

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 | 05JUN2009 17:48:19 |
| Data source version | SCIA-OL/3.01-R |
| Processing scope for products | 06MAY2009 00:00:00 to 07MAY2009 00:00:00 |
| Start time of first product within scope | 05MAY2009 23:42:37 |
| Stop time of last product within scope | 07MAY2009 00:05:52 |
| 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.

| # | Product name | Start time | Stop time | Prod err | Fit summary |
|----|--|--------------------|--------------------|----------|-------------|
| 0 | SCI_OL__2PRDPA20090505_234237_000033302078_00417_37545_2395.N1 | 05MAY2009 23:42:37 | 06MAY2009 00:38:08 | 0 | GOOD |
| 1 | SCI_OL__2PRDPA20090506_012313_000033232078_00418_37546_2396.N1 | 06MAY2009 01:23:13 | 06MAY2009 02:18:36 | 0 | GOOD |
| 2 | SCI_OL__2PRDPA20090506_030348_000033162078_00419_37547_2397.N1 | 06MAY2009 03:03:48 | 06MAY2009 03:59:05 | 0 | GOOD |
| 3 | SCI_OL__2PRDPA20090506_044424_000033092078_00420_37548_2398.N1 | 06MAY2009 04:44:24 | 06MAY2009 05:39:33 | 0 | GOOD |
| 4 | SCI_OL__2PRDPA20090506_062500_000033022078_00421_37549_2399.N1 | 06MAY2009 06:25:00 | 06MAY2009 07:20:02 | 0 | GOOD |
| 5 | SCI_OL__2PRDPA20090506_080535_000033632078_00422_37550_2400.N1 | 06MAY2009 08:05:35 | 06MAY2009 09:01:39 | 0 | GOOD |
| 6 | SCI_OL__2PRDPA20090506_094611_000033562078_00423_37551_2401.N1 | 06MAY2009 09:46:11 | 06MAY2009 10:42:07 | 0 | GOOD |
| 7 | SCI_OL__2PRDPA20090506_112647_000033482078_00424_37552_2402.N1 | 06MAY2009 11:26:47 | 06MAY2009 12:22:35 | 0 | GOOD |
| 8 | SCI_OL__2PRDPA20090506_130722_000033412078_00425_37553_2403.N1 | 06MAY2009 13:07:22 | 06MAY2009 14:03:03 | 0 | GOOD |
| 9 | SCI_OL__2PRDPA20090506_144758_000033342078_00426_37554_2404.N1 | 06MAY2009 14:47:58 | 06MAY2009 15:43:32 | 0 | GOOD |
| 10 | SCI_OL__2PRDPA20090506_162833_000033262078_00427_37555_2405.N1 | 06MAY2009 16:28:33 | 06MAY2009 17:24:00 | 0 | GOOD |
| 11 | SCI_OL__2PRDPA20090506_180925_000033122078_00428_37556_2406.N1 | 06MAY2009 18:09:25 | 06MAY2009 19:04:38 | 0 | GOOD |
| 12 | SCI_OL__2PRDPA20090506_195001_000032952078_00429_37557_2407.N1 | 06MAY2009 19:50:01 | 06MAY2009 20:44:56 | 0 | GOOD |
| 13 | SCI_OL__2PRDPA20090506_213020_000033032078_00430_37558_2408.N1 | 06MAY2009 21:30:20 | 06MAY2009 22:25:24 | 0 | GOOD |
| 14 | SCI_OL__2PRDPA20090506_231056_000032962078_00431_37559_2409.N1 | 06MAY2009 23:10:56 | 07MAY2009 00:05:52 | 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: 127162

Total number of cloud data DSRs with good quality flag (=0): 127162 (100.0 %)

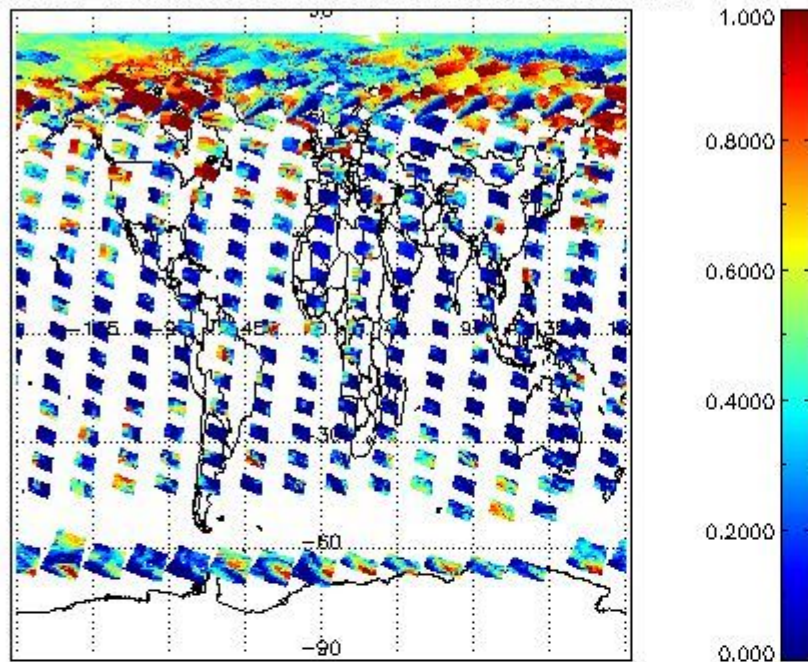
| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|-------------------|--------|----------|----------|----------|----------|----------|---|
| QUALITY_FLAG | 127162 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | flag |
| INTEGR_TIME | 127162 | 0.17844 | 0.12500 | 0.12500 | 0.25000 | 0.061840 | s |
| CL_FRAC | 127162 | 0.35819 | 0.32182 | 0.0000 | 1.0000 | 0.31595 | - |
| CL_FRAC_ERR | 127162 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | rel. fraction |
| PMD_READ | 127162 | 5.7100 | 4.0000 | 4.0000 | 8.0000 | 1.9789 | |
| PMD_READ_CL[0] | 127162 | 0.34567 | 0.0000 | 0.0000 | 8.0000 | 1.3368 | - |
| PMD_READ_CL[1] | 127162 | 1.7851 | 0.0000 | 0.0000 | 8.0000 | 2.8329 | - |
| CL_TOP_HEIGHT | 112121 | 2.6278 | 1.1000 | 0.0000 | 17.000 | 3.4325 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 112121 | 56.120 | 56.427 | 0.0000 | 101.00 | 43.871 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 127162 | 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 | 127162 | 11001100 | 11000100 | 11000000 | 11100000 | 3560.9 | flags |
| AERO_ABSO_IND | 127162 | 3.8807 | 4.5167 | -0.94461 | 15.244 | 2.2632 | |
| AERO_IND_DIAG | 127162 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 127162 | 01100011 | 11000000 | 00000000 | 11000000 | 24561. | flags |

Time and geolocation plots:

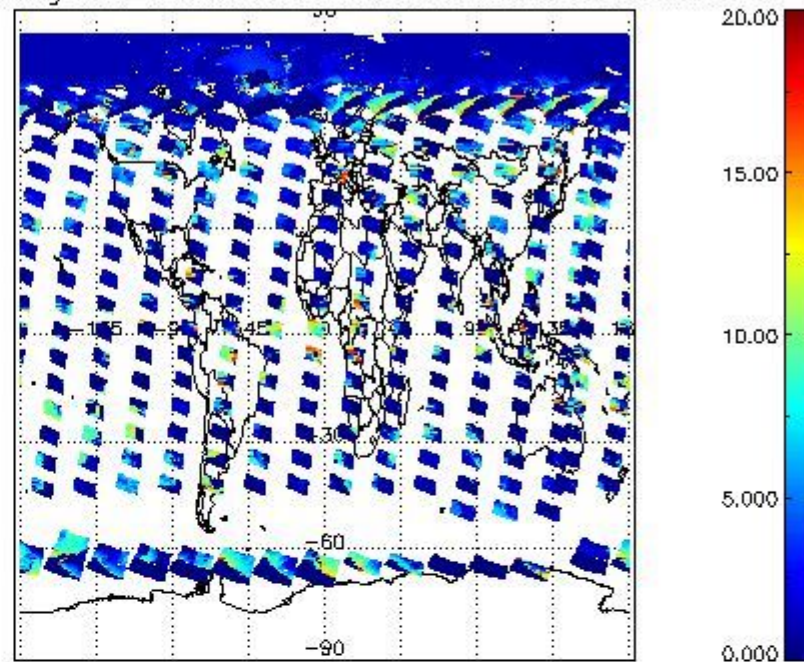
Plots are available for the following parameters:

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

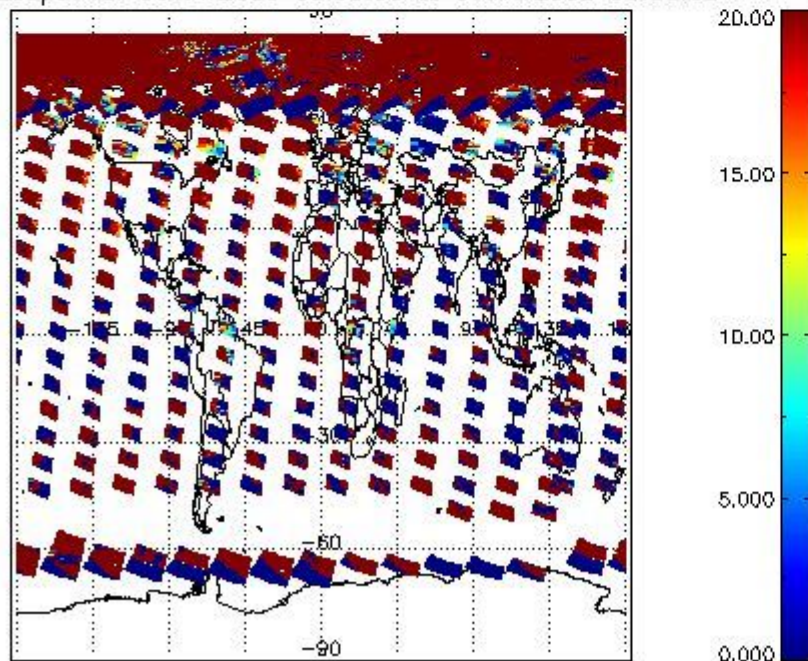
cL_frac for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



