

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 | 1.6 (28-07-2008) |
| Time of report generation | 12FEB2009 11:21:19 |
| Data source version | SCIA-OL/3.01-R |
| Processing scope for products | 25JAN2009 00:00:00 to 26JAN2009 00:00:00 |
| Start time of first product within scope | 24JAN2009 23:29:02 |
| Stop time of last product within scope | 25JAN2009 23:51:49 |
| Total number of level 2 products | 14 |
| 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.

| # | Product name | Start time | Stop time | Prod err | Fit summary |
|----|--|--------------------|--------------------|----------|-------------|
| 0 | SCI_OL__2PRDPA20090124_232902_000032692075_00474_36099_2069.N1 | 24JAN2009 23:29:02 | 25JAN2009 00:23:32 | 0 | GOOD |
| 1 | SCI_OL__2PRDPA20090125_010829_000033252075_00474_36099_2068.N1 | 25JAN2009 01:08:29 | 25JAN2009 02:03:55 | 0 | GOOD |
| 2 | SCI_OL__2PRDPA20090125_025013_000032692075_00476_36101_2072.N1 | 25JAN2009 02:50:13 | 25JAN2009 03:44:43 | 0 | GOOD |
| 3 | SCI_OL__2PRDPA20090125_042940_000033252075_00476_36101_2071.N1 | 25JAN2009 04:29:40 | 25JAN2009 05:25:06 | 0 | GOOD |
| 4 | SCI_OL__2PRDPA20090125_061124_000032692075_00478_36103_2074.N1 | 25JAN2009 06:11:24 | 25JAN2009 07:05:54 | 0 | GOOD |
| 5 | SCI_OL__2PRDPA20090125_075051_000033252075_00478_36103_2073.N1 | 25JAN2009 07:50:51 | 25JAN2009 08:46:17 | 0 | GOOD |
| 6 | SCI_OL__2PRDPA20090125_093235_000032692075_00480_36105_2070.N1 | 25JAN2009 09:32:35 | 25JAN2009 10:27:05 | 0 | GOOD |
| 7 | SCI_OL__2PRDPA20090125_125346_000032692075_00482_36107_2077.N1 | 25JAN2009 12:53:46 | 25JAN2009 13:48:16 | 0 | GOOD |
| 8 | SCI_OL__2PRDPA20090125_143313_000033252075_00483_36108_2081.N1 | 25JAN2009 14:33:13 | 25JAN2009 15:28:39 | 0 | GOOD |
| 9 | SCI_OL__2PRDPA20090125_161458_000032692075_00484_36109_2078.N1 | 25JAN2009 16:14:58 | 25JAN2009 17:09:27 | 0 | GOOD |
| 10 | SCI_OL__2PRDPA20090125_175437_000033412075_00485_36110_2079.N1 | 25JAN2009 17:54:37 | 25JAN2009 18:50:18 | 0 | GOOD |
| 11 | SCI_OL__2PRDPA20090125_193433_000033942075_00486_36111_2076.N1 | 25JAN2009 19:34:33 | 25JAN2009 20:31:07 | 0 | GOOD |
| 12 | SCI_OL__2PRDPA20090125_211536_000033252075_00487_36112_2080.N1 | 25JAN2009 21:15:36 | 25JAN2009 22:11:01 | 0 | GOOD |
| 13 | SCI_OL__2PRDPA20090125_225720_000032692075_00488_36113_2082.N1 | 25JAN2009 22:57:20 | 25JAN2009 23:51:49 | 0 | GOOD |

2.2 Product Quality Indicators

2.2.1 Cloud parameters

This is a new section that 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: 143023

Total number of cloud data DSRs with good quality flag (=0): 143023 (100.0 %)

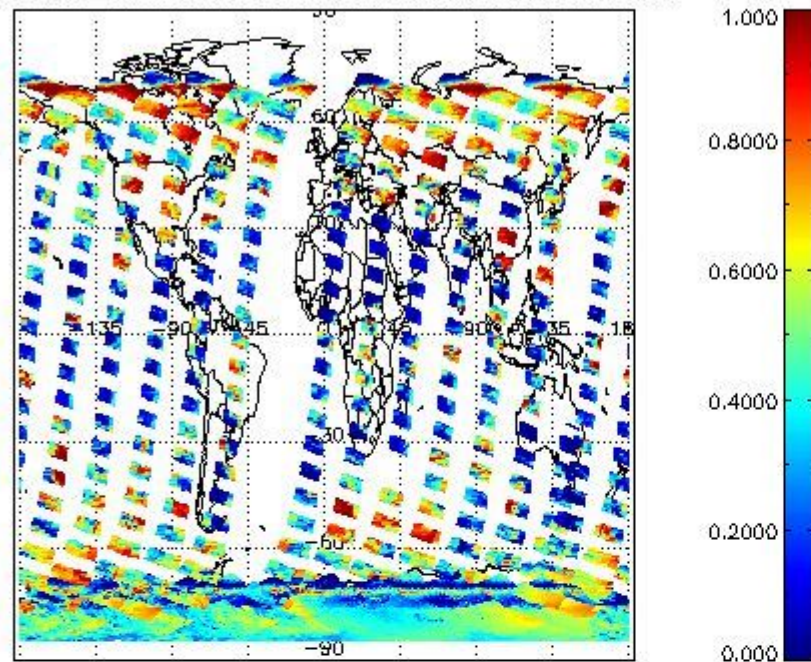
| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|-------------------|--------|----------|----------|----------|----------|----------|---|
| QUALITY_FLAG | 143023 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | flag |
| INTEGR_TIME | 143023 | 0.16910 | 0.12500 | 0.12500 | 0.25000 | 0.059732 | s |
| CL_FRAC | 143023 | 0.42079 | 0.41301 | 0.0000 | 1.0000 | 0.26923 | - |
| CL_FRAC_ERR | 143023 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | rel. fraction |
| PMD_READ | 143023 | 5.4113 | 4.0000 | 4.0000 | 8.0000 | 1.9114 | |
| PMD_READ_CL[0] | 143023 | 0.19951 | 0.0000 | 0.0000 | 8.0000 | 0.97324 | - |
| PMD_READ_CL[1] | 143023 | 0.60978 | 0.0000 | 0.0000 | 8.0000 | 1.7355 | - |
| CL_TOP_HEIGHT | 118815 | 4.4108 | 3.6380 | 0.0000 | 17.000 | 3.7681 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 118815 | 55.922 | 48.241 | 0.0000 | 101.00 | 39.634 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 143023 | 11100000 | 11100000 | 11100000 | 11100000 | 0.0000 | flags. Bit definition = 0: low or high cloud; 1: ice or water cloud; 2: thick or thin cloud; 3-15: not used |
| CLOUD_FLAGS | 143023 | 11001001 | 11000100 | 11000000 | 11100000 | 3150.8 | flags |
| AERO_ABSO_IND | 143023 | 3.1581 | 3.6708 | -1.1078 | 16.132 | 2.2415 | |
| AERO_IND_DIAG | 143023 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 143023 | 01010101 | 00000000 | 00000000 | 11000000 | 24439. | flags |

Time and geolocation plots:

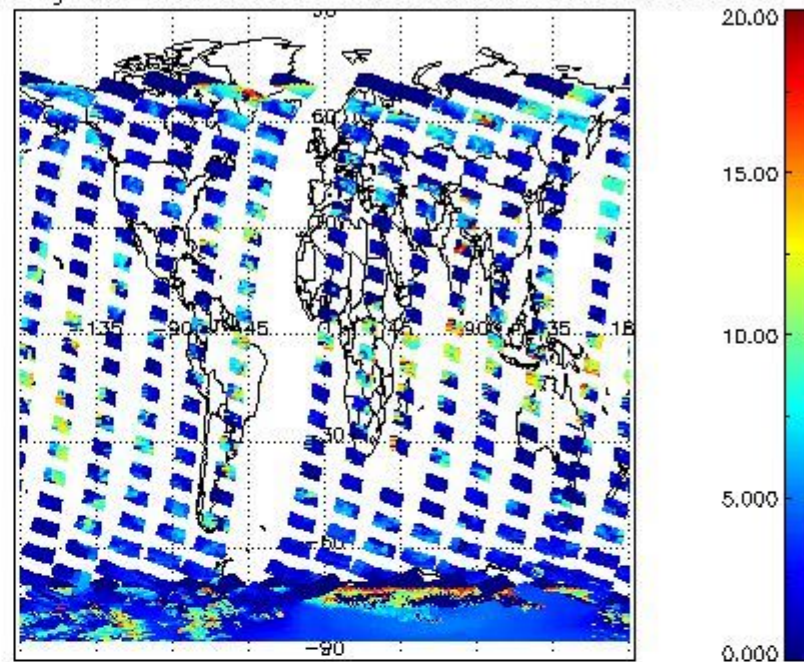
Plots are available for the following parameters:

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

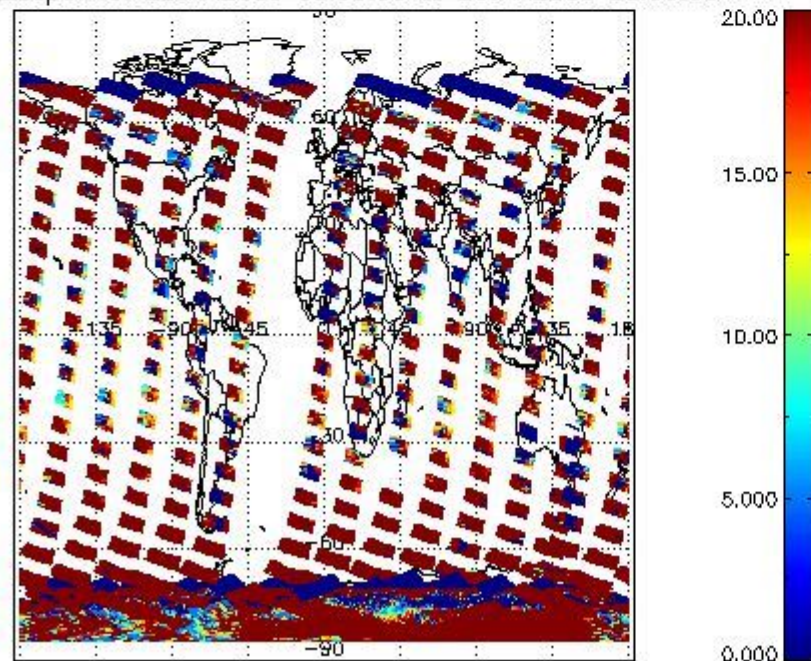
cL_frac for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



