

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 | 29JAN2012 03:36:34 |
| Data source version | SCIA-OL/5.02-W |
| Processing scope for products | 16JAN2012 00:00:00 to 17JAN2012 00:00:00 |
| Start time of first product within scope | 15JAN2012 23:51:24 |
| Stop time of last product within scope | 16JAN2012 02:30:14 |
| Total number of level 2 products | 2 |
| 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__2PWDP A20120115_235124_000035303110_00361_51668_3159.N1 | 15JAN2012 23:51:24 | 16JAN2012 00:50:15 | 0 | GOOD |
| 1 | SCI_OL__2PWDP A20120116_013138_000035163110_00362_51669_3158.N1 | 16JAN2012 01:31:38 | 16JAN2012 02:30:14 | 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: 18200

Total number of cloud data DSRs with good quality flag (=0): 18200 (100.0 %)

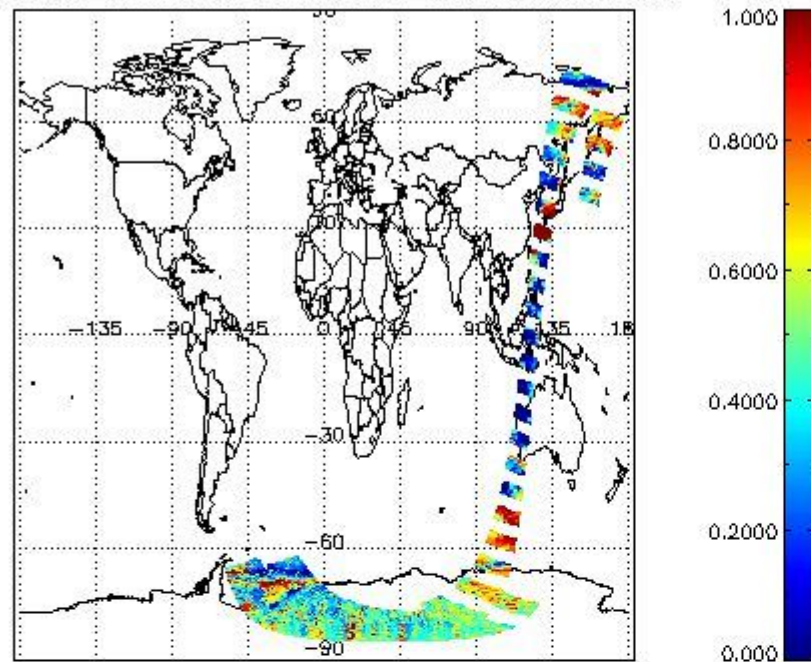
| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|-------------------|--------|----------|----------|----------|----------|----------|------|
| QUALITY_FLAG | 18200 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| INTEGR_TIME | 18200 | 0.15000 | 0.12500 | 0.12500 | 0.25000 | 0.050001 | s |
| CL_FRAC | 18200 | 0.46236 | 0.44738 | 0.0000 | 1.0000 | 0.28365 | |
| CL_FRAC_ERR | 18200 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | % |
| PMD_READ | 18200 | 4.8000 | 4.0000 | 4.0000 | 8.0000 | 1.6000 | |
| PMD_READ_CL[0] | 18200 | 0.51615 | 0.0000 | 0.0000 | 8.0000 | 1.4467 | - |
| PMD_READ_CL[1] | 18200 | 0.68775 | 0.0000 | 0.0000 | 8.0000 | 1.8516 | - |
| CL_TOP_HEIGHT | 14808 | 4.3323 | 4.2490 | 0.0000 | 17.000 | 2.9379 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 14808 | 63.732 | 84.563 | 0.0000 | 101.00 | 39.845 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 18200 | 11100000 | 11100000 | 11100000 | 11100000 | 0.0000 | |
| CLOUD_FLAGS | 18200 | 11001010 | 11000100 | 11000000 | 11100000 | 3290.9 | |
| AERO_ABSO_IND | 18200 | 0.063159 | 0.0000 | 0.0000 | 3.3510 | 0.20619 | |
| AERO_IND_DIAG | 18200 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 18200 | 01000010 | 00000000 | 00000000 | 11000000 | 23401. | |

Time and geolocation plots:

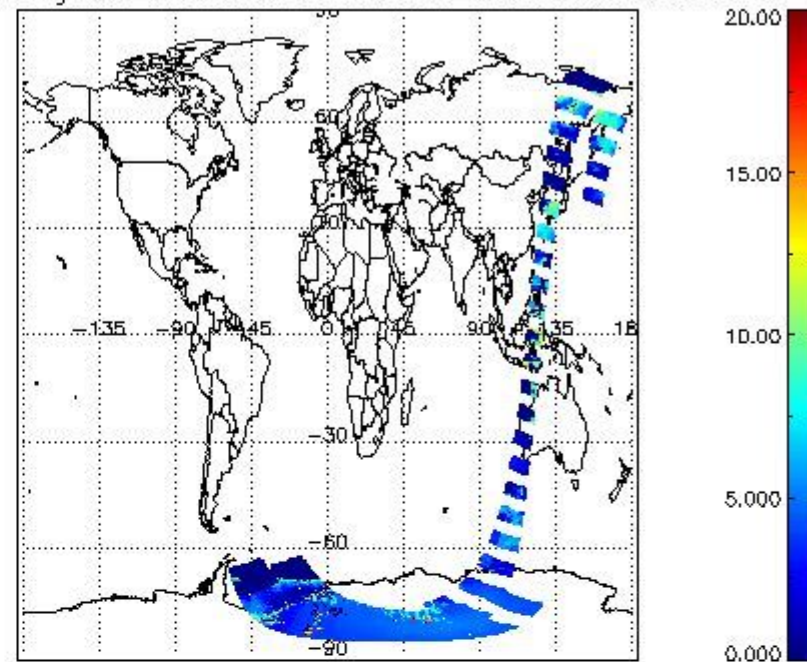
Plots are available for the following parameters:

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

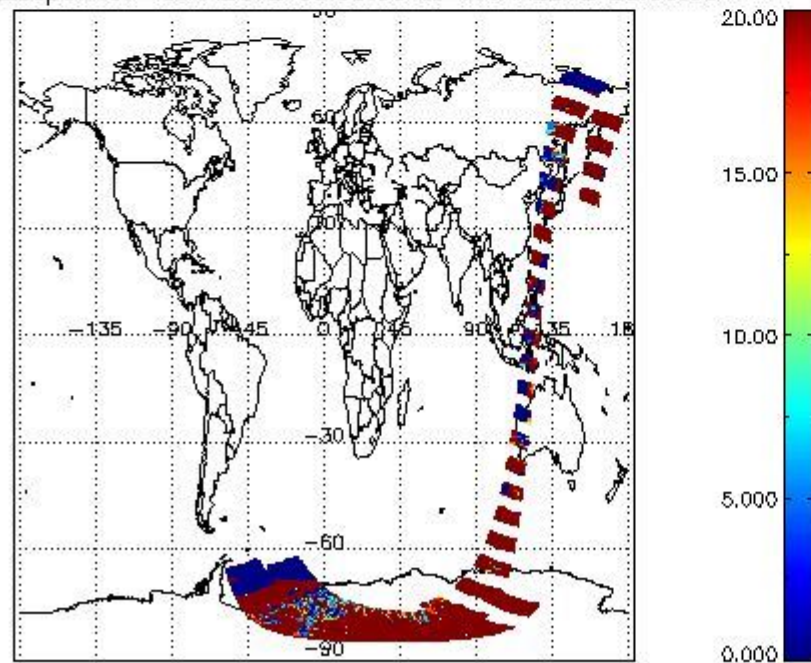
cL_frac for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



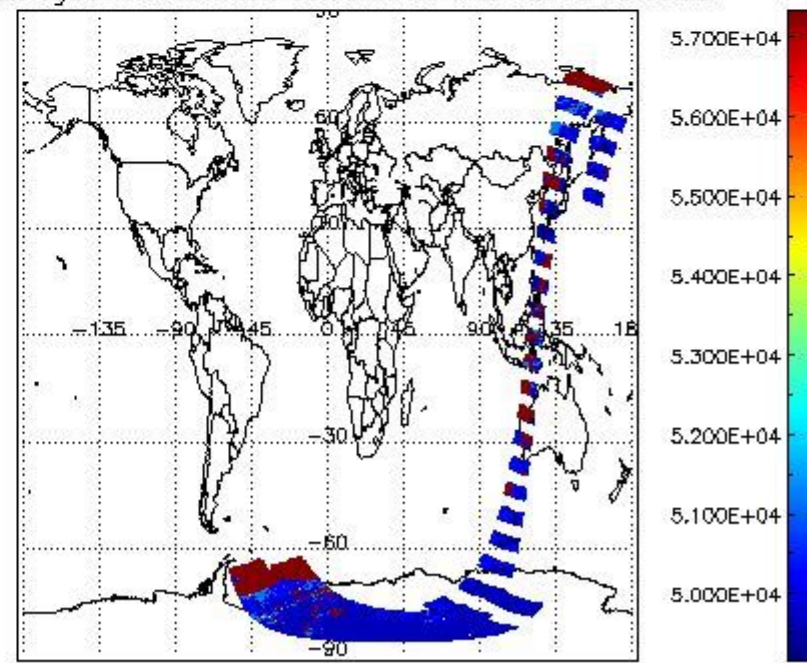
cL_top_height for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



cLopt_depth for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



cloud_flags for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



2.2.2 Nadir

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

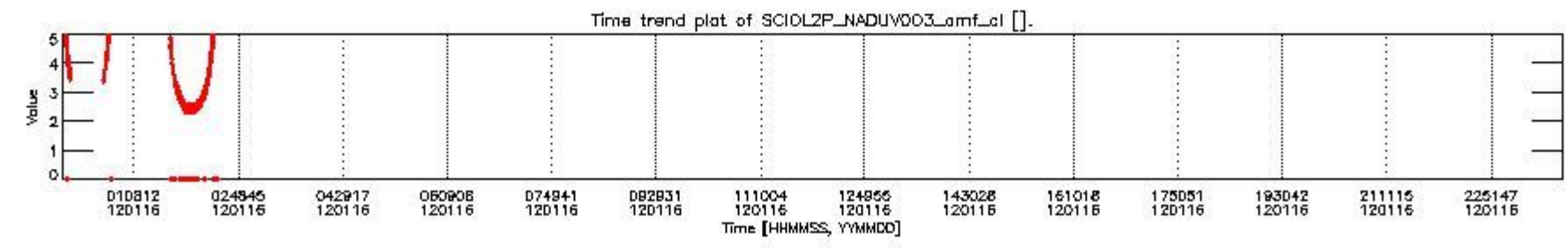
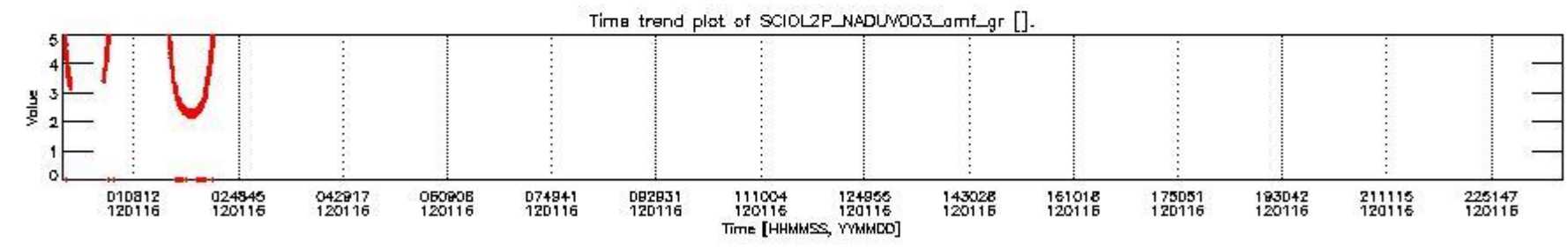
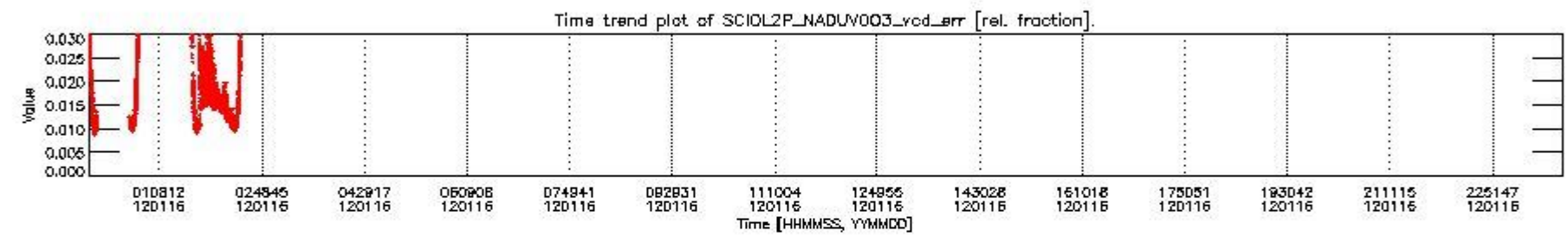
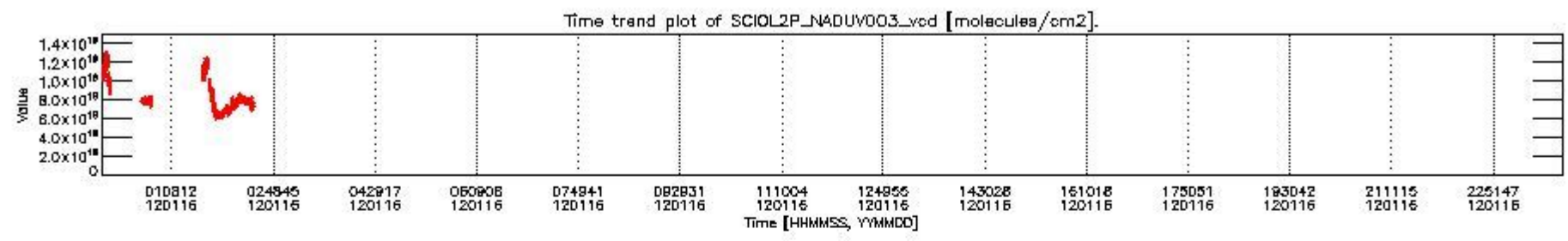
The following data items are currently included into this section:

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

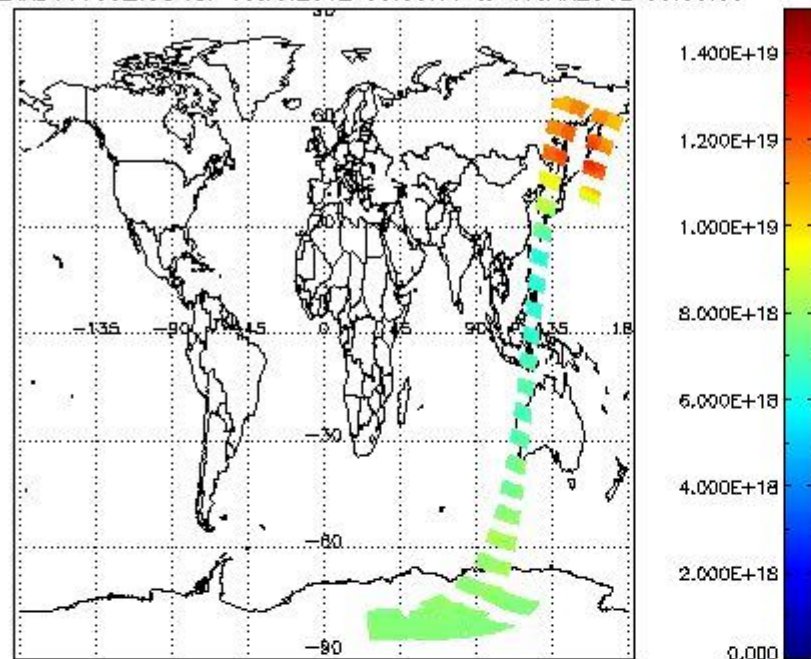
| | |
|----|---------------------------------|
| 3 | SCIOL2P_NADUV0O3_amf_cl |
| 4 | SCIOL2P_NADUV1NO2_vcd |
| 5 | SCIOL2P_NADUV1NO2_vcd_err |
| 6 | SCIOL2P_NADUV1NO2_amf_gr |
| 7 | SCIOL2P_NADUV1NO2_amf_cl |
| 8 | SCIOL2P_NADUV3BRO_vcd |
| 9 | SCIOL2P_NADUV3BRO_vcd_err |
| 10 | SCIOL2P_NADUV3BRO_amf_gr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

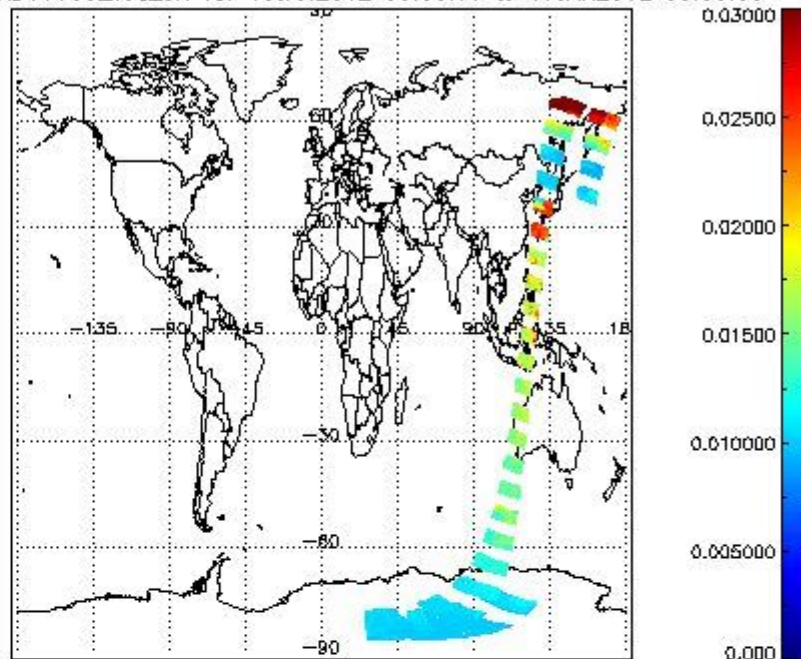
2.2.2.1 O3 (UV0)



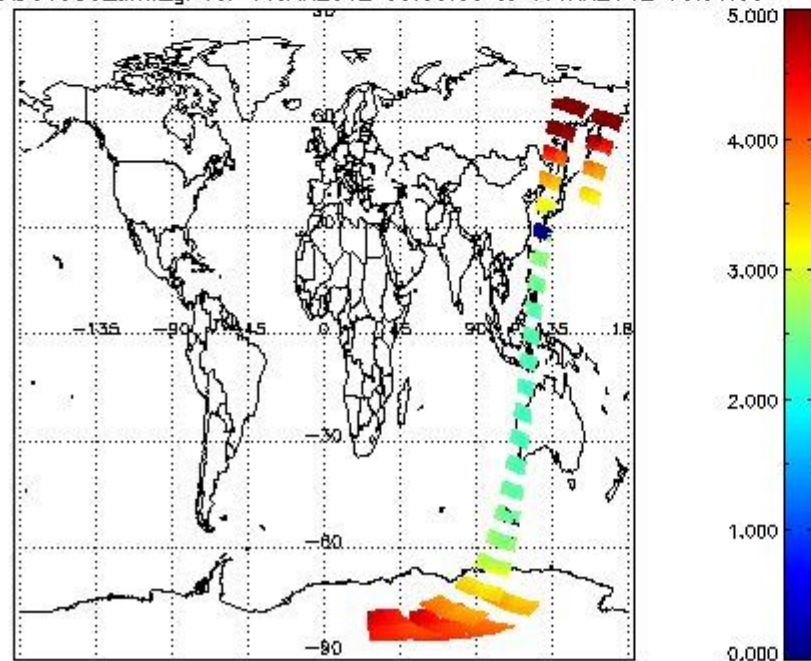
SCIOL2P_NADUV003_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



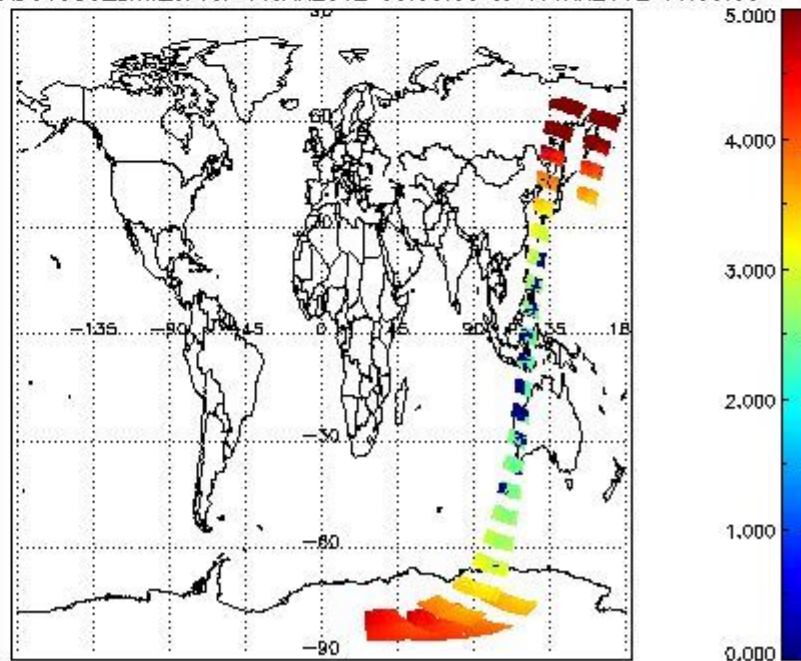
SCIOL2P_NADUV003_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



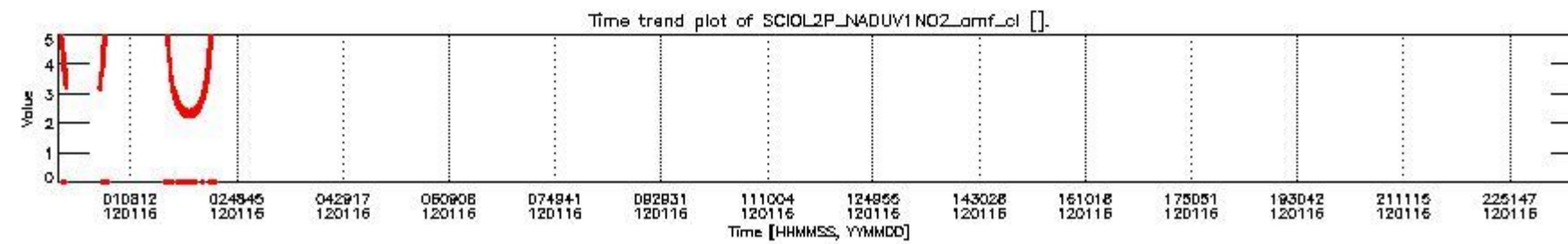
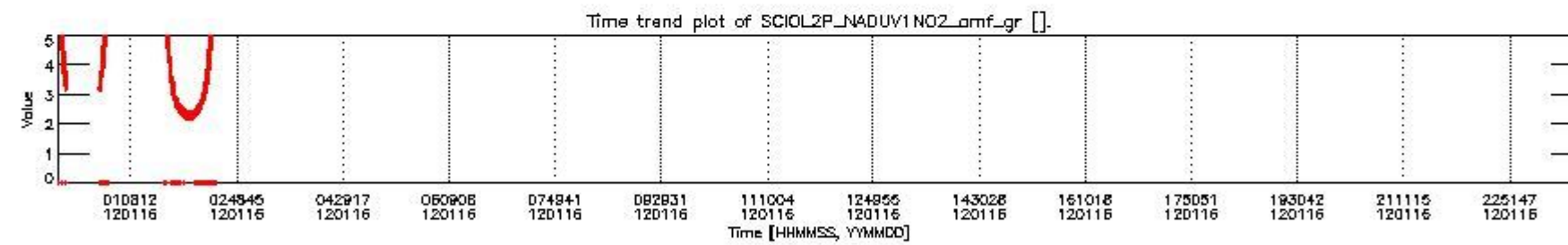
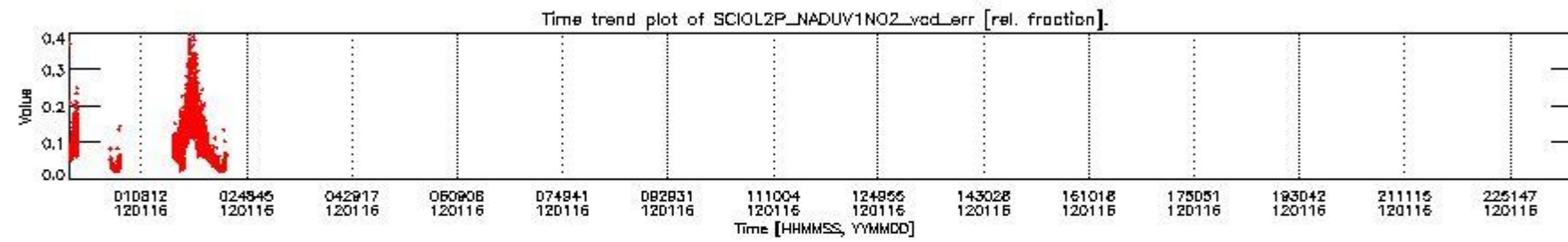
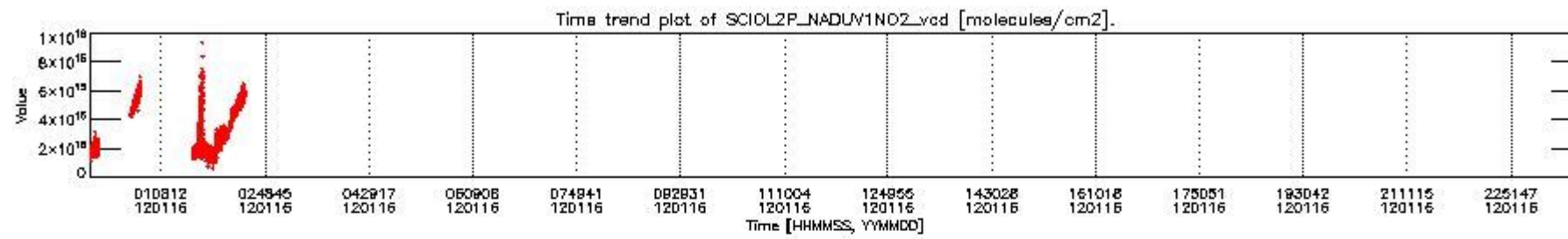
SCIOL2P_NADUV003_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



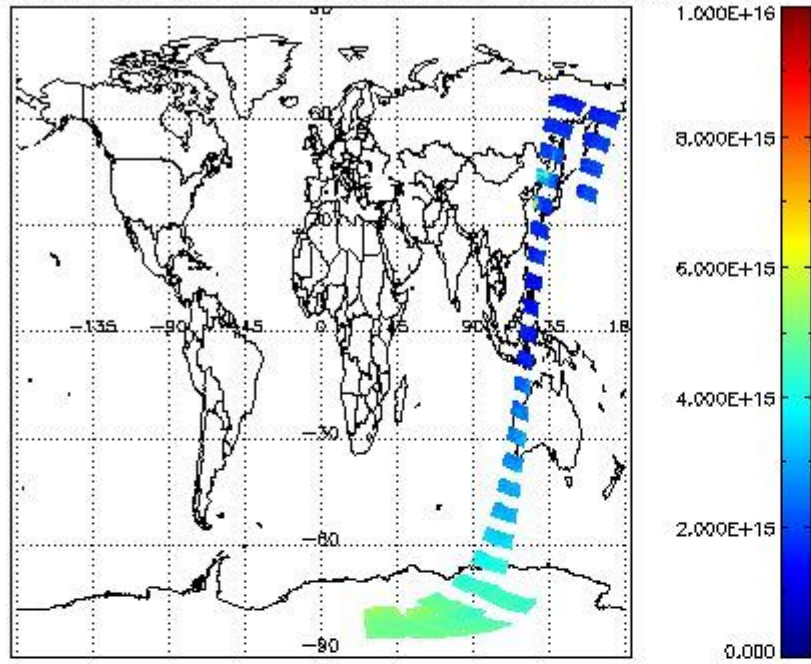
SCIOL2P_NADUV003_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



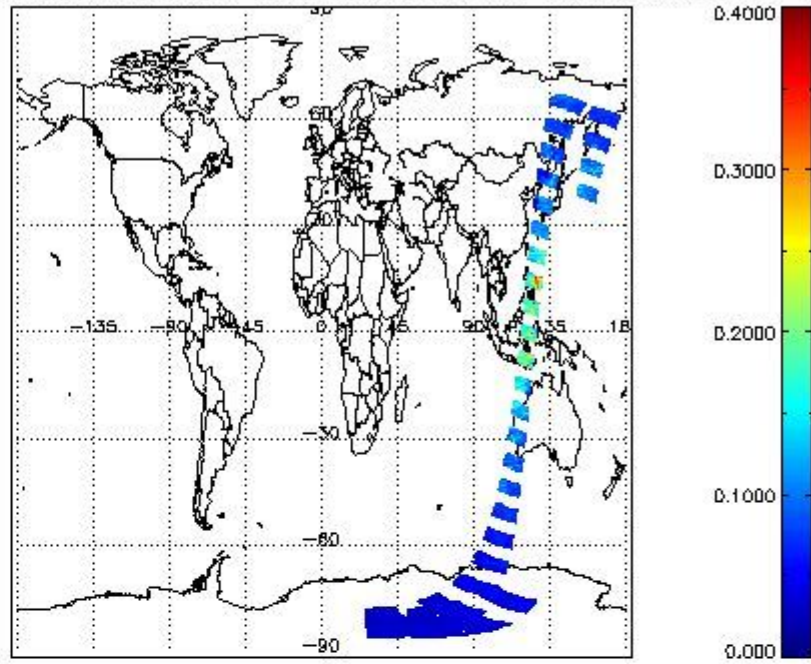
2.2.2.2 NO2 (UV1)