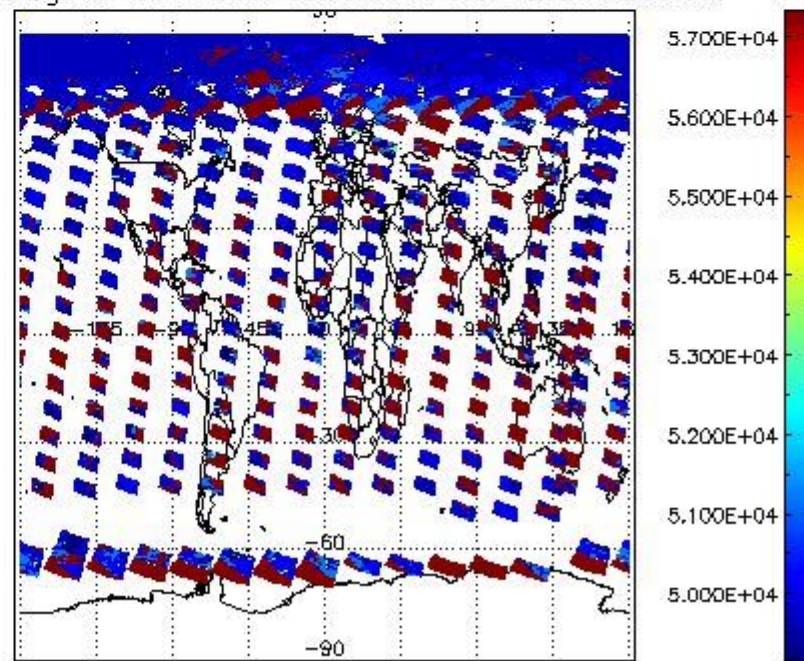
cL_top_height for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



cL_opt_depth for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



cloud_flags for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



2.2.2 Nadir

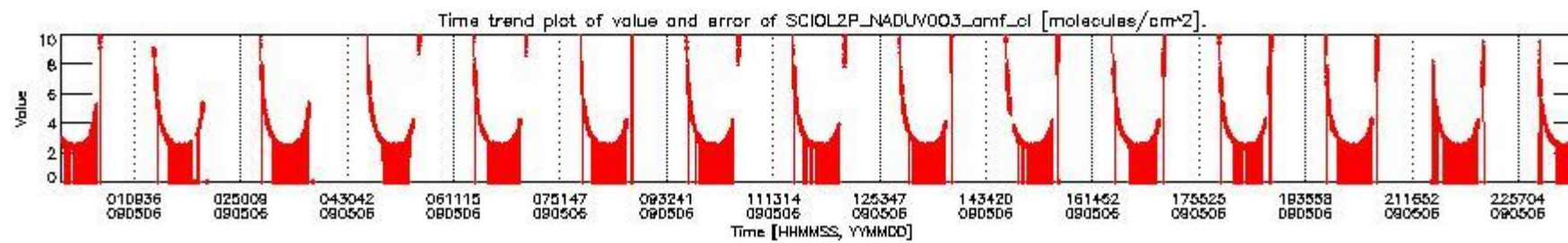
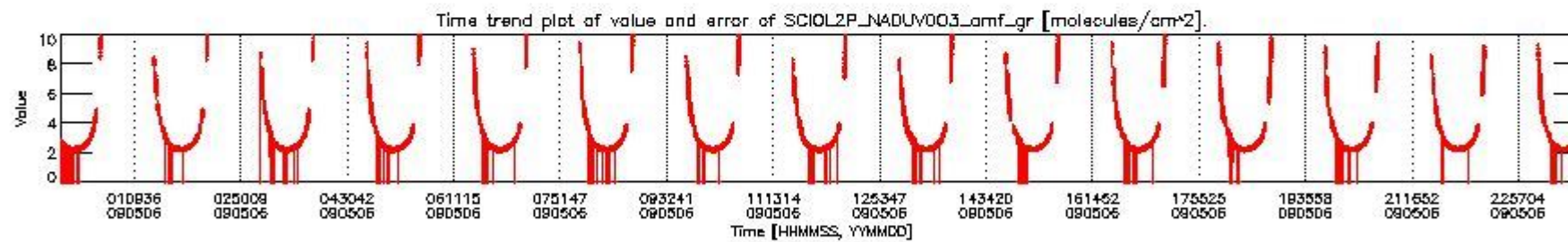
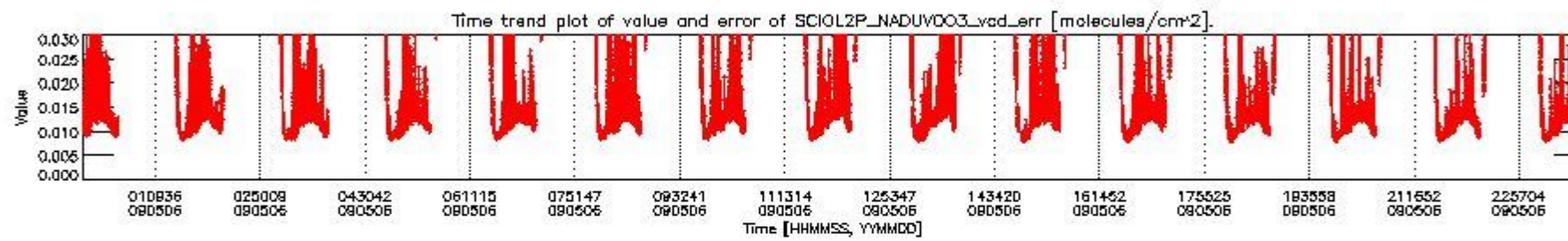
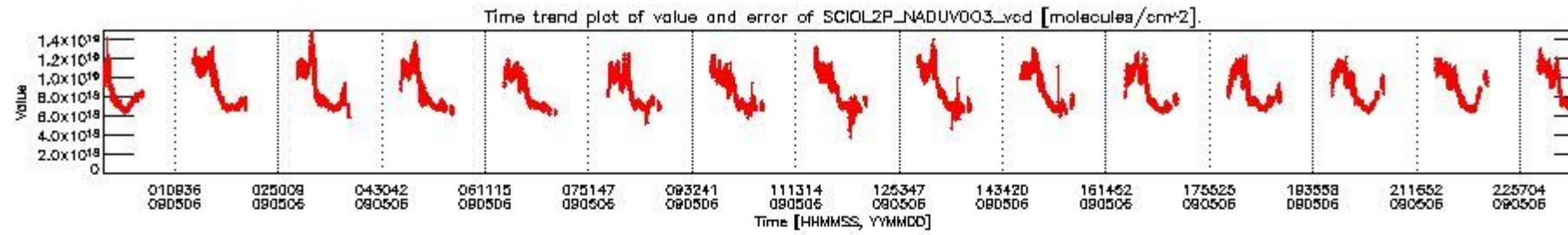
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

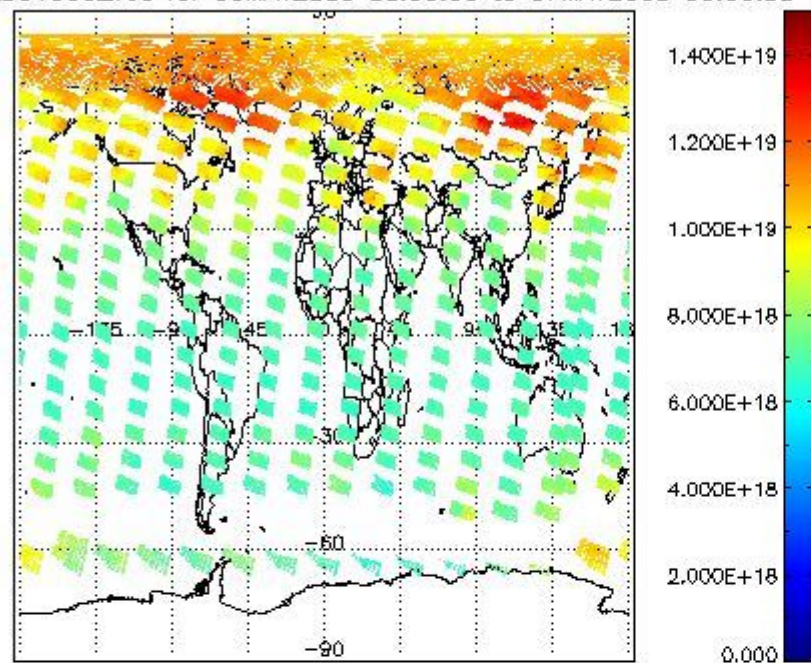
| Number | Data item ID |
|--------|--------------------------|
| 0 | SCIOL2P_NADUV003_vcd |
| 1 | SCIOL2P_NADUV003_vcd_err |
| 2 | SCIOL2P_NADUV003_amf_gr |

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

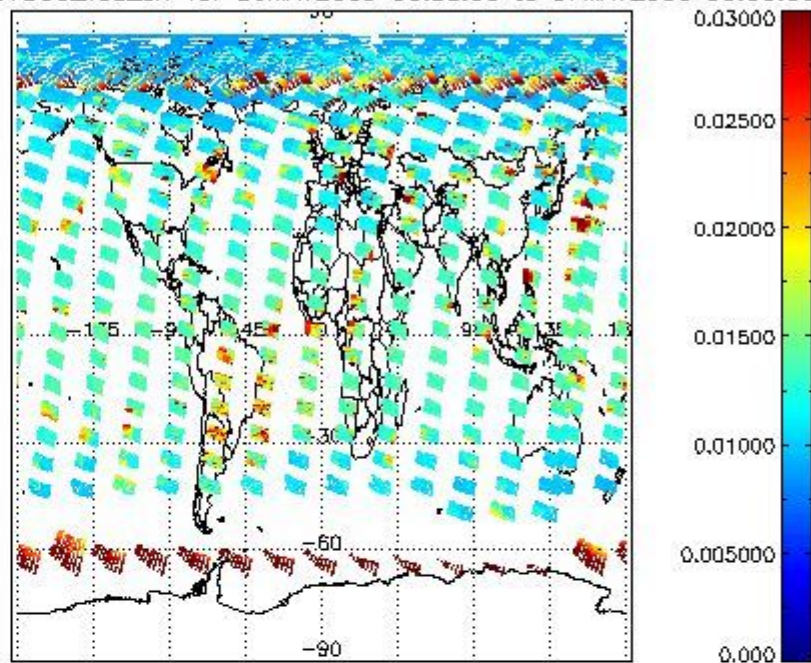
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing_start time as suggested by the product sensing_start time in the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



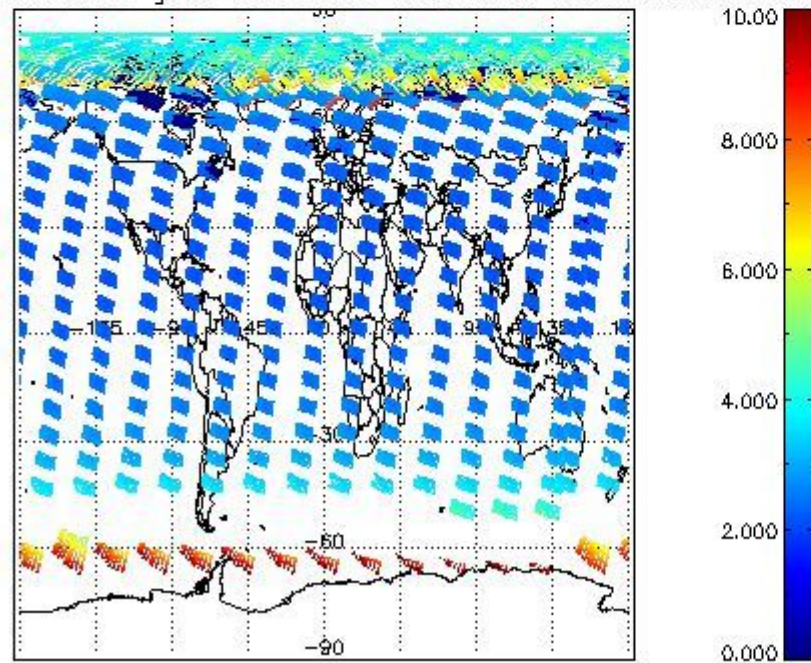
SCIOL2P_NADUV003_vcd for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



