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# 2. SCIAMACHY Daily Report for Level 2 products



## 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 | 11MAY2011 13:05:43 |
| Data source version | SCIA-OL/5.01-N |
| Processing scope for products | 05MAY2011 00:00:00 to 06MAY2011 00:00:00 |
| Start time of first product within scope | 04MAY2011 23:29:19 |
| Stop time of last product within scope | 05MAY2011 23:46:29 |
| 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__2PNDPA20110504_232919_000032133102_00130_47989_2980.N1 | 04MAY2011 23:29:19 | 05MAY2011 00:22:53 | 0 | GOOD |
| 1 | SCI_OL__2PNDPA20110505_010824_000033383102_00131_47990_2981.N1 | 05MAY2011 01:08:24 | 05MAY2011 02:04:02 | 0 | GOOD |
| 2 | SCI_OL__2PNDPA20110505_024454_000028053102_00132_47991_2982.N1 | 05MAY2011 02:44:54 | 05MAY2011 03:31:39 | 0 | GOOD |
| 3 | SCI_OL__2PNDPA20110505_033237_000060643102_00133_47992_2983.N1 | 05MAY2011 03:32:37 | 05MAY2011 05:13:41 | 0 | GOOD |
| 4 | SCI_OL__2PNDPA20110505_051548_000058513102_00134_47993_2984.N1 | 05MAY2011 05:15:48 | 05MAY2011 06:53:19 | 0 | GOOD |

| | | | | | |
|---|---|---|---|---|---|
| 5 | SCI_OL__2PNDPA20110505_065433_000040173102_00135_47994_2985.N1 | 05MAY2011 06:54:33 | 05MAY2011 08:01:30 | 0 | GOOD |
| 6 | SCI_OL__2PNDPA20110505_080244_000059953102_00136_47995_2986.N1 | 05MAY2011 08:02:44 | 05MAY2011 09:42:39 | 0 | GOOD |
| 7 | SCI_OL__2PNDPA20110505_094353_000058293102_00137_47996_2987.N1 | 05MAY2011 09:43:53 | 05MAY2011 11:21:03 | 0 | GOOD |
| 8 | SCI_OL__2PNDPA20110505_112202_000058853102_00138_47997_2988.N1 | 05MAY2011 11:22:02 | 05MAY2011 13:00:08 | 0 | GOOD |
| 9 | SCI_OL__2PNDPA20110505_130107_000058983102_00139_47998_2989.N1 | 05MAY2011 13:01:07 | 05MAY2011 14:39:25 | 0 | GOOD |
| 10 | SCI_OL__2PNDPA20110505_143929_000057623102_00140_47999_2990.N1 | 05MAY2011 14:39:29 | 05MAY2011 16:15:31 | 0 | GOOD |
| 11 | SCI_OL__2PNDPA20110505_161643_000057063102_00141_48000_2991.N1 | 05MAY2011 16:16:43 | 05MAY2011 17:51:50 | 0 | GOOD |
| 12 | SCI_OL__2PNDPA20110505_175153_000060103102_00142_48001_2992.N1 | 05MAY2011 17:51:53 | 05MAY2011 19:32:03 | 0 | GOOD |
| 13 | SCI_OL__2PNDPA20110505_193113_000060543102_00143_48002_2993.N1 | 05MAY2011 19:31:13 | 05MAY2011 21:12:07 | 0 | GOOD |
| 14 | SCI_OL__2PNDPA20110505_211210_000032303102_00144_48003_2994.N1 | 05MAY2011 21:12:10 | 05MAY2011 22:06:01 | 0 | GOOD |
| 15 | SCI_OL__2PNDPA20110505_224739_000035303102_00144_48003_2995.N1 | 05MAY2011 22:47:39 | 05MAY2011 23:46:29 | 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: 165880

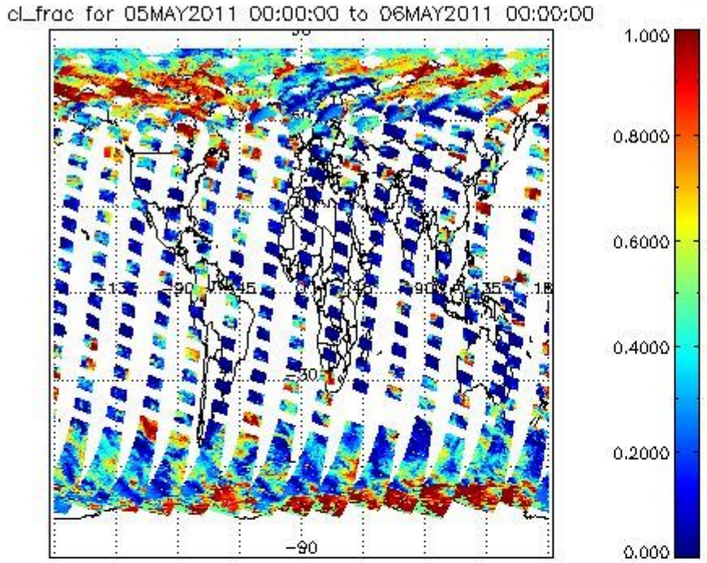
Total number of cloud data DSRs with good quality flag (=0): 165880 (100.0 %)

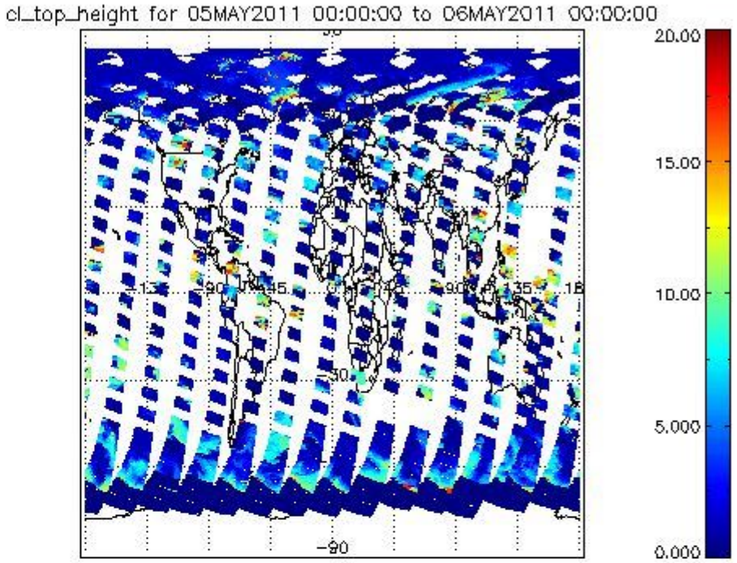
| Parameter | #valid | Mean | Median | Min | Max | Stddev | Unit |
|---|---|---|---|---|---|---|---|
| QUALITY_FLAG | 165880 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| INTEGR_TIME | 165880 | 0.16575 | 0.12500 | 0.12500 | 0.25000 | 0.058594 | s |
| CL_FRAC | 165880 | 0.40270 | 0.36464 | 0.0000 | 1.0000 | 0.31794 | |
| CL_FRAC_ERR | 165880 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | % |
| PMD_READ | 165880 | 5.3041 | 4.0000 | 4.0000 | 8.0000 | 1.8750 | |
| PMD_READ_CL[0] | 165880 | 0.45581 | 0.0000 | 0.0000 | 8.0000 | 1.3592 | - |
| PMD_READ_CL[1] | 165880 | 1.3069 | 0.0000 | 0.0000 | 8.0000 | 2.5645 | - |
| CL_TOP_HEIGHT | 130352 | 2.9760 | 1.2270 | 0.0000 | 17.000 | 3.3882 | km |
| CL_TOP_HEIGHT_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_OPT_DEPTH | 130352 | 67.477 | 100.00 | 0.0000 | 101.00 | 41.752 | km |
| CL_OPT_DEPTH_ERR | 0 | --- | --- | --- | --- | --- | --- |
| CL_TYPE_FLAGS | 165880 | 11100000 | 11100000 | 11100000 | 11100000 | 0.0000 | |
| CLOUD_FLAGS | 165880 | 11001101 | 11000100 | 11000000 | 11100000 | 3601.4 | |
| AERO_ABSO_IND | 165880 | 0.18464 | 0.0000 | 0.0000 | 4.8884 | 0.45092 | |
| AERO_IND_DIAG | 165880 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| AERO_FLAGS | 165880 | 01010011 | 00000000 | 00000000 | 11000000 | 24355. | |

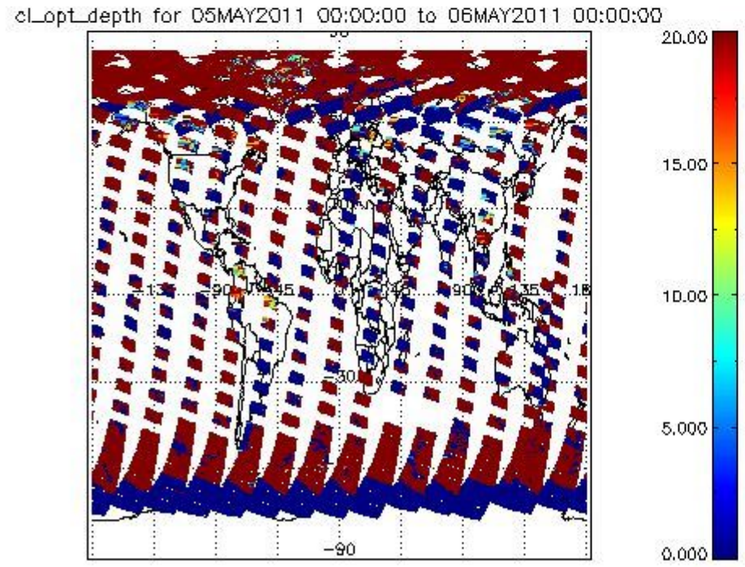
**Time and geolocation plots:**

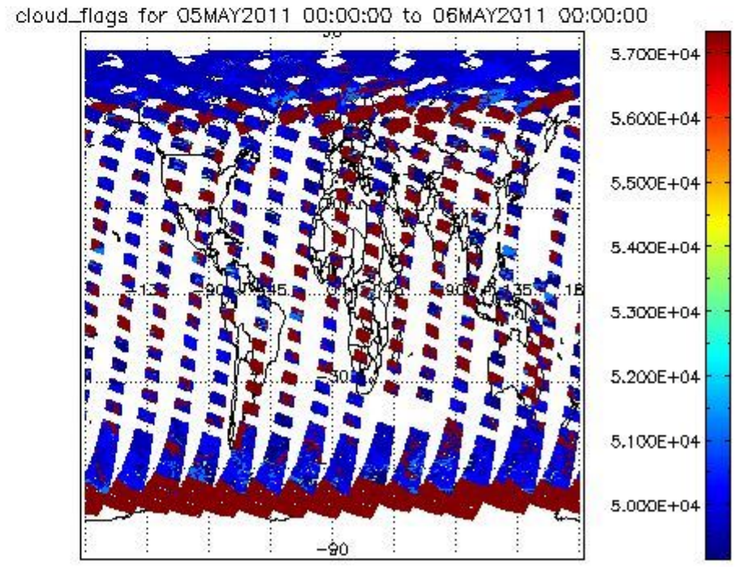
Plots are available for the following parameters:

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




### 2.2.2 Nadir

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

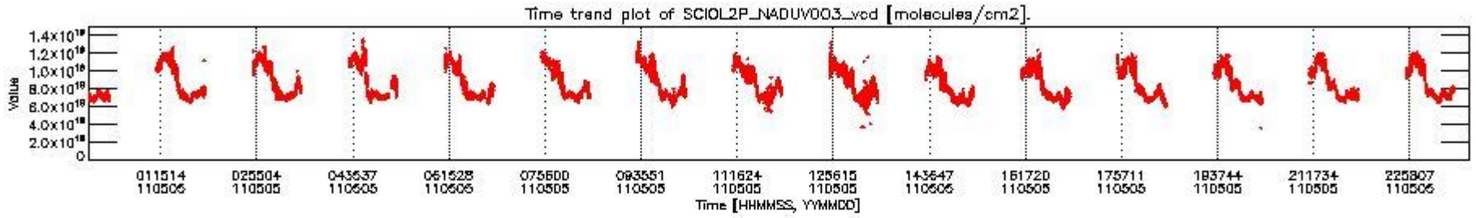
The following data items are currently included into this section:

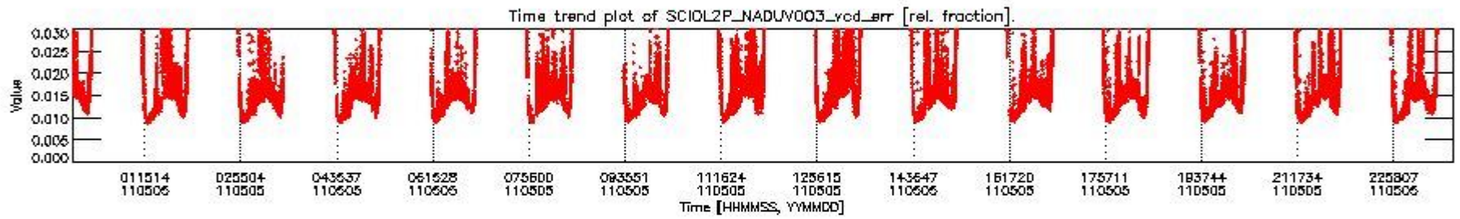
| Number | Data item ID |
|---|---|
| 0 | SCIOL2P_NADUV0O3_vcd |
| 1 | SCIOL2P_NADUV0O3_vcd_err |
| 2 | SCIOL2P_NADUV0O3_amf_gr |

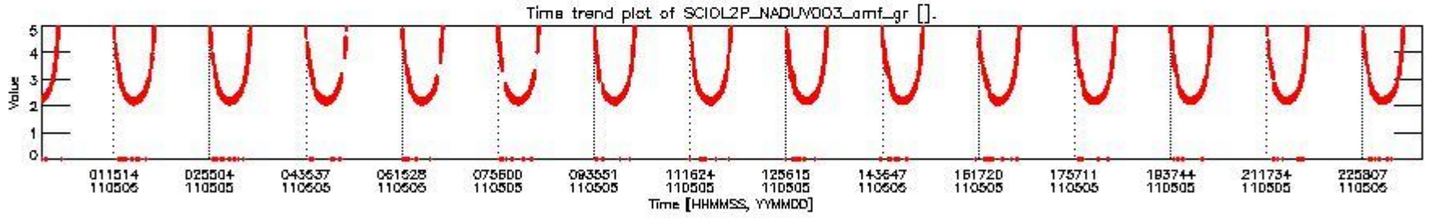
| | |
|---|---|
| 3 | SCIOL2P_NADUV0O3_amf_cl |
| 4 | SCIOL2P_NADUV1NO2_vcd |
| 5 | SCIOL2P_NADUV1NO2_vcd_err |
| 6 | SCIOL2P_NADUV1NO2_amf_gr |
| 7 | SCIOL2P_NADUV1NO2_amf_cl |
| 8 | SCIOL2P_NADUV3BRO_vcd |
| 9 | SCIOL2P_NADUV3BRO_vcd_err |
| 10 | SCIOL2P_NADUV3BRO_amf_gr |
| 11 | SCIOL2P_NADUV3BRO_amf_cl |
| 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 |

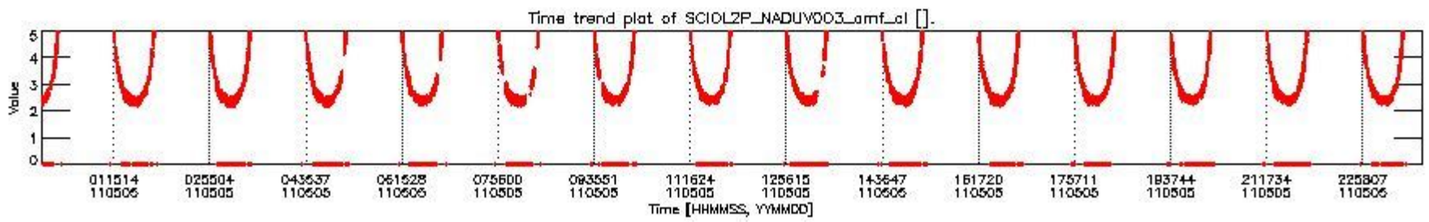
Data is presented both in time trend plots and world map plots, in order to show variations with time and geolocation. The vertical dotted lines in the time trend plots indicate orbits. The orbit times on the X-axis are estimated sensing_start time as suggested by the product sensing_start time in the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

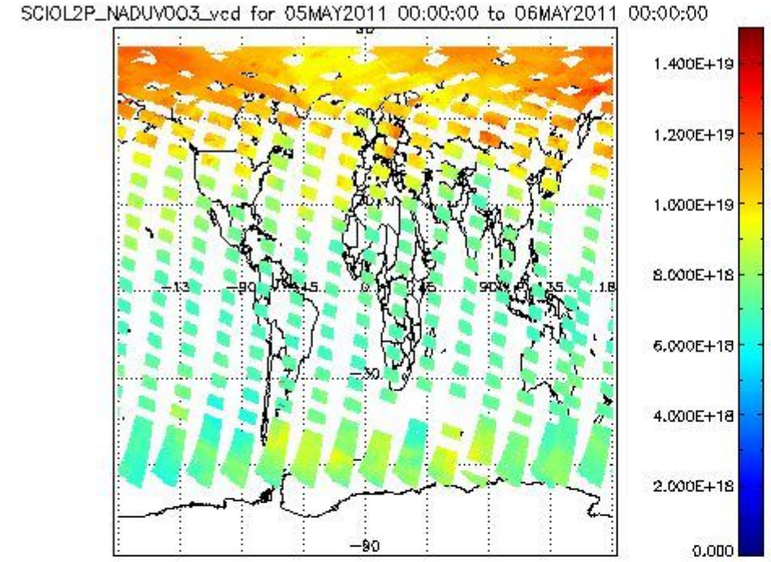
#### 2.2.2.1 O3 (UV0)

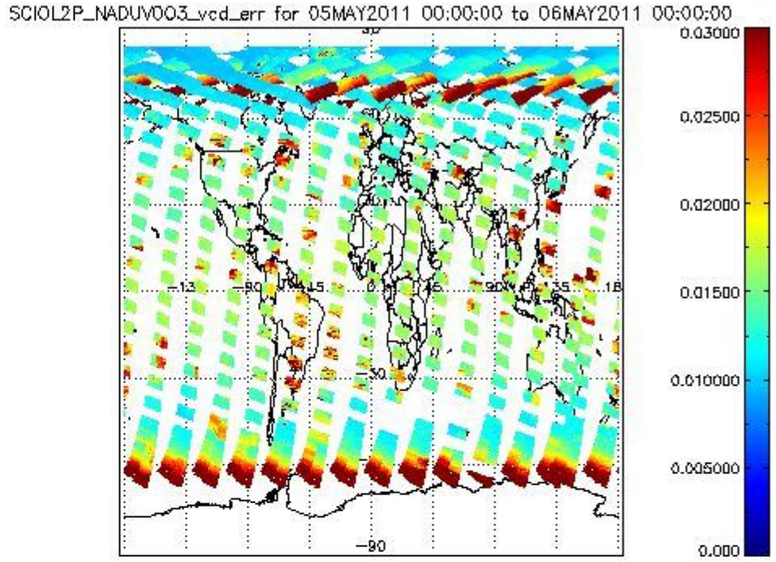

Time trend plot of SCIOL2P_NADUV003_vcd [molecules/cm2].
Value
1.4x10^18
1.2x10^18
1.0x10^18
8.0x10^17
6.0x10^17
4.0x10^17
2.0x10^17
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

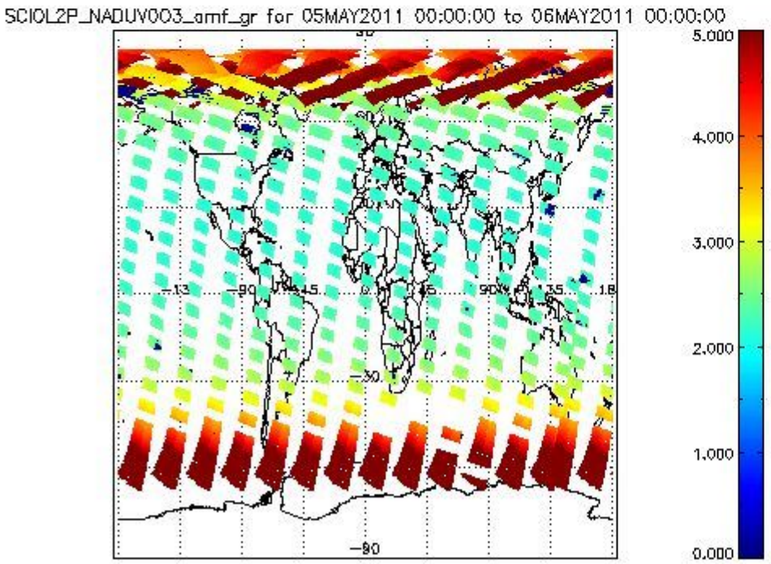

Time trend plot of SCIOL2P_NADUV003_vcd_err [rel. fraction].
Value
0.030
0.025
0.020
0.015
0.010
0.005
0.000
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

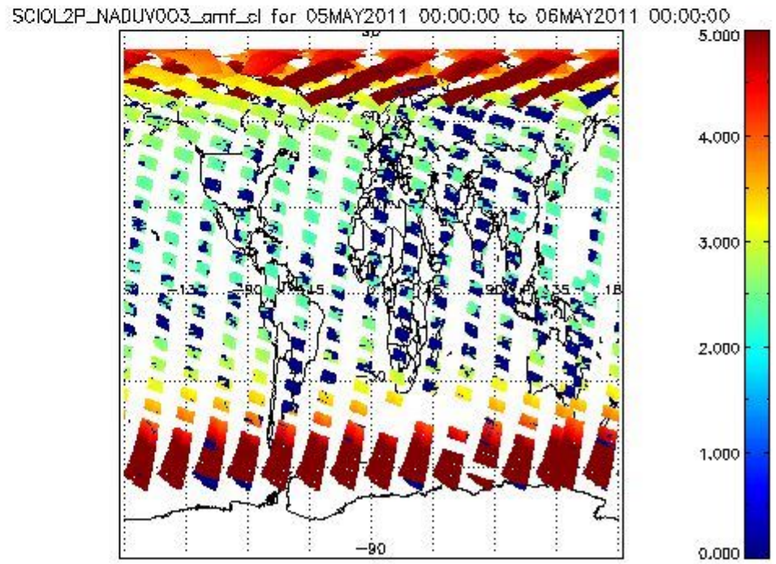

Time trend plot of SCIOL2P_NADUV003_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV003_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

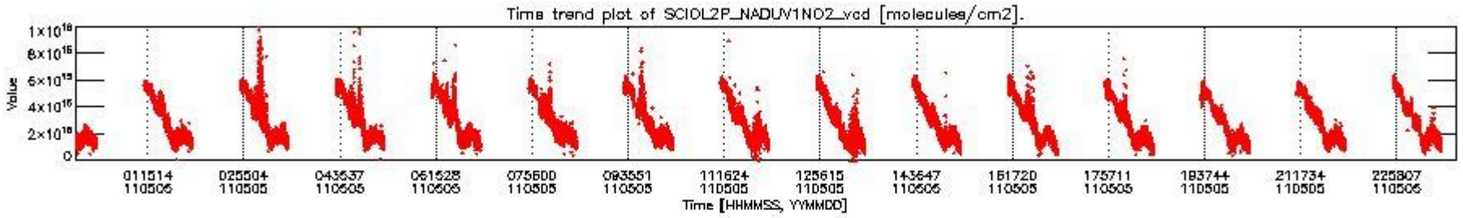

SCIOL2P_NADUV003_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.400E+19
1.200E+19
1.000E+19
8.000E+18
6.000E+18
4.000E+18
2.000E+18
0.000
−90

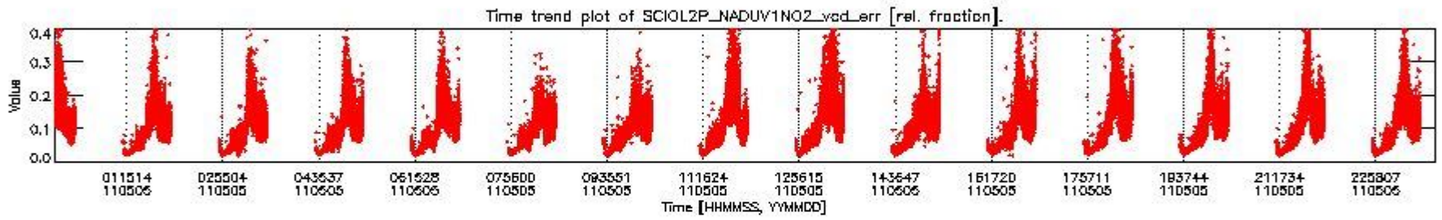

SCIOL2P_NADUV003_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
0.03000
0.02500
0.02000
0.01500
0.010000
0.005000
0.000
−90

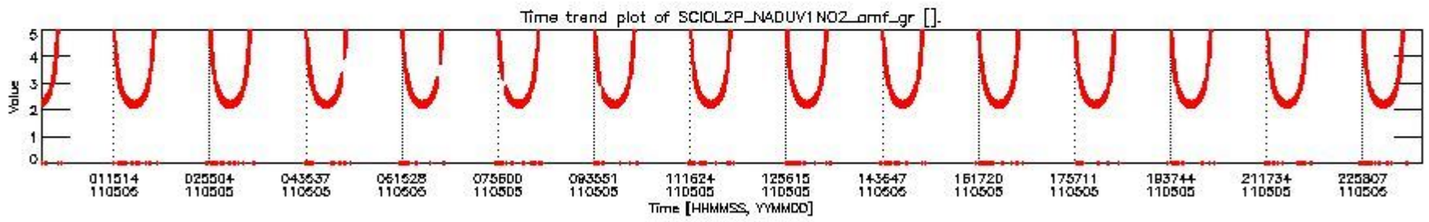

SCIOL2P_NADUV003_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
−90

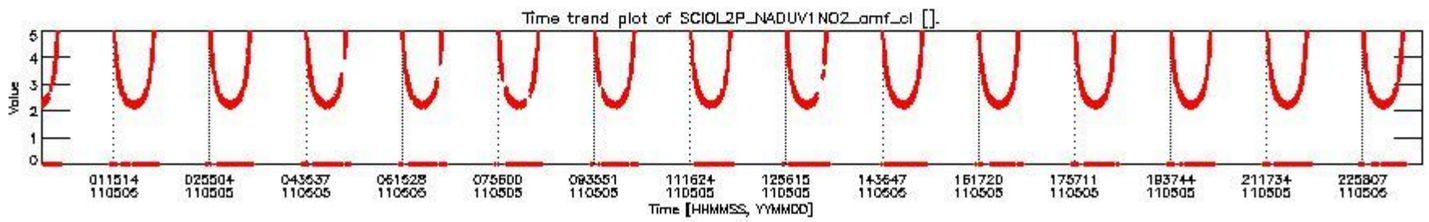

SCIOL2P_NADUV003_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
−90

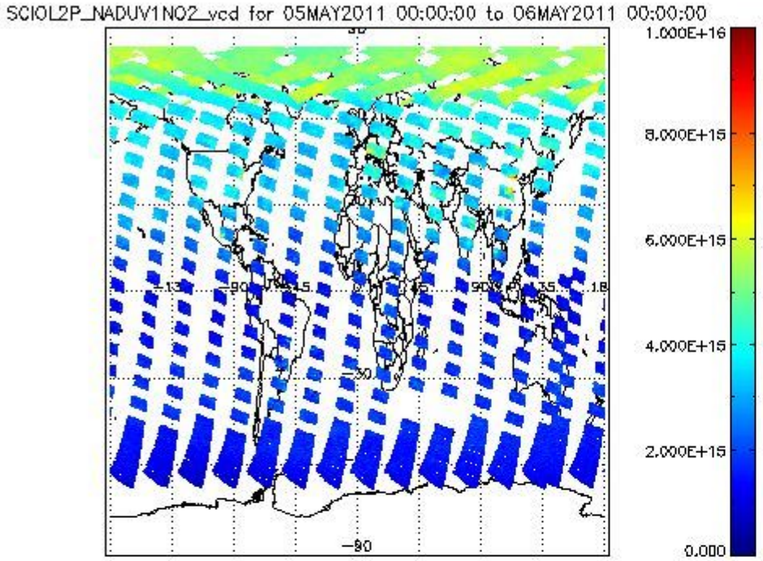
### 2.2.2.2 NO2 (UV1)

