

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [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	26APR2013 13:22:14
Data source version	GOMOS/6.01
Start time of products	19-10-2009 (19OCT2009 00:00:00)
Stop time of products	20-10-2009 (20OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	156
Nb of prods with errors	0

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

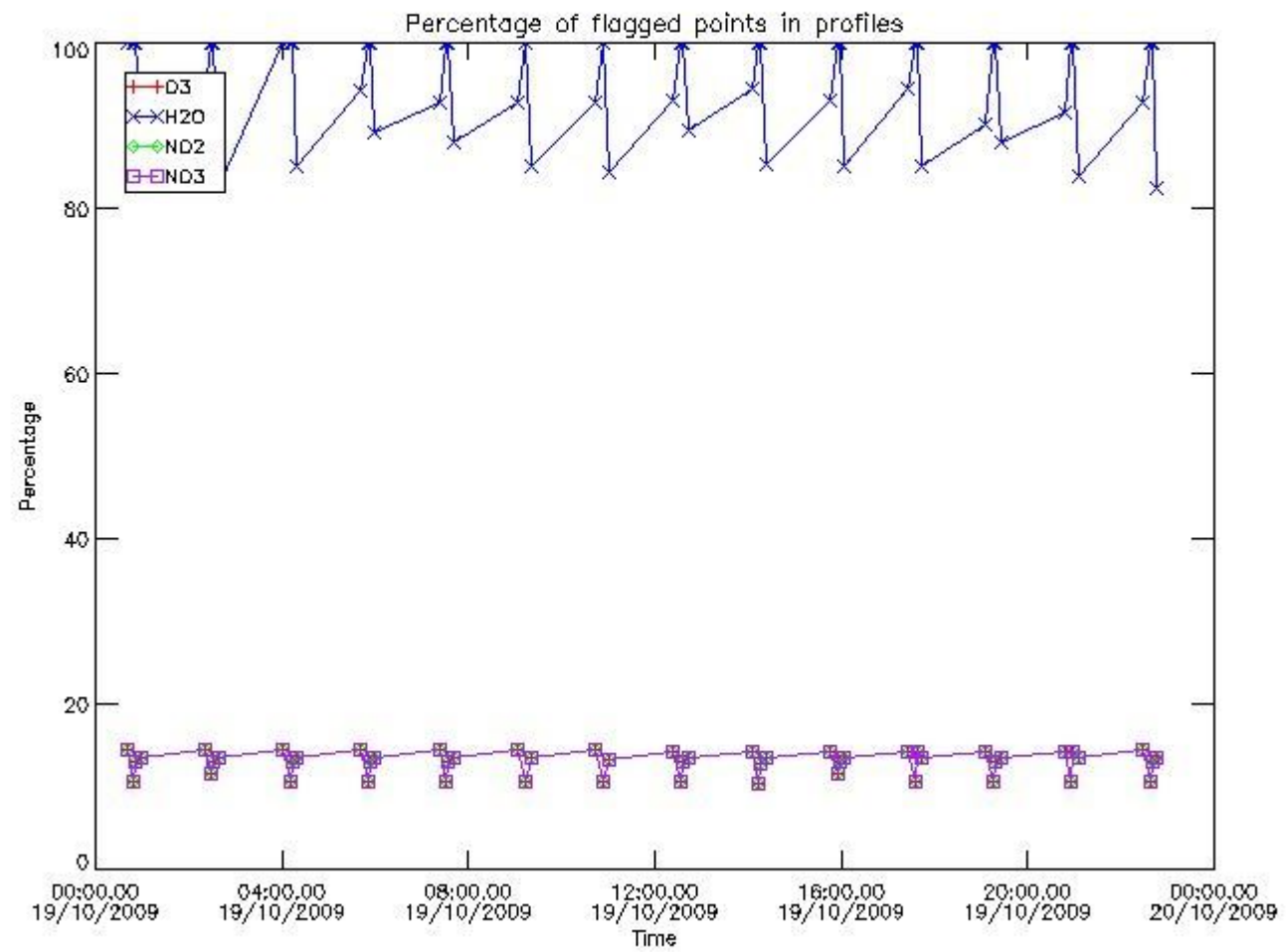
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20091019_000204_000000402083_00288_39921_4596.N1	19-OCT-2009 00:02:04	Bright	39.500	160	23Gam Per	2.9300	4700.0	79	39921	No
2	GOM_NL__2PRFIN20091019_002842_000000312083_00288_39921_4597.N1	19-OCT-2009 00:28:42	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39921	No
3	GOM_NL__2PRFIN20091019_003203_000000302083_00288_39921_4598.N1	19-OCT-2009 00:32:03	Bright	29.500	22	32Alp Leo	1.3600	15200.	59	39921	No
4	GOM_NL__2PRFIN20091019_003944_000000362083_00288_39921_4599.N1	19-OCT-2009 00:39:44	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39921	No
5	GOM_NL__2PRFIN20091019_004907_000000482083_00288_39921_4600.N1	19-OCT-2009 00:49:07	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39921	No
6	GOM_NL__2PRFIN20091019_005147_000000392083_00288_39921_4601.N1	19-OCT-2009 00:51:47	Dark	39.000	70	Zet Pup	2.2460	39000.	78	39921	No
7	GOM_NL__2PRFIN20091019_005807_000000382083_00289_39922_4601.N1	19-OCT-2009 00:58:07	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39922	No
8	GOM_NL__2PRFIN20091019_010939_000000352083_00289_39922_4602.N1	19-OCT-2009 01:09:39	Straylight	35.000	157	The1Eri	2.9060	9300.0	70	39922	No
9	GOM_NL__2PRFIN20091019_013039_000000392083_00289_39922_4603.N1	19-OCT-2009 01:30:39	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	39922	No
10	GOM_NL__2PRFIN20091019_013412_000000352083_00289_39922_4604.N1	19-OCT-2009 01:34:12	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39922	No
11	GOM_NL__2PRFIN20091019_013534_000000402083_00289_39922_4605.N1	19-OCT-2009 01:35:34	Bright	39.500	173	4Bet Tri	3.0040	8900.0	79	39922	No
12	GOM_NL__2PRFIN20091019_013729_000000382083_00289_39922_4606.N1	19-OCT-2009 01:37:29	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39922	No
13	GOM_NL__2PRFIN20091019_014239_000000402083_00289_39922_4607.N1	19-OCT-2009 01:42:39	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39922	No
14	GOM_NL__2PRFIN20091019_020919_000000312083_00289_39922_4608.N1	19-OCT-2009 02:09:19	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39922	No
15	GOM_NL__2PRFIN20091019_021239_000000292083_00289_39922_4609.N1	19-OCT-2009 02:12:39	Twilight_stray	28.500	22	32Alp Leo	1.3600	15200.	57	39922	No
16	GOM_NL__2PRFIN20091019_022020_000000362083_00289_39922_4610.N1	19-OCT-2009 02:20:20	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39922	No
17	GOM_NL__2PRFIN20091019_022944_000000482083_00289_39922_4611.N1	19-OCT-2009 02:29:44	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39922	No
18	GOM_NL__2PRFIN20091019_023224_000000392083_00289_39922_4612.N1	19-OCT-2009 02:32:24	Dark	39.000	70	Zet Pup	2.2460	39000.	78	39922	No
19	GOM_NL__2PRFIN20091019_023844_000000382083_00290_39923_4612.N1	19-OCT-2009 02:38:44	Dark	38.000	2	Alp Car	-0.73600	7000.0	76	39923	No
20	GOM_NL__2PRFIN20091019_025016_000000352083_00290_39923_4613.N1	19-OCT-2009 02:50:16	Straylight	34.500	157	The1Eri	2.9060	9300.0	69	39923	No
21	GOM_NL__2PRFIN20091019_031115_000000392083_00290_39923_4614.N1	19-OCT-2009 03:11:15	Bright	39.000	105	6Bet Ari	2.6450	8900.0	78	39923	No
22	GOM_NL__2PRFIN20091019_031448_000000342083_00290_39923_4615.N1	19-OCT-2009 03:14:48	Bright	34.000	53	43Bet And	2.0480	3300.0	68	39923	No
23	GOM_NL__2PRFIN20091019_031609_000000402083_00290_39923_4616.N1	19-OCT-2009 03:16:09	Bright	39.500	173	4Bet Tri	3.0040	8900.0	79	39923	No
24	GOM_NL__2PRFIN20091019_031804_000000382083_00290_39923_4617.N1	19-OCT-2009 03:18:04	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39923	No
25	GOM_NL__2PRFIN20091019_032315_000000392083_00290_39923_4618.N1	19-OCT-2009 03:23:15	Bright	39.000	160	23Gam Per	2.9300	4700.0	78	39923	No
26	GOM_NL__2PRFIN20091019_034955_000000312083_00290_39923_4619.N1	19-OCT-2009 03:49:55	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39923	No
27	GOM_NL__2PRFIN20091019_035316_000000292083_00290_39923_4620.N1	19-OCT-2009 03:53:16	Bright	29.000	22	32Alp Leo	1.3600	15200.	58	39923	No
28	GOM_NL__2PRFIN20091019_040057_000000352083_00290_39923_4621.N1	19-OCT-2009 04:00:57	Dark	35.000	48	30Alp Hya	1.9770	4100.0	70	39923	No
29	GOM_NL__2PRFIN20091019_041022_000000482083_00290_39923_4622.N1	19-OCT-2009 04:10:22	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39923	No
30	GOM_NL__2PRFIN20091019_041301_000000402083_00290_39923_4623.N1	19-OCT-2009 04:13:01	Dark	39.500	70	Zet Pup	2.2460	39000.	79	39923	No
31	GOM_NL__2PRFIN20091019_041921_000000382083_00291_39924_4643.N1	19-OCT-2009 04:19:21	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39924	No
32	GOM_NL__2PRFIN20091019_043052_000000352083_00291_39924_4644.N1	19-OCT-2009 04:30:52	Straylight	34.500	157	The1Eri	2.9060	9300.0	69	39924	No
33	GOM_NL__2PRFIN20091019_045150_000000392083_00291_39924_4645.N1	19-OCT-2009 04:51:50	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	39924	No
34	GOM_NL__2PRFIN20091019_045524_000000342083_00291_39924_4646.N1	19-OCT-2009 04:55:24	Bright	34.000	53	43Bet And	2.0480	3300.0	68	39924	No
35	GOM_NL__2PRFIN20091019_045840_000000382083_00291_39924_4647.N1	19-OCT-2009 04:58:40	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39924	No
36	GOM_NL__2PRFIN20091019_050350_000000392083_00291_39924_4648.N1	19-OCT-2009 05:03:50	Bright	38.500	160	23Gam Per	2.9300	4700.0	77	39924	No
37	GOM_NL__2PRFIN20091019_053031_000000312083_00291_39924_4649.N1	19-OCT-2009 05:30:31	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39924	No
38	GOM_NL__2PRFIN20091019_053352_000000292083_00291_39924_4650.N1	19-OCT-2009 05:33:52	Bright	29.000	22	32Alp Leo	1.3600	15200.	58	39924	No
39	GOM_NL__2PRFIN20091019_054134_000000362083_00291_39924_4651.N1	19-OCT-2009 05:41:34	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39924	No
40	GOM_NL__2PRFIN20091019_055059_000000482083_00291_39924_4652.N1	19-OCT-2009 05:50:59	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39924	No
41	GOM_NL__2PRFIN20091019_055338_000000402083_00291_39924_4653.N1	19-OCT-2009 05:53:38	Dark	39.500	70	Zet Pup	2.2460	39000.	79	39924	No
42	GOM_NL__2PRFIN20091019_055958_000000382083_00292_39925_4661.N1	19-OCT-2009 05:59:58	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39925	No





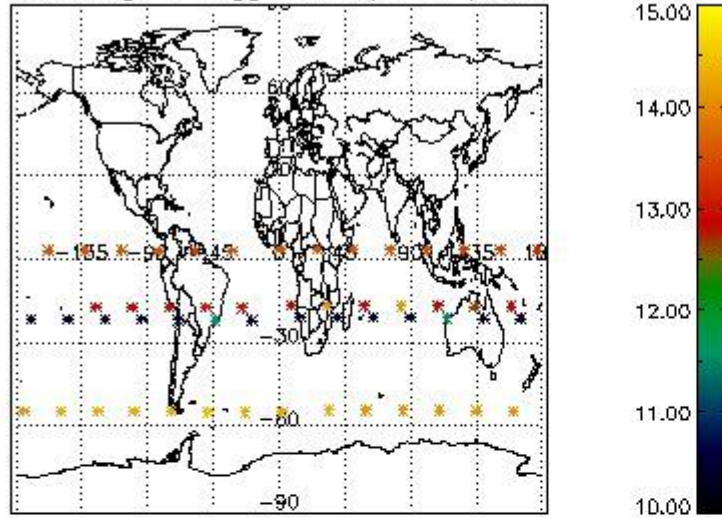
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

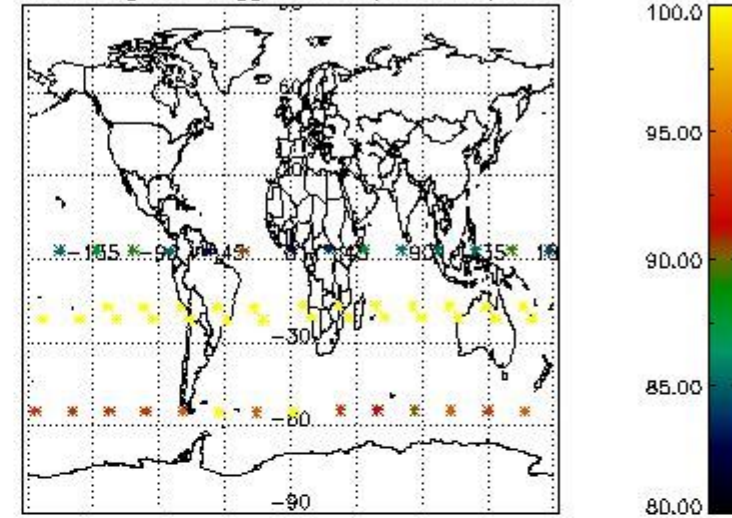


### 3.2 Plot quality information per product (world map)

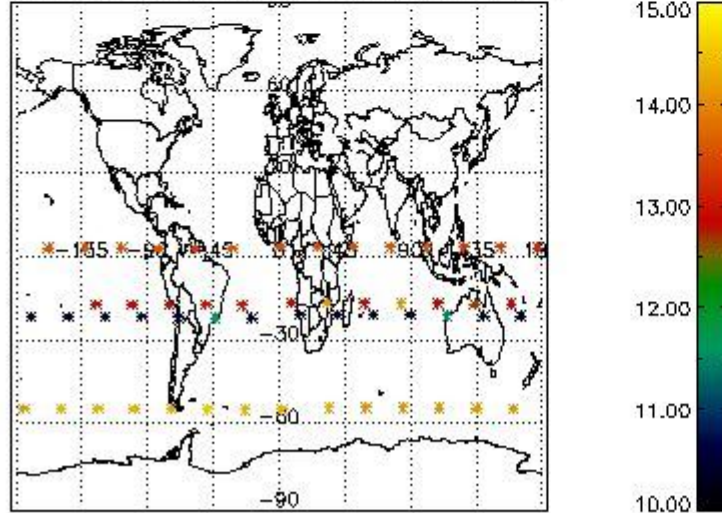
Percentage of flagged data per O3 profile



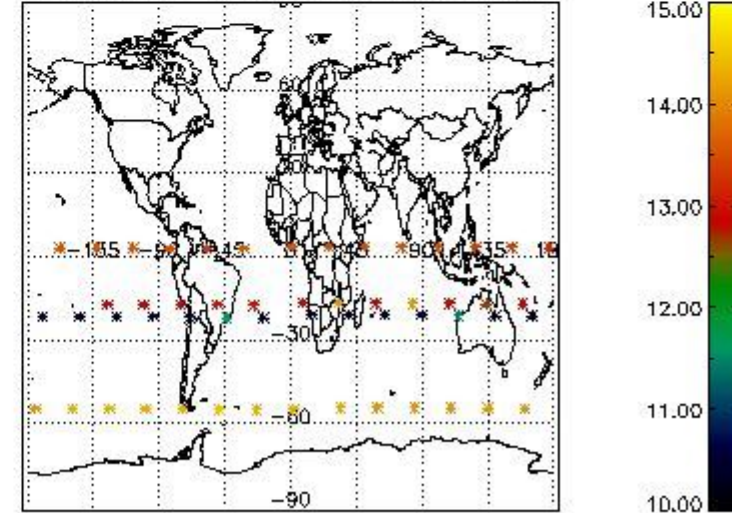
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

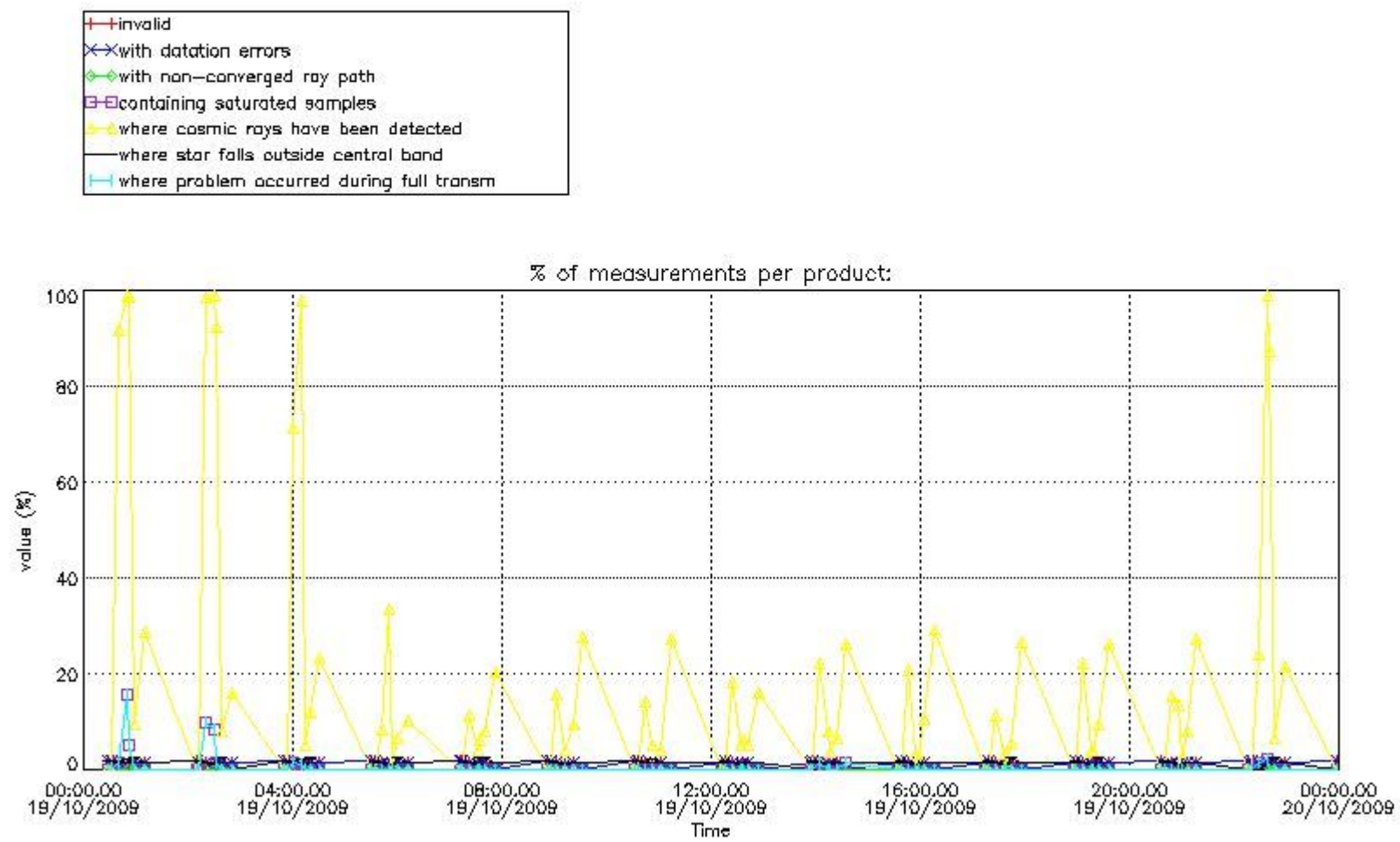


#### 4. Level 1 quality information per product

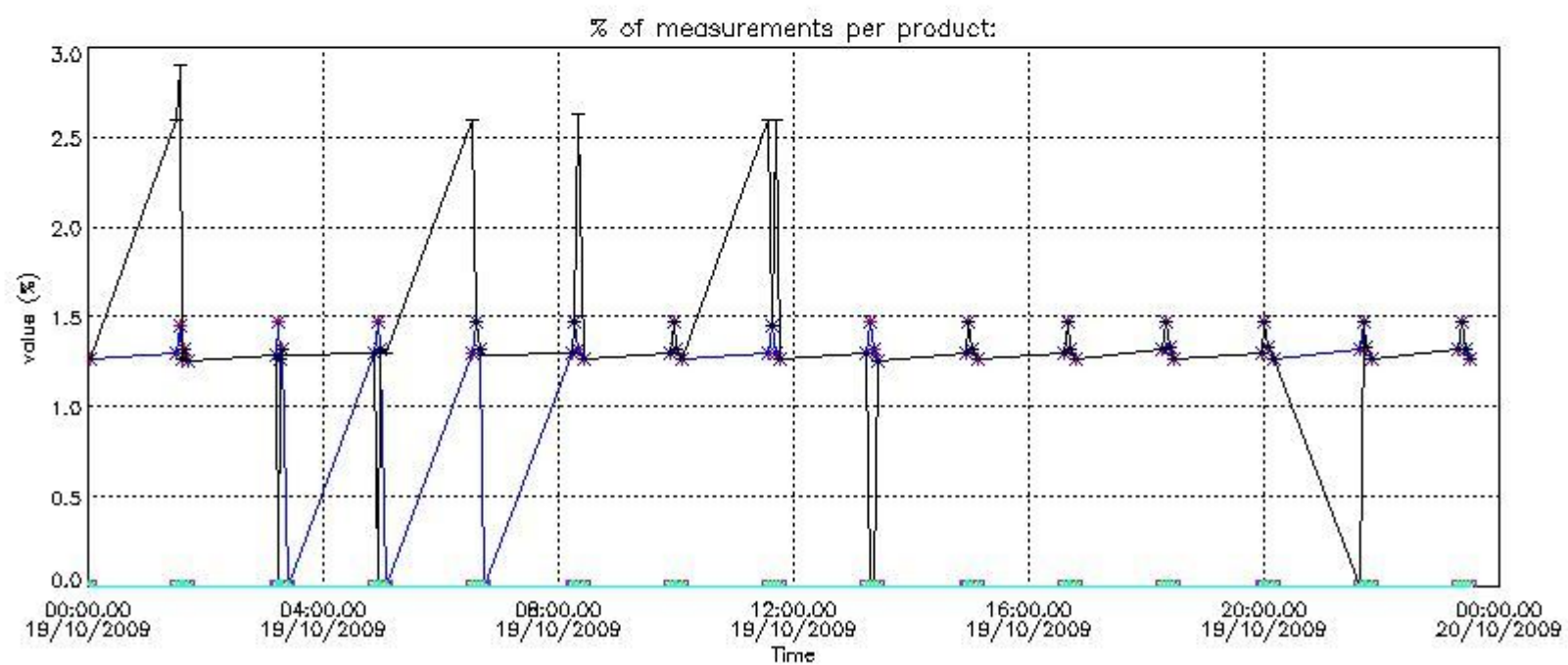
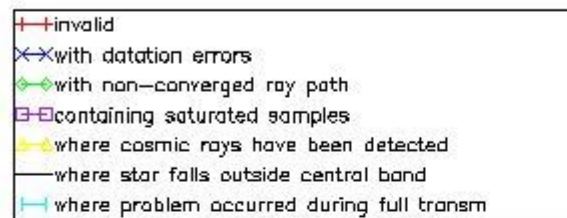
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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): ENVI SAT DESCENDING passes

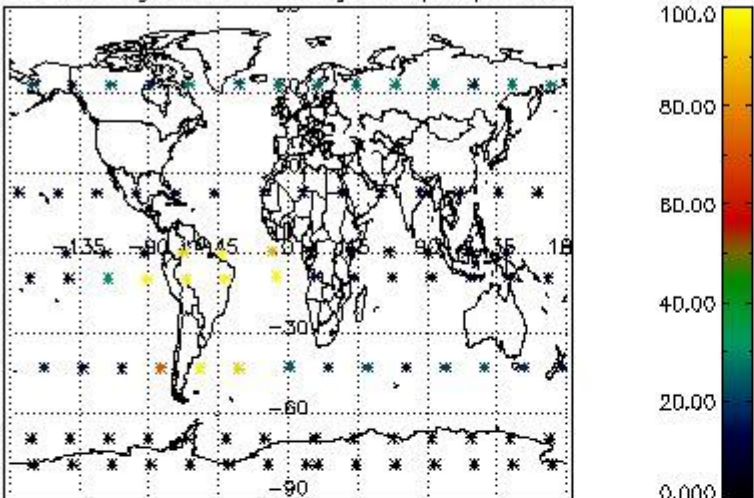


4.2 Plot quality information per product coming from level 1b processing (world map)

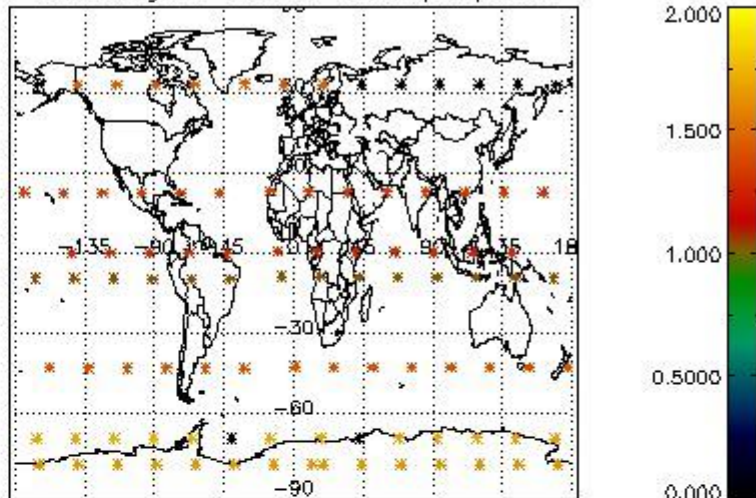
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



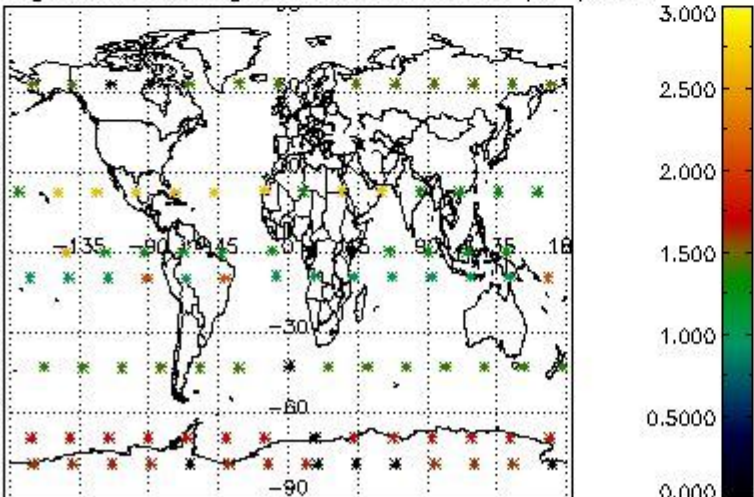
Percentage of cosmic ray hits per profile



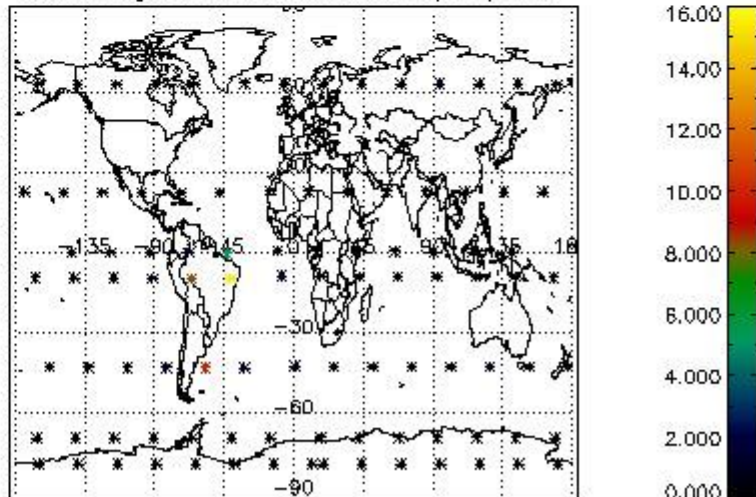
Percentage of datation errors per profile



