

# 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	26APR2013 13:17:10
Data source version	GOMOS/6.01
Start time of products	15-10-2009 (15OCT2009 00:00:00)
Stop time of products	16-10-2009 (16OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	187
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__2PRFIN20091015_001624_000000412083_00231_39864_3693.N1	15-OCT-2009 00:16:24	Bright	41.000	105	6Bet Ari	2.6450	8900.0	82	39864	No
2	GOM_NL__2PRFIN20091015_001946_000000362083_00231_39864_3694.N1	15-OCT-2009 00:19:46	Bright	35.500	53	43Bet And	2.0480	3300.0	71	39864	No
3	GOM_NL__2PRFIN20091015_002129_000000422083_00231_39864_3695.N1	15-OCT-2009 00:21:29	Bright	42.000	173	4Bet Tri	3.0040	8900.0	84	39864	No
4	GOM_NL__2PRFIN20091015_002320_000000402083_00231_39864_3696.N1	15-OCT-2009 00:23:20	Bright	39.500	73	57Gam1And	2.2600	13100.	79	39864	No
5	GOM_NL__2PRFIN20091015_002659_000000332083_00231_39864_3697.N1	15-OCT-2009 00:26:59	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39864	No
6	GOM_NL__2PRFIN20091015_002839_000000412083_00231_39864_3698.N1	15-OCT-2009 00:28:39	Bright	40.500	160	23Gam Per	2.9300	4700.0	81	39864	No
7	GOM_NL__2PRFIN20091015_005419_000000292083_00231_39864_3699.N1	15-OCT-2009 00:54:19	Tw_i_and_stray	29.000	166	17Eps Leo	2.9800	6000.0	58	39864	No
8	GOM_NL__2PRFIN20091015_010454_000000332083_00231_39864_3700.N1	15-OCT-2009 01:04:54	Dark	33.000	48	30Alp Hya	1.9770	4100.0	66	39864	No
9	GOM_NL__2PRFIN20091015_011342_000000442083_00231_39864_3701.N1	15-OCT-2009 01:13:42	Dark	43.500	132	15Rho Pup	2.8030	6900.0	87	39864	No
10	GOM_NL__2PRFIN20091015_011645_000000372083_00231_39864_3702.N1	15-OCT-2009 01:16:45	Dark	37.000	70	Zet Pup	2.2460	39000.	74	39864	No
11	GOM_NL__2PRFIN20091015_012152_000000372083_00232_39865_3701.N1	15-OCT-2009 01:21:52	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39865	No
12	GOM_NL__2PRFIN20091015_012313_000000372083_00232_39865_3702.N1	15-OCT-2009 01:23:13	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39865	No
13	GOM_NL__2PRFIN20091015_013503_000000362083_00232_39865_3703.N1	15-OCT-2009 01:35:03	Straylight	36.000	157	The1Eri	2.9060	9300.0	72	39865	No
14	GOM_NL__2PRFIN20091015_015659_000000412083_00232_39865_3704.N1	15-OCT-2009 01:56:59	Bright	41.000	105	6Bet Ari	2.6450	8900.0	82	39865	No
15	GOM_NL__2PRFIN20091015_020022_000000352083_00232_39865_3705.N1	15-OCT-2009 02:00:22	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39865	No
16	GOM_NL__2PRFIN20091015_020204_000000422083_00232_39865_3706.N1	15-OCT-2009 02:02:04	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39865	No
17	GOM_NL__2PRFIN20091015_020355_000000402083_00232_39865_3707.N1	15-OCT-2009 02:03:55	Bright	39.500	73	57Gam1And	2.2600	13100.	79	39865	No
18	GOM_NL__2PRFIN20091015_020734_000000332083_00232_39865_3708.N1	15-OCT-2009 02:07:34	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39865	No
19	GOM_NL__2PRFIN20091015_020914_000000402083_00232_39865_3709.N1	15-OCT-2009 02:09:14	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39865	No
20	GOM_NL__2PRFIN20091015_023455_000000292083_00232_39865_3710.N1	15-OCT-2009 02:34:55	Tw_i_and_stray	29.000	166	17Eps Leo	2.9800	6000.0	58	39865	No
21	GOM_NL__2PRFIN20091015_024530_000000342083_00232_39865_3711.N1	15-OCT-2009 02:45:30	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39865	No
22	GOM_NL__2PRFIN20091015_025419_000000442083_00232_39865_3712.N1	15-OCT-2009 02:54:19	Dark	44.000	132	15Rho Pup	2.8030	6900.0	88	39865	No
23	GOM_NL__2PRFIN20091015_025722_000000372083_00232_39865_3713.N1	15-OCT-2009 02:57:22	Dark	37.000	70	Zet Pup	2.2460	39000.	74	39865	No
24	GOM_NL__2PRFIN20091015_030229_000000372083_00233_39866_3712.N1	15-OCT-2009 03:02:29	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39866	No
25	GOM_NL__2PRFIN20091015_030350_000000372083_00233_39866_3713.N1	15-OCT-2009 03:03:50	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39866	No
26	GOM_NL__2PRFIN20091015_031539_000000362083_00233_39866_3714.N1	15-OCT-2009 03:15:39	Straylight	36.000	157	The1Eri	2.9060	9300.0	72	39866	No
27	GOM_NL__2PRFIN20091015_033735_000000412083_00233_39866_3715.N1	15-OCT-2009 03:37:35	Bright	40.500	105	6Bet Ari	2.6450	8900.0	81	39866	No
28	GOM_NL__2PRFIN20091015_034057_000000212083_00233_39866_3716.N1	15-OCT-2009 03:40:57	Tw_i_and_stray	21.000	53	43Bet And	2.0480	3300.0	42	39866	No
29	GOM_NL__2PRFIN20091015_034239_000000262083_00233_39866_3717.N1	15-OCT-2009 03:42:39	Tw_i_and_stray	25.500	173	4Bet Tri	3.0040	8900.0	51	39866	No
30	GOM_NL__2PRFIN20091015_034430_000000392083_00233_39866_3718.N1	15-OCT-2009 03:44:30	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39866	No
31	GOM_NL__2PRFIN20091015_034810_000000332083_00233_39866_3719.N1	15-OCT-2009 03:48:10	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39866	No
32	GOM_NL__2PRFIN20091015_034950_000000402083_00233_39866_3720.N1	15-OCT-2009 03:49:50	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39866	No
33	GOM_NL__2PRFIN20091015_041531_000000292083_00233_39866_3721.N1	15-OCT-2009 04:15:31	Tw_i_and_stray	29.000	166	17Eps Leo	2.9800	6000.0	58	39866	No
34	GOM_NL__2PRFIN20091015_042607_000000332083_00233_39866_3722.N1	15-OCT-2009 04:26:07	Dark	33.000	48	30Alp Hya	1.9770	4100.0	66	39866	No
35	GOM_NL__2PRFIN20091015_043456_000000442083_00233_39866_3723.N1	15-OCT-2009 04:34:56	Dark	44.000	132	15Rho Pup	2.8030	6900.0	88	39866	No
36	GOM_NL__2PRFIN20091015_043758_000000382083_00233_39866_3724.N1	15-OCT-2009 04:37:58	Dark	37.500	70	Zet Pup	2.2460	39000.	75	39866	No
37	GOM_NL__2PRFIN20091015_044306_000000372083_00234_39867_3723.N1	15-OCT-2009 04:43:06	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39867	No
38	GOM_NL__2PRFIN20091015_044426_000000372083_00234_39867_3724.N1	15-OCT-2009 04:44:26	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39867	No
39	GOM_NL__2PRFIN20091015_045616_000000362083_00234_39867_3725.N1	15-OCT-2009 04:56:16	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39867	No
40	GOM_NL__2PRFIN20091015_051811_000000412083_00234_39867_3726.N1	15-OCT-2009 05:18:11	Bright	40.500	105	6Bet Ari	2.6450	8900.0	81	39867	No
41	GOM_NL__2PRFIN20091015_052133_000000352083_00234_39867_3727.N1	15-OCT-2009 05:21:33	Bright	35.000	53	43Bet And	2.0480	3300.0	70	39867	No
42	GOM_NL__2PRFIN20091015_052315_000000422083_00234_39867_3728.N1	15-OCT-2009 05:23:15	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39867	No



