

## 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	1.12 (24-06-2010)
Time of report generation	01FEB2011 05:18:41
Data source version	SCIA-OL/5.01-N
Processing scope for products	26JAN2011 00:00:00 to 27JAN2011 00:00:00
Start time of first product within scope	26JAN2011 00:02:39
Stop time of last product within scope	27JAN2011 00:25:34
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__2PNDPA20110126_000239_000035843099_00001_46567_1436.N1</a>	26JAN2011 00:02:39	26JAN2011 01:02:23	0	GOOD
1	<a href="#">SCI_OL__2PNDPA20110126_014252_000081363099_00002_46568_1439.N1</a>	<b>26JAN2011 01:42:52</b>	<b>26JAN2011 03:58:29</b>	0	GOOD
2	<a href="#">SCI_OL__2PNDPA20110126_035927_000062013099_00004_46570_1440.N1</a>	26JAN2011 03:59:27	26JAN2011 05:42:48	0	GOOD
3	<a href="#">SCI_OL__2PNDPA20110126_054252_000060103099_00005_46571_1441.N1</a>	26JAN2011 05:42:52	26JAN2011 07:23:02	0	GOOD
4	<a href="#">SCI_OL__2PNDPA20110126_072305_000038003099_00006_46572_1442.N1</a>	26JAN2011 07:23:05	26JAN2011 08:26:26	0	GOOD

5	SCI_OL__2PNDPA20110126_082738_000059953099_00007_46573_1443.N1	26JAN2011 08:27:38	26JAN2011 10:07:34	0	GOOD
6	SCI_OL__2PNDPA20110126_100846_000060093099_00008_46574_1444.N1	26JAN2011 10:08:46	26JAN2011 11:48:56	0	GOOD
7	SCI_OL__2PNDPA20110126_114805_000059953099_00009_46575_1445.N1	26JAN2011 11:48:05	26JAN2011 13:28:01	0	GOOD
8	SCI_OL__2PNDPA20110126_132913_000032993099_00010_46576_1446.N1	26JAN2011 13:29:13	26JAN2011 14:24:12	0	GOOD
9	SCI_OL__2PNDPA20110126_150441_000035993099_00011_46577_1447.N1	26JAN2011 15:04:41	26JAN2011 16:04:40	0	GOOD
10	SCI_OL__2PNDPA20110126_164455_000035843099_00012_46578_1448.N1	26JAN2011 16:44:55	26JAN2011 17:44:40	0	GOOD
11	SCI_OL__2PNDPA20110126_182619_000035423099_00013_46579_1449.N1	26JAN2011 18:26:19	26JAN2011 19:25:21	0	GOOD
12	SCI_OL__2PNDPA20110126_200544_000035843099_00014_46580_1450.N1	26JAN2011 20:05:44	26JAN2011 21:05:29	0	GOOD
13	SCI_OL__2PNDPA20110126_214536_000035993099_00014_46580_1451.N1	26JAN2011 21:45:36	26JAN2011 22:45:35	0	GOOD
14	SCI_OL__2PNDPA20110126_232550_000035843099_00015_46581_1452.N1	26JAN2011 23:25:50	27JAN2011 00:25:34	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: 173940

Total number of cloud data DSRs with good quality flag (=0): 173940 (100.0 %)

Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	173940	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	173940	0.16405	0.12500	0.12500	0.25000	0.057934	s
CL_FRAC	173940	0.42504	0.42093	0.0000	1.0000	0.28619	-
CL_FRAC_ERR	173940	0.0000	0.0000	0.0000	0.0000	0.0000	%
PMD_READ	173940	5.2496	4.0000	4.0000	8.0000	1.8539	
PMD_READ_CL[0]	173940	0.37054	0.0000	0.0000	8.0000	1.1195	-
PMD_READ_CL[1]	173940	1.0491	0.0000	0.0000	8.0000	2.3725	-
CL_TOP_HEIGHT	133743	3.7749	2.8360	0.0000	17.000	3.5357	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	133743	57.515	55.648	0.0000	101.00	40.862	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	173940	11100000	11100000	11100000	11100000	0.0000	flags
CLOUD_FLAGS	173940	11001100	11000100	11000000	11100000	3529.2	flags
AERO_ABSO_IND	173940	0.46895	0.0000	0.0000	10.743	0.80364	
AERO_IND_DIAG	173940	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	173940	01010001	00000000	00000000	11000000	24289.	flags

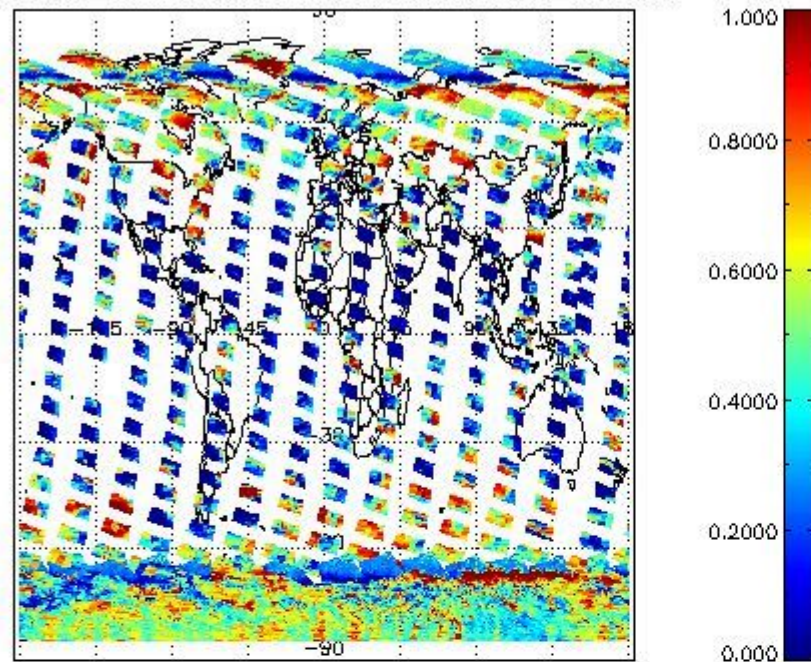
#### Time and geolocation plots:

Plots are available for the following parameters:

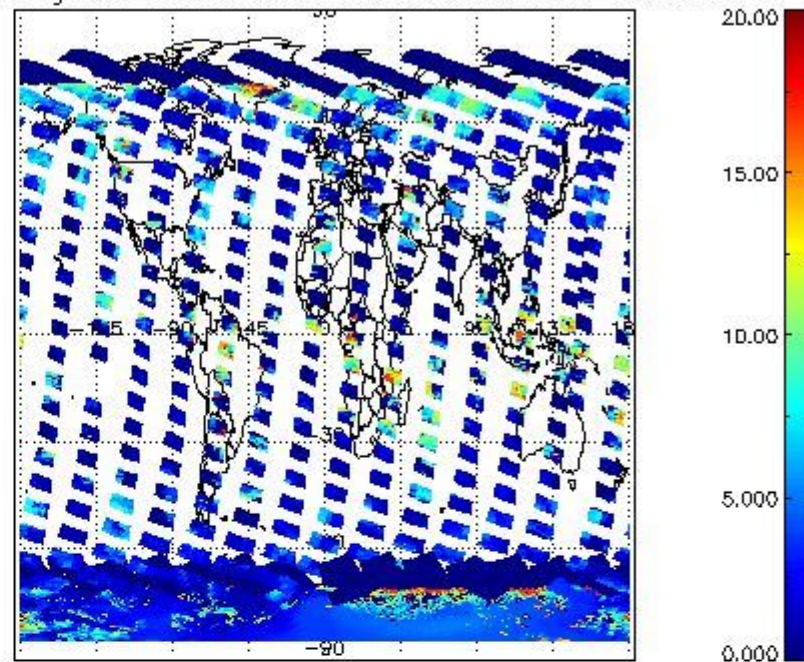
Number	Data item ID
0	cl_frac
1	cl_top_height
2	cl_opt_depth
3	cloud_flags



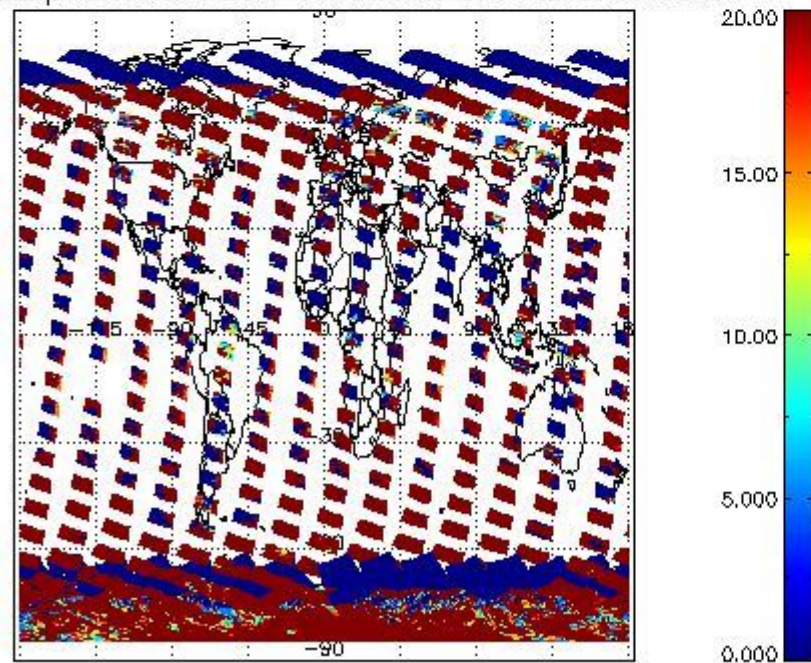
cL\_frac for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



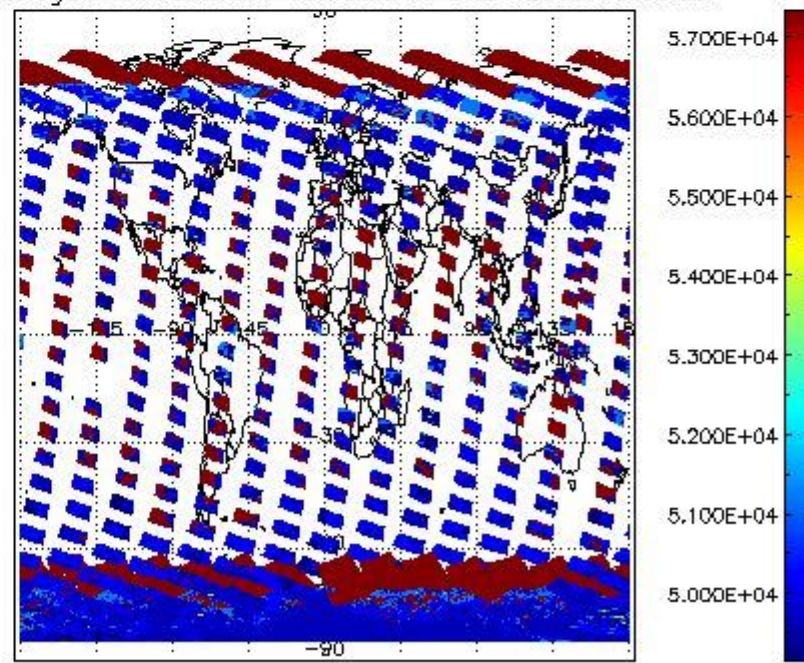
cL\_top\_height for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



cLopt\_depth for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



cloud\_flags for 26JAN2011 00:00:00 to 27JAN2011 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:

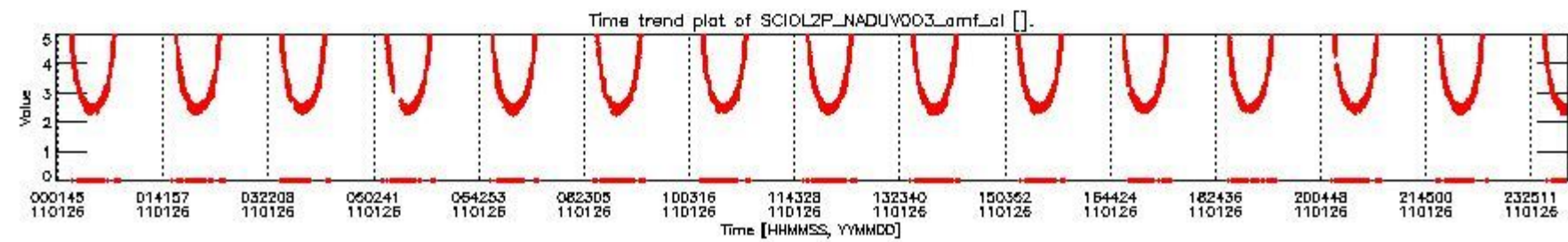
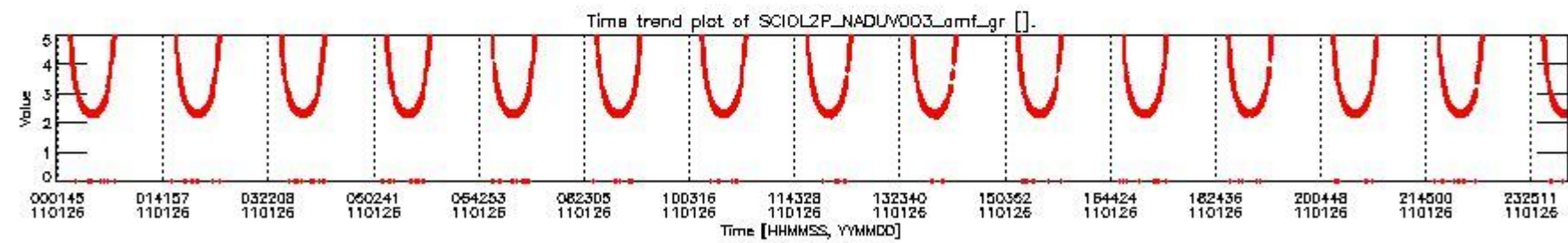
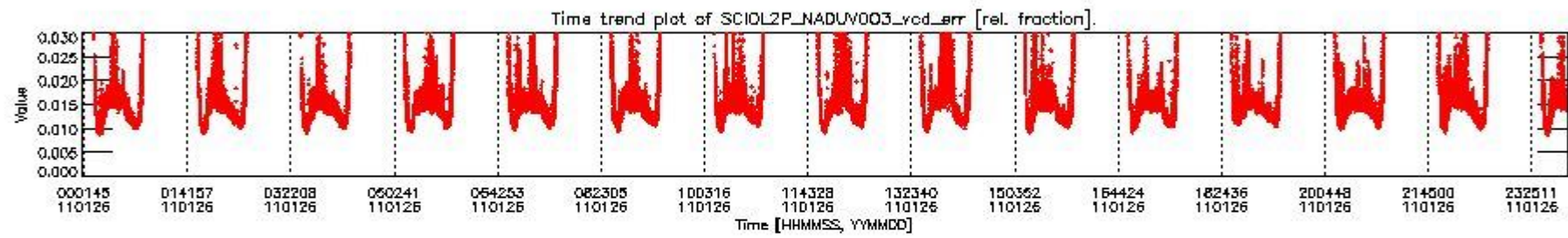
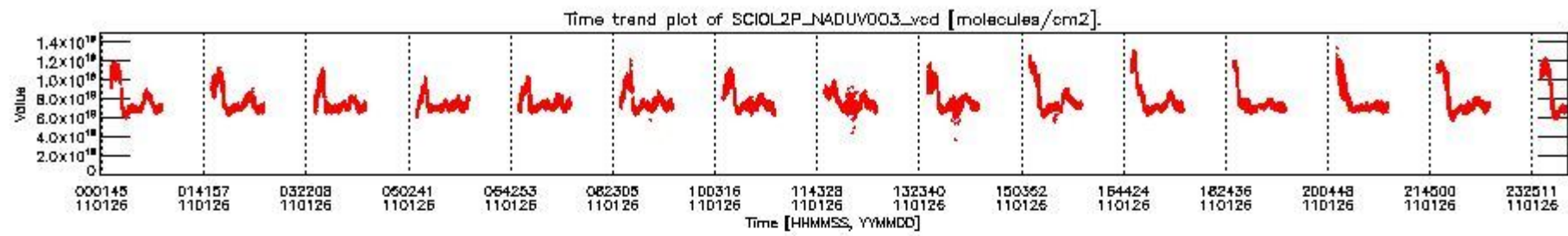
Number	Data item ID
0	SCIOL2P_NADUV003_vcd
1	SCIOL2P_NADUV003_vcd_err
2	SCIOL2P_NADUV003_amf_gr

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.

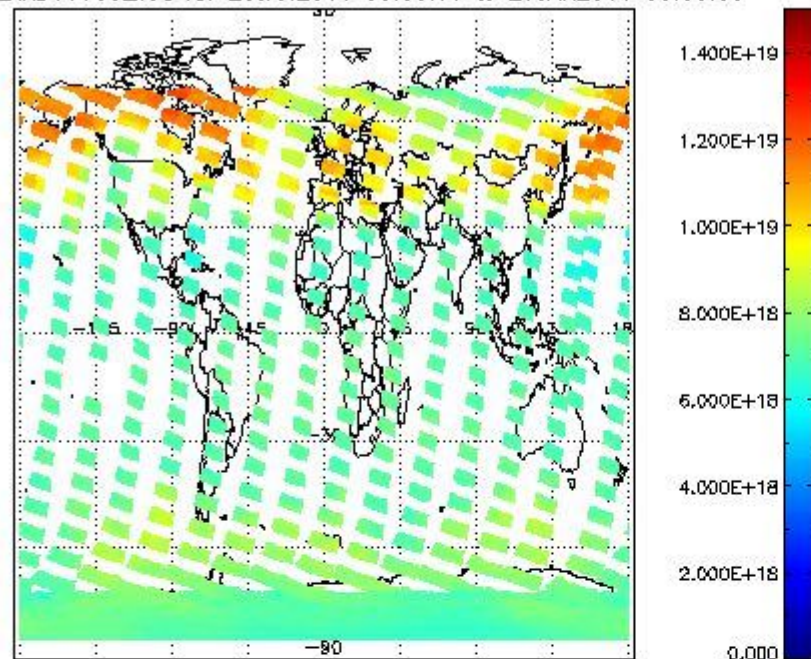
#### 2.2.2.1 O3 (UV0)



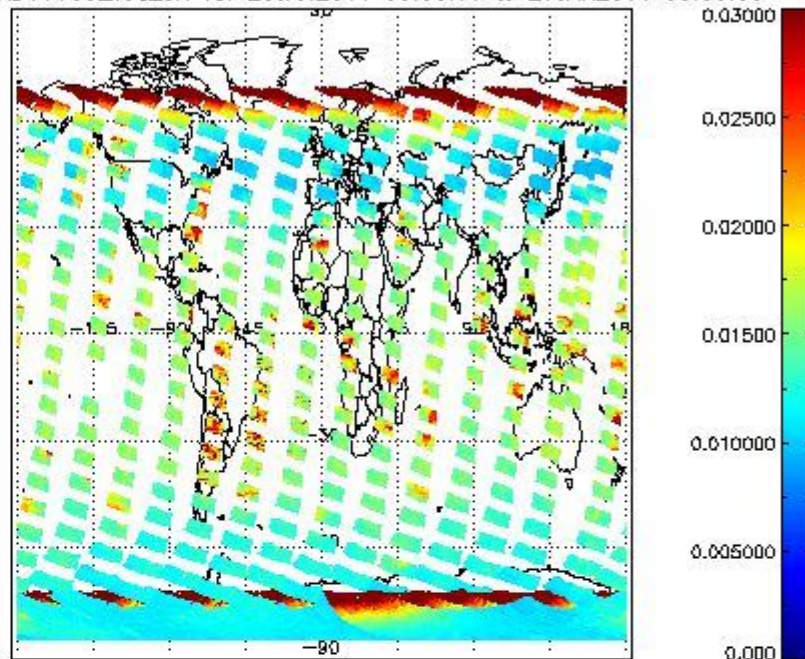




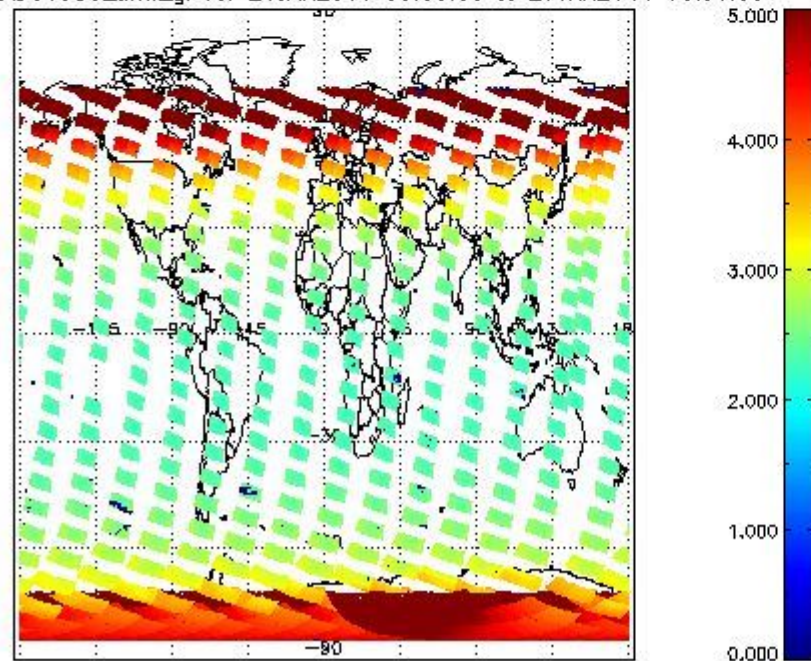
SCIOL2P\_NADUV003\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



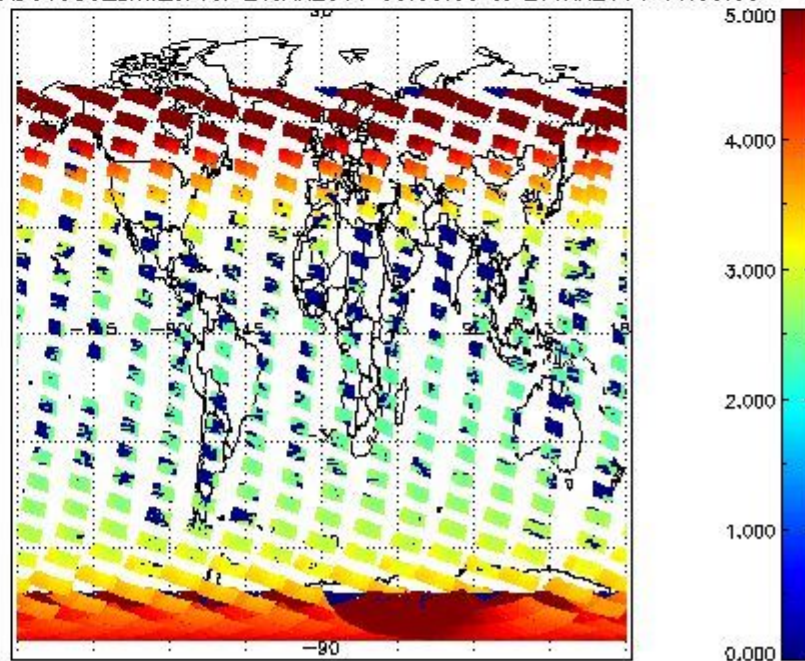
SCIOL2P\_NADUV003\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



SCIOL2P\_NADUV003\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

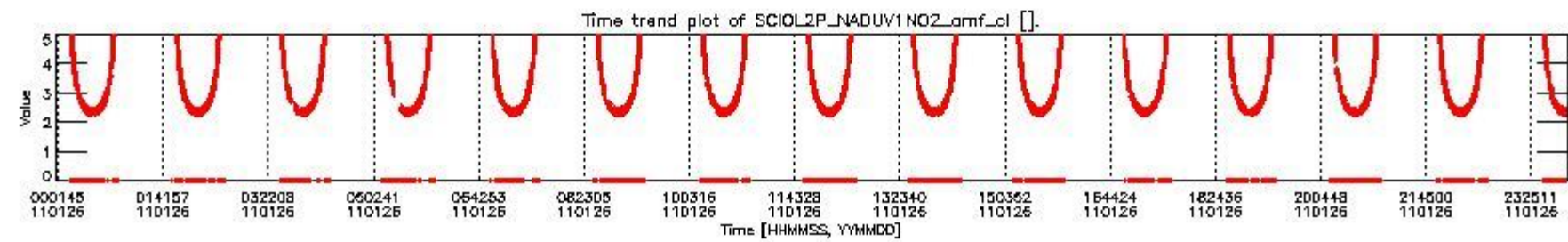
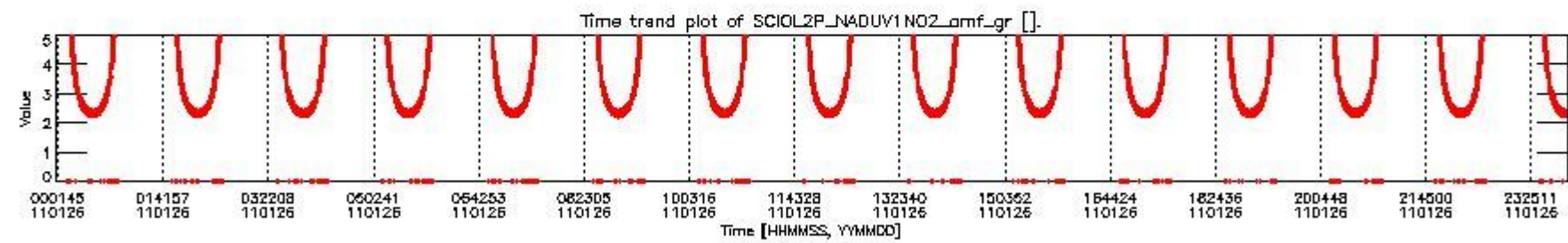
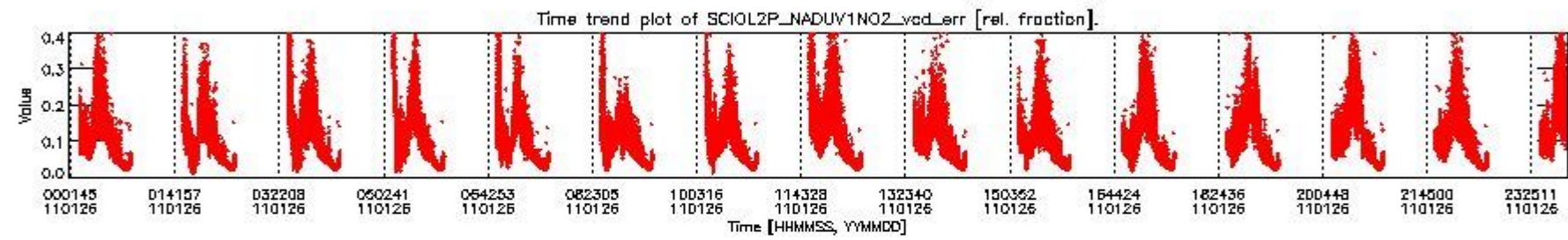
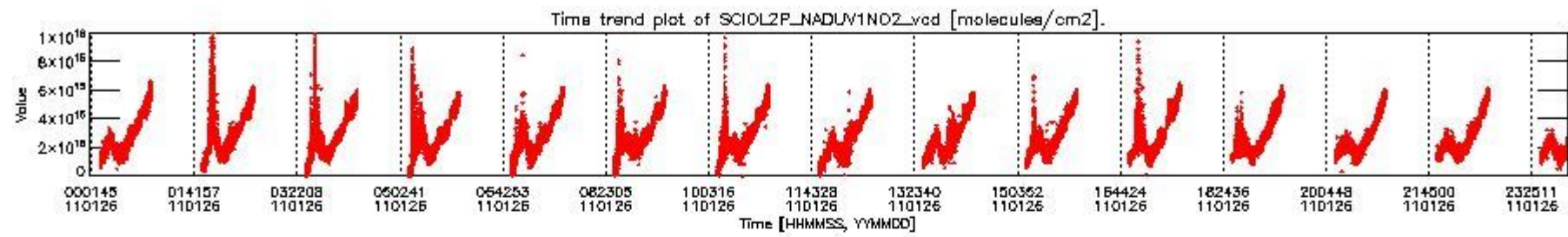


