

# 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	30APR2013 10:01:10
Data source version	GOMOS/6.01
Start time of products	22-12-2009 (22DEC2009 00:00:00)
Stop time of products	23-12-2009 (23DEC2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	166
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__2PRFIN20091222_000126_000000532085_00202_40837_8025.N1	22-DEC-2009 00:01:26	Bright	53.000	60	7Bet UMi	2.0810	3950.0	106	40837	No
2	GOM_NL__2PRFIN20091222_000546_000000452085_00202_40837_8026.N1	22-DEC-2009 00:05:46	Bright	45.000	32	77Eps UMa	1.7630	11000.	90	40837	No
3	GOM_NL__2PRFIN20091222_000835_000000442085_00202_40837_8027.N1	22-DEC-2009 00:08:35	Bright	43.500	39	85Eta UMa	1.8540	24000.	87	40837	No
4	GOM_NL__2PRFIN20091222_001209_000000572085_00202_40837_8028.N1	22-DEC-2009 00:12:09	Bright	57.000	180	27Gam Boo	3.0400	8000.0	114	40837	No
5	GOM_NL__2PRFIN20091222_001530_000000432085_00202_40837_8029.N1	22-DEC-2009 00:15:30	Bright	43.000	83		2.3780	11000.	86	40837	No
6	GOM_NL__2PRFIN20091222_001904_000000642085_00202_40837_8030.N1	22-DEC-2009 00:19:04	Bright	63.500	111	8Eta Boo	2.6800	6000.0	127	40837	No
7	GOM_NL__2PRFIN20091222_002941_000000552085_00202_40837_8031.N1	22-DEC-2009 00:29:41	Twilight	55.000	15	67Alp Vir	0.97600	28000.	110	40837	No
8	GOM_NL__2PRFIN20091222_003422_000000462085_00202_40837_8032.N1	22-DEC-2009 00:34:22	Dark	46.000	54	5The Cen	2.0550	4500.0	92	40837	No
9	GOM_NL__2PRFIN20091222_003613_000000582085_00202_40837_8033.N1	22-DEC-2009 00:36:13	Dark	58.000	106	9Bet Crv	2.6480	5600.0	116	40837	No
10	GOM_NL__2PRFIN20091222_004018_000000432085_00202_40837_8034.N1	22-DEC-2009 00:40:18	Dark	42.500	64	Gam Cen	2.2000	10600.	85	40837	No
11	GOM_NL__2PRFIN20091222_004158_000000442085_00203_40838_8017.N1	22-DEC-2009 00:41:58	Dark	43.500	26	Gam Cru	1.6240	2900.0	87	40838	No
12	GOM_NL__2PRFIN20091222_004607_000000462085_00203_40838_8018.N1	22-DEC-2009 00:46:07	Dark	46.000	113	Mu Vel	2.6920	5000.0	92	40838	No
13	GOM_NL__2PRFIN20091222_004929_000000412085_00203_40838_8019.N1	22-DEC-2009 00:49:29	Dark	40.500	71	Iot Car	2.2460	7700.0	81	40838	No
14	GOM_NL__2PRFIN20091222_005229_000000572085_00203_40838_8020.N1	22-DEC-2009 00:52:29	Dark	56.500	65	Lam Vel	2.2040	4400.0	113	40838	No
15	GOM_NL__2PRFIN20091222_005414_000000452085_00203_40838_8021.N1	22-DEC-2009 00:54:14	Dark	45.000	34	Gam2Vel	1.7930	23000.	90	40838	No
16	GOM_NL__2PRFIN20091222_005625_000000502085_00203_40838_8022.N1	22-DEC-2009 00:56:25	Dark	50.000	70	Zet Pup	2.2460	39000.	100	40838	No
17	GOM_NL__2PRFIN20091222_005853_000000502085_00203_40838_8023.N1	22-DEC-2009 00:58:53	Dark	49.500	117	Pi Pup	2.7060	3800.0	99	40838	No
18	GOM_NL__2PRFIN20091222_010157_000000502085_00203_40838_8024.N1	22-DEC-2009 01:01:57	Straylight	50.000	23	21Eps CMa	1.5020	26000.	100	40838	No
19	GOM_NL__2PRFIN20091222_010338_000000492085_00203_40838_8025.N1	22-DEC-2009 01:03:38	Straylight	49.000	179	24Omi2CMa	3.0320	24000.	98	40838	No
20	GOM_NL__2PRFIN20091222_010625_000000572085_00203_40838_8026.N1	22-DEC-2009 01:06:25	Straylight	56.500	1	9Alp CMa	-1.4400	11000.	113	40838	No
21	GOM_NL__2PRFIN20091222_010935_000000472085_00203_40838_8027.N1	22-DEC-2009 01:09:35	Straylight	46.500	7	19Bet Ori	0.10000	14000.	93	40838	No
22	GOM_NL__2PRFIN20091222_011139_000000472085_00203_40838_8028.N1	22-DEC-2009 01:11:39	Straylight	46.500	30	46Eps Ori	1.6940	30000.	93	40838	No
23	GOM_NL__2PRFIN20091222_011431_000000572085_00203_40838_8029.N1	22-DEC-2009 01:14:31	Twilight	57.000	14	58Alp Ori	0.87000	3000.0	114	40838	No
24	GOM_NL__2PRFIN20091222_011836_000000422085_00203_40838_8030.N1	22-DEC-2009 01:18:36	Bright	42.000	176	23Zet Tau	3.0200	22000.	84	40838	No
25	GOM_NL__2PRFIN20091222_012041_000000432085_00203_40838_8031.N1	22-DEC-2009 01:20:41	Bright	43.000	28	12Bet Tau	1.6500	15200.	86	40838	No
26	GOM_NL__2PRFIN20091222_012358_000000622085_00203_40838_8032.N1	22-DEC-2009 01:23:58	Bright	62.000	107	37The Aur	2.6490	11000.	124	40838	No
27	GOM_NL__2PRFIN20091222_012536_000000452085_00203_40838_8033.N1	22-DEC-2009 01:25:36	Bright	45.000	6	13Alp Aur	0.080000	3400.0	90	40838	No
28	GOM_NL__2PRFIN20091222_014202_000000402085_00203_40838_8034.N1	22-DEC-2009 01:42:02	Bright	40.000	60	7Bet UMi	2.0810	3950.0	80	40838	No
29	GOM_NL__2PRFIN20091222_014621_000000462085_00203_40838_8035.N1	22-DEC-2009 01:46:21	Bright	46.000	32	77Eps UMa	1.7630	11000.	92	40838	No
30	GOM_NL__2PRFIN20091222_014911_000000602085_00203_40838_8036.N1	22-DEC-2009 01:49:11	Bright	60.000	39	85Eta UMa	1.8540	24000.	120	40838	No
31	GOM_NL__2PRFIN20091222_015245_000000382085_00203_40838_8037.N1	22-DEC-2009 01:52:45	Bright	38.000	180	27Gam Boo	3.0400	8000.0	76	40838	No
32	GOM_NL__2PRFIN20091222_015606_000000382085_00203_40838_8038.N1	22-DEC-2009 01:56:06	Bright	38.000	83		2.3780	11000.	76	40838	No
33	GOM_NL__2PRFIN20091222_015940_000000652085_00203_40838_8039.N1	22-DEC-2009 01:59:40	Bright	64.500	111	8Eta Boo	2.6800	6000.0	129	40838	No
34	GOM_NL__2PRFIN20091222_021018_000000552085_00203_40838_8040.N1	22-DEC-2009 02:10:18	Twilight	55.000	15	67Alp Vir	0.97600	28000.	110	40838	No
35	GOM_NL__2PRFIN20091222_021458_000000432085_00203_40838_8041.N1	22-DEC-2009 02:14:58	Dark	43.000	54	5The Cen	2.0550	4500.0	86	40838	No
36	GOM_NL__2PRFIN20091222_021650_000000572085_00203_40838_8042.N1	22-DEC-2009 02:16:50	Dark	57.000	106	9Bet Crv	2.6480	5600.0	114	40838	No
37	GOM_NL__2PRFIN20091222_022055_000000442085_00203_40838_8043.N1	22-DEC-2009 02:20:55	Dark	43.500	64	Gam Cen	2.2000	10600.	87	40838	No
38	GOM_NL__2PRFIN20091222_022235_000000412085_00204_40839_8026.N1	22-DEC-2009 02:22:35	Dark	41.000	26	Gam Cru	1.6240	2900.0	82	40839	No
39	GOM_NL__2PRFIN20091222_022644_000000472085_00204_40839_8027.N1	22-DEC-2009 02:26:44	Dark	46.500	113	Mu Vel	2.6920	5000.0	93	40839	No
40	GOM_NL__2PRFIN20091222_023006_000000412085_00204_40839_8028.N1	22-DEC-2009 02:30:06	Dark	40.500	71	Iot Car	2.2460	7700.0	81	40839	No
41	GOM_NL__2PRFIN20091222_023306_000000612085_00204_40839_8029.N1	22-DEC-2009 02:33:06	Dark	61.000	65	Lam Vel	2.2040	4400.0	122	40839	No
42	GOM_NL__2PRFIN20091222_023451_000000482085_00204_40839_8030.N1	22-DEC-2009 02:34:51	Dark	47.500	34	Gam2Vel	1.7930	23000.	95	40839	No



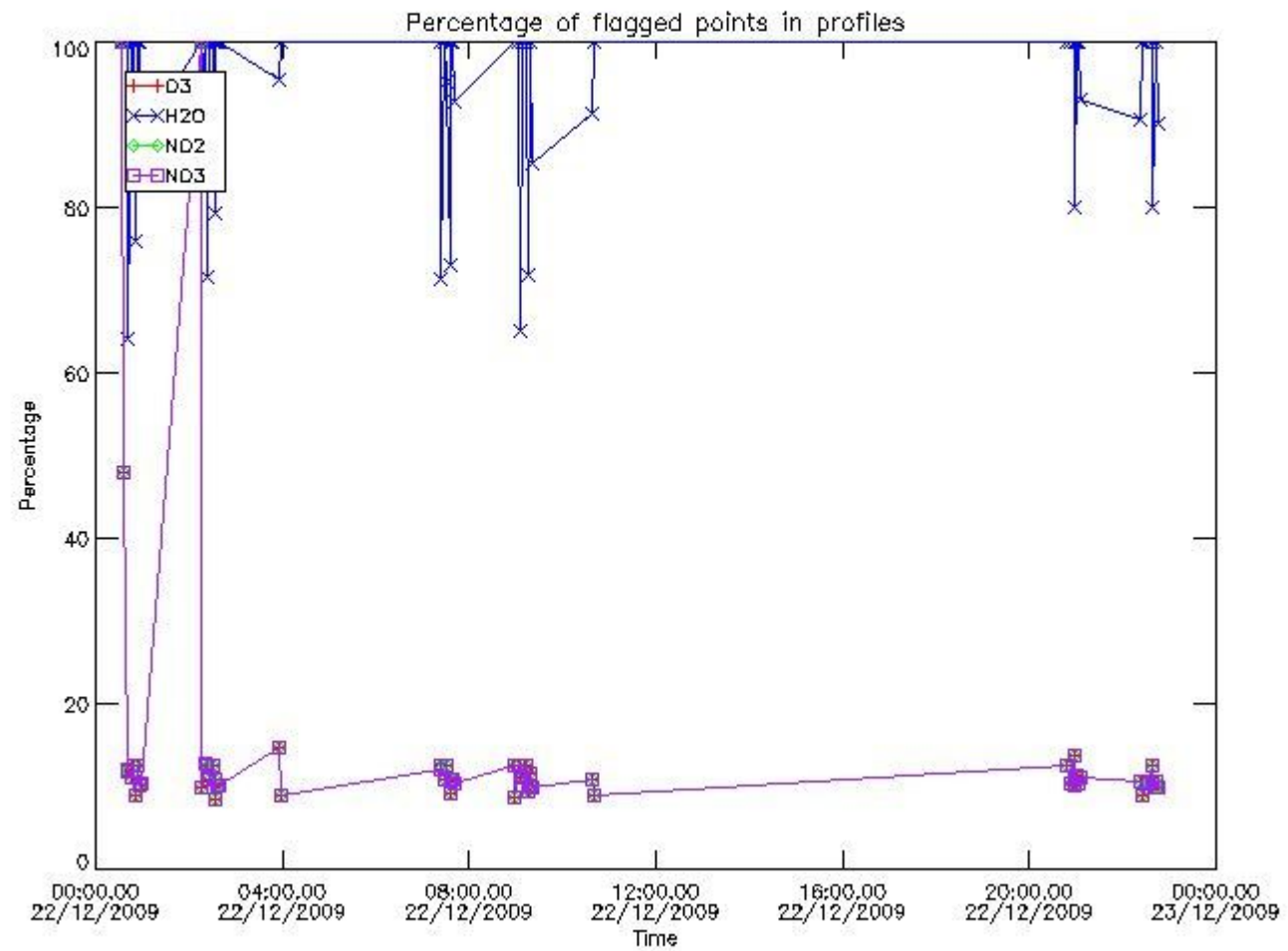


161	GOM_NL__2PRFIN20091222_233404_000000432085_00216_40851_8173.N1	22-DEC-2009 23:34:04	Bright	42.500	32	77Eps UMa	1.7630	11000.	85	40851	No
162	GOM_NL__2PRFIN20091222_233657_000000612085_00216_40851_8174.N1	22-DEC-2009 23:36:57	Bright	61.000	39	85Eta UMa	1.8540	24000.	122	40851	No
163	GOM_NL__2PRFIN20091222_234033_000000572085_00216_40851_8175.N1	22-DEC-2009 23:40:33	Bright	57.000	180	27Gam Boo	3.0400	8000.0	114	40851	No
164	GOM_NL__2PRFIN20091222_234356_000000552085_00216_40851_8176.N1	22-DEC-2009 23:43:56	Bright	54.500	83		2.3780	11000.	109	40851	No
165	GOM_NL__2PRFIN20091222_234733_000000442085_00216_40851_8177.N1	22-DEC-2009 23:47:33	Bright	43.500	111	8Eta Boo	2.6800	6000.0	87	40851	No
166	GOM_NL__2PRFIN20091222_235817_000000552085_00216_40851_8178.N1	22-DEC-2009 23:58:17	Twilight_stray	55.000	15	67Alp Vir	0.97600	28000.	110	40851	No

### 3. Quality information per product

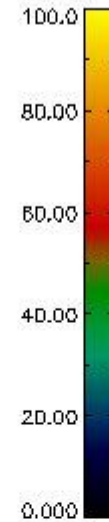
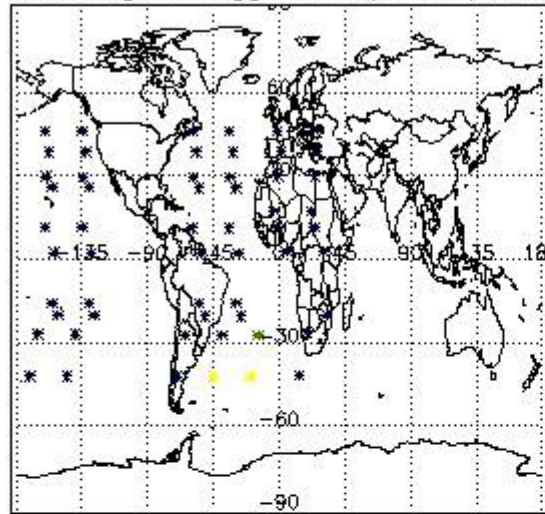
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

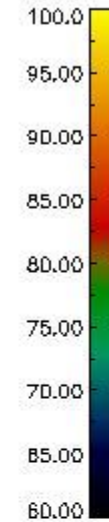
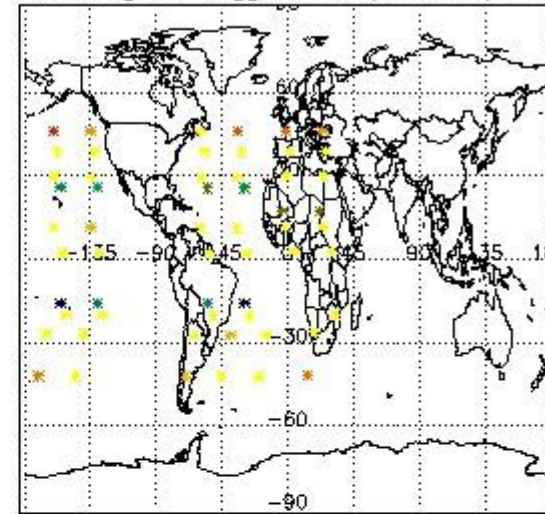


#### 3.2 Plot quality information per product (world map)

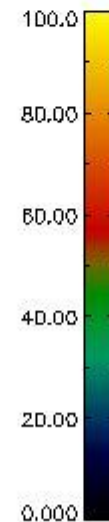
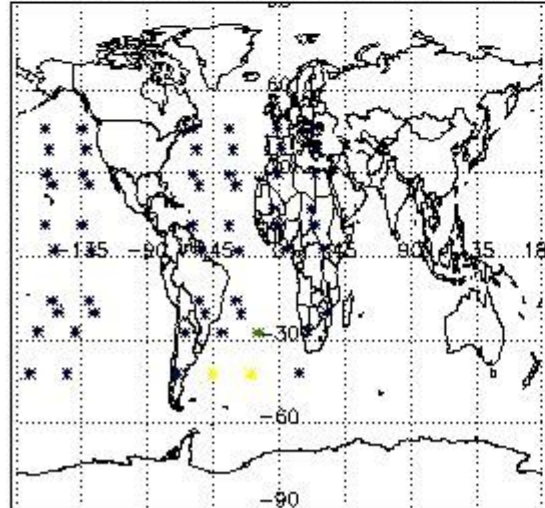
Percentage of flagged data per O3 profile



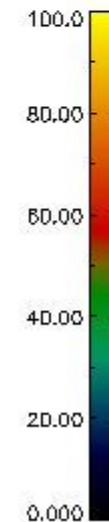
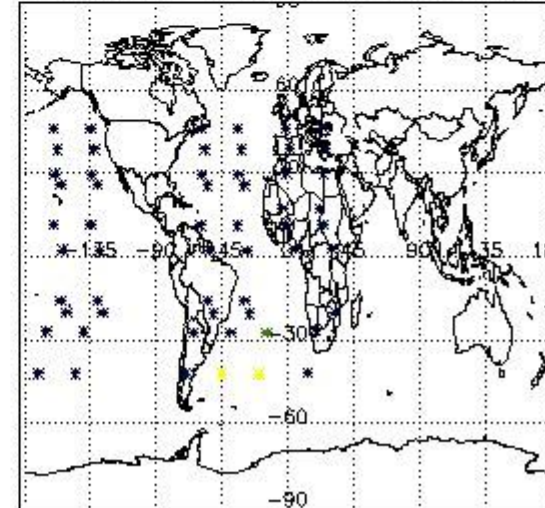
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

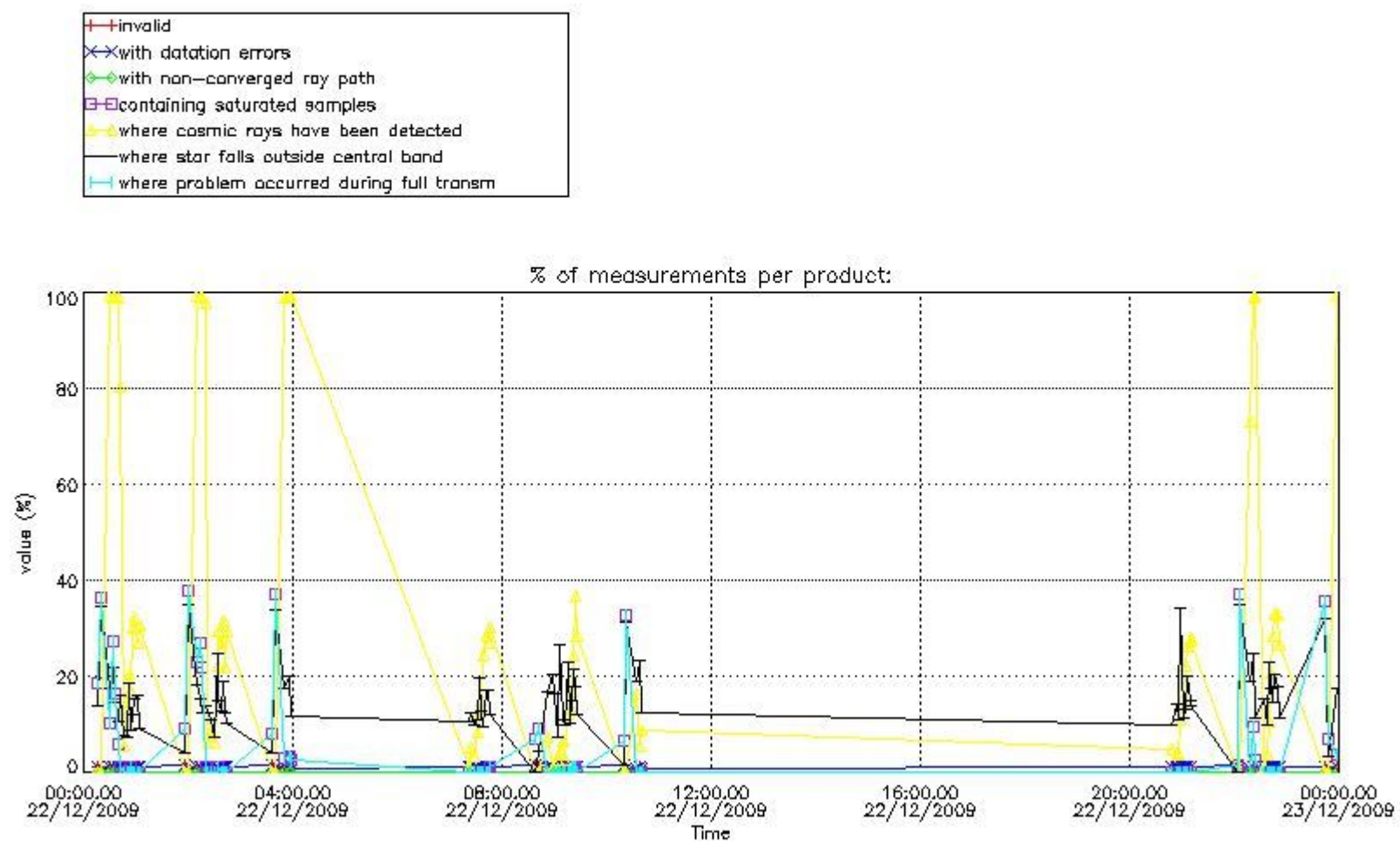


#### 4. Level 1 quality information per product

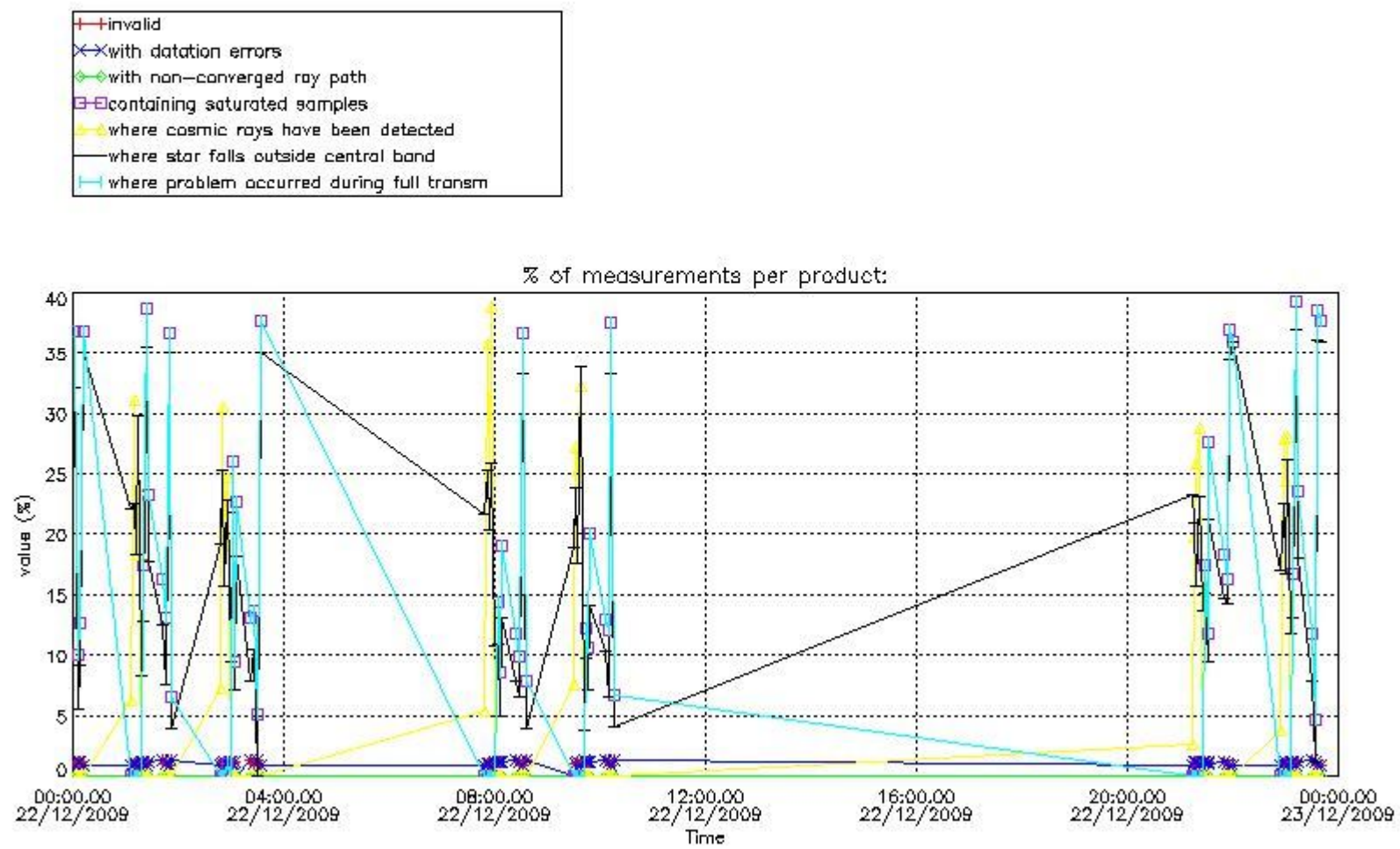
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

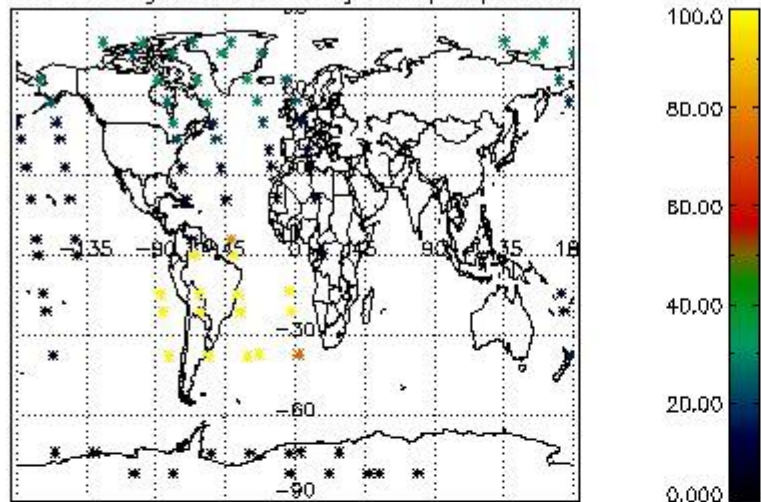


*4.2 Plot quality information per product coming from level 1b processing (world map)*

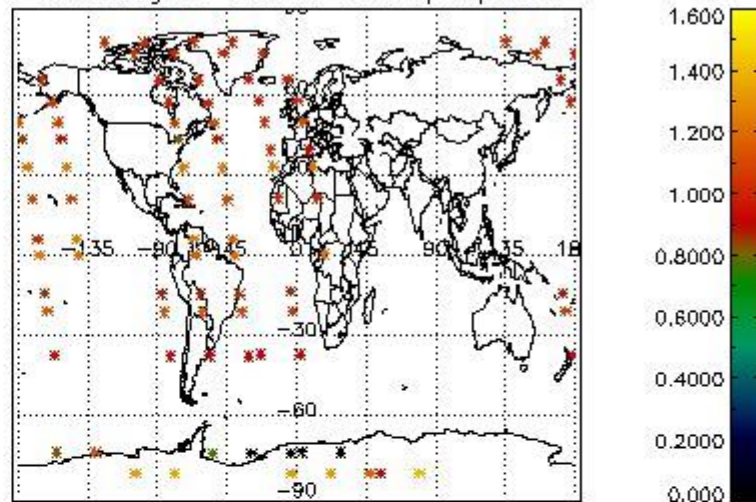
*4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes*



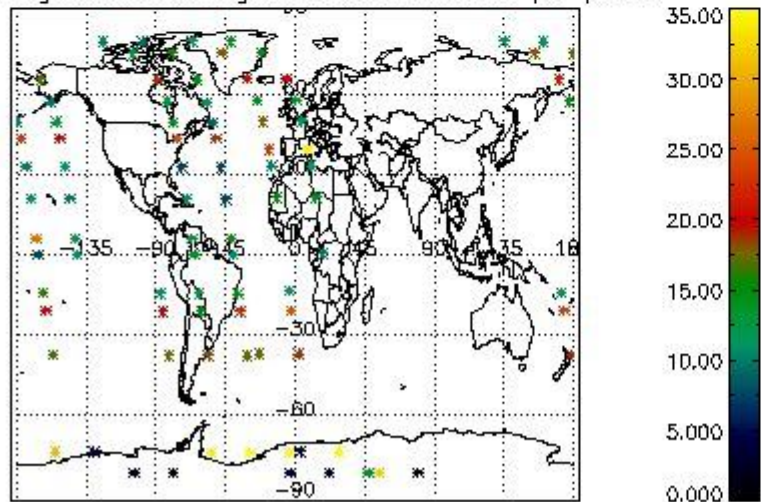
Percentage of cosmic ray hits per profile



