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	1.4 (06-11-2007)
Time of report generation	30MAY2008 15:22:02
Data source version	SCIA-OL/3.01-R
Processing scope for products	27DEC2002 00:00:00 to 28DEC2002 00:00:00
Start time of first product within scope	26DEC2002 23:31:52
Stop time of last product within scope	27DEC2002 23:55:38
Total number of level 2 products	15
Number of level 2 products with errors	0

2.1.2 Summary per product

The following table shows a summary for each product used in this report.

#	Product name	Start time	Stop time	Prod err	Fit summary
0	SCI_OL__2PRDPA20021226_233152_000033242012_00245_04307_1918.N1	26DEC2002 23:31:52	27DEC2002 00:27:17	0	GOOD
1	SCI_OL__2PRDPA20021227_011228_000033242012_00246_04308_1843.N1	27DEC2002 01:12:28	27DEC2002 02:07:52	0	GOOD
2	SCI_OL__2PRDPA20021227_025304_000033242012_00247_04309_1923.N1	27DEC2002 02:53:04	27DEC2002 03:48:28	0	GOOD
3	SCI_OL__2PRDPA20021227_043340_000033242012_00248_04310_1767.N1	27DEC2002 04:33:40	27DEC2002 05:29:04	0	GOOD
4	SCI_OL__2PRDPA20021227_061416_000033242012_00249_04311_1857.N1	27DEC2002 06:14:16	27DEC2002 07:09:40	0	GOOD
5	SCI_OL__2PRDPA20021227_075451_000033242012_00250_04312_1950.N1	27DEC2002 07:54:51	27DEC2002 08:50:16	0	GOOD
6	SCI_OL__2PRDPA20021227_093527_000033242012_00251_04313_1903.N1	27DEC2002 09:35:27	27DEC2002 10:30:52	0	GOOD
7	SCI_OL__2PRDPA20021227_111603_000033242012_00252_04314_1793.N1	27DEC2002 11:16:03	27DEC2002 12:11:27	0	GOOD
8	SCI_OL__2PRDPA20021227_125639_000033242012_00253_04315_1836.N1	27DEC2002 12:56:39	27DEC2002 13:52:03	0	GOOD
9	SCI_OL__2PRDPA20021227_143715_000033242012_00254_04316_1892.N1	27DEC2002 14:37:15	27DEC2002 15:32:39	0	GOOD
10	SCI_OL__2PRDPA20021227_161751_000033242012_00255_04317_1782.N1	27DEC2002 16:17:51	27DEC2002 17:13:15	0	GOOD
11	SCI_OL__2PRDPA20021227_175915_000033172012_00256_04318_1953.N1	27DEC2002 17:59:15	27DEC2002 18:54:32	0	GOOD
12	SCI_OL__2PRDPA20021227_193927_000033242012_00257_04319_1788.N1	27DEC2002 19:39:27	27DEC2002 20:34:52	0	GOOD
13	SCI_OL__2PRDPA20021227_211938_000033242012_00258_04320_1943.N1	27DEC2002 21:19:38	27DEC2002 22:15:03	0	GOOD
14	SCI_OL__2PRDPA20021227_230014_000033242012_00259_04321_1965.N1	27DEC2002 23:00:14	27DEC2002 23:55:38	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: 113240

Total number of cloud data DSRs with good quality flag (=0): 113240 (100.0 %)

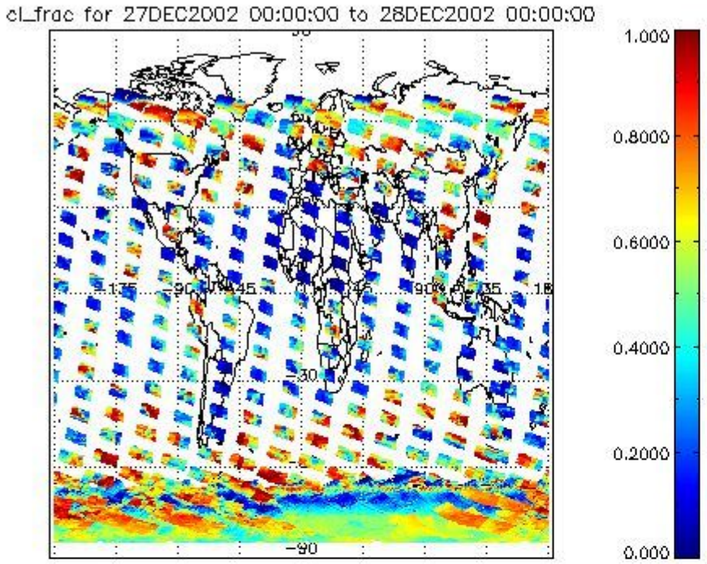
Parameter	#valid	Mean	Median	Min	Max	Stddev	Unit
QUALITY_FLAG	113240	0.0000	0.0000	0.0000	0.0000	0.0000	flag
INTEGR_TIME	113240	0.21622	0.25000	0.12500	0.50000	0.078281	s
SURFACE_PRES	113240	0.0000	0.0000	0.0000	0.0000	0.0000	hPa
CL_FRAC	113240	0.47199	0.48371	0.0000	1.0000	0.27464	-

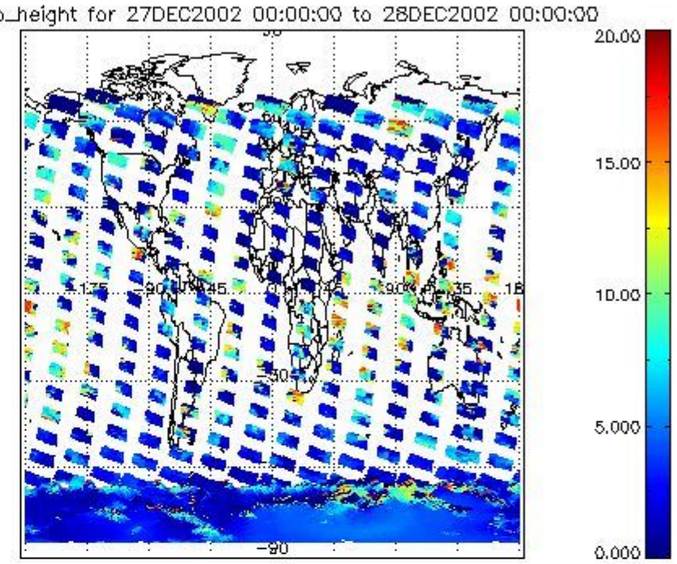
CL_FRAC_ERR	113240	0.0000	0.0000	0.0000	0.0000	0.0000	rel. fraction
PMD_READ	113240	6.9191	8.0000	4.0000	16.000	2.5050	
PMD_READ_CL[0]	113240	0.34672	0.0000	0.0000	16.000	1.3676	-
PMD_READ_CL[1]	113240	0.27176	0.0000	0.0000	16.000	1.3129	-
CL_TOP_HEIGHT	104554	4.3905	3.4105	0.0000	17.000	3.6413	km
CL_TOP_HEIGHT_ERR	0	---	---	---	---	---	---
CL_OPT_DEPTH	104554	56.964	48.356	0.0000	101.00	40.271	km
CL_OPT_DEPTH_ERR	0	---	---	---	---	---	---
CL_TYPE_FLAGS	113240	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	113240	11000101	11000010	11000000	11100000	2247.5	flags
AERO_ABSO_IND	113240	-0.062442	-0.061180	-4.6511	10.613	1.1415	
AERO_IND_DIAG	113240	0.0000	0.0000	0.0000	0.0000	0.0000	
AERO_FLAGS	113240	01101001	11000000	00000000	11000000	24447.	flags

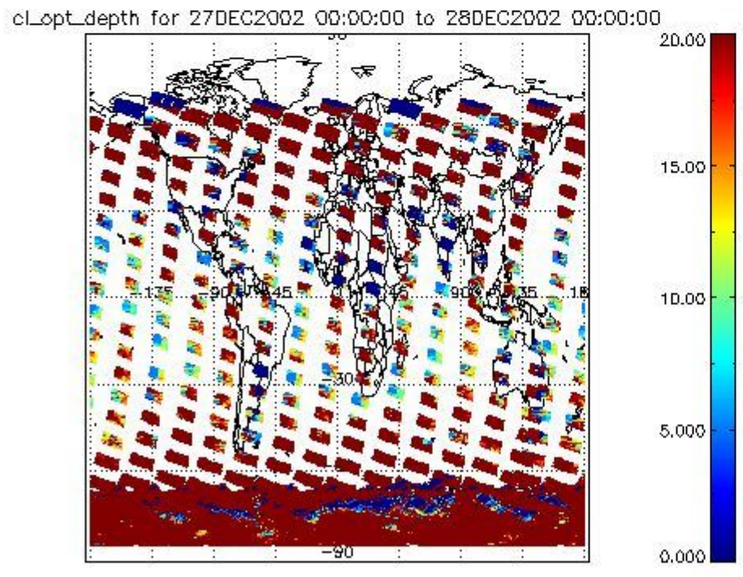
Time and geolocation plots:

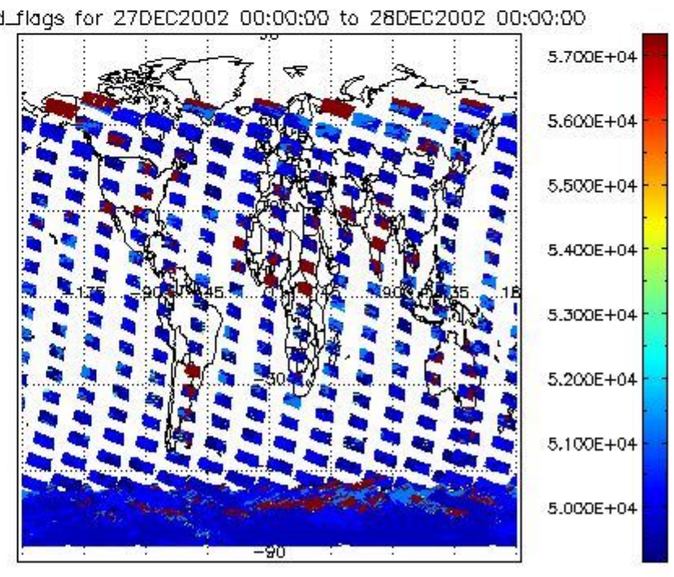
Plots are available for the following parameters:

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









2.2.2 Nadir

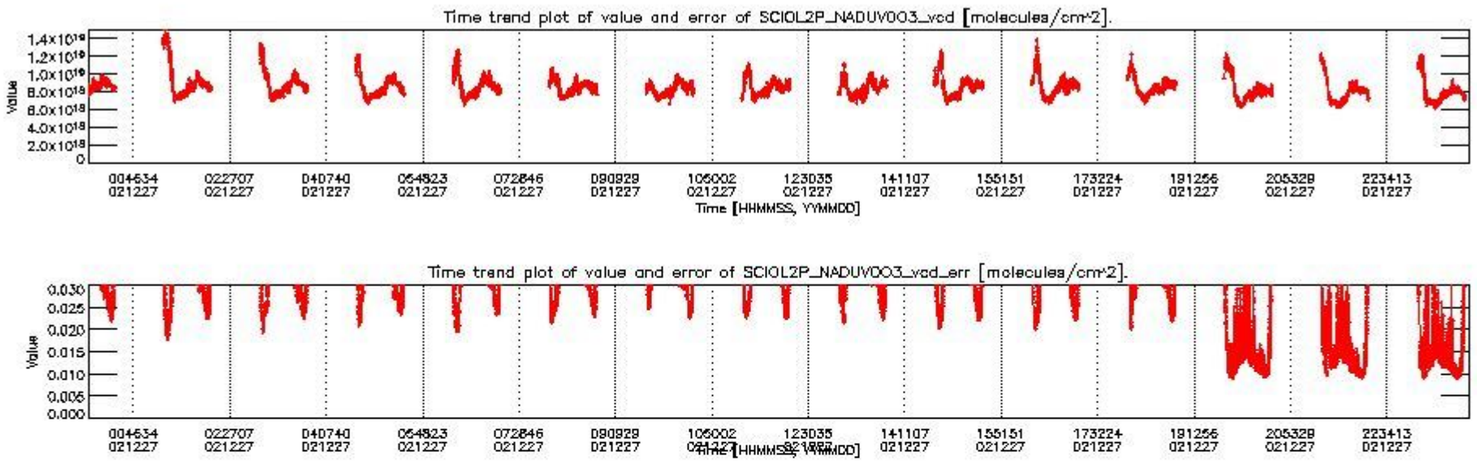
This section shows information about product quality of nadir measurements, in particular the quality of retrieved species.

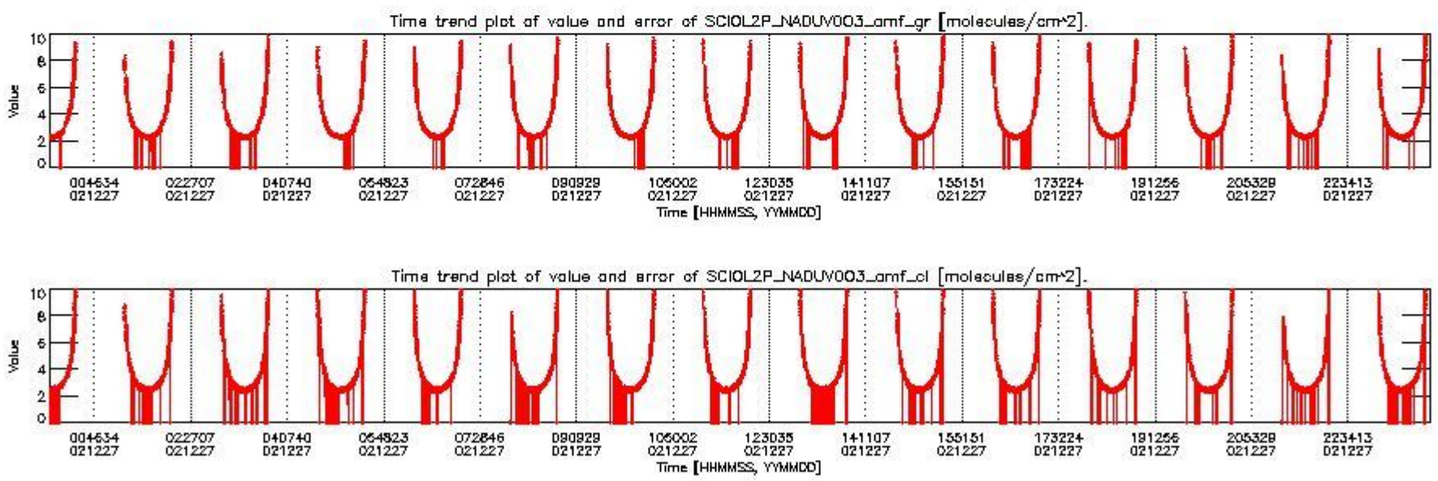
The following data items are currently included into this section:

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

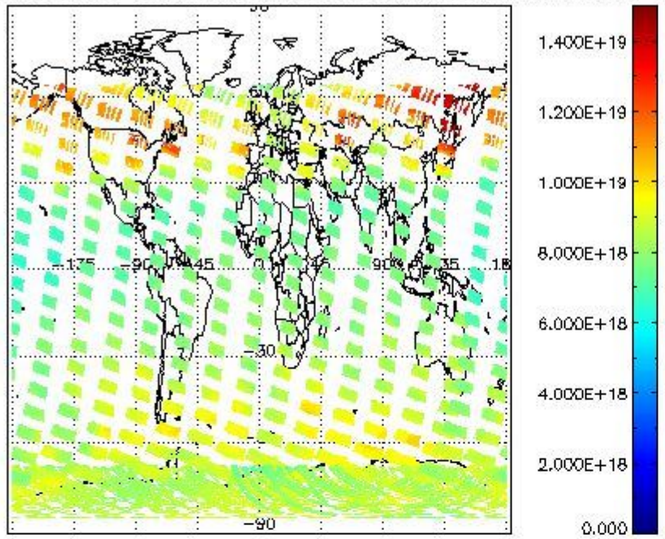
4	SCIOL2P_NADUV1NO2_vcd
5	SCIOL2P_NADUV1NO2_vcd_err
6	SCIOL2P_NADUV1NO2_amf_gr
7	SCIOL2P_NADUV1NO2_amf_cl

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.

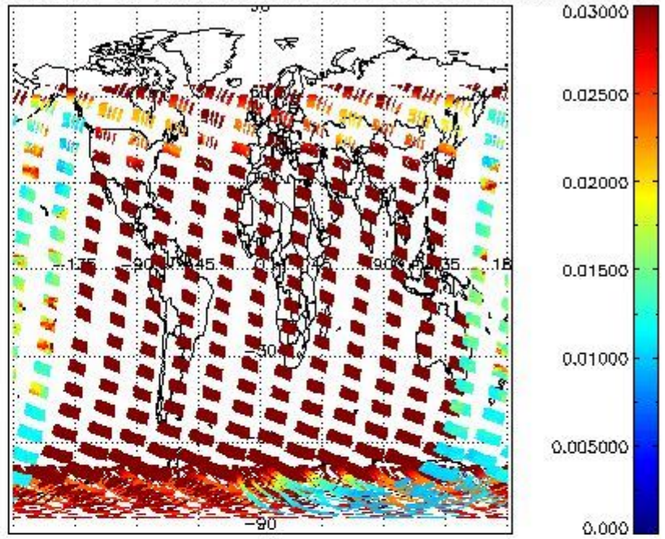




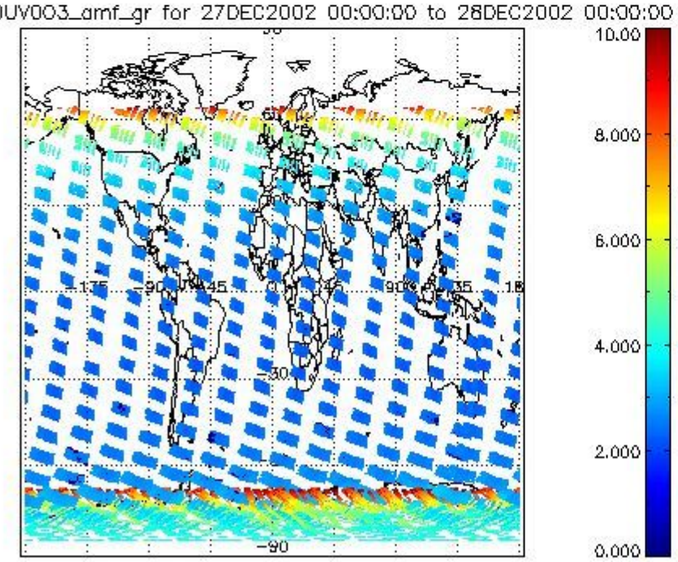
SCIOL2P_NADUV003_vcd for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