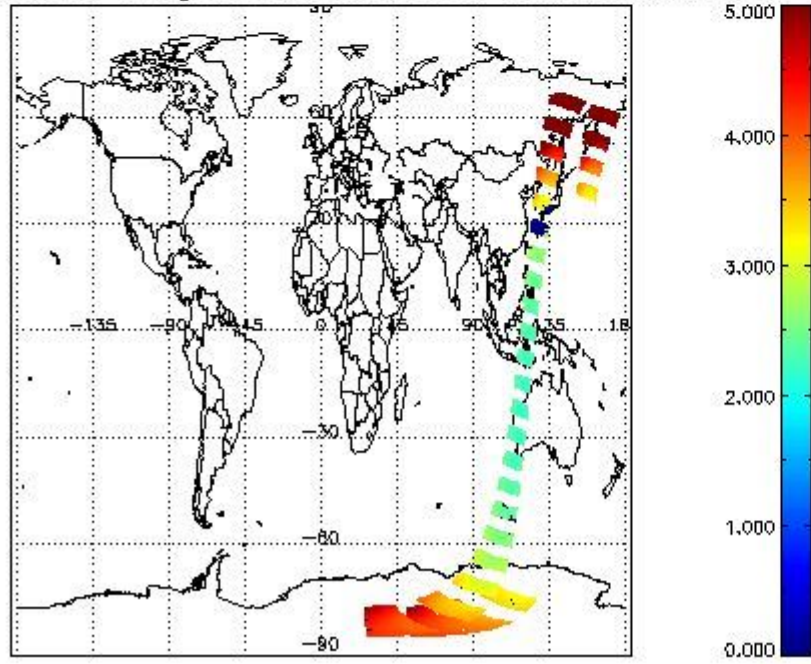
SCIOL2P_NADUV1NO2_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



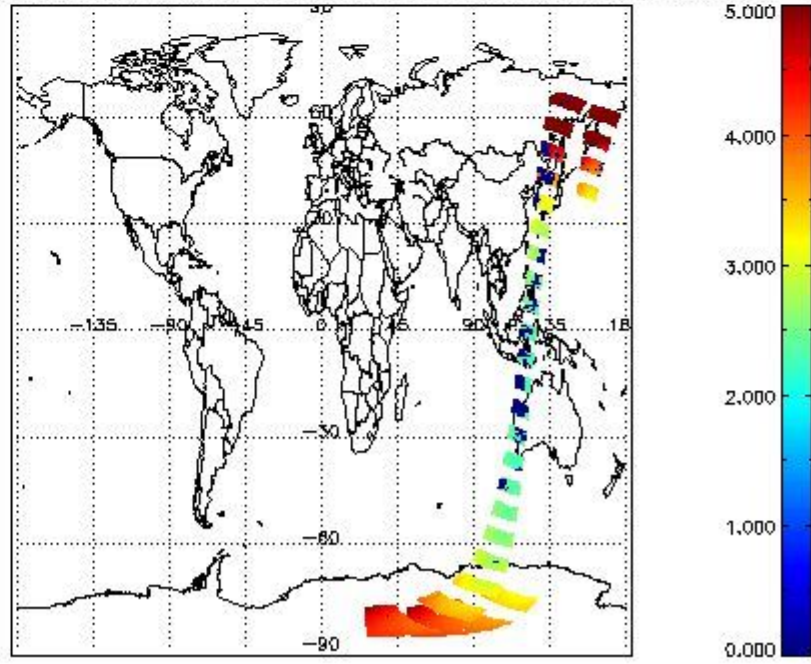
SCIOL2P_NADUV1NO2_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



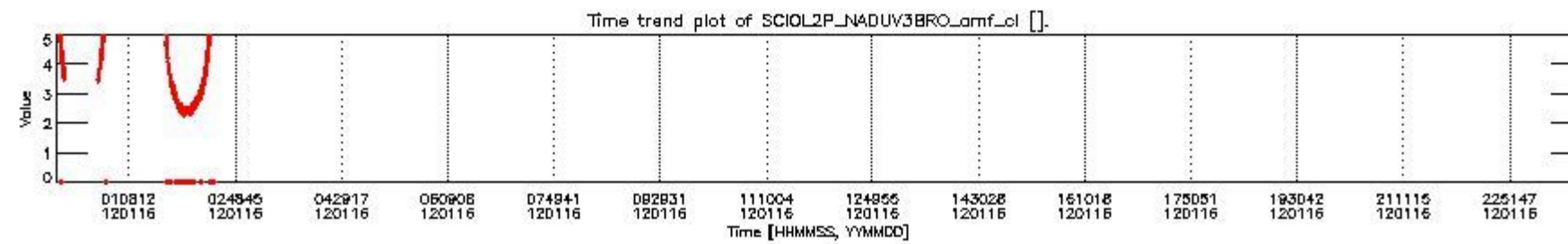
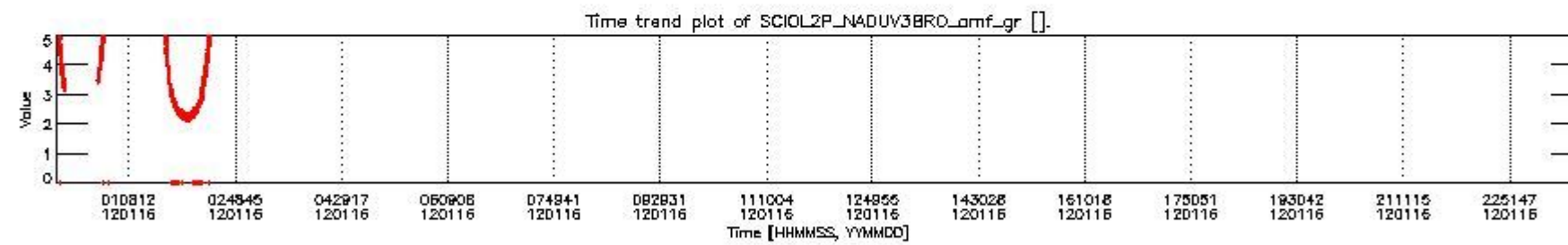
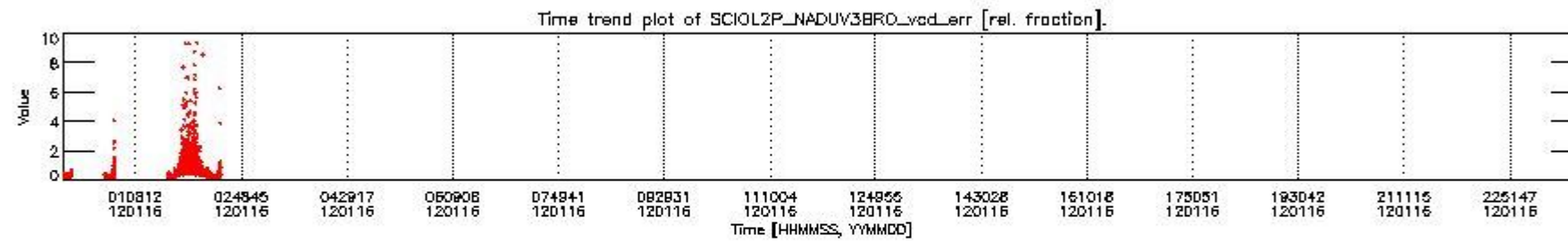
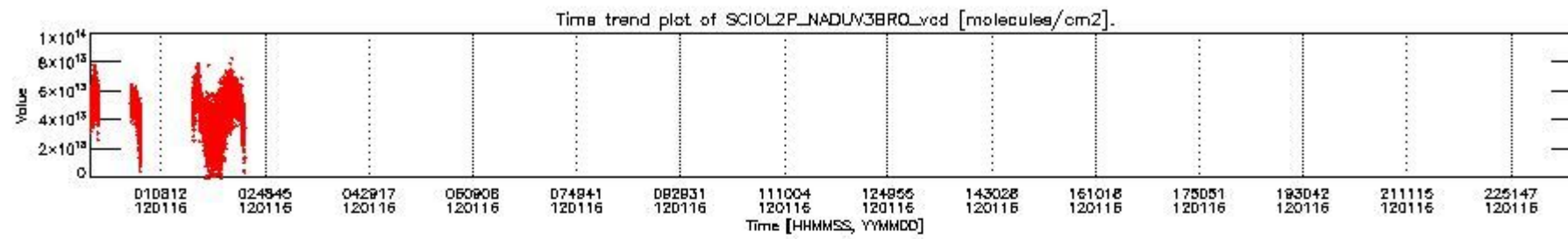
SCIOL2P_NADUV1NO2_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



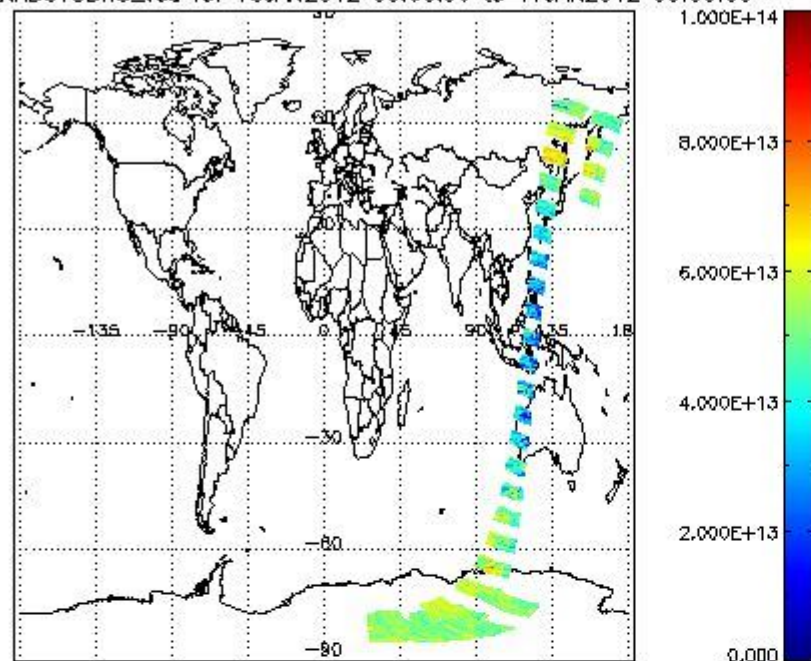
SCIOL2P_NADUV1NO2_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



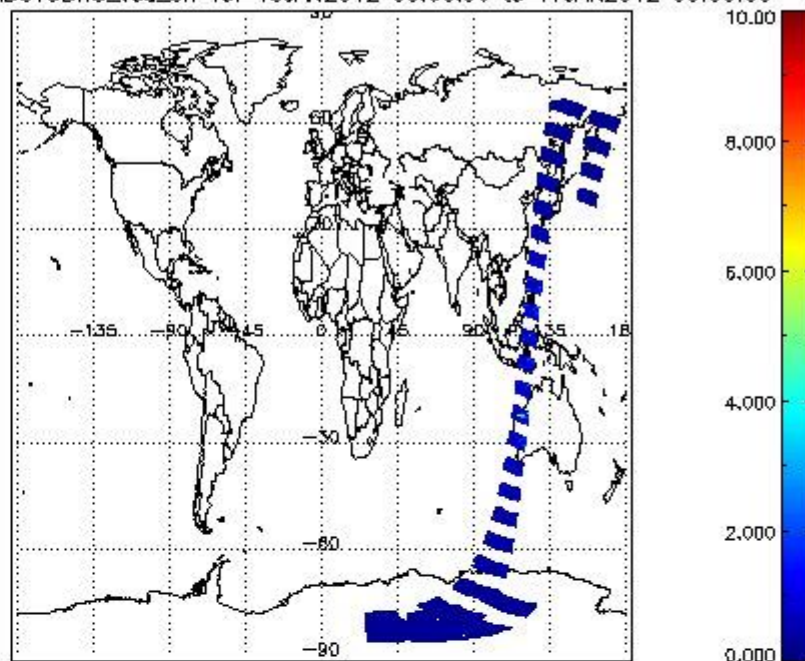
2.2.2.3 BrO (UV3)



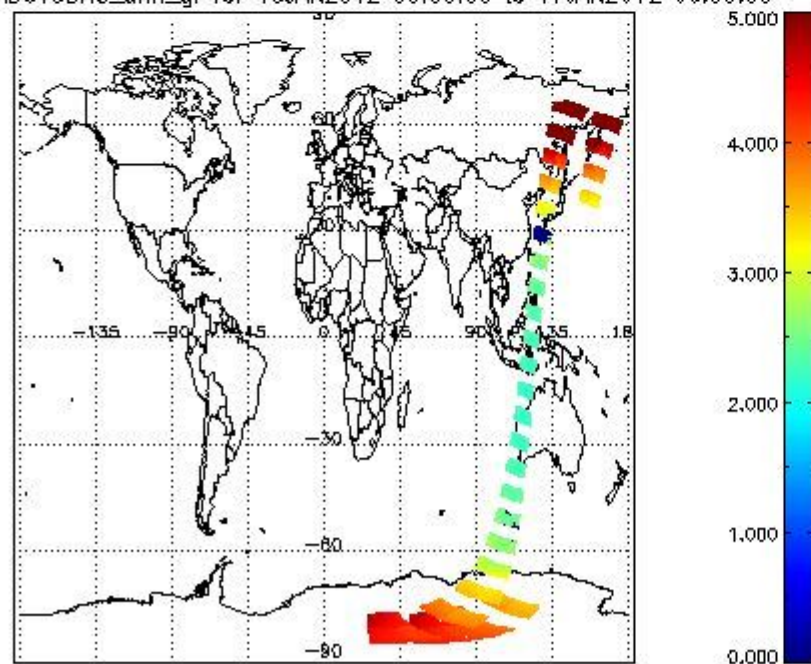
SCIOL2P_NADUV3BRO_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



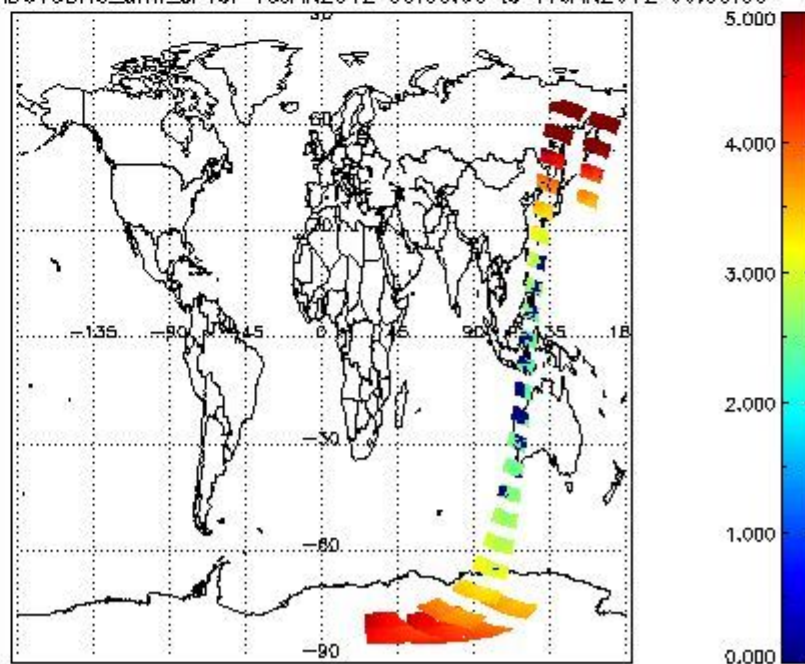
SCIOL2P_NADUV3BRO_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



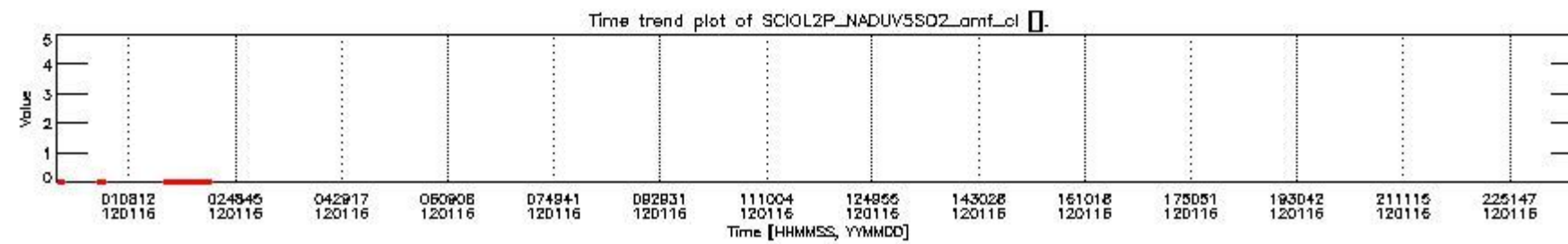
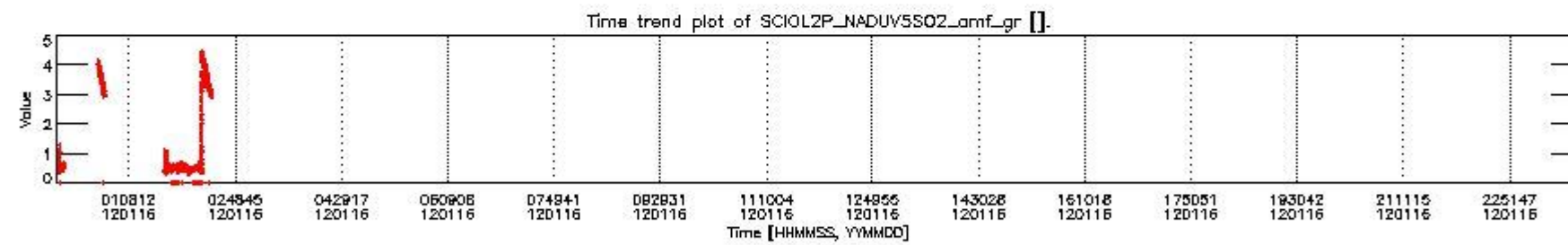
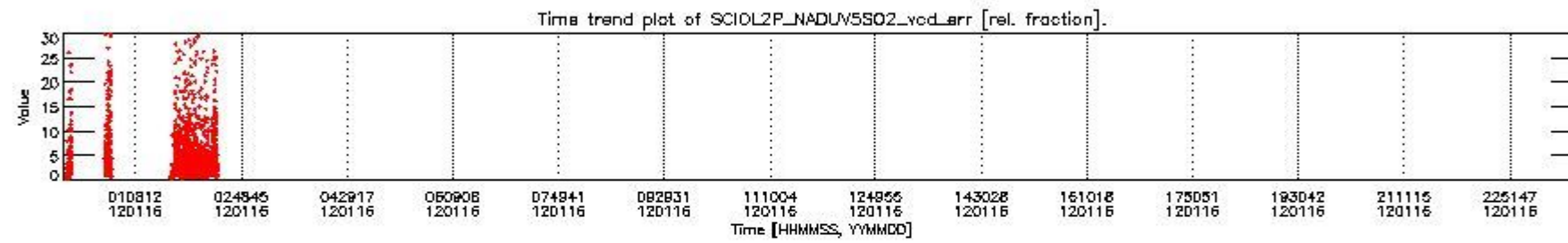
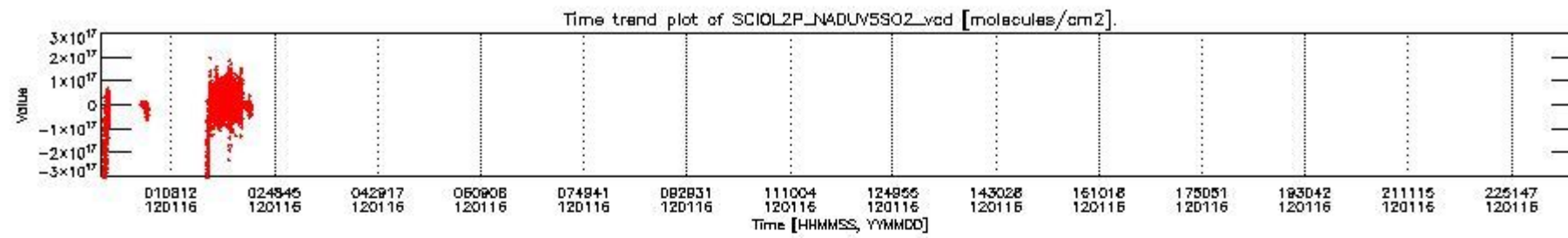
SCIOL2P_NADUV3BRO_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



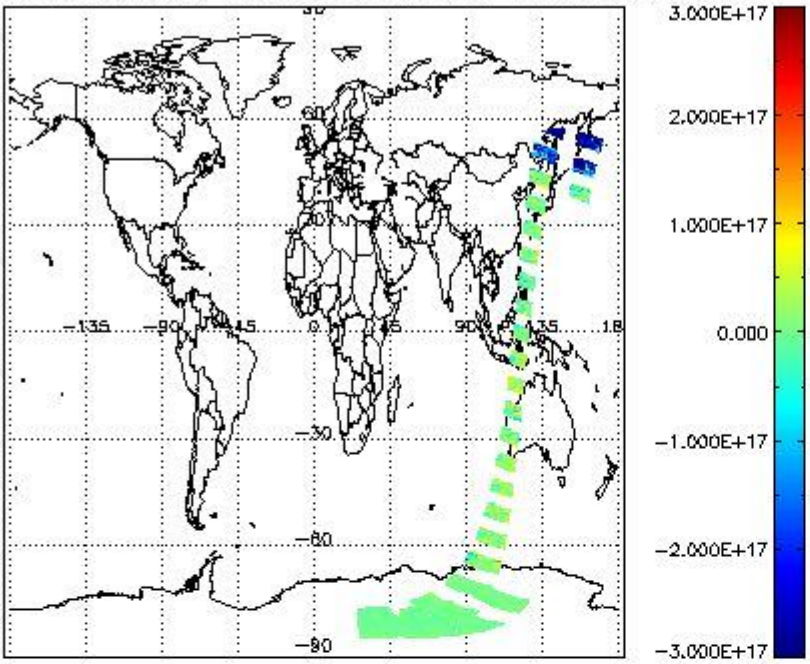
SCIOL2P_NADUV3BRO_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



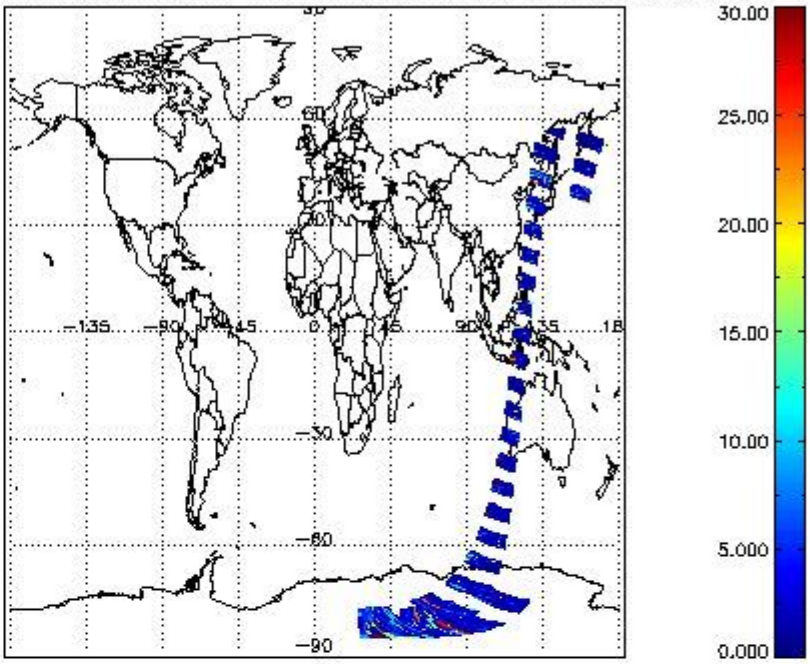
2.2.2.4 SO₂ (UV5)



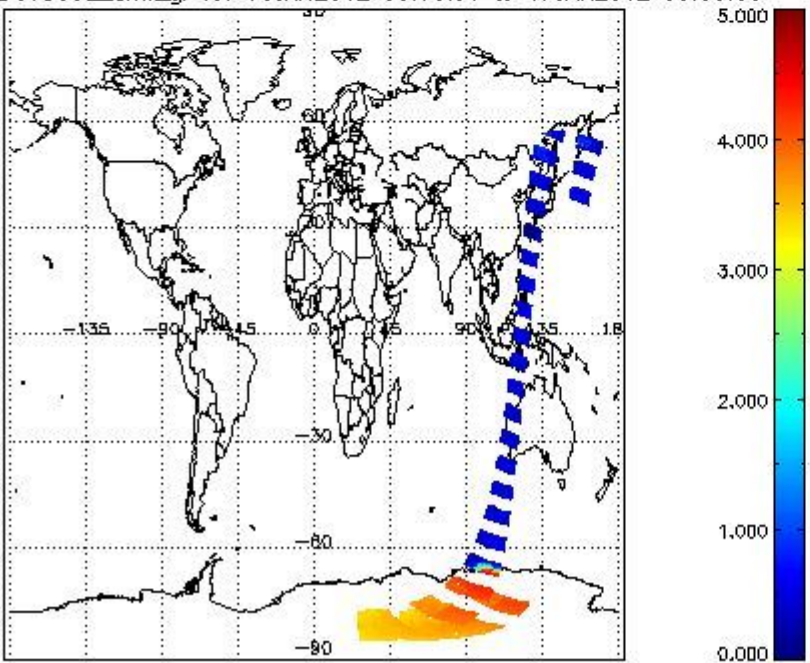
SCIOL2P_NADUV5SO2_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



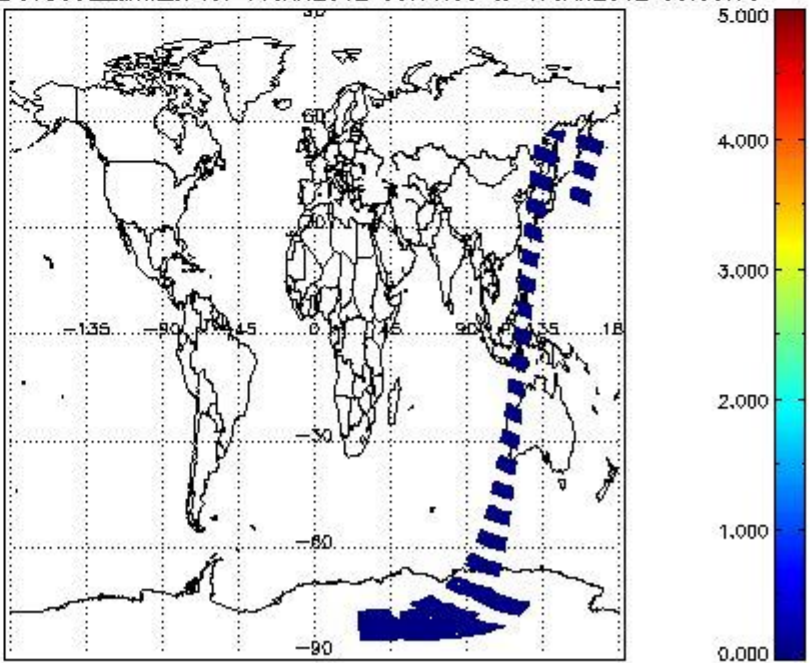
SCIOL2P_NADUV5SO2_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



