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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	1.6 (28-07-2008)
Time of report generation	05JUN2009 18:21:34
Data source version	SCIA-OL/3.01-R
Processing scope for products	11MAY2009 00:00:00 to 12MAY2009 00:00:00
Start time of first product within scope	10MAY2009 22:44:48
Stop time of last product within scope	12MAY2009 00:48:55
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__2PRDPA20090510_224448_000033252078_00488_37616_2467.N1	10MAY2009 22:44:48	10MAY2009 23:40:13	0	GOOD
1	SCI_OL__2PRDPA20090511_002523_000033122078_00489_37617_2468.N1	11MAY2009 00:25:23	11MAY2009 01:20:36	0	GOOD
2	SCI_OL__2PRDPA20090511_020559_000033252078_00490_37618_2462.N1	11MAY2009 02:05:59	11MAY2009 03:01:24	0	GOOD
3	SCI_OL__2PRDPA20090511_034634_000033122078_00491_37619_2450.N1	11MAY2009 03:46:34	11MAY2009 04:41:47	0	GOOD
4	SCI_OL__2PRDPA20090511_052710_000033252078_00492_37620_2463.N1	11MAY2009 05:27:10	11MAY2009 06:22:36	0	GOOD
5	SCI_OL__2PRDPA20090511_070746_000033122078_00493_37621_2464.N1	11MAY2009 07:07:46	11MAY2009 08:02:59	0	GOOD
6	SCI_OL__2PRDPA20090511_102857_000033122078_00495_37623_2471.N1	11MAY2009 10:28:57	11MAY2009 11:24:10	0	GOOD
7	SCI_OL__2PRDPA20090511_120933_000033252078_00496_37624_2472.N1	11MAY2009 12:09:33	11MAY2009 13:04:58	0	GOOD
8	SCI_OL__2PRDPA20090511_135008_000033122078_00497_37625_2492.N1	11MAY2009 13:50:08	11MAY2009 14:45:21	0	GOOD
9	SCI_OL__2PRDPA20090511_153044_000033252078_00498_37626_2493.N1	11MAY2009 15:30:44	11MAY2009 16:26:09	0	GOOD
10	SCI_OL__2PRDPA20090511_171040_000033682078_00499_37627_2494.N1	11MAY2009 17:10:40	11MAY2009 18:06:48	0	GOOD
11	SCI_OL__2PRDPA20090511_185115_000033812078_00500_37628_2495.N1	11MAY2009 18:51:15	11MAY2009 19:47:37	0	GOOD
12	SCI_OL__2PRDPA20090511_203231_000033122078_00501_37629_2496.N1	11MAY2009 20:32:31	11MAY2009 21:27:44	0	GOOD
13	SCI_OL__2PRDPA20090511_221307_000033252079_00001_37630_2497.N1	11MAY2009 22:13:07	11MAY2009 23:08:32	0	GOOD
14	SCI_OL__2PRDPA20090511_235342_000033122079_00002_37631_2498.N1	11MAY2009 23:53:42	12MAY2009 00:48:55	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: 132734

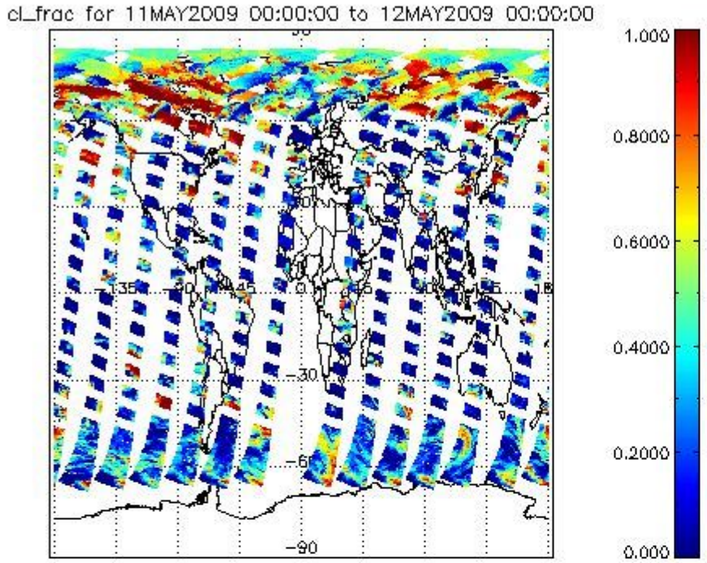
Total number of cloud data DSRs with good quality flag (=0): 132734 (100.0 %)

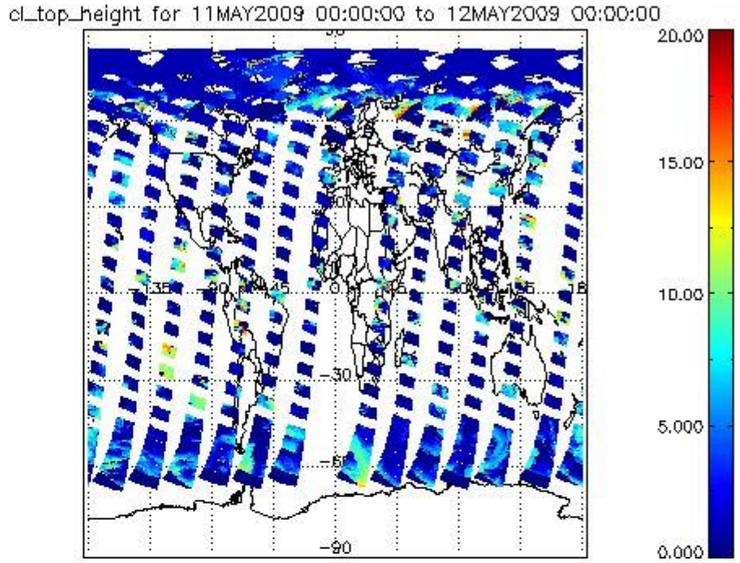
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	132734	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	132734	0.17103	0.12500	0.12500	0.25000	0.060292	s
CL_FRAC	132734	0.34816	0.30231	0.0000	1.0000	0.30695	-
CL_FRAC_ERR	132734	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	132734	5.4730	4.0000	4.0000	8.0000	1.9293	
PMD_READ_CL[0]	132734	0.33221	0.0000	0.0000	8.0000	1.3705	-
PMD_READ_CL[1]	132734	1.7021	0.0000	0.0000	8.0000	2.7482	-
CL_TOP_HEIGHT	117935	2.7435	1.1190	0.0000	17.000	3.2691	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	117935	62.561	100.00	0.0000	101.00	44.003	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	132734	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	132734	11001011	11000100	11000000	11100000	3491.8	flags
AERO_ABSO_IND	132734	3.8101	4.5039	-0.74286	15.119	2.4800	
AERO_IND_DIAG	132734	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	132734	01011000	00000000	00000000	11000000	24510.	flags

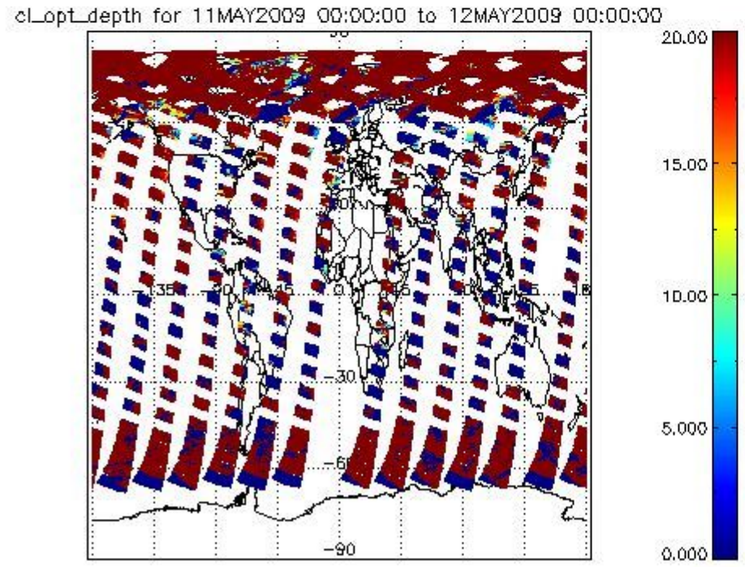
Time and geolocation plots:

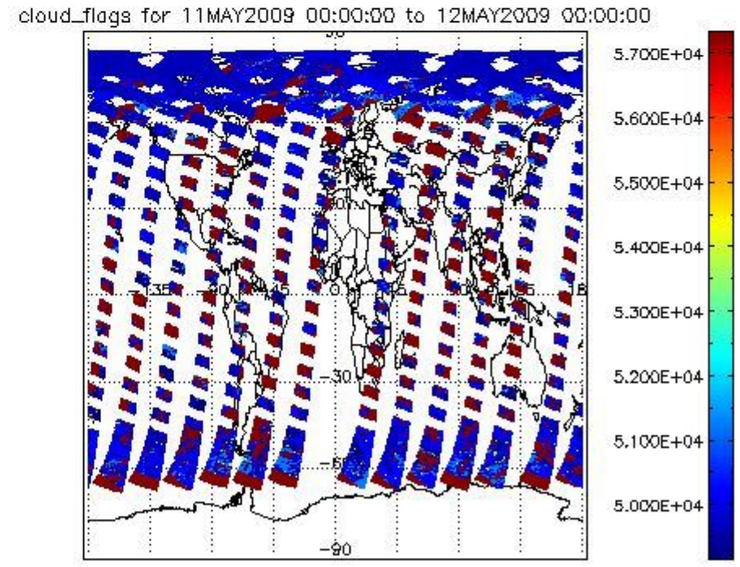
Plots are available for the following parameters:

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









2.2.2 Nadir

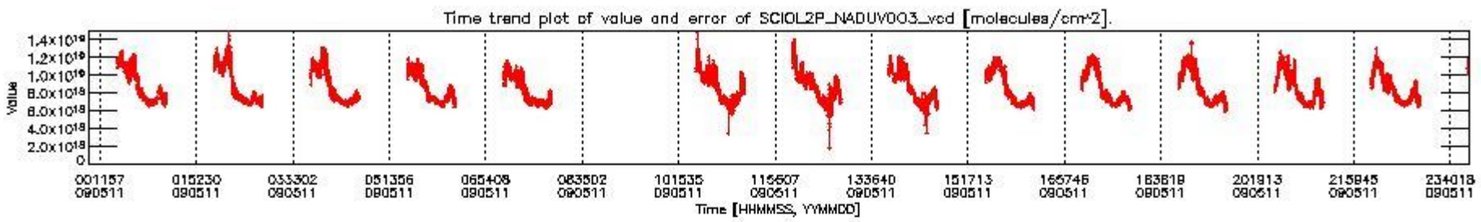
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

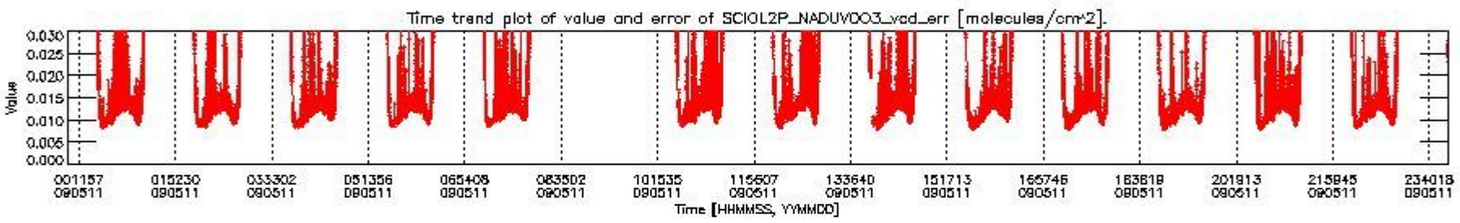
The following data items are currently included into this section:

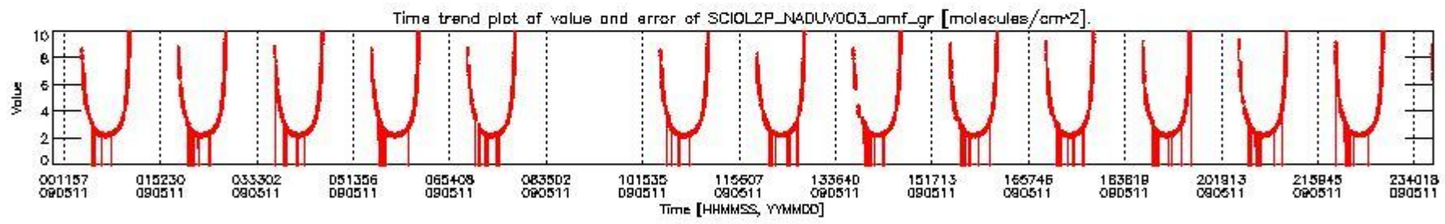
Number	Data item ID
0	SCIOL2P_NADUV0O3_vcd
1	SCIOL2P_NADUV0O3_vcd_err
2	SCIOL2P_NADUV0O3_amf_gr

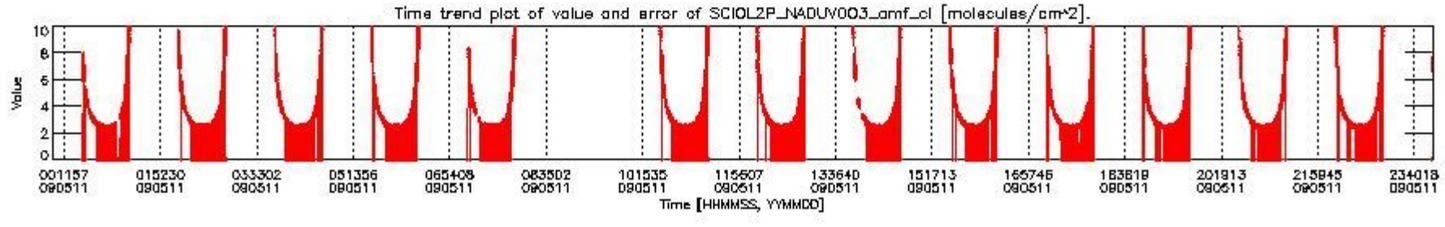
3	SCIOL2P_NADUV0O3_amf_cl
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

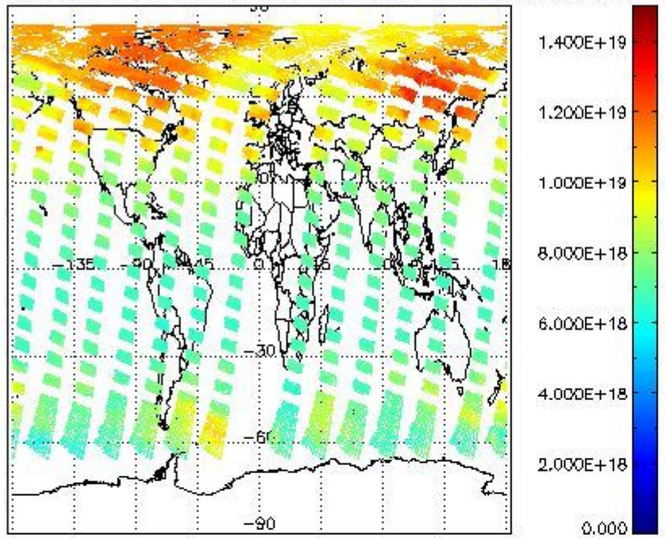




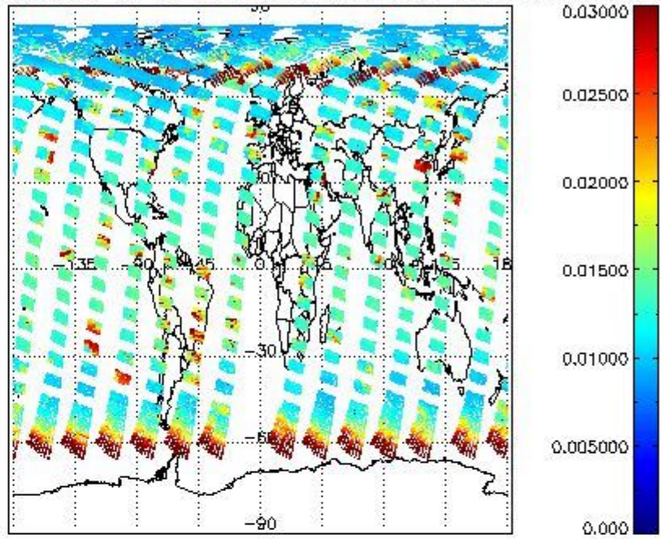




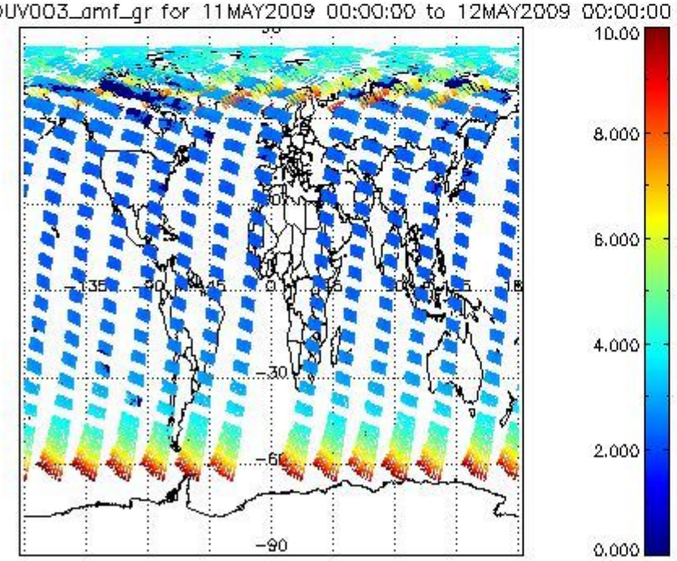
SCIOL2P_NADUV003_vcd for 11MAY2009 00:00:00 to 12MAY2009 00:00:00



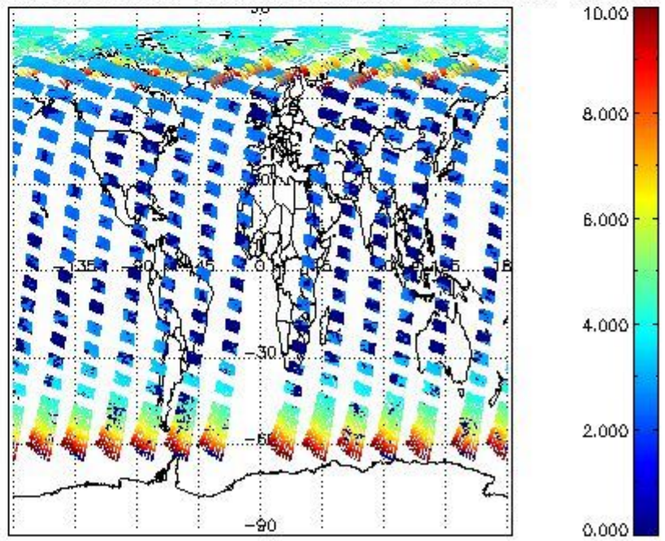
SCIOL2P_NADUV003_vcd_err for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