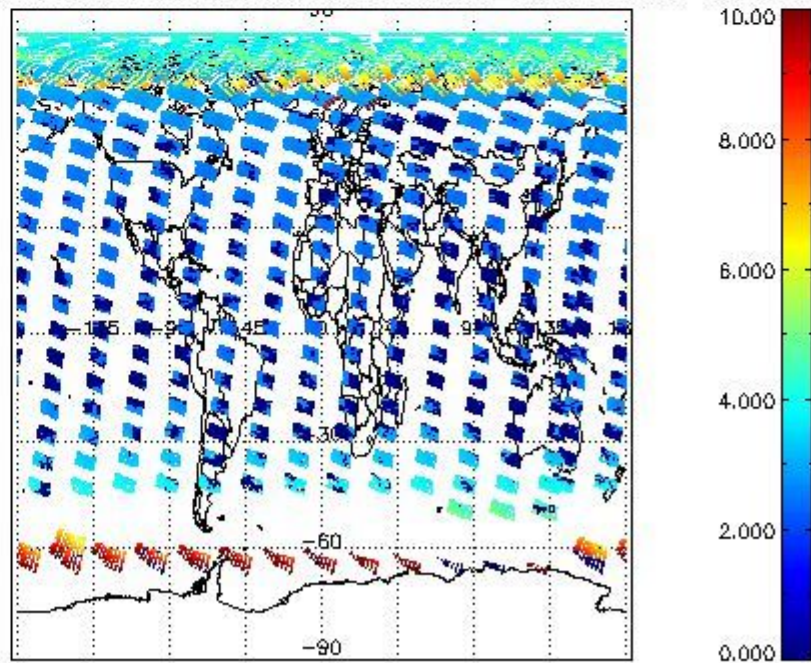
SCIOL2P_NADUV003_vcd_err for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

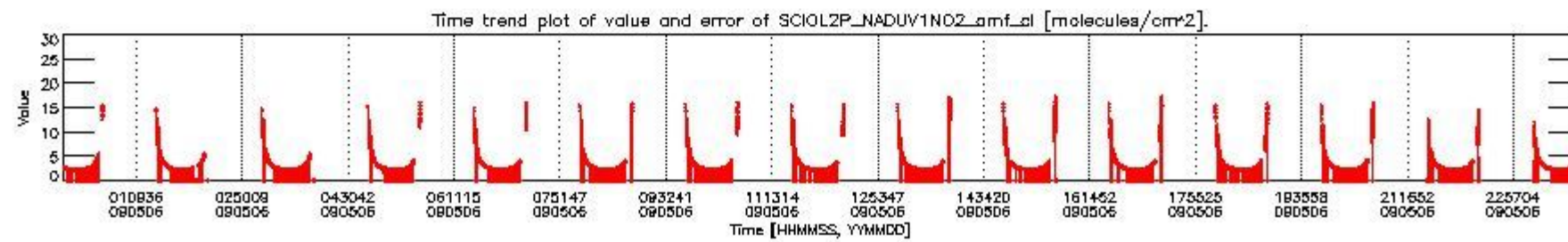
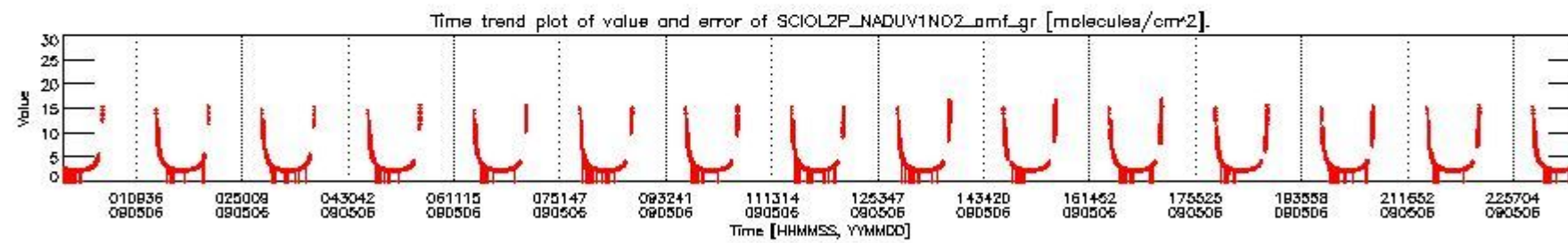
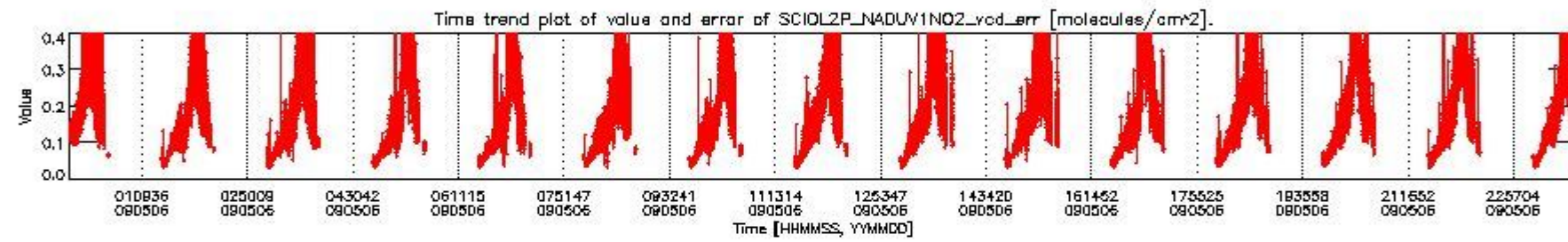
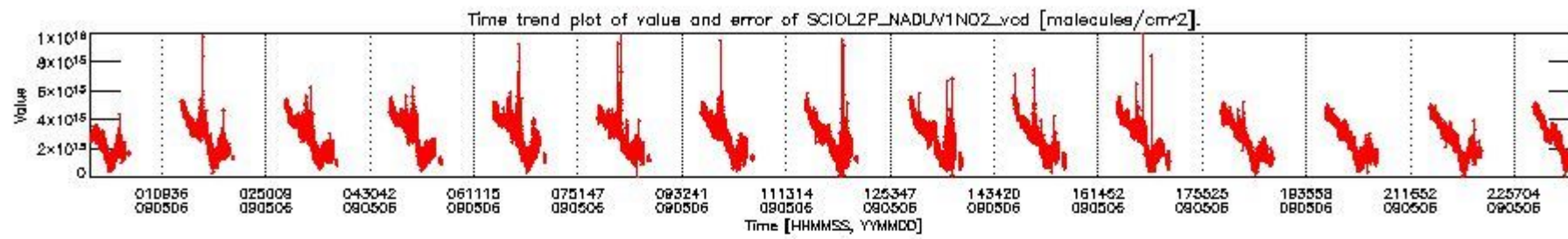


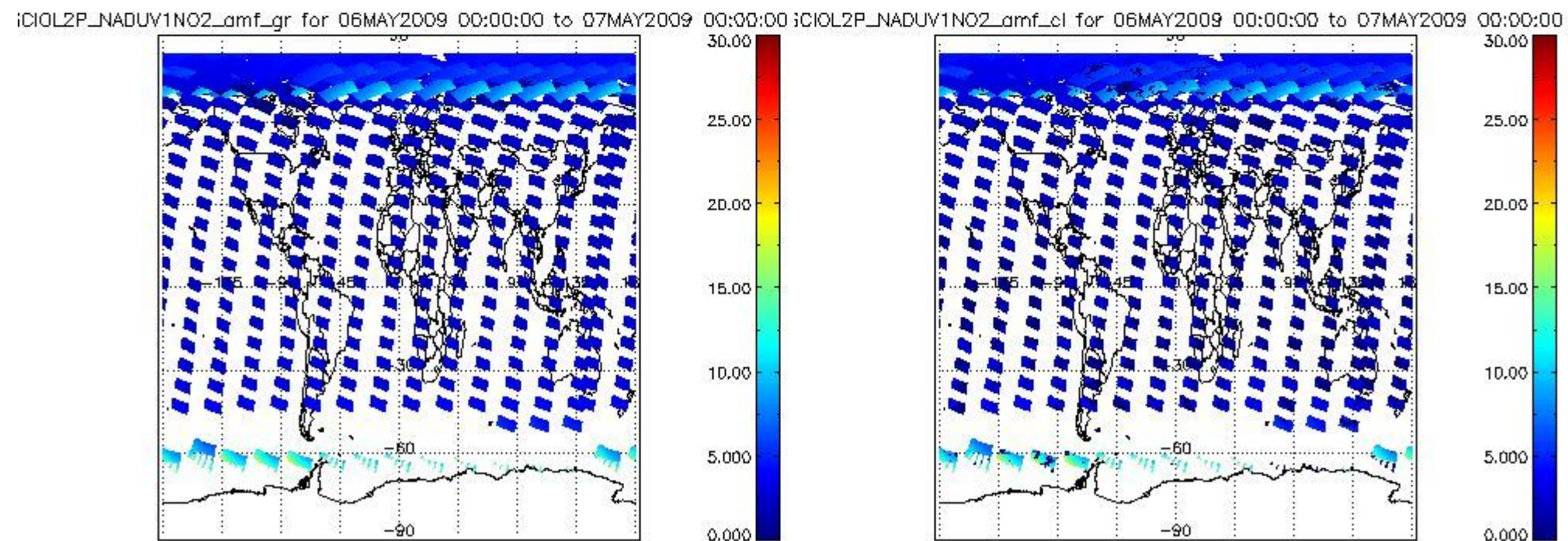
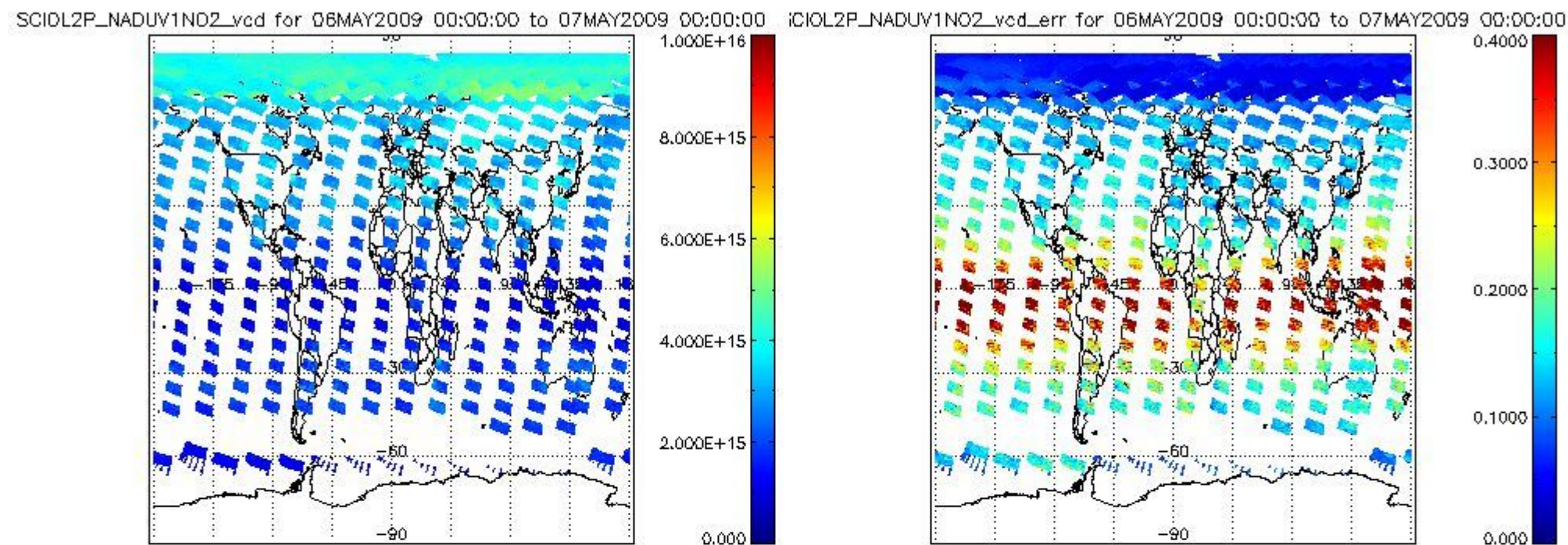
SCIOL2P_NADUV003_amf_gr for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



