

## 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	14SEP2011 03:47:38
Data source version	SCIA-OL/5.01-U
Processing scope for products	01SEP2011 00:00:00 to 02SEP2011 00:00:00
Start time of first product within scope	01SEP2011 00:04:57
Stop time of last product within scope	02SEP2011 00:27:41
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__2PUDPA20110901_000457_000035163106_00117_49700_6287.N1</a>	01SEP2011 00:04:57	01SEP2011 01:03:33	0	GOOD
1	<a href="#">SCI_OL__2PUDPA20110901_015003_000032823106_00118_49701_6288.N1</a>	<b>01SEP2011 01:50:03</b>	<b>01SEP2011 02:44:46</b>	0	GOOD
2	<a href="#">SCI_OL__2PUDPA20110901_032909_000033383106_00119_49702_6289.N1</a>	<b>01SEP2011 03:29:09</b>	<b>01SEP2011 04:24:48</b>	0	GOOD
3	<a href="#">SCI_OL__2PUDPA20110901_051032_000032823106_00120_49703_6290.N1</a>	<b>01SEP2011 05:10:32</b>	<b>01SEP2011 06:05:15</b>	0	GOOD
4	<a href="#">SCI_OL__2PUDPA20110901_064938_000033383106_00121_49704_6292.N1</a>	<b>01SEP2011 06:49:38</b>	<b>01SEP2011 07:45:17</b>	0	GOOD

5	SCI_OL__2PUDPA20110901_083101_000032823106_00122_49705_6297.N1	01SEP2011 08:31:01	01SEP2011 09:25:44	0	GOOD
6	SCI_OL__2PUDPA20110901_101007_000033383106_00123_49706_6304.N1	01SEP2011 10:10:07	01SEP2011 11:05:45	0	GOOD
7	SCI_OL__2PUDPA20110901_115130_000032823106_00124_49707_6326.N1	01SEP2011 11:51:30	01SEP2011 12:46:12	0	GOOD
8	SCI_OL__2PUDPA20110901_133036_000033383106_00125_49708_6327.N1	01SEP2011 13:30:36	01SEP2011 14:26:14	0	GOOD
9	SCI_OL__2PUDPA20110901_151159_000032823106_00126_49709_6328.N1	01SEP2011 15:11:59	01SEP2011 16:06:41	0	GOOD
10	SCI_OL__2PUDPA20110901_165105_000033383106_00127_49710_6330.N1	01SEP2011 16:51:05	01SEP2011 17:46:43	0	GOOD
11	SCI_OL__2PUDPA20110901_183241_000032133106_00128_49711_6331.N1	01SEP2011 18:32:41	01SEP2011 19:26:14	0	GOOD
12	SCI_OL__2PUDPA20110901_201147_000033383106_00129_49712_6332.N1	01SEP2011 20:11:47	01SEP2011 21:07:25	0	GOOD
13	SCI_OL__2PUDPA20110901_215257_000032823106_00130_49713_6333.N1	01SEP2011 21:52:57	01SEP2011 22:47:39	0	GOOD
14	SCI_OL__2PUDPA20110901_233203_000033383106_00131_49714_6335.N1	01SEP2011 23:32:03	02SEP2011 00:27:41	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: 170017

Total number of cloud data DSRs with good quality flag (=0): 170017 (100.0 %)

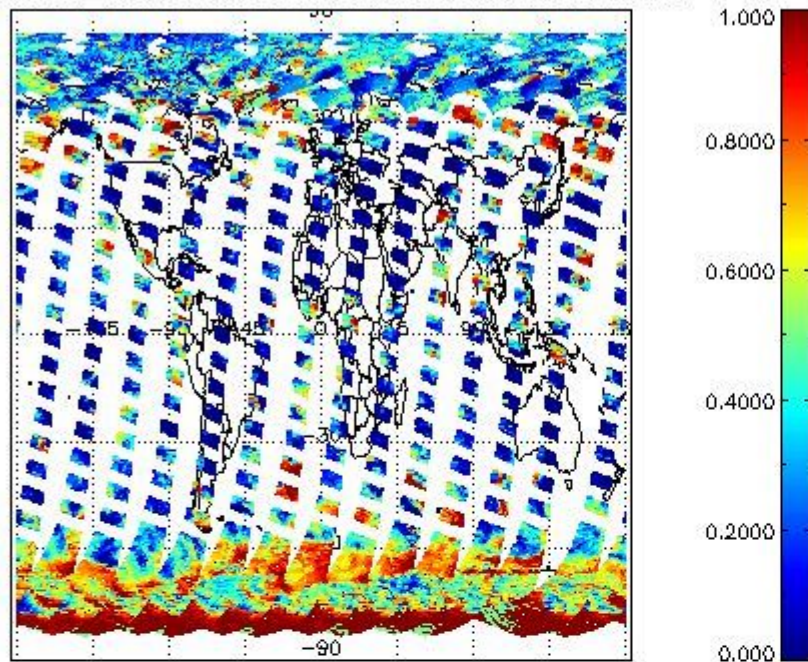
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	170017	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	170017	0.16513	0.12500	0.12500	0.25000	0.058358	s
CL_FRAC	170017	0.40670	0.37145	0.0000	1.0000	0.31196	
CL_FRAC_ERR	170017	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	170017	5.2840	4.0000	4.0000	8.0000	1.8675	
PMD_READ_CL[0]	170017	0.41763	0.0000	0.0000	8.0000	1.2252	-
PMD_READ_CL[1]	170017	1.3038	0.0000	0.0000	8.0000	2.5529	-
CL_TOP_HEIGHT	127397	3.4814	2.0599	0.0000	17.000	3.6514	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	127397	65.611	100.00	0.0000	101.00	42.327	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	170017	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	170017	11001110	11000100	11000000	11100000	3617.7	
AERO_ABSO_IND	170017	0.20262	0.0000	0.0000	5.2367	0.47544	
AERO_IND_DIAG	170017	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	170017	01010001	00000000	00000000	11000000	24311.	

#### Time and geolocation plots:

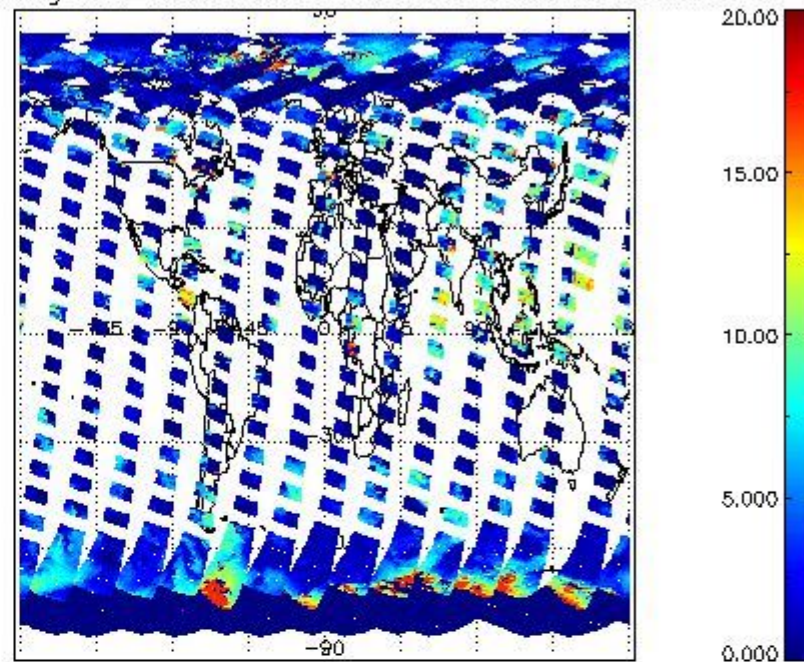
Plots are available for the following parameters:

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

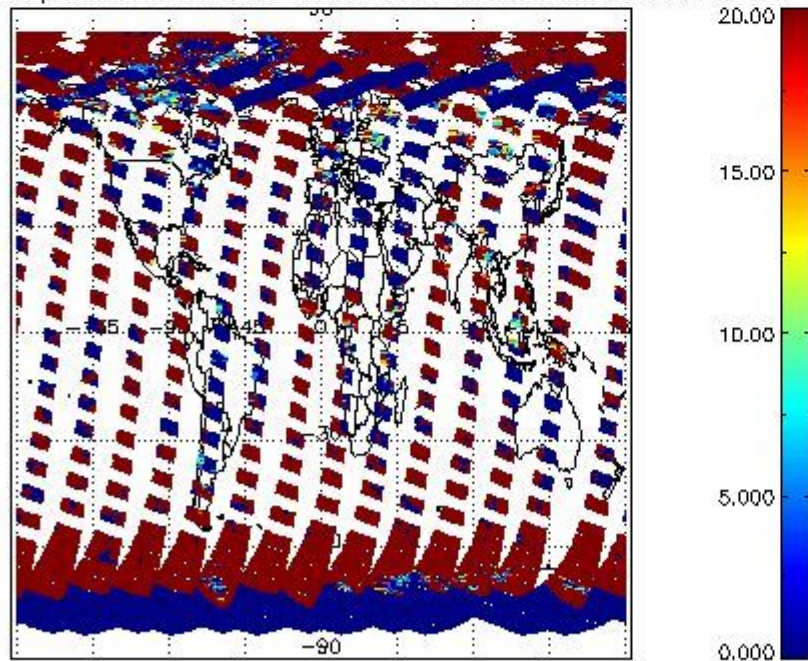
cL\_frac for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



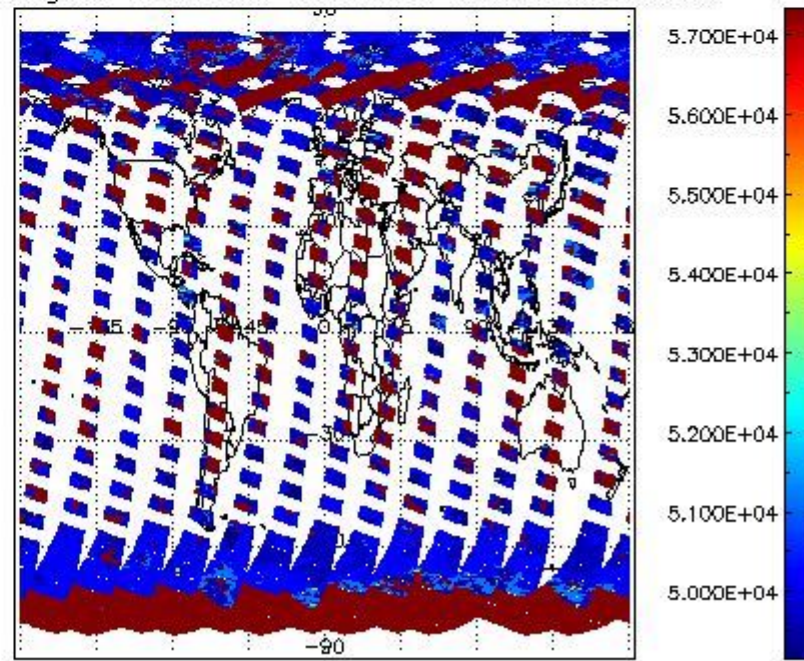
cL\_top\_height for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



cL\_opt\_depth for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



cloud\_flags for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



## 2.2.2 Nadir

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

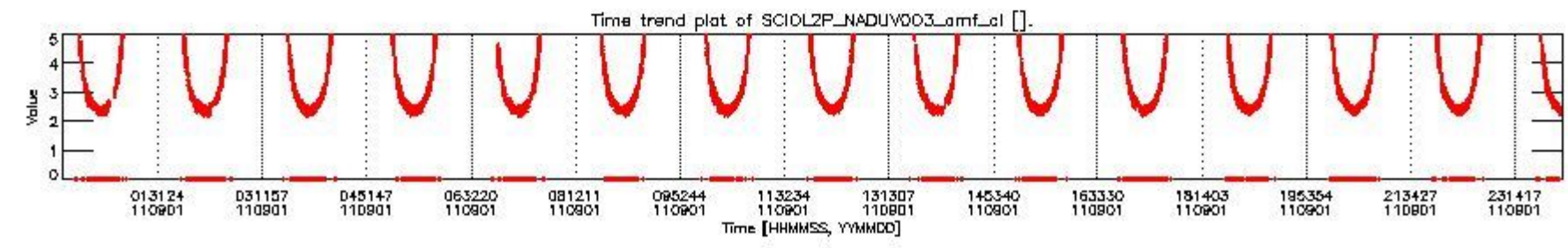
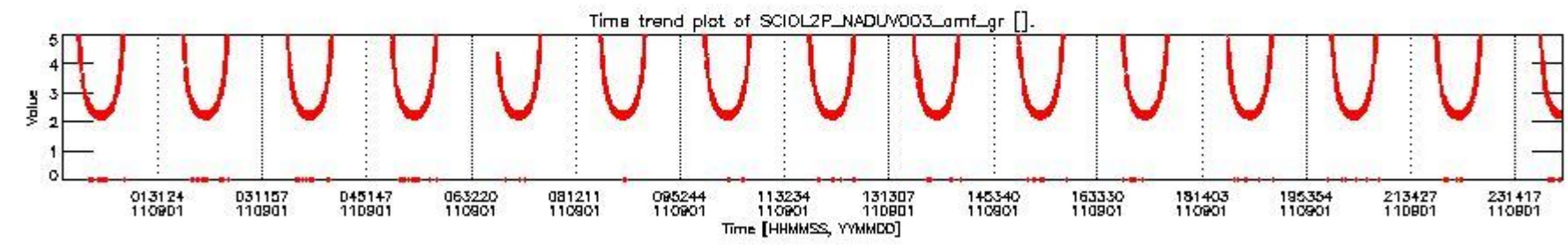
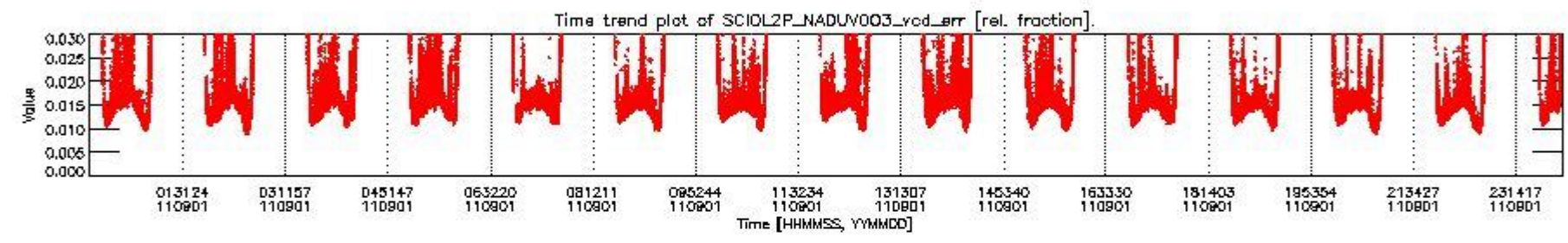
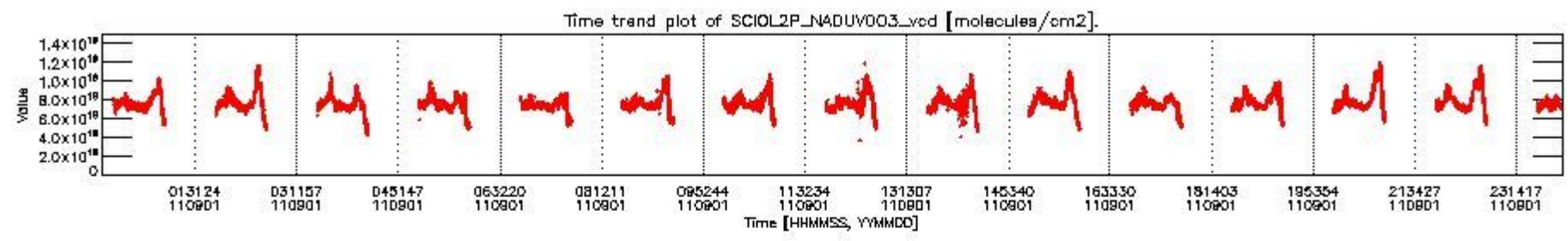
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

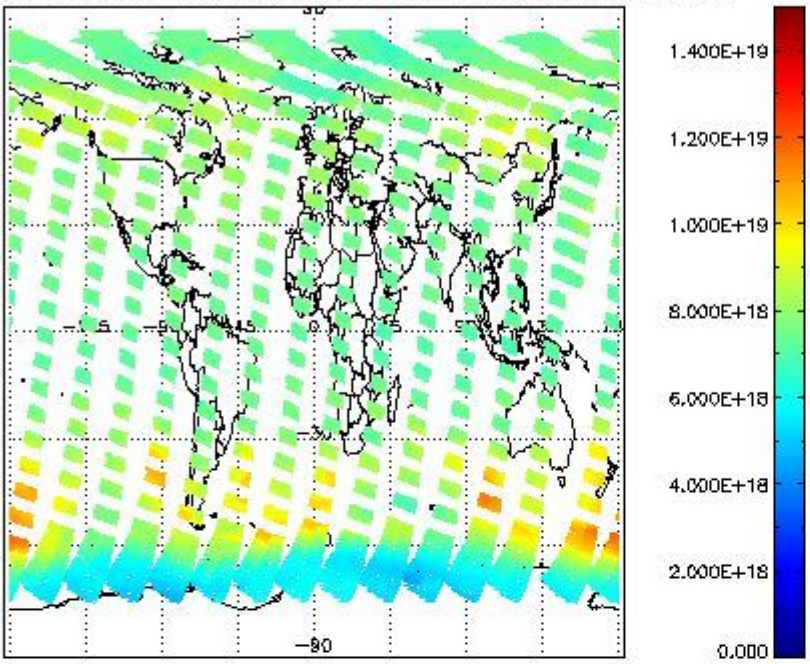
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl
8	SCIOL2P_NADUV3BRO_vcd
9	SCIOL2P_NADUV3BRO_vcd_err
10	SCIOL2P_NADUV3BRO_amf_gr
11	SCIOL2P_NADUV3BRO_amf_cl
12	SCIOL2P_NADUV5SO2_vcd
13	SCIOL2P_NADUV5SO2_vcd_err
14	SCIOL2P_NADUV5SO2_amf_gr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

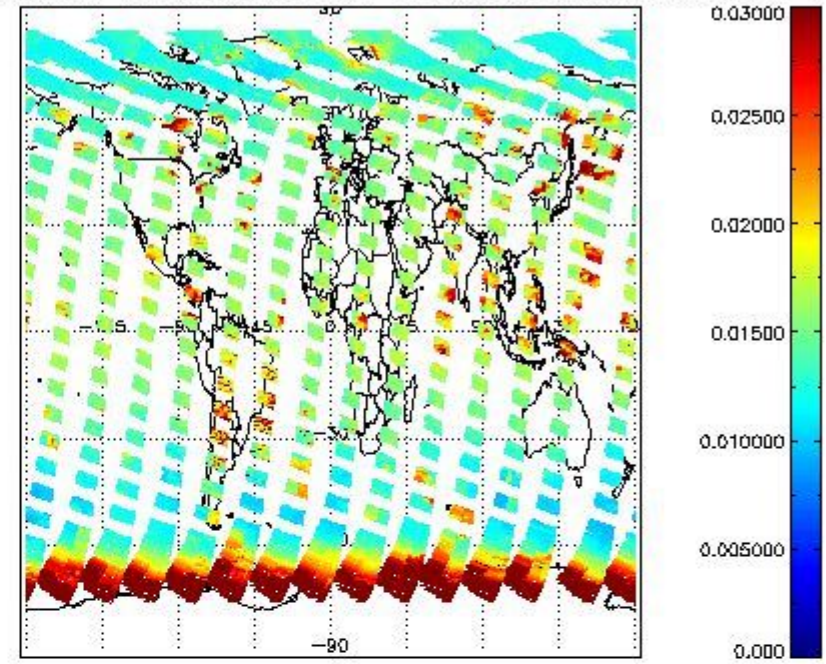
#### 2.2.2.1 O3 (UV0)



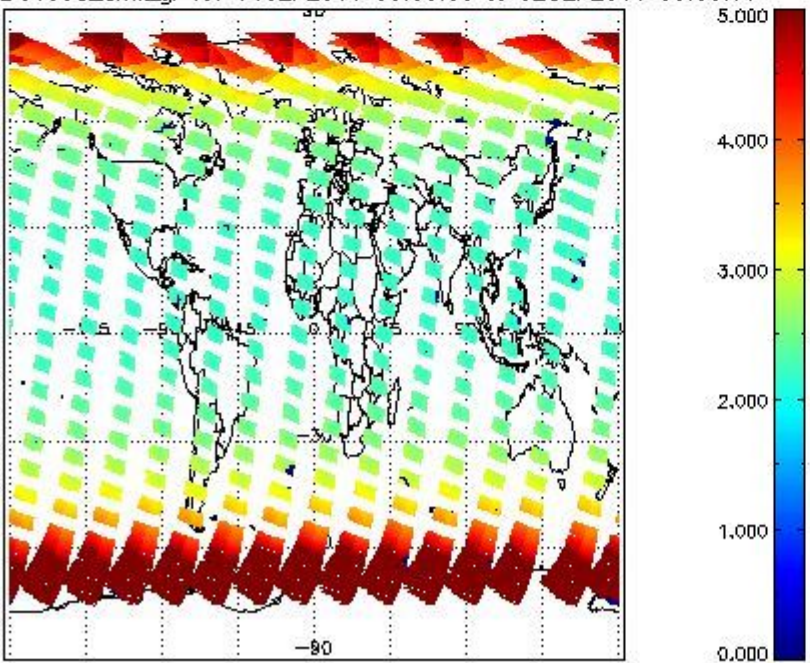
SCIOL2P\_NADUV003\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



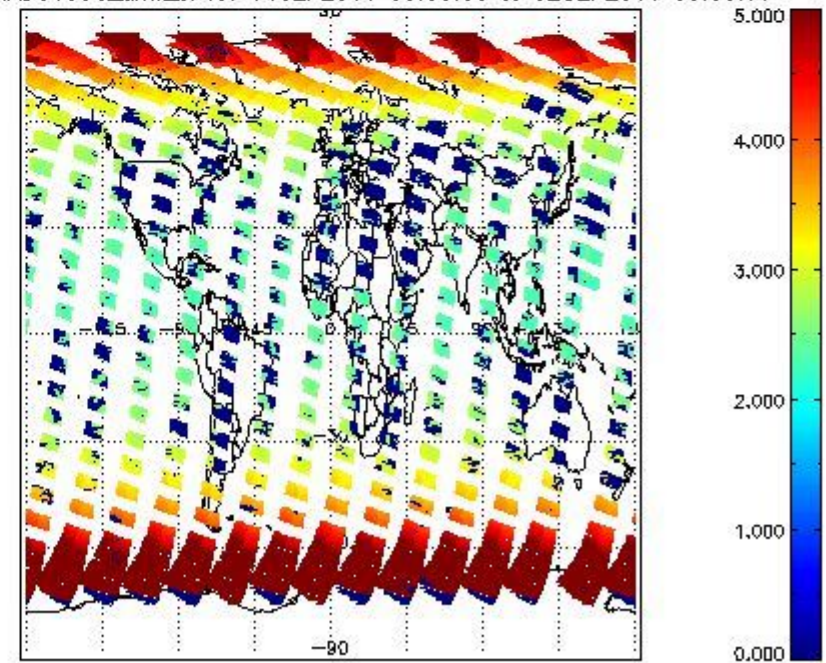
SCIOL2P\_NADUV003\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



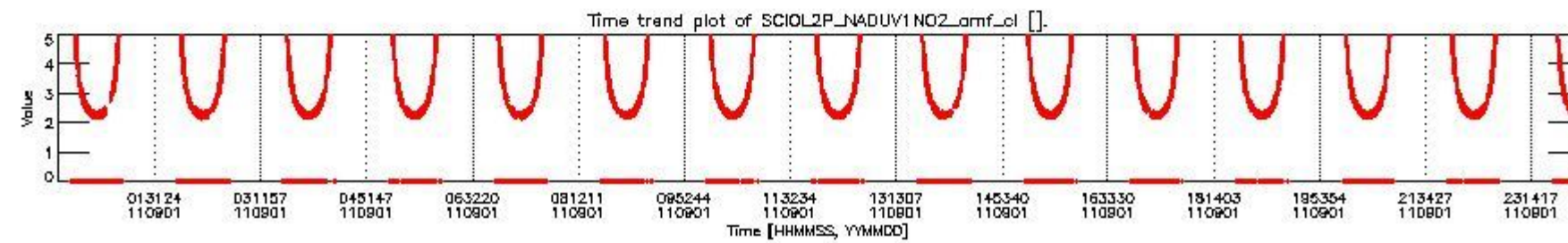
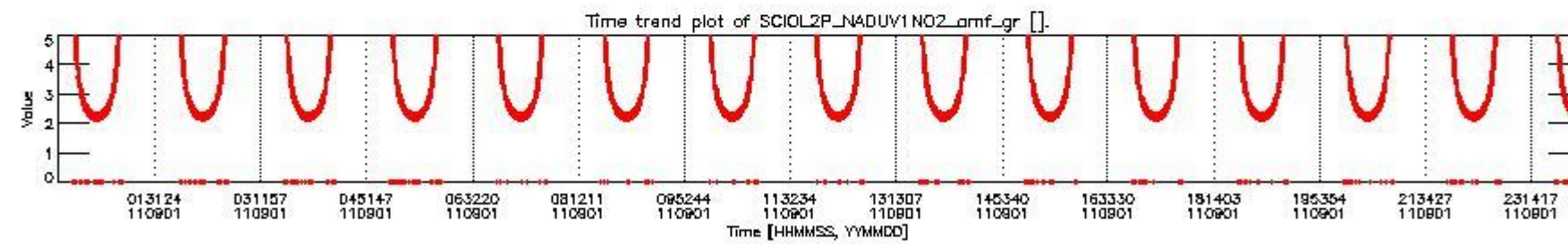
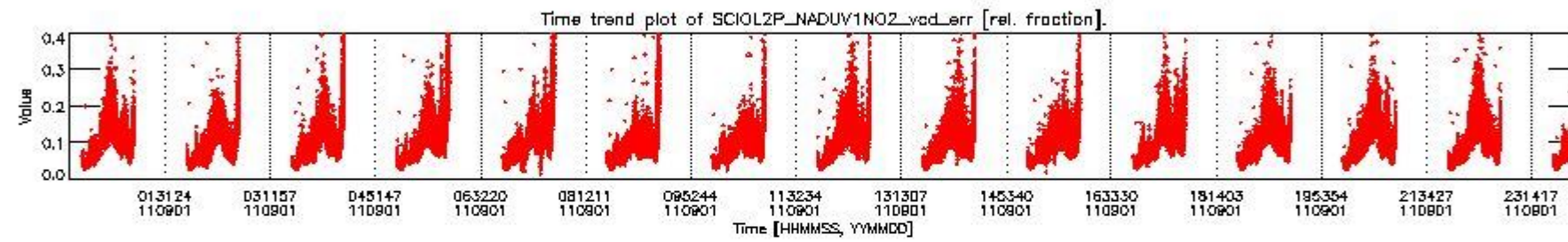
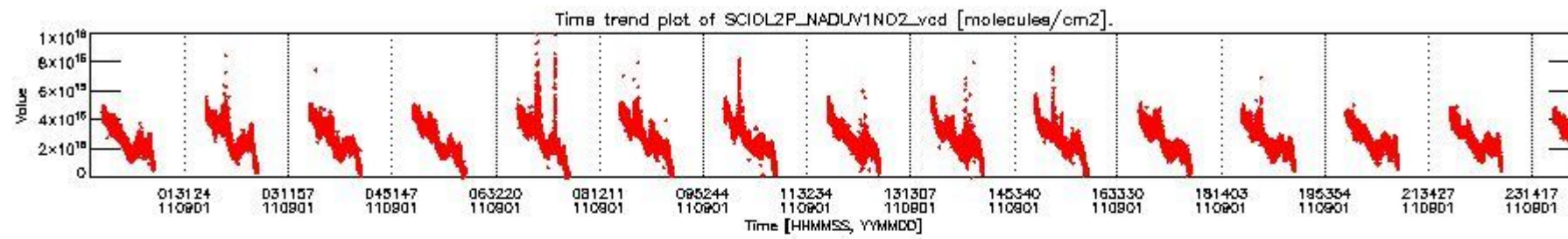
SCIOL2P\_NADUV003\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



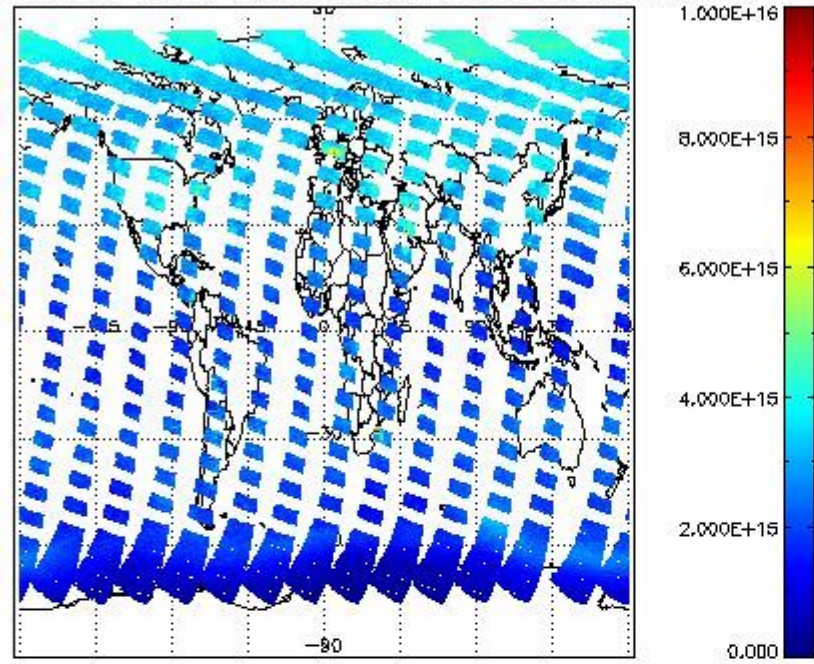
SCIOL2P\_NADUV003\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



