

## 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	06APR2012 03:36:41
Data source version	SCIA-OL/5.02-W
Processing scope for products	27MAR2012 00:00:00 to 28MAR2012 00:00:00
Start time of first product within scope	26MAR2012 23:40:54
Stop time of last product within scope	28MAR2012 00:02:40
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__2PWDPA20120326_234054_000035163113_00088_52688_4174.N1</a>	26MAR2012 23:40:54	27MAR2012 00:39:31	0	GOOD
1	<a href="#">SCI_OL__2PWDPA20120327_012108_000035303113_00089_52689_4170.N1</a>	27MAR2012 01:21:08	27MAR2012 02:19:58	0	GOOD
2	<a href="#">SCI_OL__2PWDPA20120327_030121_000035163113_00090_52690_4171.N1</a>	27MAR2012 03:01:21	27MAR2012 03:59:58	0	GOOD
3	<a href="#">SCI_OL__2PWDPA20120327_044135_000035303113_00091_52691_4172.N1</a>	27MAR2012 04:41:35	27MAR2012 05:40:25	0	GOOD
4	<a href="#">SCI_OL__2PWDPA20120327_062149_000035163113_00092_52692_4173.N1</a>	27MAR2012 06:21:49	27MAR2012 07:20:25	0	GOOD

5	SCI_OL__2PWDP	A20120327_080202_000035303113_00093_52693_4175.N1	27MAR2012 08:02:02	27MAR2012 09:00:53	0	GOOD
6	SCI_OL__2PWDP	A20120327_094216_000035163113_00094_52694_4176.N1	27MAR2012 09:42:16	27MAR2012 10:40:52	0	GOOD
7	SCI_OL__2PWDP	A20120327_112229_000035303113_00095_52695_4177.N1	27MAR2012 11:22:29	27MAR2012 12:21:19	0	GOOD
8	SCI_OL__2PWDP	A20120327_130242_000035163113_00096_52696_4178.N1	27MAR2012 13:02:42	27MAR2012 14:01:19	0	GOOD
9	SCI_OL__2PWDP	A20120327_144256_000035303113_00097_52697_4179.N1	27MAR2012 14:42:56	27MAR2012 15:41:46	0	GOOD
10	SCI_OL__2PWDP	A20120327_162309_000035163113_00098_52698_4180.N1	27MAR2012 16:23:09	27MAR2012 17:21:46	0	GOOD
11	SCI_OL__2PWDP	A20120327_180419_000034663113_00099_52699_4181.N1	27MAR2012 18:04:19	27MAR2012 19:02:06	0	GOOD
12	SCI_OL__2PWDP	A20120327_194351_000035163113_00100_52700_4182.N1	27MAR2012 19:43:51	27MAR2012 20:42:28	0	GOOD
13	SCI_OL__2PWDP	A20120327_212350_000035303113_00101_52701_4183.N1	27MAR2012 21:23:50	27MAR2012 22:22:41	0	GOOD
14	SCI_OL__2PWDP	A20120327_230404_000035163113_00102_52702_4184.N1	27MAR2012 23:04:04	28MAR2012 00:02:40	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: 163096

Total number of cloud data DSRs with good quality flag (=0): 163096 (100.0 %)

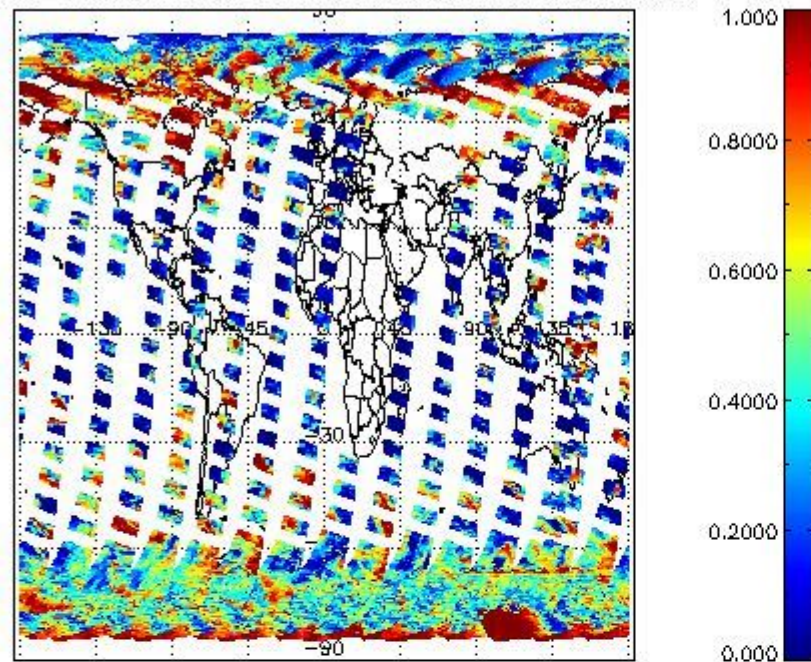
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	163096	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	163096	0.16366	0.12500	0.12500	0.25000	0.057774	s
CL_FRAC	163096	0.45662	0.42538	0.0000	1.0000	0.33228	
CL_FRAC_ERR	163096	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	163096	5.2371	4.0000	4.0000	8.0000	1.8488	
PMD_READ_CL[0]	163096	0.68271	0.0000	0.0000	8.0000	1.5477	-
PMD_READ_CL[1]	163096	1.1707	0.0000	0.0000	8.0000	2.4404	-
CL_TOP_HEIGHT	131746	3.2092	1.5856	0.0000	17.000	3.6136	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	131746	64.582	100.00	0.0000	101.00	41.210	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	163096	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	163096	11001011	11000100	11000000	11100000	3440.7	
AERO_ABSO_IND	163096	0.074887	0.0000	0.0000	7.2652	0.26150	
AERO_IND_DIAG	163096	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	163096	01010010	00000000	00000000	11000000	24321.	

#### Time and geolocation plots:

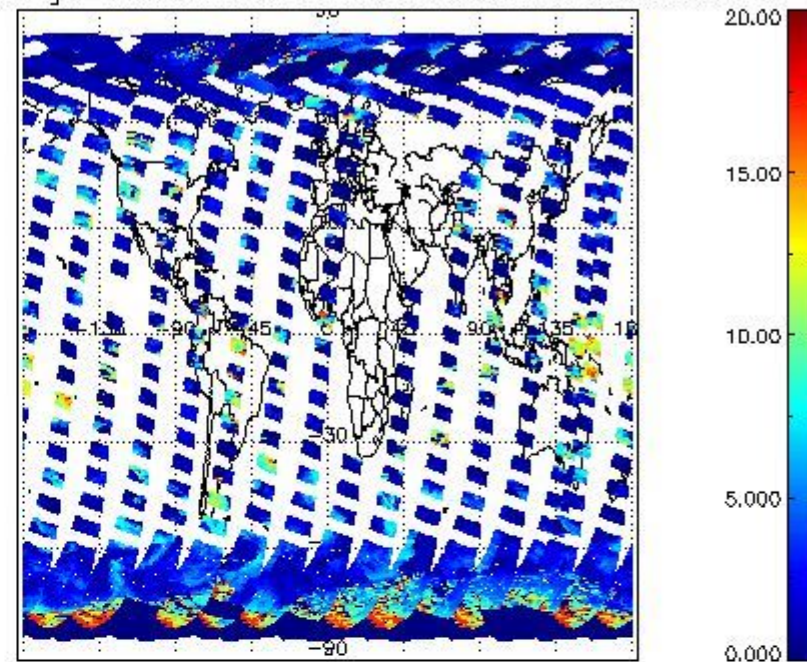
Plots are available for the following parameters:

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

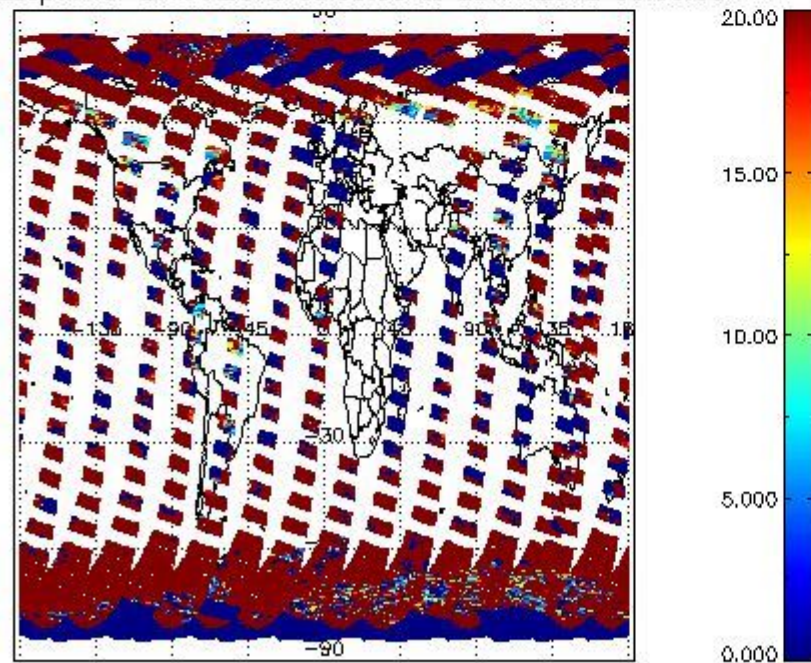
cL\_frac for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



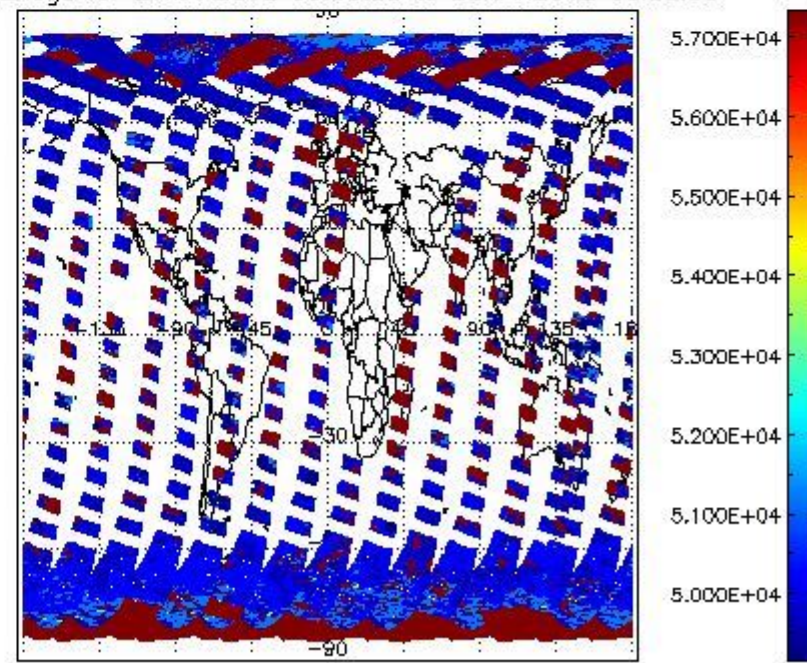
cL\_top\_height for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



cL\_opt\_depth for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



cloud\_flags for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



## 2.2.2 Nadir

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

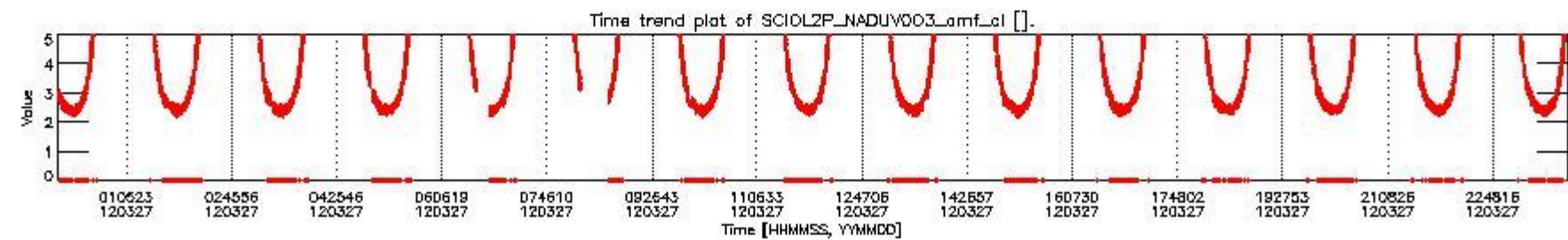
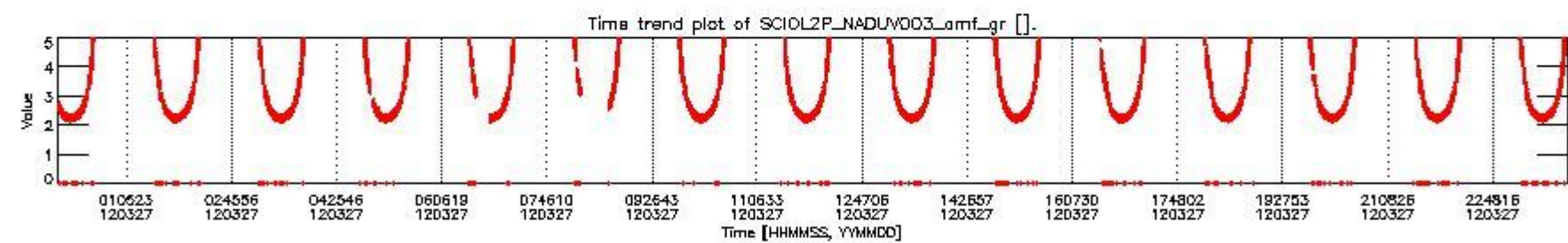
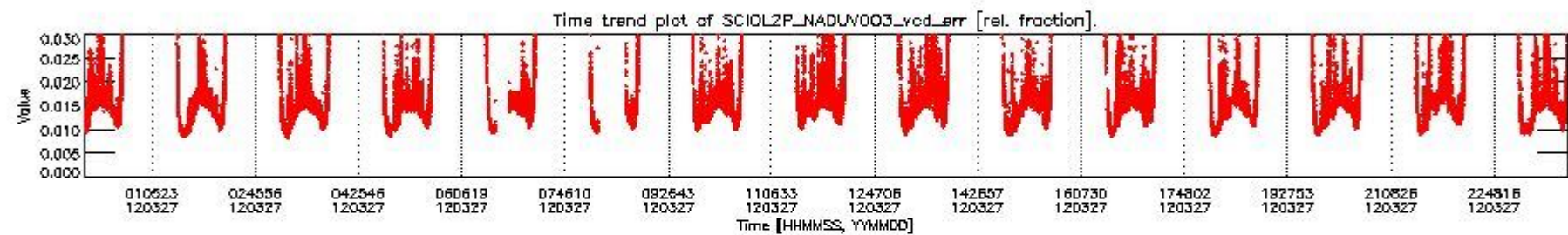
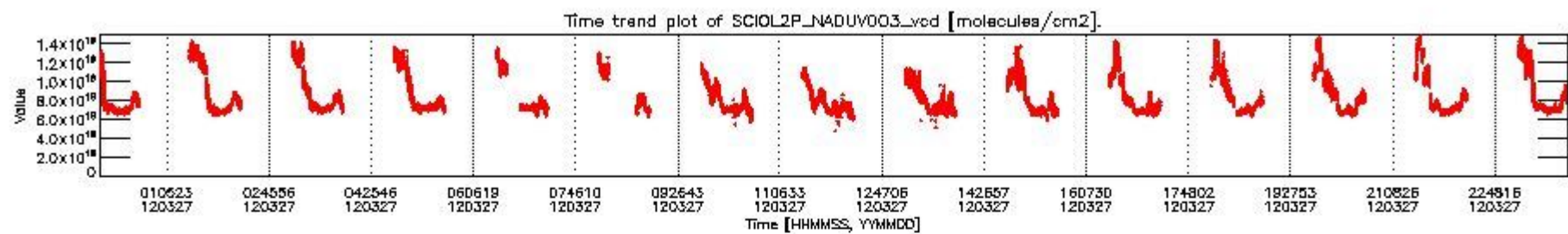
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

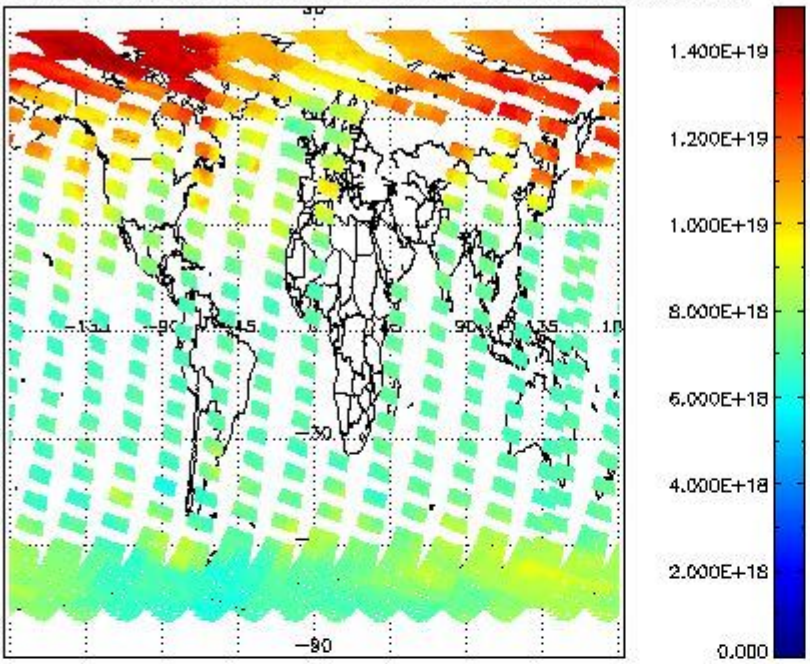
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr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

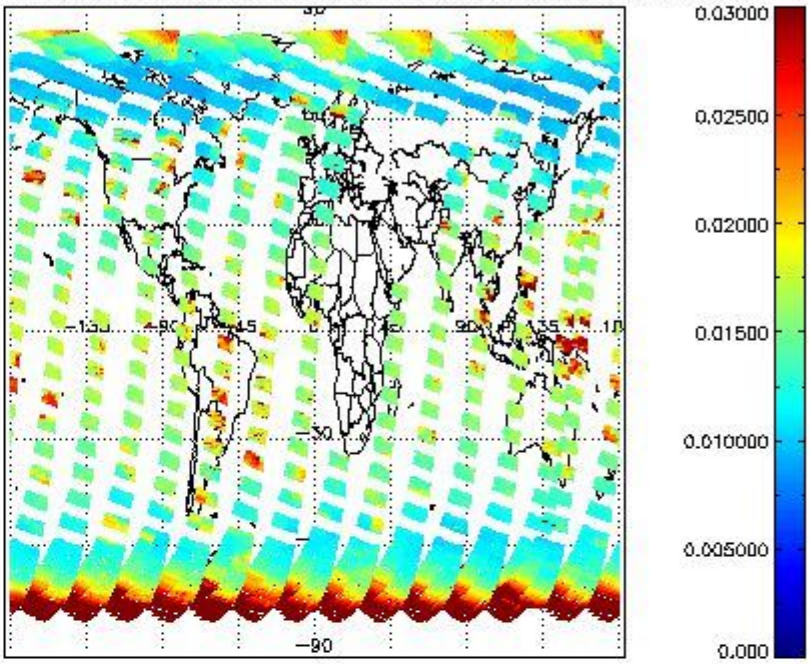
#### 2.2.2.1 O3 (UV0)



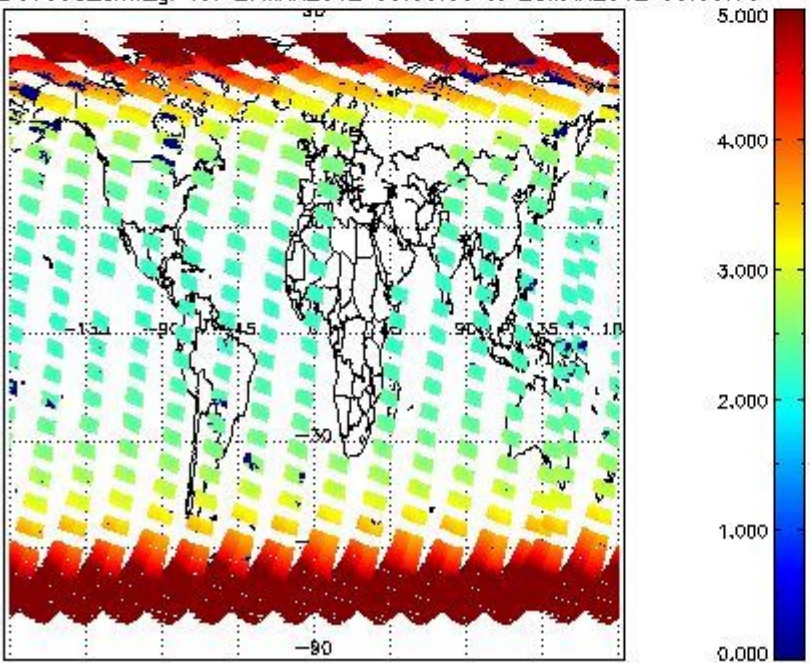
SCIOL2P\_NADUV003\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



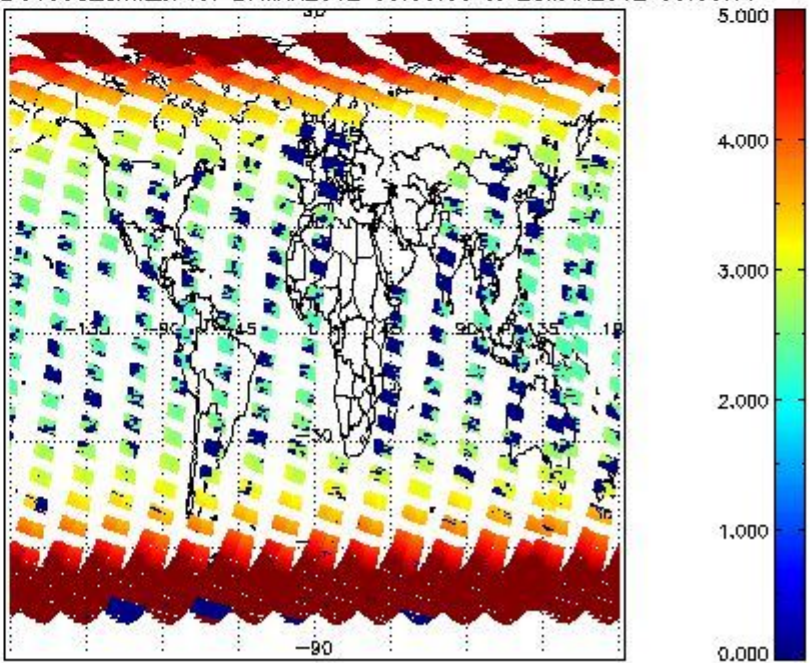
SCIOL2P\_NADUV003\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



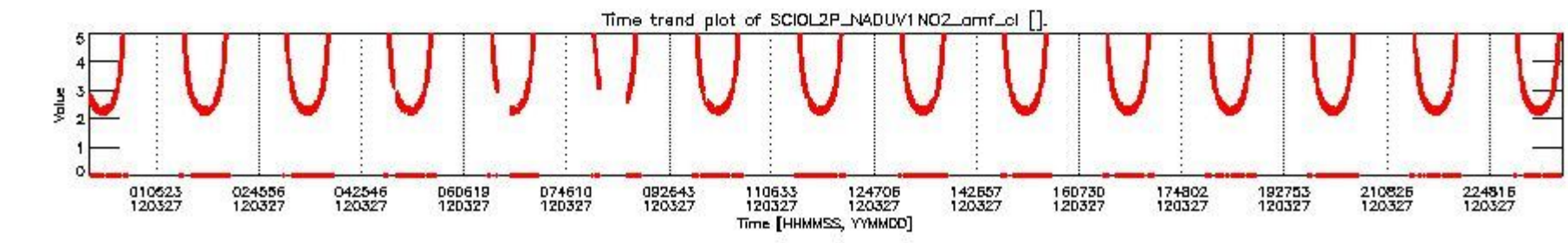
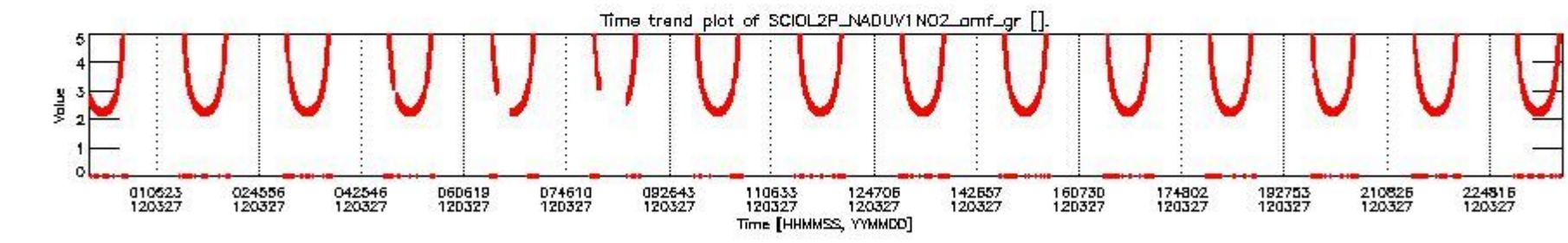
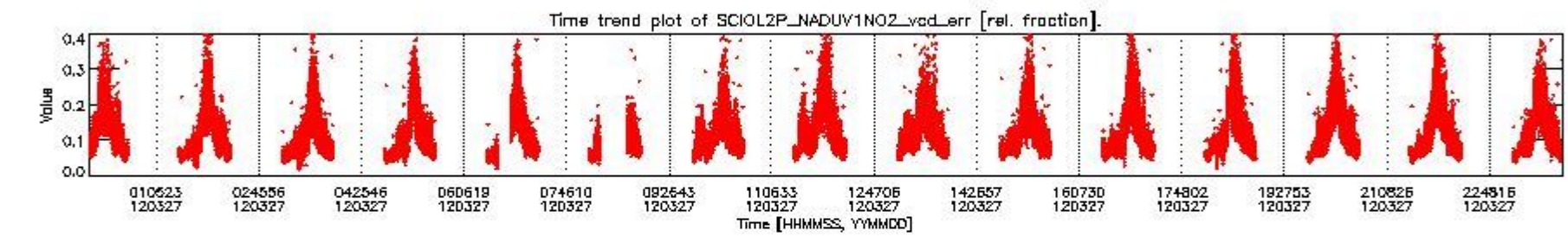
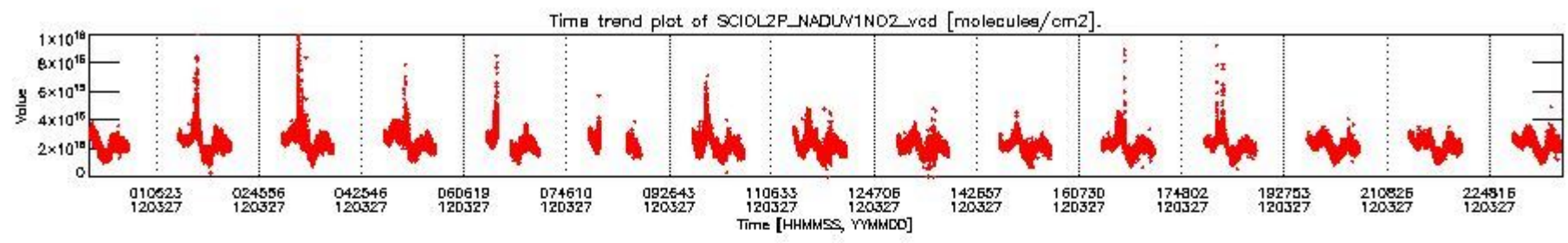
SCIOL2P\_NADUV003\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



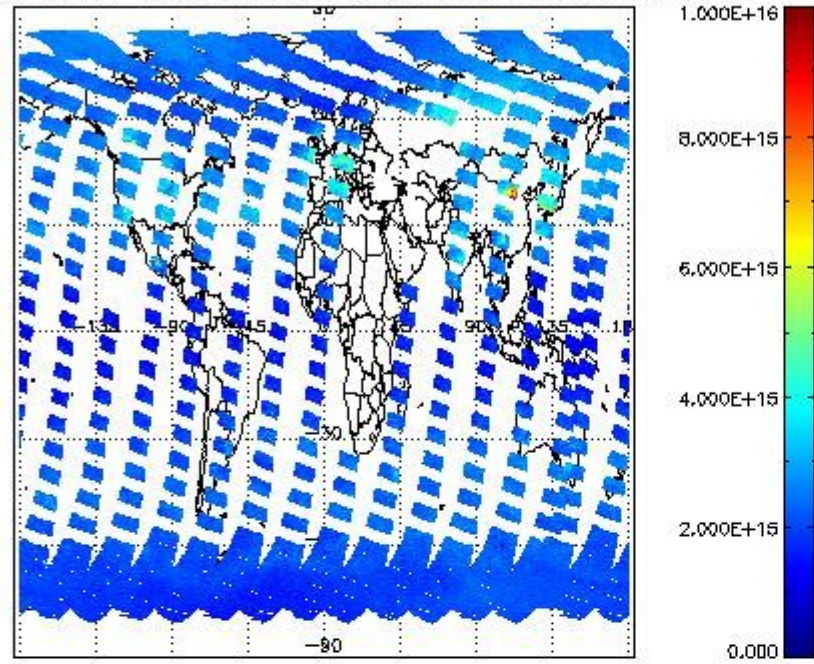
SCIOL2P\_NADUV003\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



