

# GOMOS Level 2 Daily Report

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This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	23APR2013 15:44:37
Data source version	GOMOS/6.01
Start time of products	27-12-2007 (27DEC2007 00:00:00)
Stop time of products	28-12-2007 (28DEC2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	367
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20071227_000025_000000352064_00331_30445_1586.N1	27-DEC-2007 00:00:25	Bright	34.500	149	45Eps Per	2.8880	30000.	69	30445	No
2	GOM_NL__2PRFIN20071227_000209_000000442064_00331_30445_1587.N1	27-DEC-2007 00:02:09	Bright	43.500	6	13Alp Aur	0.080000	3400.0	87	30445	No
3	GOM_NL__2PRFIN20071227_001409_000000352064_00331_30445_1588.N1	27-DEC-2007 00:14:09	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	30445	No
4	GOM_NL__2PRFIN20071227_001844_000000352064_00331_30445_1589.N1	27-DEC-2007 00:18:44	Bright	35.000	60	7Bet UMi	2.0810	3950.0	70	30445	No
5	GOM_NL__2PRFIN20071227_002223_000000362064_00331_30445_1590.N1	27-DEC-2007 00:22:23	Bright	36.000	119	14Eta Dra	2.7270	4700.0	72	30445	No
6	GOM_NL__2PRFIN20071227_003238_000000362064_00331_30445_1591.N1	27-DEC-2007 00:32:38	Bright	35.500	67	5Alp CrB	2.2210	11000.	71	30445	No
7	GOM_NL__2PRFIN20071227_003816_000000342064_00331_30445_1592.N1	27-DEC-2007 00:38:16	Bright	33.500	102	24Alp Ser	2.6000	4250.0	67	30445	No
8	GOM_NL__2PRFIN20071227_004309_000000372064_00331_30445_1593.N1	27-DEC-2007 00:43:09	Bright	36.500	104	27Bet Lib	2.6140	13100.	73	30445	No
9	GOM_NL__2PRFIN20071227_004538_000000412064_00331_30445_1594.N1	27-DEC-2007 00:45:38	Bright	41.000	122	9Alp2Lib	2.7470	9700.0	82	30445	No
10	GOM_NL__2PRFIN20071227_005221_000000512064_00331_30445_1595.N1	27-DEC-2007 00:52:21	Dark	51.000	54	5The Cen	2.0550	4500.0	102	30445	No
11	GOM_NL__2PRFIN20071227_005719_000000452064_00331_30445_1596.N1	27-DEC-2007 00:57:19	Dark	44.500	4	Alp1Cen	-0.010000	5800.0	89	30445	No
12	GOM_NL__2PRFIN20071227_010053_000000402064_00332_30446_1587.N1	27-DEC-2007 01:00:53	Dark	40.000	12	Alp1Cru	0.77500	30000.	80	30446	No
13	GOM_NL__2PRFIN20071227_010554_000000392064_00332_30446_1588.N1	27-DEC-2007 01:05:54	Dark	39.000	159	Ups Car	2.9200	7200.0	78	30446	No
14	GOM_NL__2PRFIN20071227_010729_000000432064_00332_30446_1589.N1	27-DEC-2007 01:07:29	Dark	43.000	71	Iot Car	2.2460	7700.0	86	30446	No
15	GOM_NL__2PRFIN20071227_010912_000000462064_00332_30446_1590.N1	27-DEC-2007 01:09:12	Dark	46.000	41	Eps Car	1.8600	4100.0	92	30446	No
16	GOM_NL__2PRFIN20071227_011339_000000502064_00332_30446_1591.N1	27-DEC-2007 01:13:39	Dark	49.500	2	Alp Car	-0.73600	7000.0	99	30446	No
17	GOM_NL__2PRFIN20071227_011926_000000382064_00332_30446_1592.N1	27-DEC-2007 01:19:26	Straylight	37.500	108	Alp Col	2.6520	15200.	75	30446	No
18	GOM_NL__2PRFIN20071227_012409_000000442064_00332_30446_1593.N1	27-DEC-2007 01:24:09	Straylight	43.500	101	11Alp Lep	2.5820	7000.0	87	30446	No
19	GOM_NL__2PRFIN20071227_012703_000000442064_00332_30446_1594.N1	27-DEC-2007 01:27:03	Straylight	44.000	7	19Bet Ori	0.10000	14000.	88	30446	No
20	GOM_NL__2PRFIN20071227_012901_000000442064_00332_30446_1595.N1	27-DEC-2007 01:29:01	Straylight	44.000	30	46Eps Ori	1.6940	30000.	88	30446	No
21	GOM_NL__2PRFIN20071227_013115_000000432064_00332_30446_1596.N1	27-DEC-2007 01:31:15	Twilight_stray	43.000	27	24Gam Ori	1.6360	26000.	86	30446	No
22	GOM_NL__2PRFIN20071227_013414_000000502064_00332_30446_1597.N1	27-DEC-2007 01:34:14	Bright	49.500	13	87Alp Tau	0.86700	3800.0	99	30446	No
23	GOM_NL__2PRFIN20071227_013749_000000402064_00332_30446_1598.N1	27-DEC-2007 01:37:49	Bright	40.000	28	12Bet Tau	1.6500	15200.	80	30446	No
24	GOM_NL__2PRFIN20071227_014101_000000332064_00332_30446_1599.N1	27-DEC-2007 01:41:01	Bright	33.000	149	45Eps Per	2.8880	30000.	66	30446	No
25	GOM_NL__2PRFIN20071227_014245_000000402064_00332_30446_1600.N1	27-DEC-2007 01:42:45	Bright	40.000	6	13Alp Aur	0.080000	3400.0	80	30446	No
26	GOM_NL__2PRFIN20071227_015445_000000352064_00332_30446_1601.N1	27-DEC-2007 01:54:45	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	30446	No
27	GOM_NL__2PRFIN20071227_015920_000000372064_00332_30446_1602.N1	27-DEC-2007 01:59:20	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	30446	No
28	GOM_NL__2PRFIN20071227_020259_000000352064_00332_30446_1603.N1	27-DEC-2007 02:02:59	Bright	35.000	119	14Eta Dra	2.7270	4700.0	70	30446	No
29	GOM_NL__2PRFIN20071227_021111_000000502064_00332_30446_1604.N1	27-DEC-2007 02:11:11	Bright	50.000	133	40Zet Her	2.8070	6000.0	100	30446	No
30	GOM_NL__2PRFIN20071227_021315_000000362064_00332_30446_1605.N1	27-DEC-2007 02:13:15	Bright	35.500	67	5Alp CrB	2.2210	11000.	71	30446	No
31	GOM_NL__2PRFIN20071227_021852_000000342064_00332_30446_1606.N1	27-DEC-2007 02:18:52	Bright	33.500	102	24Alp Ser	2.6000	4250.0	67	30446	No
32	GOM_NL__2PRFIN20071227_022345_000000542064_00332_30446_1607.N1	27-DEC-2007 02:23:45	Bright	54.000	104	27Bet Lib	2.6140	13100.	108	30446	No
33	GOM_NL__2PRFIN20071227_023258_000000462064_00332_30446_1608.N1	27-DEC-2007 02:32:58	Dark	45.500	54	5The Cen	2.0550	4500.0	91	30446	No
34	GOM_NL__2PRFIN20071227_023434_000000382064_00332_30446_1609.N1	27-DEC-2007 02:34:34	Dark	37.500	78	Alp Lup	2.3040	28000.	75	30446	No
35	GOM_NL__2PRFIN20071227_023550_000000392064_00332_30446_1610.N1	27-DEC-2007 02:35:50	Dark	38.500	95	Zet Cen	2.5450	26000.	77	30446	No
36	GOM_NL__2PRFIN20071227_023755_000000412064_00332_30446_1611.N1	27-DEC-2007 02:37:55	Dark	40.500	4	Alp1Cen	-0.010000	5800.0	81	30446	No
37	GOM_NL__2PRFIN20071227_024129_000000412064_00333_30447_1601.N1	27-DEC-2007 02:41:29	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	30447	No
38	GOM_NL__2PRFIN20071227_024630_000000382064_00333_30447_1602.N1	27-DEC-2007 02:46:30	Dark	38.000	159	Ups Car	2.9200	7200.0	76	30447	No
39	GOM_NL__2PRFIN20071227_024806_000000412064_00333_30447_1603.N1	27-DEC-2007 02:48:06	Dark	41.000	71	Iot Car	2.2460	7700.0	82	30447	No
40	GOM_NL__2PRFIN20071227_024948_000000442064_00333_30447_1604.N1	27-DEC-2007 02:49:48	Dark	43.500	41	Eps Car	1.8600	4100.0	87	30447	No
41	GOM_NL__2PRFIN20071227_025415_000000532064_00333_30447_1605.N1	27-DEC-2007 02:54:15	Dark	53.000	2	Alp Car	-0.73600	7000.0	106	30447	No
42	GOM_NL__2PRFIN20071227_030003_000000372064_00333_30447_1606.N1	27-DEC-2007 03:00:03	Straylight	37.000	108	Alp Col	2.6520	15200.	74	30447	No











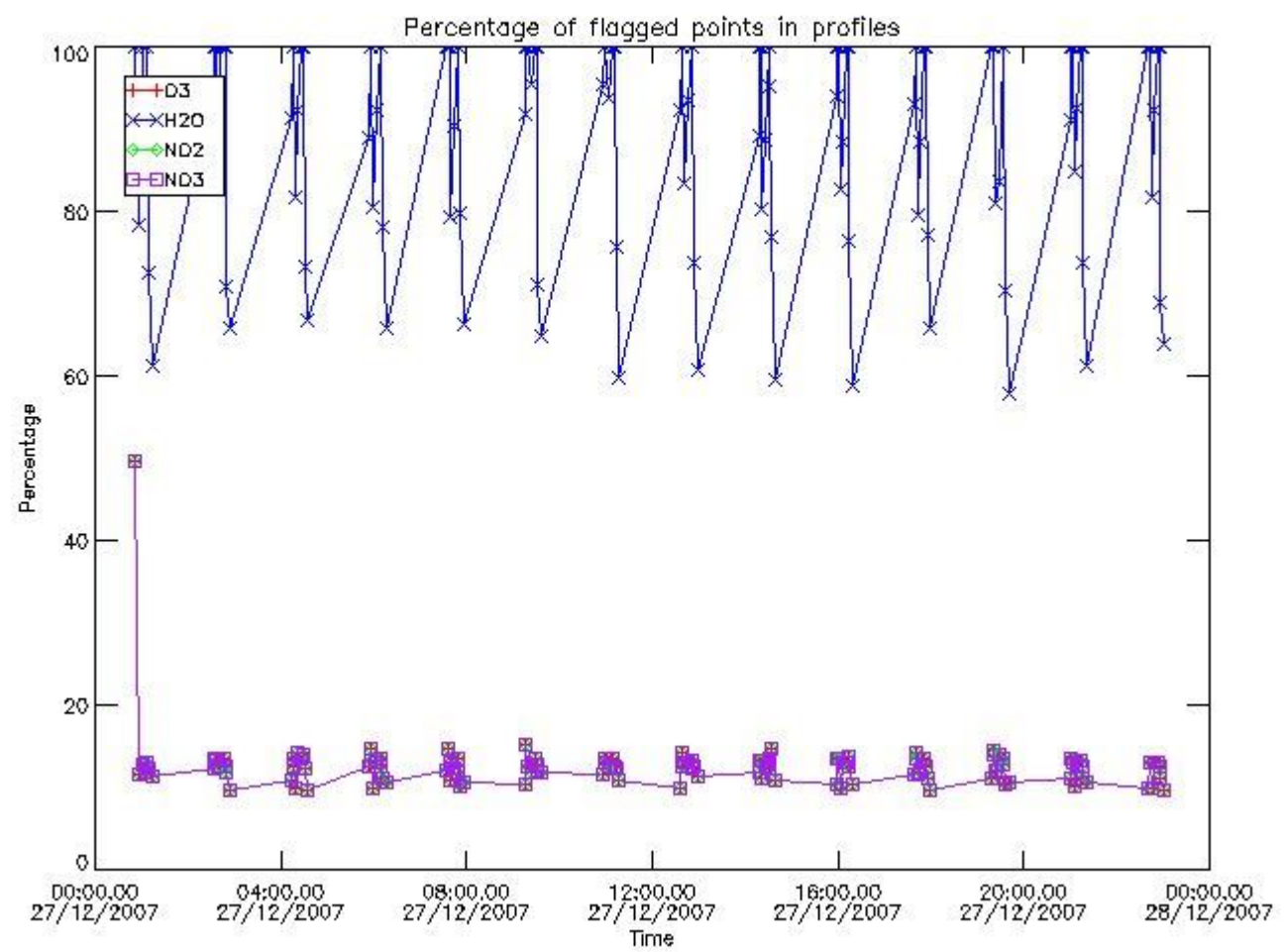
338	GOM_NL__2PRFIN20071227_220156_000000352064_00344_30458_1789.N1	27-DEC-2007 22:01:56	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	30458	No
339	GOM_NL__2PRFIN20071227_220630_000000392064_00344_30458_1790.N1	27-DEC-2007 22:06:30	Bright	38.500	60	7Bet UMi	2.0810	3950.0	77	30458	No
340	GOM_NL__2PRFIN20071227_221011_000000352064_00344_30458_1791.N1	27-DEC-2007 22:10:11	Bright	34.500	119	14Eta Dra	2.7270	4700.0	69	30458	No
341	GOM_NL__2PRFIN20071227_221824_000000352064_00344_30458_1792.N1	27-DEC-2007 22:18:24	Bright	34.500	133	40Zet Her	2.8070	6000.0	69	30458	No
342	GOM_NL__2PRFIN20071227_222028_000000352064_00344_30458_1793.N1	27-DEC-2007 22:20:28	Bright	35.000	67	5Alp CrB	2.2210	11000.	70	30458	No
343	GOM_NL__2PRFIN20071227_222606_000000342064_00344_30458_1794.N1	27-DEC-2007 22:26:06	Bright	34.000	102	24Alp Ser	2.6000	4250.0	68	30458	No
344	GOM_NL__2PRFIN20071227_223101_000000542064_00344_30458_1795.N1	27-DEC-2007 22:31:01	Bright	54.000	104	27Bet Lib	2.6140	13100.	108	30458	No
345	GOM_NL__2PRFIN20071227_223331_000000432064_00344_30458_1796.N1	27-DEC-2007 22:33:31	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	30458	No
346	GOM_NL__2PRFIN20071227_224016_000000512064_00344_30458_1797.N1	27-DEC-2007 22:40:16	Dark	51.000	54	5The Cen	2.0550	4500.0	102	30458	No
347	GOM_NL__2PRFIN20071227_224308_000000392064_00344_30458_1798.N1	27-DEC-2007 22:43:08	Dark	39.000	95	Zet Cen	2.5450	26000.	78	30458	No
348	GOM_NL__2PRFIN20071227_224510_000000522064_00344_30458_1799.N1	27-DEC-2007 22:45:10	Dark	52.000	4	Alp1Cen	-0.010000	5800.0	104	30458	No
349	GOM_NL__2PRFIN20071227_224846_000000392064_00345_30459_1801.N1	27-DEC-2007 22:48:46	Dark	39.000	12	Alp1Cru	0.77500	30000.	78	30459	No
350	GOM_NL__2PRFIN20071227_225347_000000392064_00345_30459_1802.N1	27-DEC-2007 22:53:47	Dark	39.000	159	Ups Car	2.9200	7200.0	78	30459	No
351	GOM_NL__2PRFIN20071227_225524_000000412064_00345_30459_1803.N1	27-DEC-2007 22:55:24	Dark	41.000	71	lot Car	2.2460	7700.0	82	30459	No
352	GOM_NL__2PRFIN20071227_225705_000000462064_00345_30459_1804.N1	27-DEC-2007 22:57:05	Dark	45.500	41	Eps Car	1.8600	4100.0	91	30459	No
353	GOM_NL__2PRFIN20071227_230130_000000532064_00345_30459_1805.N1	27-DEC-2007 23:01:30	Dark	53.000	2	Alp Car	-0.73600	7000.0	106	30459	No
354	GOM_NL__2PRFIN20071227_230716_000000402064_00345_30459_1806.N1	27-DEC-2007 23:07:16	Straylight	40.000	108	Alp Col	2.6520	15200.	80	30459	No
355	GOM_NL__2PRFIN20071227_231158_000000402064_00345_30459_1807.N1	27-DEC-2007 23:11:58	Straylight	40.000	101	11Alp Lep	2.5820	7000.0	80	30459	No
356	GOM_NL__2PRFIN20071227_231451_000000522064_00345_30459_1808.N1	27-DEC-2007 23:14:51	Straylight	51.500	7	19Bet Ori	0.10000	14000.	103	30459	No
357	GOM_NL__2PRFIN20071227_231648_000000452064_00345_30459_1809.N1	27-DEC-2007 23:16:48	Straylight	44.500	30	46Eps Ori	1.6940	30000.	89	30459	No
358	GOM_NL__2PRFIN20071227_231902_000000412064_00345_30459_1810.N1	27-DEC-2007 23:19:02	Tw_i_and_stray	40.500	27	24Gam Ori	1.6360	26000.	81	30459	No
359	GOM_NL__2PRFIN20071227_232202_000000452064_00345_30459_1811.N1	27-DEC-2007 23:22:02	Bright	44.500	13	87Alp Tau	0.86700	3800.0	89	30459	No
360	GOM_NL__2PRFIN20071227_232534_000000412064_00345_30459_1812.N1	27-DEC-2007 23:25:34	Bright	40.500	28	12Bet Tau	1.6500	15200.	81	30459	No
361	GOM_NL__2PRFIN20071227_232850_000000352064_00345_30459_1813.N1	27-DEC-2007 23:28:50	Bright	34.500	149	45Eps Per	2.8880	30000.	69	30459	No
362	GOM_NL__2PRFIN20071227_233030_000000432064_00345_30459_1814.N1	27-DEC-2007 23:30:30	Bright	42.500	6	13Alp Aur	0.080000	3400.0	85	30459	No
363	GOM_NL__2PRFIN20071227_233153_000000362064_00345_30459_1815.N1	27-DEC-2007 23:31:53	Bright	35.500	35	33Alp Per	1.7950	6250.0	71	30459	No
364	GOM_NL__2PRFIN20071227_234232_000000362064_00345_30459_1816.N1	27-DEC-2007 23:42:32	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	30459	No
365	GOM_NL__2PRFIN20071227_234706_000000362064_00345_30459_1817.N1	27-DEC-2007 23:47:06	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	30459	No
366	GOM_NL__2PRFIN20071227_235047_000000372064_00345_30459_1818.N1	27-DEC-2007 23:50:47	Bright	36.500	119	14Eta Dra	2.7270	4700.0	73	30459	No
367	GOM_NL__2PRFIN20071227_235901_000000332064_00345_30459_1819.N1	27-DEC-2007 23:59:01	Bright	33.000	133	40Zet Her	2.8070	6000.0	66	30459	No

### 3. Quality information per product

In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

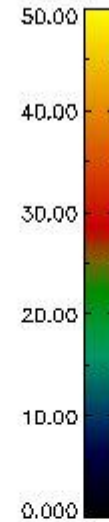
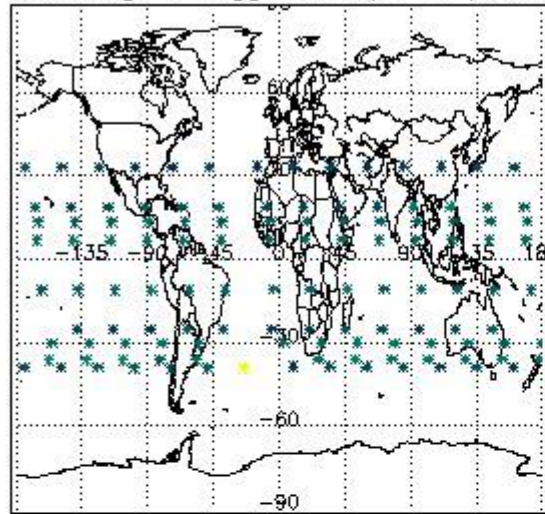
#### 3.1 Plot quality information per product (time dependant)



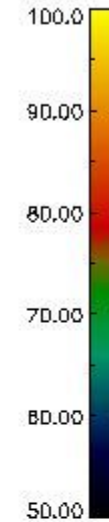
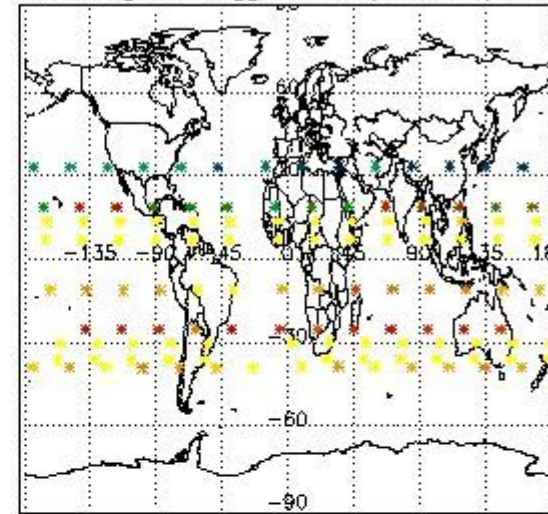


*3.2 Plot quality information per product (world map)*

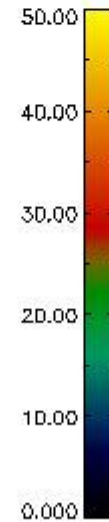
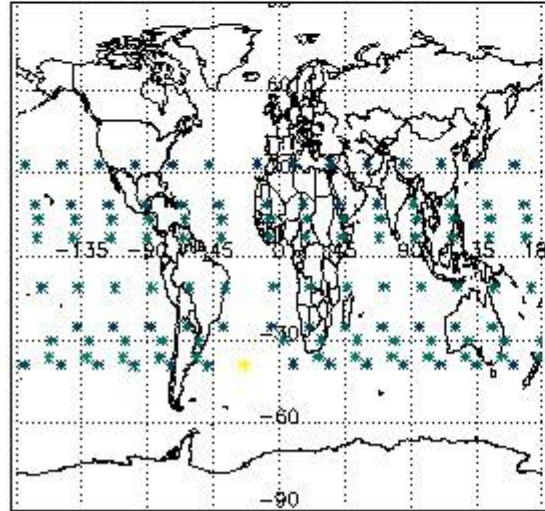
Percentage of flagged data per O3 profile



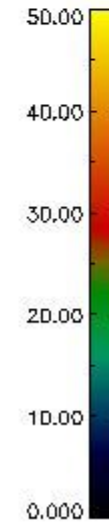
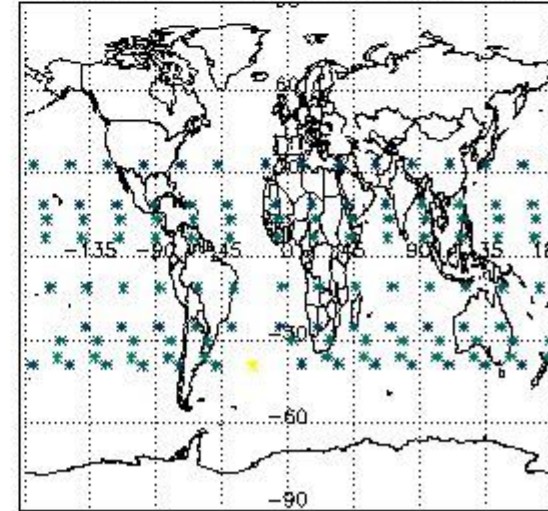
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

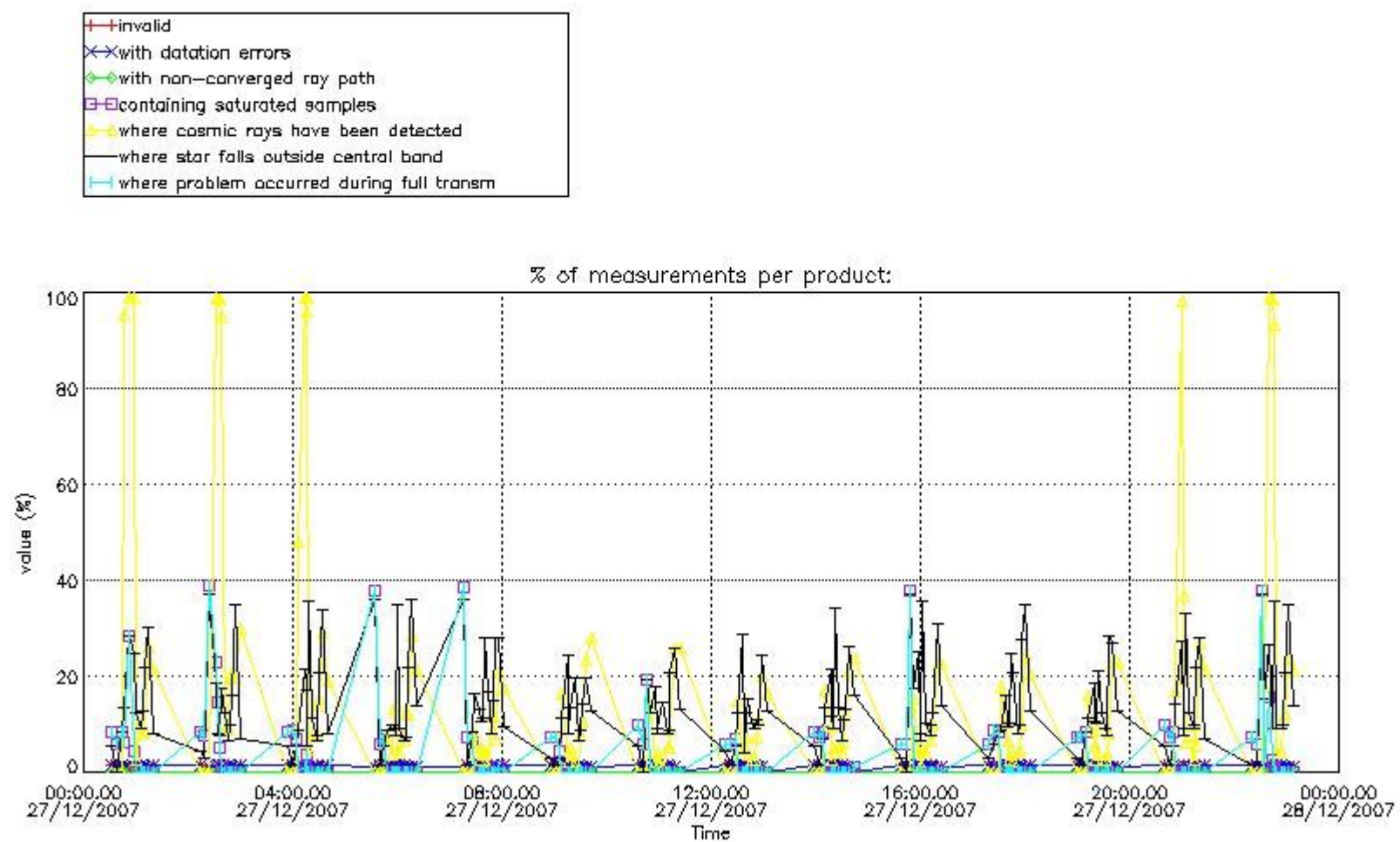


#### 4. Level 1 quality information per product

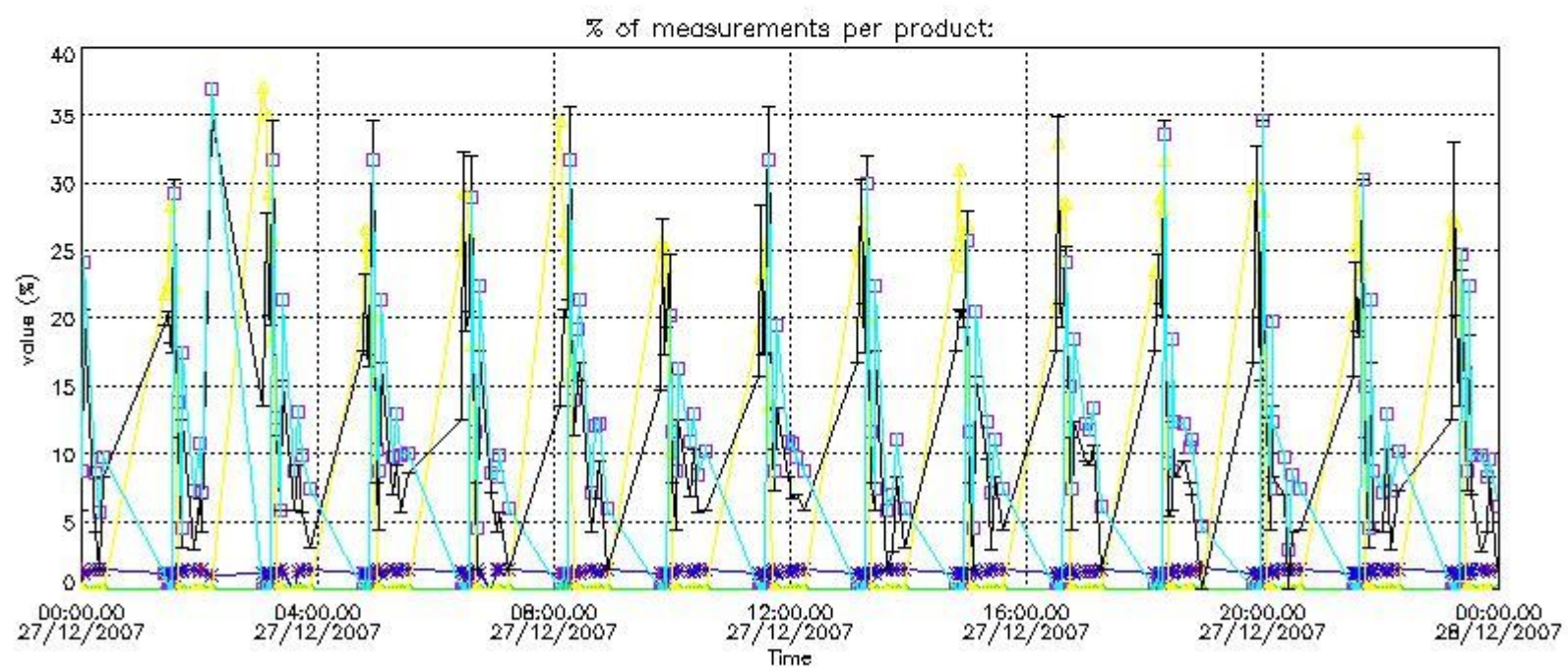
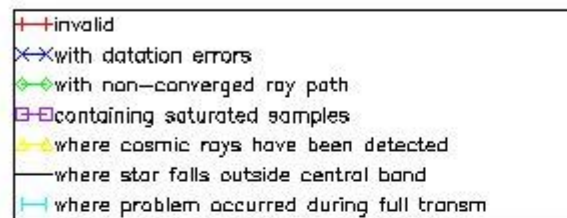
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

###### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes



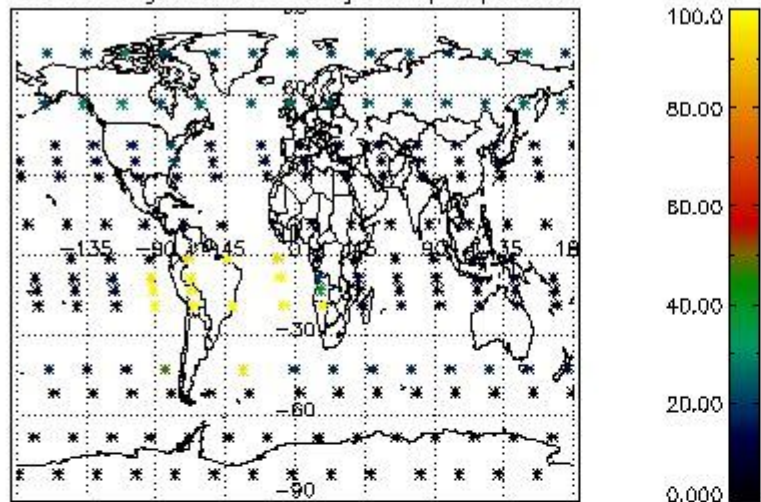
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