SCIOL2P_NADUV003_amf_cl for 06MAY2009 00:00:00 to 07MAY2009 00:00:00







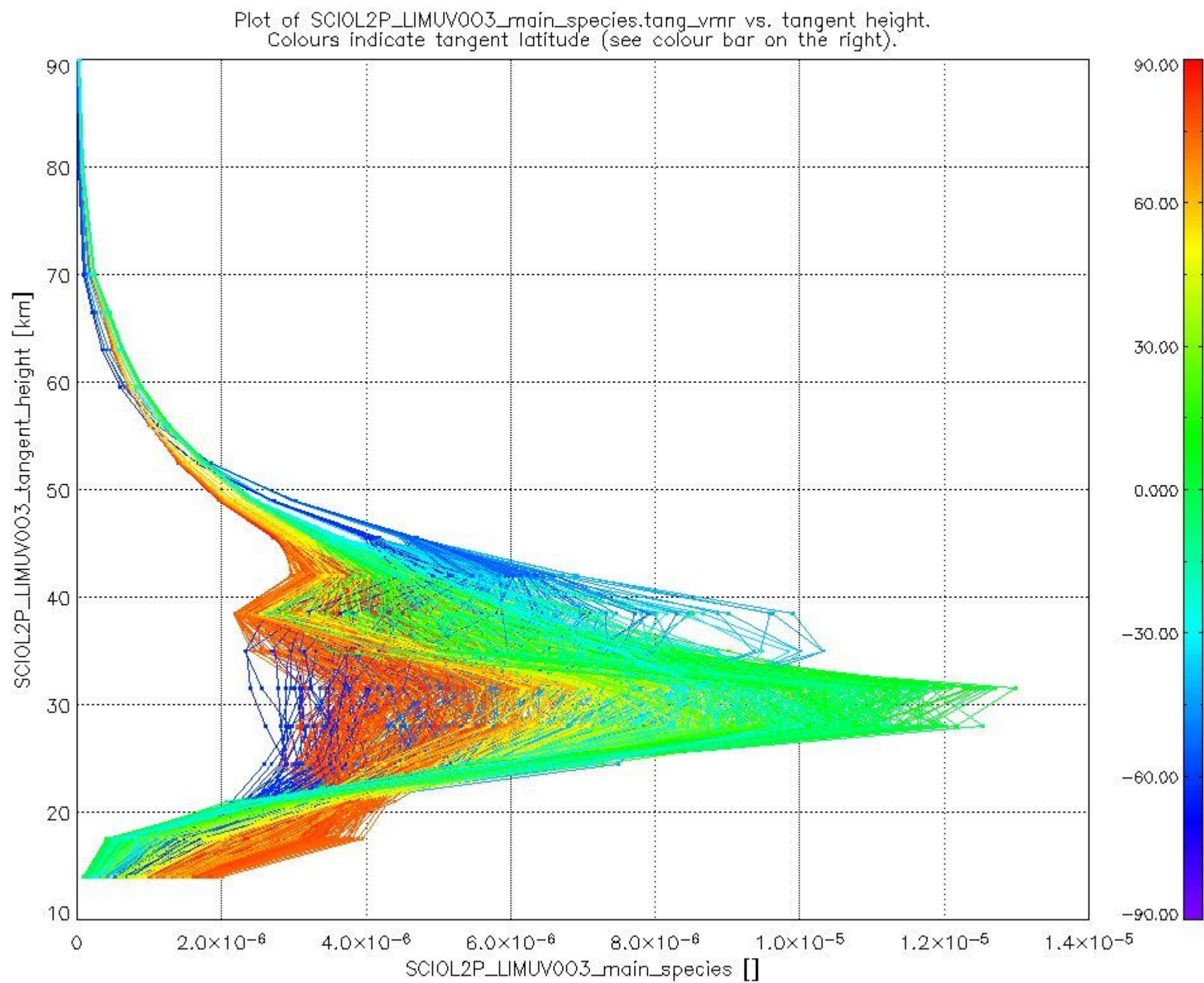
2.2.3 Limb

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

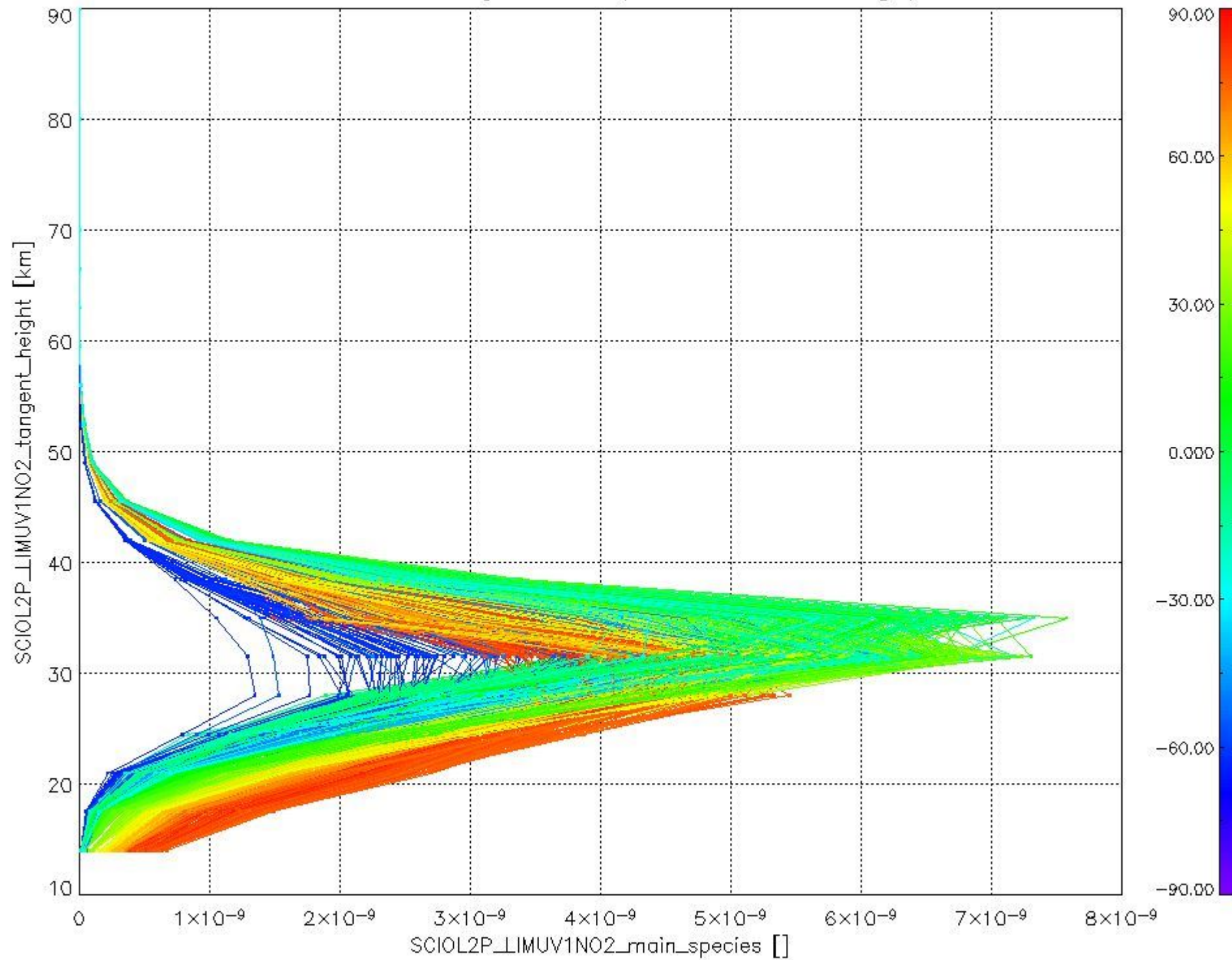
The following data items are currently included into this section:

| 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.



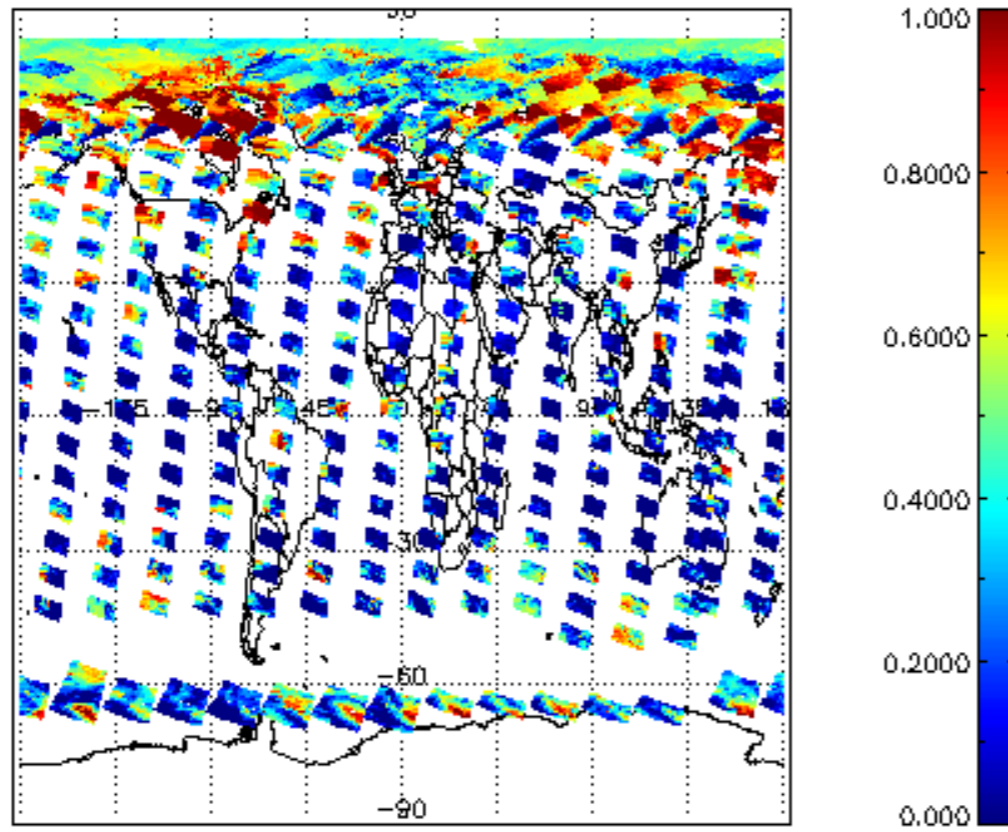
Plot of SCIOL2P_LIMUV1NO2_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