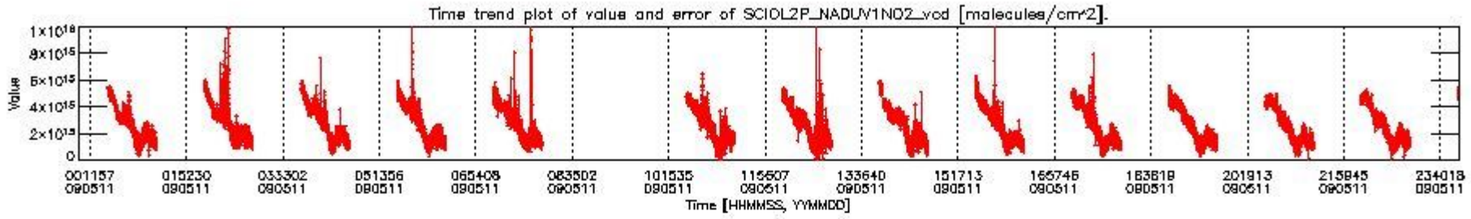


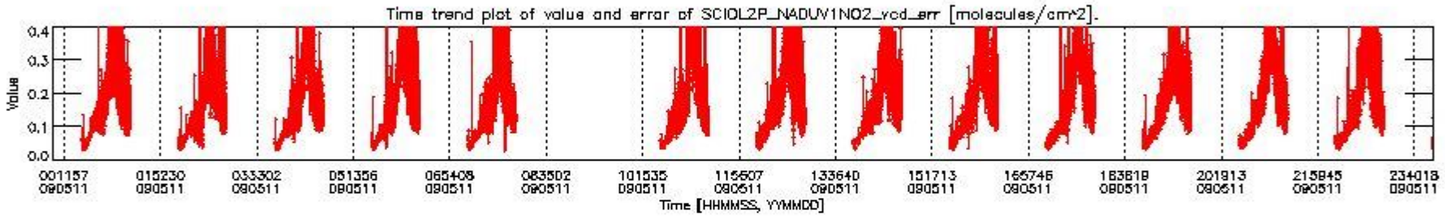
SCIOL2P_NADUV003_amf_gr for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

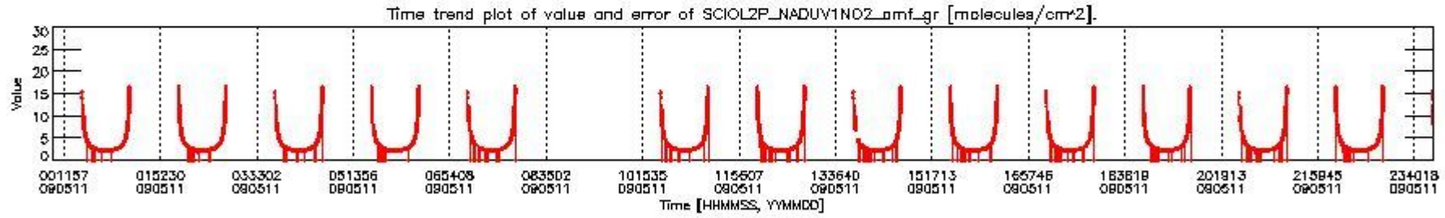


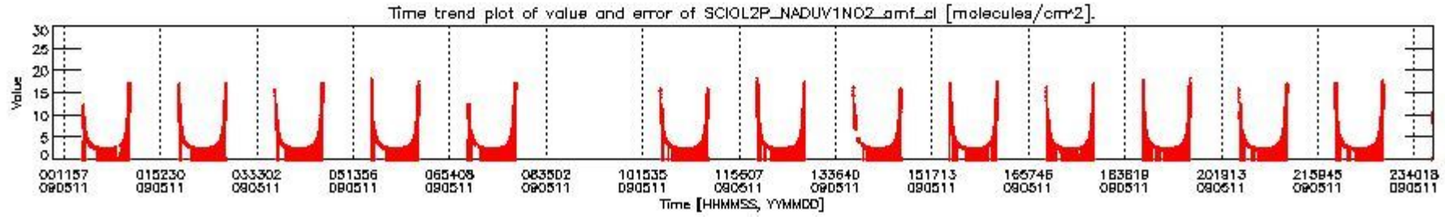
SCIOL2P_NADUV003_amf_cl for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

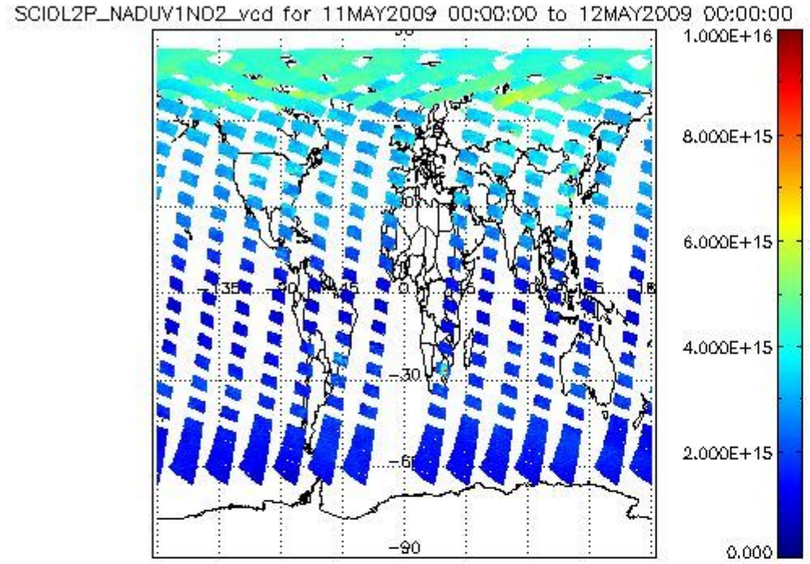


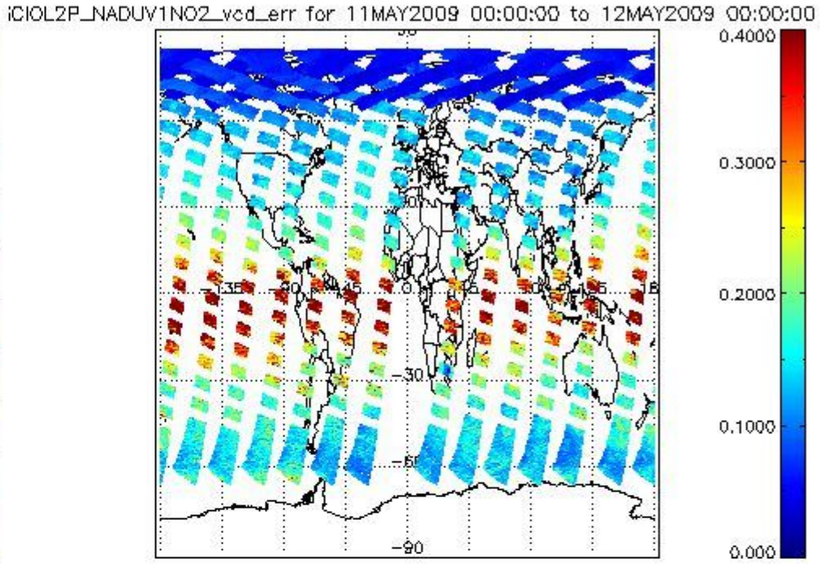

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165745 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

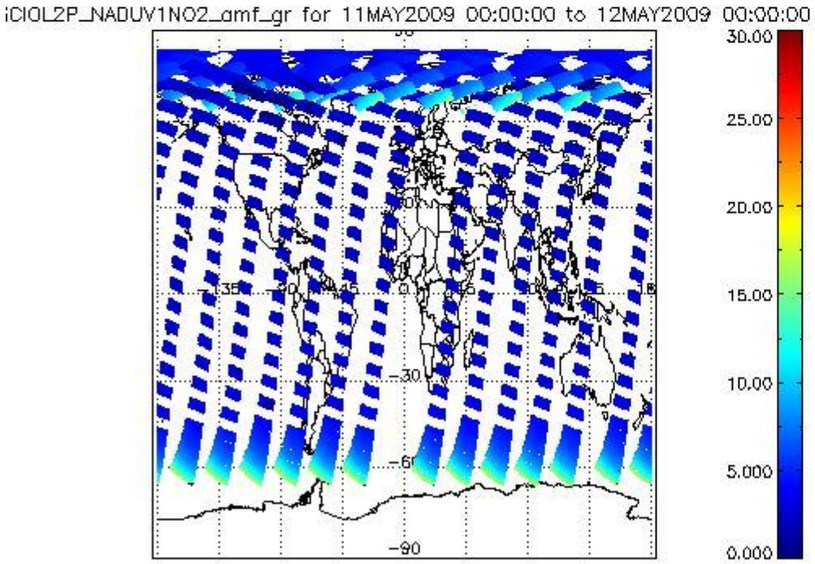

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd_err [molecules/cm^2].
Value
0.4
0.3
0.2
0.1
0.0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165745 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