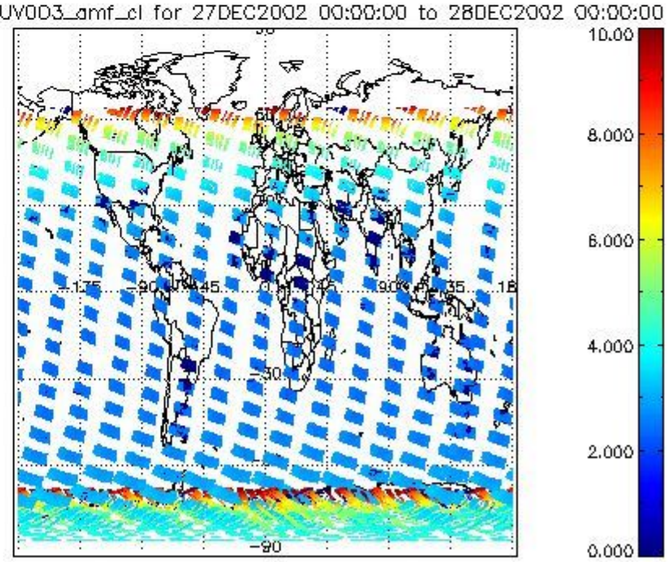
SCIOL2P_NADUV003_vcd_err for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

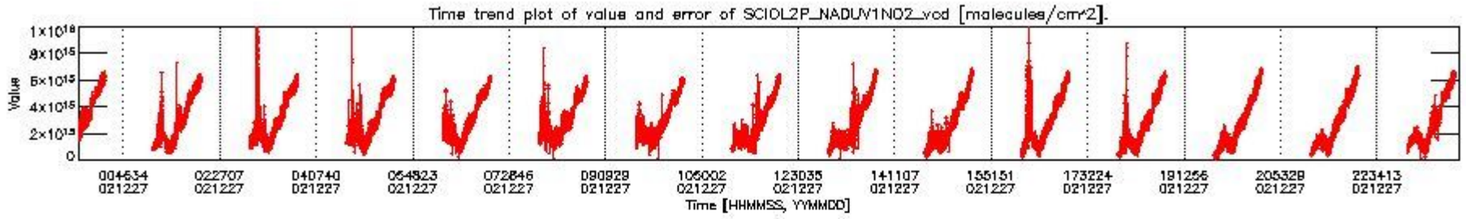


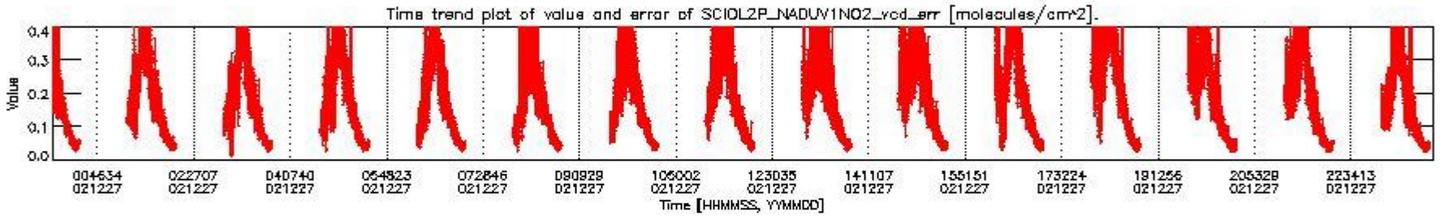
SCIOL2P_NADUV003_amf_gr for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

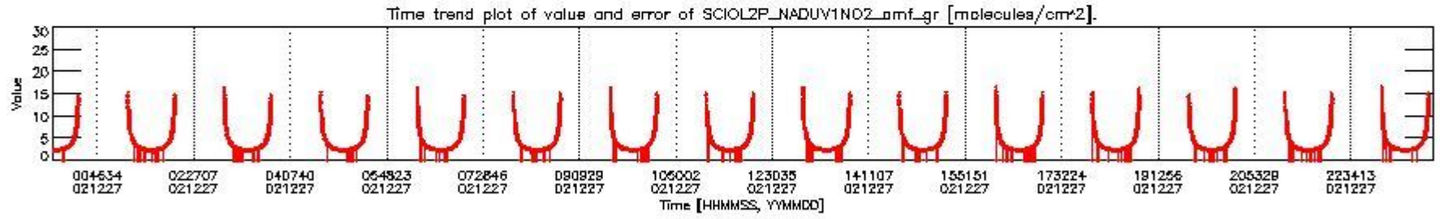


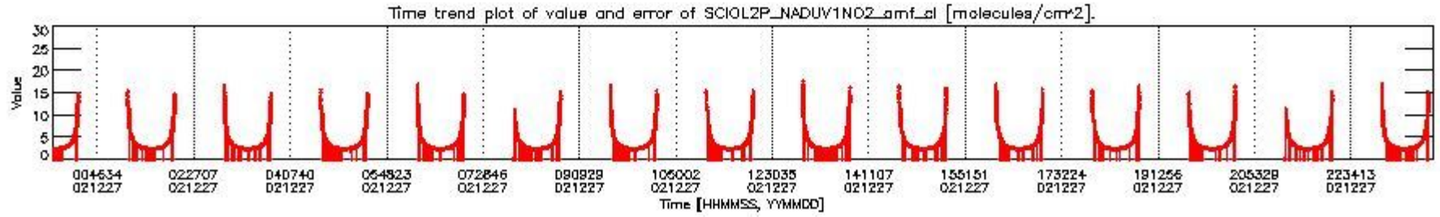
SCIOL2P_NADUV003_amf_cl for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

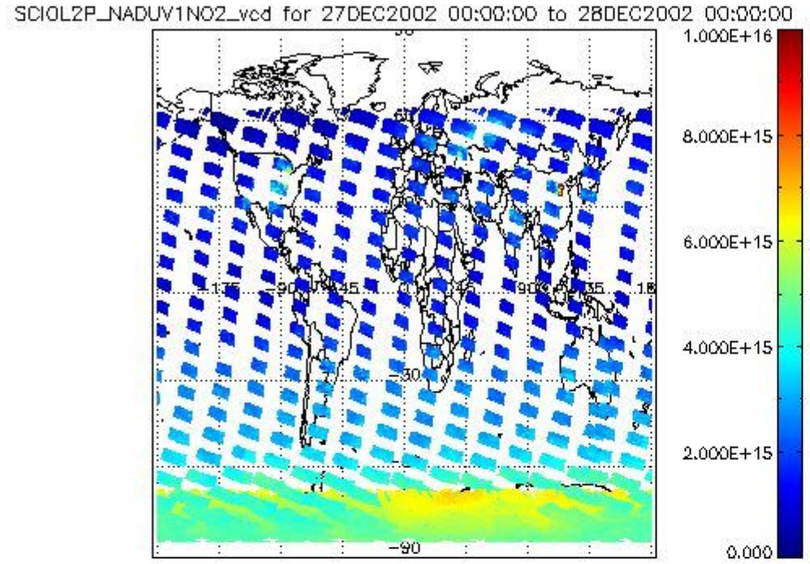


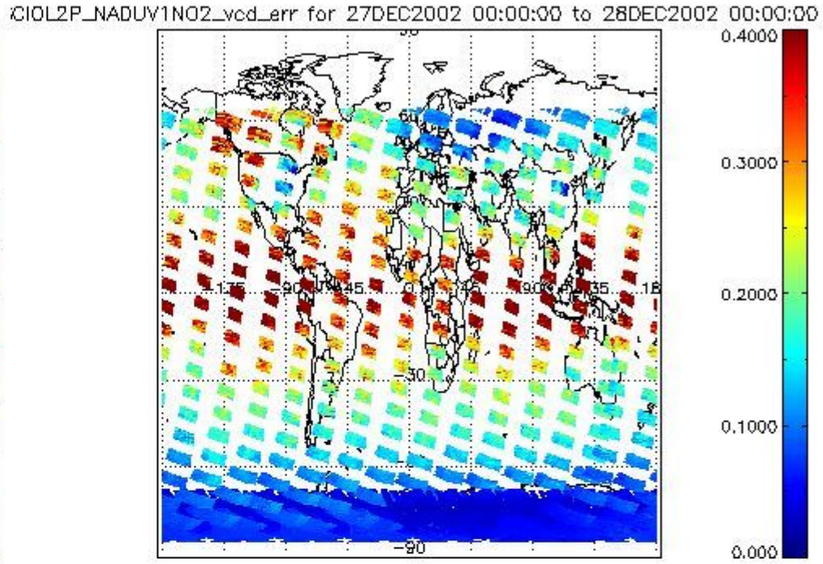

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

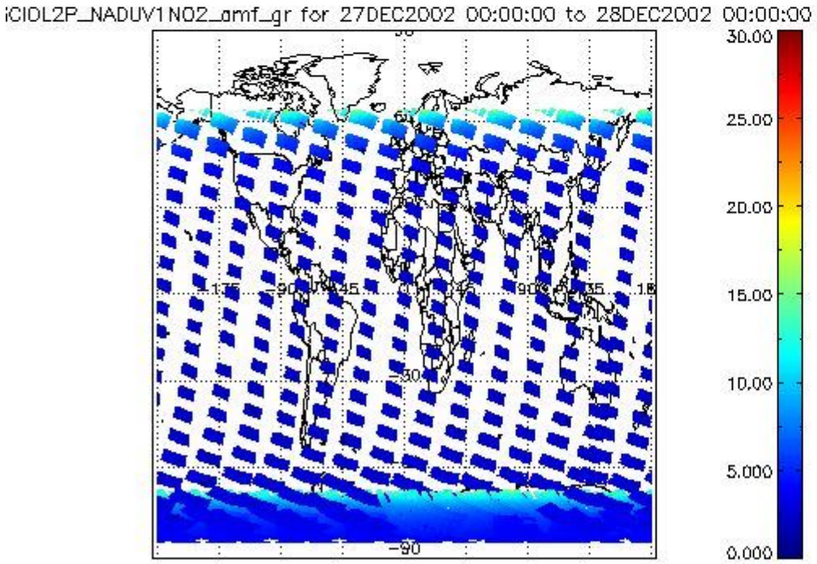

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd_err [molecules/cm^2].
Value
0.4
0.3
0.2
0.1
0.0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