SCIOL2P\_NADUV003\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

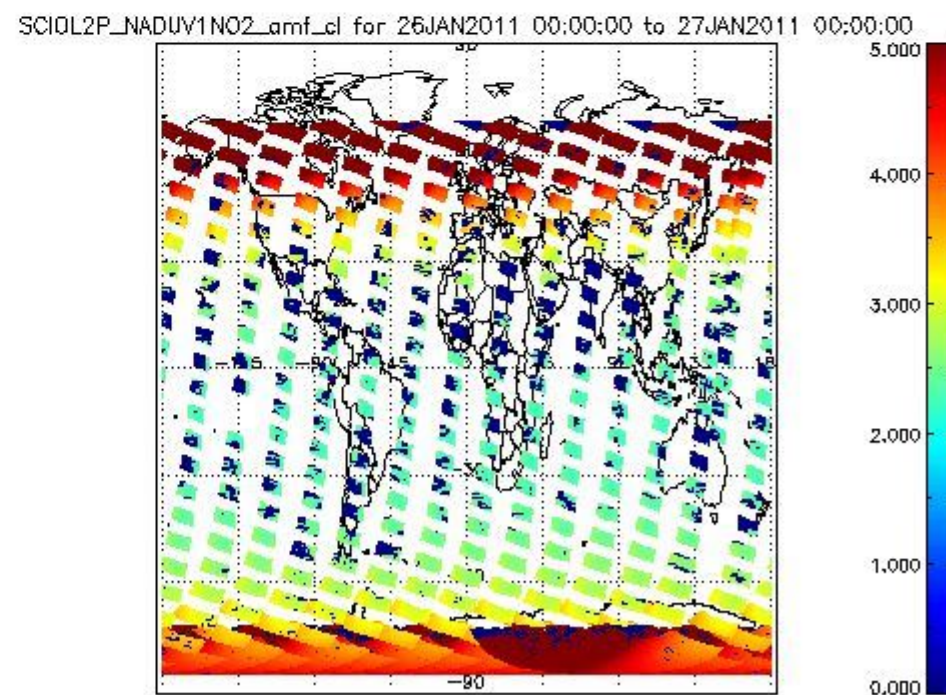
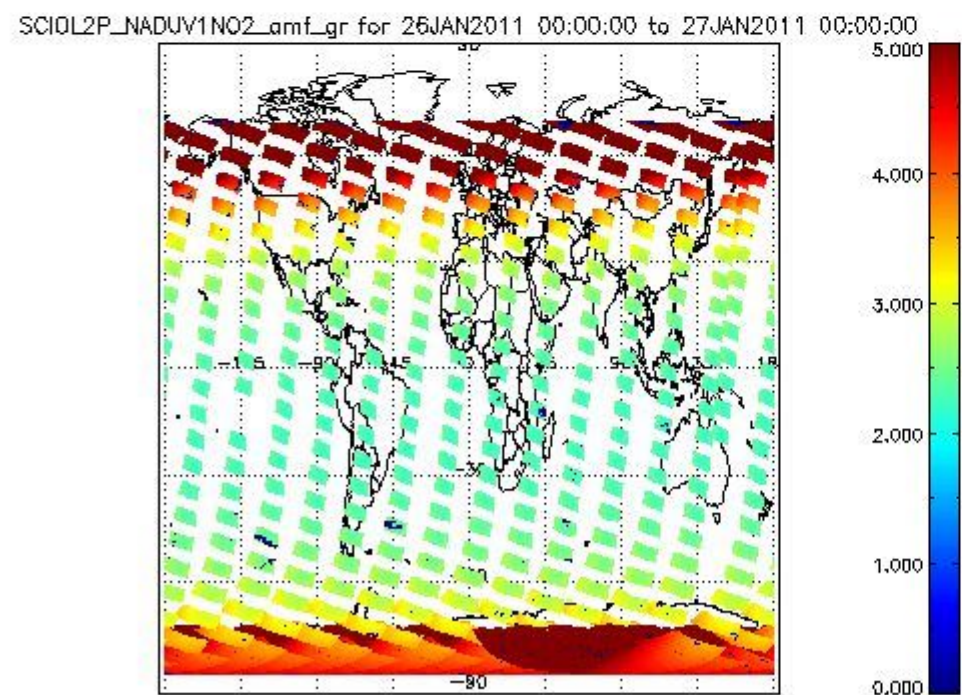
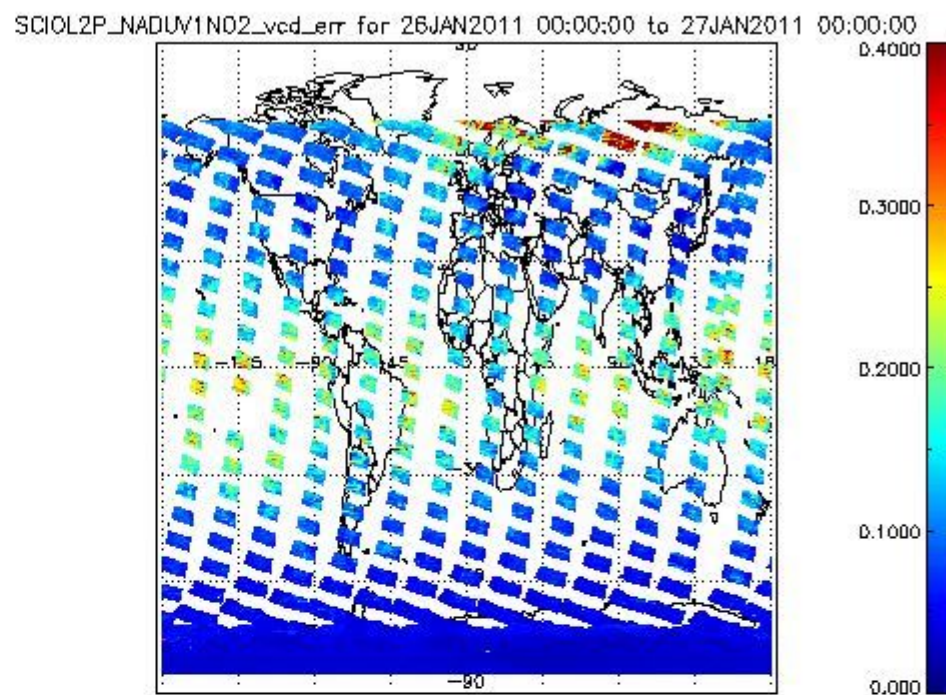
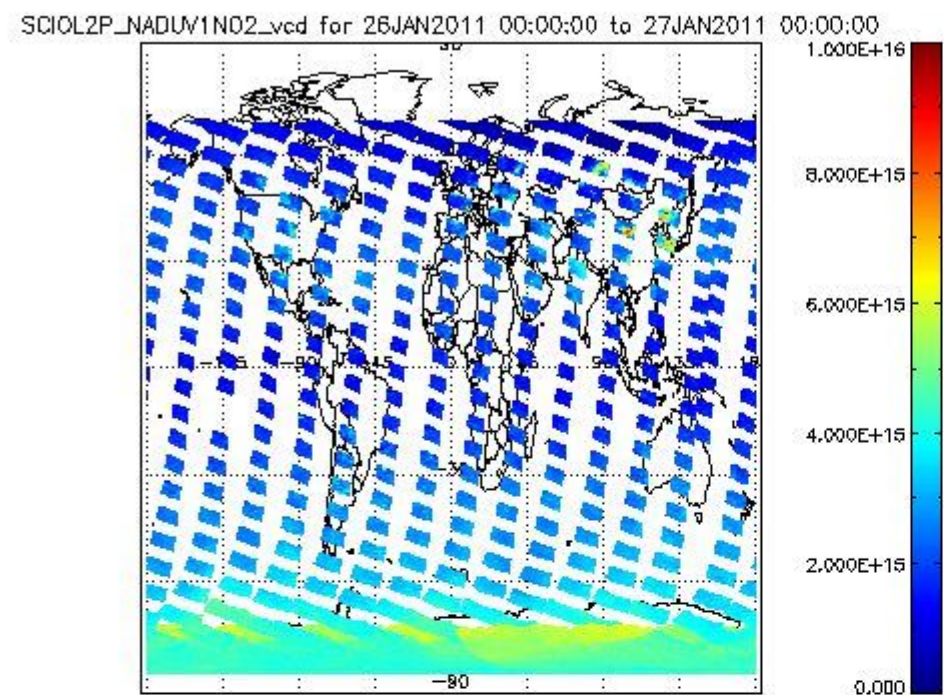


2.2.2.2 NO2 (UV1)



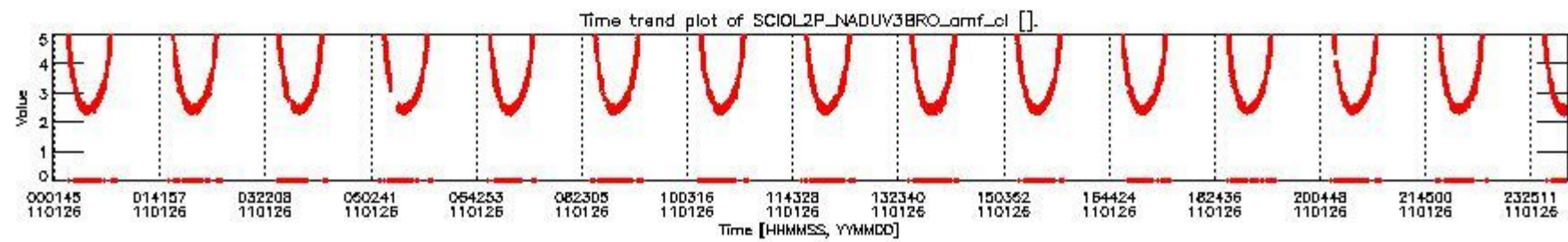
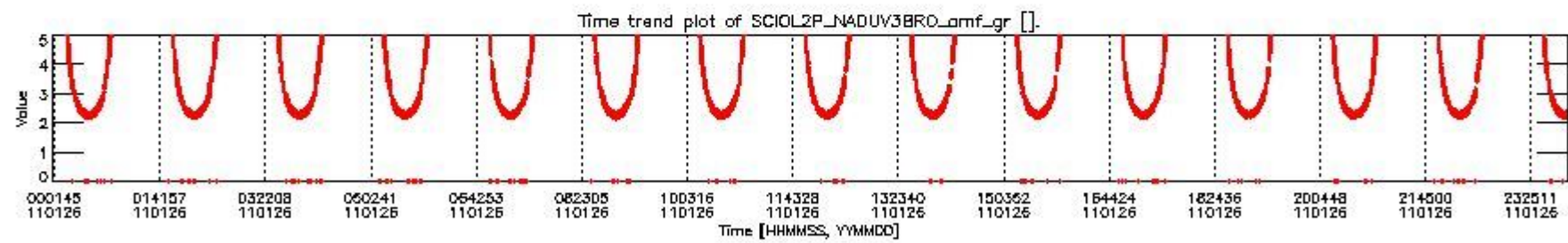
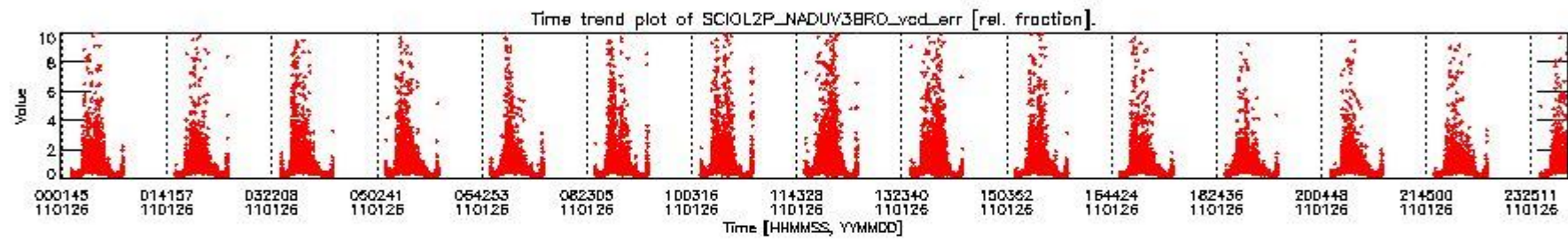
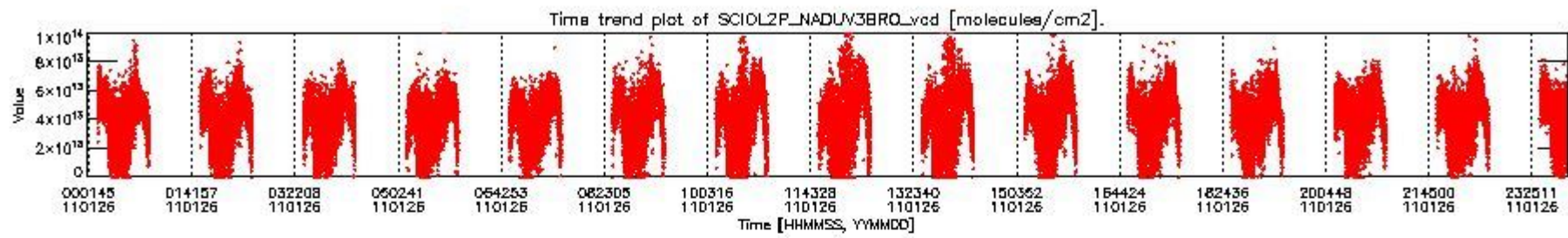






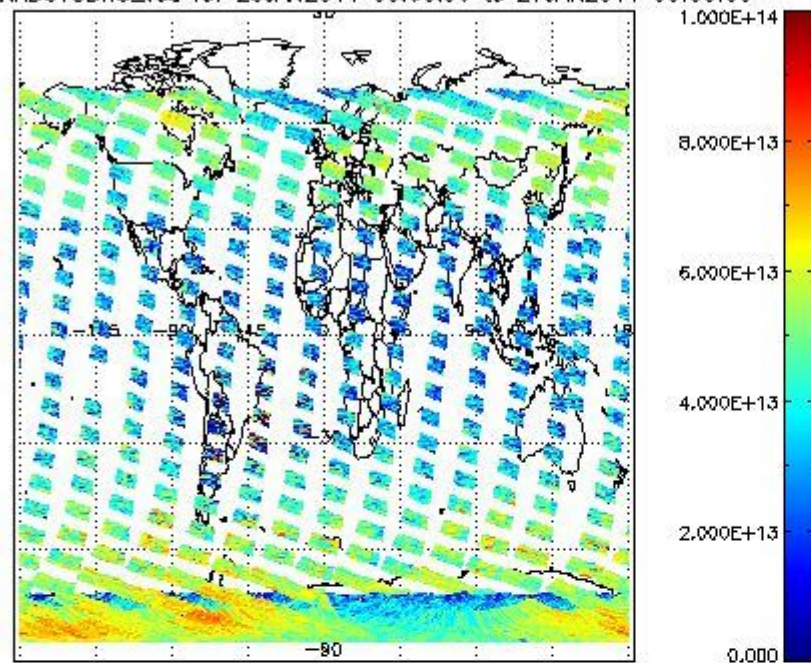
2.2.2.3 BrO (UV3)



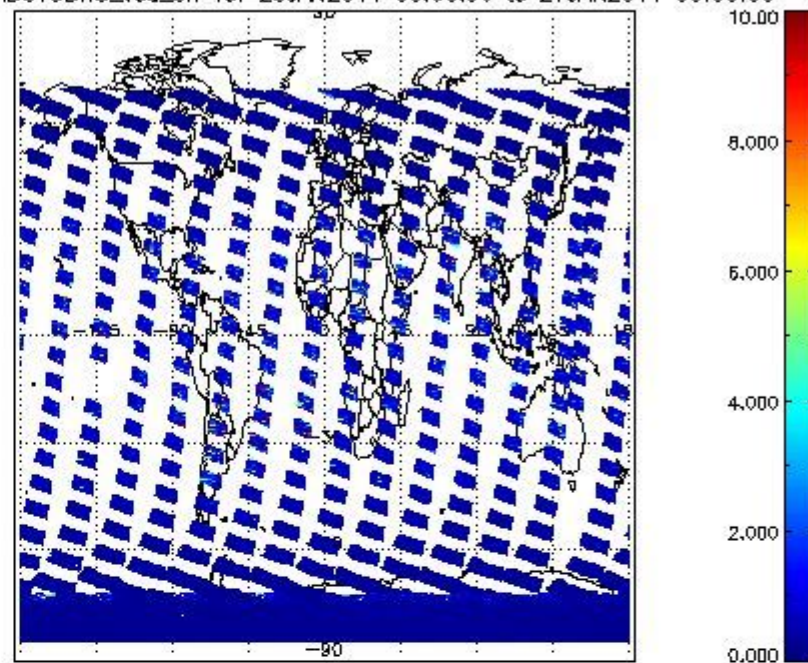




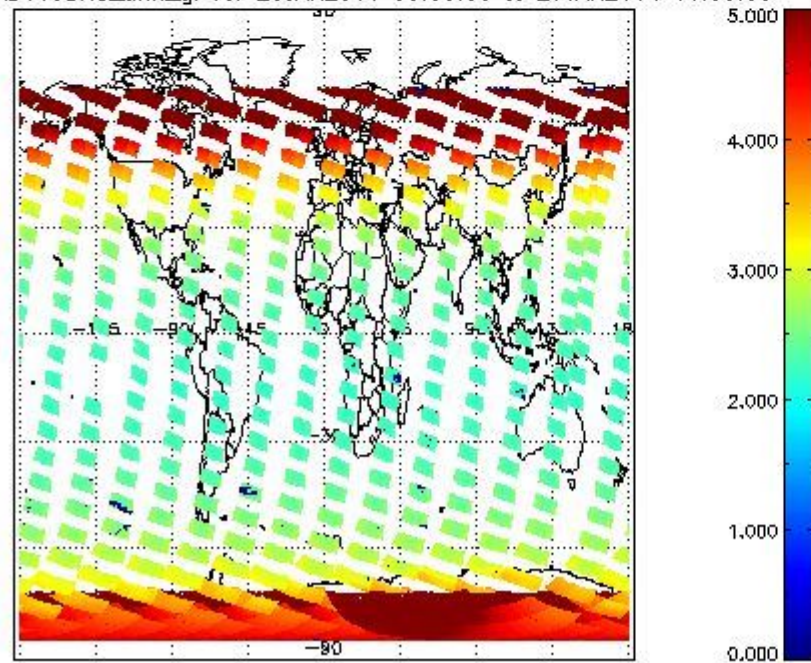
SCIOL2P\_NADUV3BRO\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



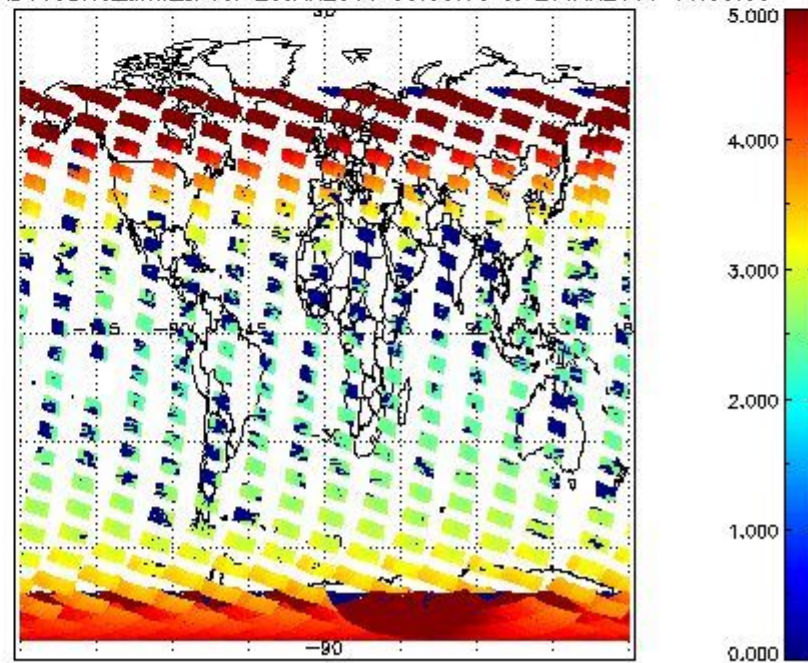
SCIOL2P\_NADUV3BRO\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



SCIOL2P\_NADUV3BRO\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

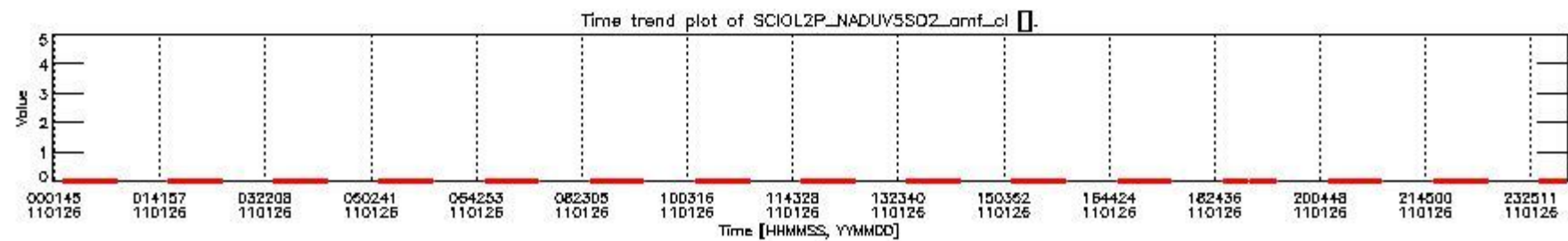
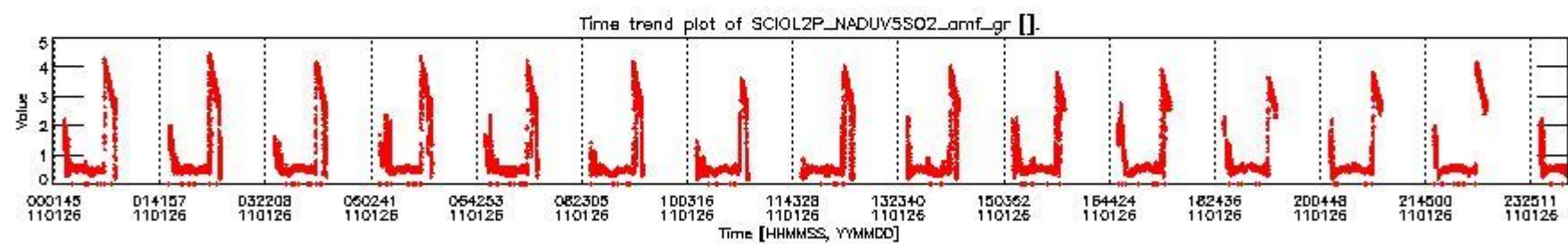
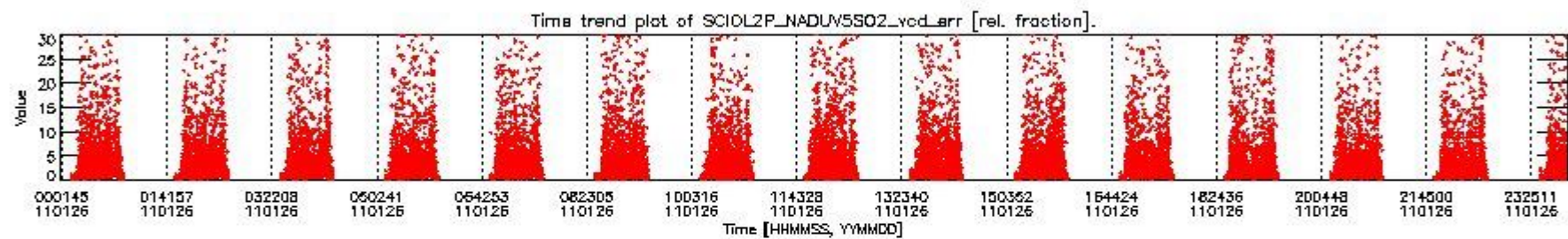
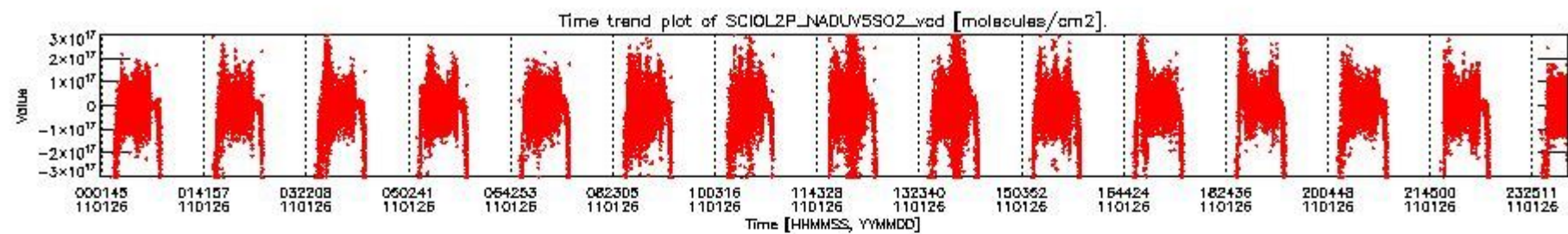


SCIOL2P\_NADUV3BRO\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



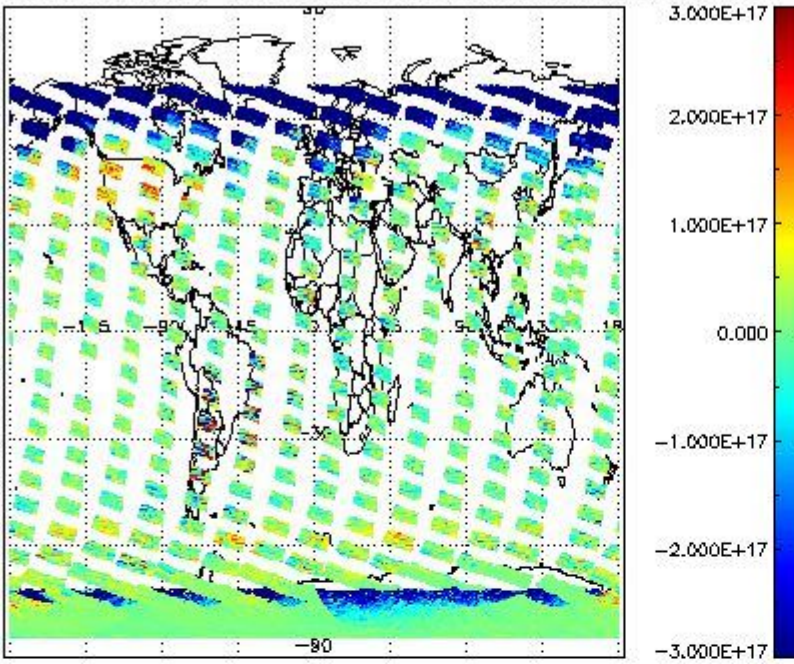
2.2.2.4 SO2 (UV5)



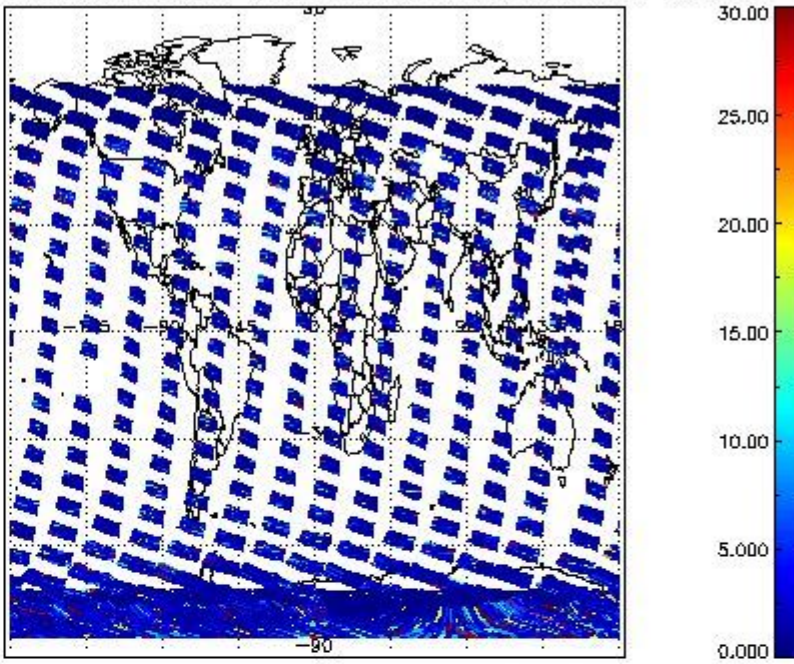




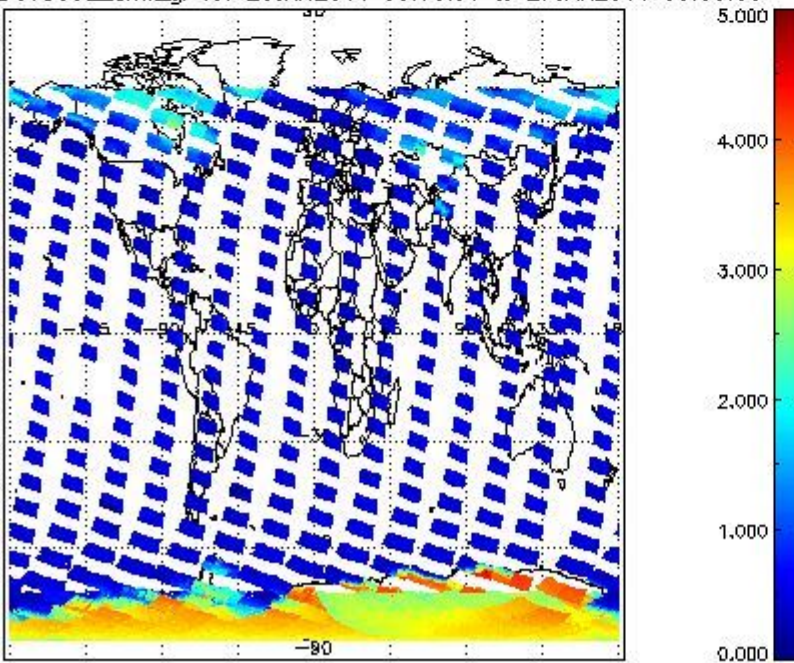
SCIOL2P\_NADUV5SO2\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



