

2. SCIAMACHY Daily Report for Level 2 products

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2.3 ADF monitoring

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 | 27JAN2011 03:02:15 |
| Data source version | SCIA-OL/5.01-U |
| Processing scope for products | 09JAN2011 00:00:00 to 10JAN2011 00:00:00 |
| Start time of first product within scope | 08JAN2011 22:46:39 |
| Stop time of last product within scope | 10JAN2011 00:49:50 |
| Total number of level 2 products | 16 |
| 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 | SCI_OL__2PUDPA20110108_224639_000035993098_00188_46323_2716.N1 | 08JAN2011 22:46:39 | 08JAN2011 23:46:38 | 0 | GOOD |
| 1 | SCI_OL__2PUDPA20110109_002653_000035843098_00189_46324_2717.N1 | 09JAN2011 00:26:53 | 09JAN2011 01:26:37 | 0 | GOOD |
| 2 | SCI_OL__2PUDPA20110109_020706_000035993098_00190_46325_2718.N1 | 09JAN2011 02:07:06 | 09JAN2011 03:07:05 | 0 | GOOD |
| 3 | SCI_OL__2PUDPA20110109_034720_000035843098_00191_46326_2719.N1 | 09JAN2011 03:47:20 | 09JAN2011 04:47:05 | 0 | GOOD |
| 4 | SCI_OL__2PUDPA20110109_052734_000035993098_00192_46327_2720.N1 | 09JAN2011 05:27:34 | 09JAN2011 06:27:33 | 0 | GOOD |

| | | | | | |
|----|--|--------------------|--------------------|---|------|
| 5 | SCI_OL__2PUDPA20110109_070748_000035843098_00193_46328_2721.N1 | 09JAN2011 07:07:48 | 09JAN2011 08:07:32 | 0 | GOOD |
| 6 | SCI_OL__2PUDPA20110109_084802_000035993098_00194_46329_2722.N1 | 09JAN2011 08:48:02 | 09JAN2011 09:48:01 | 0 | GOOD |
| 7 | SCI_OL__2PUDPA20110109_102815_000035843098_00195_46330_2723.N1 | 09JAN2011 10:28:15 | 09JAN2011 11:28:00 | 0 | GOOD |
| 8 | SCI_OL__2PUDPA20110109_120829_000035993098_00196_46331_2724.N1 | 09JAN2011 12:08:29 | 09JAN2011 13:08:28 | 0 | GOOD |
| 9 | SCI_OL__2PUDPA20110109_134843_000035843098_00197_46332_2725.N1 | 09JAN2011 13:48:43 | 09JAN2011 14:48:27 | 0 | GOOD |
| 10 | SCI_OL__2PUDPA20110109_152857_000035993098_00198_46333_2726.N1 | 09JAN2011 15:28:57 | 09JAN2011 16:28:56 | 0 | GOOD |
| 11 | SCI_OL__2PUDPA20110109_170910_000035843098_00199_46334_2727.N1 | 09JAN2011 17:09:10 | 09JAN2011 18:08:55 | 0 | GOOD |
| 12 | SCI_OL__2PUDPA20110109_184944_000035993098_00200_46335_2728.N1 | 09JAN2011 18:49:44 | 09JAN2011 19:49:44 | 0 | GOOD |
| 13 | SCI_OL__2PUDPA20110109_202958_000035843098_00201_46336_2729.N1 | 09JAN2011 20:29:58 | 09JAN2011 21:29:43 | 0 | GOOD |
| 14 | SCI_OL__2PUDPA20110109_220952_000035993098_00202_46337_2730.N1 | 09JAN2011 22:09:52 | 09JAN2011 23:09:51 | 0 | GOOD |
| 15 | SCI_OL__2PUDPA20110109_235006_000035843098_00203_46338_2731.N1 | 09JAN2011 23:50:06 | 10JAN2011 00:49:50 | 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: 170372

Total number of cloud data DSRs with good quality flag (=0): 170372 (100.0 %)

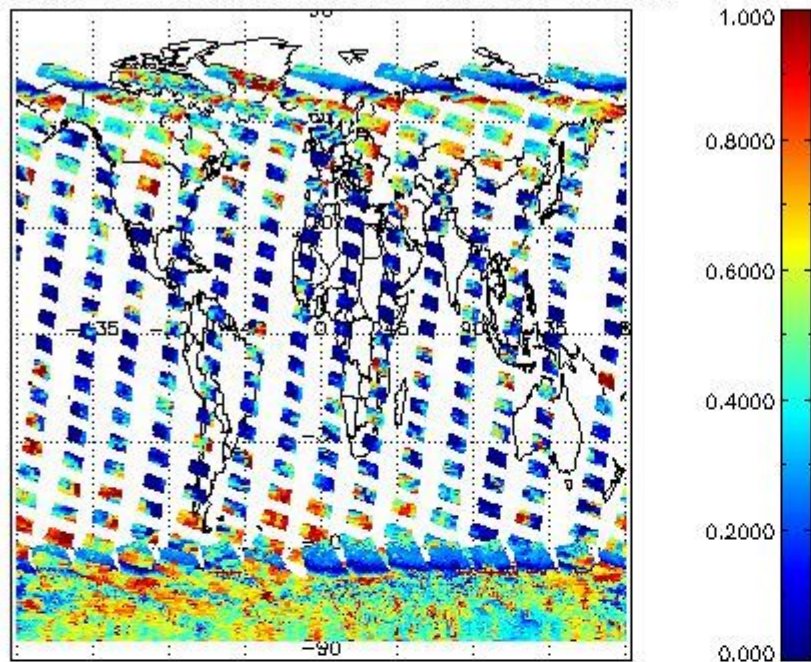
| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|-------------------|--------|----------|----------|----------|----------|----------|-------|
| QUALITY_FLAG | 170372 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | flag |
| INTEGR_TIME | 170372 | 0.16372 | 0.12500 | 0.12500 | 0.25000 | 0.057801 | s |
| CL_FRAC | 170372 | 0.40509 | 0.39830 | 0.0000 | 1.0000 | 0.27861 | - |
| CL_FRAC_ERR | 170372 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | % |
| PMD_READ | 170372 | 5.2392 | 4.0000 | 4.0000 | 8.0000 | 1.8496 | |
| PMD_READ_CL[0] | 170372 | 0.32559 | 0.0000 | 0.0000 | 8.0000 | 1.0875 | - |
| PMD_READ_CL[1] | 170372 | 1.0404 | 0.0000 | 0.0000 | 8.0000 | 2.3320 | - |
| CL_TOP_HEIGHT | 133299 | 3.7198 | 3.0330 | 0.0000 | 17.000 | 3.3487 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 133299 | 58.428 | 58.871 | 0.0000 | 101.00 | 41.041 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 170372 | 11100000 | 11100000 | 11100000 | 11100000 | 0.0000 | flags |
| CLOUD_FLAGS | 170372 | 11001100 | 11000100 | 11000000 | 11100000 | 3506.9 | flags |
| AERO_ABSO_IND | 170372 | 0.40430 | 0.0000 | 0.0000 | 15.622 | 0.74624 | |
| AERO_IND_DIAG | 170372 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 170372 | 01010000 | 00000000 | 00000000 | 11000000 | 24246. | flags |

Time and geolocation plots:

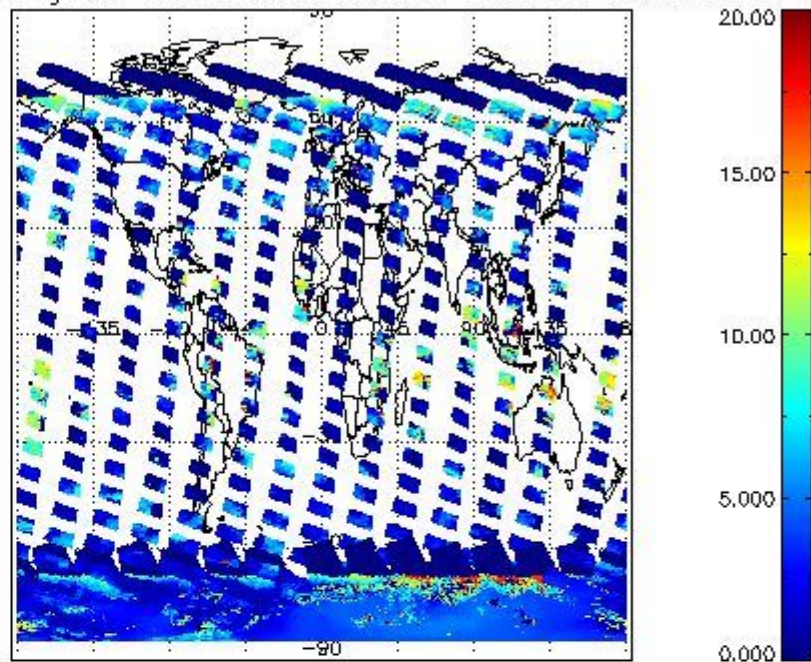
Plots are available for the following parameters:

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

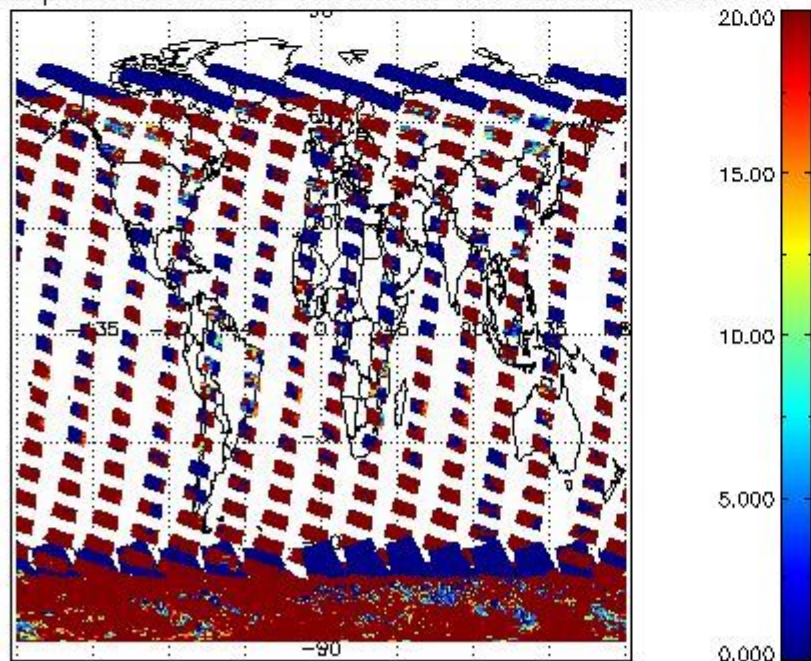
cL_frac for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



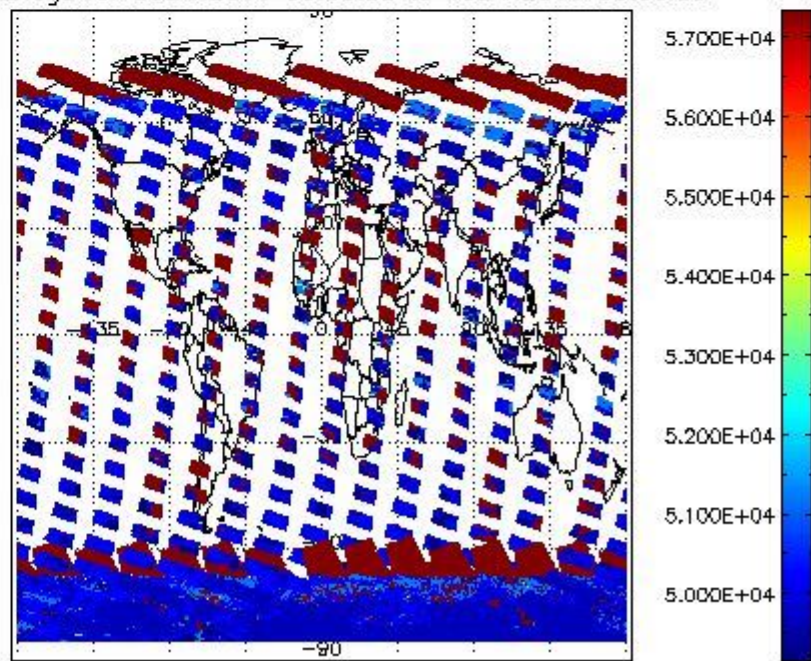
cL_top_height for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



cLopt_depth for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



cloud_flags for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



2.2.2 Nadir

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

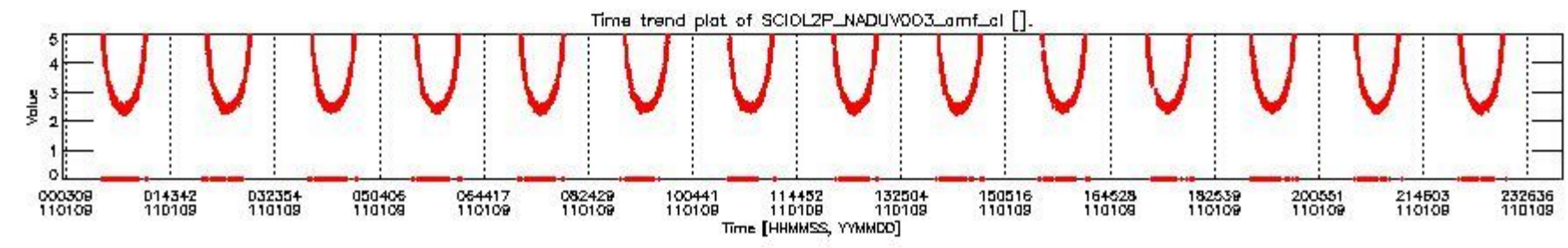
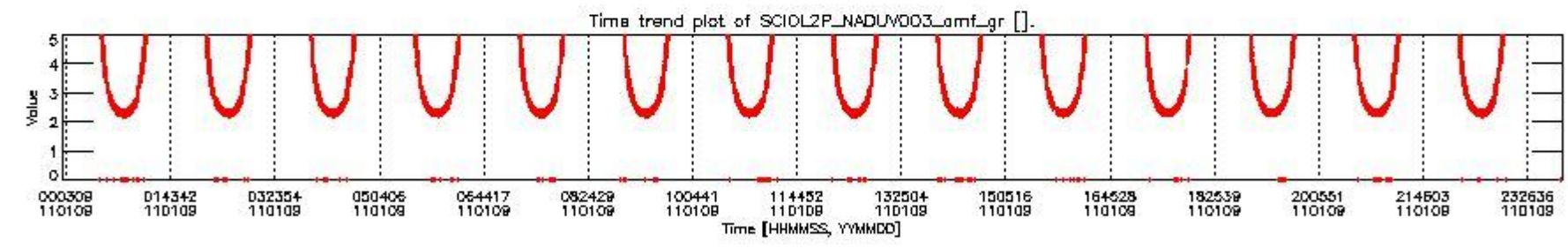
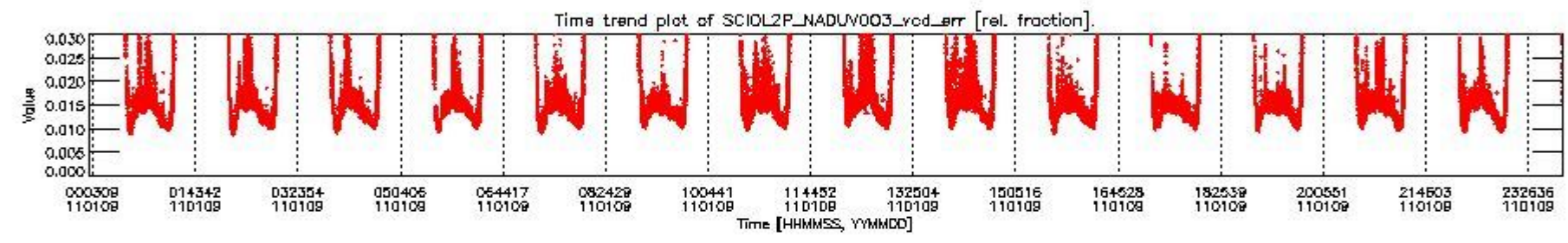
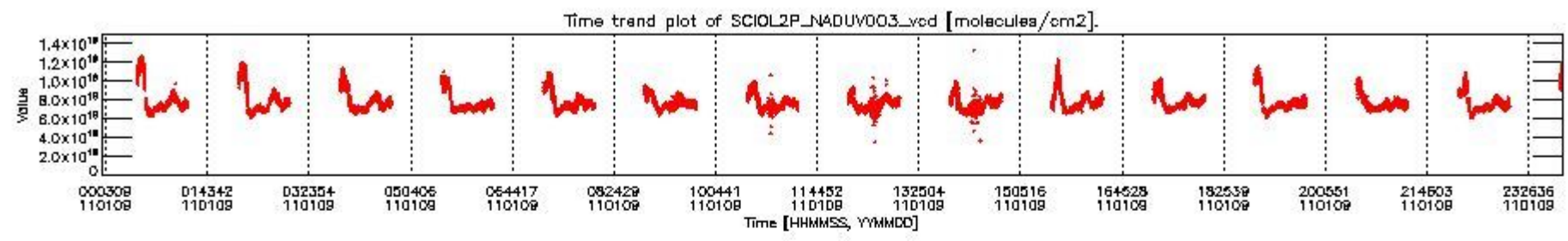
The following data items are currently included into this section:

| Number | Data item ID |
|--------|--------------------------|
| 0 | SCIOL2P_NADUV003_vcd |
| 1 | SCIOL2P_NADUV003_vcd_err |
| 2 | SCIOL2P_NADUV003_amf_gr |

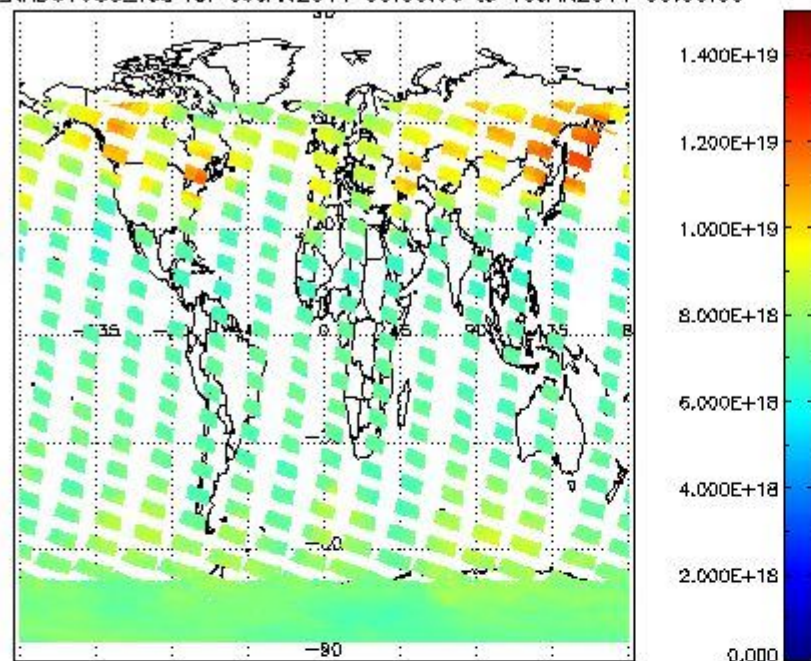
| | |
|----|---------------------------------|
| 3 | SCIOL2P_NADUV0O3_amf_cl |
| 4 | SCIOL2P_NADUV1NO2_vcd |
| 5 | SCIOL2P_NADUV1NO2_vcd_err |
| 6 | SCIOL2P_NADUV1NO2_amf_gr |
| 7 | SCIOL2P_NADUV1NO2_amf_cl |
| 8 | SCIOL2P_NADUV3BRO_vcd |
| 9 | SCIOL2P_NADUV3BRO_vcd_err |
| 10 | SCIOL2P_NADUV3BRO_amf_gr |
| 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.

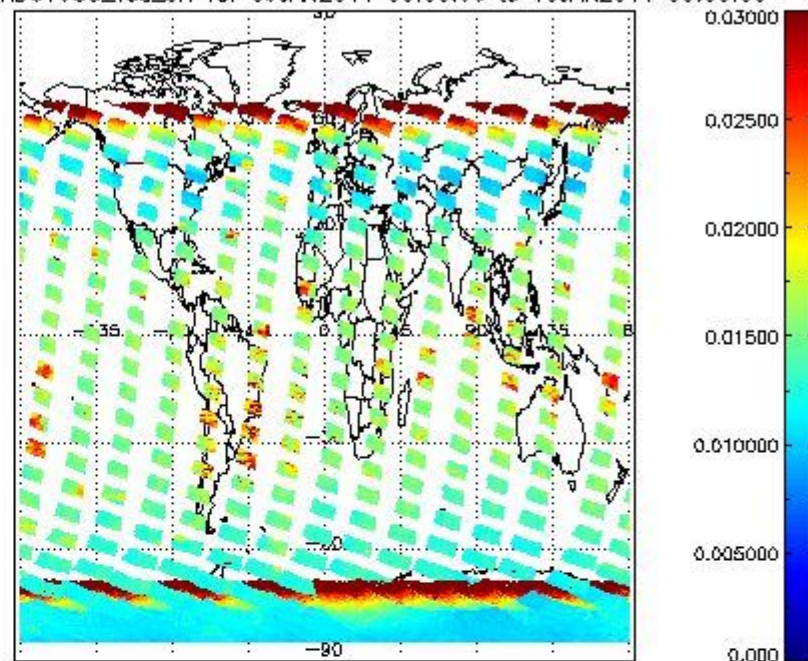
2.2.2.1 O3 (UV0)



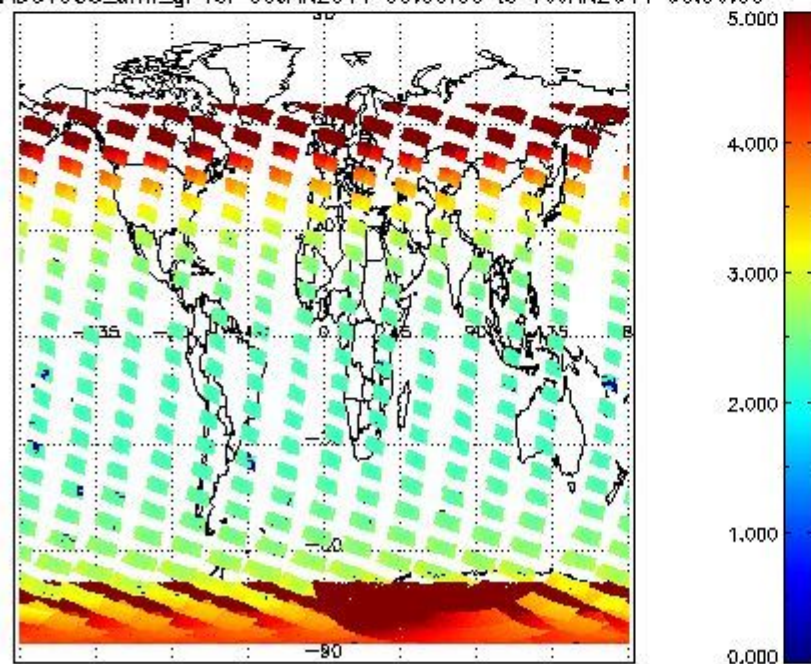
SCIOL2P_NADUV003_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



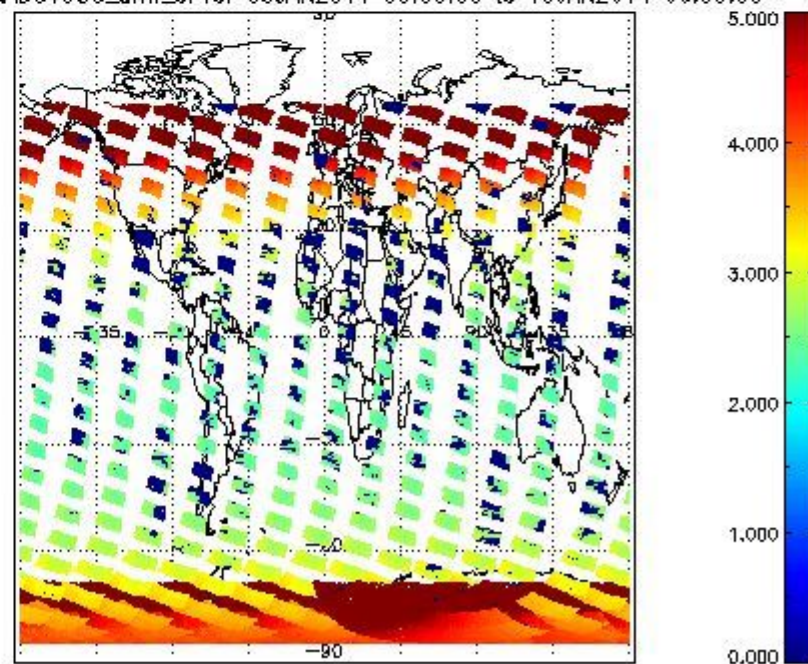
SCIOL2P_NADUV003_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



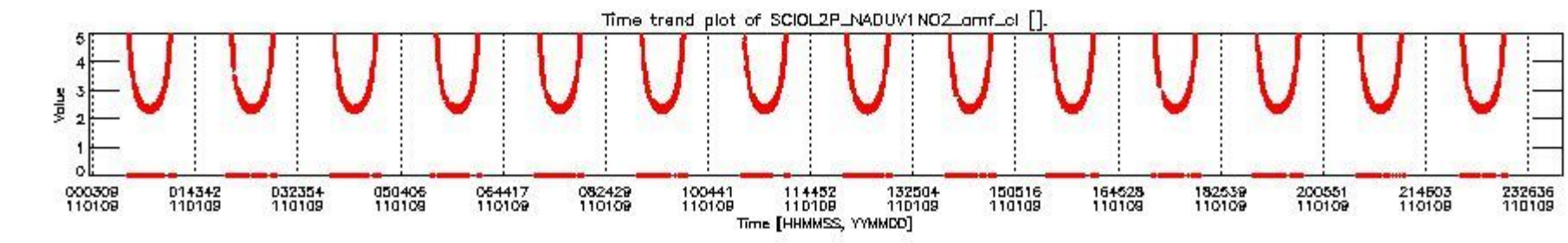
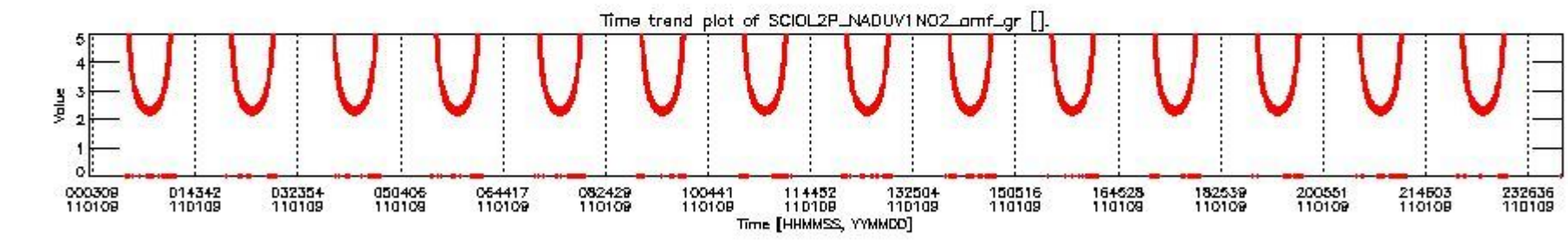
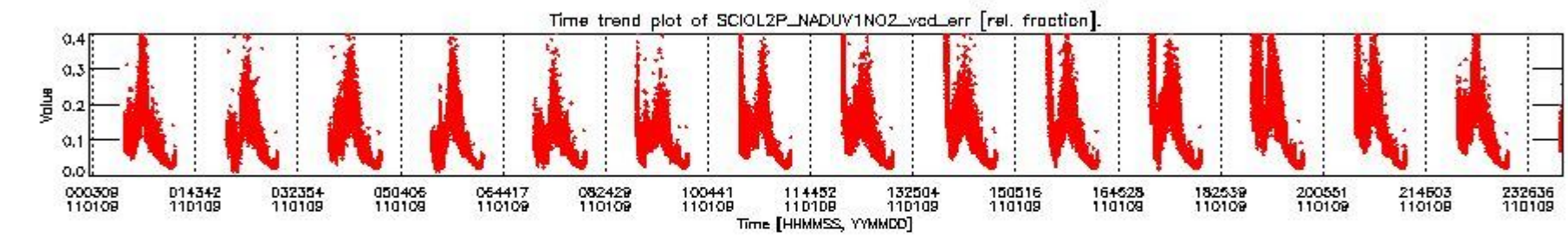
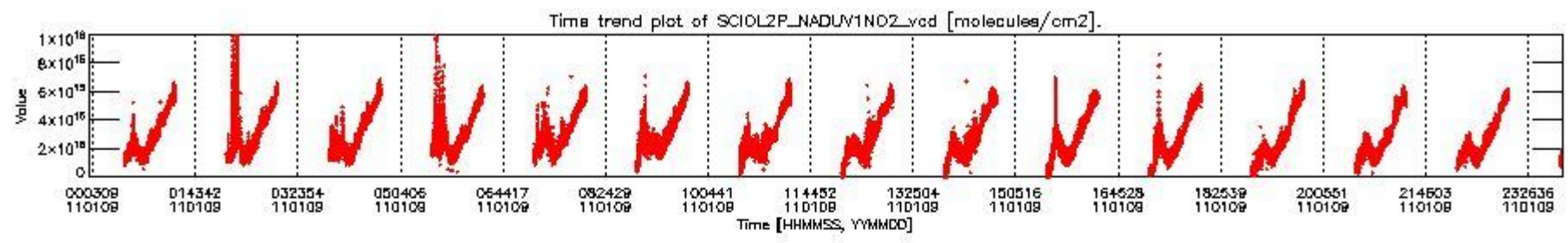
SCIOL2P_NADUV003_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

