

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 | 1.4 (06-11-2007) |
| Time of report generation | 15MAR2008 06:02:50 |
| Data source version | SCIA-OL/3.01-R |
| Processing scope for products | 21FEB2008 00:00:00 to 22FEB2008 00:00:00 |
| Start time of first product within scope | 21FEB2008 00:20:56 |
| Stop time of last product within scope | 22FEB2008 00:43:42 |
| 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.

| # | Product name | Start time | Stop time | Prod err | Fit summary |
|----|--|--------------------|--------------------|----------|-------------|
| 0 | SCI_OL__2PRDPA20080221_002056_000032692066_00131_31247_3519.N1 | 21FEB2008 00:20:56 | 21FEB2008 01:15:25 | 0 | GOOD |
| 1 | SCI_OL__2PRDPA20080221_020022_000033252066_00132_31248_3521.N1 | 21FEB2008 02:00:22 | 21FEB2008 02:55:48 | 0 | GOOD |
| 2 | SCI_OL__2PRDPA20080221_034206_000032692066_00133_31249_3522.N1 | 21FEB2008 03:42:06 | 21FEB2008 04:36:36 | 0 | GOOD |
| 3 | SCI_OL__2PRDPA20080221_052133_000033252066_00134_31250_3524.N1 | 21FEB2008 05:21:33 | 21FEB2008 06:16:59 | 0 | GOOD |
| 4 | SCI_OL__2PRDPA20080221_070317_000032692066_00135_31251_3526.N1 | 21FEB2008 07:03:17 | 21FEB2008 07:57:47 | 0 | GOOD |
| 5 | SCI_OL__2PRDPA20080221_084244_000033252066_00136_31252_3529.N1 | 21FEB2008 08:42:44 | 21FEB2008 09:38:10 | 0 | GOOD |
| 6 | SCI_OL__2PRDPA20080221_102428_000032692066_00137_31253_3530.N1 | 21FEB2008 10:24:28 | 21FEB2008 11:18:58 | 0 | GOOD |
| 7 | SCI_OL__2PRDPA20080221_120355_000033252066_00138_31254_3535.N1 | 21FEB2008 12:03:55 | 21FEB2008 12:59:21 | 0 | GOOD |
| 8 | SCI_OL__2PRDPA20080221_134539_000032692066_00139_31255_3537.N1 | 21FEB2008 13:45:39 | 21FEB2008 14:40:09 | 0 | GOOD |
| 9 | SCI_OL__2PRDPA20080221_152506_000033252066_00140_31256_3540.N1 | 21FEB2008 15:25:06 | 21FEB2008 16:20:32 | 0 | GOOD |
| 10 | SCI_OL__2PRDPA20080221_170650_000032692066_00141_31257_3542.N1 | 21FEB2008 17:06:50 | 21FEB2008 18:01:20 | 0 | GOOD |
| 11 | SCI_OL__2PRDPA20080221_184550_000033812066_00142_31258_3543.N1 | 21FEB2008 18:45:50 | 21FEB2008 19:42:11 | 0 | GOOD |
| 12 | SCI_OL__2PRDPA20080221_202625_000033942066_00143_31259_3545.N1 | 21FEB2008 20:26:25 | 21FEB2008 21:22:59 | 0 | GOOD |
| 13 | SCI_OL__2PRDPA20080221_220728_000033252066_00144_31260_3547.N1 | 21FEB2008 22:07:28 | 21FEB2008 23:02:54 | 0 | GOOD |
| 14 | SCI_OL__2PRDPA20080221_234912_000032692066_00145_31261_3549.N1 | 21FEB2008 23:49:12 | 22FEB2008 00:43:42 | 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: 148720

Total number of cloud data DSRs with good quality flag (=0): 148720 (100.0 %)

| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|--------------|--------|---------|---------|---------|---------|----------|------|
| QUALITY_FLAG | 148720 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | flag |
| INTEGR_TIME | 148720 | 0.16914 | 0.12500 | 0.12500 | 0.25000 | 0.059744 | s |
| SURFACE_PRES | 148720 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | hPa |
| CL_FRAC | 148720 | 0.41740 | 0.39949 | 0.0000 | 1.0000 | 0.27660 | - |

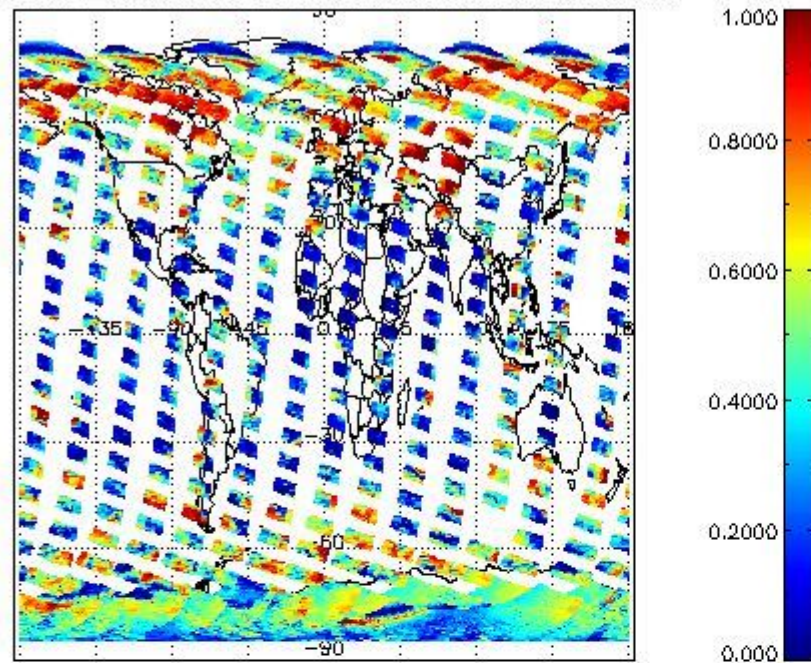
| | | | | | | | |
|-------------------|--------|----------|----------|----------|----------|---------|---|
| CL_FRAC_ERR | 148720 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | rel. fraction |
| PMD_READ | 148720 | 5.4126 | 4.0000 | 4.0000 | 8.0000 | 1.9118 | |
| PMD_READ_CL[0] | 148720 | 0.18372 | 0.0000 | 0.0000 | 8.0000 | 0.93128 | - |
| PMD_READ_CL[1] | 148720 | 0.55359 | 0.0000 | 0.0000 | 8.0000 | 1.6518 | - |
| CL_TOP_HEIGHT | 121437 | 4.3098 | 2.6900 | 0.0000 | 17.000 | 4.1816 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 121437 | 56.432 | 49.121 | 0.0000 | 101.00 | 39.777 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 148720 | 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 | 148720 | 11001001 | 11000100 | 11000000 | 11100000 | 3164.0 | flags |
| AERO_ABSO_IND | 148720 | 2.7790 | 3.1647 | -1.3887 | 13.864 | 1.9845 | |
| AERO_IND_DIAG | 148720 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 148720 | 01010101 | 00000000 | 00000000 | 11000000 | 24441. | flags |

Time and geolocation plots:

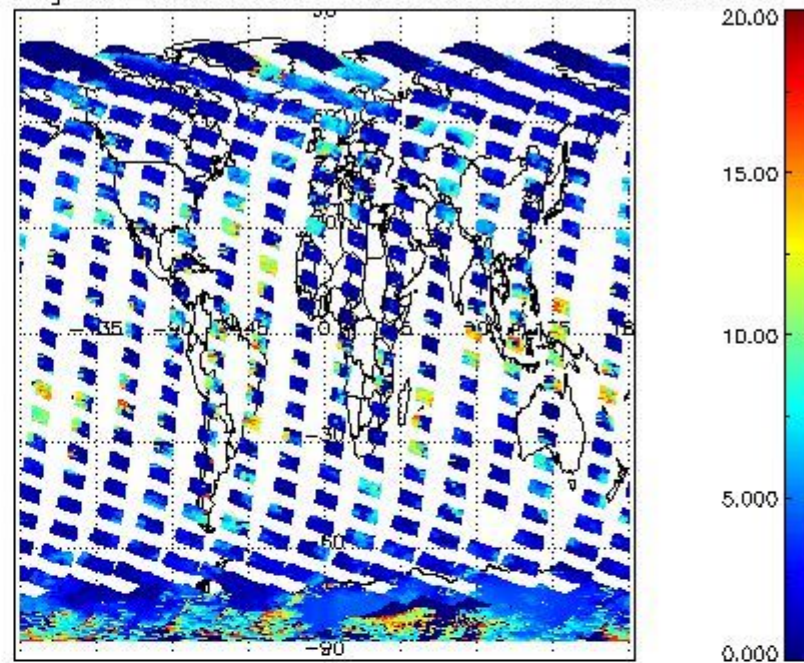
Plots are available for the following parameters:

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

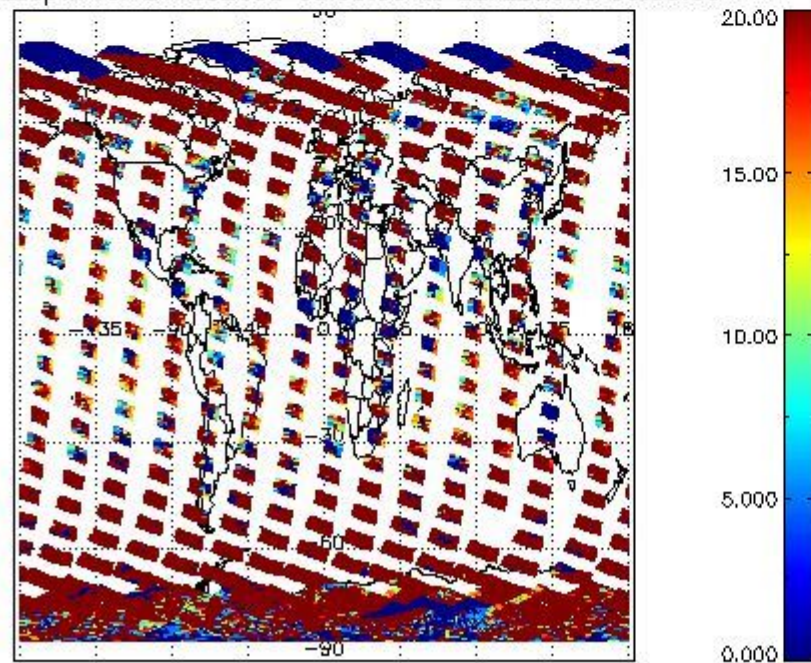
cL_frac for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