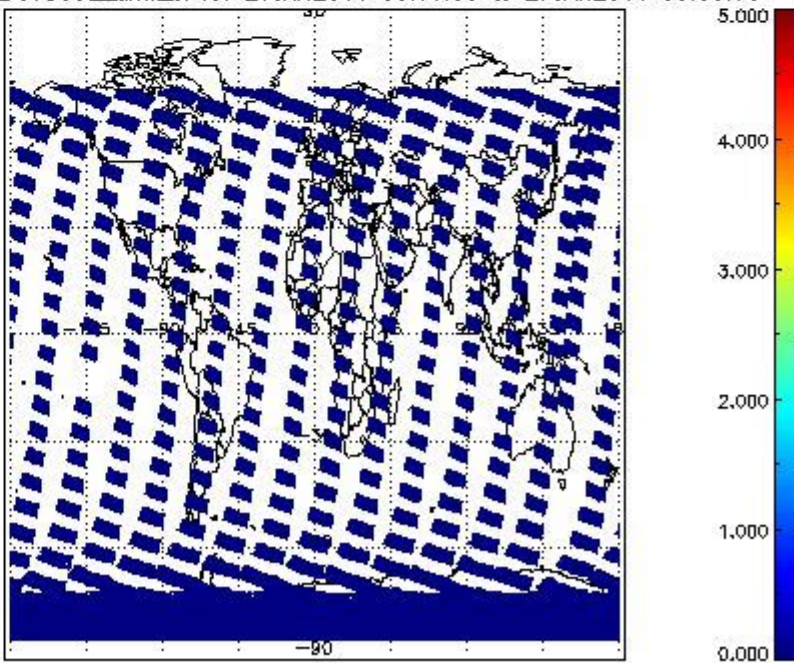
SCIOL2P\_NADUV5SO2\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



SCIOL2P\_NADUV5SO2\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

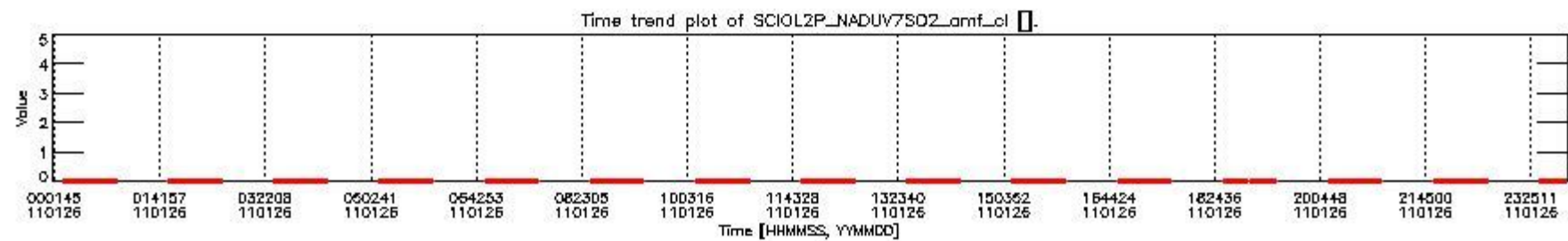
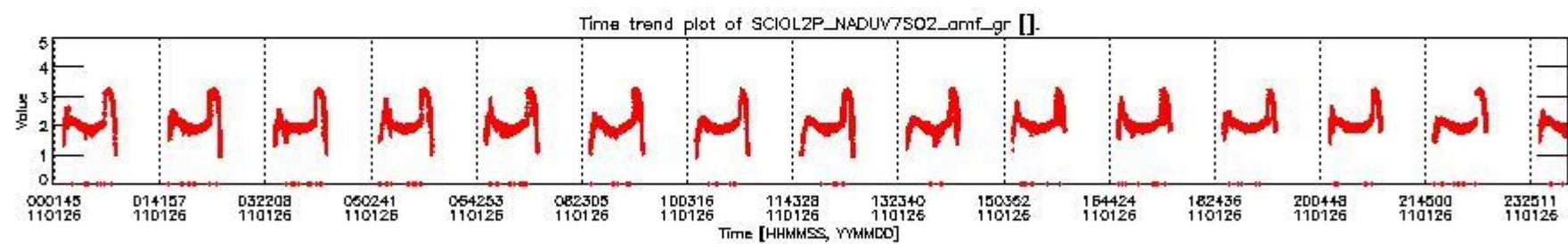
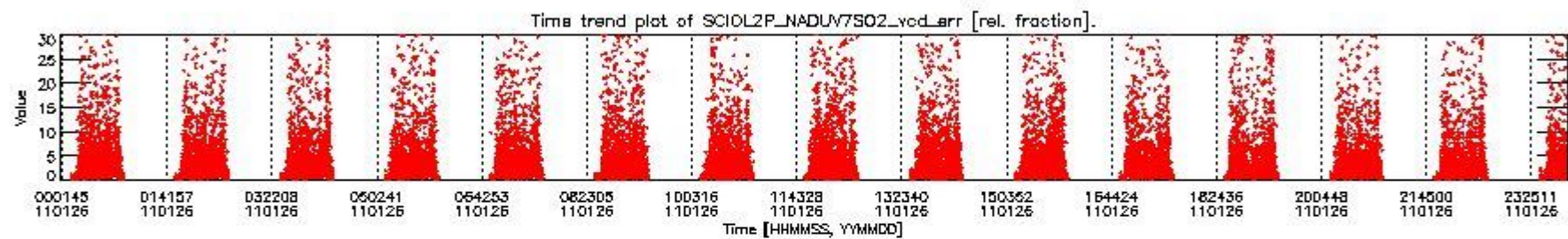
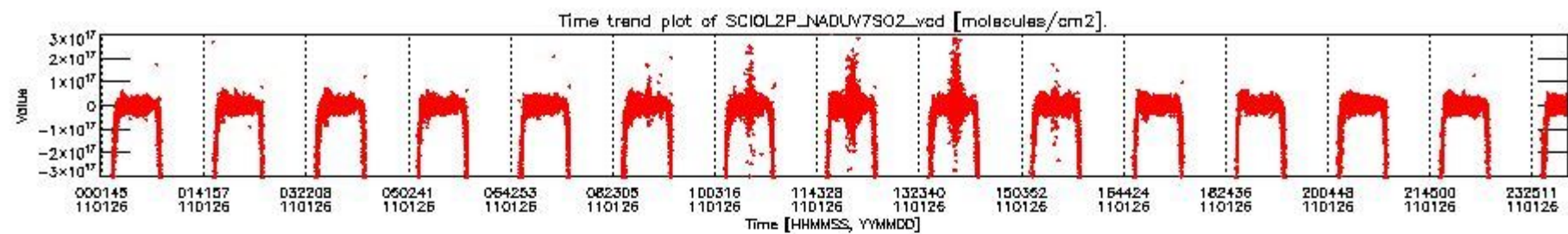


SCIOL2P\_NADUV5SO2\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

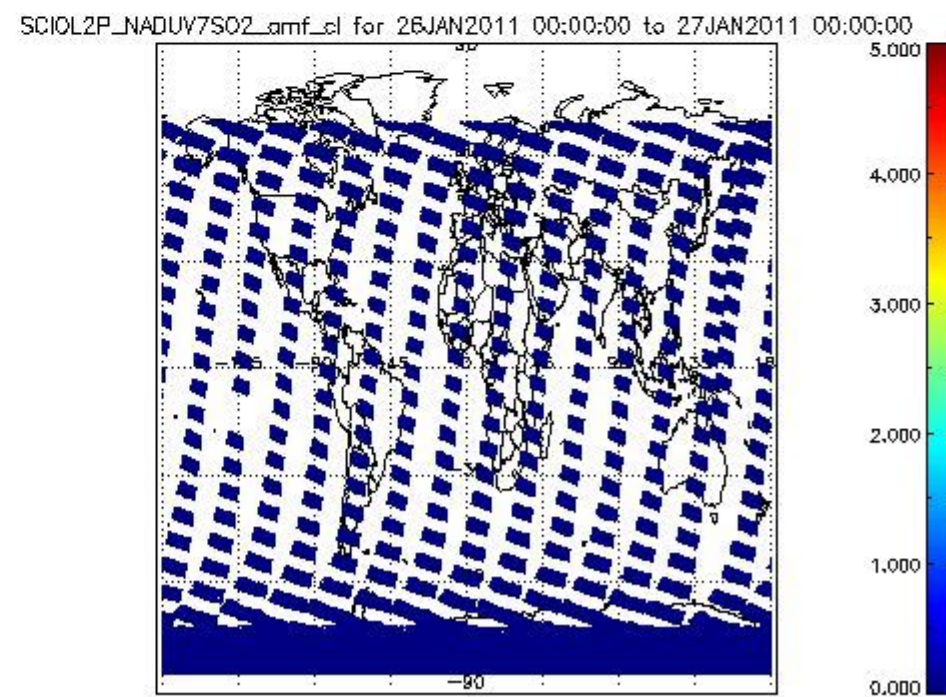
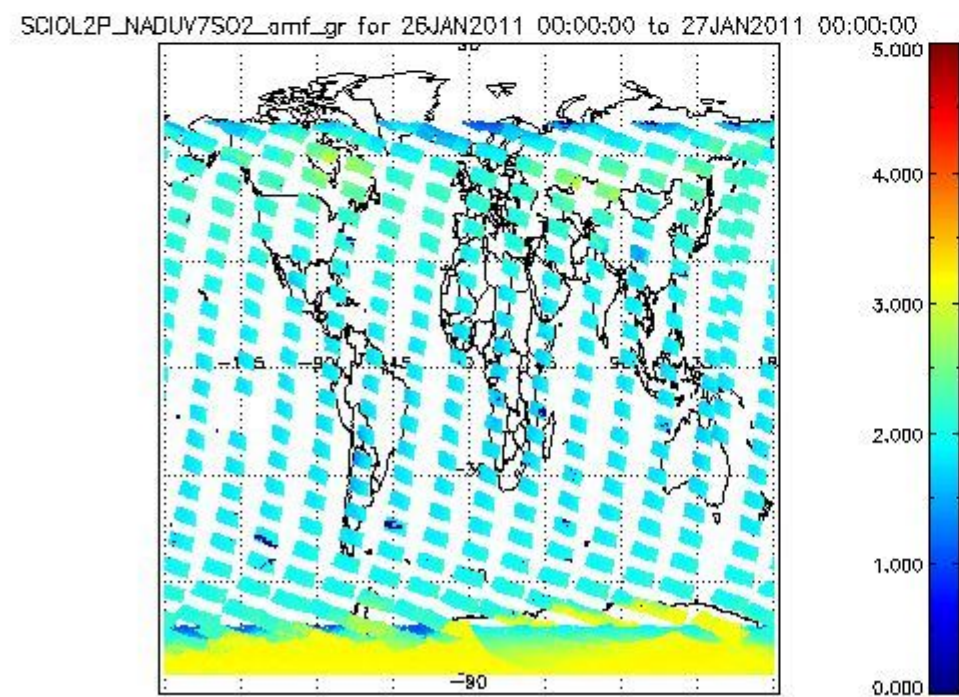
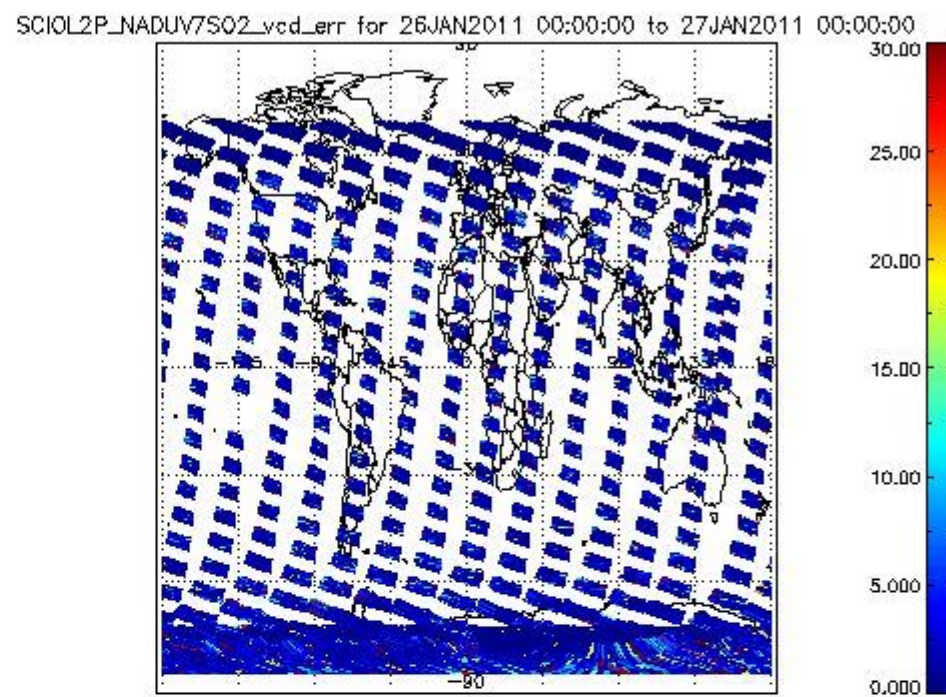
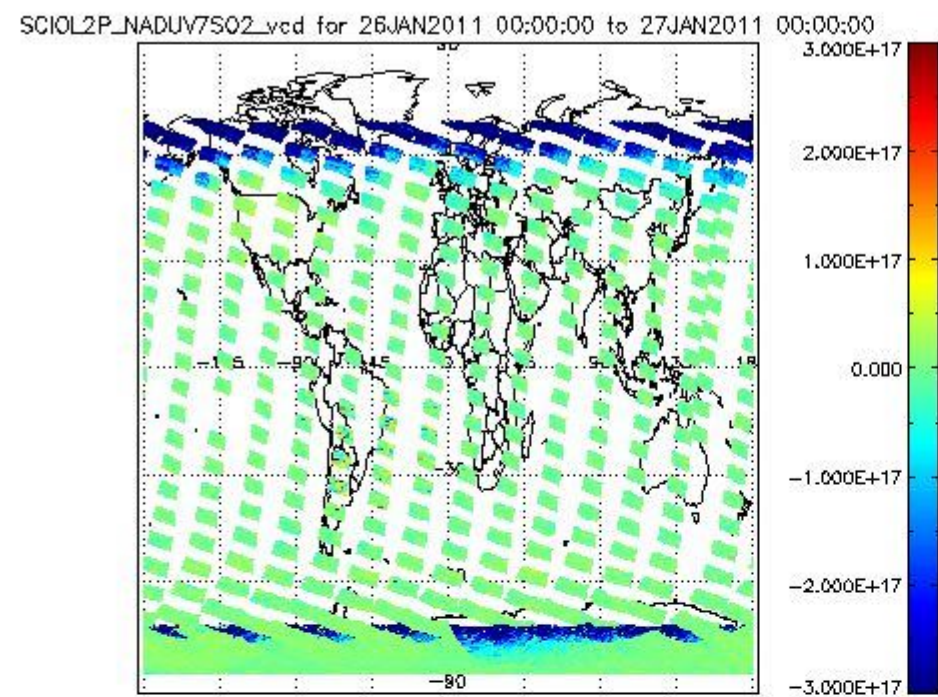


2.2.2.5 SO2 (UV7)



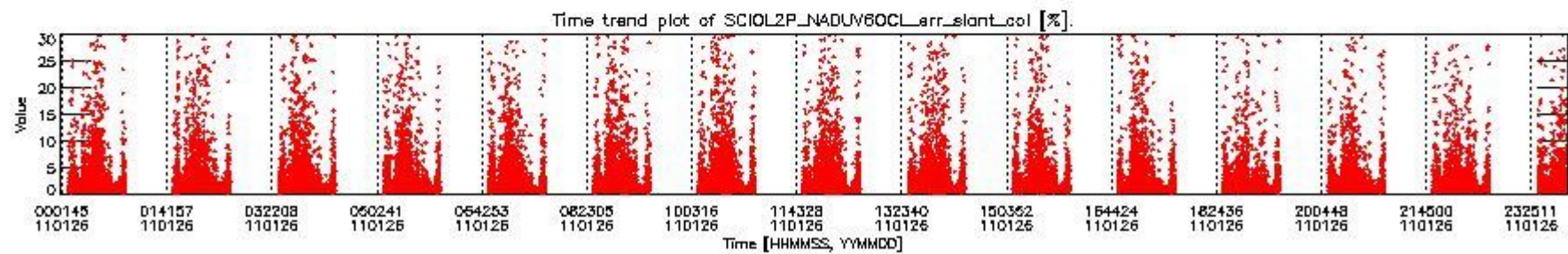
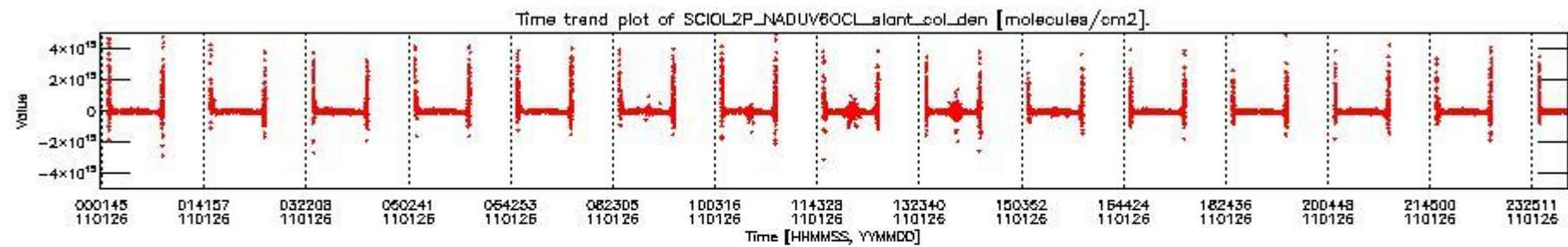




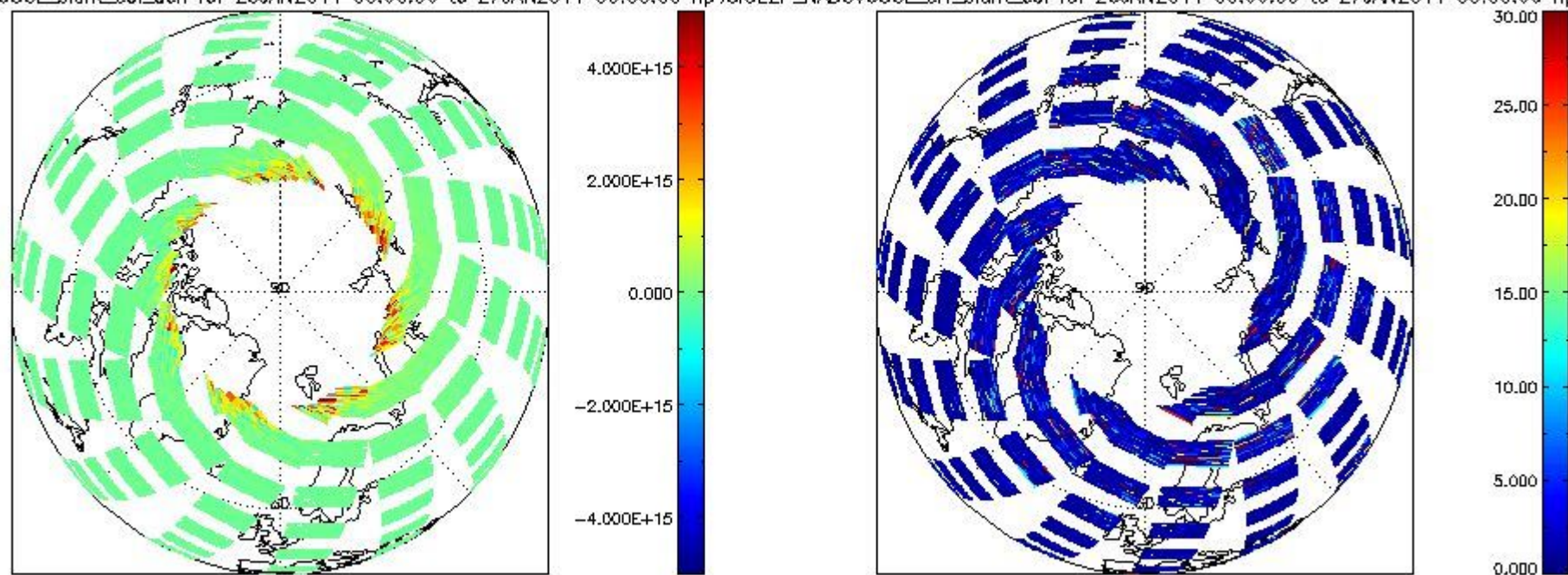


2.2.2.6 OCIO (UV6)



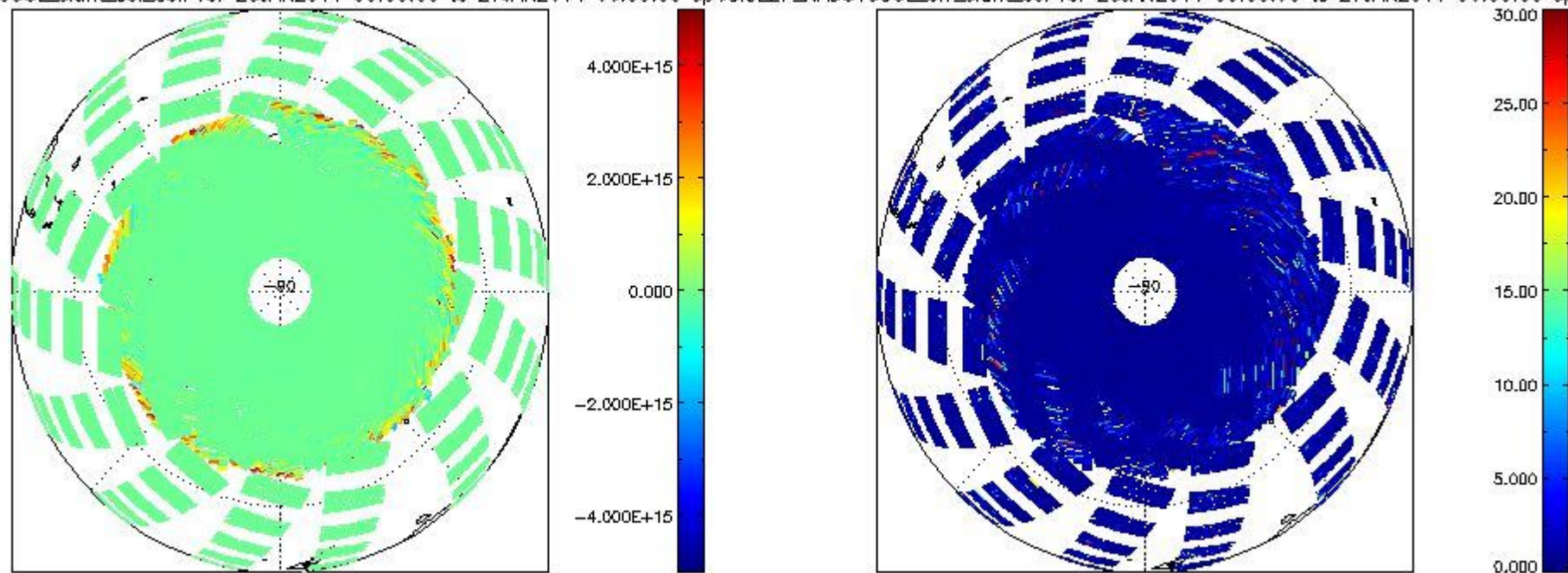


SCIOI2P\_NADUV6OCL\_slant\_col\_den for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 np;SCIOI2P\_NADUV6OCL\_err\_slant\_col for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 np

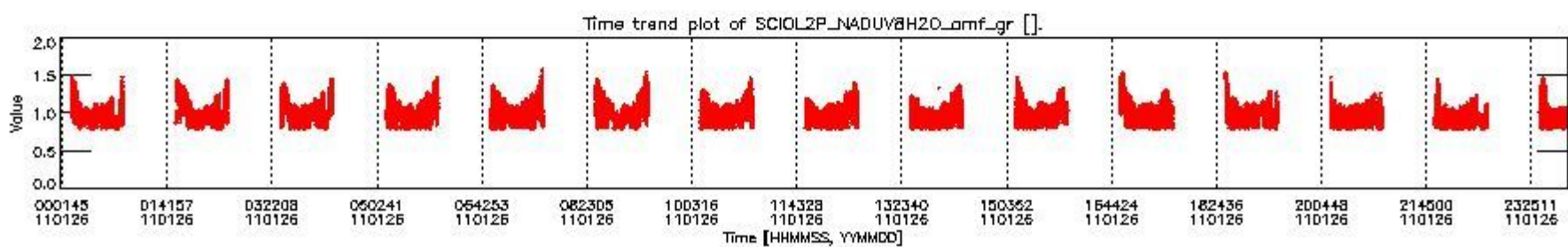
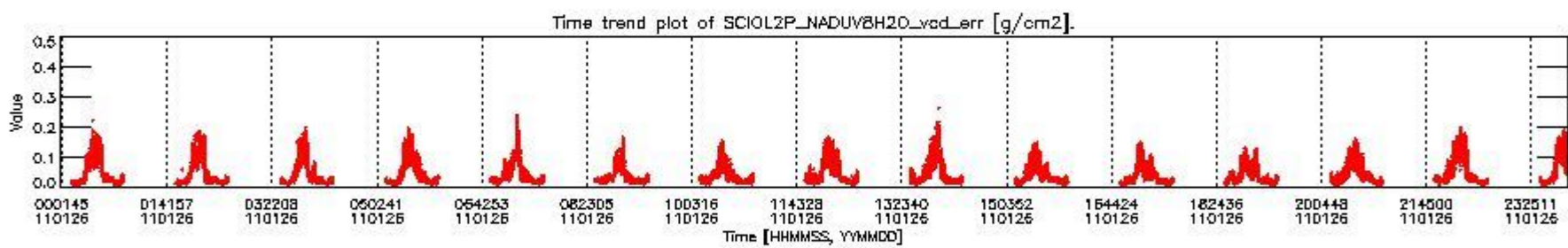
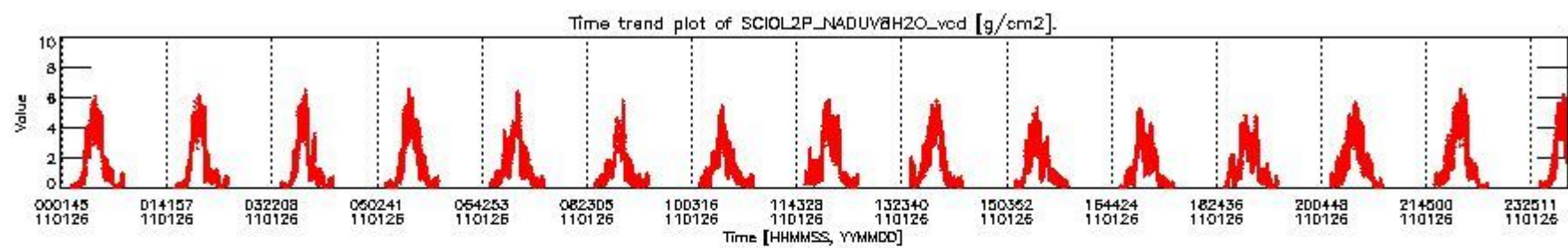




SCIOL2P\_NADUV60CL\_slant\_col\_den for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 sp SCIOL2P\_NADUV60CL\_err\_slant\_col for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 sp

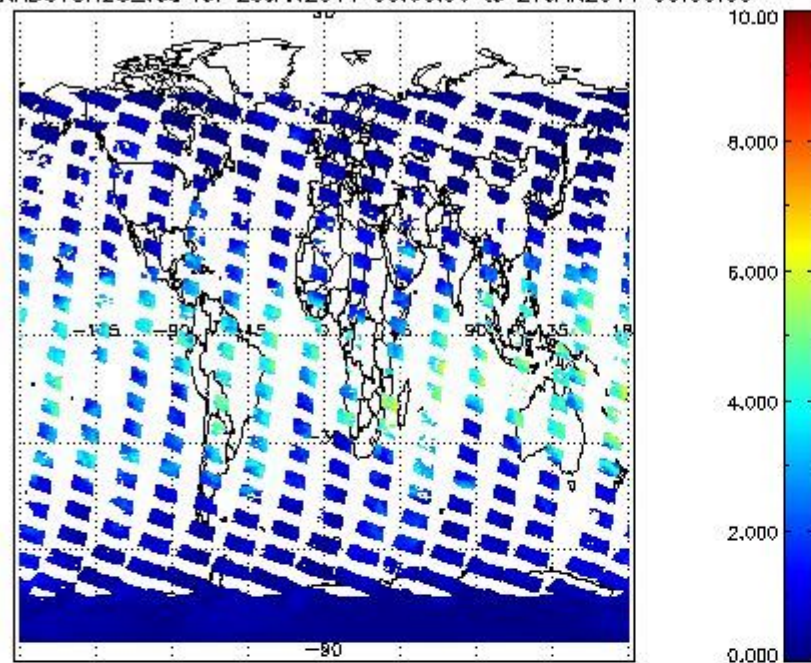


### 2.2.2.7 H2O (UV8)

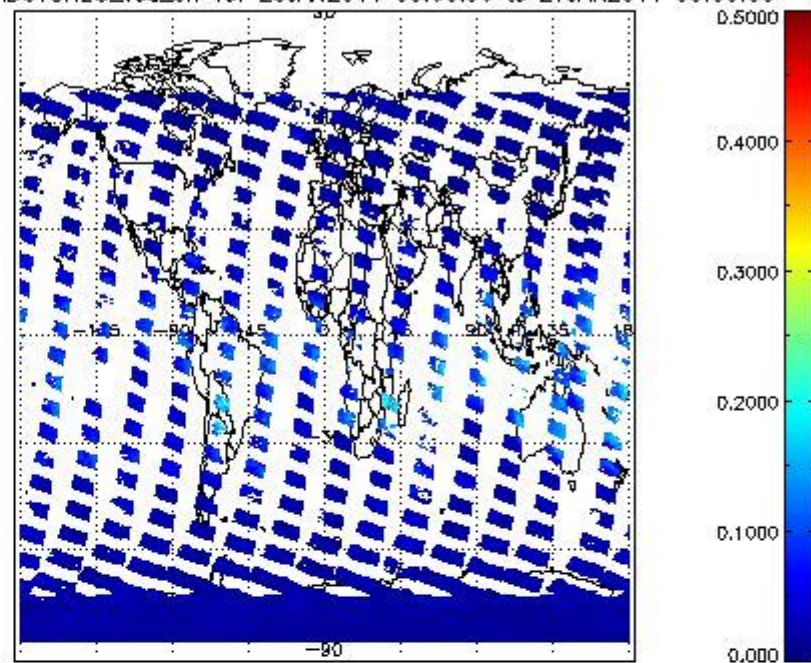




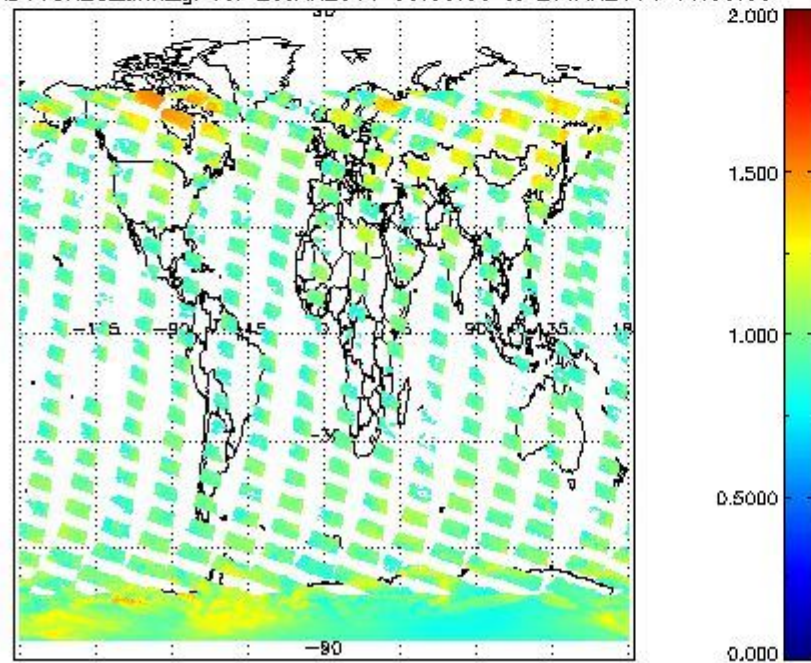
SCIOL2P\_NADUV8H20\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