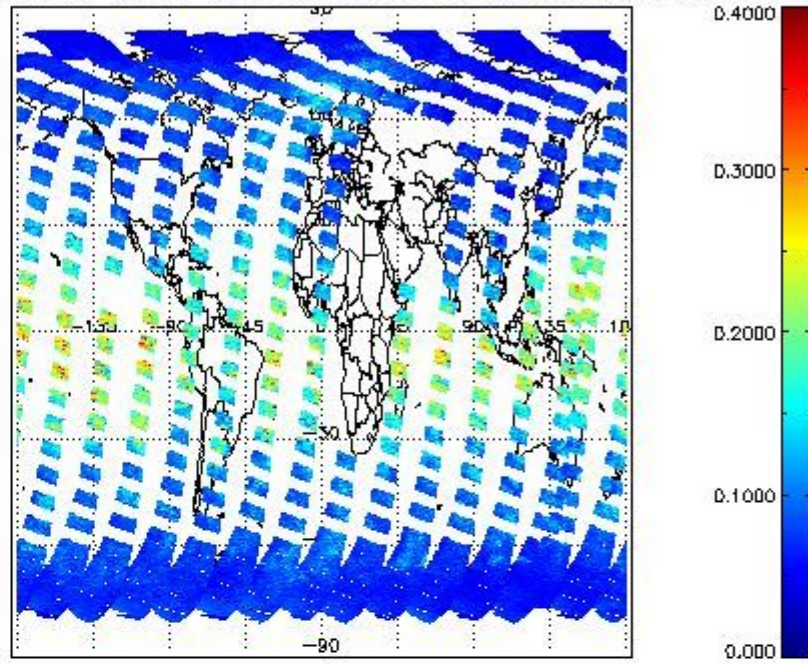
2.2.2.2 NO2 (UV1)



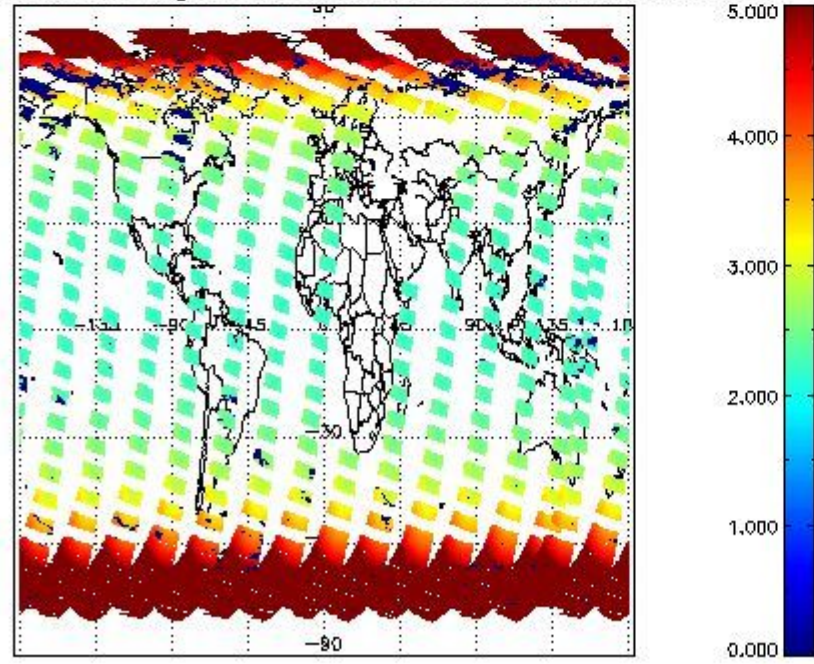
SCIOL2P\_NADUV1NO2\_vcd for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



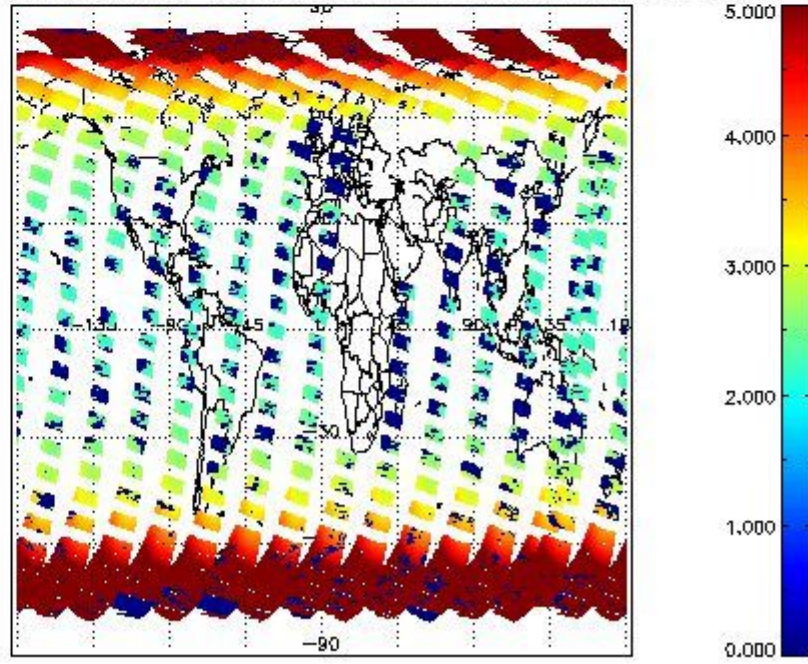
SCIOL2P\_NADUV1NO2\_vcd\_err for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

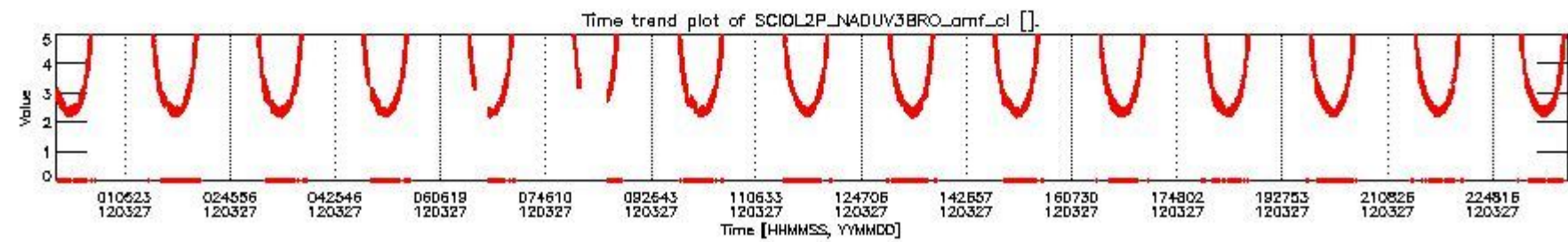
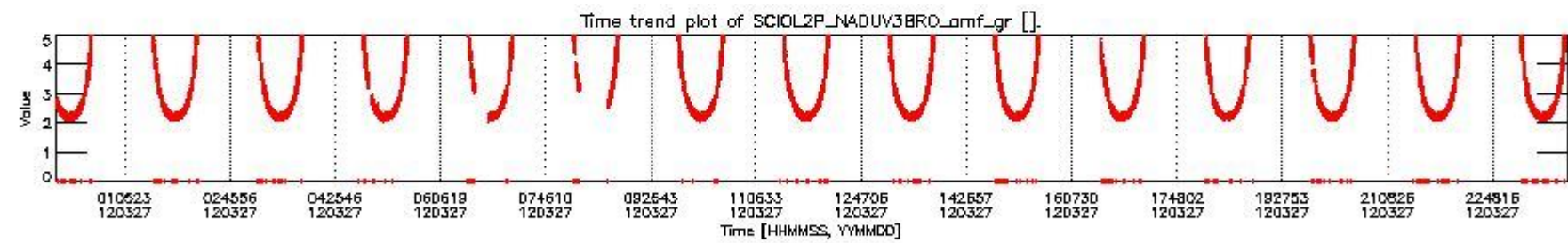
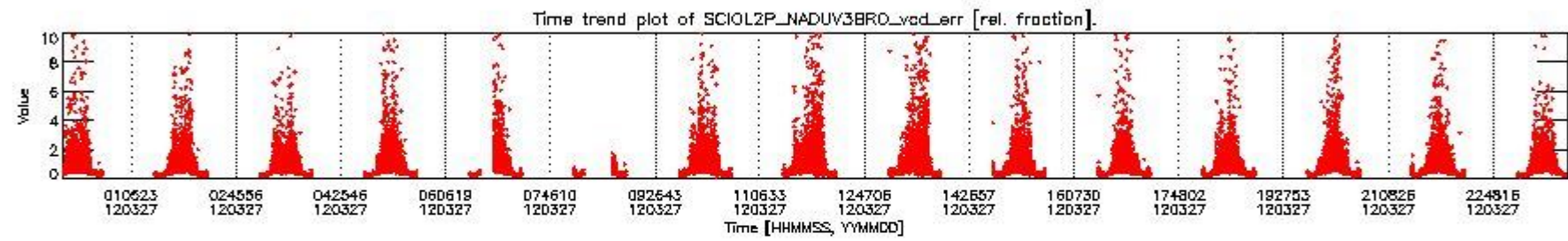
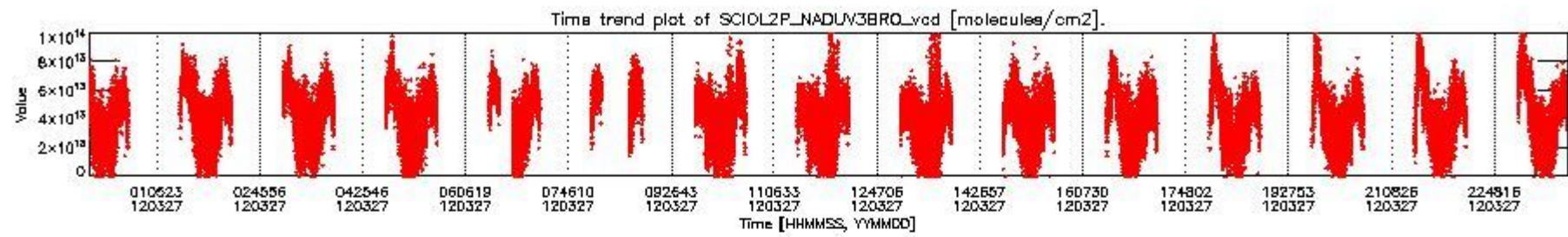


SCIOL2P\_NADUV1NO2\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

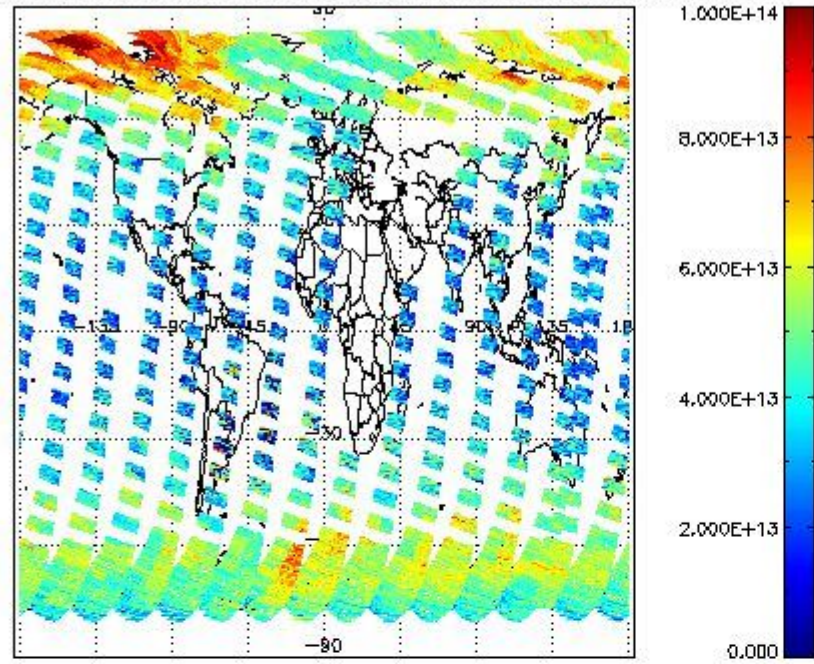


### 2.2.2.3 BrO (UV3)

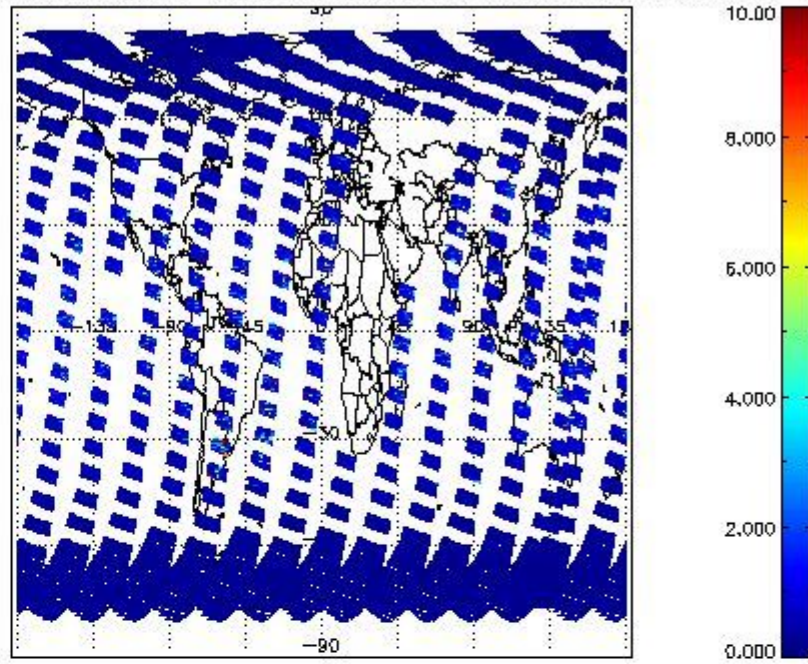




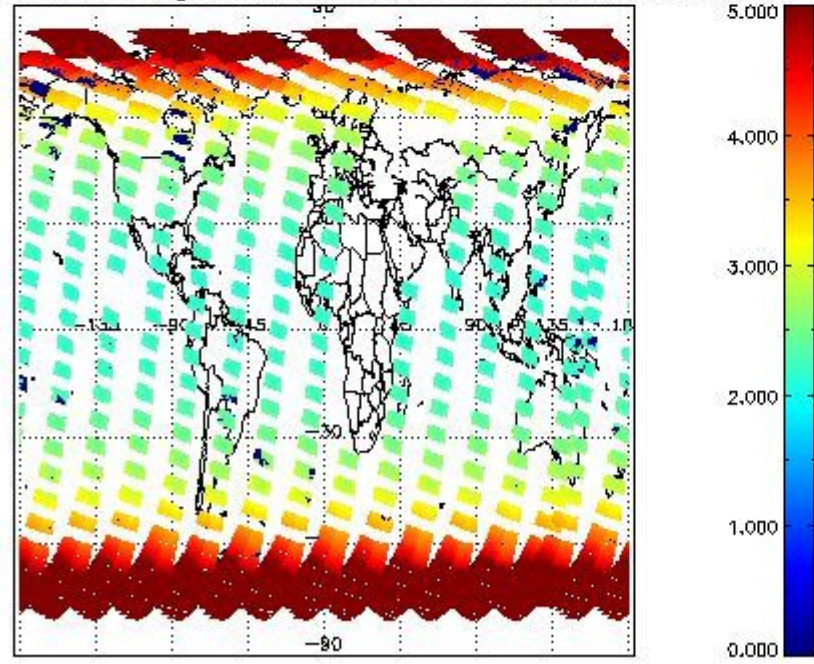
SCIOL2P\_NADUV3BRO\_vcd for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



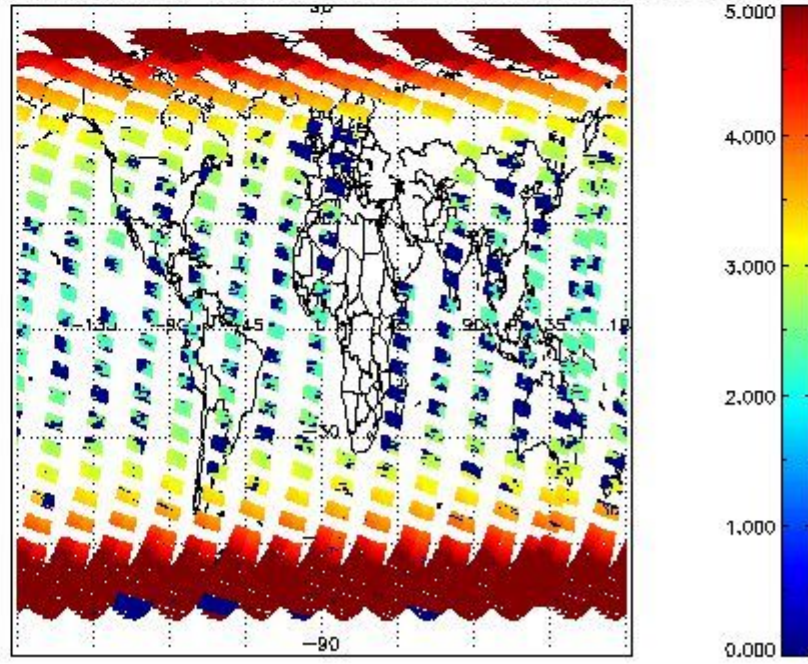
SCIOL2P\_NADUV3BRO\_vcd\_err for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



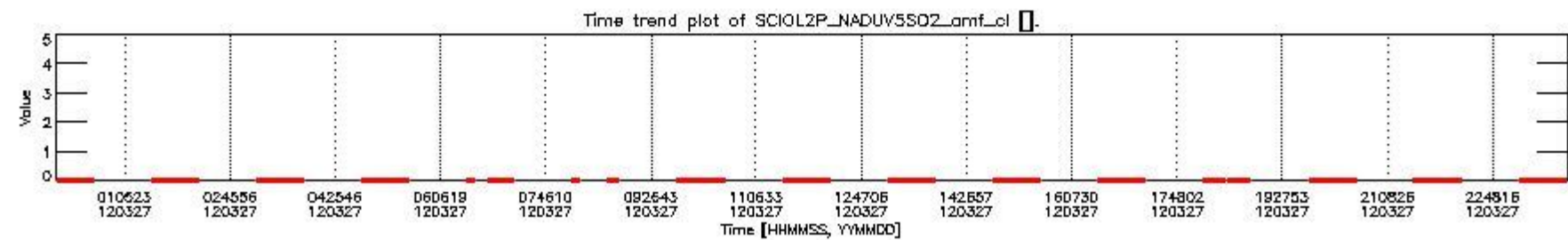
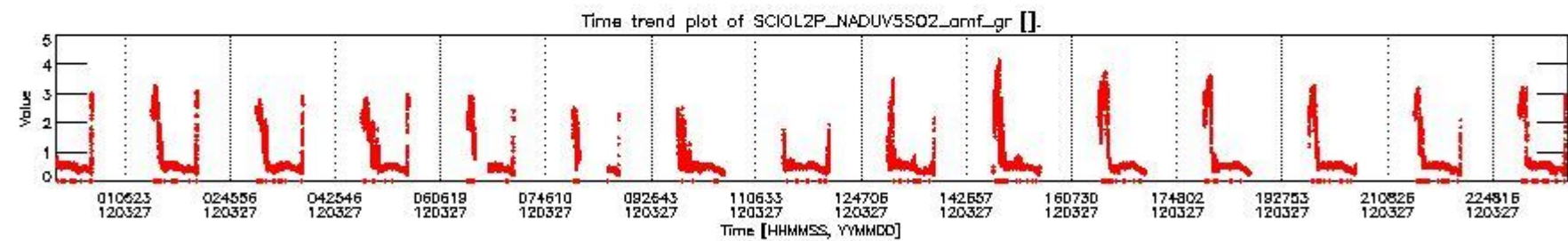
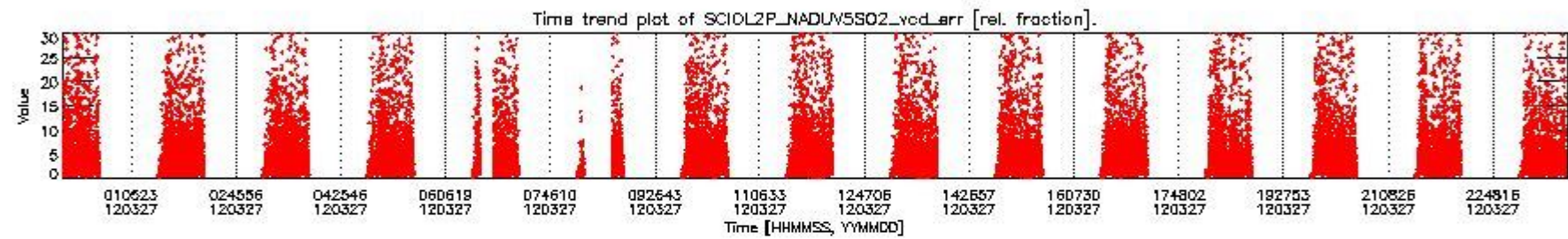
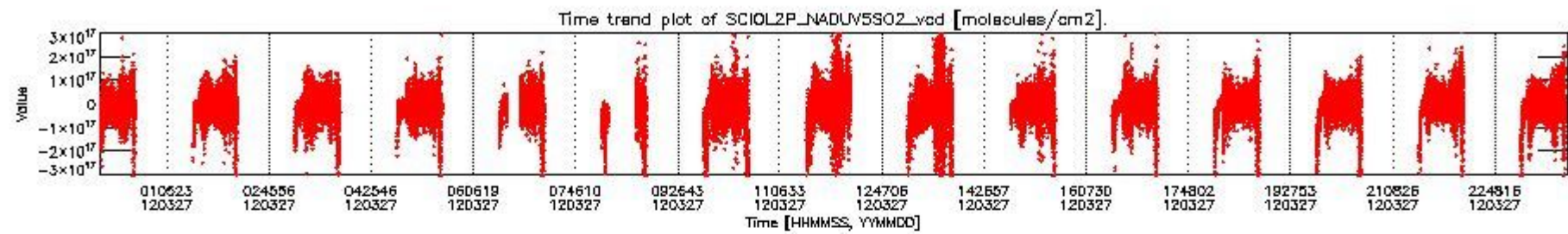
SCIOL2P\_NADUV3BRO\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



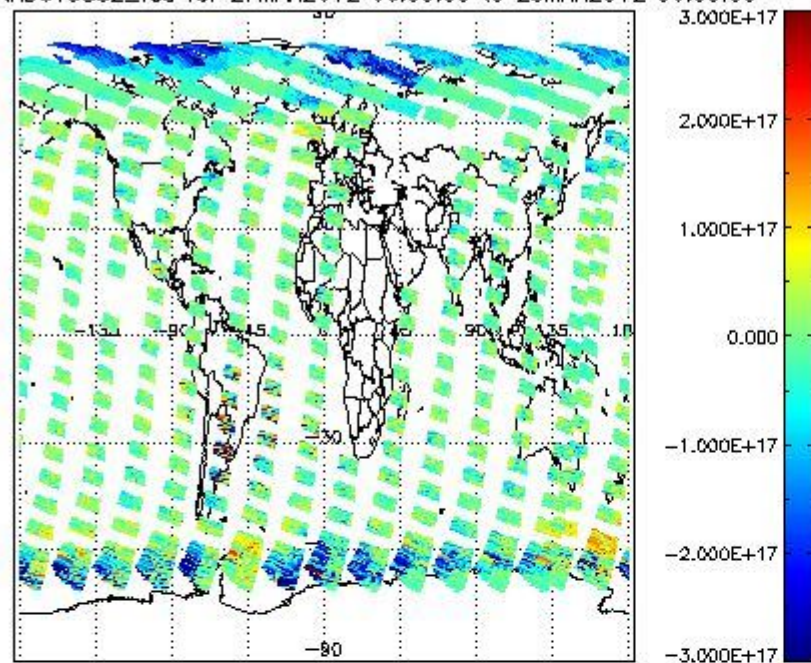
SCIOL2P\_NADUV3BRO\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



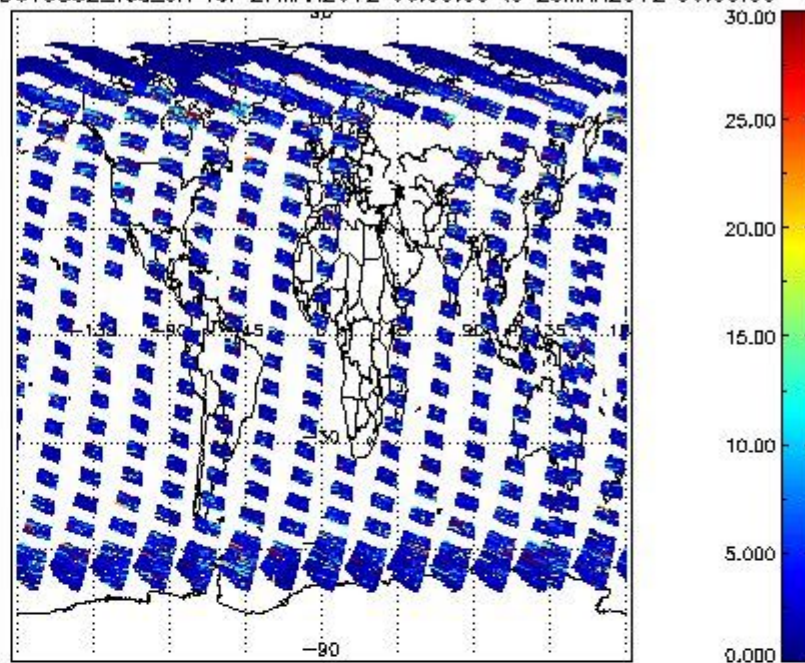
#### 2.2.2.4 SO2 (UV5)



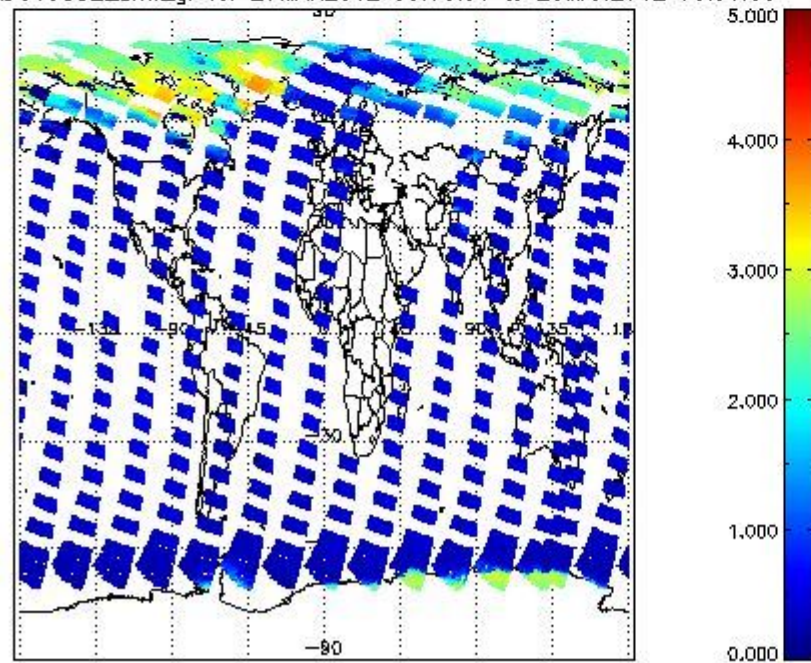
SCIOL2P\_NADUV5SO2\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



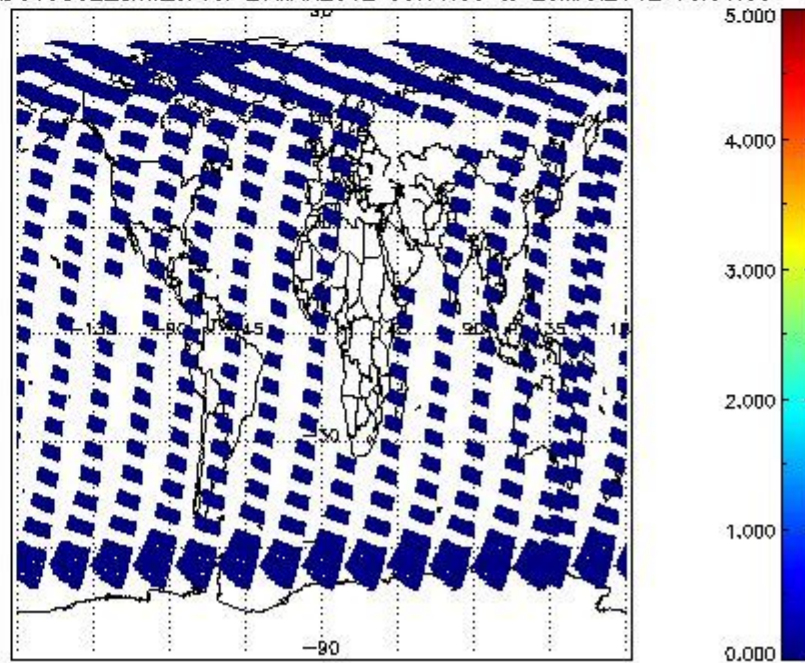
SCIOL2P\_NADUV5SO2\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



