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 chacteristics of the data that are included into this report.

Item	Value
Report version	1.5 (01-07-2008)
Time of report generation	28JUL2008 15:41:49
Data source version	SCIA-OL/3.01-R
Processing scope for products	11JAN2004 00:00:00 to 12JAN2004 00:00:00
Start time of first product within scope	10JAN2004 22:49:00
Stop time of last product within scope	12JAN2004 00:53:16
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.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	SCI_OL__2PRDPA20040110_224900_000032932023_00173_09746_6153.N1	10JAN2004 22:49:00	10JAN2004 23:43:54	0	GOOD
1	SCI_OL__2PRDPA20040111_003100_000032372023_00174_09747_6407.N1	11JAN2004 00:31:00	11JAN2004 01:24:57	0	GOOD
2	SCI_OL__2PRDPA20040111_021012_000032932023_00175_09748_6034.N1	11JAN2004 02:10:12	11JAN2004 03:05:05	0	GOOD
3	SCI_OL__2PRDPA20040111_035211_000032372023_00176_09749_6328.N1	11JAN2004 03:52:11	11JAN2004 04:46:08	0	GOOD
4	SCI_OL__2PRDPA20040111_053123_000032932023_00177_09750_6278.N1	11JAN2004 05:31:23	11JAN2004 06:26:17	0	GOOD
5	SCI_OL__2PRDPA20040111_071322_000032372023_00178_09751_6020.N1	11JAN2004 07:13:22	11JAN2004 08:07:20	0	GOOD
6	SCI_OL__2PRDPA20040111_085234_000032932023_00179_09752_6255.N1	11JAN2004 08:52:34	11JAN2004 09:47:28	0	GOOD
7	SCI_OL__2PRDPA20040111_103434_000032372023_00180_09753_6281.N1	11JAN2004 10:34:34	11JAN2004 11:28:31	0	GOOD
8	SCI_OL__2PRDPA20040111_121346_000032932023_00181_09754_6233.N1	11JAN2004 12:13:46	11JAN2004 13:08:39	0	GOOD
9	SCI_OL__2PRDPA20040111_135545_000032372023_00182_09755_6056.N1	11JAN2004 13:55:45	11JAN2004 14:49:42	0	GOOD
10	SCI_OL__2PRDPA20040111_153457_000032932023_00183_09756_6025.N1	11JAN2004 15:34:57	11JAN2004 16:29:50	0	GOOD
11	SCI_OL__2PRDPA20040111_171538_000033322023_00184_09757_6041.N1	11JAN2004 17:15:38	11JAN2004 18:11:11	0	GOOD
12	SCI_OL__2PRDPA20040111_185539_000033492023_00185_09758_6074.N1	11JAN2004 18:55:39	11JAN2004 19:51:29	0	GOOD
13	SCI_OL__2PRDPA20040111_203808_000032372023_00186_09759_6154.N1	11JAN2004 20:38:08	11JAN2004 21:32:05	0	GOOD
14	SCI_OL__2PRDPA20040111_221720_000032932023_00187_09760_6358.N1	11JAN2004 22:17:20	11JAN2004 23:12:13	0	GOOD
15	SCI_OL__2PRDPA20040111_235919_000032372023_00188_09761_6314.N1	11JAN2004 23:59:19	12JAN2004 00:53:16	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: 112800

Total number of cloud data DSRs with good quality flag (=0): 112800 (100.0 %)

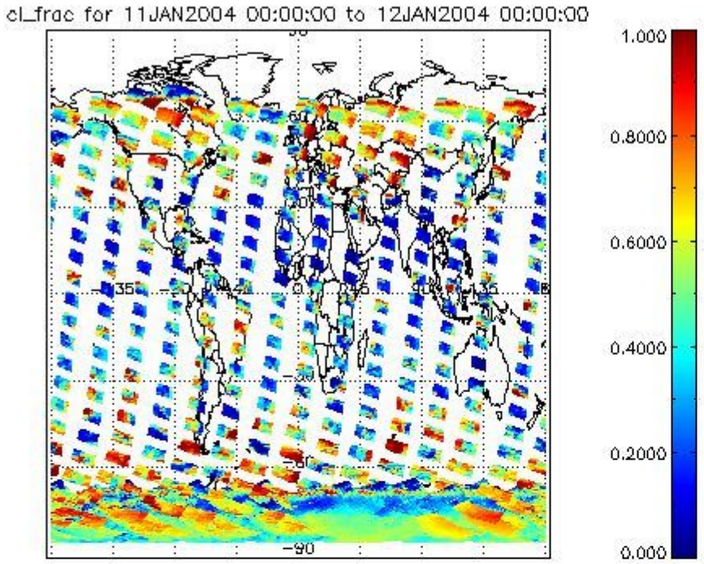
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	112800	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	112800	0.21680	0.25000	0.12500	1.0000	0.086618	s
CL_FRAC	112800	0.47699	0.48754	0.0000	1.0000	0.26874	-

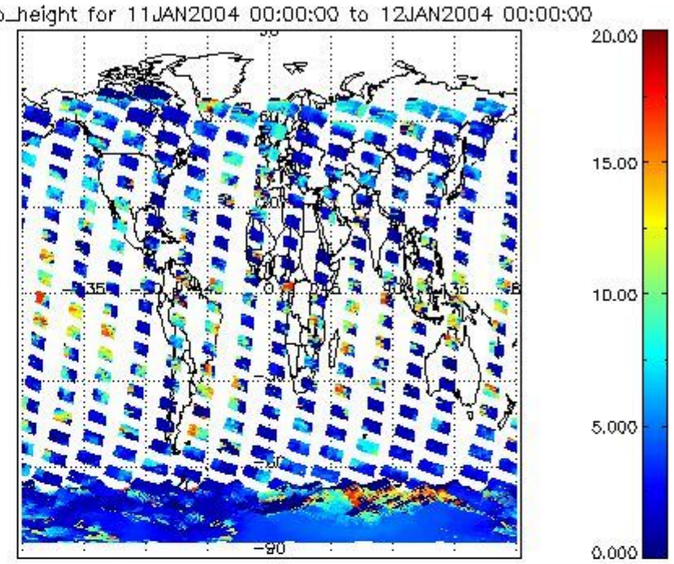
CL_FRAC_ERR	112800	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	112800	6.9376	8.0000	4.0000	32.000	2.7718	
PMD_READ_CL[0]	112800	0.31730	0.0000	0.0000	32.000	1.3165	-
PMD_READ_CL[1]	112800	0.23906	0.0000	0.0000	32.000	1.2843	-
CL_TOP_HEIGHT	103645	4.5875	3.4700	0.0000	17.000	3.9036	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	103645	47.431	30.760	0.0000	101.00	38.301	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	112800	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	112800	11000101	11000010	11000000	11100000	2280.4	flags
AERO_ABSO_IND	112800	0.57687	0.30167	-4.3612	10.311	1.2104	
AERO_IND_DIAG	112800	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	112800	01101000	11000000	00000000	11000000	24475.	flags

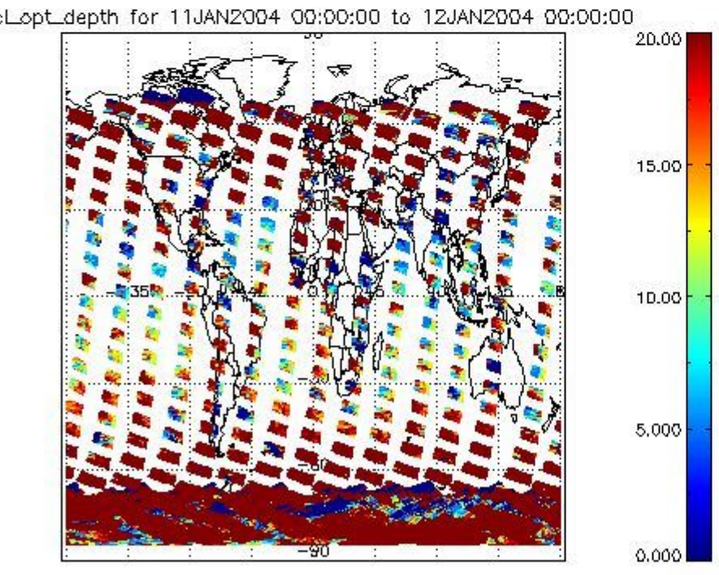
Time and geolocation plots:

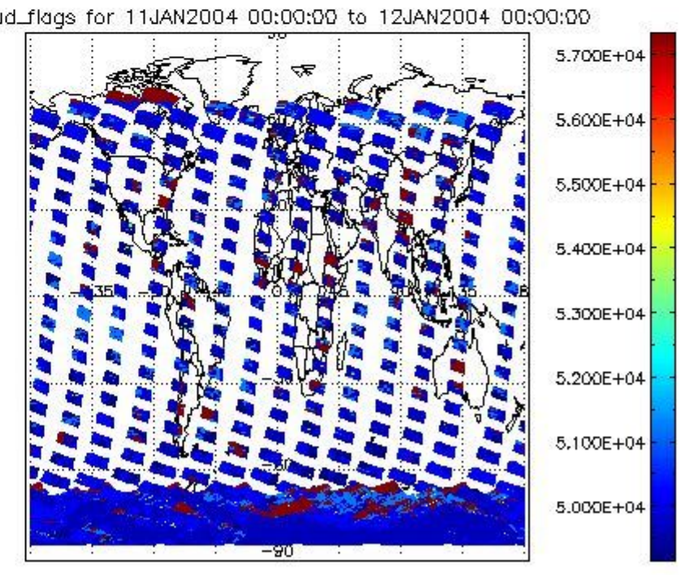
Plots are available for the following parameters:

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









2.2.2 Nadir

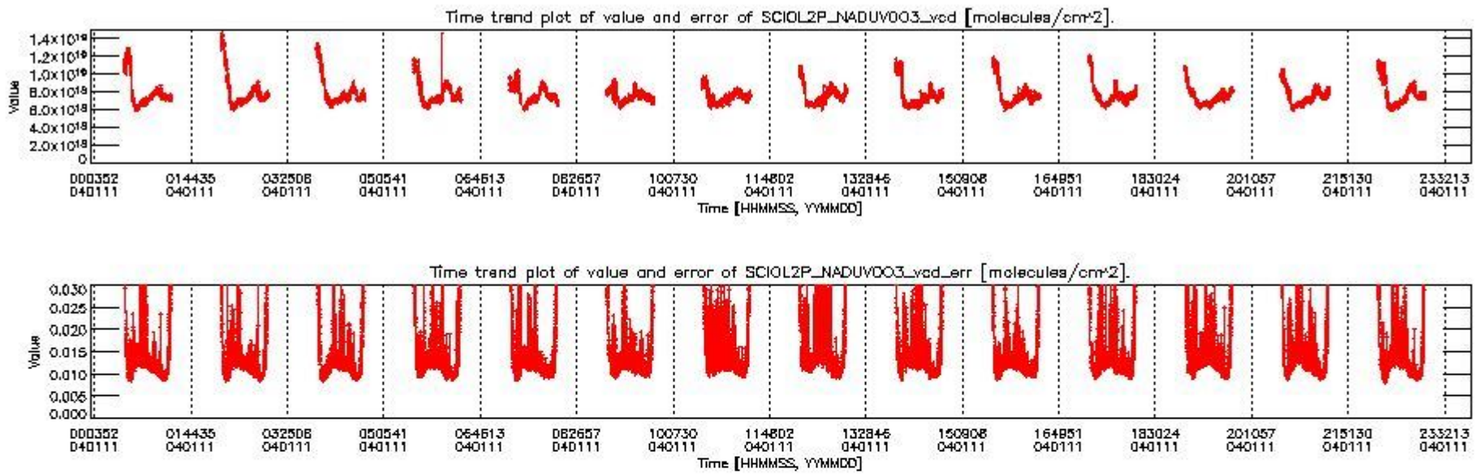
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

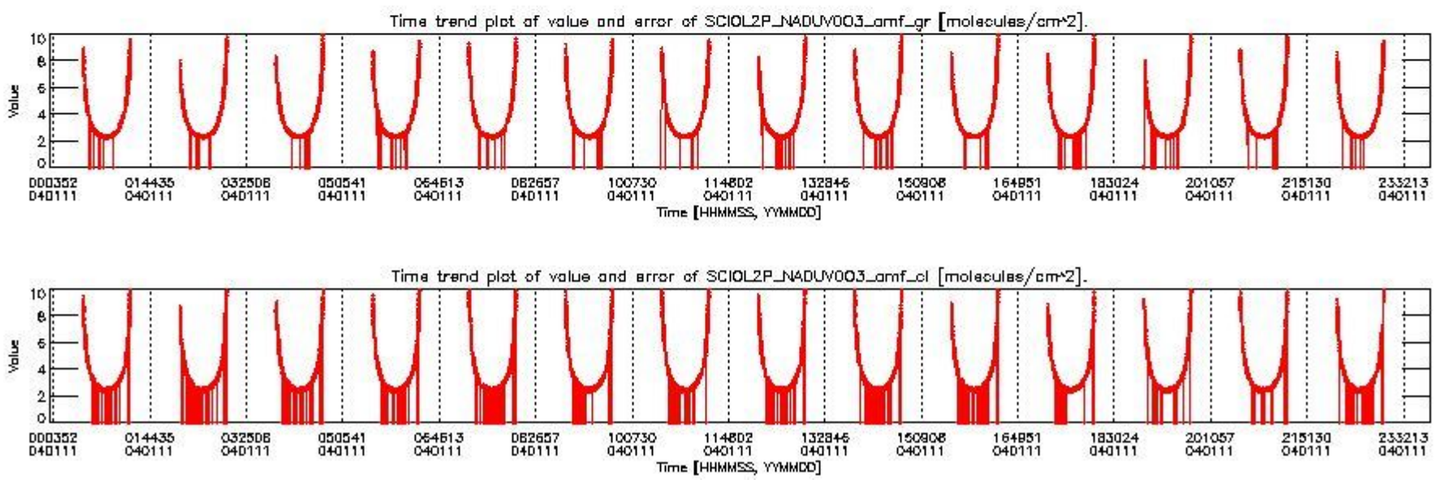
The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2P_NADUV0O3_vcd
1	SCIOL2P_NADUV0O3_vcd_err
2	SCIOL2P_NADUV0O3_amf_gr
3	SCIOL2P_NADUV0O3_amf_cl

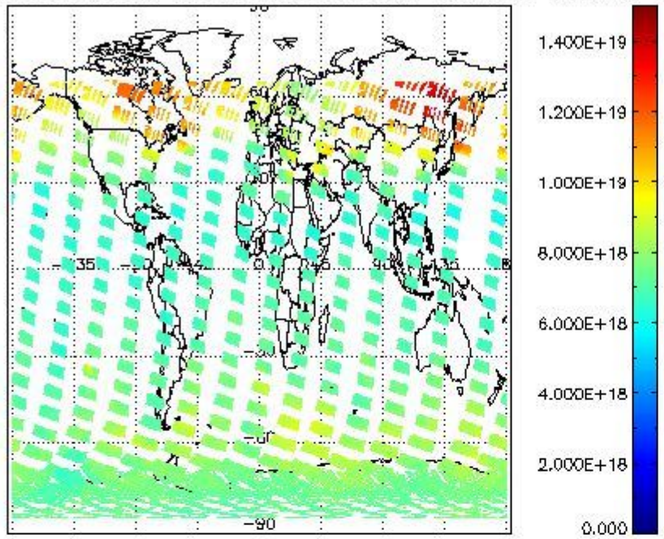
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

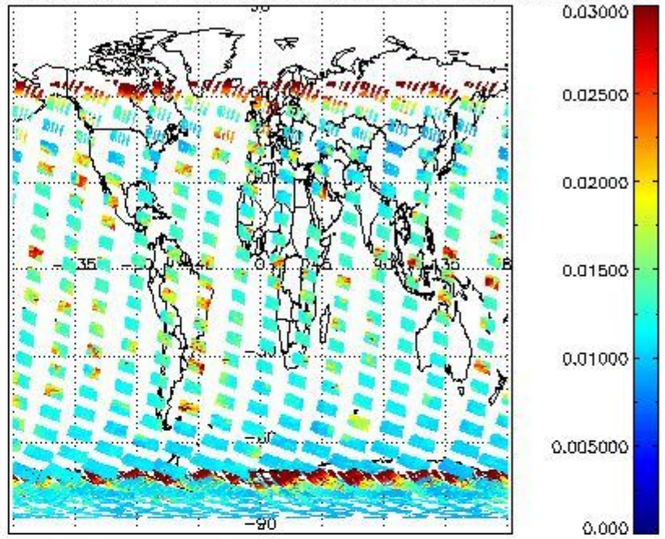




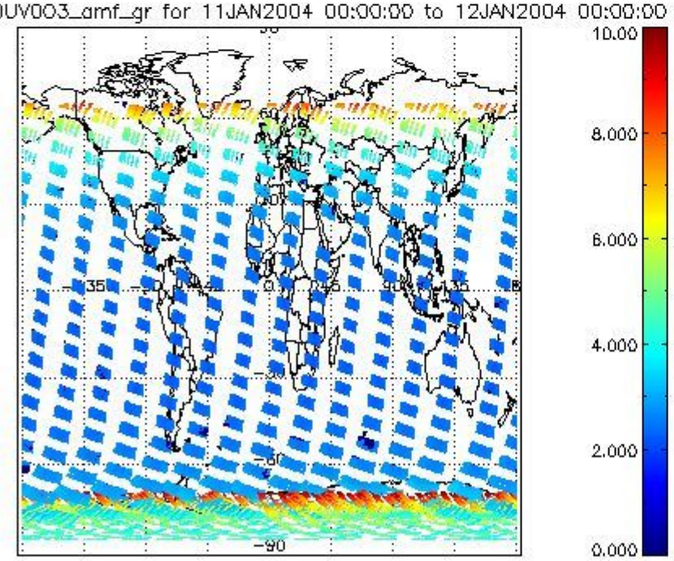
SCIOL2P_NADUV003_vcd for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



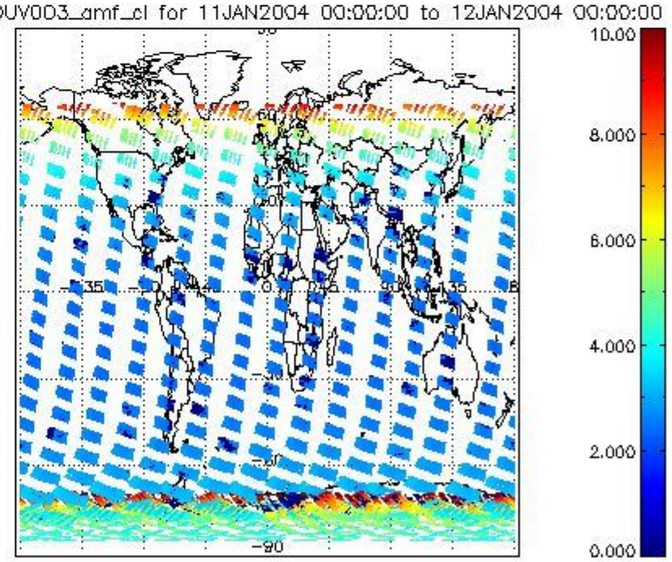
SCIOL2P_NADUV003_vcd_err for 11JAN2004 00:00:00 to 12JAN2004 00:00:00