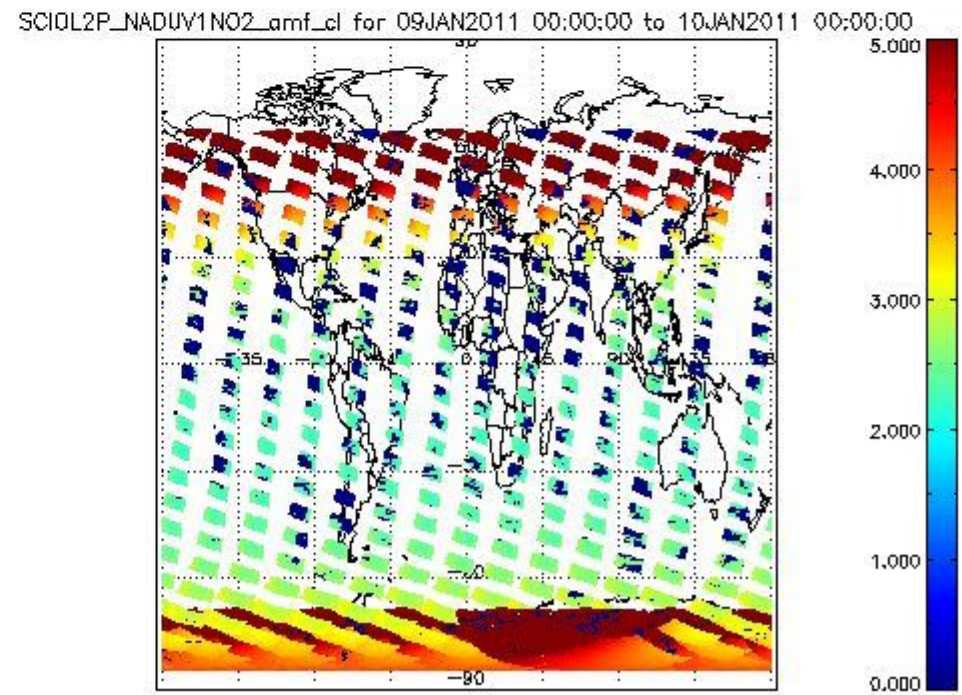
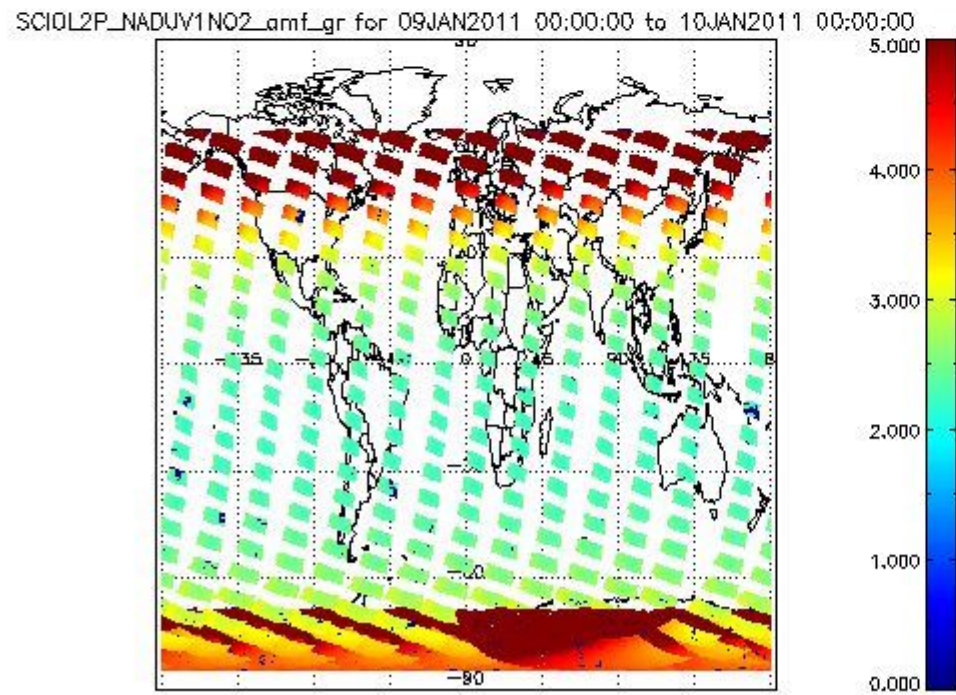
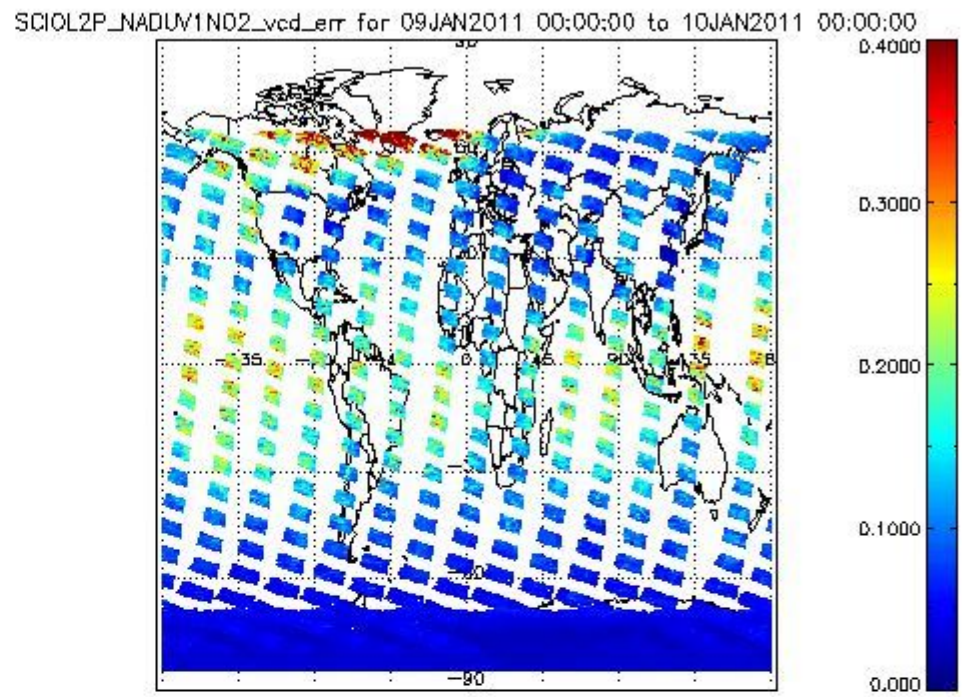
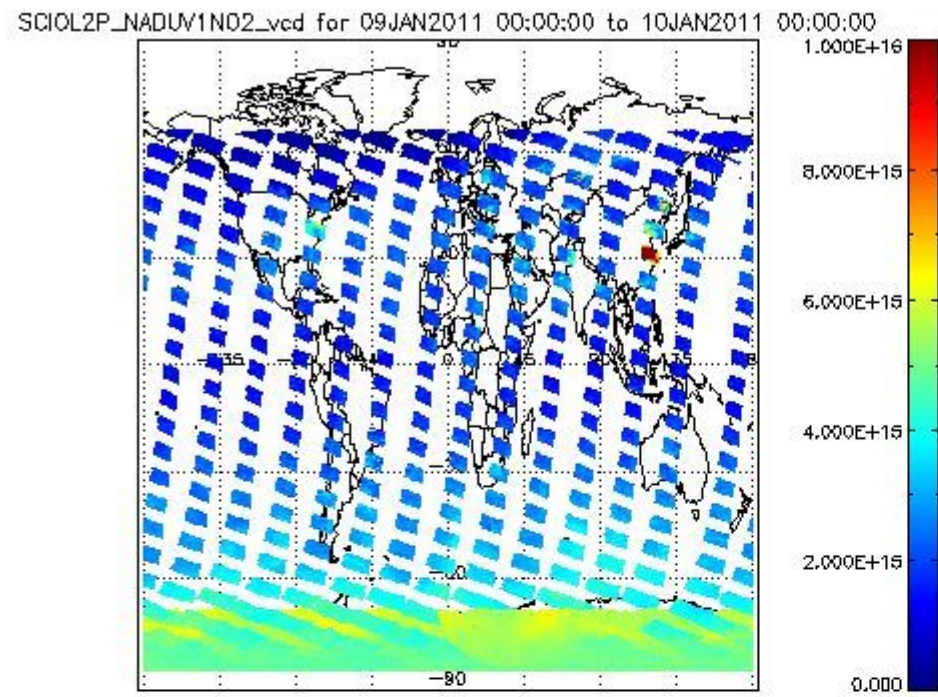


SCIOL2P_NADUV003_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

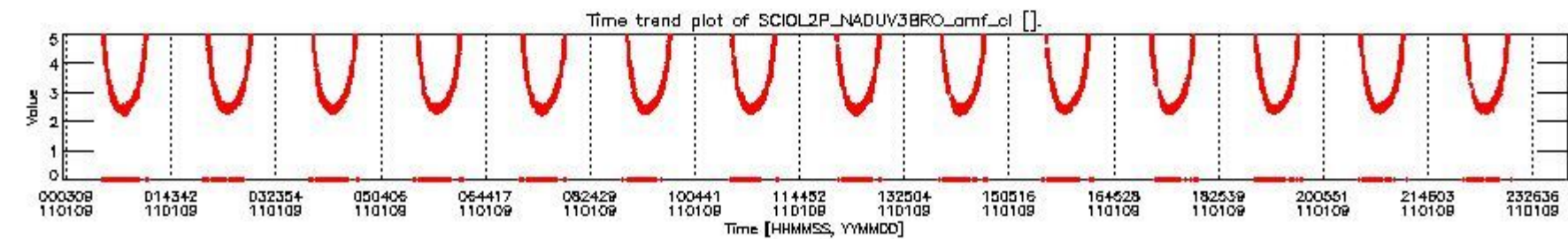
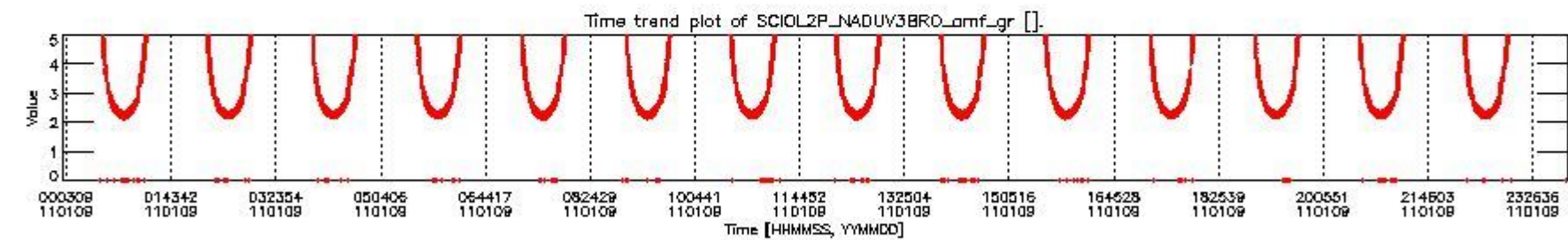
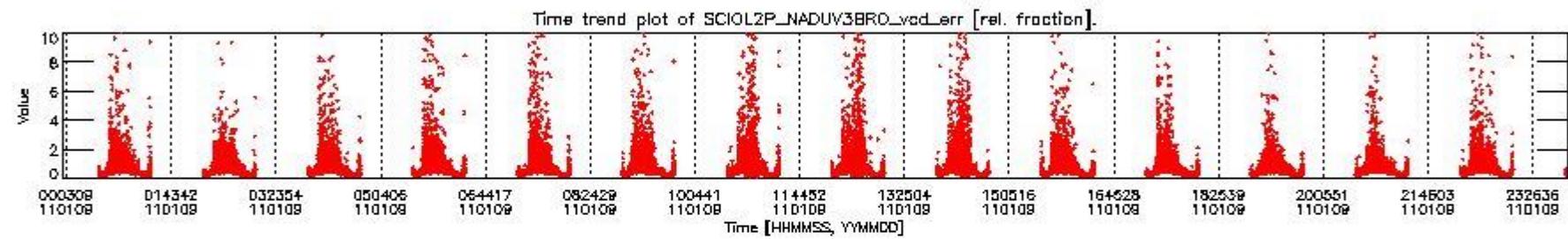
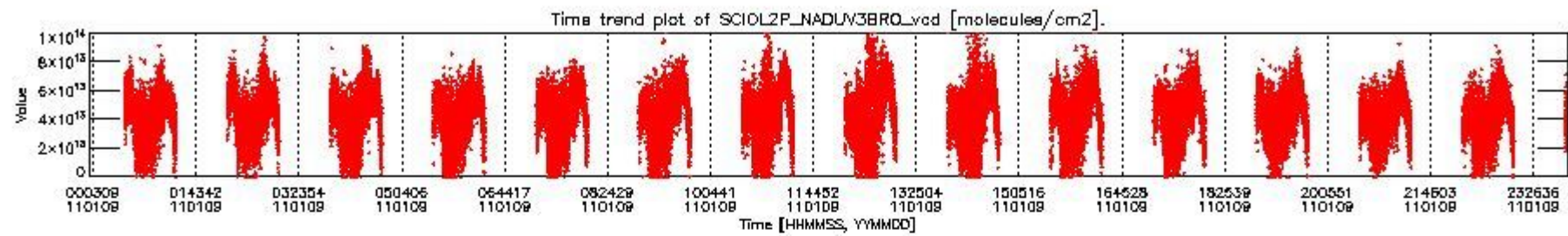


2.2.2.2 NO2 (UV1)

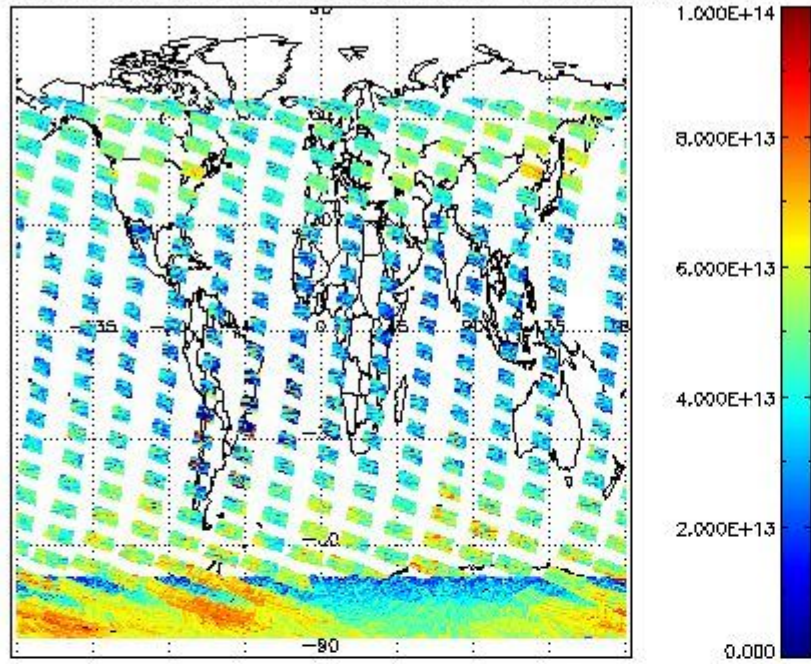




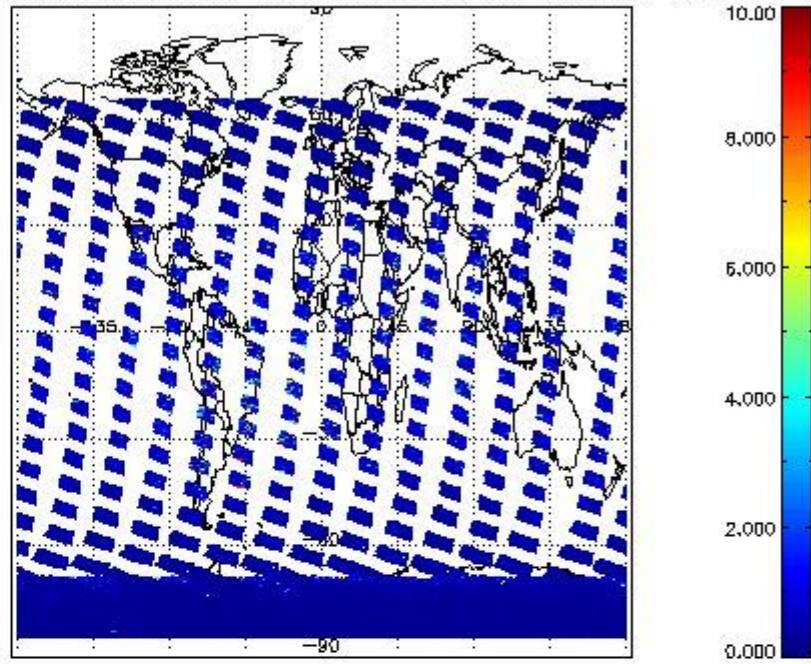
2.2.2.3 BrO (UV3)



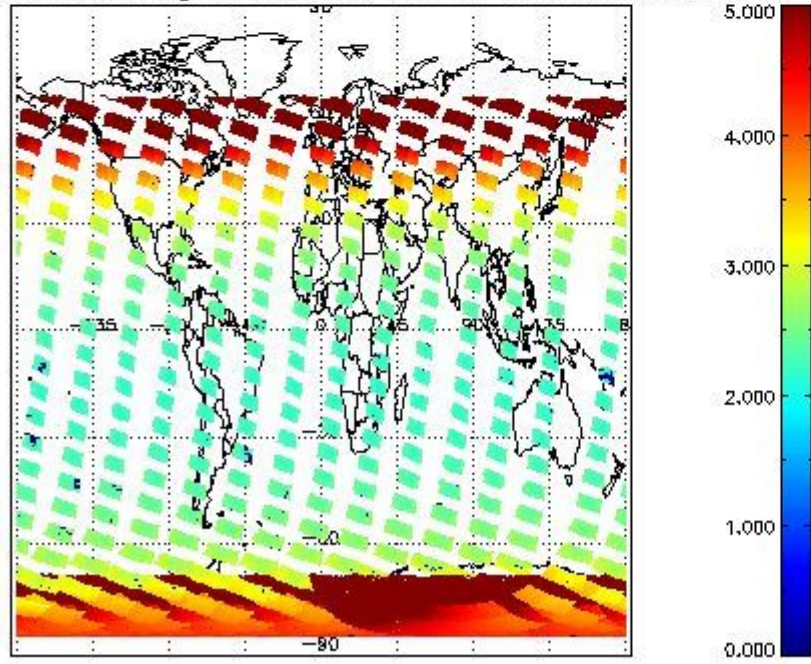
SCIOL2P_NADUV3BRO_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



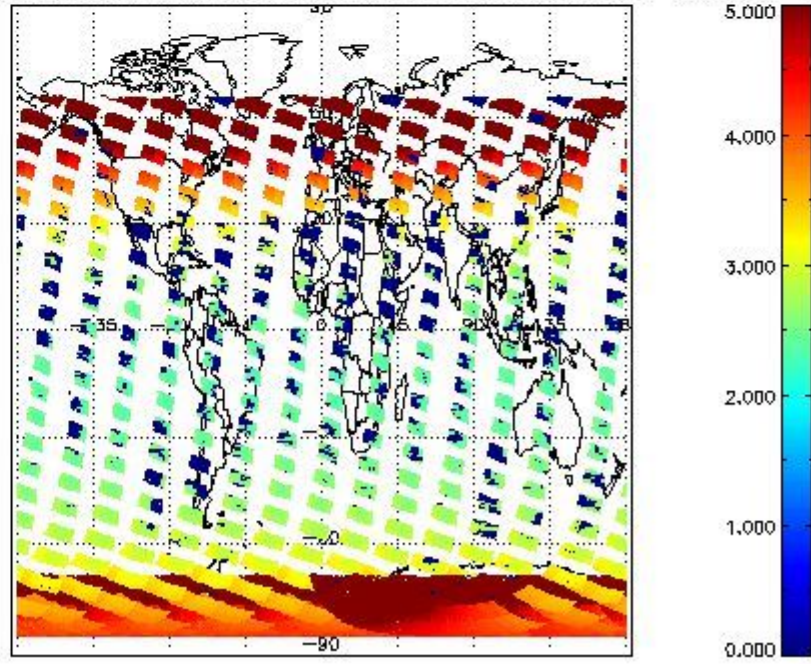
SCIOL2P_NADUV3BRO_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



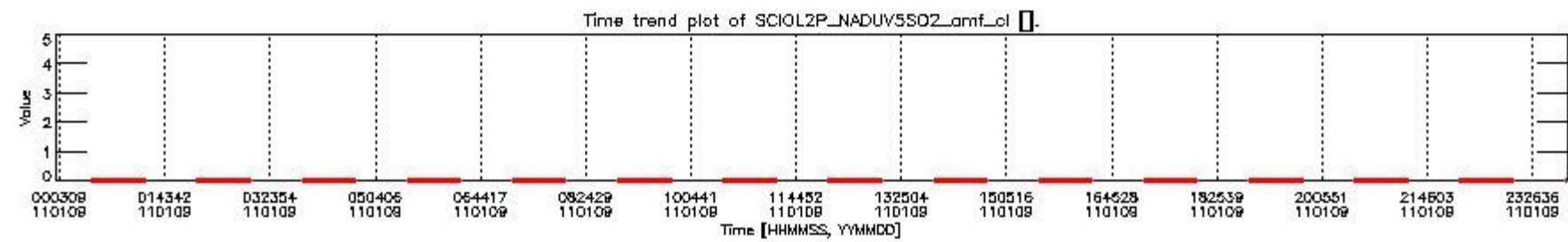
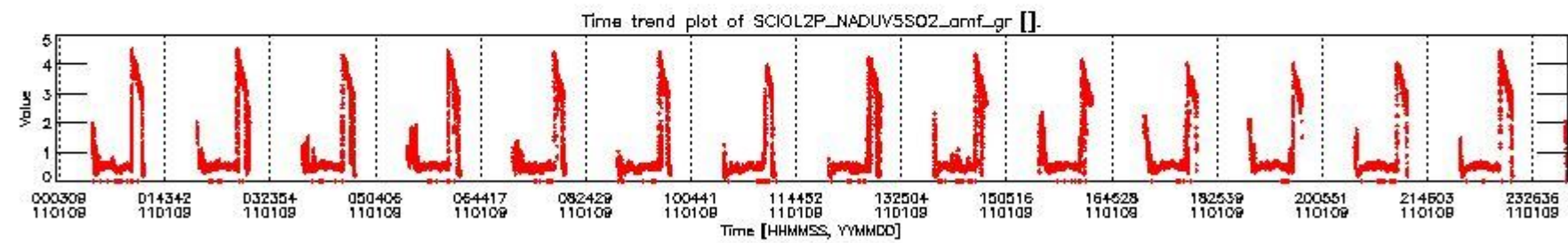
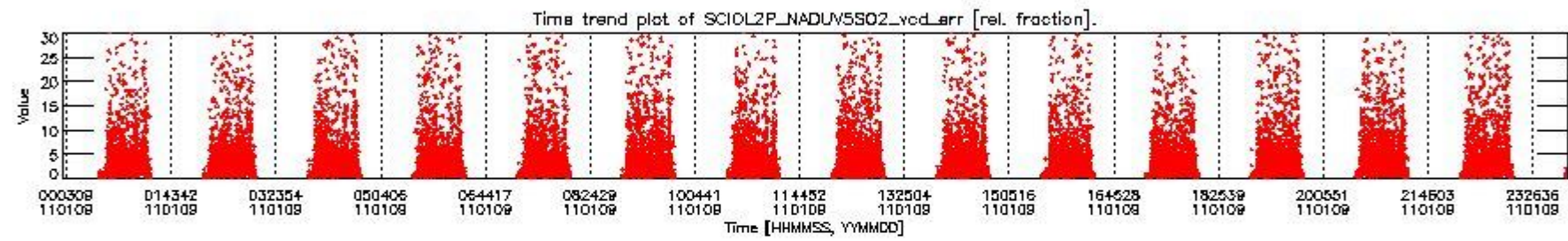
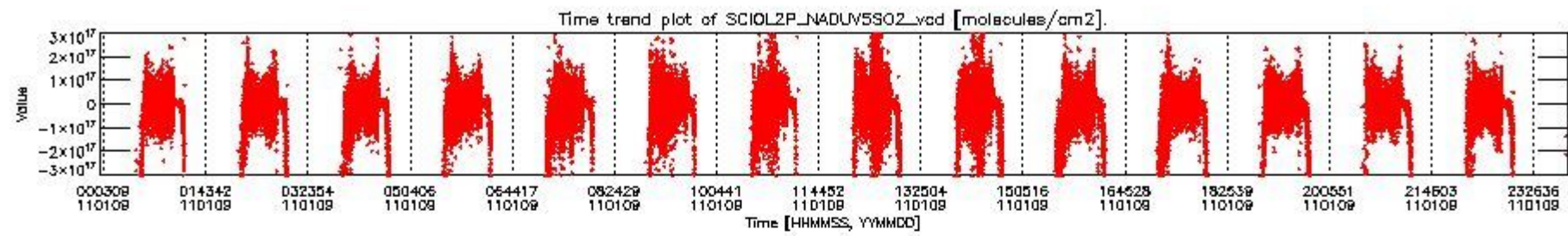
SCIOL2P_NADUV3BRO_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



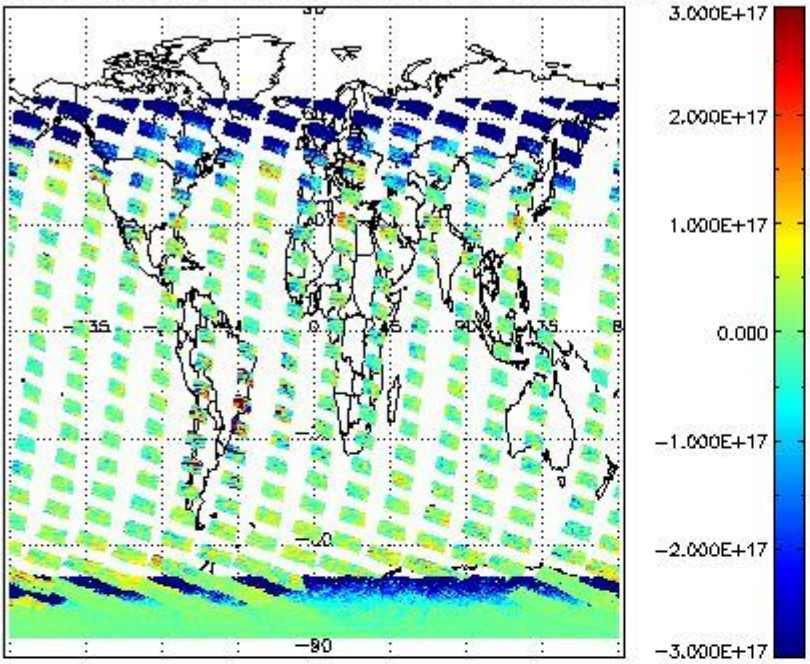
SCIOL2P_NADUV3BRO_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



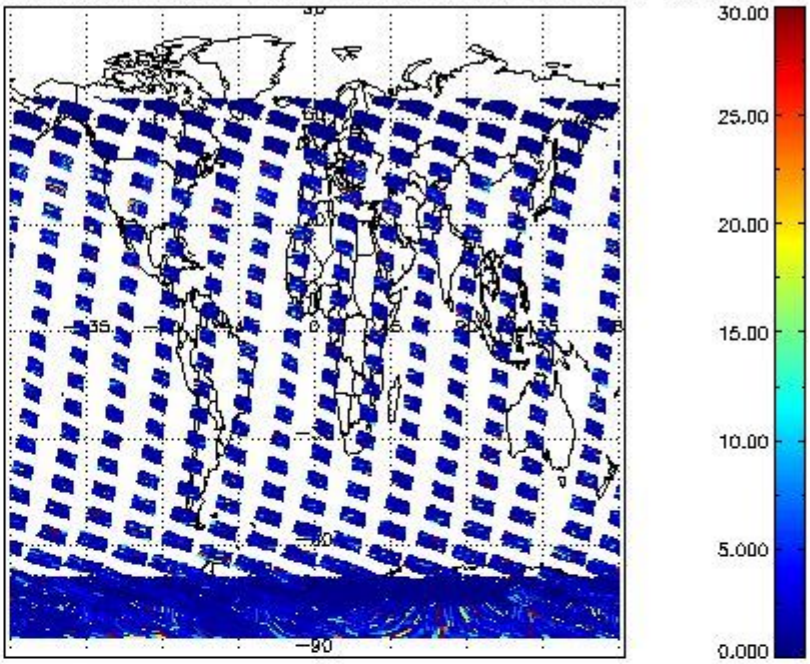
2.2.2.4 SO2 (UV5)