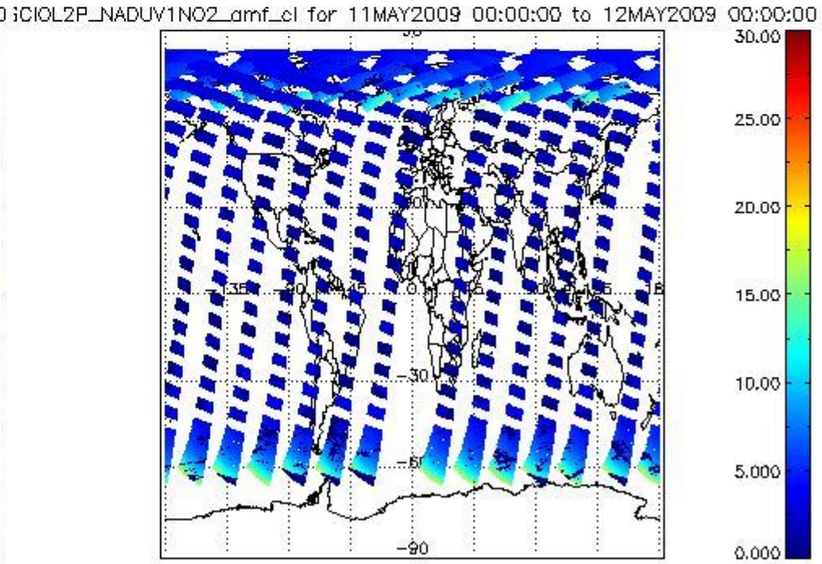

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165745 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_cl [molecules/cm^2].
Value
30
25
20
15
10
5
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165745 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]









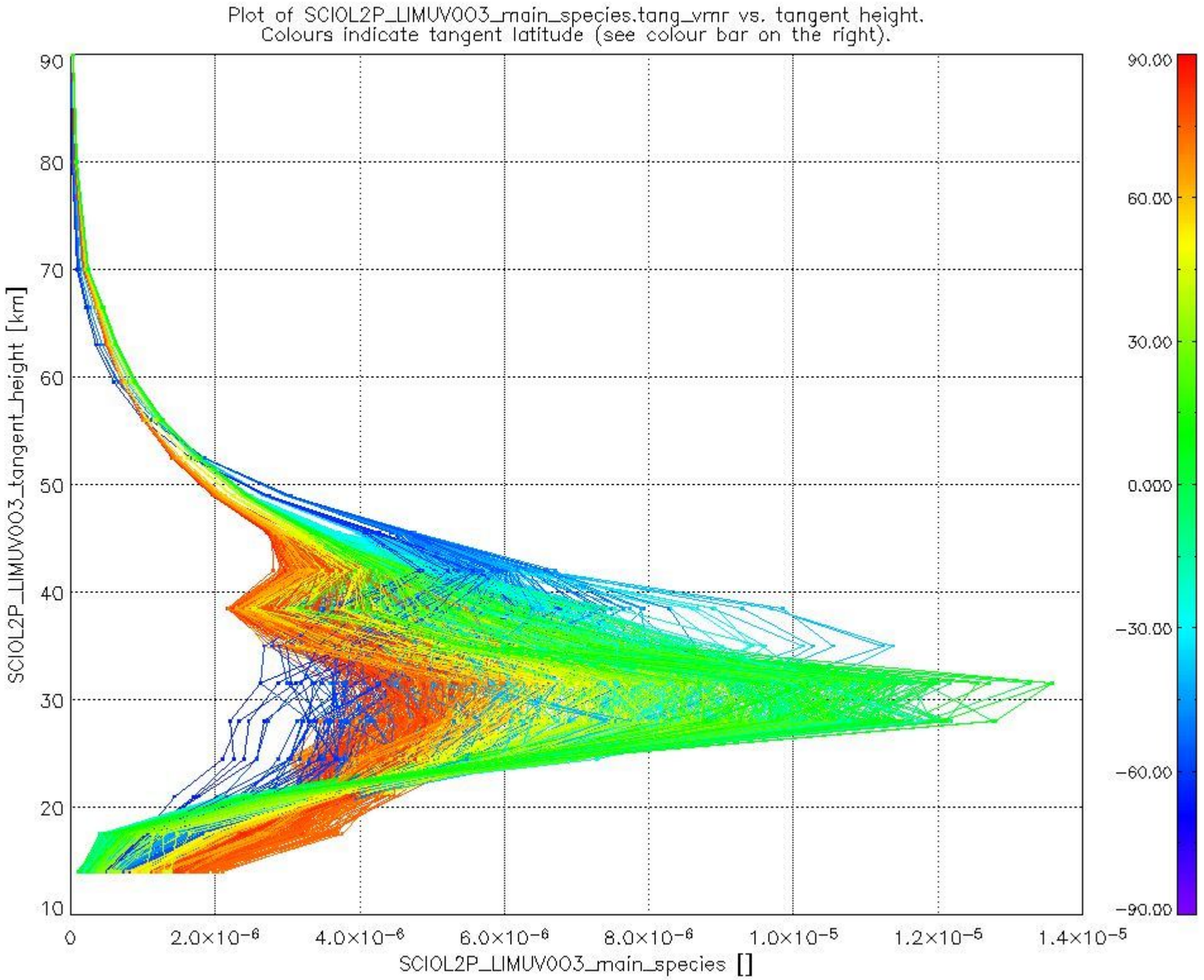
2.2.3 Limb

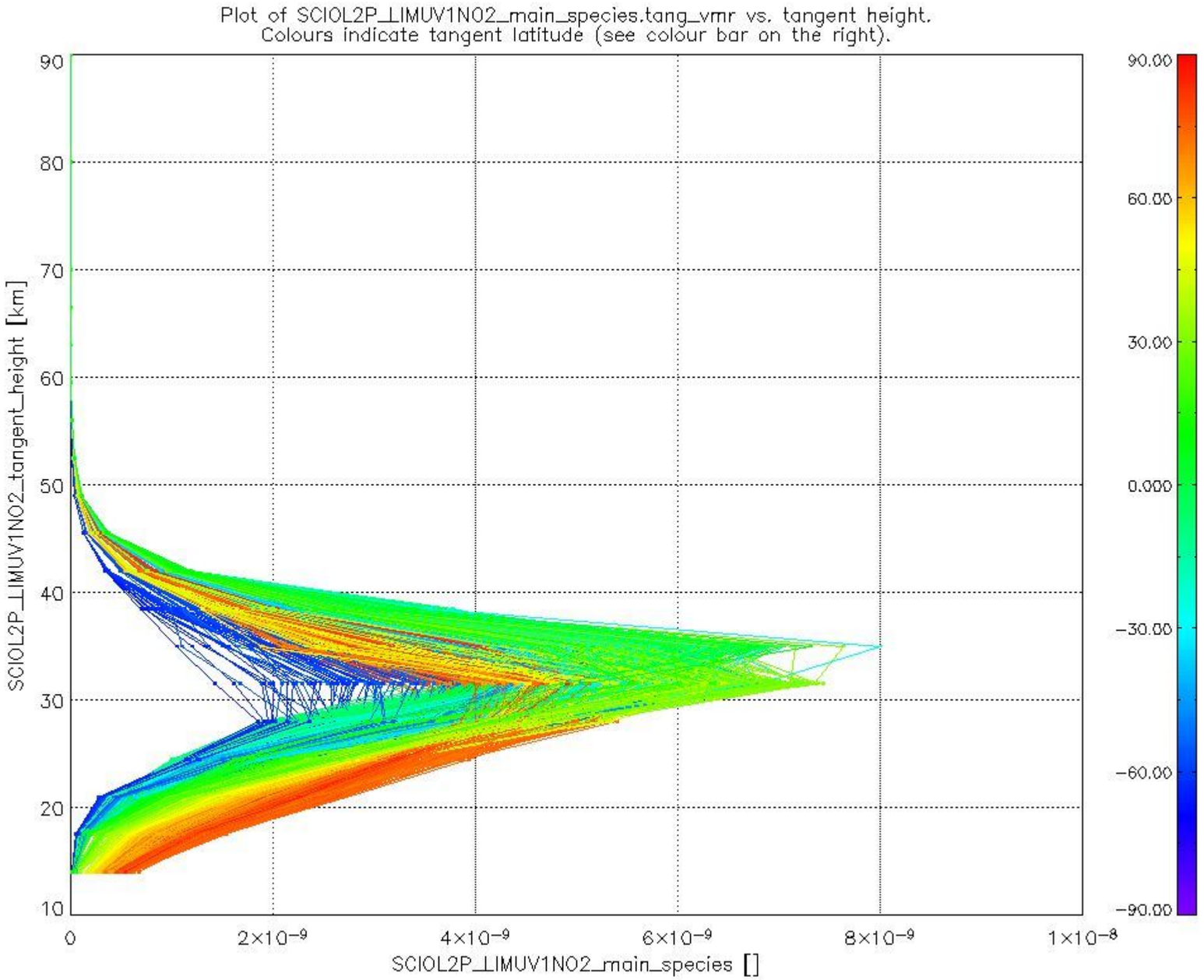
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV0O3_main_species
1	SCIOL2PLIMUV1NO2_main_species

