

## 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	03OCT2011 03:02:16
Data source version	SCIA-OL/5.01-U
Processing scope for products	20SEP2011 00:00:00 to 21SEP2011 00:00:00
Start time of first product within scope	20SEP2011 00:10:47
Stop time of last product within scope	21SEP2011 00:32:46
Total number of level 2 products	12
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__2PUDPA20110920_001047_000035163106_00390_49973_6621.N1</a>	20SEP2011 00:10:47	20SEP2011 01:09:23	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110920_015101_000035303106_00391_49974_6623.N1</a>	20SEP2011 01:51:01	20SEP2011 02:49:52	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110920_033116_000035843106_00392_49975_6624.N1</a>	20SEP2011 03:31:16	20SEP2011 04:31:00	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110920_051130_000035303106_00393_49976_6625.N1</a>	20SEP2011 05:11:30	20SEP2011 06:10:21	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110920_065145_000027903106_00394_49977_6622.N1</a>	20SEP2011 06:51:45	20SEP2011 07:38:16	0	GOOD

5	SCI_OL__2PUDPA20110920_133243_000035843106_00398_49981_6627.N1	20SEP2011 13:32:43	20SEP2011 14:32:27	0	GOOD
6	SCI_OL__2PUDPA20110920_151257_000035303106_00399_49982_6628.N1	20SEP2011 15:12:57	20SEP2011 16:11:48	0	GOOD
7	SCI_OL__2PUDPA20110920_165312_000035843106_00400_49983_6629.N1	20SEP2011 16:53:12	20SEP2011 17:52:56	0	GOOD
8	SCI_OL__2PUDPA20110920_183339_000035303106_00401_49984_6630.N1	20SEP2011 18:33:39	20SEP2011 19:32:30	0	GOOD
9	SCI_OL__2PUDPA20110920_201354_000035163106_00402_49985_6631.N1	20SEP2011 20:13:54	20SEP2011 21:12:30	0	GOOD
10	SCI_OL__2PUDPA20110920_215355_000035303106_00403_49986_6632.N1	20SEP2011 21:53:55	20SEP2011 22:52:46	0	GOOD
11	SCI_OL__2PUDPA20110920_233410_000035163106_00404_49987_6633.N1	20SEP2011 23:34:10	21SEP2011 00:32:46	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: 128180

Total number of cloud data DSRs with good quality flag (=0): 128180 (100.0 %)

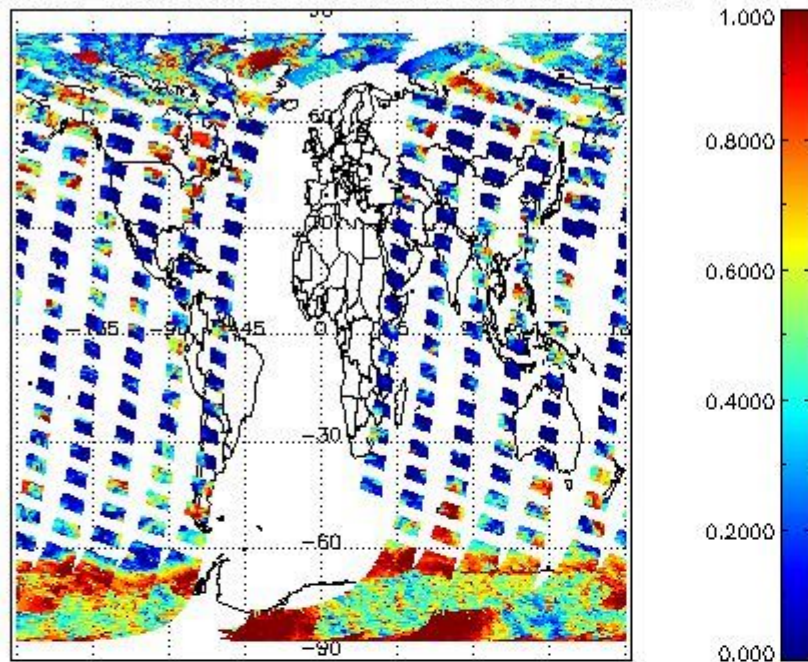
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	128180	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	128180	0.16633	0.12500	0.12500	0.25000	0.058805	s
CL_FRAC	128180	0.42822	0.39856	0.0000	1.0000	0.33207	
CL_FRAC_ERR	128180	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	128180	5.3225	4.0000	4.0000	8.0000	1.8818	
PMD_READ_CL[0]	128180	0.52816	0.0000	0.0000	8.0000	1.3104	-
PMD_READ_CL[1]	128180	1.4243	0.0000	0.0000	8.0000	2.6773	-
CL_TOP_HEIGHT	100433	3.5805	2.0472	0.0000	17.000	3.8528	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	100433	62.296	98.082	0.0000	101.00	42.675	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	128180	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	128180	11001101	11000100	11000000	11100000	3571.1	
AERO_ABSO_IND	128180	0.19193	0.0000	0.0000	10.882	0.45316	
AERO_IND_DIAG	128180	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	128180	01010011	00000000	00000000	11000000	24379.	

#### Time and geolocation plots:

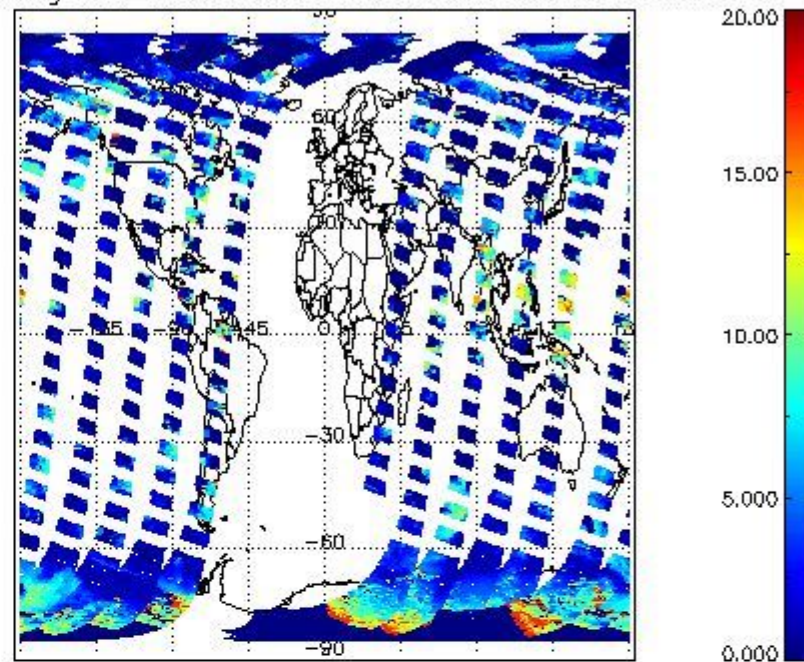
Plots are available for the following parameters:

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

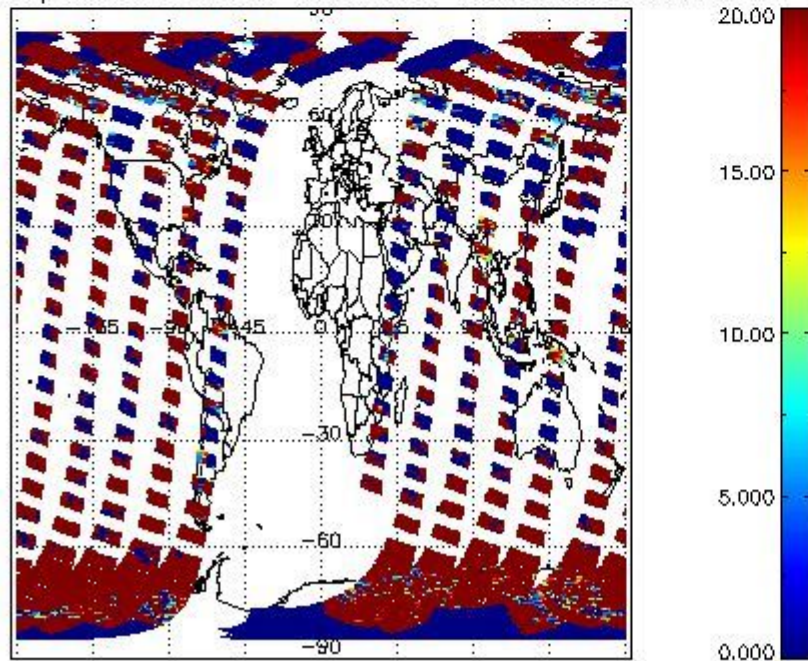
cL\_frac for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



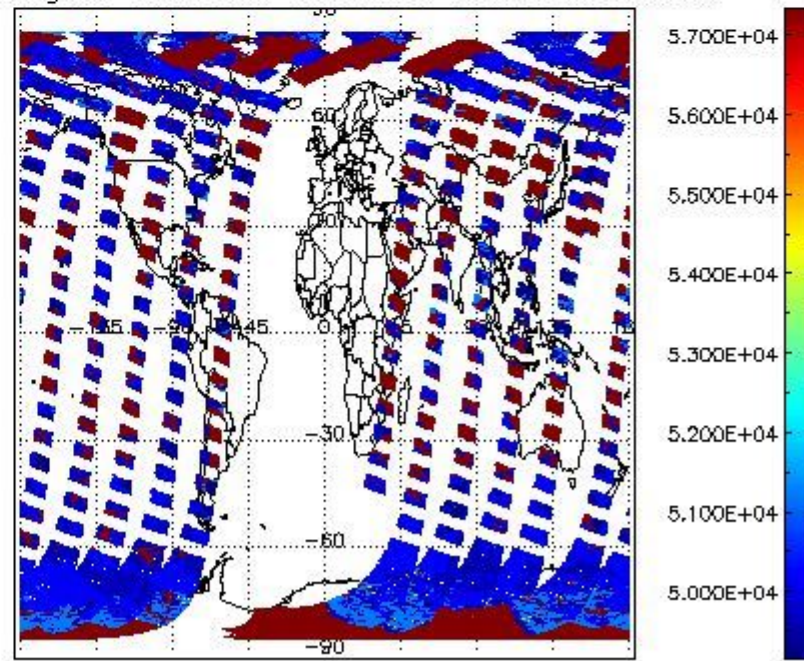
cL\_top\_height for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



cL\_opt\_depth for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



cloud\_flags for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



## 2.2.2 Nadir

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

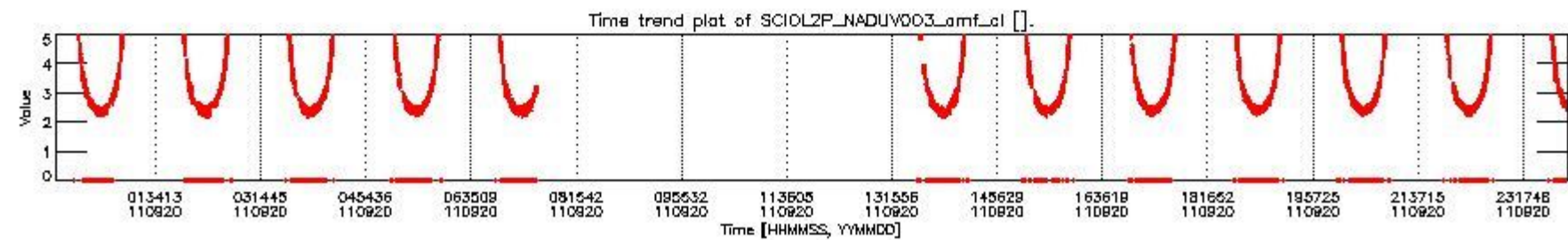
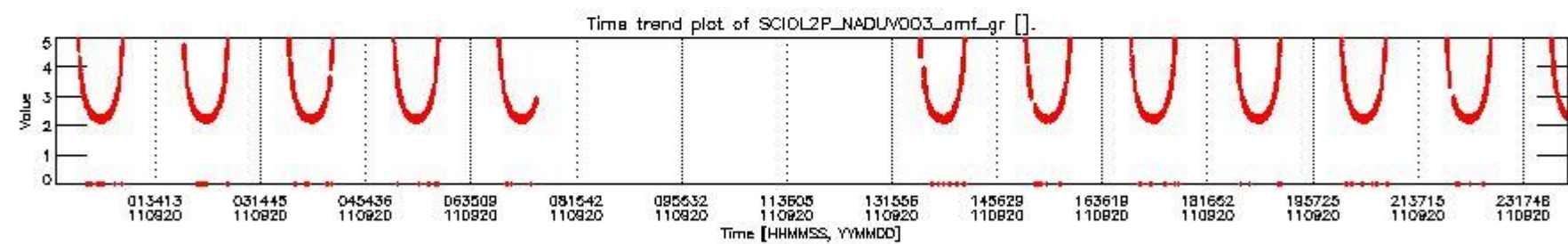
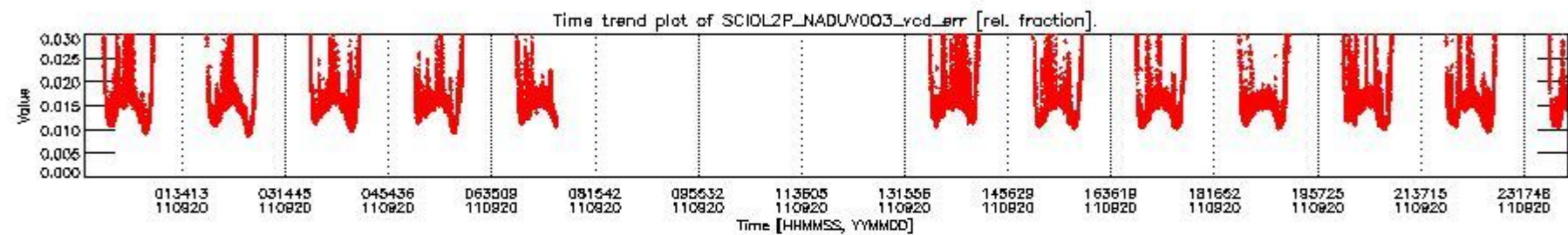
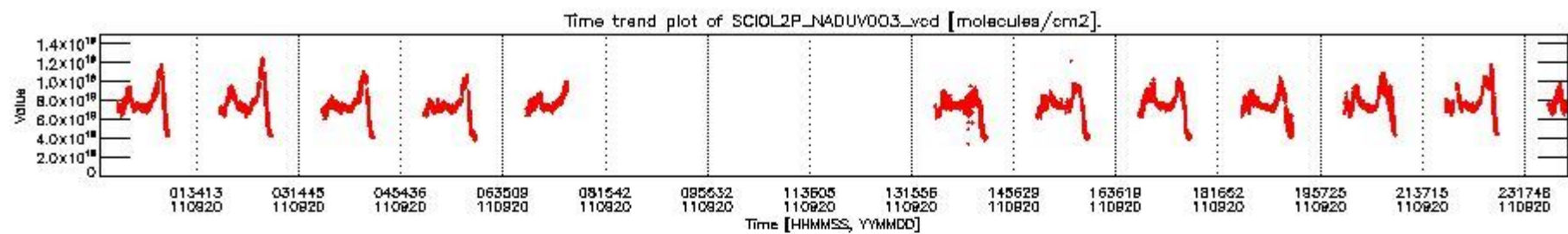
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

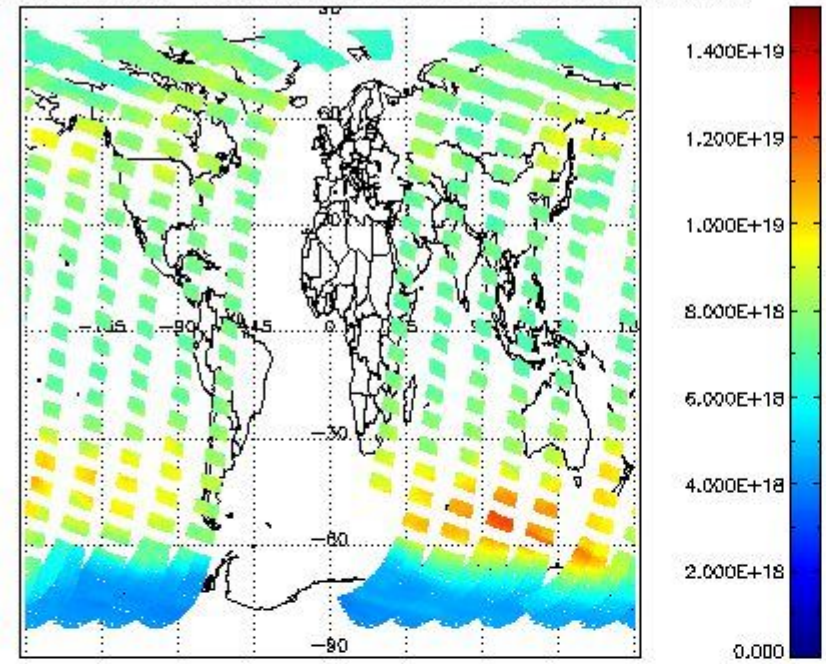
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr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

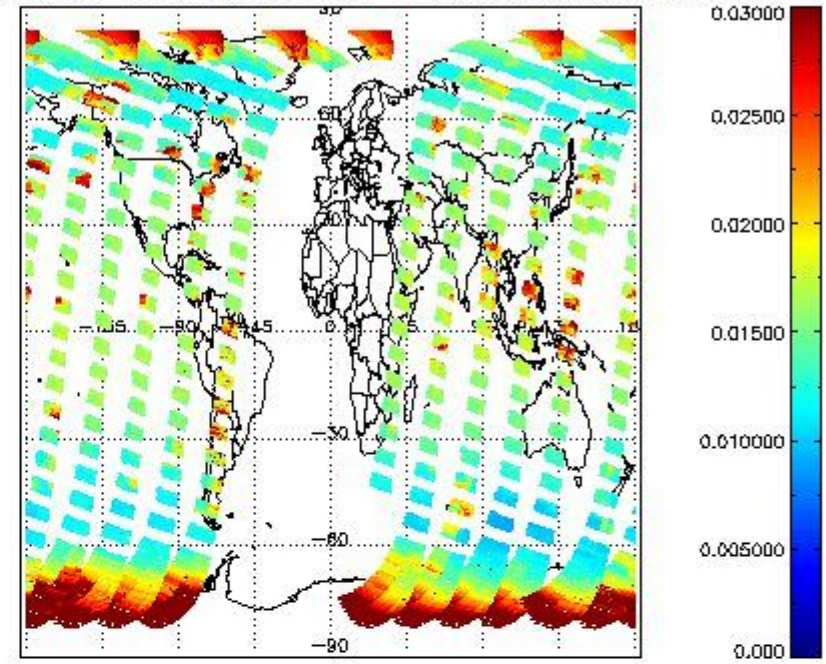
#### 2.2.2.1 O3 (UV0)



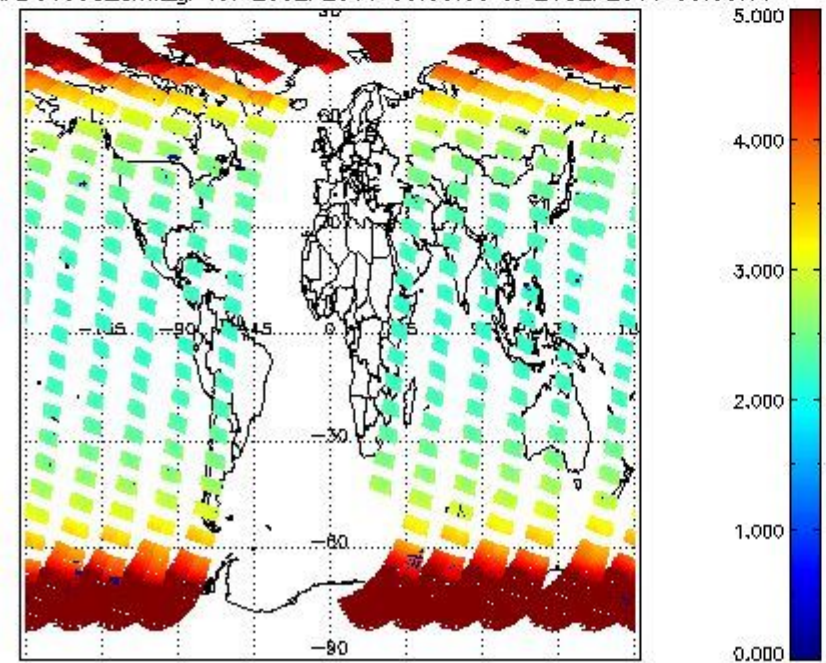
SCIOL2P\_NADUV003\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



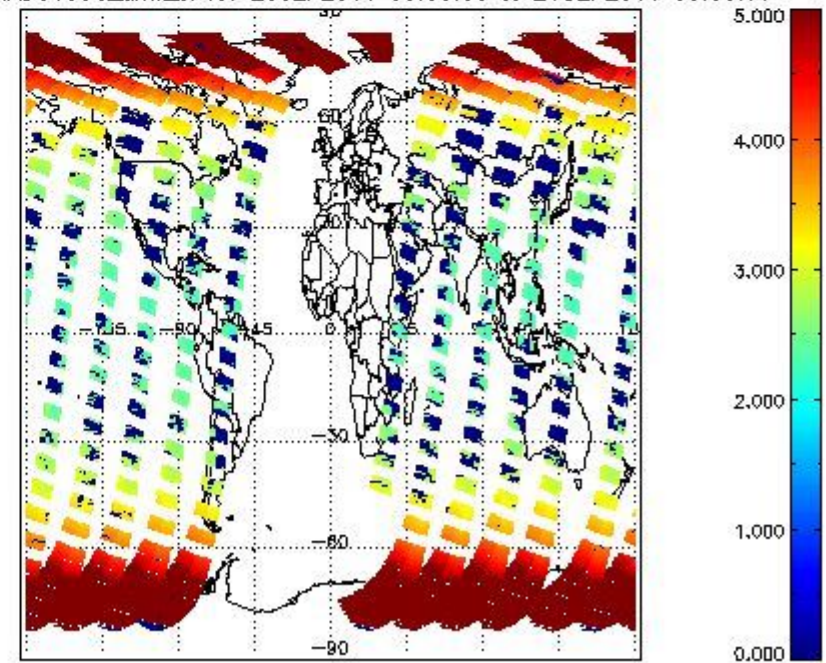
SCIOL2P\_NADUV003\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



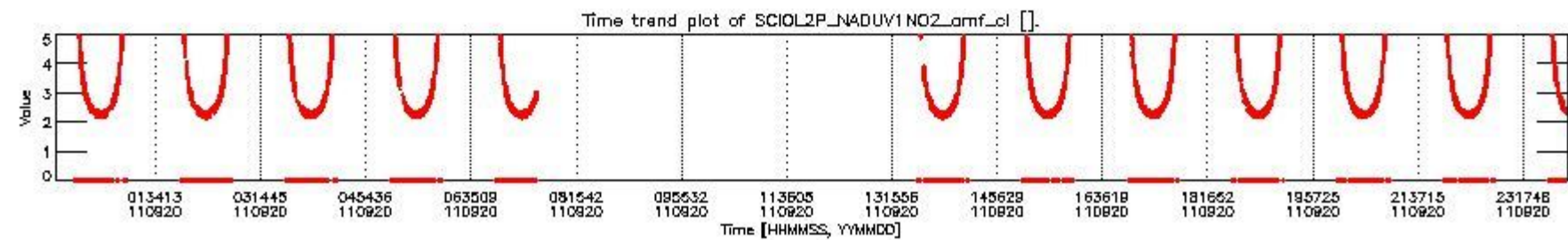
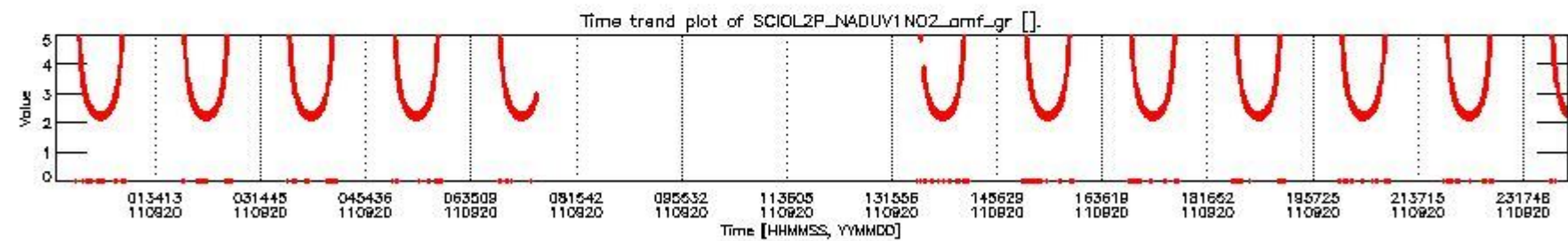
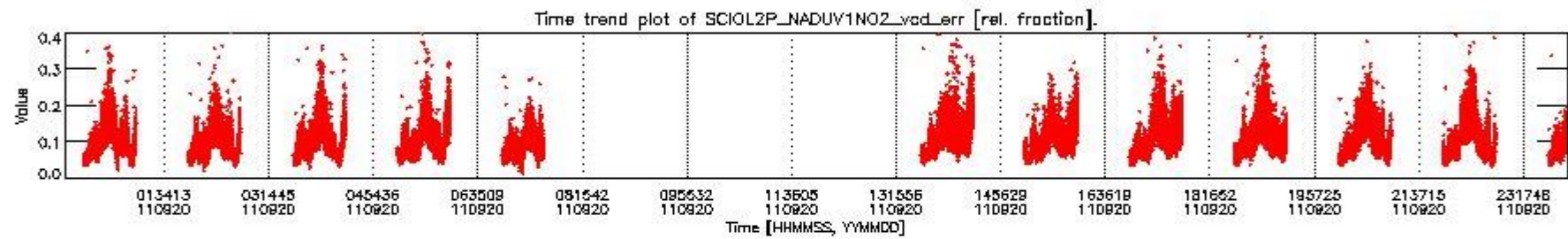
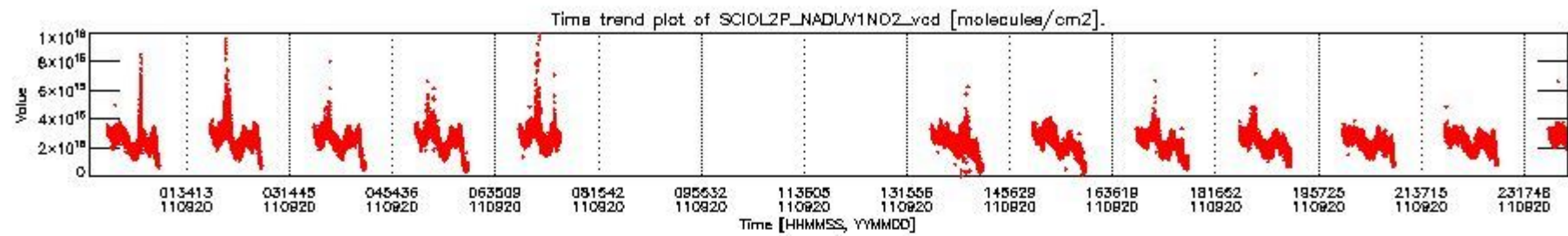
SCIOL2P\_NADUV003\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



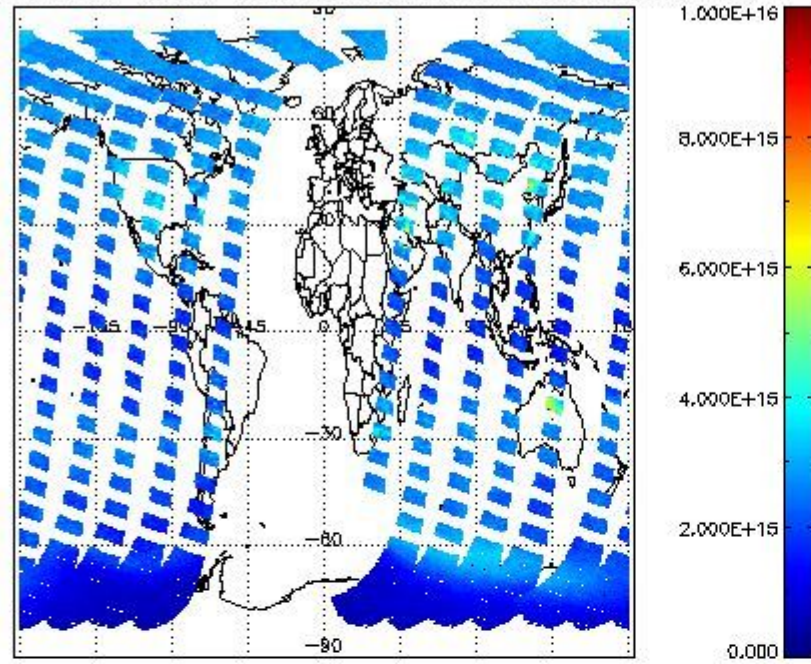
SCIOL2P\_NADUV003\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



