

## 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	26OCT2011 05:27:40
Data source version	SCIA-OL/5.02-N
Processing scope for products	20OCT2011 00:00:00 to 21OCT2011 00:00:00
Start time of first product within scope	20OCT2011 00:14:43
Stop time of last product within scope	21OCT2011 00:35:47
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__2PNDPA20111020_001443_000034613107_00389_50403_1284.N1</a>	20OCT2011 00:14:43	20OCT2011 01:12:25	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20111020_015458_000082053107_00390_50404_1283.N1</a>	20OCT2011 01:54:58	20OCT2011 04:11:44	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20111020_041147_000061193107_00392_50406_1282.N1</a>	20OCT2011 04:11:47	20OCT2011 05:53:46	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20111020_055350_000062023107_00393_50407_1281.N1</a>	20OCT2011 05:53:50	20OCT2011 07:37:12	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20111020_073716_000039243107_00394_50408_1277.N1</a>	20OCT2011 07:37:16	20OCT2011 08:42:40	0	GOOD

5	SCI_OL__2PNDPA20111020_084244_000060793107_00395_50409_1278.N1	20OCT2011 08:42:44	20OCT2011 10:24:03	0	GOOD
6	SCI_OL__2PNDPA20111020_102407_000058733107_00396_50410_1279.N1	20OCT2011 10:24:07	20OCT2011 12:02:00	0	GOOD
7	SCI_OL__2PNDPA20111020_120110_000060103107_00397_50411_1285.N1	20OCT2011 12:01:10	20OCT2011 13:41:20	0	GOOD
8	SCI_OL__2PNDPA20111020_134124_000057793107_00398_50412_1286.N1	20OCT2011 13:41:24	20OCT2011 15:17:44	0	GOOD
9	SCI_OL__2PNDPA20111020_151653_000035163107_00399_50413_1287.N1	20OCT2011 15:16:53	20OCT2011 16:15:29	0	GOOD
10	SCI_OL__2PNDPA20111020_165708_000034613107_00400_50414_1288.N1	20OCT2011 16:57:08	20OCT2011 17:54:50	0	GOOD
11	SCI_OL__2PNDPA20111020_183735_000034473107_00401_50415_1292.N1	20OCT2011 18:37:35	20OCT2011 19:35:03	0	GOOD
12	SCI_OL__2PNDPA20111020_201750_000034613107_00402_50416_1293.N1	20OCT2011 20:17:50	20OCT2011 21:15:32	0	GOOD
13	SCI_OL__2PNDPA20111020_215751_000035163107_00402_50416_1294.N1	20OCT2011 21:57:51	20OCT2011 22:56:27	0	GOOD
14	SCI_OL__2PNDPA20111020_233805_000034613107_00403_50417_1295.N1	20OCT2011 23:38:05	21OCT2011 00:35:47	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: 161648

Total number of cloud data DSRs with good quality flag (=0): 161648 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	161648	0.0000	0.0000	0.0000	0.0000	0.0000	
INTEGR_TIME	161648	0.16636	0.12500	0.12500	0.25000	0.058817	s
CL_FRAC	161648	0.43792	0.42791	0.0000	1.0000	0.31997	
CL_FRAC_ERR	161648	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	161648	5.3236	4.0000	4.0000	8.0000	1.8821	
PMD_READ_CL[0]	161648	0.53293	0.0000	0.0000	8.0000	1.3342	-
PMD_READ_CL[1]	161648	1.2562	0.0000	0.0000	8.0000	2.5172	-
CL_TOP_HEIGHT	130276	4.1748	2.7132	0.0000	17.000	4.3521	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	130276	57.162	54.926	0.0000	101.00	41.081	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	161648	11100000	11100000	11100000	11100000	0.0000	
CLOUD_FLAGS	161648	11001100	11000100	11000000	11100000	3492.0	
AERO_ABSO_IND	161648	0.10253	0.0000	0.0000	6.0146	0.30538	
AERO_IND_DIAG	161648	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	161648	01010110	00000000	00000000	11000000	24446.	

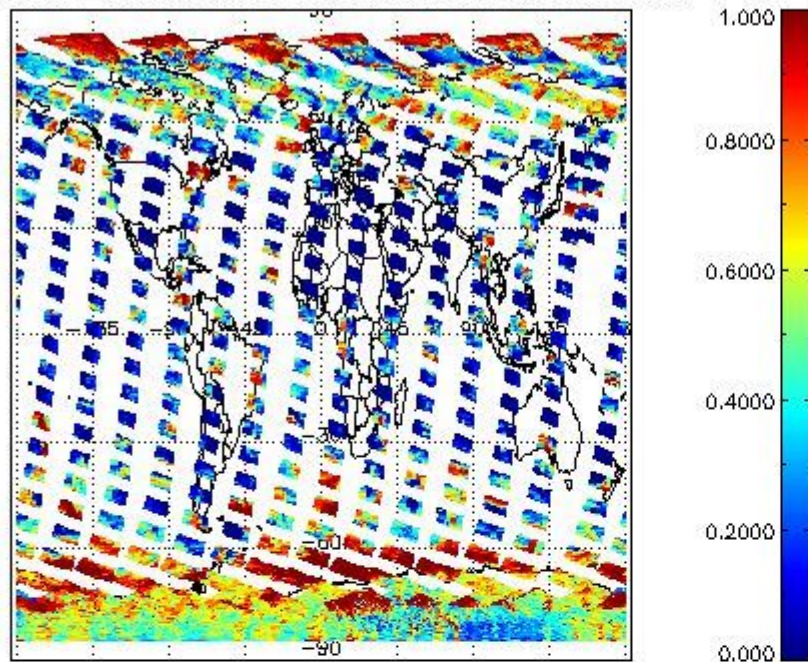
#### Time and geolocation plots:

Plots are available for the following parameters:

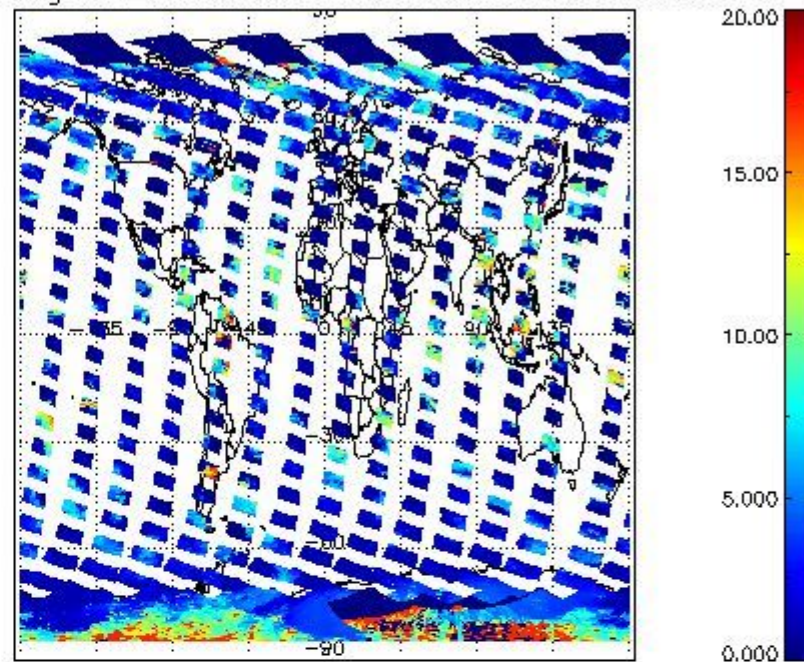
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



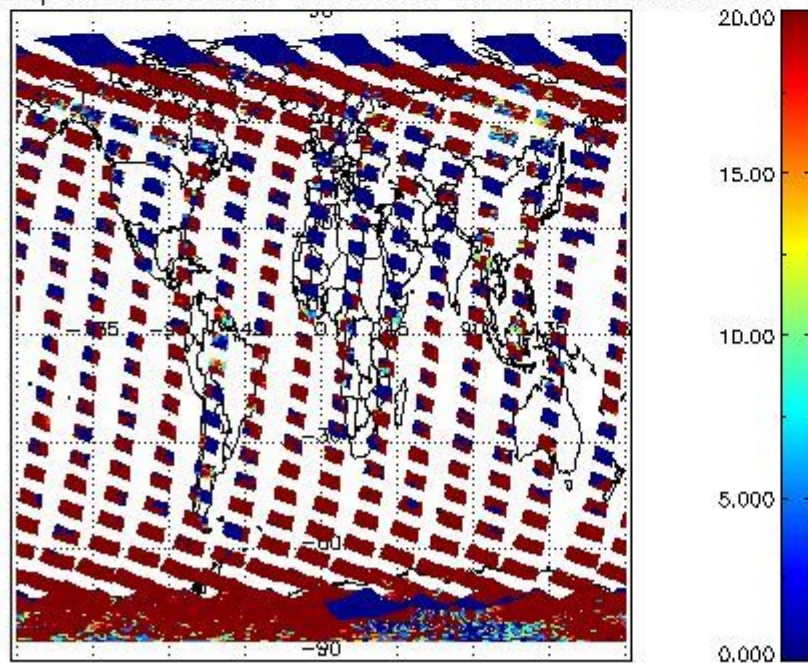
cLfrac for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



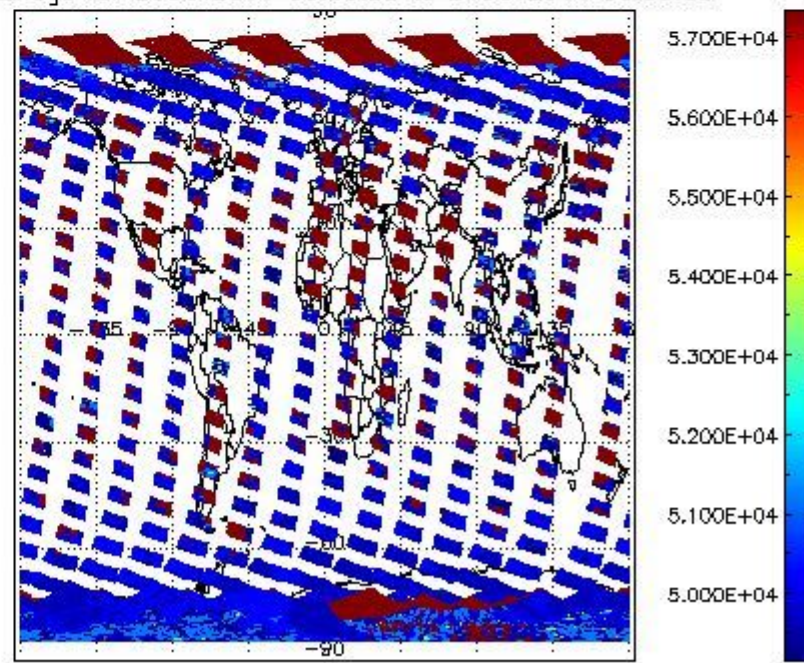
cL\_top\_height for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



cL\_opt\_depth for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



cloud\_flags for 20OCT2011 00:00:00 to 21OCT2011 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:

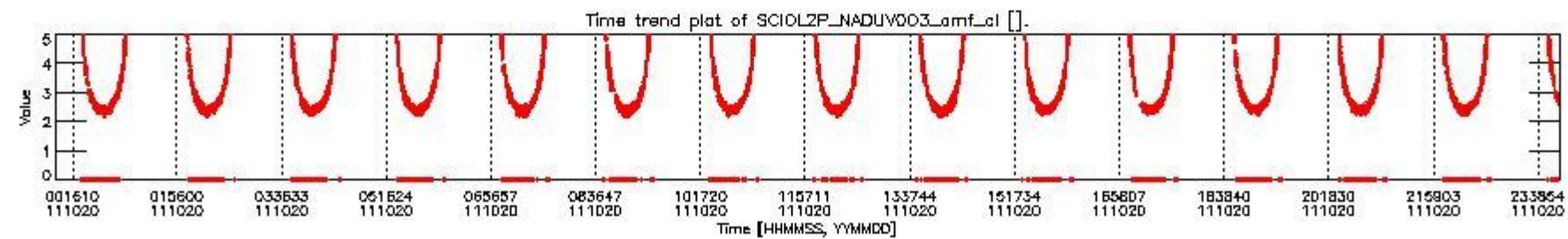
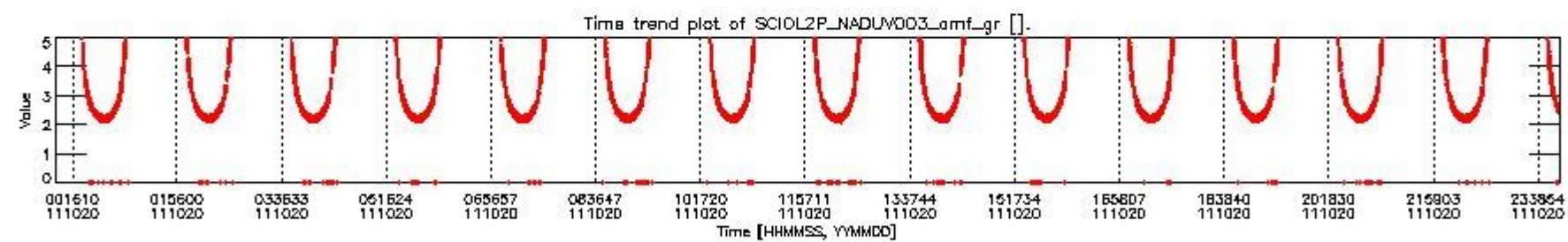
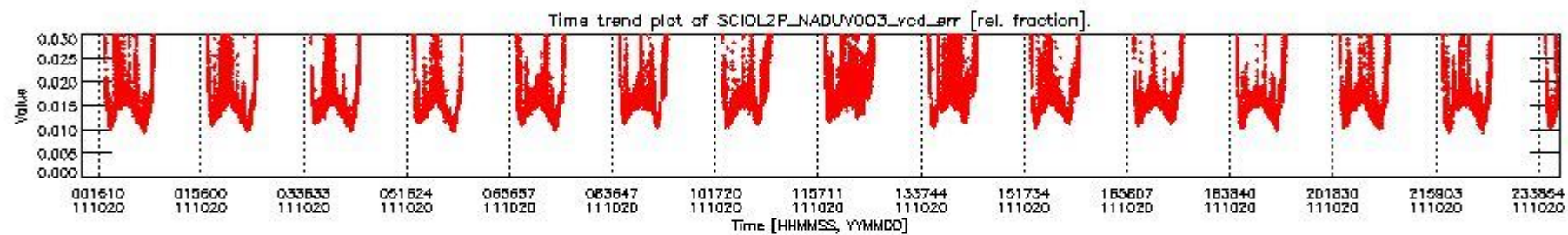
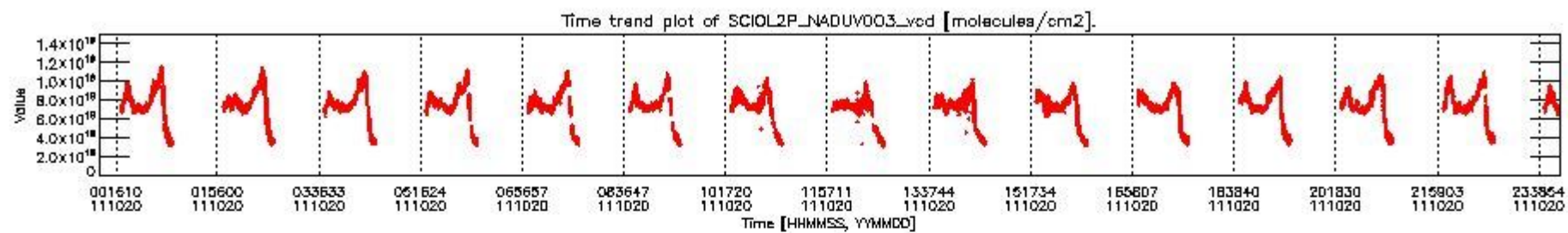
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

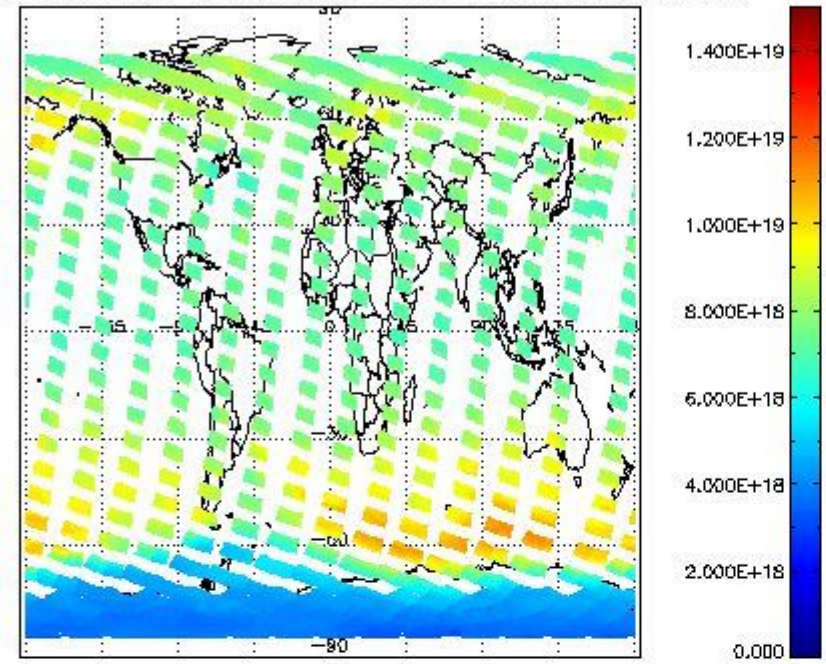
#### 2.2.2.1 O3 (UV0)



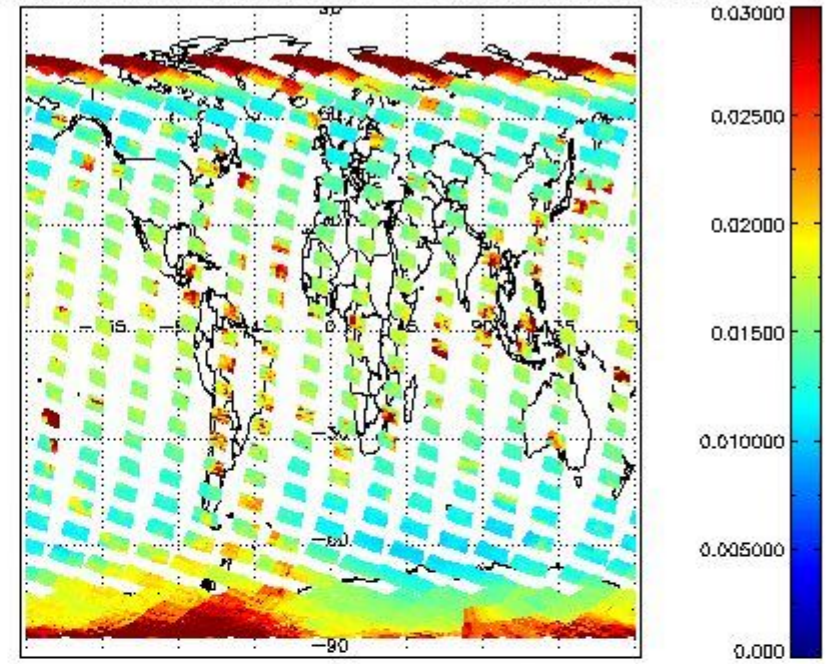




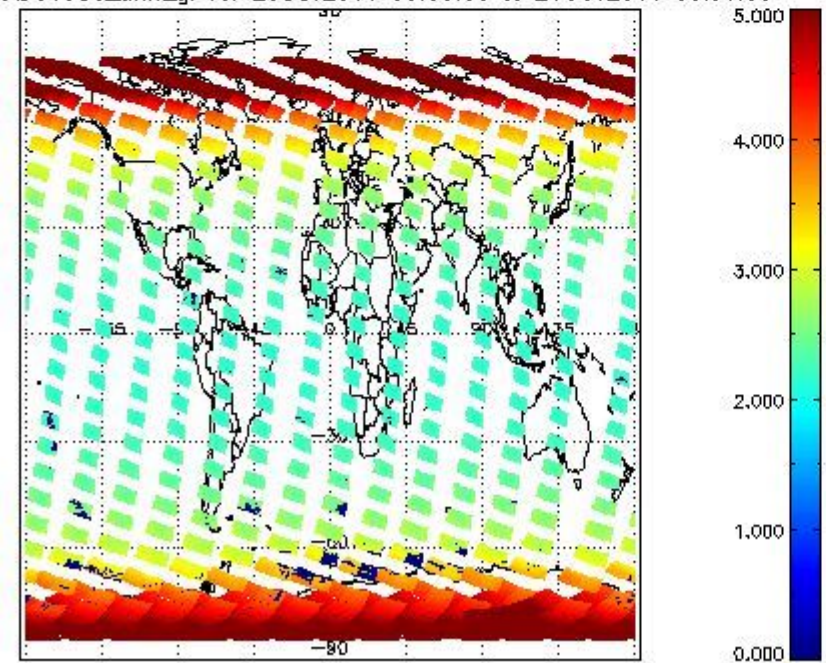
SCIOL2P\_NADUV003\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



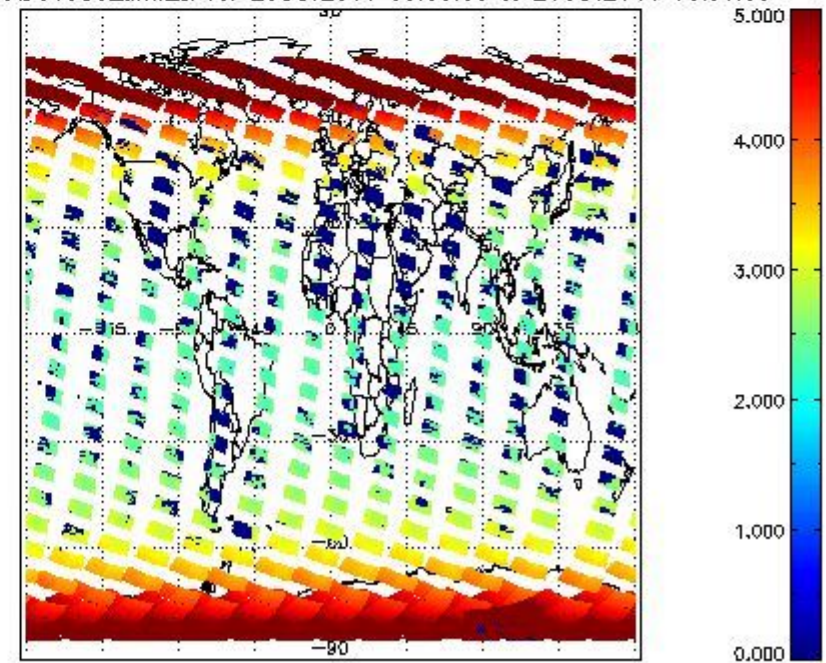
SCIOL2P\_NADUV003\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

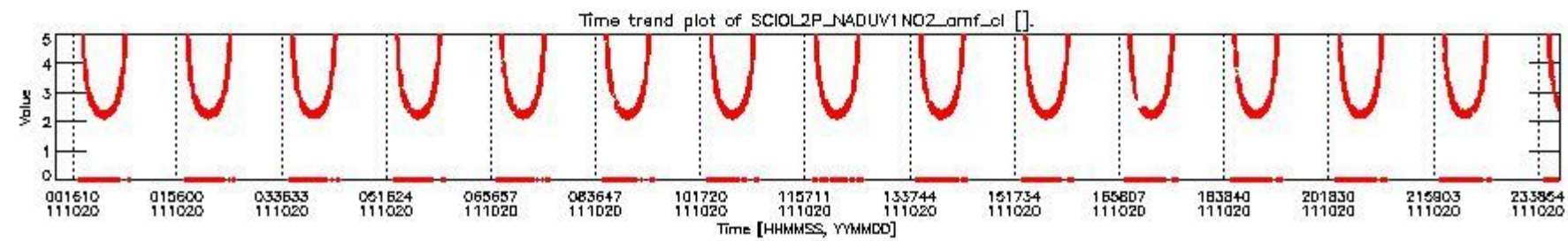
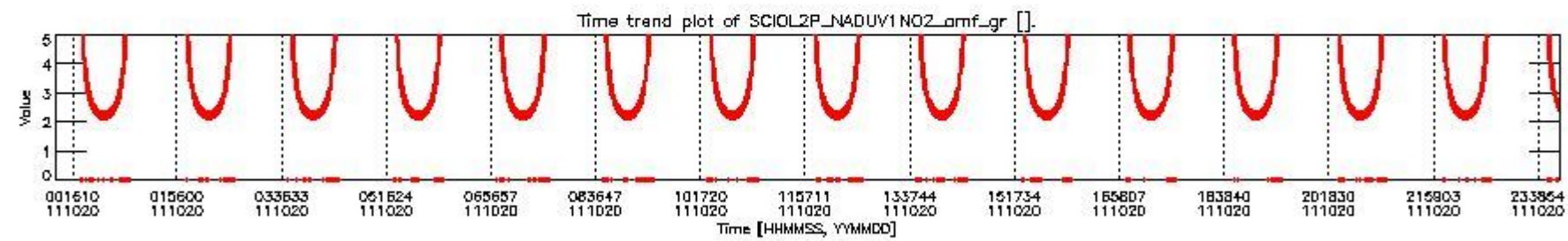
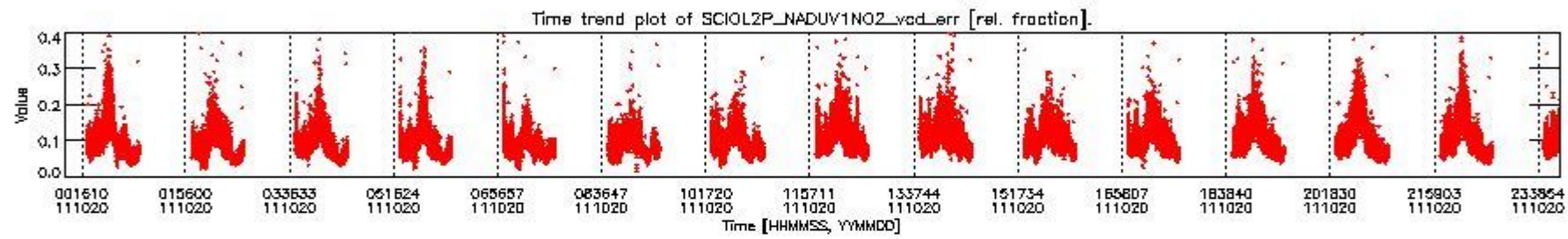
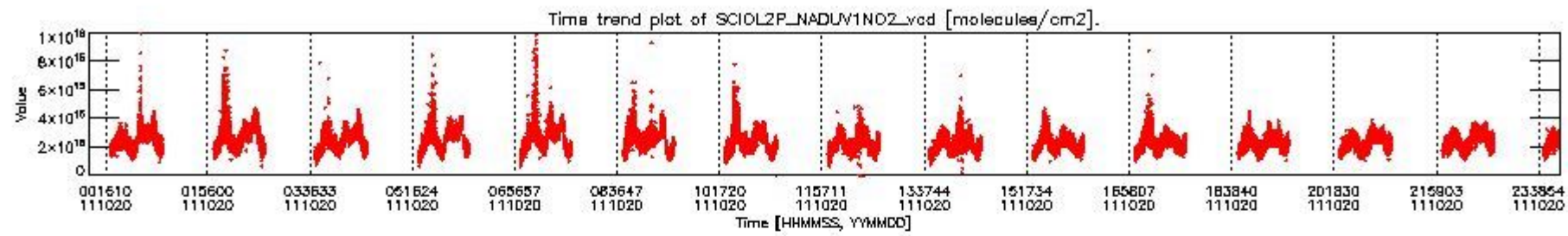


SCIOL2P\_NADUV003\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



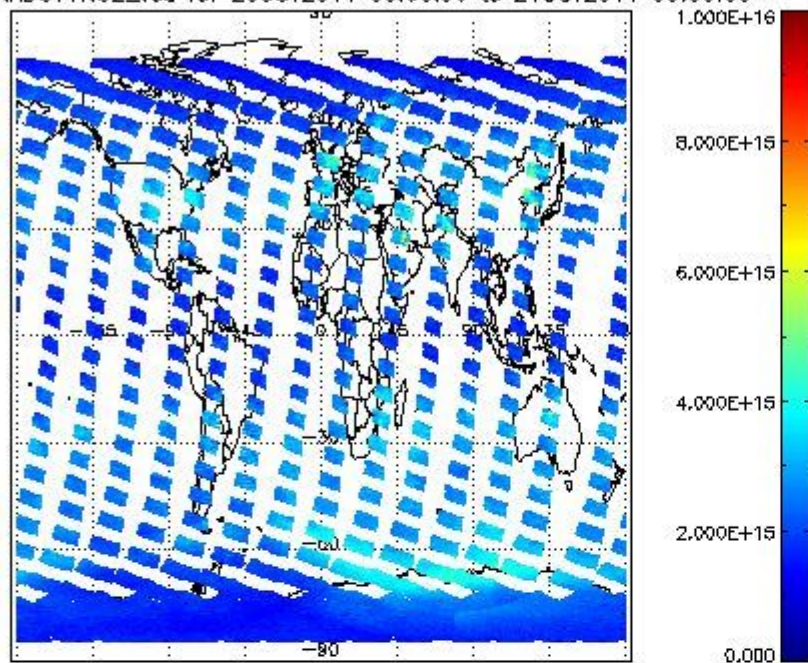
2.2.2.2 NO2 (UV1)