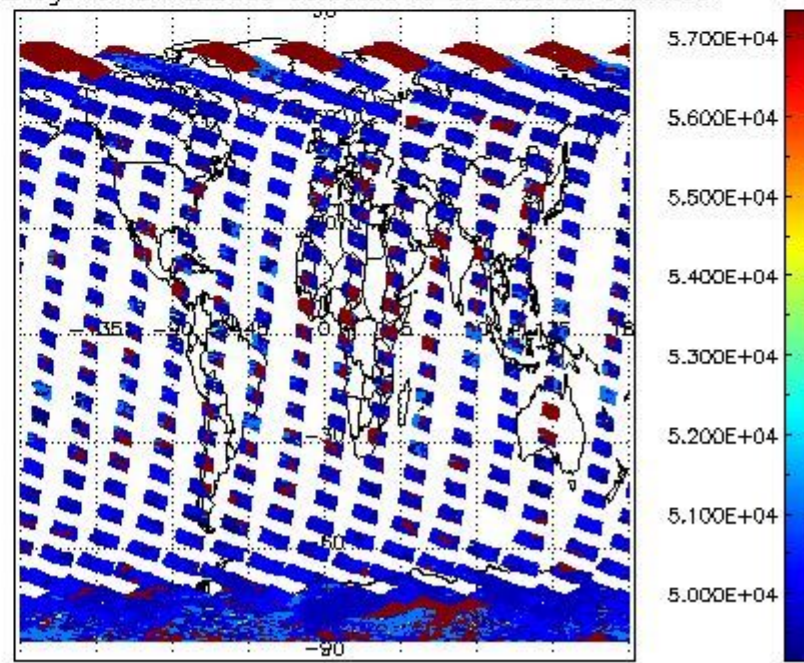
cL_top_height for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



cL_opt_depth for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



cloud_flags for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



2.2.2 Nadir

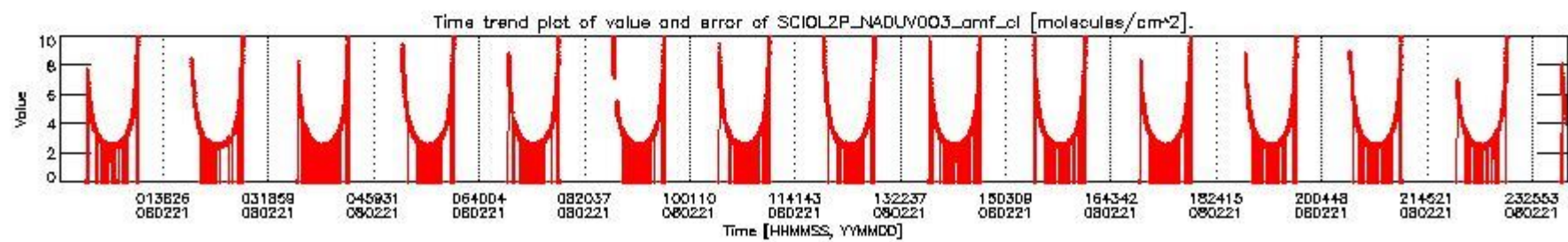
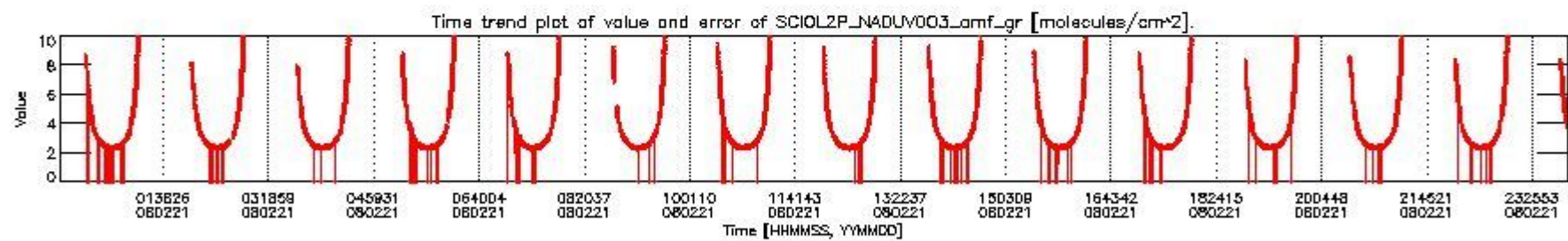
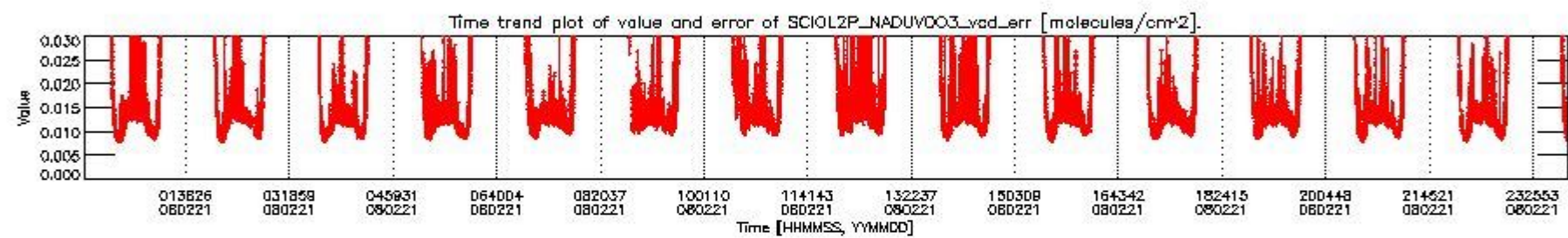
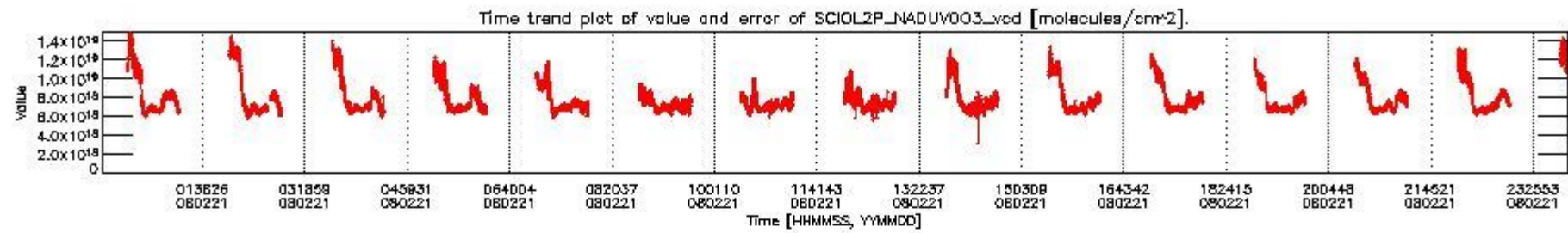
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

The following data items are currently included into this section:

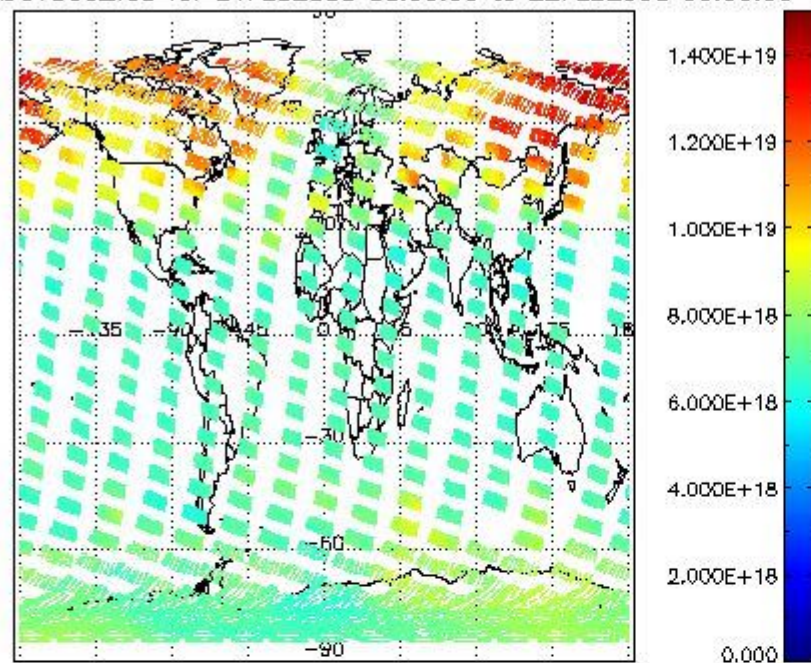
| Number | Data item ID |
|--------|--------------------------|
| 0 | SCIOL2P_NADUV003_vcd |
| 1 | SCIOL2P_NADUV003_vcd_err |
| 2 | SCIOL2P_NADUV003_amf_gr |
| 3 | SCIOL2P_NADUV003_amf_cl |

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

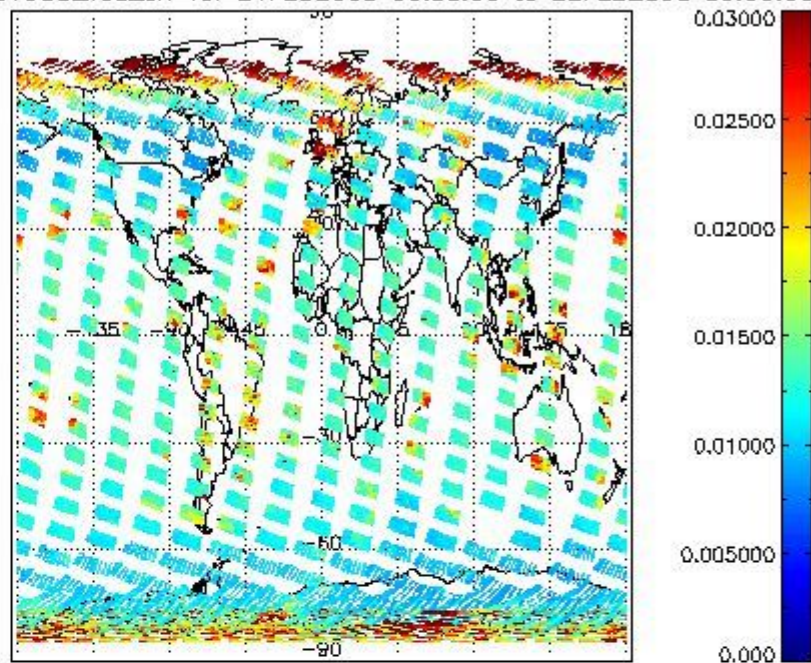
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing_start time as suggested by the product sensing_start time in the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



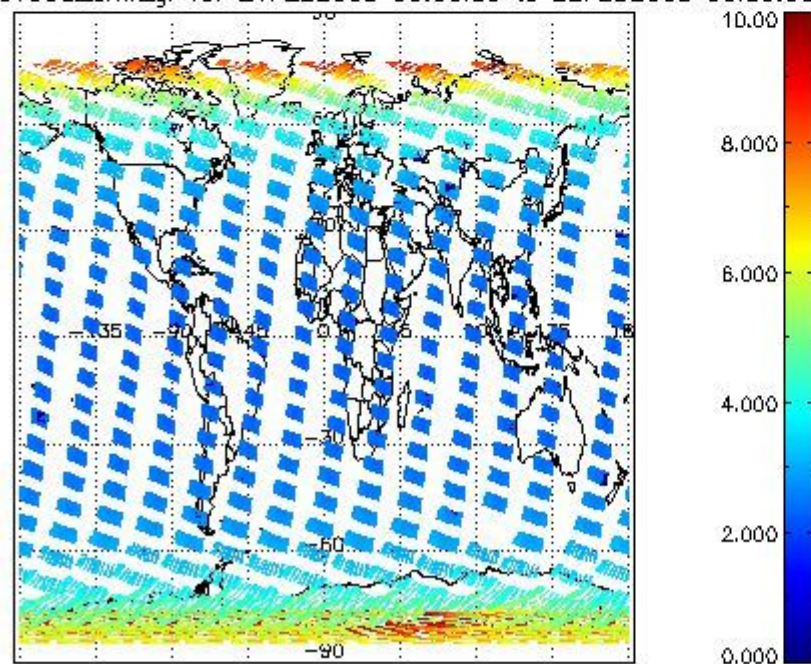
SCIOL2P_NADUV003_vcd for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