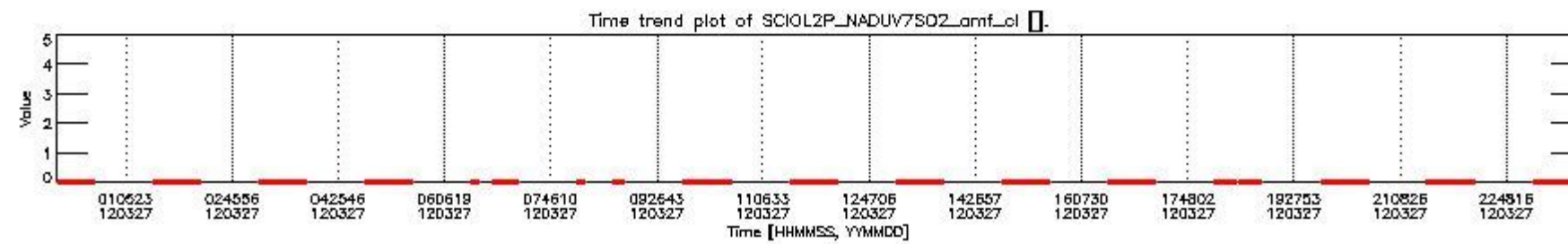
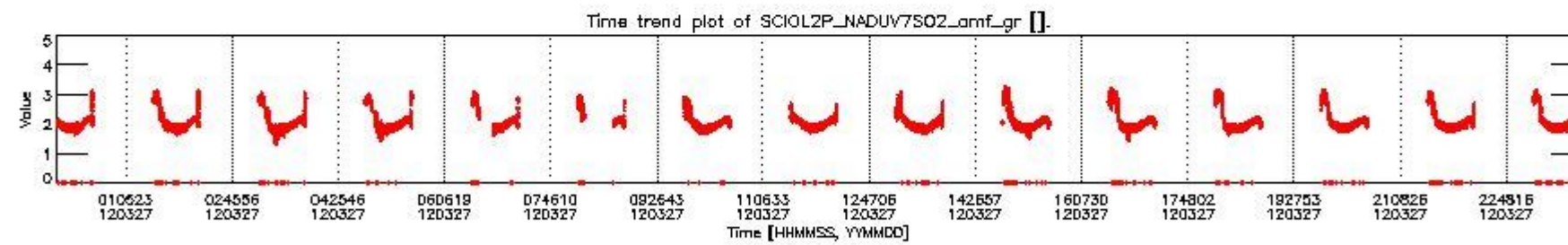
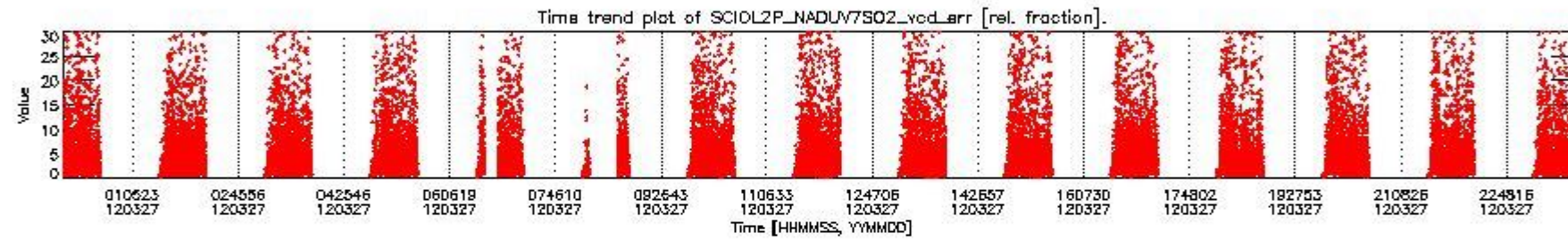
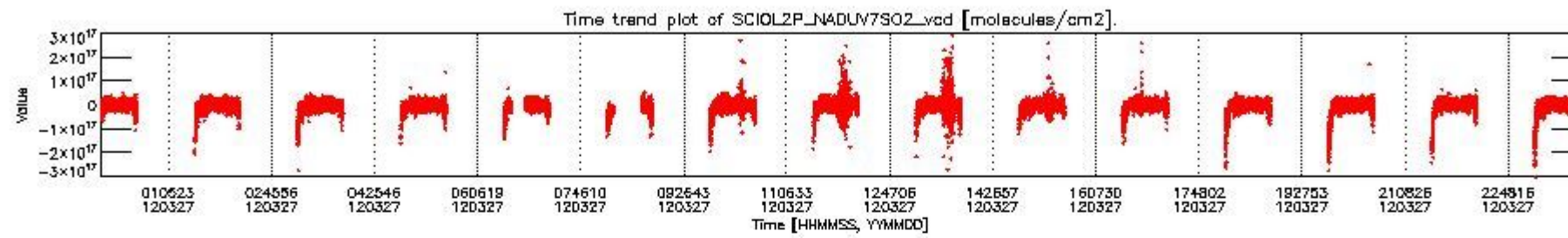
SCIOL2P\_NADUV5SO2\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



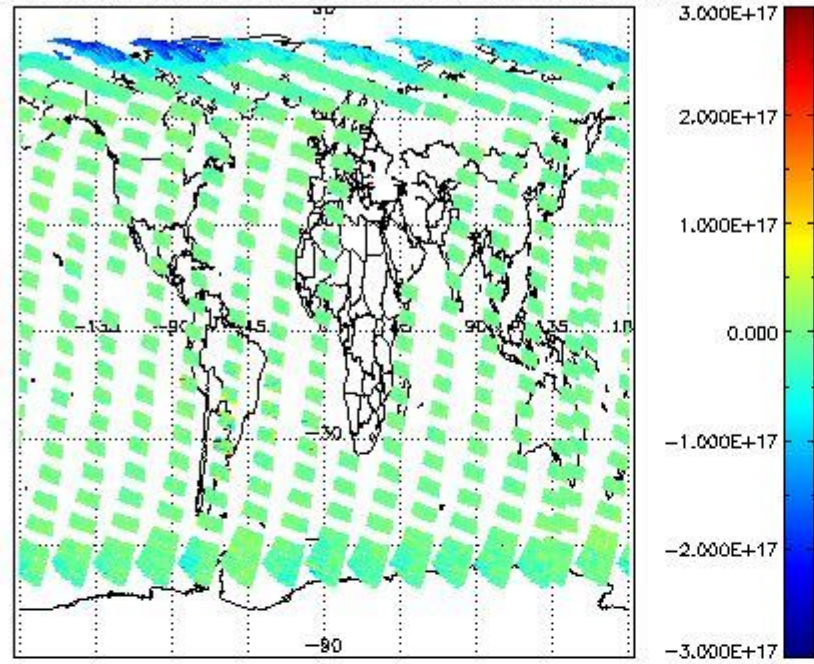
SCIOL2P\_NADUV5SO2\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



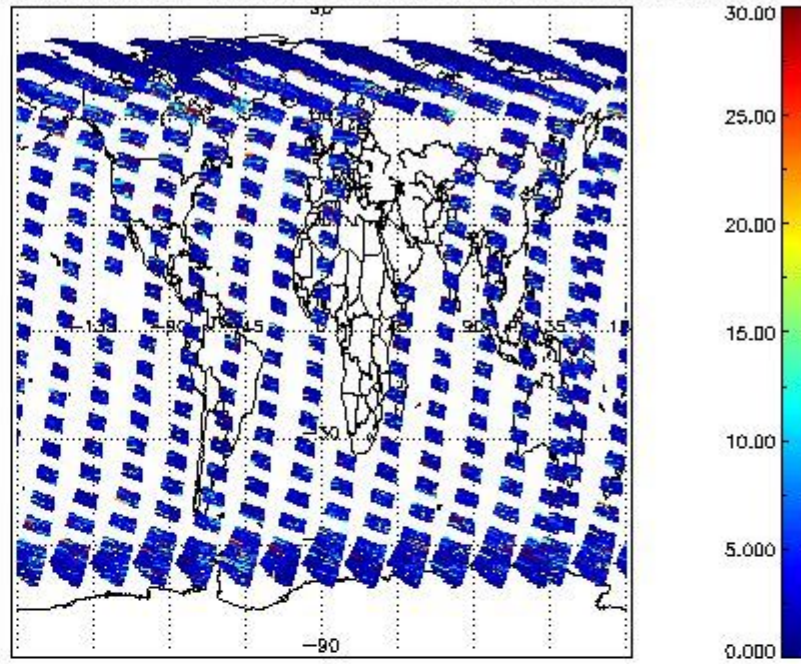
2.2.2.5 SO2 (UV7)



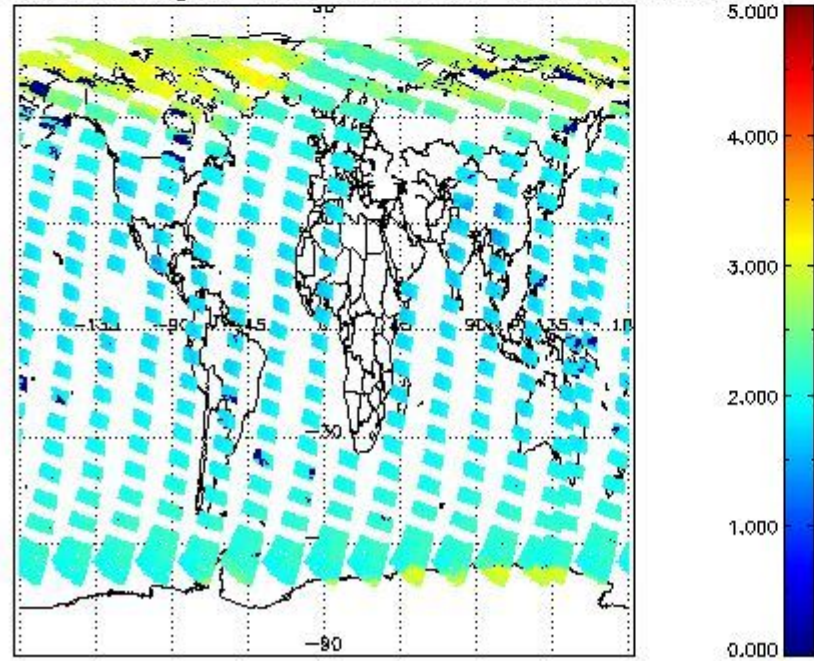
SCIOL2P\_NADUV7S02\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



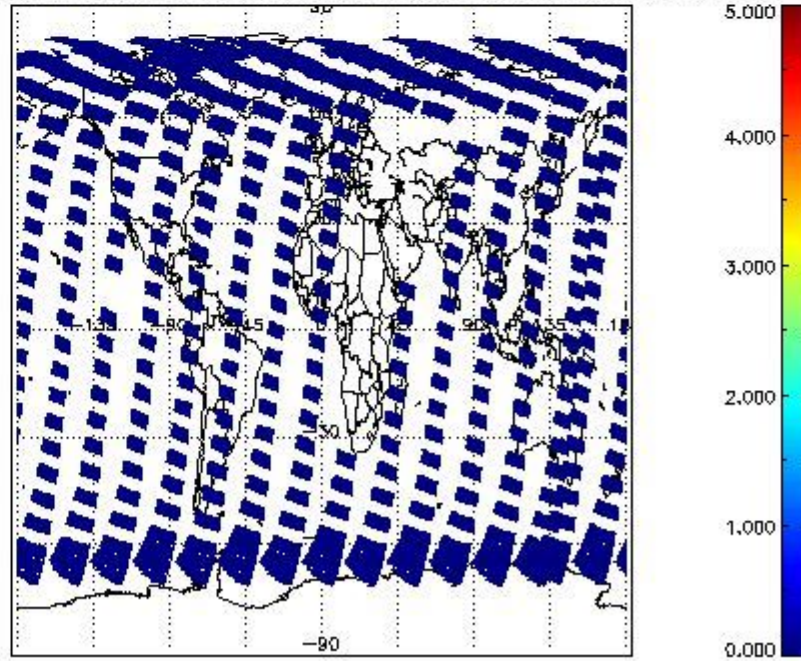
SCIOL2P\_NADUV7S02\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



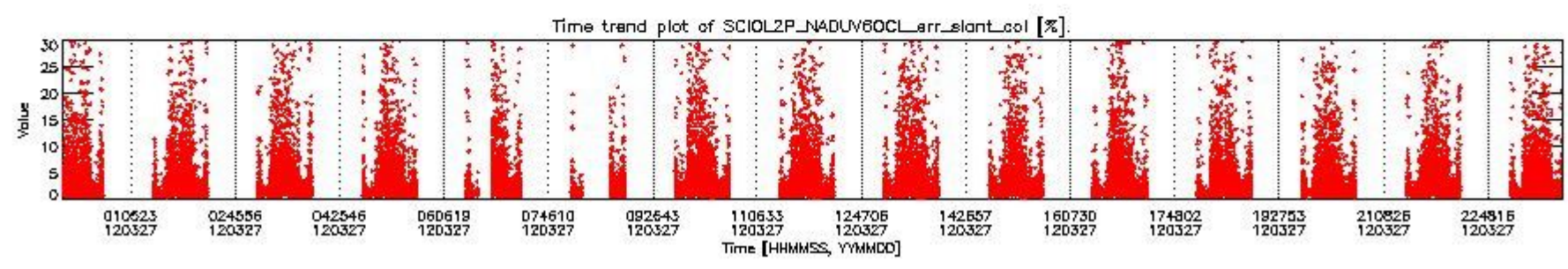
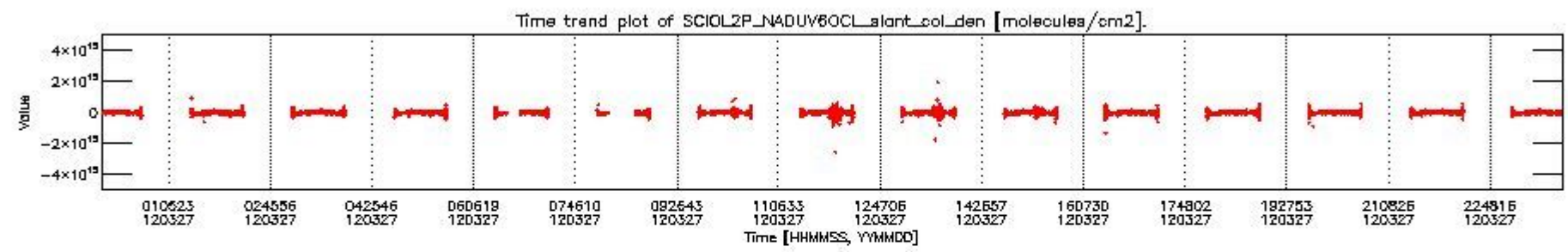
SCIOL2P\_NADUV7S02\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



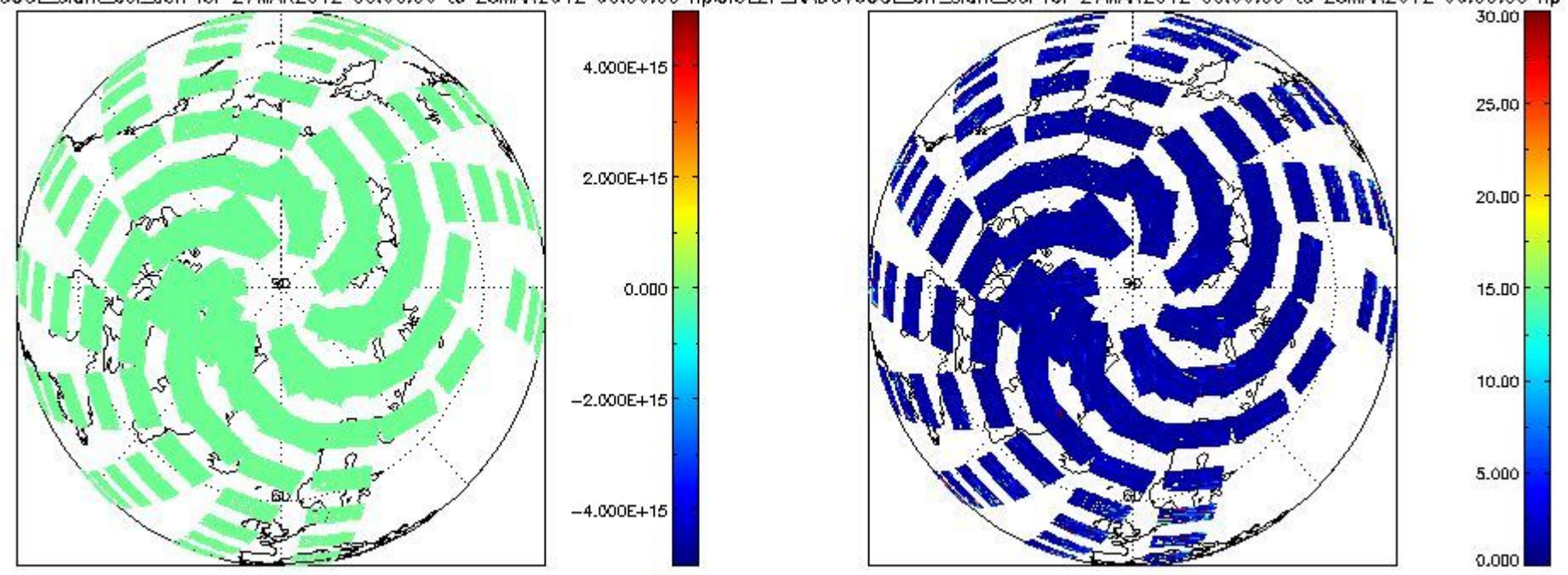
SCIOL2P\_NADUV7S02\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



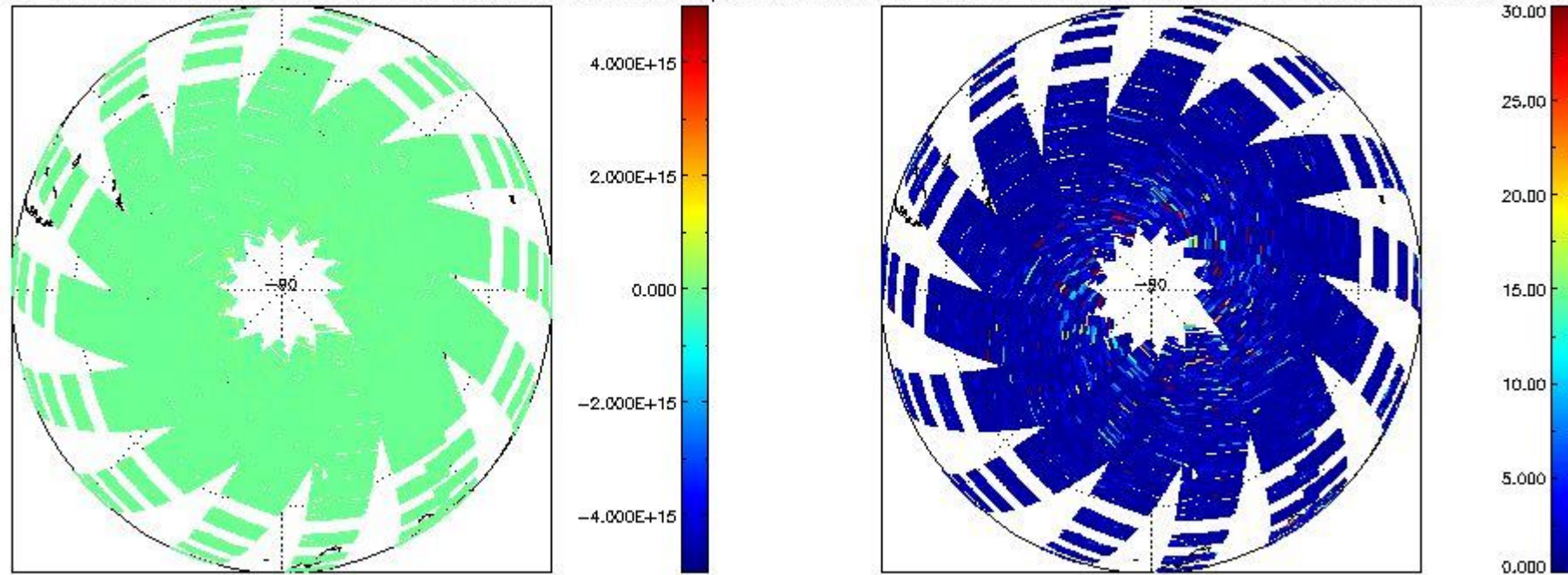
## 2.2.2.6 OCIO (UV6)



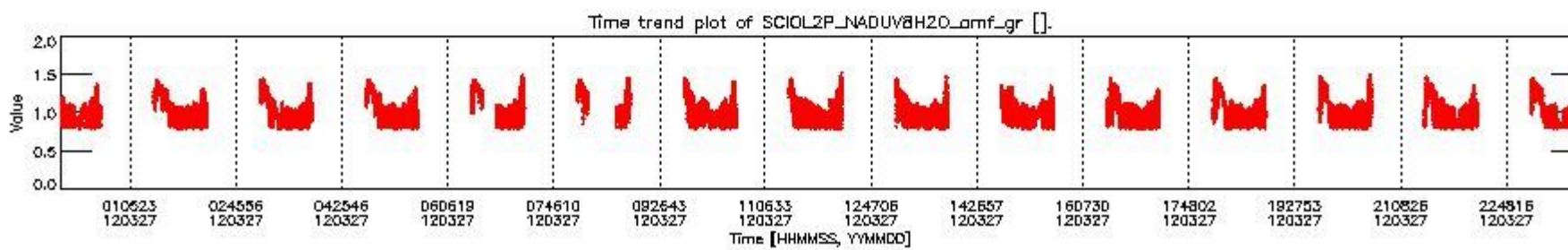
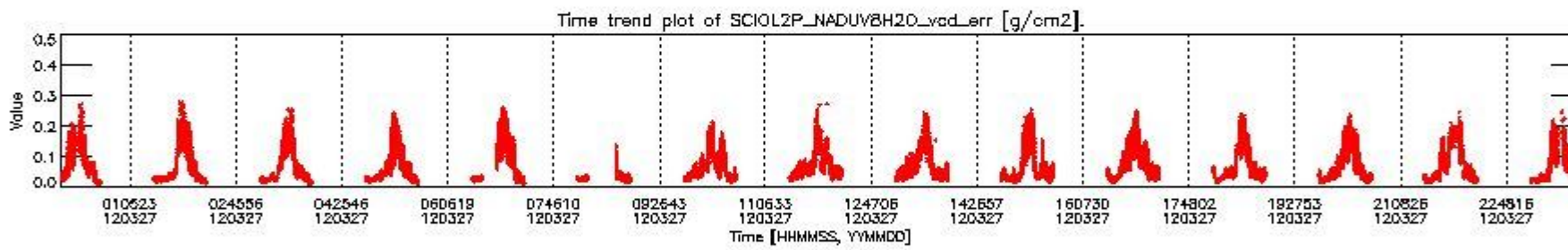
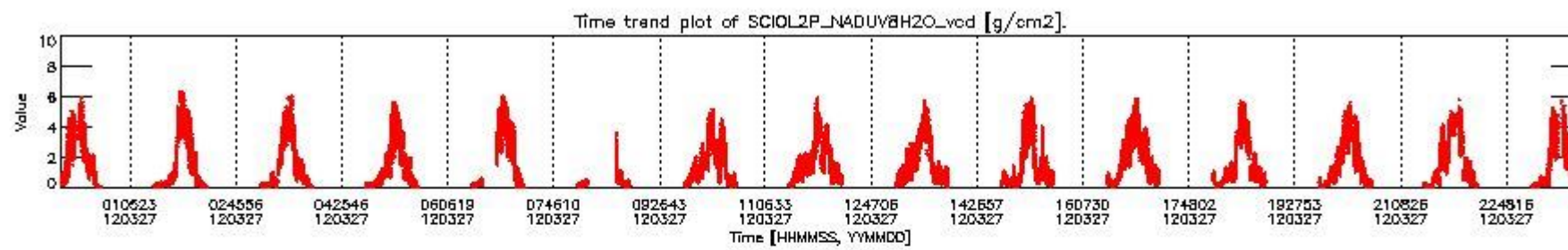
CIOL2P\_NADUV6OCLslant\_col\_den for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 npCIOL2P\_NADUV6OCLarr\_slant\_col for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 np



CIOL2P\_NADUV6OCL\_slant\_coLden for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 spCIOL2P\_NADUV6OCL\_err\_slant\_col for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 sp

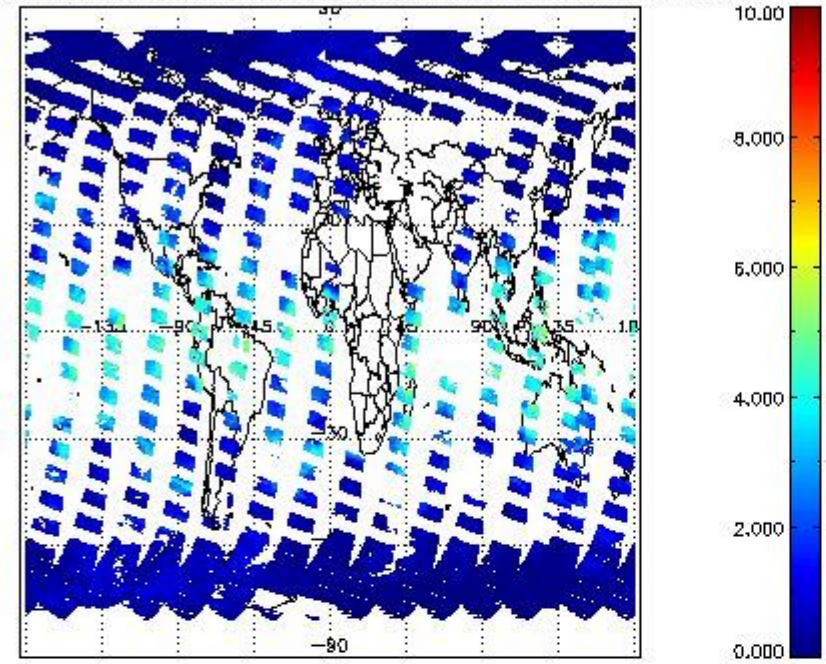


### 2.2.2.7 H2O (UV8)

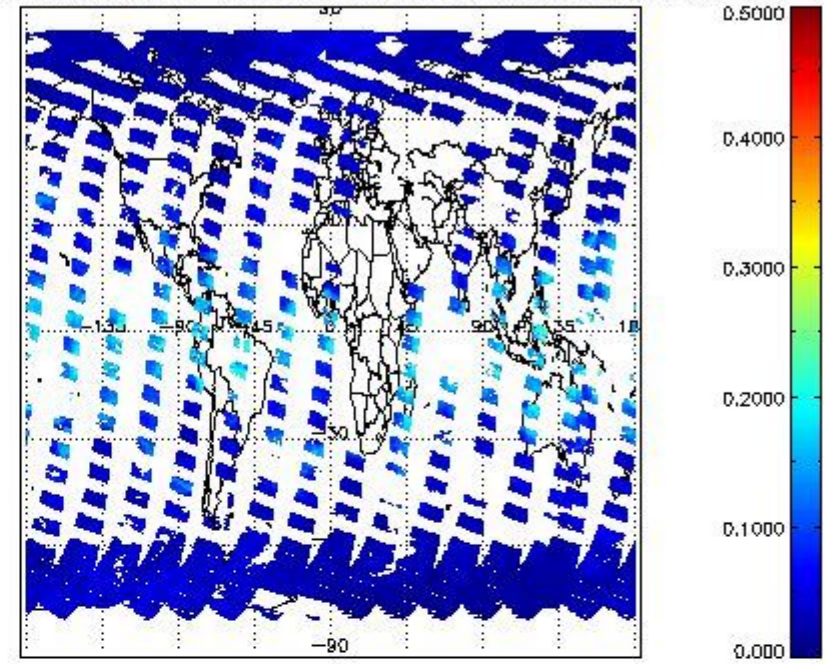




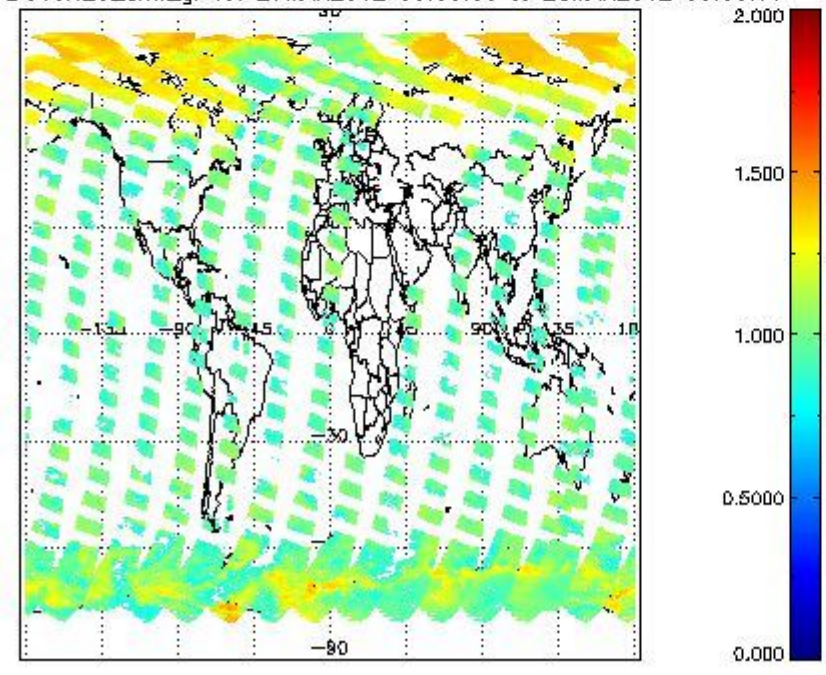
SCIOL2P\_NADUV8H2O\_vcd for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