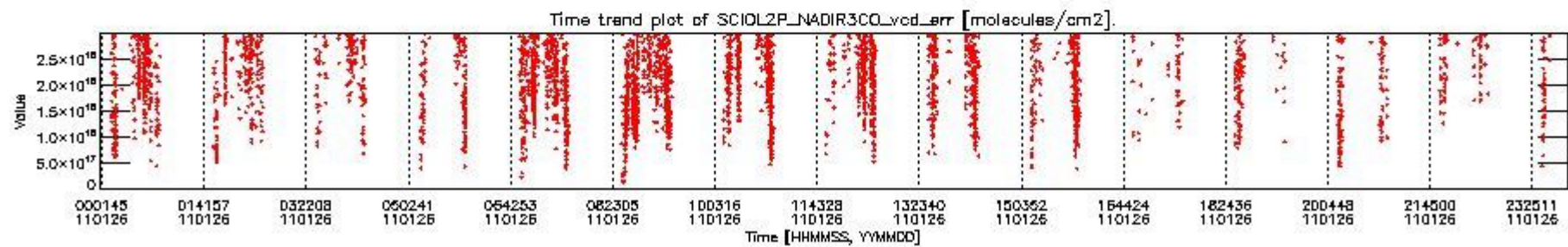
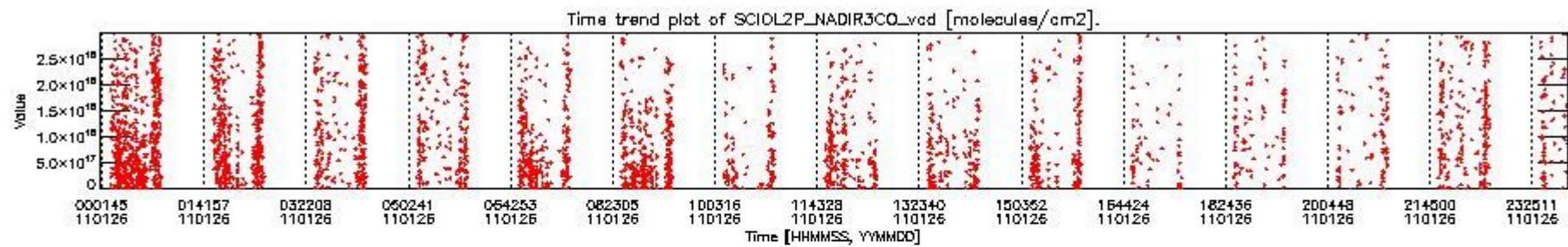
SCIOL2P\_NADUV8H20\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



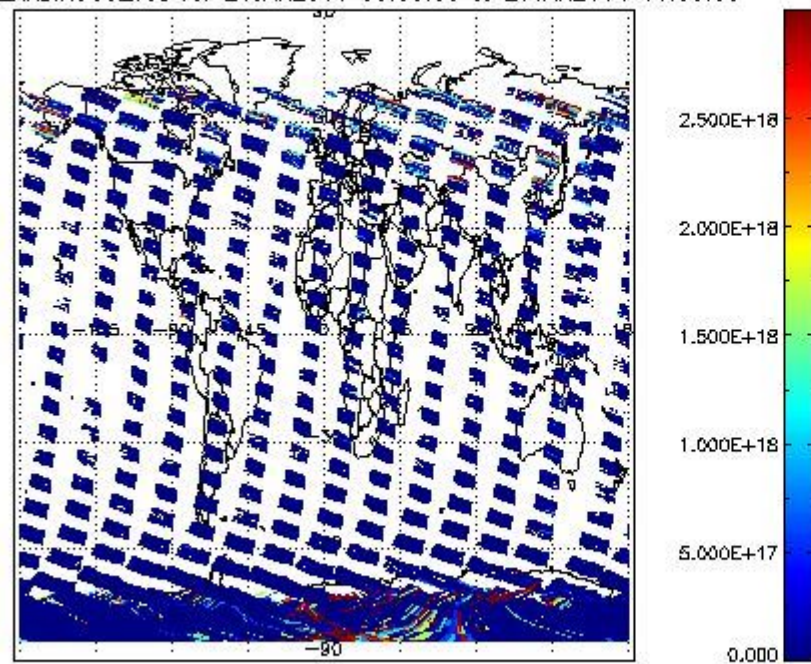
SCIOL2P\_NADUV8H20\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



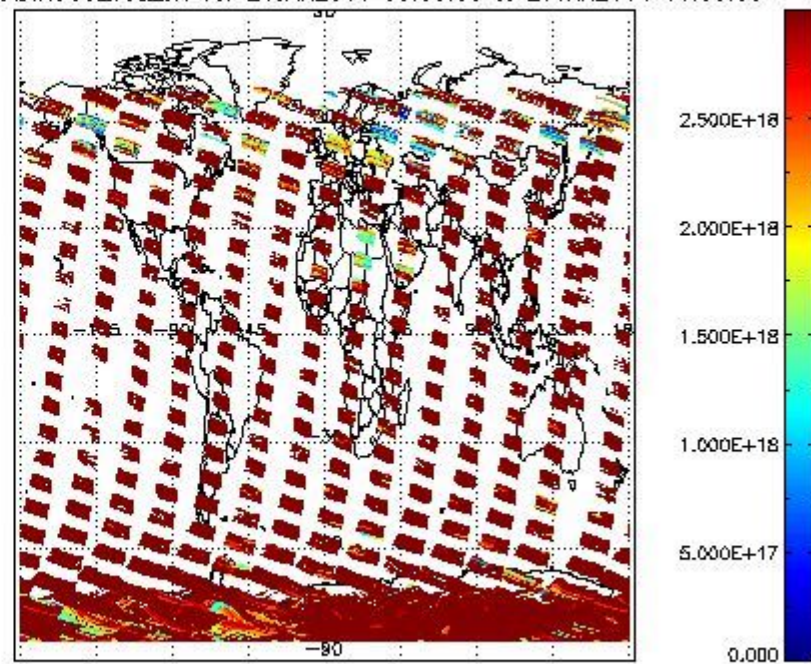




SCIDL2P\_NADIR3CO\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



SCIDL2P\_NADIR3CO\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 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.

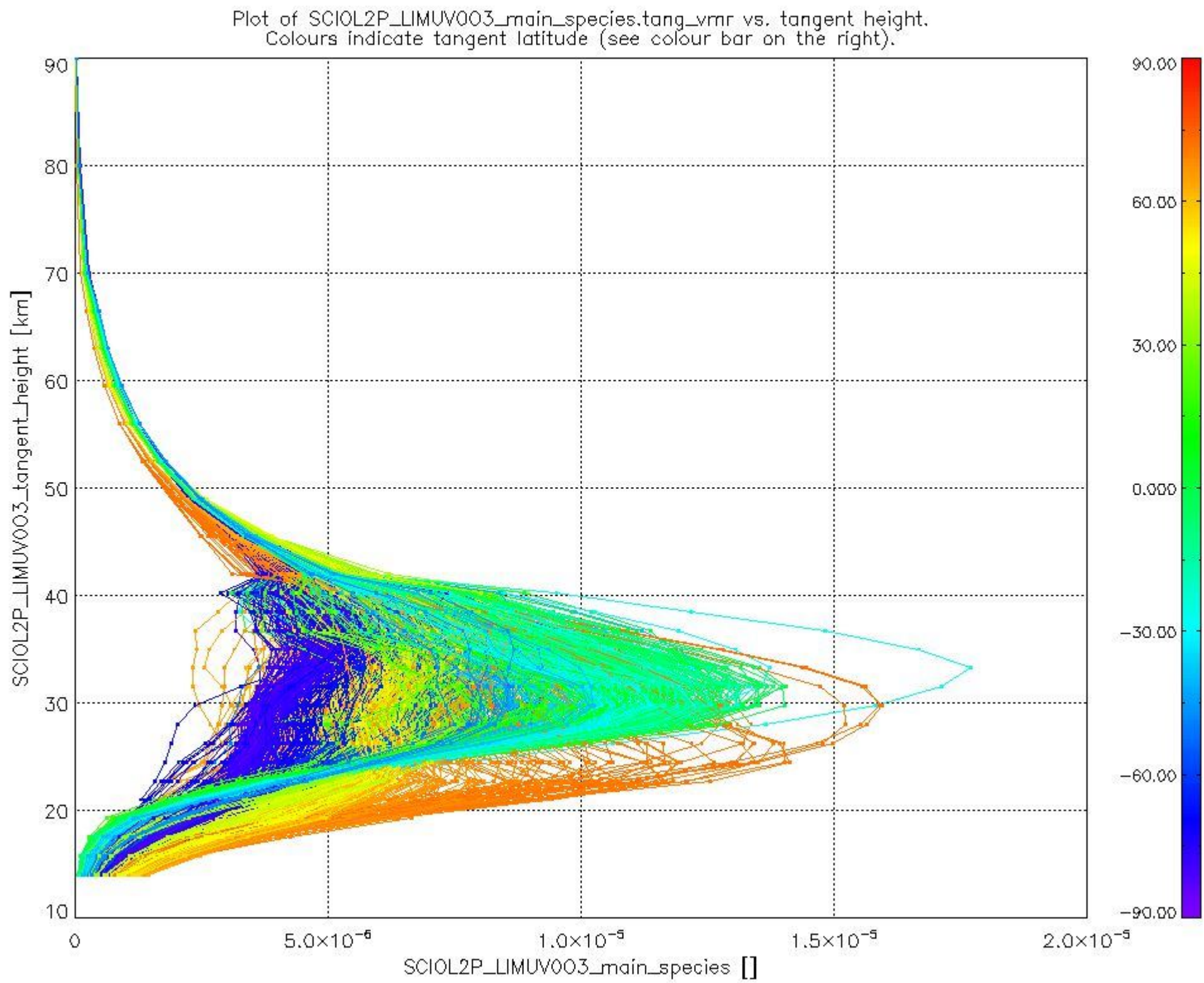
The following data items are currently included into this section:

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.

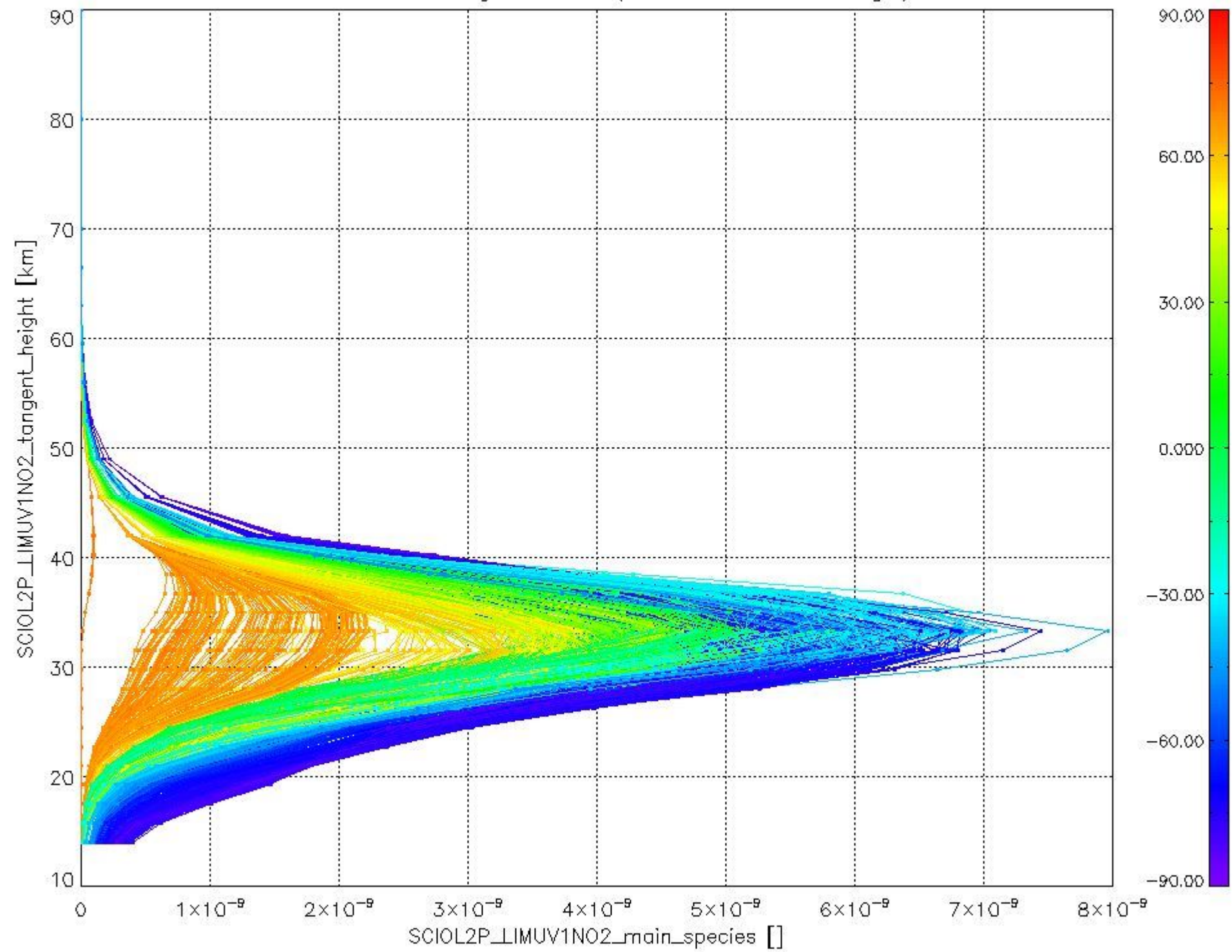
2.2.3.1 O3 (UV0)



2.2.3.2 NO2 (UV1)



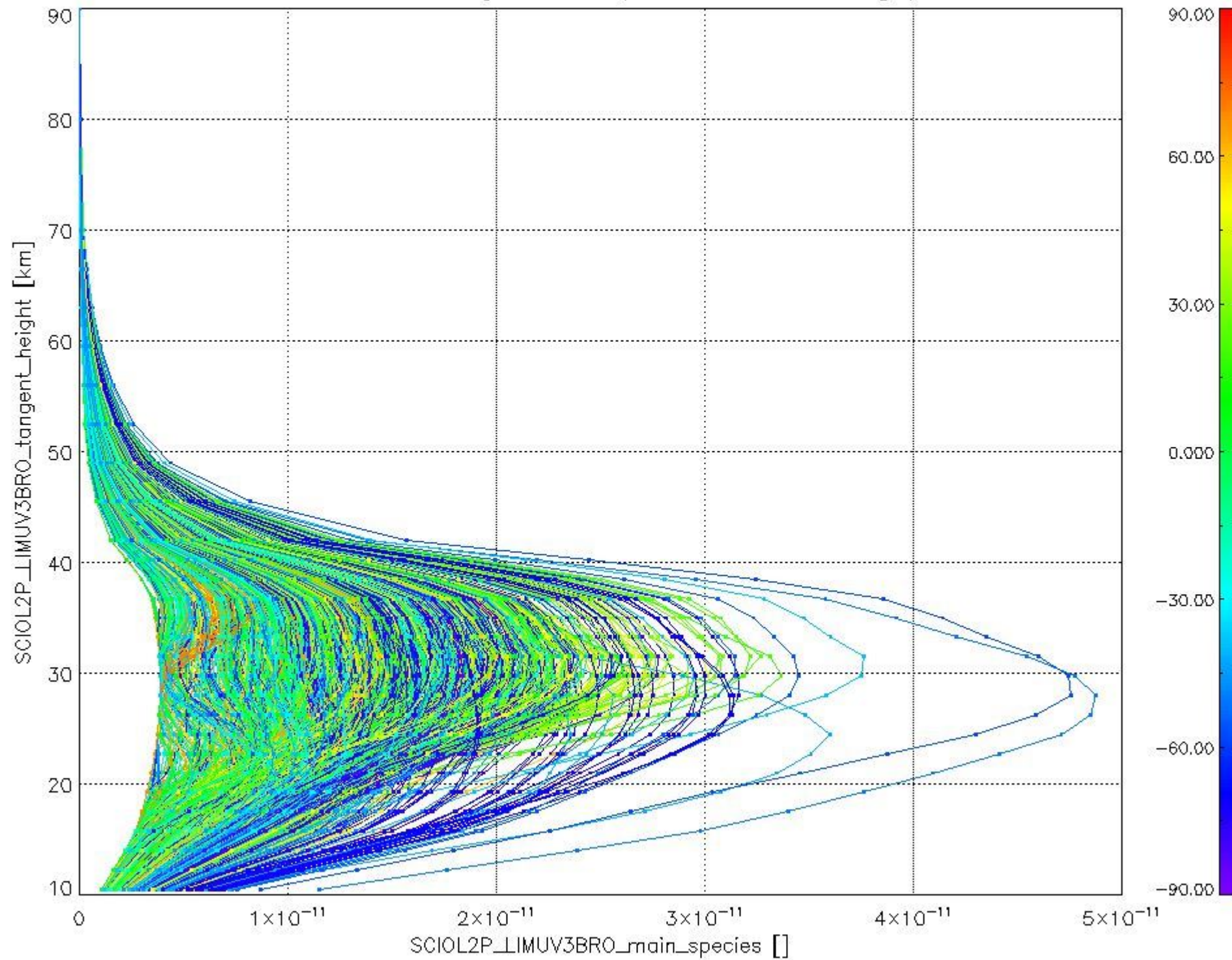
Plot of SCIOL2P\_LIMUV1NO2\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).



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

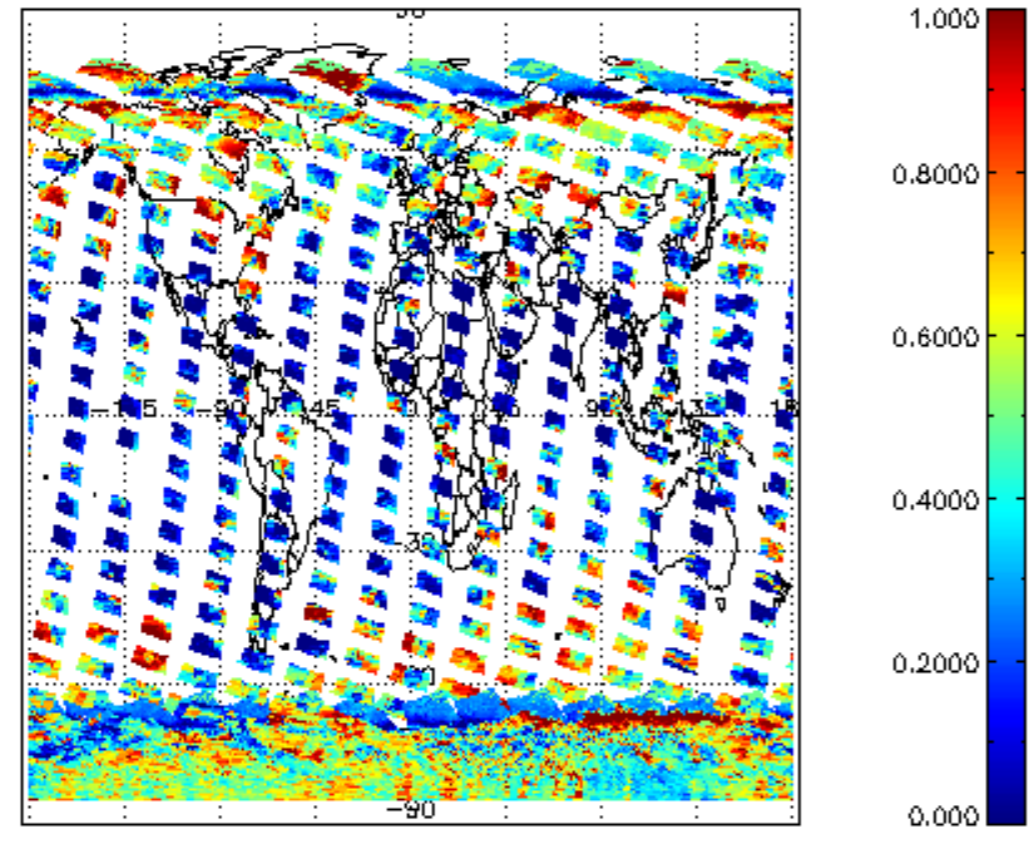
Number	ADF
	<b>IN_ (INITIALISATION_FILE)</b>
0	SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959
	<b>ECF (ECMWF_FILE)</b>
1	NOT USED
	<b>MF1 (M_FACTOR_FILE)</b>
2	SCI_MF1_AXVIEC20110125_150535_20110125_182843_20110127_182843
3	SCI_MF1_AXVIEC20110125_150654_20110126_193212_20110128_193212



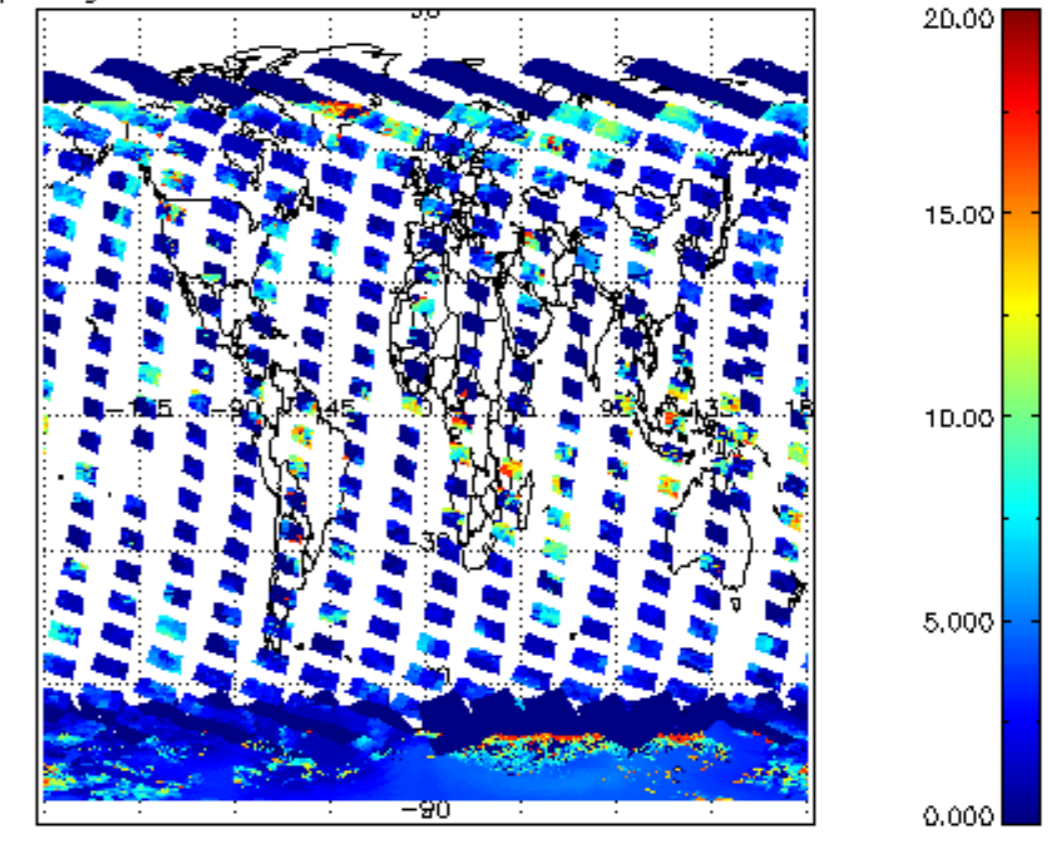




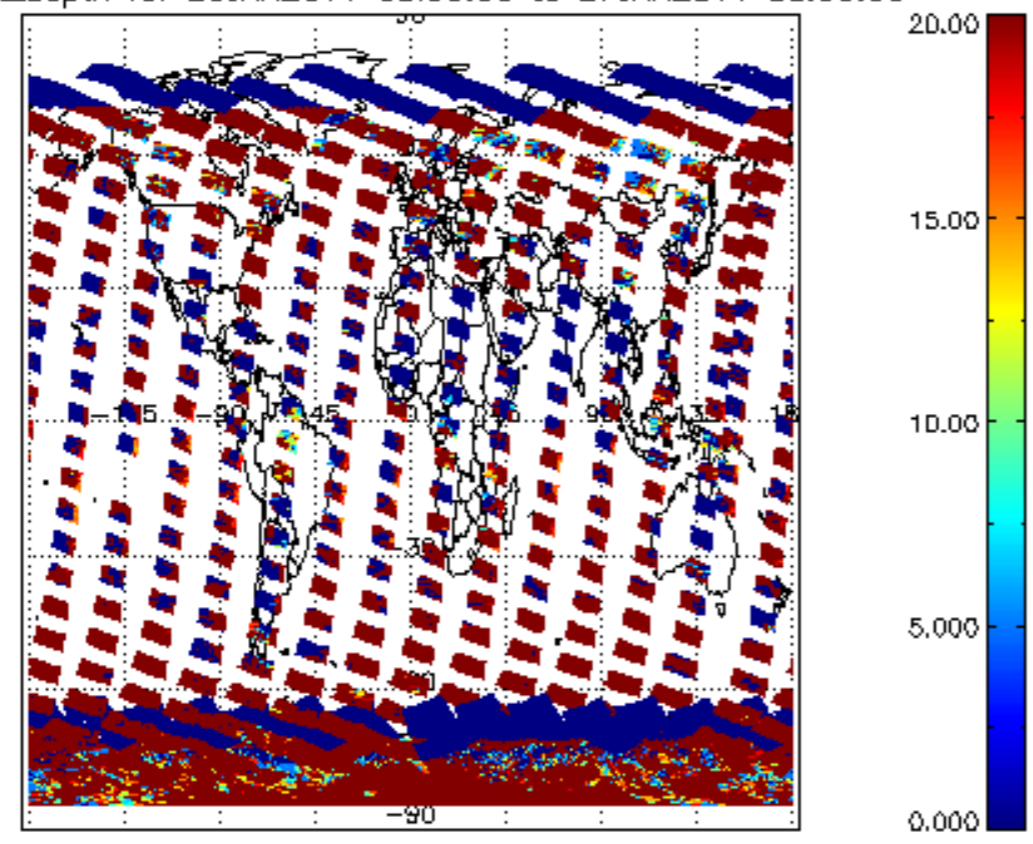
cL\_frac for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