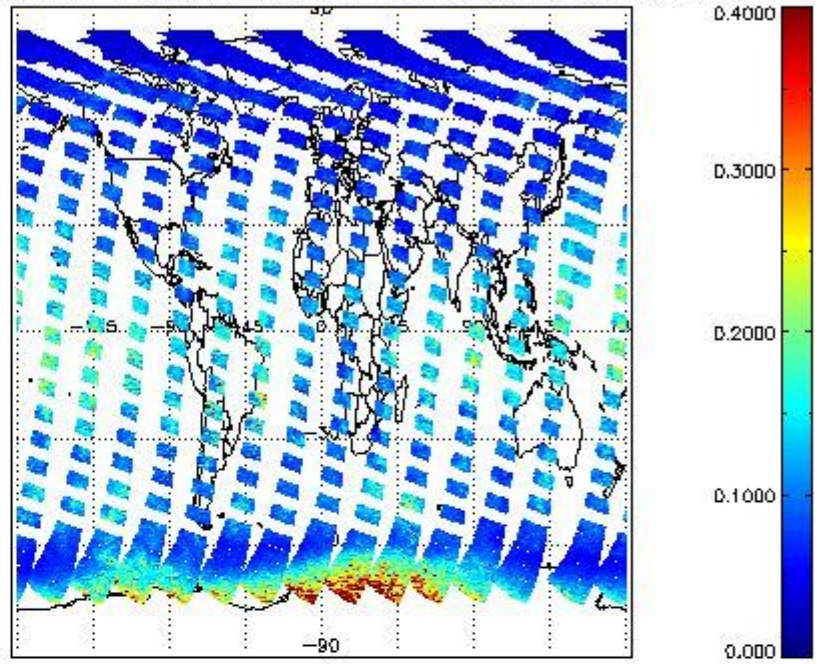
2.2.2.2 NO2 (UV1)



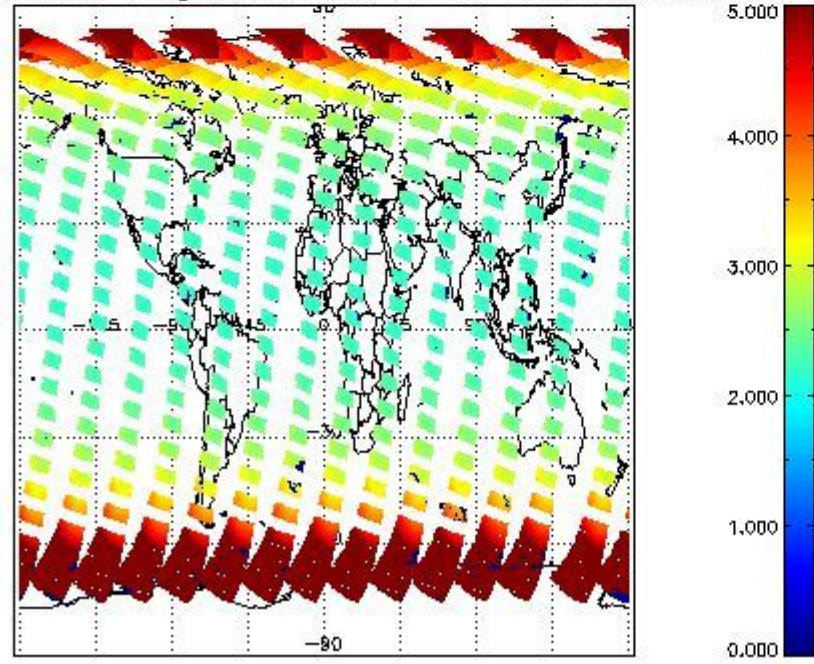
SCIOL2P\_NADUV1NO2\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



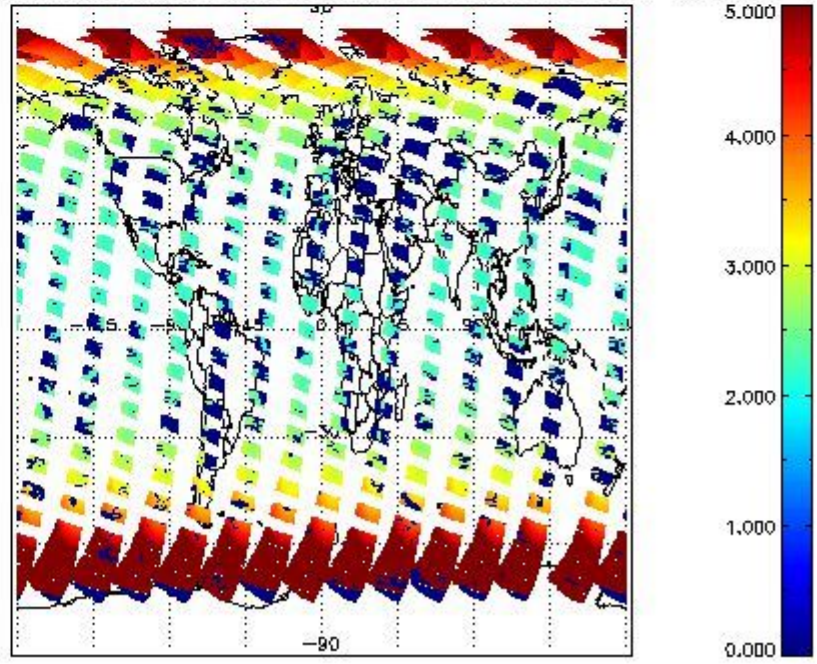
SCIOL2P\_NADUV1NO2\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

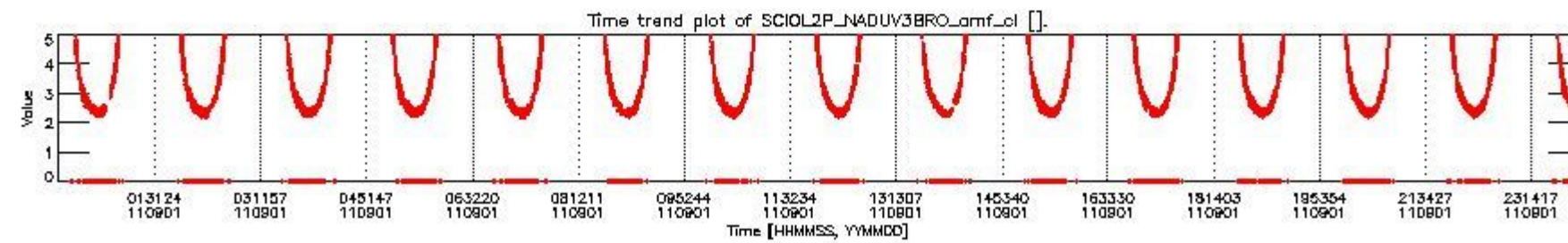
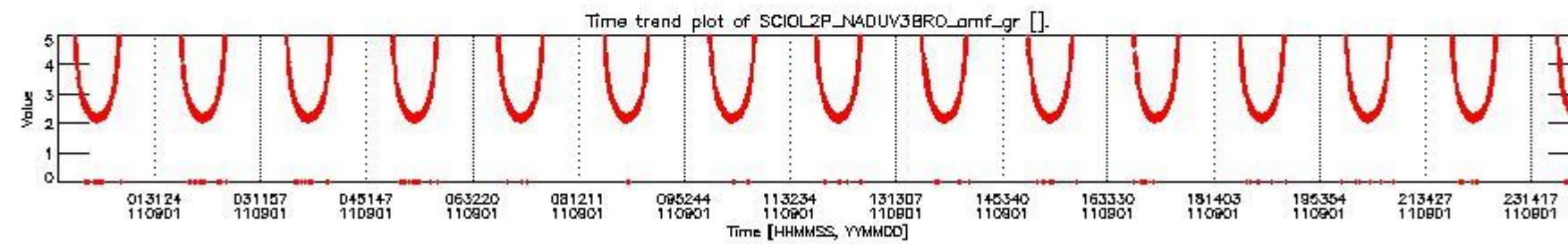
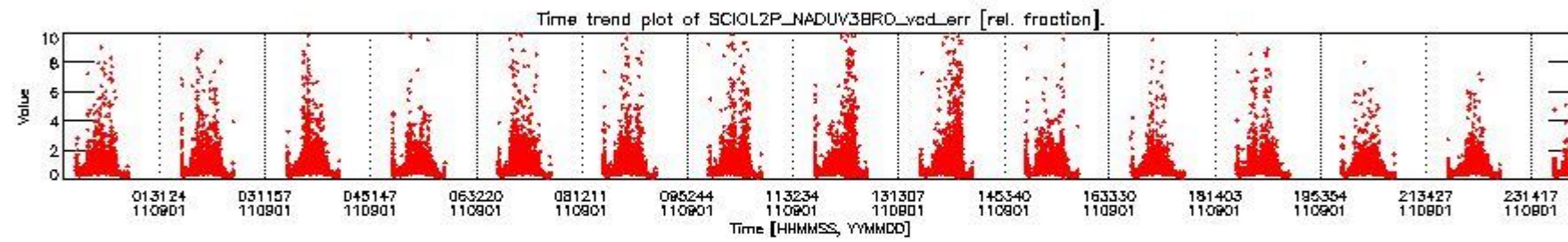
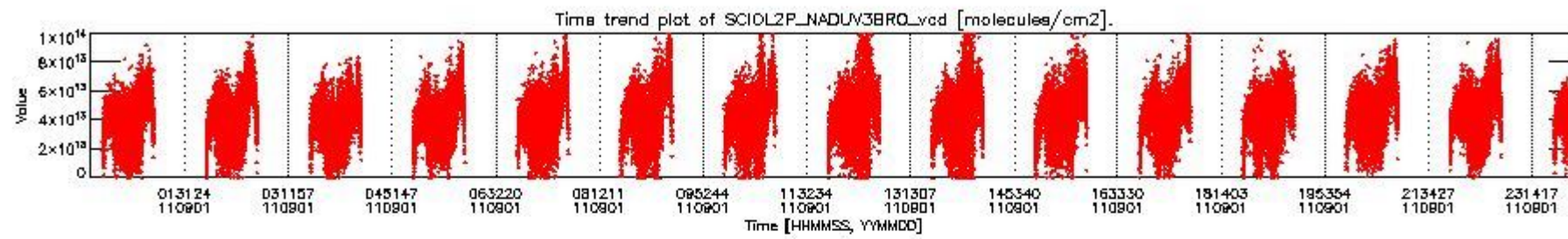


SCIOL2P\_NADUV1NO2\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

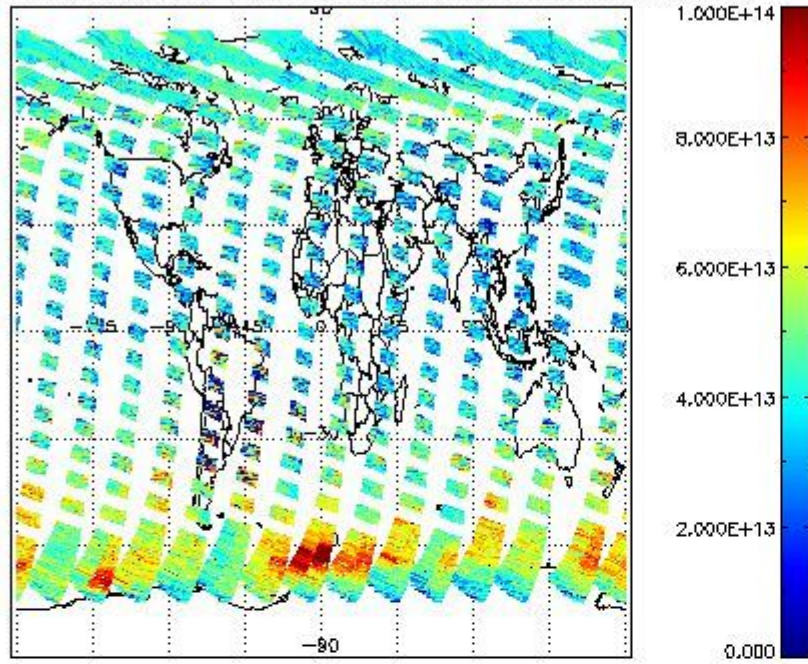


### 2.2.2.3 BrO (UV3)

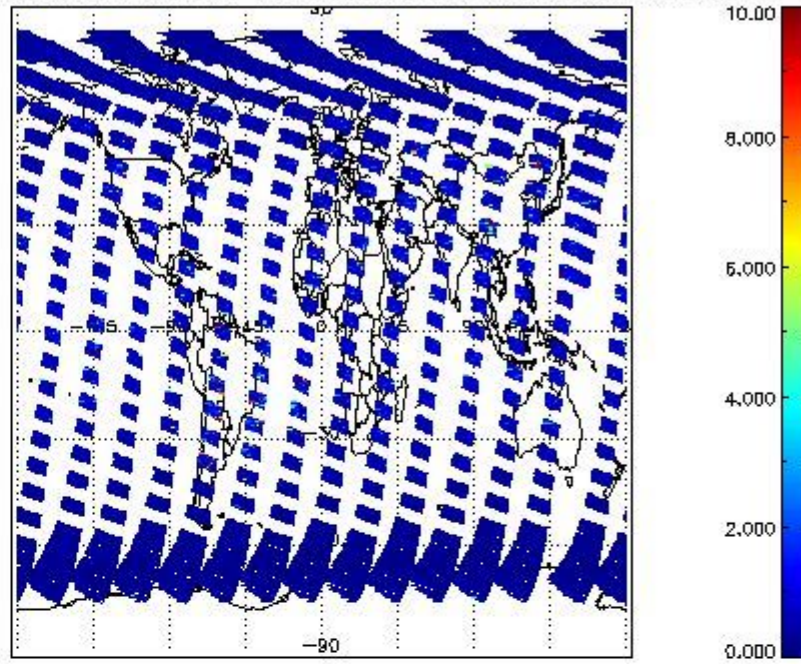




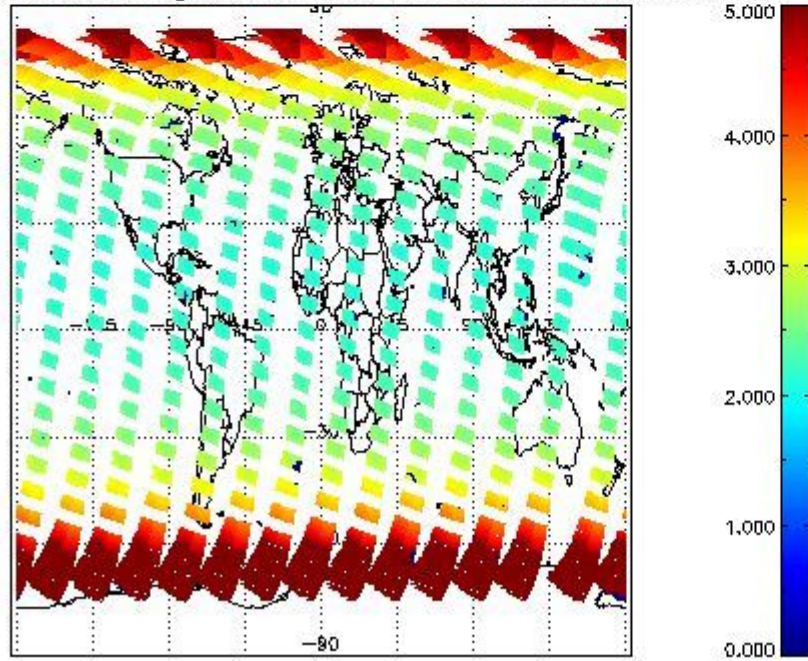
SCIOL2P\_NADUV3BRO\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



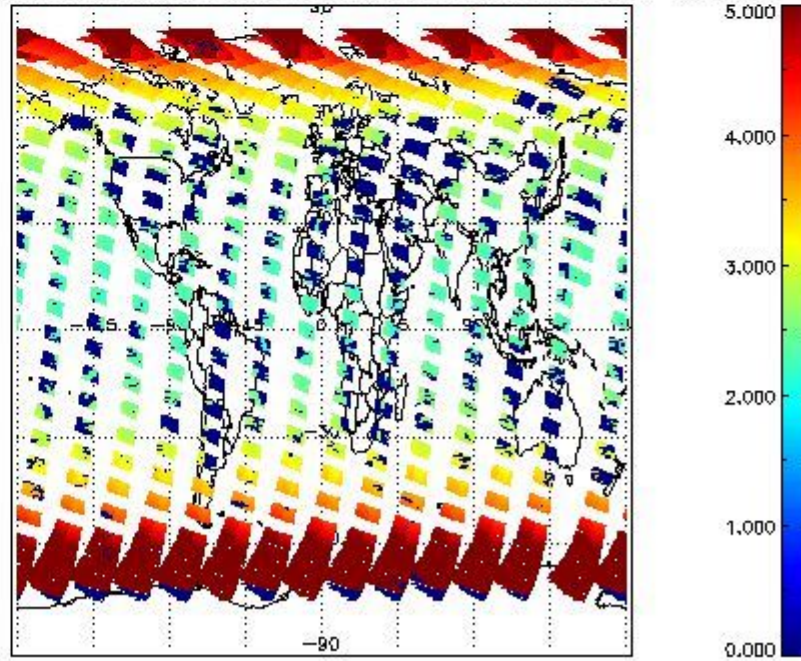
SCIOL2P\_NADUV3BRO\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



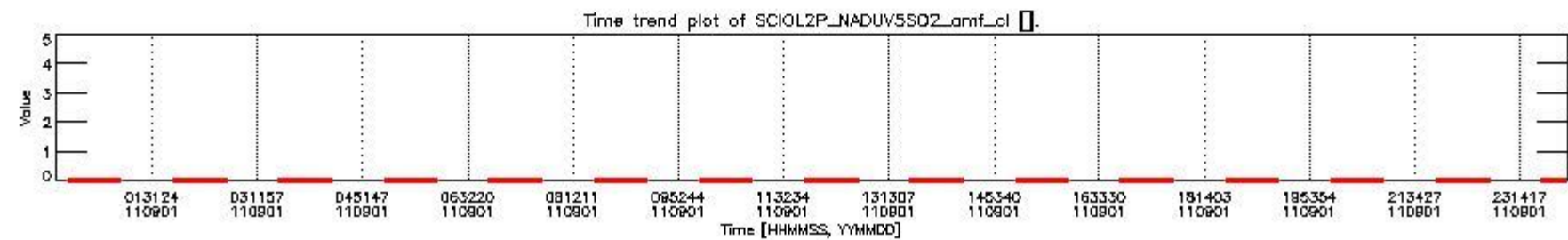
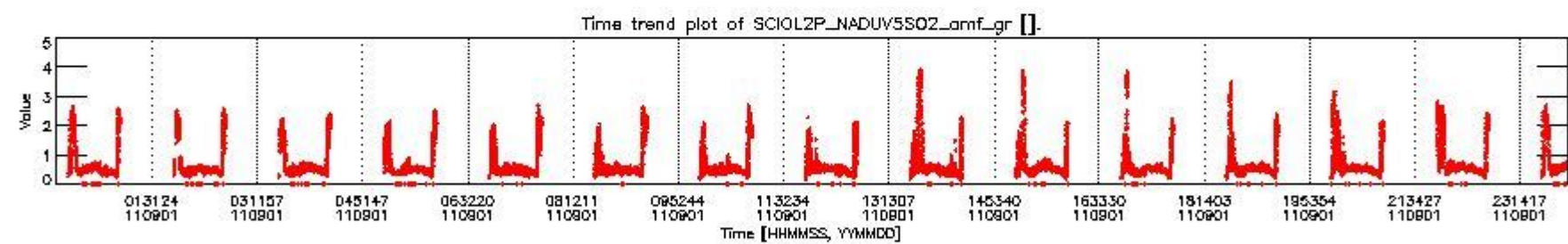
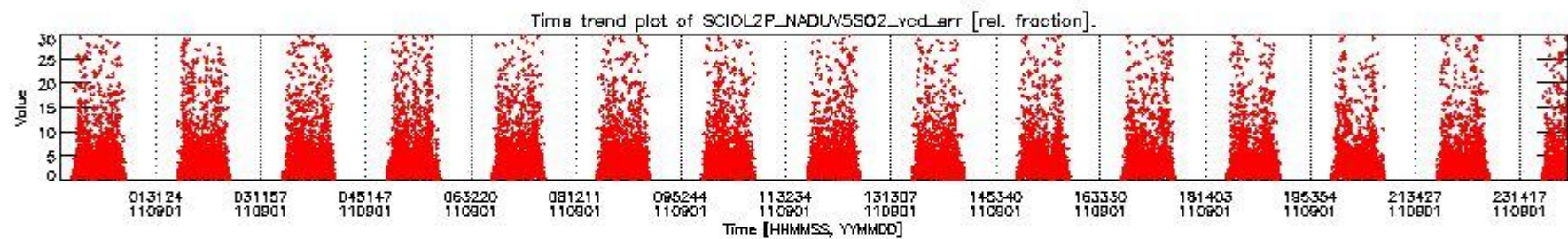
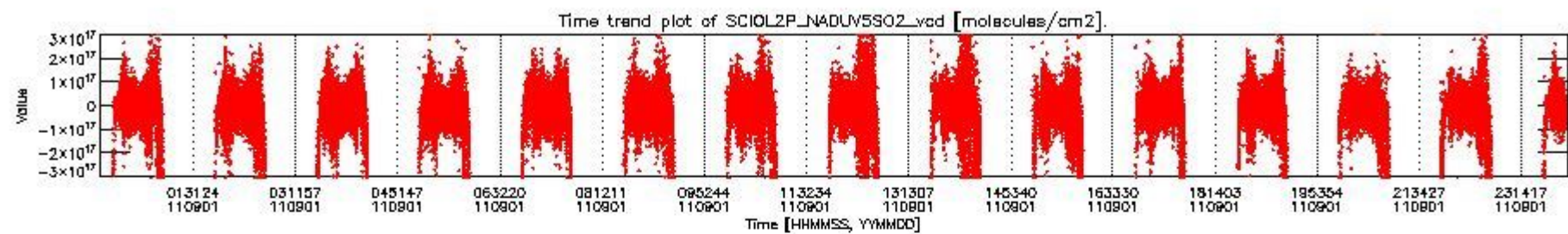
SCIOL2P\_NADUV3BRO\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



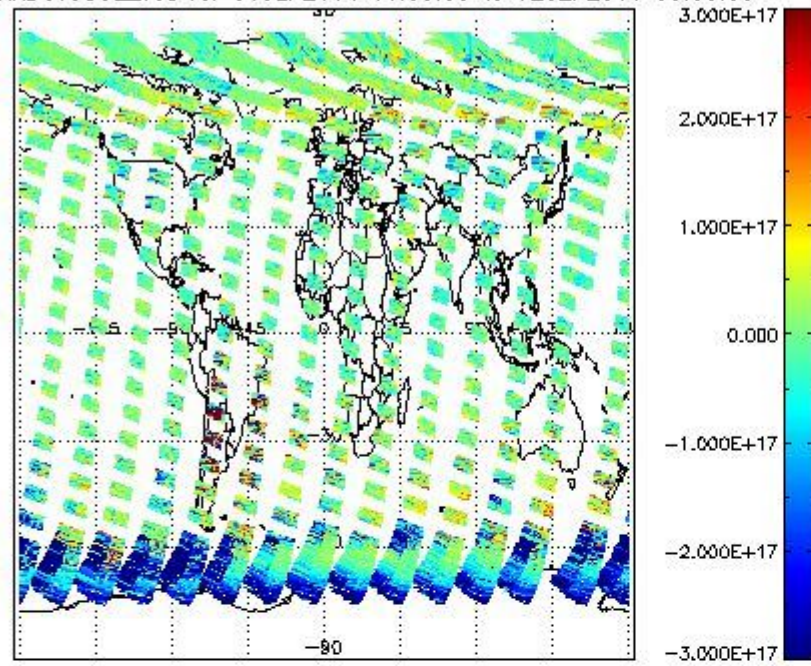
SCIOL2P\_NADUV3BRO\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



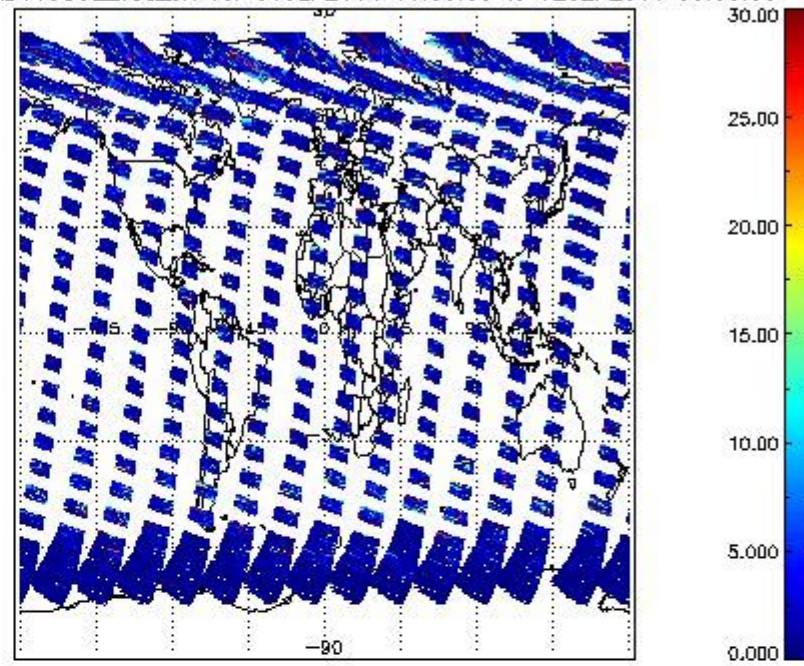
2.2.2.4 SO2 (UV5)



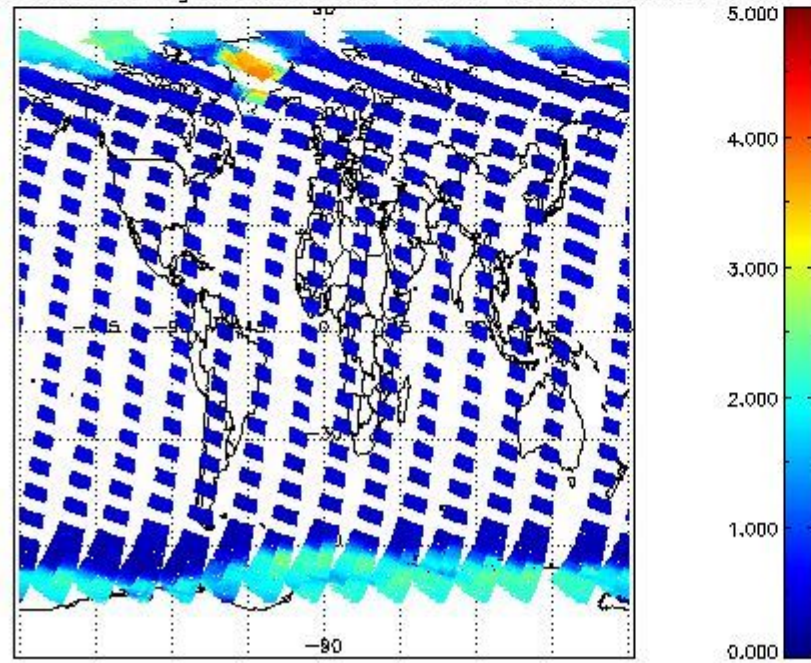
SCIOL2P\_NADUV5S02\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



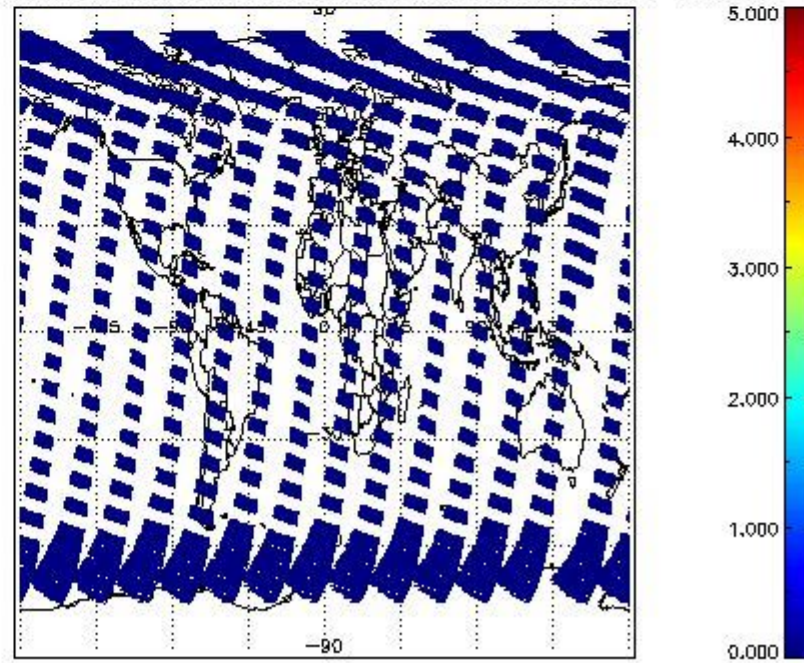
SCIOL2P\_NADUV5S02\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