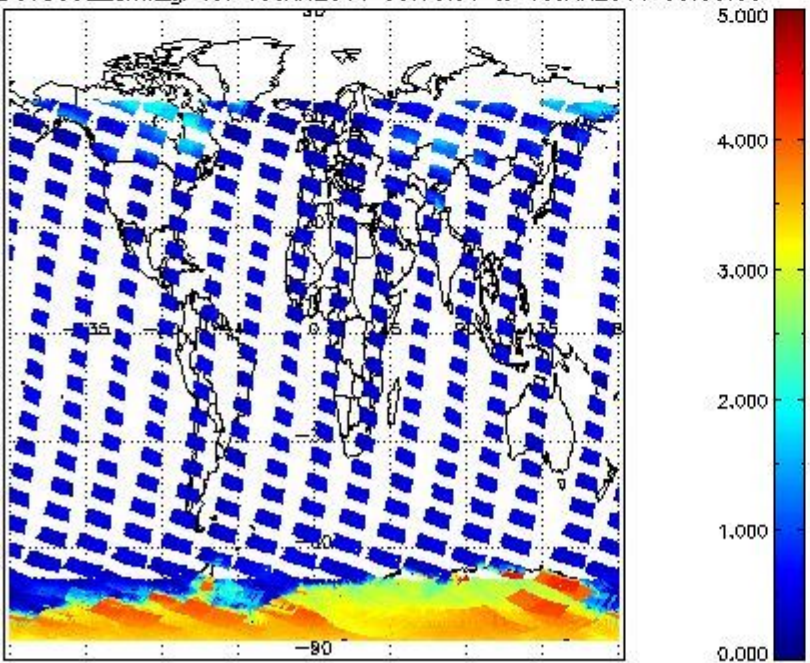
SCIOL2P_NADUV5SO2_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



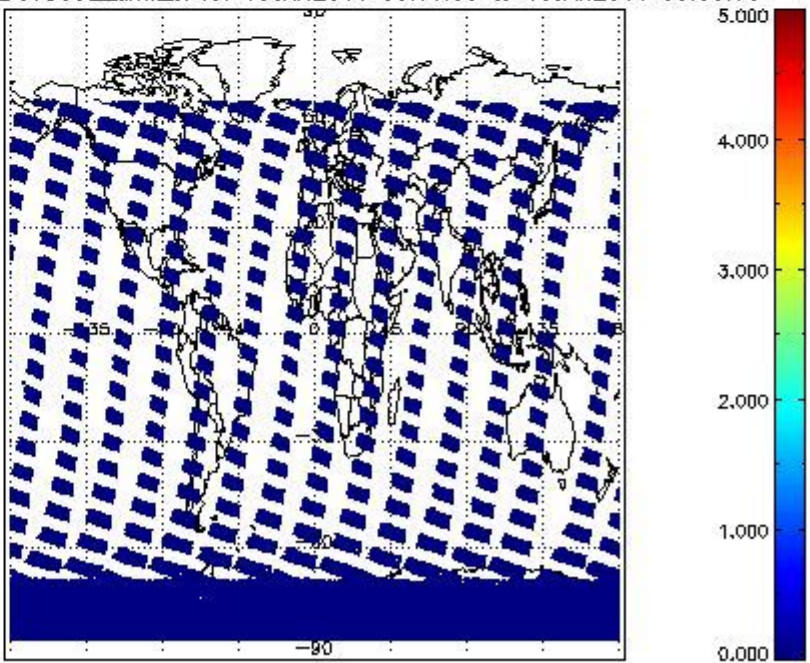
SCIOL2P_NADUV5SO2_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



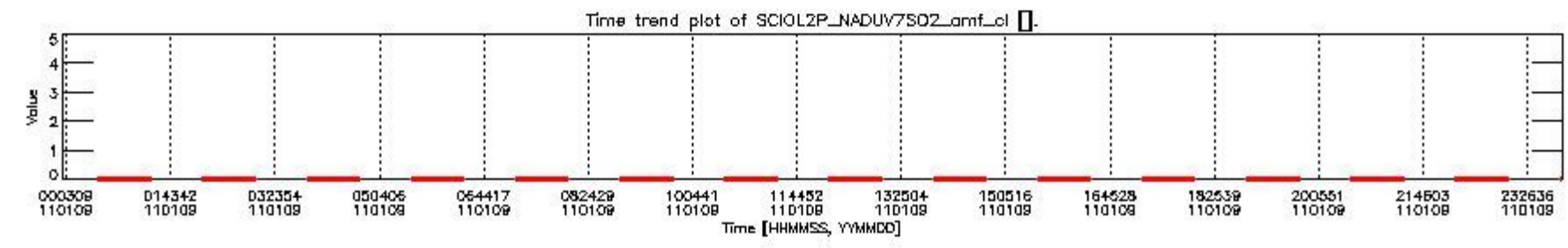
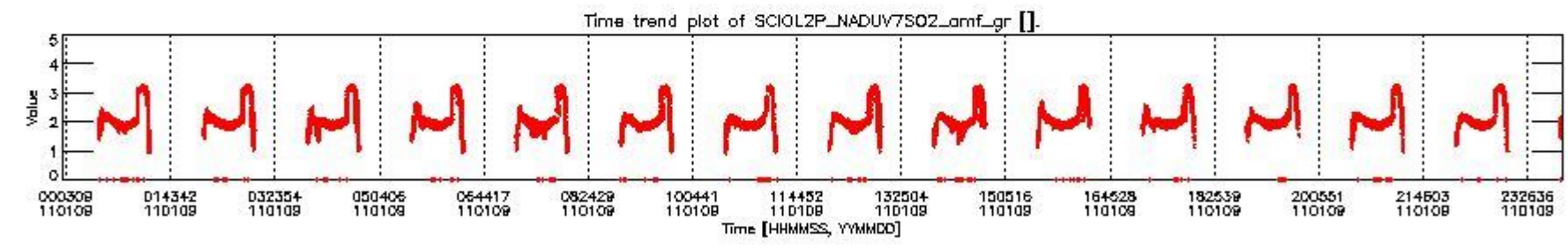
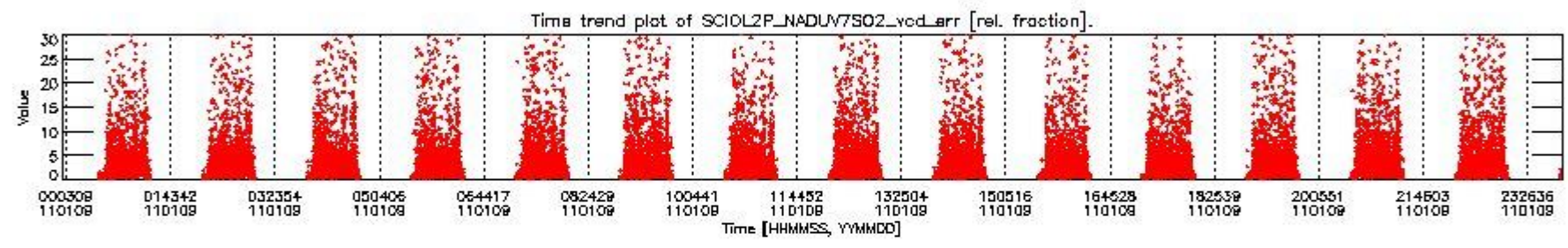
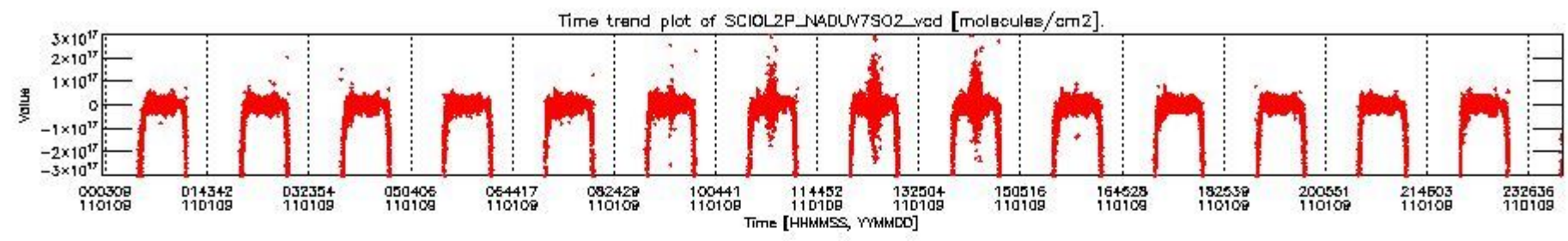
SCIOL2P_NADUV5SO2_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

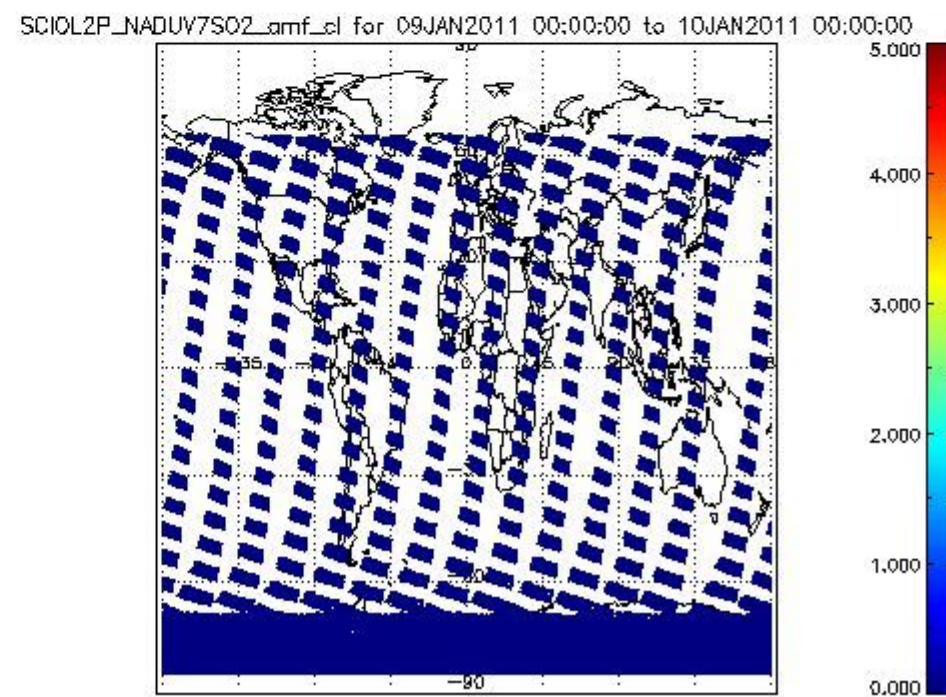
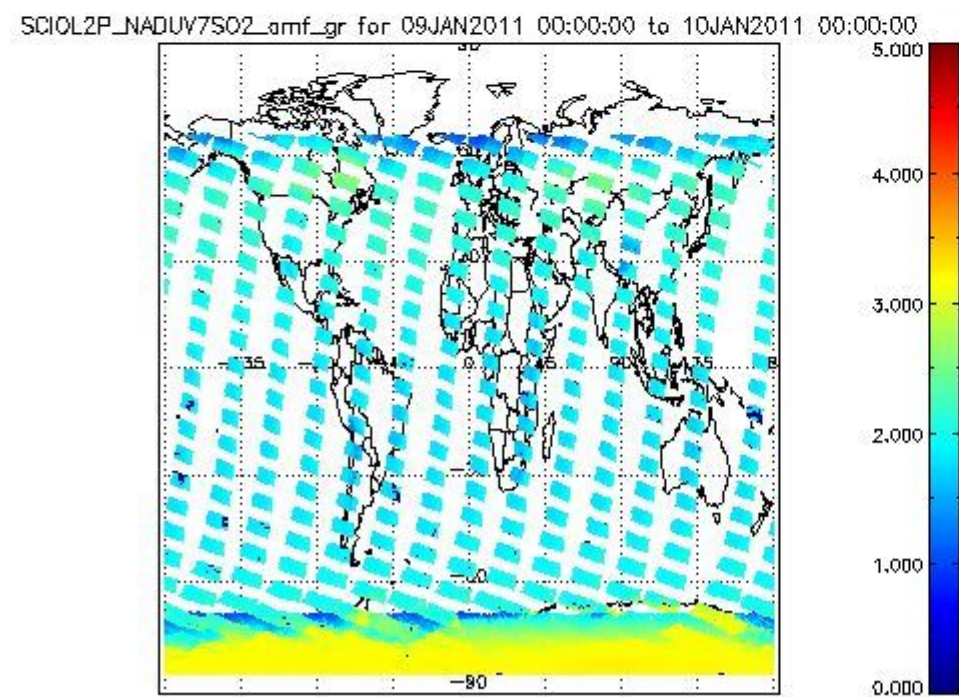
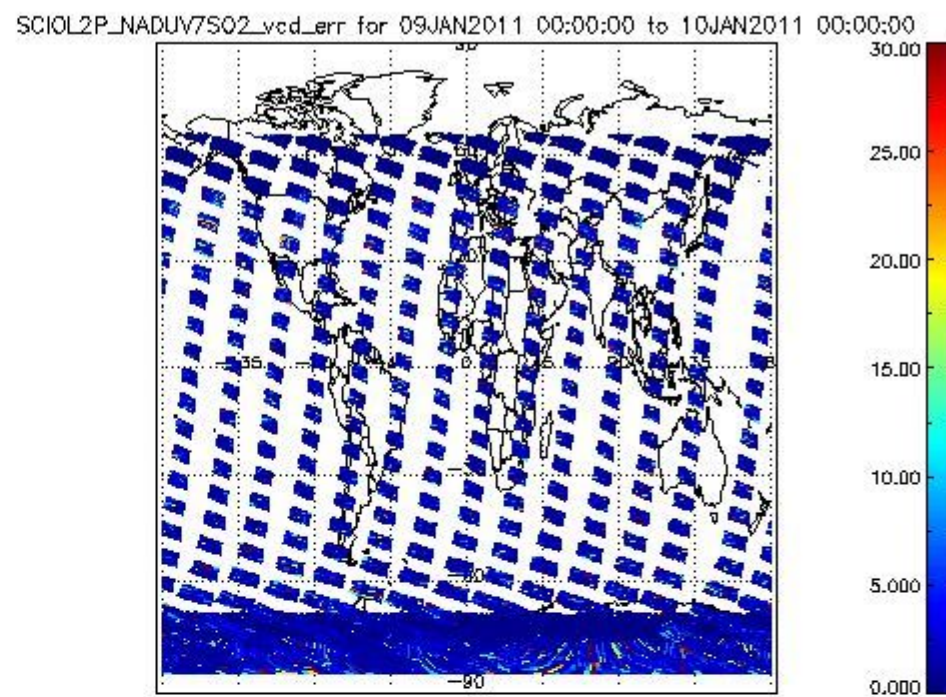
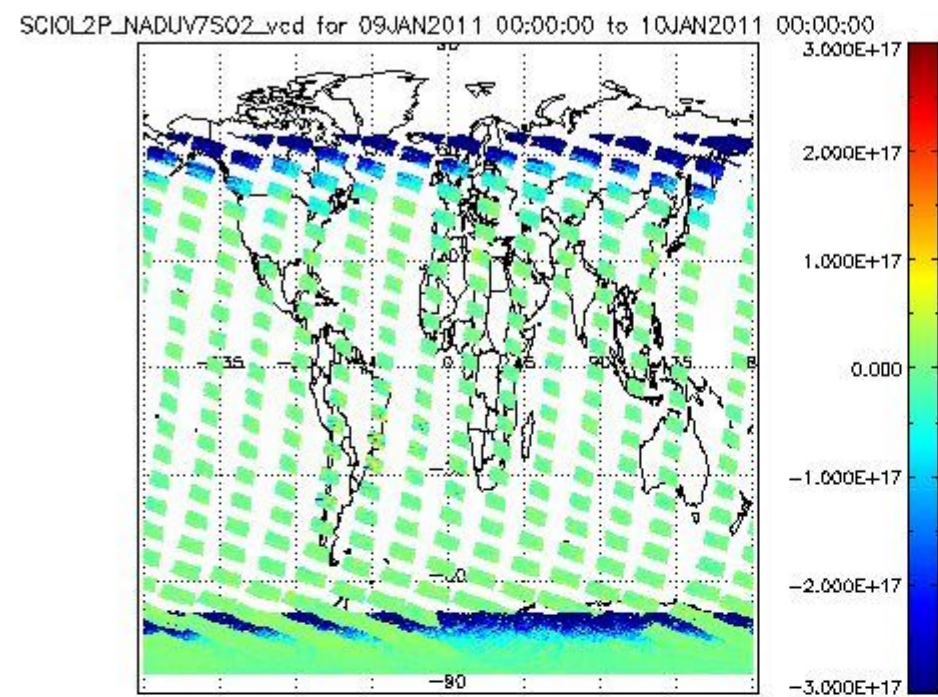


SCIOL2P_NADUV5SO2_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

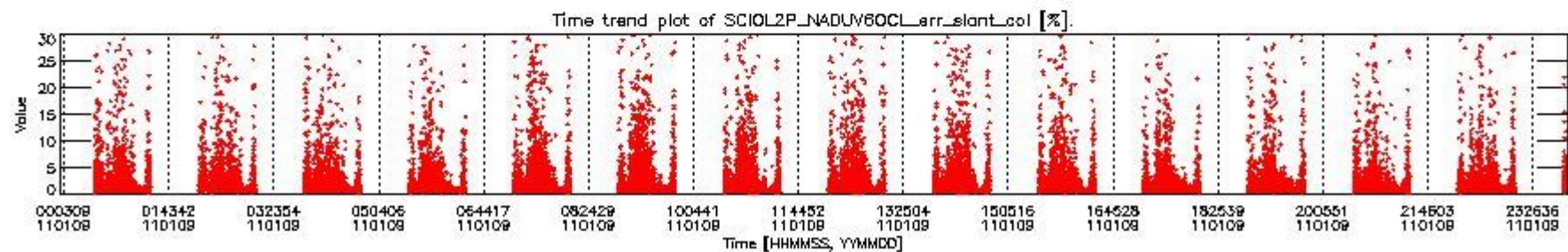
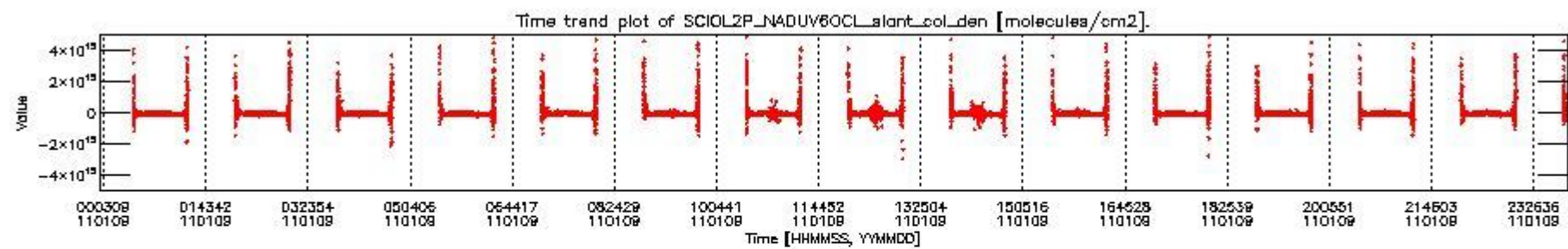


2.2.2.5 SO2 (UV7)

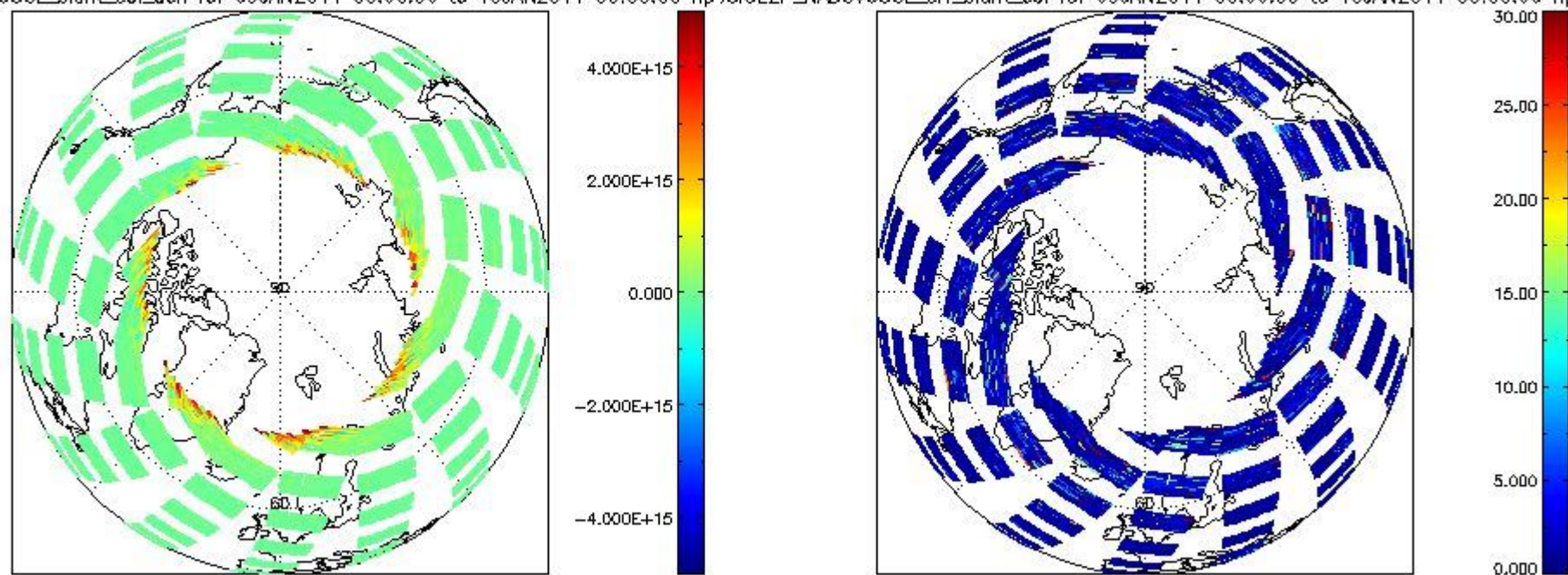




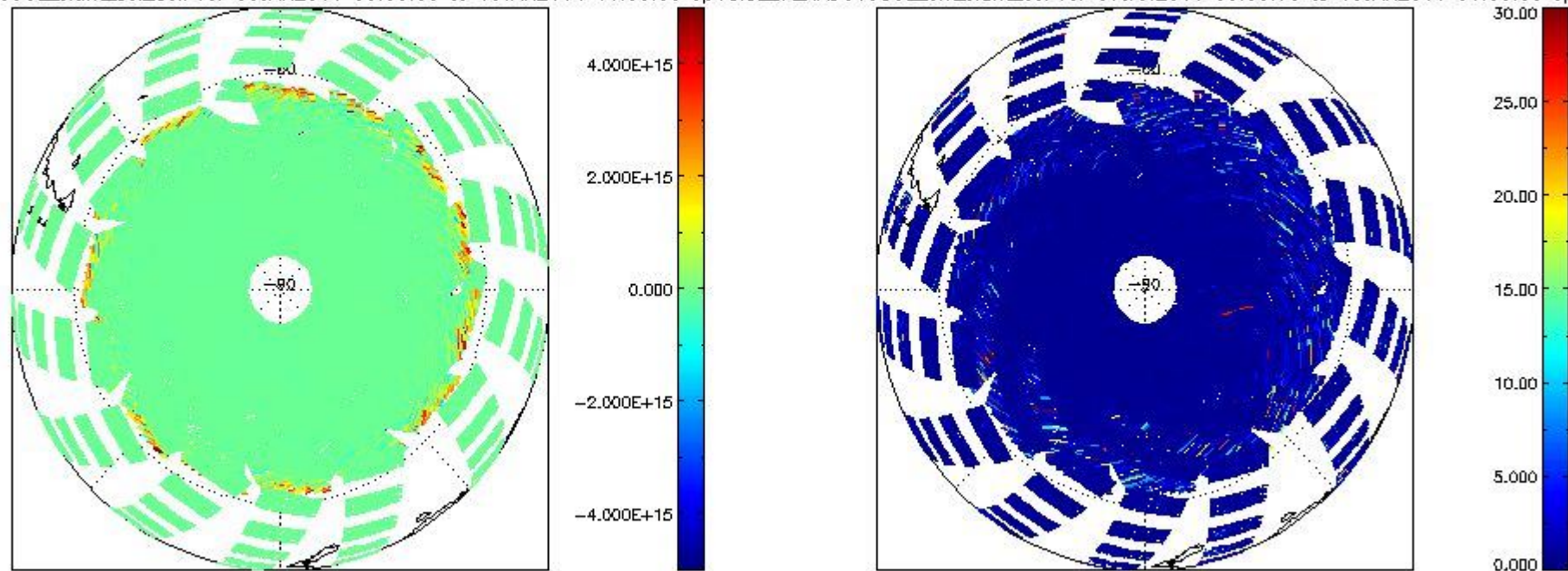
2.2.2.6 OCIO (UV6)



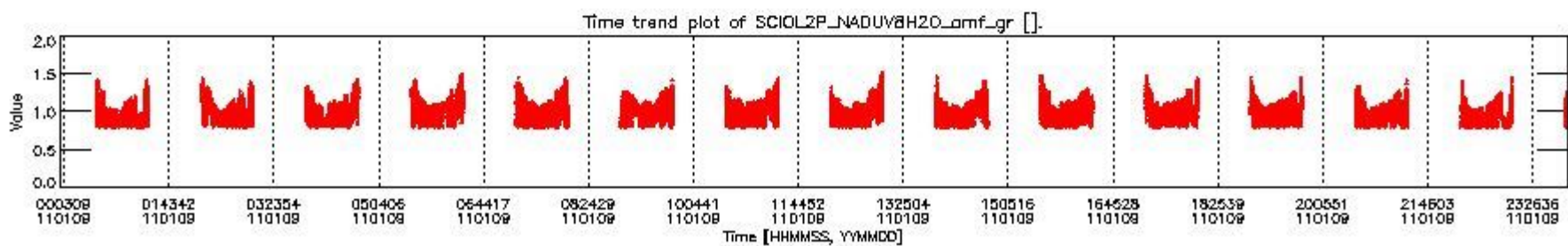
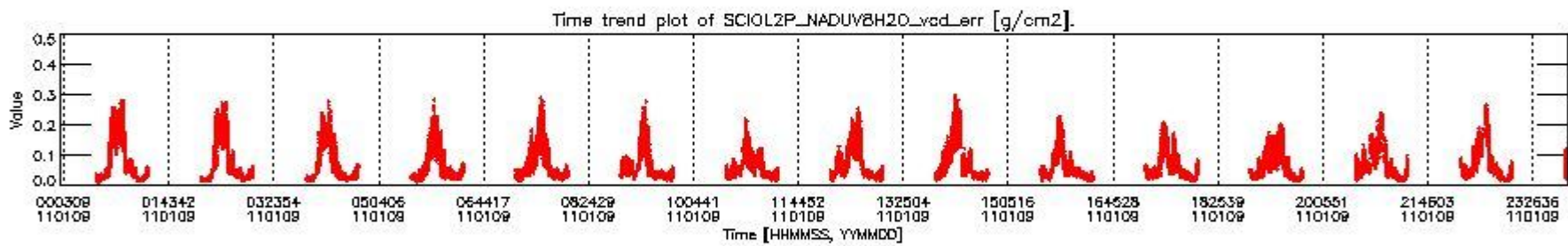
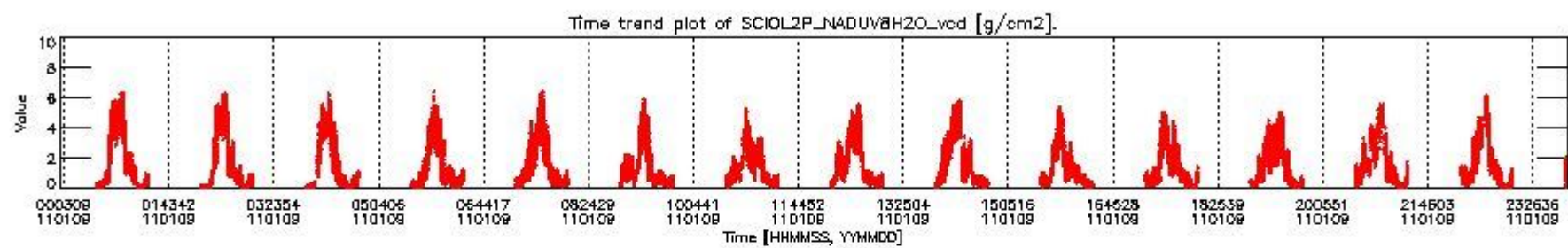
SCIOI2P_NADUV60CL_slant_col_den for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 np;SCIOI2P_NADUV60CL_err_slant_col for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 np