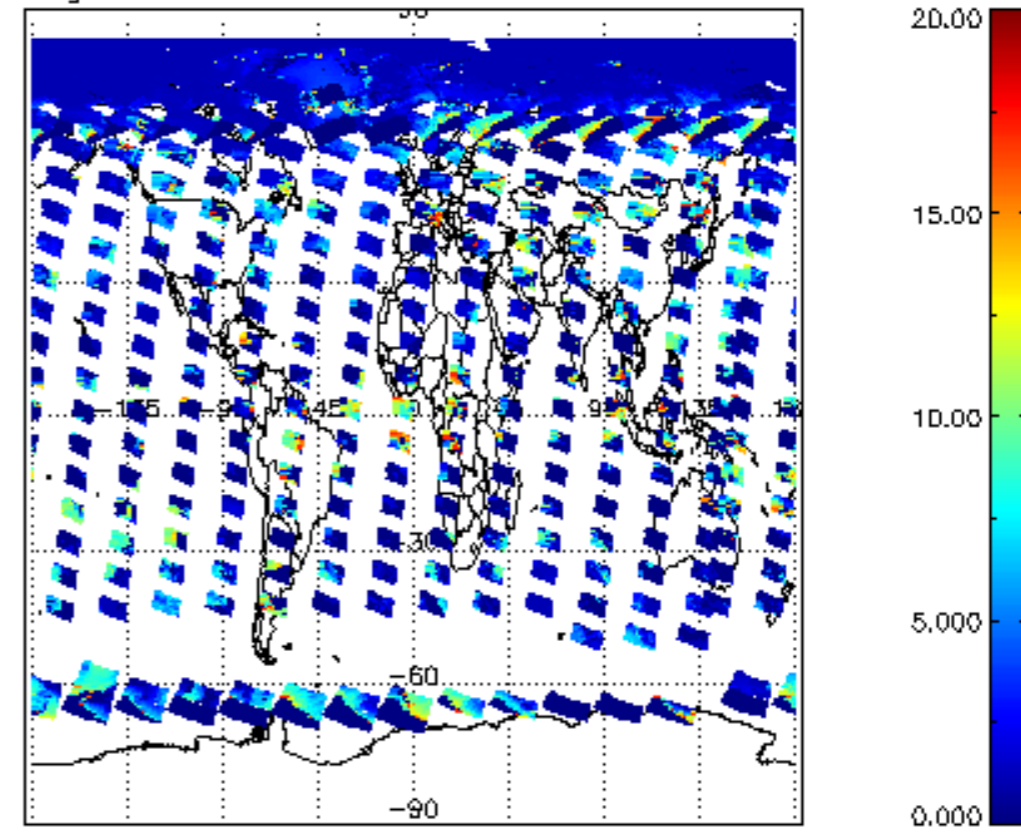
2.3 ADF monitoring

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

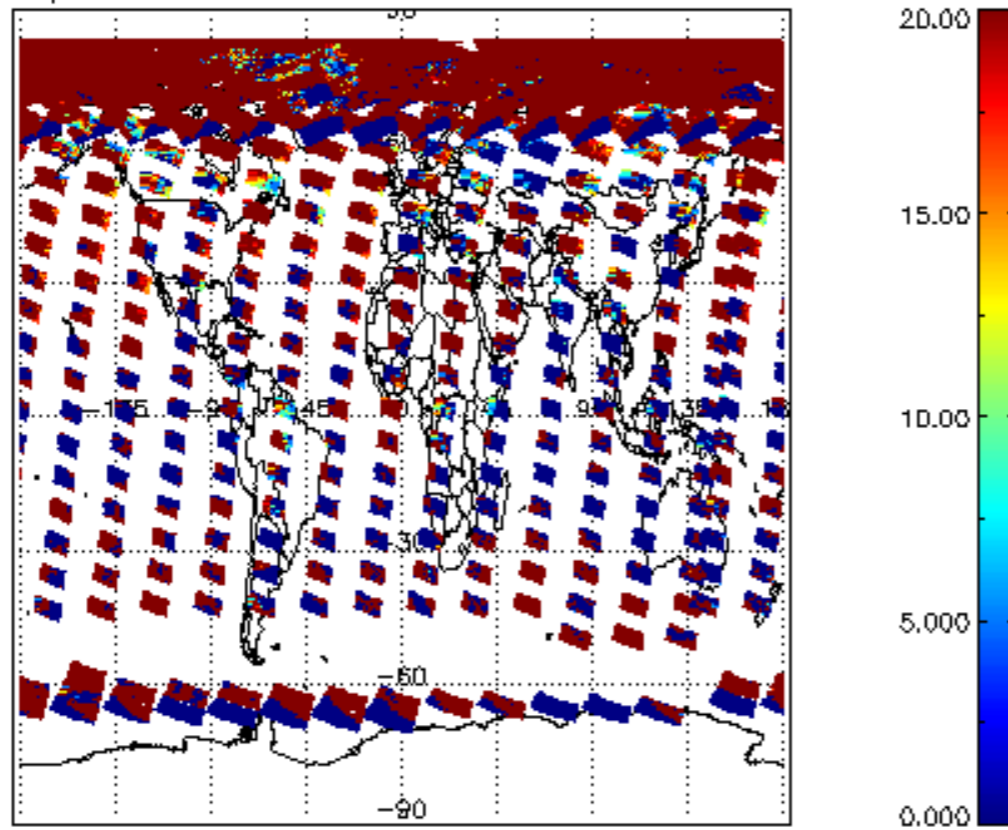
cl_frac for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



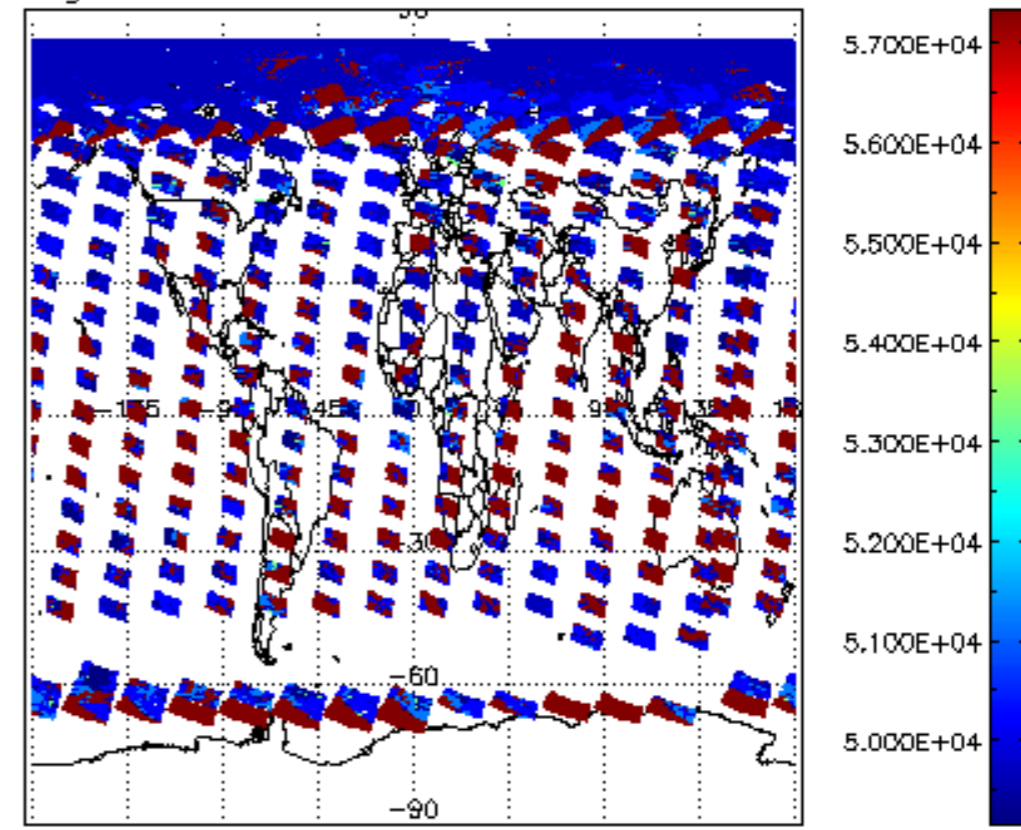
cl_top_height for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