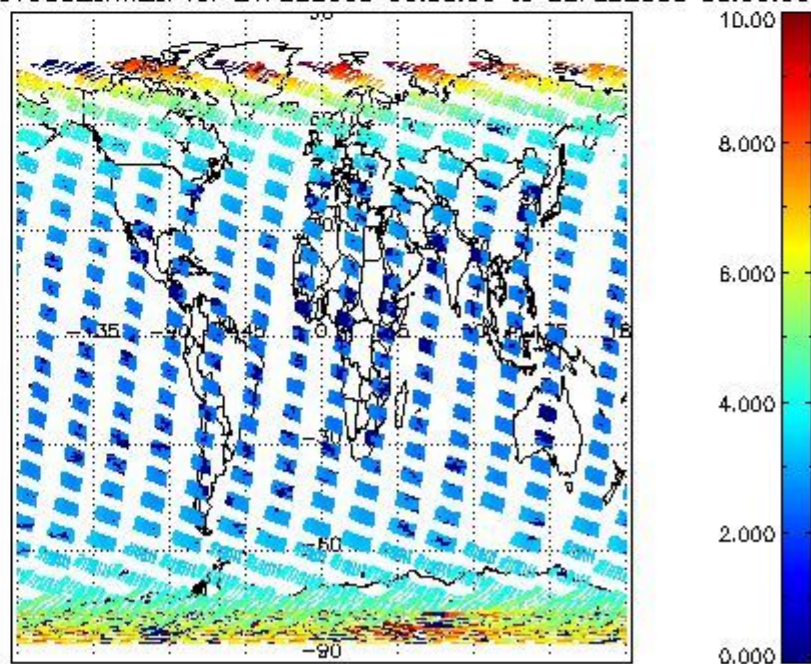
SCIOL2P_NADUV003_vcd_err for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

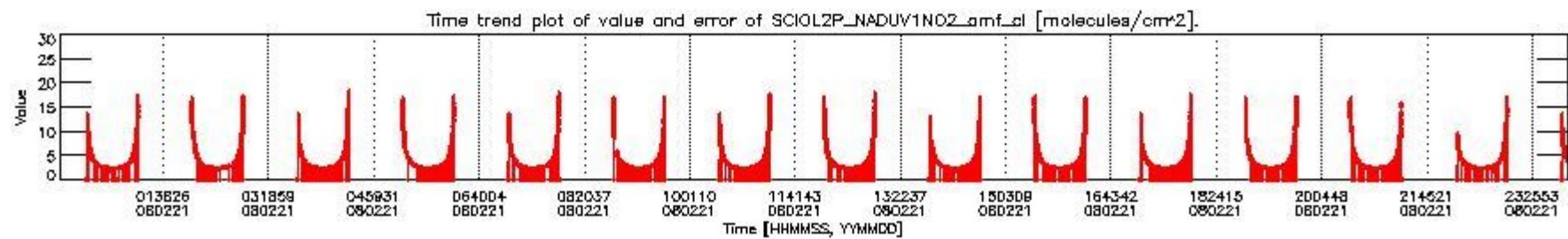
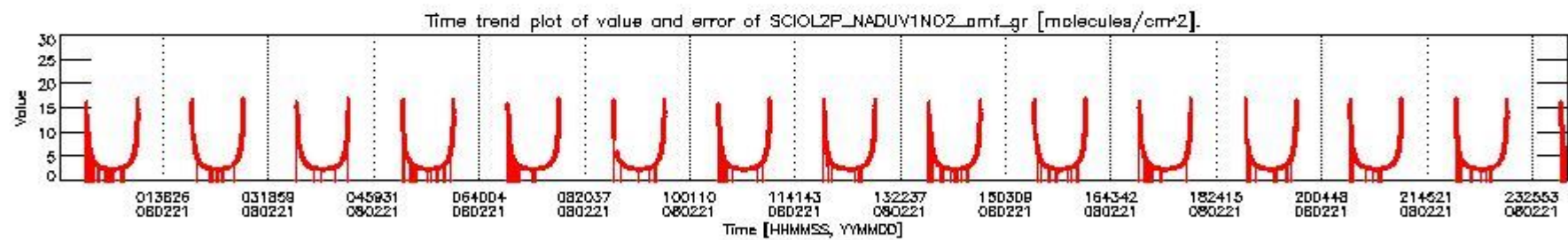
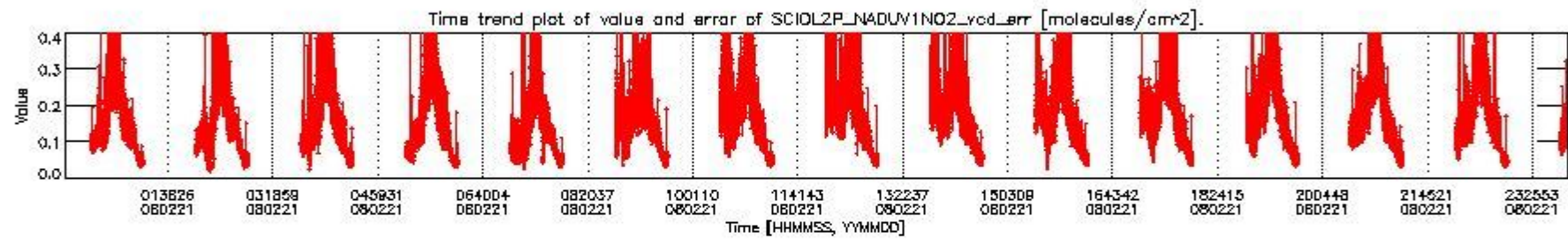
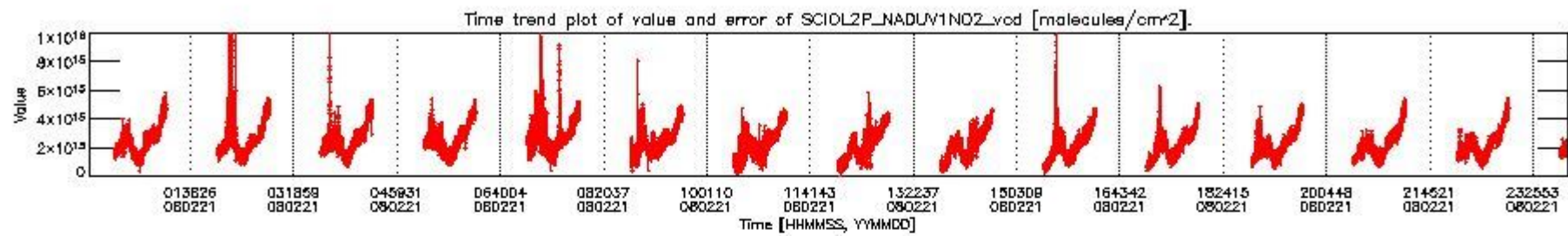


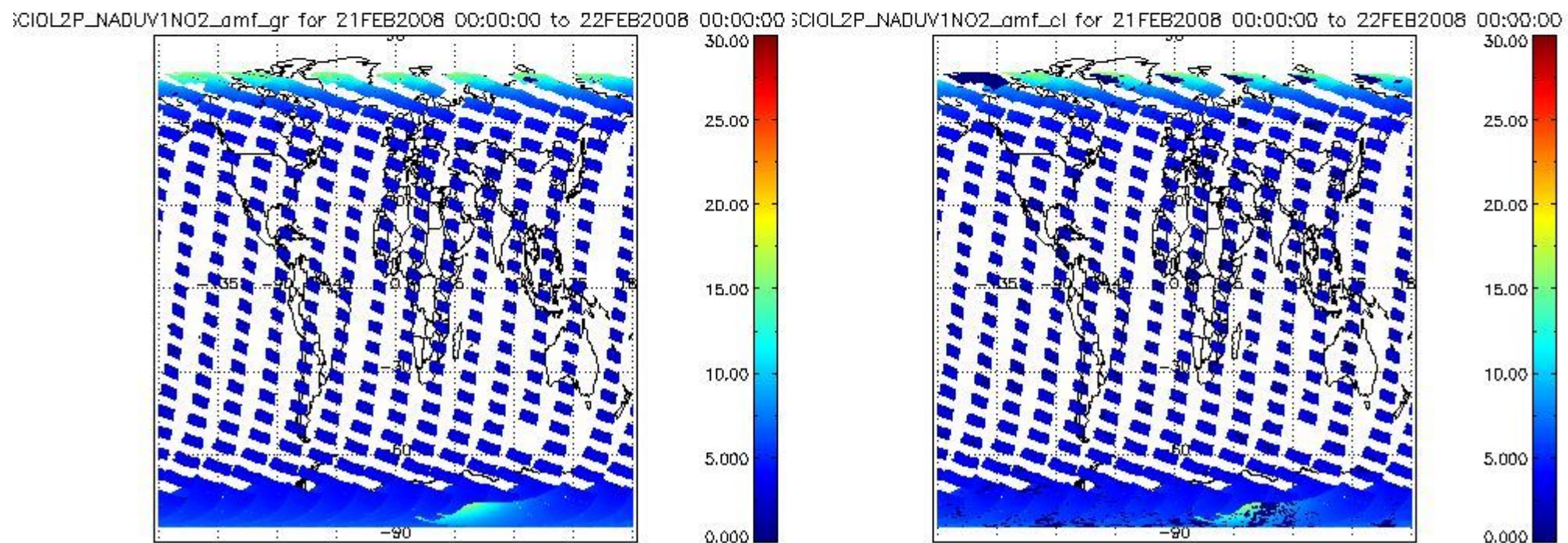
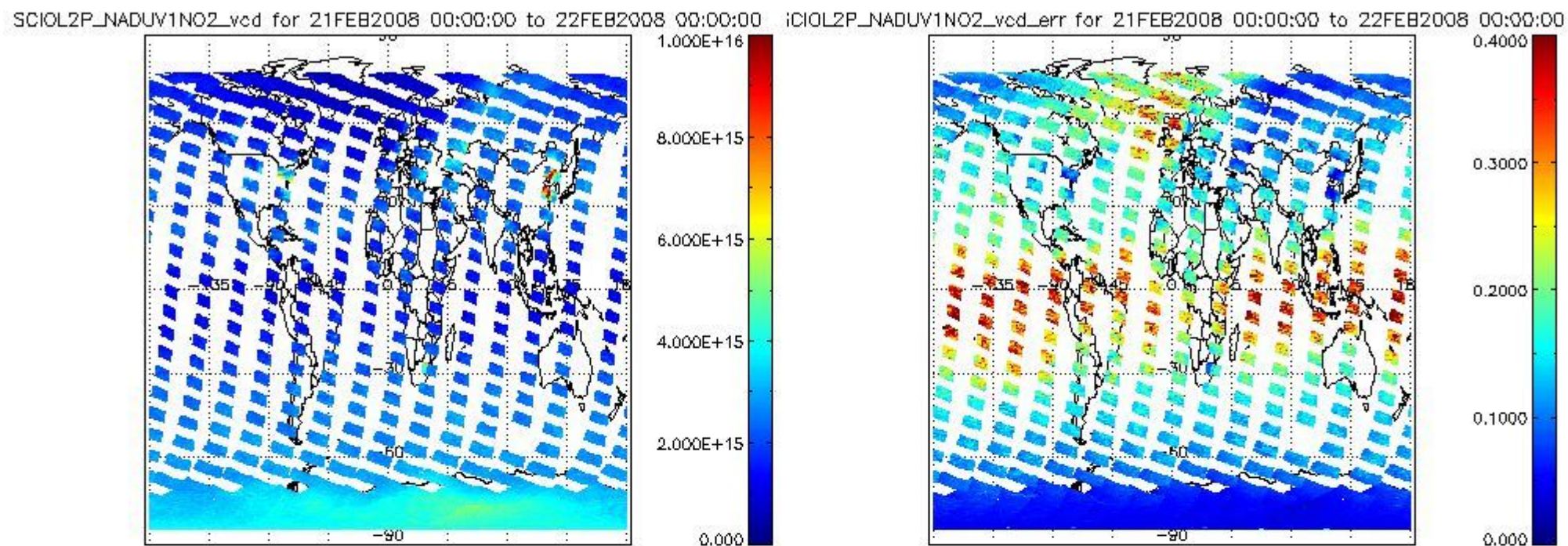
SCIOL2P_NADUV003_amf_gr for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