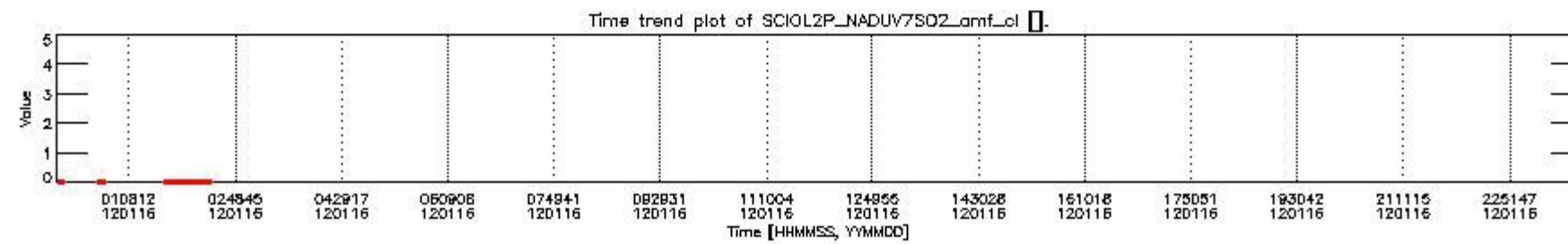
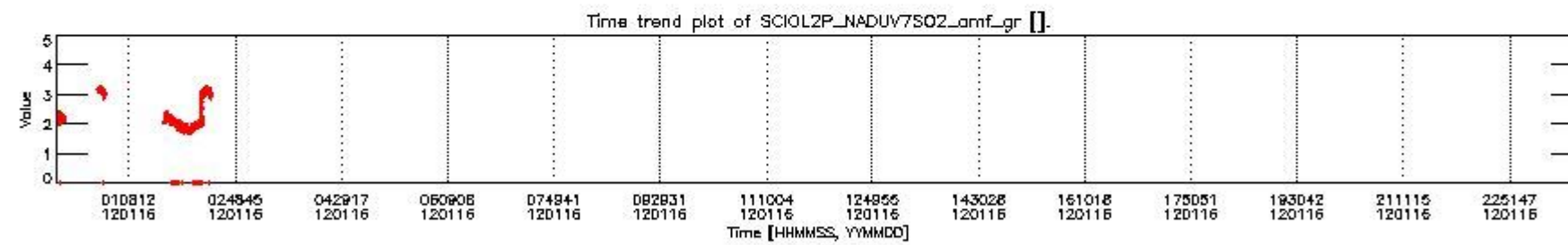
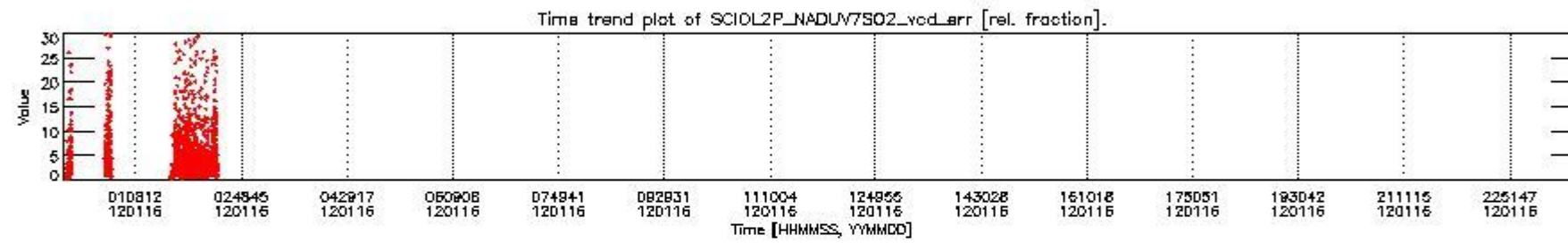
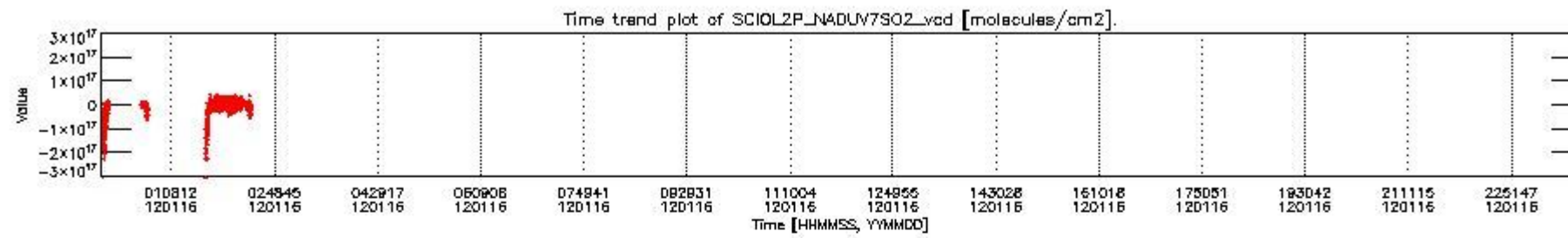
SCIOL2P_NADUV5SO2_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



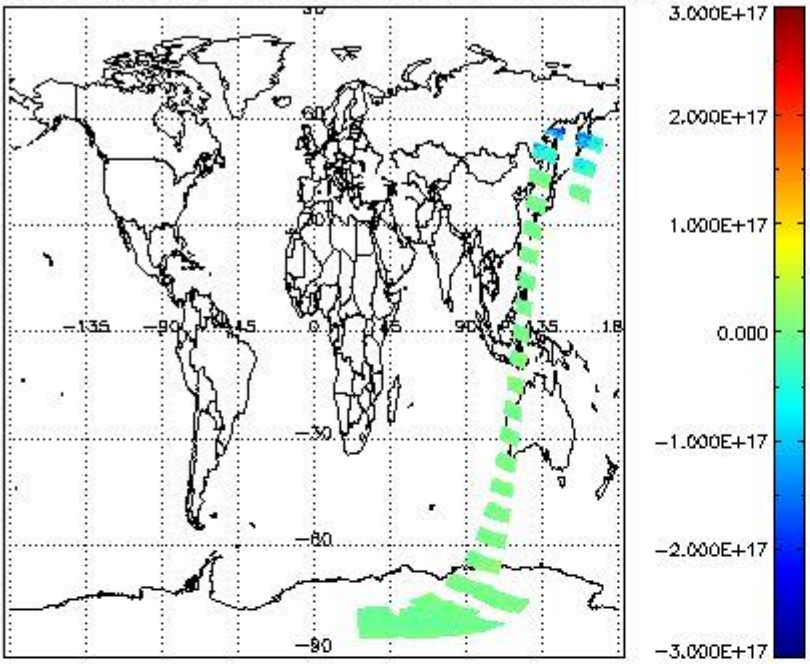
SCIOL2P_NADUV5SO2_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



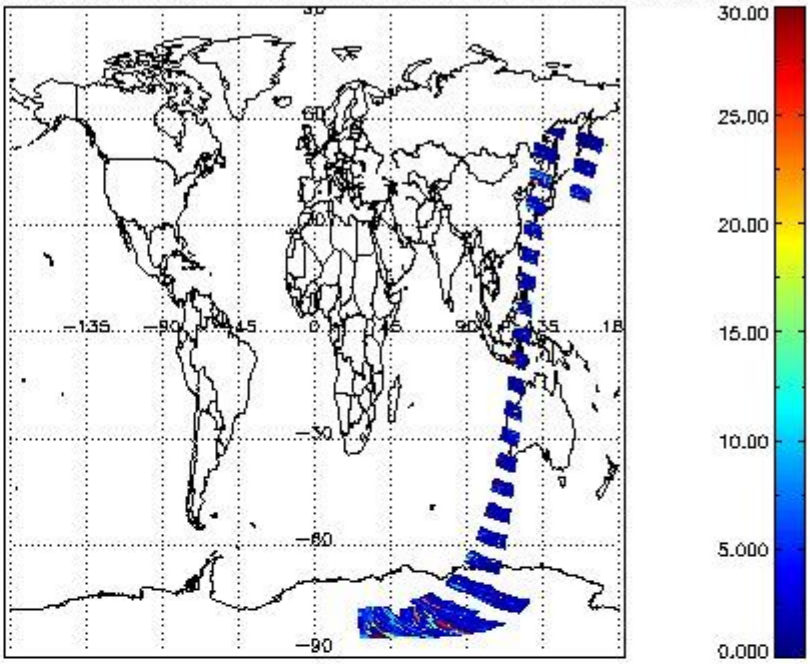
2.2.2.5 SO2 (UV7)



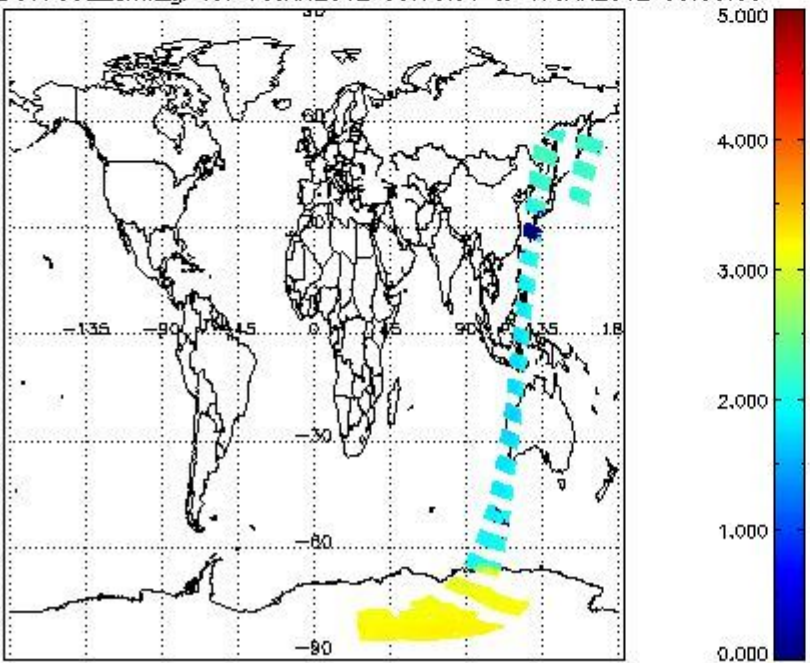
SCIOL2P_NADUV7S02_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



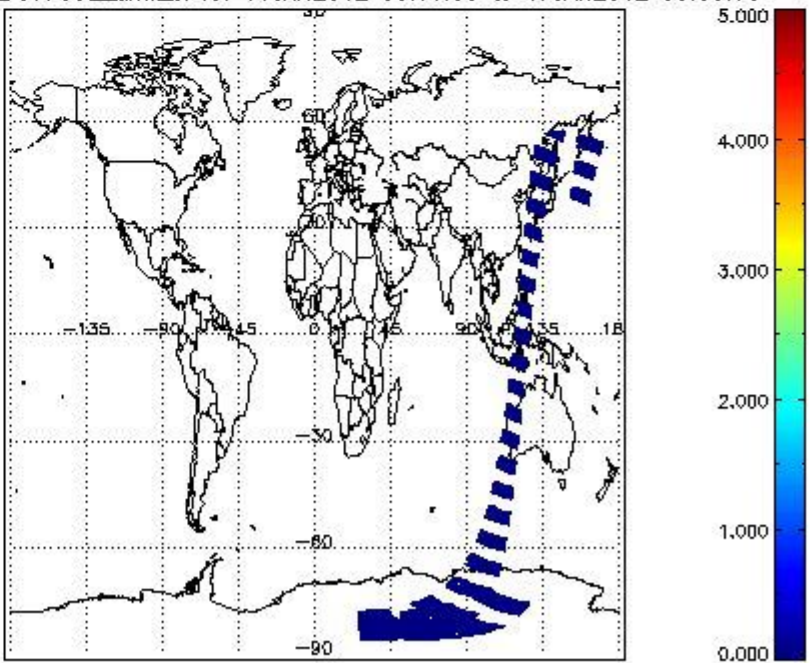
SCIOL2P_NADUV7S02_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



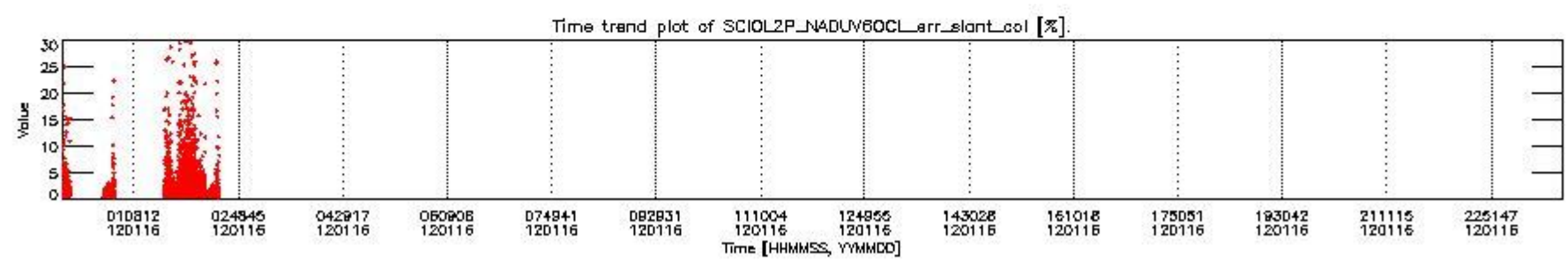
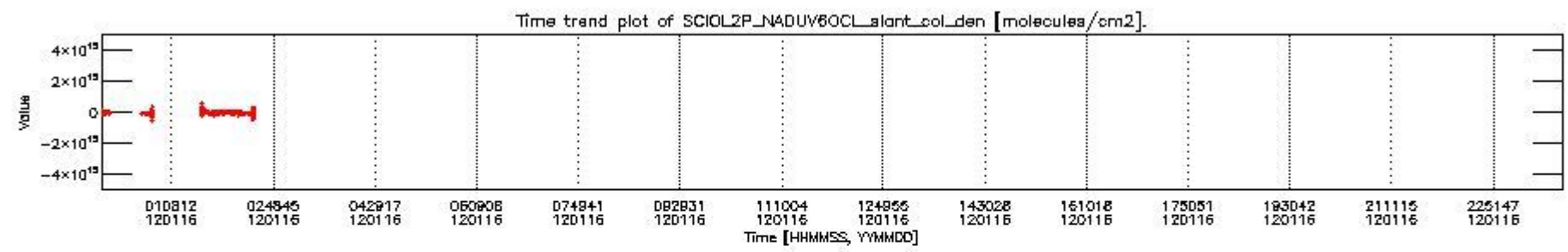
SCIOL2P_NADUV7S02_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



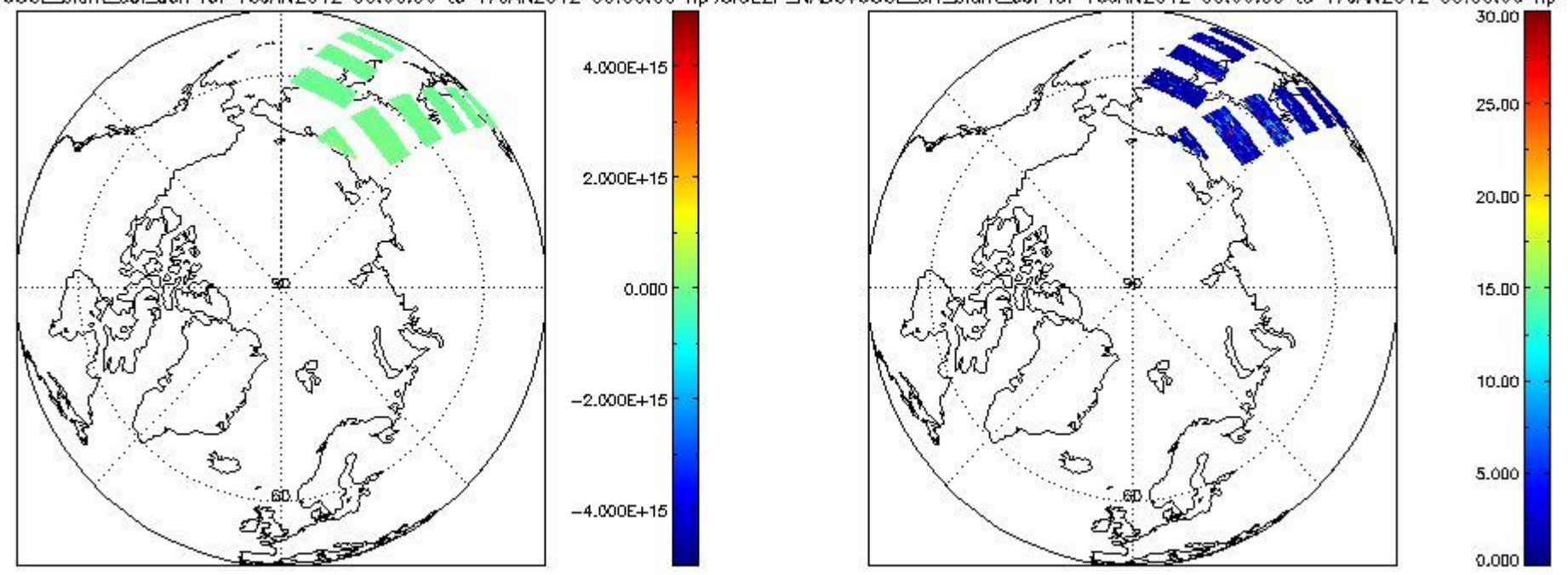
SCIOL2P_NADUV7S02_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



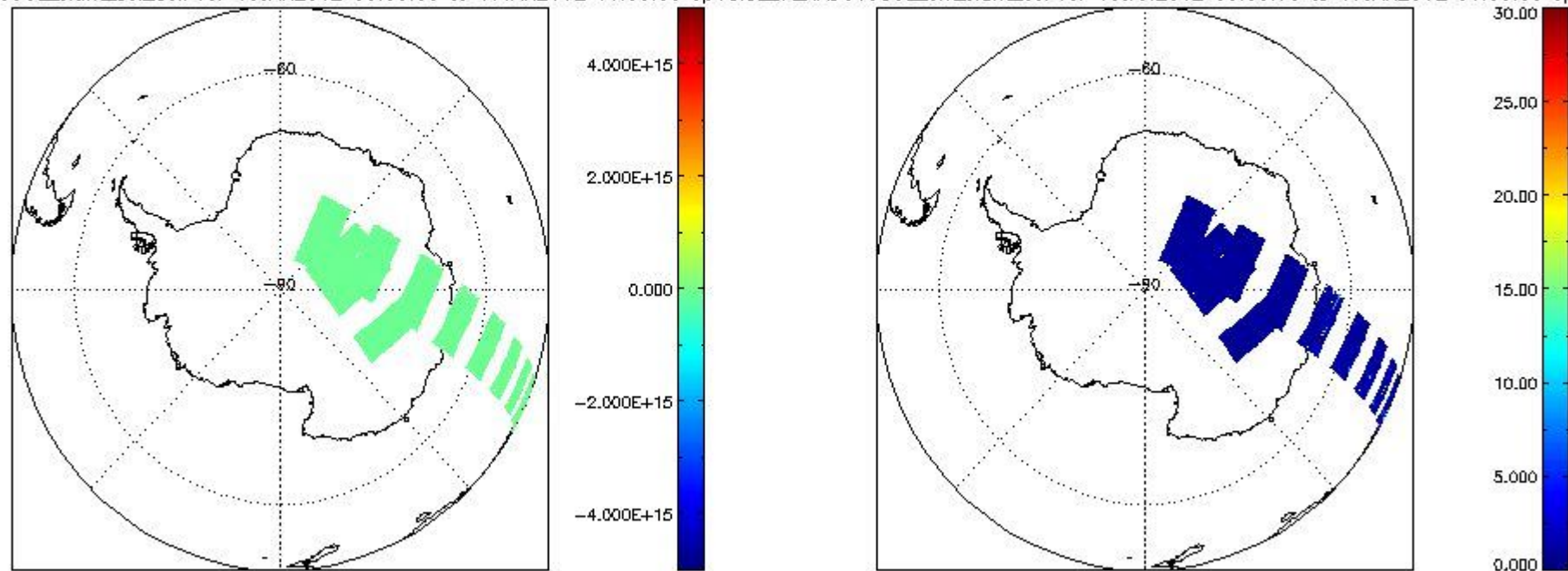
2.2.2.6 OCIO (UV6)



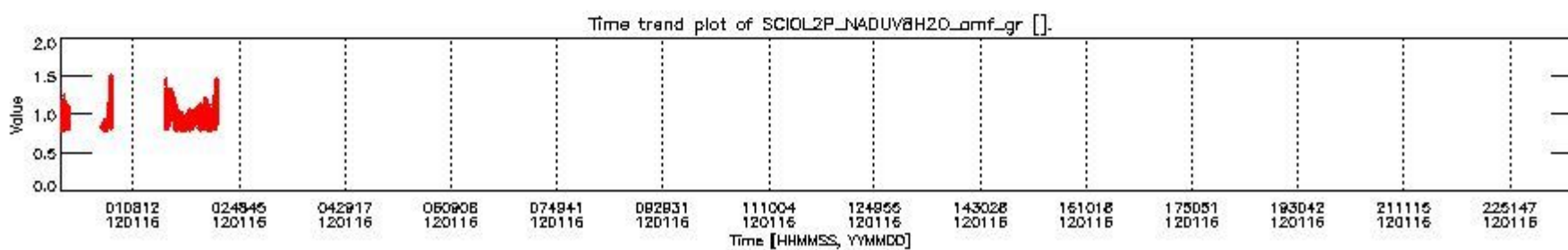
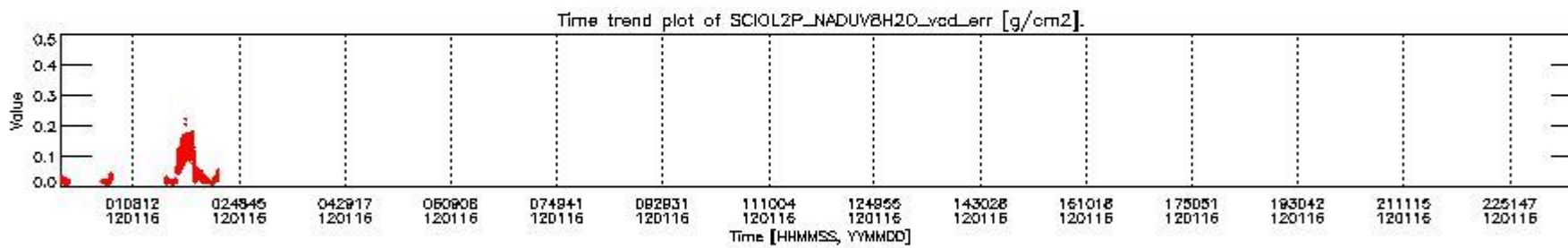
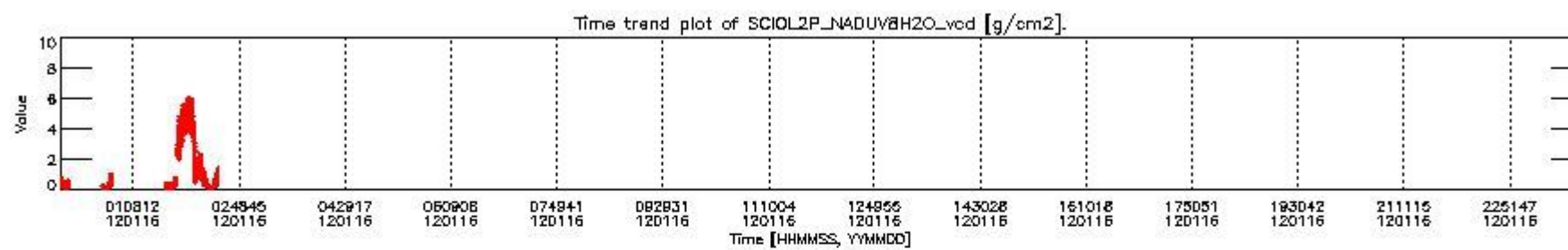
SCIOI2P_NADUV60CL_slant_col_den for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 np; SCIOI2P_NADUV60CL_err_slant_col for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 np



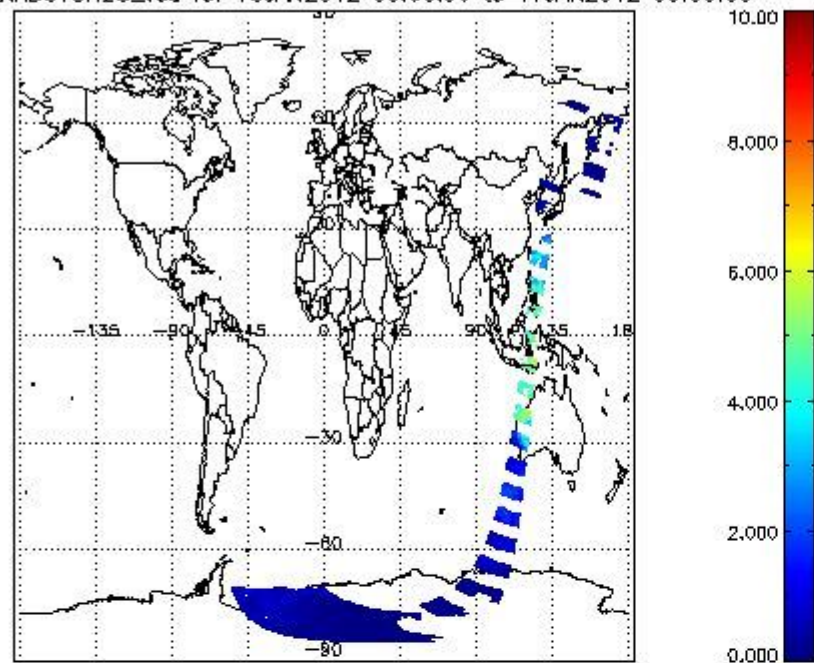
SCIOL2P_NADUV6OCL_slant_col_den for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 sp SCIOL2P_NADUV6OCL_err_slant_col for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 sp



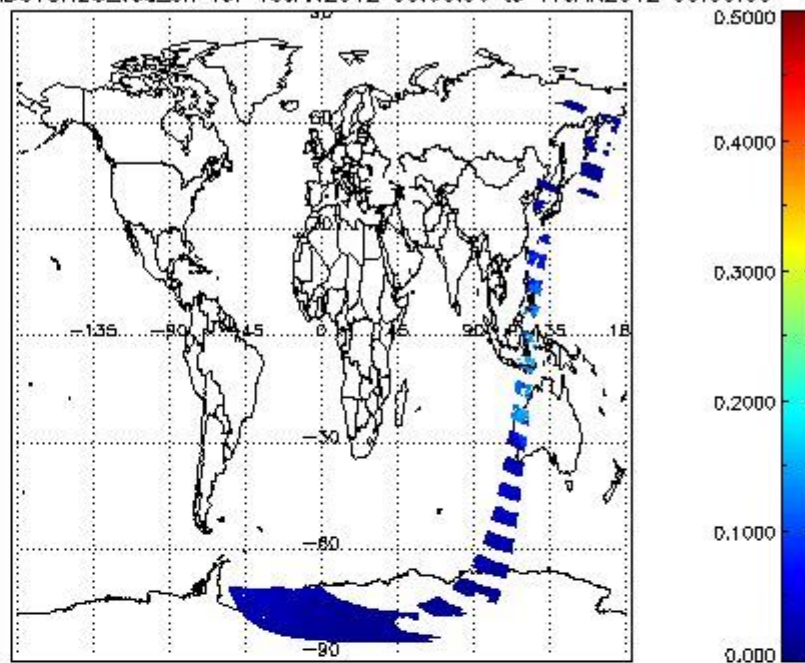
2.2.2.7 H2O (UV8)



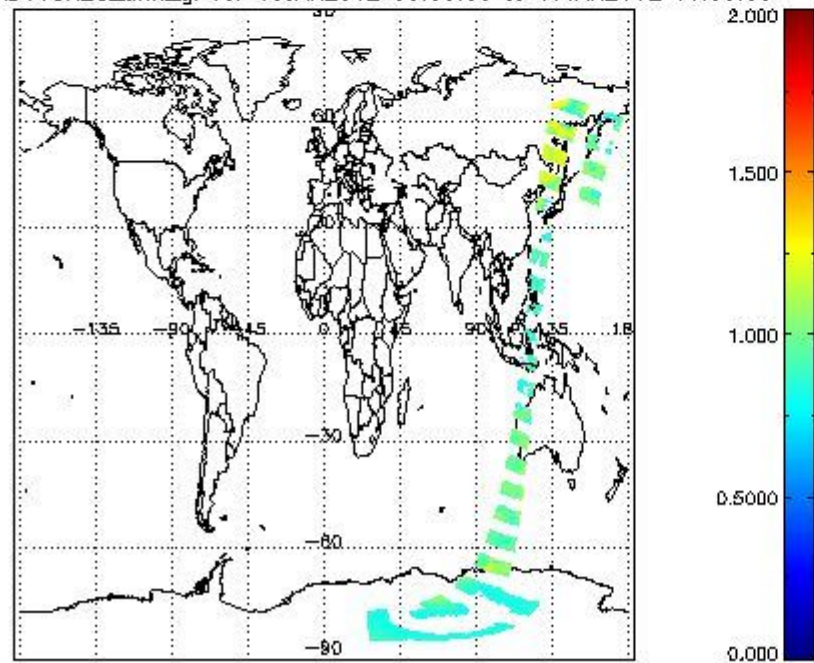
SCIOL2P_NADUV8H2O_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

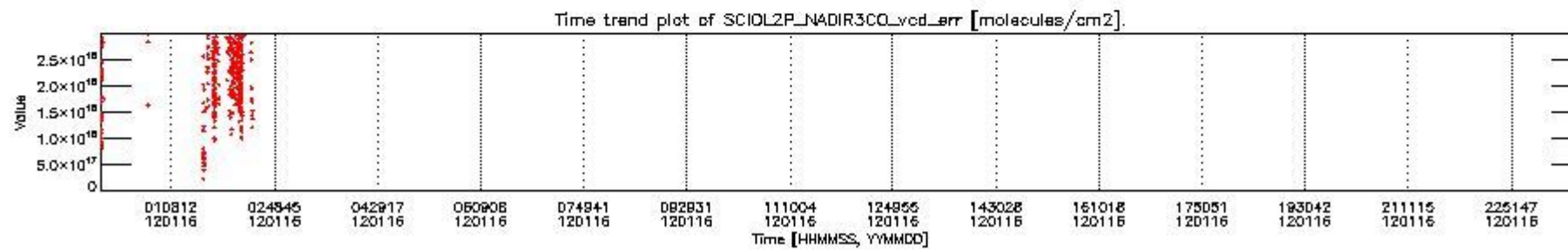
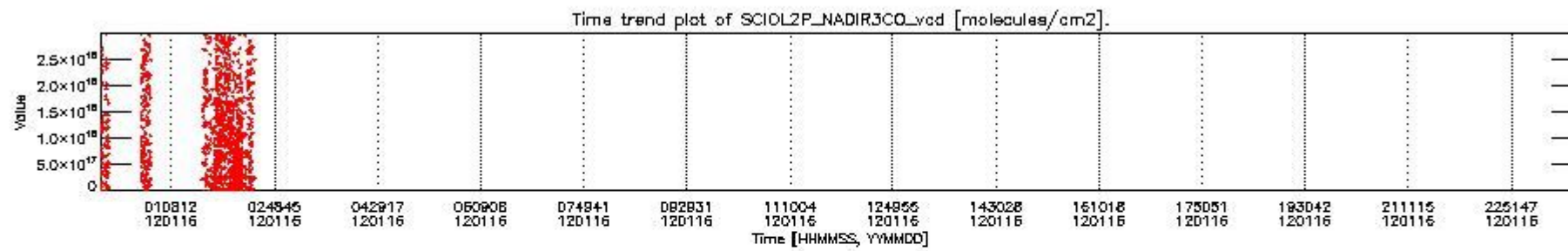