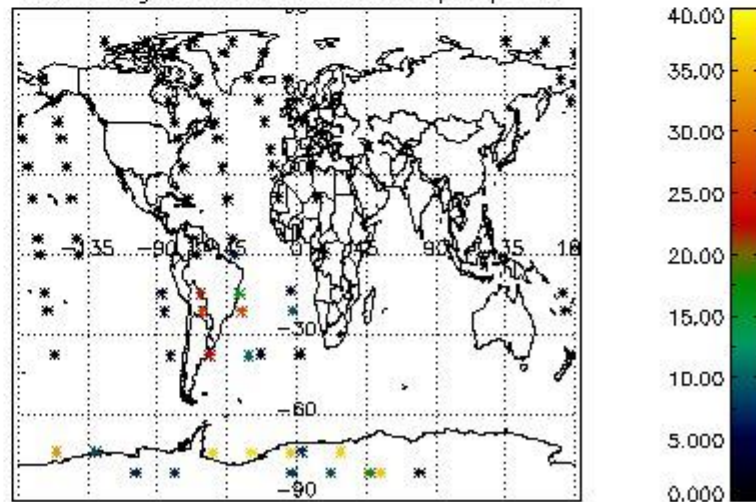
Percentage of datation errors per profile



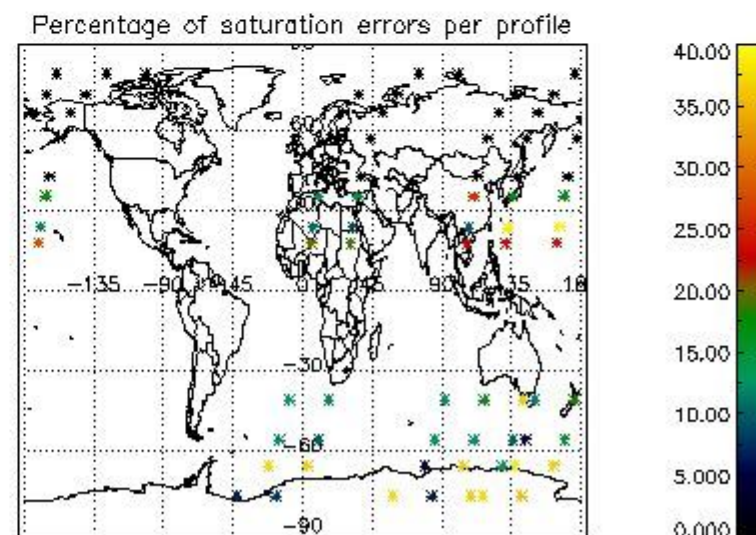
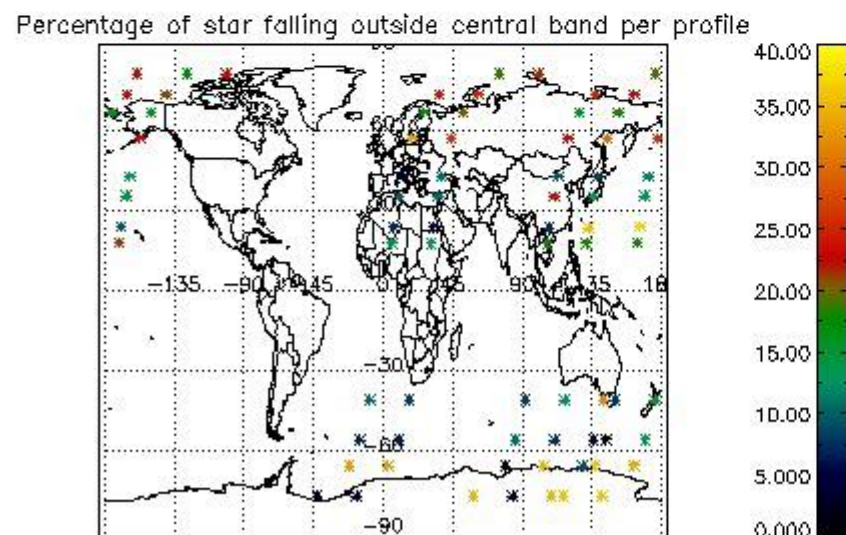
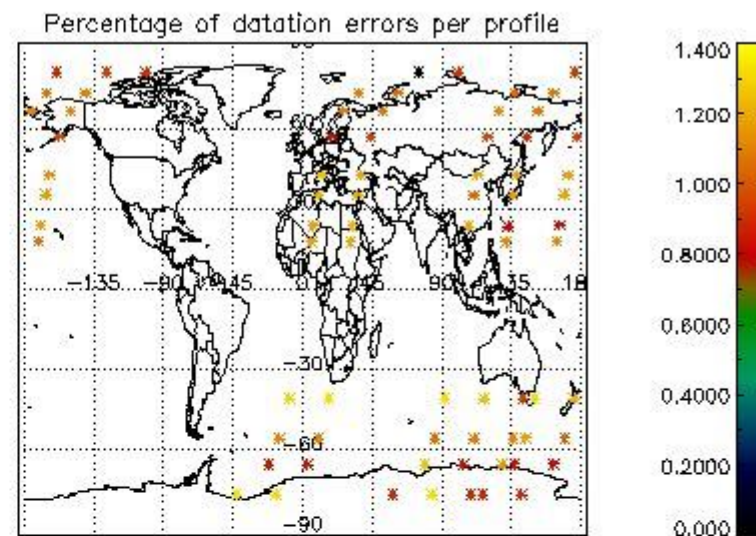
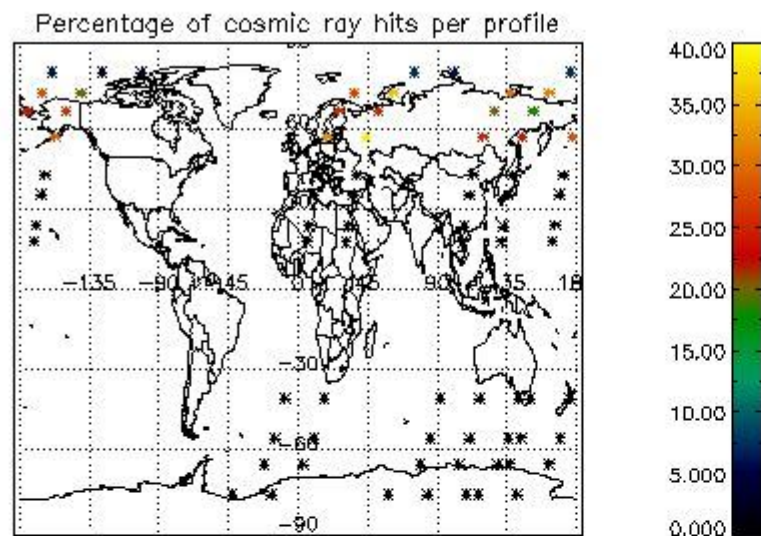
Percentage of star falling outside central band per profile



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

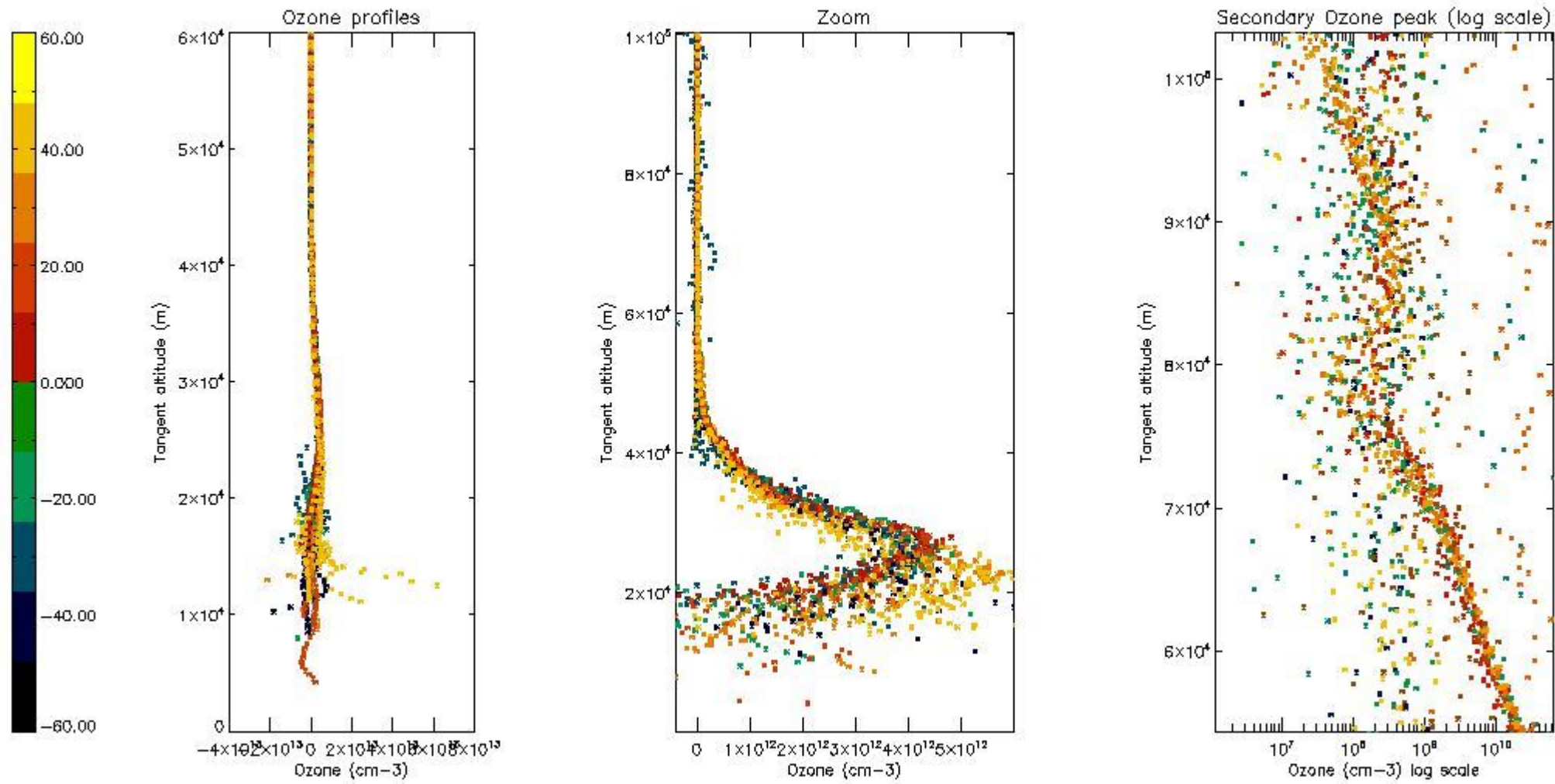
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	34
STD < 20	13

STD < 10	9
STD < 5	4

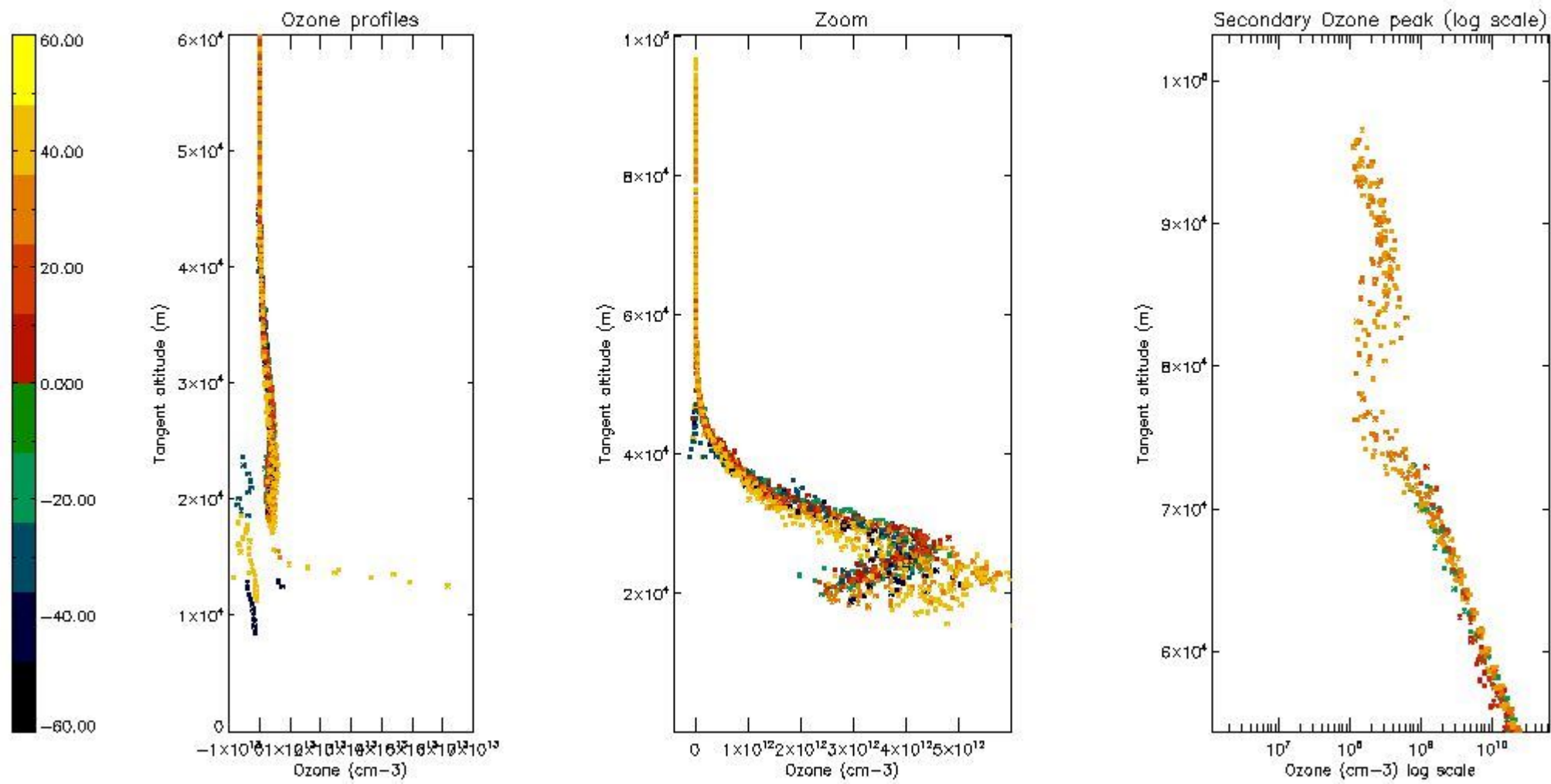
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



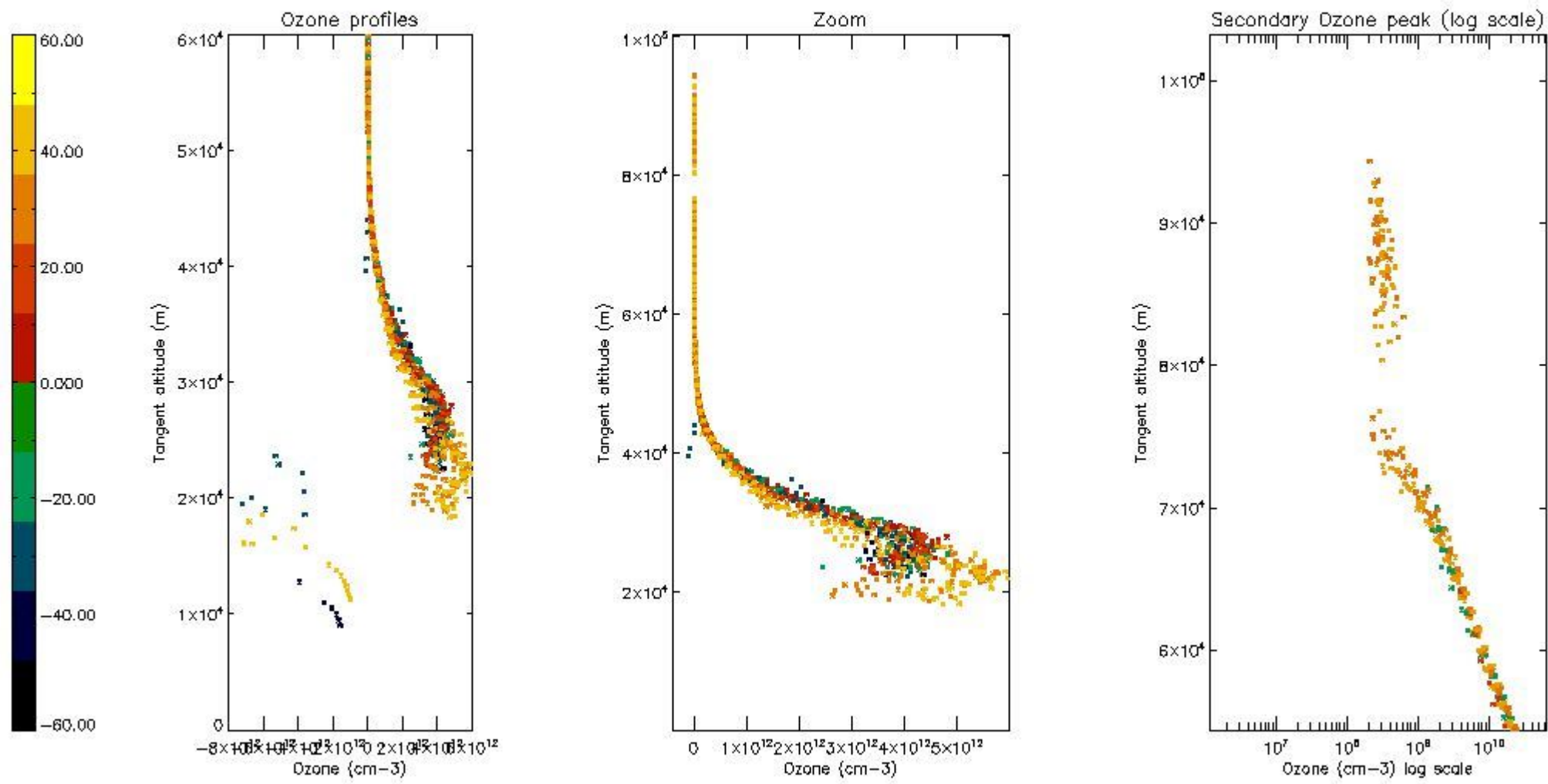
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



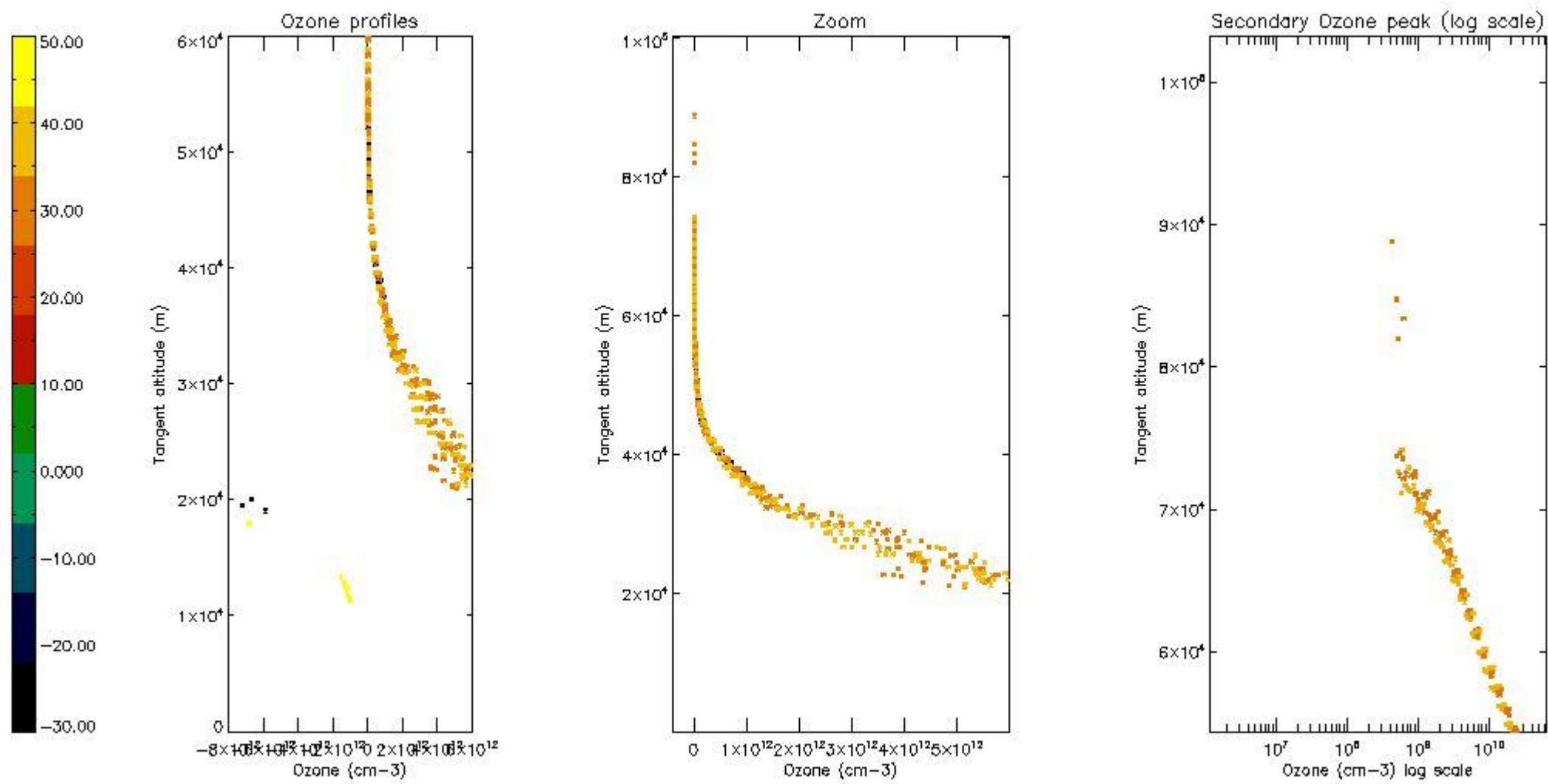
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



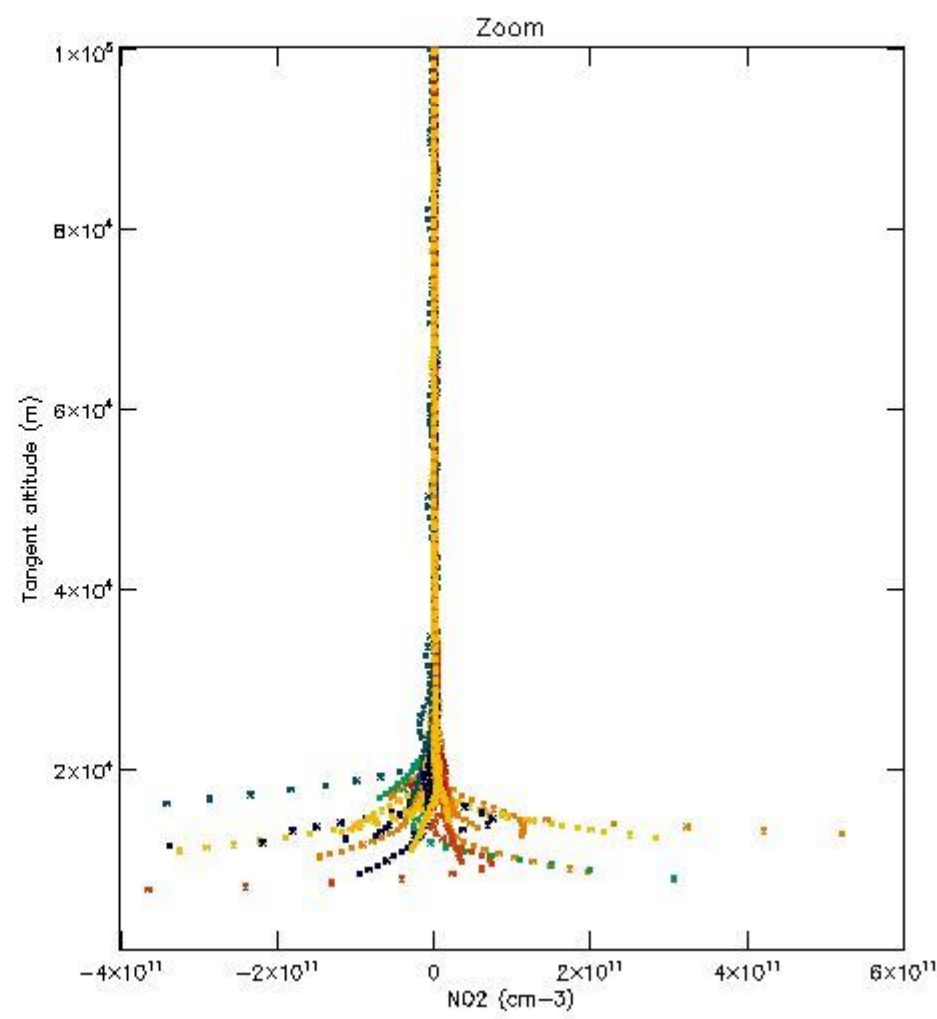
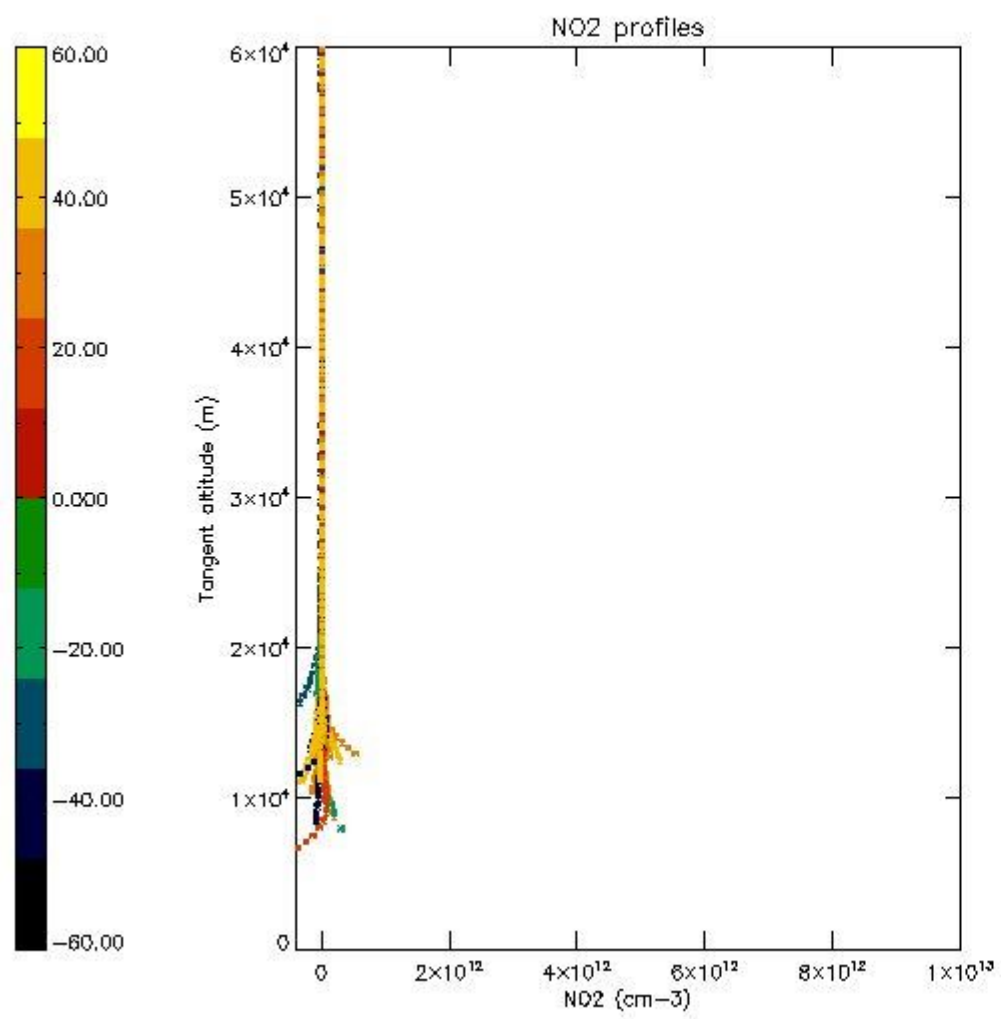
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