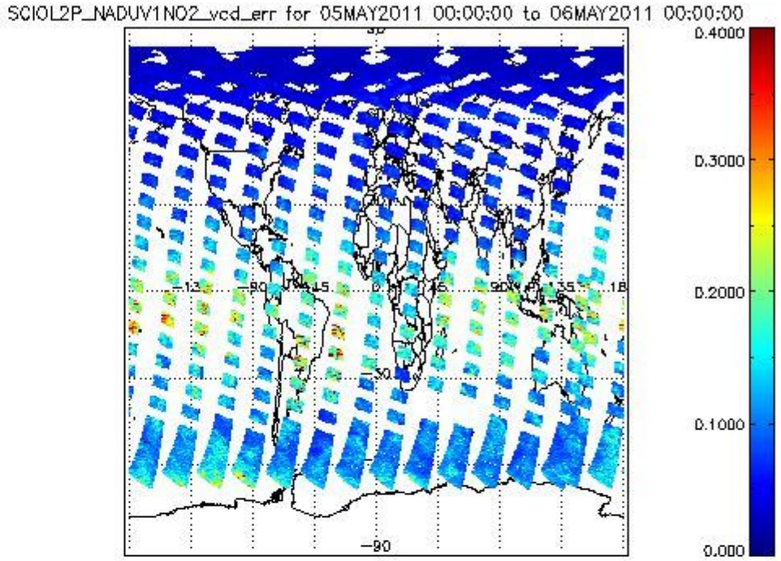

Time trend plot of SCIOL2P_NADUV1NO2_vcd [molecules/cm2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

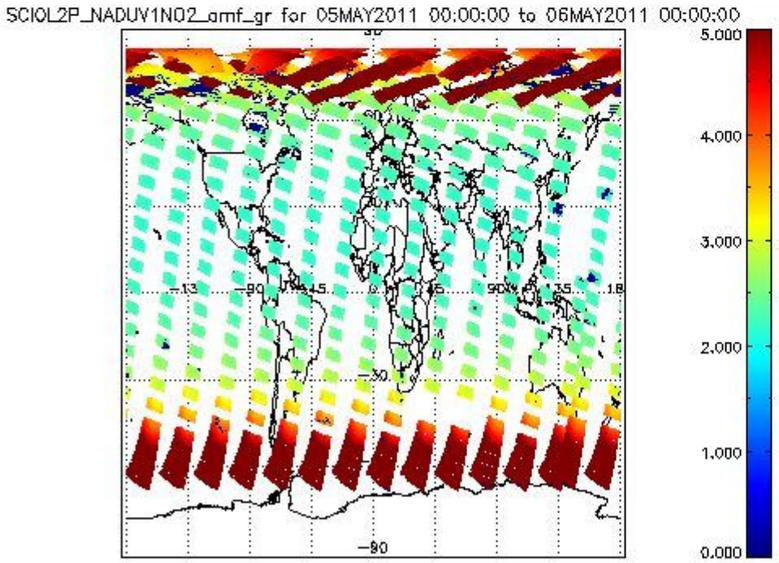

Time trend plot of SCIOL2P_NADUV1NO2_vcd_err [rel. fraction].
Value
0.4
0.3
0.2
0.1
0.0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

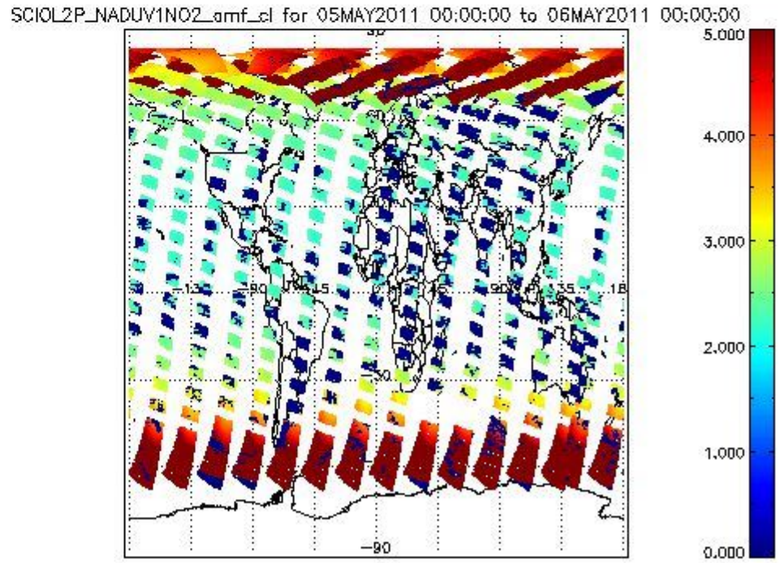

Time trend plot of SCIOL2P_NADUV1NO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV1NO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

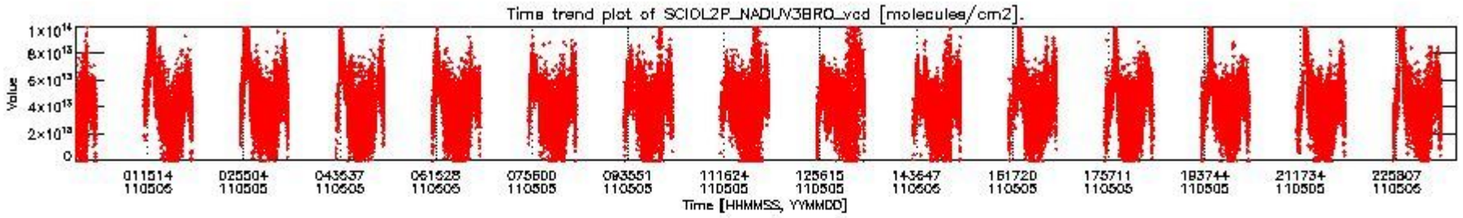

SCIOL2P_NADUV1NO2_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.000E+16
8.000E+15
6.000E+15
4.000E+15
2.000E+15
0.000
-90

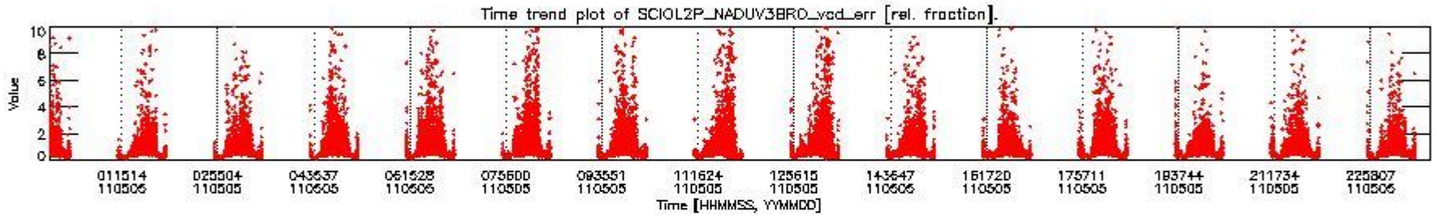

SCIOL2P_NADUV1NO2_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
0.4000
0.3000
0.2000
0.1000
0.000
-90

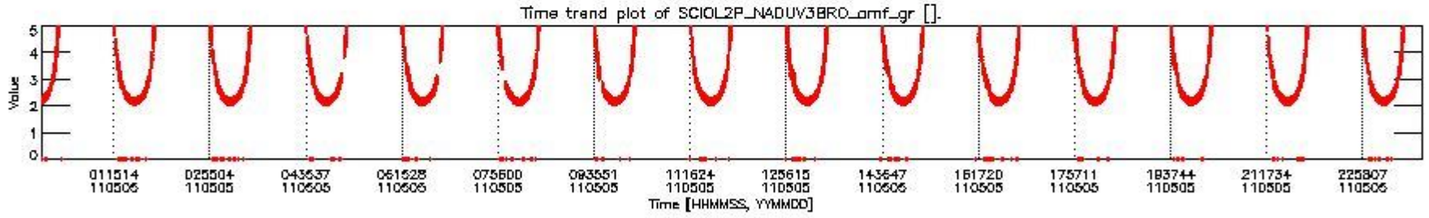

SCIOL2P_NADUV1NO2_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

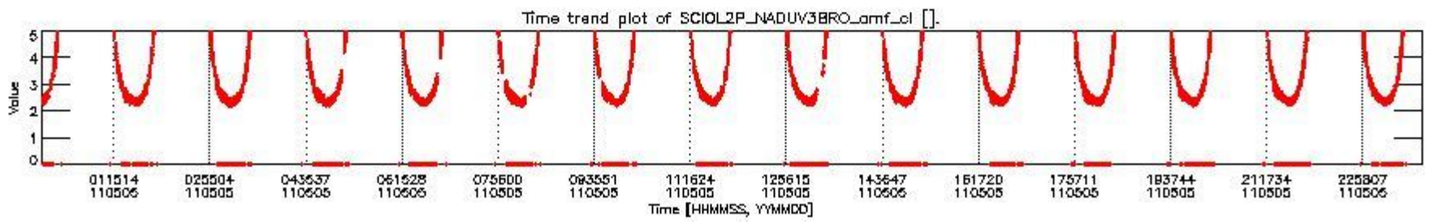

SCIOL2P_NADUV1NO2_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

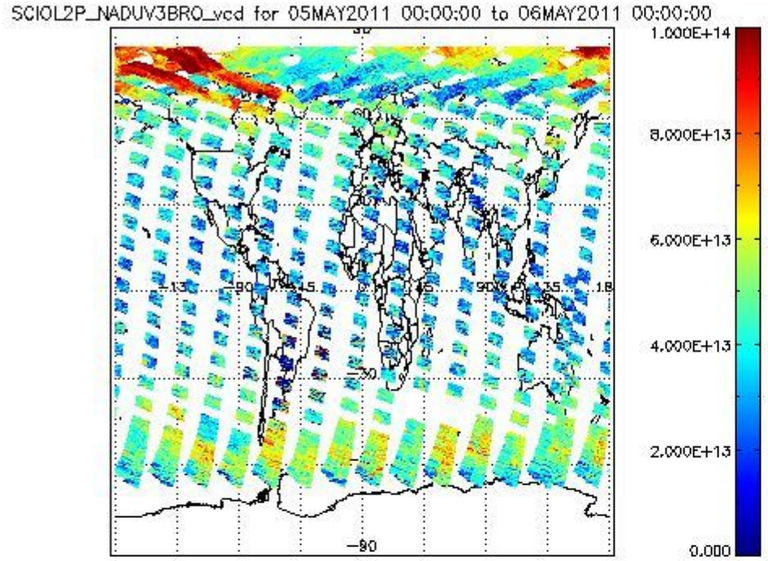
### 2.2.2.3 BrO (UV3)

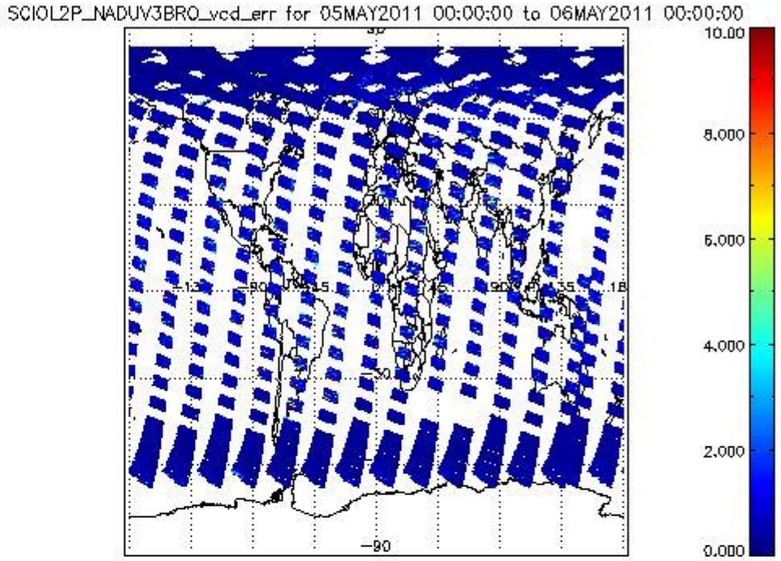

Time trend plot of SCIOL2P_NADUV3BRO_vcd [molecules/cm2].
Value
Time [HHMMSS, YYMMDD]

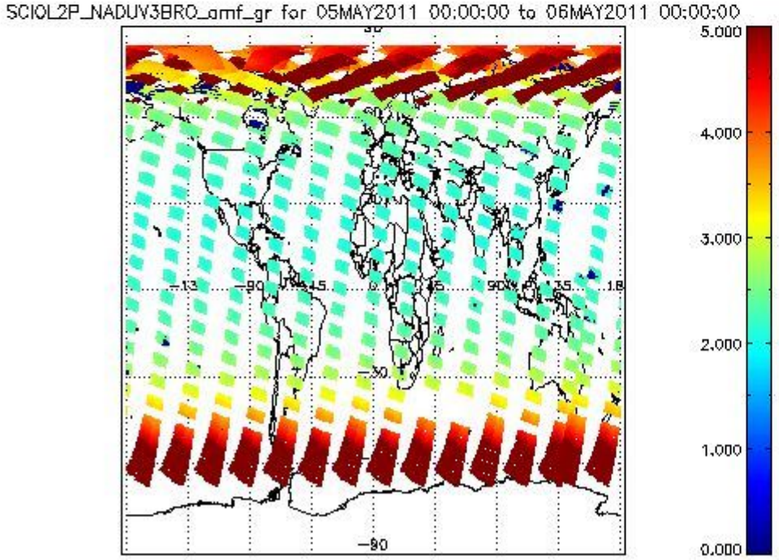

Time trend plot of SCIOL2P_NADUV3BRO_vcd_err [rel. fraction].
Value
Time [HHMMSS, YYMMDD]

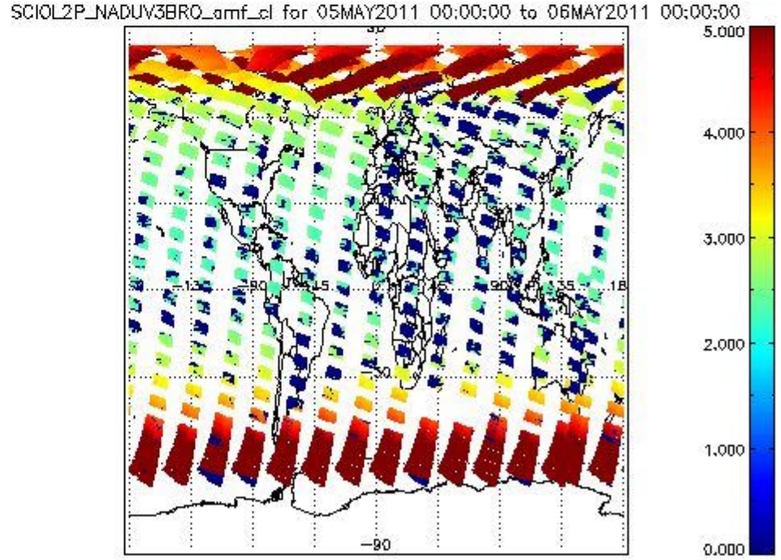

Time trend plot of SCIOL2P_NADUV3BRO_amf_gr [].
Value
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV3BRO_amf_cl [].
Value
Time [HHMMSS, YYMMDD]

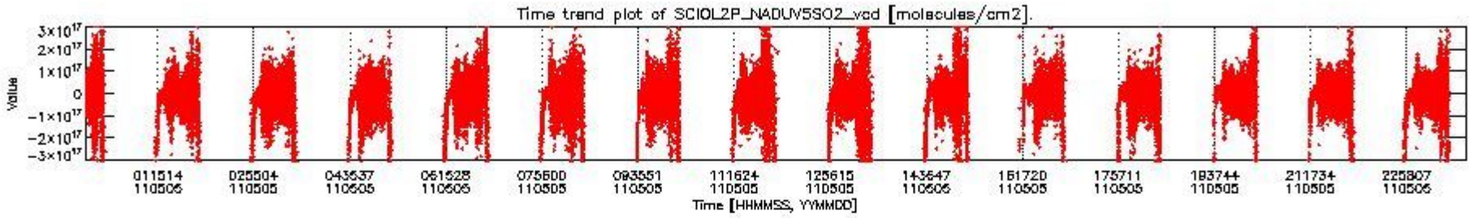

SCIOL2P_NADUV3BRO_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.000E+14
8.000E+13
6.000E+13
4.000E+13
2.000E+13
0.000
-90

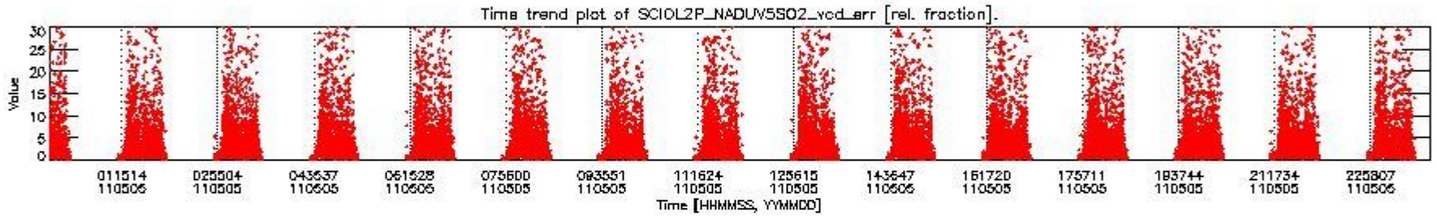

SCIOL2P_NADUV3BRO_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
10.00
8.000
6.000
4.000
2.000
0.000
-90

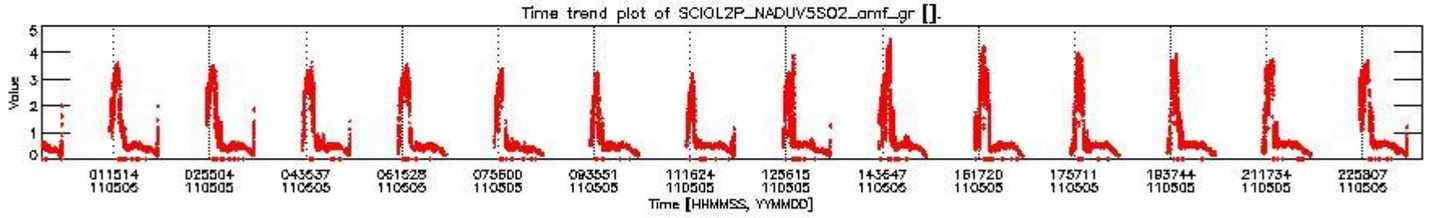

SCIOL2P_NADUV3BRO_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

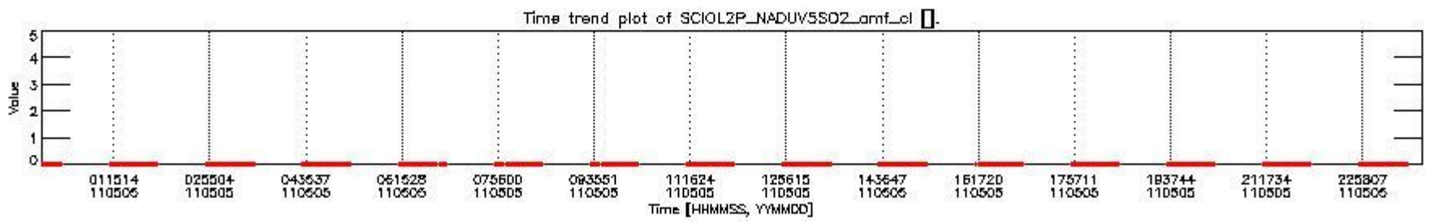

SCIOL2P_NADUV3BRO_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

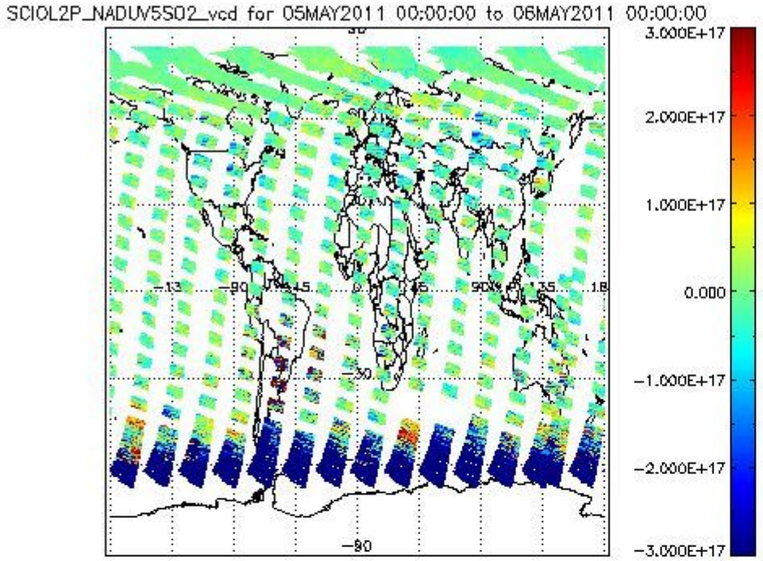
#### 2.2.2.4 SO2 (UV5)

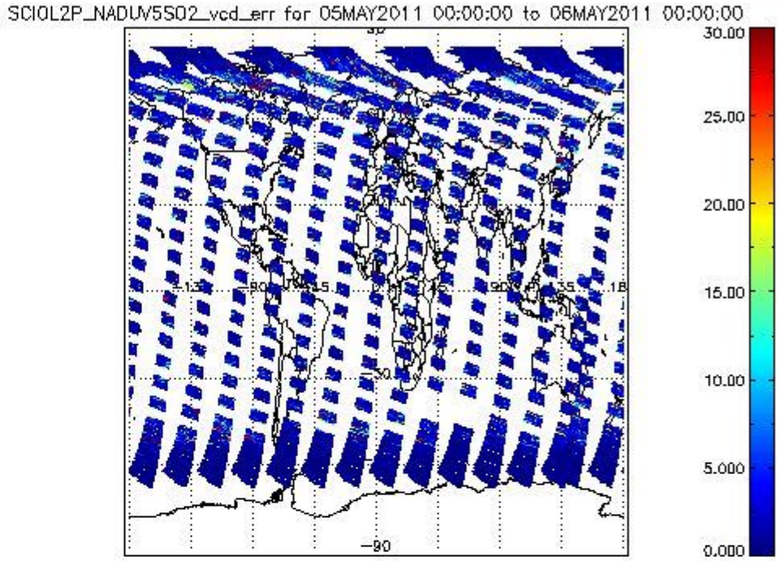

Time trend plot of SCIOL2P_NADUV5SO2_vcd [molecules/cm2].
Value
3x10^17
2x10^17
1x10^17
0
-1x10^17
-2x10^17
-3x10^17
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

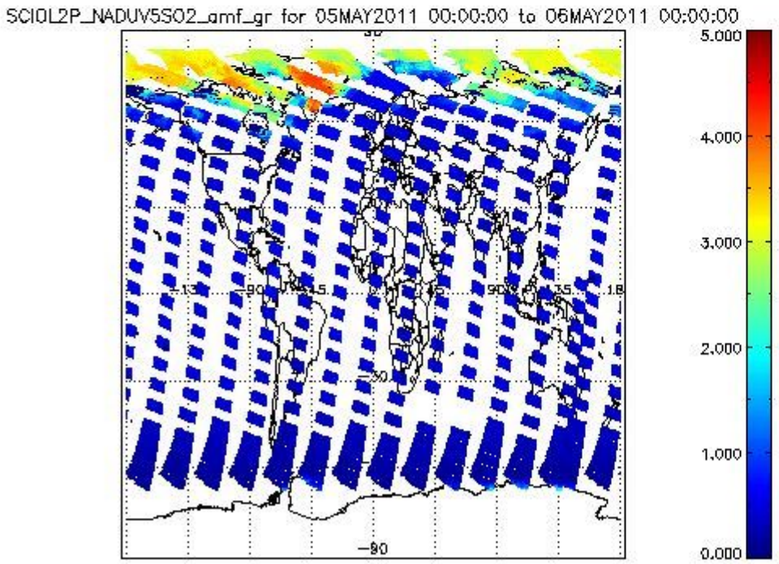

Time trend plot of SCIOL2P_NADUV5SO2_vcd_err [rel. fraction].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

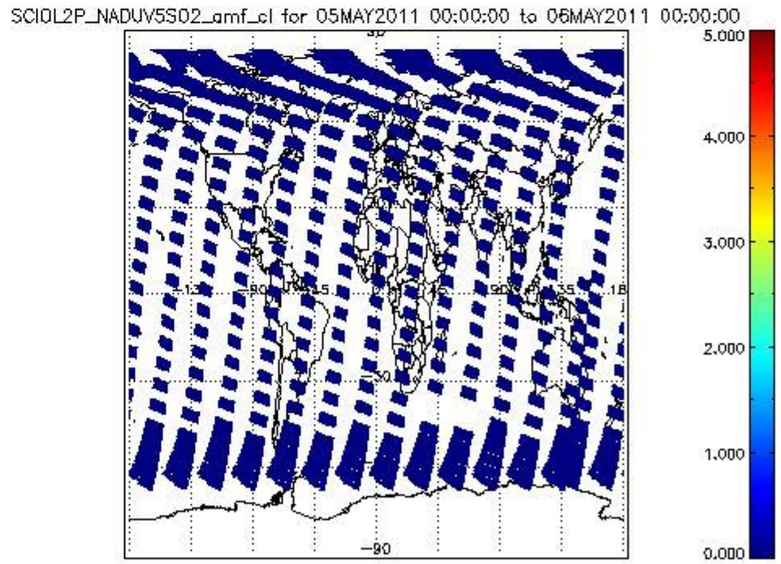

Time trend plot of SCIOL2P_NADUV5SO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV5SO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