SCIOL2P_NADUV003_amf_cl for 21FEB2008 00:00:00 to 22FEB2008 00:00:00







2.2.3 Limb

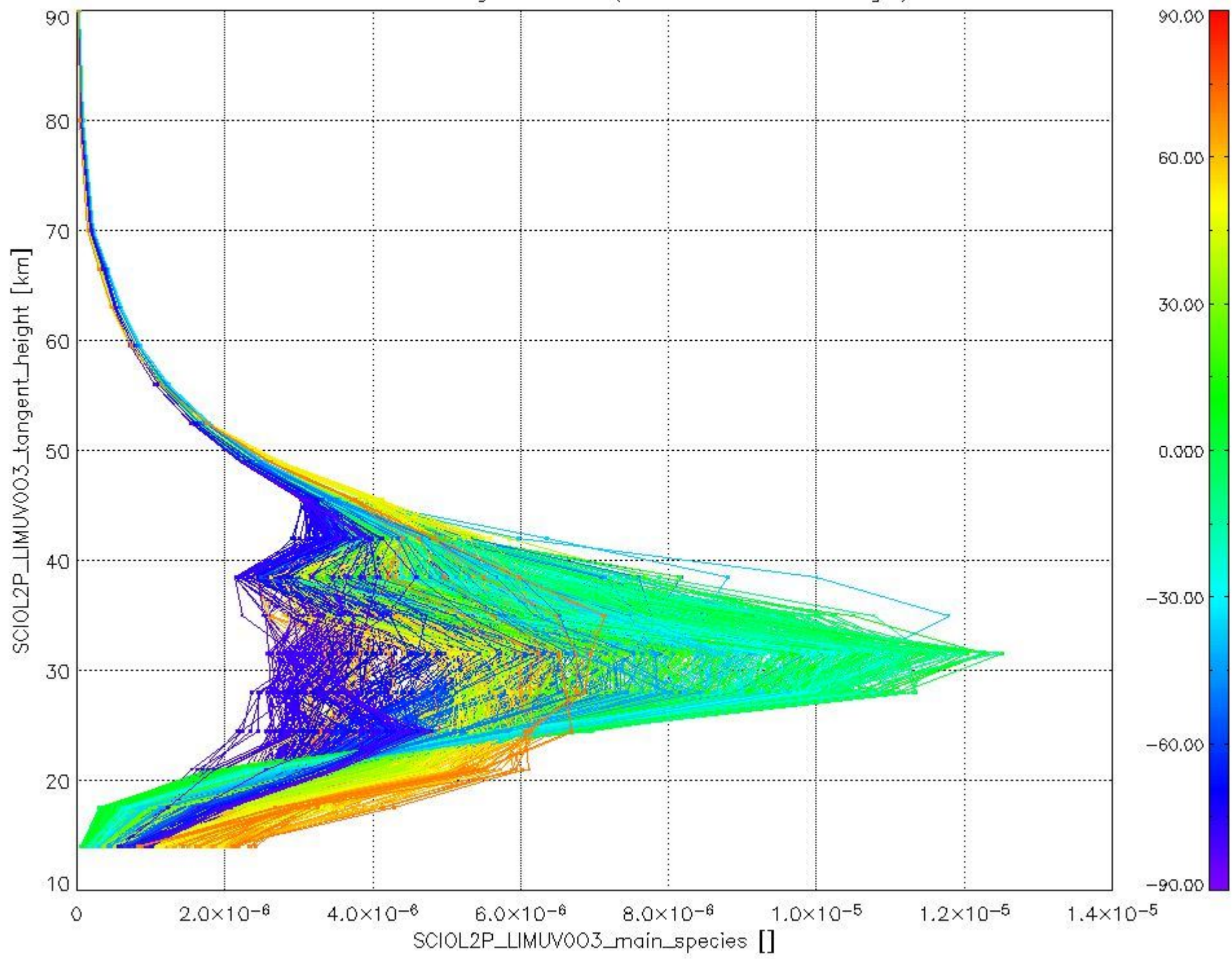
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

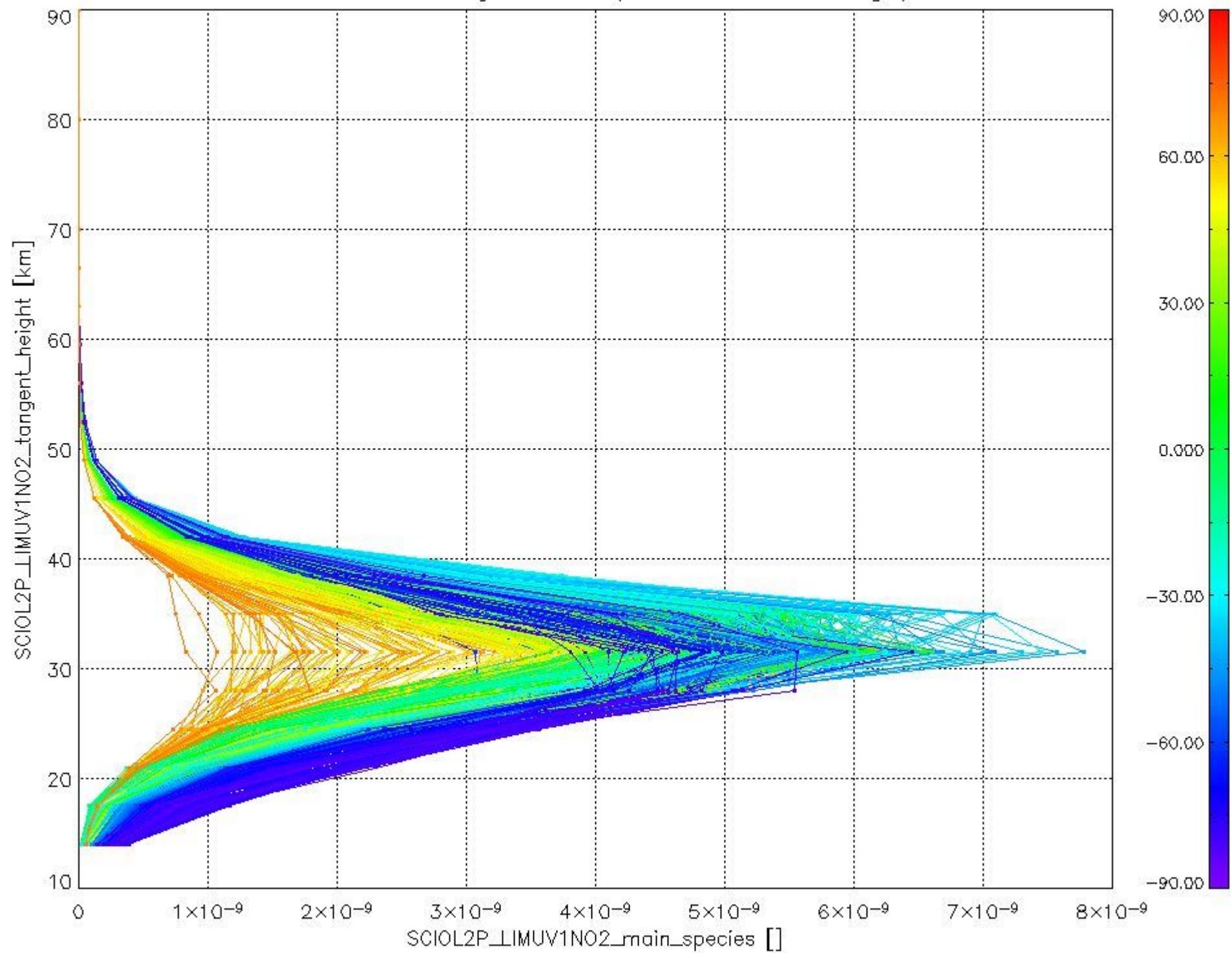
| Number | Data item ID |
|--------|-------------------------------|
| 0 | SCIOL2PLIMUV003_main_species |
| 1 | SCIOL2PLIMUV1NO2_main_species |

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

Plot of SCIOL2P_LIMUV003_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



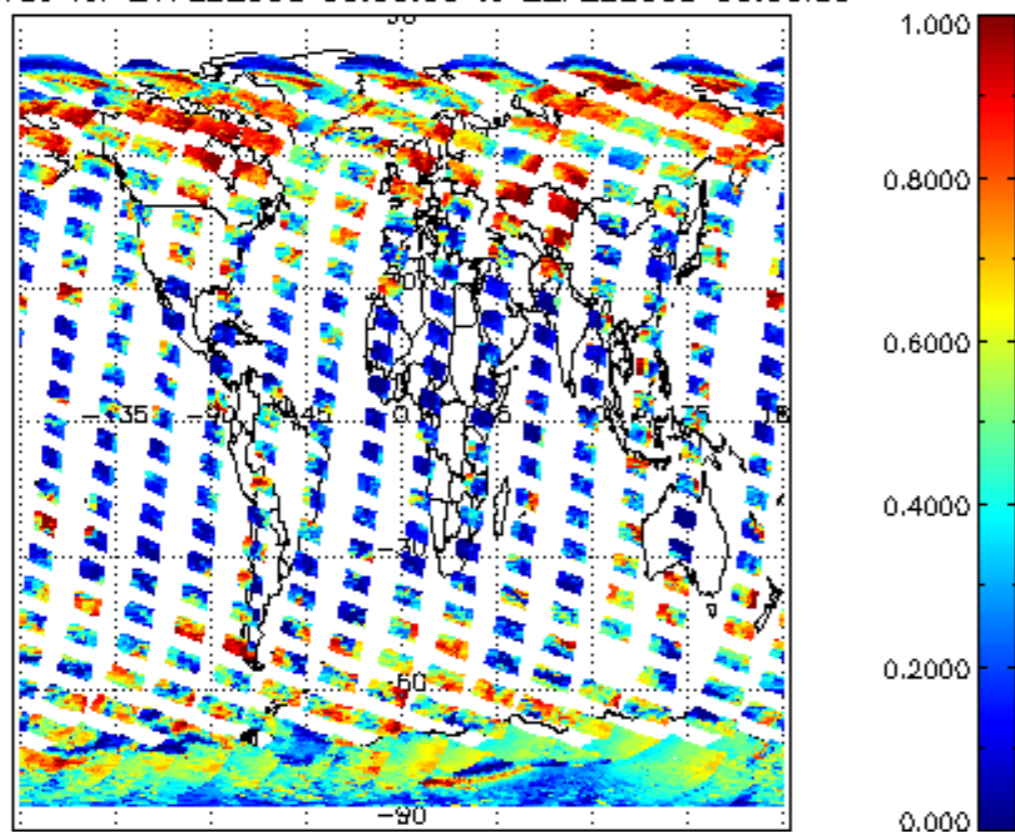
Plot of SCIOL2P_LIMUV1NO2_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).