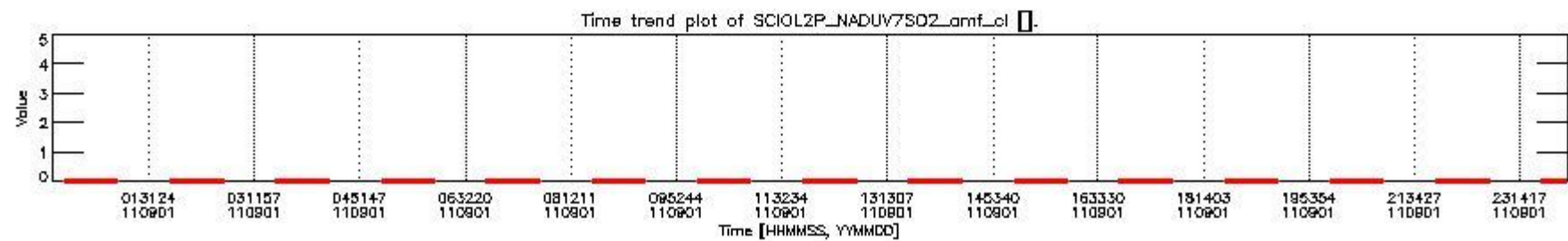
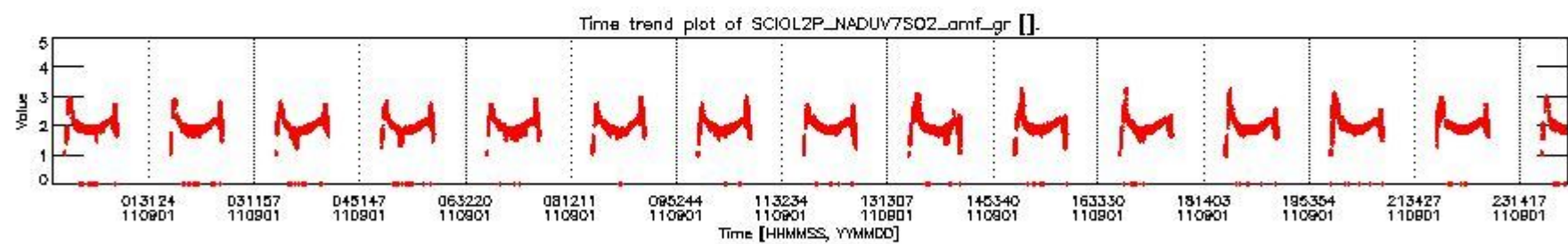
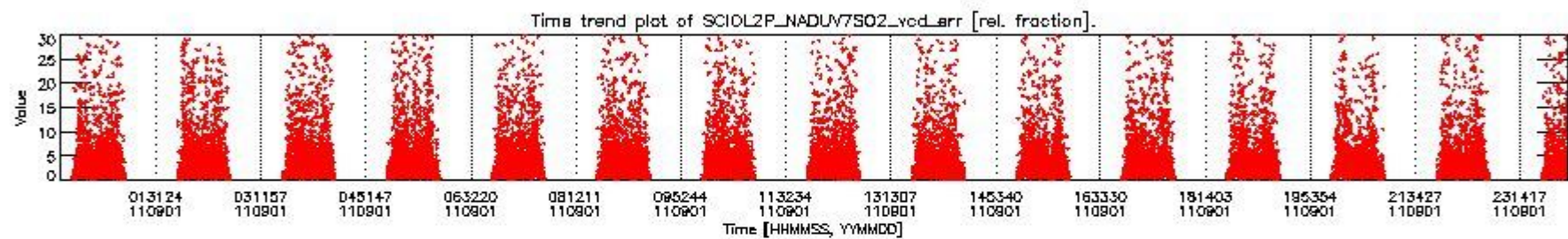
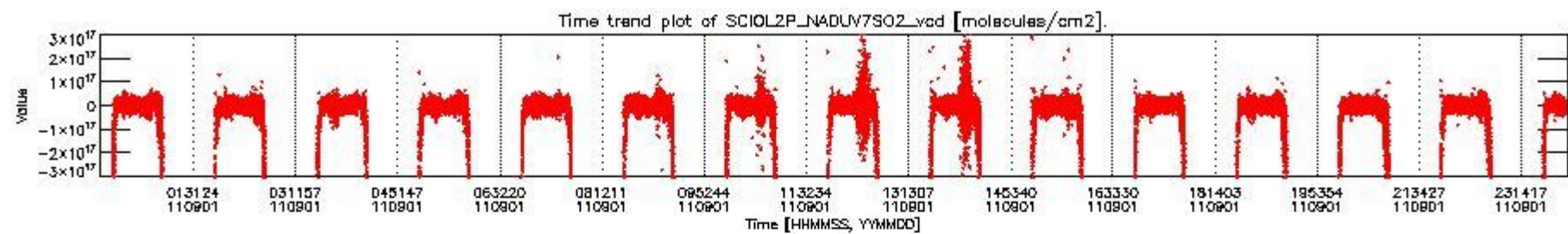
SCIOL2P\_NADUV5S02\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



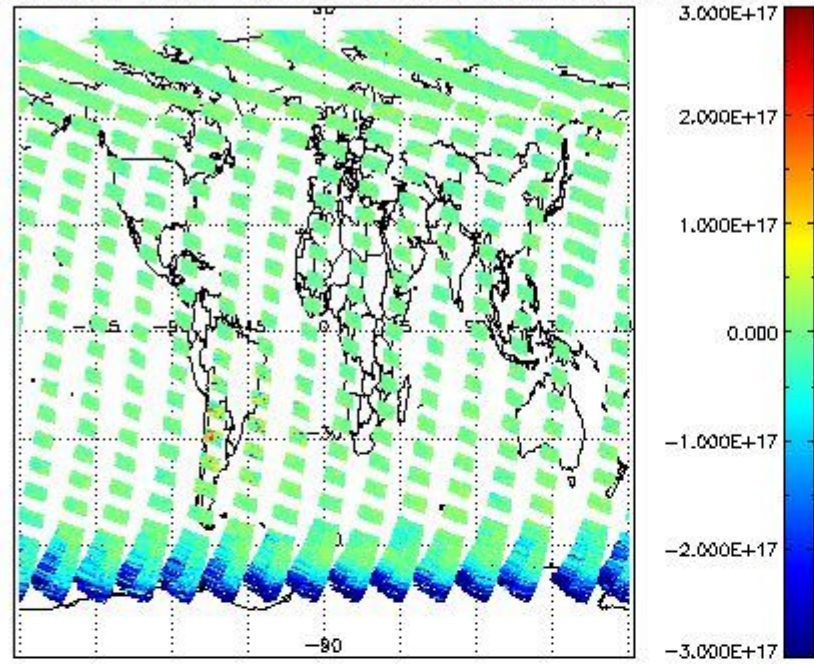
SCIOL2P\_NADUV5S02\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



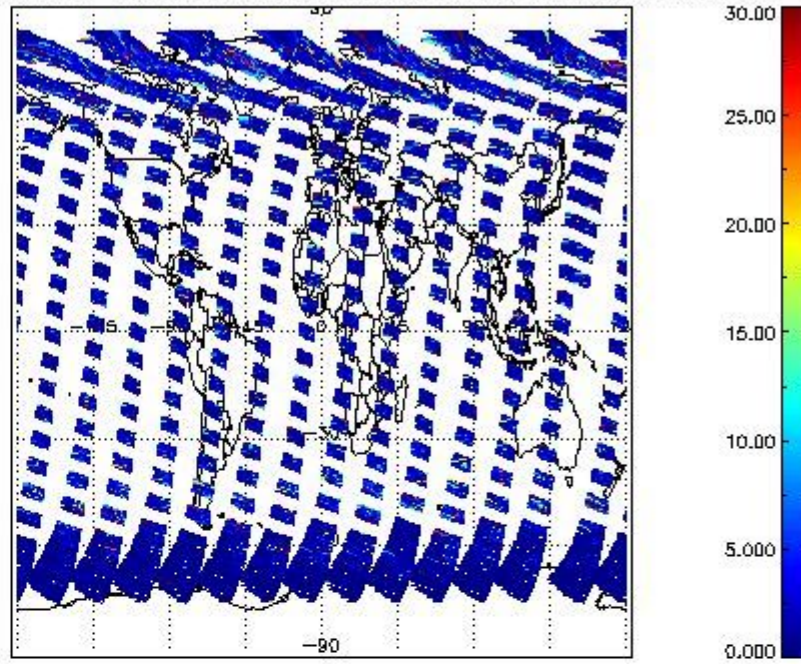
### 2.2.2.5 SO2 (UV7)



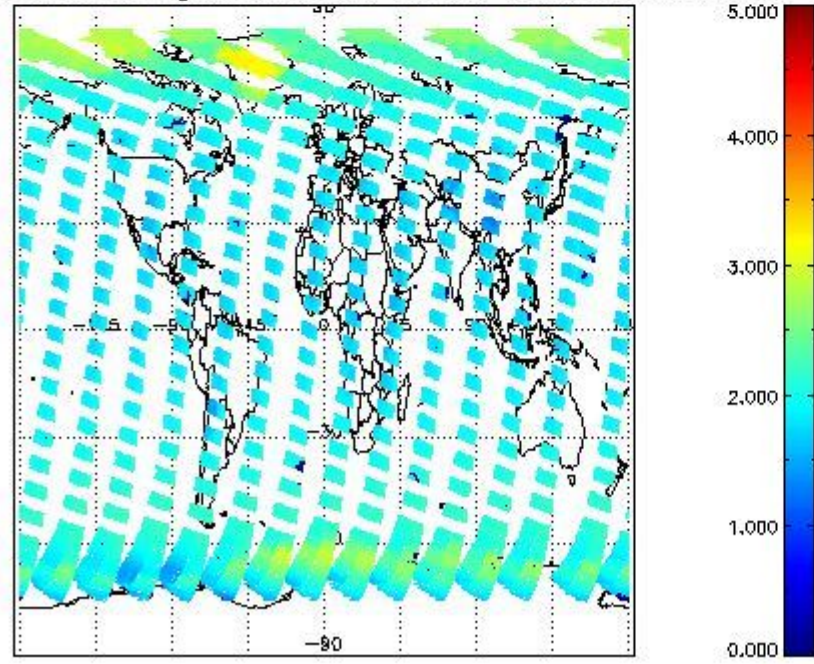
SCIOL2P\_NADUV7S02\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



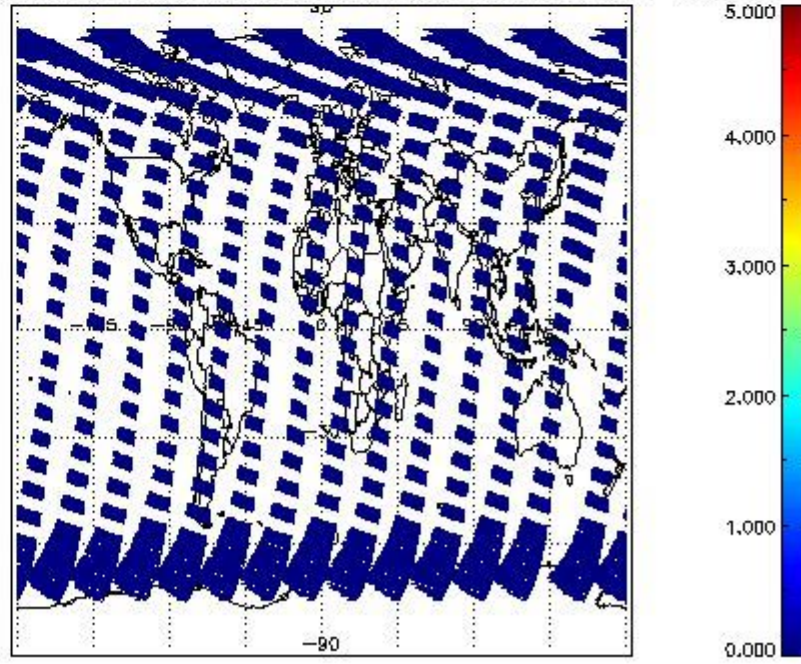
SCIOL2P\_NADUV7S02\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



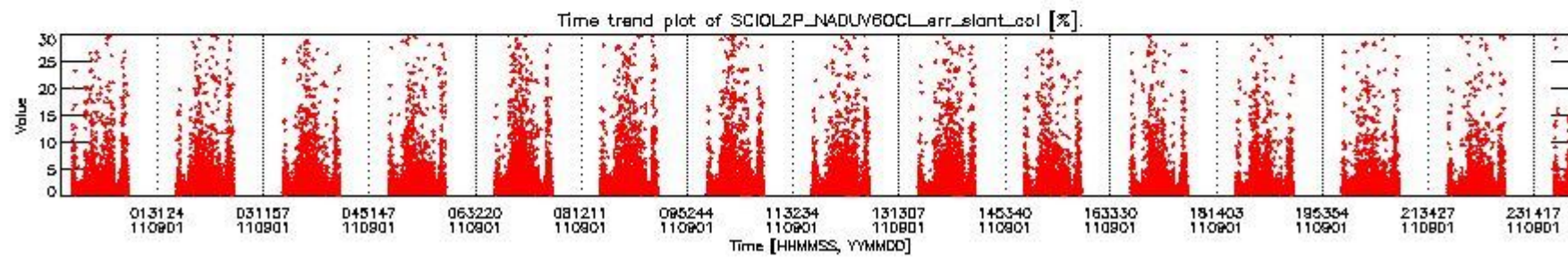
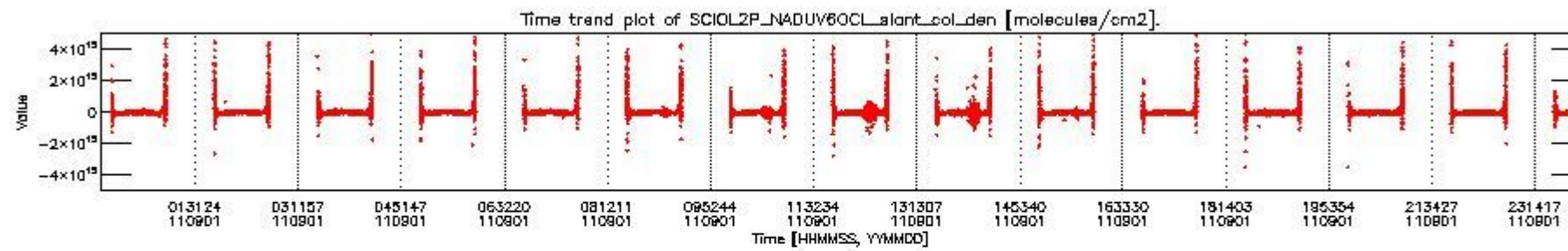
SCIOL2P\_NADUV7S02\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



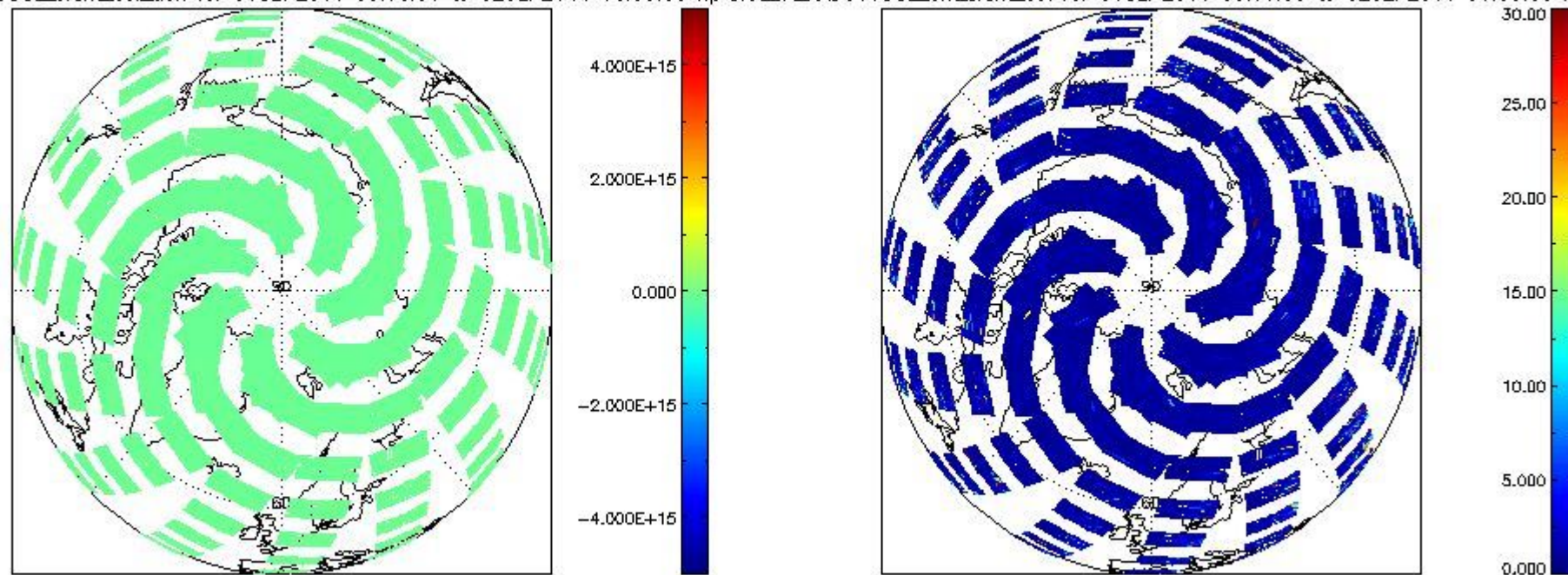
SCIOL2P\_NADUV7S02\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



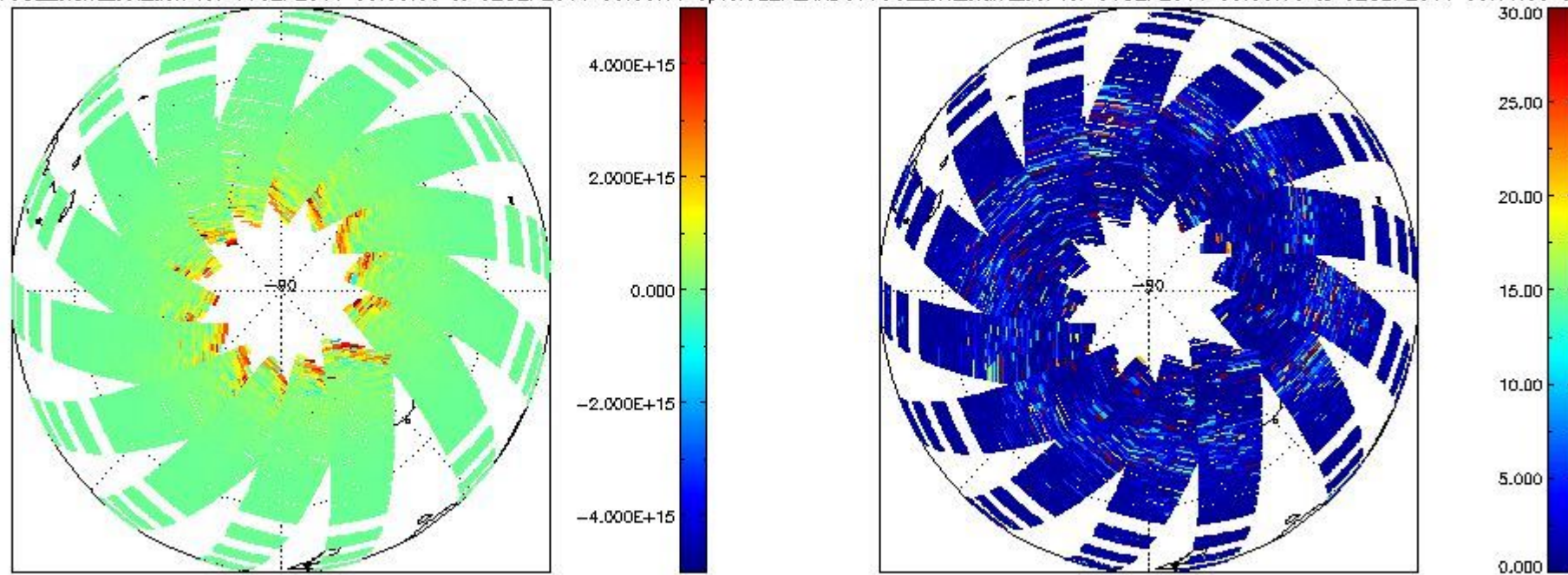
2.2.2.6 OCIO (UV6)



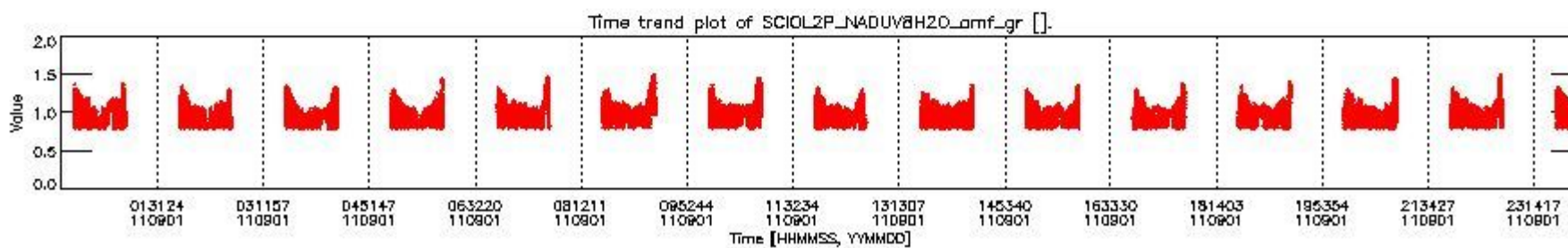
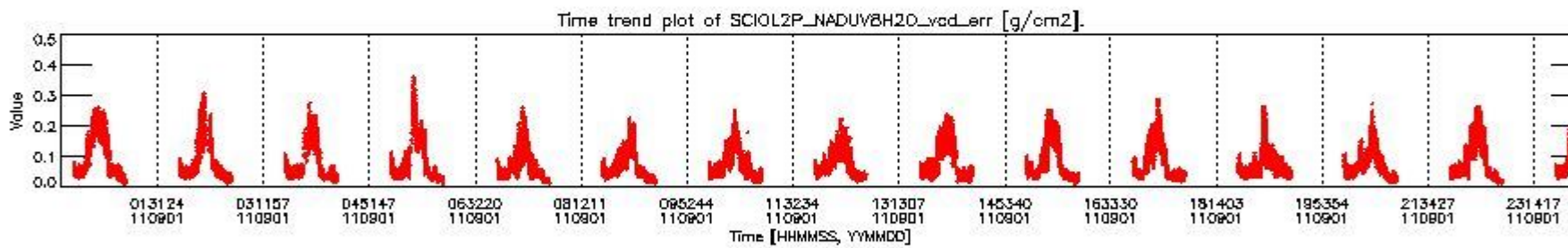
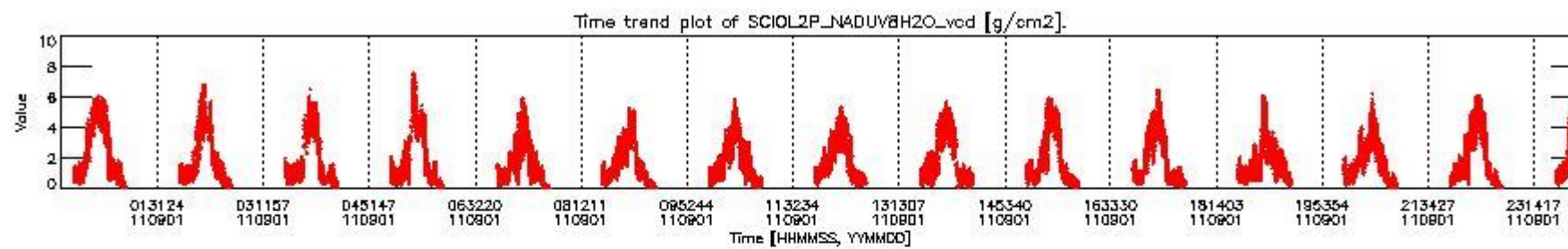
CIOL2P\_NADUV60CLslant\_col\_den for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 np; CIOL2P\_NADUV60CLerr\_slant\_col for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 np



CIOL2P\_NADUV60CL\_slant\_col\_den for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 sp | CIOL2P\_NADUV60CL\_err\_slant\_col for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 sp

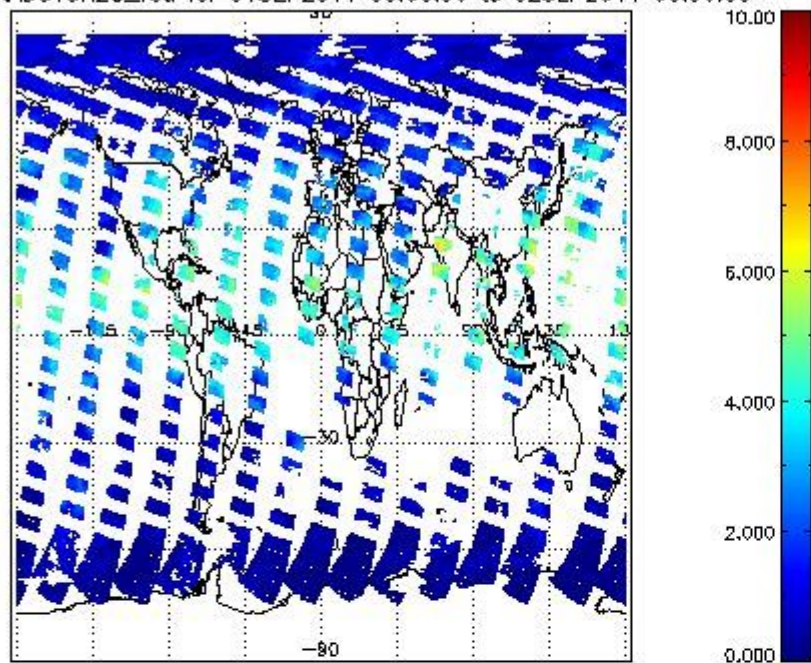


### 2.2.2.7 H2O (UV8)

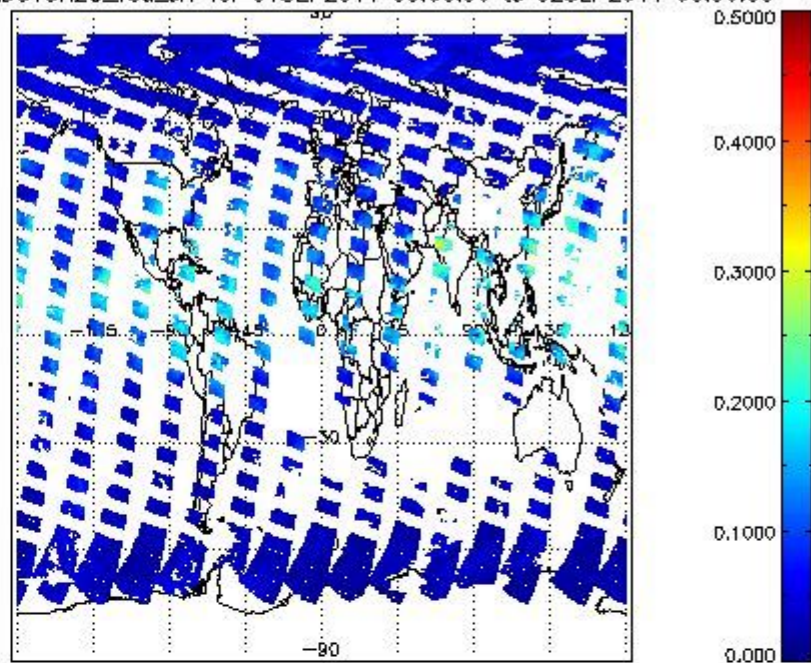




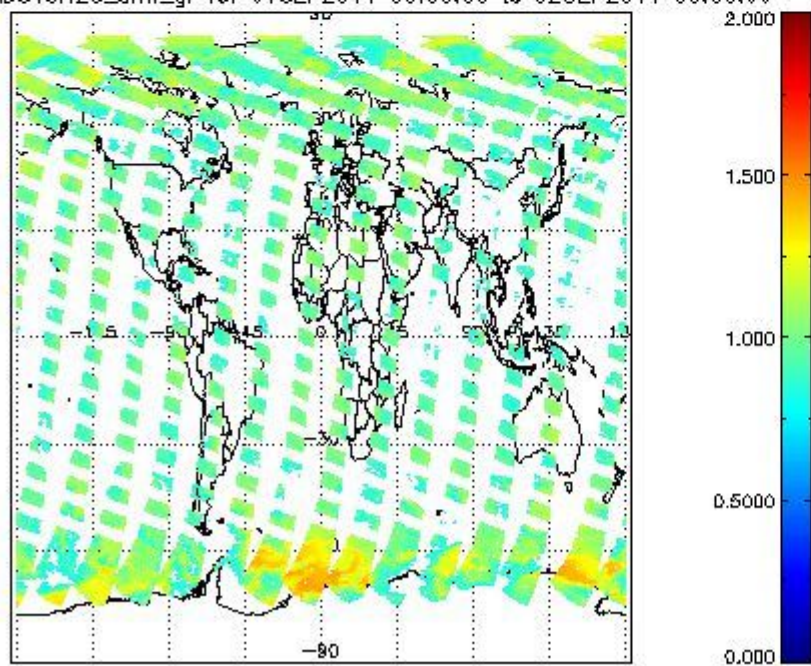
SCIOL2P\_NADUV8H2O\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