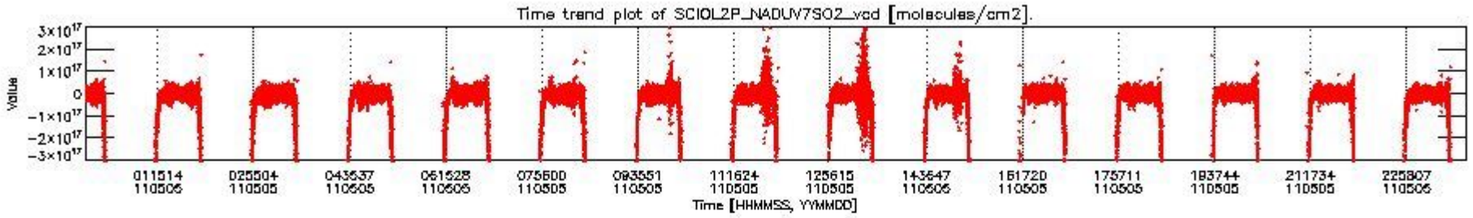

SCIOL2P_NADUV5SO2_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
3.000E+17
2.000E+17
1.000E+17
0.000
-1.000E+17
-2.000E+17
-3.000E+17
-90

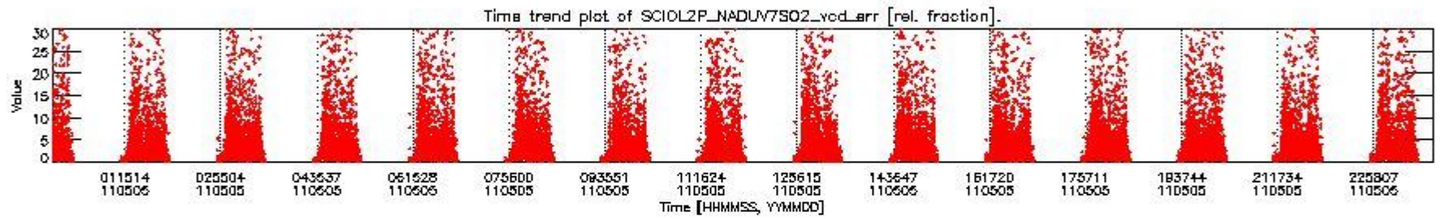

SCIOL2P_NADUV5SO2_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
30.00
25.00
20.00
15.00
10.00
5.000
0.000
-90

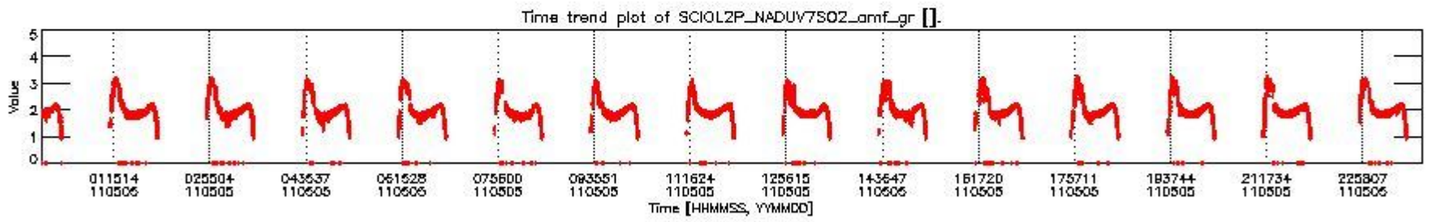

SCIOL2P_NADUV5SO2_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

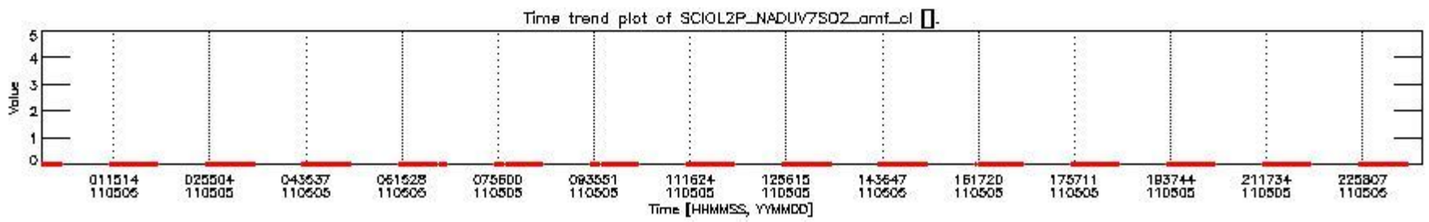

SCIOL2P_NADUV5SO2_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

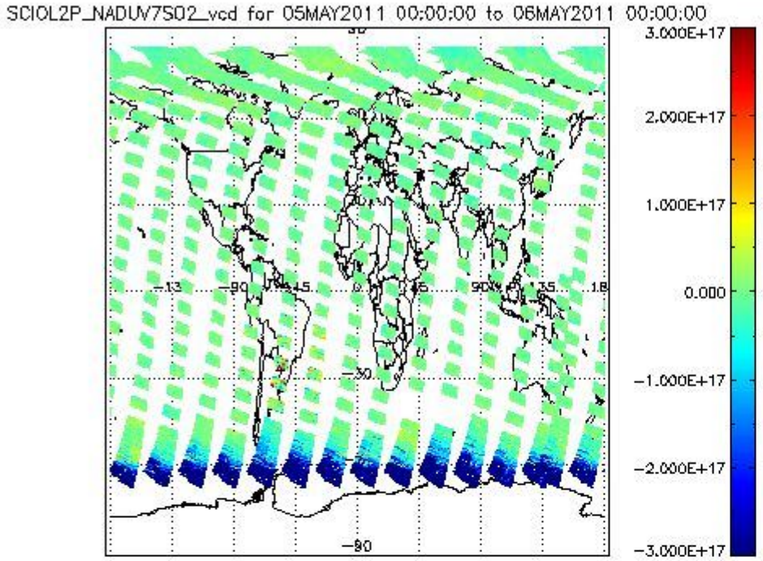
### 2.2.2.5 SO2 (UV7)

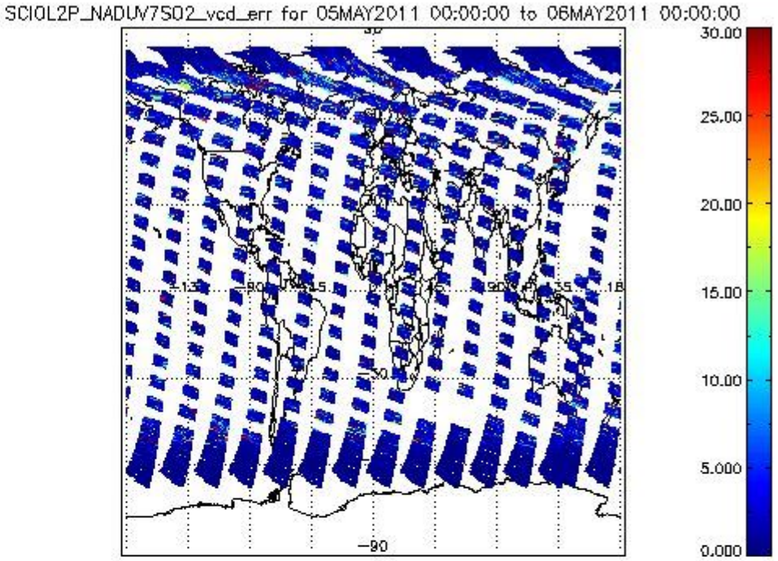

Time trend plot of SCIOL2P_NADUV7SO2_vcd [molecules/cm2].
Value
3x10^17
2x10^17
1x10^17
0
-1x10^17
-2x10^17
-3x10^17
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

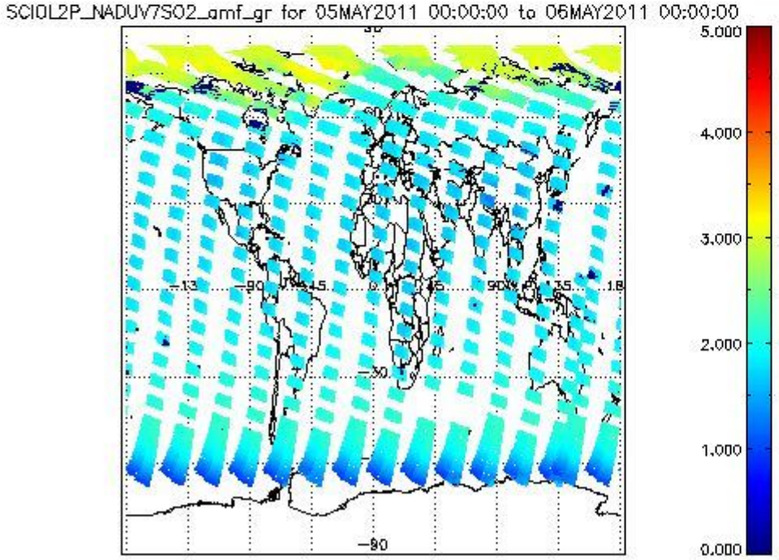

Time trend plot of SCIOL2P_NADUV7SO2_vcd_err [rel. fraction].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

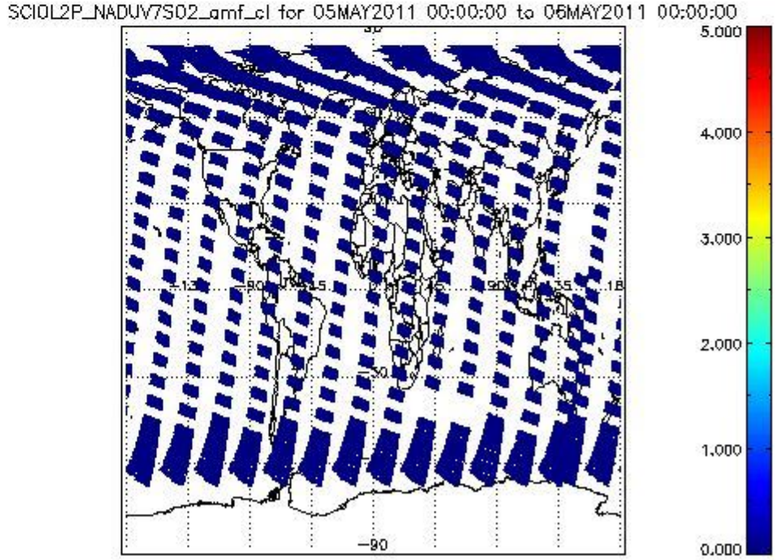

Time trend plot of SCIOL2P_NADUV7SO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV7SO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

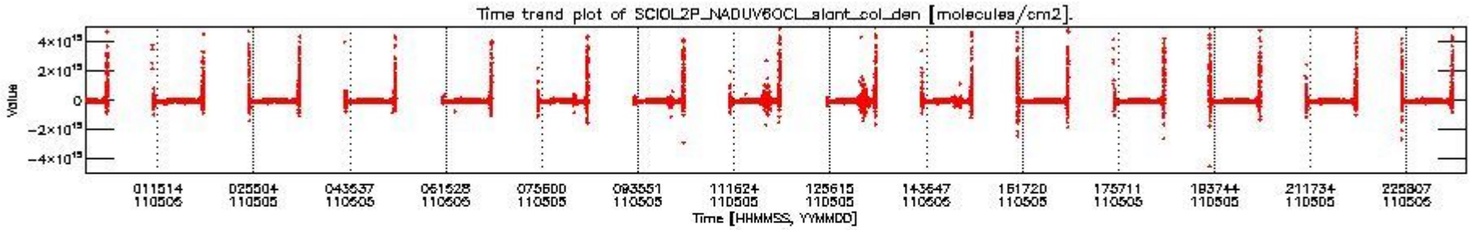


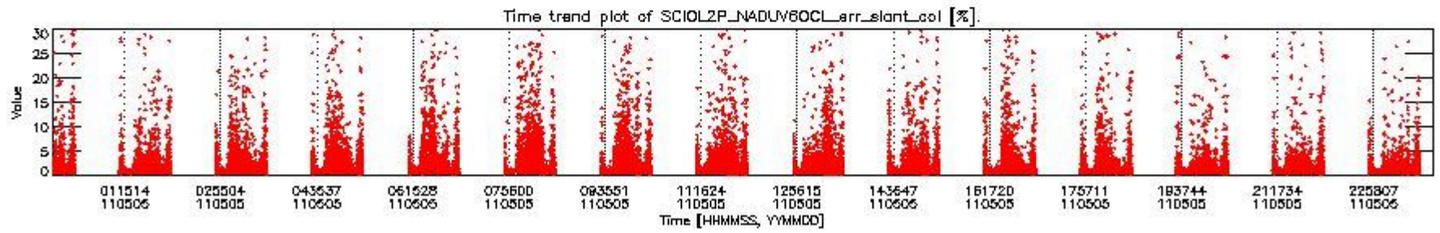



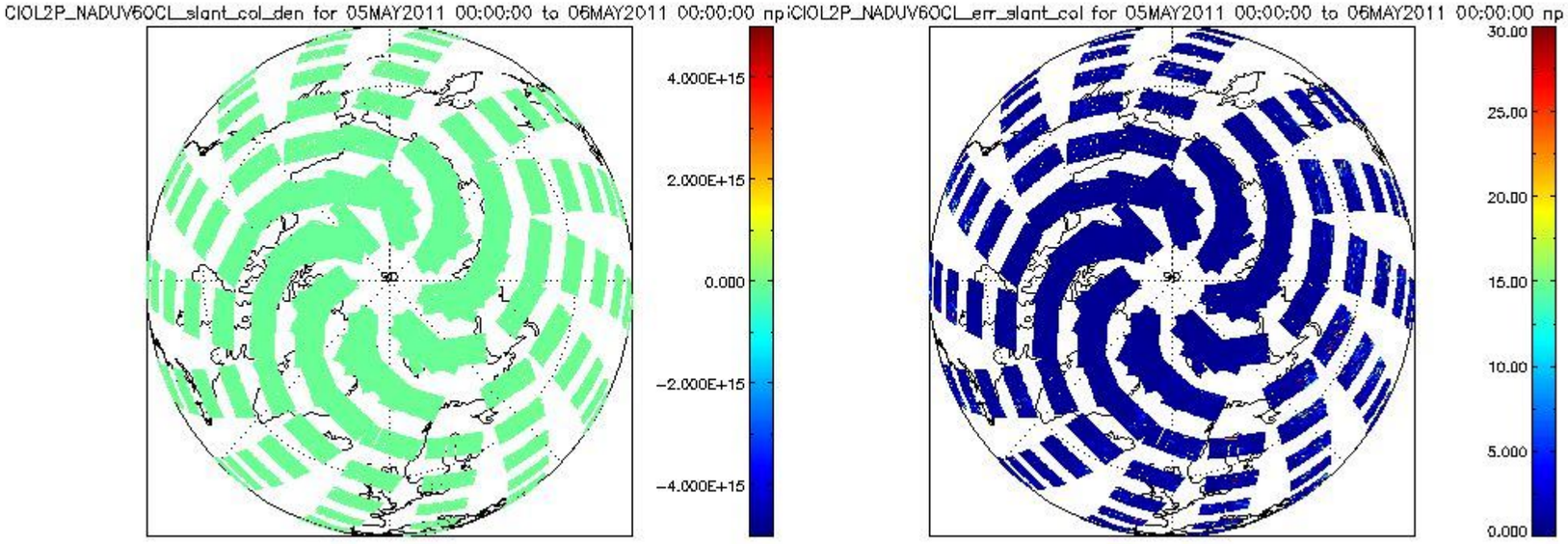



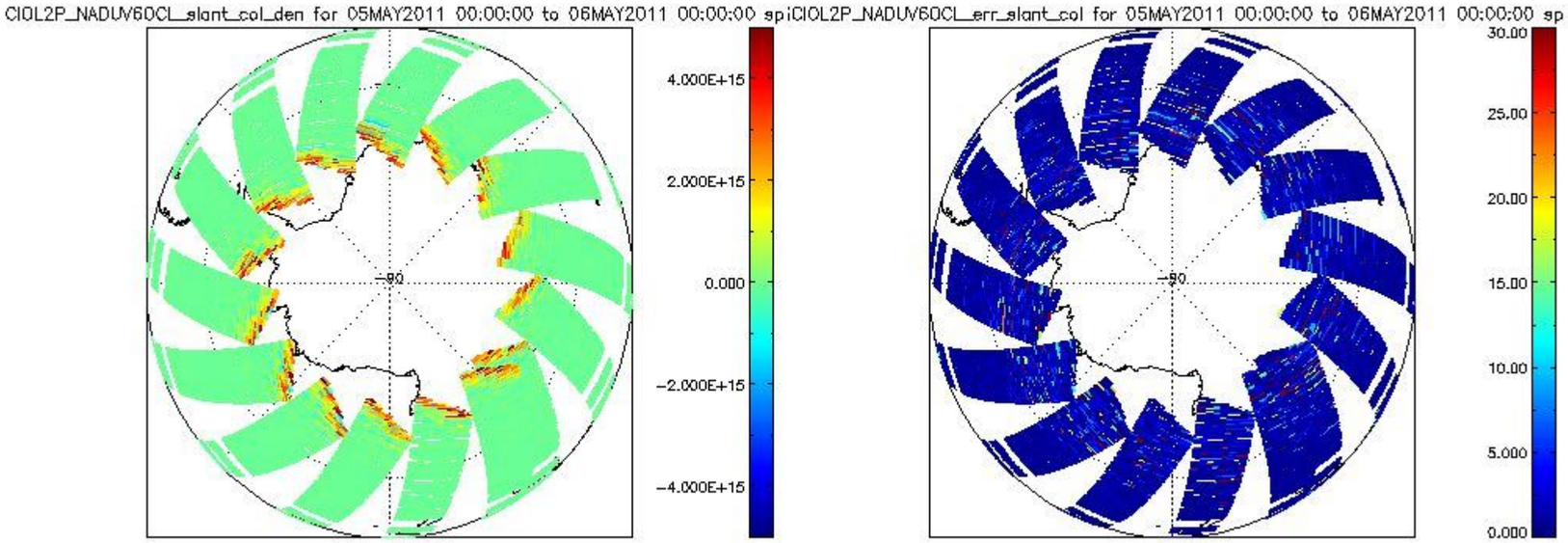




### 2.2.2.6 OClO (UV6)

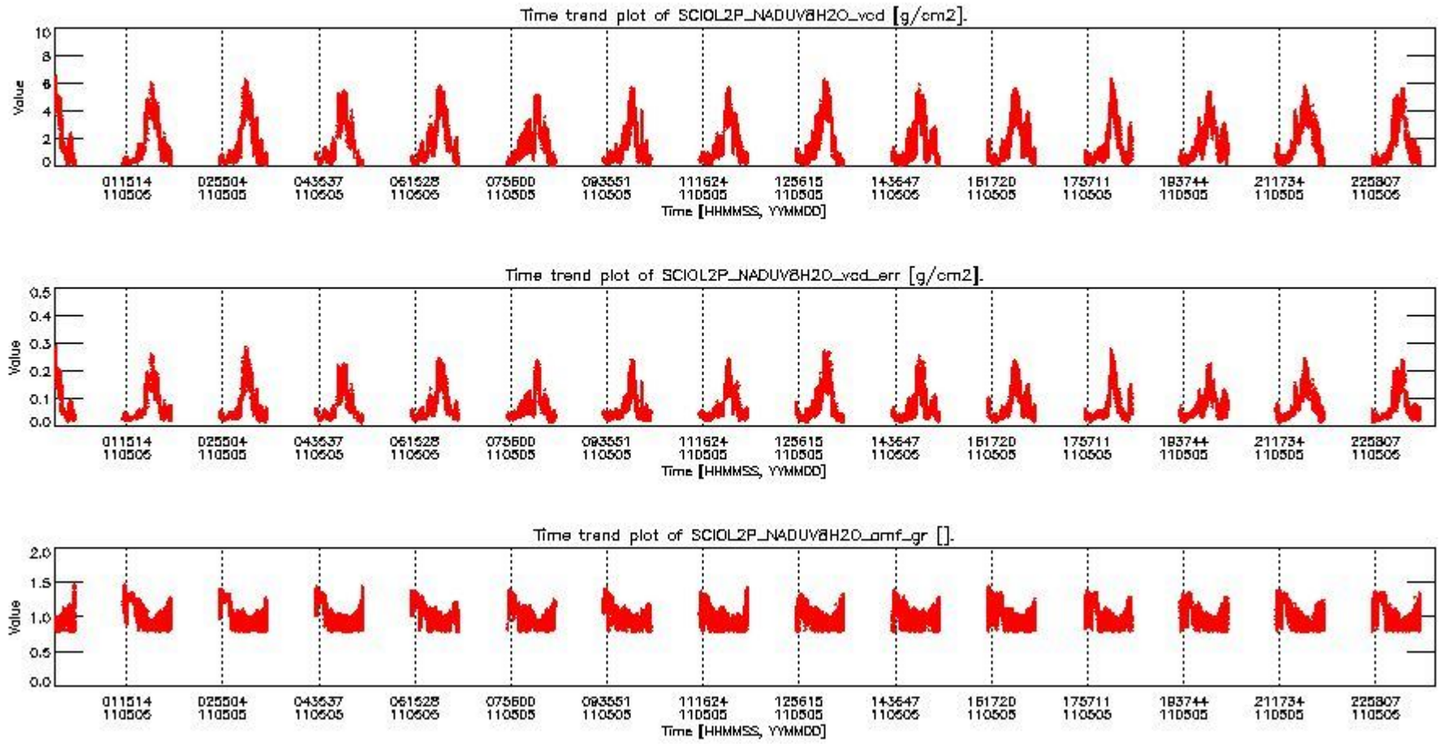

Time trend plot of SCIOL2P_NADUV6OCL_slant_col_den [molecules/cm2].
Value
4×10^15
2×10^15
0
−2×10^15
−4×10^15
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110506
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUV6OCL_err_slant_col [%].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075600 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110506
Time [HHMMSS, YYMMDD]

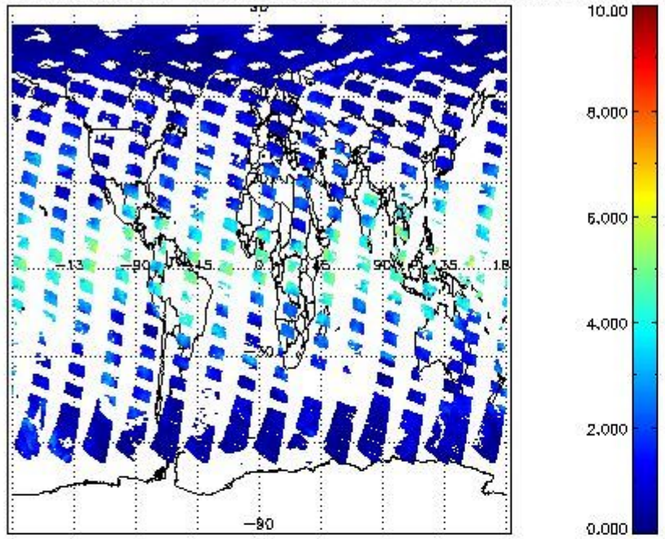

CIOL2P_NADUV6OCL_slant_col_den for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 np
4.000E+15
2.000E+15
0.000
−2.000E+15
−4.000E+15
90
CIOL2P_NADUV6OCL_err_slant_col for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 np
30.00
25.00
20.00
15.00
10.00
5.000
0.000
90


CIOL2P_NADUV6OCL_slant_col_den for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 spiCIOL2P_NADUV6OCL_err_slant_col for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 sp
4.000E+15
2.000E+15
0.000
-2.000E+15
-4.000E+15
30.00
25.00
20.00
15.00
10.00
5.000
0.000

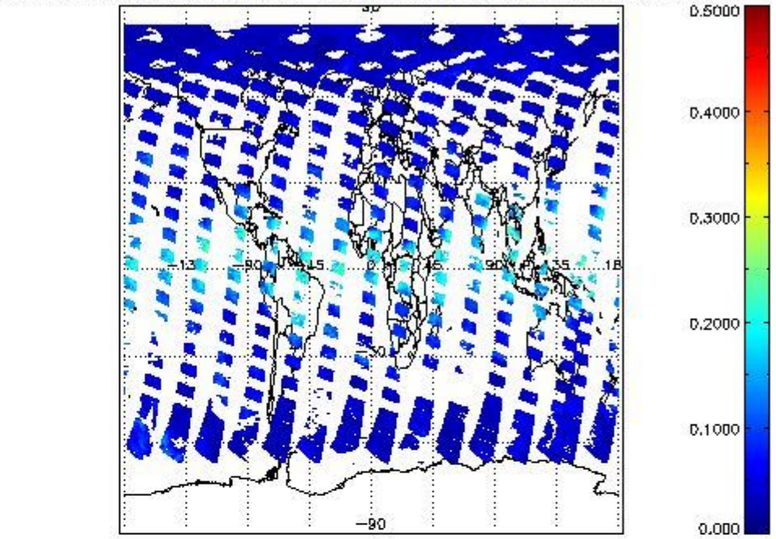
### 2.2.2.7 H2O (UV8)


Time trend plot of SCIOL2P_NADUV8H2O_vcd [g/cm2].
Time trend plot of SCIOL2P_NADUV8H2O_vcd_err [g/cm2].
Time trend plot of SCIOL2P_NADUV8H2O_amf_gr [].
Value
Time [HHMMSS, YYMMDD]

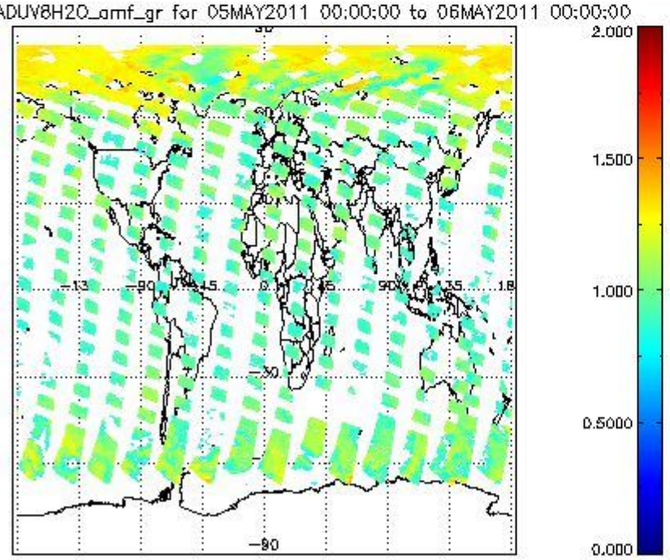
SCIOL2P_NADUV8H2O_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00