SCIOL2P_NADUV8H2O_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

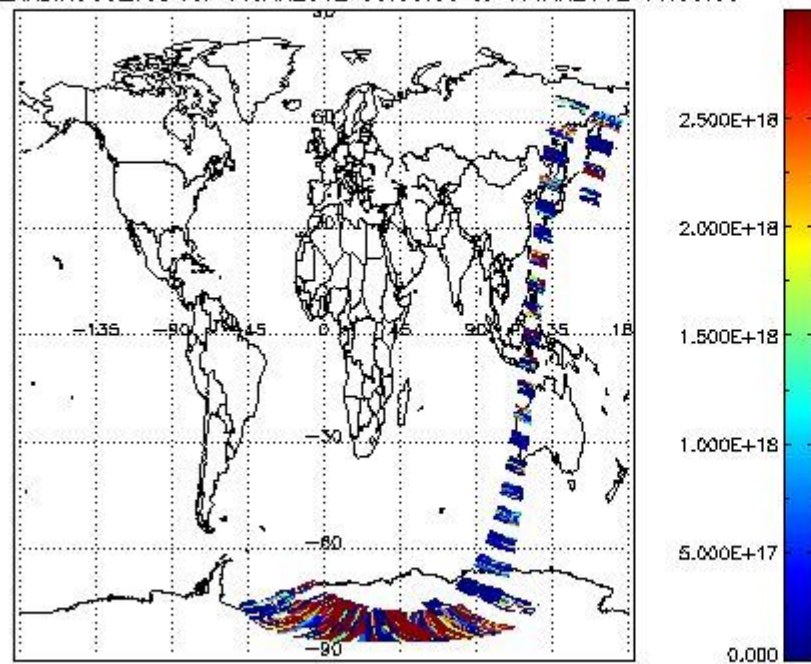


SCIOL2P_NADUV8H2O_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

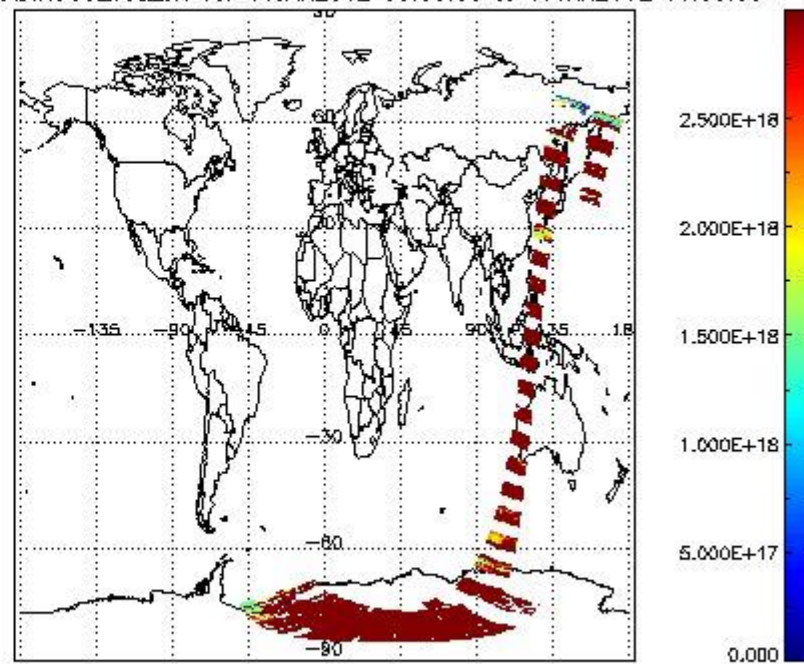




SCIDL2P_NADIR3CO_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



SCIDL2P_NADIR3CO_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



2.2.3 Limb

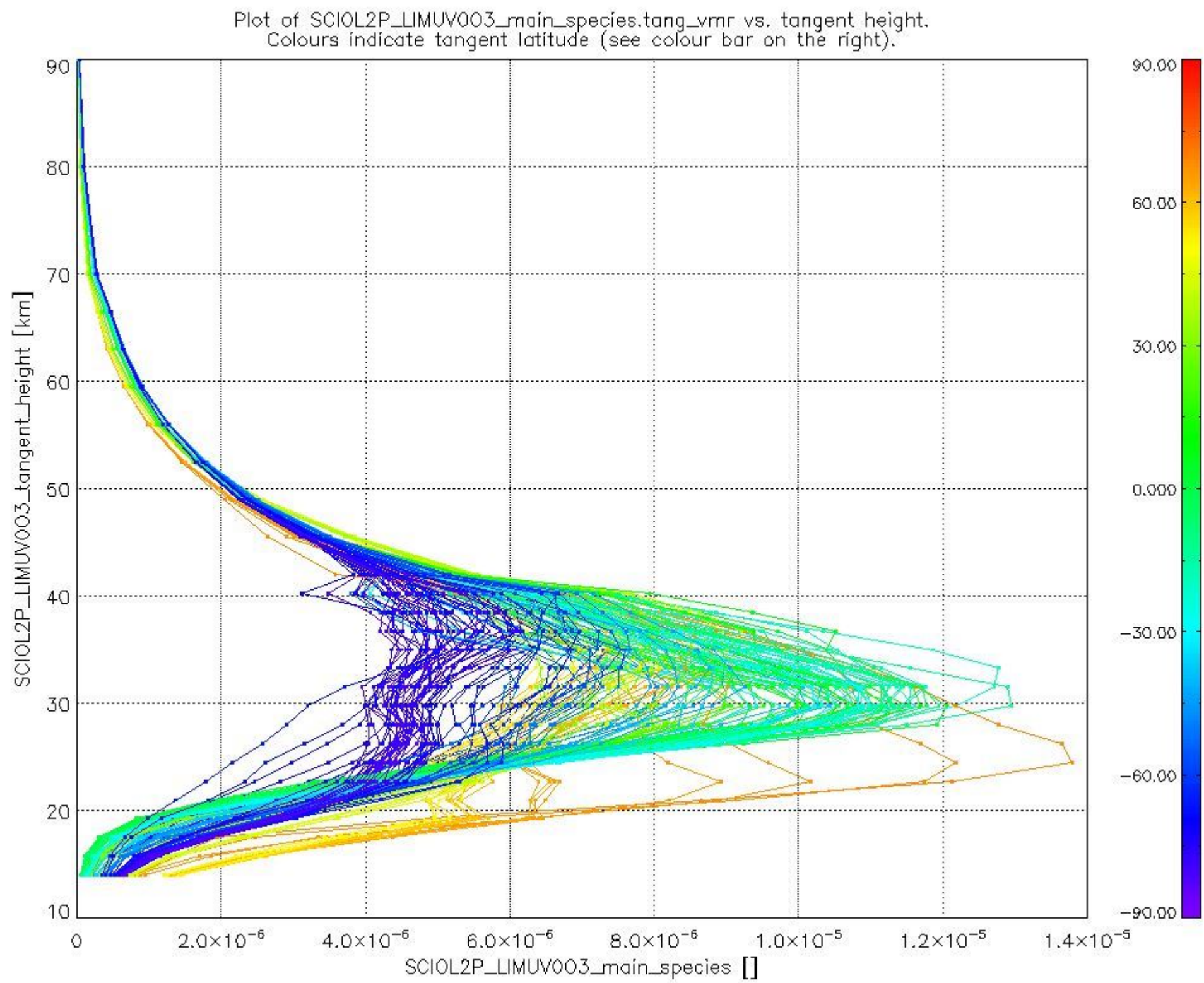
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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 |

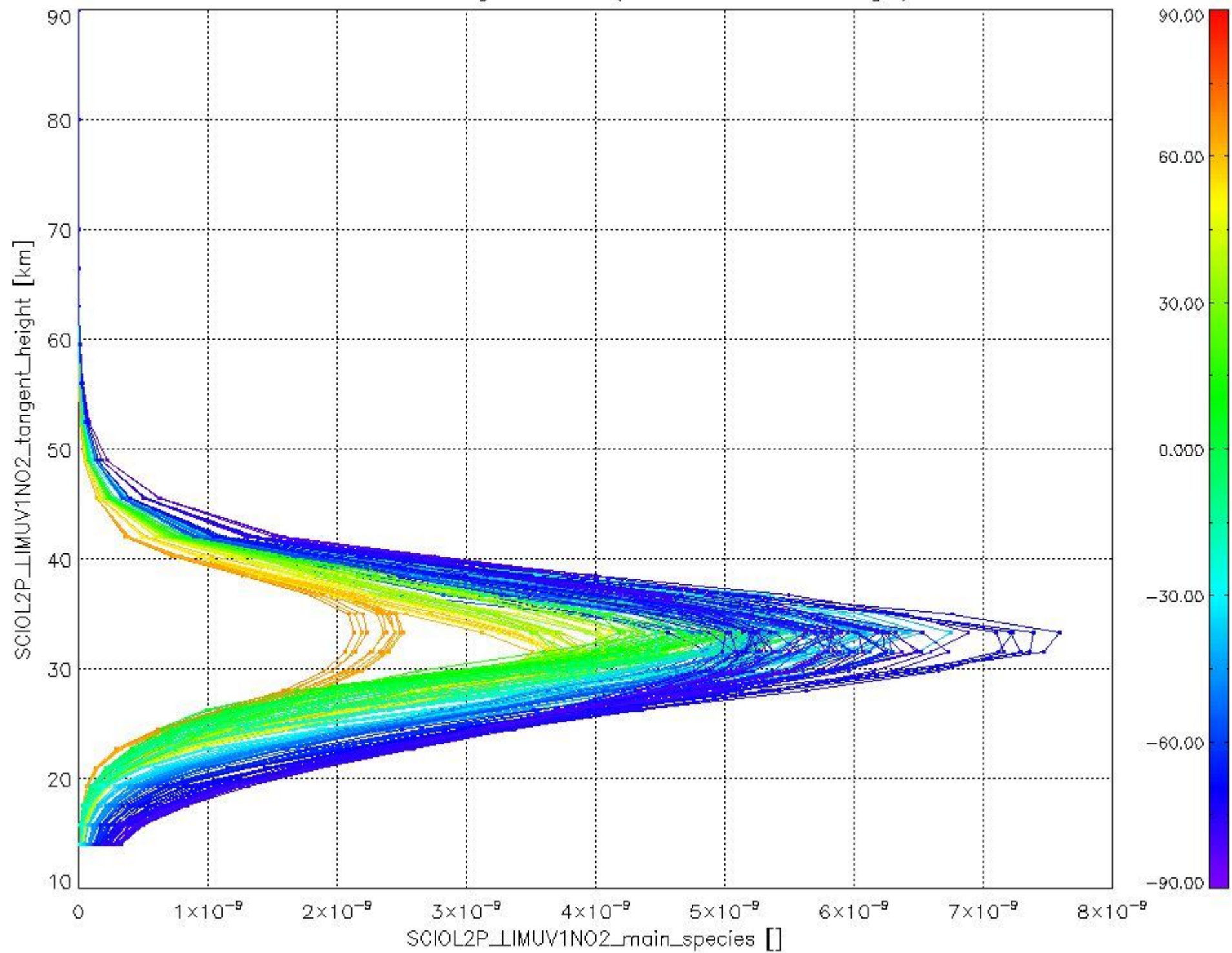
The following plots show for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

2.2.3.1 O3 (UV0)



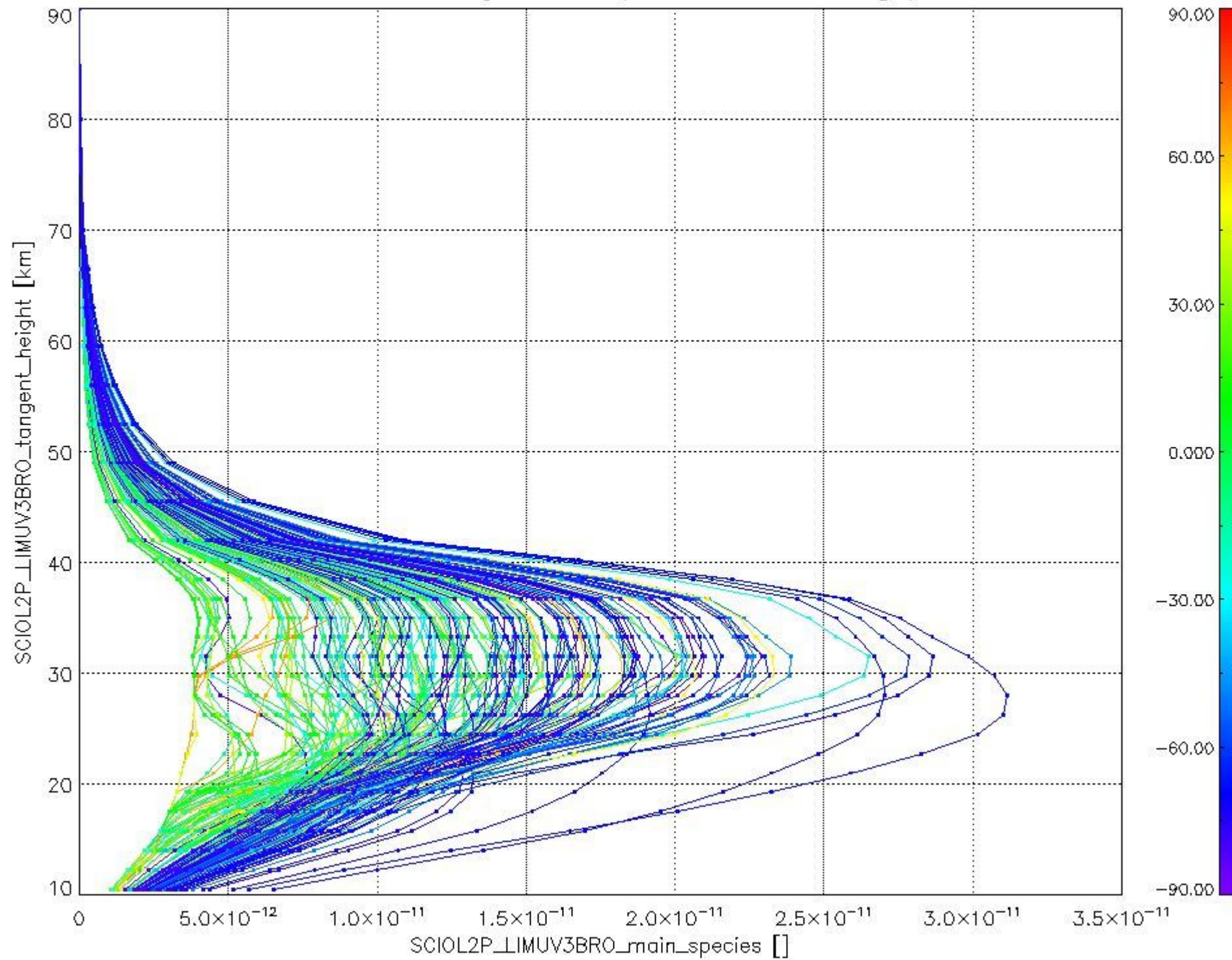
2.2.3.2 NO2 (UV1)

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)

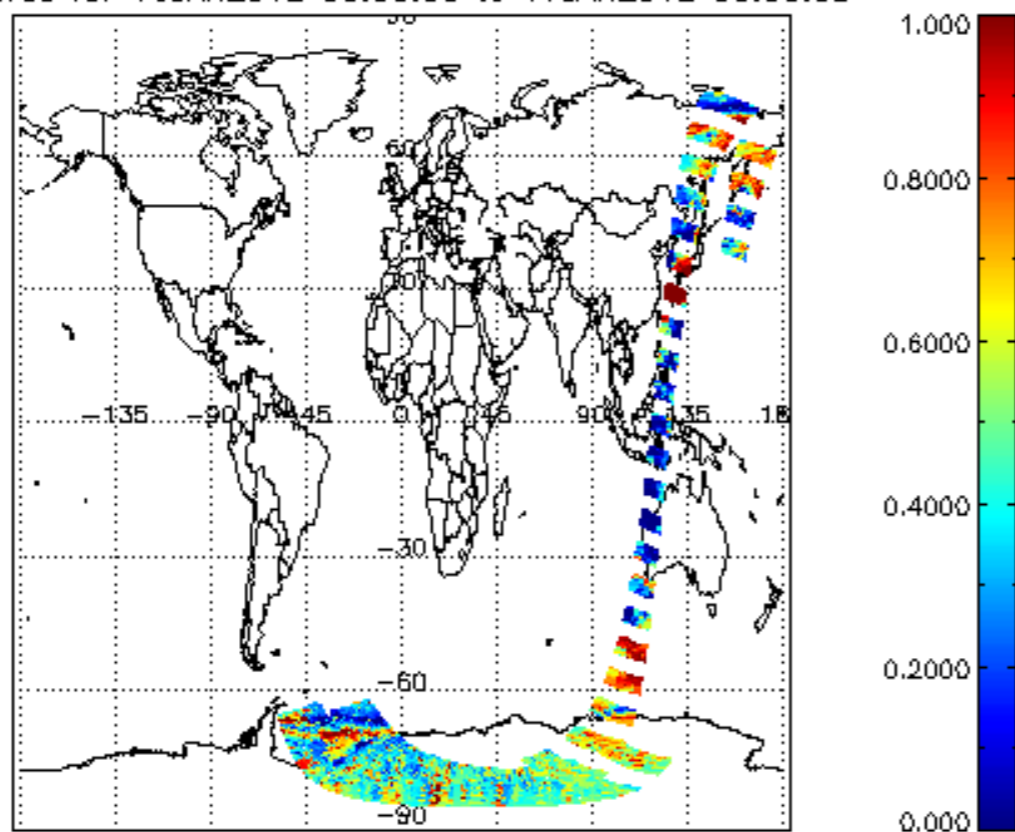
Plot of SCIOL2P_LIMUV3BRO_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



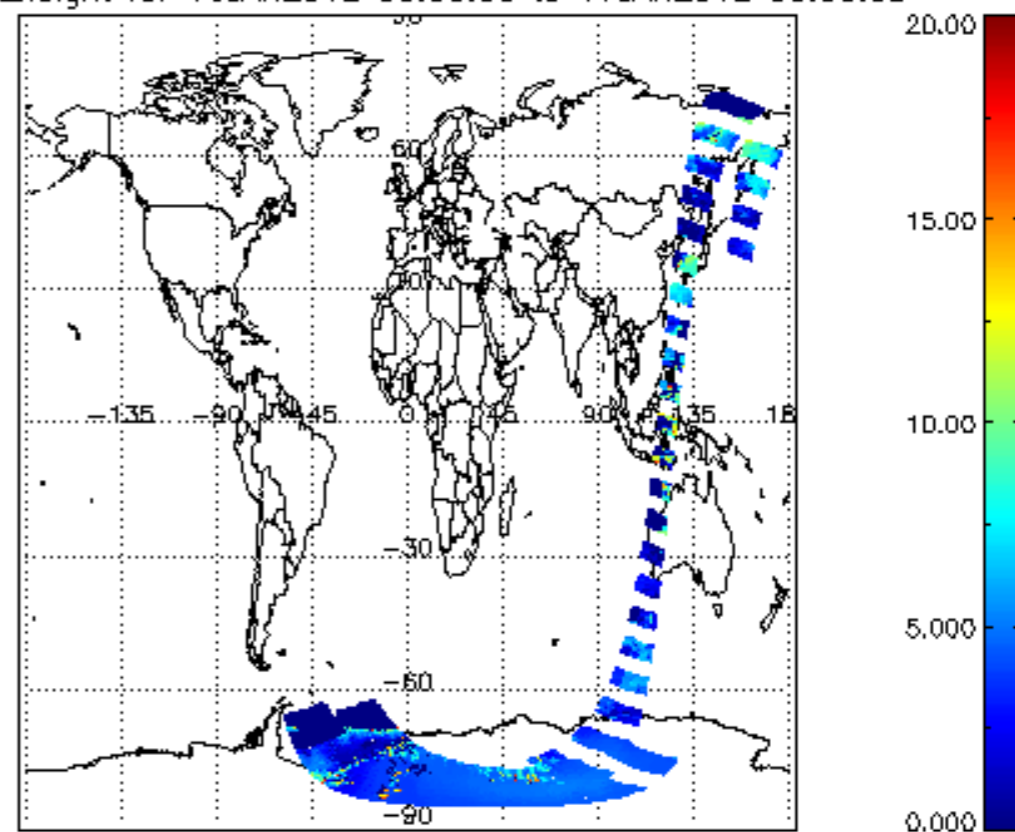
2.3 ADF monitoring

| Number | ADF |
|--------|---|
| | IN_ (INITIALISATION_FILE) |
| 0 | SCI_IN_AXNPDE20110201_120000_20020301_000000_20991231_235959 |
| | ECF (ECMWF_FILE) |
| 1 | NOT USED |
| | MF1 (M_FACTOR_FILE) |
| 2 | SCI_MF1_AXVIEC20120117_135924_20120115_180951_20120117_180951 |

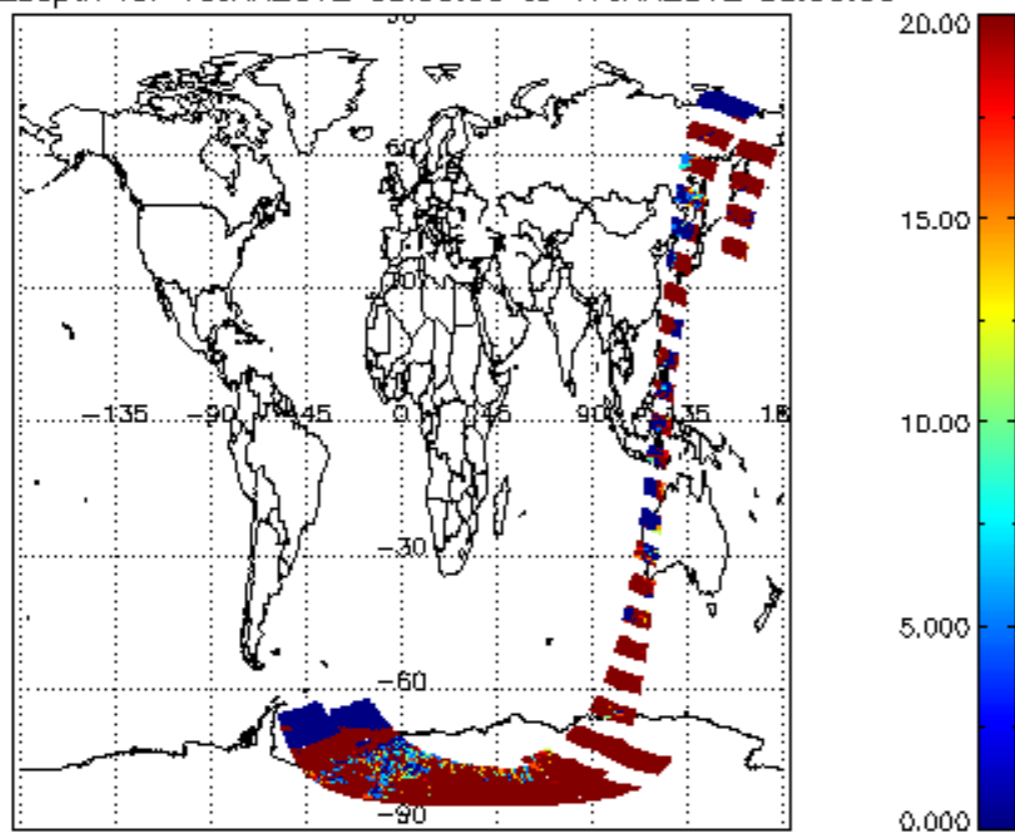
cL_frac for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



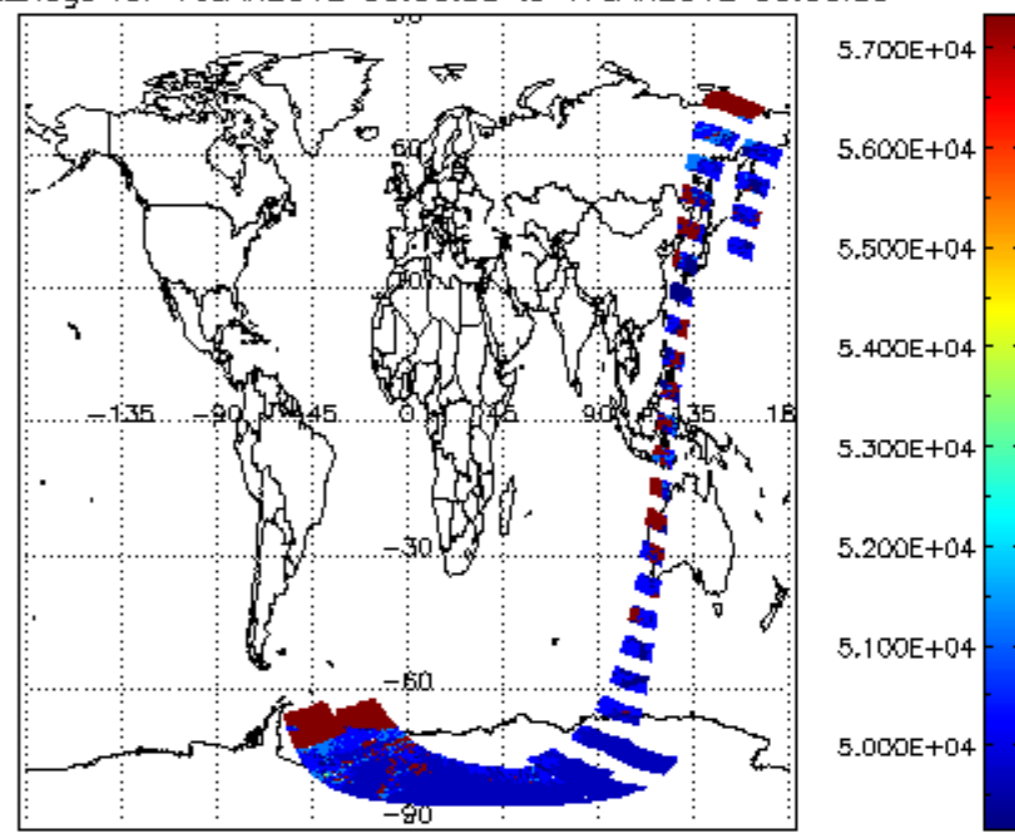
cL_top_height for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

