

## 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	23MAR2012 03:16:45
Data source version	SCIA-OL/5.02-W
Processing scope for products	10MAR2012 00:00:00 to 11MAR2012 00:00:00
Start time of first product within scope	10MAR2012 00:06:04
Stop time of last product within scope	11MAR2012 00:28:03
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__2PWDPA20120310_000604_000035303112_00275_52444_3941.N1</a>	10MAR2012 00:06:04	10MAR2012 01:04:55	0	GOOD
1	<a href="#">SCI_OL__2PWDPA20120310_014617_000035163112_00276_52445_3924.N1</a>	10MAR2012 01:46:17	10MAR2012 02:44:54	0	GOOD
2	<a href="#">SCI_OL__2PWDPA20120310_032631_000035303112_00277_52446_3925.N1</a>	10MAR2012 03:26:31	10MAR2012 04:25:21	0	GOOD
3	<a href="#">SCI_OL__2PWDPA20120310_050645_000035163112_00278_52447_3926.N1</a>	10MAR2012 05:06:45	10MAR2012 06:05:21	0	GOOD
4	<a href="#">SCI_OL__2PWDPA20120310_064658_000035303112_00279_52448_3927.N1</a>	10MAR2012 06:46:58	10MAR2012 07:45:49	0	GOOD

5	SCI_OL__2PWDP20120310_082712_000035163112_00280_52449_3928.N1	10MAR2012 08:27:12	10MAR2012 09:25:48	0	GOOD
6	SCI_OL__2PWDP20120310_100725_000035303112_00281_52450_3930.N1	10MAR2012 10:07:25	10MAR2012 11:06:15	0	GOOD
7	SCI_OL__2PWDP20120310_114738_000035163112_00282_52451_3929.N1	10MAR2012 11:47:38	10MAR2012 12:46:14	0	GOOD
8	SCI_OL__2PWDP20120310_132752_000035303112_00283_52452_3931.N1	10MAR2012 13:27:52	10MAR2012 14:26:42	0	GOOD
9	SCI_OL__2PWDP20120310_150805_000035163112_00284_52453_3932.N1	10MAR2012 15:08:05	10MAR2012 16:06:41	0	GOOD
10	SCI_OL__2PWDP20120310_164819_000035303112_00285_52454_3933.N1	10MAR2012 16:48:19	10MAR2012 17:47:09	0	GOOD
11	SCI_OL__2PWDP20120310_182934_000034843112_00286_52455_3934.N1	10MAR2012 18:29:34	10MAR2012 19:27:38	0	GOOD
12	SCI_OL__2PWDP20120310_200904_000035303112_00287_52456_3935.N1	10MAR2012 20:09:04	10MAR2012 21:07:54	0	GOOD
13	SCI_OL__2PWDP20120310_214859_000035163112_00288_52457_3936.N1	10MAR2012 21:48:59	10MAR2012 22:47:35	0	GOOD
14	SCI_OL__2PWDP20120310_232913_000035303112_00289_52458_3937.N1	10MAR2012 23:29:13	11MAR2012 00:28:03	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: 161720

Total number of cloud data DSRs with good quality flag (=0): 161720 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	161720	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	161720	0.16600	0.12500	0.12500	0.25000	0.058685	s
CL_FRAC	161720	0.47723	0.46300	0.0000	1.0000	0.32995	
CL_FRAC_ERR	161720	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	161720	5.3119	4.0000	4.0000	8.0000	1.8779	
PMD_READ_CL[0]	161720	0.66164	0.0000	0.0000	8.0000	1.5184	-
PMD_READ_CL[1]	161720	1.1420	0.0000	0.0000	8.0000	2.4624	-
CL_TOP_HEIGHT	131543	3.4826	1.9820	0.0000	17.000	3.6553	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	131543	60.467	66.492	0.0000	101.00	40.877	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	161720	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	161720	11001011	11000100	11000000	11100000	3393.2	
AERO_ABSO_IND	161720	0.093374	0.0000	0.0000	7.8665	0.28912	
AERO_IND_DIAG	161720	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	161720	01010101	00000000	00000000	11000000	24435.	

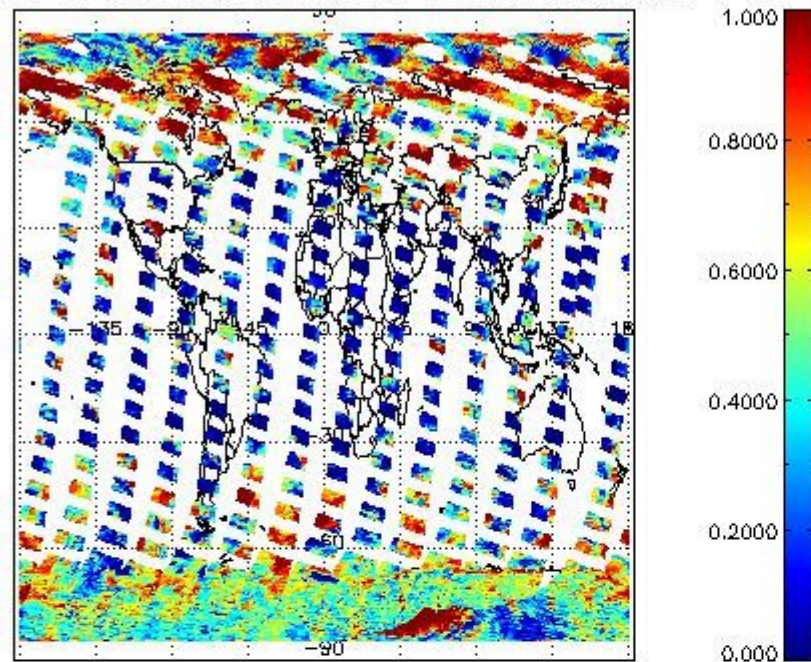
#### Time and geolocation plots:

Plots are available for the following parameters:

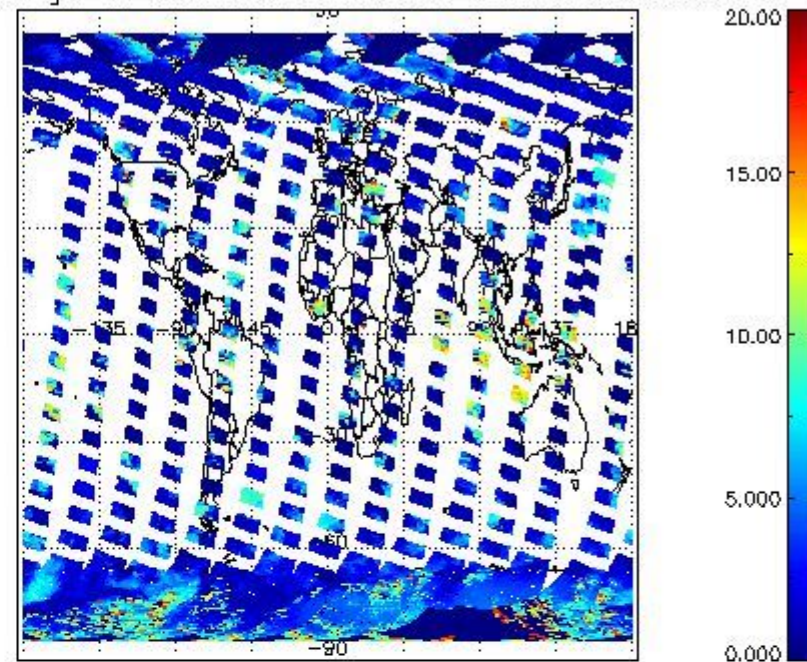
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



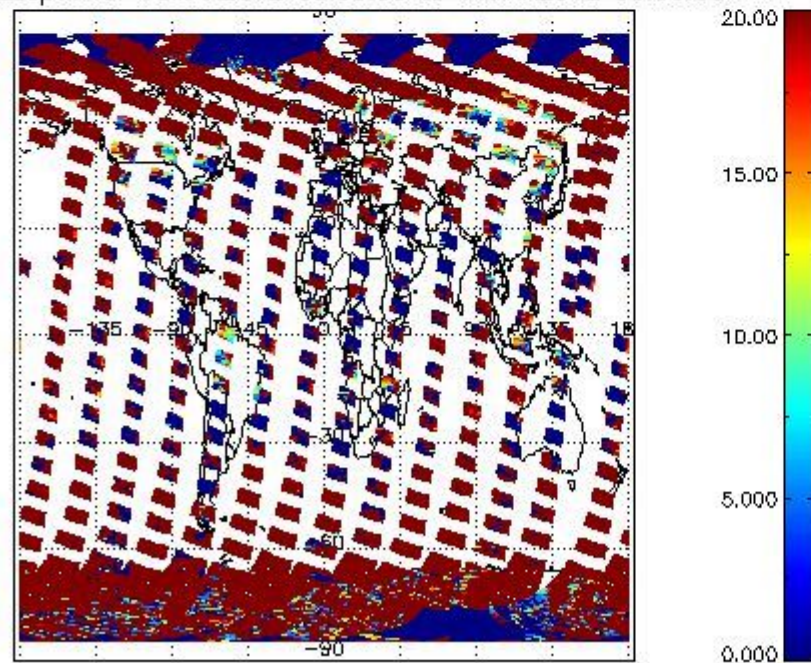
cL\_frac for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



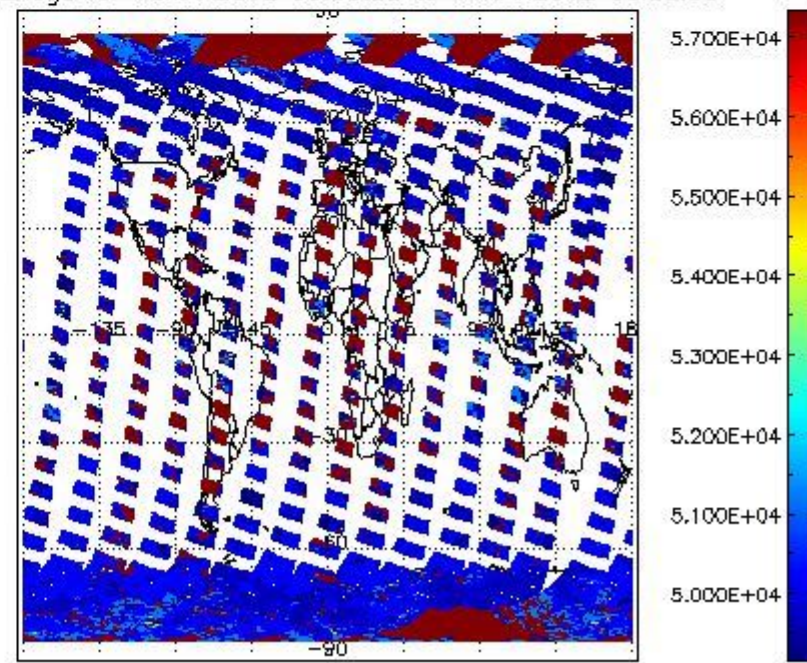
cL\_top\_height for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



cL\_opt\_depth for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



cloud\_flags for 10MAR2012 00:00:00 to 11MAR2012 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:

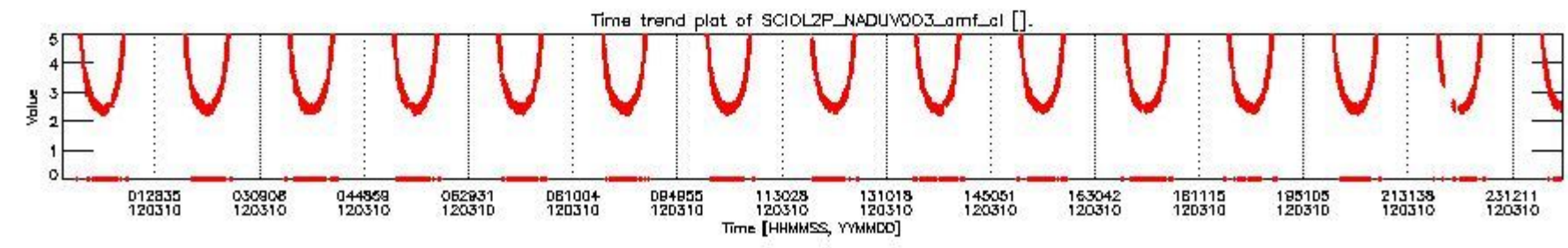
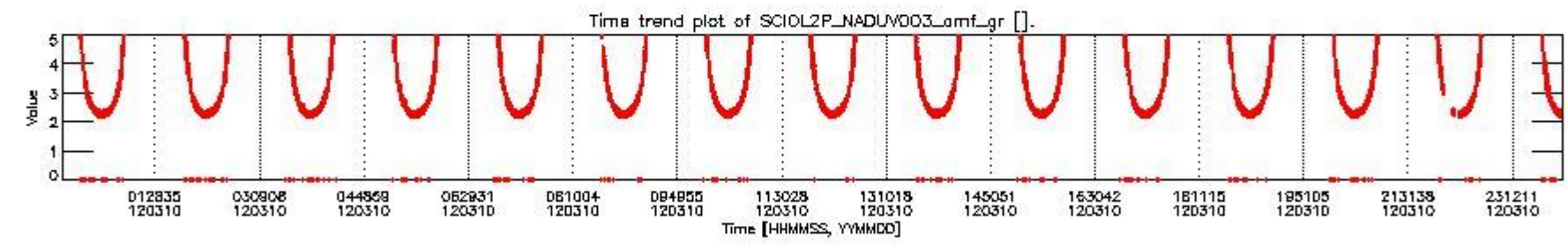
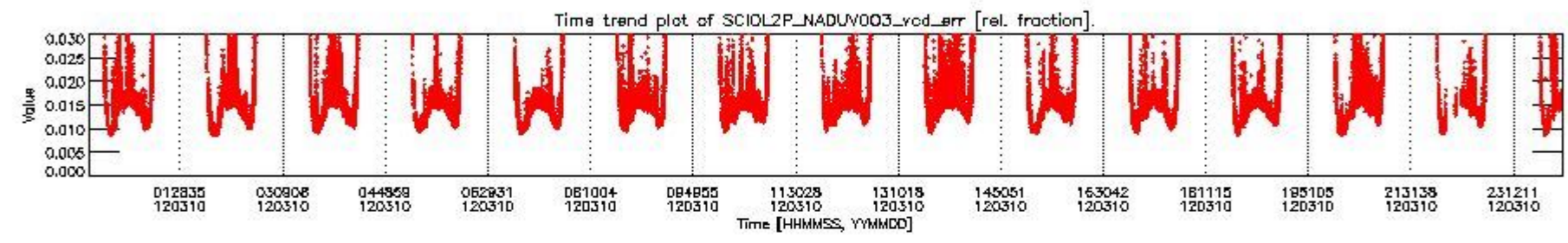
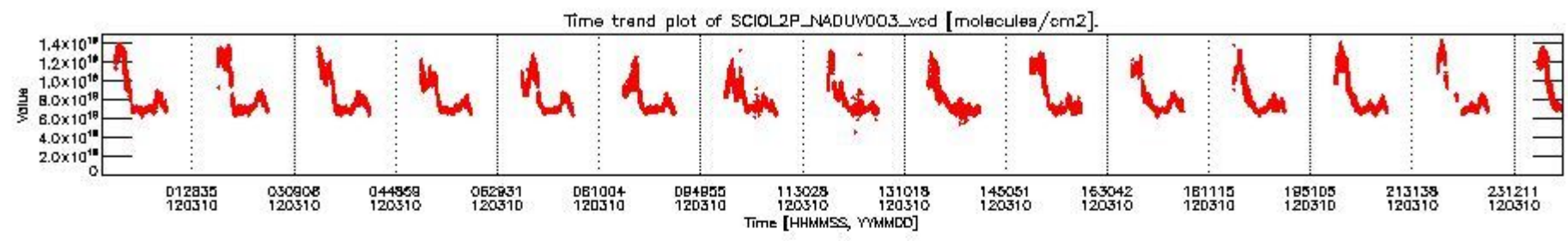
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

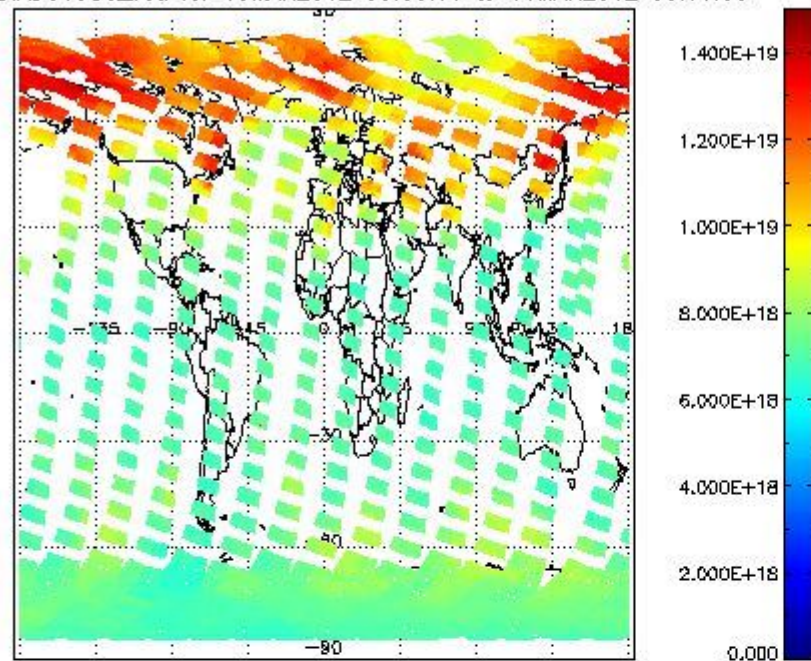
#### 2.2.2.1 O3 (UV0)



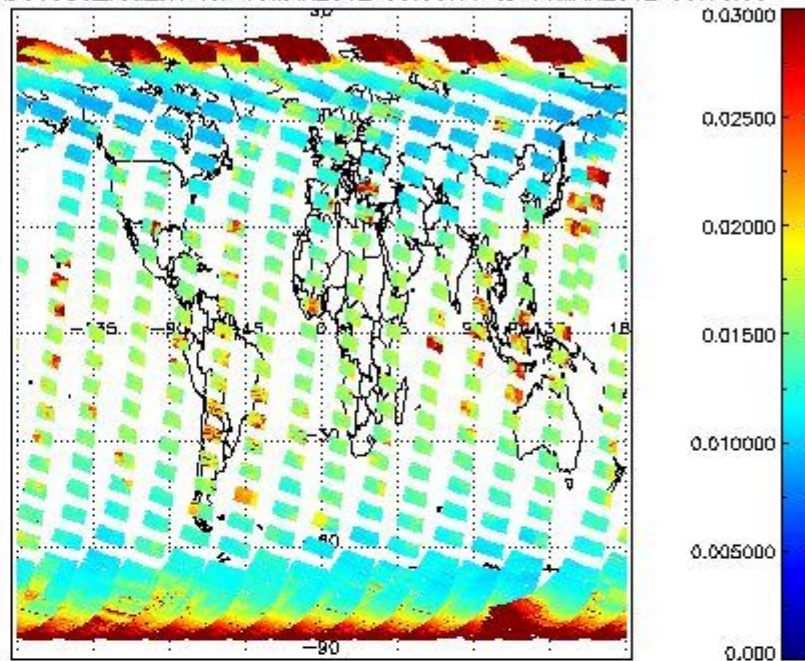




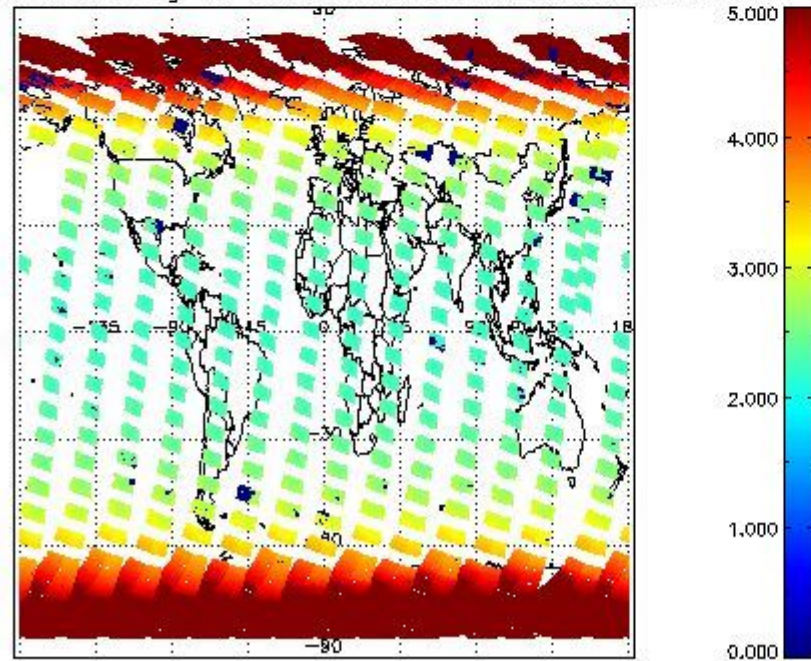
SCIOL2P\_NADUV003\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



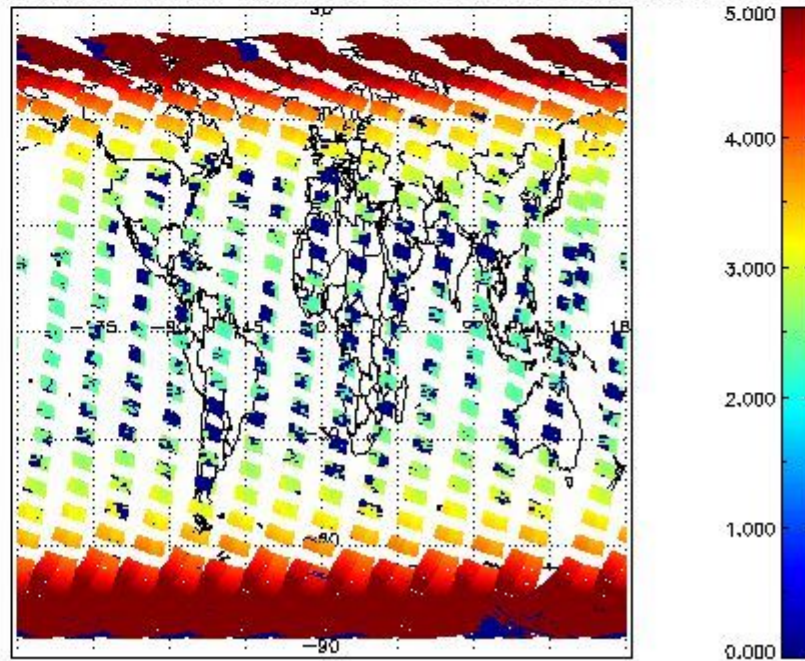
SCIOL2P\_NADUV003\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

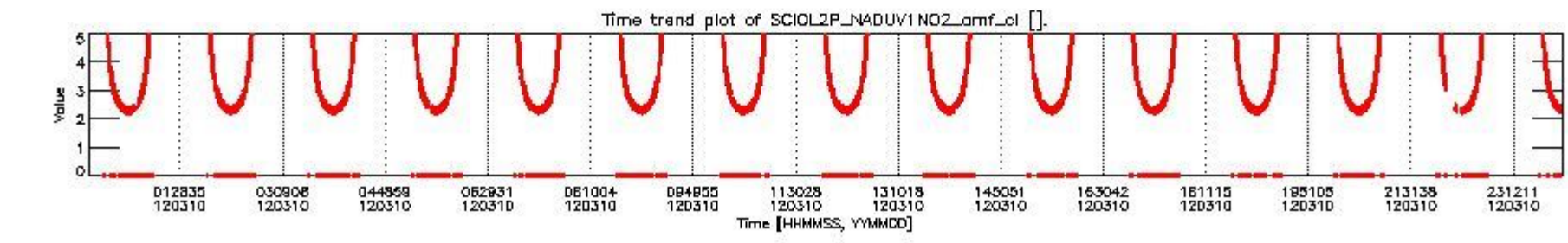
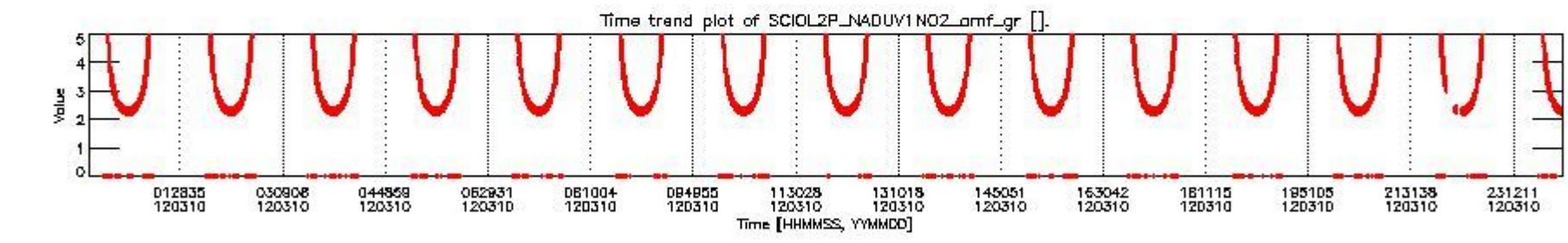
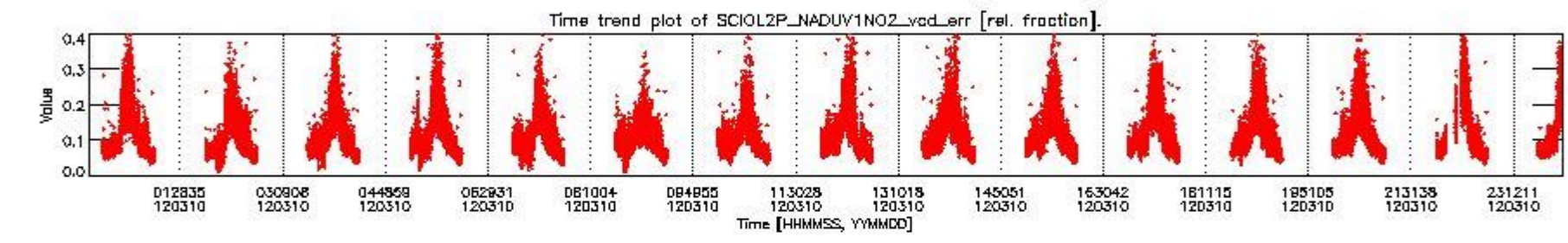
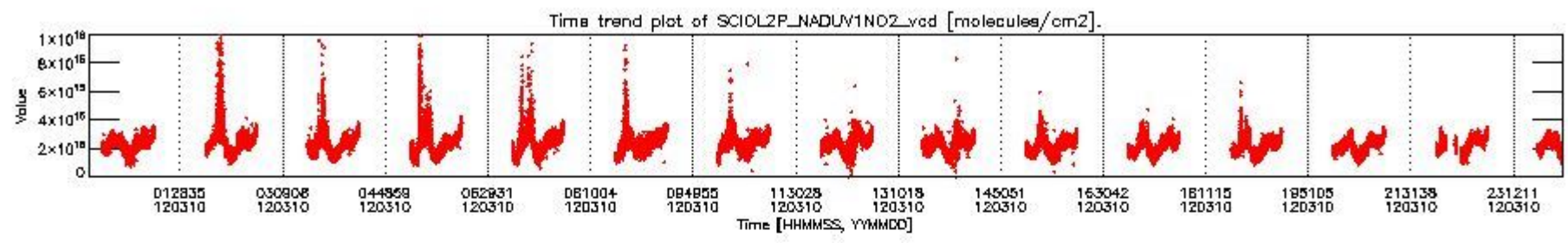


SCIOL2P\_NADUV003\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



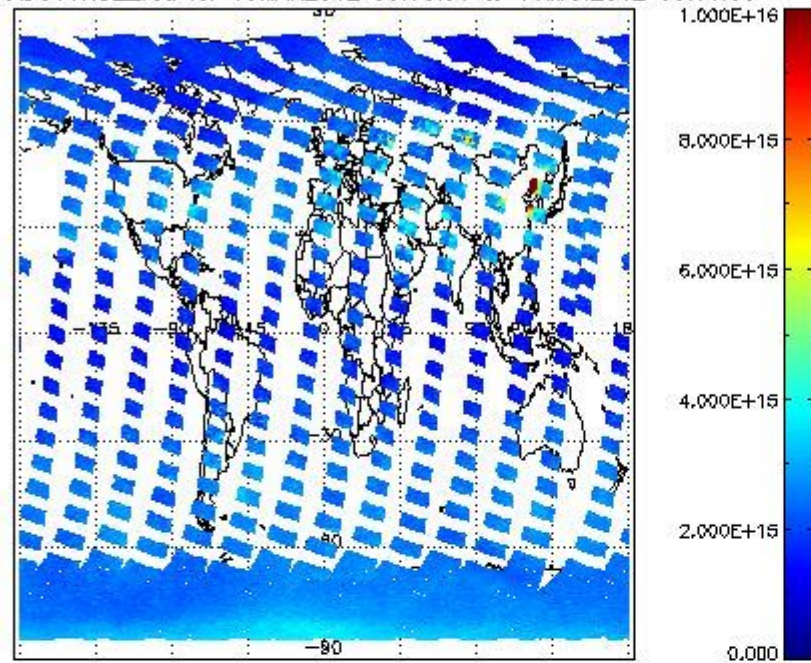
2.2.2.2 NO2 (UV1)