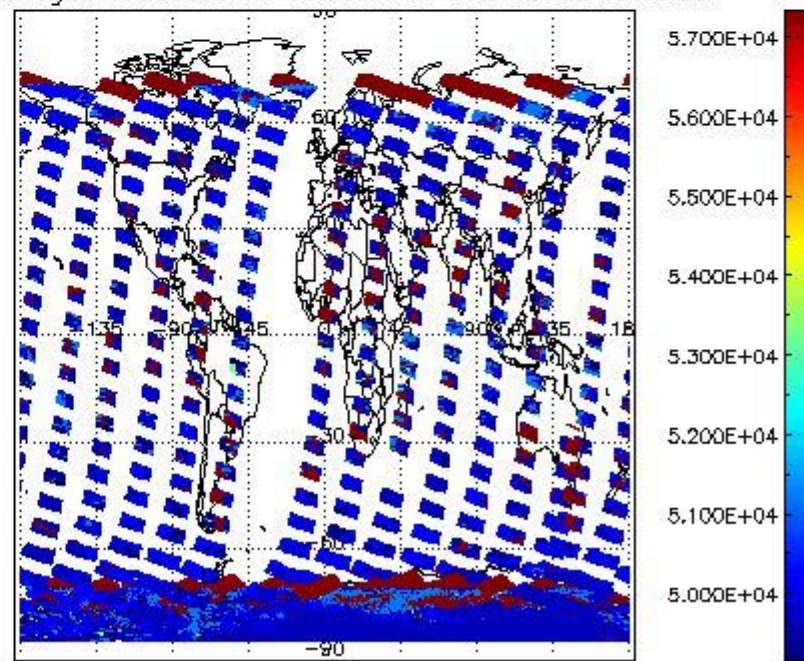
cL_top_height for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



cLopt_depth for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



cloud_flags for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



2.2.2 Nadir

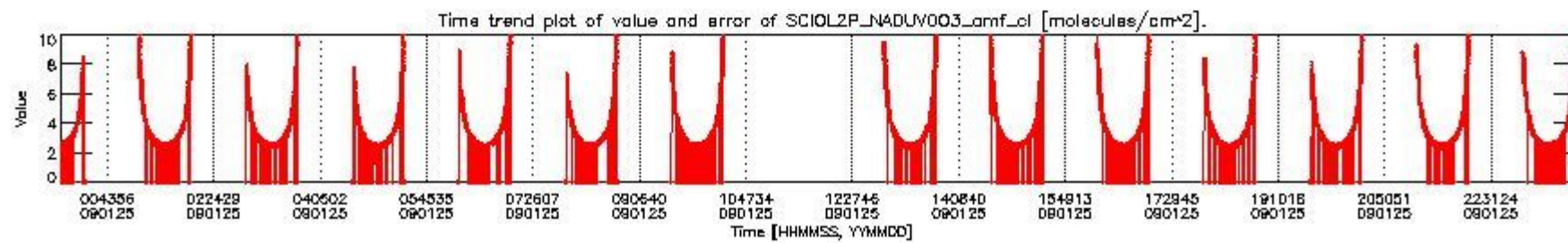
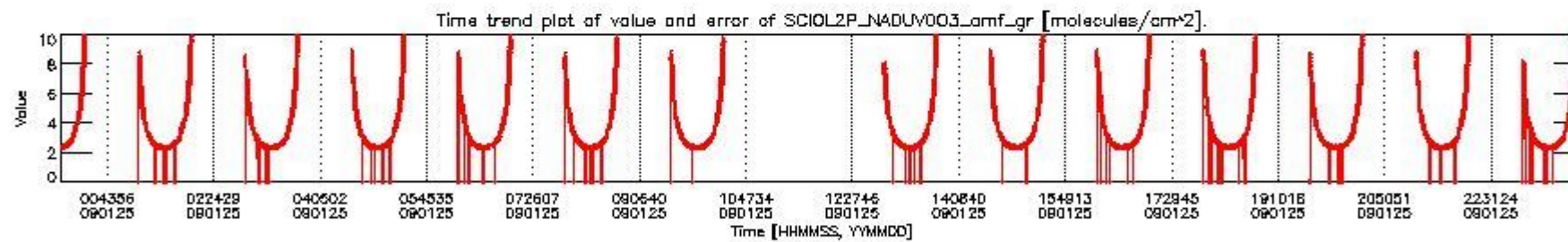
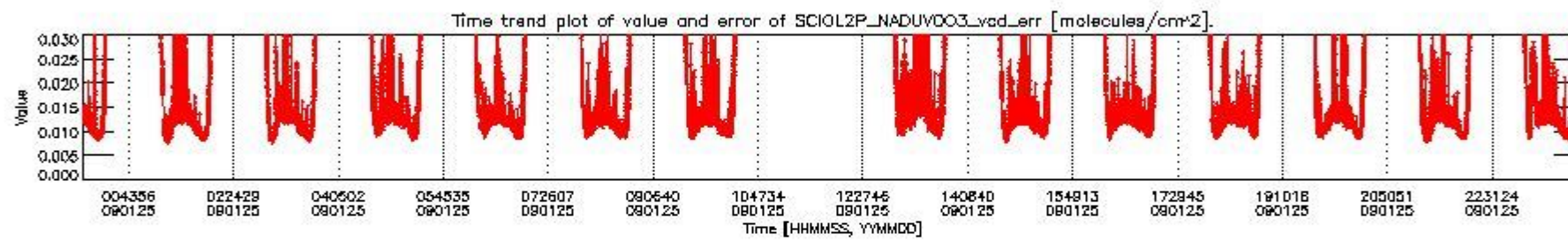
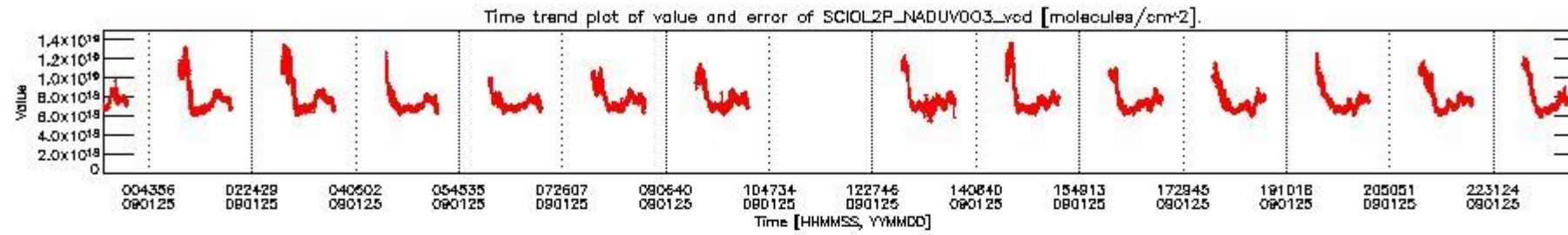
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

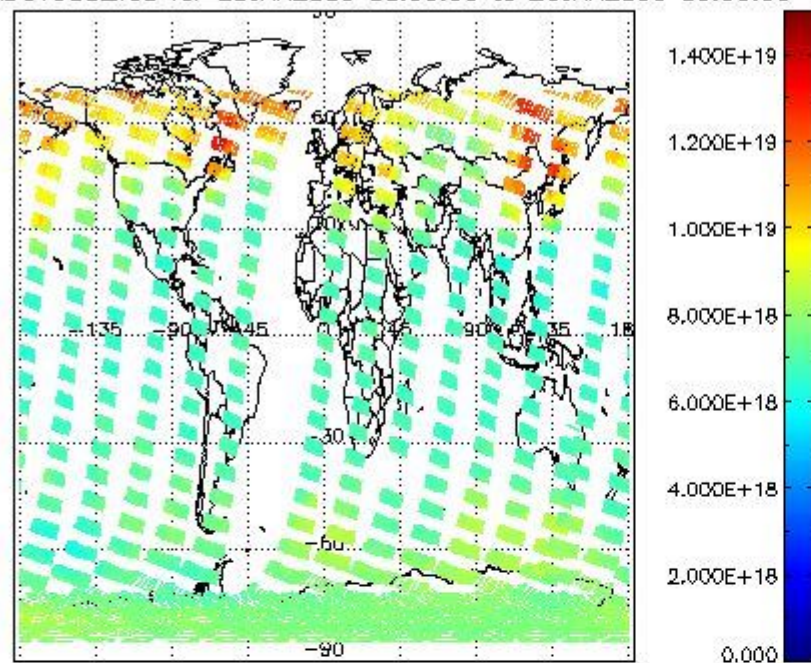
| Number | Data item ID |
|--------|--------------------------|
| 0 | SCIOL2P_NADUV003_vcd |
| 1 | SCIOL2P_NADUV003_vcd_err |
| 2 | SCIOL2P_NADUV003_amf_gr |

| | |
|---|---------------------------|
| 3 | SCIOL2P_NADUV003_amf_cl |
| 4 | SCIOL2P_NADUV1NO2_vcd |
| 5 | SCIOL2P_NADUV1NO2_vcd_err |
| 6 | SCIOL2P_NADUV1NO2_amf_gr |
| 7 | SCIOL2P_NADUV1NO2_amf_cl |

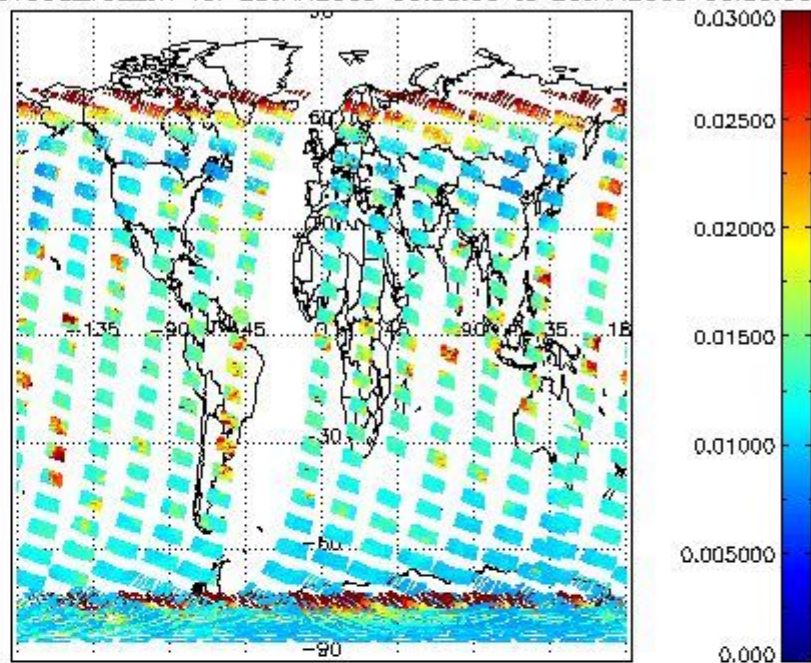
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing_start time as suggested by the product sensing_start time in the MPH.