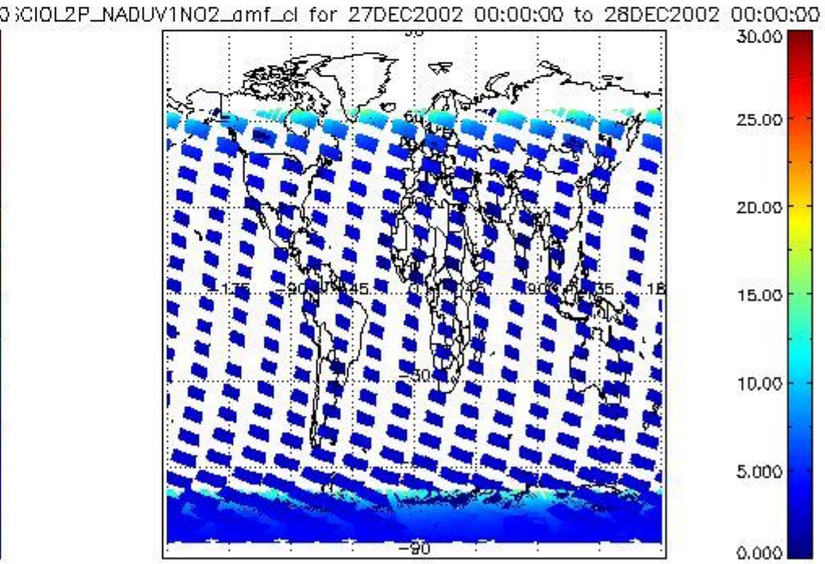

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
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
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]









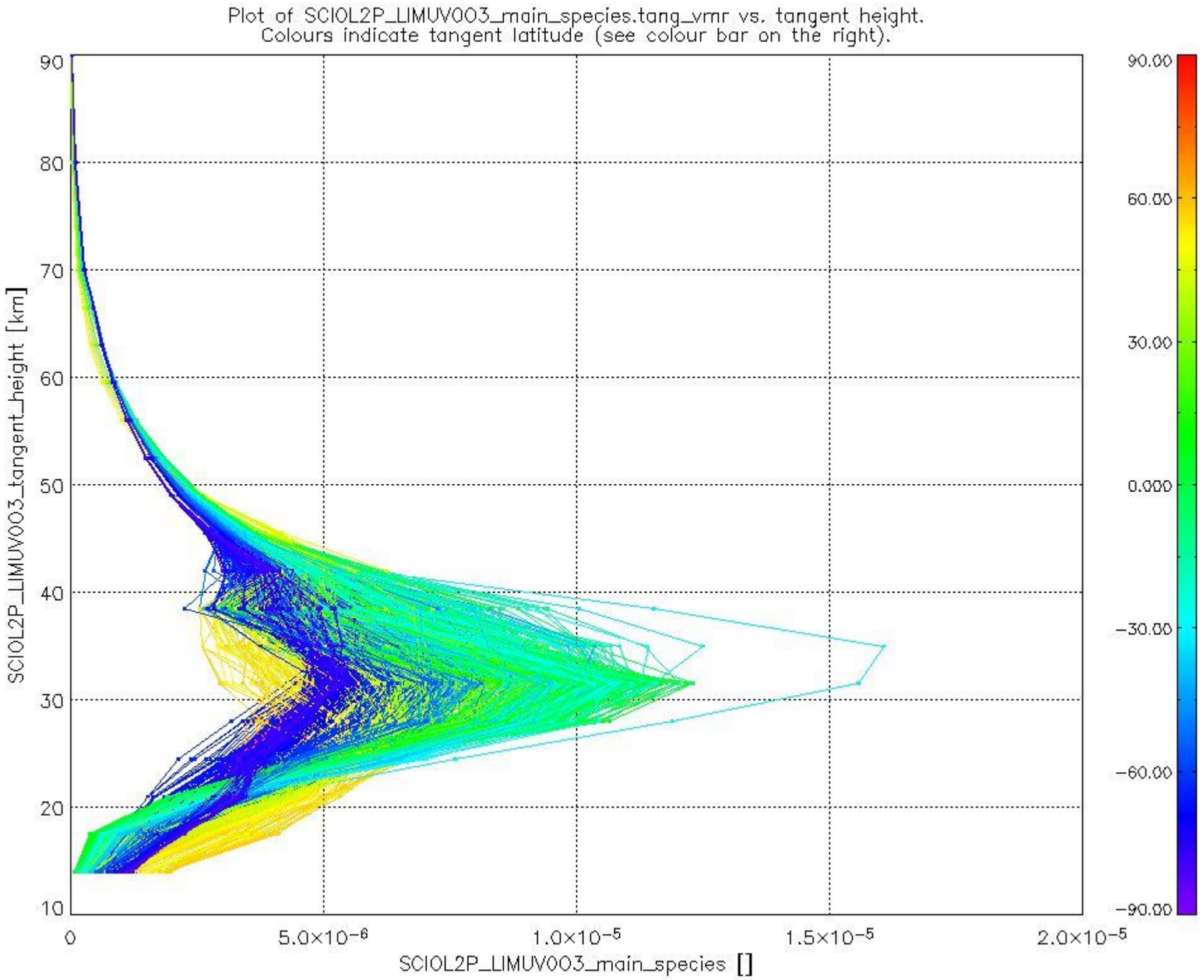
2.2.3 Limb

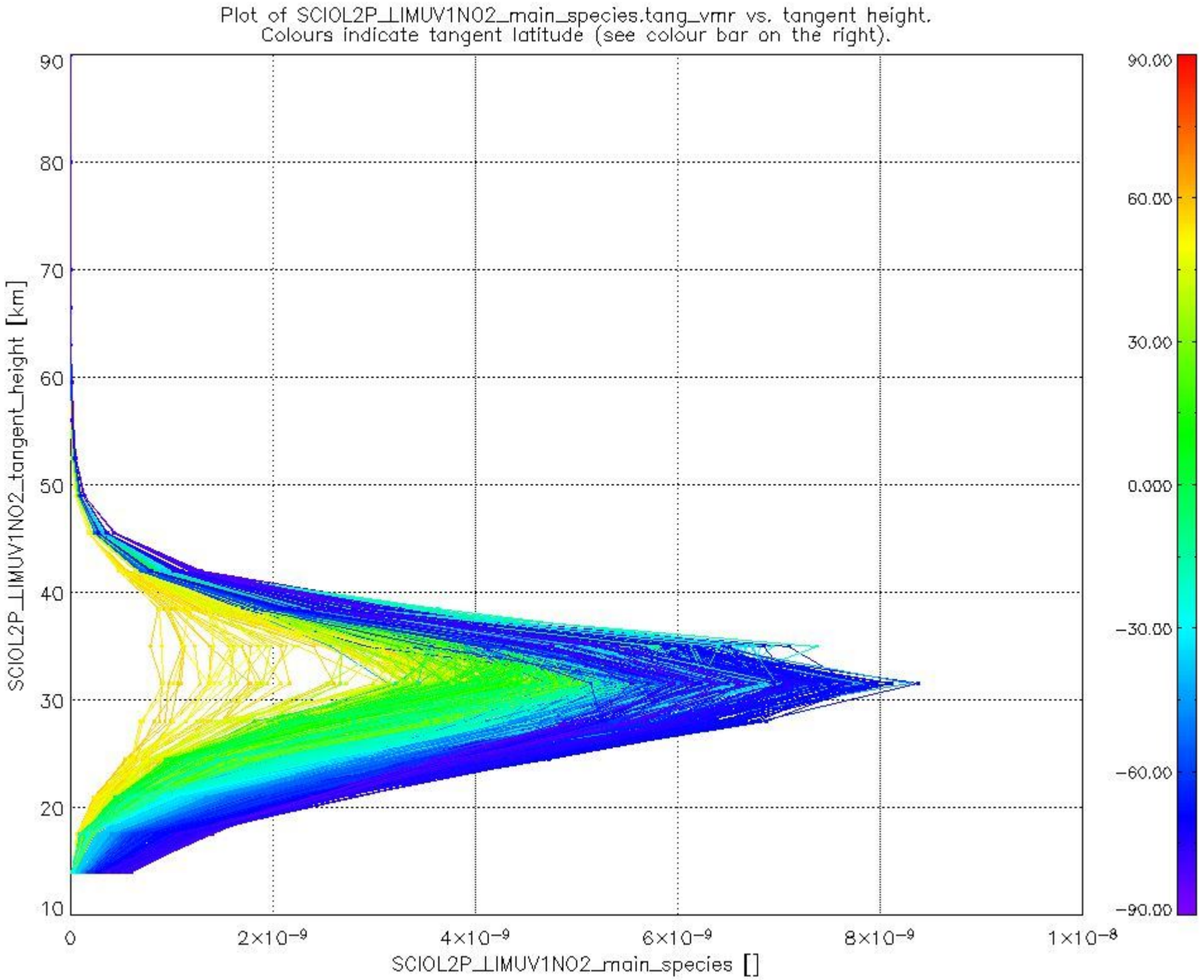
This section shows information about product quality of the limb retrievals, in particular the quality of retrieved species.

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.