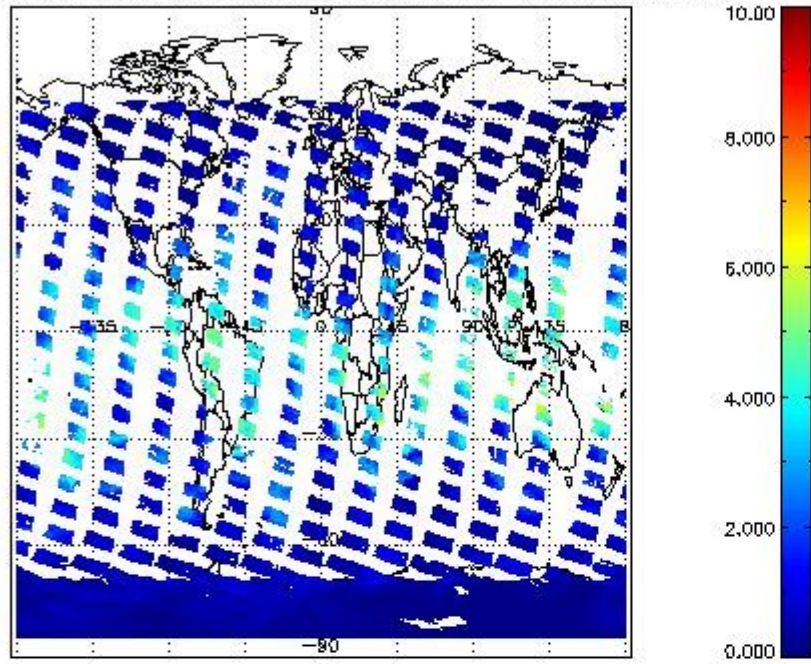
SCIOL2P_NADUV60CL_slant_col_den for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 sp SCIOL2P_NADUV60CL_err_slant_col for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 sp



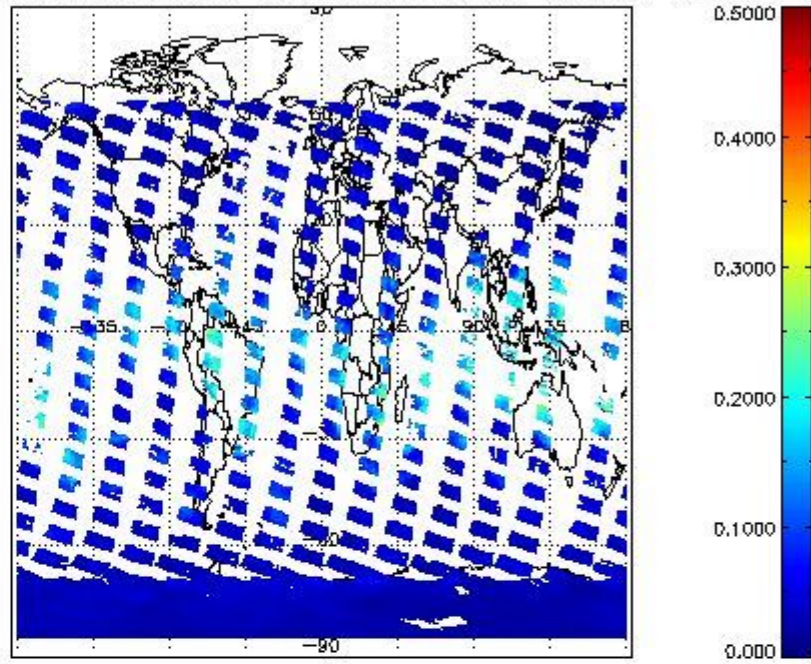
2.2.2.7 H2O (UV8)



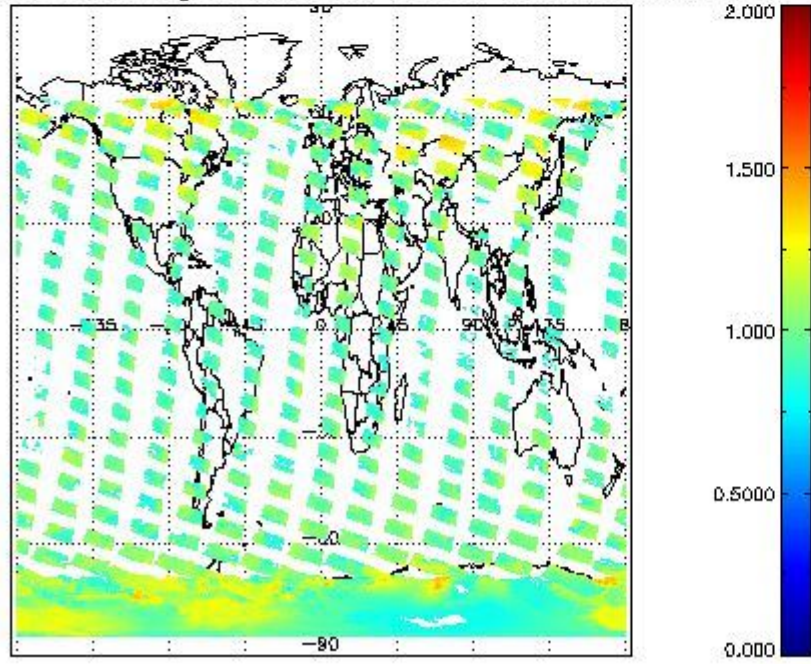
SCIOL2P_NADUV8H20_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



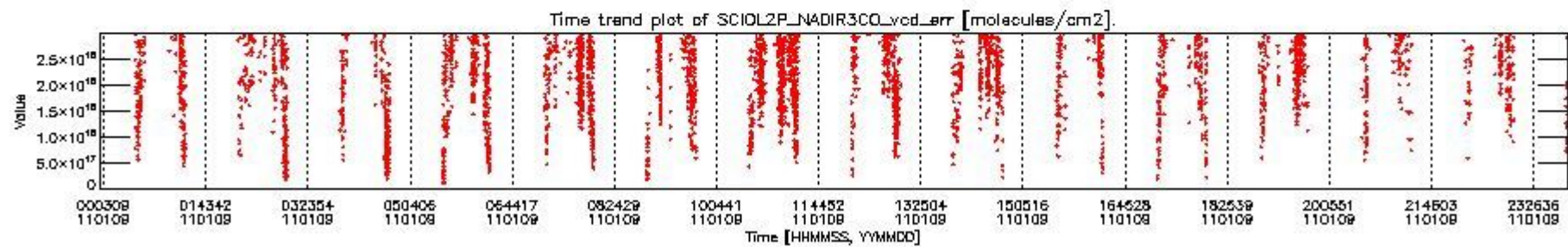
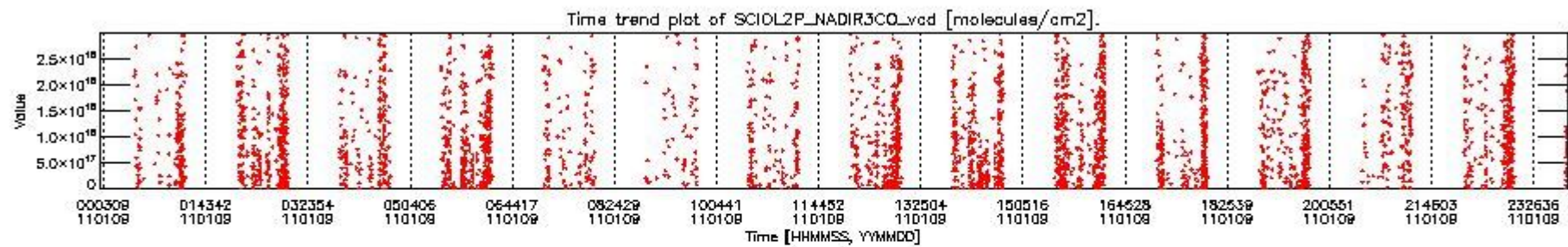
SCIOL2P_NADUV8H20_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



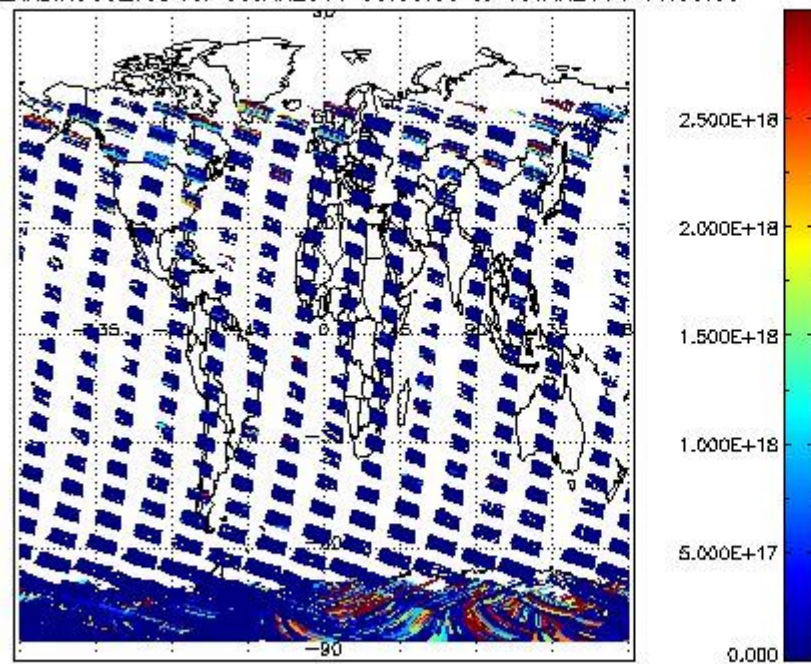
SCIOL2P_NADUV8H20_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



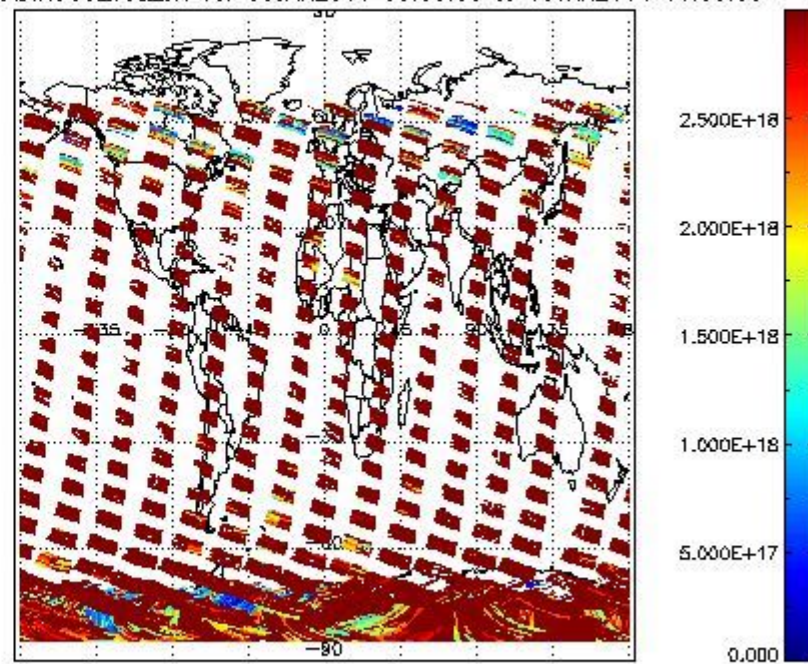
2.2.2.8 CO (IR3)



SCIDL2P_NADIR3CO_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



SCIDL2P_NADIR3CO_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



2.2.3 Limb

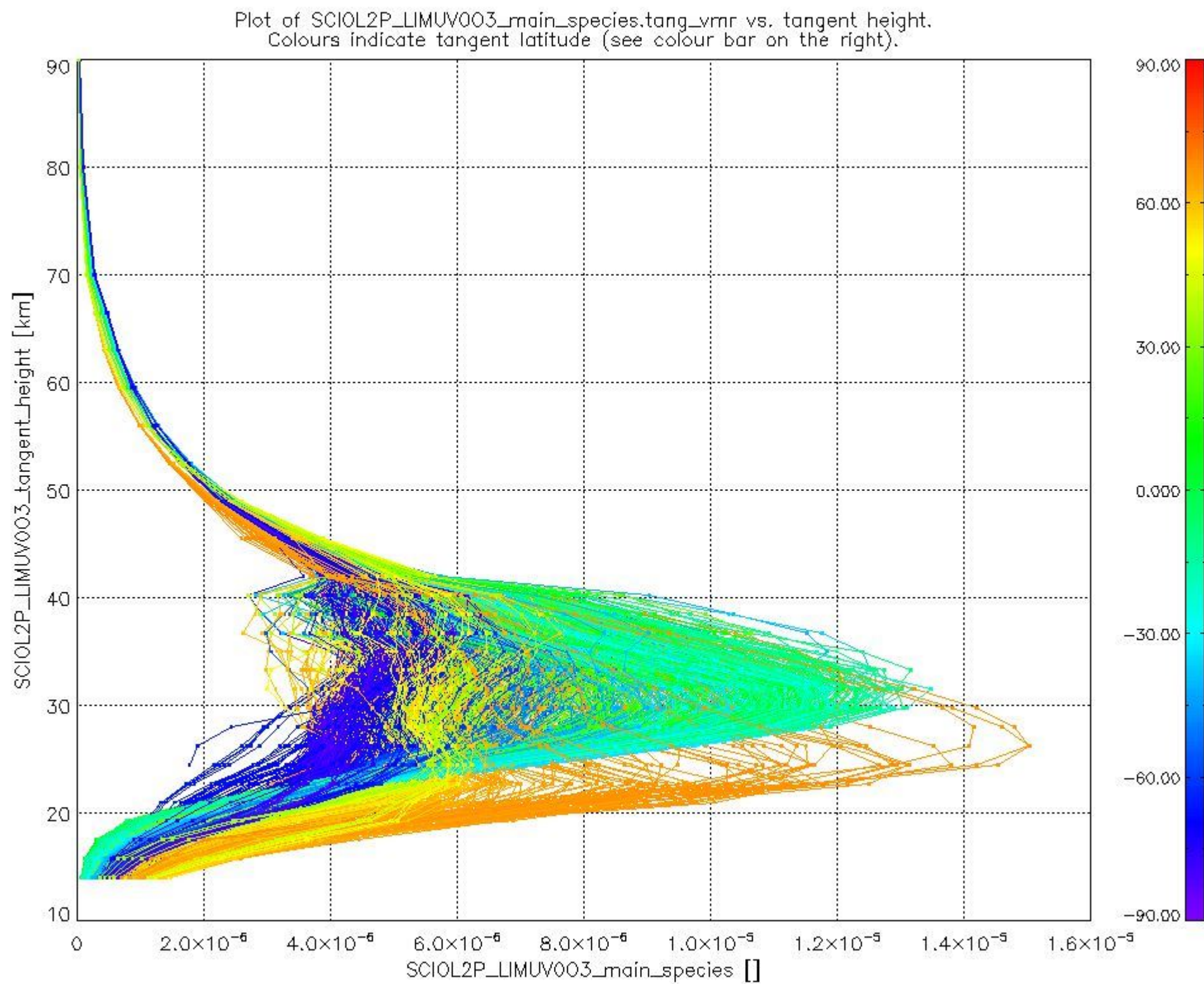
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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 |

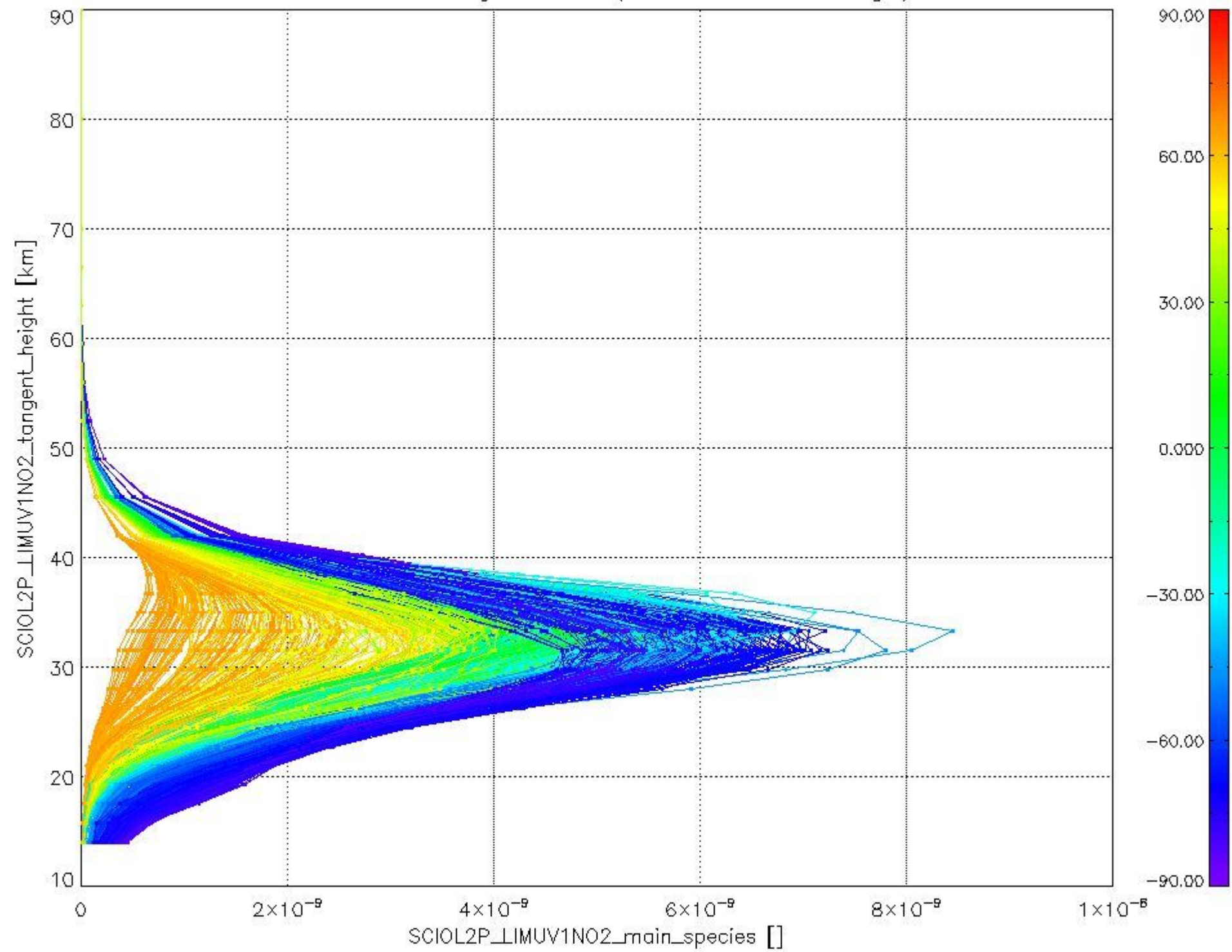
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



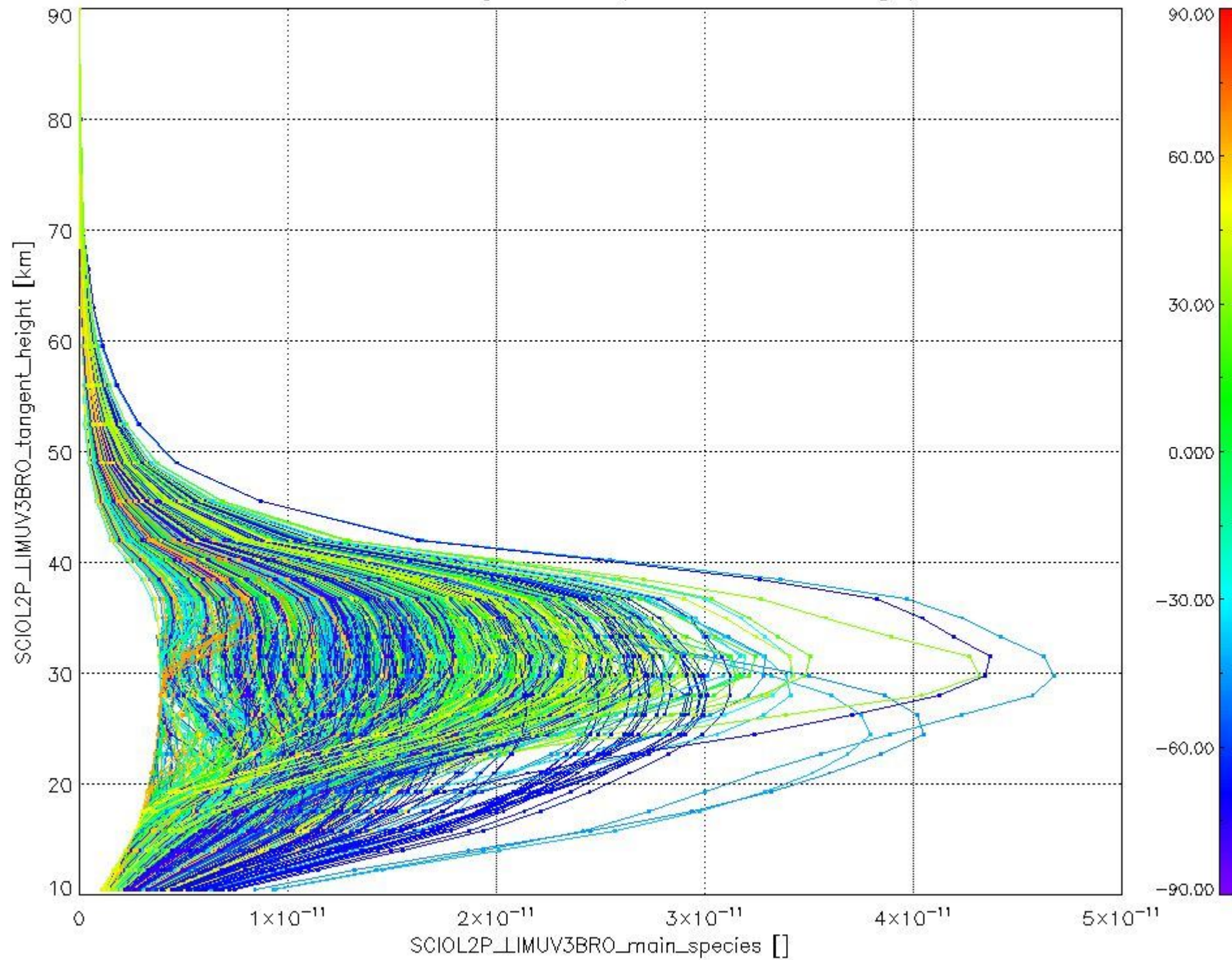
2.2.3.2 NO2 (UV1)

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)

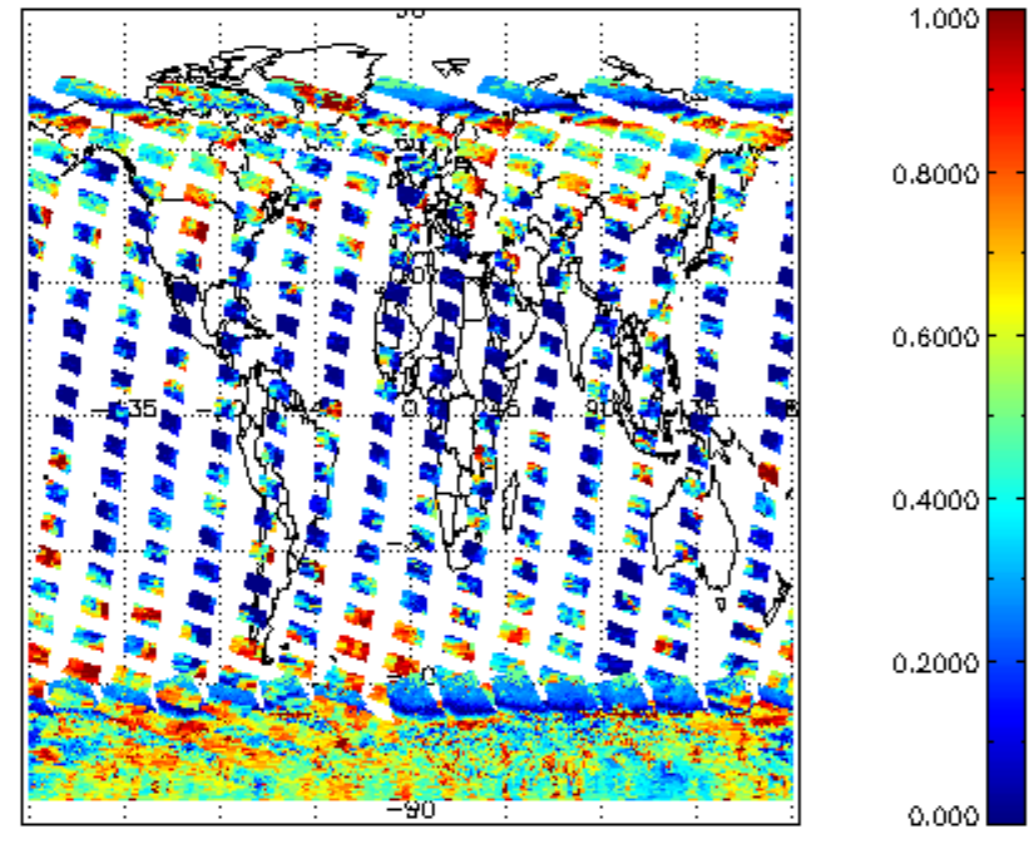
Plot of SCIOL2P_LIMUV3BRO_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



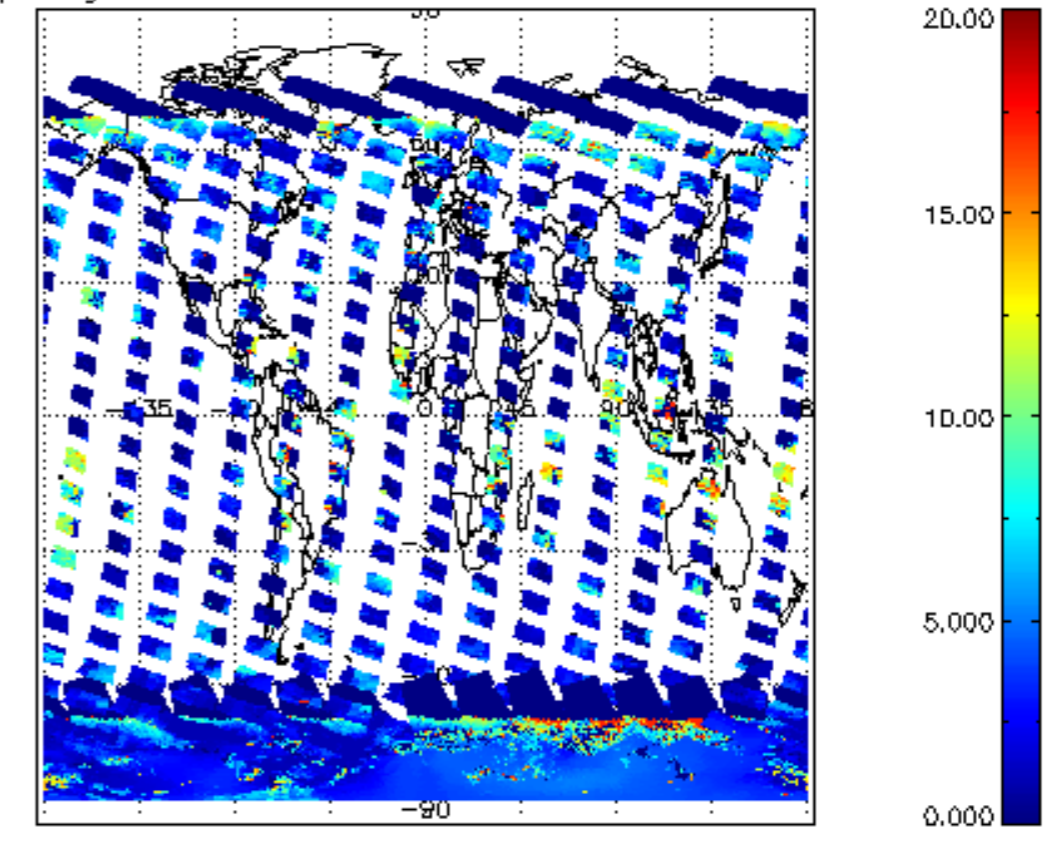
2.3 ADF monitoring

| Number | ADF |
|--------|---|
| | IN_ (INITIALISATION_FILE) |
| 0 | SCI_IN_AXNPDE20090615_120000_20090615_000000_20991231_235959 |
| | ECF (ECMWF_FILE) |
| 1 | NOT USED |
| | MF1 (M_FACTOR_FILE) |
| 2 | SCI_MF1_AXVIEC20110111_110403_20110108_185213_20110110_185213 |
| 3 | SCI_MF1_AXVIEC20110111_110507_20110109_181527_20110111_181527 |