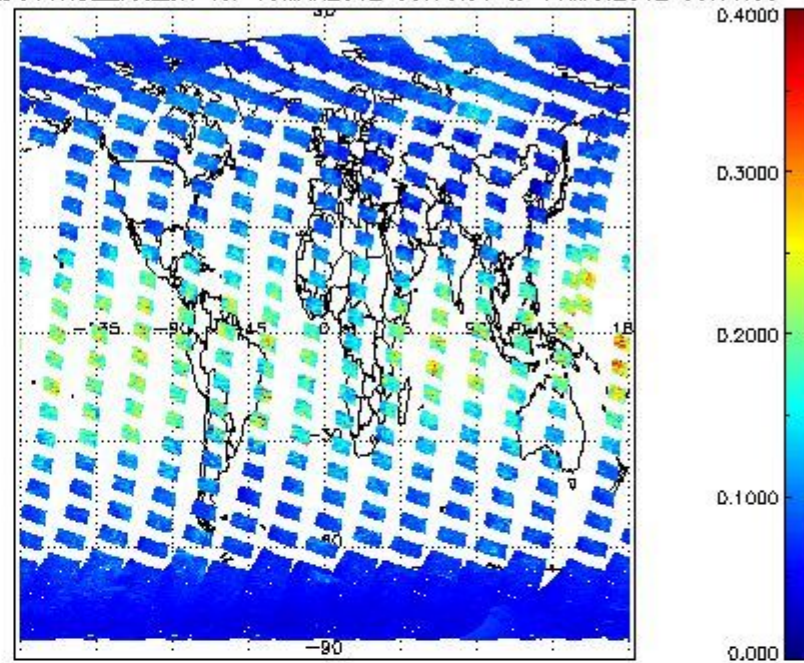




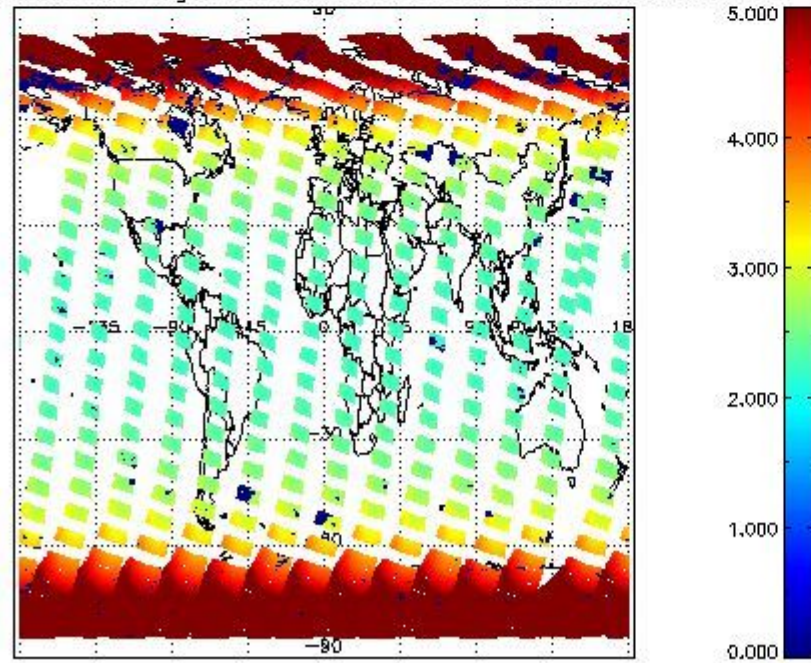
SCIOL2P\_NADUV1NO2\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



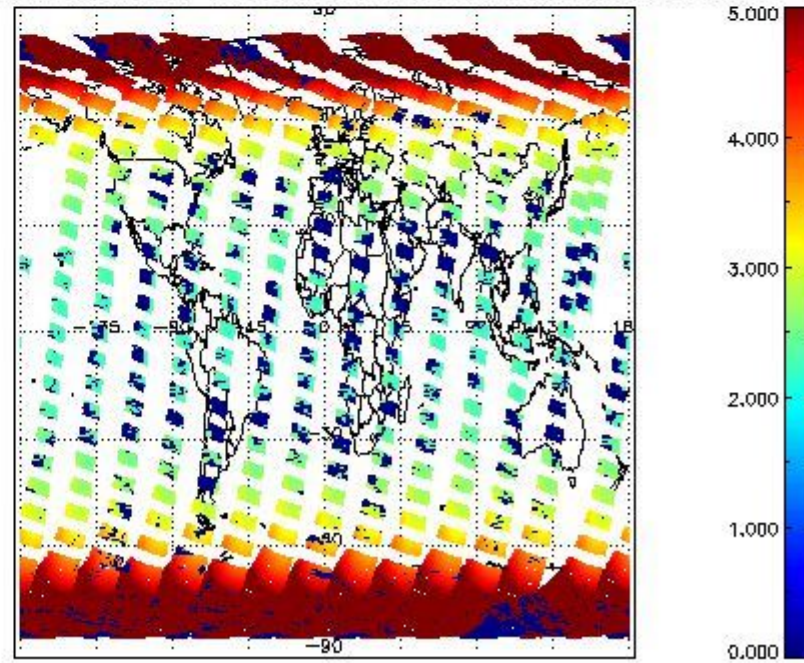
SCIOL2P\_NADUV1NO2\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

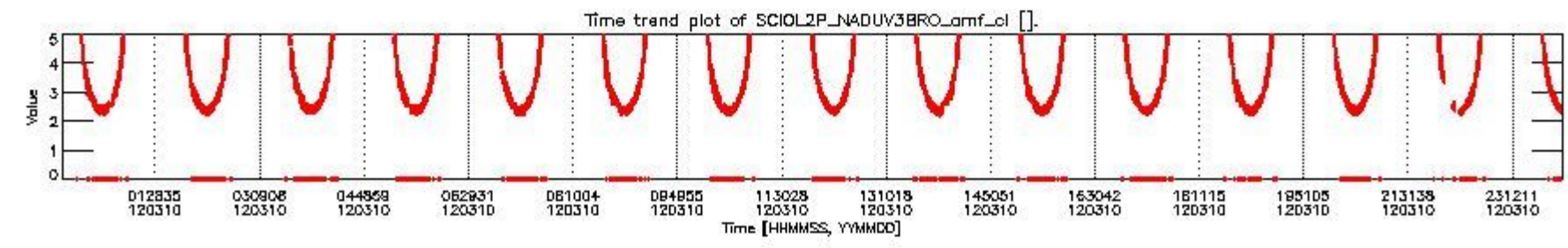
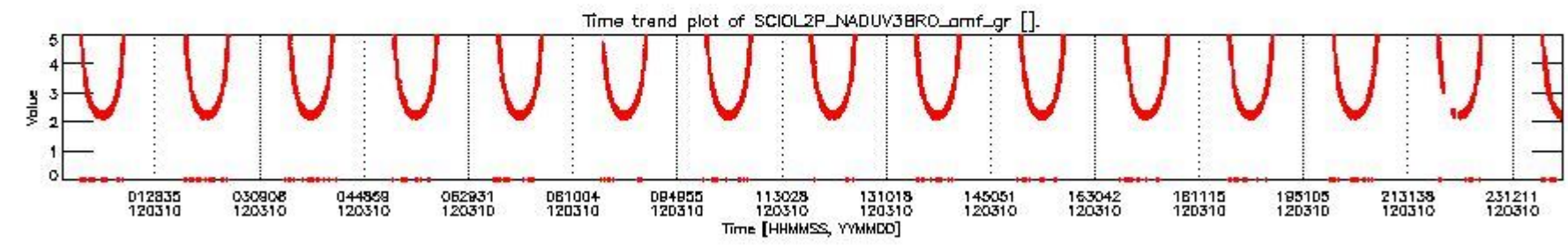
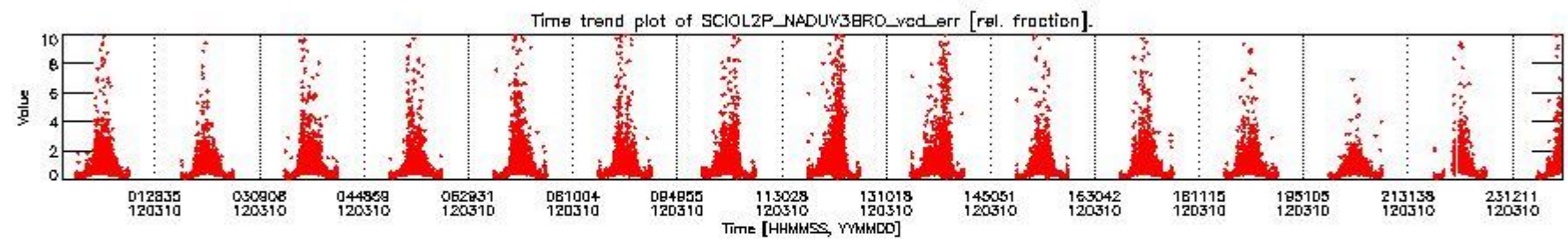
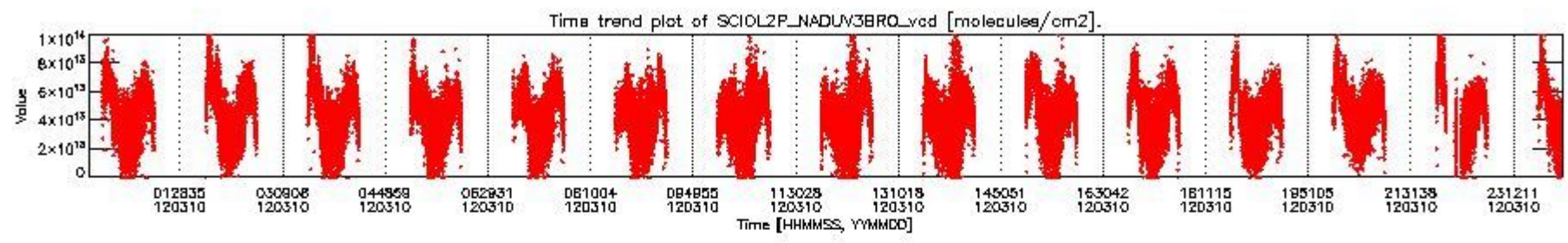


SCIOL2P\_NADUV1NO2\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



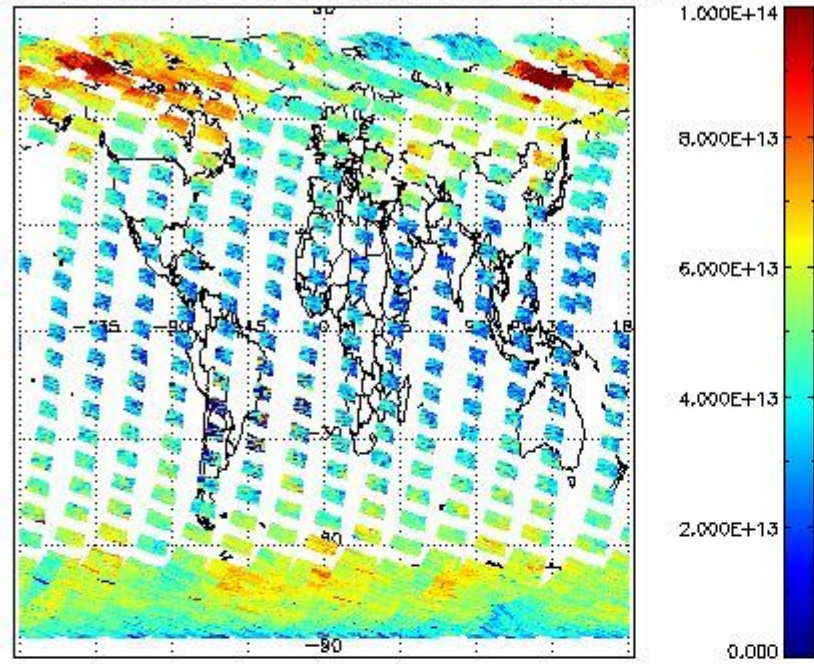
### 2.2.2.3 BrO (UV3)



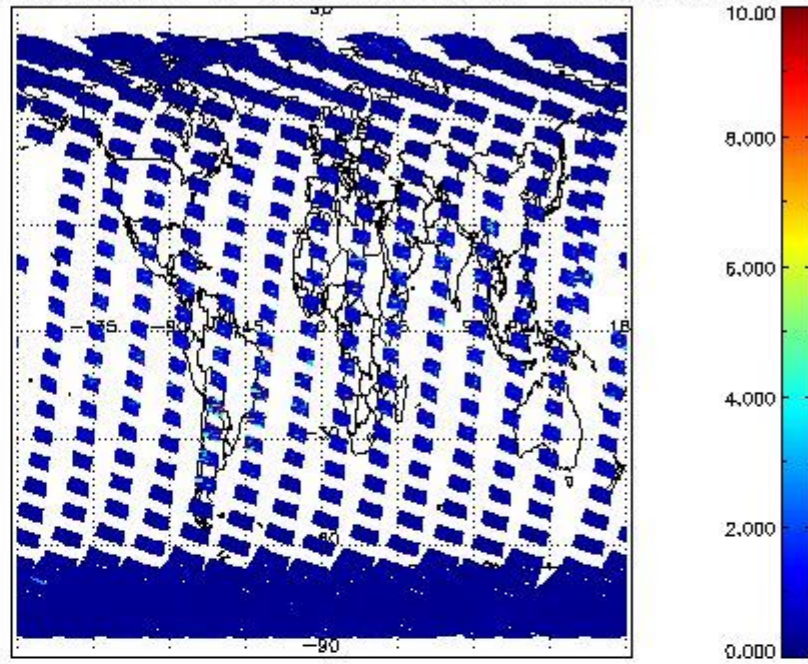




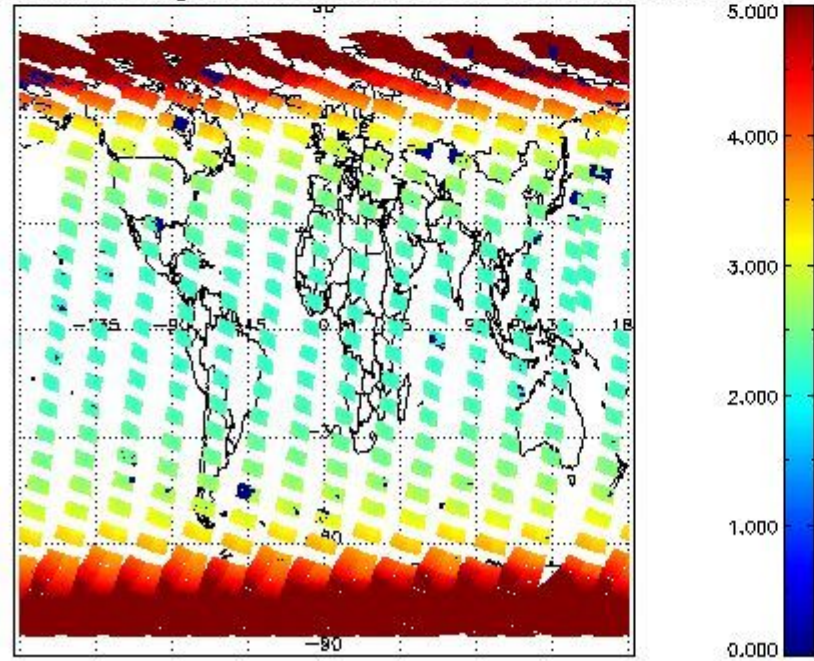
SCIOL2P\_NADUV3BRO\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



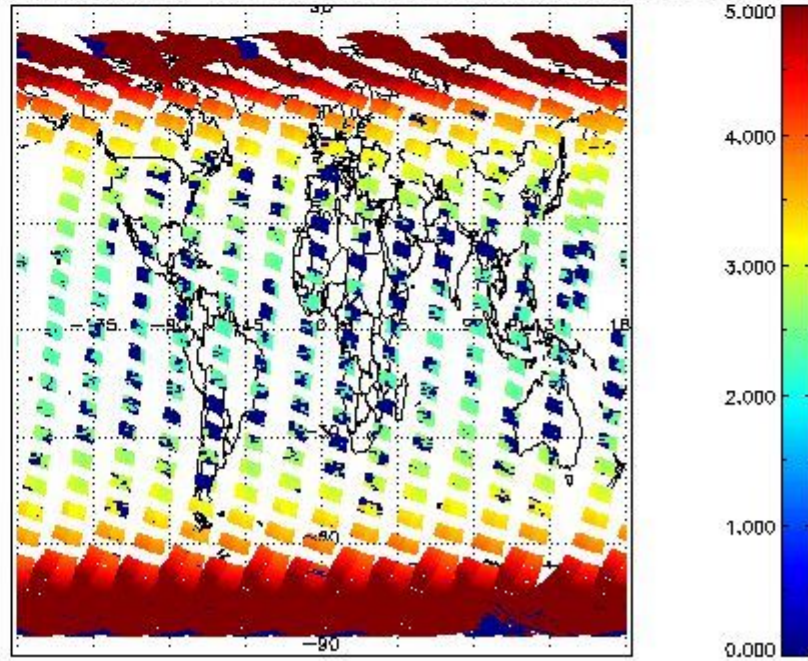
SCIOL2P\_NADUV3BRO\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

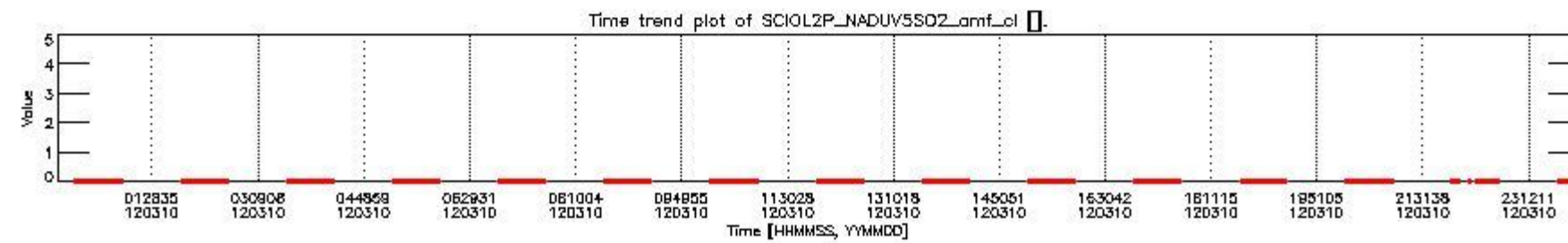
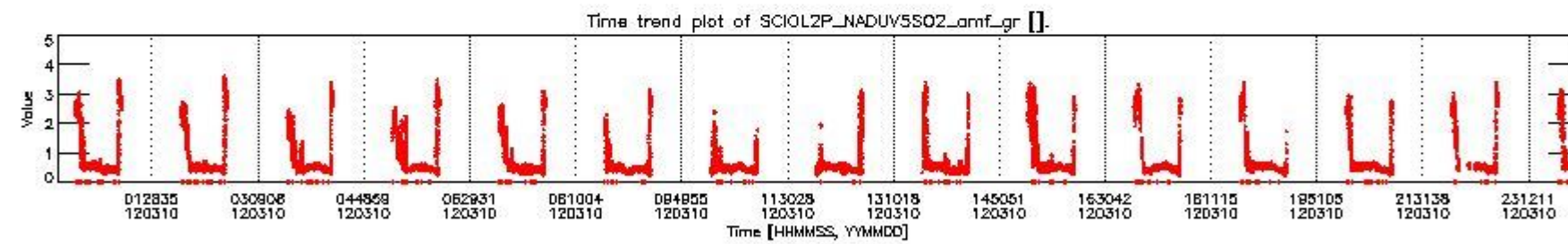
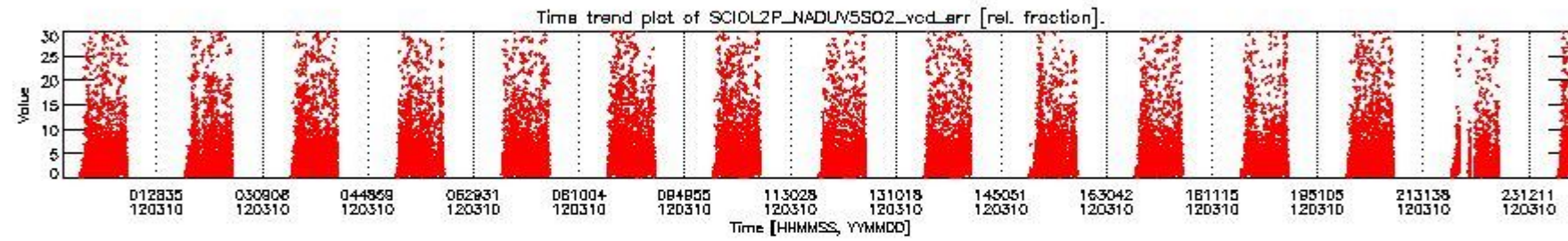
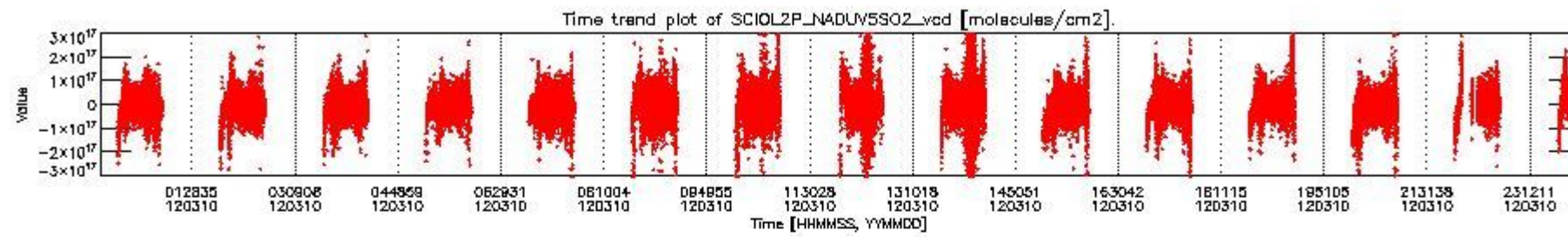


SCIOL2P\_NADUV3BRO\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



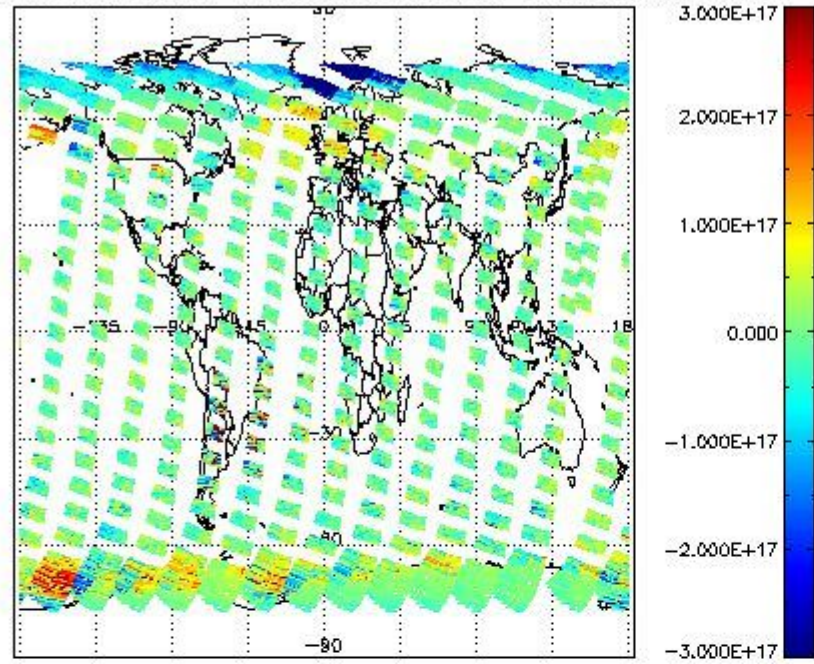
#### 2.2.2.4 SO2 (UV5)



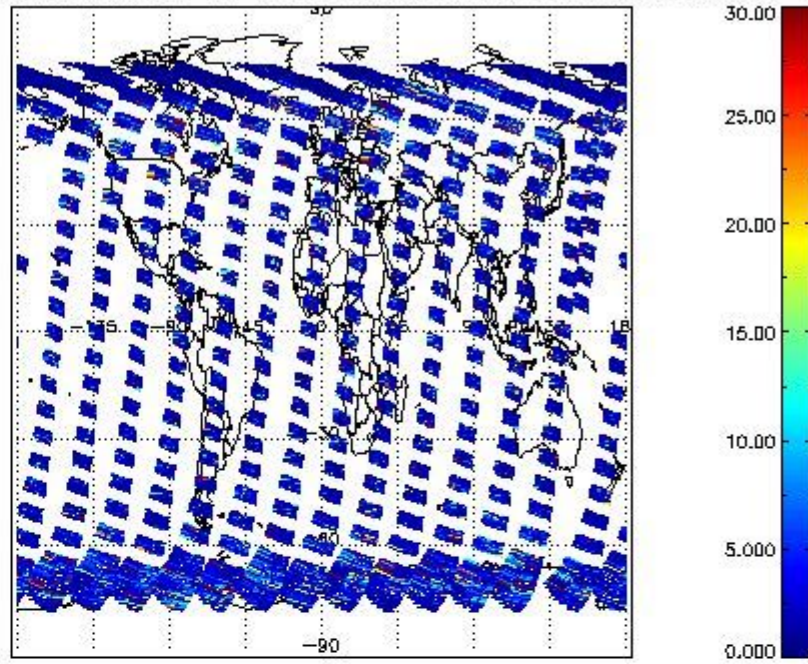




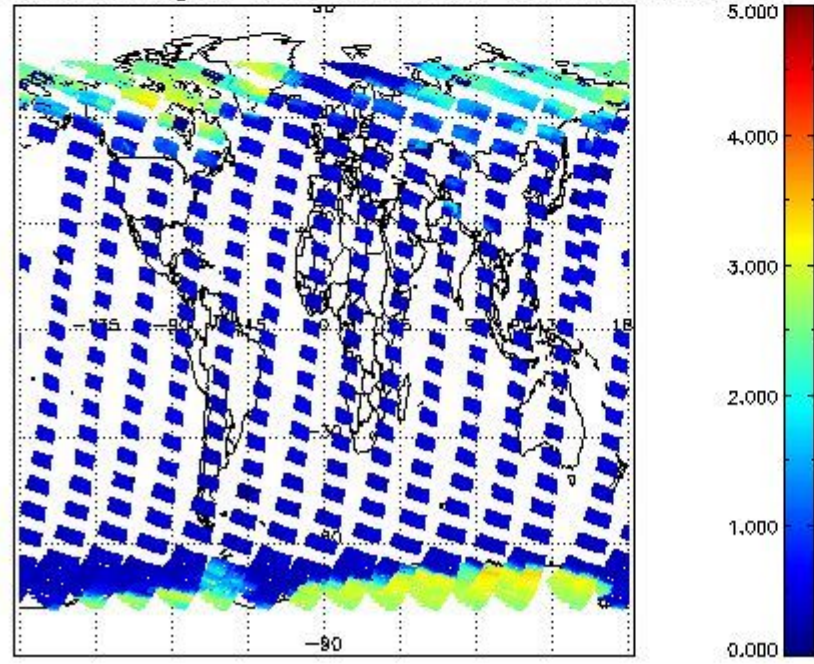
SCIOL2P\_NADUV5S02\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