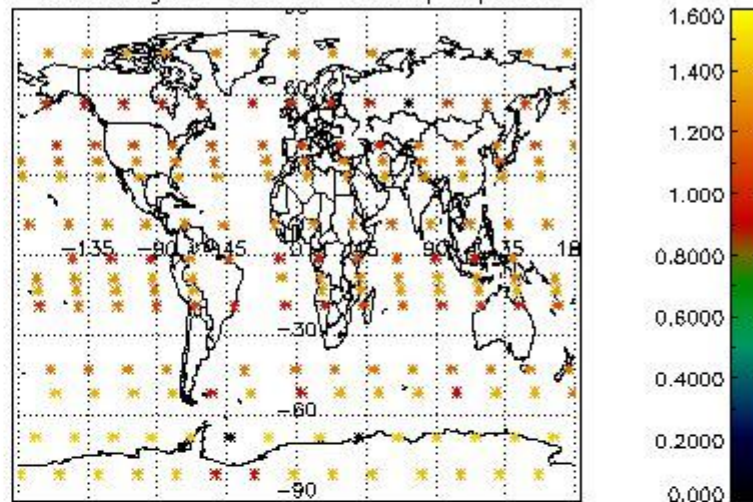
4.2 Plot quality information per product coming from level 1b processing (world map)

4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

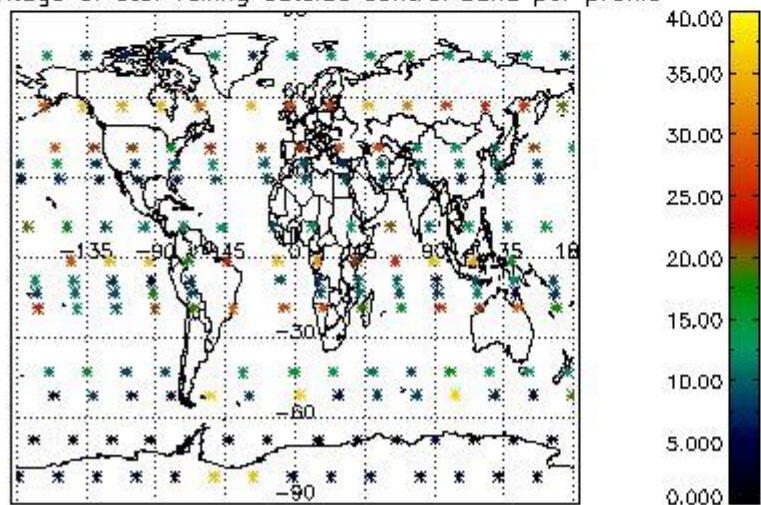
Percentage of cosmic ray hits per profile



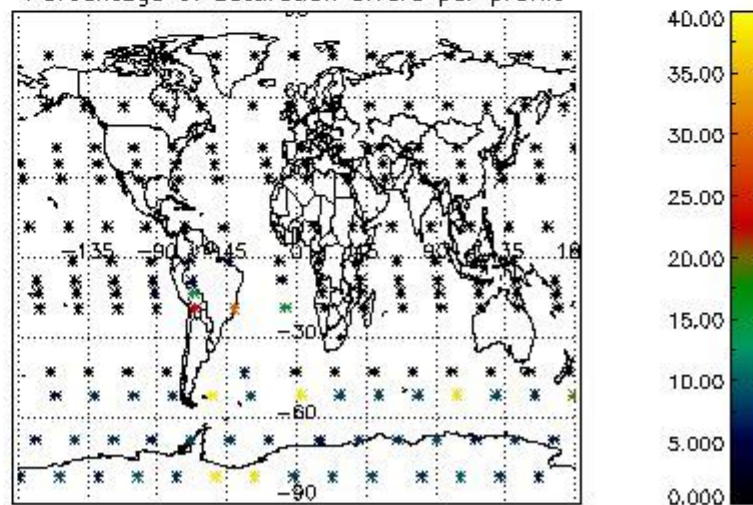
Percentage of datation errors per profile



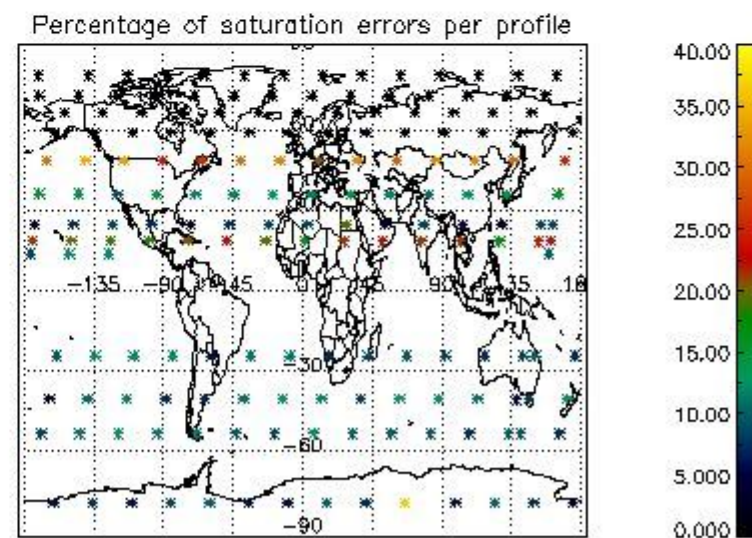
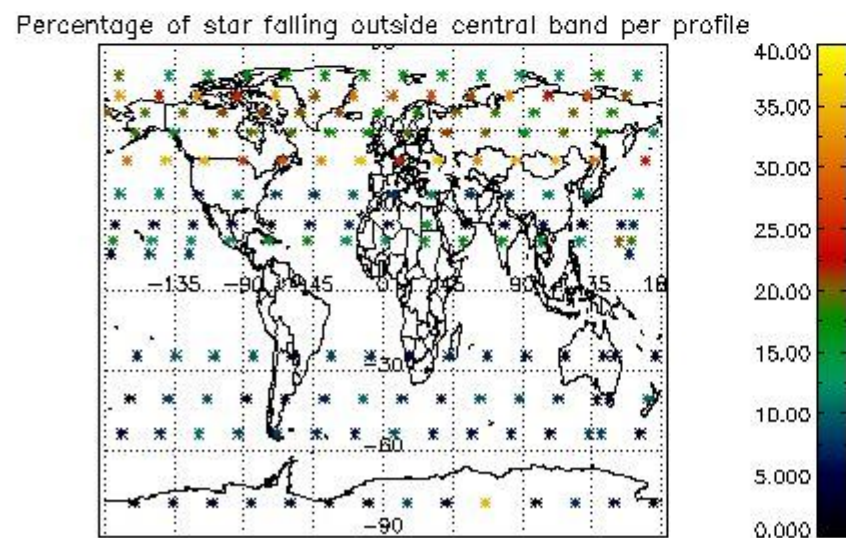
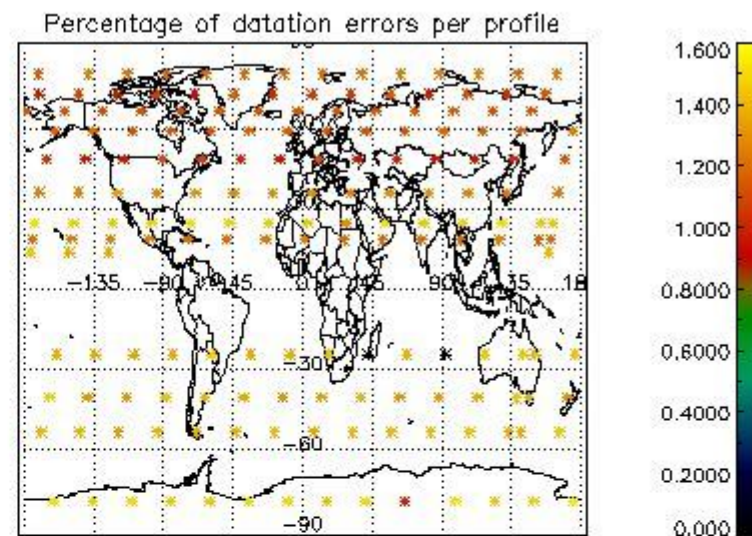
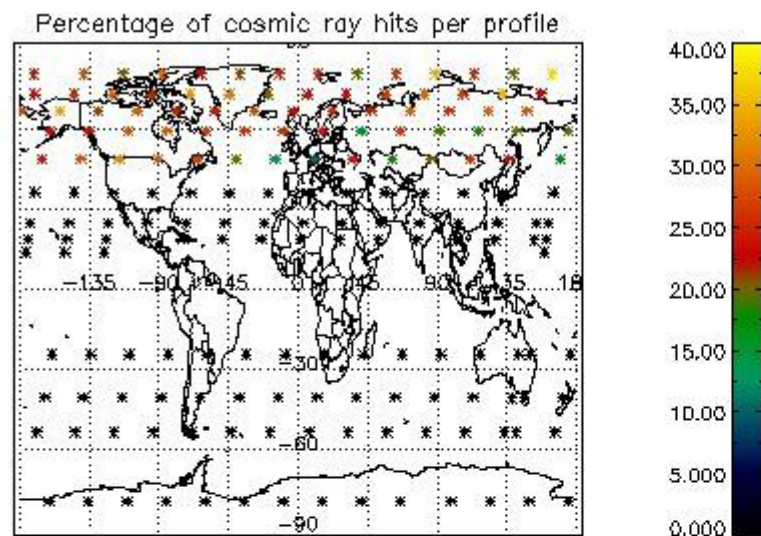
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

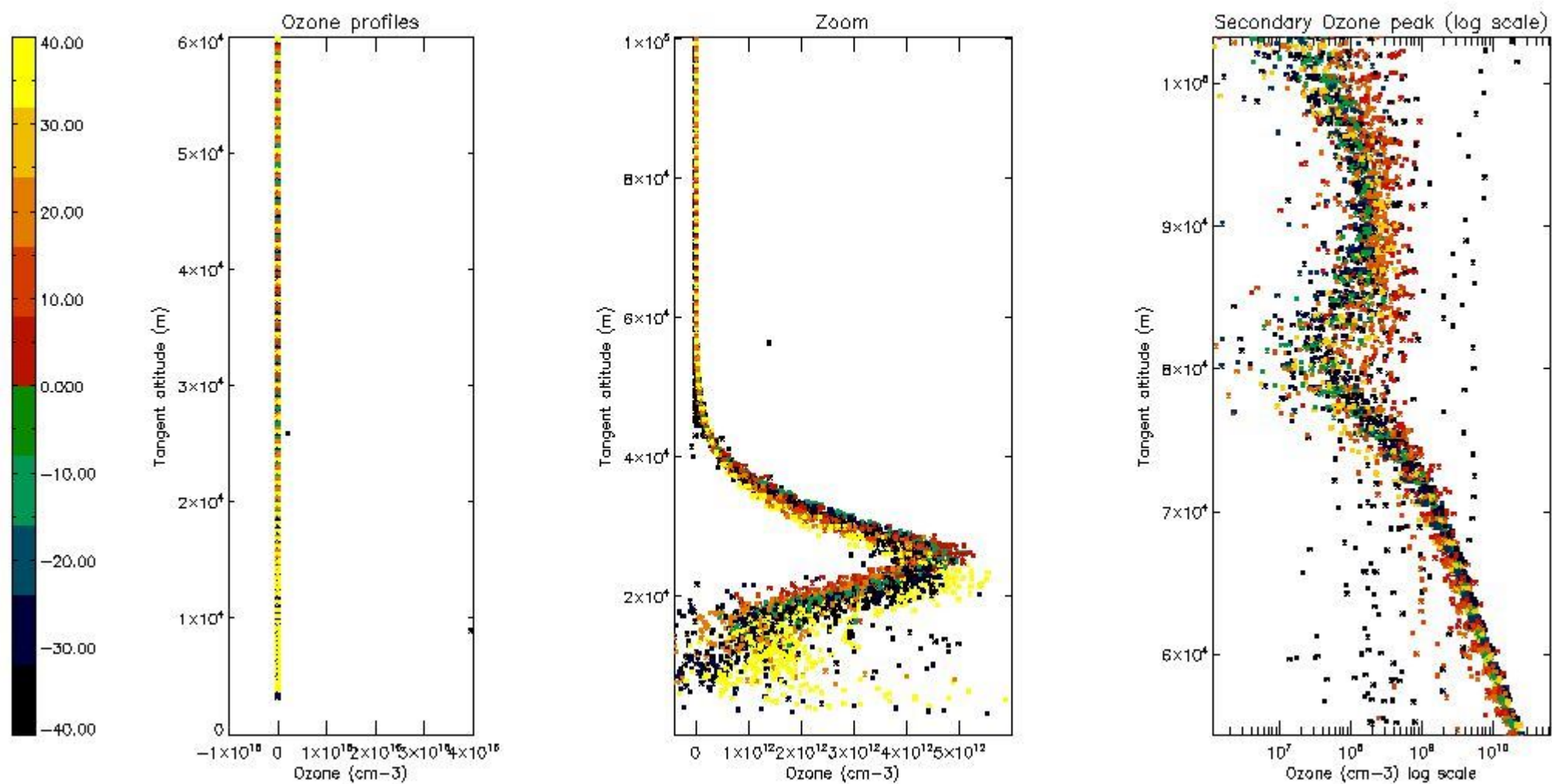
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	36
STD < 20	19

STD < 10	14
STD < 5	8

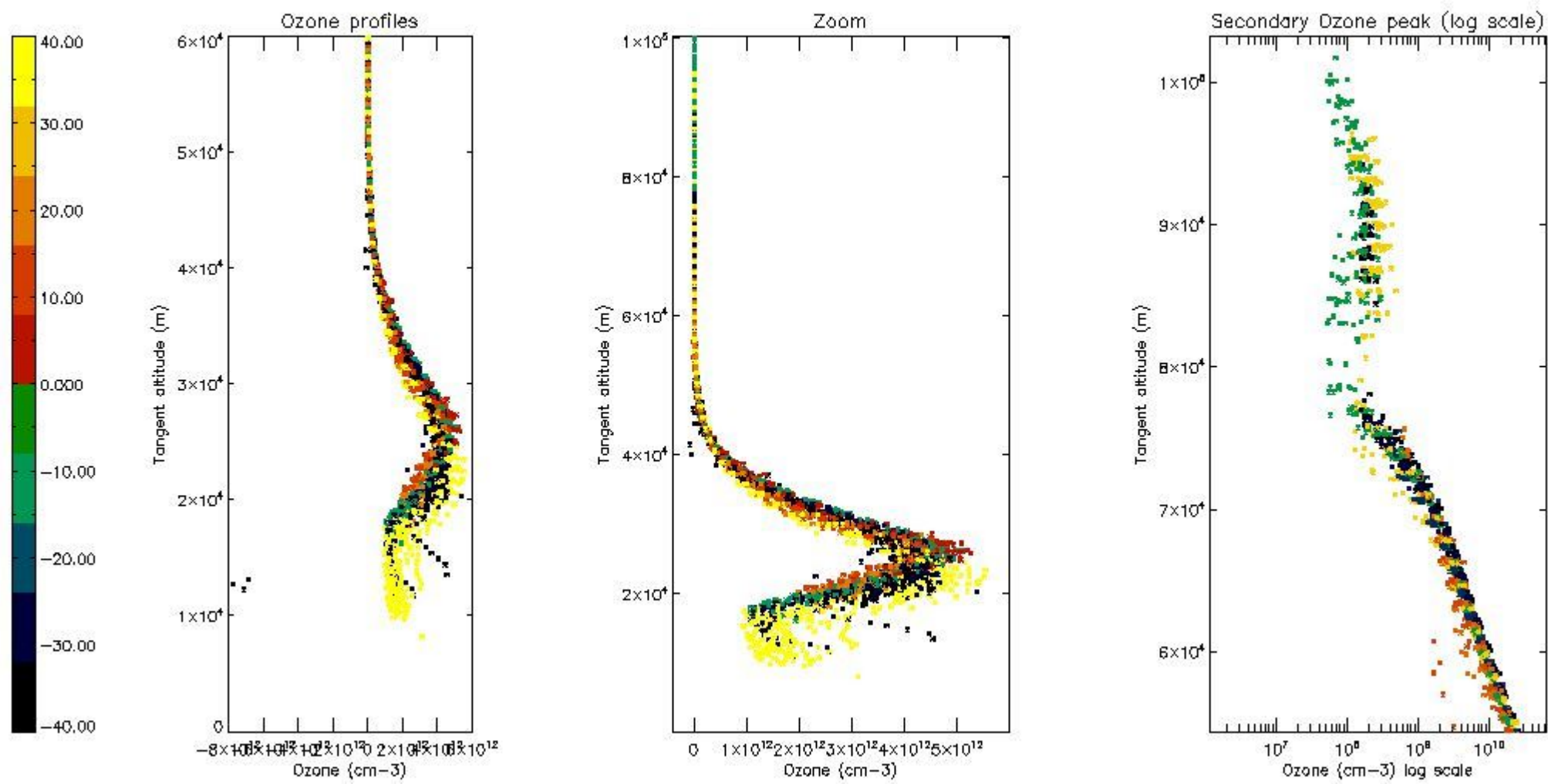
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



5.3 Plot ozone profiles where STD < 20% (dark without errors)

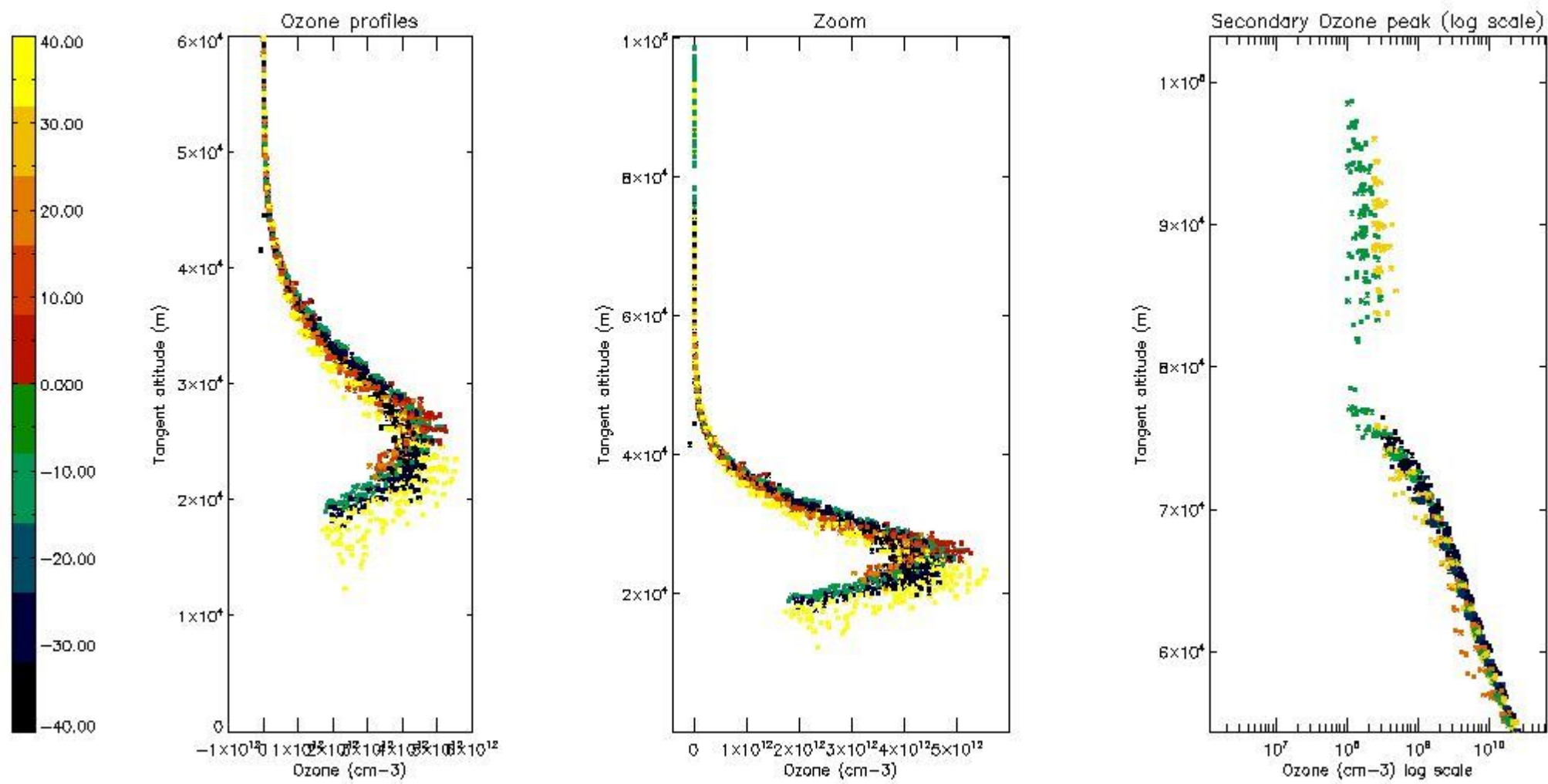
The colorbar represents the latitude.



*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

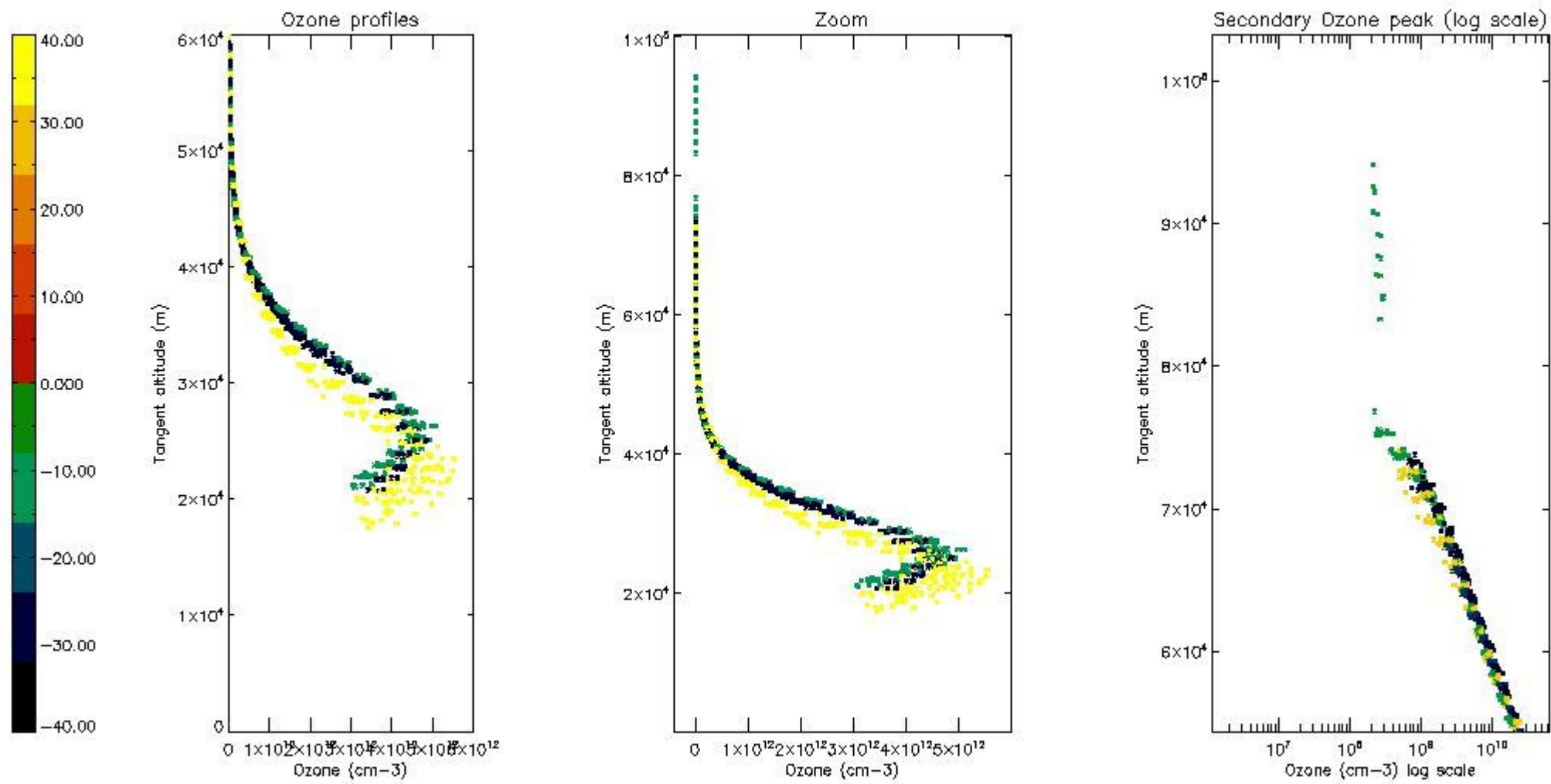
The colorbar represents the latitude.





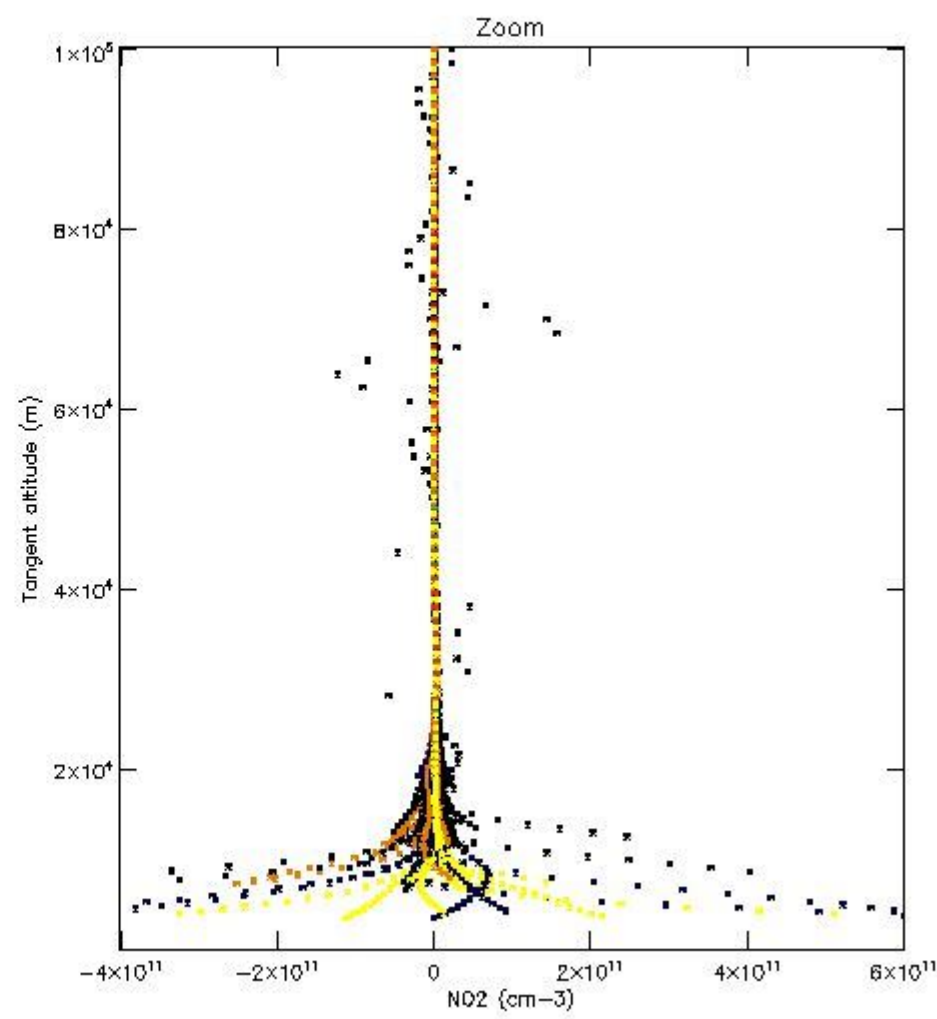
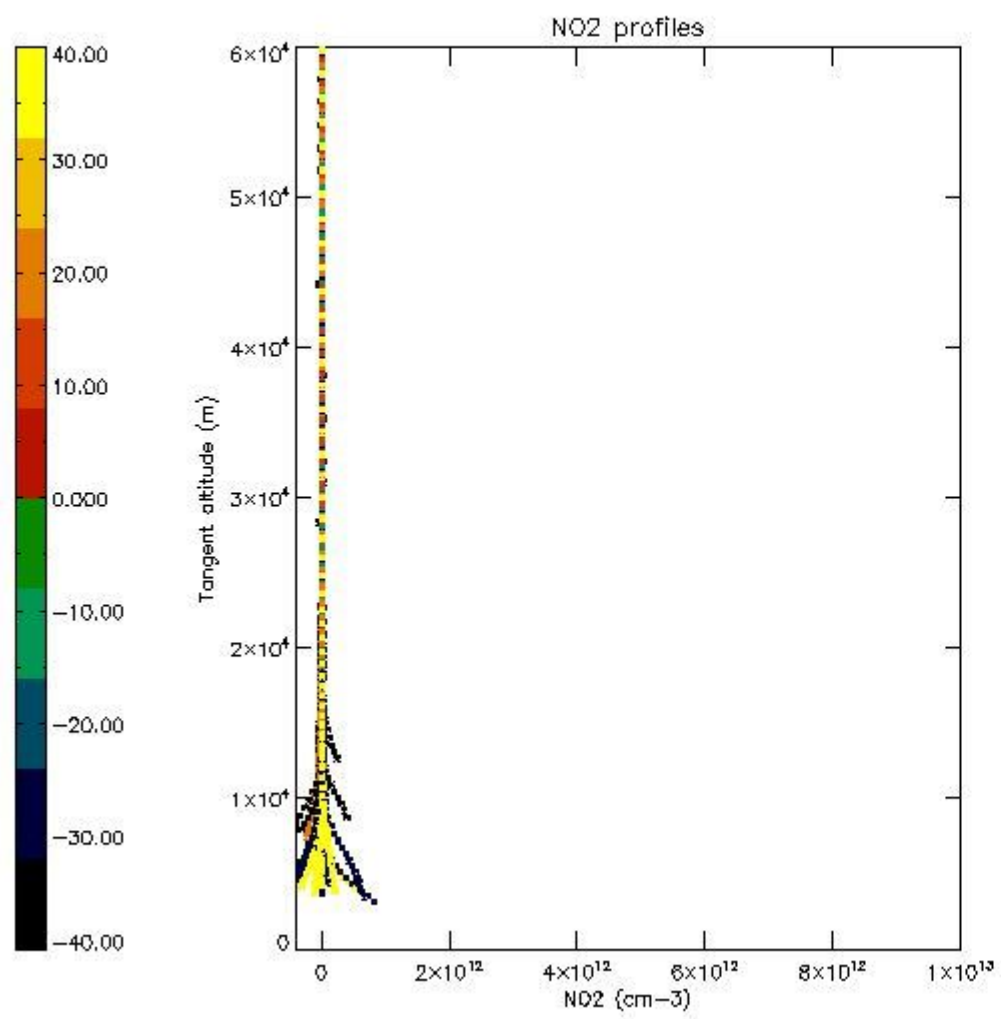
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