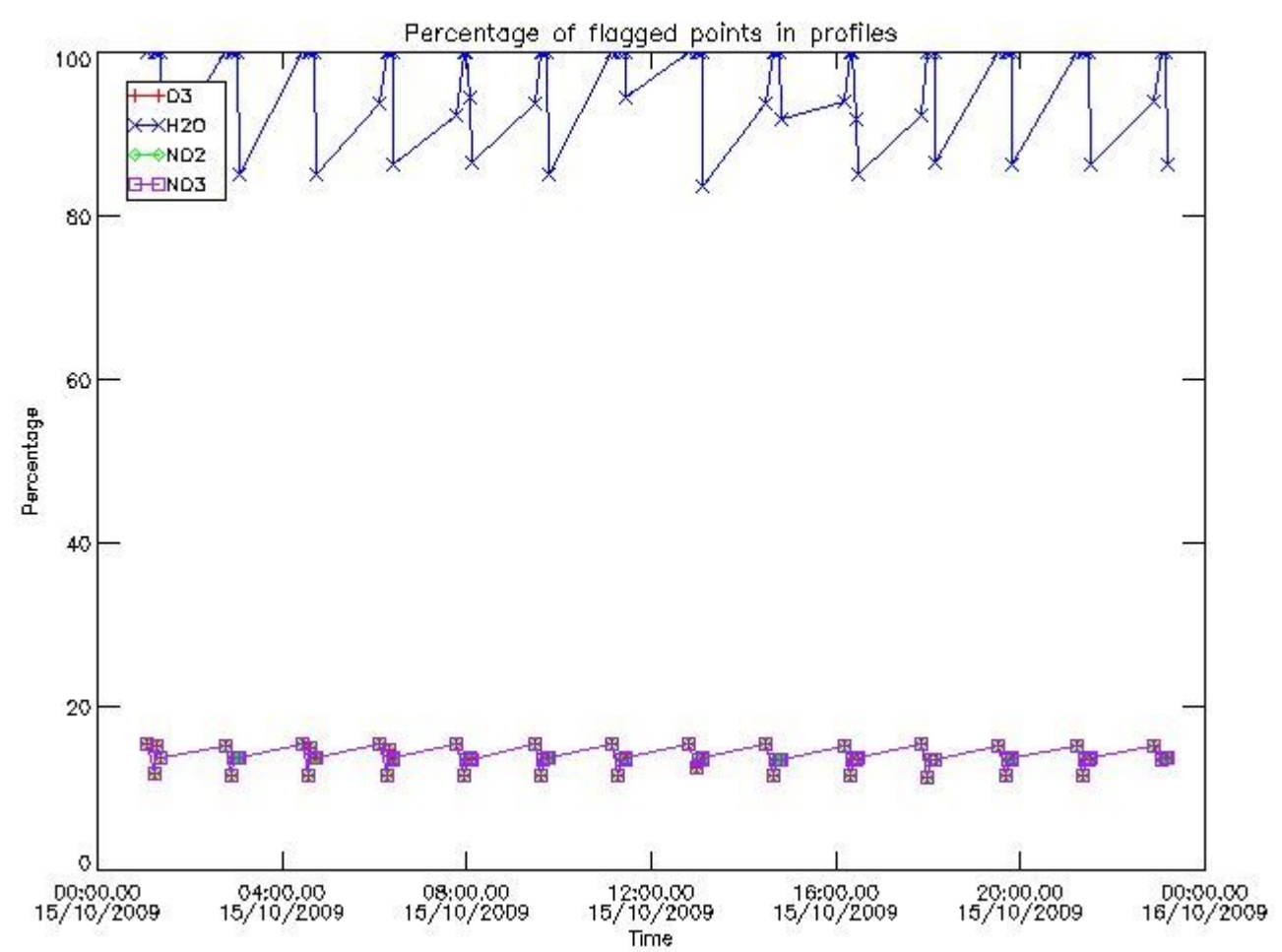


161	GOM_NL__2PRFIN20091015_203406_000000332083_00243_39876_3913.N1	15-OCT-2009 20:34:06	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39876	No
162	GOM_NL__2PRFIN20091015_203541_000000402083_00243_39876_3914.N1	15-OCT-2009 20:35:41	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39876	No
163	GOM_NL__2PRFIN20091015_210133_000000292083_00243_39876_3915.N1	15-OCT-2009 21:01:33	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39876	No
164	GOM_NL__2PRFIN20091015_211213_000000342083_00243_39876_3916.N1	15-OCT-2009 21:12:13	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39876	No
165	GOM_NL__2PRFIN20091015_212108_000000452083_00243_39876_3917.N1	15-OCT-2009 21:21:08	Dark	44.500	132	15Rho Pup	2.8030	6900.0	89	39876	No
166	GOM_NL__2PRFIN20091015_212406_000000382083_00243_39876_3918.N1	15-OCT-2009 21:24:06	Dark	38.000	70	Zet Pup	2.2460	39000.	76	39876	No
167	GOM_NL__2PRFIN20091015_212913_000000382083_00244_39877_3917.N1	15-OCT-2009 21:29:13	Dark	37.500	161	Tau Pup	2.9310	4500.0	75	39877	No
168	GOM_NL__2PRFIN20091015_213034_000000372083_00244_39877_3918.N1	15-OCT-2009 21:30:34	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39877	No
169	GOM_NL__2PRFIN20091015_214220_000000362083_00244_39877_3919.N1	15-OCT-2009 21:42:20	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39877	No
170	GOM_NL__2PRFIN20091015_220404_000000402083_00244_39877_3920.N1	15-OCT-2009 22:04:04	Bright	40.000	105	6Bet Ari	2.6450	8900.0	80	39877	No
171	GOM_NL__2PRFIN20091015_220729_000000212083_00244_39877_3921.N1	15-OCT-2009 22:07:29	Twilight	20.500	53	43Bet And	2.0480	3300.0	41	39877	No
172	GOM_NL__2PRFIN20091015_220907_000000412083_00244_39877_3922.N1	15-OCT-2009 22:09:07	Bright	41.000	173	4Bet Tri	3.0040	8900.0	82	39877	No
173	GOM_NL__2PRFIN20091015_221059_000000392083_00244_39877_3923.N1	15-OCT-2009 22:10:59	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39877	No
174	GOM_NL__2PRFIN20091015_221442_000000332083_00244_39877_3924.N1	15-OCT-2009 22:14:42	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39877	No
175	GOM_NL__2PRFIN20091015_221616_000000402083_00244_39877_3925.N1	15-OCT-2009 22:16:16	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39877	No
176	GOM_NL__2PRFIN20091015_224210_000000292083_00244_39877_3926.N1	15-OCT-2009 22:42:10	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39877	No
177	GOM_NL__2PRFIN20091015_225250_000000342083_00244_39877_3927.N1	15-OCT-2009 22:52:50	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39877	No
178	GOM_NL__2PRFIN20091015_230443_000000382083_00244_39877_3928.N1	15-OCT-2009 23:04:43	Dark	38.000	70	Zet Pup	2.2460	39000.	76	39877	No
179	GOM_NL__2PRFIN20091015_230950_000000372083_00245_39878_3928.N1	15-OCT-2009 23:09:50	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39878	No
180	GOM_NL__2PRFIN20091015_231111_000000372083_00245_39878_3929.N1	15-OCT-2009 23:11:11	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39878	No
181	GOM_NL__2PRFIN20091015_232257_000000362083_00245_39878_3930.N1	15-OCT-2009 23:22:57	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39878	No
182	GOM_NL__2PRFIN20091015_234440_000000402083_00245_39878_3931.N1	15-OCT-2009 23:44:40	Bright	40.000	105	6Bet Ari	2.6450	8900.0	80	39878	No
183	GOM_NL__2PRFIN20091015_234805_000000352083_00245_39878_3932.N1	15-OCT-2009 23:48:05	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39878	No
184	GOM_NL__2PRFIN20091015_234942_000000422083_00245_39878_3933.N1	15-OCT-2009 23:49:42	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39878	No
185	GOM_NL__2PRFIN20091015_235134_000000392083_00245_39878_3934.N1	15-OCT-2009 23:51:34	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39878	No
186	GOM_NL__2PRFIN20091015_235517_000000332083_00245_39878_3935.N1	15-OCT-2009 23:55:17	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39878	No
187	GOM_NL__2PRFIN20091015_235651_000000412083_00245_39878_3936.N1	15-OCT-2009 23:56:51	Bright	40.500	160	23Gam Per	2.9300	4700.0	81	39878	No

### 3. Quality information per product

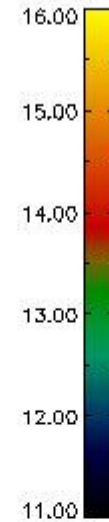
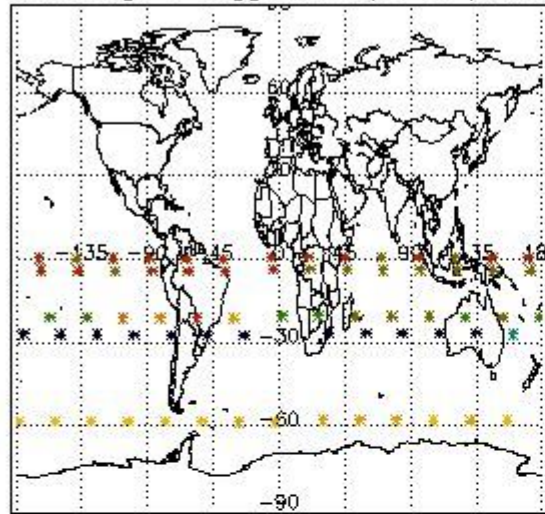
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

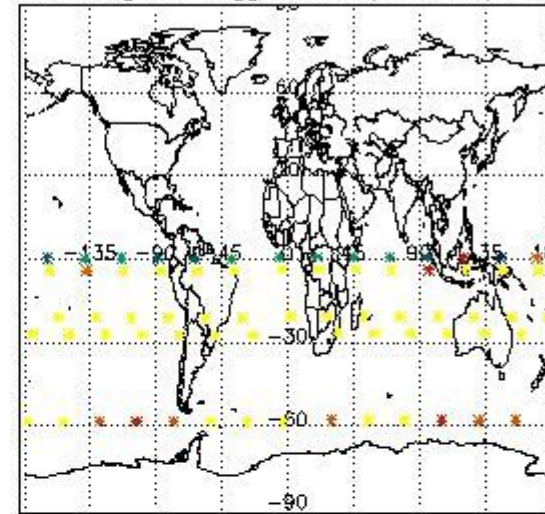


3.2 Plot quality information per product (world map)

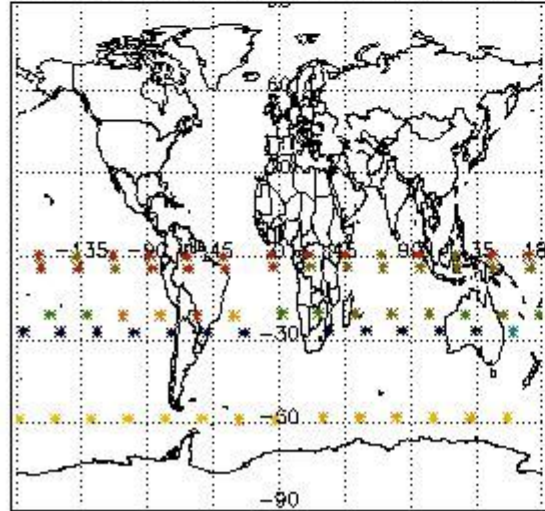
Percentage of flagged data per O3 profile



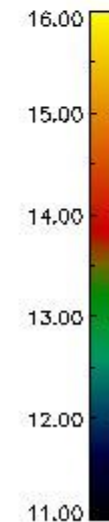
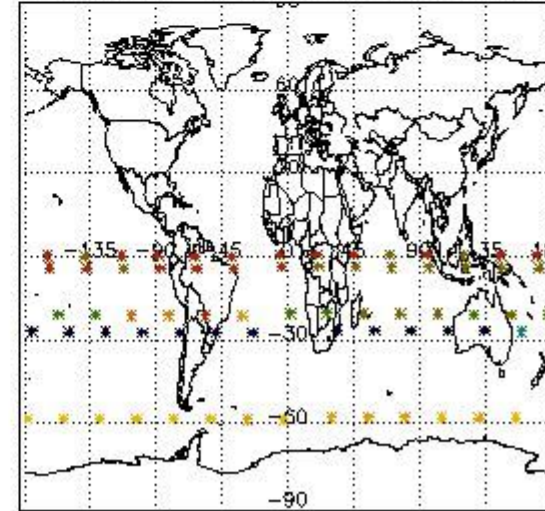
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

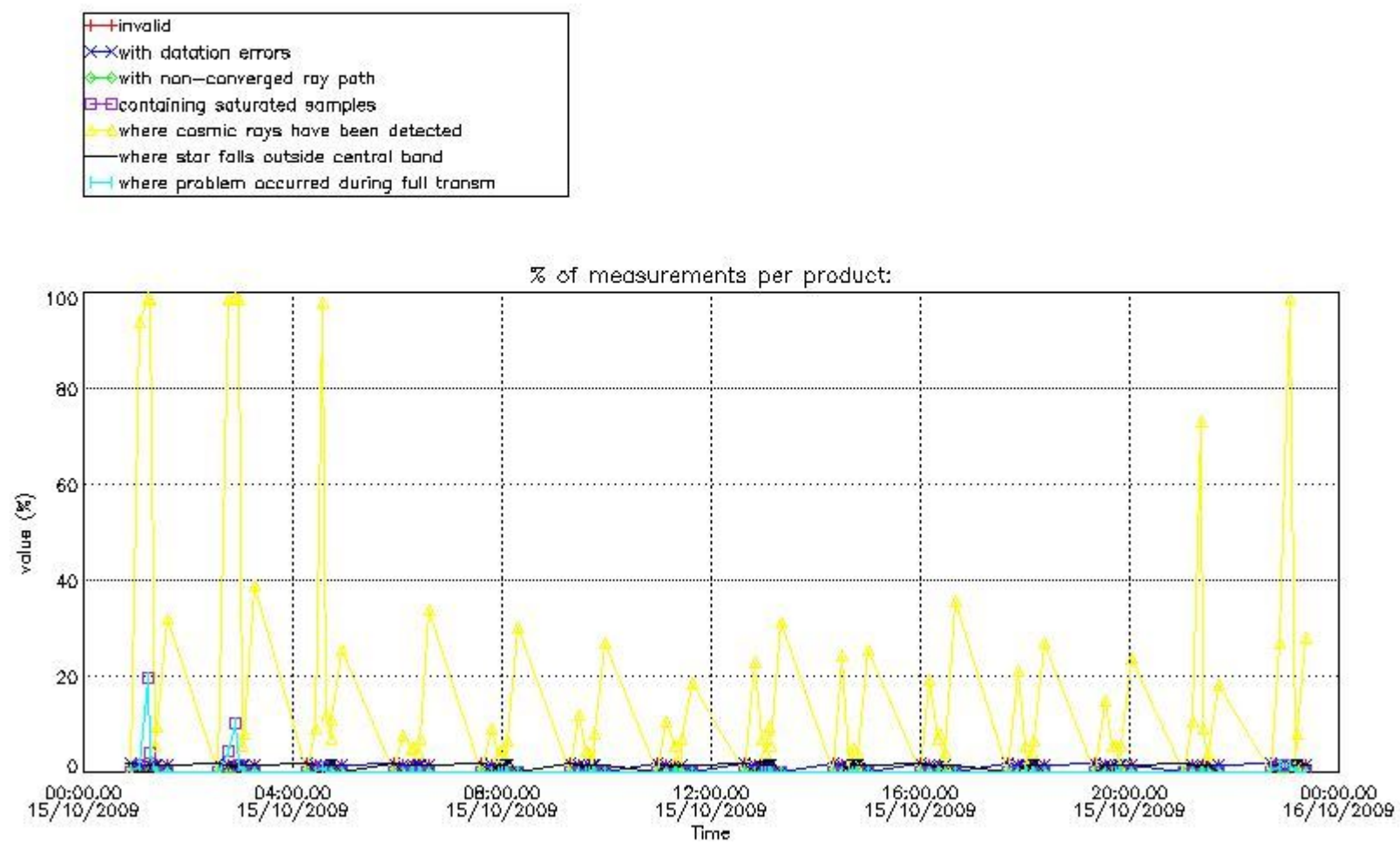


#### 4. Level 1 quality information per product

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.