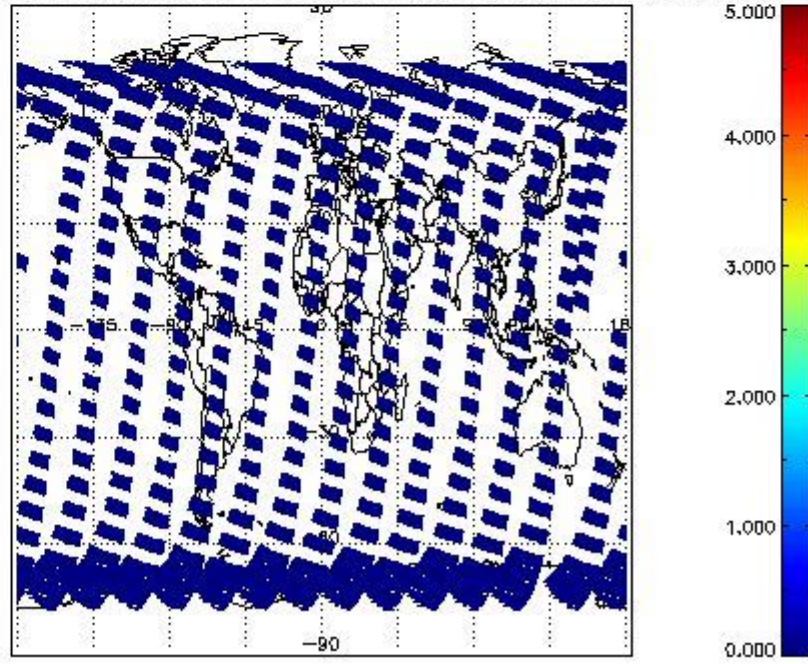
SCIOL2P\_NADUV5S02\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIOL2P\_NADUV5S02\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

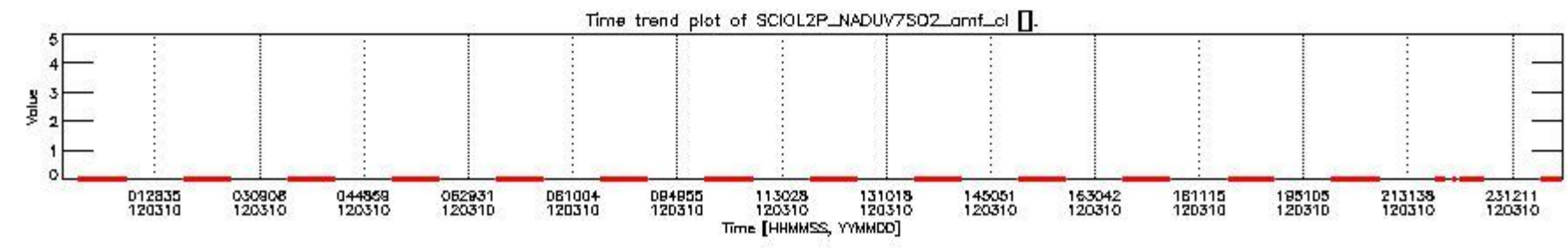
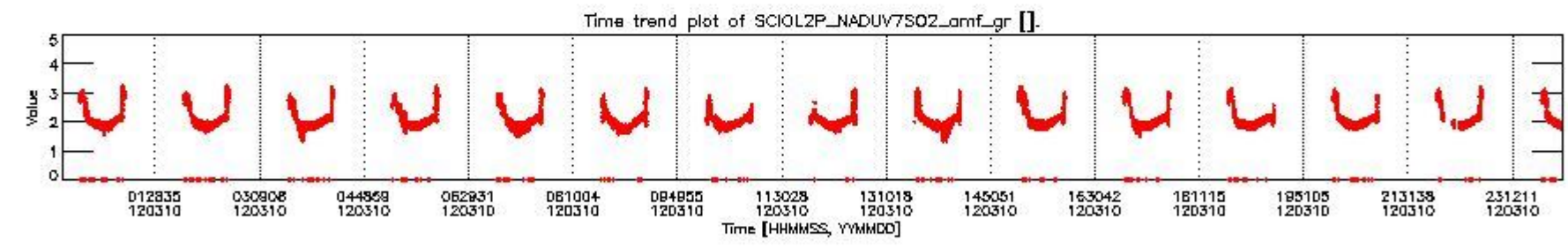
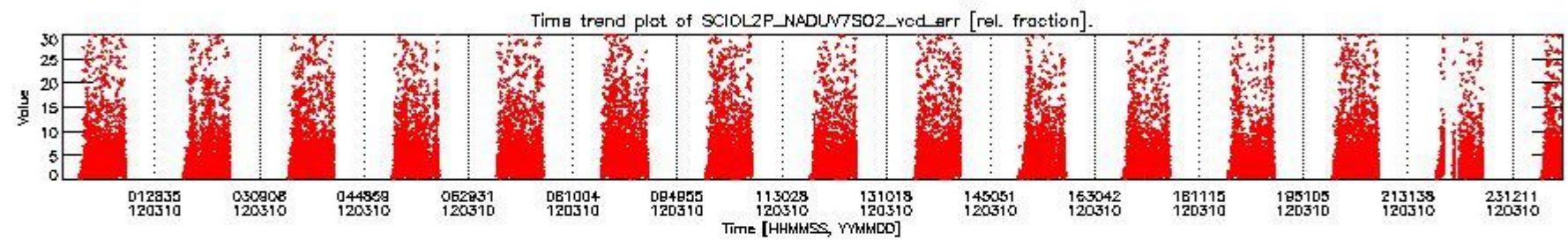
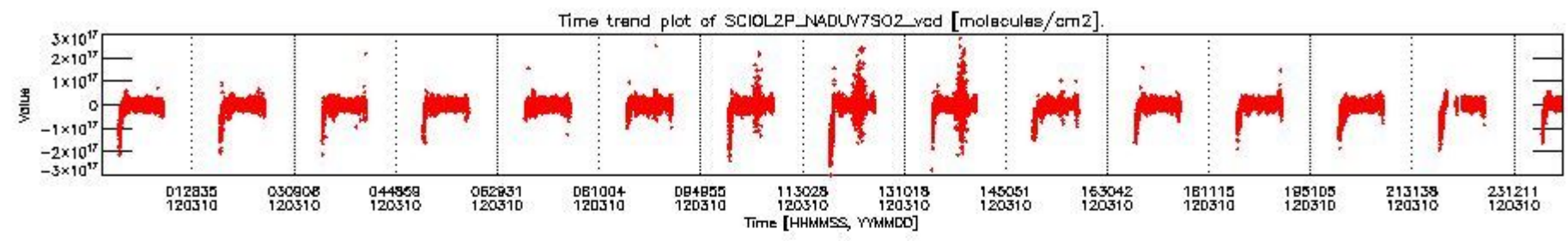


SCIOL2P\_NADUV5S02\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



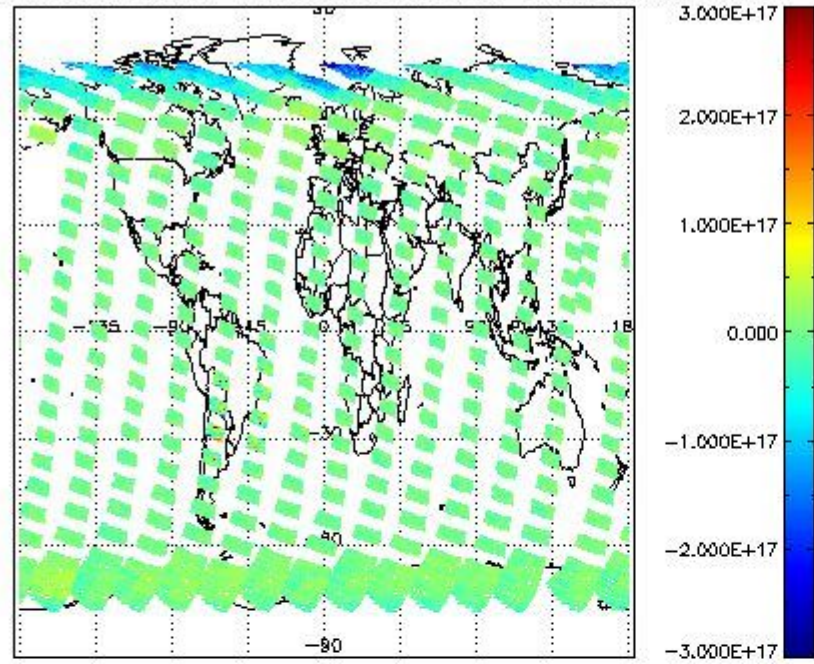
2.2.2.5 SO2 (UV7)



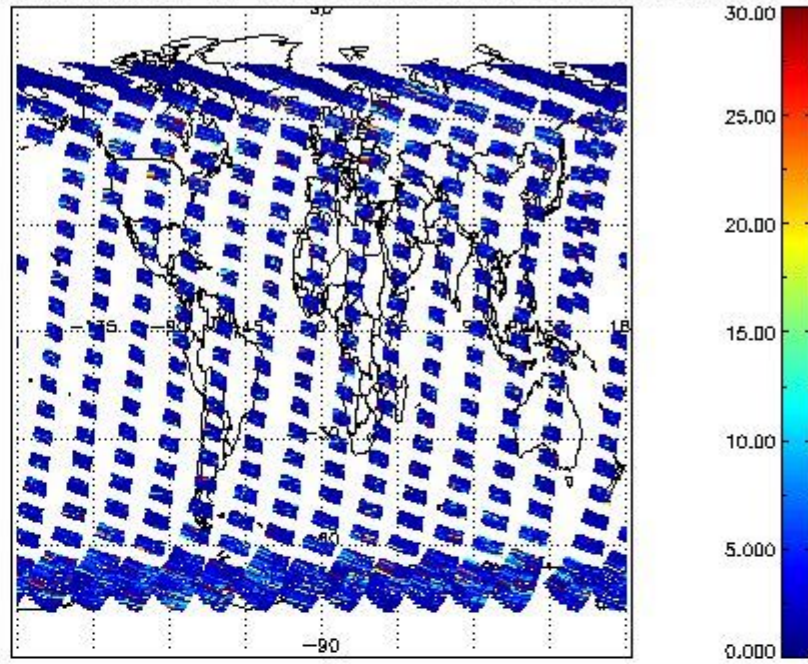




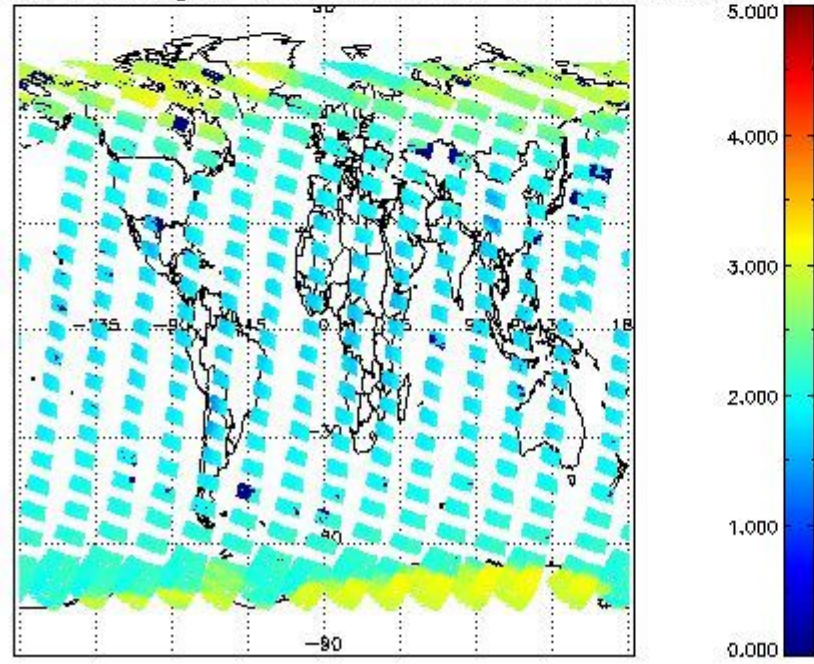
SCIOL2P\_NADUV7S02\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



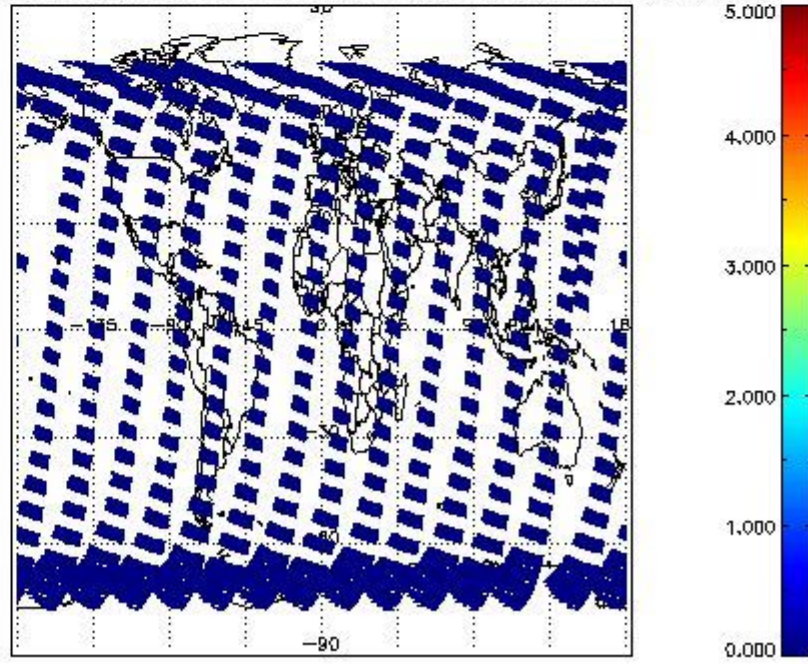
SCIOL2P\_NADUV7S02\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

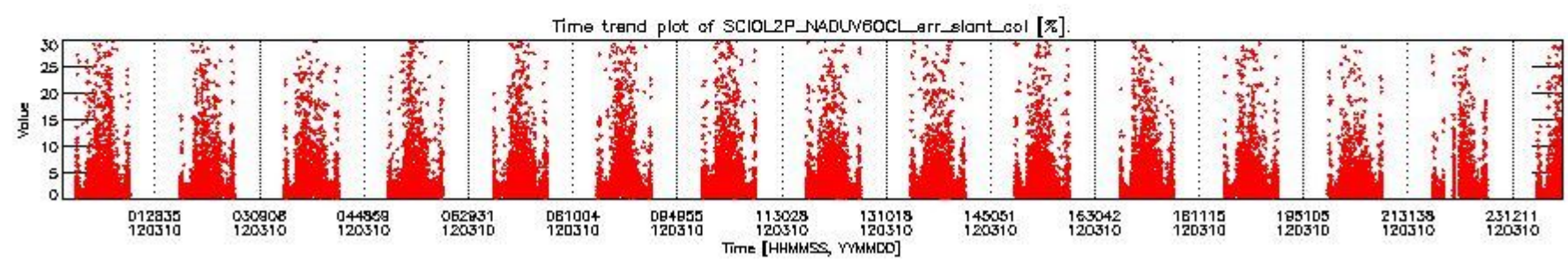
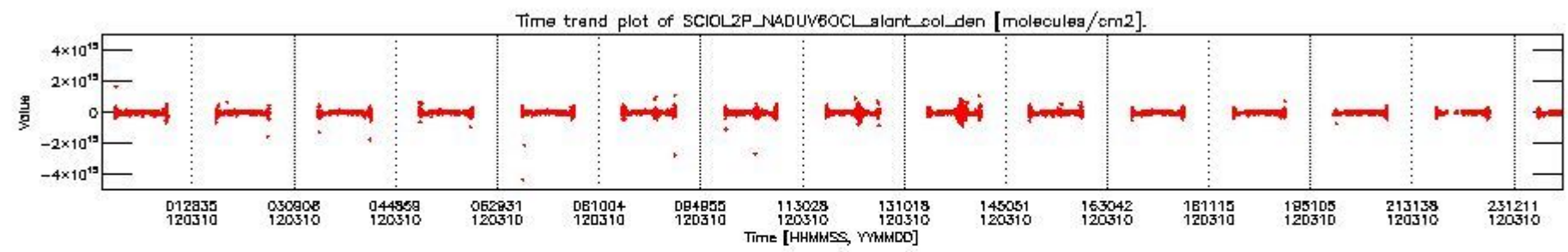


SCIOL2P\_NADUV7S02\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

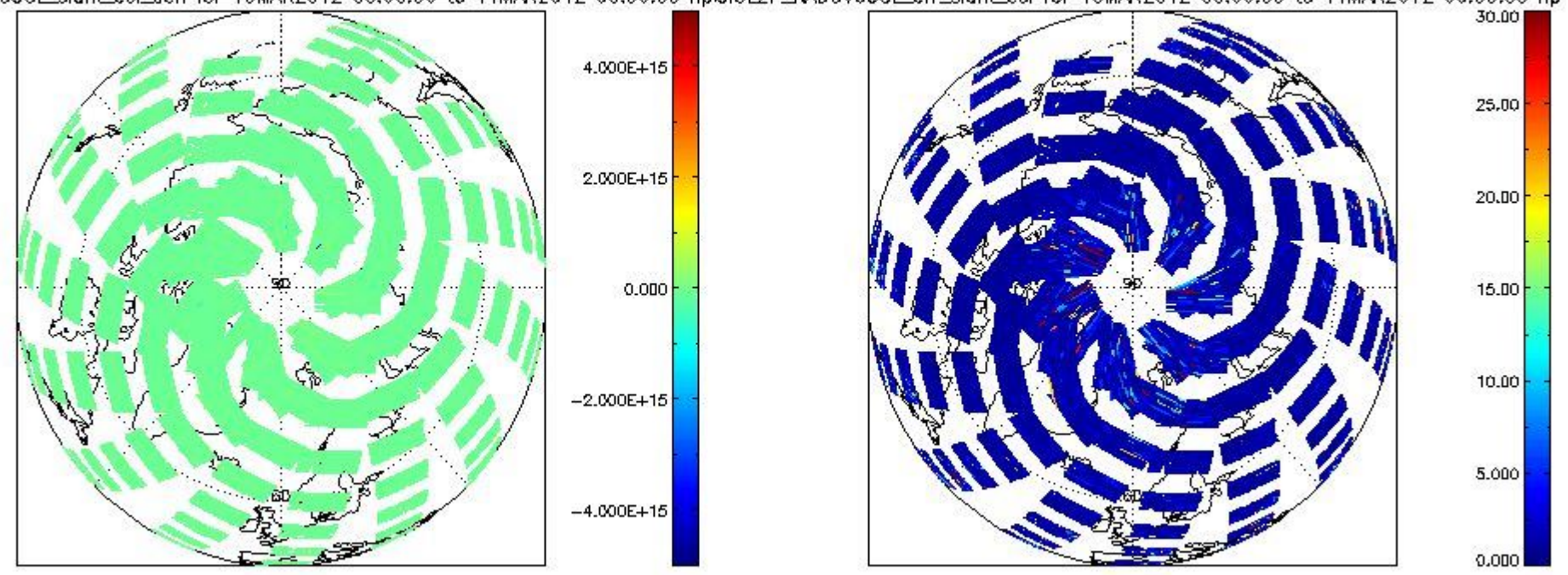


## 2.2.2.6 OCIO (UV6)



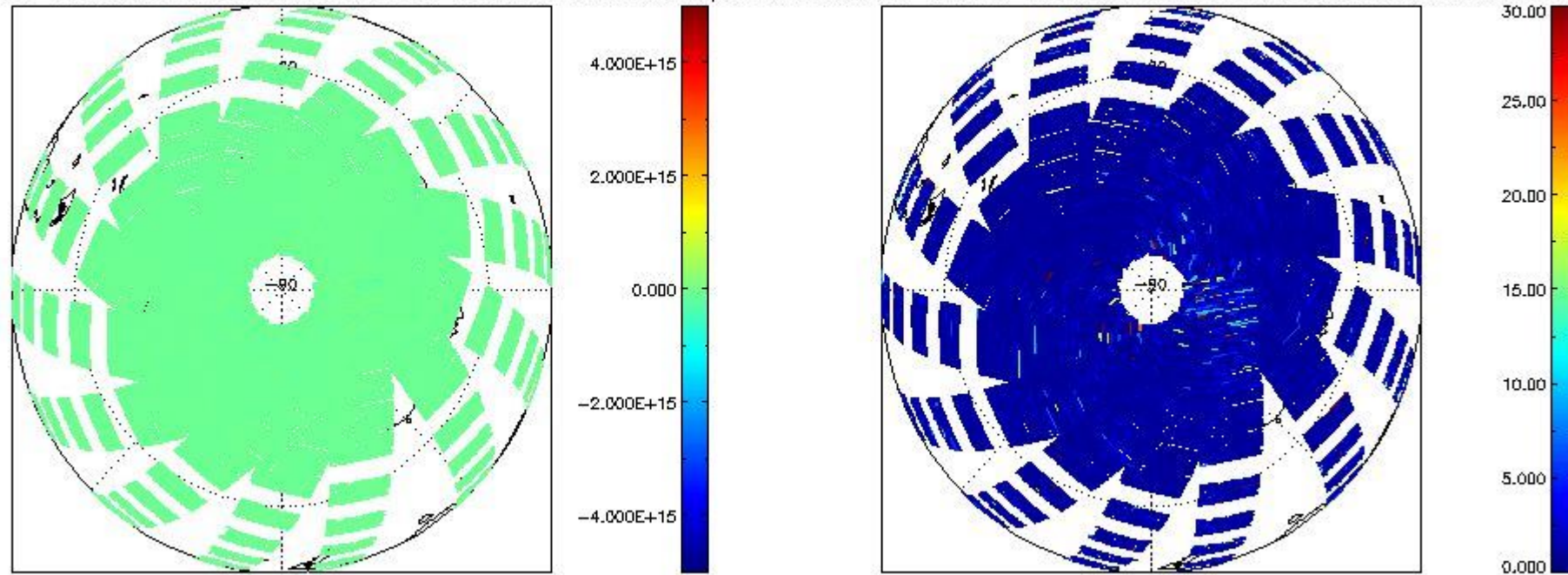


CIOL2P\_NADUV6OCL\_slant\_col\_den for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 npCIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 np

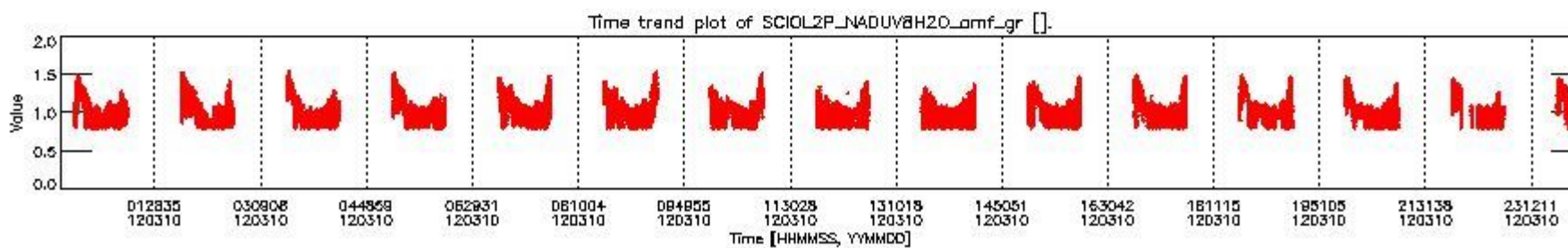
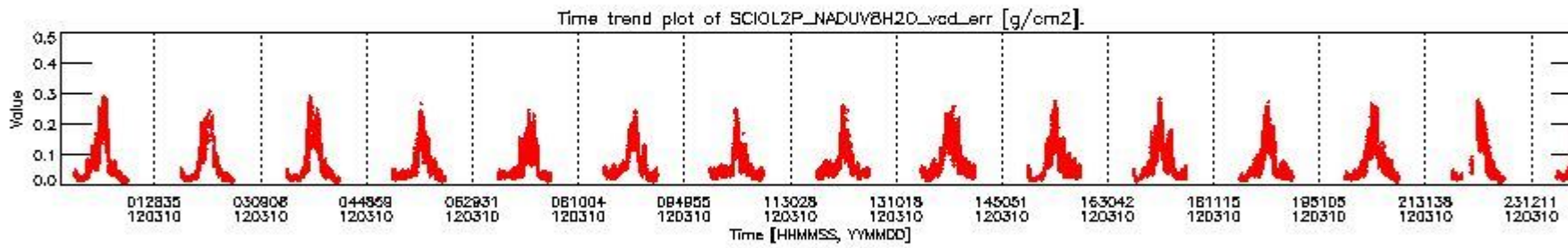
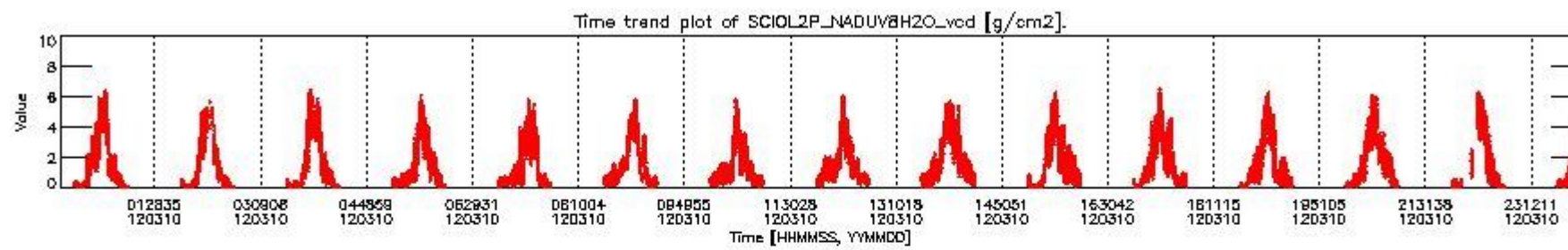




CIOL2P\_NADUV6OCL\_slant\_coLden for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 spCIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 sp

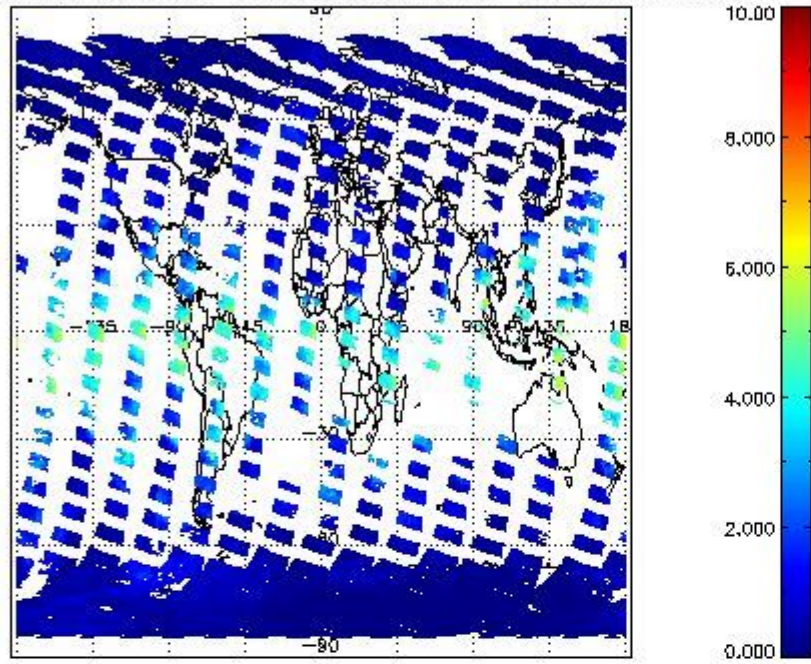


### 2.2.2.7 H2O (UV8)

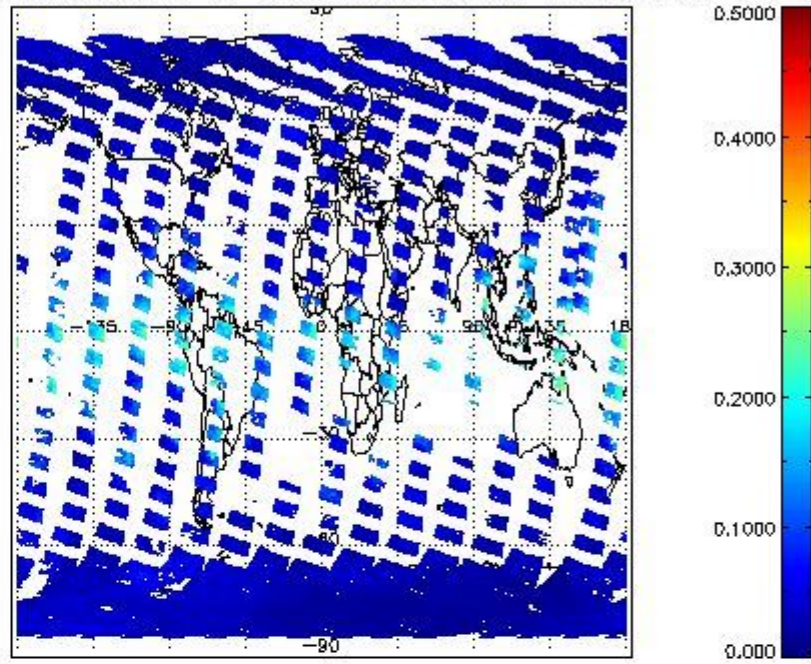




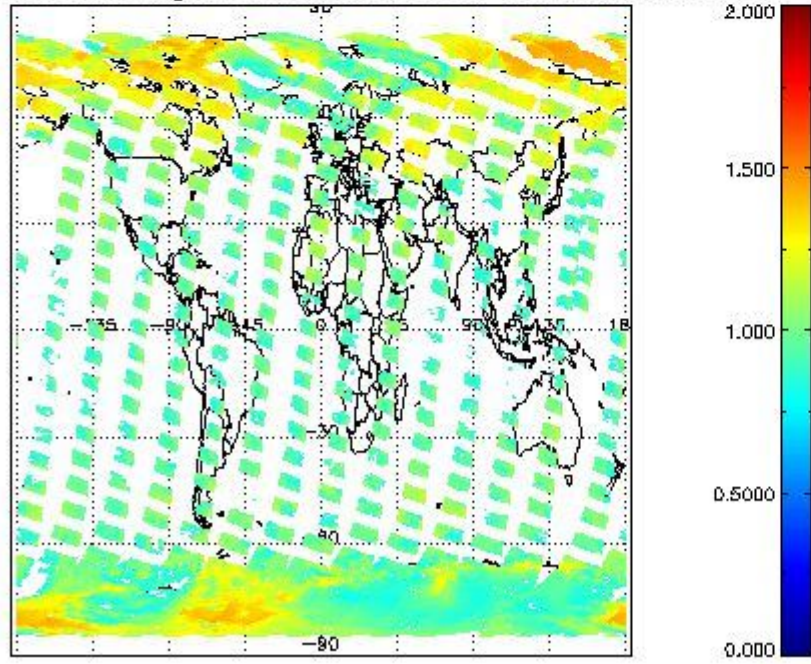
SCIOL2P\_NADUV8H2O\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