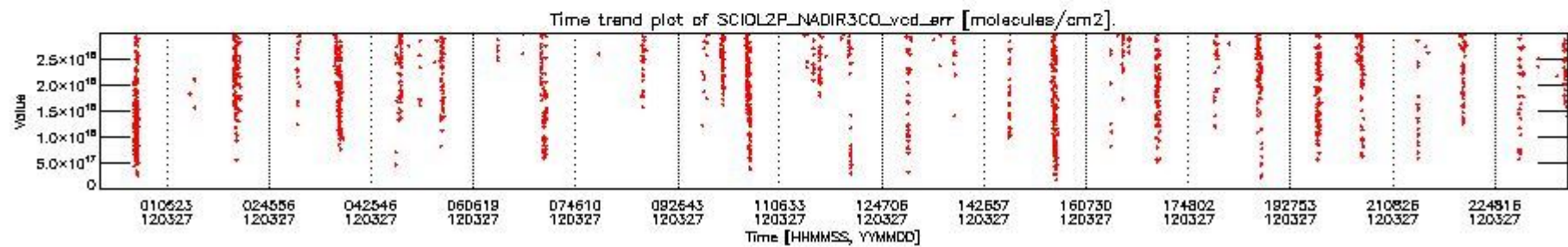
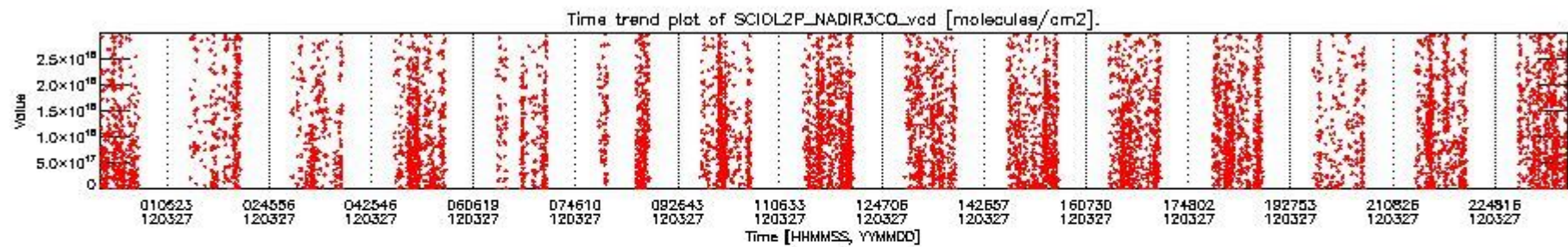
SCIOL2P\_NADUV8H2O\_vcd\_err for 27MAR2012 00:00:00 to 26MAR2012 00:00:00



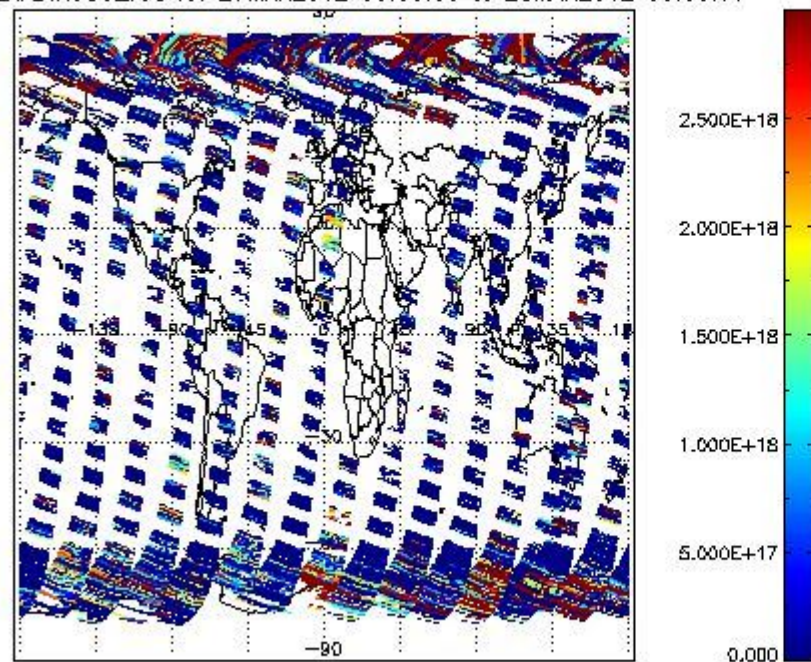
SCIOL2P\_NADUV8H2O\_arnf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



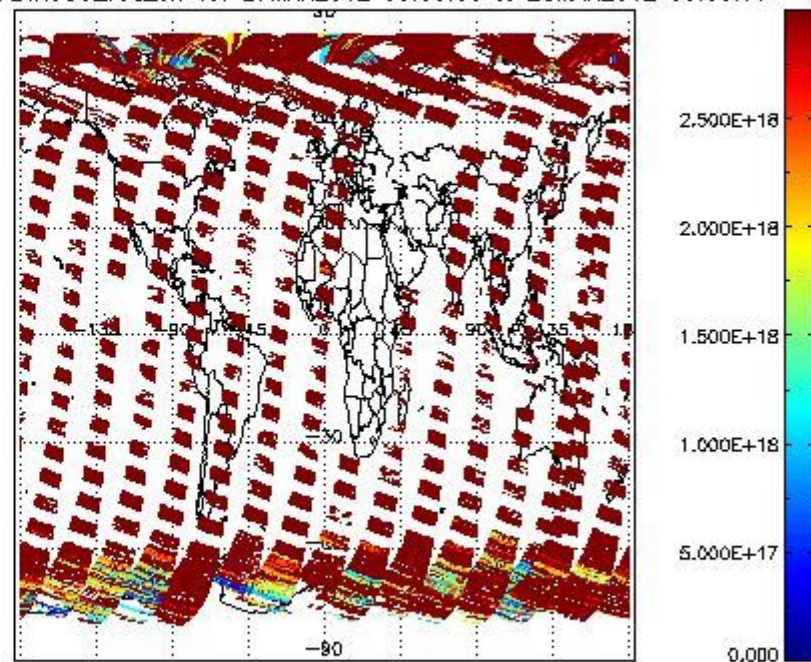
2.2.2.8 CO (IR3)



SCIDL2P\_NADIR3CO\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



### 2.2.3 Limb

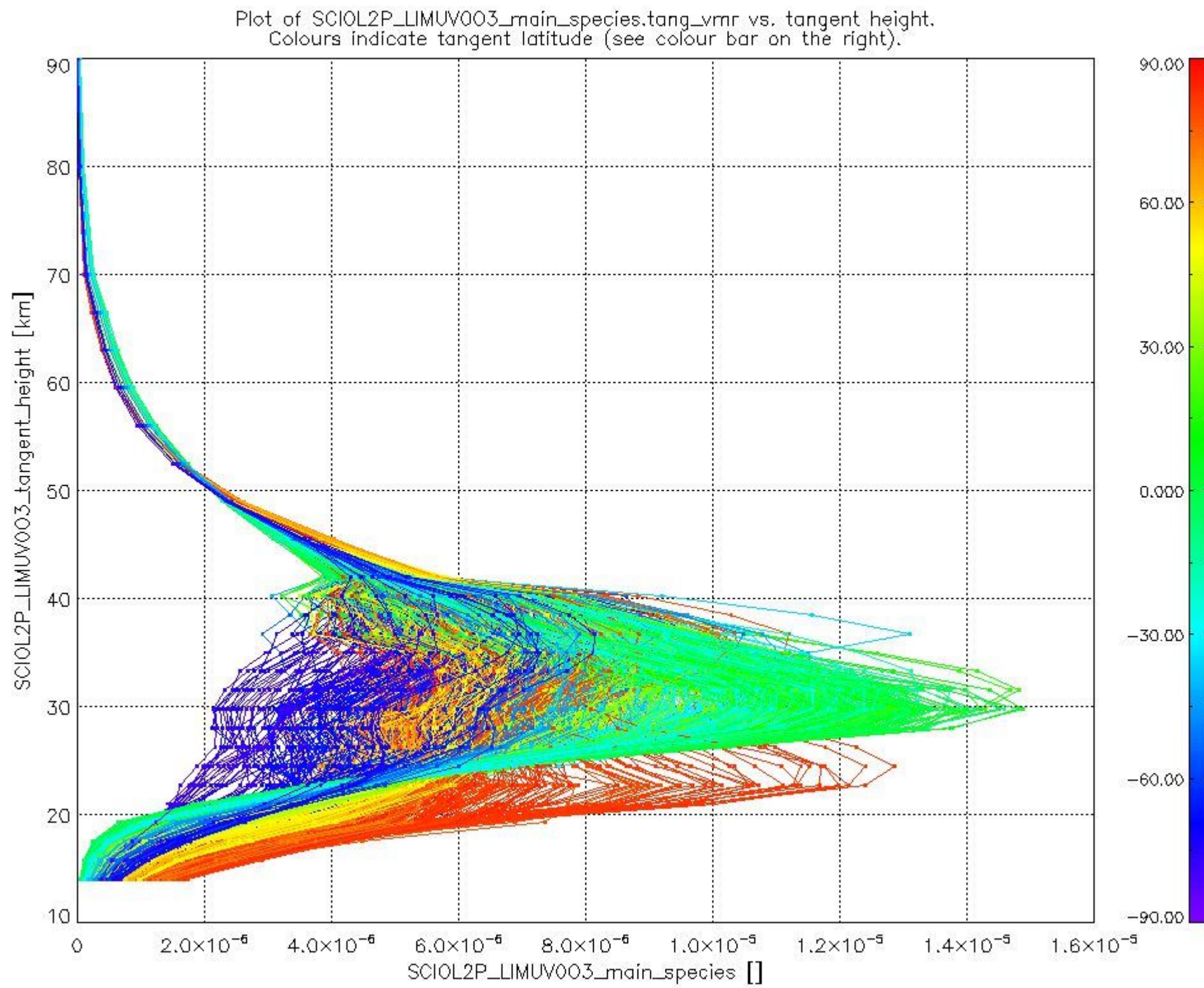
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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

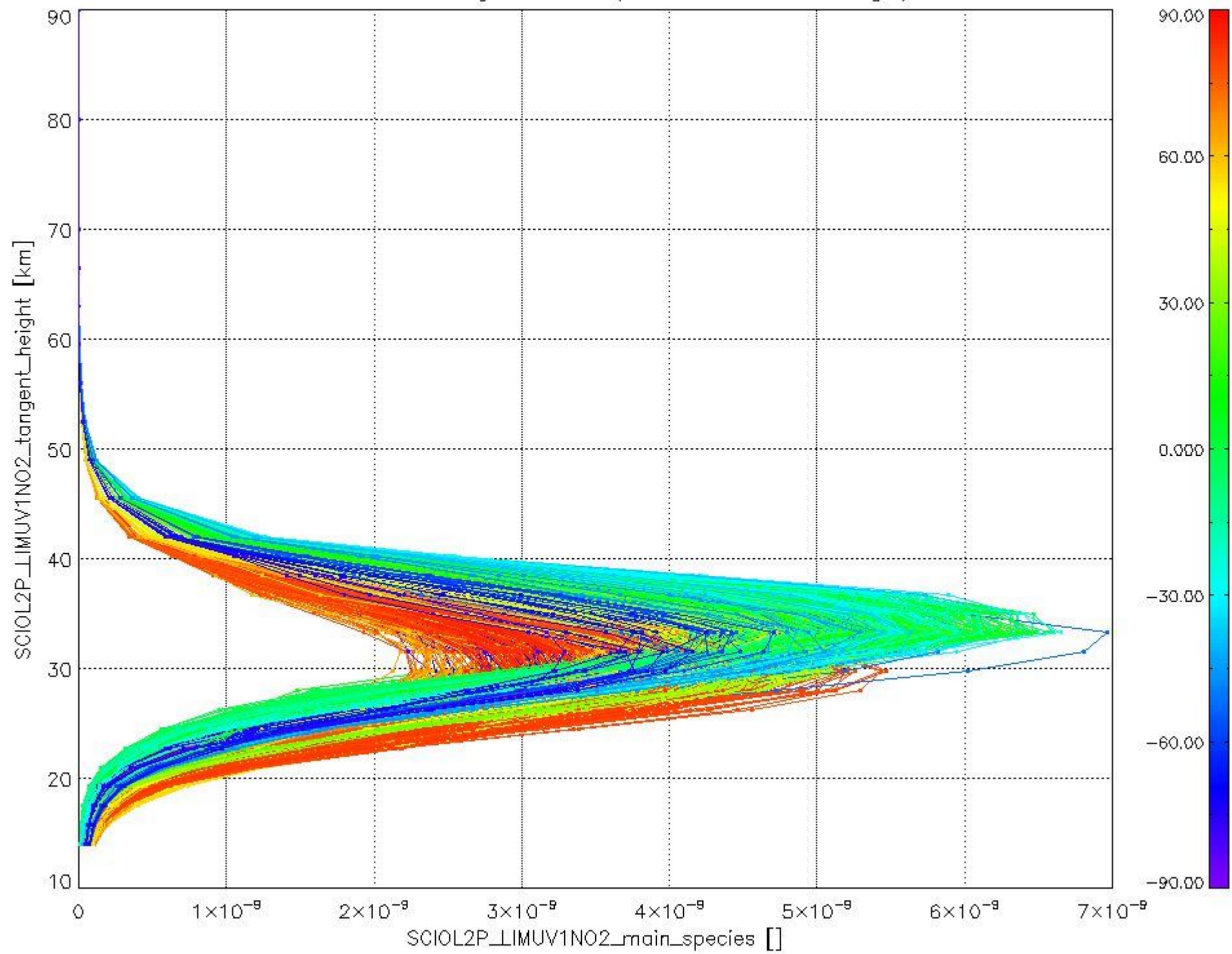
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

### 2.2.3.1 O3 (UV0)



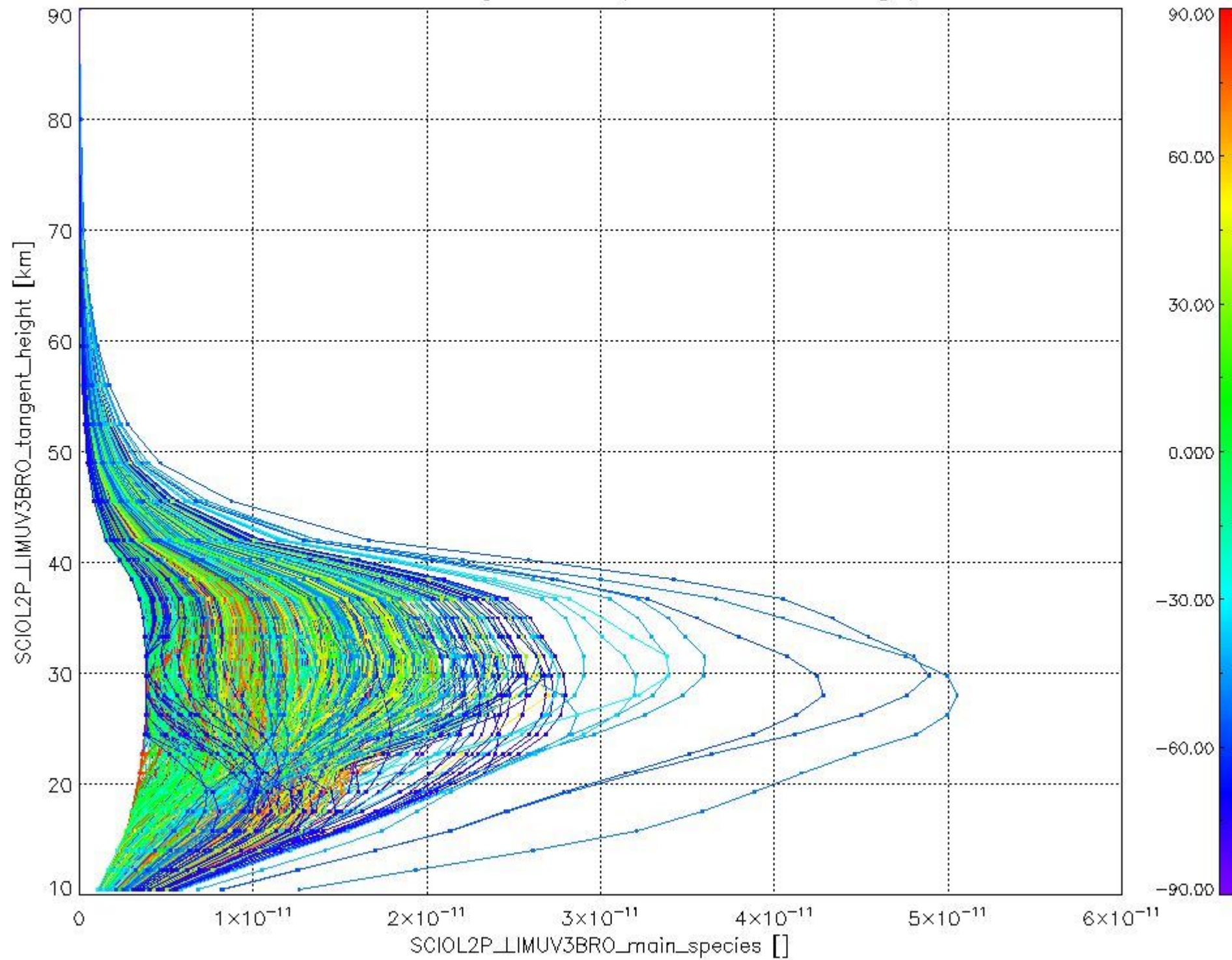
### 2.2.3.2 NO2 (UV1)

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).

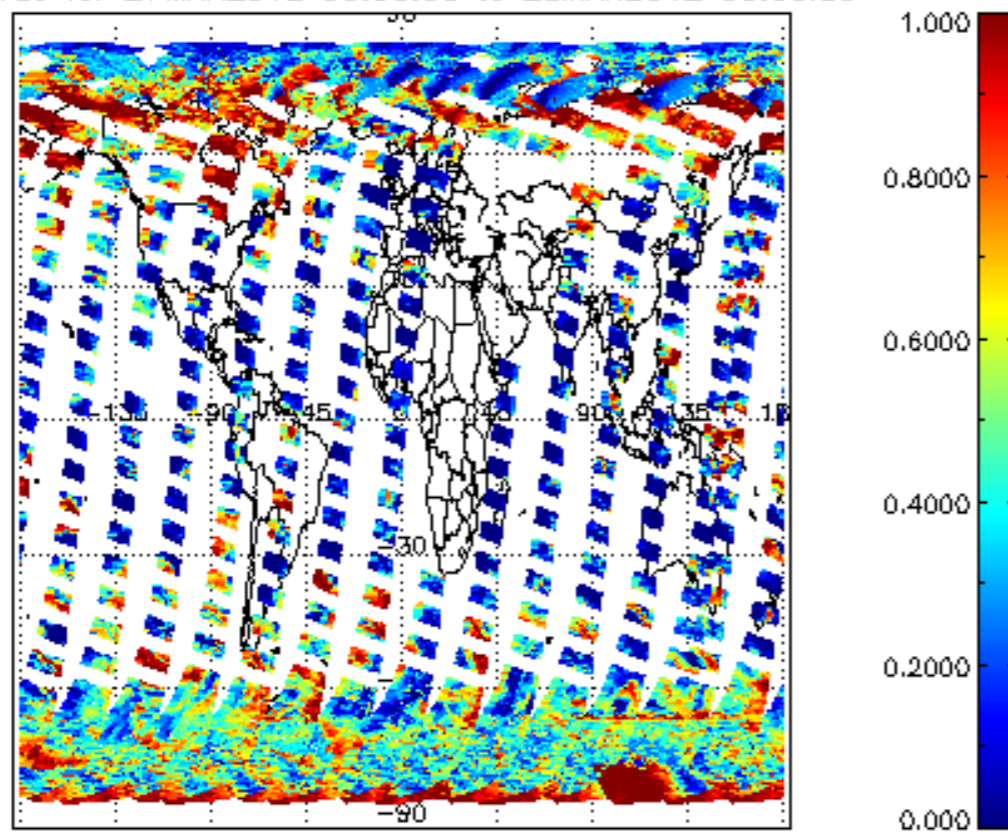


### 2.3 ADF monitoring

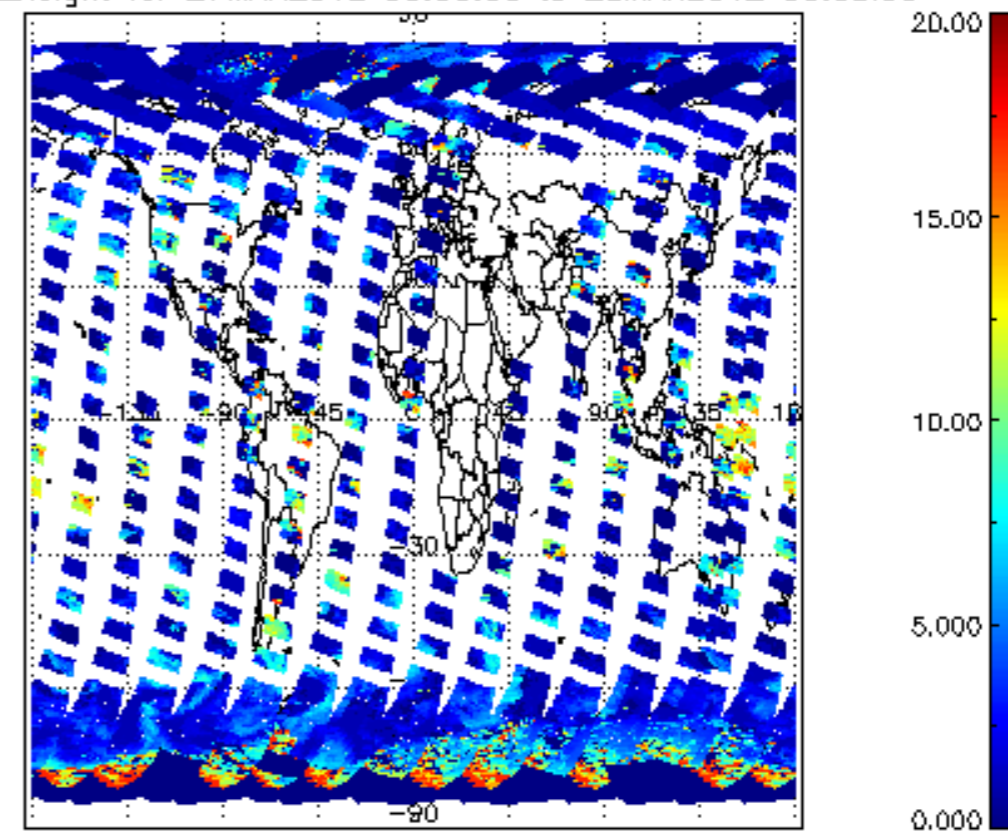
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20120327_133016_20120326_180605_20120328_180605
3	SCI_MF1_AXVIEC20120328_074554_20120327_190933_20120329_190933



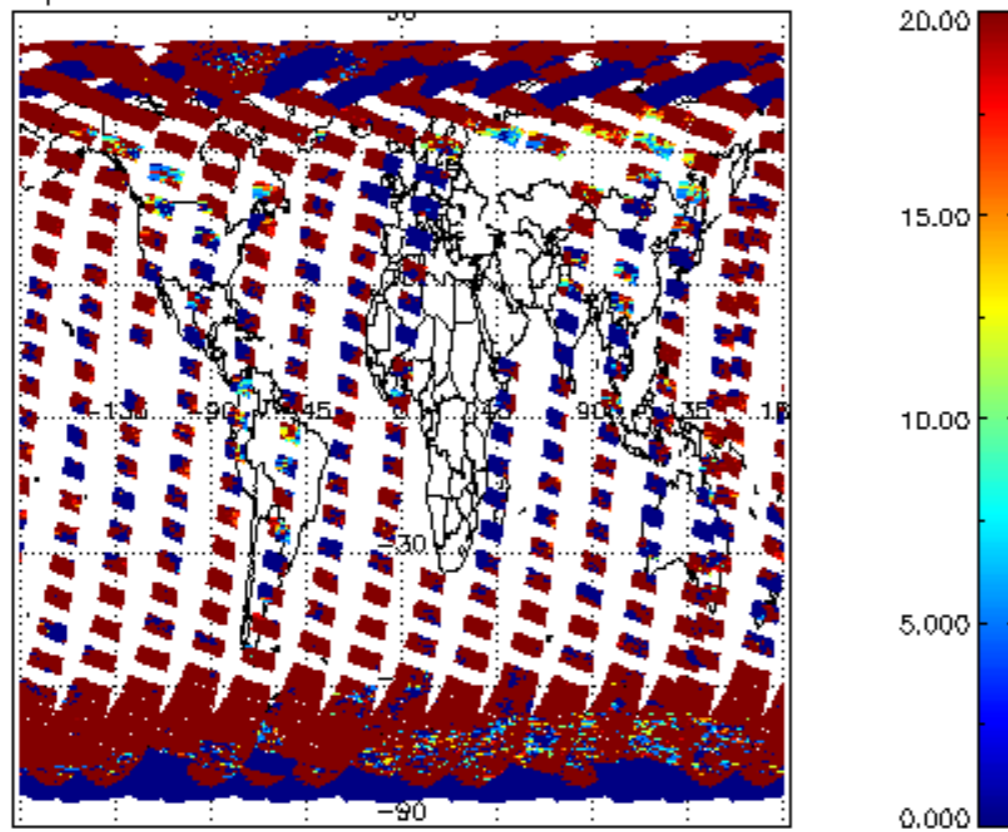
cL\_frac for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



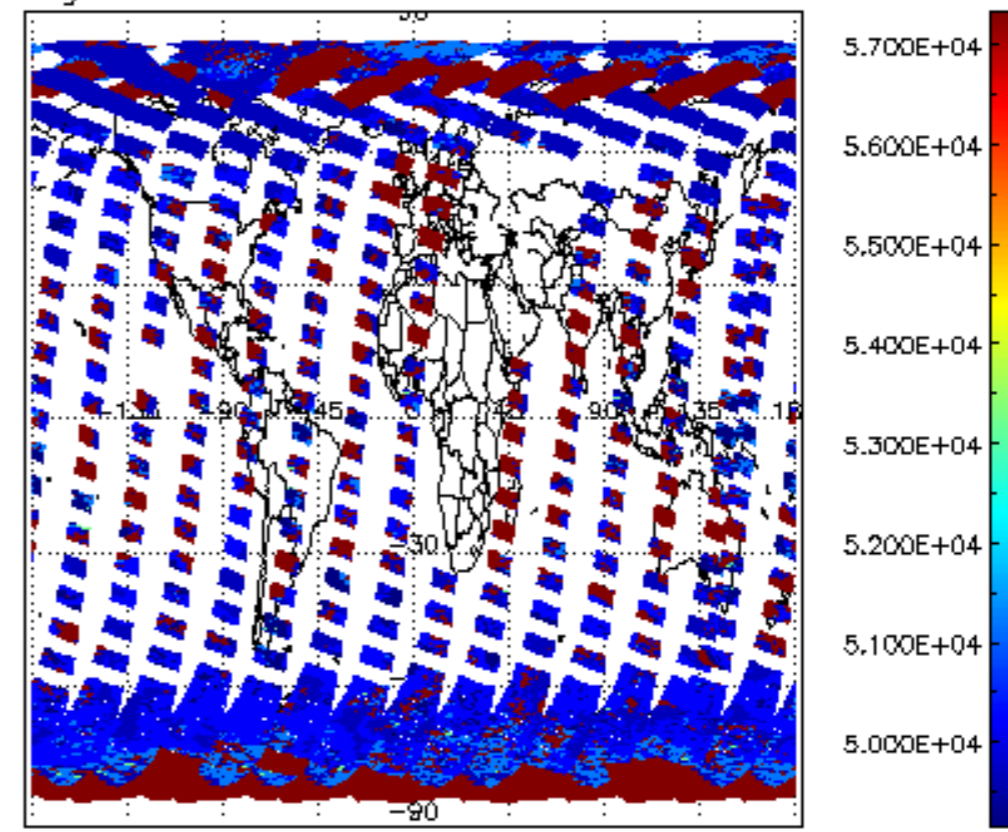
cL\_top\_height for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