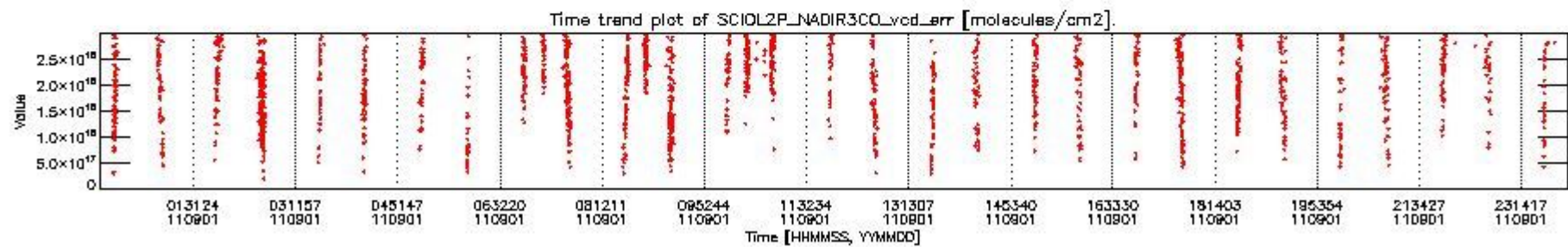
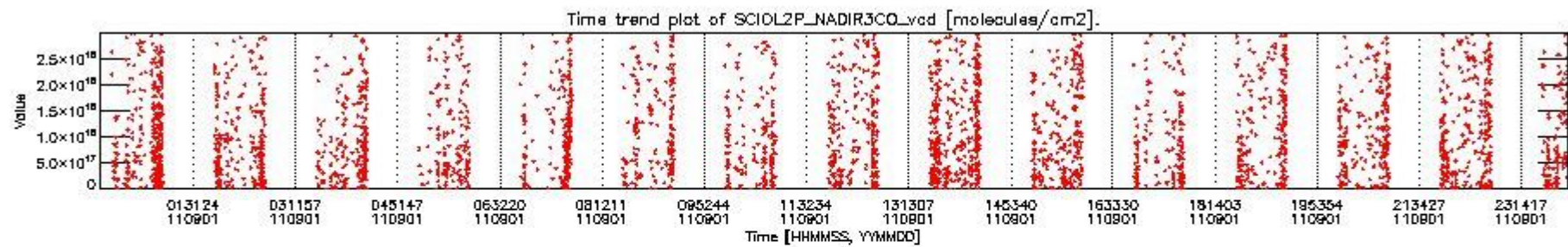
SCIOL2P\_NADUV8H2O\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



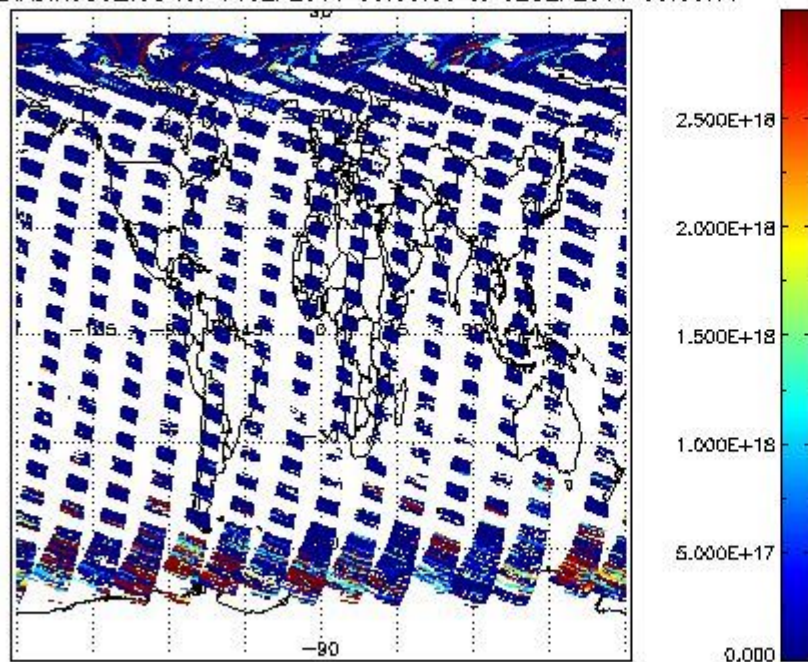
SCIOL2P\_NADUV8H2O\_arnf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



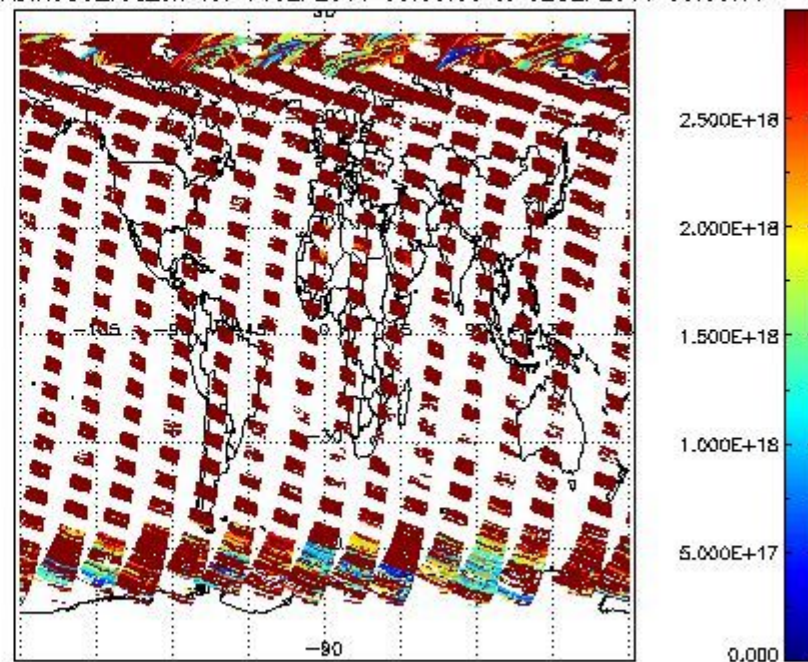
2.2.2.8 CO (IR3)



SCIDL2P\_NADIR3CO\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



### 2.2.3 Limb

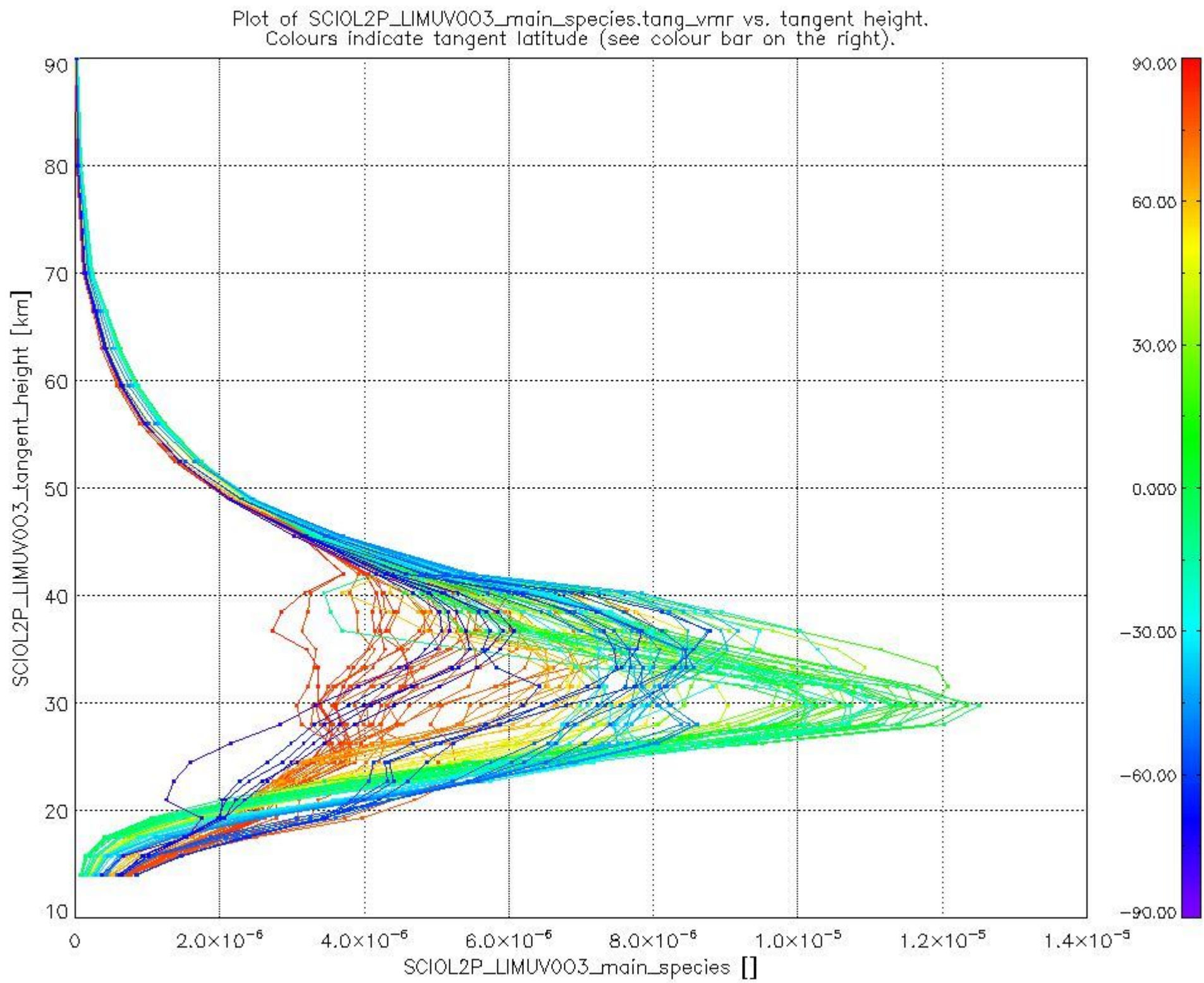
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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

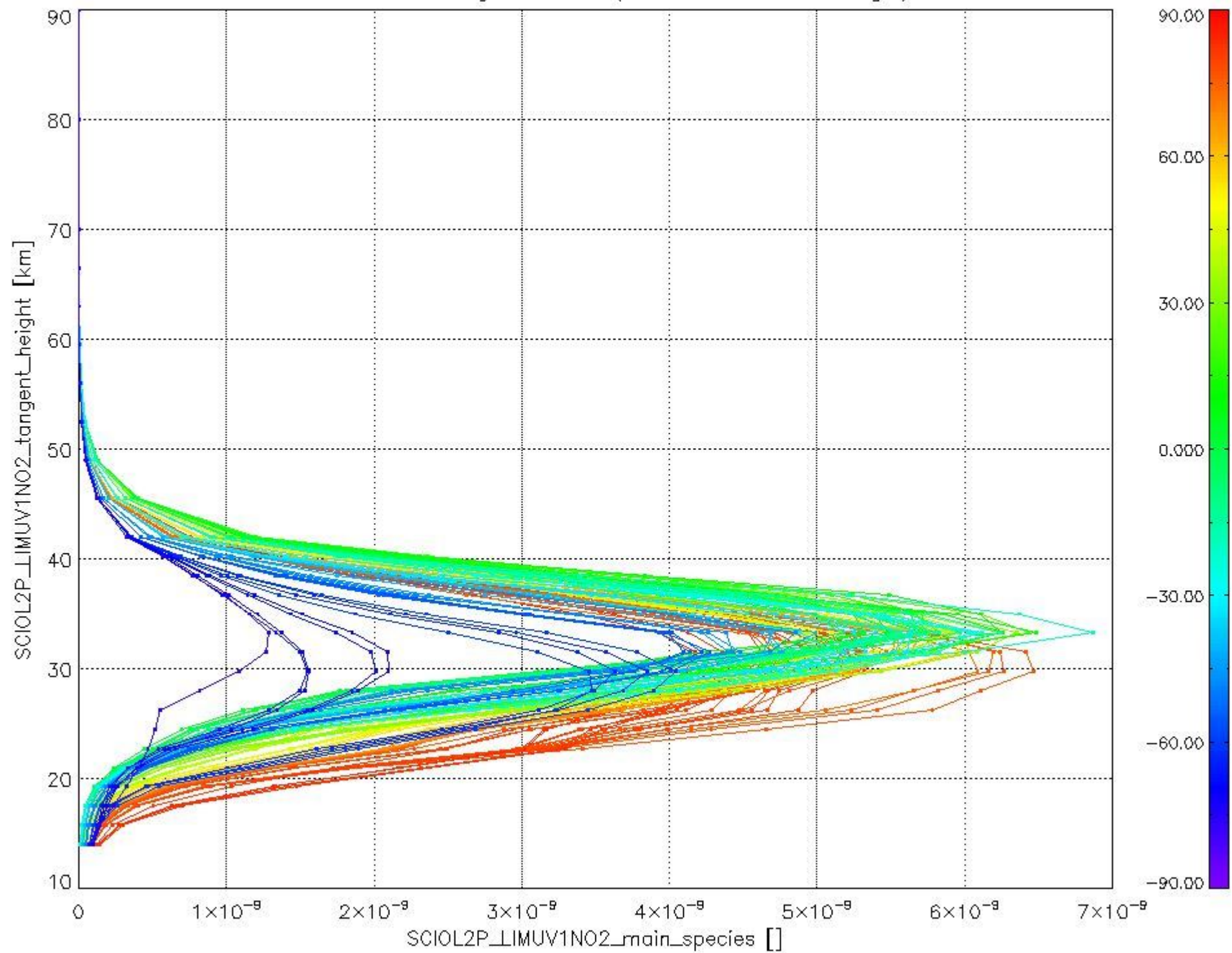
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



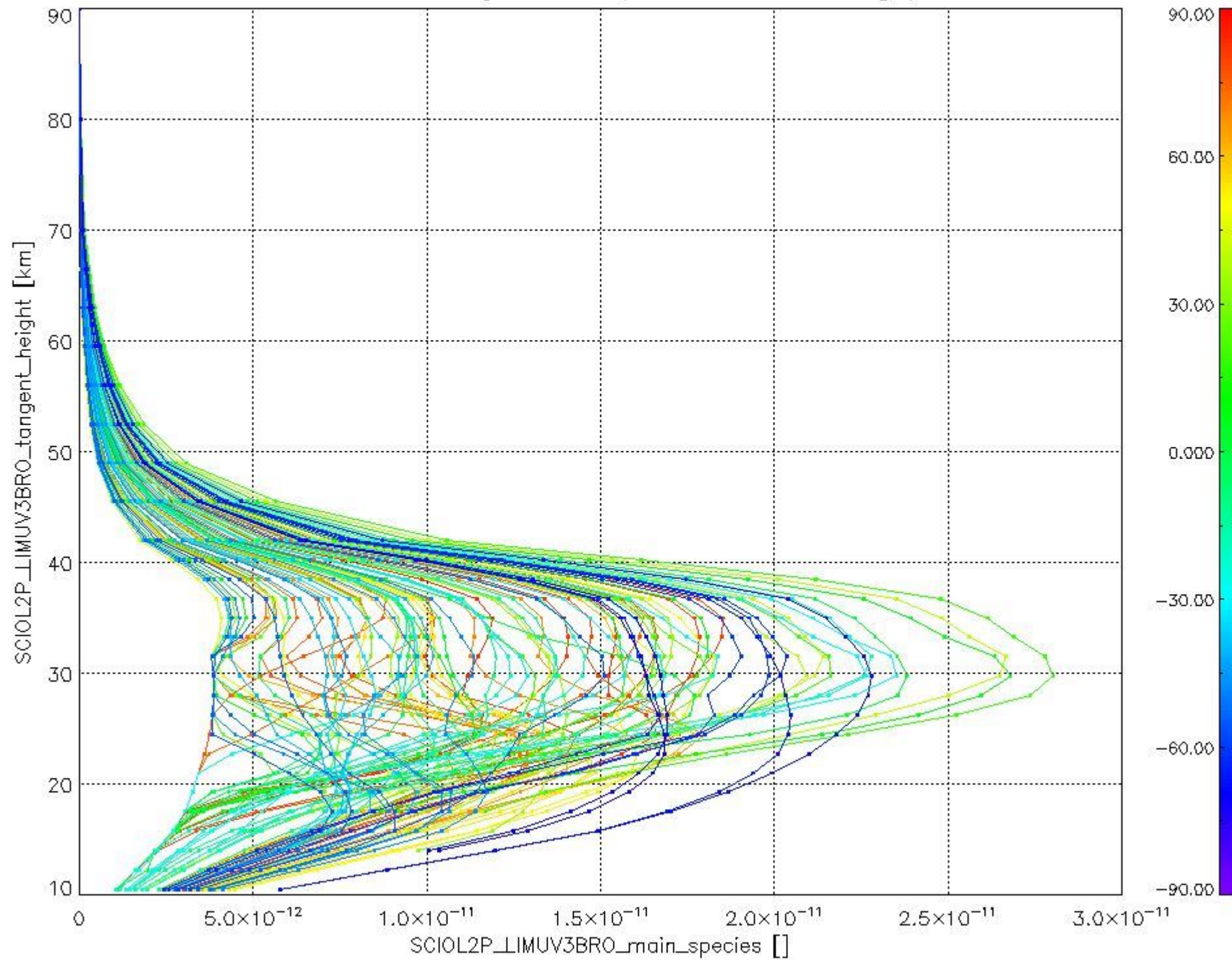
2.2.3.2 NO2 (UV1)

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).

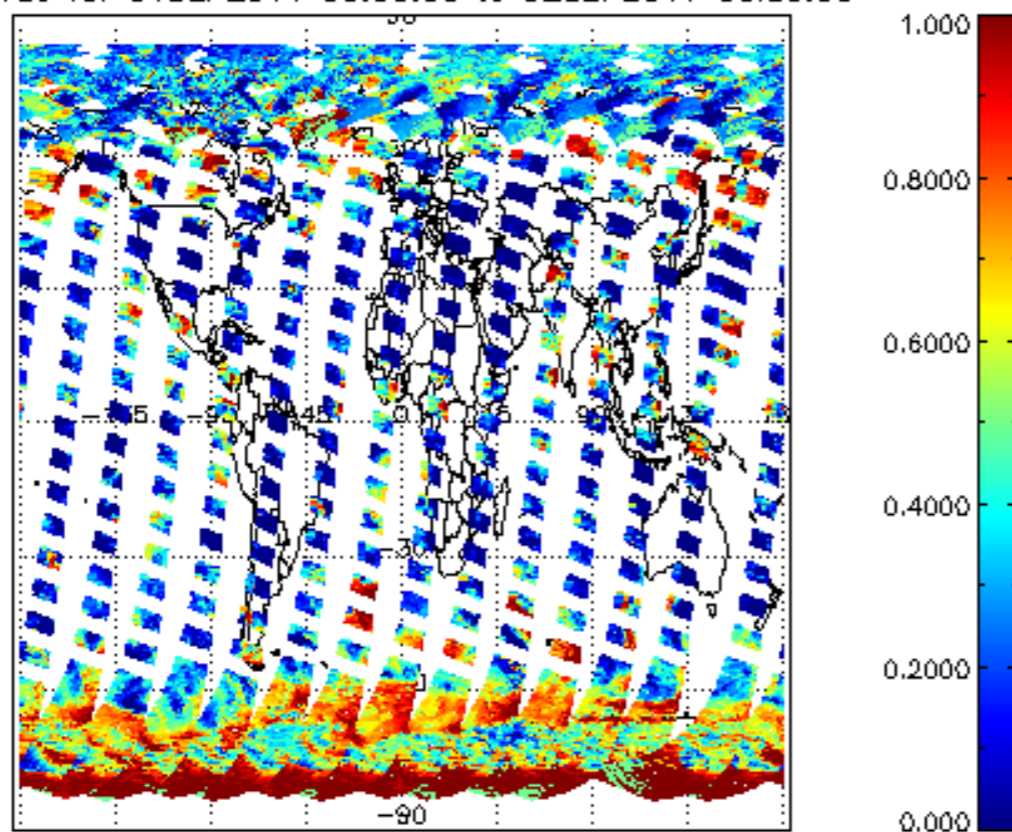


### 2.3 ADF monitoring

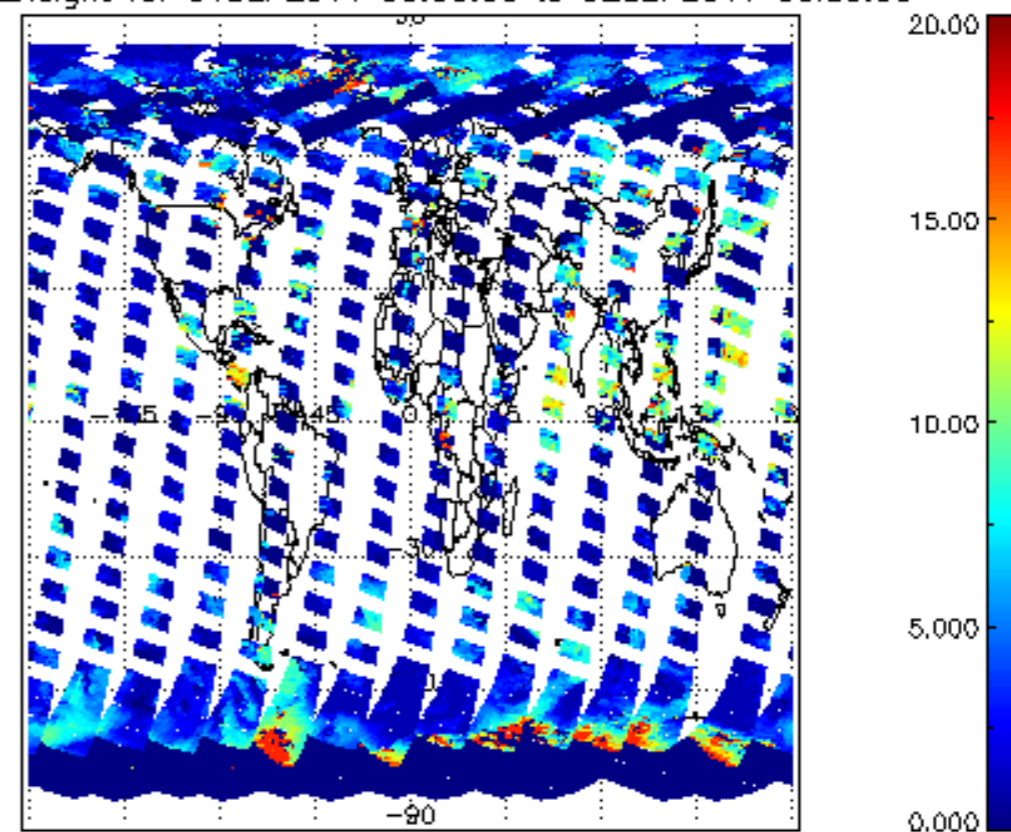
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110906_112401_20110831_183405_20110902_183405
3	SCI_MF1_AXVIEC20110906_112532_20110901_193733_20110903_193733



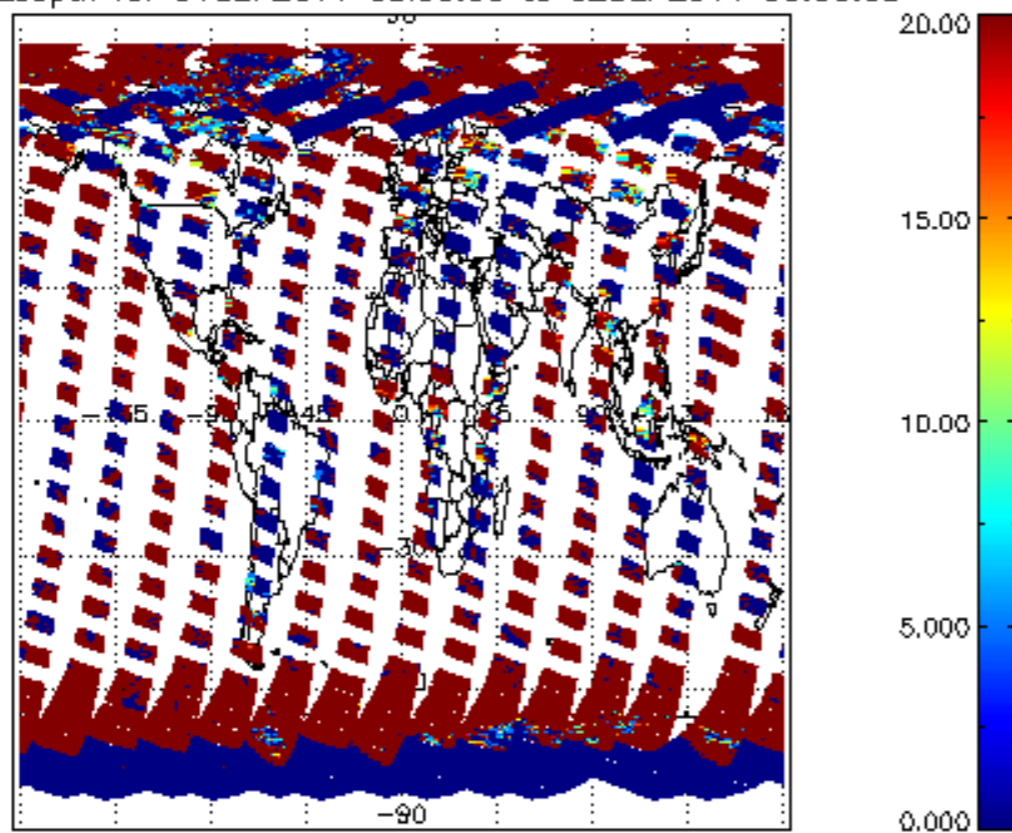
cl\_frac for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



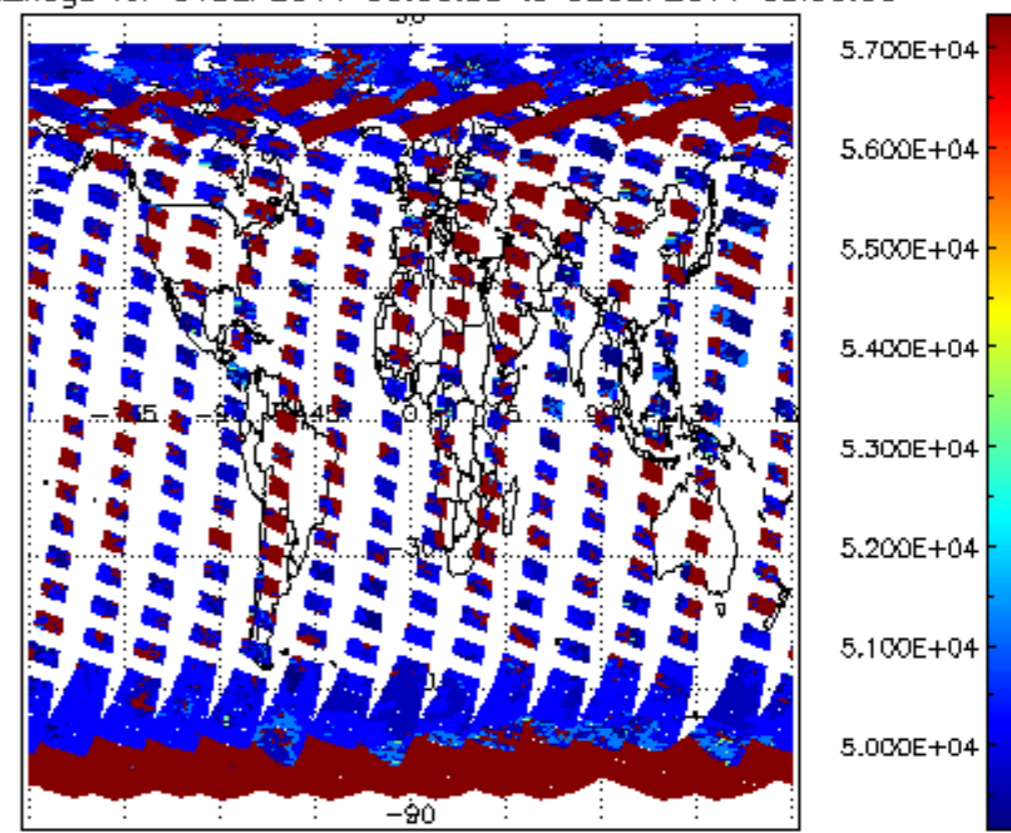
cl\_top\_height for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