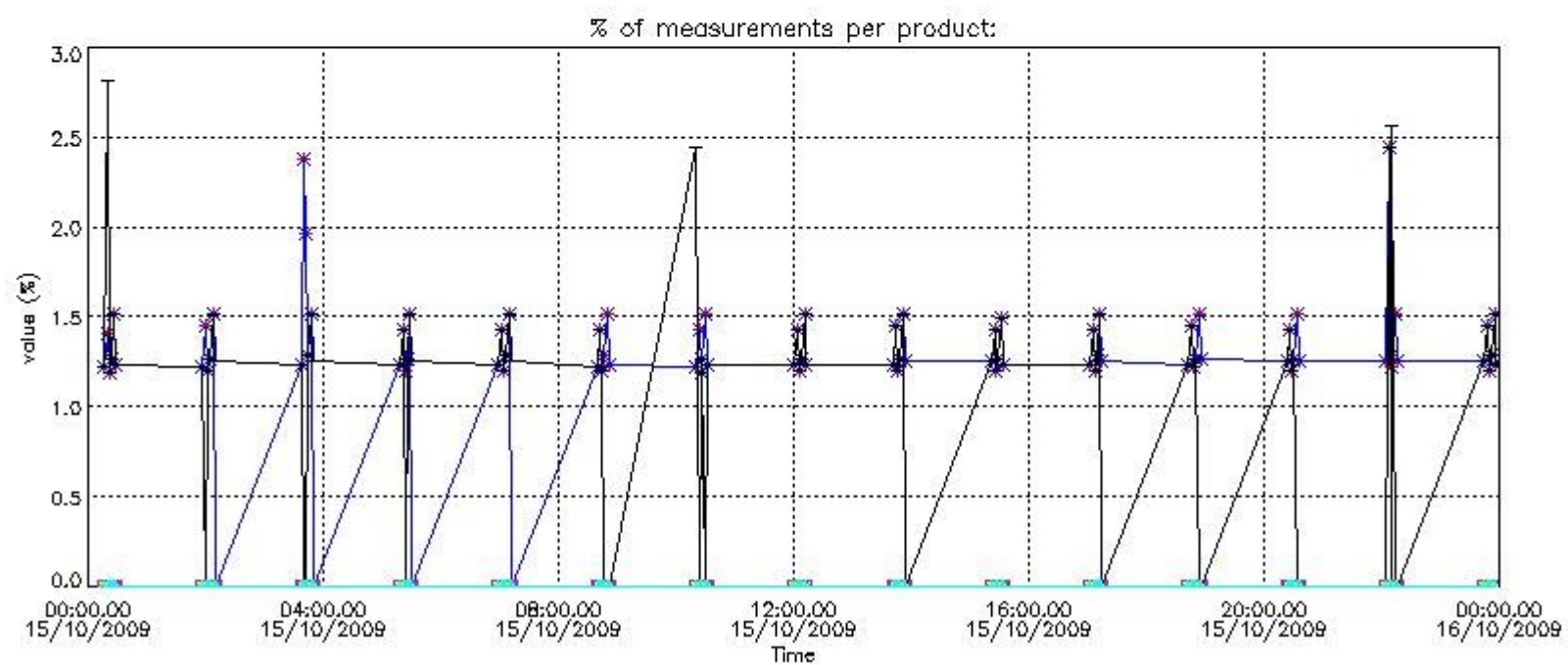
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

###### 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): ENVI SAT DESCENDING passes

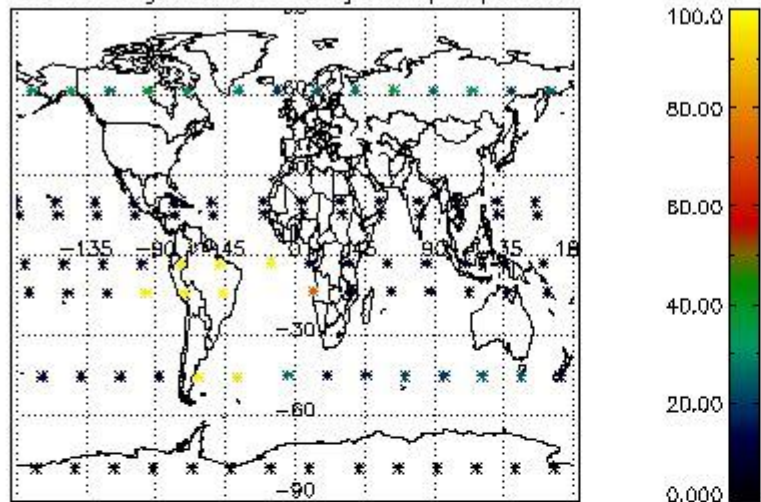




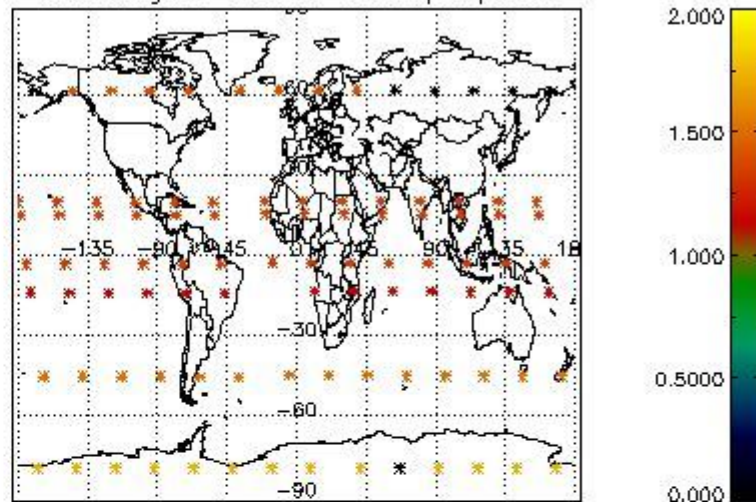
4.2 Plot quality information per product coming from level 1b processing (world map)

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

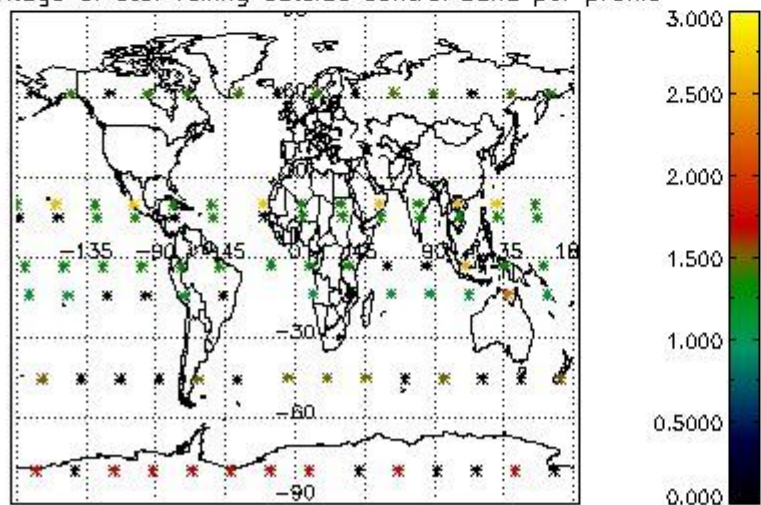
Percentage of cosmic ray hits per profile



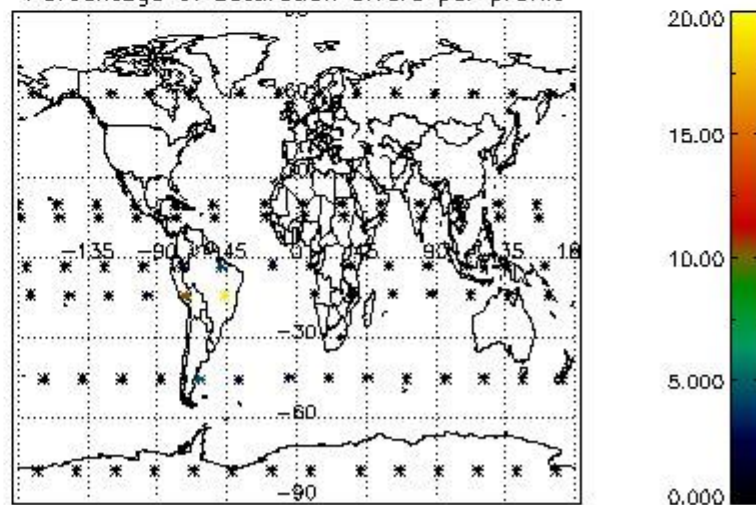
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

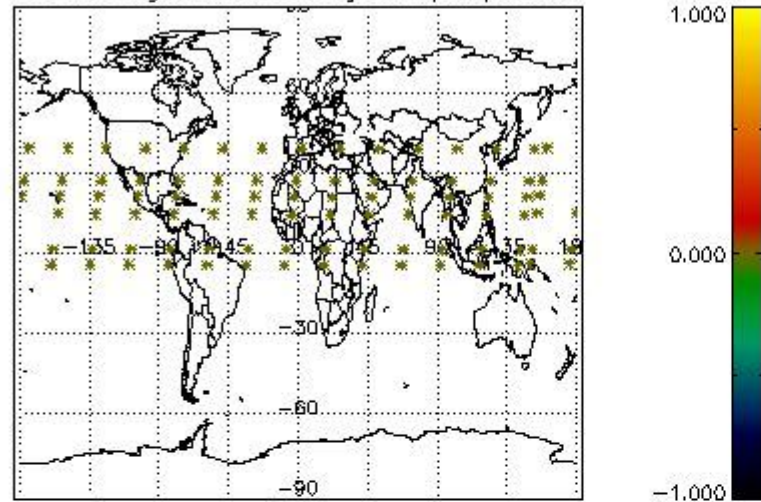


Percentage of saturation errors per profile

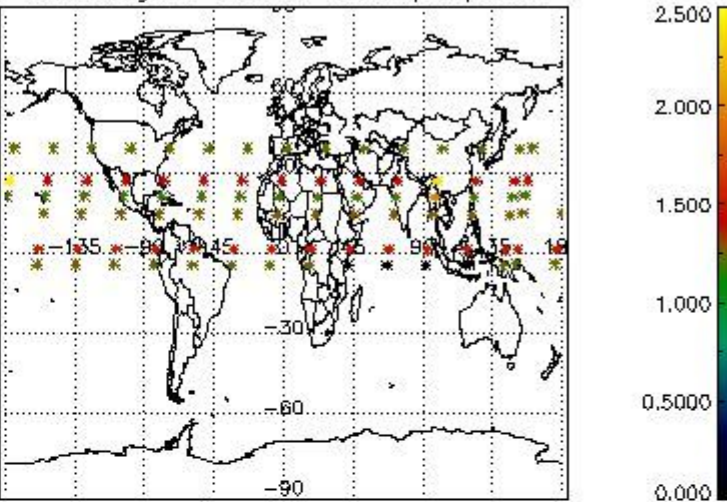


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

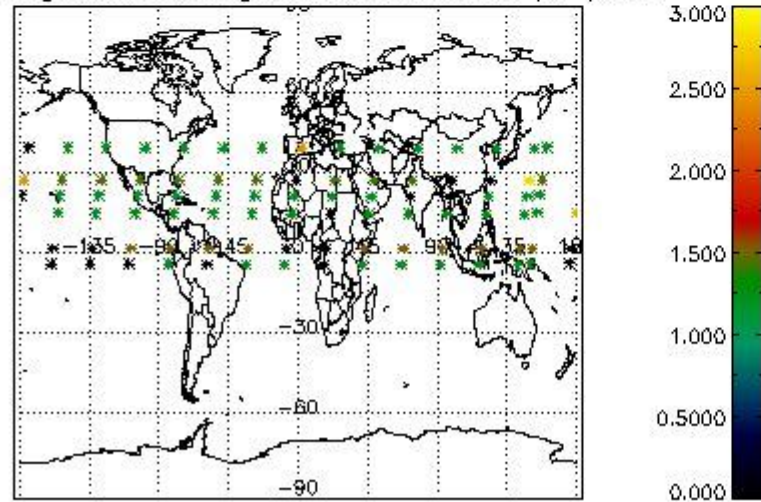
Percentage of cosmic ray hits per profile



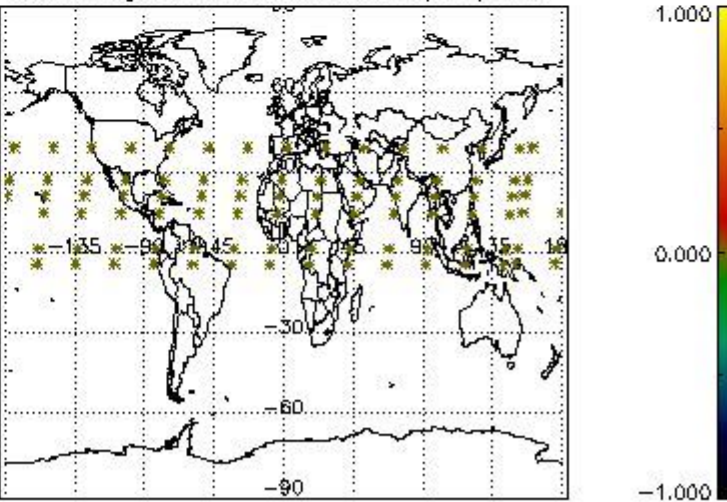
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 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