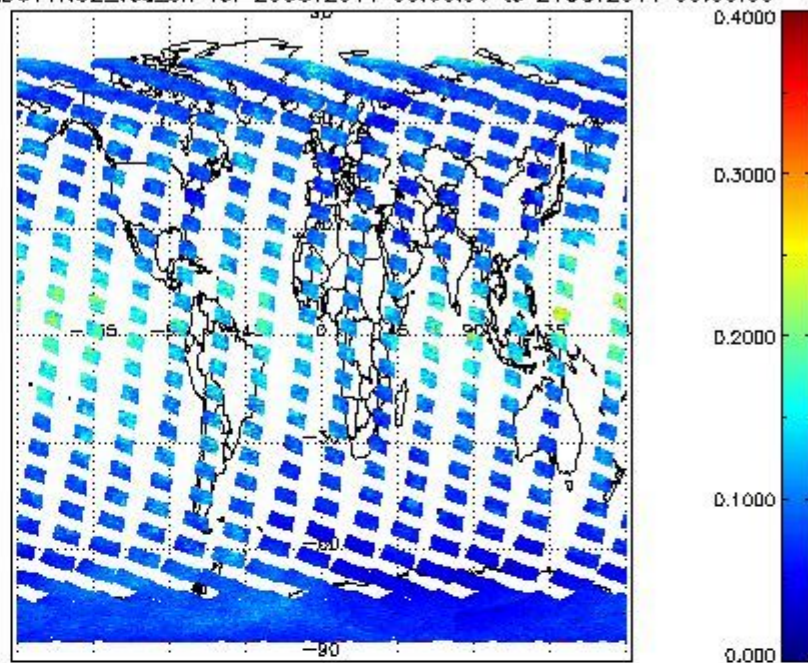




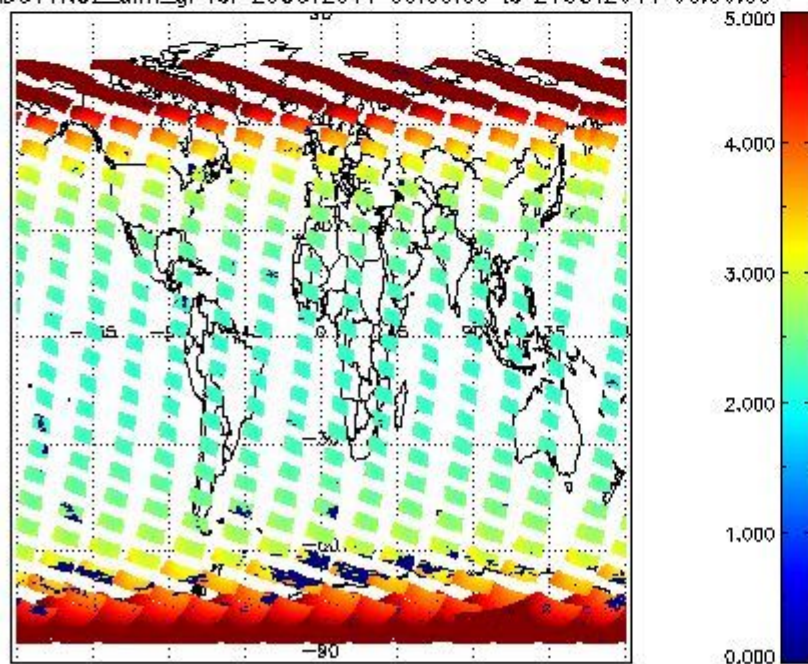
SCIOL2P\_NADUV1NO2\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



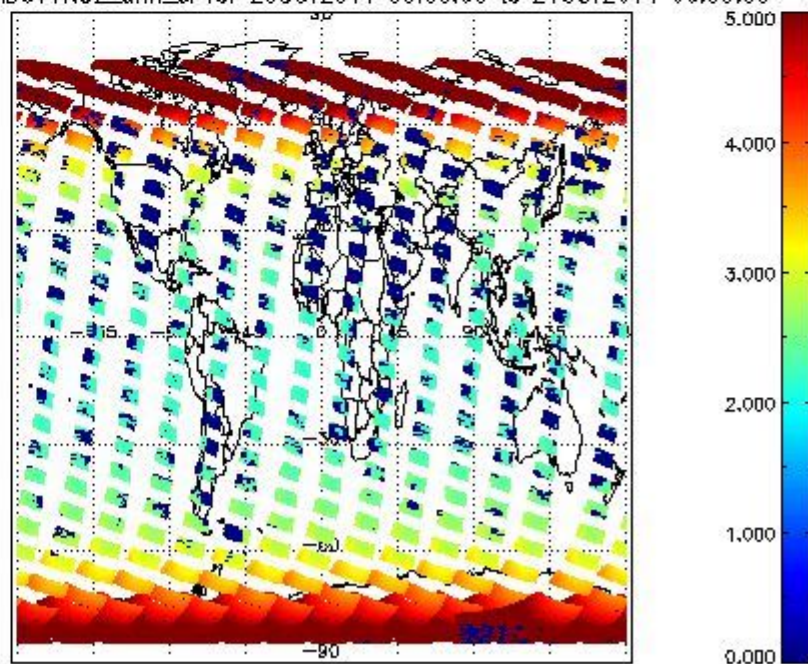
SCIOL2P\_NADUV1NO2\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

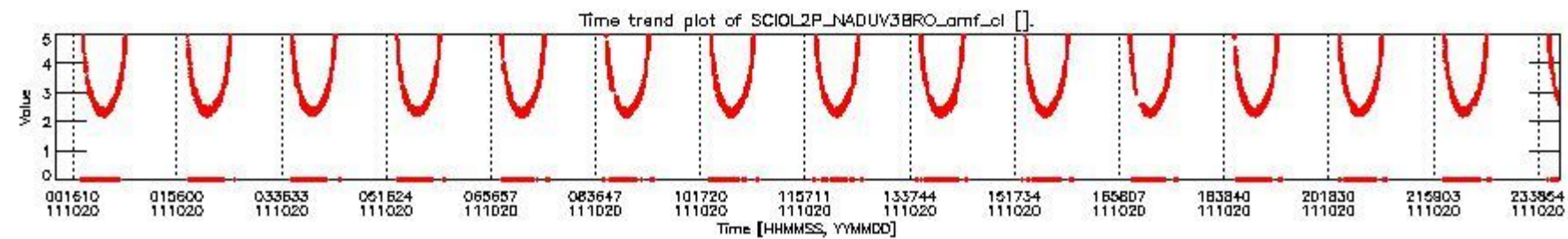
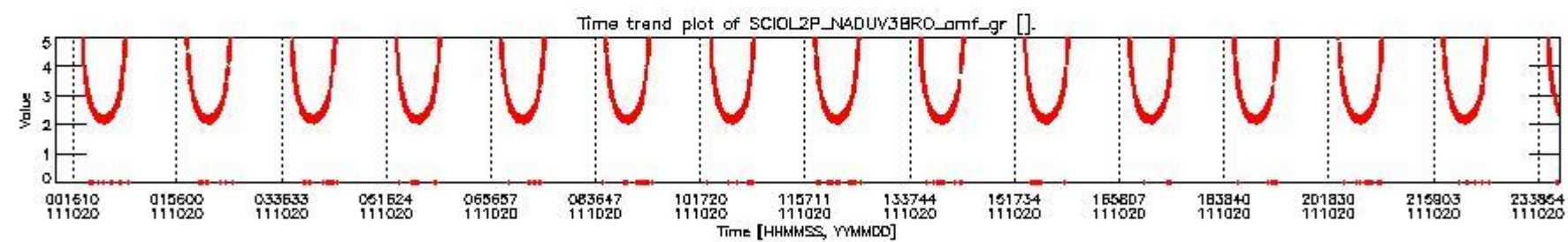
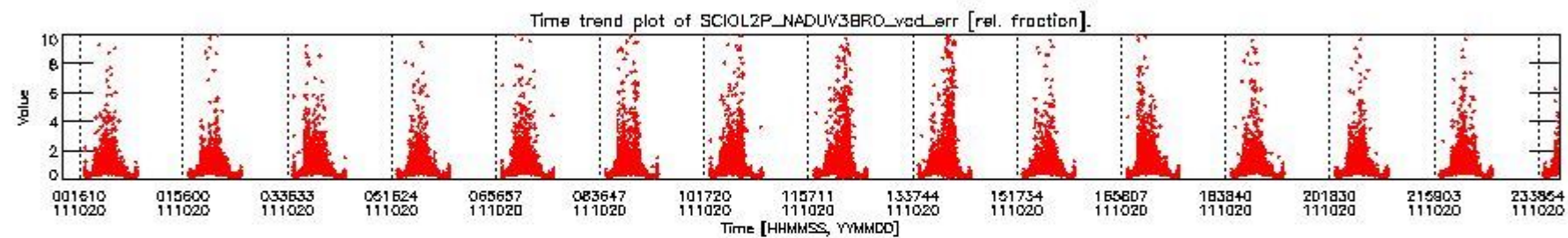
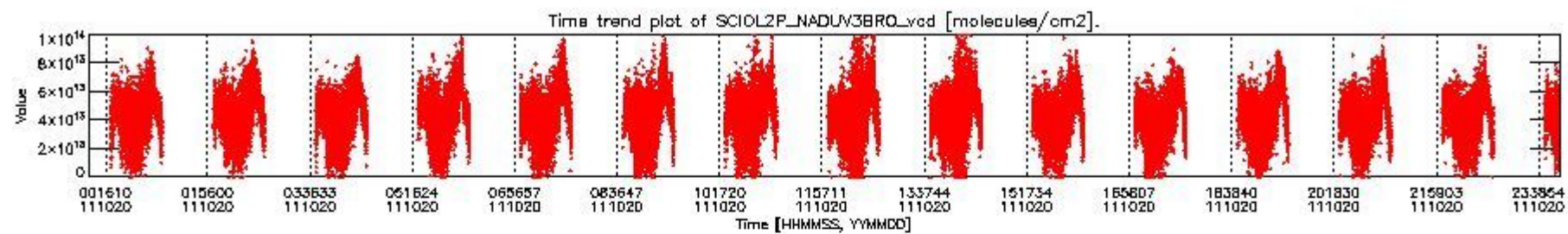


SCIOL2P\_NADUV1NO2\_amf\_cl for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



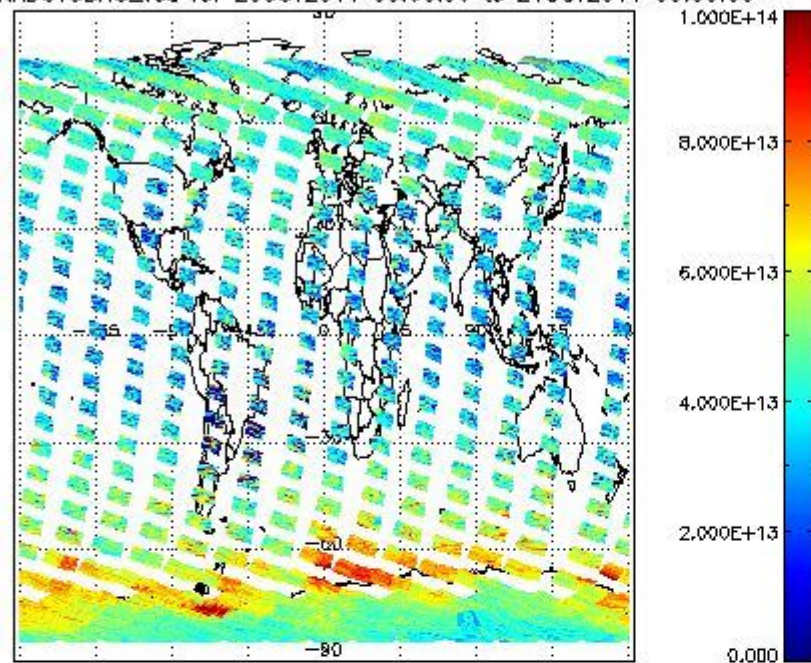
2.2.2.3 BrO (UV3)



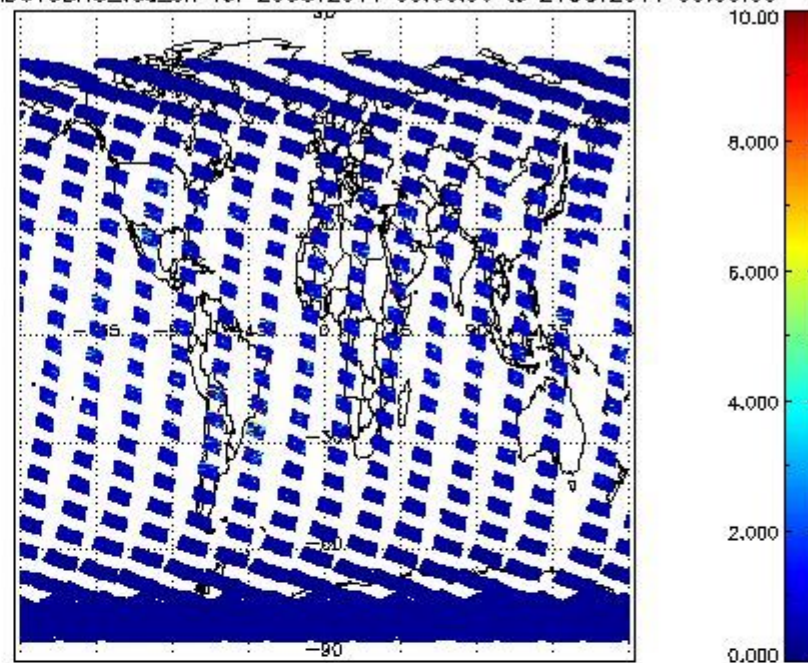




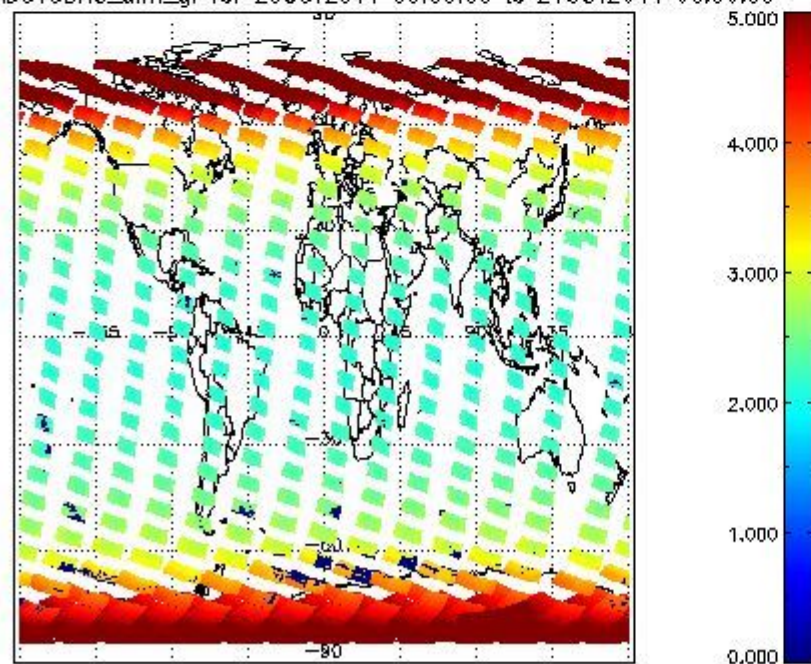
SCIOL2P\_NADUV3BRO\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



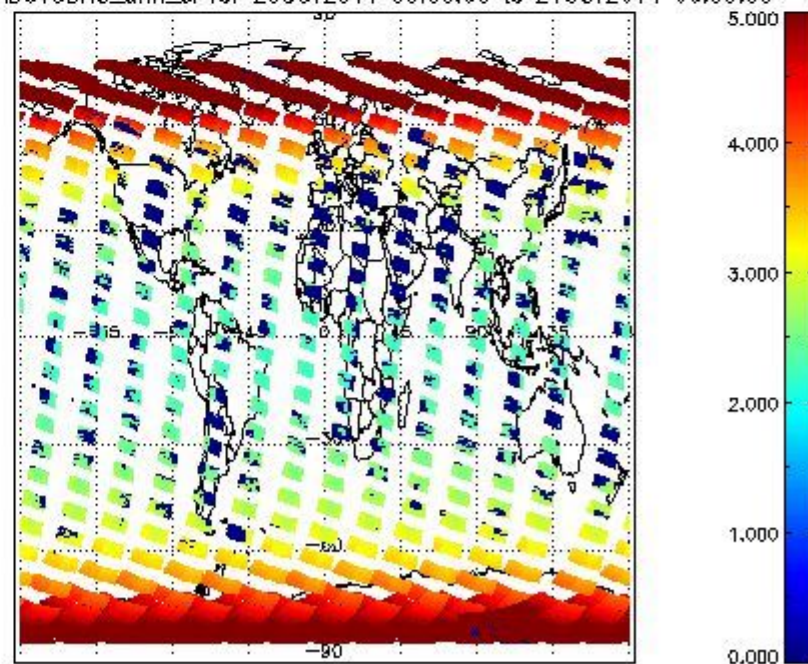
SCIOL2P\_NADUV3BRO\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

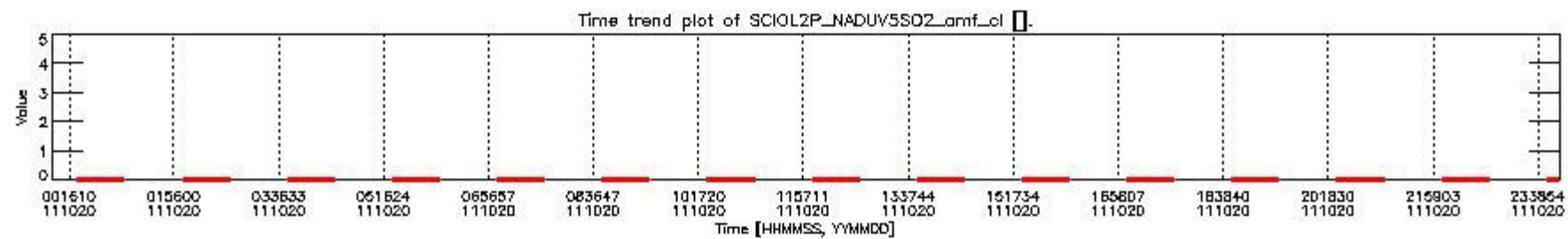
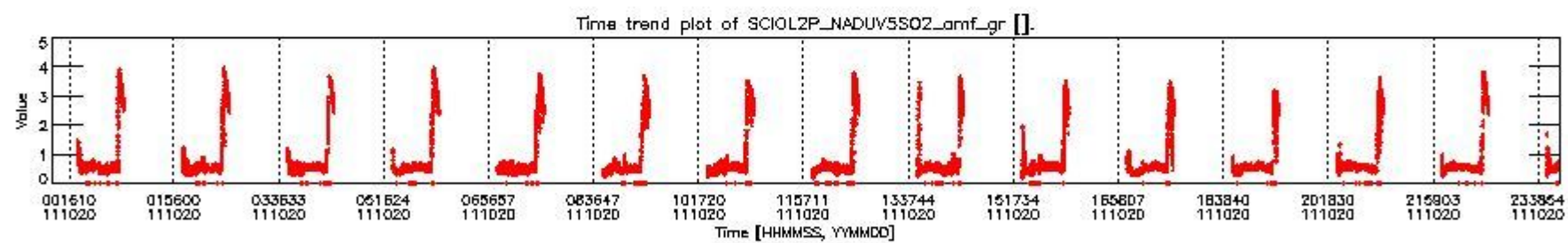
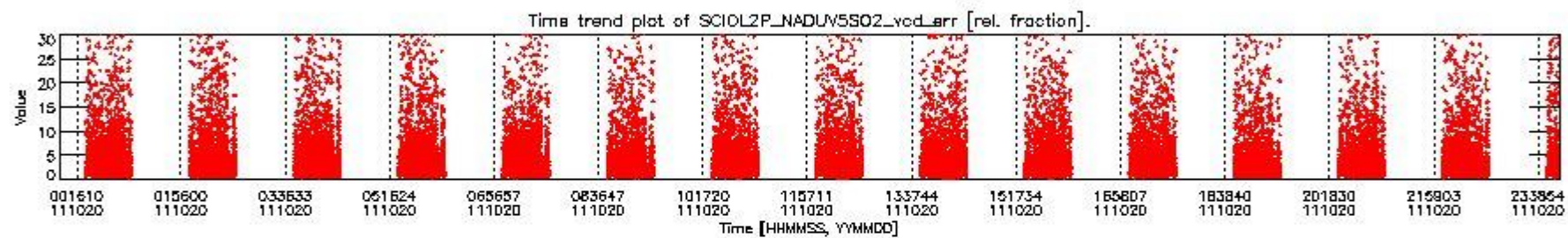
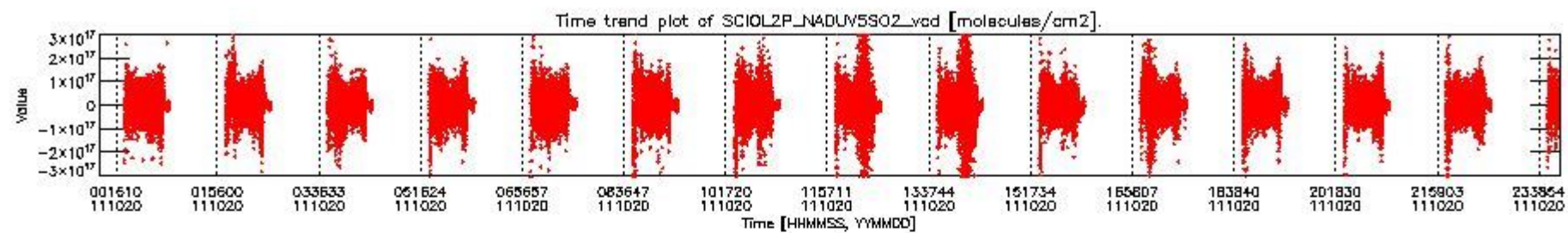


SCIOL2P\_NADUV3BRO\_amf\_cl for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



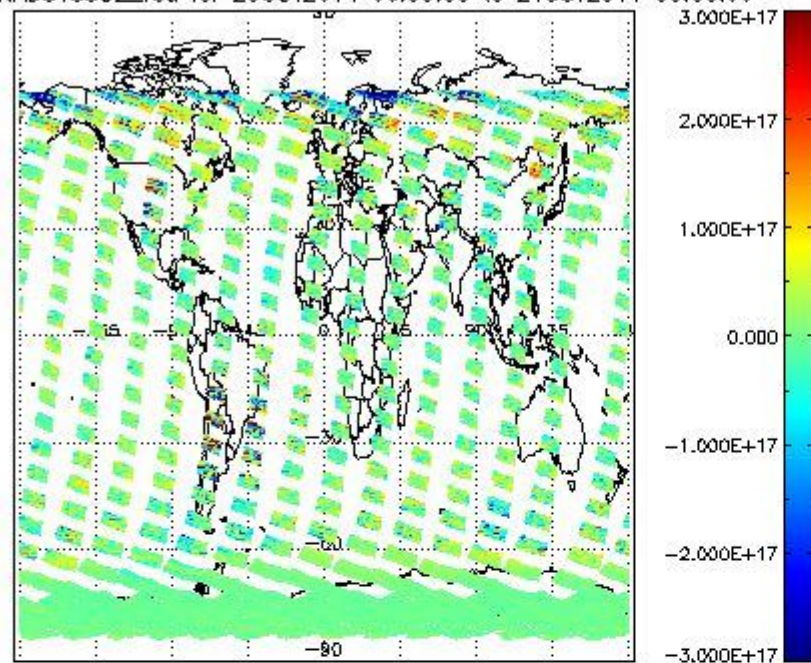
2.2.2.4 SO2 (UV5)



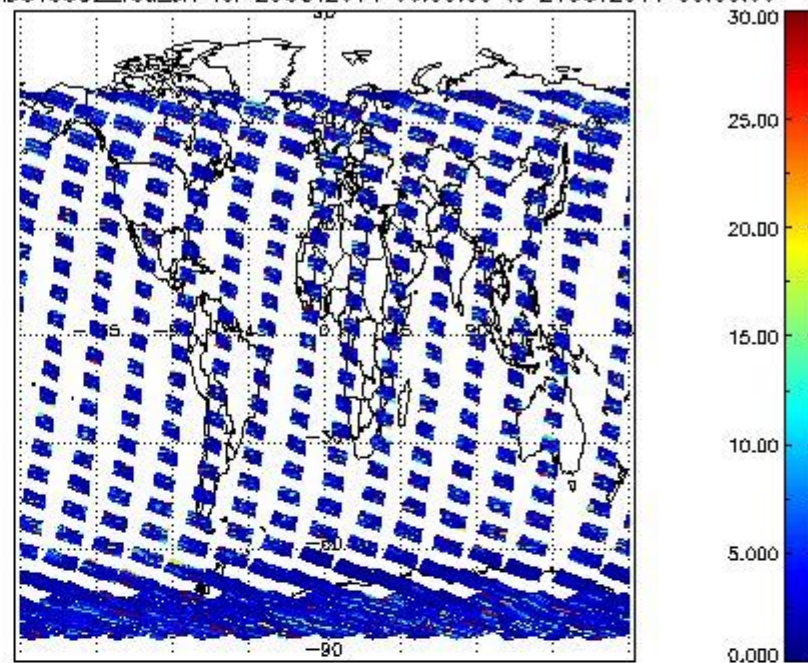




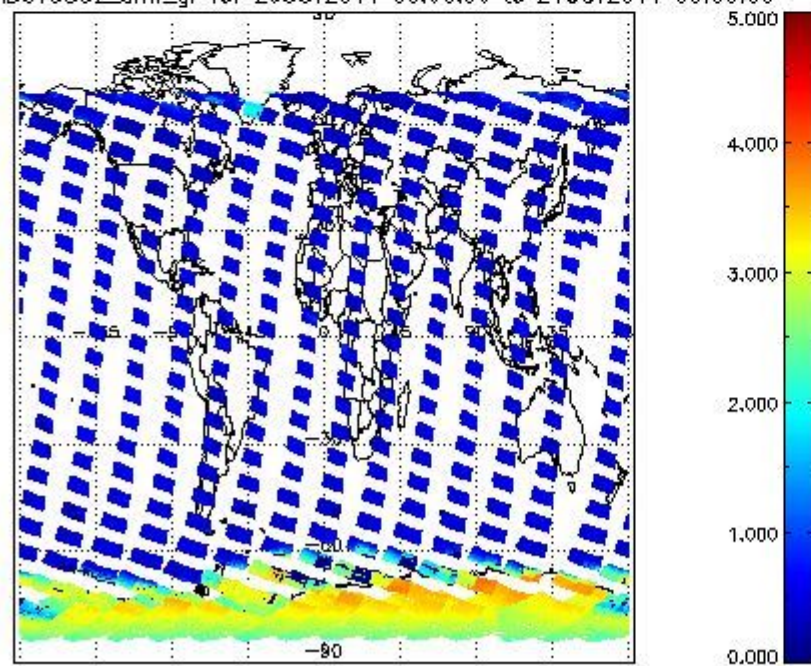
SCIOL2P\_NADUV5SO2\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



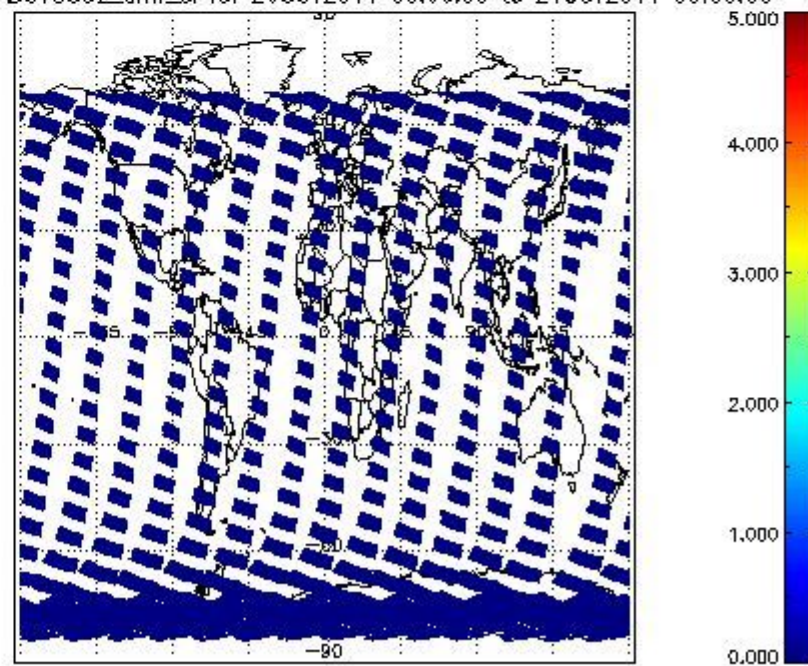
SCIOL2P\_NADUV5SO2\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV5SO2\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