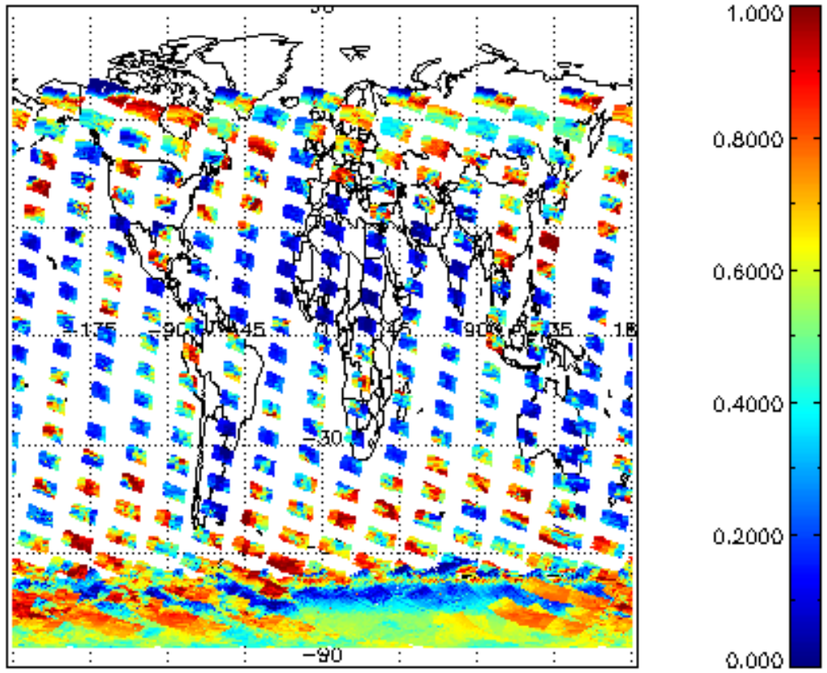

Plot of SCIOL2P_LIMUV003_main_species.tang_vmr vs. tangent height.
Colours indicate tangent latitude (see colour bar on the right).
SCIOL2P_LIMUV003_tangent_height [km]
90
80
70
60
50
40
30
20
10
0
5.0×10⁻⁶
1.0×10⁻⁵
1.5×10⁻⁵
2.0×10⁻⁵
SCIOL2P_LIMUV003_main_species []
90.00
60.00
30.00
0.000
−30.00
−60.00
−90.00



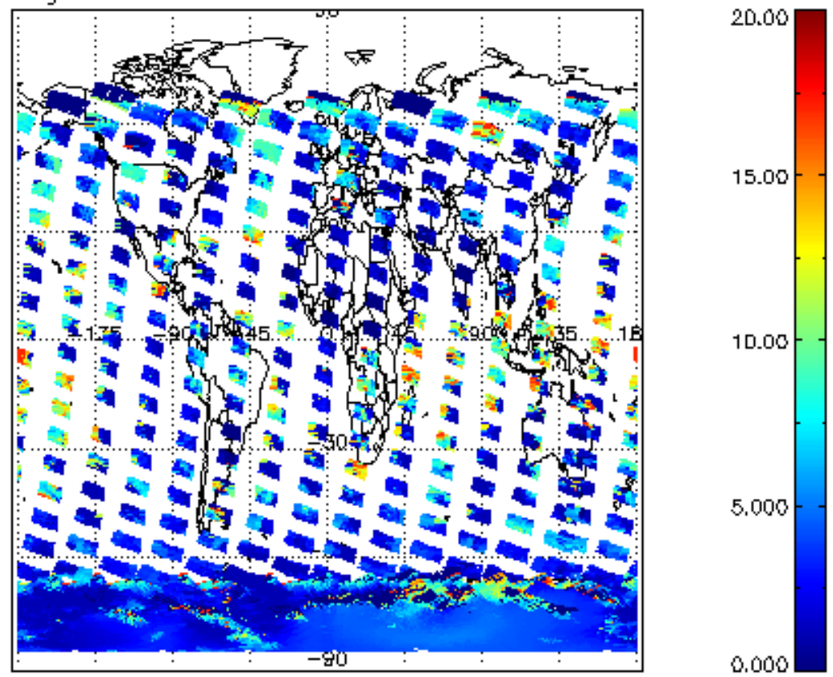
2.3 ADF monitoring

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

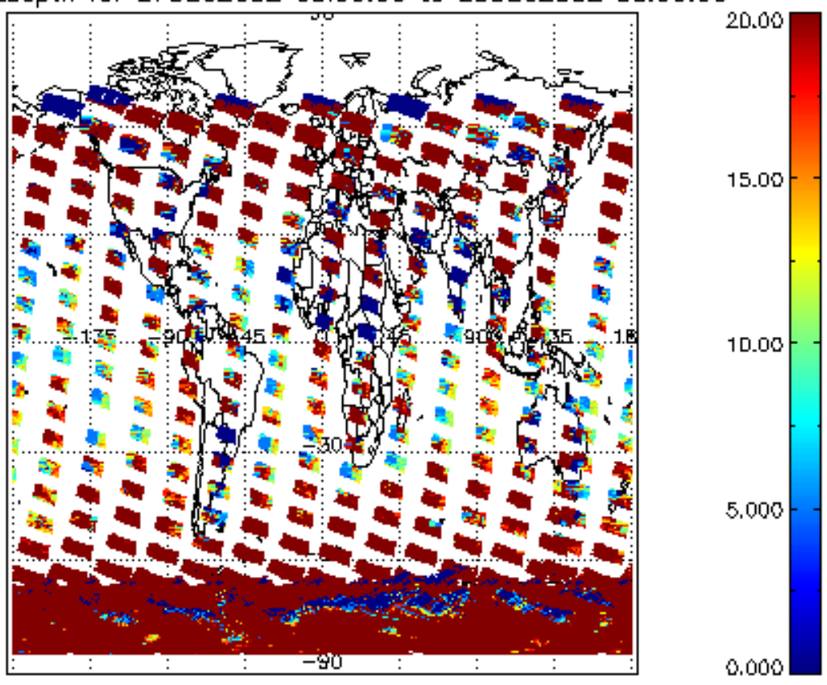
cl_frac for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



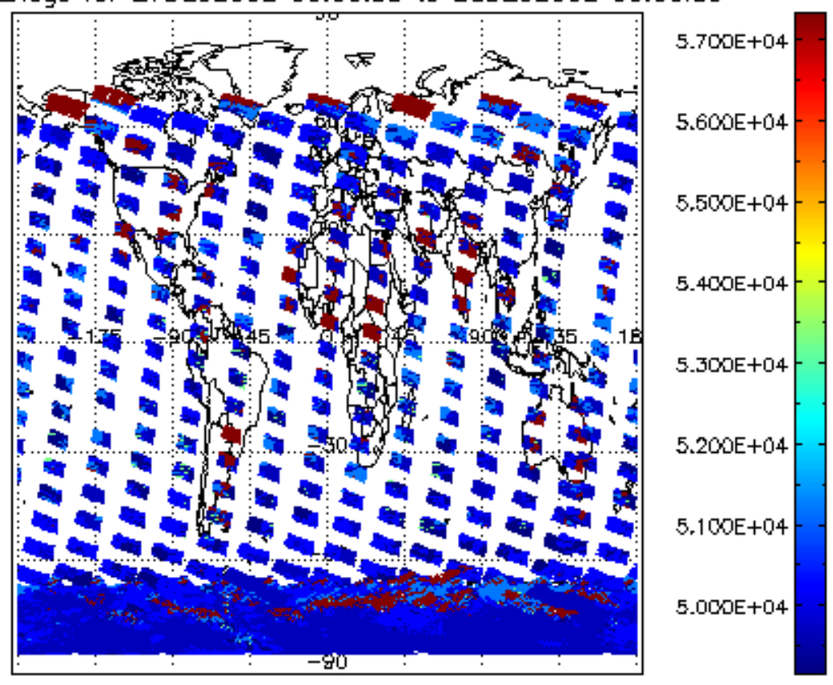
cl_top_height for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

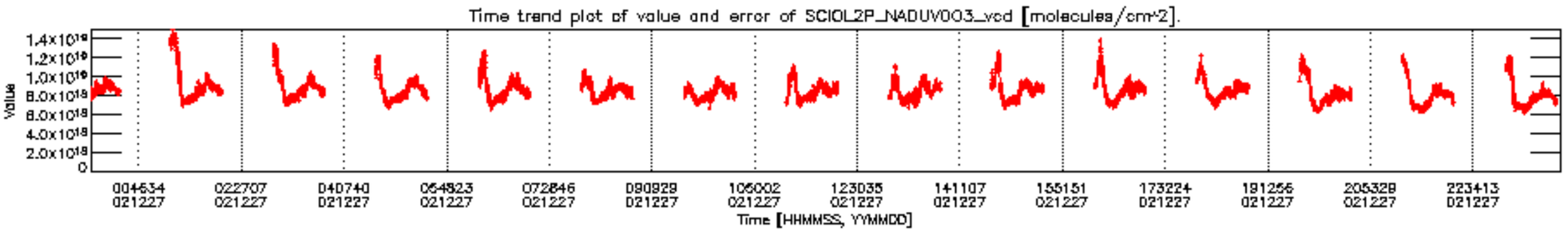


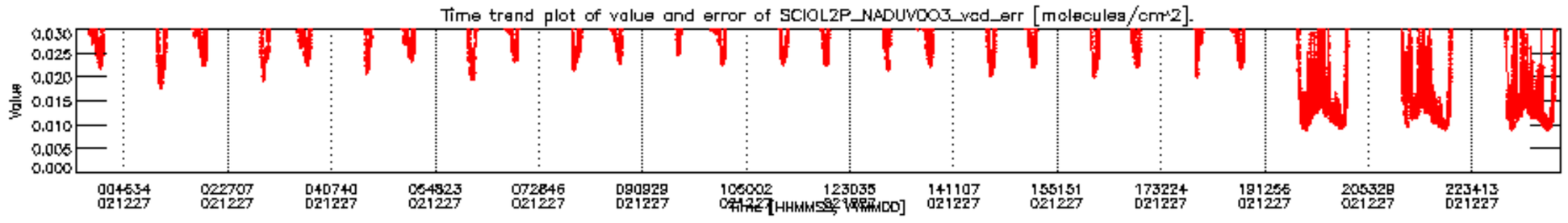
cl_opt_depth for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

