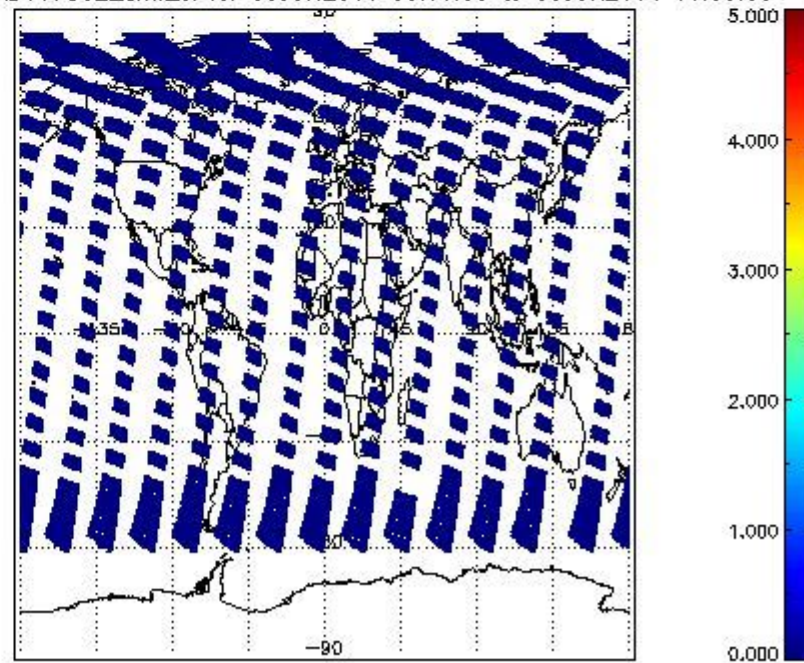
SCIOL2P\_NADUV7S02\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



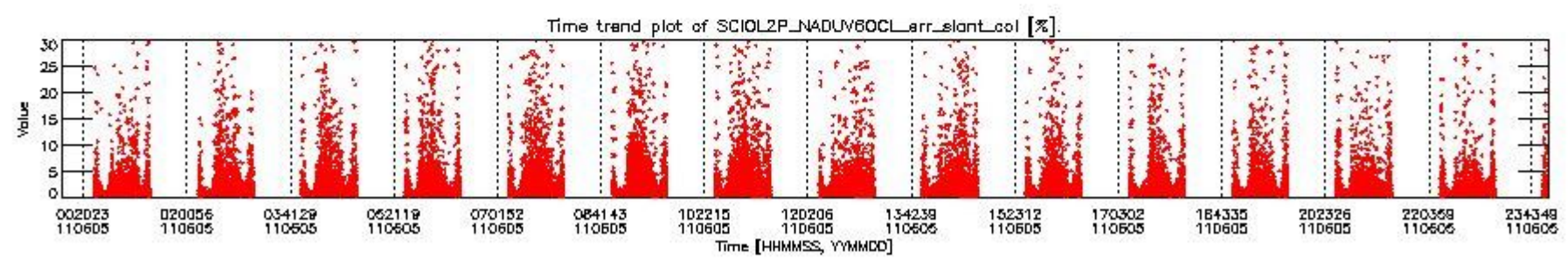
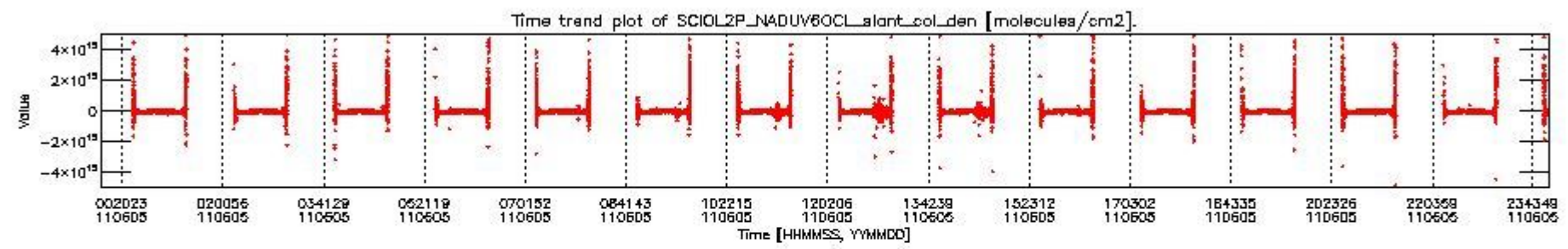
SCIOL2P\_NADUV7S02\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



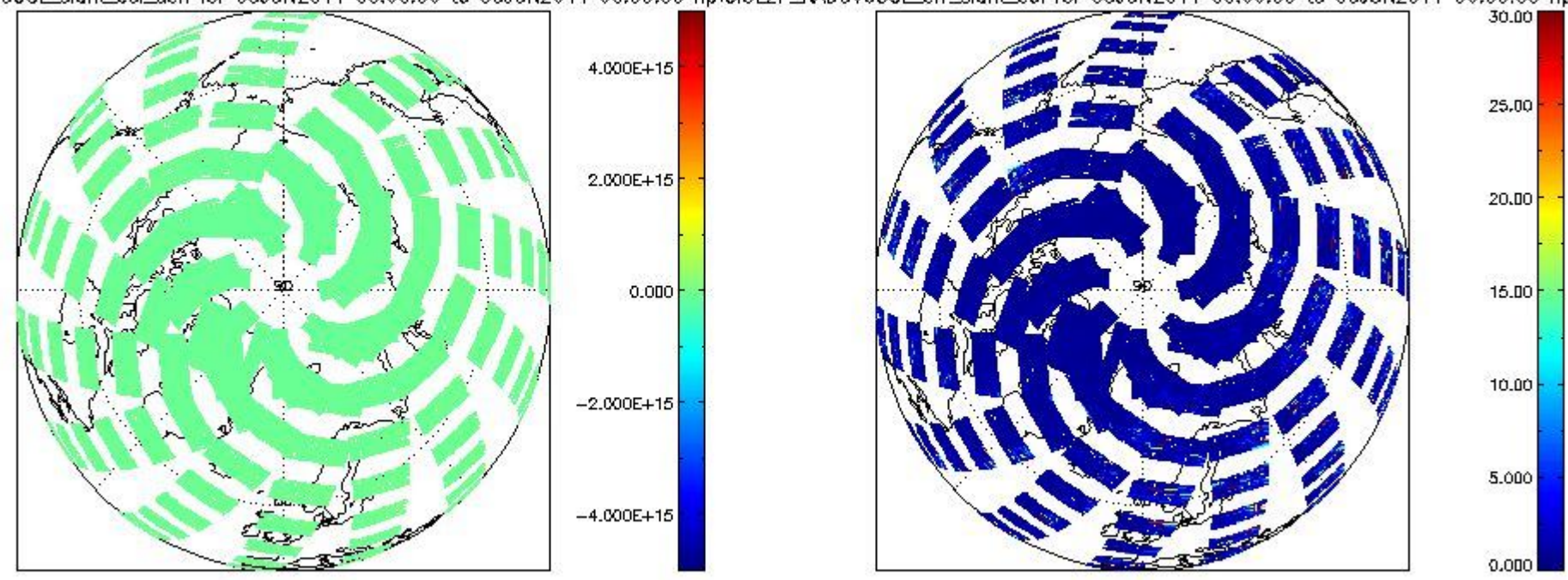
SCIOL2P\_NADUV7S02\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



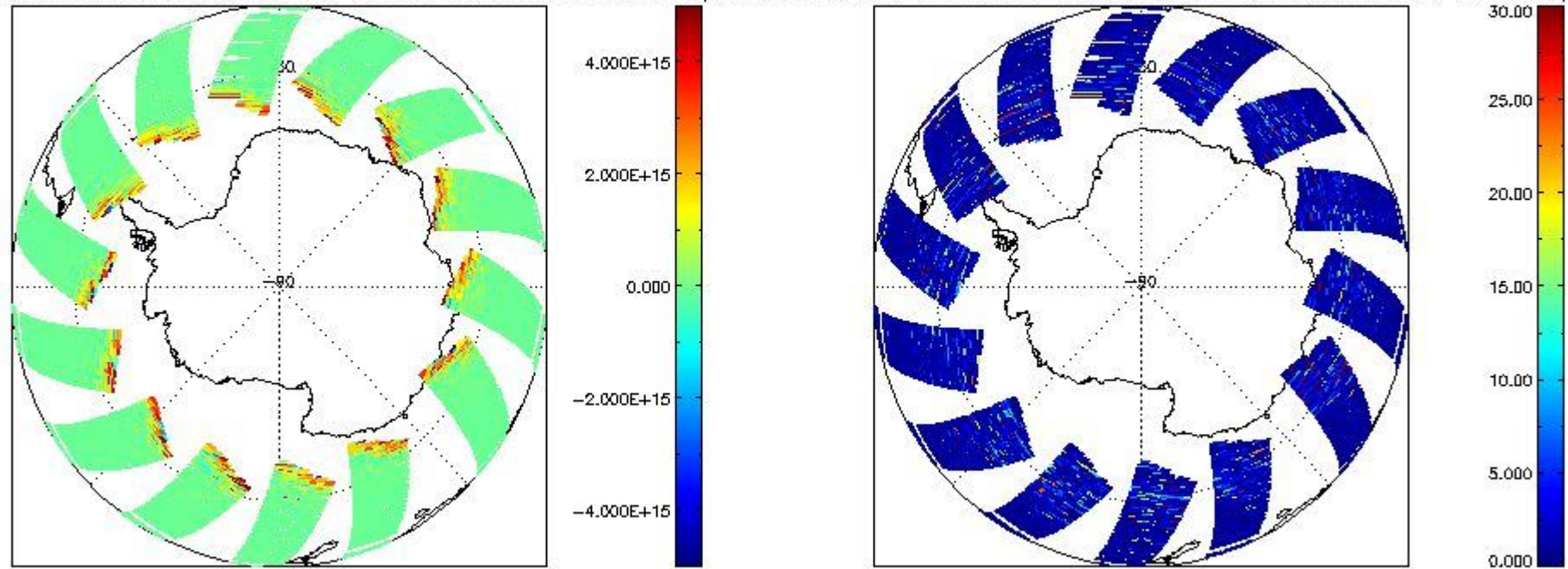
2.2.2.6 OCIO (UV6)



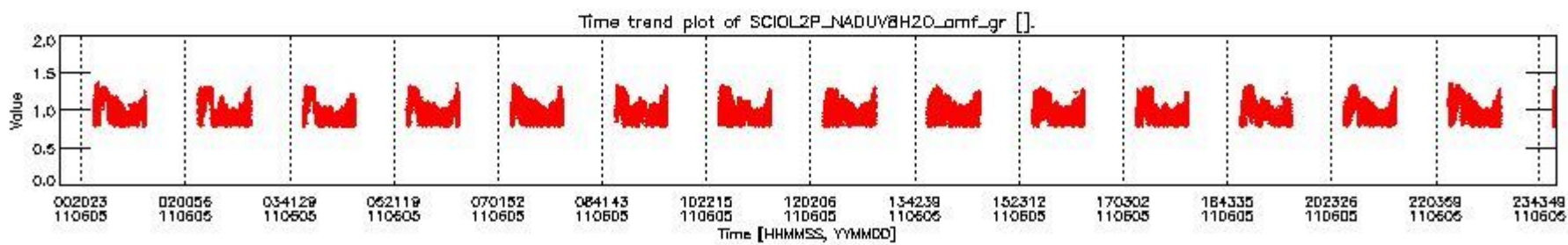
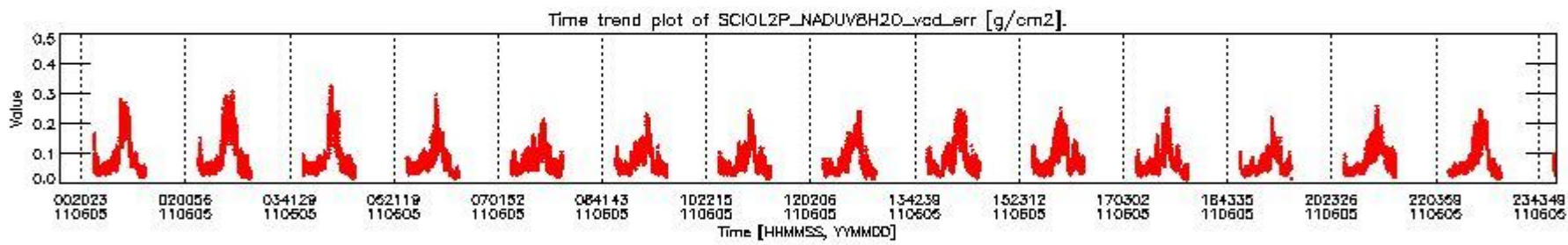
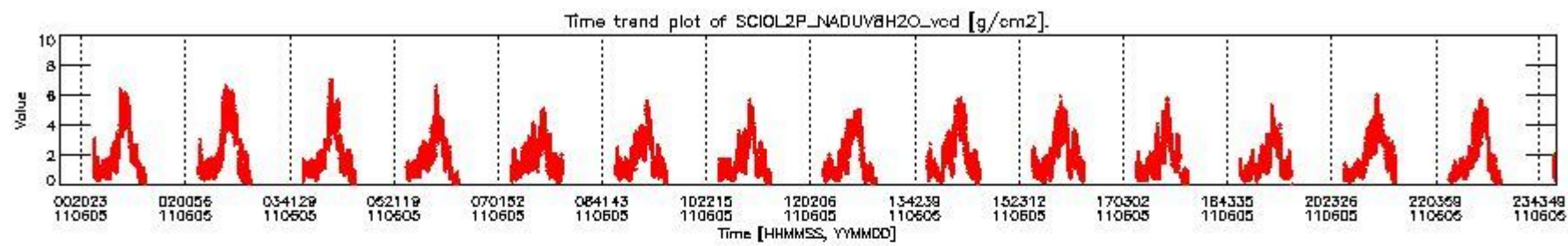
CIOL2P\_NADUV6OCLslant\_col\_den for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 np; CIOL2P\_NADUV6OCLarr\_slant\_col for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 np



CIOL2P\_NADUV60CL\_slant\_col\_den for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 sp; CIOL2P\_NADUV60CL\_err\_slant\_col for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 sp

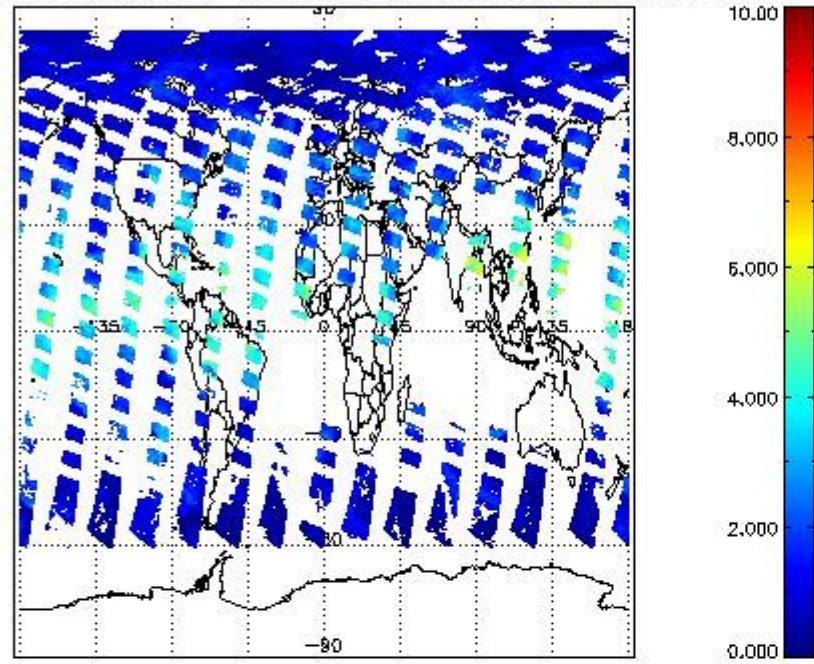


### 2.2.2.7 H<sub>2</sub>O (UV8)

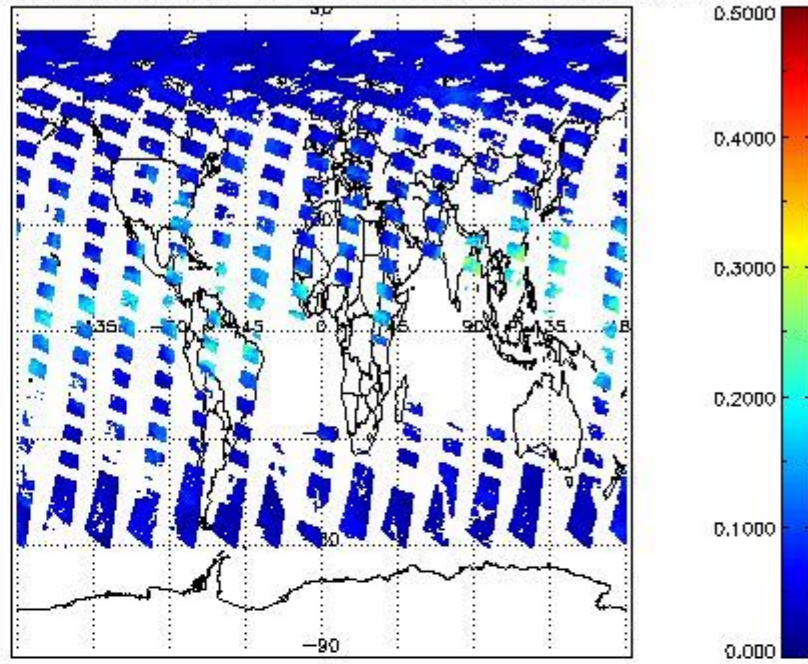




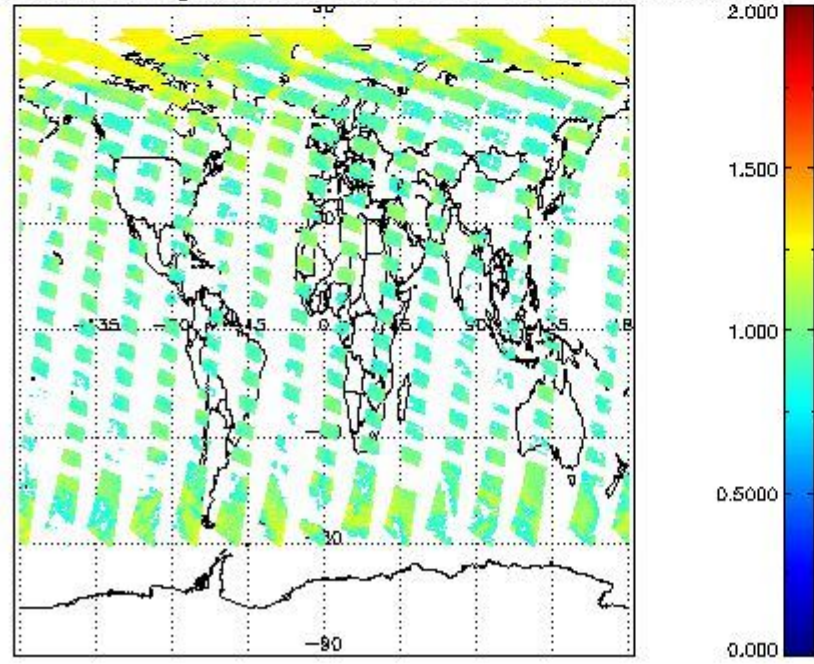
SCIOL2P\_NADUV8H2O\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