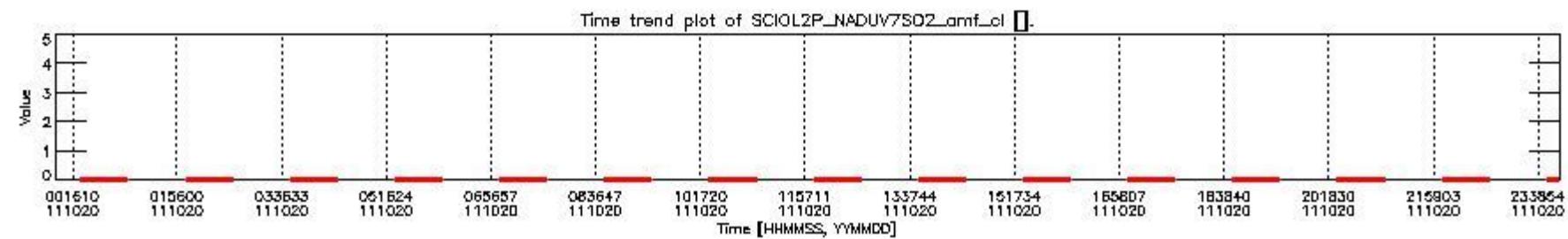
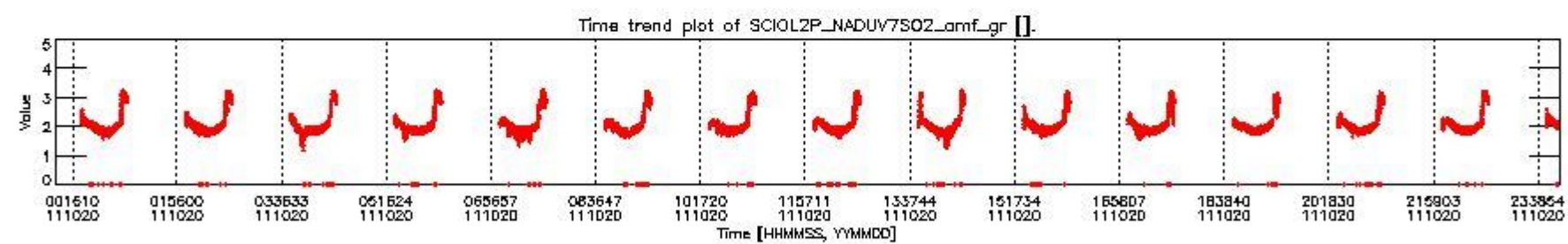
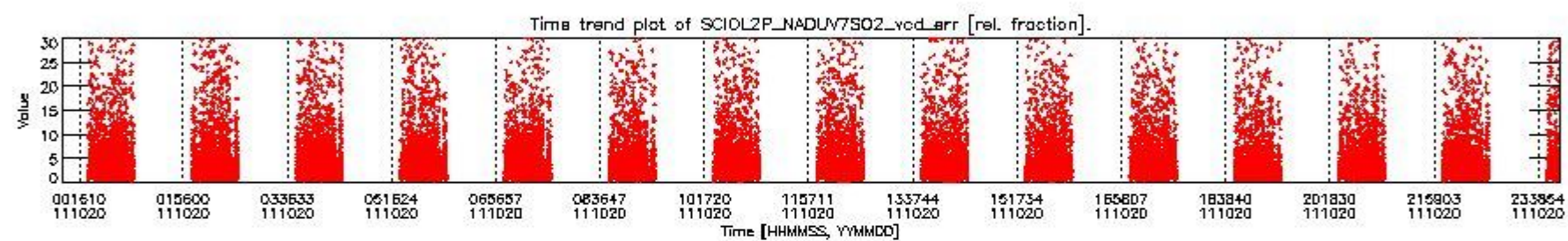
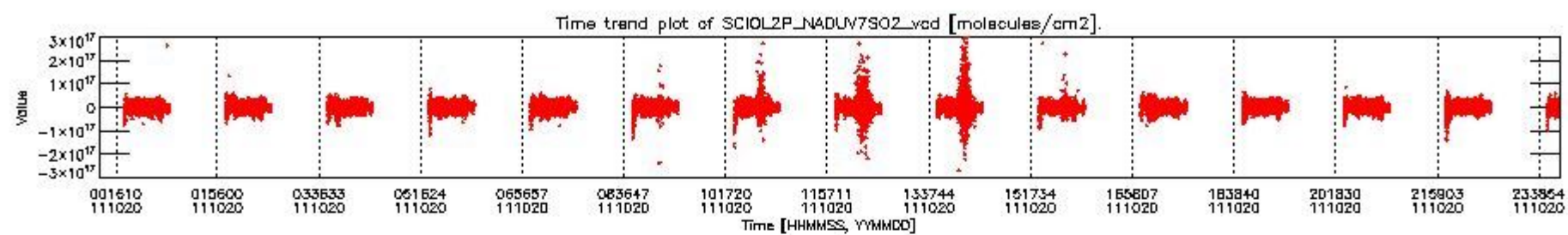


SCIOL2P\_NADUV5SO2\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



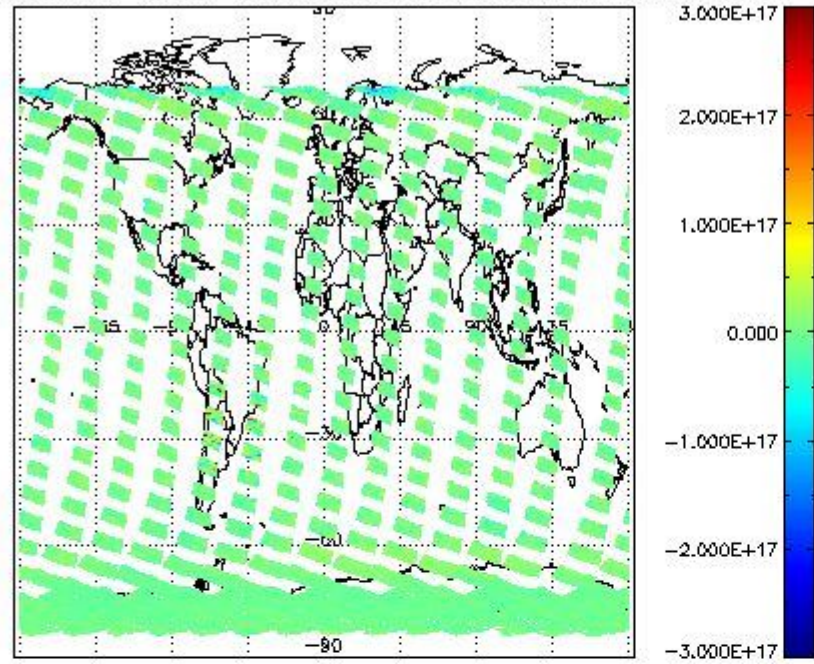
2.2.2.5 SO2 (UV7)



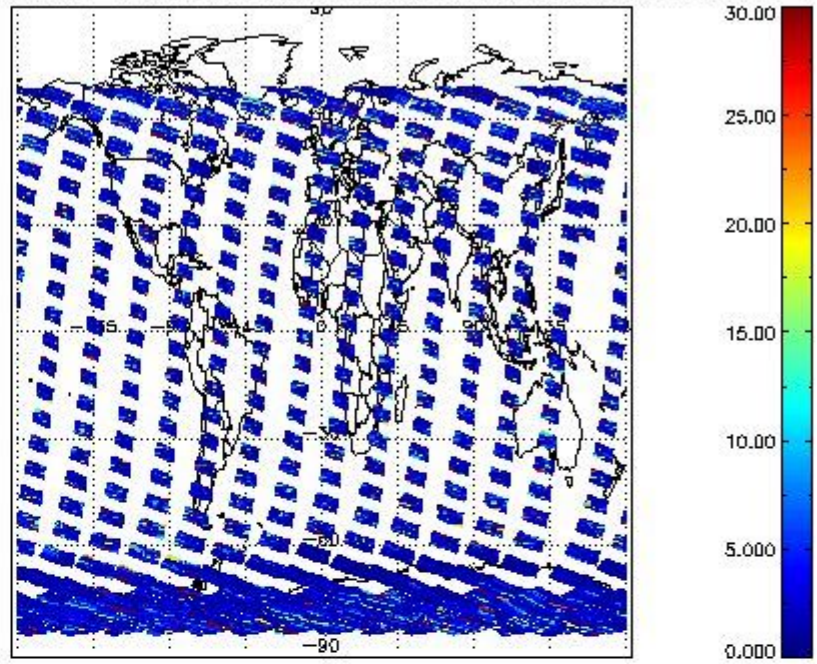




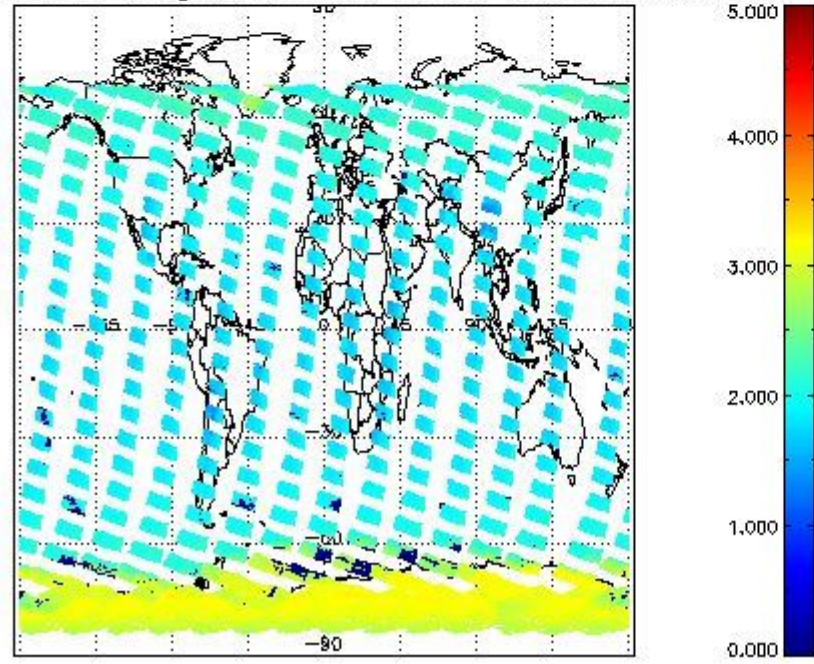
SCIOL2P\_NADUV7S02\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



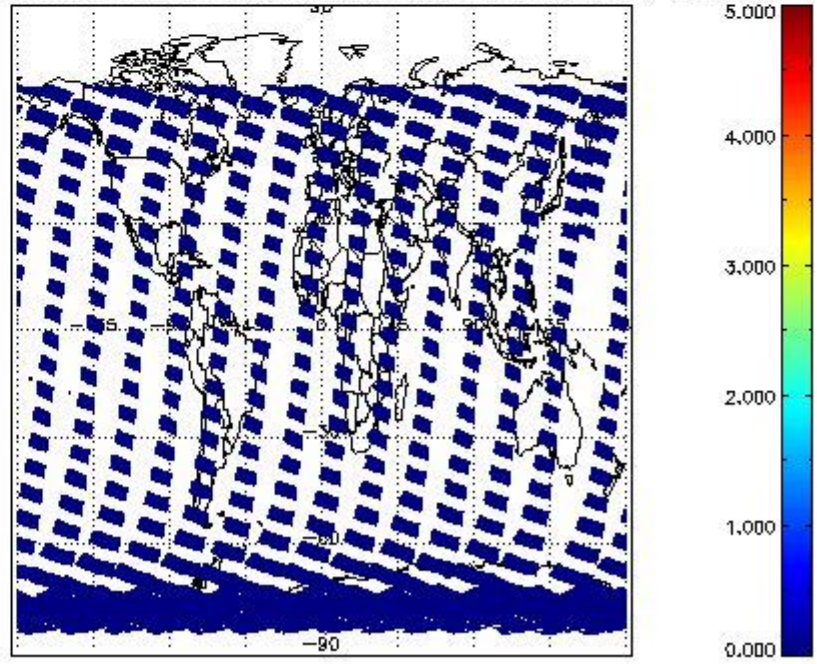
SCIOL2P\_NADUV7S02\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV7S02\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

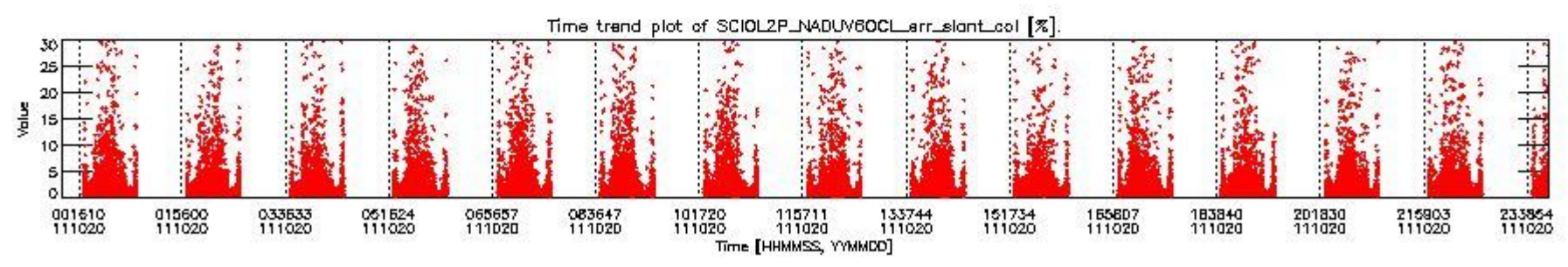
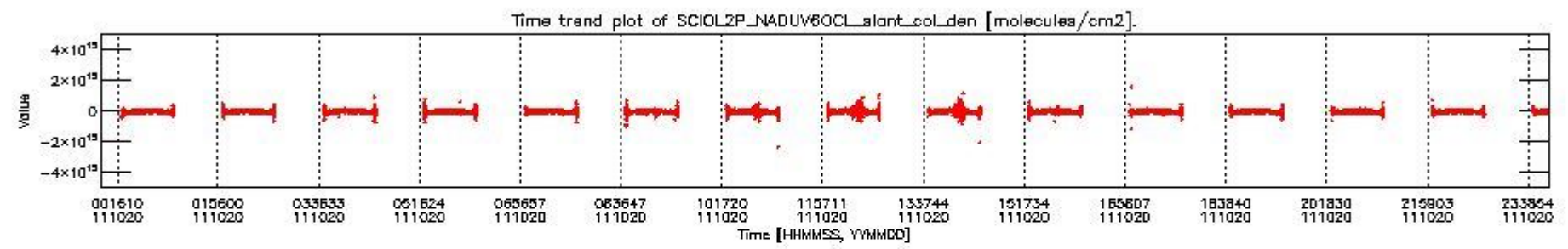


SCIOL2P\_NADUV7S02\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

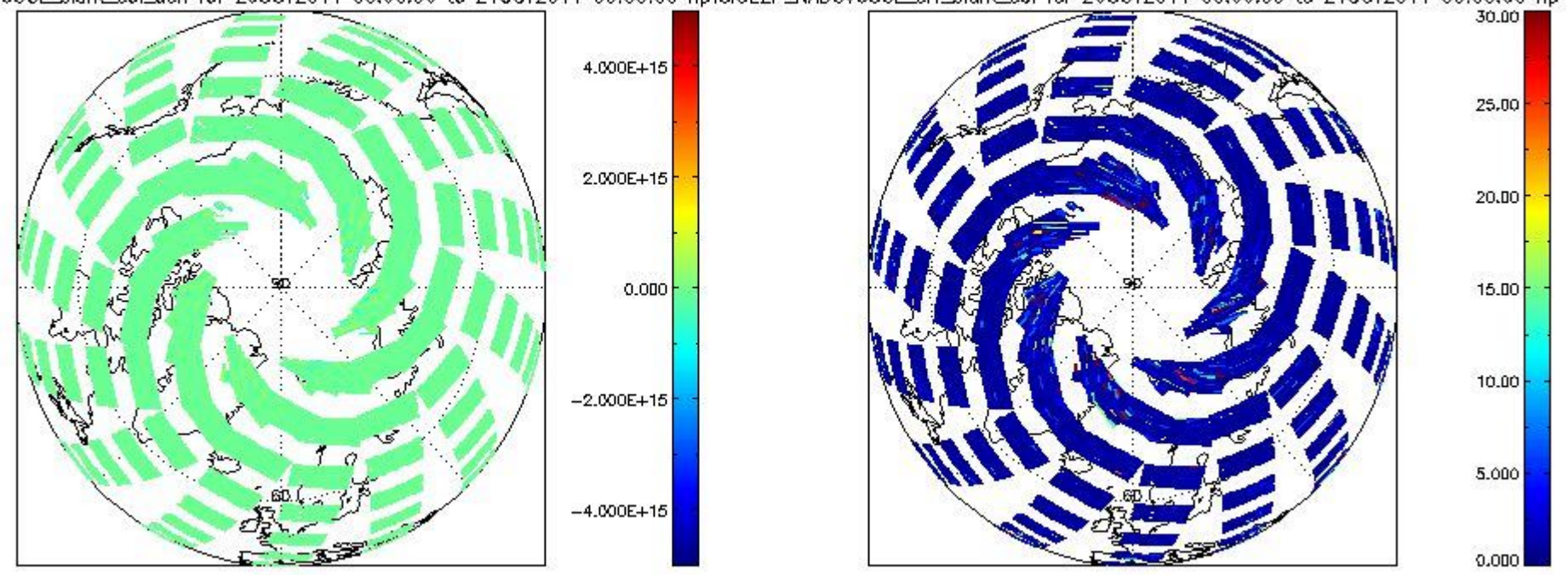


### 2.2.2.6 OCIO (UV6)



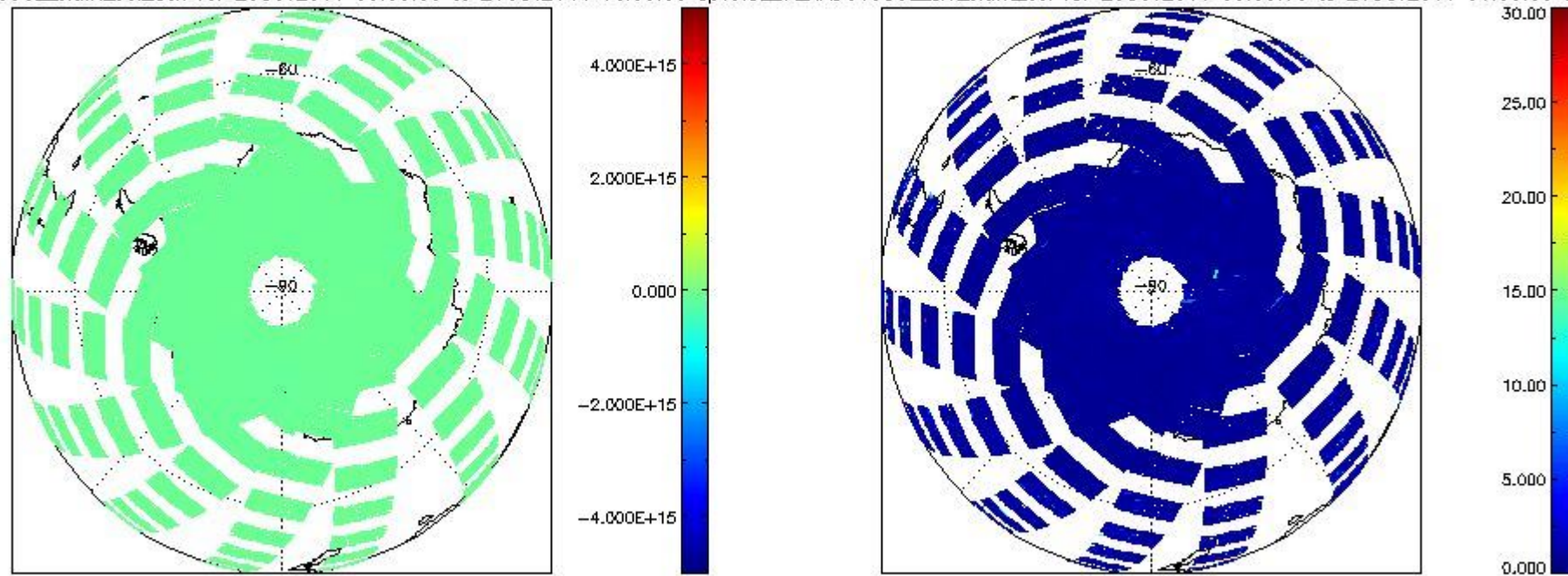


CIOL2P\_NADUV60CL\_slant\_col\_den for 200CT2011 00:00:00 to 21OCT2011 00:00:00 np CIOL2P\_NADUV60CL\_err\_slant\_col for 200CT2011 00:00:00 to 21OCT2011 00:00:00 np

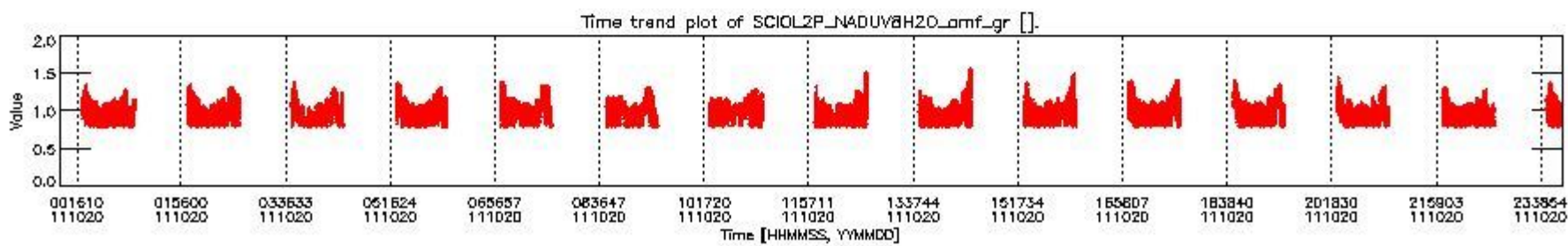
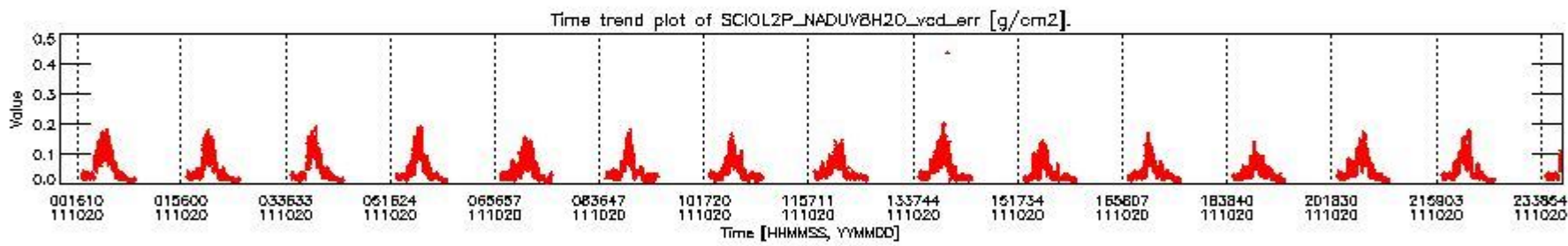
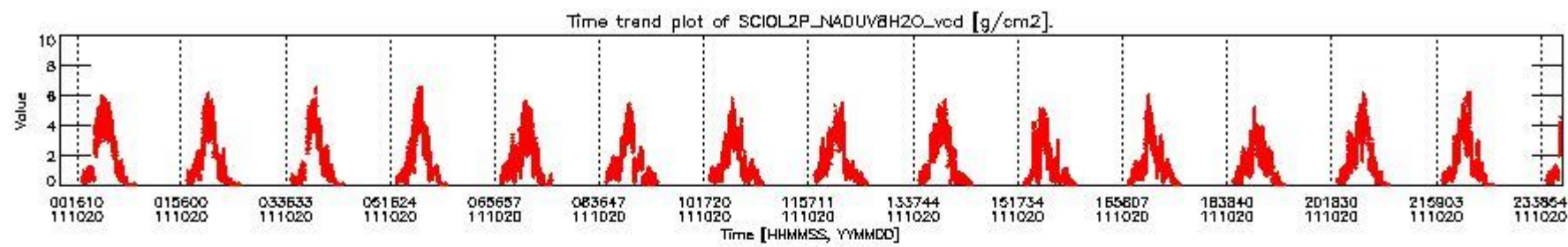




CIOL2P\_NADUV60CL\_slant\_col\_den for 20OCT2011 00:00:00 to 21OCT2011 00:00:00 sp; CIOL2P\_NADUV60CL\_err\_slant\_col for 20OCT2011 00:00:00 to 21OCT2011 00:00:00 sp

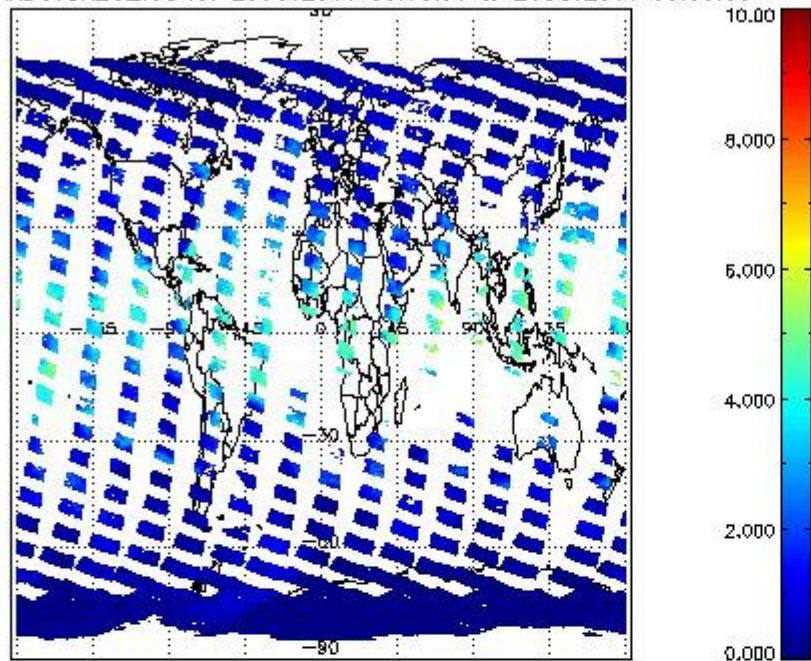


### 2.2.2.7 H2O (UV8)

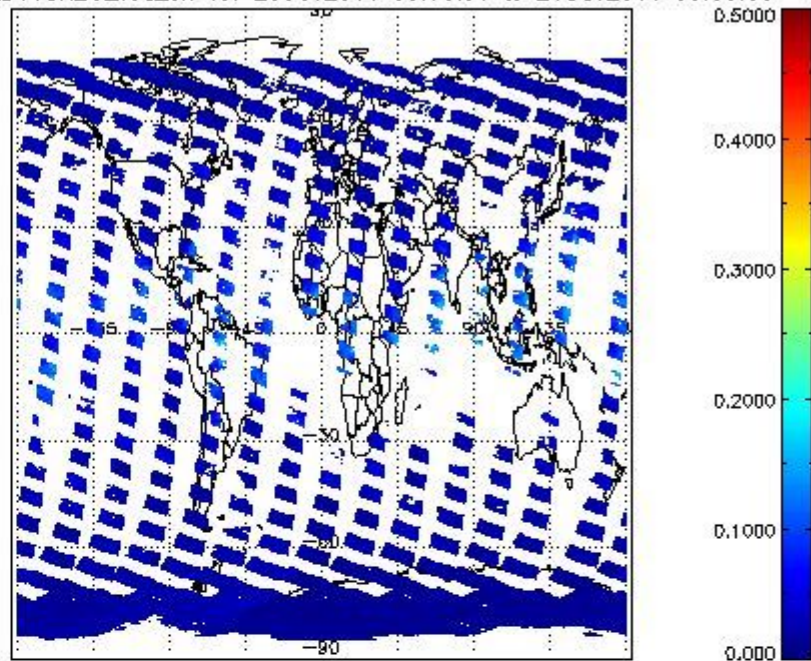




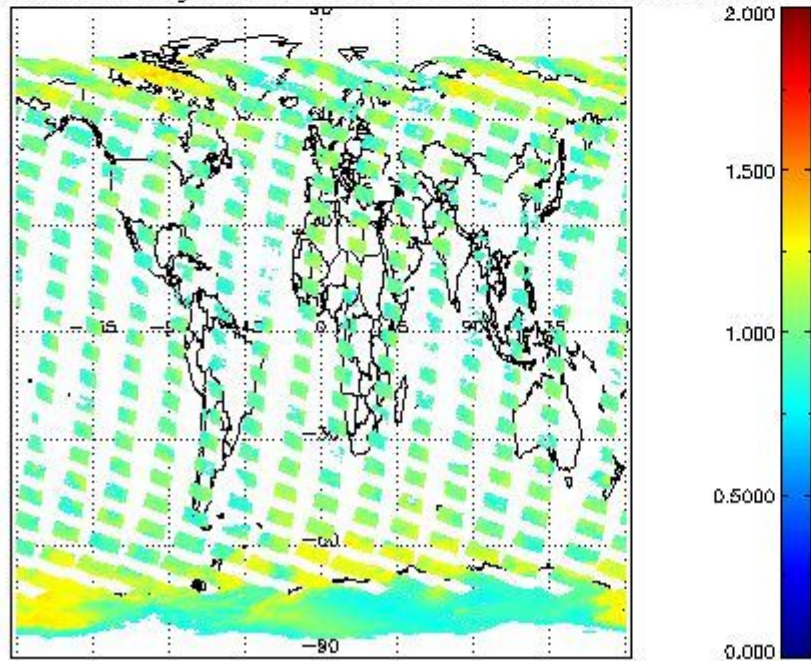
SCIOL2P\_NADUV8H2O\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV8H2O\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