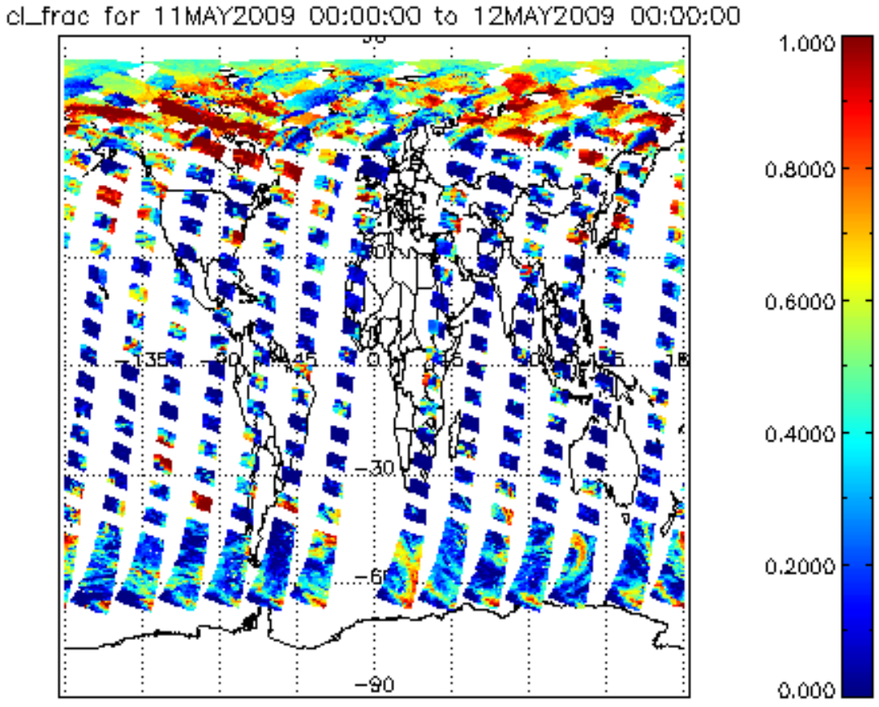
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

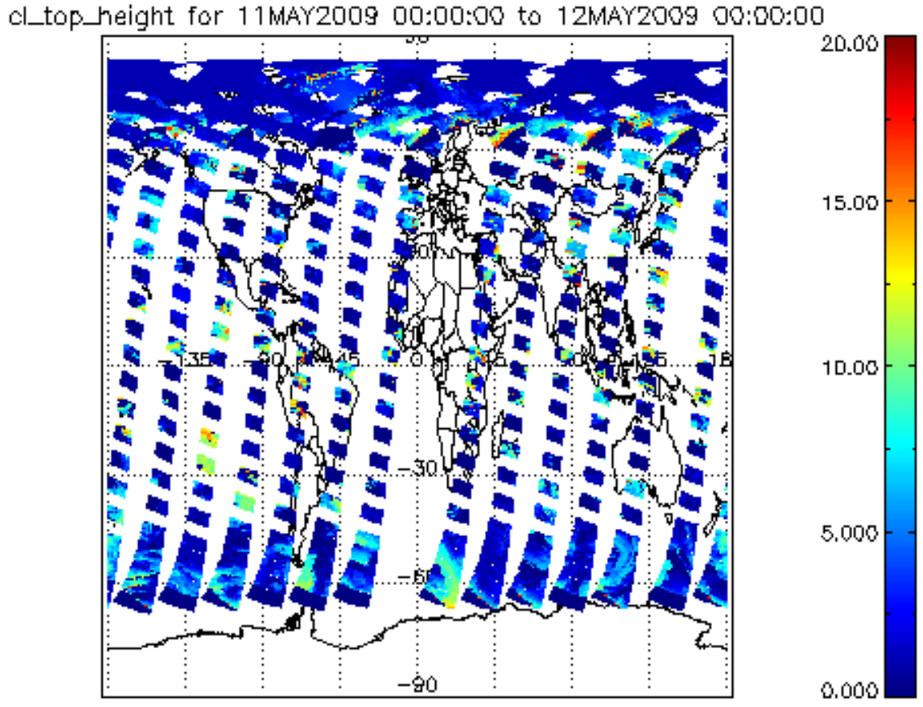


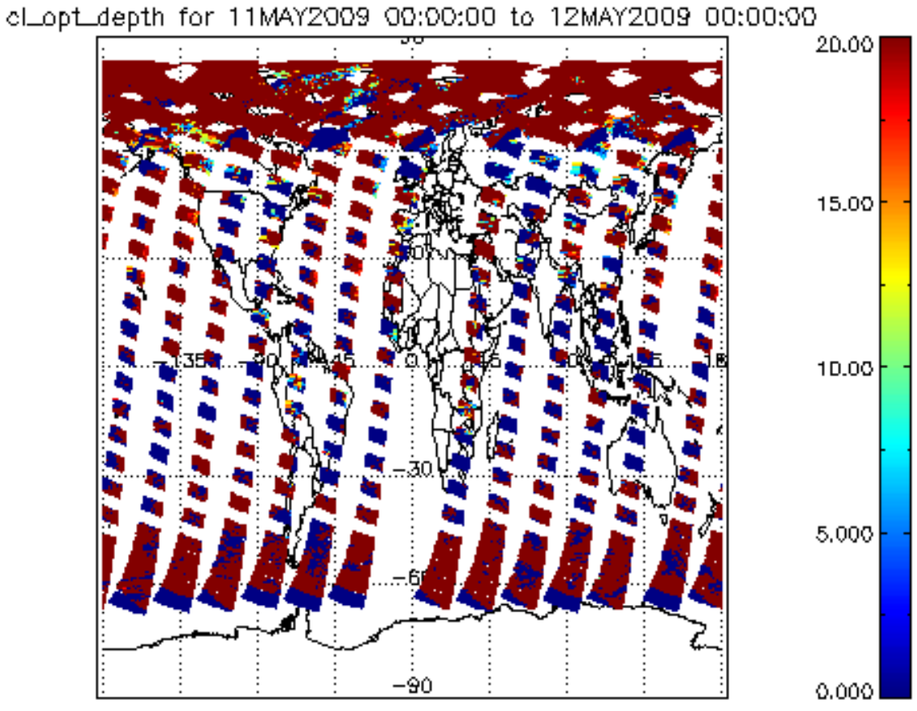


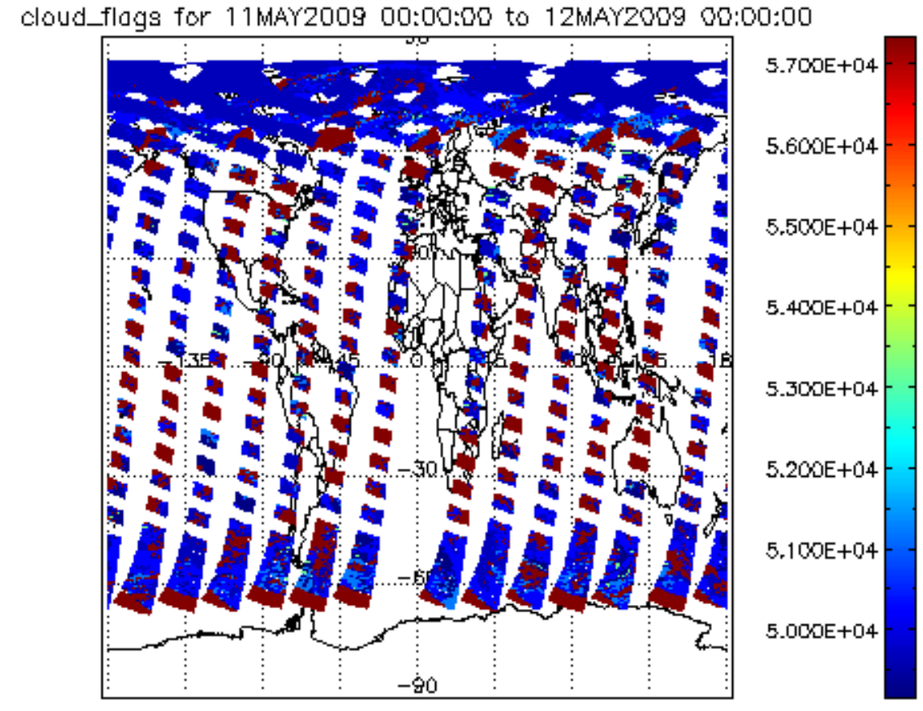
2.3 ADF monitoring

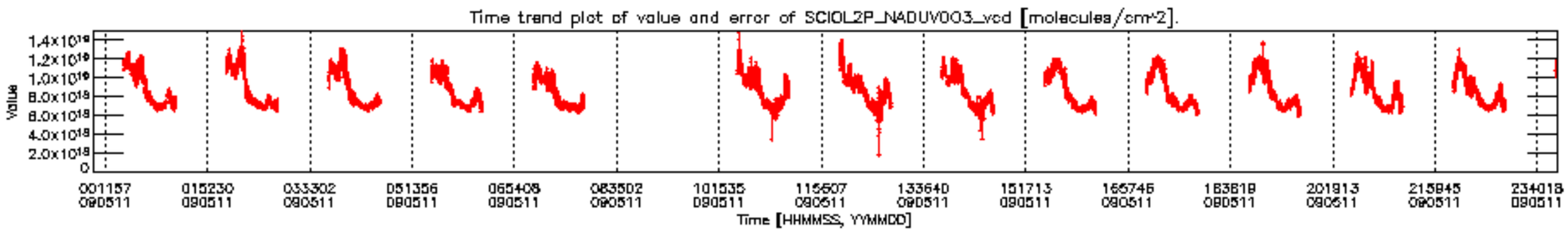
Number	ADF
	IN_ (INITIALISATION_FILE)
0	SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959
	ECF (ECMWF_FILE)
1	NOT USED

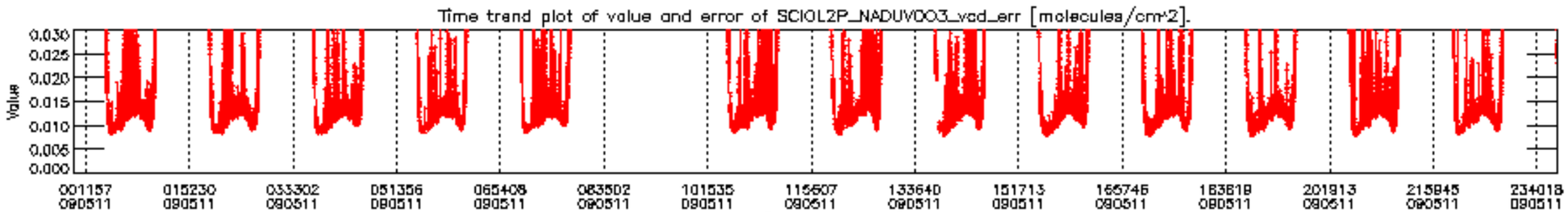

cl_frac for 11MAY2009 00:00:00 to 12MAY2009 00:00:00
1.000
0.8000
0.6000
0.4000
0.2000
0.000
-90