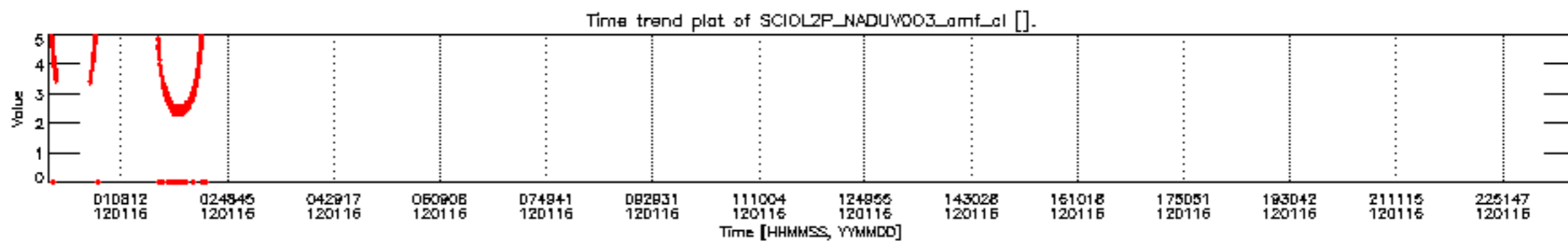
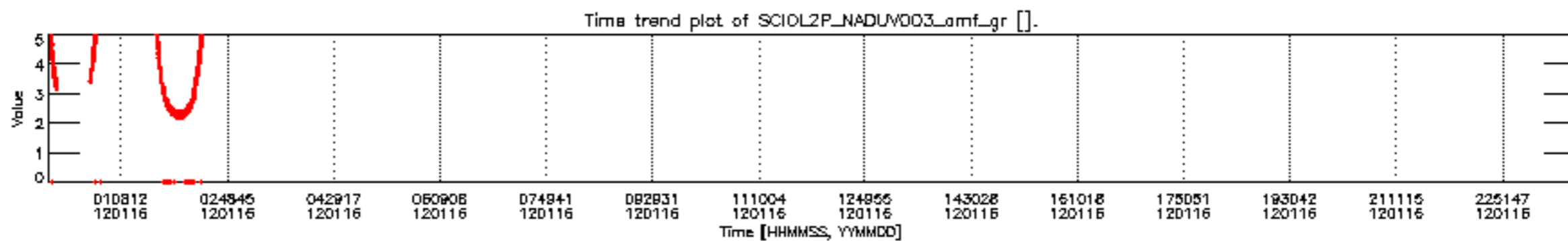
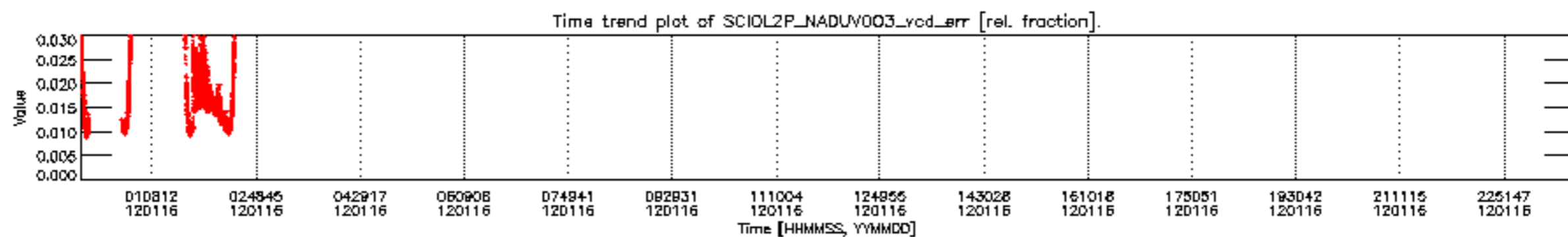
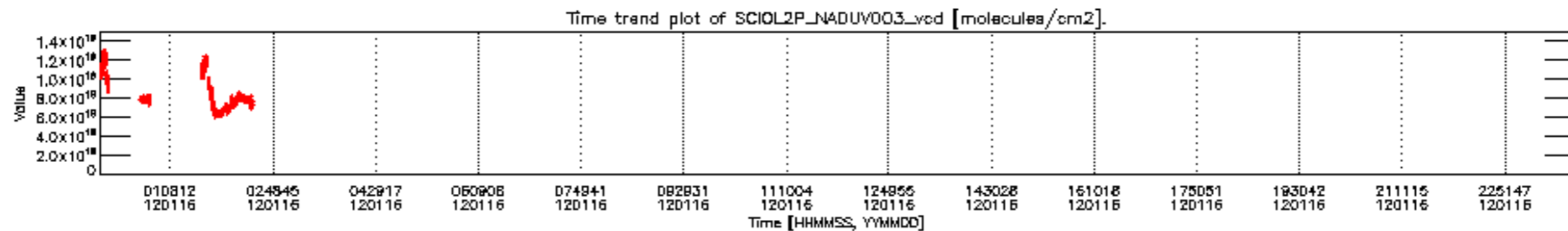


cLopt_depth for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

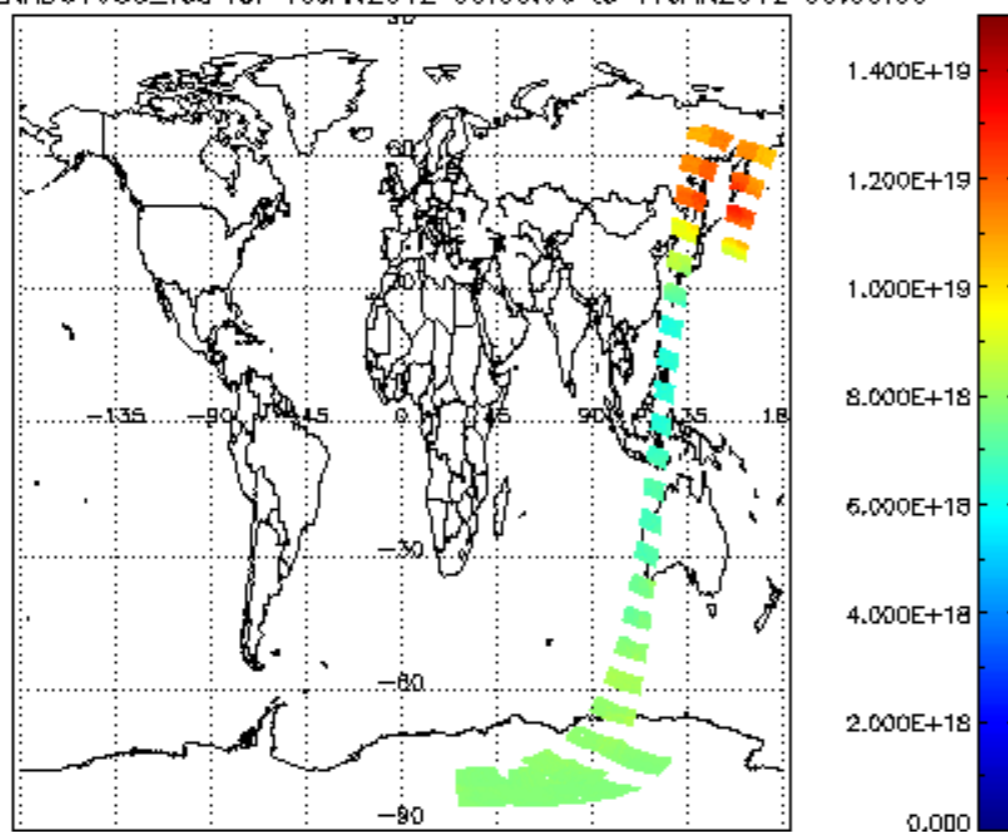


cloud_flags for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

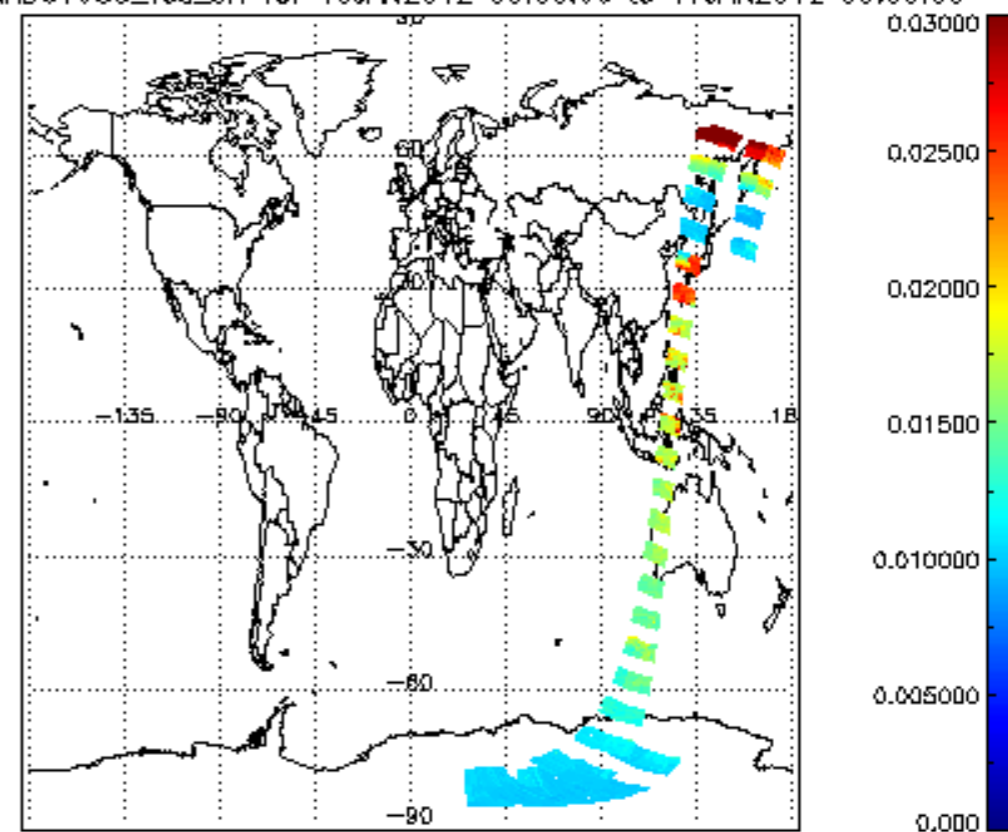




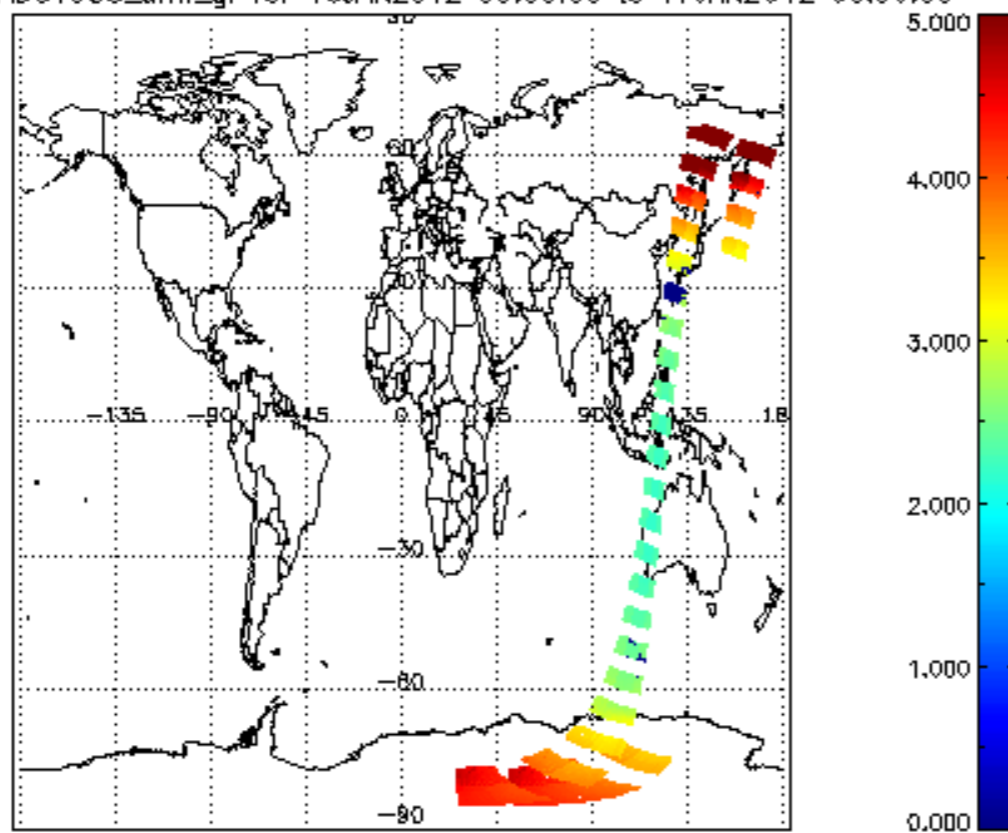
SCIOL2P_NADUV003_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



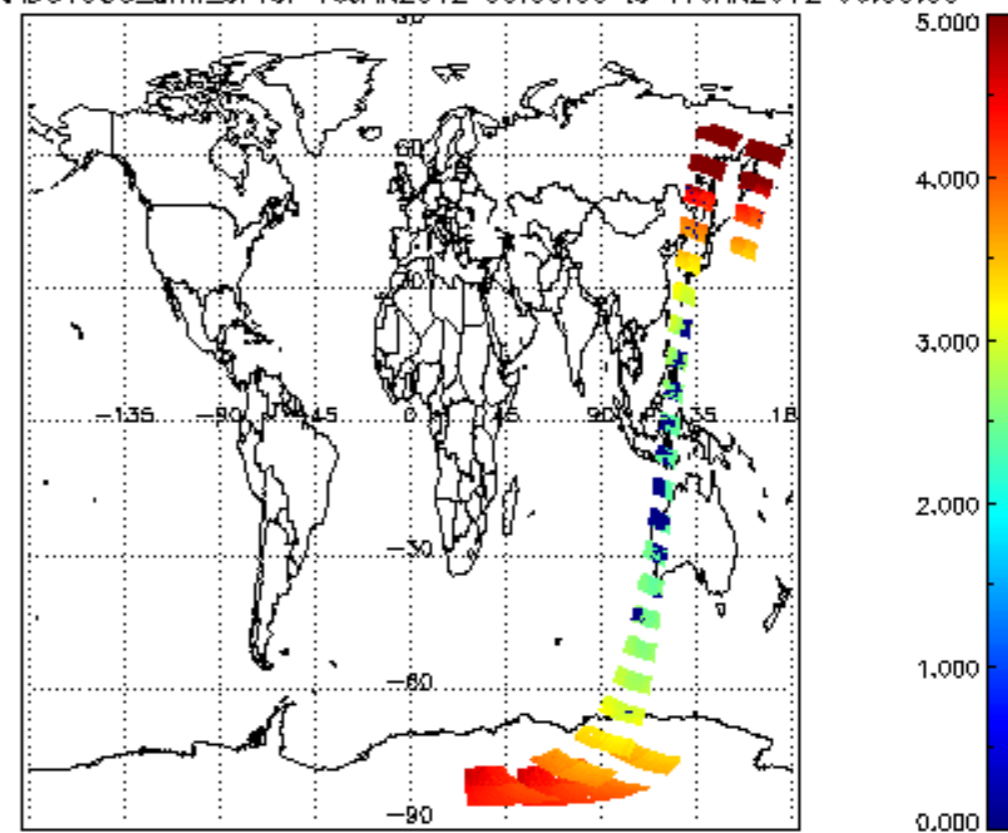
SCIOL2P_NADUV003_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

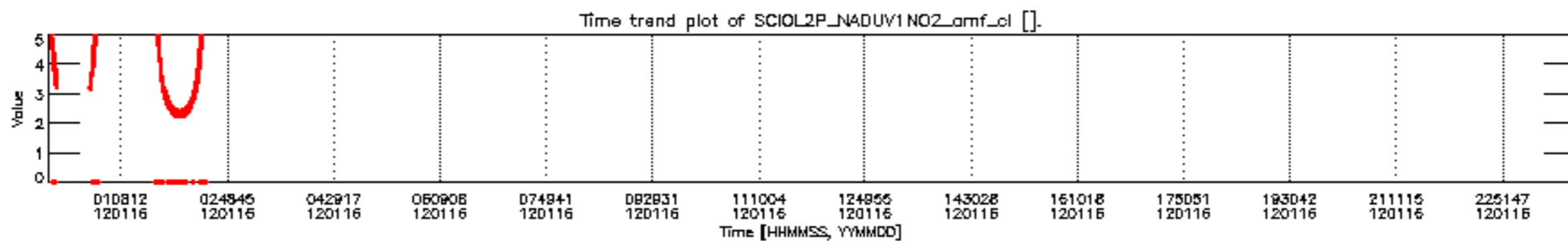
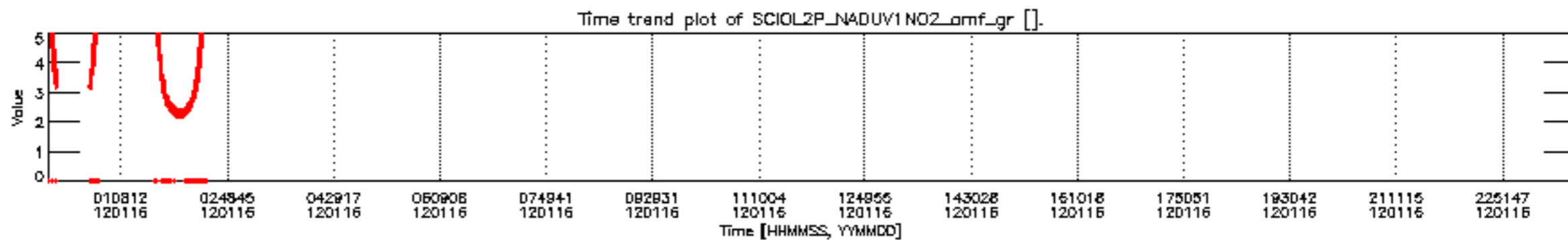
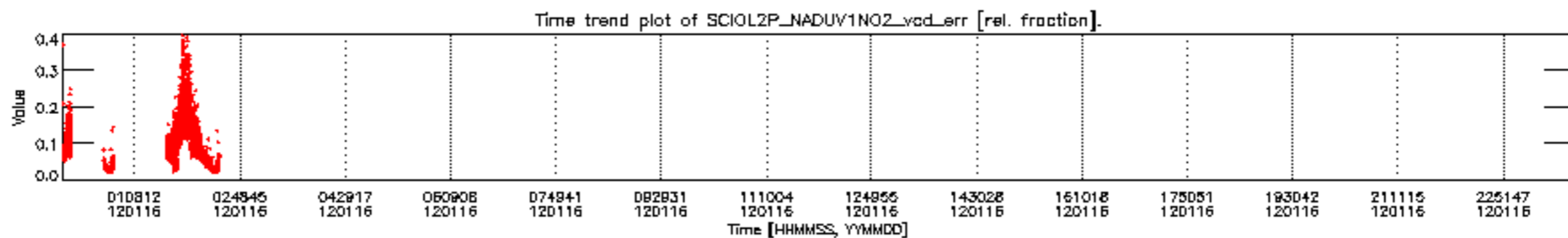
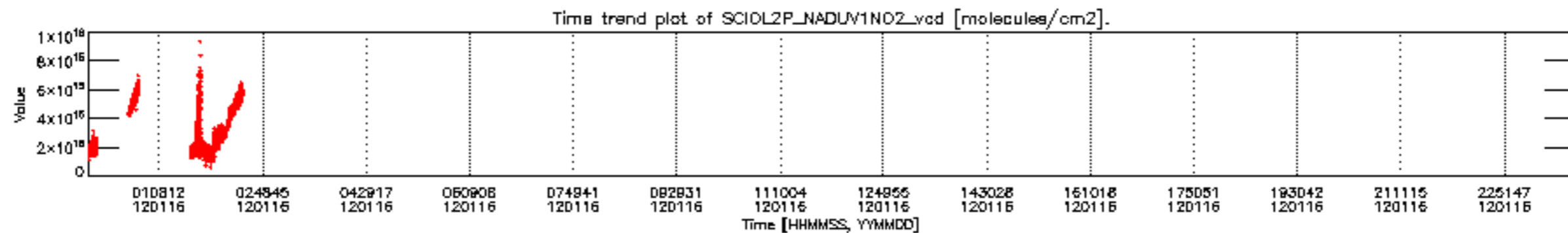


SCIOL2P_NADUV003_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

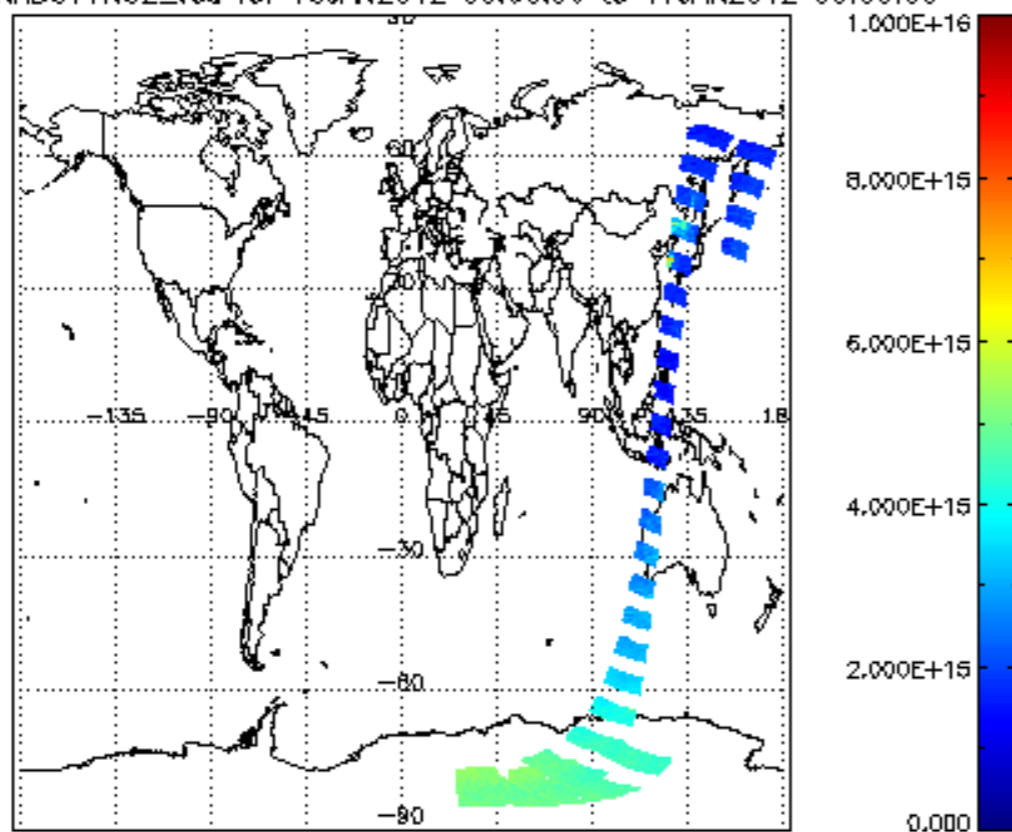


SCIOL2P_NADUV003_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

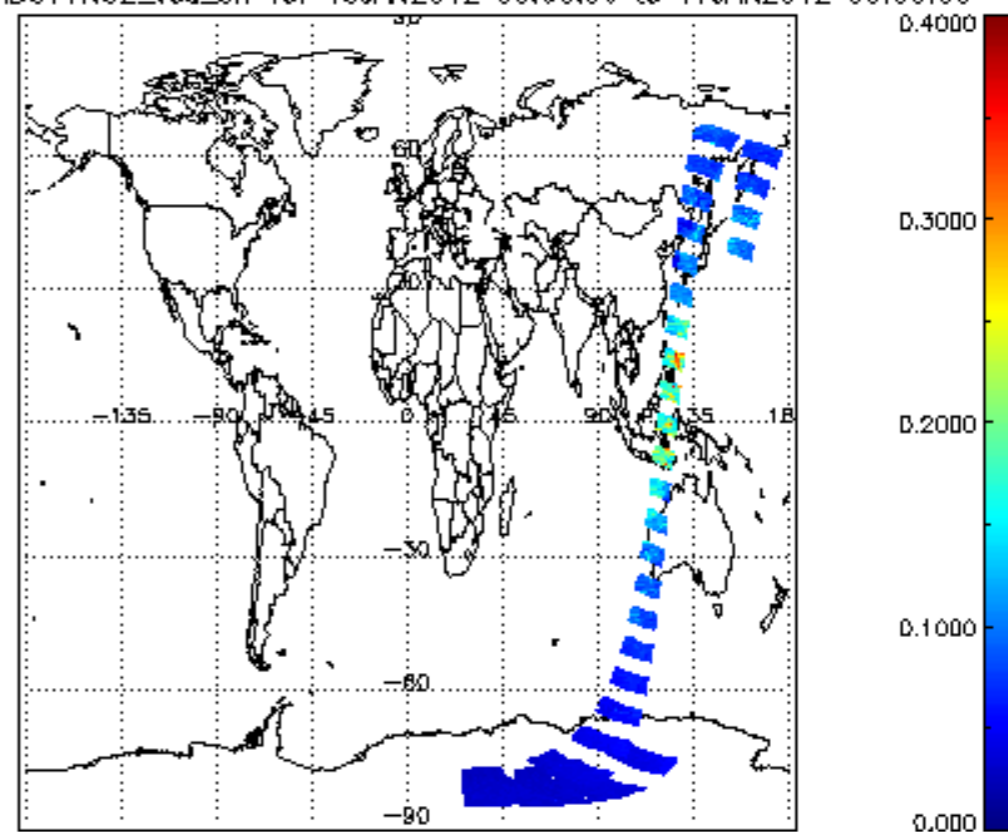




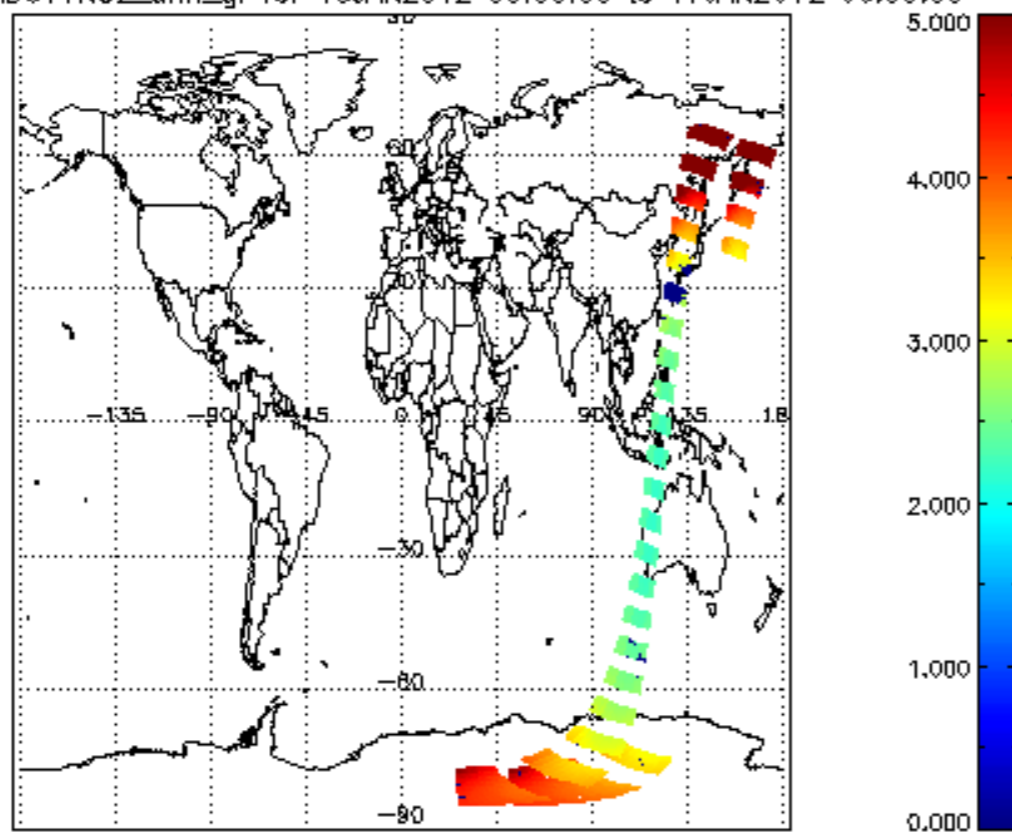
SCIOL2P_NADUV1NO2_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



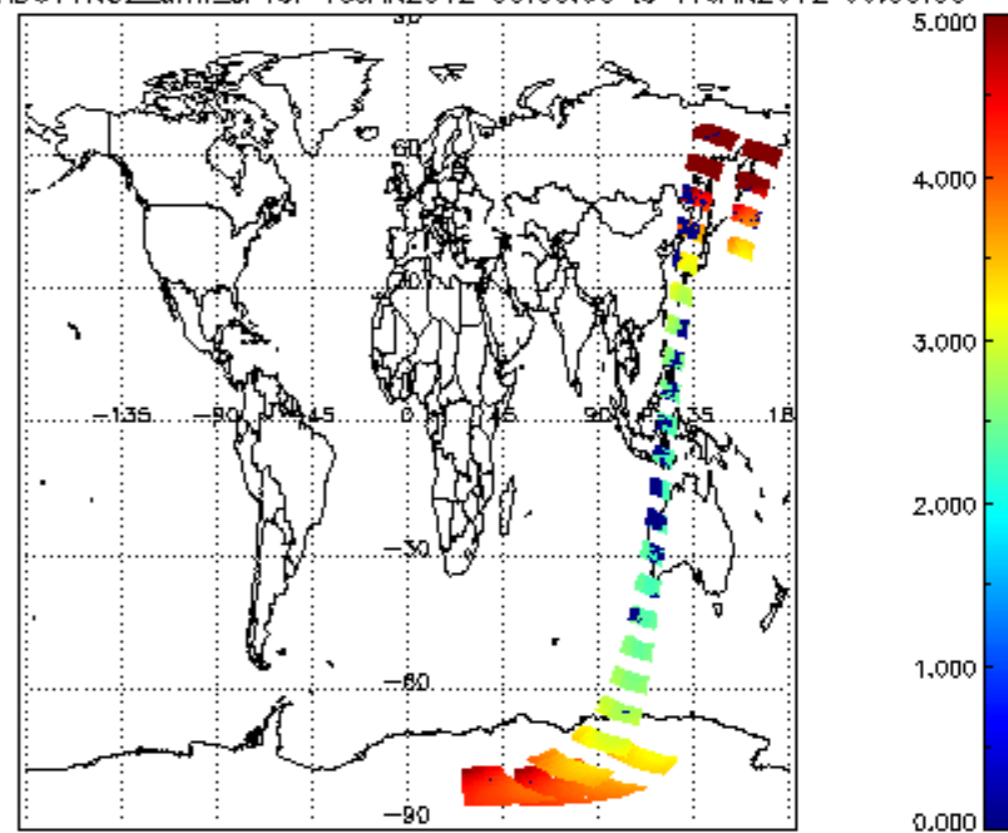
SCIOL2P_NADUV1NO2_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