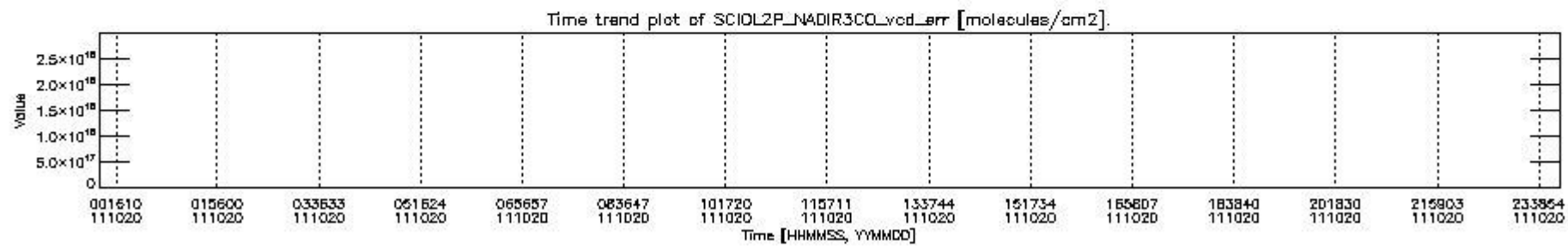
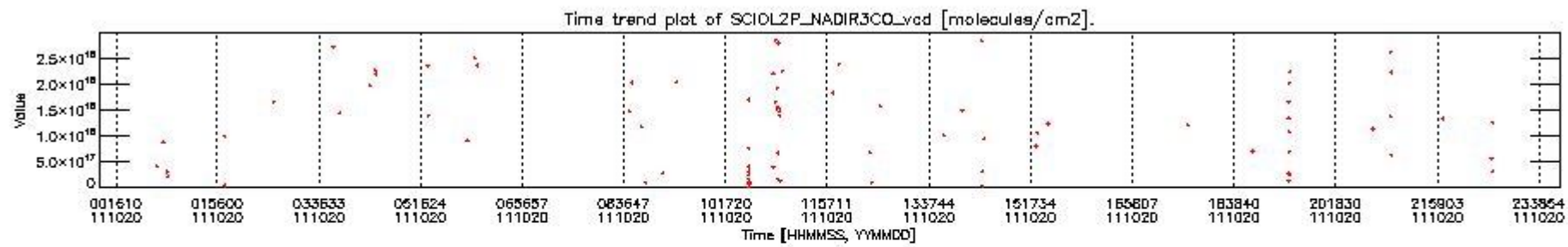


SCIOL2P\_NADUV8H2O\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

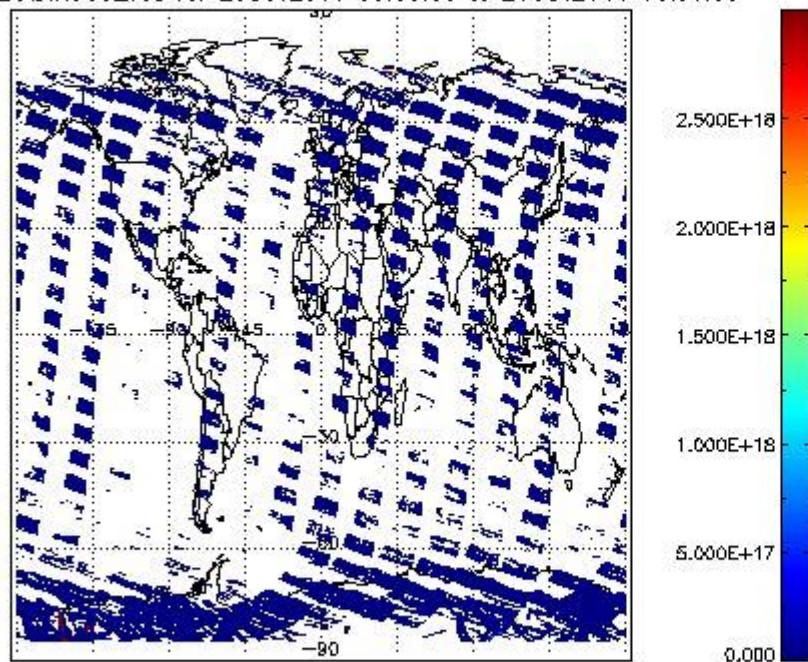


2.2.2.8 CO (IR3)

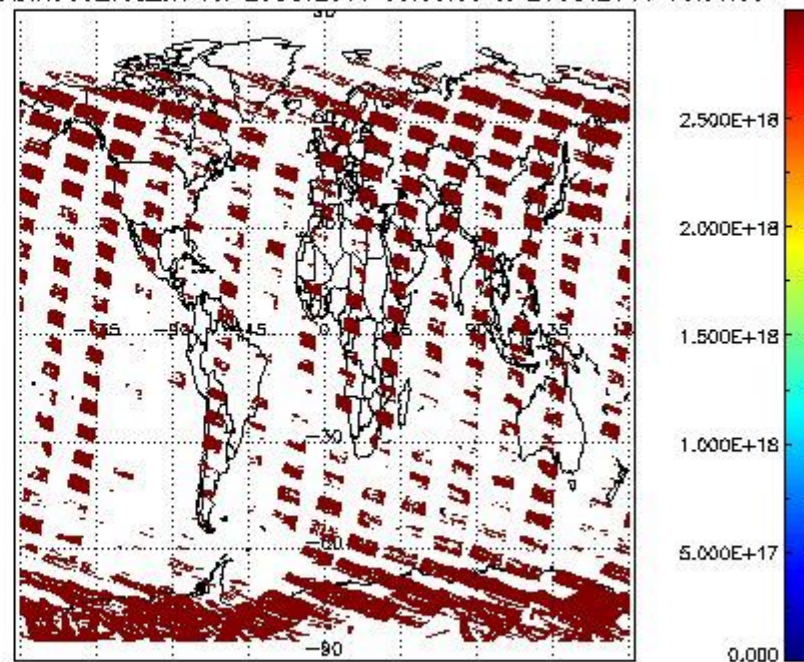




SCIDL2P\_NADIR3CO\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



### 2.2.3 Limb

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

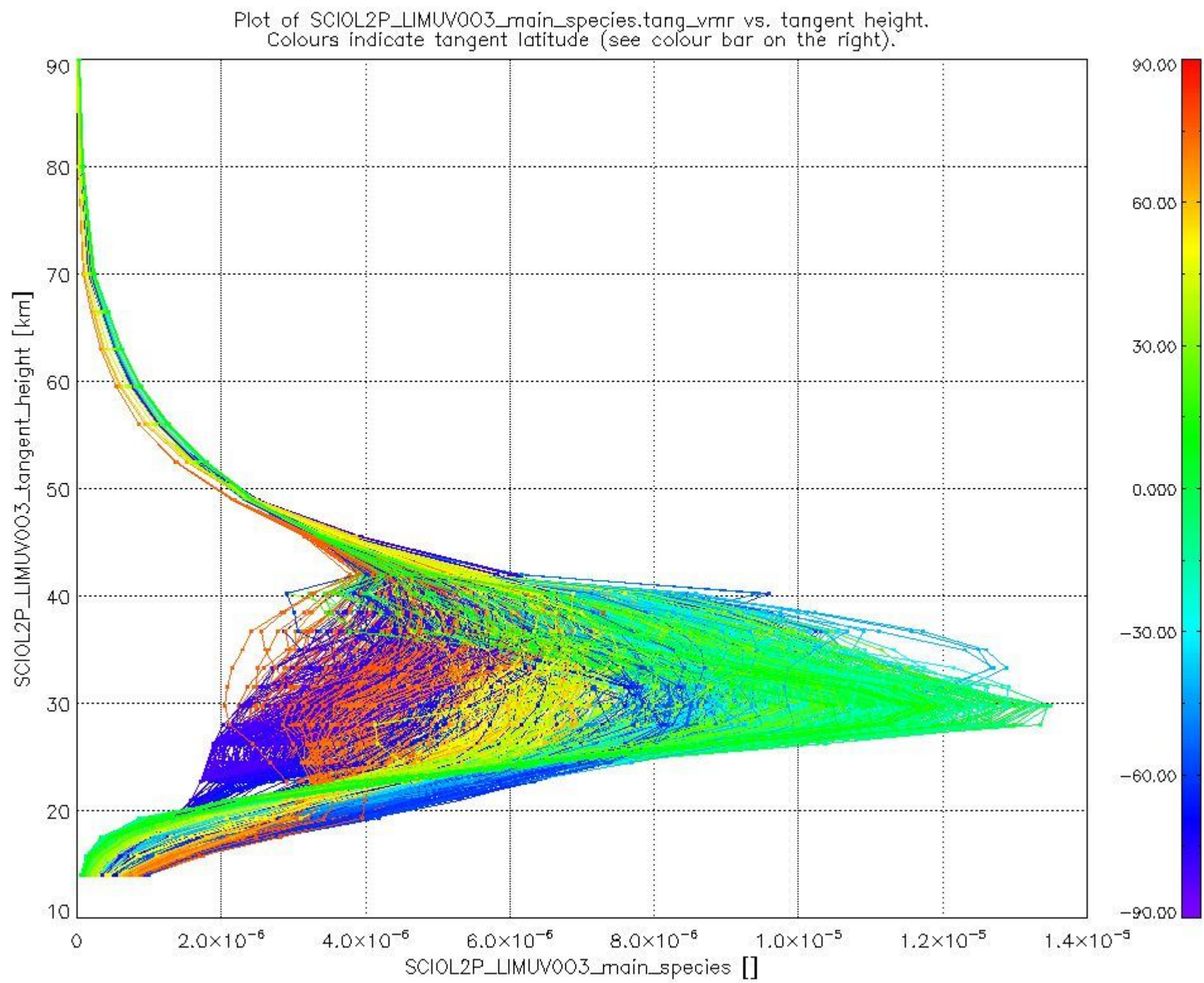
The following data items are currently included into this section:

Number	Data item ID
0	SCIDL2P_LIMUV003_main_species
1	SCIDL2P_LIMUV1NO2_main_species
2	SCIDL2P_LIMUV3BRO_main_species



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

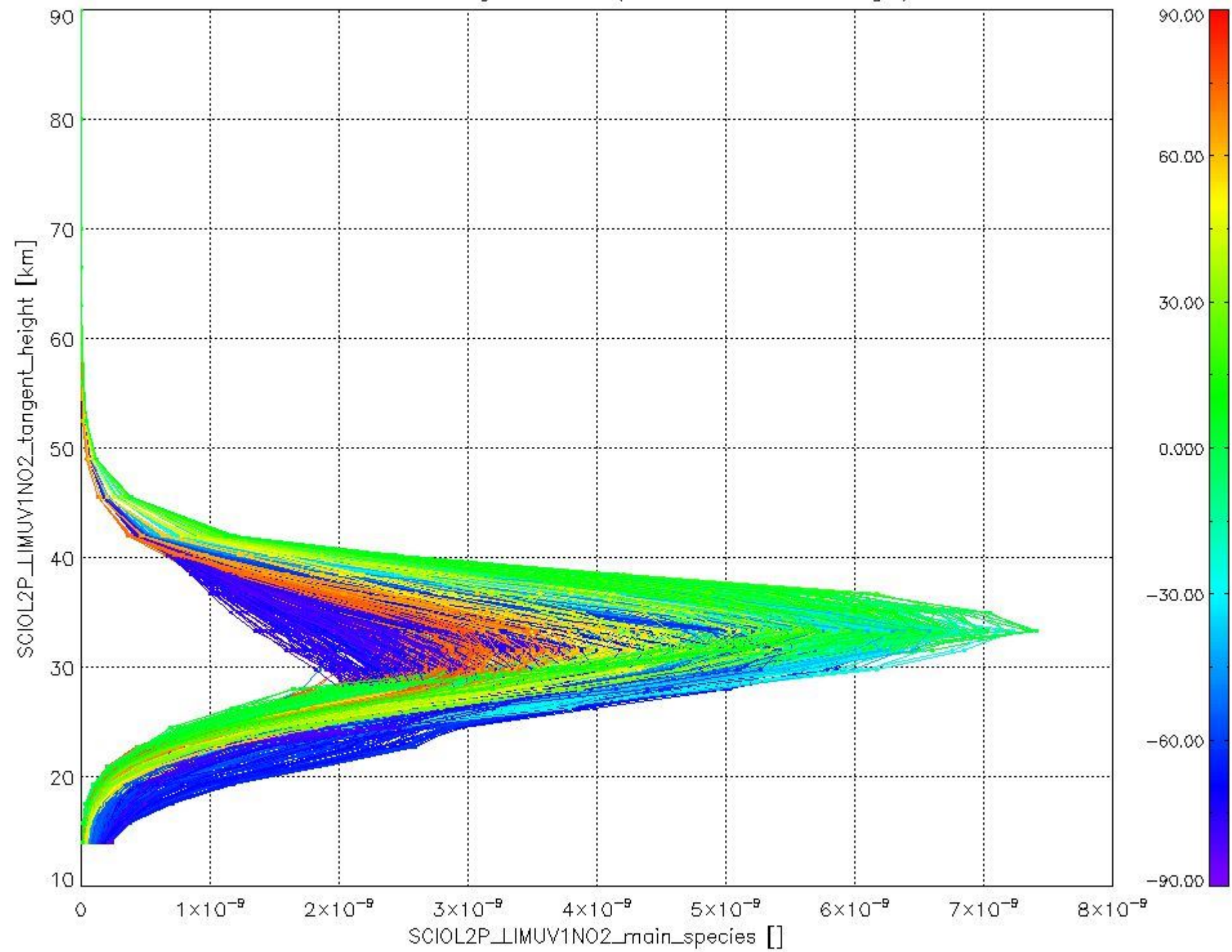
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



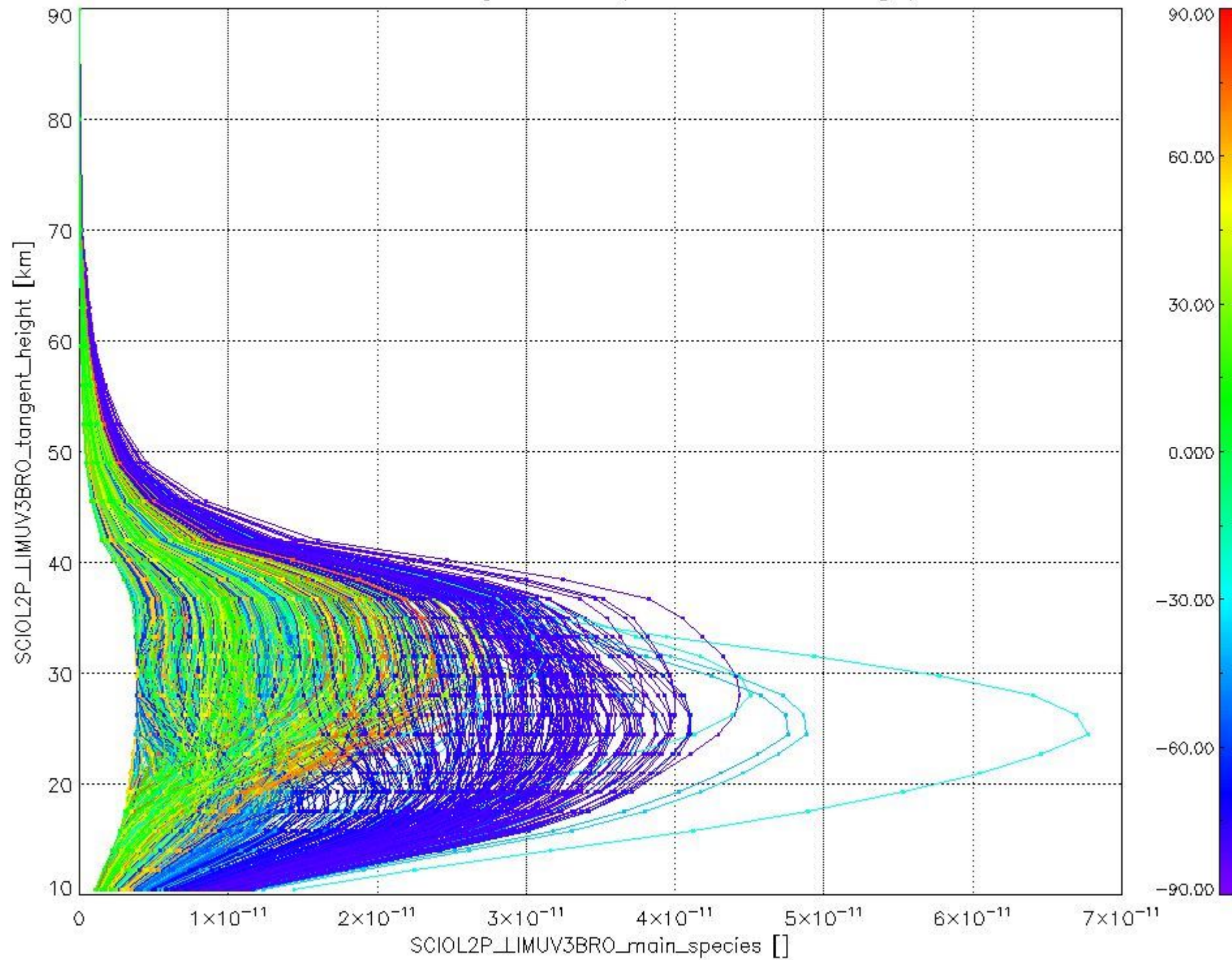
Plot of SCIO2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



2.2.3.3 BrO (UV3)



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



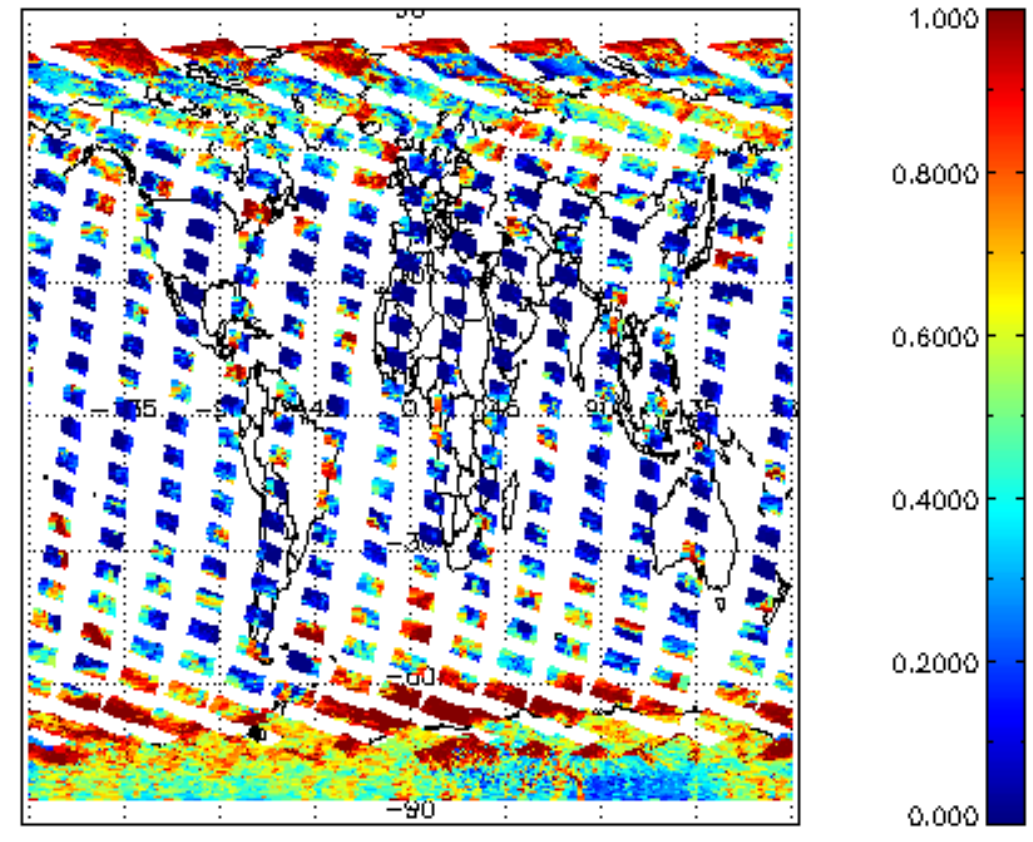
### 2.3 ADF monitoring

Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20111018_110903_20111019_183707_20111021_183707
3	SCI_MF1_AXVIEC20111018_111008_20111020_194036_20111022_194036

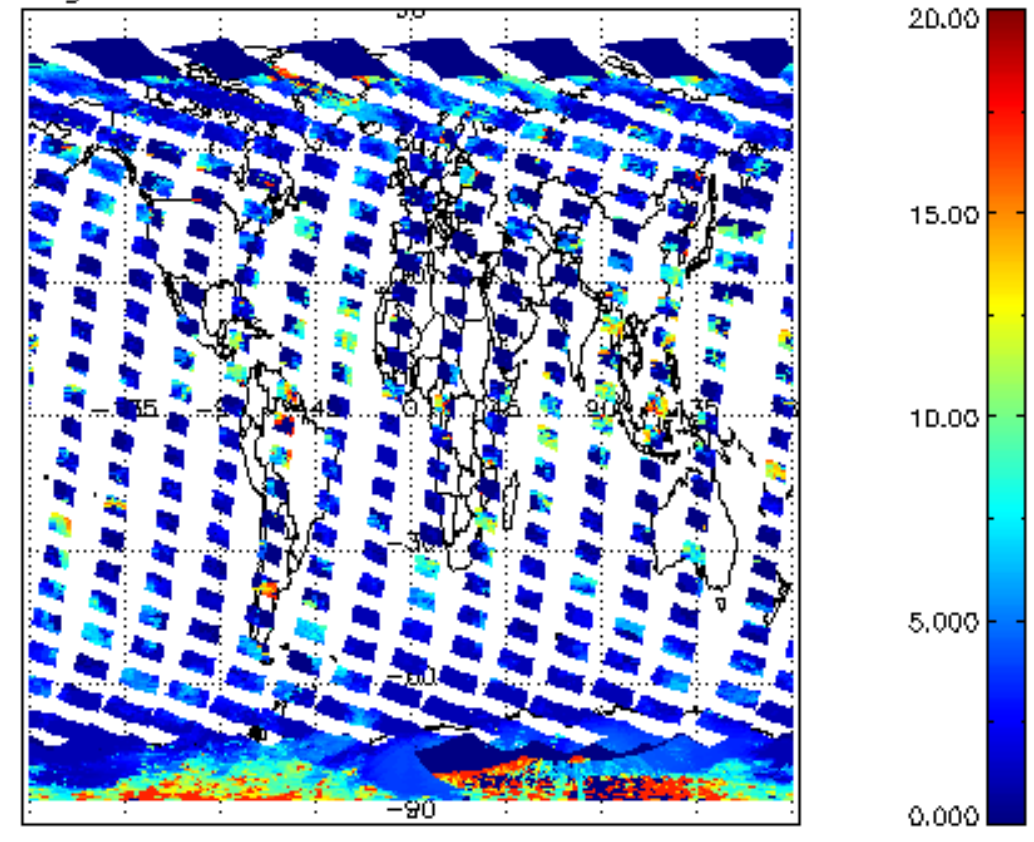




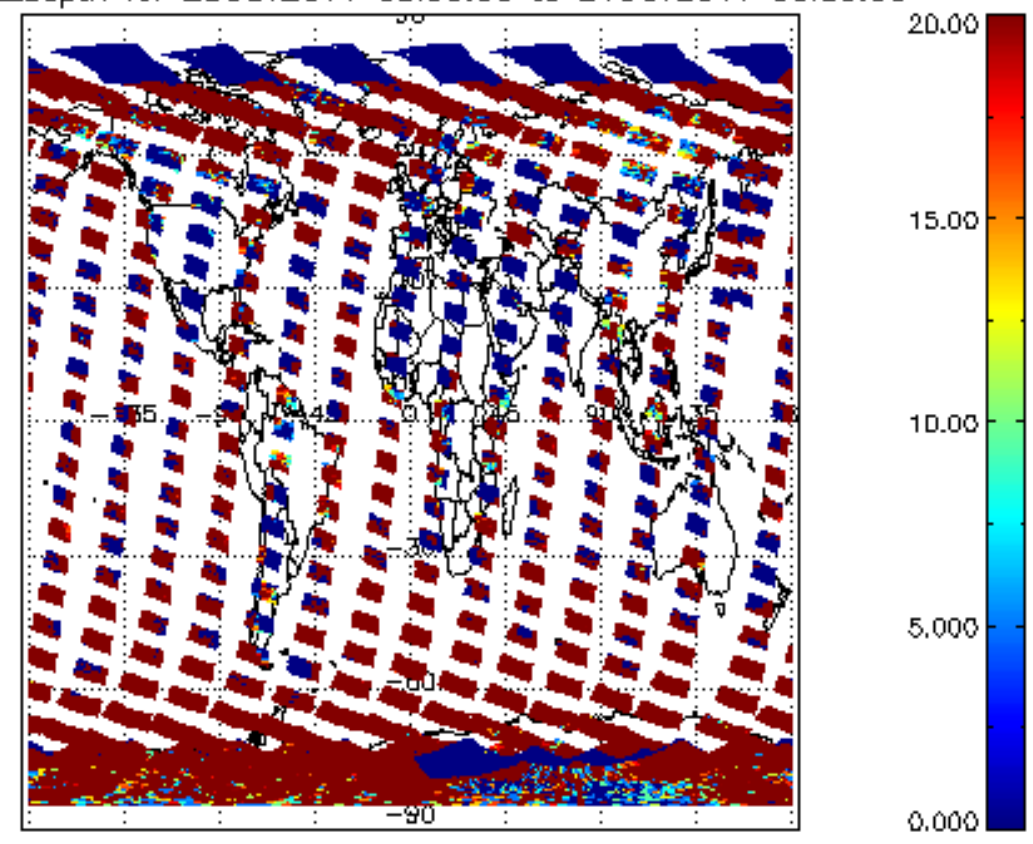
cl\_frac for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



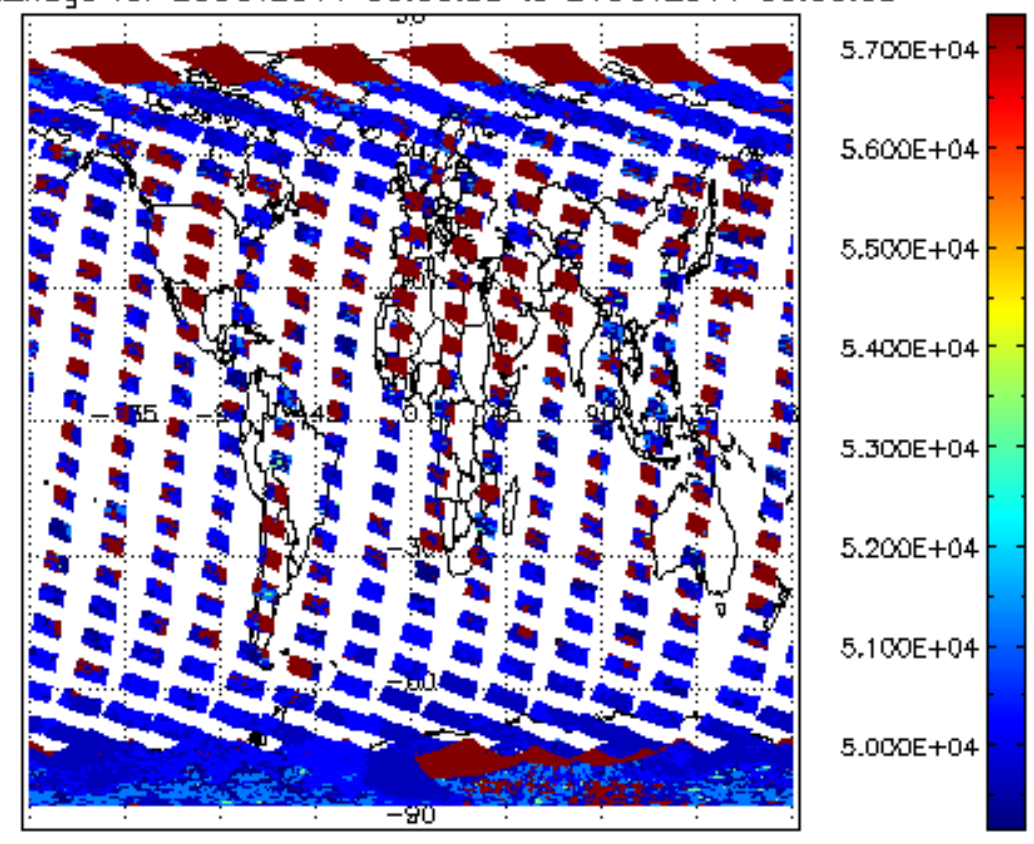
cl\_top\_height for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