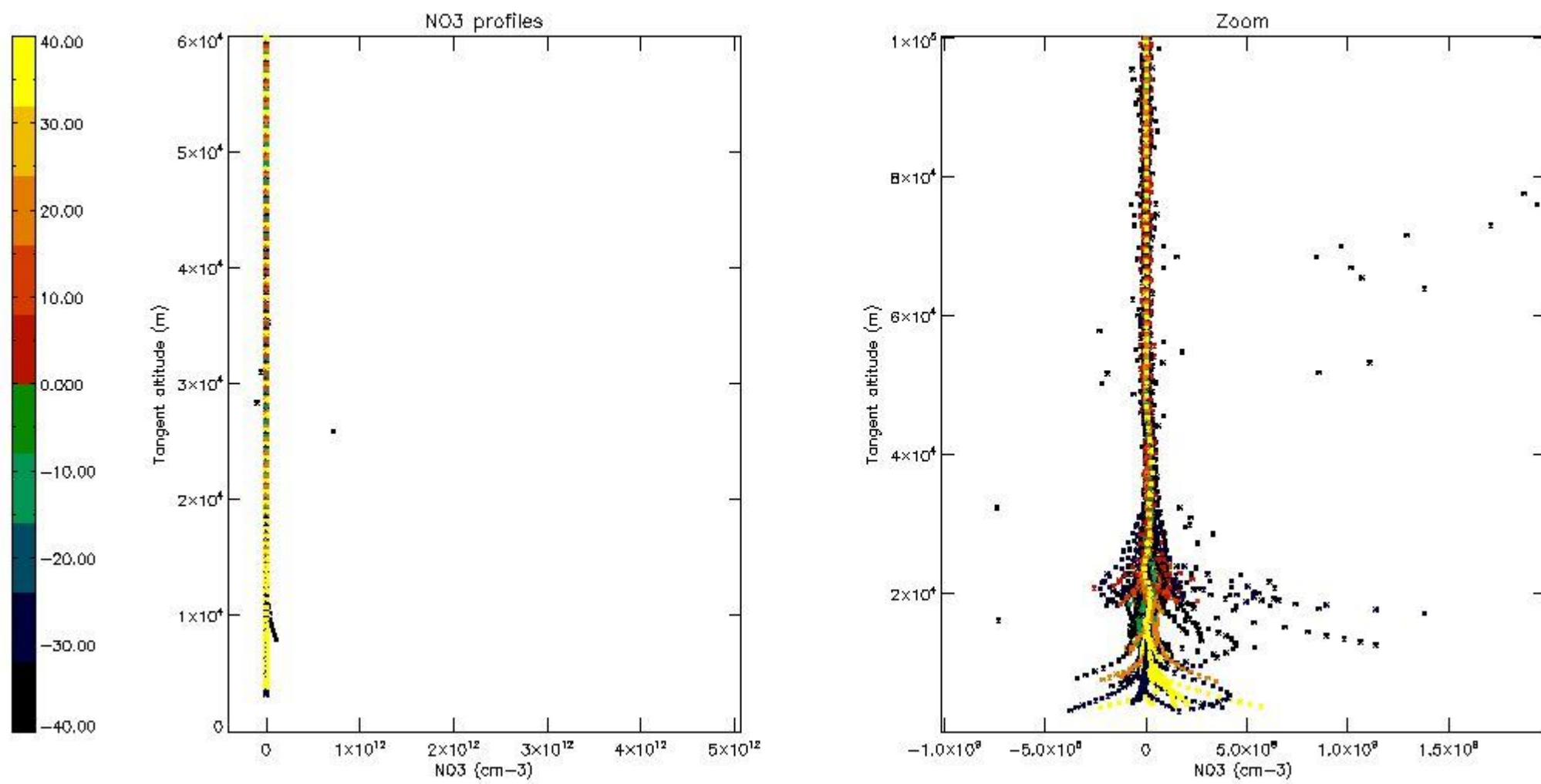
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



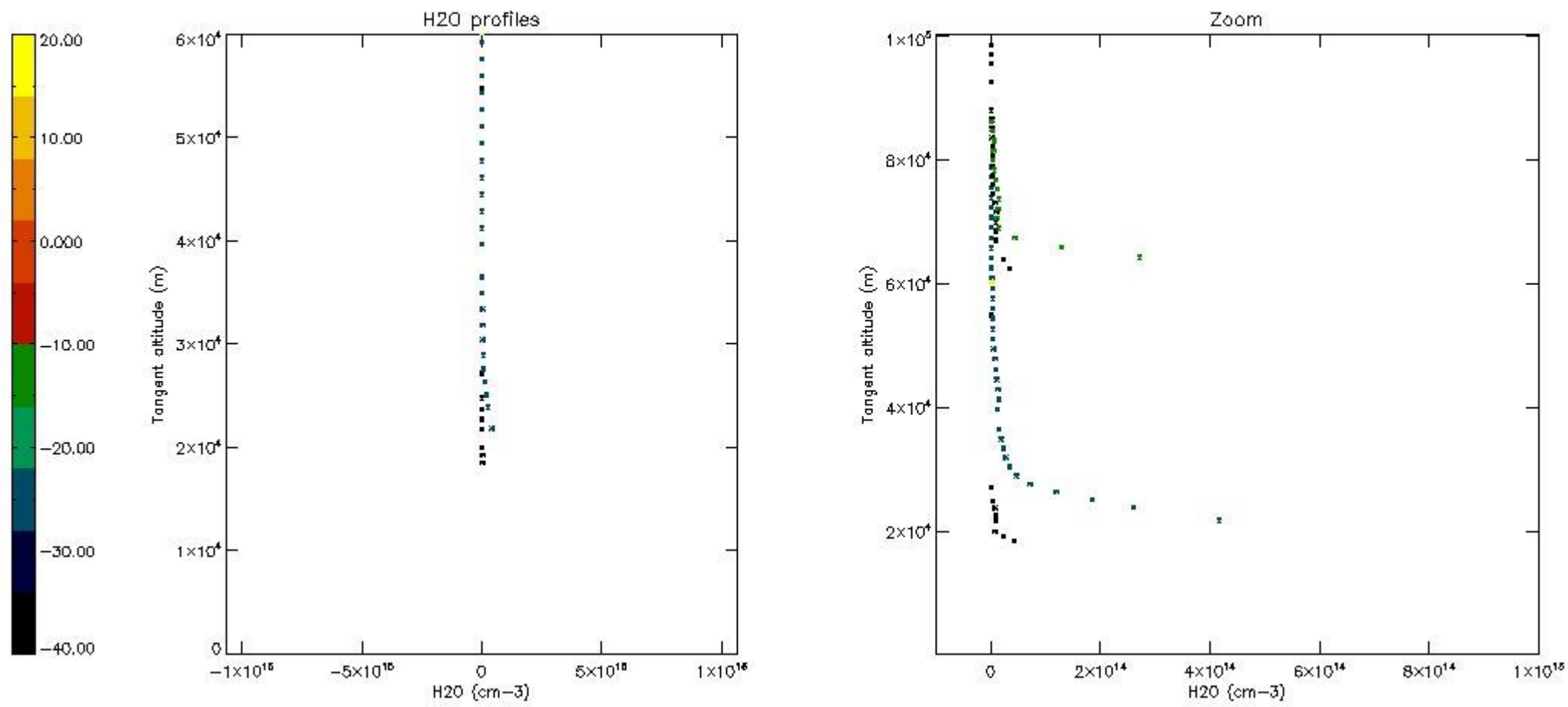
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*5.8 Plot H2O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)*

The colorbar represents the latitude.



## 6. Auxiliary Data Files used for the production reported in section 2

The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-DEC-2007 00:00:25
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-DEC-2007 00:00:25
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-DEC-2007 00:00:25

# GOMOS Level 2 Daily Report

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### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

#### [5.1 Ozone statistics based on quality of products](#)

#### [5.2 Plot ozone profiles for all STD \(dark without errors\)](#)

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#### [5.5. Plot ozone profiles where STD < 5% \(dark without errors\)](#)

#### [5.6 Plot NO2 profiles for all STD \(dark without errors\)](#)

#### [5.7 Plot NO3 profiles for all STD \(dark without errors\)](#)

#### [5.8 Plot H2O profiles \(only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors\) for all STD](#)

### [6. Auxiliary Data Files used for the production reported in section 2](#)

This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	23APR2013 15:44:37
Data source version	GOMOS/6.01
Start time of products	27-12-2007 (27DEC2007 00:00:00)
Stop time of products	28-12-2007 (28DEC2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	367
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20071227_000025_000000352064_00331_30445_1586.N1	27-DEC-2007 00:00:25	Bright	34.500	149	45Eps Per	2.8880	30000.	69	30445	No
2	GOM_NL__2PRFIN20071227_000209_000000442064_00331_30445_1587.N1	27-DEC-2007 00:02:09	Bright	43.500	6	13Alp Aur	0.080000	3400.0	87	30445	No
3	GOM_NL__2PRFIN20071227_001409_000000352064_00331_30445_1588.N1	27-DEC-2007 00:14:09	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	30445	No
4	GOM_NL__2PRFIN20071227_001844_000000352064_00331_30445_1589.N1	27-DEC-2007 00:18:44	Bright	35.000	60	7Bet UMi	2.0810	3950.0	70	30445	No
5	GOM_NL__2PRFIN20071227_002223_000000362064_00331_30445_1590.N1	27-DEC-2007 00:22:23	Bright	36.000	119	14Eta Dra	2.7270	4700.0	72	30445	No
6	GOM_NL__2PRFIN20071227_003238_000000362064_00331_30445_1591.N1	27-DEC-2007 00:32:38	Bright	35.500	67	5Alp CrB	2.2210	11000.	71	30445	No
7	GOM_NL__2PRFIN20071227_003816_000000342064_00331_30445_1592.N1	27-DEC-2007 00:38:16	Bright	33.500	102	24Alp Ser	2.6000	4250.0	67	30445	No
8	GOM_NL__2PRFIN20071227_004309_000000372064_00331_30445_1593.N1	27-DEC-2007 00:43:09	Bright	36.500	104	27Bet Lib	2.6140	13100.	73	30445	No
9	GOM_NL__2PRFIN20071227_004538_000000412064_00331_30445_1594.N1	27-DEC-2007 00:45:38	Bright	41.000	122	9Alp2Lib	2.7470	9700.0	82	30445	No
10	GOM_NL__2PRFIN20071227_005221_000000512064_00331_30445_1595.N1	27-DEC-2007 00:52:21	Dark	51.000	54	5The Cen	2.0550	4500.0	102	30445	No
11	GOM_NL__2PRFIN20071227_005719_000000452064_00331_30445_1596.N1	27-DEC-2007 00:57:19	Dark	44.500	4	Alp1Cen	-0.010000	5800.0	89	30445	No
12	GOM_NL__2PRFIN20071227_010053_000000402064_00332_30446_1587.N1	27-DEC-2007 01:00:53	Dark	40.000	12	Alp1Cru	0.77500	30000.	80	30446	No
13	GOM_NL__2PRFIN20071227_010554_000000392064_00332_30446_1588.N1	27-DEC-2007 01:05:54	Dark	39.000	159	Ups Car	2.9200	7200.0	78	30446	No
14	GOM_NL__2PRFIN20071227_010729_000000432064_00332_30446_1589.N1	27-DEC-2007 01:07:29	Dark	43.000	71	Iot Car	2.2460	7700.0	86	30446	No
15	GOM_NL__2PRFIN20071227_010912_000000462064_00332_30446_1590.N1	27-DEC-2007 01:09:12	Dark	46.000	41	Eps Car	1.8600	4100.0	92	30446	No
16	GOM_NL__2PRFIN20071227_011339_000000502064_00332_30446_1591.N1	27-DEC-2007 01:13:39	Dark	49.500	2	Alp Car	-0.73600	7000.0	99	30446	No
17	GOM_NL__2PRFIN20071227_011926_000000382064_00332_30446_1592.N1	27-DEC-2007 01:19:26	Straylight	37.500	108	Alp Col	2.6520	15200.	75	30446	No
18	GOM_NL__2PRFIN20071227_012409_000000442064_00332_30446_1593.N1	27-DEC-2007 01:24:09	Straylight	43.500	101	11Alp Lep	2.5820	7000.0	87	30446	No
19	GOM_NL__2PRFIN20071227_012703_000000442064_00332_30446_1594.N1	27-DEC-2007 01:27:03	Straylight	44.000	7	19Bet Ori	0.10000	14000.	88	30446	No
20	GOM_NL__2PRFIN20071227_012901_000000442064_00332_30446_1595.N1	27-DEC-2007 01:29:01	Straylight	44.000	30	46Eps Ori	1.6940	30000.	88	30446	No
21	GOM_NL__2PRFIN20071227_013115_000000432064_00332_30446_1596.N1	27-DEC-2007 01:31:15	Twilight_stray	43.000	27	24Gam Ori	1.6360	26000.	86	30446	No
22	GOM_NL__2PRFIN20071227_013414_000000502064_00332_30446_1597.N1	27-DEC-2007 01:34:14	Bright	49.500	13	87Alp Tau	0.86700	3800.0	99	30446	No
23	GOM_NL__2PRFIN20071227_013749_000000402064_00332_30446_1598.N1	27-DEC-2007 01:37:49	Bright	40.000	28	12Bet Tau	1.6500	15200.	80	30446	No
24	GOM_NL__2PRFIN20071227_014101_000000332064_00332_30446_1599.N1	27-DEC-2007 01:41:01	Bright	33.000	149	45Eps Per	2.8880	30000.	66	30446	No
25	GOM_NL__2PRFIN20071227_014245_000000402064_00332_30446_1600.N1	27-DEC-2007 01:42:45	Bright	40.000	6	13Alp Aur	0.080000	3400.0	80	30446	No
26	GOM_NL__2PRFIN20071227_015445_000000352064_00332_30446_1601.N1	27-DEC-2007 01:54:45	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	30446	No
27	GOM_NL__2PRFIN20071227_015920_000000372064_00332_30446_1602.N1	27-DEC-2007 01:59:20	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	30446	No
28	GOM_NL__2PRFIN20071227_020259_000000352064_00332_30446_1603.N1	27-DEC-2007 02:02:59	Bright	35.000	119	14Eta Dra	2.7270	4700.0	70	30446	No
29	GOM_NL__2PRFIN20071227_021111_000000502064_00332_30446_1604.N1	27-DEC-2007 02:11:11	Bright	50.000	133	40Zet Her	2.8070	6000.0	100	30446	No
30	GOM_NL__2PRFIN20071227_021315_000000362064_00332_30446_1605.N1	27-DEC-2007 02:13:15	Bright	35.500	67	5Alp CrB	2.2210	11000.	71	30446	No
31	GOM_NL__2PRFIN20071227_021852_000000342064_00332_30446_1606.N1	27-DEC-2007 02:18:52	Bright	33.500	102	24Alp Ser	2.6000	4250.0	67	30446	No
32	GOM_NL__2PRFIN20071227_022345_000000542064_00332_30446_1607.N1	27-DEC-2007 02:23:45	Bright	54.000	104	27Bet Lib	2.6140	13100.	108	30446	No
33	GOM_NL__2PRFIN20071227_023258_000000462064_00332_30446_1608.N1	27-DEC-2007 02:32:58	Dark	45.500	54	5The Cen	2.0550	4500.0	91	30446	No
34	GOM_NL__2PRFIN20071227_023434_000000382064_00332_30446_1609.N1	27-DEC-2007 02:34:34	Dark	37.500	78	Alp Lup	2.3040	28000.	75	30446	No
35	GOM_NL__2PRFIN20071227_023550_000000392064_00332_30446_1610.N1	27-DEC-2007 02:35:50	Dark	38.500	95	Zet Cen	2.5450	26000.	77	30446	No
36	GOM_NL__2PRFIN20071227_023755_000000412064_00332_30446_1611.N1	27-DEC-2007 02:37:55	Dark	40.500	4	Alp1Cen	-0.010000	5800.0	81	30446	No
37	GOM_NL__2PRFIN20071227_024129_000000412064_00333_30447_1601.N1	27-DEC-2007 02:41:29	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	30447	No
38	GOM_NL__2PRFIN20071227_024630_000000382064_00333_30447_1602.N1	27-DEC-2007 02:46:30	Dark	38.000	159	Ups Car	2.9200	7200.0	76	30447	No
39	GOM_NL__2PRFIN20071227_024806_000000412064_00333_30447_1603.N1	27-DEC-2007 02:48:06	Dark	41.000	71	Iot Car	2.2460	7700.0	82	30447	No
40	GOM_NL__2PRFIN20071227_024948_000000442064_00333_30447_1604.N1	27-DEC-2007 02:49:48	Dark	43.500	41	Eps Car	1.8600	4100.0	87	30447	No
41	GOM_NL__2PRFIN20071227_025415_000000532064_00333_30447_1605.N1	27-DEC-2007 02:54:15	Dark	53.000	2	Alp Car	-0.73600	7000.0	106	30447	No
42	GOM_NL__2PRFIN20071227_030003_000000372064_00333_30447_1606.N1	27-DEC-2007 03:00:03	Straylight	37.000	108	Alp Col	2.6520	15200.	74	30447	No











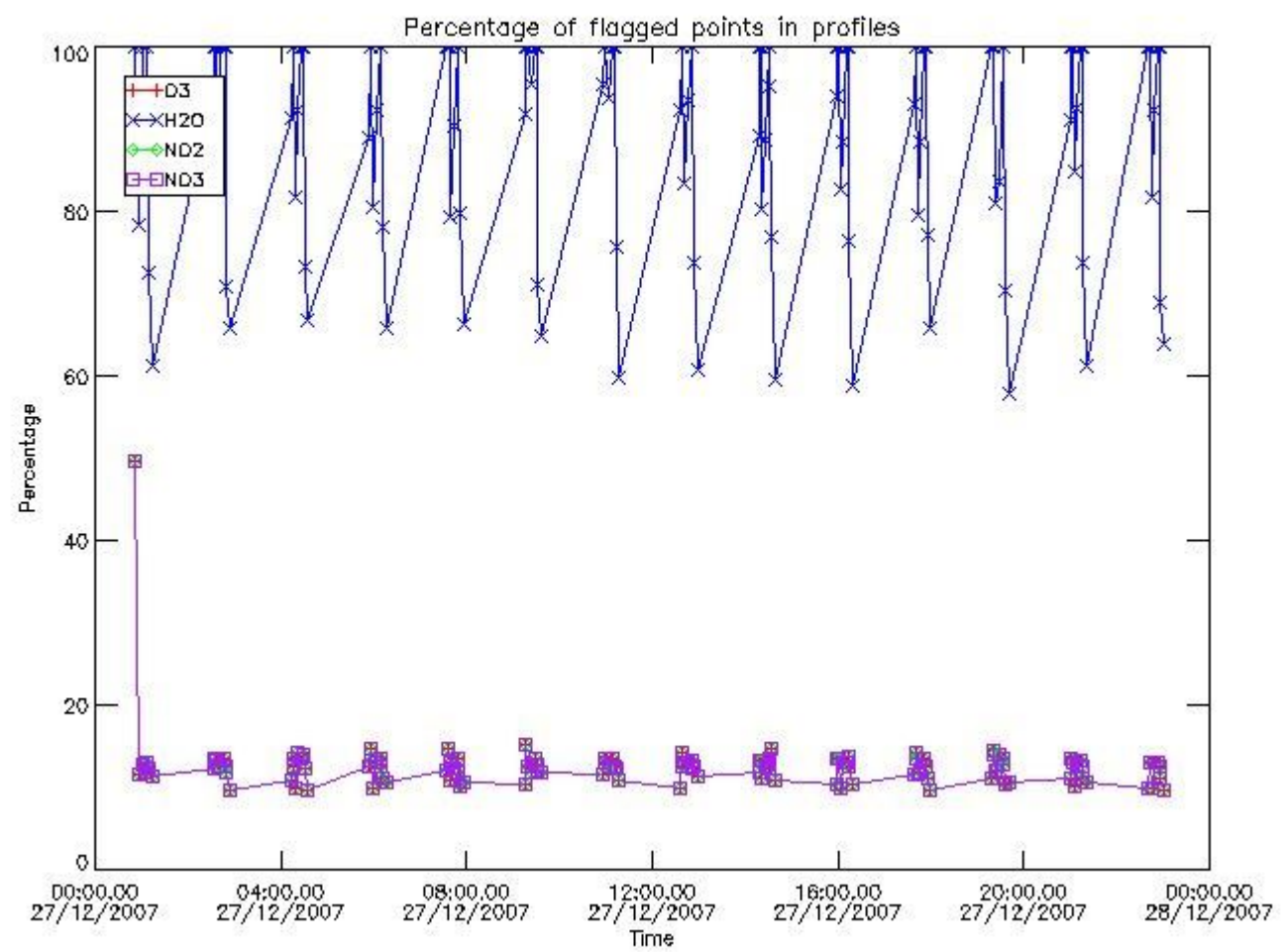


338	GOM_NL__2PRFIN20071227_220156_000000352064_00344_30458_1789.N1	27-DEC-2007 22:01:56	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	30458	No
339	GOM_NL__2PRFIN20071227_220630_000000392064_00344_30458_1790.N1	27-DEC-2007 22:06:30	Bright	38.500	60	7Bet UMi	2.0810	3950.0	77	30458	No
340	GOM_NL__2PRFIN20071227_221011_000000352064_00344_30458_1791.N1	27-DEC-2007 22:10:11	Bright	34.500	119	14Eta Dra	2.7270	4700.0	69	30458	No
341	GOM_NL__2PRFIN20071227_221824_000000352064_00344_30458_1792.N1	27-DEC-2007 22:18:24	Bright	34.500	133	40Zet Her	2.8070	6000.0	69	30458	No
342	GOM_NL__2PRFIN20071227_222028_000000352064_00344_30458_1793.N1	27-DEC-2007 22:20:28	Bright	35.000	67	5Alp CrB	2.2210	11000.	70	30458	No
343	GOM_NL__2PRFIN20071227_222606_000000342064_00344_30458_1794.N1	27-DEC-2007 22:26:06	Bright	34.000	102	24Alp Ser	2.6000	4250.0	68	30458	No
344	GOM_NL__2PRFIN20071227_223101_000000542064_00344_30458_1795.N1	27-DEC-2007 22:31:01	Bright	54.000	104	27Bet Lib	2.6140	13100.	108	30458	No
345	GOM_NL__2PRFIN20071227_223331_000000432064_00344_30458_1796.N1	27-DEC-2007 22:33:31	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	30458	No
346	GOM_NL__2PRFIN20071227_224016_000000512064_00344_30458_1797.N1	27-DEC-2007 22:40:16	Dark	51.000	54	5The Cen	2.0550	4500.0	102	30458	No
347	GOM_NL__2PRFIN20071227_224308_000000392064_00344_30458_1798.N1	27-DEC-2007 22:43:08	Dark	39.000	95	Zet Cen	2.5450	26000.	78	30458	No
348	GOM_NL__2PRFIN20071227_224510_000000522064_00344_30458_1799.N1	27-DEC-2007 22:45:10	Dark	52.000	4	Alp1Cen	-0.010000	5800.0	104	30458	No
349	GOM_NL__2PRFIN20071227_224846_000000392064_00345_30459_1801.N1	27-DEC-2007 22:48:46	Dark	39.000	12	Alp1Cru	0.77500	30000.	78	30459	No
350	GOM_NL__2PRFIN20071227_225347_000000392064_00345_30459_1802.N1	27-DEC-2007 22:53:47	Dark	39.000	159	Ups Car	2.9200	7200.0	78	30459	No
351	GOM_NL__2PRFIN20071227_225524_000000412064_00345_30459_1803.N1	27-DEC-2007 22:55:24	Dark	41.000	71	lot Car	2.2460	7700.0	82	30459	No
352	GOM_NL__2PRFIN20071227_225705_000000462064_00345_30459_1804.N1	27-DEC-2007 22:57:05	Dark	45.500	41	Eps Car	1.8600	4100.0	91	30459	No
353	GOM_NL__2PRFIN20071227_230130_000000532064_00345_30459_1805.N1	27-DEC-2007 23:01:30	Dark	53.000	2	Alp Car	-0.73600	7000.0	106	30459	No
354	GOM_NL__2PRFIN20071227_230716_000000402064_00345_30459_1806.N1	27-DEC-2007 23:07:16	Straylight	40.000	108	Alp Col	2.6520	15200.	80	30459	No
355	GOM_NL__2PRFIN20071227_231158_000000402064_00345_30459_1807.N1	27-DEC-2007 23:11:58	Straylight	40.000	101	11Alp Lep	2.5820	7000.0	80	30459	No
356	GOM_NL__2PRFIN20071227_231451_000000522064_00345_30459_1808.N1	27-DEC-2007 23:14:51	Straylight	51.500	7	19Bet Ori	0.10000	14000.	103	30459	No
357	GOM_NL__2PRFIN20071227_231648_000000452064_00345_30459_1809.N1	27-DEC-2007 23:16:48	Straylight	44.500	30	46Eps Ori	1.6940	30000.	89	30459	No
358	GOM_NL__2PRFIN20071227_231902_000000412064_00345_30459_1810.N1	27-DEC-2007 23:19:02	Tw_i_and_stray	40.500	27	24Gam Ori	1.6360	26000.	81	30459	No
359	GOM_NL__2PRFIN20071227_232202_000000452064_00345_30459_1811.N1	27-DEC-2007 23:22:02	Bright	44.500	13	87Alp Tau	0.86700	3800.0	89	30459	No
360	GOM_NL__2PRFIN20071227_232534_000000412064_00345_30459_1812.N1	27-DEC-2007 23:25:34	Bright	40.500	28	12Bet Tau	1.6500	15200.	81	30459	No
361	GOM_NL__2PRFIN20071227_232850_000000352064_00345_30459_1813.N1	27-DEC-2007 23:28:50	Bright	34.500	149	45Eps Per	2.8880	30000.	69	30459	No
362	GOM_NL__2PRFIN20071227_233030_000000432064_00345_30459_1814.N1	27-DEC-2007 23:30:30	Bright	42.500	6	13Alp Aur	0.080000	3400.0	85	30459	No
363	GOM_NL__2PRFIN20071227_233153_000000362064_00345_30459_1815.N1	27-DEC-2007 23:31:53	Bright	35.500	35	33Alp Per	1.7950	6250.0	71	30459	No
364	GOM_NL__2PRFIN20071227_234232_000000362064_00345_30459_1816.N1	27-DEC-2007 23:42:32	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	30459	No
365	GOM_NL__2PRFIN20071227_234706_000000362064_00345_30459_1817.N1	27-DEC-2007 23:47:06	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	30459	No
366	GOM_NL__2PRFIN20071227_235047_000000372064_00345_30459_1818.N1	27-DEC-2007 23:50:47	Bright	36.500	119	14Eta Dra	2.7270	4700.0	73	30459	No
367	GOM_NL__2PRFIN20071227_235901_000000332064_00345_30459_1819.N1	27-DEC-2007 23:59:01	Bright	33.000	133	40Zet Her	2.8070	6000.0	66	30459	No

### 3. Quality information per product

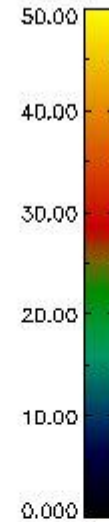
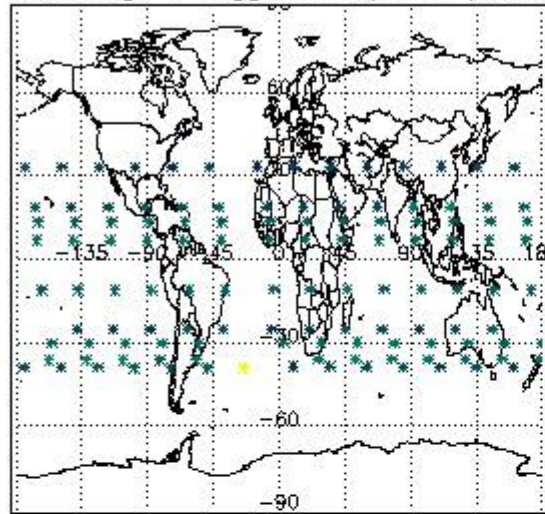
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

#### 3.1 Plot quality information per product (time dependant)

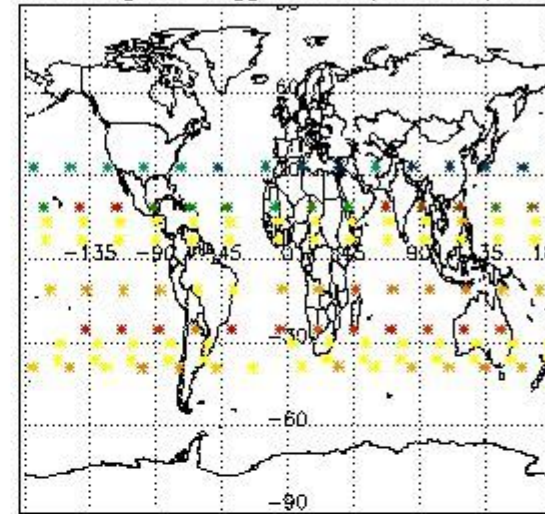


3.2 Plot quality information per product (world map)

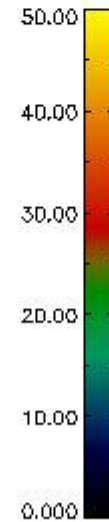
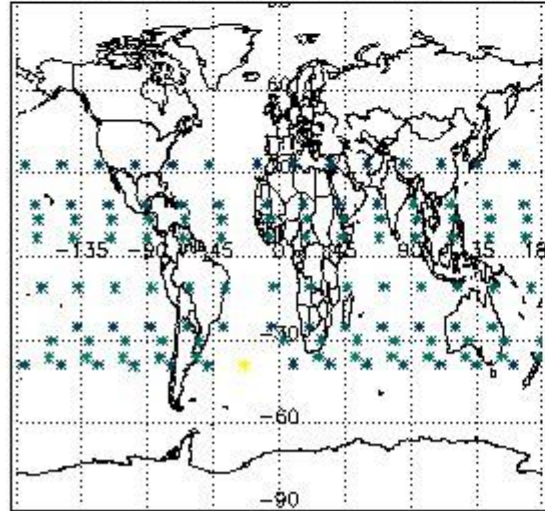
Percentage of flagged data per O3 profile



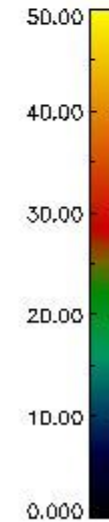
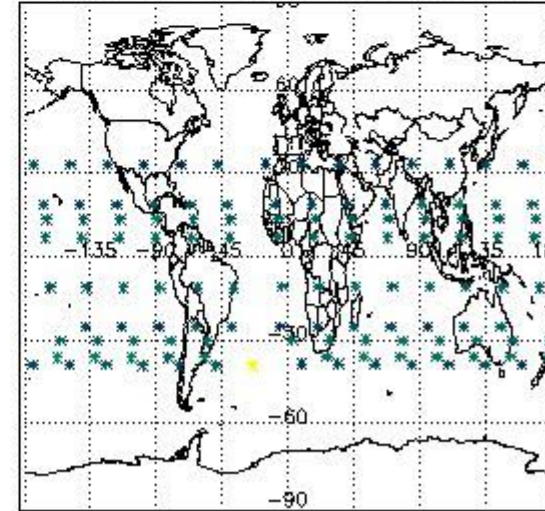
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