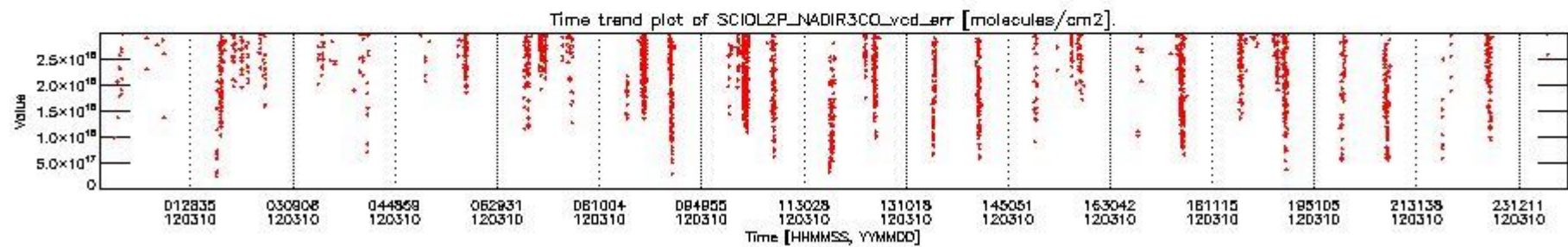
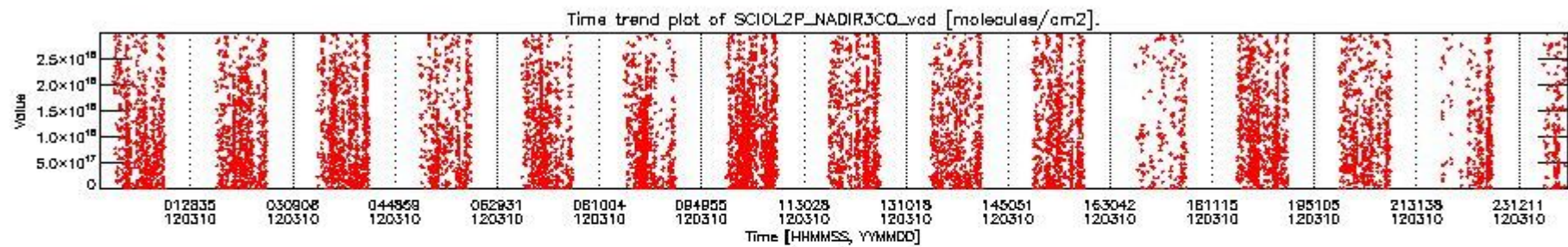
SCIOL2P\_NADUV8H2O\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



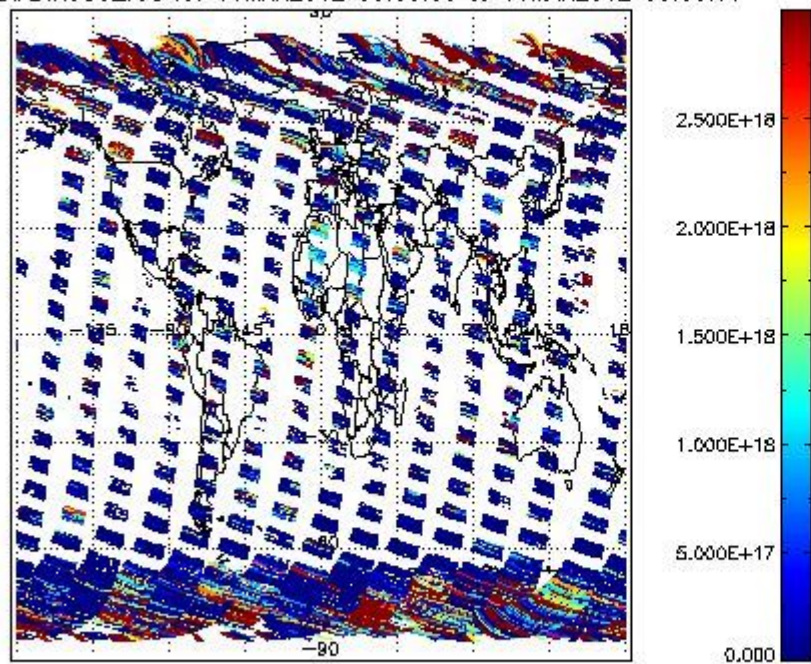
SCIOL2P\_NADUV8H2O\_arnf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



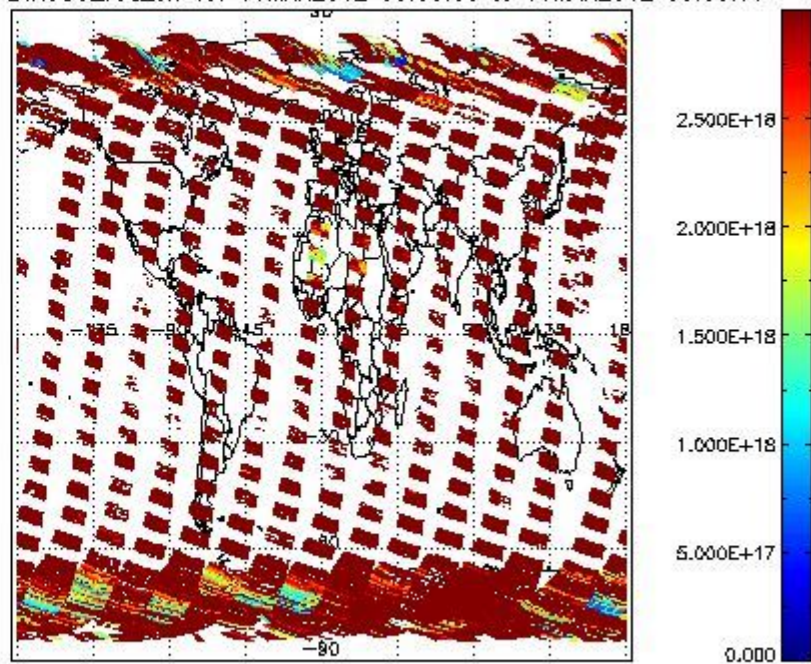




SCIDL2P\_NADIR3CO\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



### 2.2.3 Limb

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

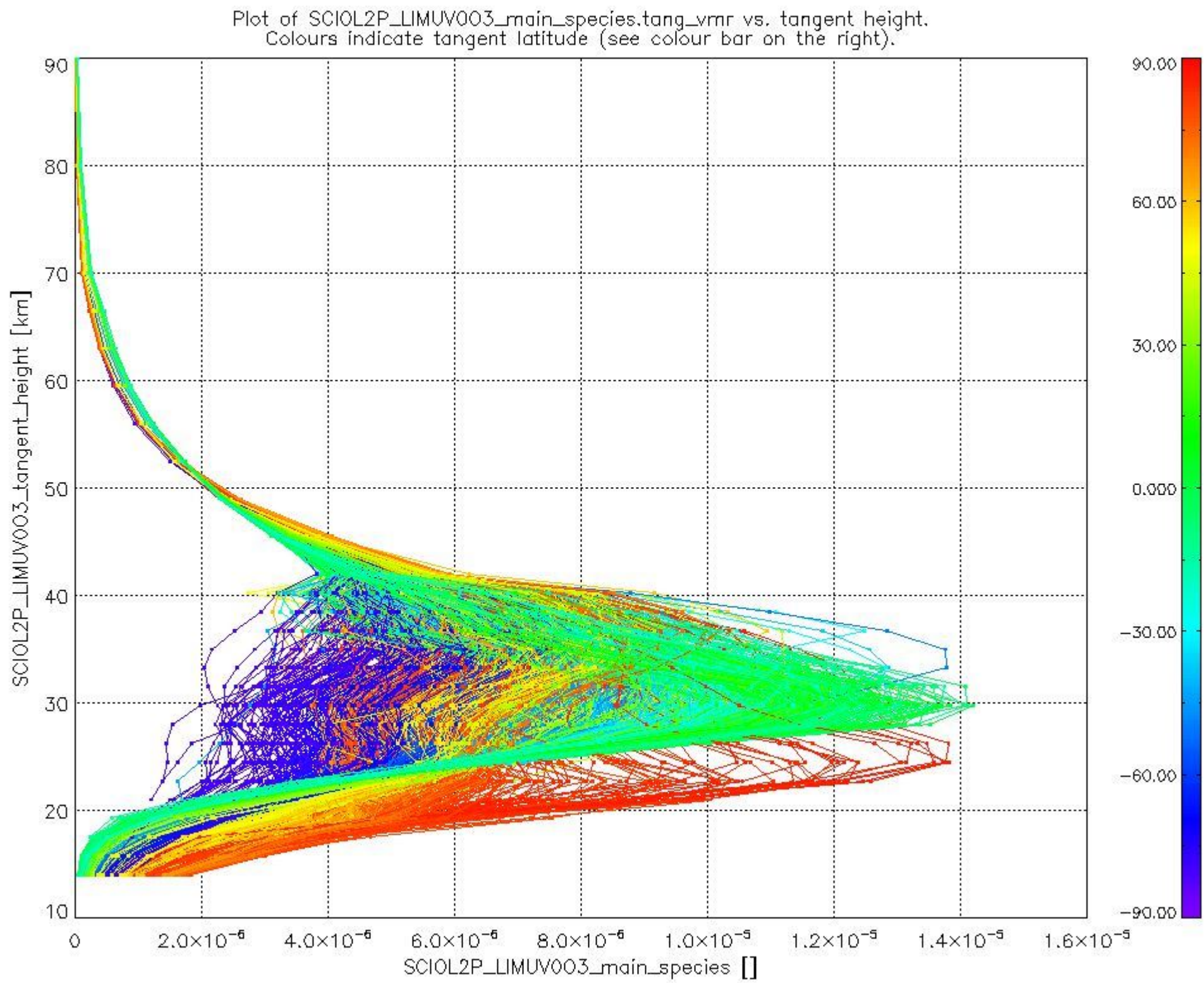
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



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

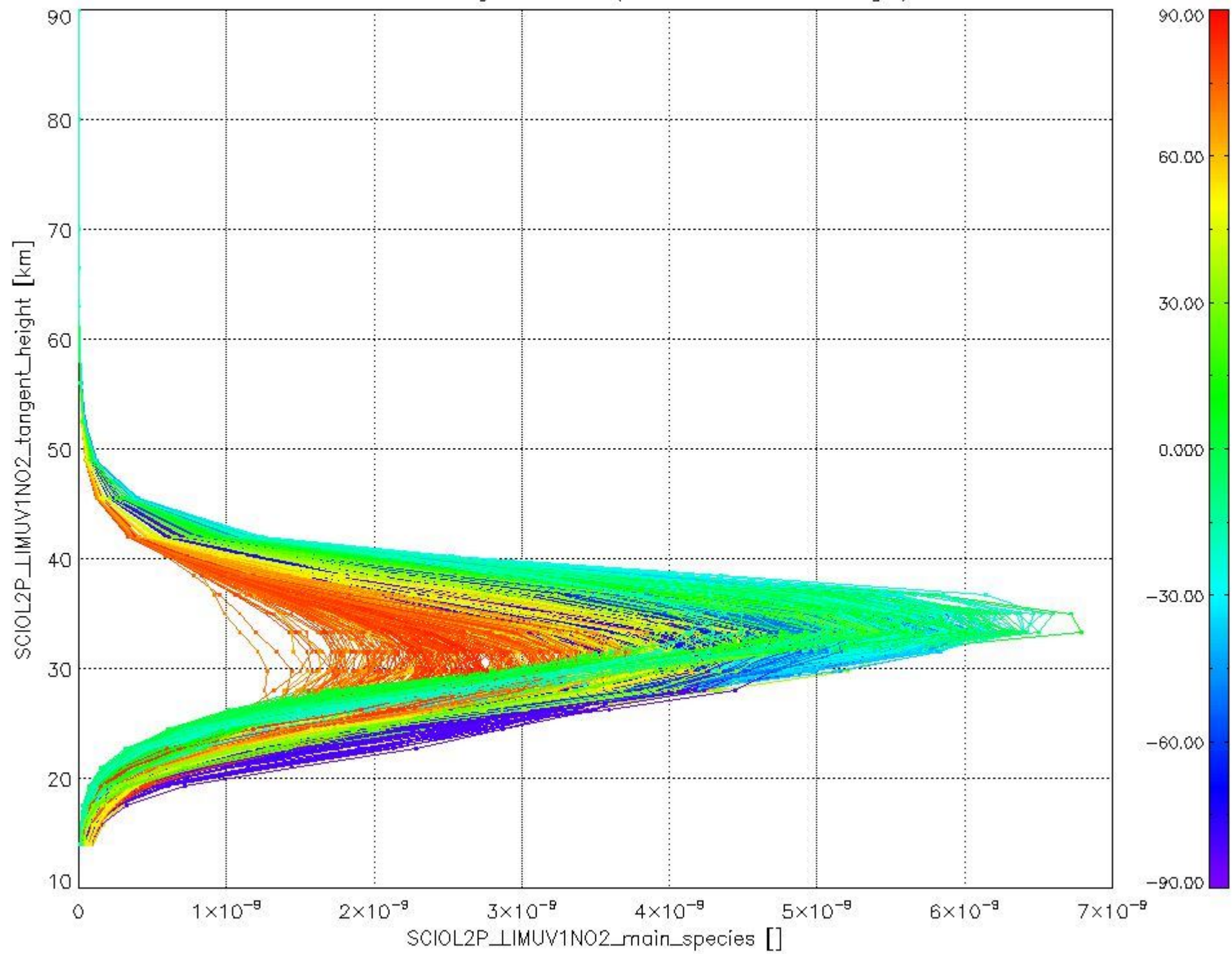
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



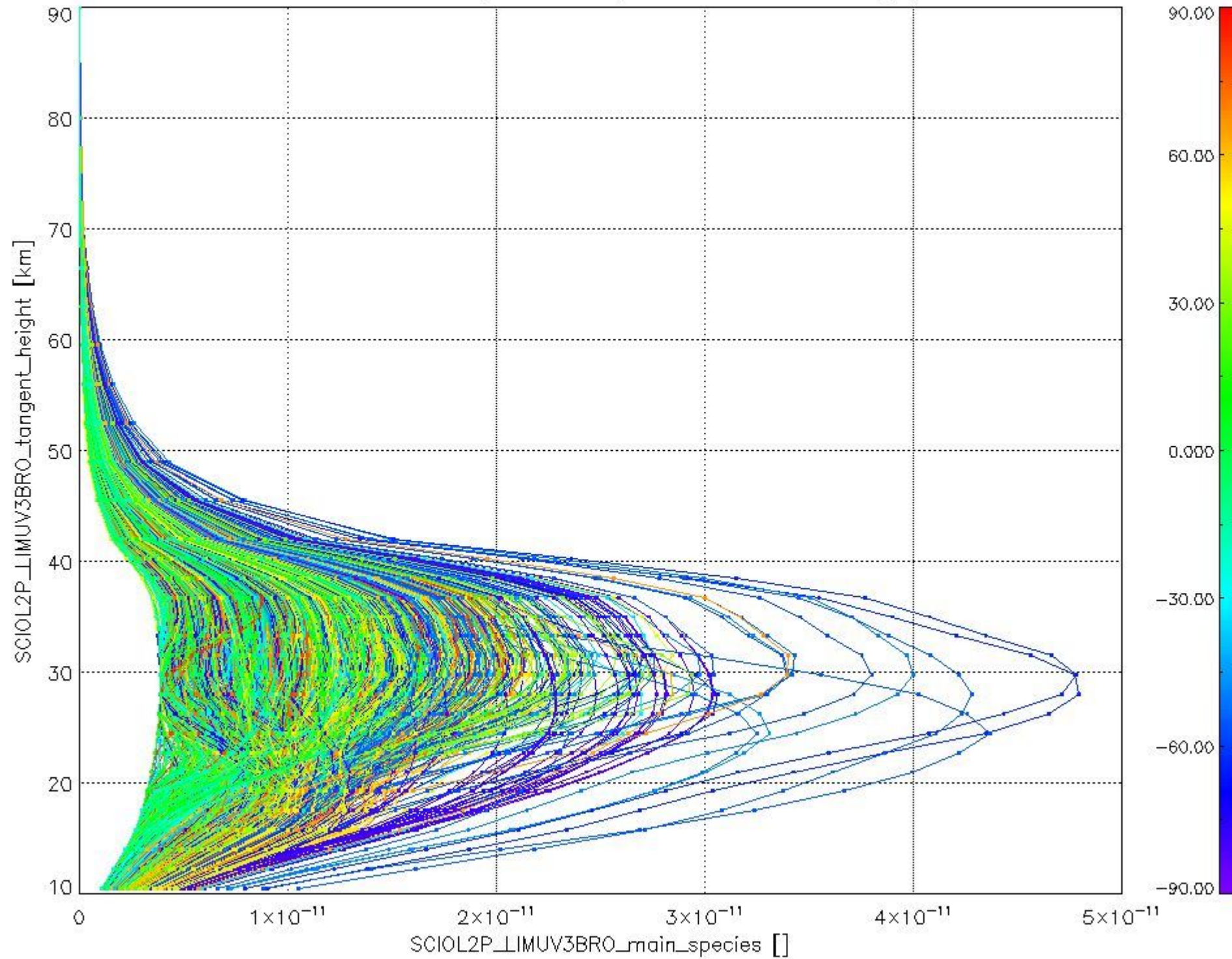
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



2.2.3.3 BrO (UV3)



Plot of SCIOL2P\_LIMUV3BRO\_main\_species.tang\_vmr vs. tangent height.  
Colours indicate tangent latitude (see colour bar on the right).



### 2.3 ADF monitoring

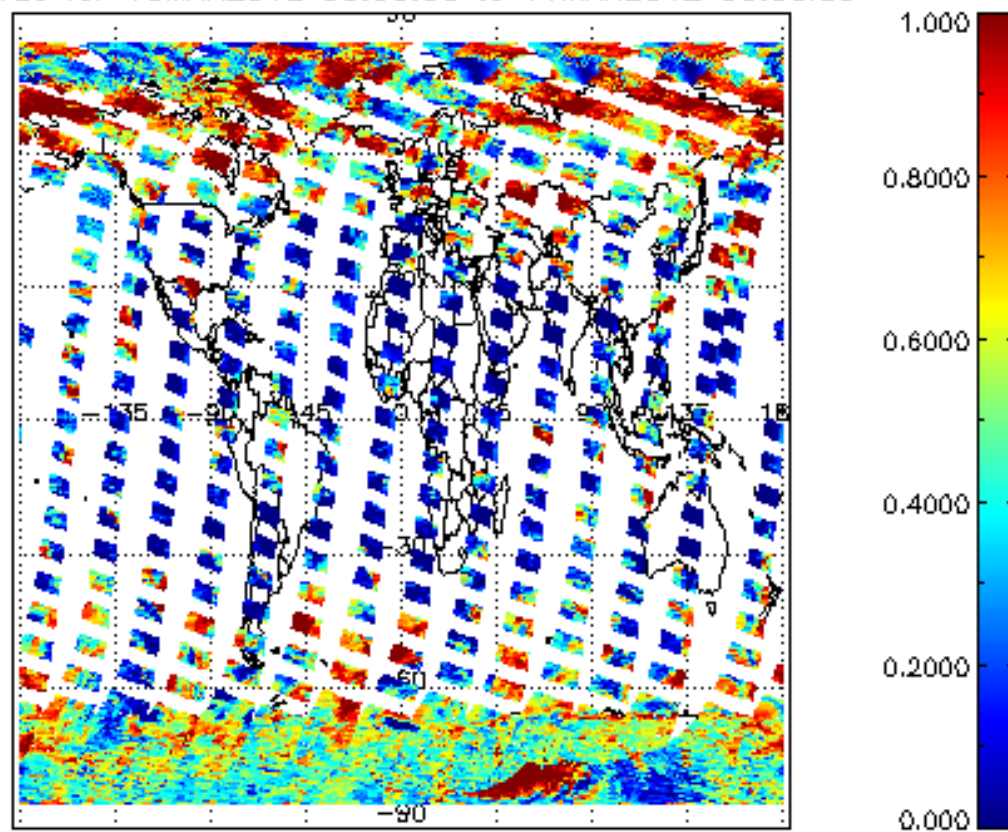
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20120315_082515_20120309_182934_20120311_182934
3	SCI_MF1_AXVIEC20120315_082620_20120310_193303_20120312_193303



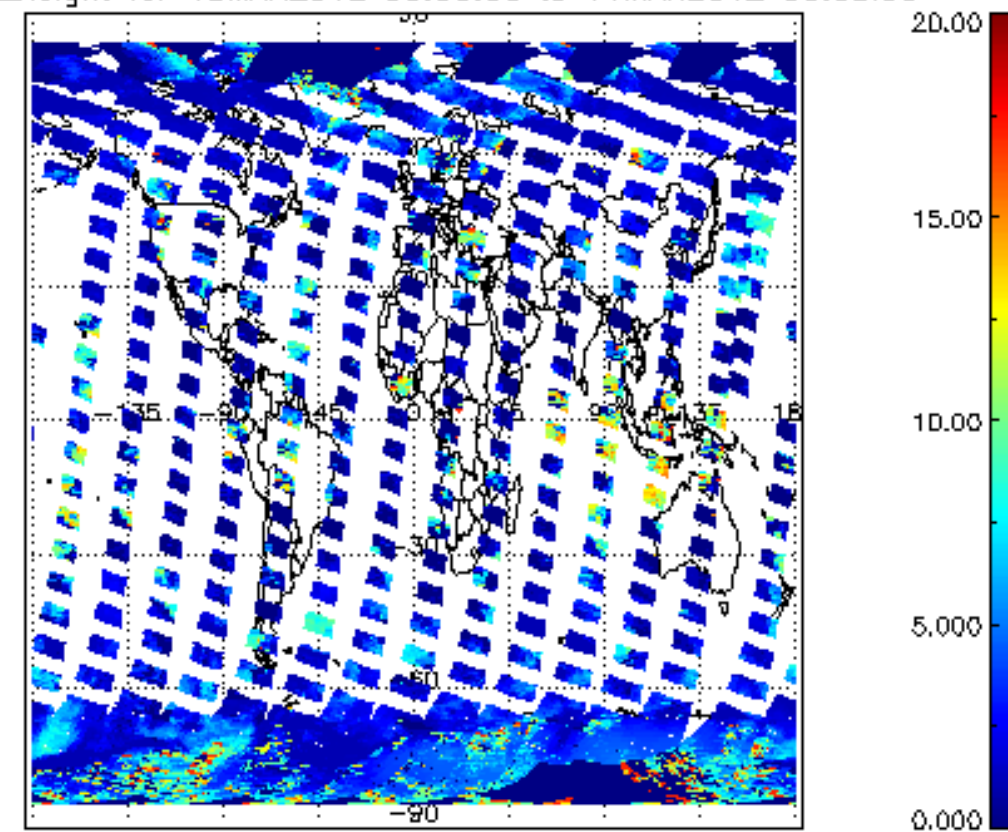




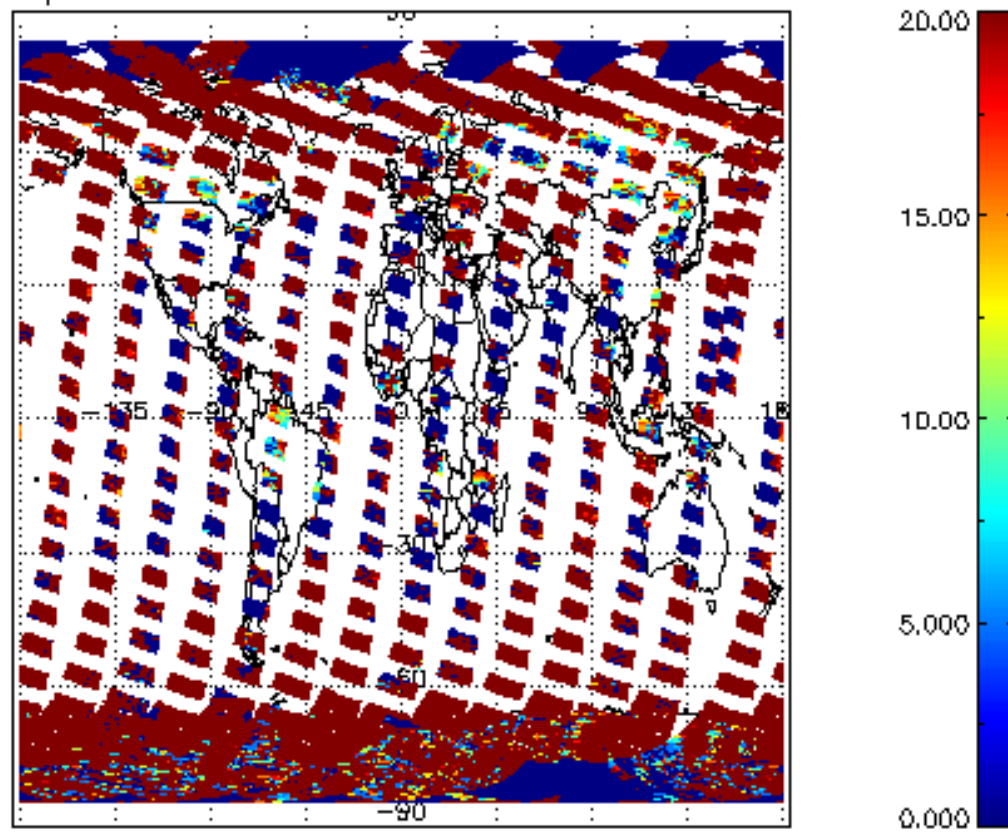
cL\_frac for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