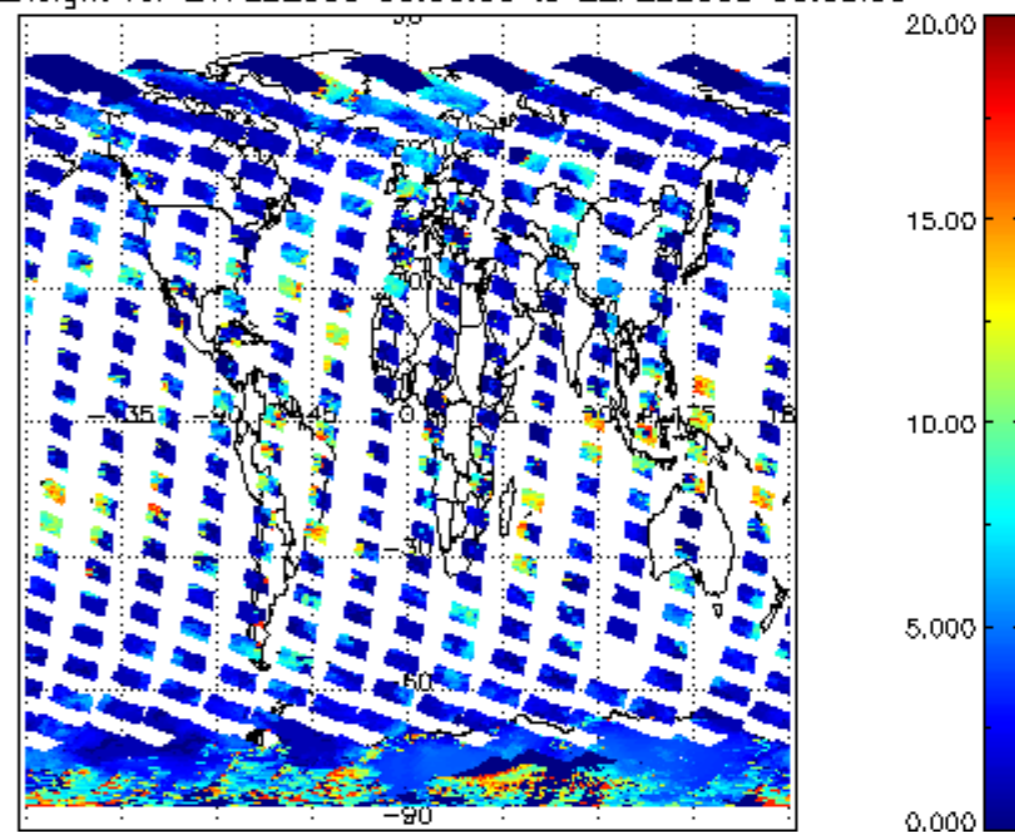
2.3 ADF monitoring

| Number | ADF |
|--------|--|
| | IN_ (INITIALISATION_FILE) |
| 0 | SCI_IN_AXNPDE20070629_092400_20070720_000000_20991231_235959 |
| | ECF (ECMWF_FILE) |
| 1 | NOT USED |

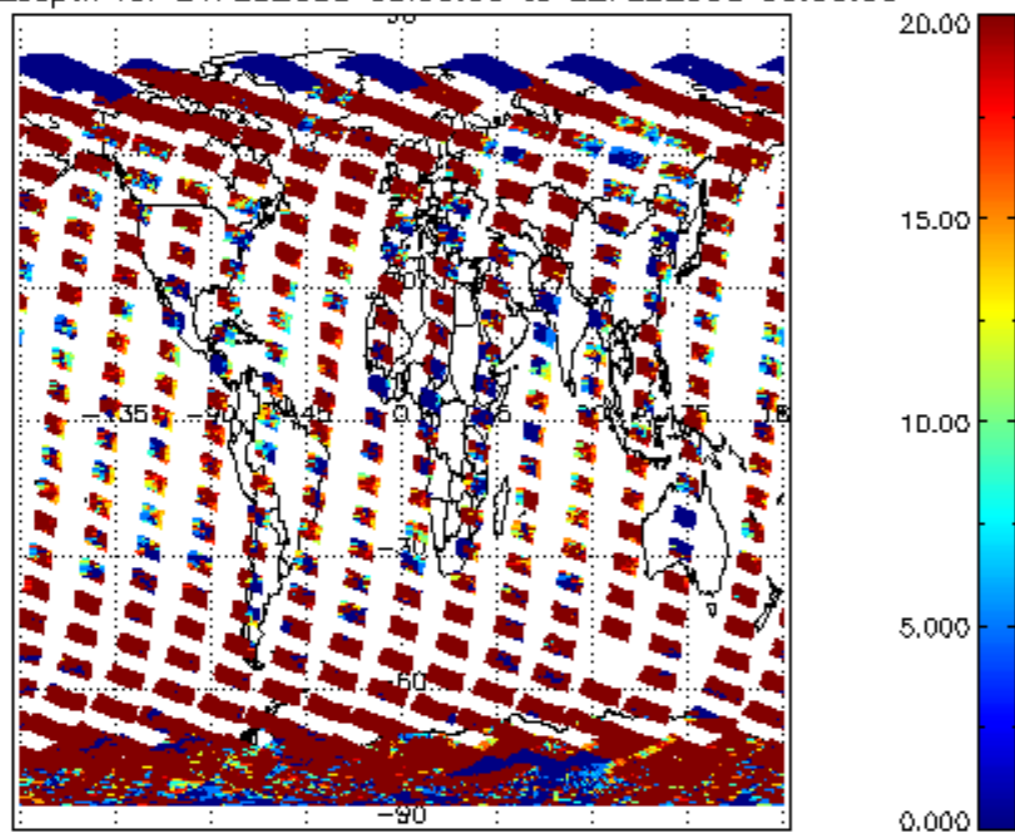
cl_frac for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



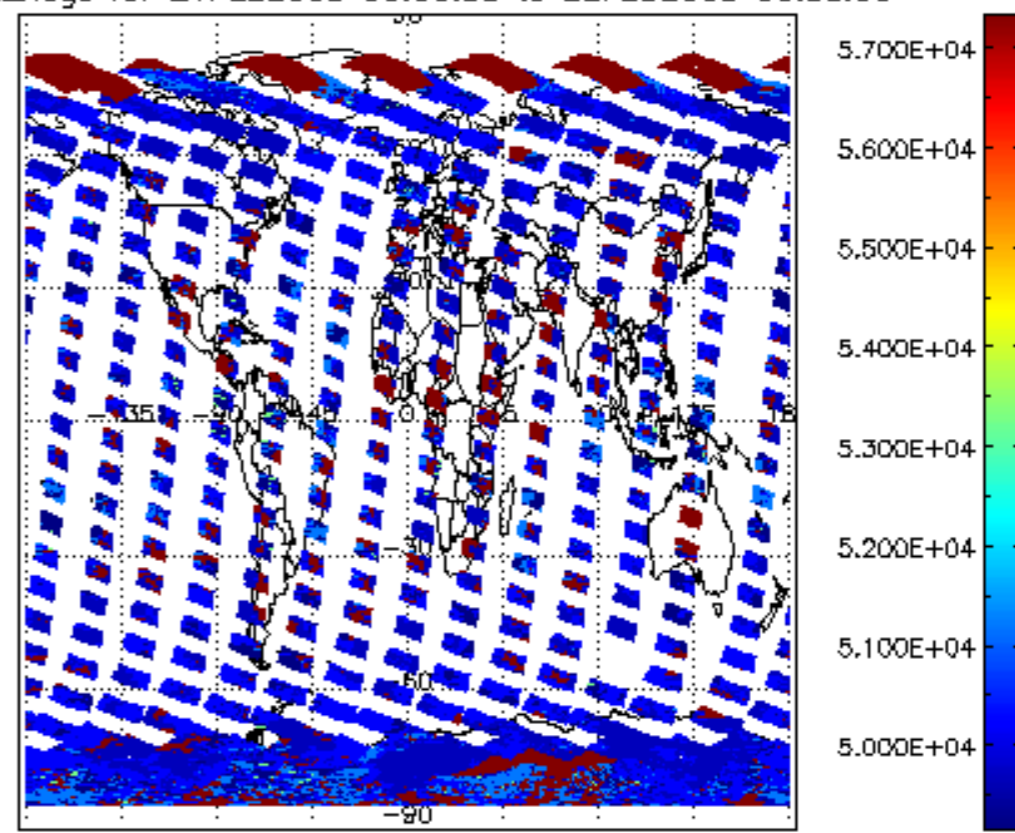
cl_top_height for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