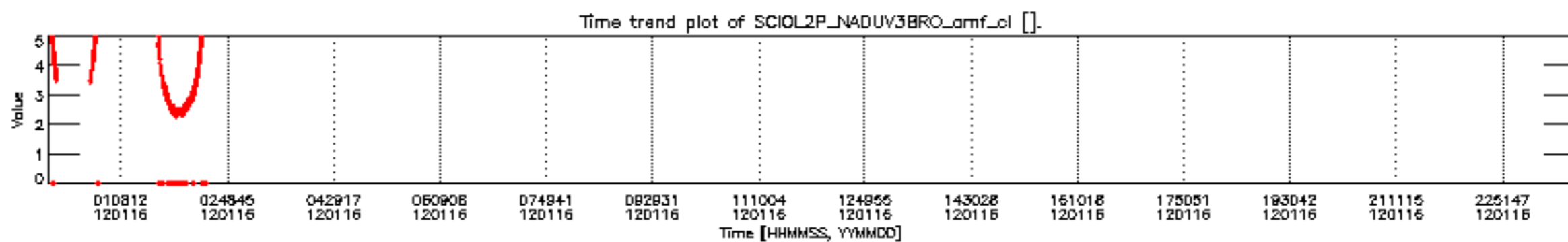
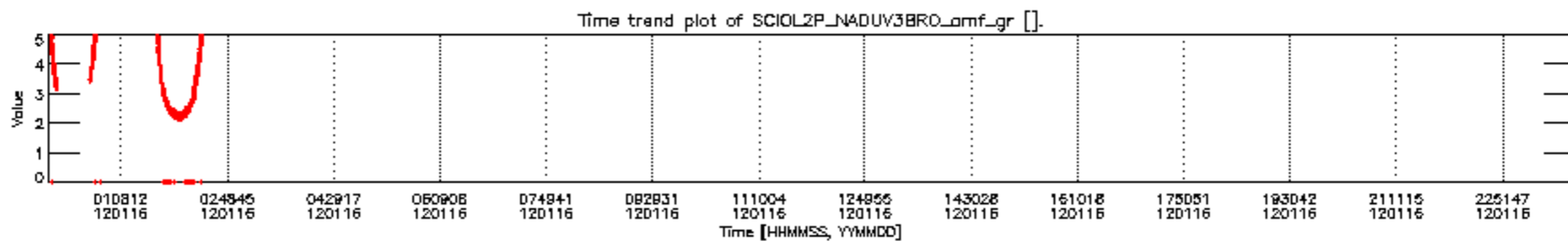
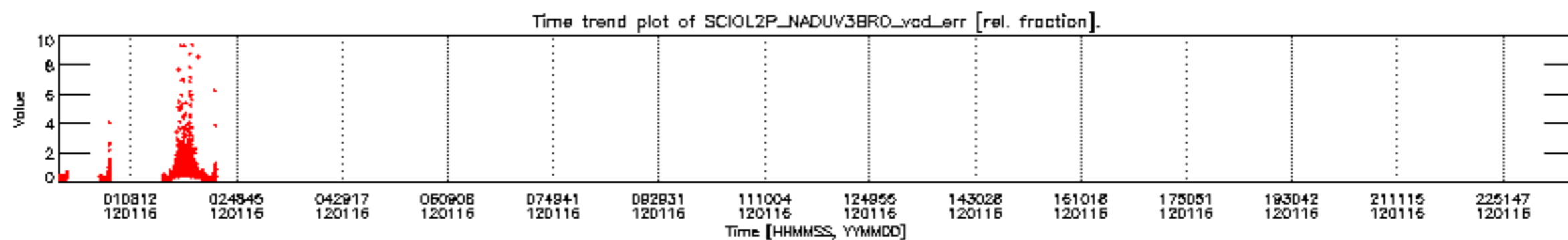
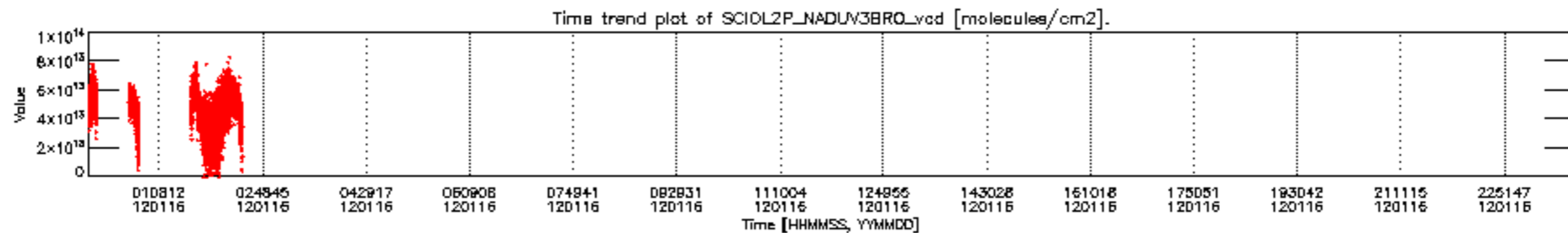


SCIOL2P_NADUV1NO2_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

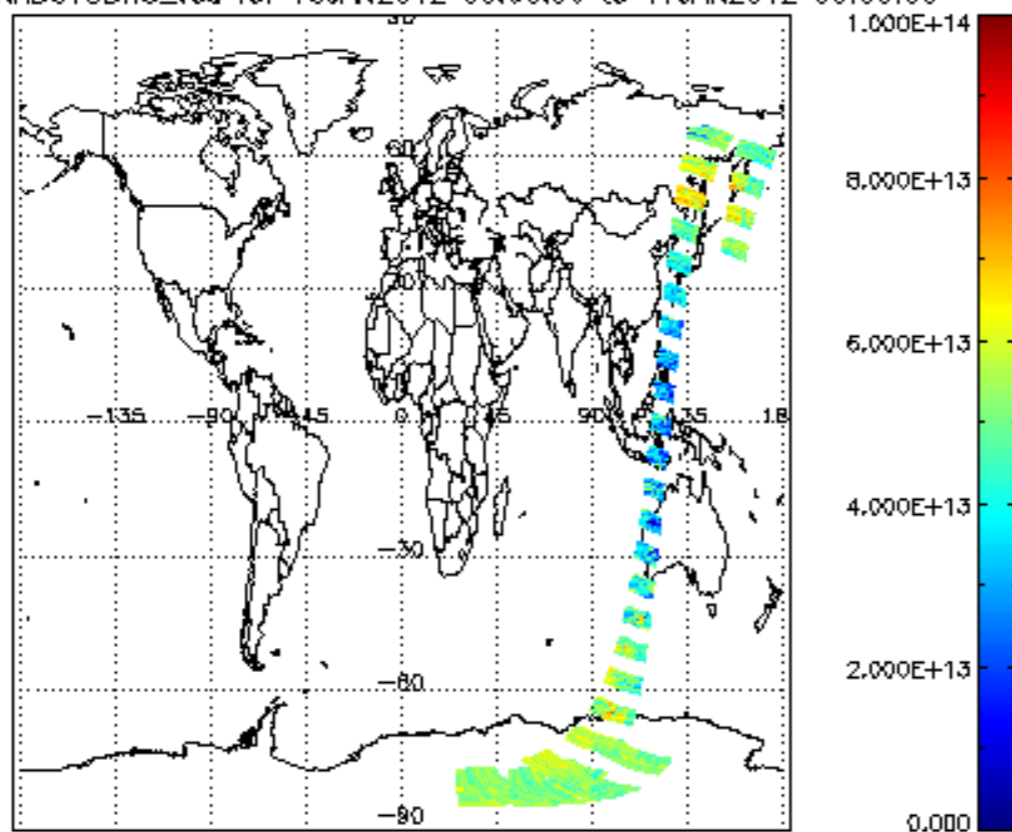


SCIOL2P_NADUV1NO2_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

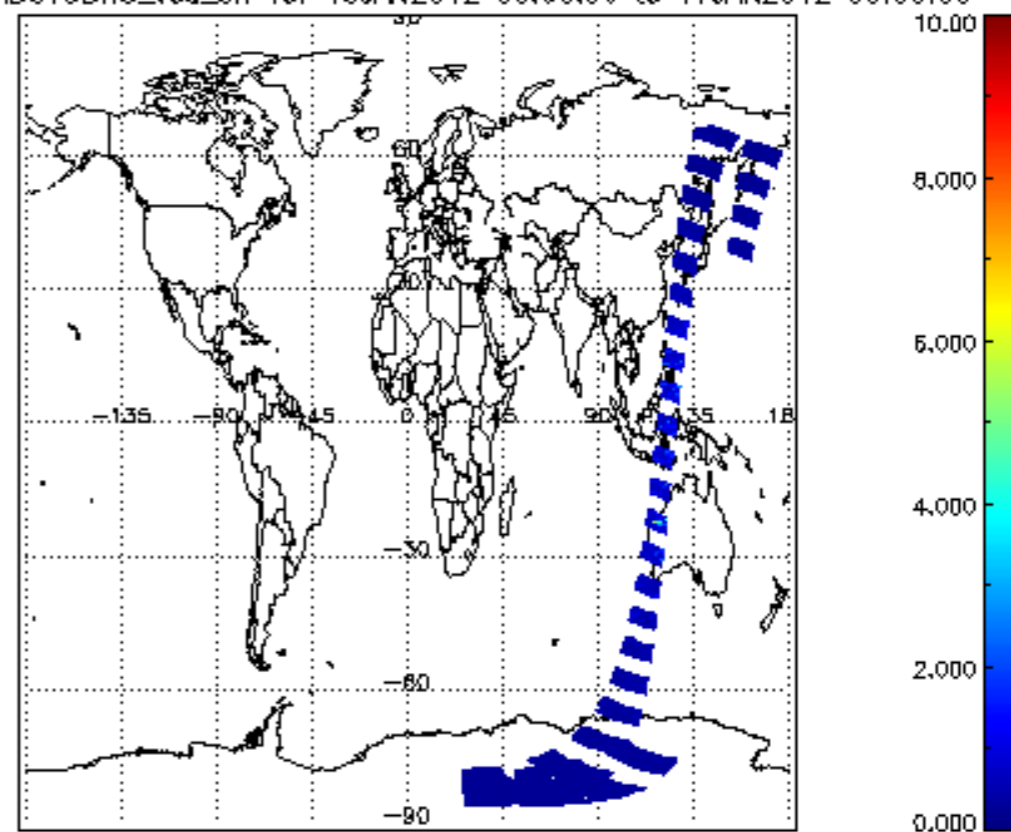




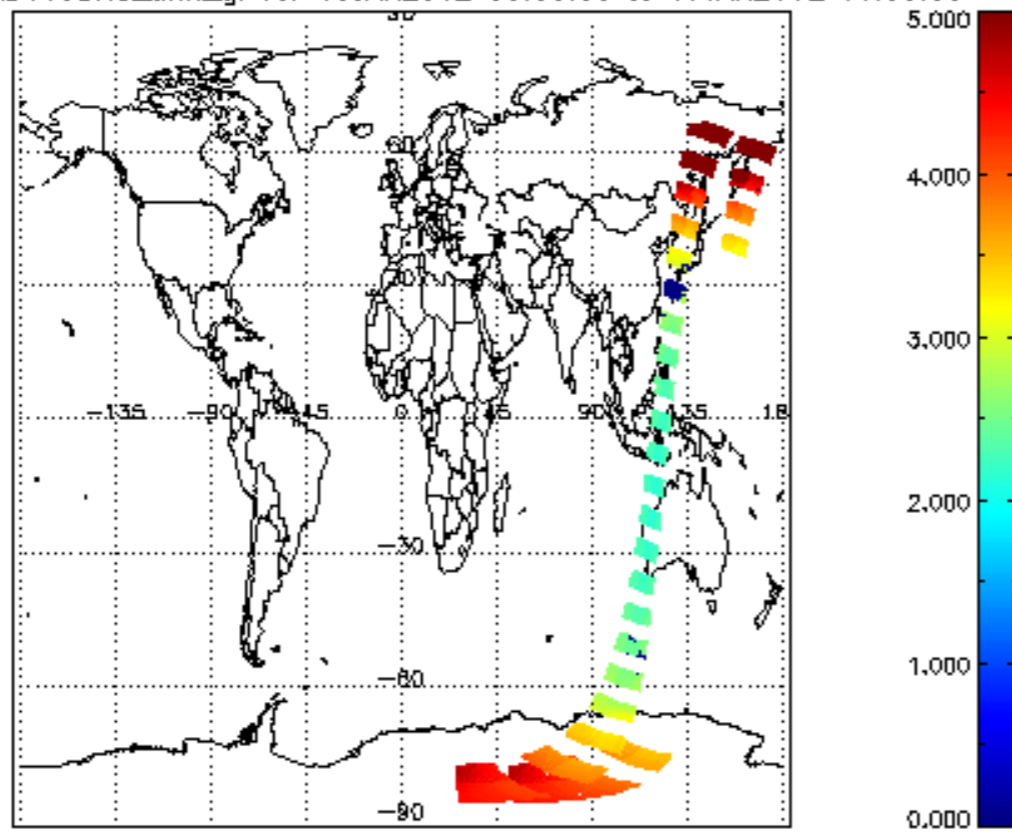
SCIOL2P_NADUV3BRO_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



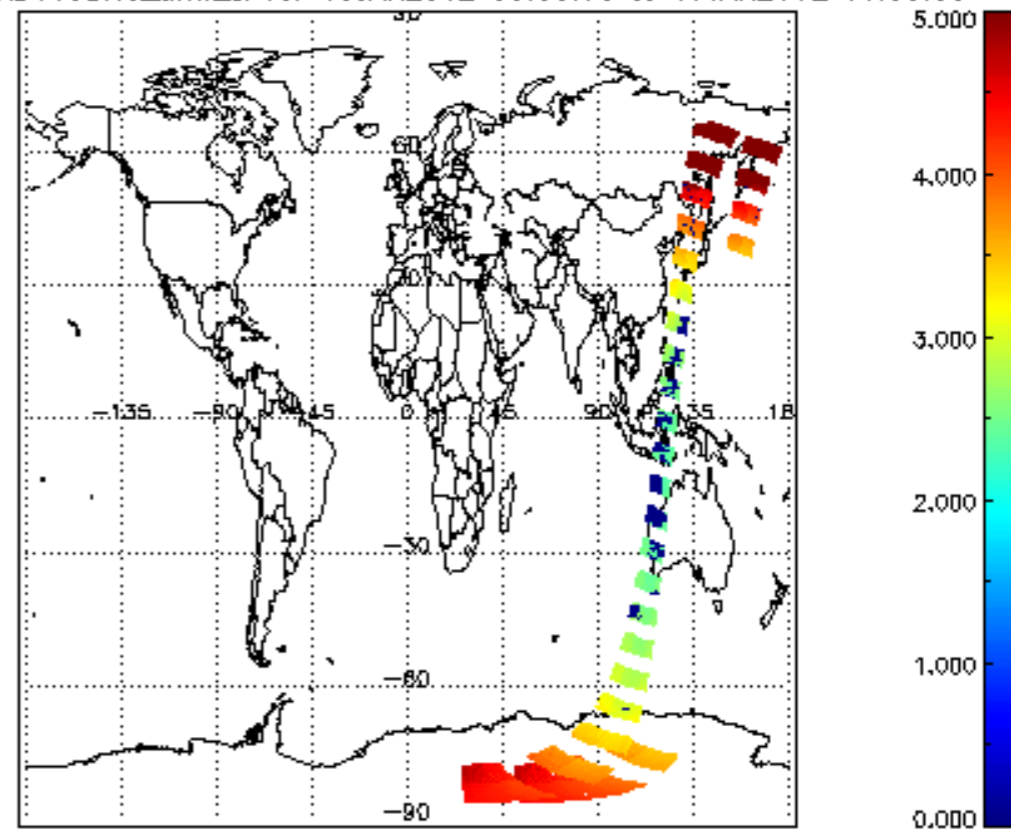
SCIOL2P_NADUV3BRO_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

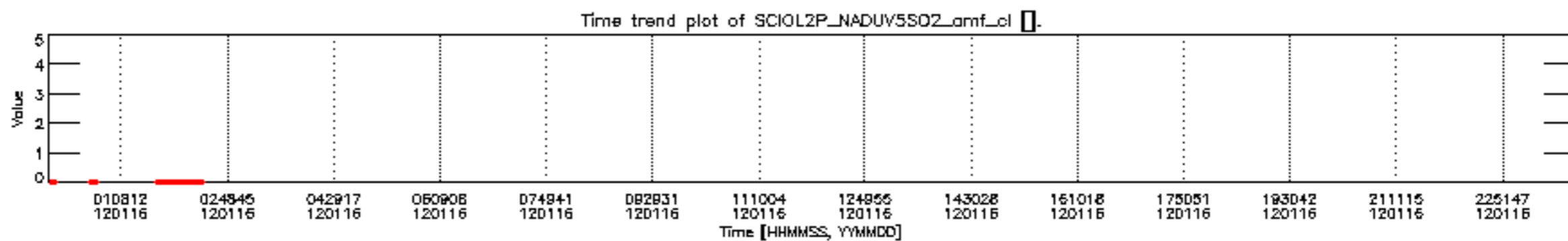
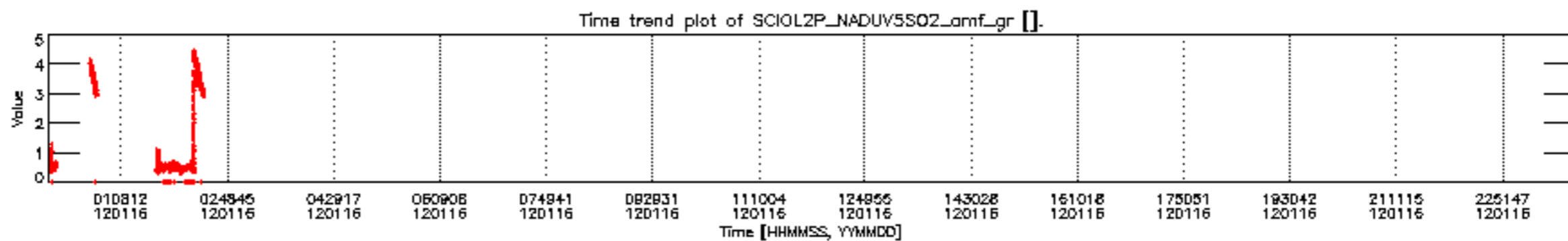
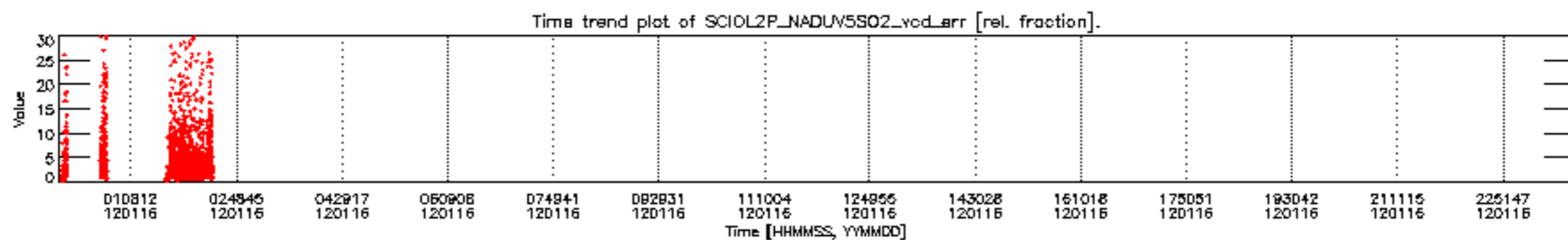
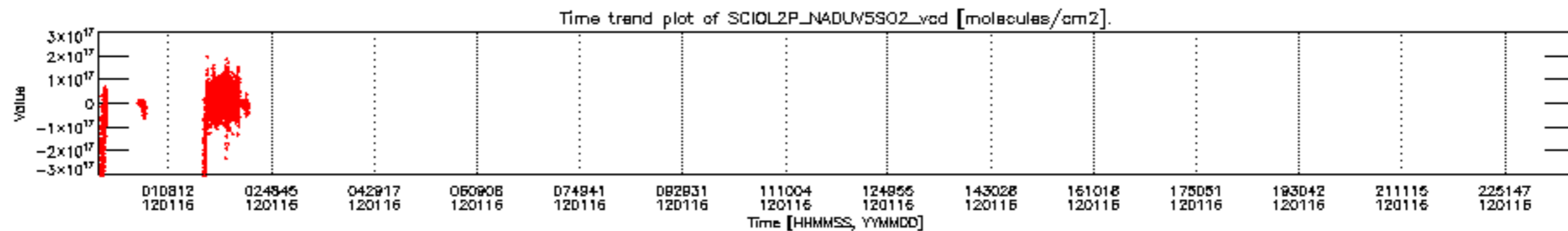


SCIOL2P_NADUV3BRO_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

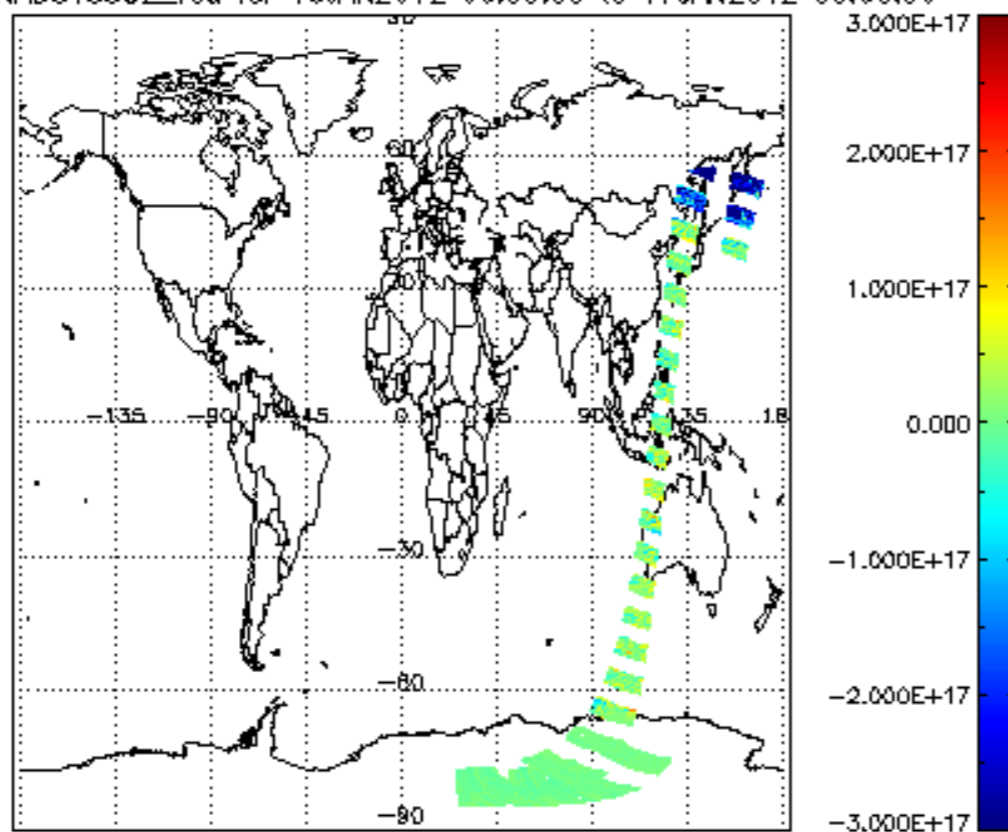


SCIOL2P_NADUV3BRO_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

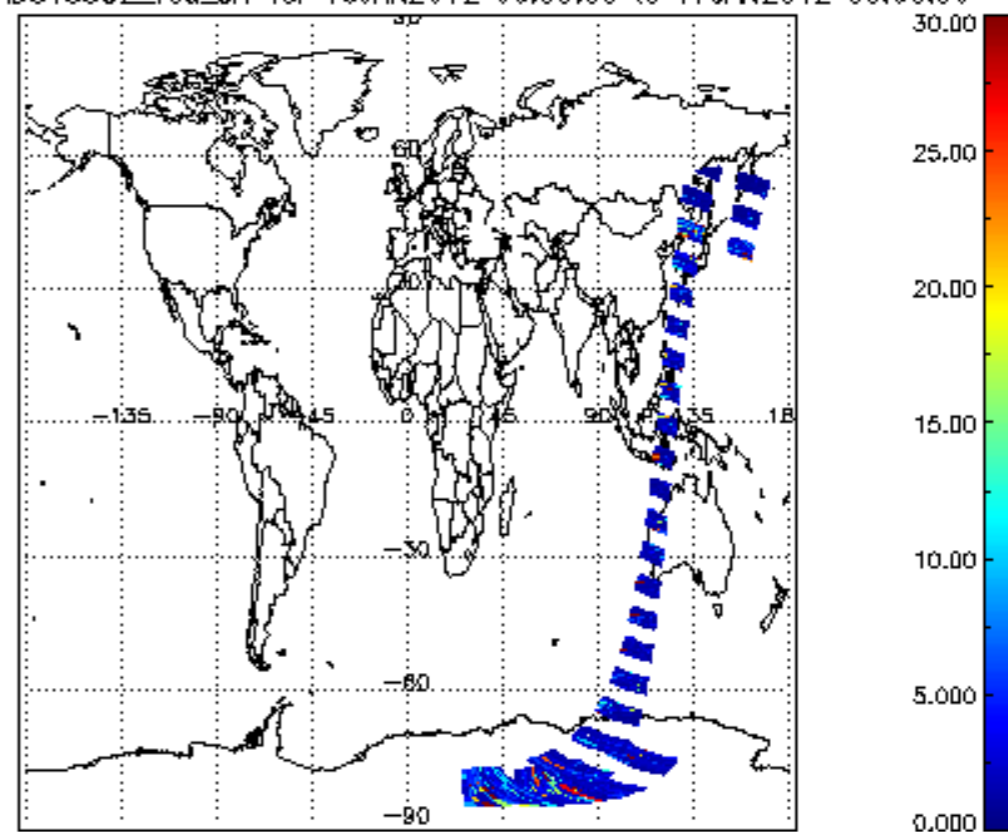




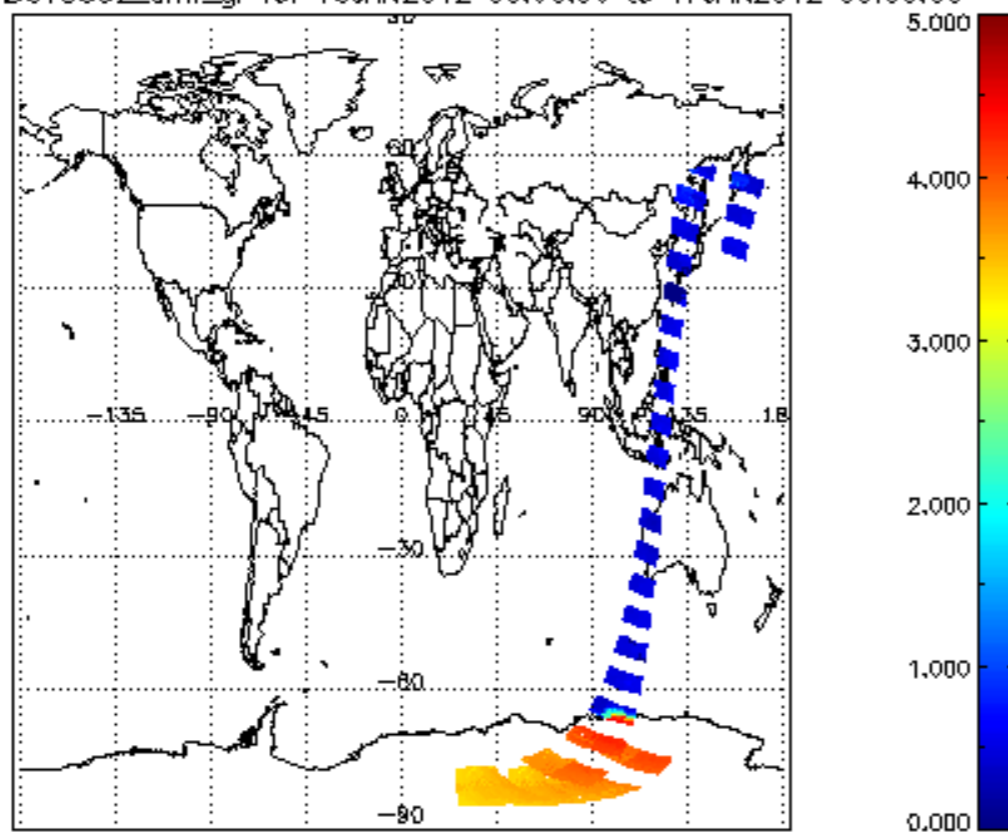
SCIOL2P_NADUV5S02_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



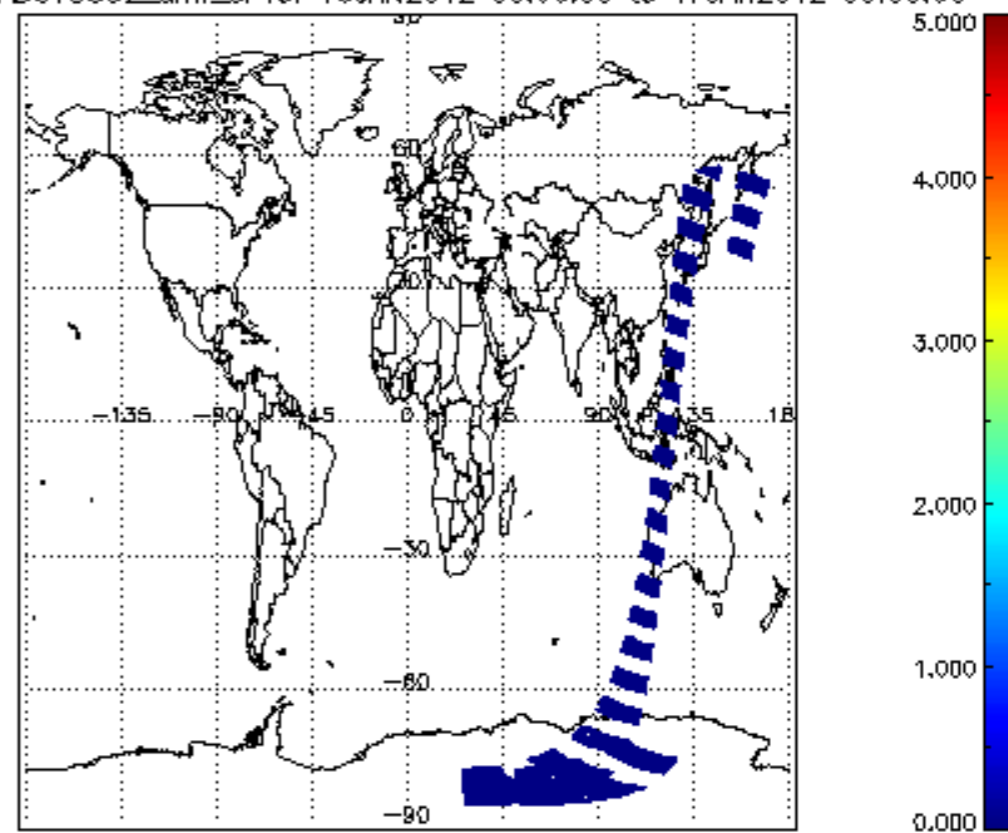
SCIOL2P_NADUV5S02_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