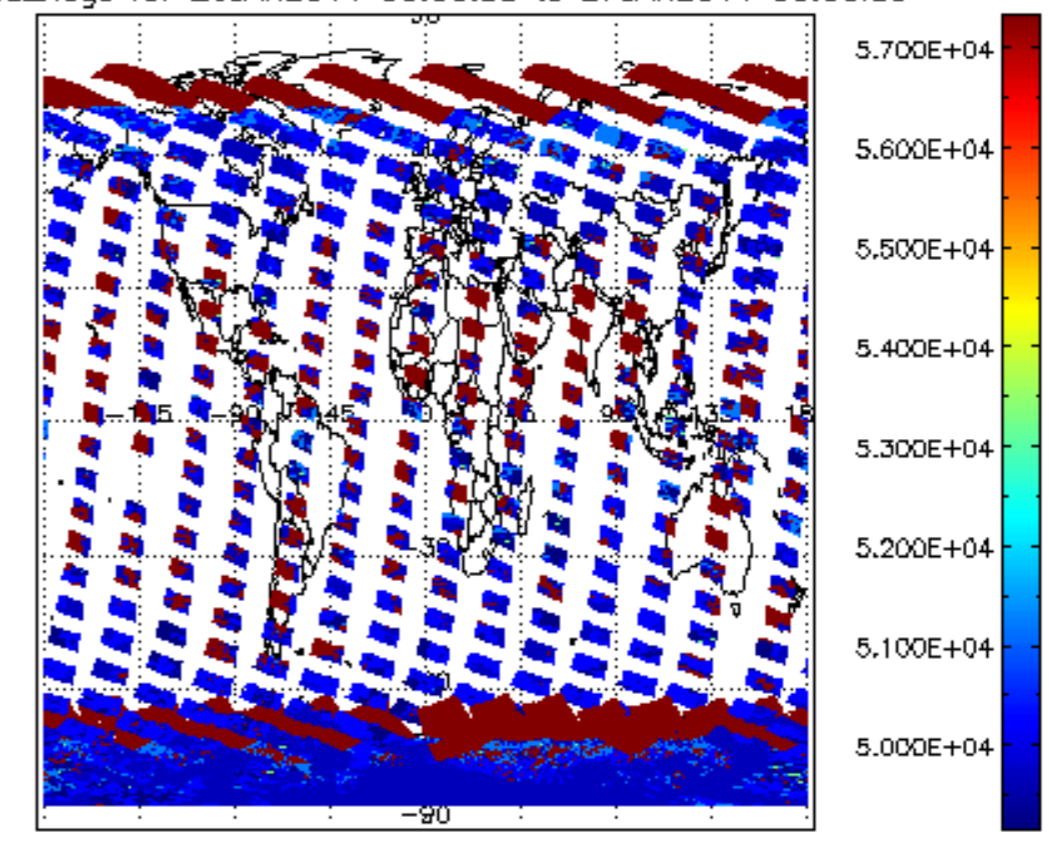
cL\_top\_height for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



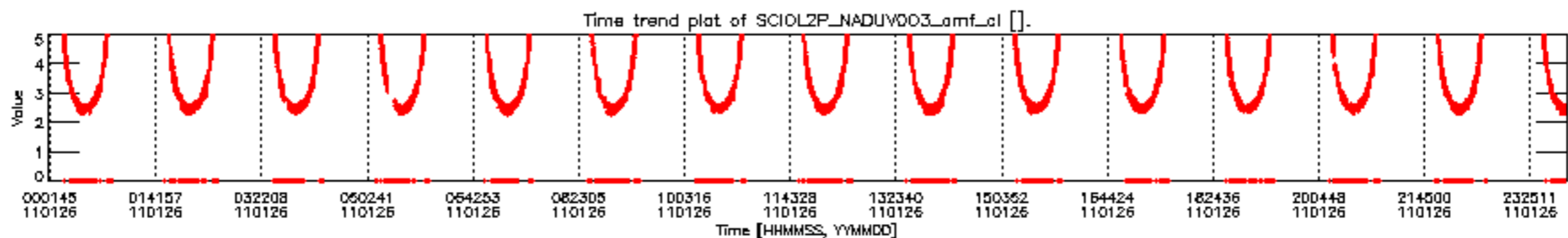
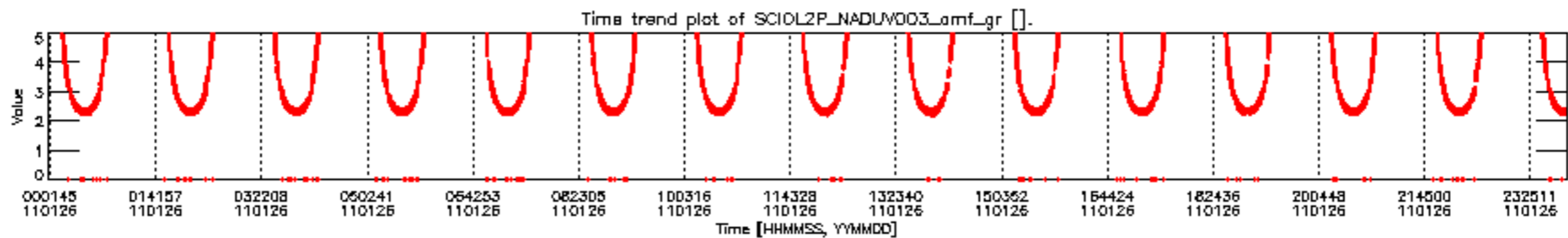
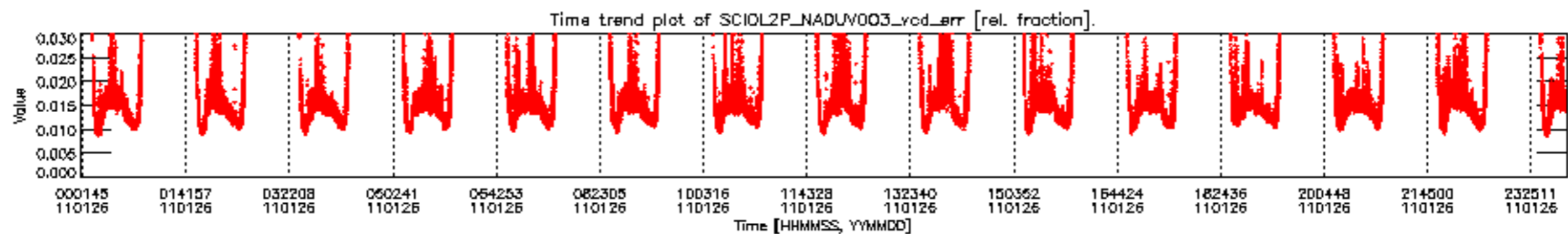
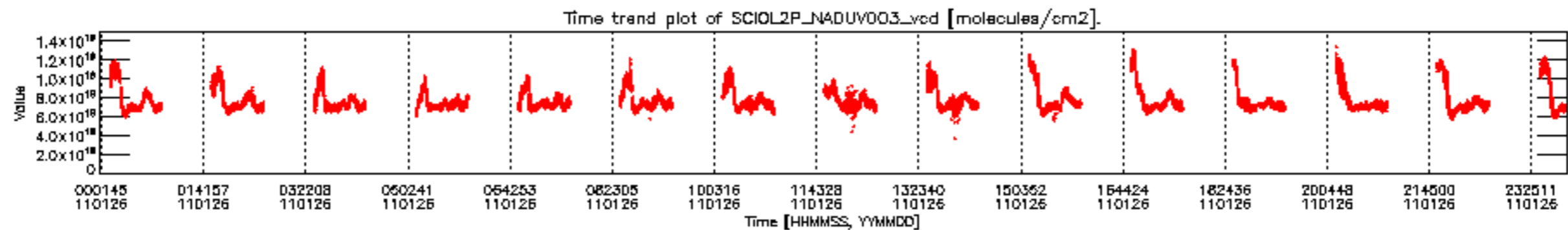
cLopt\_depth for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



cloud\_flags for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

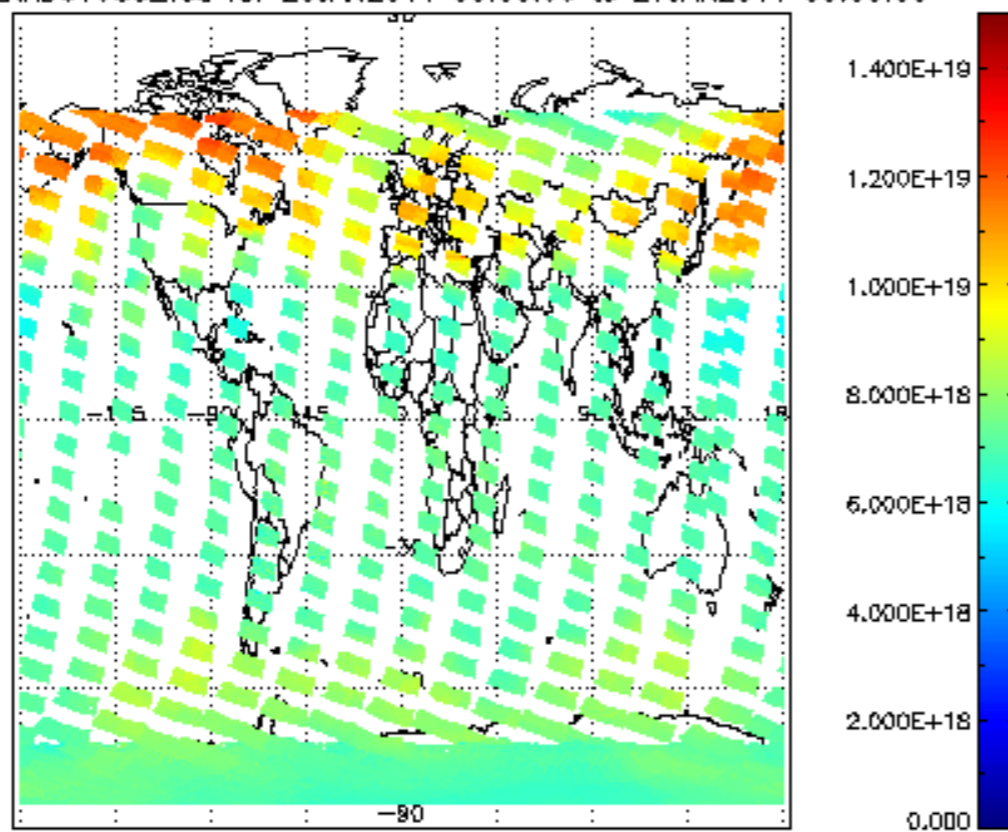




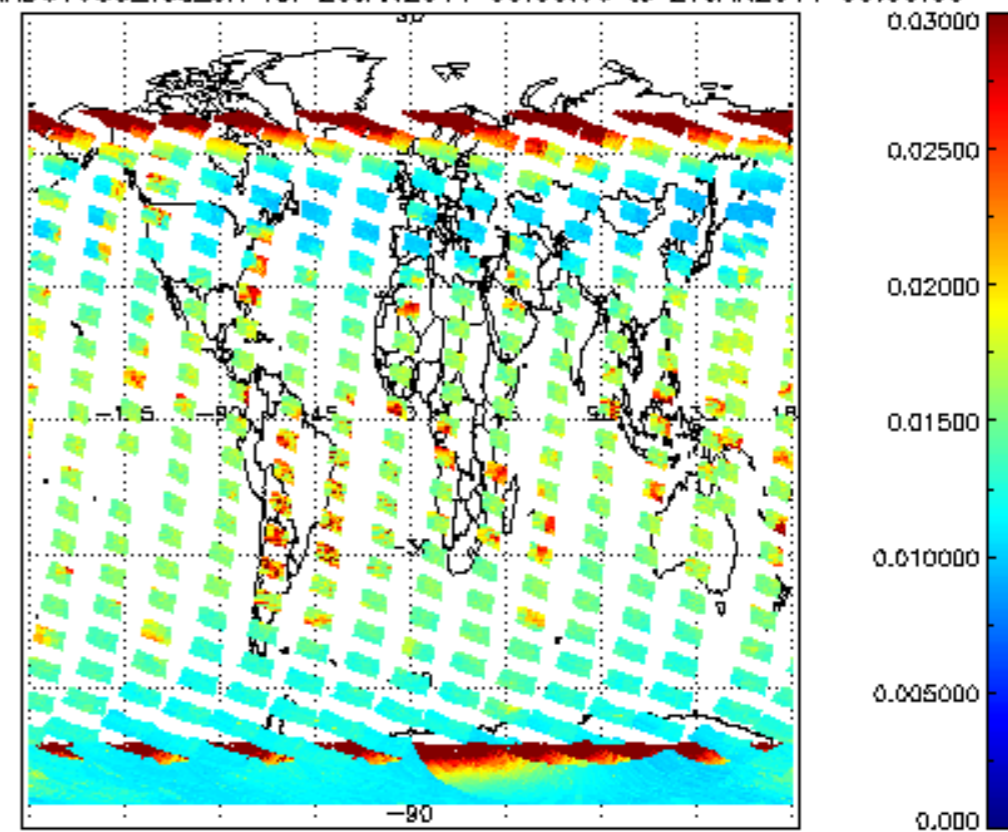




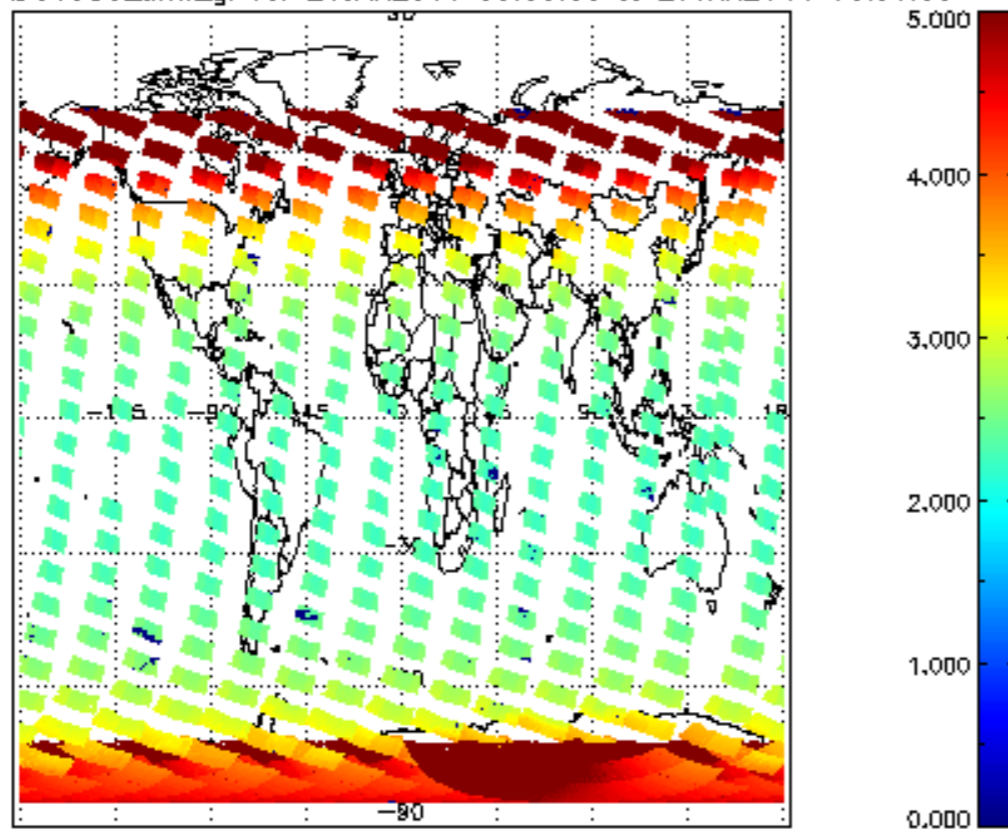
SCIOL2P\_NADUV003\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



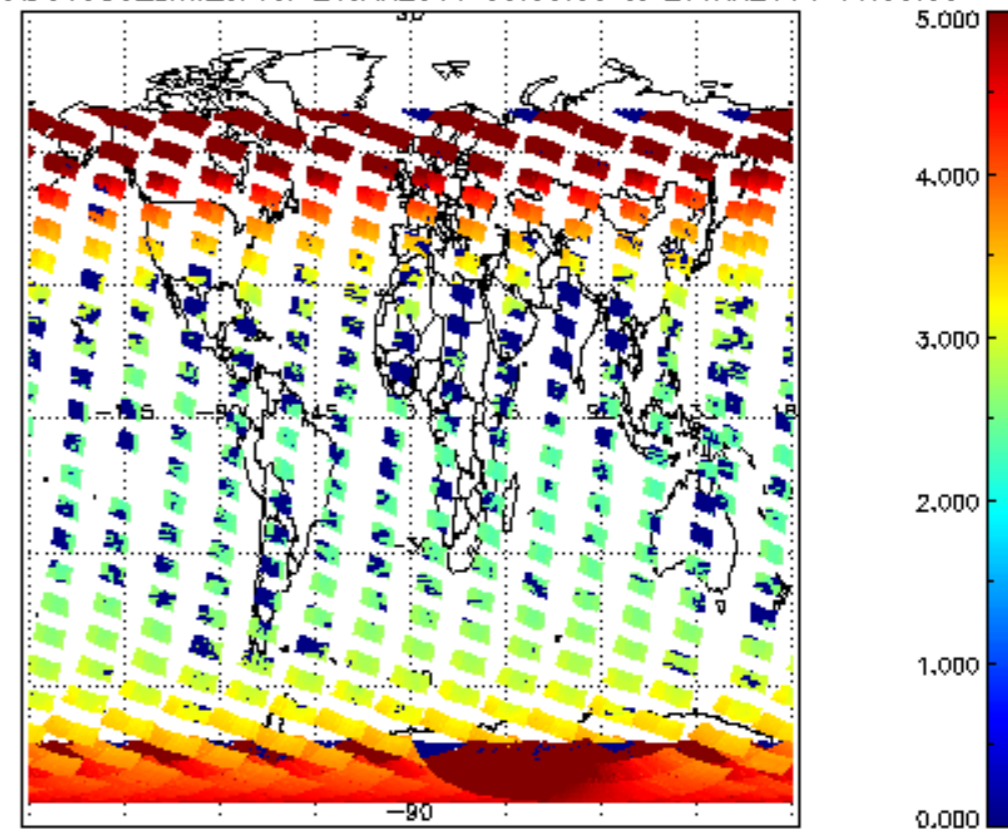
SCIOL2P\_NADUV003\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



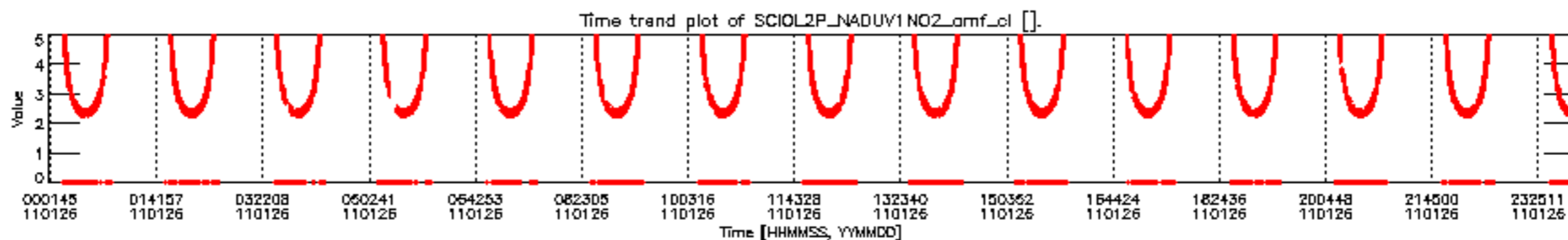
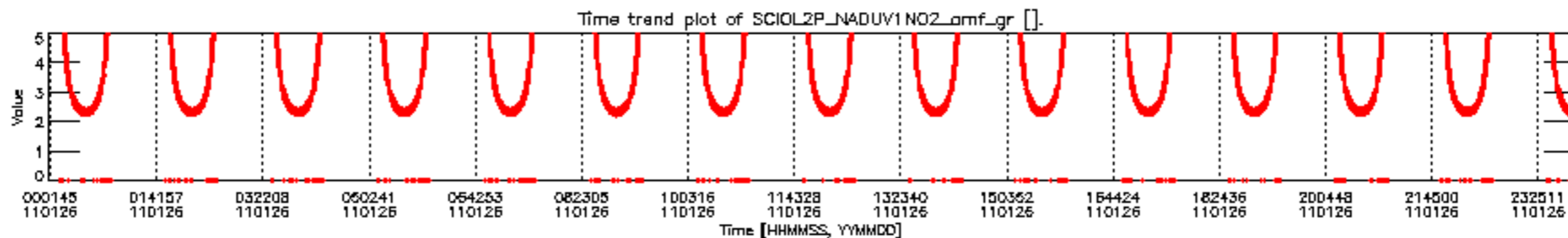
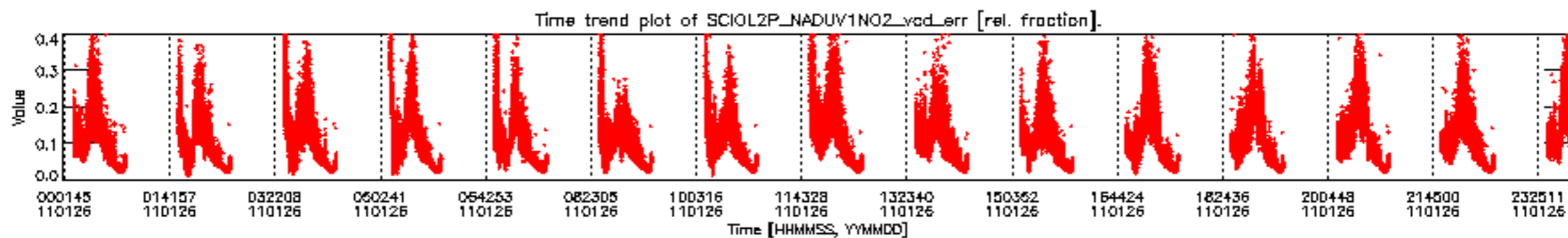
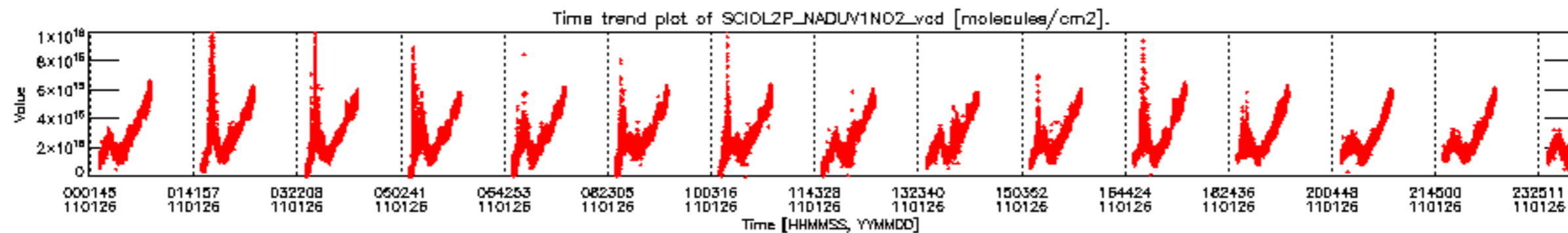
SCIOL2P\_NADUV003\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



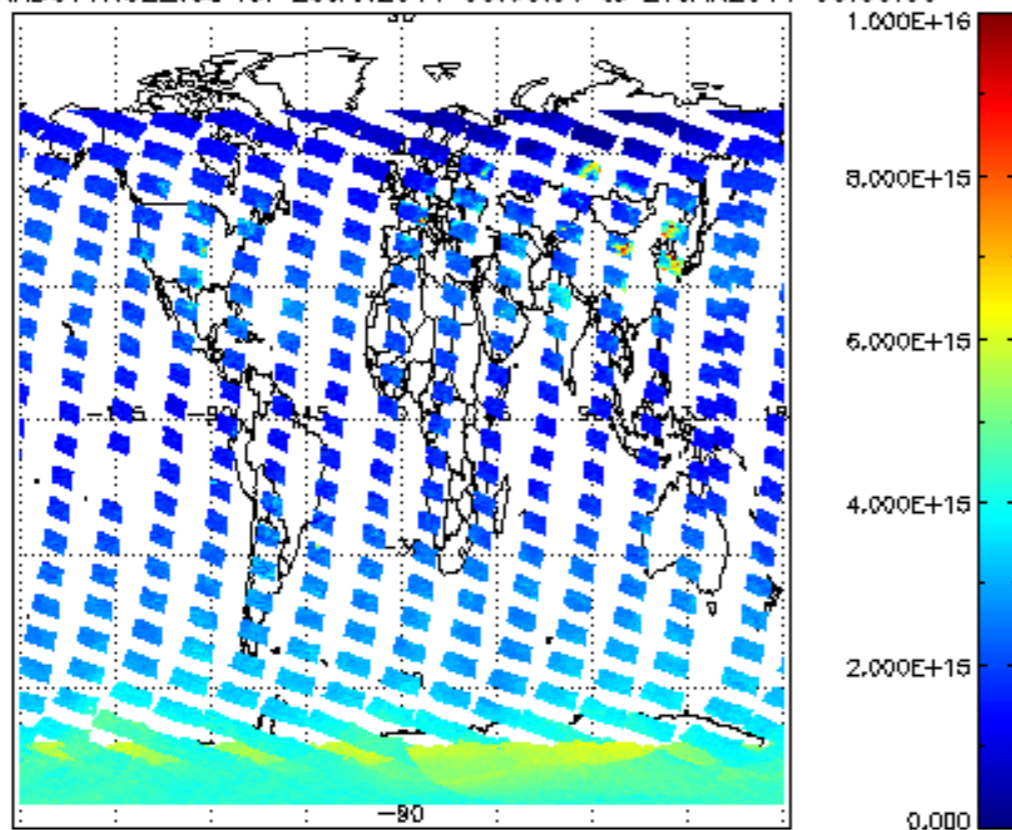
SCIOL2P\_NADUV003\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



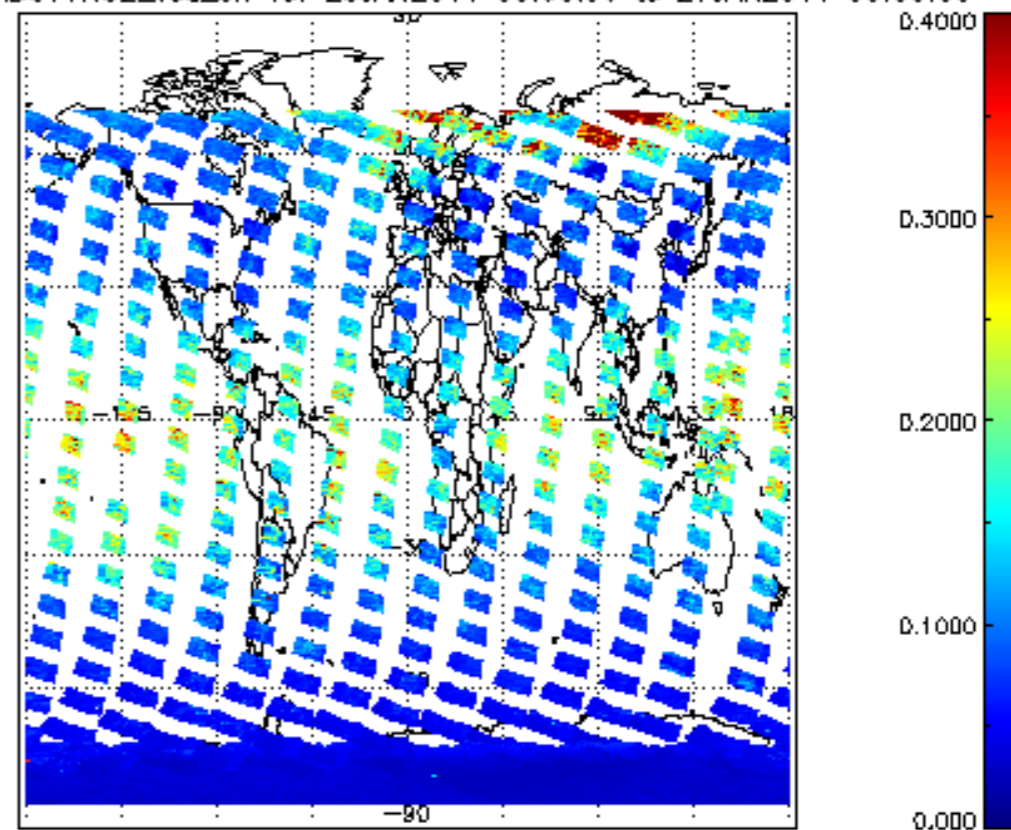




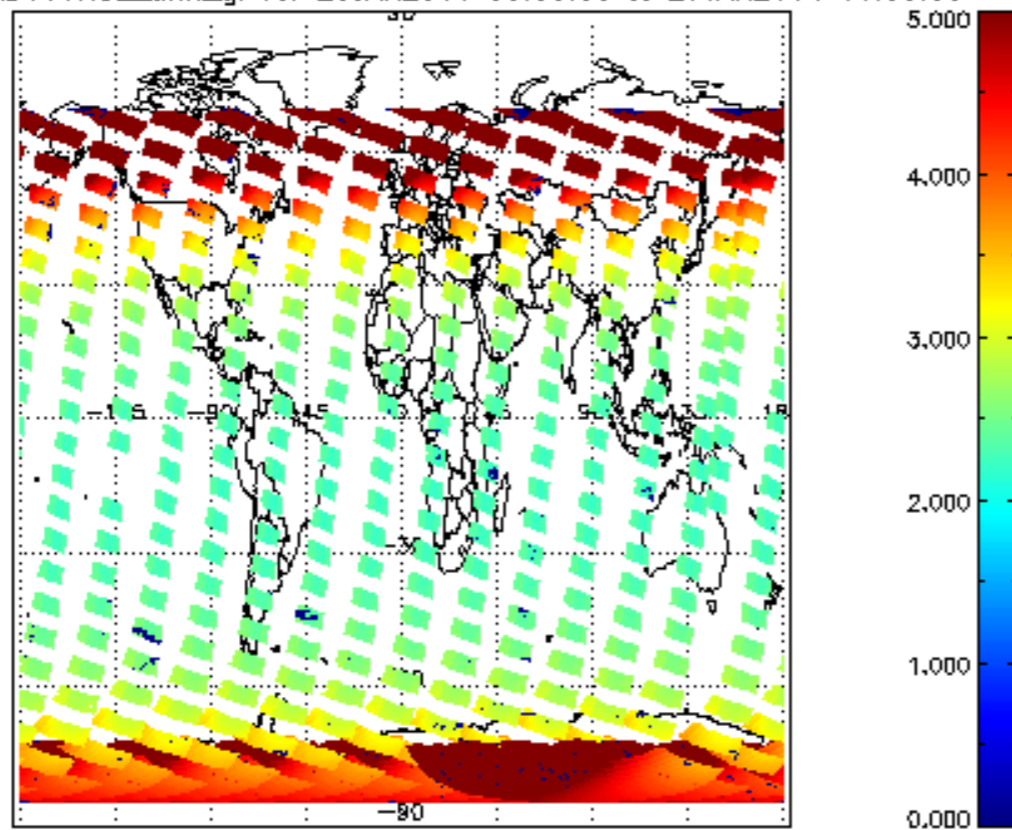
SCIOL2P\_NADUV1NO2\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