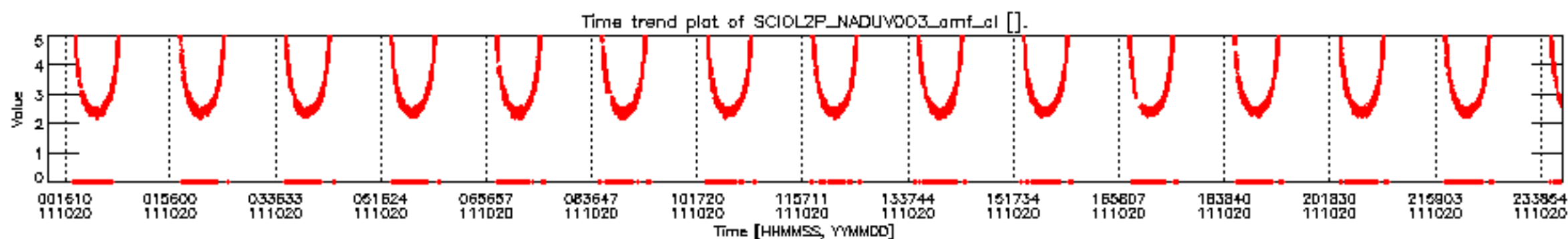
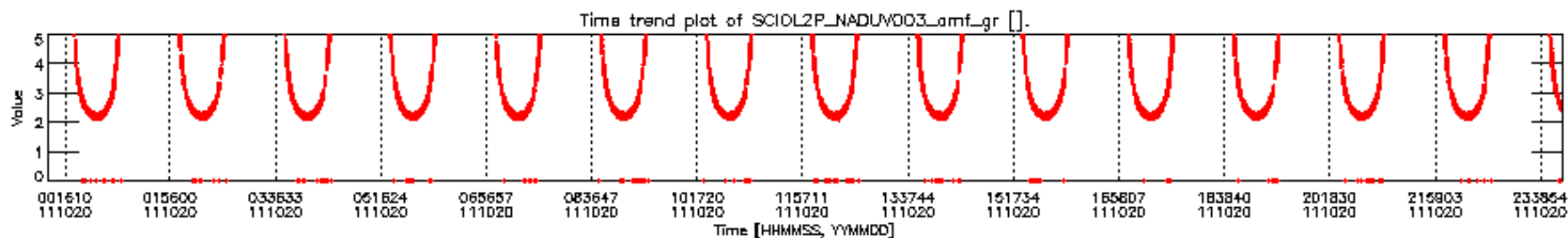
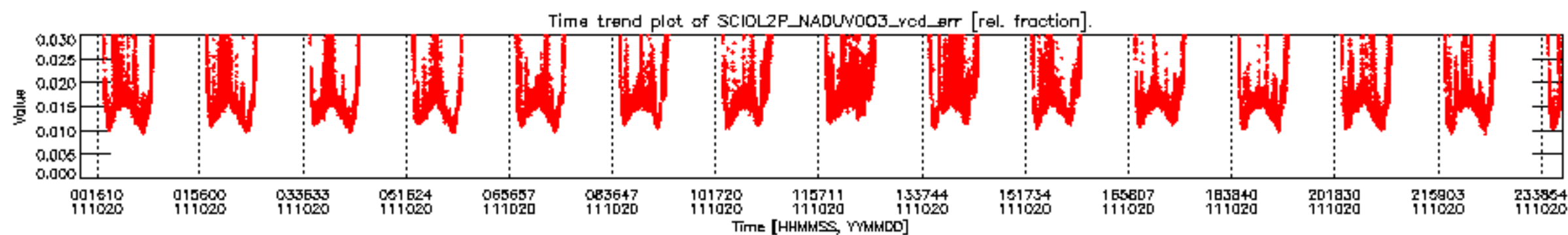
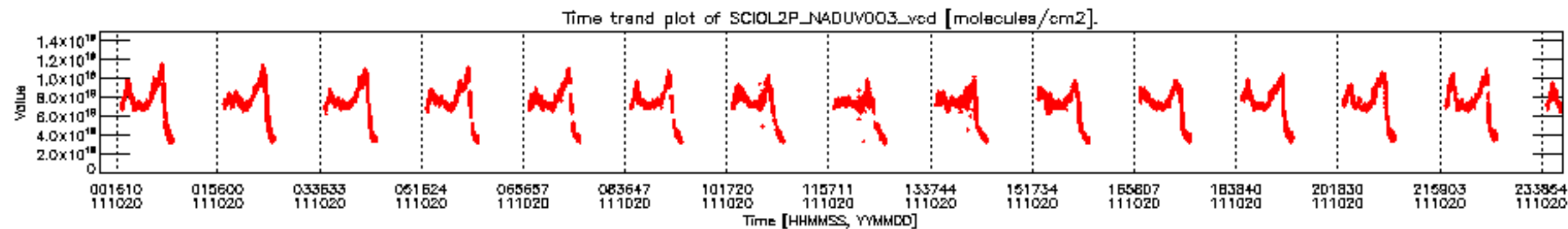
cl\_opt\_depth for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



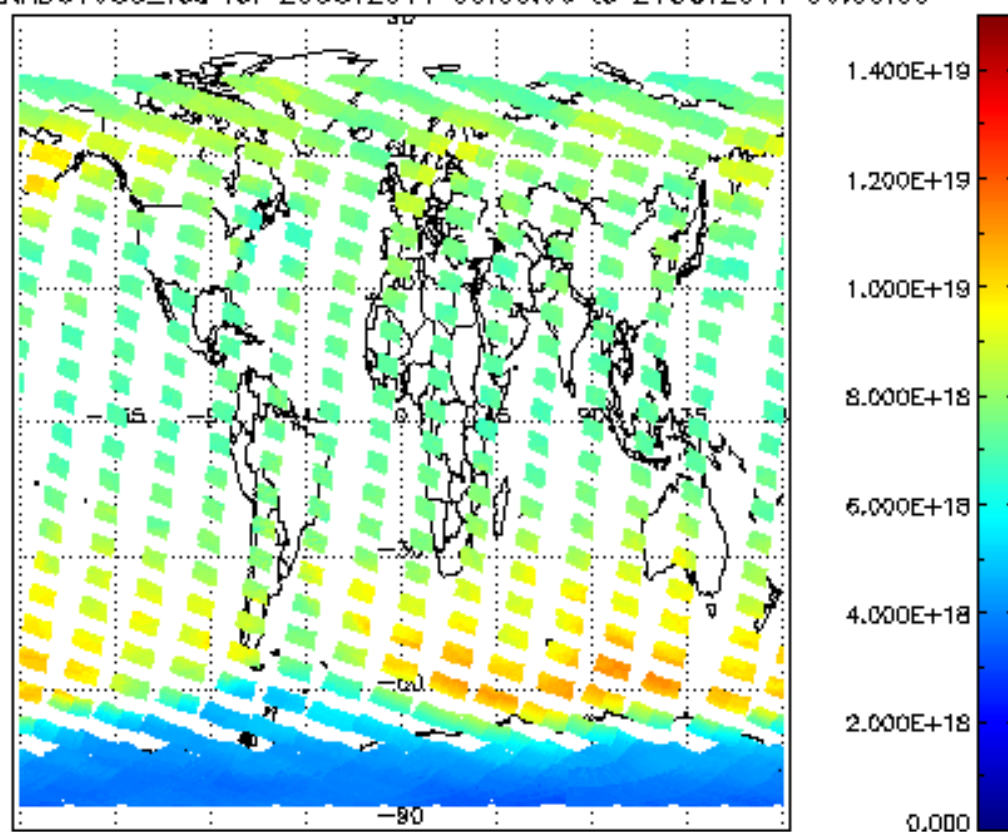
cloud\_flags for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



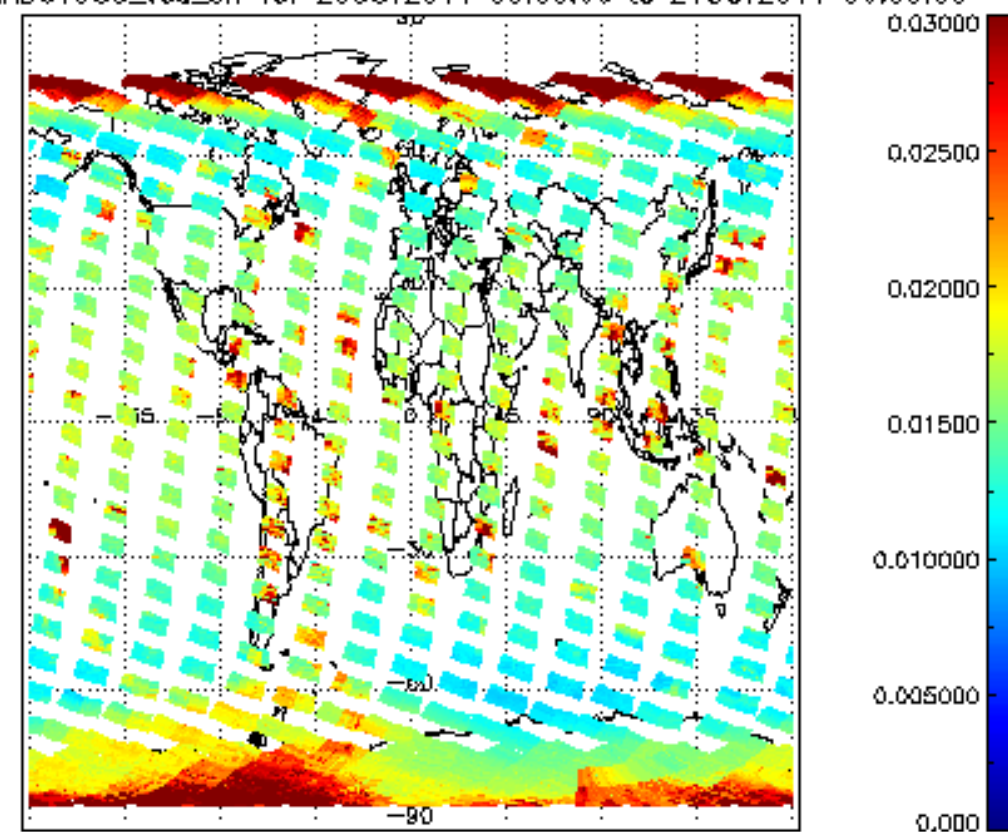




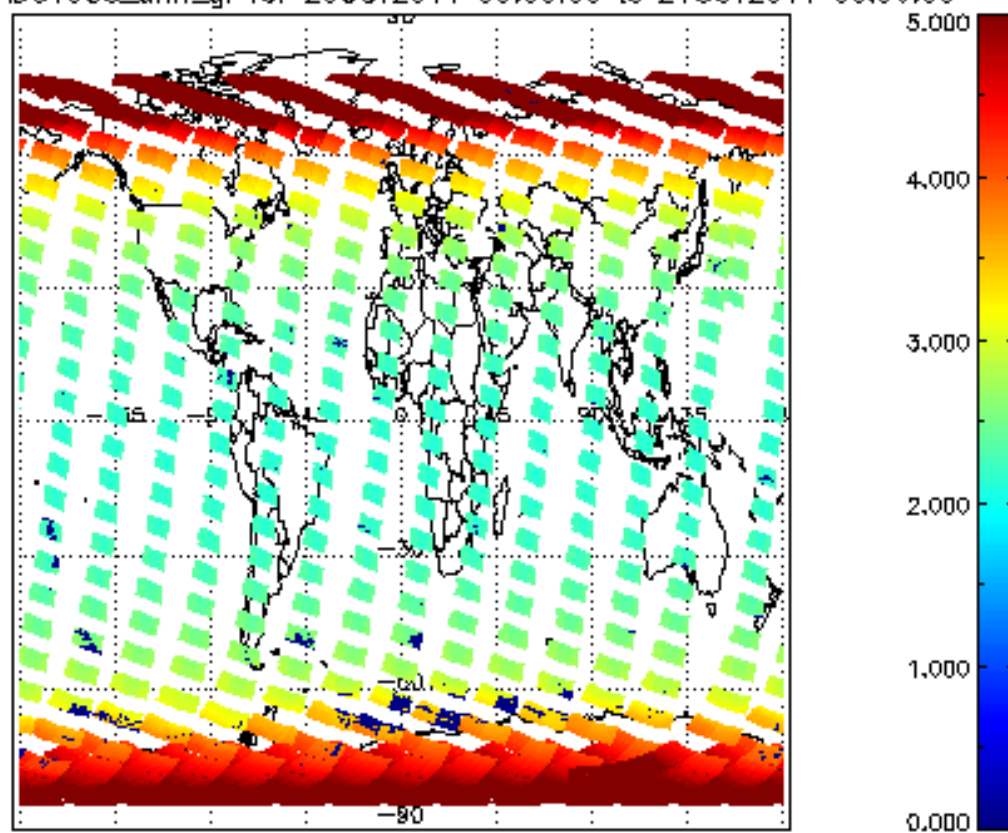
SCIOL2P\_NADUV003\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



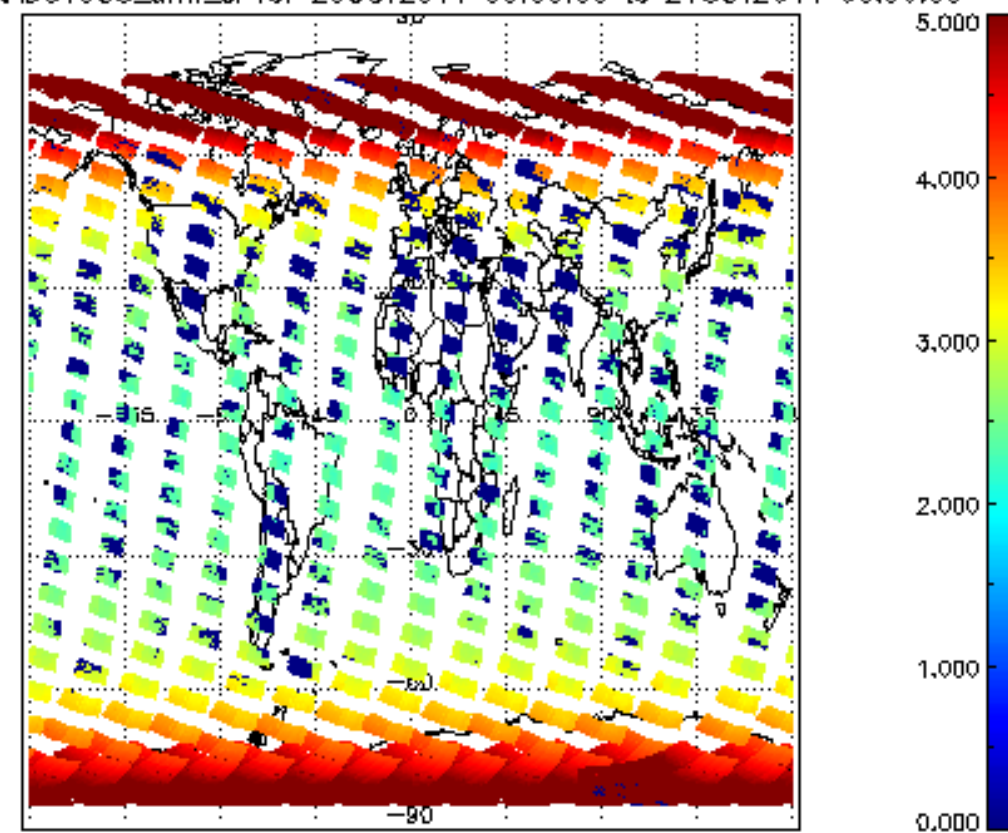
SCIOL2P\_NADUV003\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



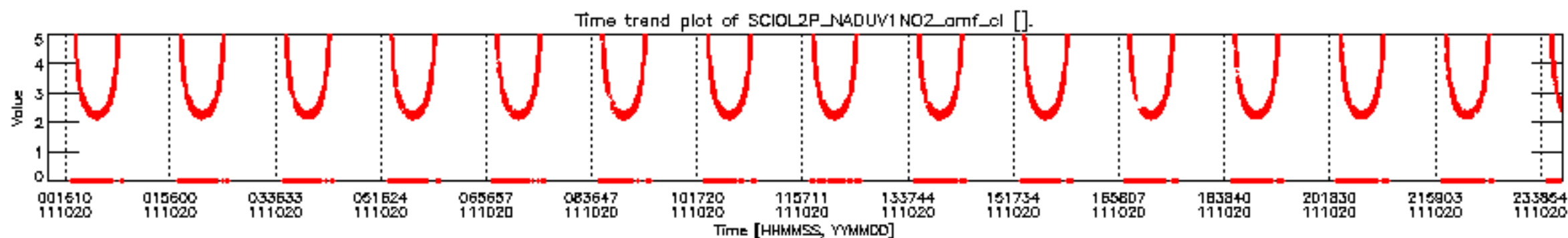
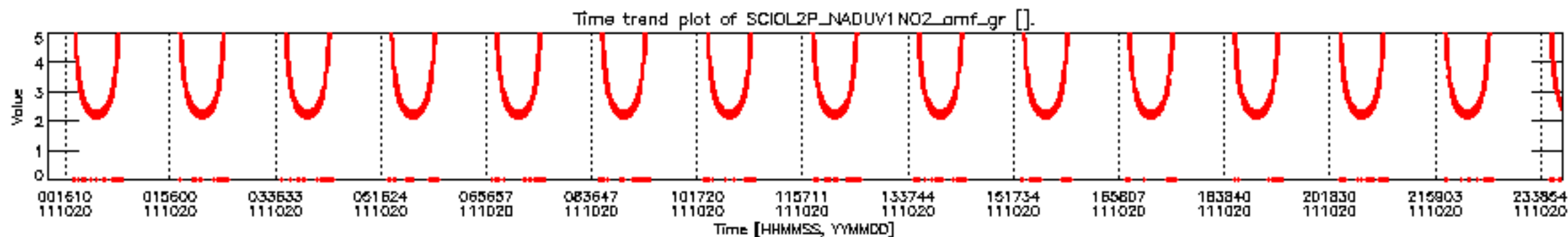
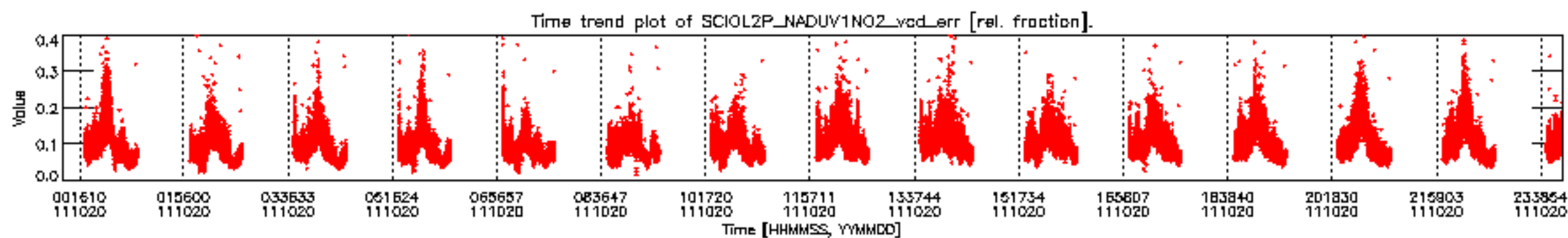
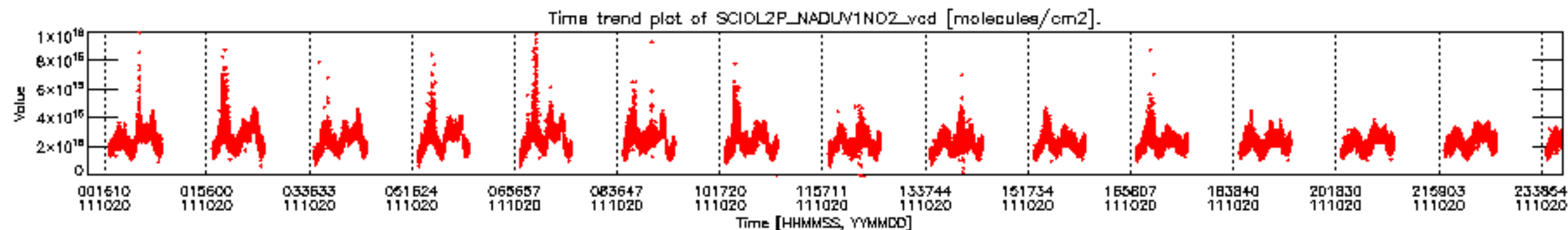
SCIOL2P\_NADUV003\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



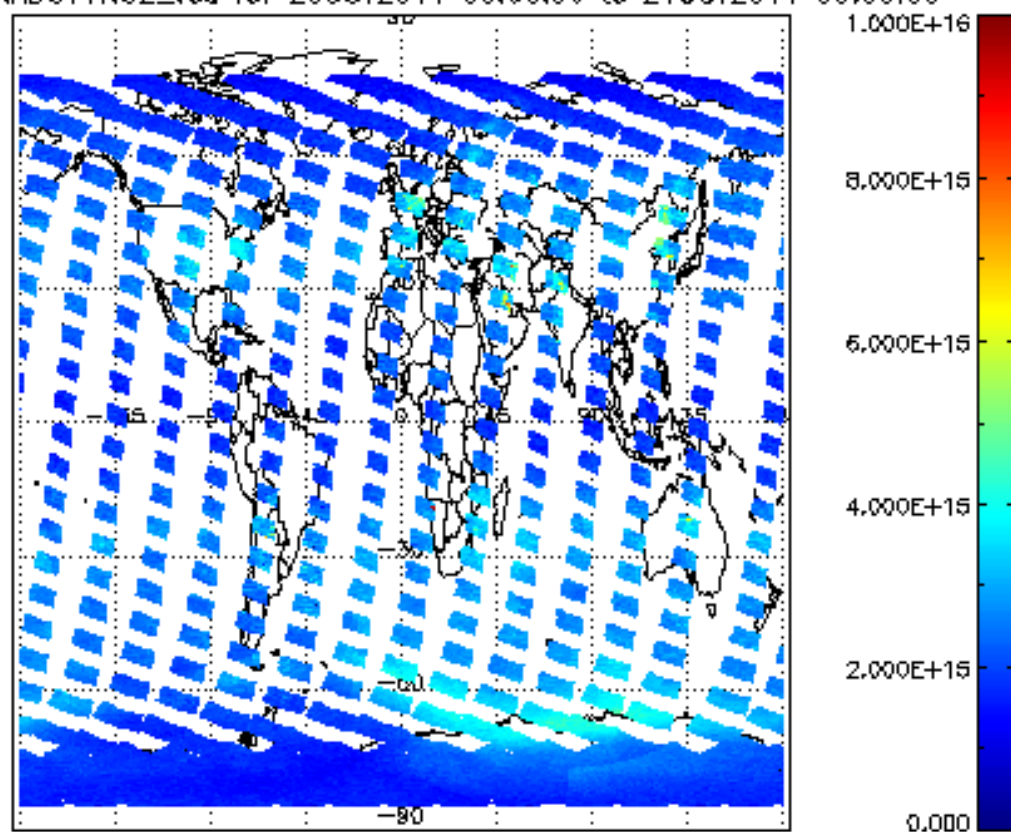
SCIOL2P\_NADUV003\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



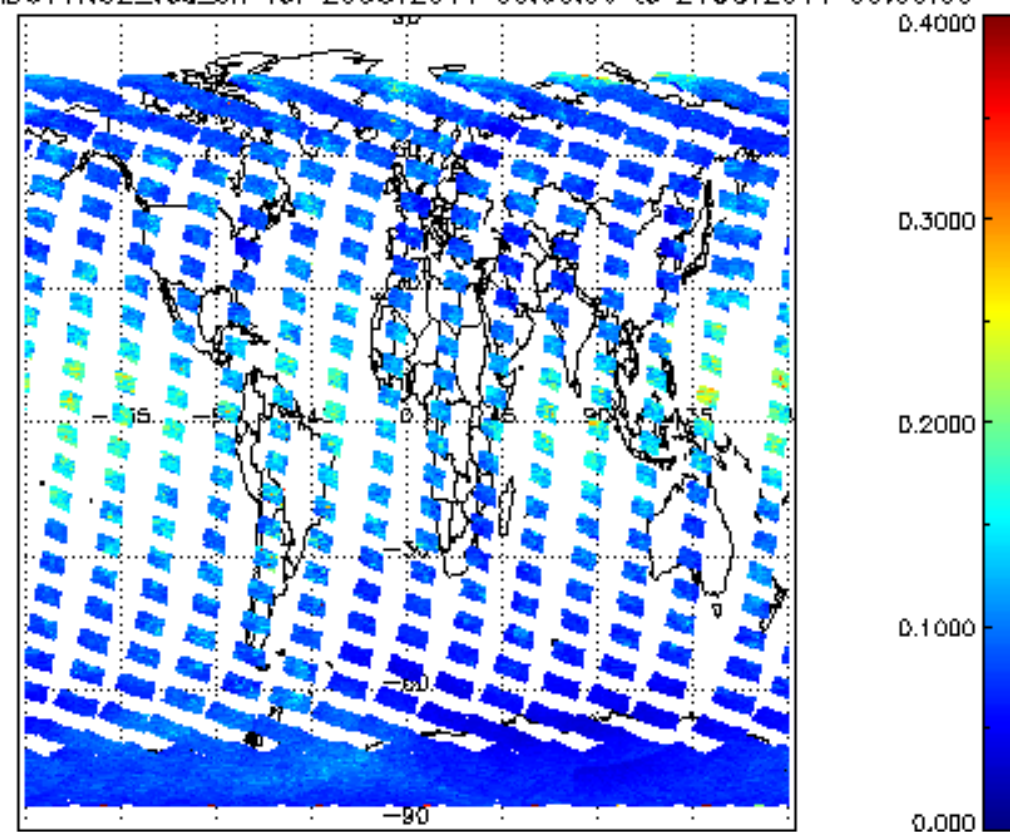




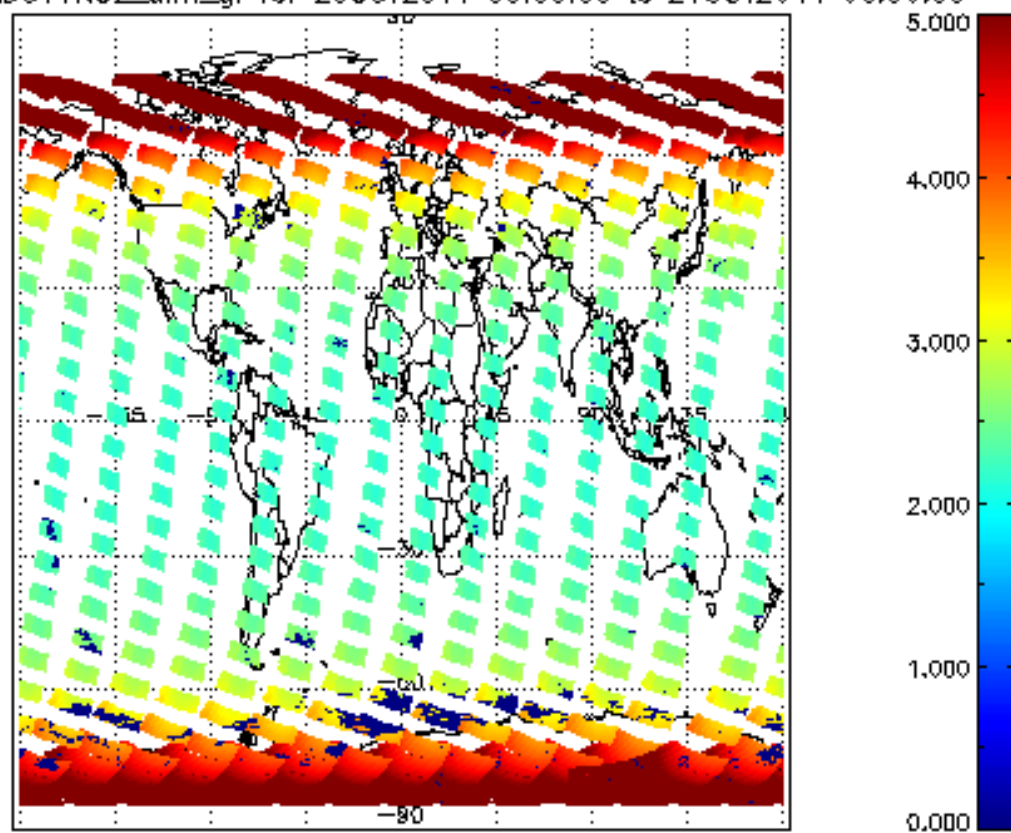
SCIOL2P\_NADUV1NO2\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