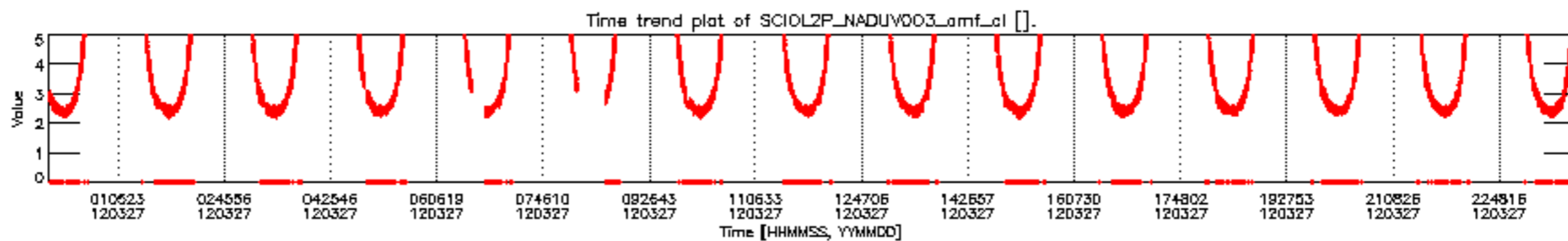
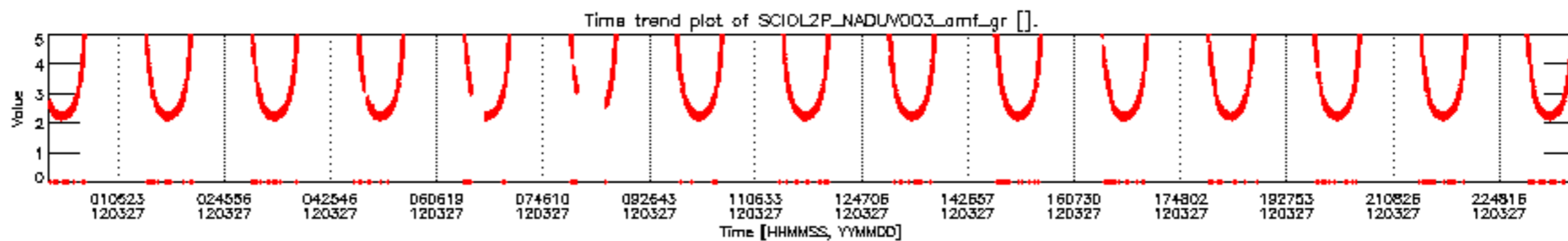
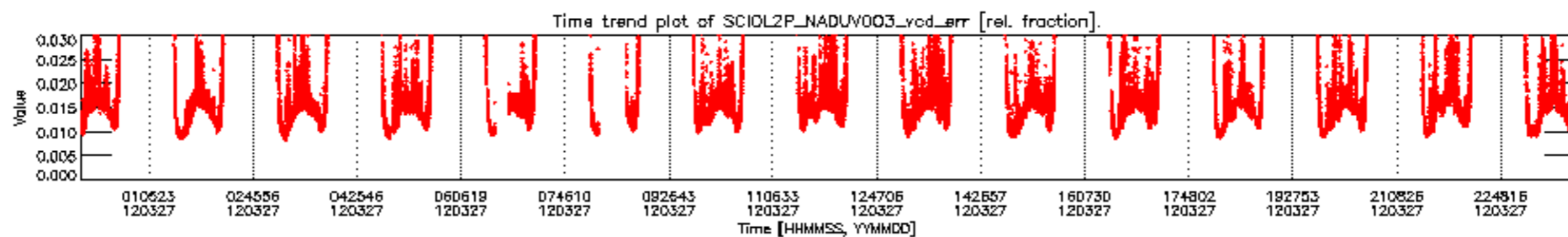
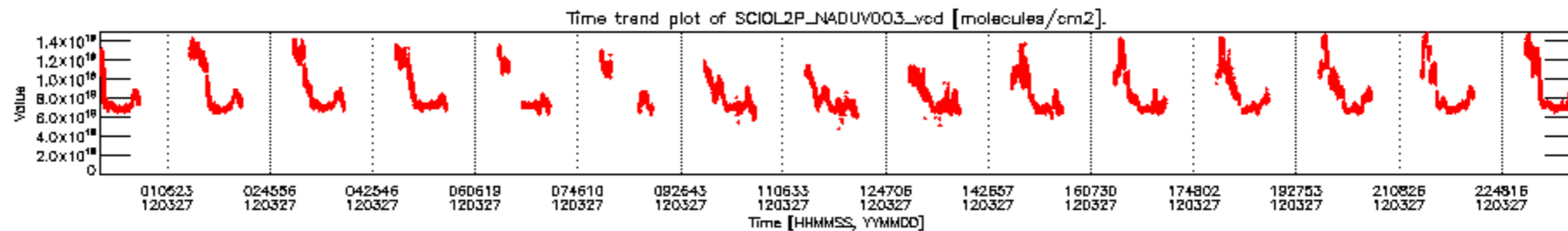


cL\_opt\_depth for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



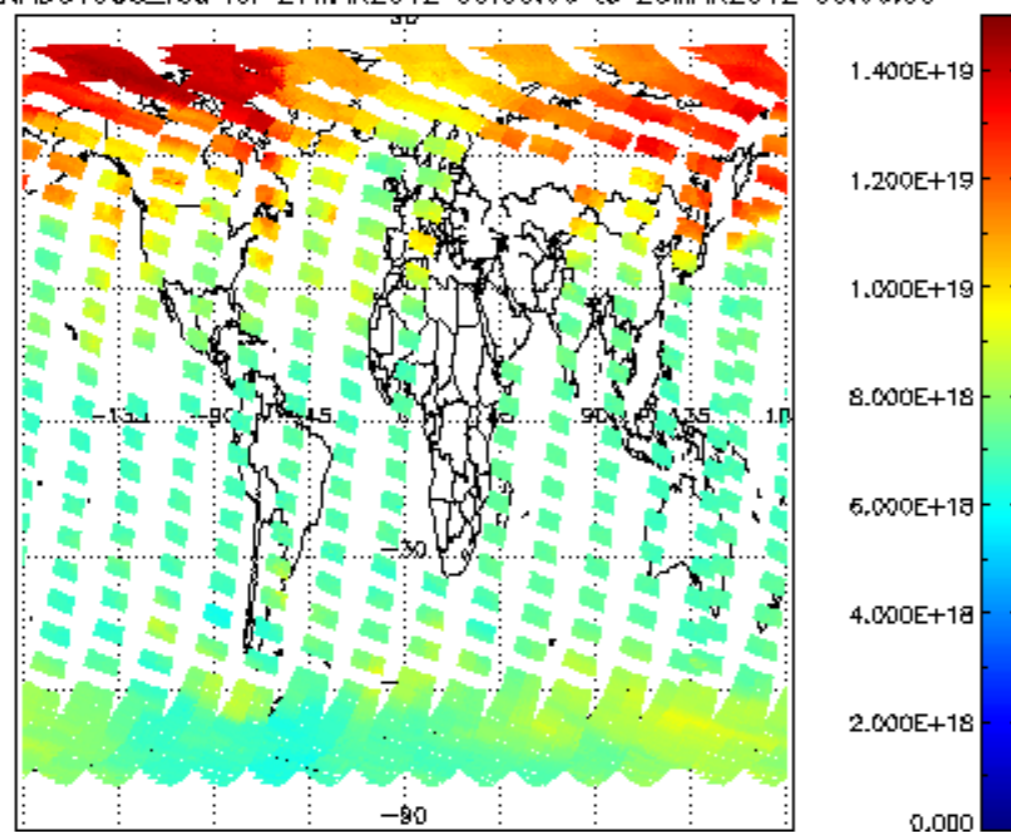
cloud\_flags for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



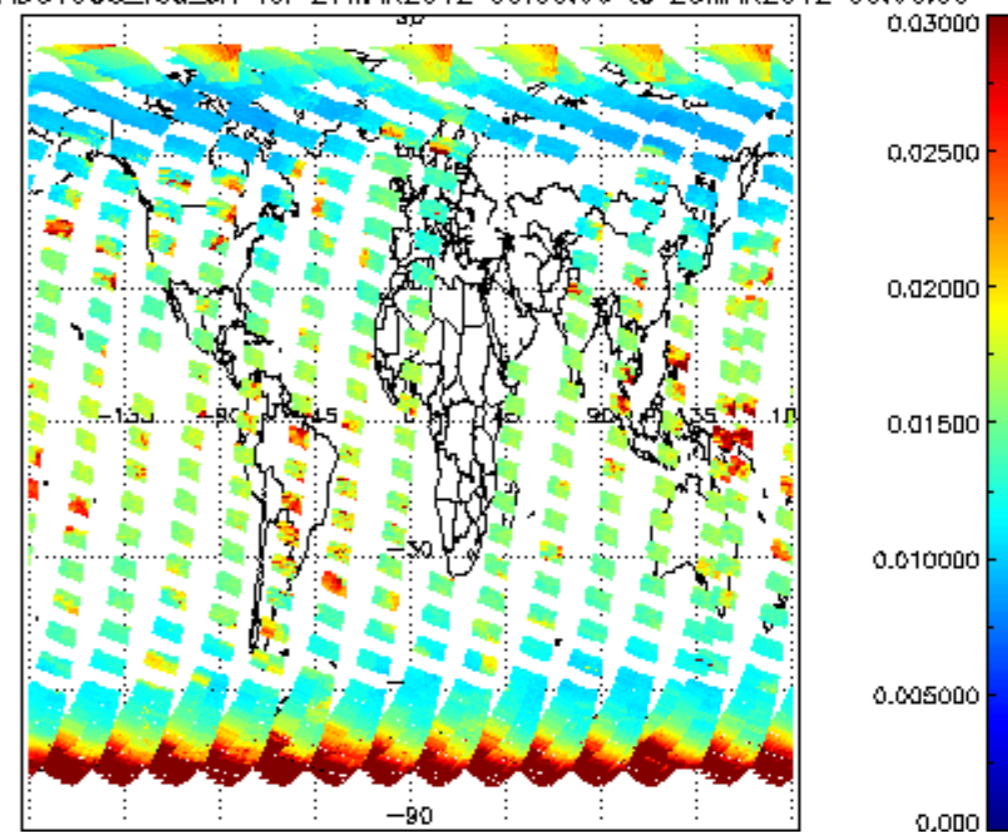




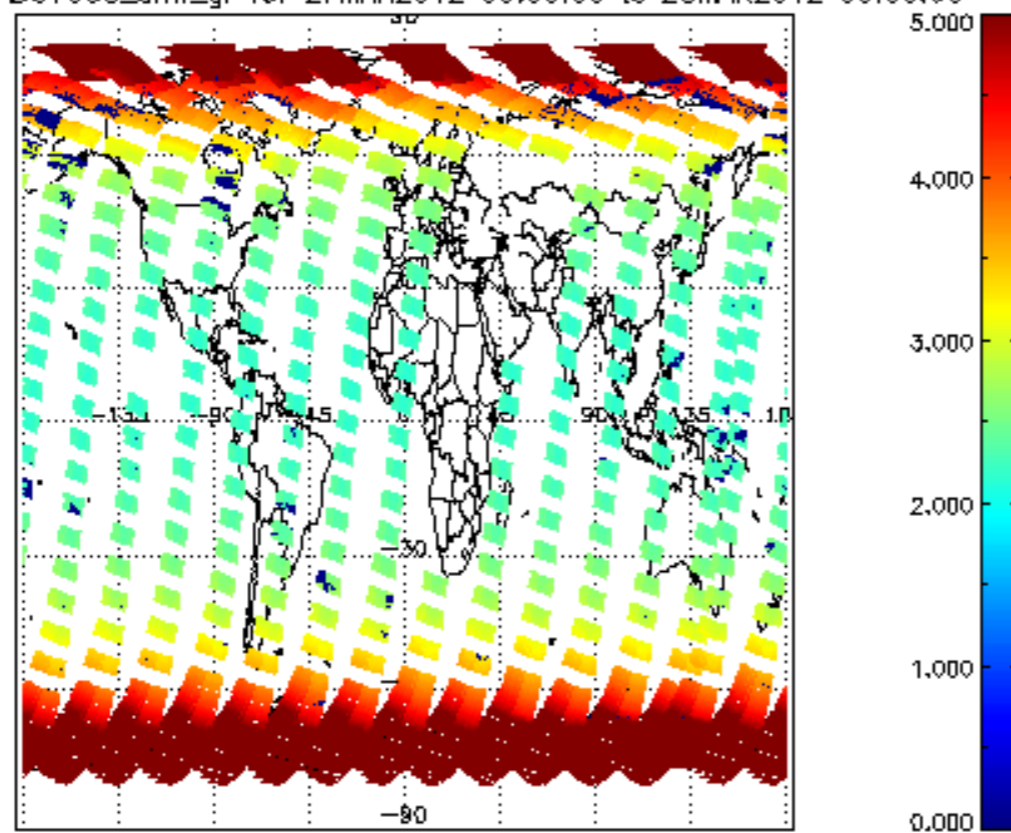
SCIOL2P\_NADUV003\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



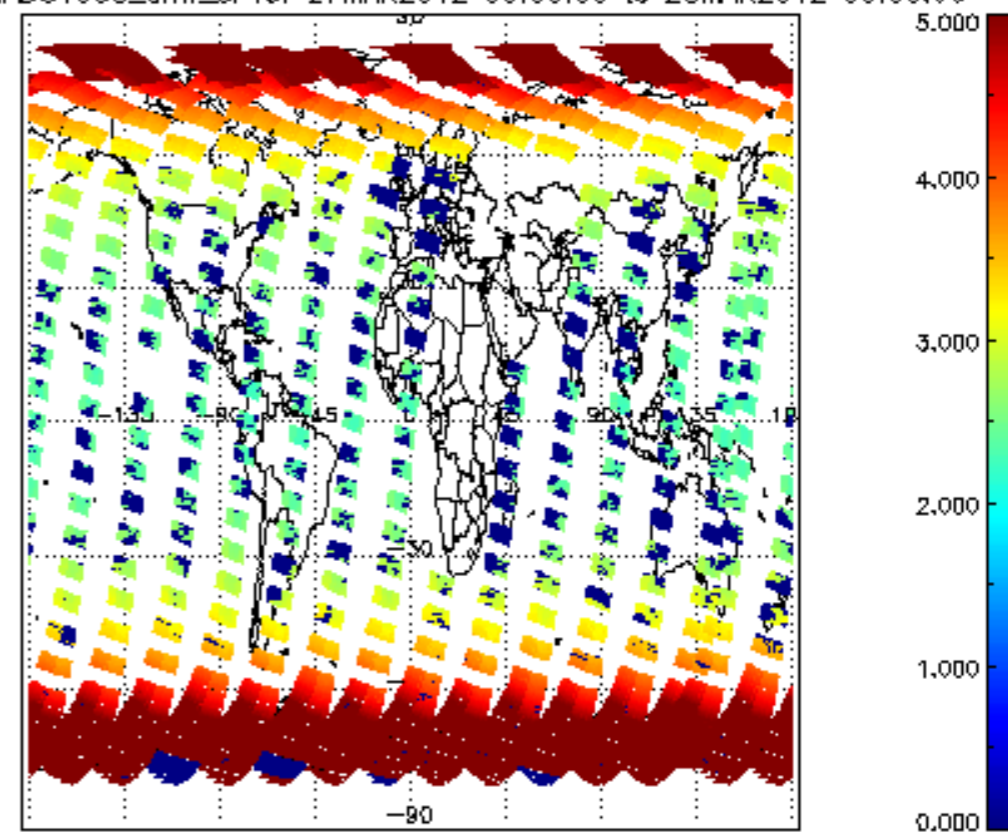
SCIOL2P\_NADUV003\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

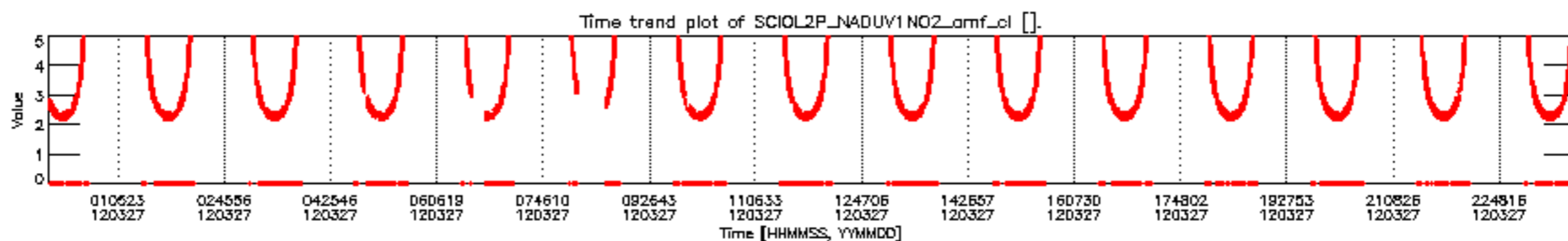
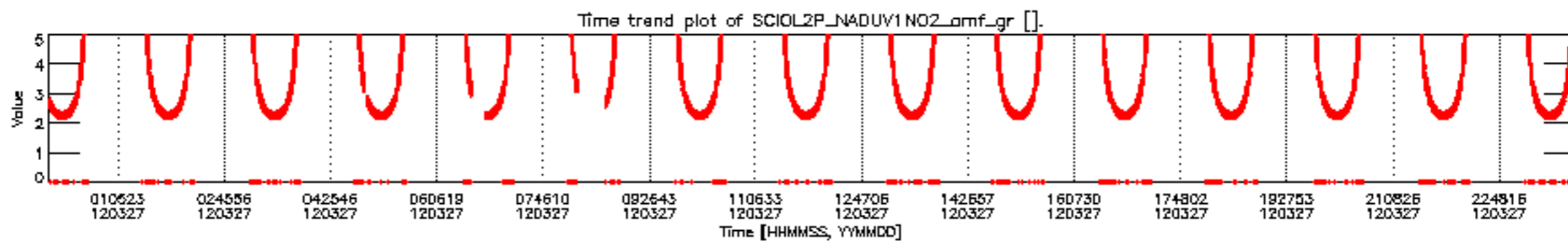
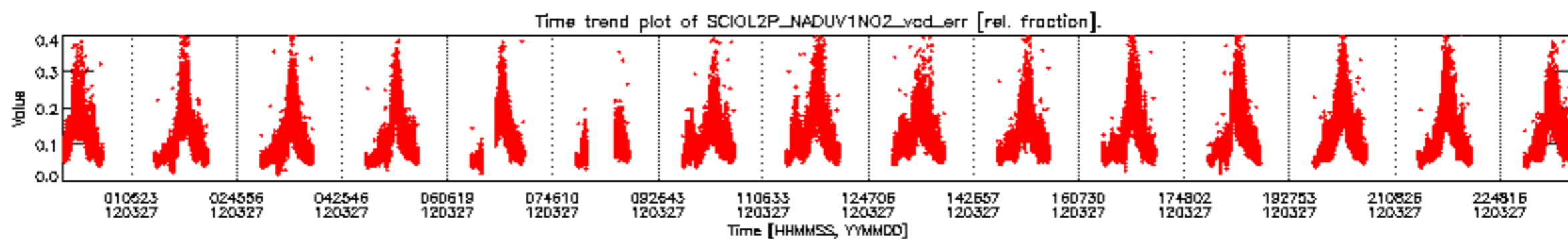
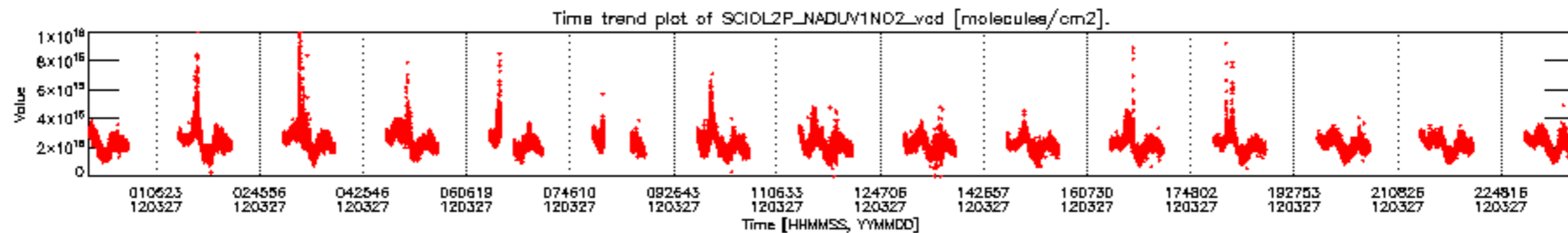


SCIOL2P\_NADUV003\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

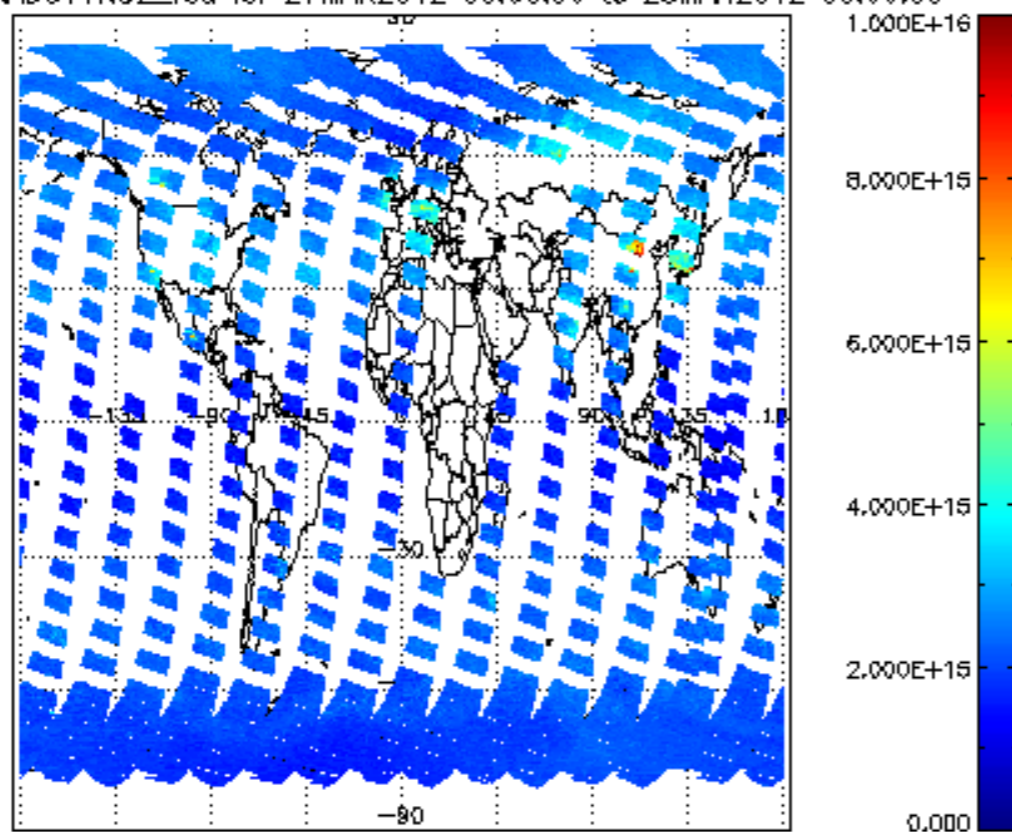


SCIOL2P\_NADUV003\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

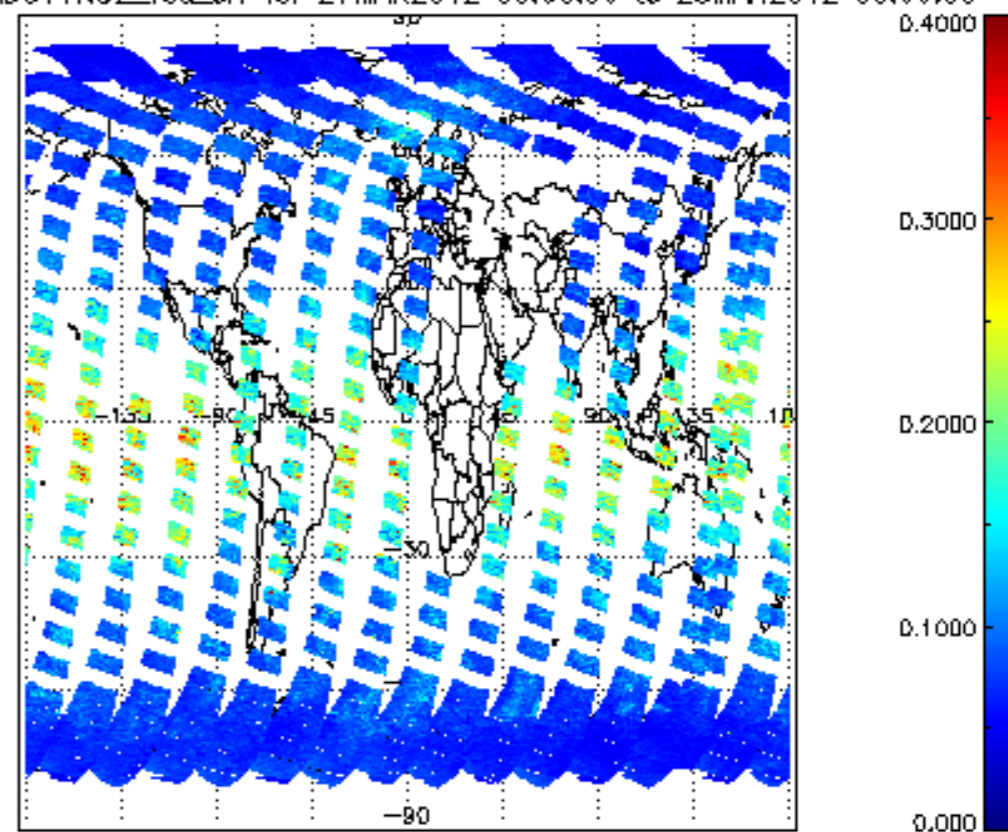




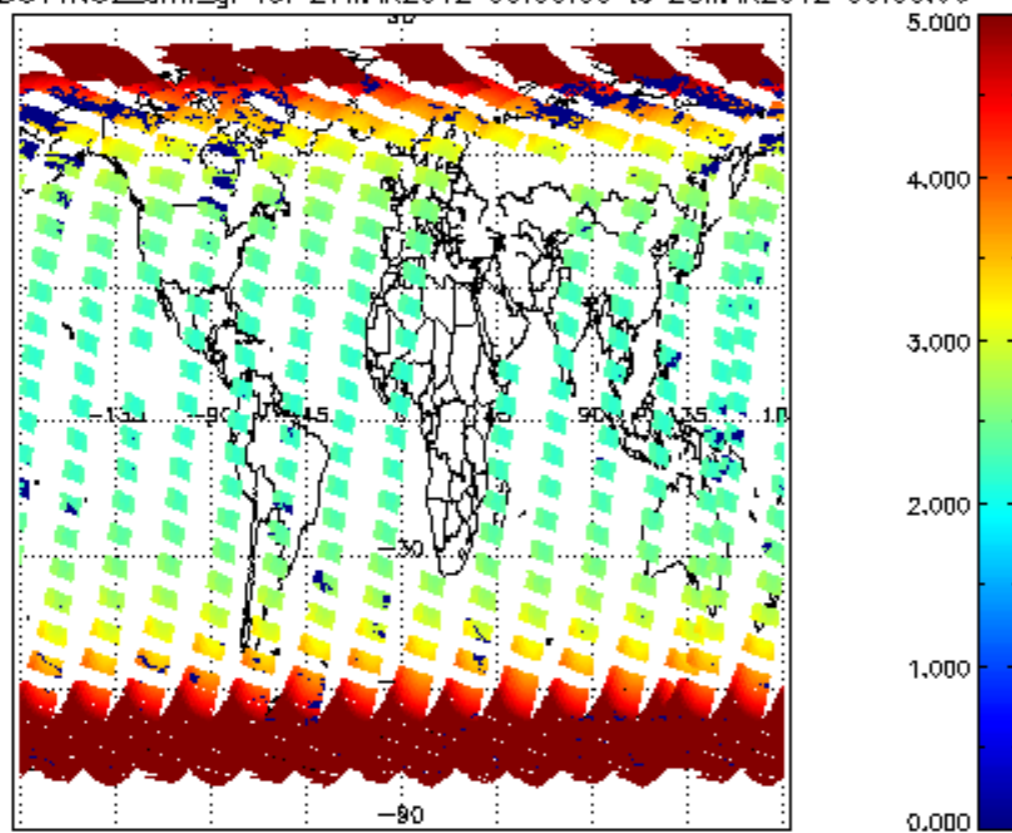
SCIOL2P\_NADUV1NO2\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