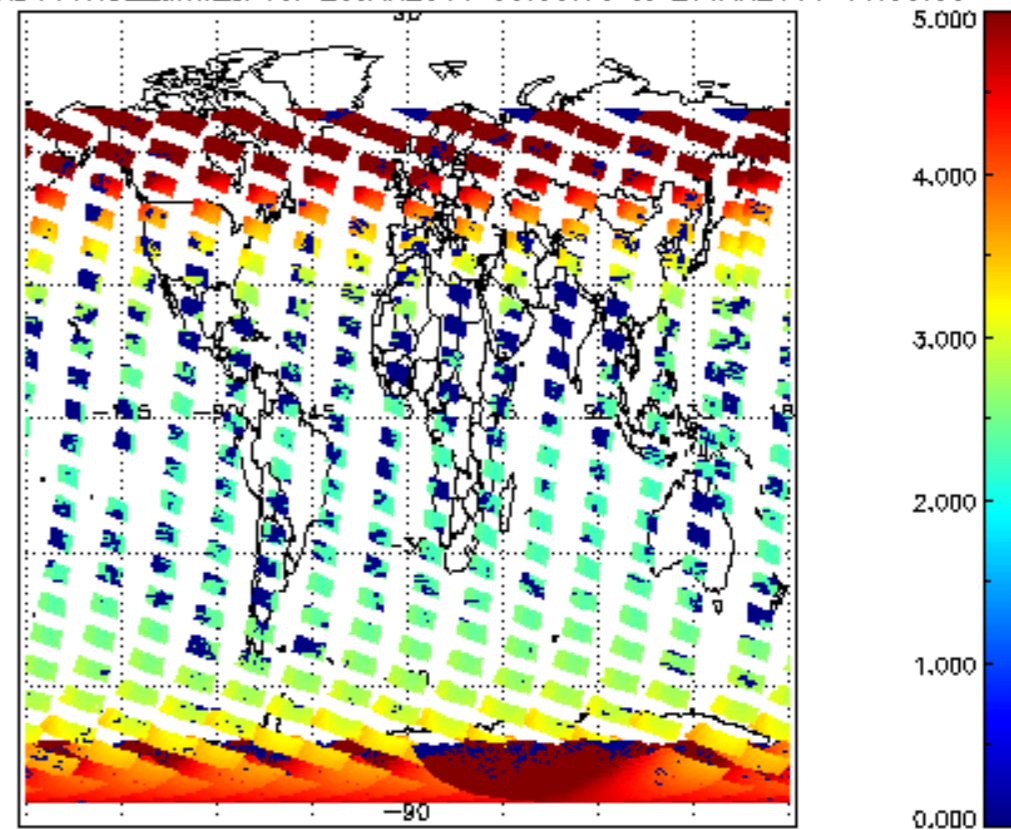
SCIOL2P\_NADUV1NO2\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



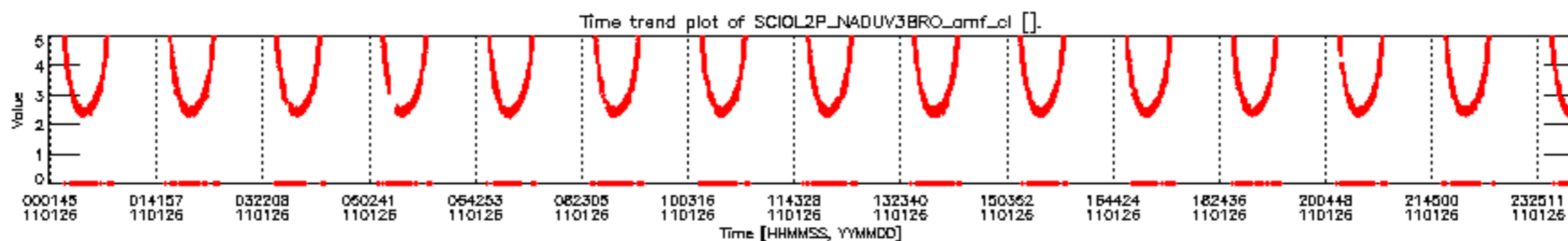
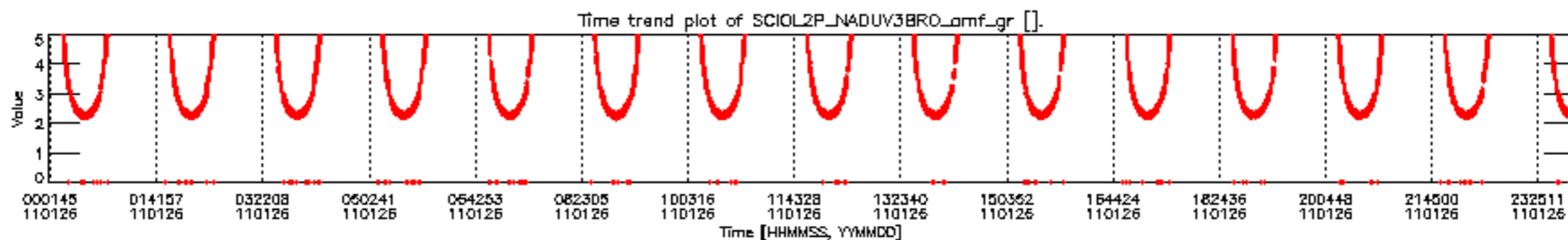
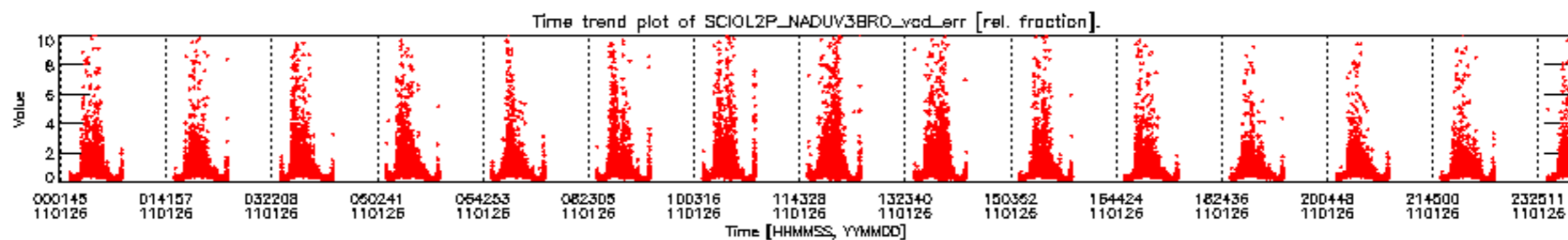
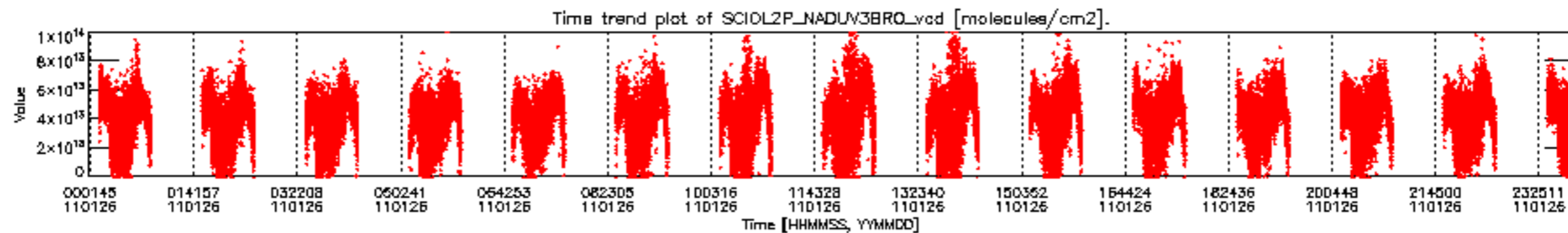
SCIOL2P\_NADUV1NO2\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



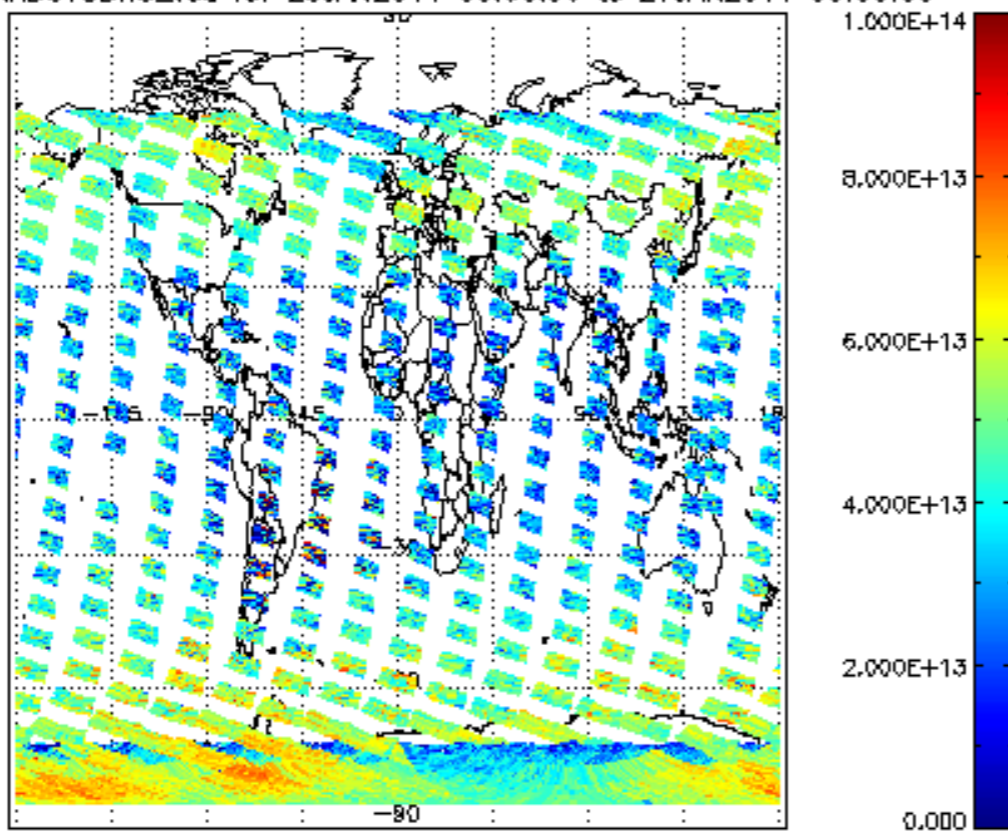
SCIOL2P\_NADUV1NO2\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



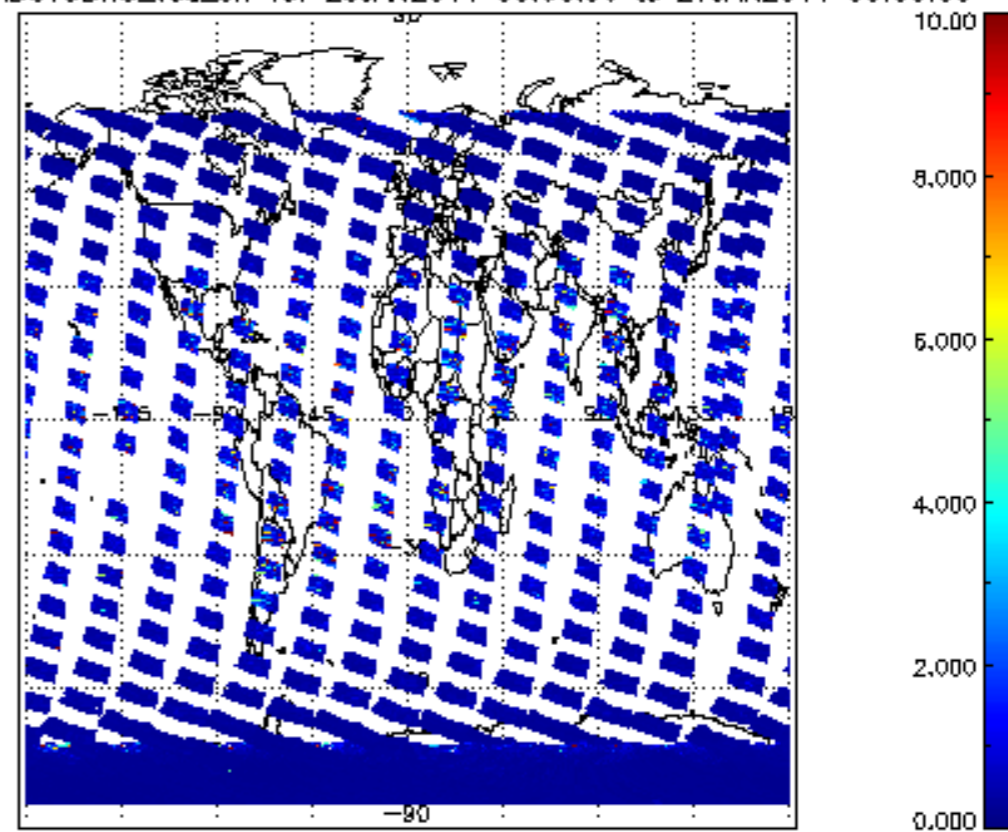




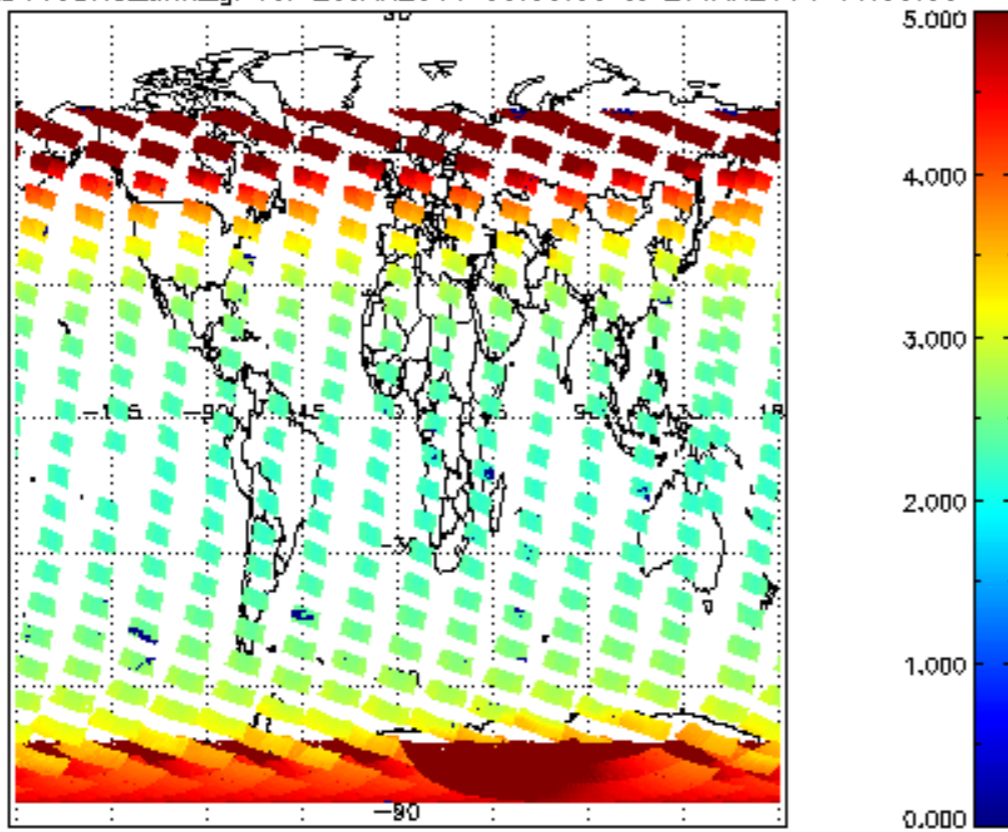
SCIOL2P\_NADUV3BRO\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



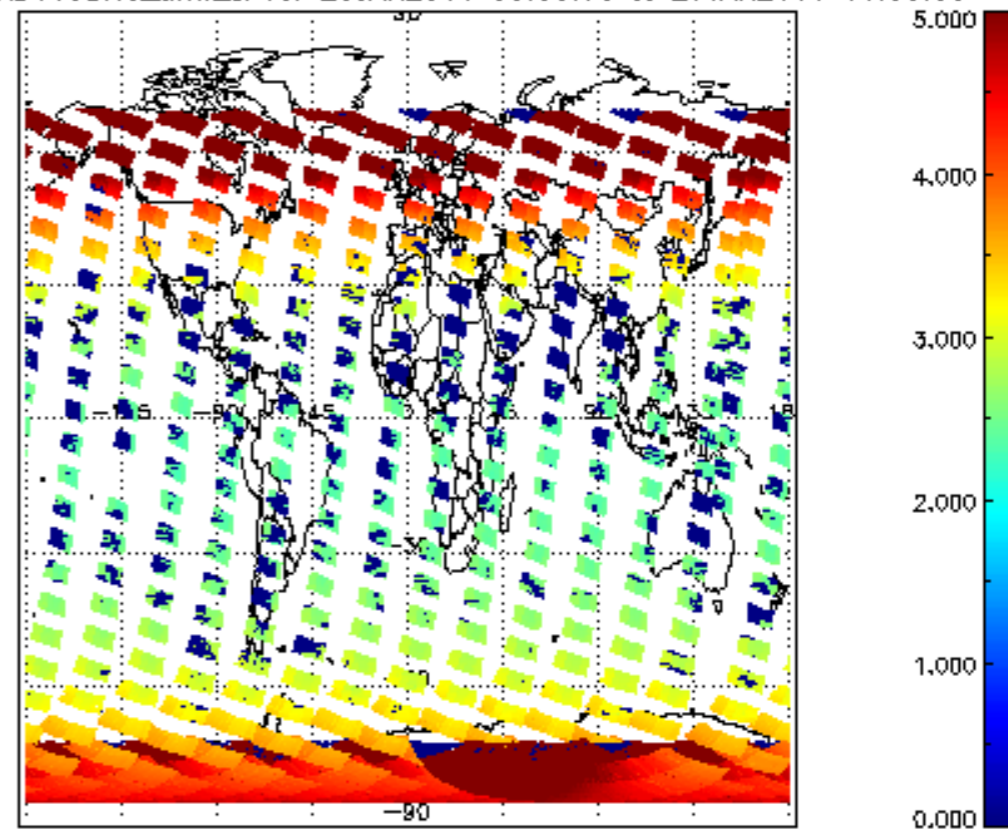
SCIOL2P\_NADUV3BRO\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



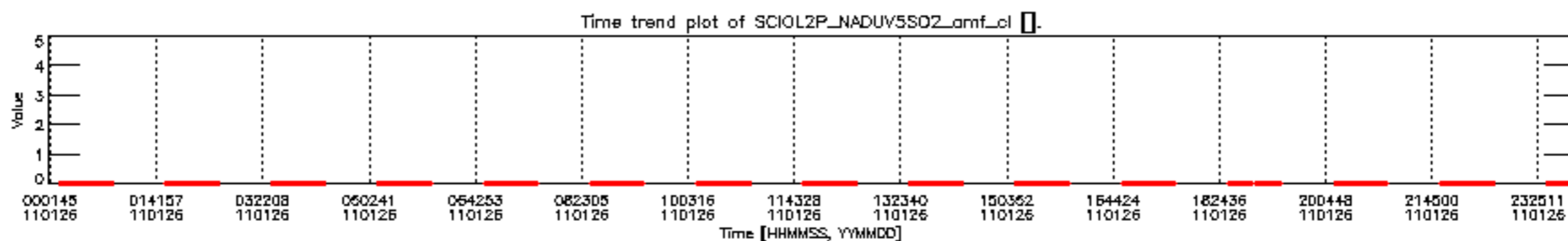
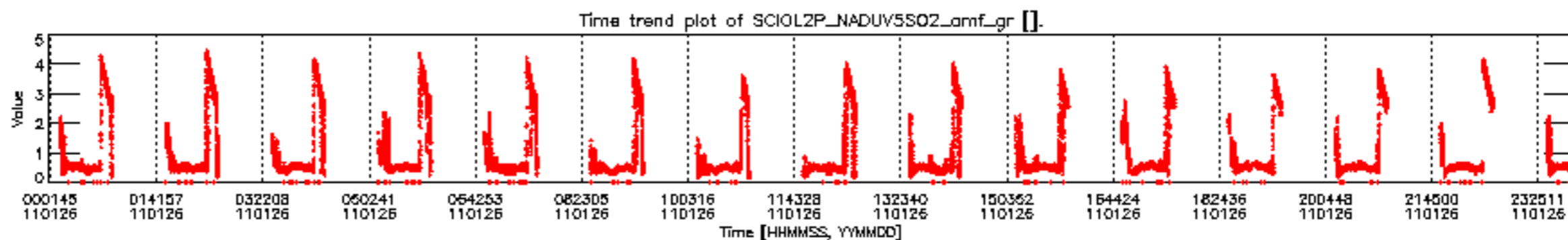
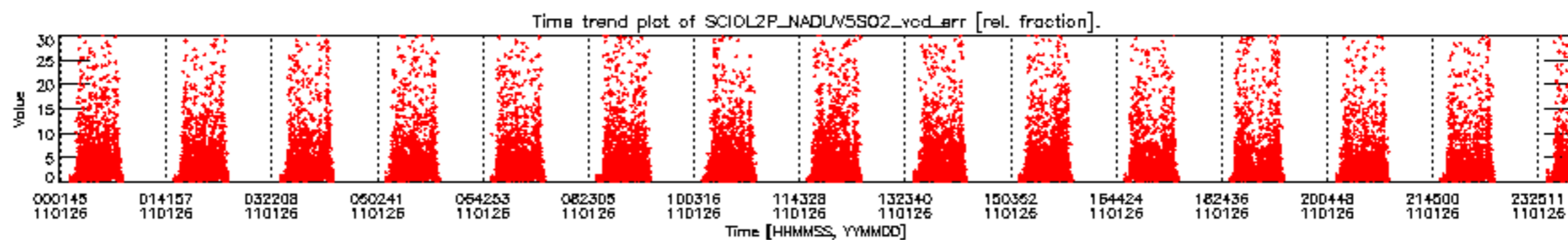
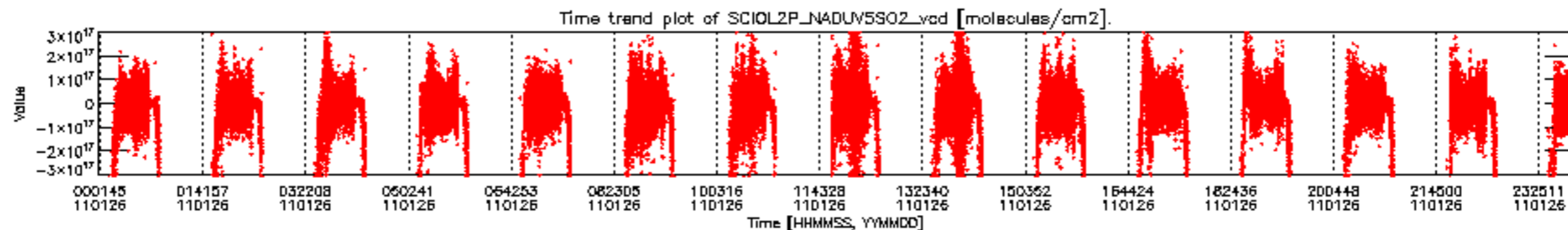
SCIOL2P\_NADUV3BRO\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



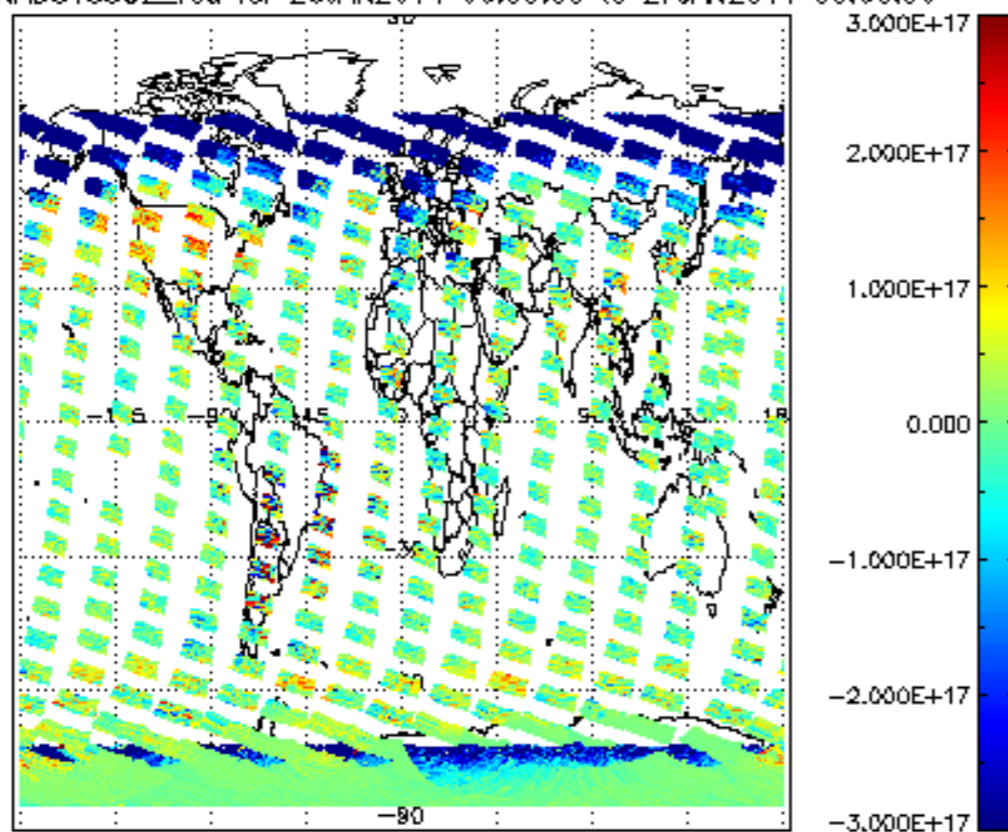
SCIOL2P\_NADUV3BRO\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