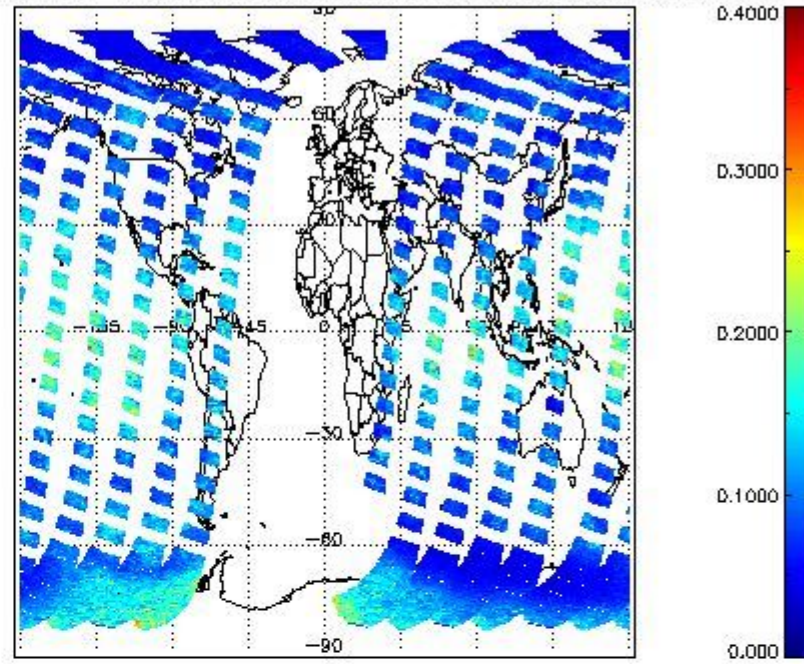
2.2.2.2 NO2 (UV1)



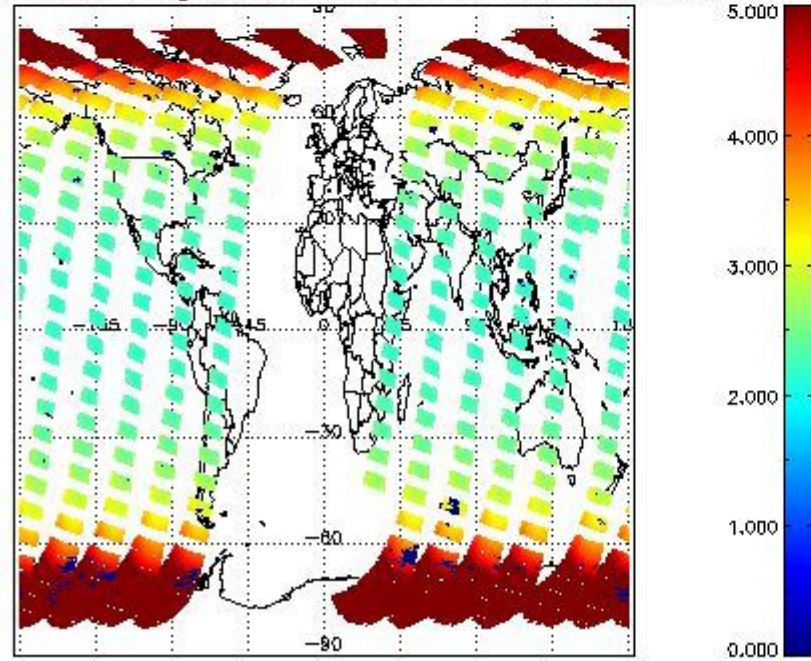
SCIOL2P\_NADUV1NO2\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



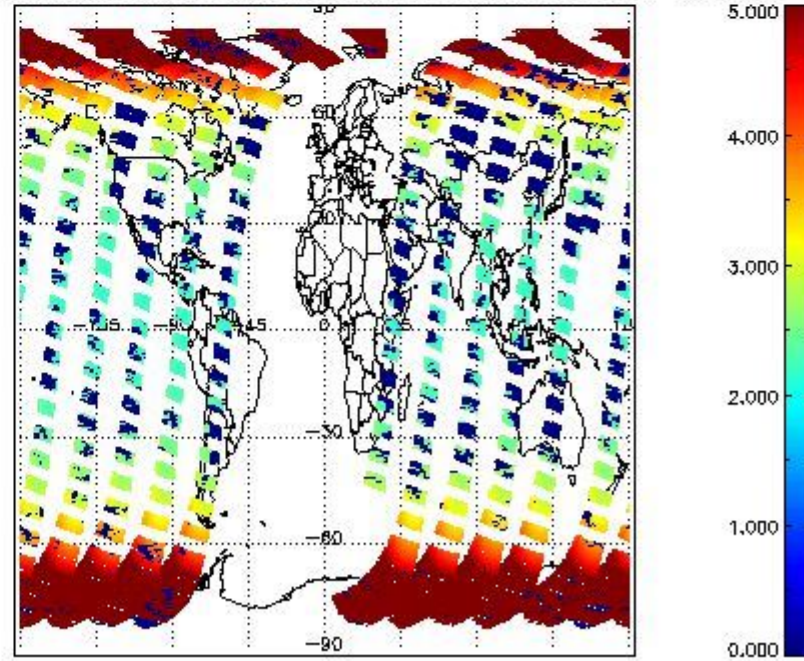
SCIOL2P\_NADUV1NO2\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

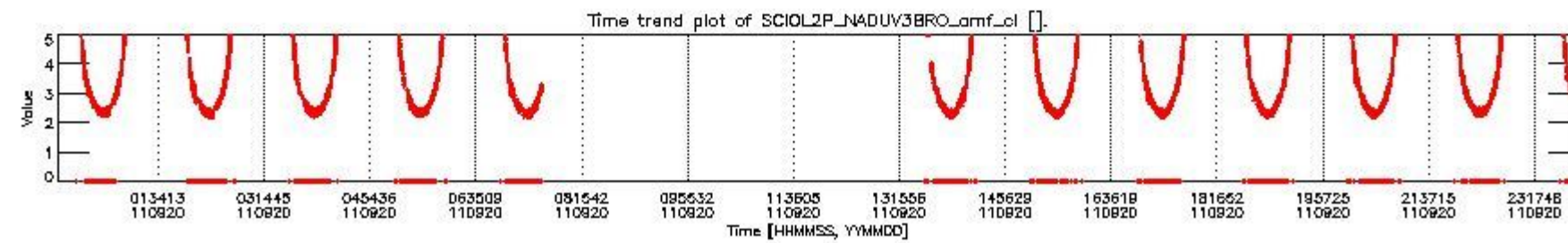
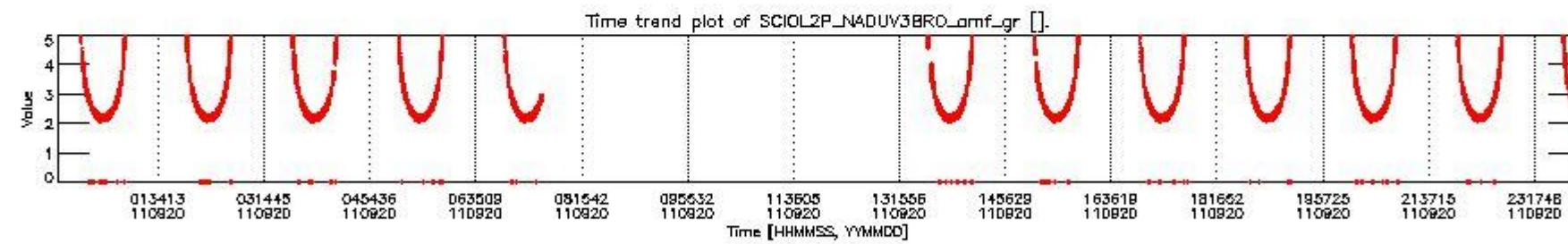
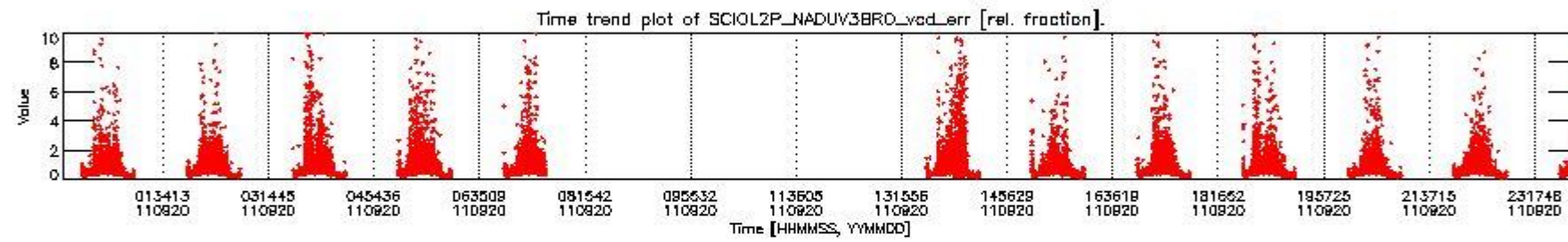
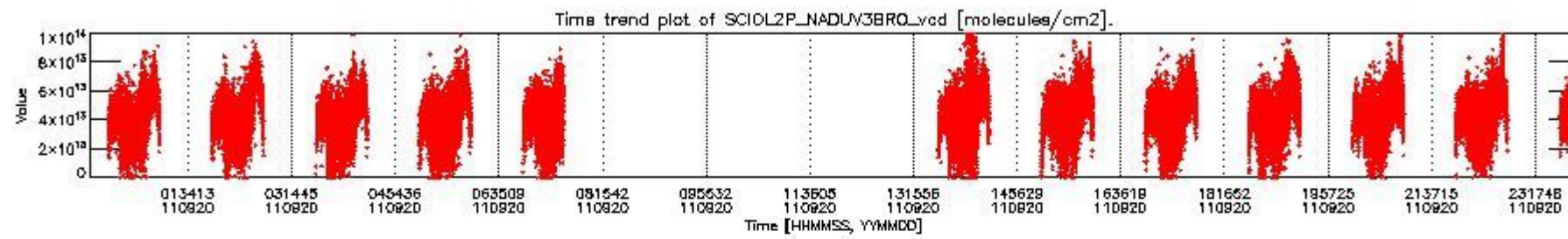


SCIOL2P\_NADUV1NO2\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

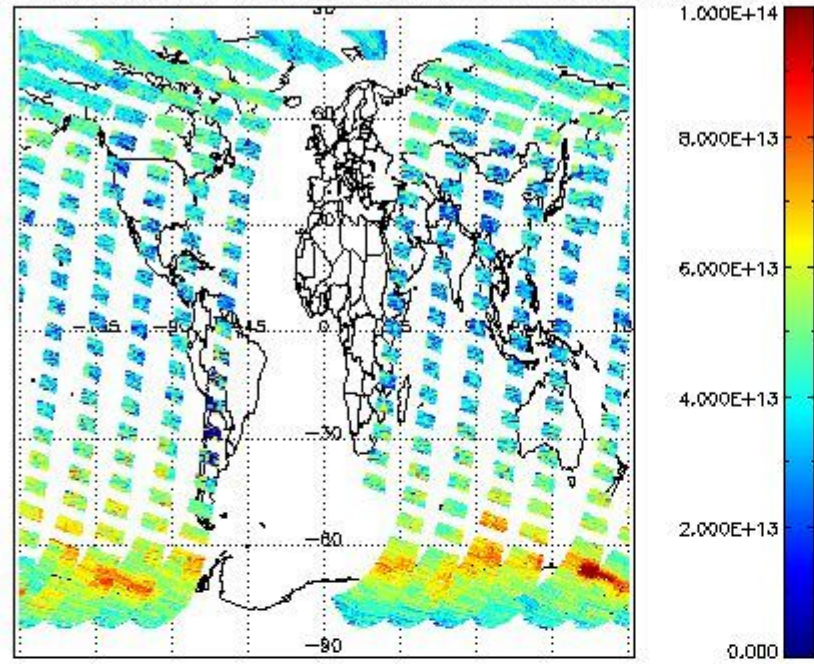


2.2.2.3 BrO (UV3)

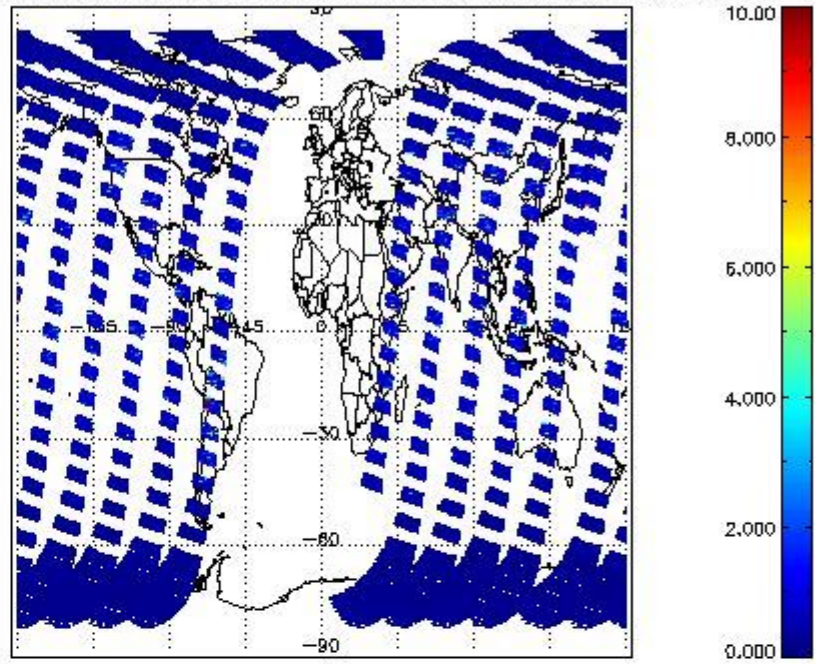




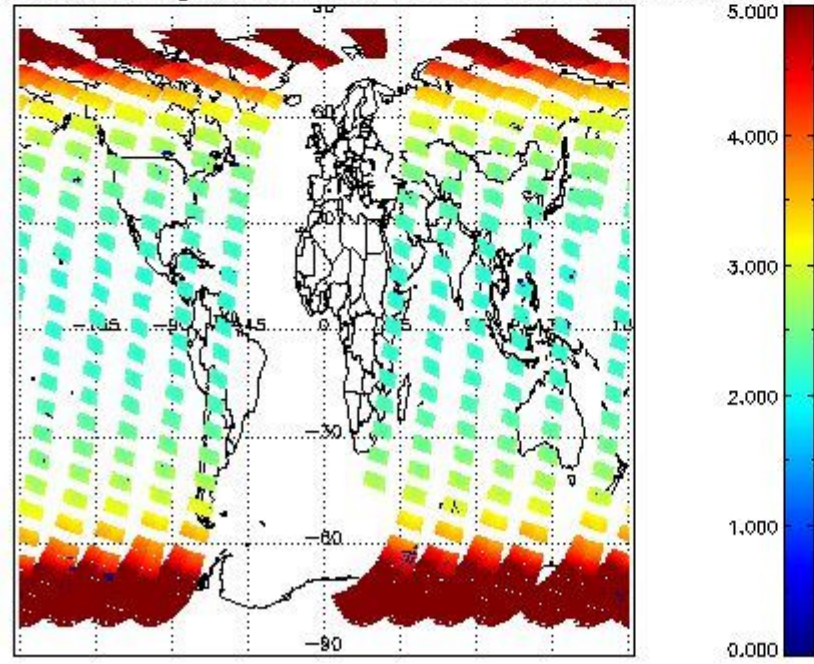
SCIOL2P\_NADUV3BRO\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



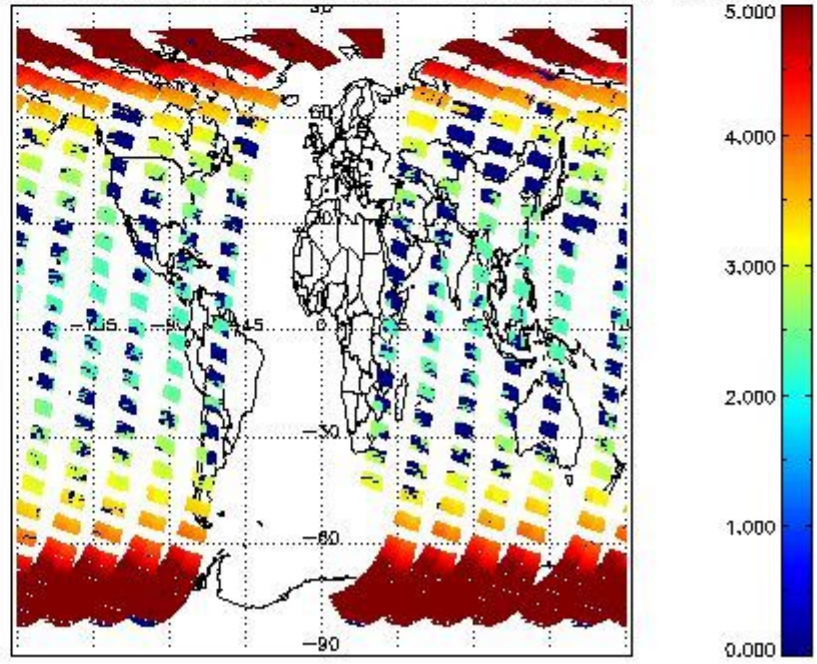
SCIOL2P\_NADUV3BRO\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



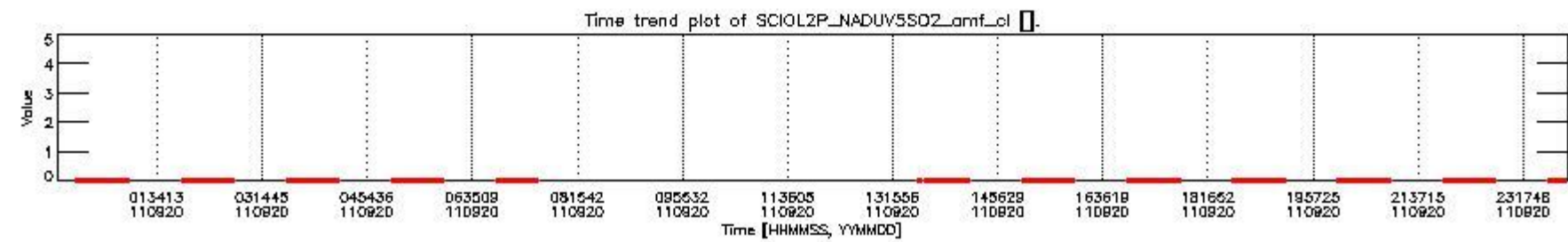
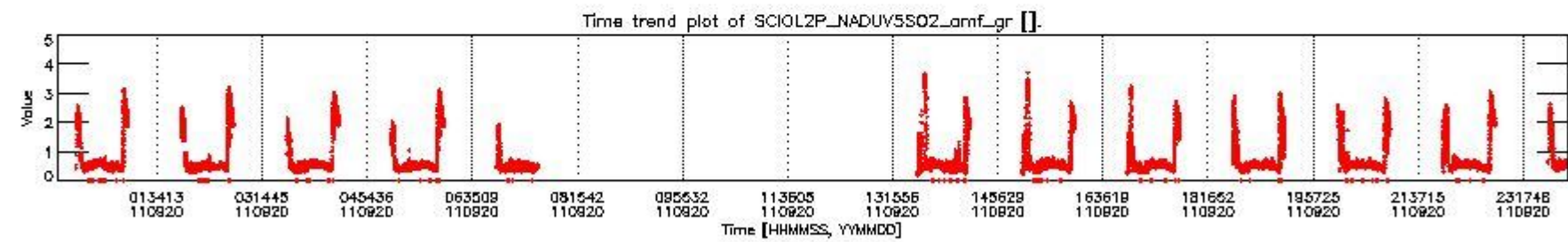
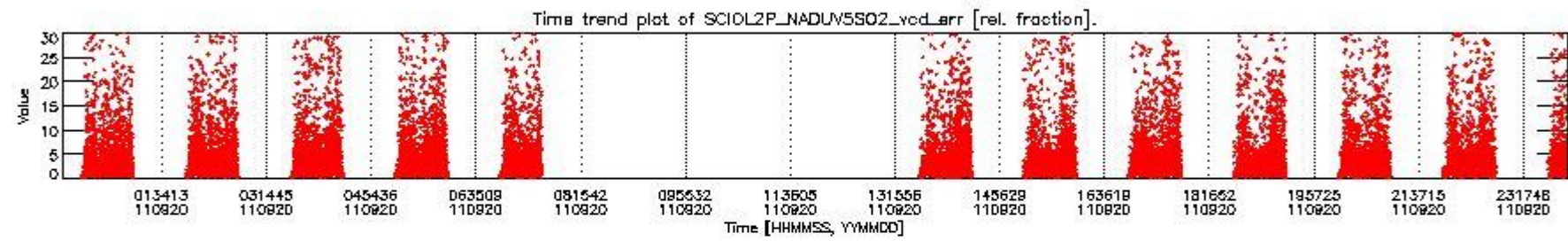
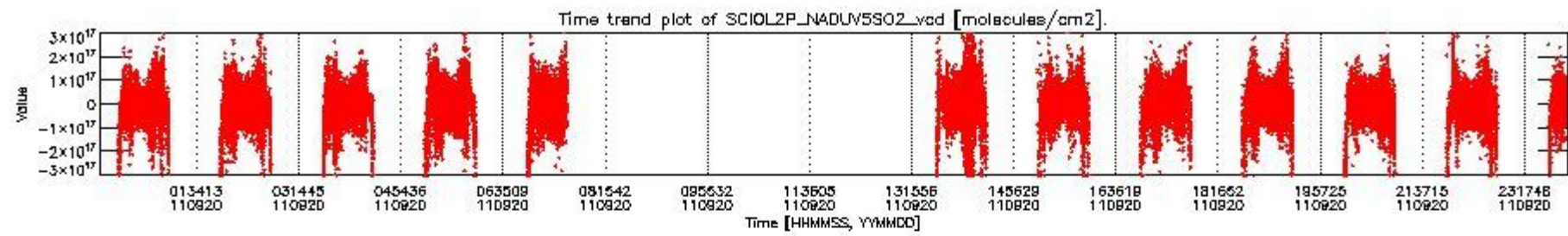
SCIOL2P\_NADUV3BRO\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



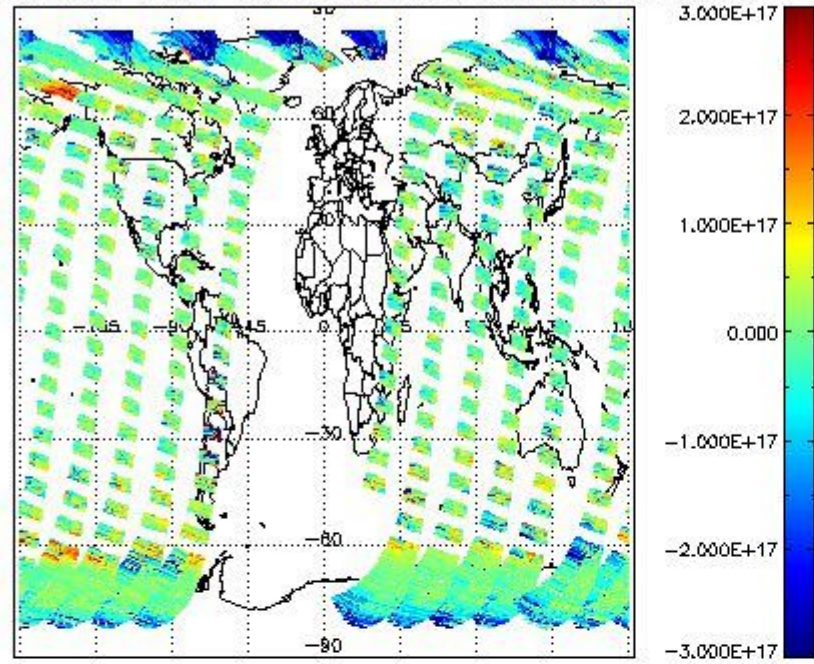
SCIOL2P\_NADUV3BRO\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



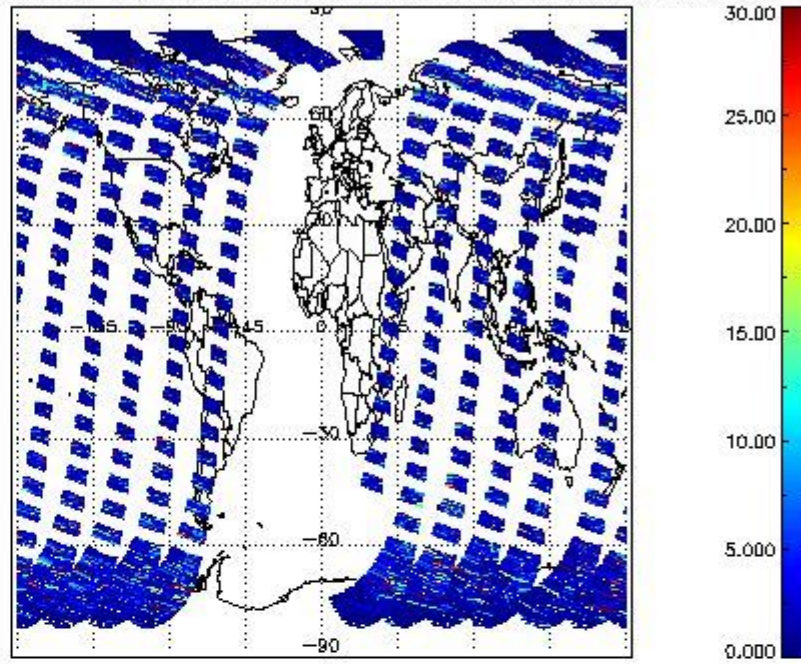
#### 2.2.2.4 SO2 (UV5)



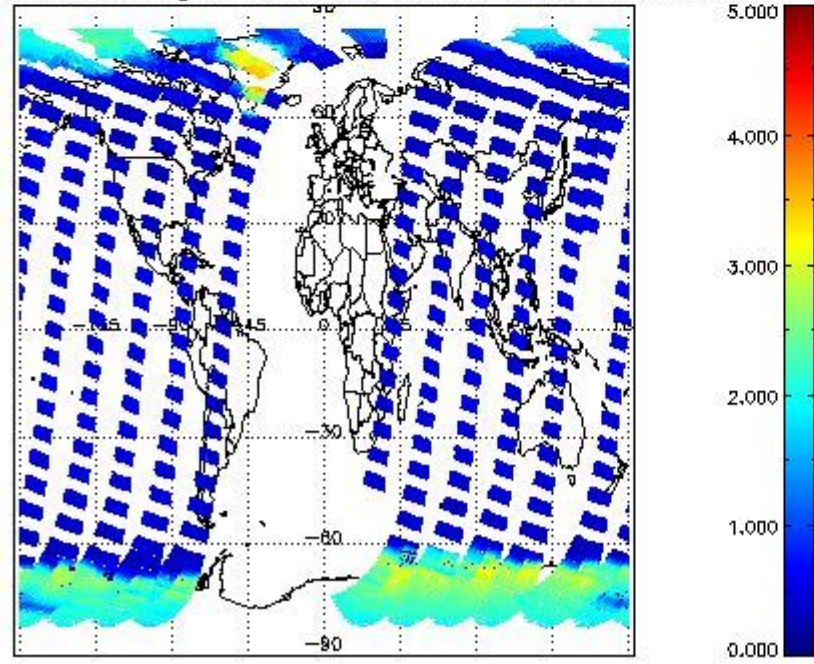
SCIOL2P\_NADUV5S02\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



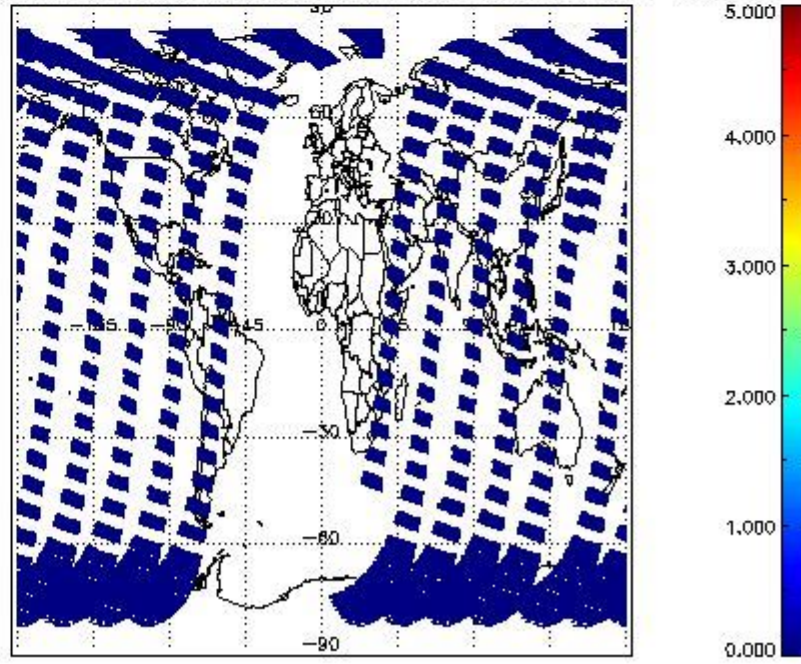
SCIOL2P\_NADUV5S02\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