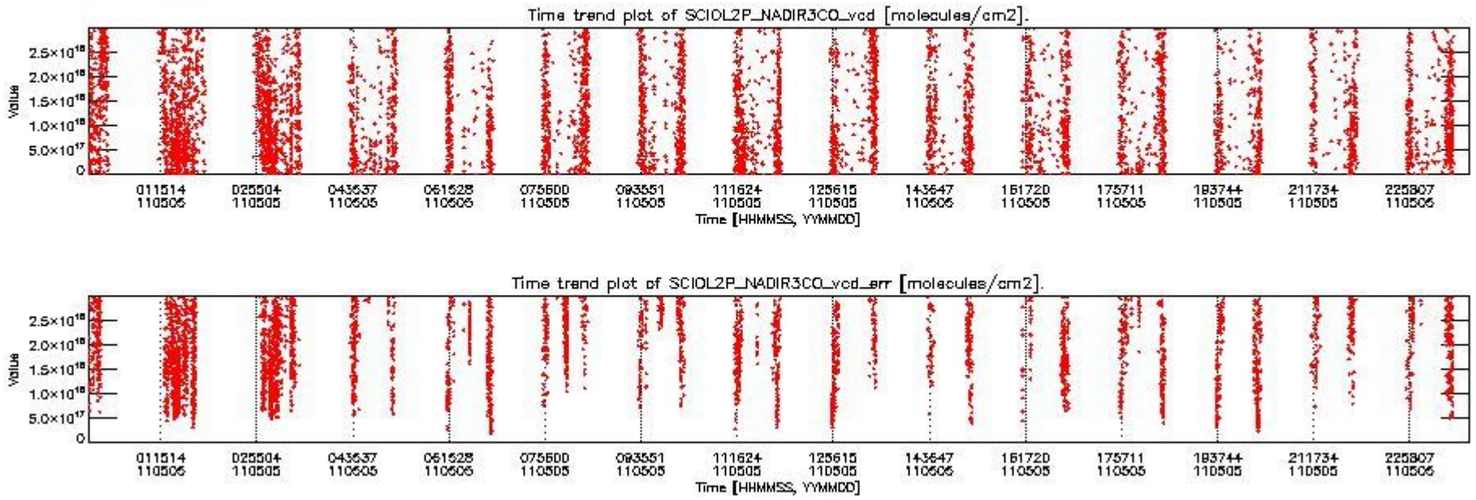

SCIOL2P_NADUV8H2O_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00

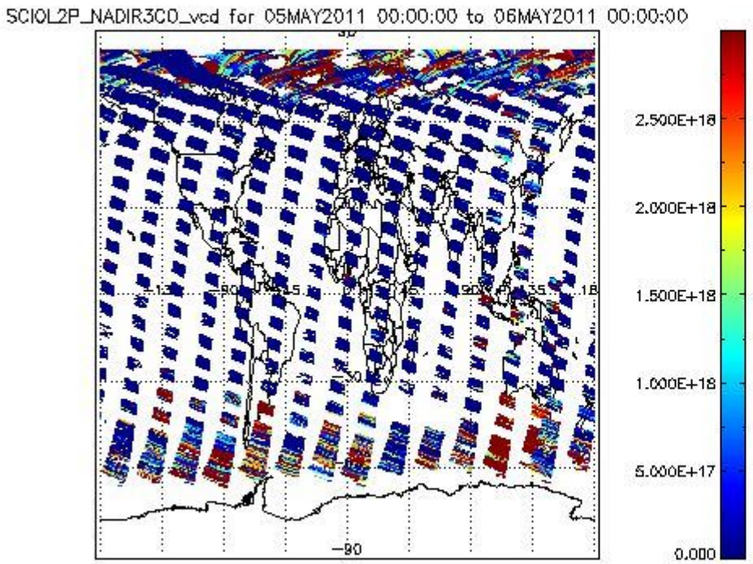


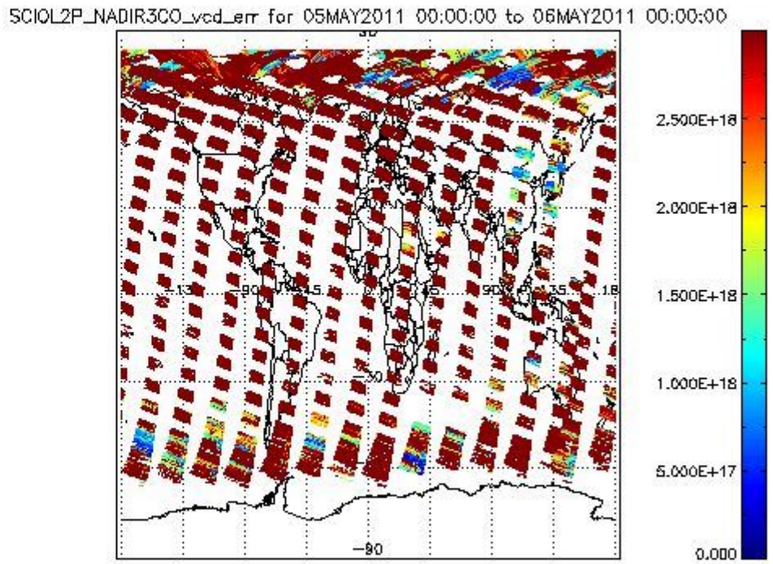

SCIOL2P_NADUV8H2O_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00




### 2.2.2.8 CO (IR3)




### 2.2.3 Limb

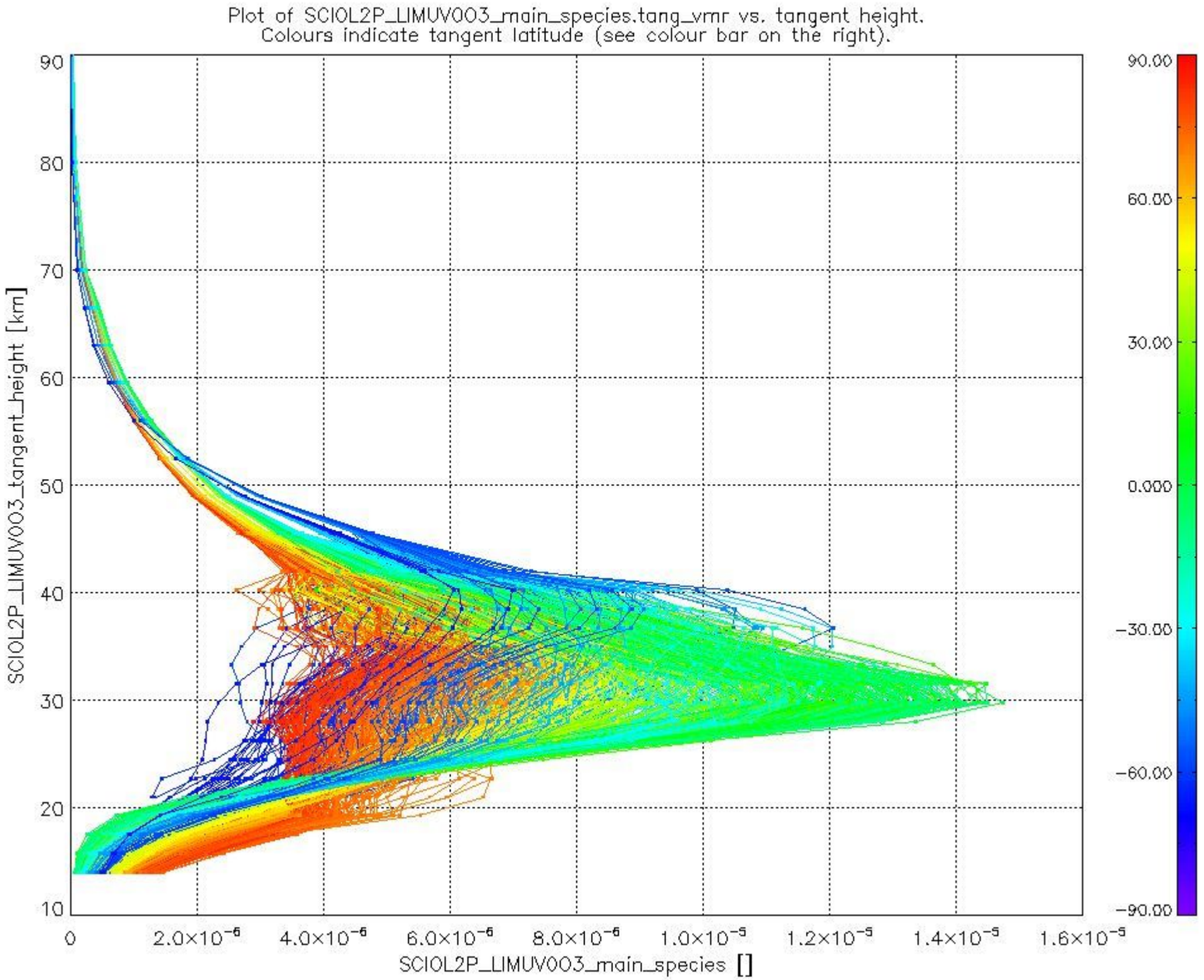
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

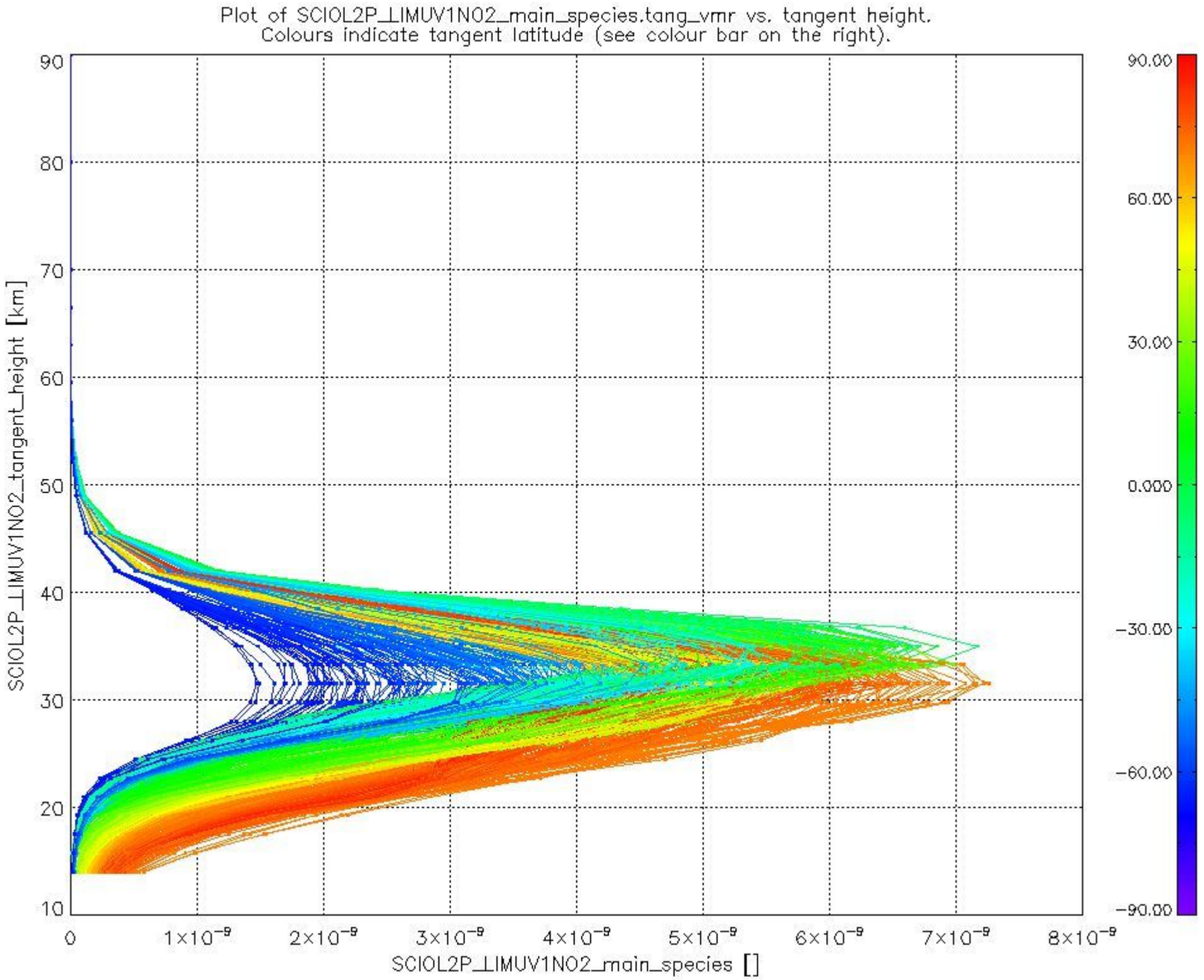
| Number | Data item ID |
|---|---|
| 0 | SCIOL2P_LIMUV0O3_main_species |
| 1 | SCIOL2P_LIMUV1NO2_main_species |
| 2 | SCIOL2P_LIMUV3BRO_main_species |

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

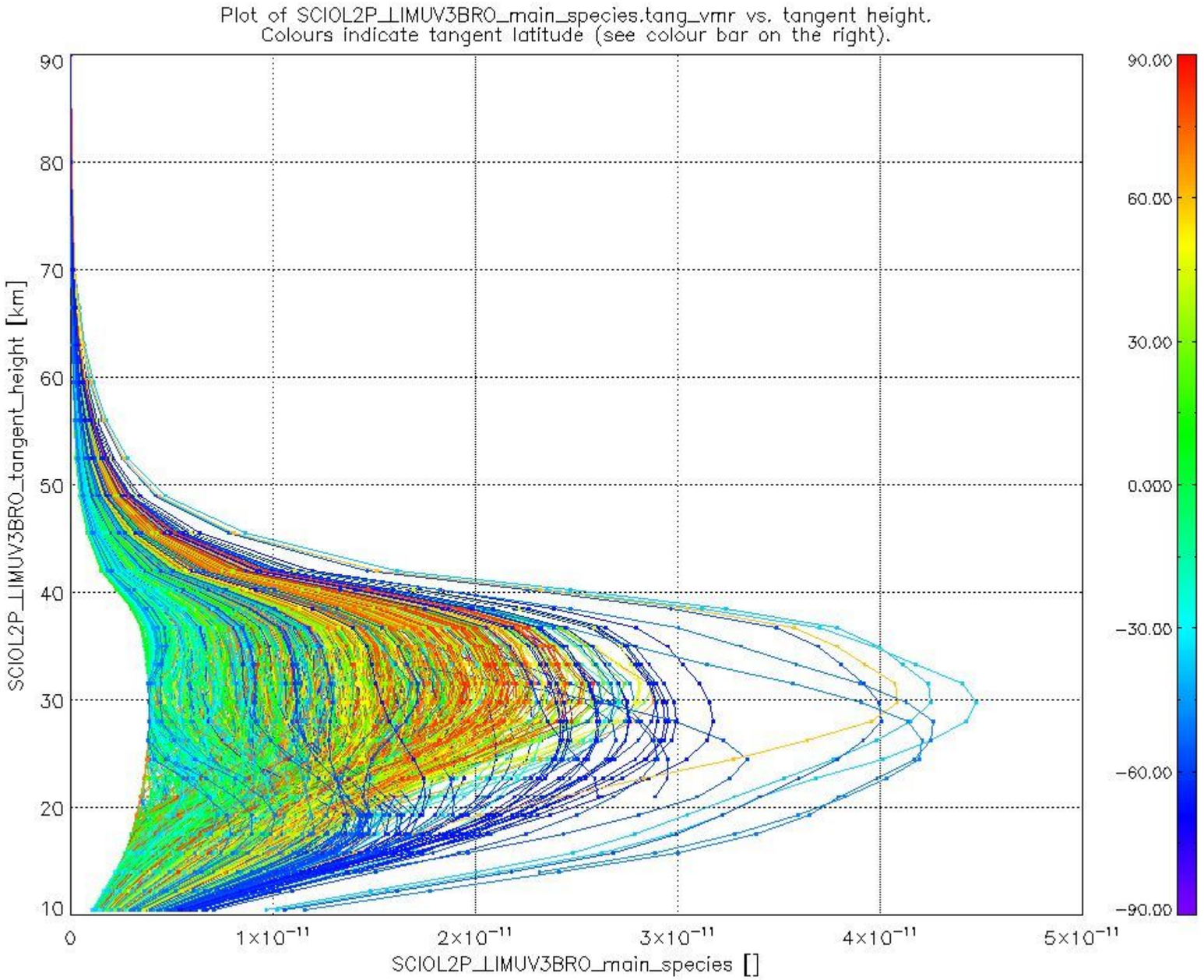
#### 2.2.3.1 O3 (UV0)




#### 2.2.3.2 NO2 (UV1)

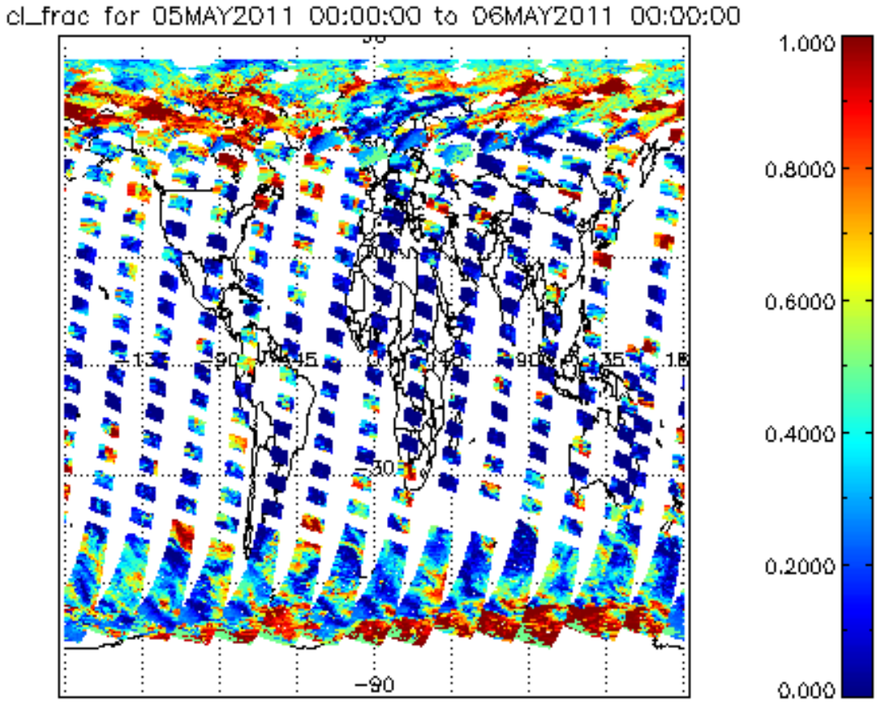

Plot of SCIOL2P_LIMUV1NO2_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).
SCIOL2P_LIMUV1NO2_tangent_height [km]
90
80
70
60
50
40
30
20
10
0
1×10⁻⁹
2×10⁻⁹
3×10⁻⁹
4×10⁻⁹
5×10⁻⁹
6×10⁻⁹
7×10⁻⁹
8×10⁻⁹
SCIOL2P_LIMUV1NO2_main_species []
90.00
60.00
30.00
0.000
−30.00
−60.00
−90.00

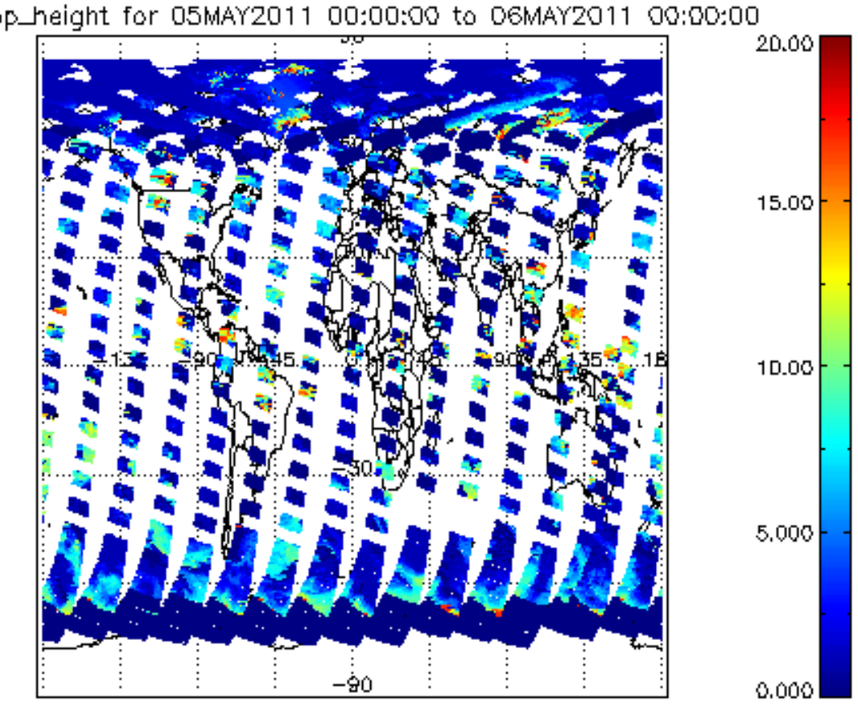
#### 2.2.3.3 BrO (UV3)

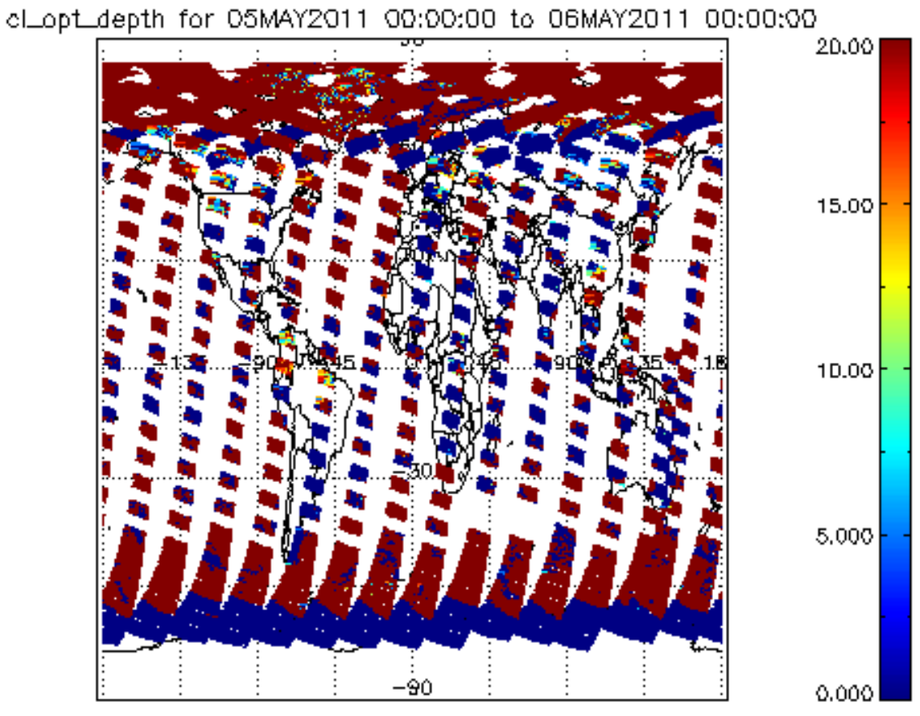


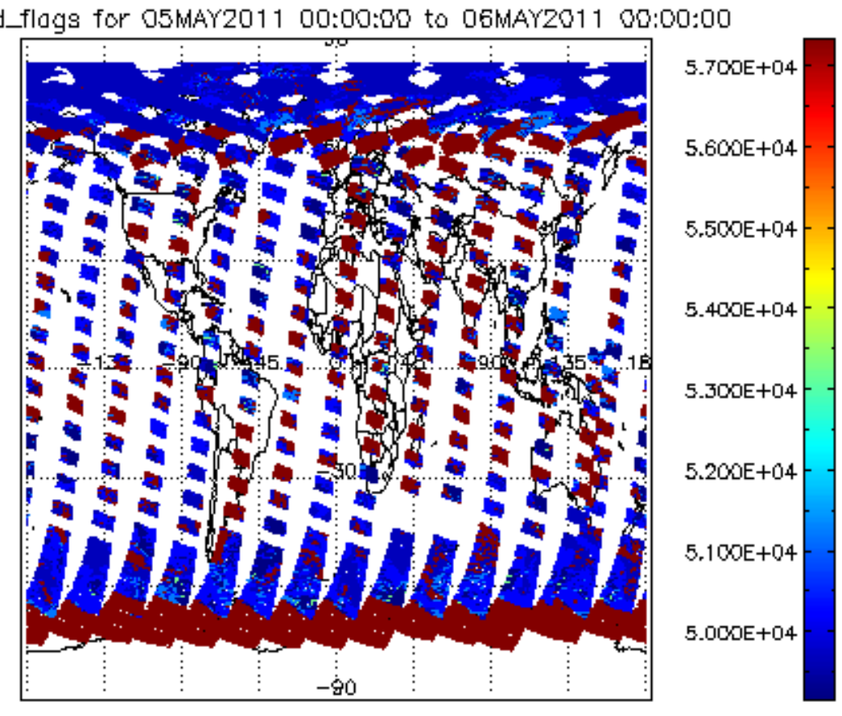

## 2.3 ADF monitoring

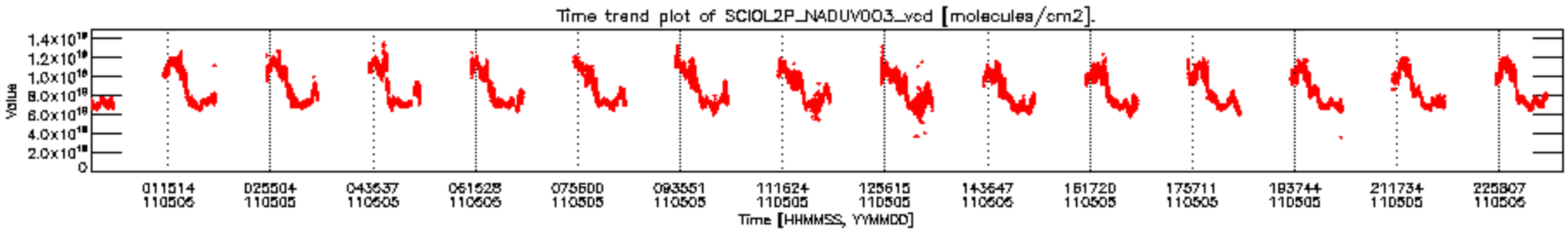
| Number | ADF |
|---|---|
| | **IN_ (INITIALISATION_FILE)** |
| 0 | SCI_IN__AXNPDE20090615_120000_20090615_000000_20991231_235959 |
| | **ECF (ECMWF_FILE)** |
| 1 | NOT USED |
| | **MF1 (M_FACTOR_FILE)** |
| 2 | SCI_MF1_AXVIEC20110426_111441_20110425_182810_20110523_182810 |

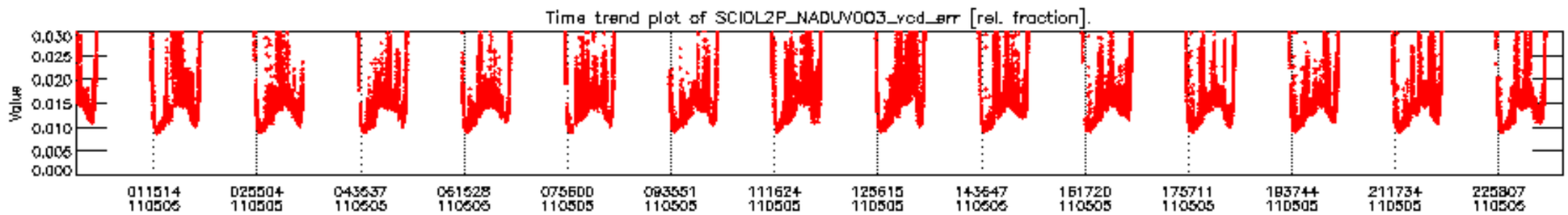

cl_frac for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.000
0.8000
0.6000
0.4000
0.2000
0.000
-90