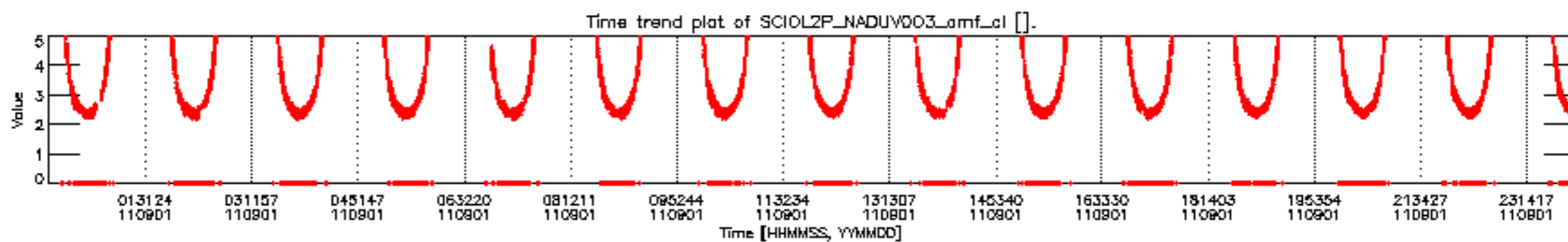
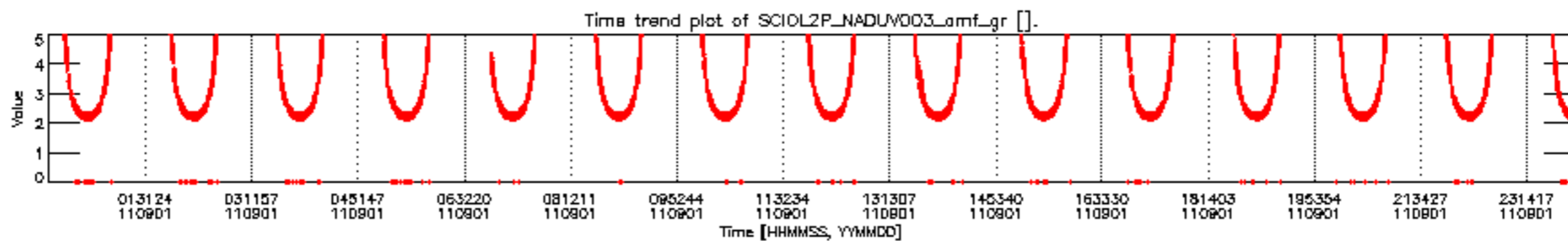
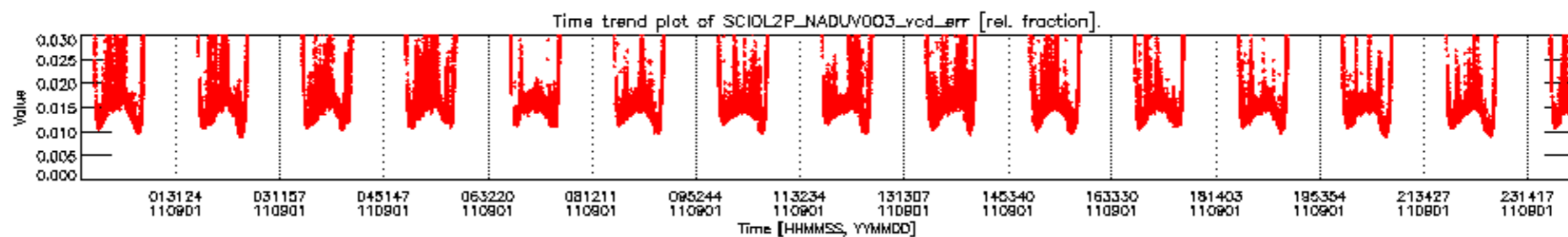
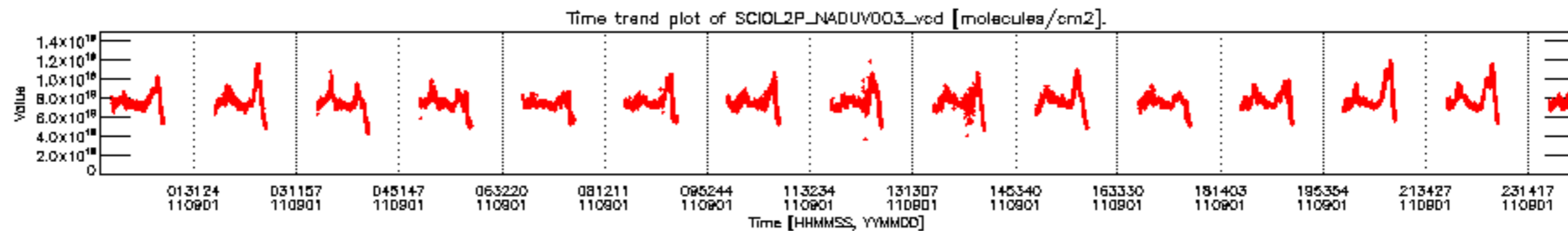


cl\_opt\_depth for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



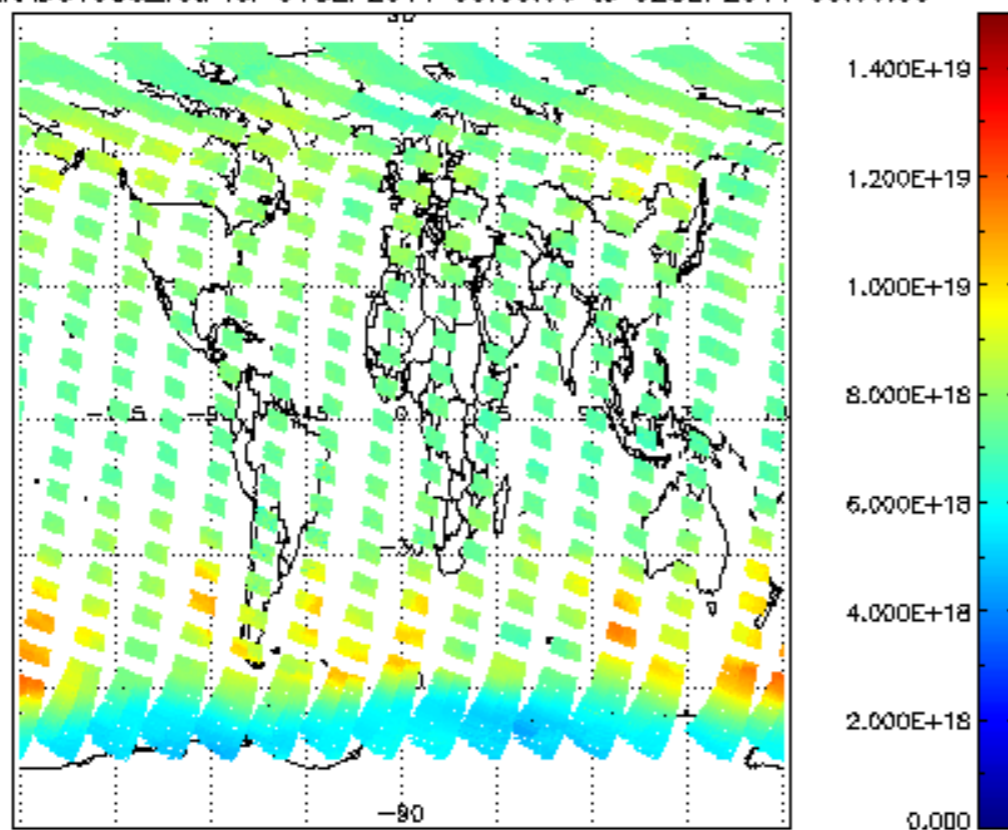
cloud\_flags for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



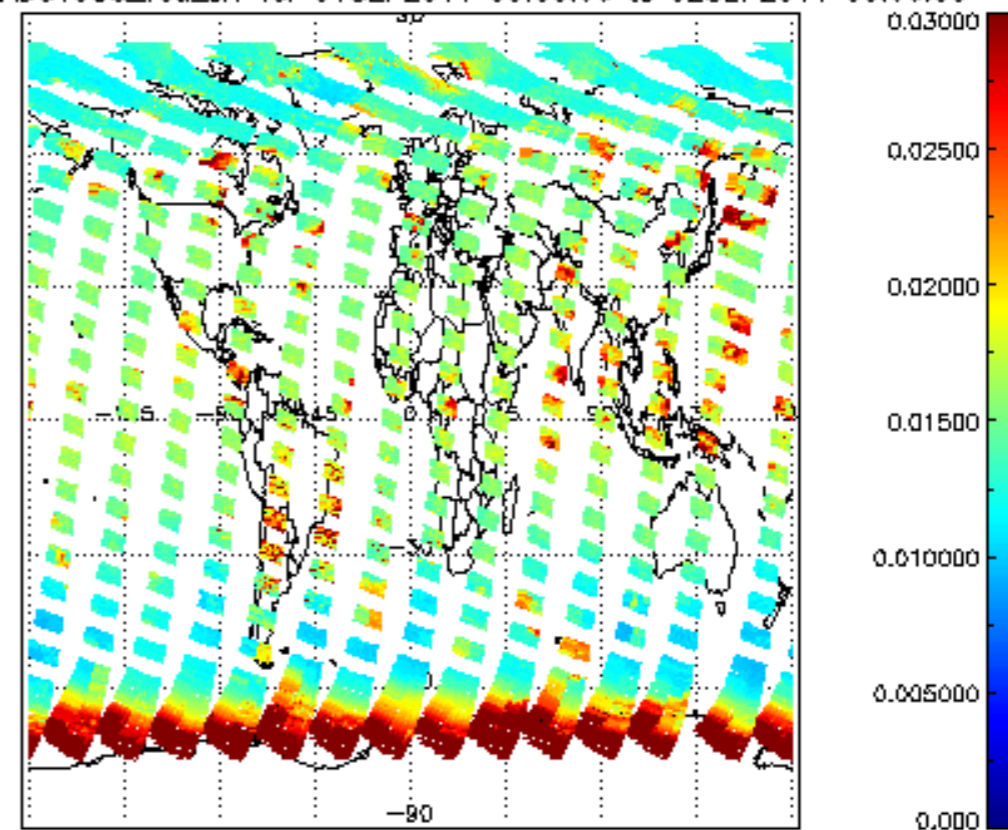




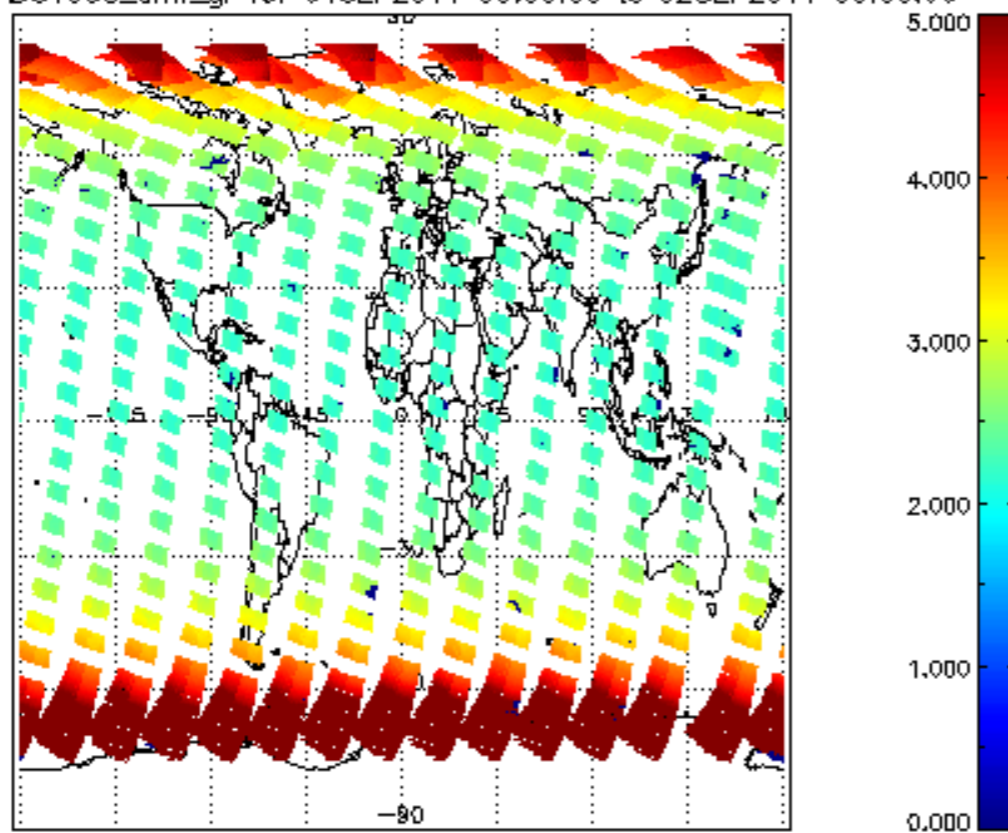
SCIOL2P\_NADUV003\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



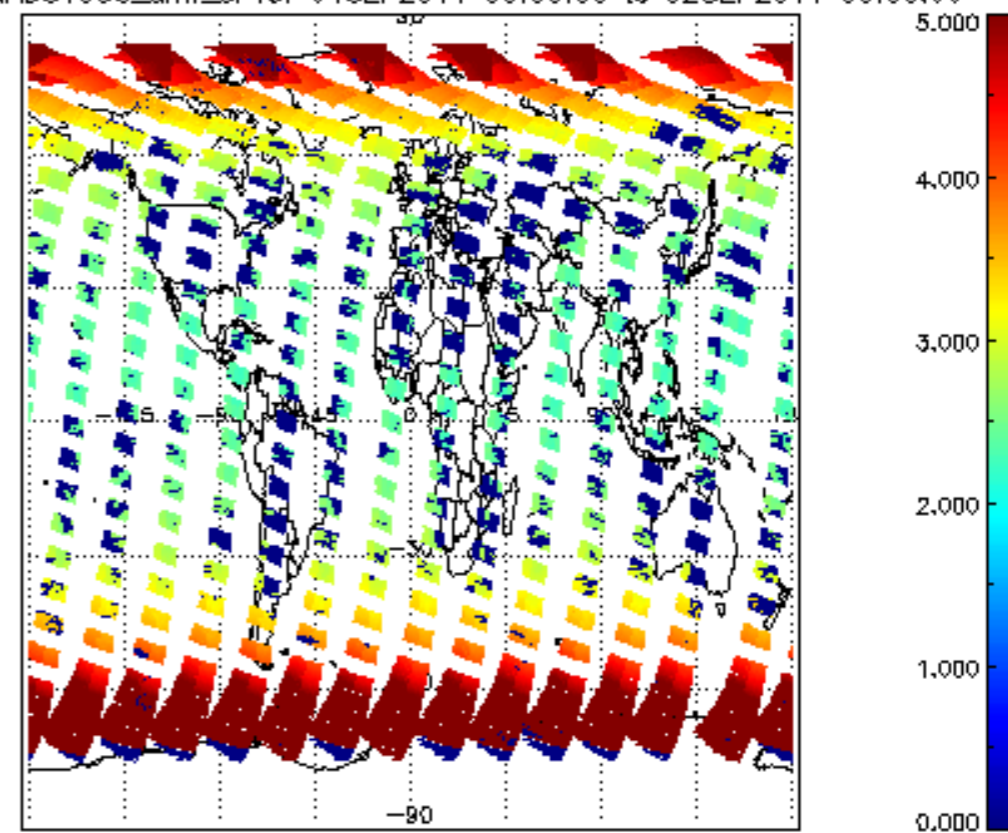
SCIOL2P\_NADUV003\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

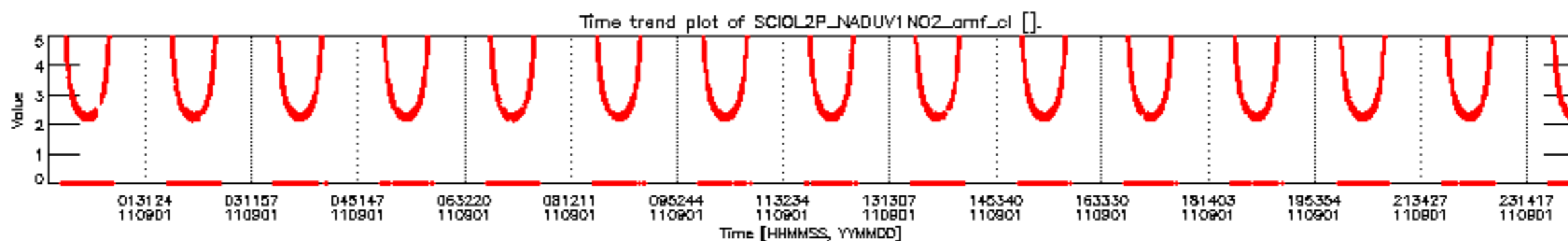
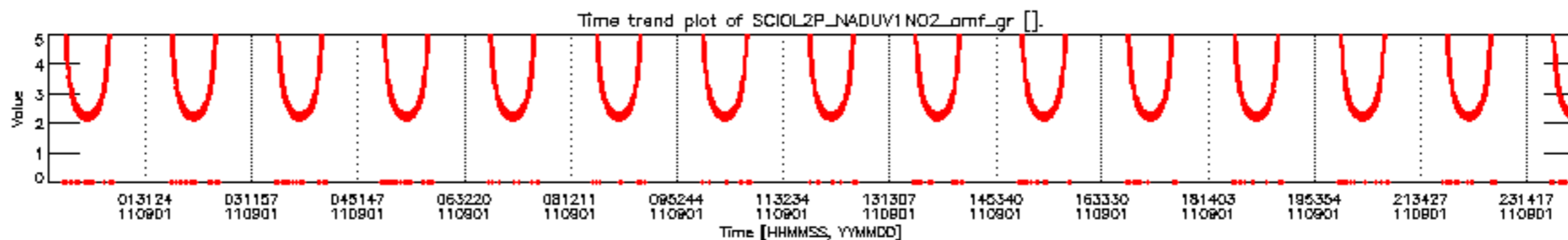
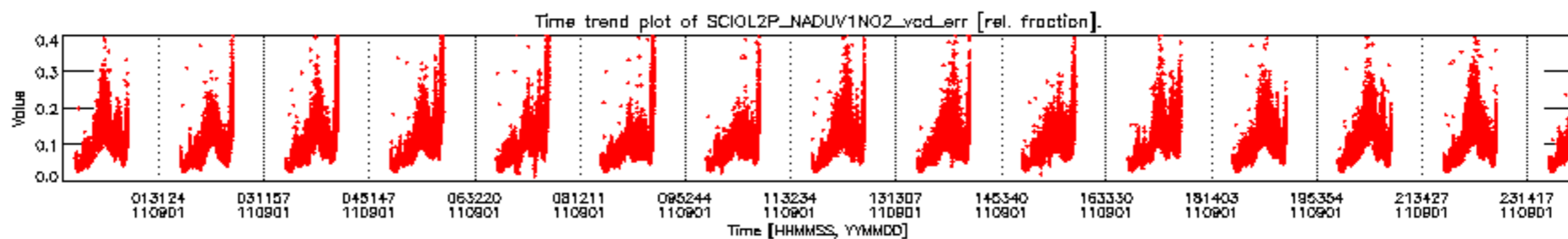
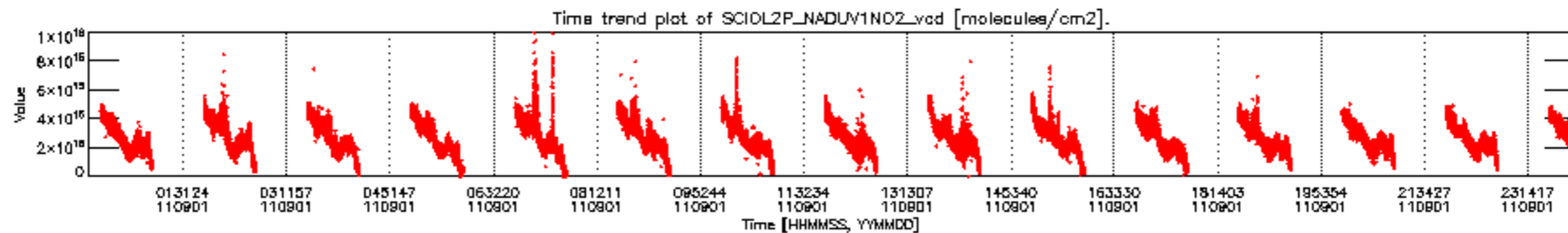


SCIOL2P\_NADUV003\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

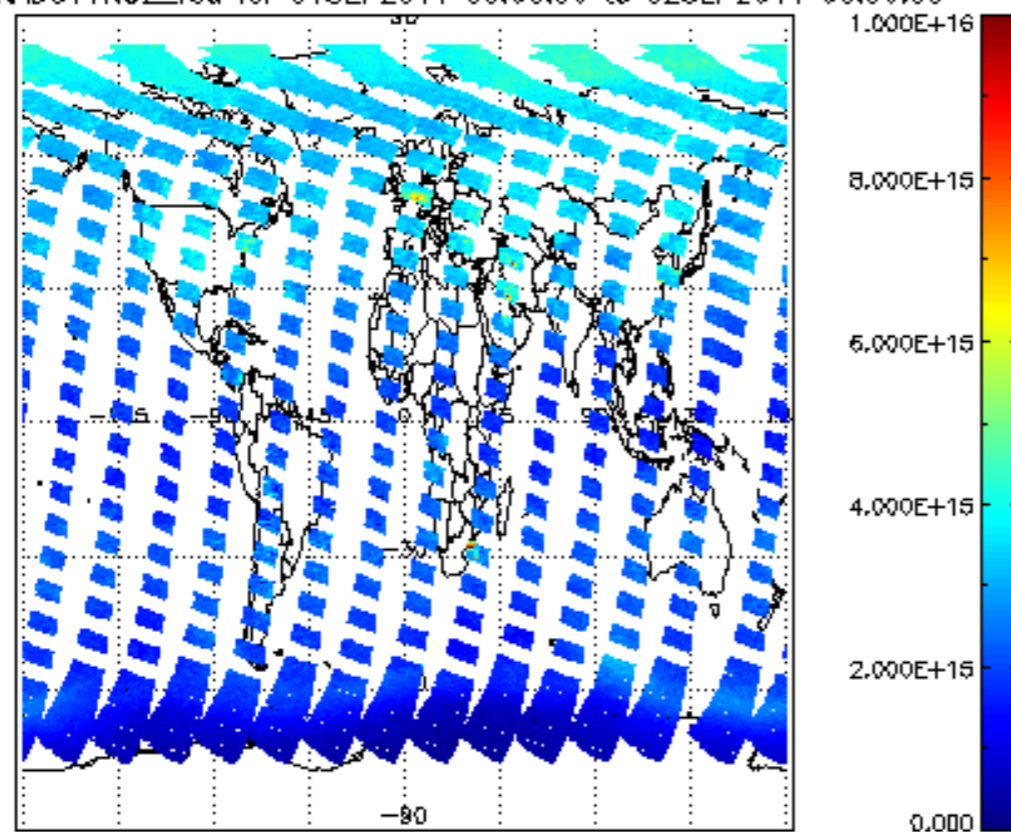


SCIOL2P\_NADUV003\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

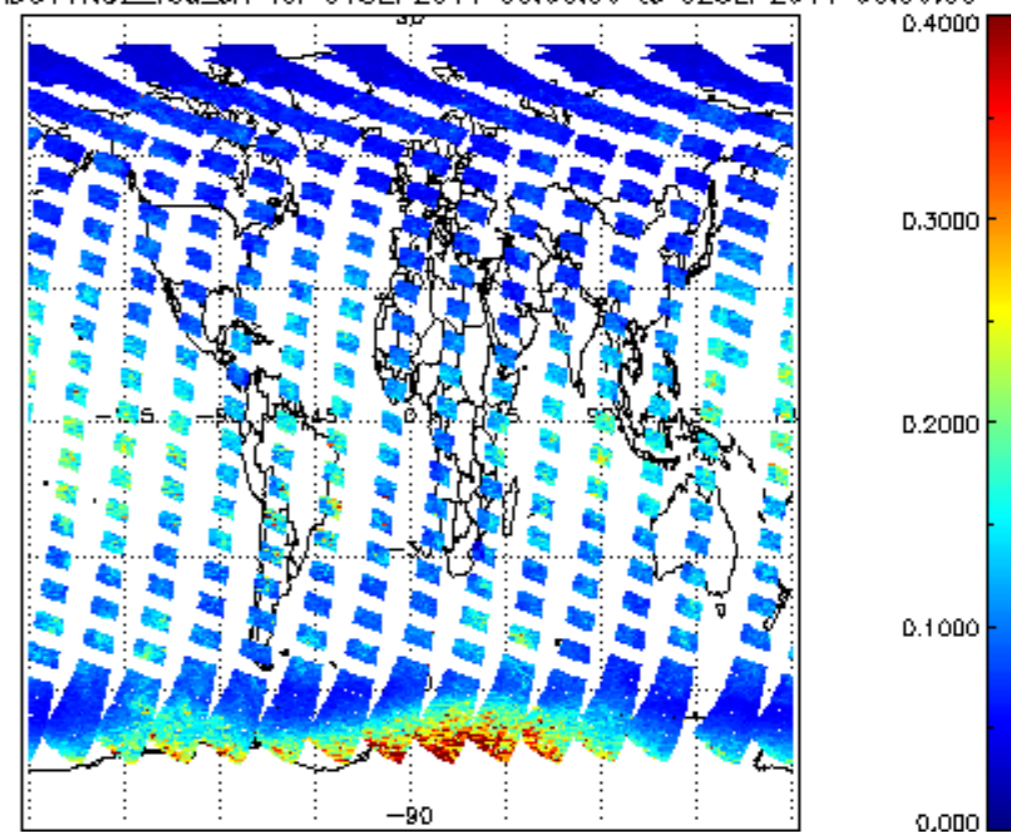




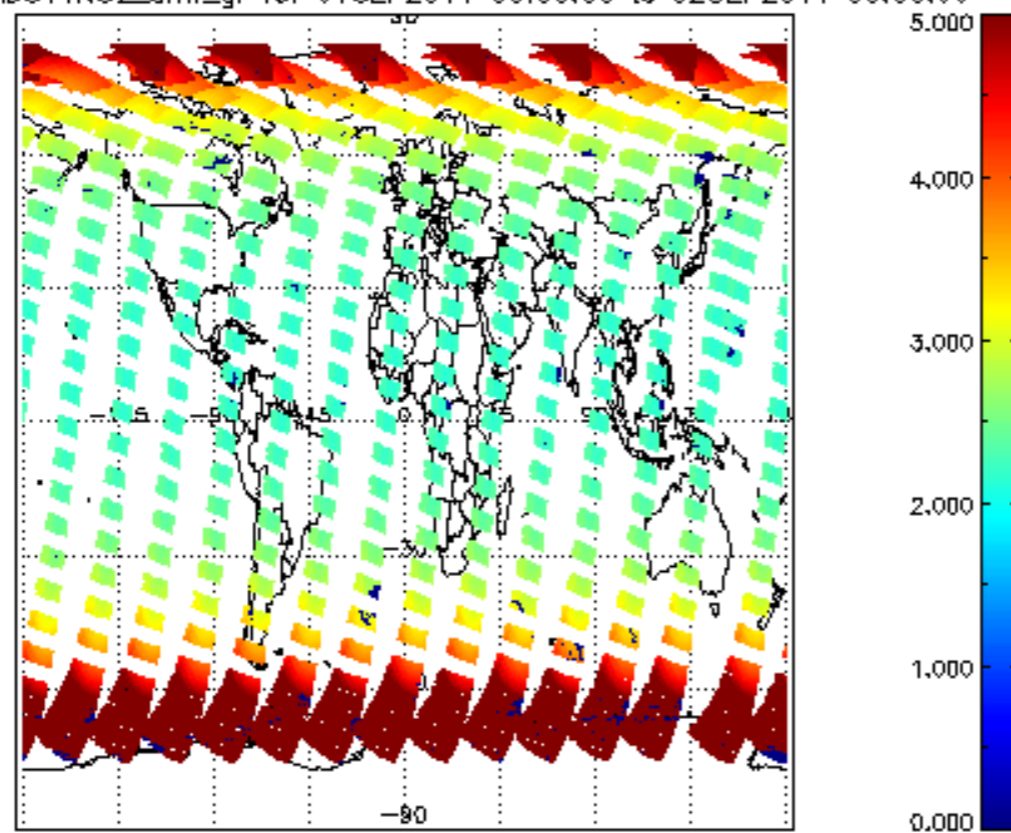
SCIOL2P\_NADUV1N02\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



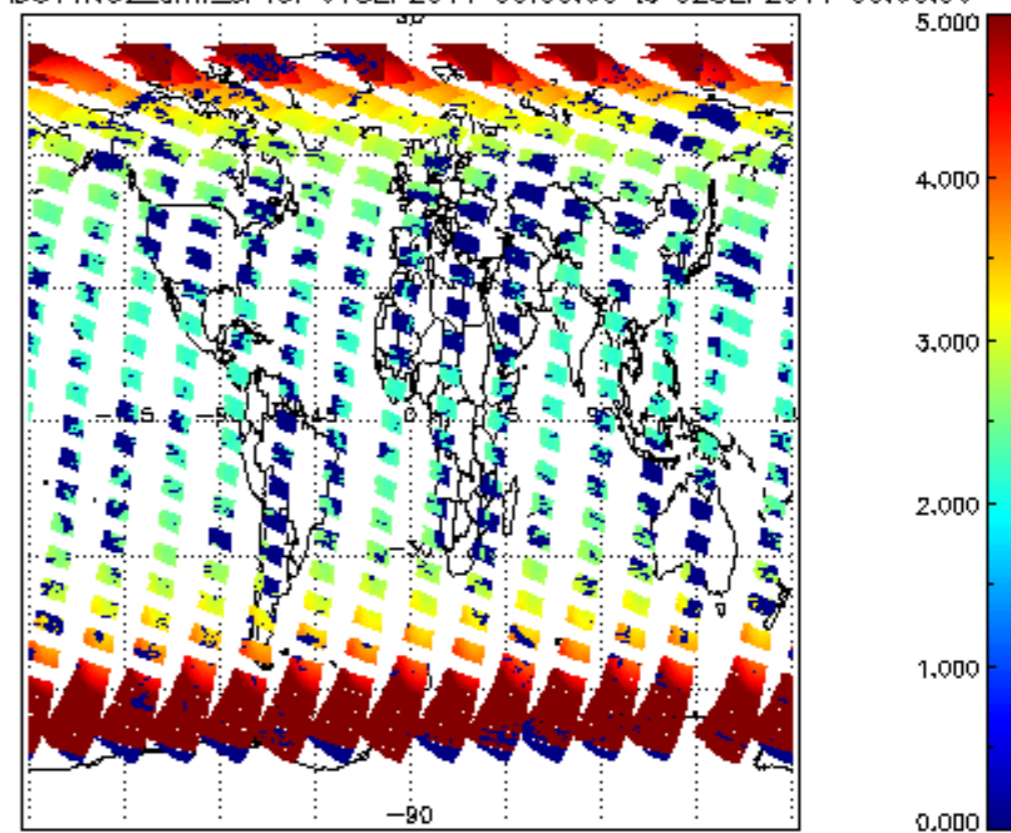
SCIOL2P\_NADUV1N02\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