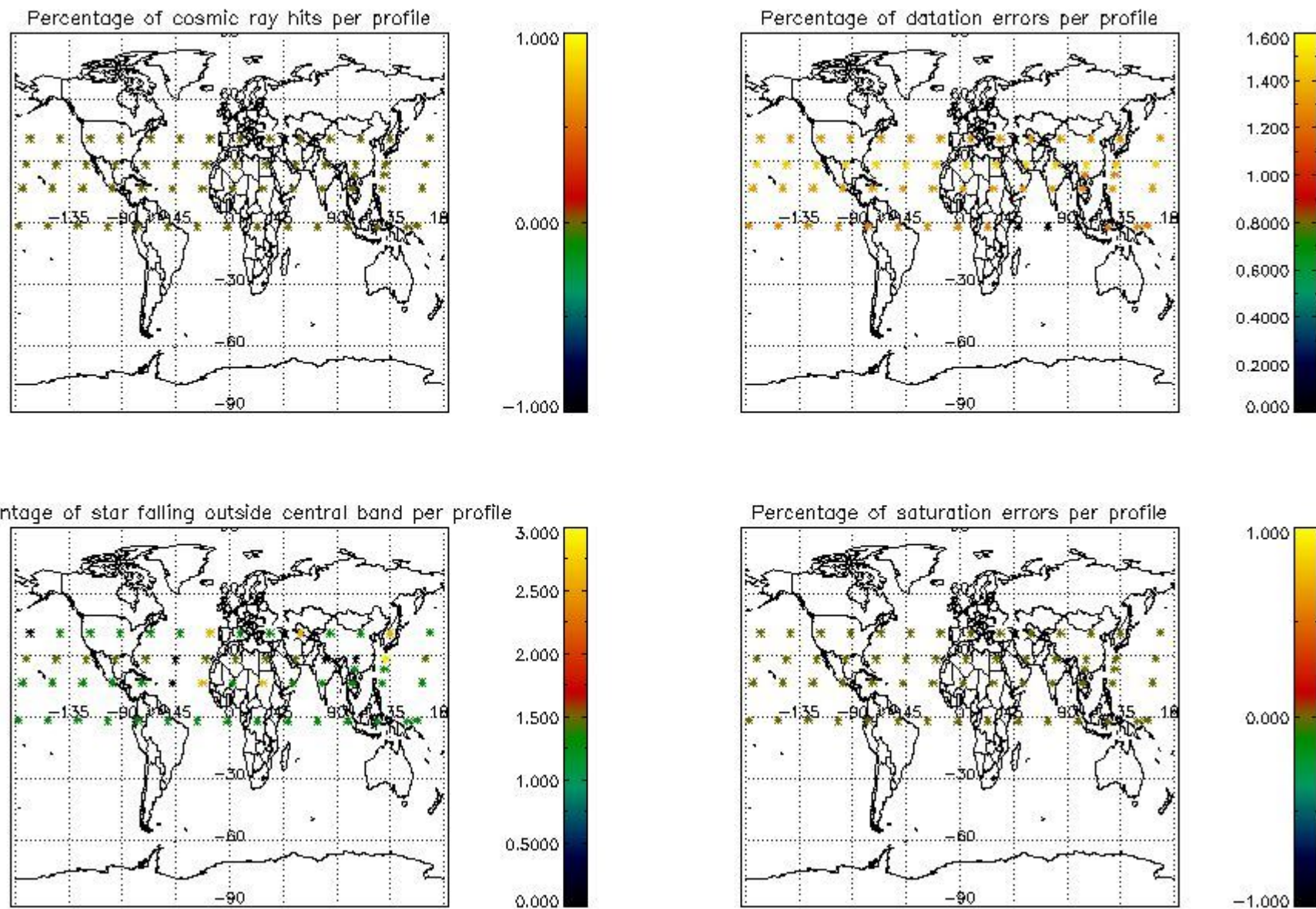
Percentage of star falling outside central band per profile



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

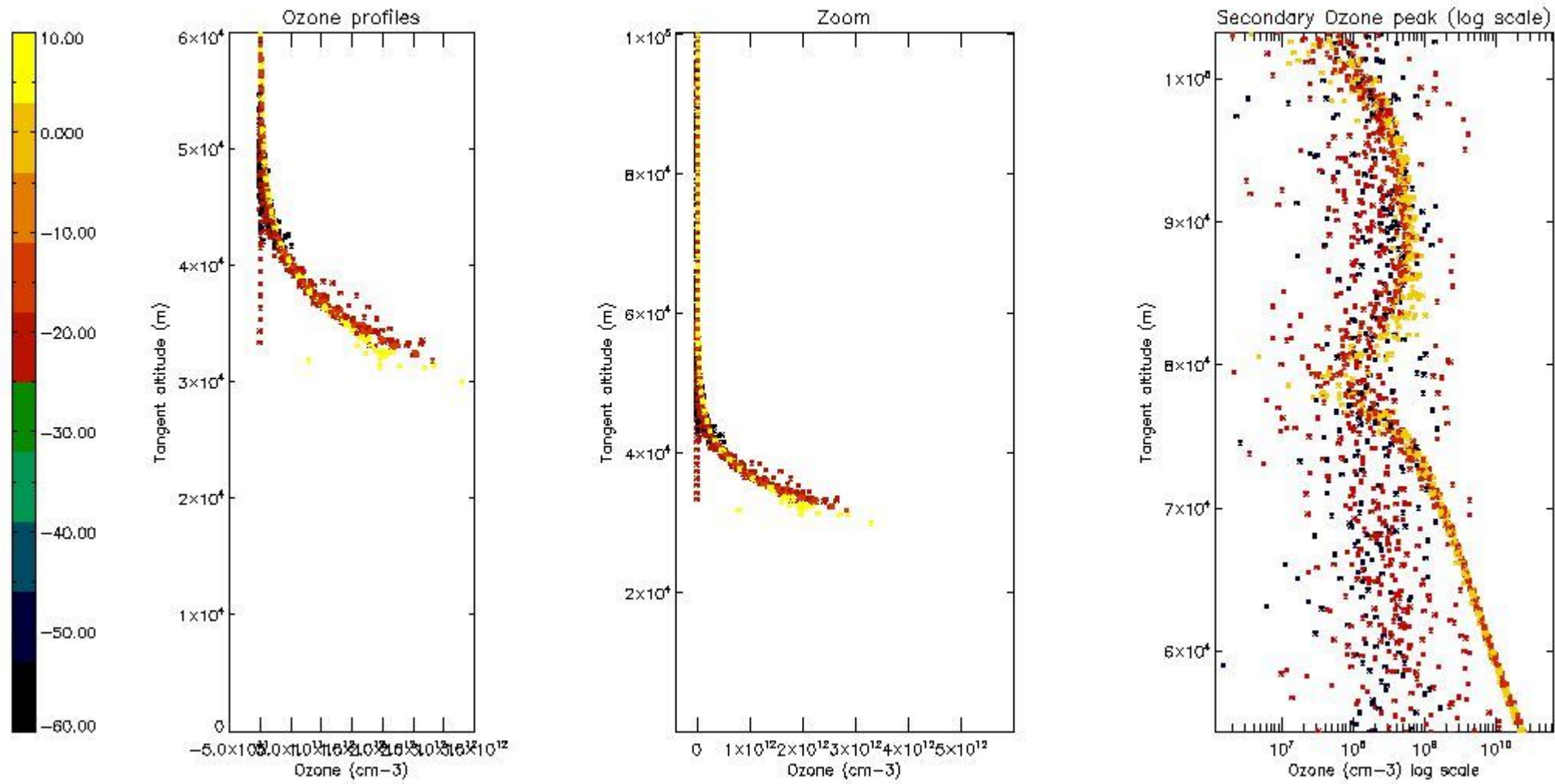
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	15

STD < 10	13
STD < 5	9

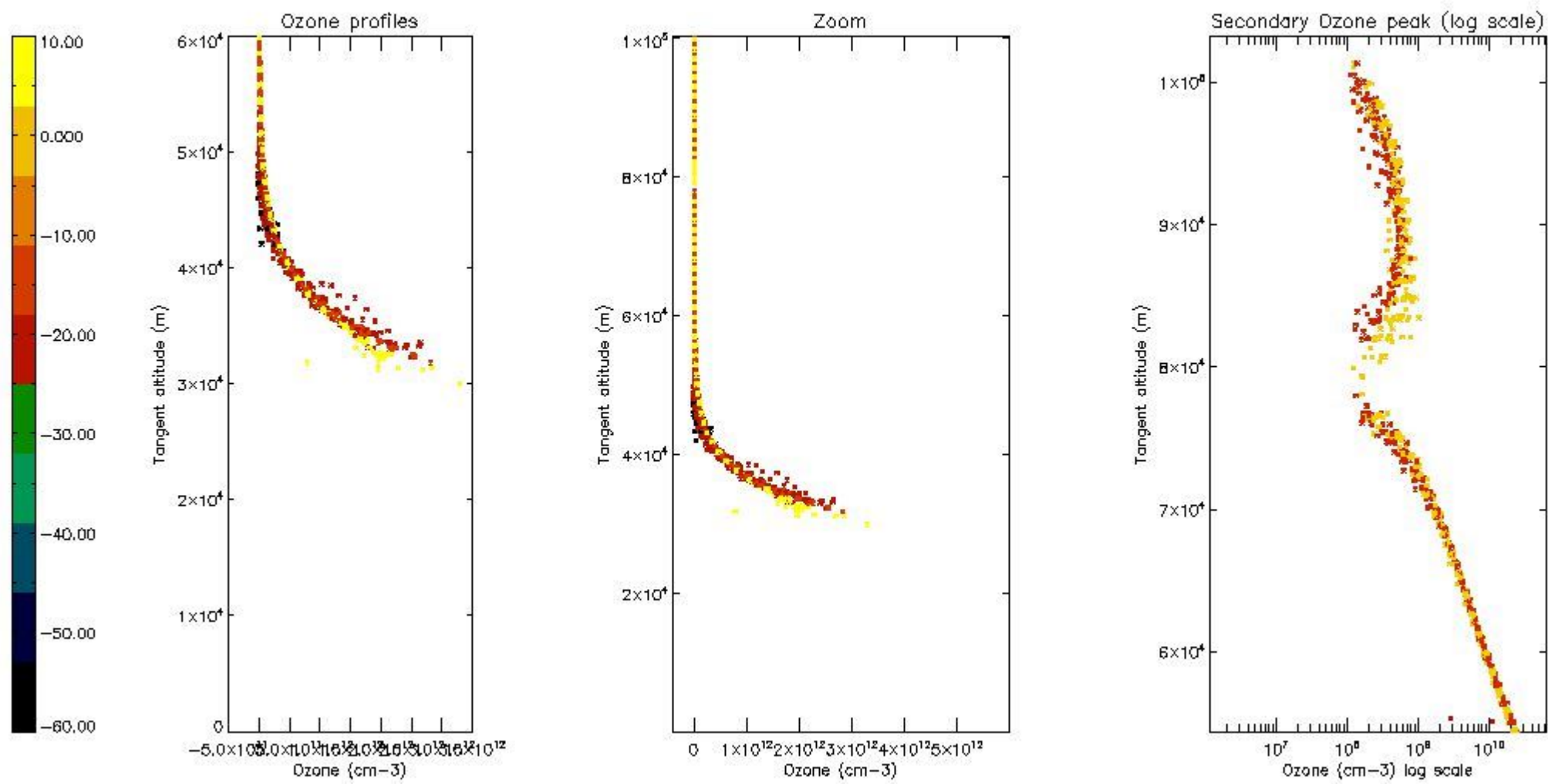
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



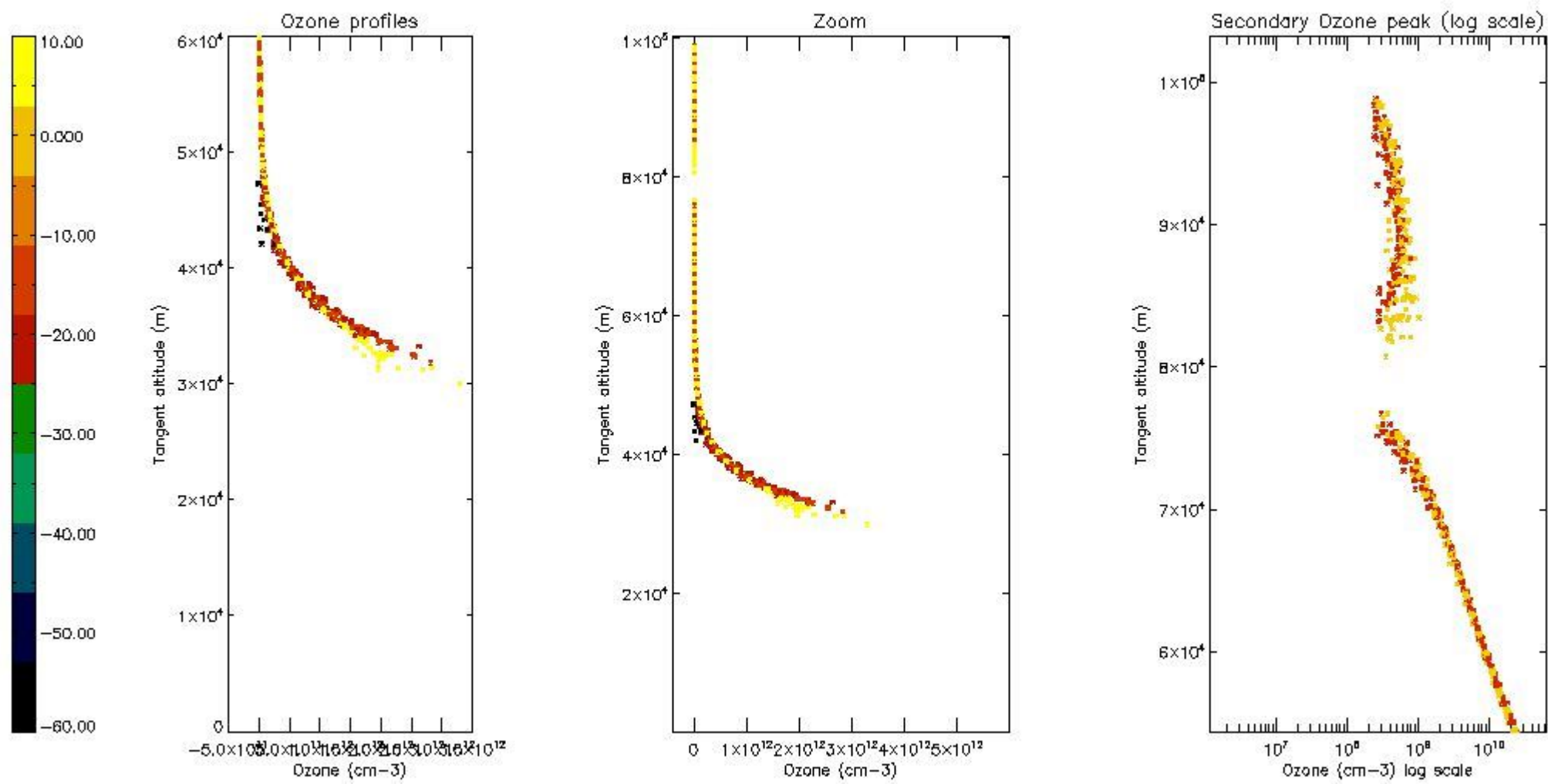
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



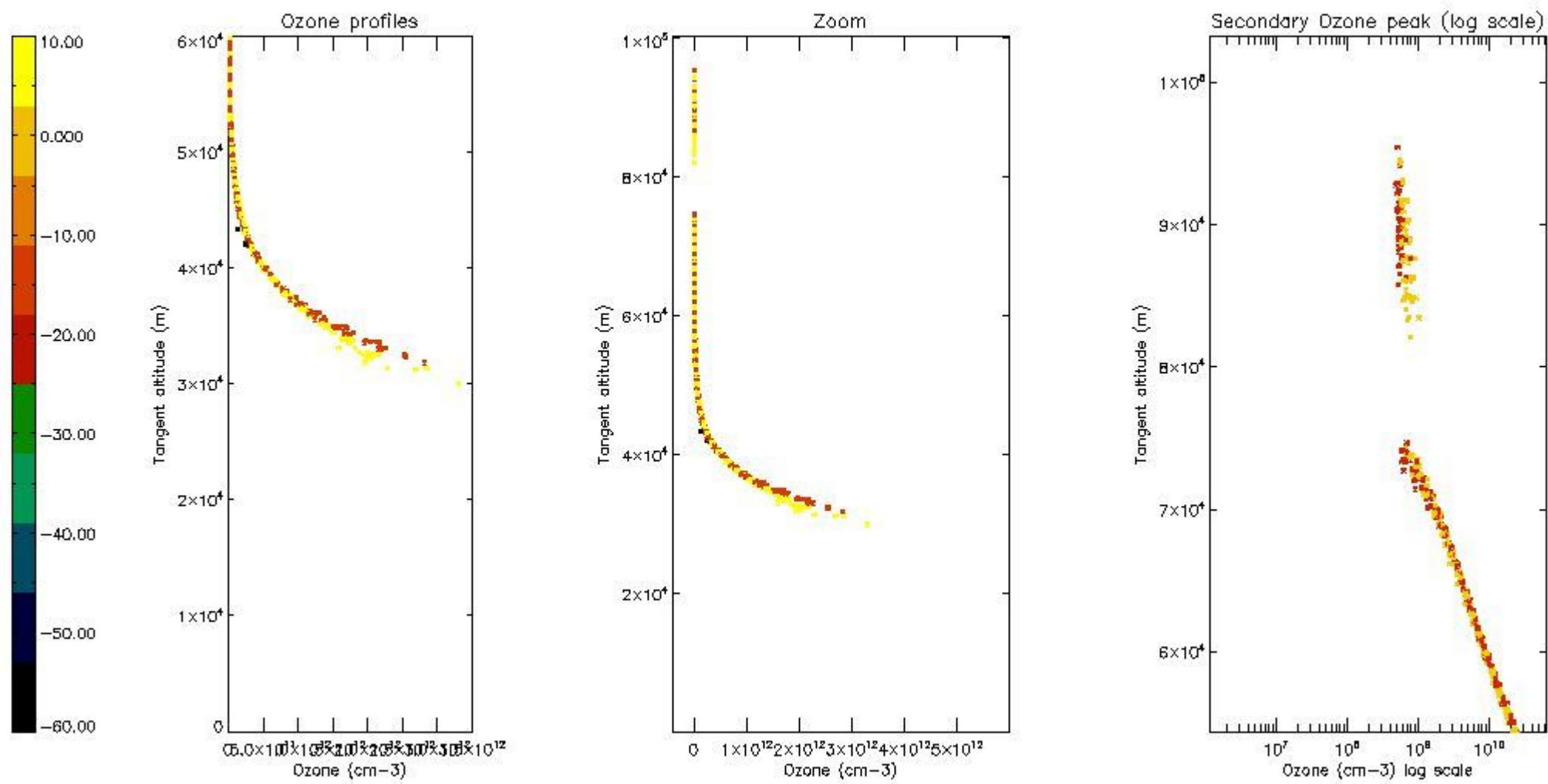
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



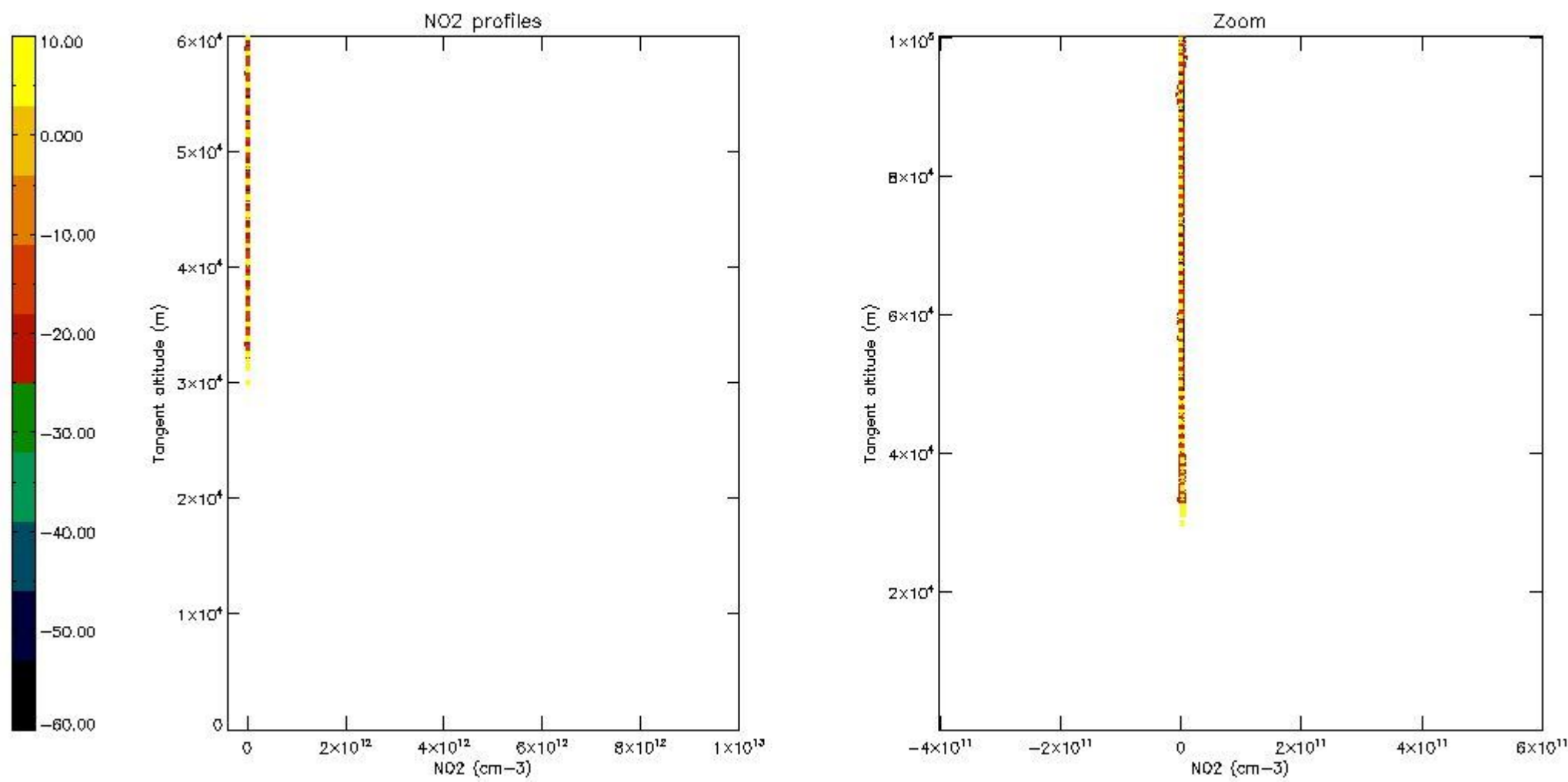
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



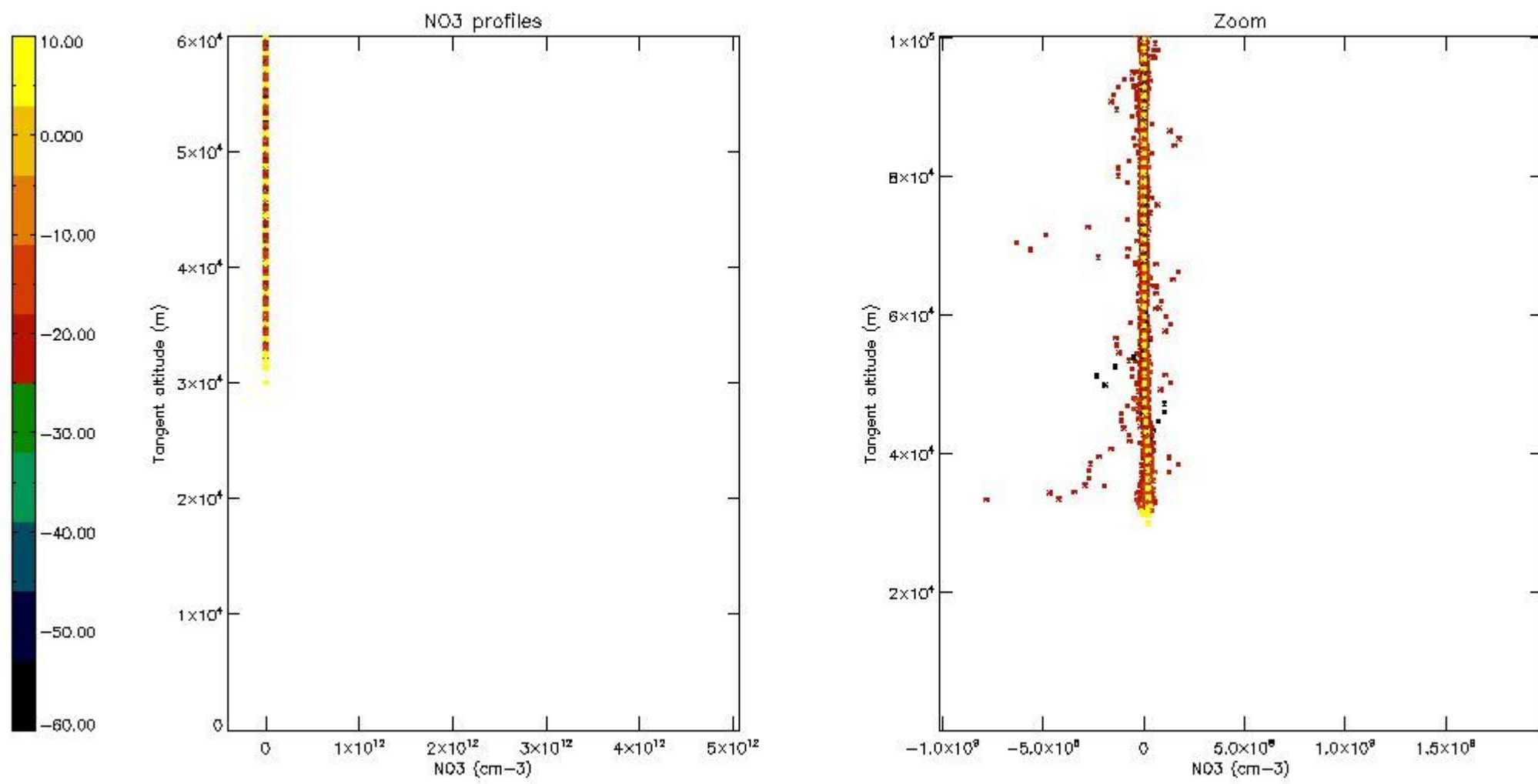
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