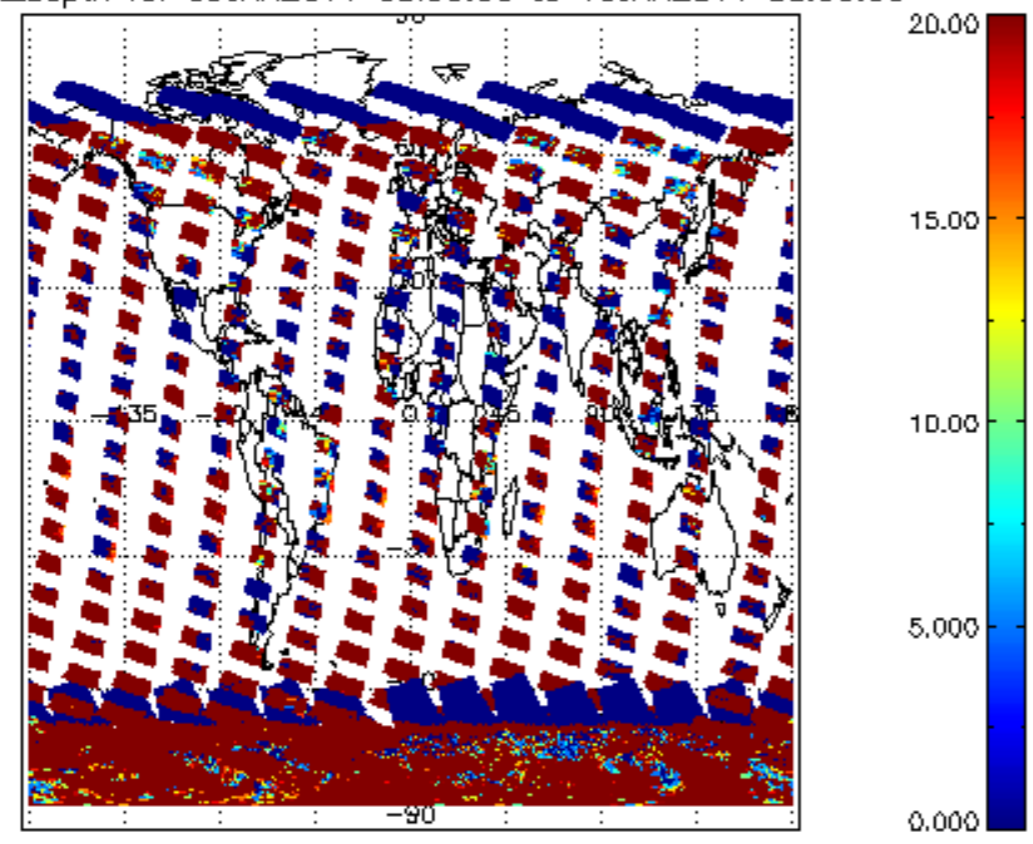
cL_frac for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



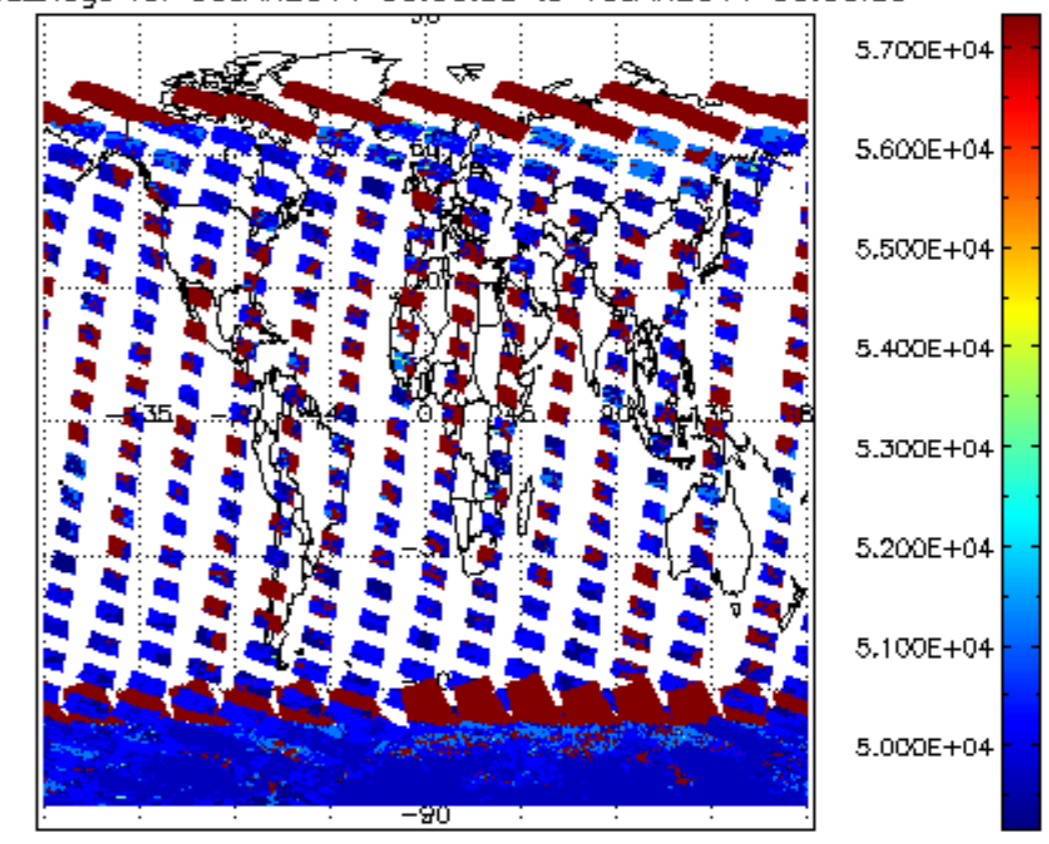
cL_top_height for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

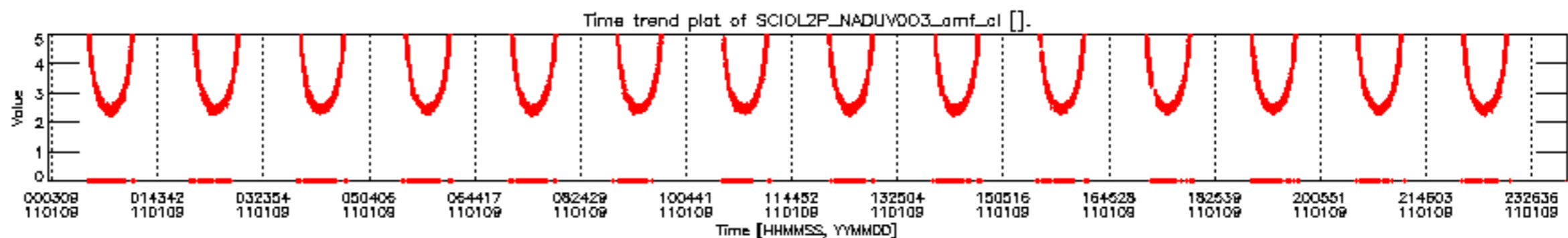
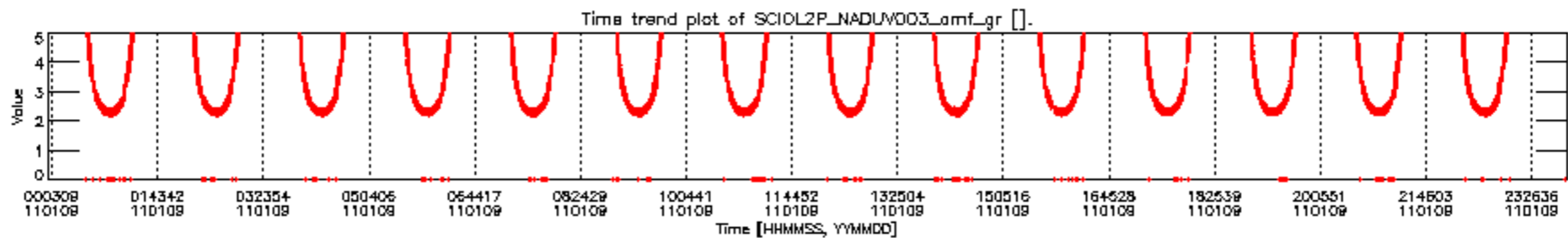
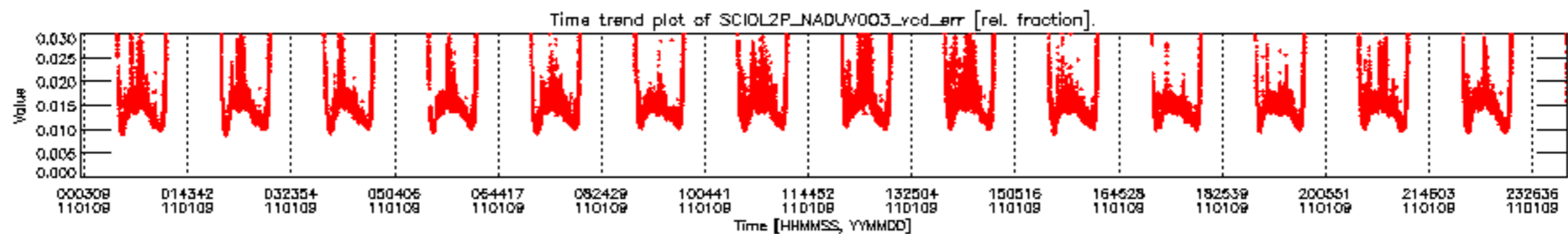
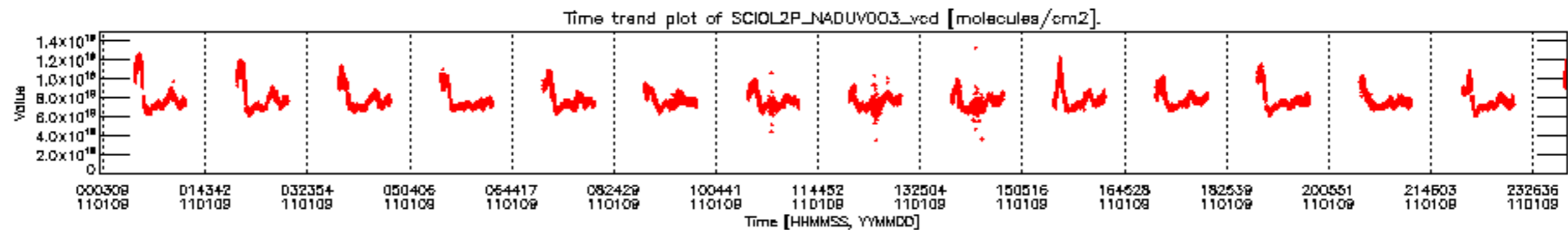


cL_opt_depth for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

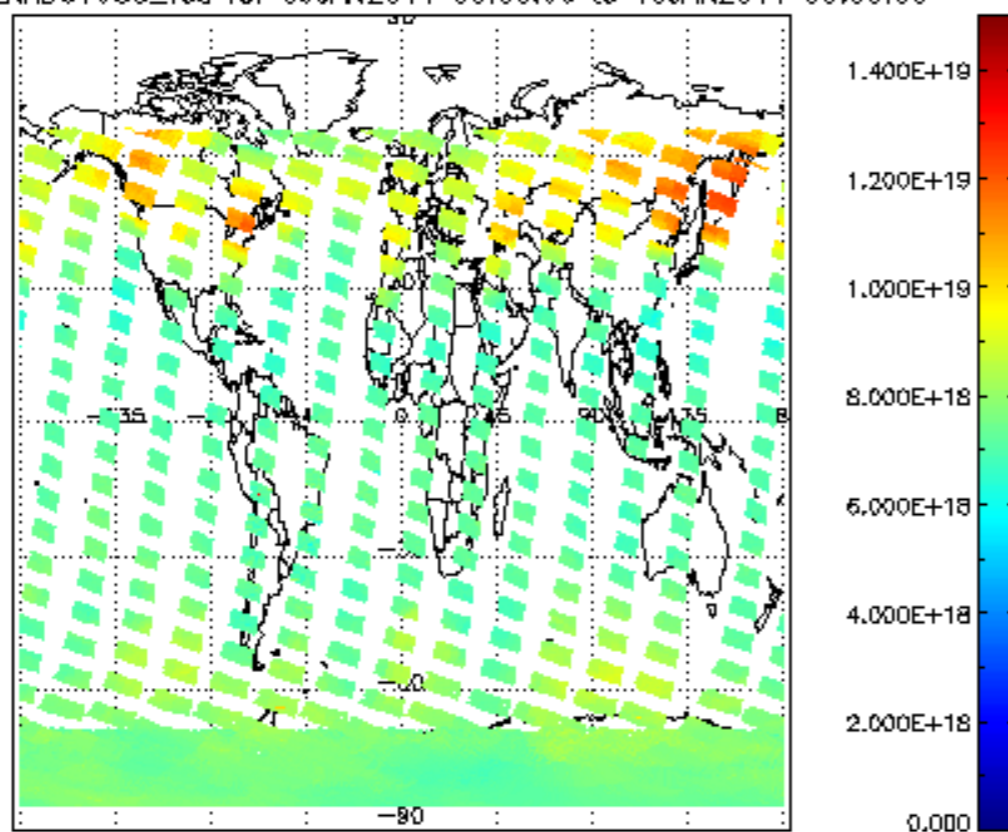


cloud_flags for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

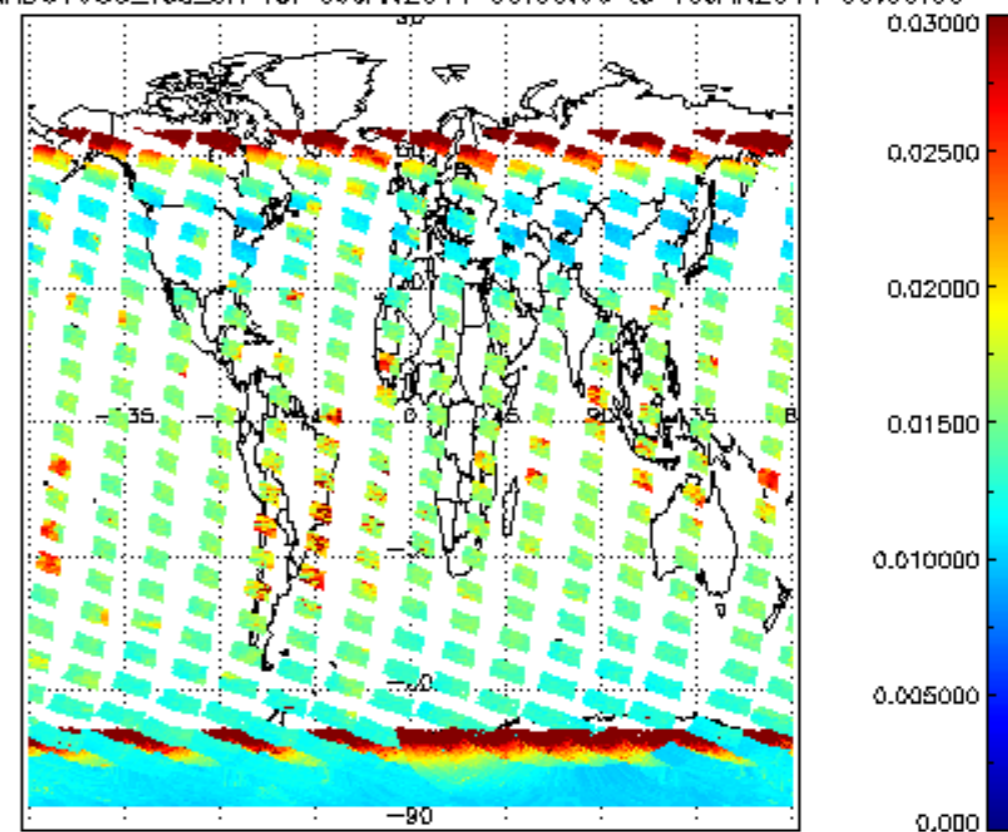




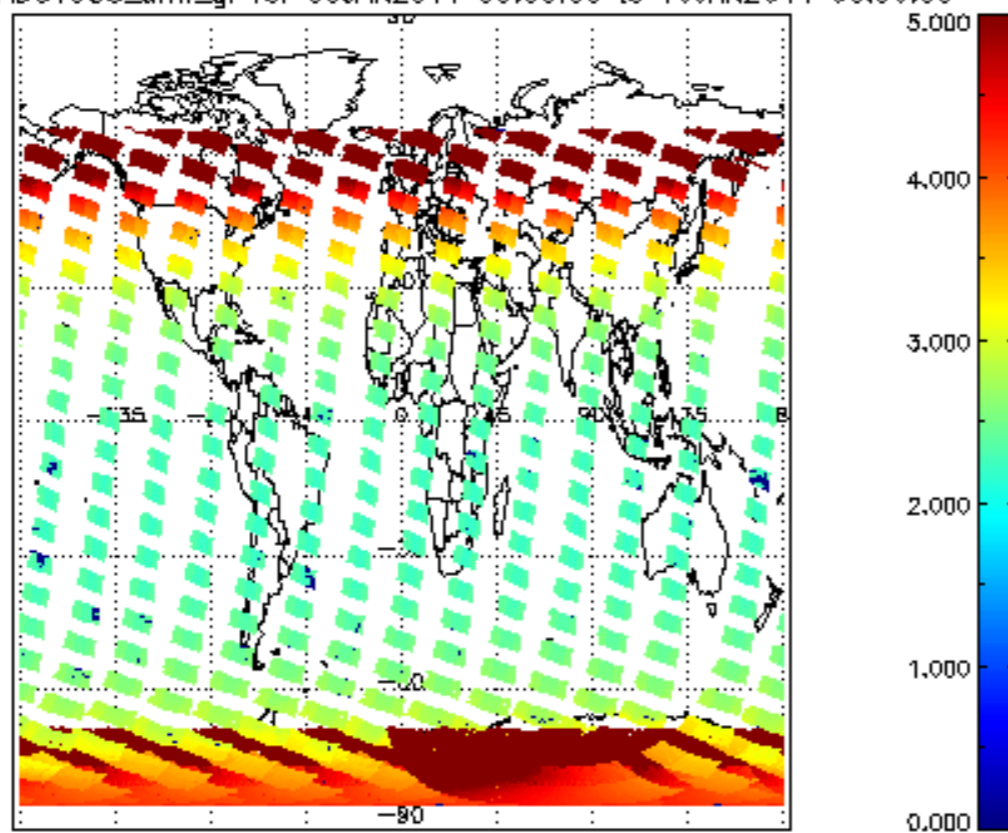
SCIOL2P_NADUV003_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



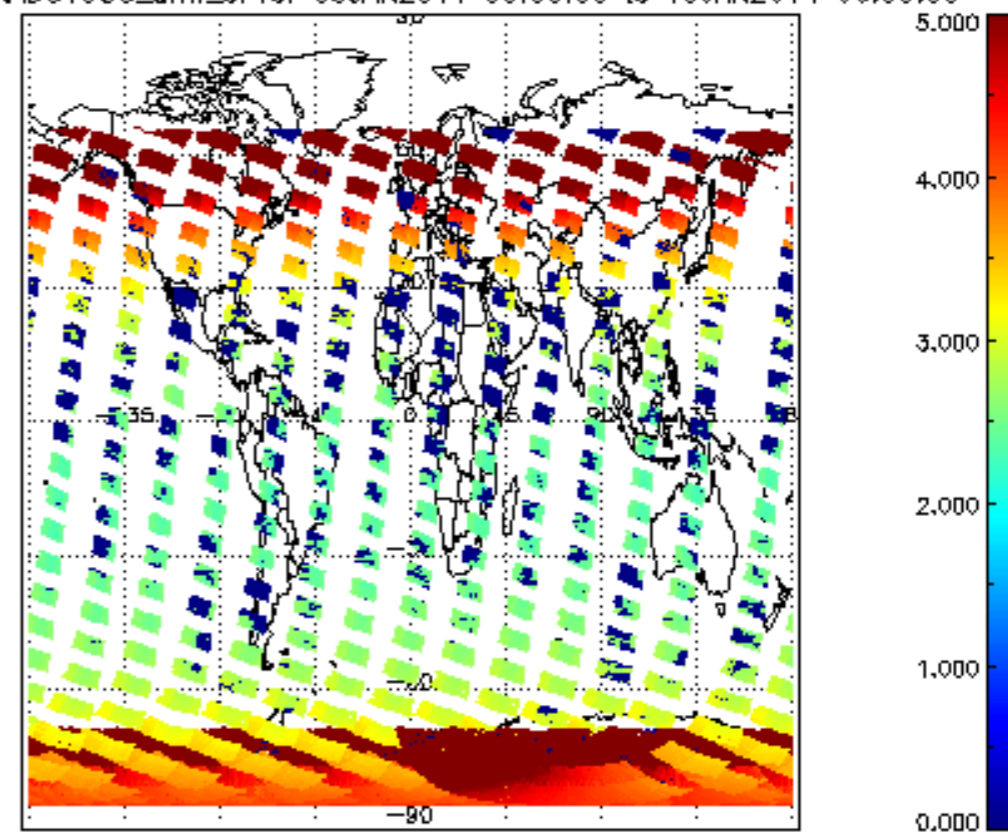
SCIOL2P_NADUV003_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

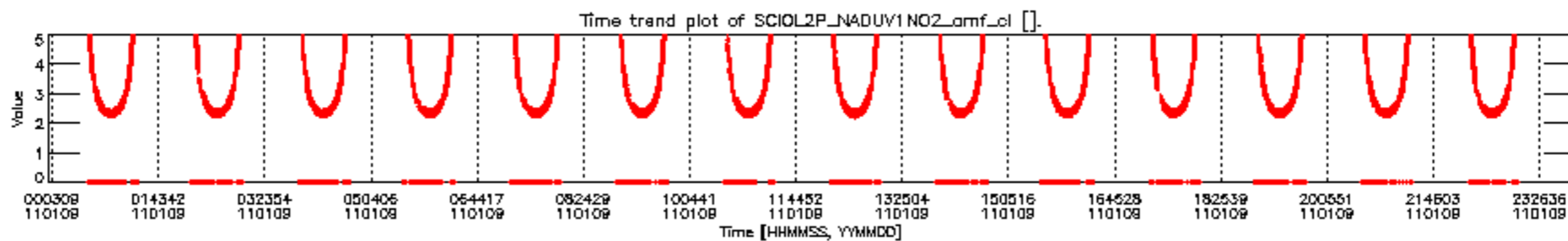
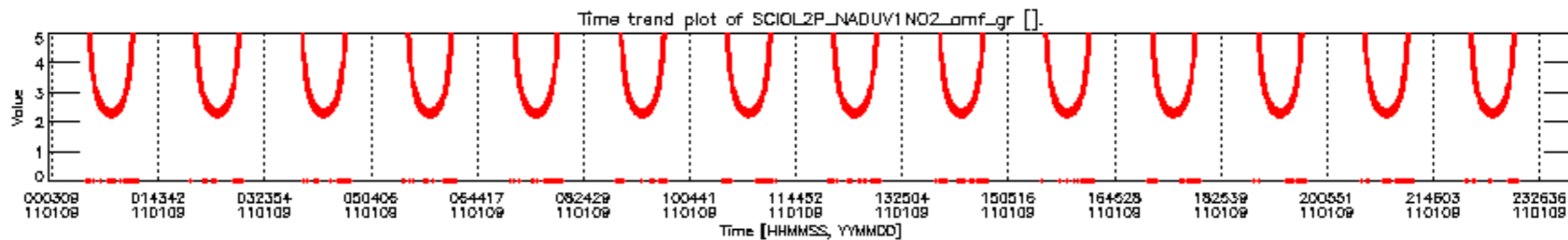
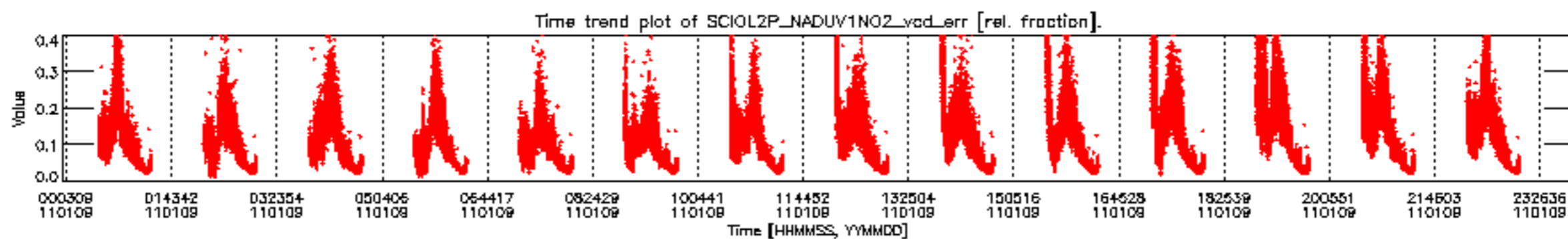
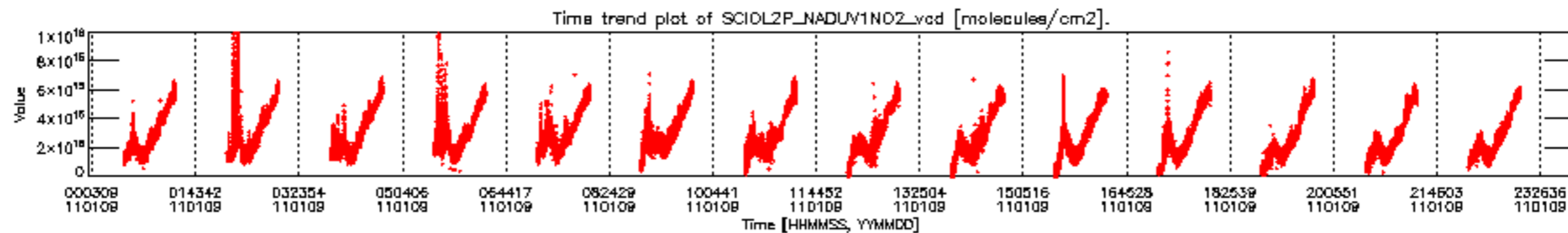