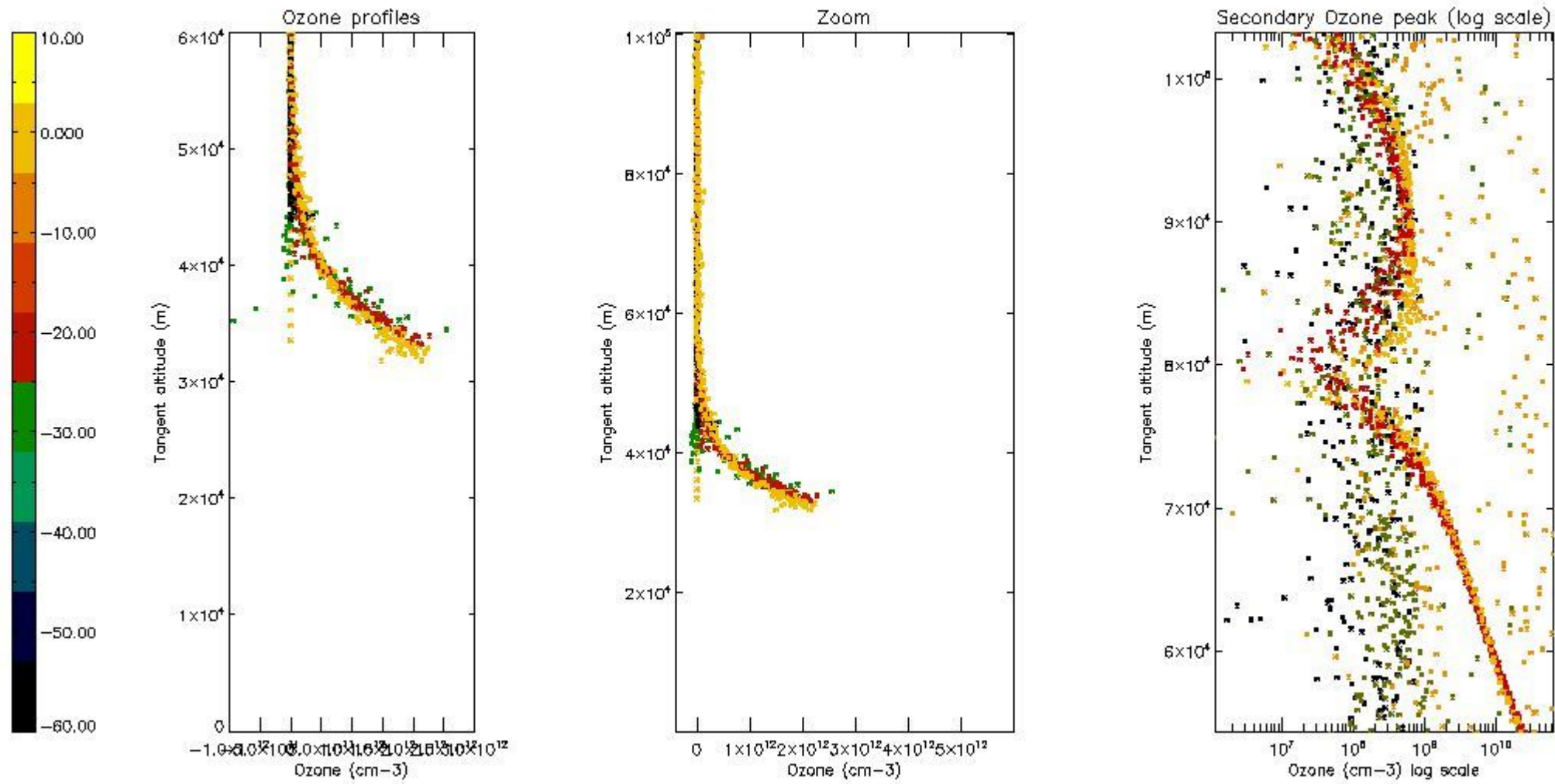
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	13

STD < 10	11
STD < 5	8

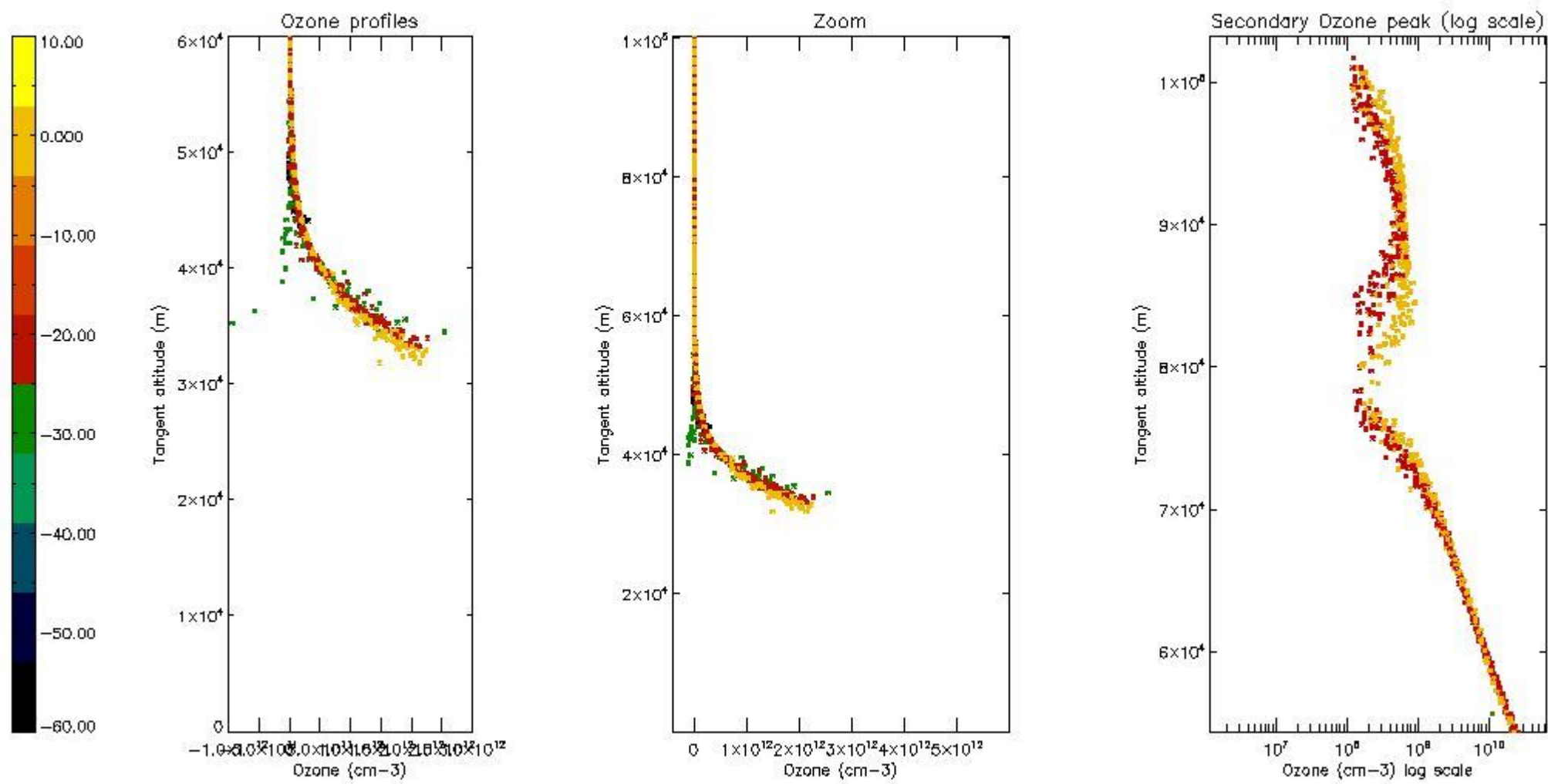
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



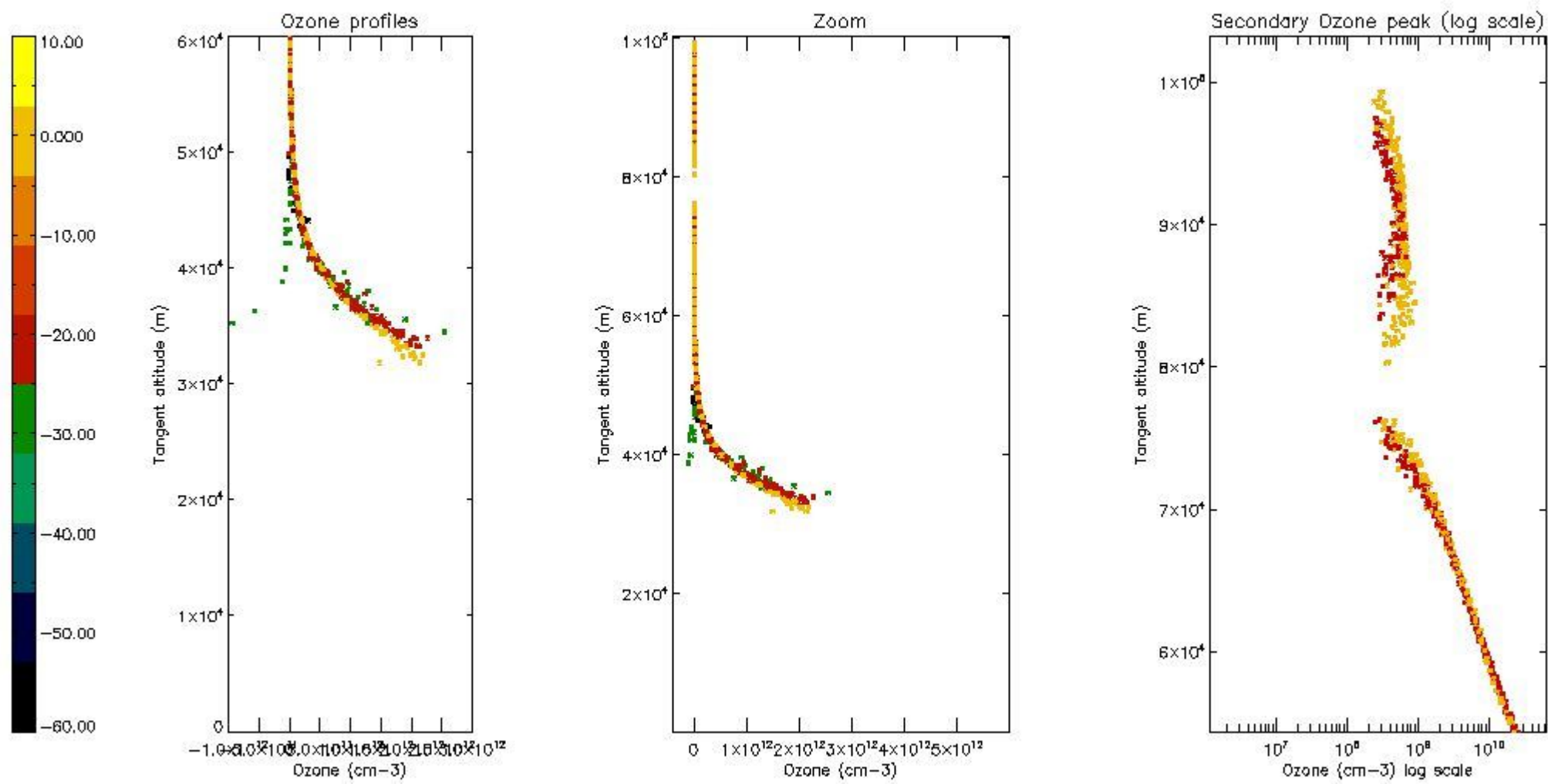
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



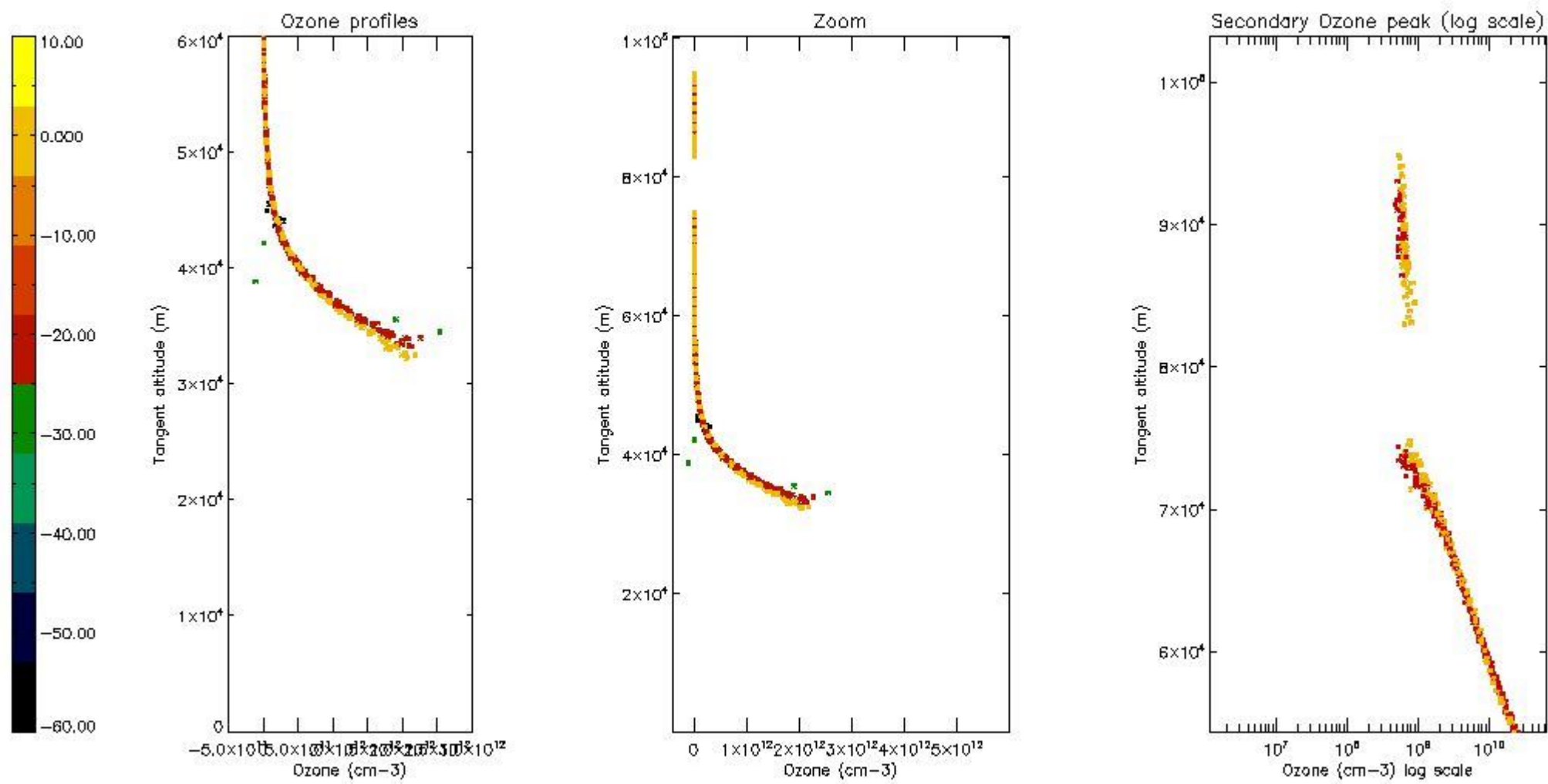
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