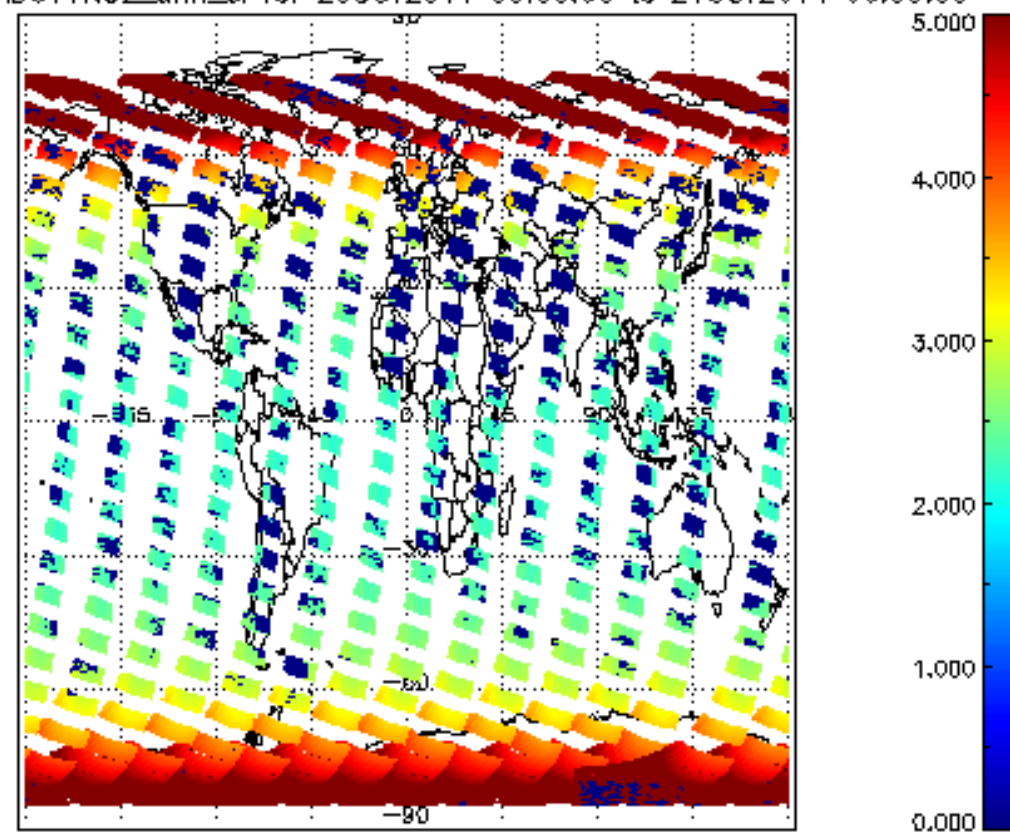
SCIOL2P\_NADUV1NO2\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



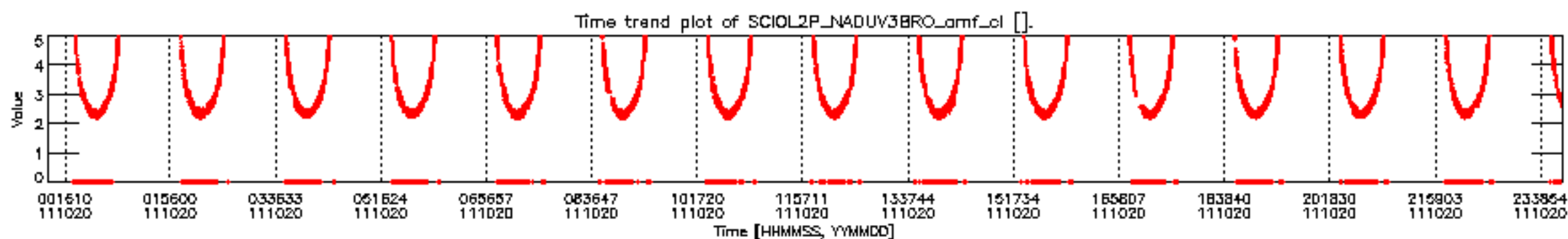
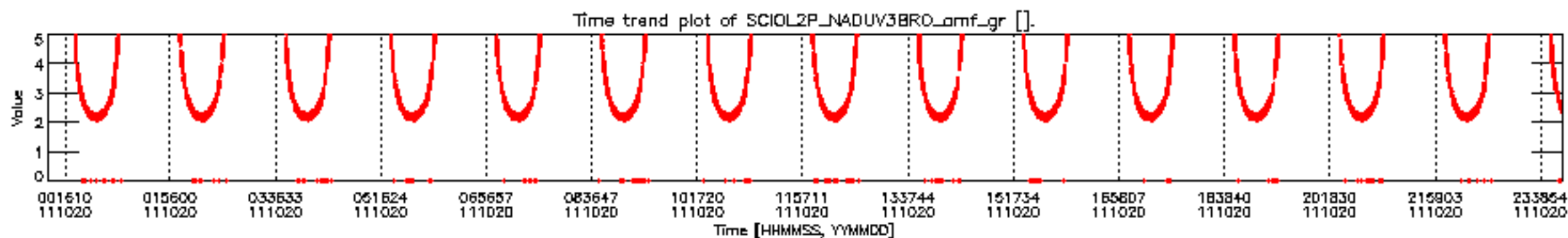
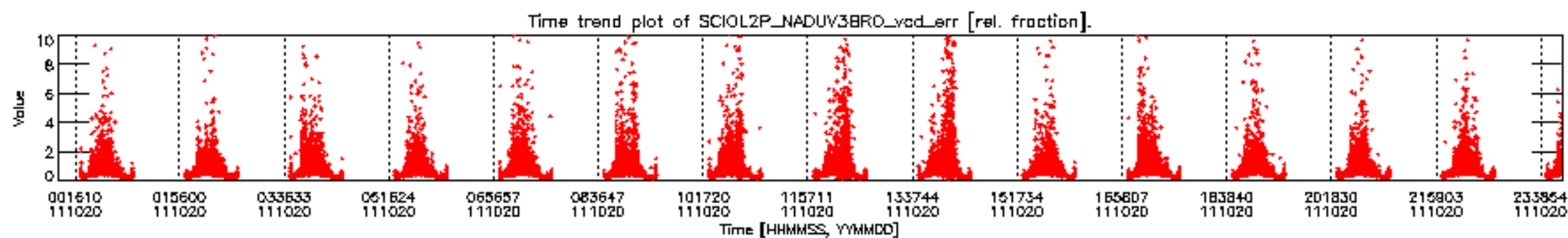
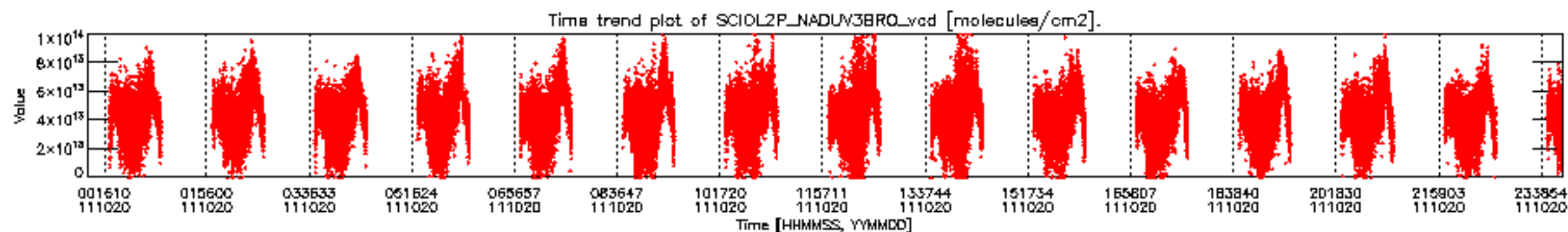
SCIOL2P\_NADUV1NO2\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



SCIOL2P\_NADUV1NO2\_amf\_cl for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

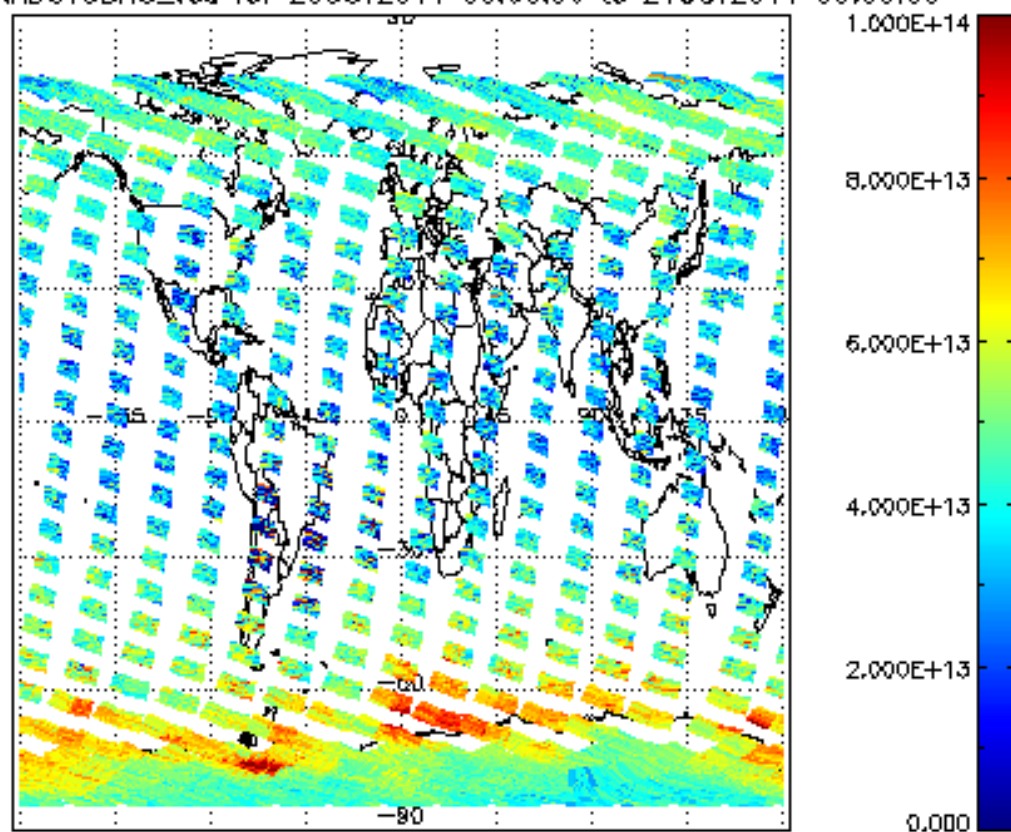




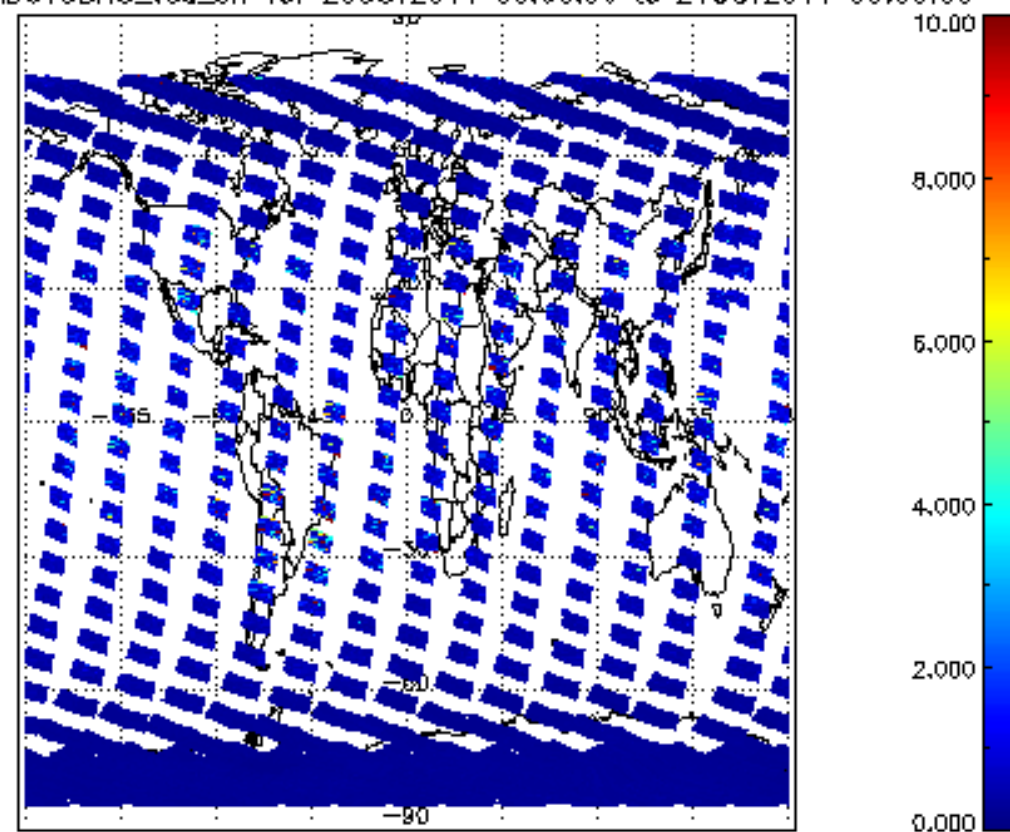




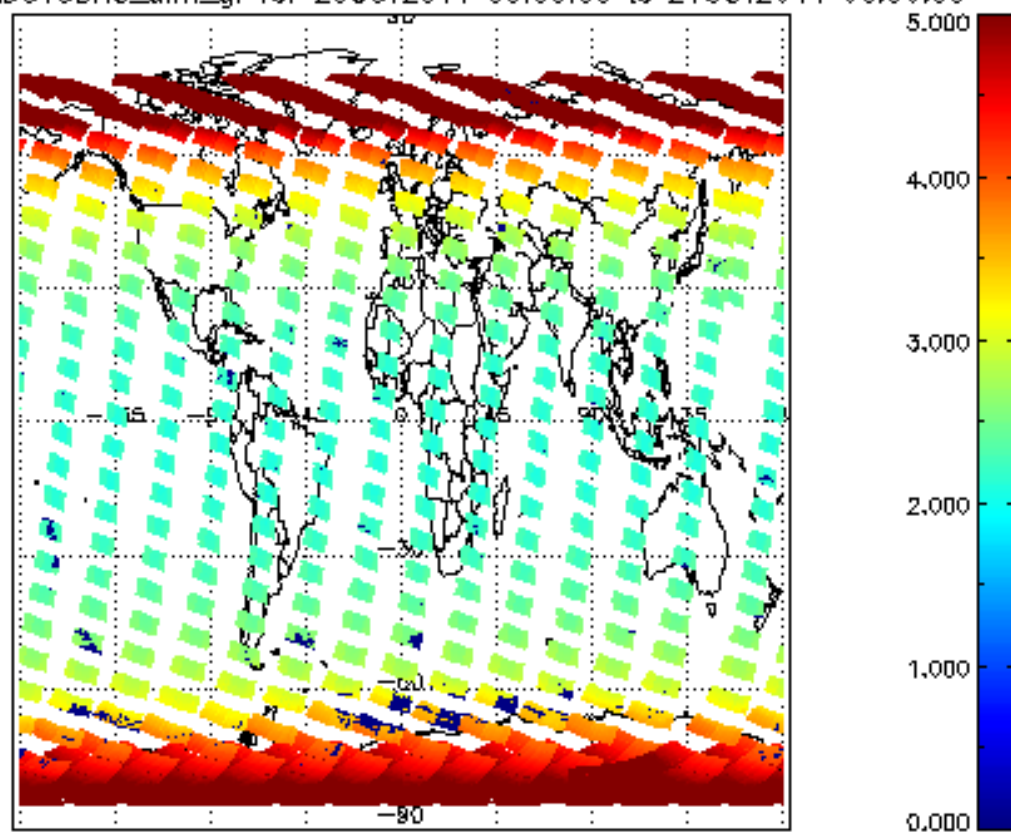
SCIOL2P\_NADUV3BRO\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



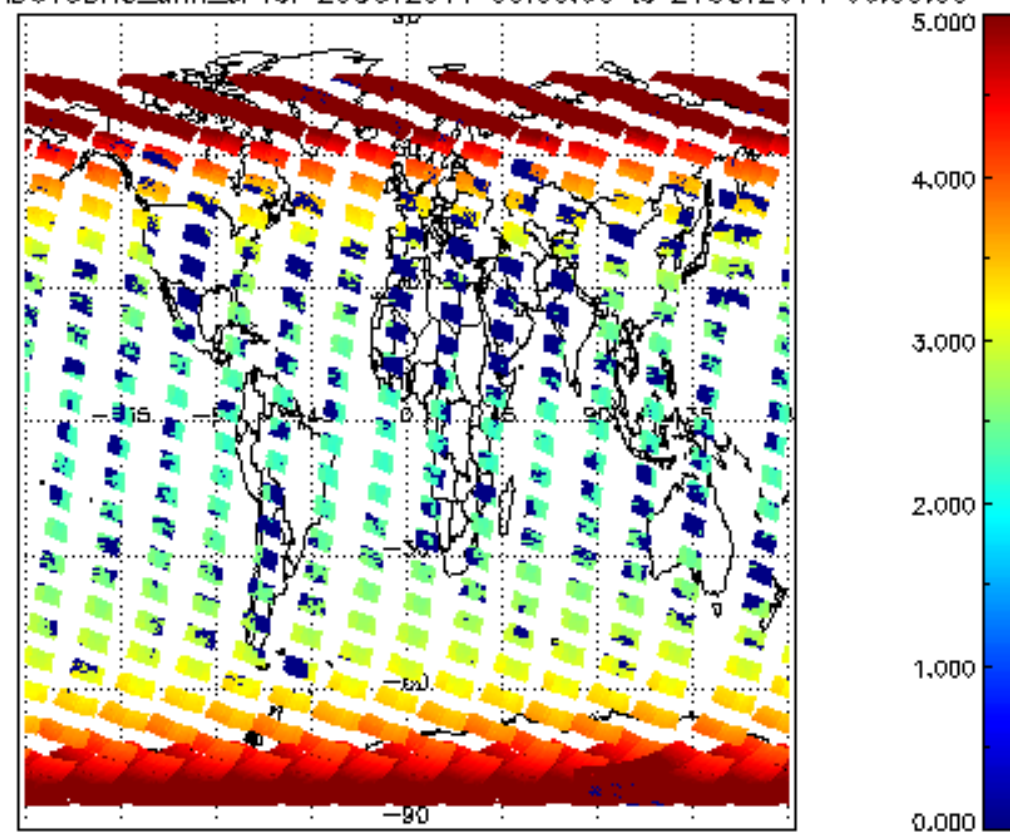
SCIOL2P\_NADUV3BRO\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00

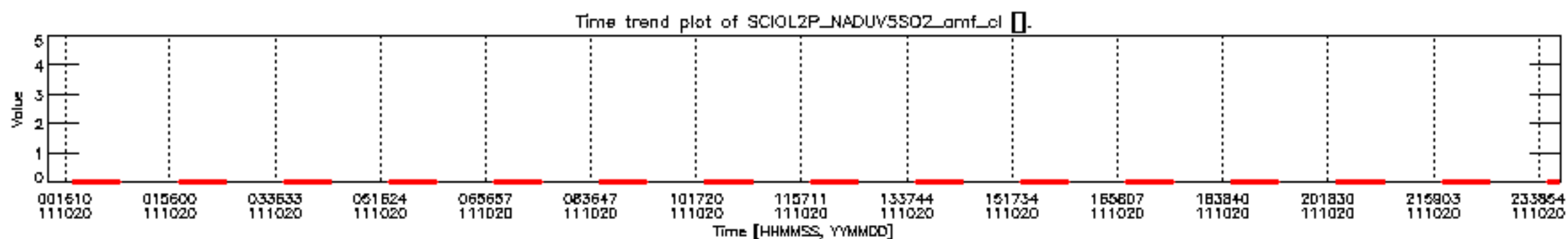
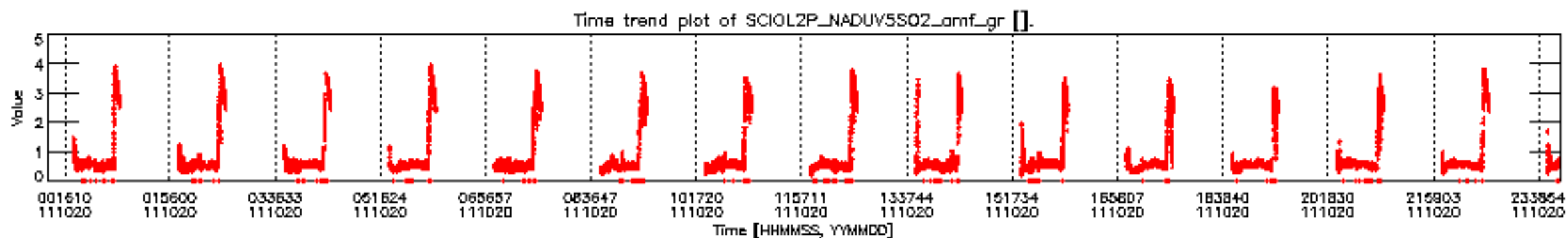
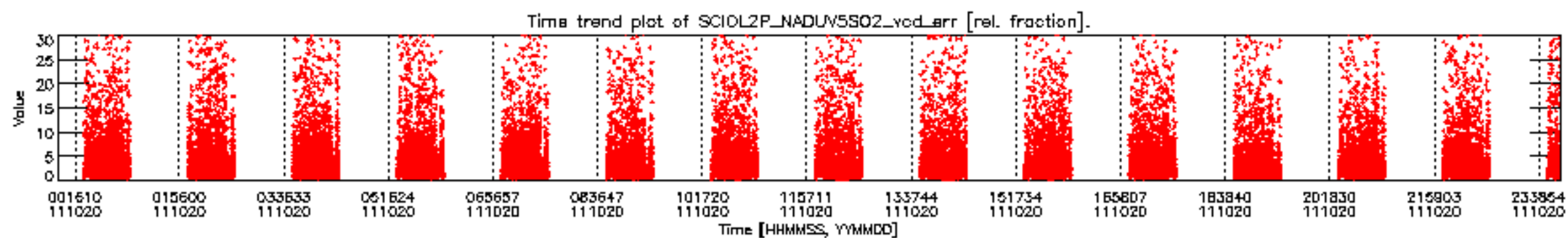
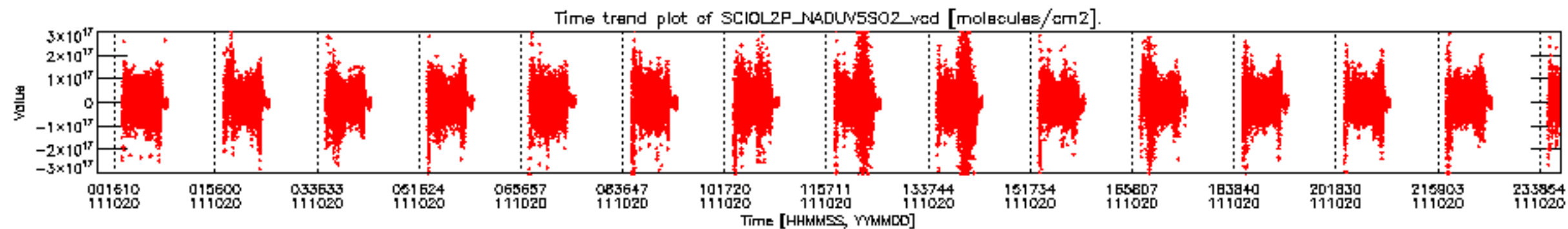


SCIOL2P\_NADUV3BRO\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



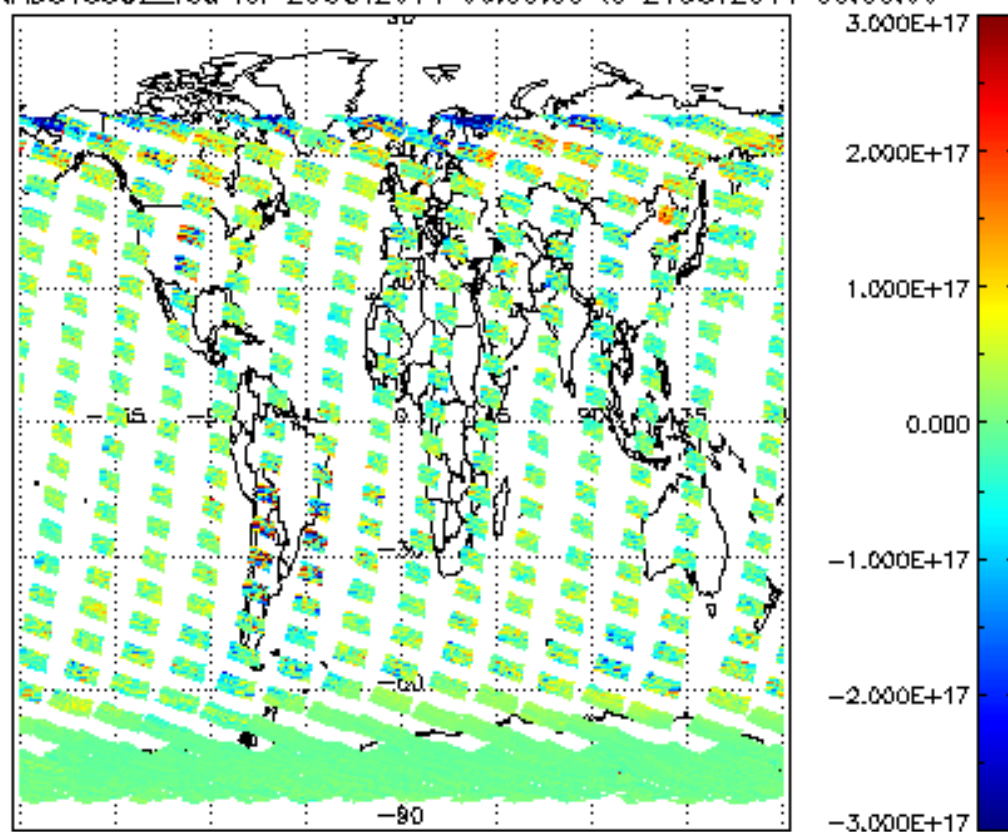
SCIOL2P\_NADUV3BRO\_amf\_cl for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



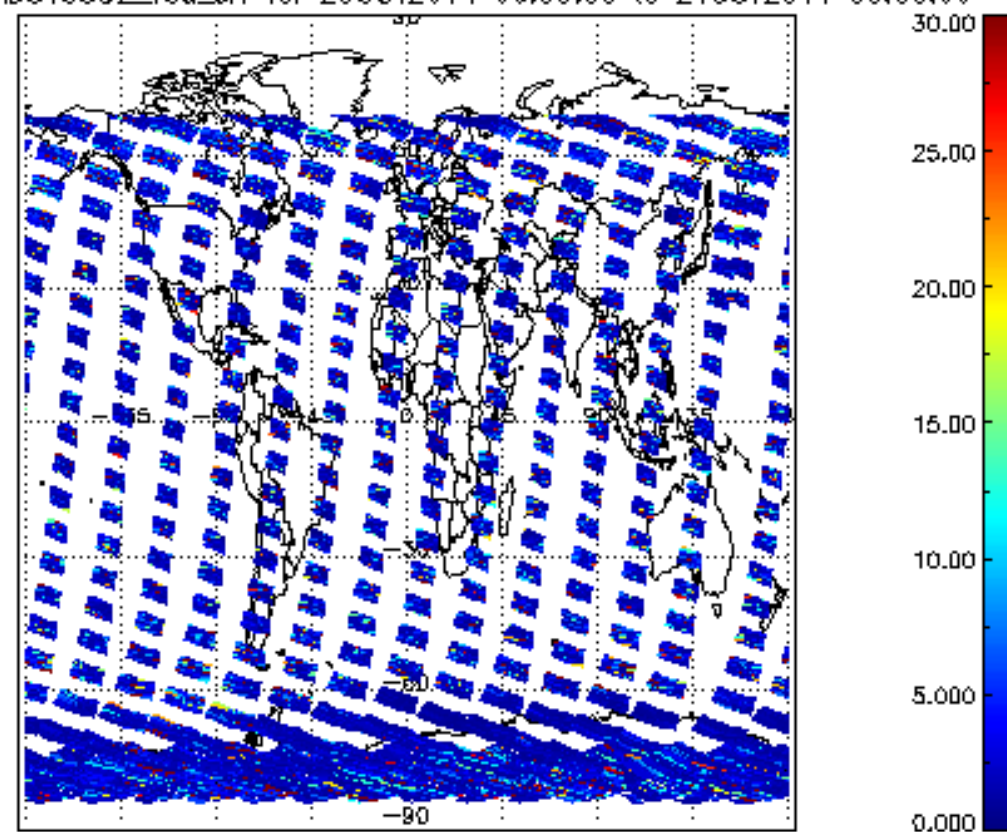




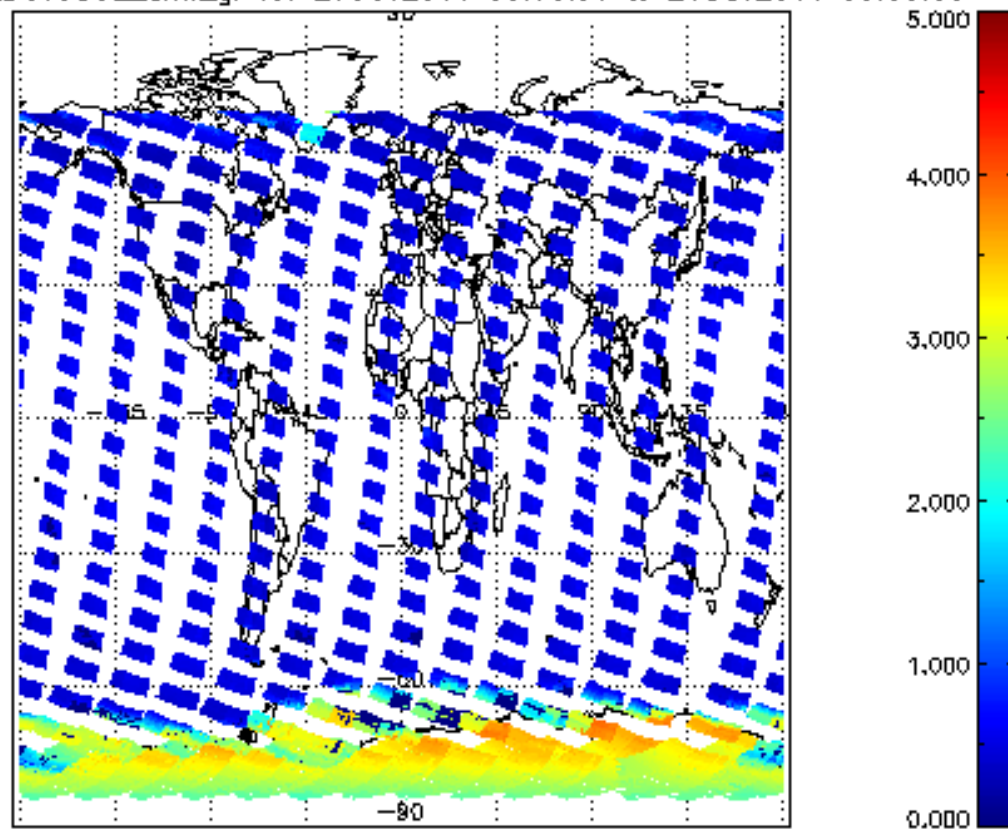
SCIOL2P\_NADUV5S02\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