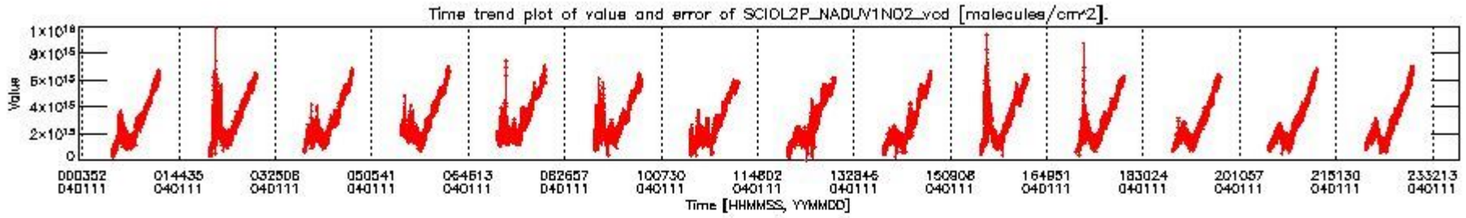


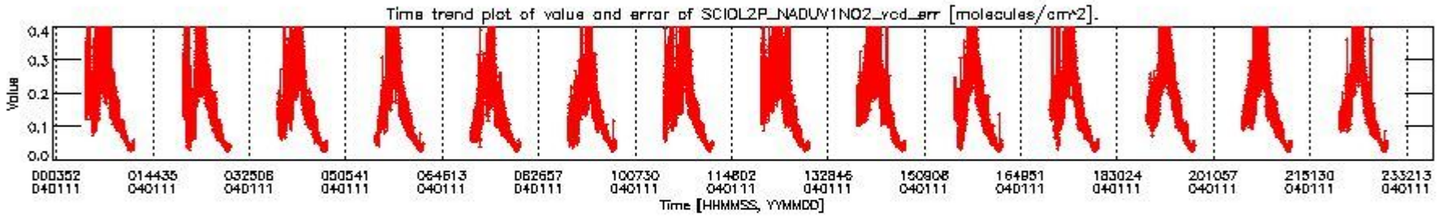
SCIOL2P_NADUV003_amf_gr for 11JAN2004 00:00:00 to 12JAN2004 00:00:00

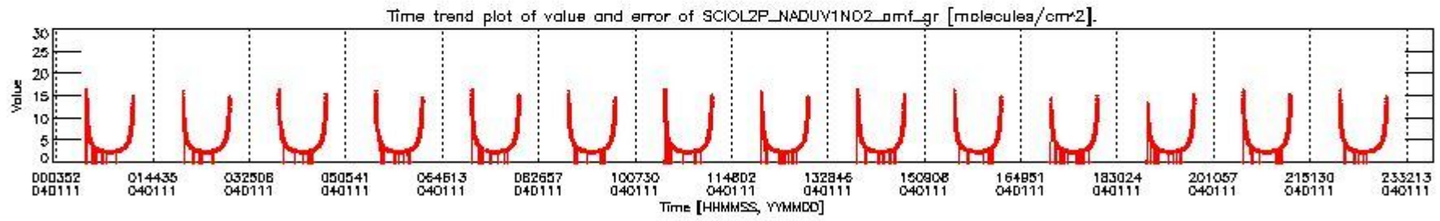


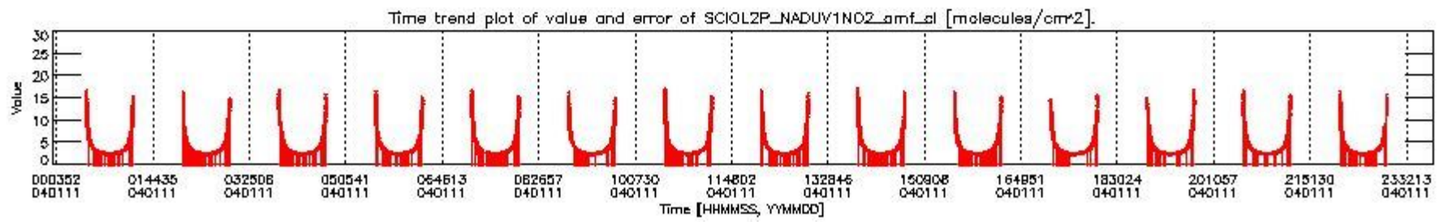
SCIOL2P_NADUV003_amf_cl for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



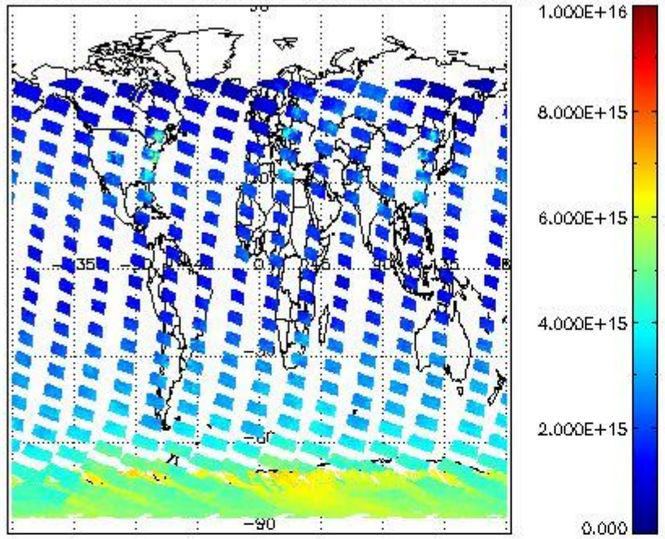

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

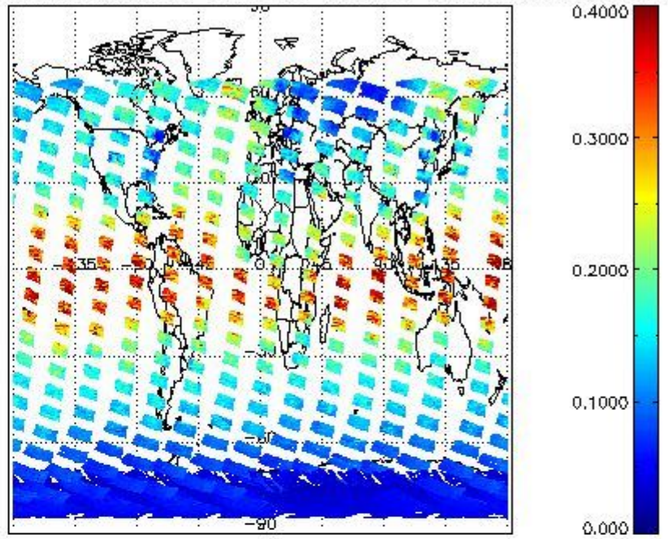

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

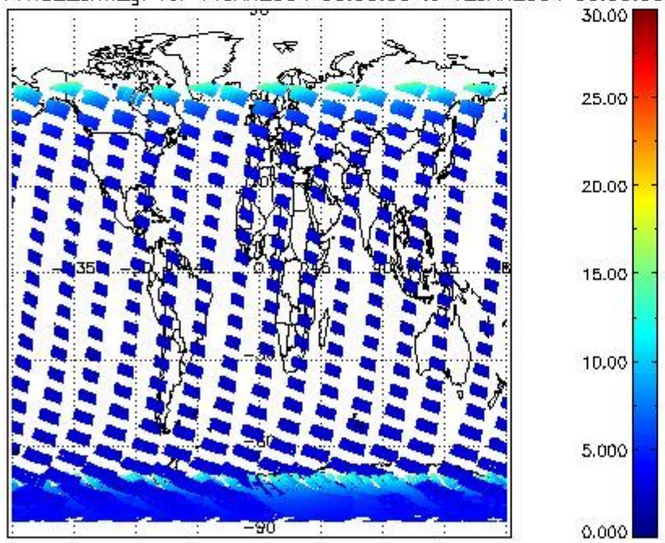
SCIOL2P_NADUV1NO2_vcd for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



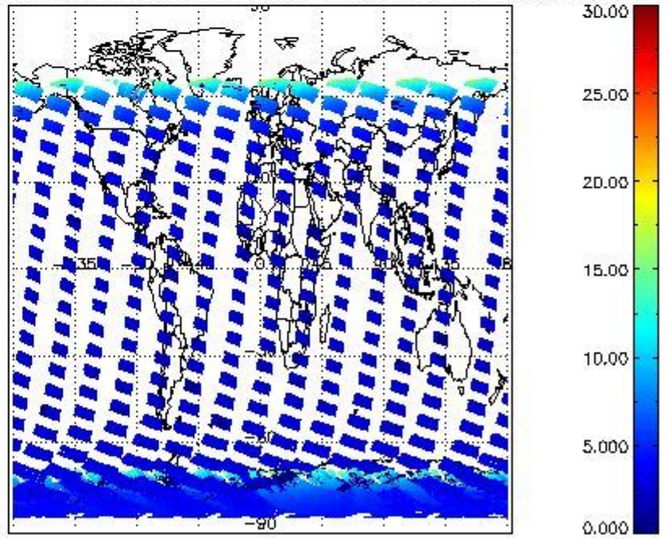
SCIOL2P_NADUV1NO2_vcd_err for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