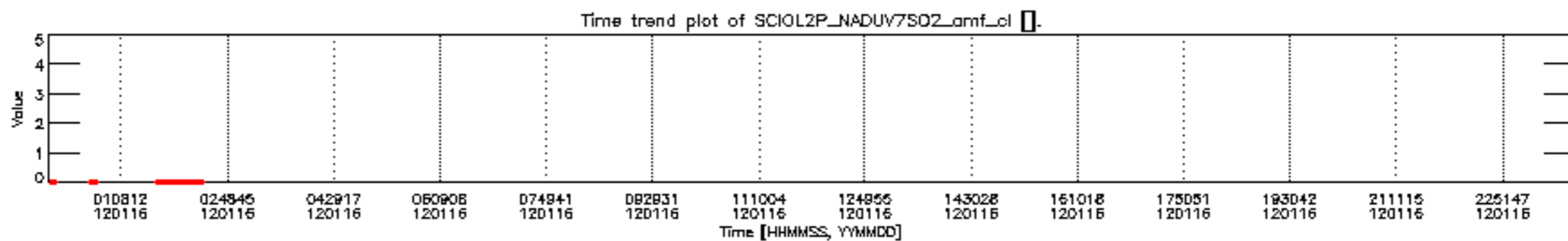
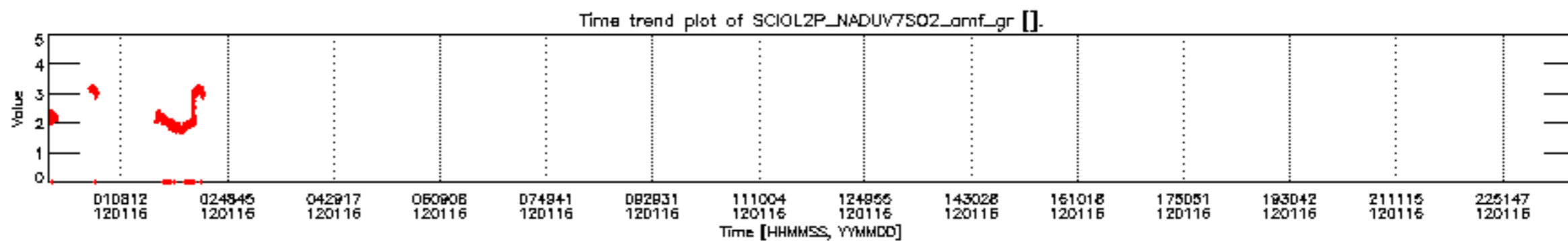
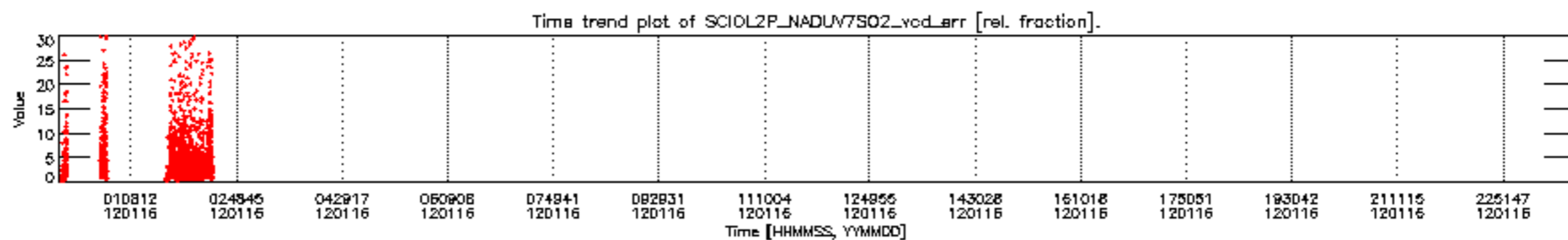
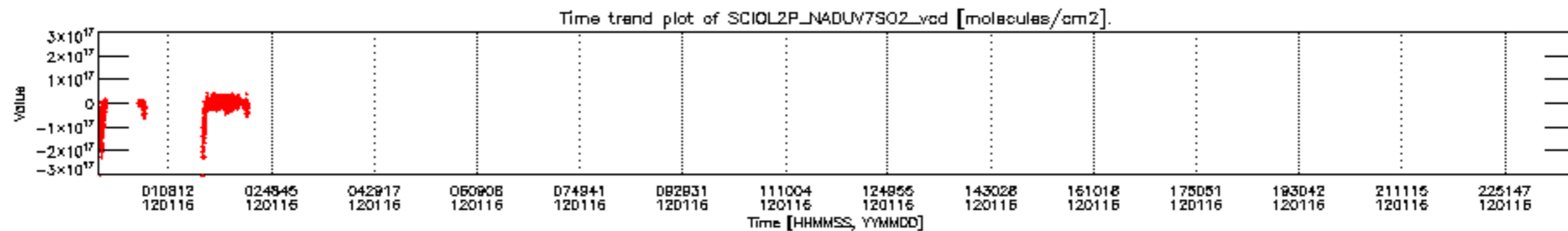


SCIOL2P_NADUV5S02_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

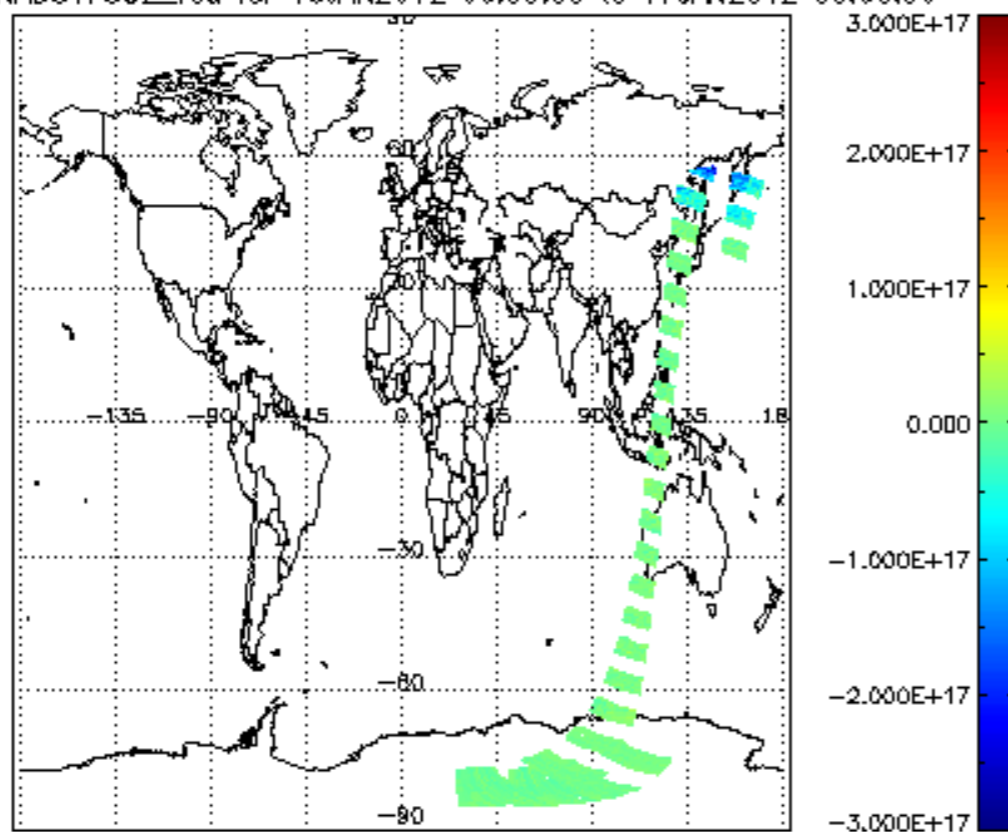


SCIOL2P_NADUV5S02_amf_sl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

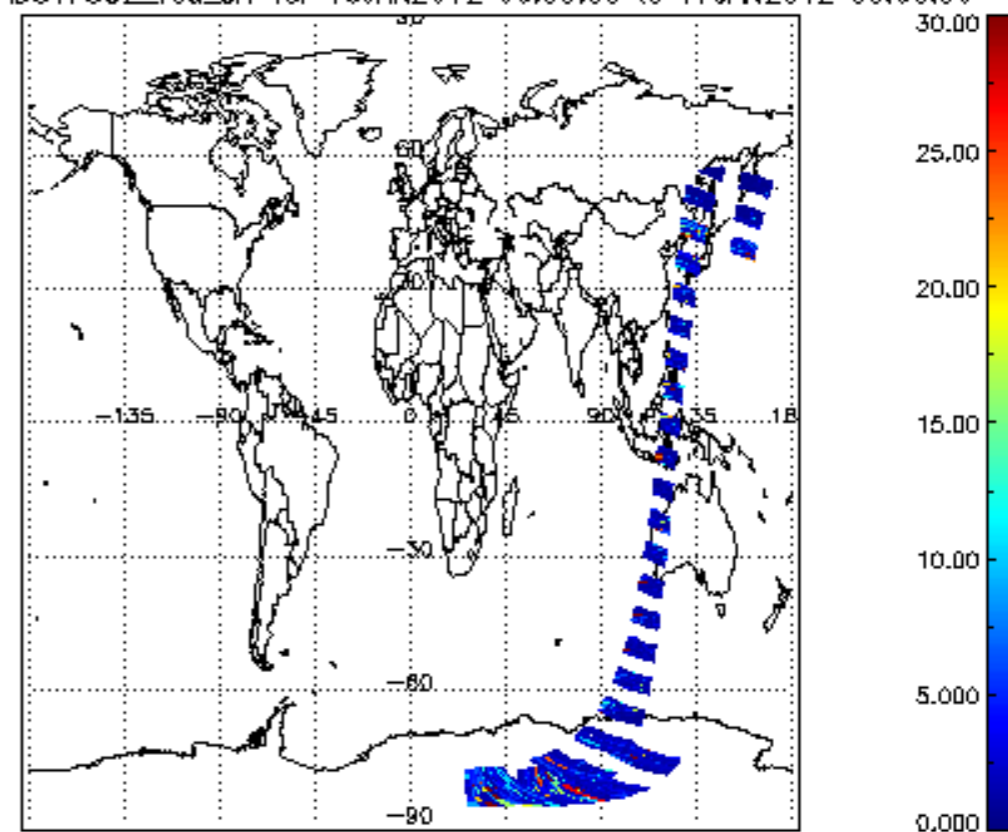




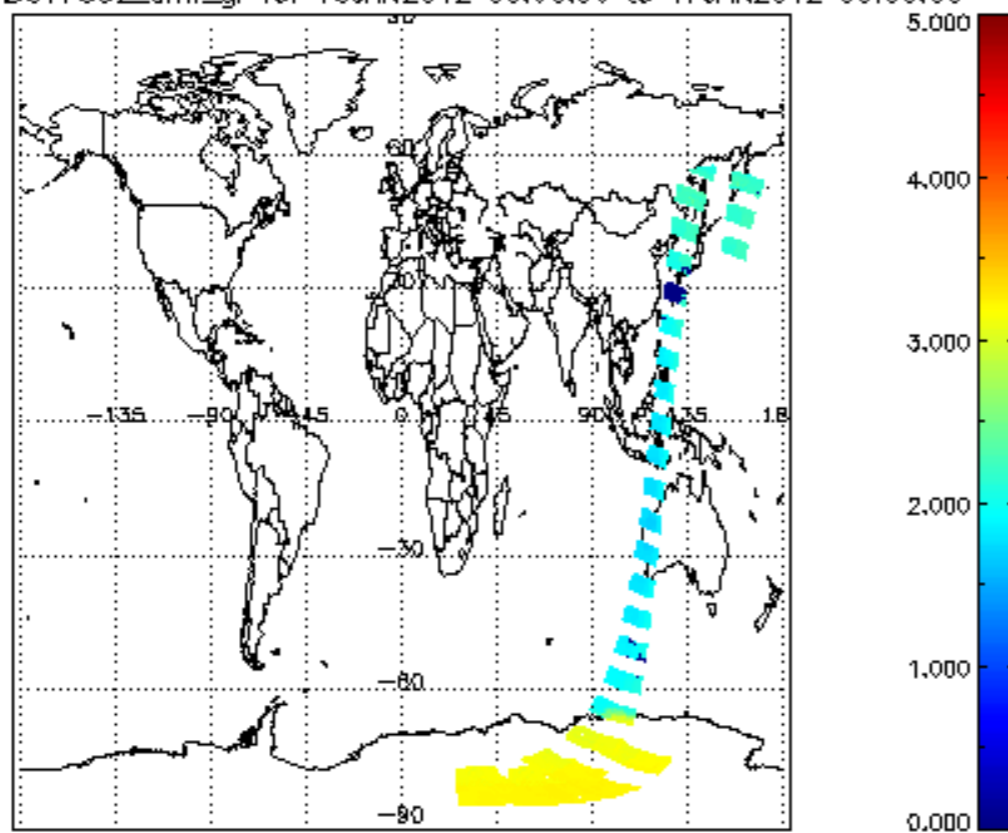
SCIOL2P_NADUV7S02_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



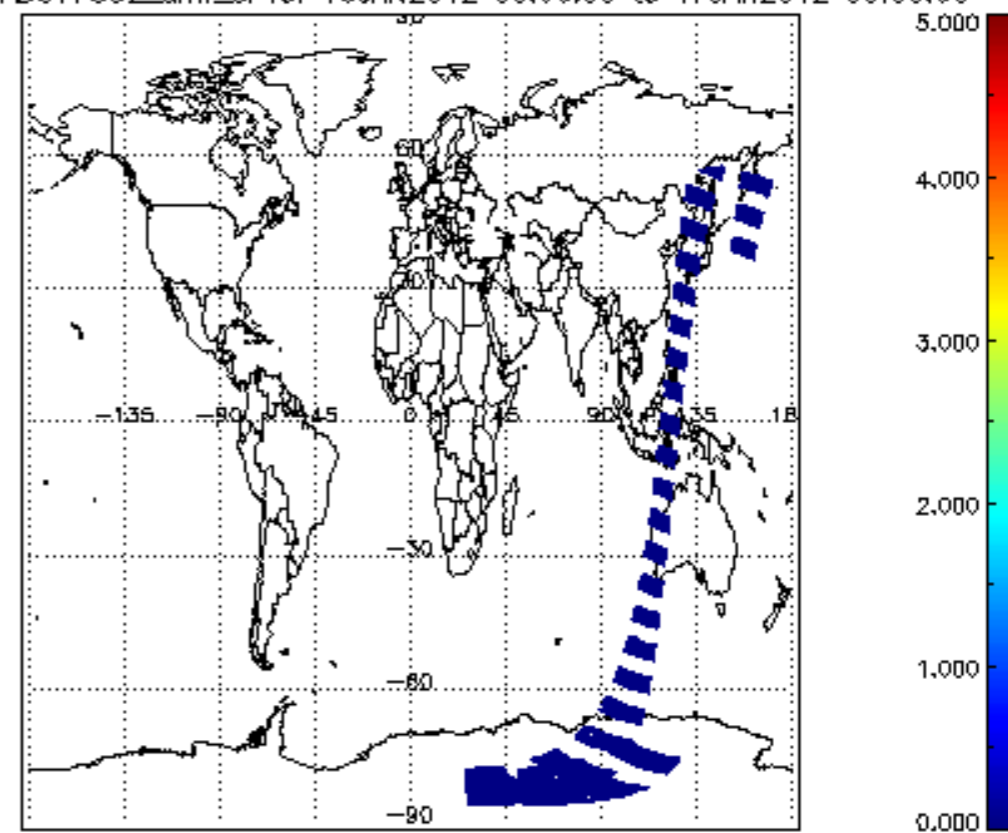
SCIOL2P_NADUV7S02_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

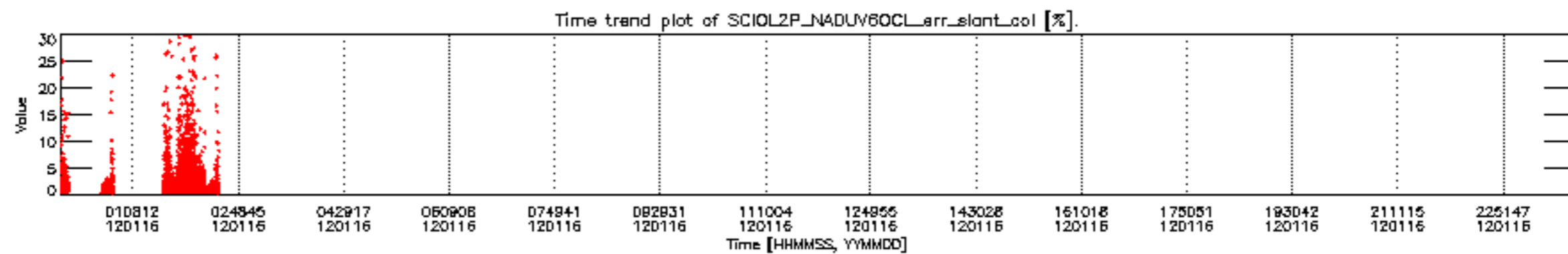
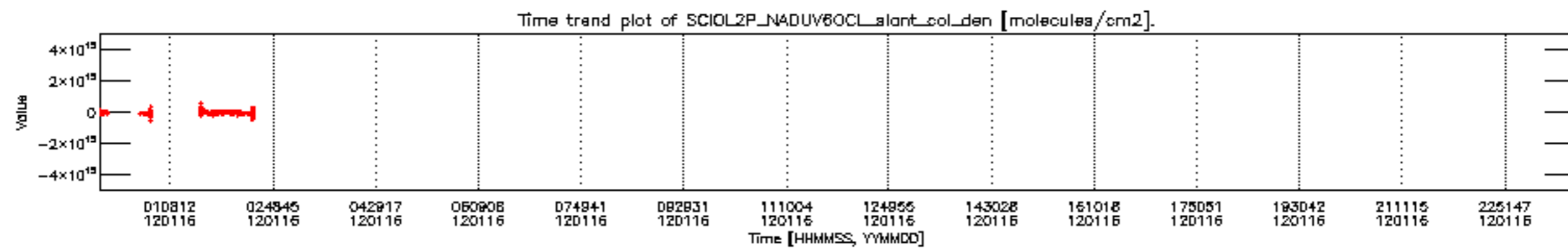


SCIOL2P_NADUV7S02_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

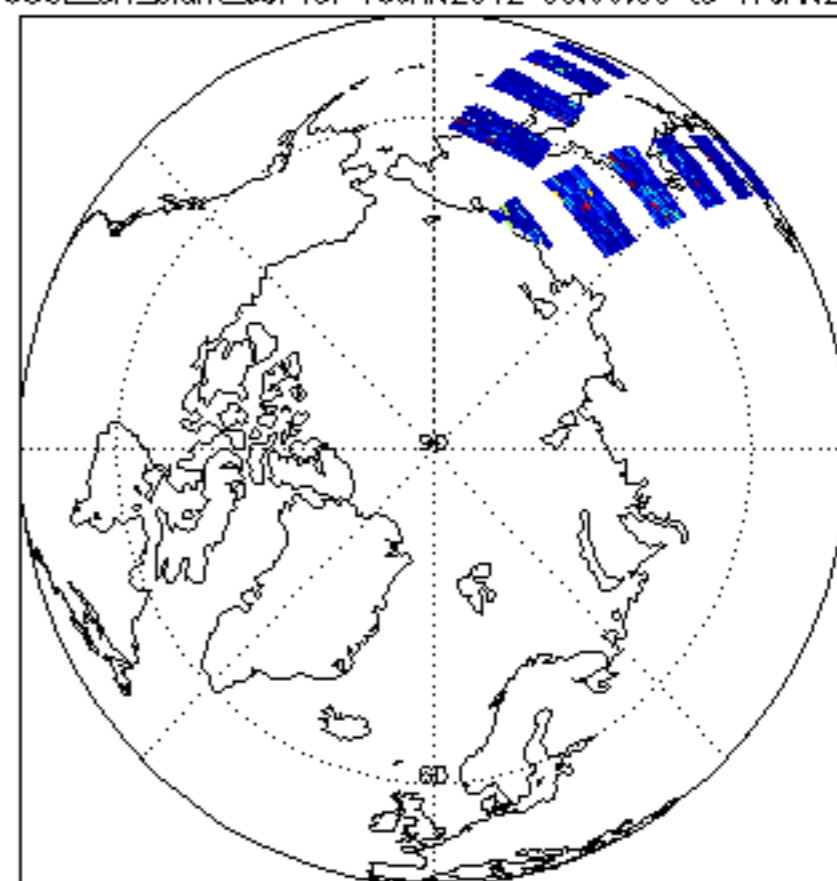
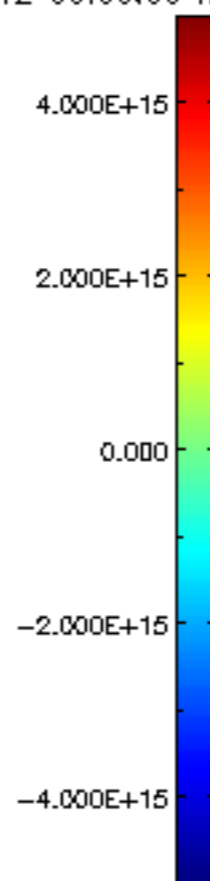
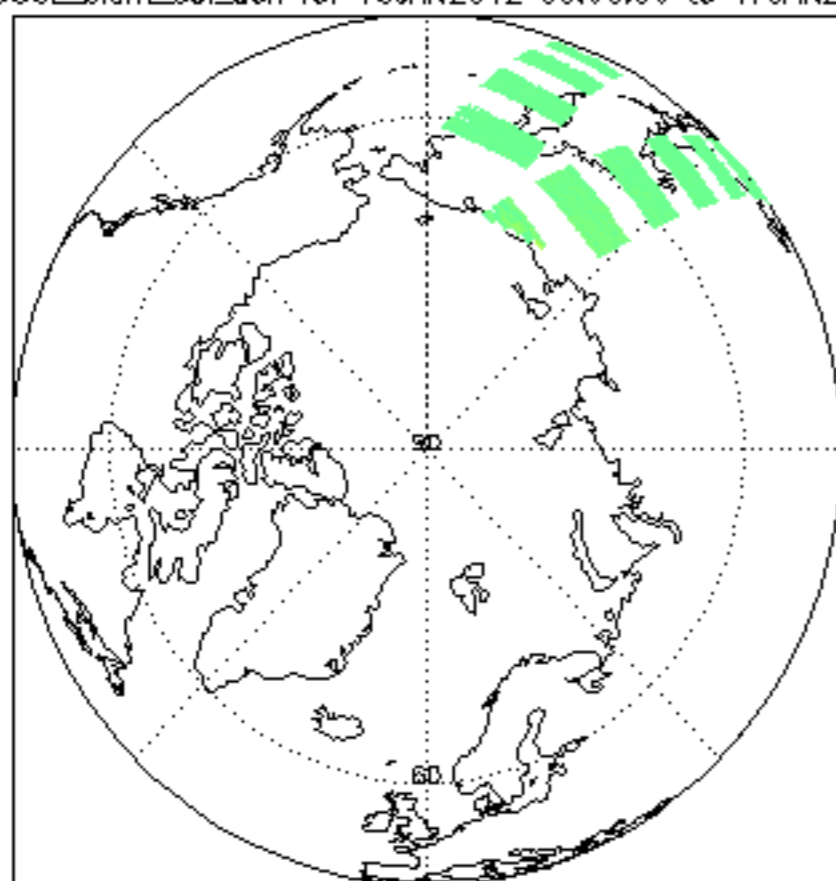


SCIOL2P_NADUV7S02_amf_cl for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

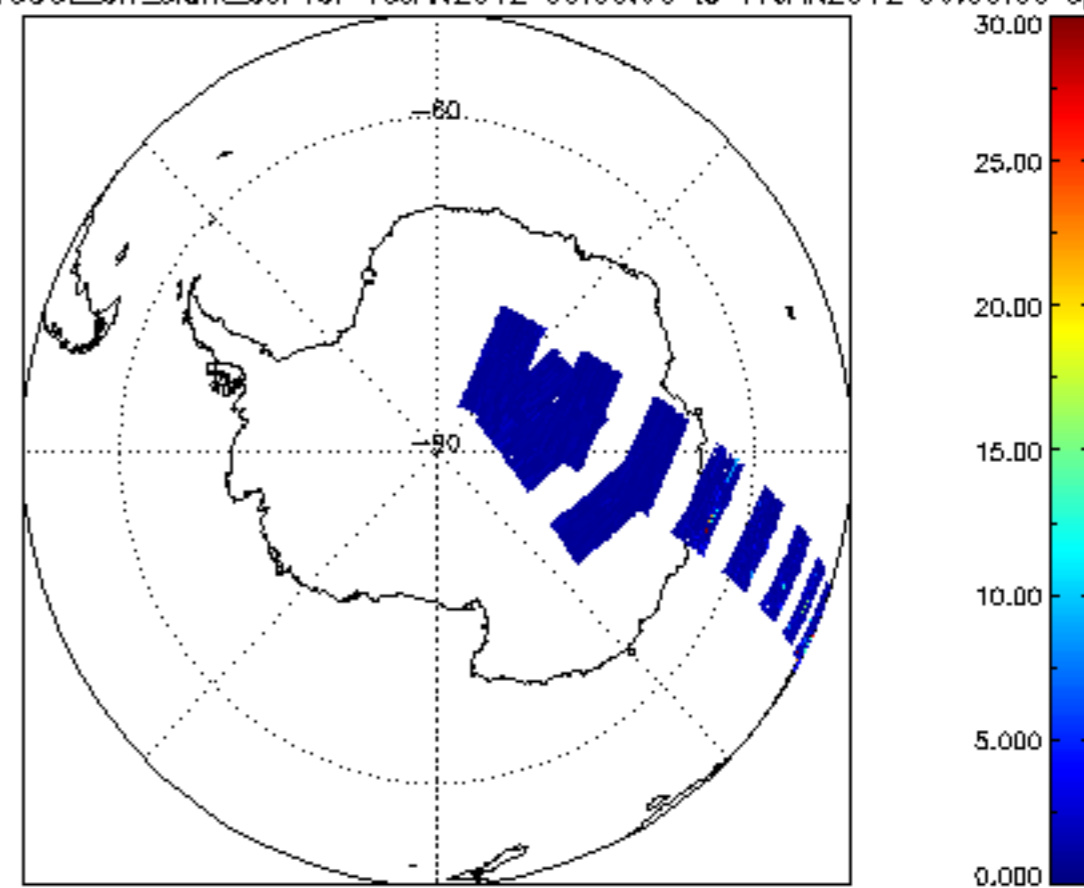
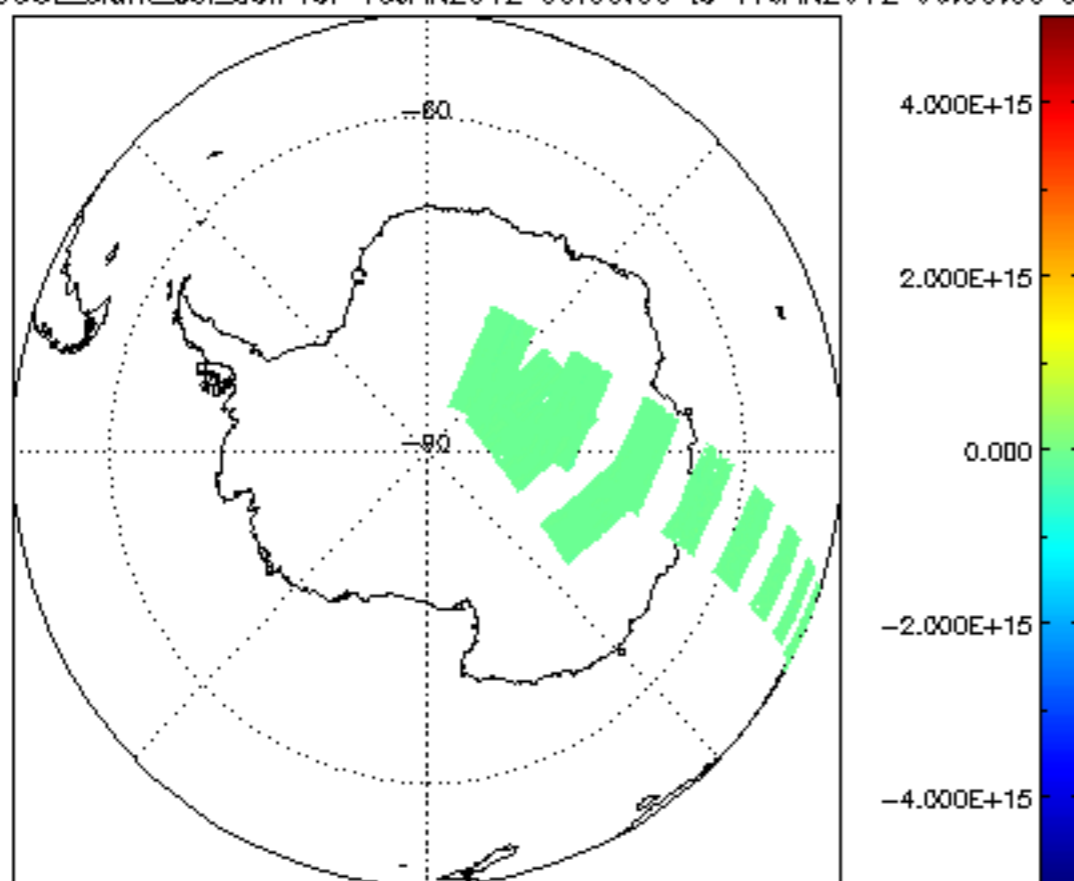