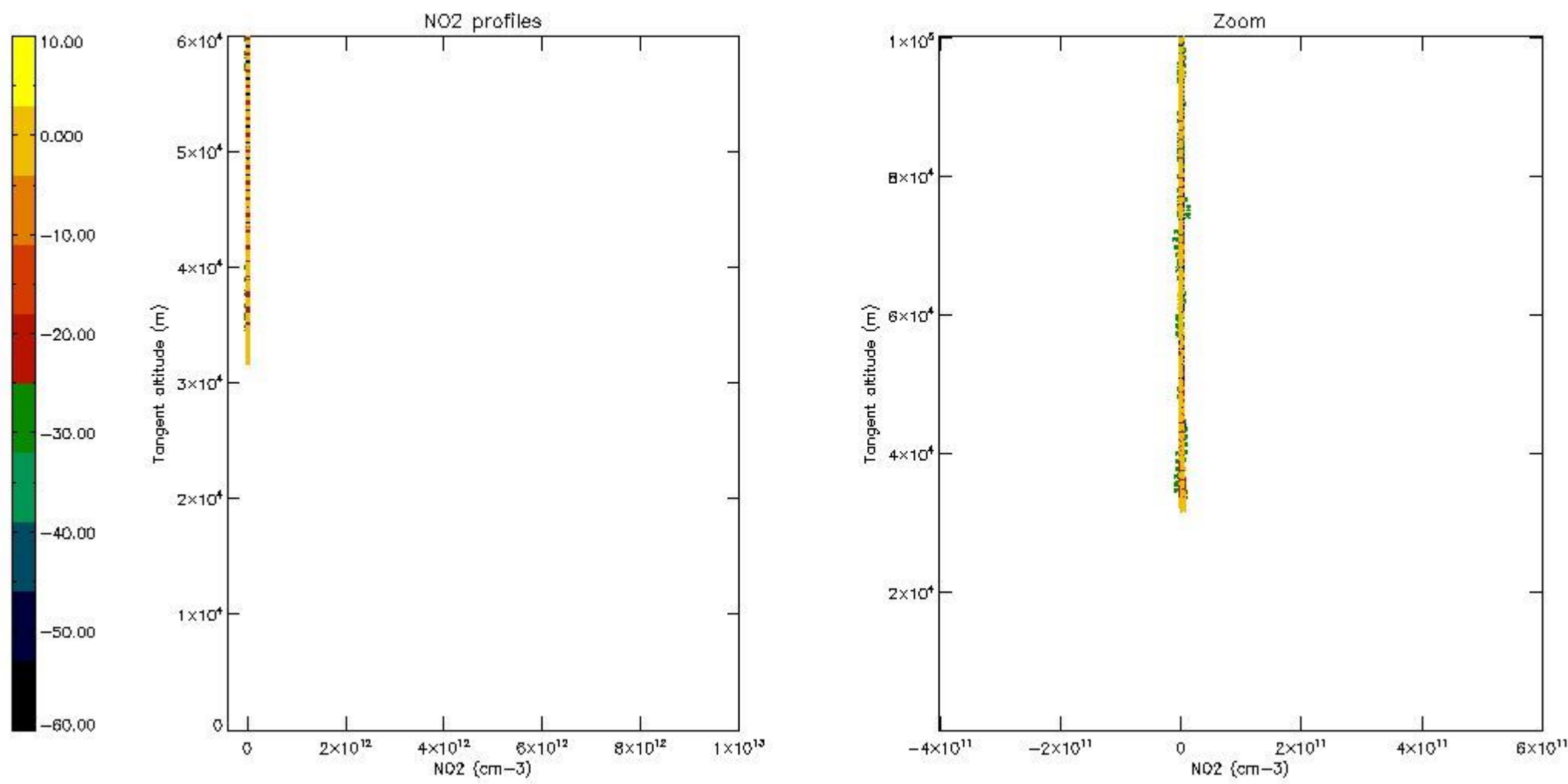
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

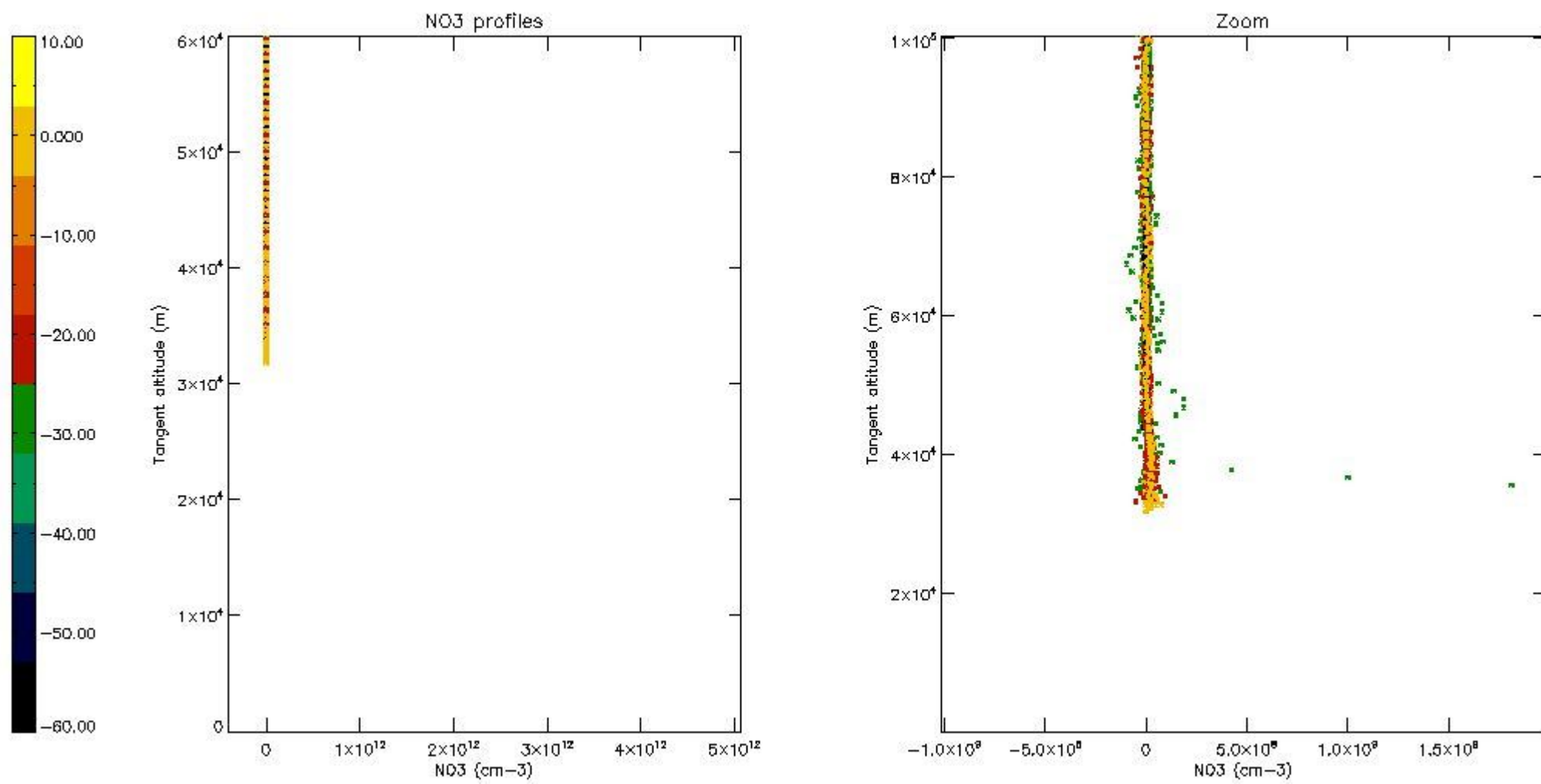
The colorbar represents the latitude.



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

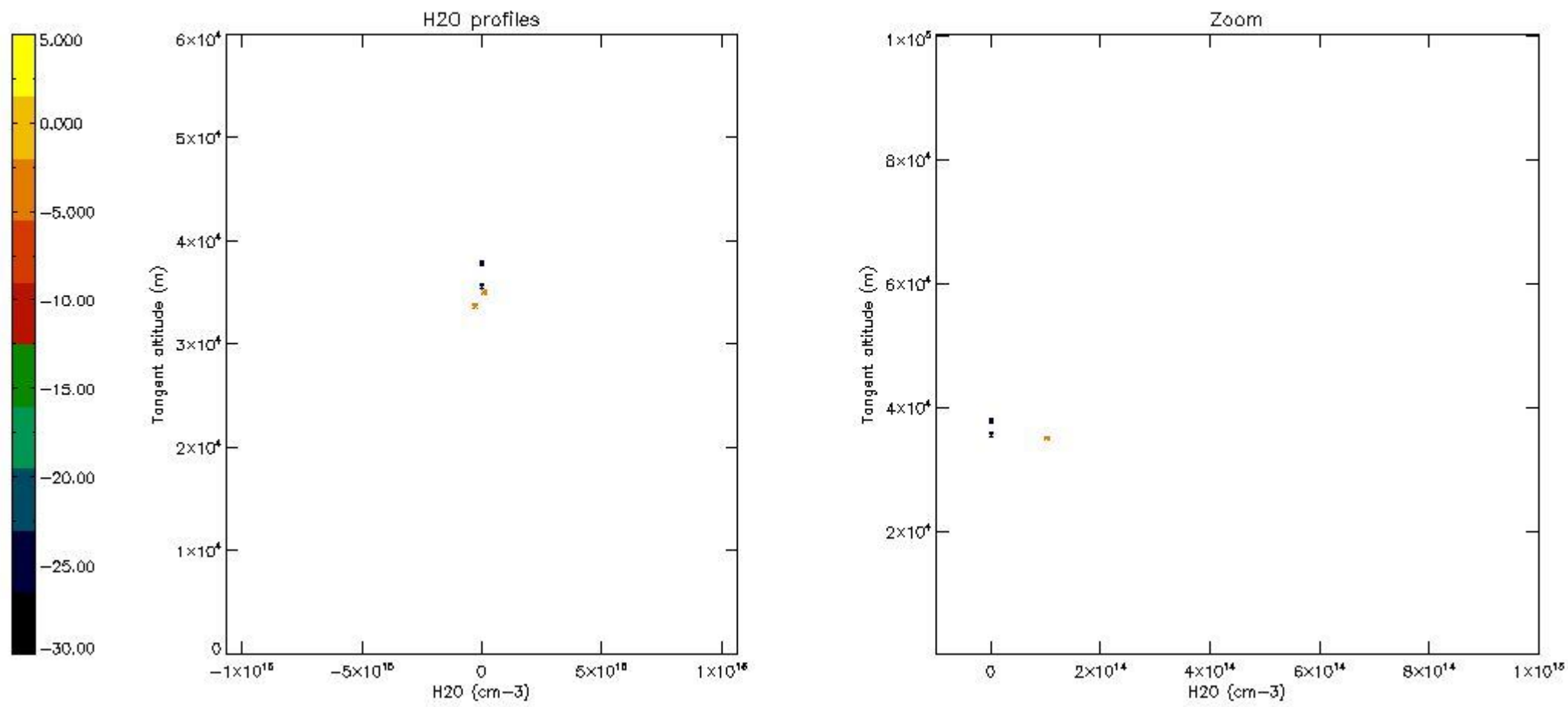
The colorbar represents the latitude.