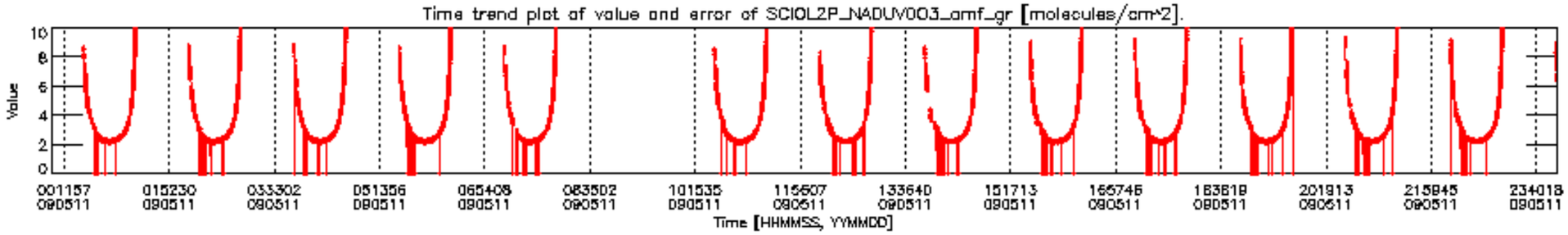

cl_top_height for 11MAY2009 00:00:00 to 12MAY2009 00:00:00
20.00
15.00
10.00
5.000
0.000
-90

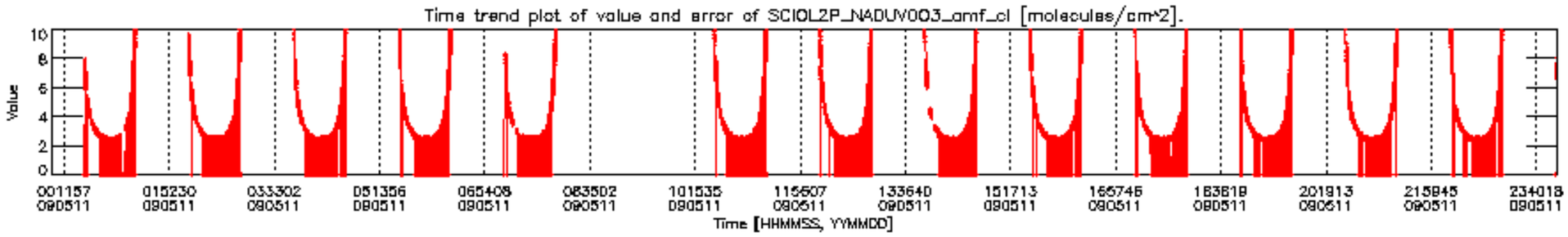

cl_opt_depth for 11MAY2009 00:00:00 to 12MAY2009 00:00:00
20.00
15.00
10.00
5.000
0.000
-90


cloud_flags for 11MAY2009 00:00:00 to 12MAY2009 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

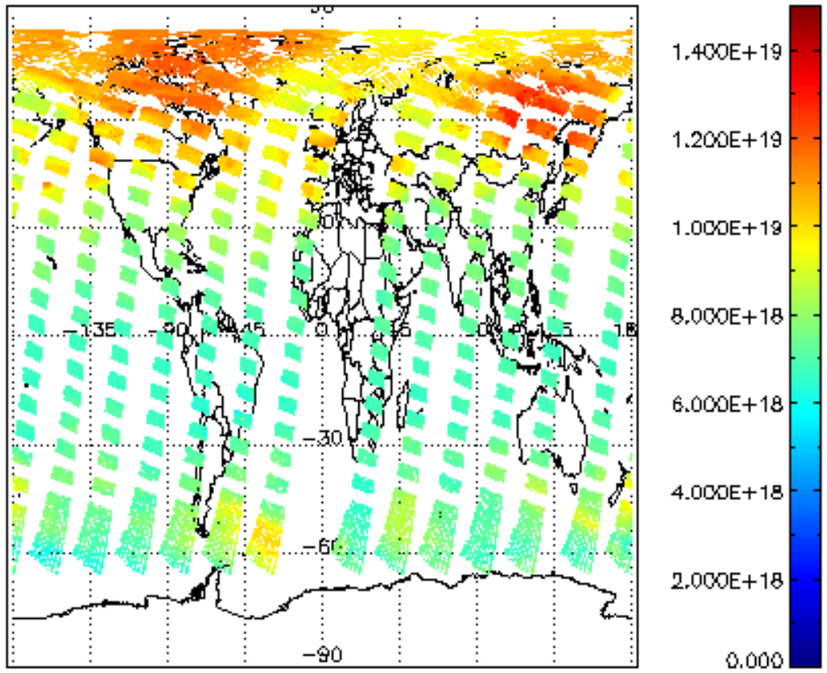

Time trend plot of value and error of SCIOL2P_NADUV003_vcd [molecules/cm^2].
Value
1.4x10^18
1.2x10^18
1.0x10^18
8.0x10^17
6.0x10^17
4.0x10^17
2.0x10^17
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV003_vcd_err [molecules/cm^2].
Value
0.030
0.025
0.020
0.015
0.010
0.005
0.000
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

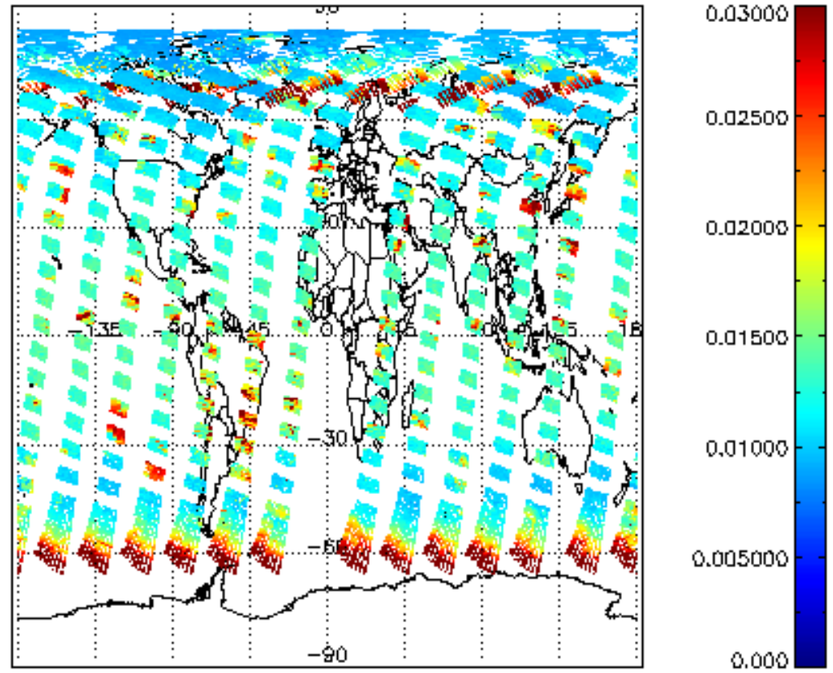

Time trend plot of value and error of SCIOL2P_NADUV003_amf_gr [molecules/cm^2].
Value
10
8
6
4
2
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV003_amf_cl [molecules/cm^2].
Value
10
8
6
4
2
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

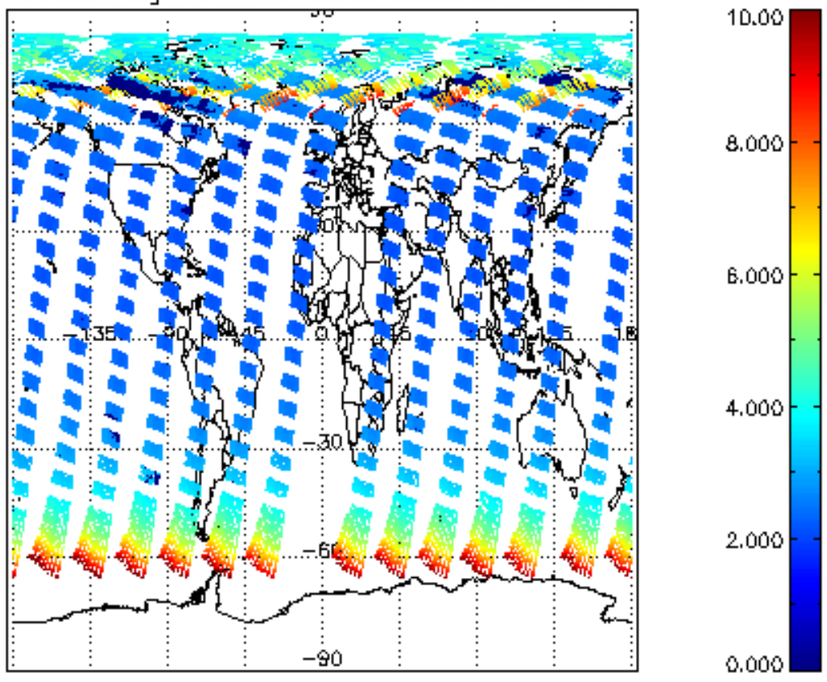
SCIOL2P_NADUV003_vcd for 11MAY2009 00:00:00 to 12MAY2009 00:00:00