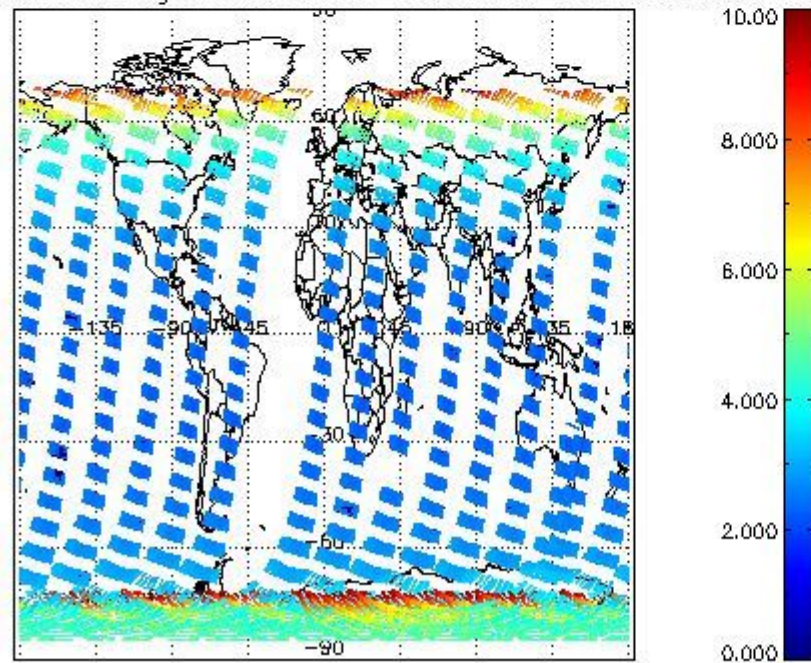
SCIOL2P_NADUV003_vcd for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



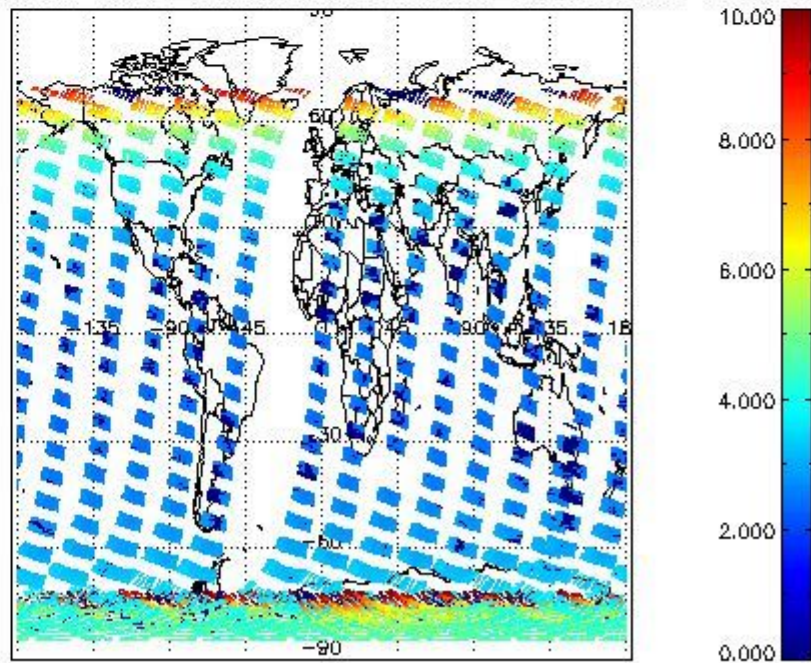
SCIOL2P_NADUV003_vcd_err for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

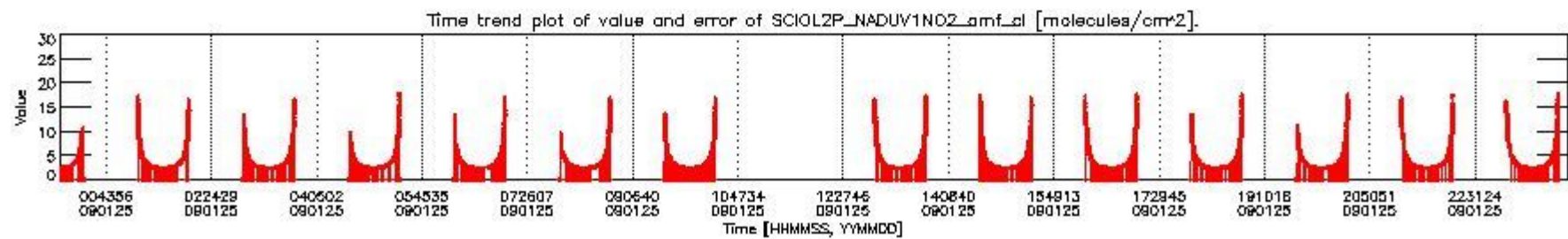
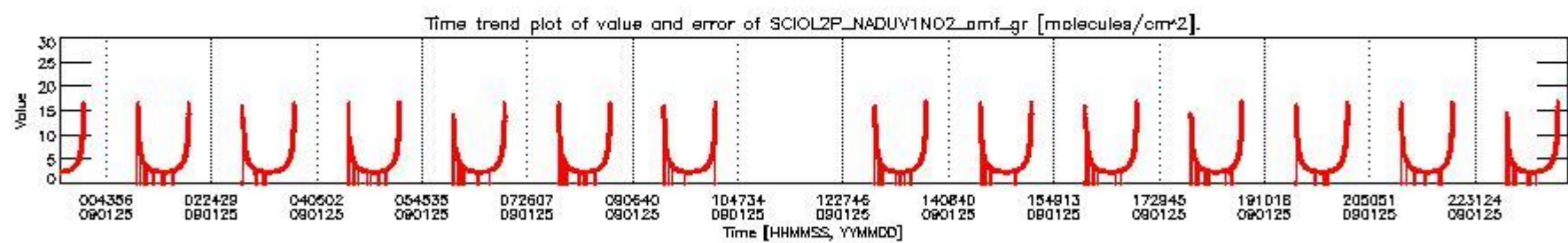
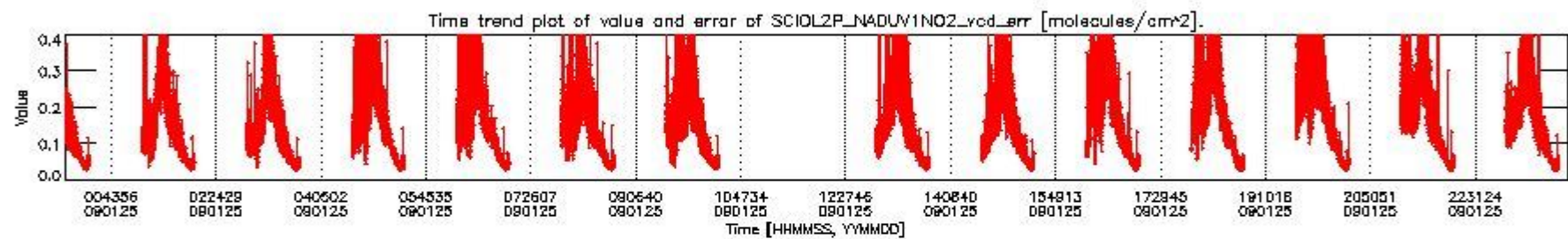
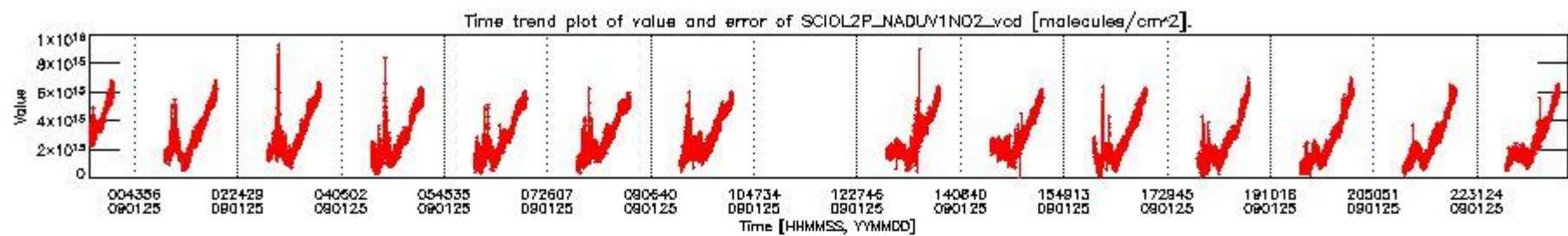


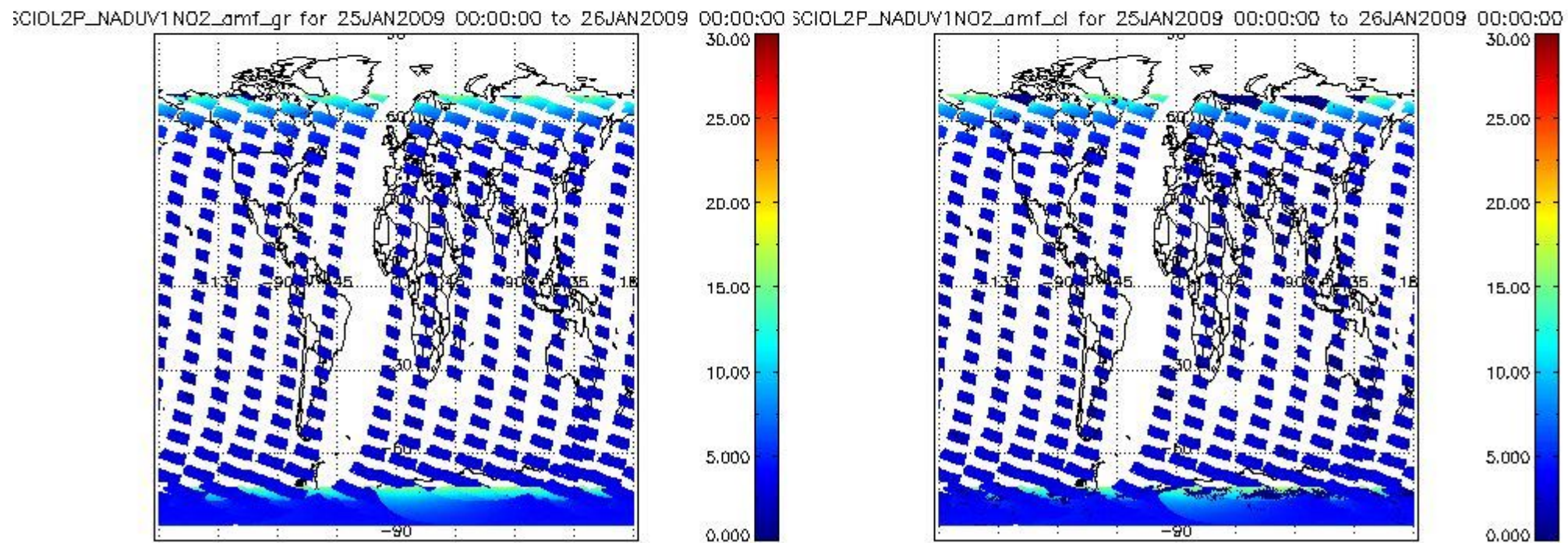
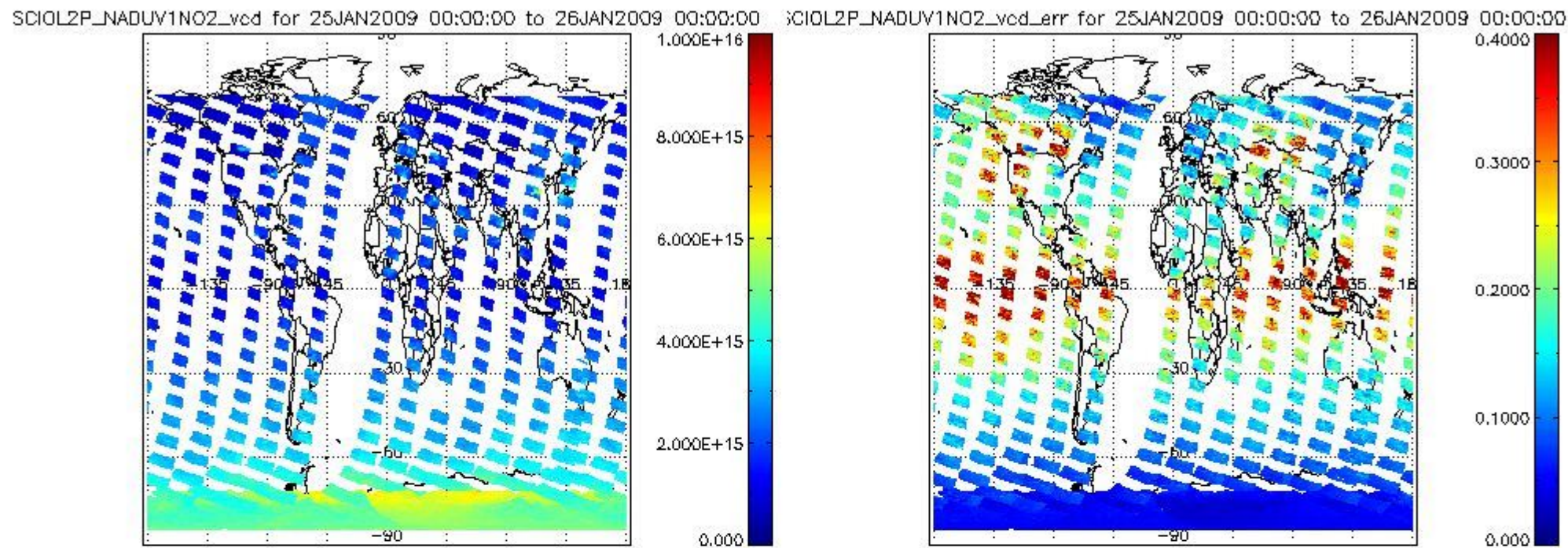
SCIOL2P_NADUV003_amf_gr for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