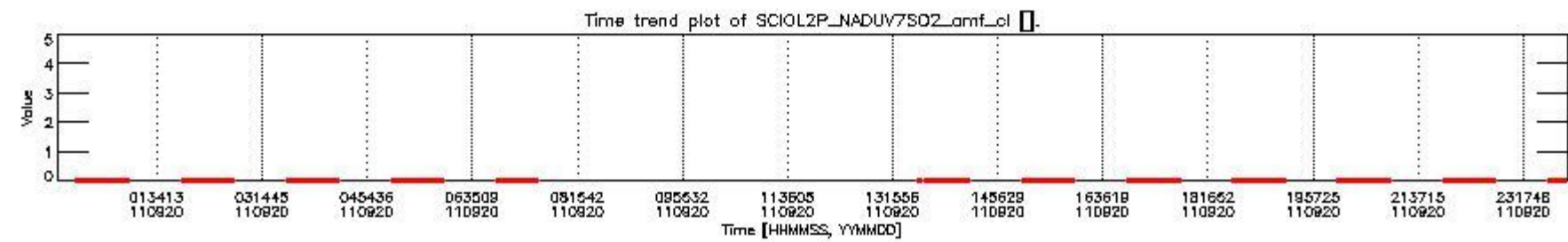
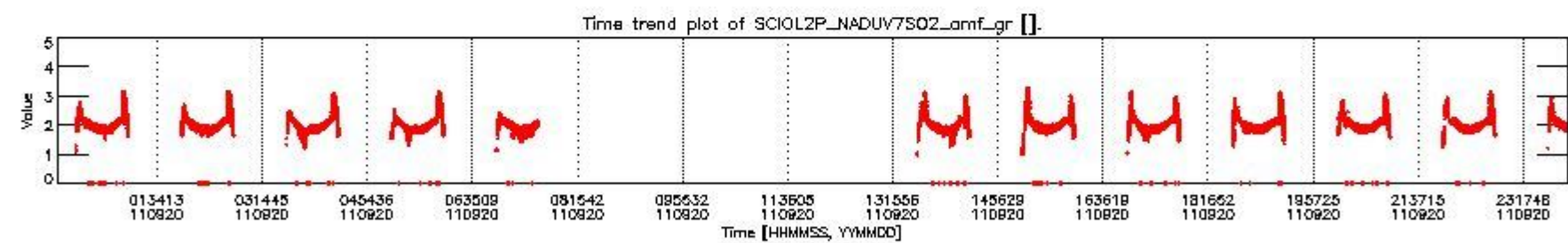
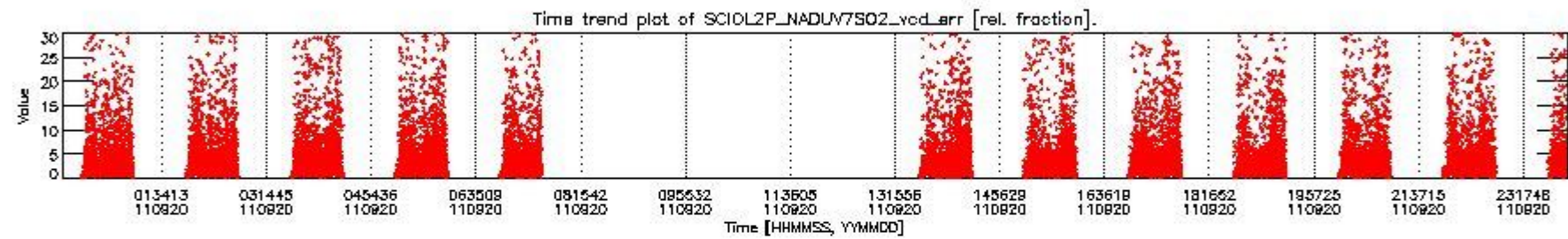
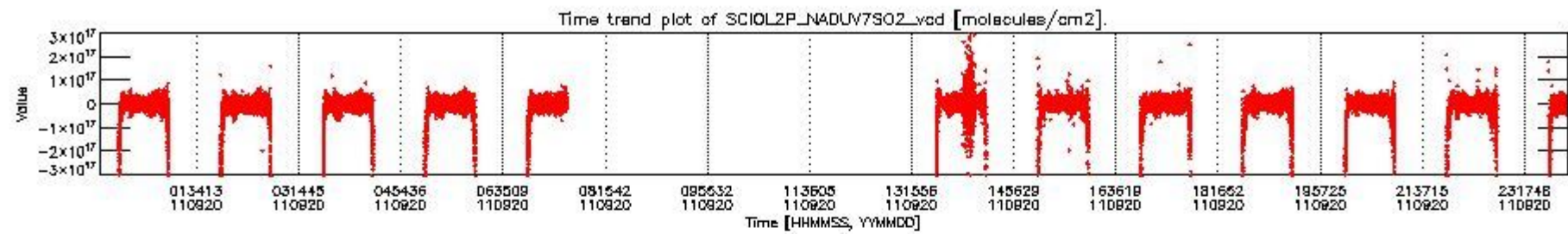
SCIOL2P\_NADUV5S02\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



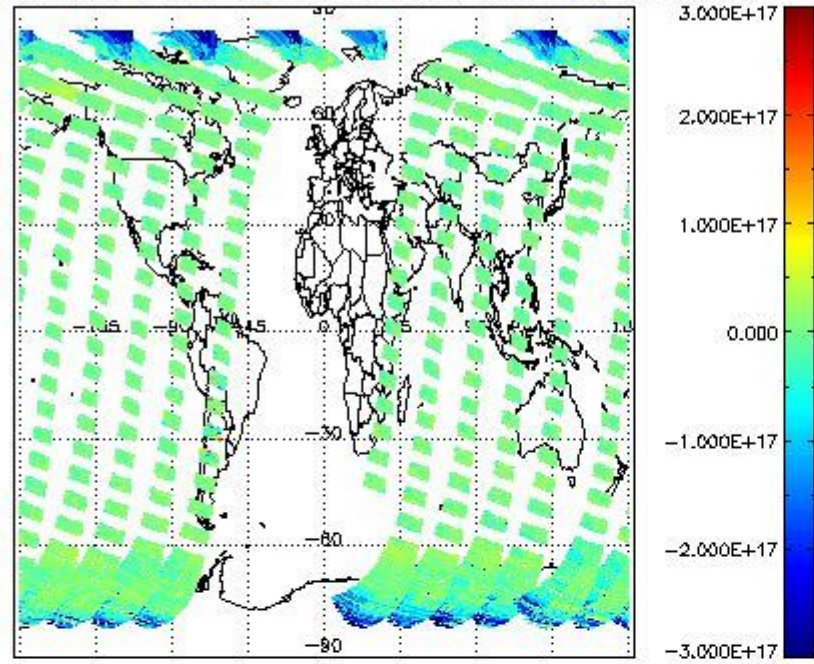
SCIOL2P\_NADUV5S02\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



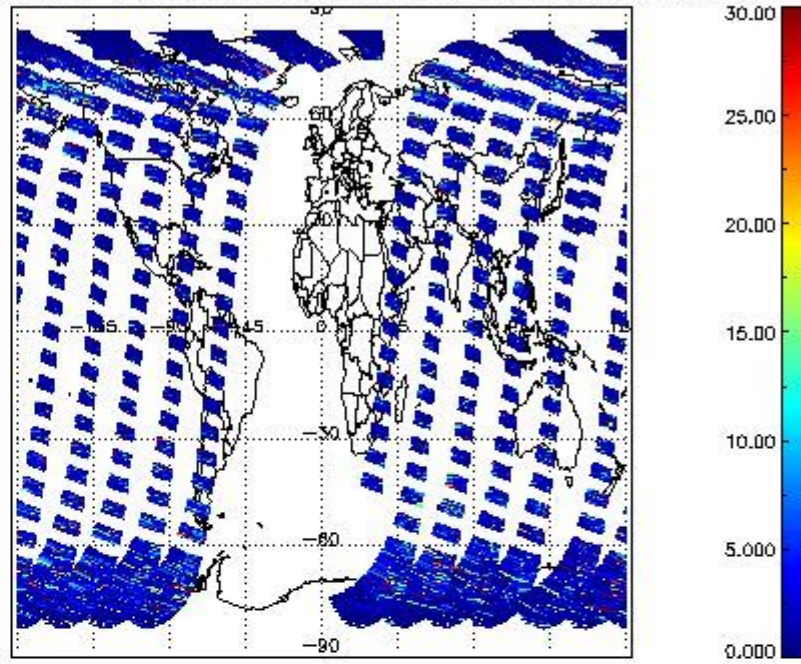
### 2.2.2.5 SO2 (UV7)



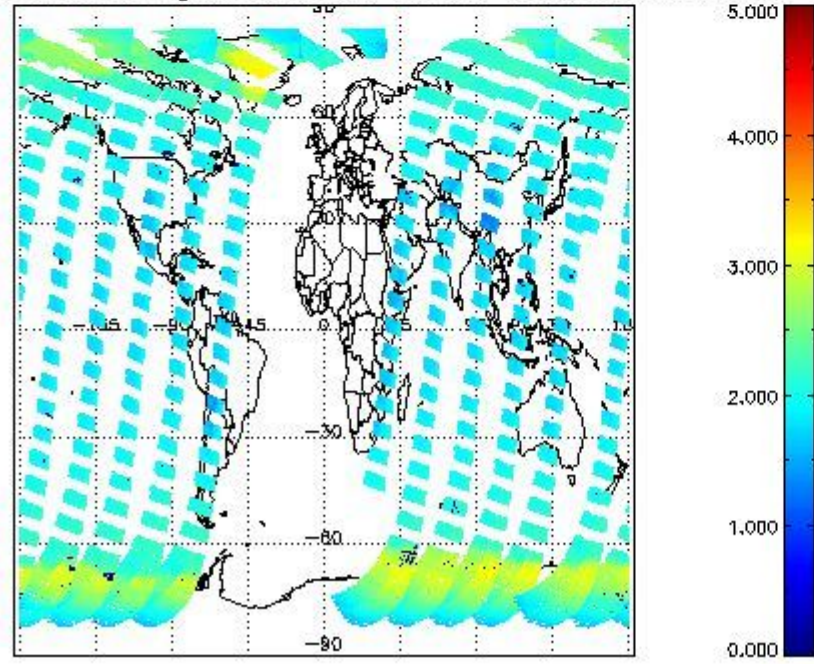
SCIOL2P\_NADUV7S02\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



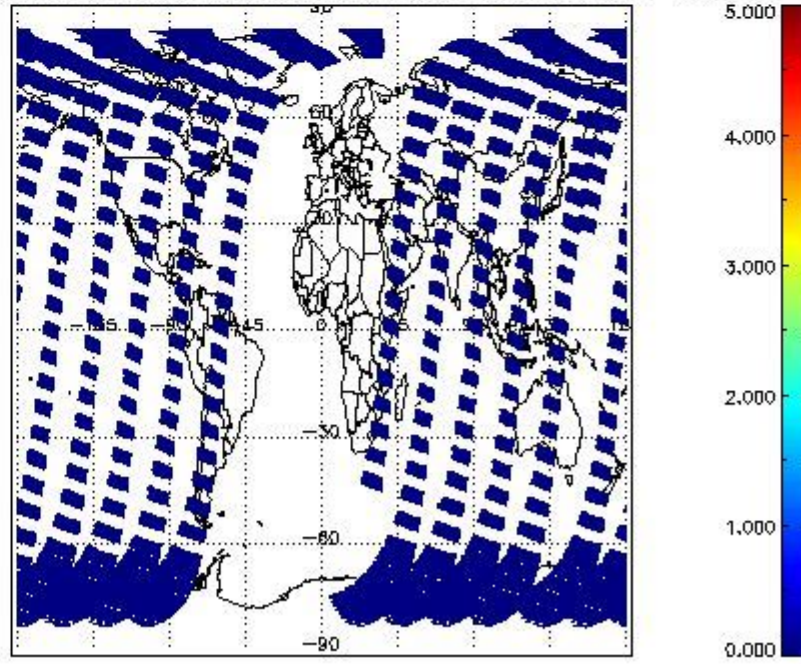
SCIOL2P\_NADUV7S02\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



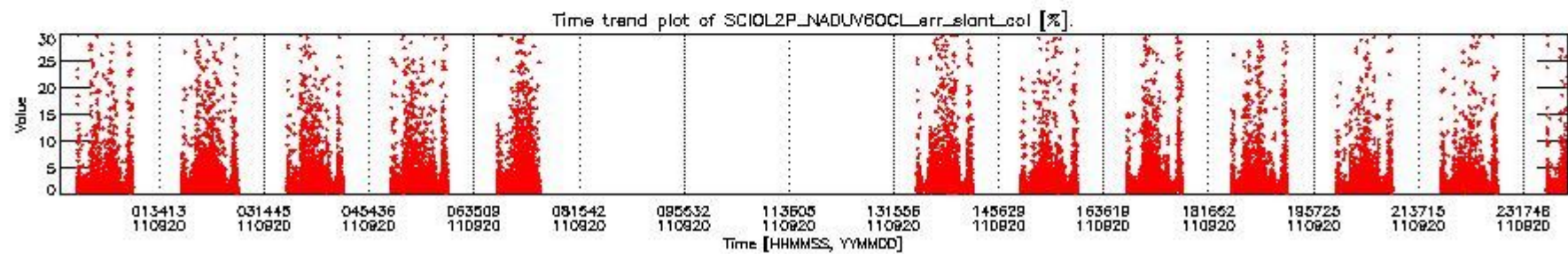
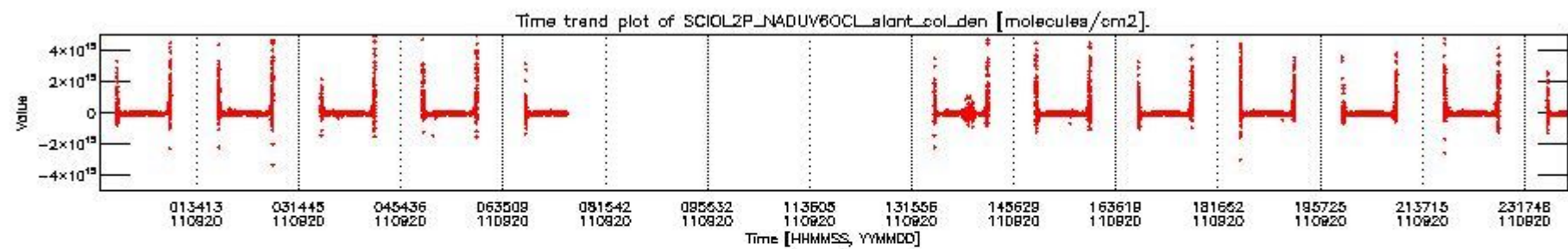
SCIOL2P\_NADUV7S02\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



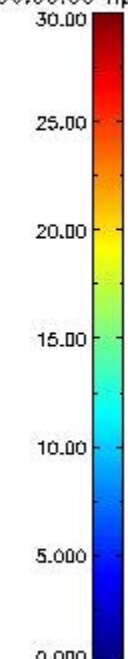
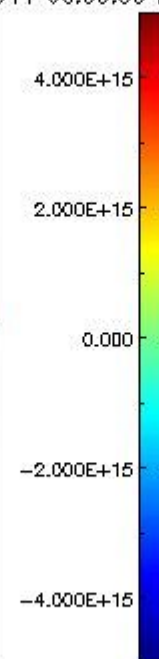
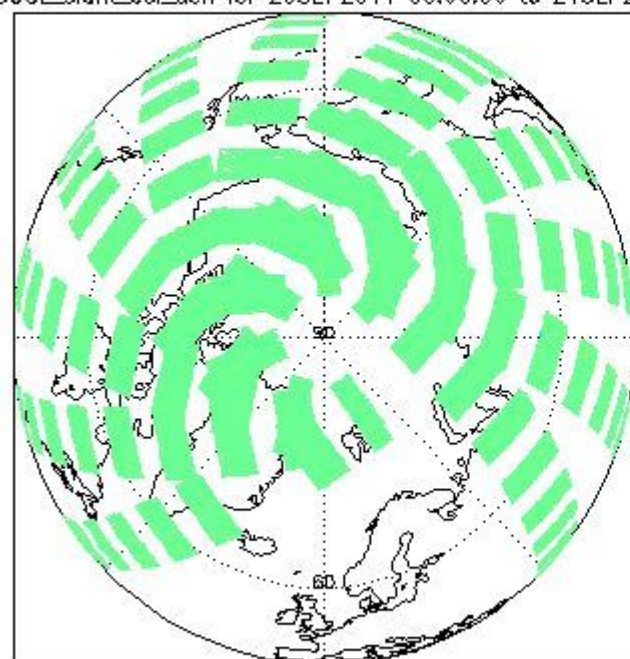
SCIOL2P\_NADUV7S02\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



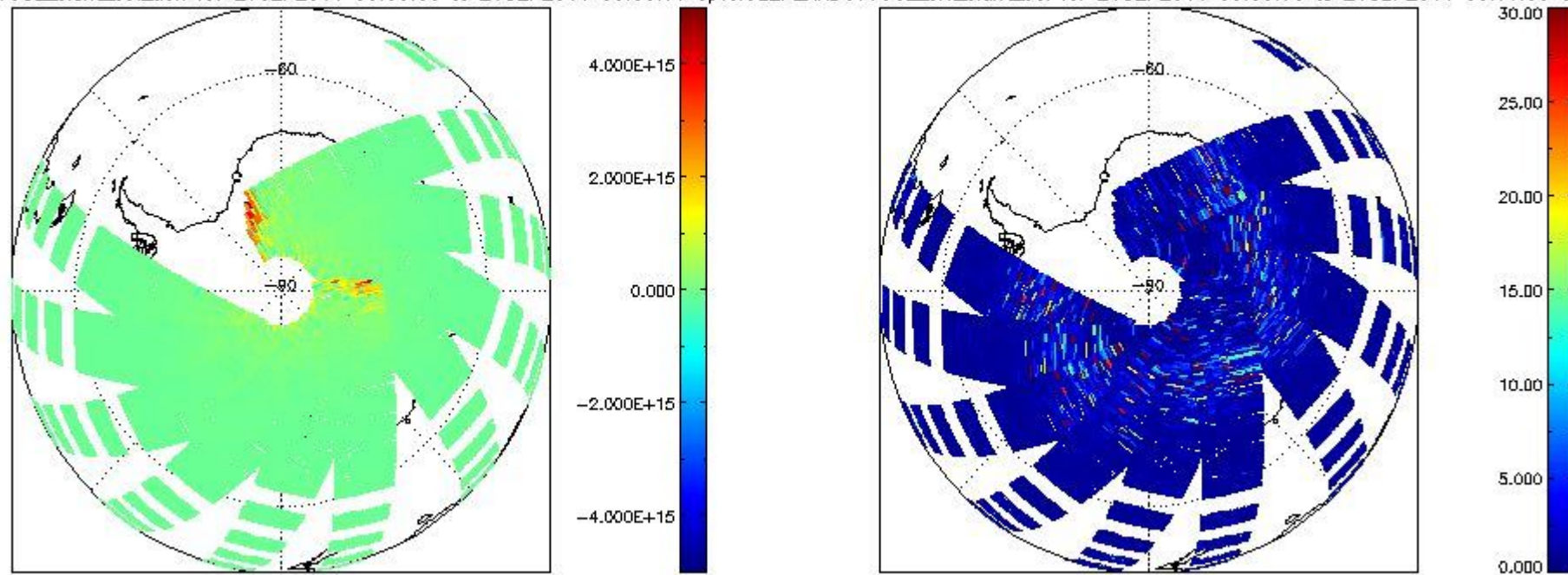
### 2.2.2.6 OCIO (UV6)



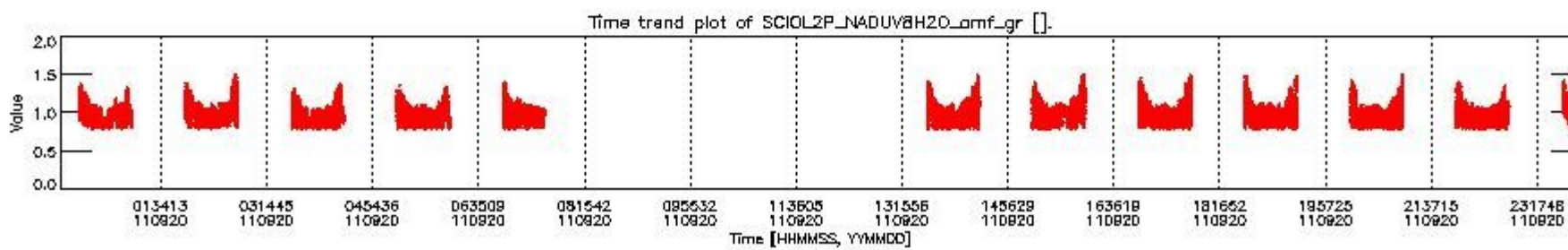
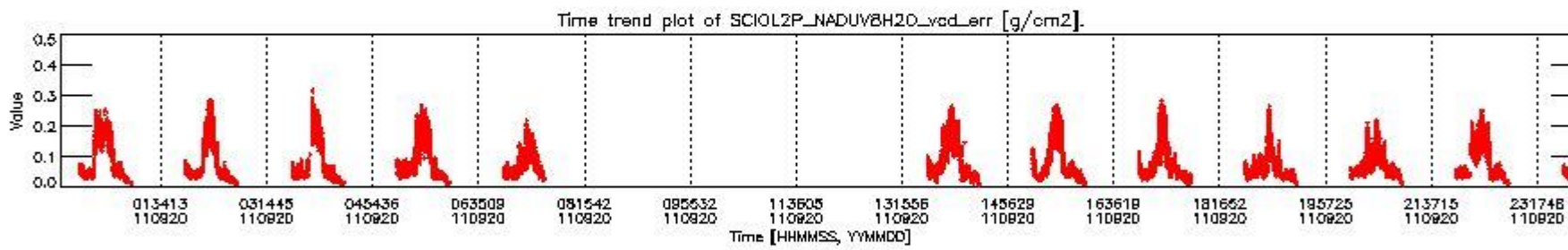
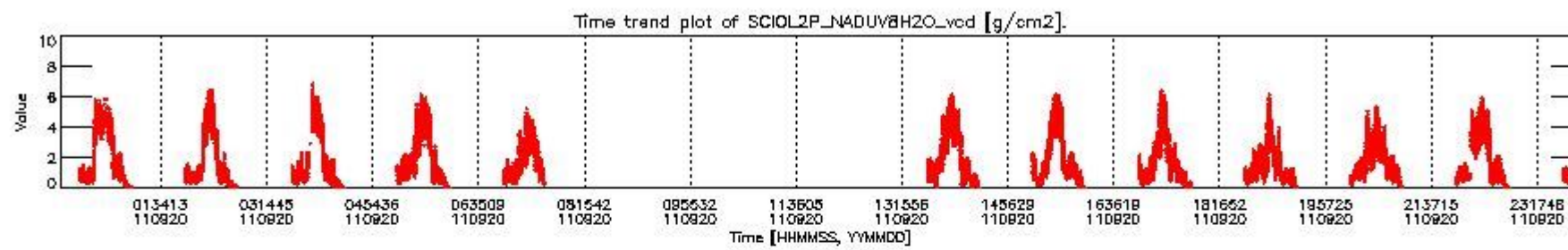
CIOL2P\_NADUV60CLslant\_col\_den for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 np; CIOL2P\_NADUV60CLerr\_slant\_col for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 np



CIOL2P\_NADUV60CL\_slant\_col\_den for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 sp | CIOL2P\_NADUV60CL\_err\_slant\_col for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 sp

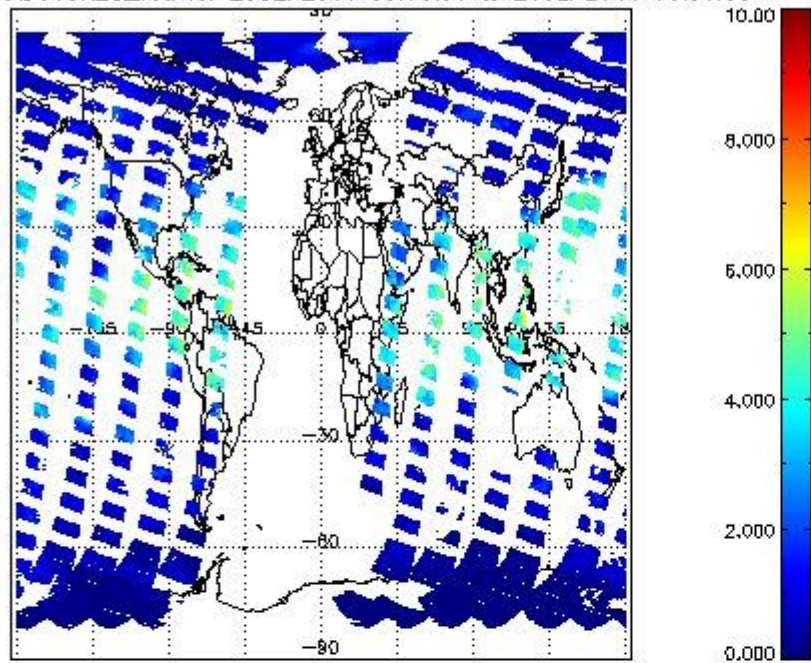


### 2.2.2.7 H2O (UV8)

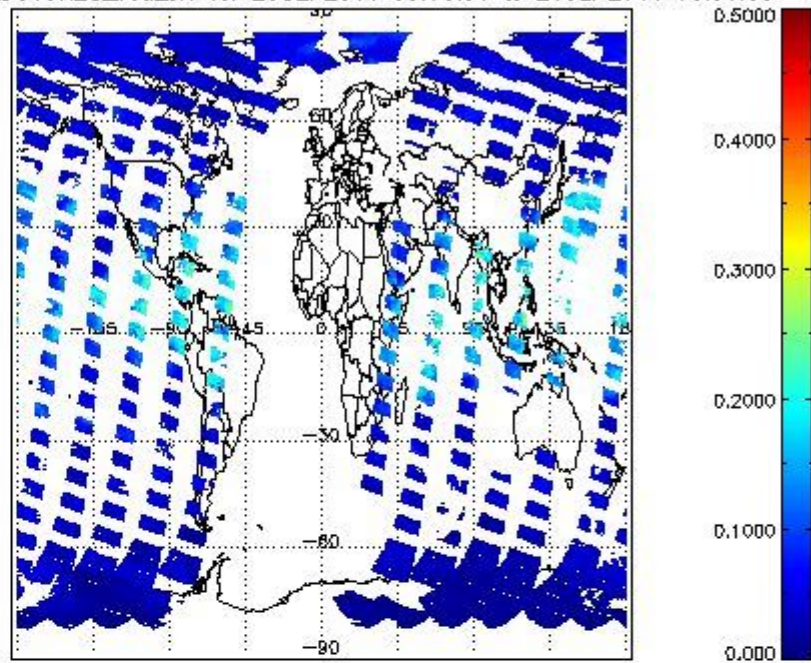




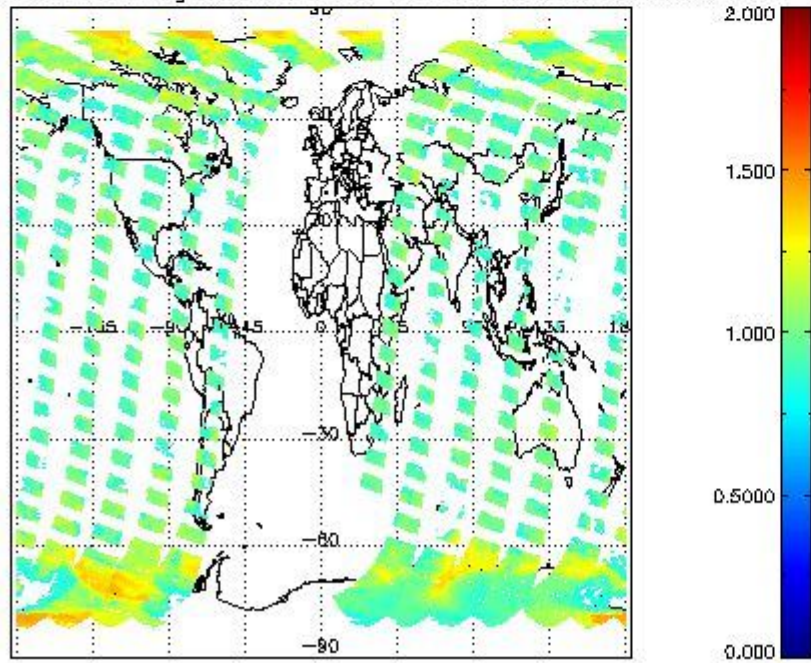
SCIOL2P\_NADUV8H2O\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



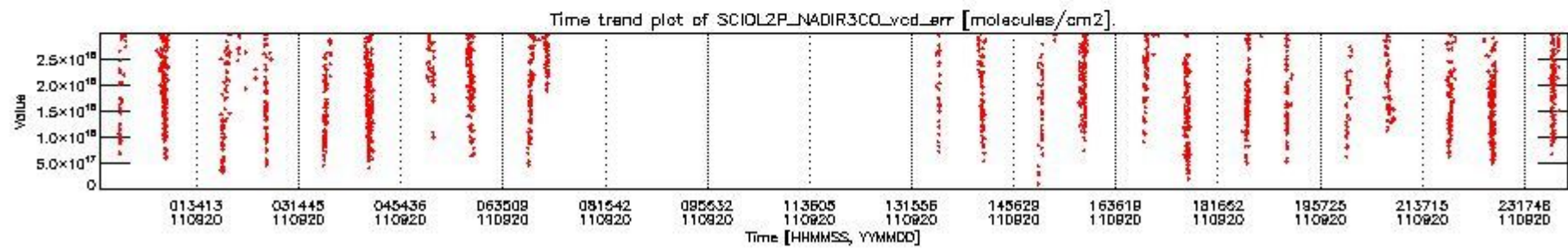
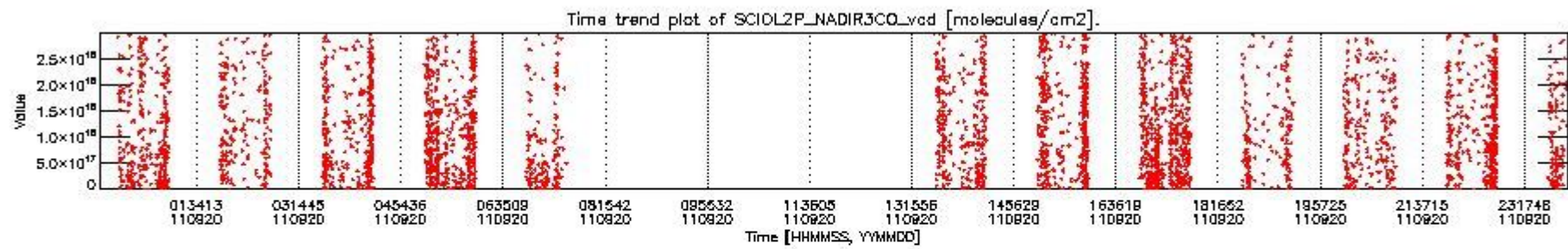
SCIOL2P\_NADUV8H2O\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