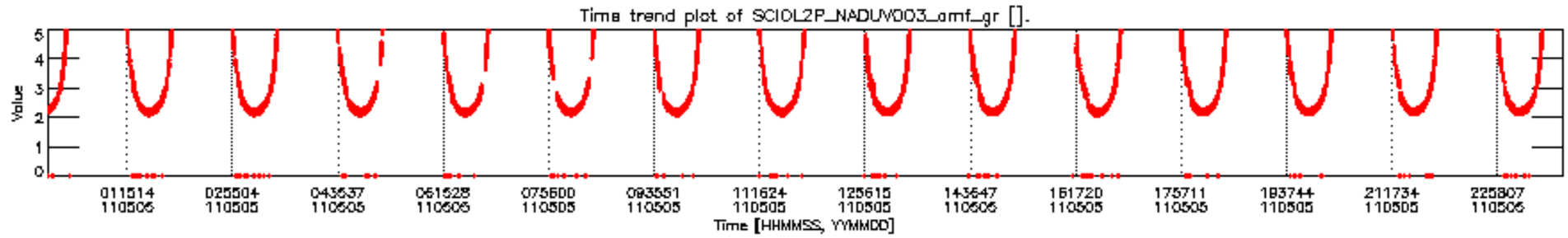

cl_top_height for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
20.00
15.00
10.00
5.000
0.000
-90

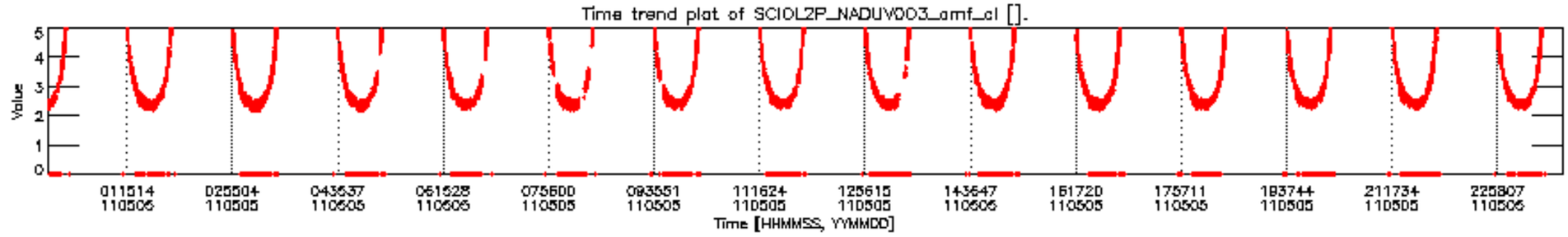

cl_opt_depth for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
20.00
15.00
10.00
5.000
0.000
-90

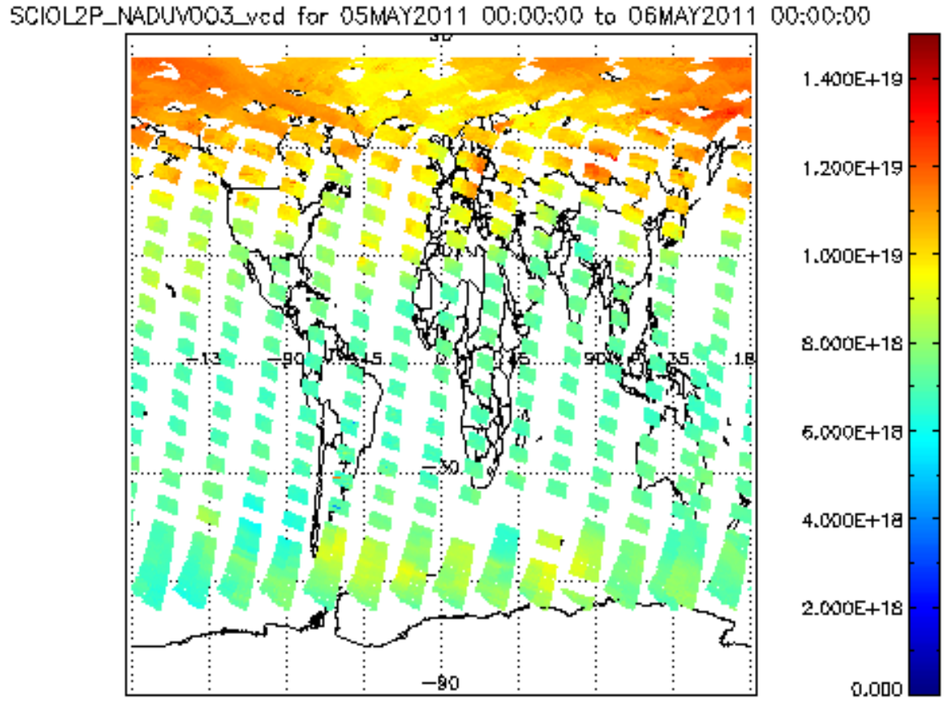

cloud_flags for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.700E+04
5.600E+04
5.500E+04
5.400E+04
5.300E+04
5.200E+04
5.100E+04
5.000E+04
-90

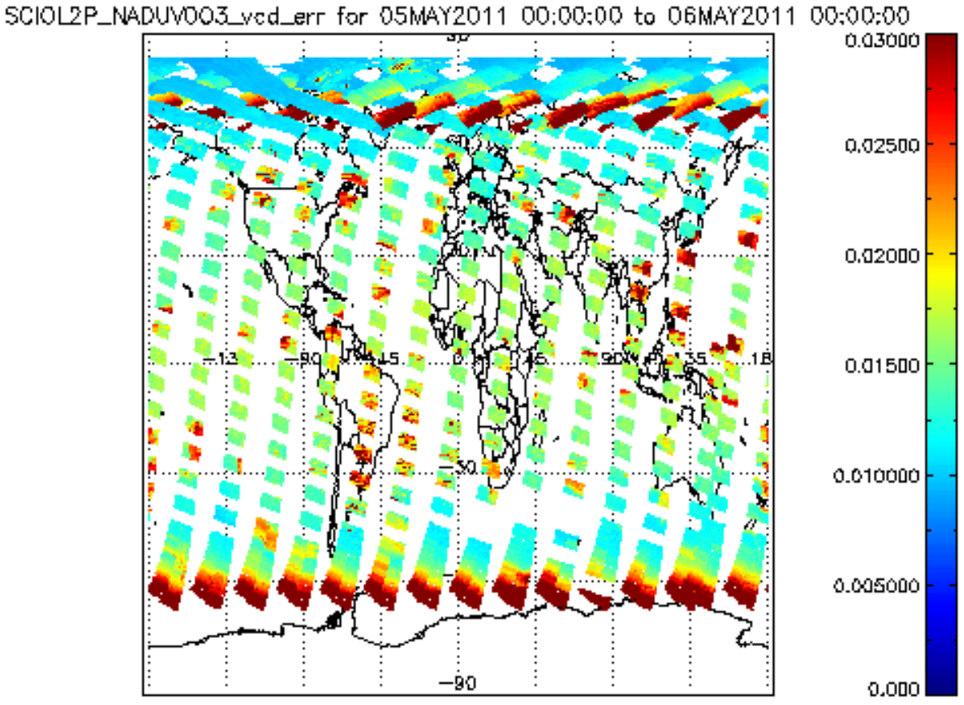

Time trend plot of SCIOL2P_NADUV003_vcd [molecules/cm2].
Value
1.4x10^16
1.2x10^16
1.0x10^16
8.0x10^15
6.0x10^15
4.0x10^15
2.0x10^15
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

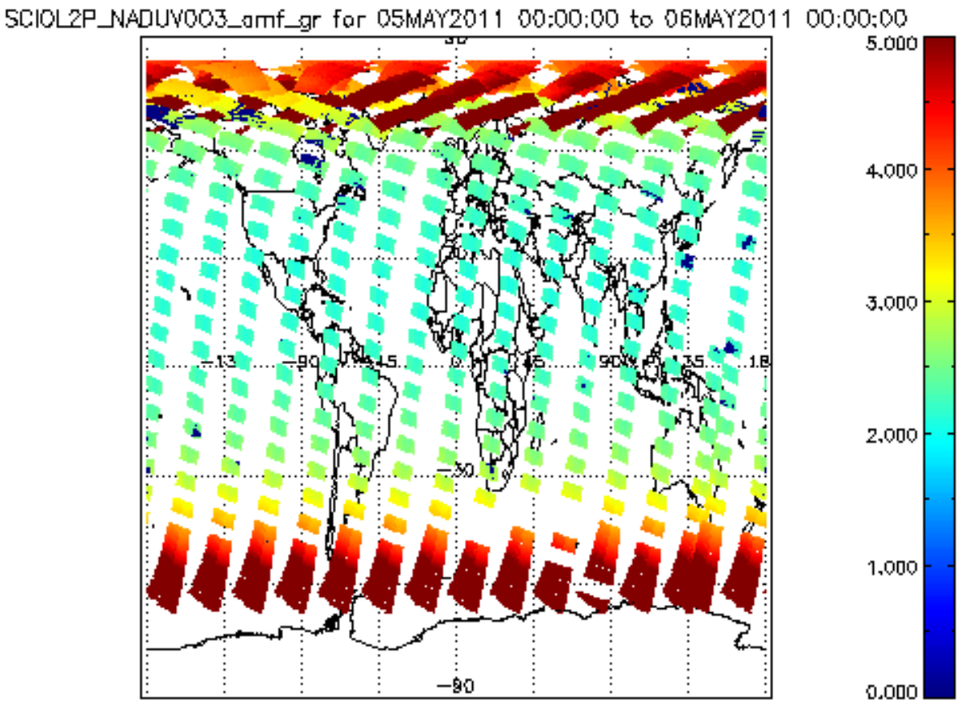

Time trend plot of SCIOL2P_NADUV003_vcd_err [rel. fraction].
Value
0.030
0.025
0.020
0.015
0.010
0.005
0.000
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

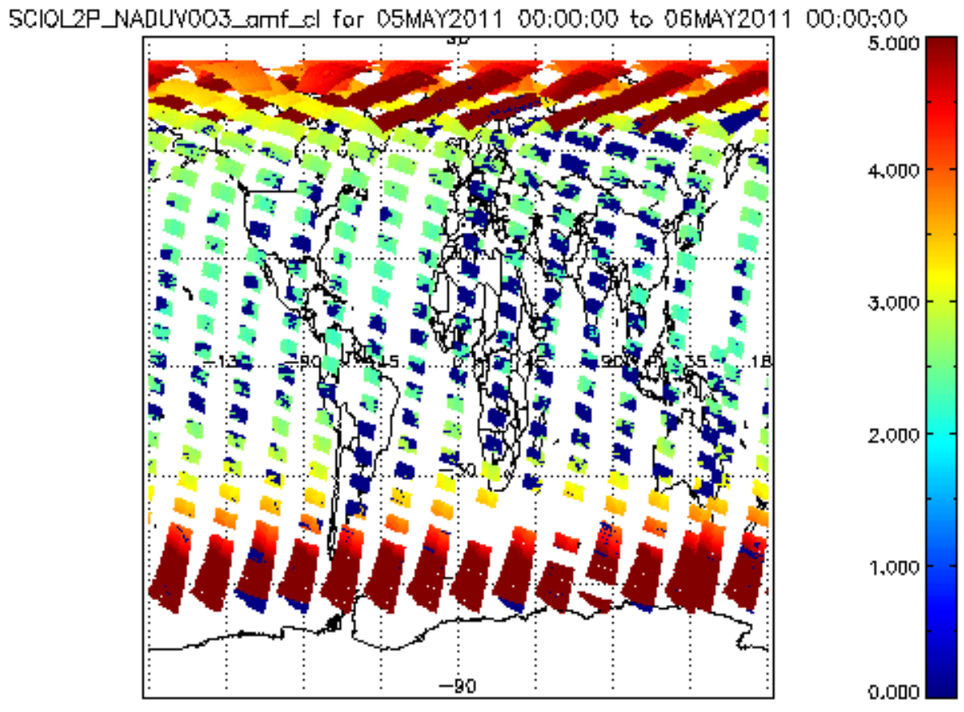

Time trend plot of SCIOL2P_NADUV003_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

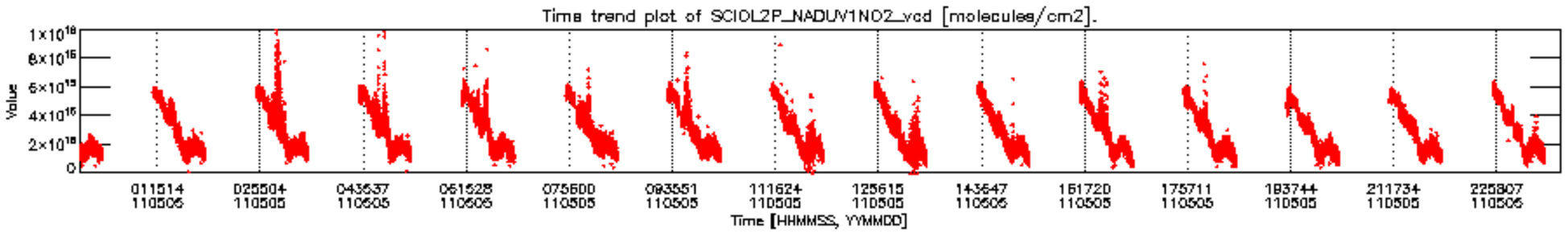

Time trend plot of SCIOL2P_NADUV003_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

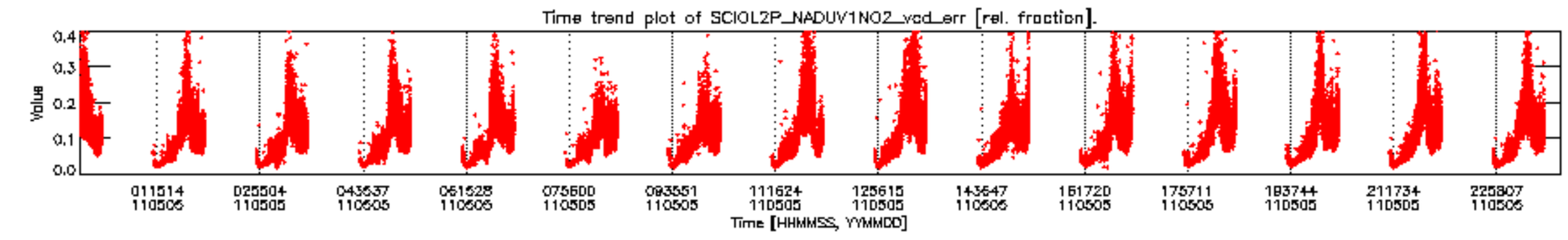

SCIOL2P_NADUV003_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.400E+19
1.200E+19
1.000E+19
8.000E+18
6.000E+18
4.000E+18
2.000E+18
0.000

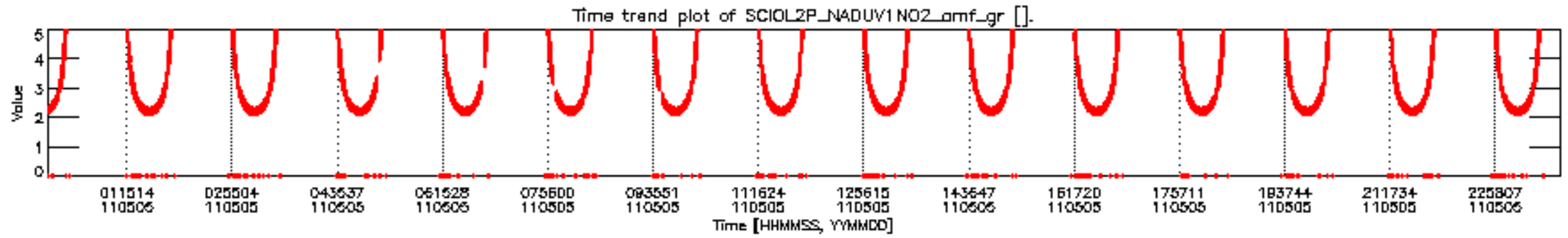

SCIOL2P_NADUV003_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
0.03000
0.02500
0.02000
0.01500
0.010000
0.005000
0.000

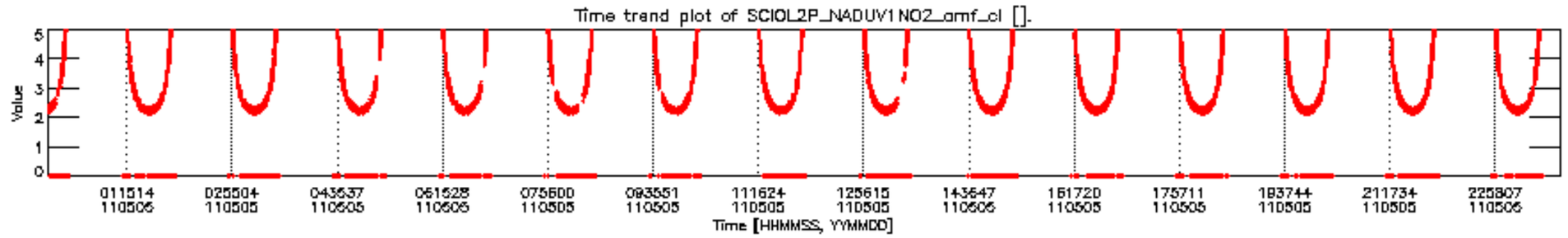

SCIOL2P_NADUV003_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000

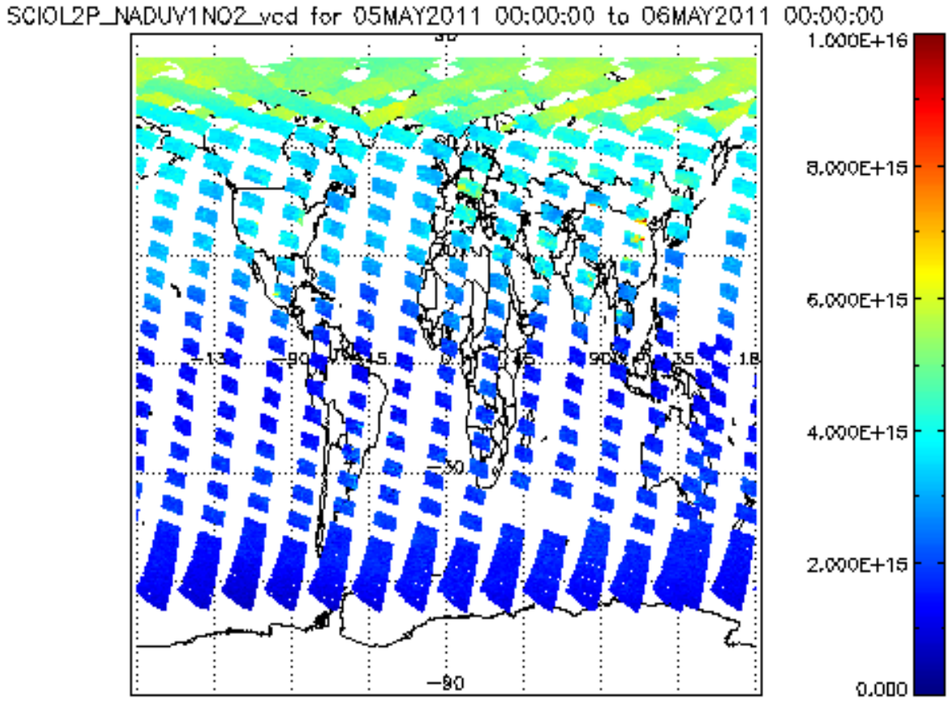

SCIOL2P_NADUV003_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000

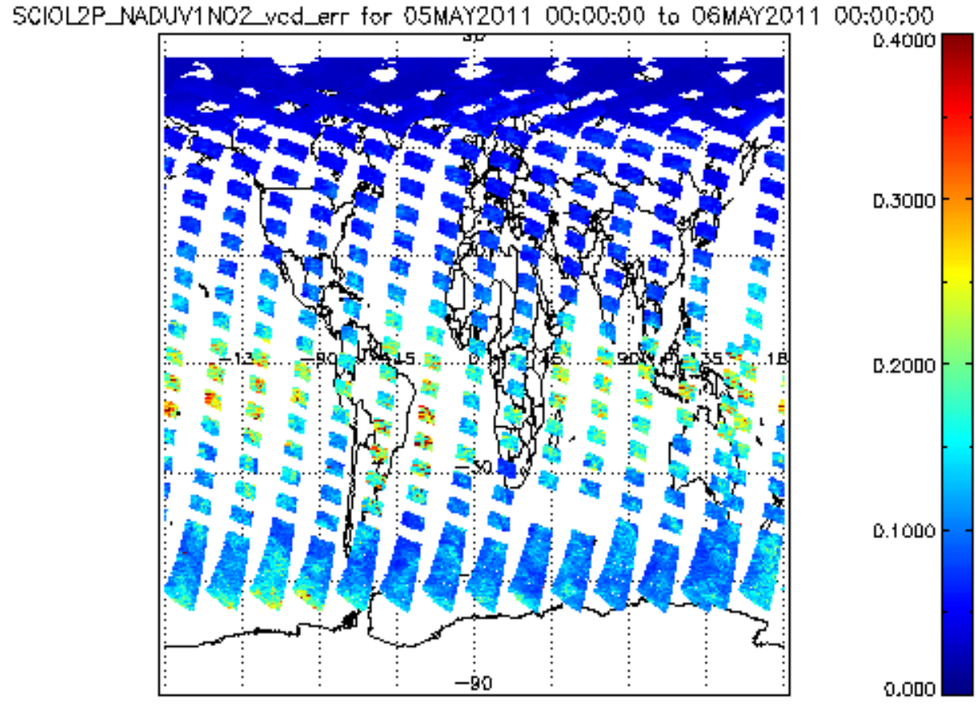

Time trend plot of SCIOL2P_NADUV1NO2_vcd [molecules/cm2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

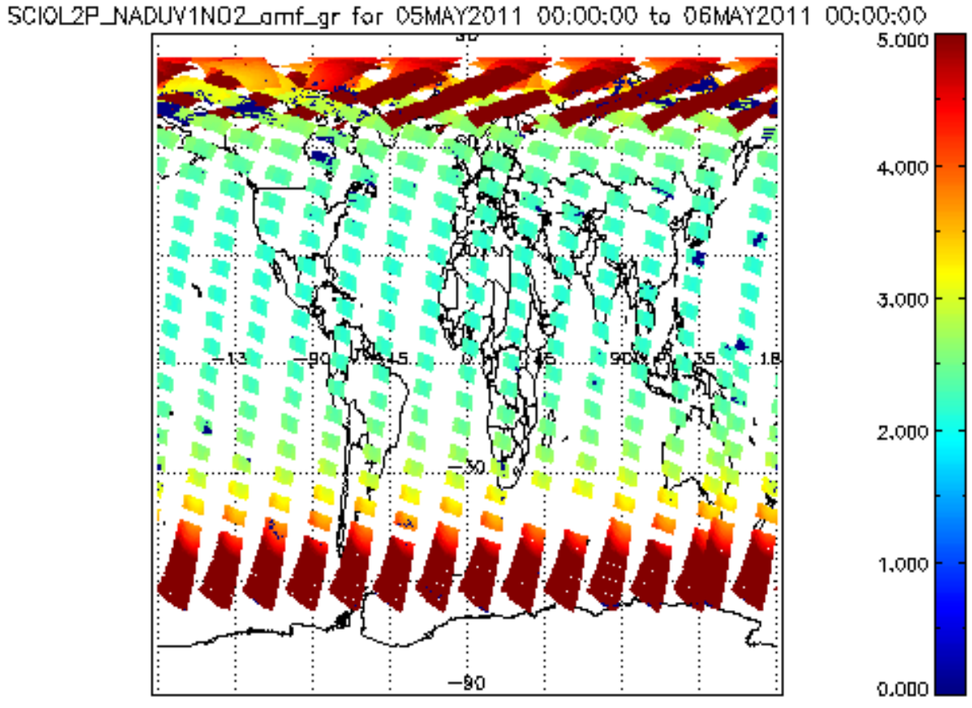

Time trend plot of SCIOL2P_NADUV1NO2_vcd_err [rel. fraction].
Value
0.4
0.3
0.2
0.1
0.0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

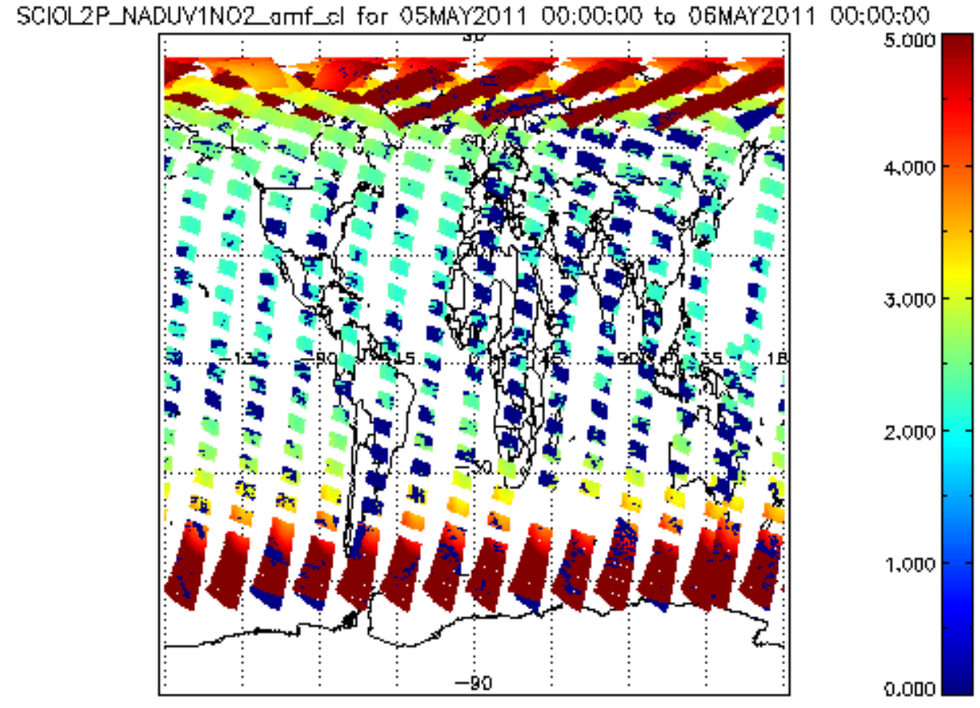

Time trend plot of SCIOL2P_NADUV1NO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

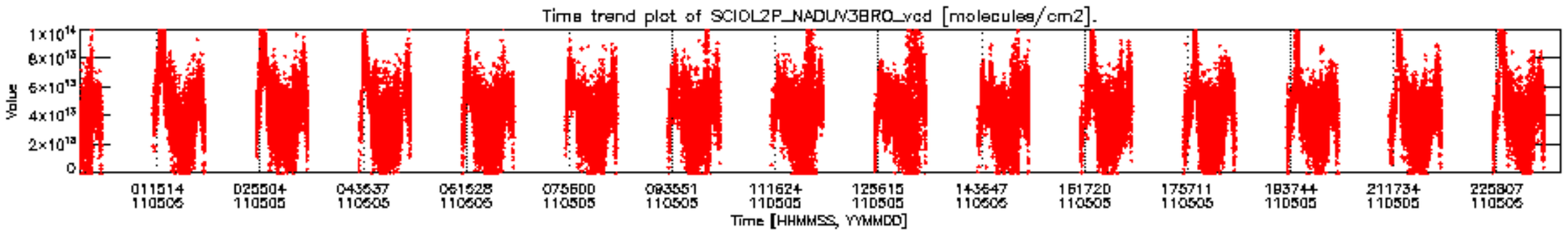

Time trend plot of SCIOL2P_NADUV1NO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