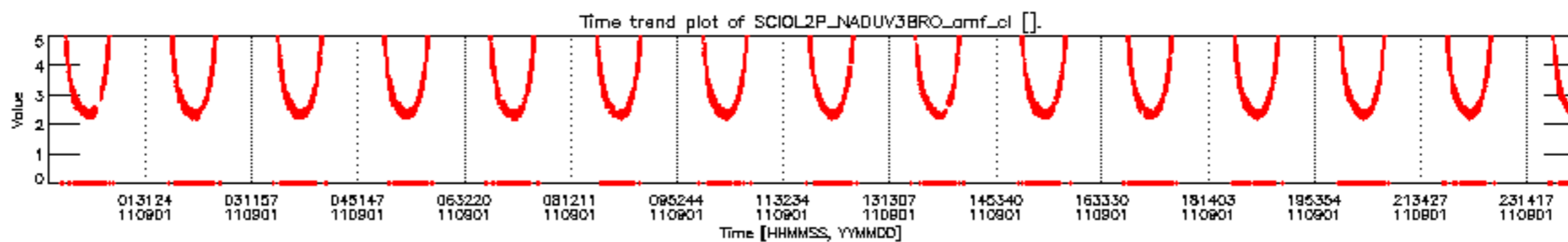
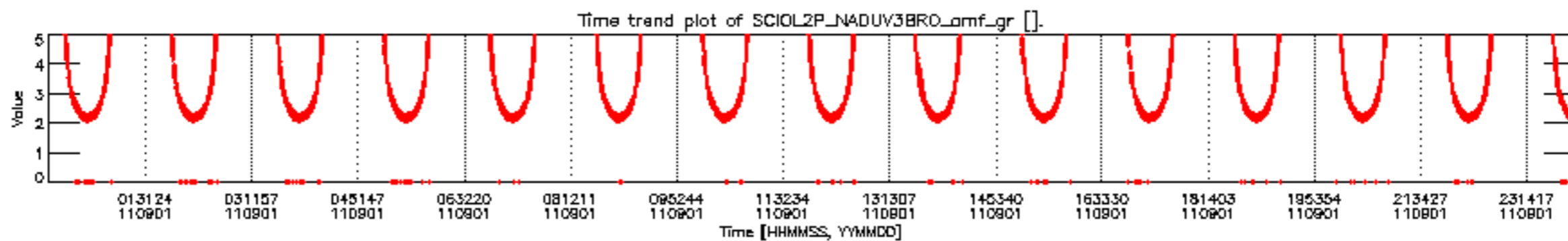
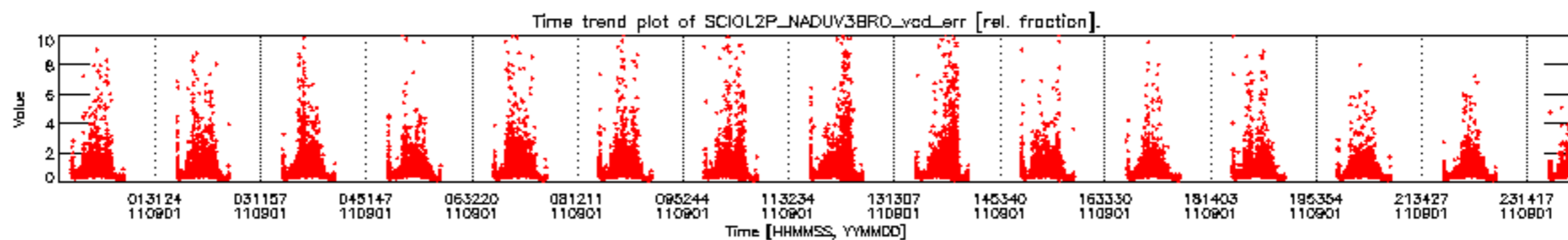
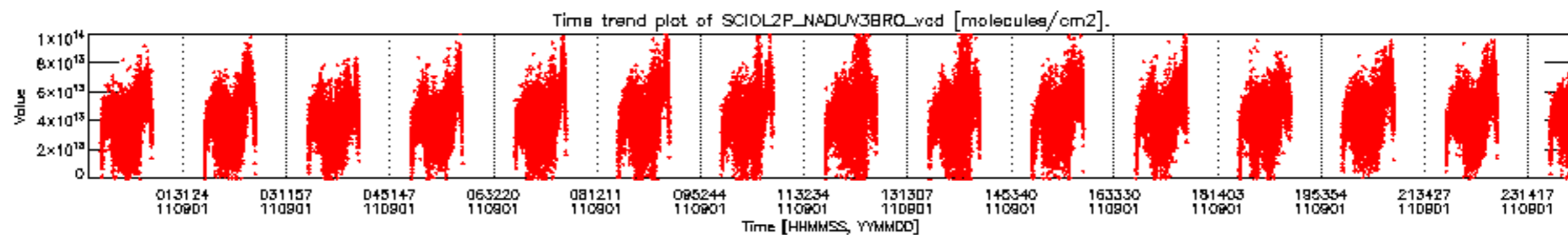


SCIOL2P\_NADUV1N02\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

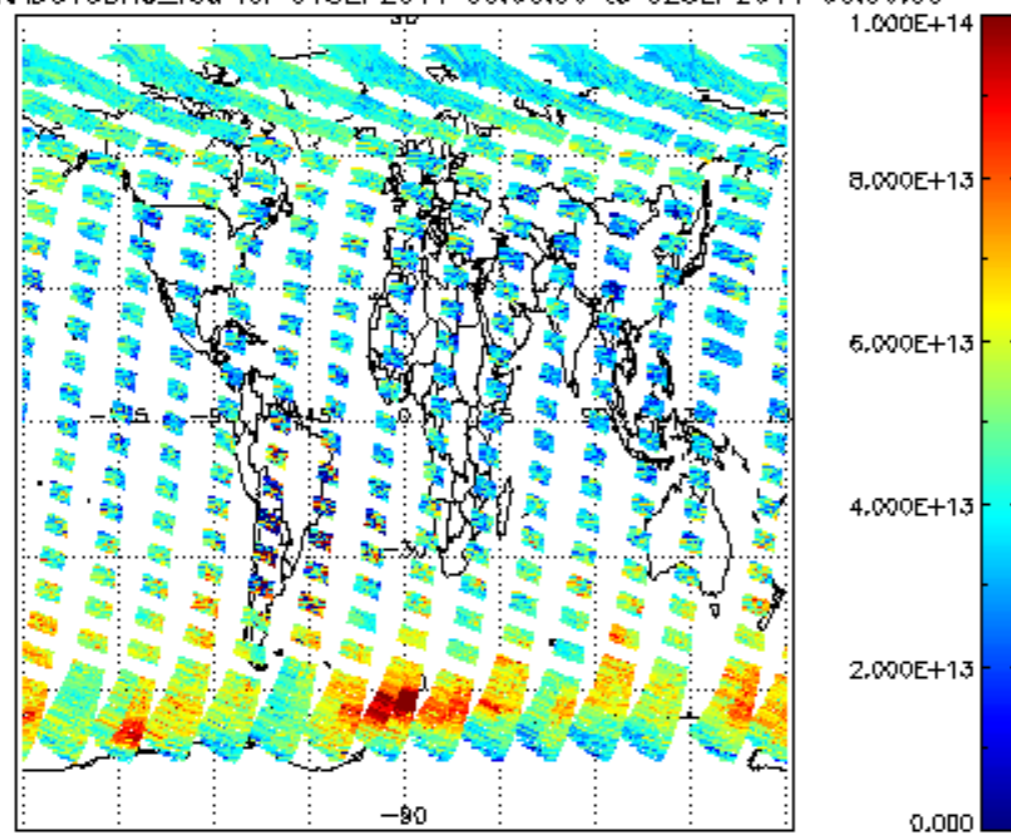


SCIOL2P\_NADUV1N02\_amf\_sl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

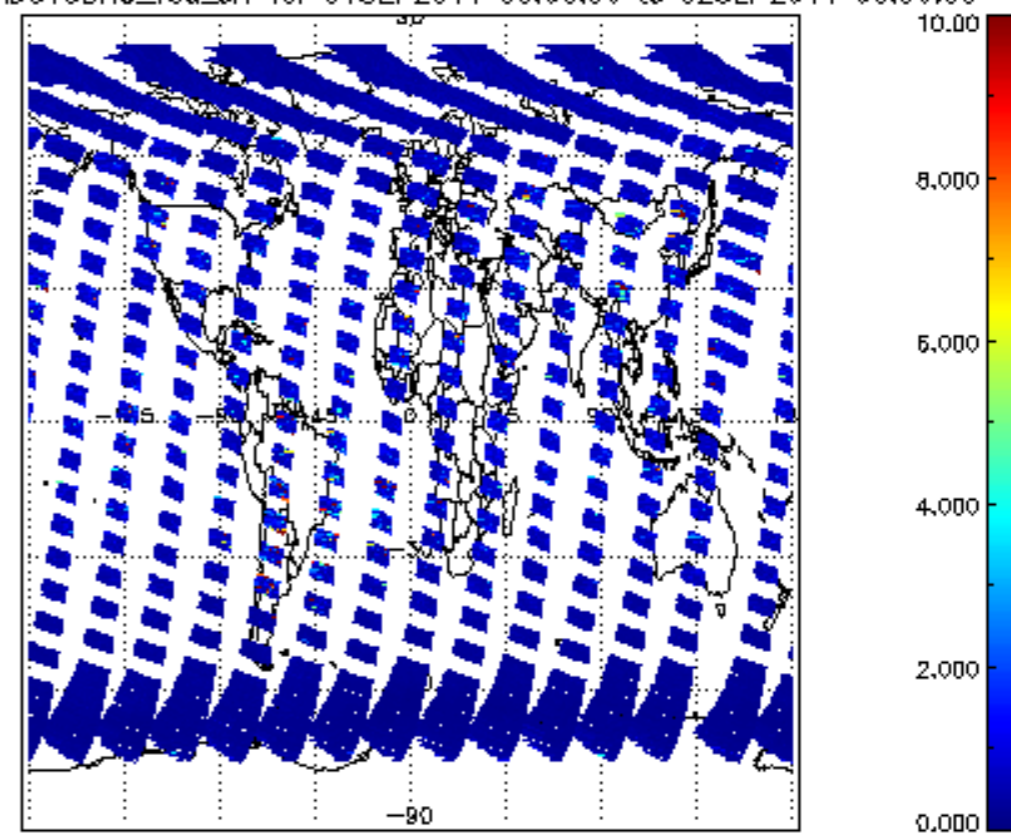




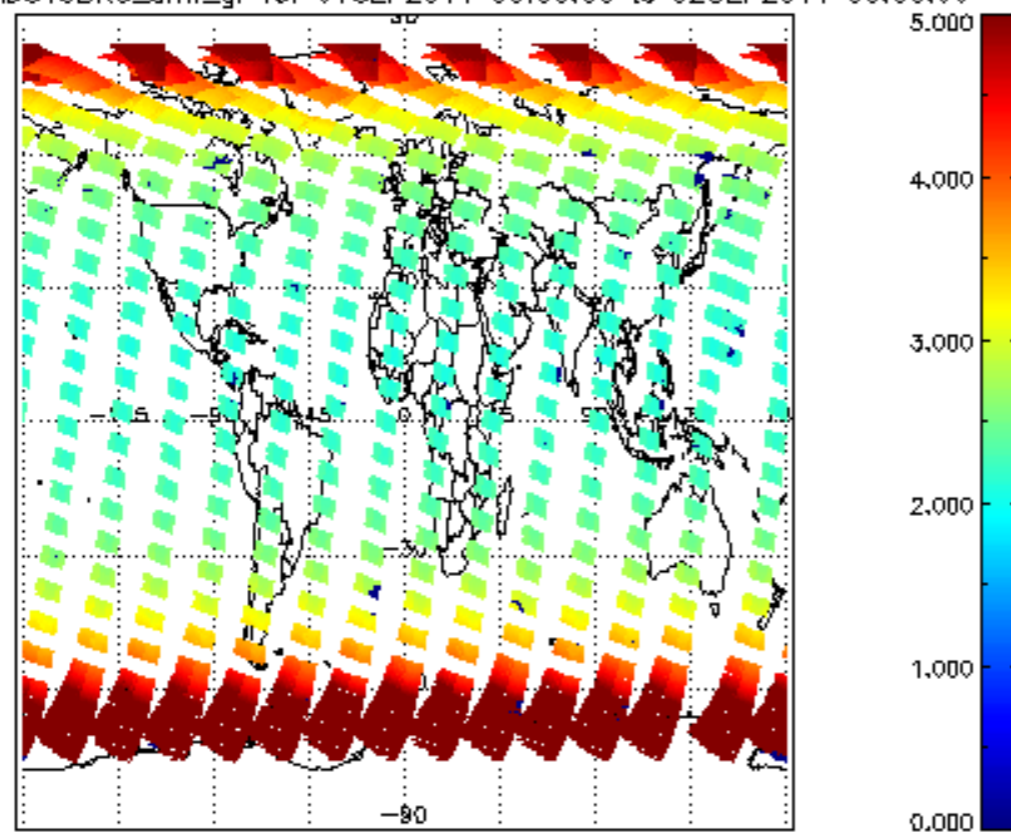
SCIOL2P\_NADUV3BRO\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



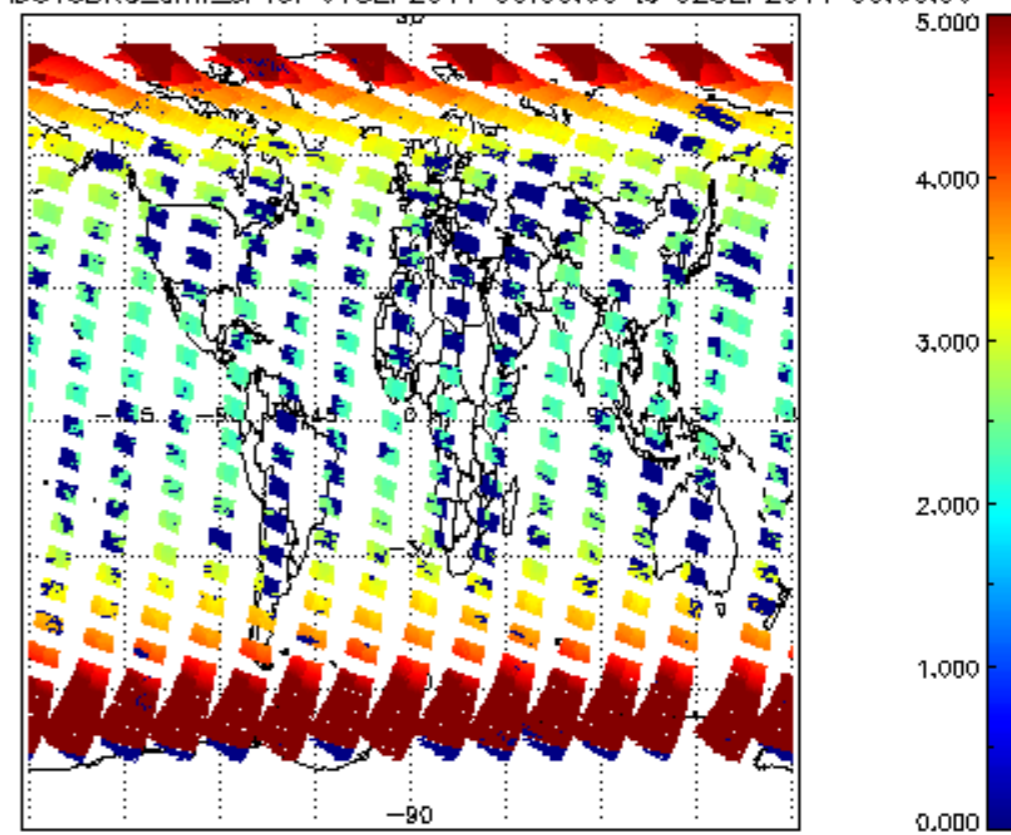
SCIOL2P\_NADUV3BRO\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

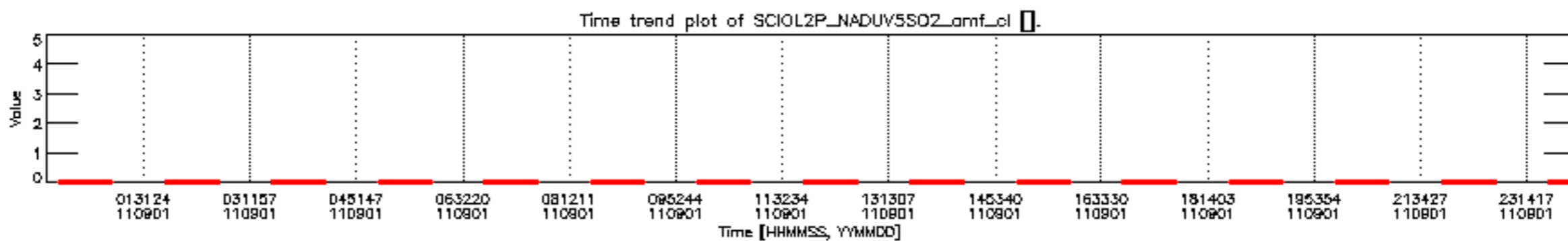
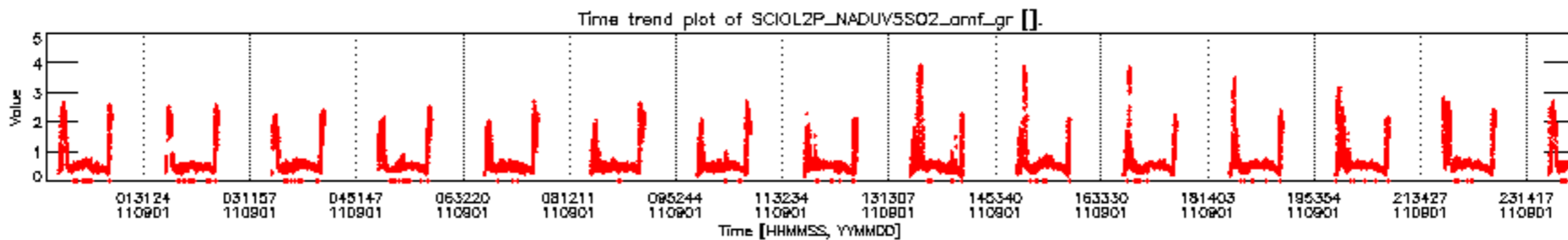
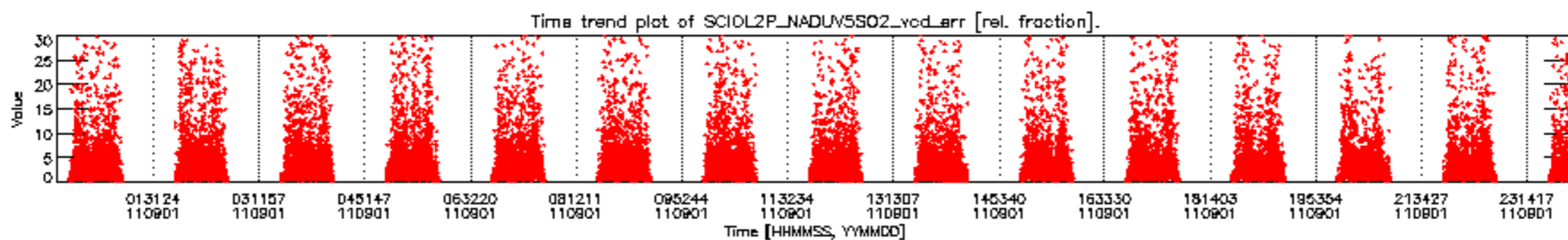
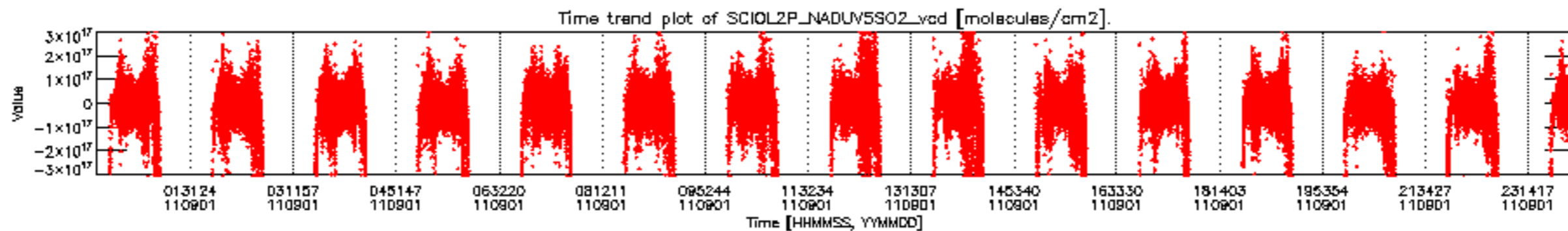


SCIOL2P\_NADUV3BRO\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

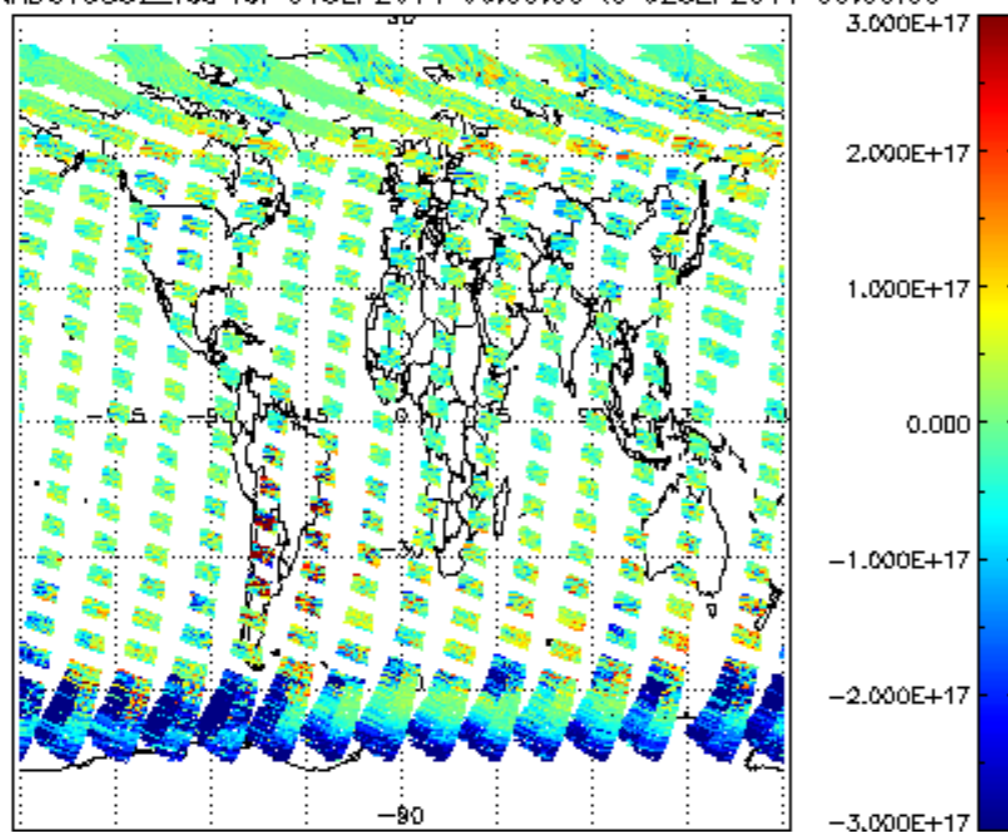


SCIOL2P\_NADUV3BRO\_amf\_sl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

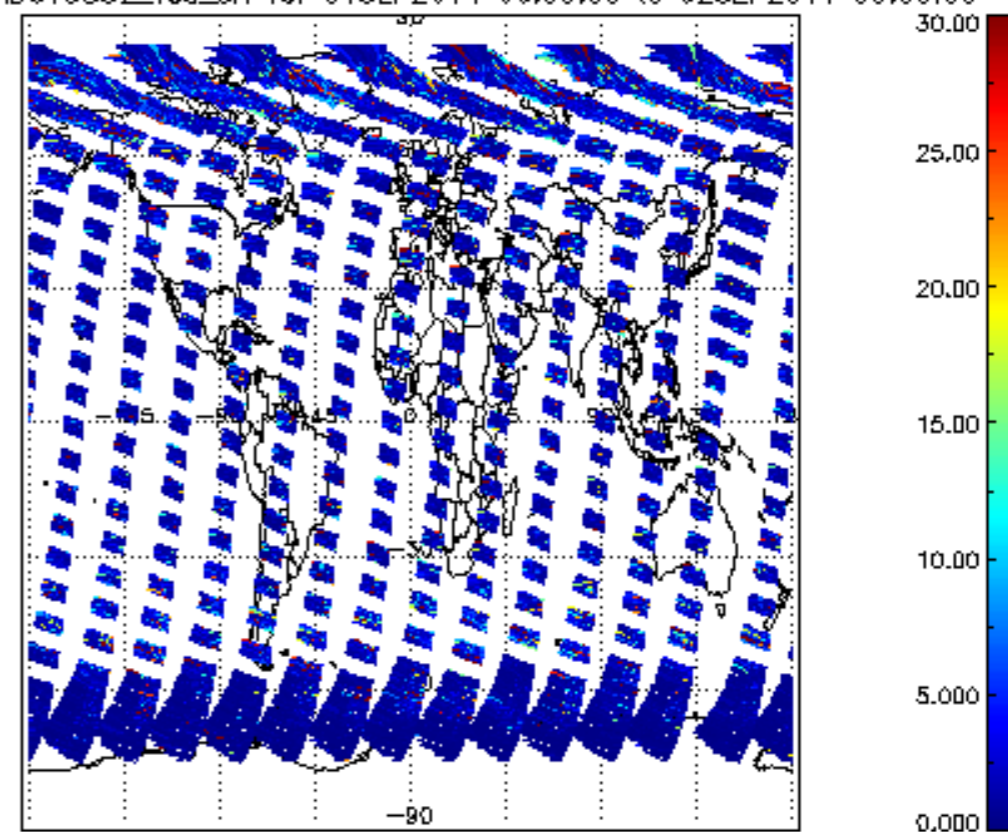




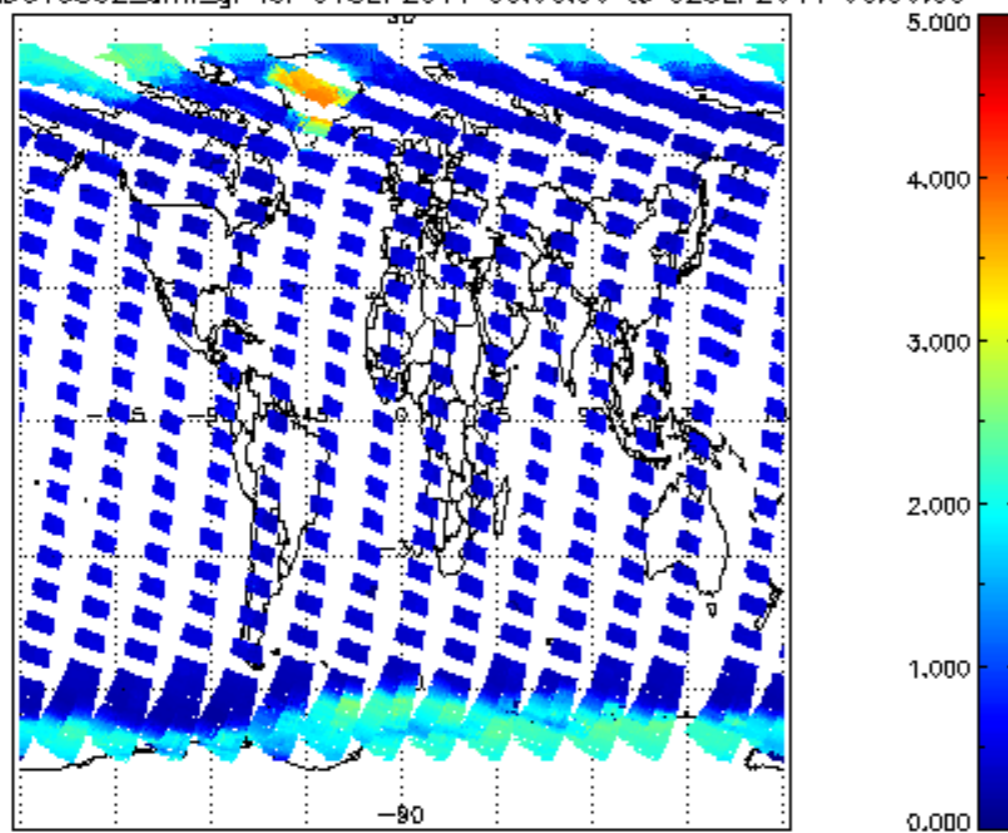
SCIOL2P\_NADUV5S02\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