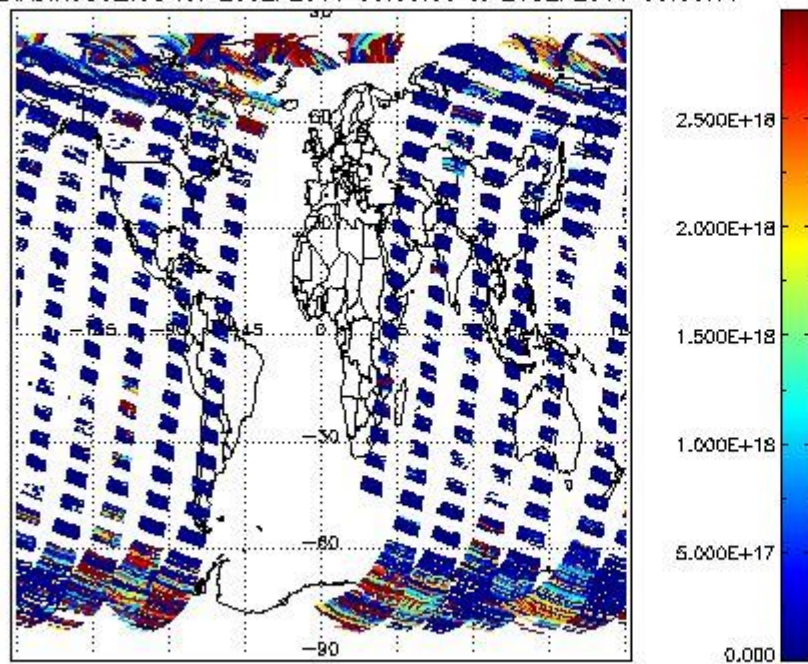
SCIOL2P\_NADUV8H2O\_arnf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



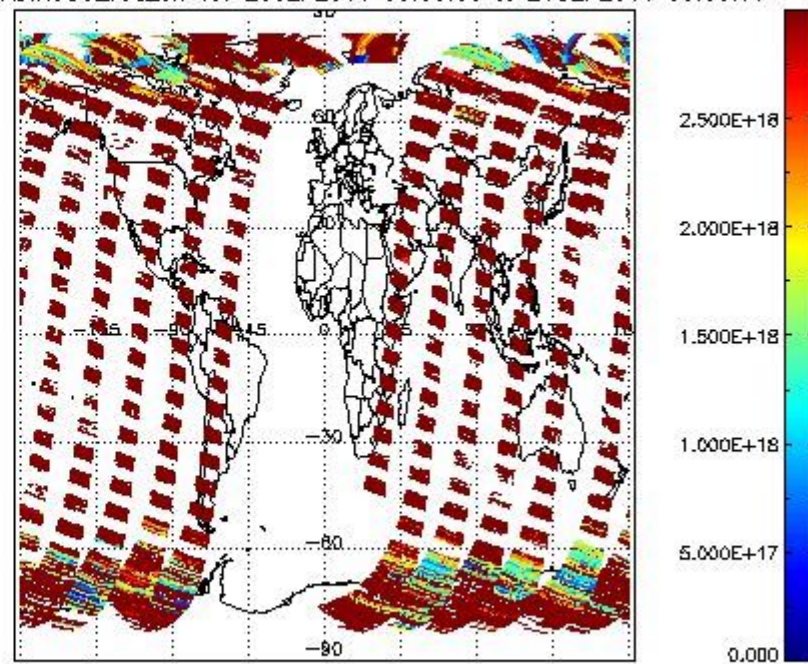
2.2.2.8 CO (IR3)



SCIO2P\_NADIR3CO\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



SCIO2P\_NADIR3CO\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



### 2.2.3 Limb

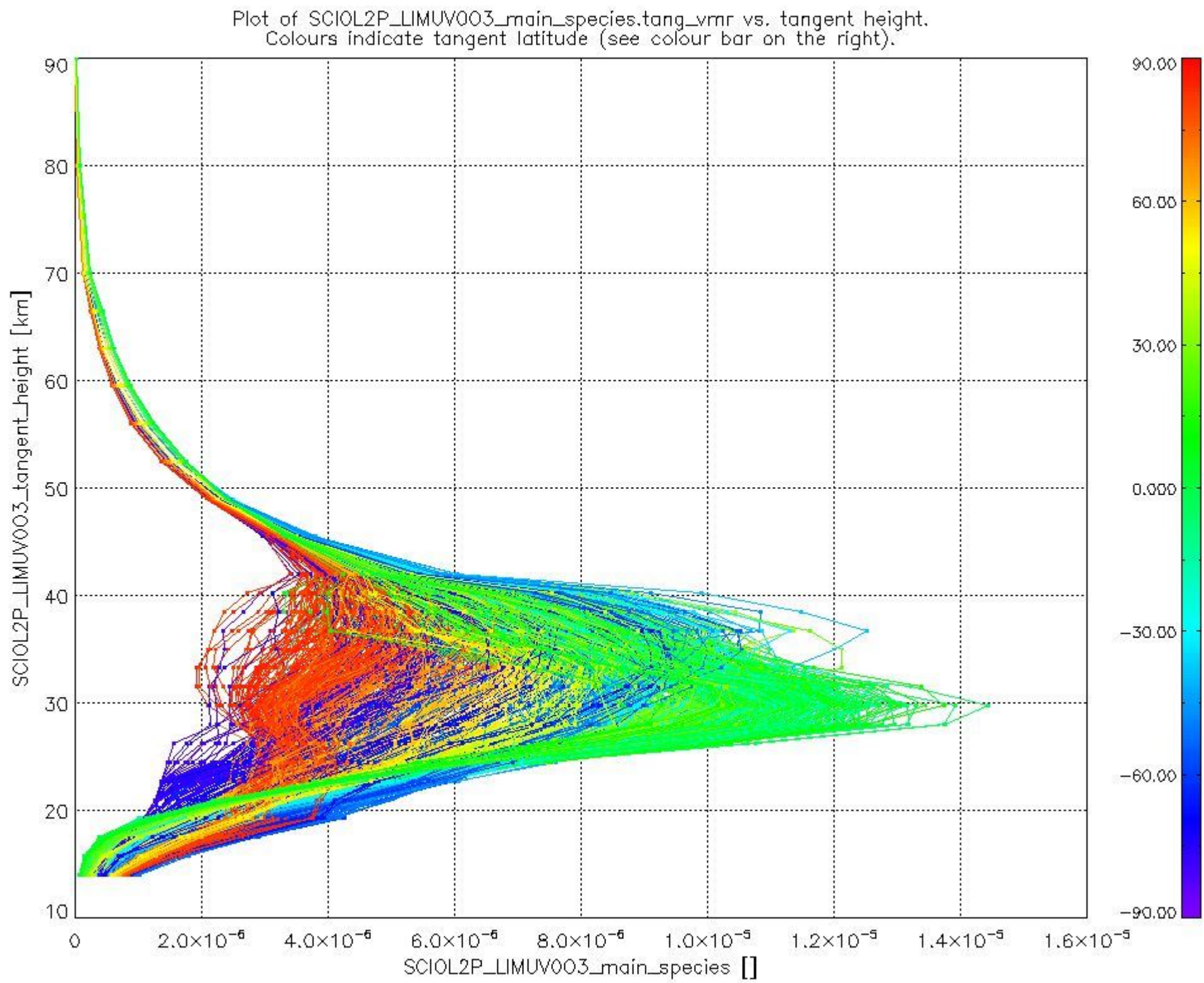
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIO2P_LIMUV003_main_species
1	SCIO2P_LIMUV1NO2_main_species
2	SCIO2P_LIMUV3BRO_main_species

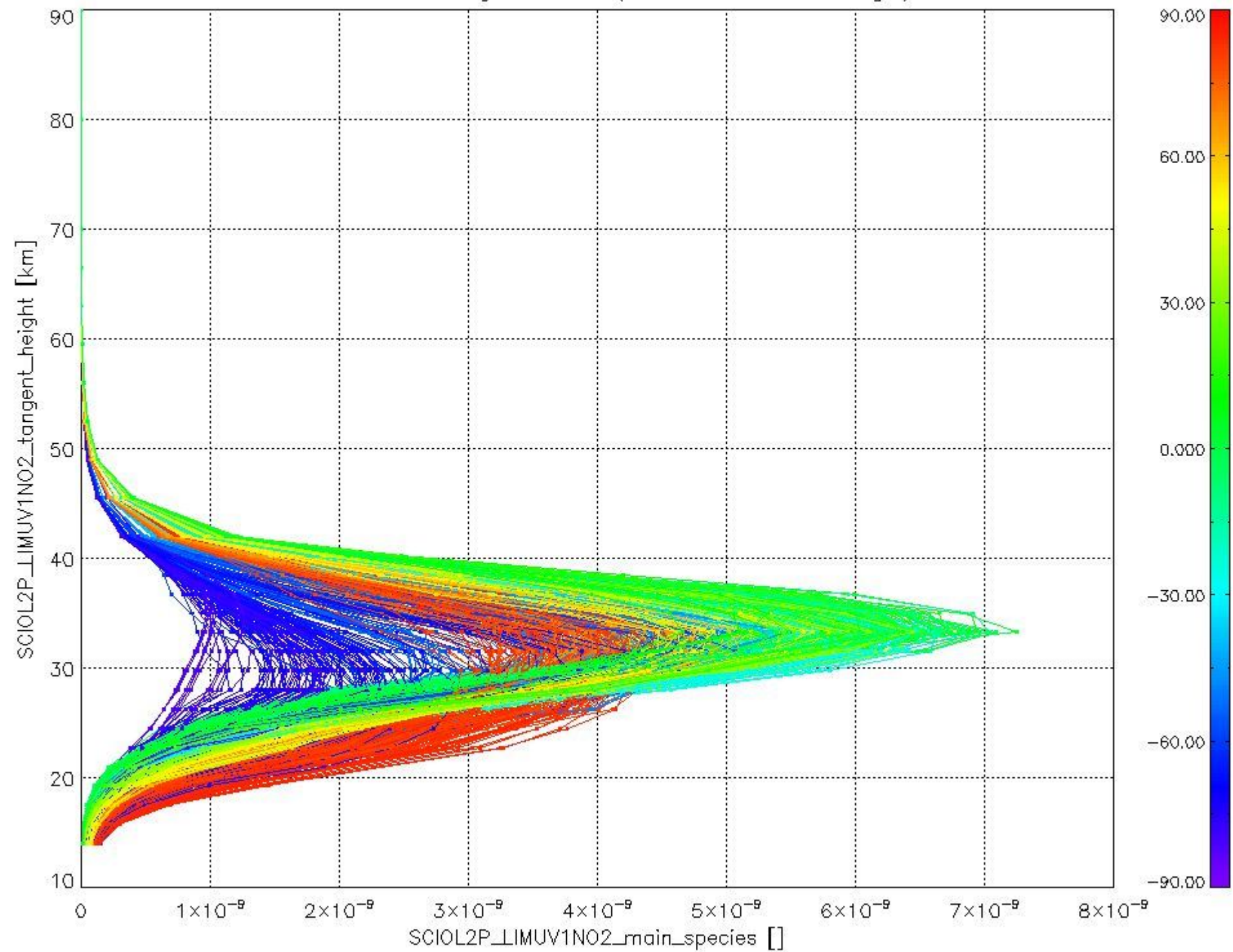
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



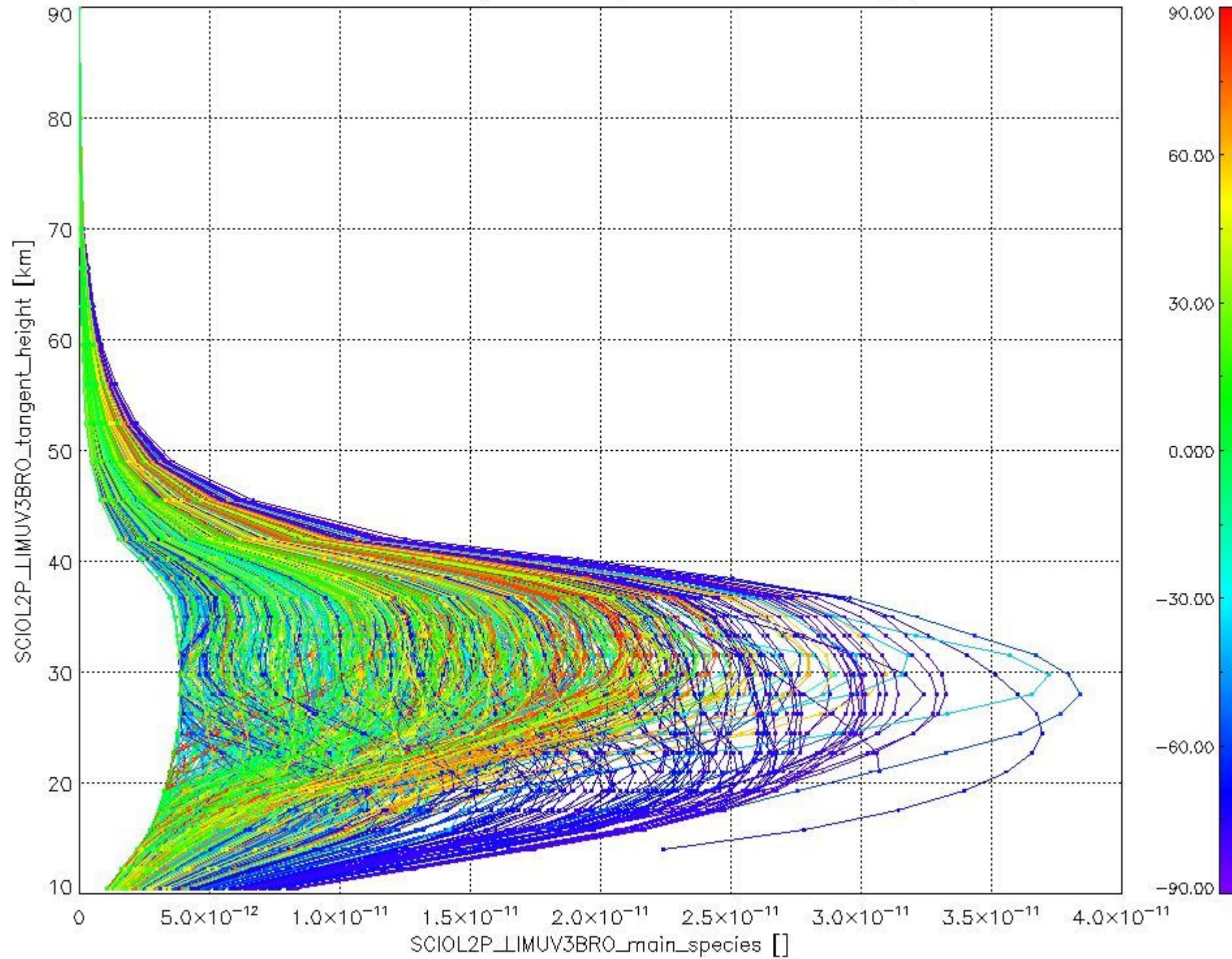
2.2.3.2 NO2 (UV1)

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).

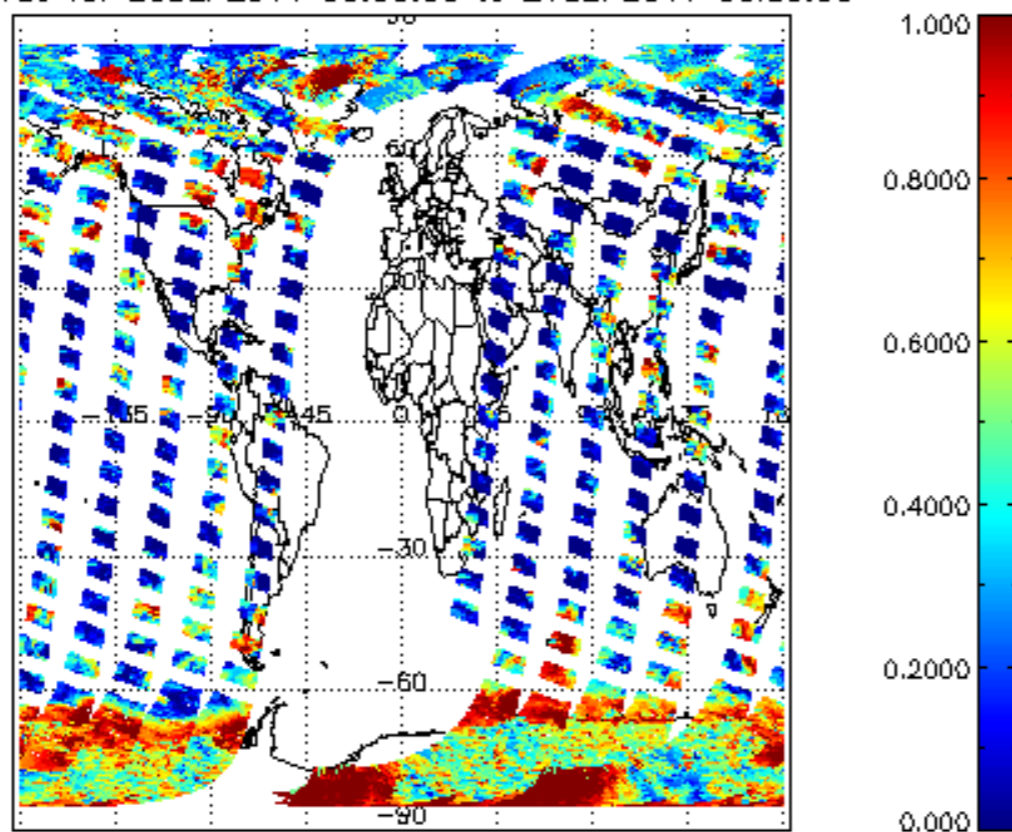


### 2.3 ADF monitoring

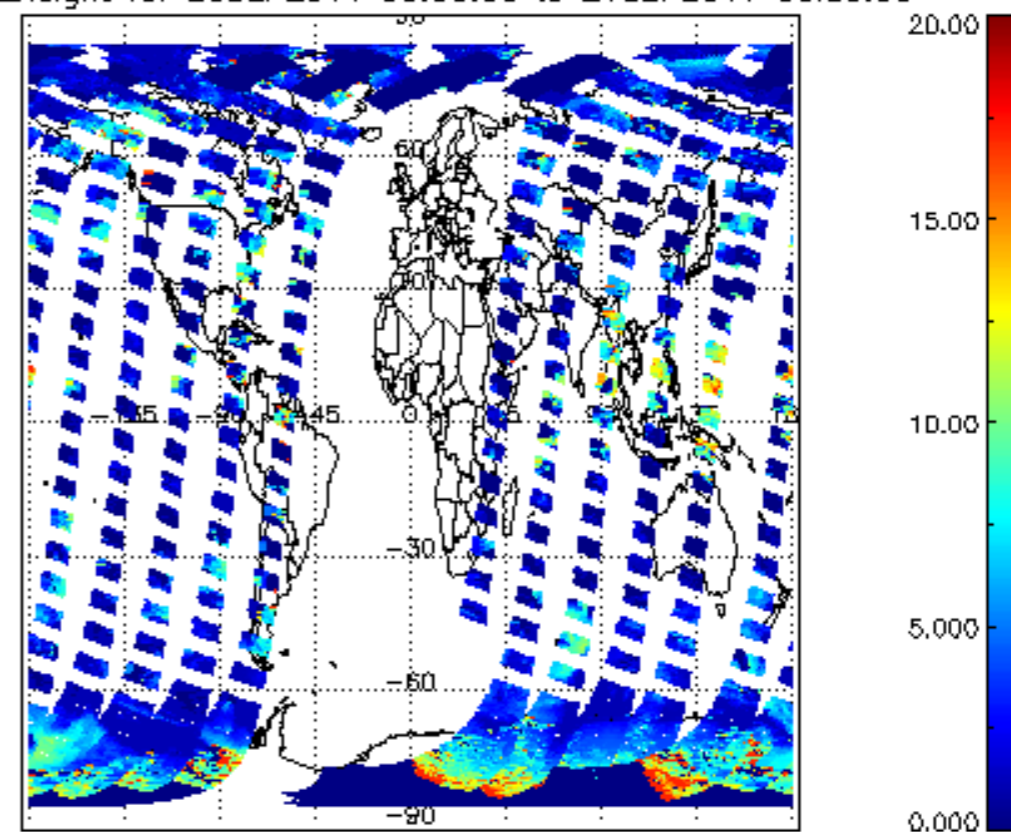
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110920_110536_20110919_183718_20110921_183718
3	SCI_MF1_AXVIEC20110927_140806_20110920_194046_20110922_194046



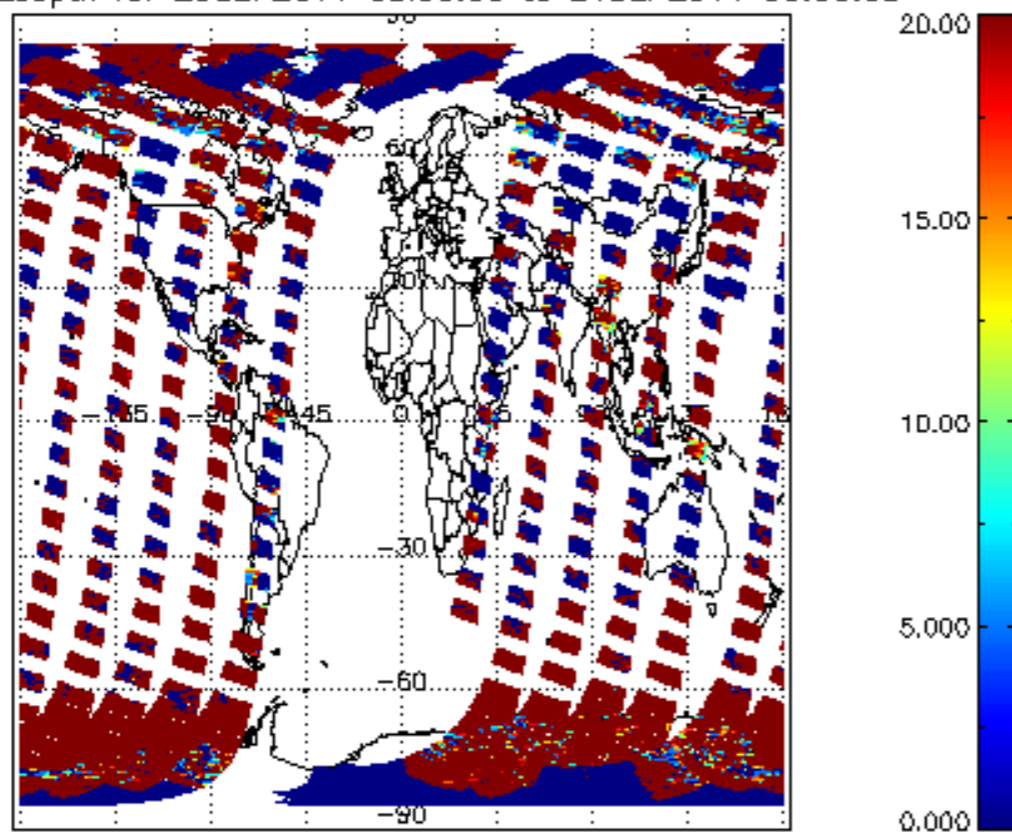
cL\_frac for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



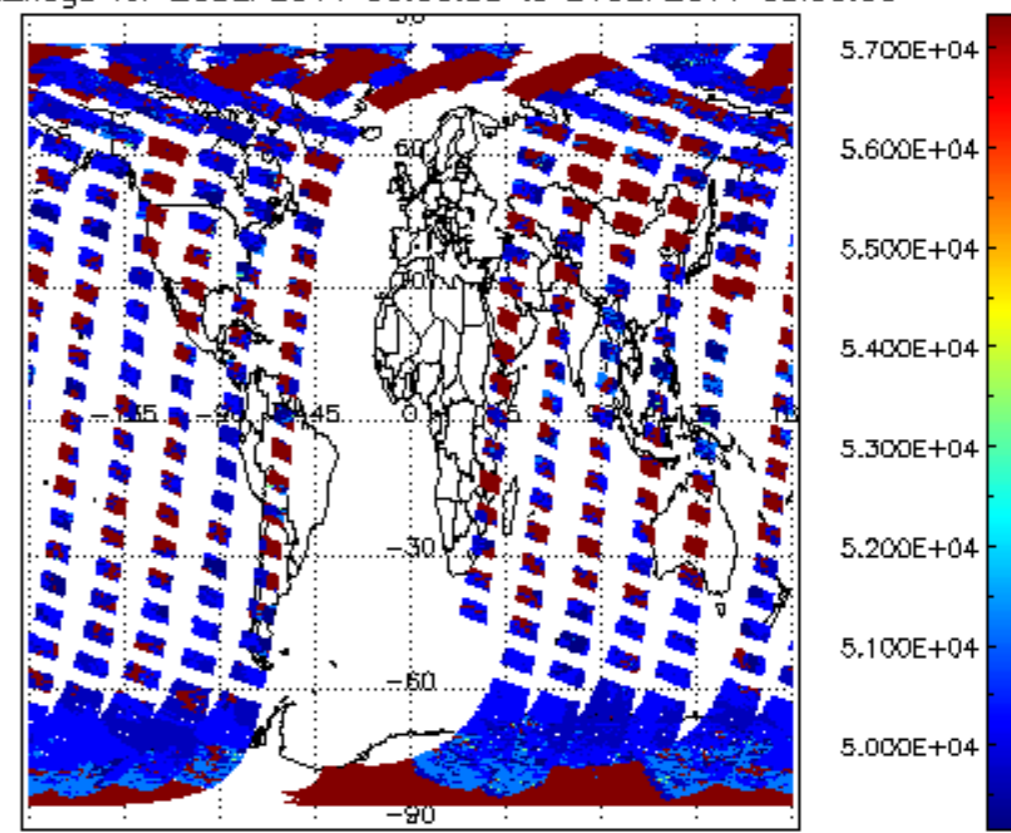
cL\_top\_height for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