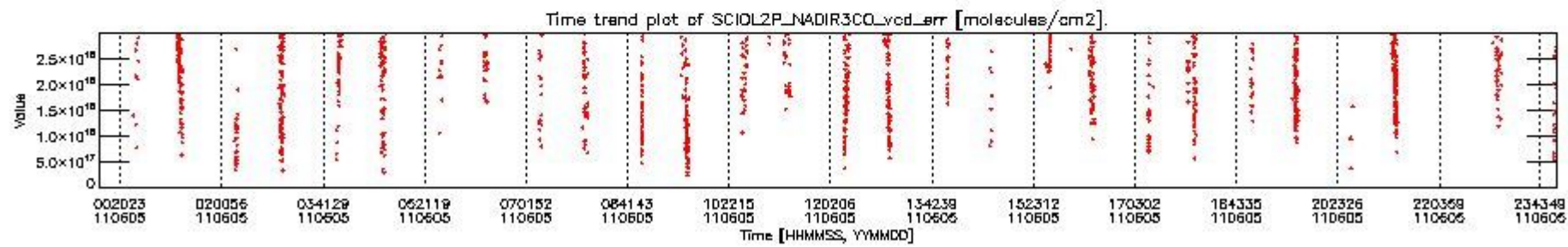
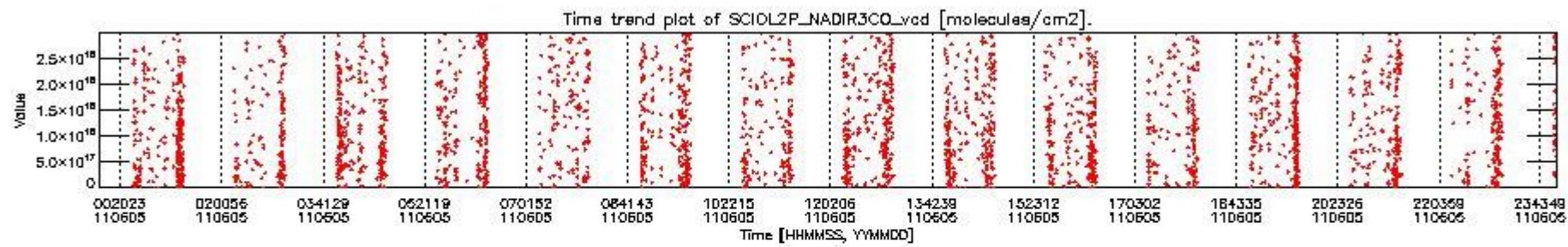
SCIOL2P\_NADUV8H2O\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



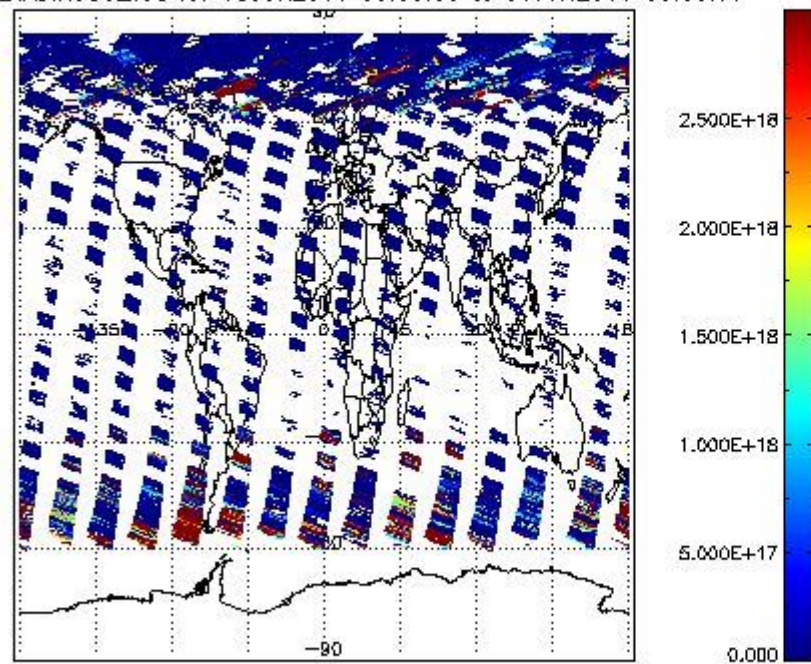
SCIOL2P\_NADUV8H2O\_arnf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



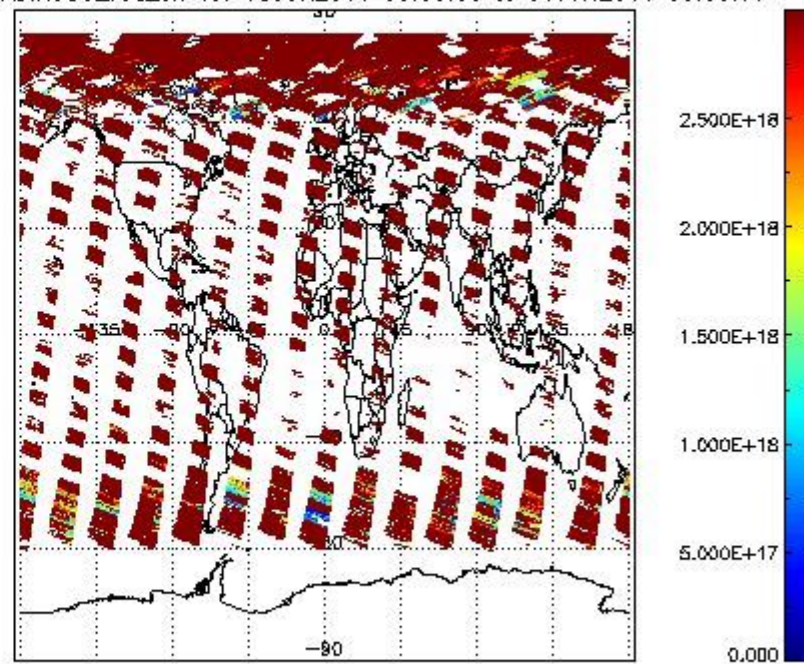
### 2.2.2.8 CO (IR3)



SCIDL2P\_NADIR3CO\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



### 2.2.3 Limb

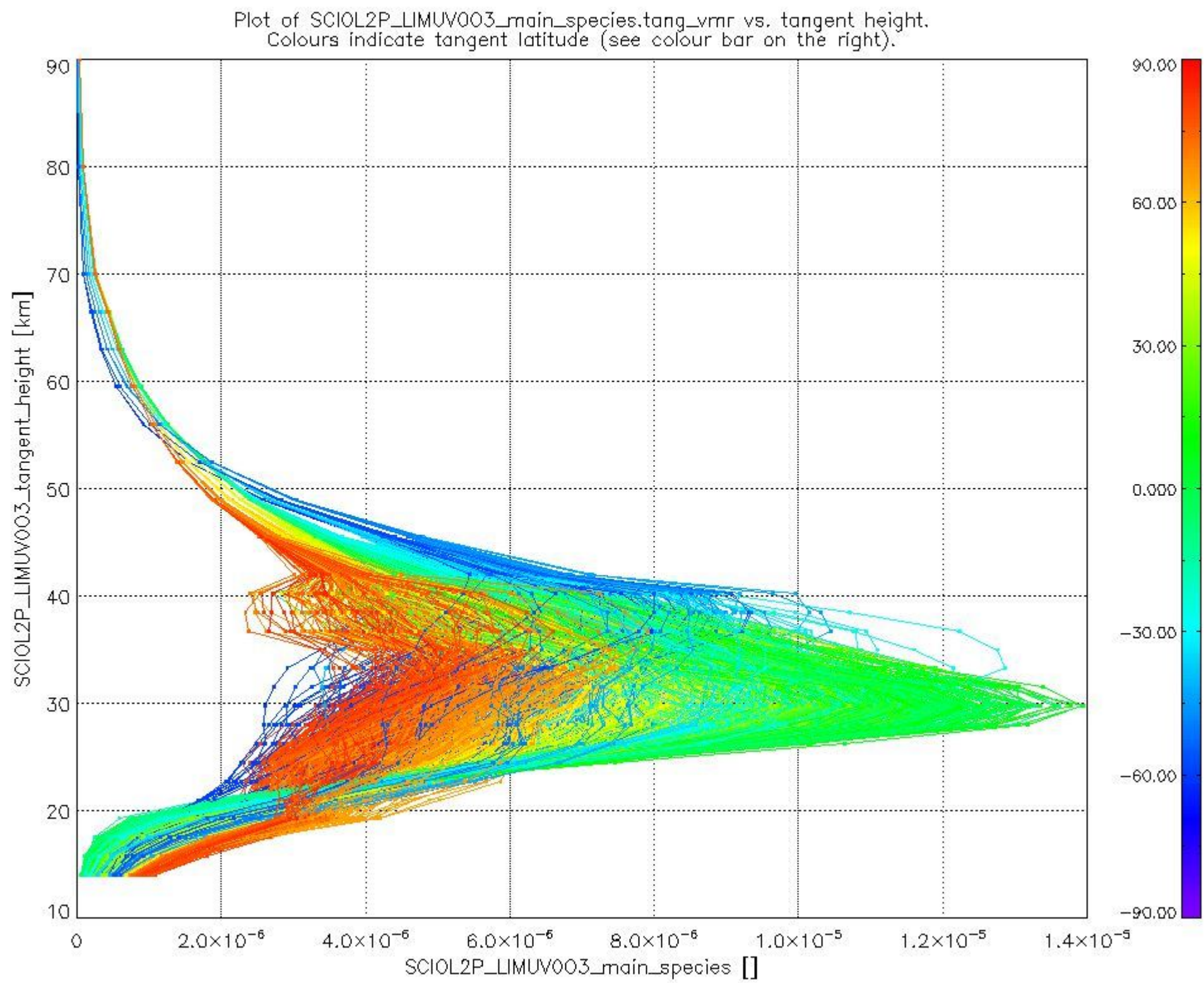
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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

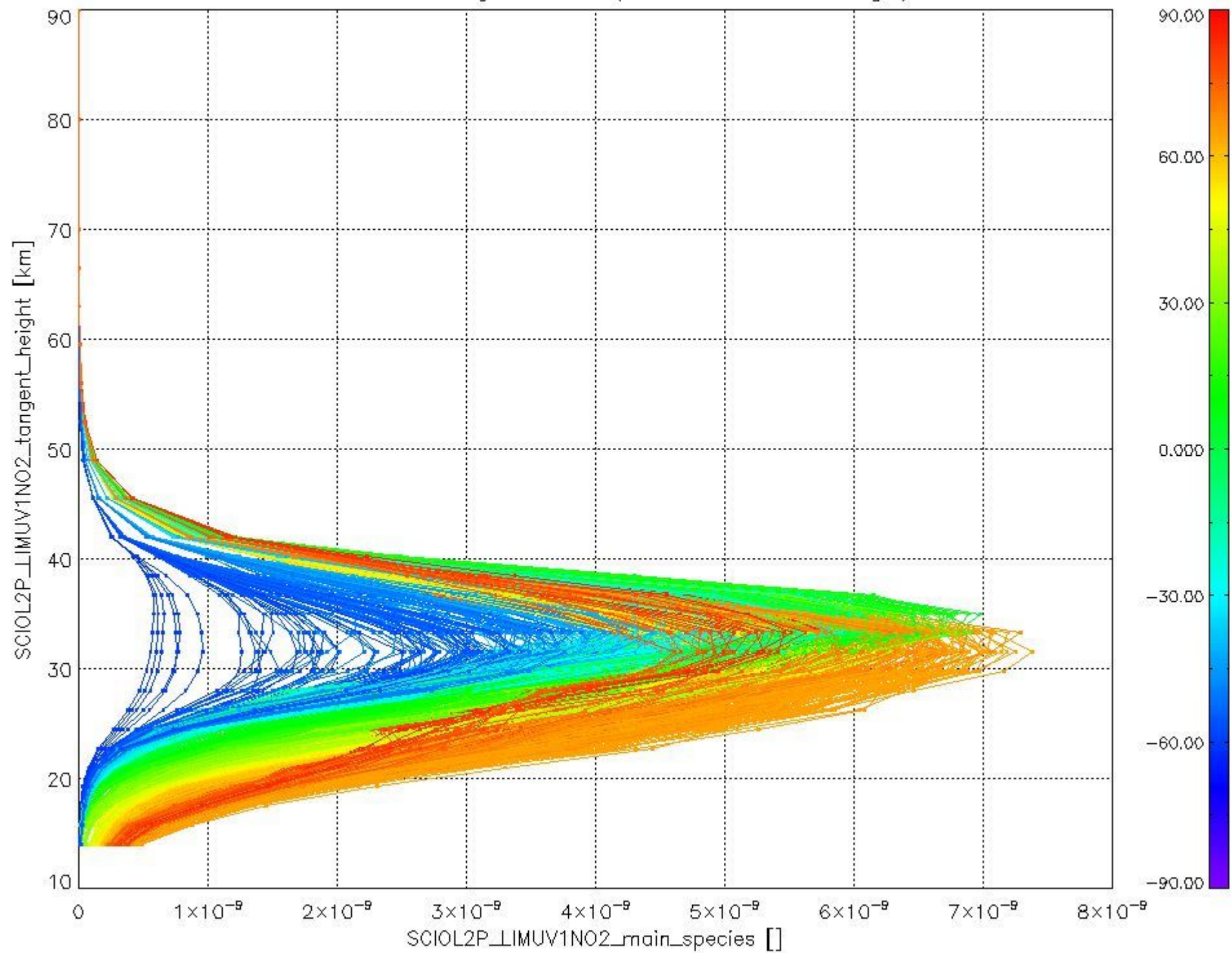
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

### 2.2.3.1 O3 (UV0)



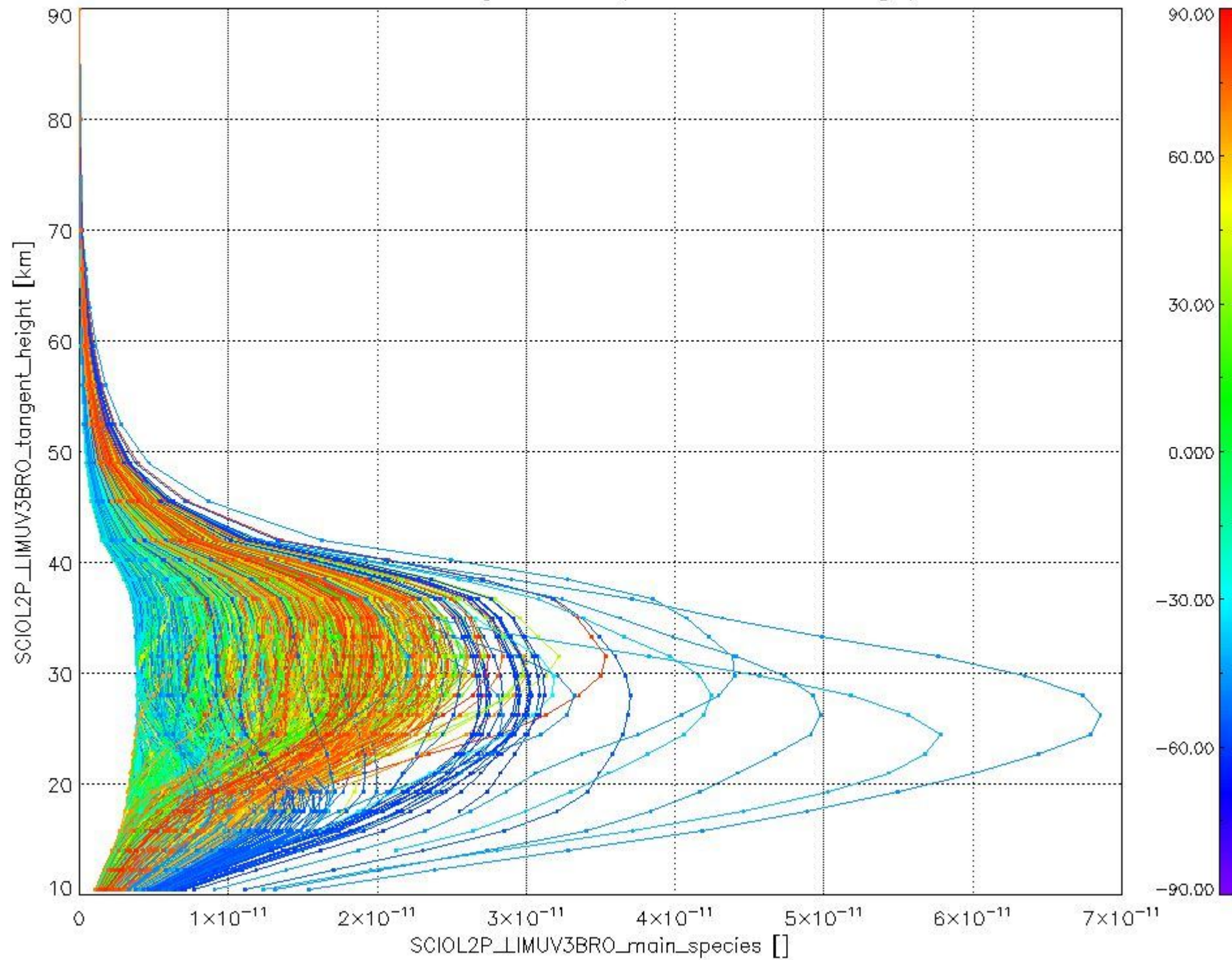
### 2.2.3.2 NO2 (UV1)

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).

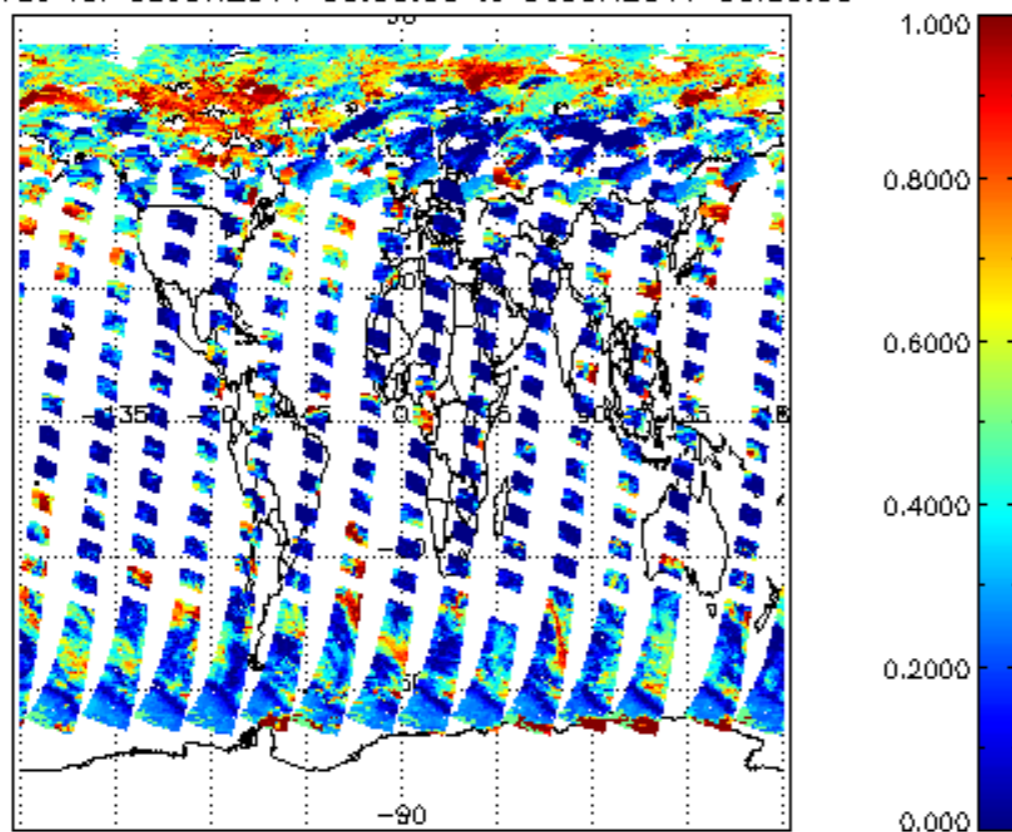


### 2.3 ADF monitoring

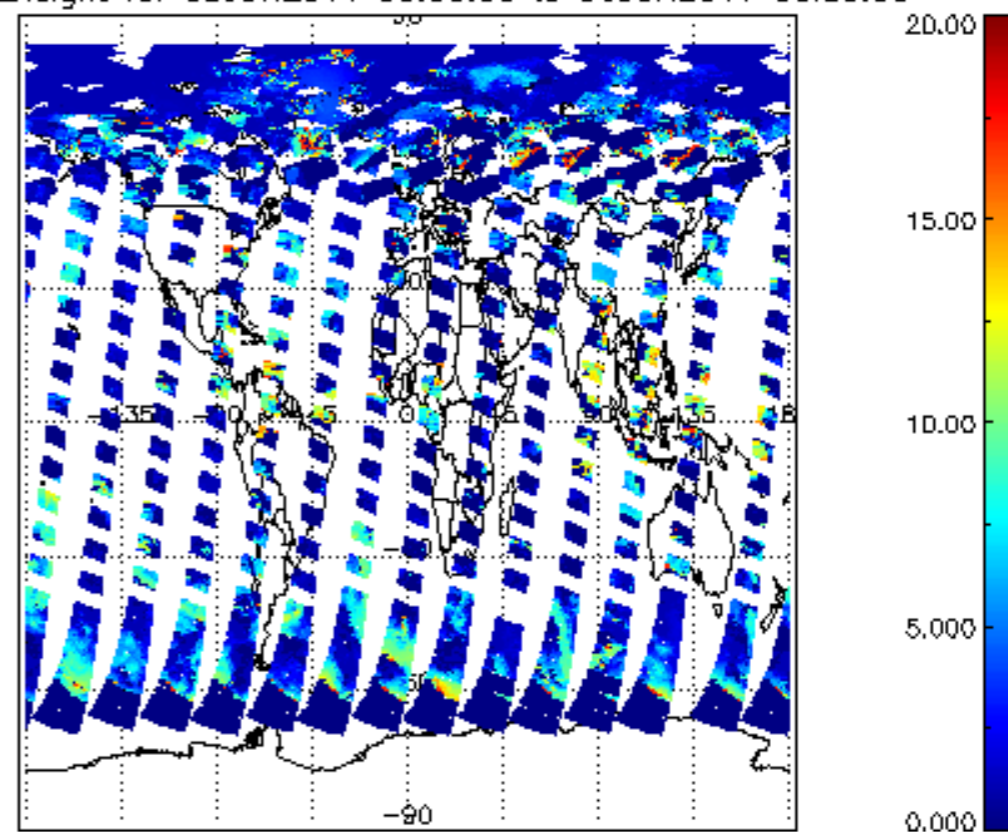
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110607_110448_20110604_190120_20110606_190120
3	SCI_MF1_AXVIEC20110607_110552_20110605_182435_20110607_182435