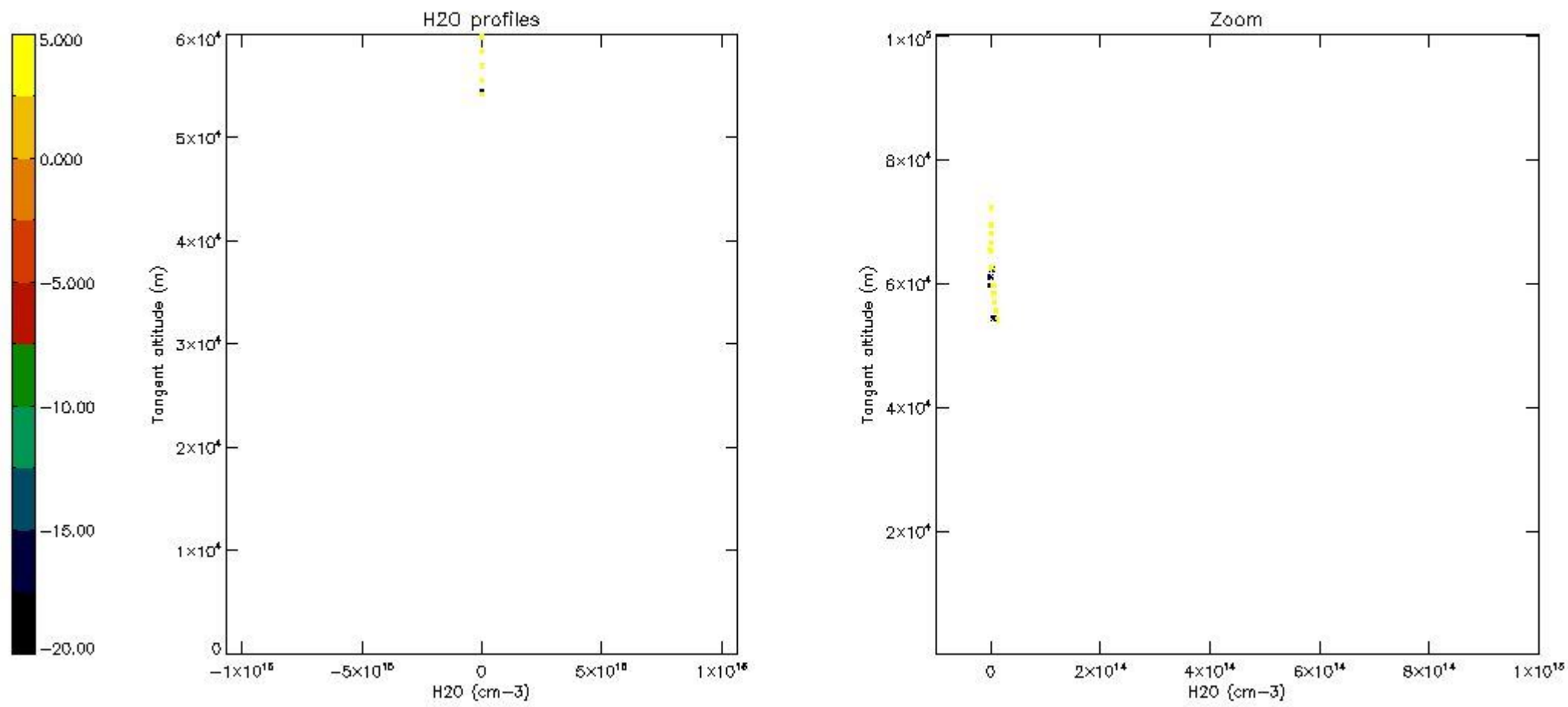
The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O 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	19-OCT-2009 00:02:04
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	19-OCT-2009 00:02:04
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	19-OCT-2009 00:02:04

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [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	26APR2013 13:22:14
Data source version	GOMOS/6.01
Start time of products	19-10-2009 (19OCT2009 00:00:00)
Stop time of products	20-10-2009 (20OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	156
Nb of prods with errors	0

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

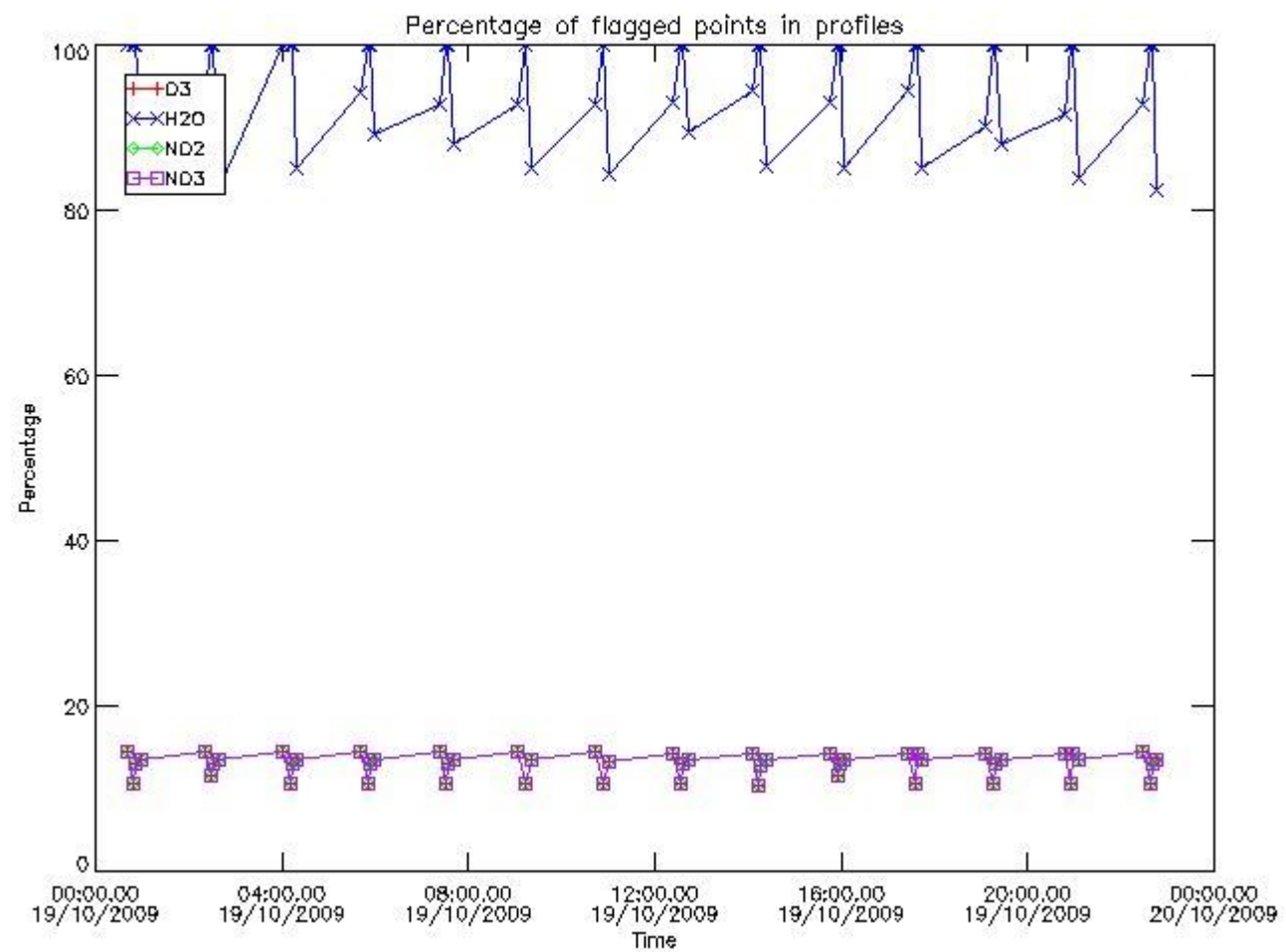
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20091019_000204_000000402083_00288_39921_4596.N1	19-OCT-2009 00:02:04	Bright	39.500	160	23Gam Per	2.9300	4700.0	79	39921	No
2	GOM_NL__2PRFIN20091019_002842_000000312083_00288_39921_4597.N1	19-OCT-2009 00:28:42	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39921	No
3	GOM_NL__2PRFIN20091019_003203_000000302083_00288_39921_4598.N1	19-OCT-2009 00:32:03	Bright	29.500	22	32Alp Leo	1.3600	15200.	59	39921	No
4	GOM_NL__2PRFIN20091019_003944_000000362083_00288_39921_4599.N1	19-OCT-2009 00:39:44	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39921	No
5	GOM_NL__2PRFIN20091019_004907_000000482083_00288_39921_4600.N1	19-OCT-2009 00:49:07	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39921	No
6	GOM_NL__2PRFIN20091019_005147_000000392083_00288_39921_4601.N1	19-OCT-2009 00:51:47	Dark	39.000	70	Zet Pup	2.2460	39000.	78	39921	No
7	GOM_NL__2PRFIN20091019_005807_000000382083_00289_39922_4601.N1	19-OCT-2009 00:58:07	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39922	No
8	GOM_NL__2PRFIN20091019_010939_000000352083_00289_39922_4602.N1	19-OCT-2009 01:09:39	Straylight	35.000	157	The1Eri	2.9060	9300.0	70	39922	No
9	GOM_NL__2PRFIN20091019_013039_000000392083_00289_39922_4603.N1	19-OCT-2009 01:30:39	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	39922	No
10	GOM_NL__2PRFIN20091019_013412_000000352083_00289_39922_4604.N1	19-OCT-2009 01:34:12	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39922	No
11	GOM_NL__2PRFIN20091019_013534_000000402083_00289_39922_4605.N1	19-OCT-2009 01:35:34	Bright	39.500	173	4Bet Tri	3.0040	8900.0	79	39922	No
12	GOM_NL__2PRFIN20091019_013729_000000382083_00289_39922_4606.N1	19-OCT-2009 01:37:29	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39922	No
13	GOM_NL__2PRFIN20091019_014239_000000402083_00289_39922_4607.N1	19-OCT-2009 01:42:39	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39922	No
14	GOM_NL__2PRFIN20091019_020919_000000312083_00289_39922_4608.N1	19-OCT-2009 02:09:19	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39922	No
15	GOM_NL__2PRFIN20091019_021239_000000292083_00289_39922_4609.N1	19-OCT-2009 02:12:39	Twilight_stray	28.500	22	32Alp Leo	1.3600	15200.	57	39922	No
16	GOM_NL__2PRFIN20091019_022020_000000362083_00289_39922_4610.N1	19-OCT-2009 02:20:20	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39922	No
17	GOM_NL__2PRFIN20091019_022944_000000482083_00289_39922_4611.N1	19-OCT-2009 02:29:44	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39922	No
18	GOM_NL__2PRFIN20091019_023224_000000392083_00289_39922_4612.N1	19-OCT-2009 02:32:24	Dark	39.000	70	Zet Pup	2.2460	39000.	78	39922	No
19	GOM_NL__2PRFIN20091019_023844_000000382083_00290_39923_4612.N1	19-OCT-2009 02:38:44	Dark	38.000	2	Alp Car	-0.73600	7000.0	76	39923	No
20	GOM_NL__2PRFIN20091019_025016_000000352083_00290_39923_4613.N1	19-OCT-2009 02:50:16	Straylight	34.500	157	The1Eri	2.9060	9300.0	69	39923	No
21	GOM_NL__2PRFIN20091019_031115_000000392083_00290_39923_4614.N1	19-OCT-2009 03:11:15	Bright	39.000	105	6Bet Ari	2.6450	8900.0	78	39923	No
22	GOM_NL__2PRFIN20091019_031448_000000342083_00290_39923_4615.N1	19-OCT-2009 03:14:48	Bright	34.000	53	43Bet And	2.0480	3300.0	68	39923	No
23	GOM_NL__2PRFIN20091019_031609_000000402083_00290_39923_4616.N1	19-OCT-2009 03:16:09	Bright	39.500	173	4Bet Tri	3.0040	8900.0	79	39923	No
24	GOM_NL__2PRFIN20091019_031804_000000382083_00290_39923_4617.N1	19-OCT-2009 03:18:04	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39923	No
25	GOM_NL__2PRFIN20091019_032315_000000392083_00290_39923_4618.N1	19-OCT-2009 03:23:15	Bright	39.000	160	23Gam Per	2.9300	4700.0	78	39923	No
26	GOM_NL__2PRFIN20091019_034955_000000312083_00290_39923_4619.N1	19-OCT-2009 03:49:55	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39923	No
27	GOM_NL__2PRFIN20091019_035316_000000292083_00290_39923_4620.N1	19-OCT-2009 03:53:16	Bright	29.000	22	32Alp Leo	1.3600	15200.	58	39923	No
28	GOM_NL__2PRFIN20091019_040057_000000352083_00290_39923_4621.N1	19-OCT-2009 04:00:57	Dark	35.000	48	30Alp Hya	1.9770	4100.0	70	39923	No
29	GOM_NL__2PRFIN20091019_041022_000000482083_00290_39923_4622.N1	19-OCT-2009 04:10:22	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39923	No
30	GOM_NL__2PRFIN20091019_041301_000000402083_00290_39923_4623.N1	19-OCT-2009 04:13:01	Dark	39.500	70	Zet Pup	2.2460	39000.	79	39923	No
31	GOM_NL__2PRFIN20091019_041921_000000382083_00291_39924_4643.N1	19-OCT-2009 04:19:21	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39924	No
32	GOM_NL__2PRFIN20091019_043052_000000352083_00291_39924_4644.N1	19-OCT-2009 04:30:52	Straylight	34.500	157	The1Eri	2.9060	9300.0	69	39924	No
33	GOM_NL__2PRFIN20091019_045150_000000392083_00291_39924_4645.N1	19-OCT-2009 04:51:50	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	39924	No
34	GOM_NL__2PRFIN20091019_045524_000000342083_00291_39924_4646.N1	19-OCT-2009 04:55:24	Bright	34.000	53	43Bet And	2.0480	3300.0	68	39924	No
35	GOM_NL__2PRFIN20091019_045840_000000382083_00291_39924_4647.N1	19-OCT-2009 04:58:40	Bright	38.000	73	57Gam1And	2.2600	13100.	76	39924	No
36	GOM_NL__2PRFIN20091019_050350_000000392083_00291_39924_4648.N1	19-OCT-2009 05:03:50	Bright	38.500	160	23Gam Per	2.9300	4700.0	77	39924	No
37	GOM_NL__2PRFIN20091019_053031_000000312083_00291_39924_4649.N1	19-OCT-2009 05:30:31	Twilight_stray	30.500	166	17Eps Leo	2.9800	6000.0	61	39924	No
38	GOM_NL__2PRFIN20091019_053352_000000292083_00291_39924_4650.N1	19-OCT-2009 05:33:52	Bright	29.000	22	32Alp Leo	1.3600	15200.	58	39924	No
39	GOM_NL__2PRFIN20091019_054134_000000362083_00291_39924_4651.N1	19-OCT-2009 05:41:34	Dark	35.500	48	30Alp Hya	1.9770	4100.0	71	39924	No
40	GOM_NL__2PRFIN20091019_055059_000000482083_00291_39924_4652.N1	19-OCT-2009 05:50:59	Dark	48.000	132	15Rho Pup	2.8030	6900.0	96	39924	No
41	GOM_NL__2PRFIN20091019_055338_000000402083_00291_39924_4653.N1	19-OCT-2009 05:53:38	Dark	39.500	70	Zet Pup	2.2460	39000.	79	39924	No
42	GOM_NL__2PRFIN20091019_055958_000000382083_00292_39925_4661.N1	19-OCT-2009 05:59:58	Dark	37.500	2	Alp Car	-0.73600	7000.0	75	39925	No





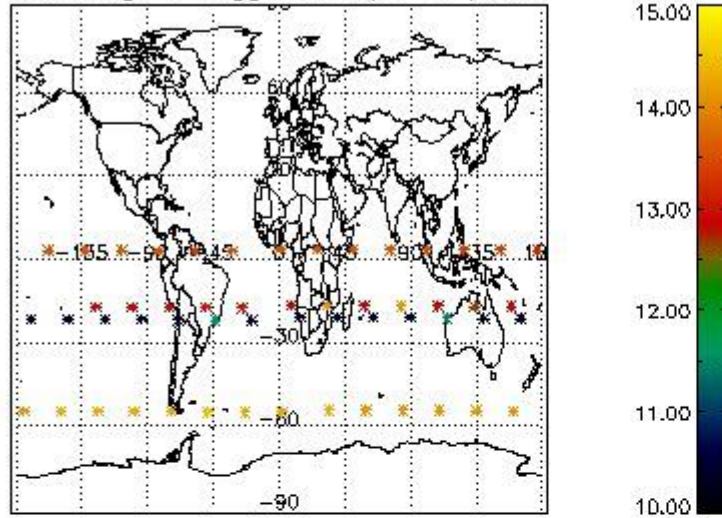
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

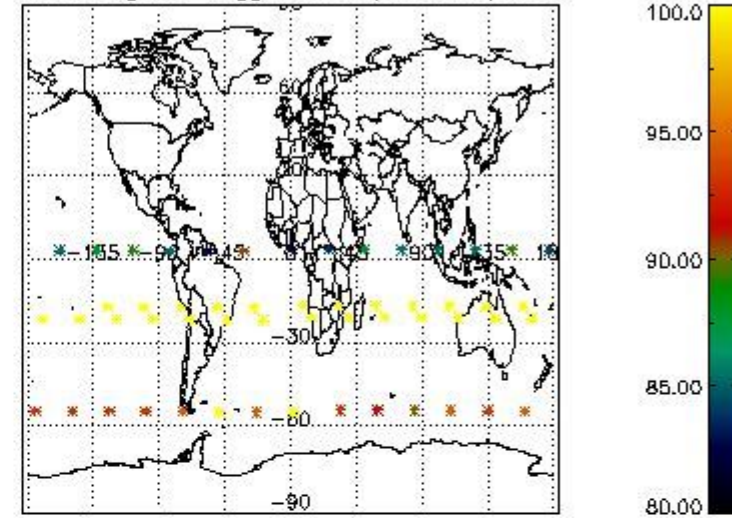


### 3.2 Plot quality information per product (world map)

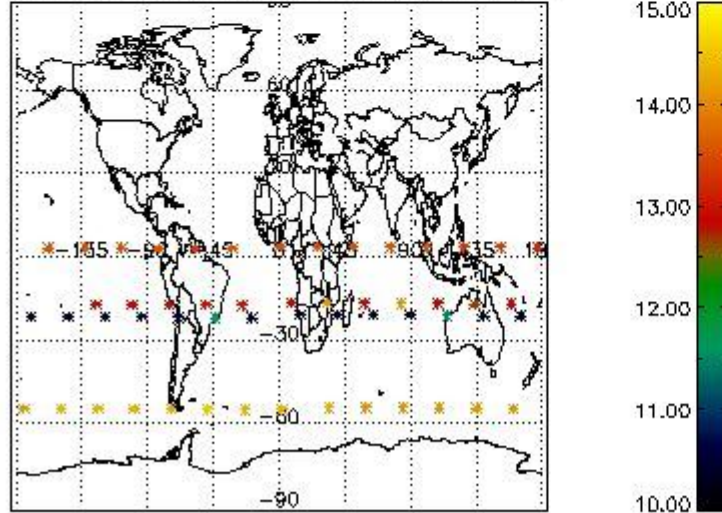
Percentage of flagged data per O3 profile



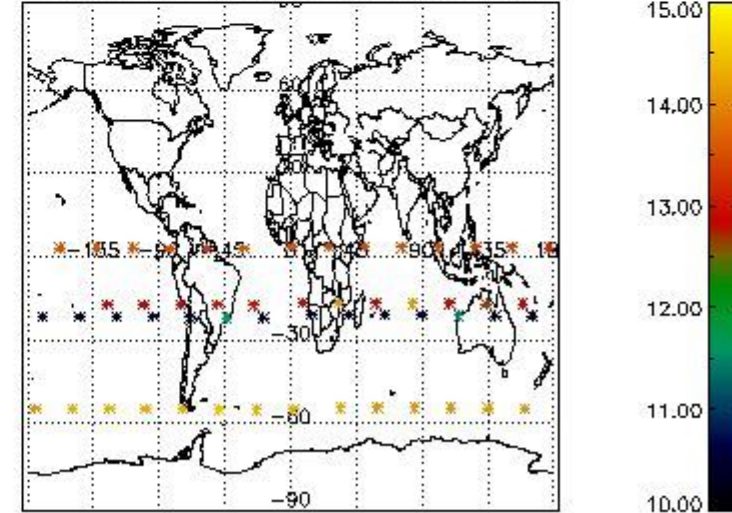
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

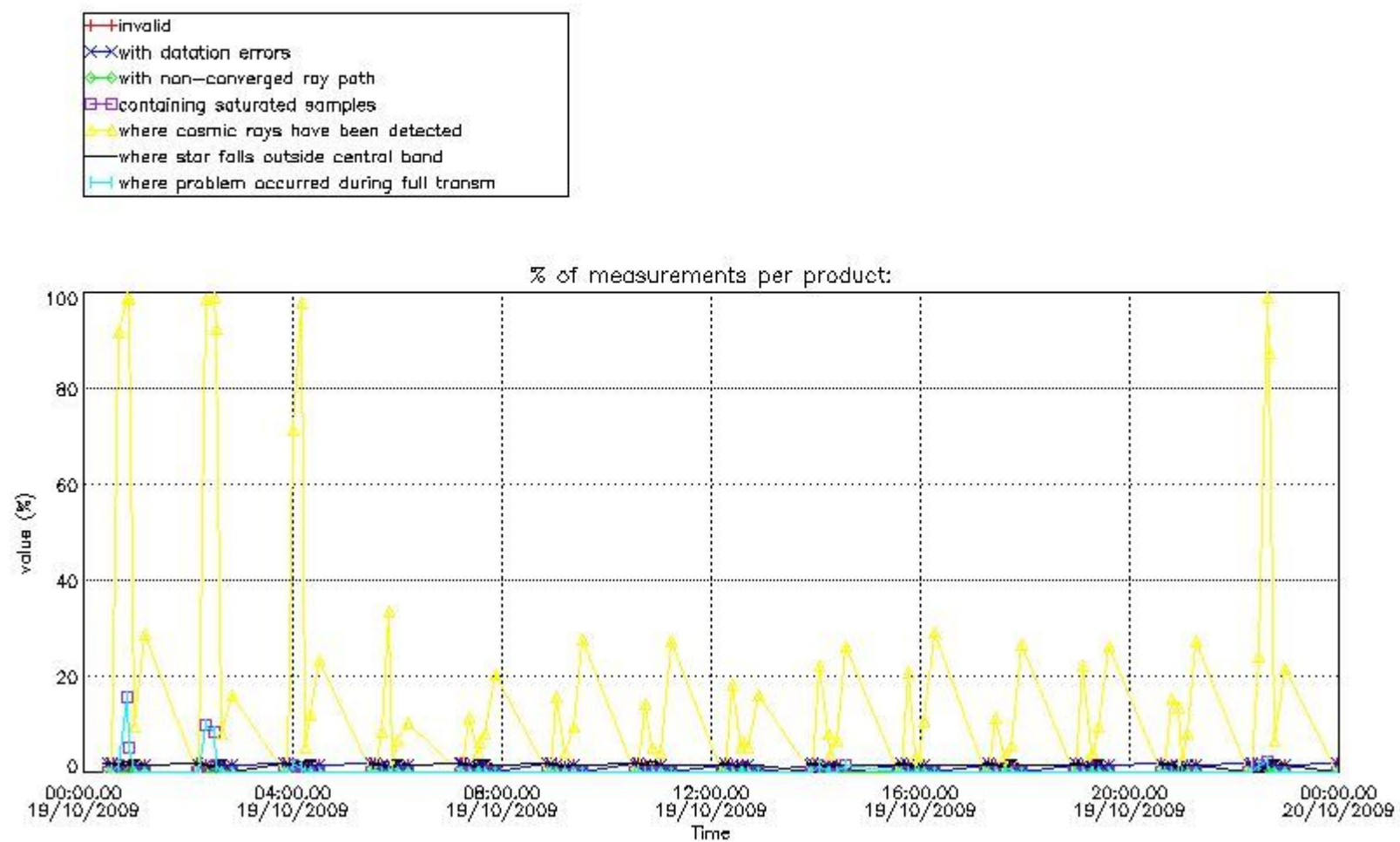


#### 4. Level 1 quality information per product

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.

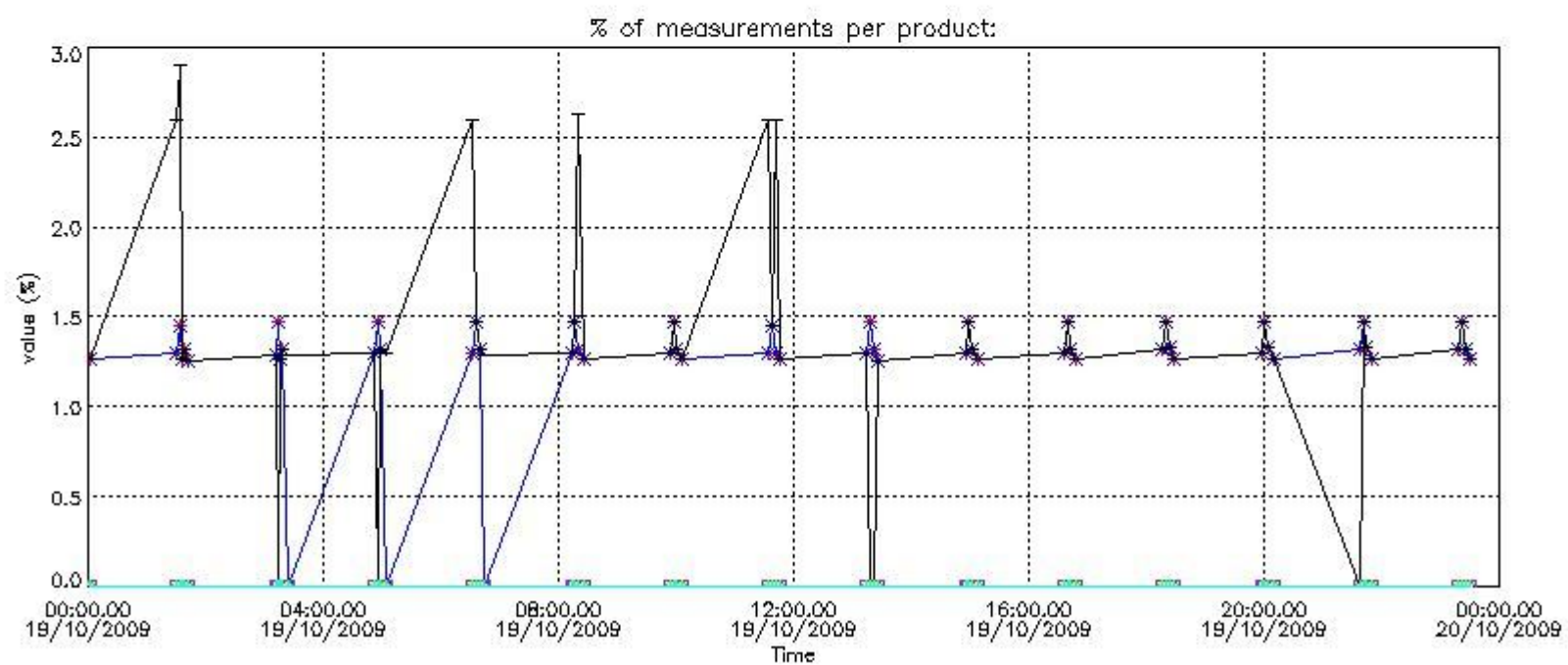
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



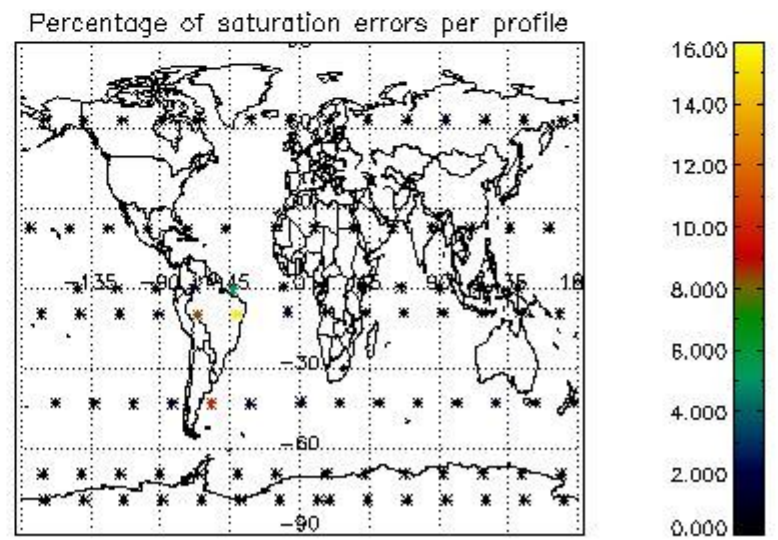
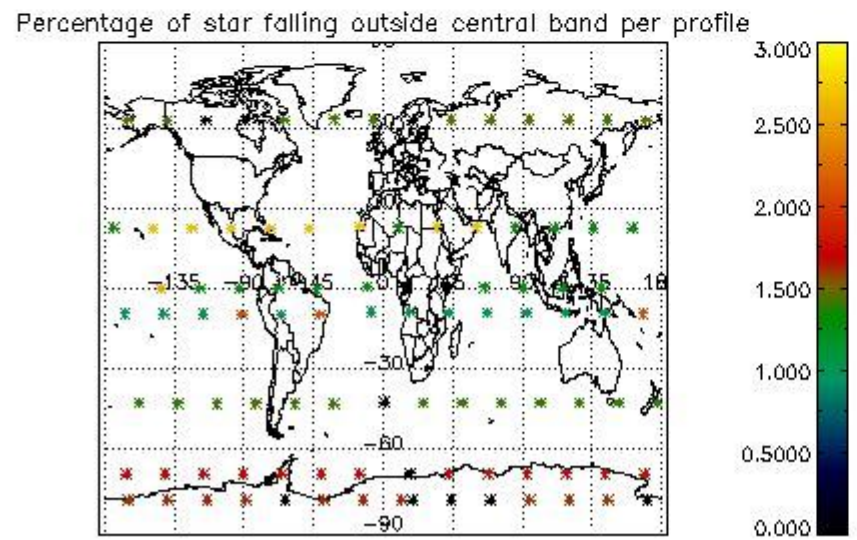
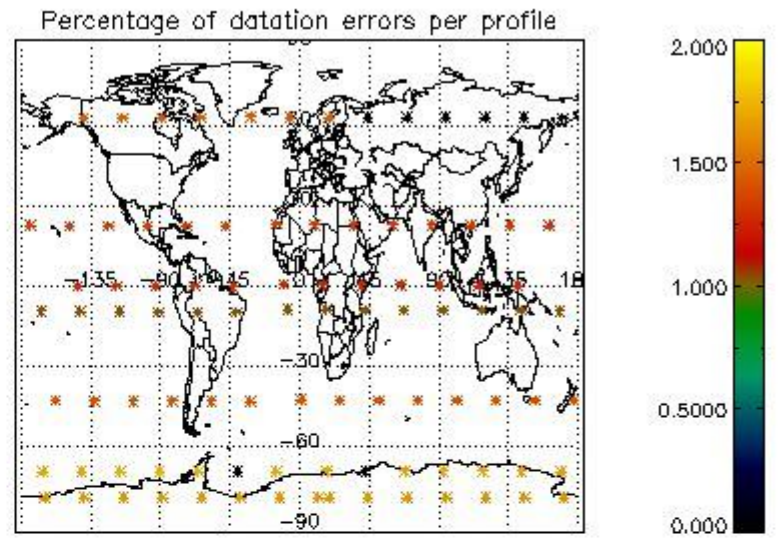
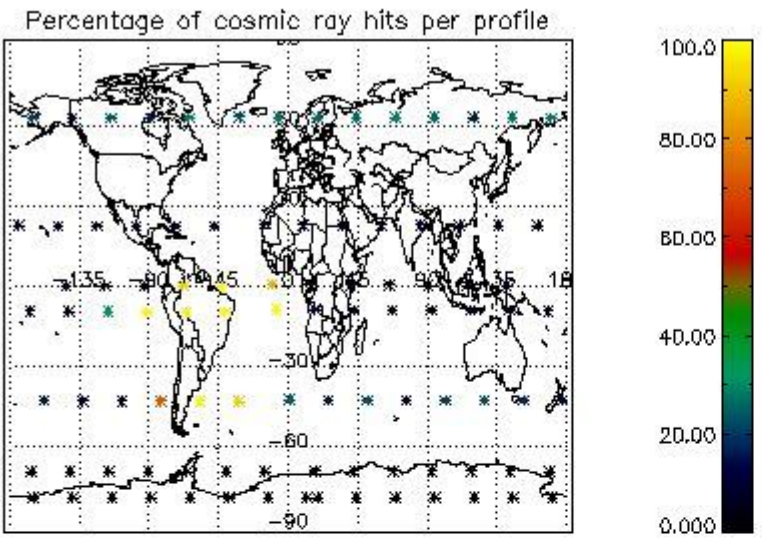
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