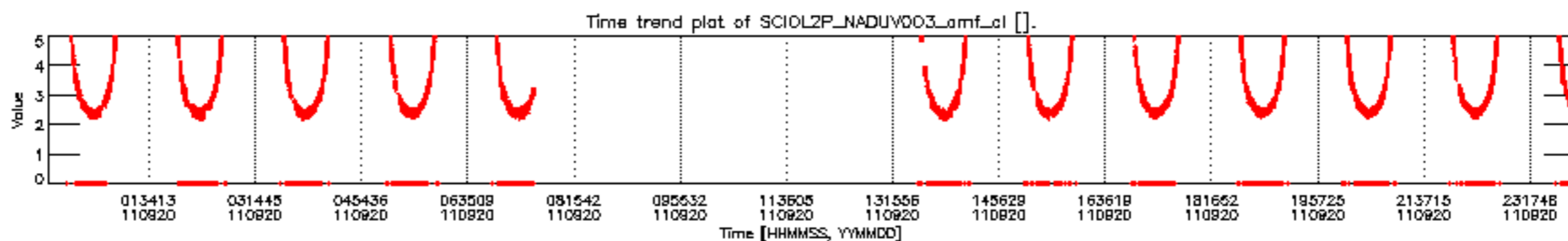
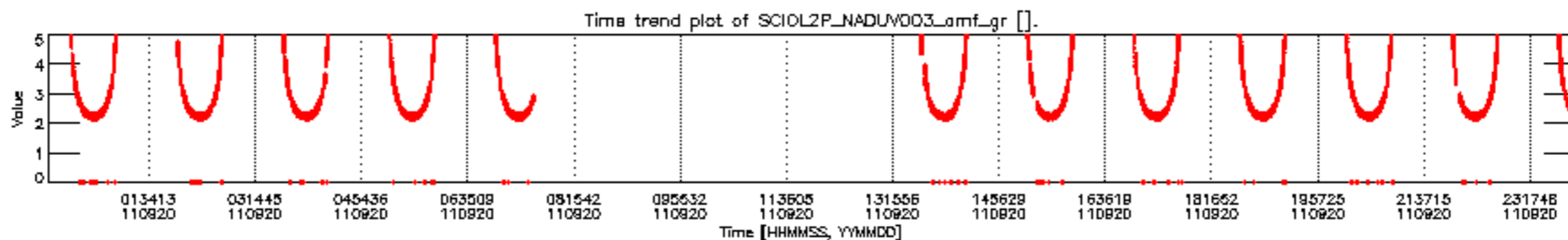
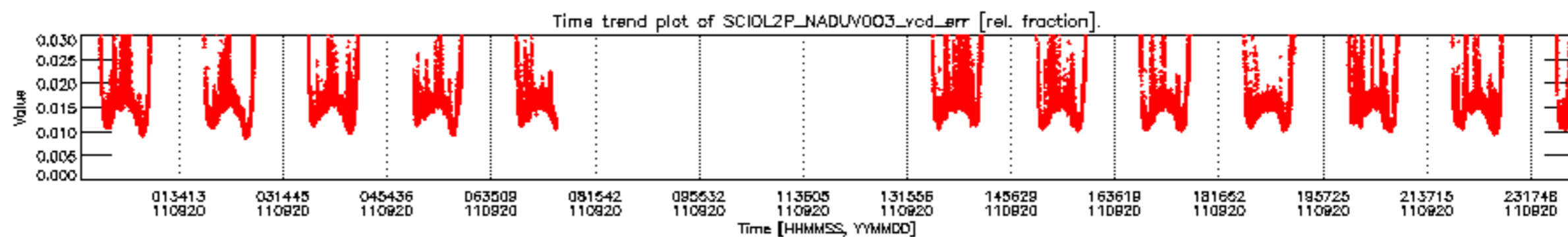
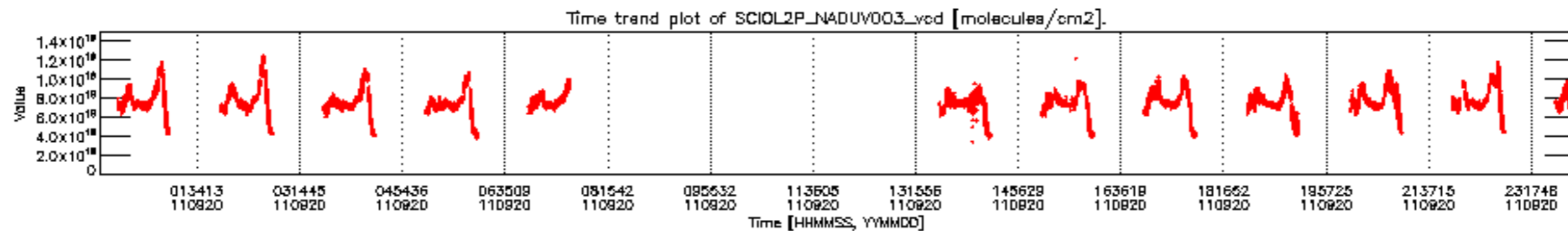


cL\_opt\_depth for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



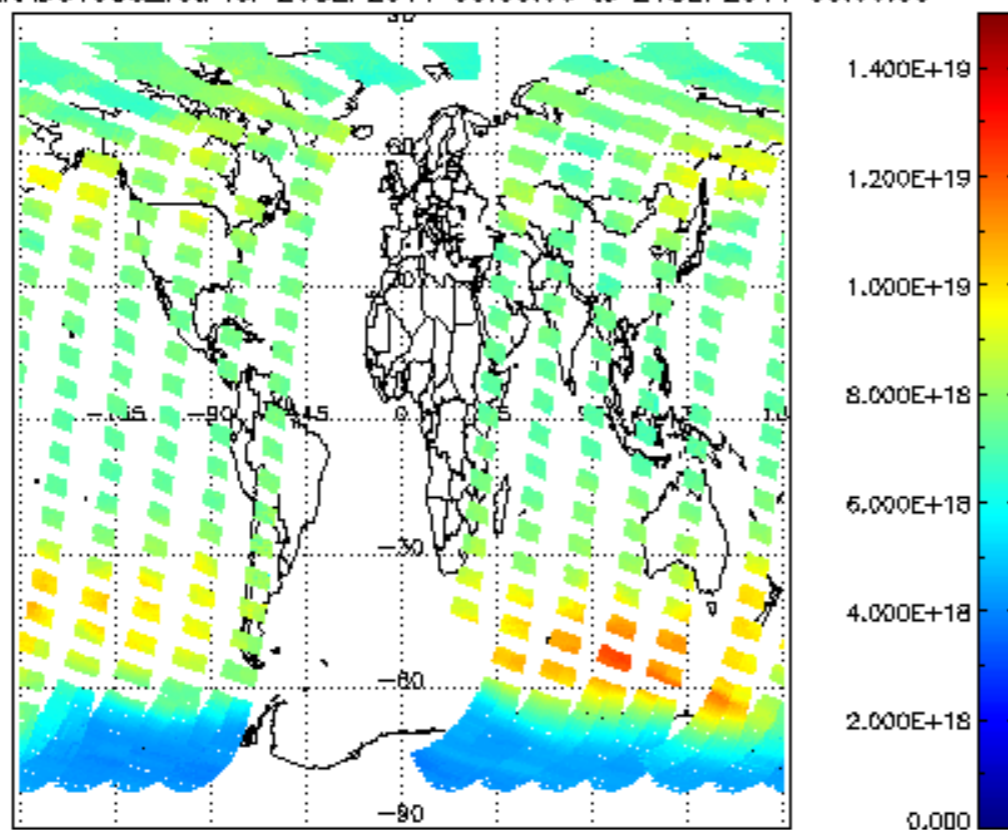
cloud\_flags for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



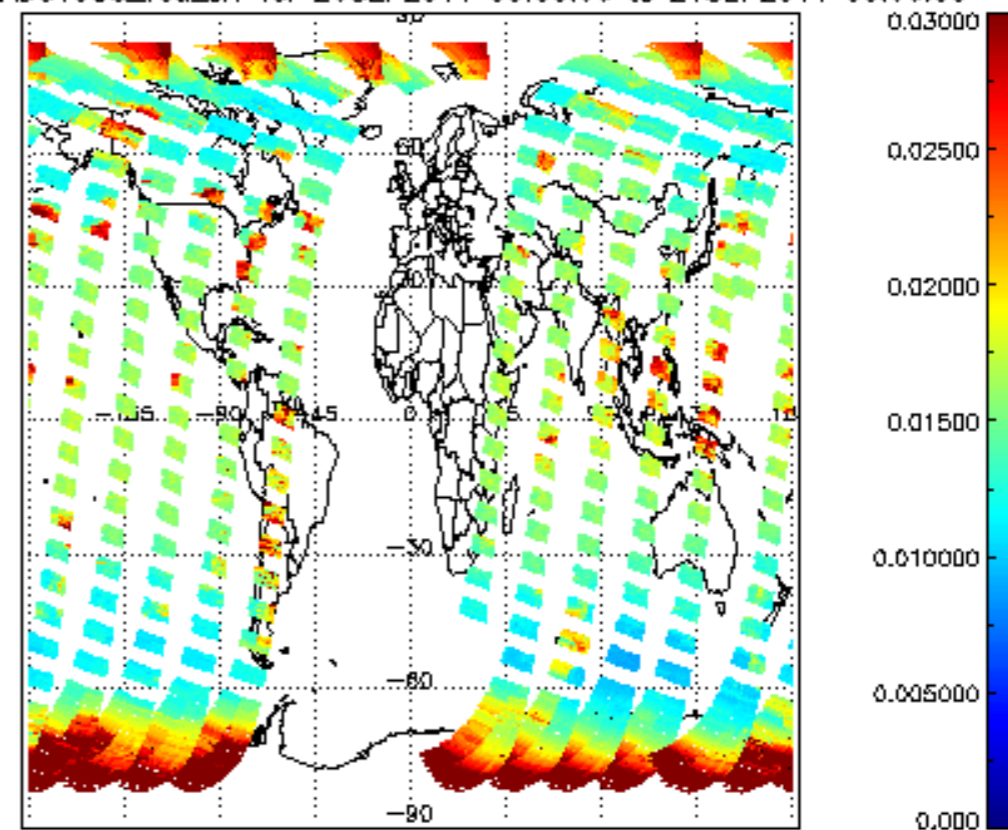




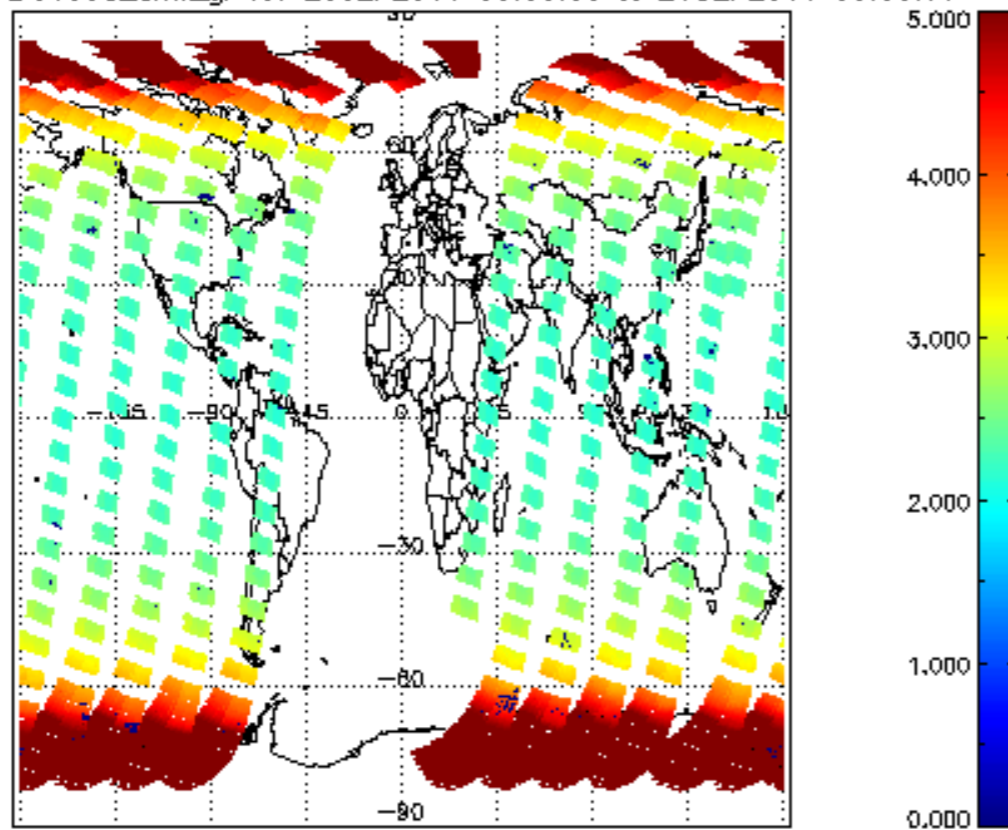
SCIOL2P\_NADUV003\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



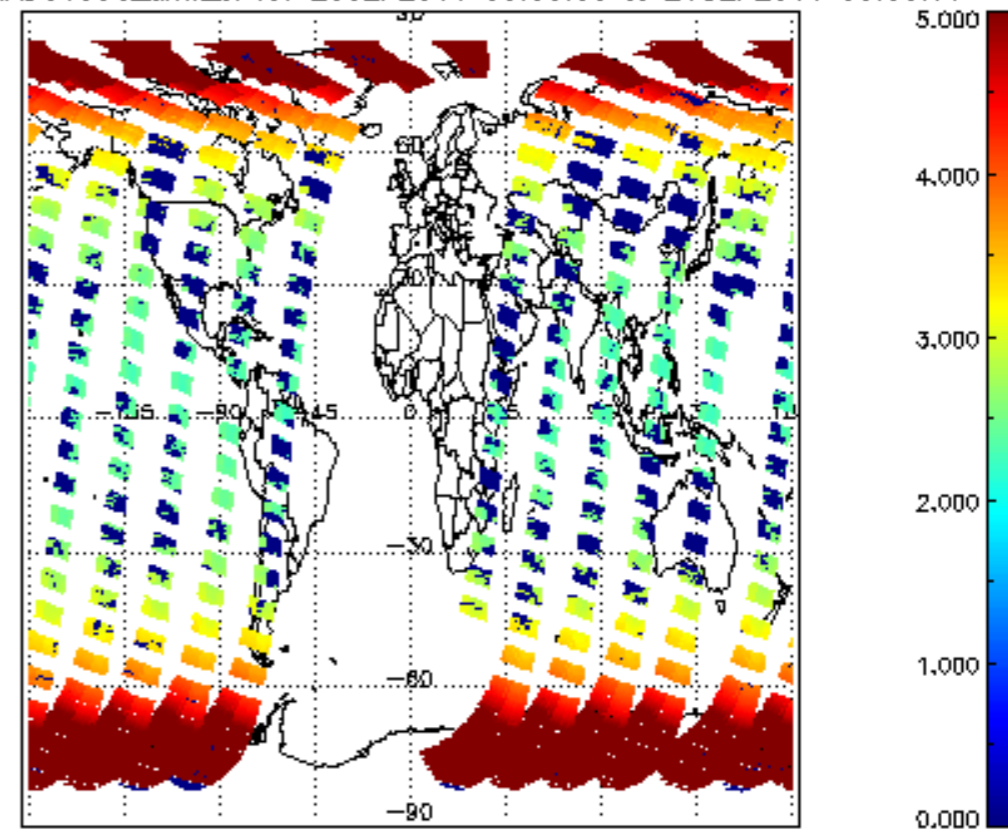
SCIOL2P\_NADUV003\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

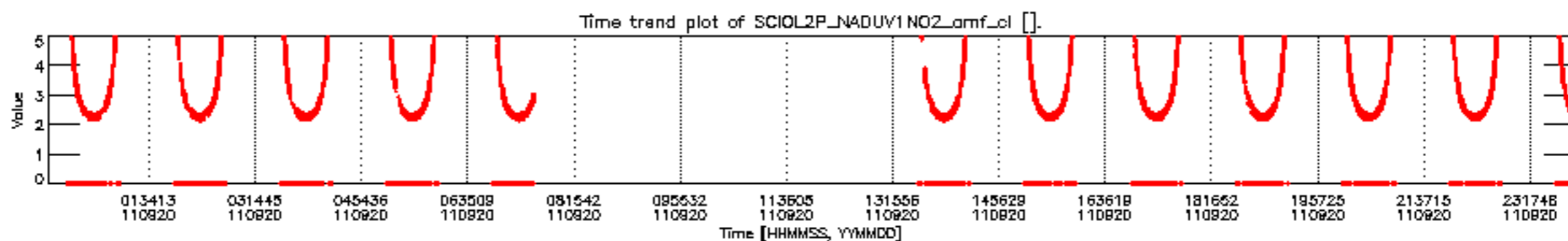
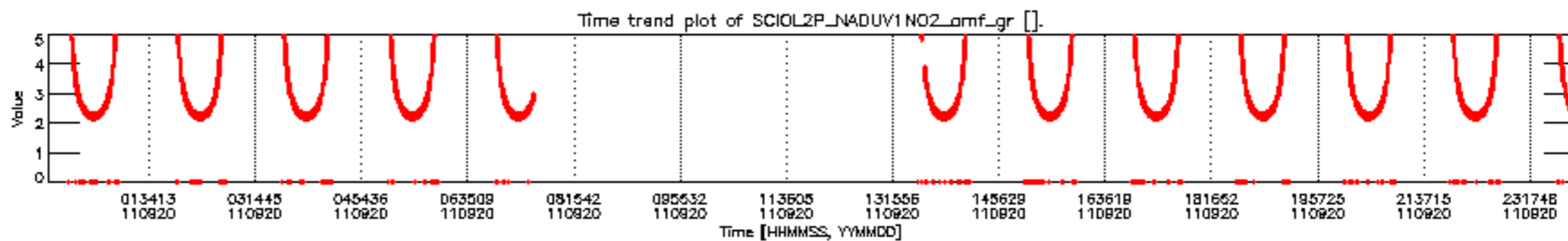
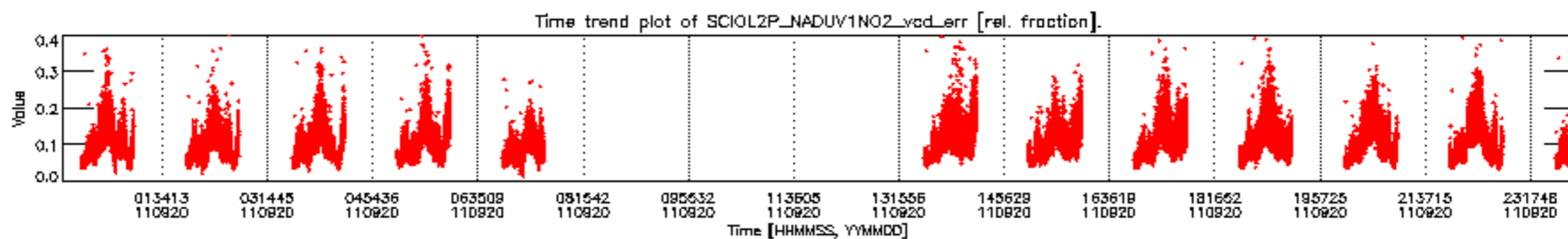
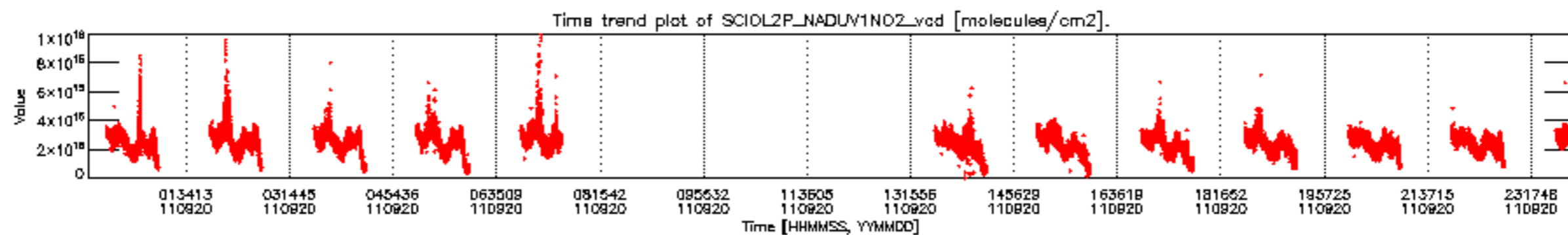


SCIOL2P\_NADUV003\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

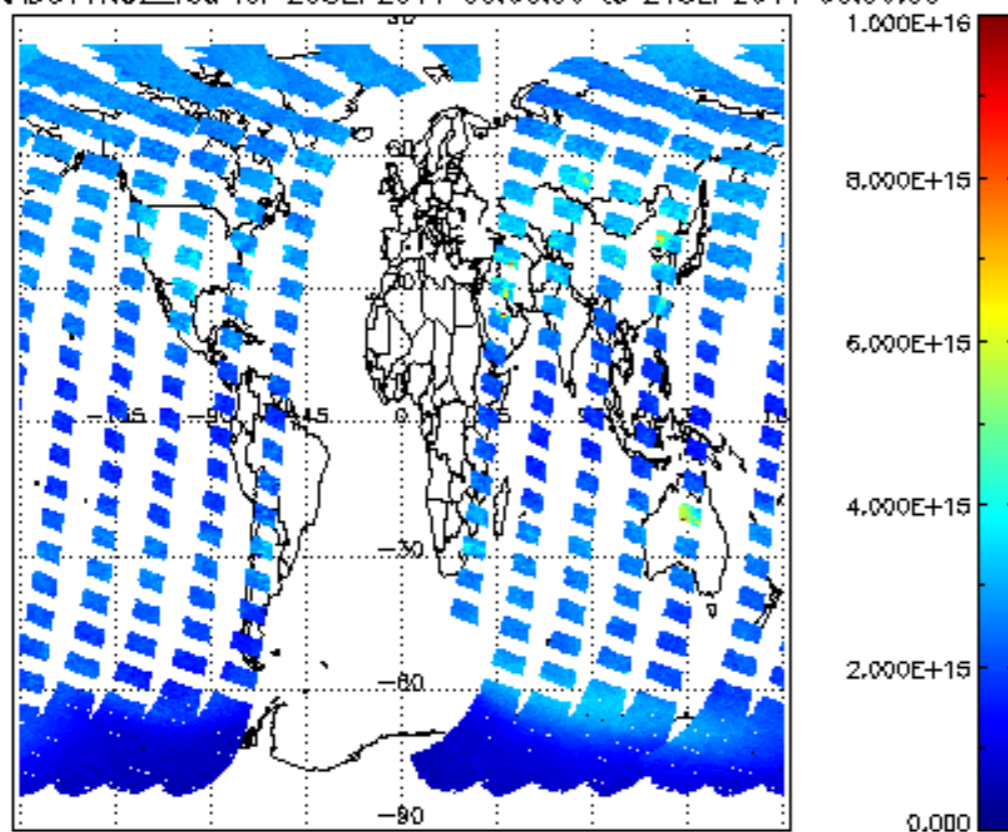


SCIOL2P\_NADUV003\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

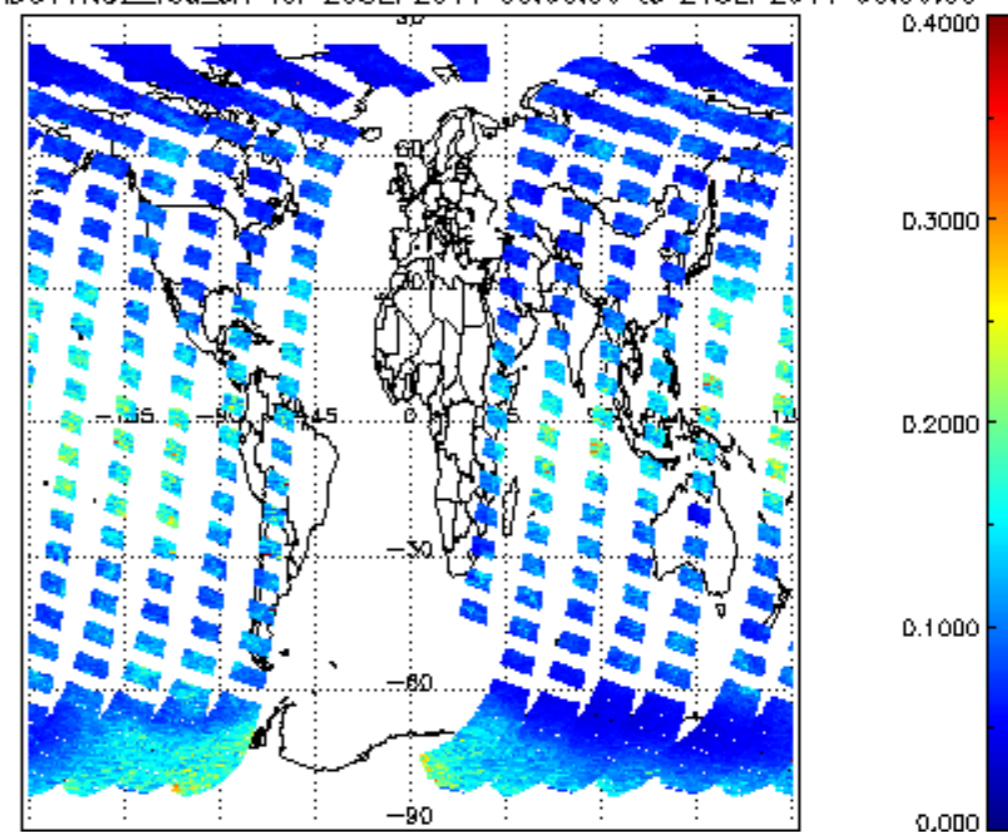




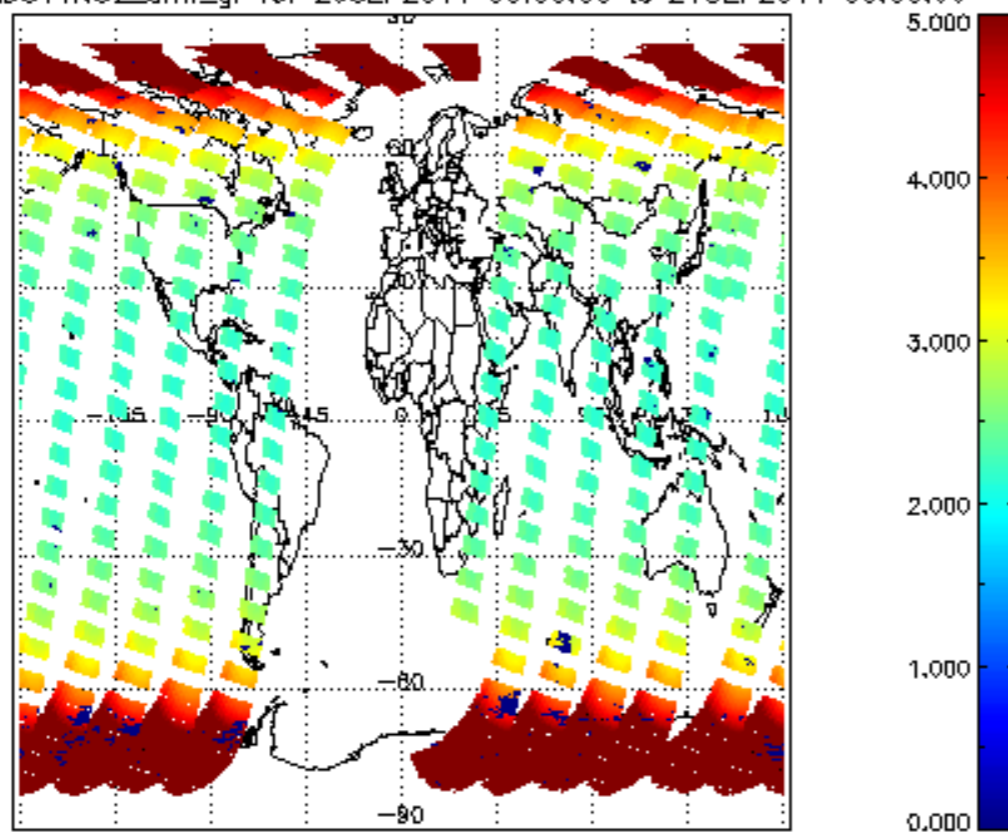
SCIOL2P\_NADUV1NO2\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



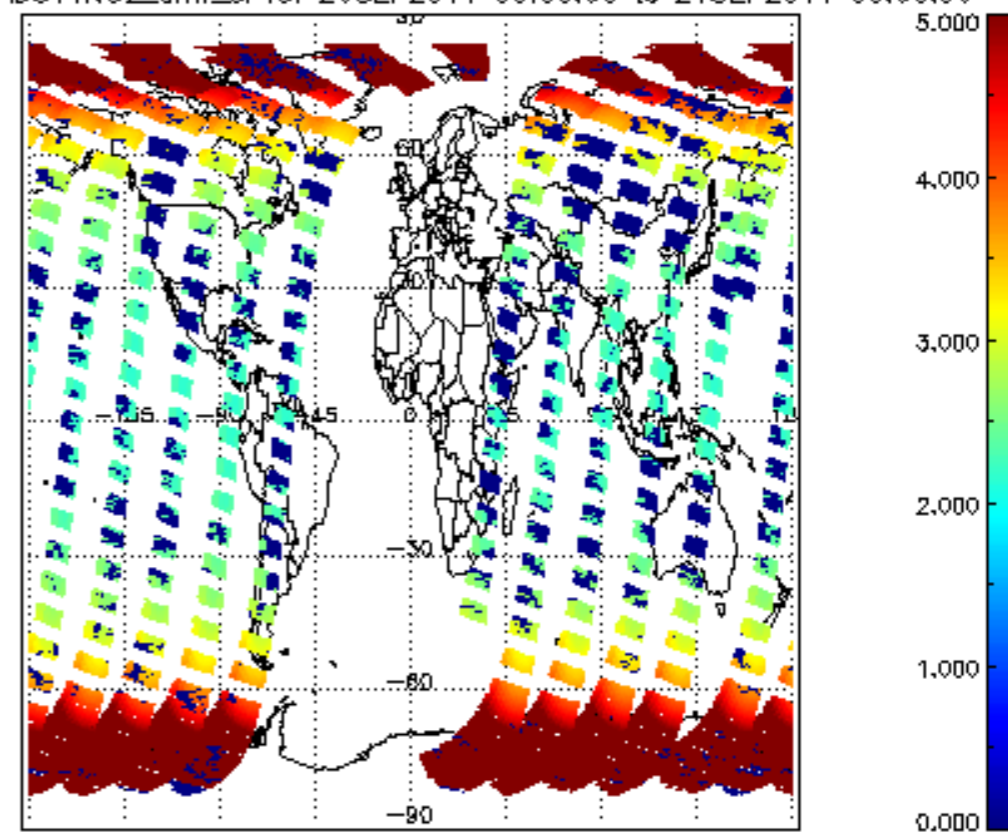
SCIOL2P\_NADUV1NO2\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