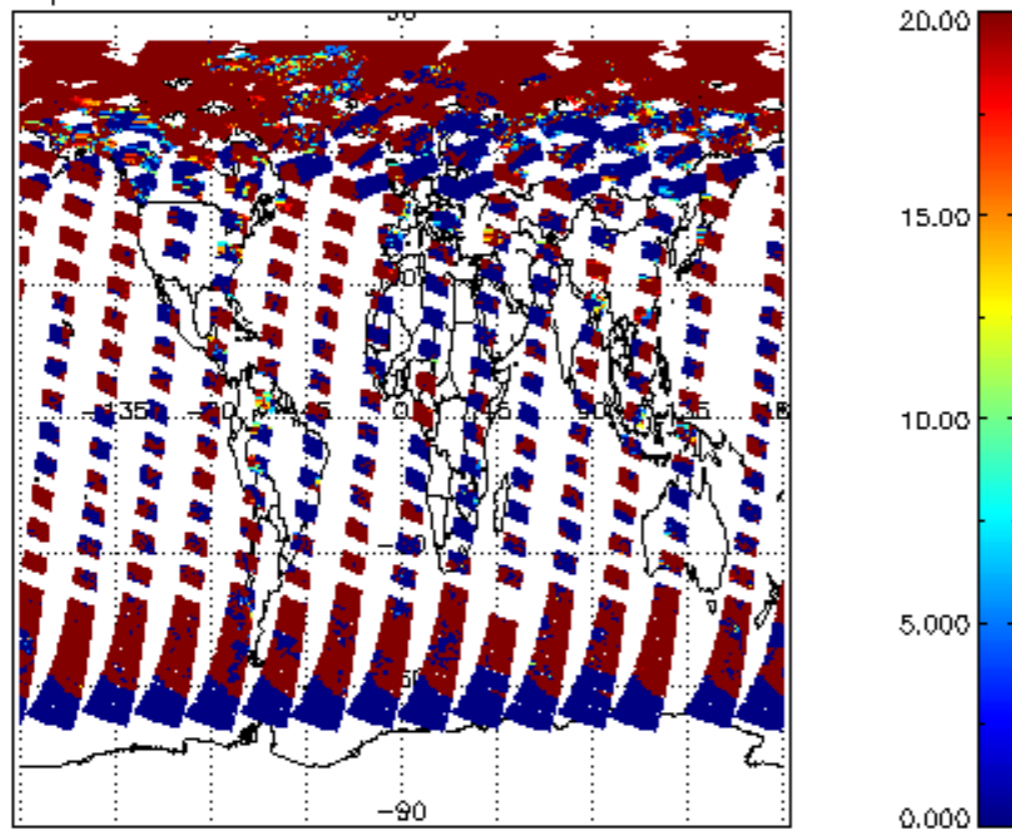
cl\_frac for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



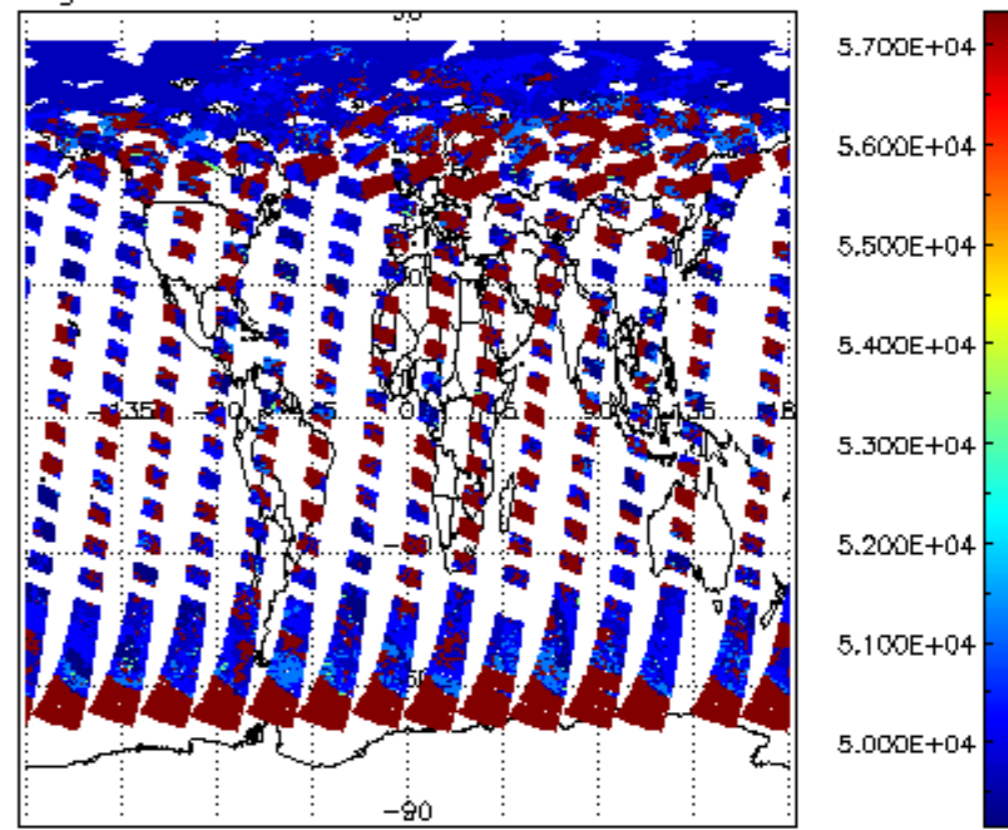
cl\_top\_height for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

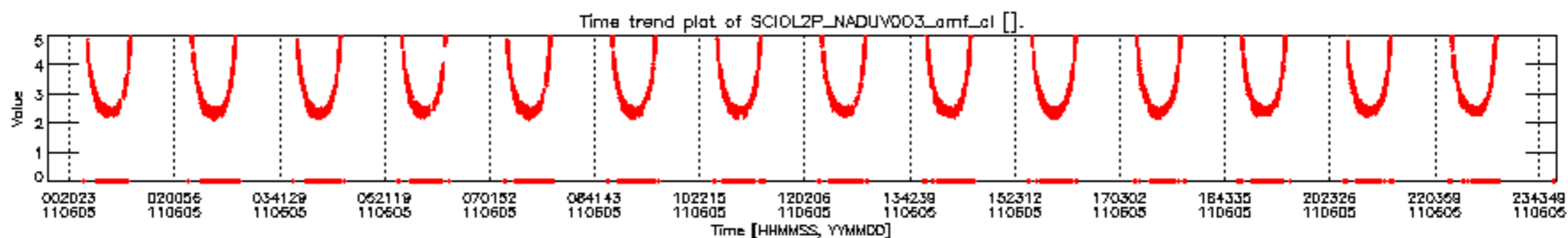
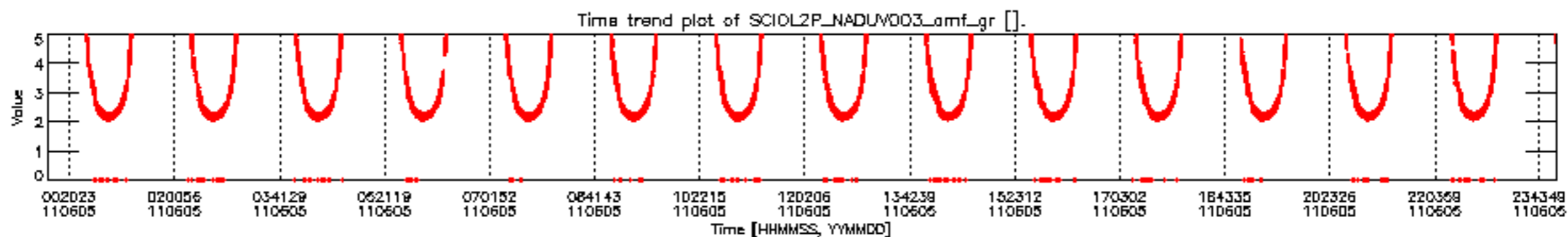
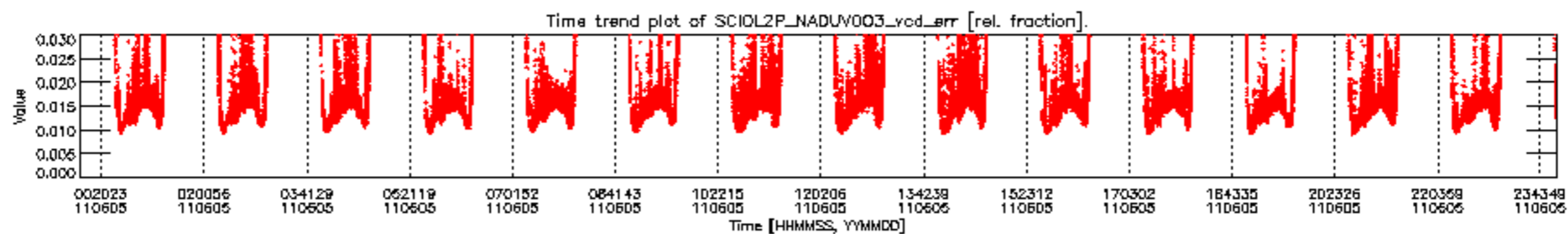
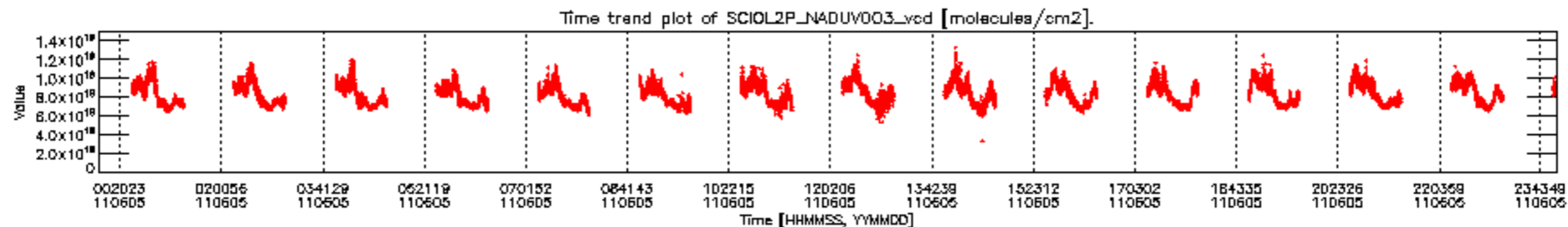


cl\_opt\_depth for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



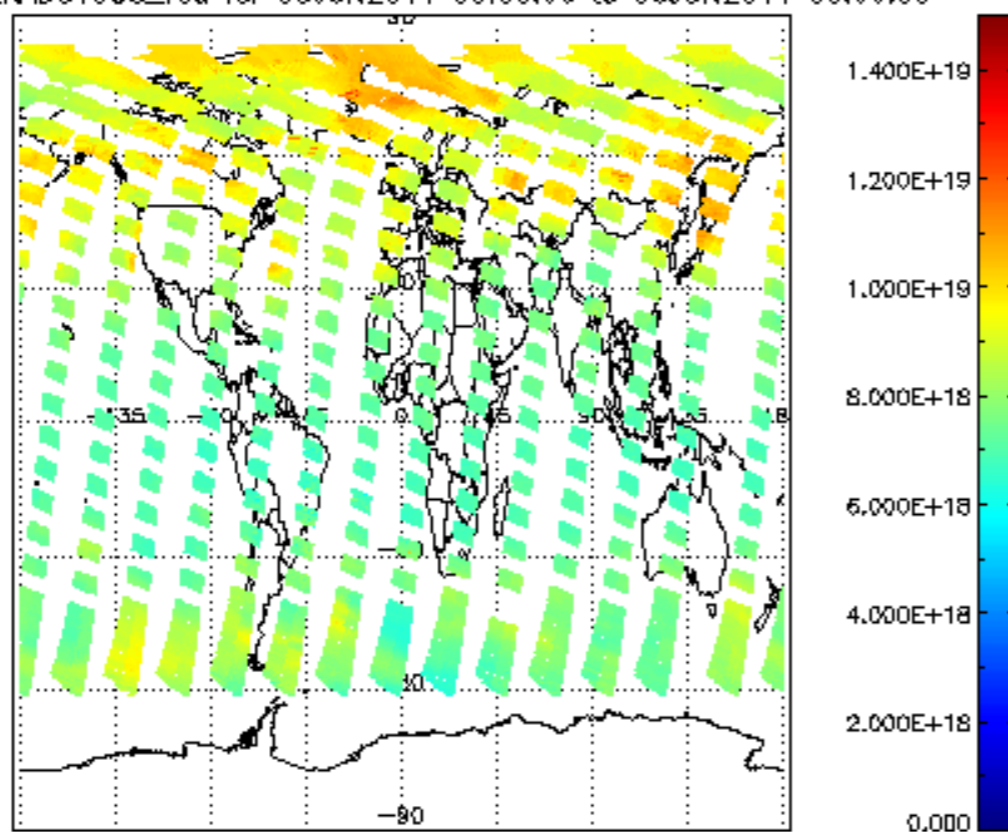
cloud\_flags for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



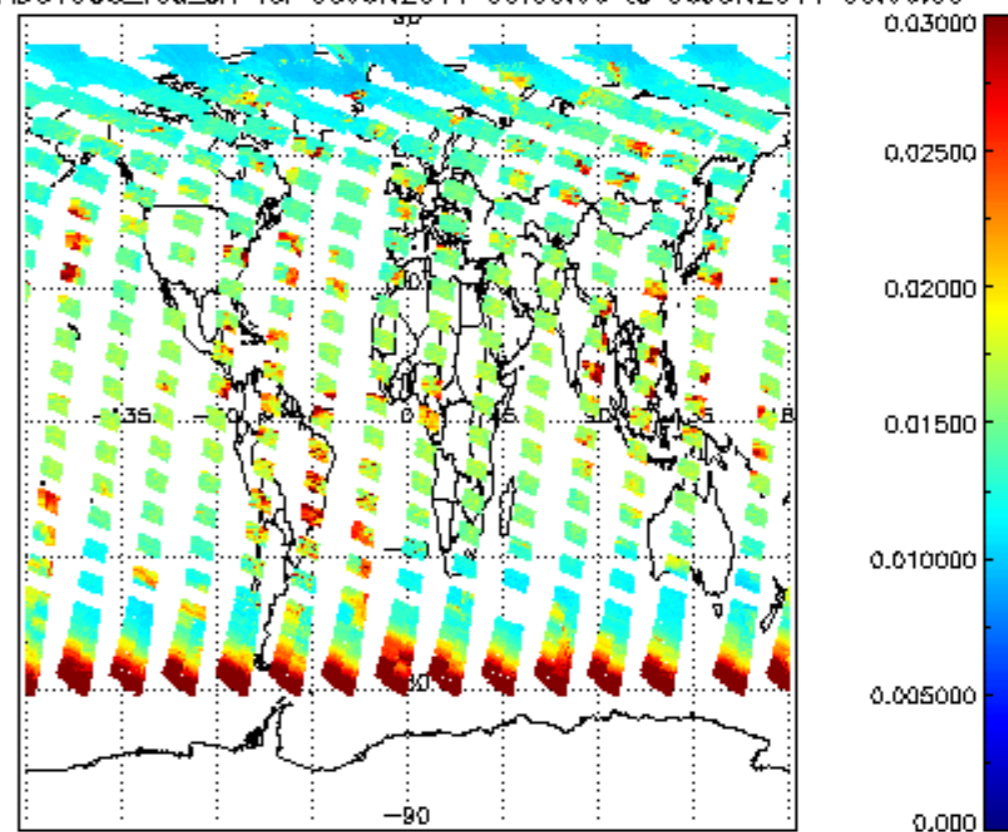




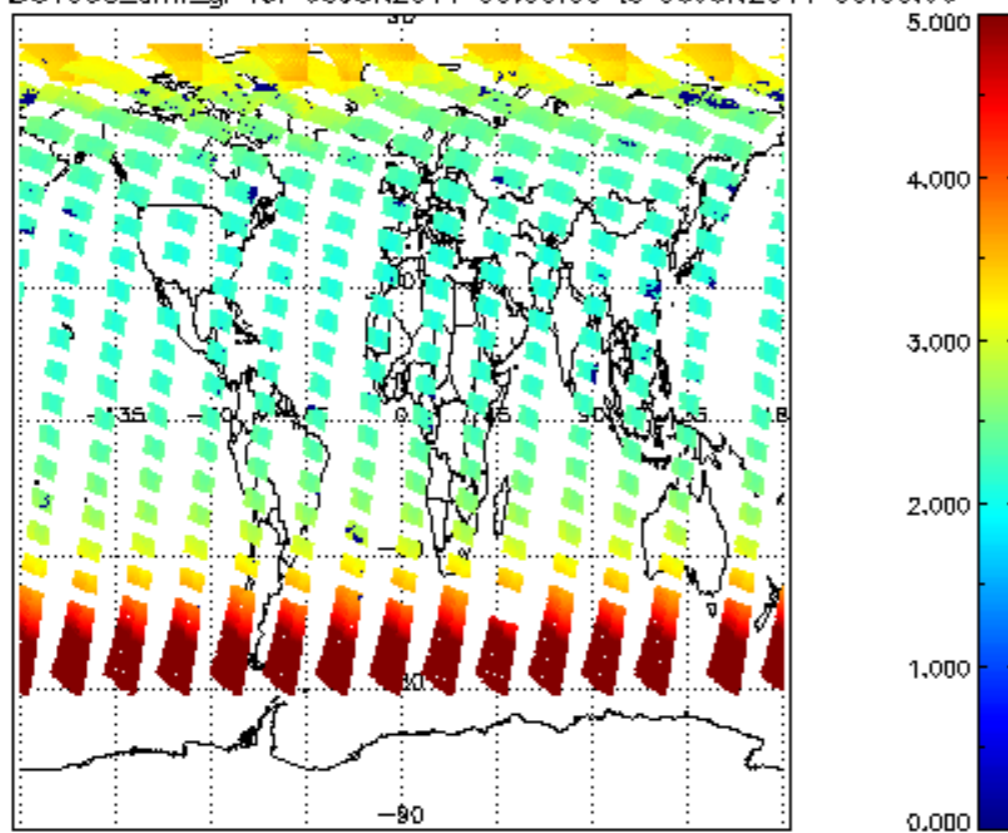
SCIOL2P\_NADUV003\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