SCIOL2P_NADUV1NO2_amf_gr for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



SCIOL2P_NADUV1NO2_amf_cl for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



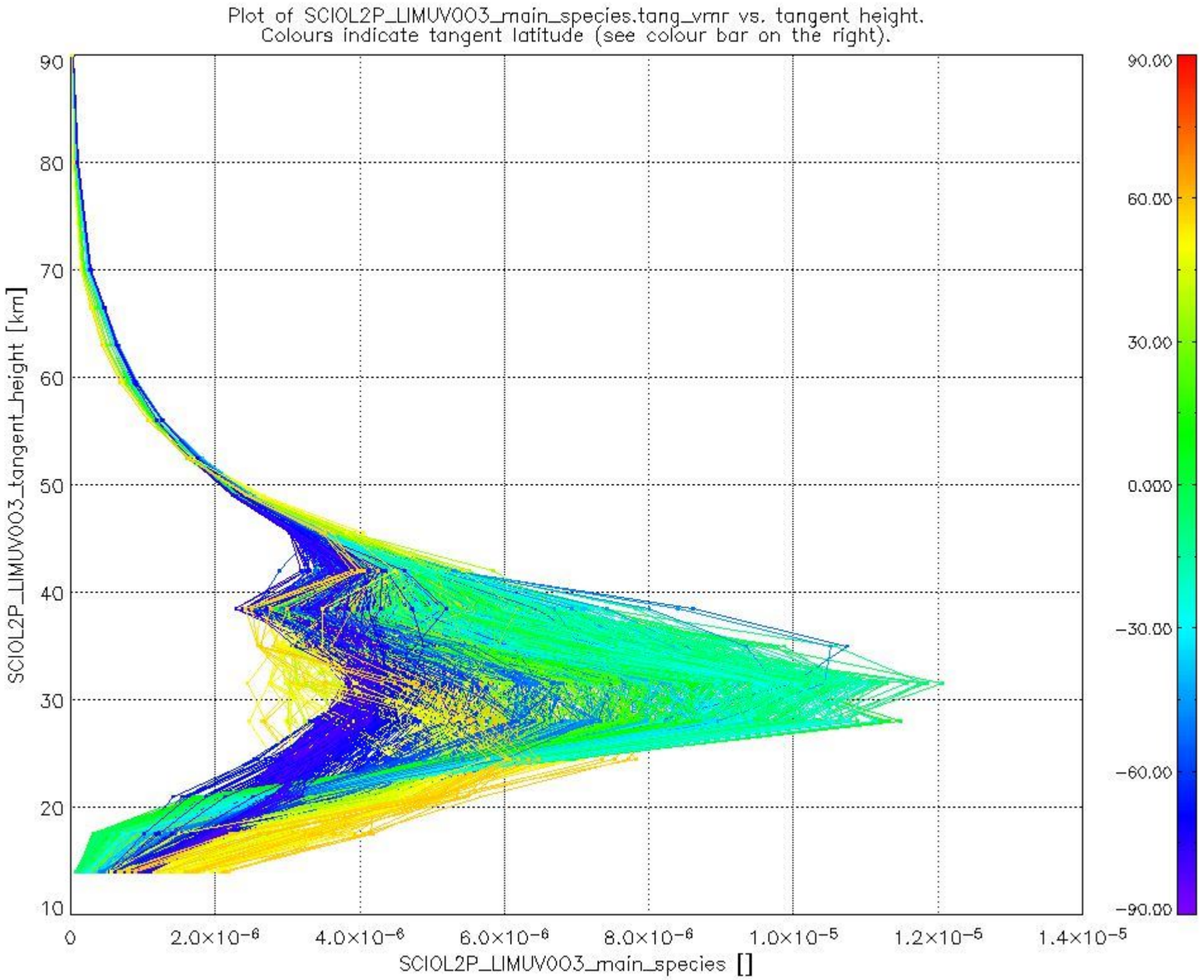
2.2.3 Limb

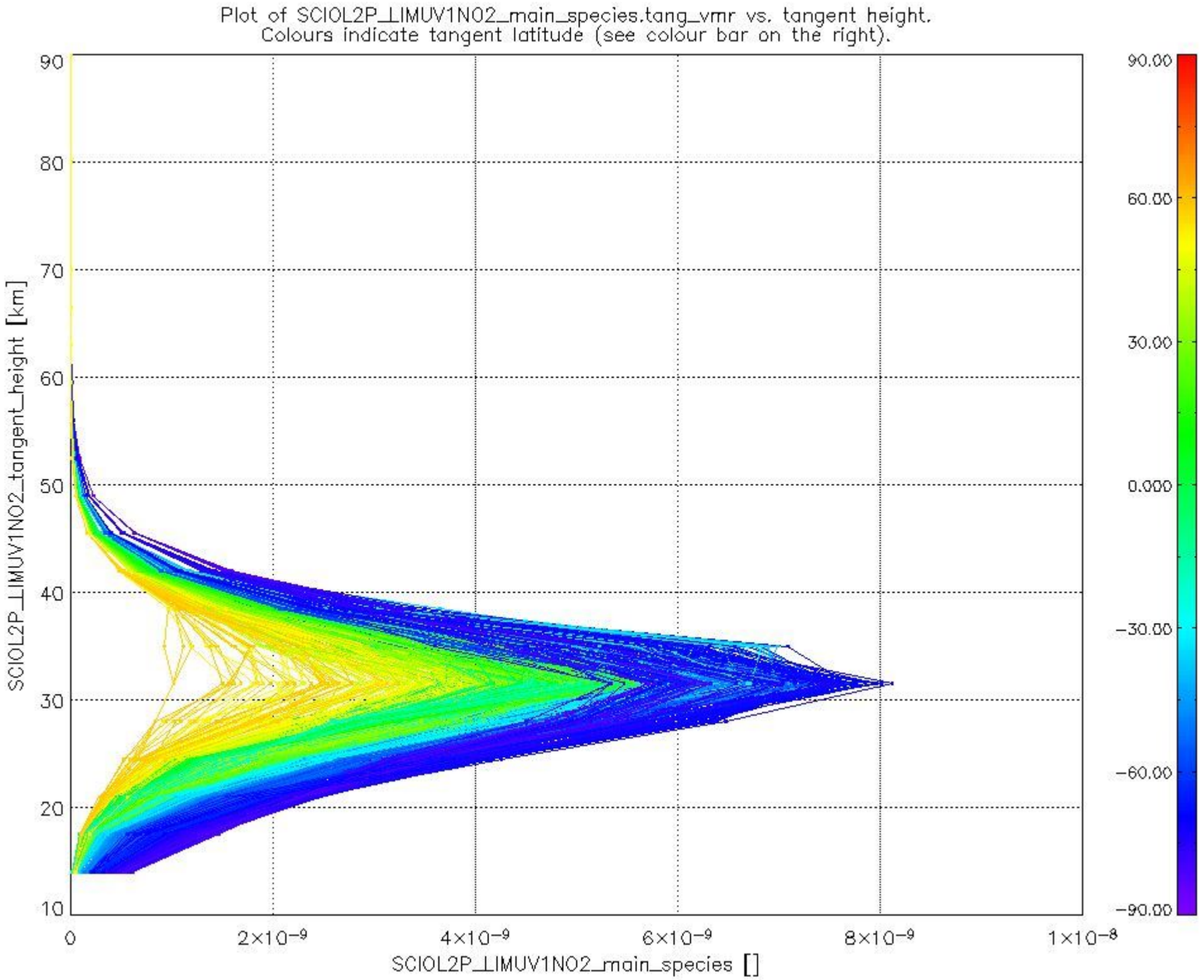
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

The following data items are currently included into this section:

Number	Data item ID
0	SCIOL2PLIMUV0O3_main_species
1	SCIOL2PLIMUV1NO2_main_species

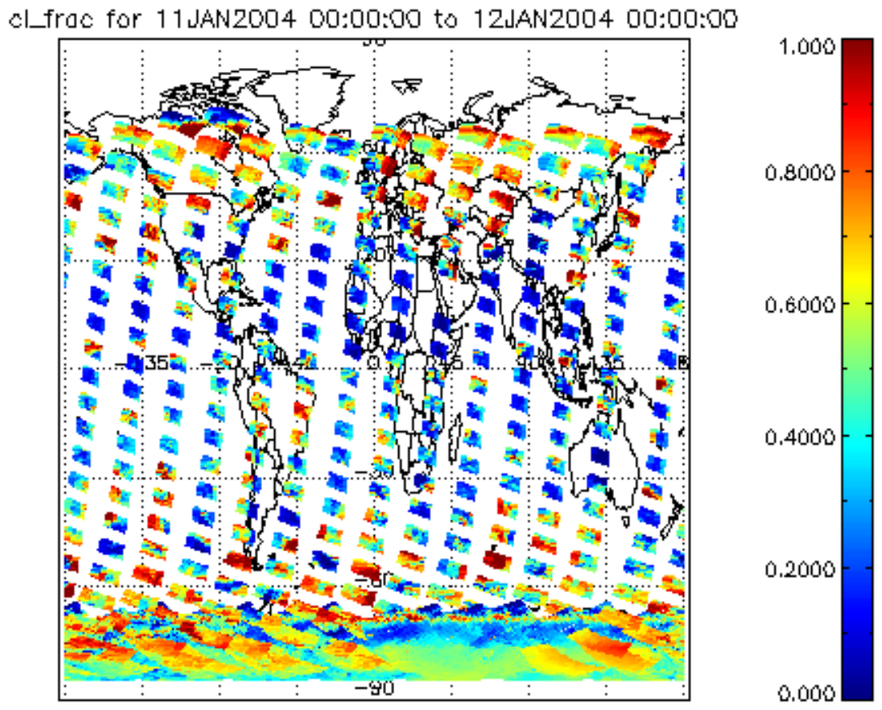
The following plots shows for each species the tangent volume mixing ratio vs. tangent height. Colours indicate tangent latitude.