SCIOL2P_NADUV003_amf_cl for 25JAN2009 00:00:00 to 26JAN2009 00:00:00







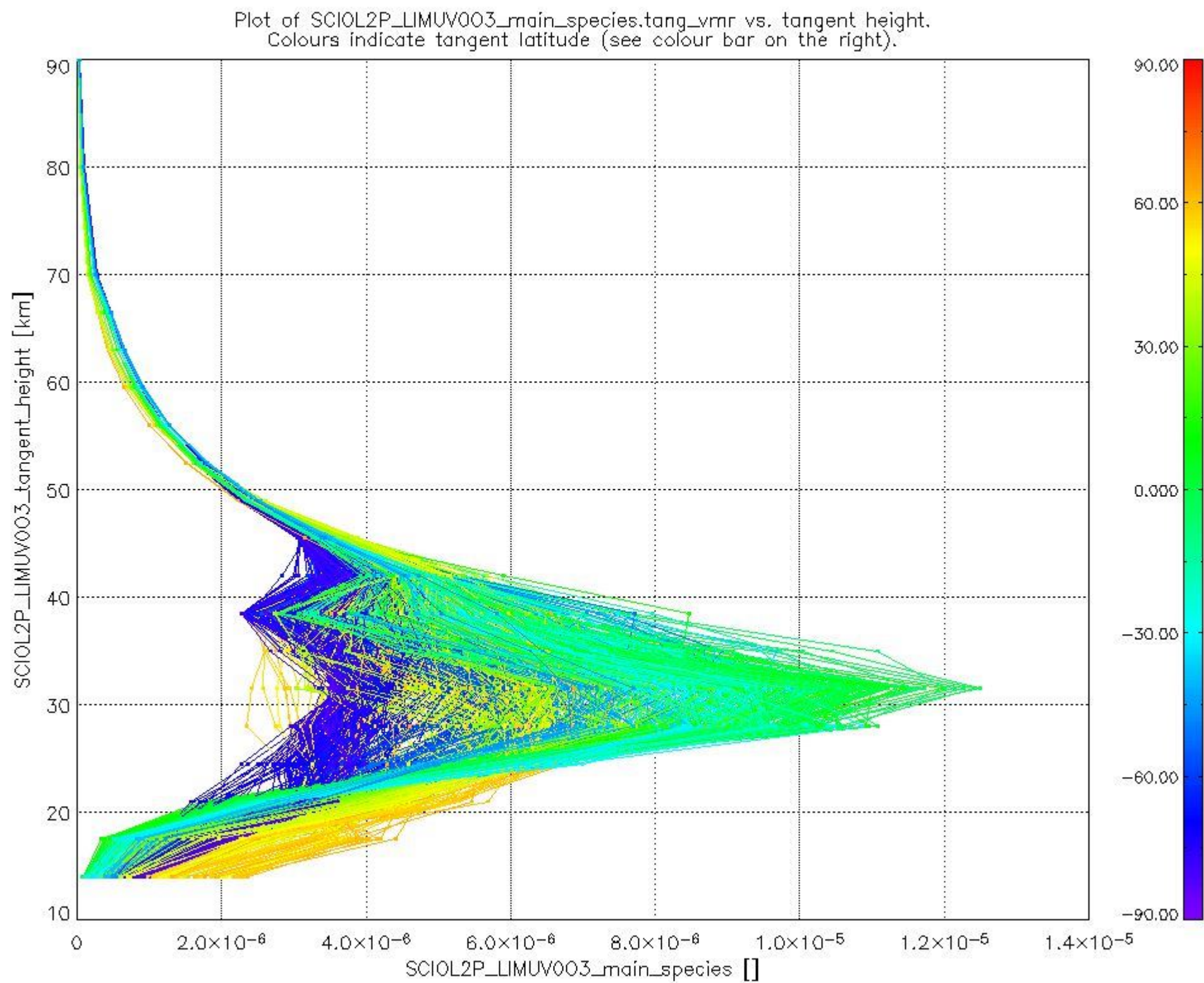
2.2.3 Limb

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

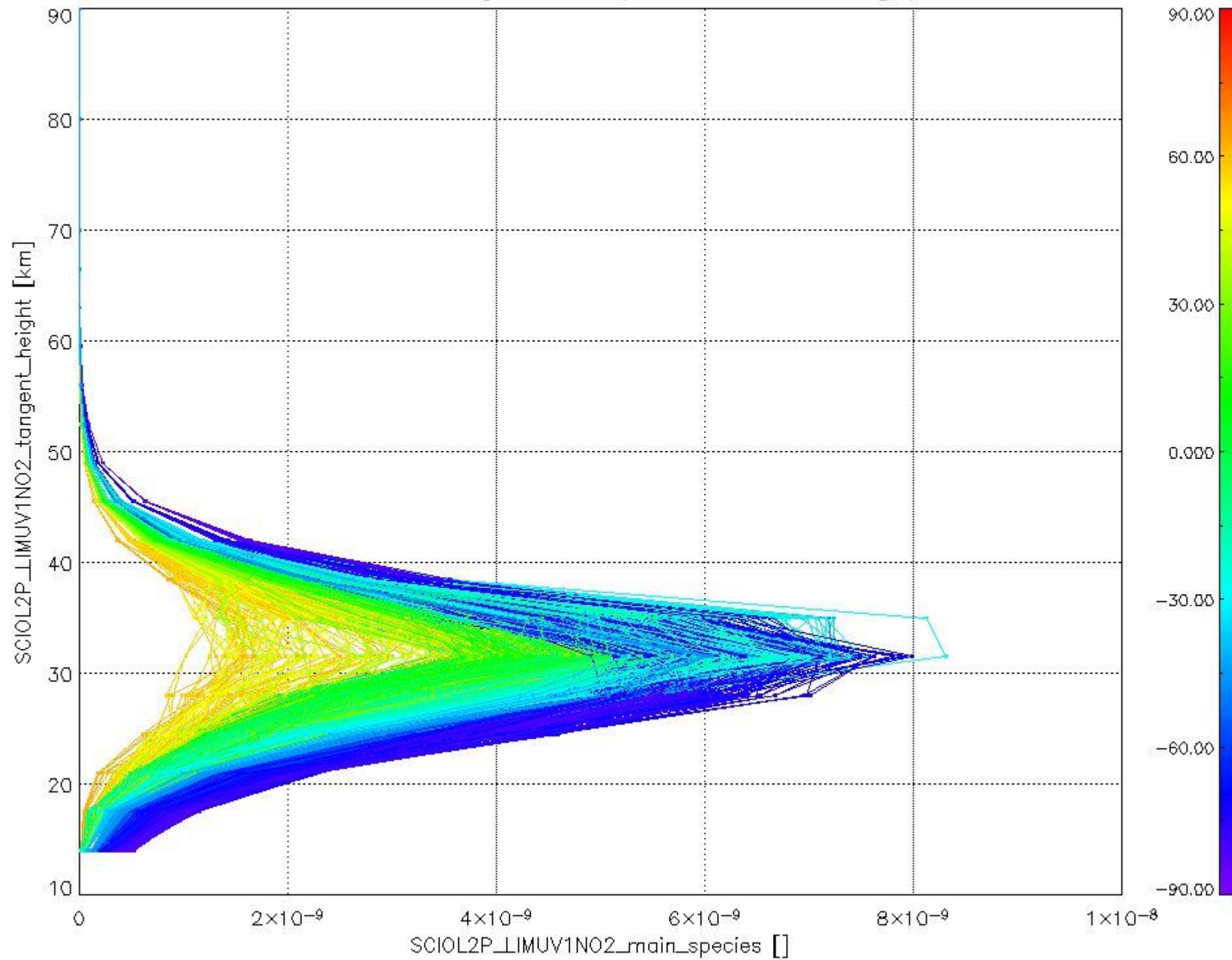
The following data items are currently included into this section:

| Number | Data item ID |
|--------|-------------------------------|
| 0 | SCIOL2PLIMUV003_main_species |
| 1 | SCIOL2PLIMUV1NO2_main_species |

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



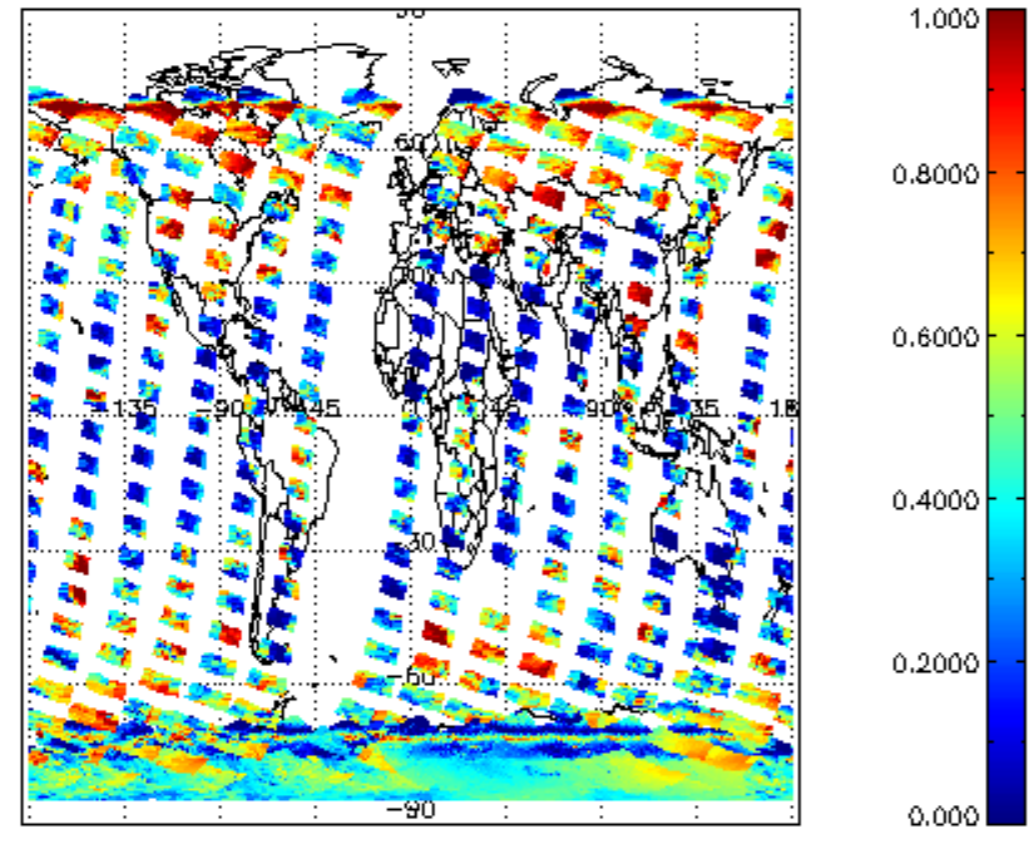
Plot of SCIOL2P_LIMUV1NO2_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