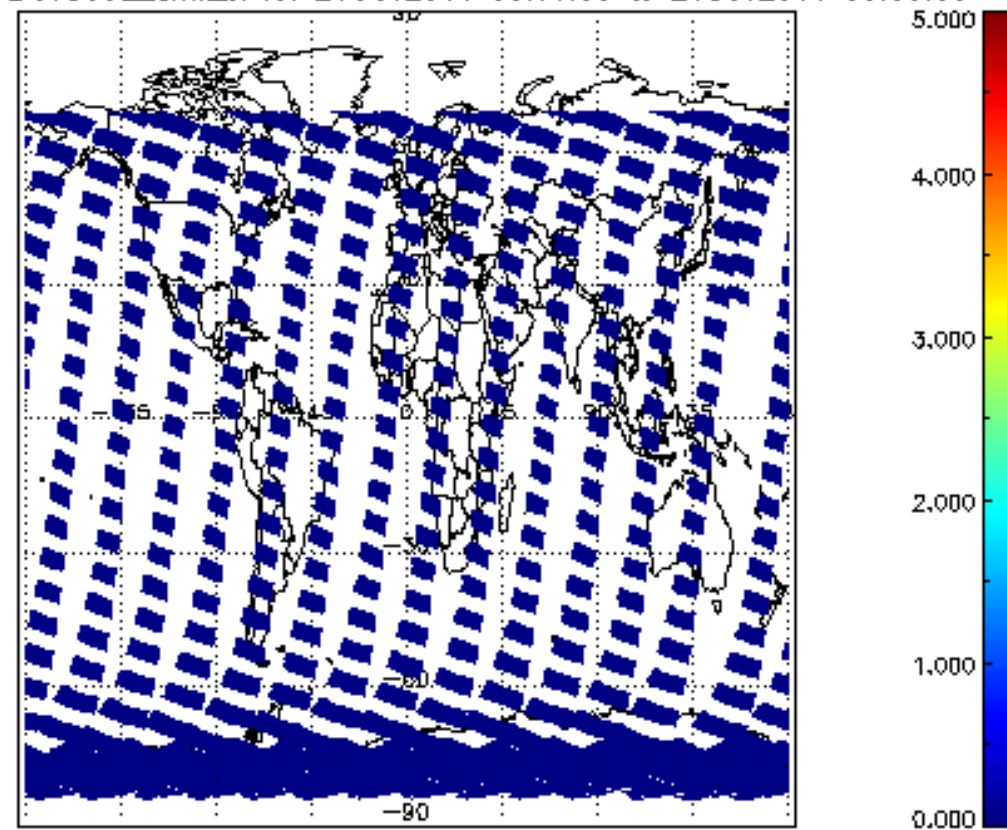
SCIOL2P\_NADUV5S02\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

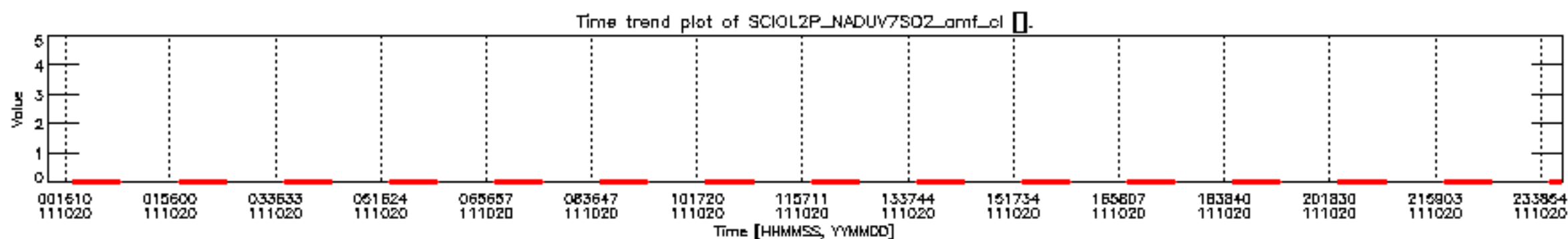
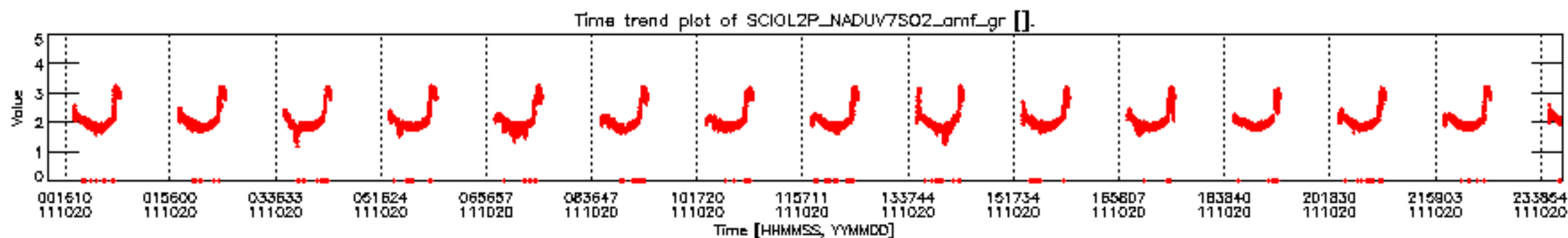
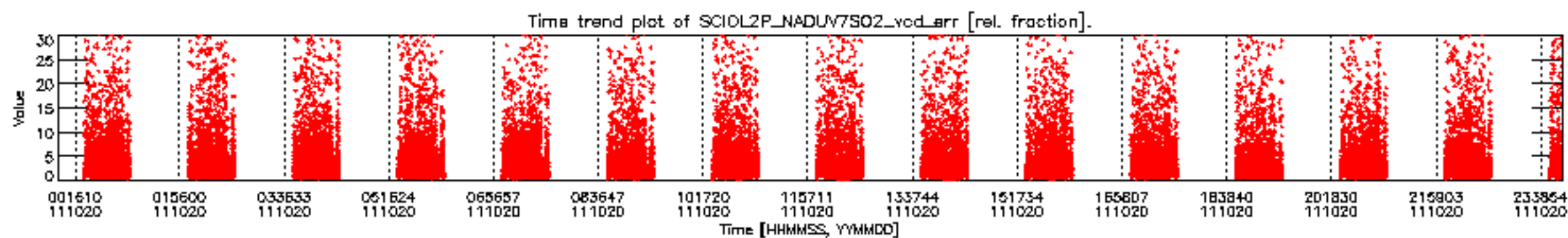
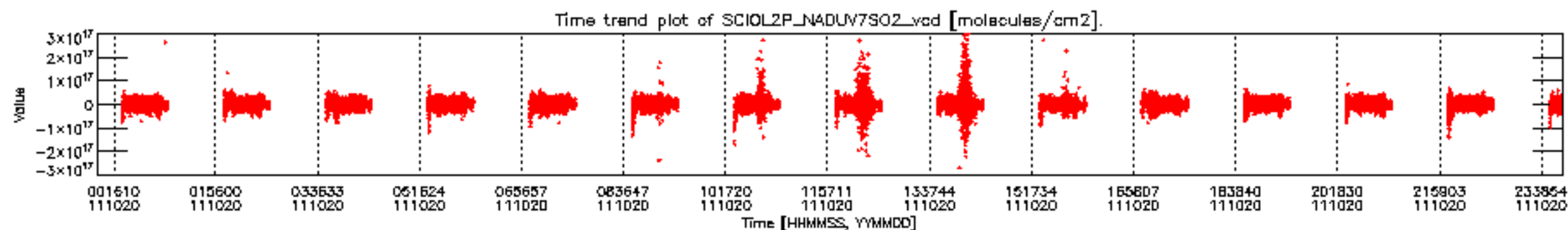


SCIOL2P\_NADUV5S02\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



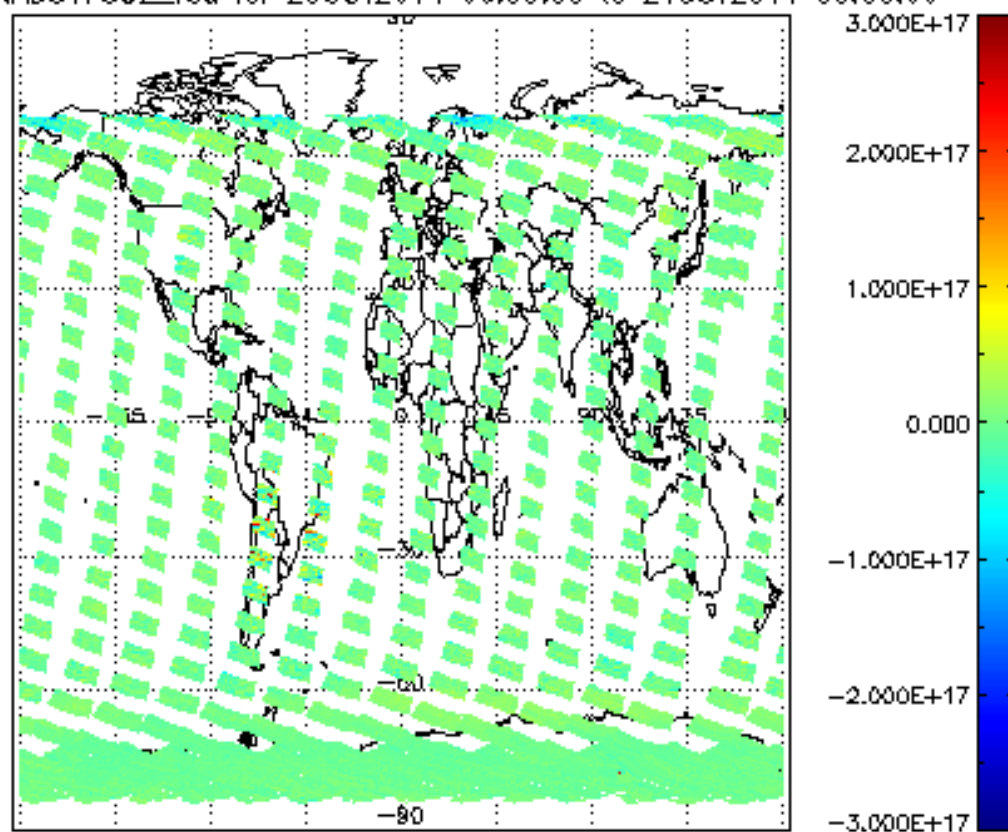
SCIOL2P\_NADUV5S02\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



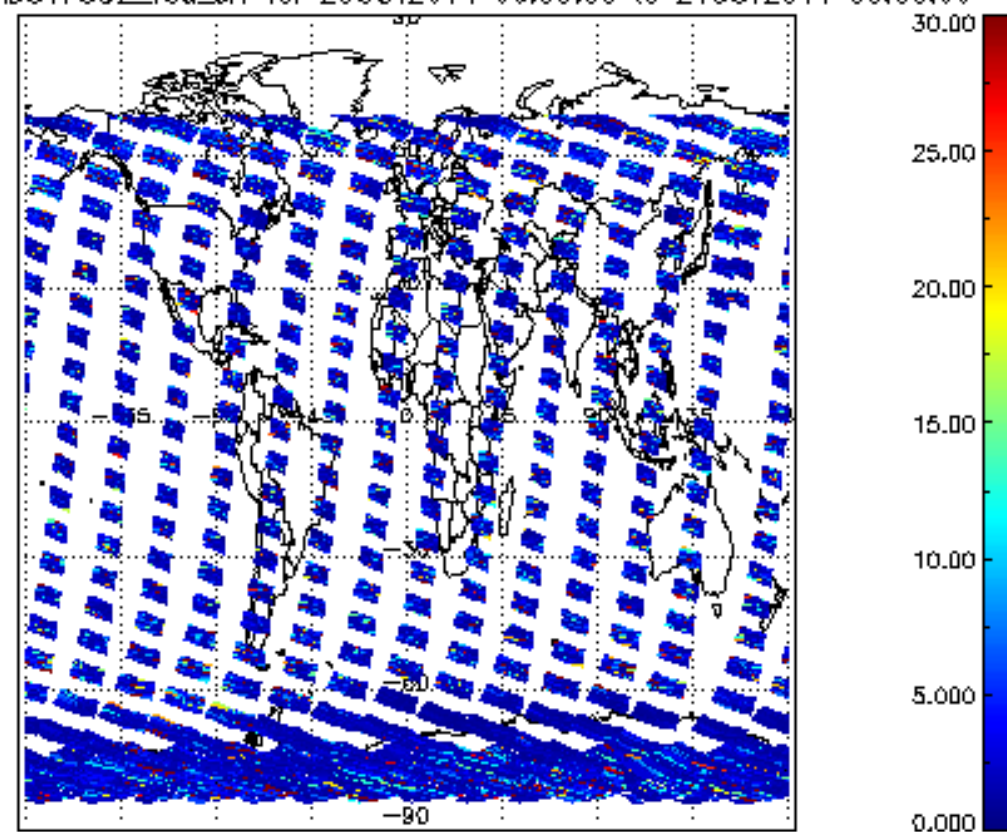




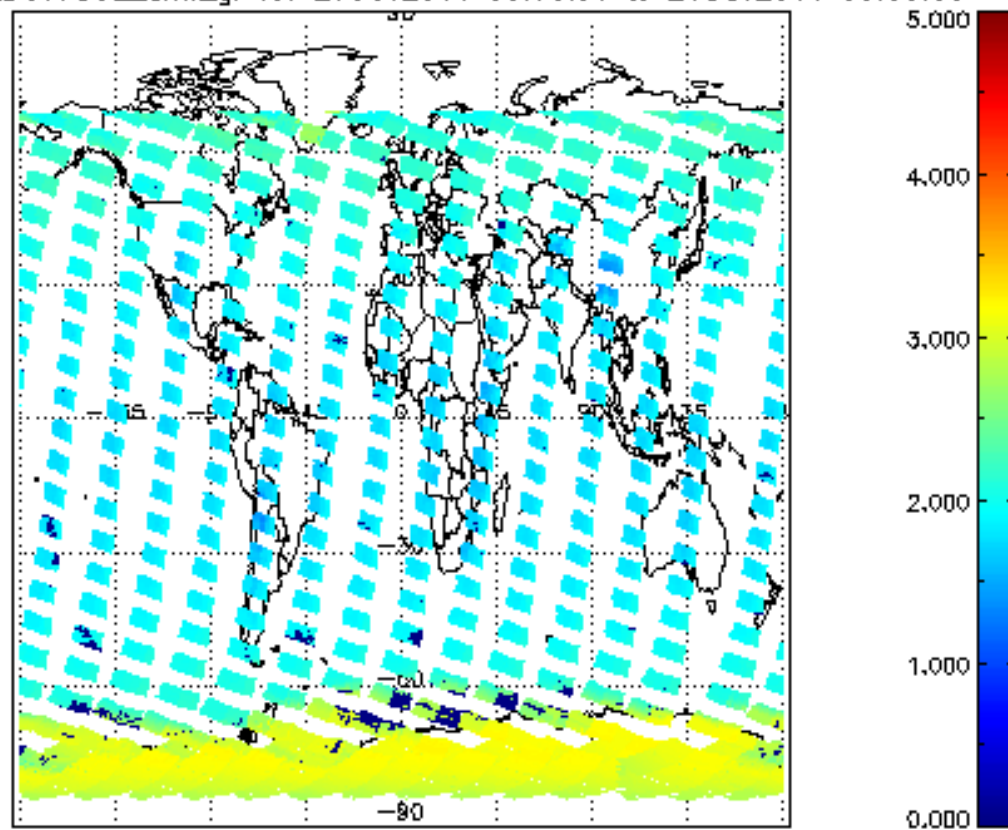
SCIOL2P\_NADUV7S02\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



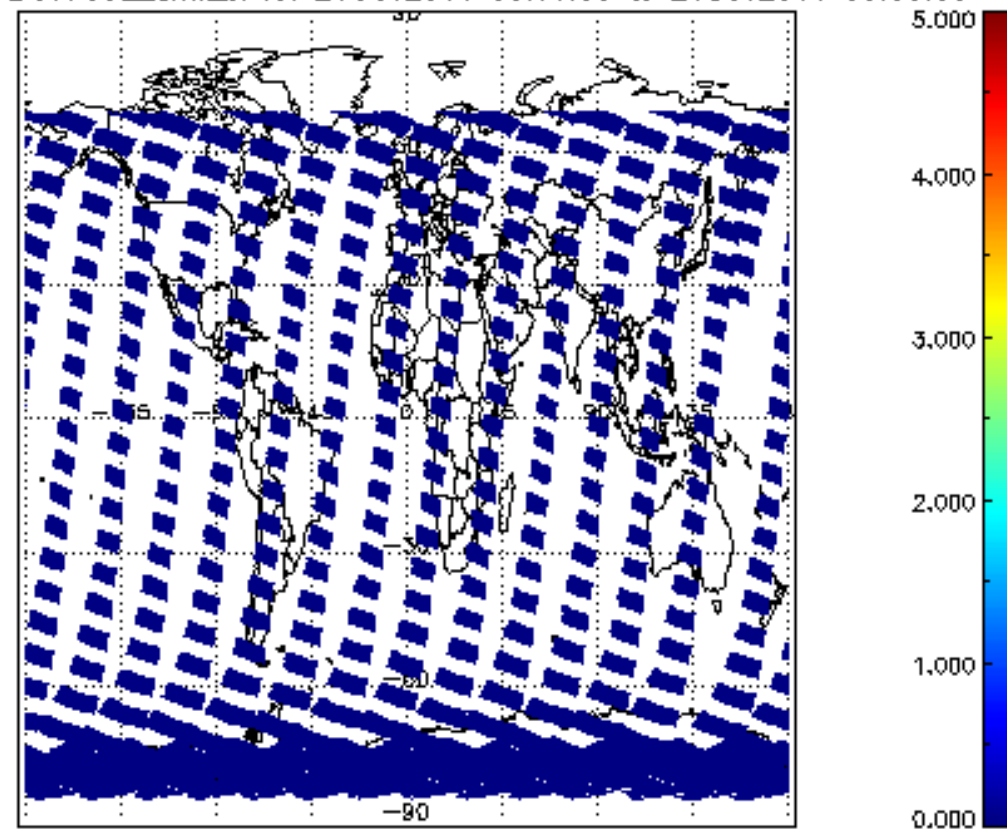
SCIOL2P\_NADUV7S02\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

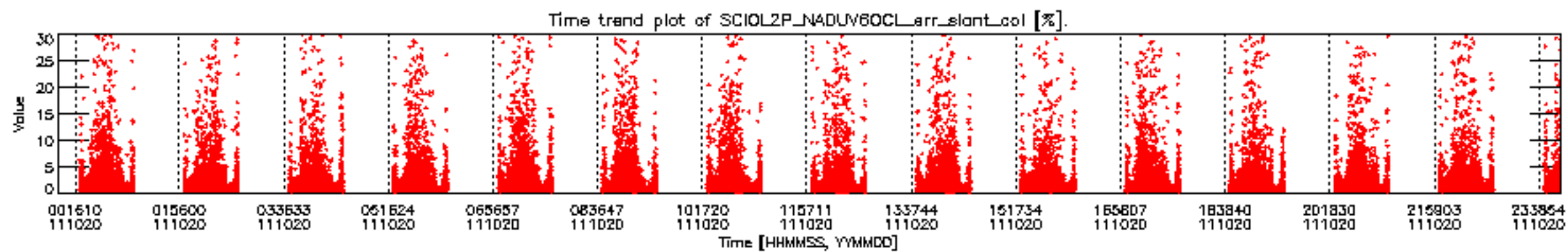
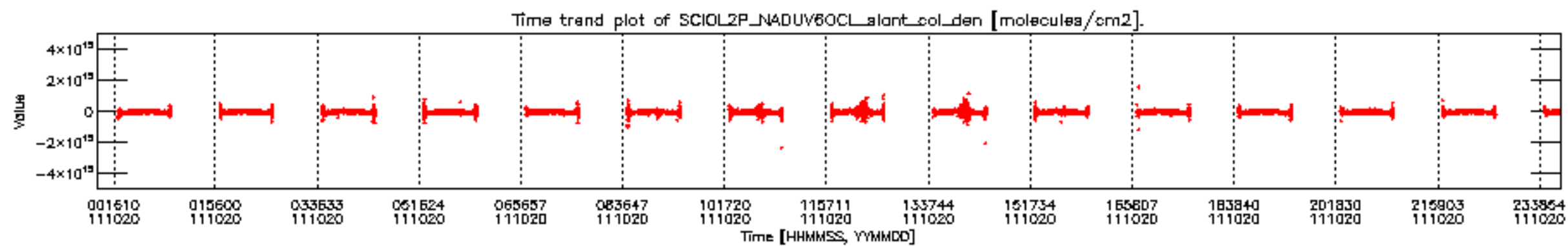


SCIOL2P\_NADUV7S02\_amf\_gr for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



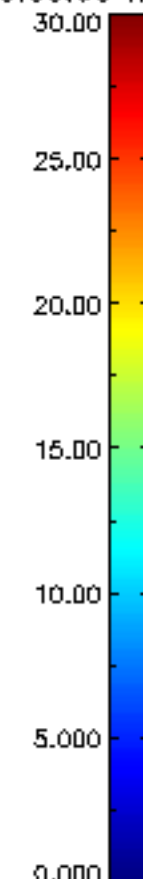
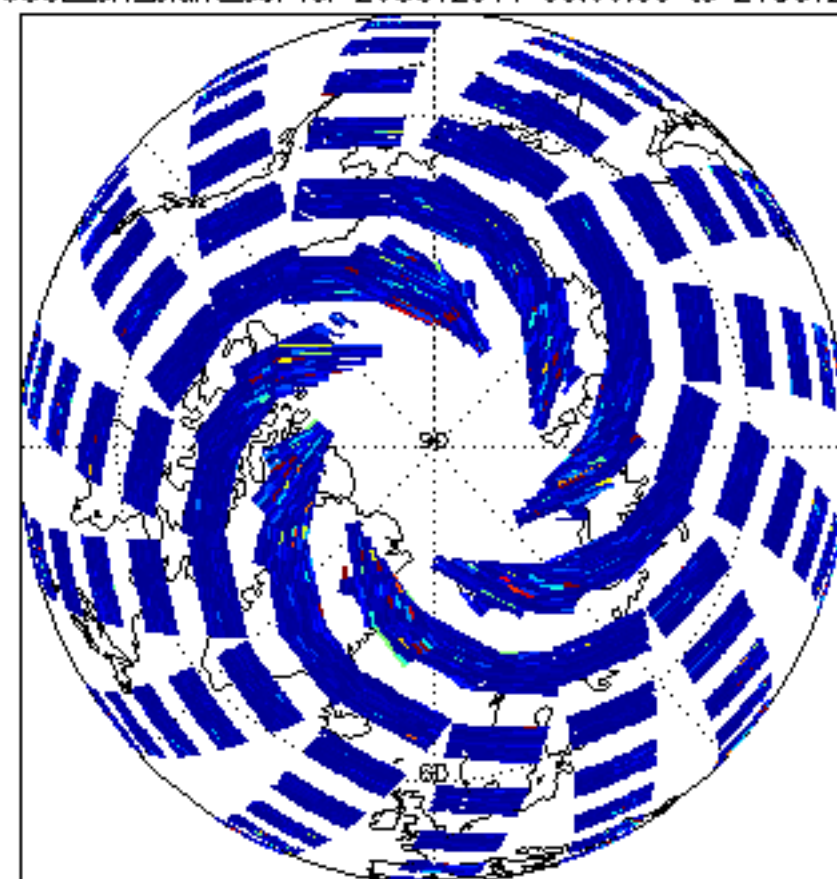
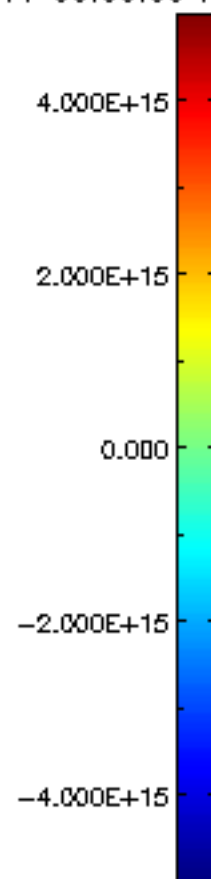
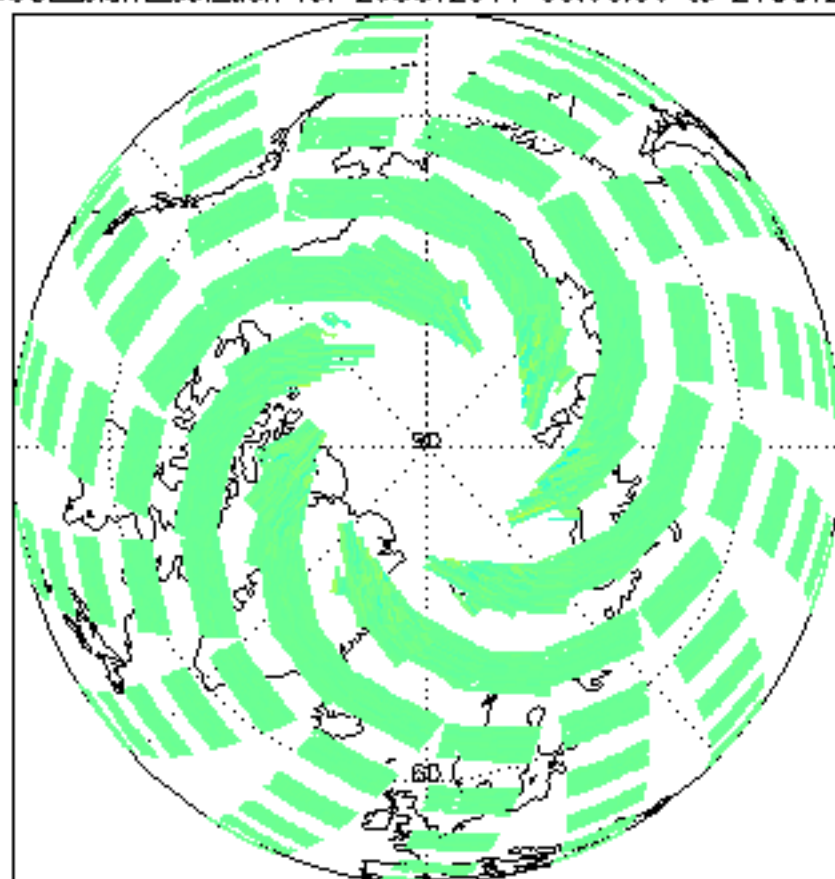
SCIOL2P\_NADUV7S02\_amf\_cl for 20OCT2011 00:00:00 to 21OCT2011 00:00:00