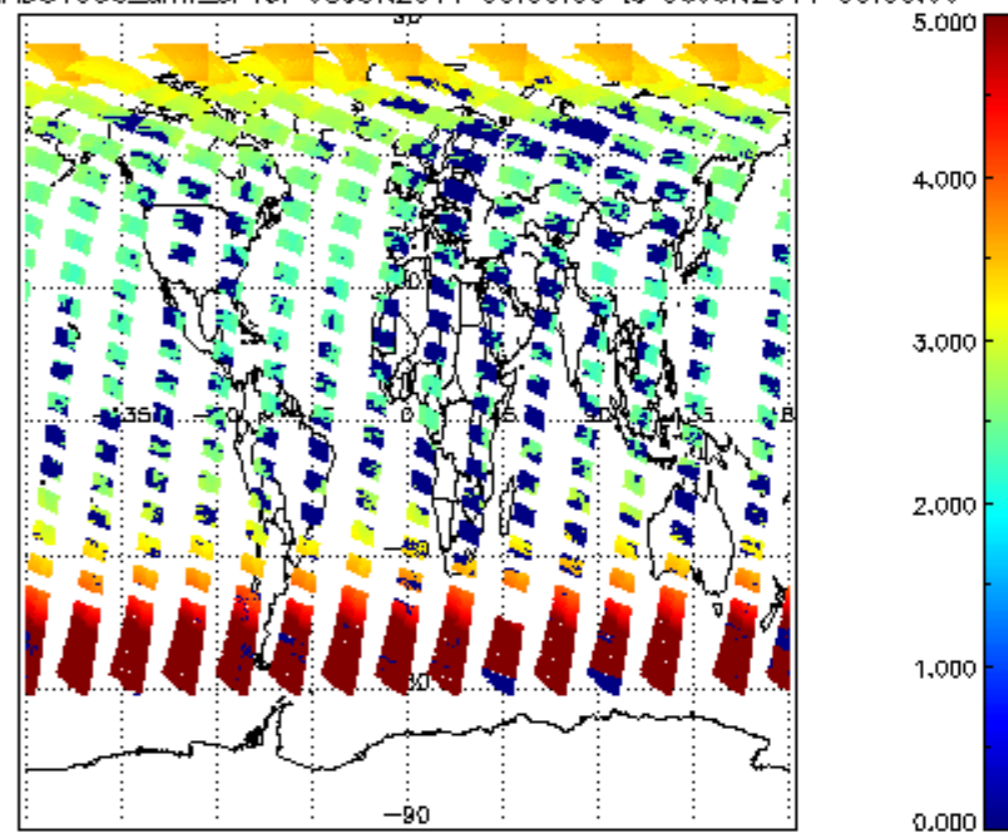
SCIOL2P\_NADUV003\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

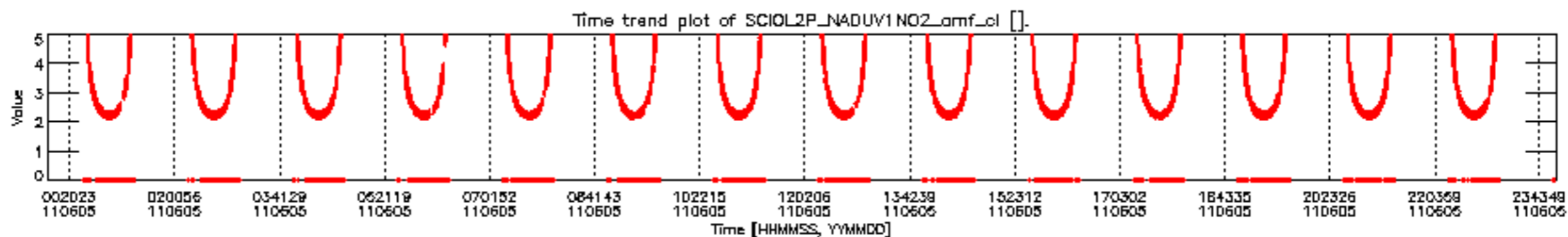
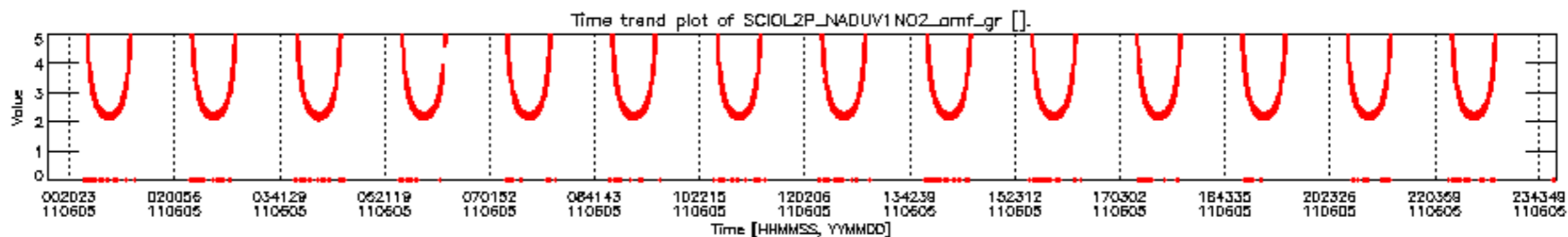
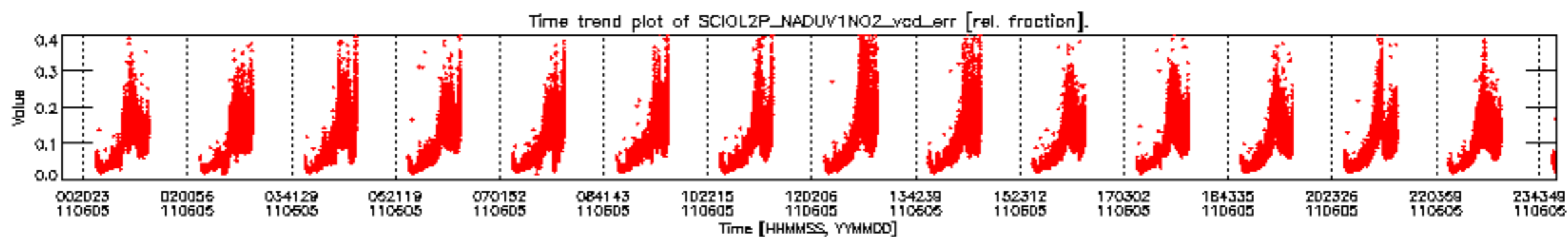
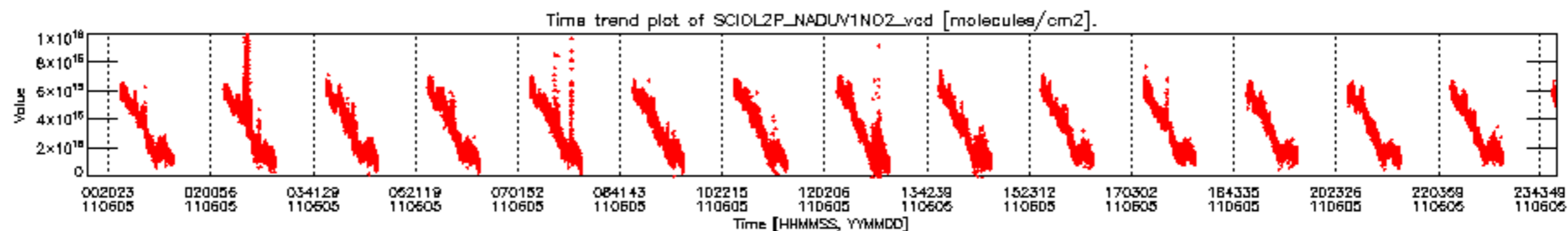


SCIOL2P\_NADUV003\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

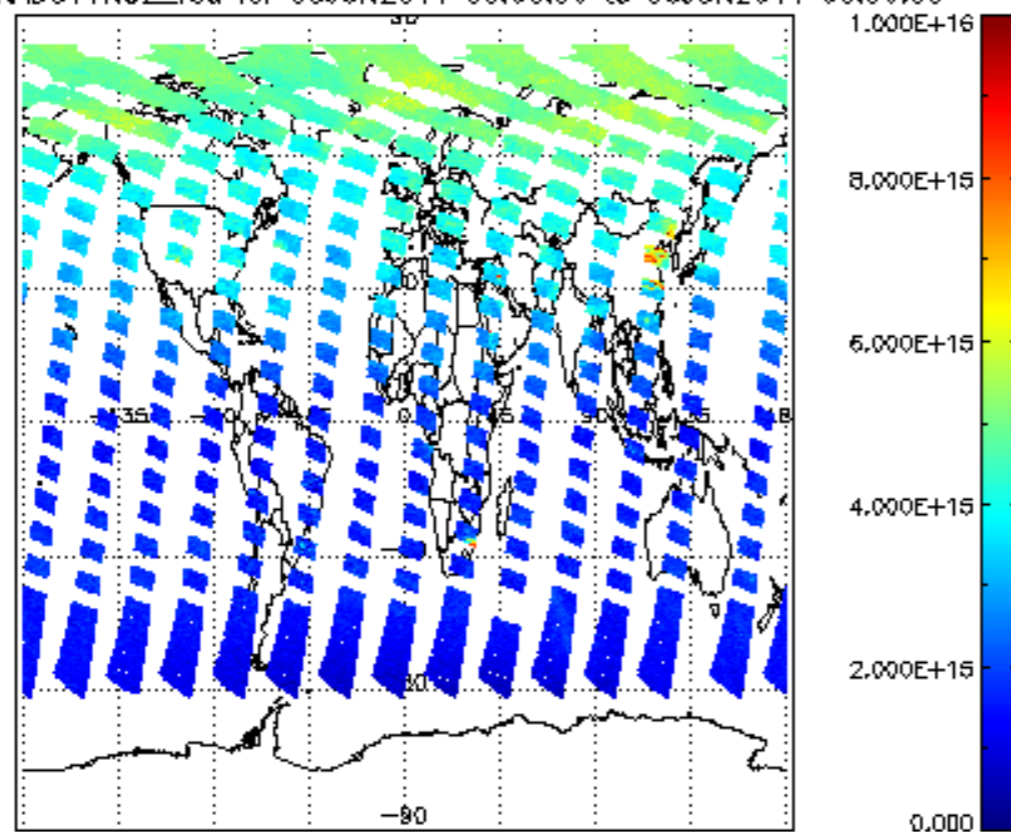


SCIOL2P\_NADUV003\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

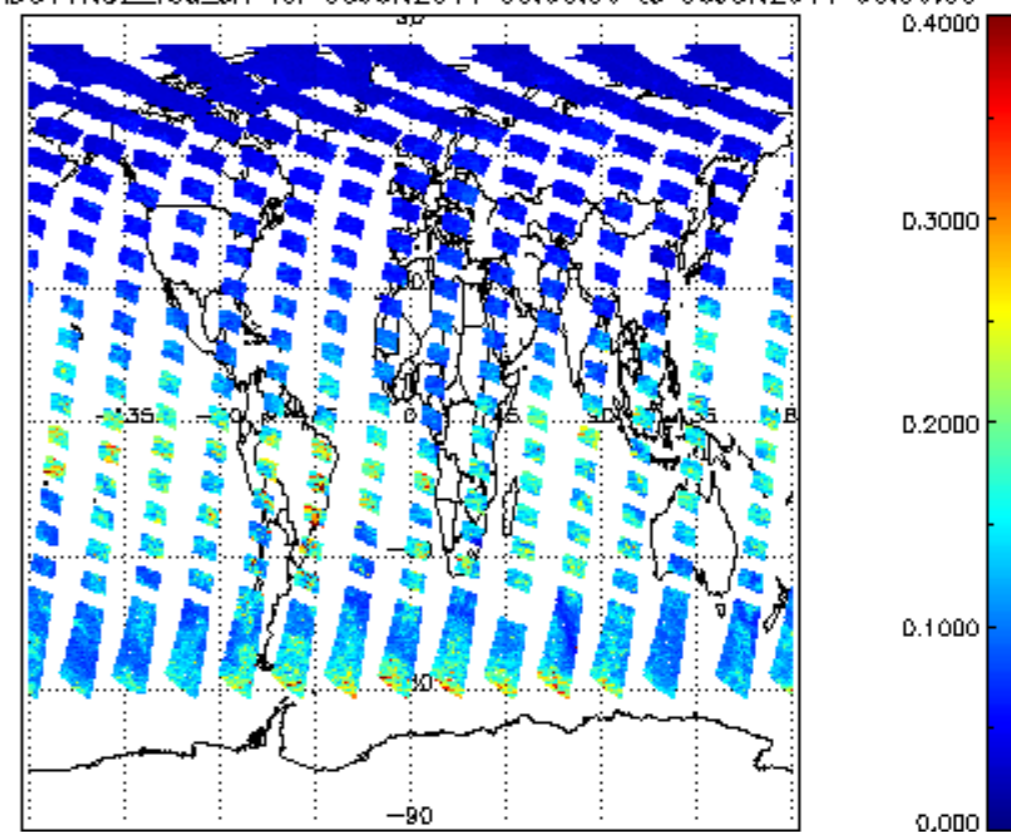




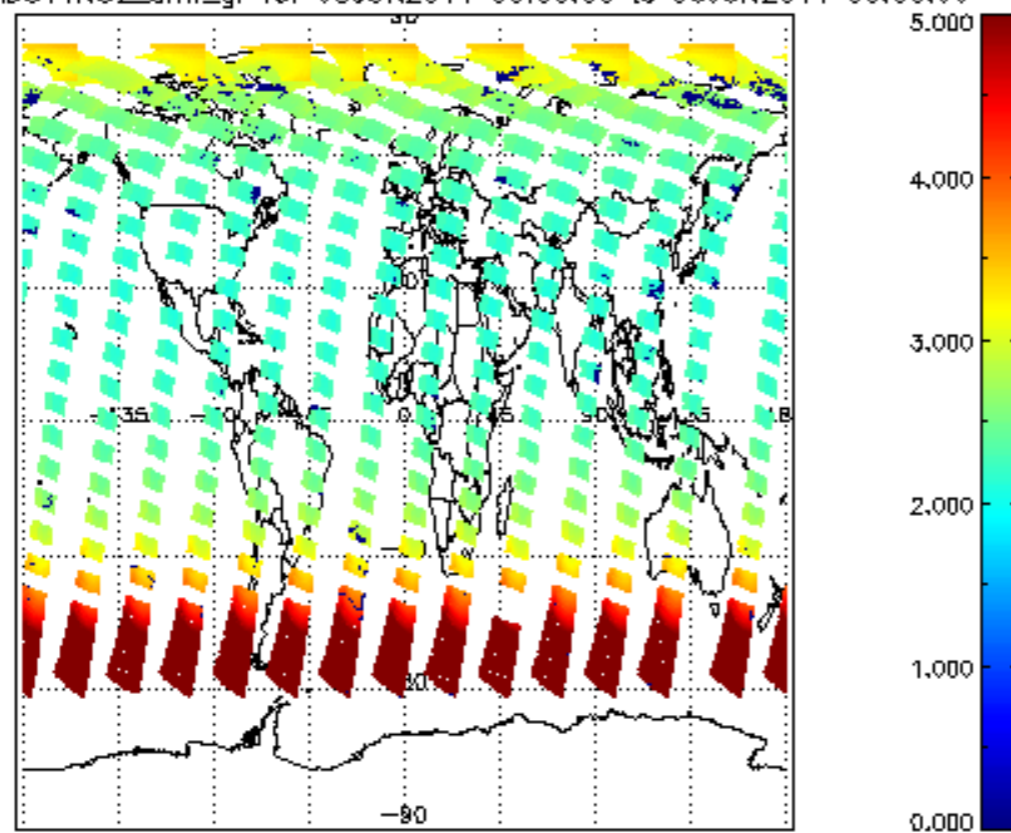
SCIOL2P\_NADUV1NO2\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



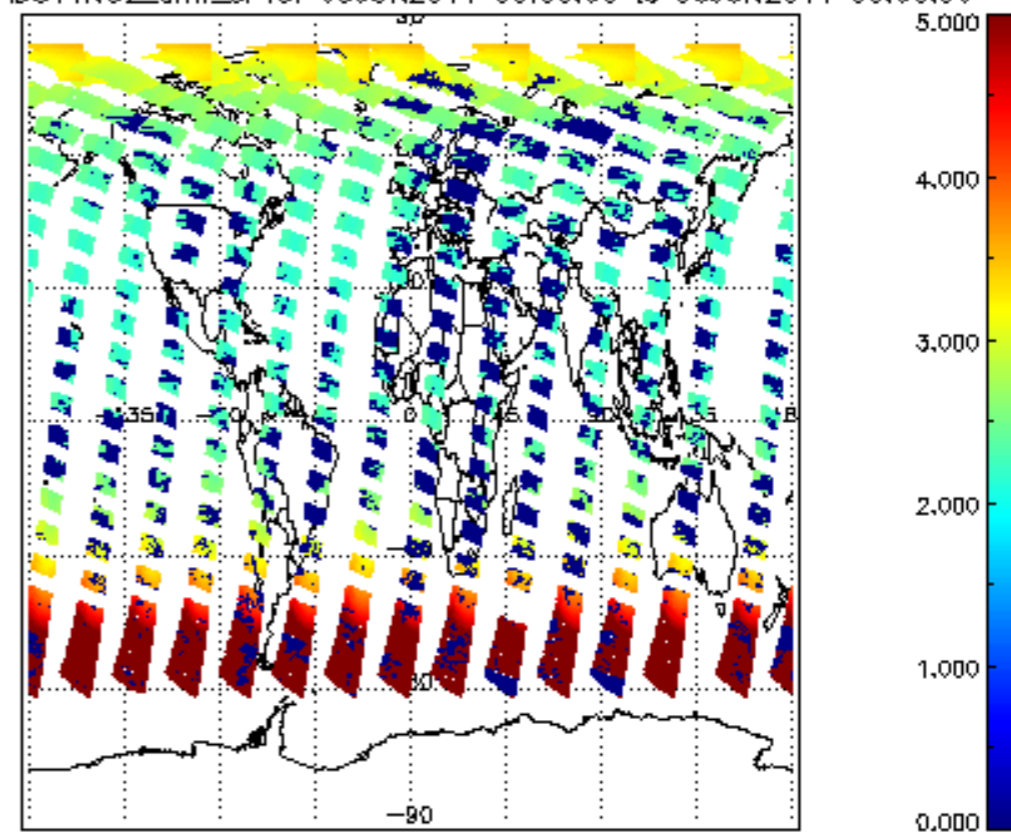
SCIOL2P\_NADUV1NO2\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