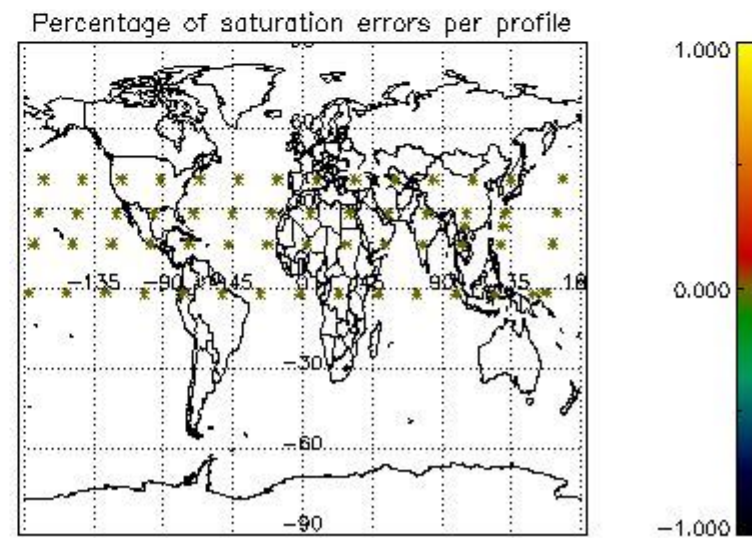
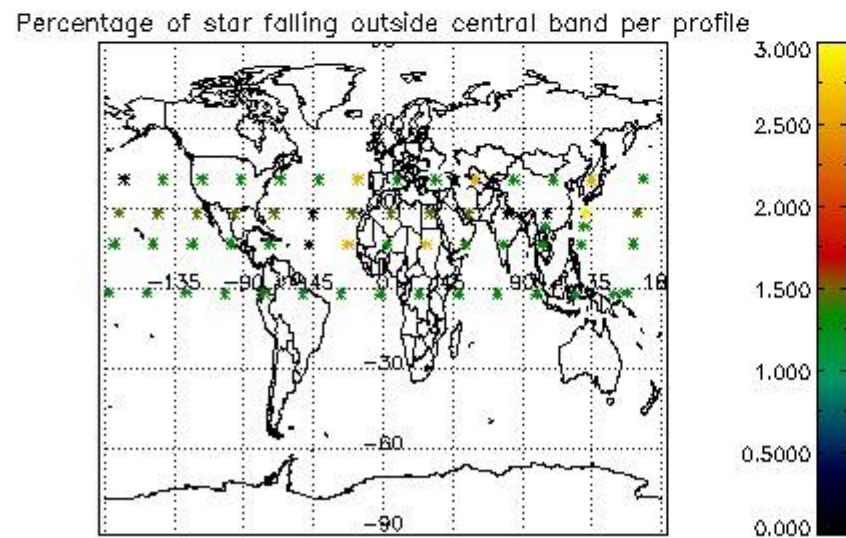
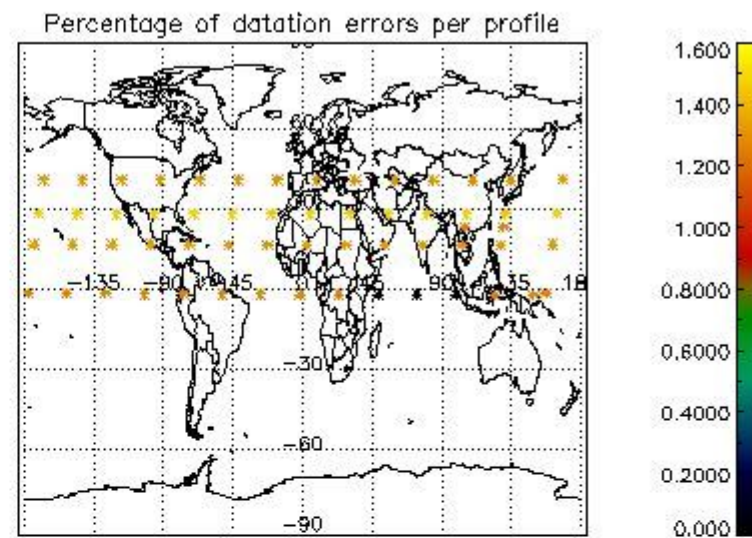
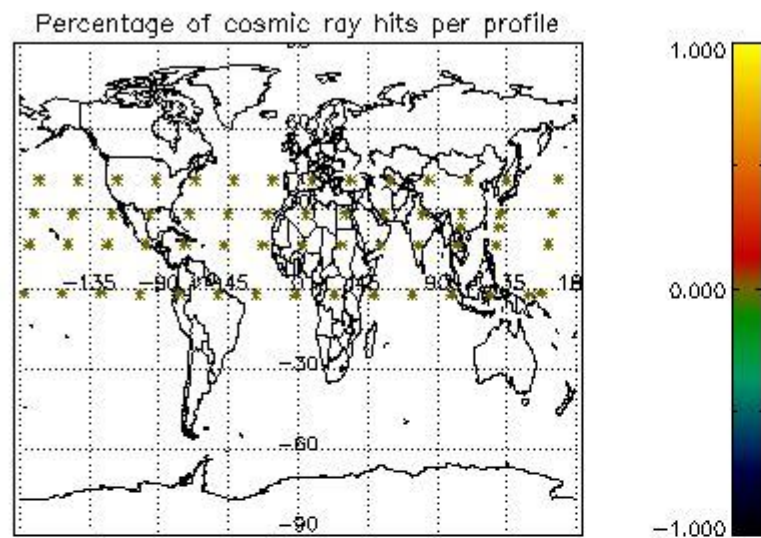


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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

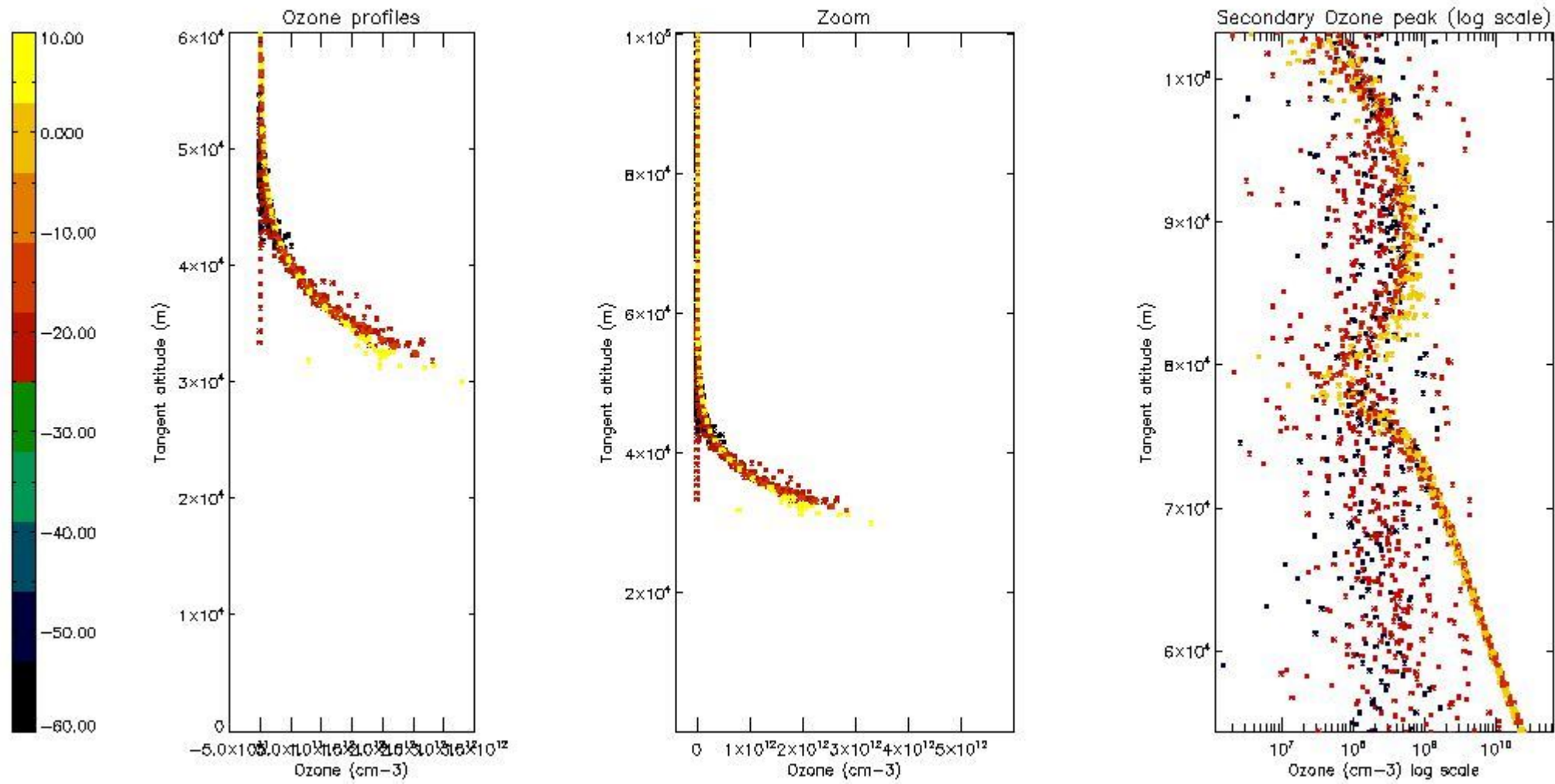
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	15

STD < 10	13
STD < 5	9

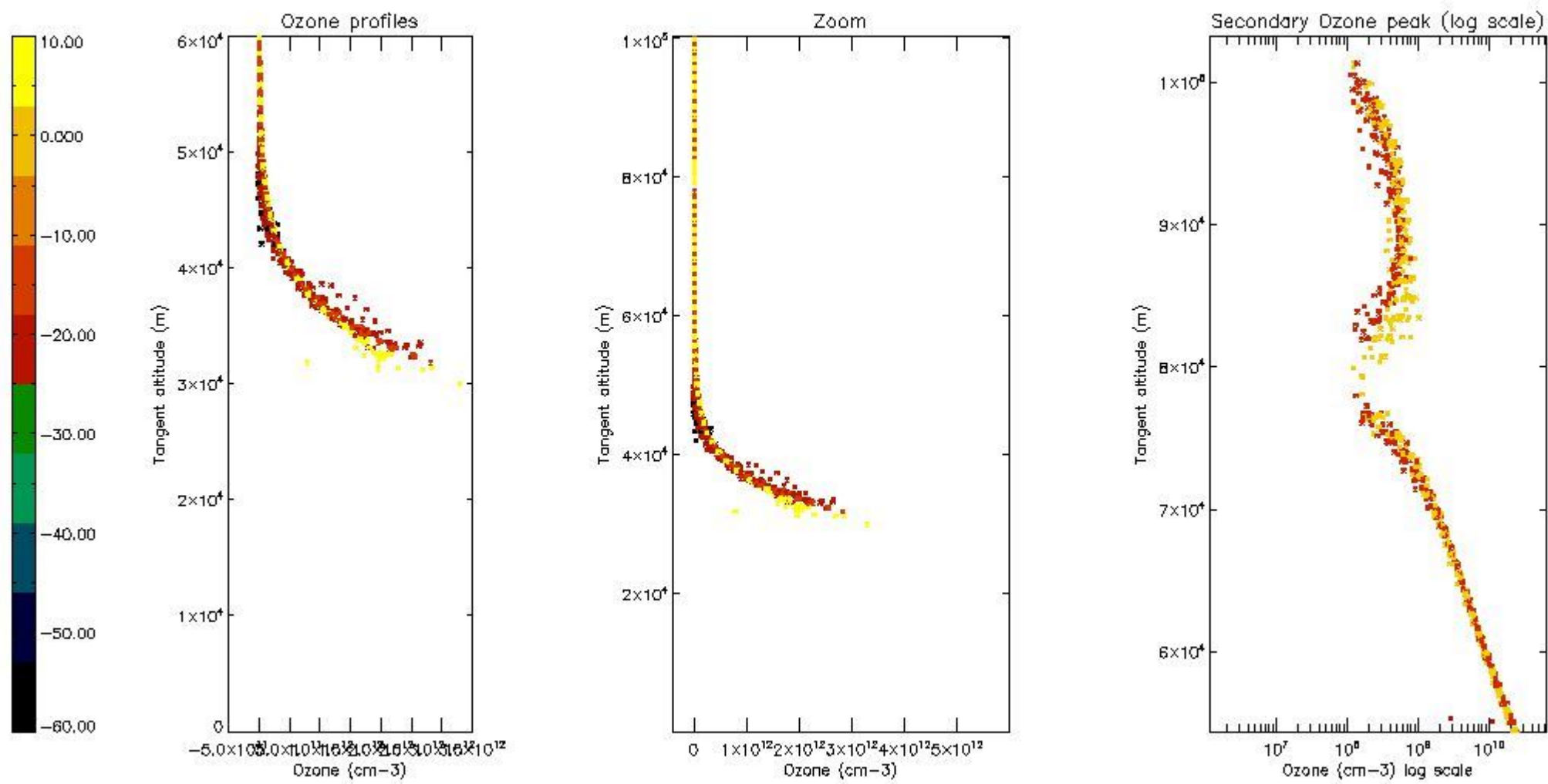
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



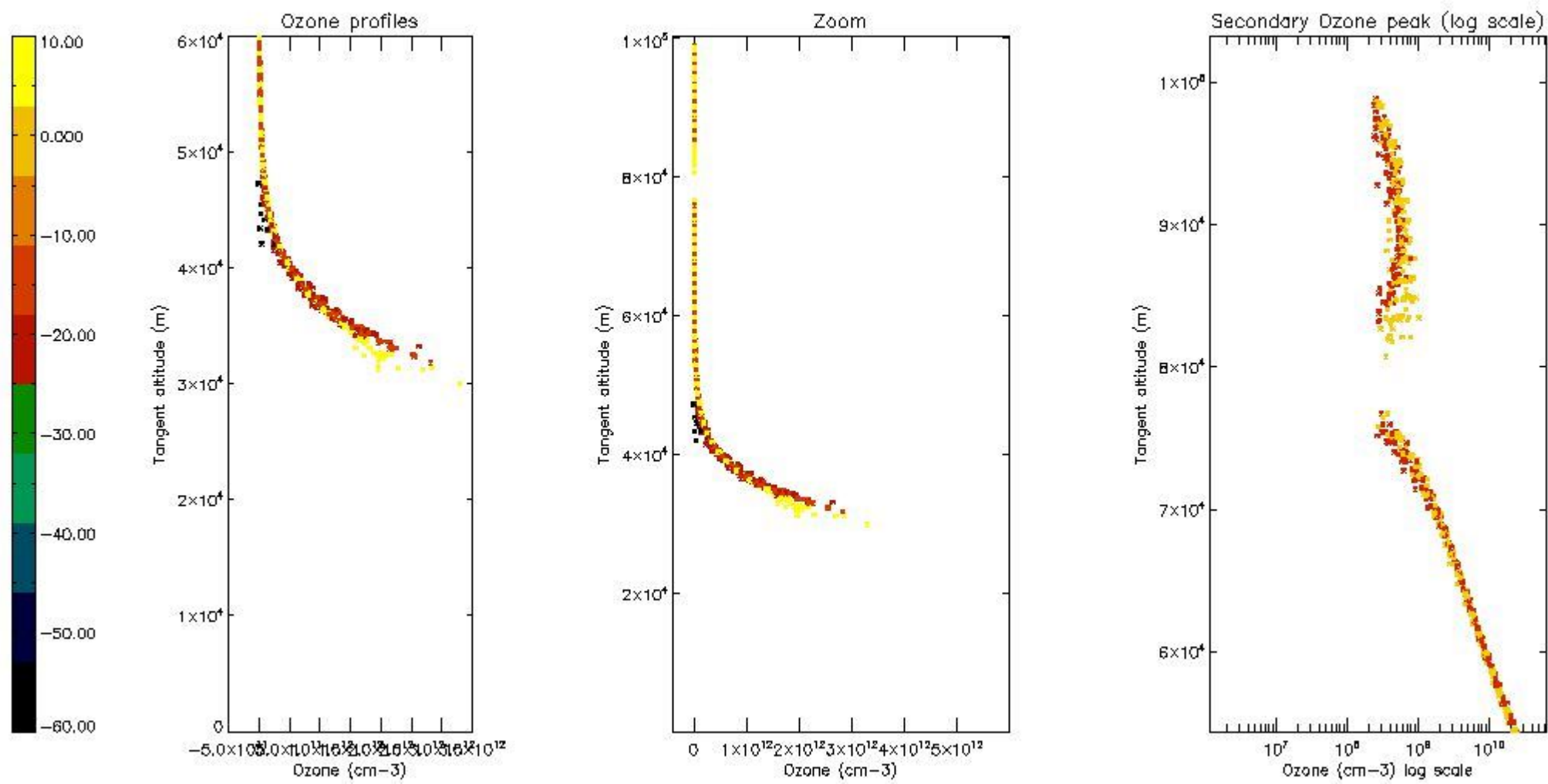
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



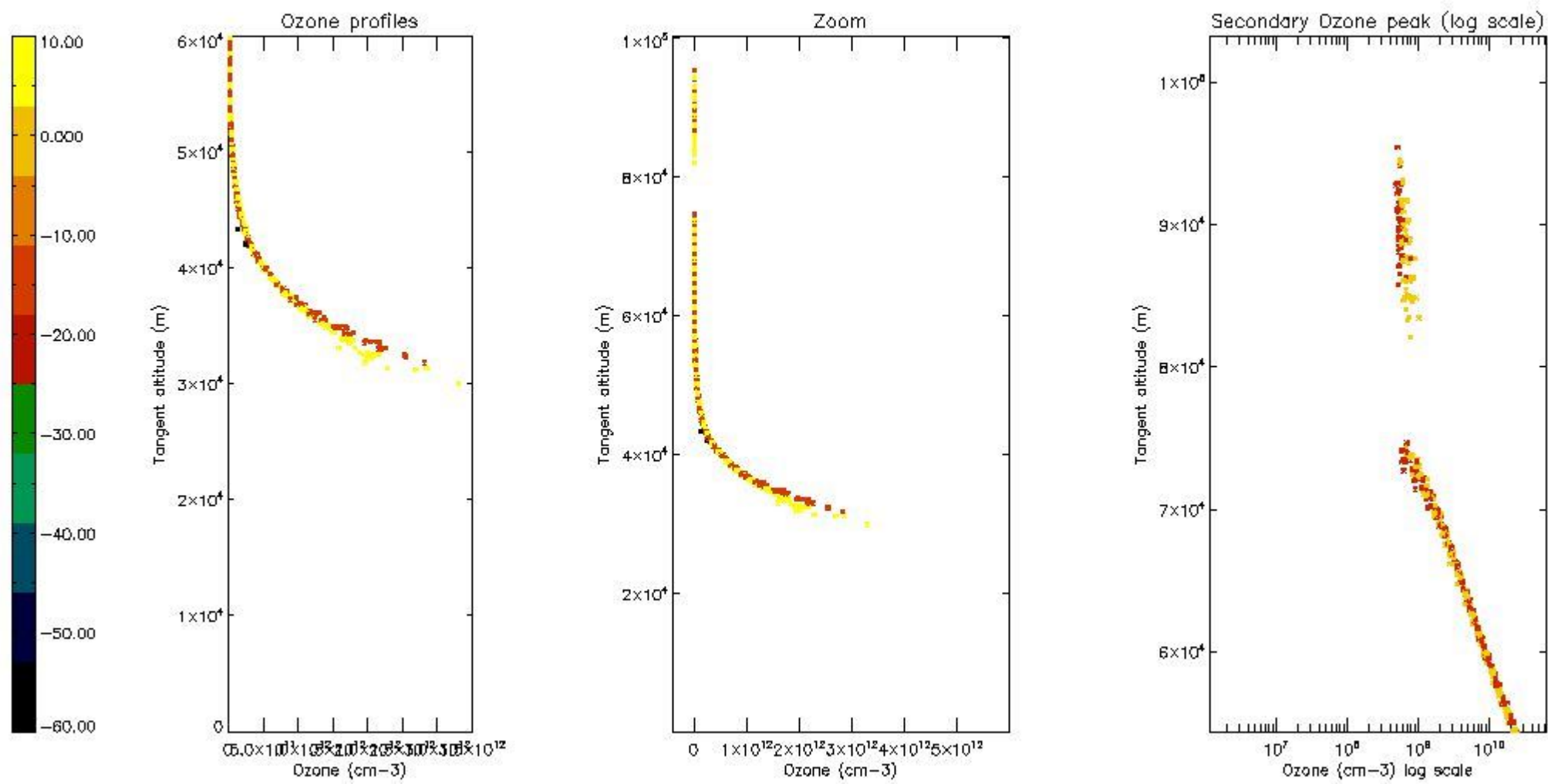
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



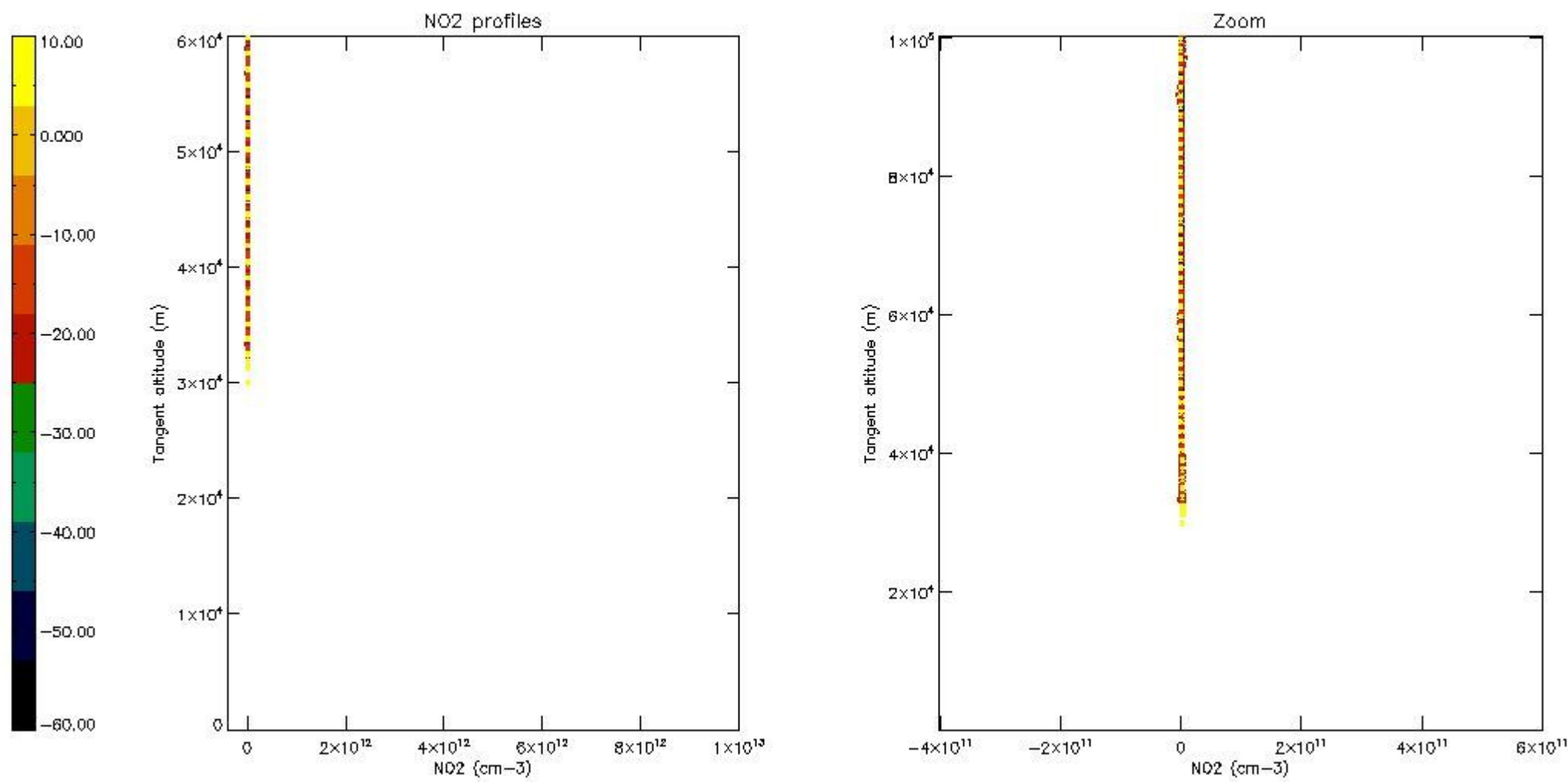
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

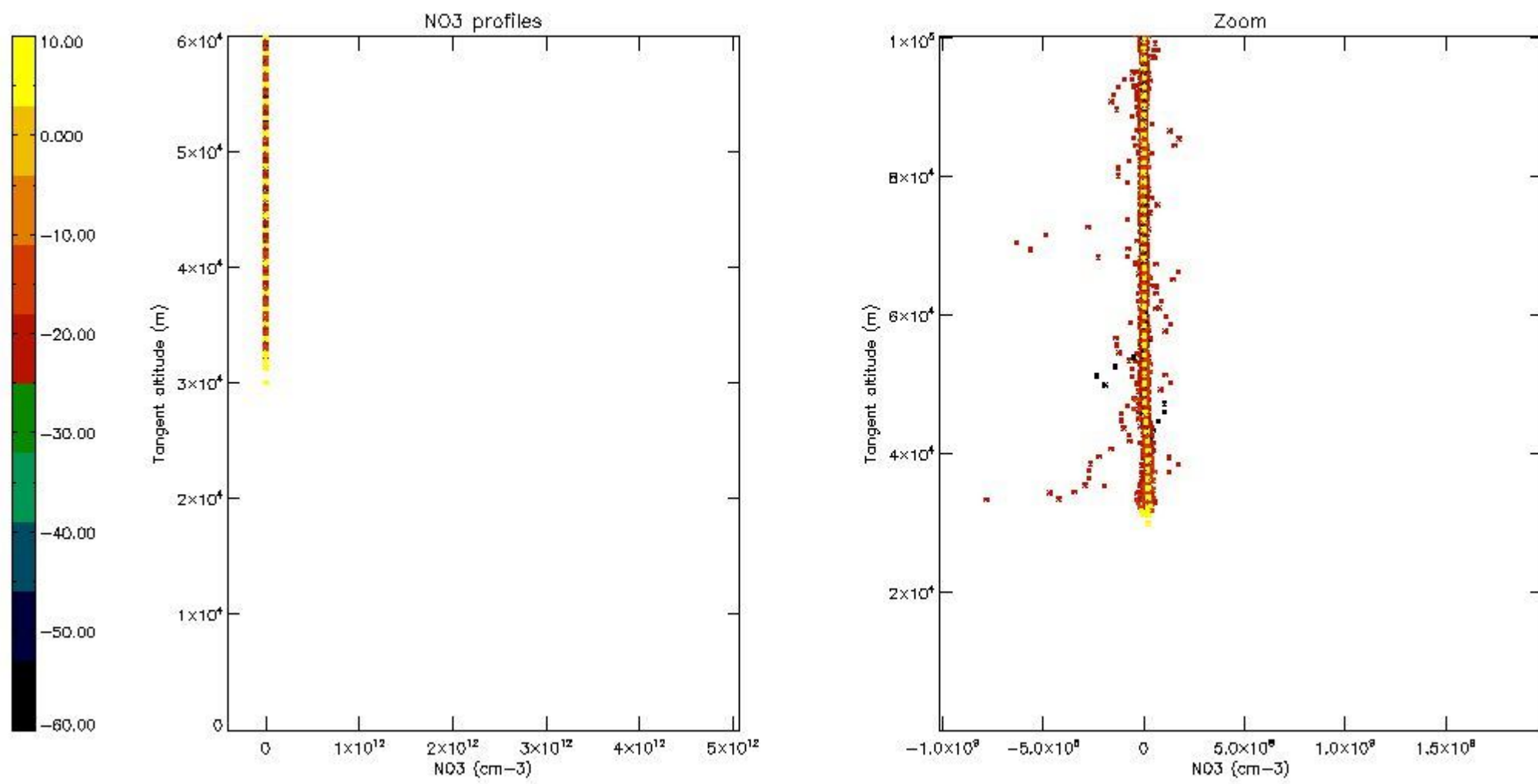
The colorbar represents the latitude.