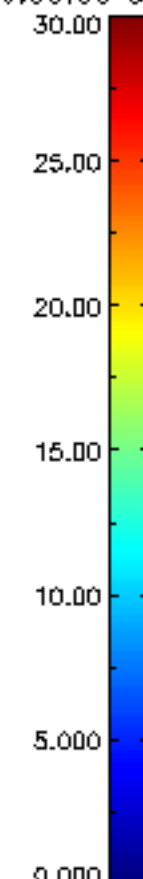
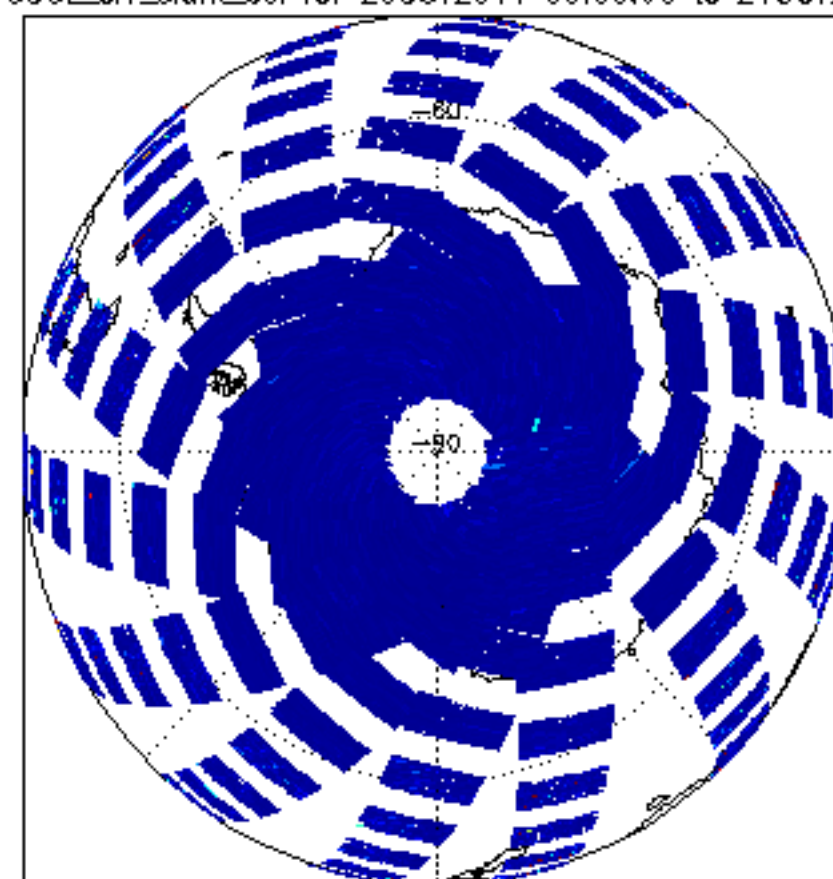
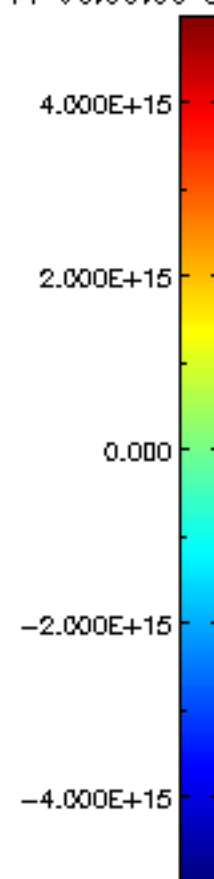
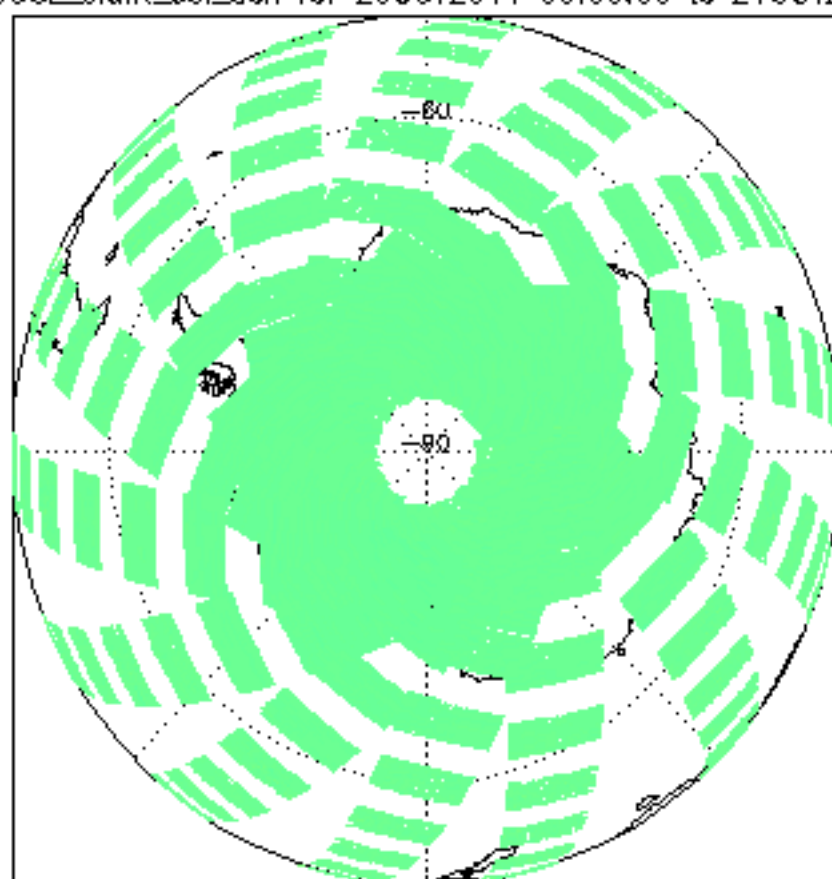




CIOL2P\_NADUV60CL\_slant\_col\_den for 200OCT2011 00:00:00 to 21OCT2011 00:00:00 np iCIOL2P\_NADUV60CL\_err\_slant\_col for 200OCT2011 00:00:00 to 21OCT2011 00:00:00 np



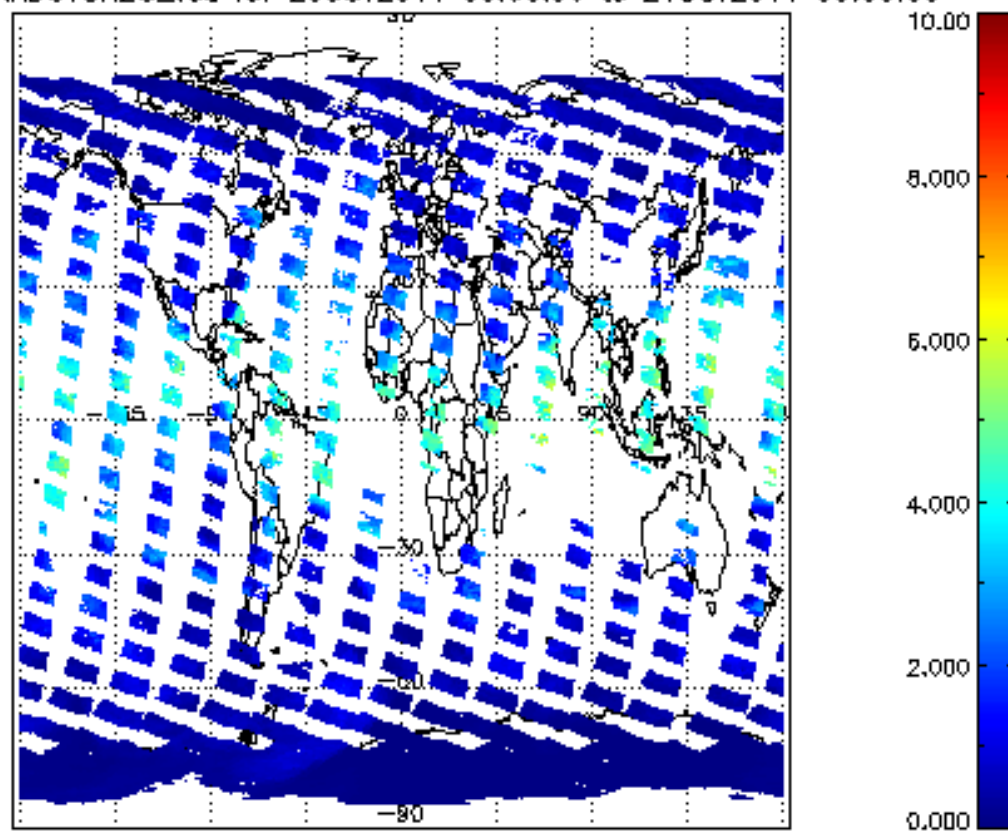
CIOL2P\_NADUV60CL\_slant\_col\_den for 20OCT2011 00:00:00 to 21OCT2011 00:00:00 sp; CIOL2P\_NADUV60CL\_err\_slant\_col for 20OCT2011 00:00:00 to 21OCT2011 00:00:00 sp



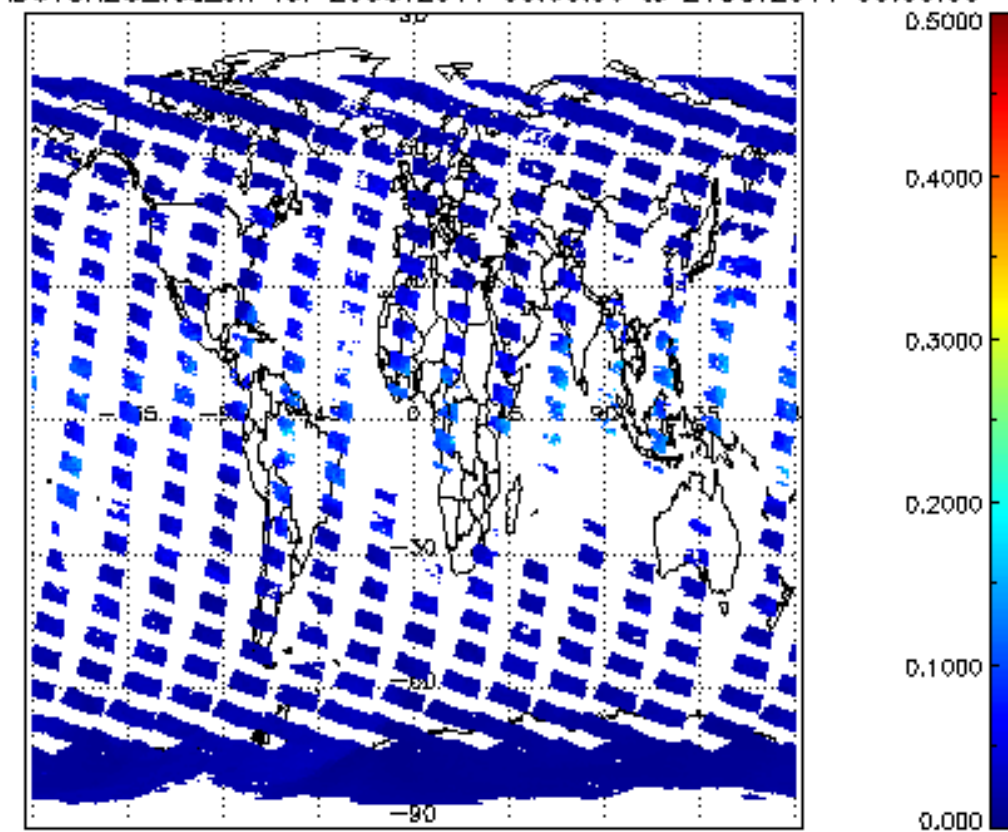




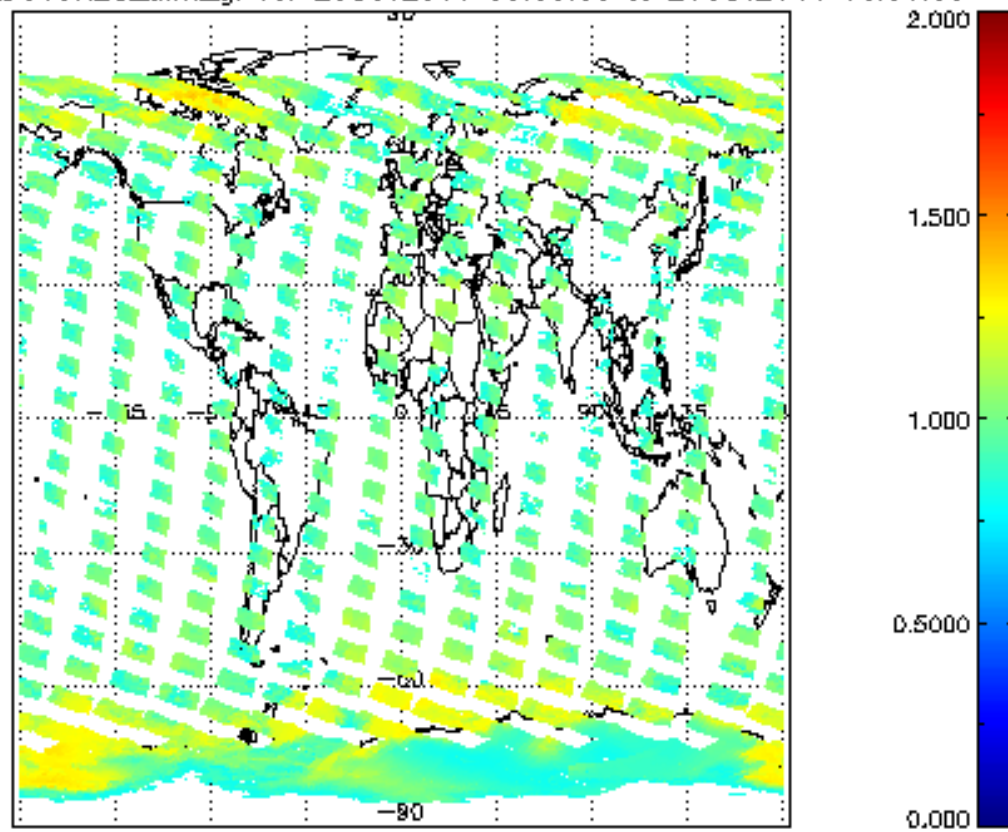
SCIOL2P\_NADUV8H20\_vcd for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



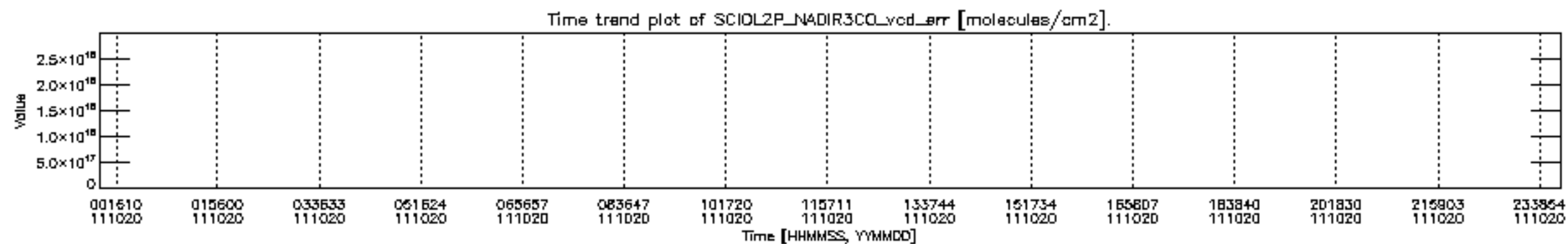
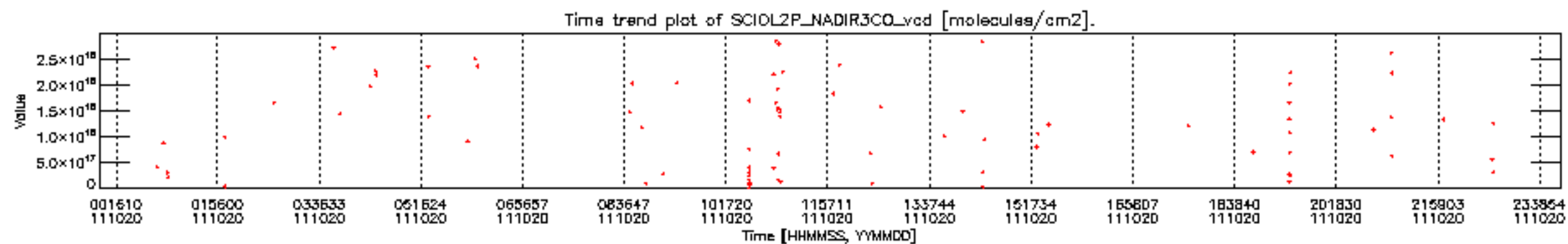
SCIOL2P\_NADUV8H20\_vcd\_err for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



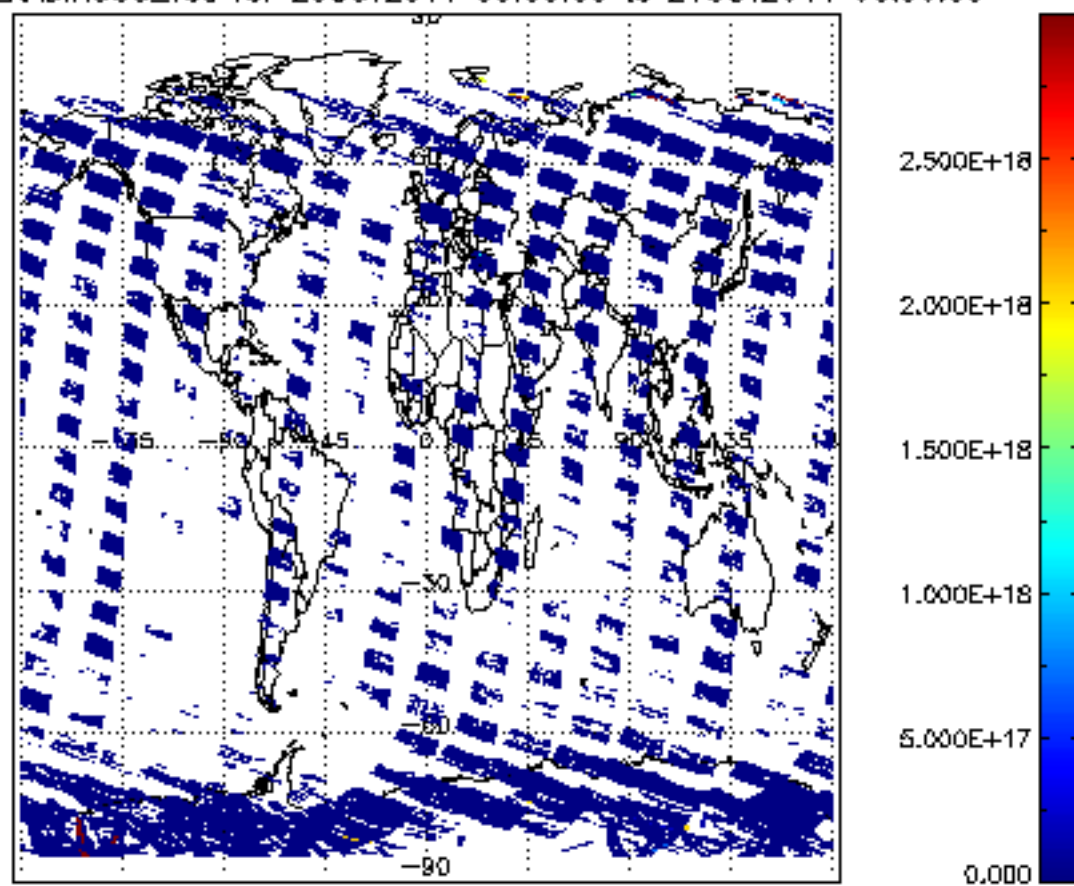
SCIOL2P\_NADUV8H20\_amf\_gr for 200OCT2011 00:00:00 to 21OCT2011 00:00:00



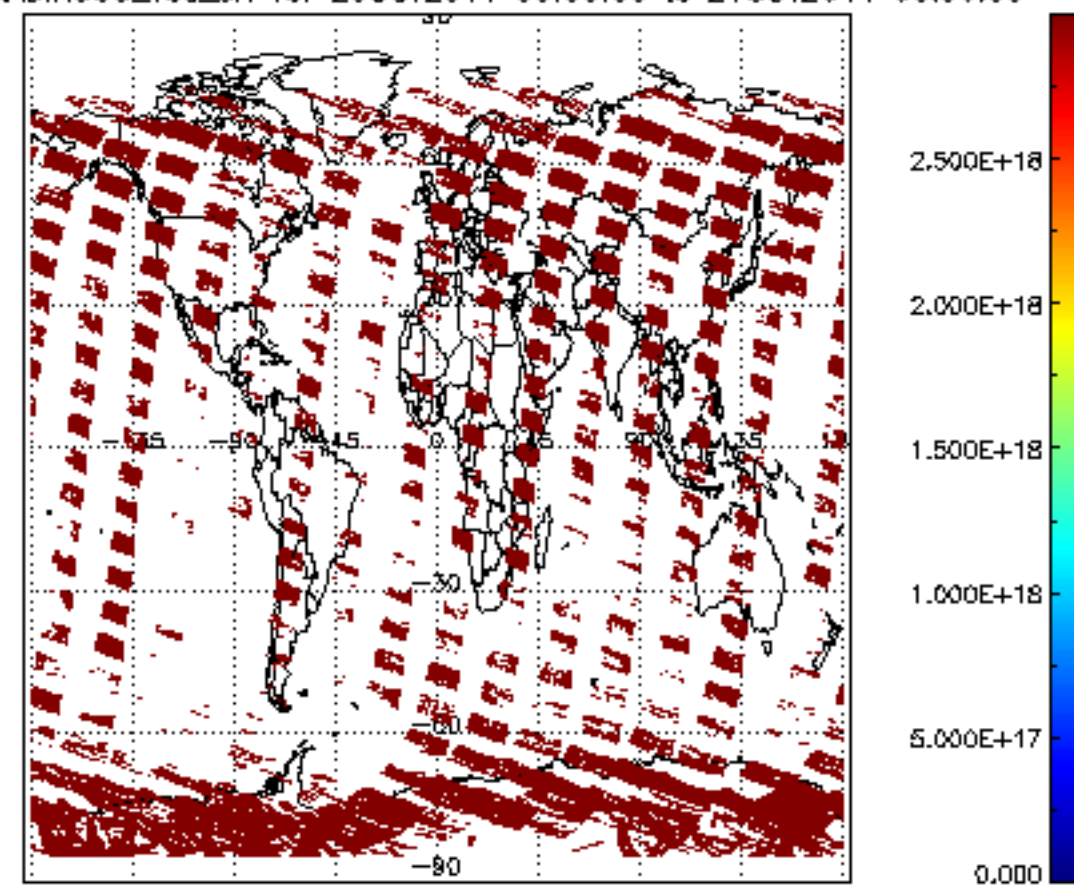




SCIOL2P\_NADIR3CO\_vcd for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

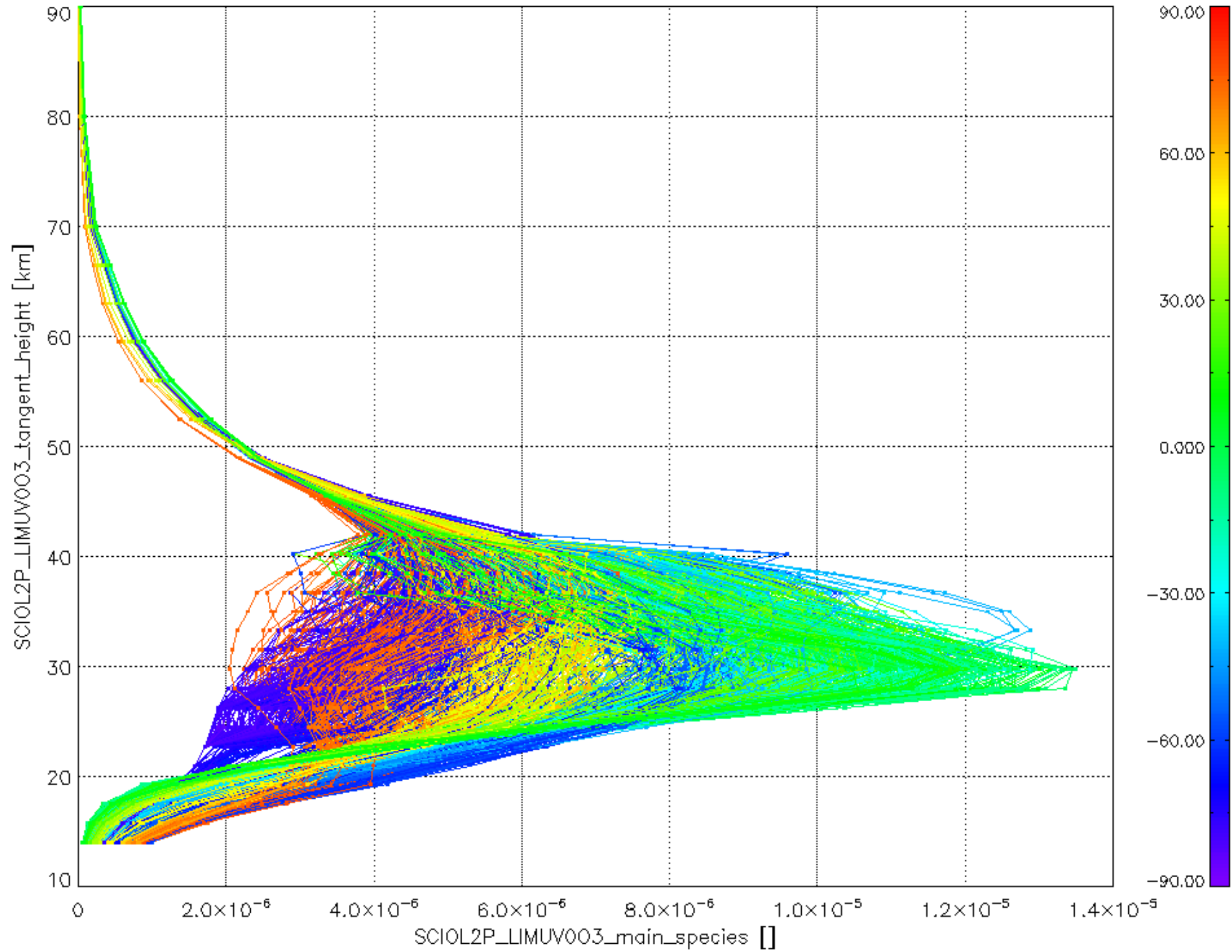


SCIOL2P\_NADIR3CO\_vcd\_err for 20OCT2011 00:00:00 to 21OCT2011 00:00:00

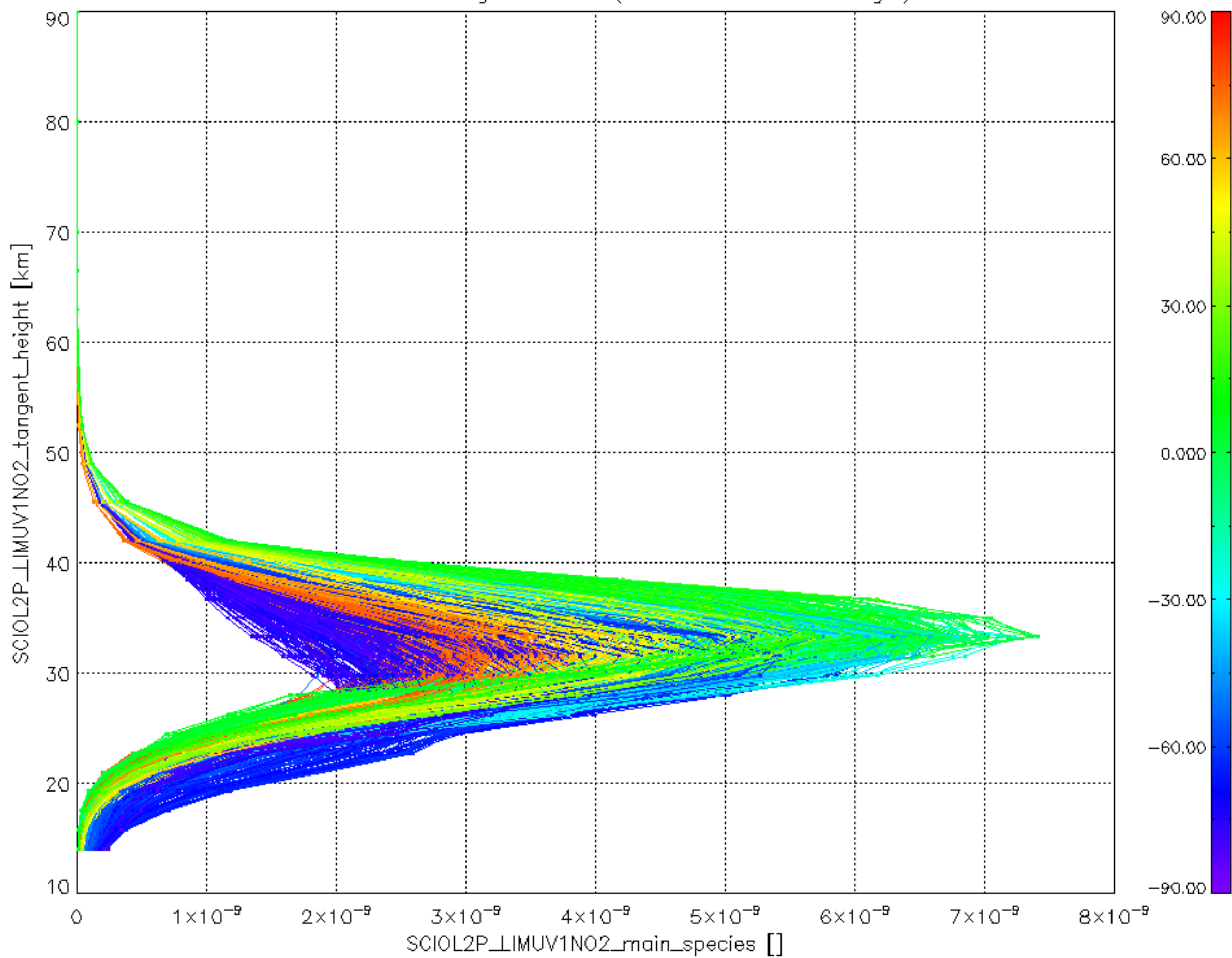




Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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).