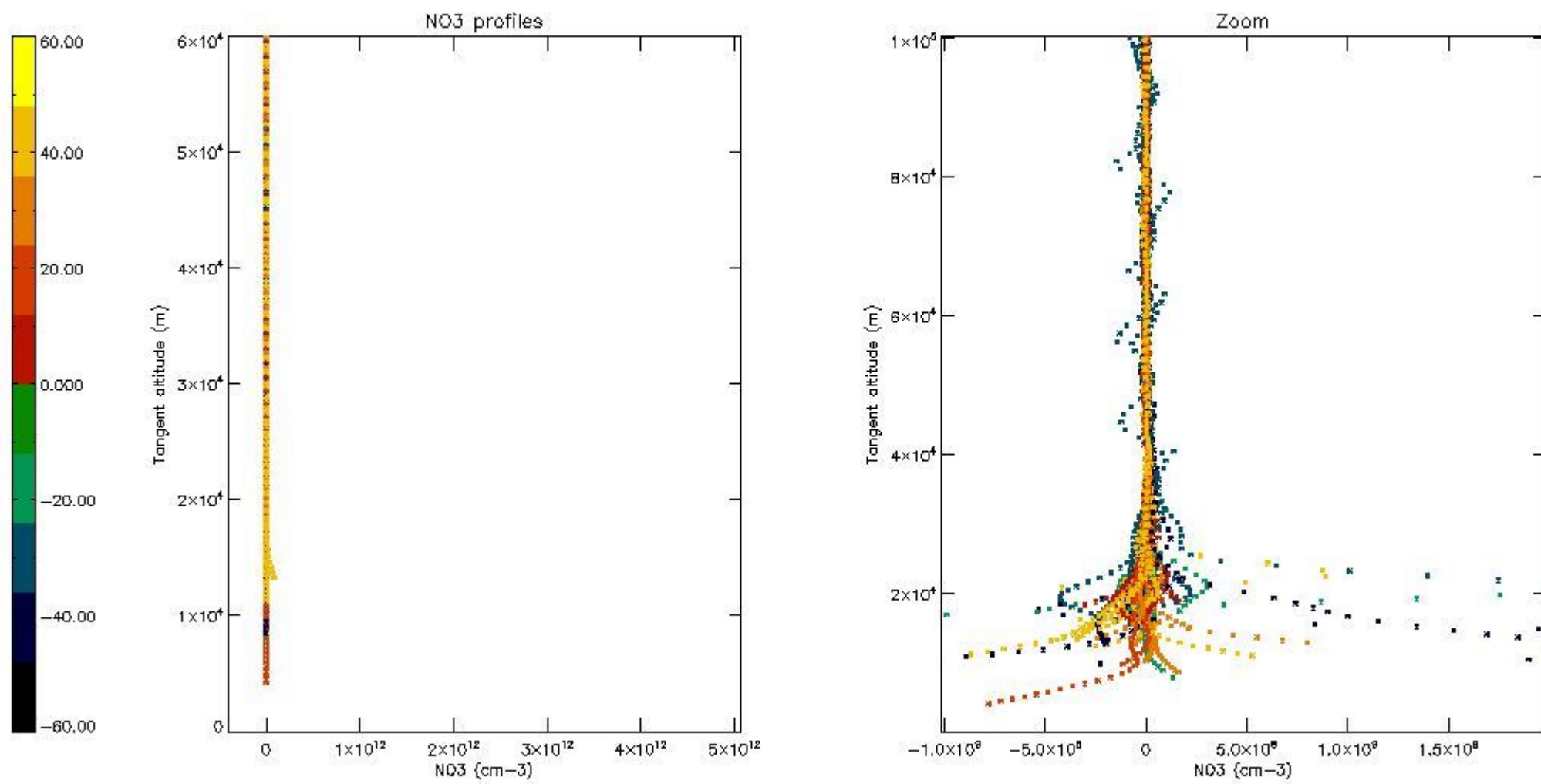
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

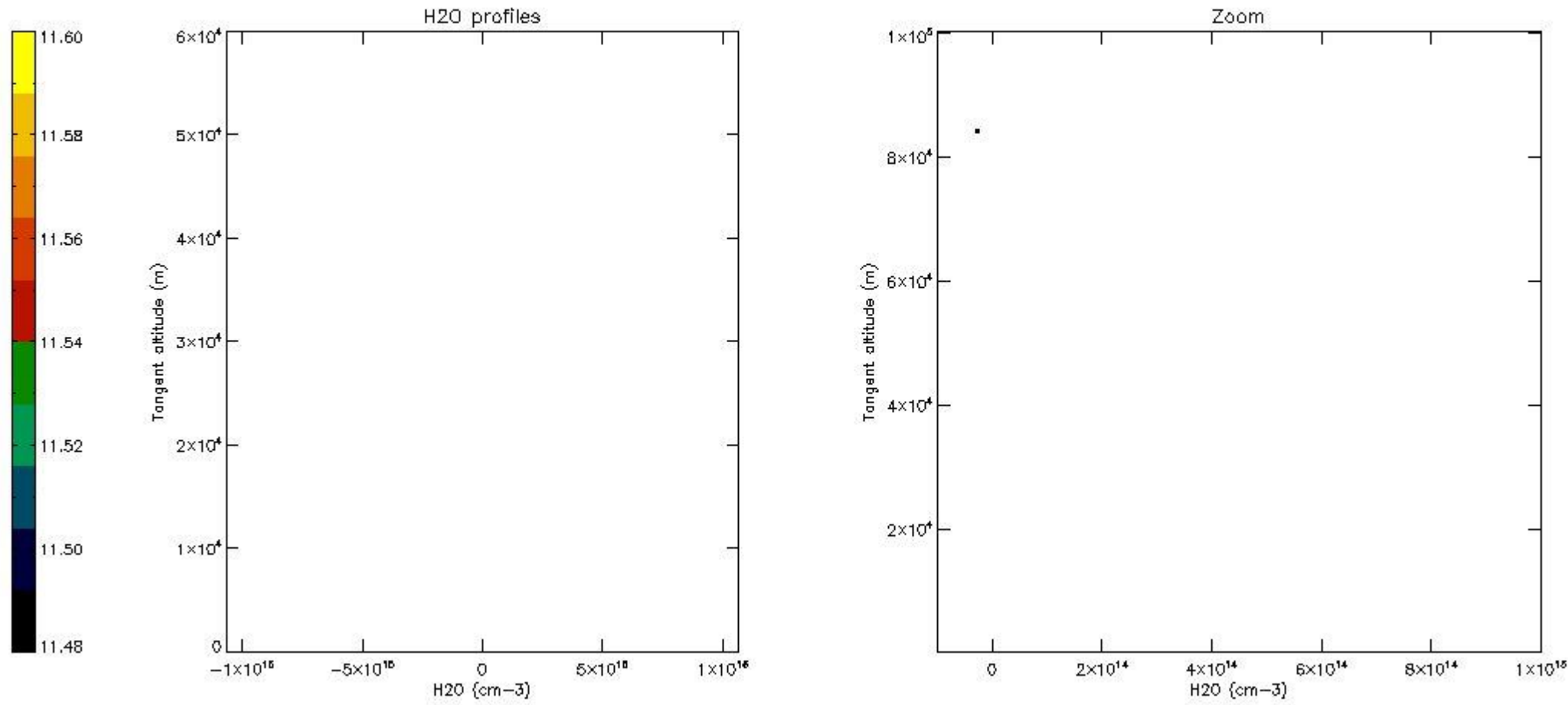
The colorbar represents the latitude.



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	22-DEC-2009 00:01:26
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	22-DEC-2009 00:01:26
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	22-DEC-2009 00:01:26

# GOMOS Level 2 Daily Report

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#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [3.2 Plot of level 2 quality information per product \(world map\)](#)

### [4. Level 1 Quality information per product \(stored on level 2 products\)](#)

#### [4.1 Plot of level 1 quality information per product \(time dependant\)](#)

##### [4.1.1 Plot of level 1 quality information per product \(time dependant\): ASCENDING](#)

##### [4.1.2 Plot of level 1 quality information per product \(time dependant\): DESCENDING](#)

#### [4.2 Plot of level 1 quality information per product \(world map\)](#)

##### [4.2.1 Plot of level 1 quality information per product \(world map\): ASCENDING](#)

##### [4.2.2 Plot of level 1 quality information per product \(world map\): DESCENDING](#)

### [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 \(dark without errors\)](#)

#### [5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

#### [5.4. Plot ozone profiles where STD < 10% \(dark without errors\)](#)

#### [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	30APR2013 10:01:10
Data source version	GOMOS/6.01
Start time of products	22-12-2009 (22DEC2009 00:00:00)
Stop time of products	23-12-2009 (23DEC2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	166
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__2PRFIN20091222_000126_000000532085_00202_40837_8025.N1	22-DEC-2009 00:01:26	Bright	53.000	60	7Bet UMi	2.0810	3950.0	106	40837	No
2	GOM_NL__2PRFIN20091222_000546_000000452085_00202_40837_8026.N1	22-DEC-2009 00:05:46	Bright	45.000	32	77Eps UMa	1.7630	11000.	90	40837	No
3	GOM_NL__2PRFIN20091222_000835_000000442085_00202_40837_8027.N1	22-DEC-2009 00:08:35	Bright	43.500	39	85Eta UMa	1.8540	24000.	87	40837	No
4	GOM_NL__2PRFIN20091222_001209_000000572085_00202_40837_8028.N1	22-DEC-2009 00:12:09	Bright	57.000	180	27Gam Boo	3.0400	8000.0	114	40837	No
5	GOM_NL__2PRFIN20091222_001530_000000432085_00202_40837_8029.N1	22-DEC-2009 00:15:30	Bright	43.000	83		2.3780	11000.	86	40837	No
6	GOM_NL__2PRFIN20091222_001904_000000642085_00202_40837_8030.N1	22-DEC-2009 00:19:04	Bright	63.500	111	8Eta Boo	2.6800	6000.0	127	40837	No
7	GOM_NL__2PRFIN20091222_002941_000000552085_00202_40837_8031.N1	22-DEC-2009 00:29:41	Twilight	55.000	15	67Alp Vir	0.97600	28000.	110	40837	No
8	GOM_NL__2PRFIN20091222_003422_000000462085_00202_40837_8032.N1	22-DEC-2009 00:34:22	Dark	46.000	54	5The Cen	2.0550	4500.0	92	40837	No
9	GOM_NL__2PRFIN20091222_003613_000000582085_00202_40837_8033.N1	22-DEC-2009 00:36:13	Dark	58.000	106	9Bet Crv	2.6480	5600.0	116	40837	No
10	GOM_NL__2PRFIN20091222_004018_000000432085_00202_40837_8034.N1	22-DEC-2009 00:40:18	Dark	42.500	64	Gam Cen	2.2000	10600.	85	40837	No
11	GOM_NL__2PRFIN20091222_004158_000000442085_00203_40838_8017.N1	22-DEC-2009 00:41:58	Dark	43.500	26	Gam Cru	1.6240	2900.0	87	40838	No
12	GOM_NL__2PRFIN20091222_004607_000000462085_00203_40838_8018.N1	22-DEC-2009 00:46:07	Dark	46.000	113	Mu Vel	2.6920	5000.0	92	40838	No
13	GOM_NL__2PRFIN20091222_004929_000000412085_00203_40838_8019.N1	22-DEC-2009 00:49:29	Dark	40.500	71	Iot Car	2.2460	7700.0	81	40838	No
14	GOM_NL__2PRFIN20091222_005229_000000572085_00203_40838_8020.N1	22-DEC-2009 00:52:29	Dark	56.500	65	Lam Vel	2.2040	4400.0	113	40838	No
15	GOM_NL__2PRFIN20091222_005414_000000452085_00203_40838_8021.N1	22-DEC-2009 00:54:14	Dark	45.000	34	Gam2Vel	1.7930	23000.	90	40838	No
16	GOM_NL__2PRFIN20091222_005625_000000502085_00203_40838_8022.N1	22-DEC-2009 00:56:25	Dark	50.000	70	Zet Pup	2.2460	39000.	100	40838	No
17	GOM_NL__2PRFIN20091222_005853_000000502085_00203_40838_8023.N1	22-DEC-2009 00:58:53	Dark	49.500	117	Pi Pup	2.7060	3800.0	99	40838	No
18	GOM_NL__2PRFIN20091222_010157_000000502085_00203_40838_8024.N1	22-DEC-2009 01:01:57	Straylight	50.000	23	21Eps CMa	1.5020	26000.	100	40838	No
19	GOM_NL__2PRFIN20091222_010338_000000492085_00203_40838_8025.N1	22-DEC-2009 01:03:38	Straylight	49.000	179	24Omi2CMa	3.0320	24000.	98	40838	No
20	GOM_NL__2PRFIN20091222_010625_000000572085_00203_40838_8026.N1	22-DEC-2009 01:06:25	Straylight	56.500	1	9Alp CMa	-1.4400	11000.	113	40838	No
21	GOM_NL__2PRFIN20091222_010935_000000472085_00203_40838_8027.N1	22-DEC-2009 01:09:35	Straylight	46.500	7	19Bet Ori	0.10000	14000.	93	40838	No
22	GOM_NL__2PRFIN20091222_011139_000000472085_00203_40838_8028.N1	22-DEC-2009 01:11:39	Straylight	46.500	30	46Eps Ori	1.6940	30000.	93	40838	No
23	GOM_NL__2PRFIN20091222_011431_000000572085_00203_40838_8029.N1	22-DEC-2009 01:14:31	Twilight	57.000	14	58Alp Ori	0.87000	3000.0	114	40838	No
24	GOM_NL__2PRFIN20091222_011836_000000422085_00203_40838_8030.N1	22-DEC-2009 01:18:36	Bright	42.000	176	23Zet Tau	3.0200	22000.	84	40838	No
25	GOM_NL__2PRFIN20091222_012041_000000432085_00203_40838_8031.N1	22-DEC-2009 01:20:41	Bright	43.000	28	12Bet Tau	1.6500	15200.	86	40838	No
26	GOM_NL__2PRFIN20091222_012358_000000622085_00203_40838_8032.N1	22-DEC-2009 01:23:58	Bright	62.000	107	37The Aur	2.6490	11000.	124	40838	No
27	GOM_NL__2PRFIN20091222_012536_000000452085_00203_40838_8033.N1	22-DEC-2009 01:25:36	Bright	45.000	6	13Alp Aur	0.080000	3400.0	90	40838	No
28	GOM_NL__2PRFIN20091222_014202_000000402085_00203_40838_8034.N1	22-DEC-2009 01:42:02	Bright	40.000	60	7Bet UMi	2.0810	3950.0	80	40838	No
29	GOM_NL__2PRFIN20091222_014621_000000462085_00203_40838_8035.N1	22-DEC-2009 01:46:21	Bright	46.000	32	77Eps UMa	1.7630	11000.	92	40838	No
30	GOM_NL__2PRFIN20091222_014911_000000602085_00203_40838_8036.N1	22-DEC-2009 01:49:11	Bright	60.000	39	85Eta UMa	1.8540	24000.	120	40838	No
31	GOM_NL__2PRFIN20091222_015245_000000382085_00203_40838_8037.N1	22-DEC-2009 01:52:45	Bright	38.000	180	27Gam Boo	3.0400	8000.0	76	40838	No
32	GOM_NL__2PRFIN20091222_015606_000000382085_00203_40838_8038.N1	22-DEC-2009 01:56:06	Bright	38.000	83		2.3780	11000.	76	40838	No
33	GOM_NL__2PRFIN20091222_015940_000000652085_00203_40838_8039.N1	22-DEC-2009 01:59:40	Bright	64.500	111	8Eta Boo	2.6800	6000.0	129	40838	No
34	GOM_NL__2PRFIN20091222_021018_000000552085_00203_40838_8040.N1	22-DEC-2009 02:10:18	Twilight	55.000	15	67Alp Vir	0.97600	28000.	110	40838	No
35	GOM_NL__2PRFIN20091222_021458_000000432085_00203_40838_8041.N1	22-DEC-2009 02:14:58	Dark	43.000	54	5The Cen	2.0550	4500.0	86	40838	No
36	GOM_NL__2PRFIN20091222_021650_000000572085_00203_40838_8042.N1	22-DEC-2009 02:16:50	Dark	57.000	106	9Bet Crv	2.6480	5600.0	114	40838	No
37	GOM_NL__2PRFIN20091222_022055_000000442085_00203_40838_8043.N1	22-DEC-2009 02:20:55	Dark	43.500	64	Gam Cen	2.2000	10600.	87	40838	No
38	GOM_NL__2PRFIN20091222_022235_000000412085_00204_40839_8026.N1	22-DEC-2009 02:22:35	Dark	41.000	26	Gam Cru	1.6240	2900.0	82	40839	No
39	GOM_NL__2PRFIN20091222_022644_000000472085_00204_40839_8027.N1	22-DEC-2009 02:26:44	Dark	46.500	113	Mu Vel	2.6920	5000.0	93	40839	No
40	GOM_NL__2PRFIN20091222_023006_000000412085_00204_40839_8028.N1	22-DEC-2009 02:30:06	Dark	40.500	71	Iot Car	2.2460	7700.0	81	40839	No
41	GOM_NL__2PRFIN20091222_023306_000000612085_00204_40839_8029.N1	22-DEC-2009 02:33:06	Dark	61.000	65	Lam Vel	2.2040	4400.0	122	40839	No
42	GOM_NL__2PRFIN20091222_023451_000000482085_00204_40839_8030.N1	22-DEC-2009 02:34:51	Dark	47.500	34	Gam2Vel	1.7930	23000.	95	40839	No



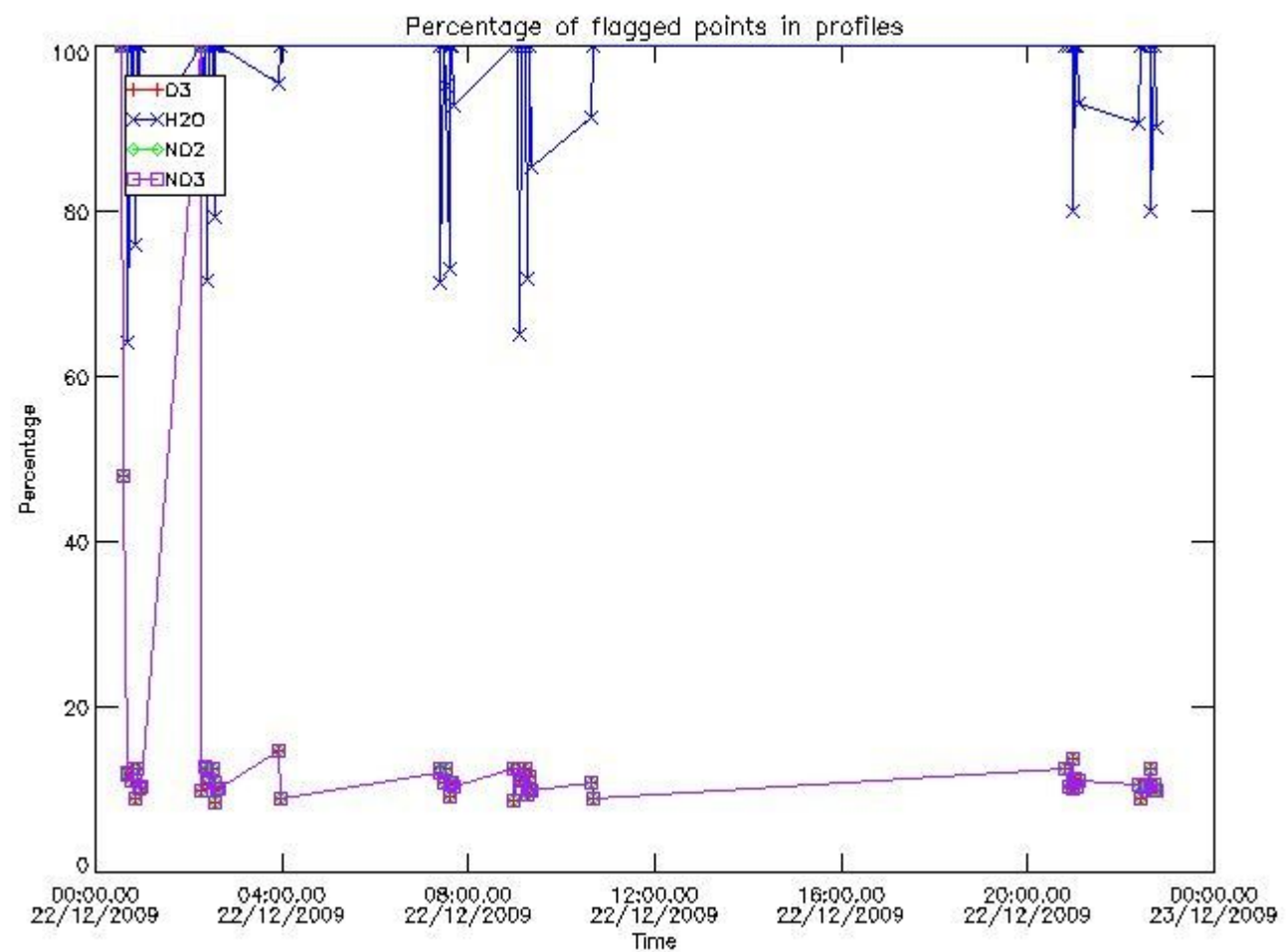


161	GOM_NL__2PRFIN20091222_233404_000000432085_00216_40851_8173.N1	22-DEC-2009 23:34:04	Bright	42.500	32	77Eps UMa	1.7630	11000.	85	40851	No
162	GOM_NL__2PRFIN20091222_233657_000000612085_00216_40851_8174.N1	22-DEC-2009 23:36:57	Bright	61.000	39	85Eta UMa	1.8540	24000.	122	40851	No
163	GOM_NL__2PRFIN20091222_234033_000000572085_00216_40851_8175.N1	22-DEC-2009 23:40:33	Bright	57.000	180	27Gam Boo	3.0400	8000.0	114	40851	No
164	GOM_NL__2PRFIN20091222_234356_000000552085_00216_40851_8176.N1	22-DEC-2009 23:43:56	Bright	54.500	83		2.3780	11000.	109	40851	No
165	GOM_NL__2PRFIN20091222_234733_000000442085_00216_40851_8177.N1	22-DEC-2009 23:47:33	Bright	43.500	111	8Eta Boo	2.6800	6000.0	87	40851	No
166	GOM_NL__2PRFIN20091222_235817_000000552085_00216_40851_8178.N1	22-DEC-2009 23:58:17	Twilight_stray	55.000	15	67Alp Vir	0.97600	28000.	110	40851	No

### 3. Quality information per product

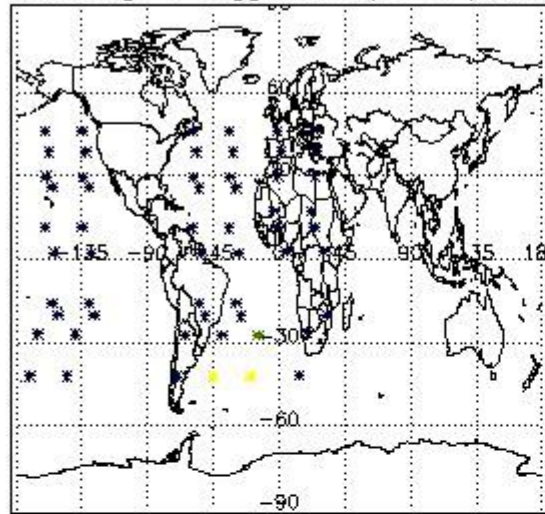
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

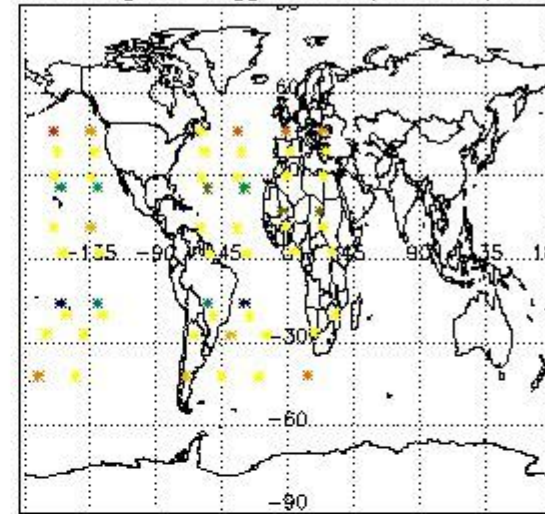


#### 3.2 Plot quality information per product (world map)

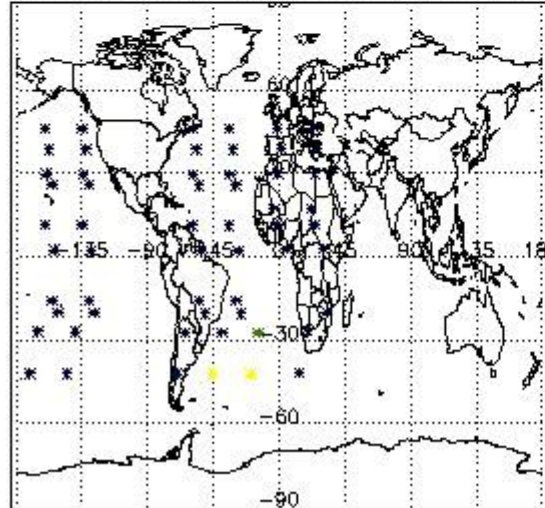
Percentage of flagged data per O3 profile



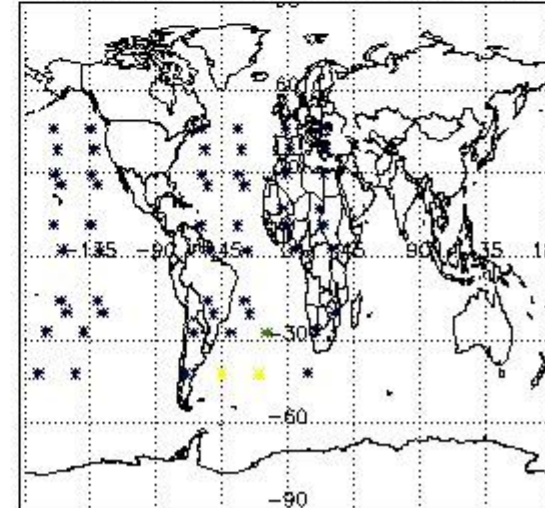
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

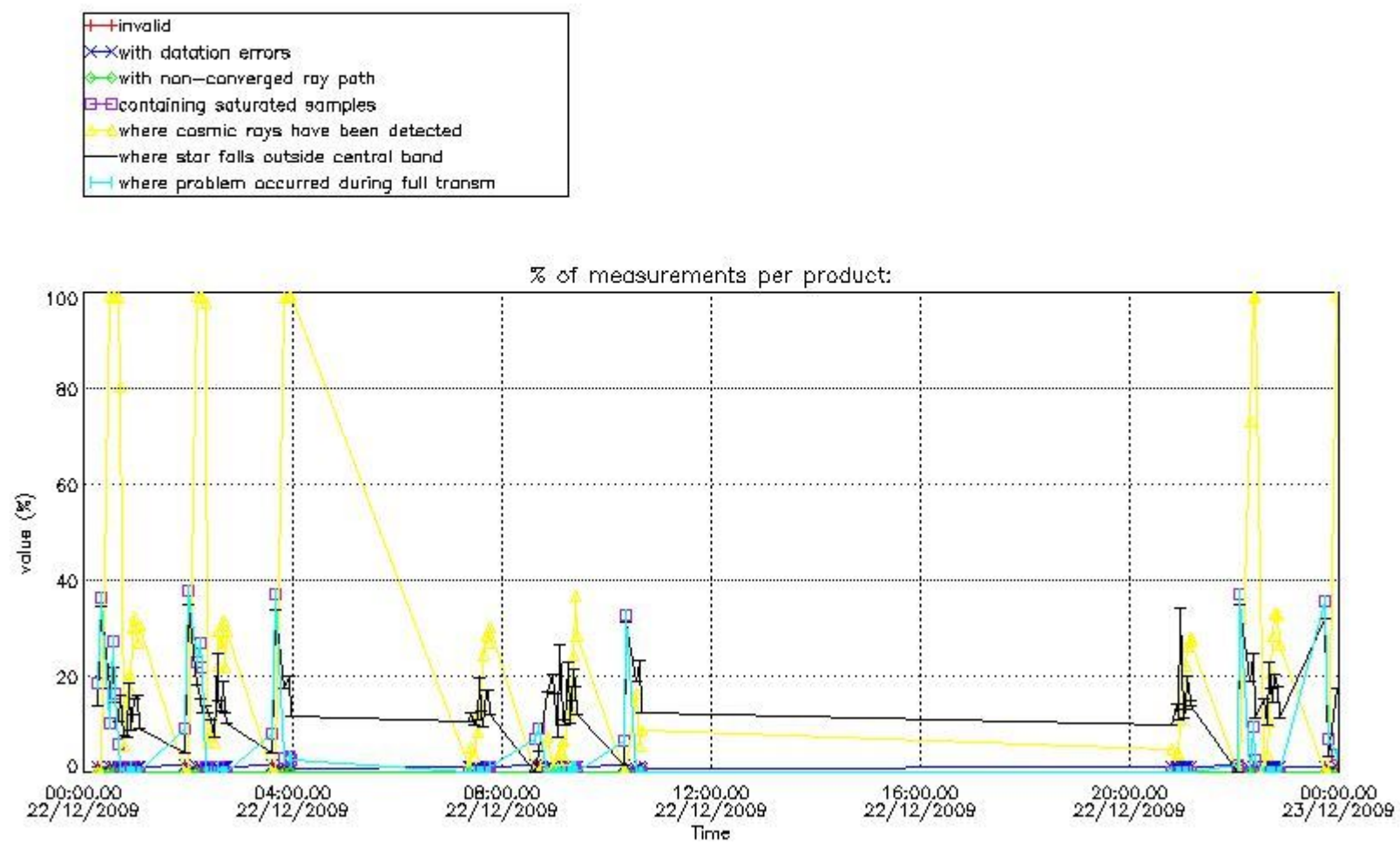


#### 4. Level 1 quality information per product

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.