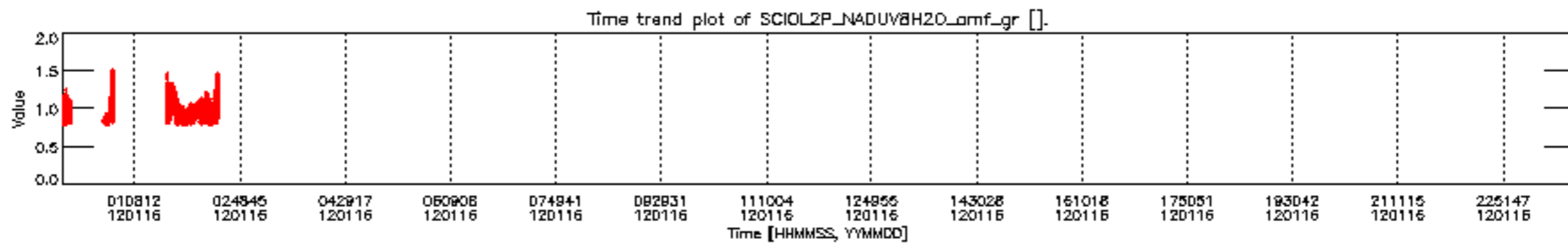
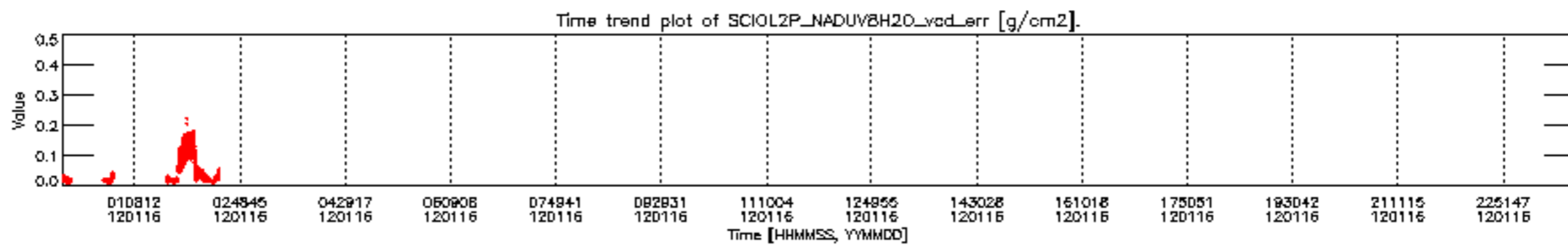
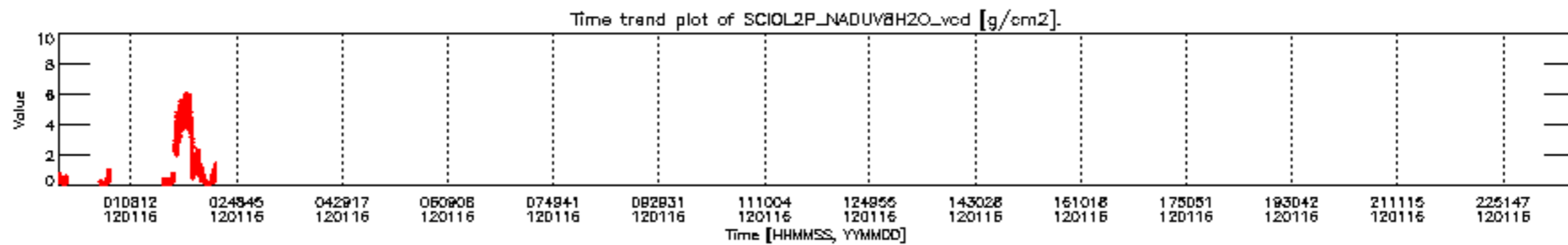


ICOL2P_NADUV60CL_slant_col_den for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 np;ICOL2P_NADUV60CL_err_slant_col for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 np

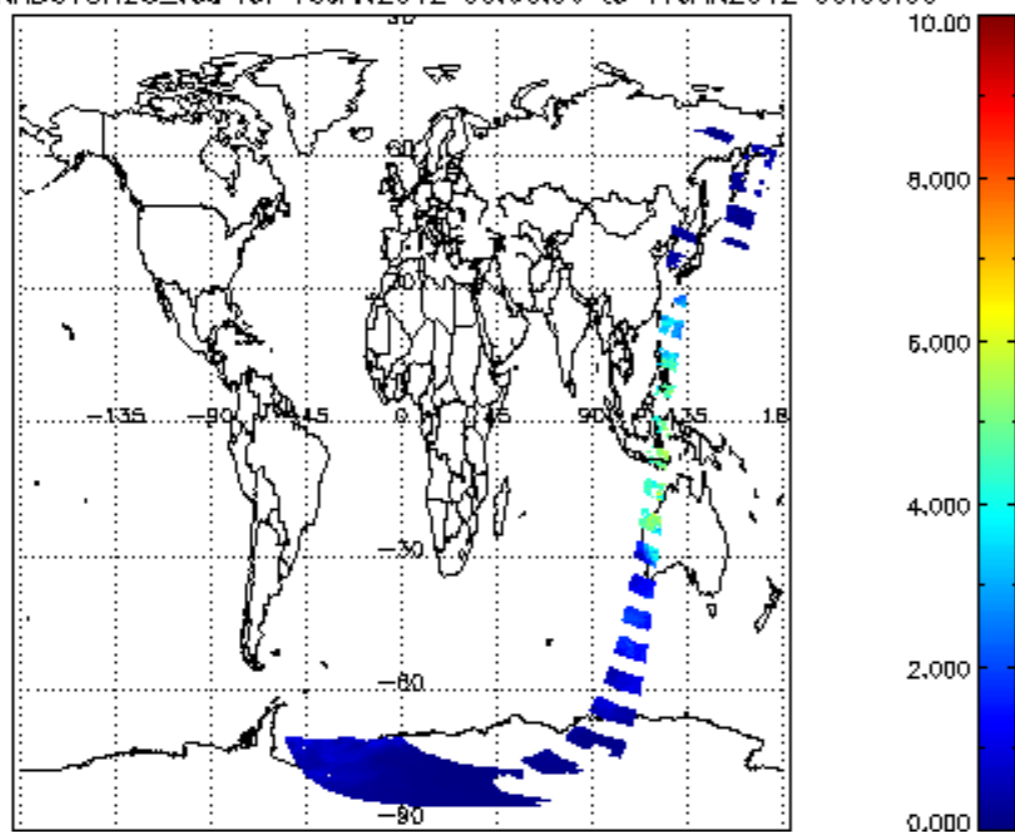


iCIOL2P_NADUV6OCL_slant_col_den for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 sp iCIOL2P_NADUV6OCL_err_slant_col for 16JAN2012 00:00:00 to 17JAN2012 00:00:00 sp

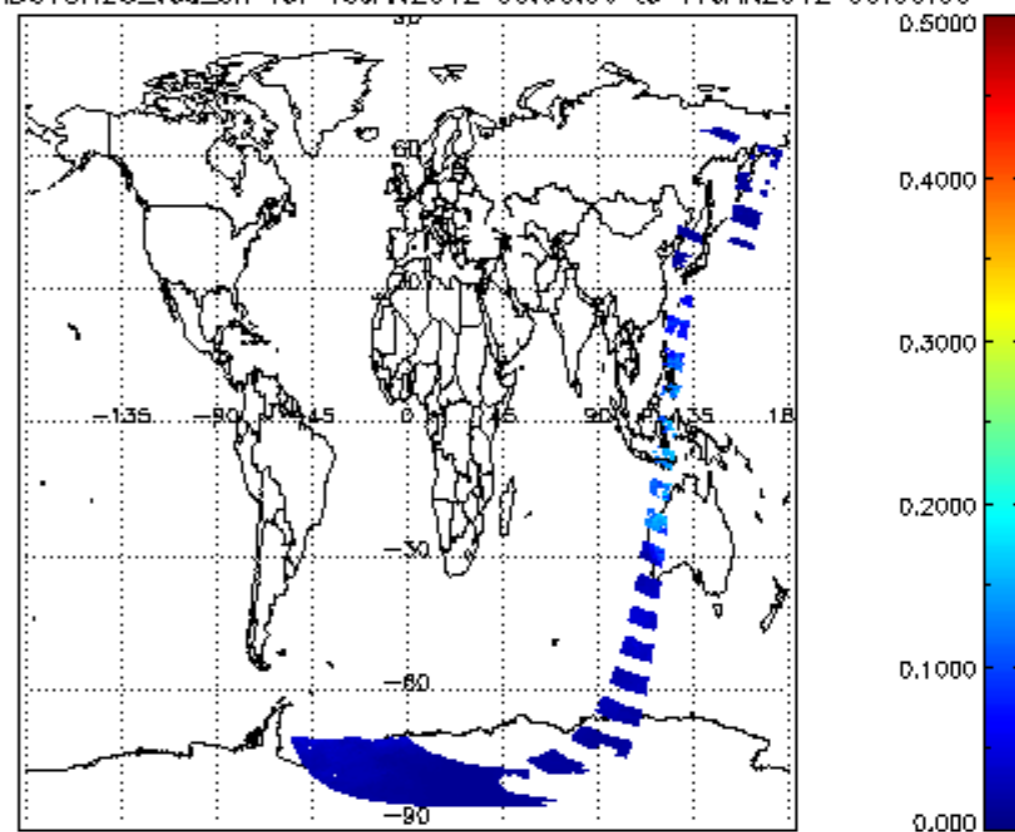




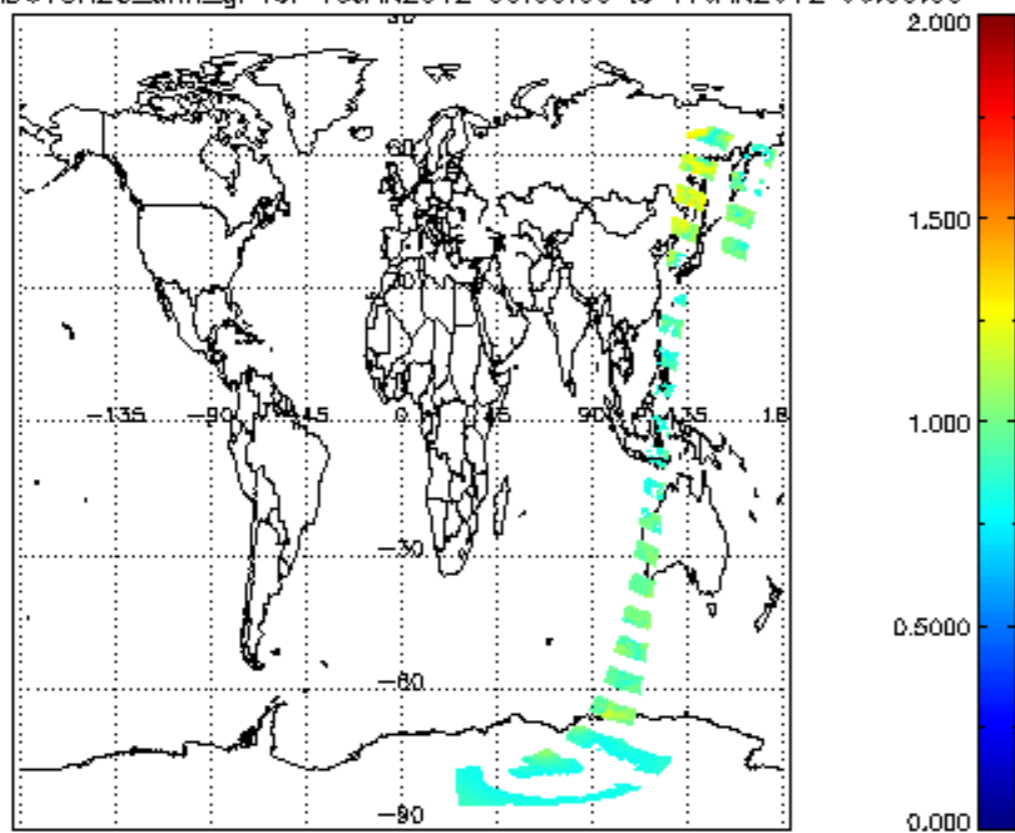
SCIOL2P_NADUVB20_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

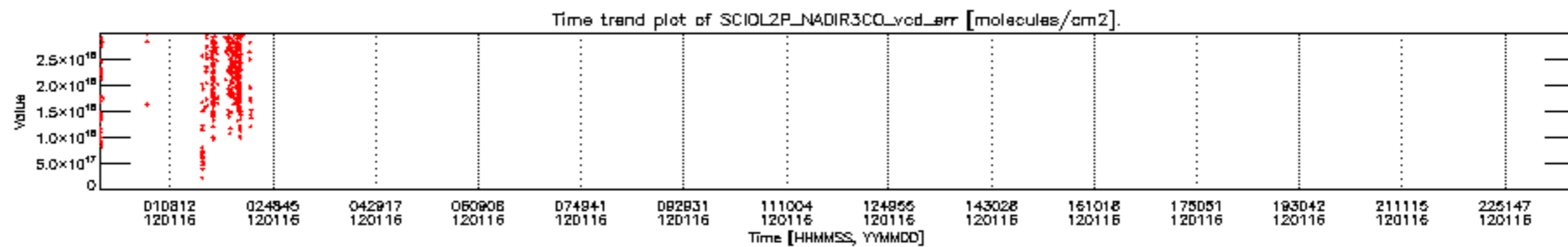
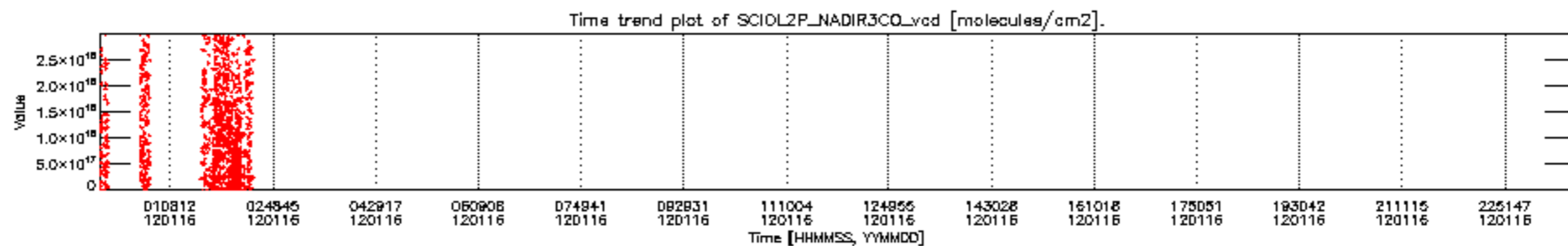


SCIOL2P_NADUVB20_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

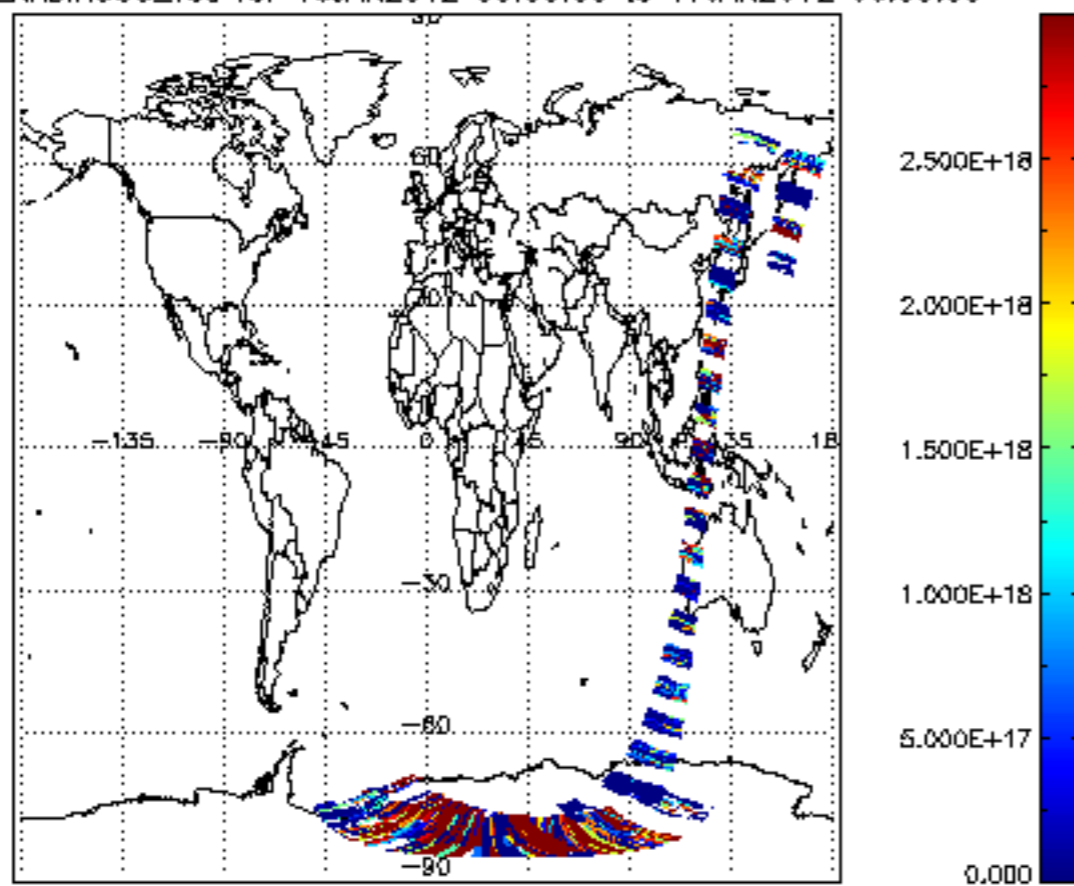


SCIOL2P_NADUVB20_amf_gr for 16JAN2012 00:00:00 to 17JAN2012 00:00:00

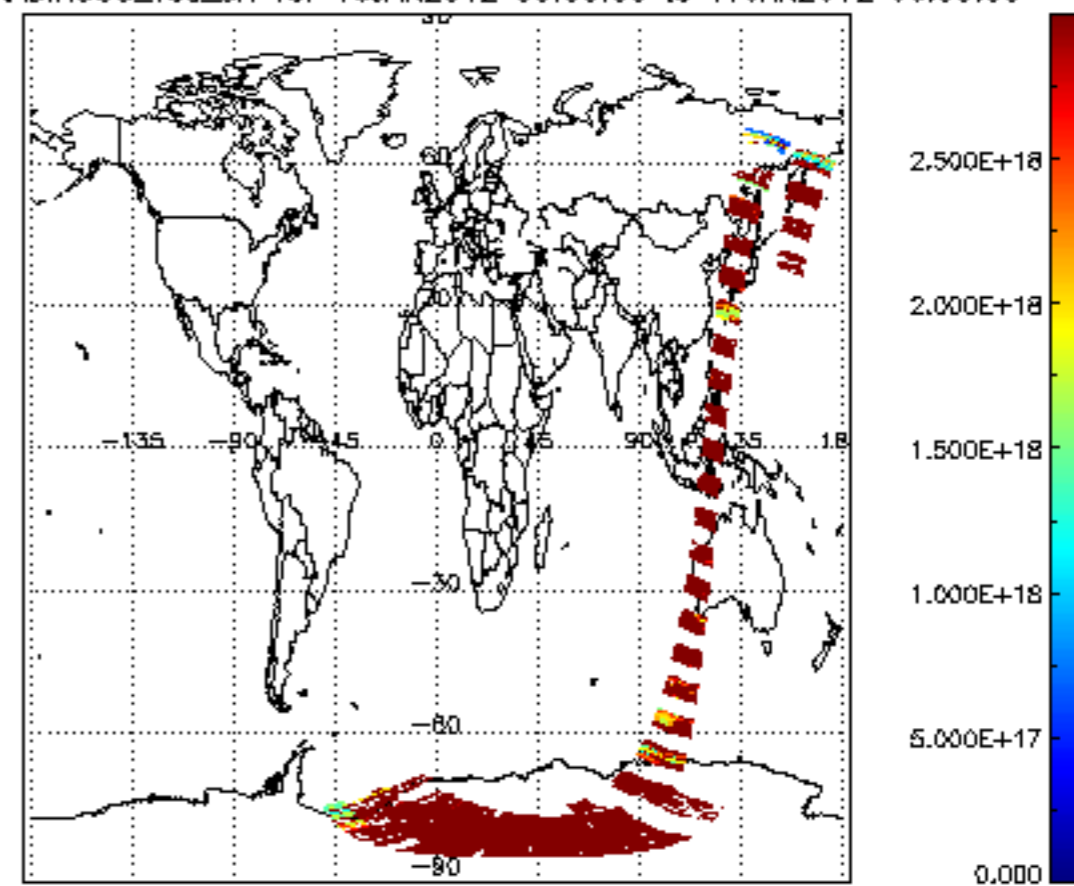




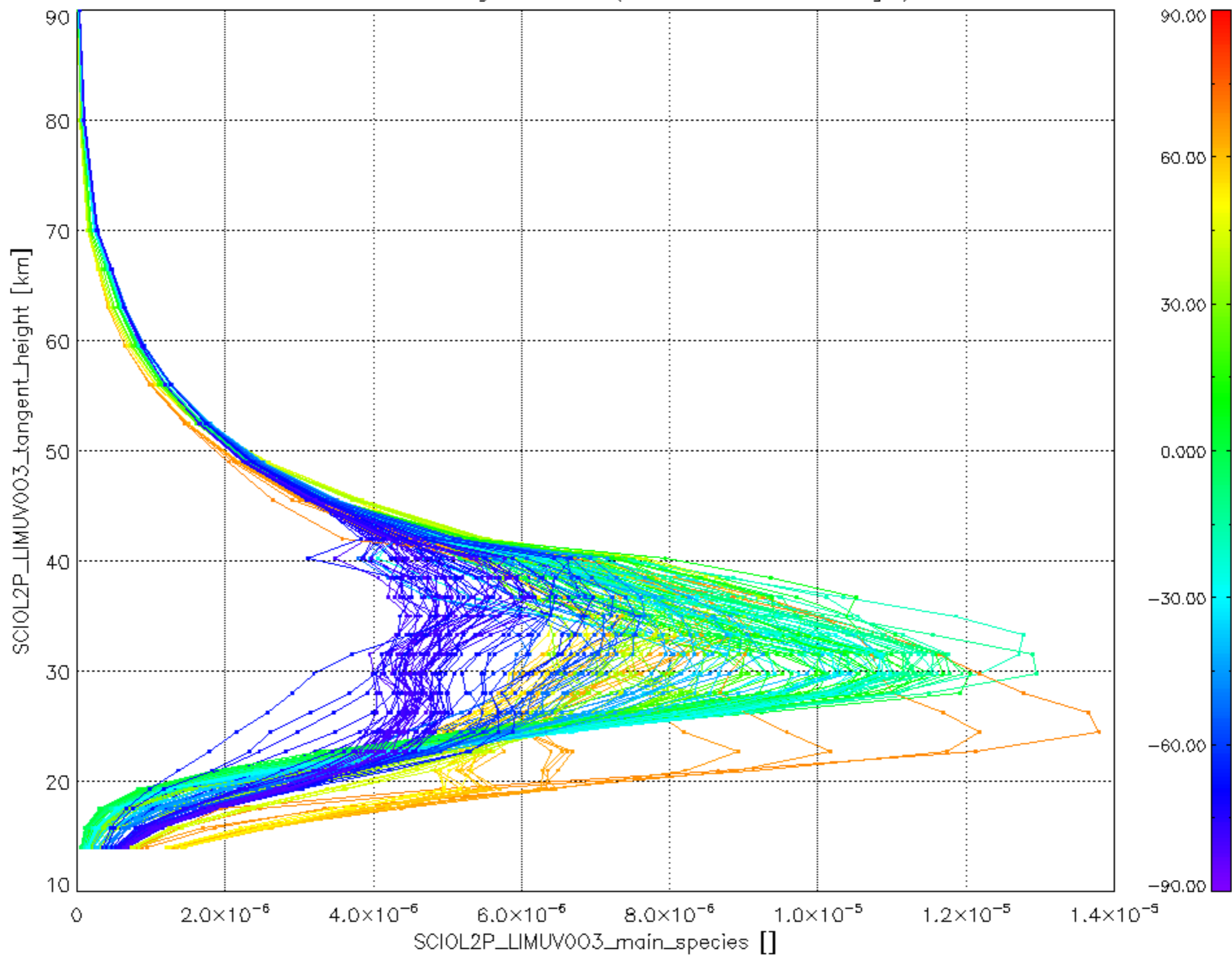
SCIOL2P_NADIR3CO_vcd for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



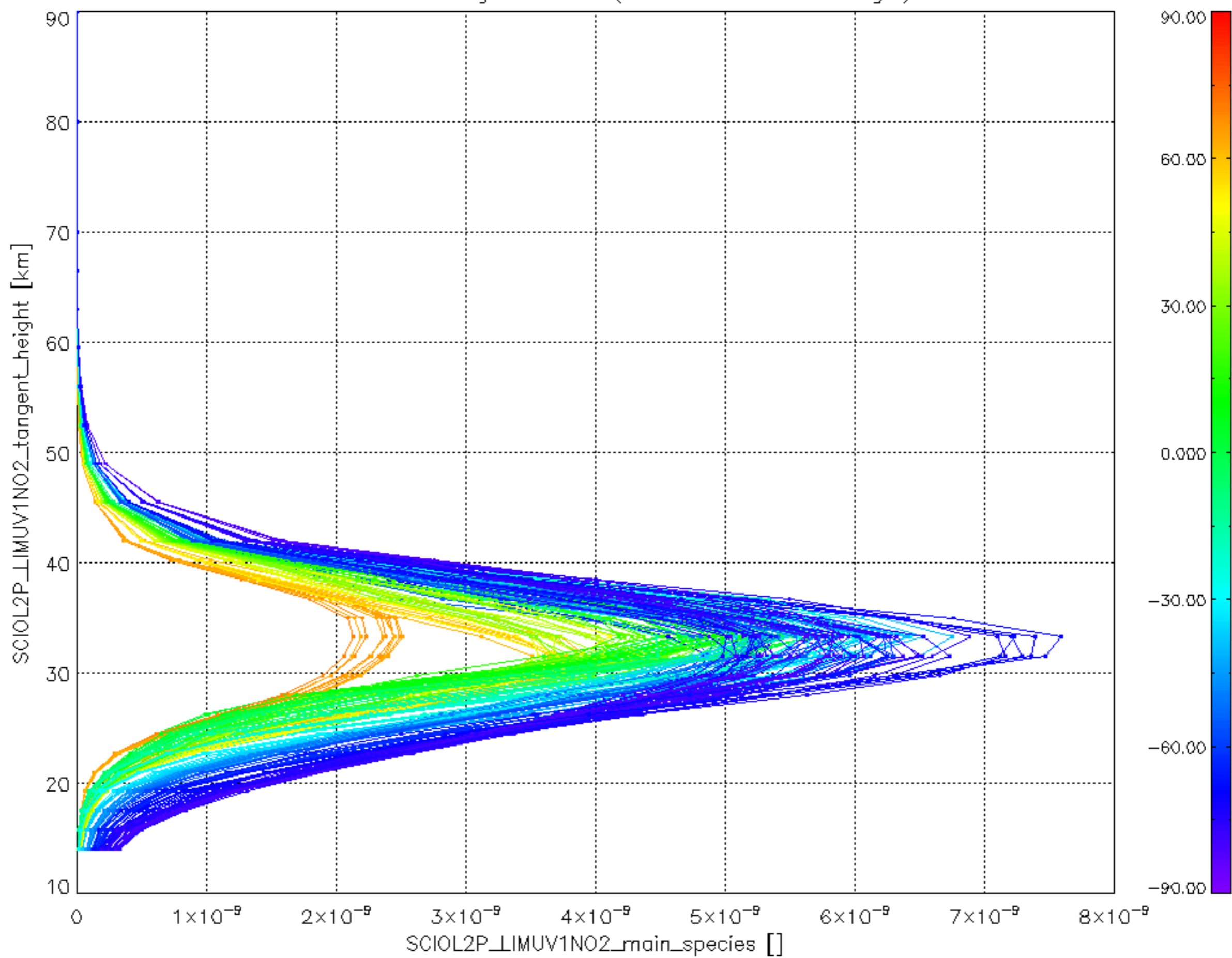
SCIOL2P_NADIR3CO_vcd_err for 16JAN2012 00:00:00 to 17JAN2012 00:00:00



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).