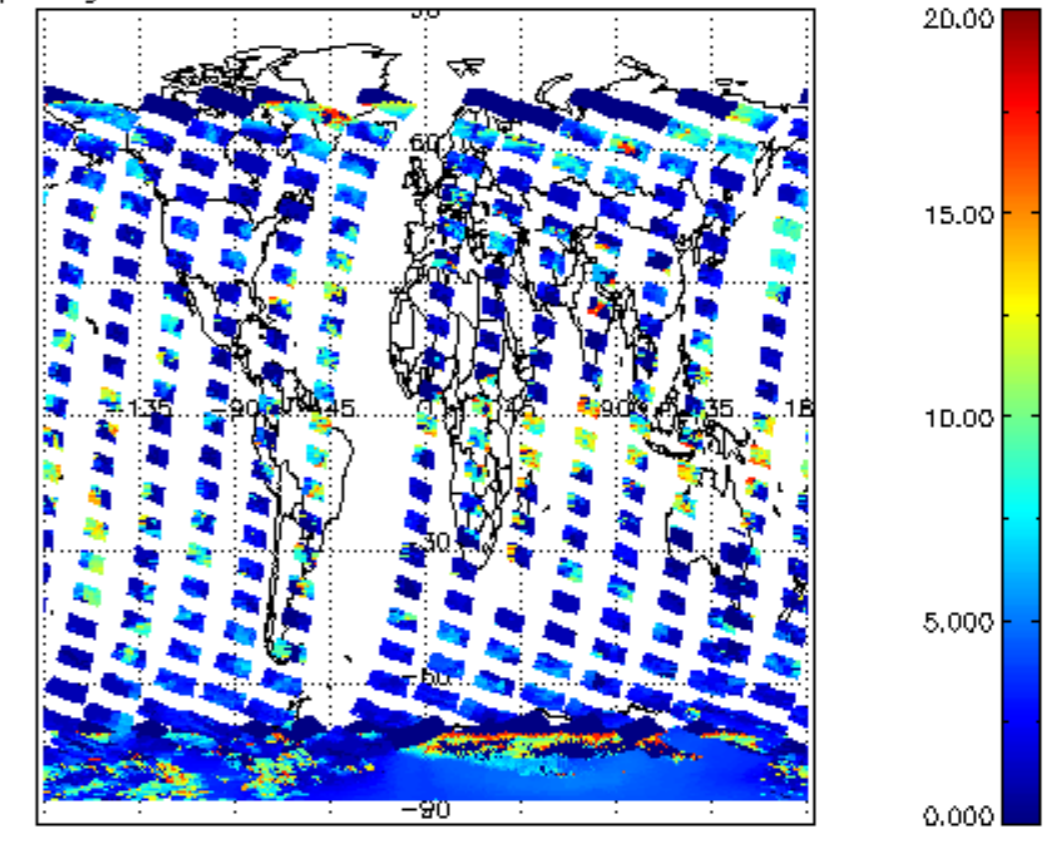
2.3 ADF monitoring

| Number | ADF |
|--------|---|
| | IN_ (INITIALISATION_FILE) |
| 0 | SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959 |
| | ECF (ECMWF_FILE) |
| 1 | NOT USED |

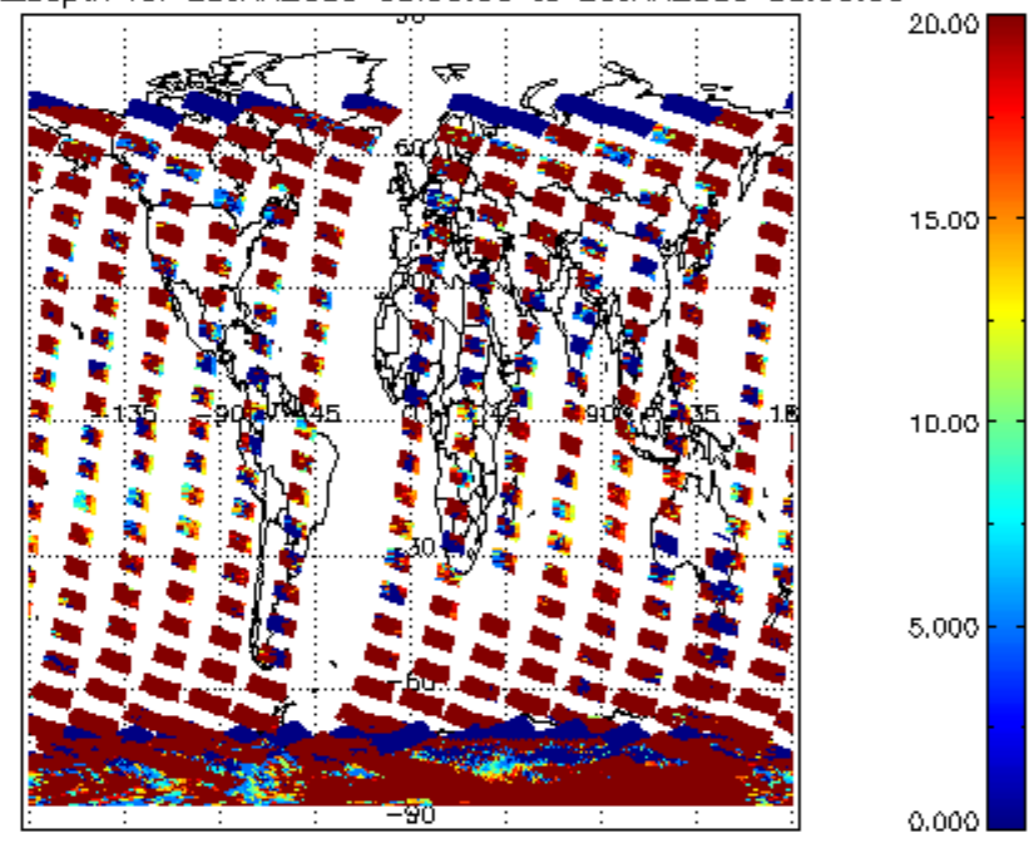
cL_frac for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



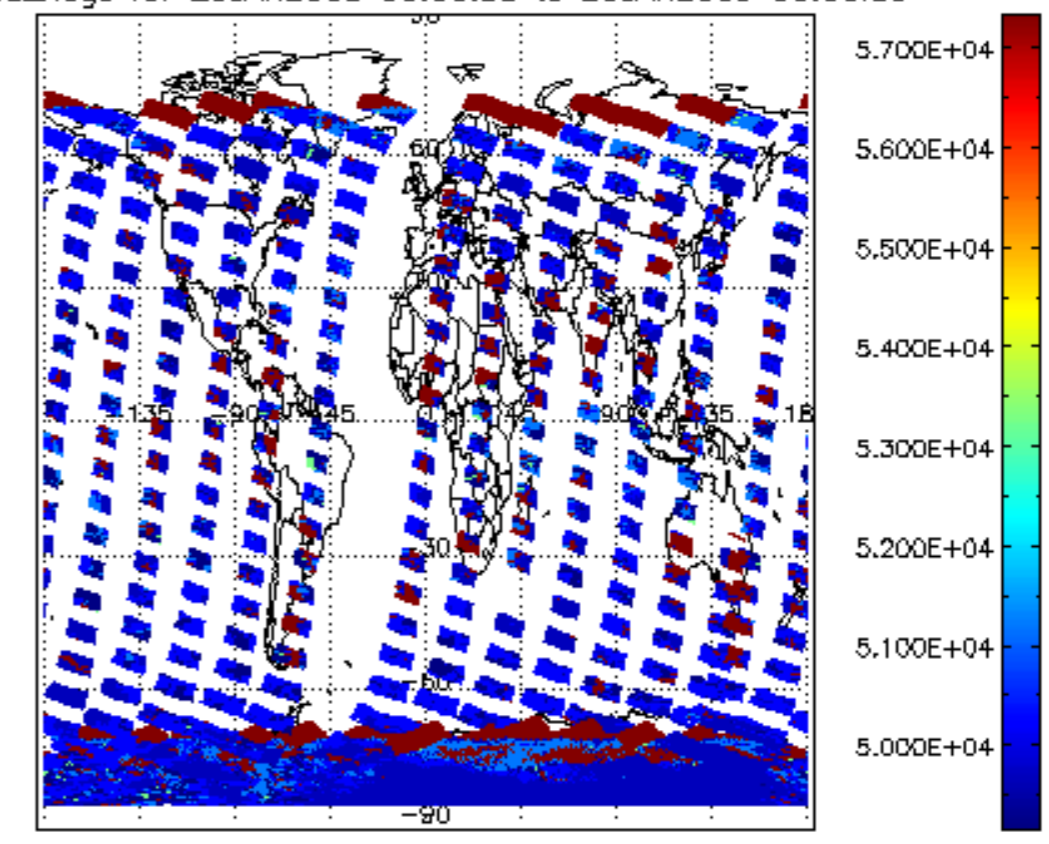
cL_top_height for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