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	15-OCT-2009 00:16:24
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-OCT-2009 00:16:24
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-OCT-2009 00:16:24

# GOMOS Level 2 Daily Report

## SUMMARY

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

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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 \(dark without errors\)](#)

#### [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 13:17:10
Data source version	GOMOS/6.01
Start time of products	15-10-2009 (15OCT2009 00:00:00)
Stop time of products	16-10-2009 (16OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	187
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__2PRFIN20091015_001624_000000412083_00231_39864_3693.N1	15-OCT-2009 00:16:24	Bright	41.000	105	6Bet Ari	2.6450	8900.0	82	39864	No
2	GOM_NL__2PRFIN20091015_001946_000000362083_00231_39864_3694.N1	15-OCT-2009 00:19:46	Bright	35.500	53	43Bet And	2.0480	3300.0	71	39864	No
3	GOM_NL__2PRFIN20091015_002129_000000422083_00231_39864_3695.N1	15-OCT-2009 00:21:29	Bright	42.000	173	4Bet Tri	3.0040	8900.0	84	39864	No
4	GOM_NL__2PRFIN20091015_002320_000000402083_00231_39864_3696.N1	15-OCT-2009 00:23:20	Bright	39.500	73	57Gam1And	2.2600	13100.	79	39864	No
5	GOM_NL__2PRFIN20091015_002659_000000332083_00231_39864_3697.N1	15-OCT-2009 00:26:59	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39864	No
6	GOM_NL__2PRFIN20091015_002839_000000412083_00231_39864_3698.N1	15-OCT-2009 00:28:39	Bright	40.500	160	23Gam Per	2.9300	4700.0	81	39864	No
7	GOM_NL__2PRFIN20091015_005419_000000292083_00231_39864_3699.N1	15-OCT-2009 00:54:19	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39864	No
8	GOM_NL__2PRFIN20091015_010454_000000332083_00231_39864_3700.N1	15-OCT-2009 01:04:54	Dark	33.000	48	30Alp Hya	1.9770	4100.0	66	39864	No
9	GOM_NL__2PRFIN20091015_011342_000000442083_00231_39864_3701.N1	15-OCT-2009 01:13:42	Dark	43.500	132	15Rho Pup	2.8030	6900.0	87	39864	No
10	GOM_NL__2PRFIN20091015_011645_000000372083_00231_39864_3702.N1	15-OCT-2009 01:16:45	Dark	37.000	70	Zet Pup	2.2460	39000.	74	39864	No
11	GOM_NL__2PRFIN20091015_012152_000000372083_00232_39865_3701.N1	15-OCT-2009 01:21:52	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39865	No
12	GOM_NL__2PRFIN20091015_012313_000000372083_00232_39865_3702.N1	15-OCT-2009 01:23:13	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39865	No
13	GOM_NL__2PRFIN20091015_013503_000000362083_00232_39865_3703.N1	15-OCT-2009 01:35:03	Straylight	36.000	157	The1Eri	2.9060	9300.0	72	39865	No
14	GOM_NL__2PRFIN20091015_015659_000000412083_00232_39865_3704.N1	15-OCT-2009 01:56:59	Bright	41.000	105	6Bet Ari	2.6450	8900.0	82	39865	No
15	GOM_NL__2PRFIN20091015_020022_000000352083_00232_39865_3705.N1	15-OCT-2009 02:00:22	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39865	No
16	GOM_NL__2PRFIN20091015_020204_000000422083_00232_39865_3706.N1	15-OCT-2009 02:02:04	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39865	No
17	GOM_NL__2PRFIN20091015_020355_000000402083_00232_39865_3707.N1	15-OCT-2009 02:03:55	Bright	39.500	73	57Gam1And	2.2600	13100.	79	39865	No
18	GOM_NL__2PRFIN20091015_020734_000000332083_00232_39865_3708.N1	15-OCT-2009 02:07:34	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39865	No
19	GOM_NL__2PRFIN20091015_020914_000000402083_00232_39865_3709.N1	15-OCT-2009 02:09:14	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39865	No
20	GOM_NL__2PRFIN20091015_023455_000000292083_00232_39865_3710.N1	15-OCT-2009 02:34:55	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39865	No
21	GOM_NL__2PRFIN20091015_024530_000000342083_00232_39865_3711.N1	15-OCT-2009 02:45:30	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39865	No
22	GOM_NL__2PRFIN20091015_025419_000000442083_00232_39865_3712.N1	15-OCT-2009 02:54:19	Dark	44.000	132	15Rho Pup	2.8030	6900.0	88	39865	No
23	GOM_NL__2PRFIN20091015_025722_000000372083_00232_39865_3713.N1	15-OCT-2009 02:57:22	Dark	37.000	70	Zet Pup	2.2460	39000.	74	39865	No
24	GOM_NL__2PRFIN20091015_030229_000000372083_00233_39866_3712.N1	15-OCT-2009 03:02:29	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39866	No
25	GOM_NL__2PRFIN20091015_030350_000000372083_00233_39866_3713.N1	15-OCT-2009 03:03:50	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39866	No
26	GOM_NL__2PRFIN20091015_031539_000000362083_00233_39866_3714.N1	15-OCT-2009 03:15:39	Straylight	36.000	157	The1Eri	2.9060	9300.0	72	39866	No
27	GOM_NL__2PRFIN20091015_033735_000000412083_00233_39866_3715.N1	15-OCT-2009 03:37:35	Bright	40.500	105	6Bet Ari	2.6450	8900.0	81	39866	No
28	GOM_NL__2PRFIN20091015_034057_000000212083_00233_39866_3716.N1	15-OCT-2009 03:40:57	Twilight	21.000	53	43Bet And	2.0480	3300.0	42	39866	No
29	GOM_NL__2PRFIN20091015_034239_000000262083_00233_39866_3717.N1	15-OCT-2009 03:42:39	Twilight	25.500	173	4Bet Tri	3.0040	8900.0	51	39866	No
30	GOM_NL__2PRFIN20091015_034430_000000392083_00233_39866_3718.N1	15-OCT-2009 03:44:30	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39866	No
31	GOM_NL__2PRFIN20091015_034810_000000332083_00233_39866_3719.N1	15-OCT-2009 03:48:10	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39866	No
32	GOM_NL__2PRFIN20091015_034950_000000402083_00233_39866_3720.N1	15-OCT-2009 03:49:50	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39866	No
33	GOM_NL__2PRFIN20091015_041531_000000292083_00233_39866_3721.N1	15-OCT-2009 04:15:31	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39866	No
34	GOM_NL__2PRFIN20091015_042607_000000332083_00233_39866_3722.N1	15-OCT-2009 04:26:07	Dark	33.000	48	30Alp Hya	1.9770	4100.0	66	39866	No
35	GOM_NL__2PRFIN20091015_043456_000000442083_00233_39866_3723.N1	15-OCT-2009 04:34:56	Dark	44.000	132	15Rho Pup	2.8030	6900.0	88	39866	No
36	GOM_NL__2PRFIN20091015_043758_000000382083_00233_39866_3724.N1	15-OCT-2009 04:37:58	Dark	37.500	70	Zet Pup	2.2460	39000.	75	39866	No
37	GOM_NL__2PRFIN20091015_044306_000000372083_00234_39867_3723.N1	15-OCT-2009 04:43:06	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39867	No
38	GOM_NL__2PRFIN20091015_044426_000000372083_00234_39867_3724.N1	15-OCT-2009 04:44:26	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39867	No
39	GOM_NL__2PRFIN20091015_045616_000000362083_00234_39867_3725.N1	15-OCT-2009 04:56:16	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39867	No
40	GOM_NL__2PRFIN20091015_051811_000000412083_00234_39867_3726.N1	15-OCT-2009 05:18:11	Bright	40.500	105	6Bet Ari	2.6450	8900.0	81	39867	No
41	GOM_NL__2PRFIN20091015_052133_000000352083_00234_39867_3727.N1	15-OCT-2009 05:21:33	Bright	35.000	53	43Bet And	2.0480	3300.0	70	39867	No
42	GOM_NL__2PRFIN20091015_052315_000000422083_00234_39867_3728.N1	15-OCT-2009 05:23:15	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39867	No