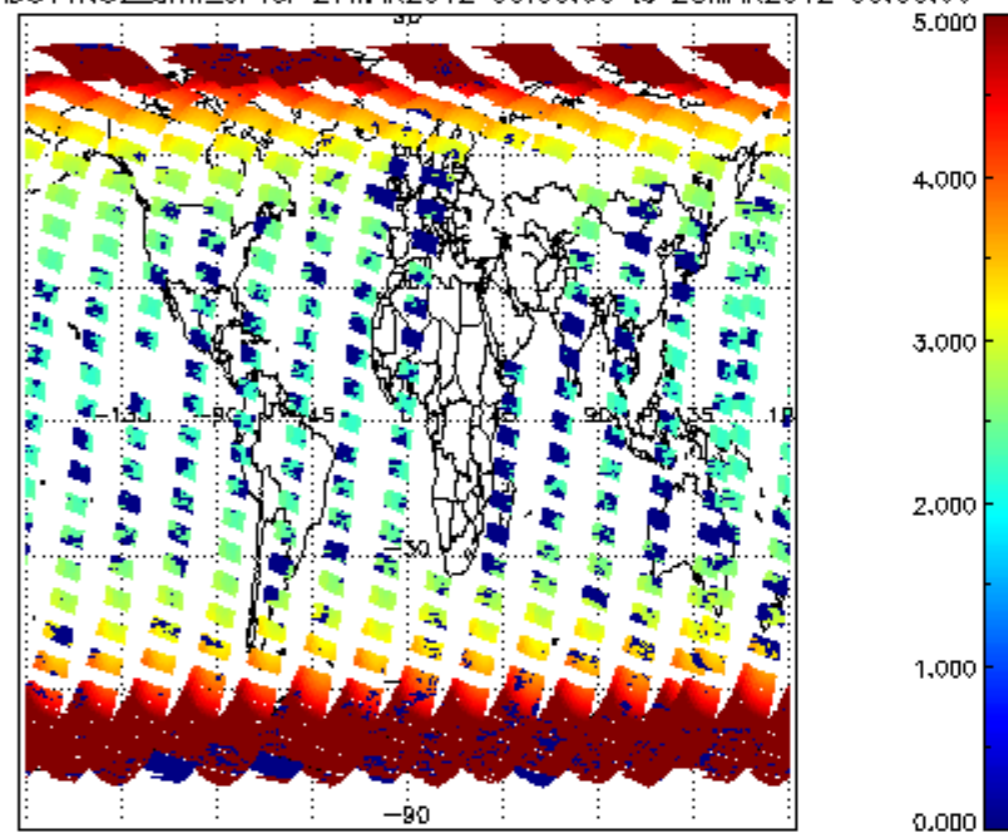
SCIOL2P\_NADUV1NO2\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

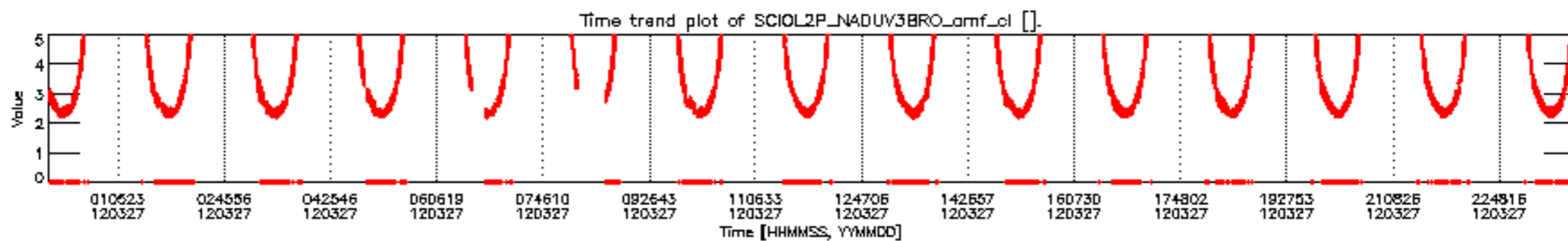
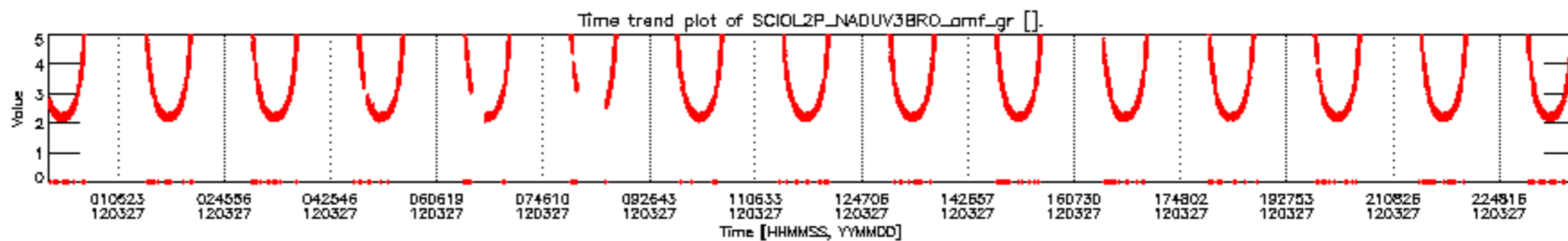
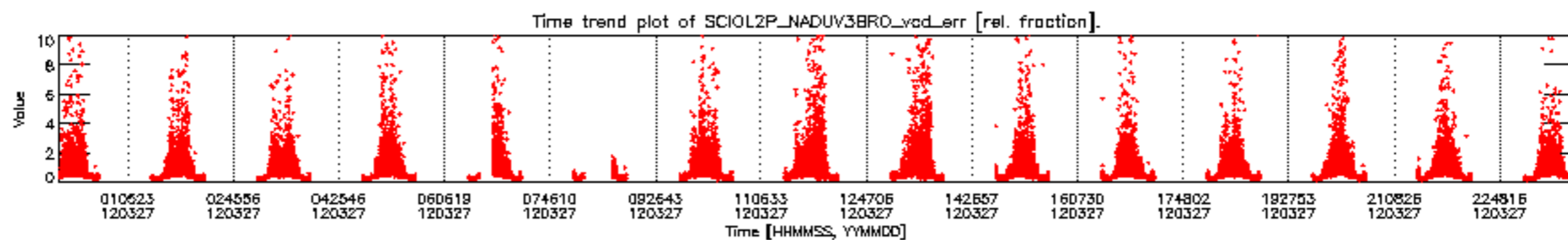
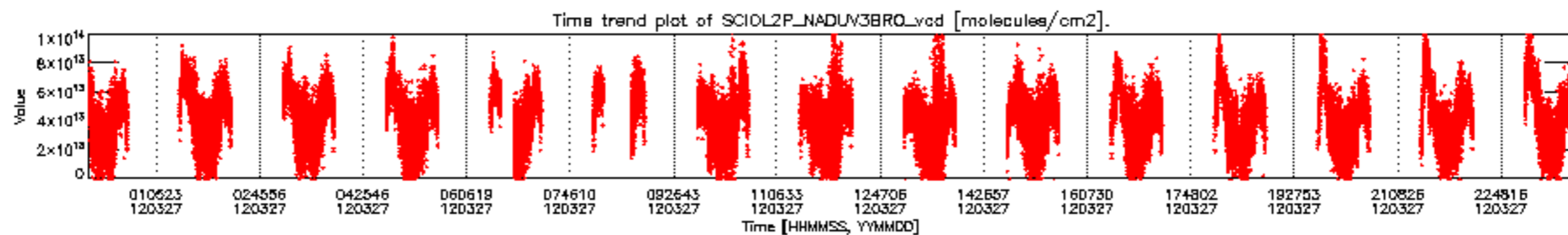


SCIOL2P\_NADUV1NO2\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

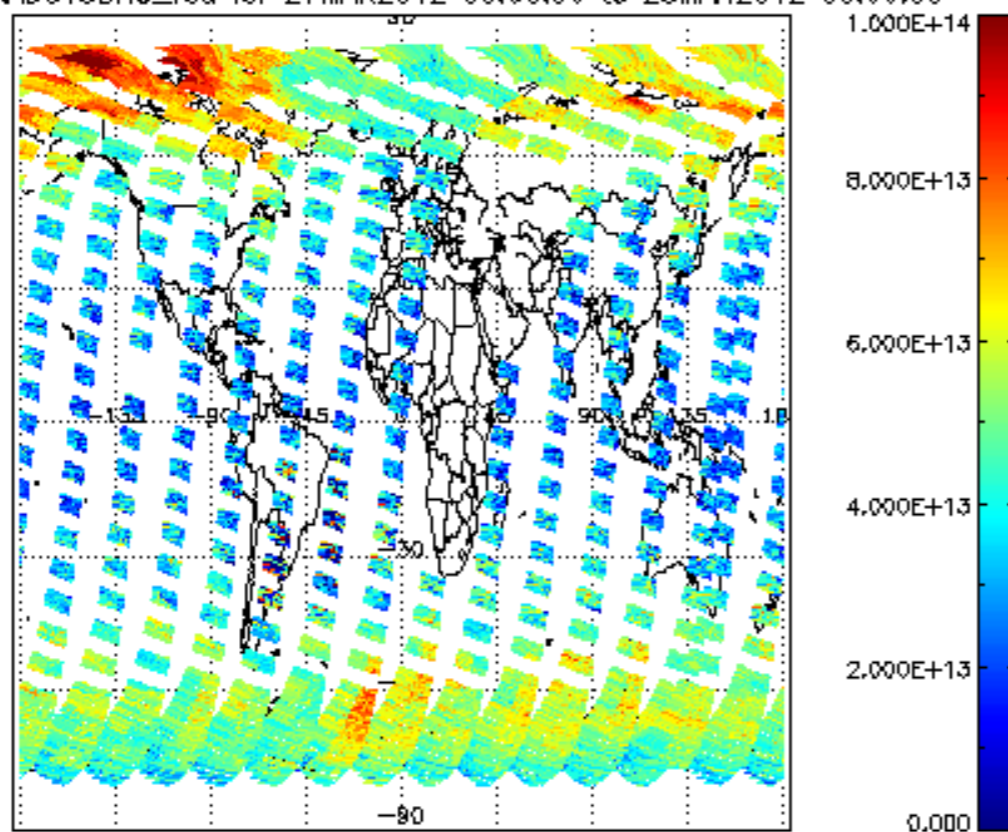


SCIOL2P\_NADUV1NO2\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

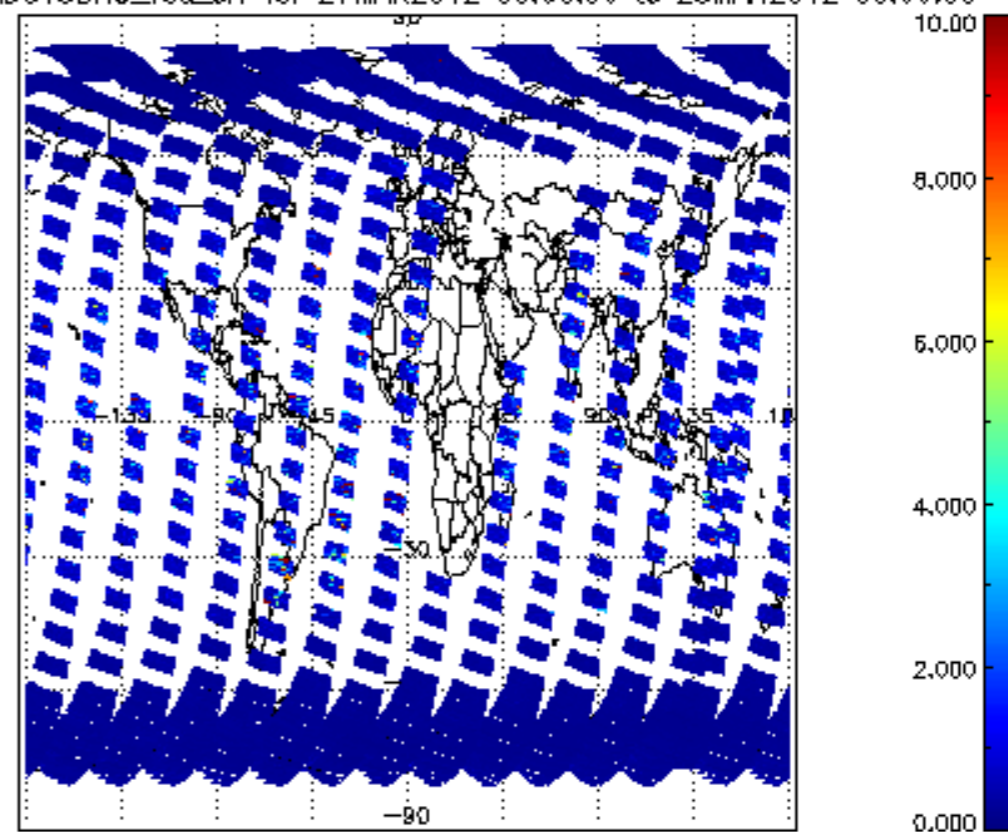




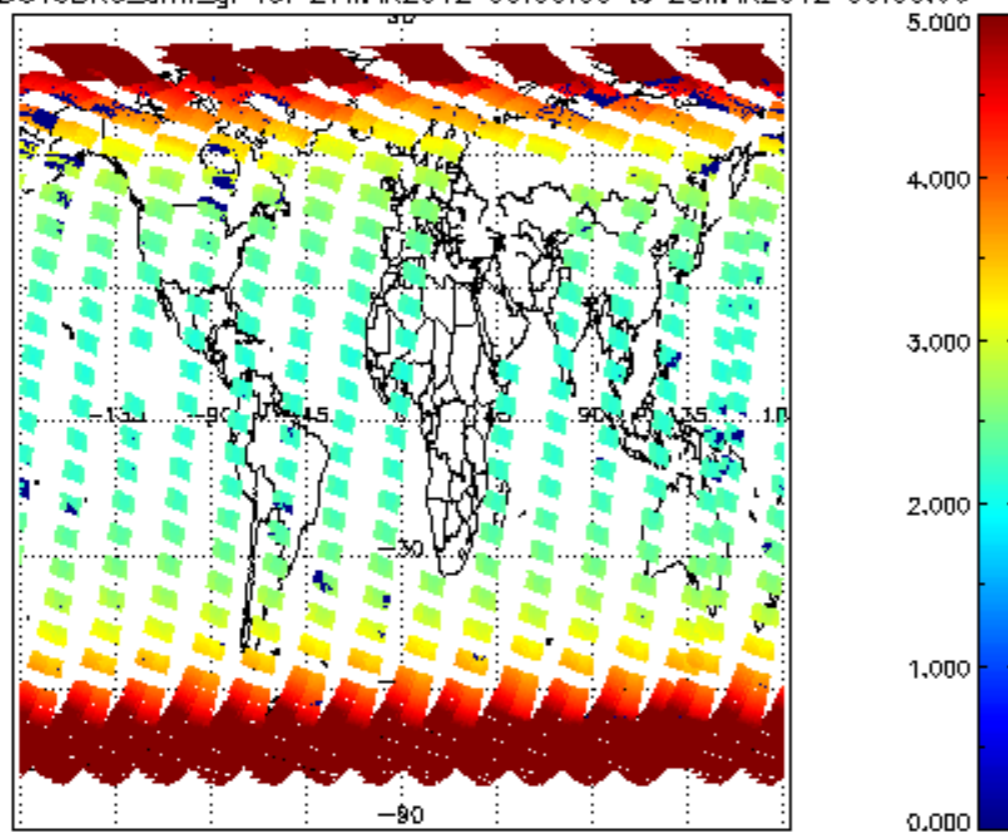
SCIOL2P\_NADUV3BRO\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



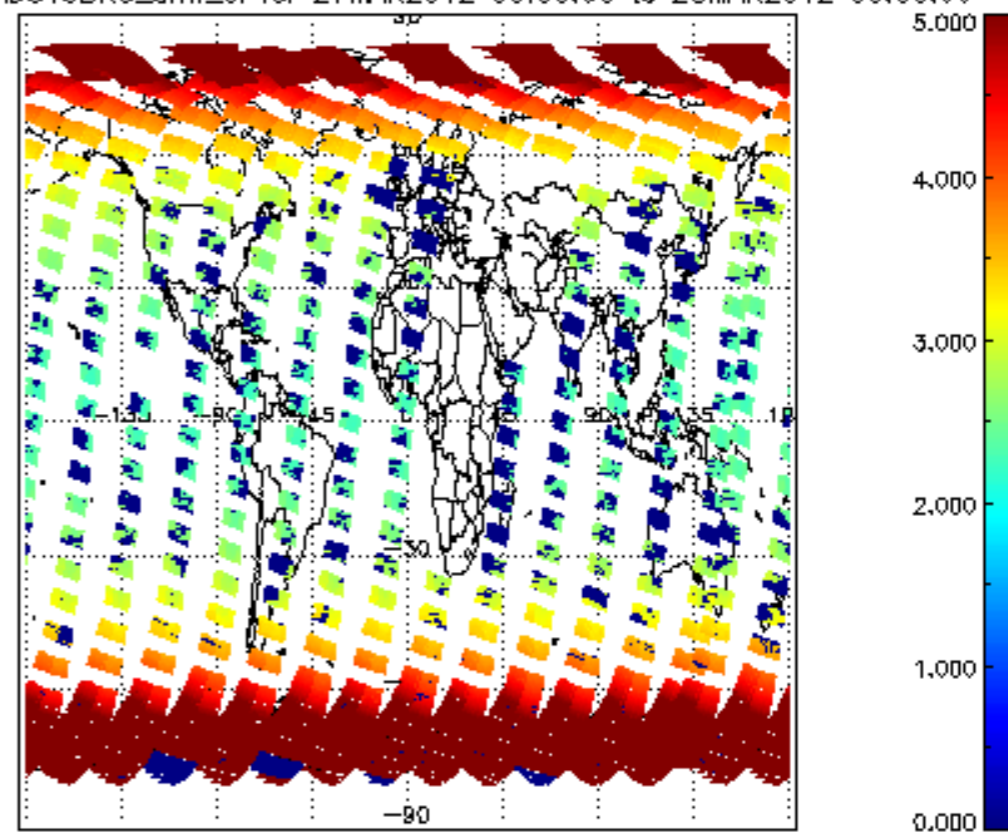
SCIOL2P\_NADUV3BRO\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

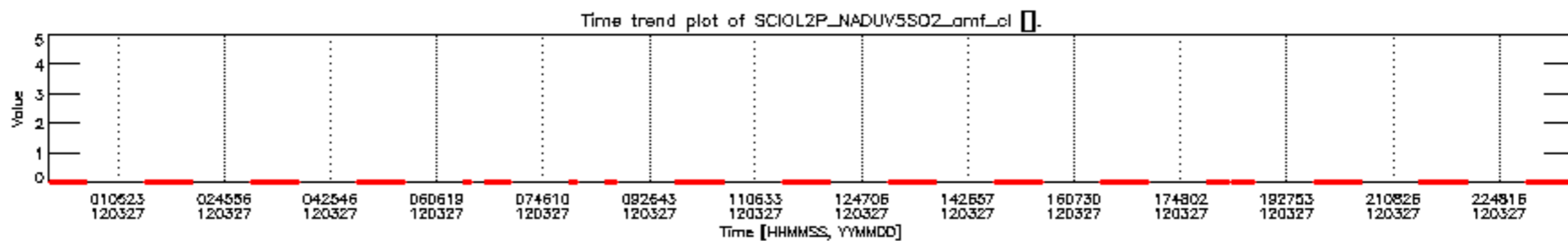
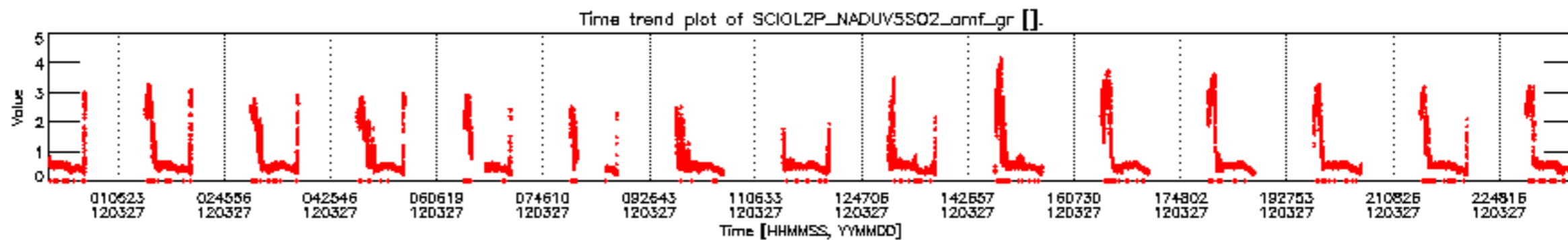
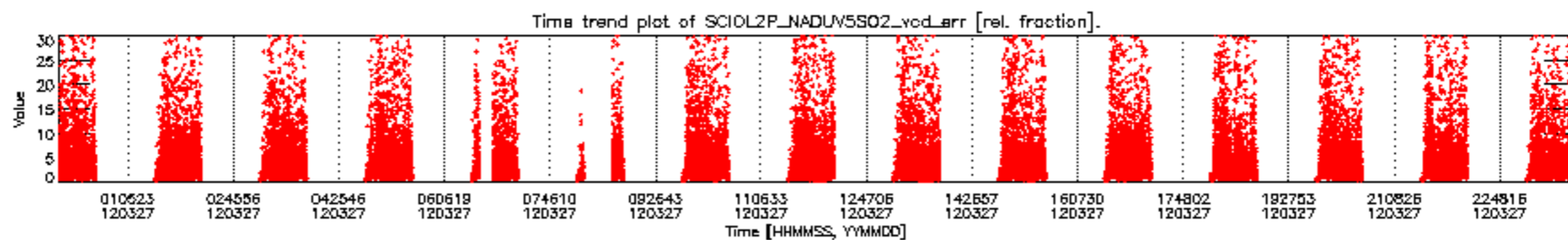
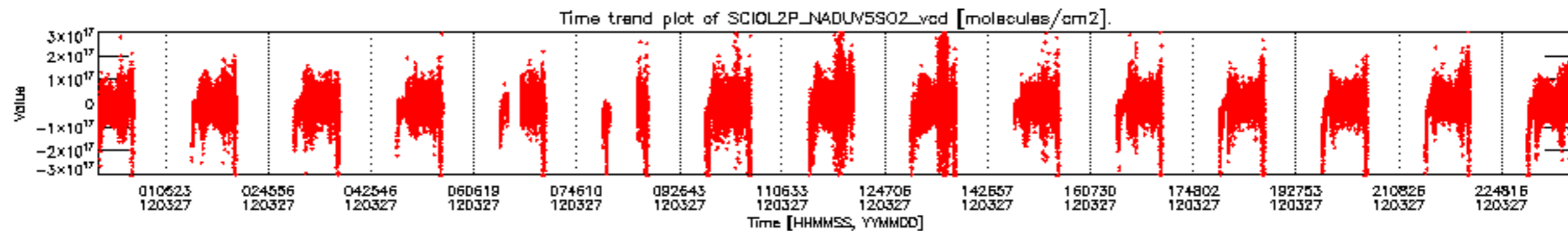


SCIOL2P\_NADUV3BRO\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

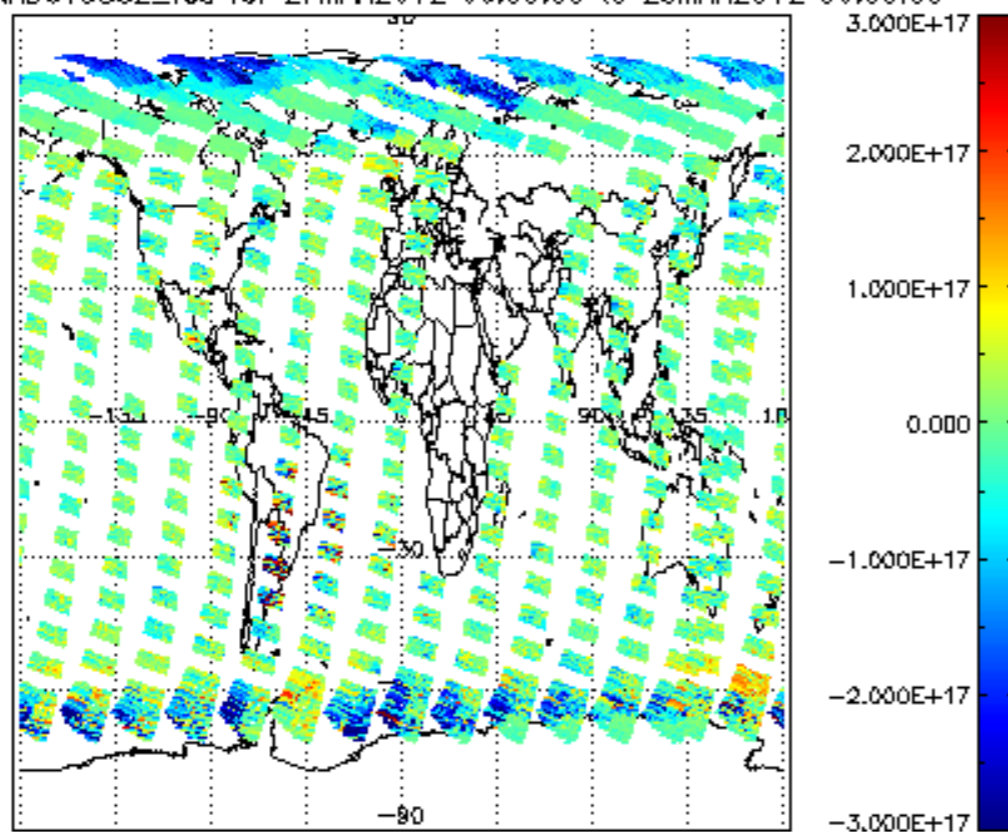


SCIOL2P\_NADUV3BRO\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

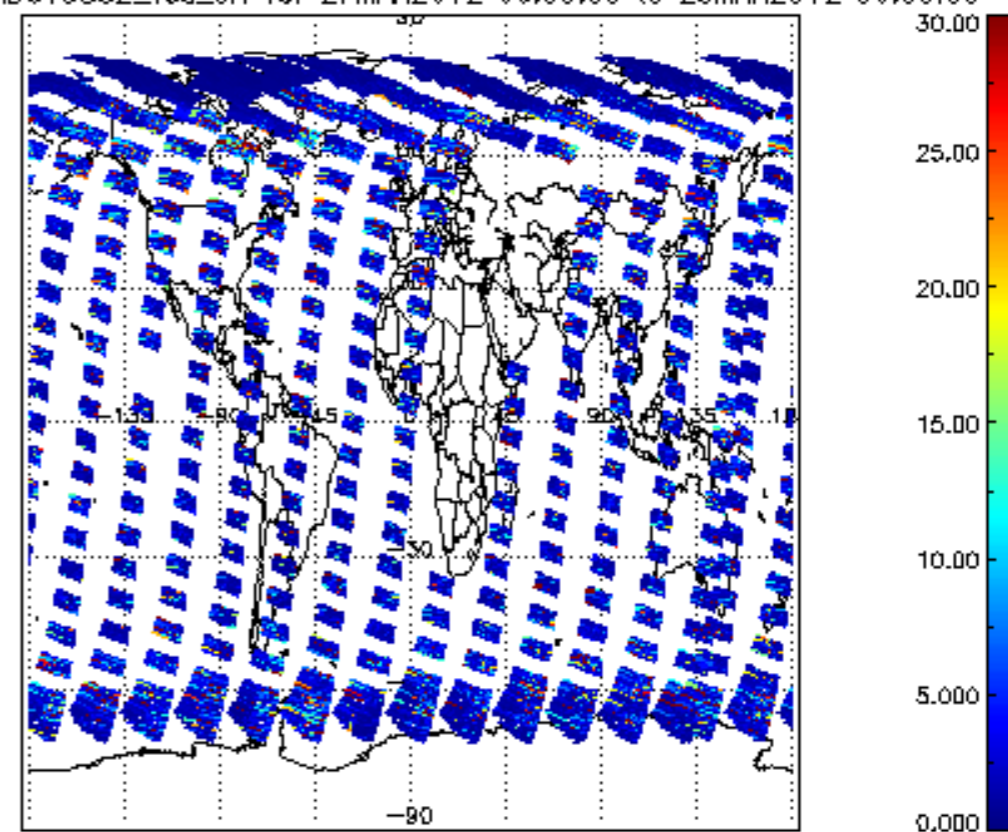




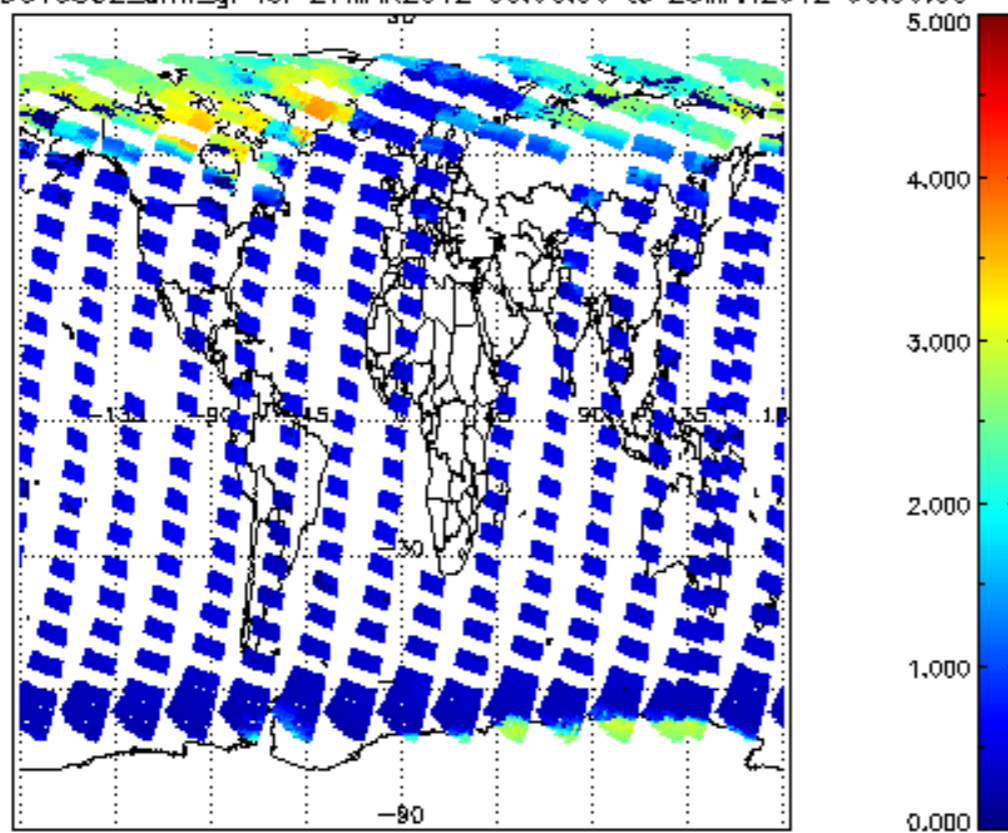
SCIOL2P\_NADUV5S02\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