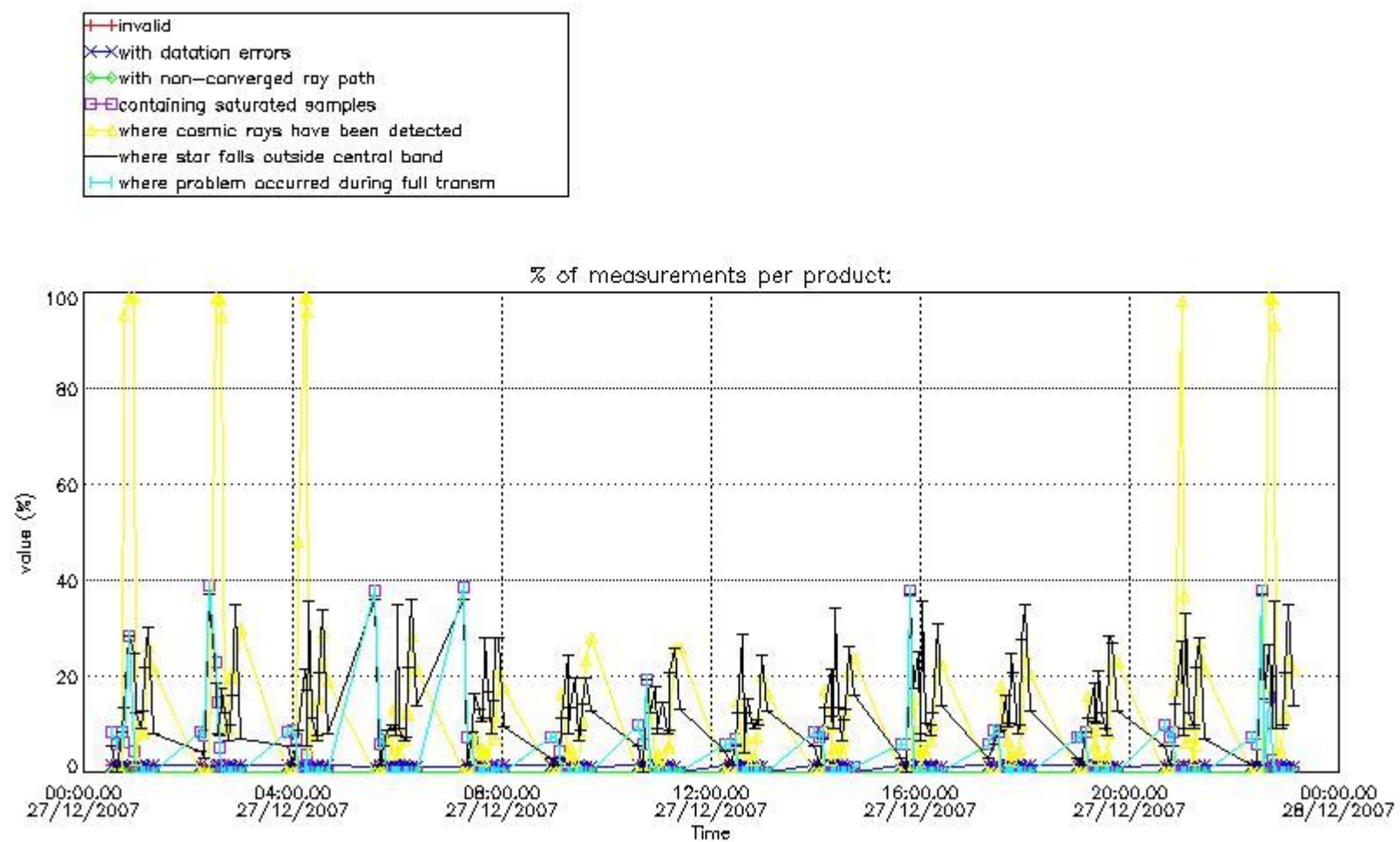


#### 4. Level 1 quality information per product

In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

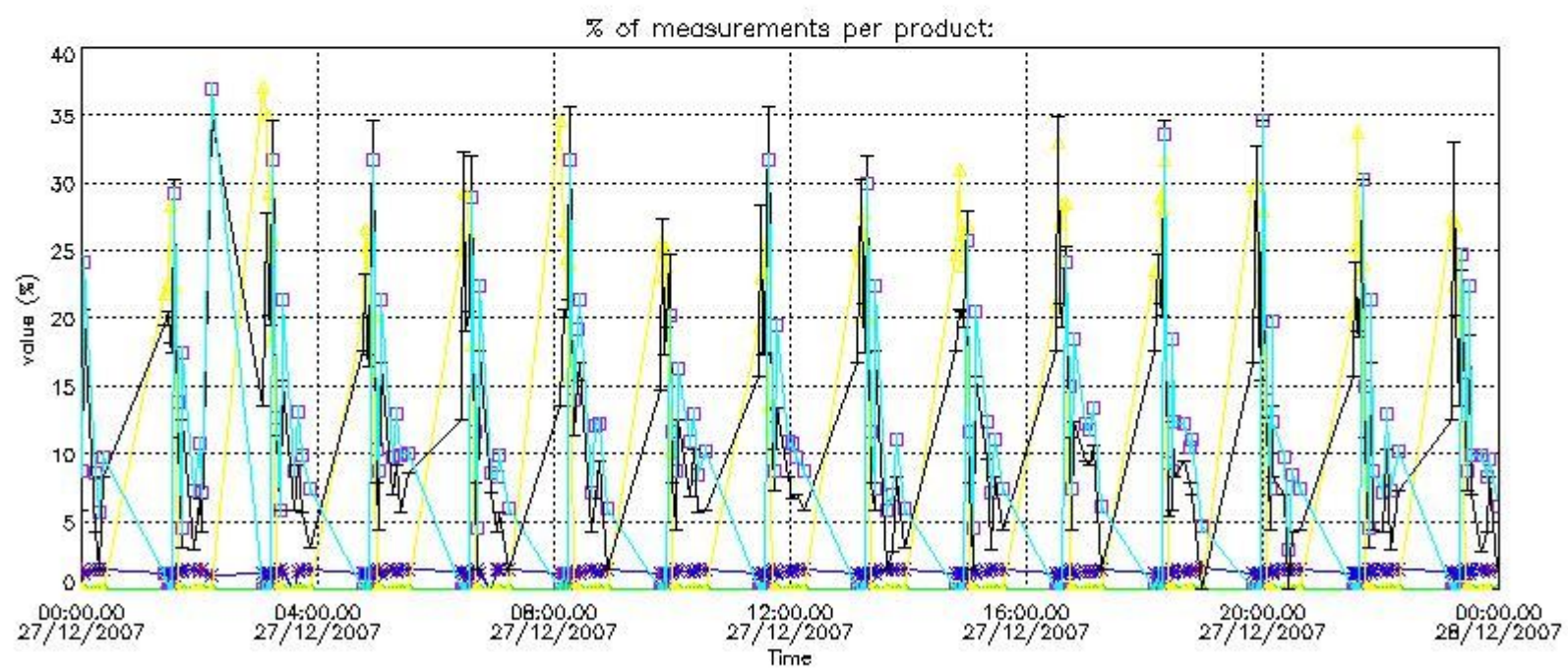
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

##### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes



4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

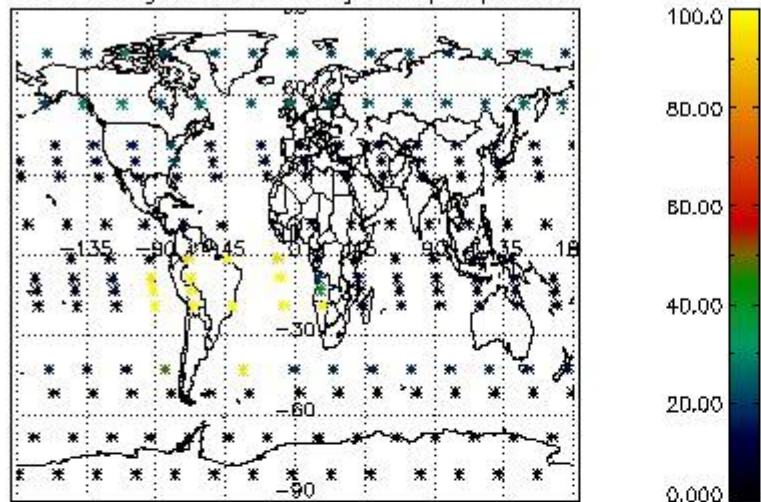




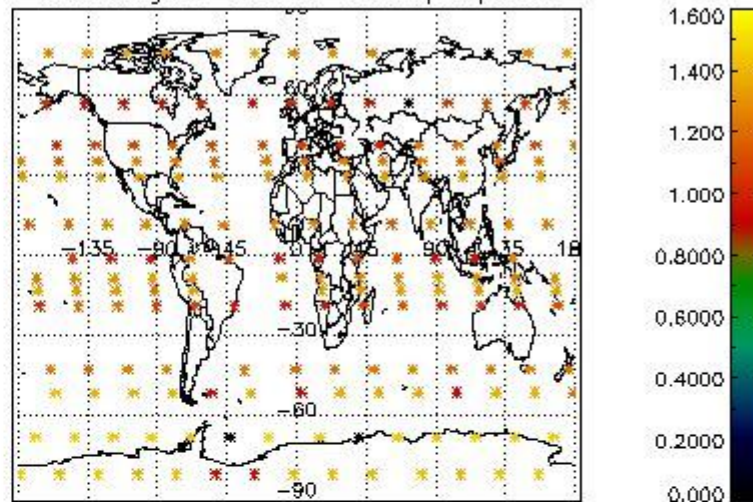
4.2 Plot quality information per product coming from level 1b processing (world map)

4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

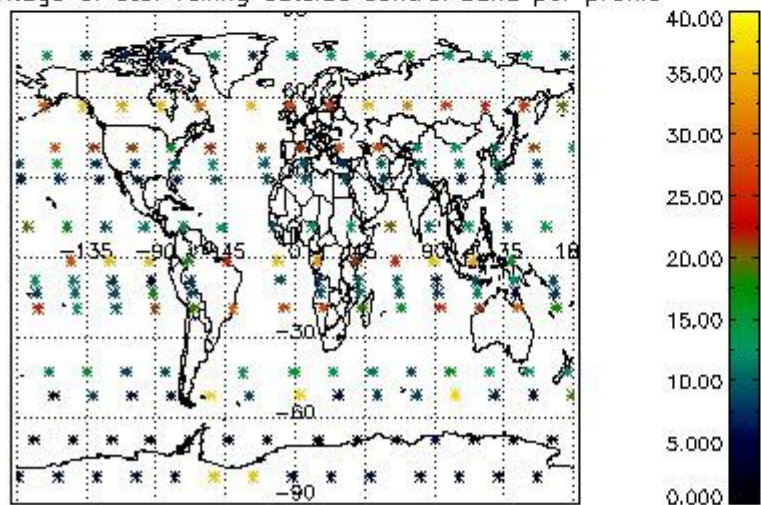
Percentage of cosmic ray hits per profile



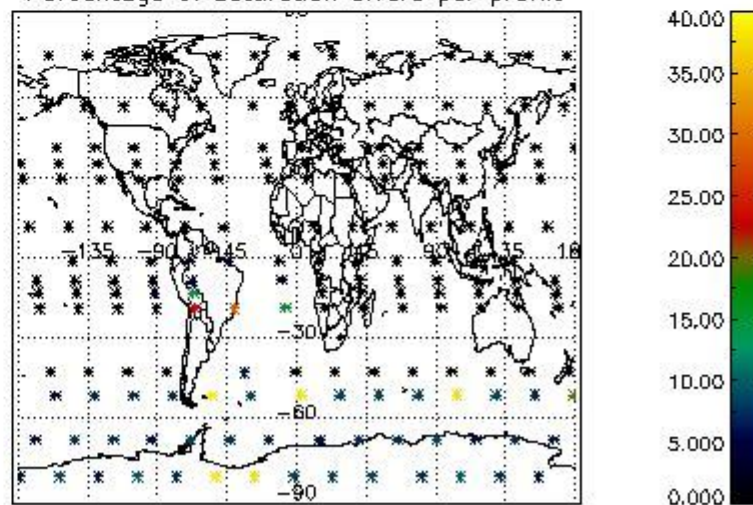
Percentage of datation errors per profile



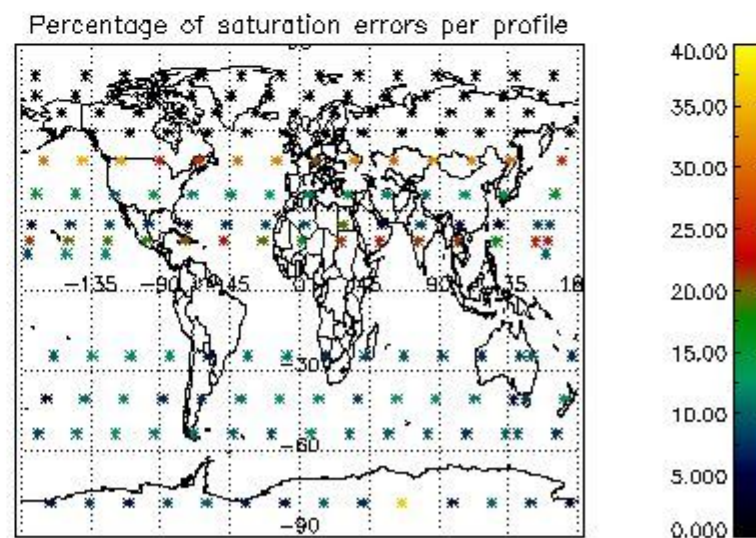
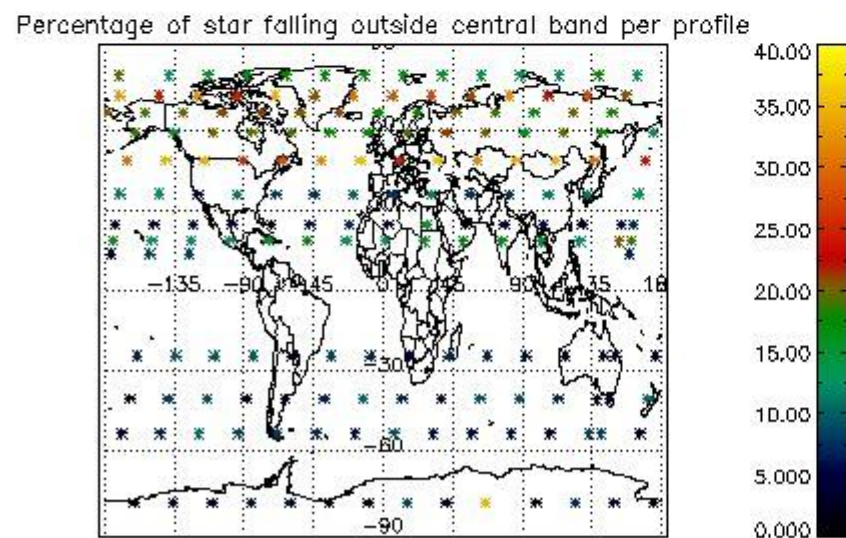
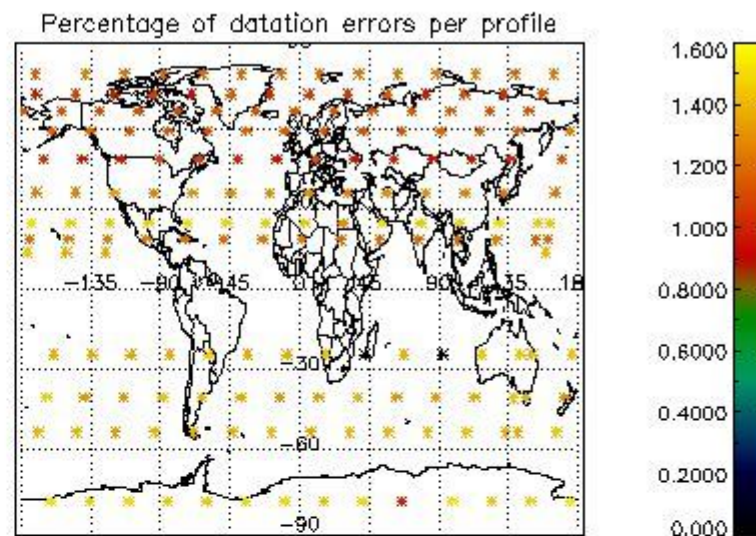
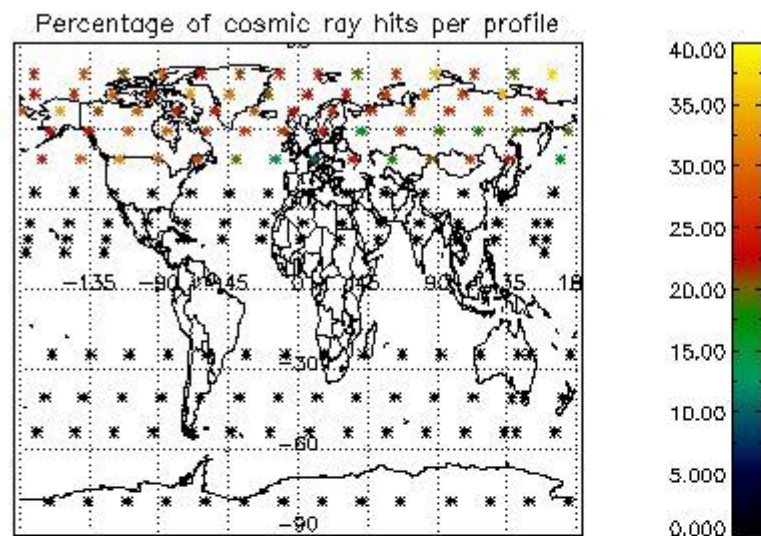
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

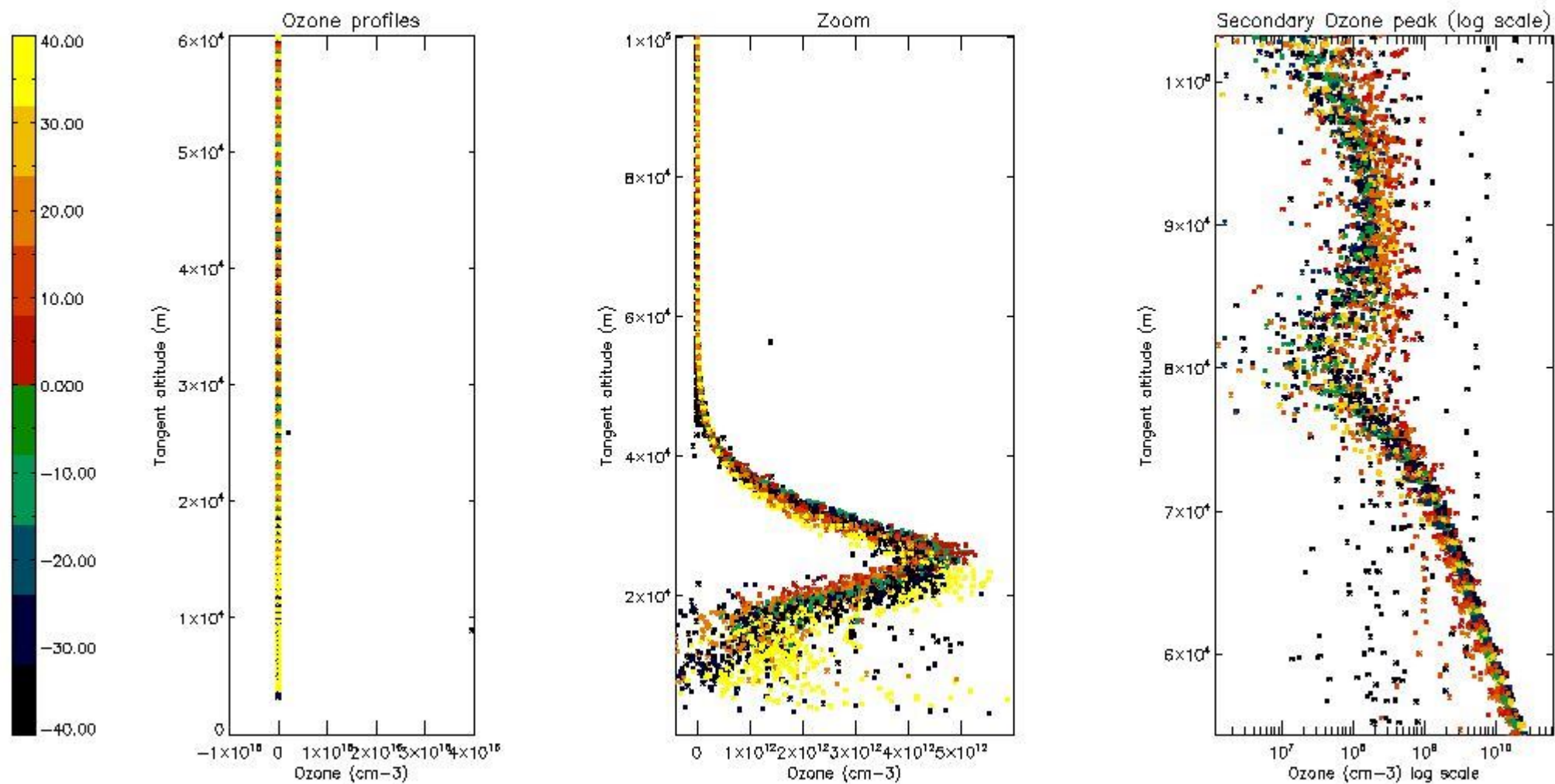
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	36
STD < 20	19

STD < 10	14
STD < 5	8

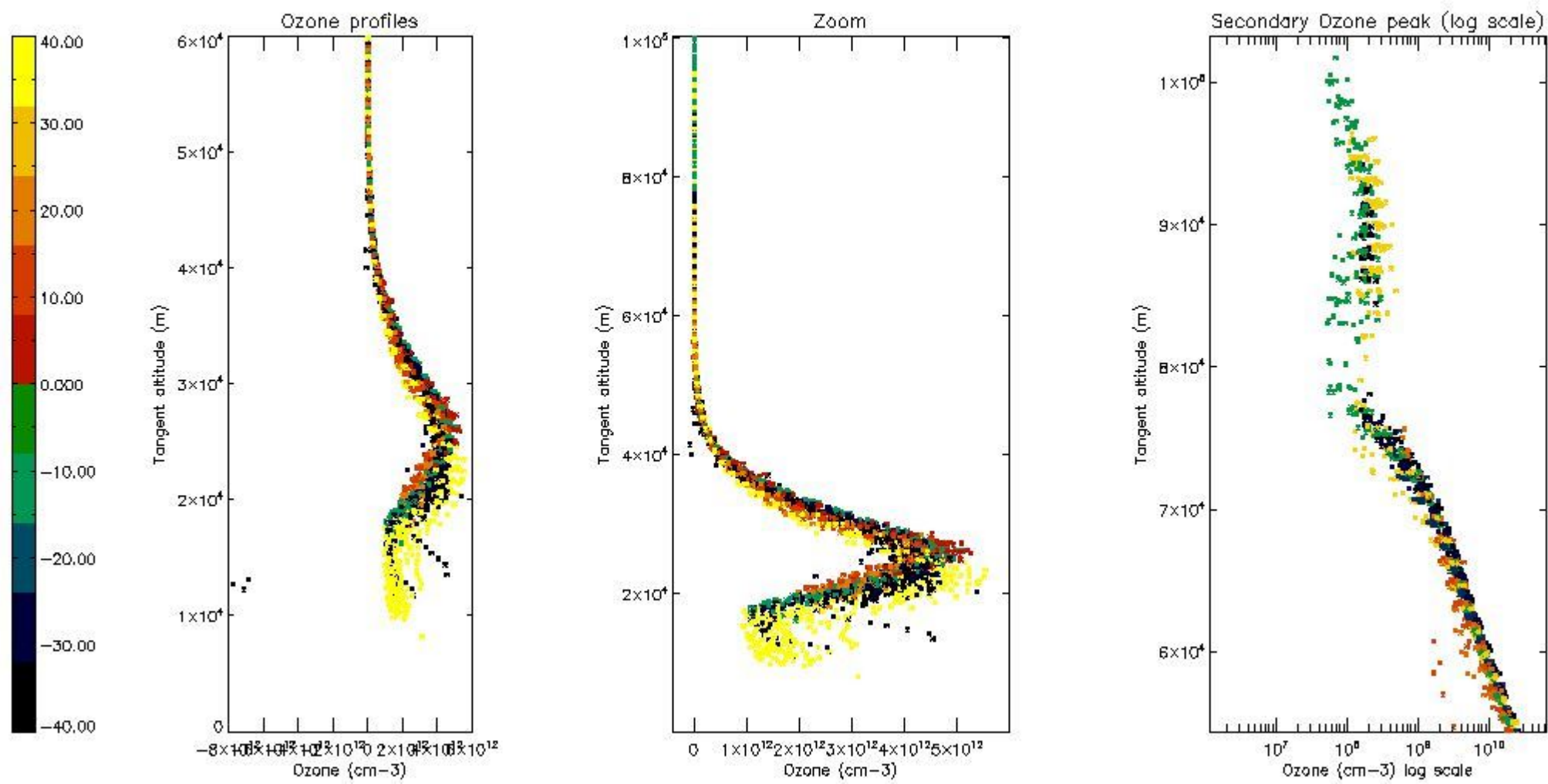
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



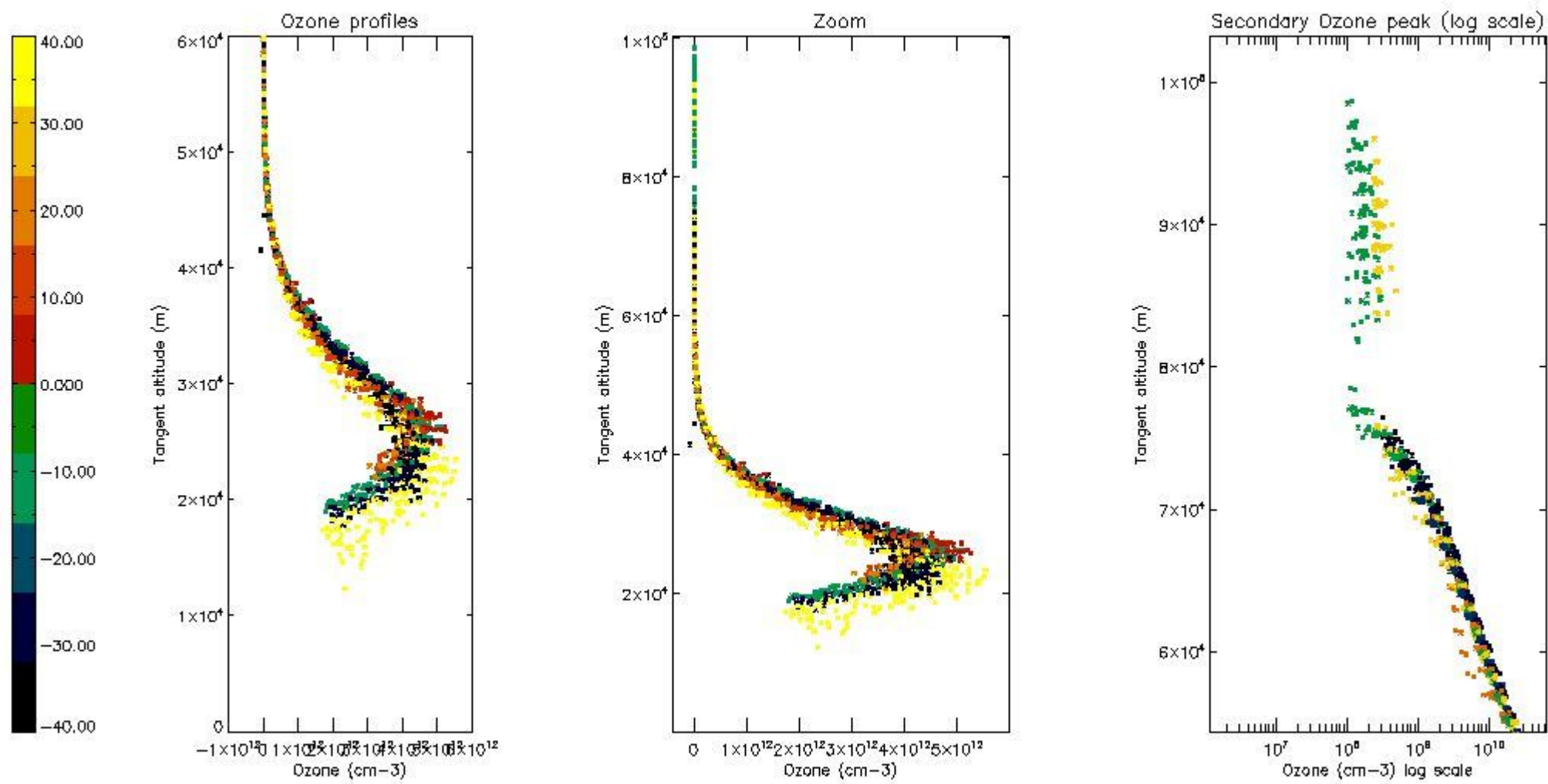
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



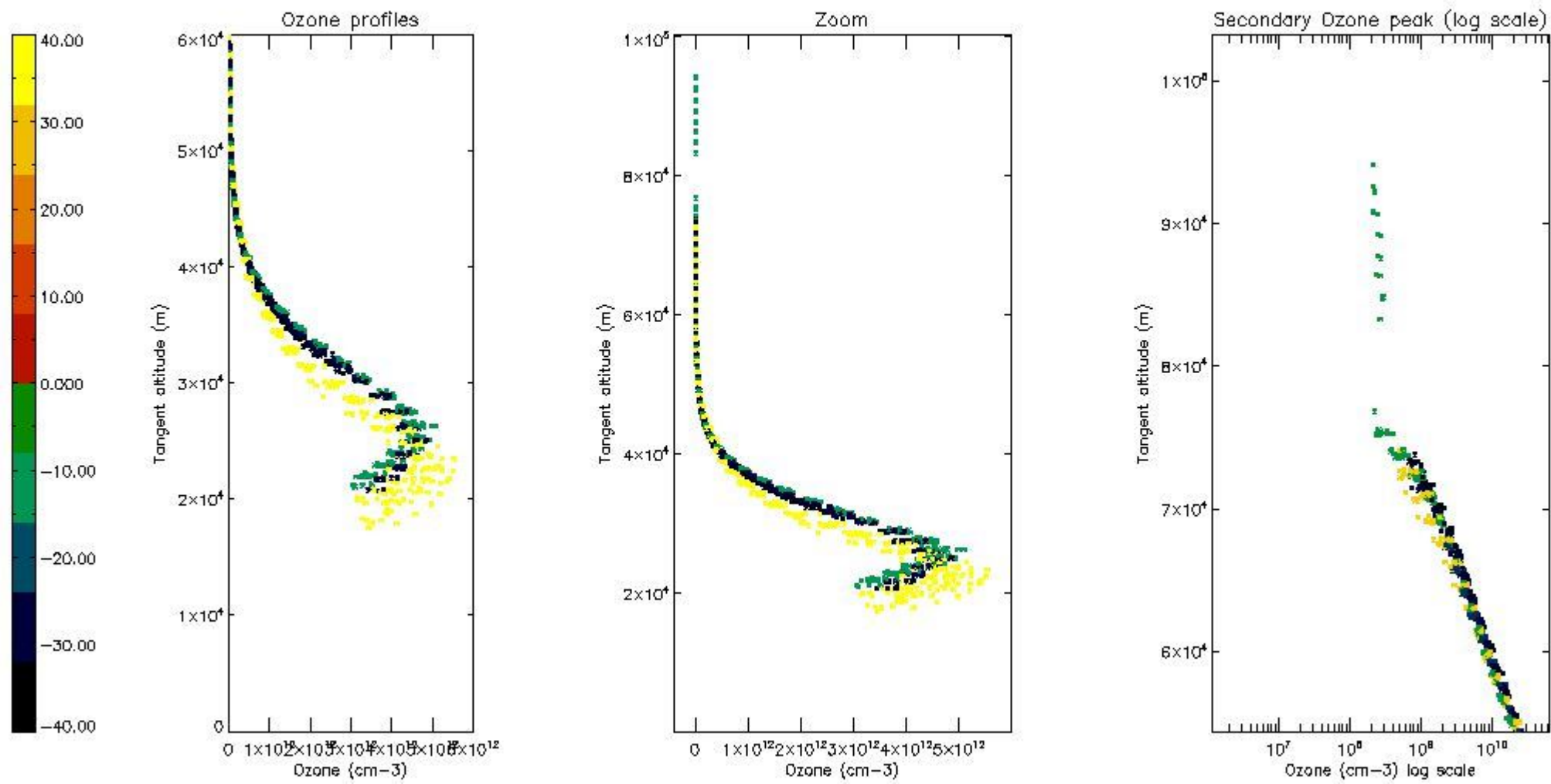
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