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

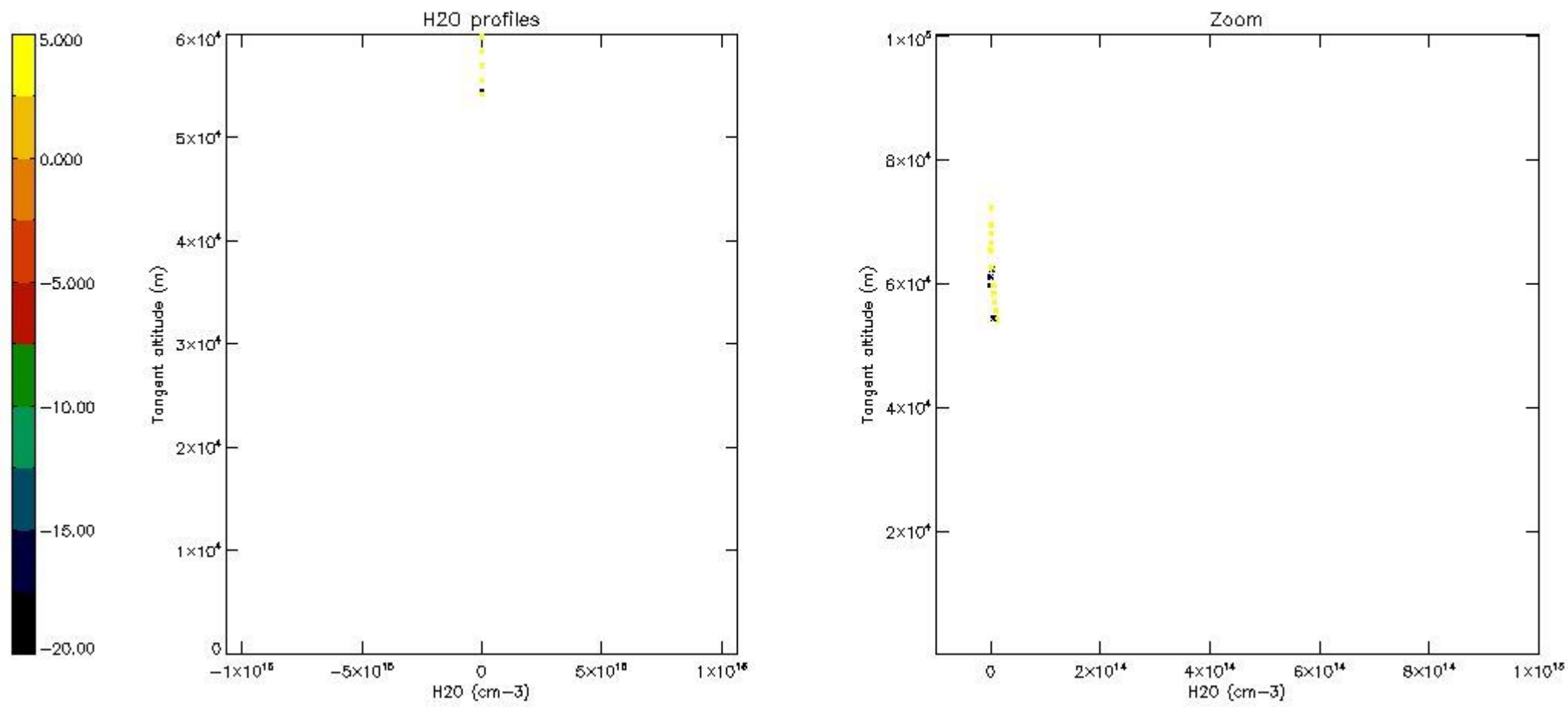
The colorbar represents the latitude.





5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

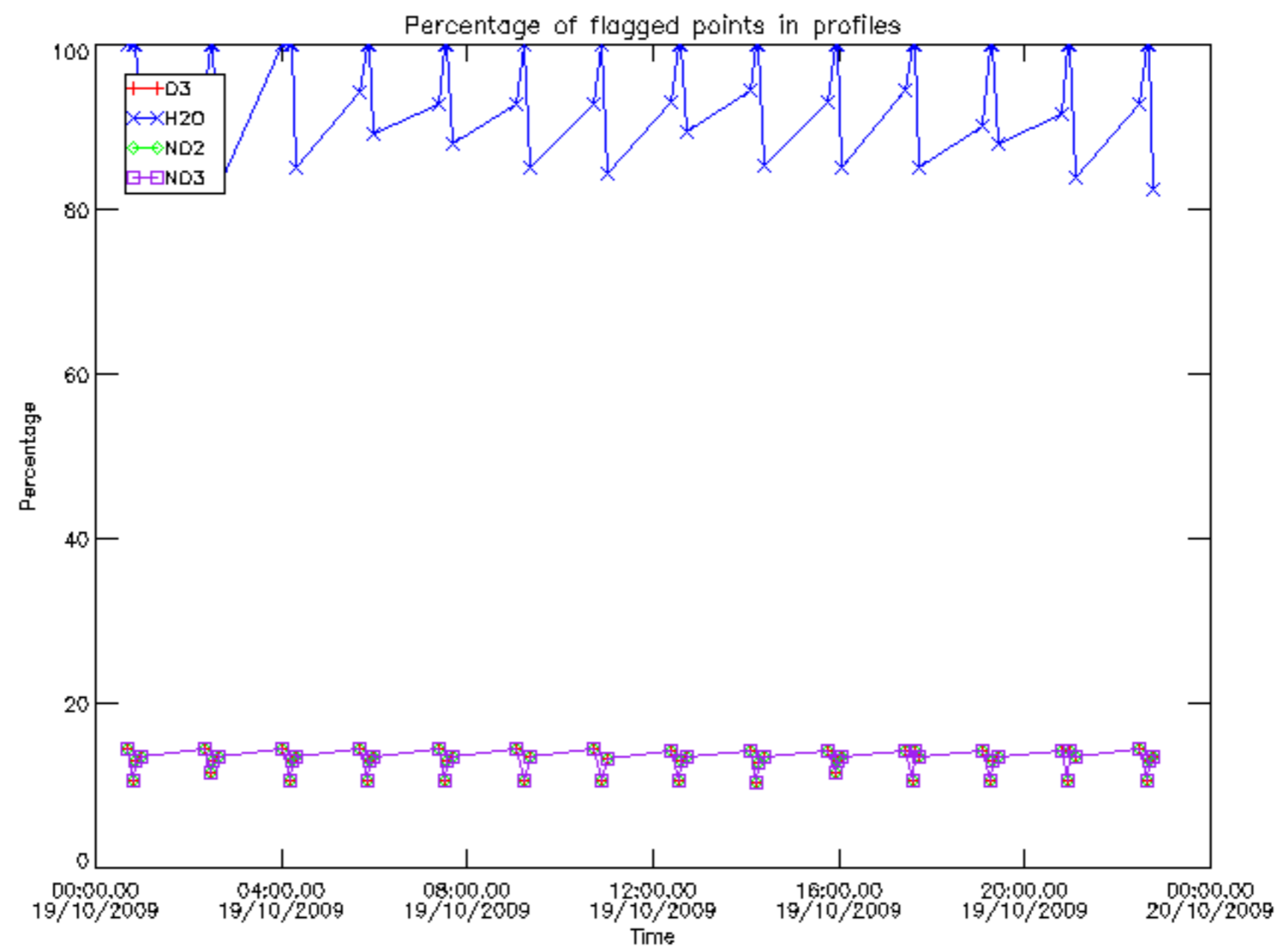
The colorbar represents the latitude.



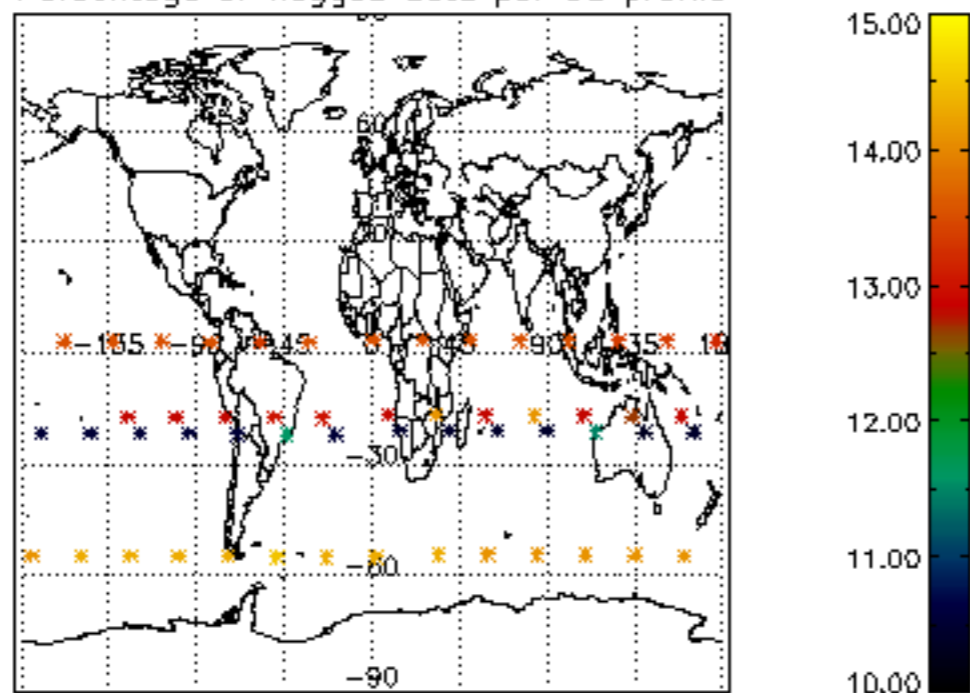
## 6. Auxiliary Data Files used for the production reported in section 2

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.

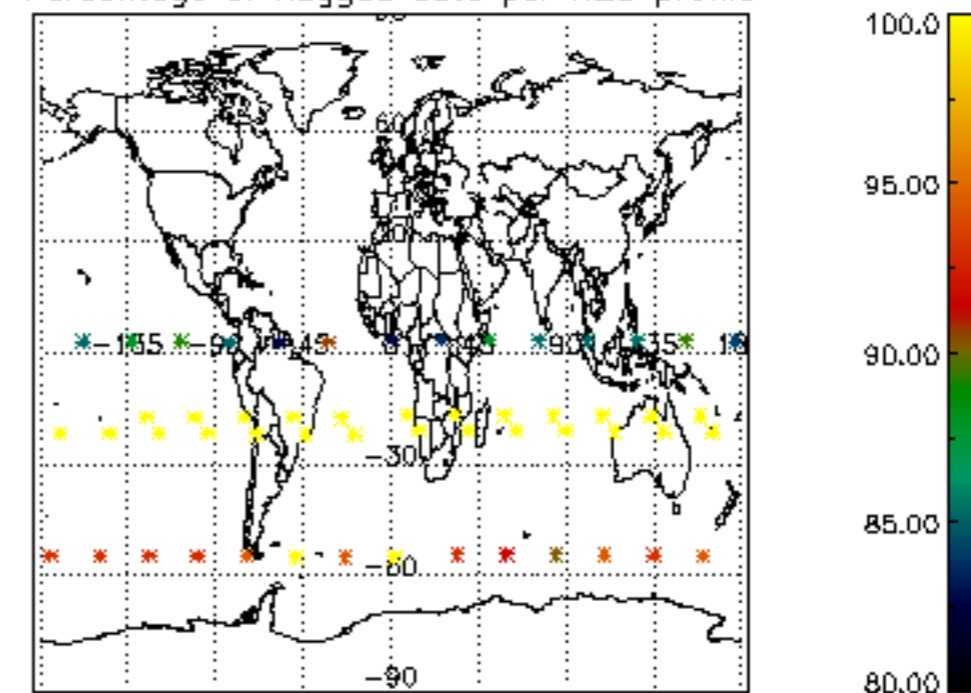
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	19-OCT-2009 00:02:04
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	19-OCT-2009 00:02:04
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	19-OCT-2009 00:02:04



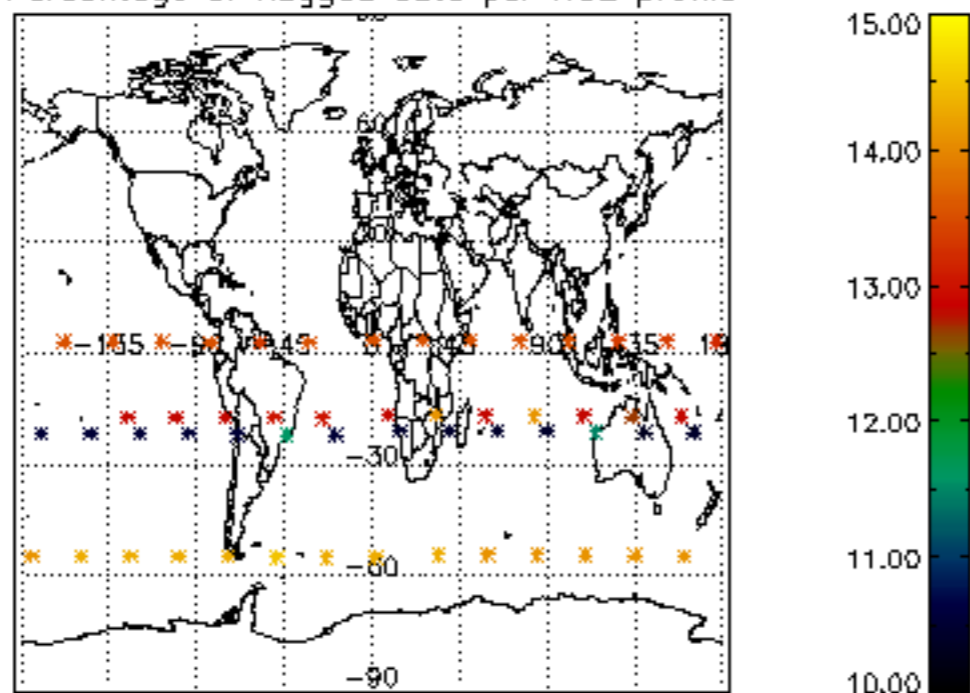
Percentage of flagged data per D3 profile



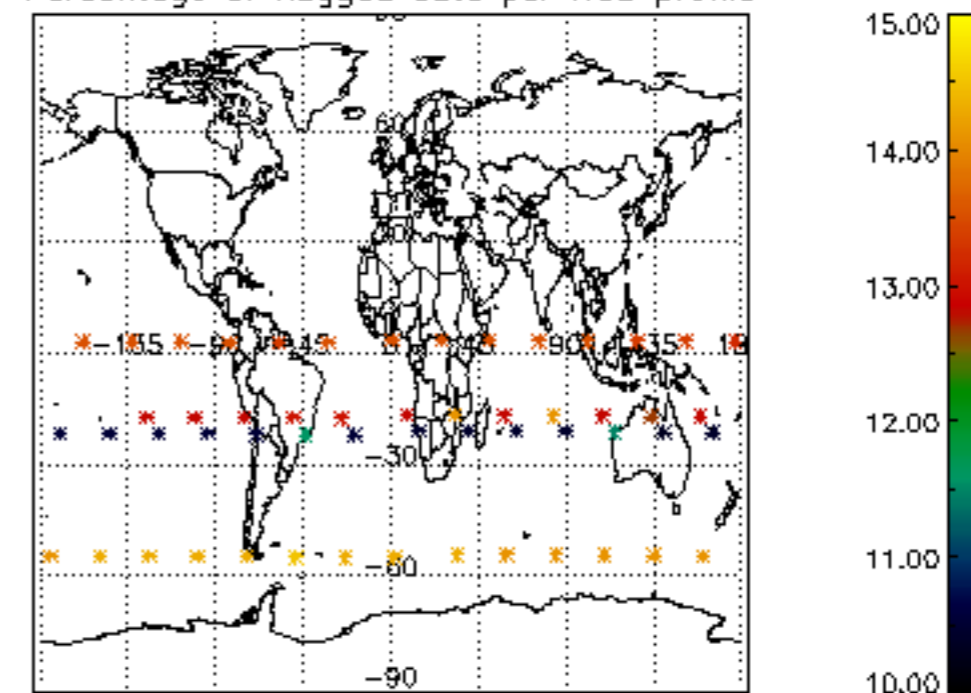
Percentage of flagged data per H2O profile

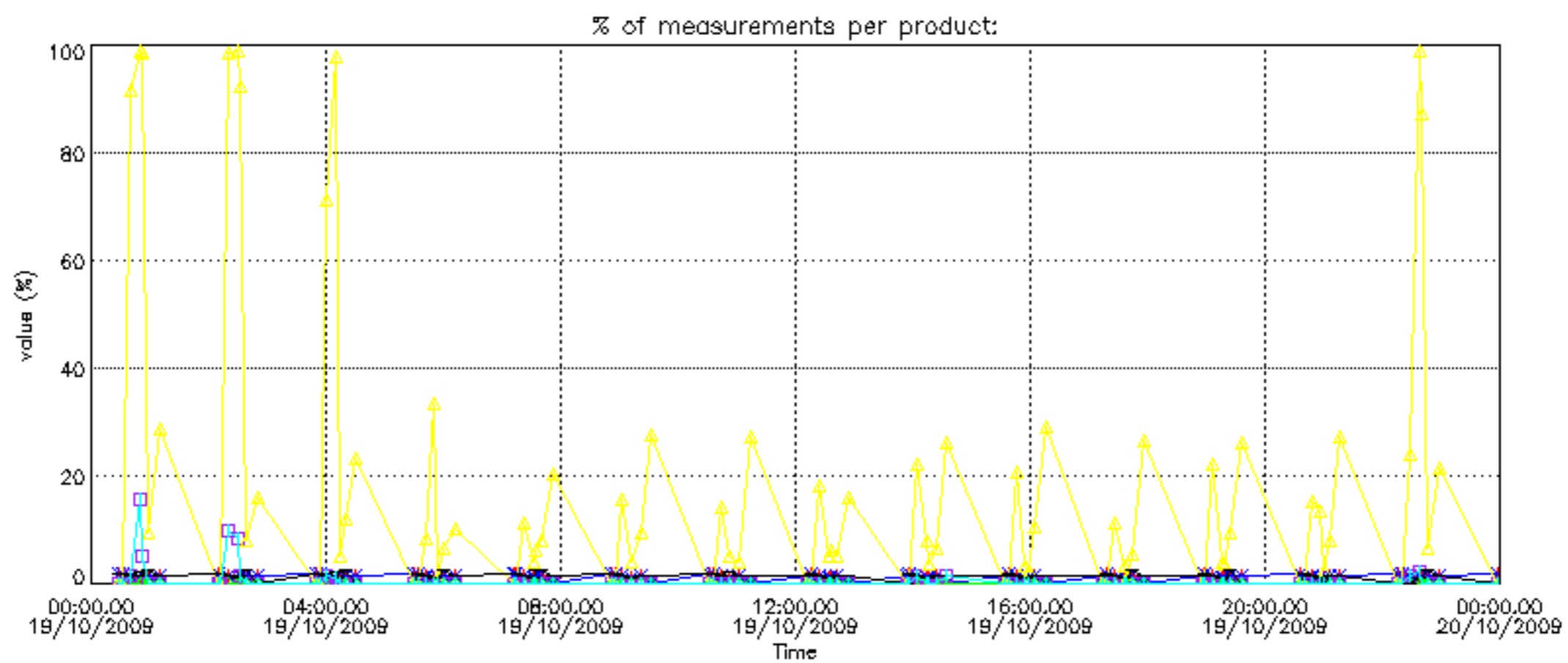
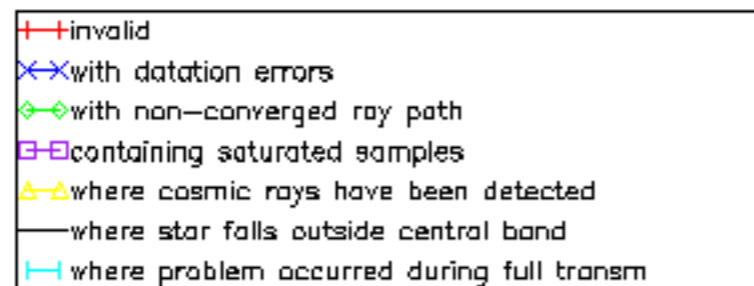


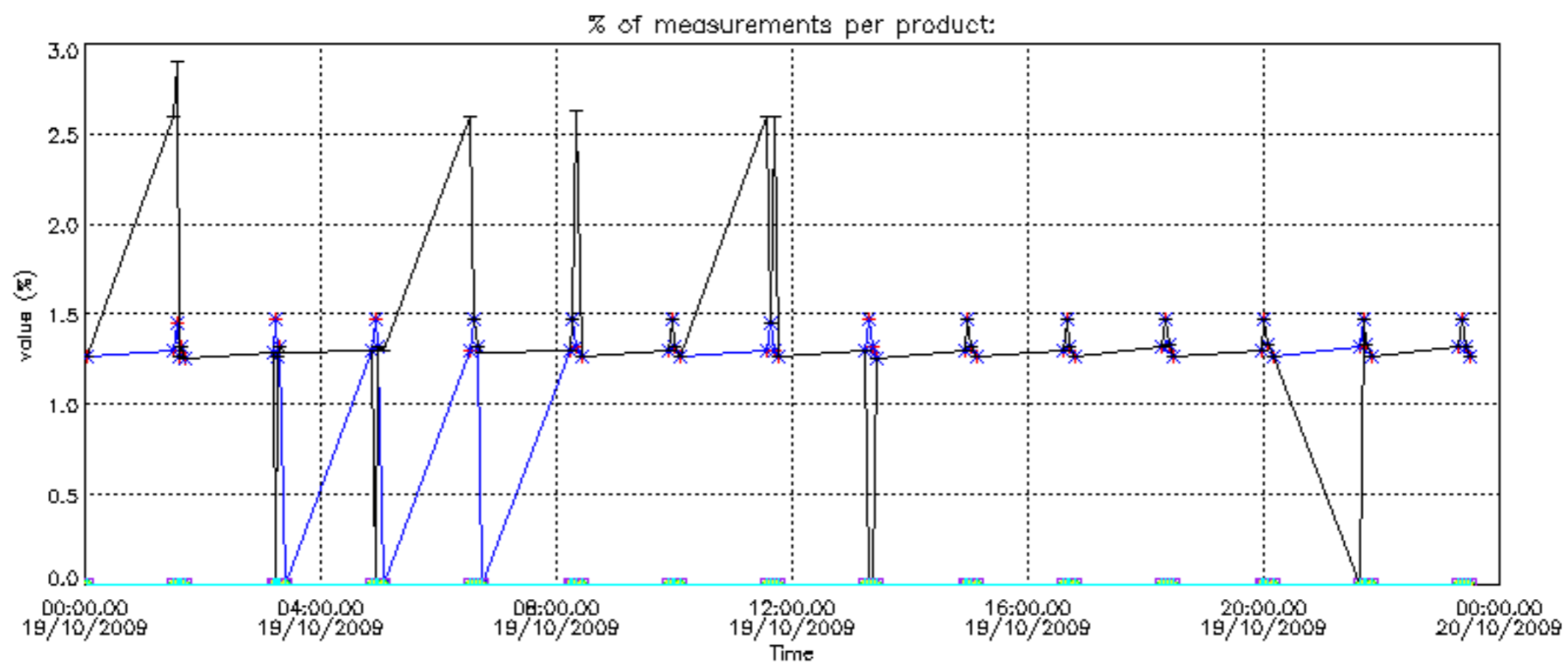
Percentage of flagged data per NO2 profile



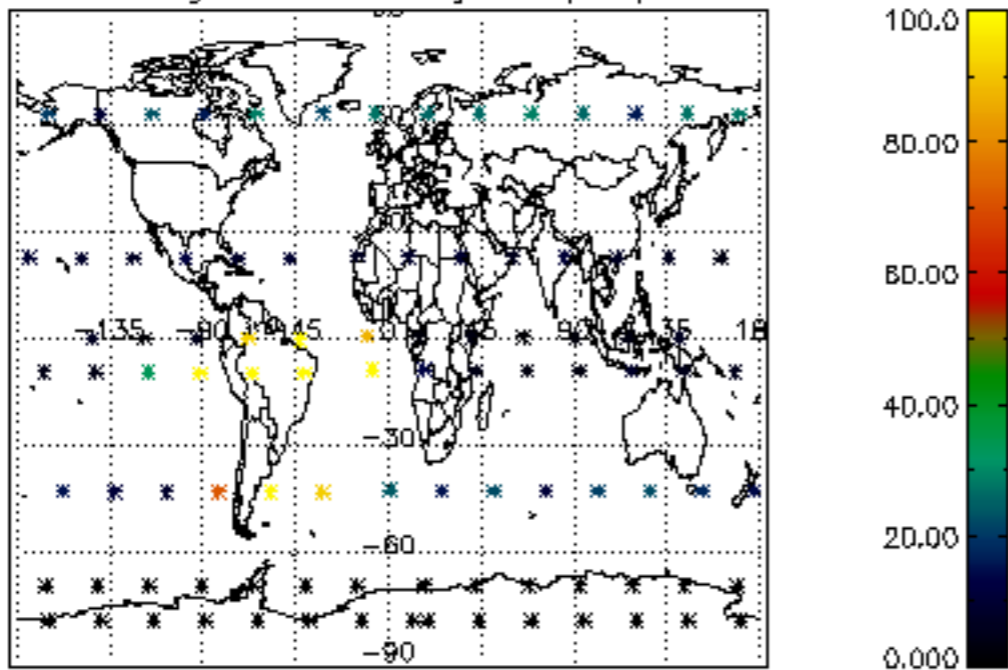
Percentage of flagged data per NO3 profile