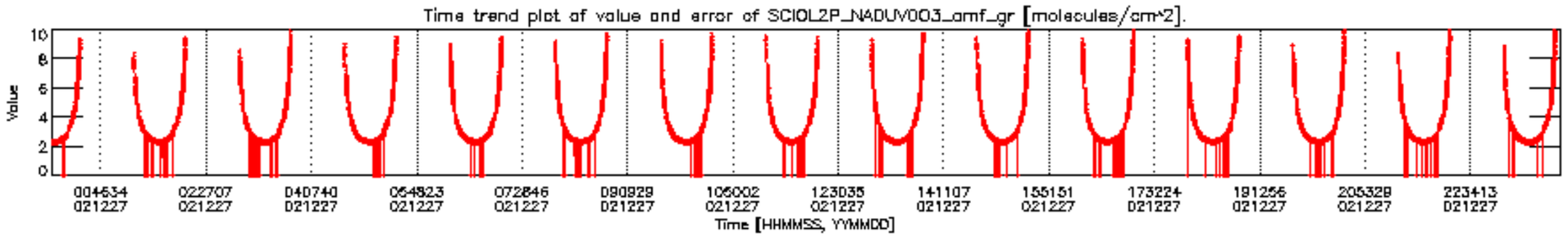


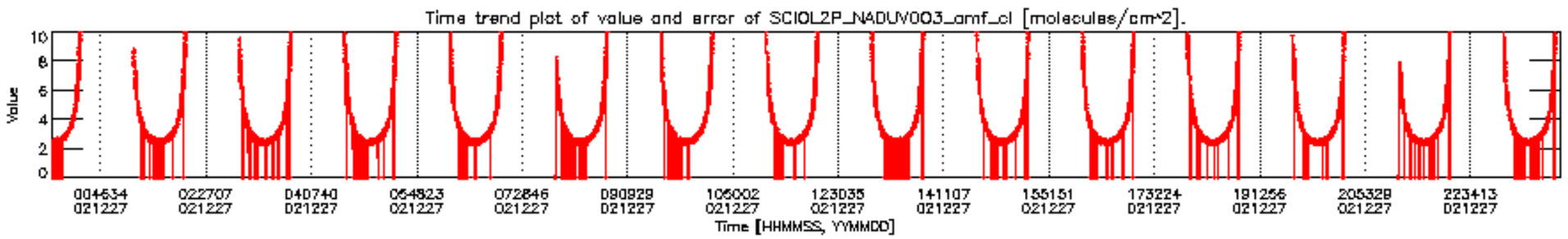
cloud_flags for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



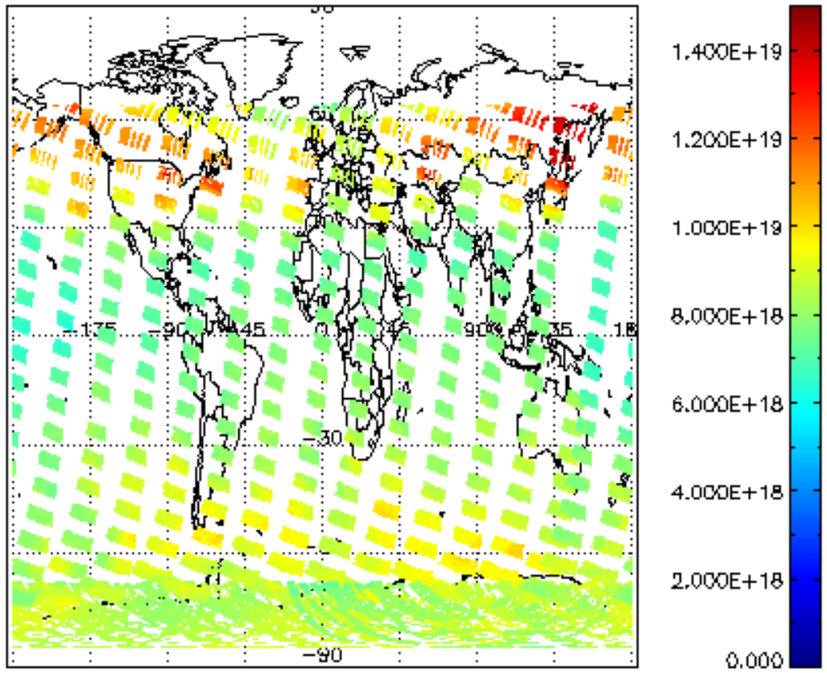

Time trend plot of value and error of SCIOL2P_NADUV003_vcd [molecules/cm^2].
Value
1.4x10^19
1.2x10^19
1.0x10^19
8.0x10^18
6.0x10^18
4.0x10^18
2.0x10^18
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
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
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

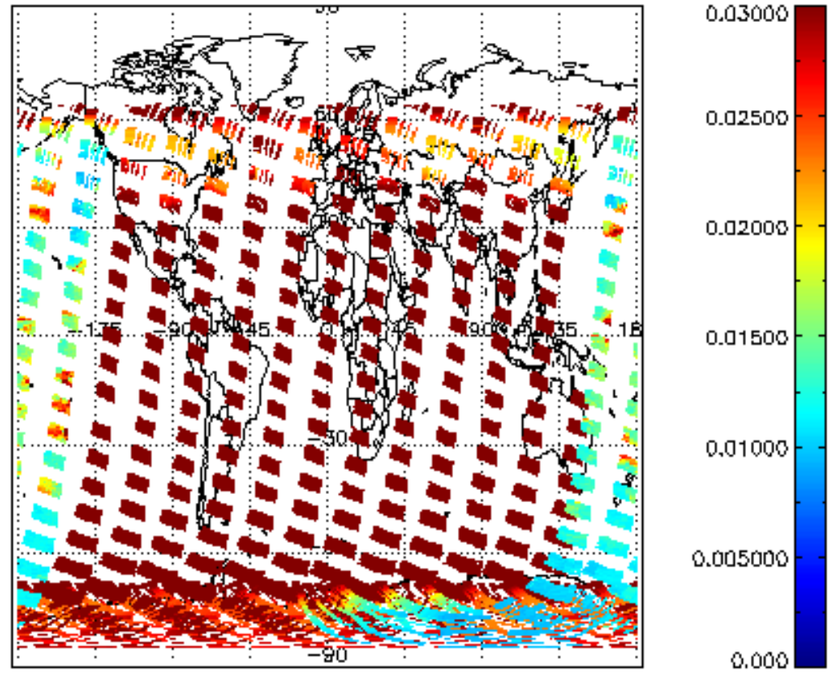

Time trend plot of value and error of SCIOL2P_NADUV003_amf_gr [molecules/cm^2].
Value
10
8
6
4
2
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]


Time trend plot of value and error of SCIOL2P_NADUV003_amf_cl [molecules/cm^2].
Value
10
8
6
4
2
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

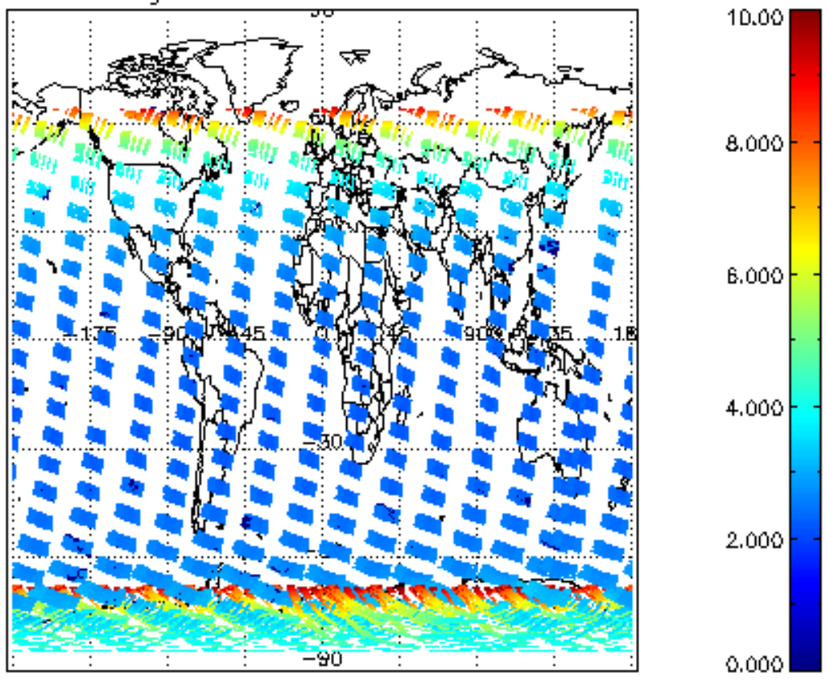
SCIOL2P_NADUV003_vcd for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