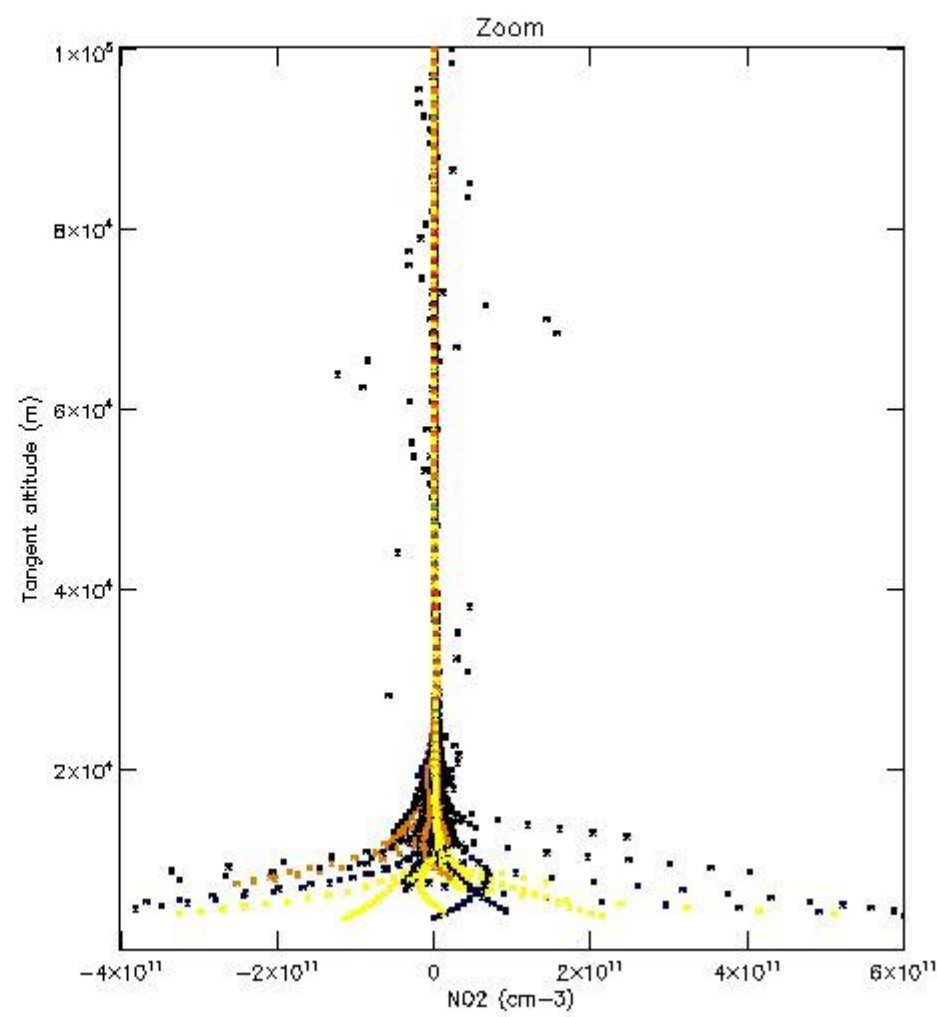
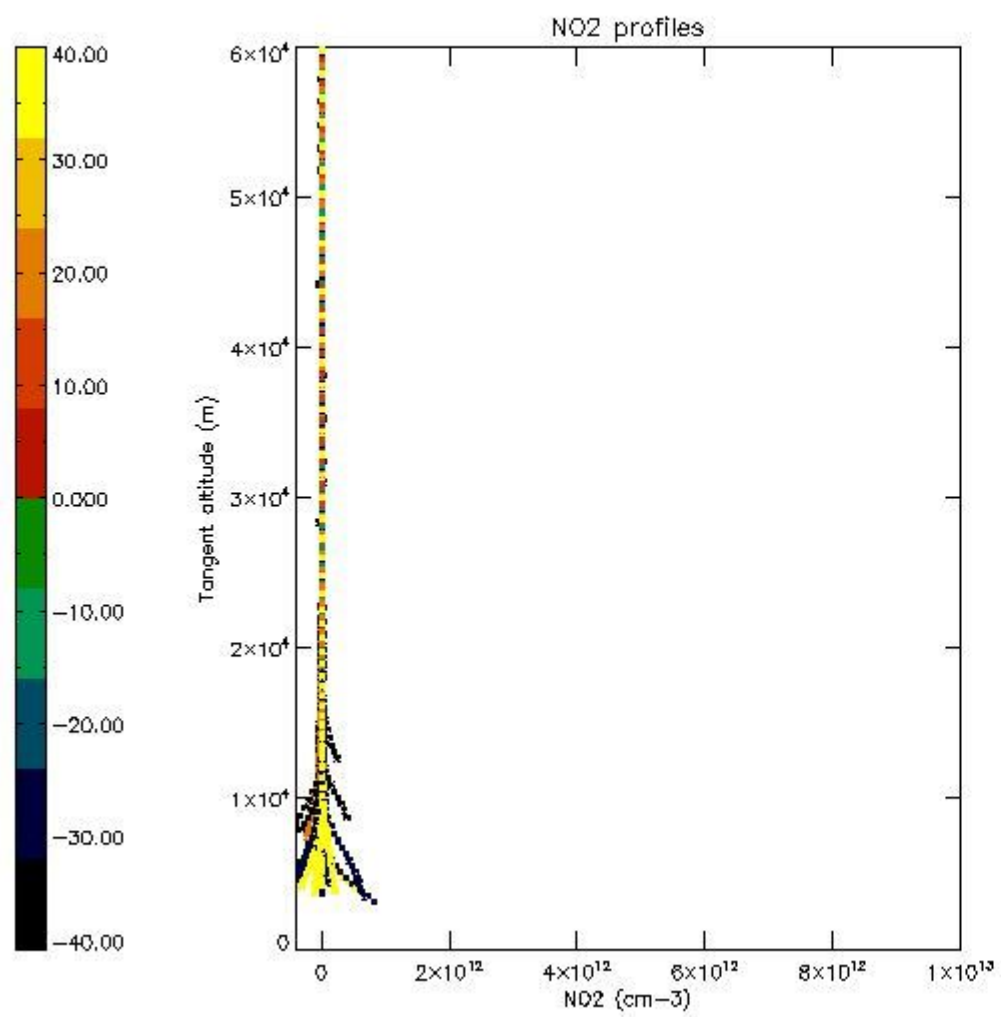
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)

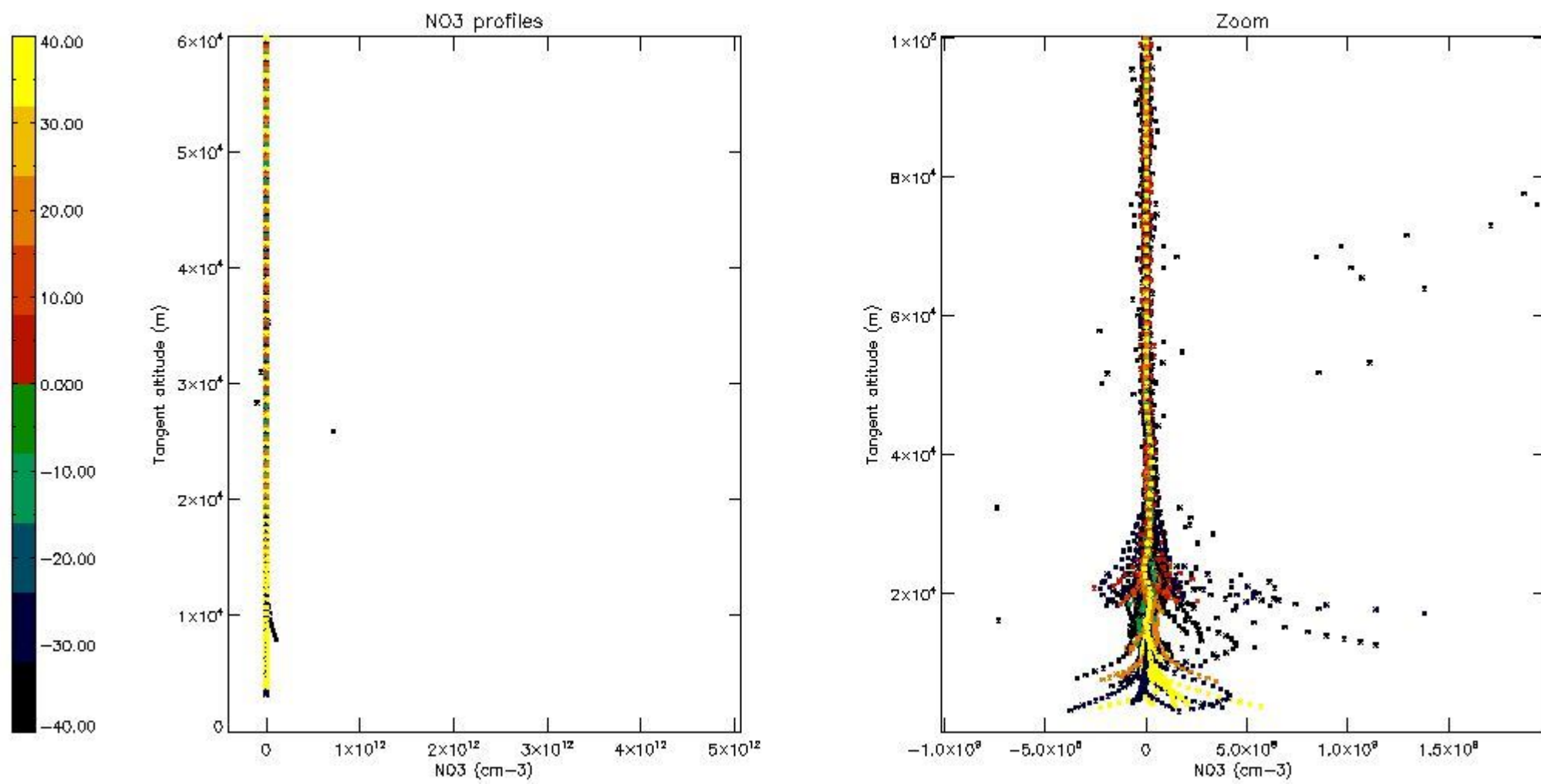
The colorbar represents the latitude.



*5.7 Plot NO3 profiles for all STD (dark without errors)*

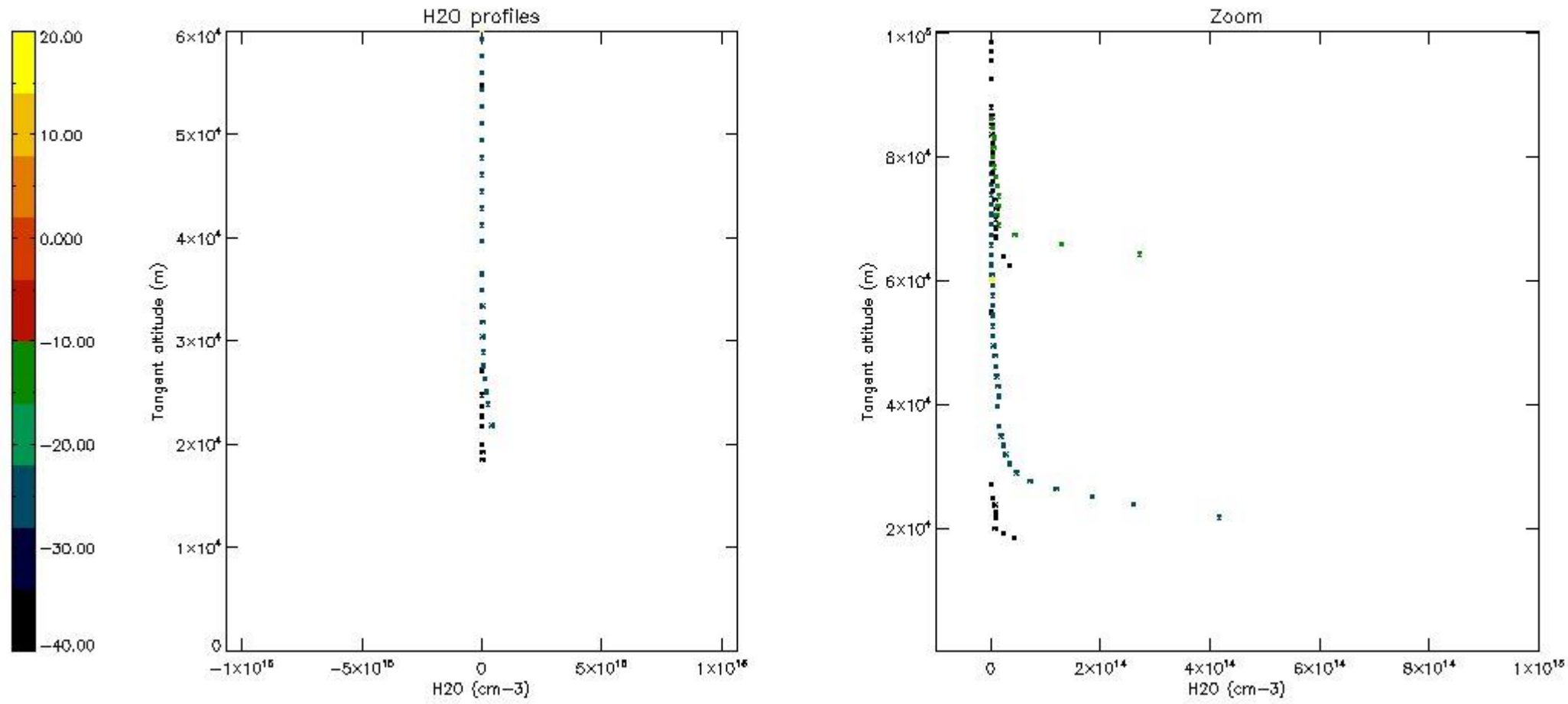
The colorbar represents the latitude.





*5.8 Plot H2O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)*

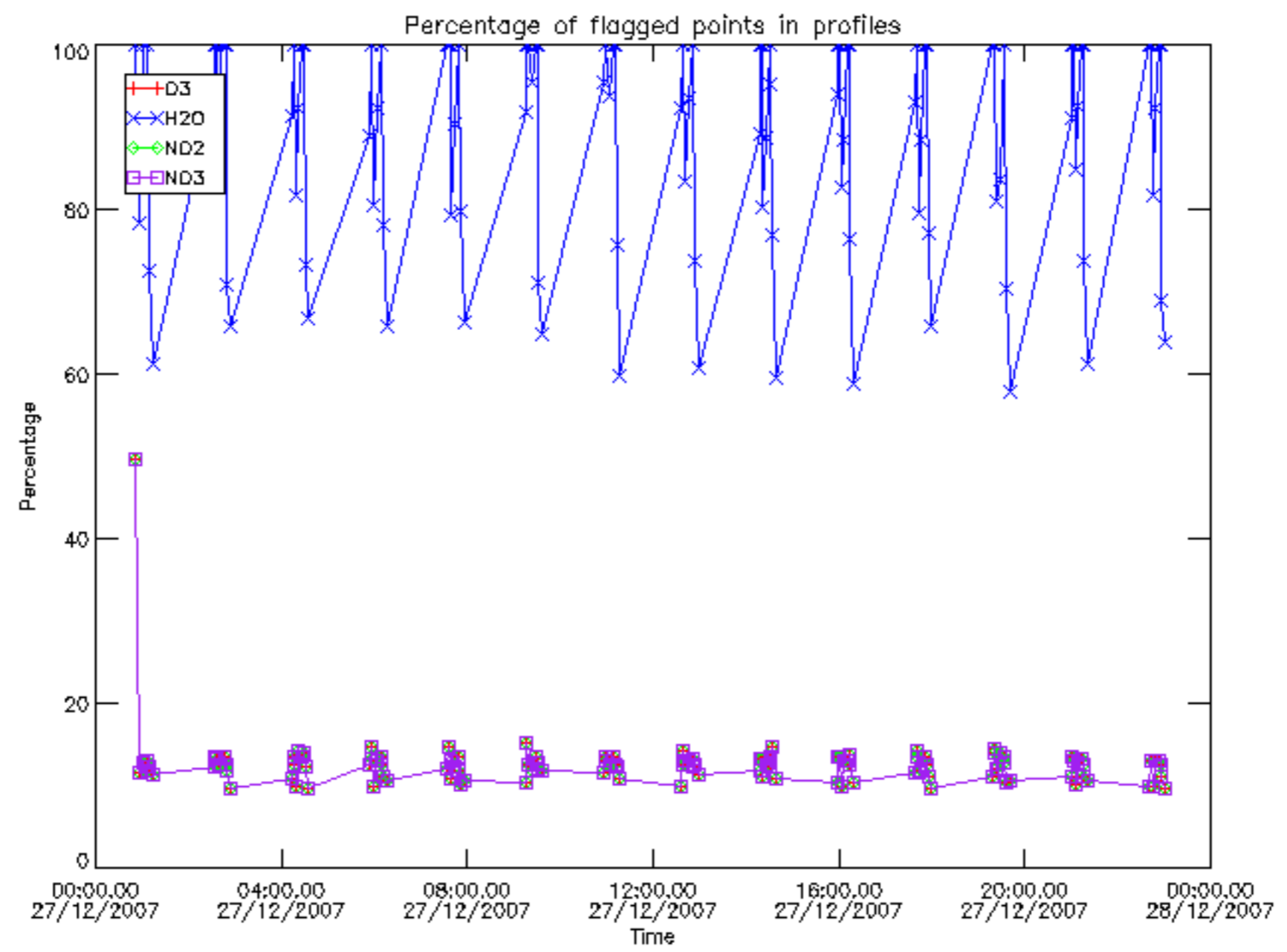
The colorbar represents the latitude.



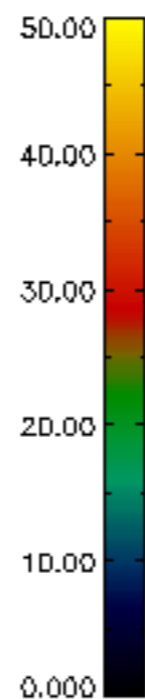
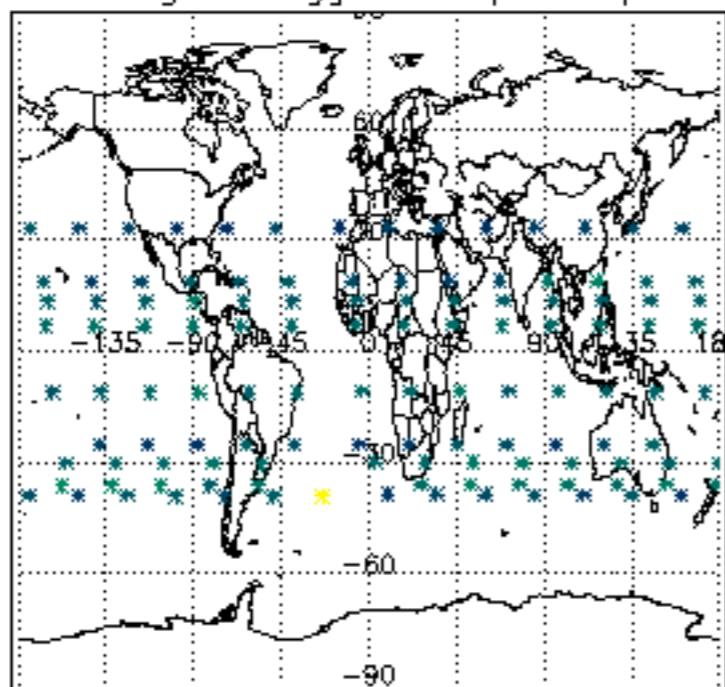
## 6. Auxiliary Data Files used for the production reported in section 2

The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

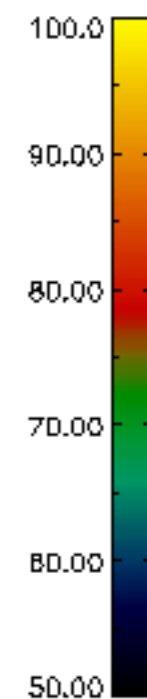
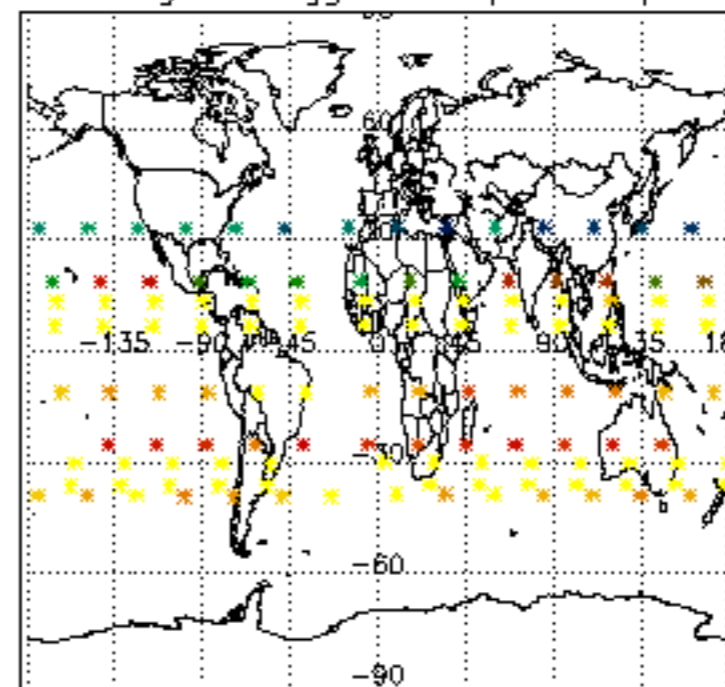
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-DEC-2007 00:00:25
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-DEC-2007 00:00:25
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-DEC-2007 00:00:25



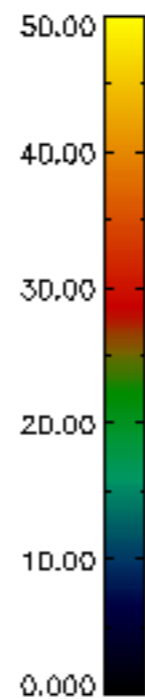
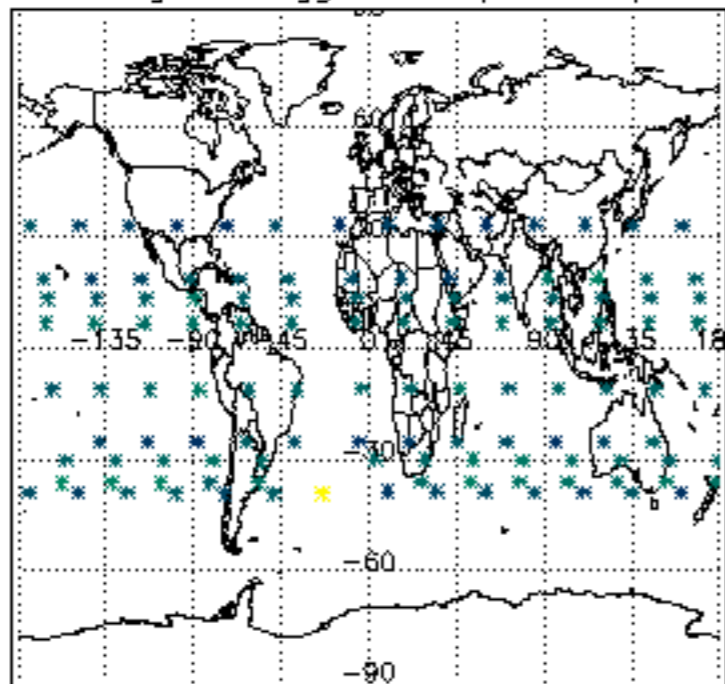
Percentage of flagged data per D3 profile



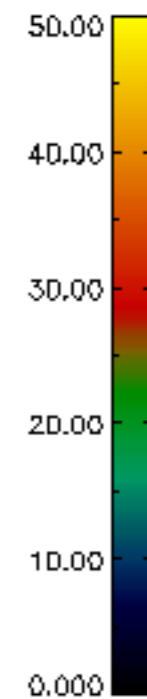
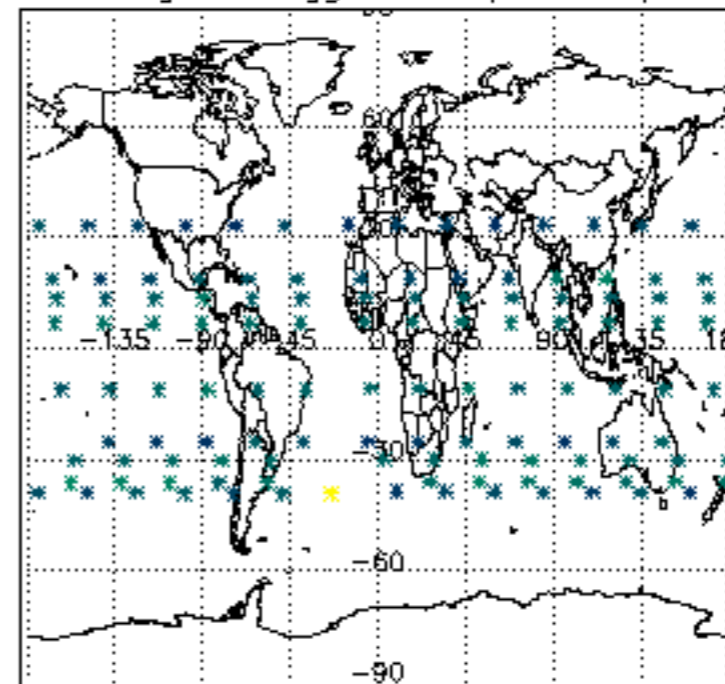
Percentage of flagged data per H2O profile

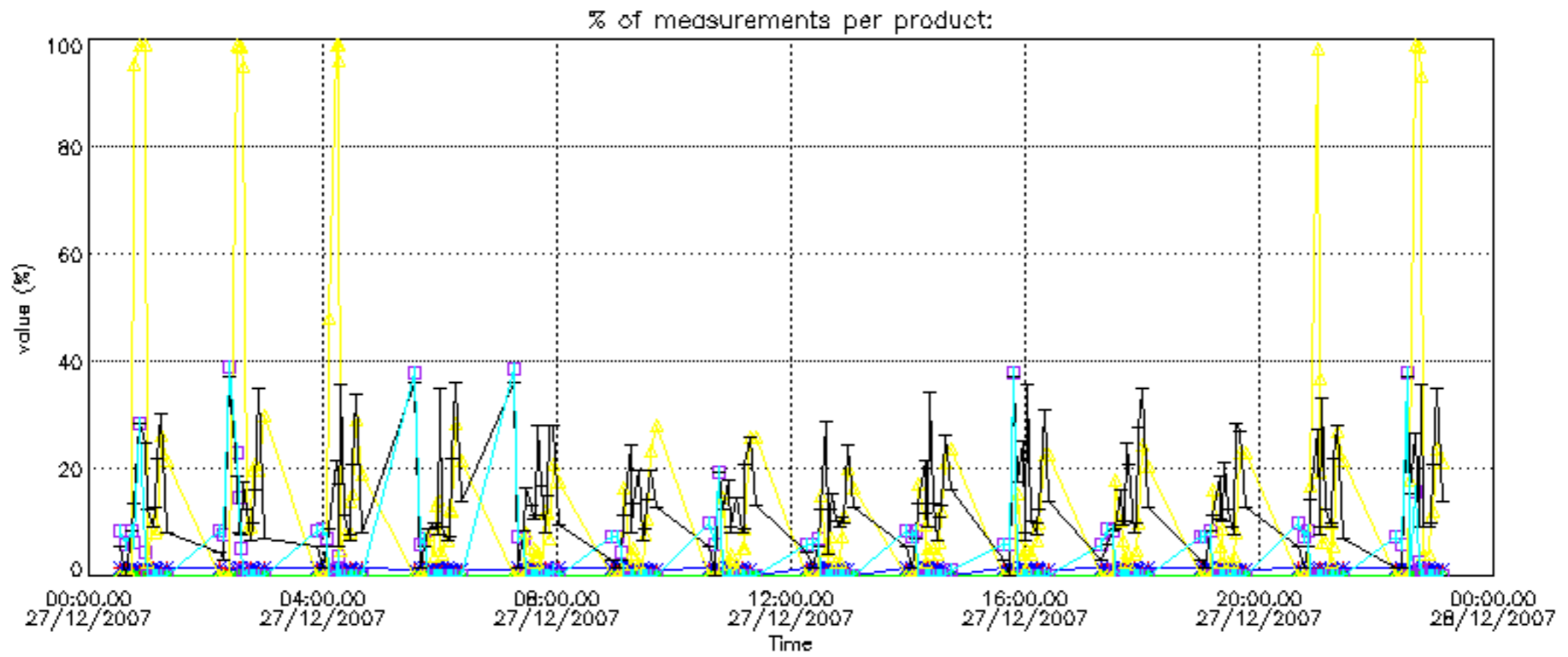


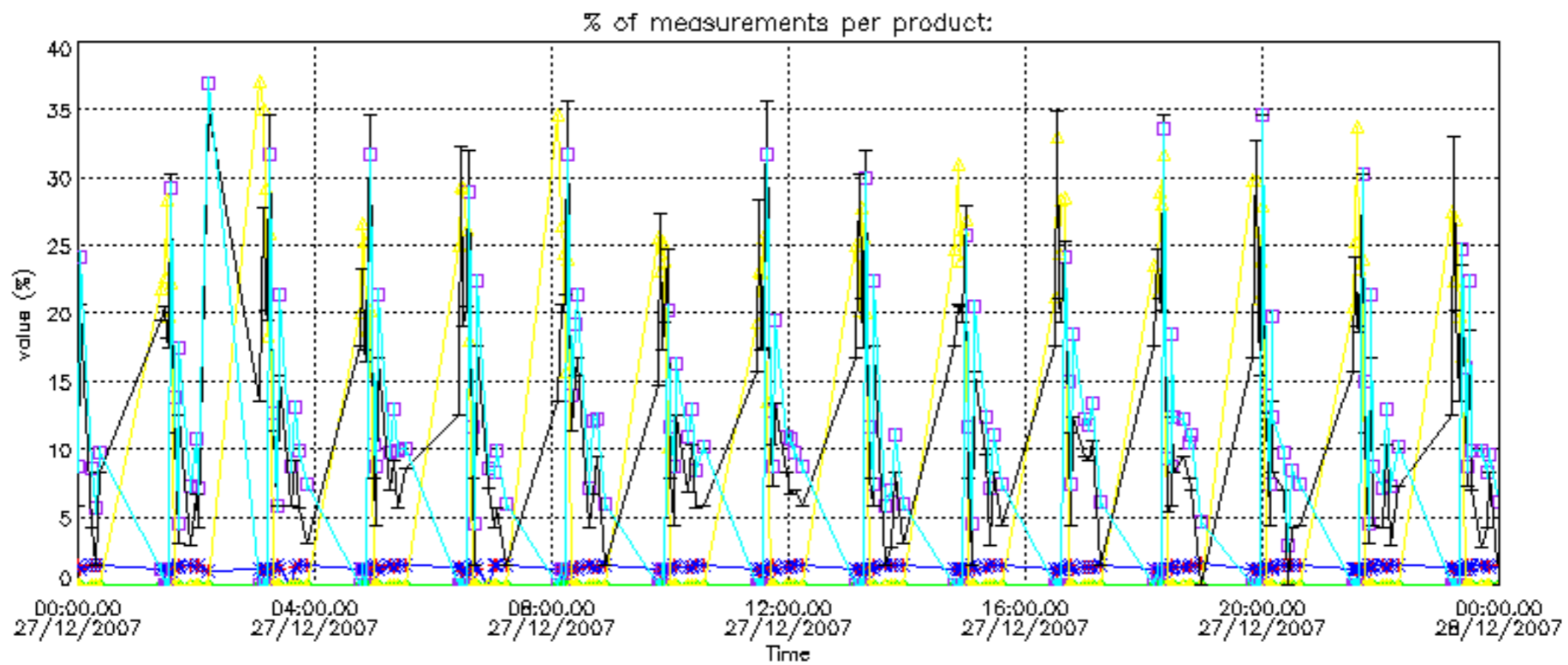
Percentage of flagged data per NO2 profile