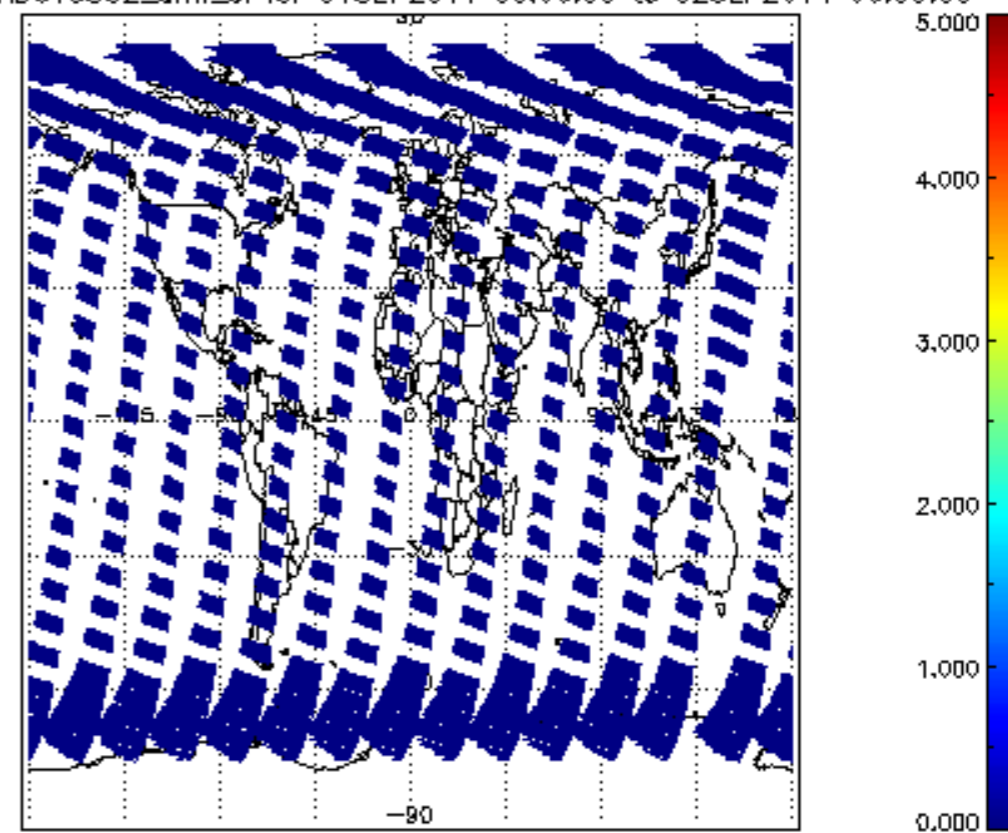
SCIOL2P\_NADUV5S02\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

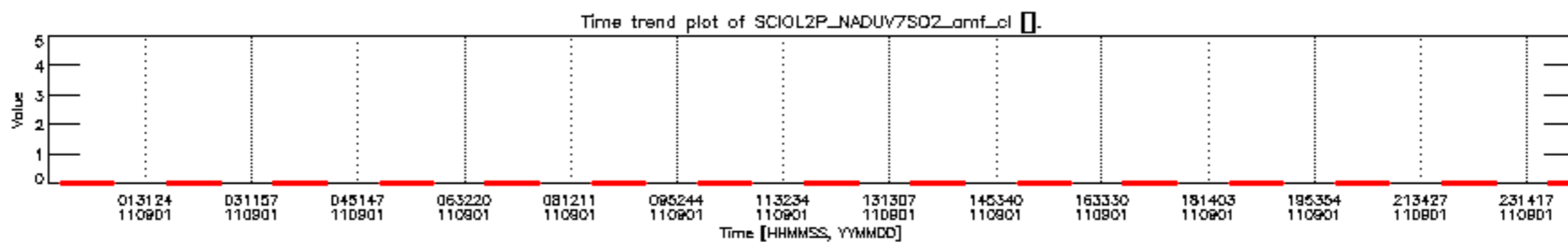
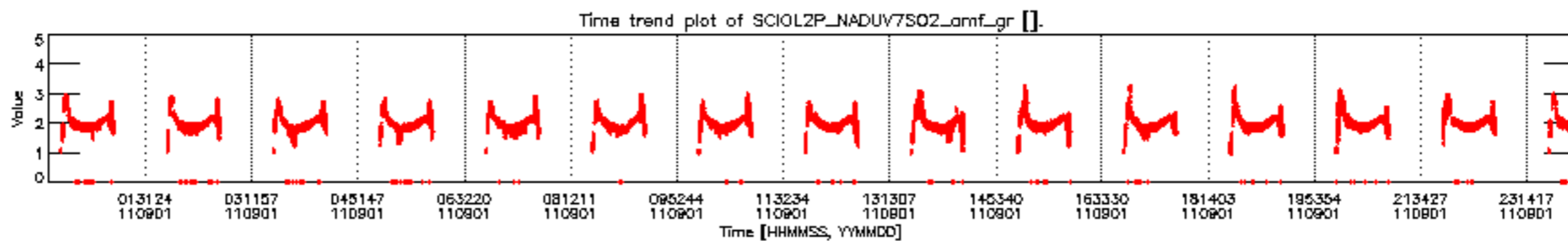
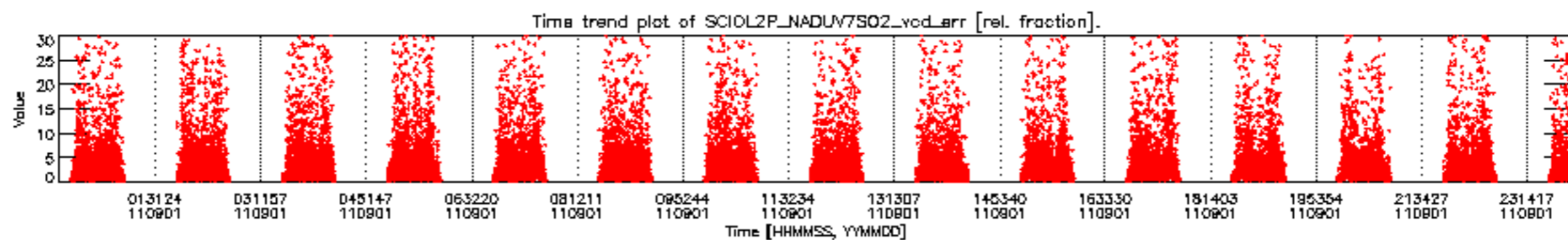
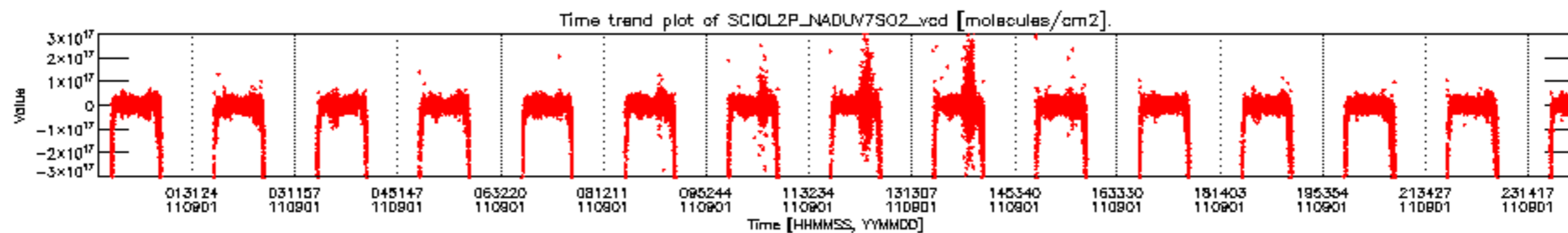


SCIOL2P\_NADUV5S02\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



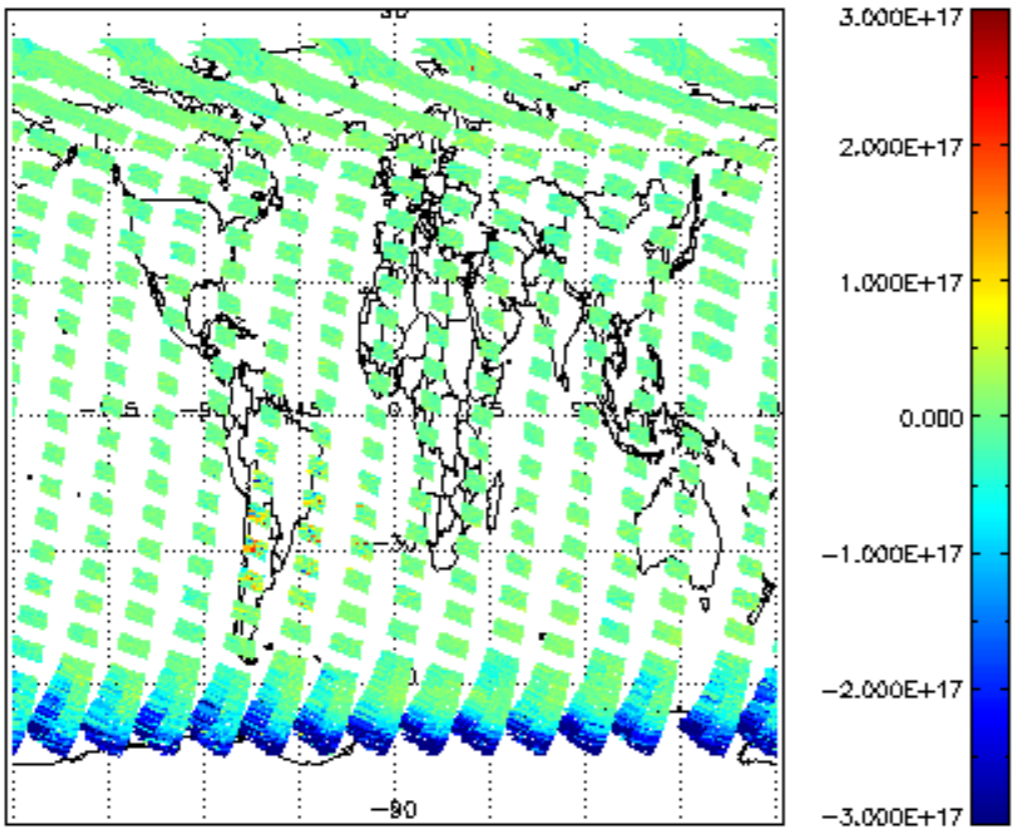
SCIOL2P\_NADUV5S02\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



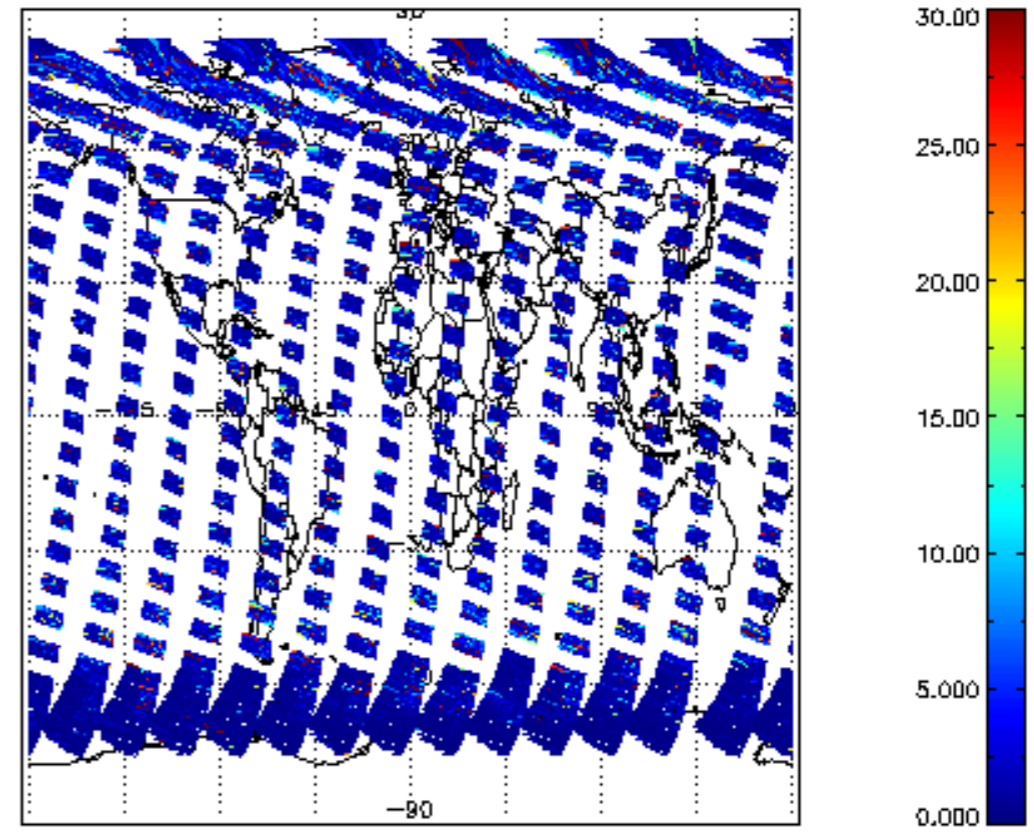




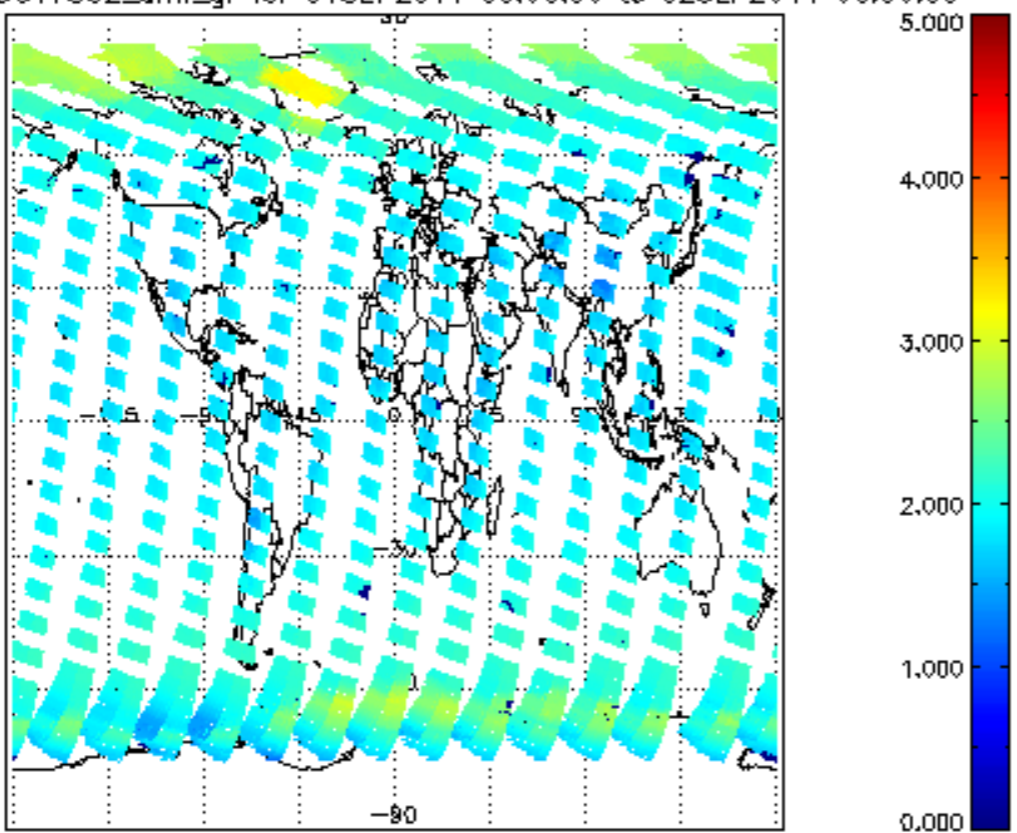
SCIOL2P\_NADUV7S02\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00



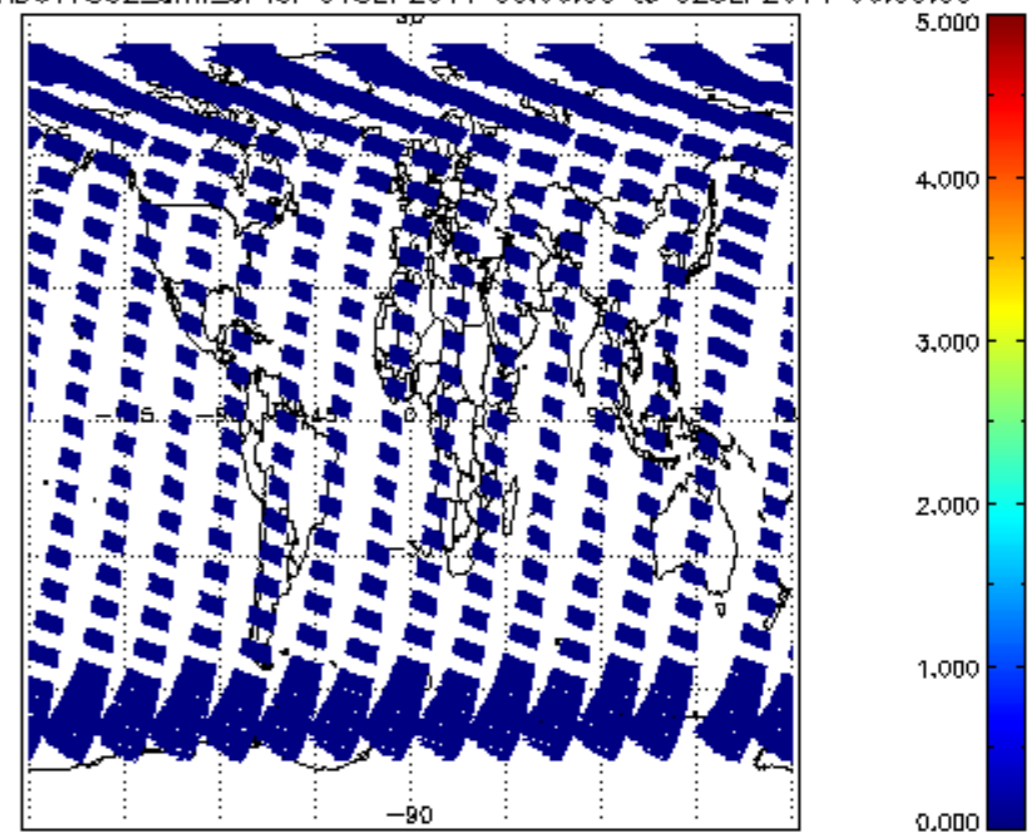
SCIOL2P\_NADUV7S02\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

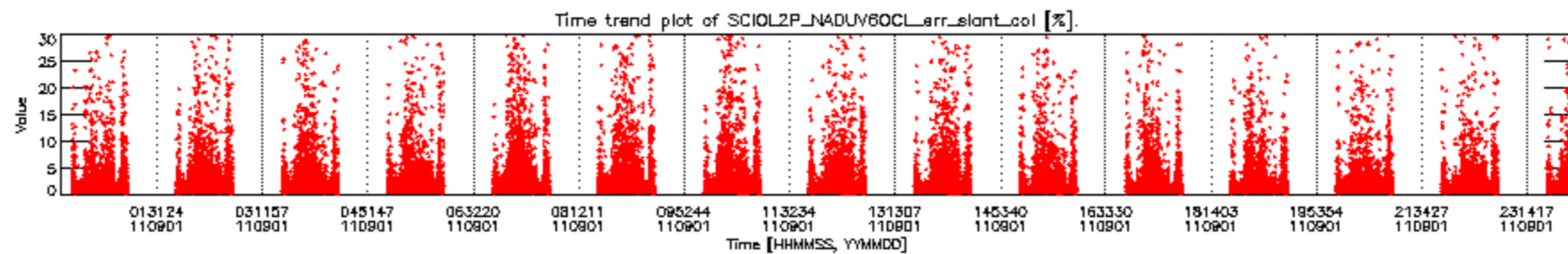
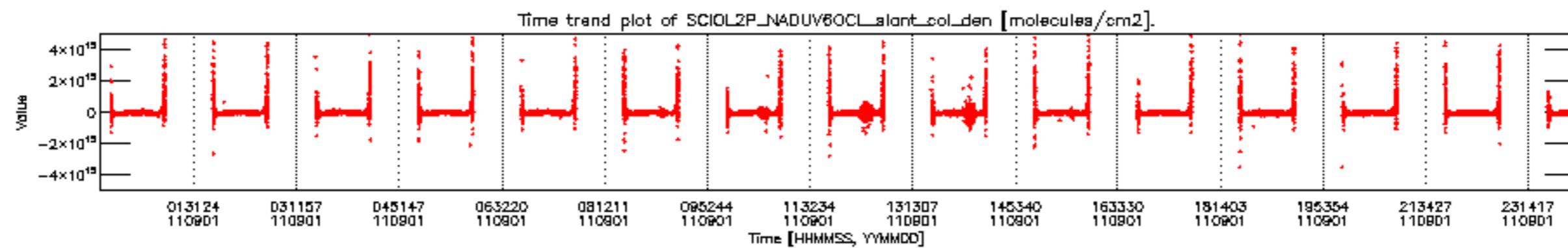


SCIOL2P\_NADUV7S02\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

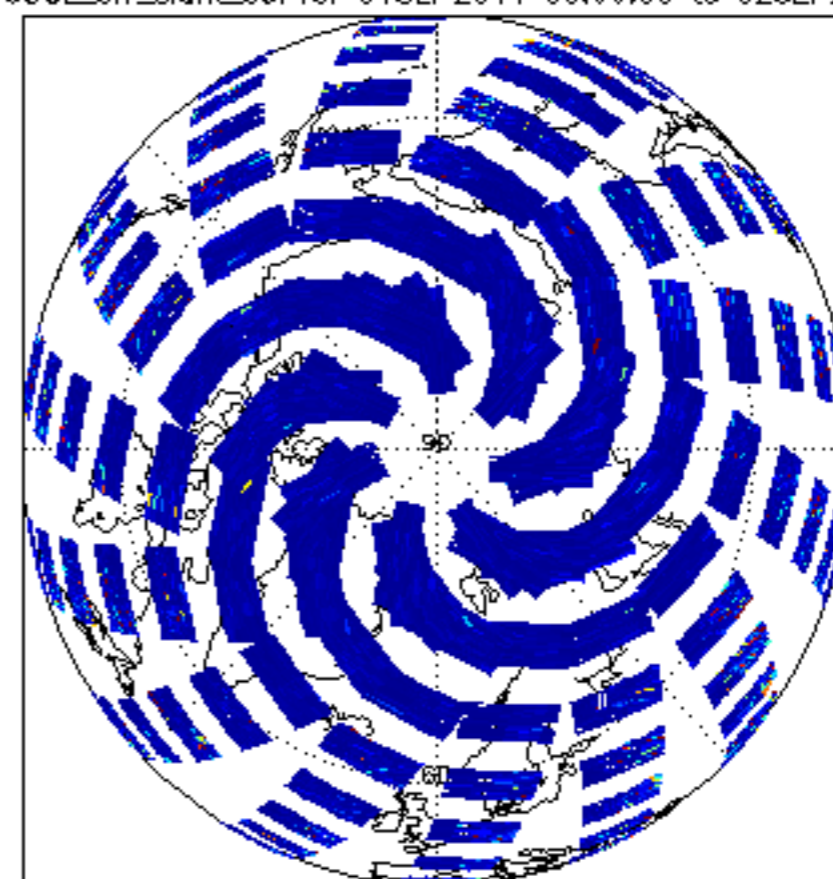
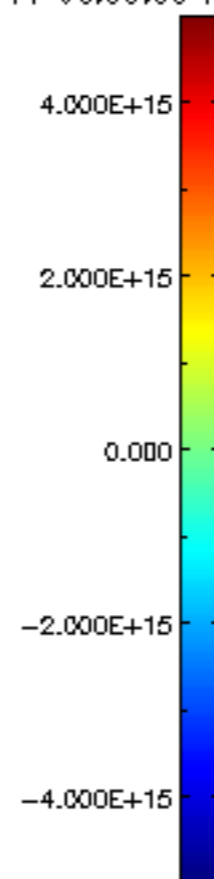
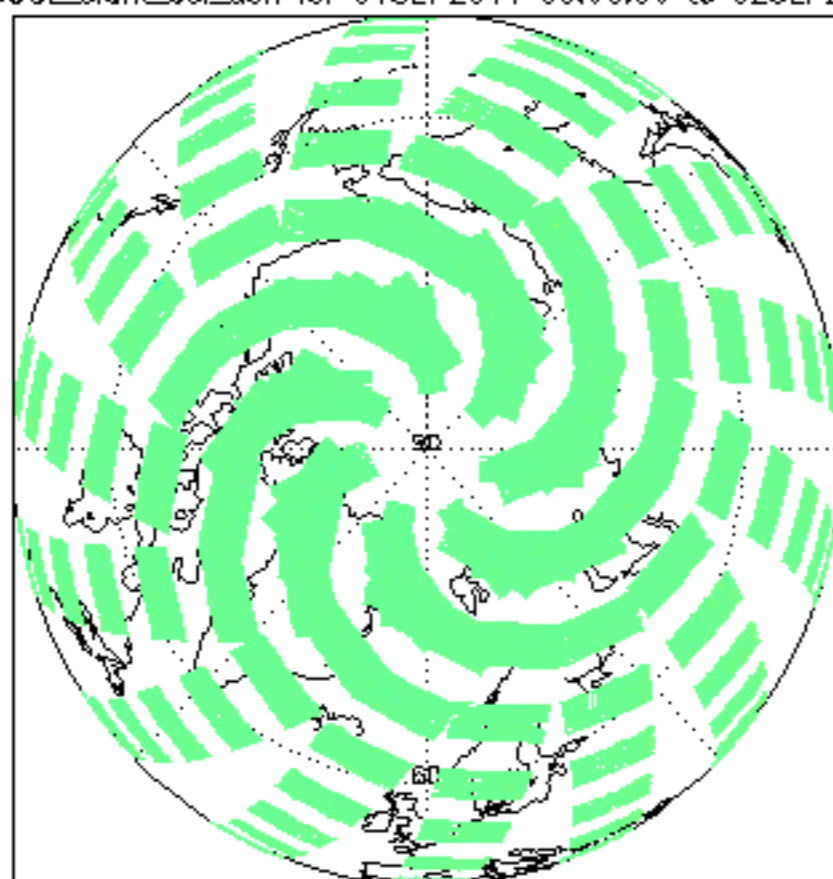


SCIOL2P\_NADUV7S02\_amf\_cl for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

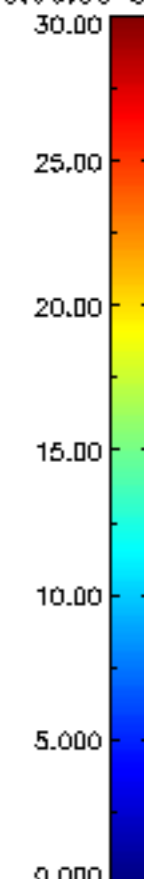
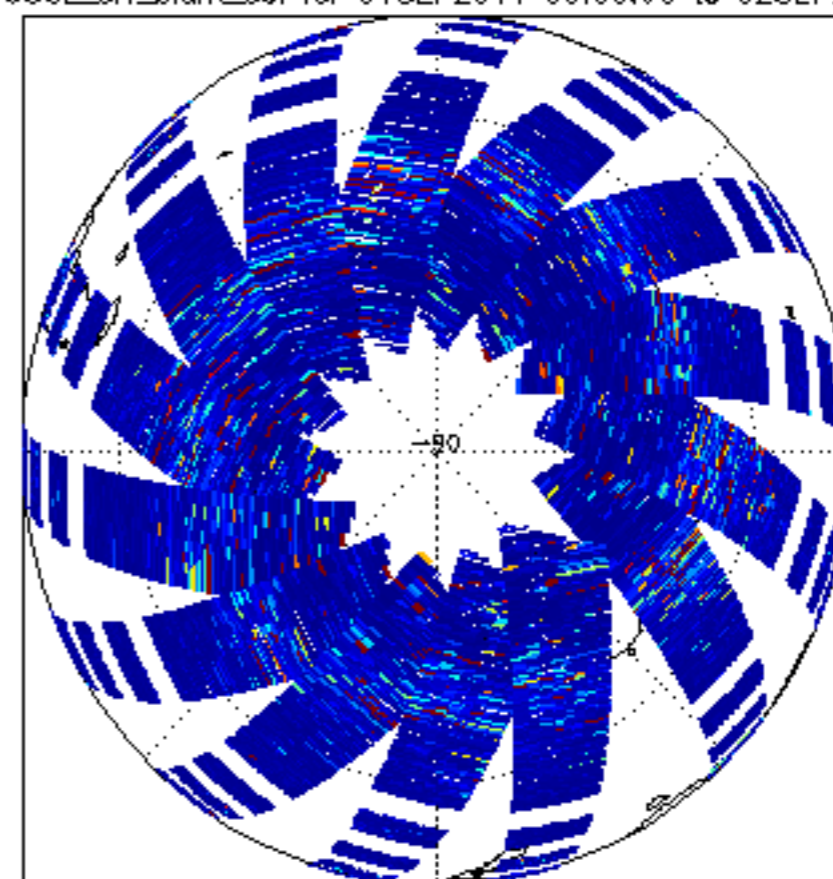
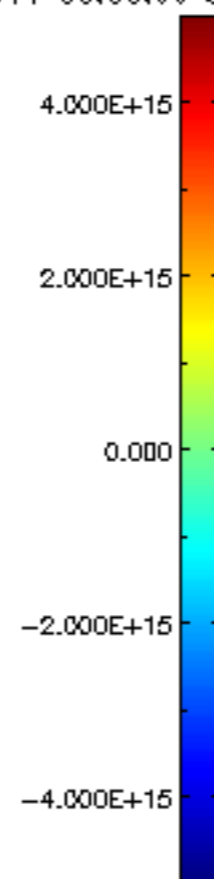
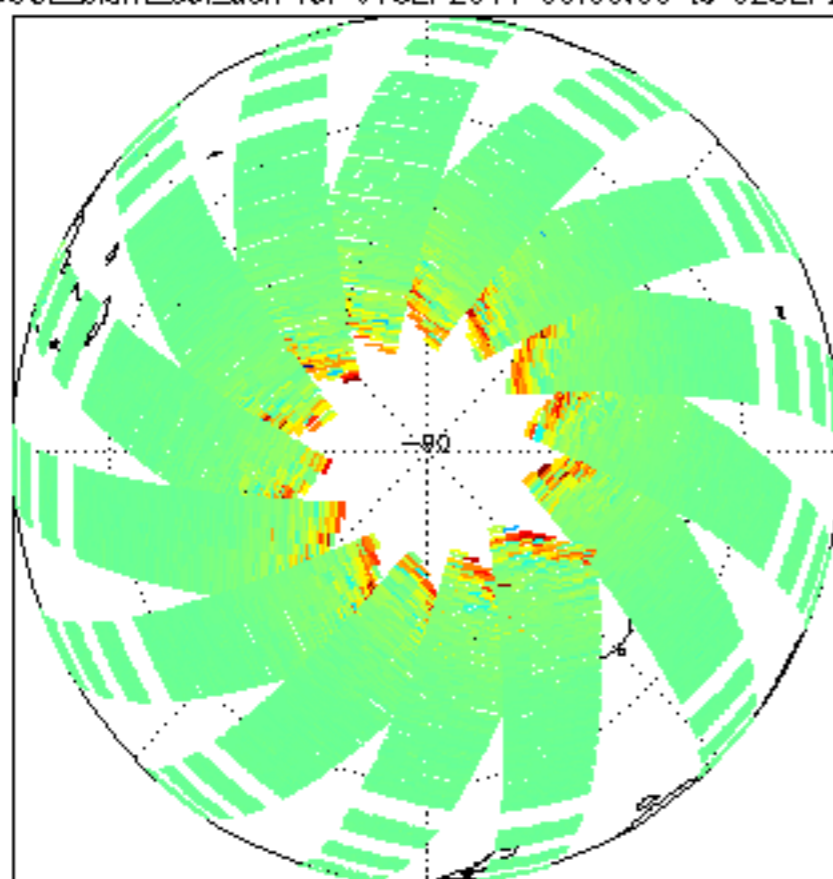