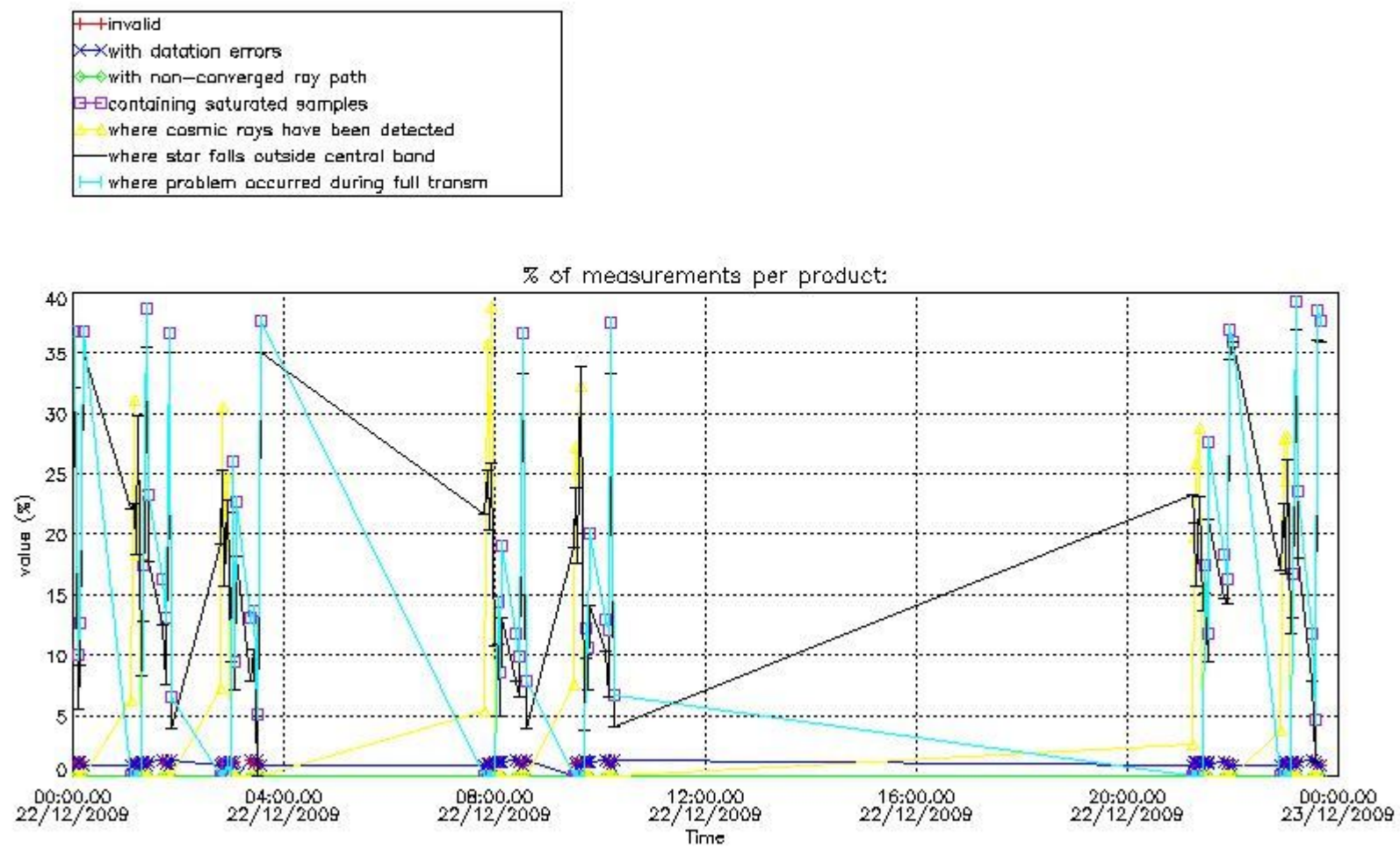
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

##### 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

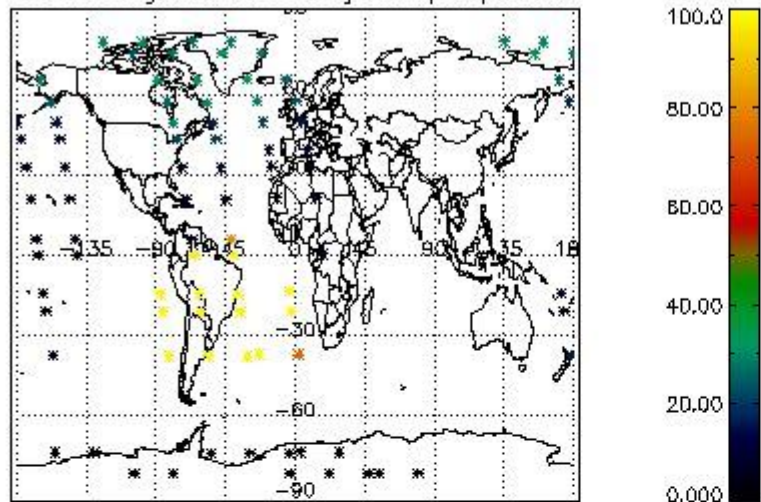




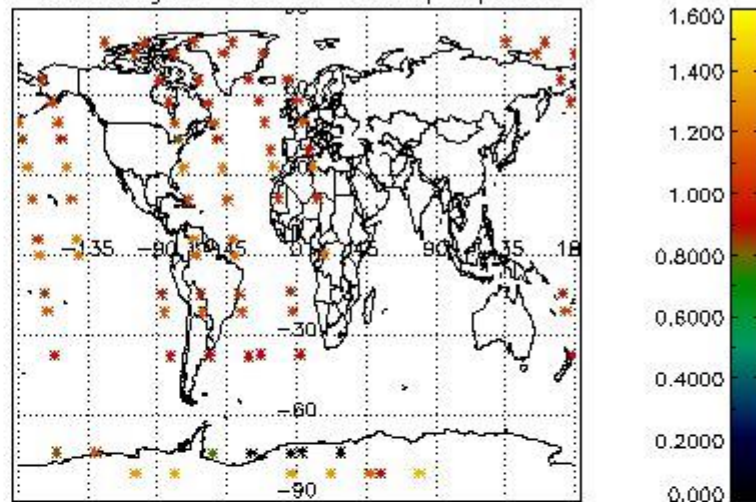
4.2 Plot quality information per product coming from level 1b processing (world map)

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

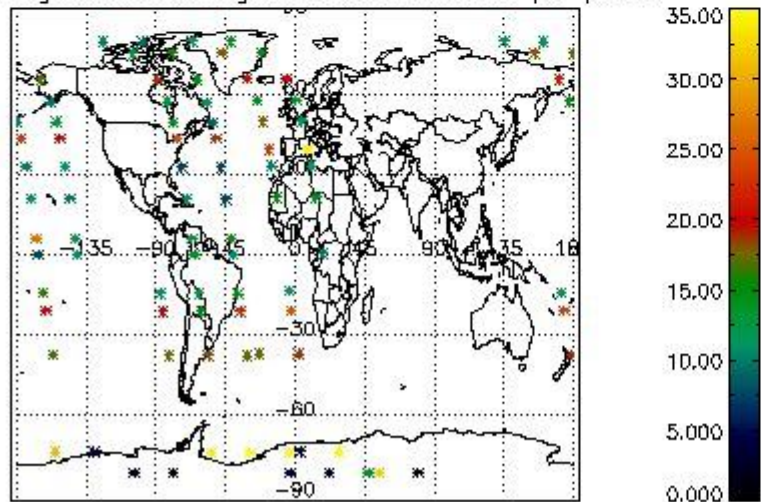
Percentage of cosmic ray hits per profile



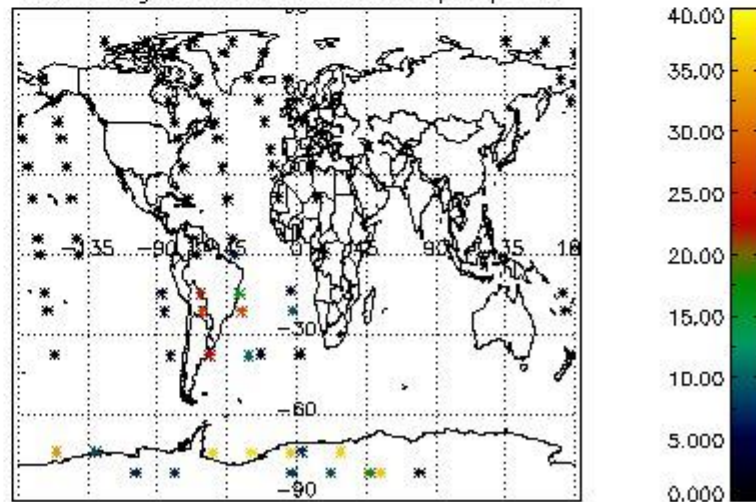
Percentage of datation errors per profile



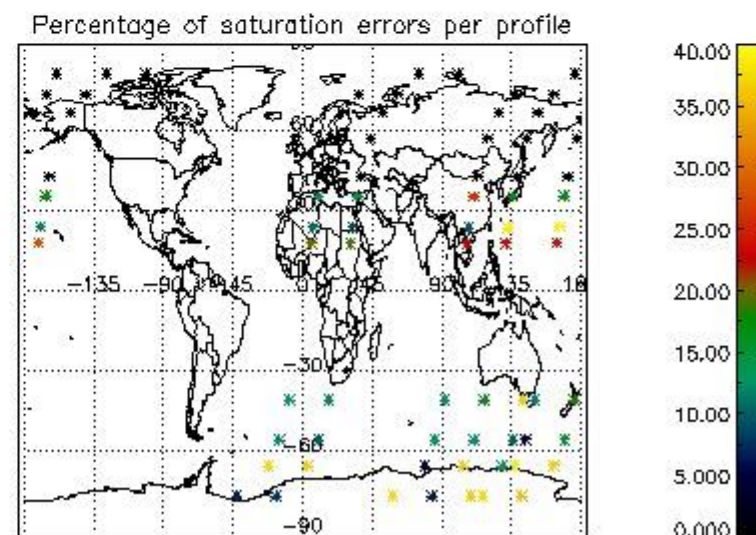
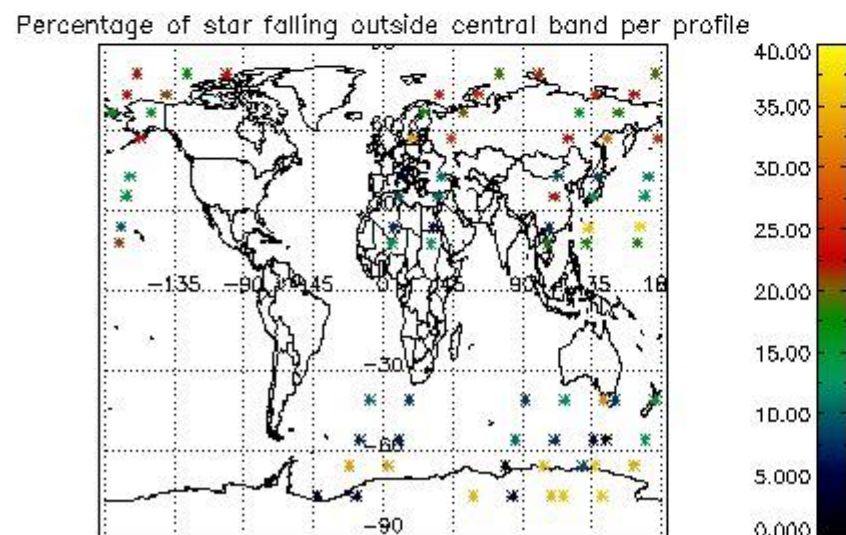
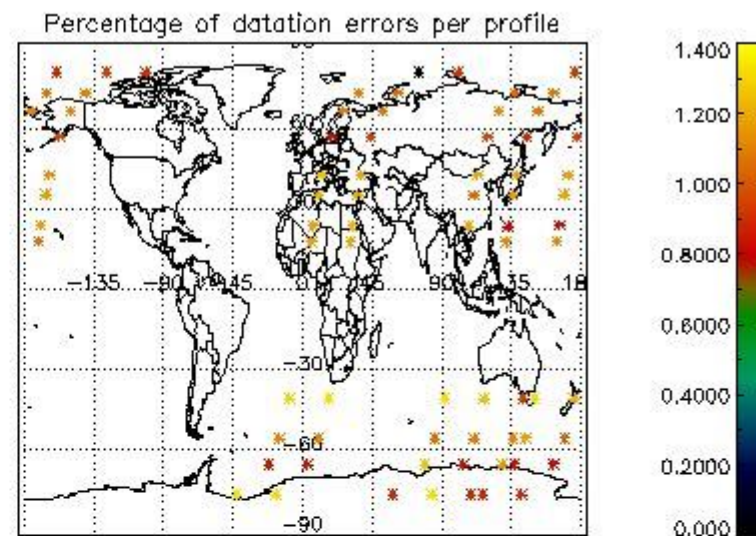
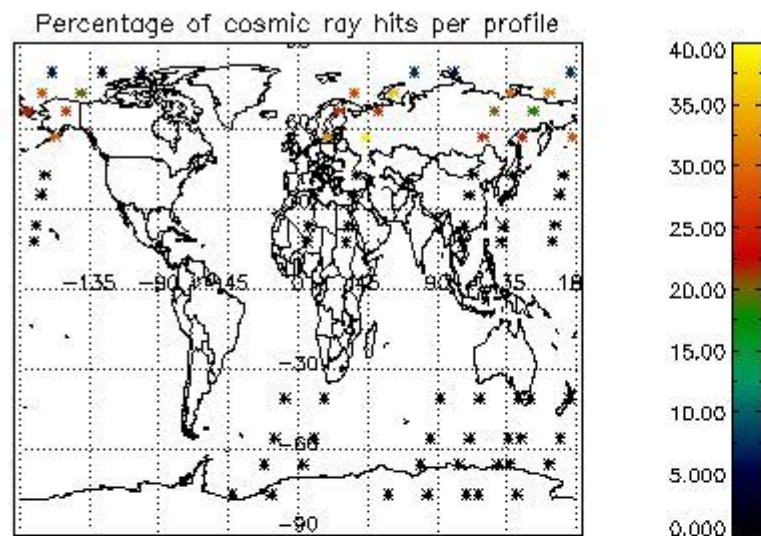
Percentage of star falling outside central band per profile



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

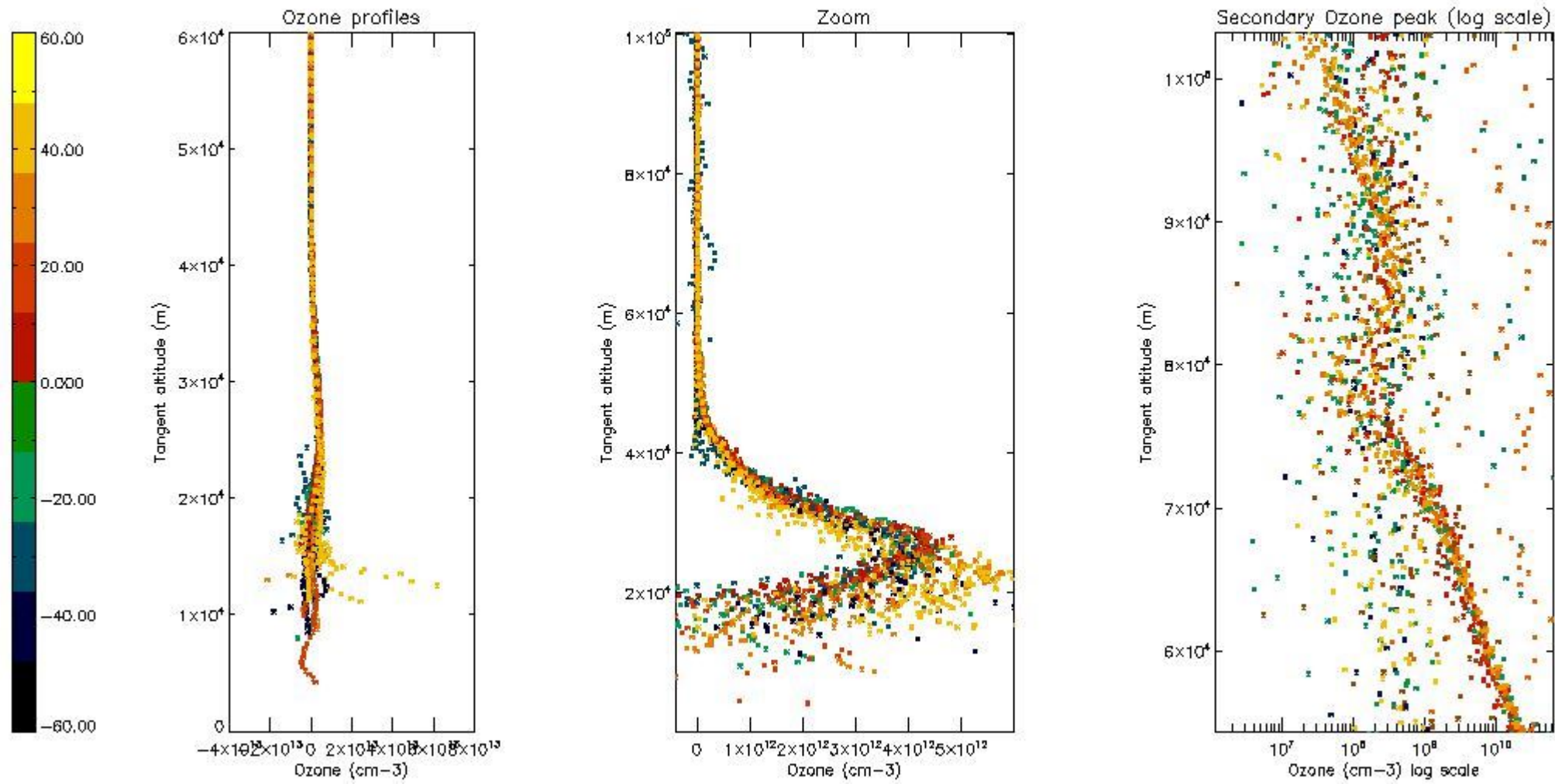
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	34
STD < 20	13

STD < 10	9
STD < 5	4

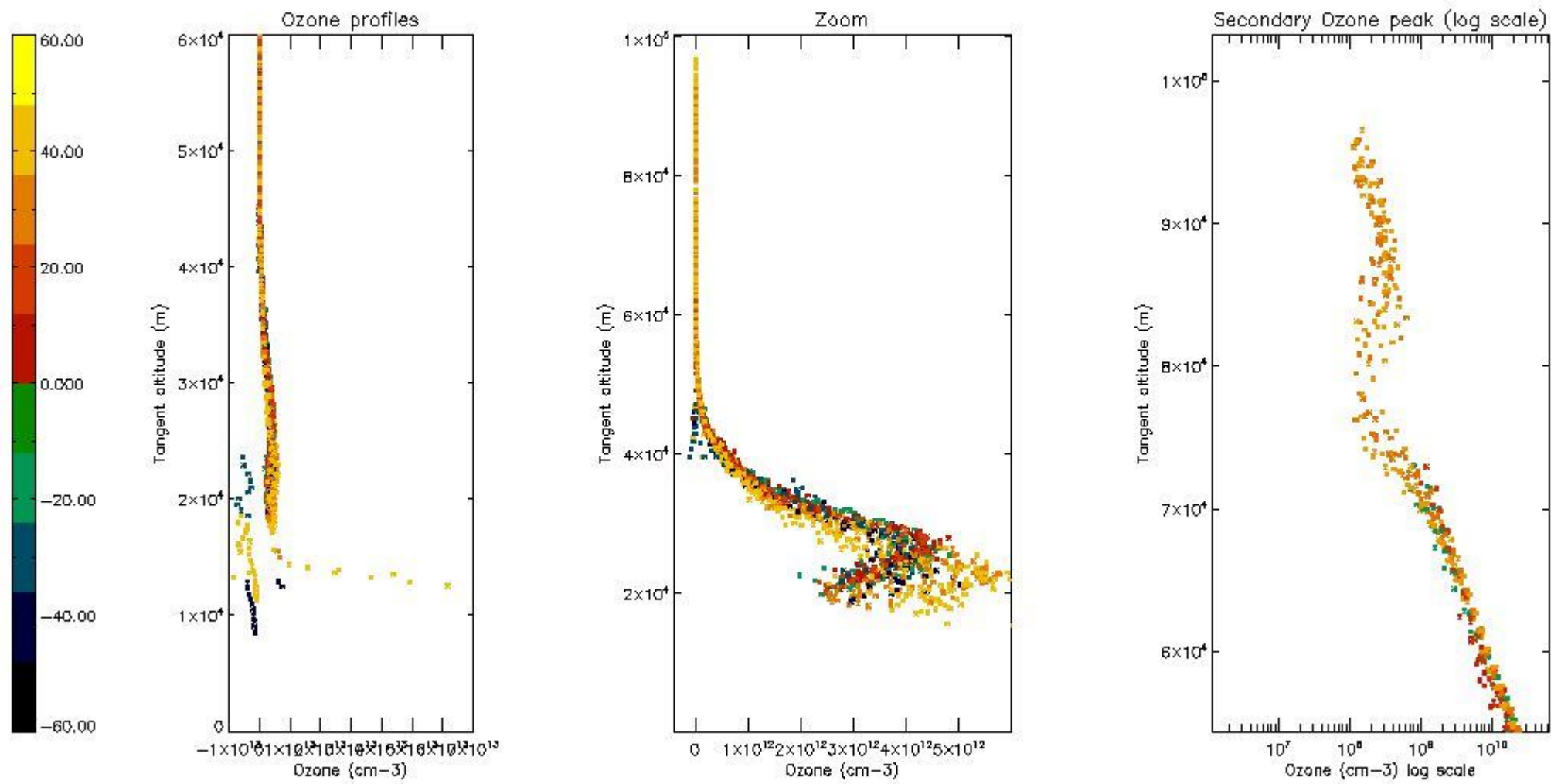
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



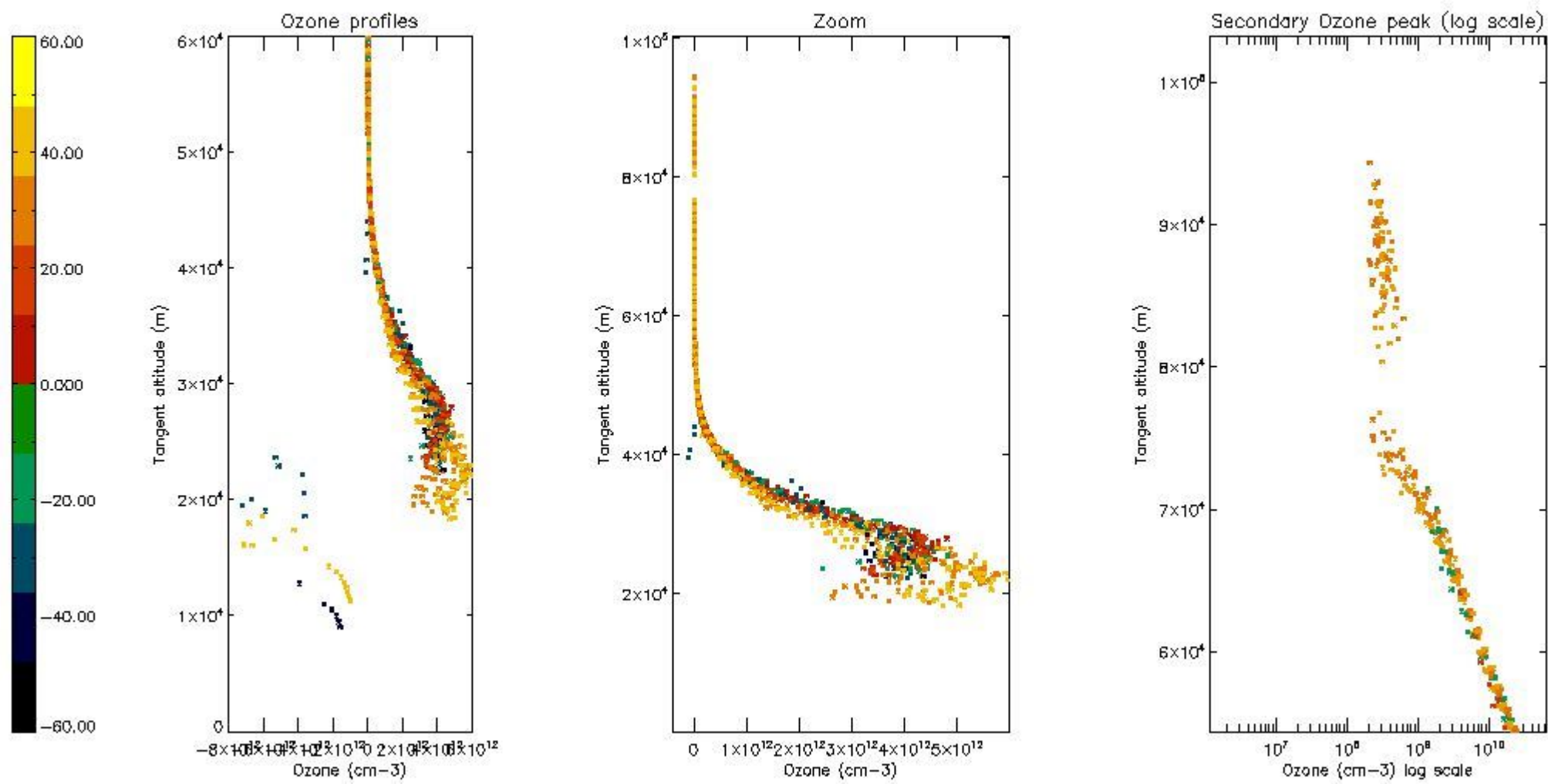
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



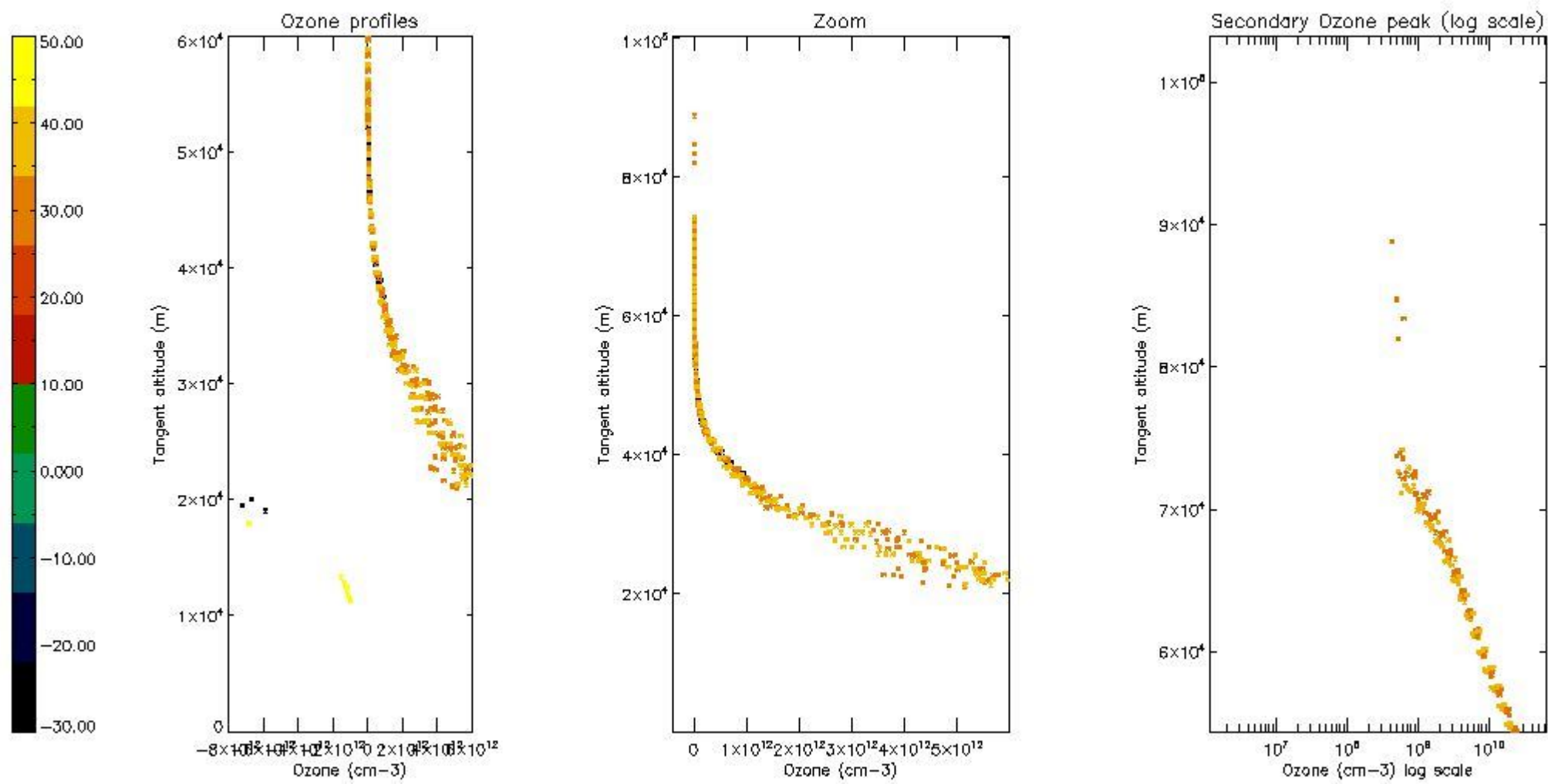
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