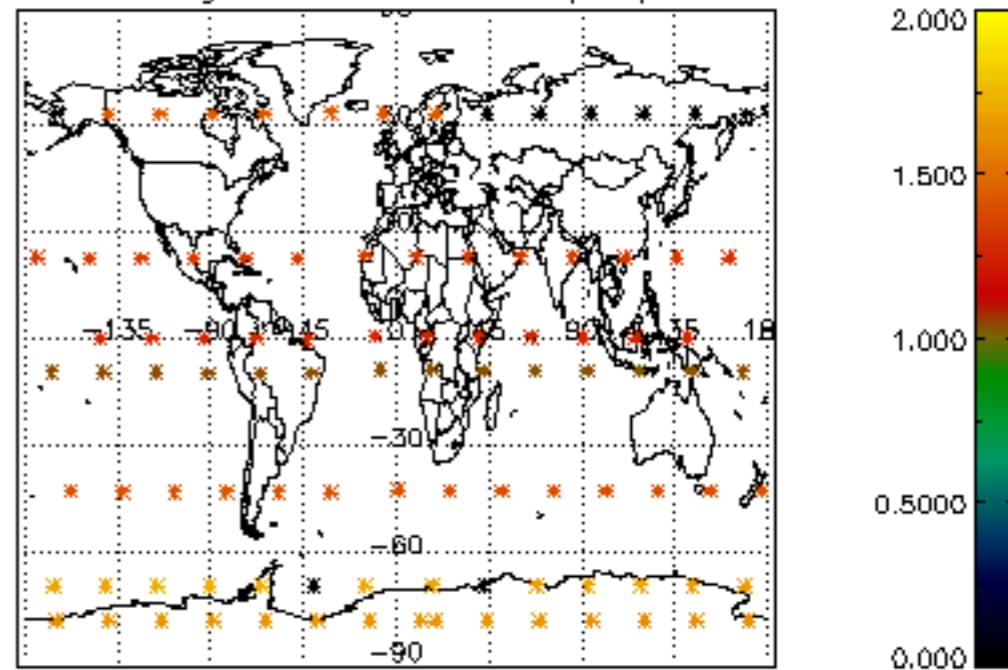




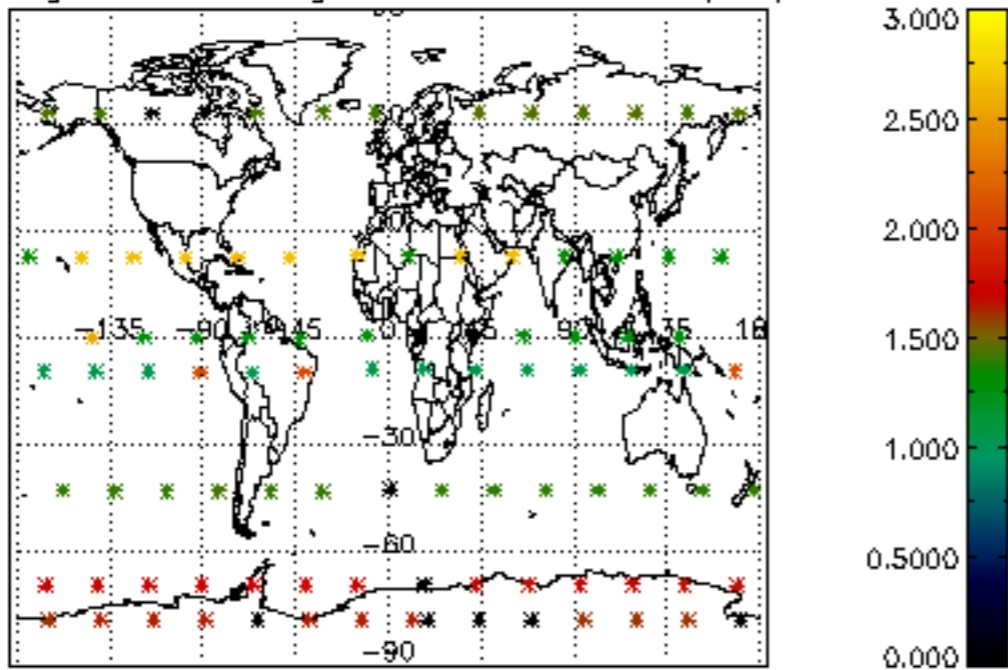
Percentage of cosmic ray hits per profile



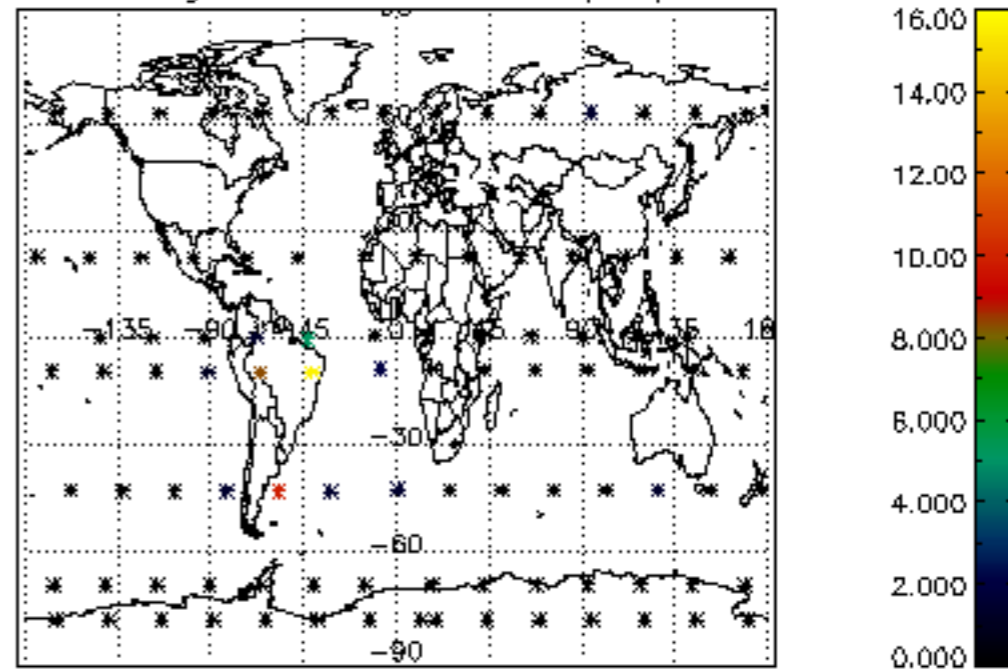
Percentage of datation errors per profile



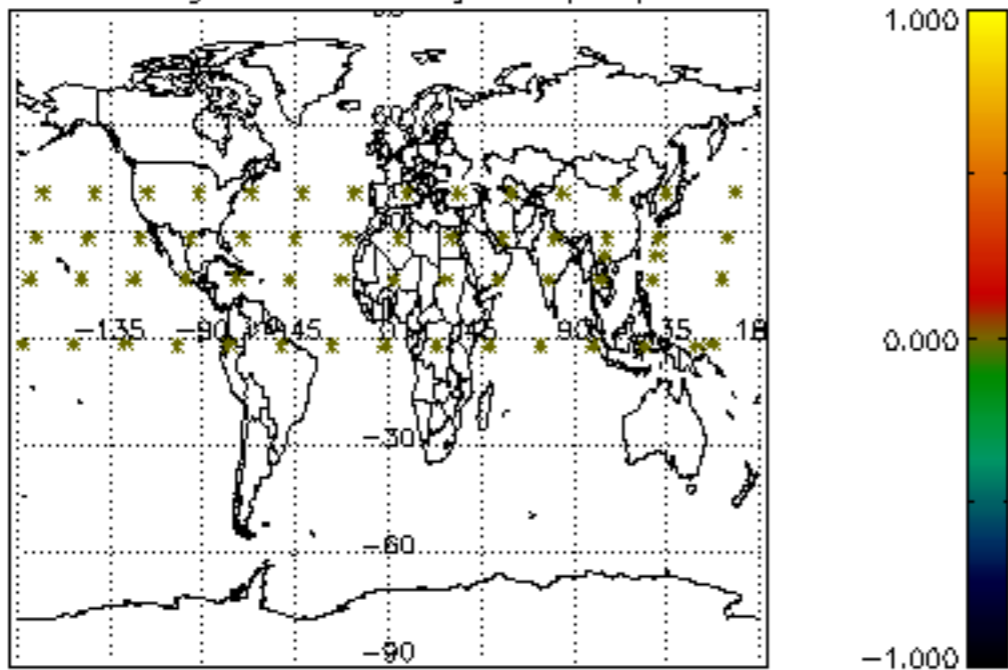
Percentage of star falling outside central band per profile



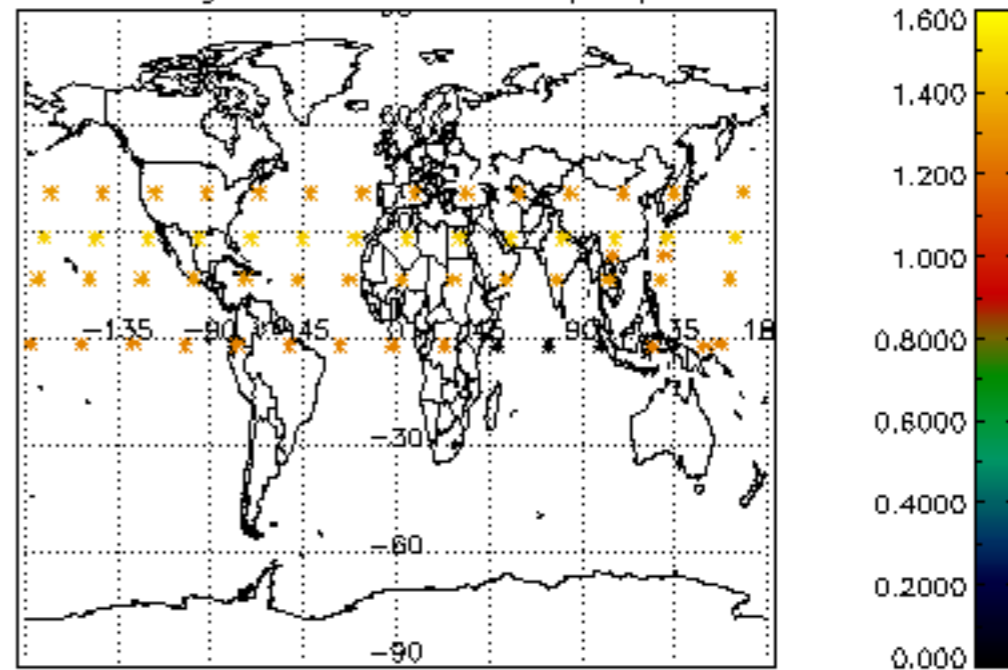
Percentage of saturation errors per profile



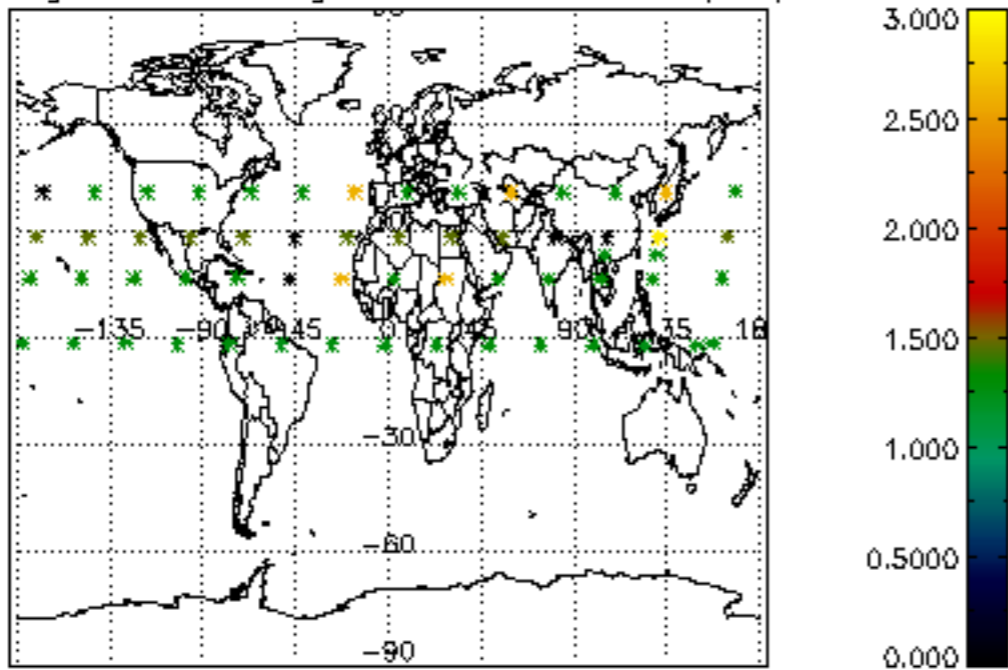
Percentage of cosmic ray hits per profile



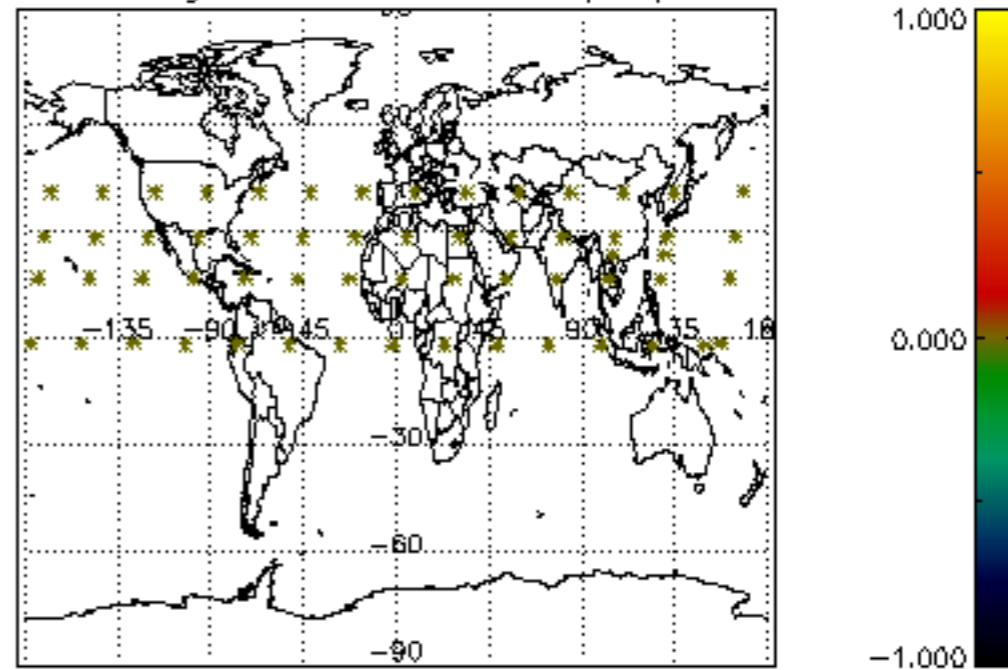
Percentage of datation errors per profile



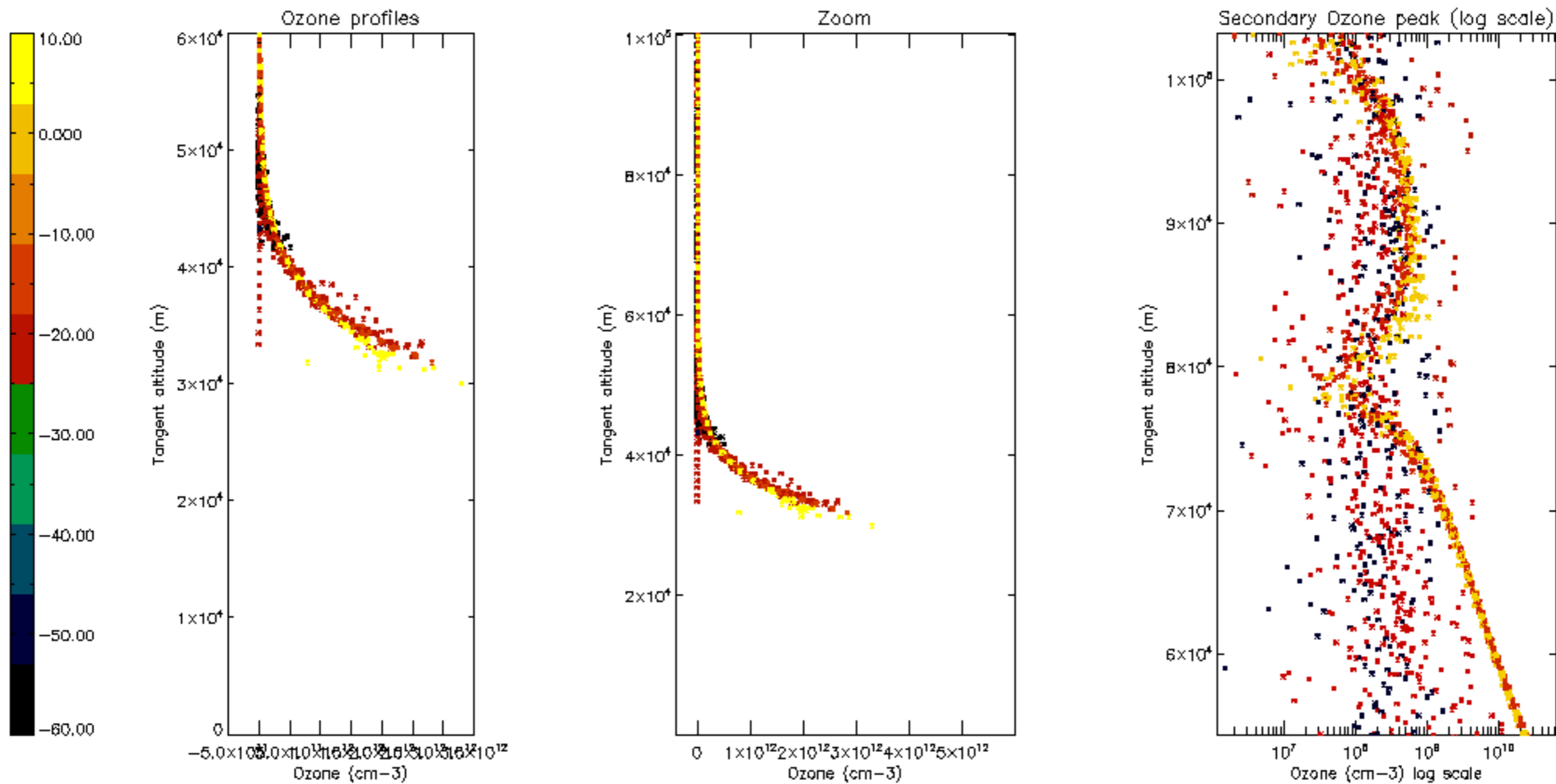
Percentage of star falling outside central band per profile

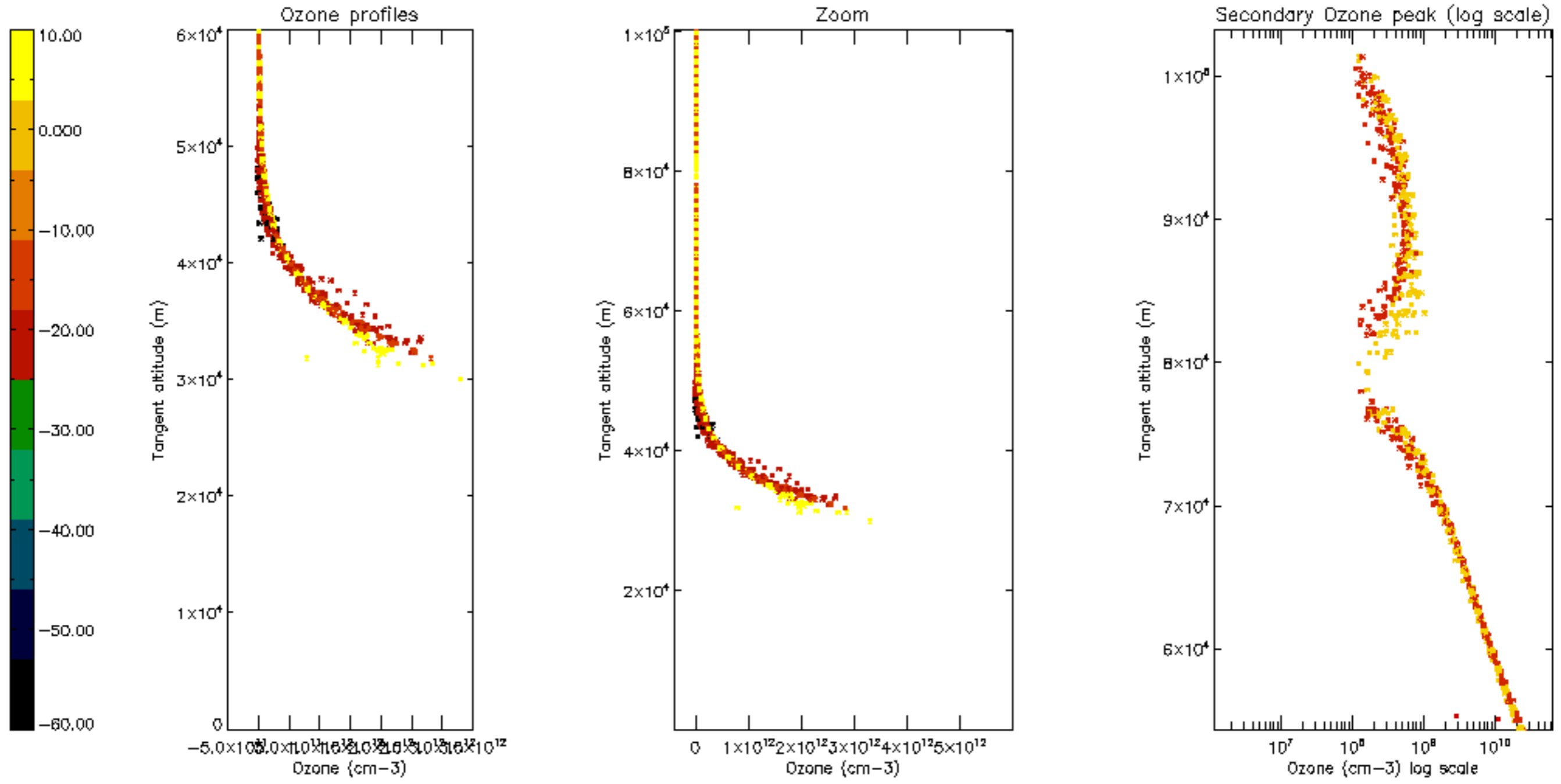


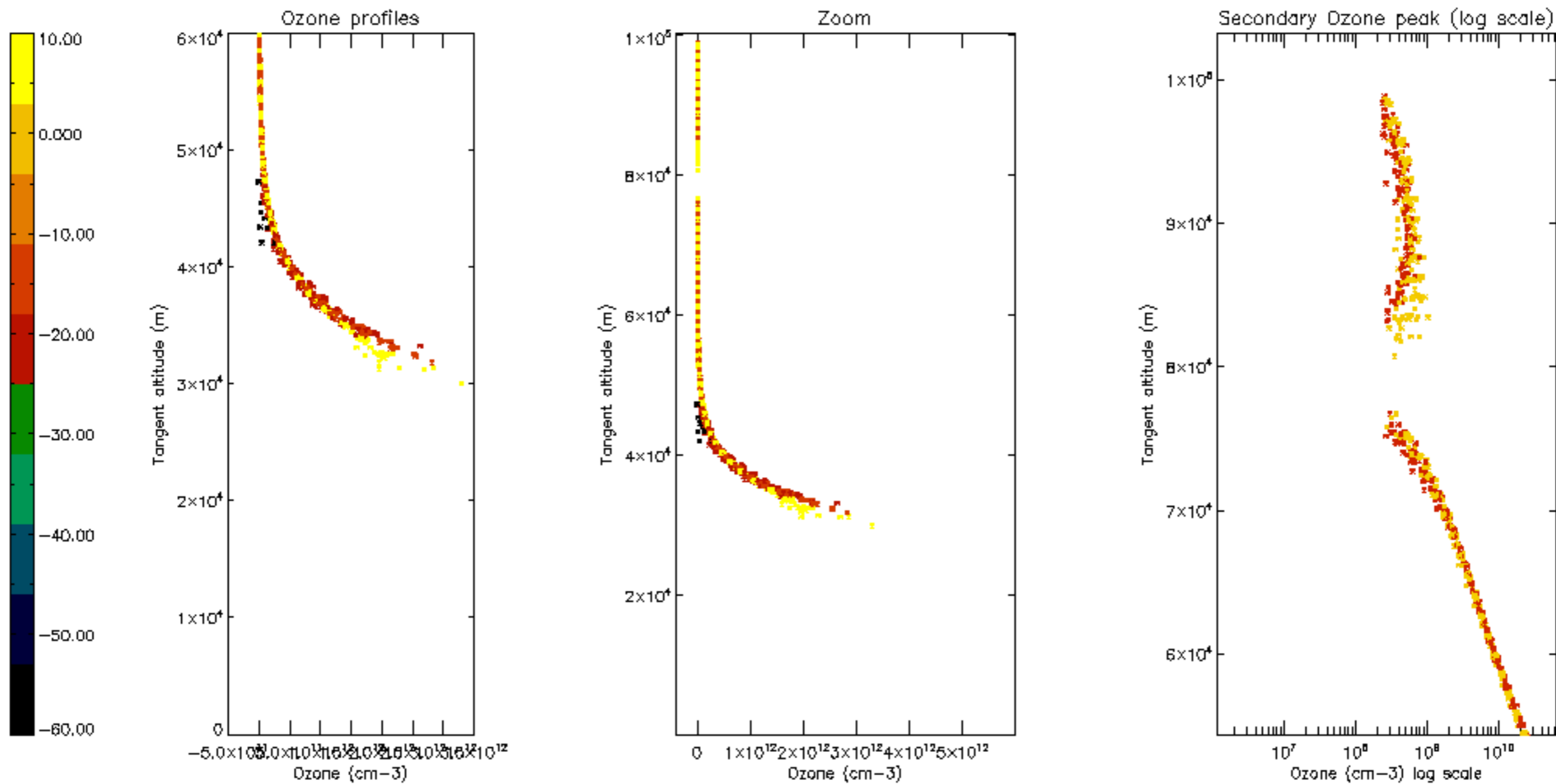
Percentage of saturation errors per profile