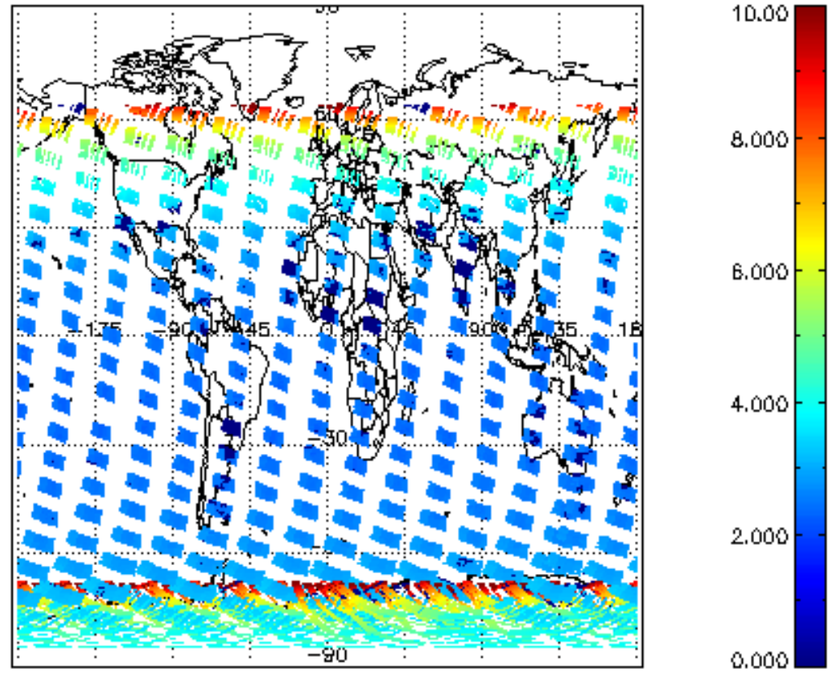
SCIOL2P_NADUV003_vcd_err for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

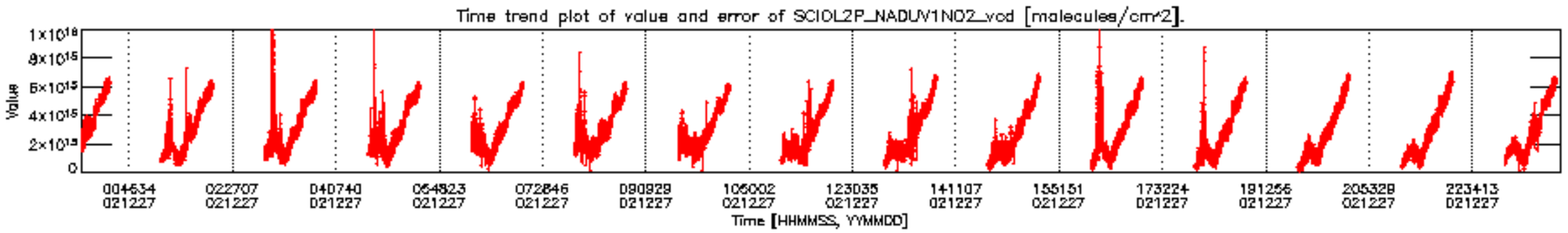


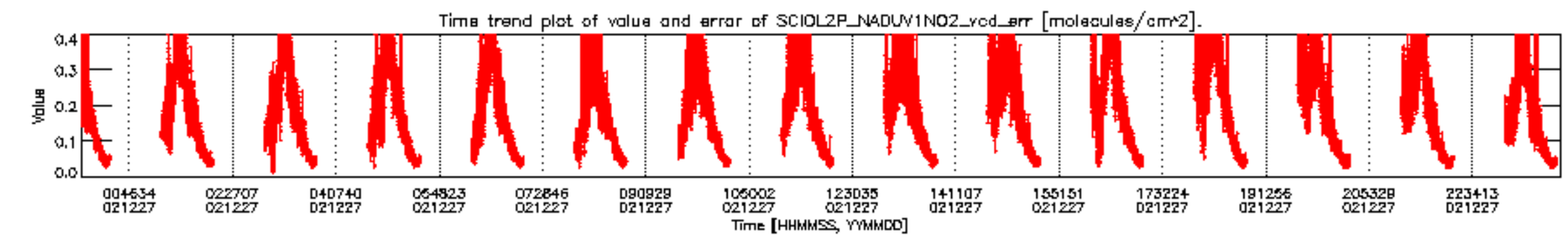
SCIOL2P_NADUV003_amf_gr for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

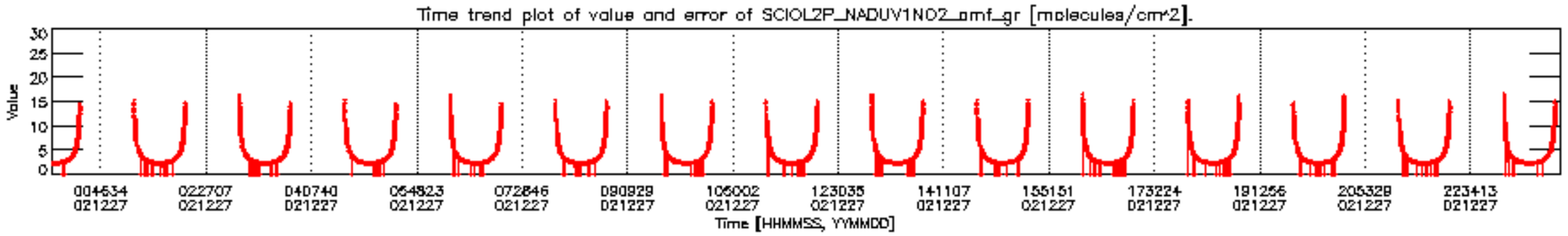


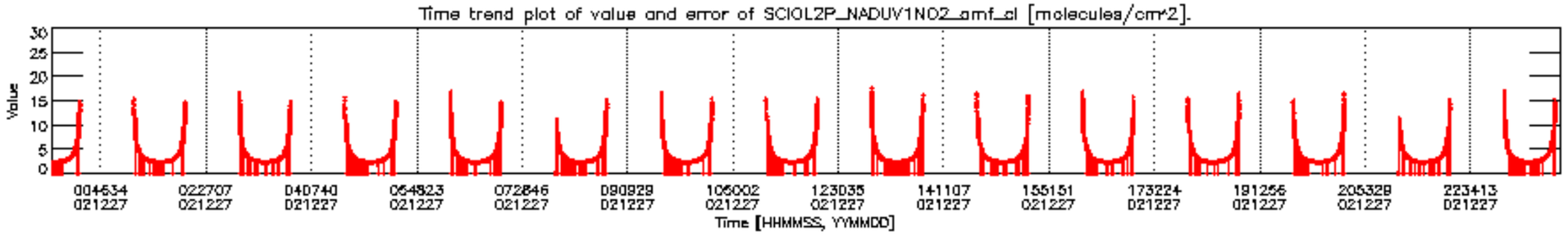
SCIOL2P_NADUV003_amf_cl for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



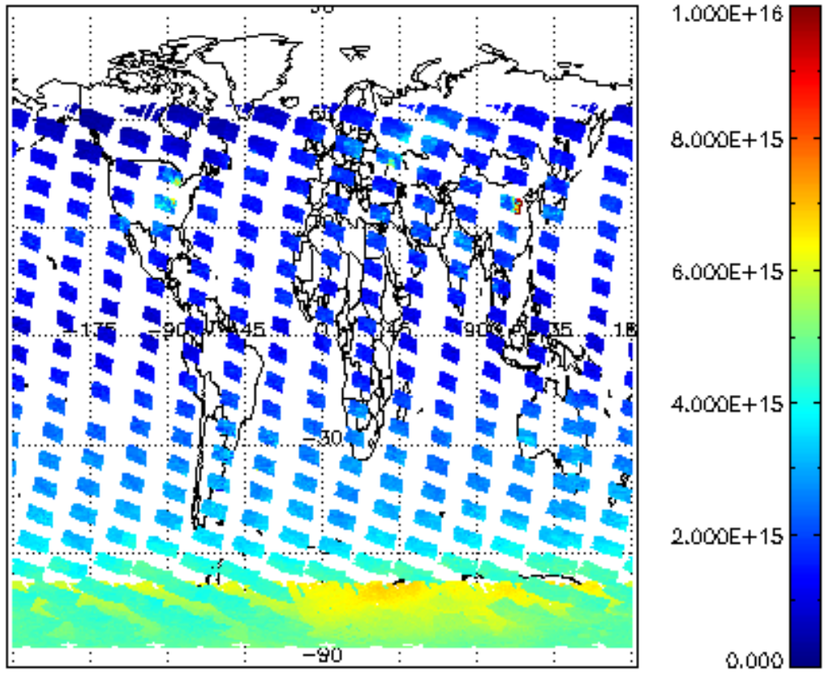

Time trend plot of value and error of SCIOL2P_NADUV1NO2_vcd [molecules/cm^2].
Value
1x10^16
8x10^15
6x10^15
4x10^15
2x10^15
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
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
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