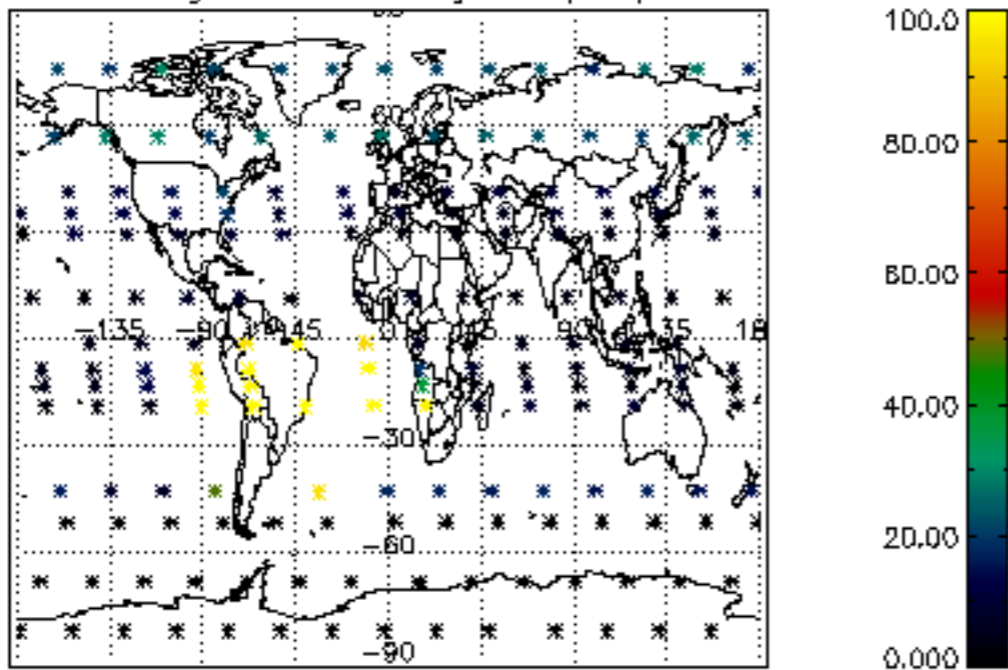
Percentage of flagged data per NO3 profile



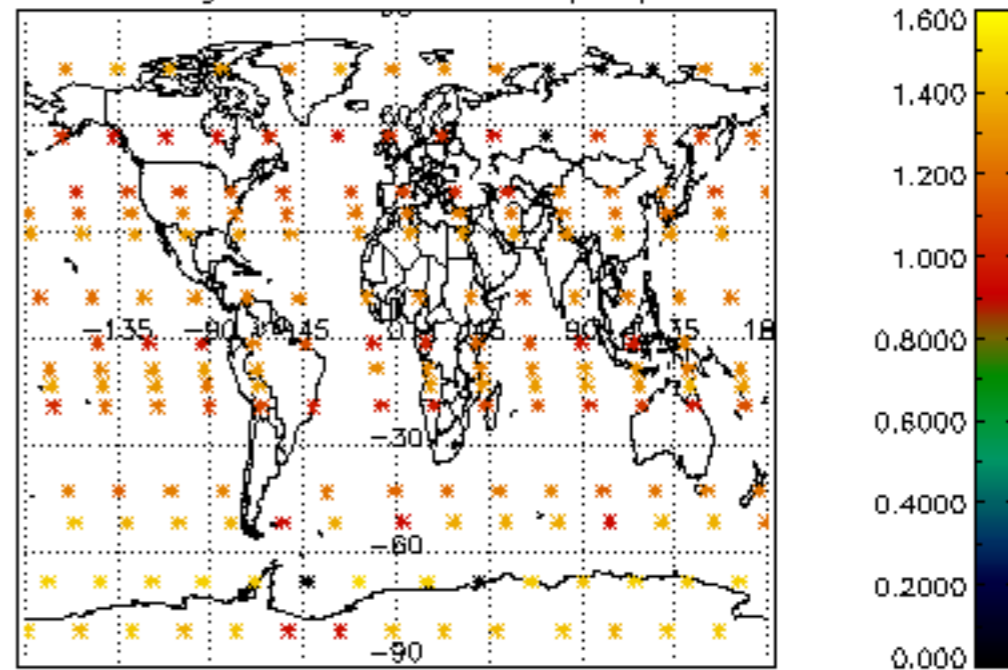




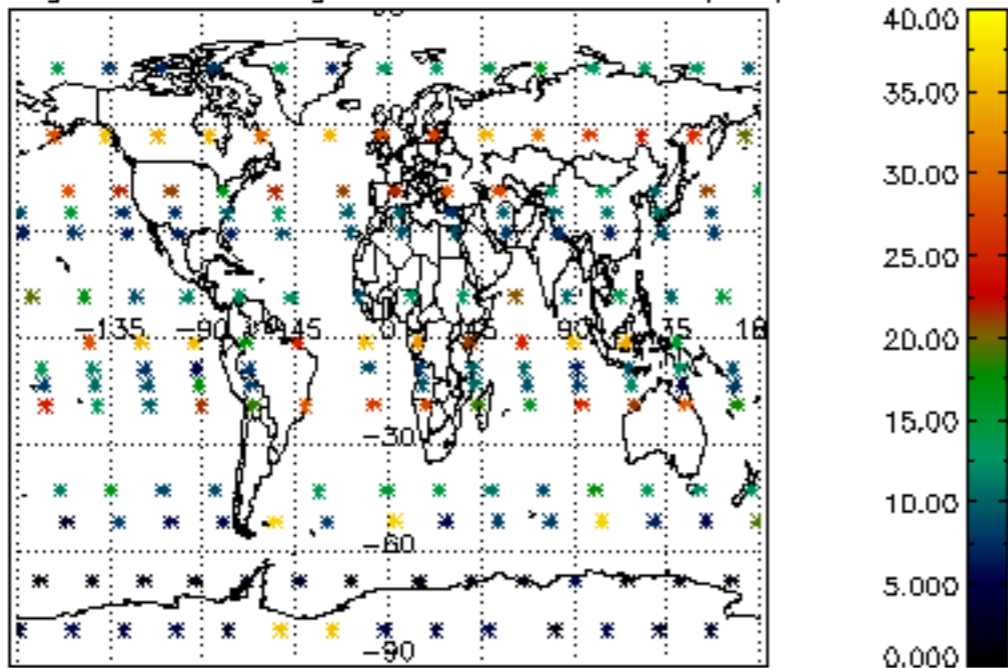
Percentage of cosmic ray hits per profile



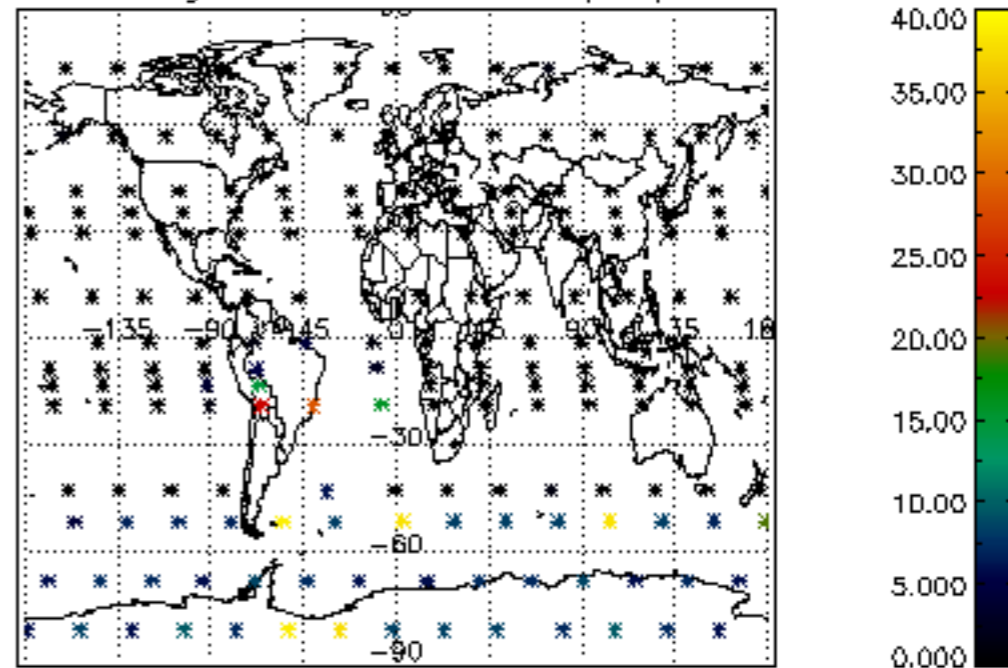
Percentage of datation errors per profile



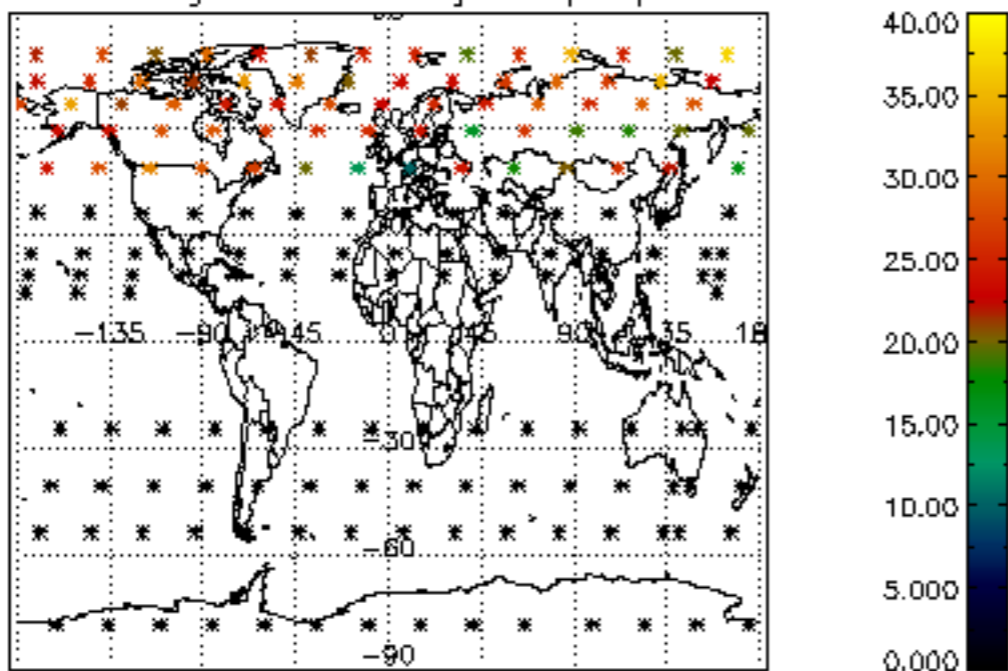
Percentage of star falling outside central band per profile



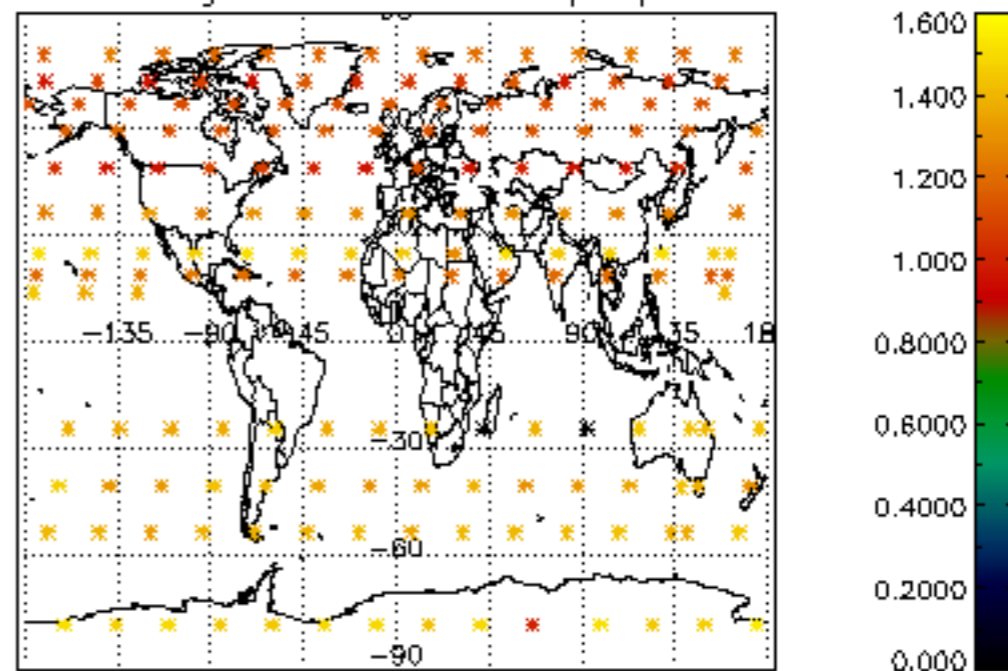
Percentage of saturation errors per profile



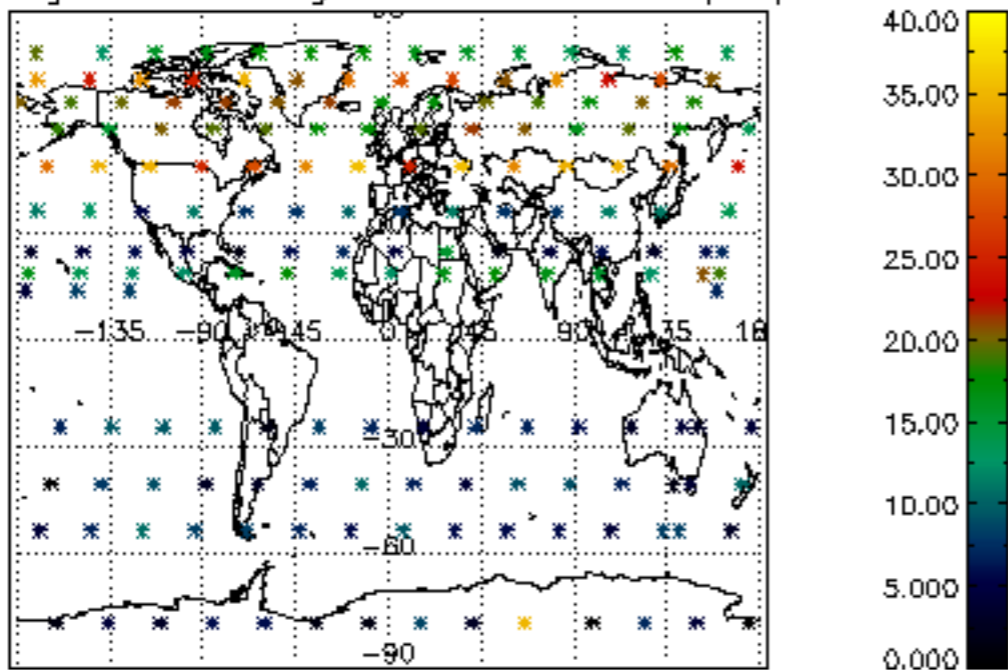
Percentage of cosmic ray hits per profile



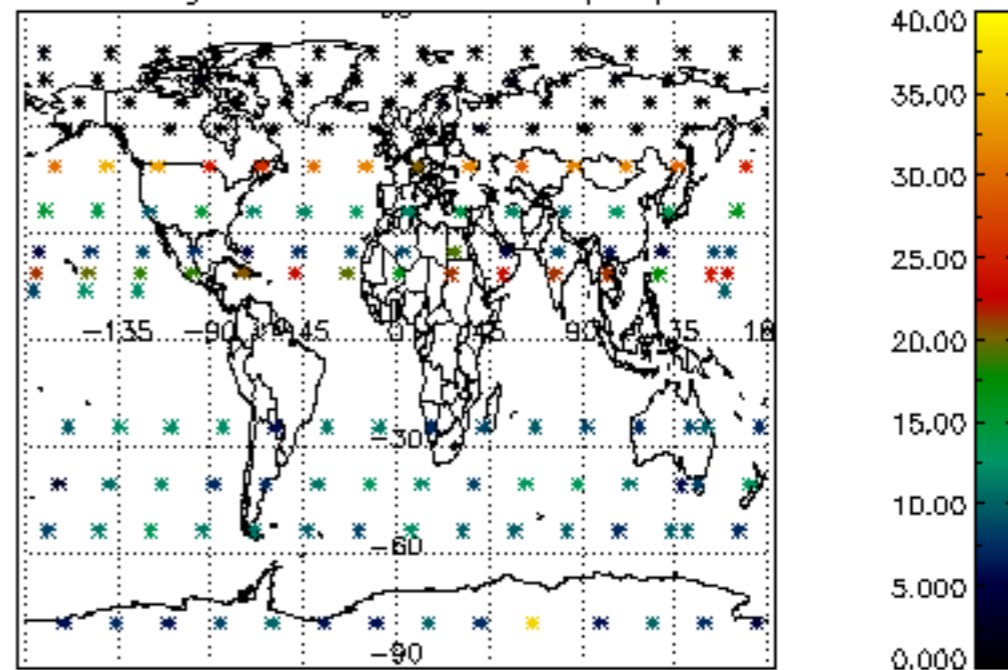
Percentage of datation errors per profile



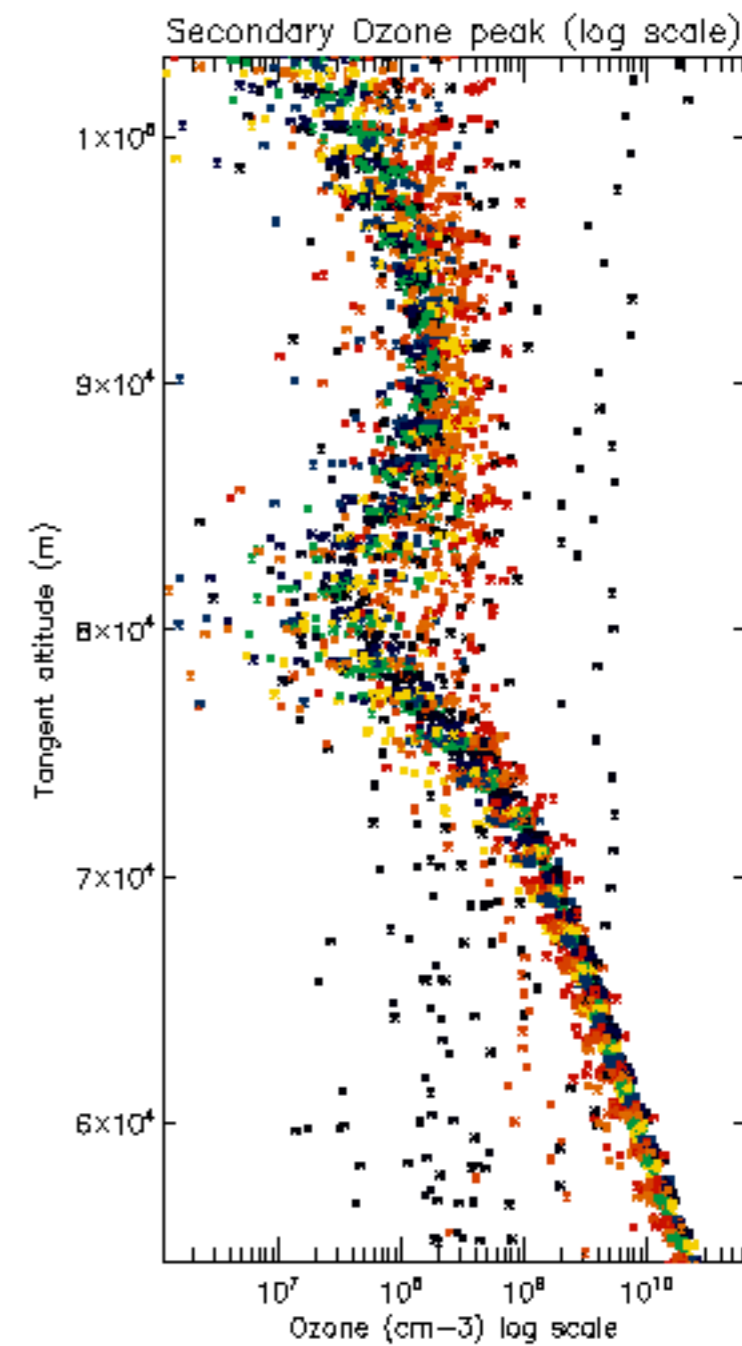
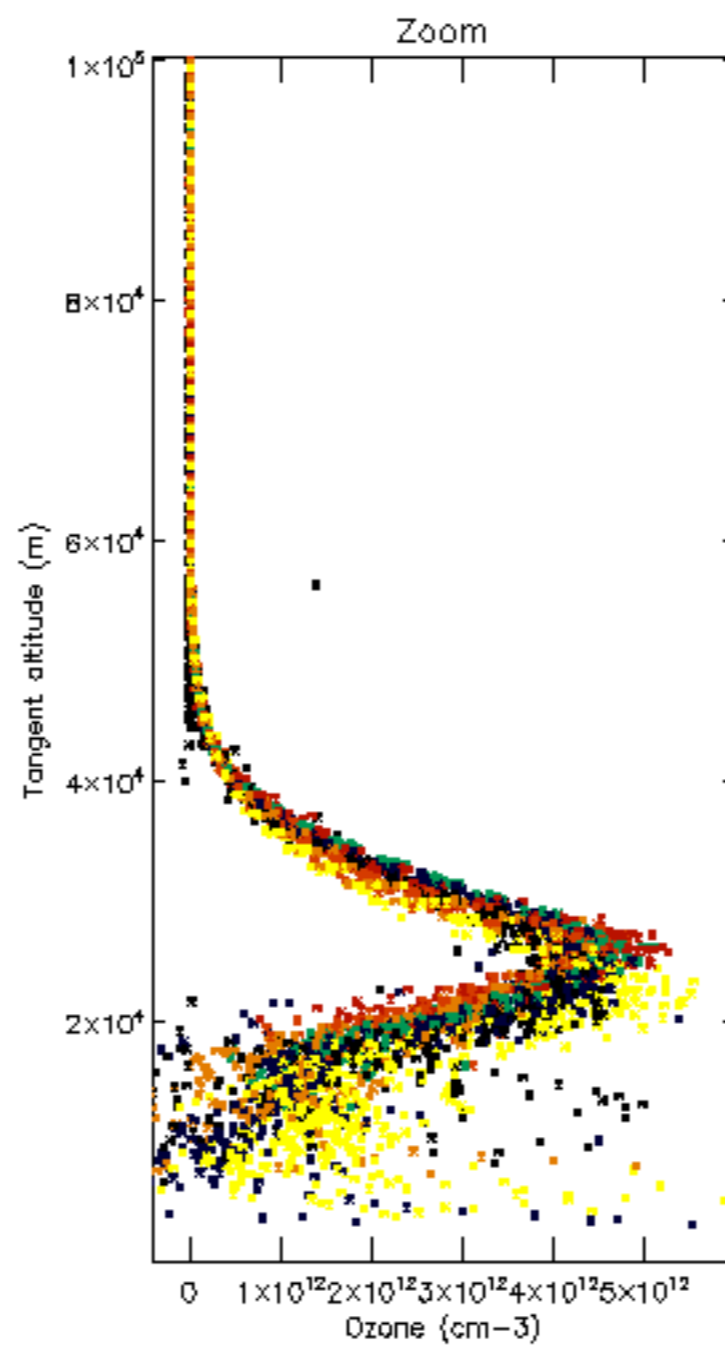
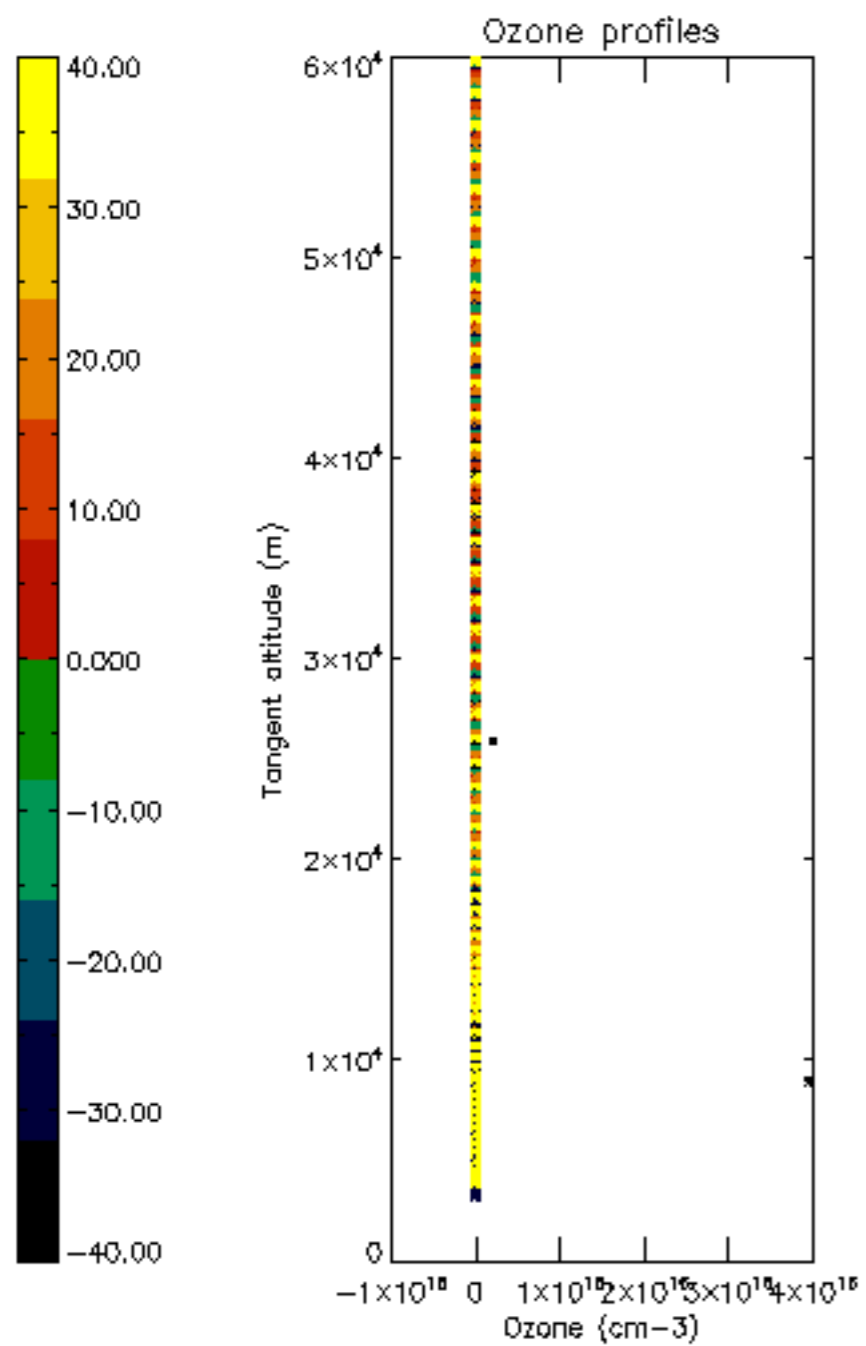
Percentage of star falling outside central band per profile