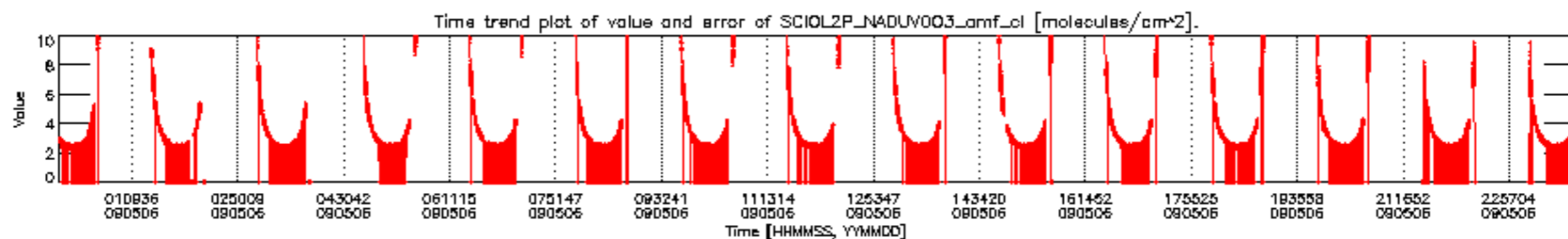
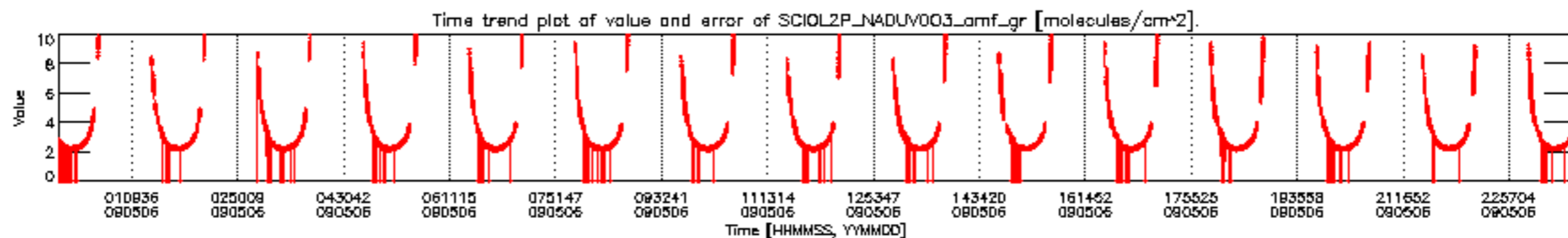
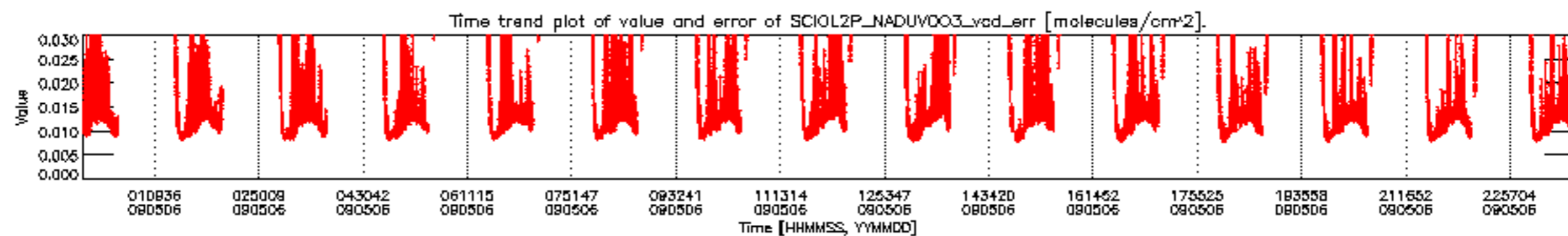
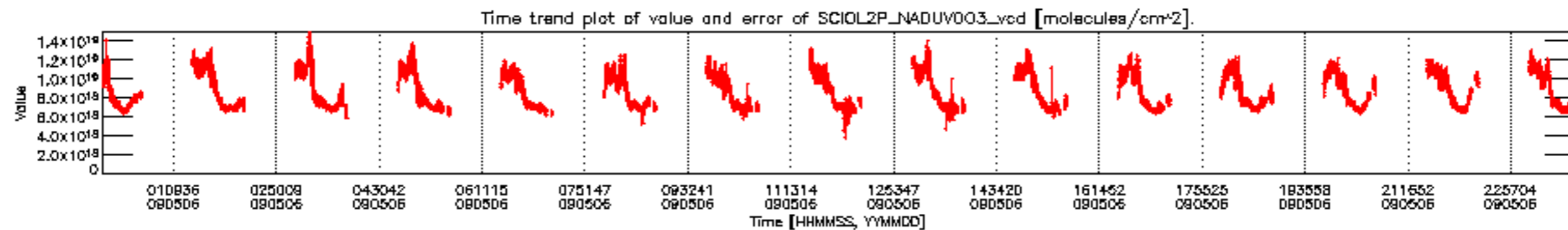


cl_opt_depth for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

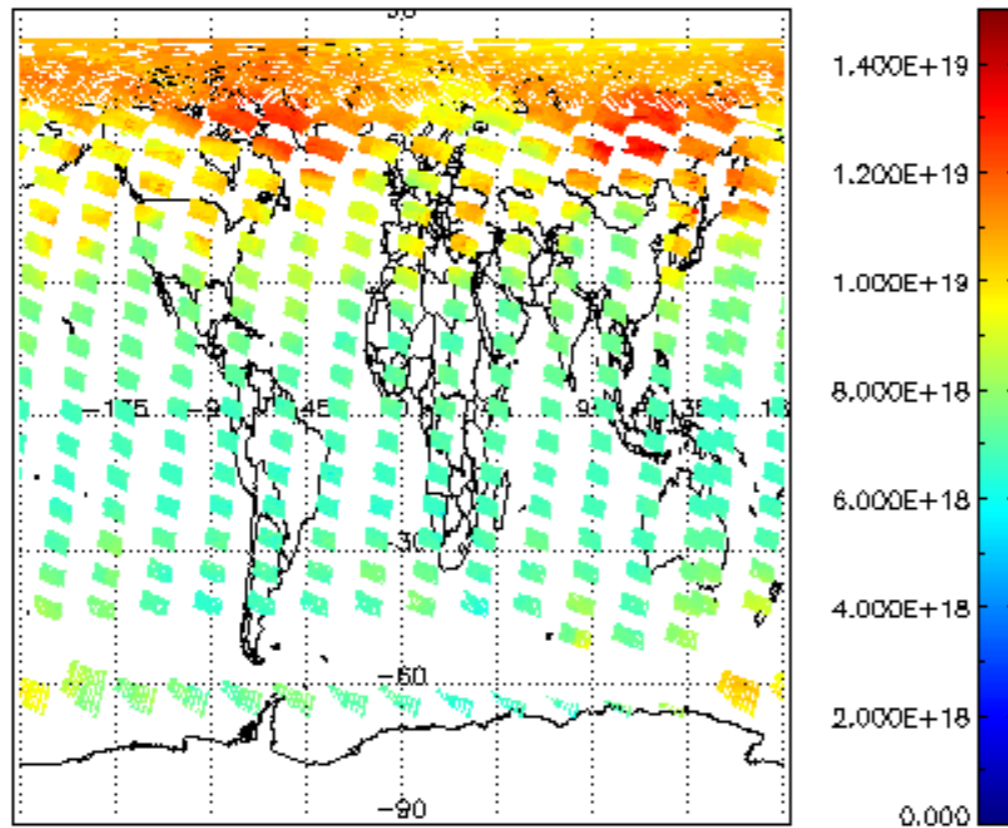


cloud_flags for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

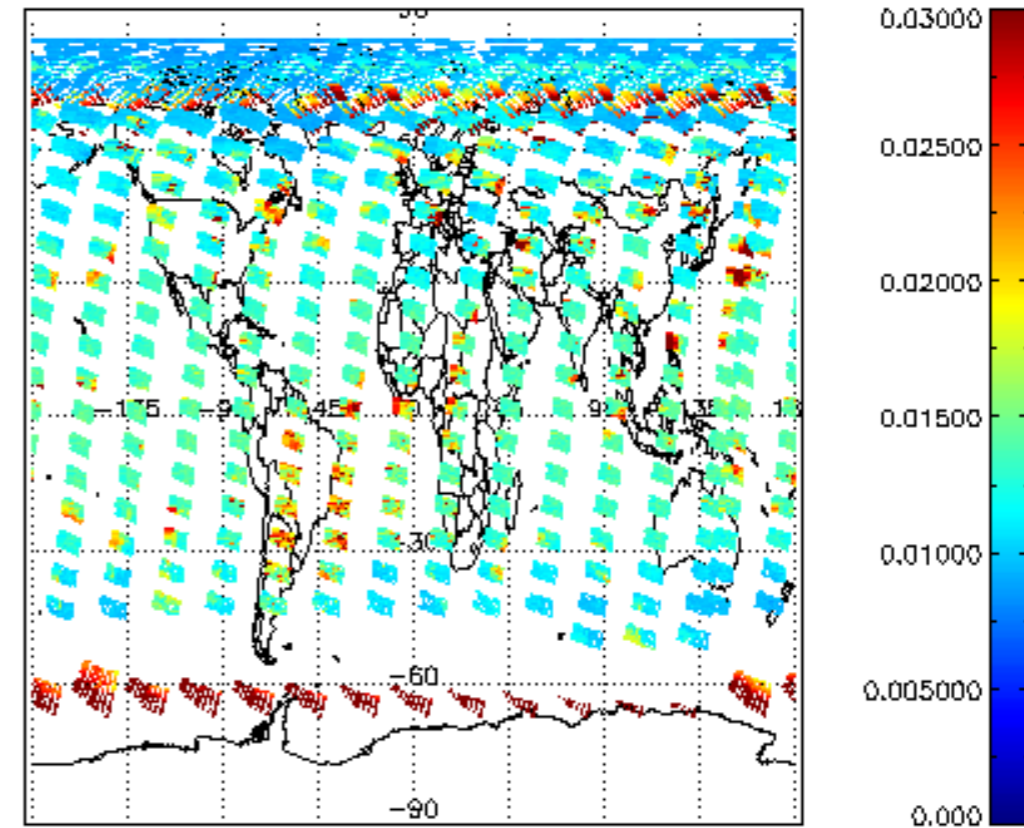




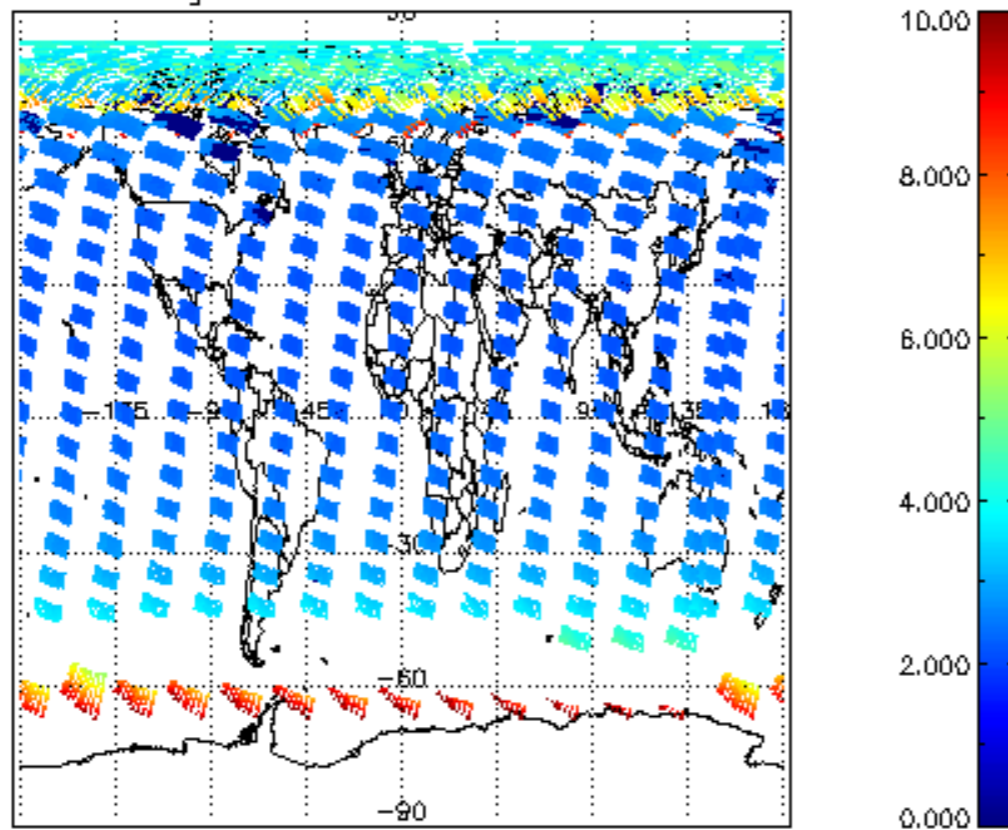
SCIOL2P_NADUV003_vcd for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