SCIOL2P_NADUV003_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

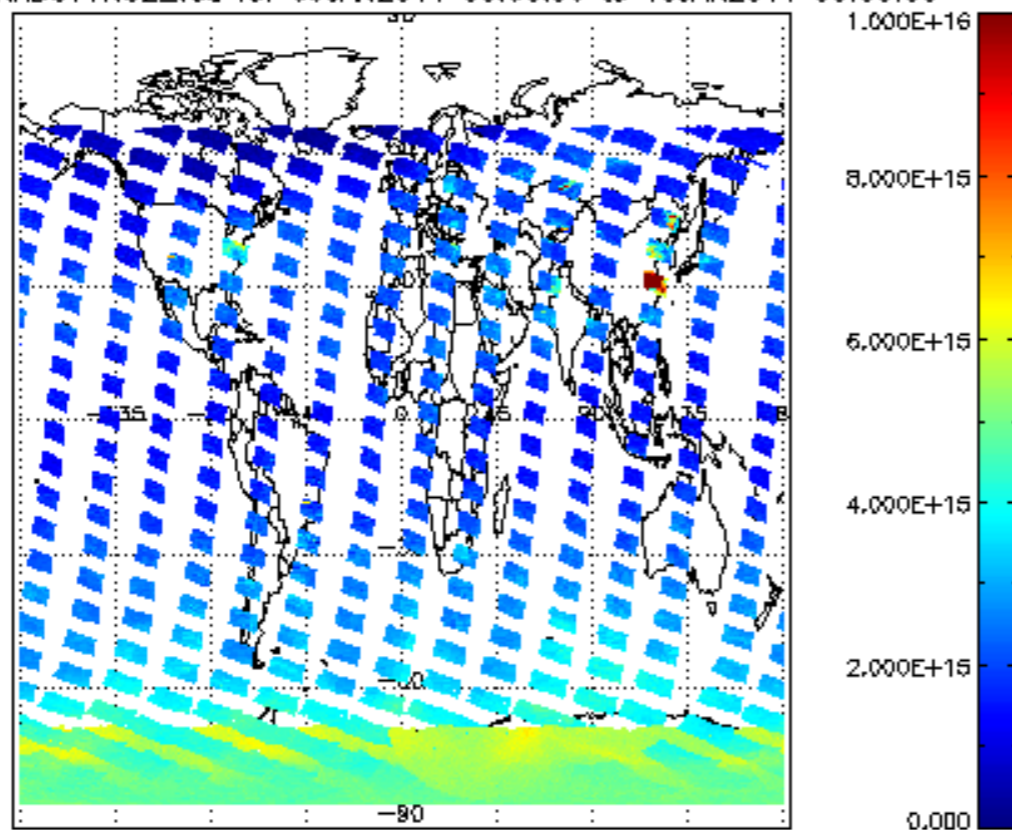


SCIOL2P_NADUV003_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

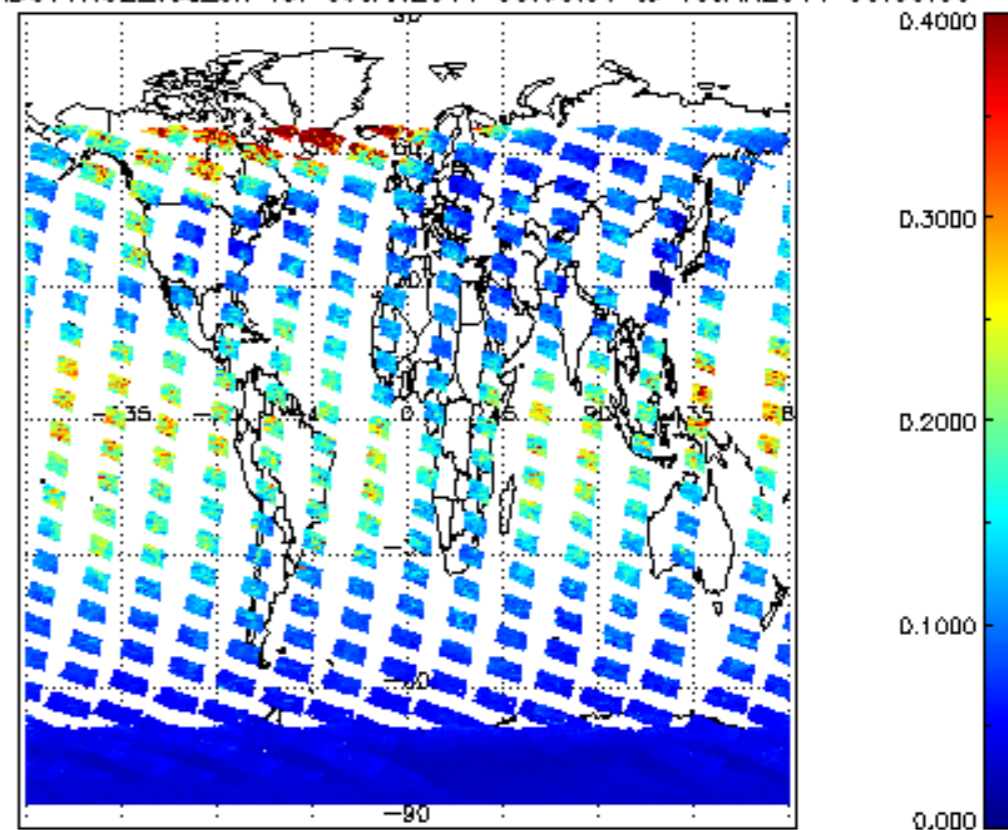




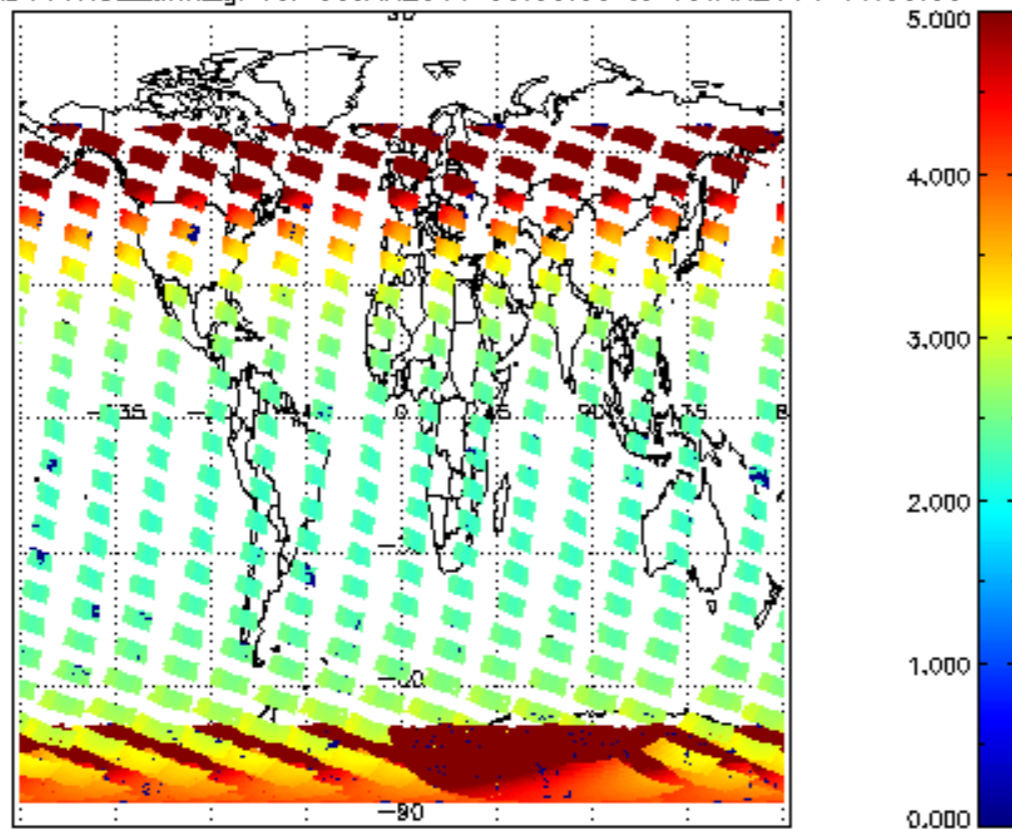
SCIOL2P_NADUV1NO2_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



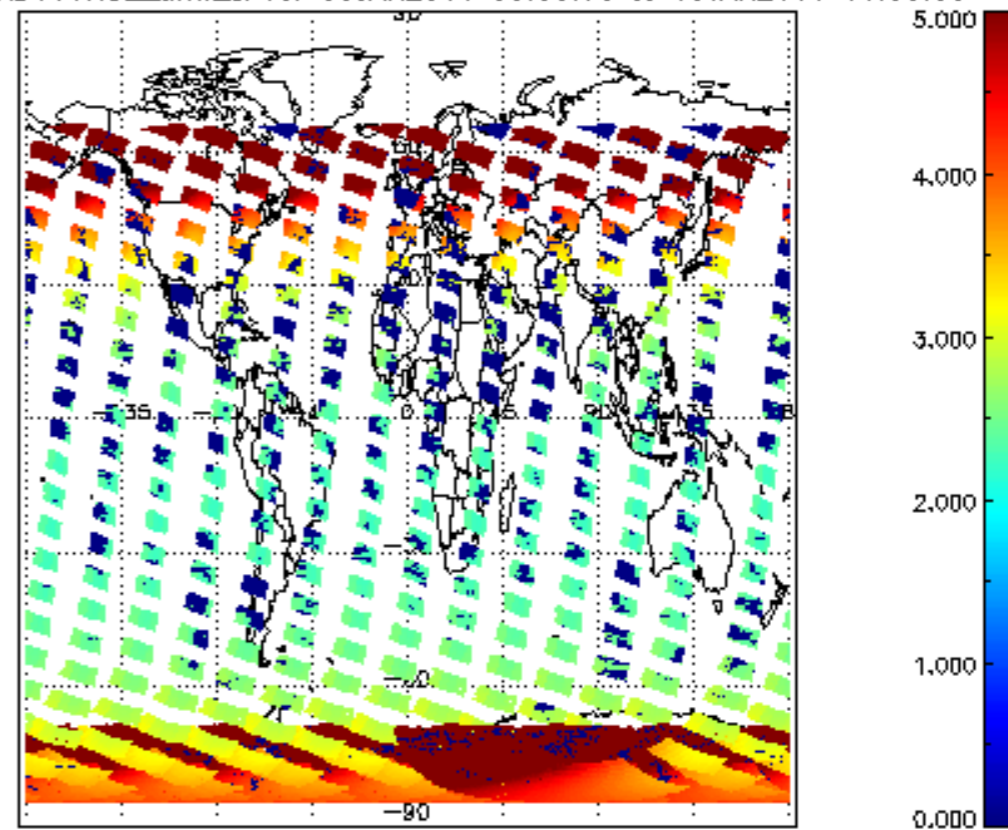
SCIOL2P_NADUV1NO2_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



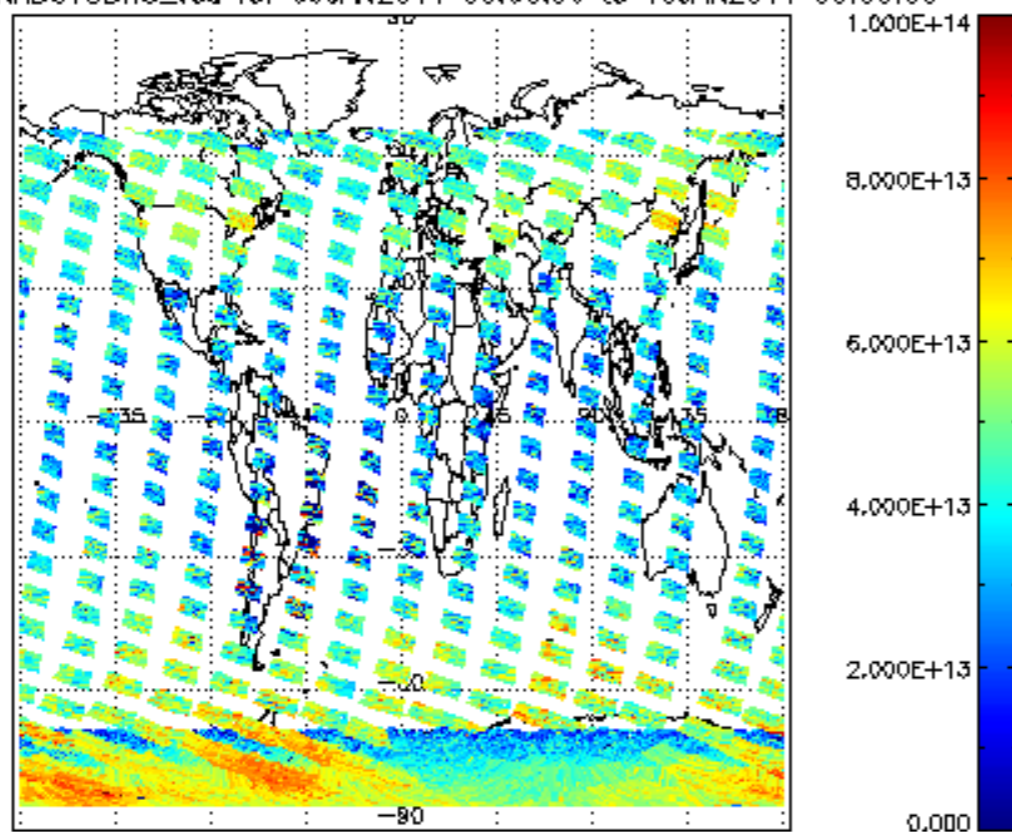
SCIOL2P_NADUV1NO2_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



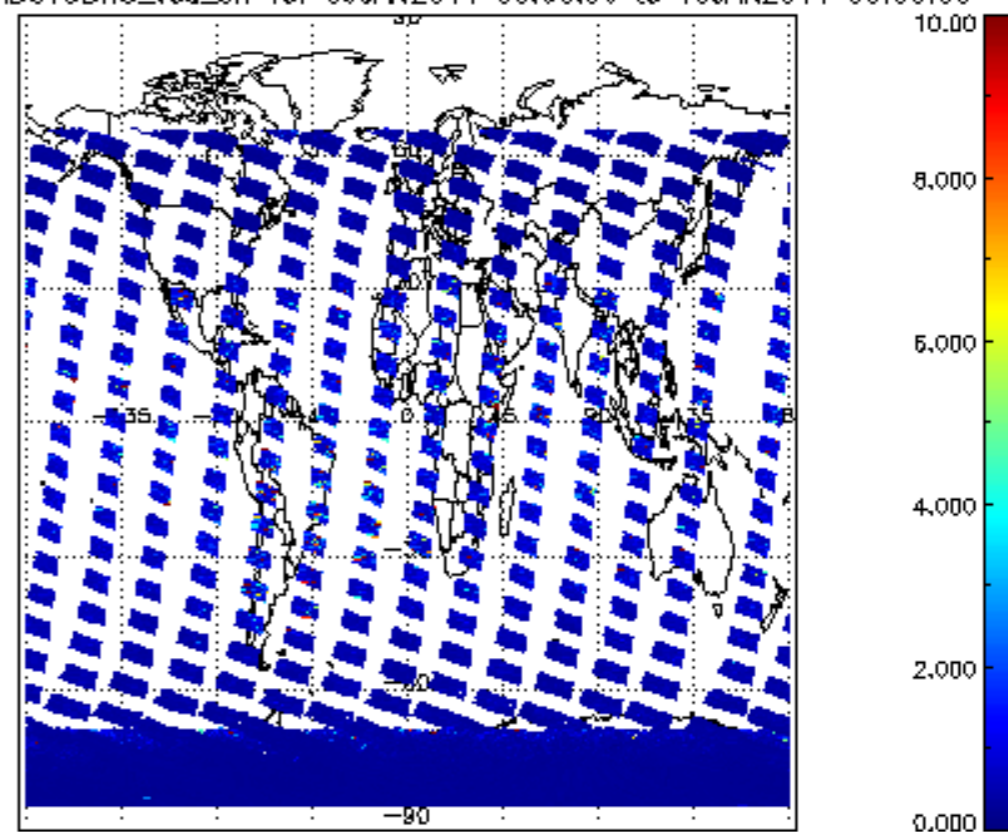
SCIOL2P_NADUV1NO2_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



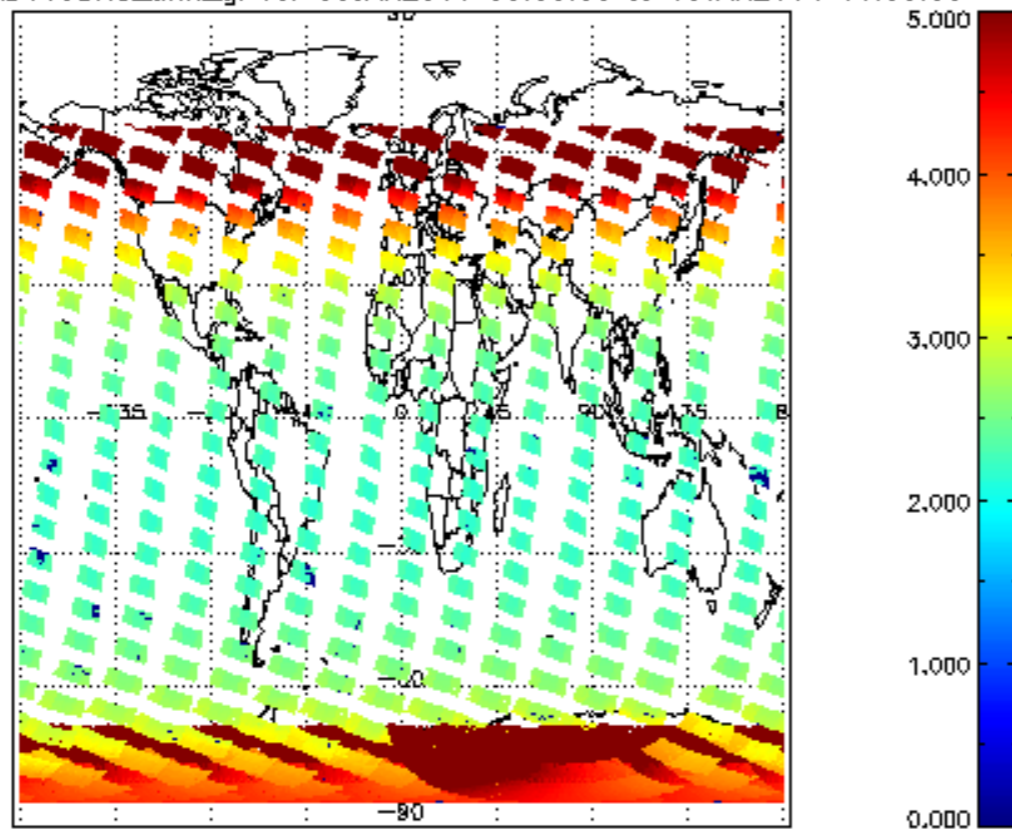
SCIOL2P_NADUV3BRO_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



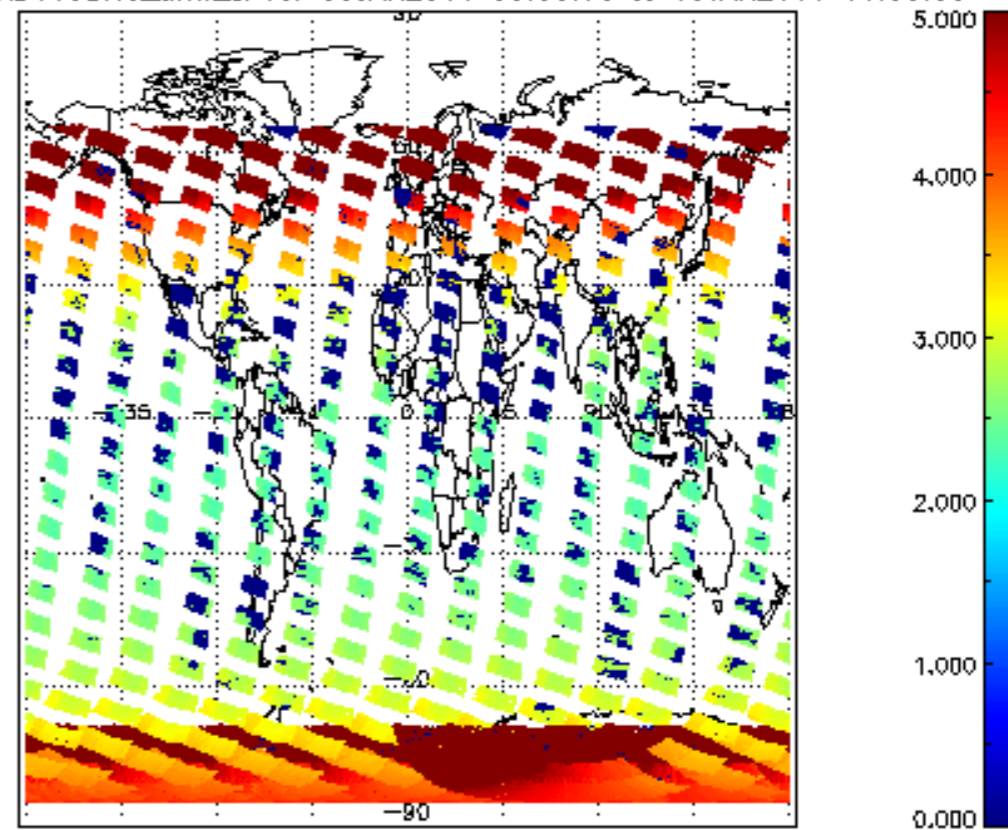
SCIOL2P_NADUV3BRO_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

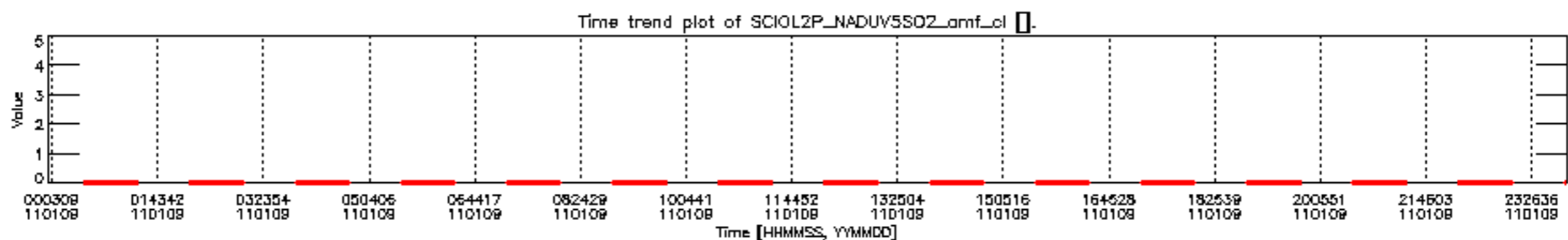
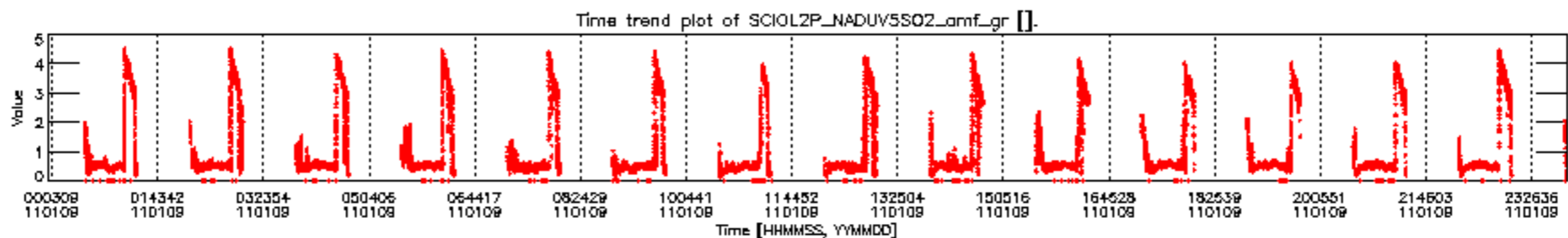
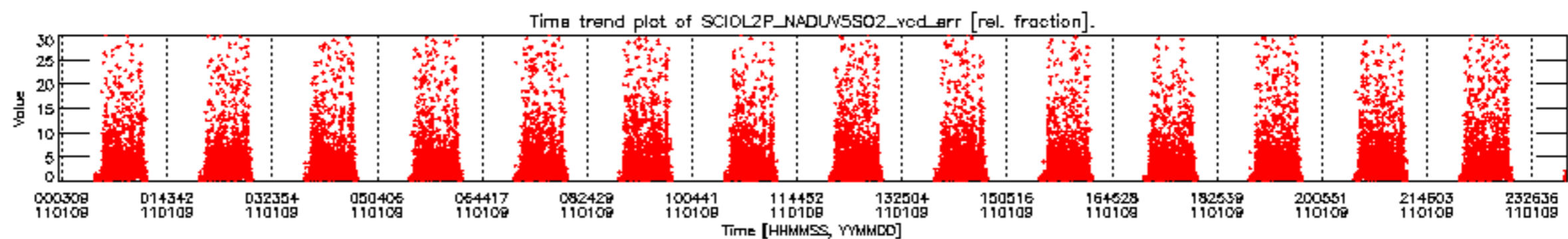
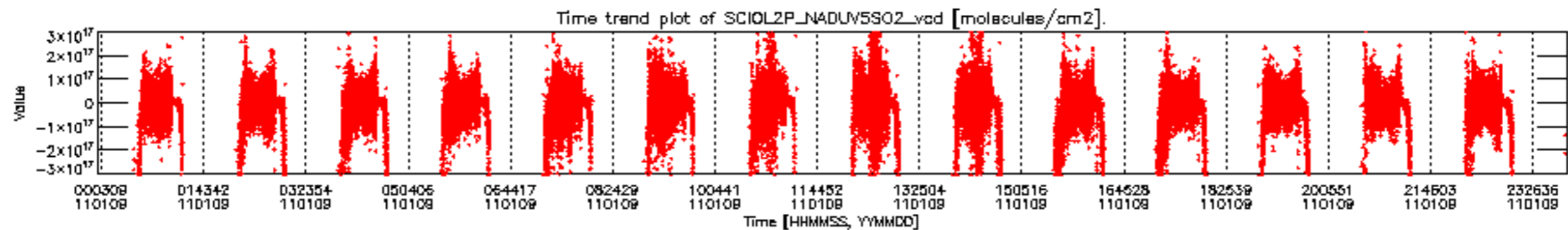


SCIOL2P_NADUV3BRO_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

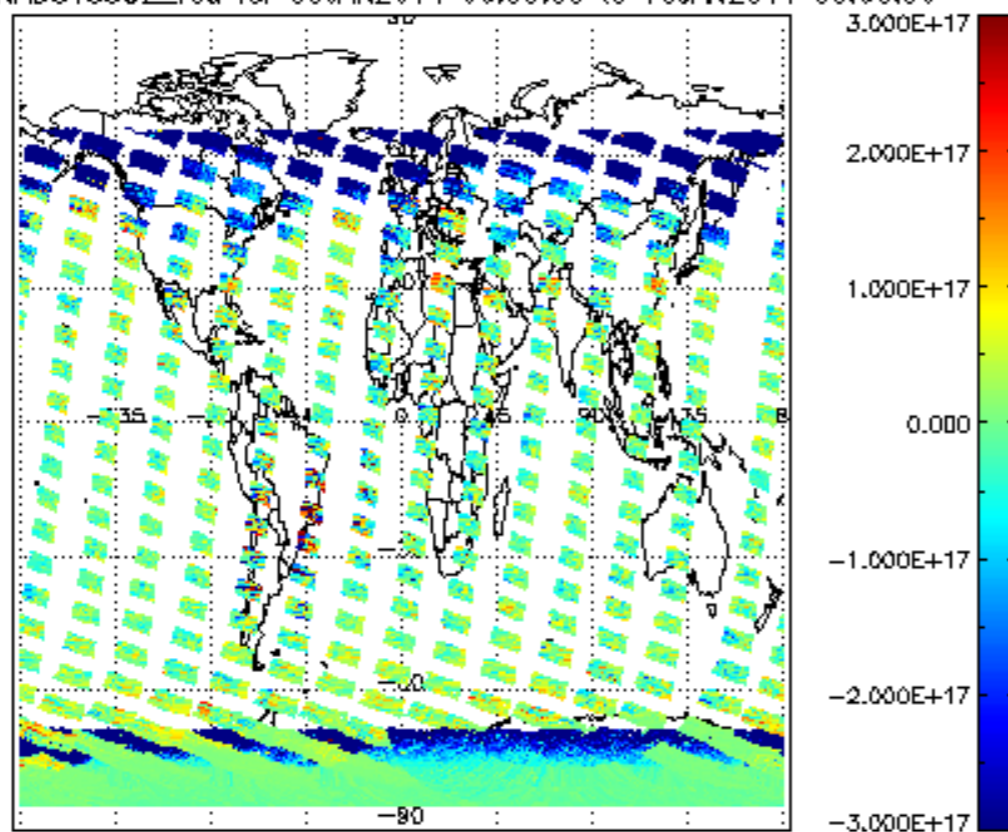


SCIOL2P_NADUV3BRO_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

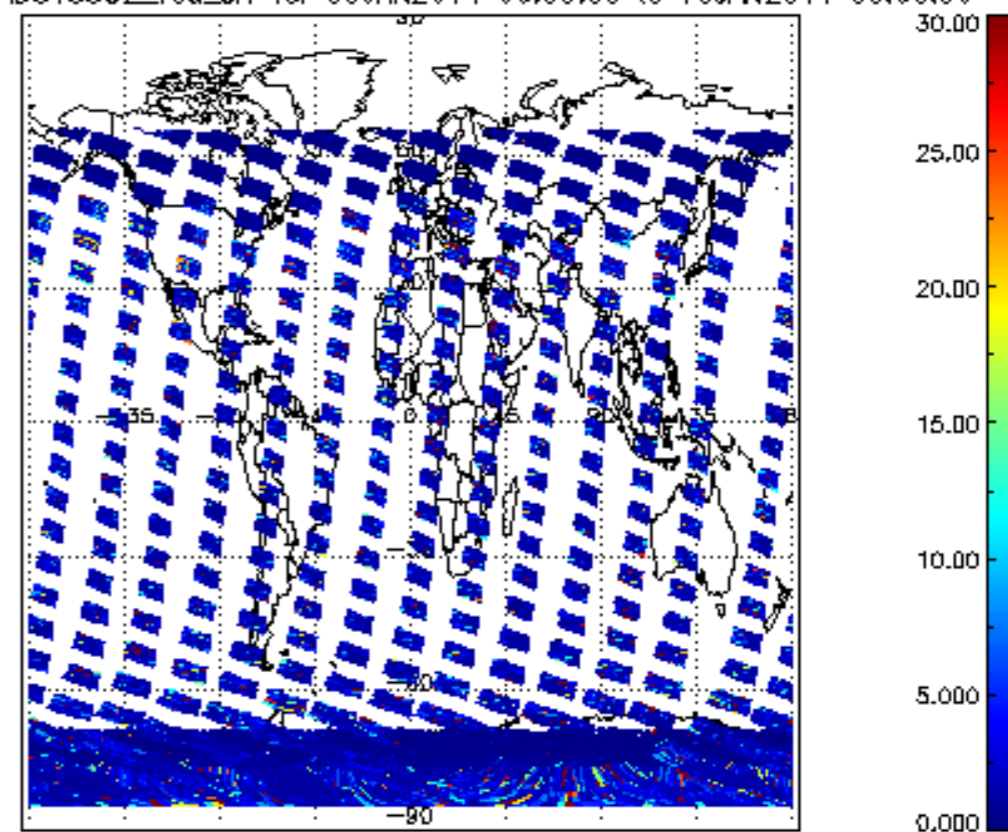




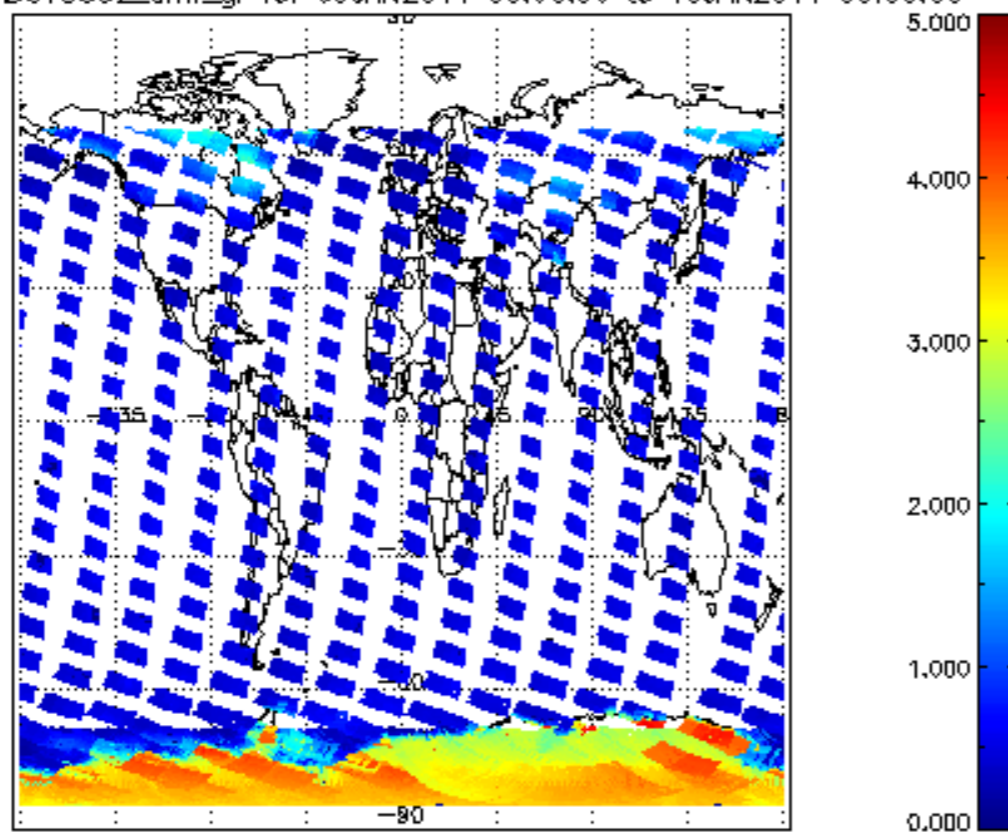
SCIOL2P_NADUV5S02_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