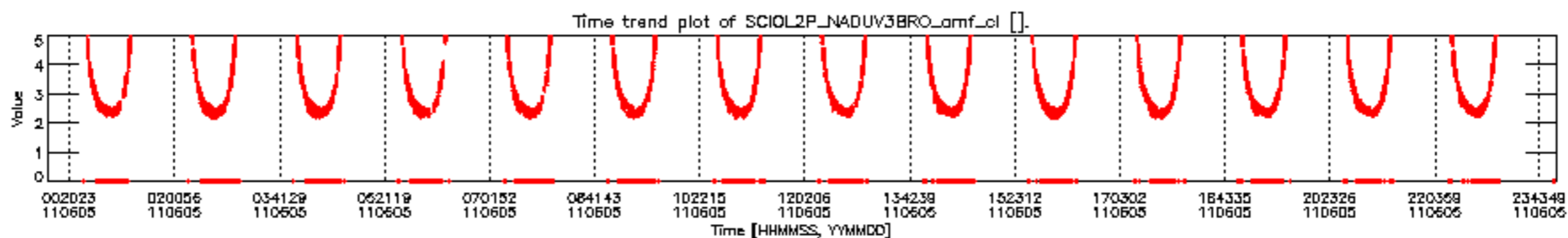
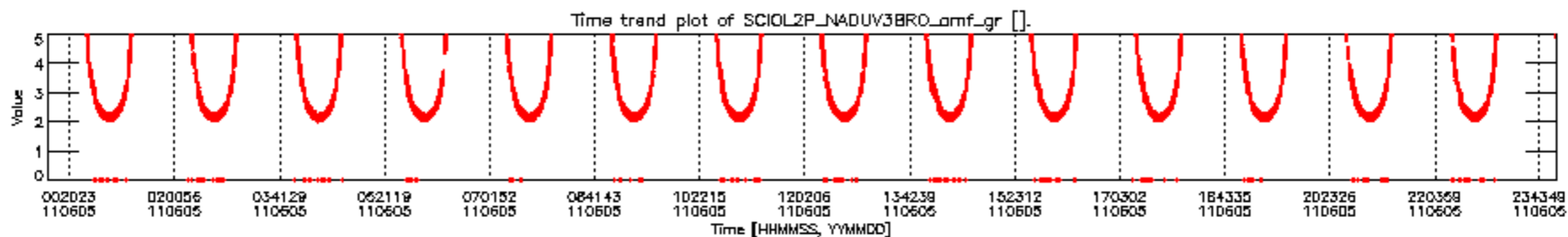
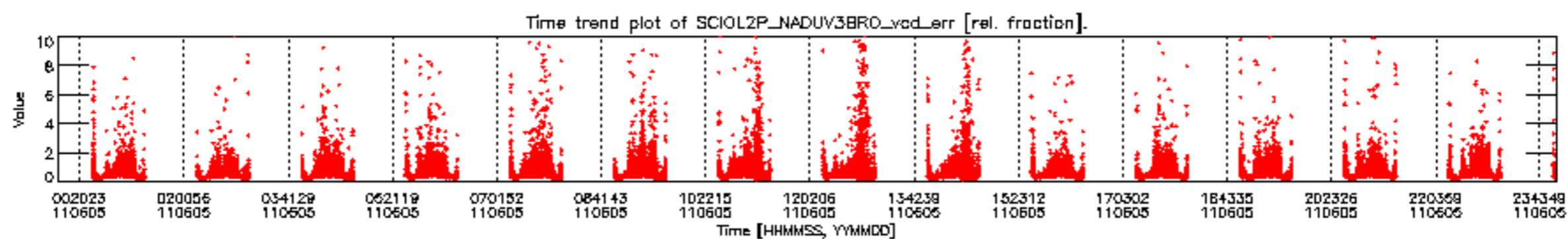
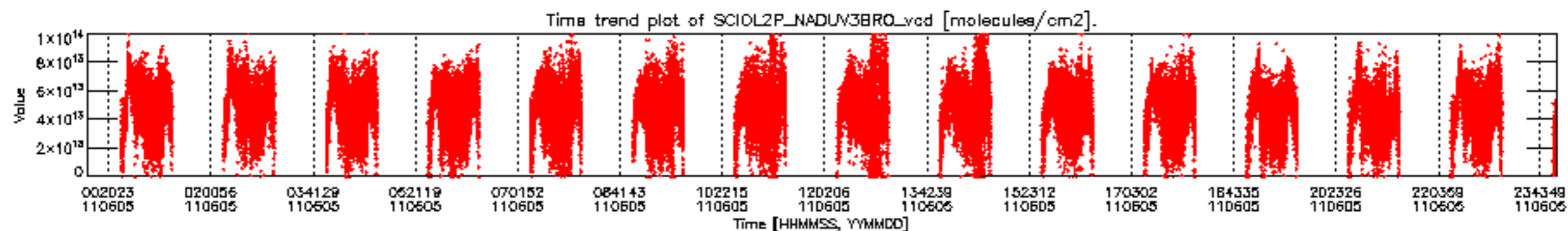


SCIOL2P\_NADUV1NO2\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

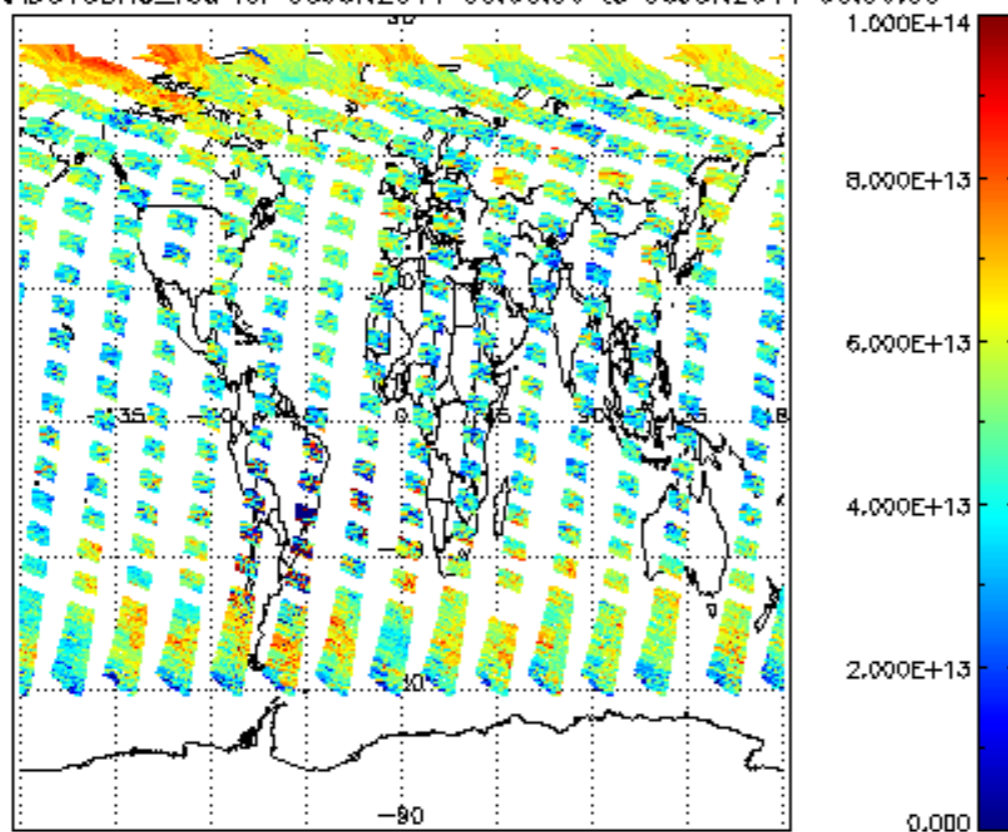


SCIOL2P\_NADUV1NO2\_amf\_sl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

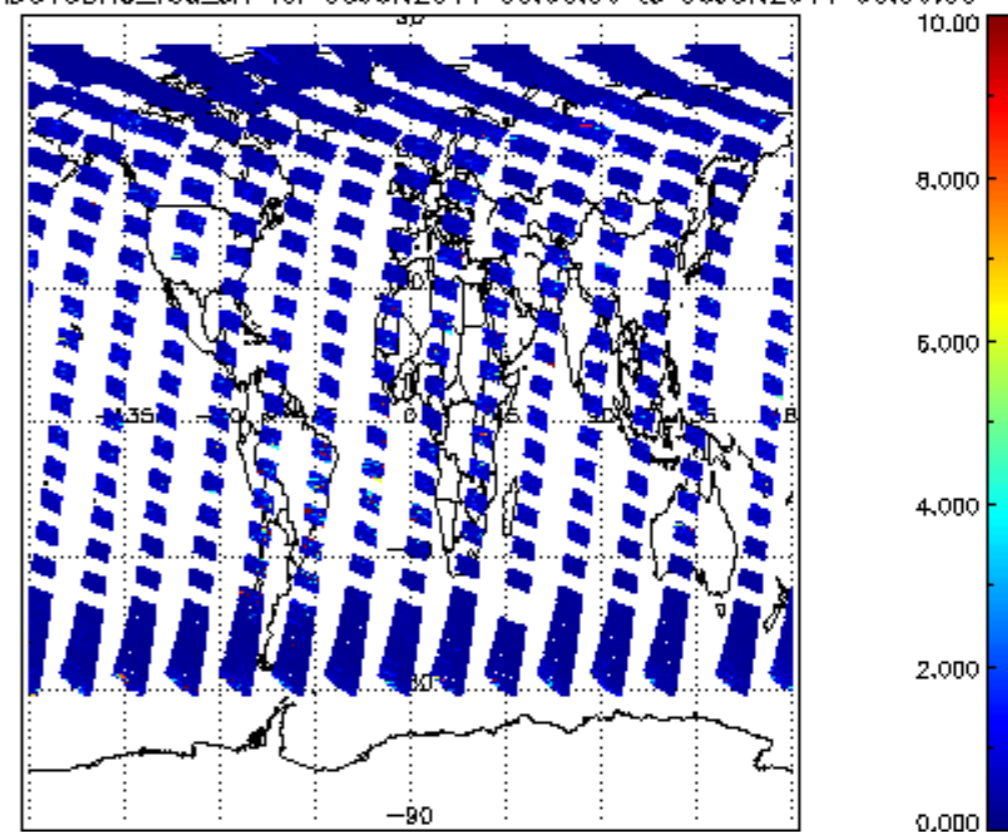




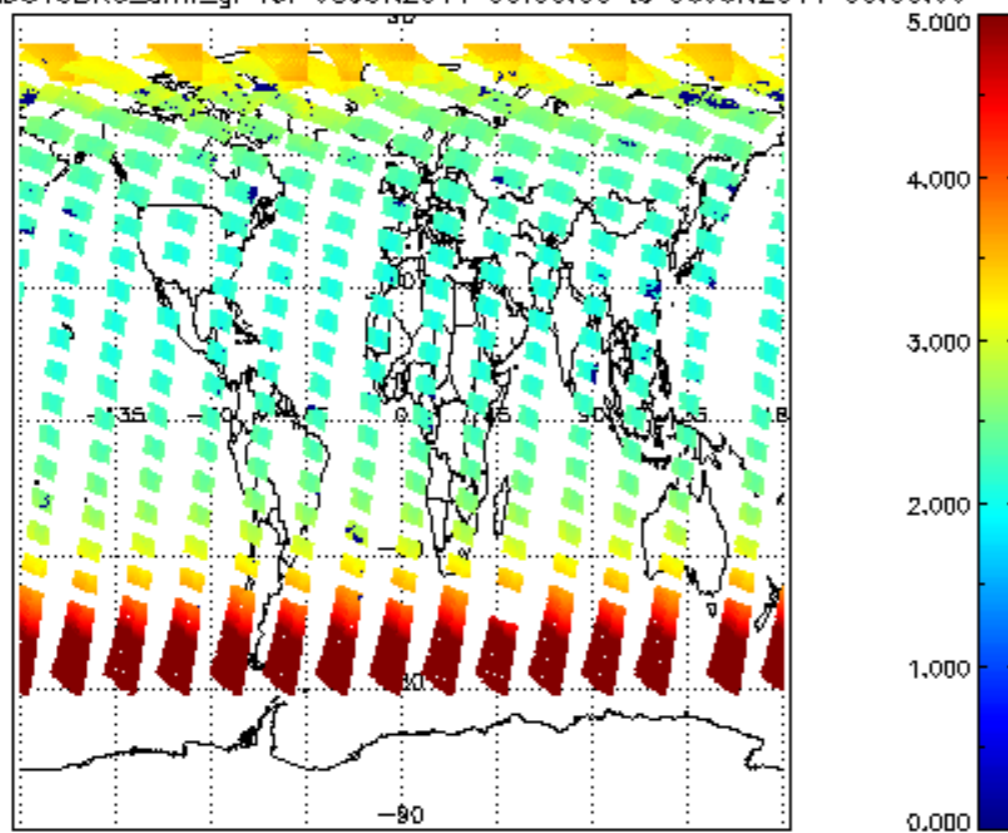
SCIOL2P\_NADUV3BRO\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



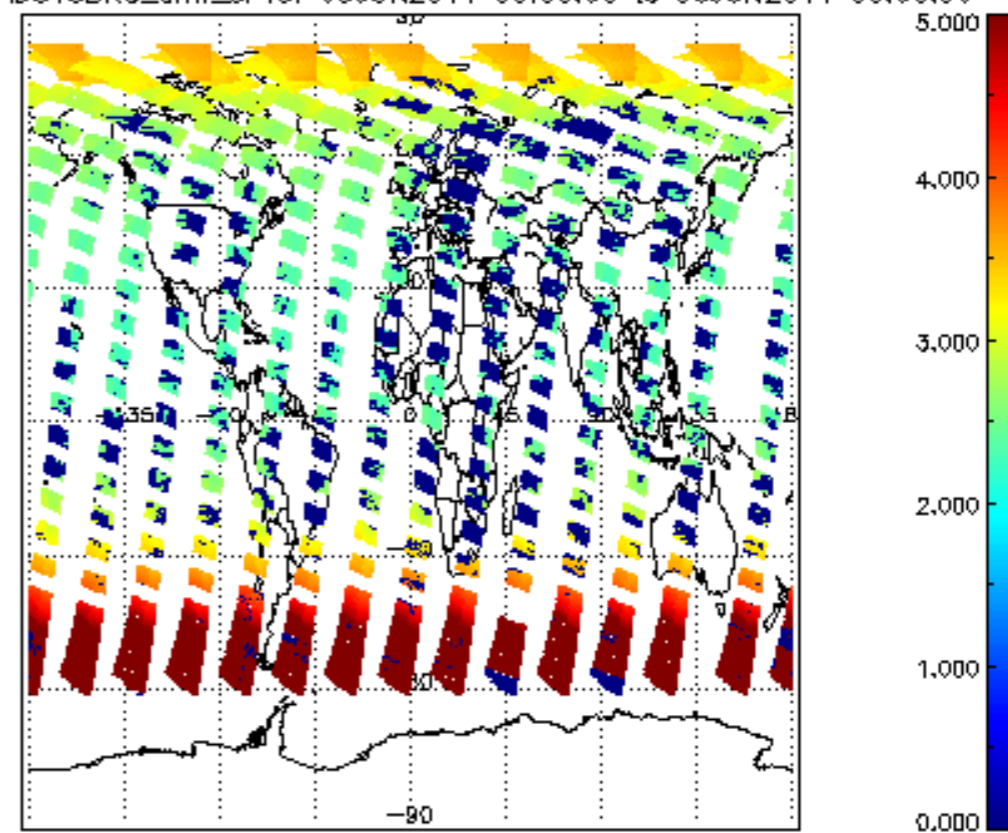
SCIOL2P\_NADUV3BRO\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

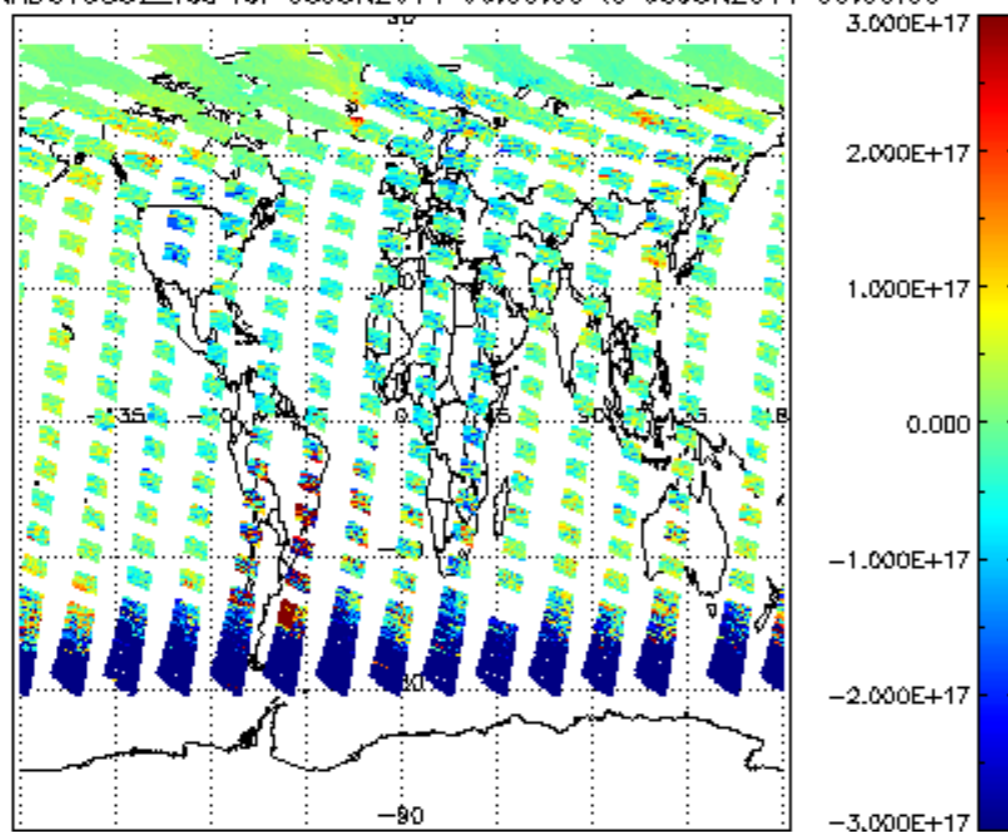


SCIOL2P\_NADUV3BRO\_amf\_sl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

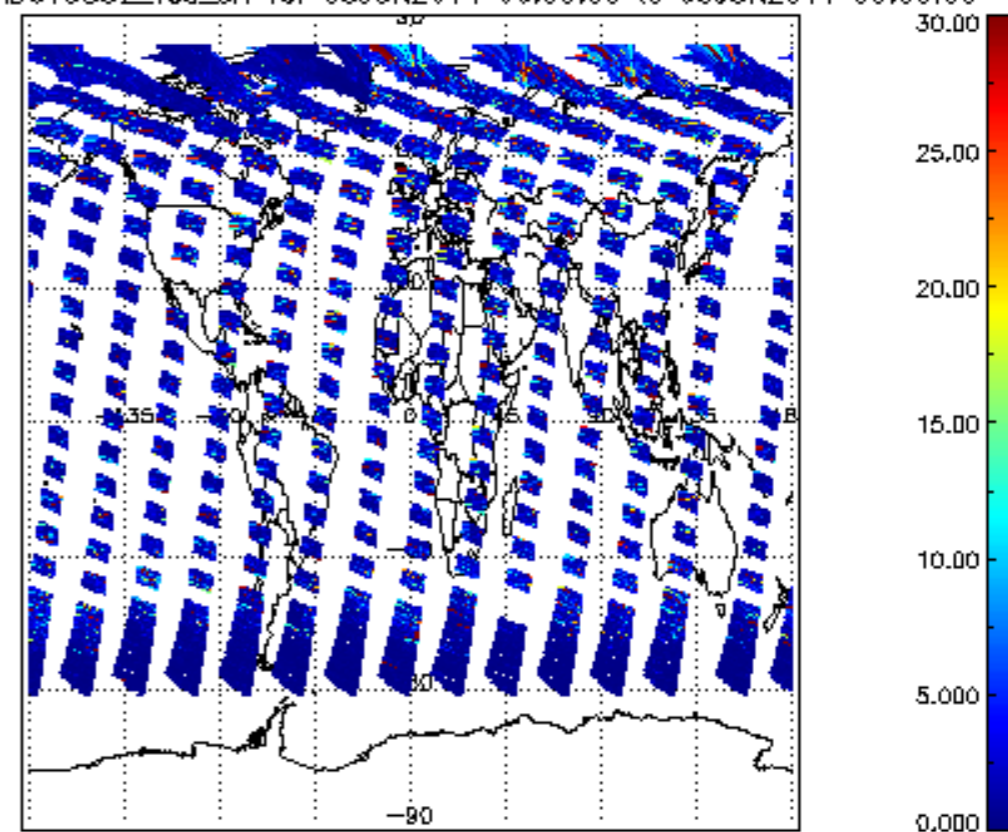




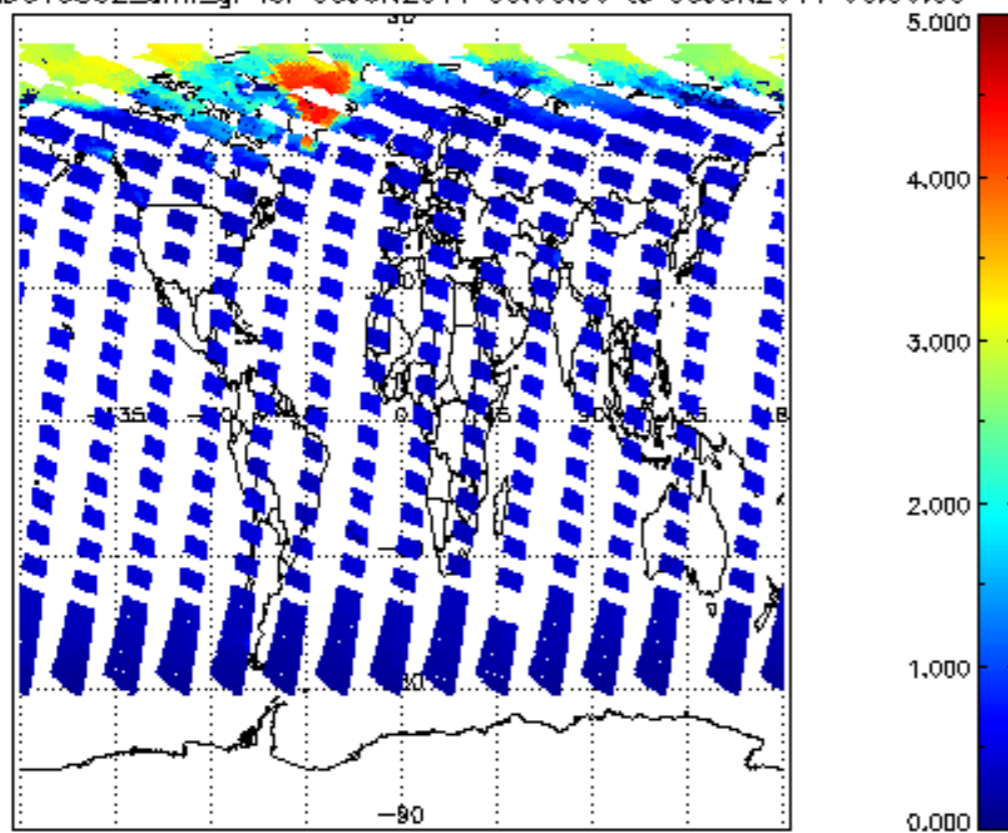
SCIOL2P\_NADUV5S02\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