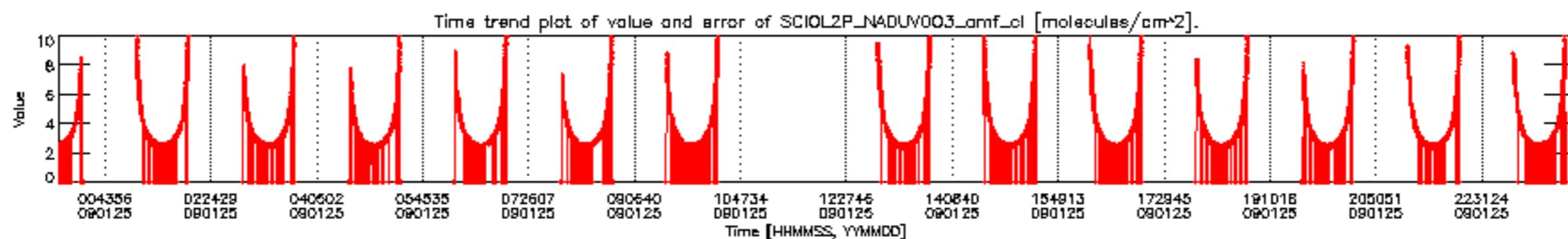
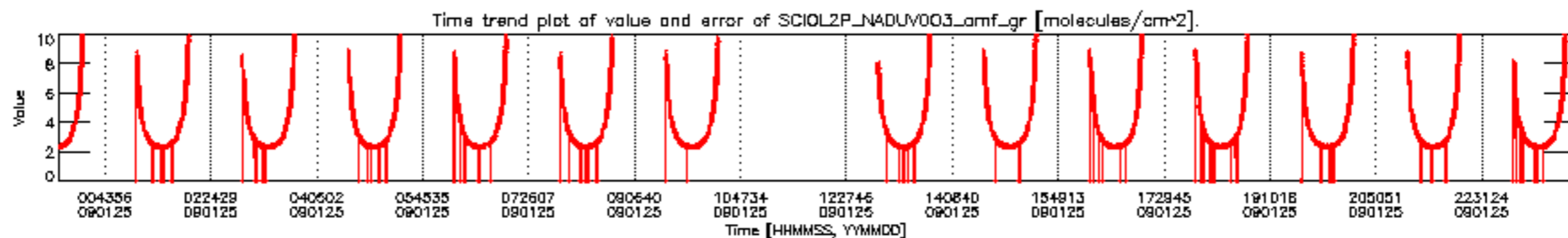
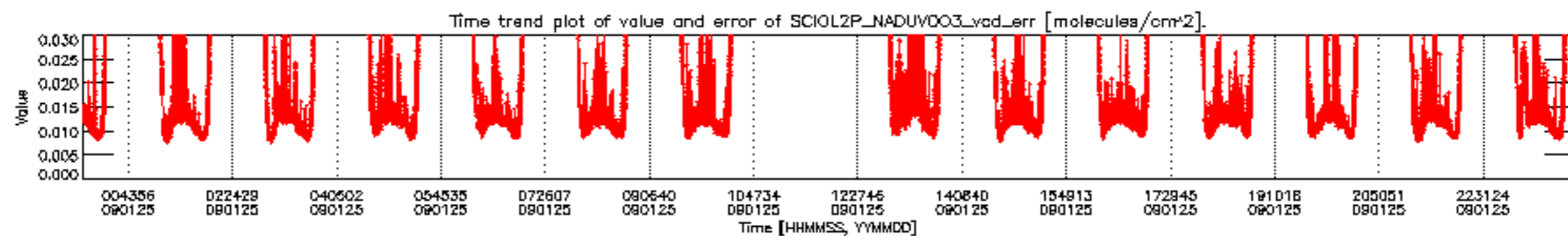
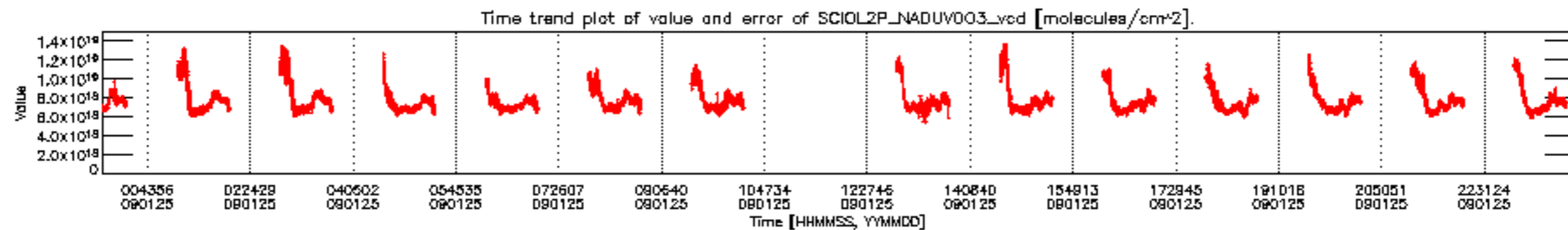


cLopt_depth for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

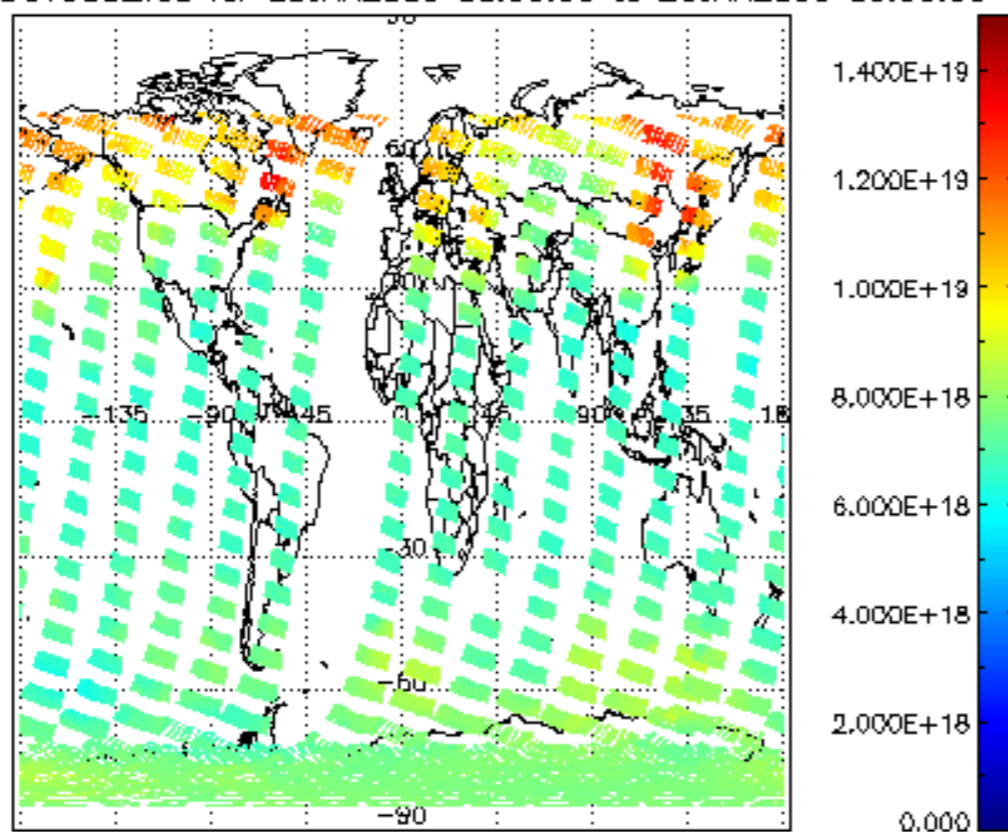


cloud_flags for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

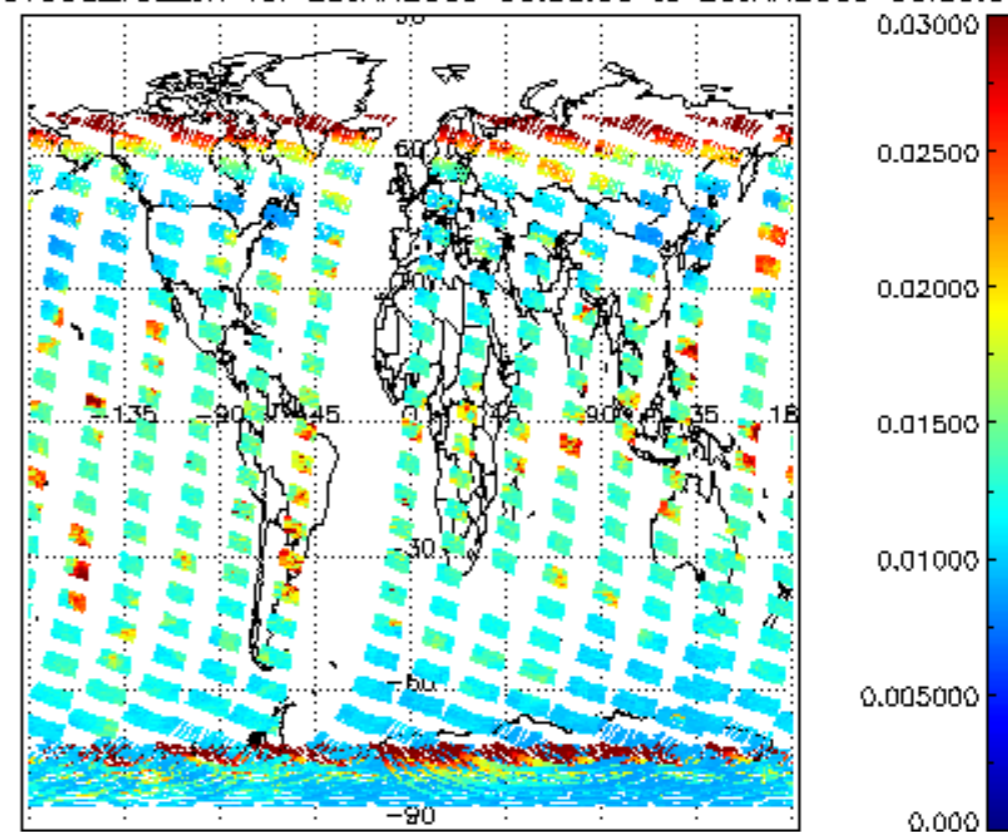




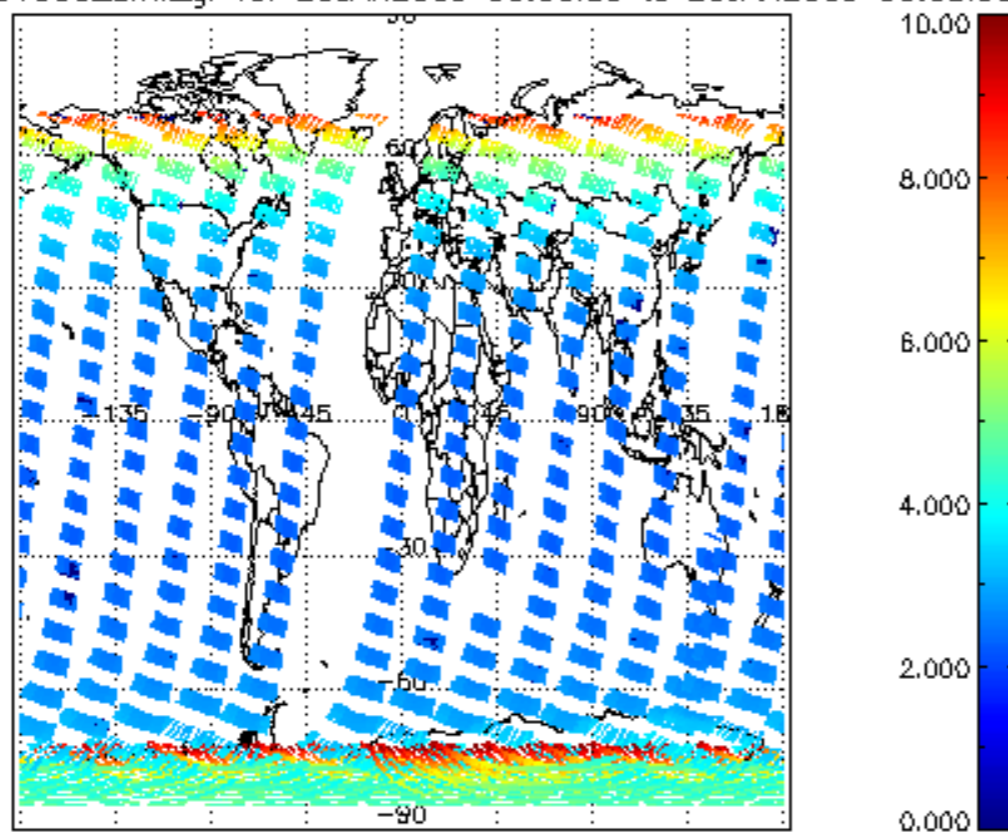
SCIOL2P_NADUV003_vcd for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