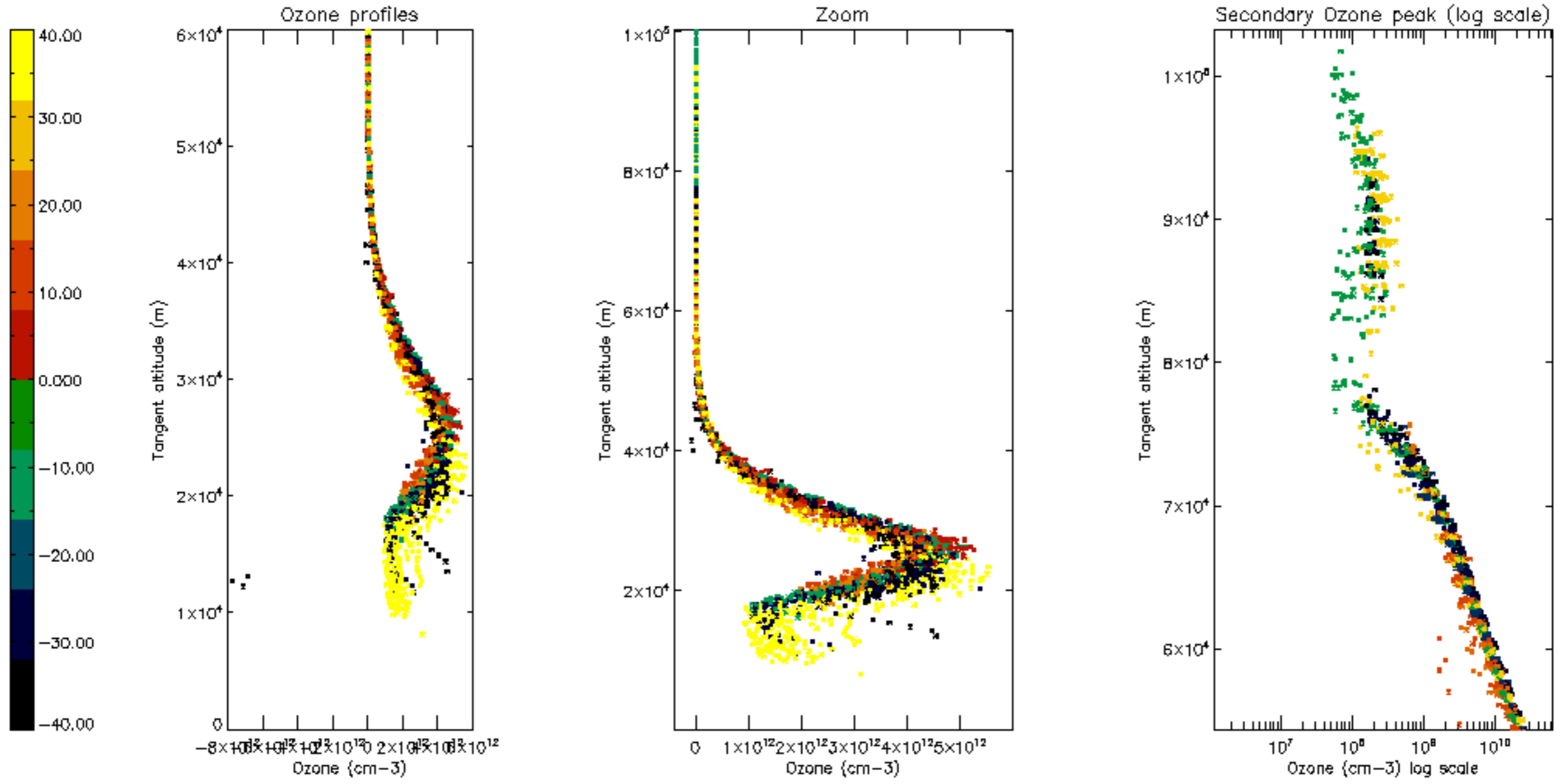


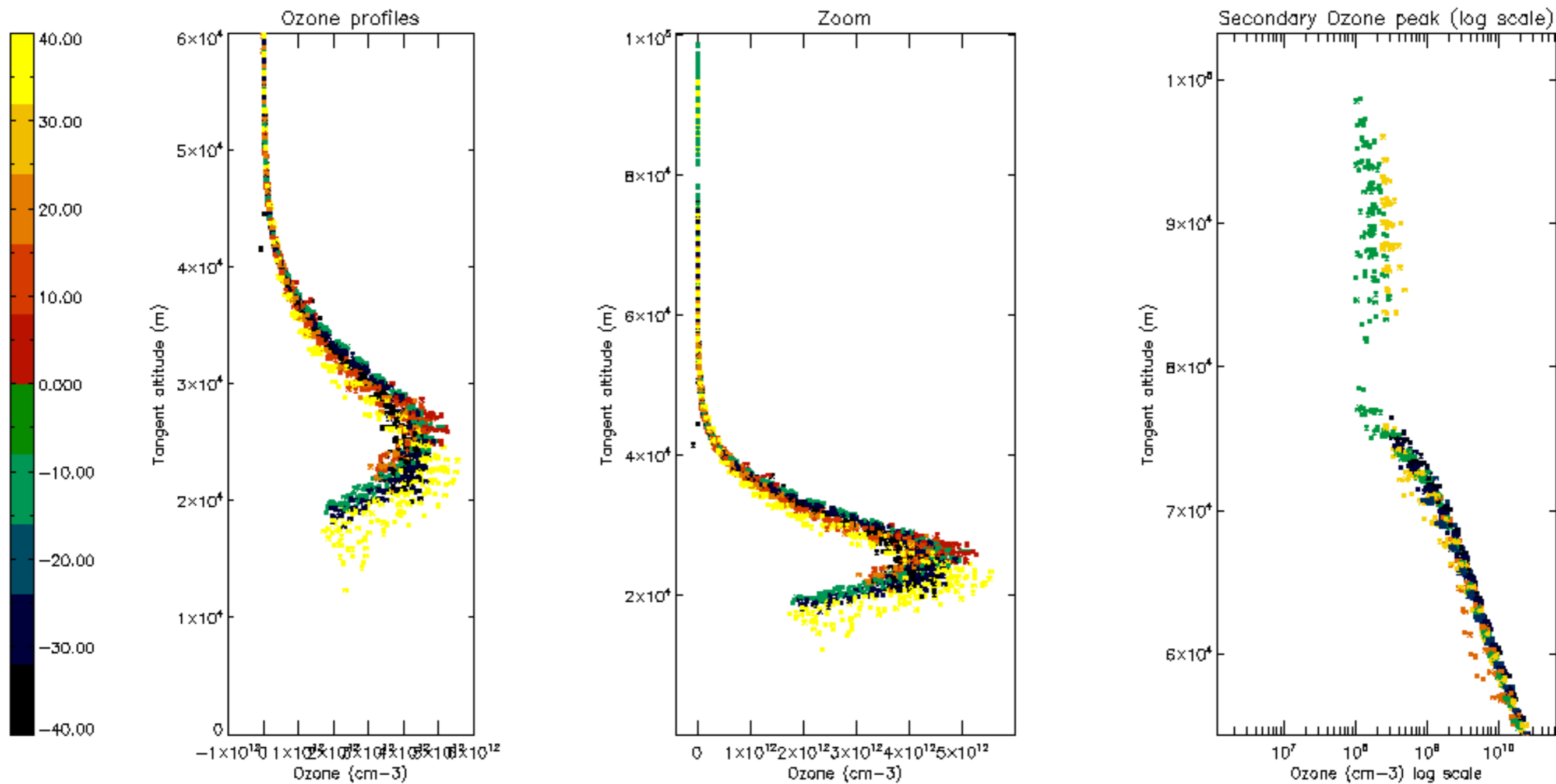
Percentage of saturation errors per profile

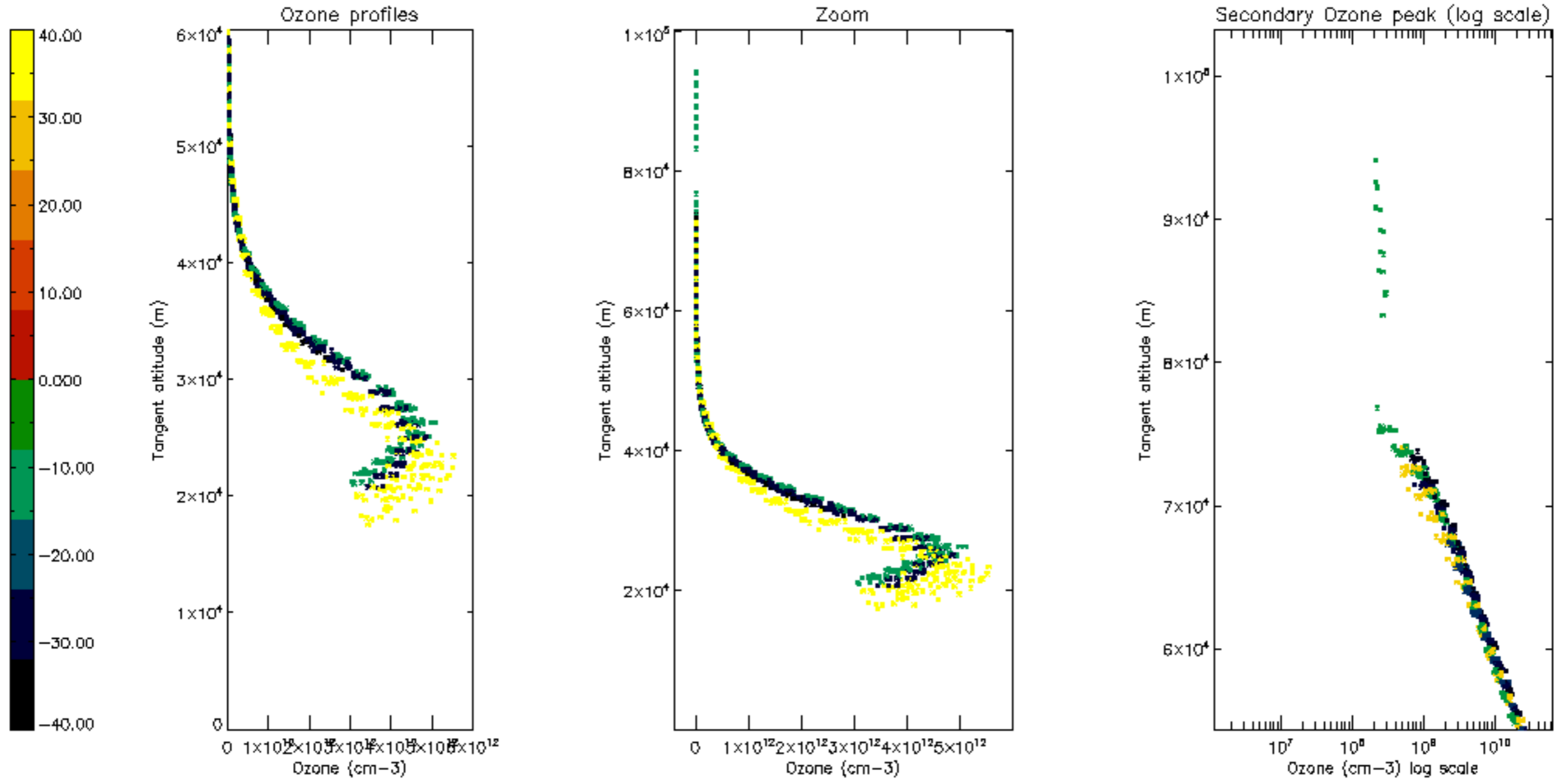


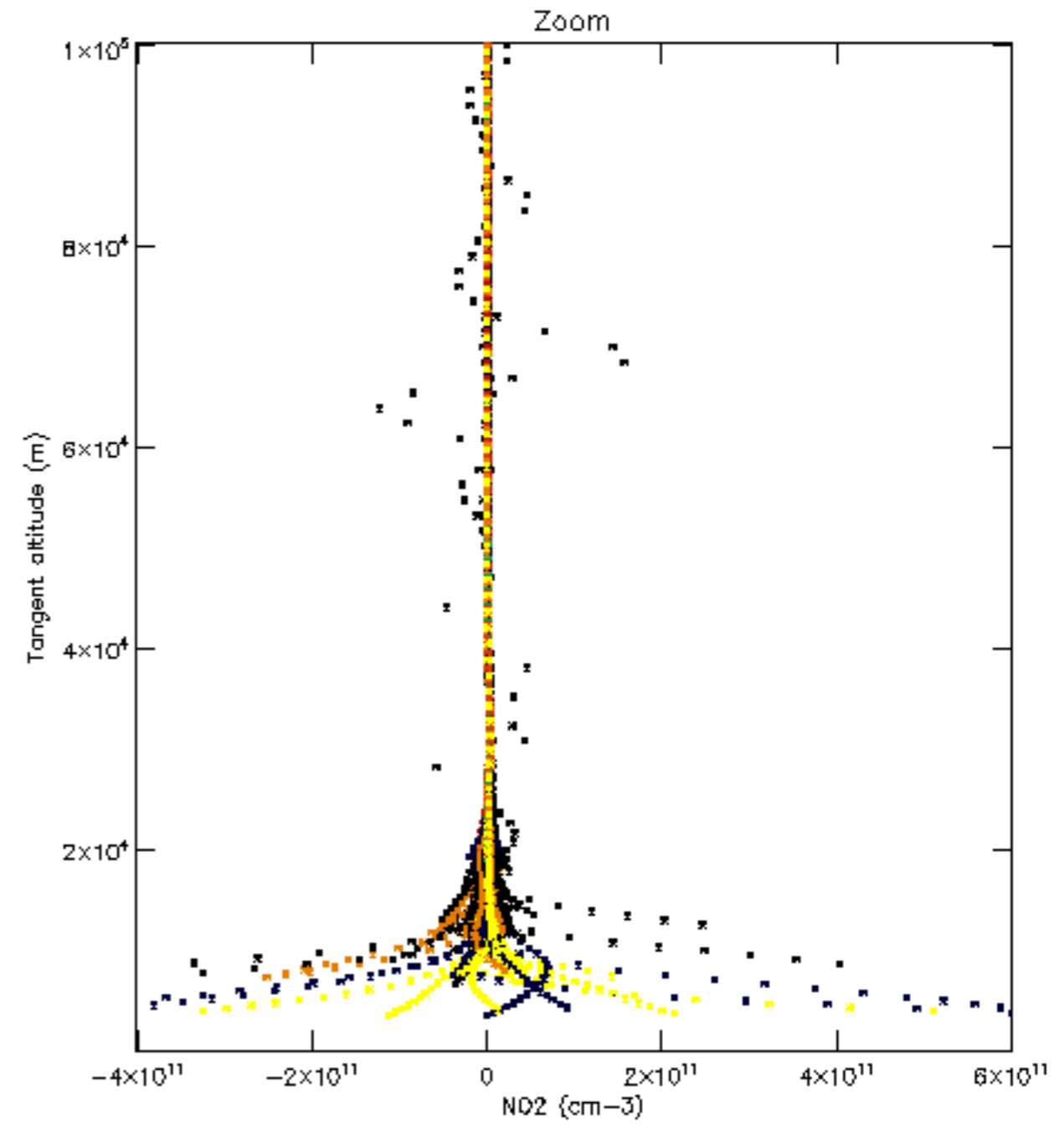
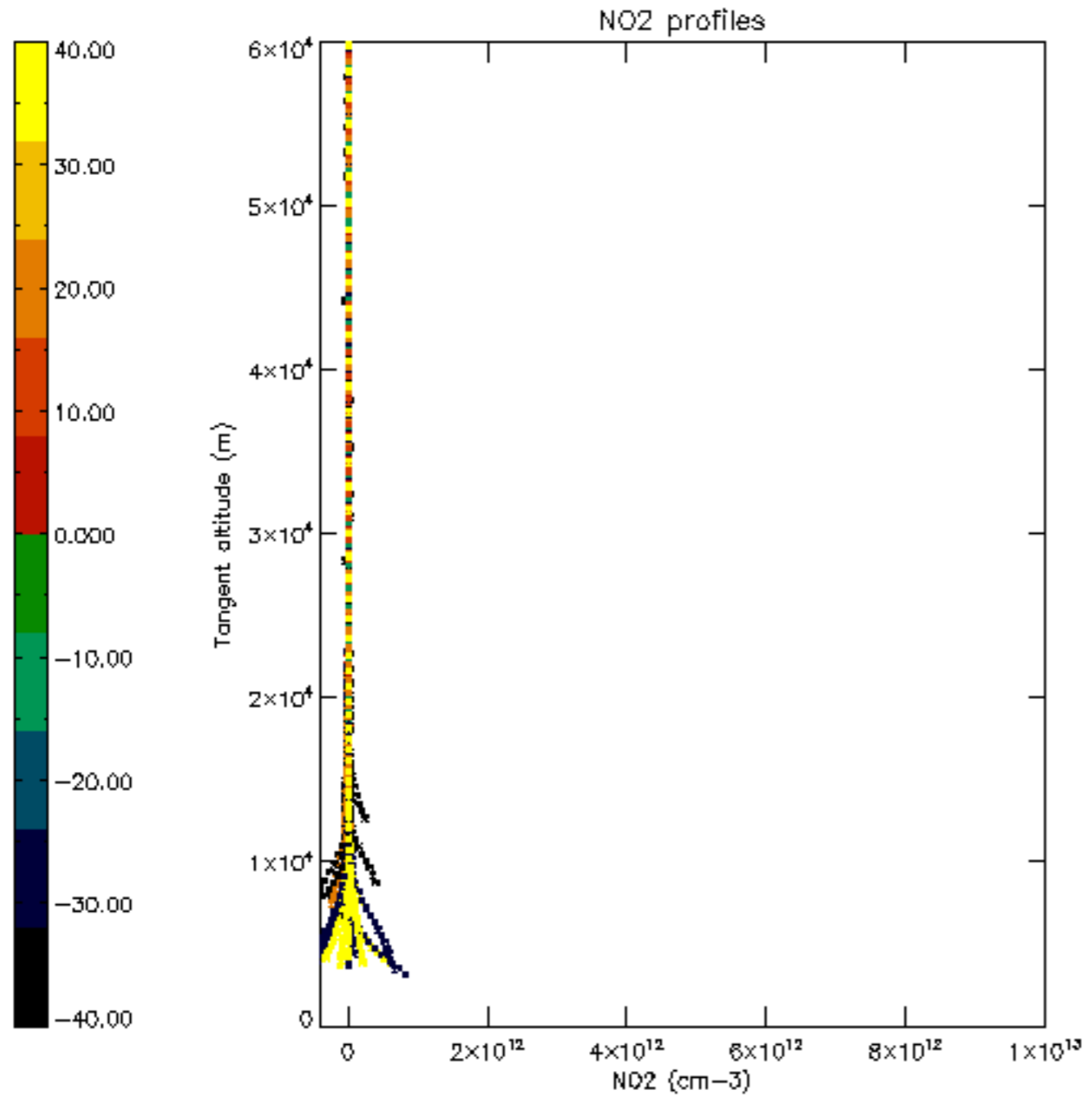


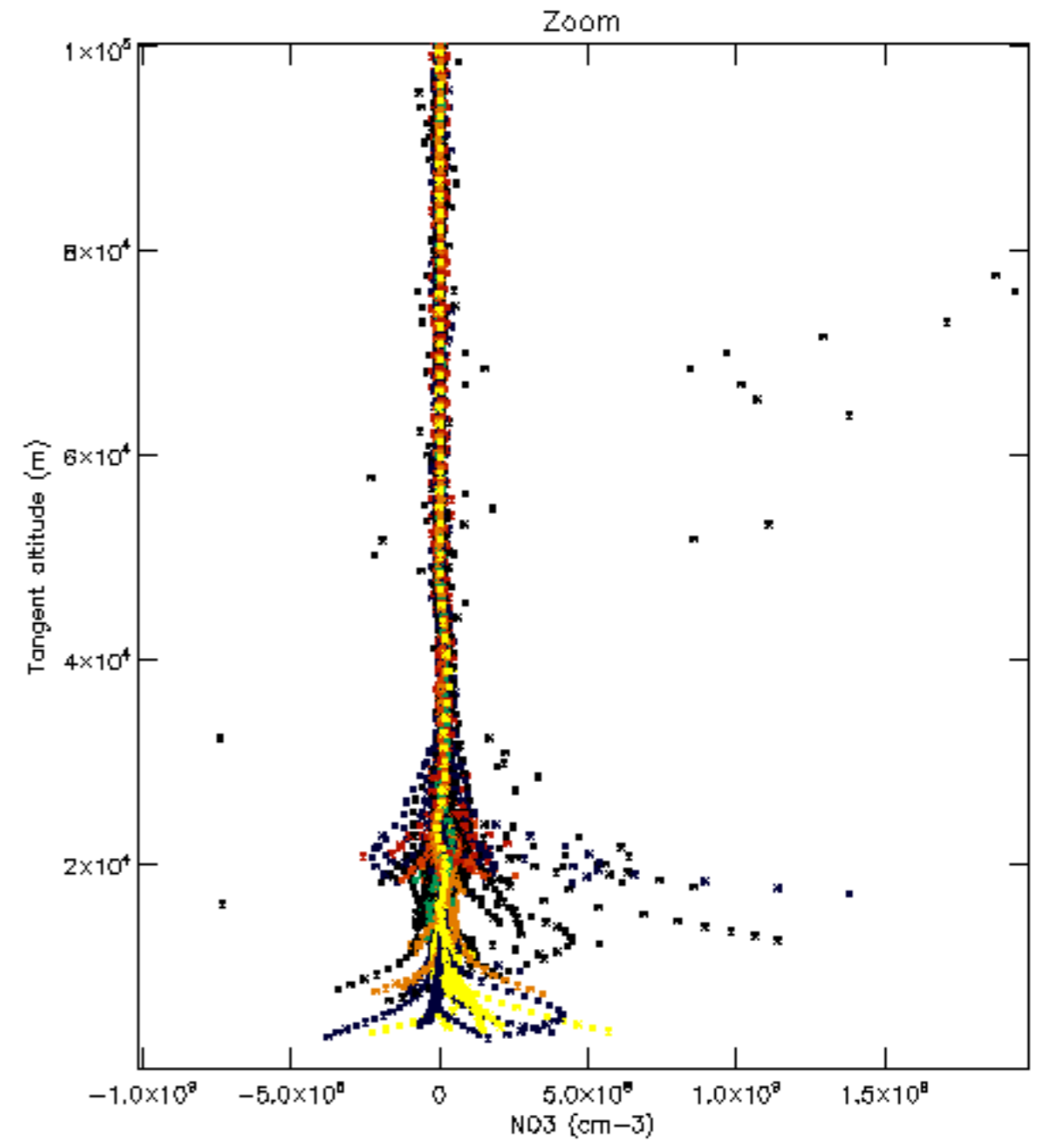
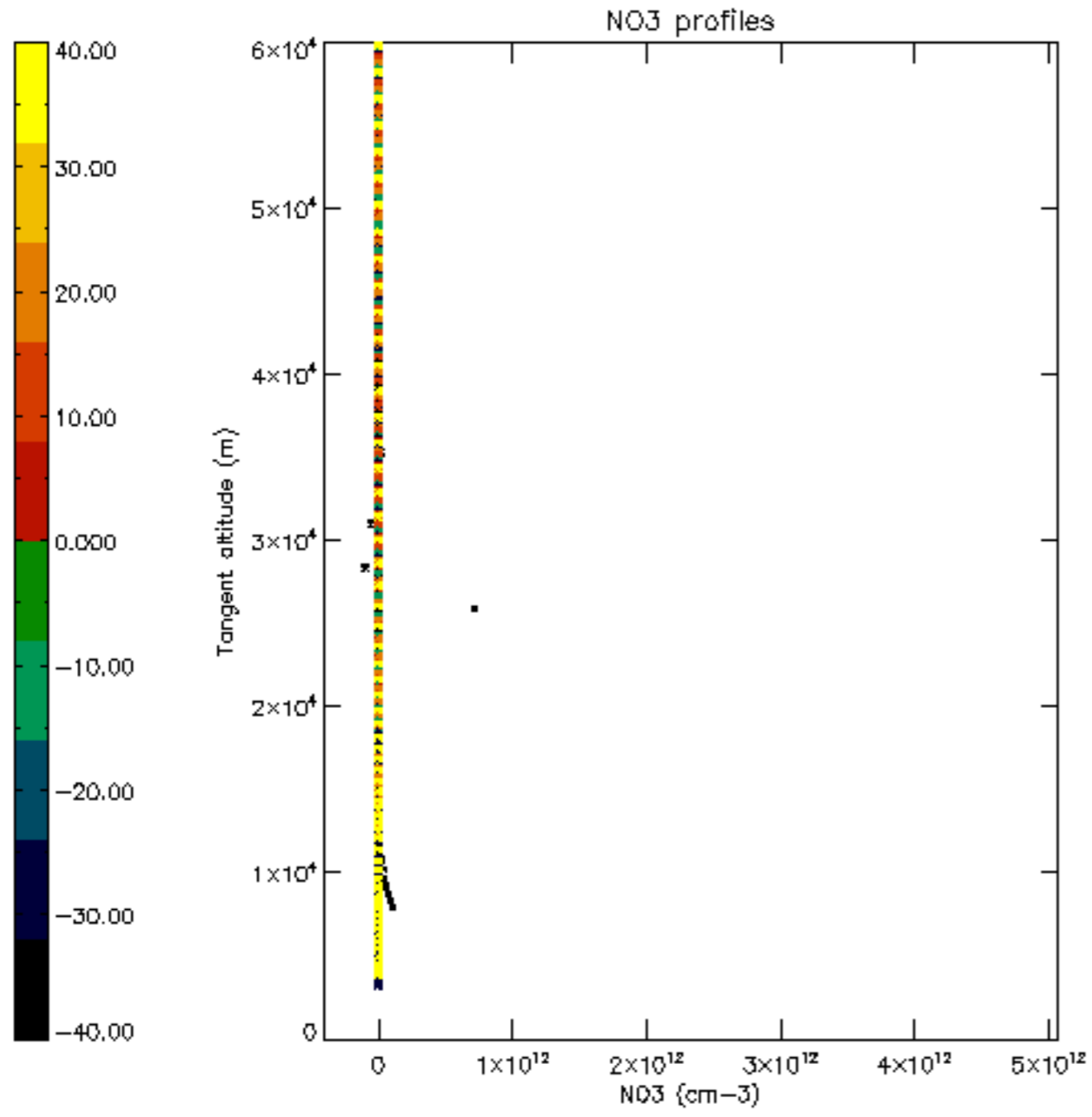


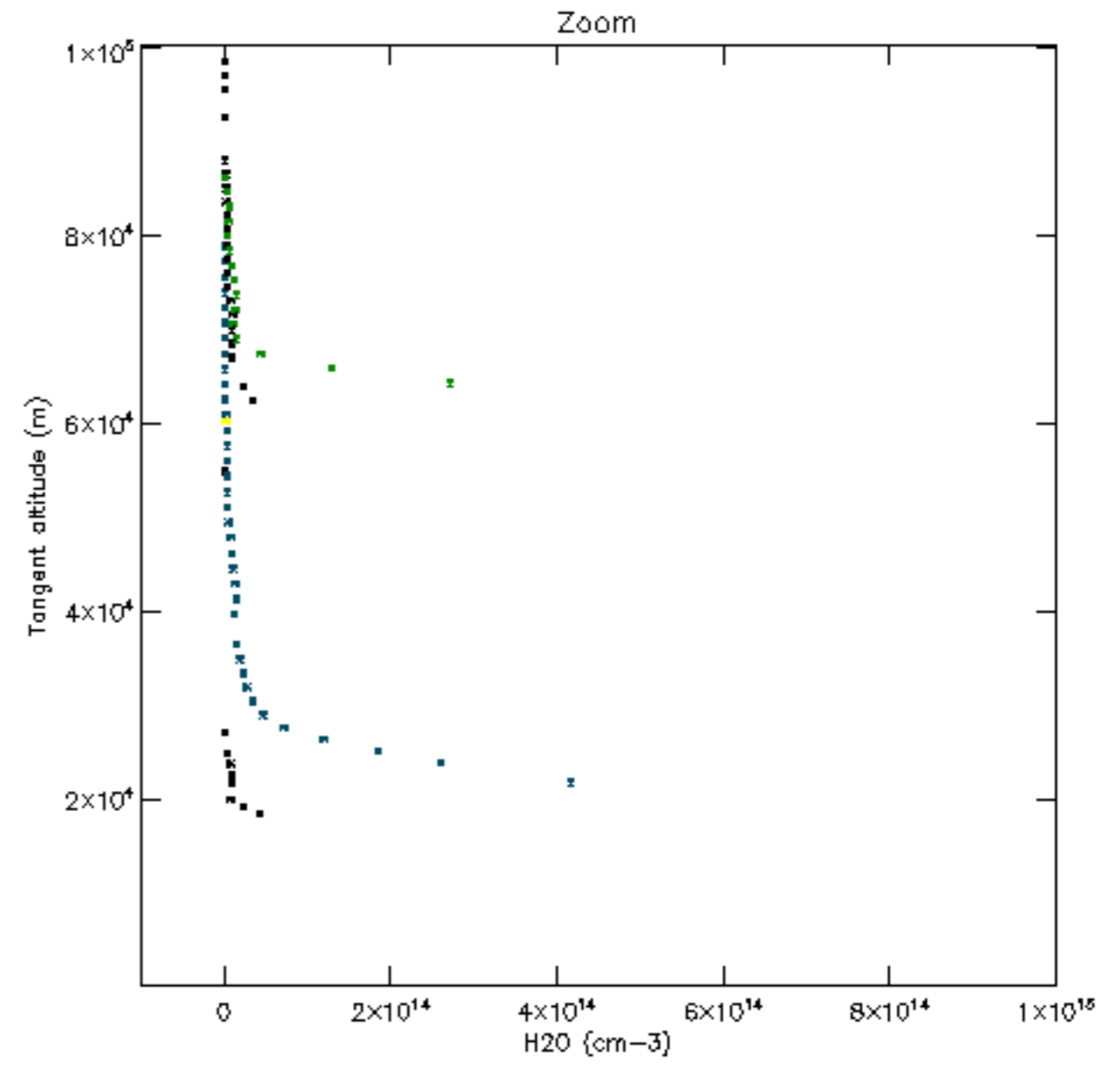
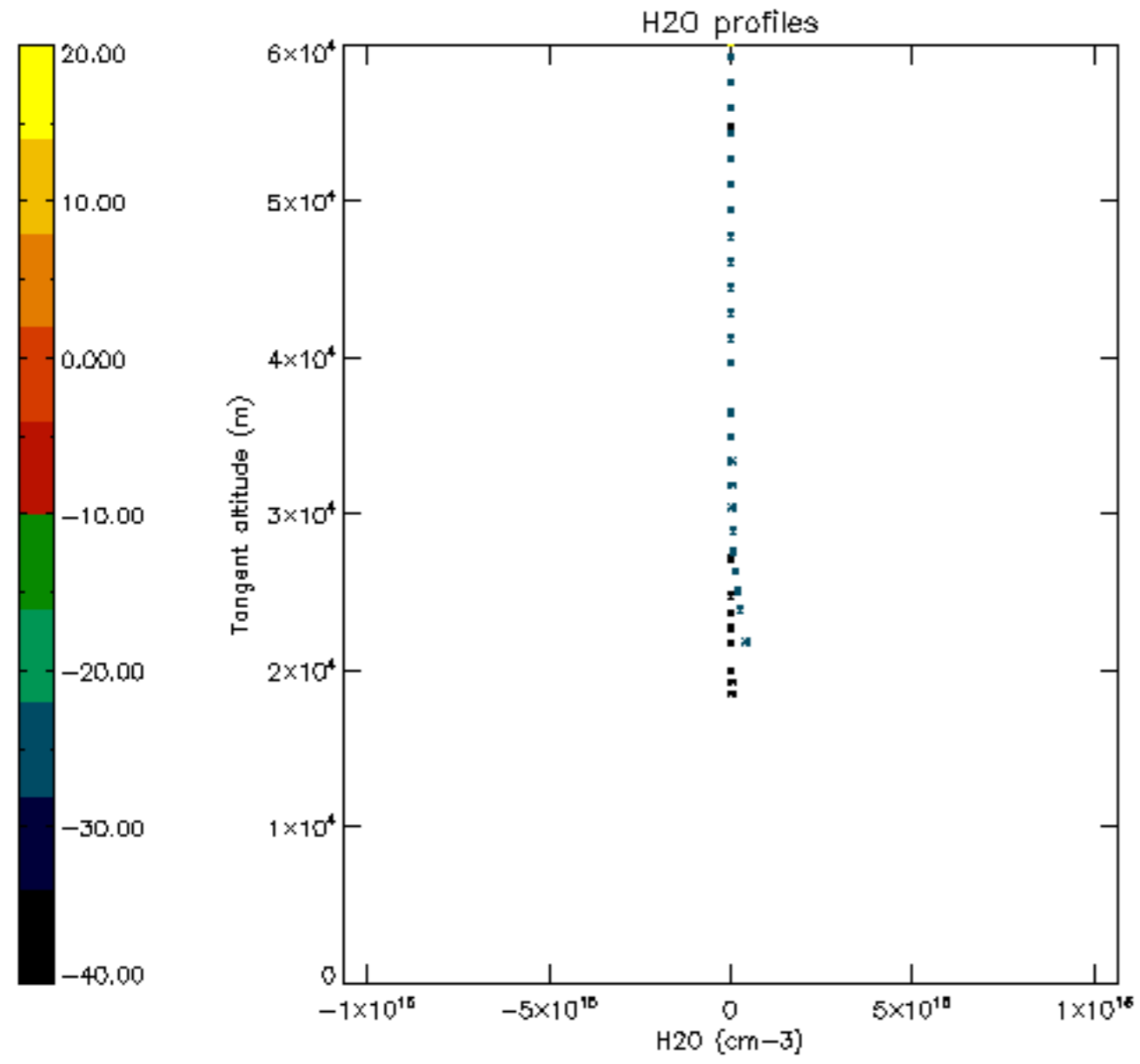