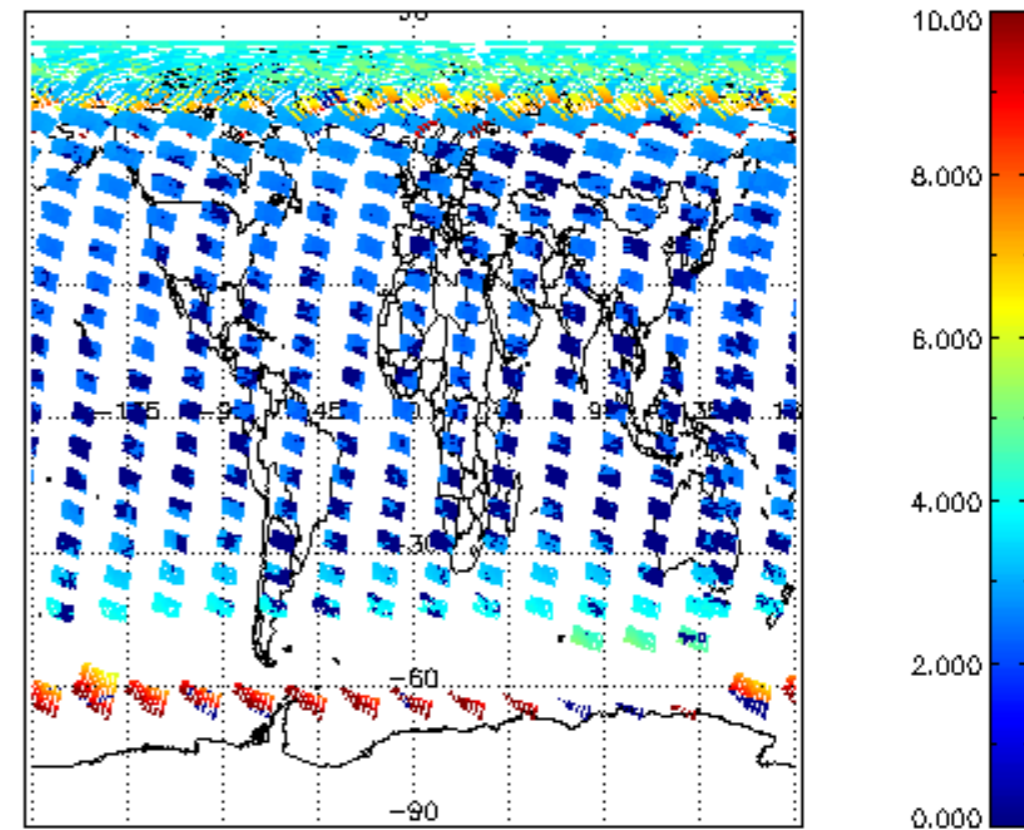
SCIOL2P_NADUV003_vcd_err for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

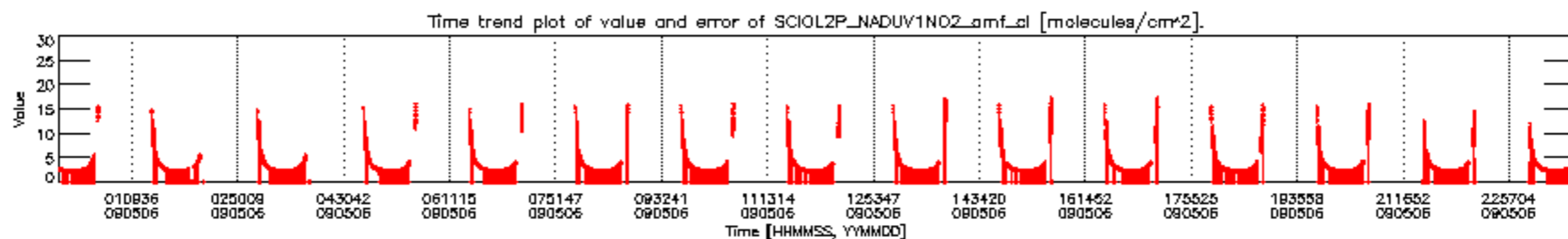
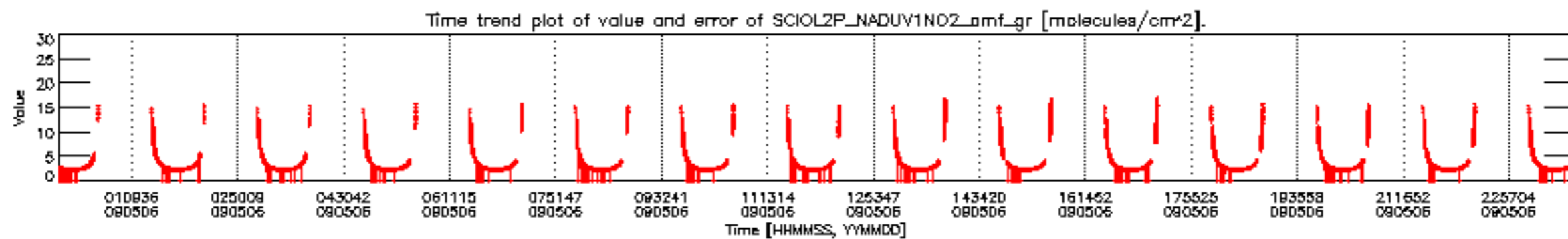
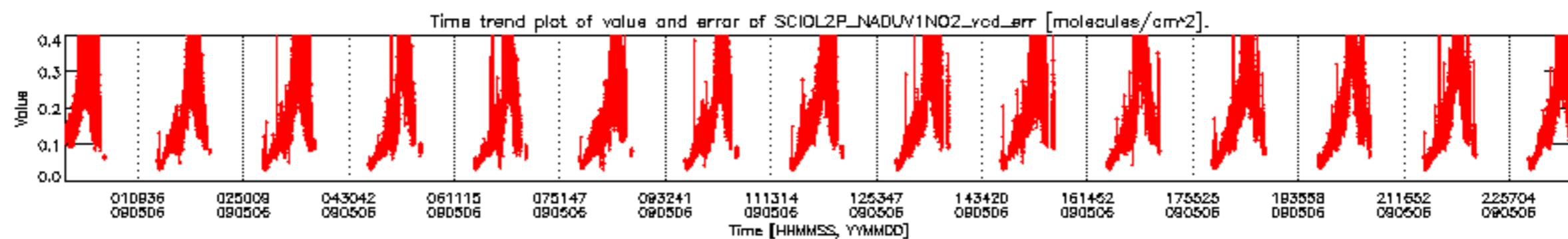
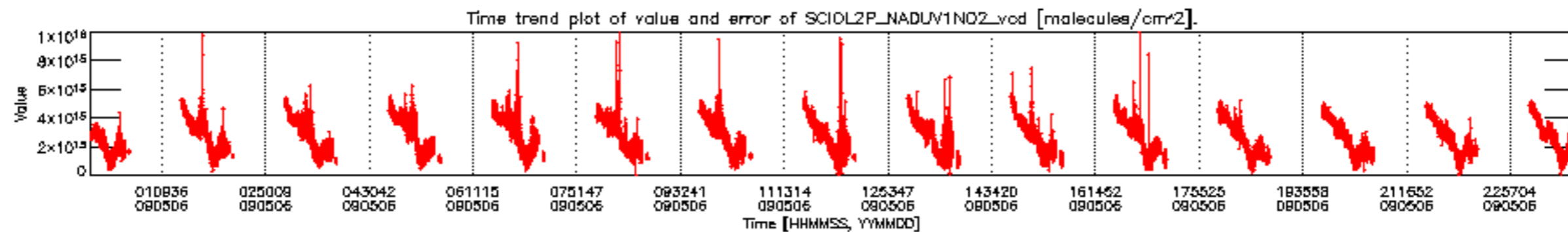