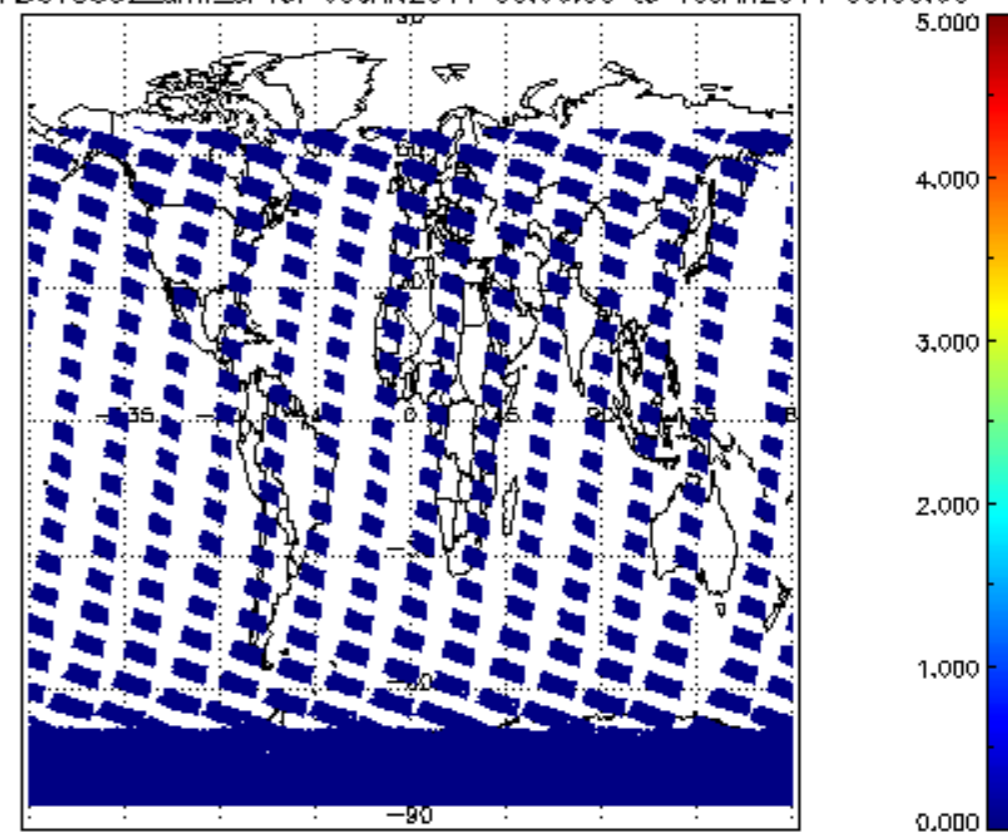
SCIOL2P_NADUV5S02_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

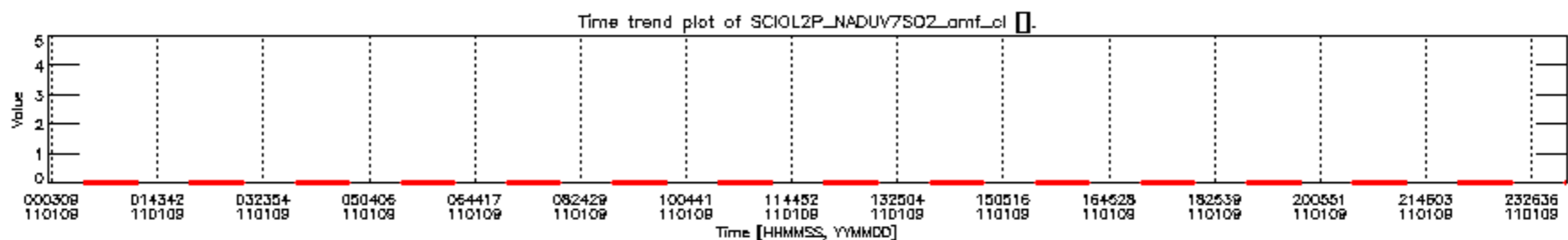
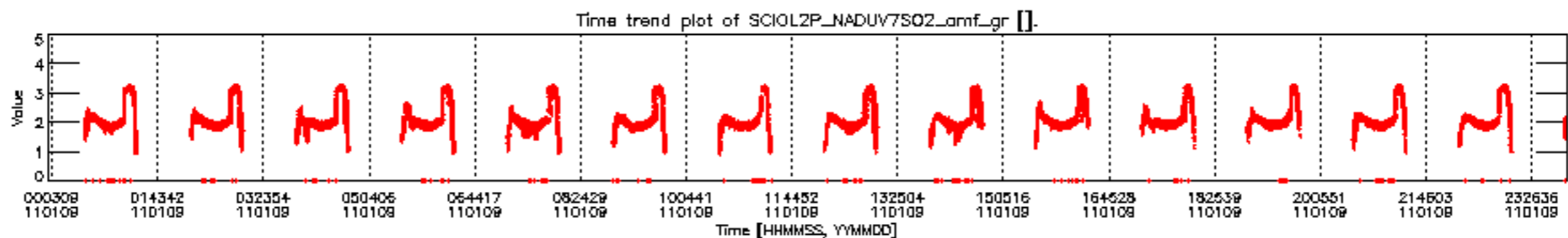
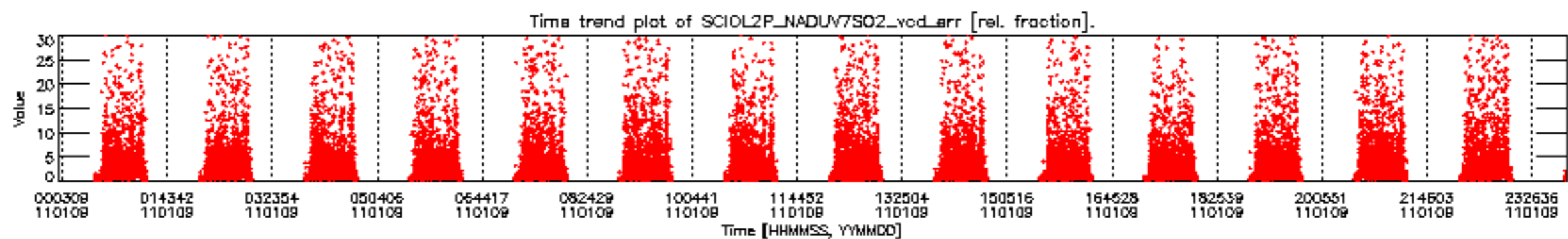
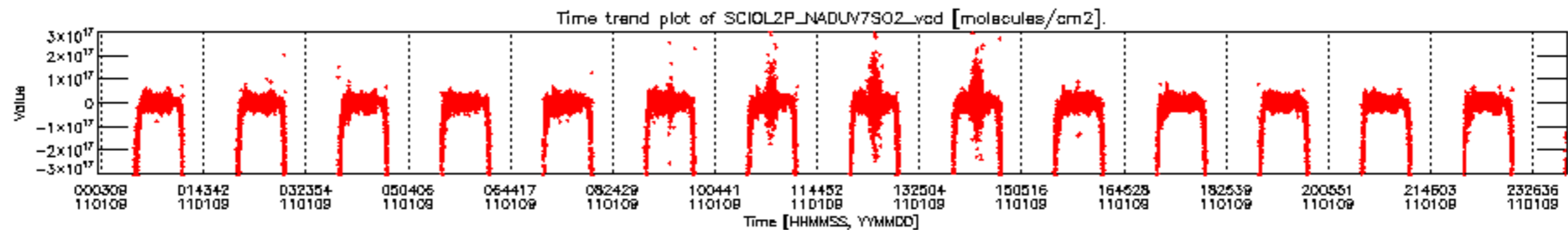


SCIOL2P_NADUV5S02_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

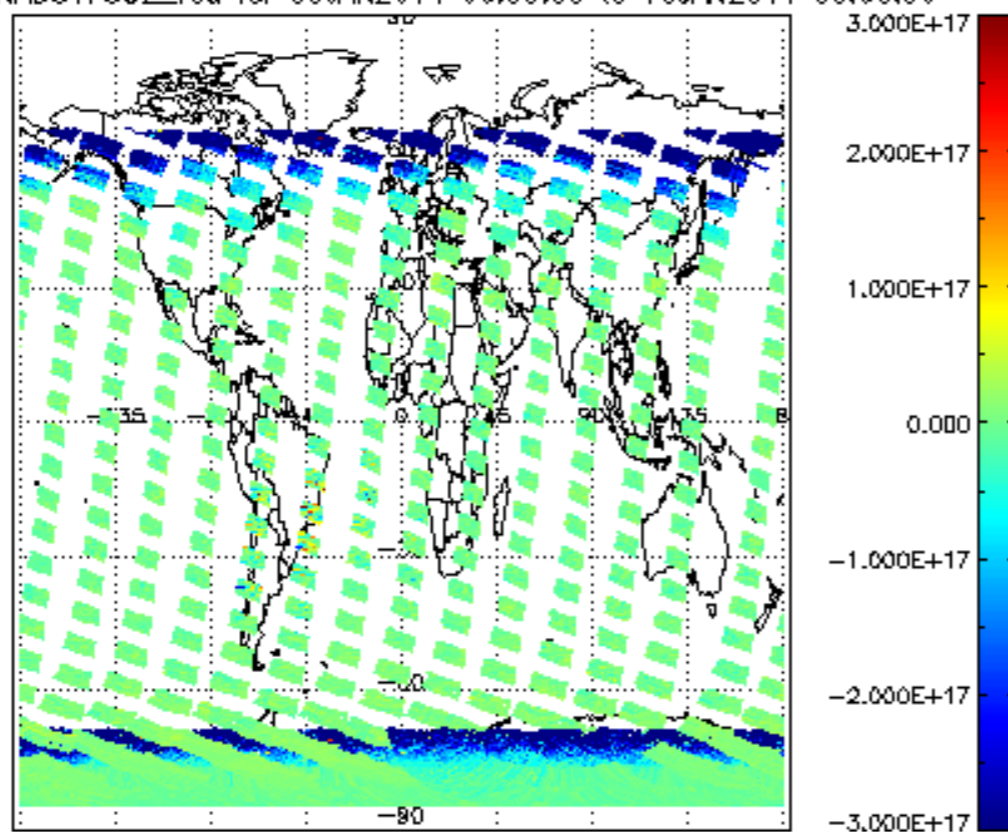


SCIOL2P_NADUV5S02_amf_cl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

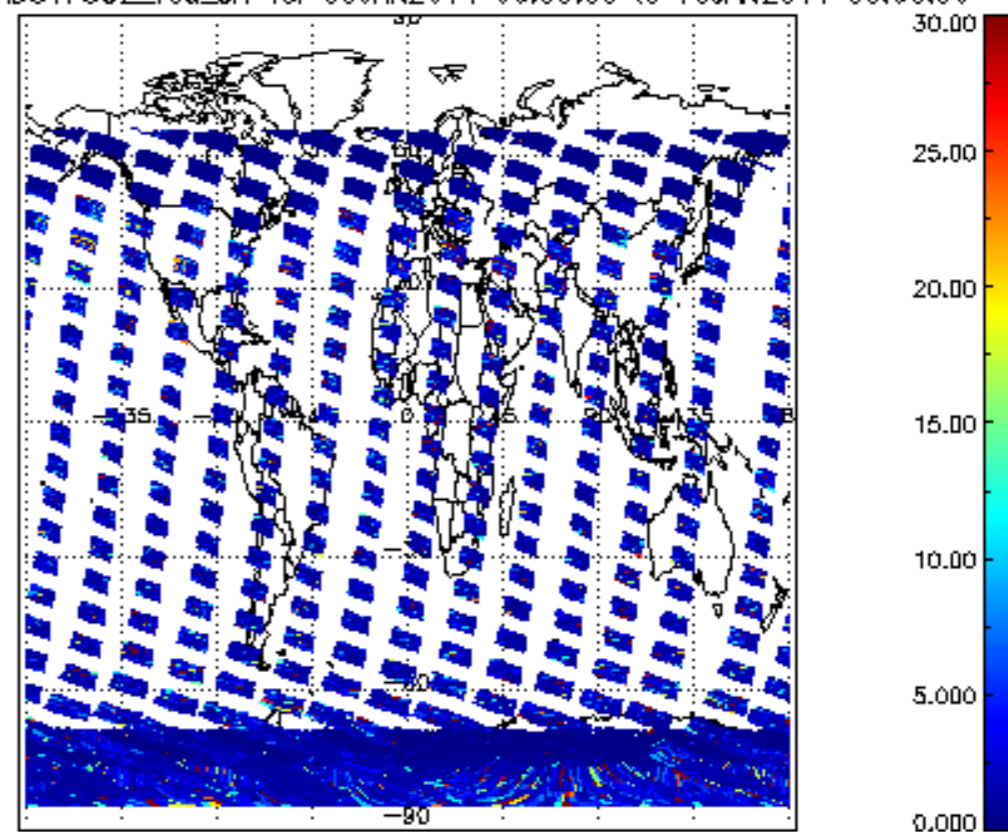




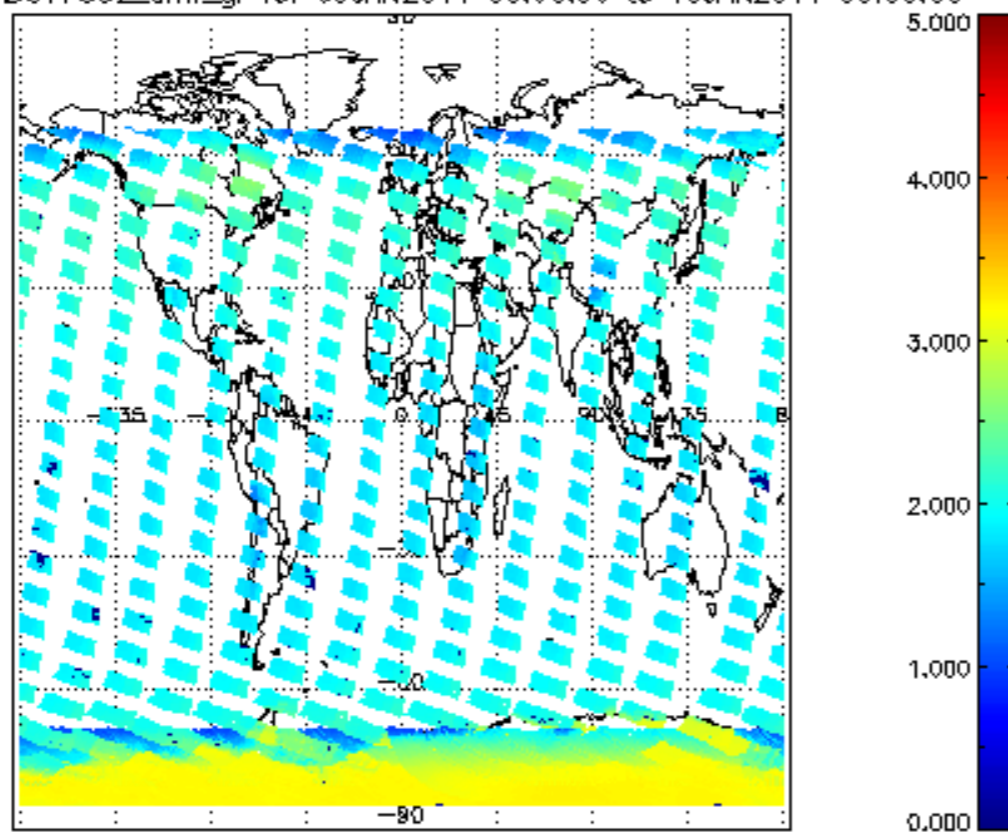
SCIOL2P_NADUV7S02_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



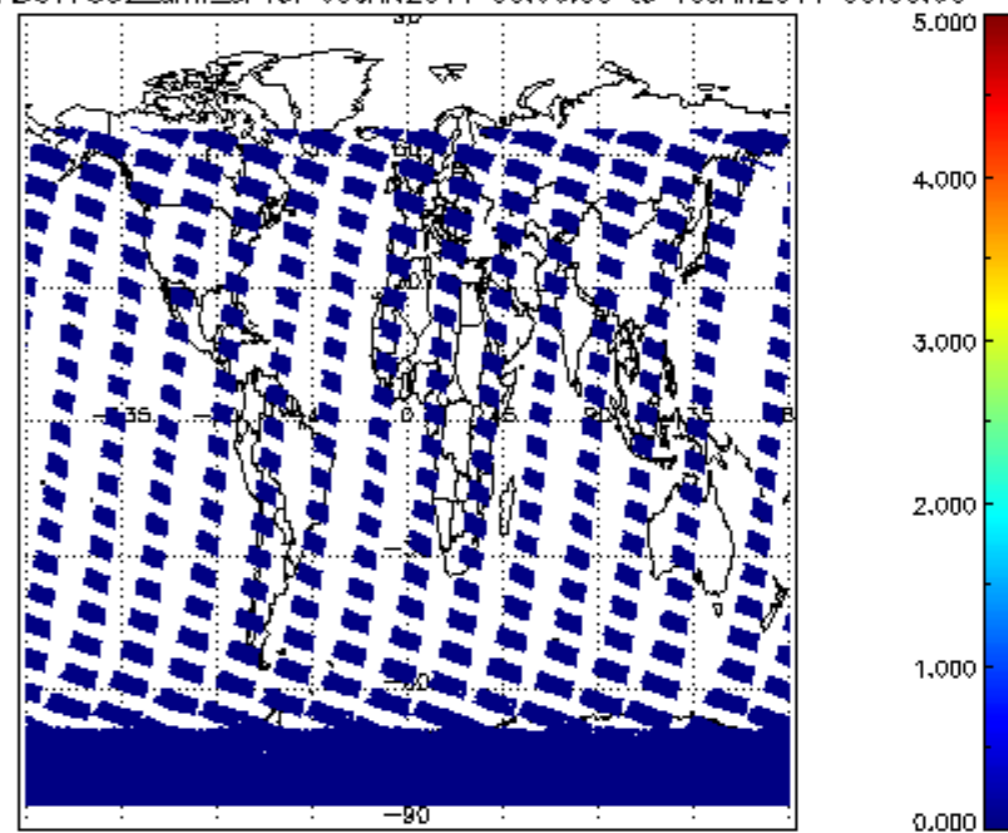
SCIOL2P_NADUV7S02_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

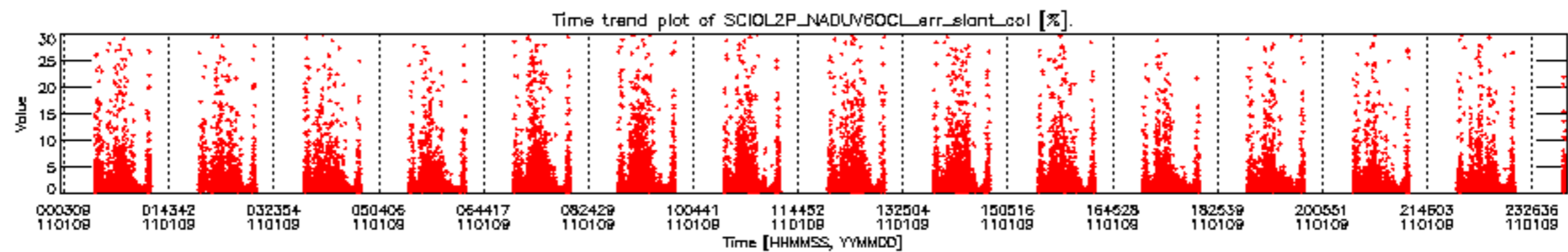
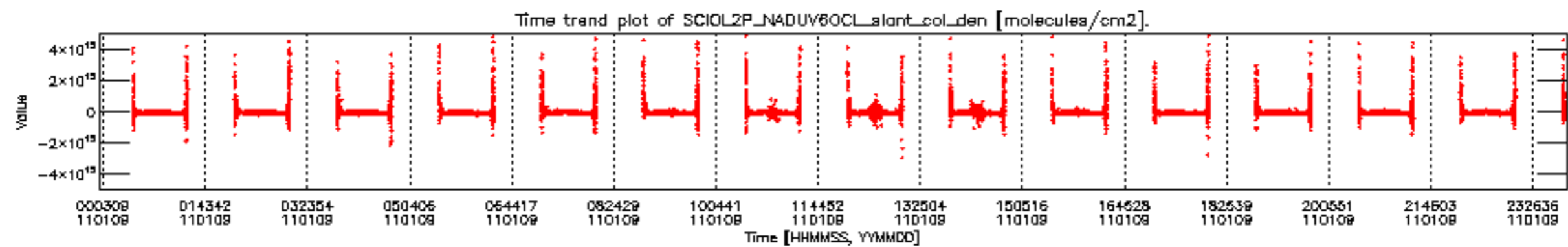


SCIOL2P_NADUV7S02_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

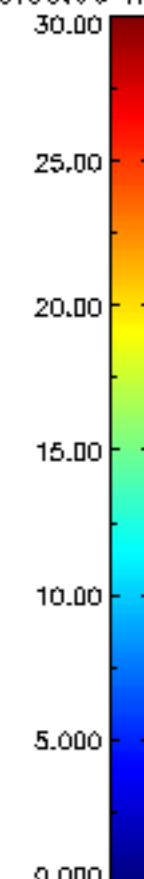
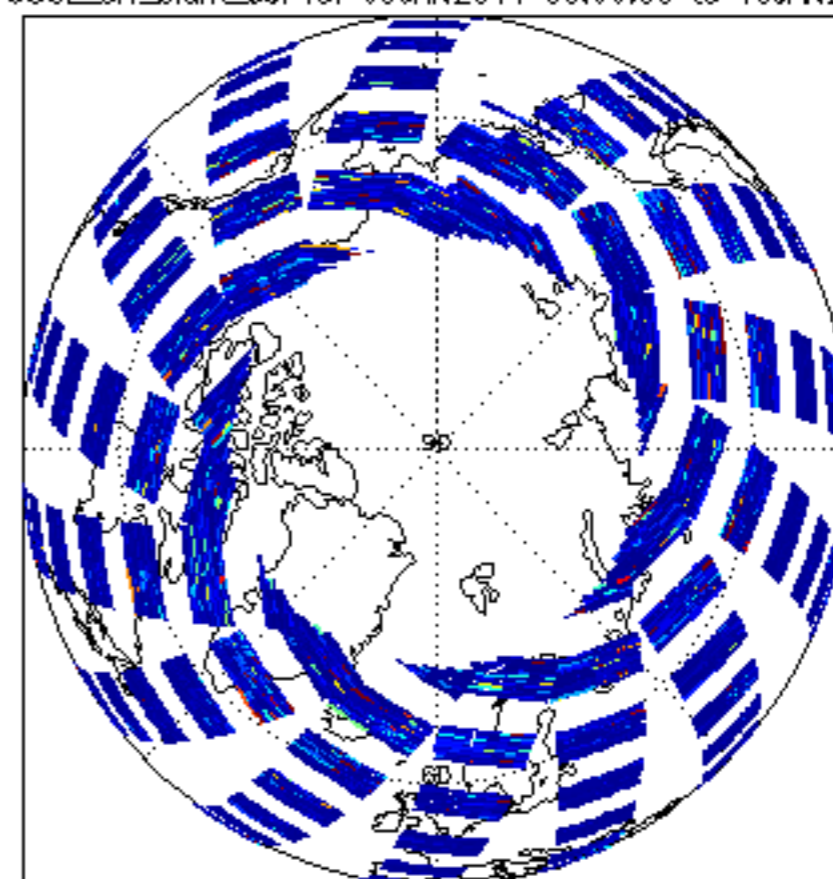
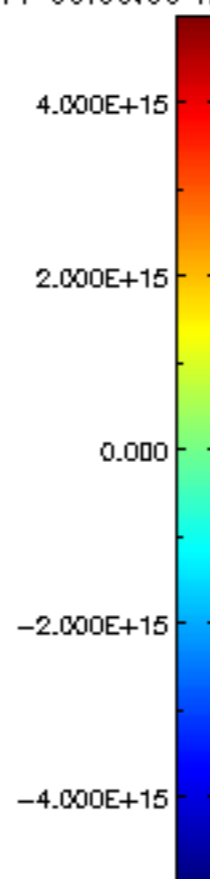
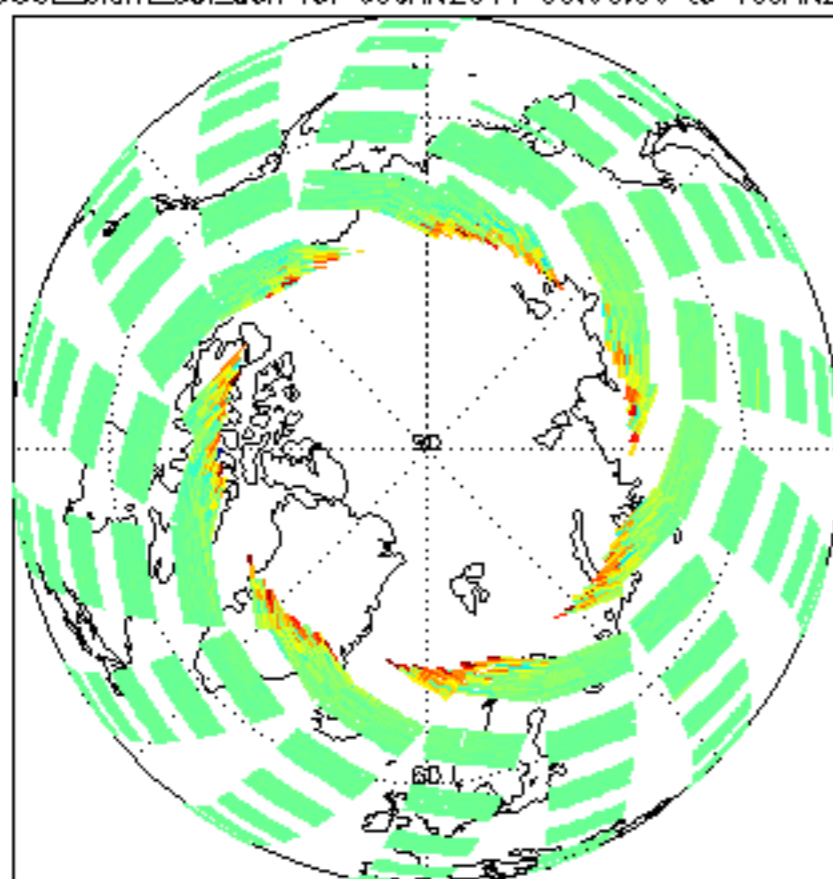


SCIOL2P_NADUV7S02_amf_sl for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