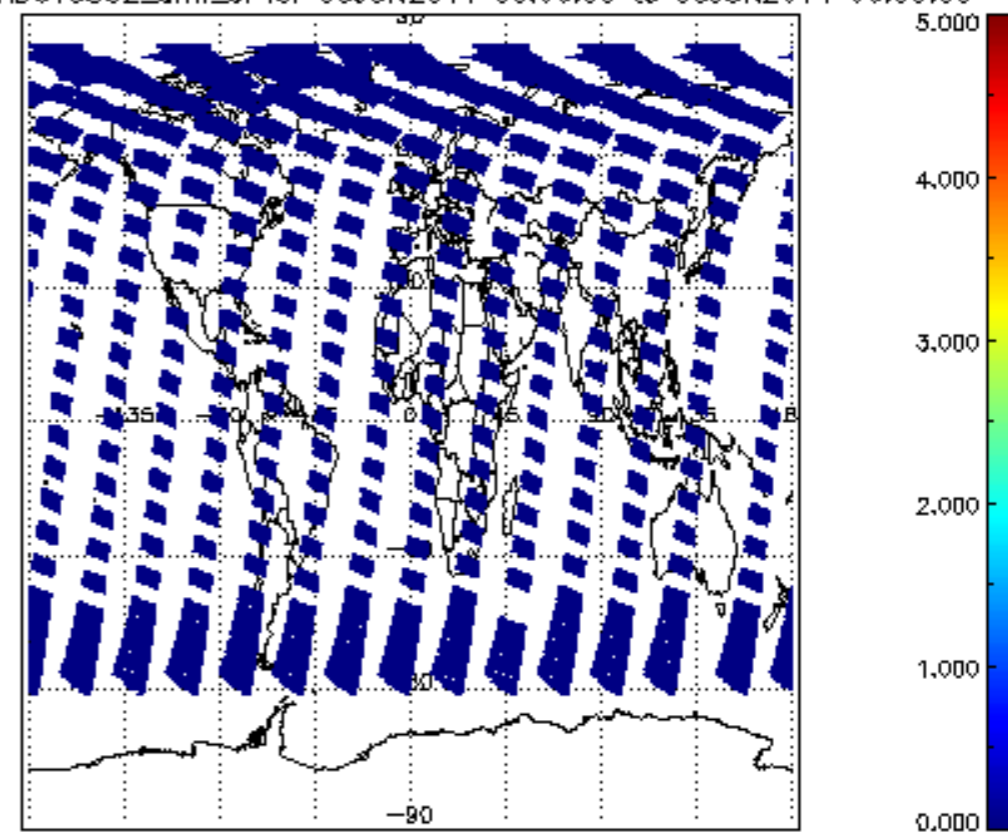
SCIOL2P\_NADUV5S02\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

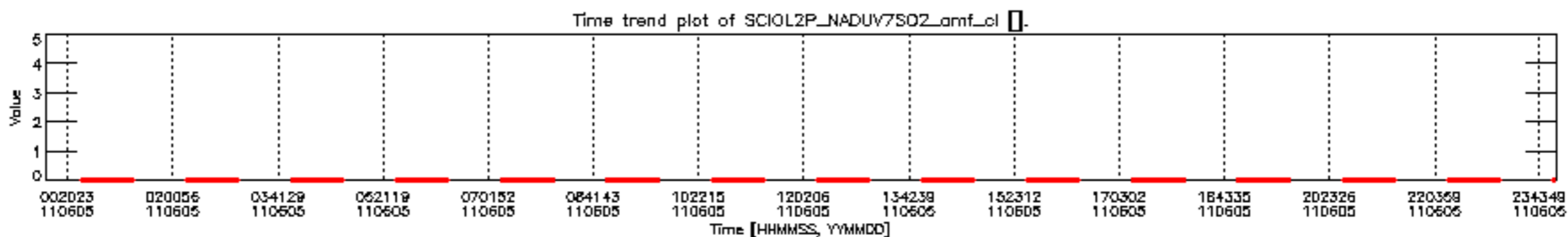
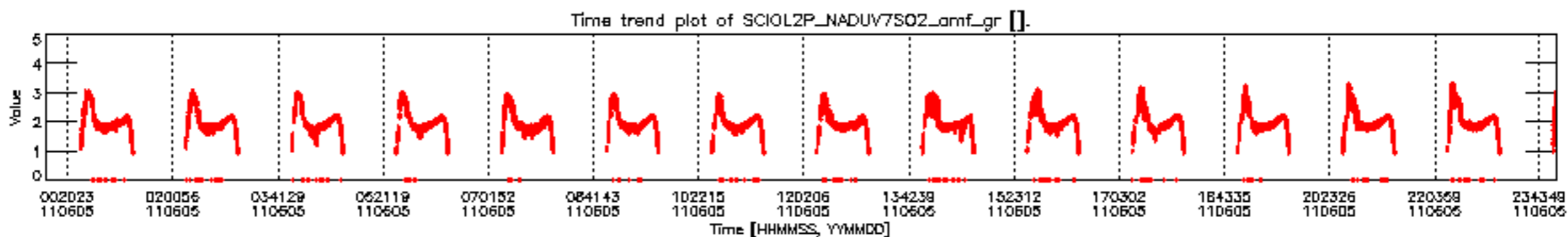
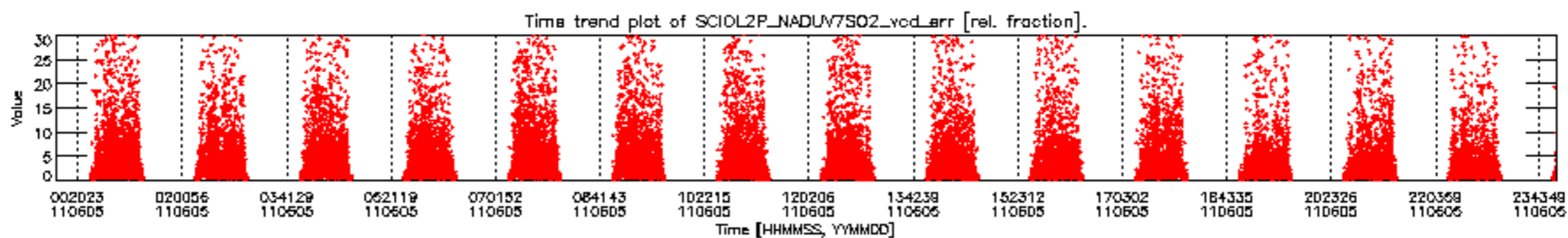
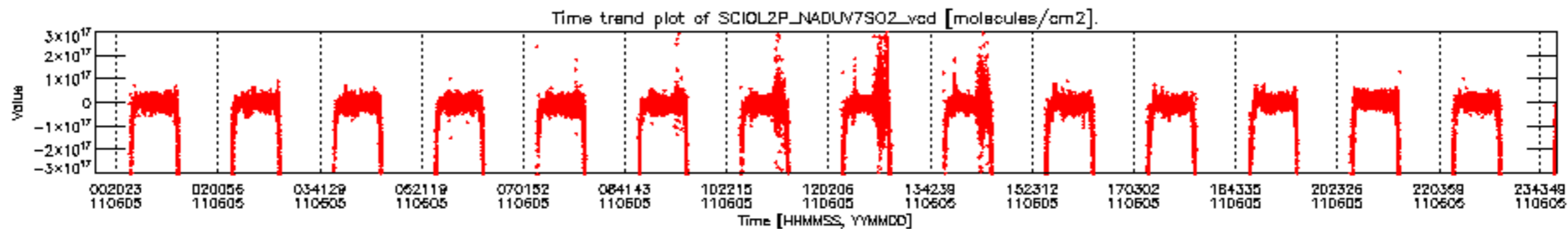


SCIOL2P\_NADUV5S02\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



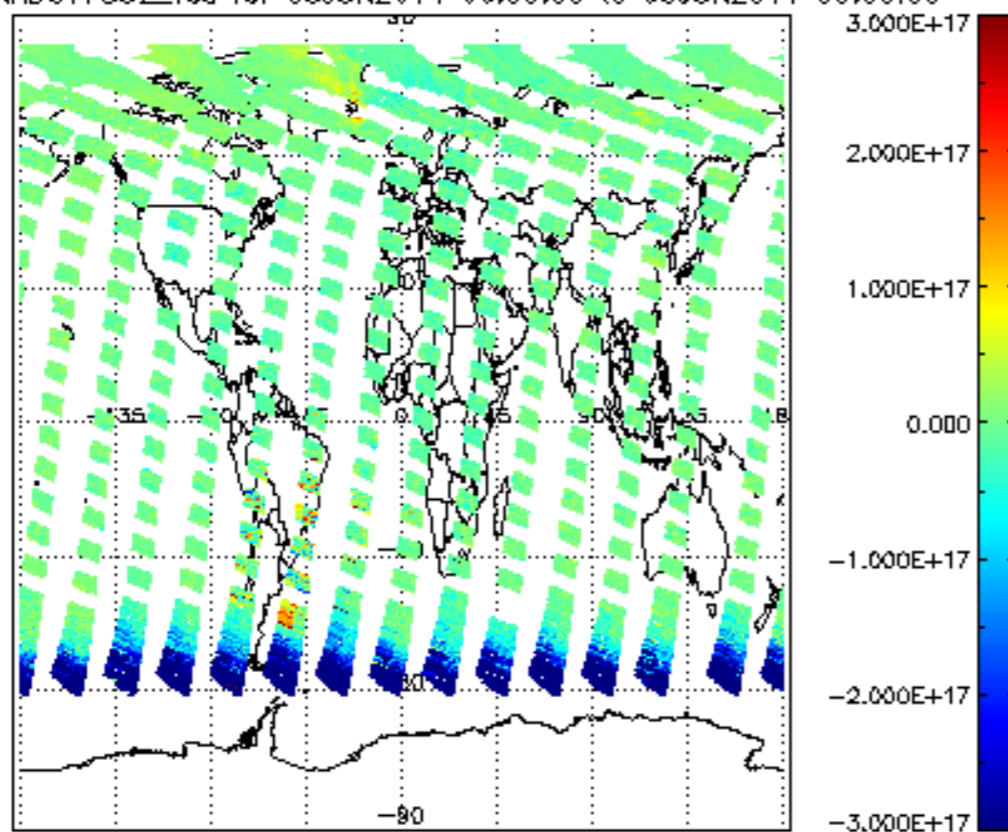
SCIOL2P\_NADUV5S02\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



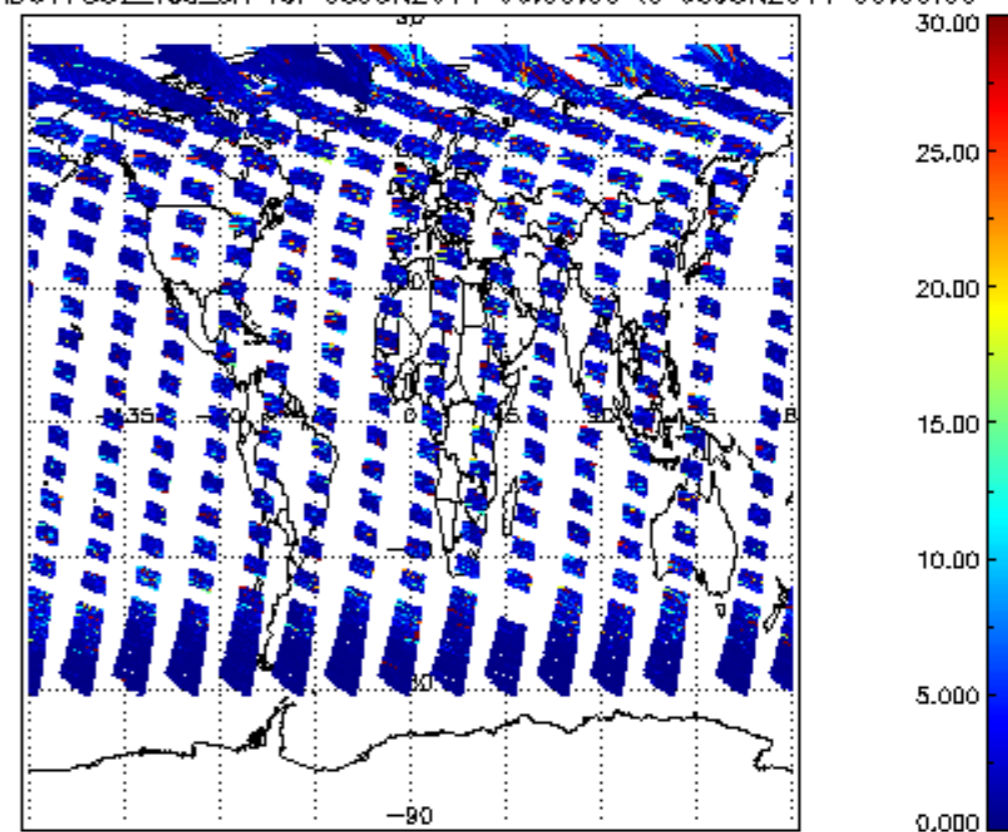




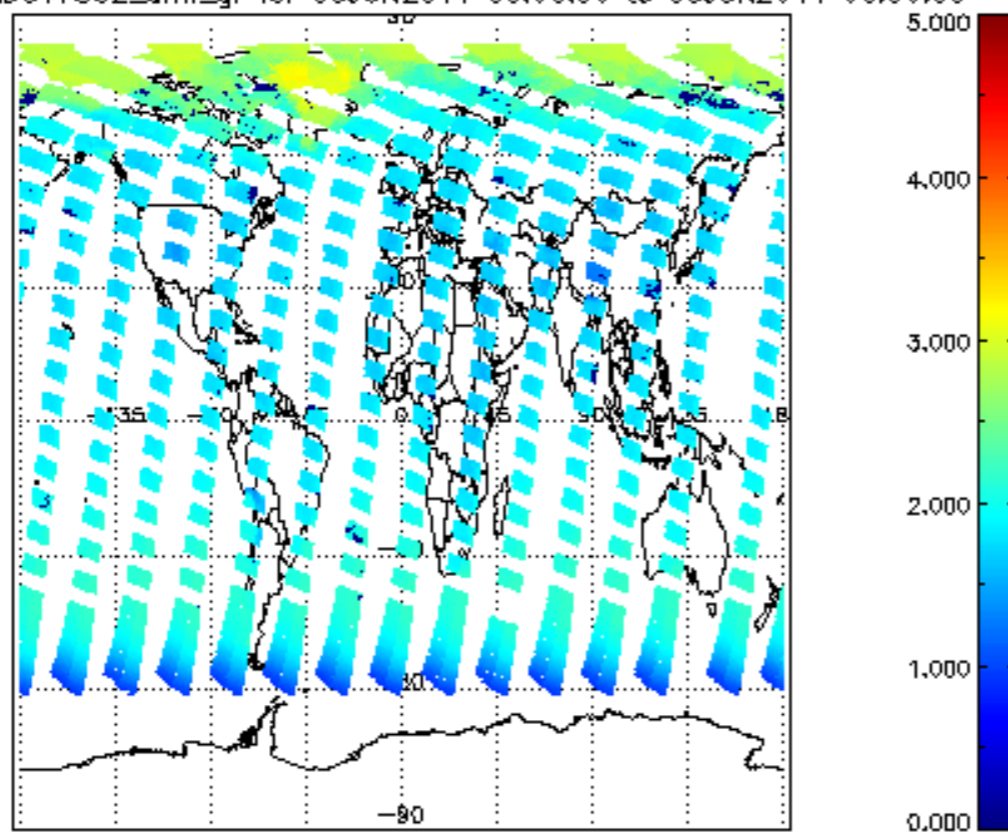
SCIOL2P\_NADUV7S02\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00



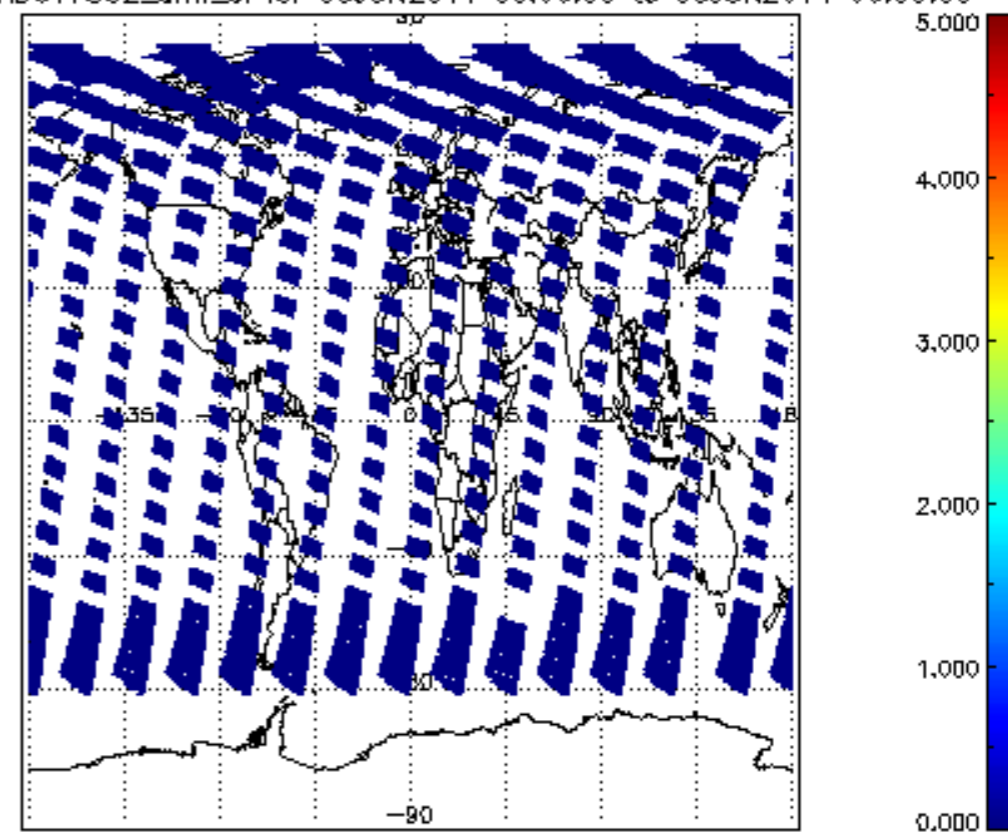
SCIOL2P\_NADUV7S02\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