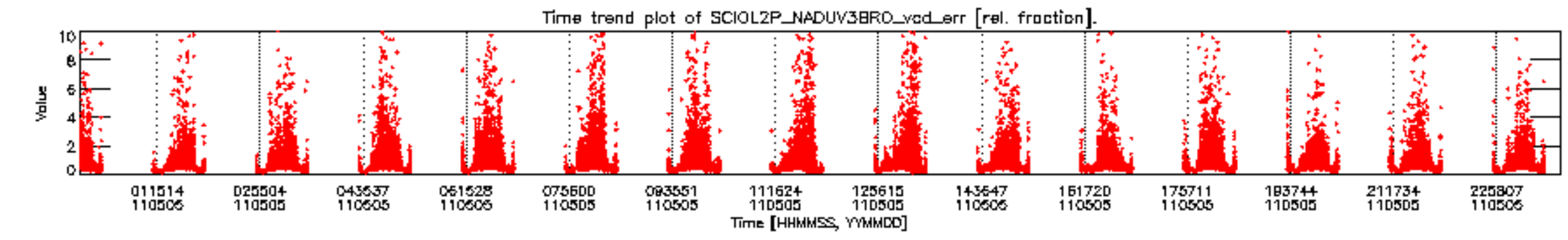

SCIOL2P_NADUV1NO2_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.000E+16
8.000E+15
6.000E+15
4.000E+15
2.000E+15
0.000
-90

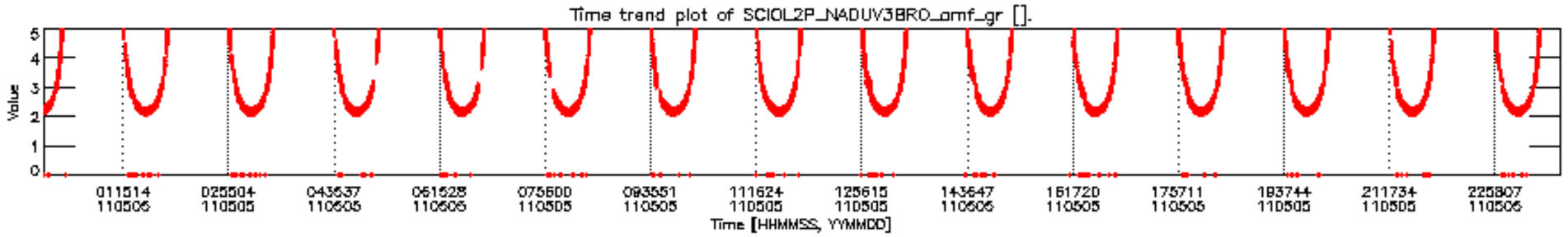

SCIOL2P_NADUV1NO2_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
0.4000
0.3000
0.2000
0.1000
0.000
-90

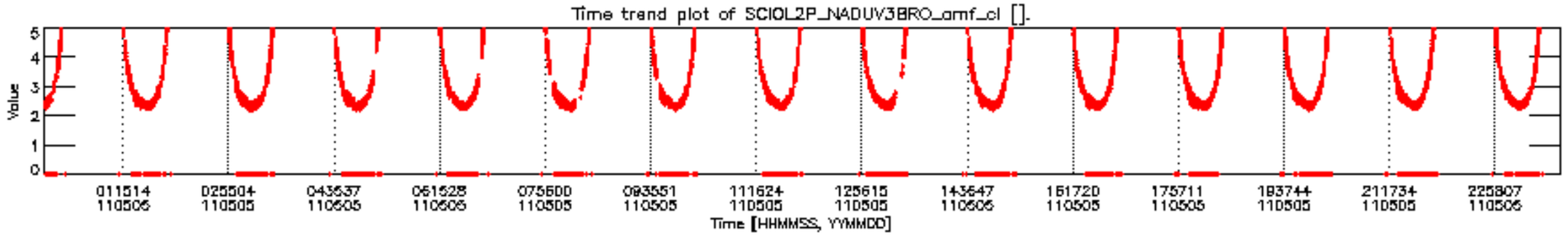

SCIOL2P_NADUV1NO2_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

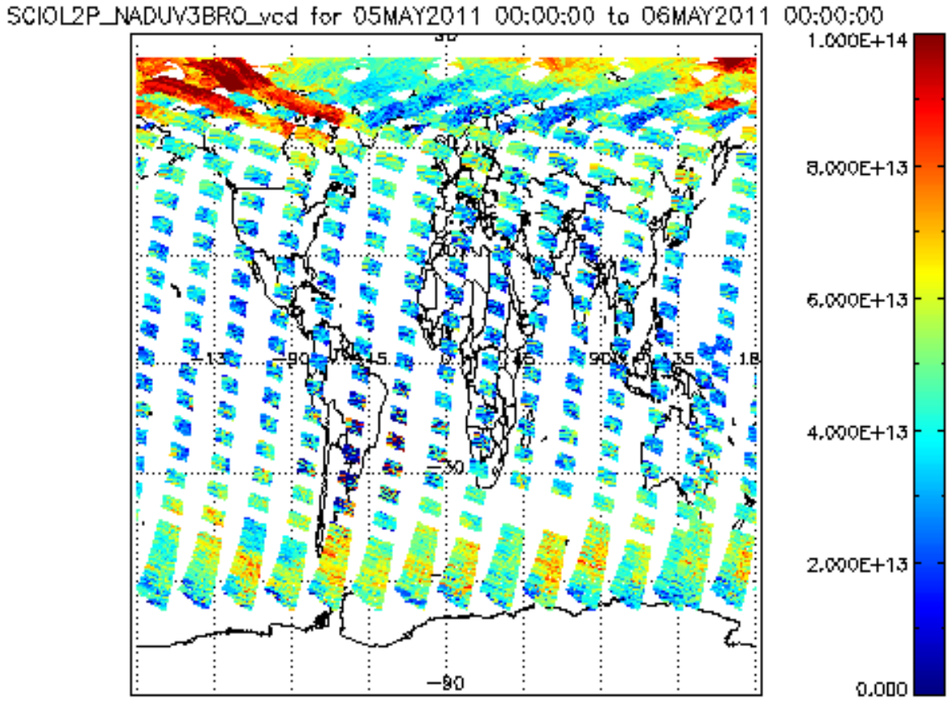

SCIOL2P_NADUV1NO2_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

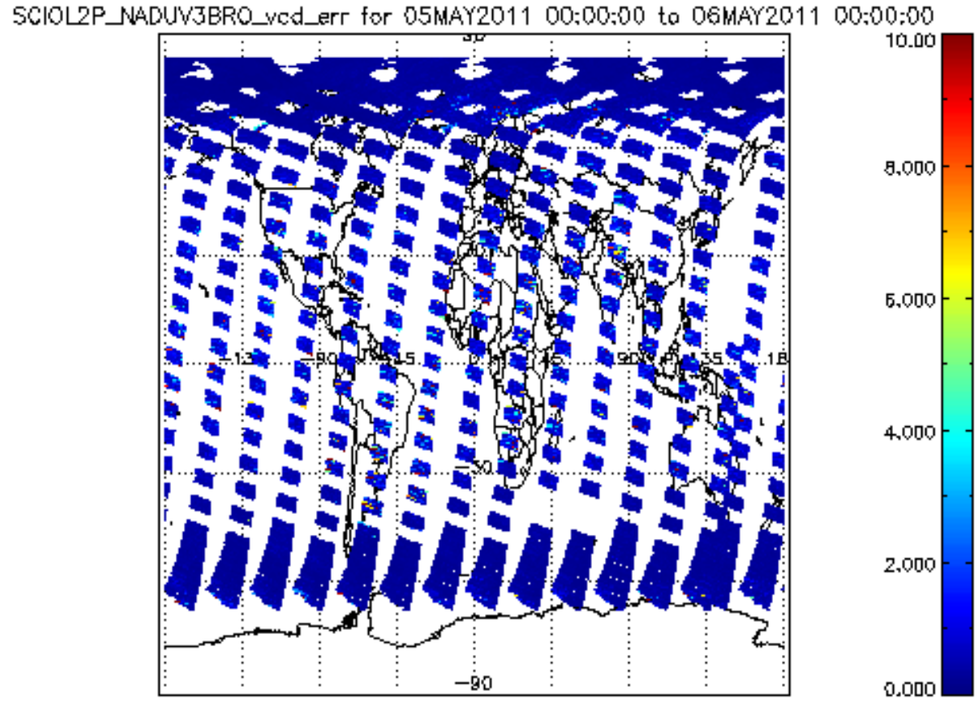

Time trend plot of SCIOL2P_NADUV3BRO_vcd [molecules/cm2].
Value
1x10^14
8x10^13
6x10^13
4x10^13
2x10^13
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

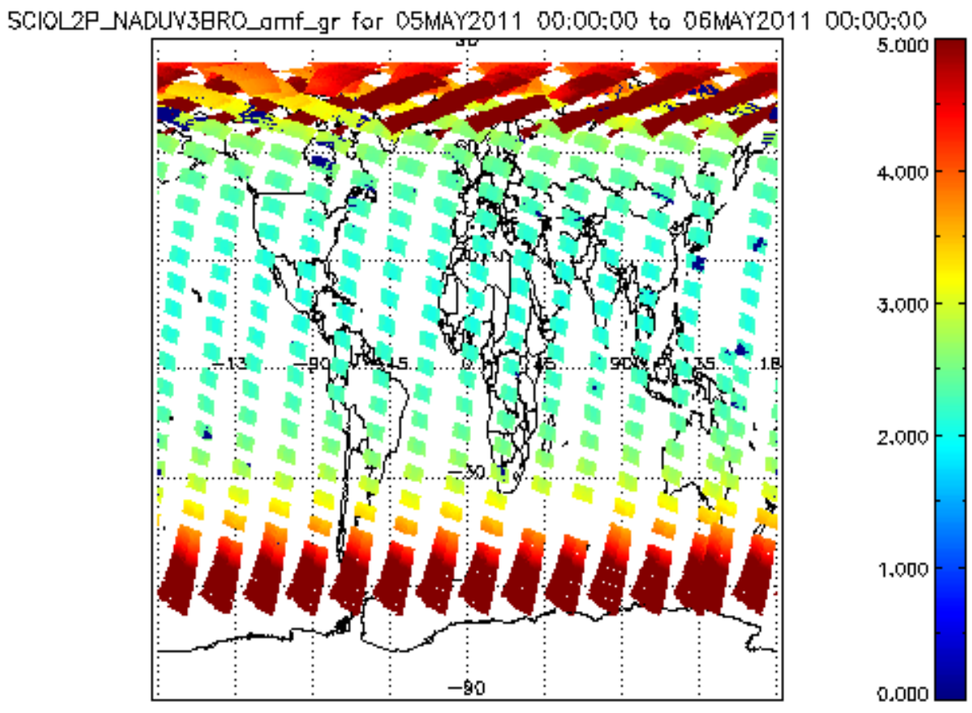

Time trend plot of SCIOL2P_NADUV3BRO_vcd_err [rel. fraction].
Value
10
8
6
4
2
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

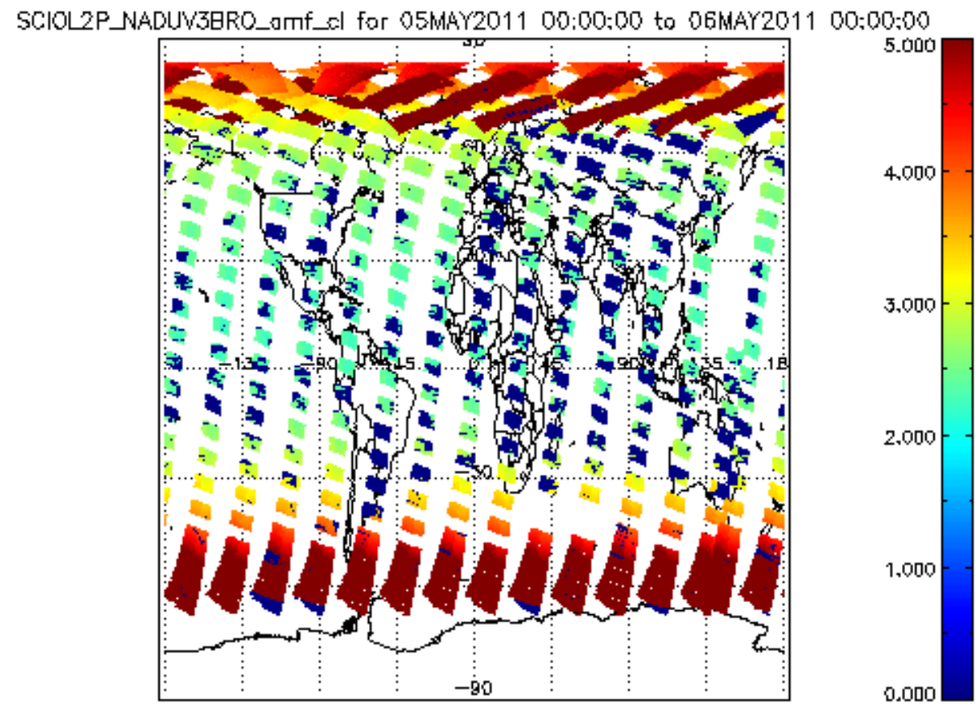

Time trend plot of SCIOL2P_NADUV3BRO_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

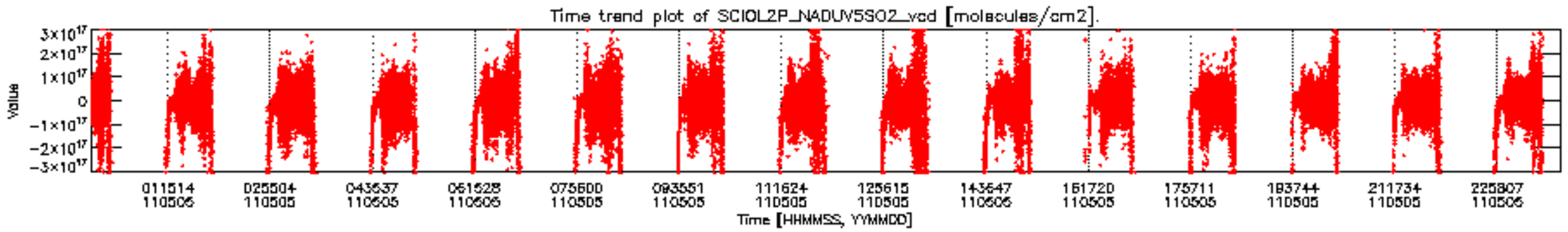

Time trend plot of SCIOL2P_NADUV3BRO_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

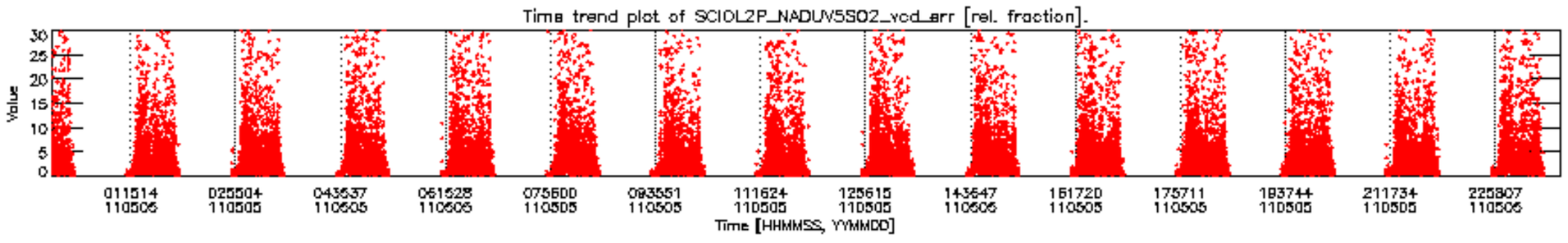

SCIOL2P_NADUV3BRO_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
1.000E+14
8.000E+13
6.000E+13
4.000E+13
2.000E+13
0.000
-90

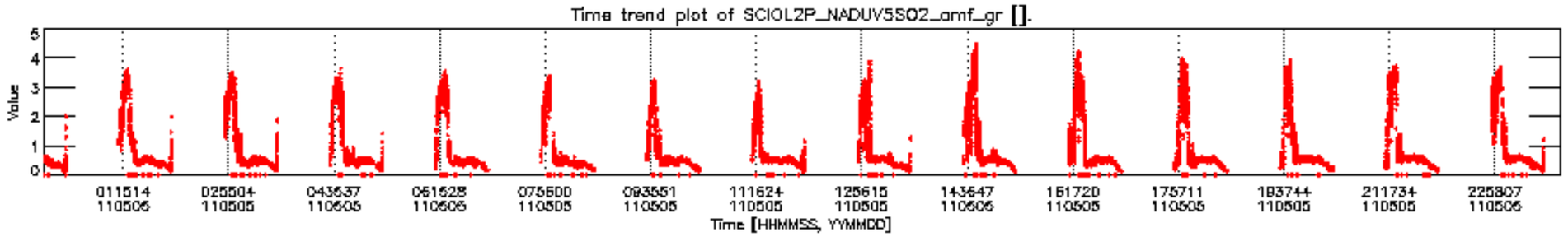

SCIOL2P_NADUV3BRO_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
10.00
8.000
6.000
4.000
2.000
0.000
-90

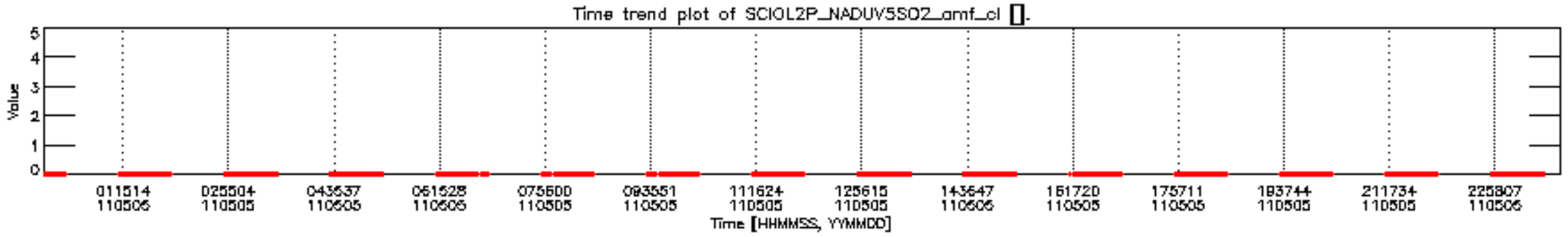

SCIOL2P_NADUV3BRO_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

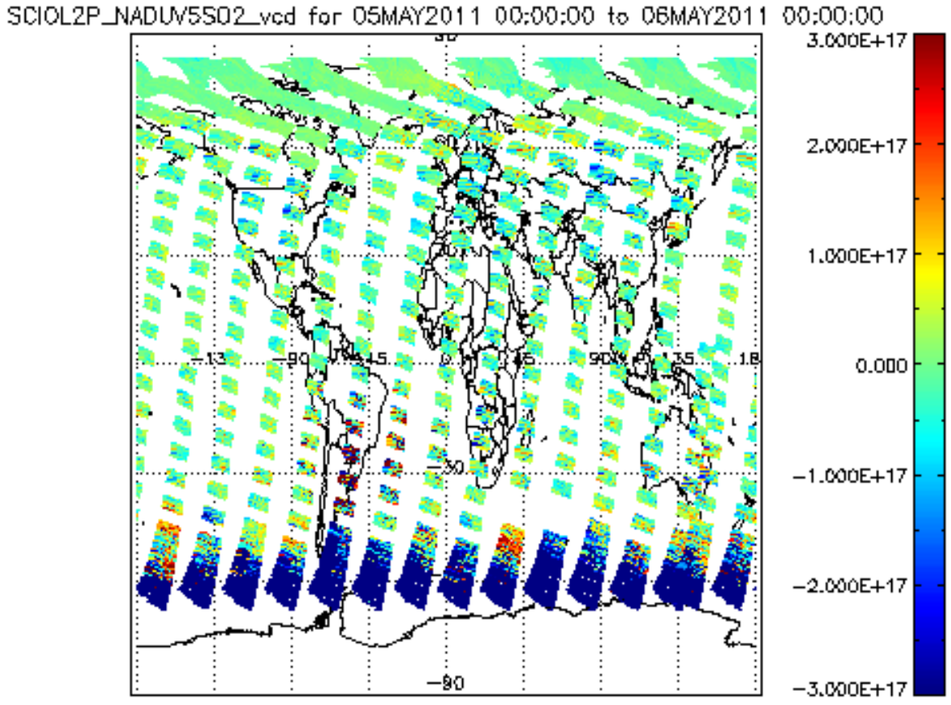

SCIOL2P_NADUV3BRO_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

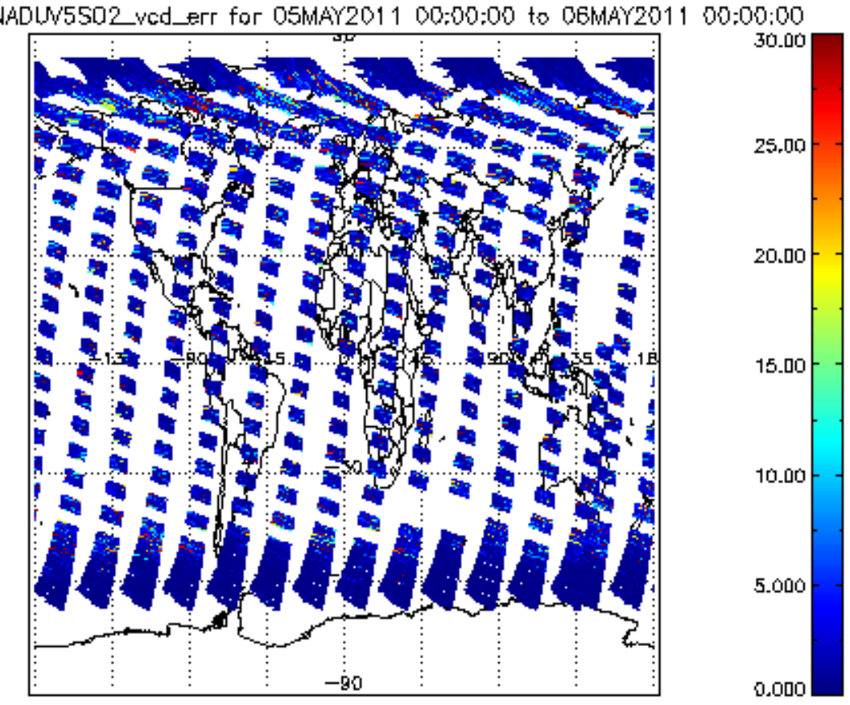

Time trend plot of SCIOL2P_NADUV5SO2_vcd [molecules/cm2].
Value
3x10^17
2x10^17
1x10^17
0
-1x10^17
-2x10^17
-3x10^17
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

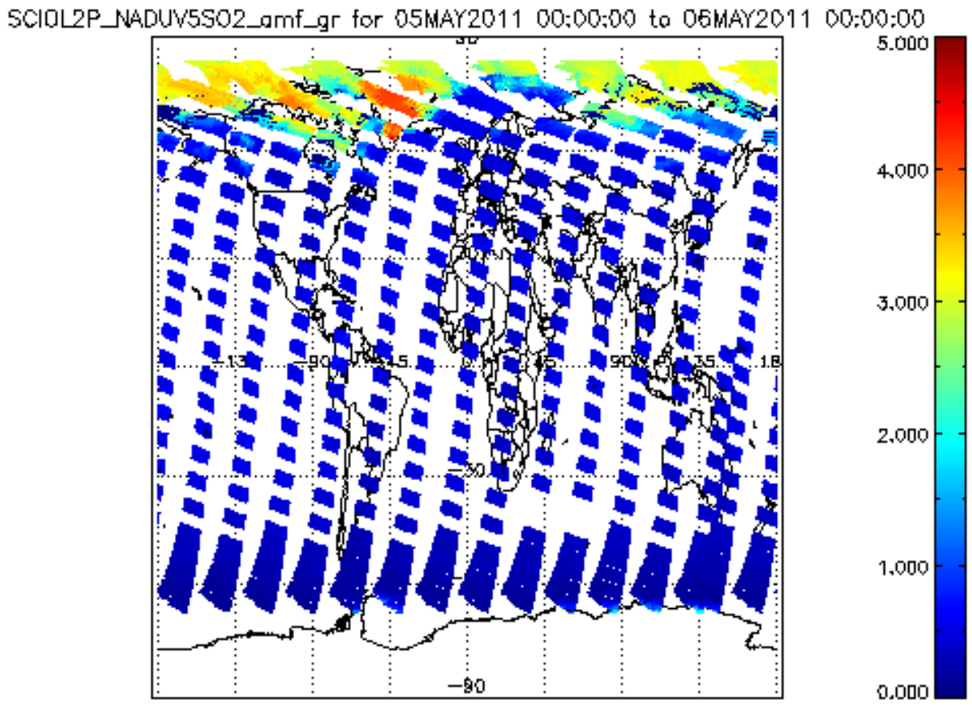

Time trend plot of SCIOL2P_NADUV5SO2_vcd_err [rel. fraction].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

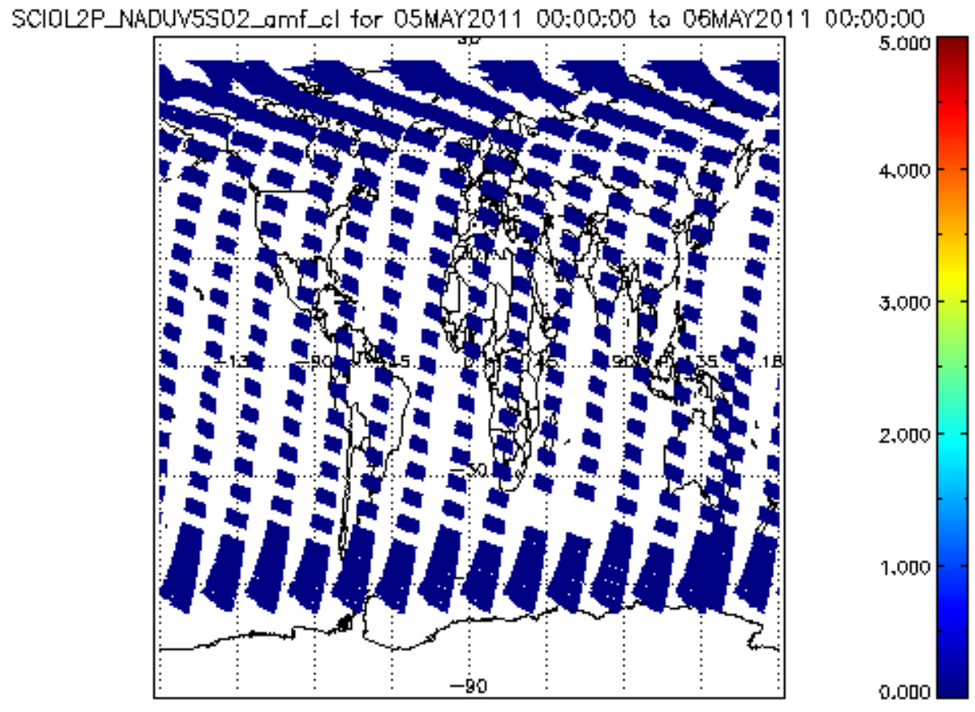

Time trend plot of SCIOL2P_NADUV5SO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