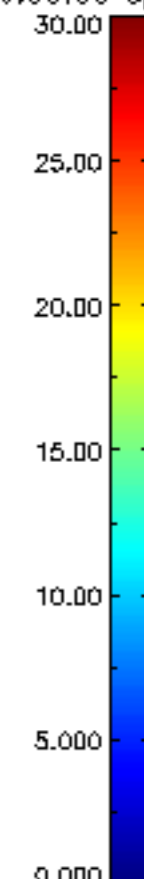
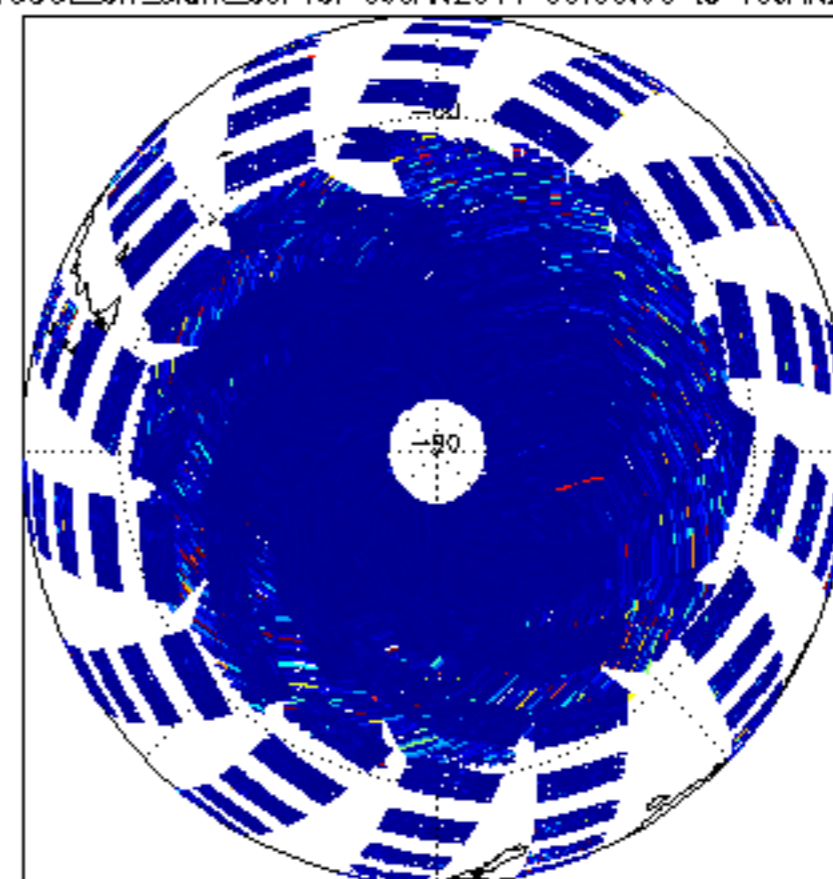
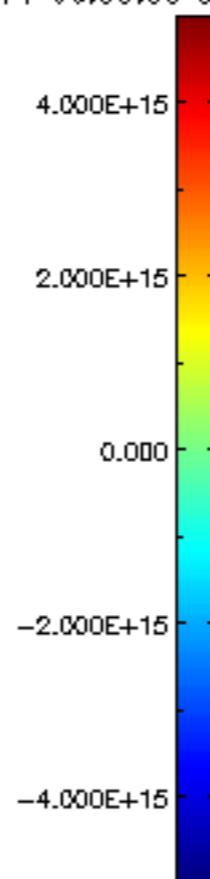
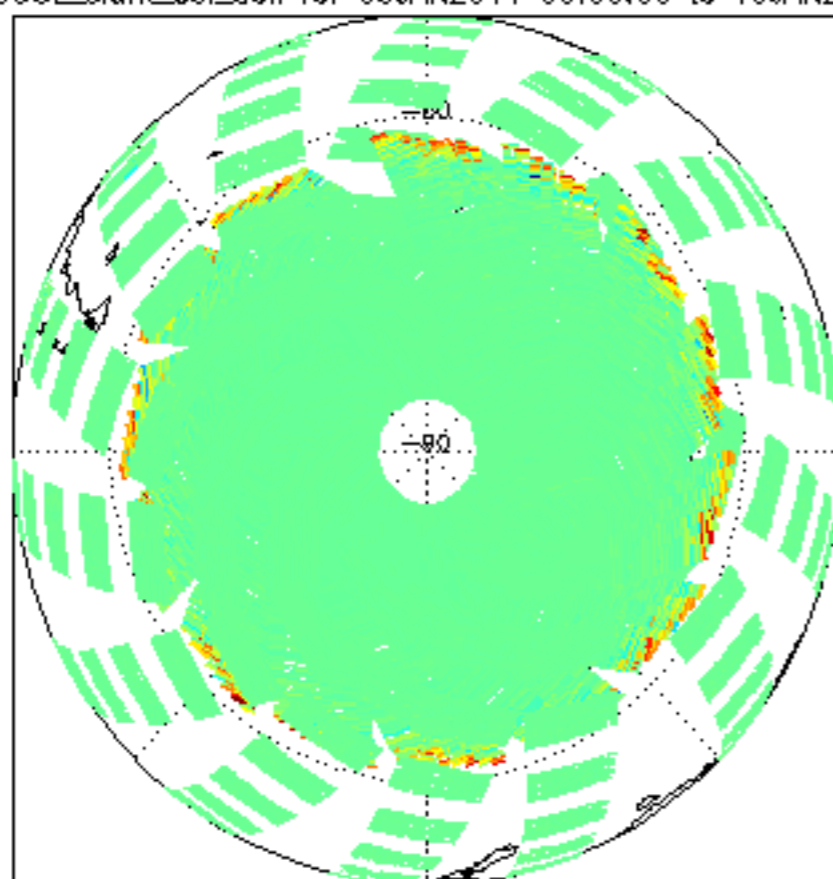




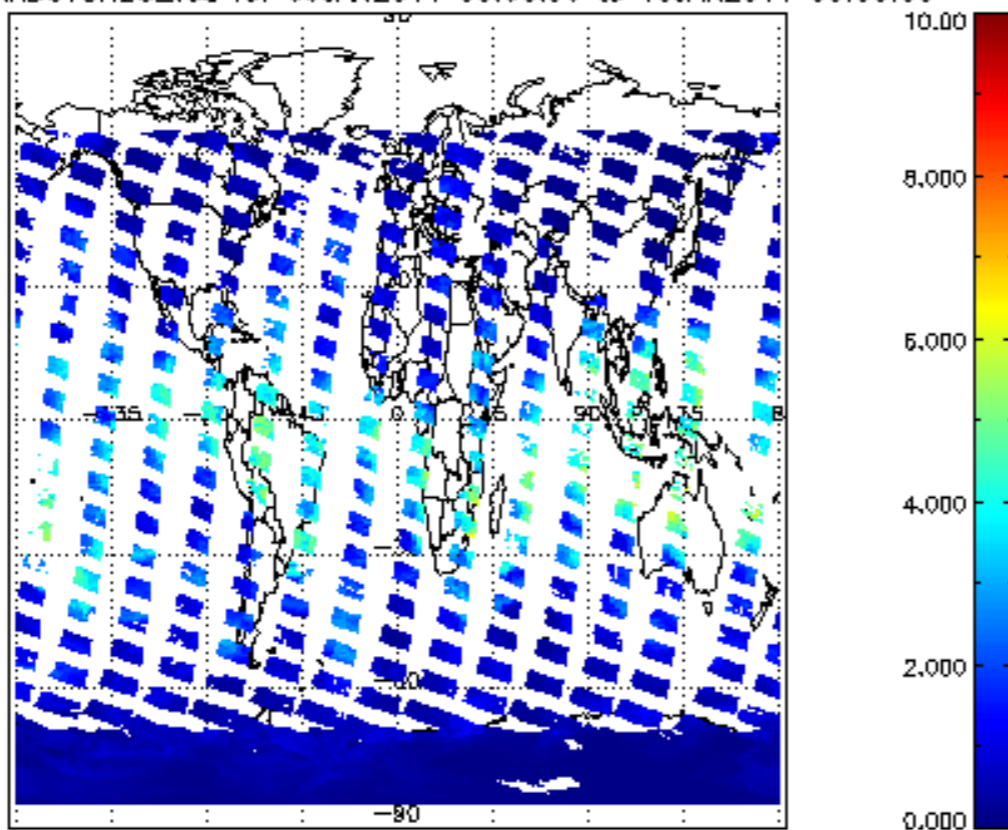
ICIOL2P_NADUV60CL_slant_col_den for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 np;ICIOL2P_NADUV60CL_err_slant_col for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 np



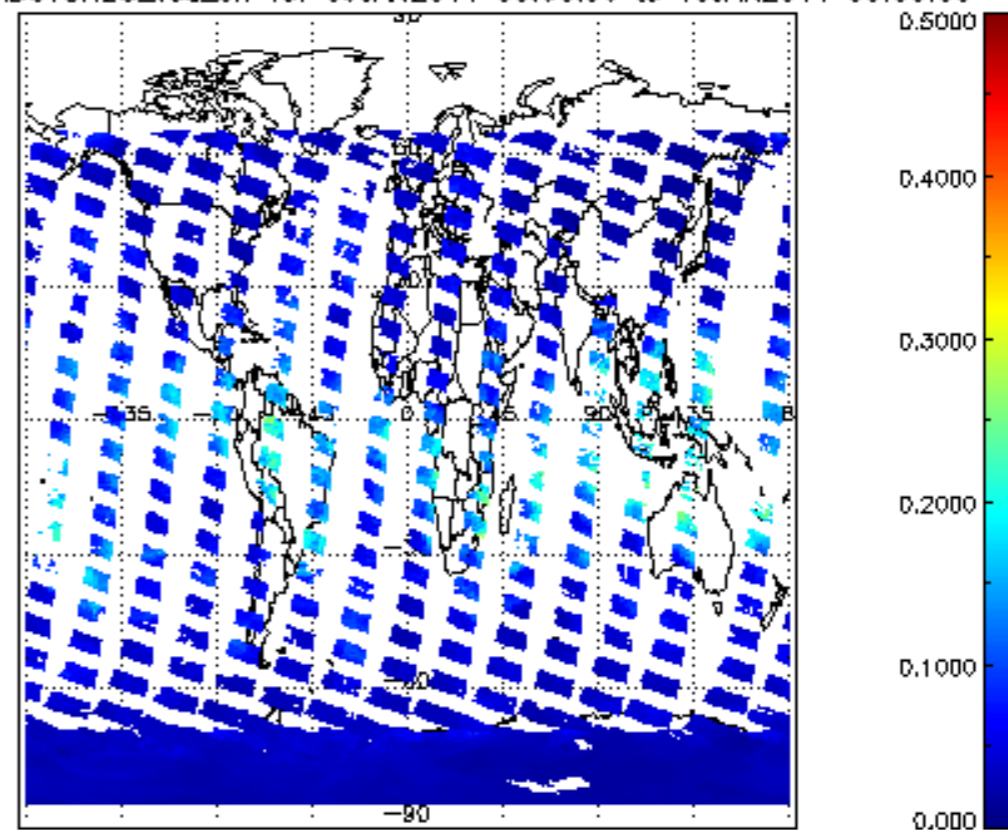
iCIOL2P_NADUV6OCL_slant_col_den for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 sp iCIOL2P_NADUV6OCL_err_slant_col for 09JAN2011 00:00:00 to 10JAN2011 00:00:00 sp



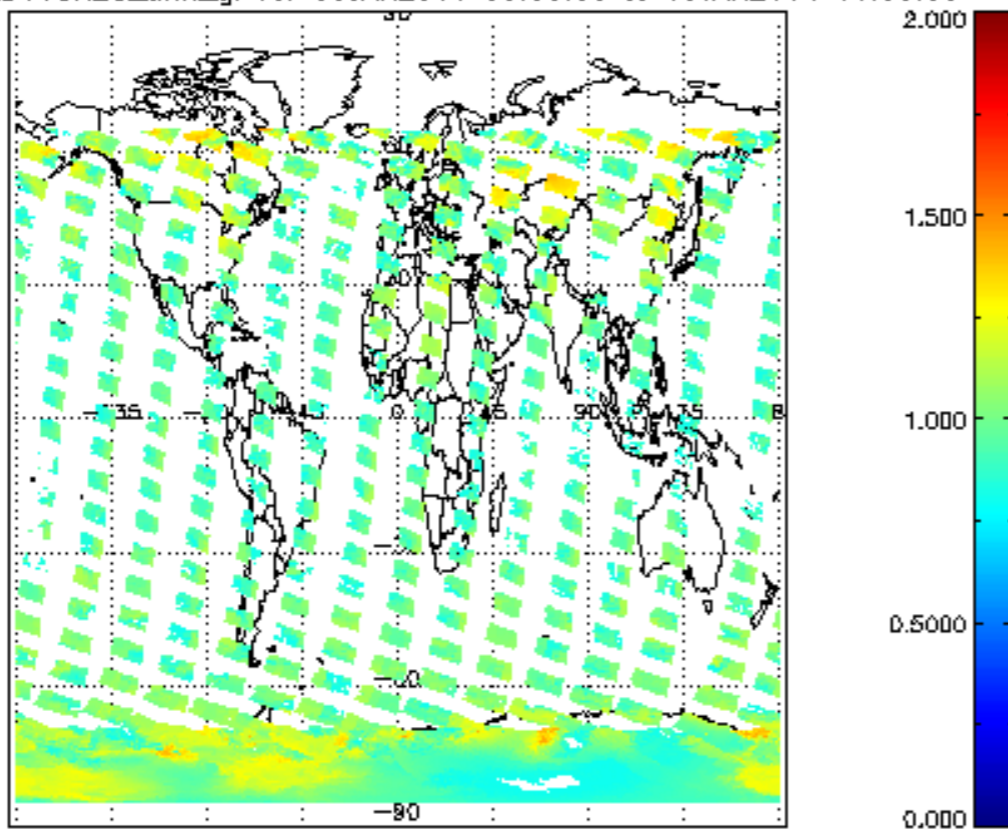
SCIOL2P_NADUV8H20_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

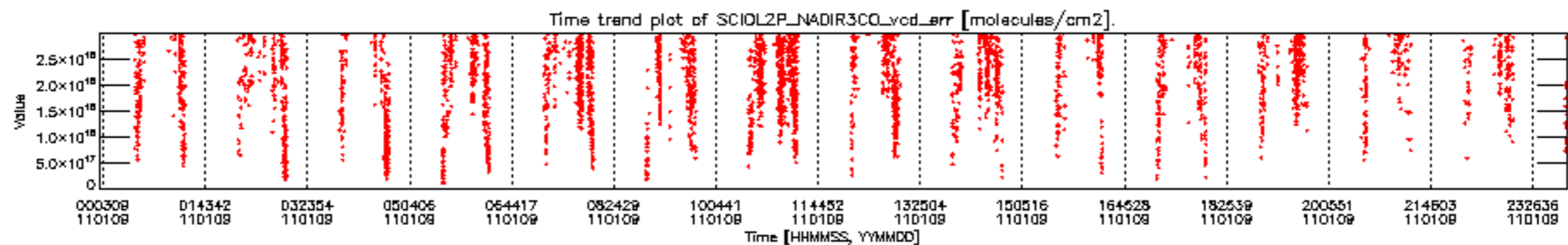
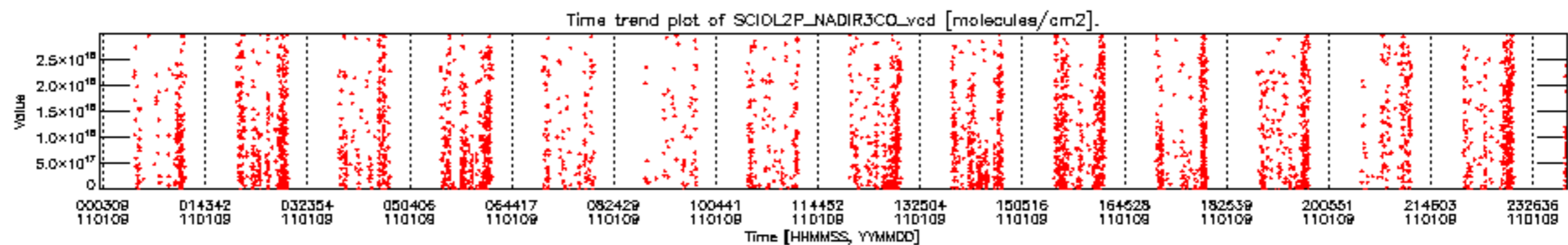


SCIOL2P_NADUV8H20_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

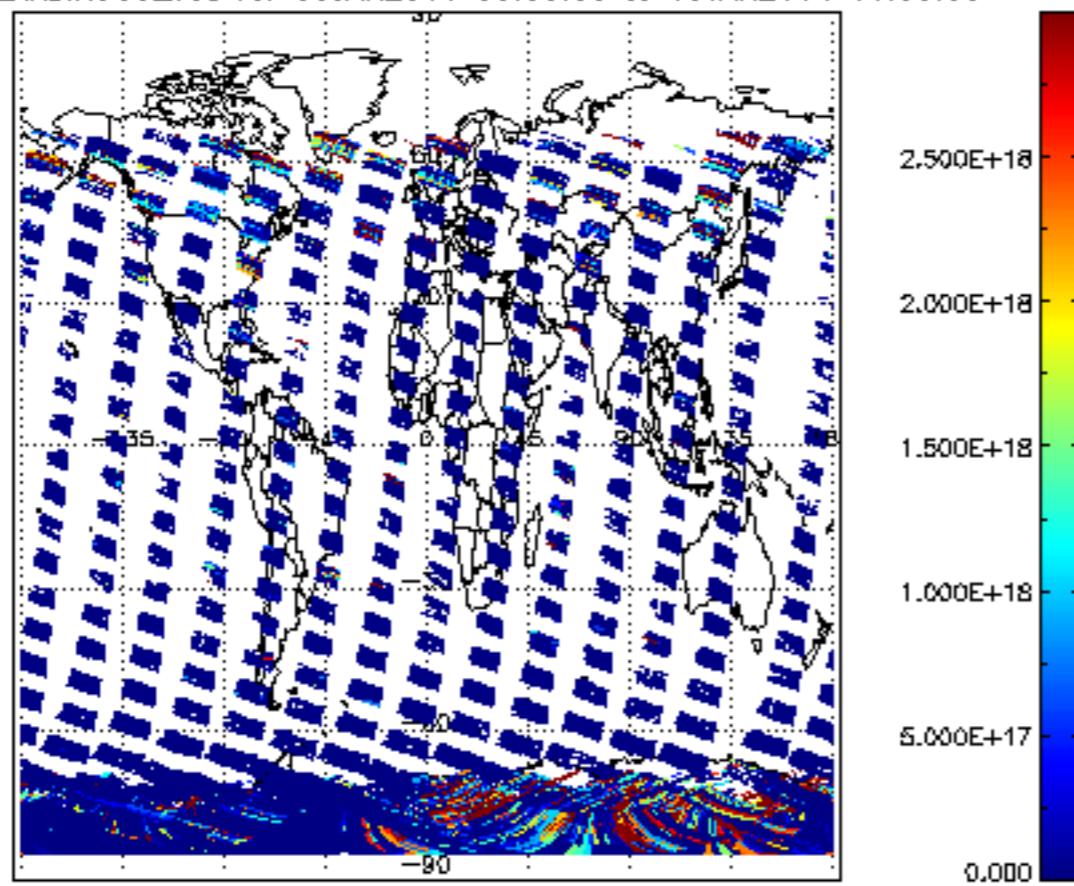


SCIOL2P_NADUV8H20_amf_gr for 09JAN2011 00:00:00 to 10JAN2011 00:00:00

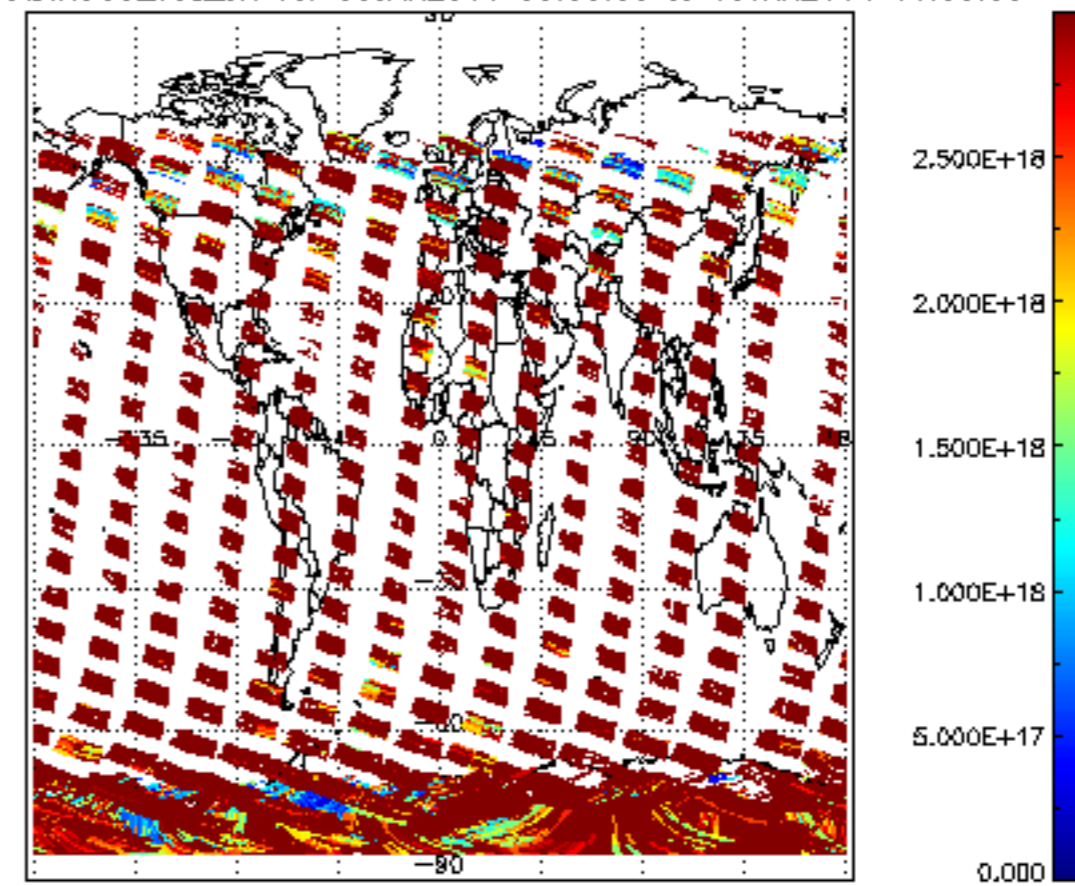




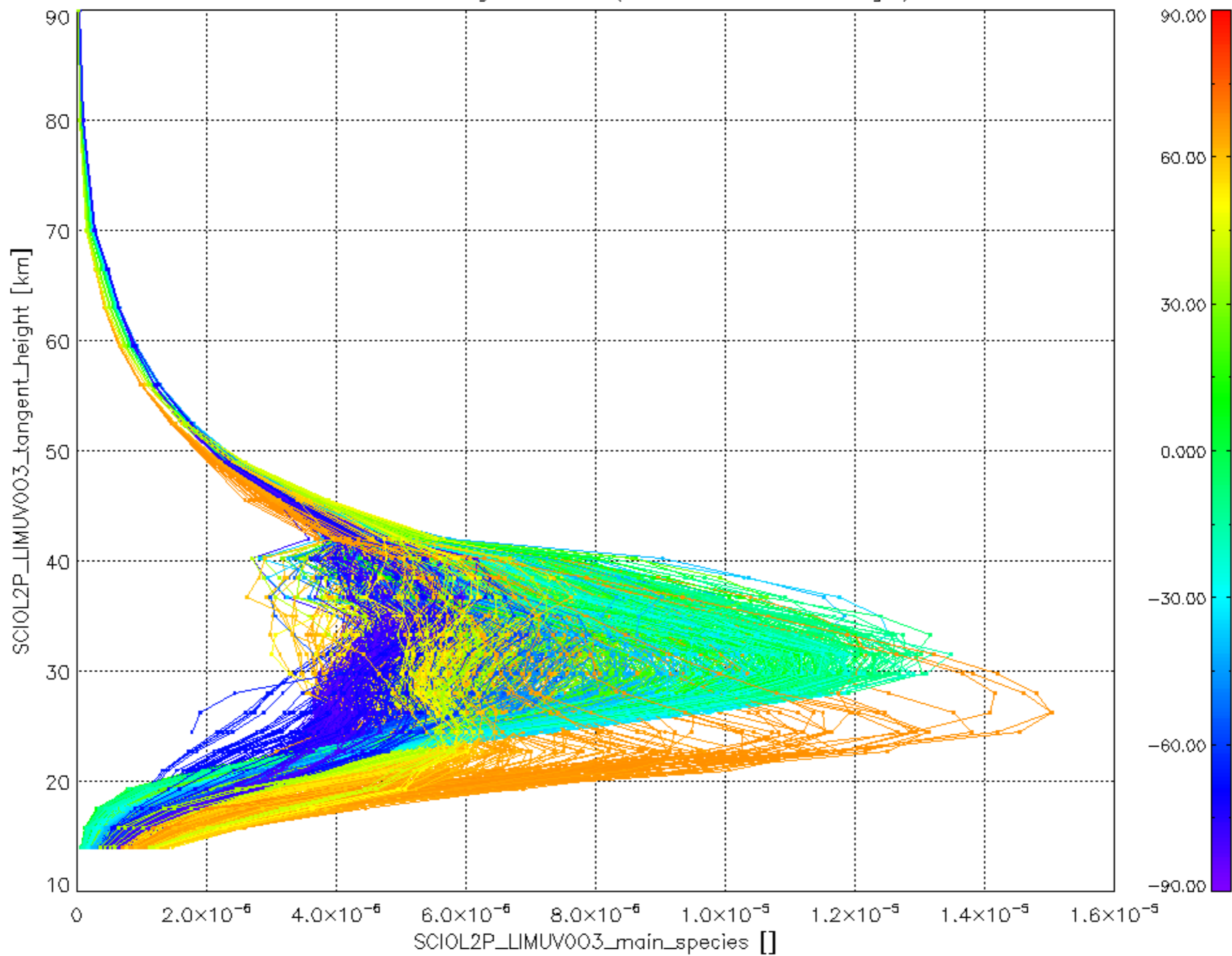
SCIOL2P_NADIR3CO_vcd for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



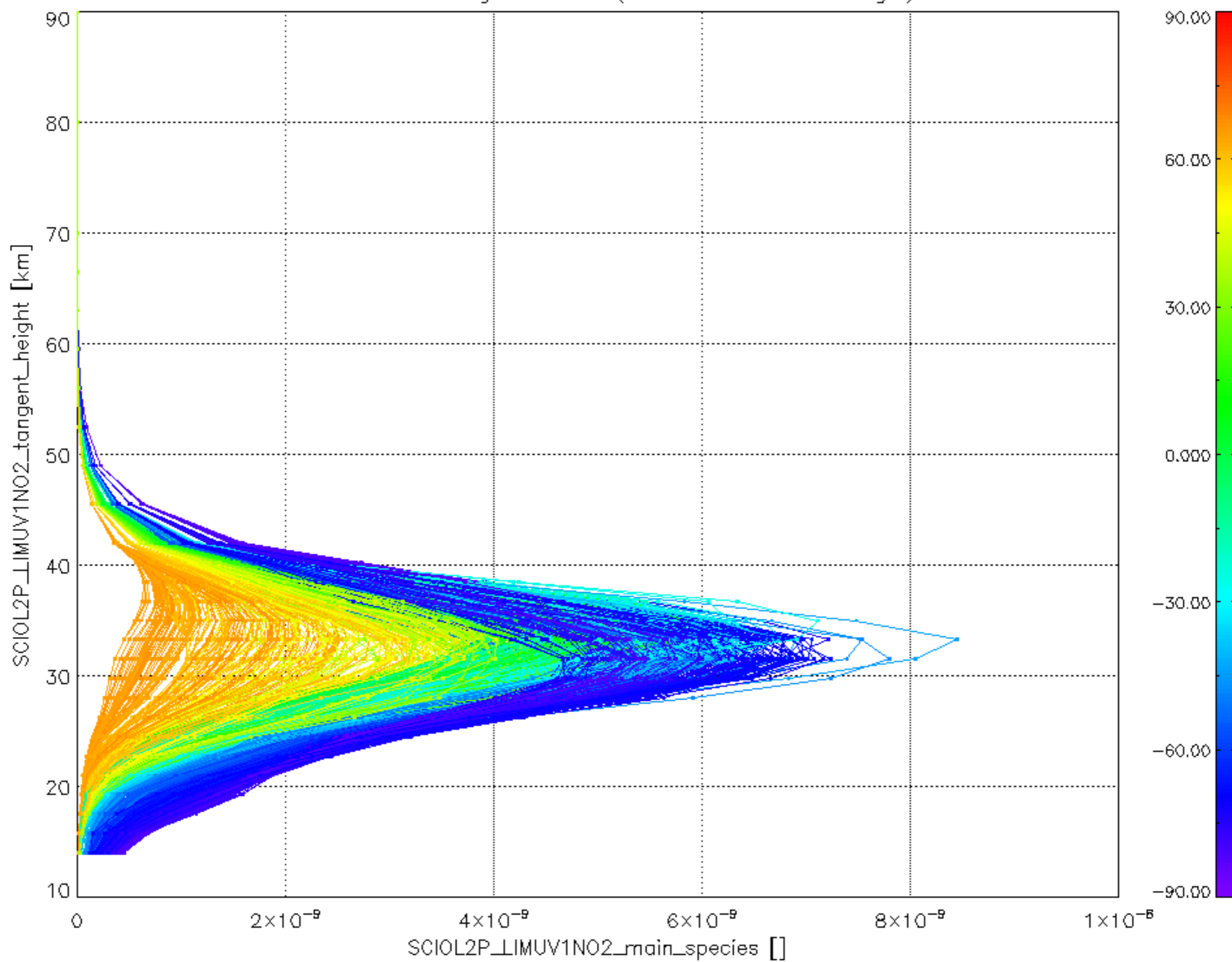
SCIOL2P_NADIR3CO_vcd_err for 09JAN2011 00:00:00 to 10JAN2011 00:00:00



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).