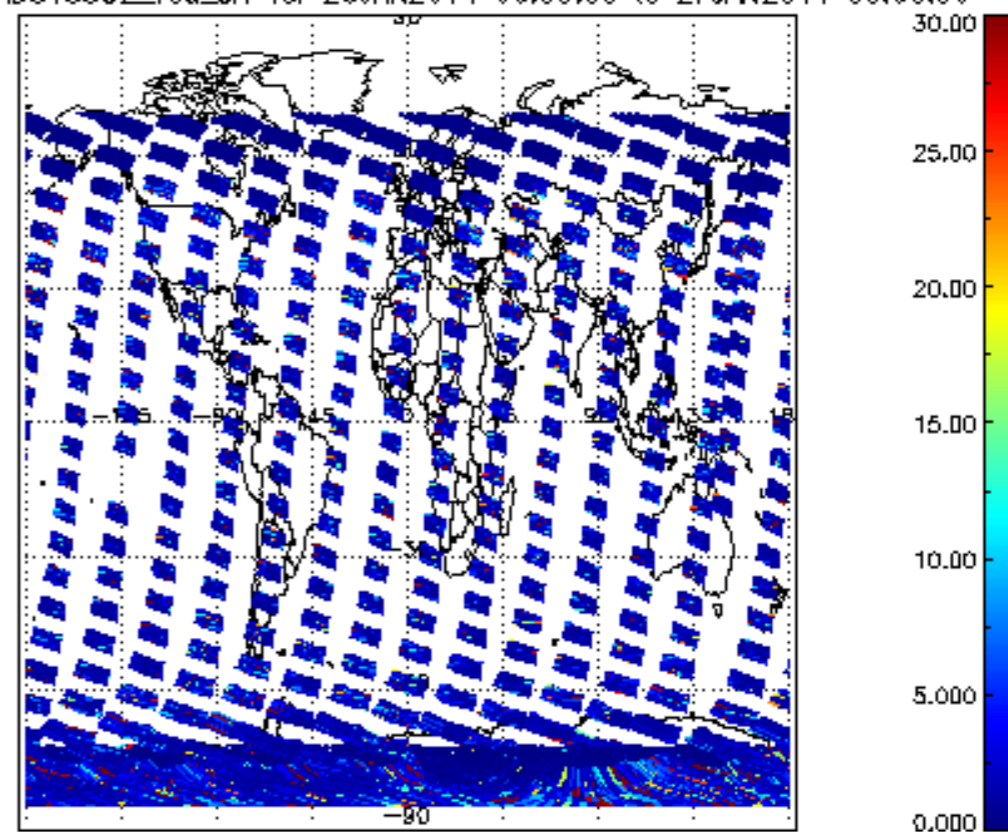




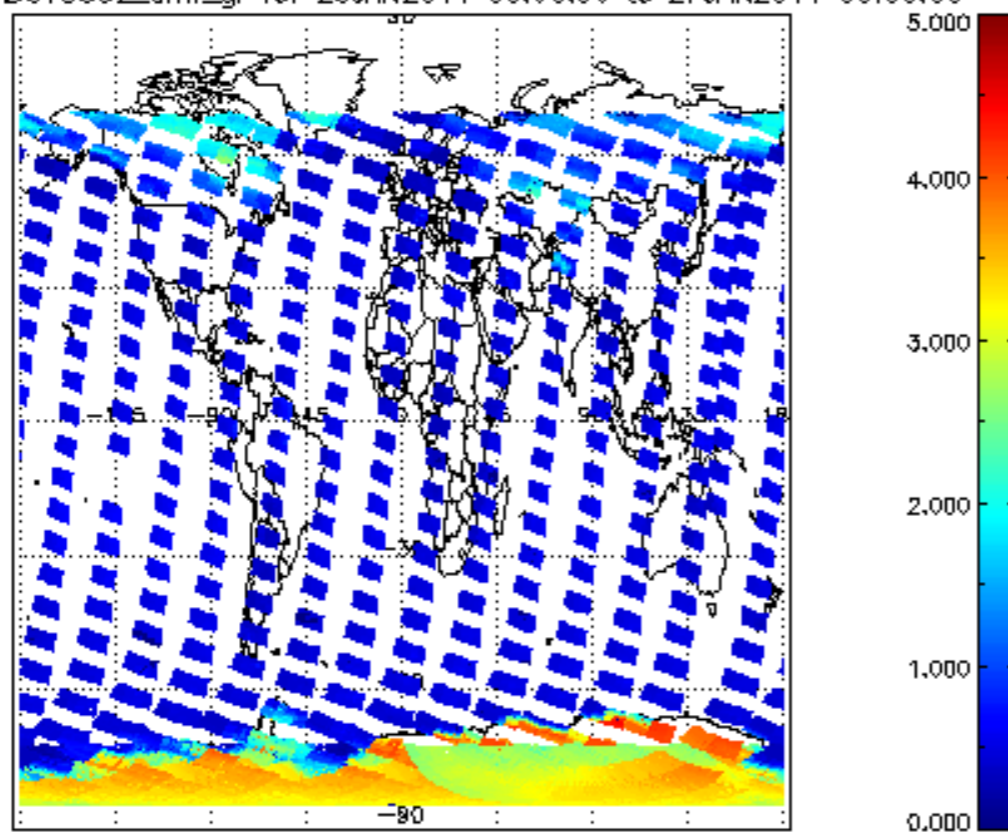
SCIOL2P\_NADUV5S02\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



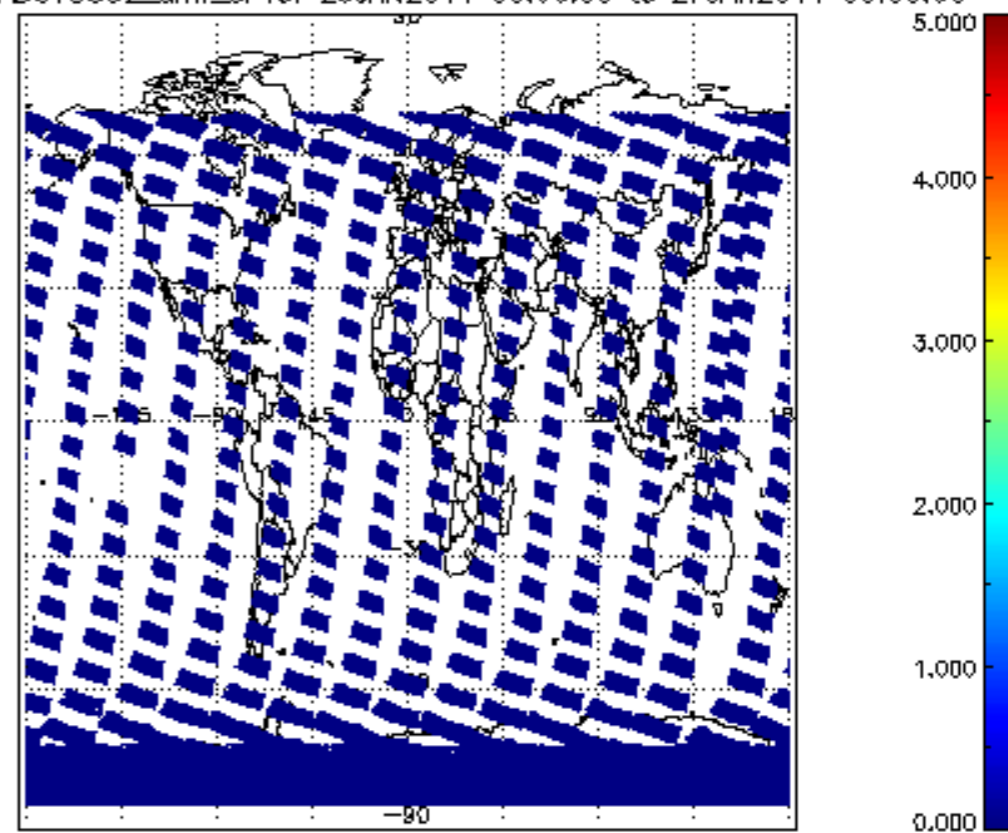
SCIOL2P\_NADUV5S02\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



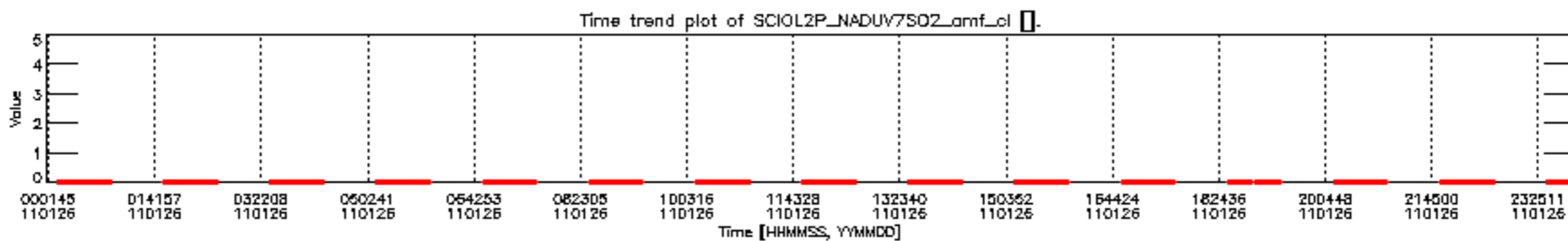
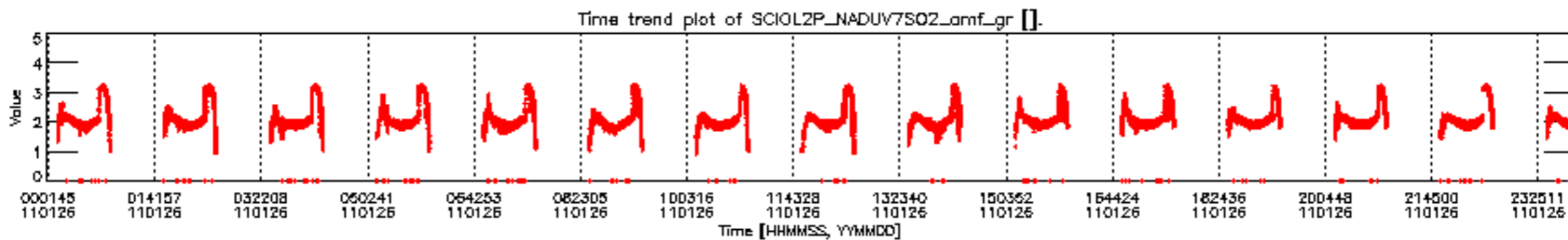
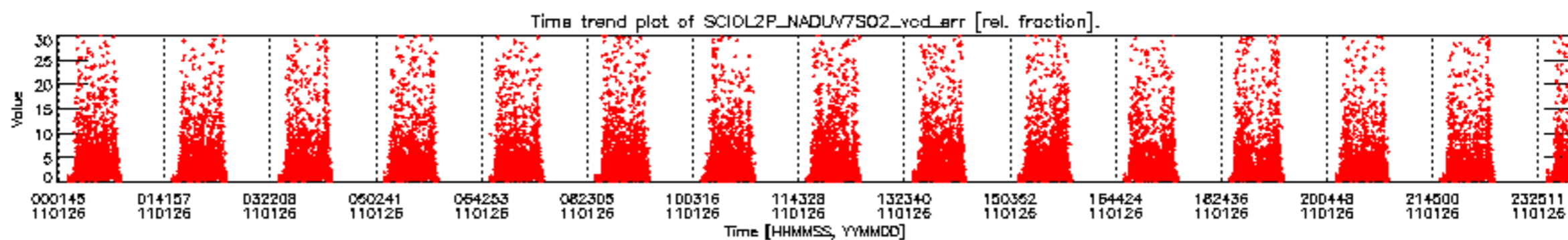
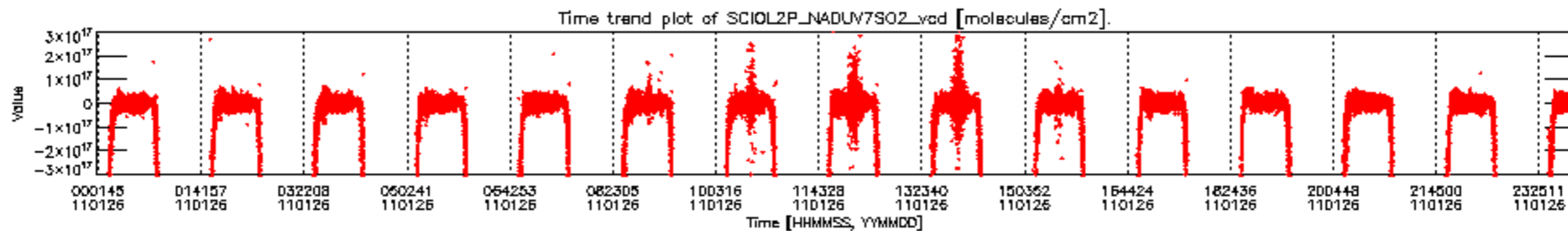
SCIOL2P\_NADUV5S02\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



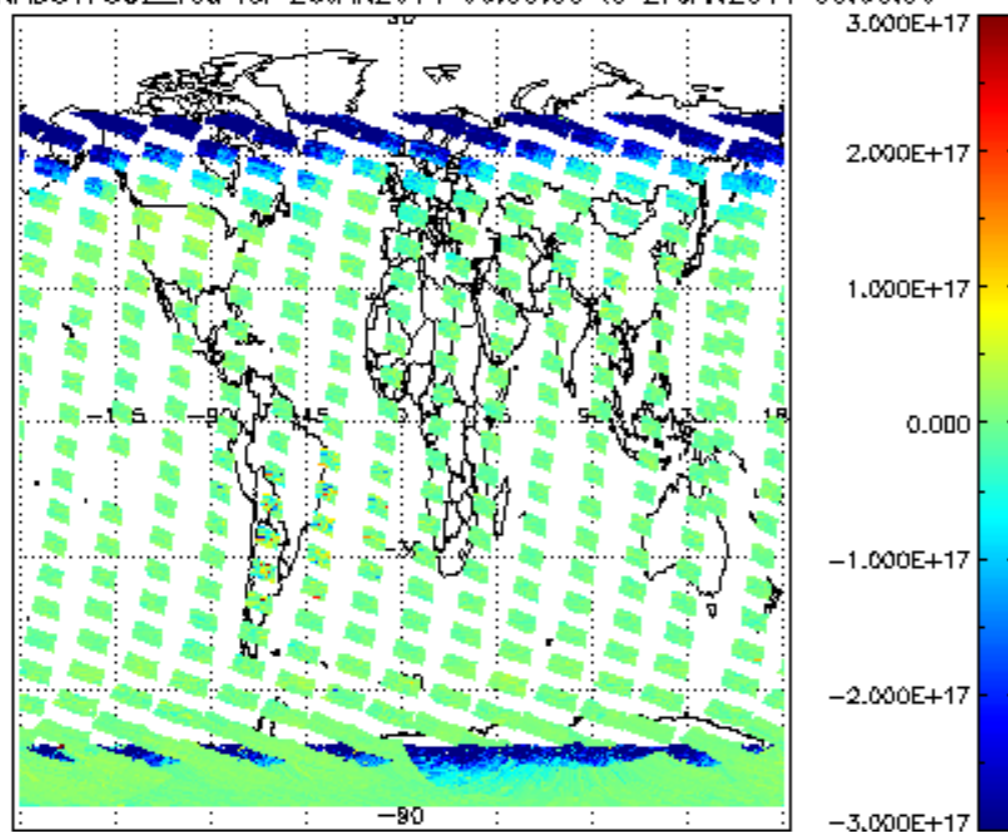
SCIOL2P\_NADUV5S02\_amf\_cl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



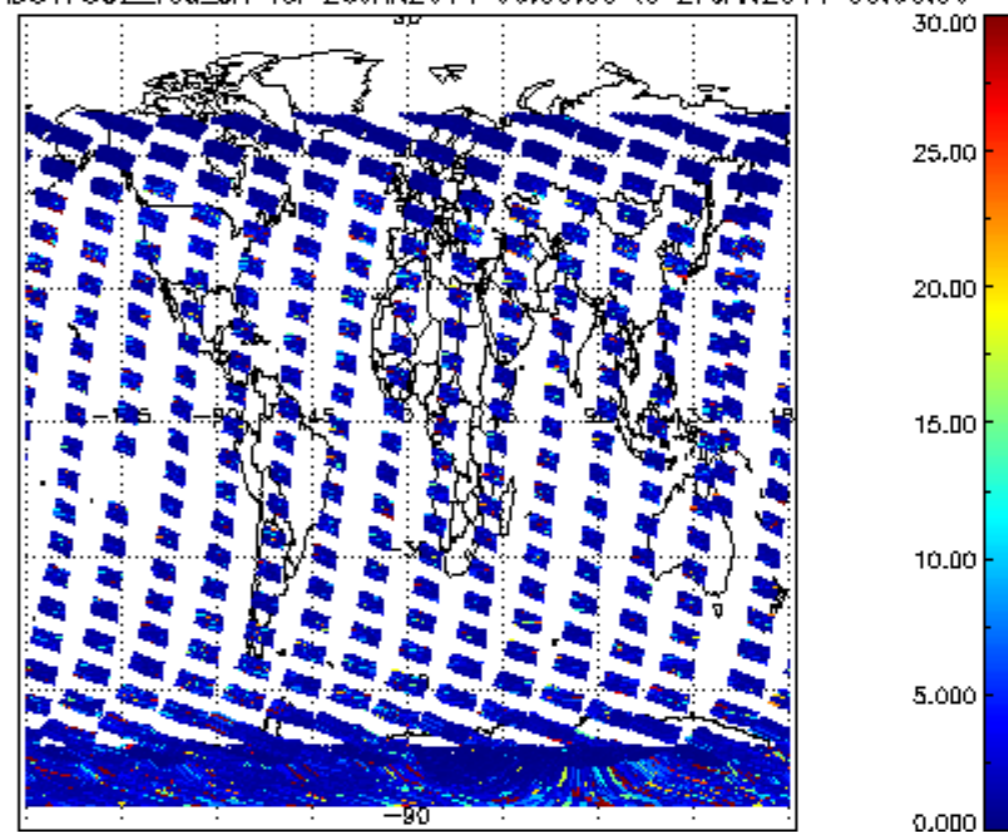




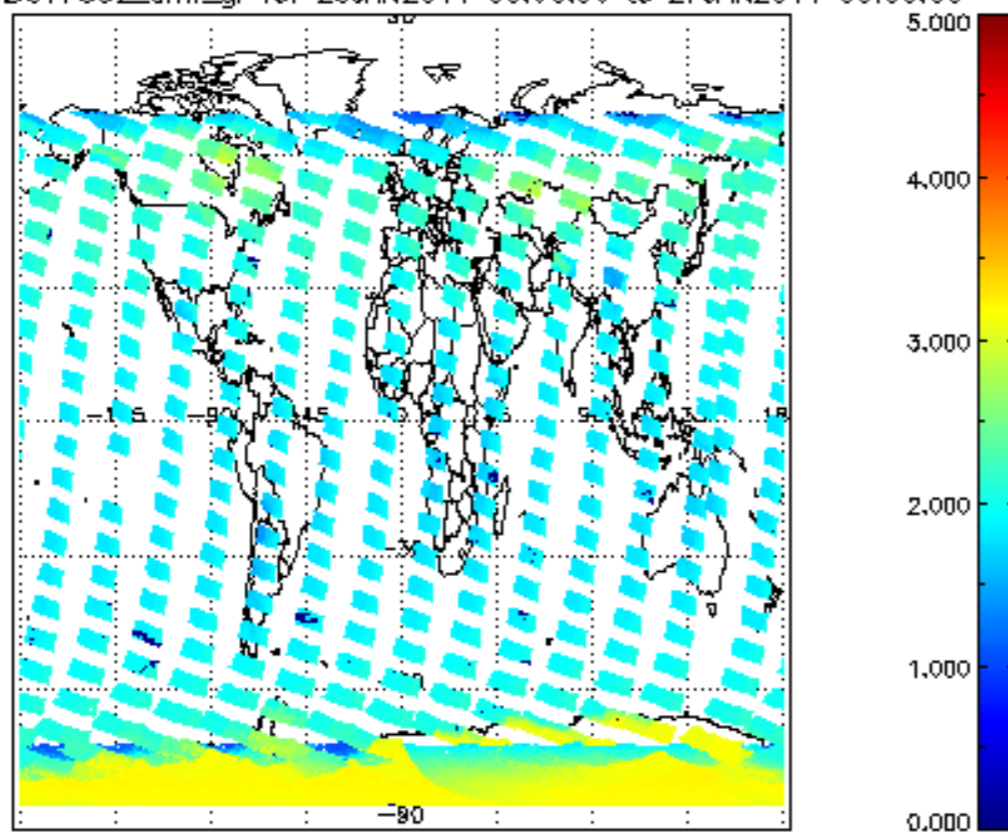
SCIOL2P\_NADUV7S02\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



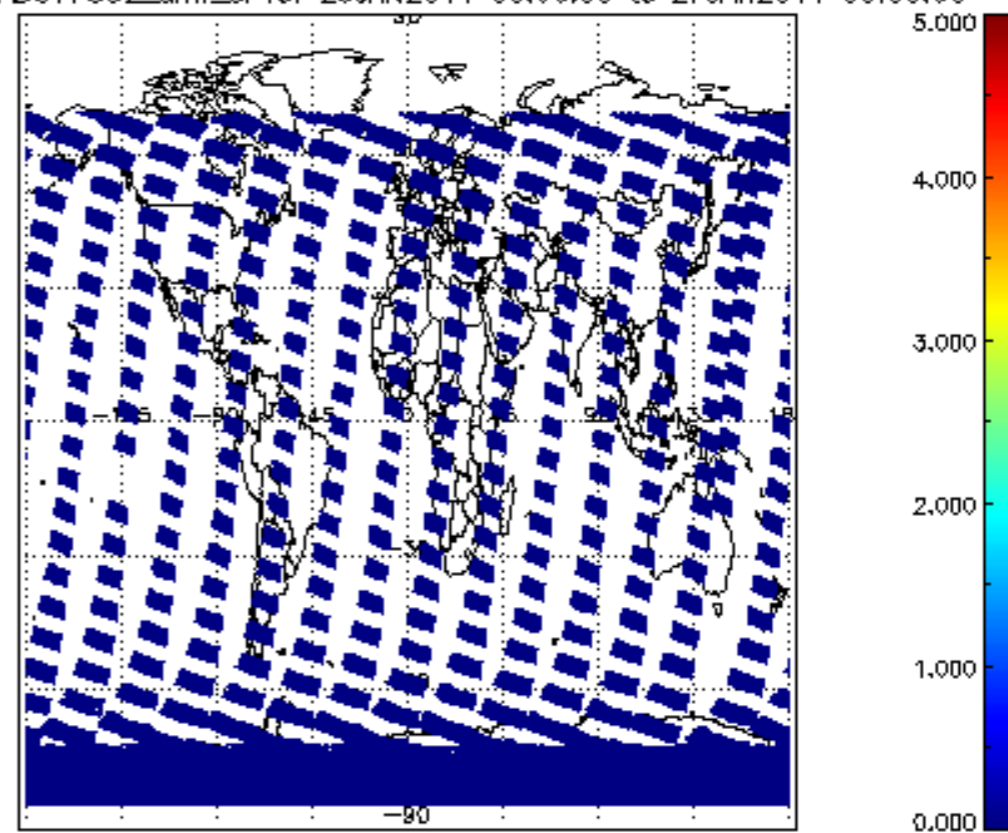
SCIOL2P\_NADUV7S02\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



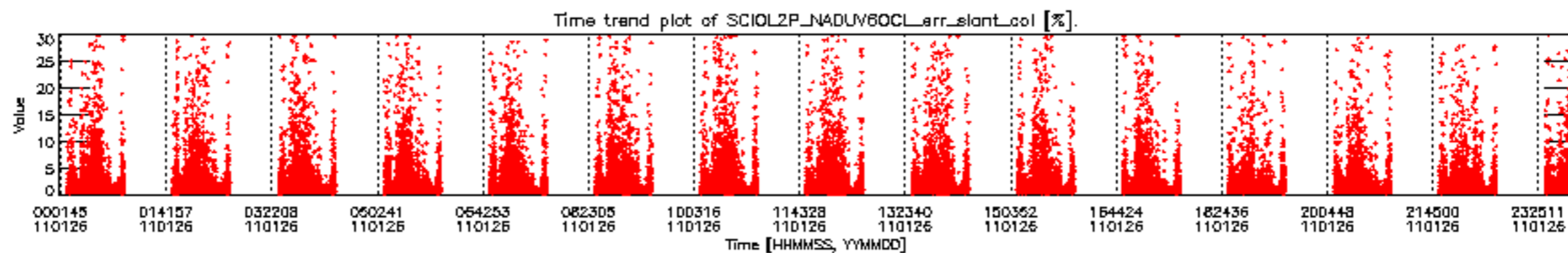
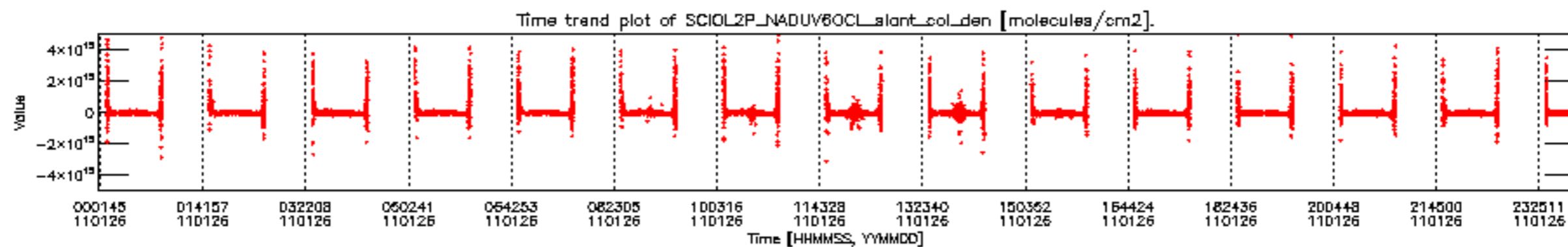
SCIOL2P\_NADUV7S02\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



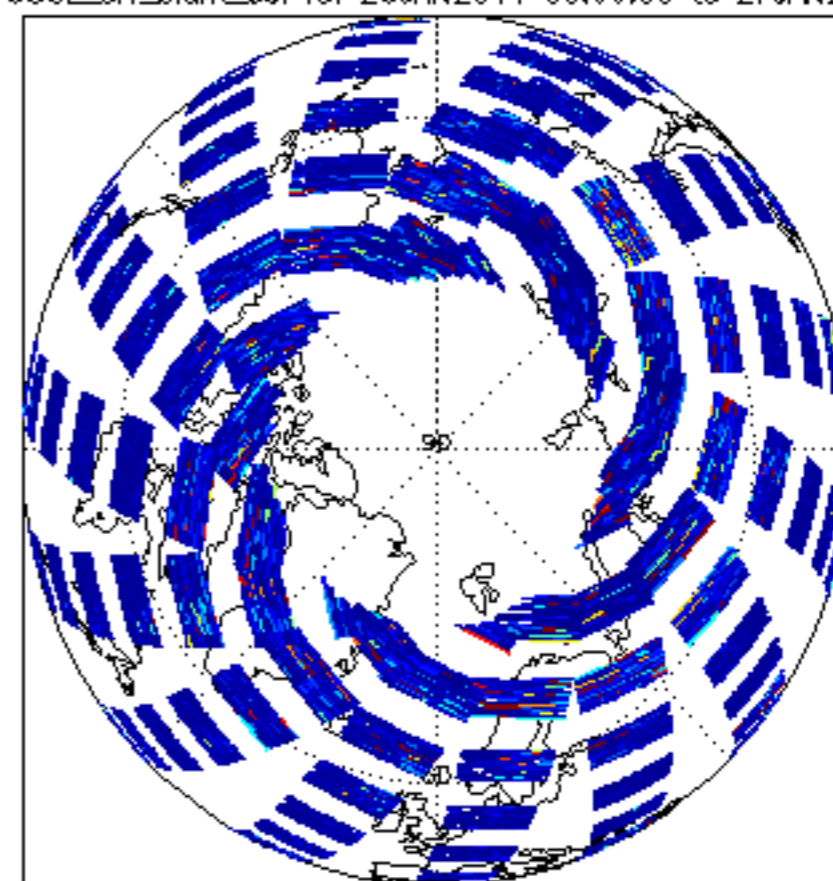
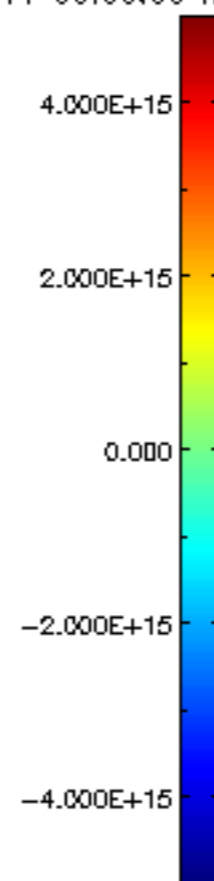
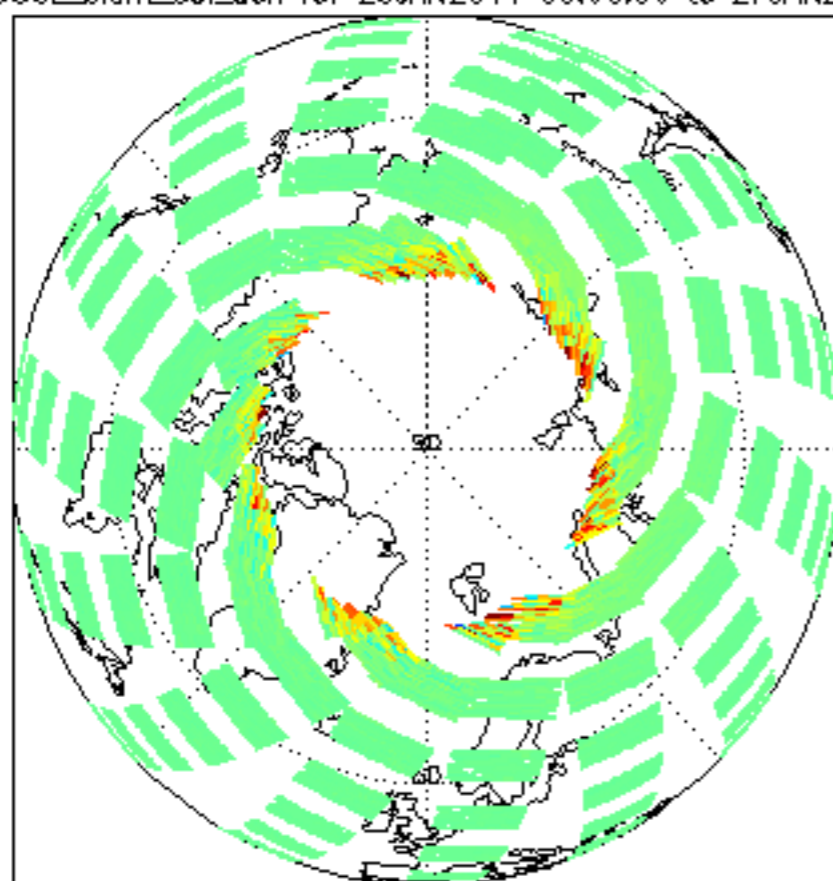
SCIOL2P\_NADUV7S02\_amf\_sl for 26JAN2011 00:00:00 to 27JAN2011 00:00:00