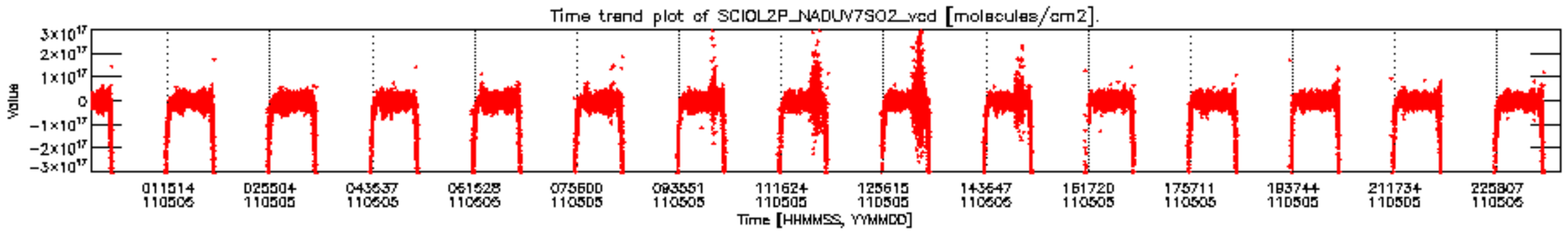

Time trend plot of SCIOL2P_NADUV5SO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

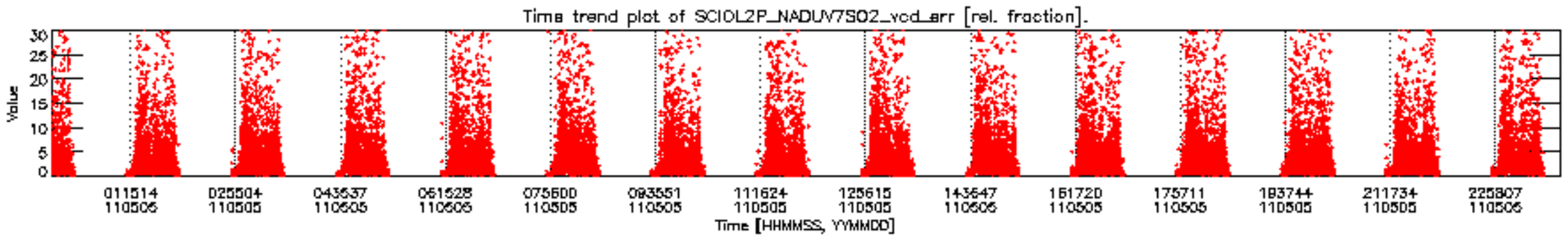

SCIOL2P_NADUV5SO2_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
3.000E+17
2.000E+17
1.000E+17
0.000
-1.000E+17
-2.000E+17
-3.000E+17
-90

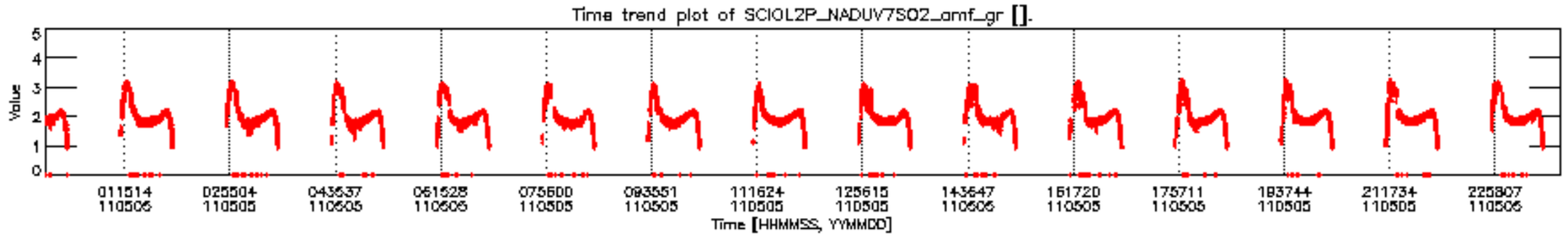

SCIOL2P_NADUV5SO2_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
30.00
25.00
20.00
15.00
10.00
5.000
0.000
-90

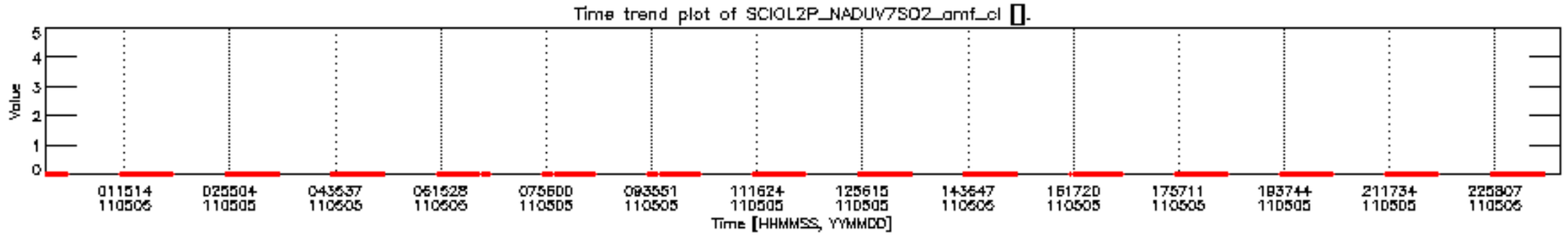

SCIOL2P_NADUV5SO2_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

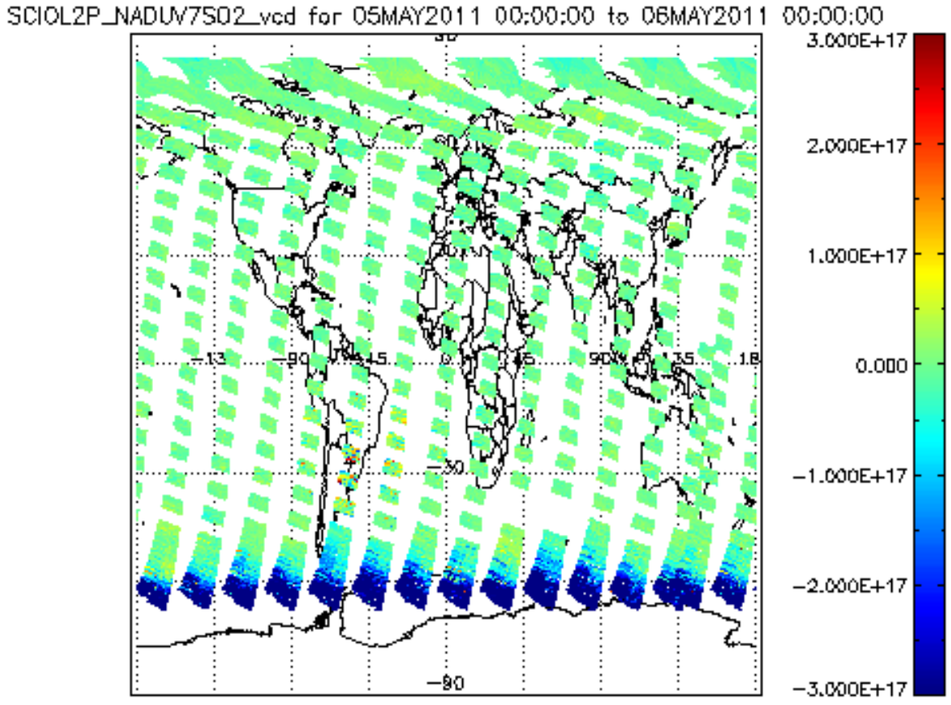

SCIOL2P_NADUV5SO2_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

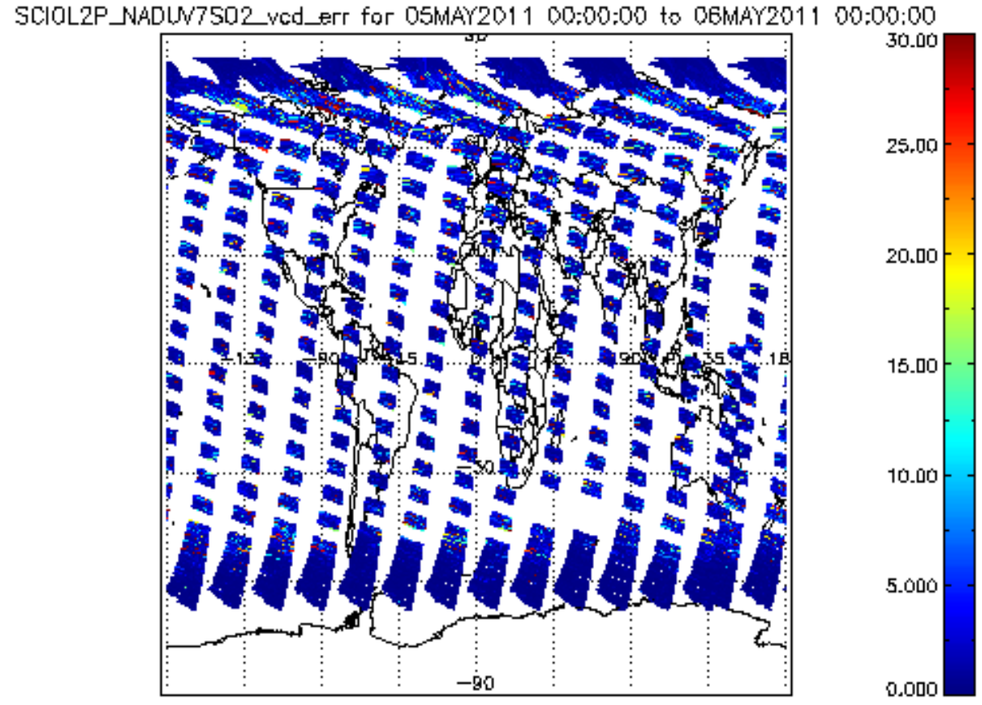

Time trend plot of SCIOL2P_NADUV7SO2_vcd [molecules/cm2].
Value
3x10^17
2x10^17
1x10^17
0
-1x10^17
-2x10^17
-3x10^17
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

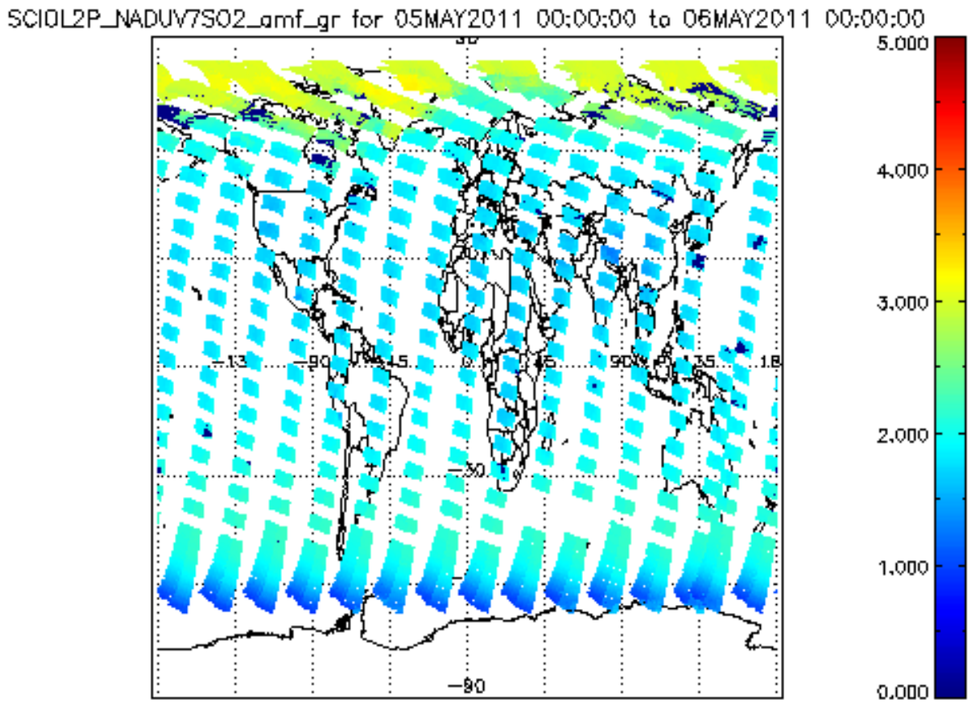

Time trend plot of SCIOL2P_NADUV7SO2_vcd_err [rel. fraction].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

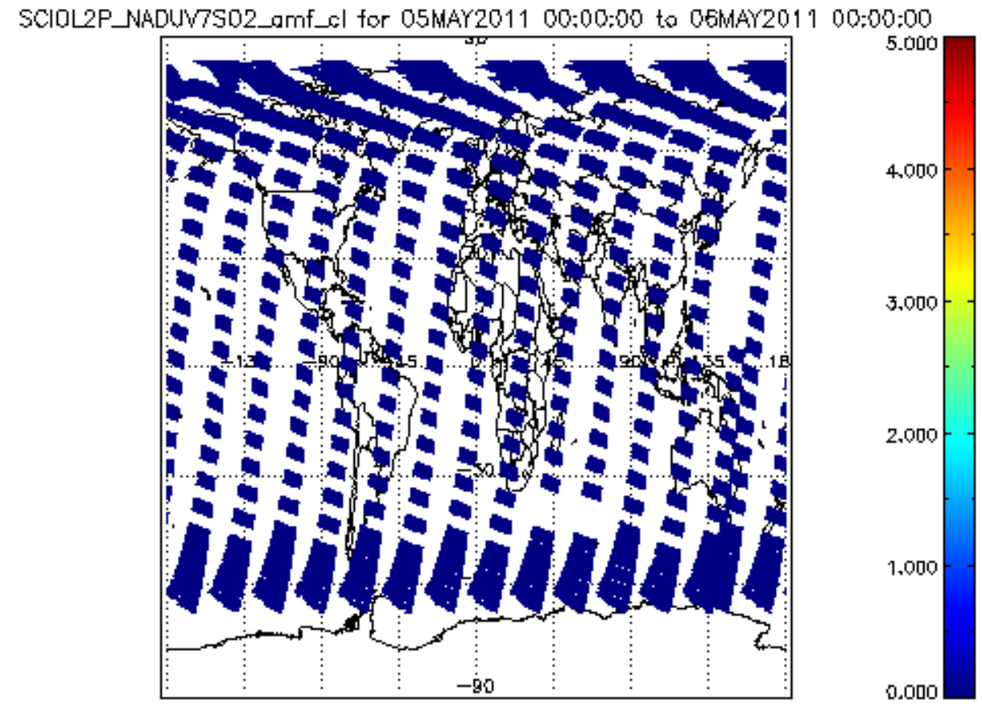

Time trend plot of SCIOL2P_NADUV7SO2_amf_gr [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

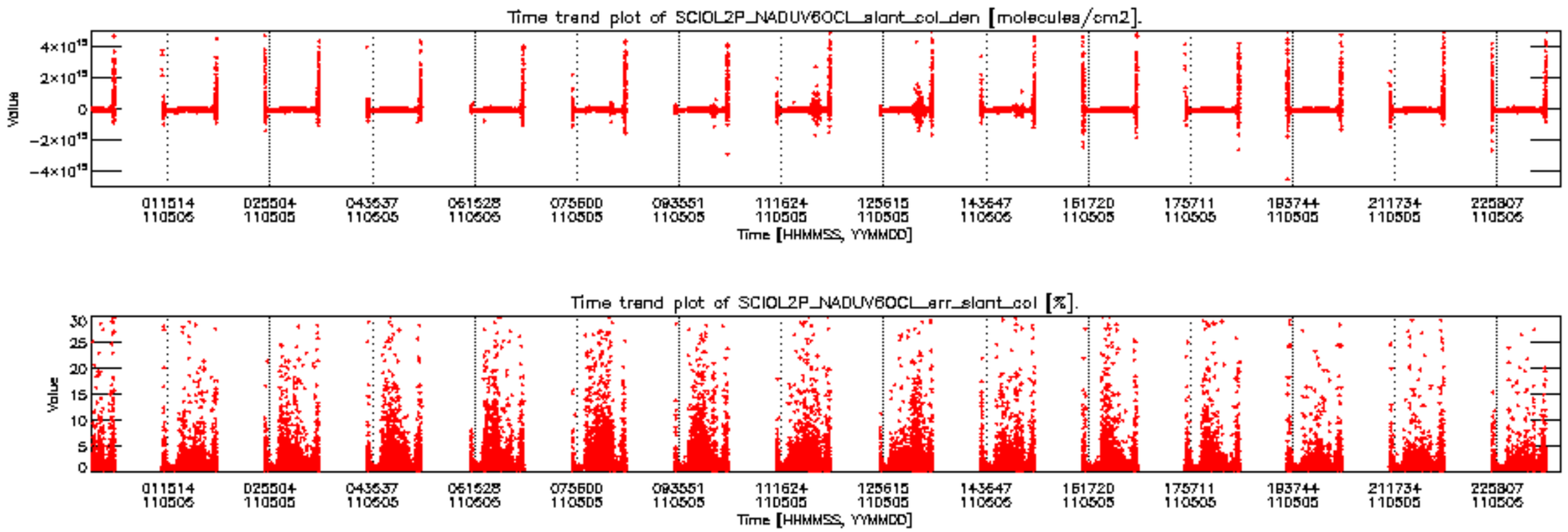

Time trend plot of SCIOL2P_NADUV7SO2_amf_cl [].
Value
5
4
3
2
1
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

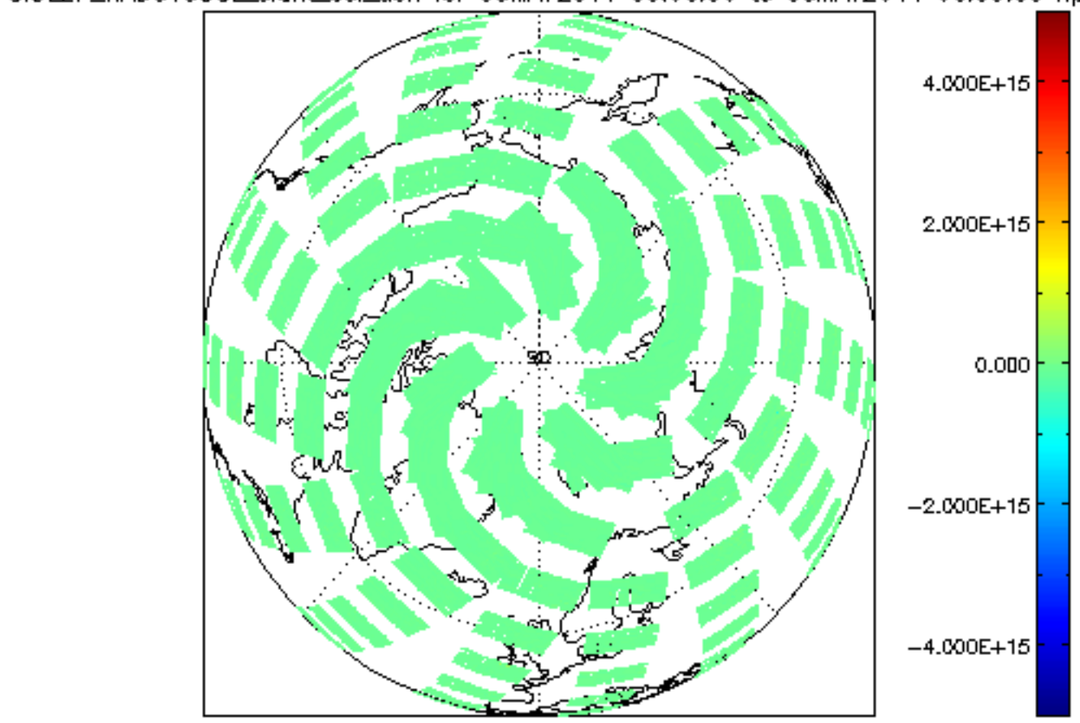

SCIOL2P_NADUV7SO2_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
3.000E+17
2.000E+17
1.000E+17
0.000
-1.000E+17
-2.000E+17
-3.000E+17
-90

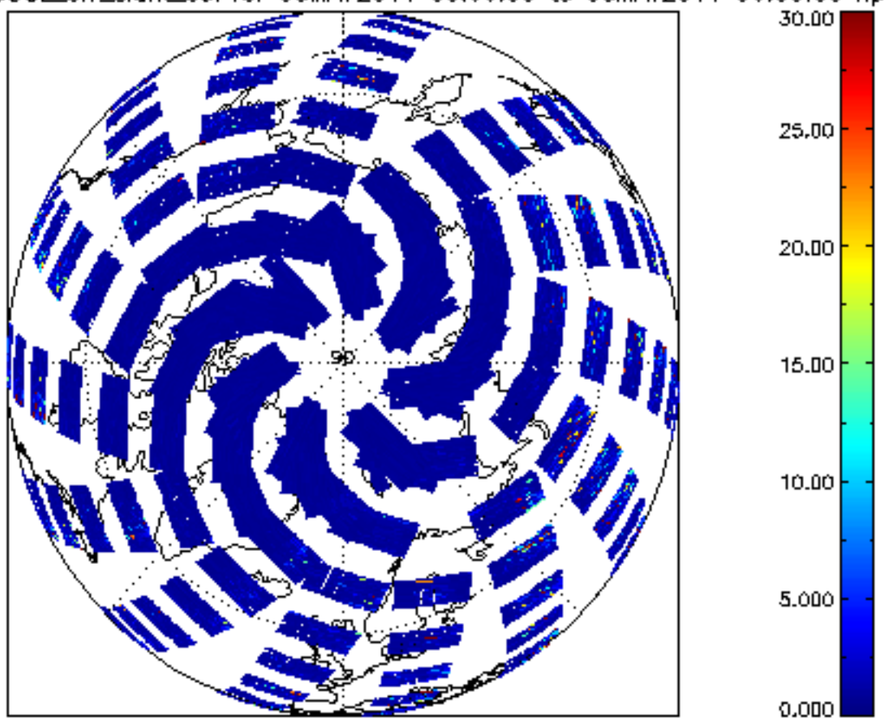

SCIOL2P_NADUV7SO2_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
30.00
25.00
20.00
15.00
10.00
5.000
0.000
-90

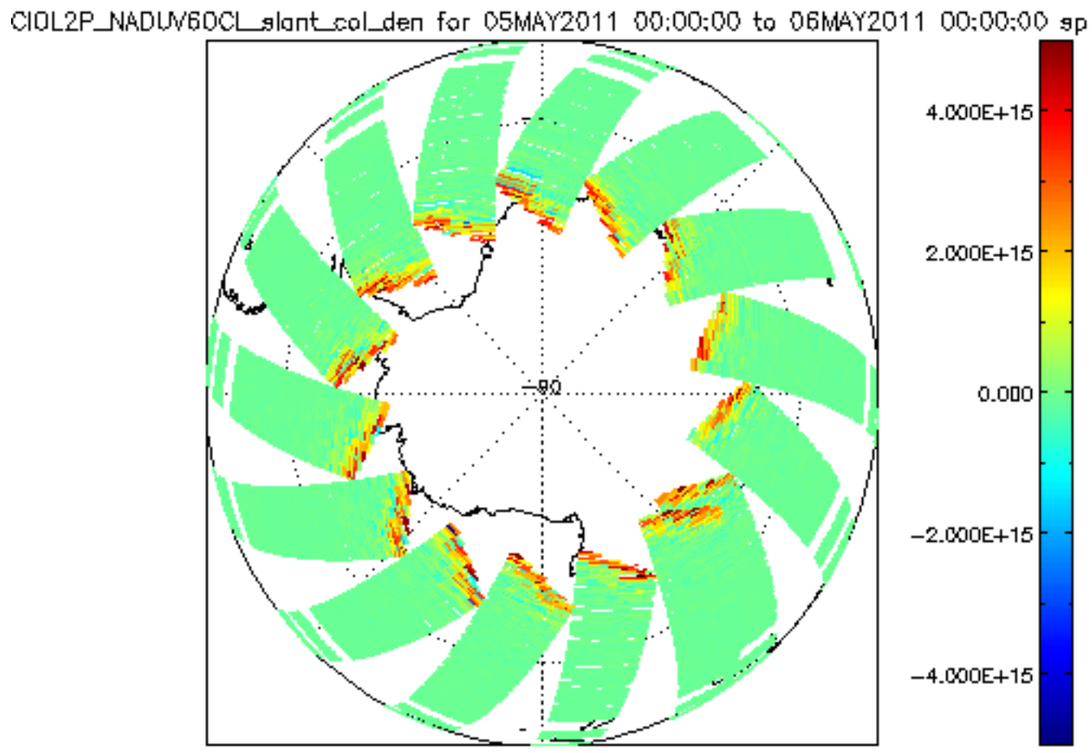

SCIOL2P_NADUV7SO2_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

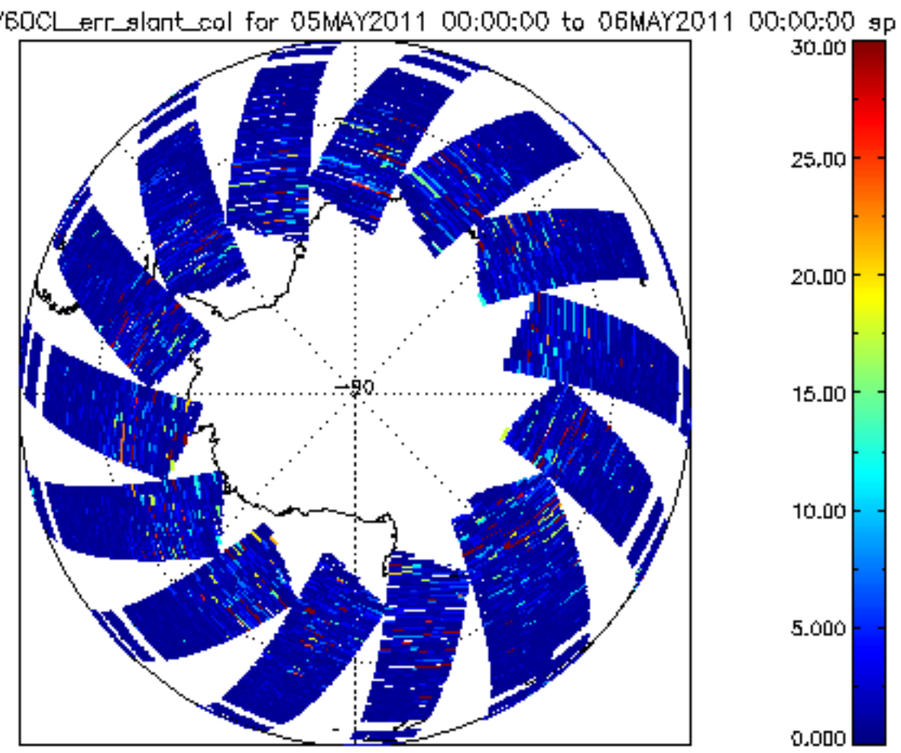

SCIOL2P_NADUV7SO2_amf_cl for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
5.000
4.000
3.000
2.000
1.000
0.000
-90