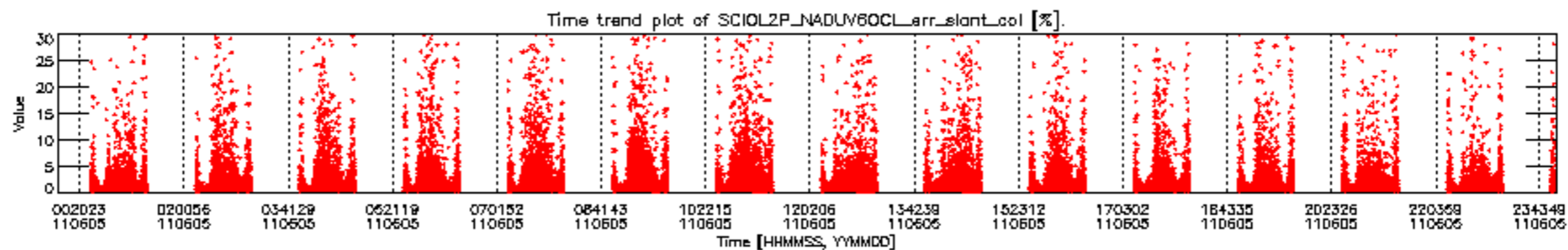
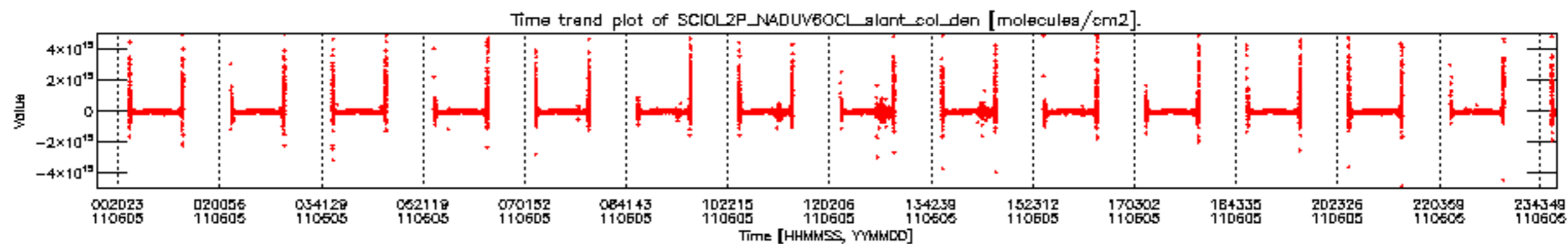


SCIOL2P\_NADUV7S02\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

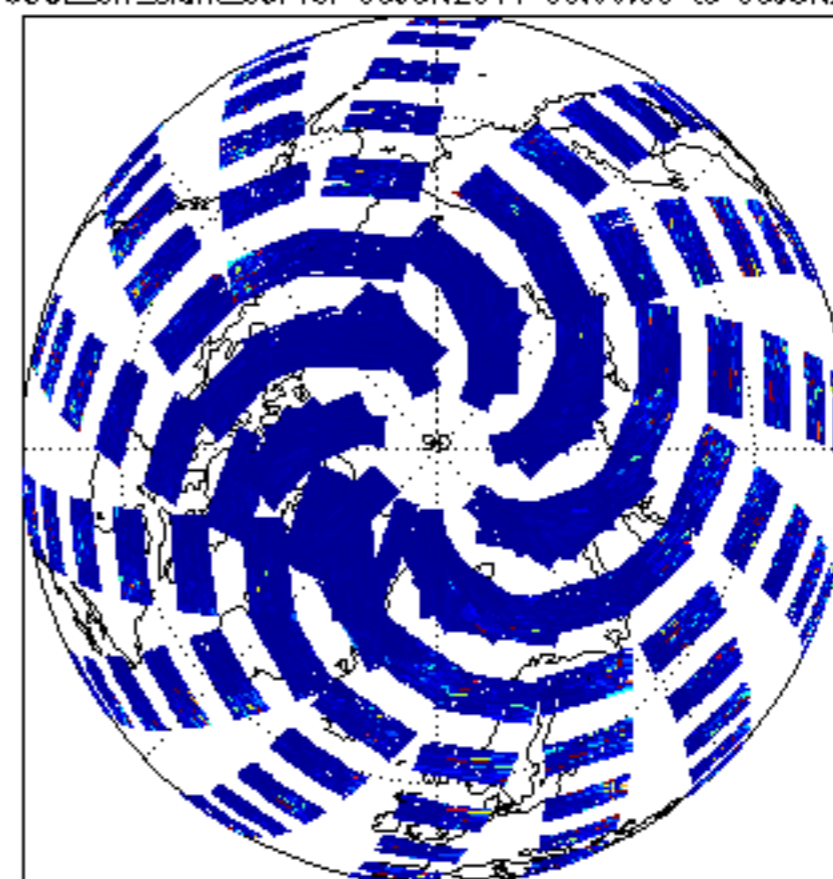
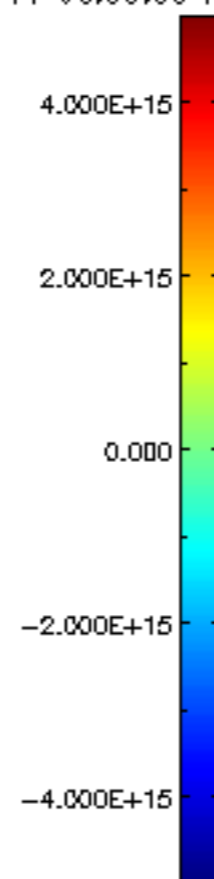
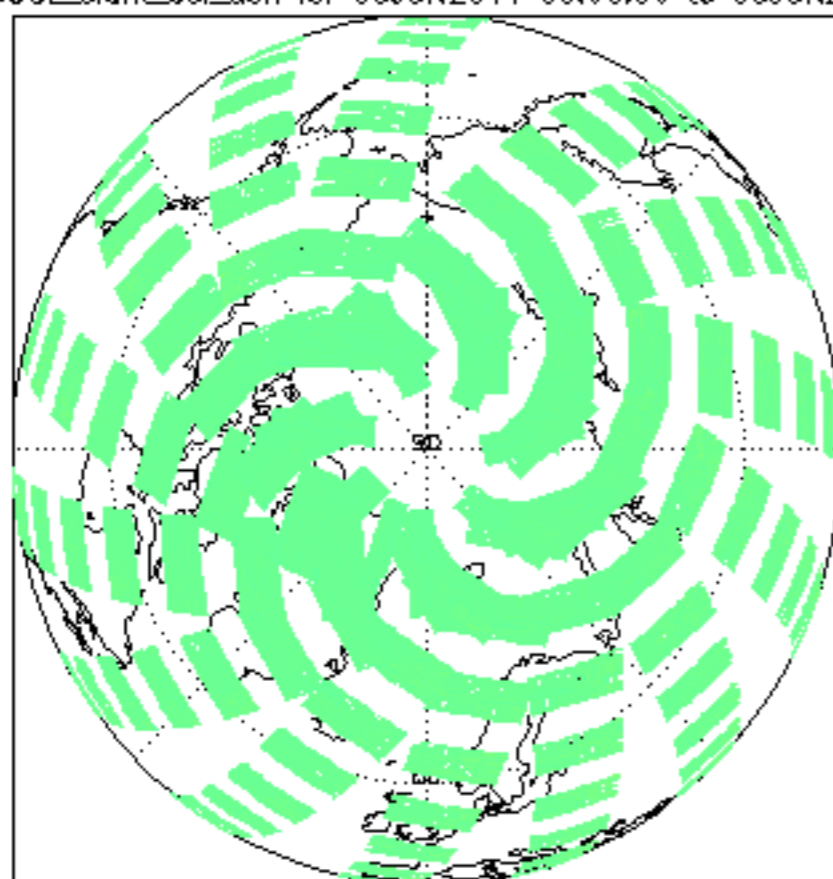


SCIOL2P\_NADUV7S02\_amf\_cl for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

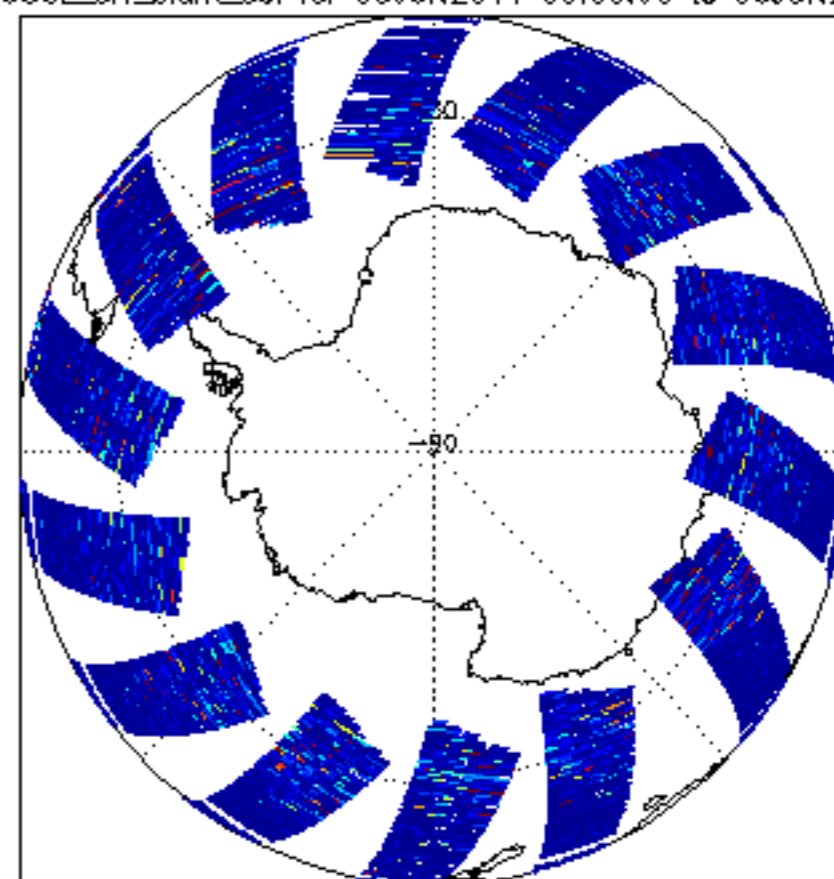
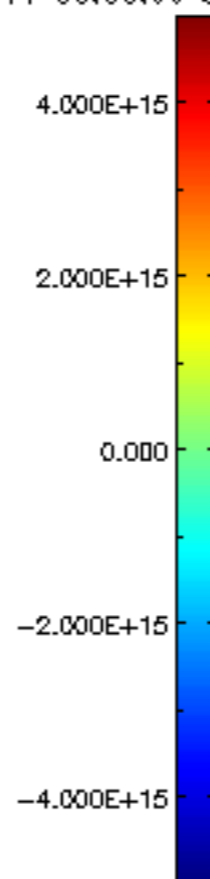
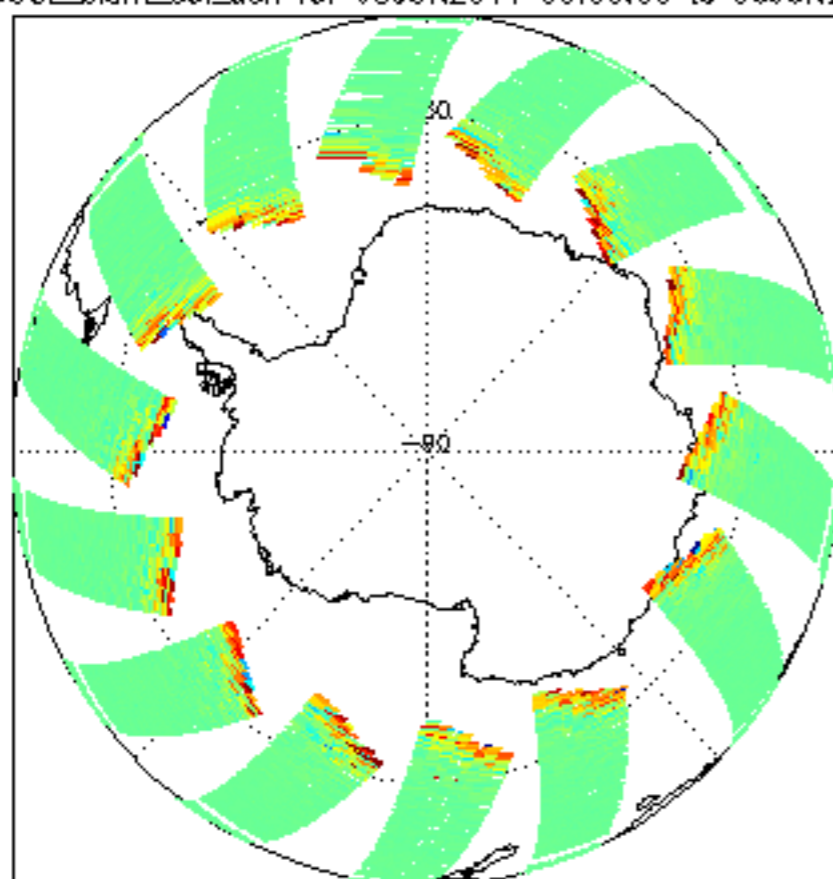


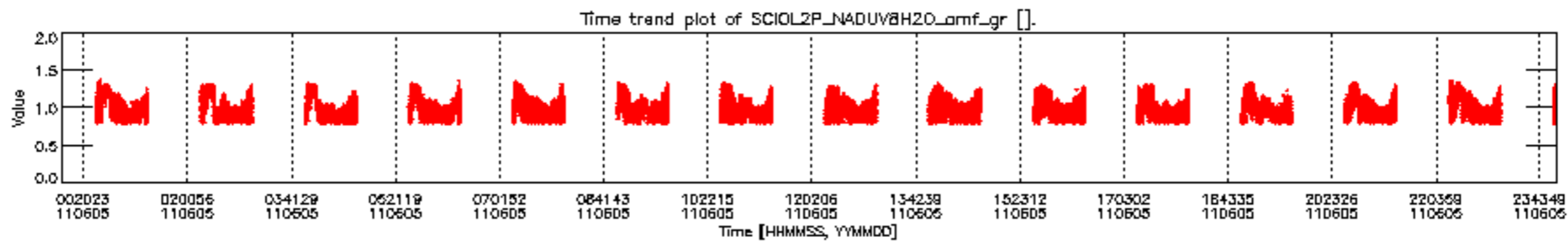
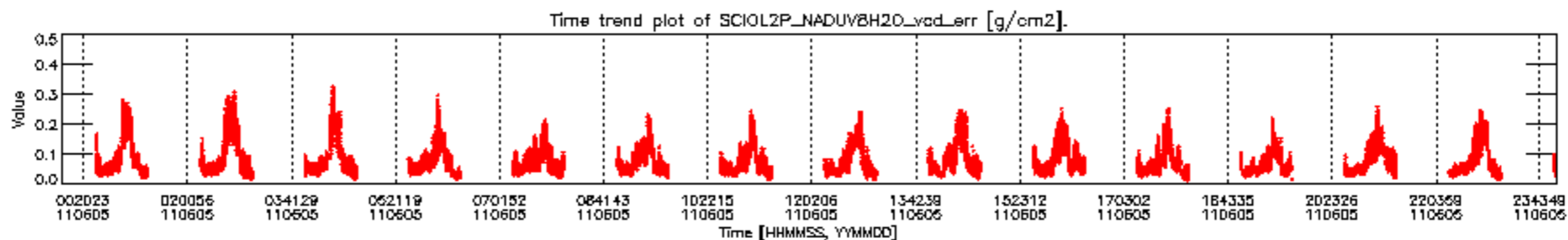
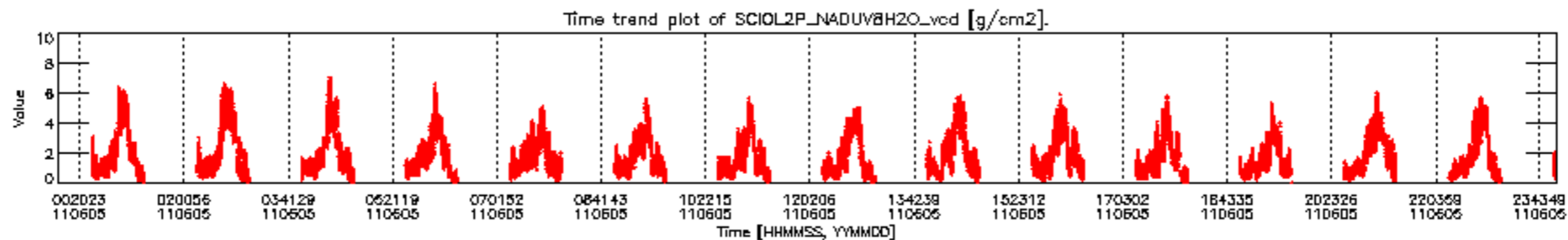


CIOL2P\_NADUV6OCL\_slant\_col\_den for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 np iCIOL2P\_NADUV6OCL\_err\_slant\_col for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 np

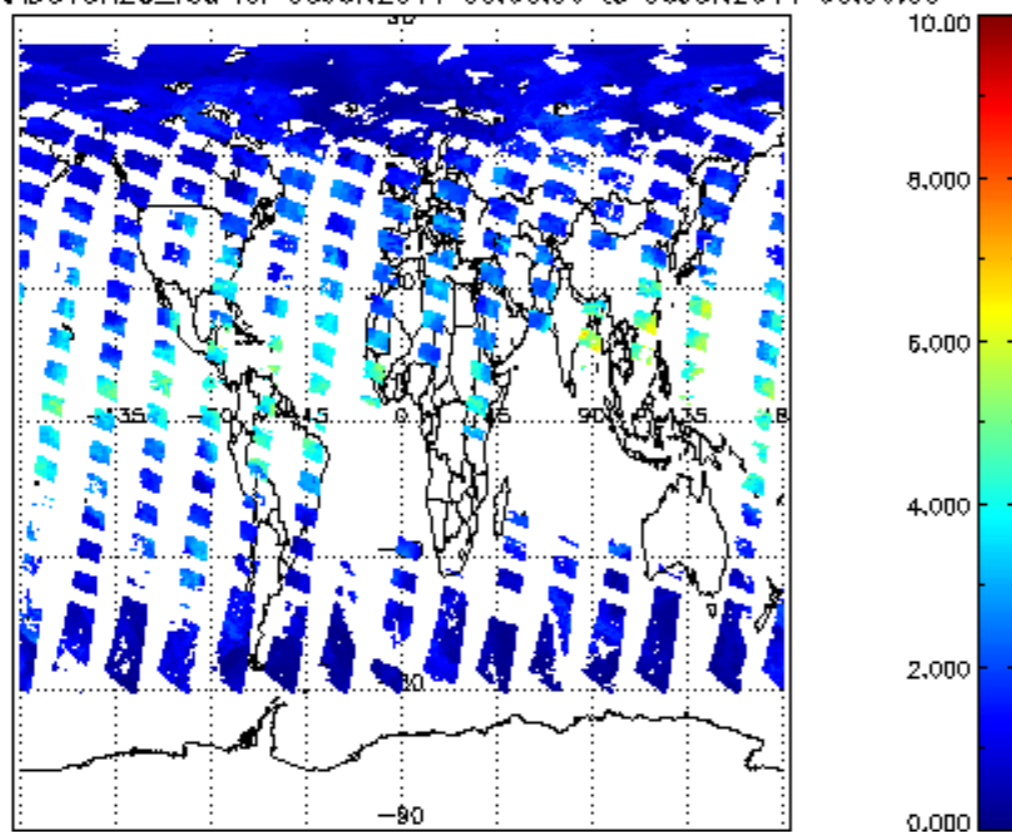


CIOL2P\_NADUV60CL\_slant\_col\_den for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 05JUN2011 00:00:00 to 06JUN2011 00:00:00 sp