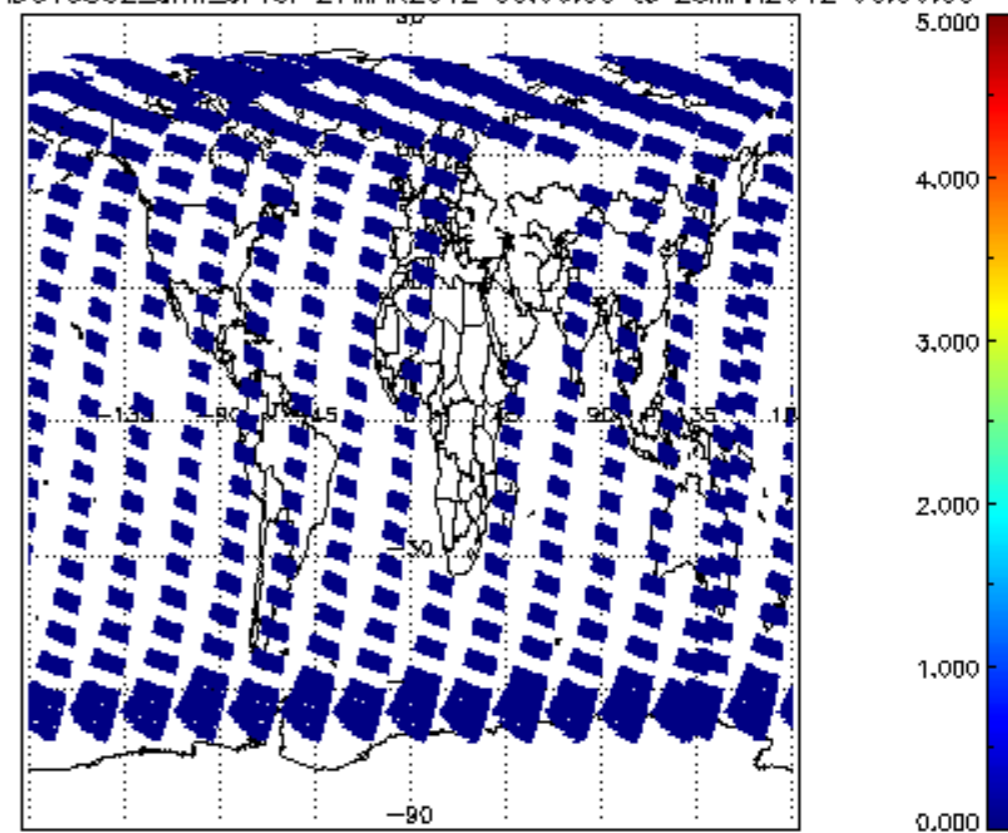
SCIOL2P\_NADUV5S02\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

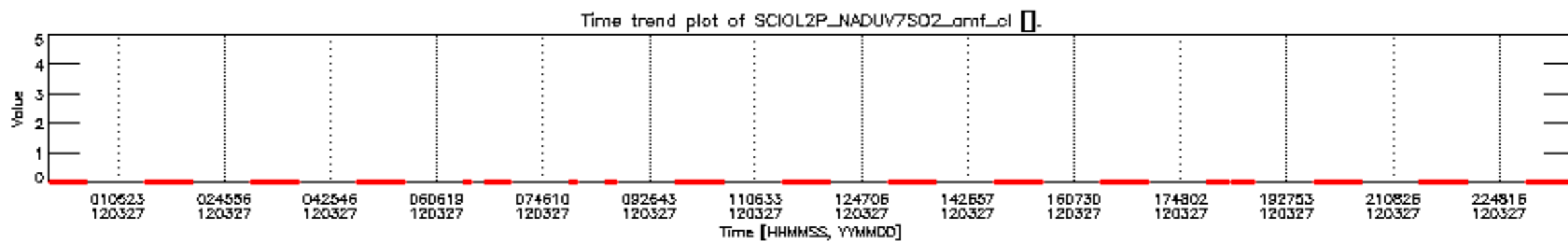
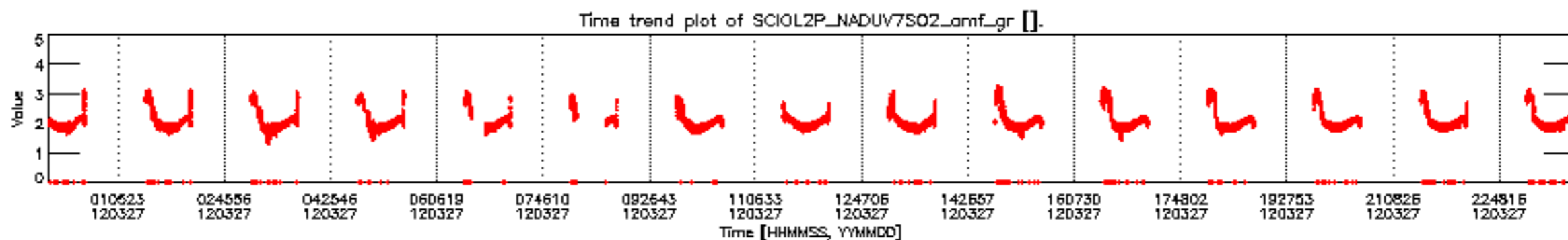
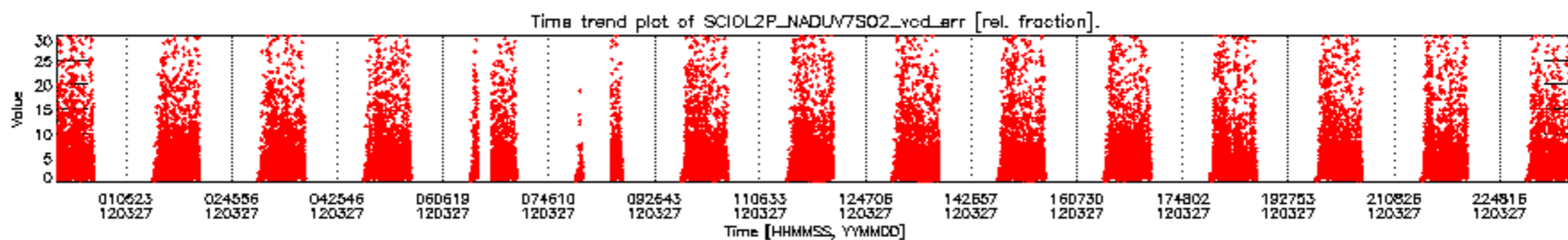
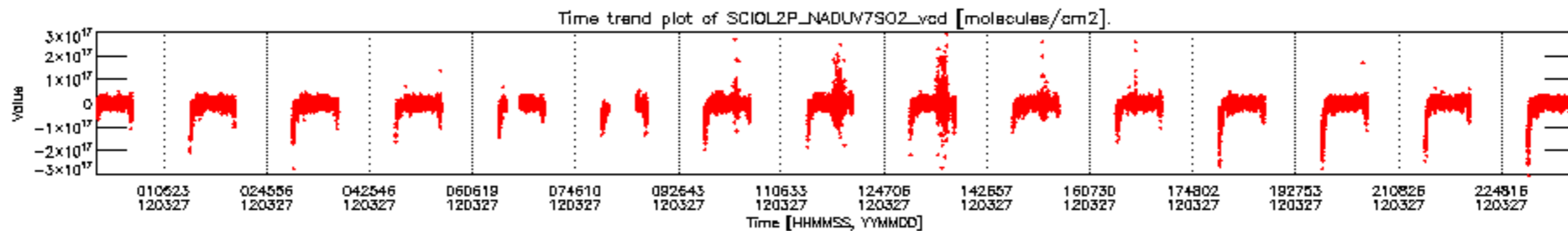


SCIOL2P\_NADUV5S02\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



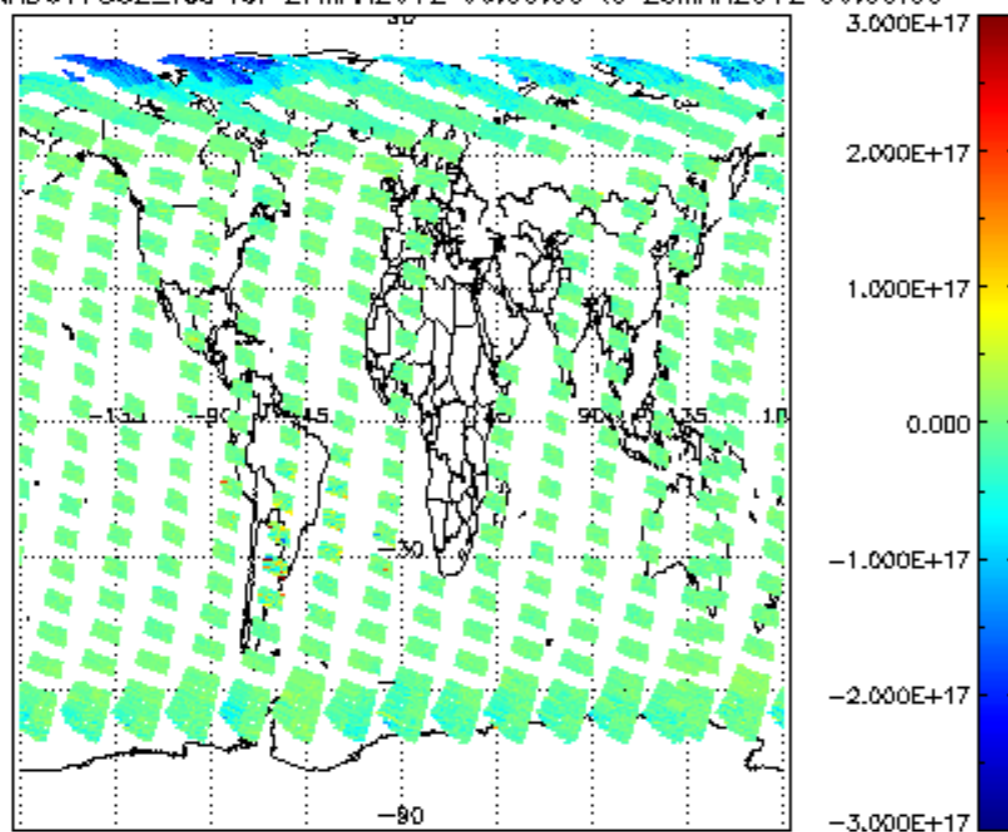
SCIOL2P\_NADUV5S02\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



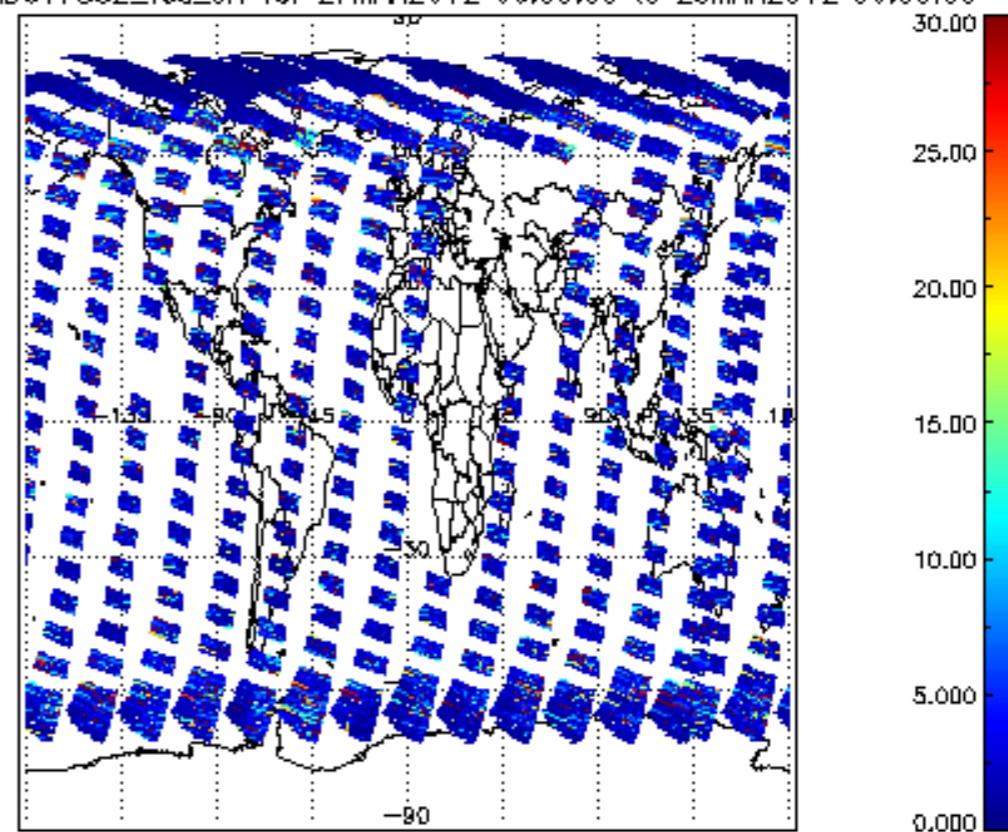




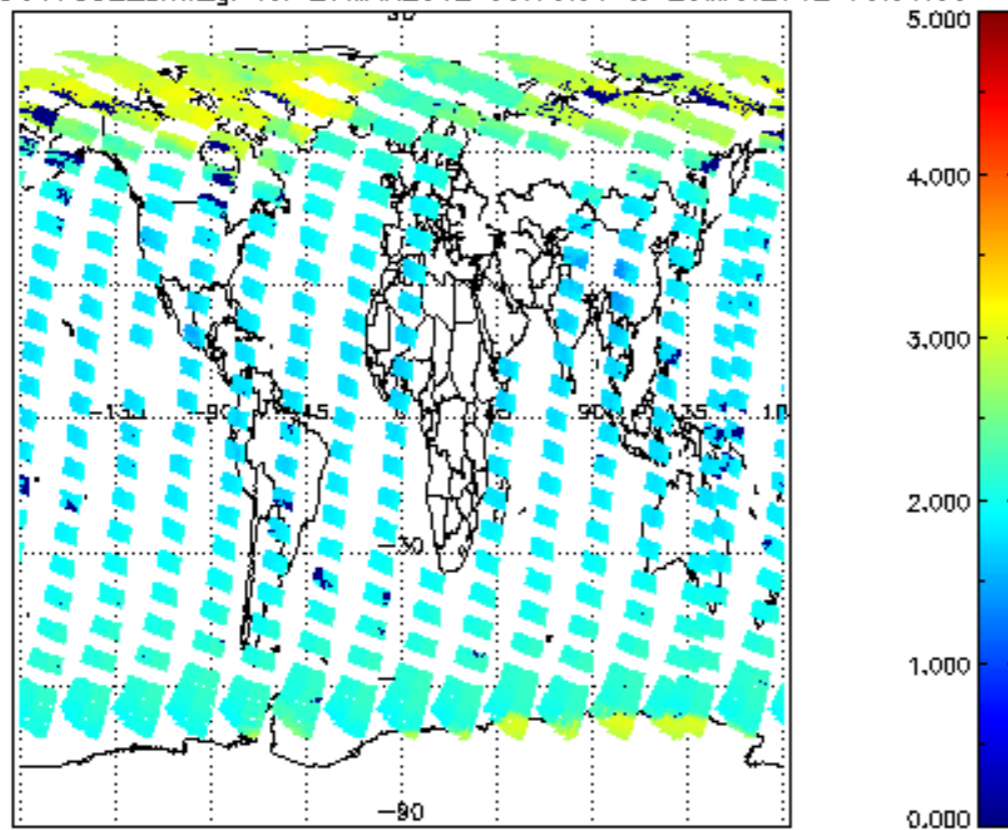
SCIOL2P\_NADUV7S02\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



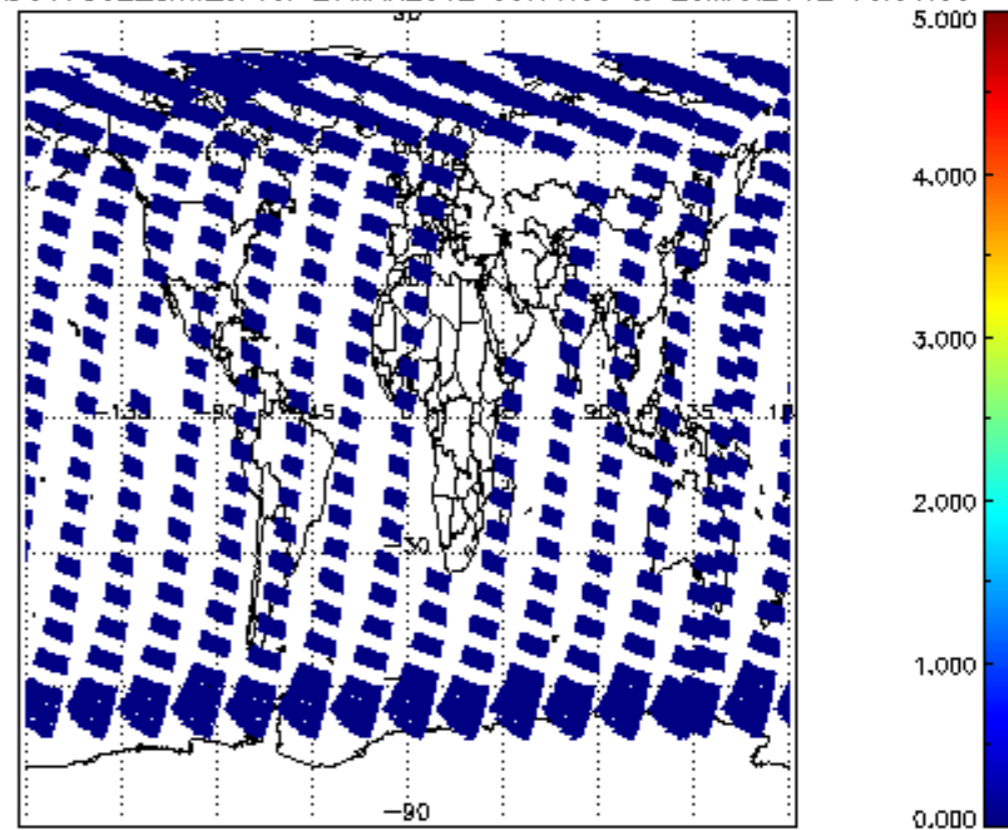
SCIOL2P\_NADUV7S02\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

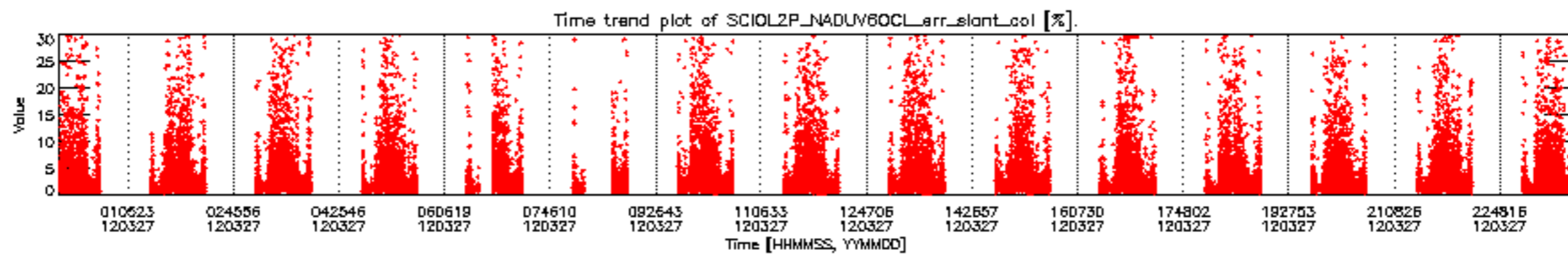
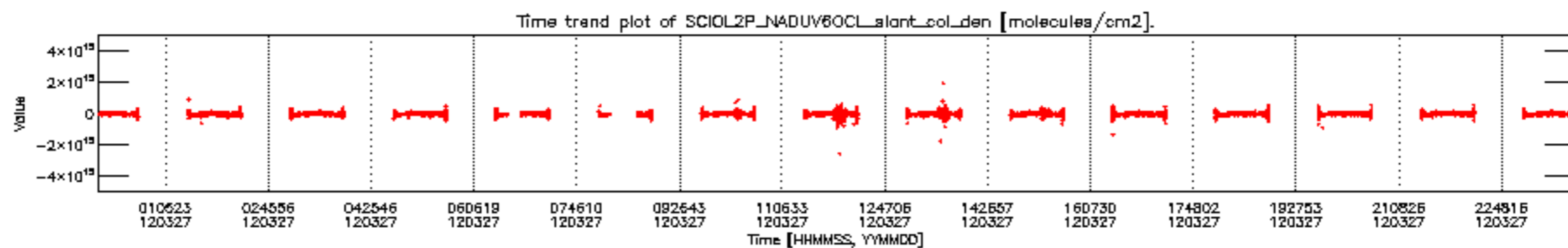


SCIOL2P\_NADUV7S02\_amf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

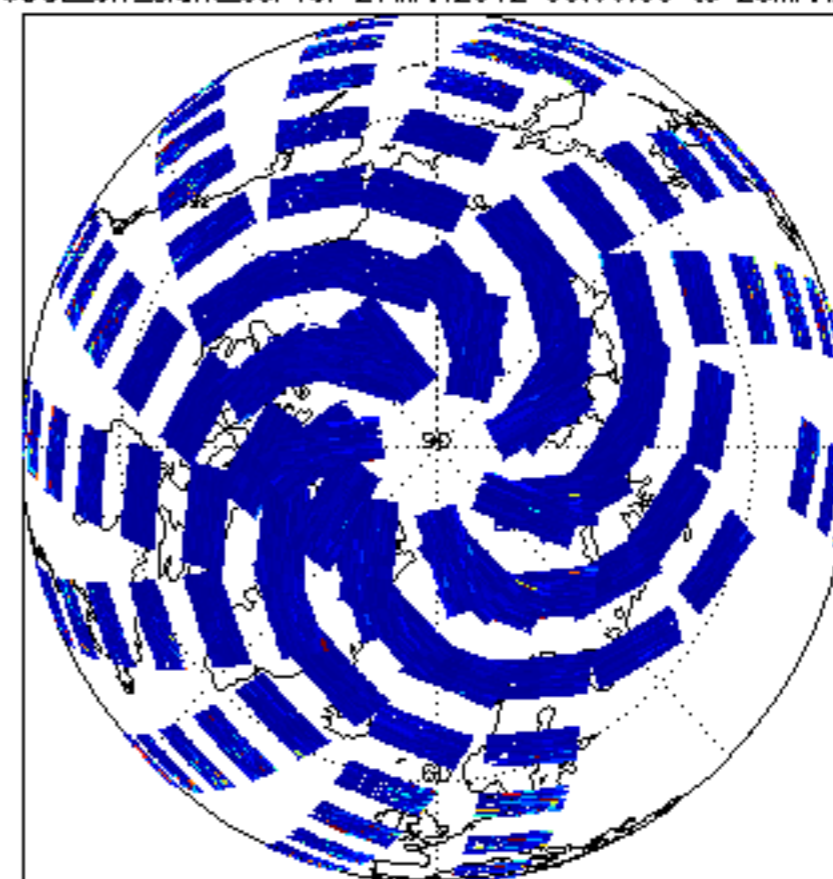
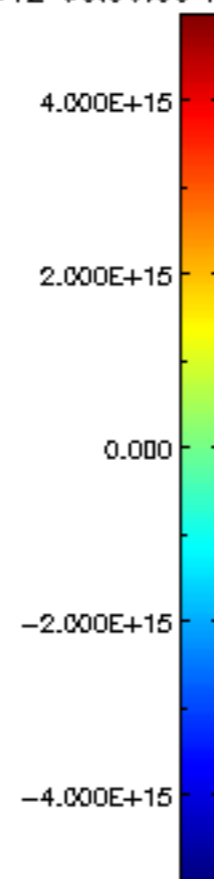
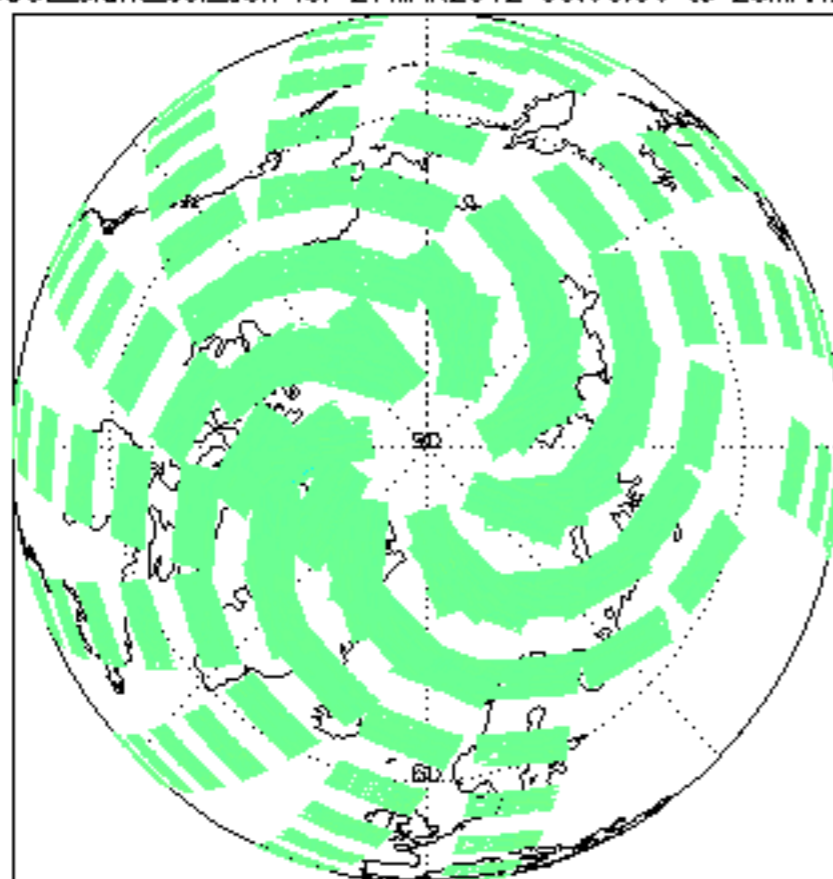


SCIOL2P\_NADUV7S02\_amf\_cl for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