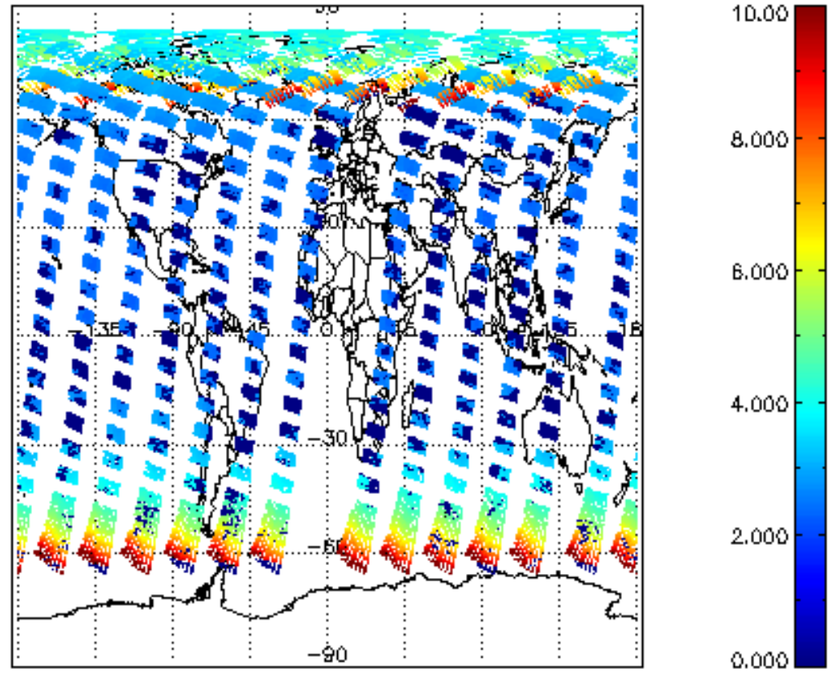
SCIOL2P_NADUV003_vcd_err for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

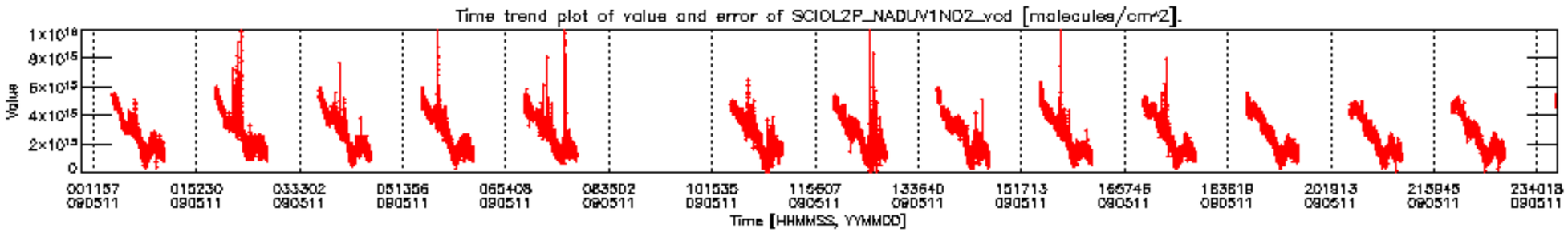


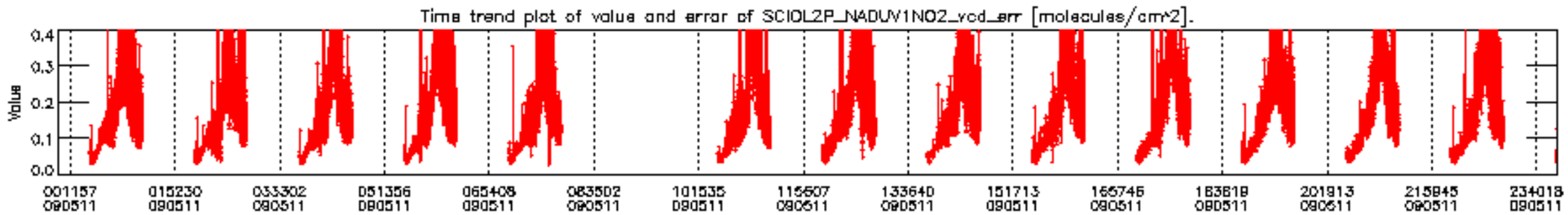
SCIOL2P_NADUV003_amf_gr for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

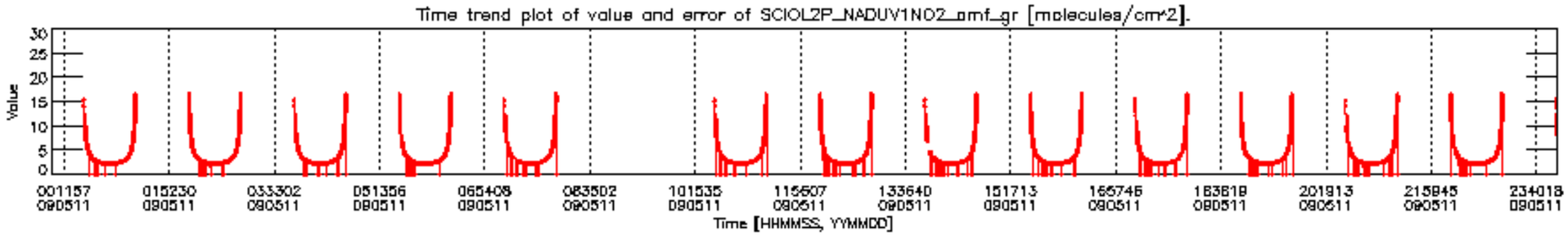


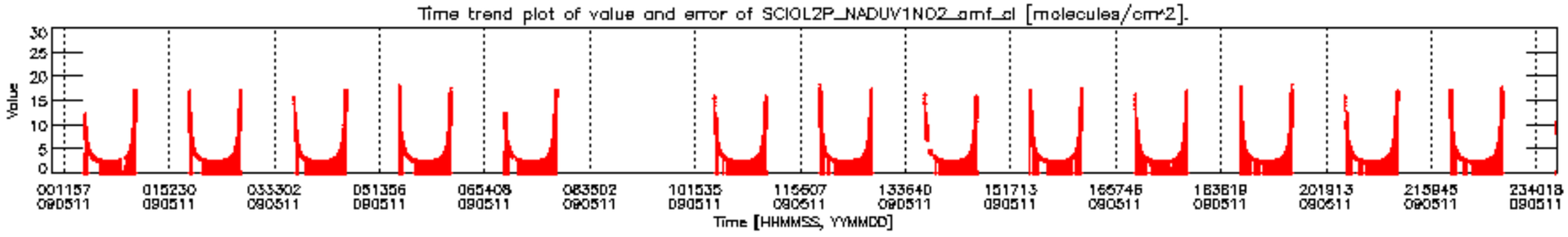
SCIOL2P_NADUV003_amf_cl for 11MAY2009 00:00:00 to 12MAY2009 00:00:00



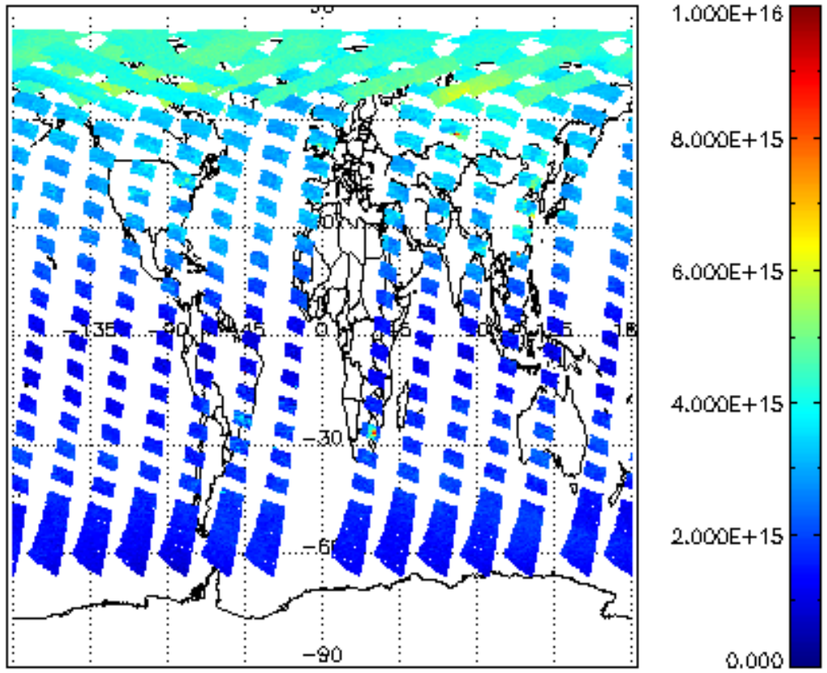

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd_err [molecules/cm^2].
Value
0.4
0.3
0.2
0.1
0.0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