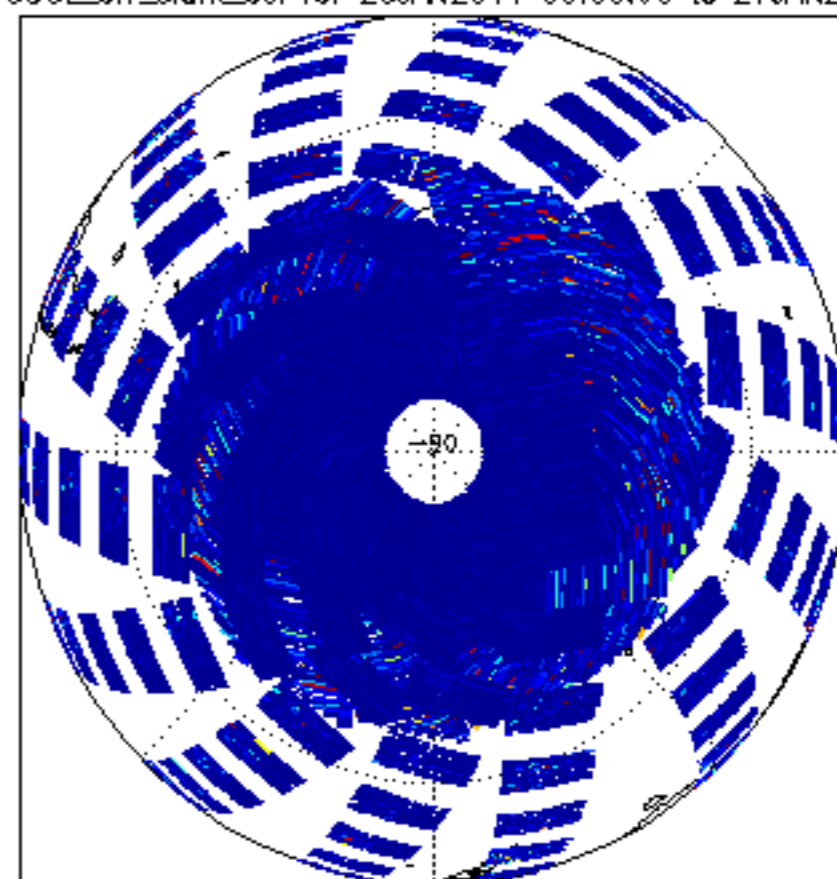
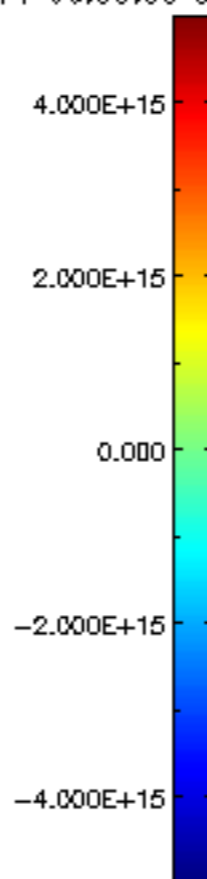
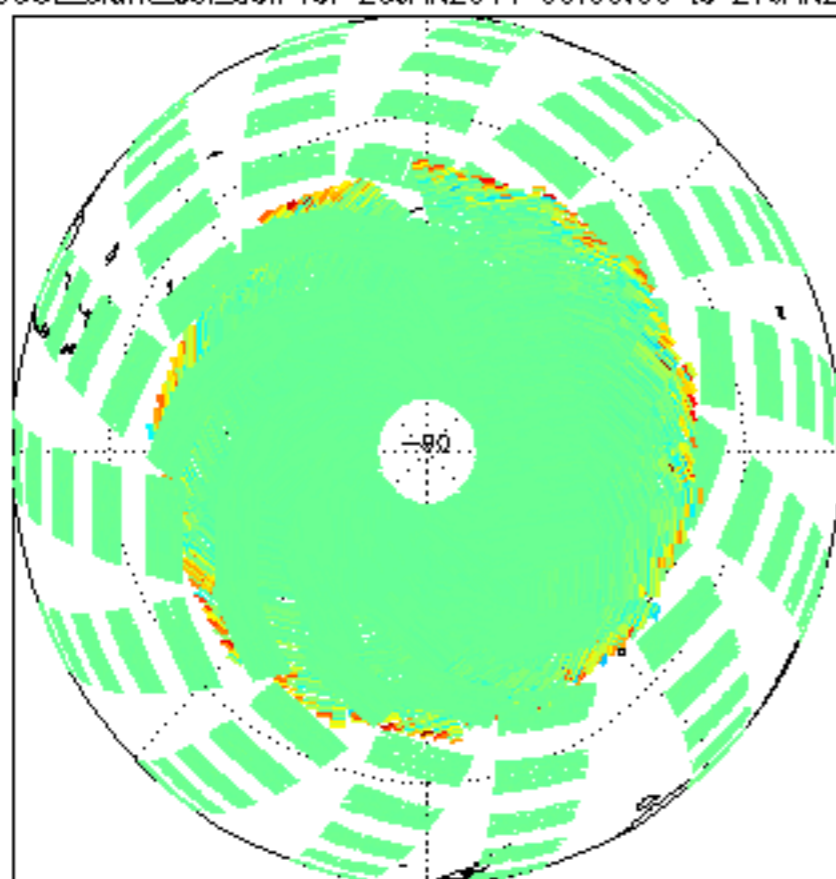


ICIOL2P\_NADUV6OCL\_slant\_col\_den for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 np;ICIOL2P\_NADUV6OCL\_err\_slant\_col for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 np





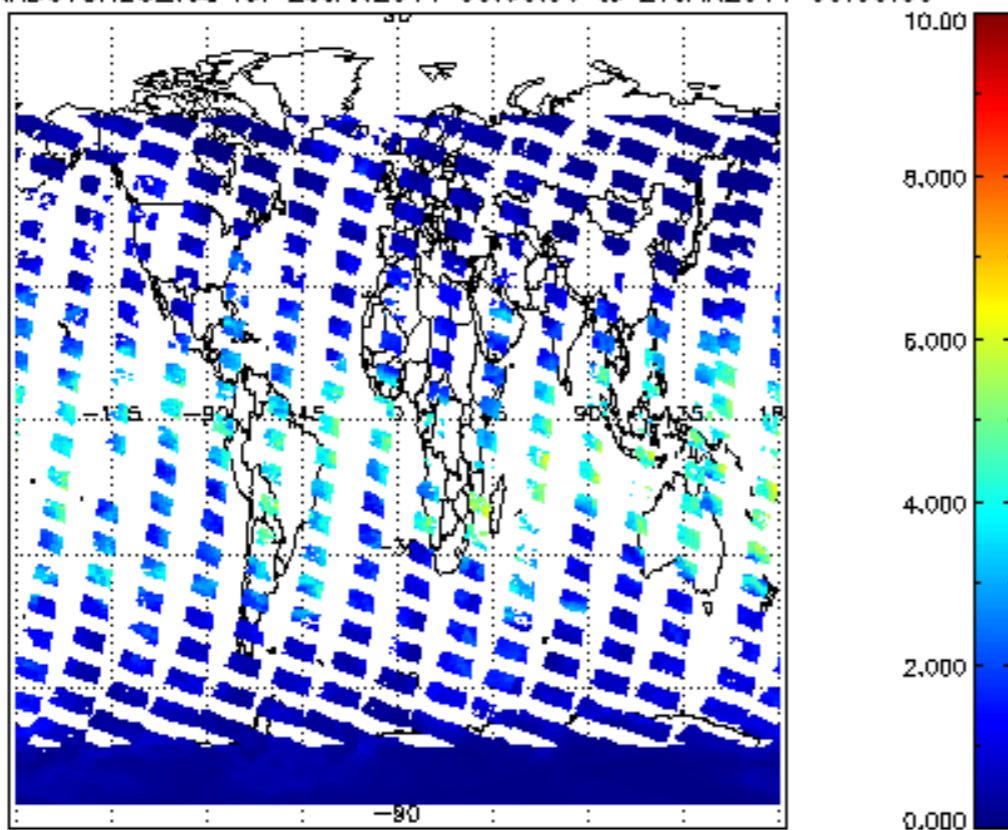
iCIOL2P\_NADUV60CL\_slant\_col\_den for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 sp iCIOL2P\_NADUV60CL\_err\_slant\_col for 26JAN2011 00:00:00 to 27JAN2011 00:00:00 sp



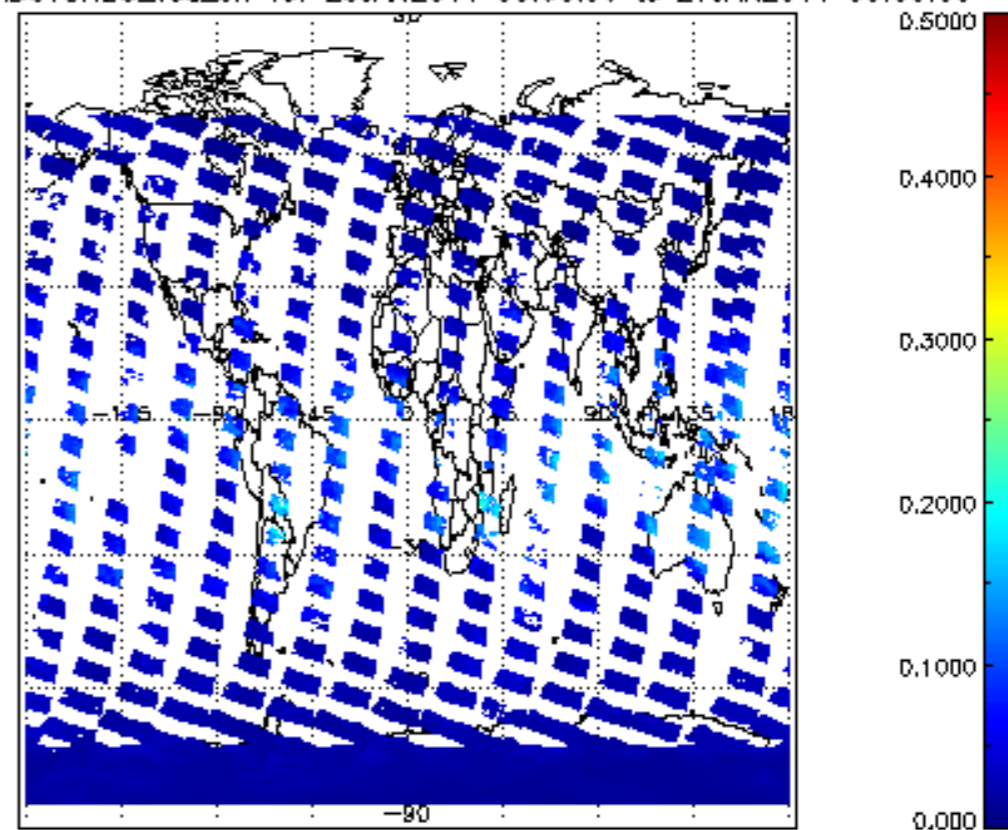




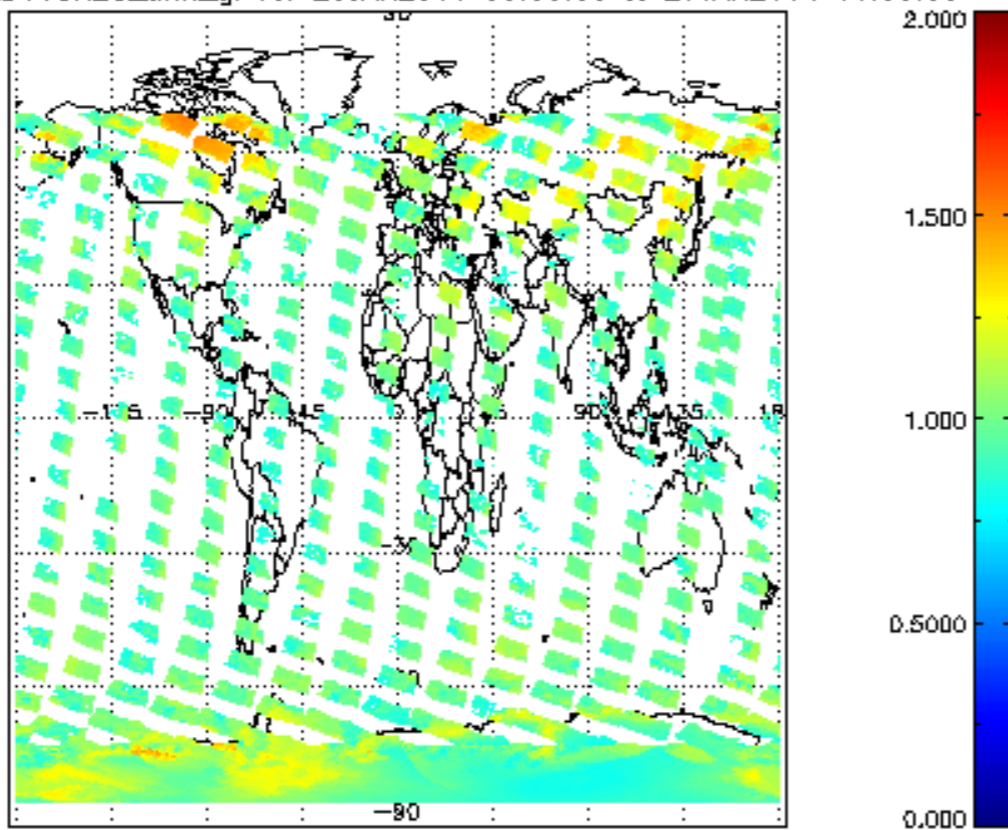
SCIOL2P\_NADUV8H20\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

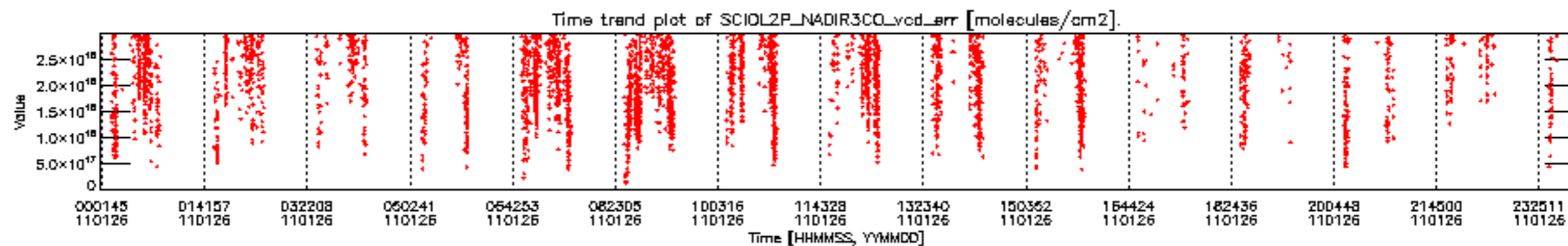
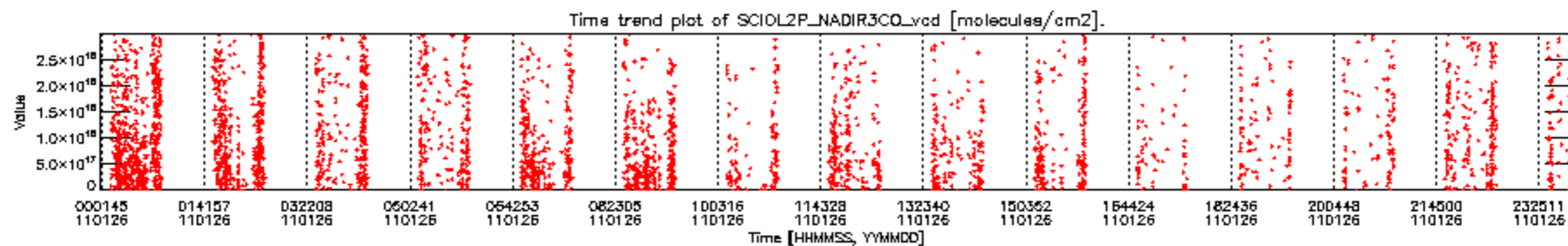


SCIOL2P\_NADUV8H20\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



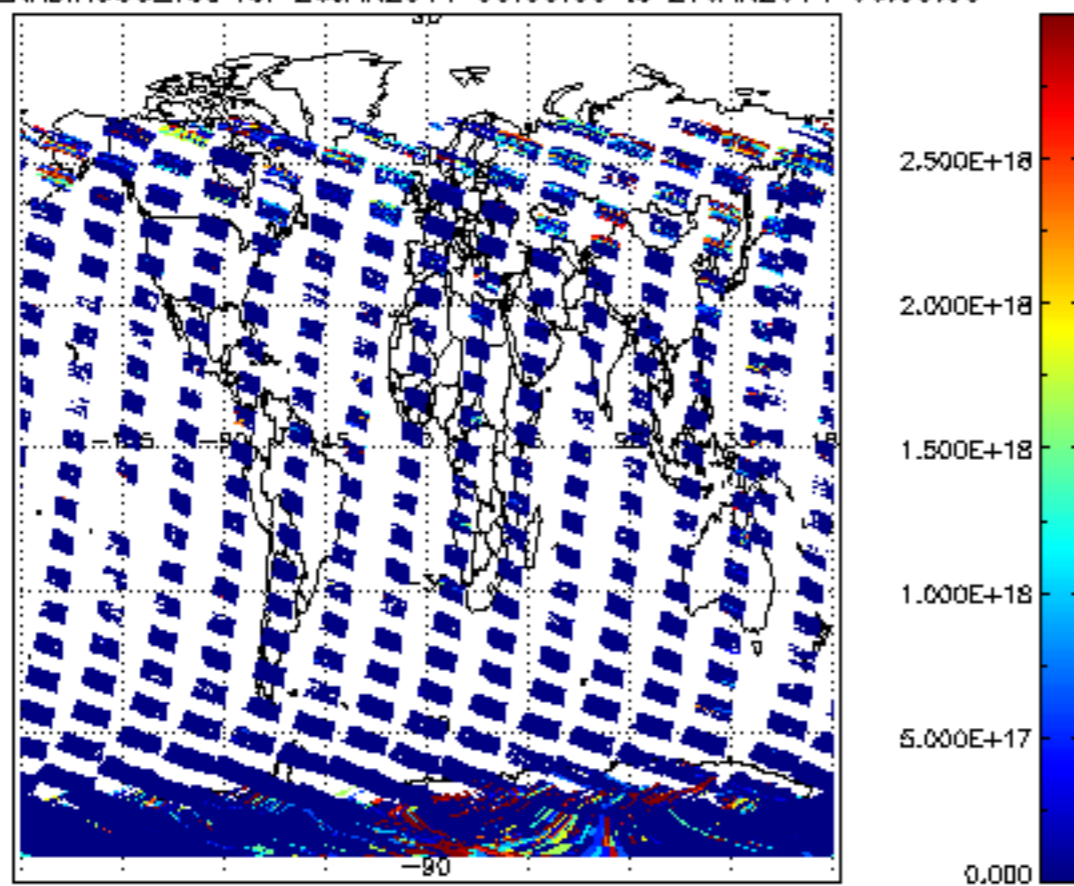
SCIOL2P\_NADUV8H20\_amf\_gr for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



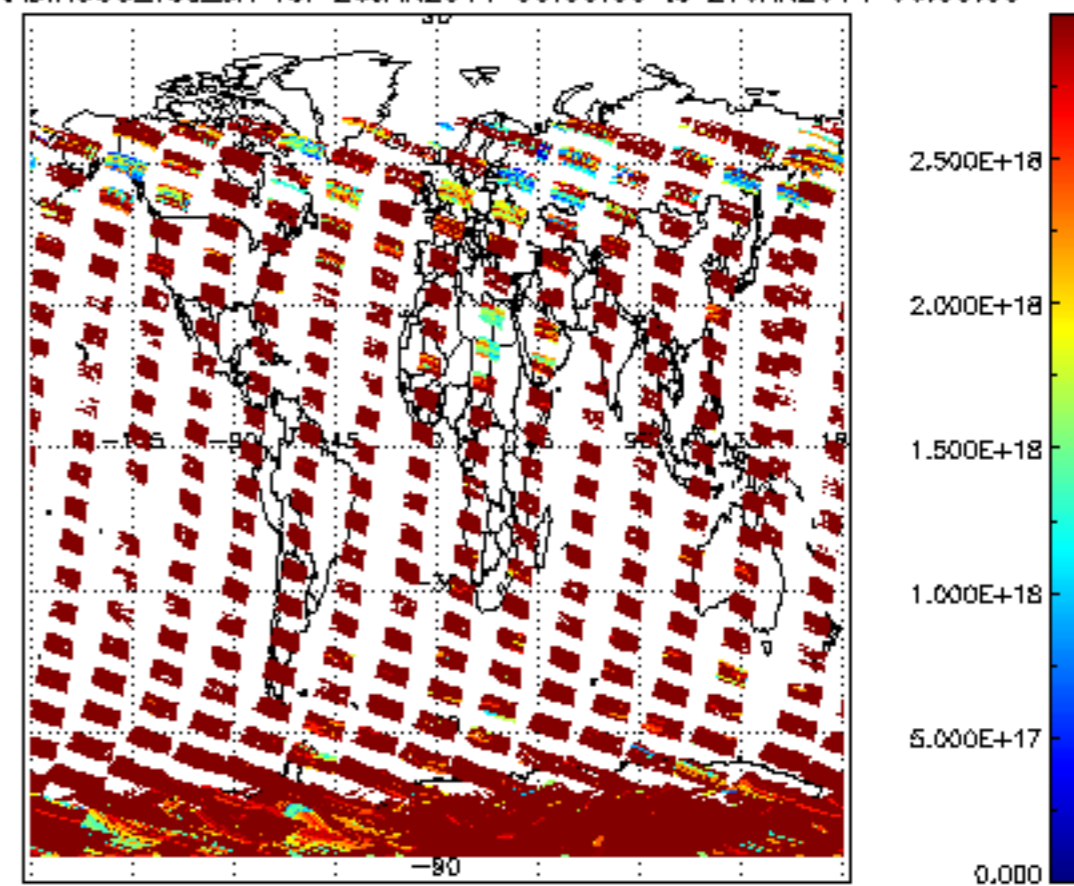




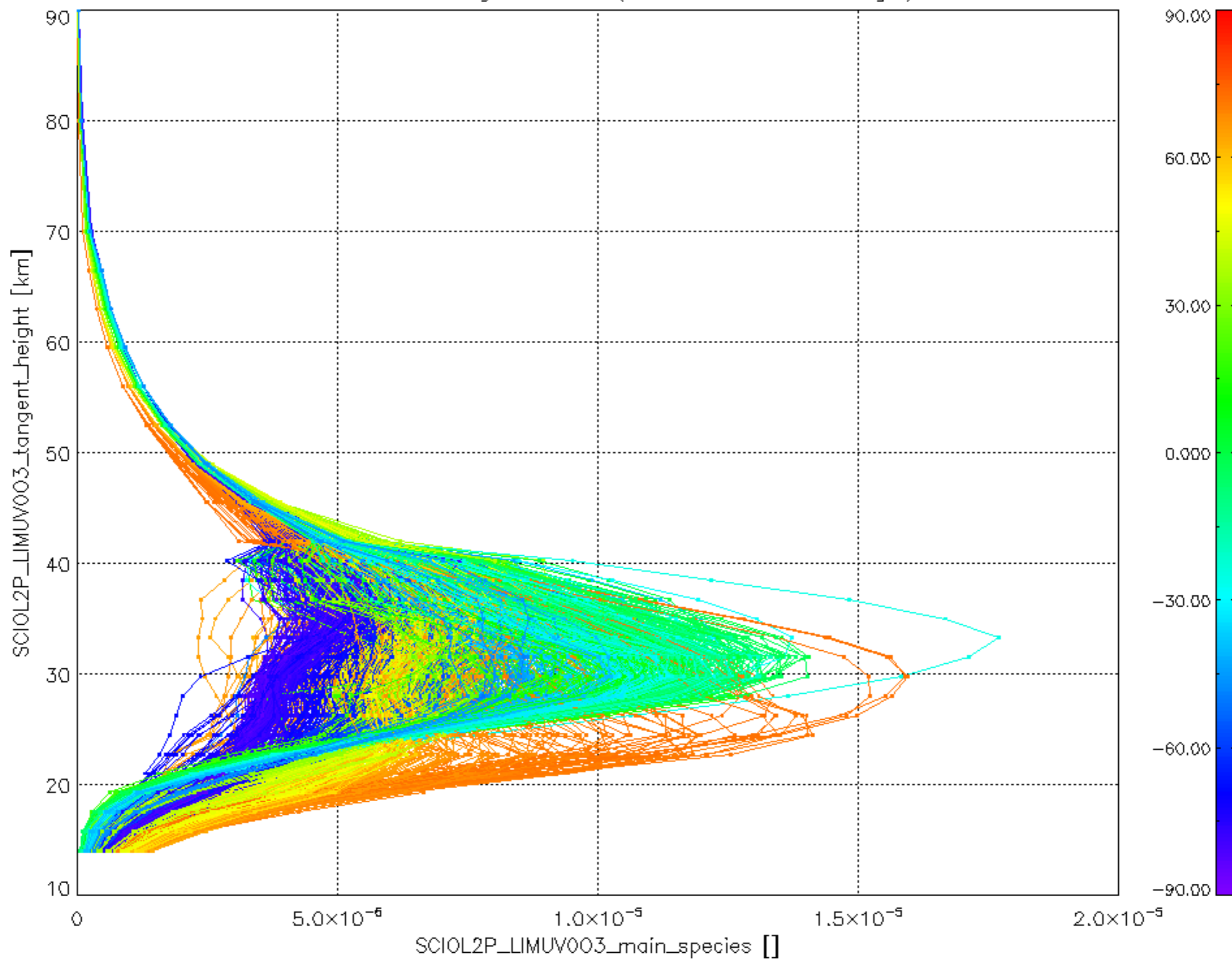
SCIOL2P\_NADIR3CO\_vcd for 26JAN2011 00:00:00 to 27JAN2011 00:00:00



SCIOL2P\_NADIR3CO\_vcd\_err for 26JAN2011 00:00:00 to 27JAN2011 00:00:00

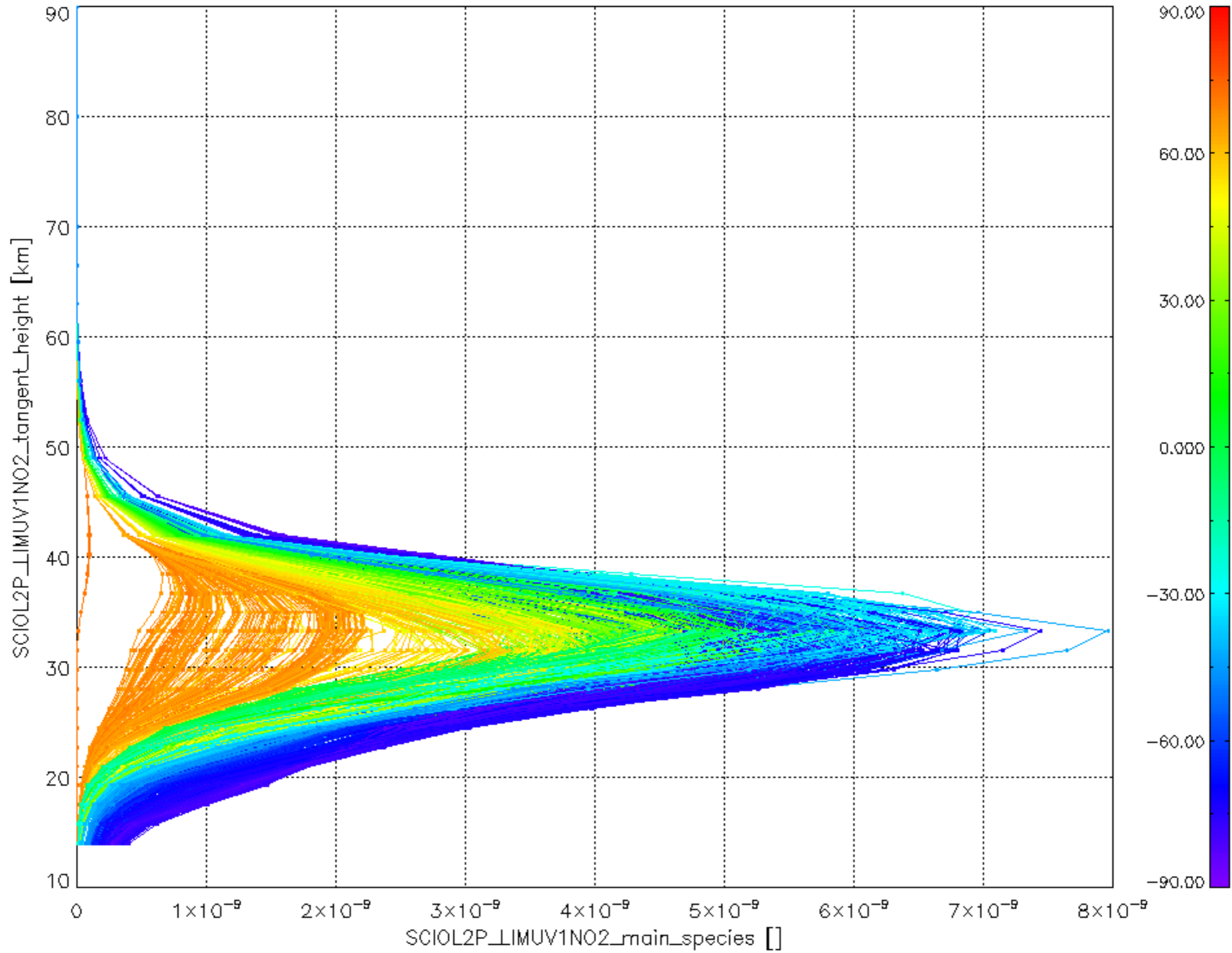


Plot of SCIOL2P\_LIMUV003\_main\_species.tang\_vmr vs. tangent height.  
 Colours indicate tangent latitude (see colour bar on the right).





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).