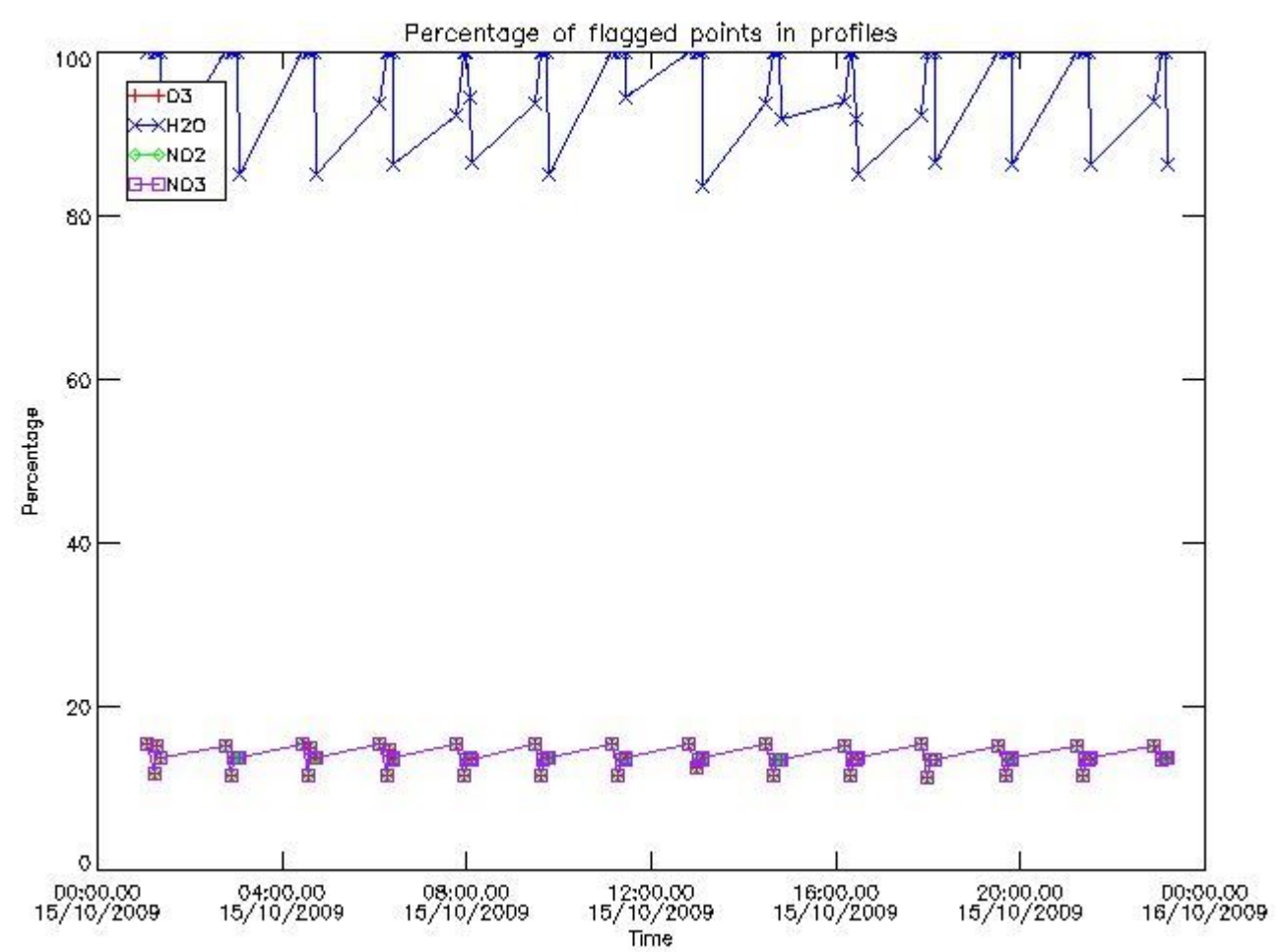


161	GOM_NL__2PRFIN20091015_203406_000000332083_00243_39876_3913.N1	15-OCT-2009 20:34:06	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39876	No
162	GOM_NL__2PRFIN20091015_203541_000000402083_00243_39876_3914.N1	15-OCT-2009 20:35:41	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39876	No
163	GOM_NL__2PRFIN20091015_210133_000000292083_00243_39876_3915.N1	15-OCT-2009 21:01:33	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39876	No
164	GOM_NL__2PRFIN20091015_211213_000000342083_00243_39876_3916.N1	15-OCT-2009 21:12:13	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39876	No
165	GOM_NL__2PRFIN20091015_212108_000000452083_00243_39876_3917.N1	15-OCT-2009 21:21:08	Dark	44.500	132	15Rho Pup	2.8030	6900.0	89	39876	No
166	GOM_NL__2PRFIN20091015_212406_000000382083_00243_39876_3918.N1	15-OCT-2009 21:24:06	Dark	38.000	70	Zet Pup	2.2460	39000.	76	39876	No
167	GOM_NL__2PRFIN20091015_212913_000000382083_00244_39877_3917.N1	15-OCT-2009 21:29:13	Dark	37.500	161	Tau Pup	2.9310	4500.0	75	39877	No
168	GOM_NL__2PRFIN20091015_213034_000000372083_00244_39877_3918.N1	15-OCT-2009 21:30:34	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39877	No
169	GOM_NL__2PRFIN20091015_214220_000000362083_00244_39877_3919.N1	15-OCT-2009 21:42:20	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39877	No
170	GOM_NL__2PRFIN20091015_220404_000000402083_00244_39877_3920.N1	15-OCT-2009 22:04:04	Bright	40.000	105	6Bet Ari	2.6450	8900.0	80	39877	No
171	GOM_NL__2PRFIN20091015_220729_000000212083_00244_39877_3921.N1	15-OCT-2009 22:07:29	Twilight	20.500	53	43Bet And	2.0480	3300.0	41	39877	No
172	GOM_NL__2PRFIN20091015_220907_000000412083_00244_39877_3922.N1	15-OCT-2009 22:09:07	Bright	41.000	173	4Bet Tri	3.0040	8900.0	82	39877	No
173	GOM_NL__2PRFIN20091015_221059_000000392083_00244_39877_3923.N1	15-OCT-2009 22:10:59	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39877	No
174	GOM_NL__2PRFIN20091015_221442_000000332083_00244_39877_3924.N1	15-OCT-2009 22:14:42	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39877	No
175	GOM_NL__2PRFIN20091015_221616_000000402083_00244_39877_3925.N1	15-OCT-2009 22:16:16	Bright	40.000	160	23Gam Per	2.9300	4700.0	80	39877	No
176	GOM_NL__2PRFIN20091015_224210_000000292083_00244_39877_3926.N1	15-OCT-2009 22:42:10	Twilight	29.000	166	17Eps Leo	2.9800	6000.0	58	39877	No
177	GOM_NL__2PRFIN20091015_225250_000000342083_00244_39877_3927.N1	15-OCT-2009 22:52:50	Dark	33.500	48	30Alp Hya	1.9770	4100.0	67	39877	No
178	GOM_NL__2PRFIN20091015_230443_000000382083_00244_39877_3928.N1	15-OCT-2009 23:04:43	Dark	38.000	70	Zet Pup	2.2460	39000.	76	39877	No
179	GOM_NL__2PRFIN20091015_230950_000000372083_00245_39878_3928.N1	15-OCT-2009 23:09:50	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39878	No
180	GOM_NL__2PRFIN20091015_231111_000000372083_00245_39878_3929.N1	15-OCT-2009 23:11:11	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39878	No
181	GOM_NL__2PRFIN20091015_232257_000000362083_00245_39878_3930.N1	15-OCT-2009 23:22:57	Straylight	35.500	157	The1Eri	2.9060	9300.0	71	39878	No
182	GOM_NL__2PRFIN20091015_234440_000000402083_00245_39878_3931.N1	15-OCT-2009 23:44:40	Bright	40.000	105	6Bet Ari	2.6450	8900.0	80	39878	No
183	GOM_NL__2PRFIN20091015_234805_000000352083_00245_39878_3932.N1	15-OCT-2009 23:48:05	Bright	34.500	53	43Bet And	2.0480	3300.0	69	39878	No
184	GOM_NL__2PRFIN20091015_234942_000000422083_00245_39878_3933.N1	15-OCT-2009 23:49:42	Bright	41.500	173	4Bet Tri	3.0040	8900.0	83	39878	No
185	GOM_NL__2PRFIN20091015_235134_000000392083_00245_39878_3934.N1	15-OCT-2009 23:51:34	Bright	39.000	73	57Gam1And	2.2600	13100.	78	39878	No
186	GOM_NL__2PRFIN20091015_235517_000000332083_00245_39878_3935.N1	15-OCT-2009 23:55:17	Bright	33.000	110	37Del Cas	2.6780	8900.0	66	39878	No
187	GOM_NL__2PRFIN20091015_235651_000000412083_00245_39878_3936.N1	15-OCT-2009 23:56:51	Bright	40.500	160	23Gam Per	2.9300	4700.0	81	39878	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.

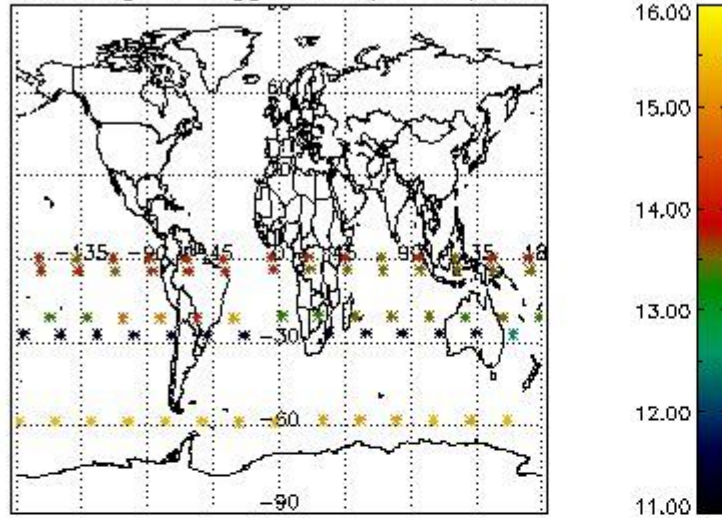
#### 3.1 Plot quality information per product (time dependant)



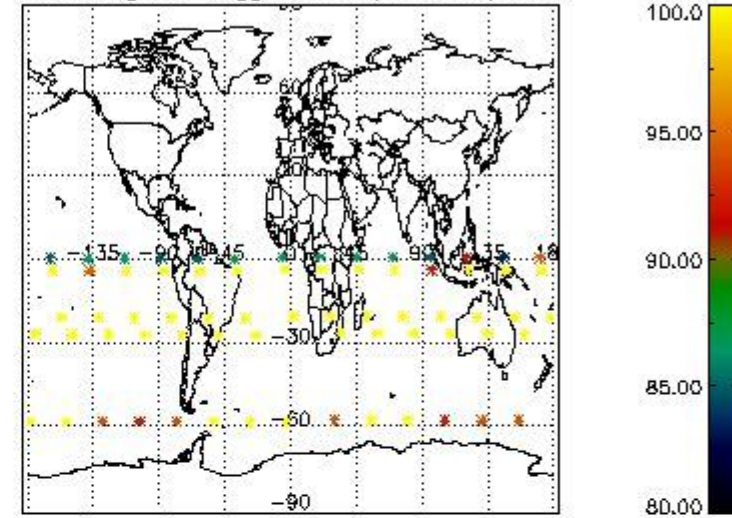
3.2 Plot quality information per product (world map)



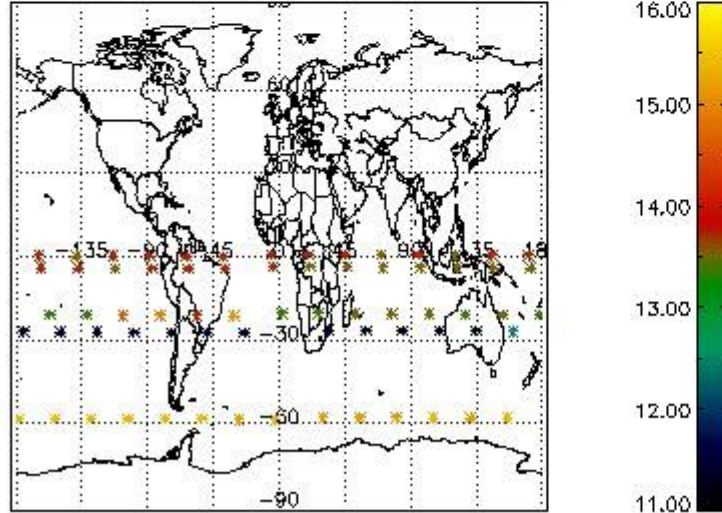
Percentage of flagged data per O3 profile



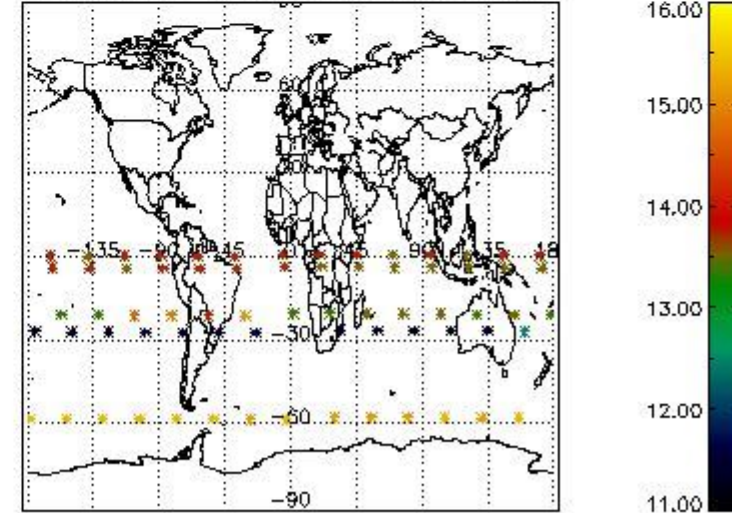
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