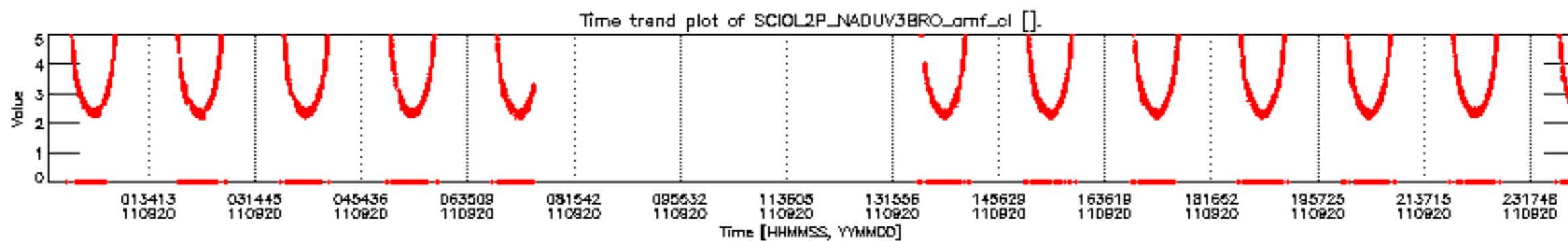
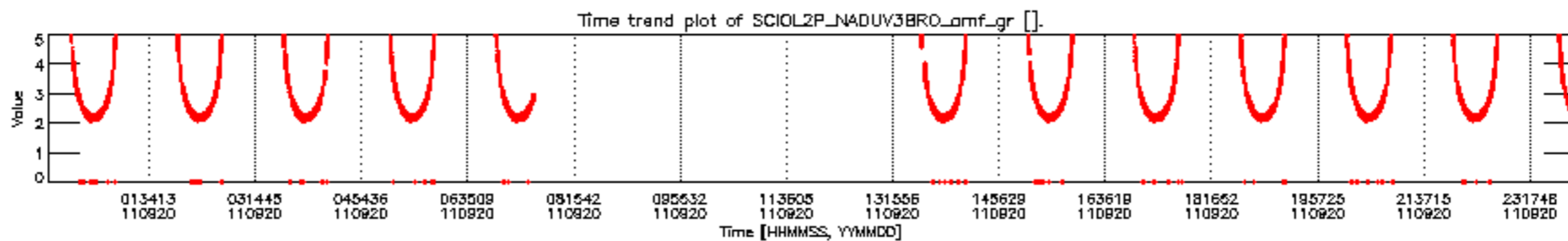
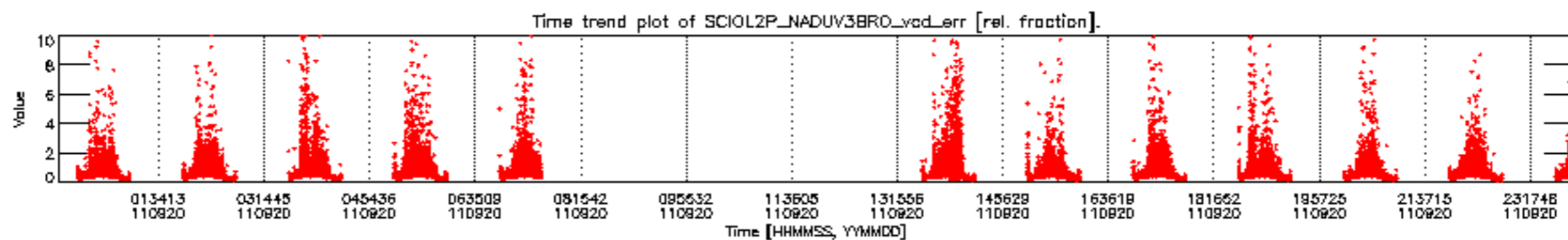
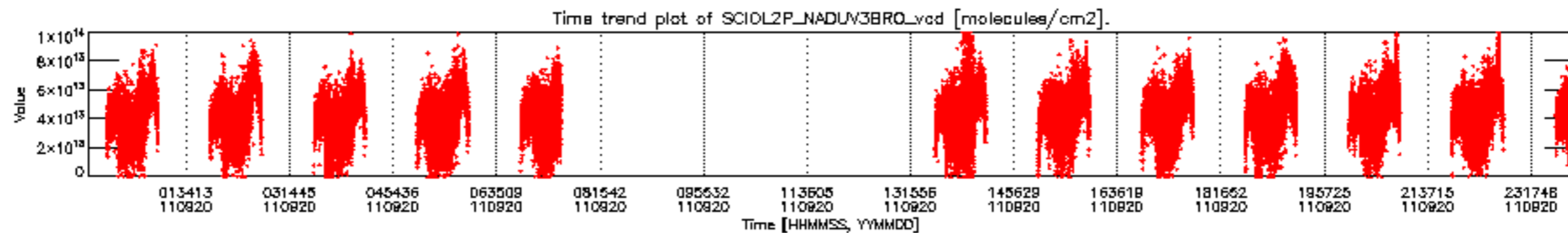


SCIOL2P\_NADUV1NO2\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

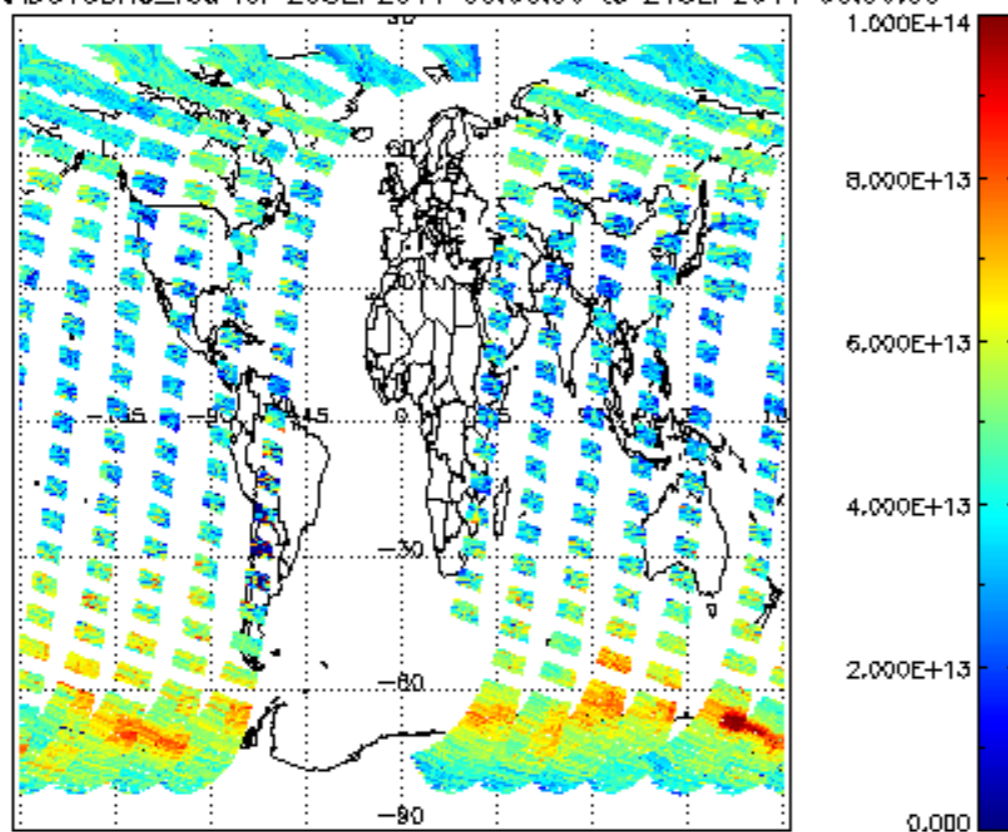


SCIOL2P\_NADUV1NO2\_amf\_sl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

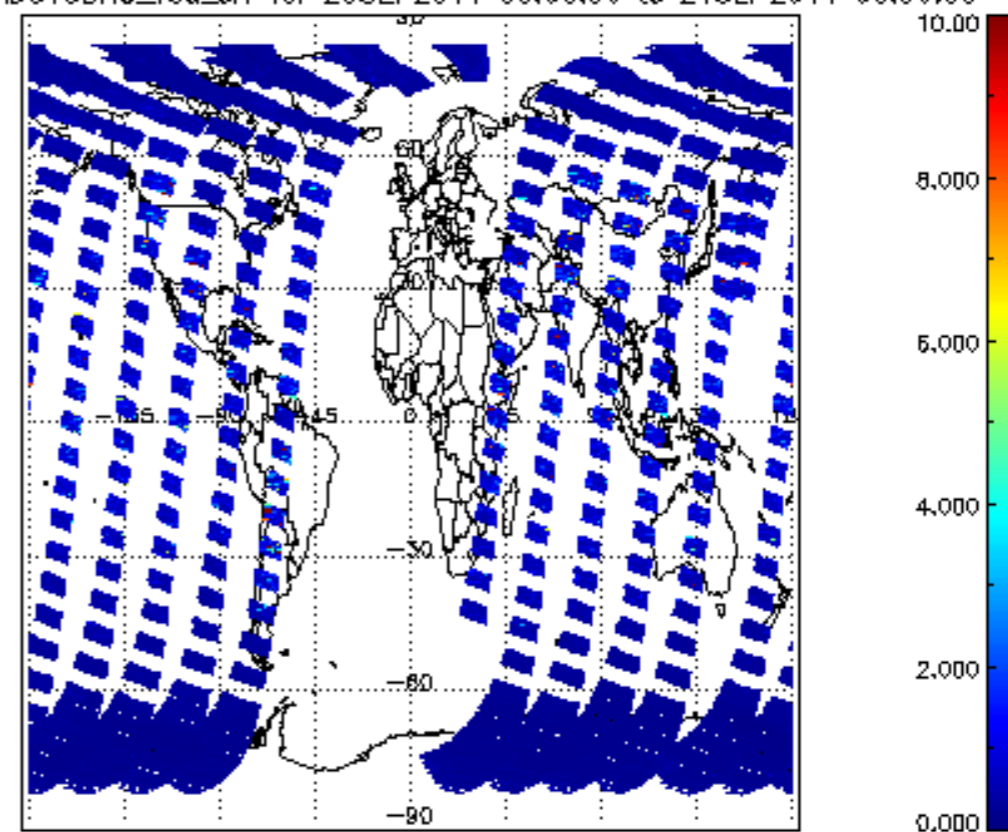




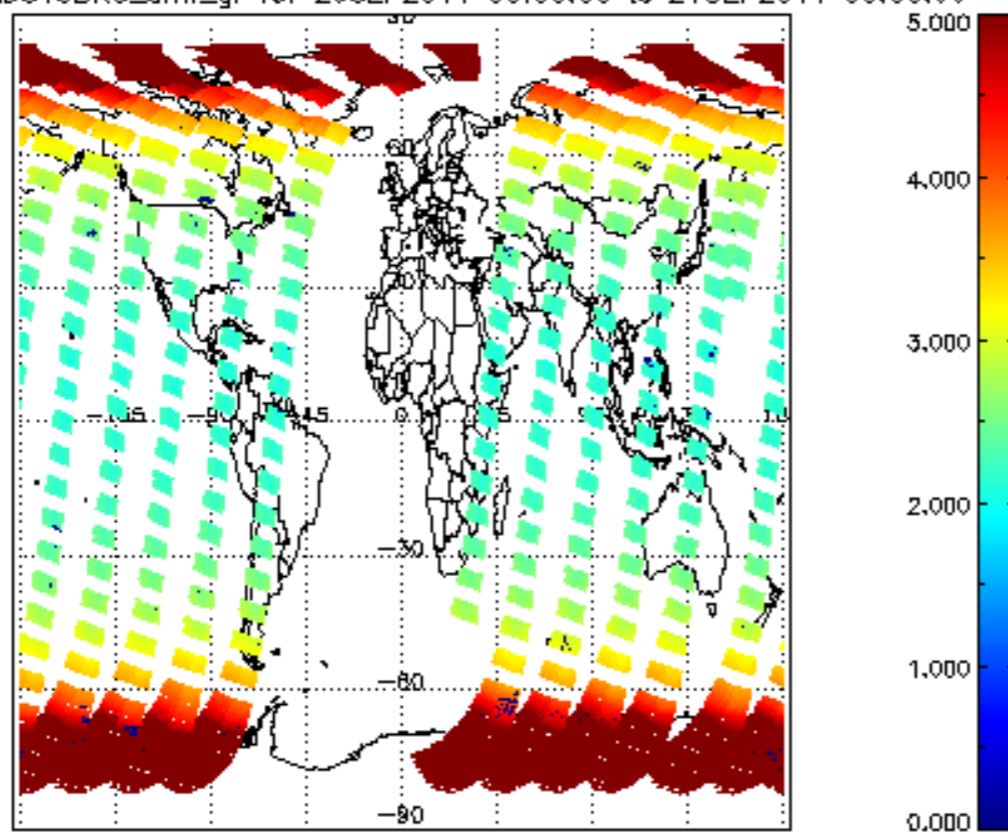
SCIOL2P\_NADUV3BRO\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



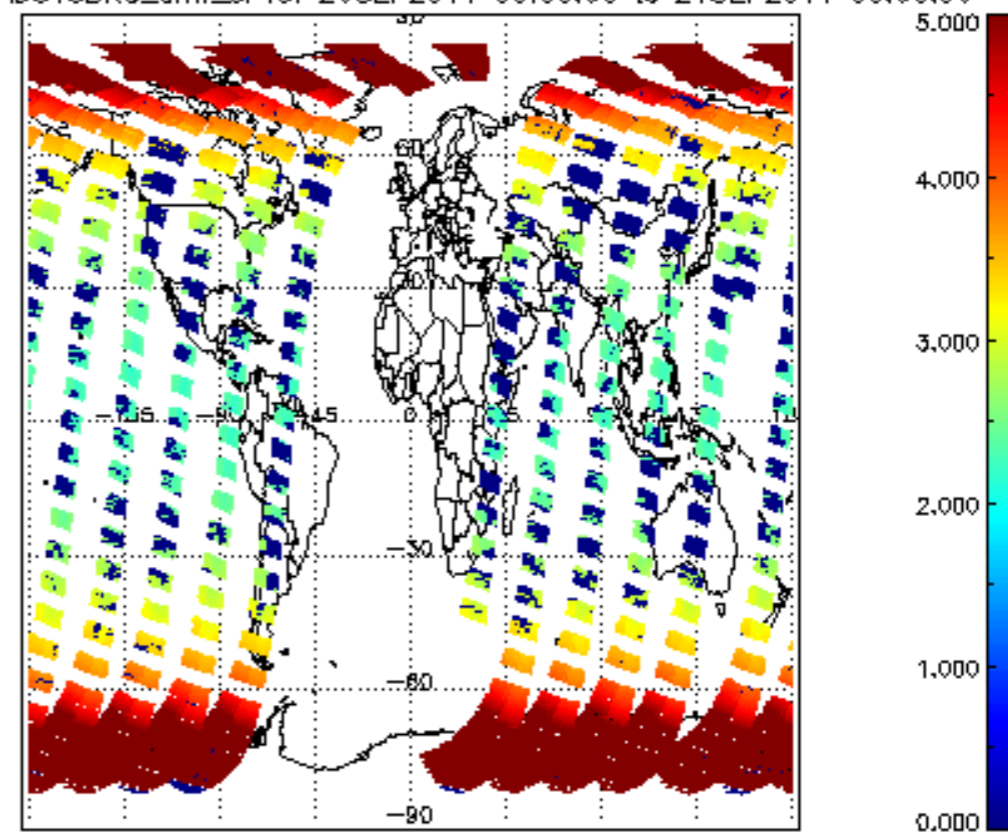
SCIOL2P\_NADUV3BRO\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

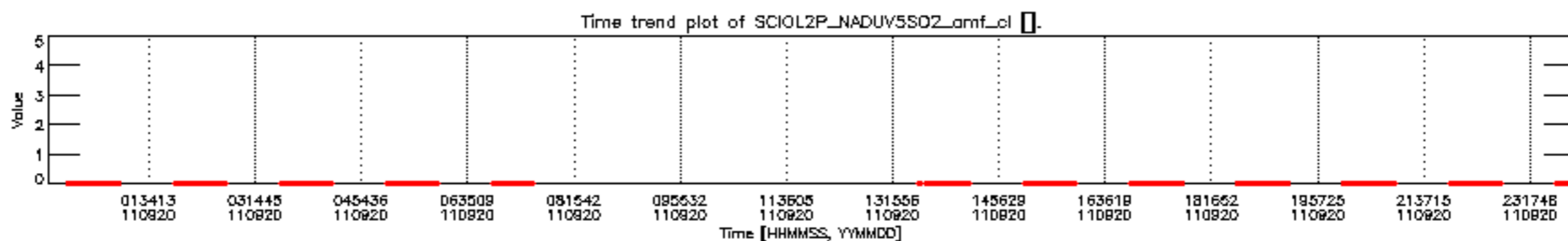
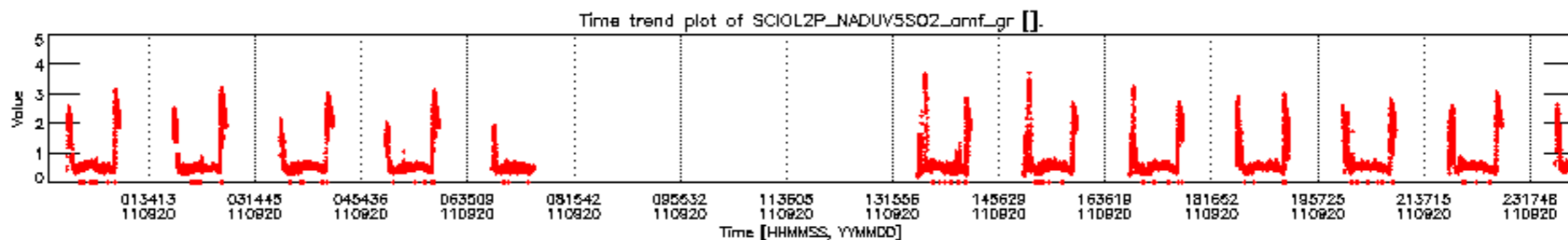
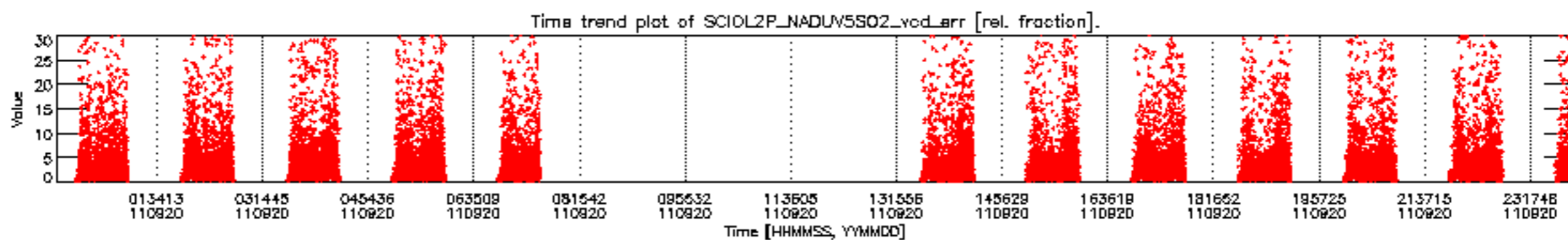
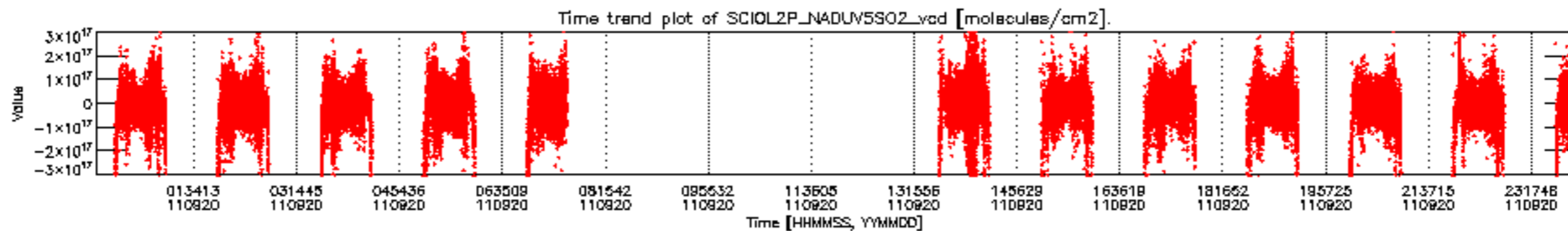


SCIOL2P\_NADUV3BRO\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

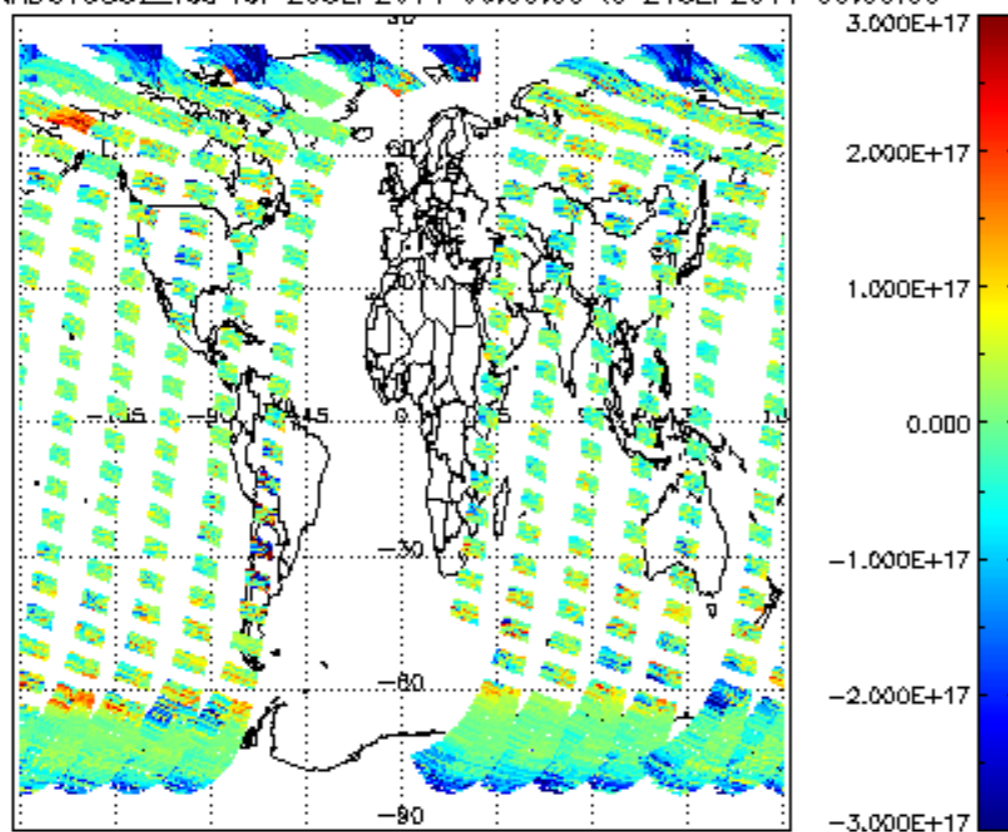


SCIOL2P\_NADUV3BRO\_amf\_sl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

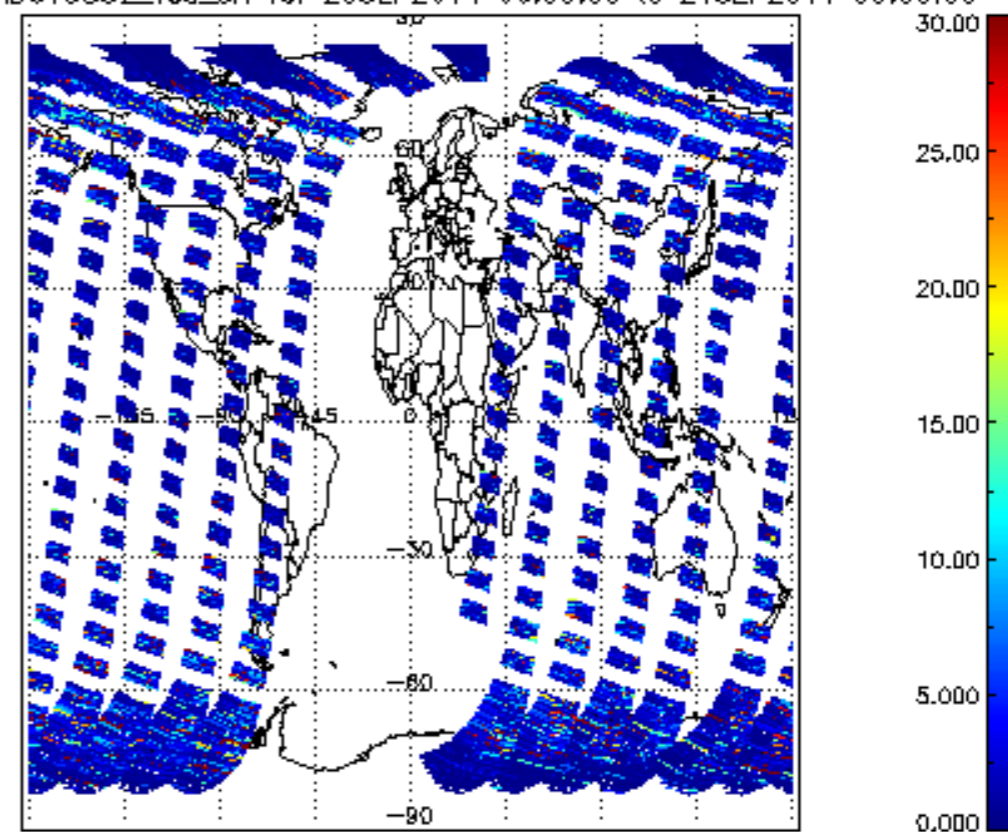




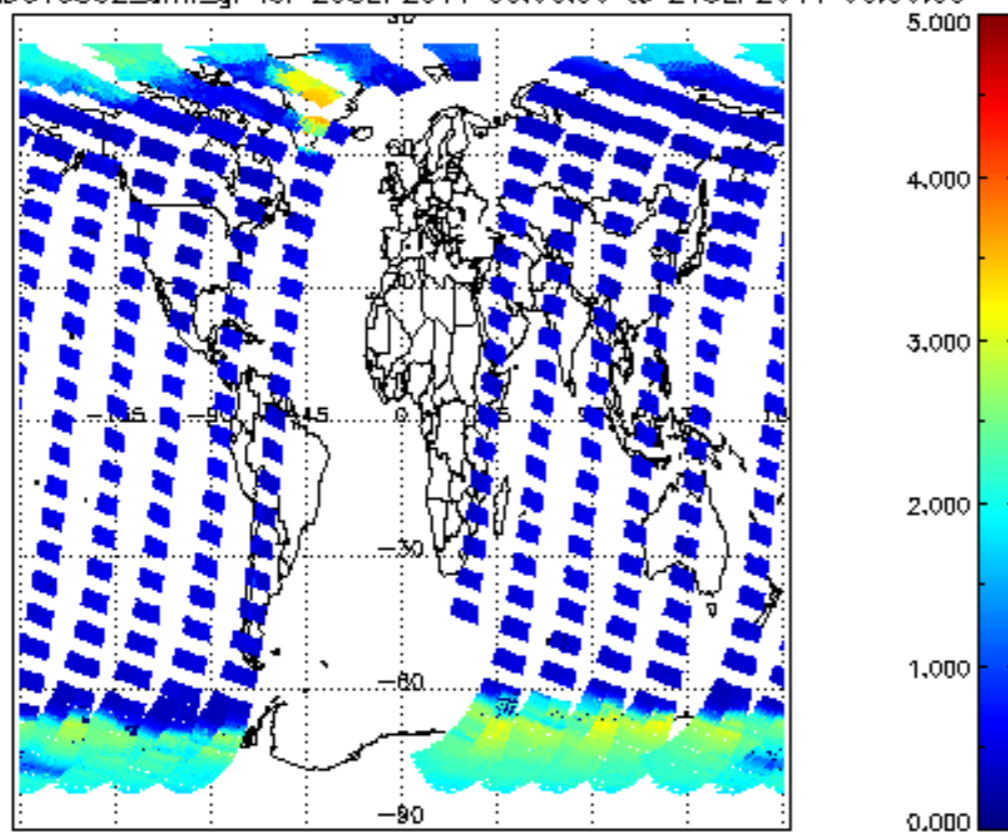
SCIOL2P\_NADUV5S02\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



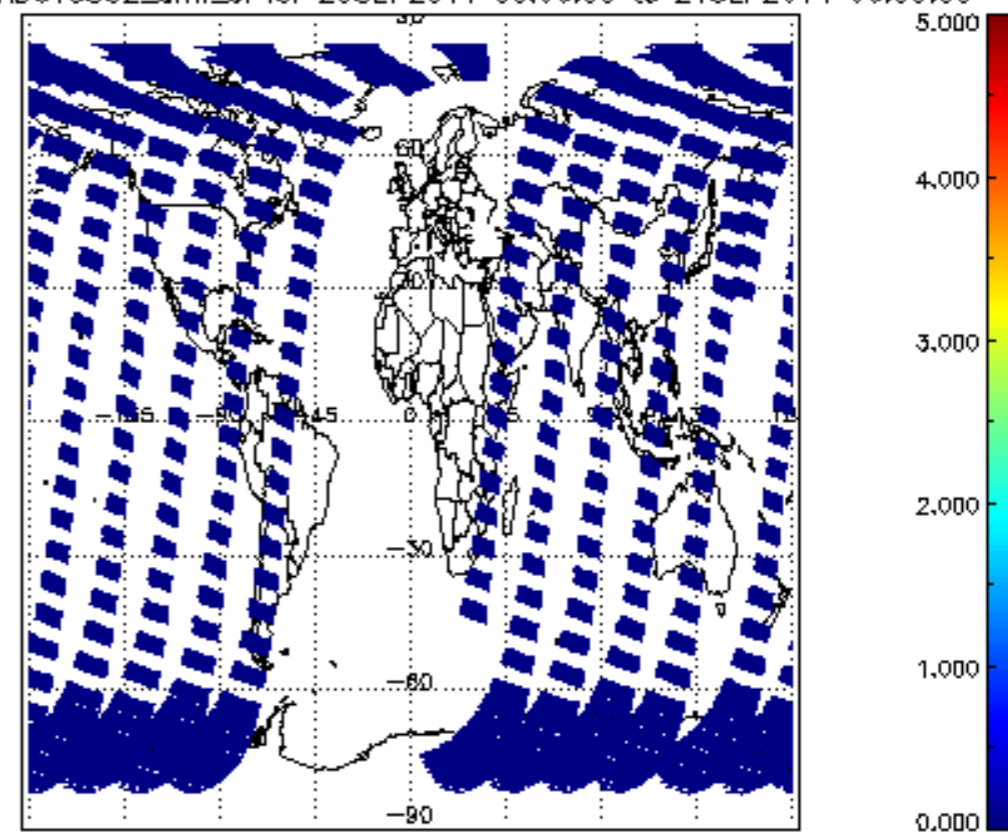
SCIOL2P\_NADUV5S02\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