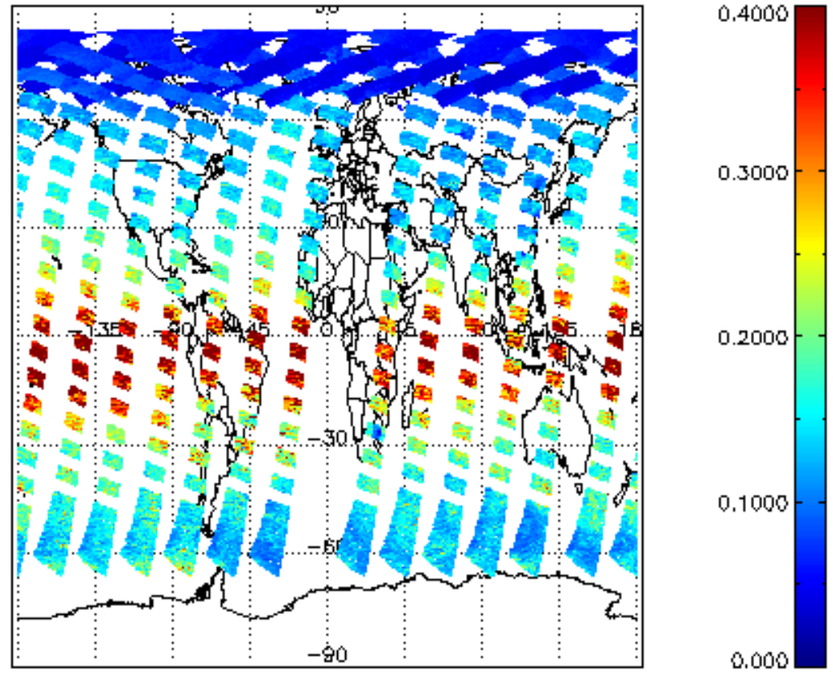

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_cl [molecules/cm^2].
Value
30
25
20
15
10
5
0
001157 090511
015230 090511
033302 090511
051356 090511
065408 090511
083502 090511
101535 090511
115607 090511
133640 090511
151713 090511
165746 090511
183819 090511
201913 090511
215945 090511
234018 090511
Time [HHMMSS, YYMMDD]

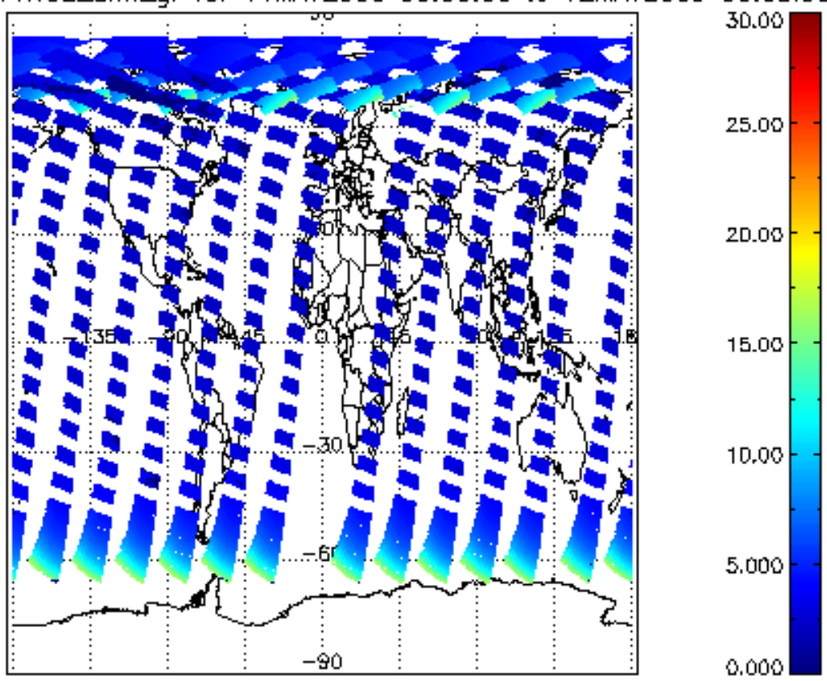
SCIDL2P_NADUV1NO2_vcd for 11MAY2009 00:00:00 to 12MAY2009 00:00:00



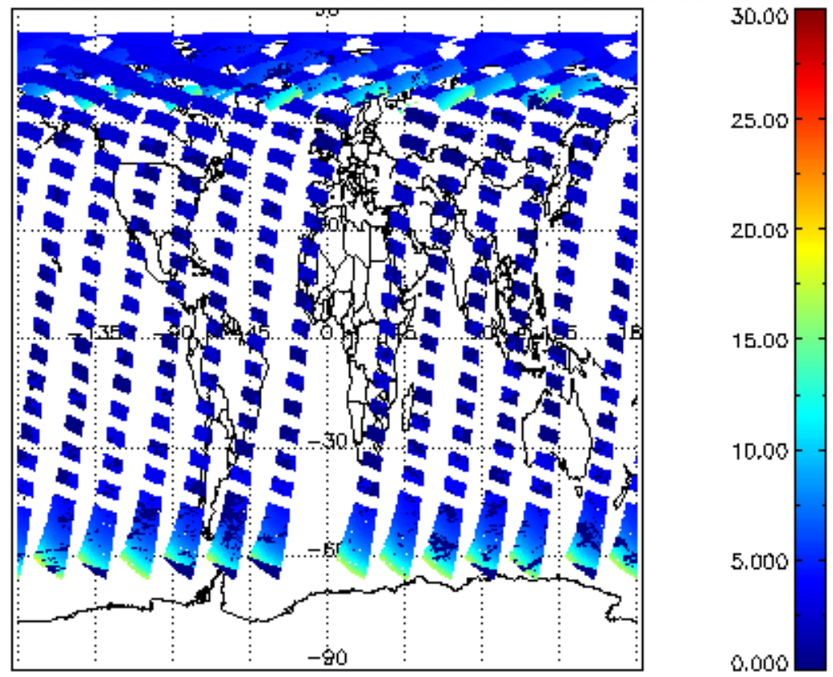
iCIOL2P_NADUV1NO2_vcd_err for 11MAY2009 00:00:00 to 12MAY2009 00:00:00

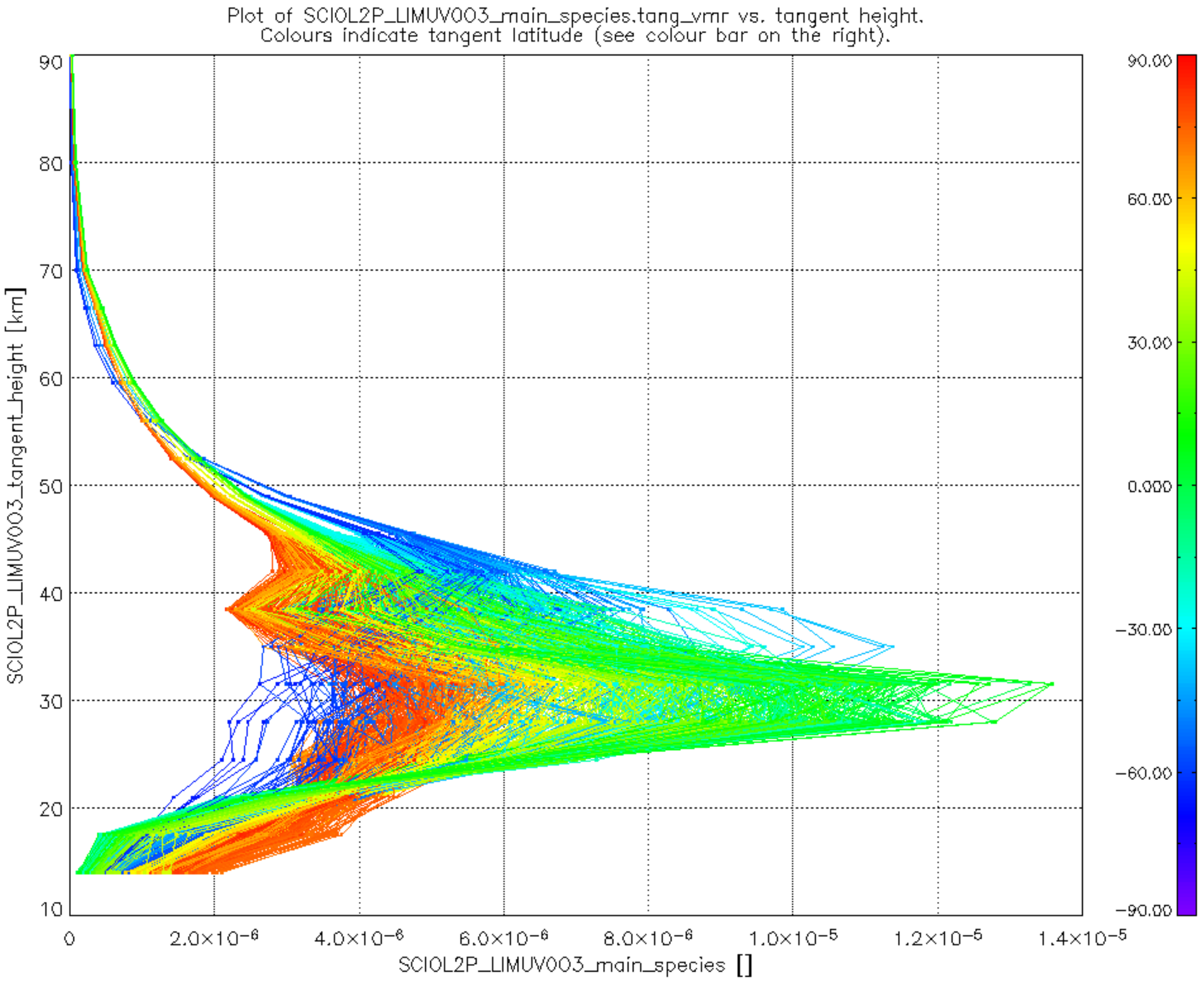


iCIOL2P_NADUV1NO2_amf_gr for 11MAY2009 00:00:00 to 12MAY2009 00:00:00



iCIOL2P_NADUV1NO2_amf_cl for 11MAY2009 00:00:00 to 12MAY2009 00:00:00




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
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).