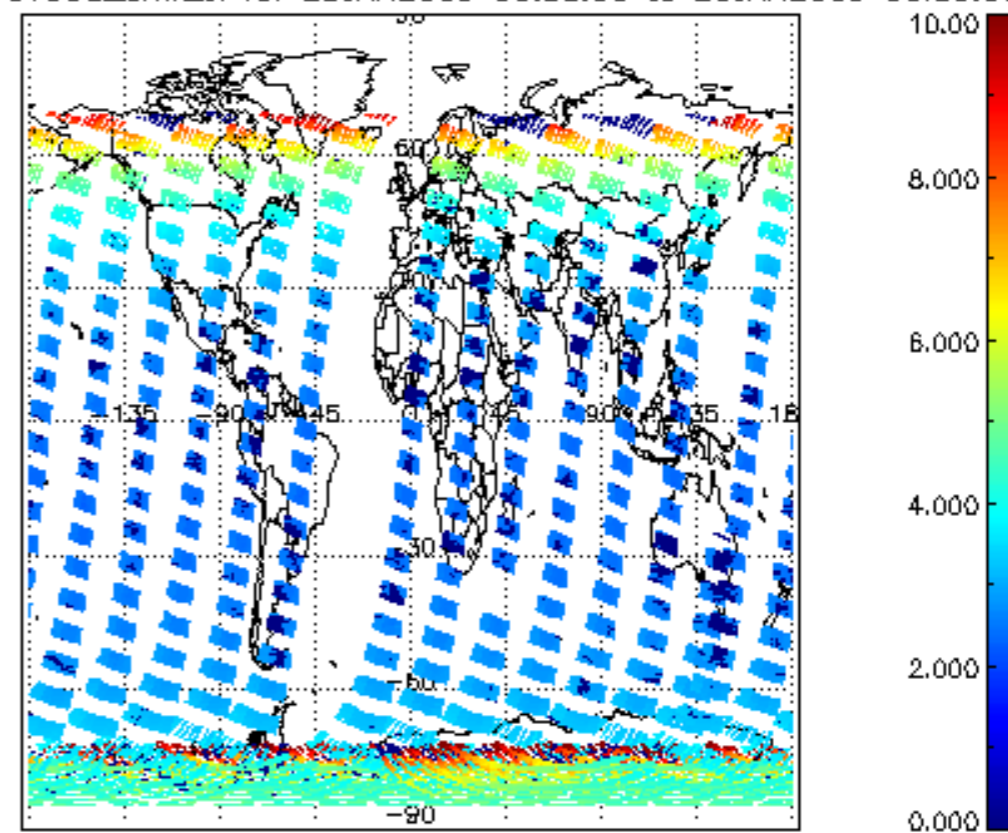
SCIOL2P_NADUV003_vcd_err for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

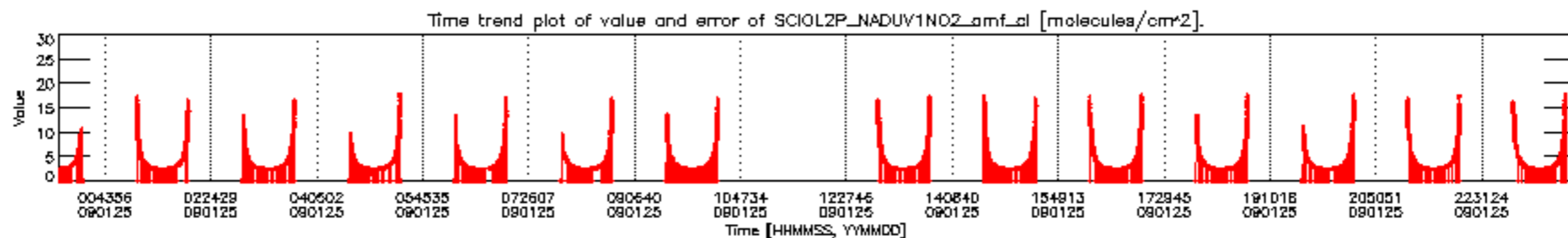
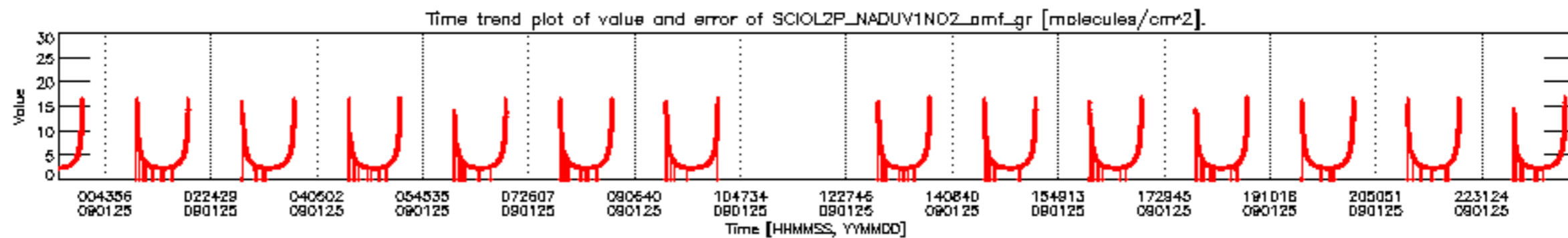
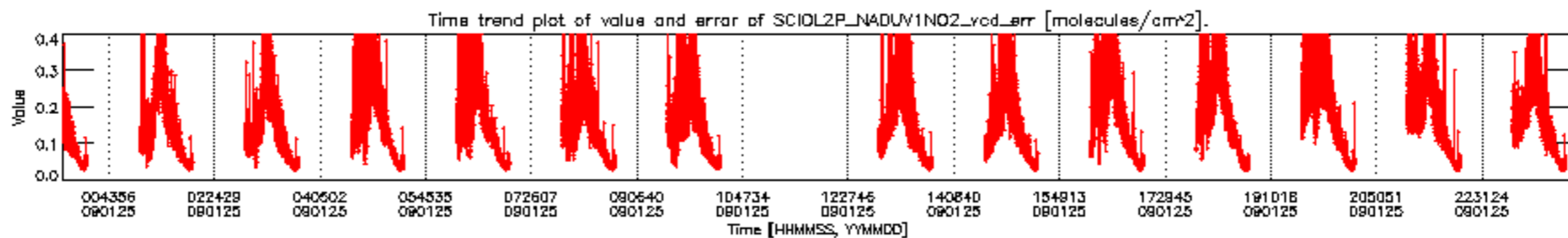
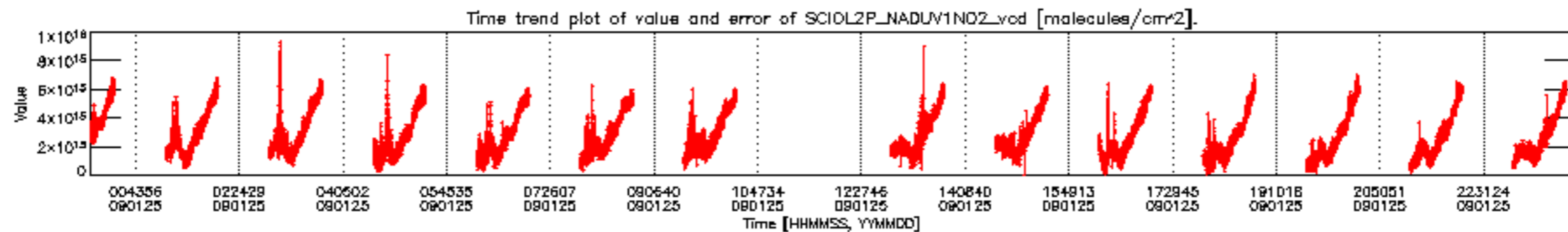