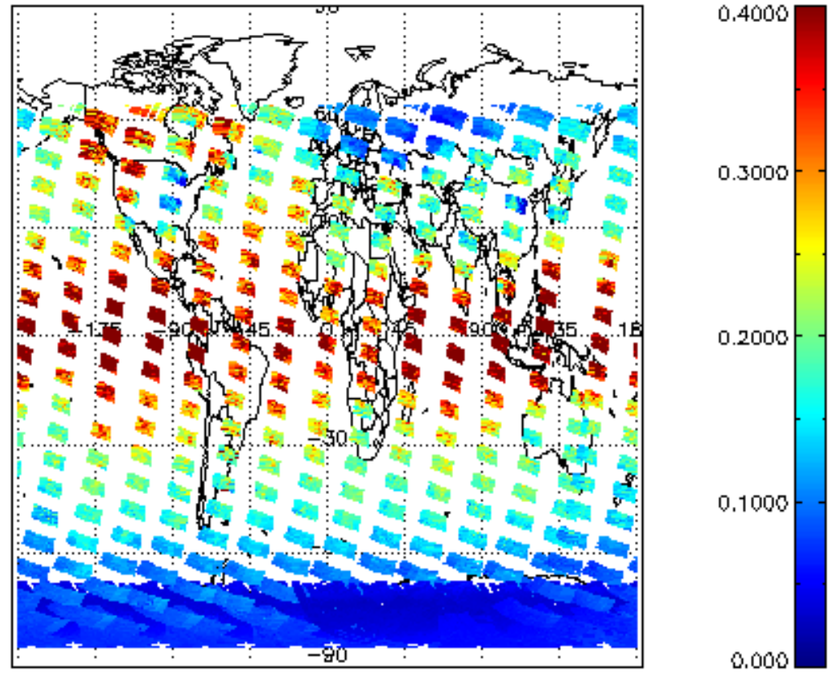

Time trend plot of value and error of SCIOL2P_NADUV1NO2_amf_gr [molecules/cm^2].
Value
30
25
20
15
10
5
0
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
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
004634 021227
022707 021227
040740 021227
054823 021227
072846 021227
090929 021227
105002 021227
123035 021227
141107 021227
155151 021227
173224 021227
191256 021227
205328 021227
223413 021227
Time [HHMMSS, YYMMDD]

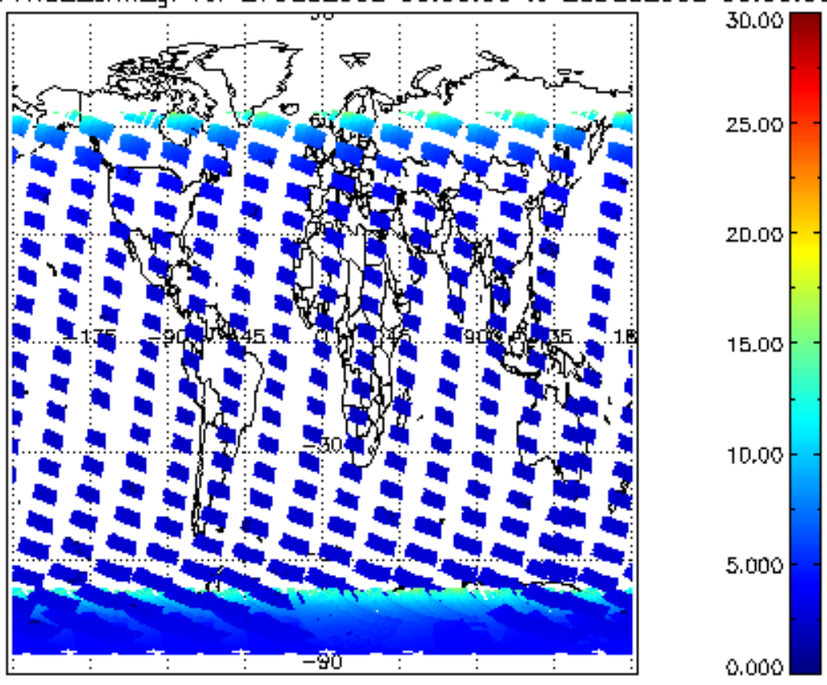
SCIOL2P_NADUV1NO2_vcd for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



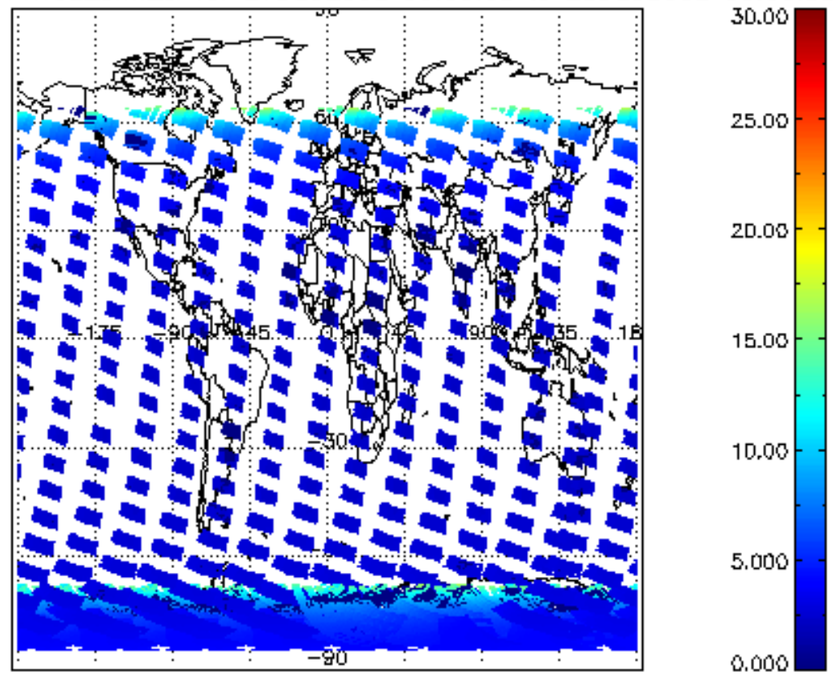
SCIOL2P_NADUV1NO2_vcd_err for 27DEC2002 00:00:00 to 28DEC2002 00:00:00

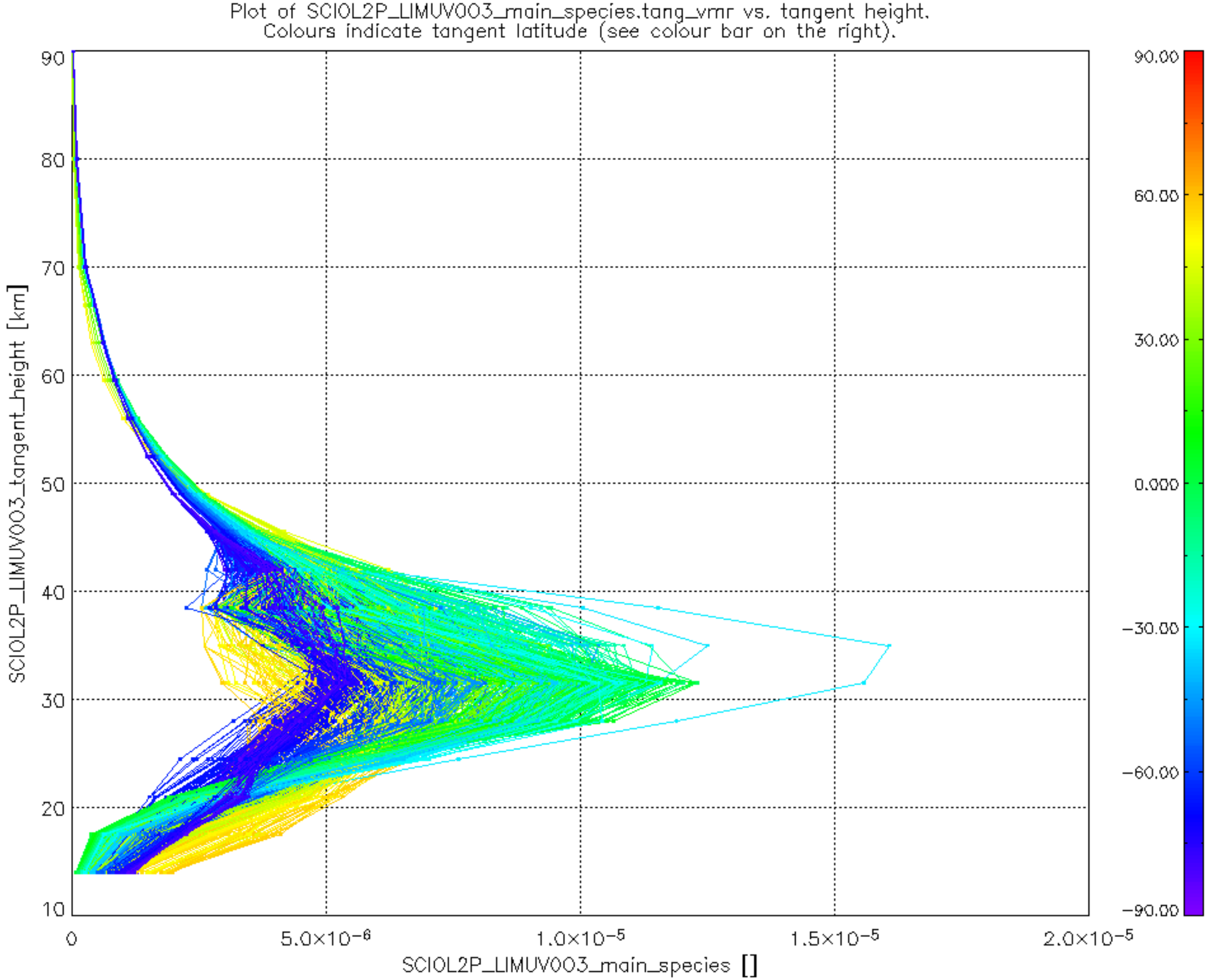


SCIOL2P_NADUV1NO2_amf_gr for 27DEC2002 00:00:00 to 28DEC2002 00:00:00



SCIOL2P_NADUV1NO2_amf_cl for 27DEC2002 00:00:00 to 28DEC2002 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
5.0×10⁻⁶
1.0×10⁻⁵
1.5×10⁻⁵
2.0×10⁻⁵
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).