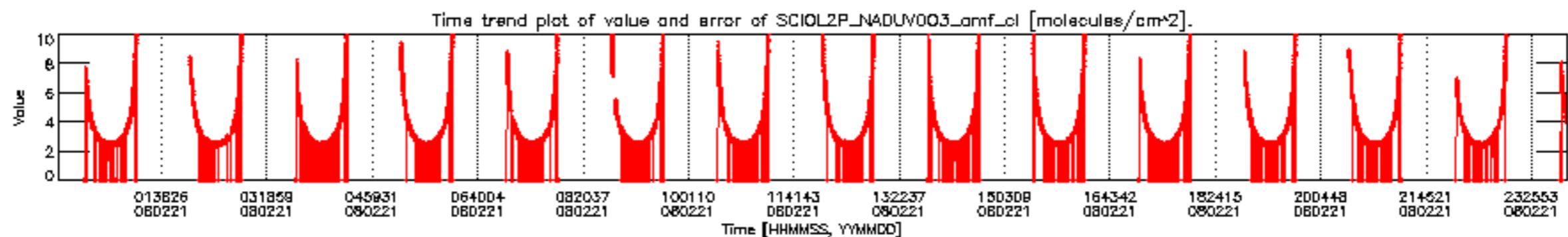
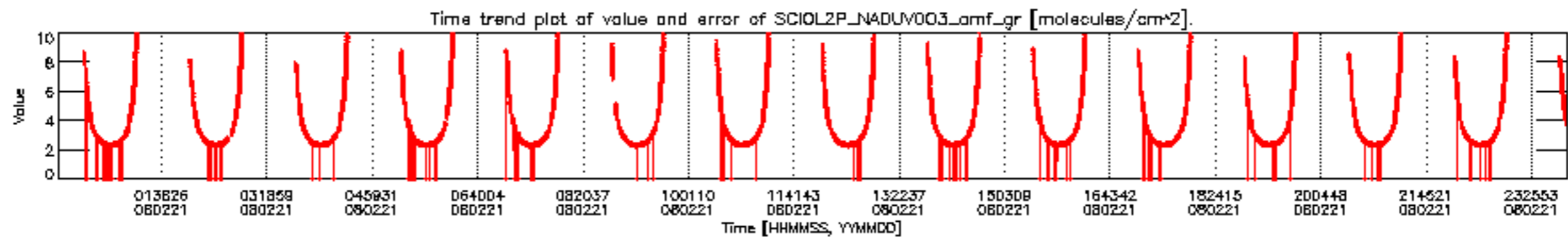
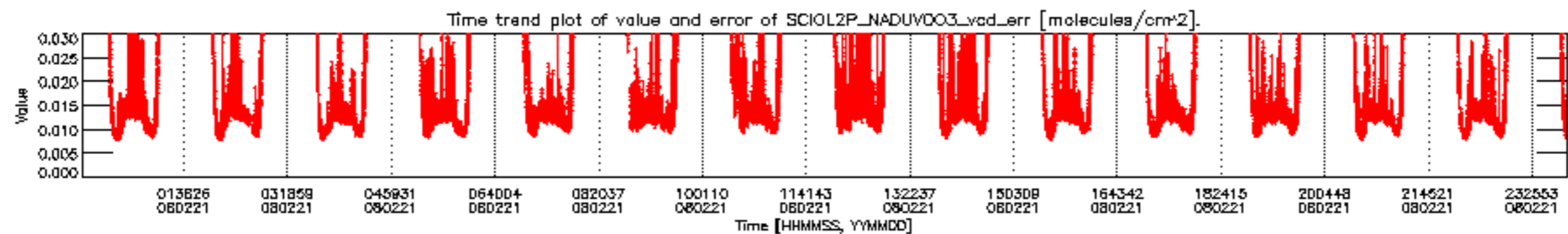
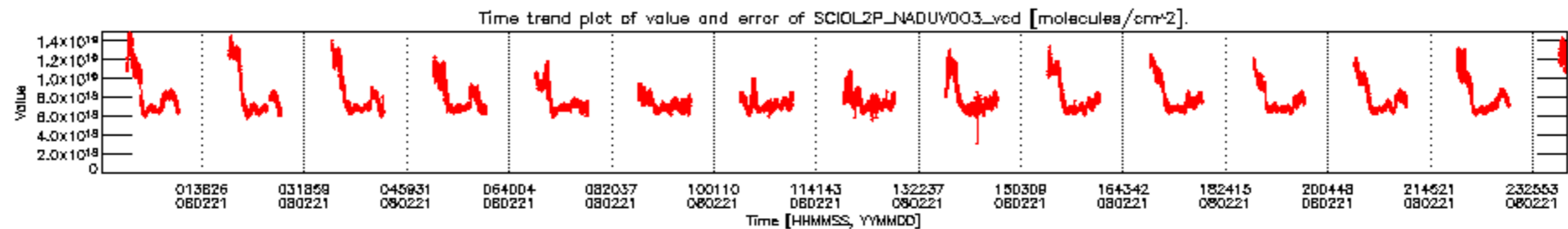


cl_opt_depth for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

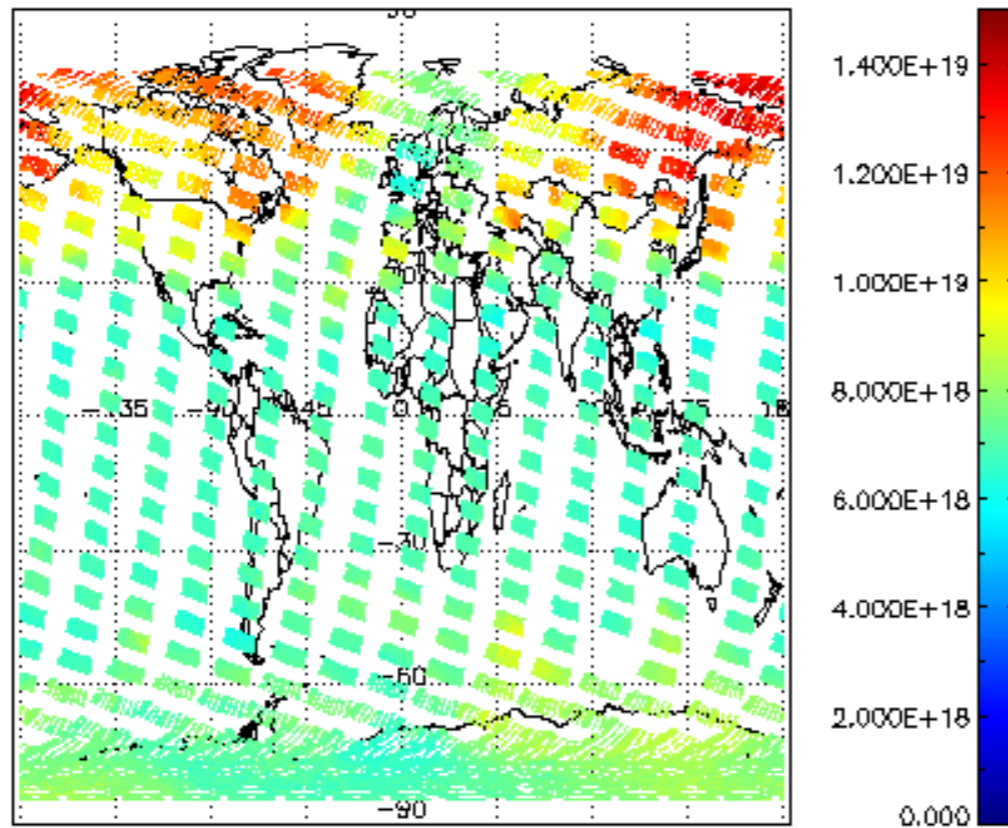


cloud_flags for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

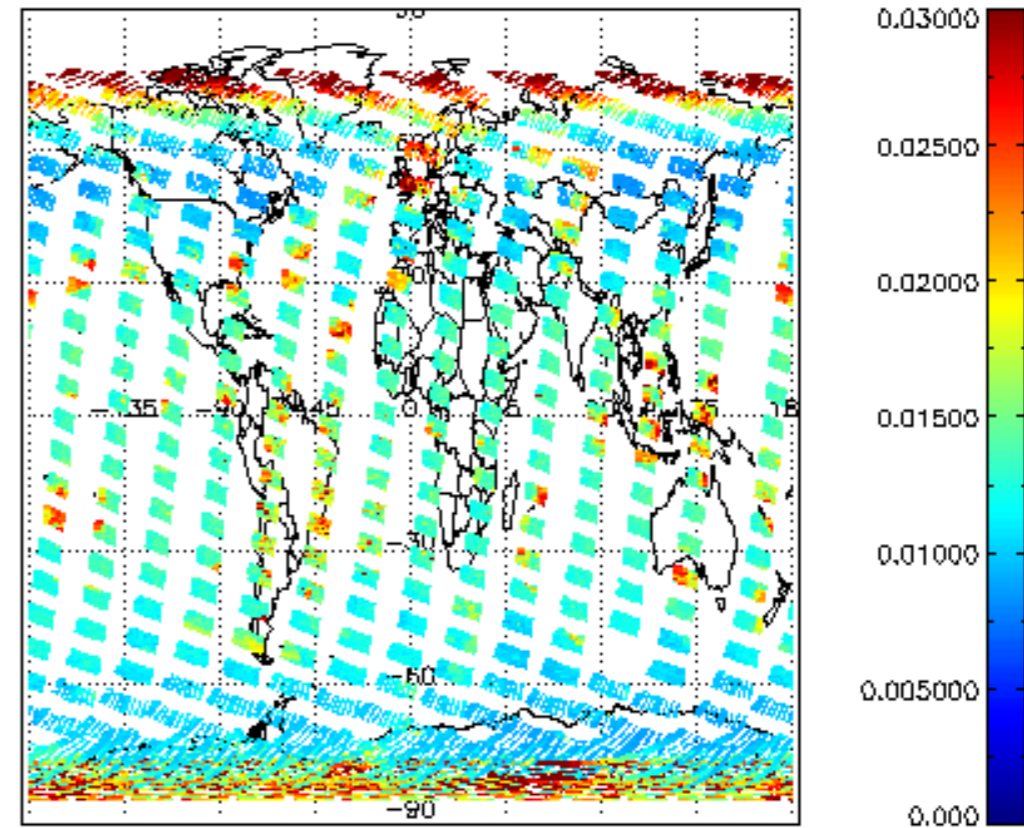




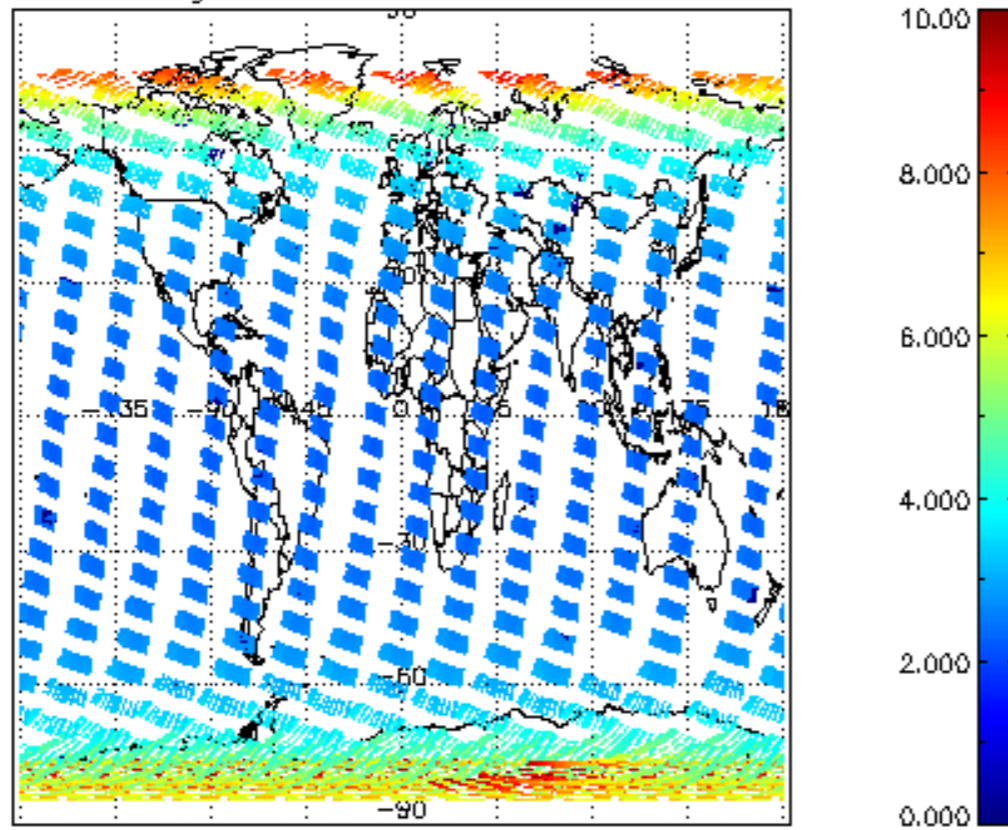
SCIOL2P_NADUV003_vcd for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