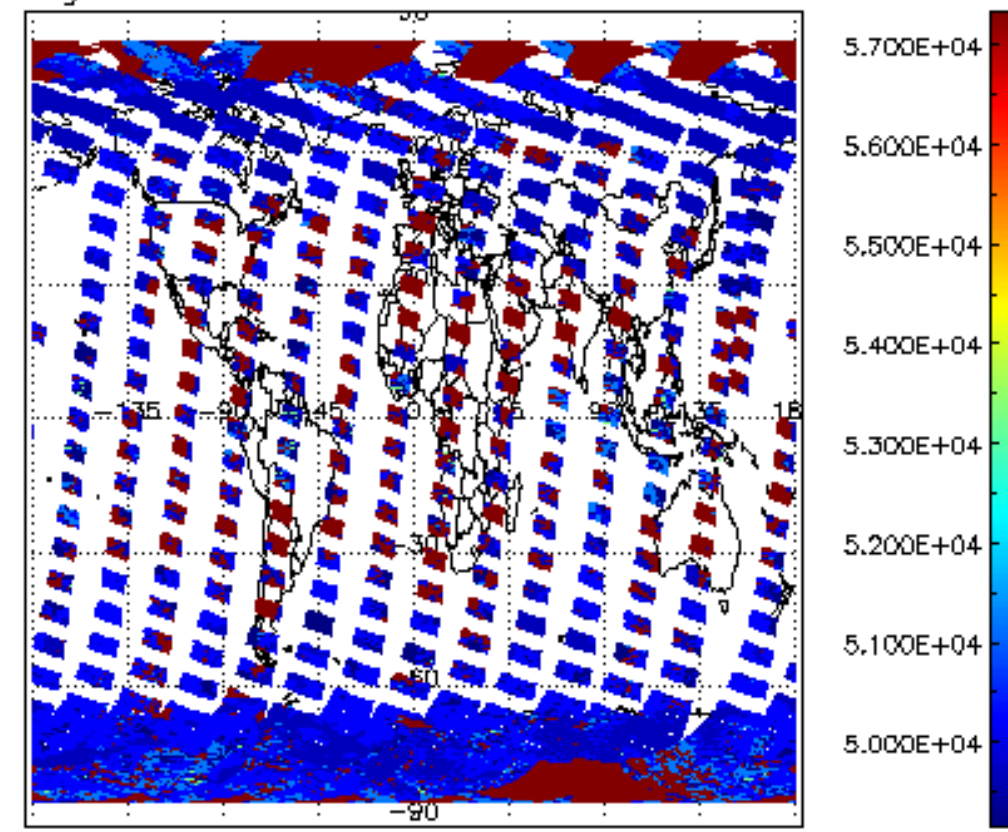
cL\_top\_height for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



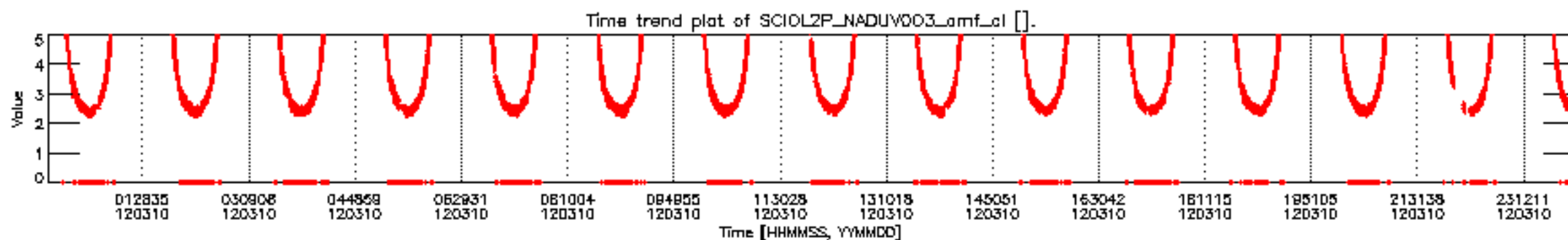
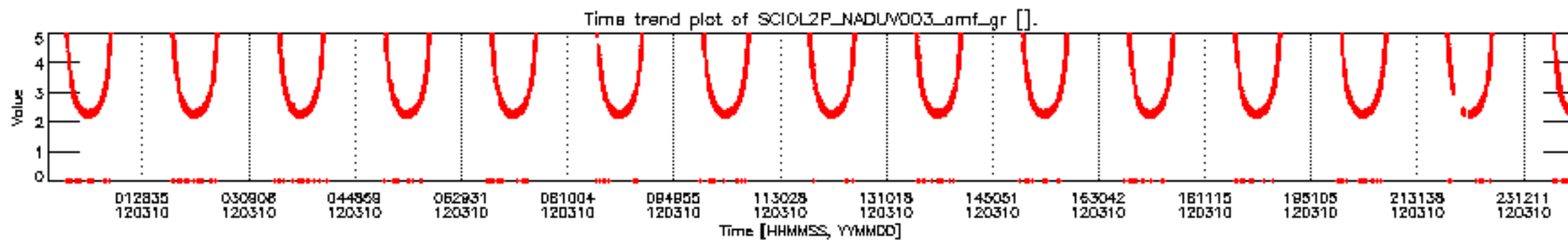
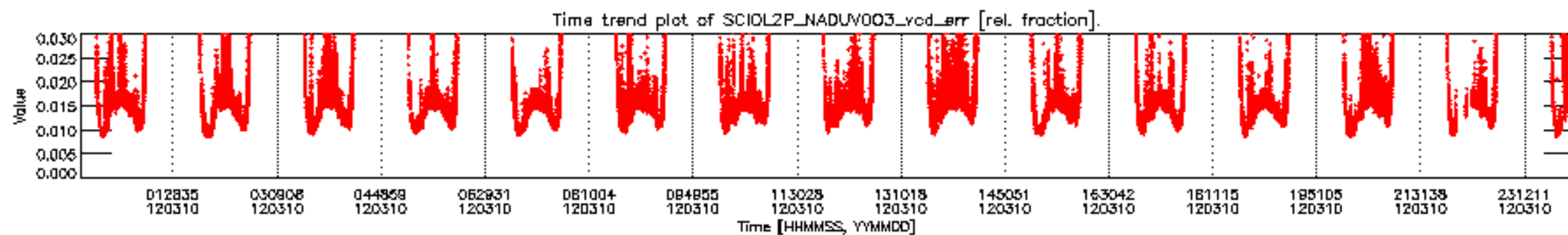
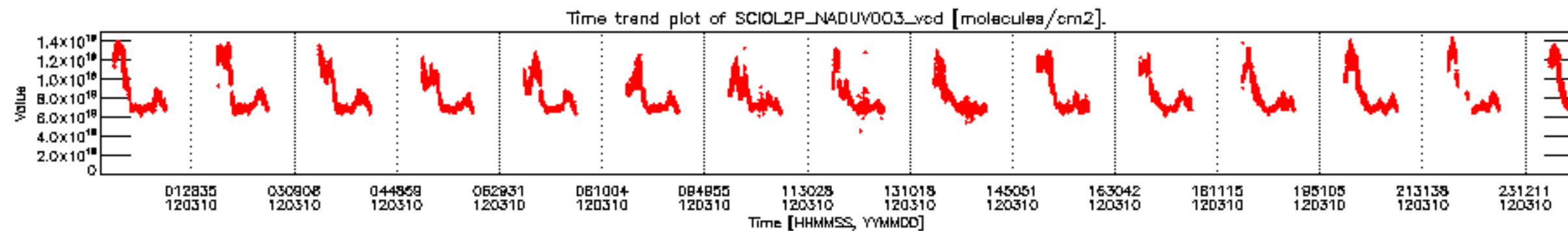
cL\_opt\_depth for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



cloud\_flags for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

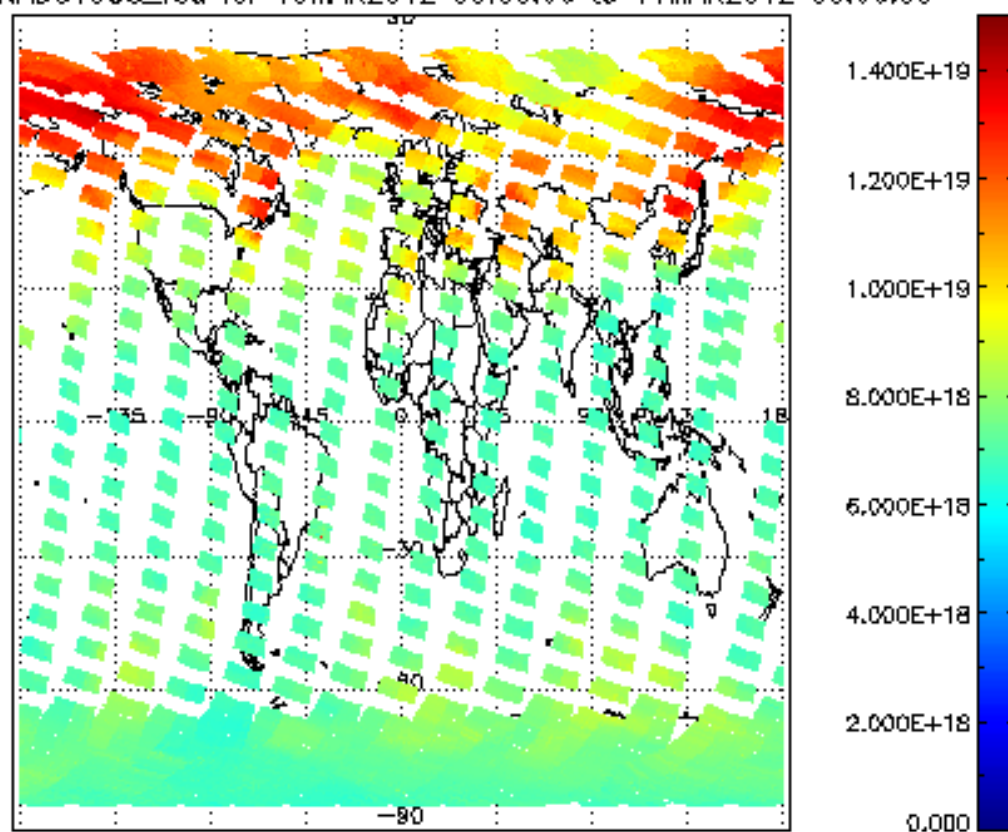




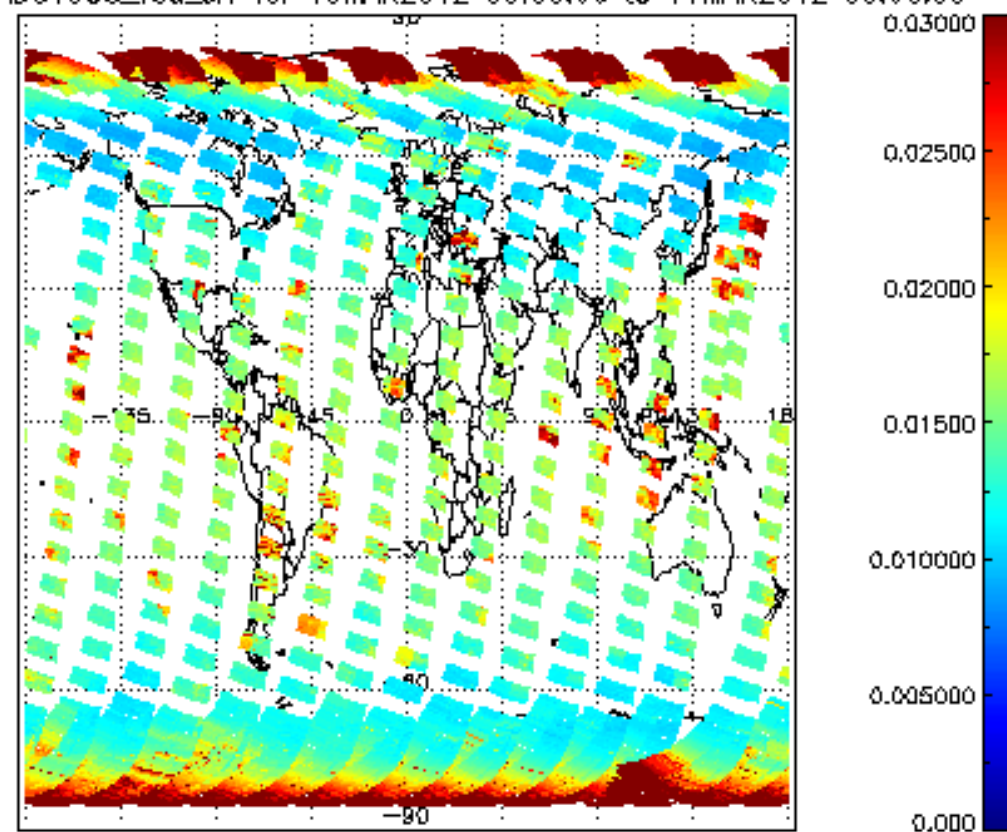




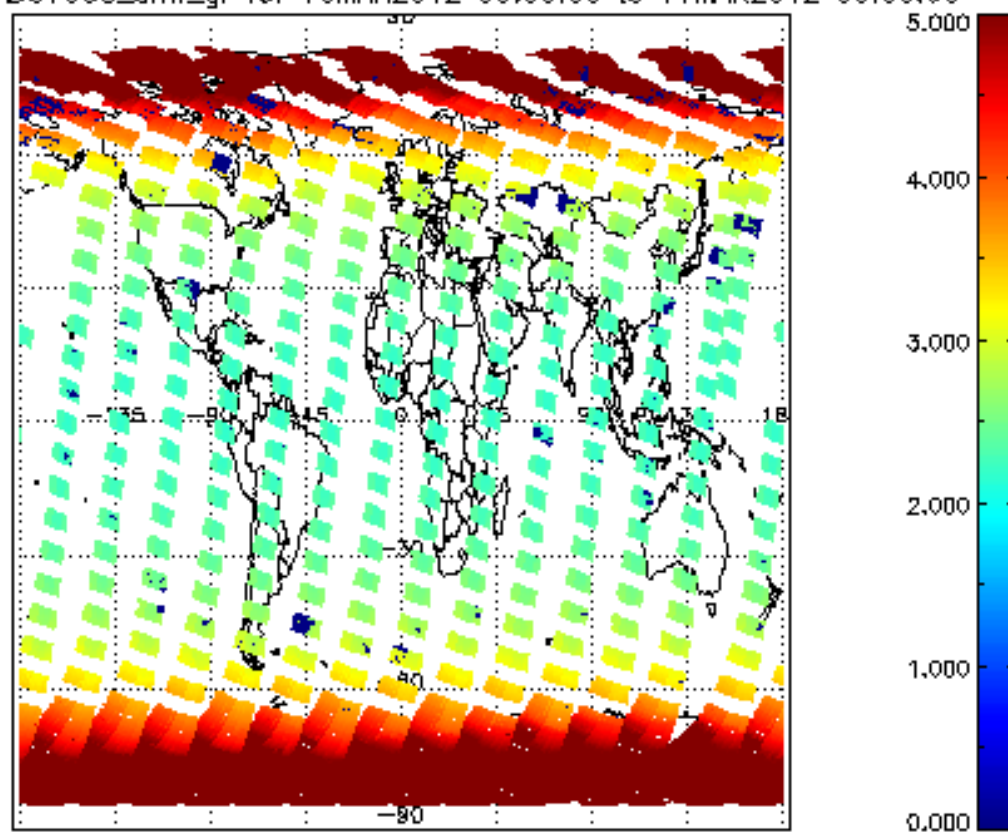
SCIOL2P\_NADUV003\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



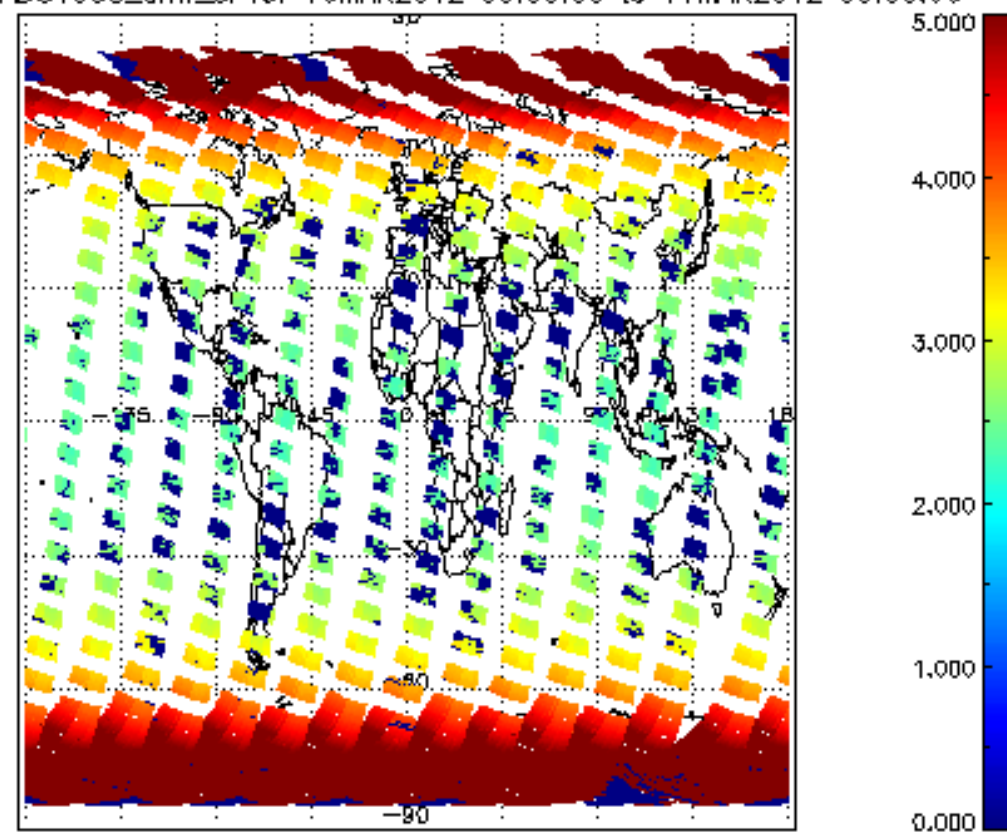
SCIOL2P\_NADUV003\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

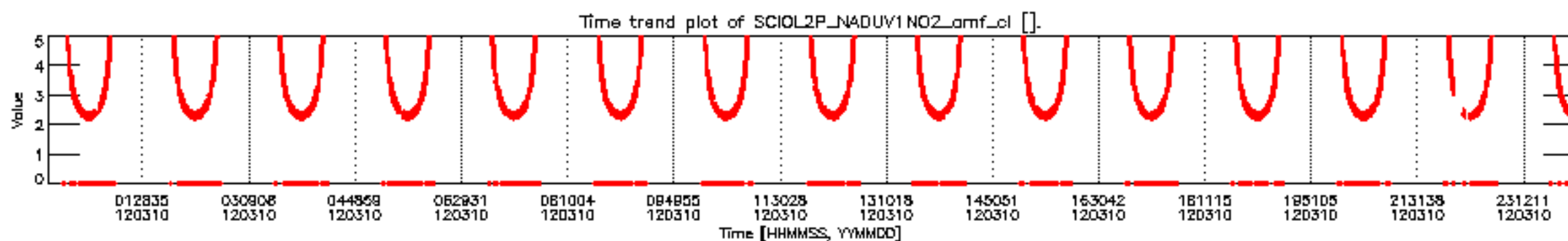
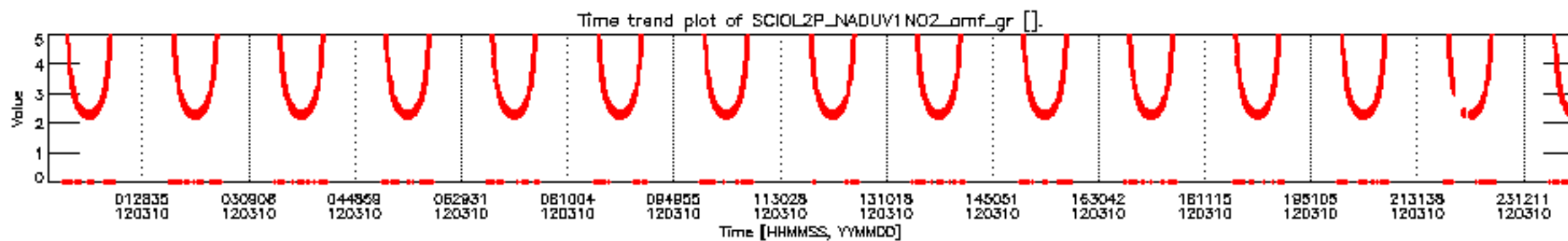
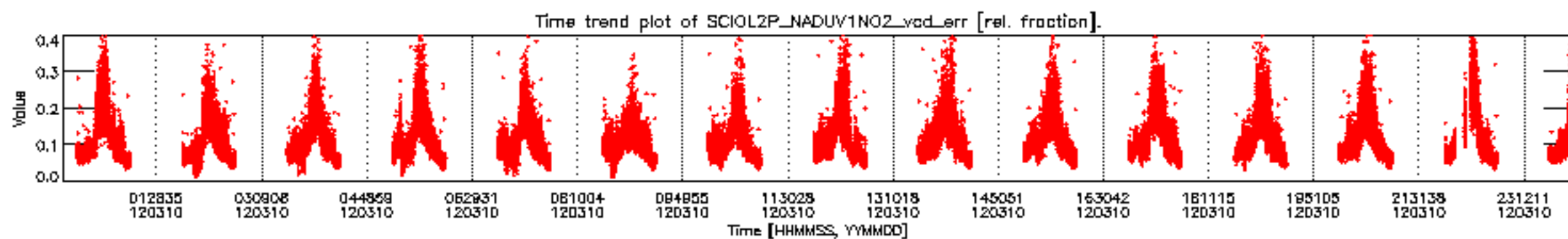
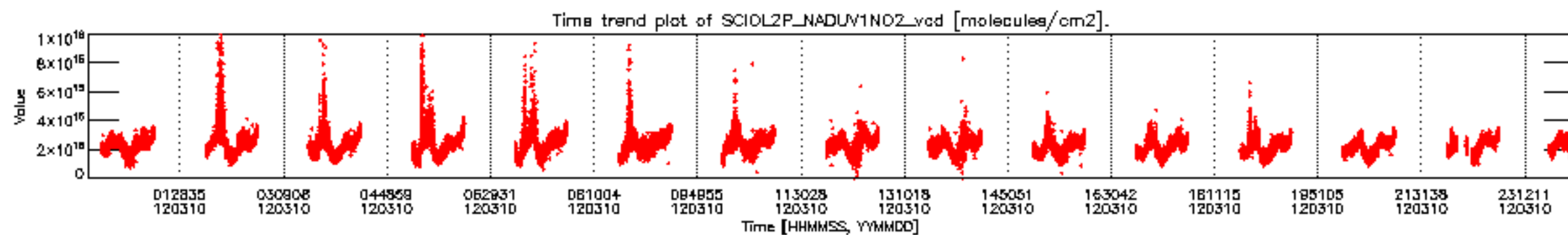


SCIOL2P\_NADUV003\_arnf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



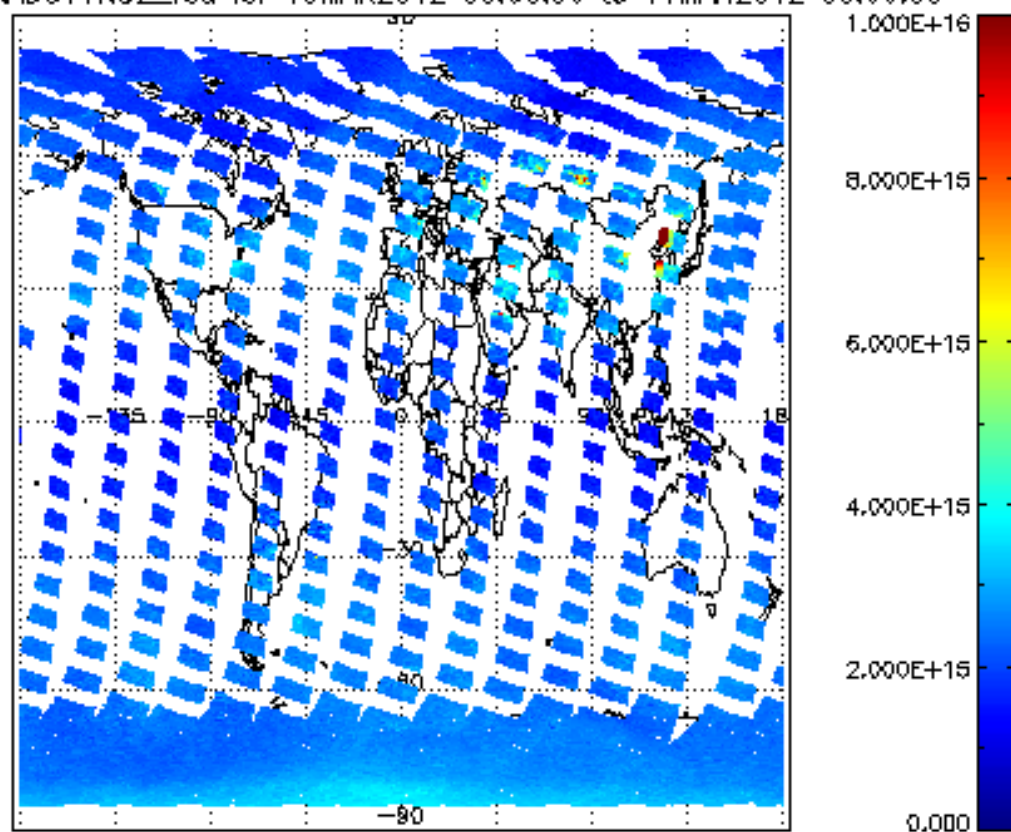
SCIOL2P\_NADUV003\_arnf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



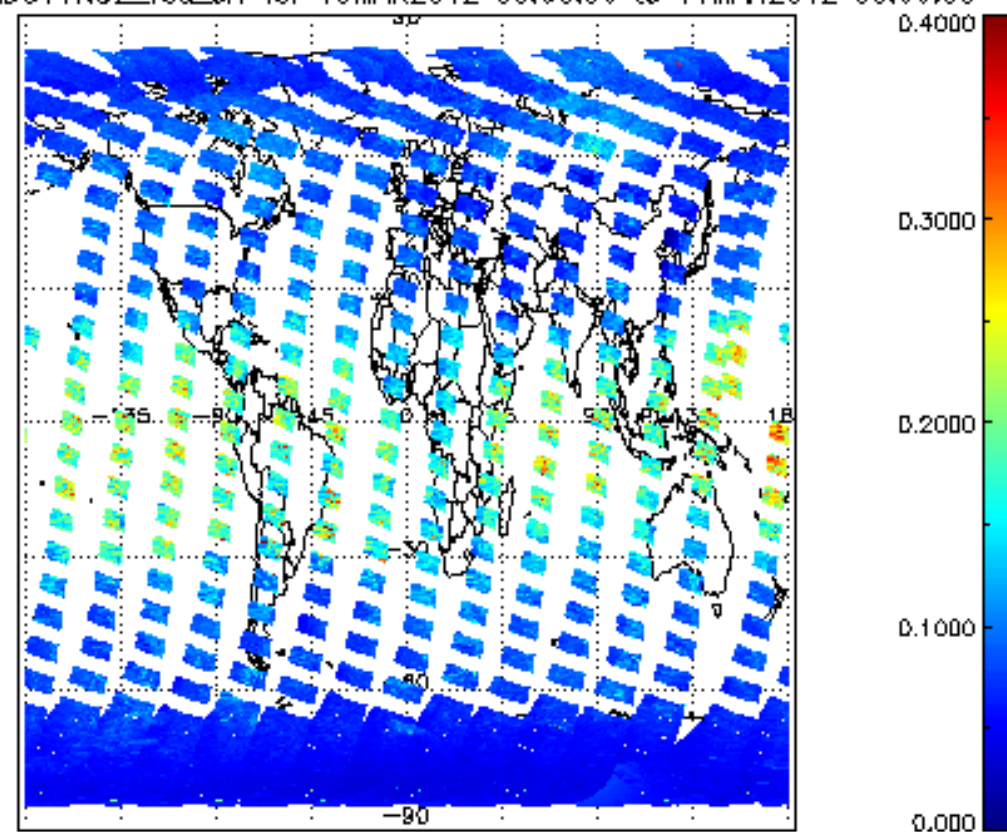




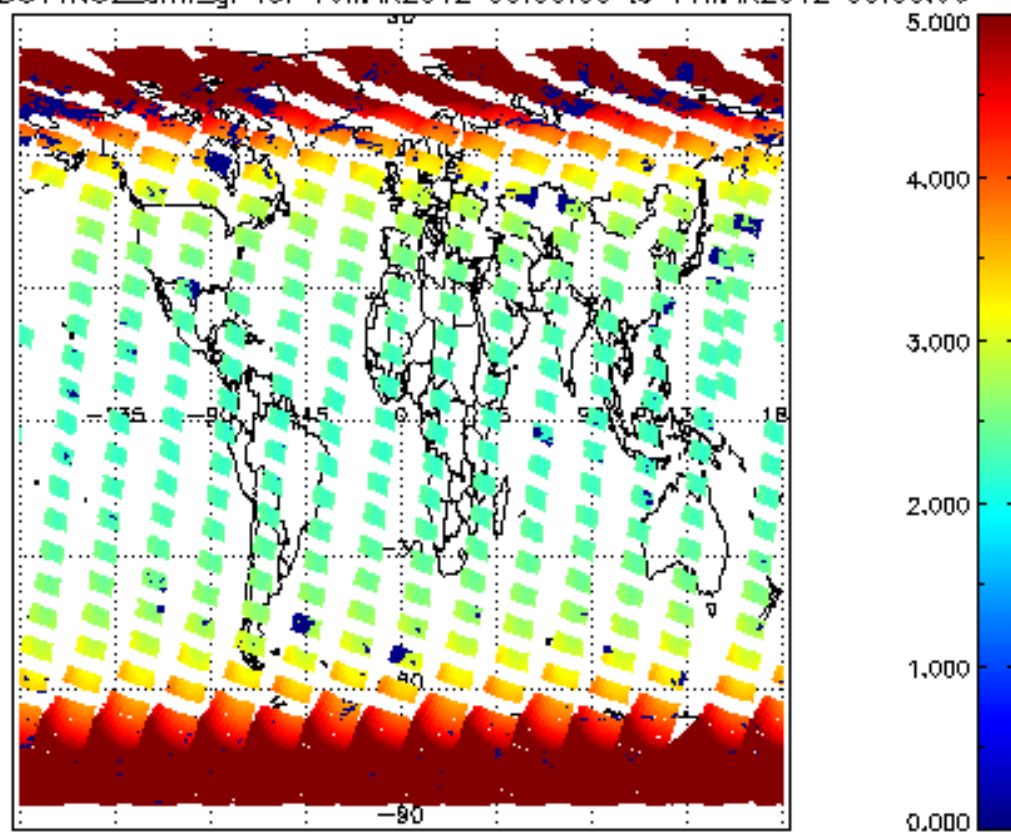
SCIOL2P\_NADUV1NO2\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