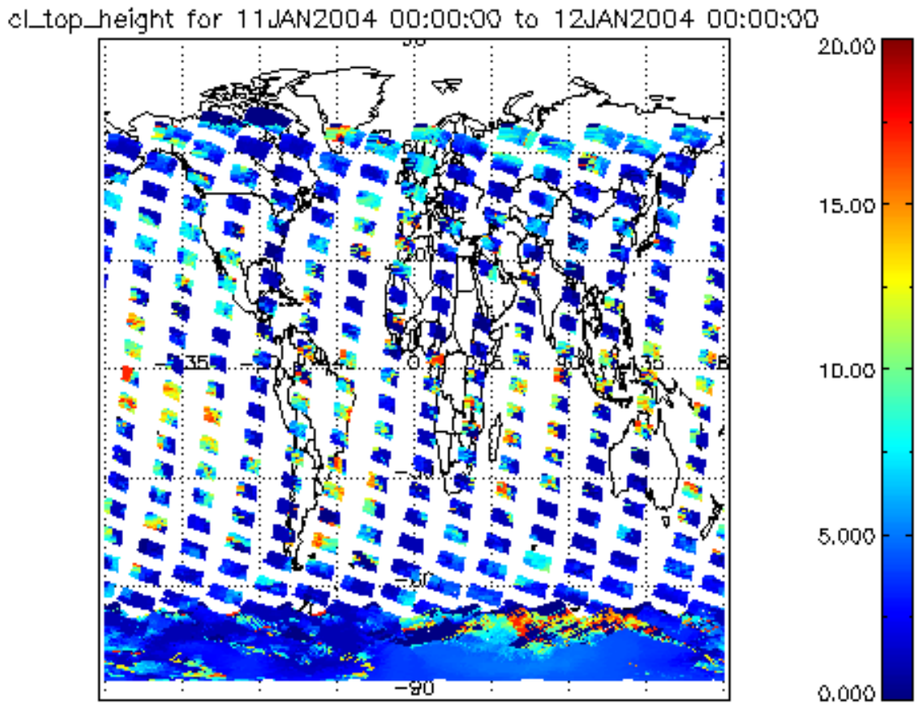

Plot of SCIOL2P_LIMUV003_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).
SCIOL2P_LIMUV003_tangent_height [km]
90
80
70
60
50
40
30
20
10
0
2.0×10⁻⁶
4.0×10⁻⁶
6.0×10⁻⁶
8.0×10⁻⁶
1.0×10⁻⁵
1.2×10⁻⁵
1.4×10⁻⁵
SCIOL2P_LIMUV003_main_species []
90.00
60.00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

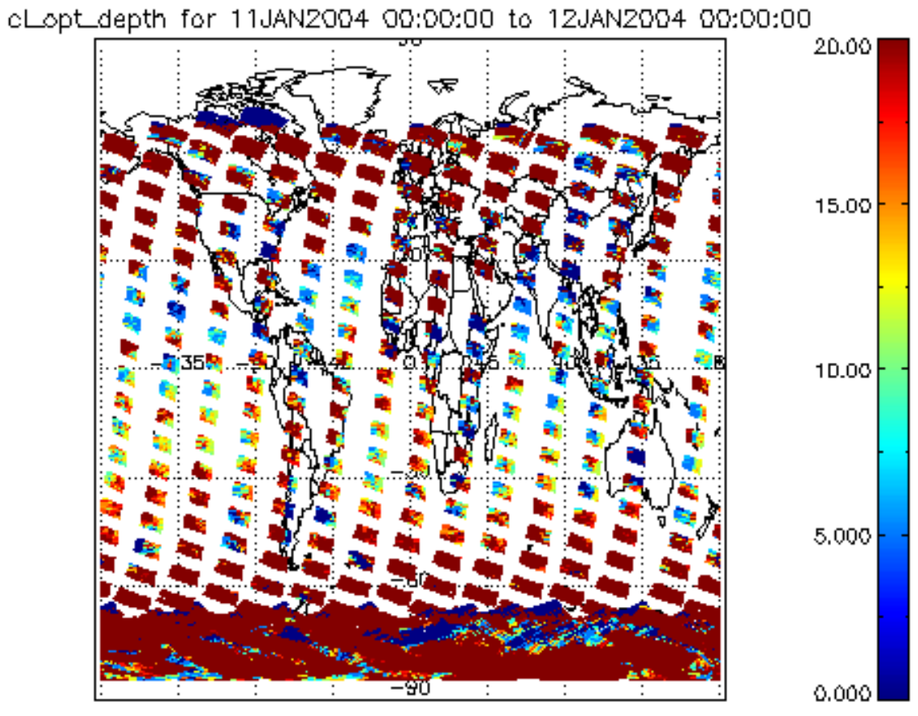


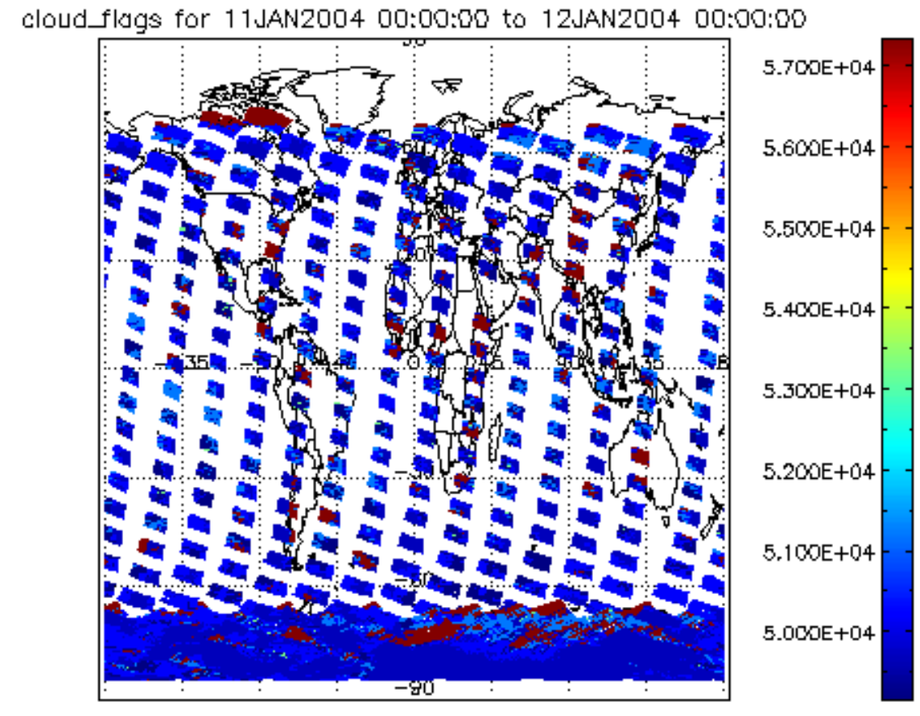
2.3 ADF monitoring

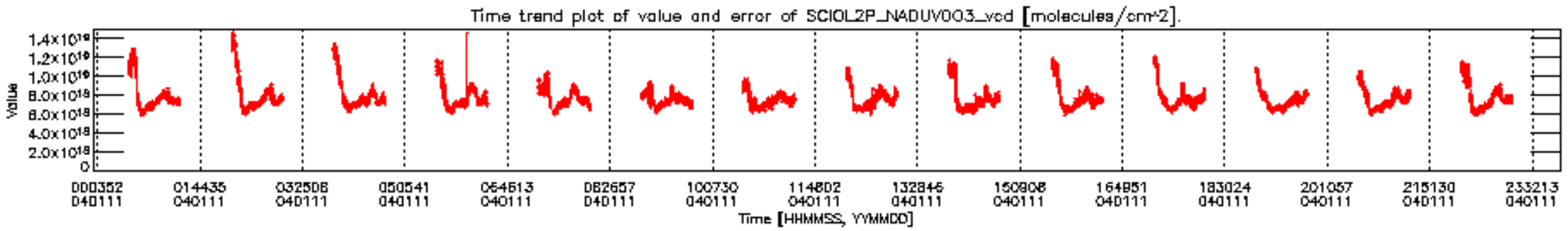
Number	ADF
	IN_ (INITIALISATION_FILE)
0	SCI_IN__AXNPDE20070629_092400_20070720_000000_20991231_235959
	ECF (ECMWF_FILE)
1	NOT USED