SCIOL2P_NADUV003_amf_gr for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

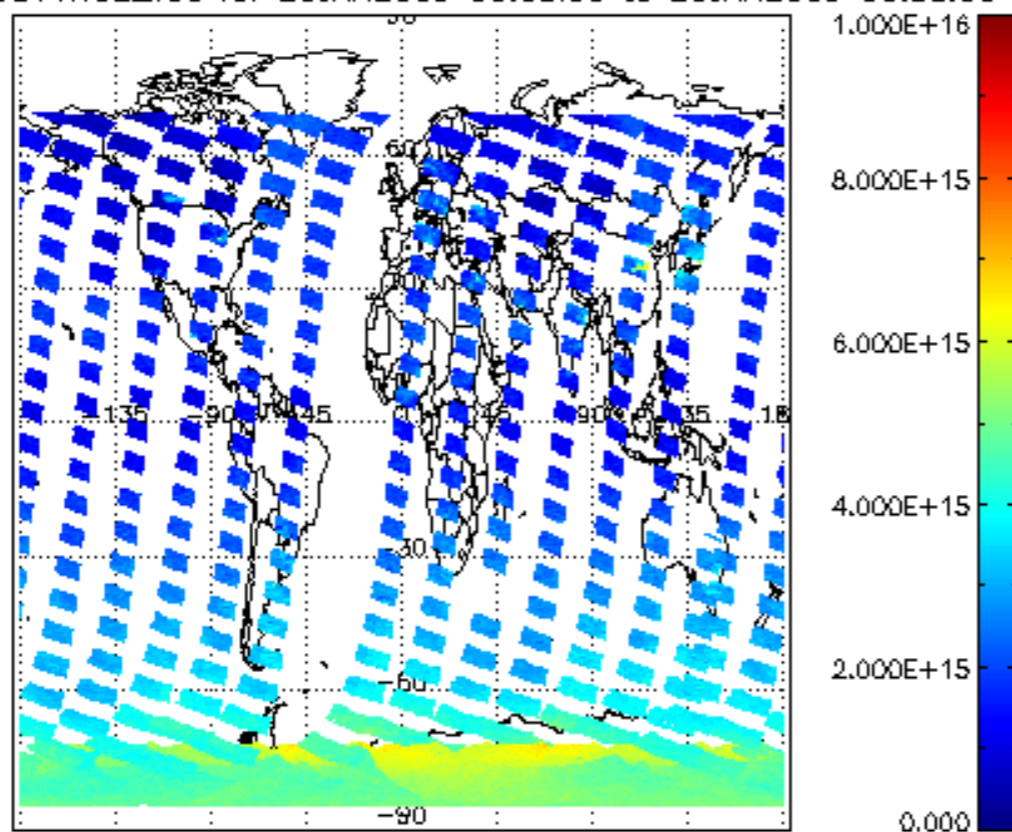


SCIOL2P_NADUV003_amf_cl for 25JAN2009 00:00:00 to 26JAN2009 00:00:00

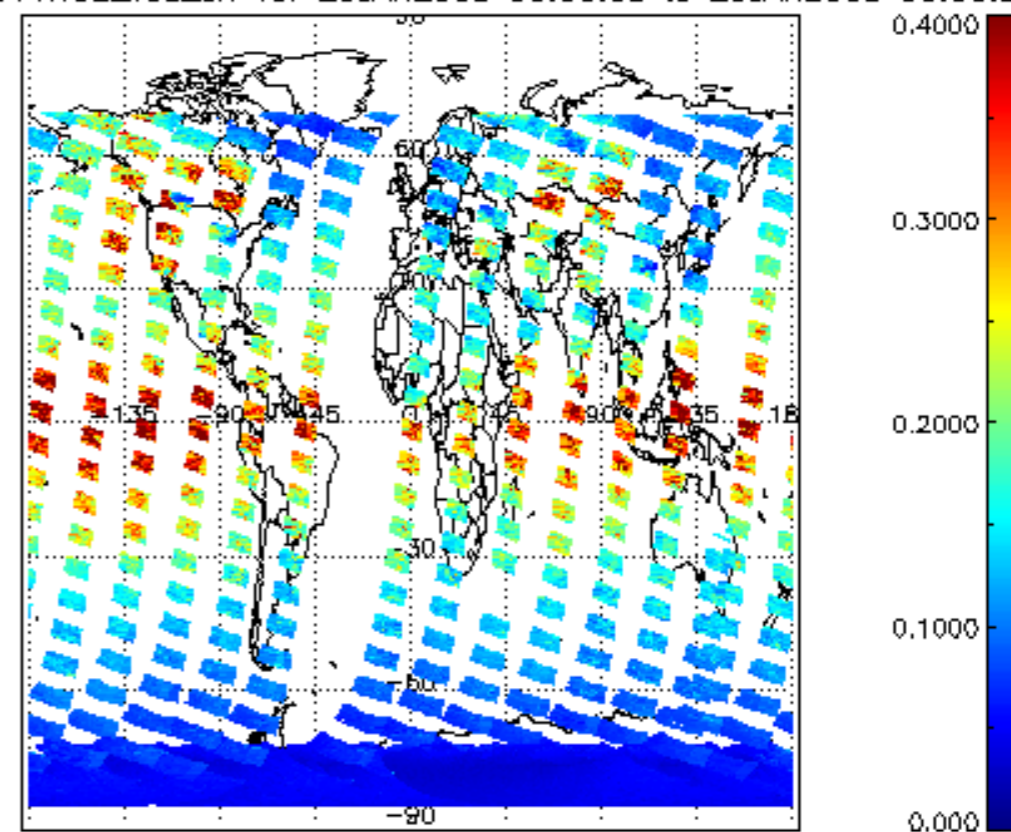




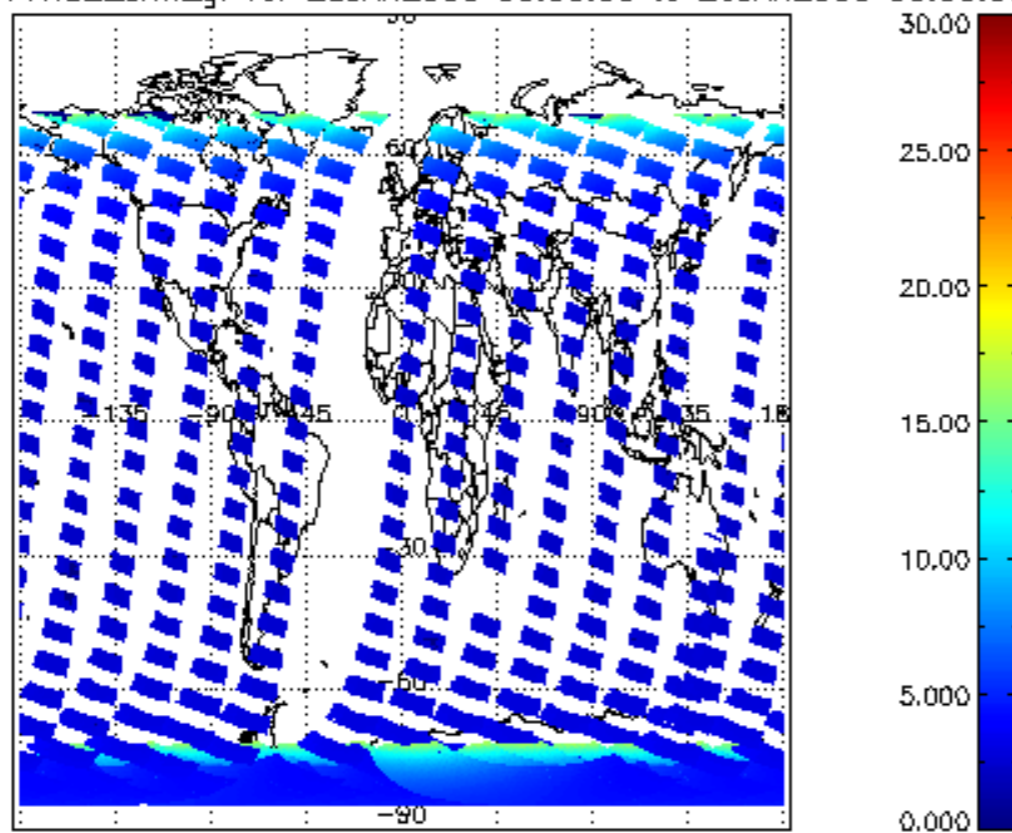
SCIOL2P_NADUV1NO2_vcd for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



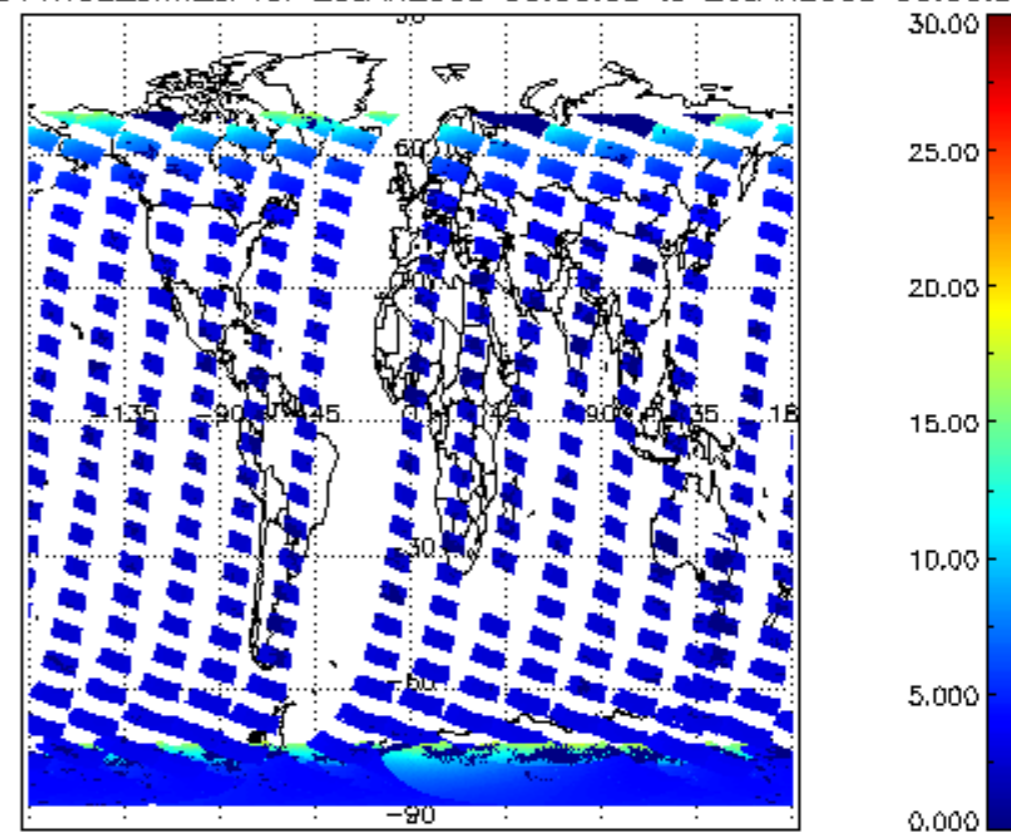
SCIOL2P_NADUV1NO2_vcd_err for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



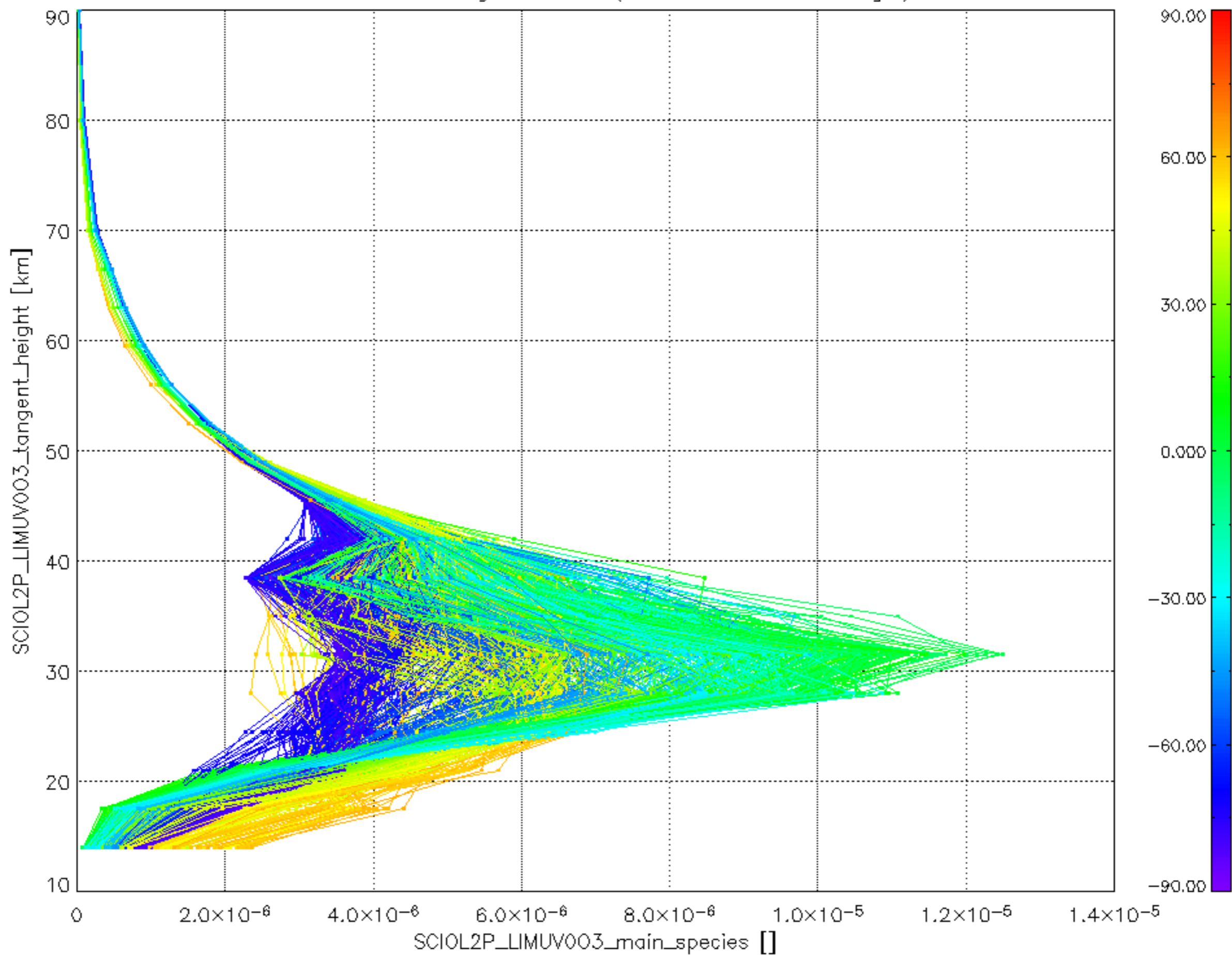
SCIOL2P_NADUV1NO2_amf_gr for 25JAN2009 00:00:00 to 26JAN2009 00:00:00



SCIOL2P_NADUV1NO2_amf_cl for 25JAN2009 00:00:00 to 26JAN2009 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).