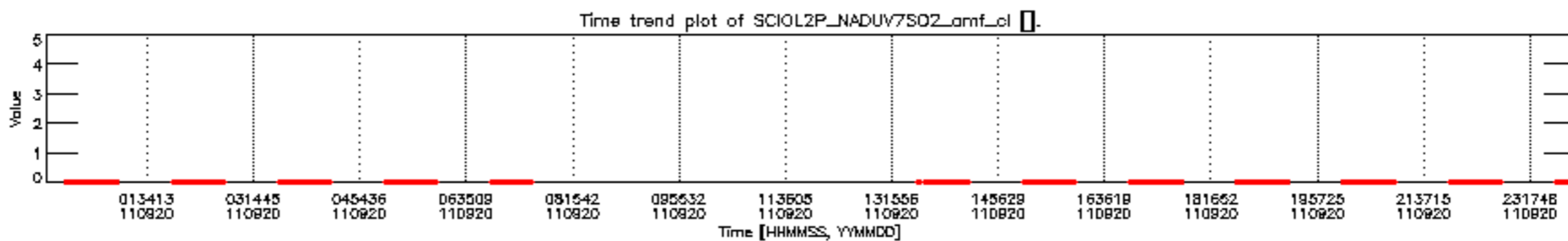
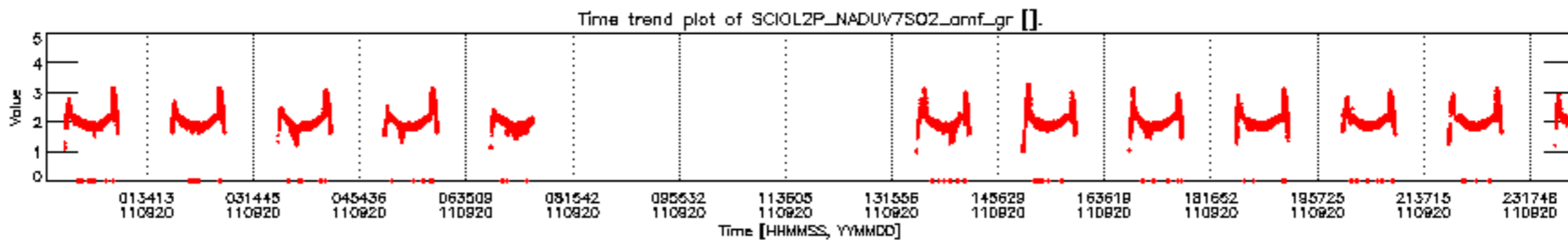
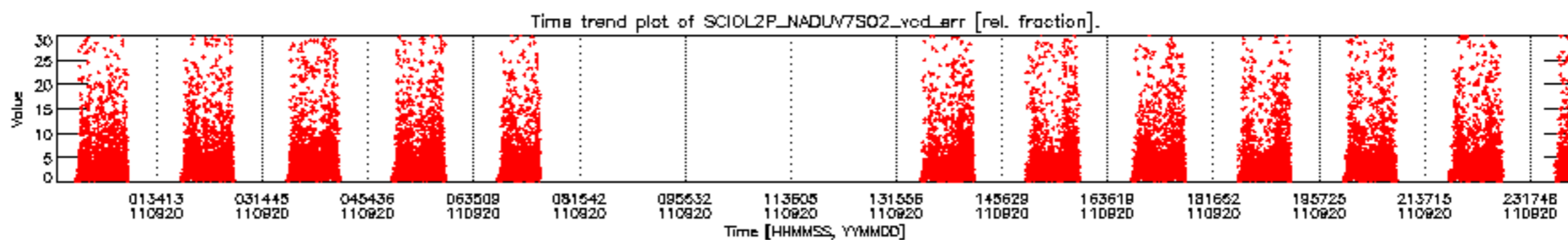
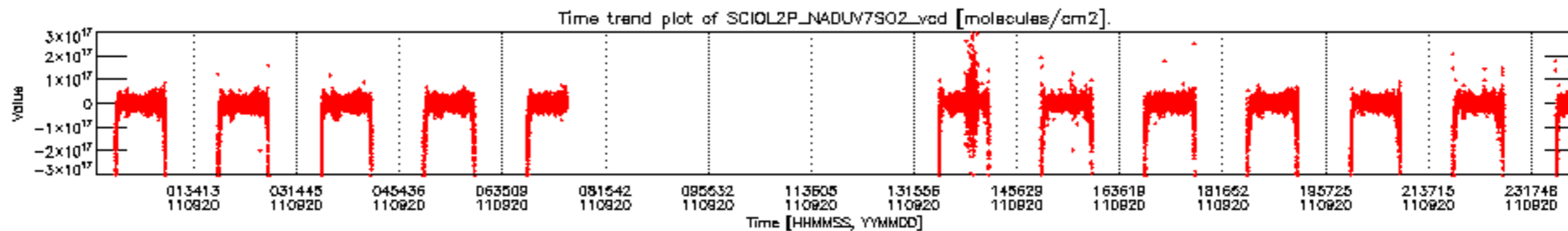


SCIOL2P\_NADUV5S02\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



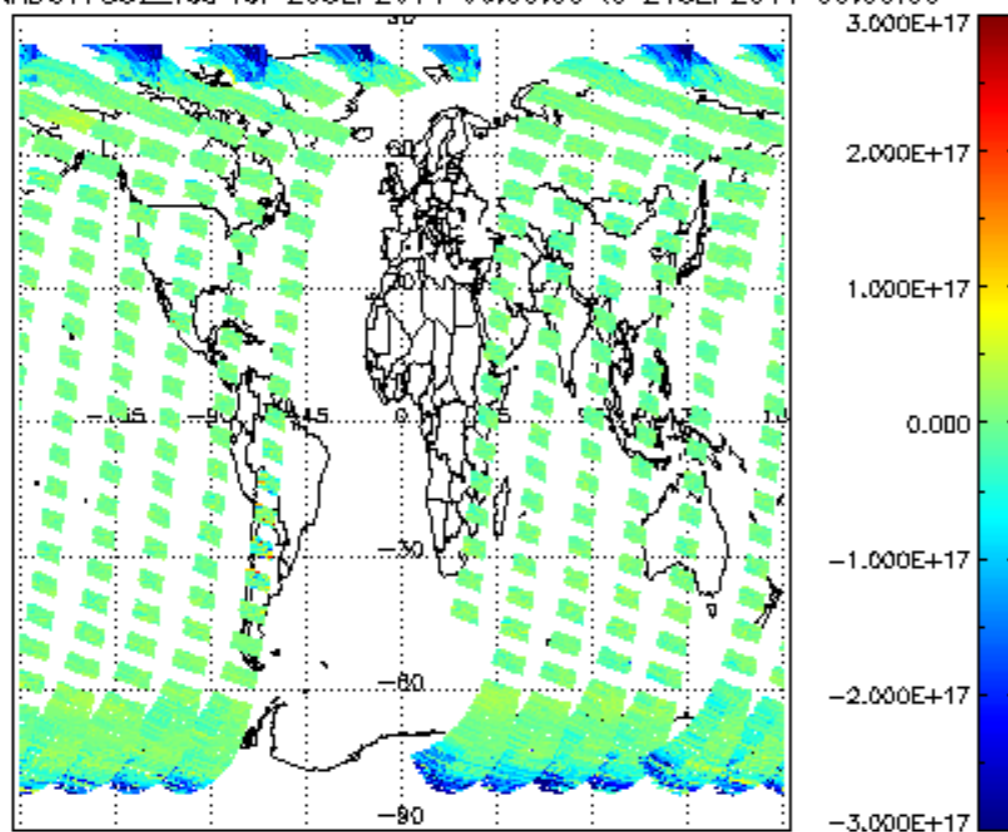
SCIOL2P\_NADUV5S02\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



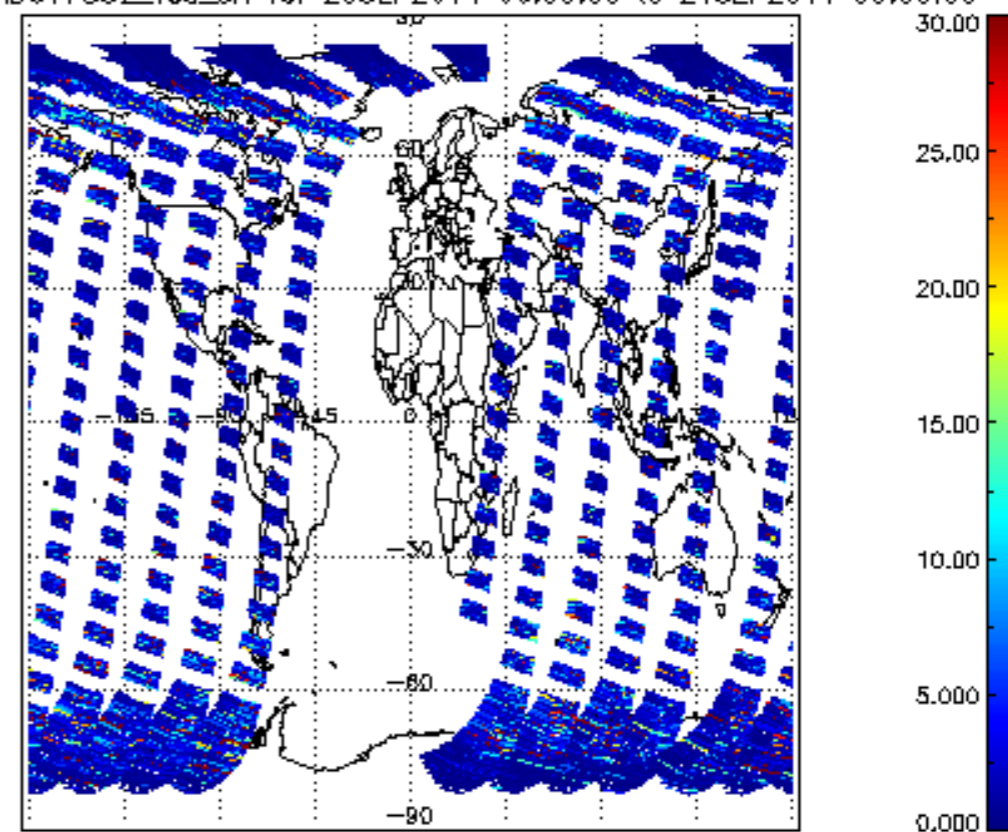




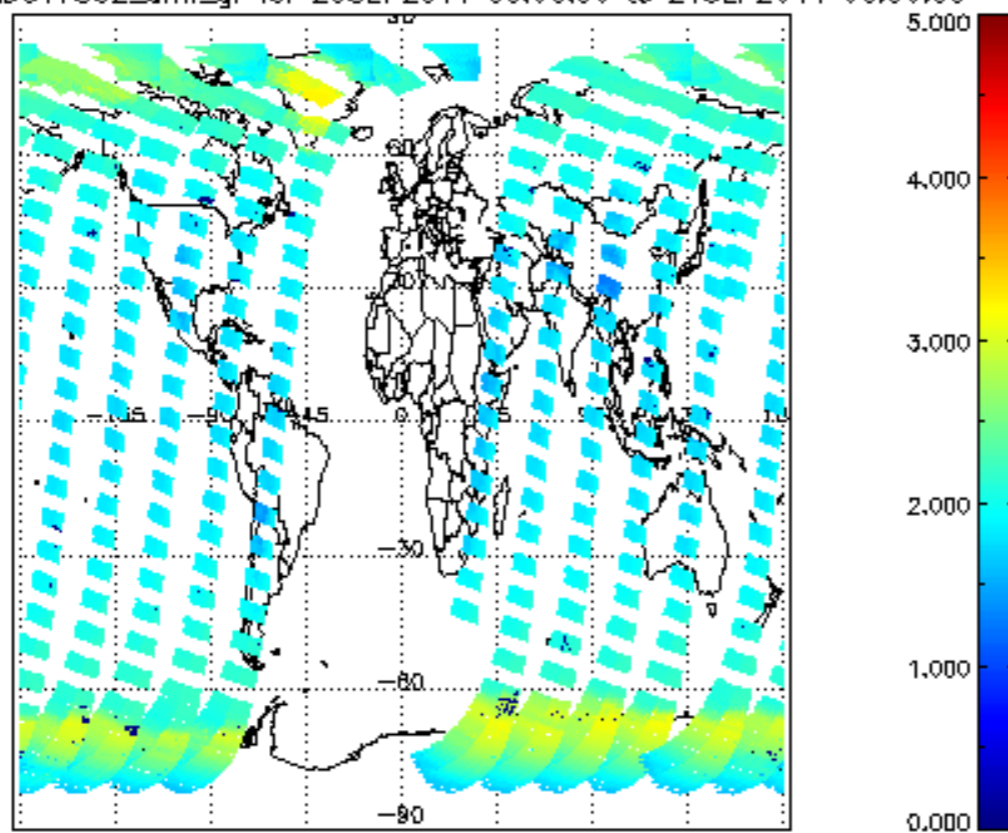
SCIOL2P\_NADUV7S02\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00



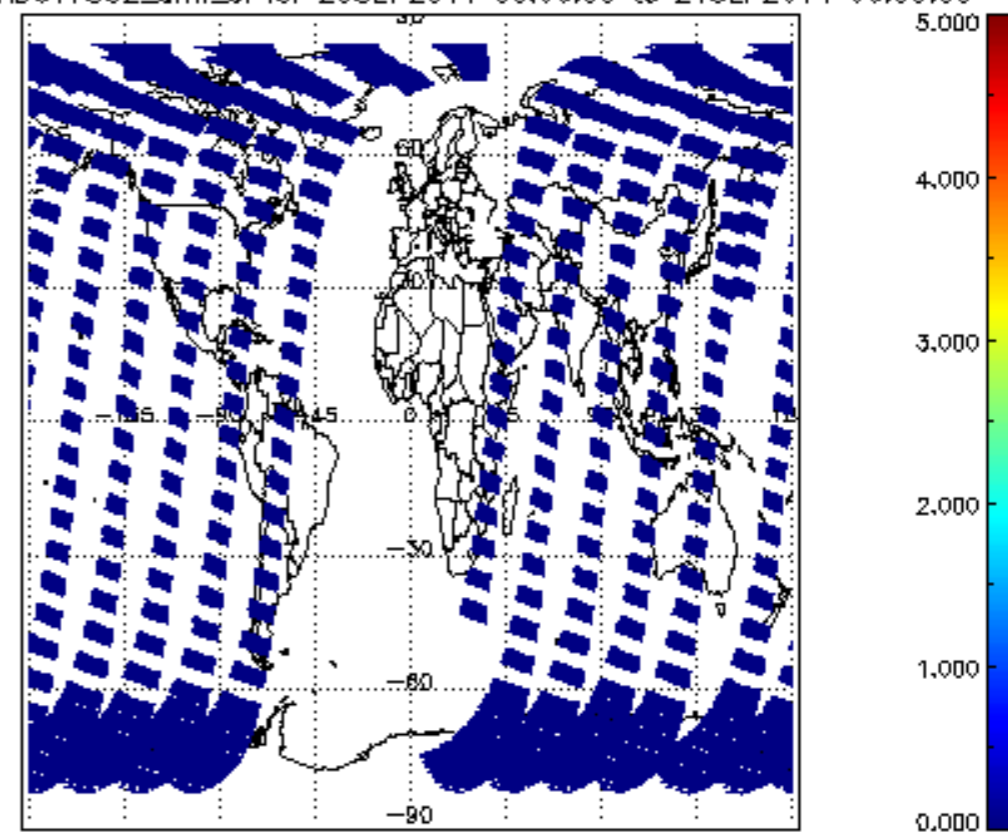
SCIOL2P\_NADUV7S02\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

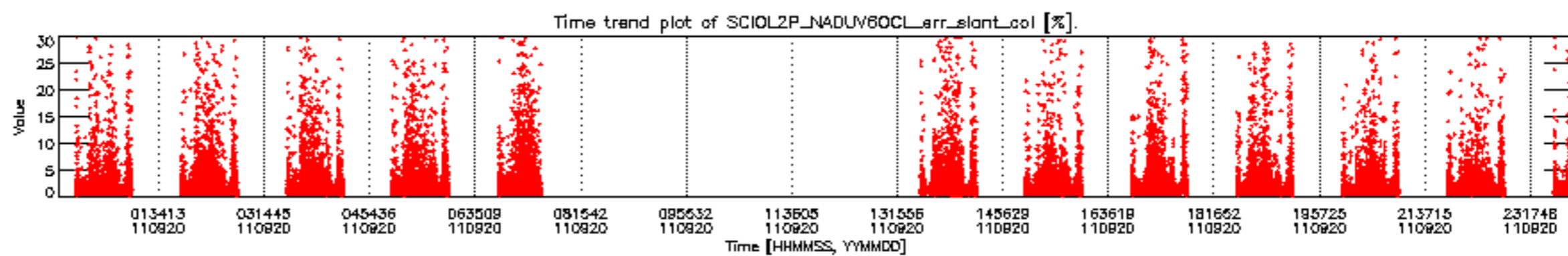
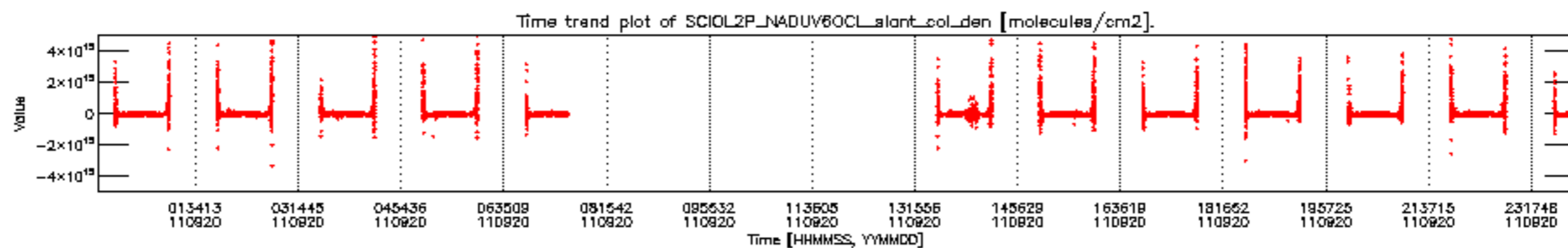


SCIOL2P\_NADUV7S02\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

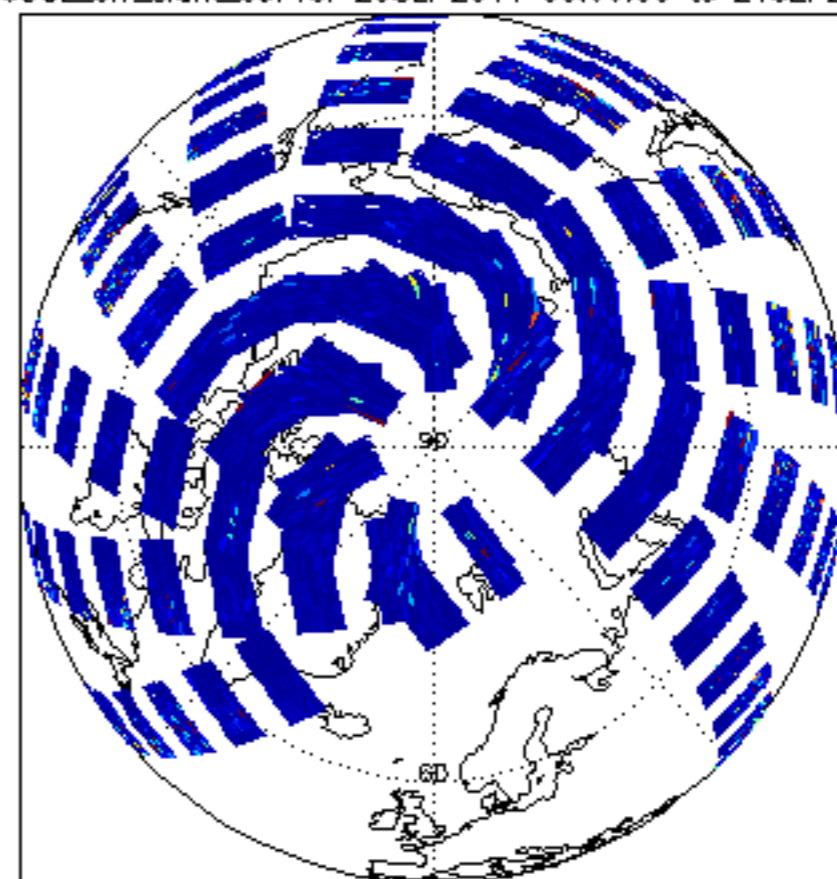
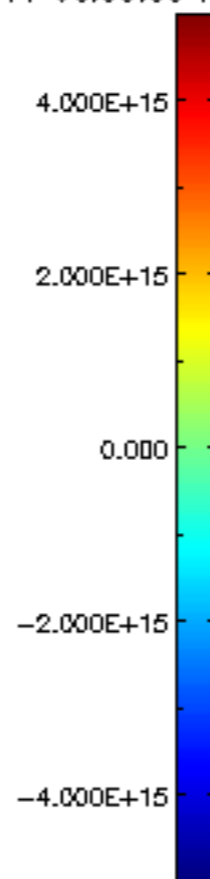
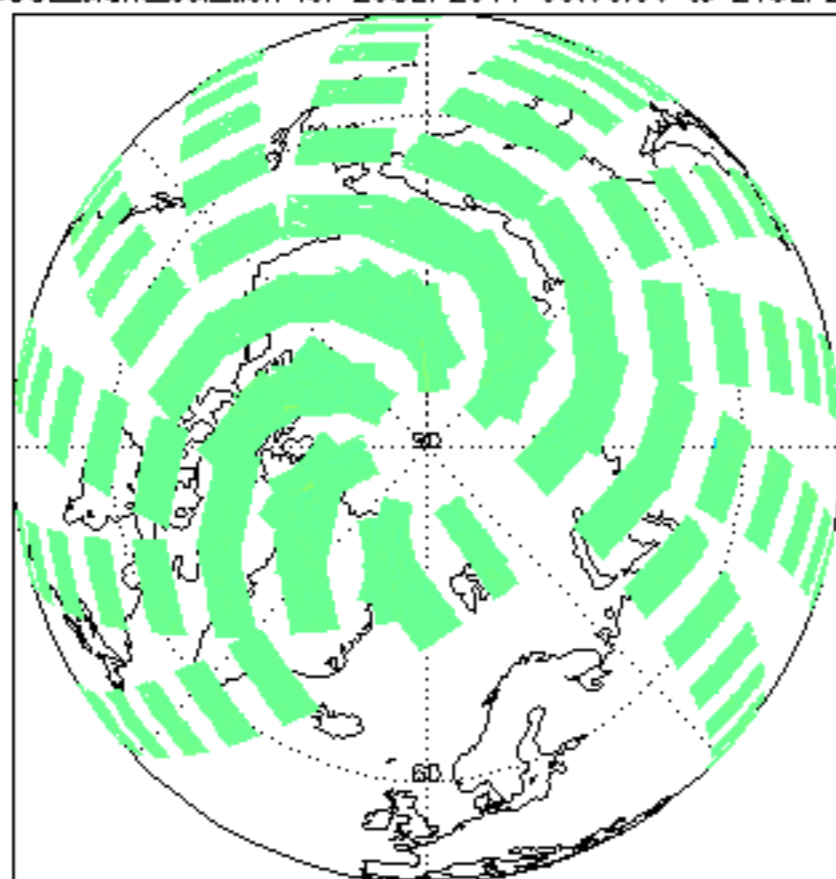


SCIOL2P\_NADUV7S02\_amf\_cl for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

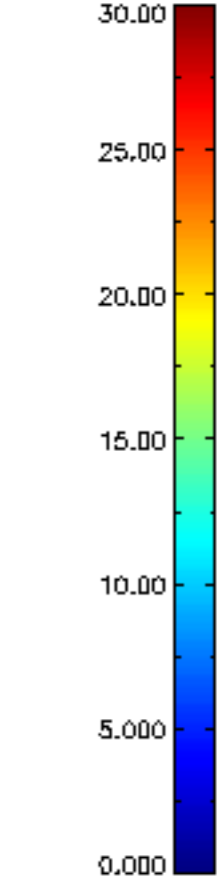
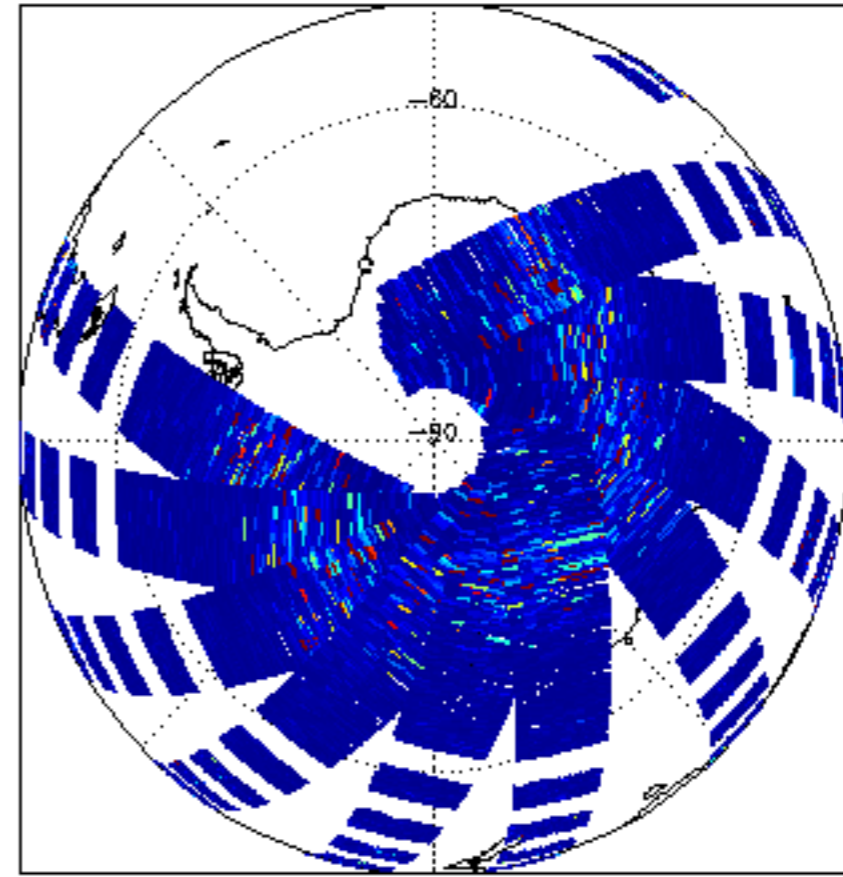
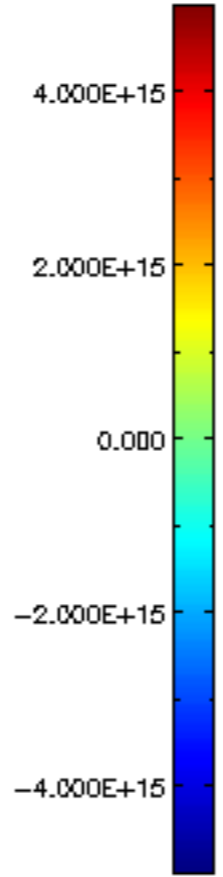
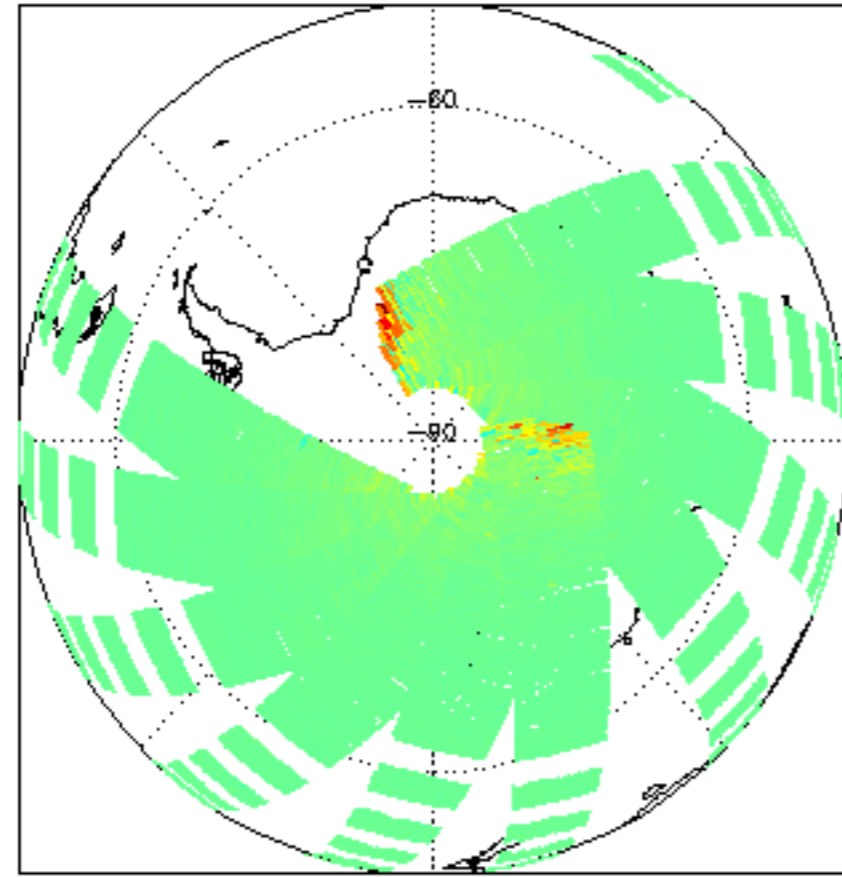