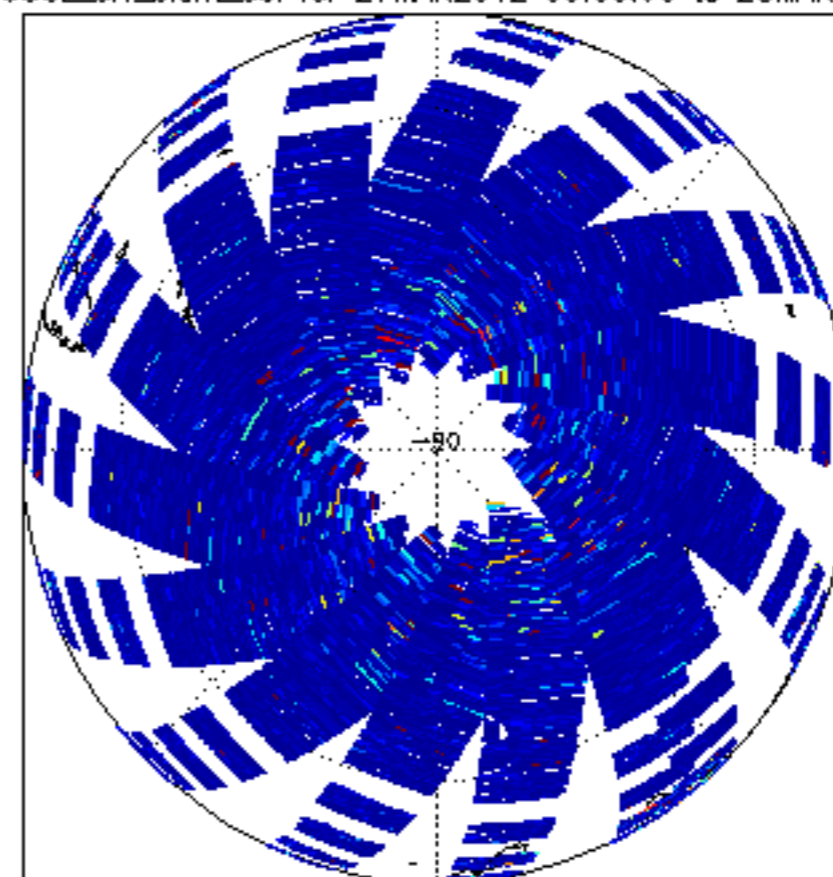
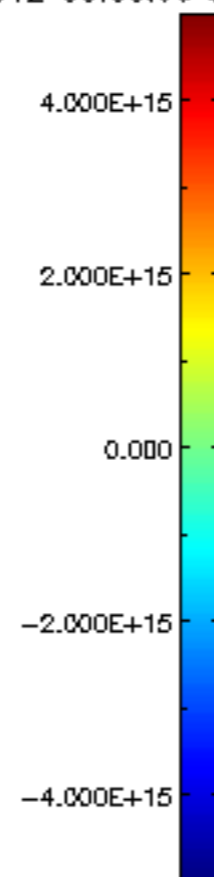
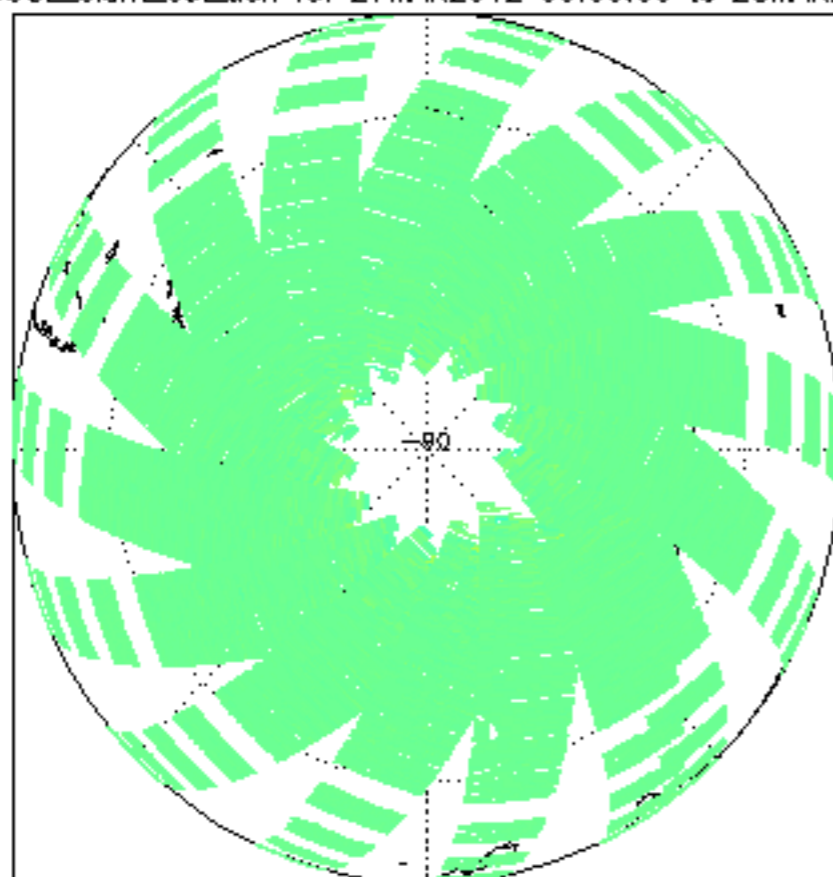


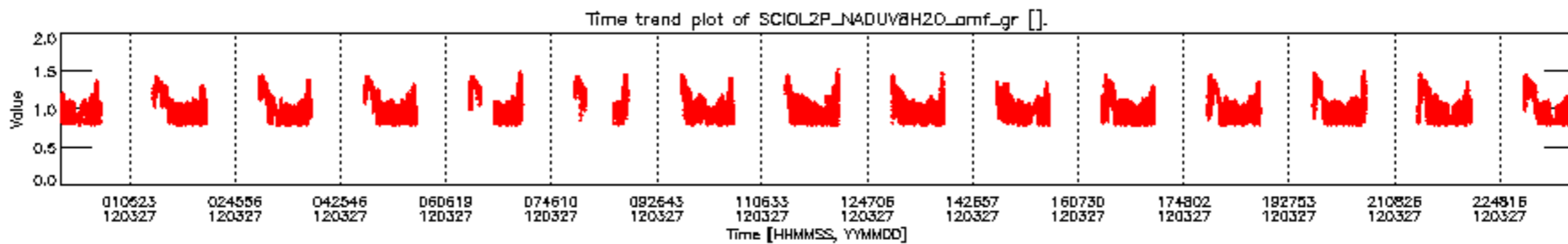
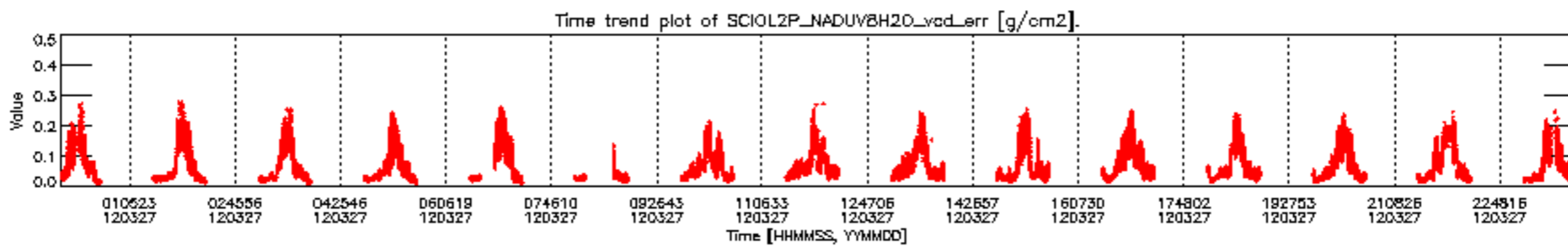
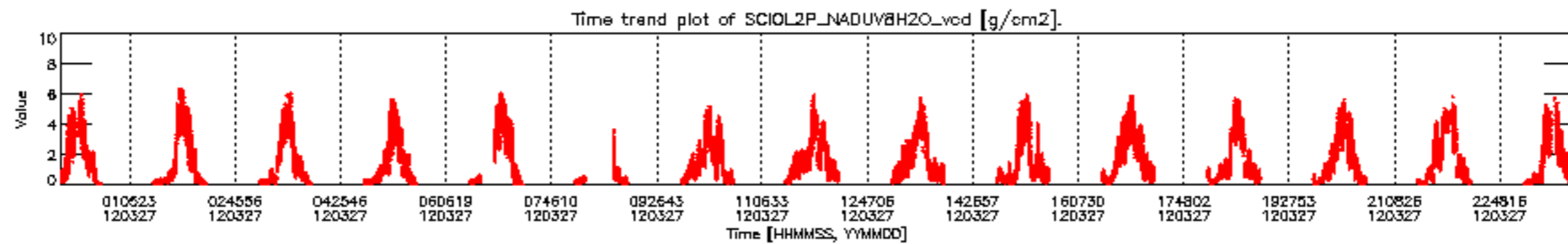


CIOL2P\_NADUV6OCL\_slant\_col\_den for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 np; CIOL2P\_NADUV6OCL\_err\_slant\_col for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 np

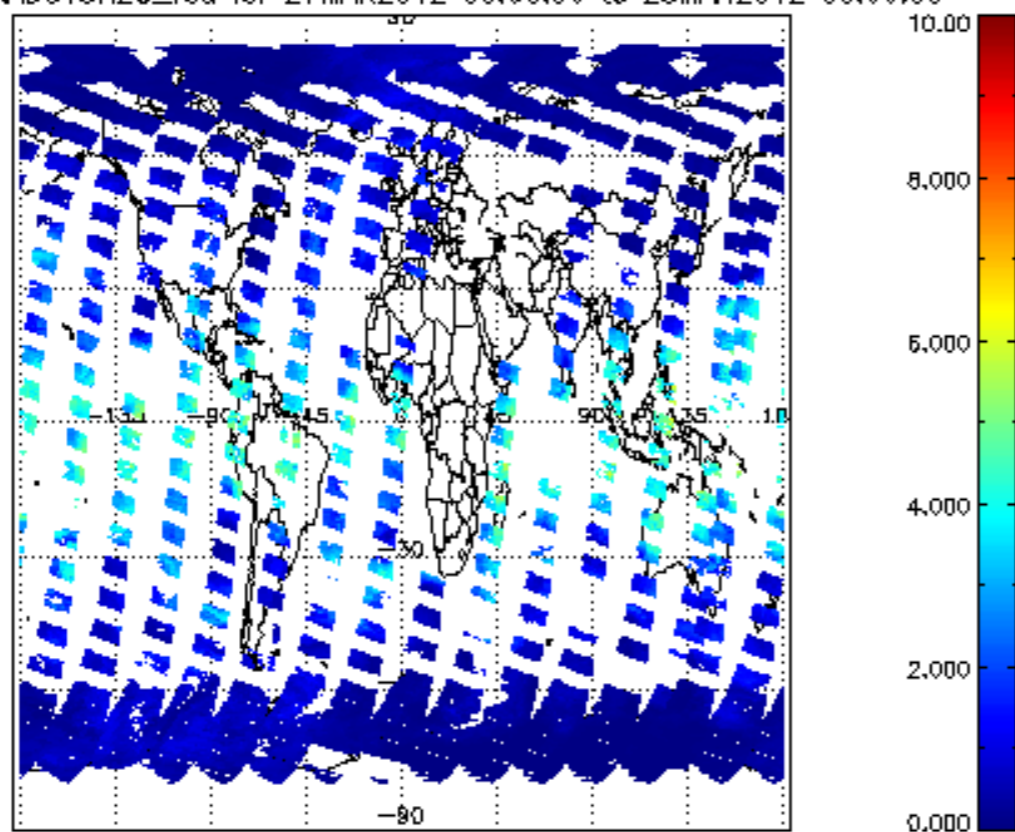


CIOL2P\_NADUV6OCL\_slant\_coLden for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 sp; CIOL2P\_NADUV6OCL\_err\_slant\_col for 27MAR2012 00:00:00 to 28MAR2012 00:00:00 sp

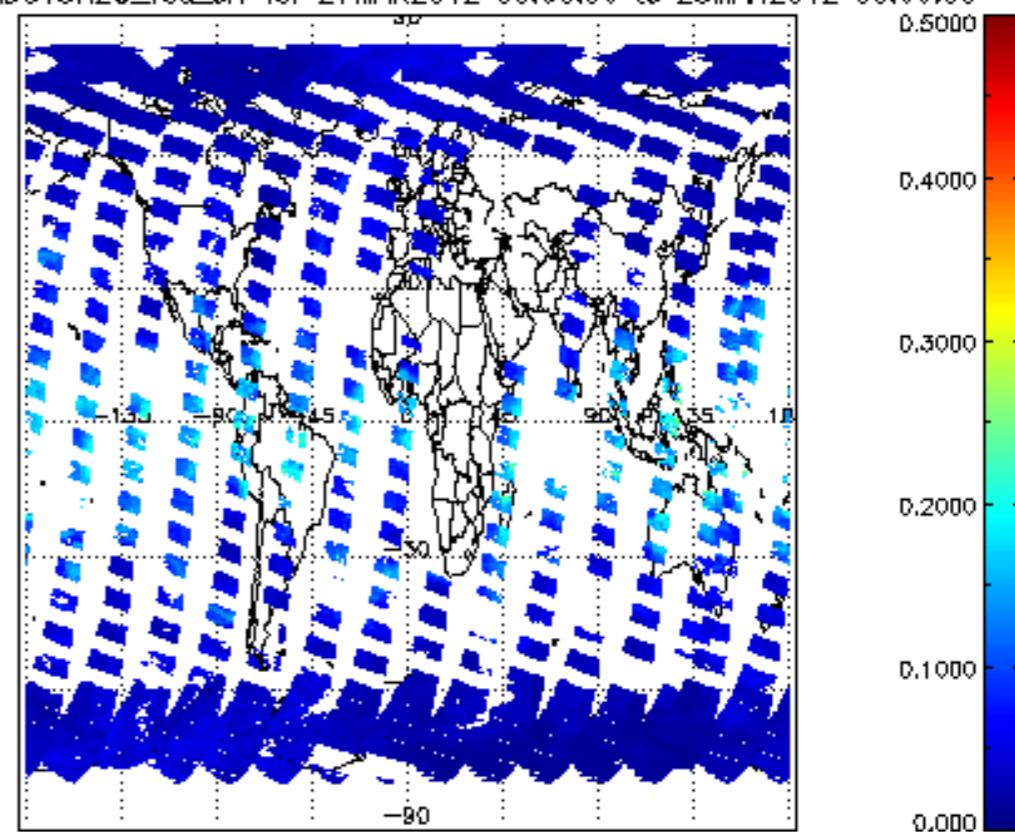




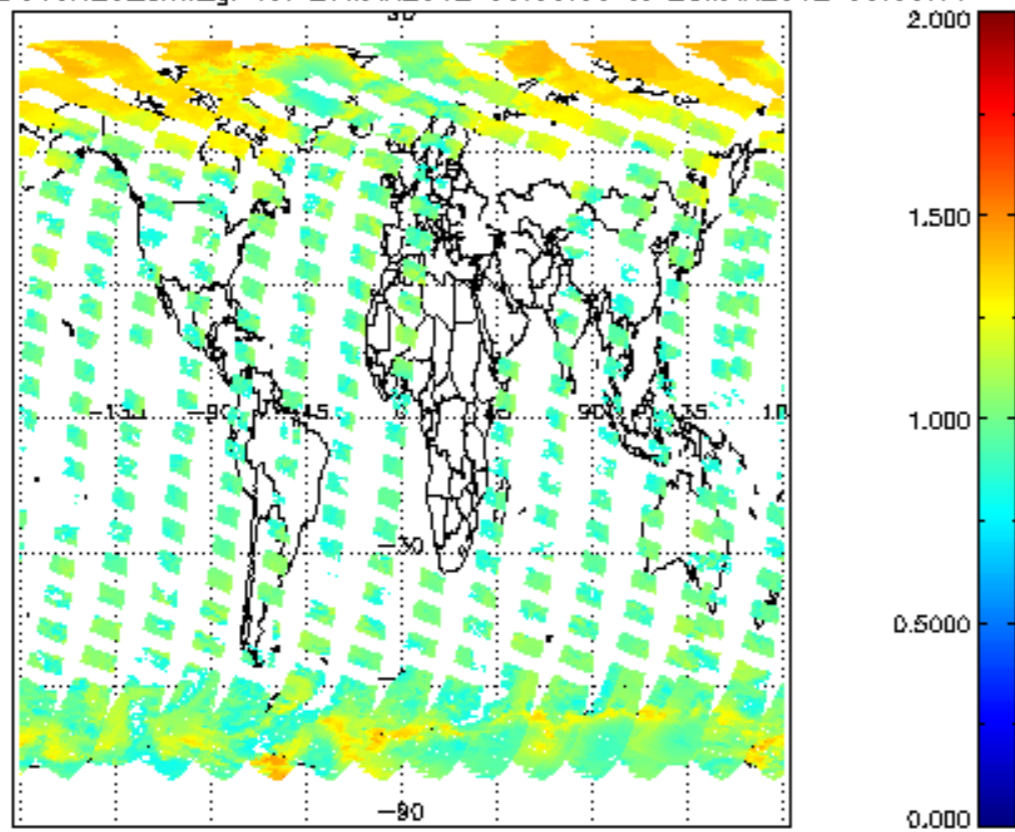
SCIOL2P\_NADUV8H20\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00



SCIOL2P\_NADUV8H20\_vcd\_Lerr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

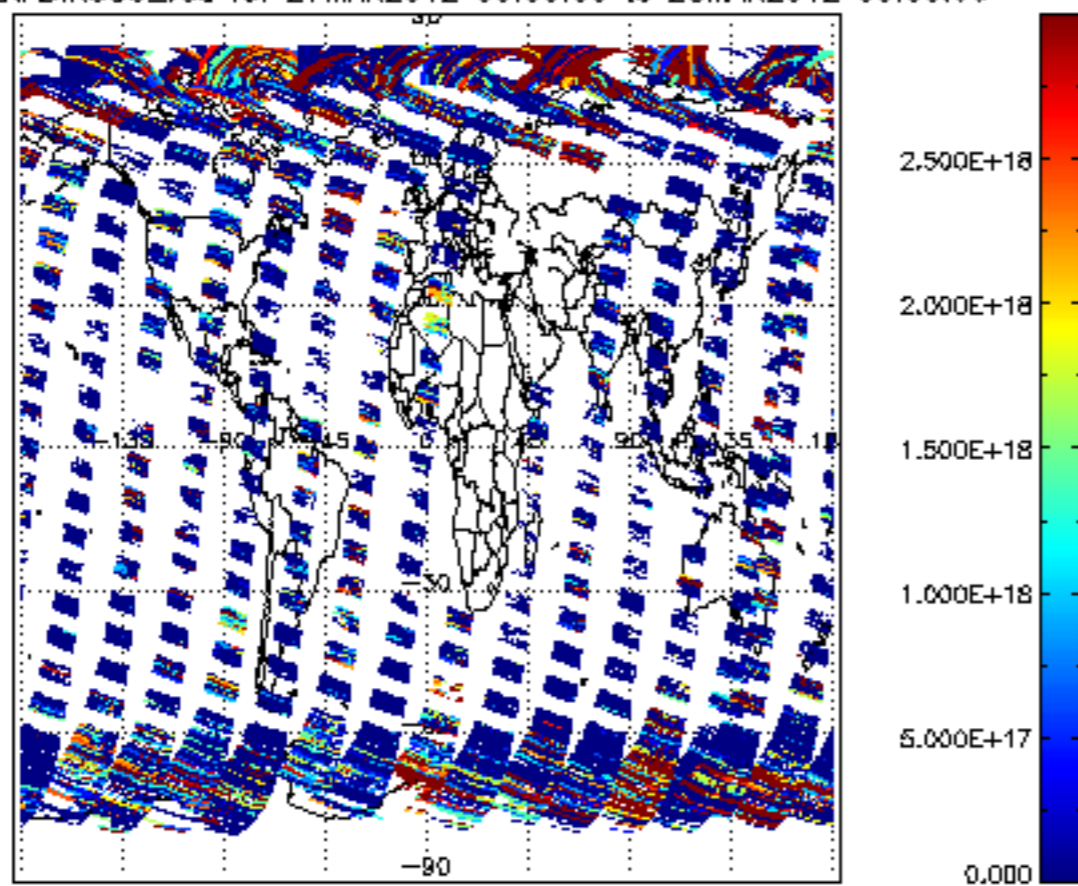


SCIOL2P\_NADUV8H20\_arnf\_gr for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

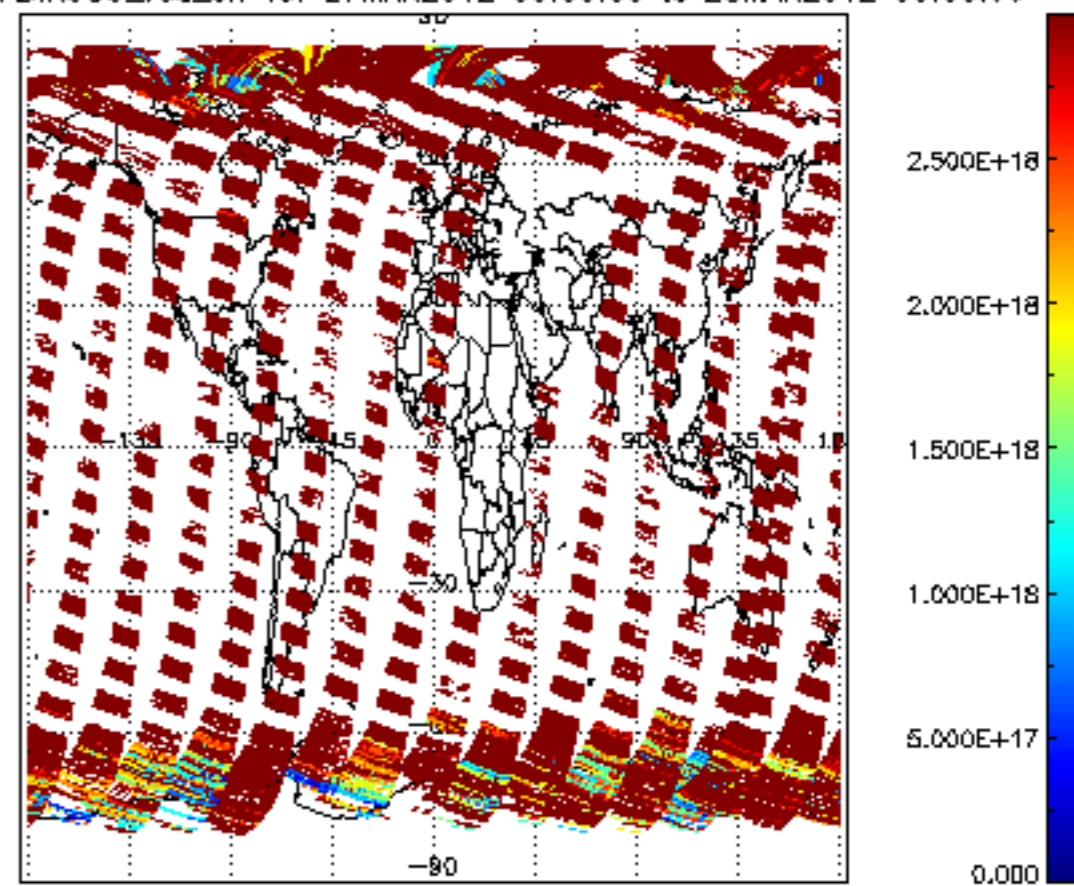




SCIOL2P\_NADIR3CO\_vcd for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

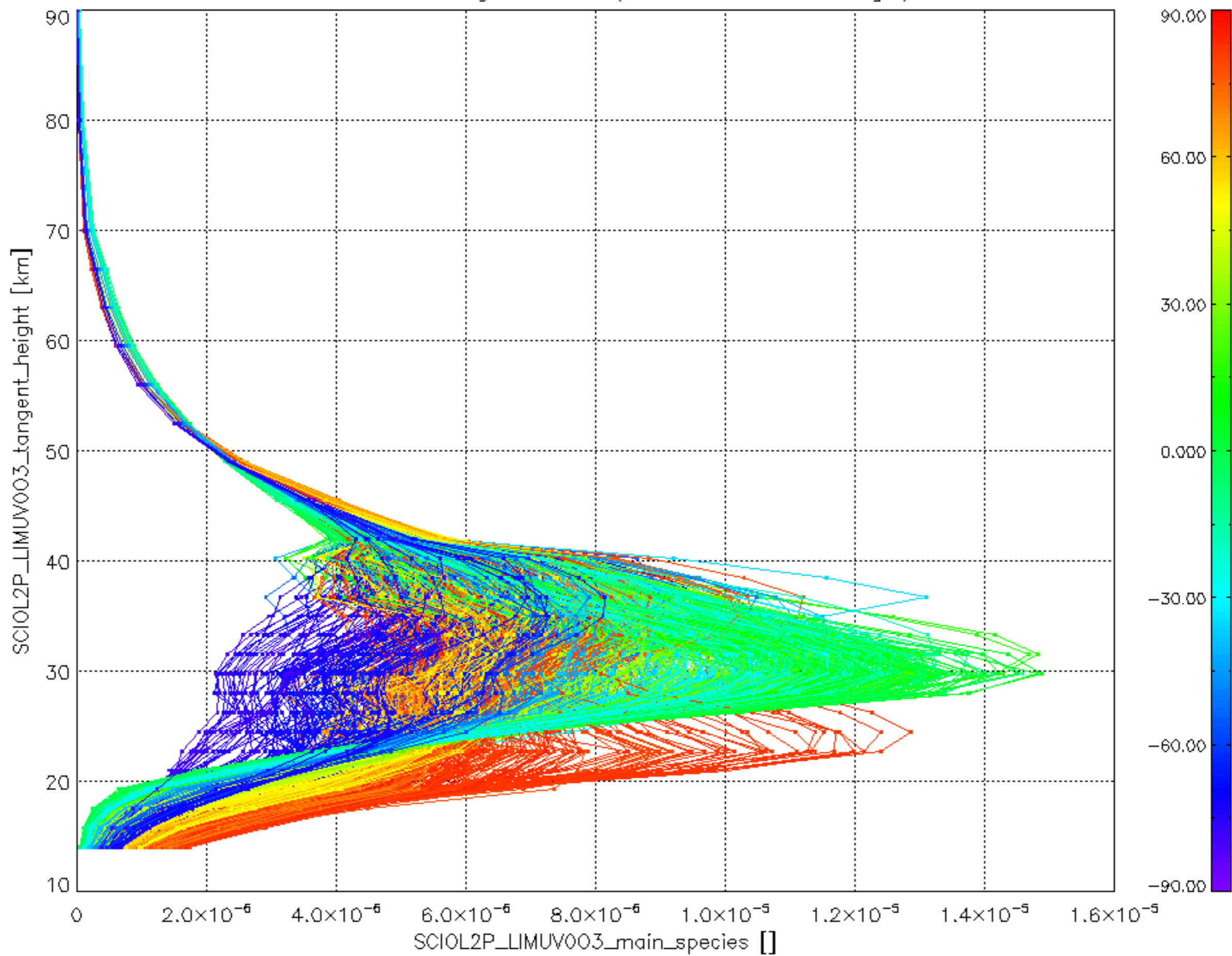


SCIOL2P\_NADIR3CO\_vcd\_err for 27MAR2012 00:00:00 to 28MAR2012 00:00:00

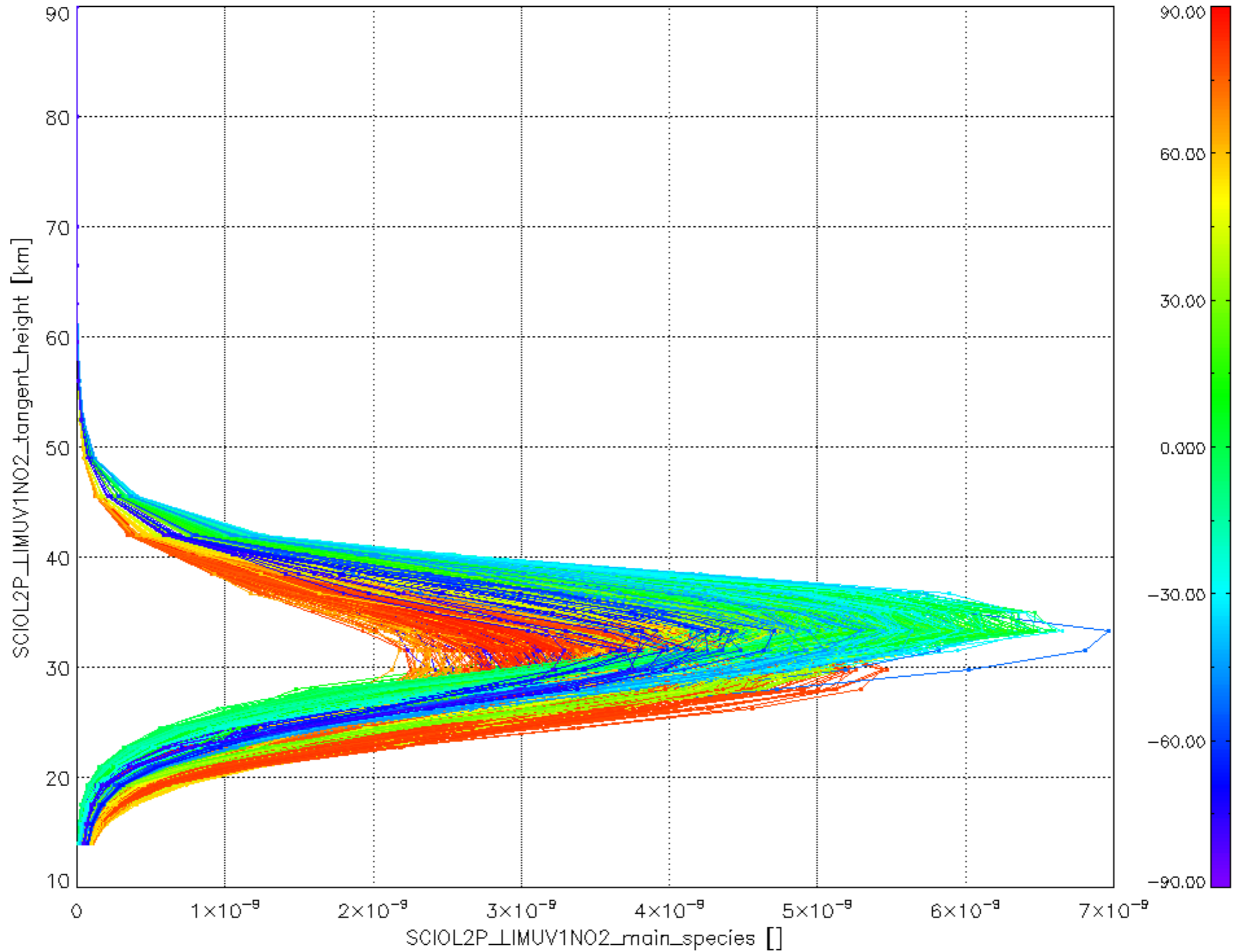




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