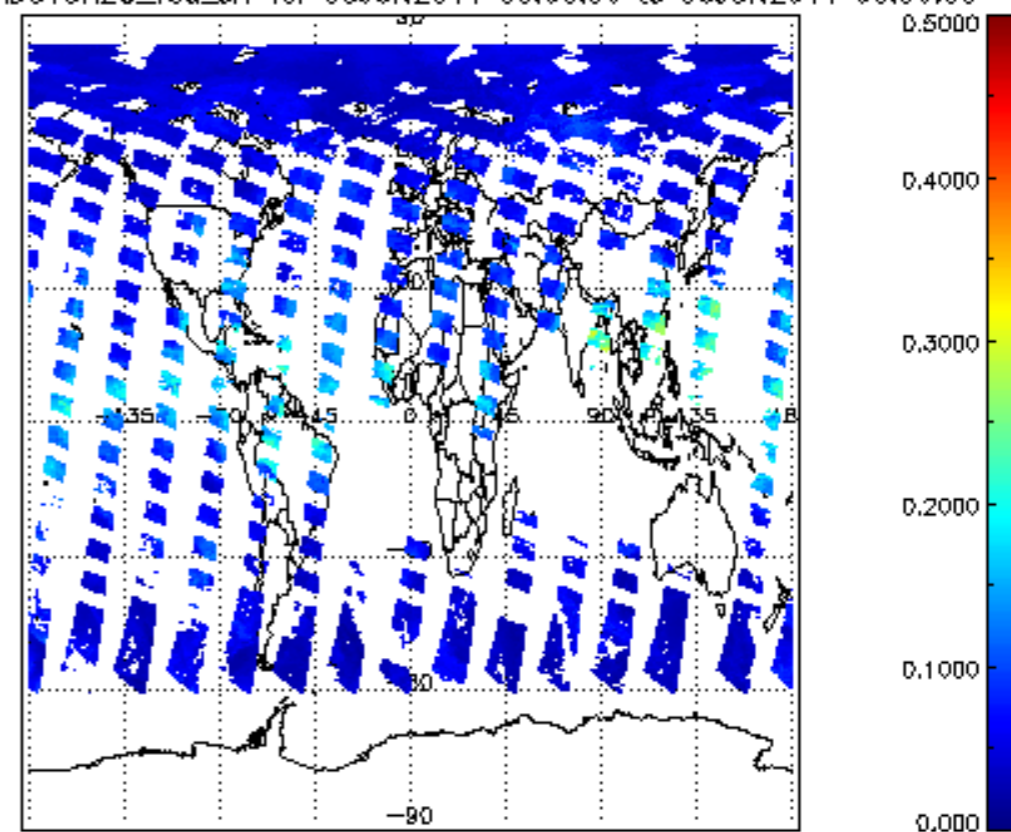




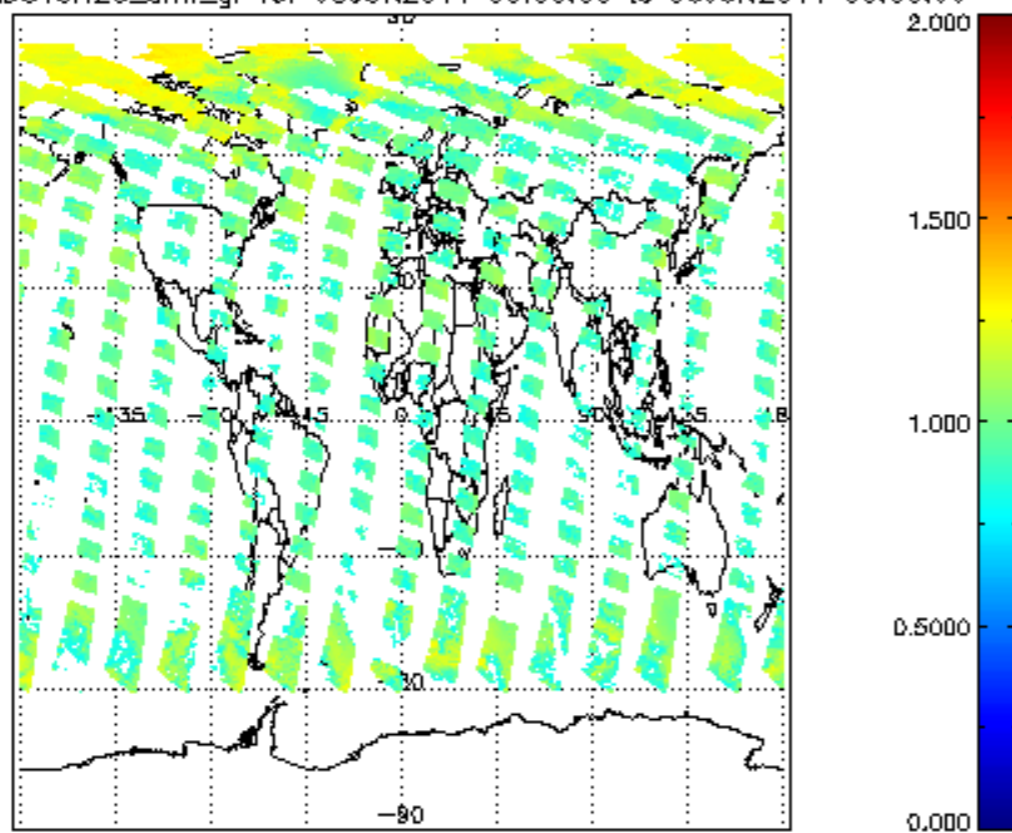
SCIOL2P\_NADUV8H2O\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

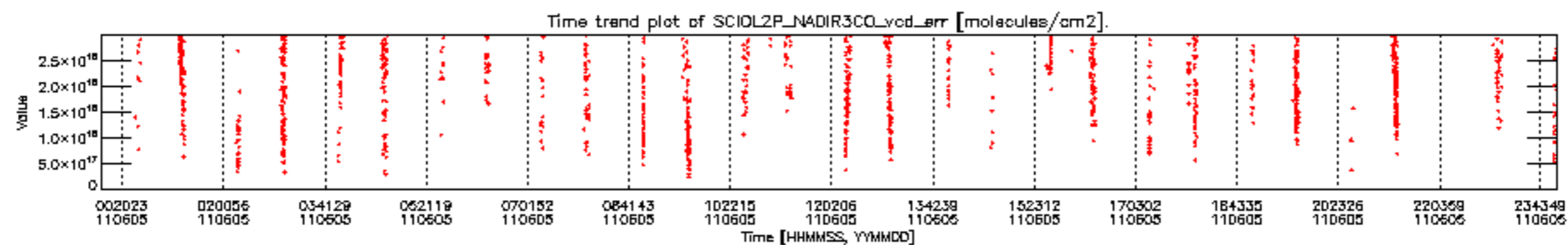
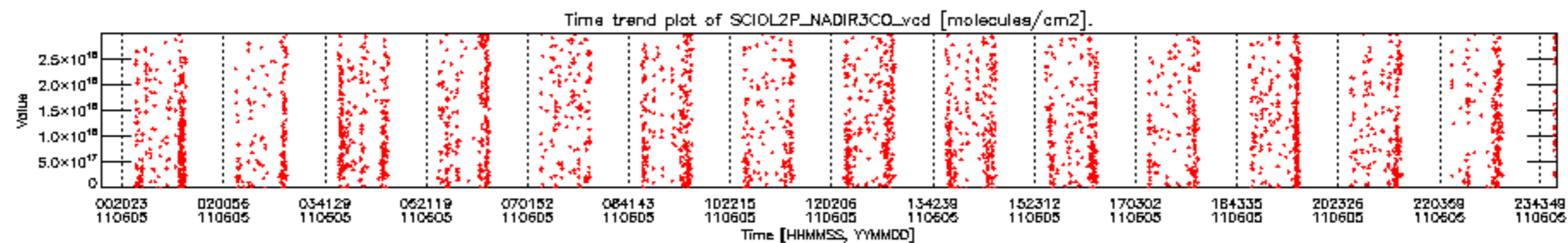


SCIOL2P\_NADUV8H2O\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

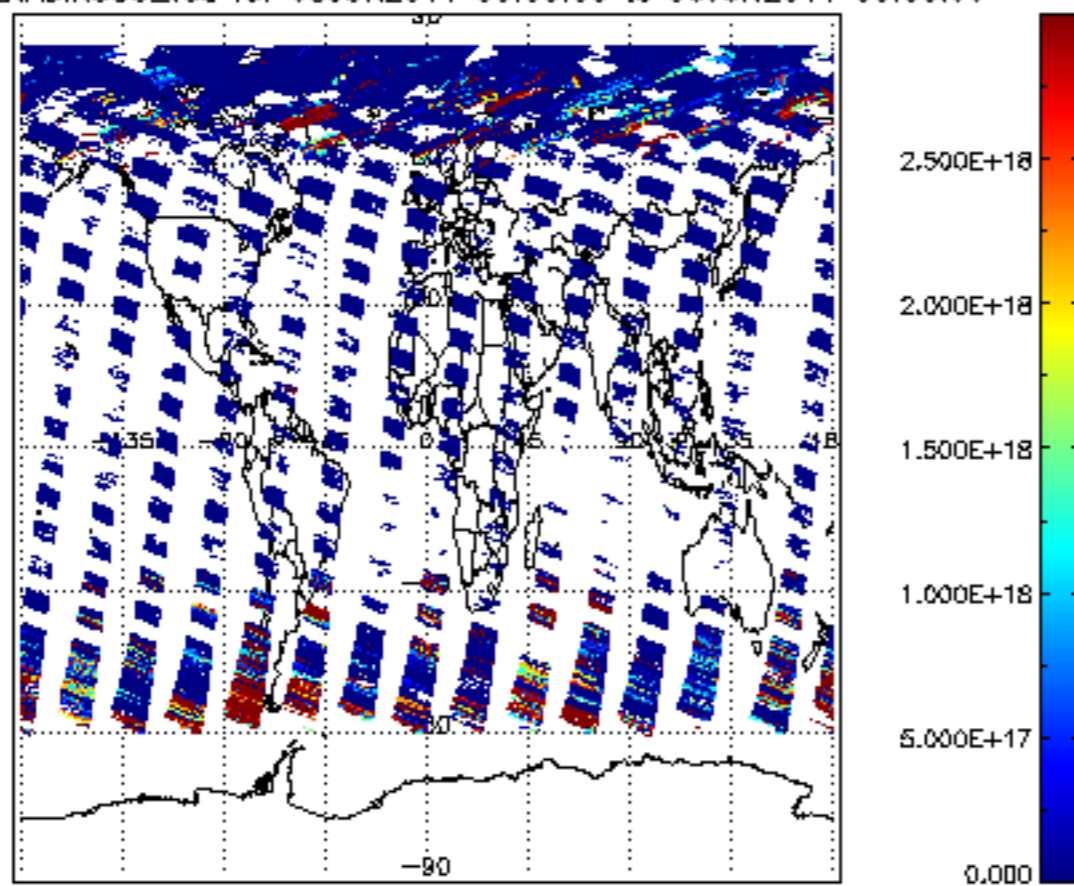


SCIOL2P\_NADUV8H2O\_amf\_gr for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

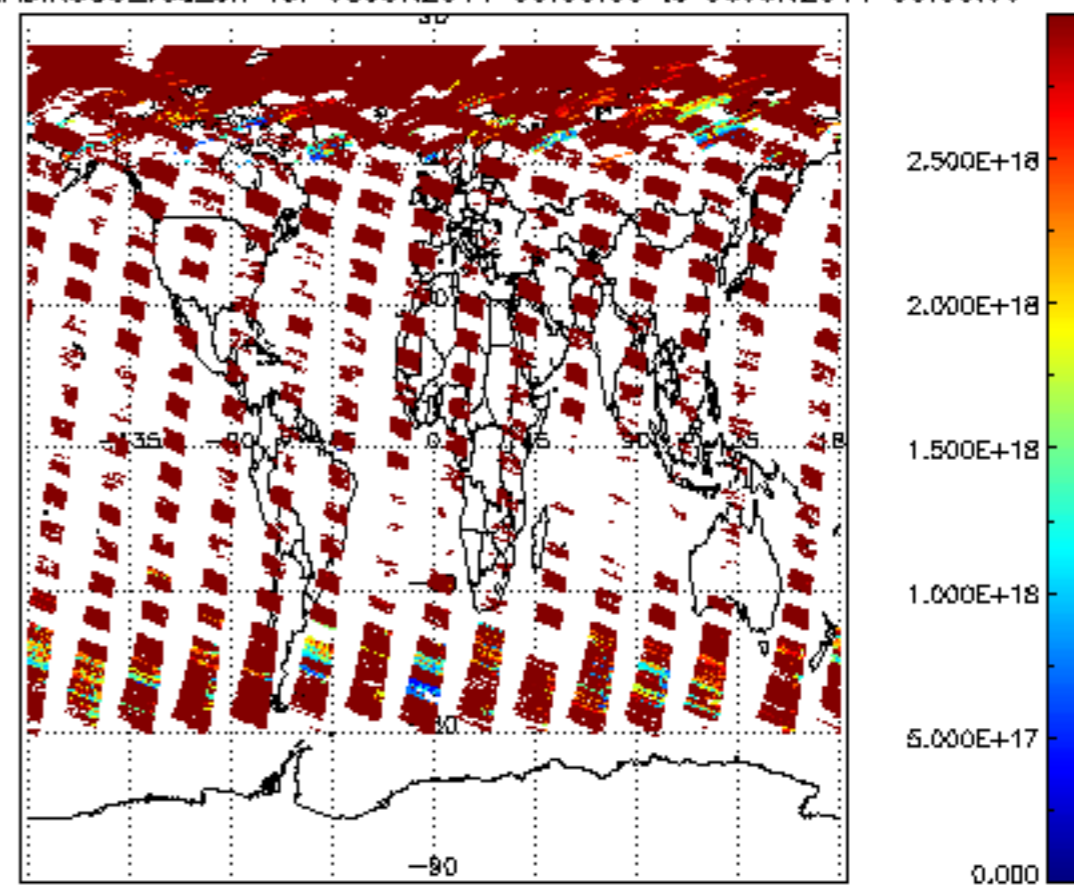




SCIOL2P\_NADIR3CO\_vcd for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

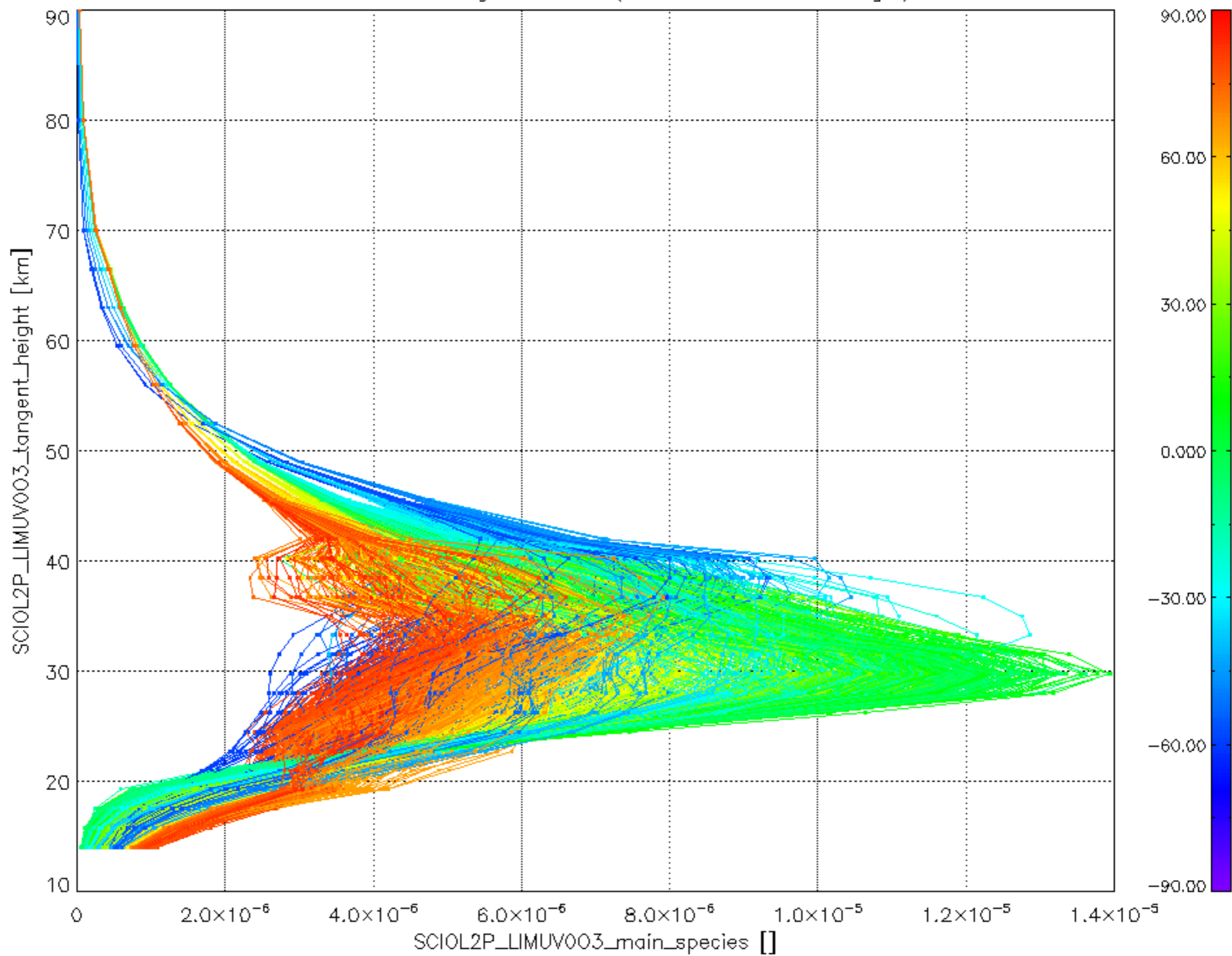


SCIOL2P\_NADIR3CO\_vcd\_err for 05JUN2011 00:00:00 to 06JUN2011 00:00:00

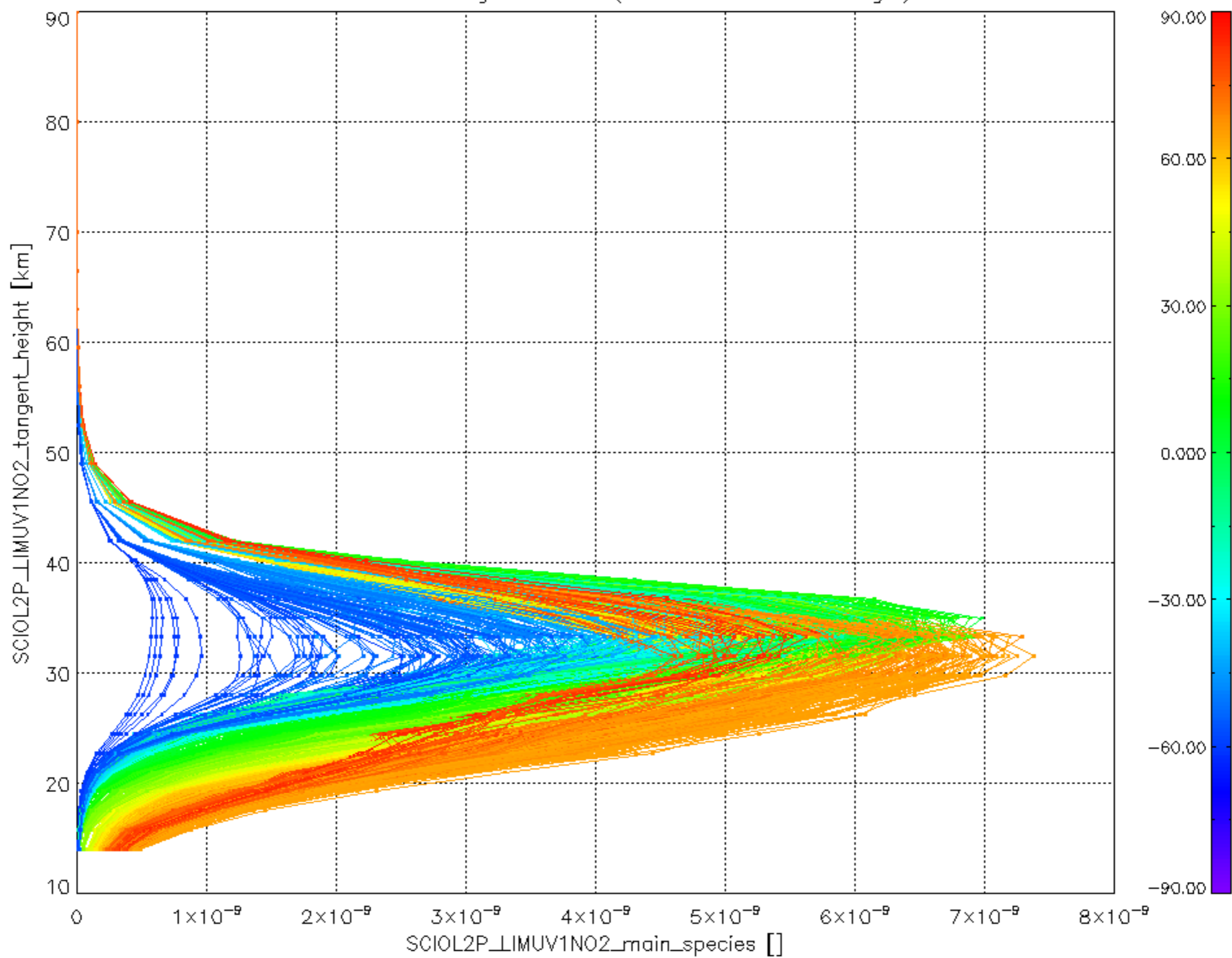




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