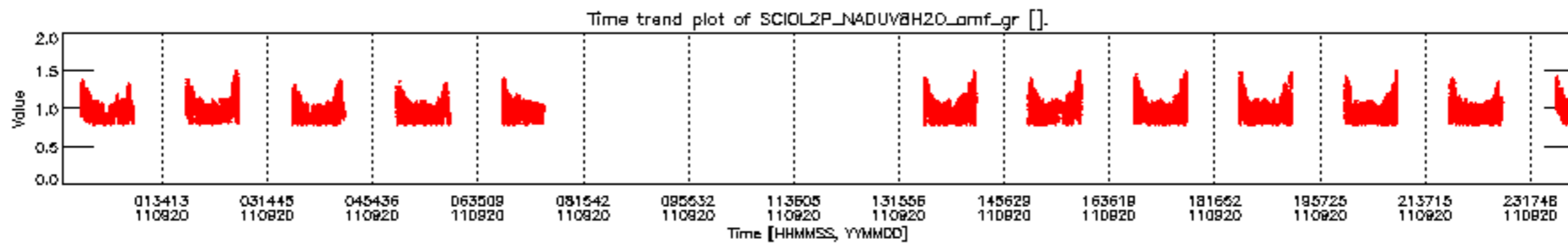
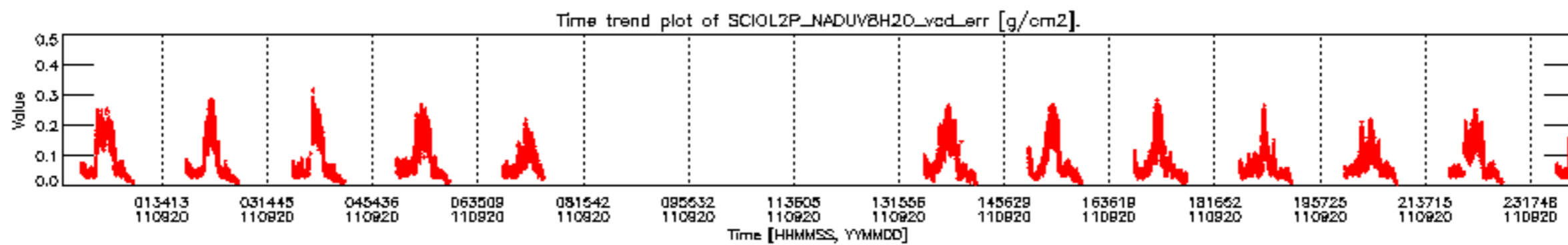
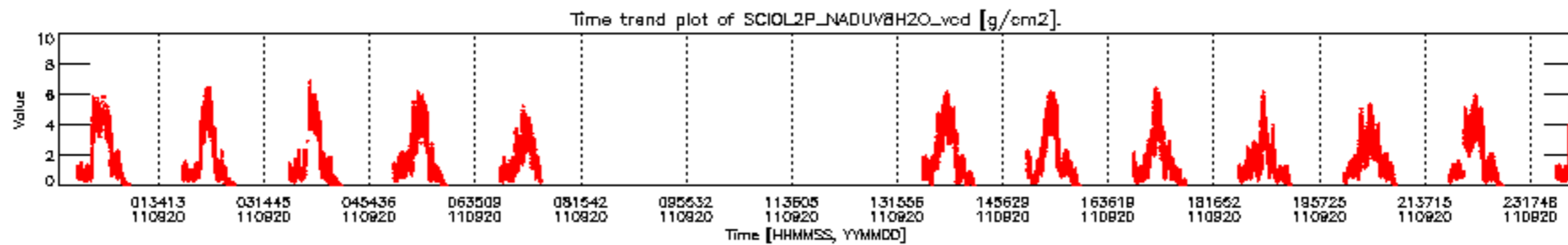


CIOL2P\_NADUV60CL\_slant\_col\_den for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 np iCIOL2P\_NADUV60CL\_err\_slant\_col for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 np

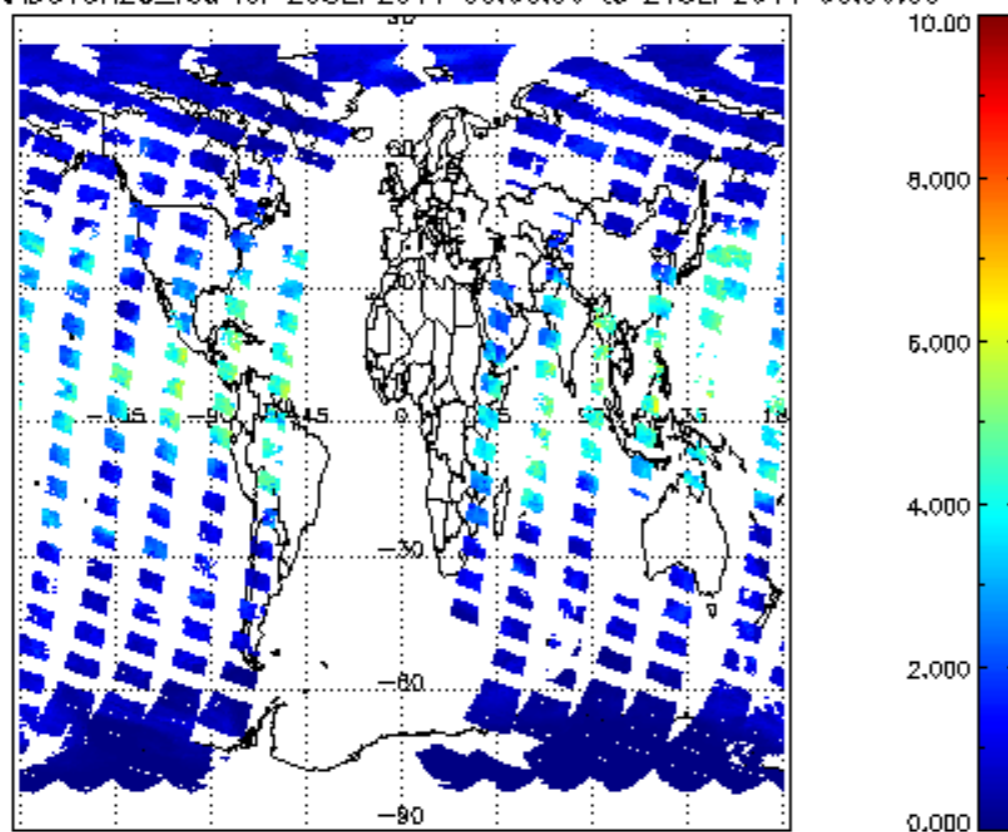


CIOL2P\_NADUV60CL\_slant\_col\_den for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 20SEP2011 00:00:00 to 21SEP2011 00:00:00 sp

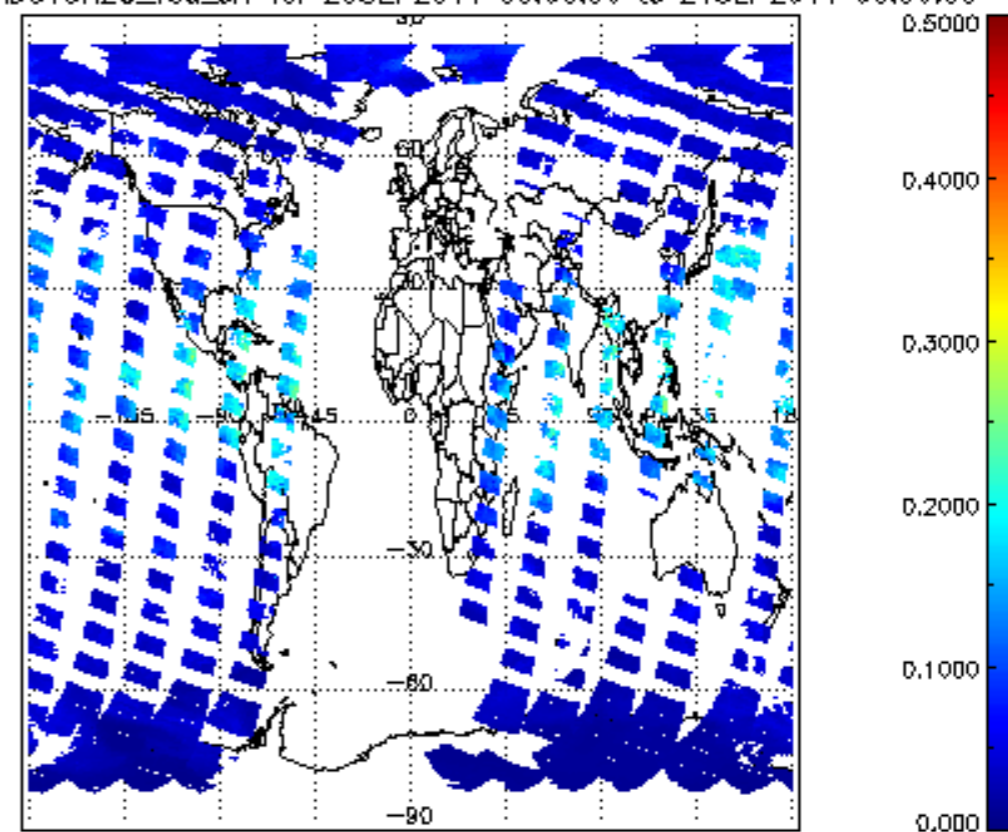




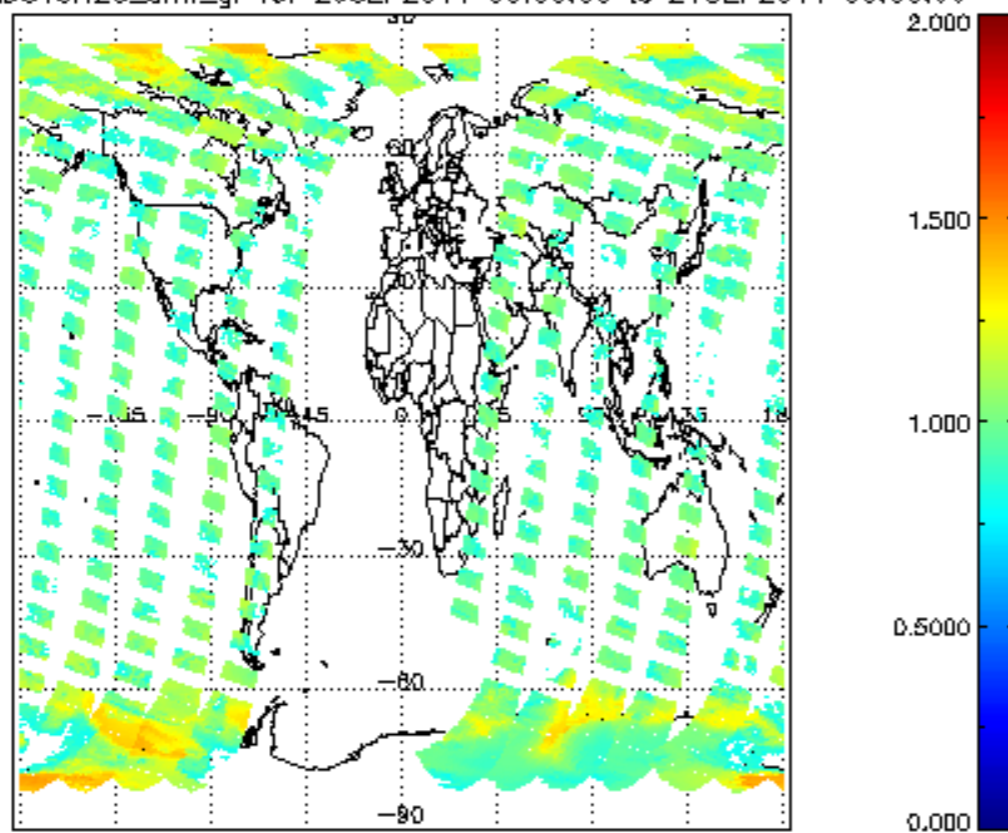
SCIOL2P\_NADUV8H2O\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

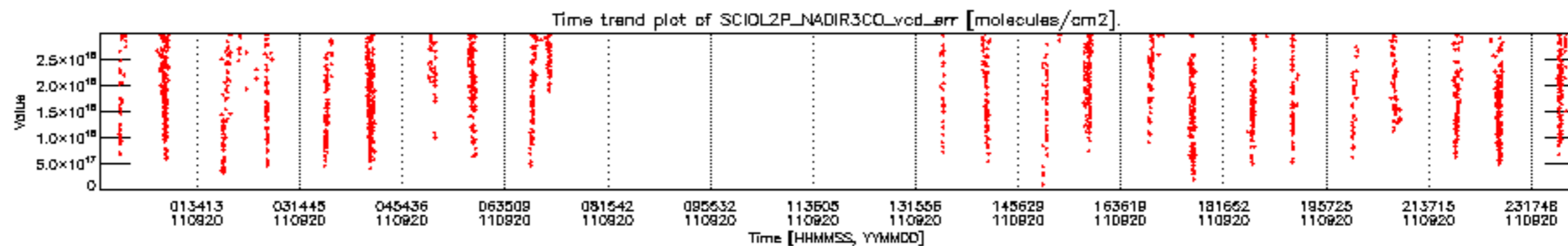
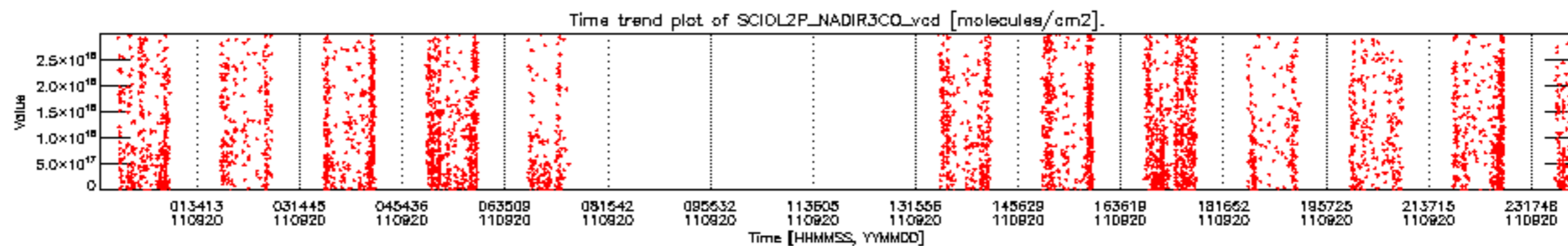


SCIOL2P\_NADUV8H2O\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

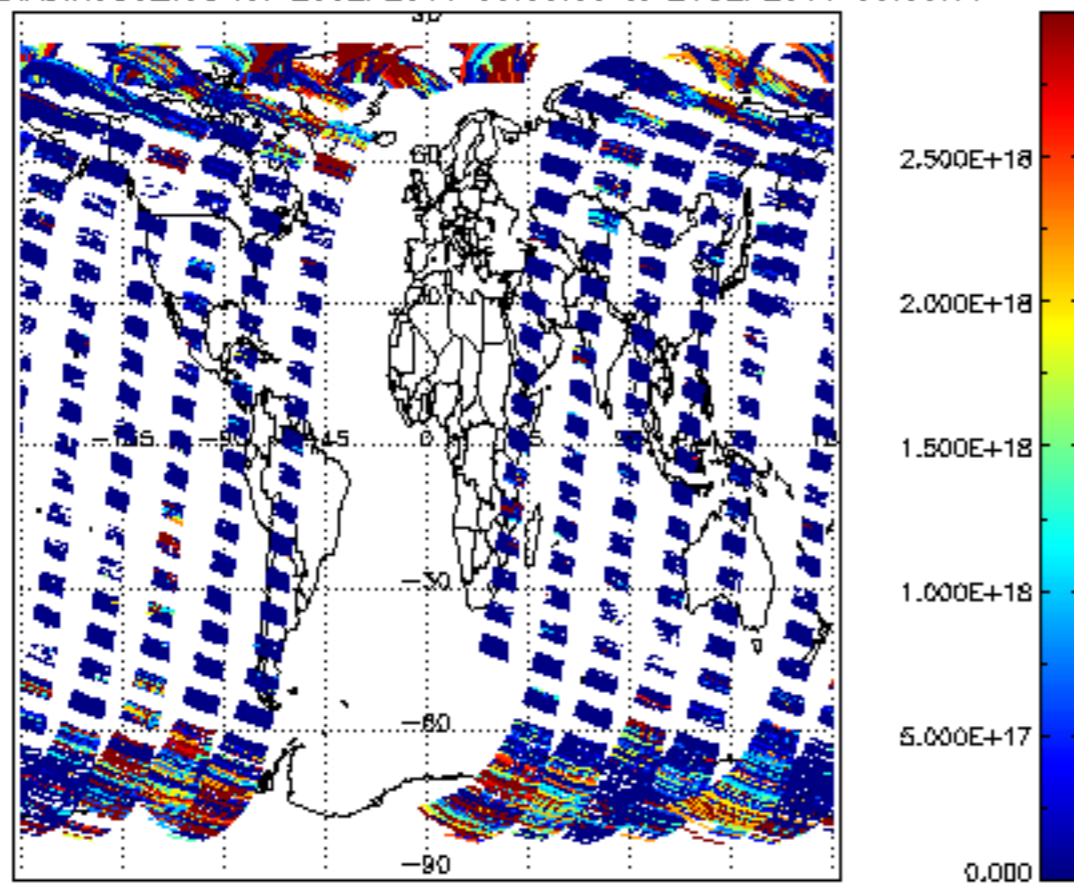


SCIOL2P\_NADUV8H2O\_amf\_gr for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

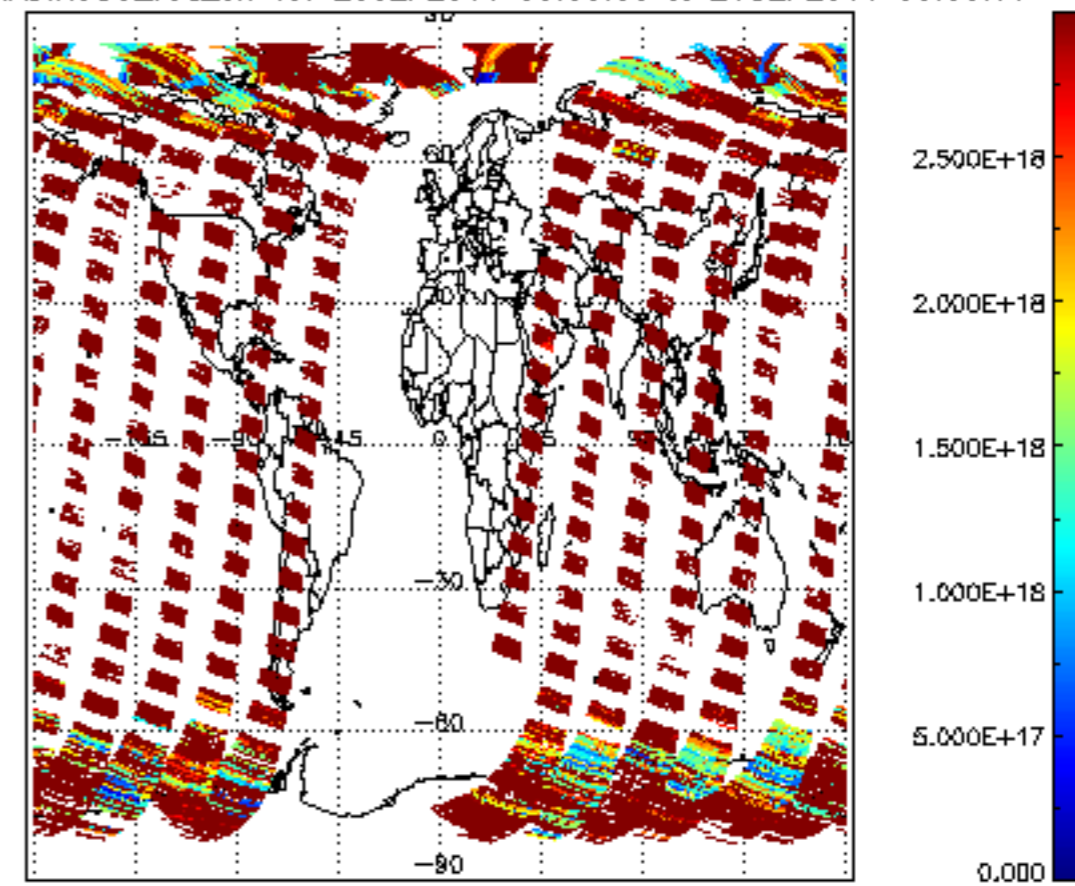




SCIOL2P\_NADIR3CO\_vcd for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

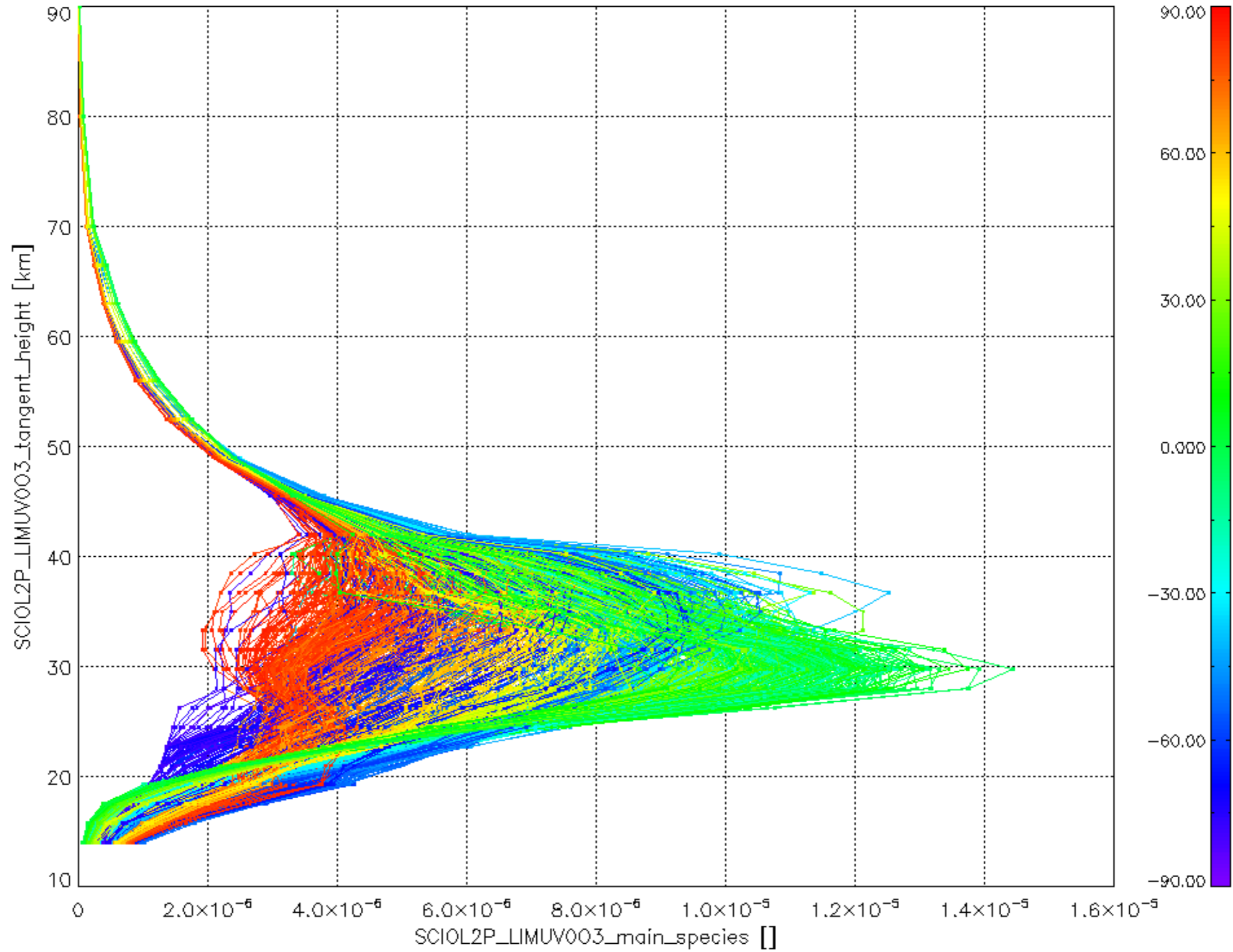


SCIOL2P\_NADIR3CO\_vcd\_err for 20SEP2011 00:00:00 to 21SEP2011 00:00:00

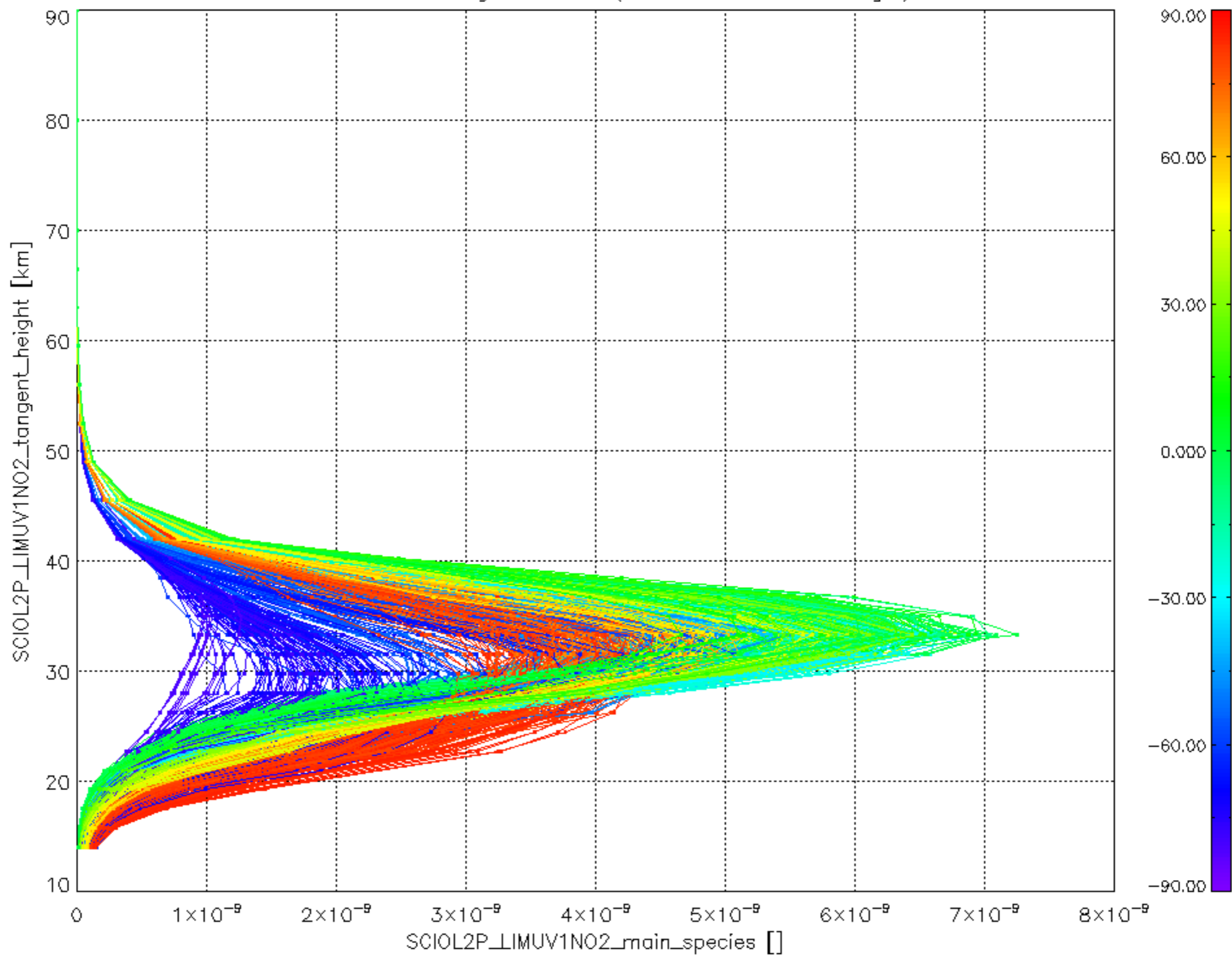




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