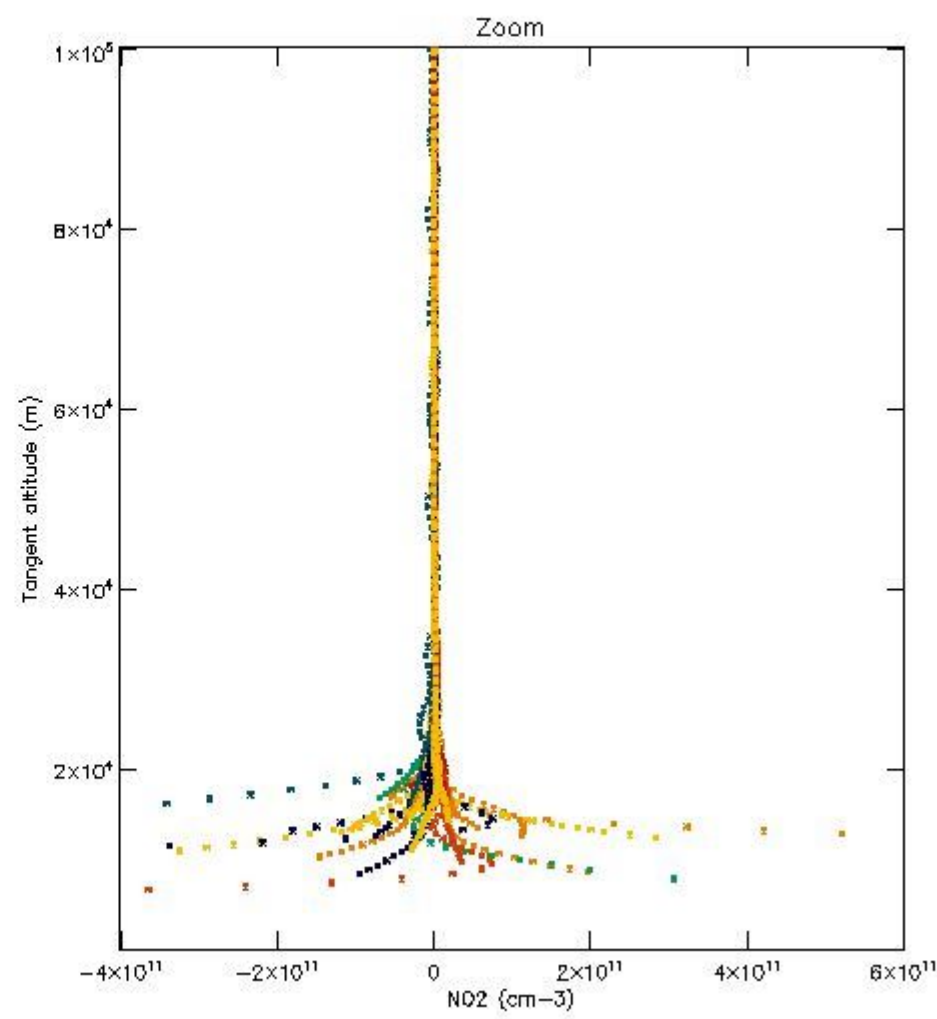
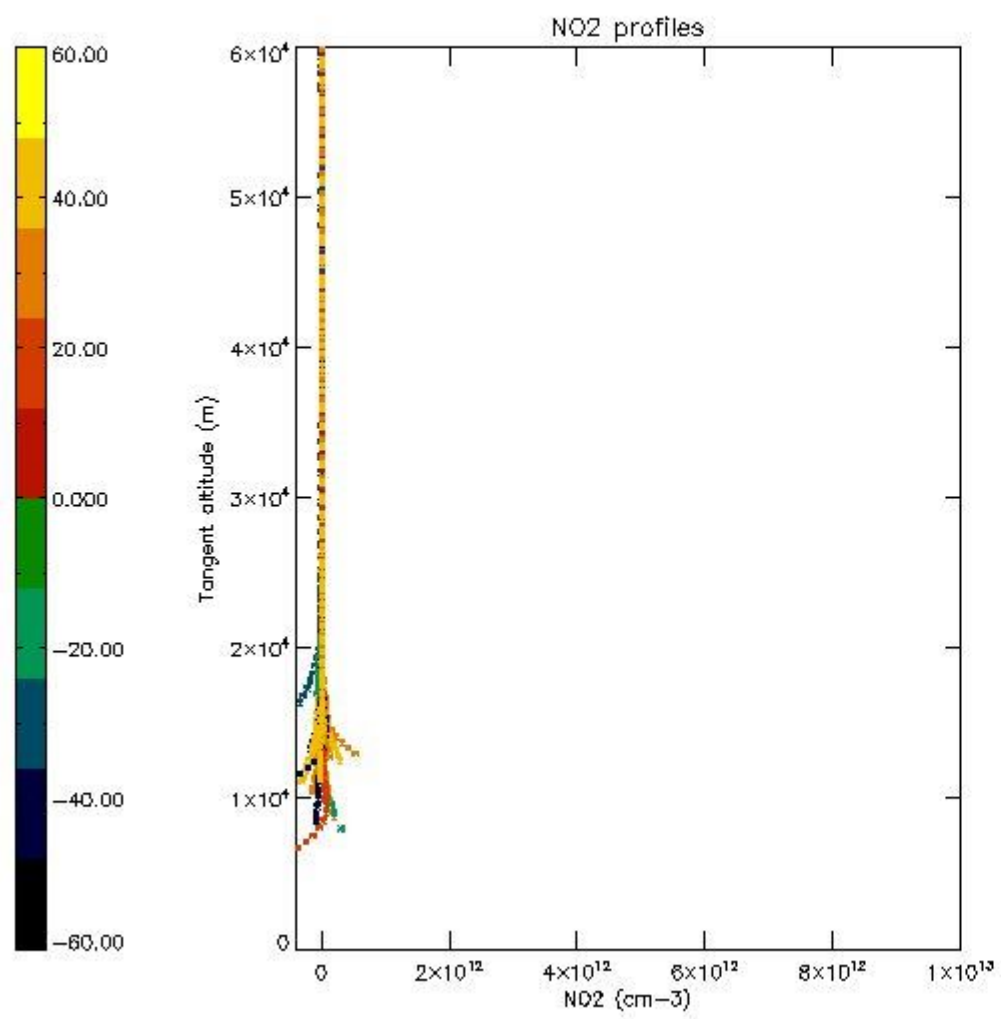
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

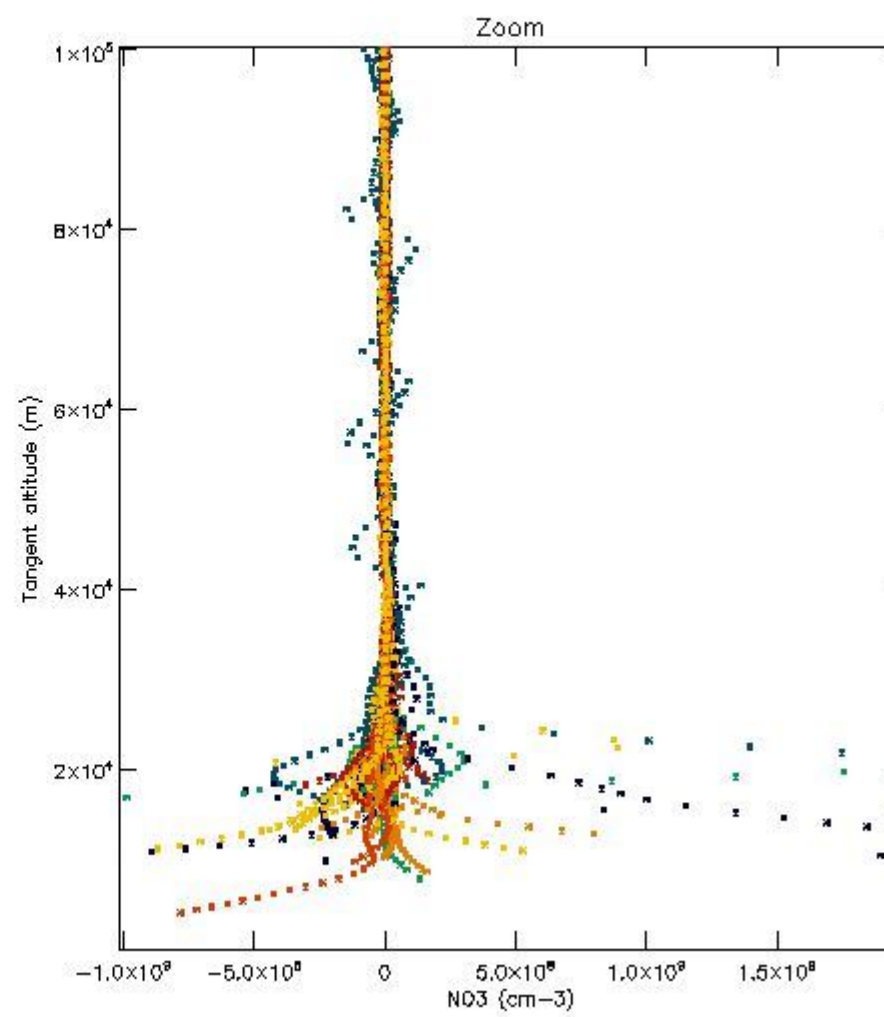
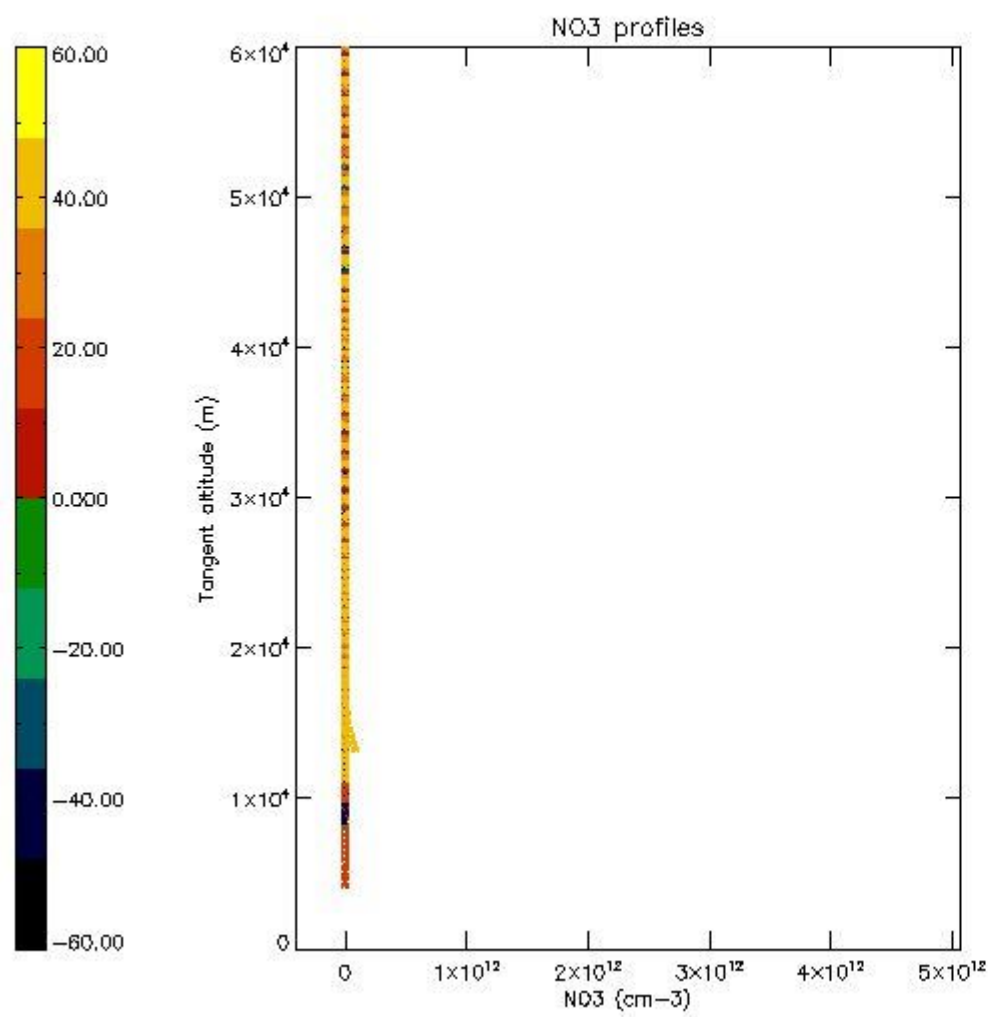
The colorbar represents the latitude.



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

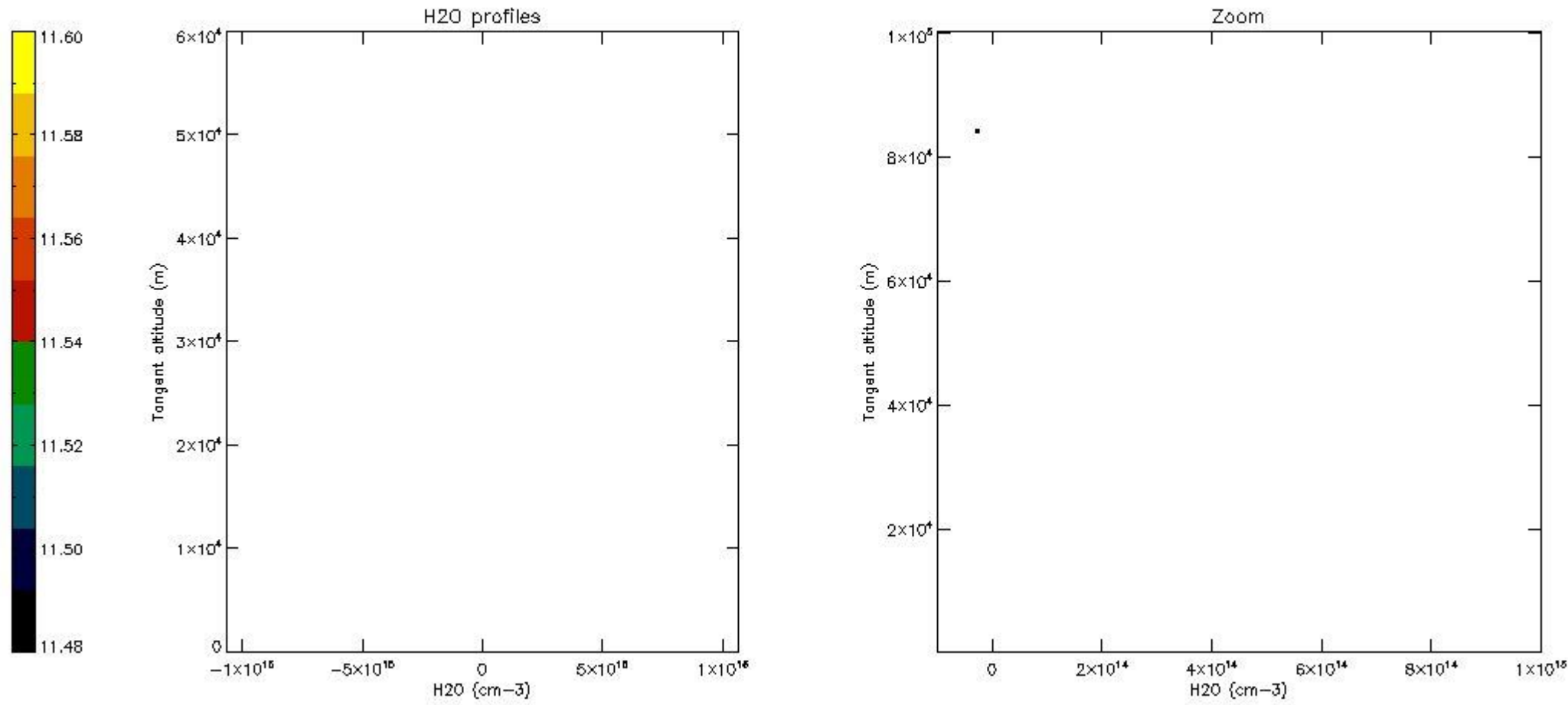
The colorbar represents the latitude.





*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)*

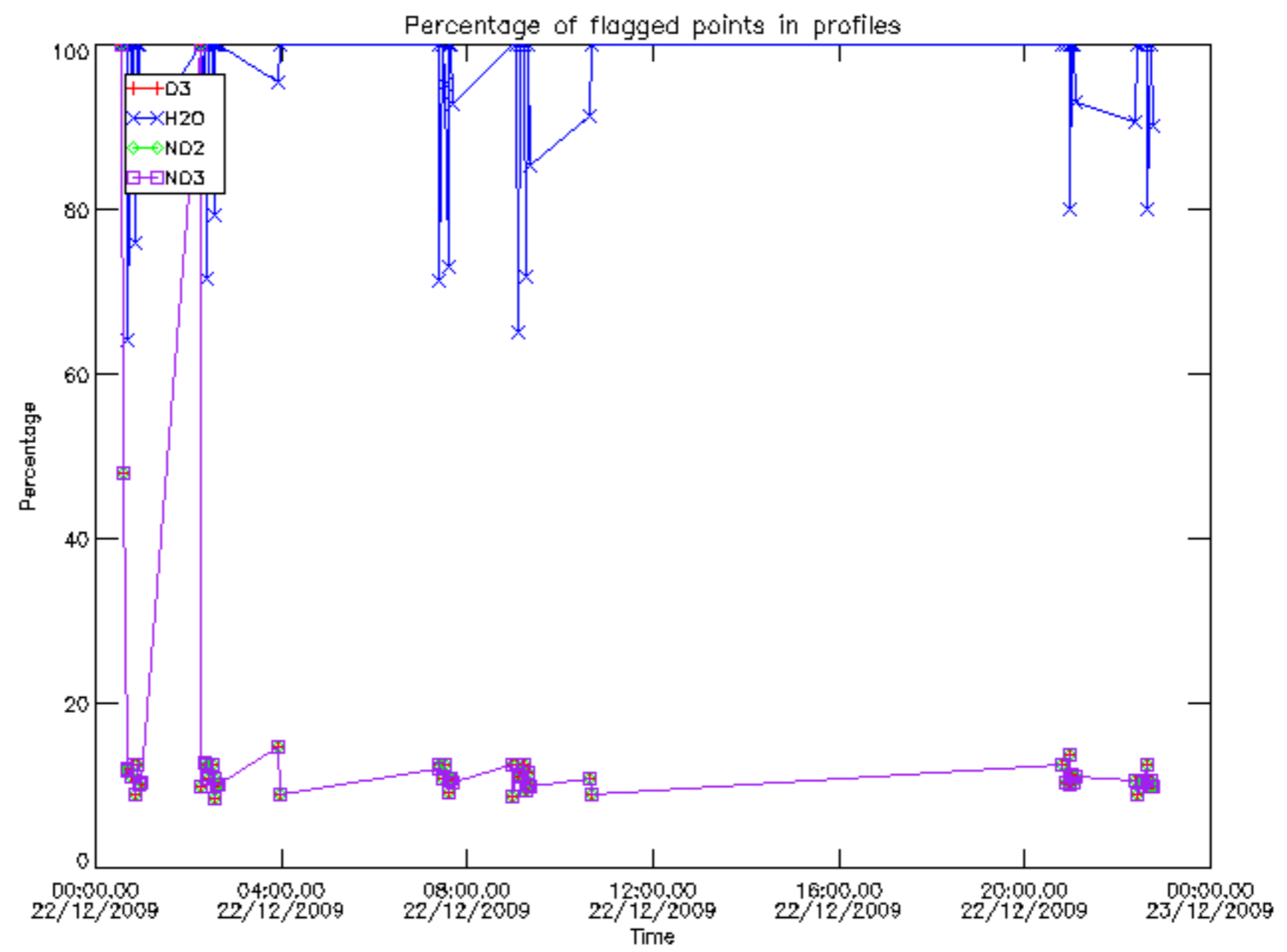
The colorbar represents the latitude.



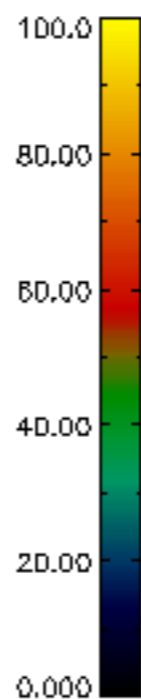
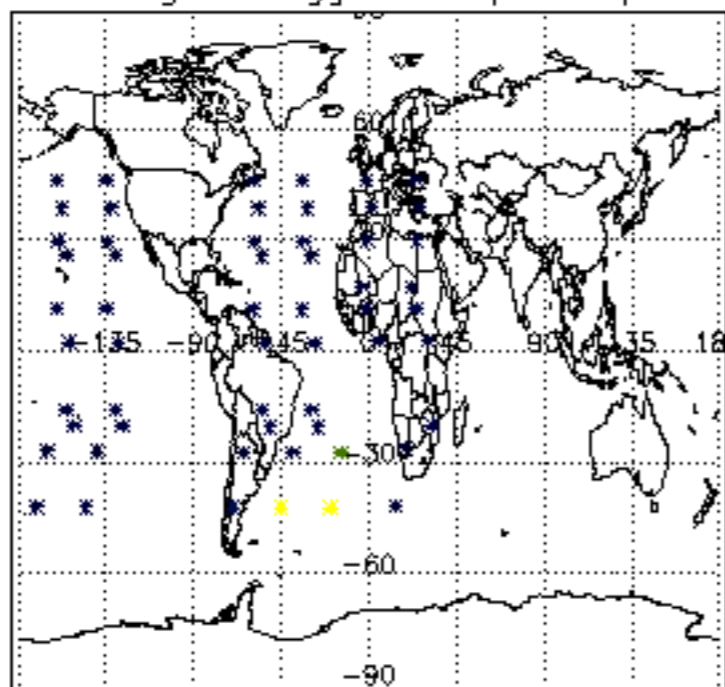
## 6. Auxiliary Data Files used for the production reported in section 2

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.

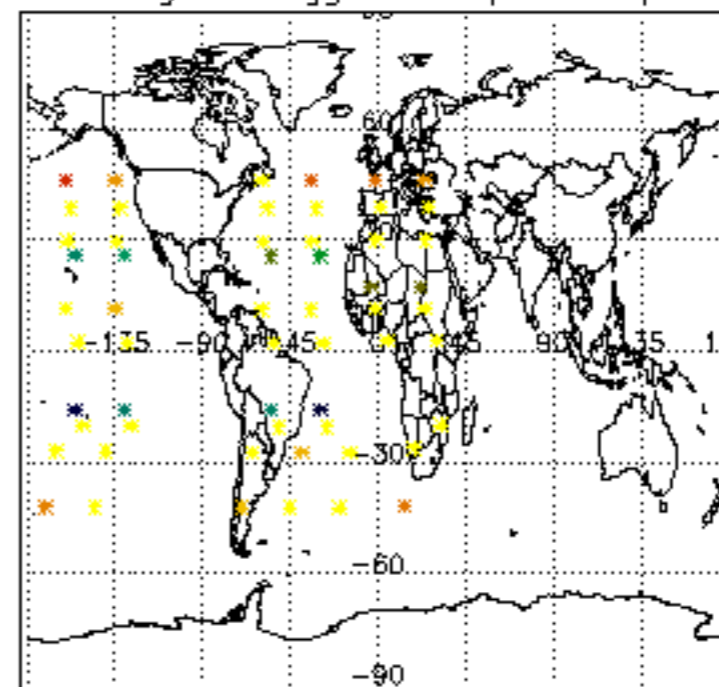
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	22-DEC-2009 00:01:26
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	22-DEC-2009 00:01:26
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	22-DEC-2009 00:01:26



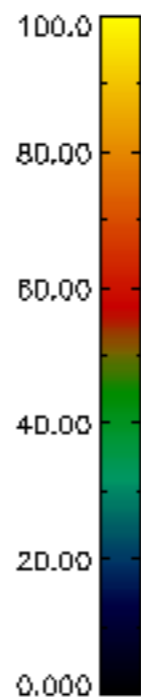
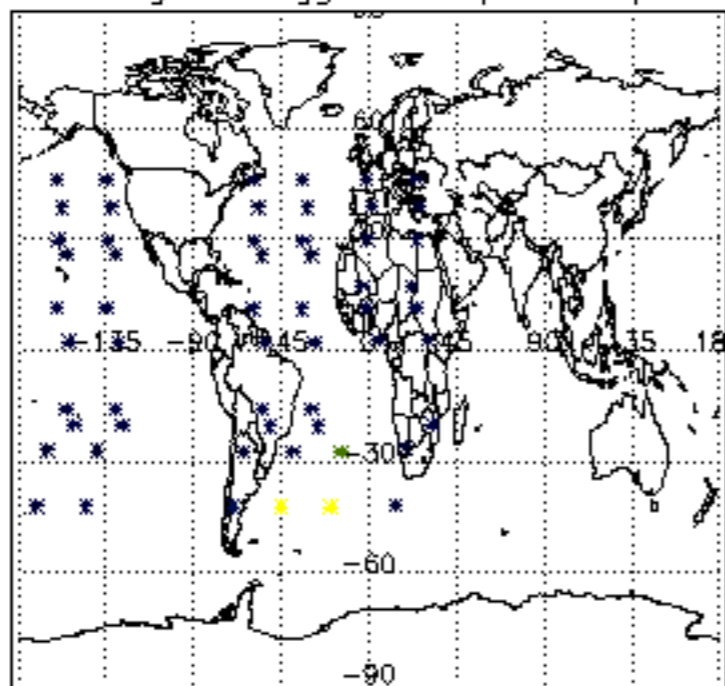
Percentage of flagged data per D3 profile



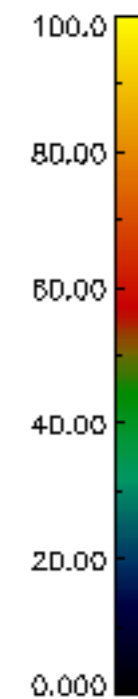
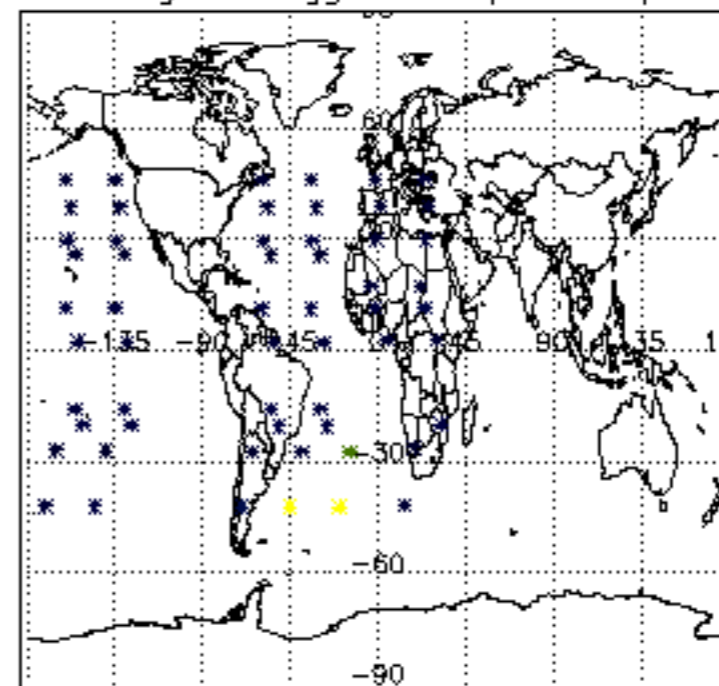
Percentage of flagged data per H2O profile

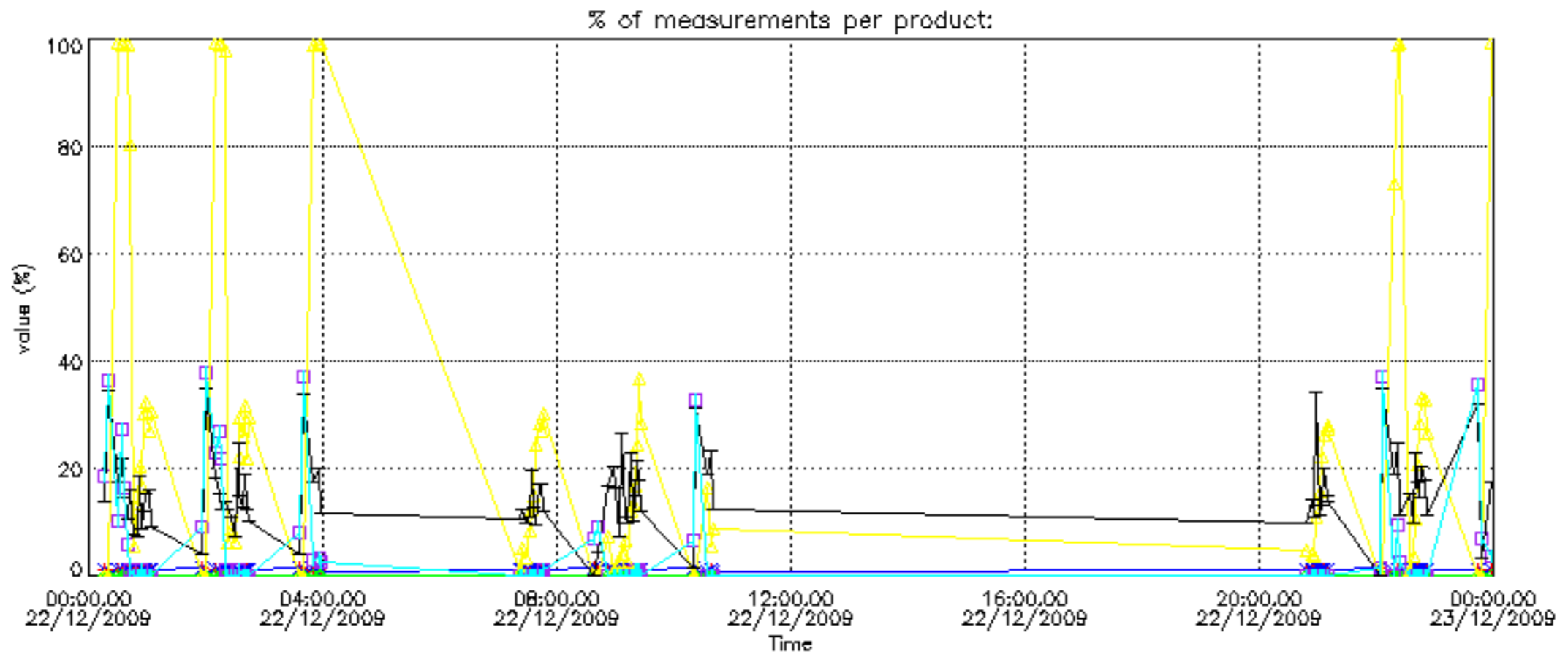


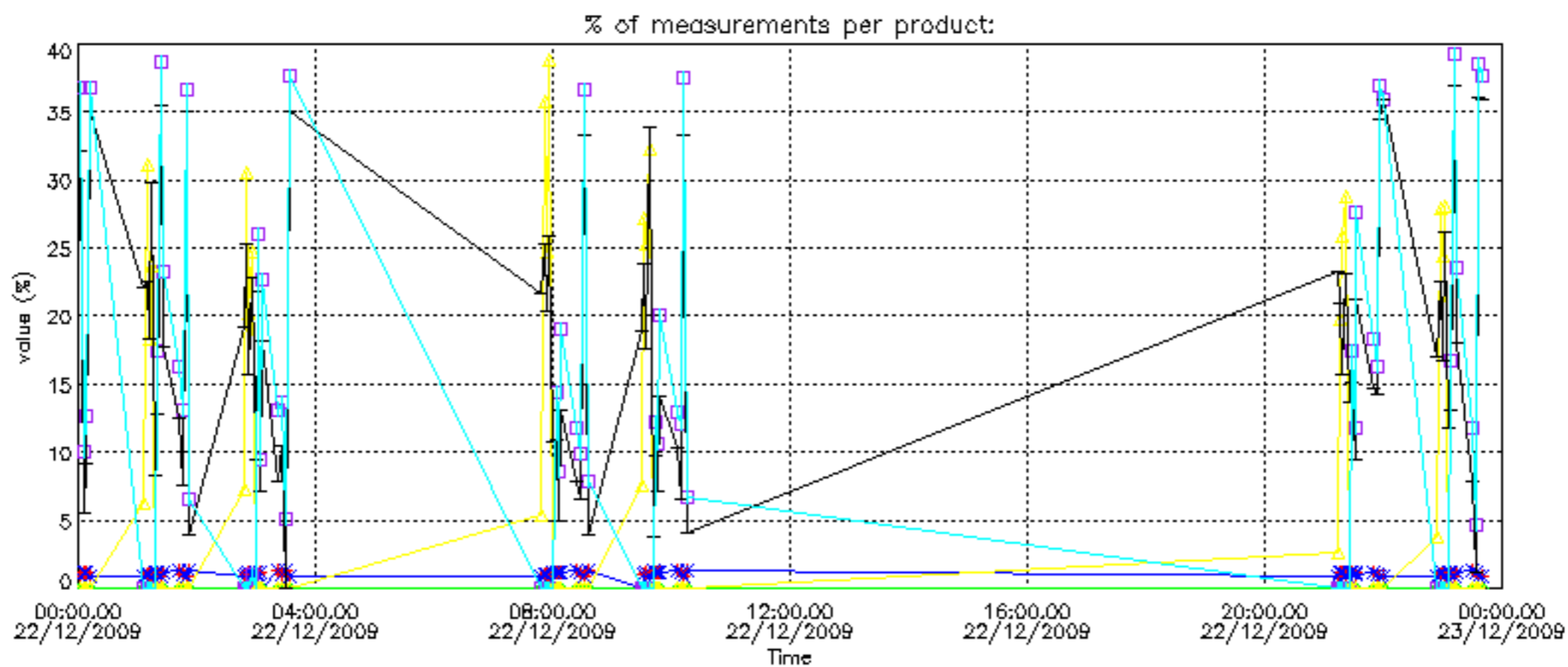
Percentage of flagged data per NO2 profile