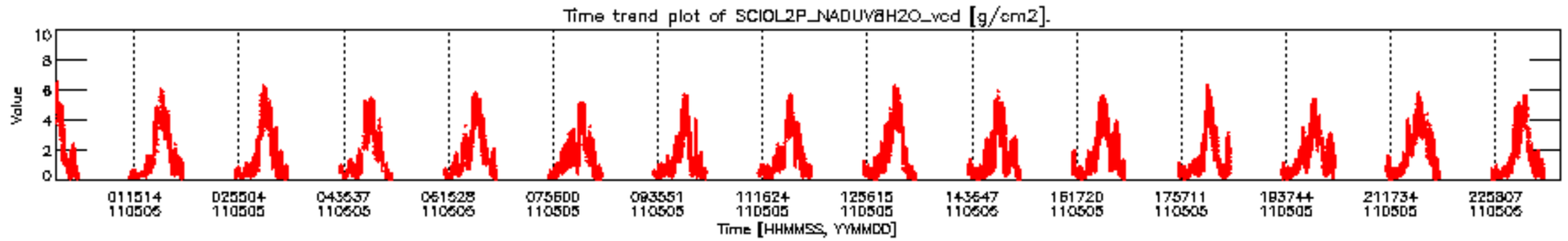

Time trend plot of SCIOL2P_NADUV6OCL_slant_col_den [molecules/cm2].
Value
4×10¹⁵
2×10¹⁵
0
−2×10¹⁵
−4×10¹⁵
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]
Time trend plot of SCIOL2P_NADUV6OCL_arr_slant_col [%].
Value
30
25
20
15
10
5
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

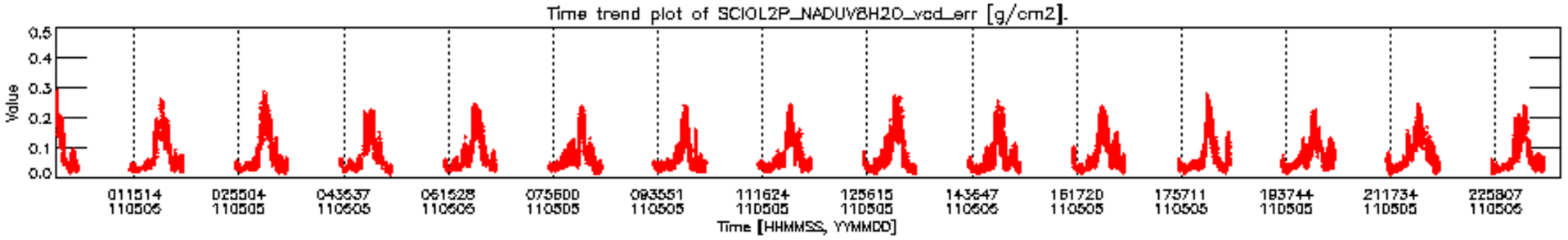

ClOL2P_NADUV6OCL_slant_col_den for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 np
4.000E+15
2.000E+15
0.000
−2.000E+15
−4.000E+15

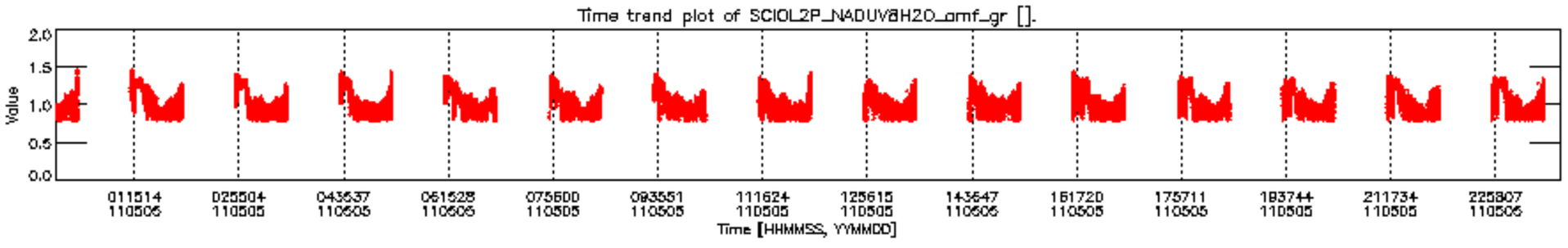

ClOL2P_NADUV6OCL_err_slant_col for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 np
30.00
25.00
20.00
15.00
10.00
5.000
0.000


CIOL2P_NADUV6OCL_slant_col_den for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 sp
4.000E+15
2.000E+15
0.000
−2.000E+15
−4.000E+15
−90

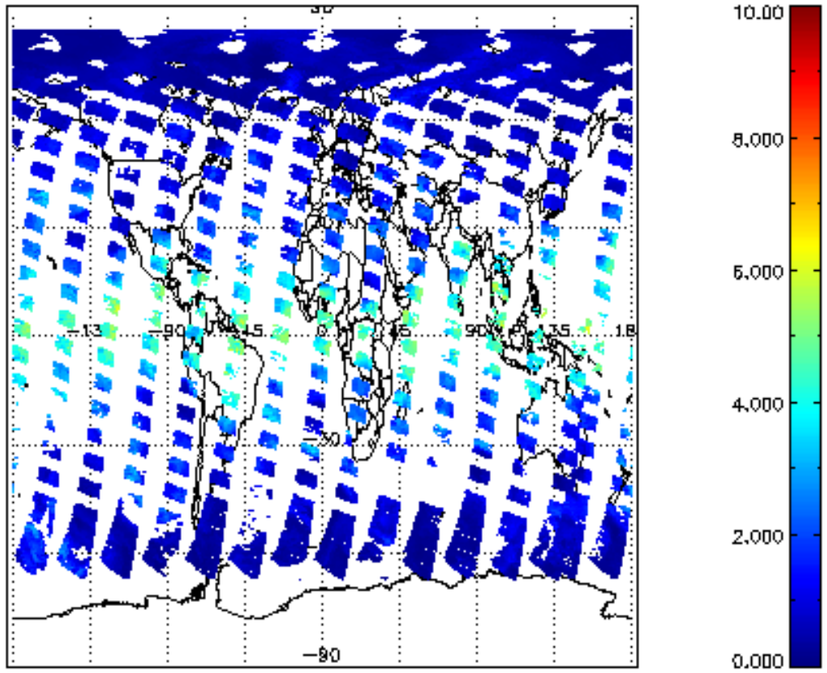

CIOL2P_NADUV6OCL_err_slant_col for 05MAY2011 00:00:00 to 06MAY2011 00:00:00 sp
30.00
25.00
20.00
15.00
10.00
5.000
0.000
−90


Time trend plot of SCIOL2P_NADUVBH2O_vcd [g/cm2].
Value
10
8
6
4
2
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

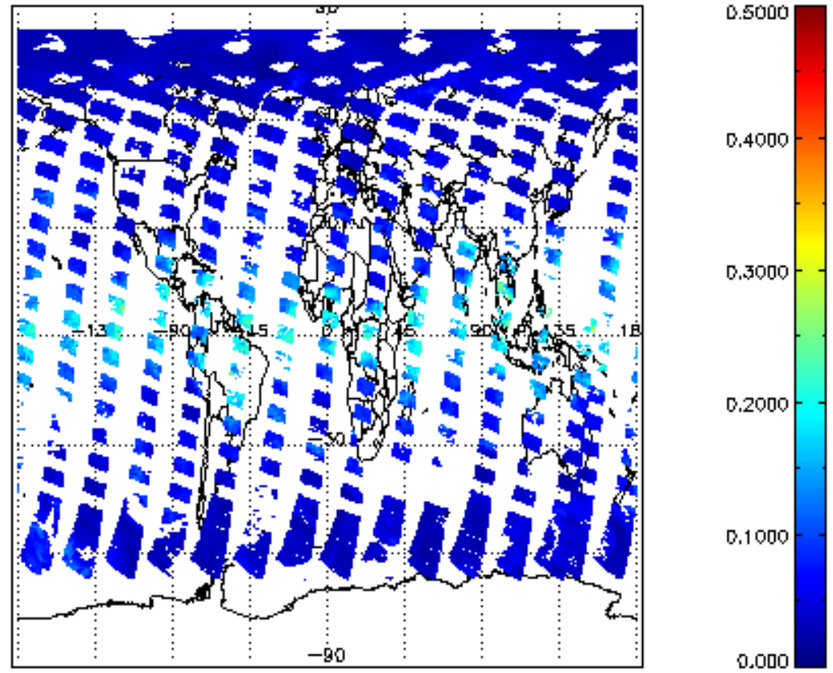

Time trend plot of SCIOL2P_NADUVBH2O_vcd_err [g/cm2].
Value
0.5
0.4
0.3
0.2
0.1
0.0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


Time trend plot of SCIOL2P_NADUVBH2O_amf_gr [].
Value
2.0
1.5
1.0
0.5
0.0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]

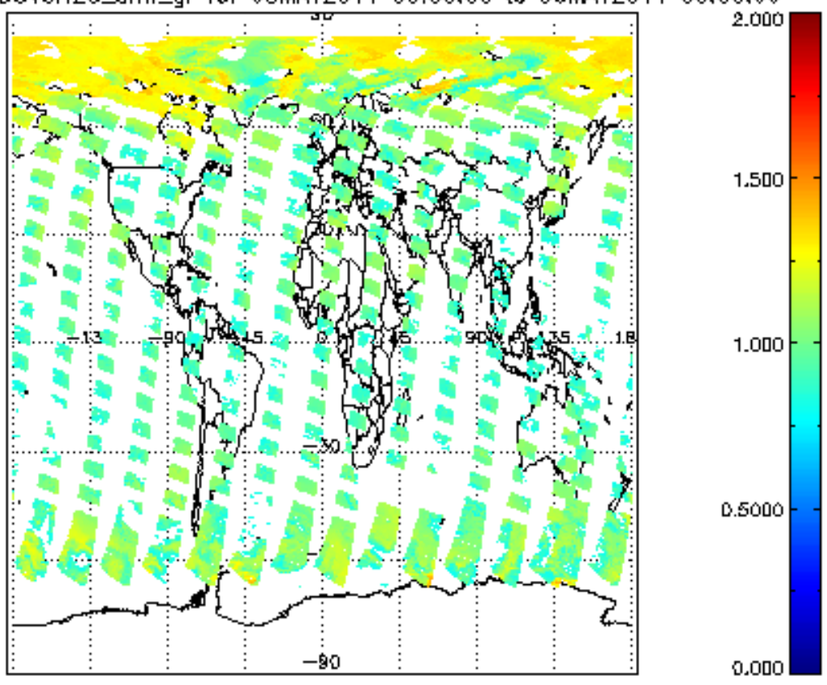
SCIOL2P_NADUV8H2O_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00

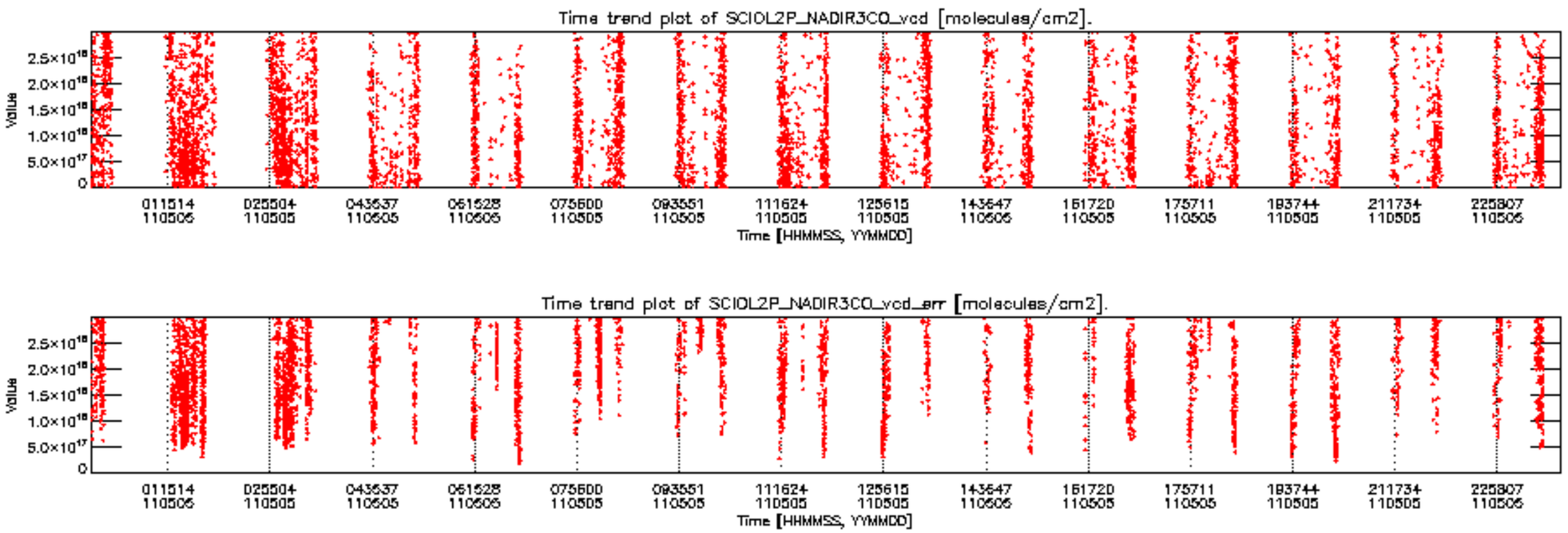


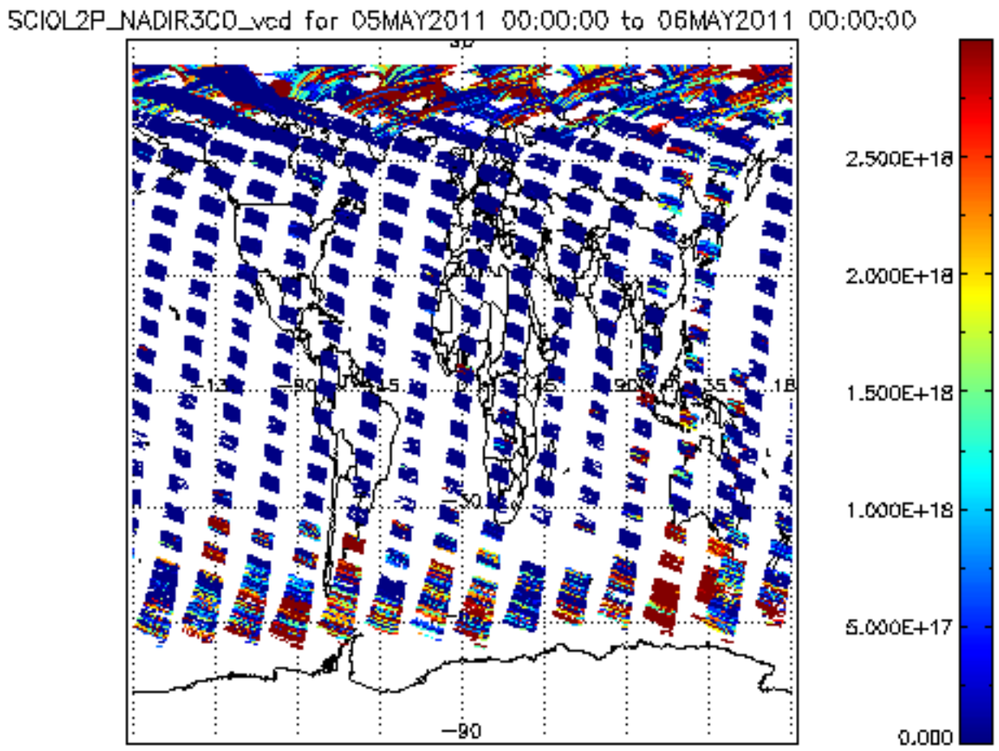

SCIOL2P_NADUV8H2O_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00

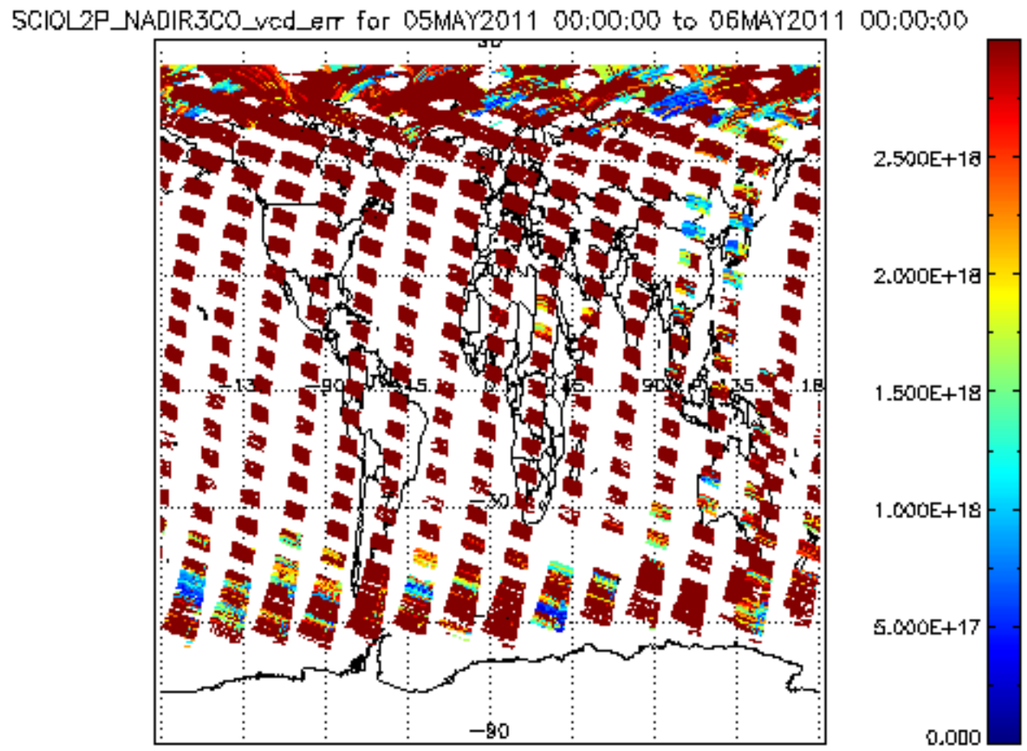


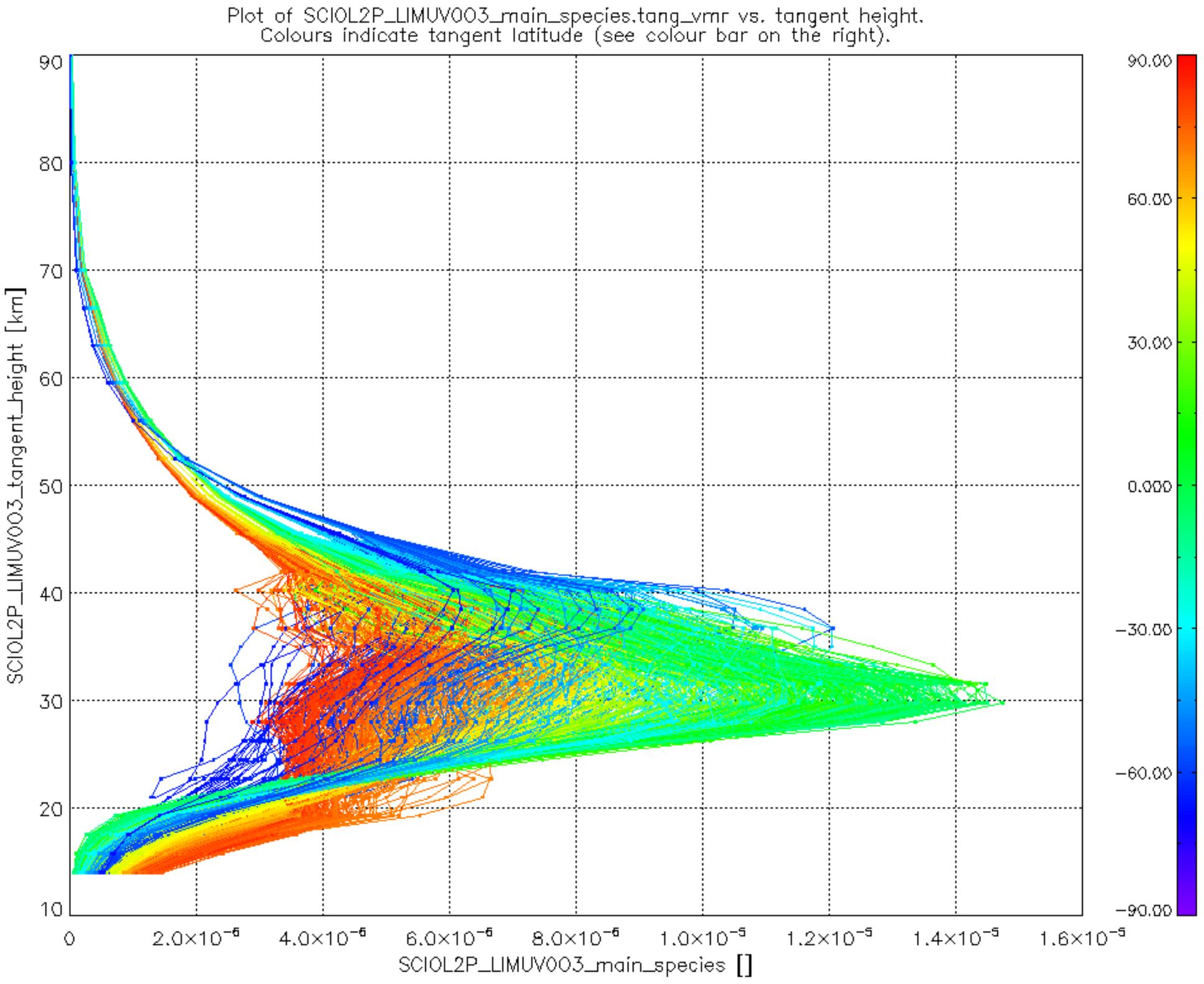

SCIOL2P_NADUV8H2O_amf_gr for 05MAY2011 00:00:00 to 06MAY2011 00:00:00



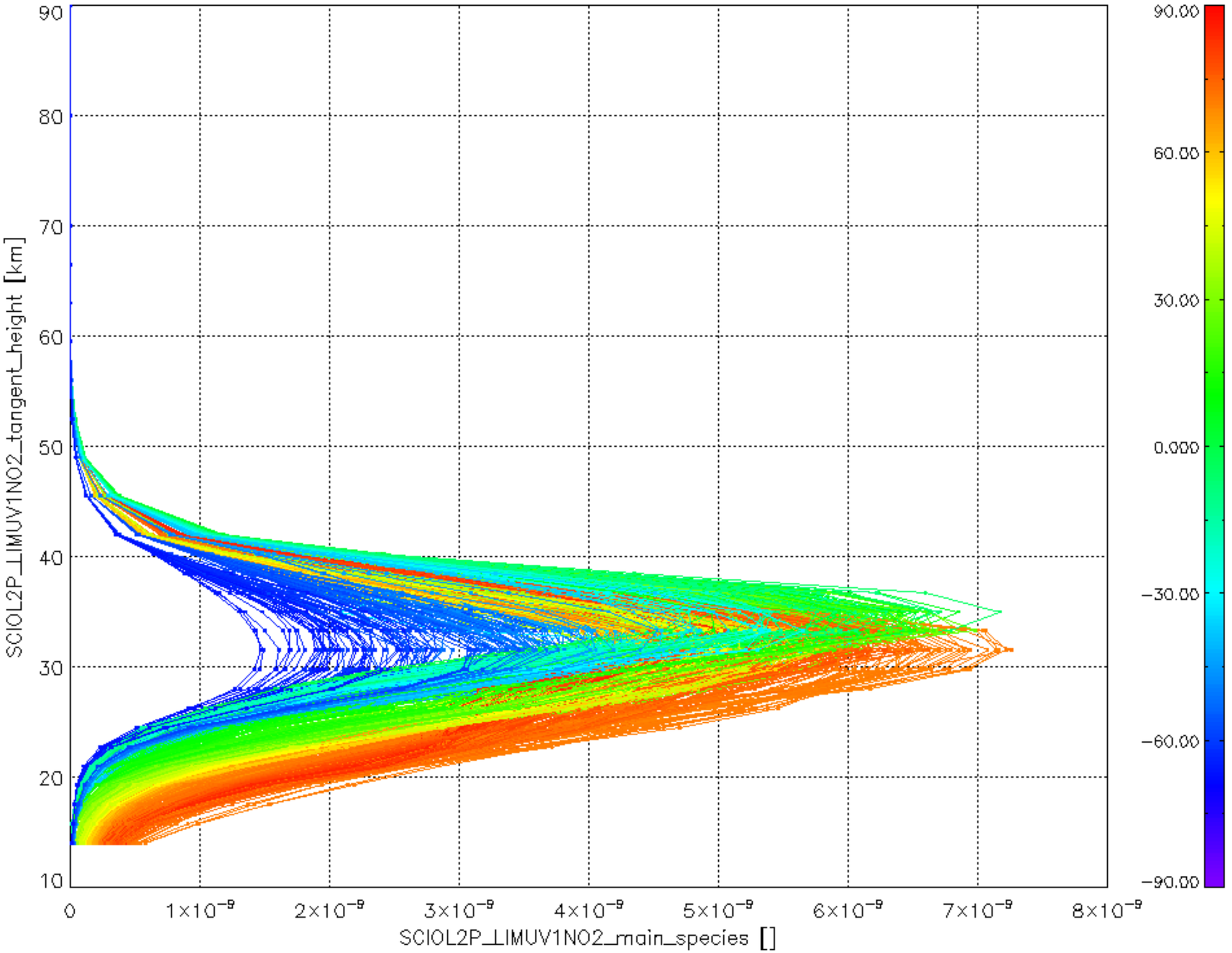

Time trend plot of SCIOL2P_NADIR3CO_vcd [molecules/cm2].
Value
2.5×10^18
2.0×10^18
1.5×10^18
1.0×10^18
5.0×10^17
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]
Time trend plot of SCIOL2P_NADIR3CO_vcd_err [molecules/cm2].
Value
2.5×10^18
2.0×10^18
1.5×10^18
1.0×10^18
5.0×10^17
0
011514 110505
025504 110505
043537 110505
061528 110505
075500 110505
093551 110505
111624 110505
125615 110505
143647 110505
161720 110505
175711 110505
193744 110505
211734 110505
225807 110505
Time [HHMMSS, YYMMDD]


SCIOL2P_NADIR3CO_vcd for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
2.500E+18
2.000E+18
1.500E+18
1.000E+18
5.000E+17
0.000
−90


SCIOL2P_NADIR3CO_vcd_err for 05MAY2011 00:00:00 to 06MAY2011 00:00:00
2.500E+18
2.000E+18
1.500E+18
1.000E+18
5.000E+17
0.000
−90


Plot of SCIOL2P_LIMUV003_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).
SCIOL2P_LIMUV003_tangent_height [km]
90
80
70
60
50
40
30
20
10
0
2.0×10⁻⁶
4.0×10⁻⁶
6.0×10⁻⁶
8.0×10⁻⁶
1.0×10⁻⁵
1.2×10⁻⁵
1.4×10⁻⁵
1.6×10⁻⁵
SCIOL2P_LIMUV003_main_species []
90.00
60.00
30.00
0.000
−30.00
−60.00
−90.00

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).