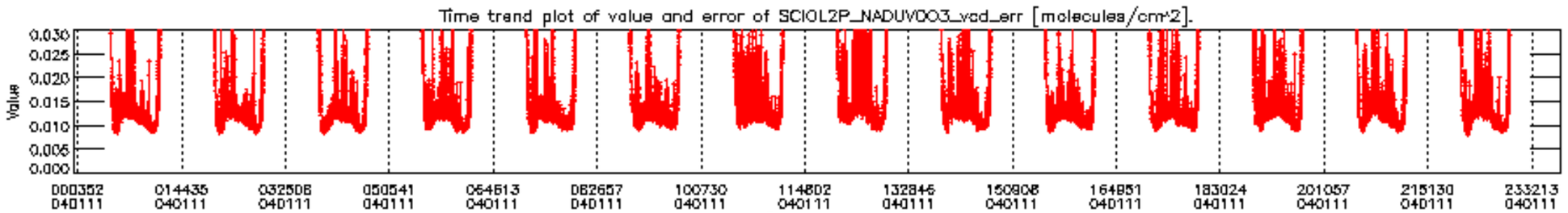

cl_frac for 11JAN2004 00:00:00 to 12JAN2004 00:00:00
1.000
0.8000
0.6000
0.4000
0.2000
0.000
-90

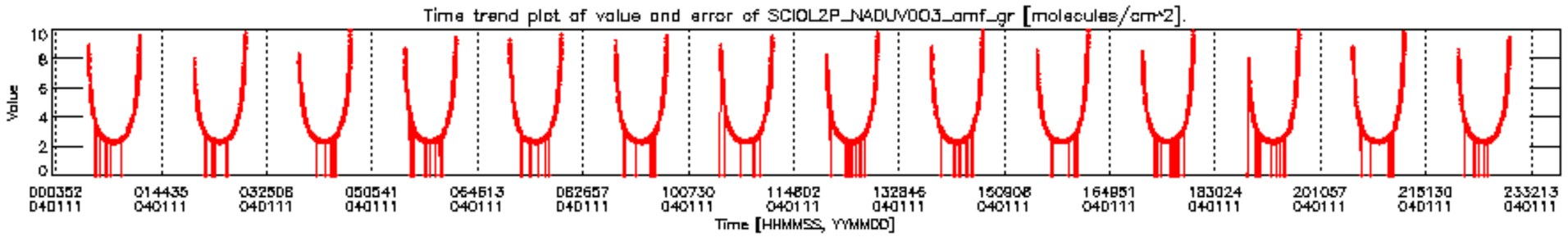

cl_top_height for 11JAN2004 00:00:00 to 12JAN2004 00:00:00
20.00
15.00
10.00
5.000
0.000
-90

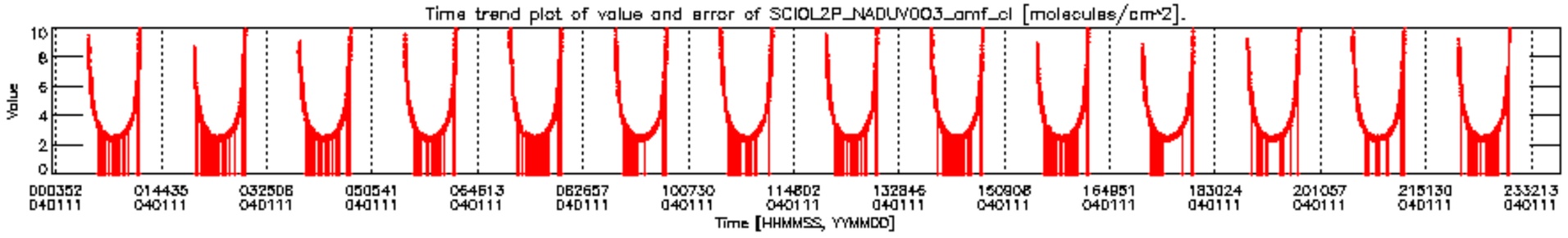

cl_opt_depth for 11JAN2004 00:00:00 to 12JAN2004 00:00:00
20.00
15.00
10.00
5.000
0.000
-90


cloud_flags for 11JAN2004 00:00:00 to 12JAN2004 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

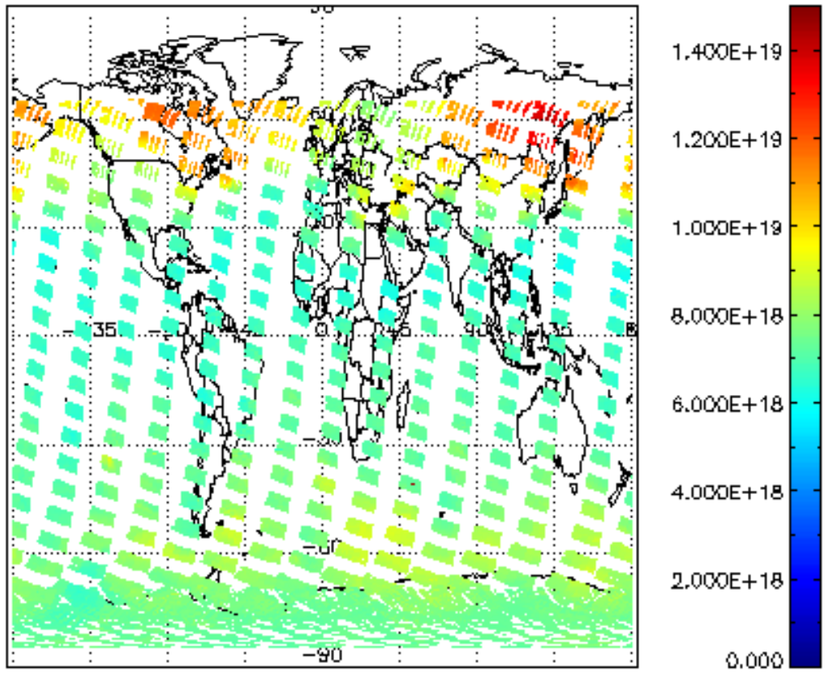

Time trend plot of value and error of SCIOL2P_NADUV003_vcd [molecules/cm^2].
Value
1.4x10^19
1.2x10^19
1.0x10^19
8.0x10^18
6.0x10^18
4.0x10^18
2.0x10^18
0
000352 040111
014435 040111
032506 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032506 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

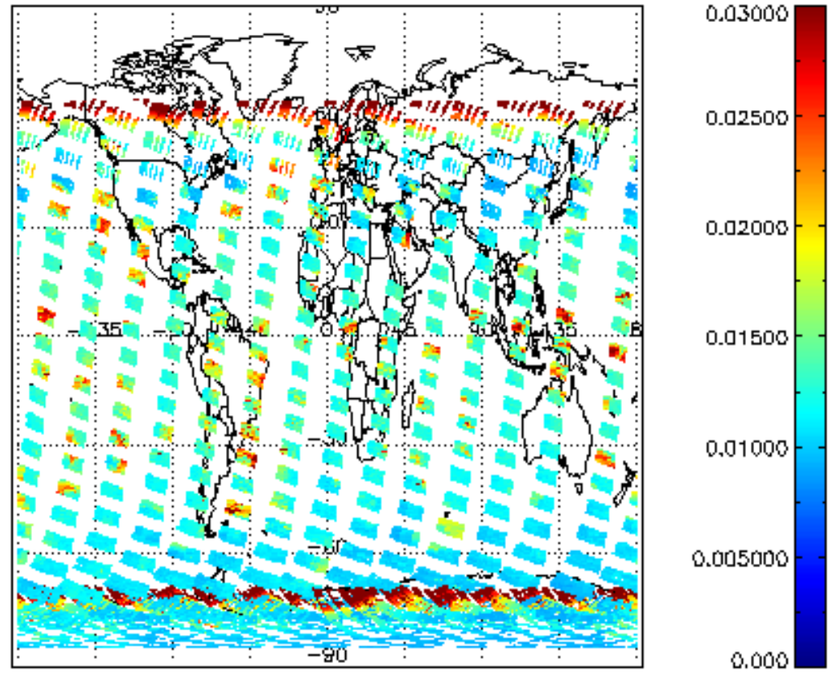

Time trend plot of value and error of SCIOL2P_NADUV003_amf_gr [molecules/cm^2].
Value
10
8
6
4
2
0
000352 040111
014435 040111
032506 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032506 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

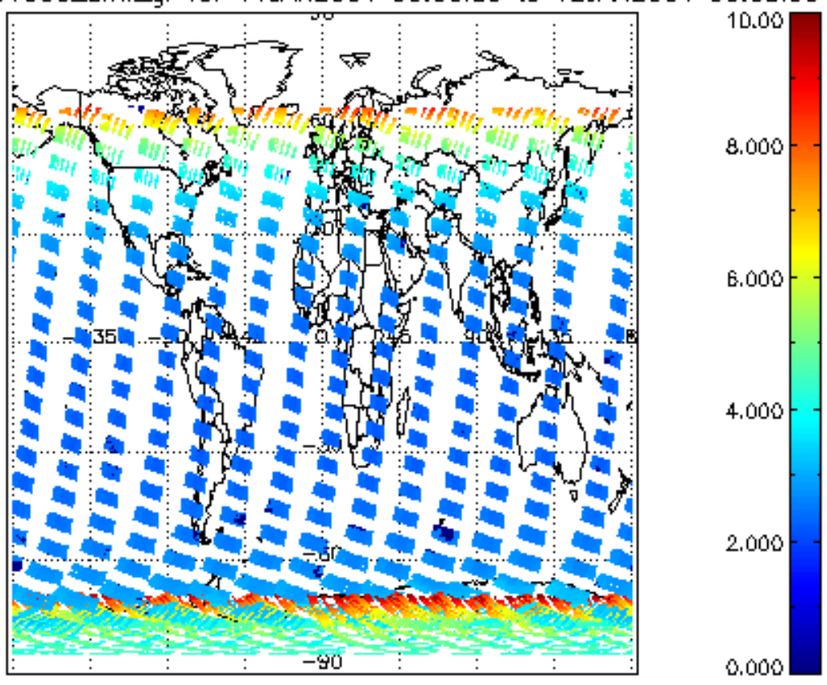
SCIOL2P_NADUV003_vcd for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