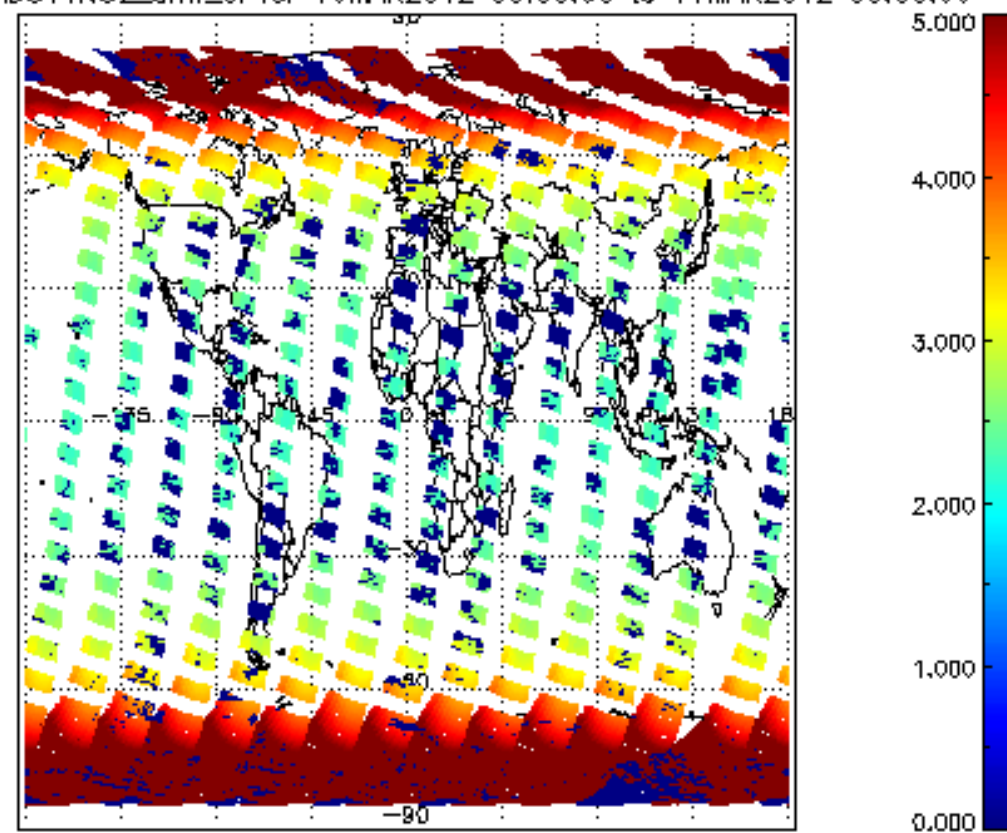
SCIOL2P\_NADUV1NO2\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

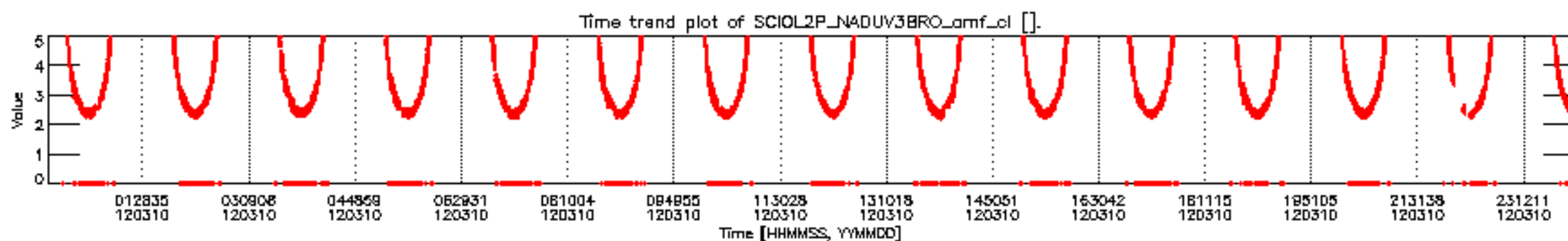
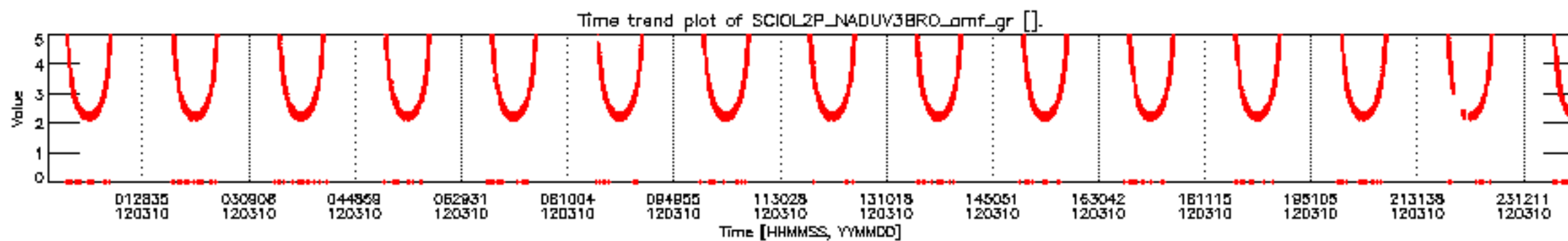
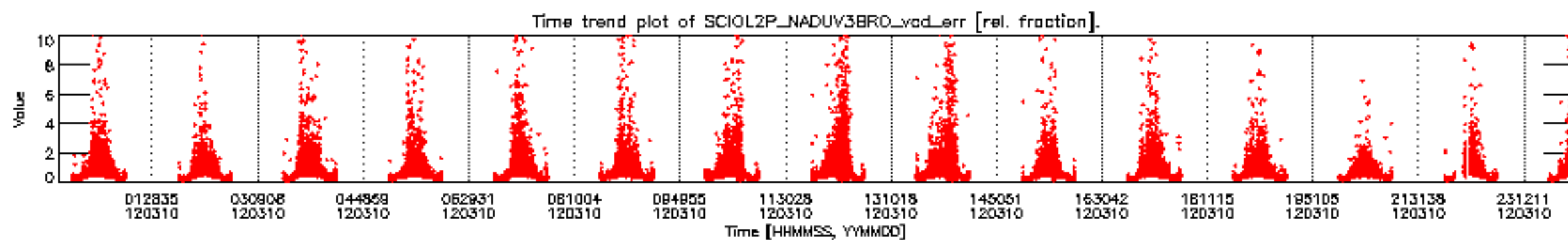
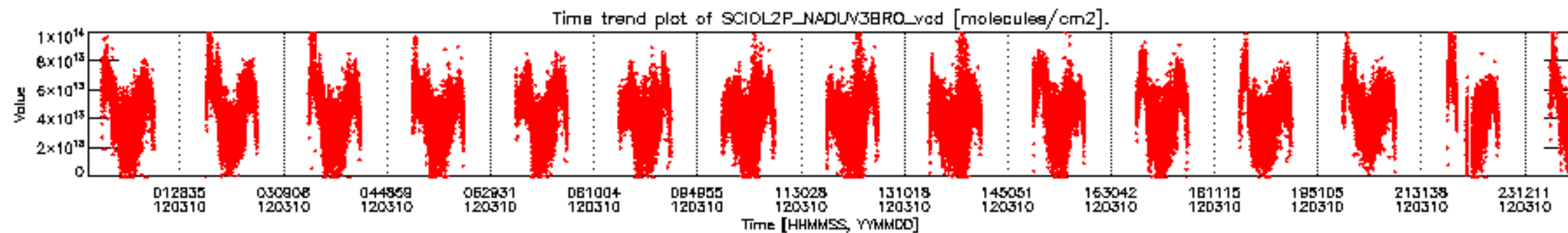


SCIOL2P\_NADUV1NO2\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



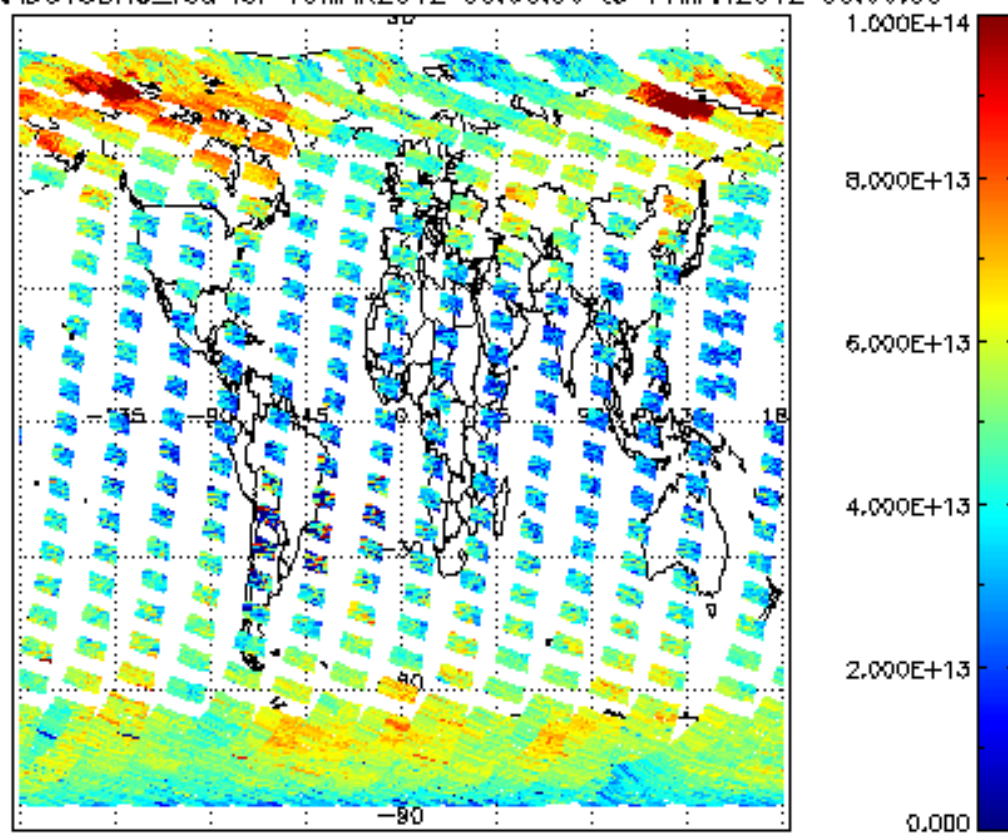
SCIOL2P\_NADUV1NO2\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



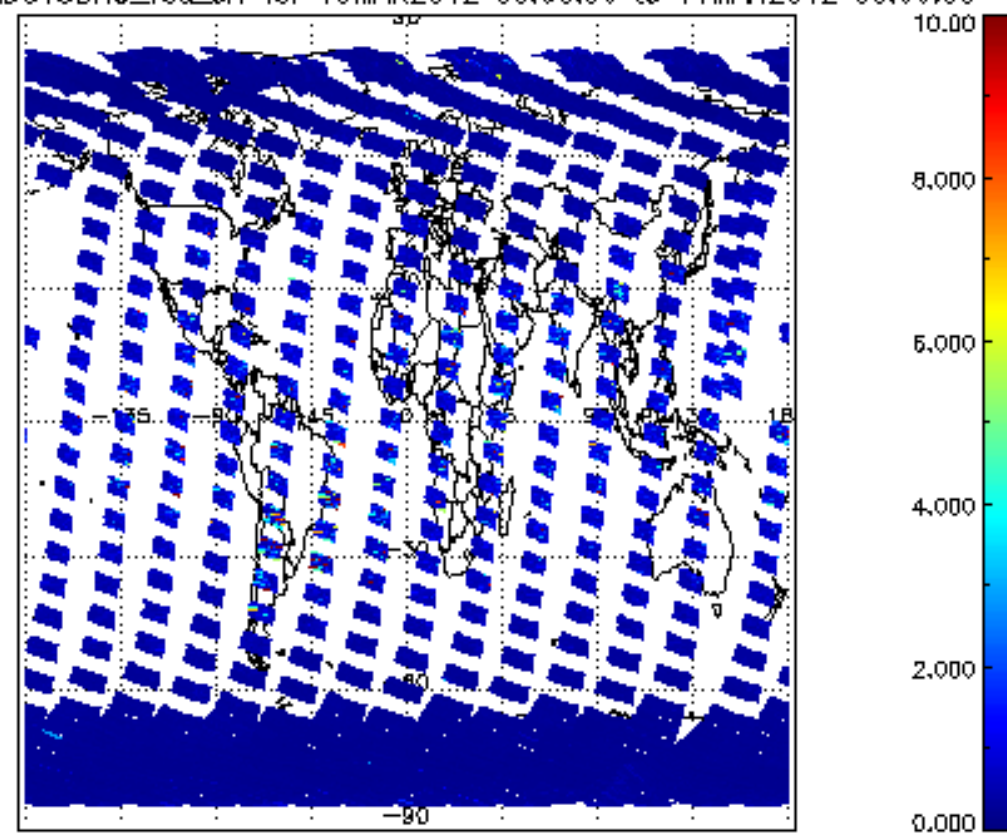




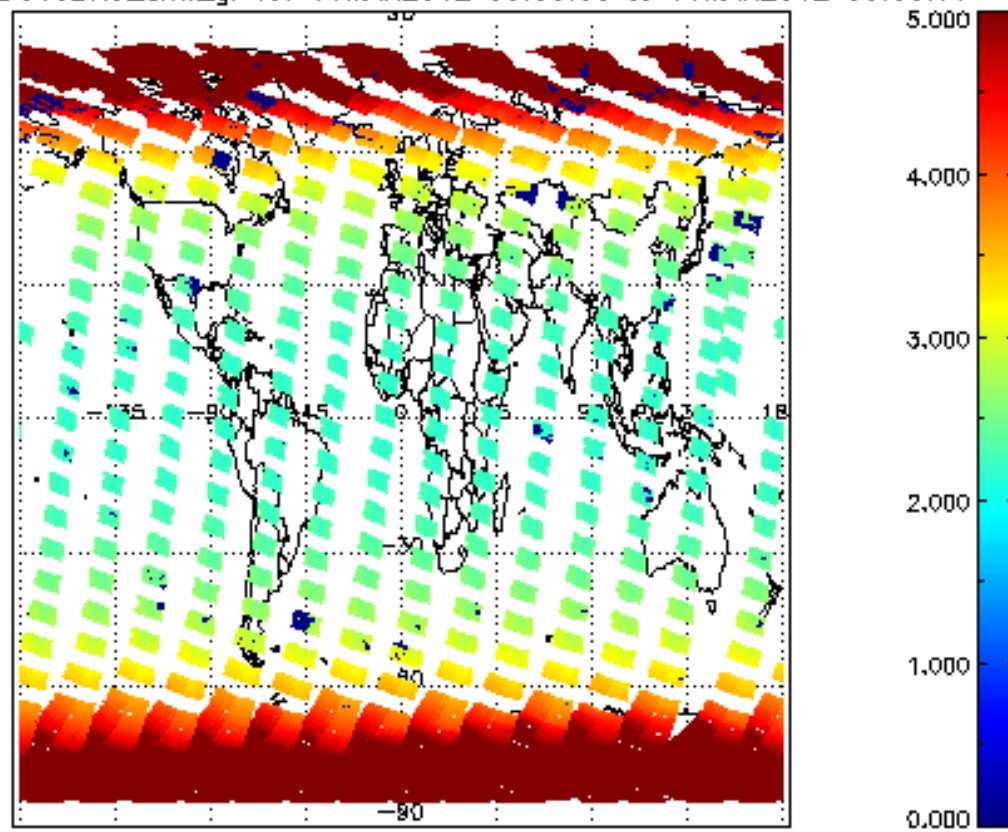
SCIOL2P\_NADUV3BRO\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



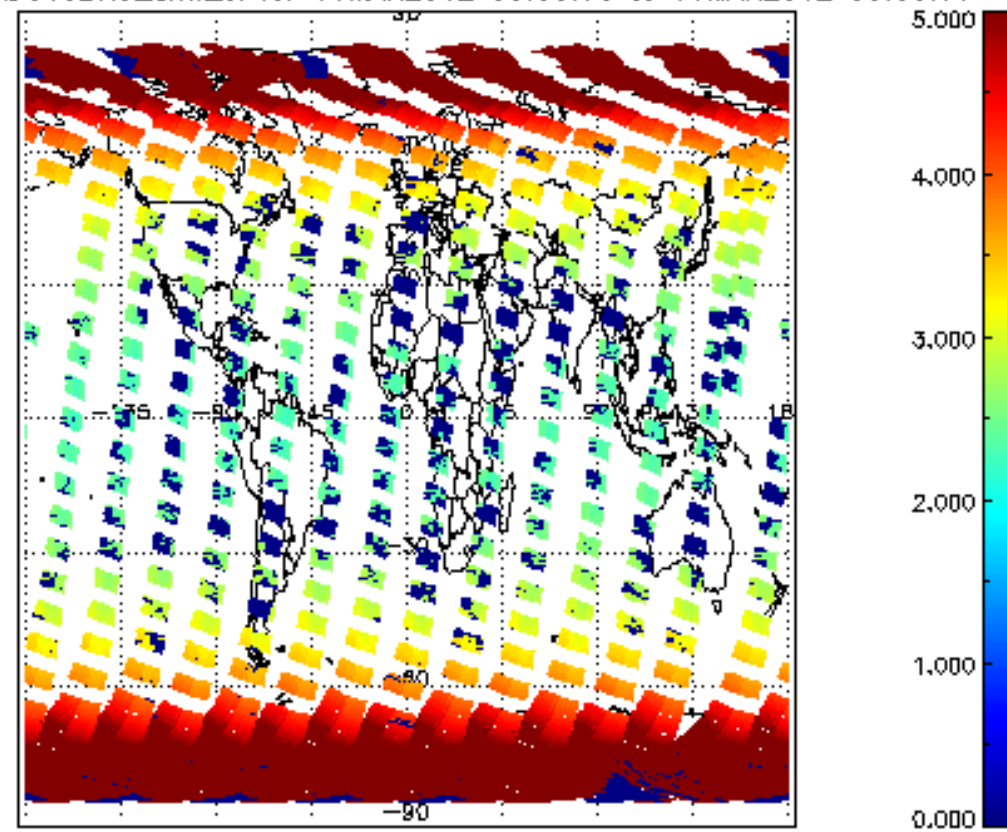
SCIOL2P\_NADUV3BRO\_vcd\_Lerr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

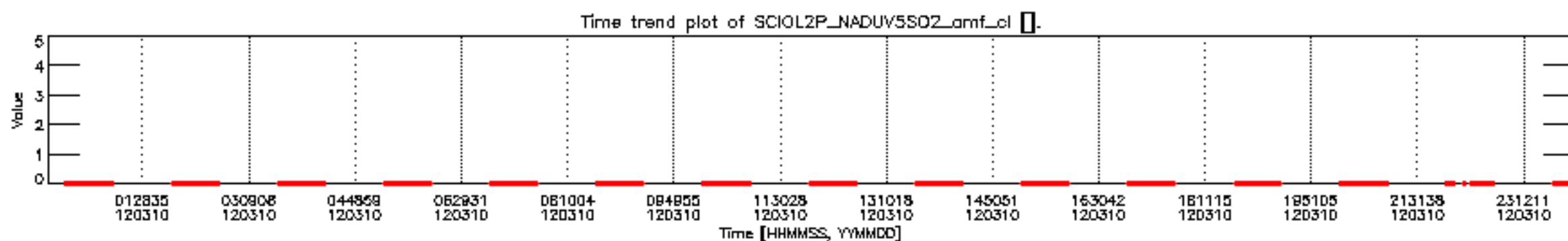
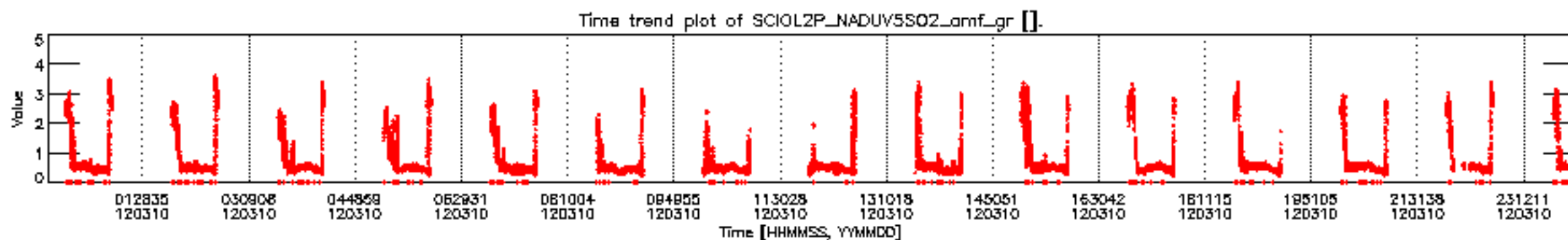
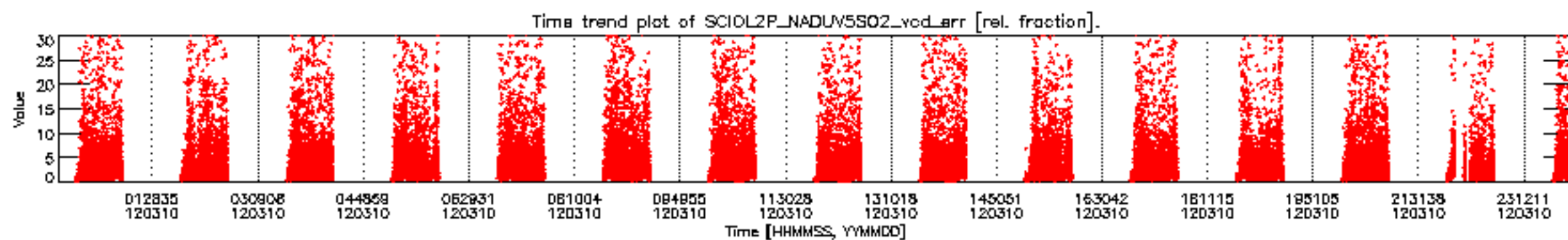
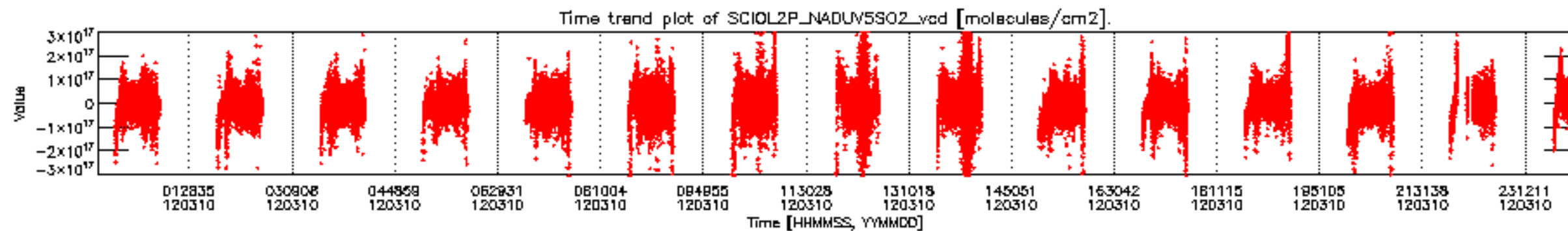


SCIOL2P\_NADUV3BRO\_arnf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



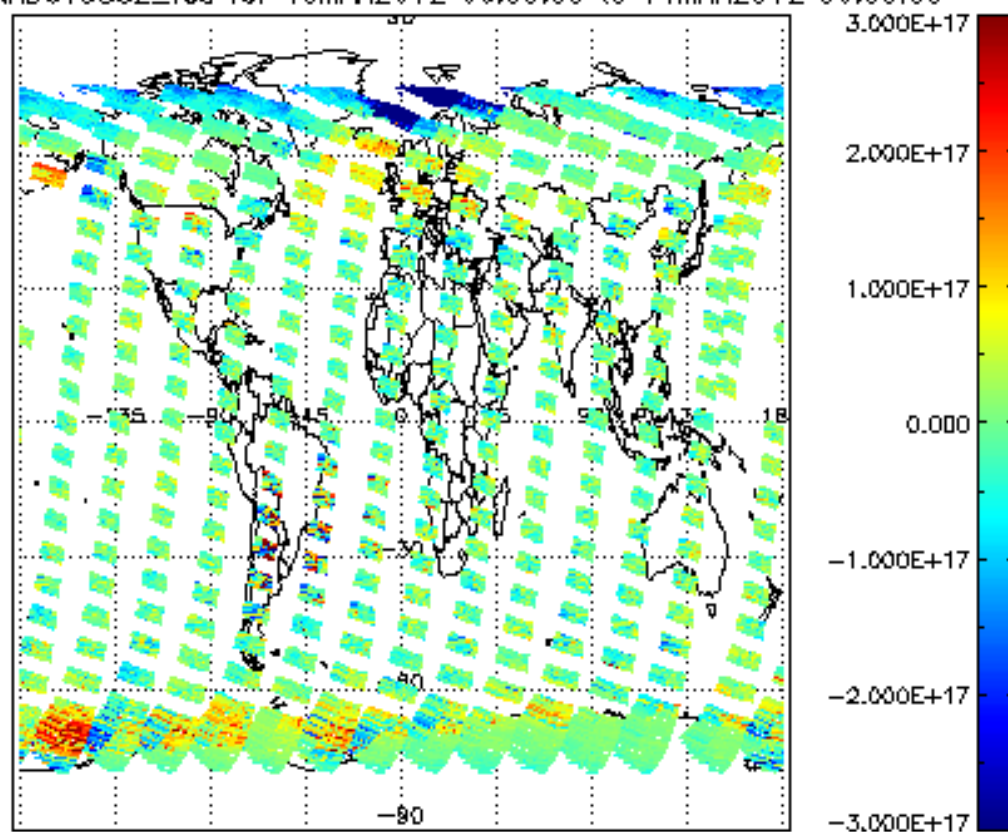
SCIOL2P\_NADUV3BRO\_arnf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