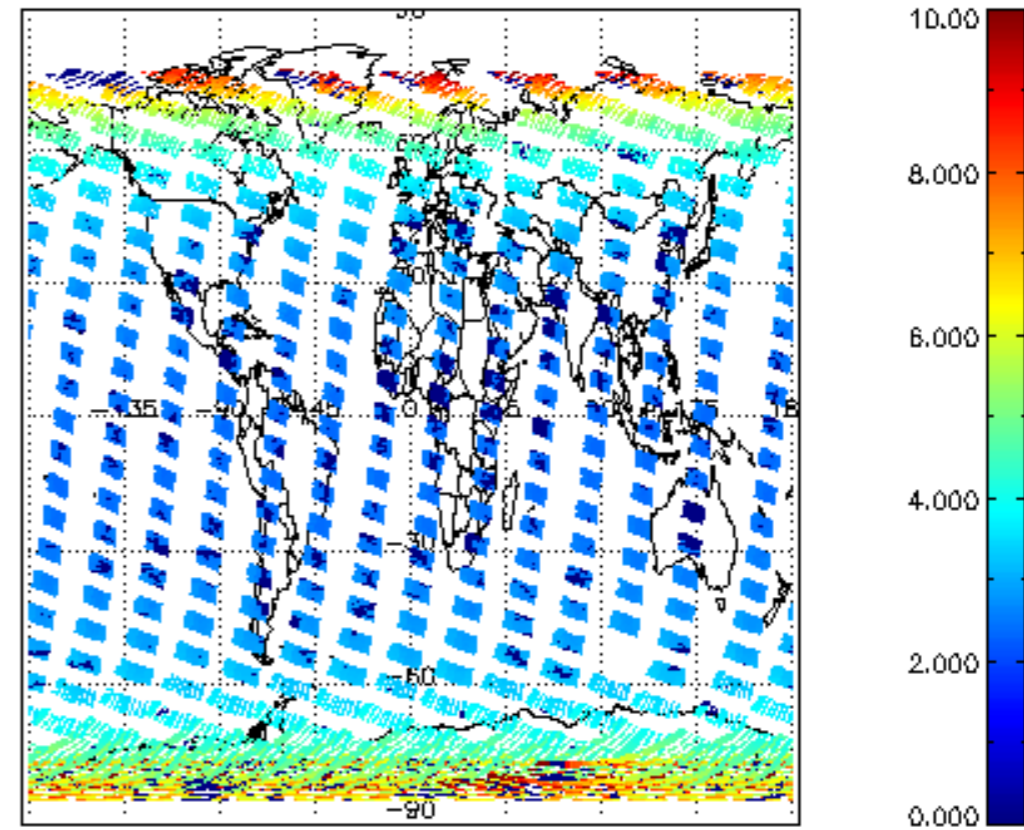
SCIOL2P_NADUV003_vcd_err for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

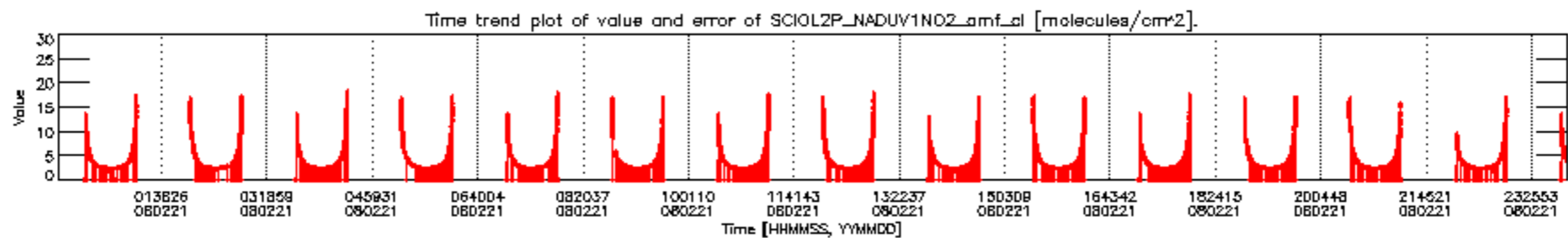
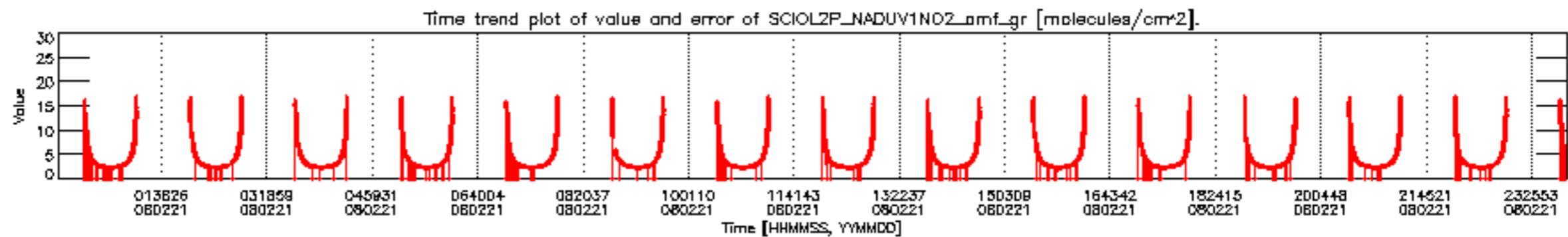
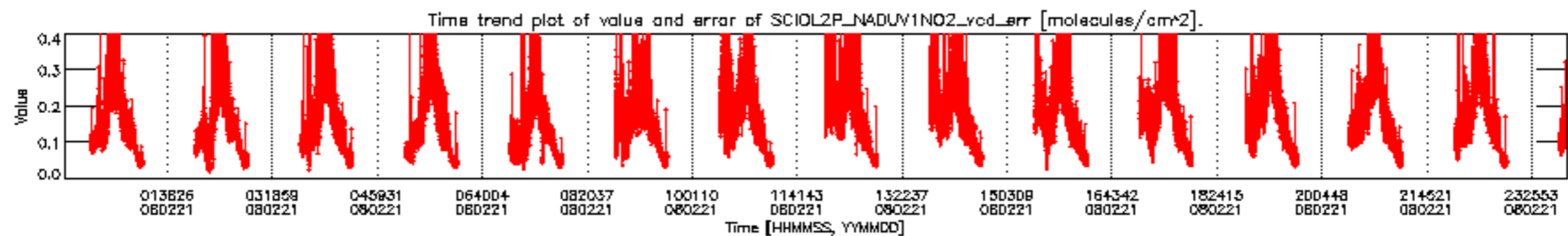
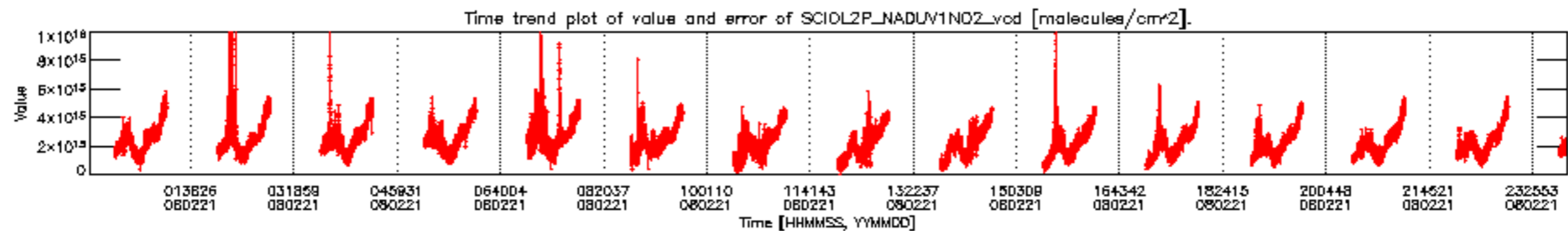