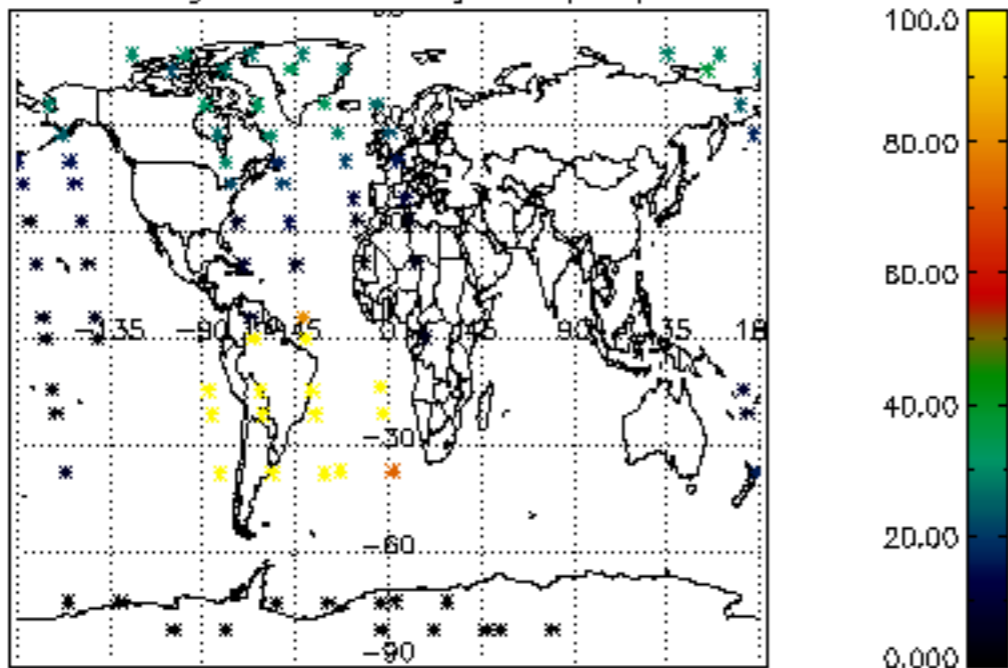
Percentage of flagged data per NO3 profile



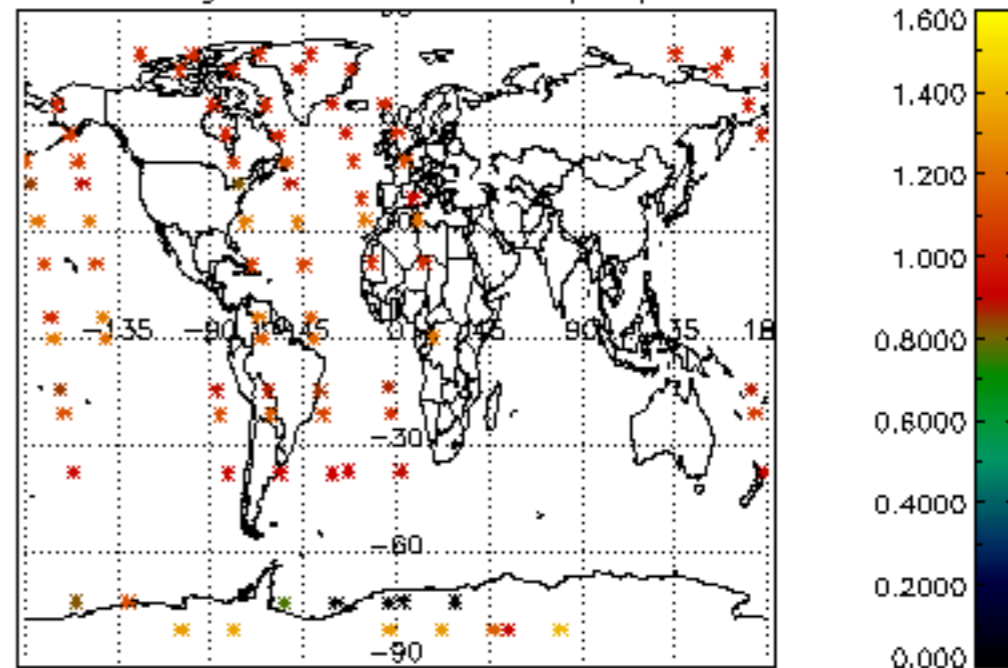




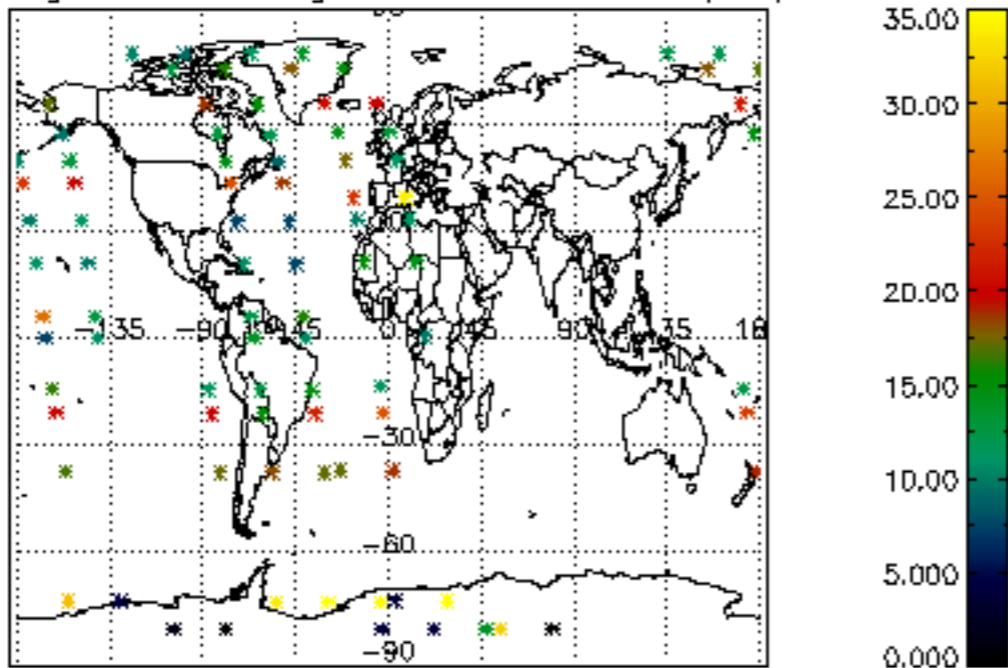
Percentage of cosmic ray hits per profile



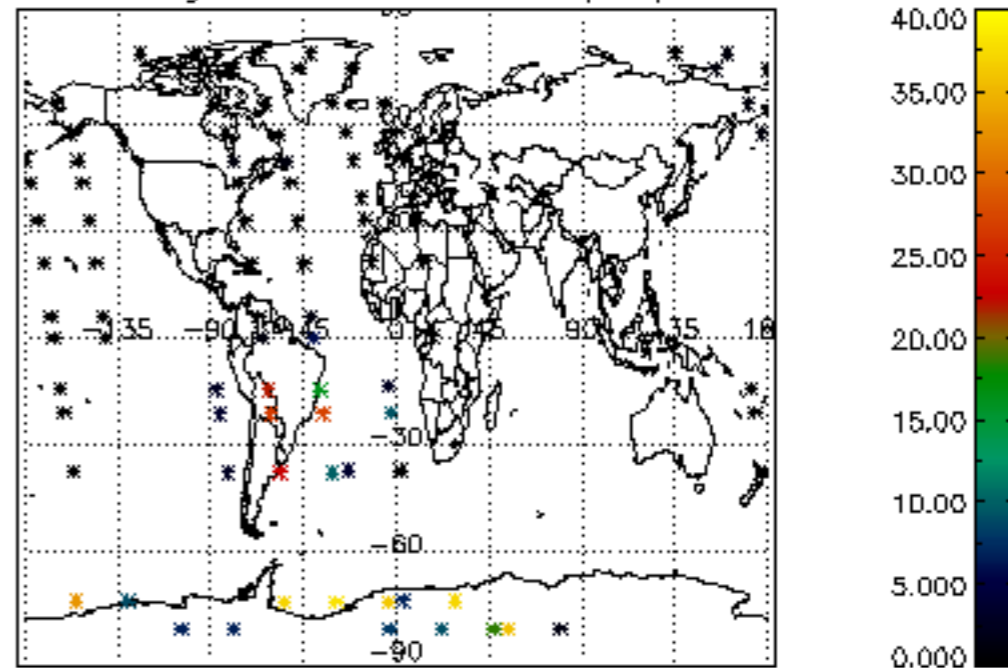
Percentage of datation errors per profile



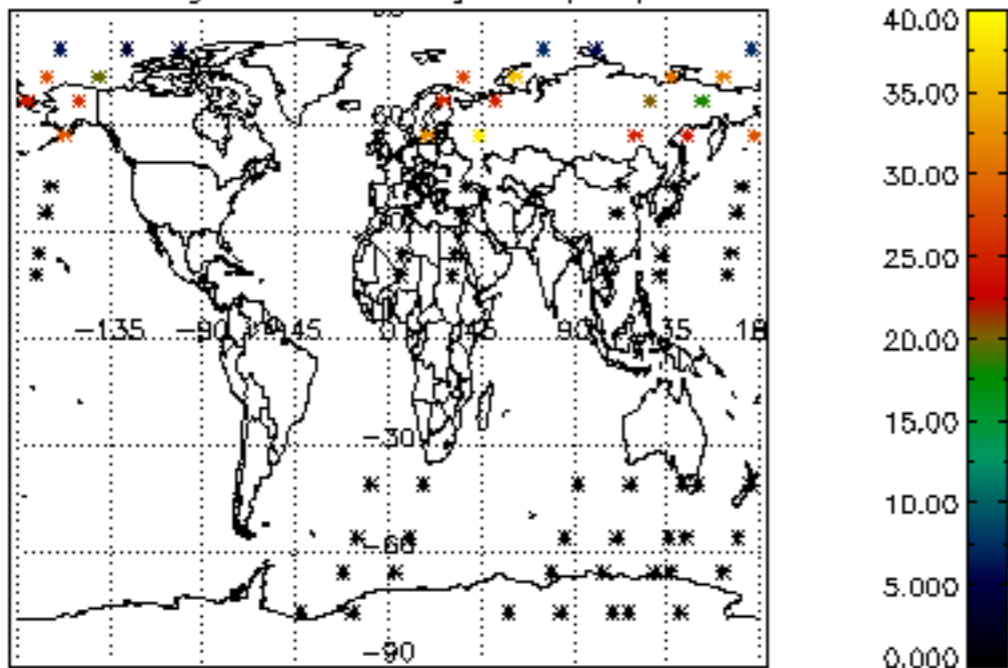
Percentage of star falling outside central band per profile



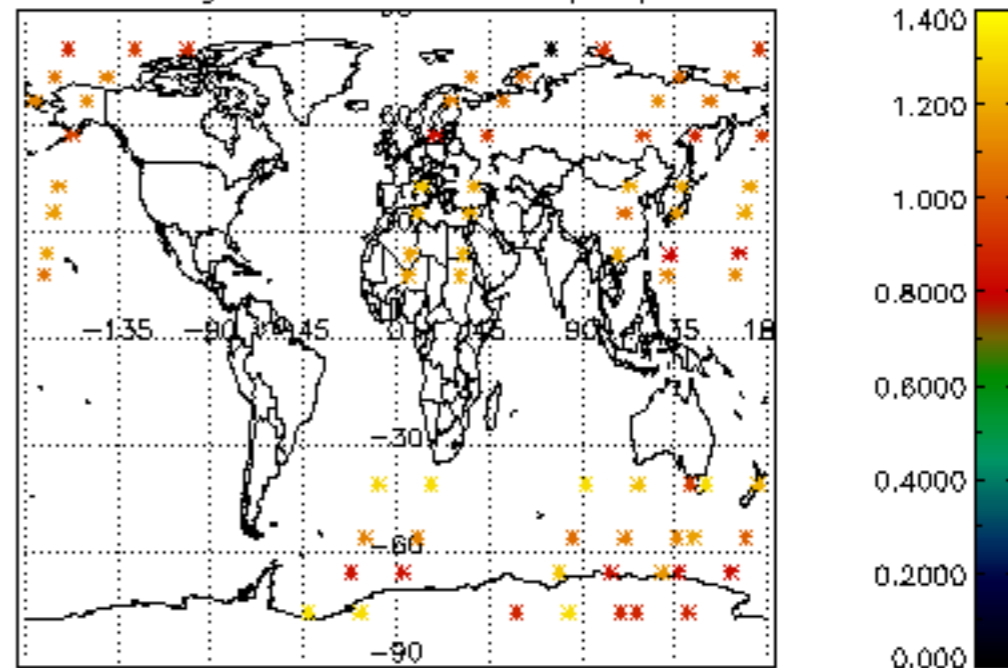
Percentage of saturation errors per profile



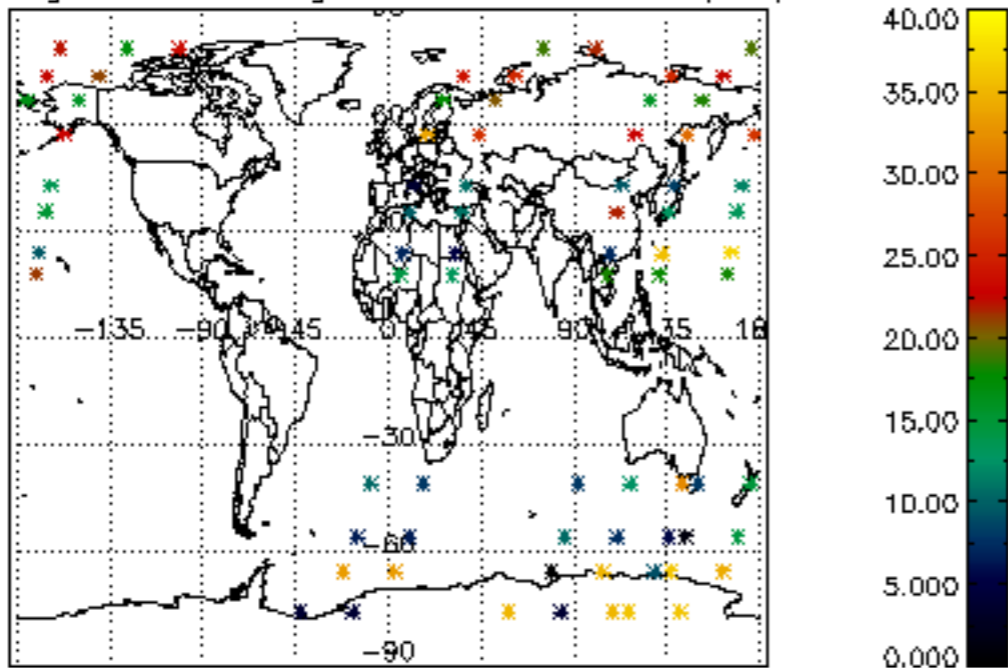
Percentage of cosmic ray hits per profile



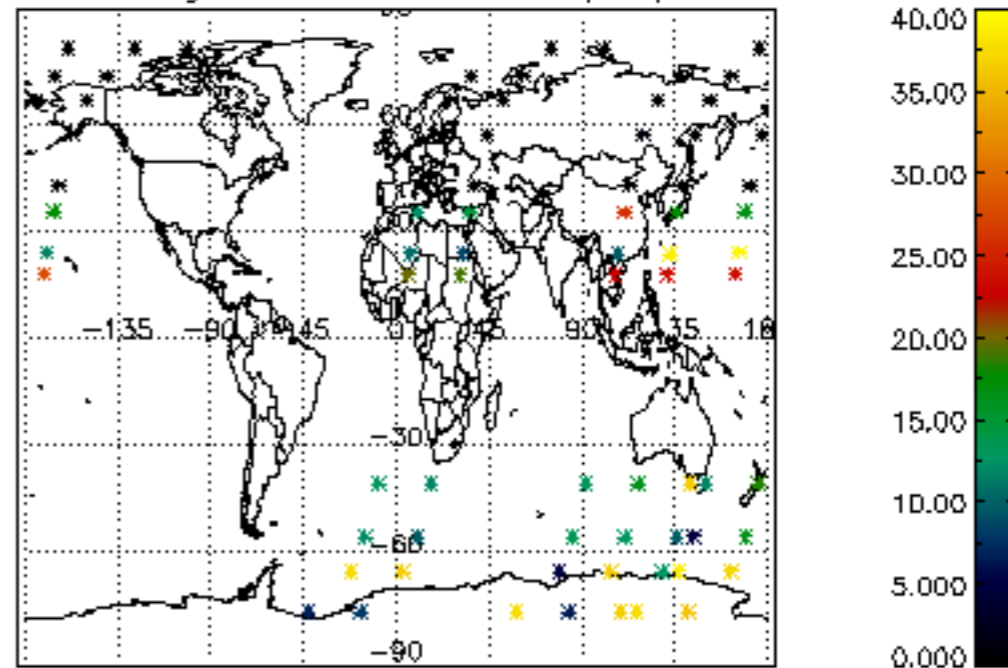
Percentage of datation errors per profile



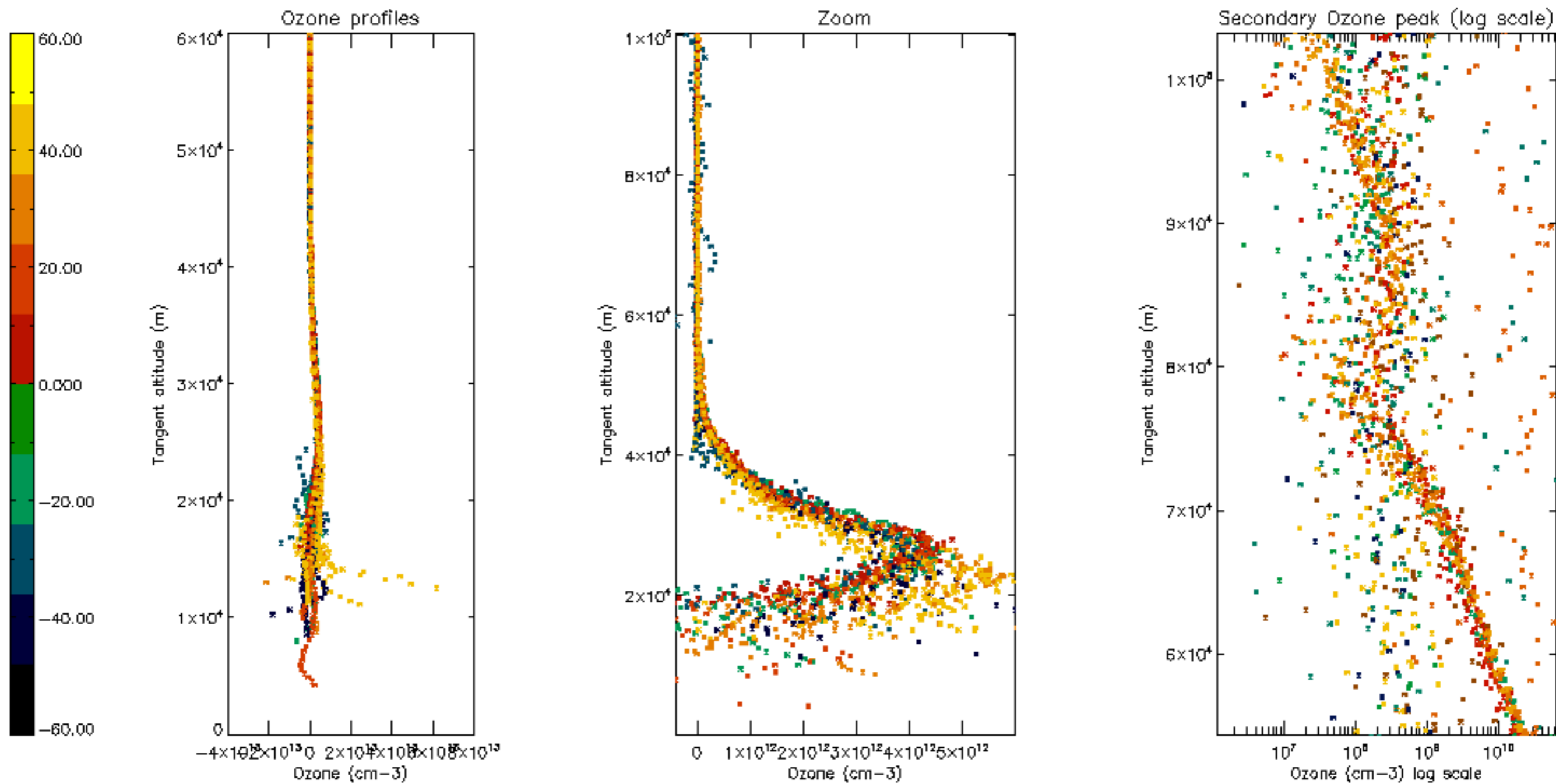
Percentage of star falling outside central band per profile

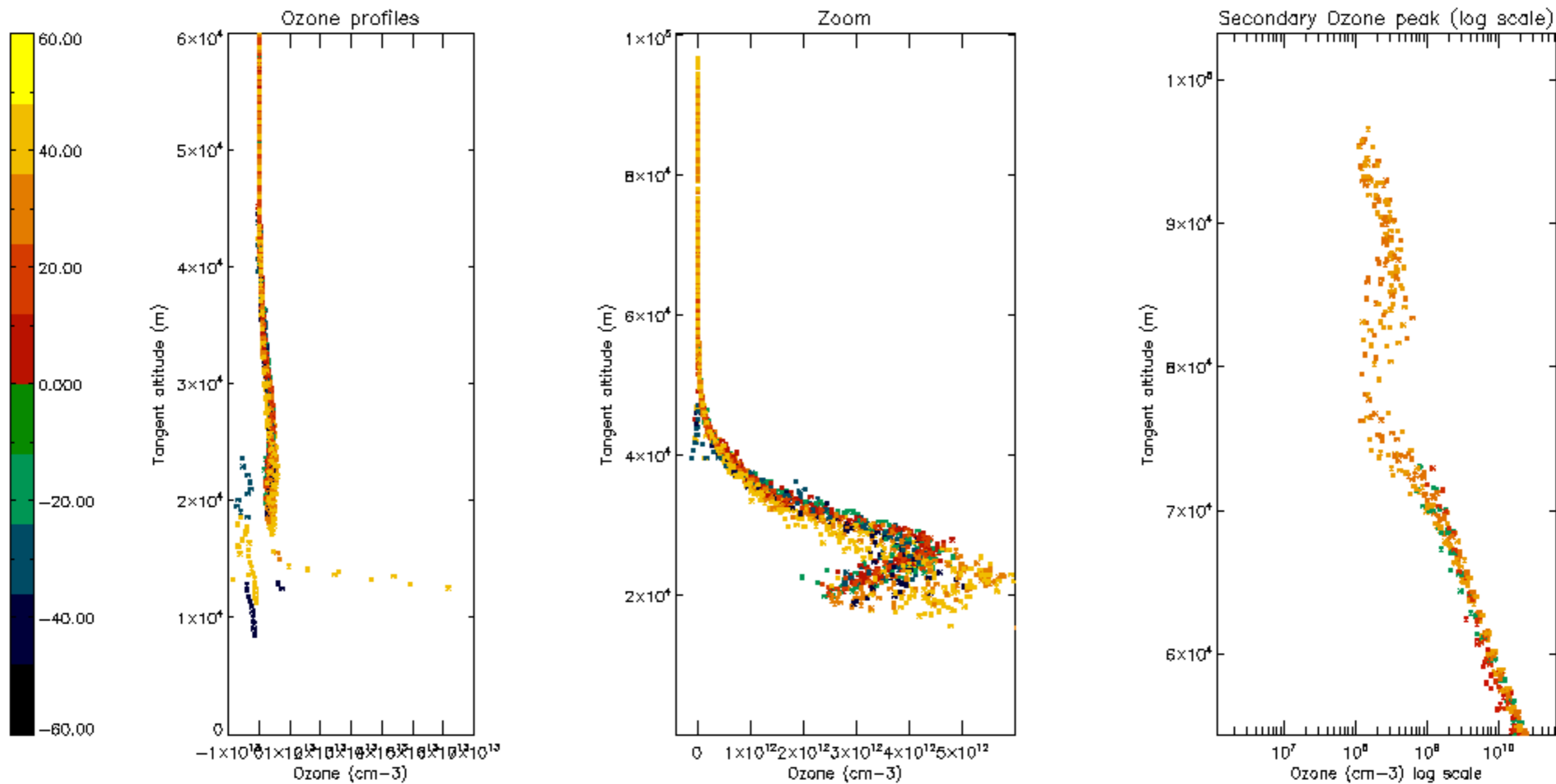


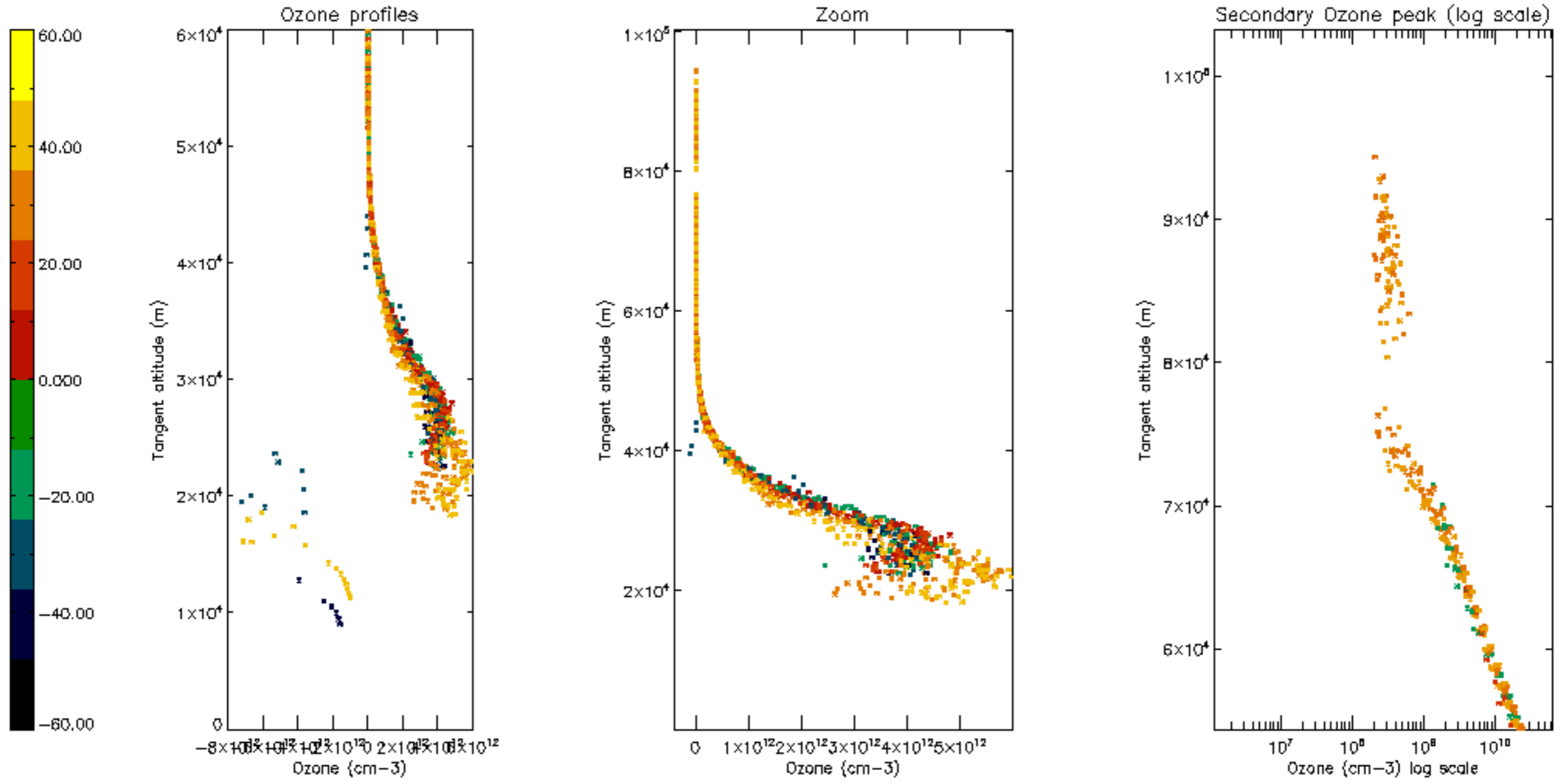
Percentage of saturation errors per profile