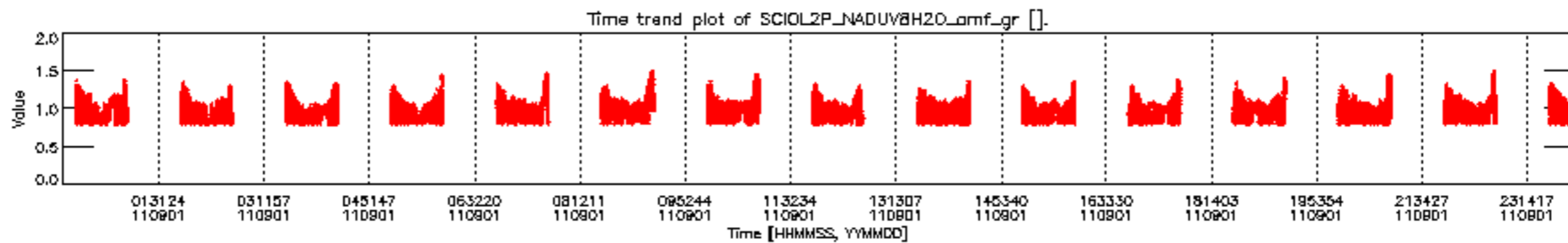
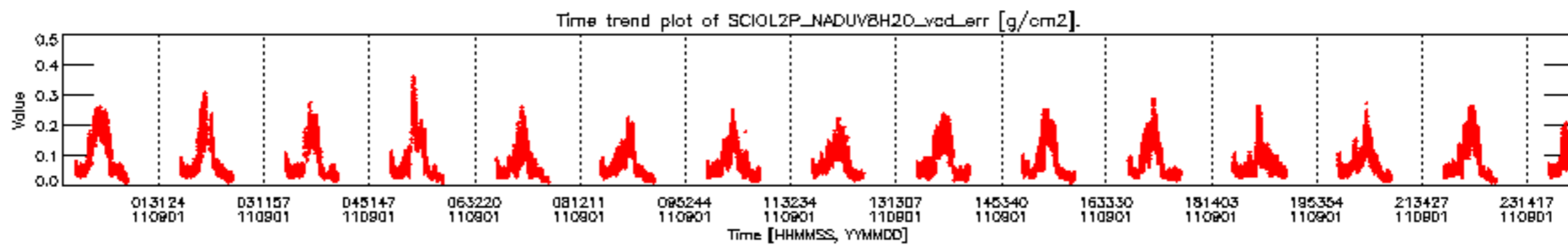
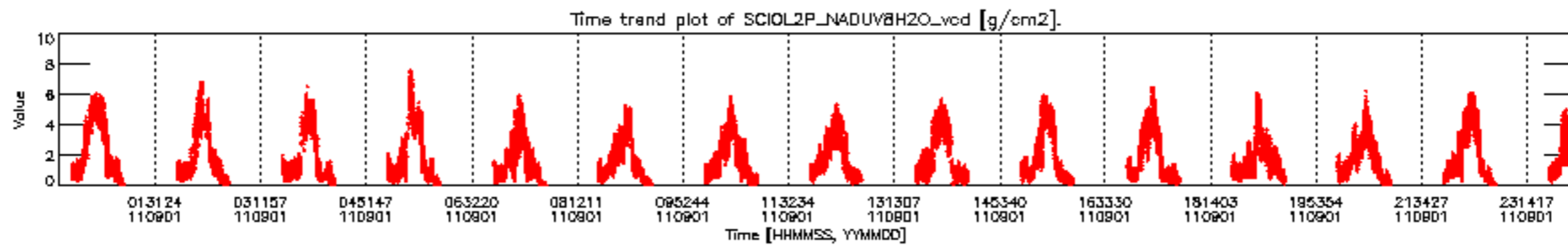


CIOL2P\_NADUV60CL\_slant\_col\_den for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 np iCIOL2P\_NADUV60CL\_err\_slant\_col for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 np

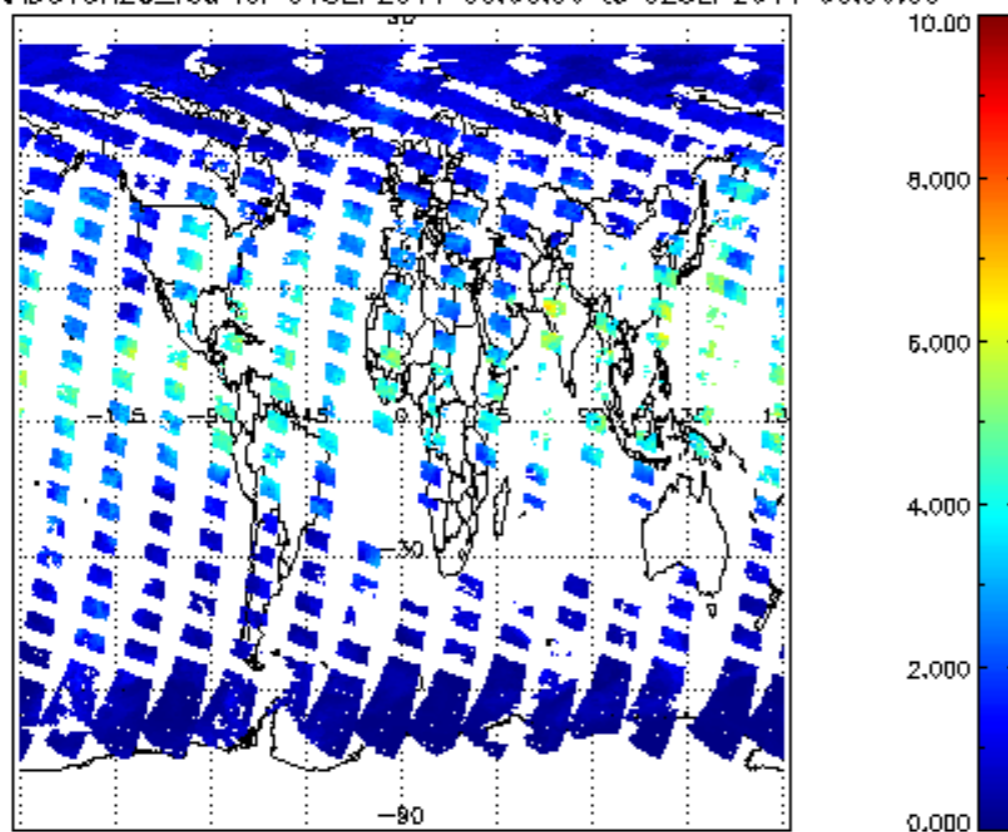


CIOL2P\_NADUV60CL\_slant\_col\_den for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 01SEP2011 00:00:00 to 02SEP2011 00:00:00 sp

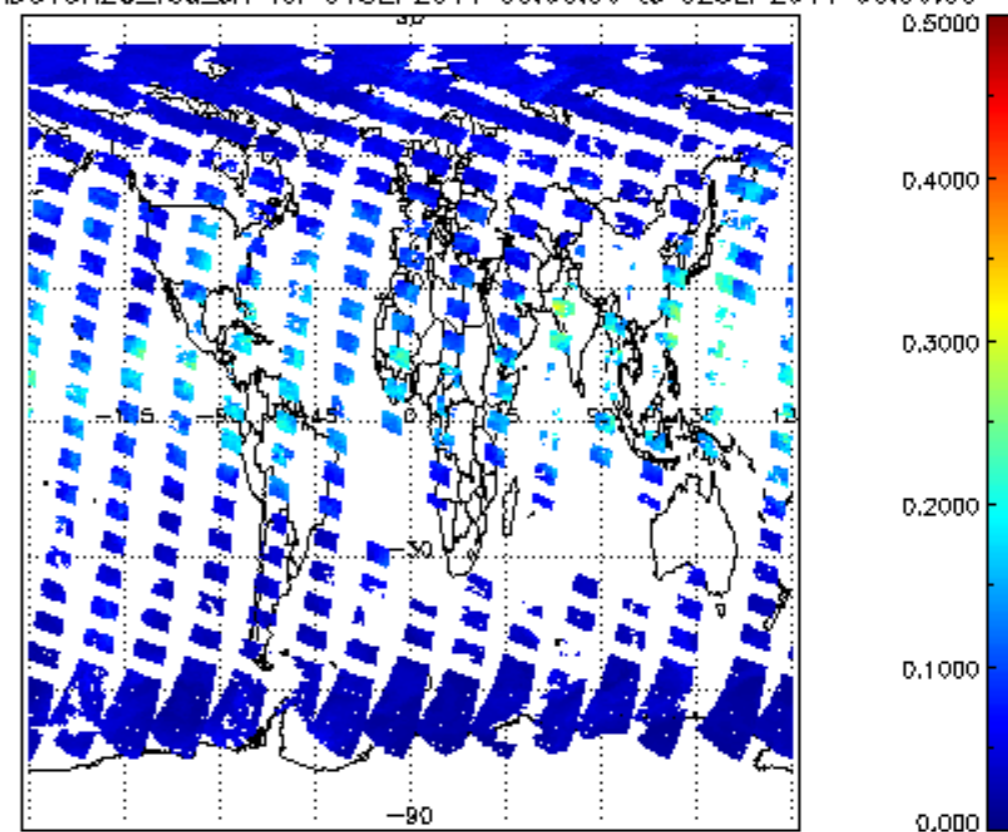




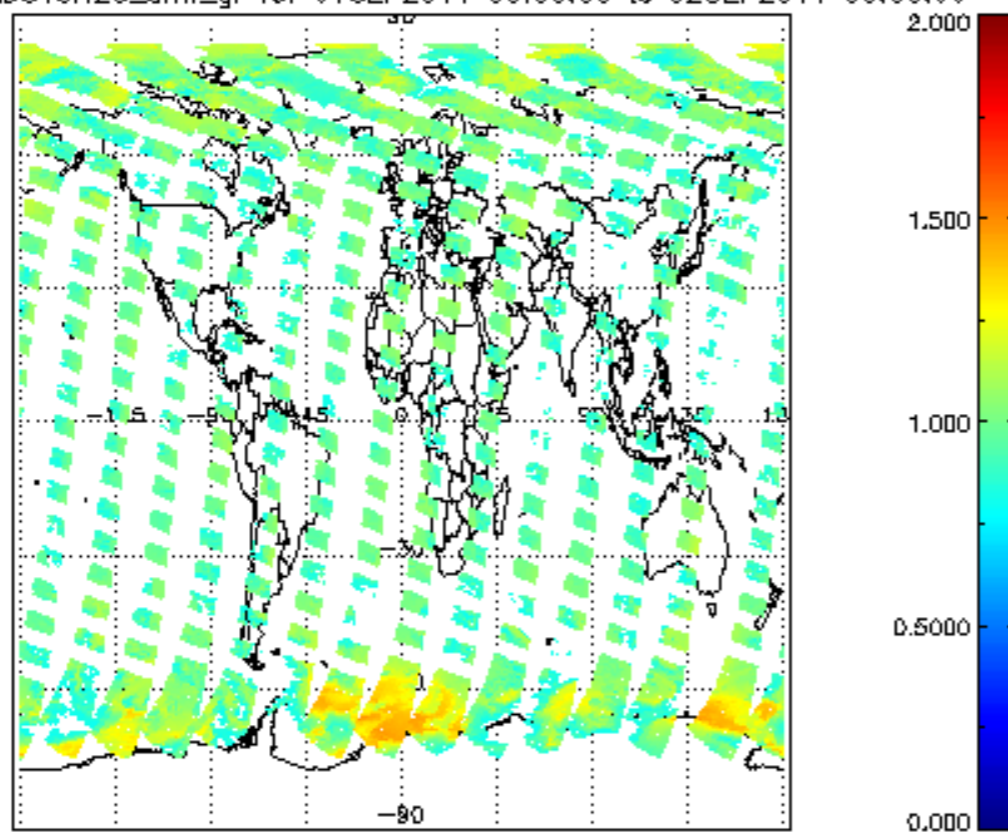
SCIOL2P\_NADUV8H2O\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

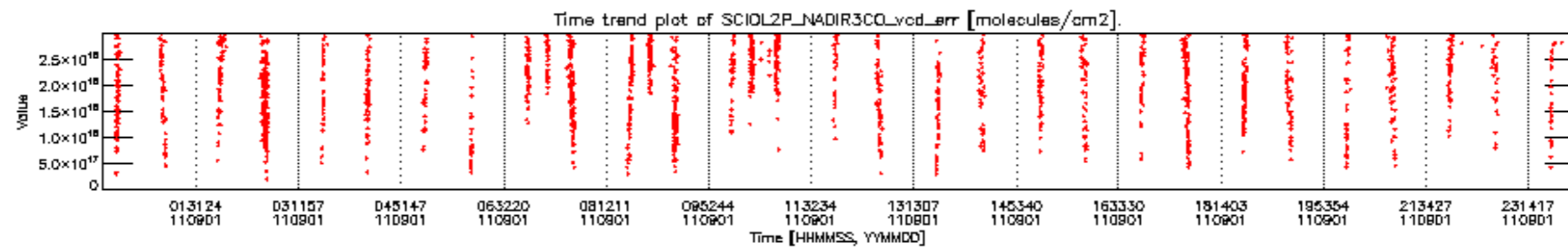
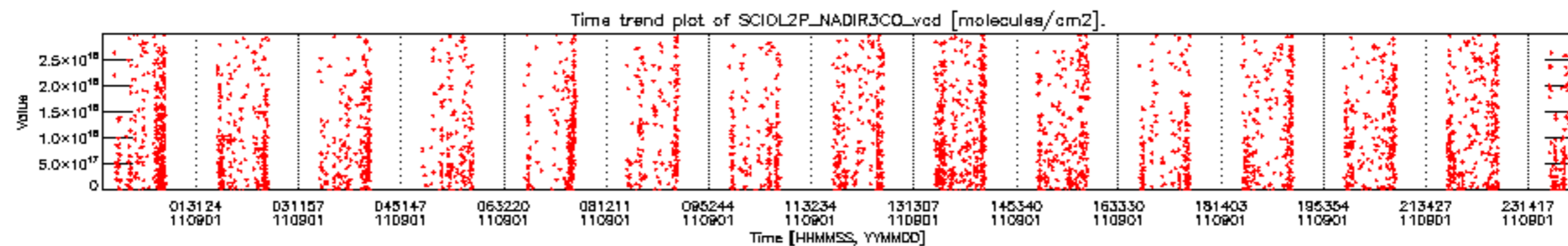


SCIOL2P\_NADUV8H2O\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

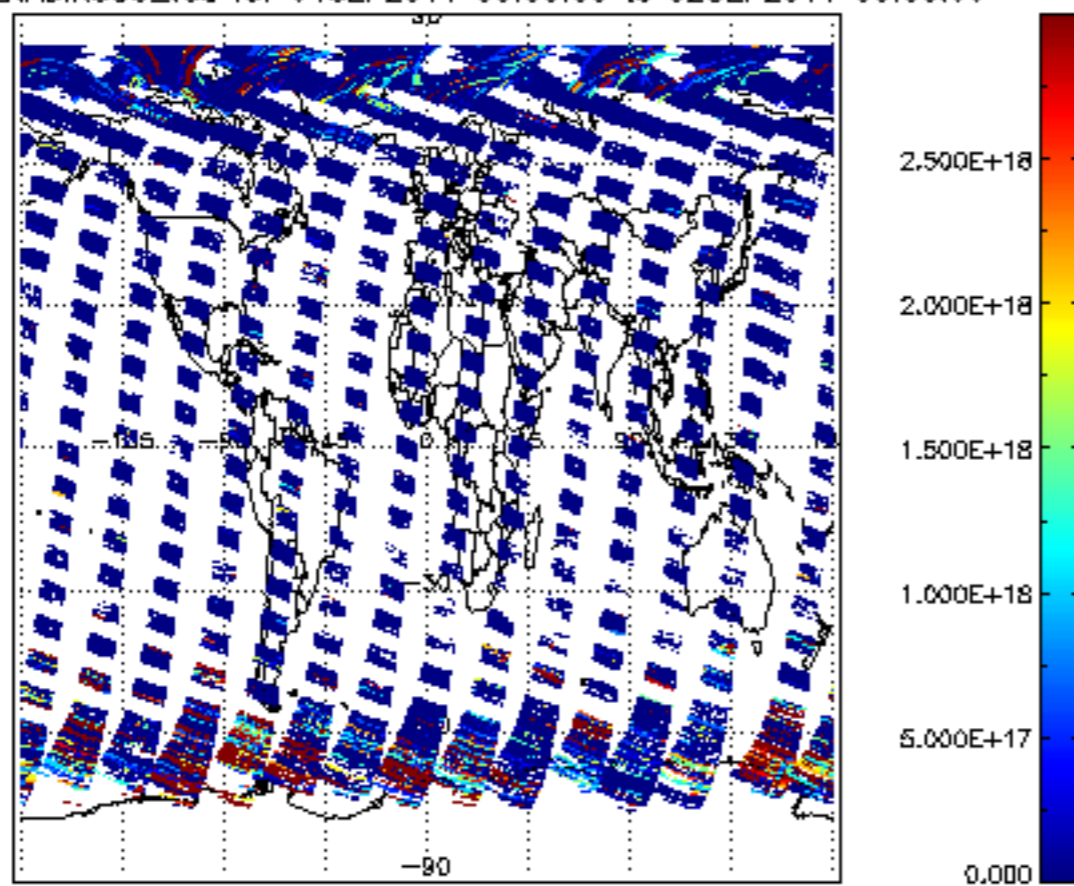


SCIOL2P\_NADUV8H2O\_amf\_gr for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

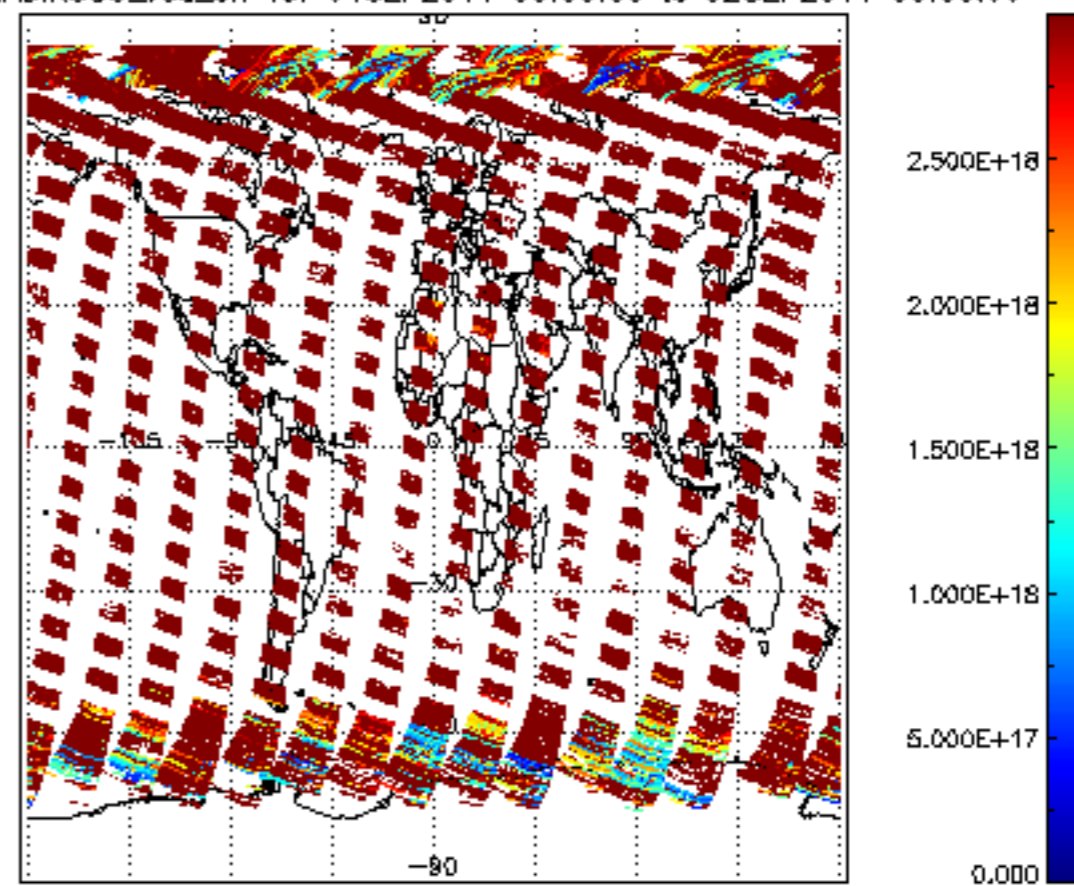




SCIOL2P\_NADIR3CO\_vcd for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

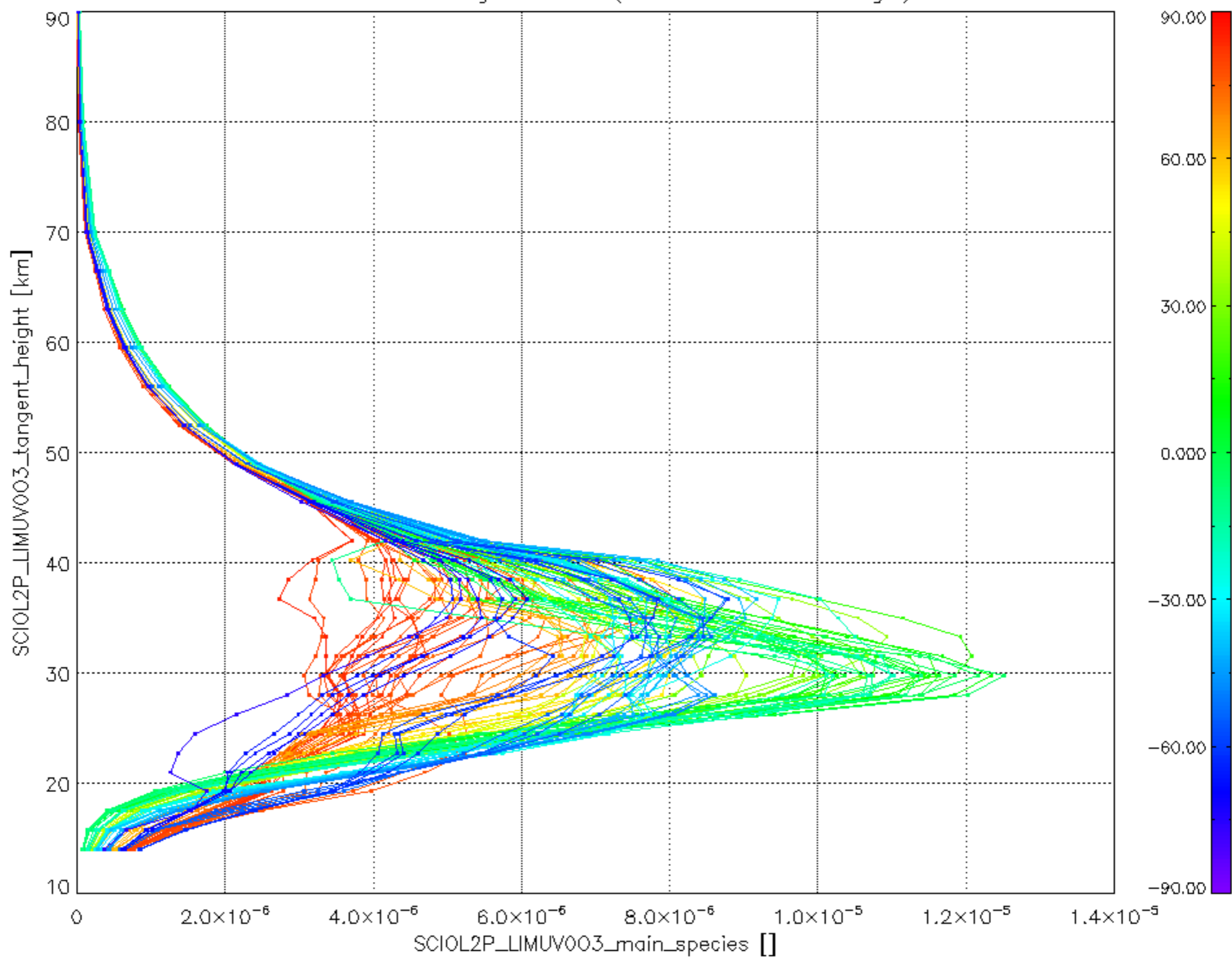


SCIOL2P\_NADIR3CO\_vcd\_err for 01SEP2011 00:00:00 to 02SEP2011 00:00:00

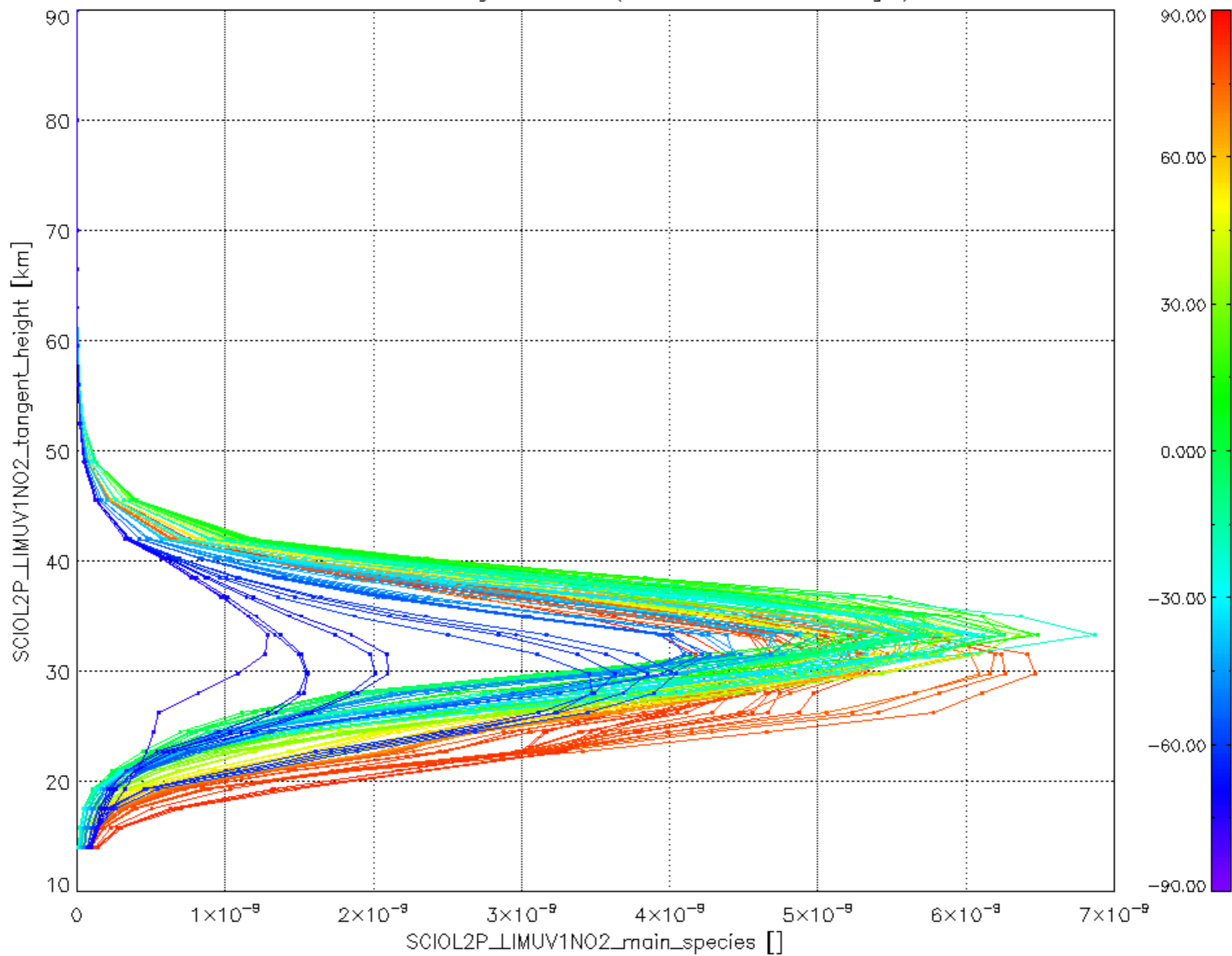




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