SCIOL2P_NADUV003_amf_gr for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

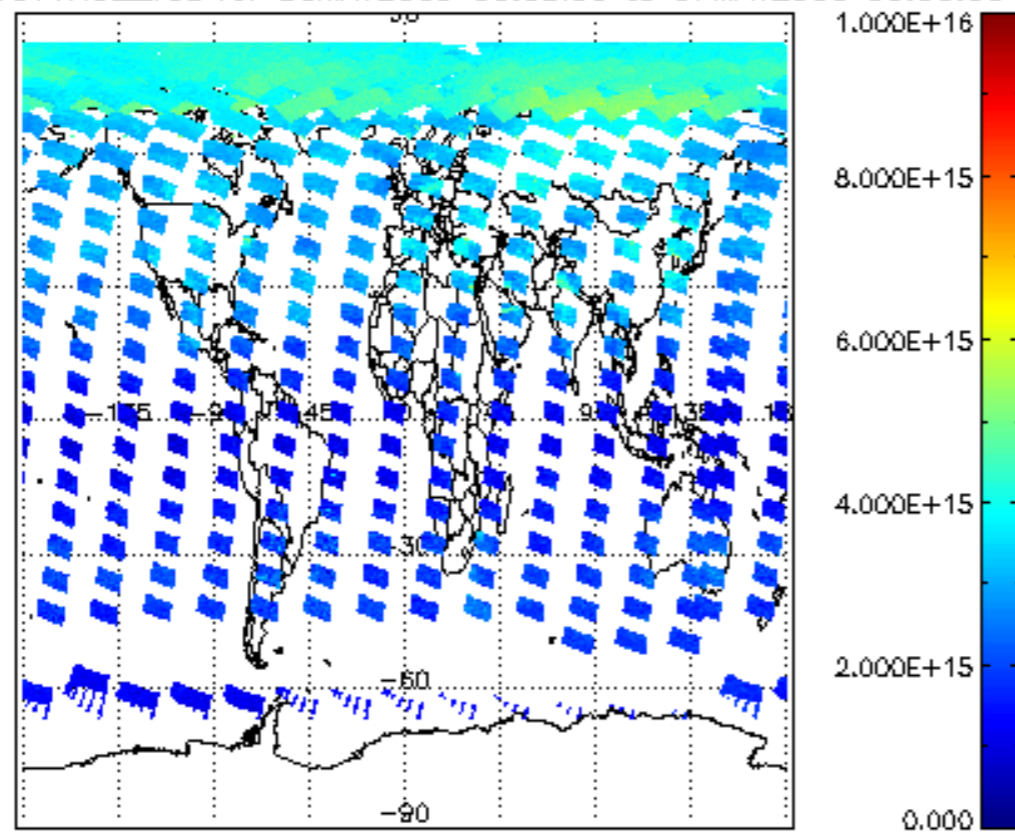


SCIOL2P_NADUV003_amf_cl for 06MAY2009 00:00:00 to 07MAY2009 00:00:00

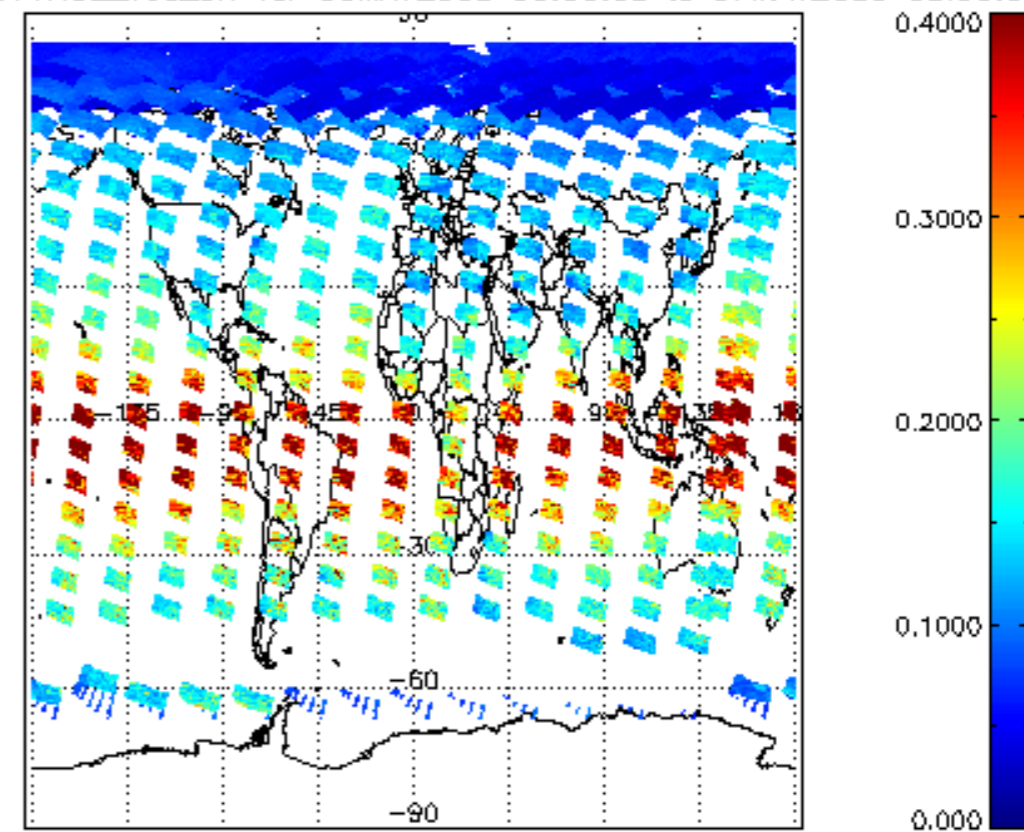




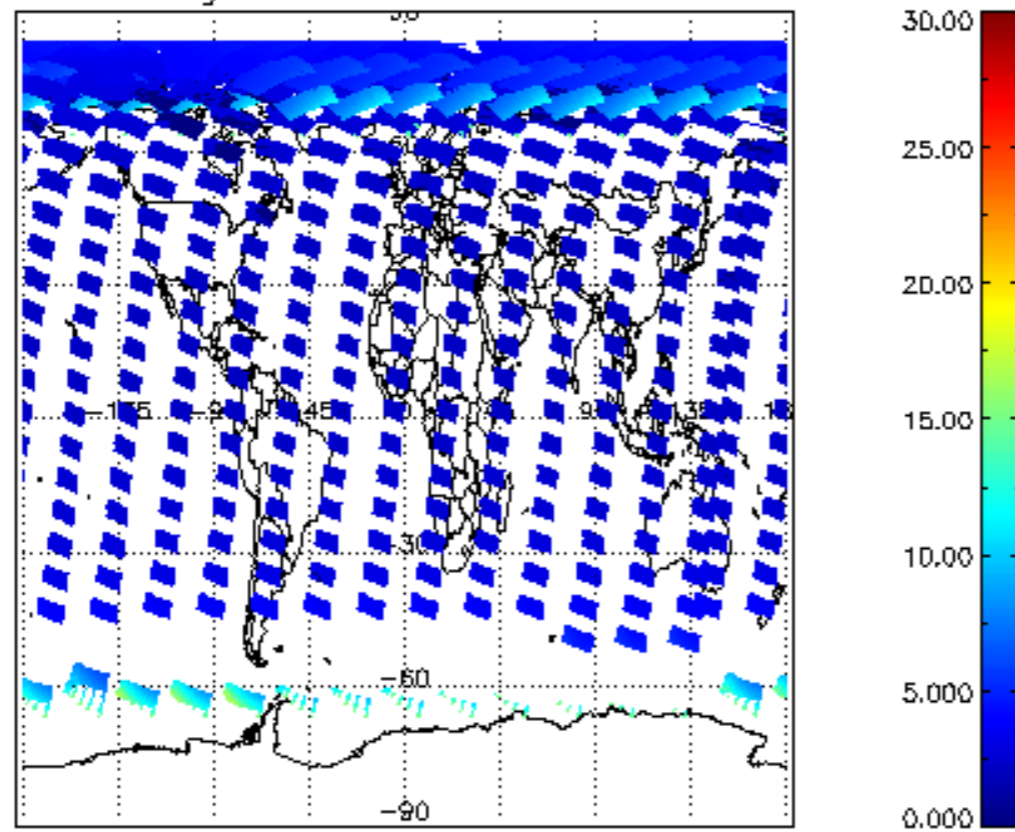
SCIOL2P_NADUV1NO2_vcd for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



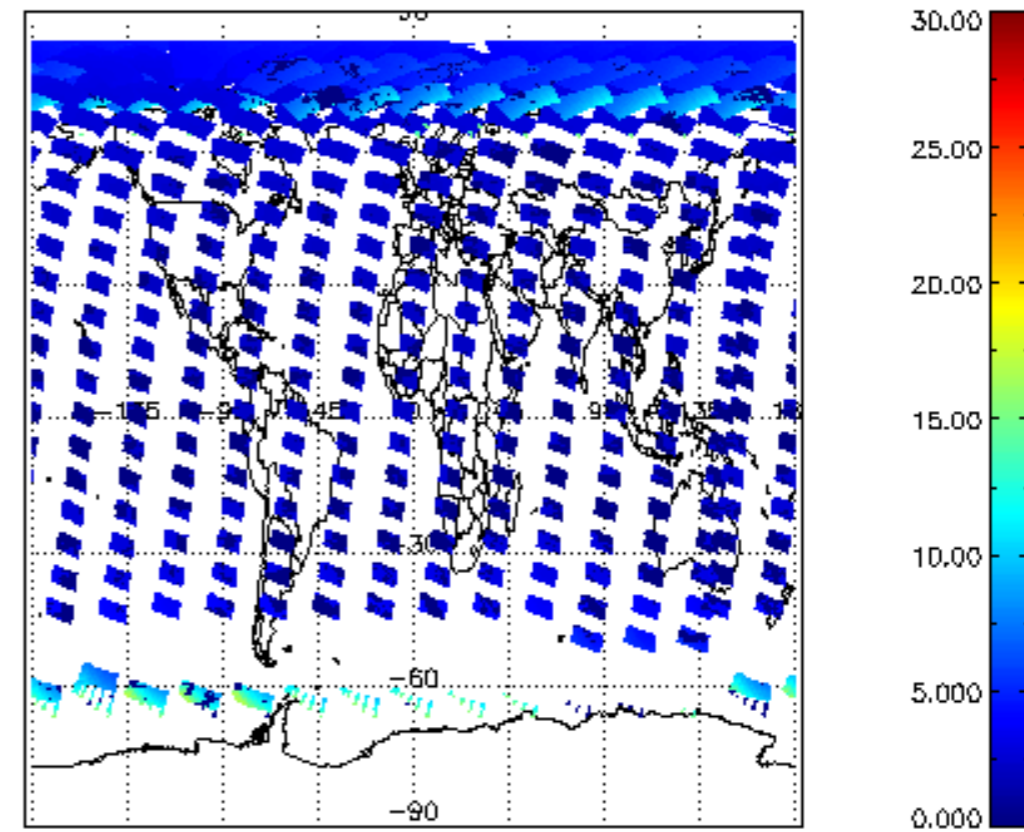
iCIOL2P_NADUV1NO2_vcd_err for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



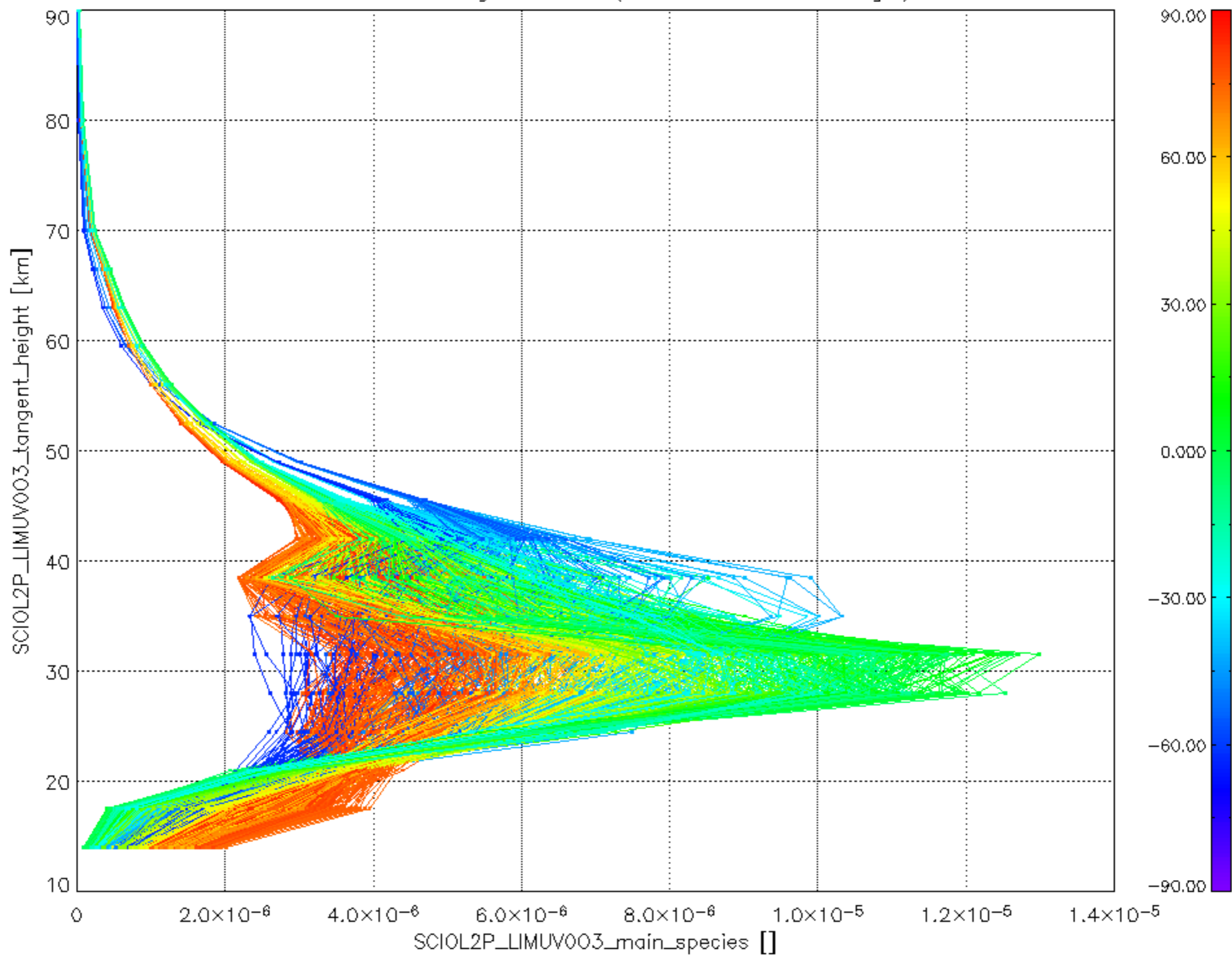
iCIOL2P_NADUV1NO2_amf_gr for 06MAY2009 00:00:00 to 07MAY2009 00:00:00



iCIOL2P_NADUV1NO2_amf_cl for 06MAY2009 00:00:00 to 07MAY2009 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).