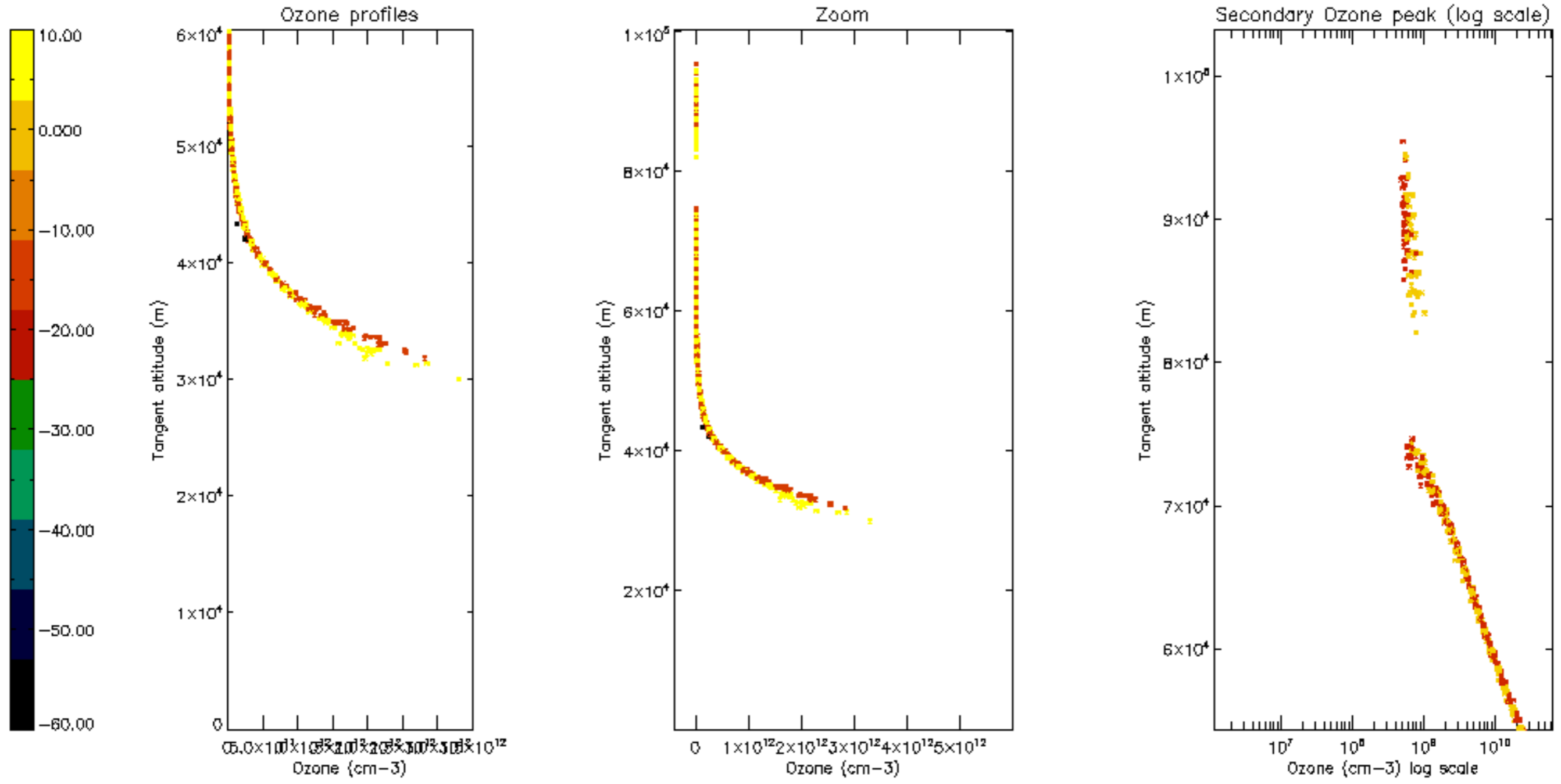


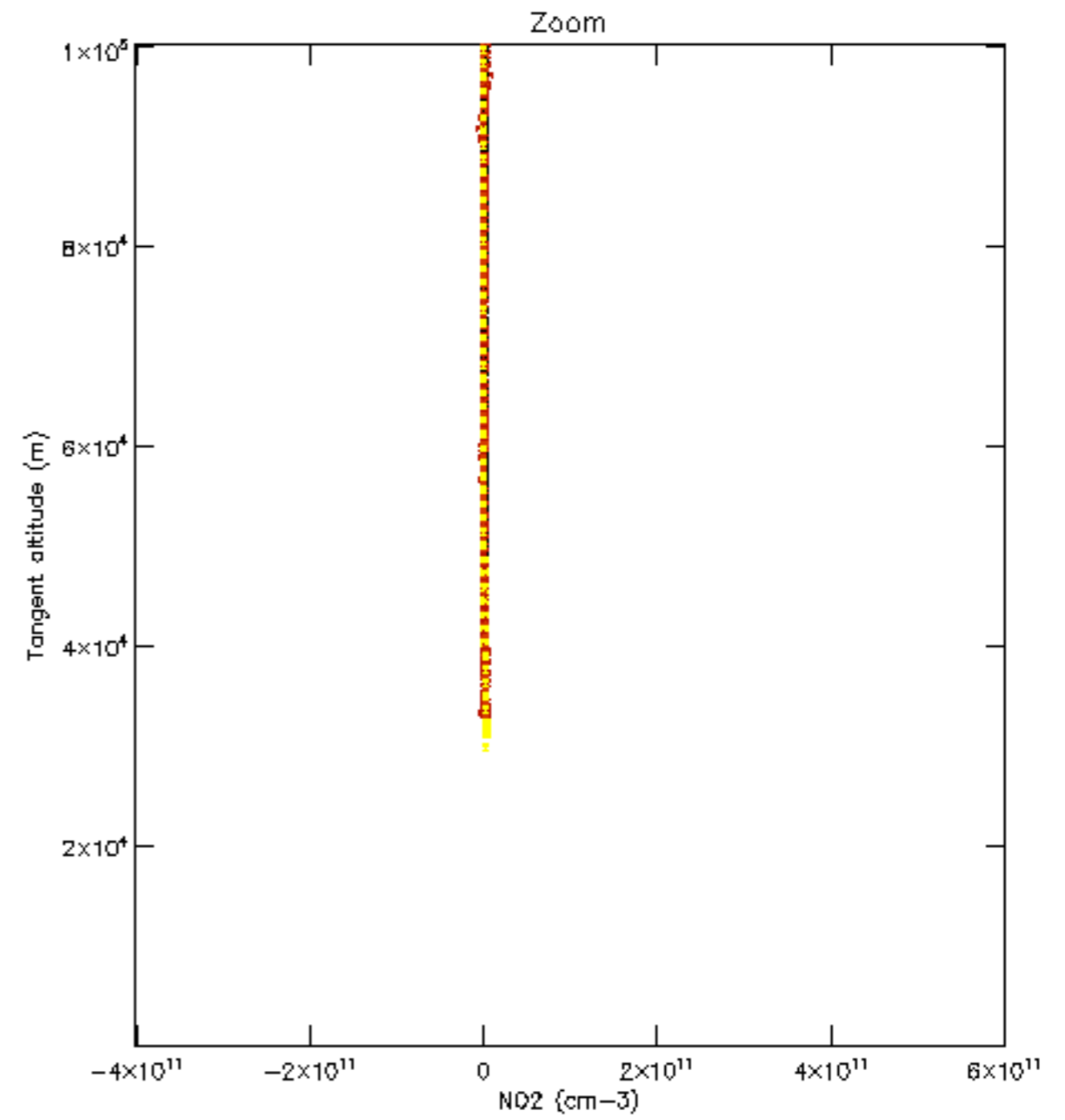
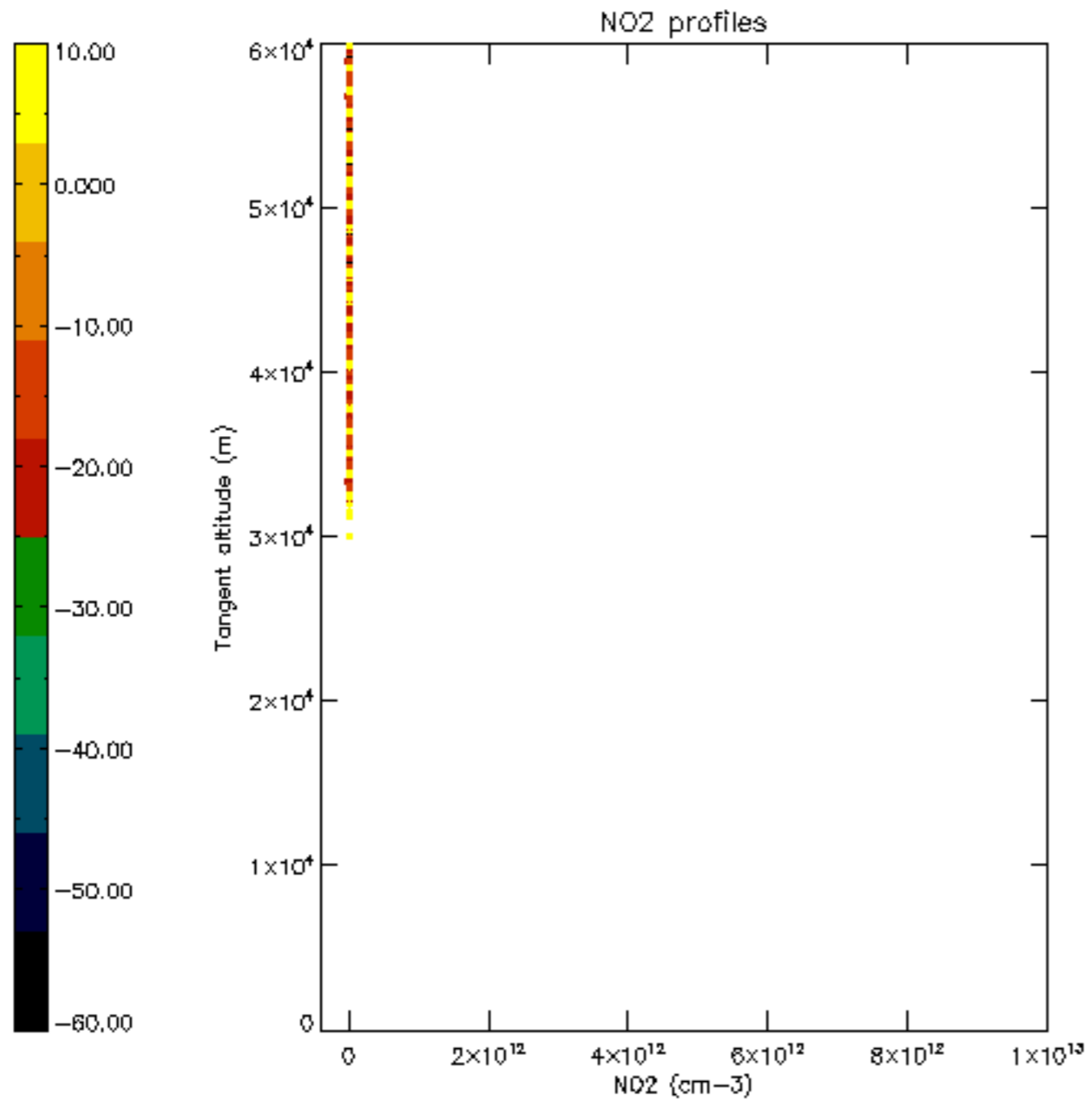


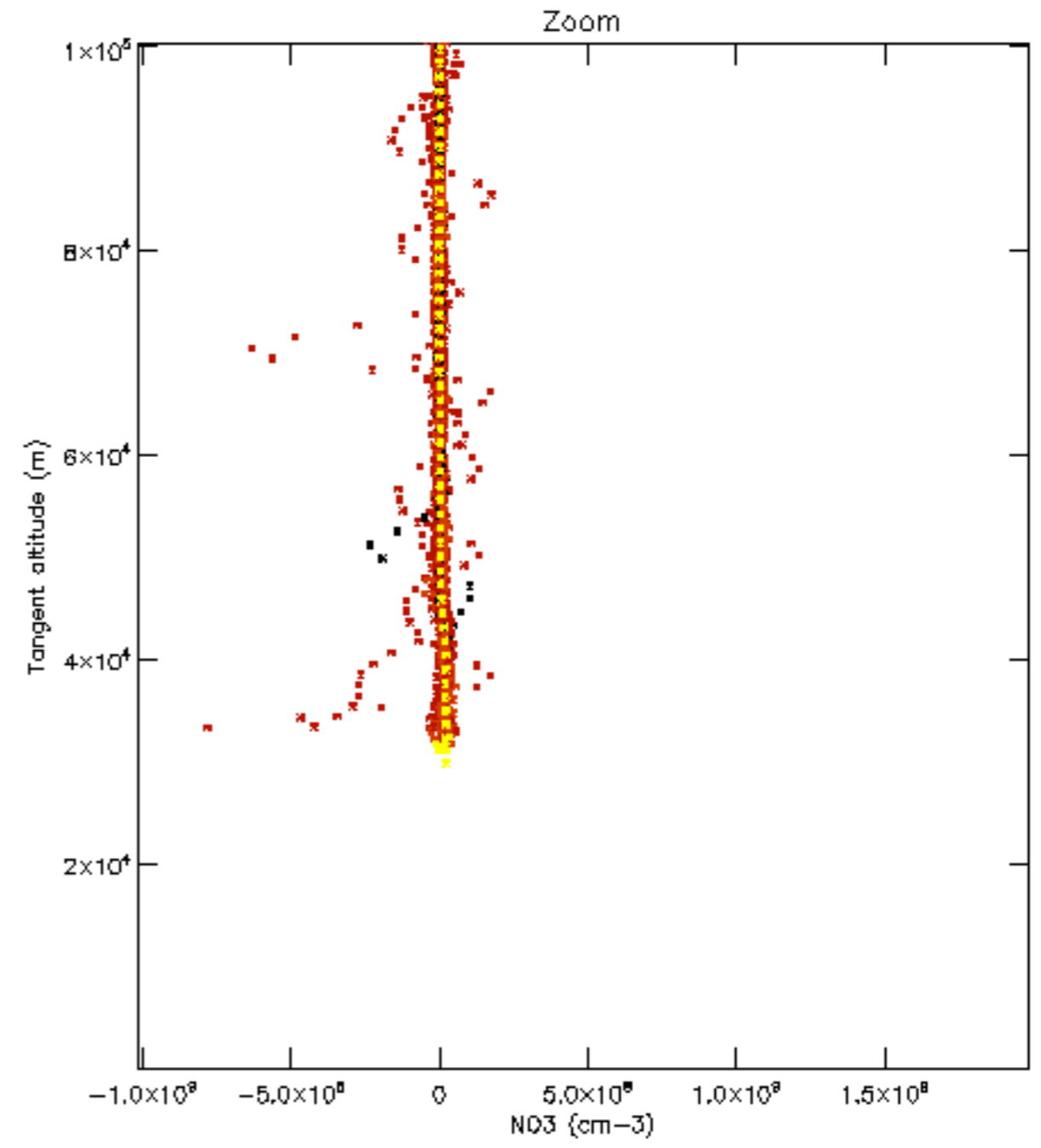
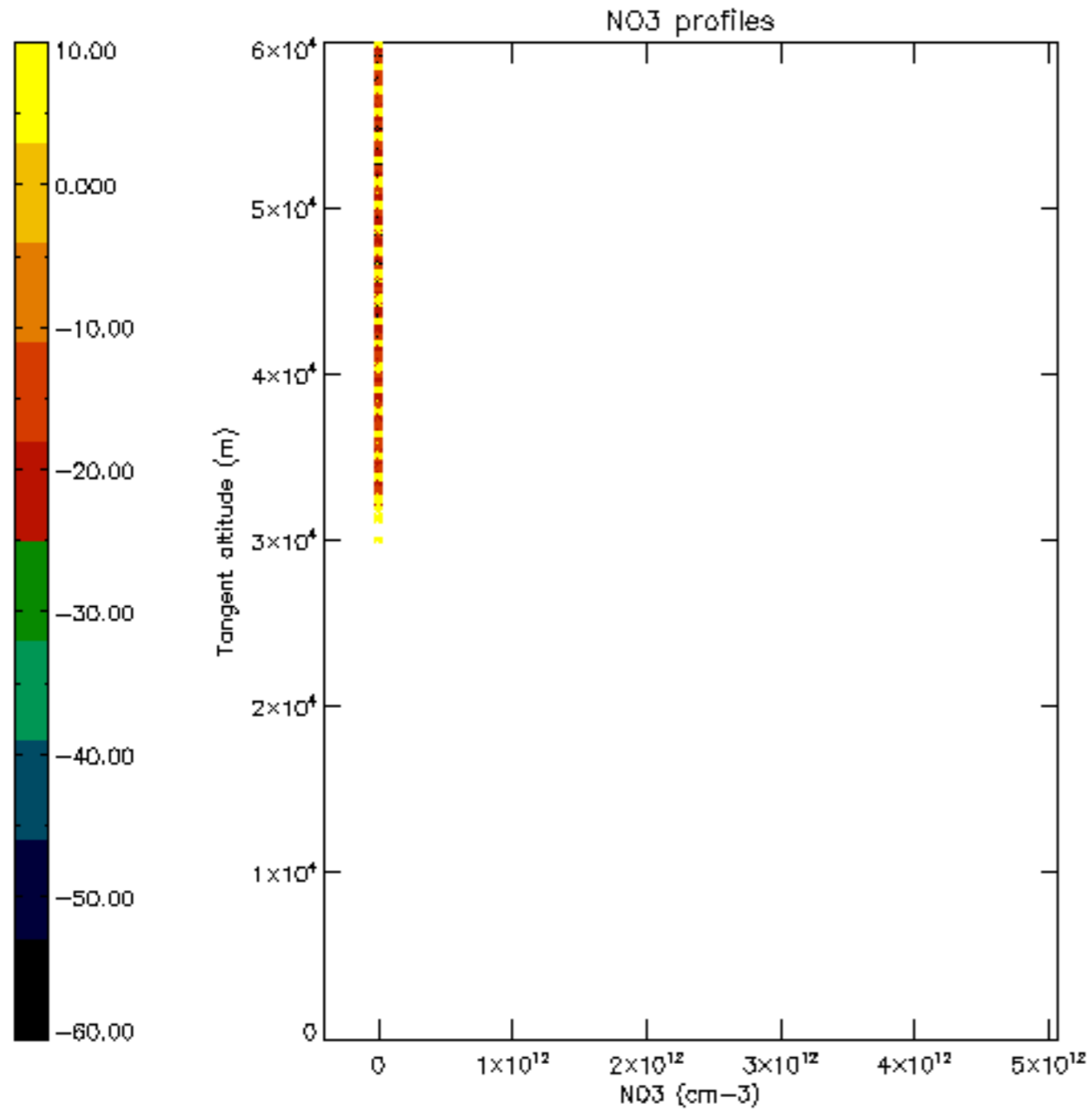


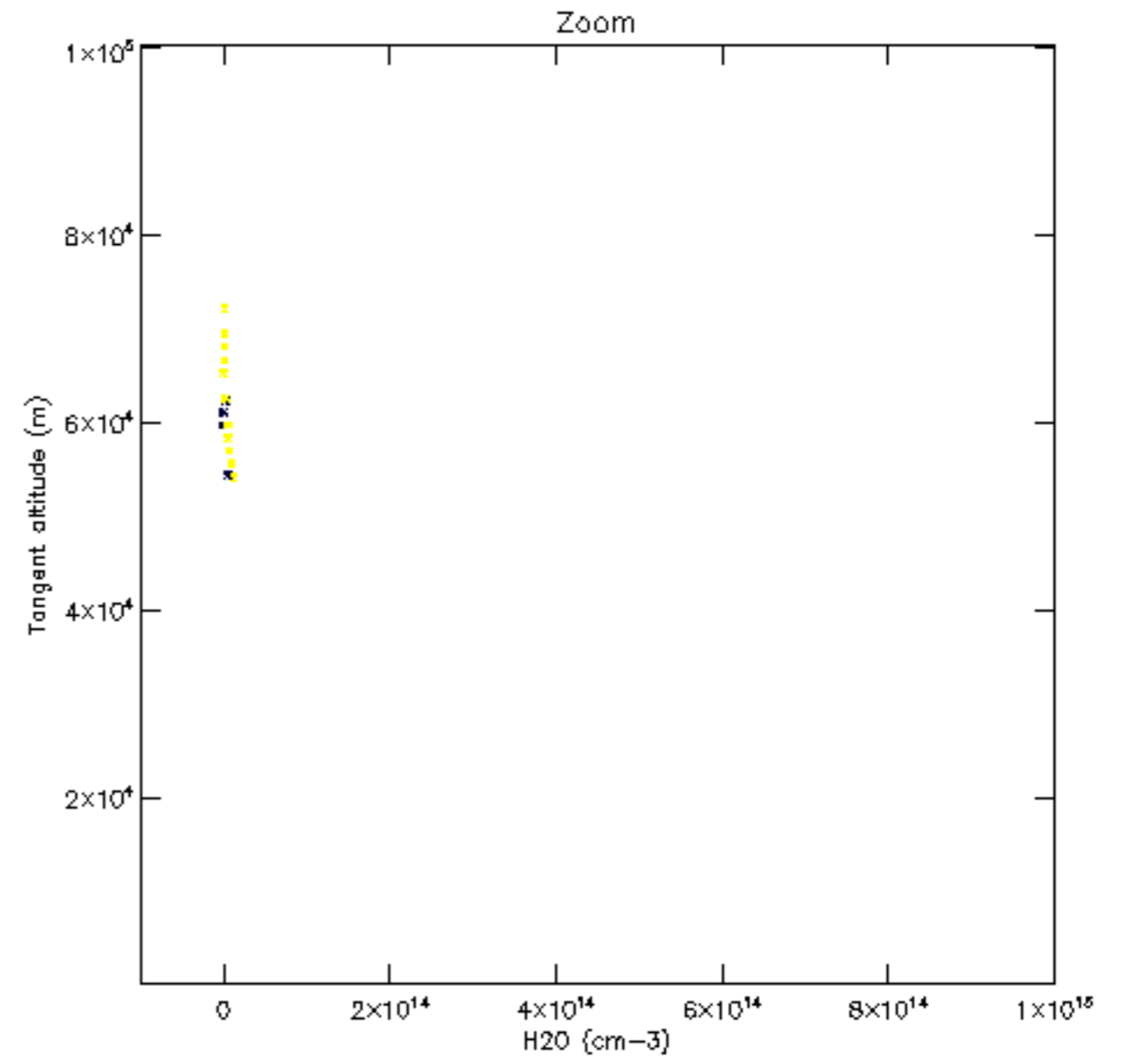
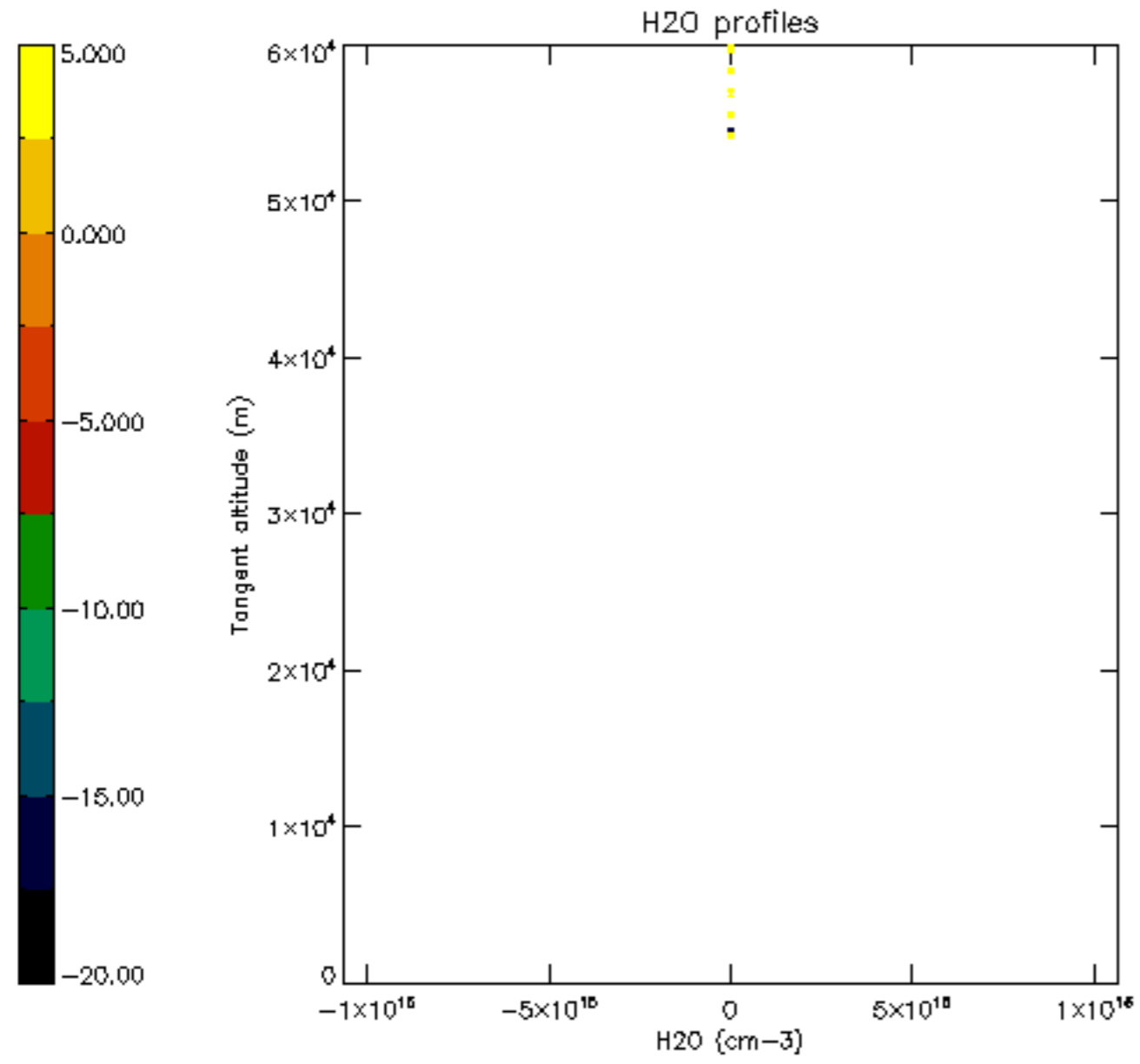


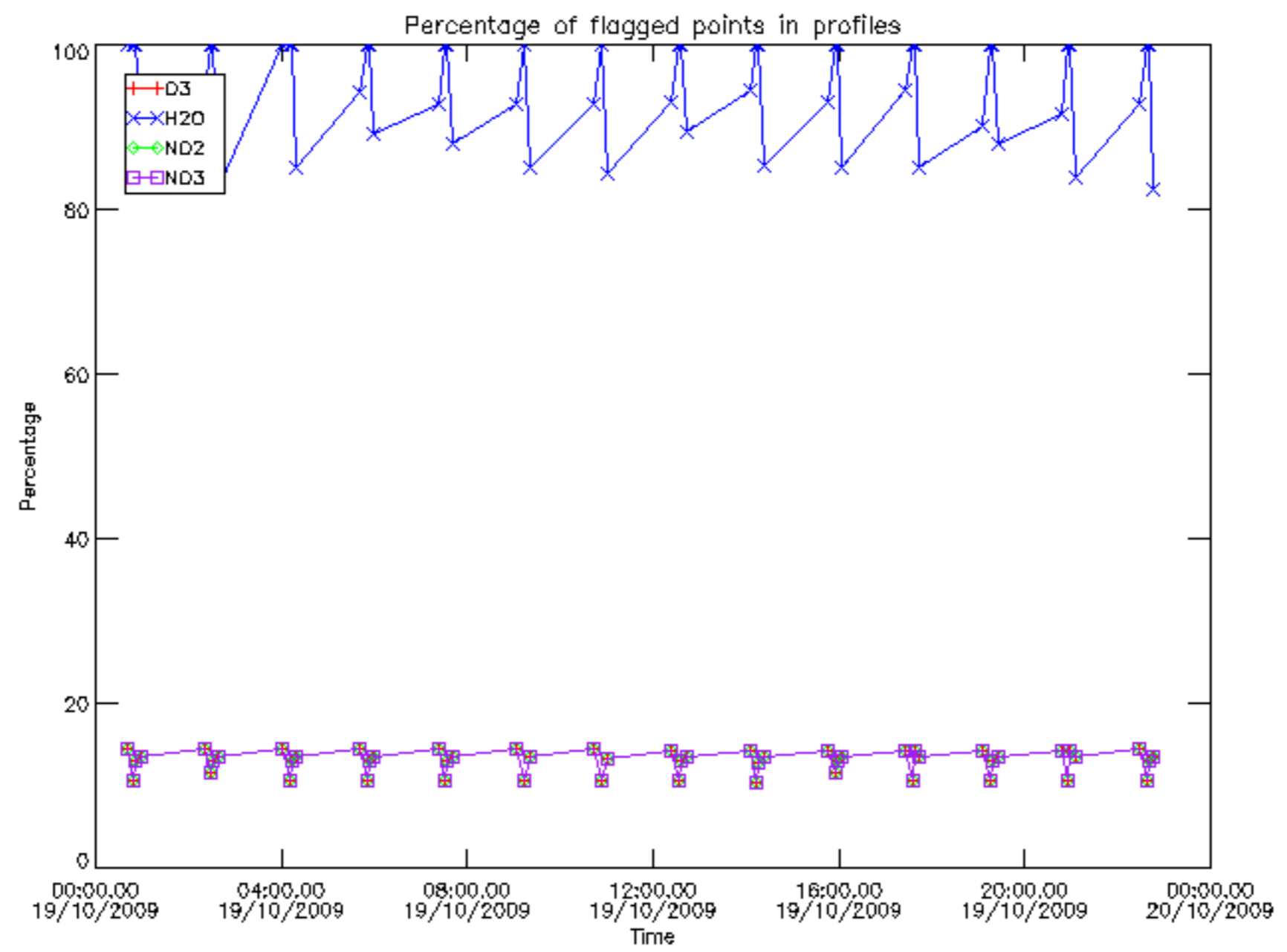






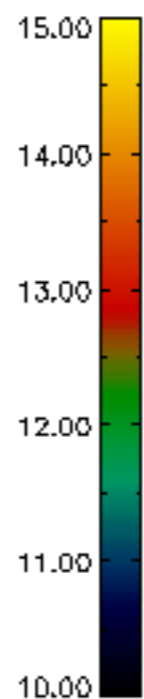
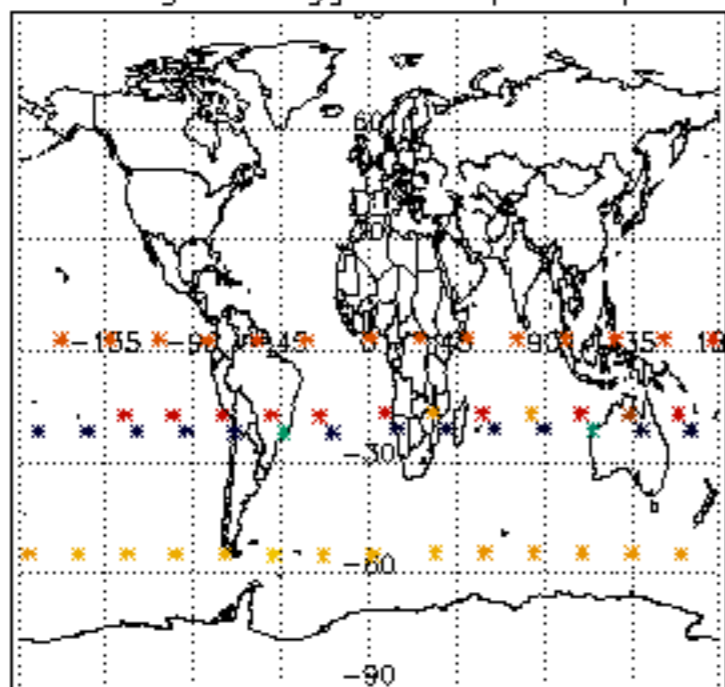