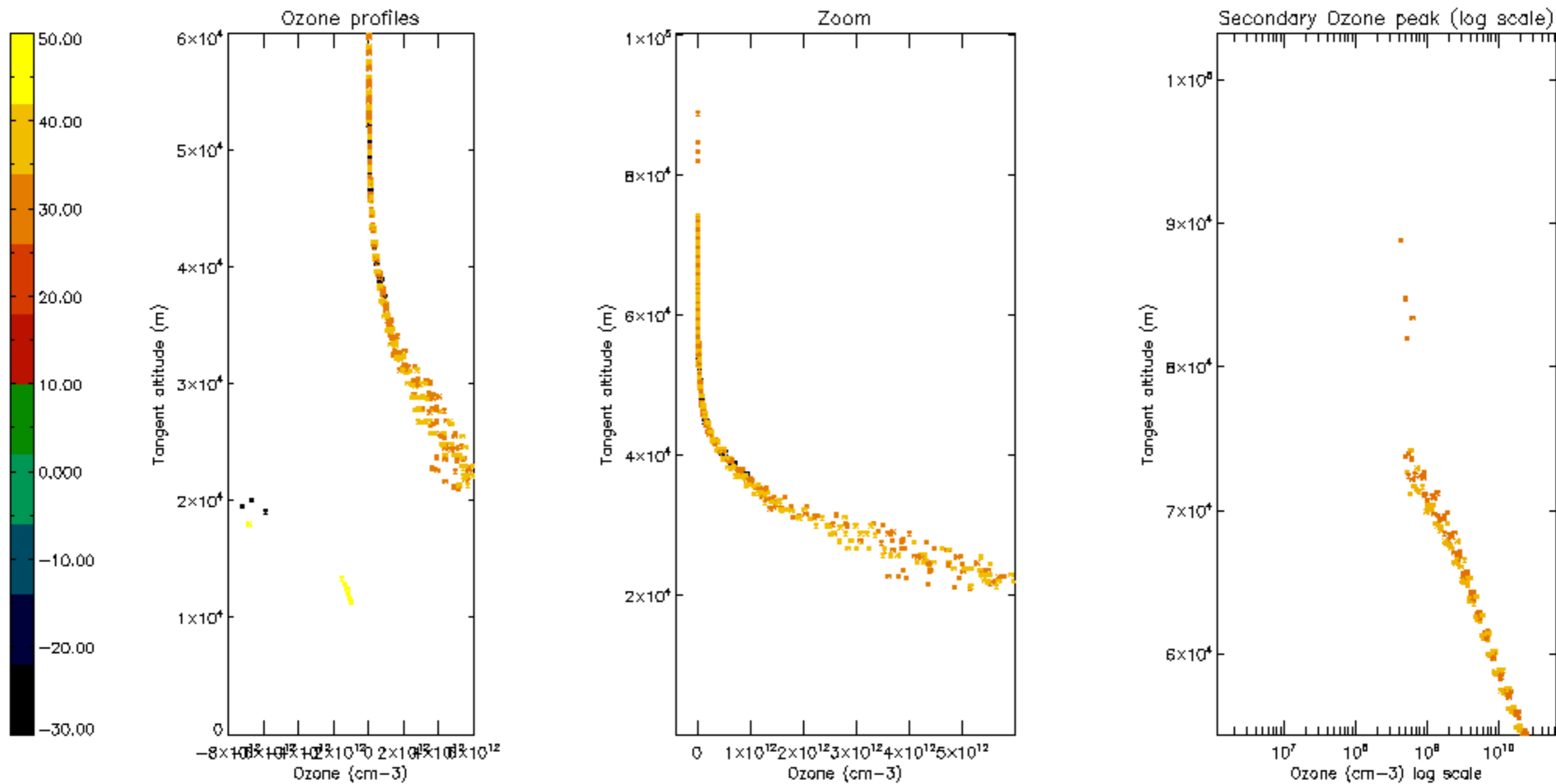


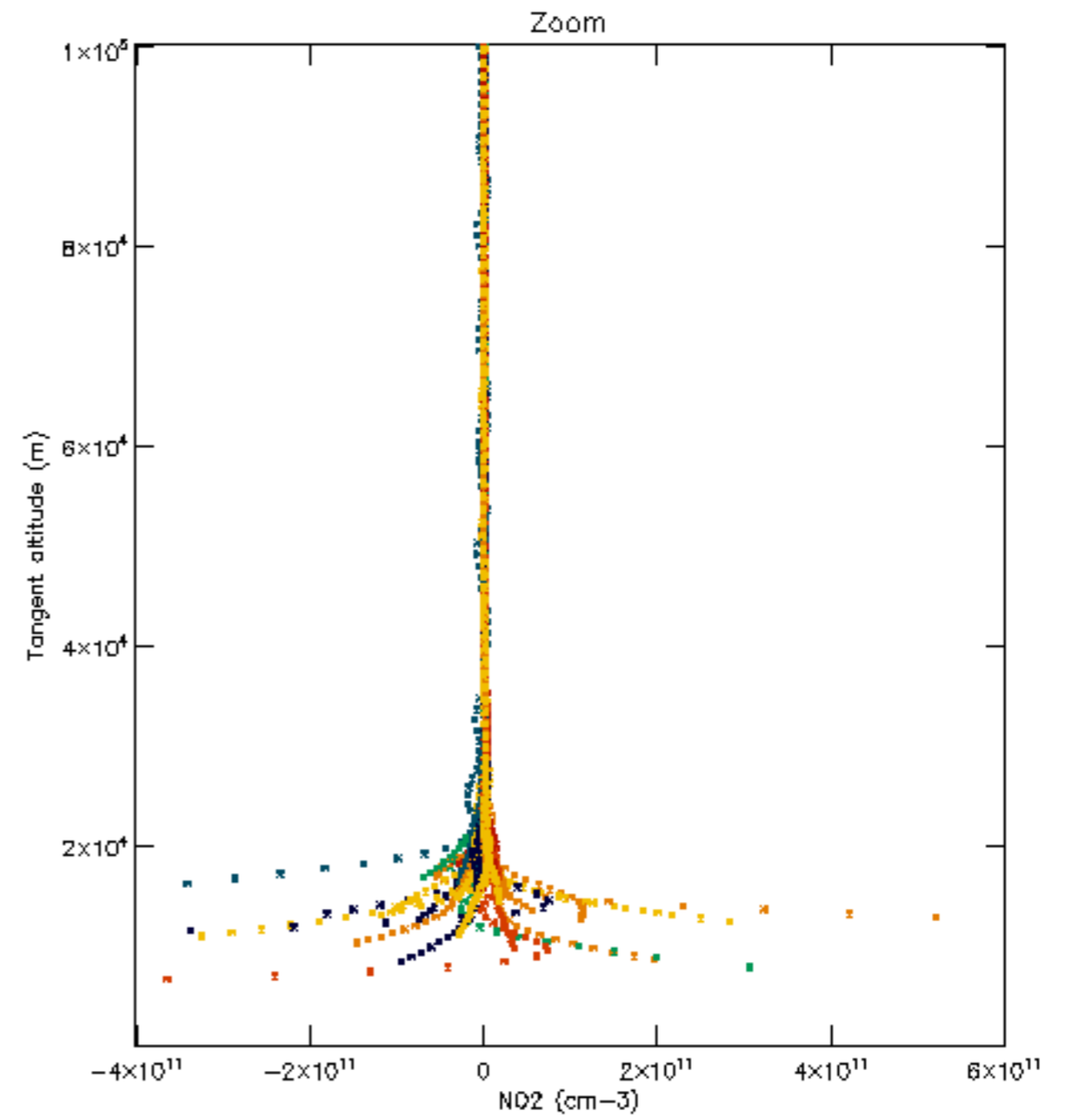
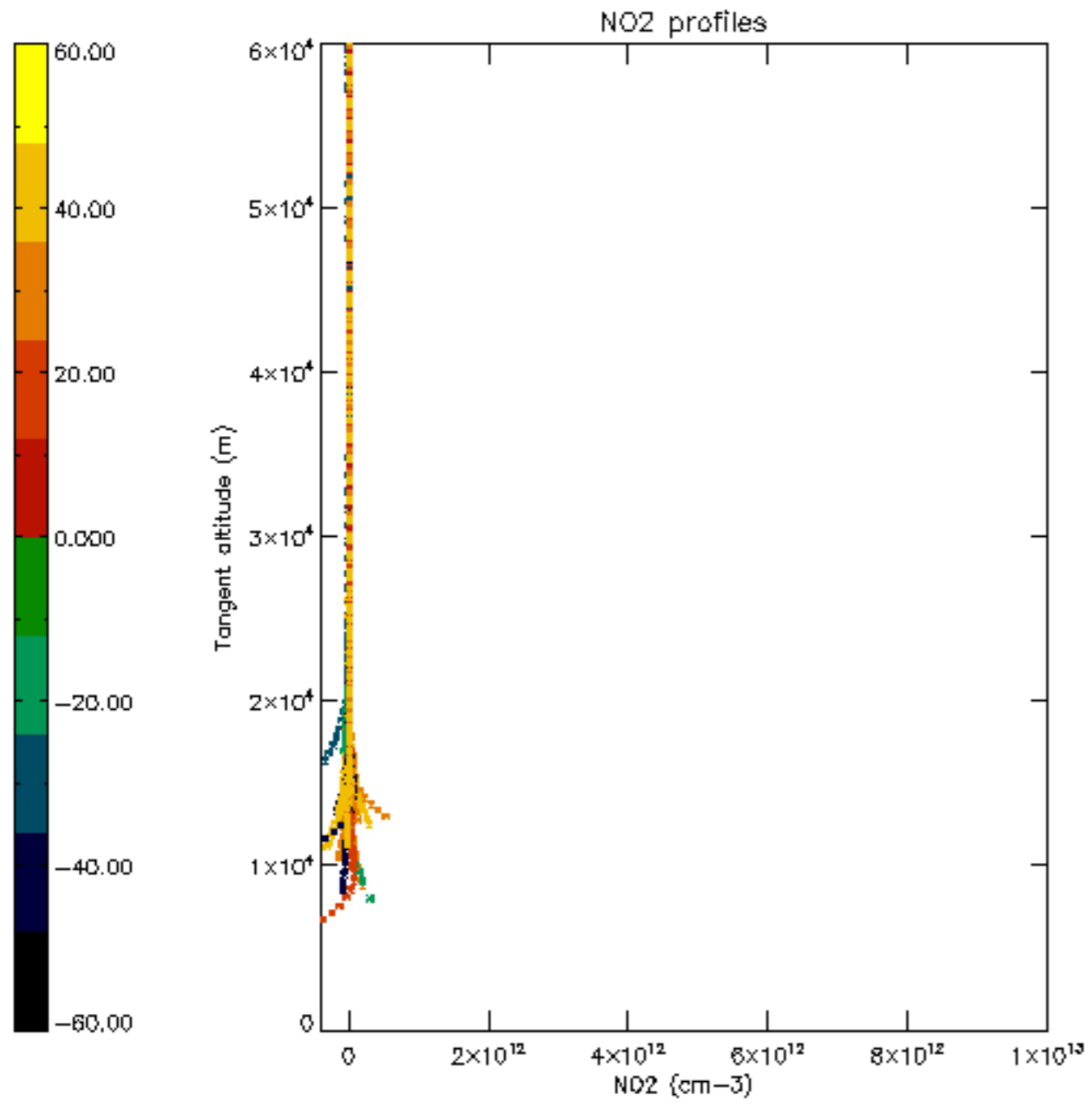


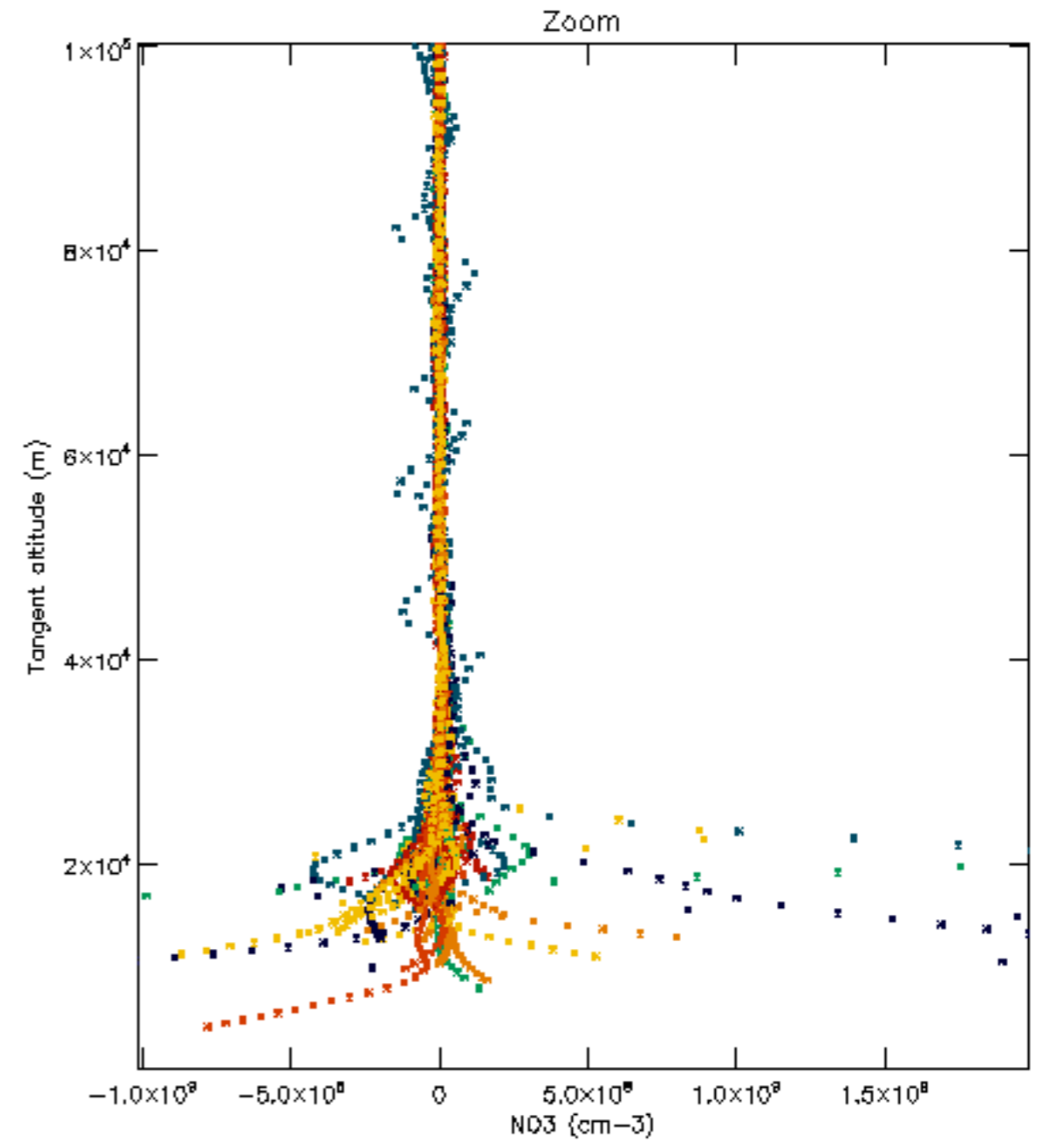
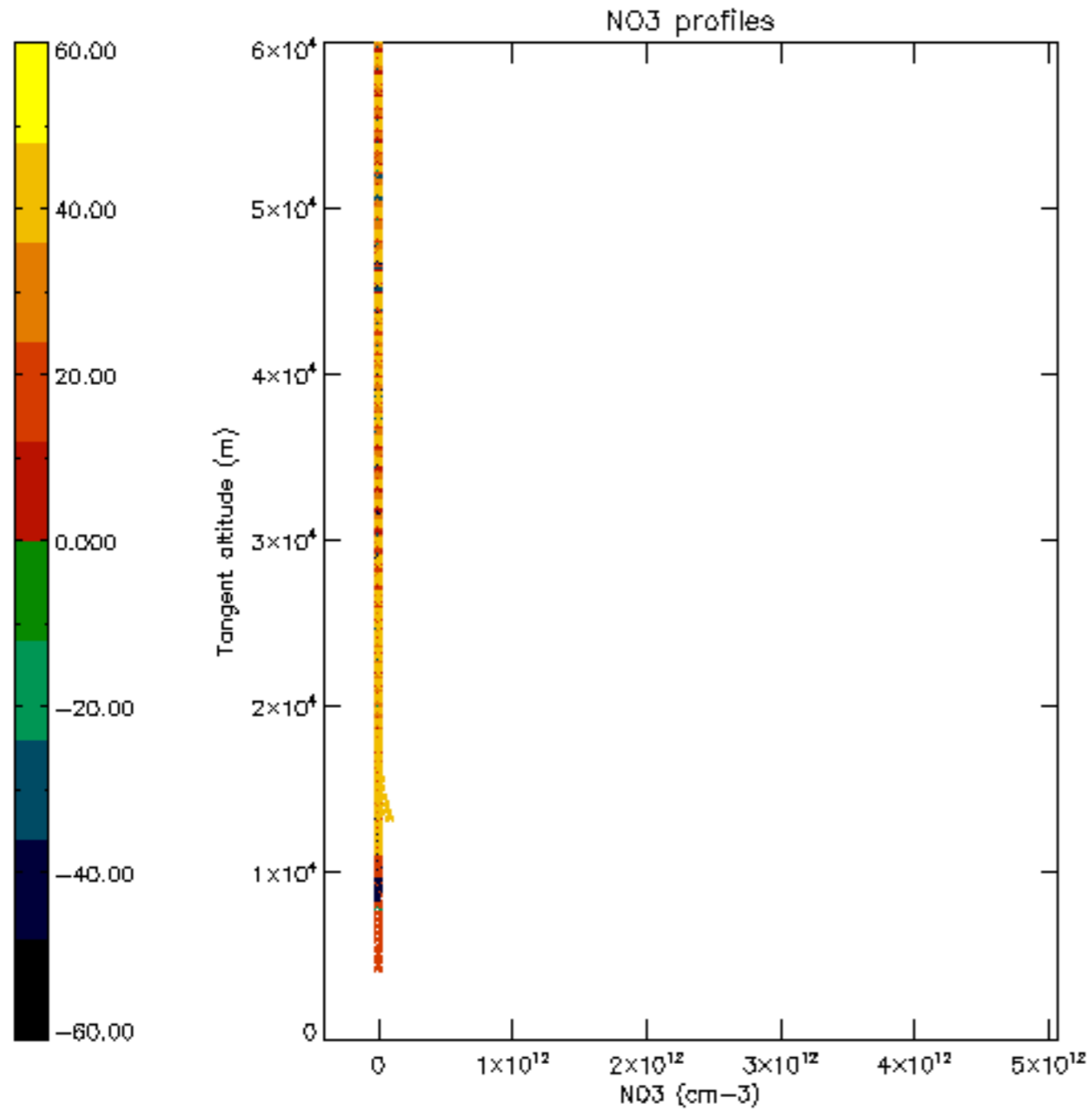


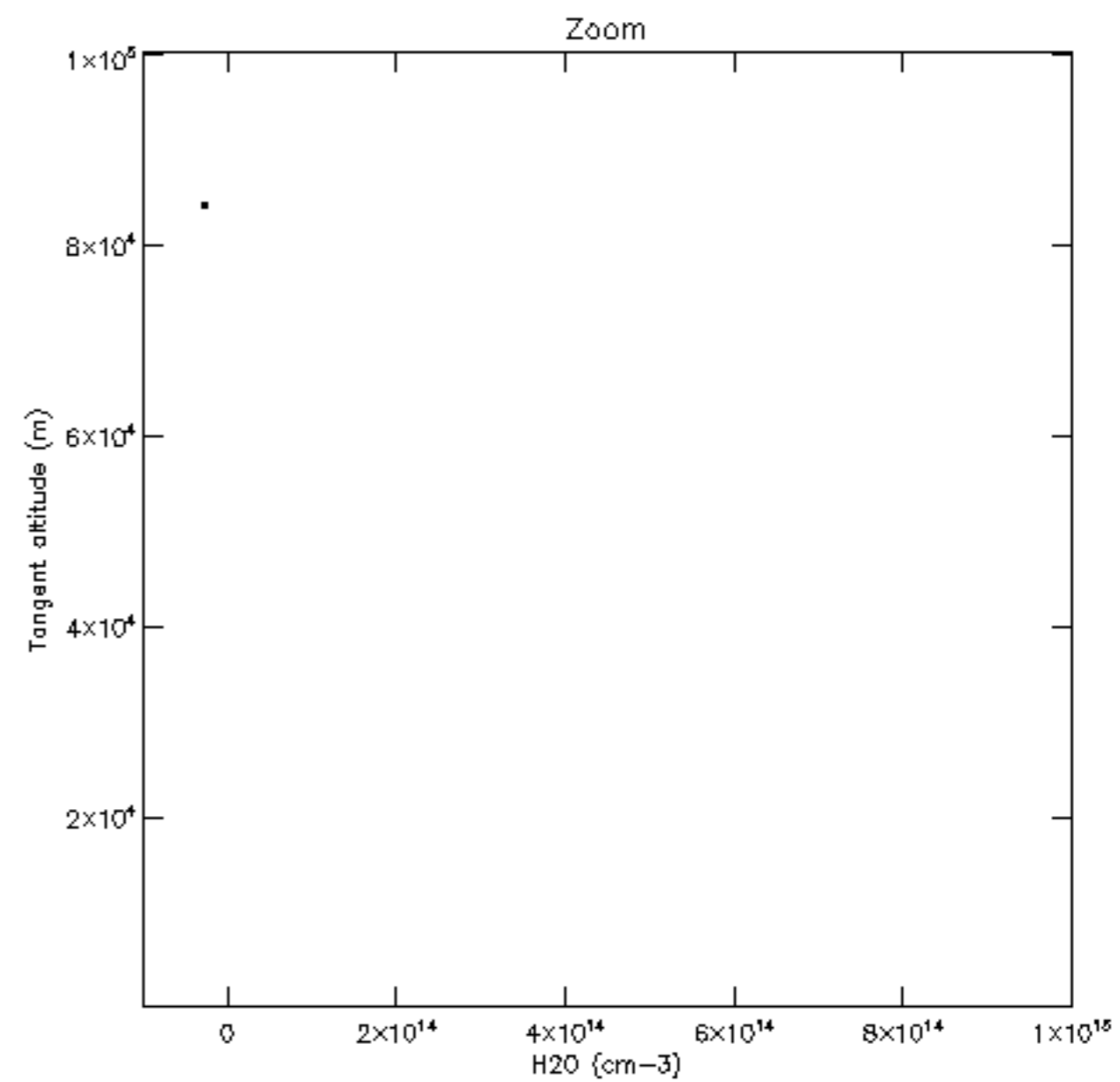
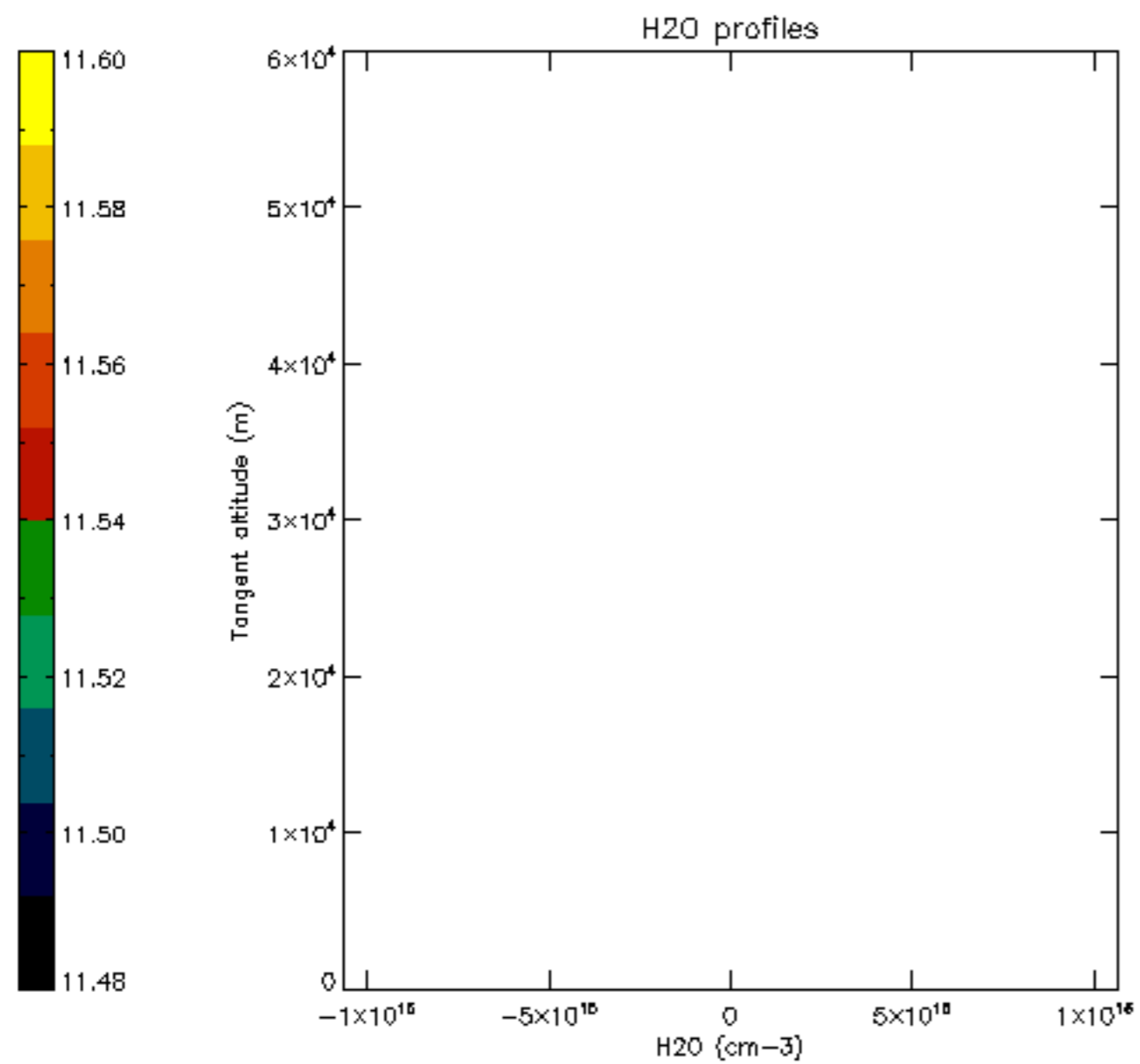