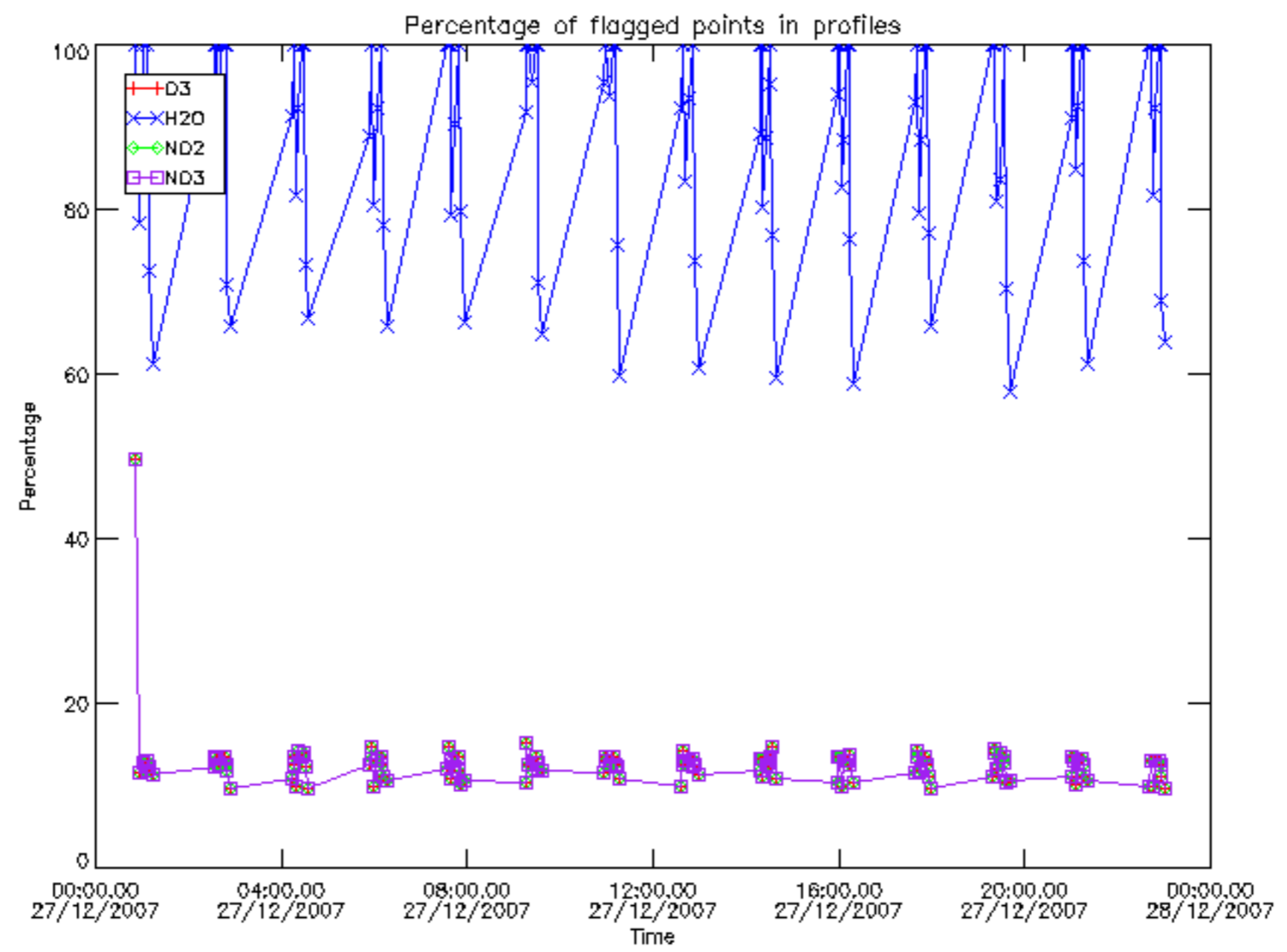






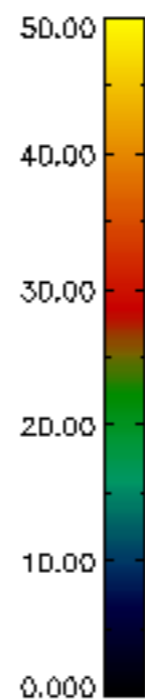
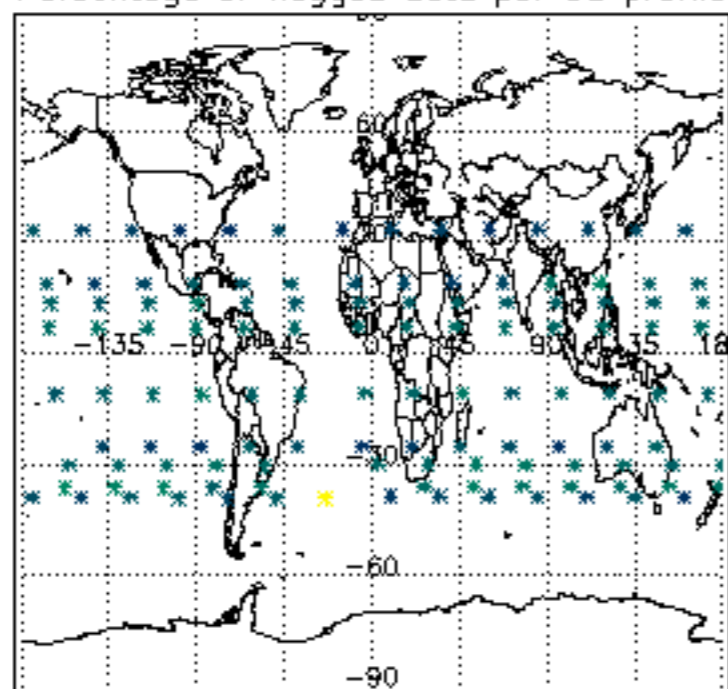




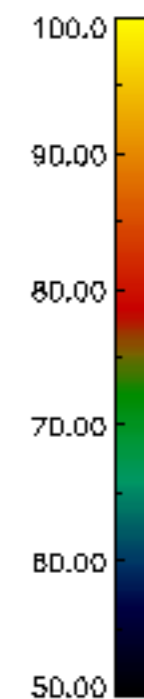
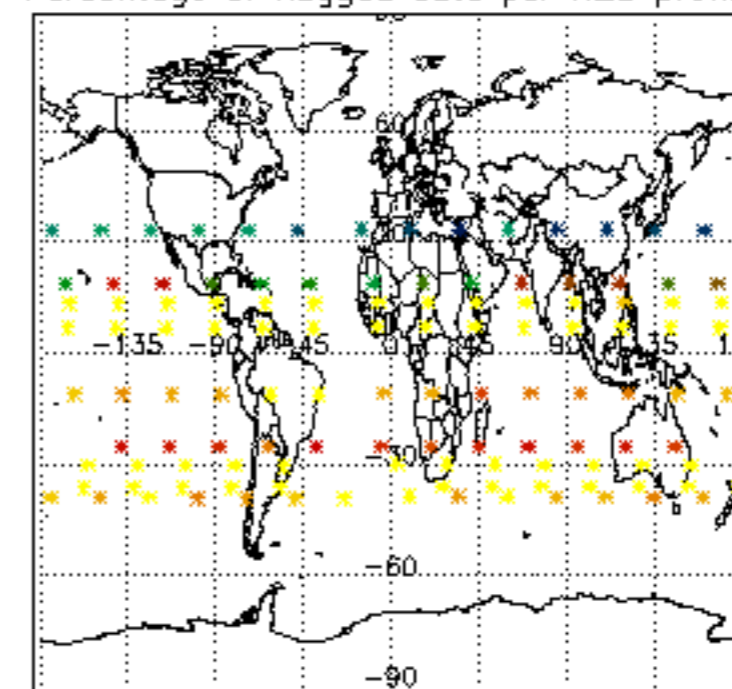




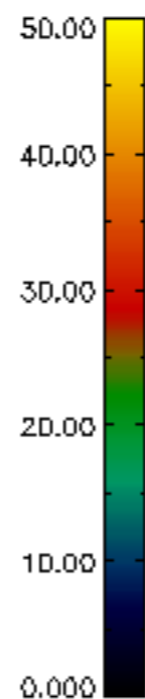
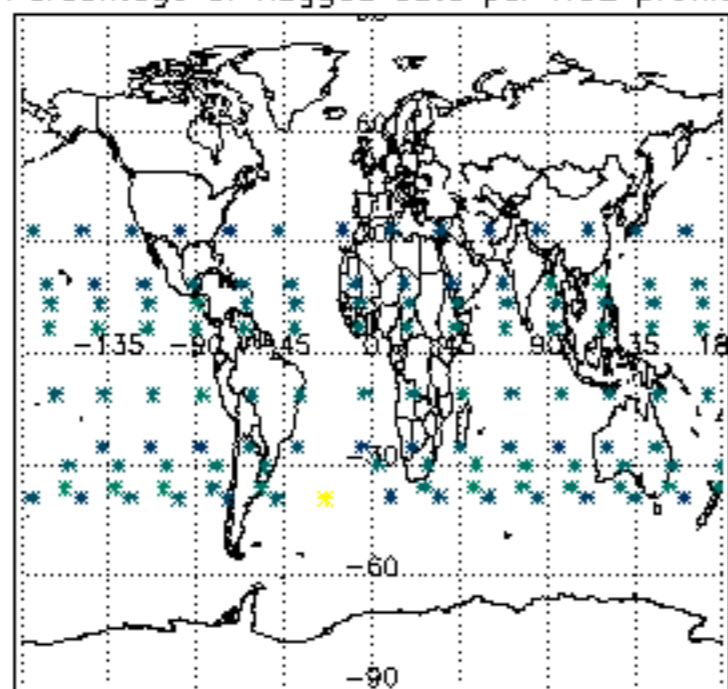
Percentage of flagged data per D3 profile



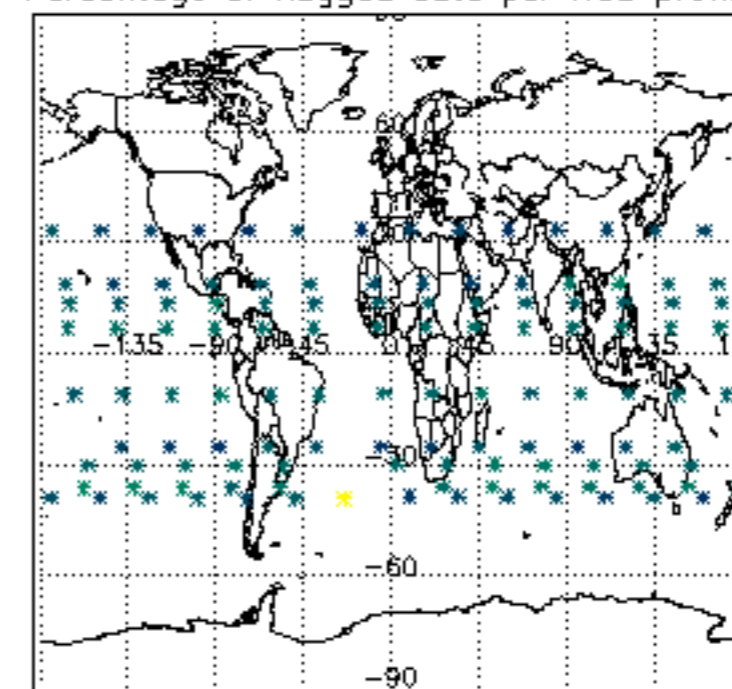
Percentage of flagged data per H2O profile

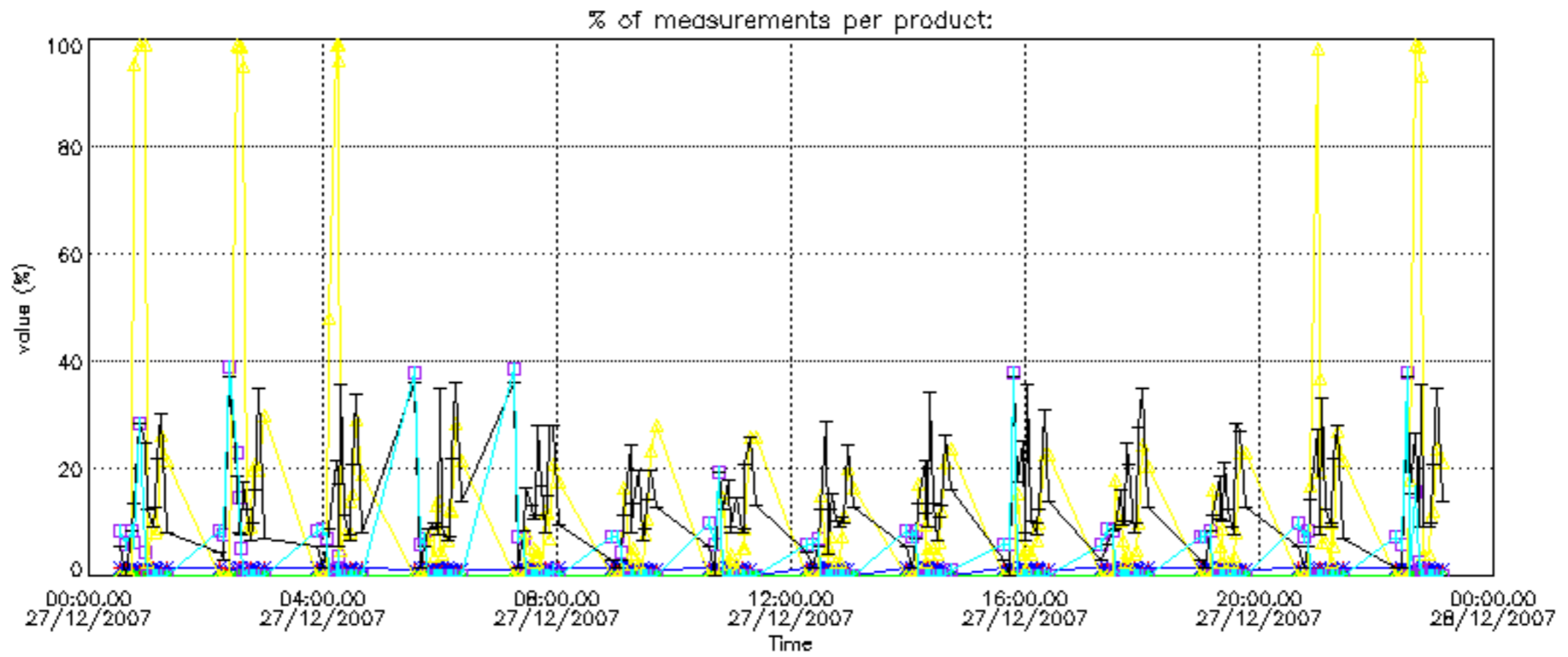


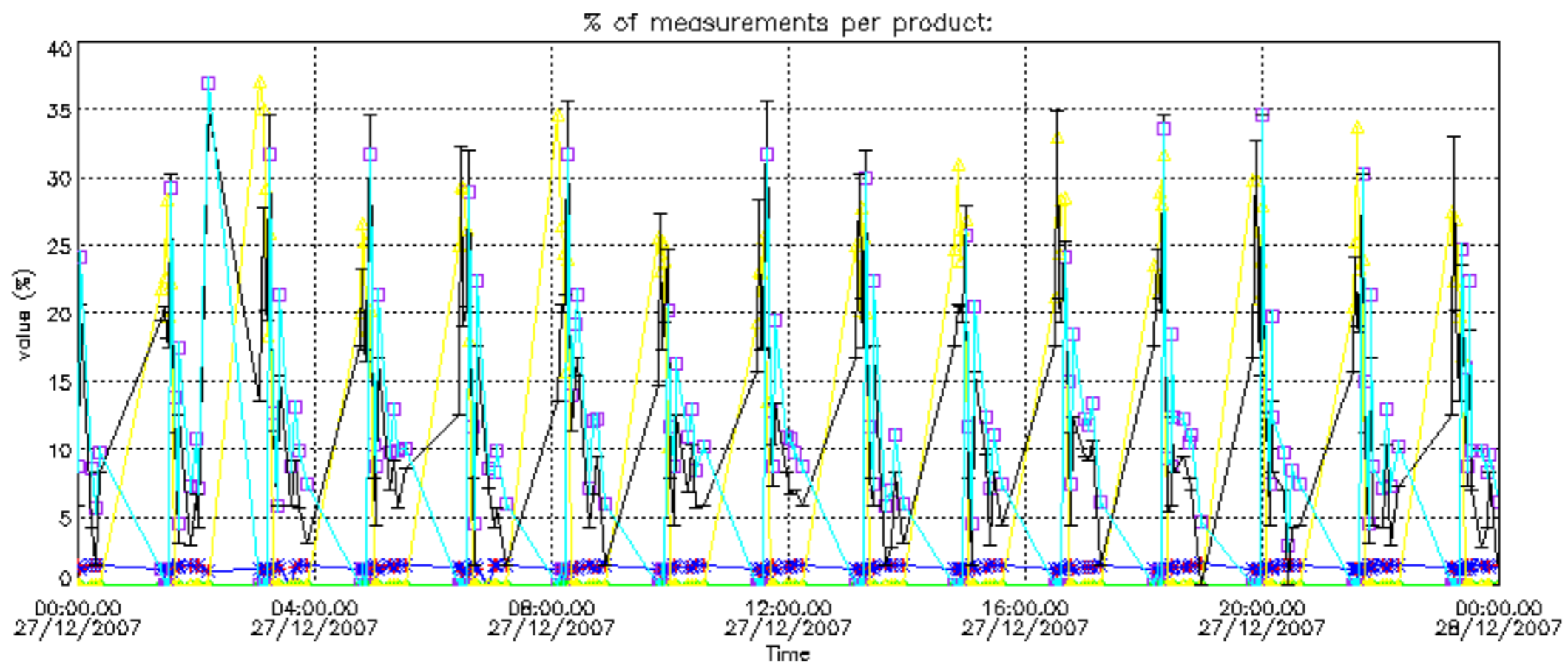
Percentage of flagged data per NO2 profile



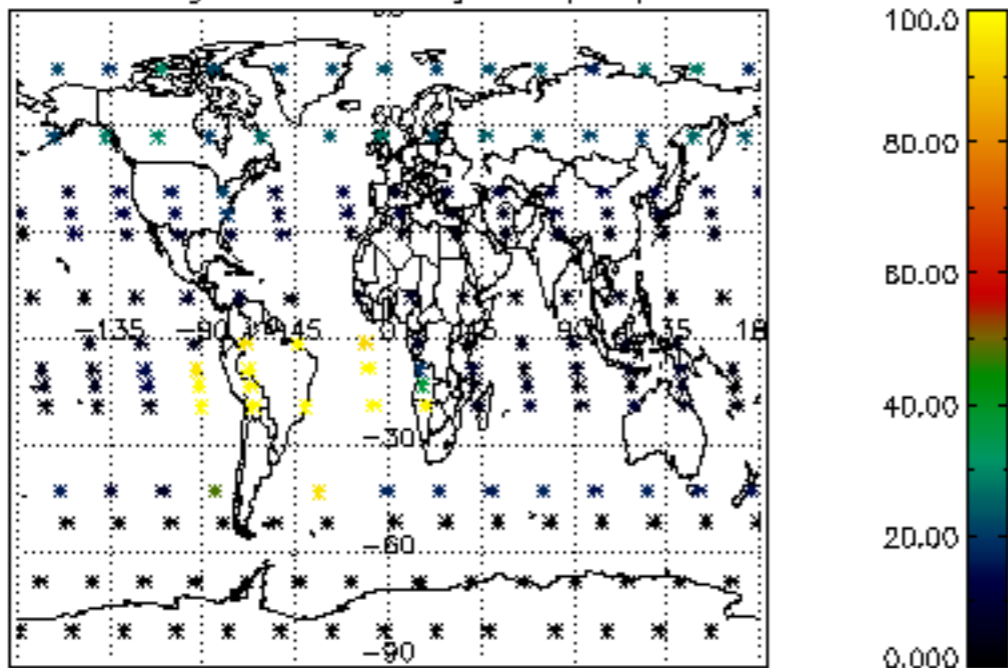
Percentage of flagged data per NO3 profile



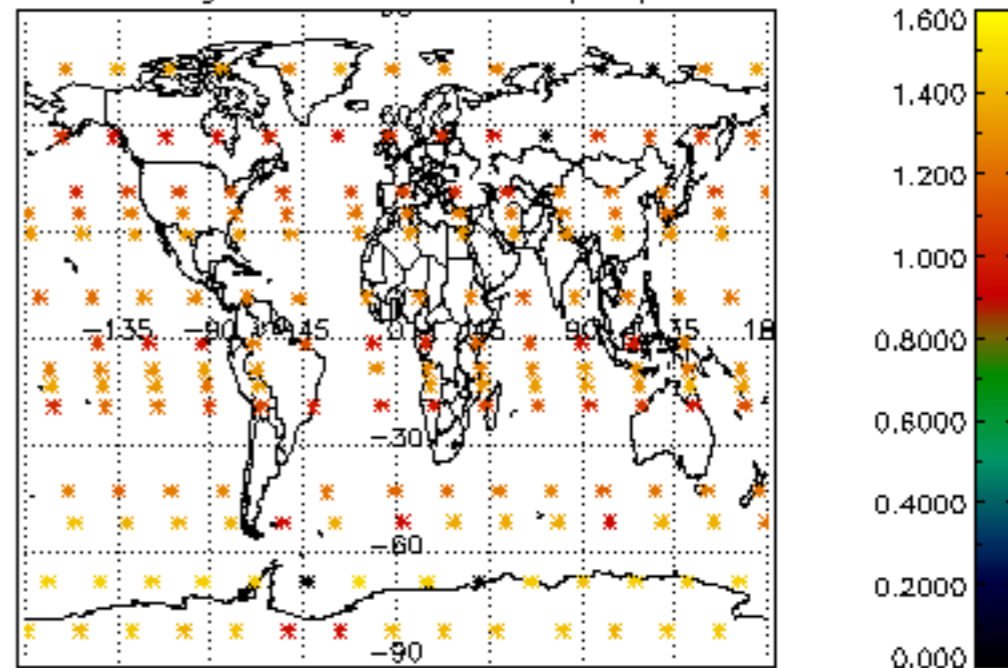




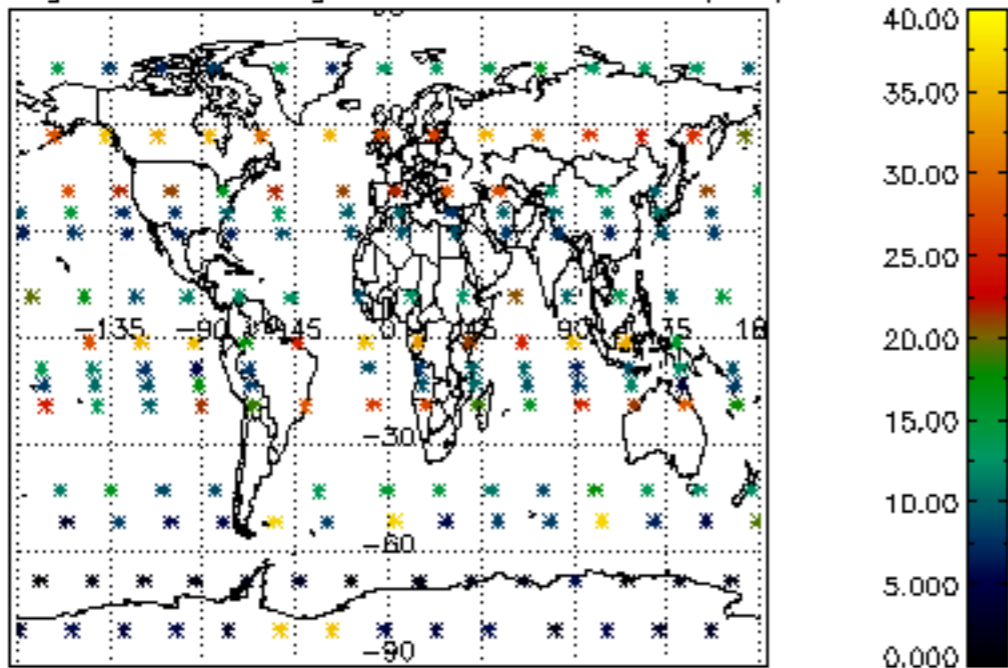
Percentage of cosmic ray hits per profile



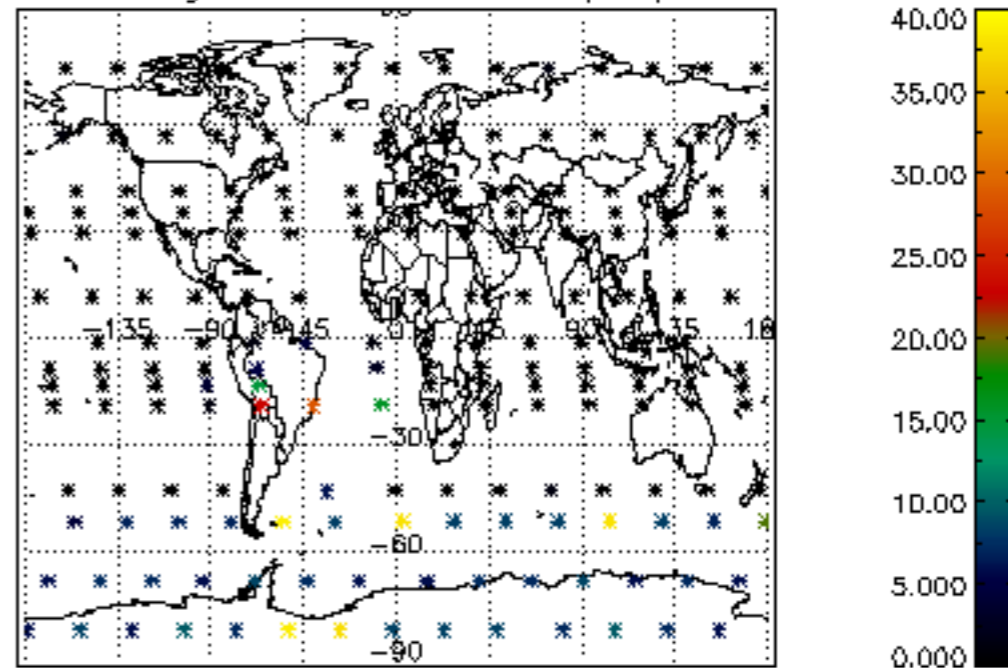
Percentage of datation errors per profile



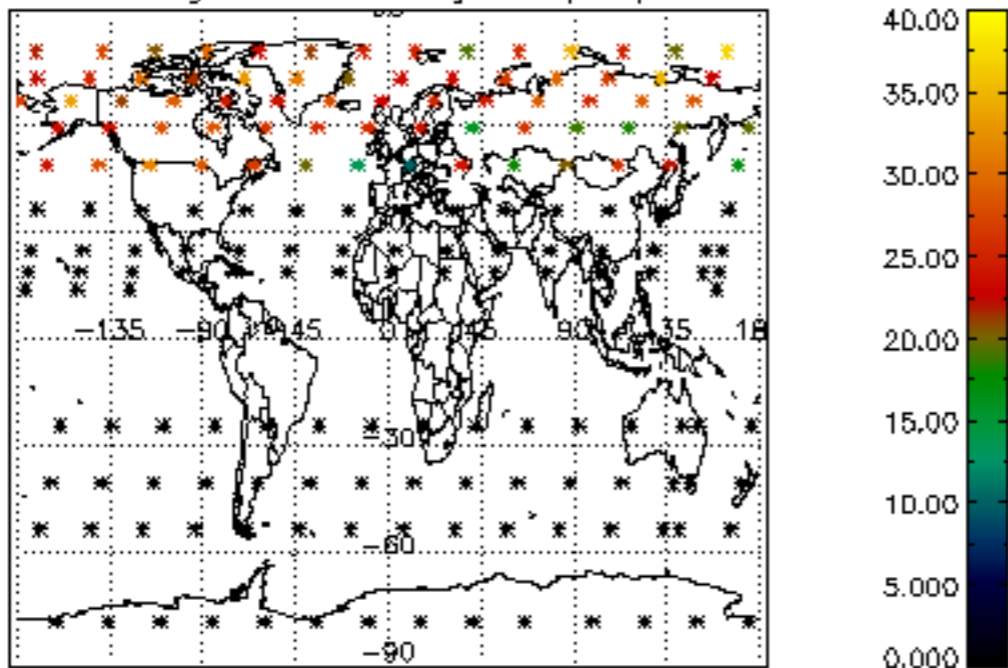
Percentage of star falling outside central band per profile



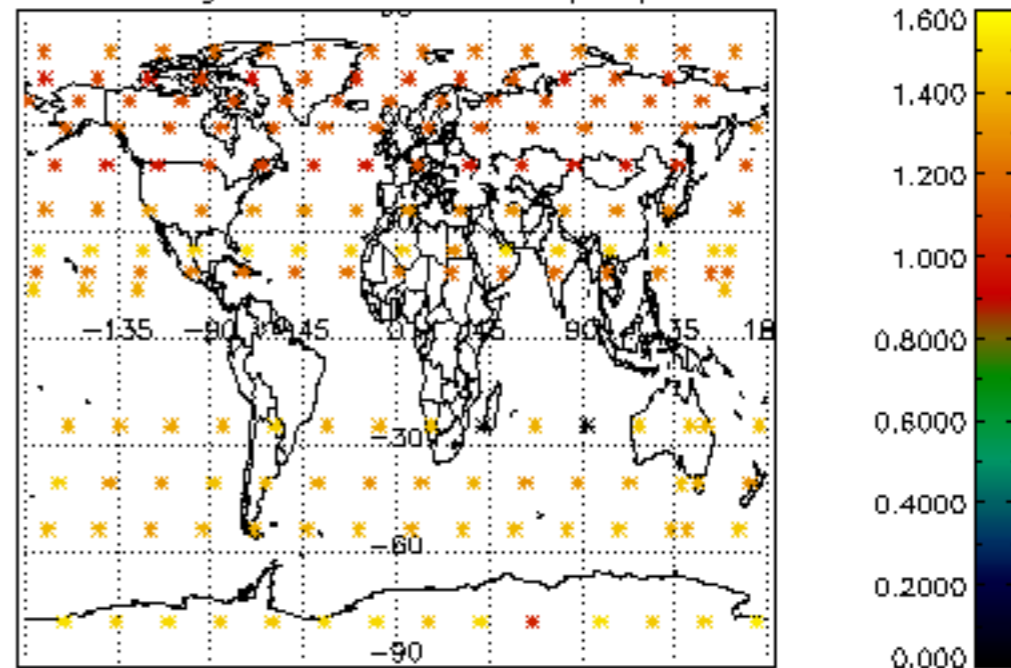
Percentage of saturation errors per profile



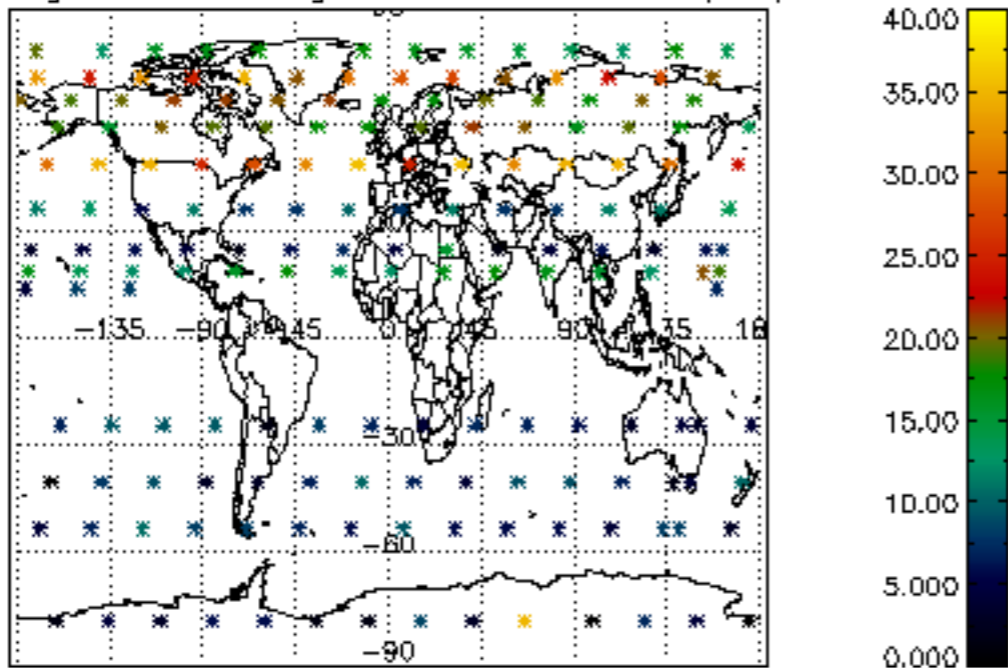
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