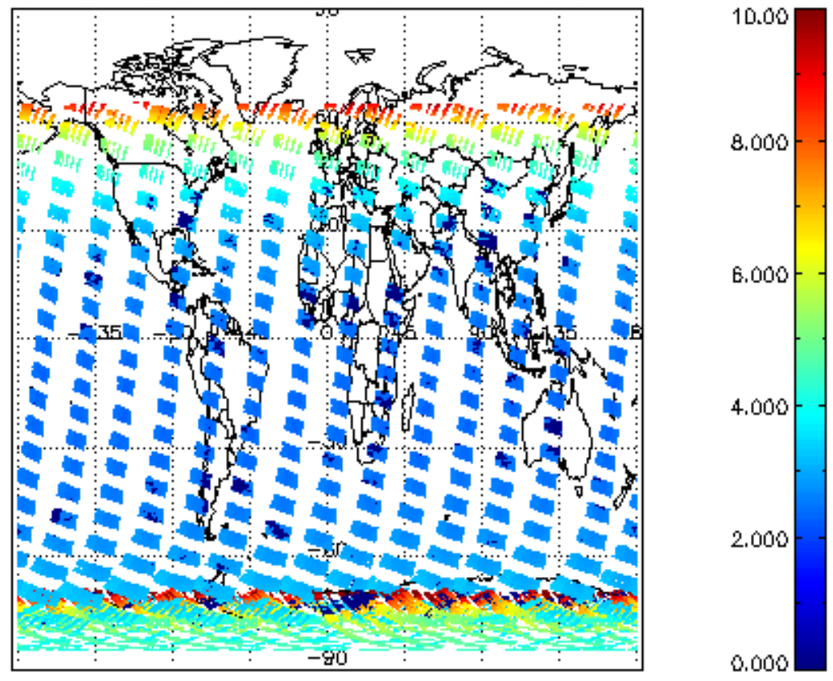
SCIOL2P_NADUV003_vcd_err for 11JAN2004 00:00:00 to 12JAN2004 00:00:00

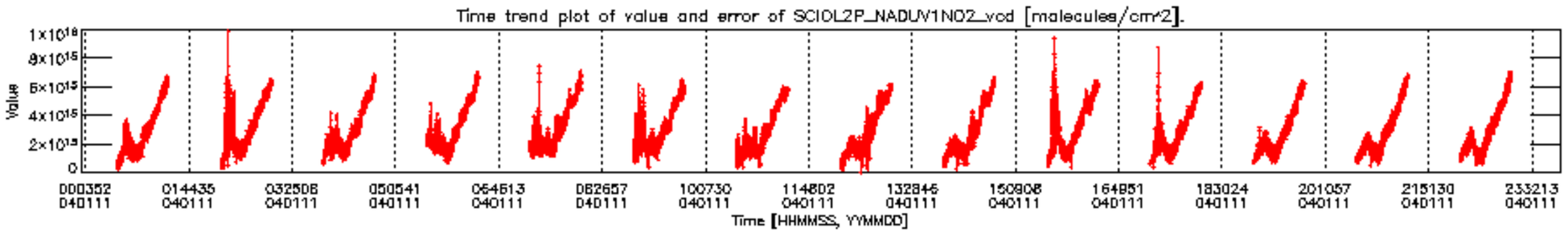


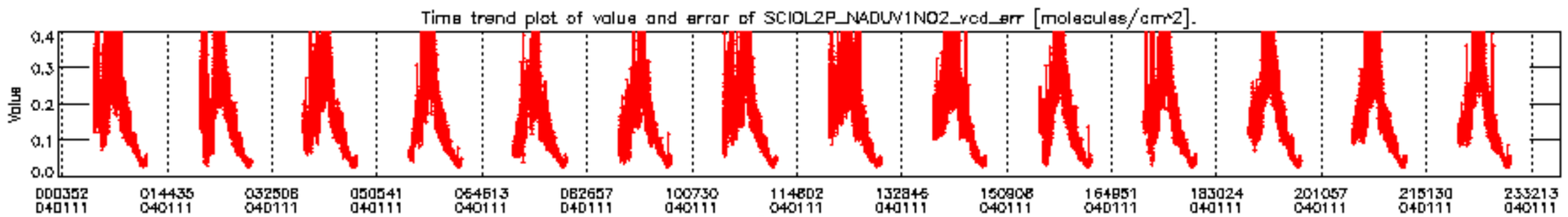
SCIOL2P_NADUV003_amf_gr for 11JAN2004 00:00:00 to 12JAN2004 00:00:00

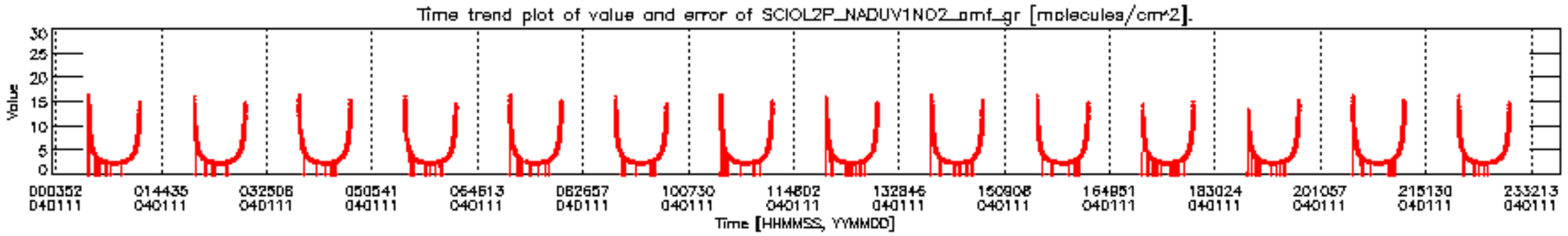


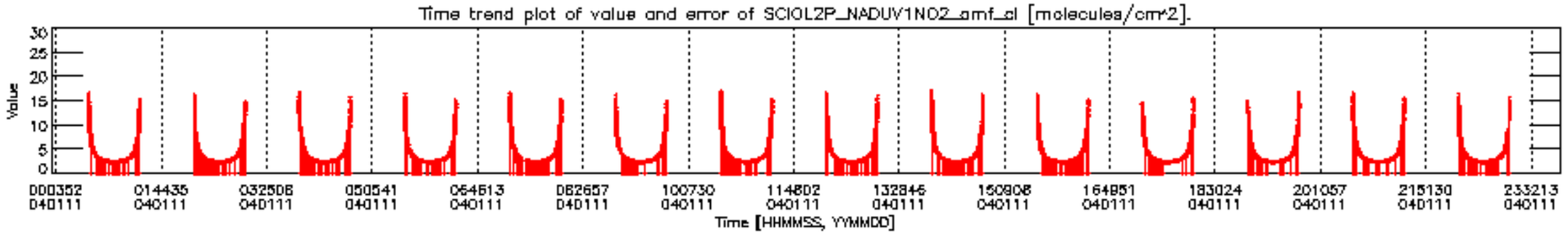
SCIOL2P_NADUV003_amf_cl for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