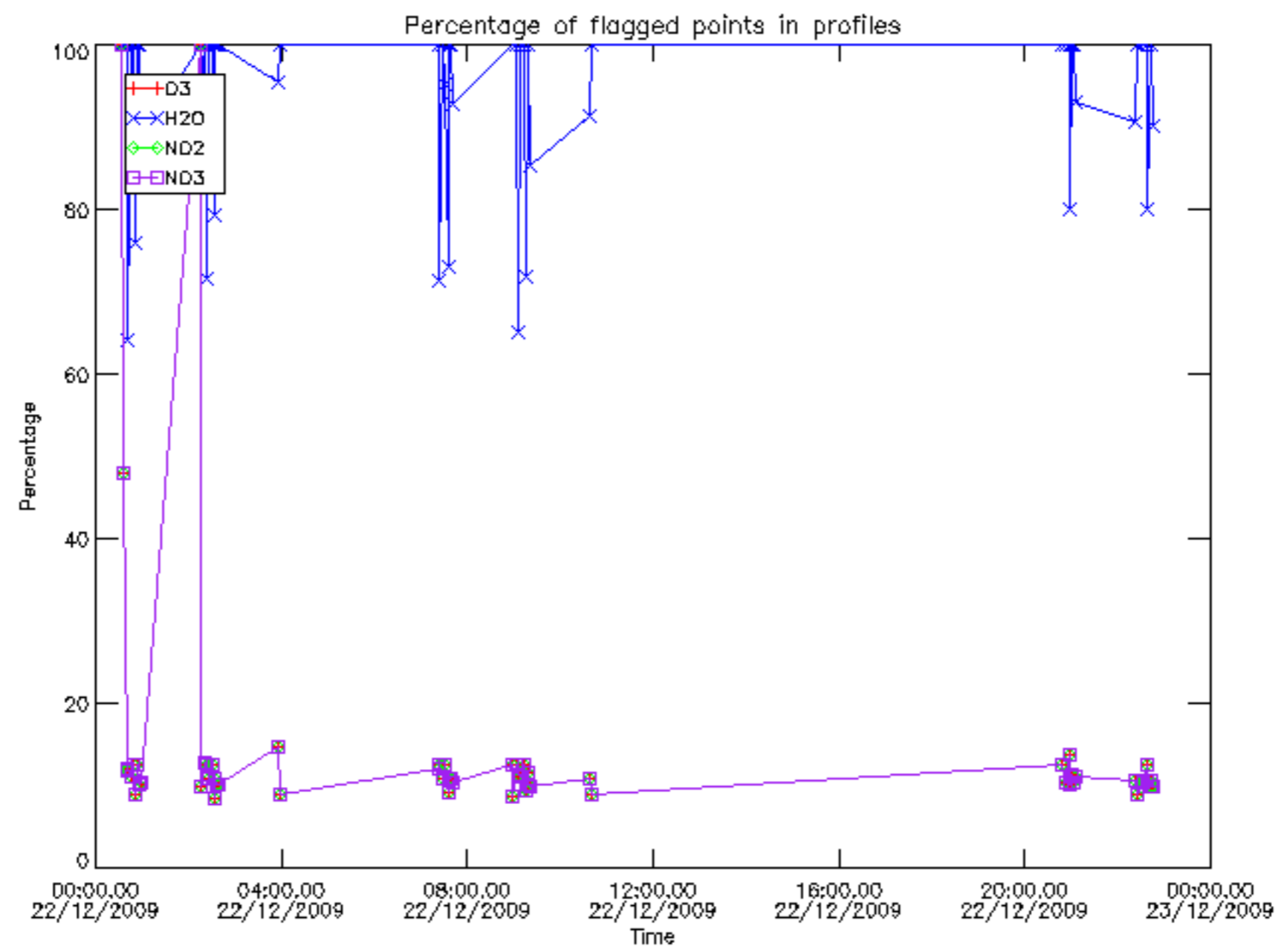






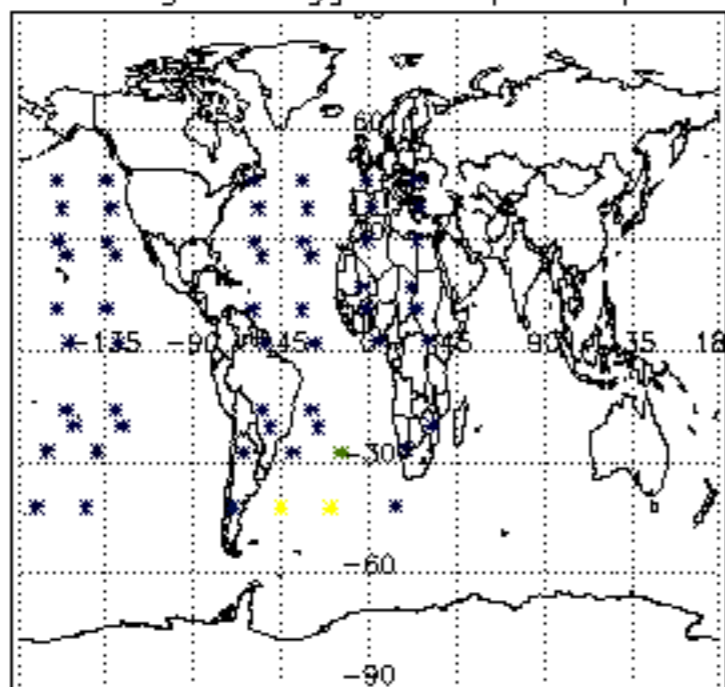




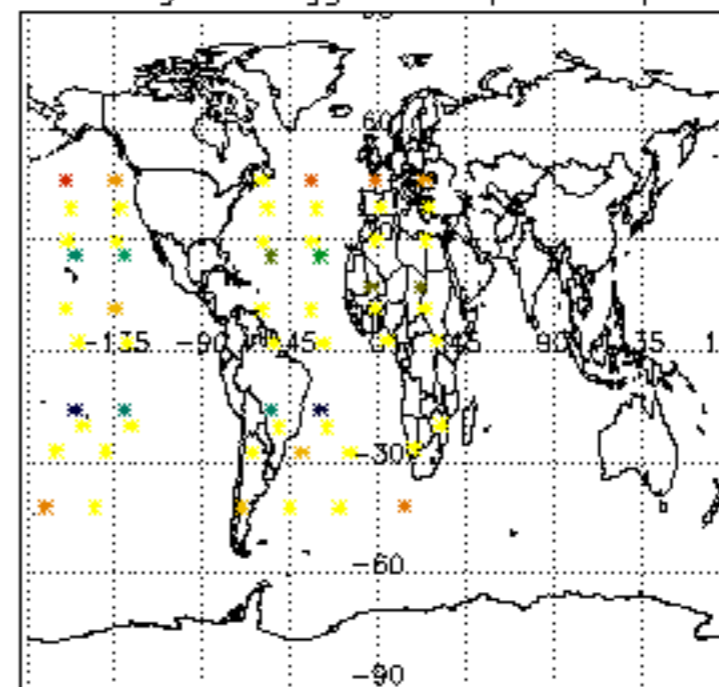




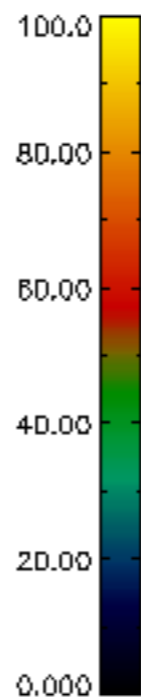
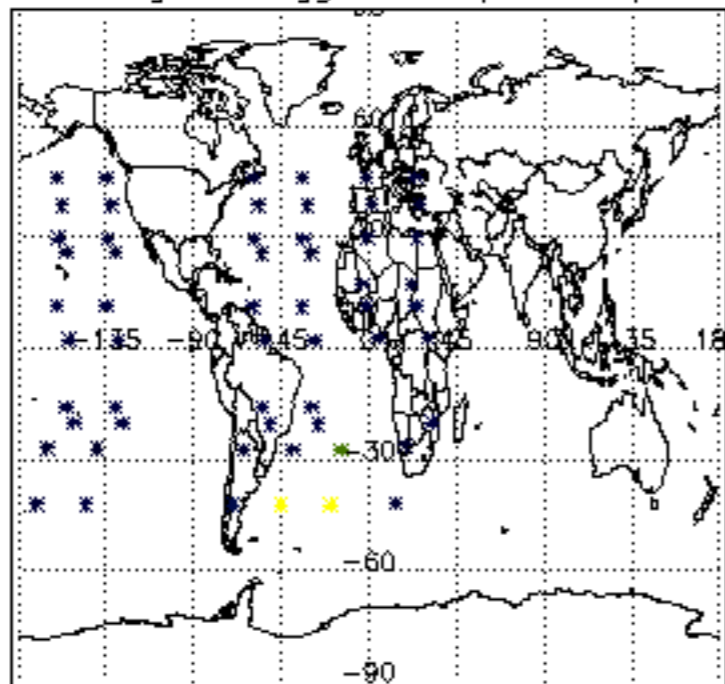
Percentage of flagged data per D3 profile



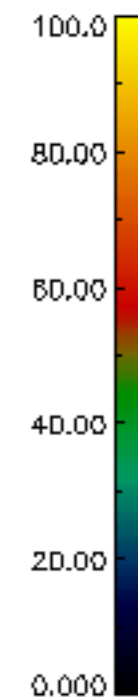
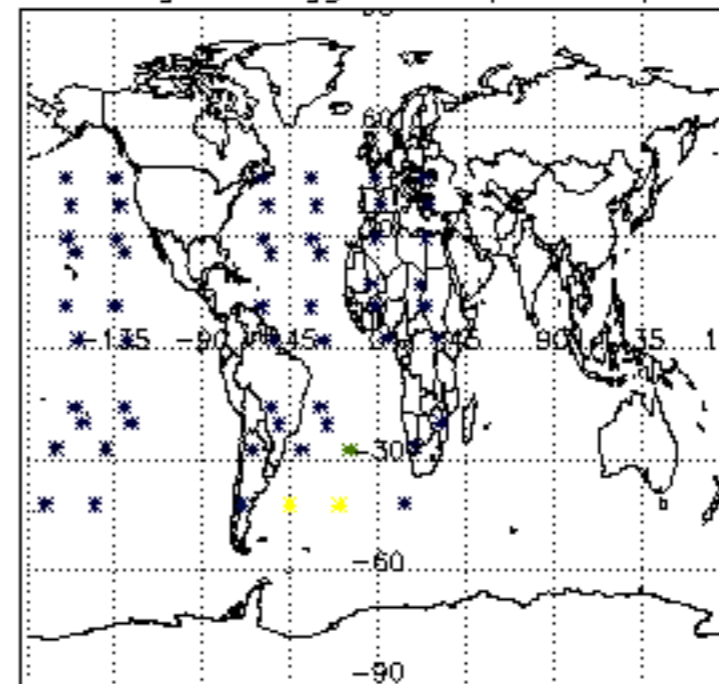
Percentage of flagged data per H2O profile

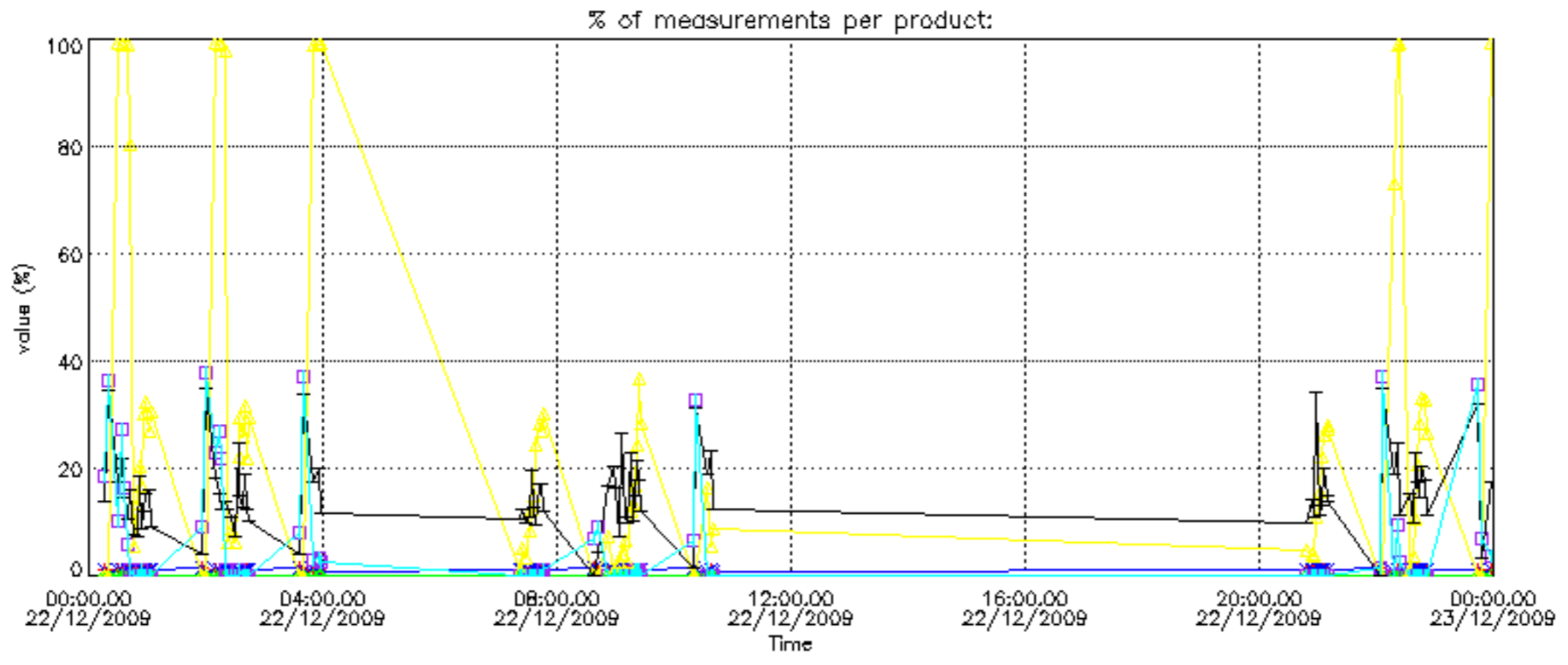


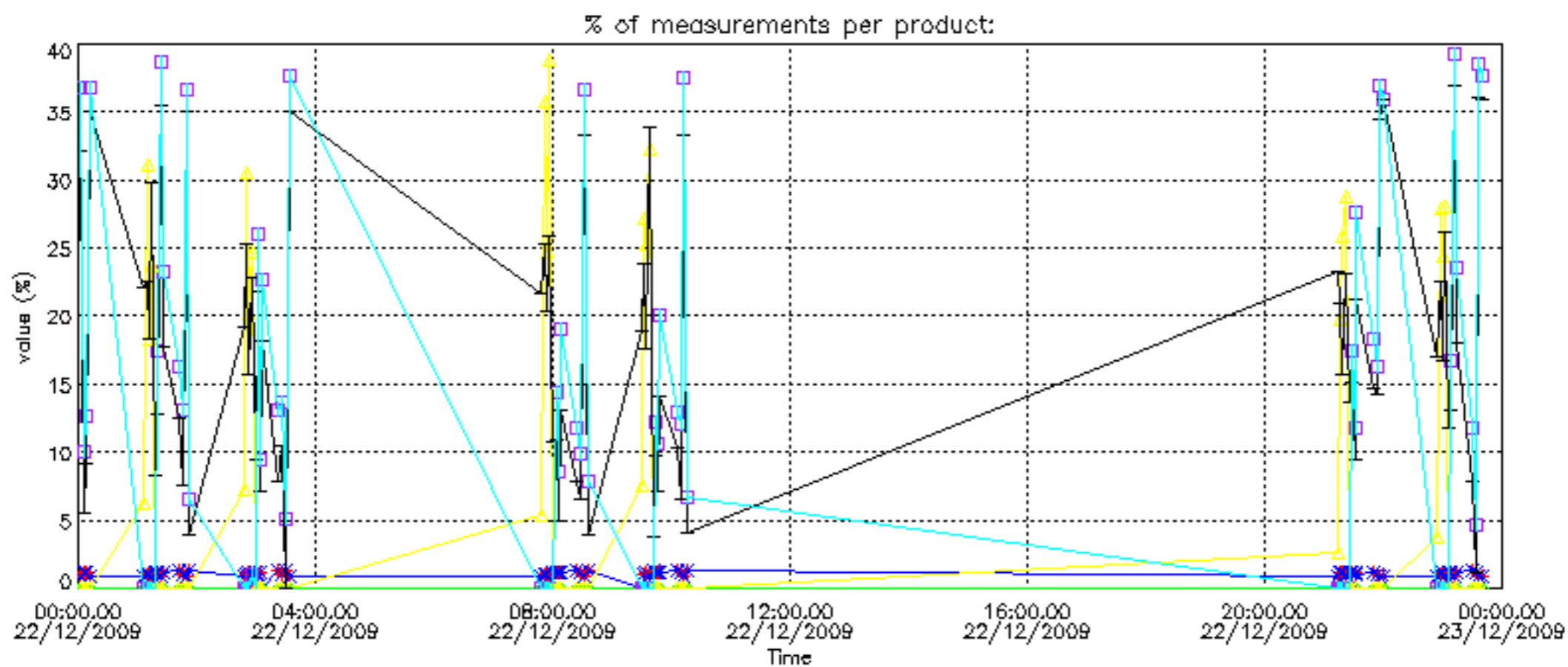
Percentage of flagged data per NO2 profile



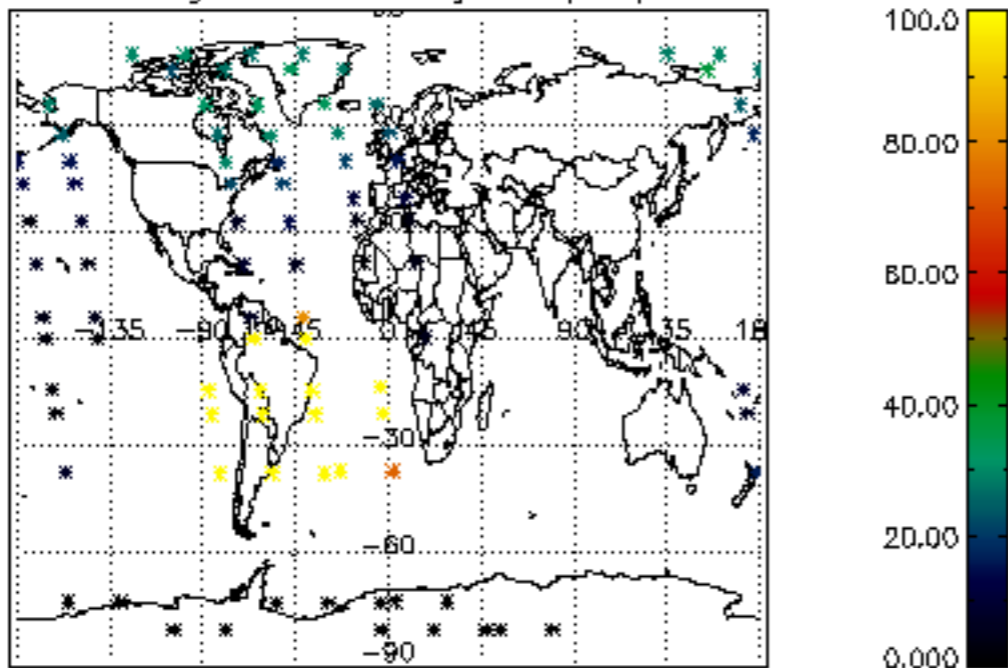
Percentage of flagged data per NO3 profile



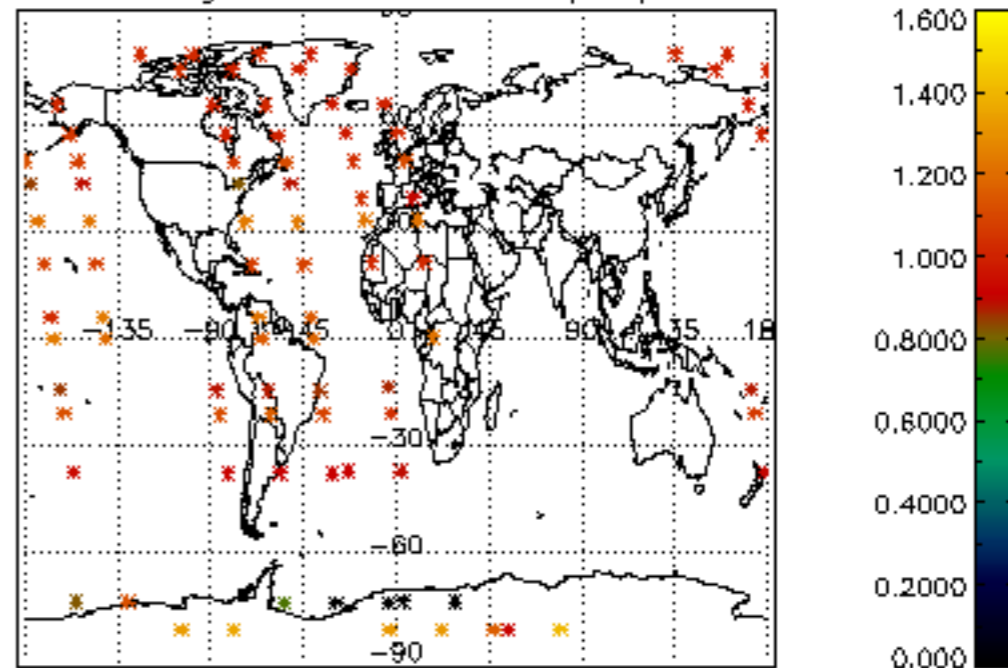




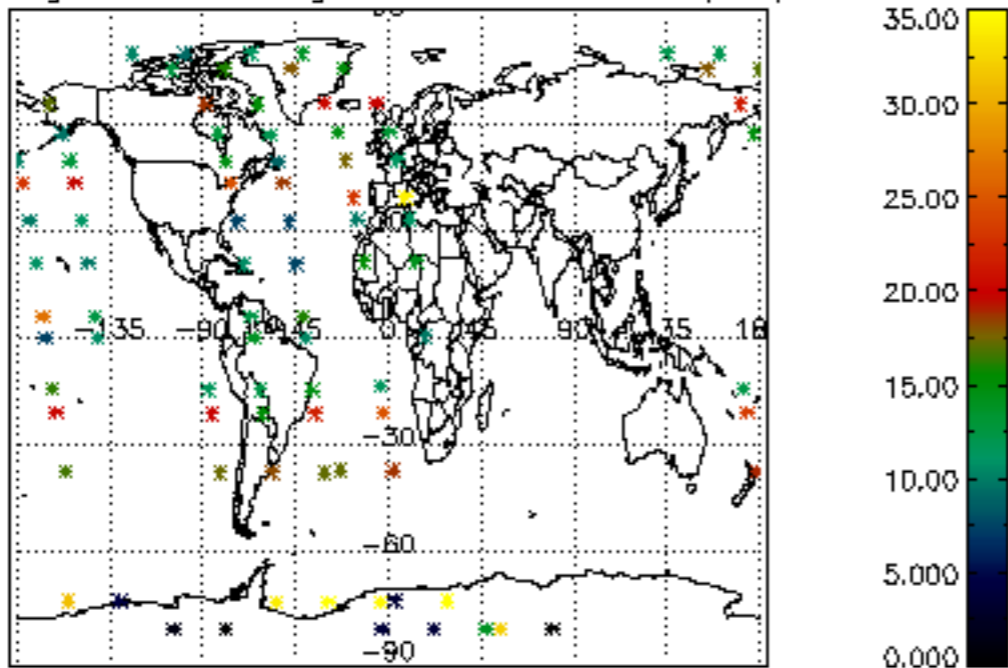
Percentage of cosmic ray hits per profile



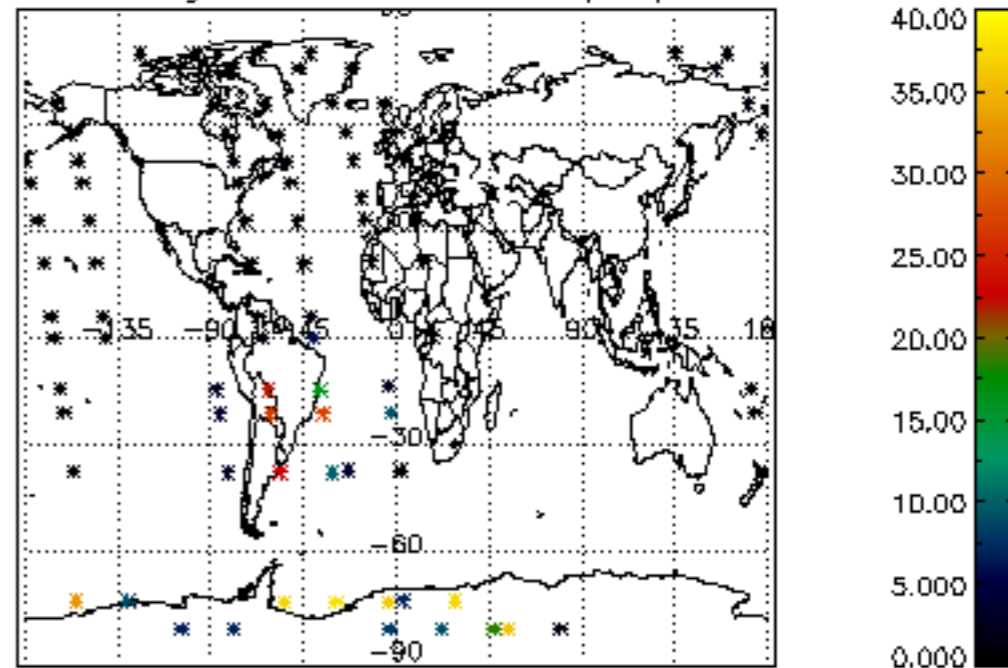
Percentage of datation errors per profile



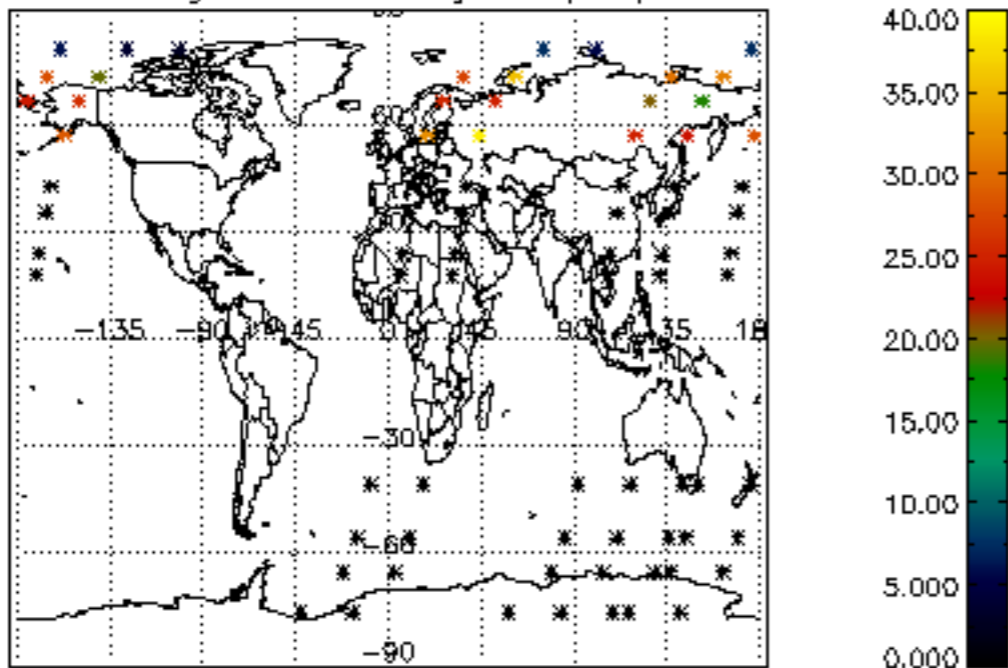
Percentage of star falling outside central band per profile



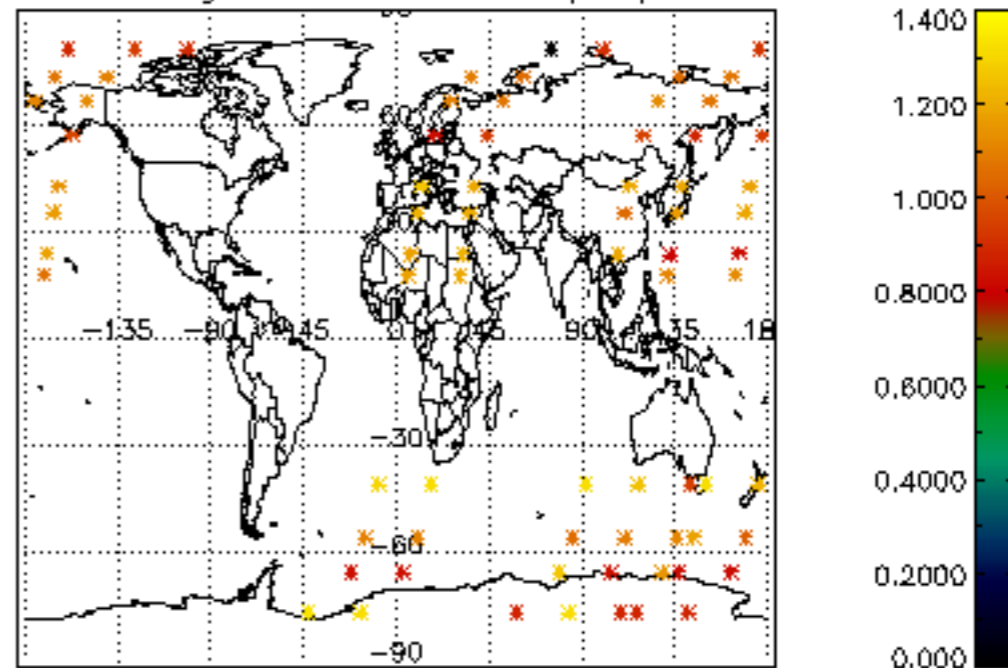
Percentage of saturation errors per profile



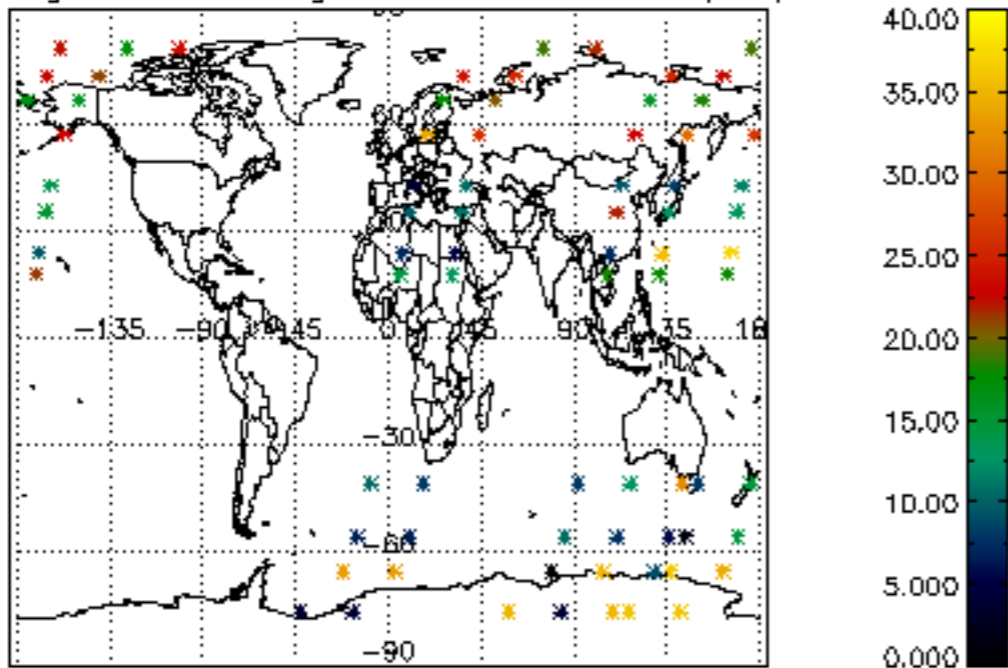
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