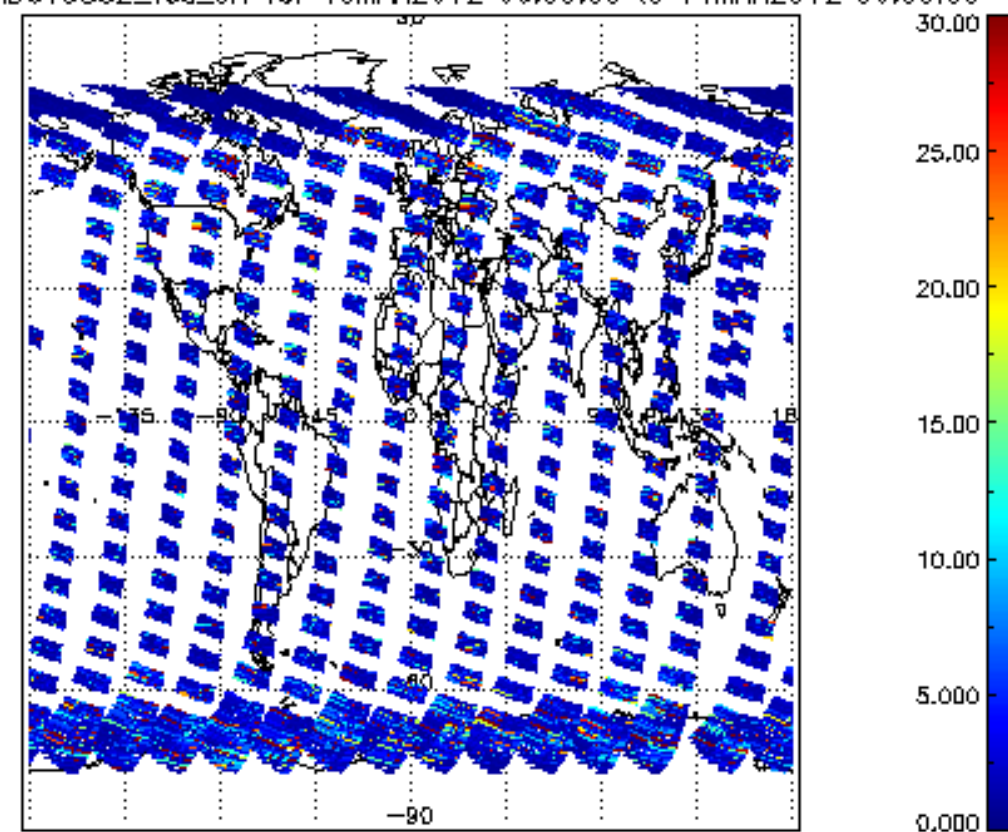




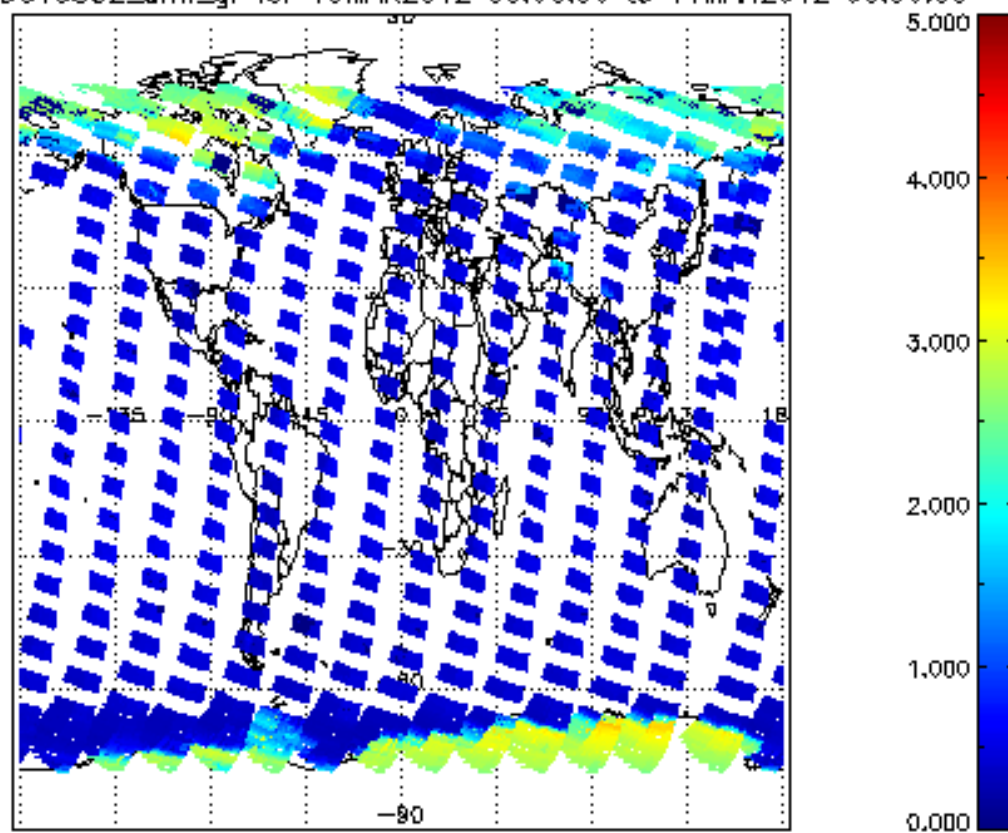
SCIOL2P\_NADUV5S02\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



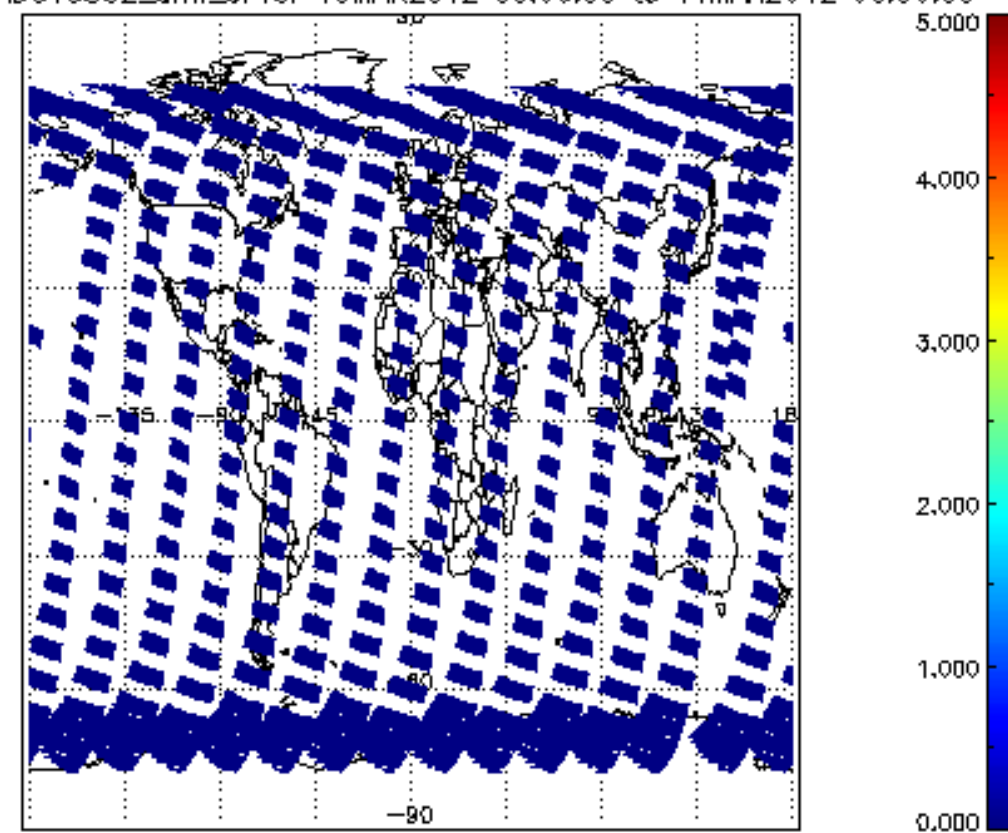
SCIOL2P\_NADUV5S02\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

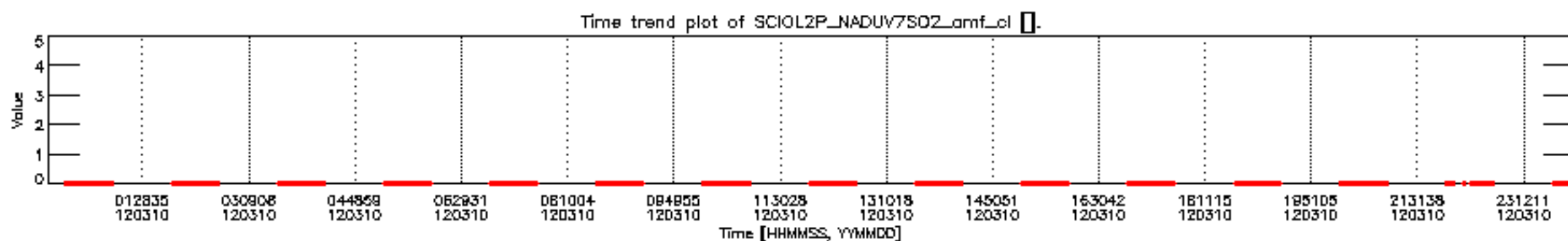
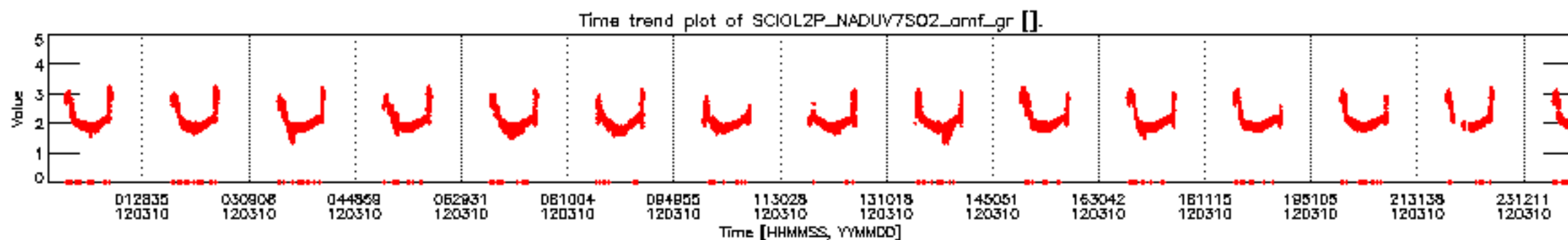
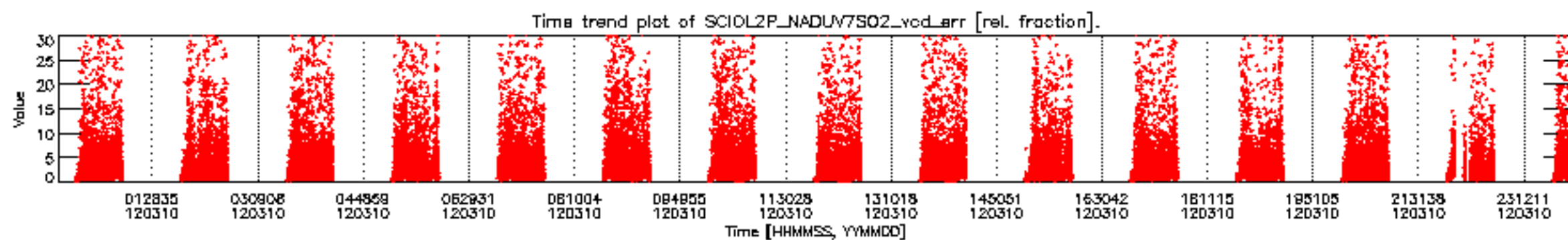
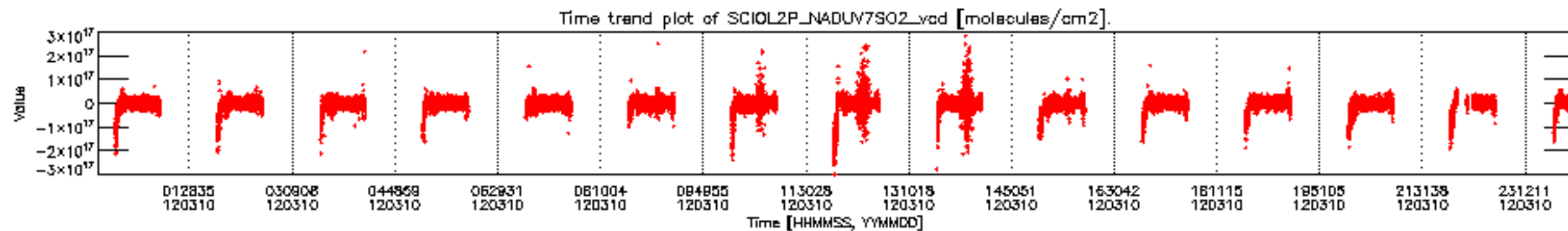


SCIOL2P\_NADUV5S02\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



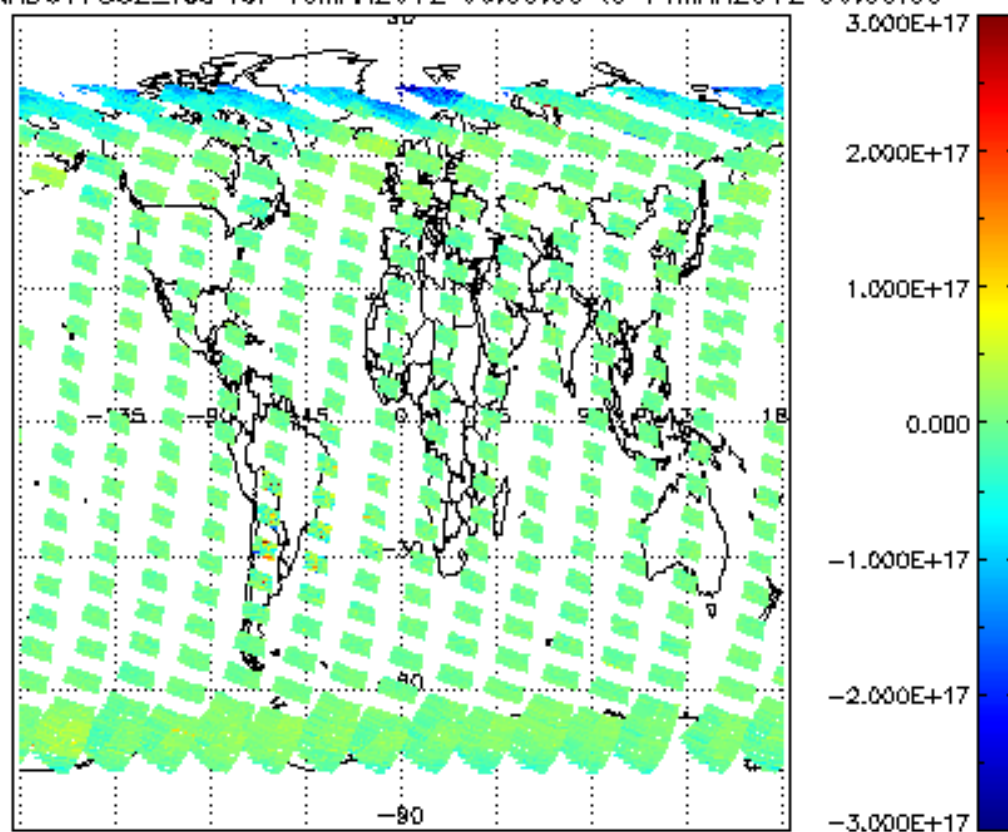
SCIOL2P\_NADUV5S02\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



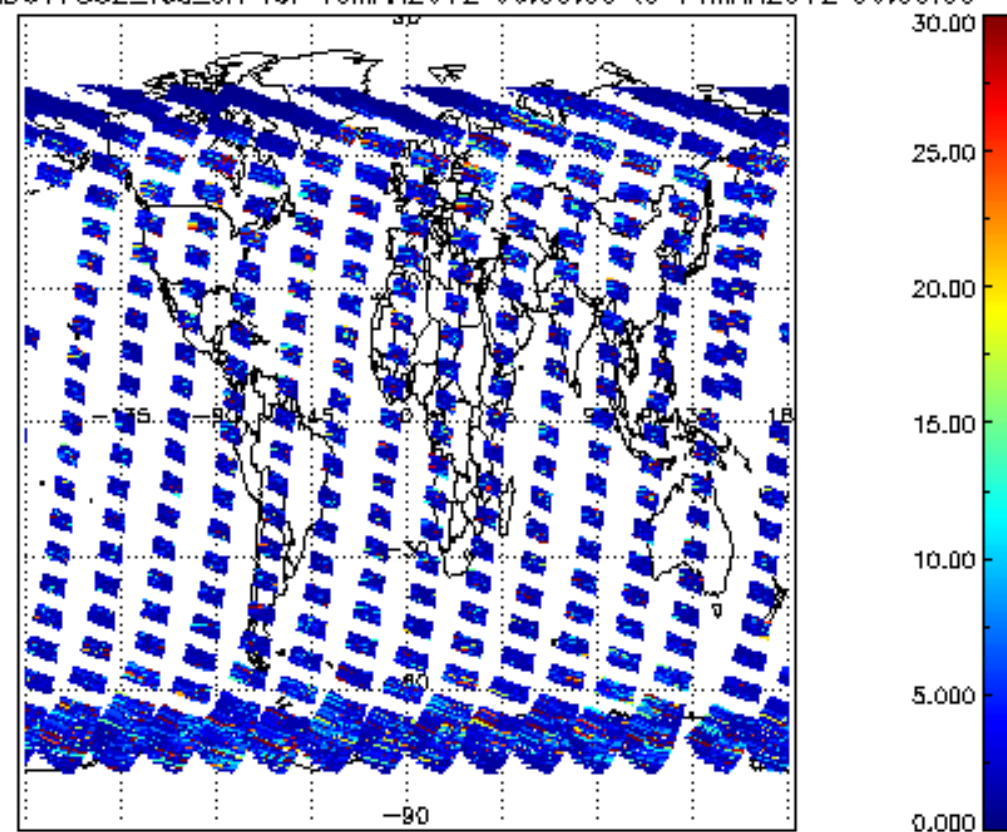




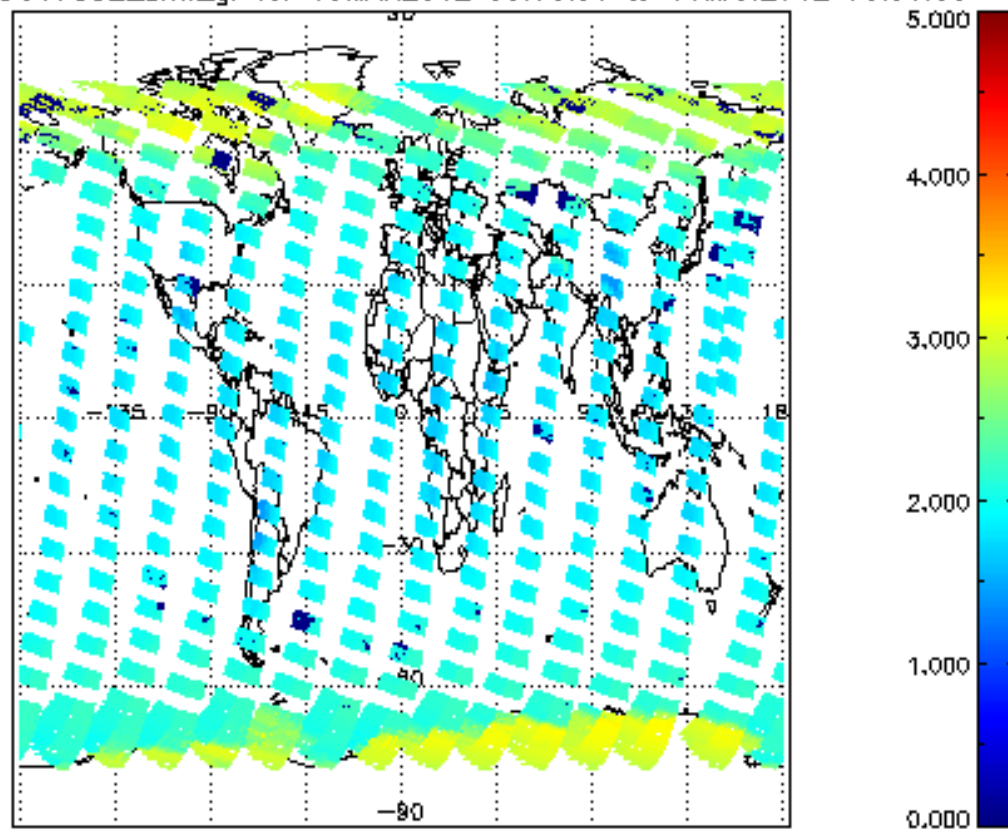
SCIOL2P\_NADUV7S02\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



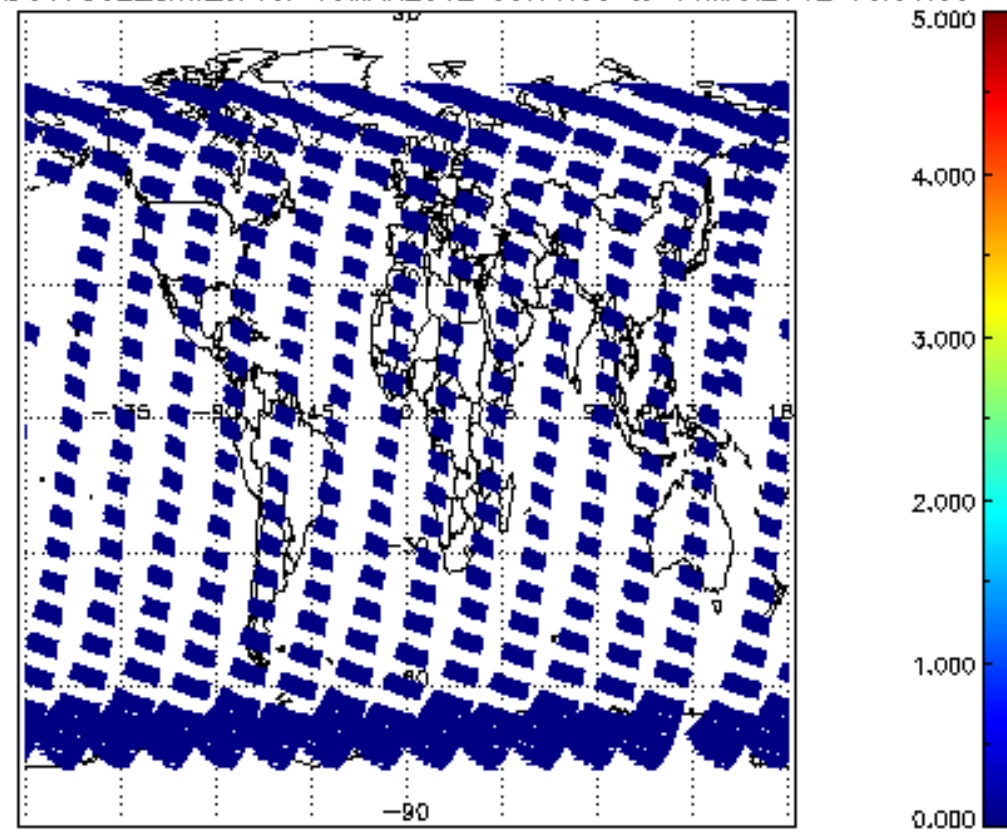
SCIOL2P\_NADUV7S02\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

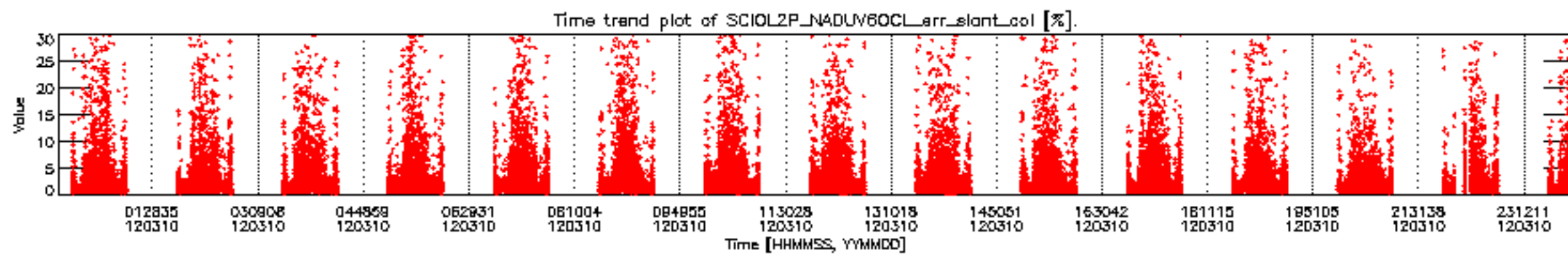
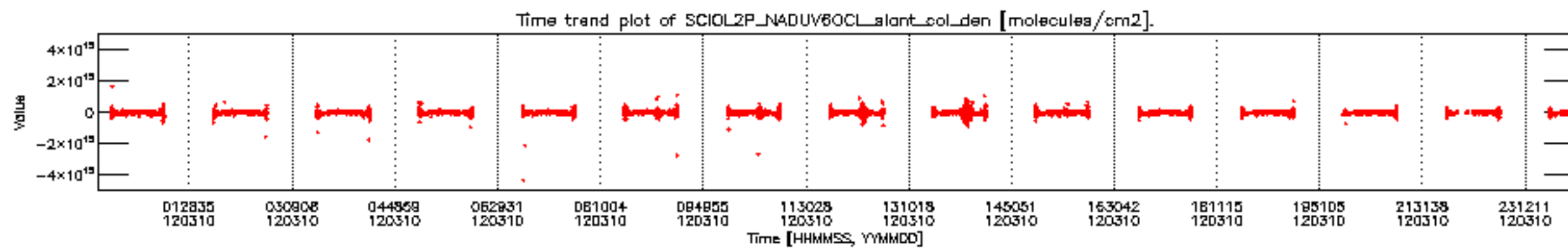


SCIOL2P\_NADUV7S02\_amf\_gr for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



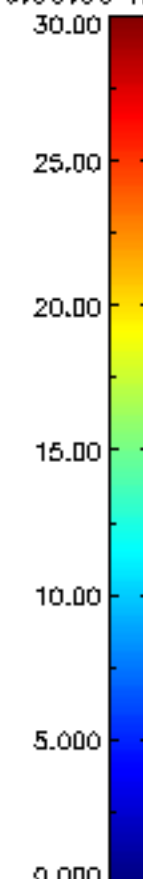
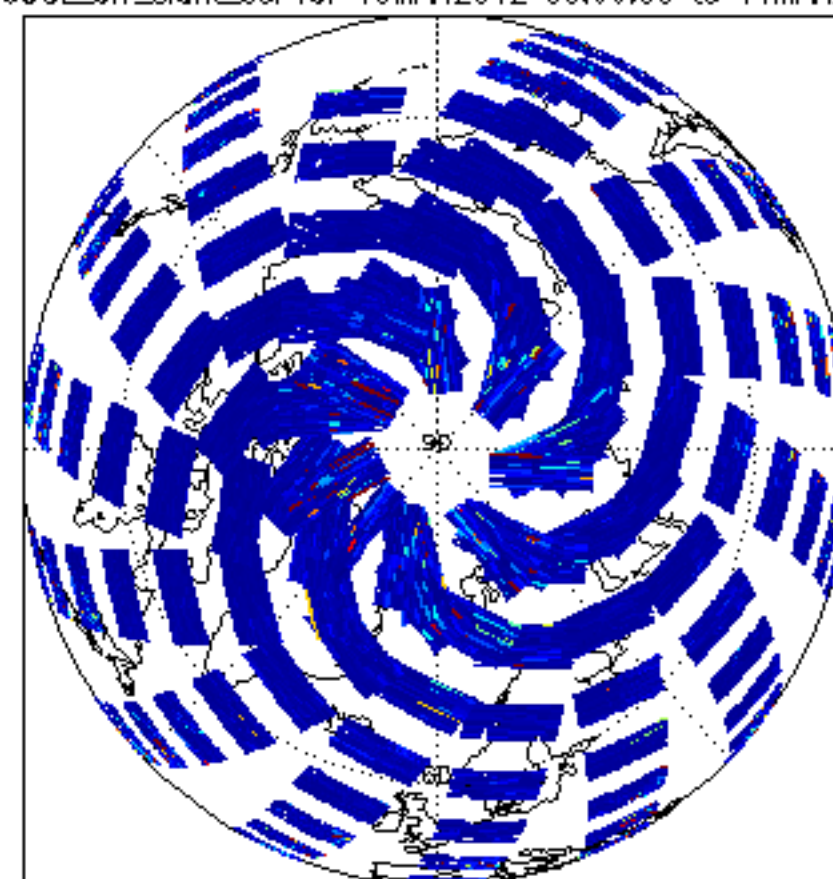
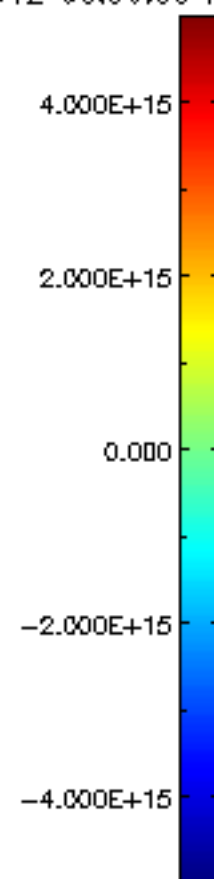
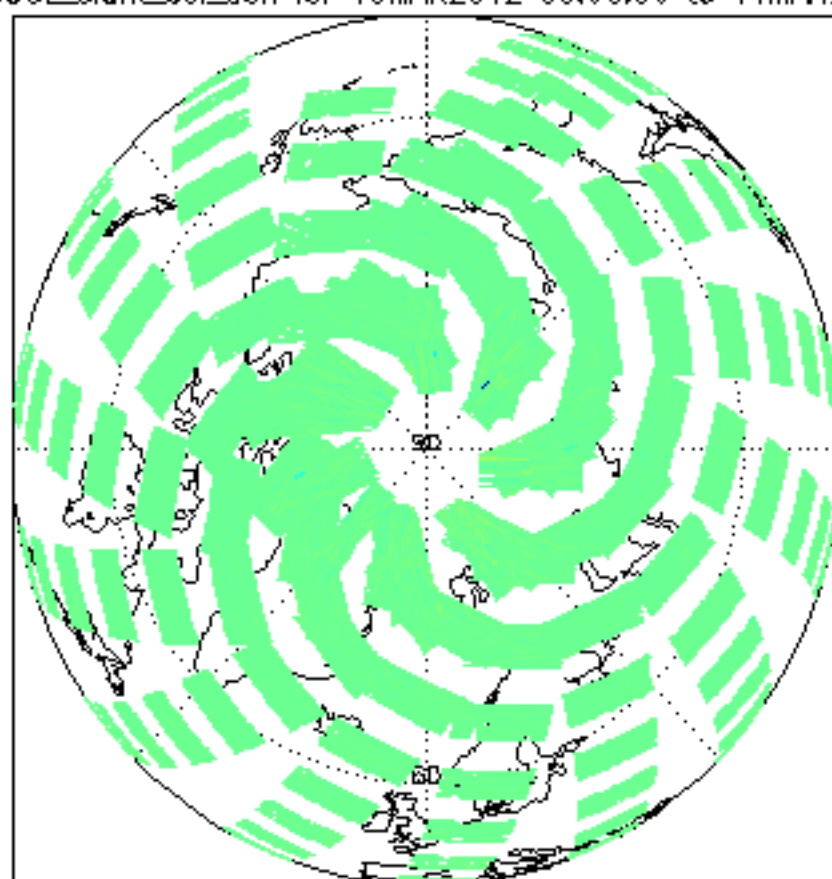
SCIOL2P\_NADUV7S02\_amf\_cl for 10MAR2012 00:00:00 to 11MAR2012 00:00:00