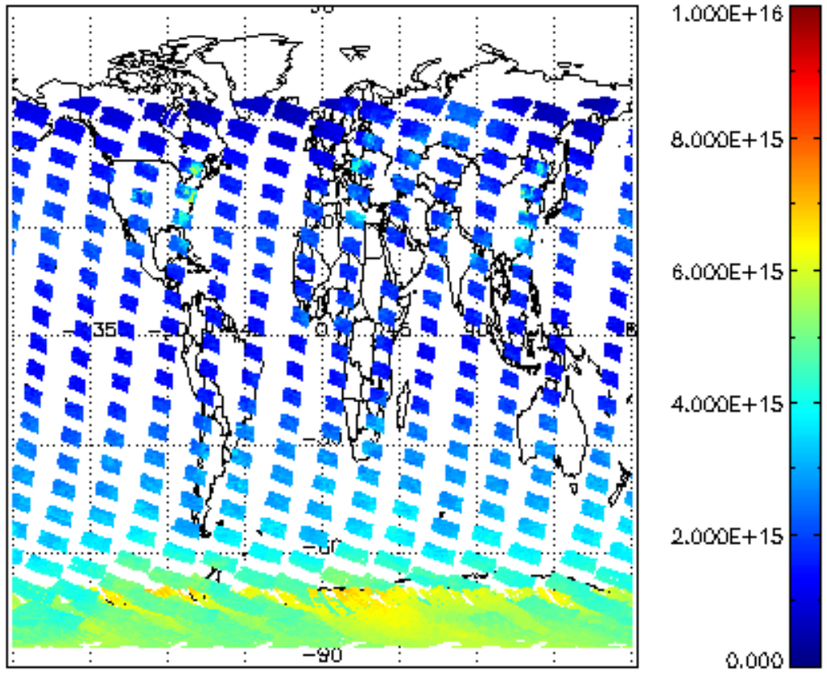

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

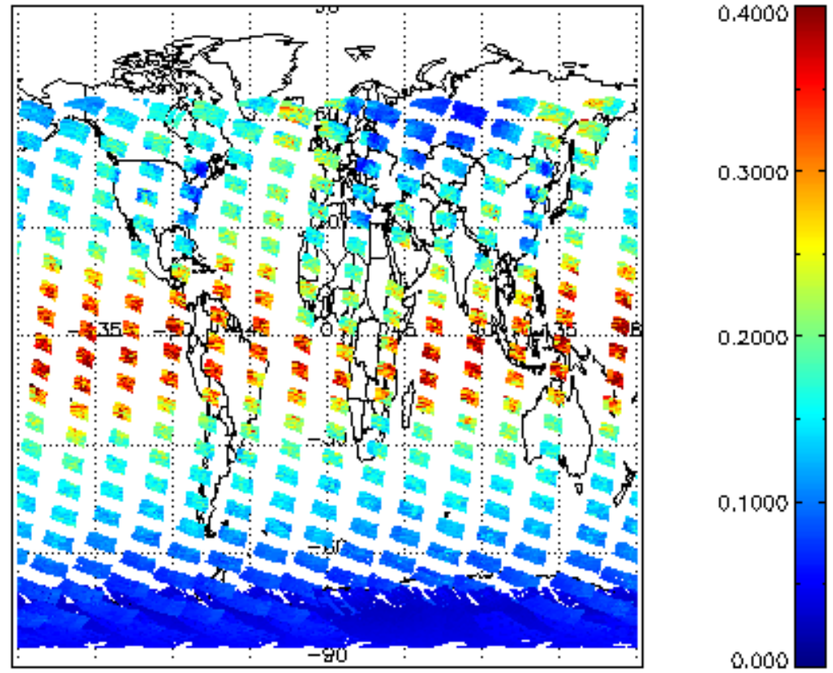

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
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
000352 040111
014435 040111
032508 040111
050541 040111
064613 040111
082657 040111
100730 040111
114802 040111
132846 040111
150908 040111
164951 040111
183024 040111
201057 040111
215130 040111
233213 040111
Time [HHMMSS, YYMMDD]

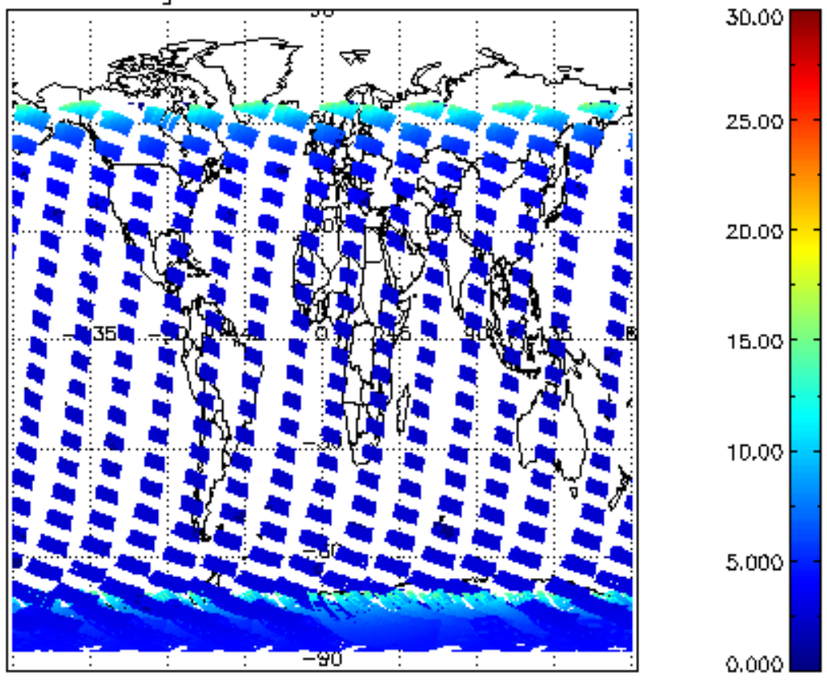
SCIOL2P_NADUV1NO2_vcd for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



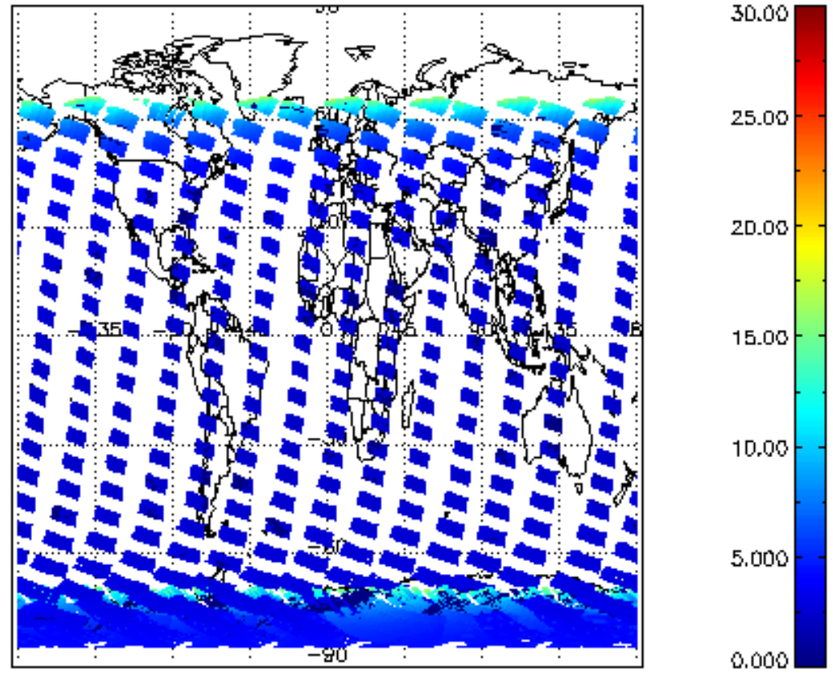
SCIOL2P_NADUV1NO2_vcd_err for 11JAN2004 00:00:00 to 12JAN2004 00:00:00

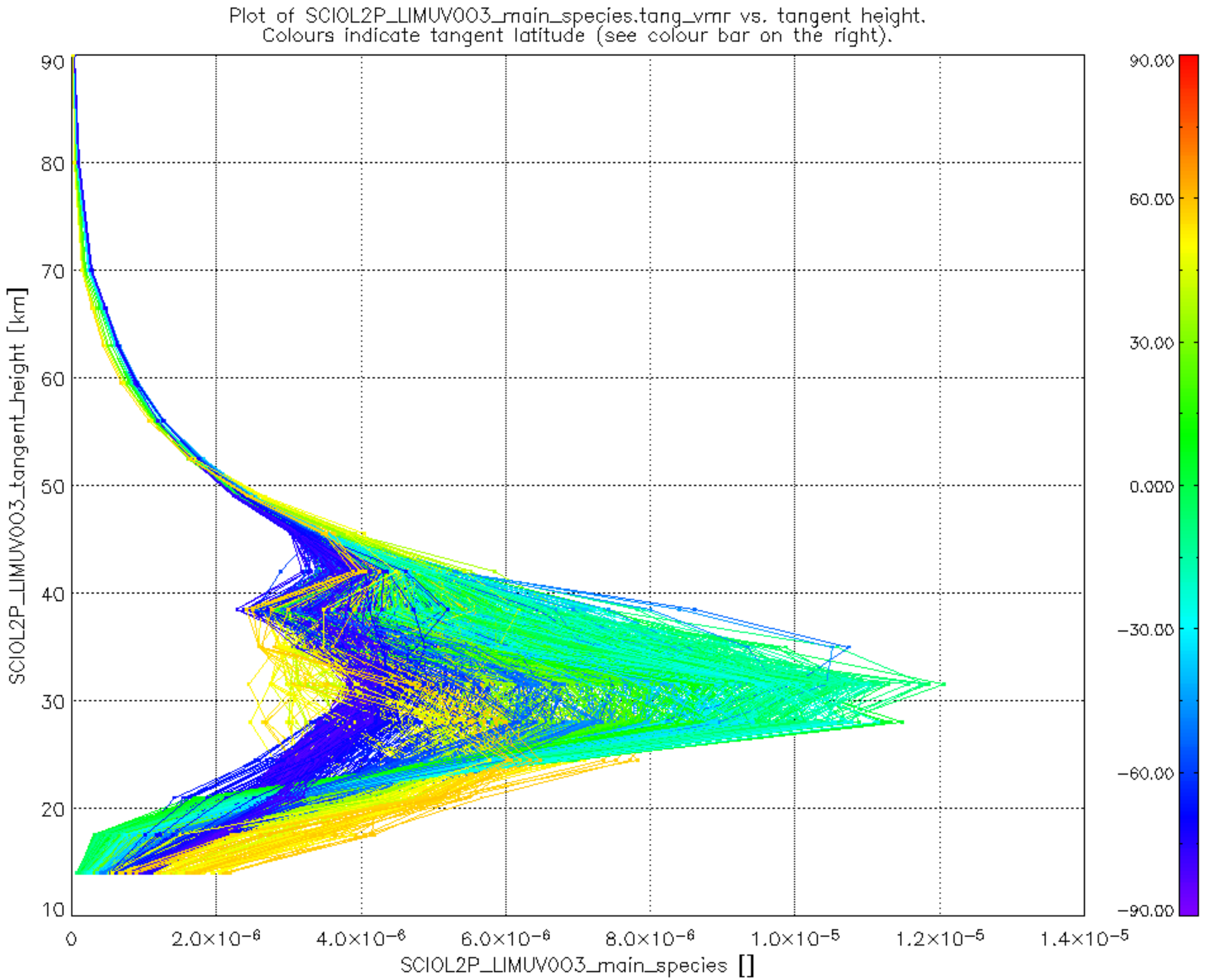


SCIOL2P_NADUV1NO2_amf_gr for 11JAN2004 00:00:00 to 12JAN2004 00:00:00



SCIOL2P_NADUV1NO2_amf_cl for 11JAN2004 00:00:00 to 12JAN2004 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).