SCIOL2P_NADUV003_amf_gr for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

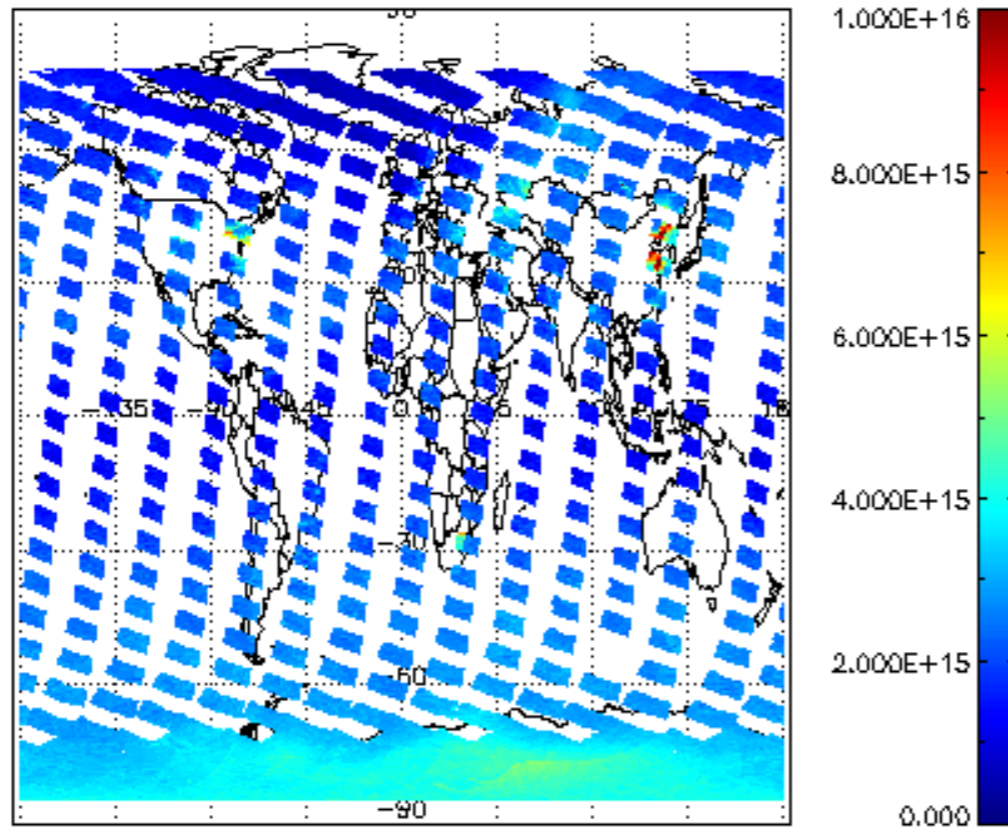


SCIOL2P_NADUV003_amf_cl for 21FEB2008 00:00:00 to 22FEB2008 00:00:00

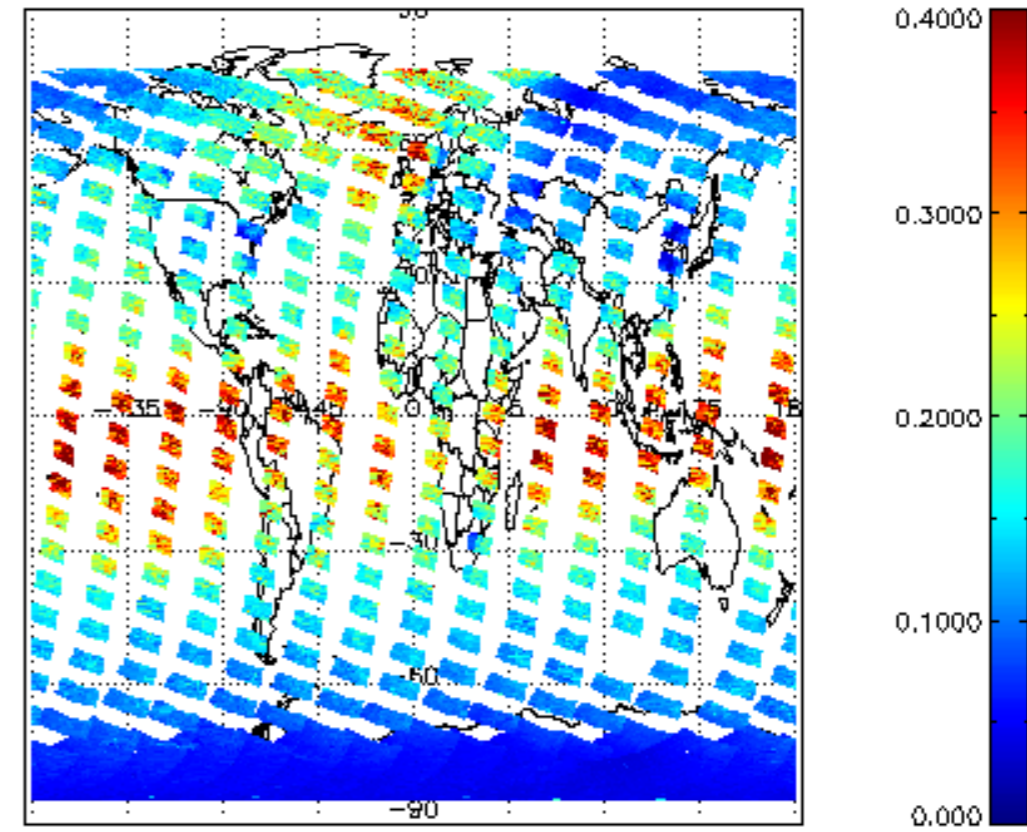




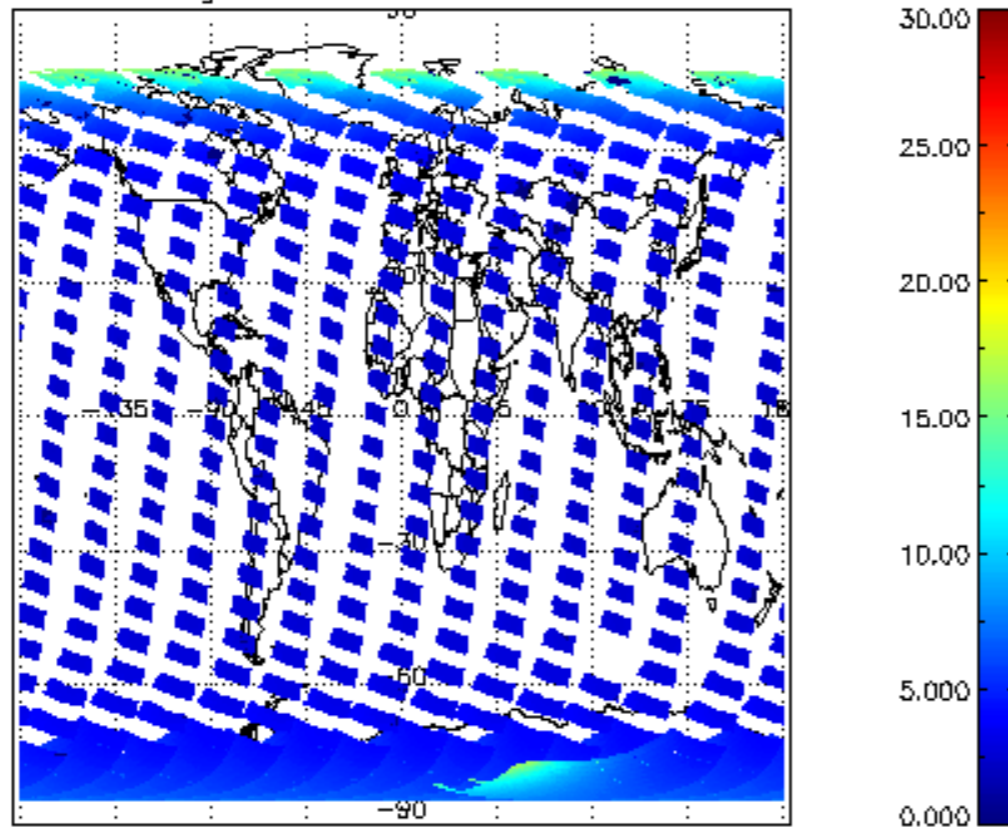
SCIOL2P_NADUV1NO2_vcd for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



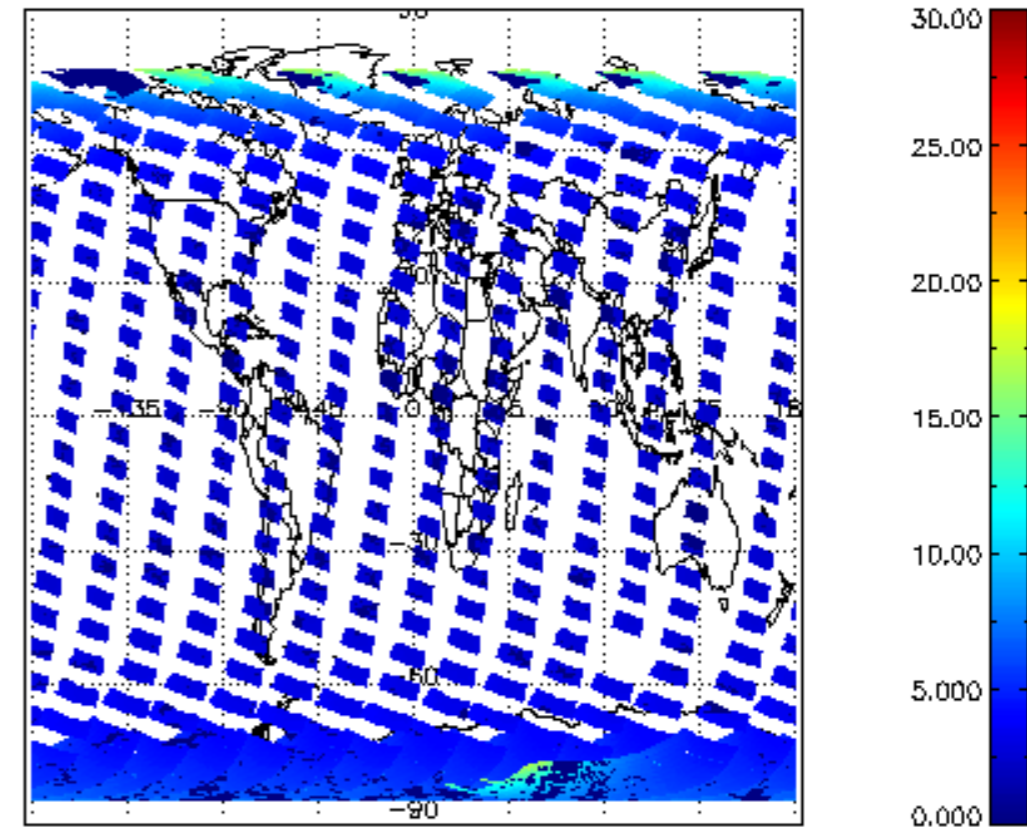
SCIOL2P_NADUV1NO2_vcd_err for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



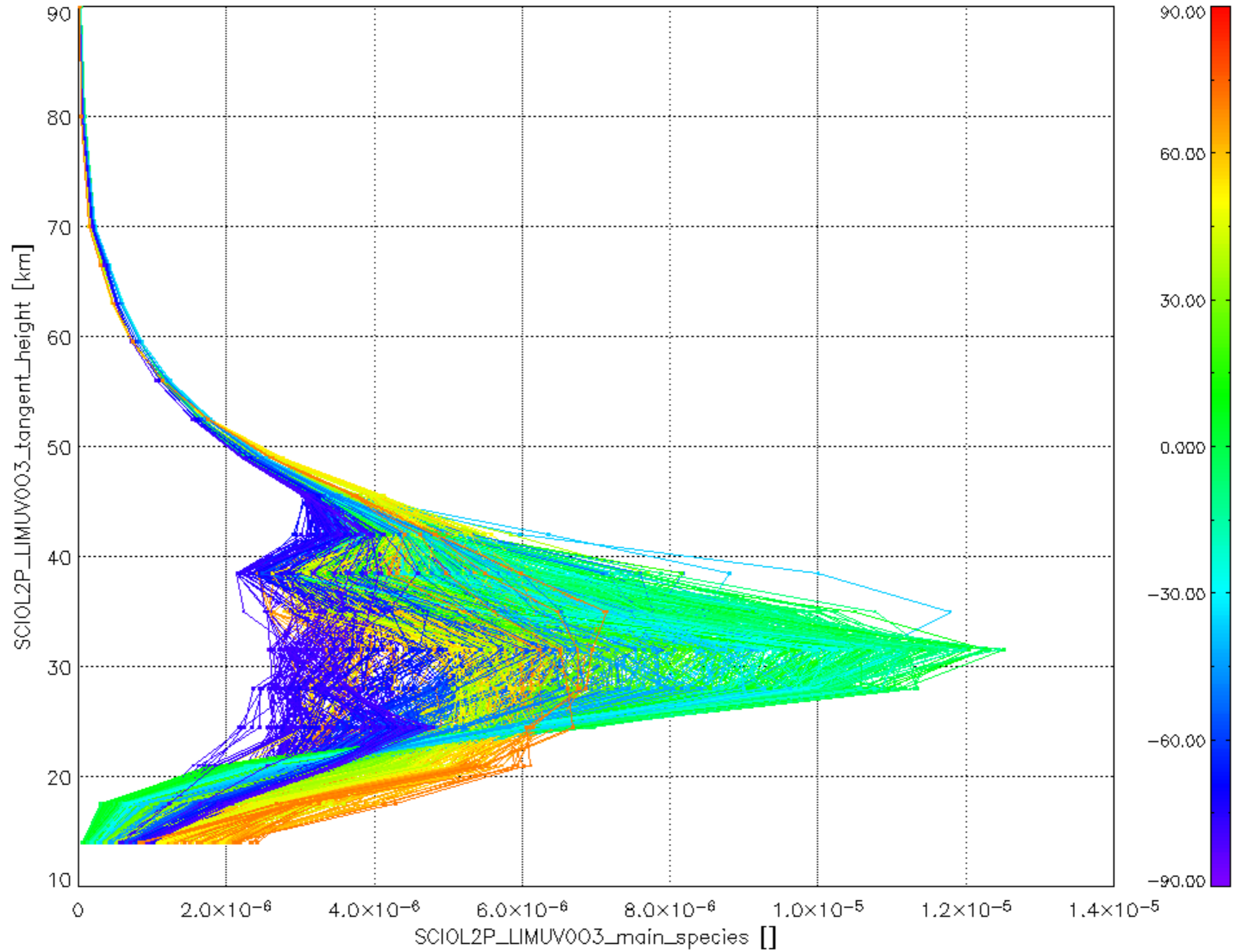
SCIOL2P_NADUV1NO2_amf_gr for 21FEB2008 00:00:00 to 22FEB2008 00:00:00



SCIOL2P_NADUV1NO2_amf_cl for 21FEB2008 00:00:00 to 22FEB2008 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).