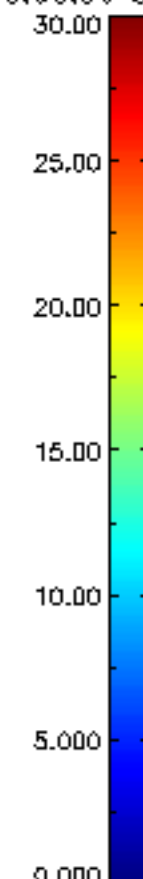
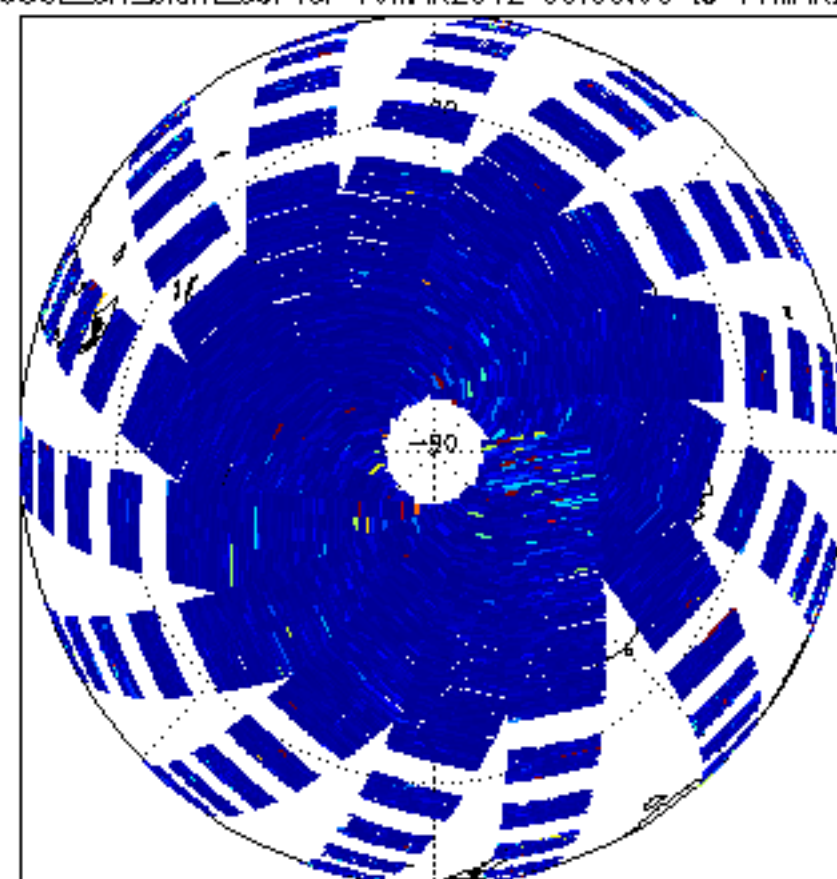
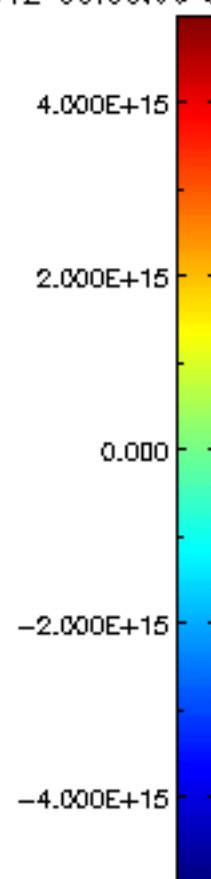
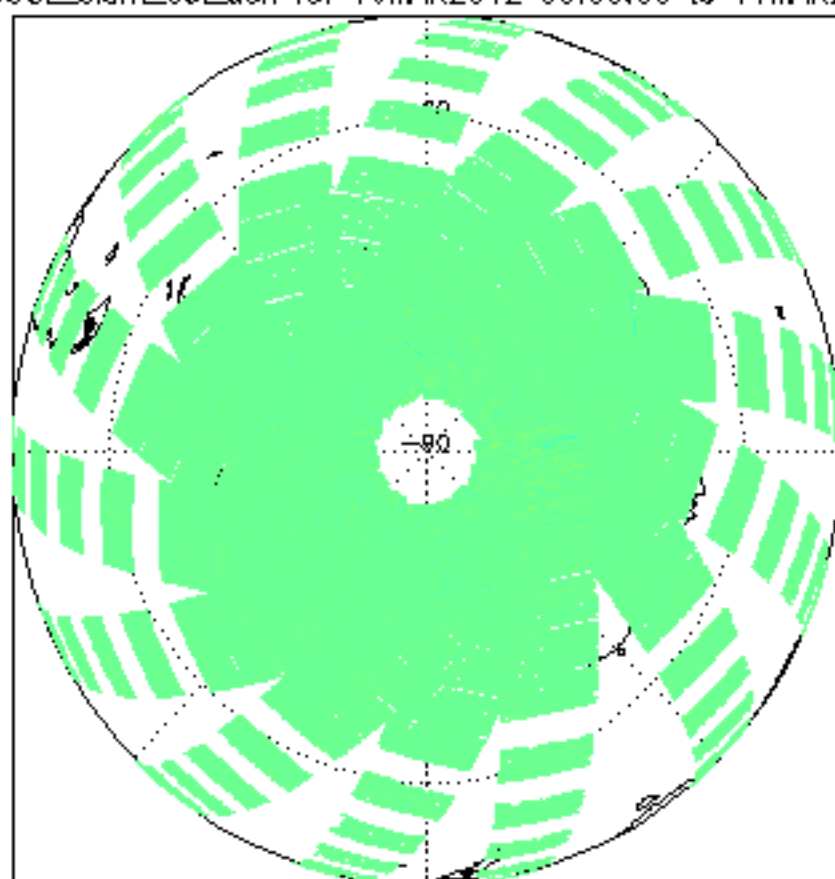




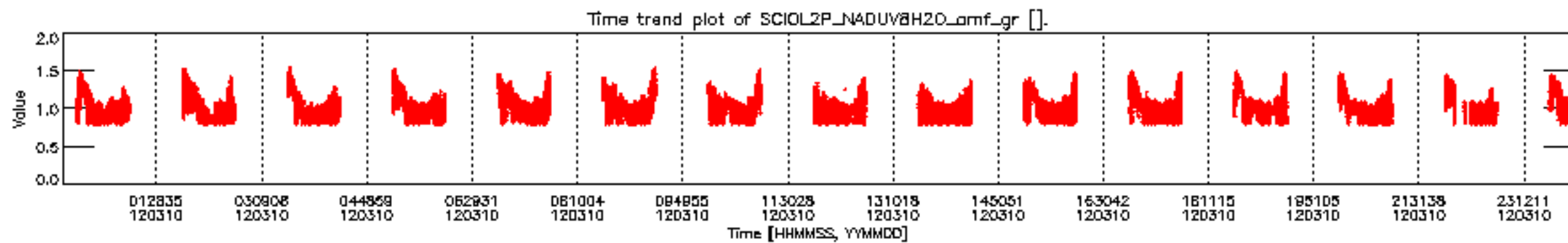
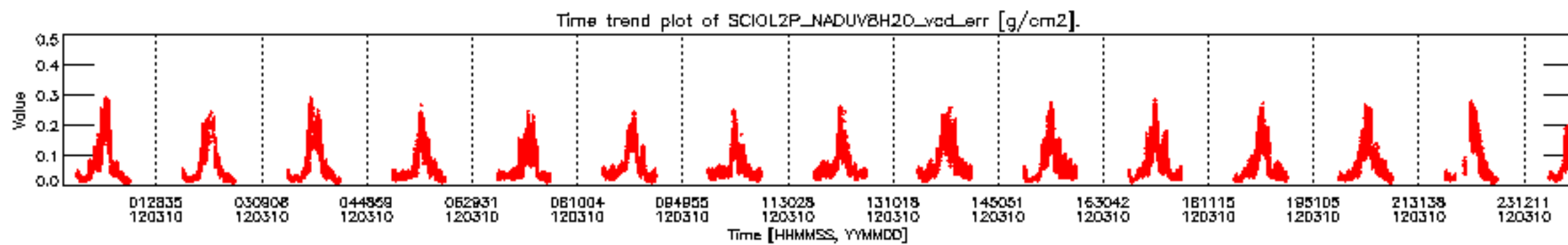
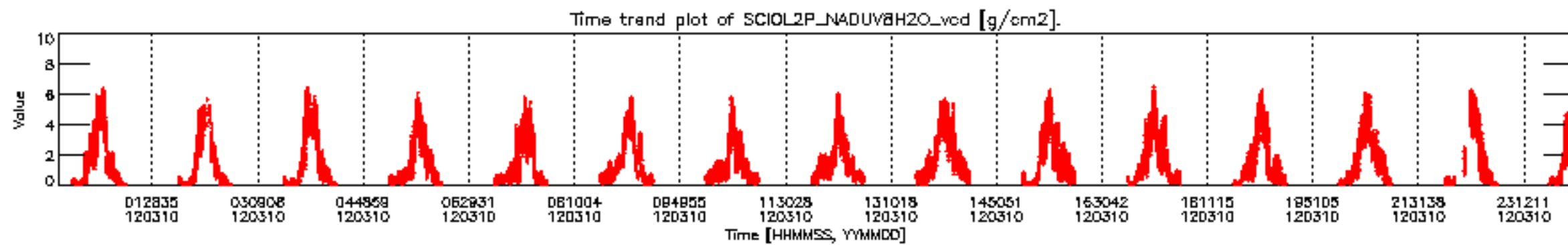
CIOL2P\_NADUV6OCL\_slant\_col\_den for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 np



CIOL2P\_NADUV6OCL\_slant\_coLden for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 10MAR2012 00:00:00 to 11MAR2012 00:00:00 sp

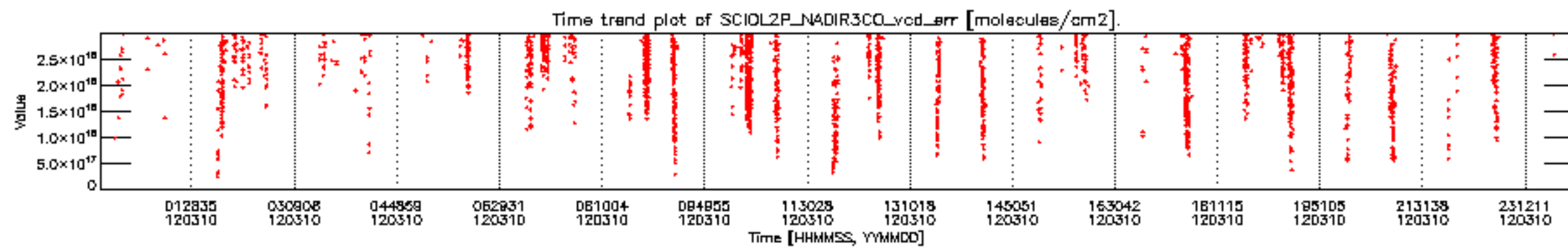
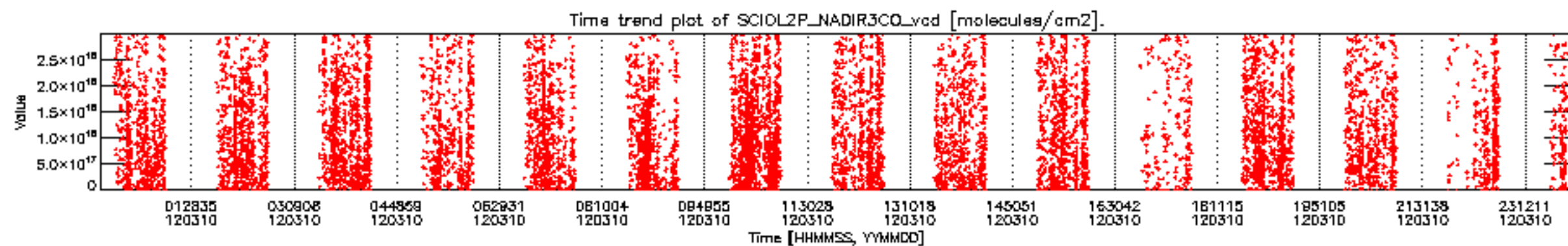




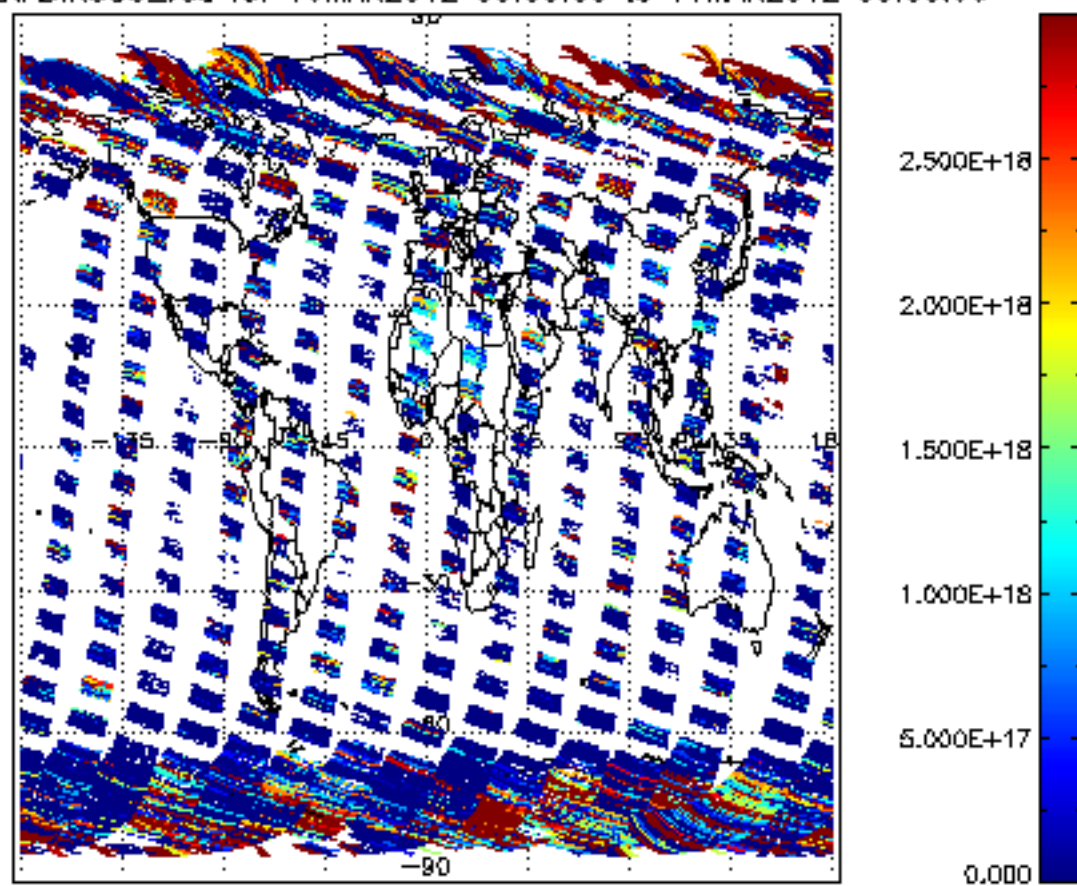




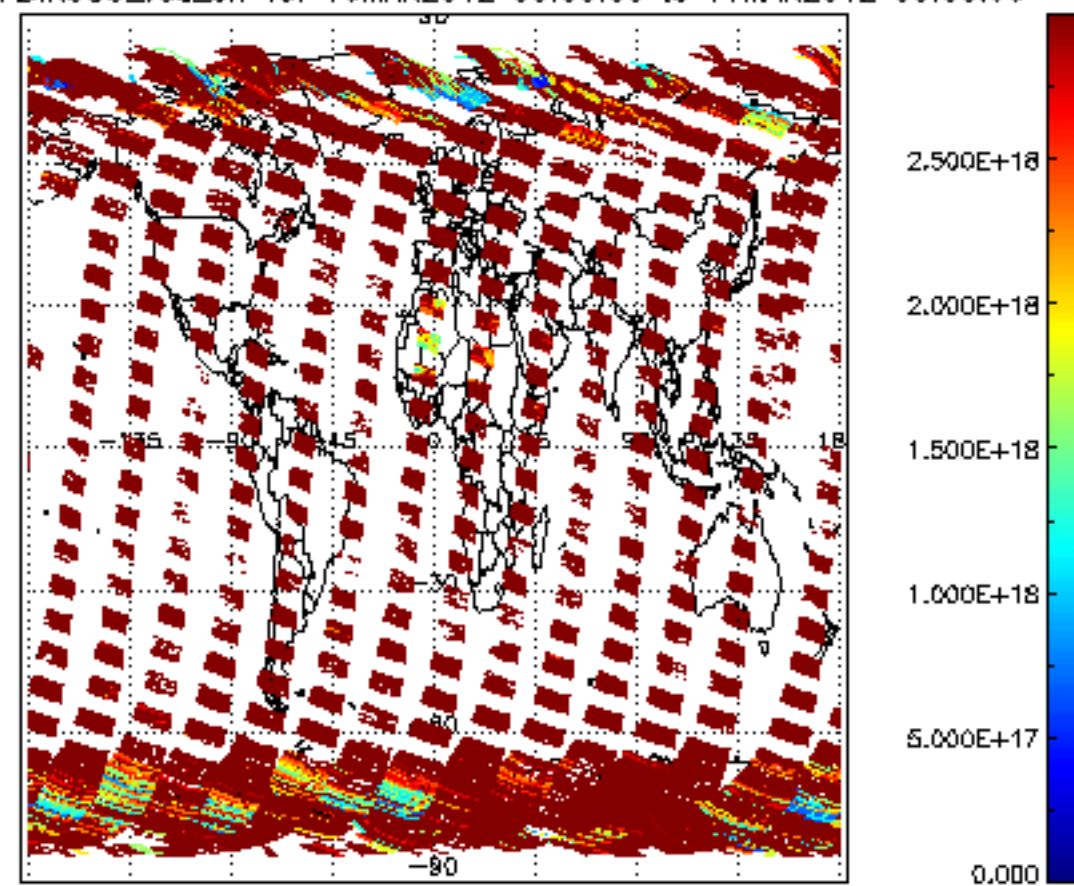




SCIOL2P\_NADIR3CO\_vcd for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

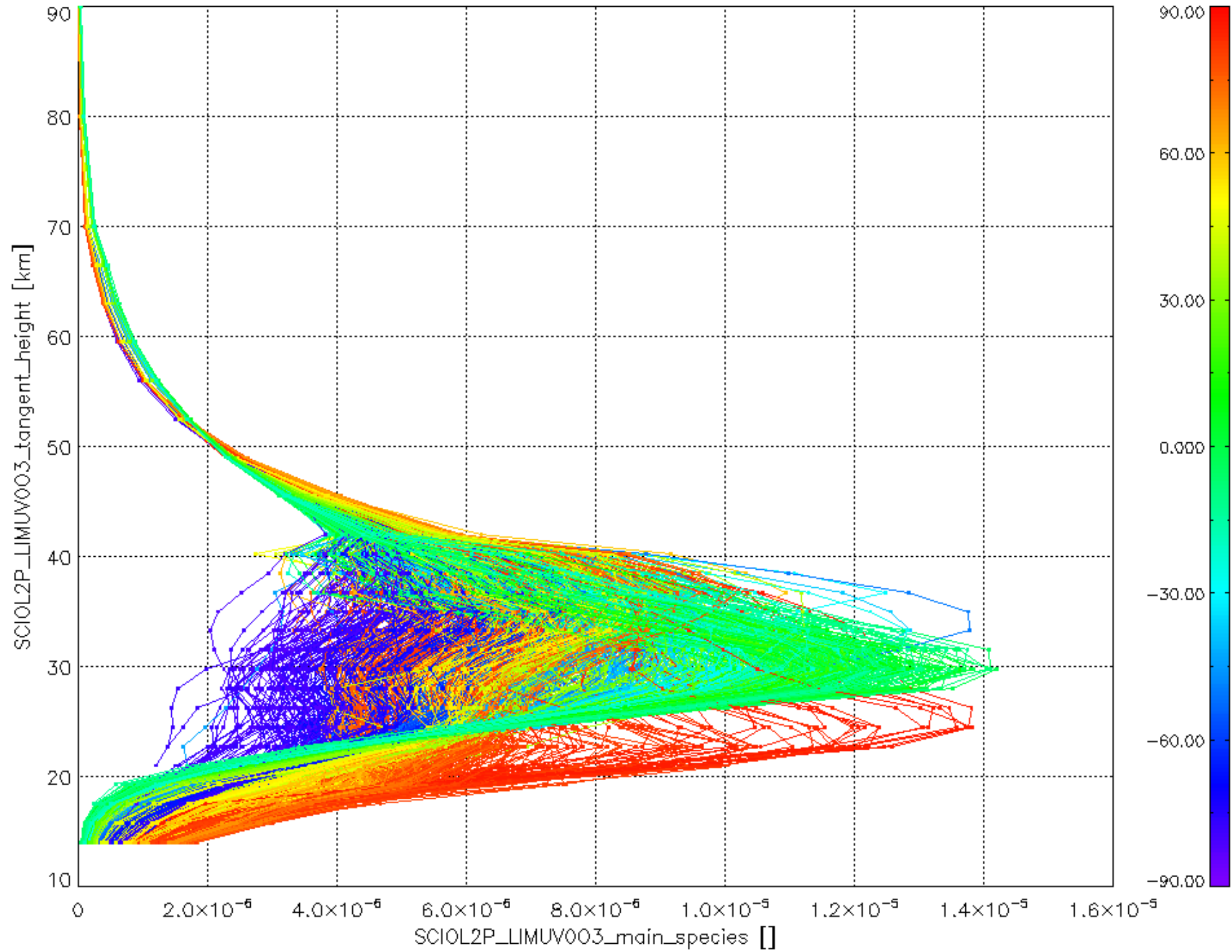


SCIOL2P\_NADIR3CO\_vcd\_err for 10MAR2012 00:00:00 to 11MAR2012 00:00:00

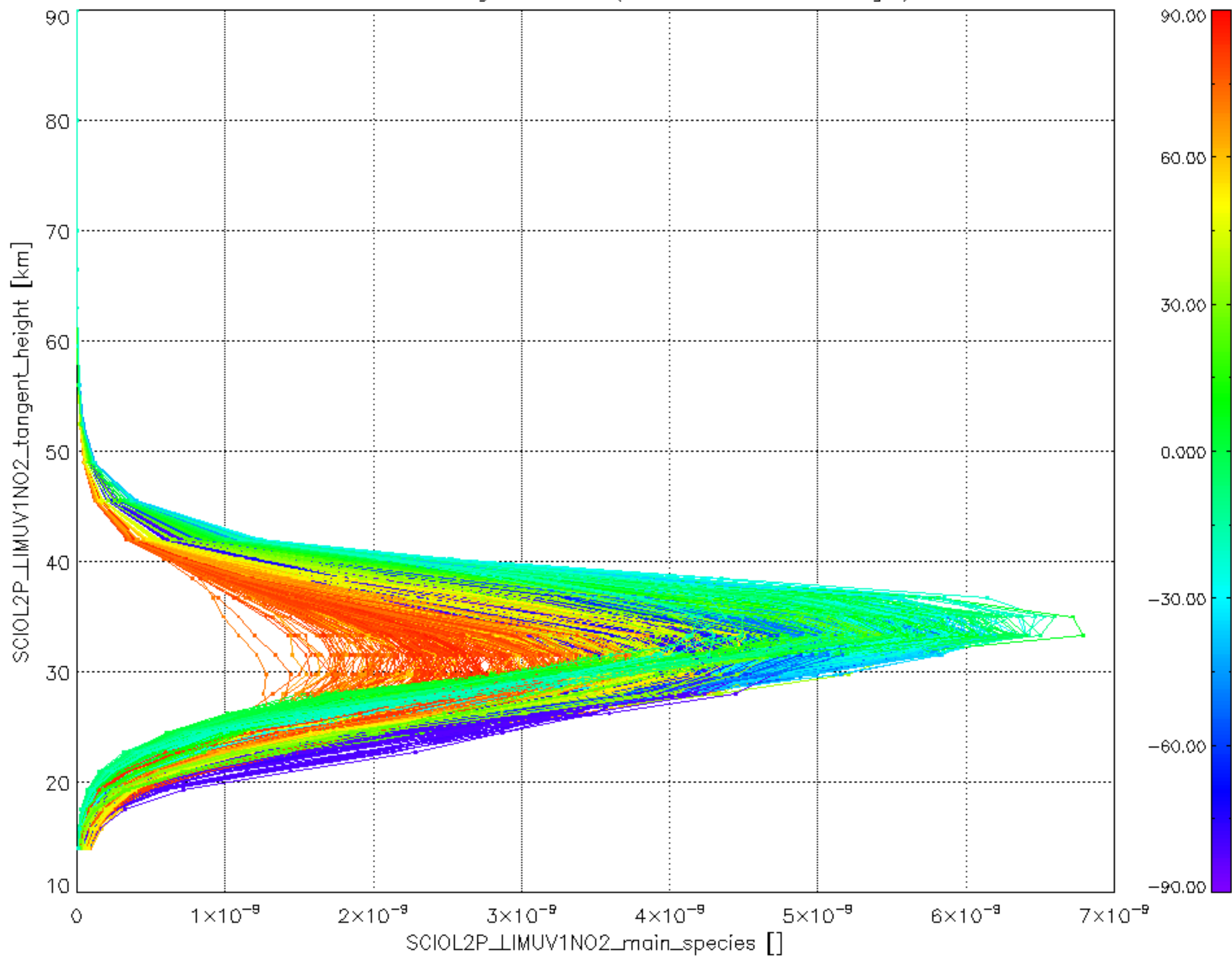




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