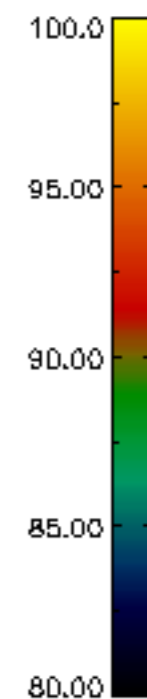
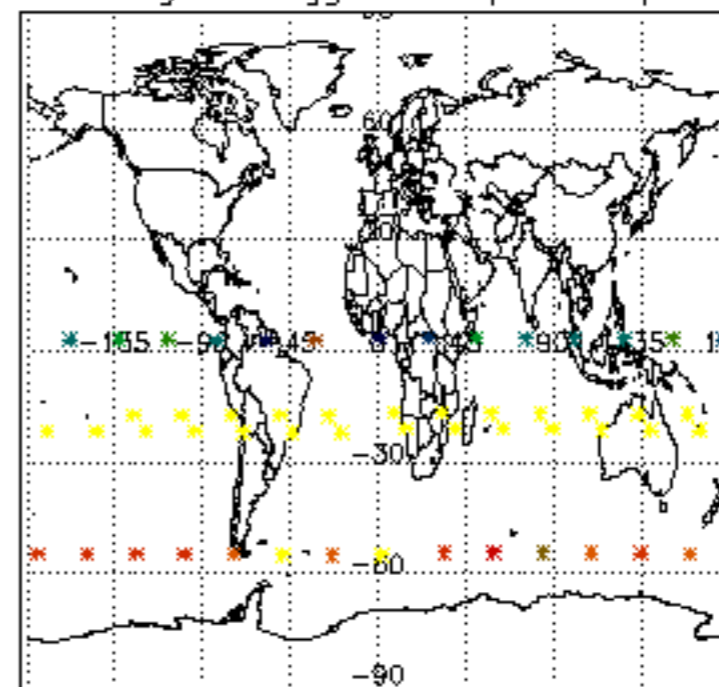




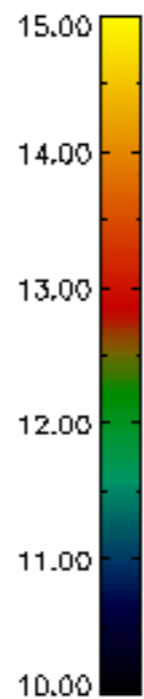
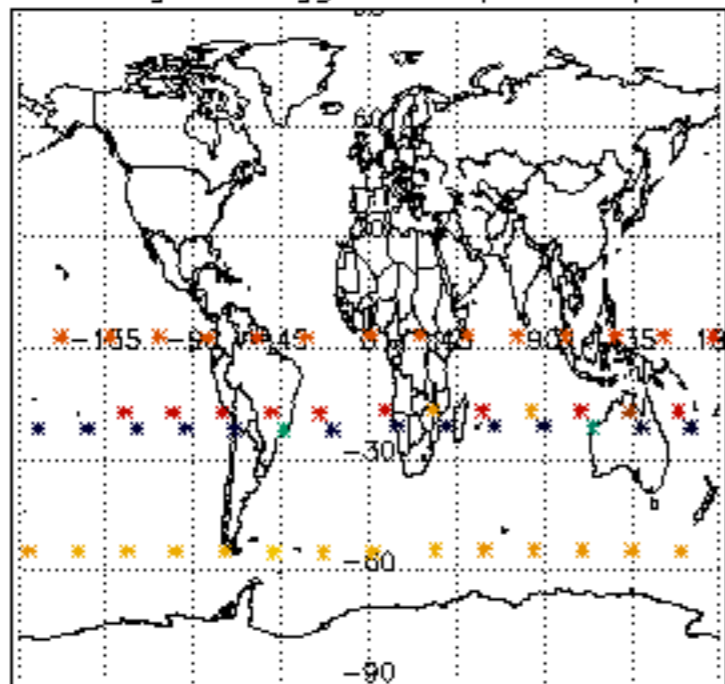
Percentage of flagged data per D3 profile



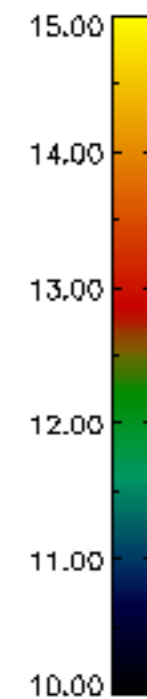
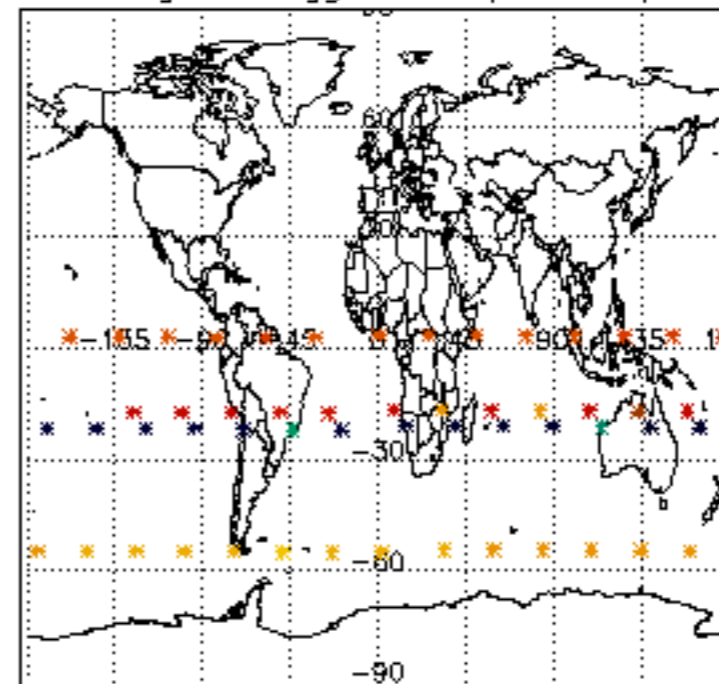
Percentage of flagged data per H2O profile

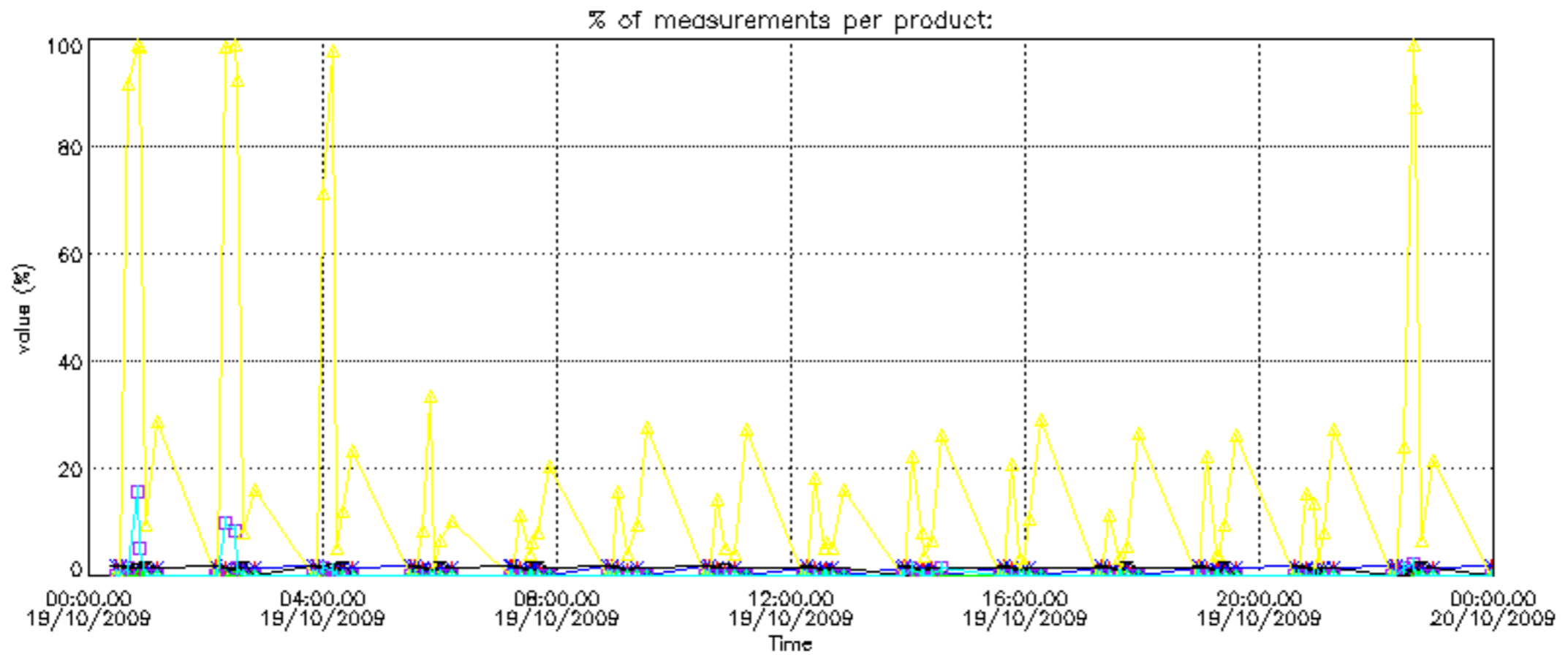


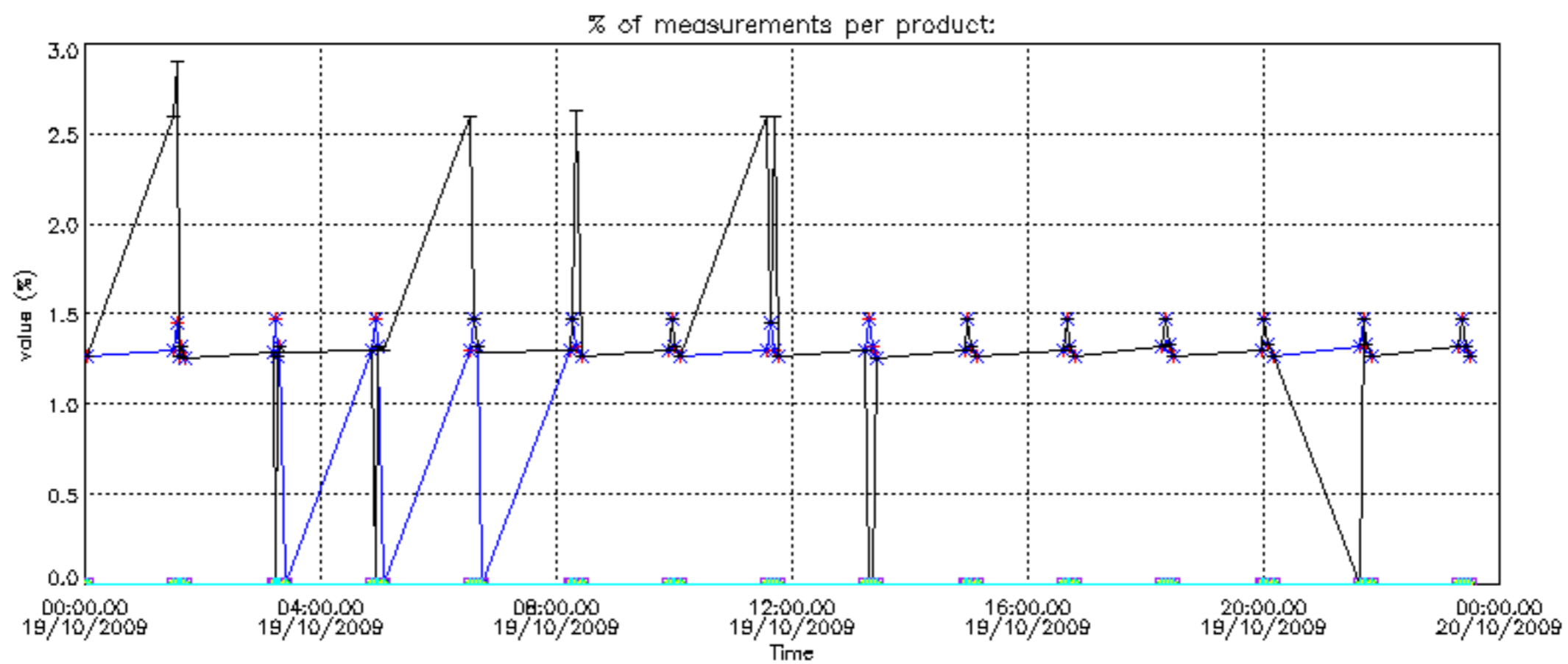
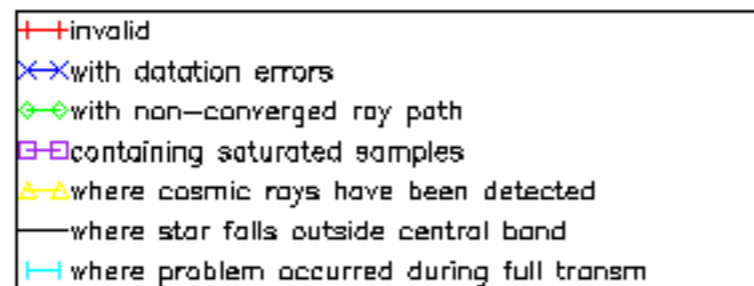
Percentage of flagged data per NO2 profile



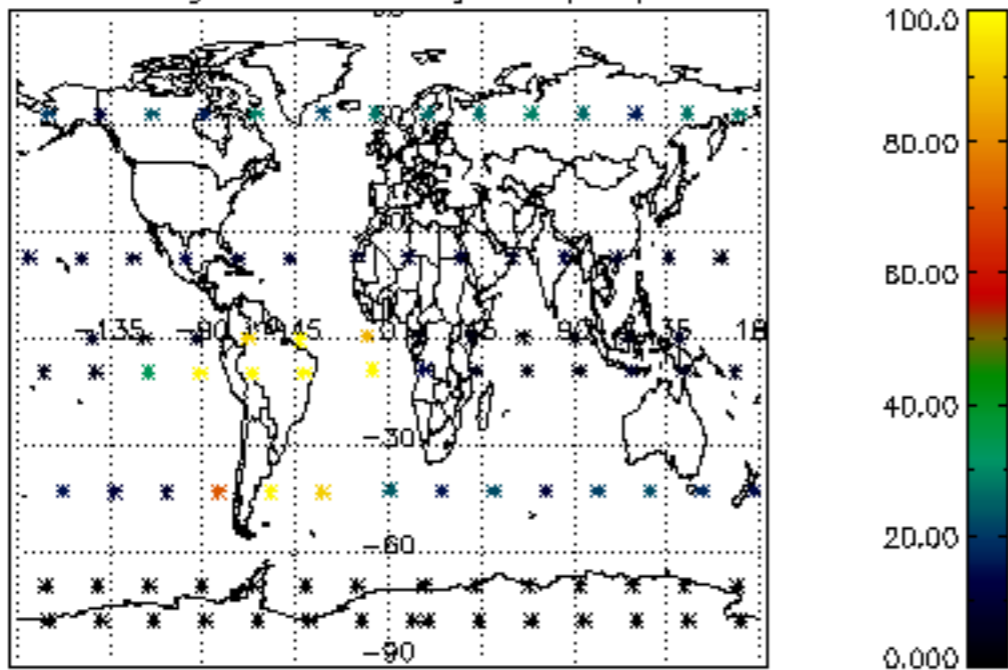
Percentage of flagged data per NO3 profile



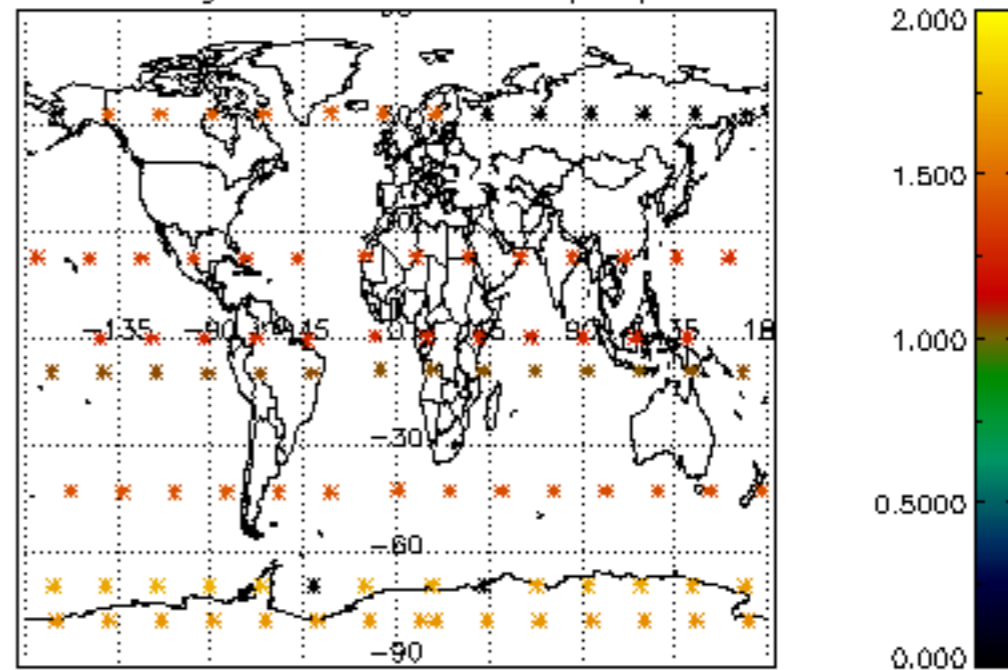




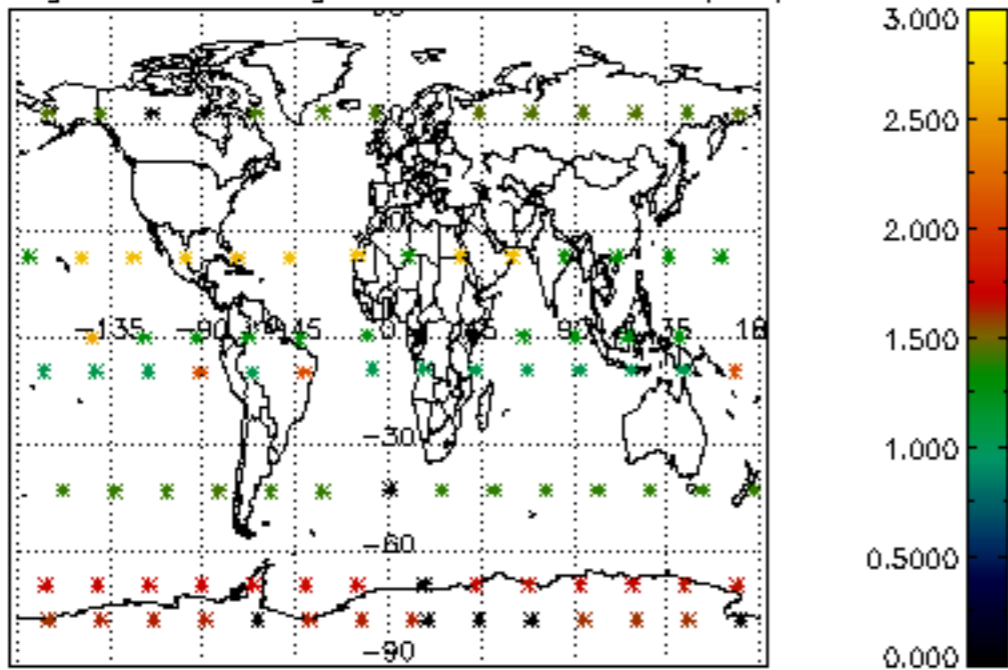
Percentage of cosmic ray hits per profile



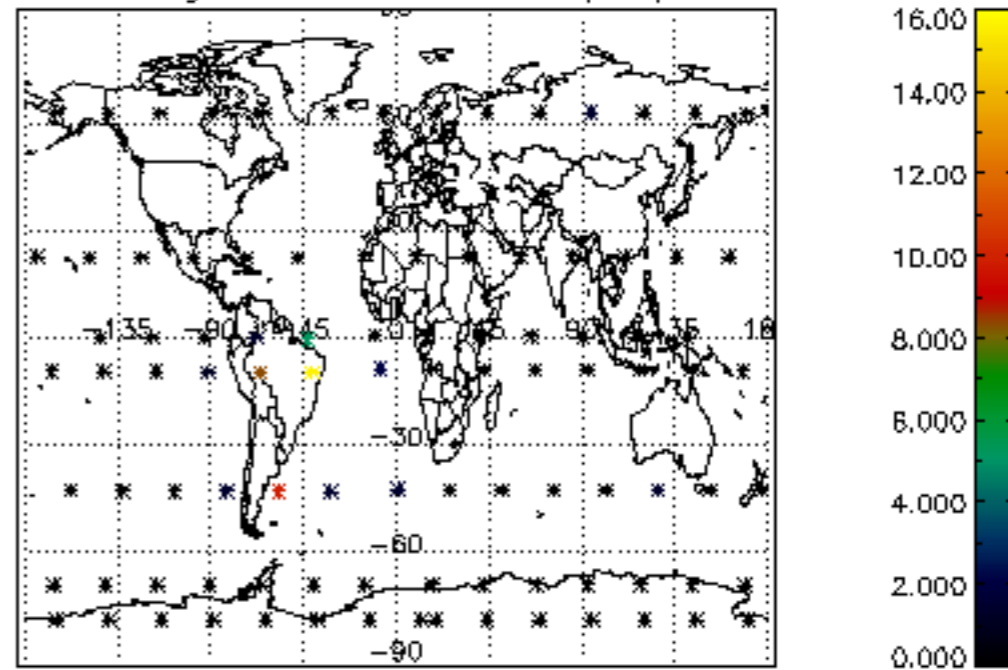
Percentage of datation errors per profile



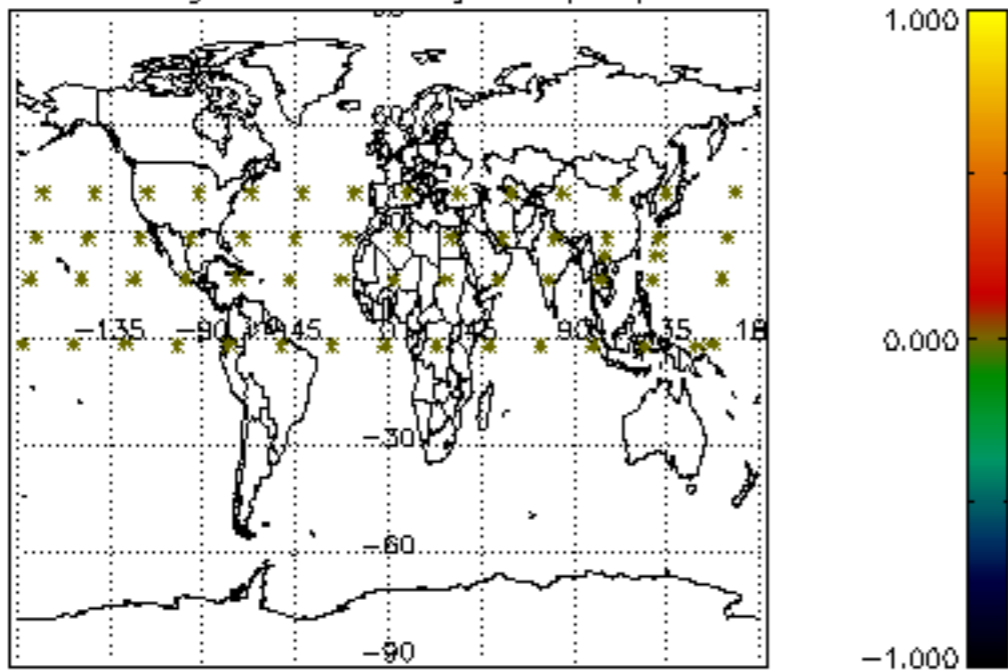
Percentage of star falling outside central band per profile



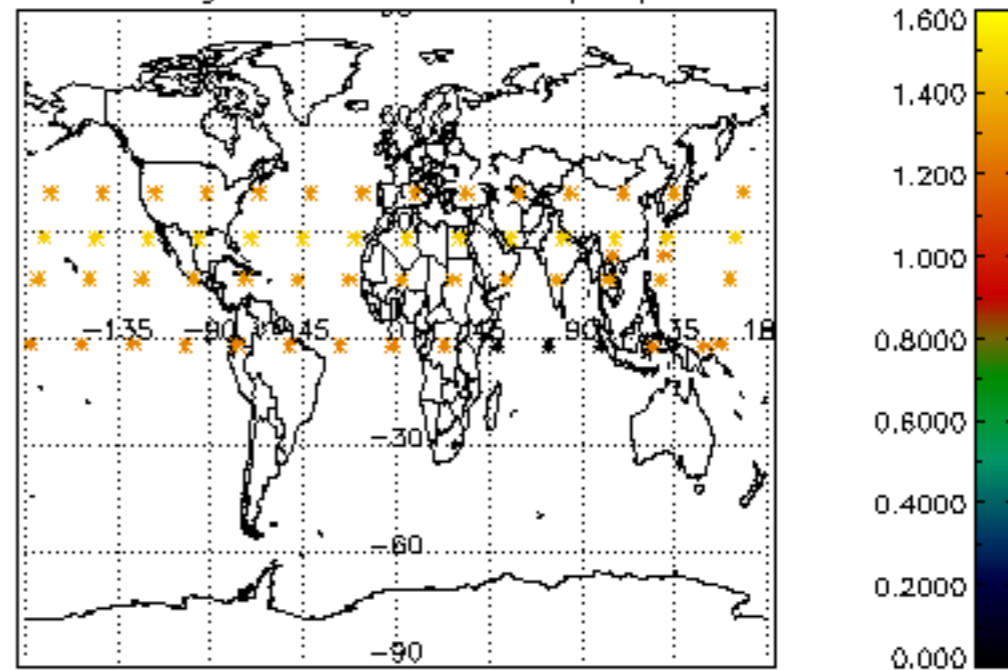
Percentage of saturation errors per profile



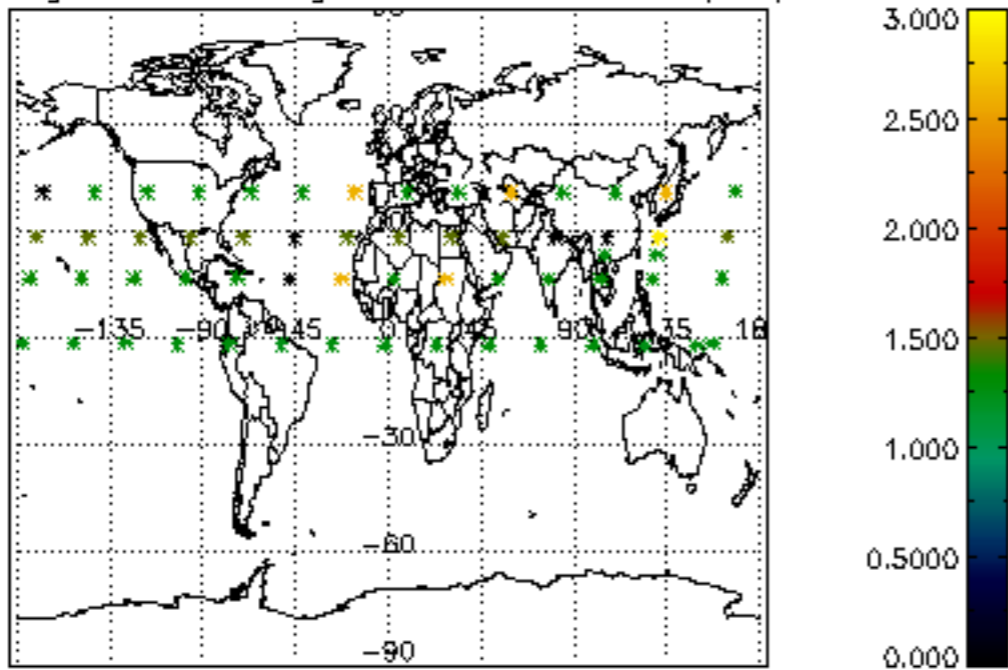
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