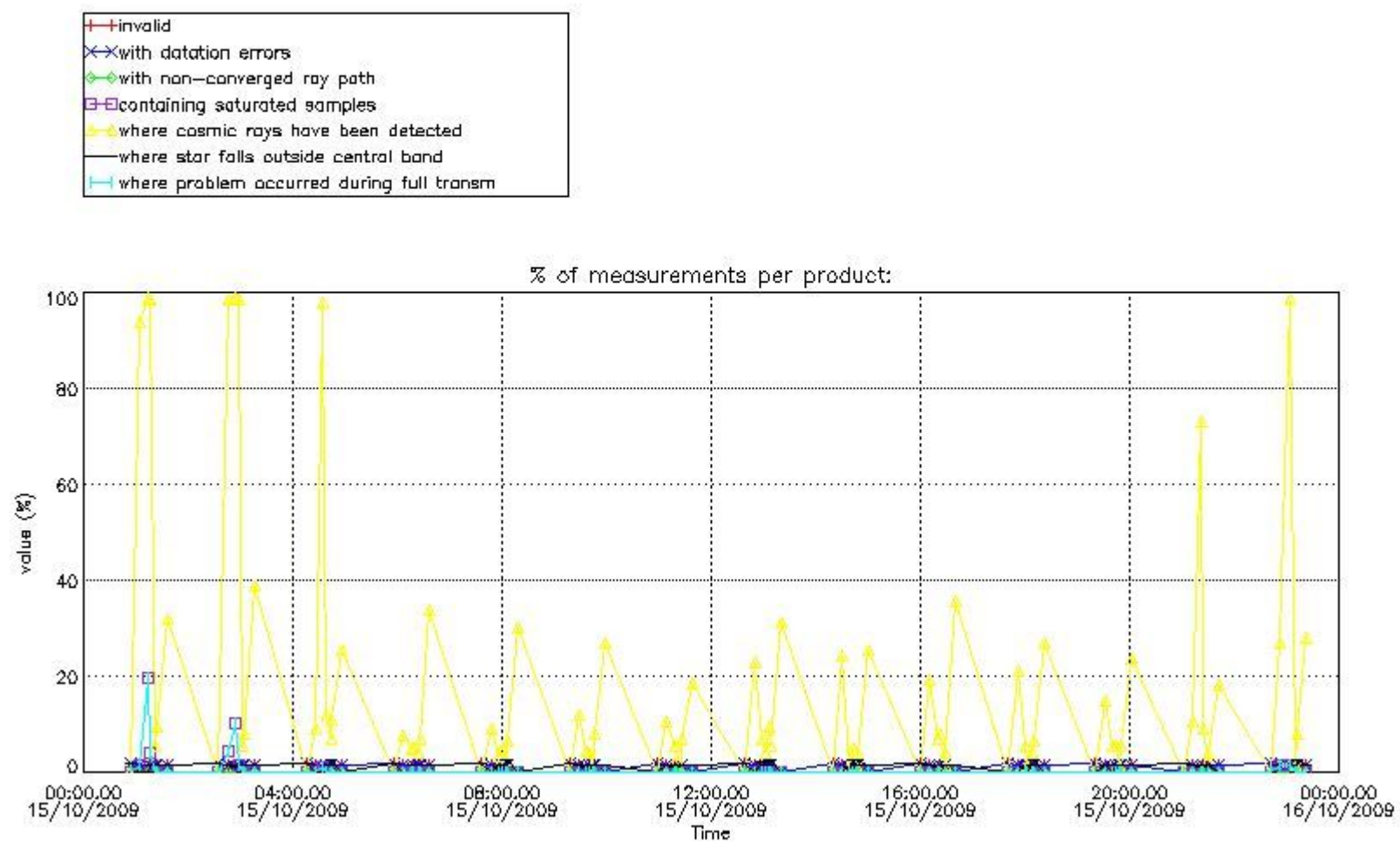


#### 4. Level 1 quality information per product

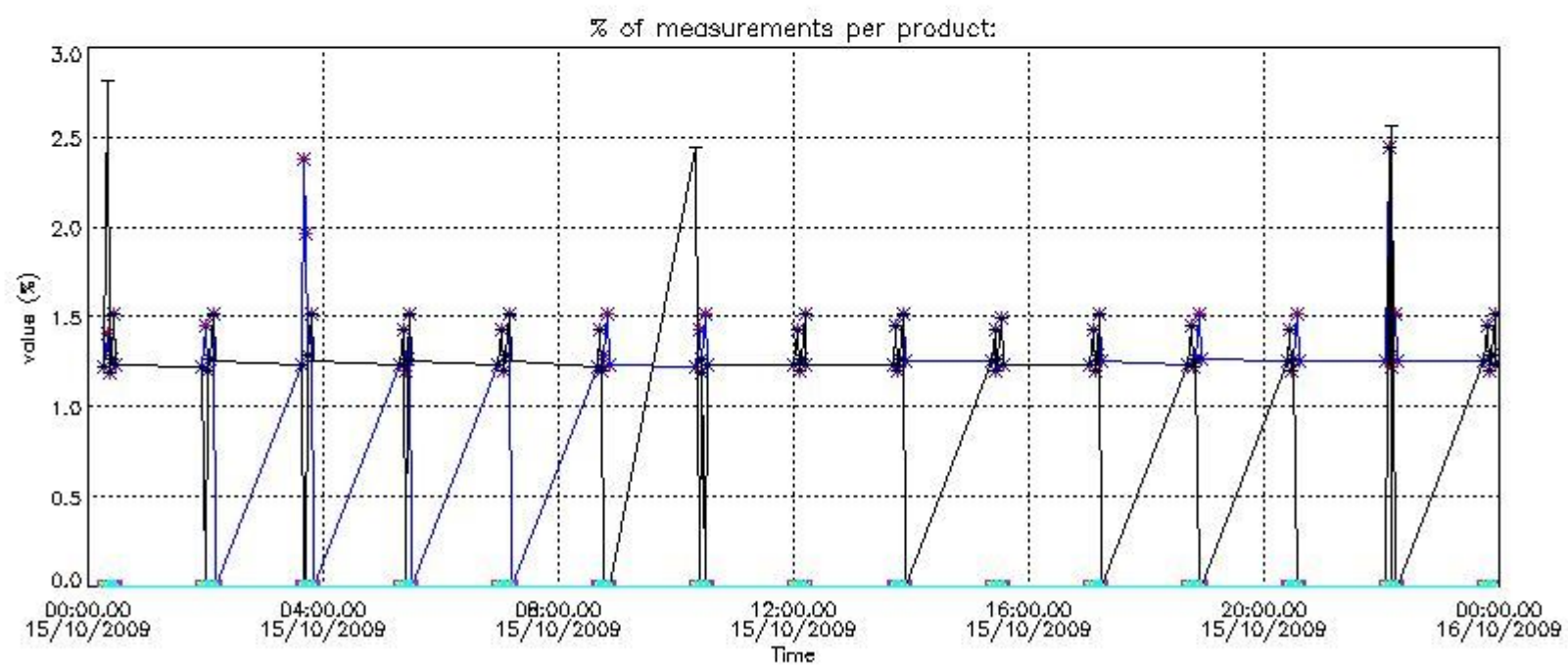
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



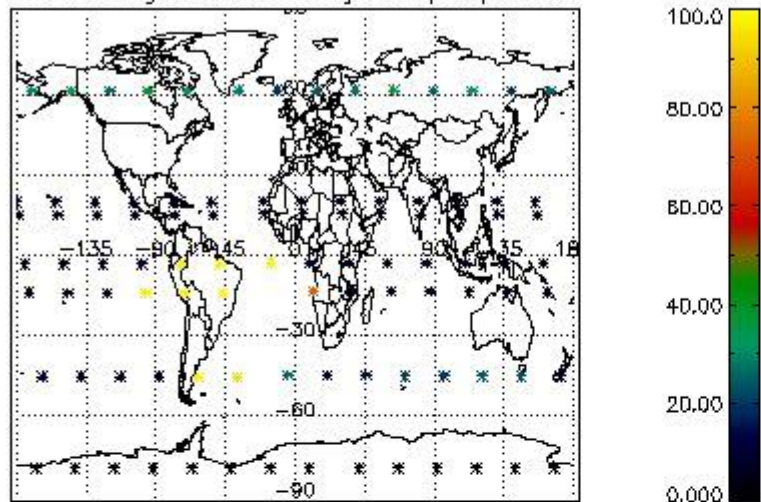
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



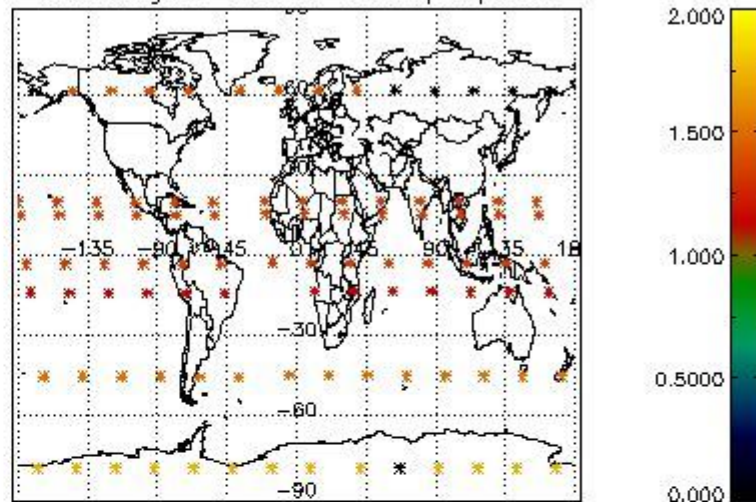
4.2 Plot quality information per product coming from level 1b processing (world map)

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

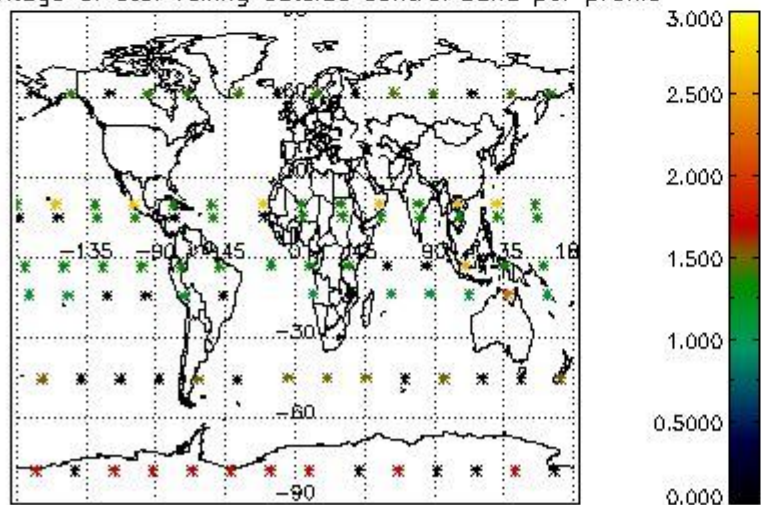
Percentage of cosmic ray hits per profile



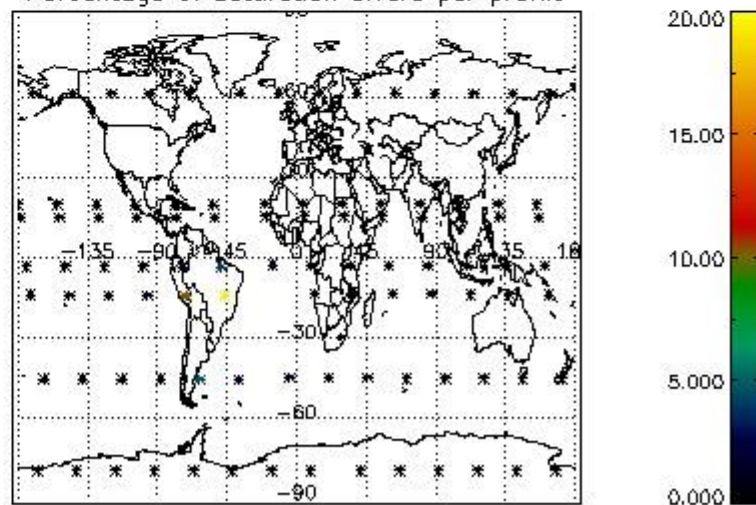
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

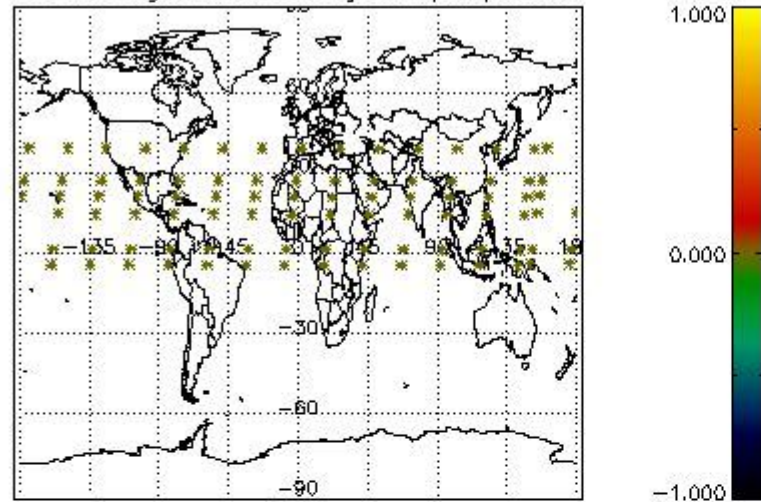


Percentage of saturation errors per profile

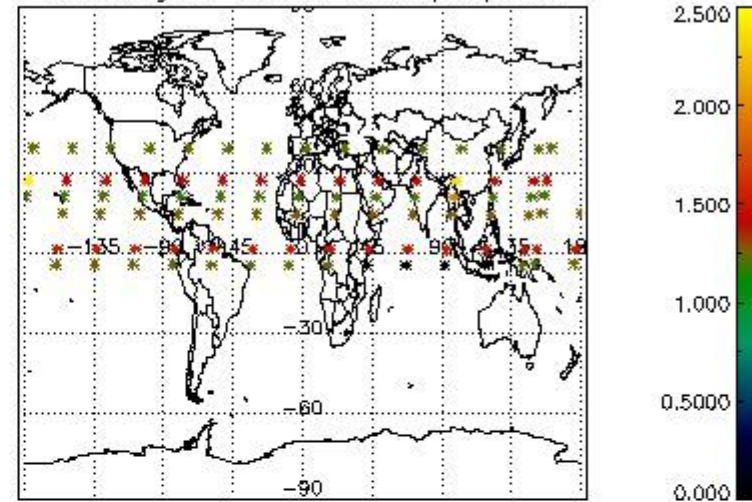


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

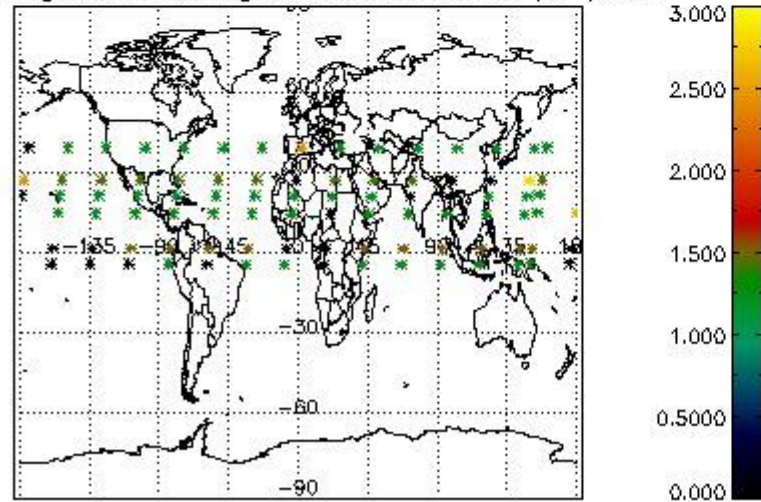
Percentage of cosmic ray hits per profile



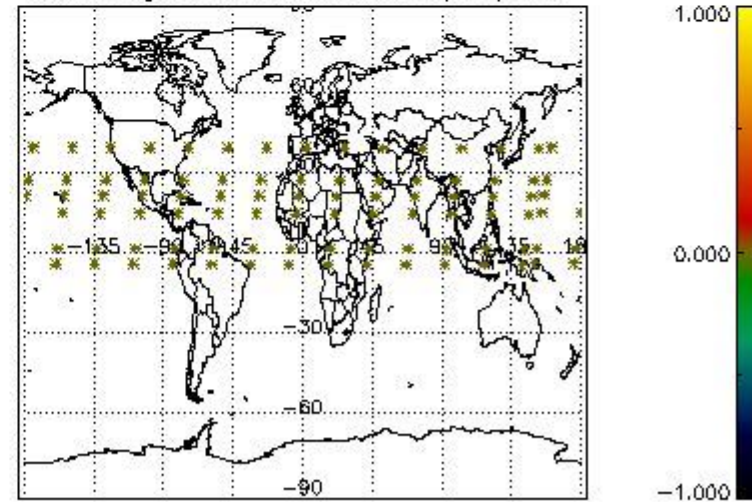
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 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

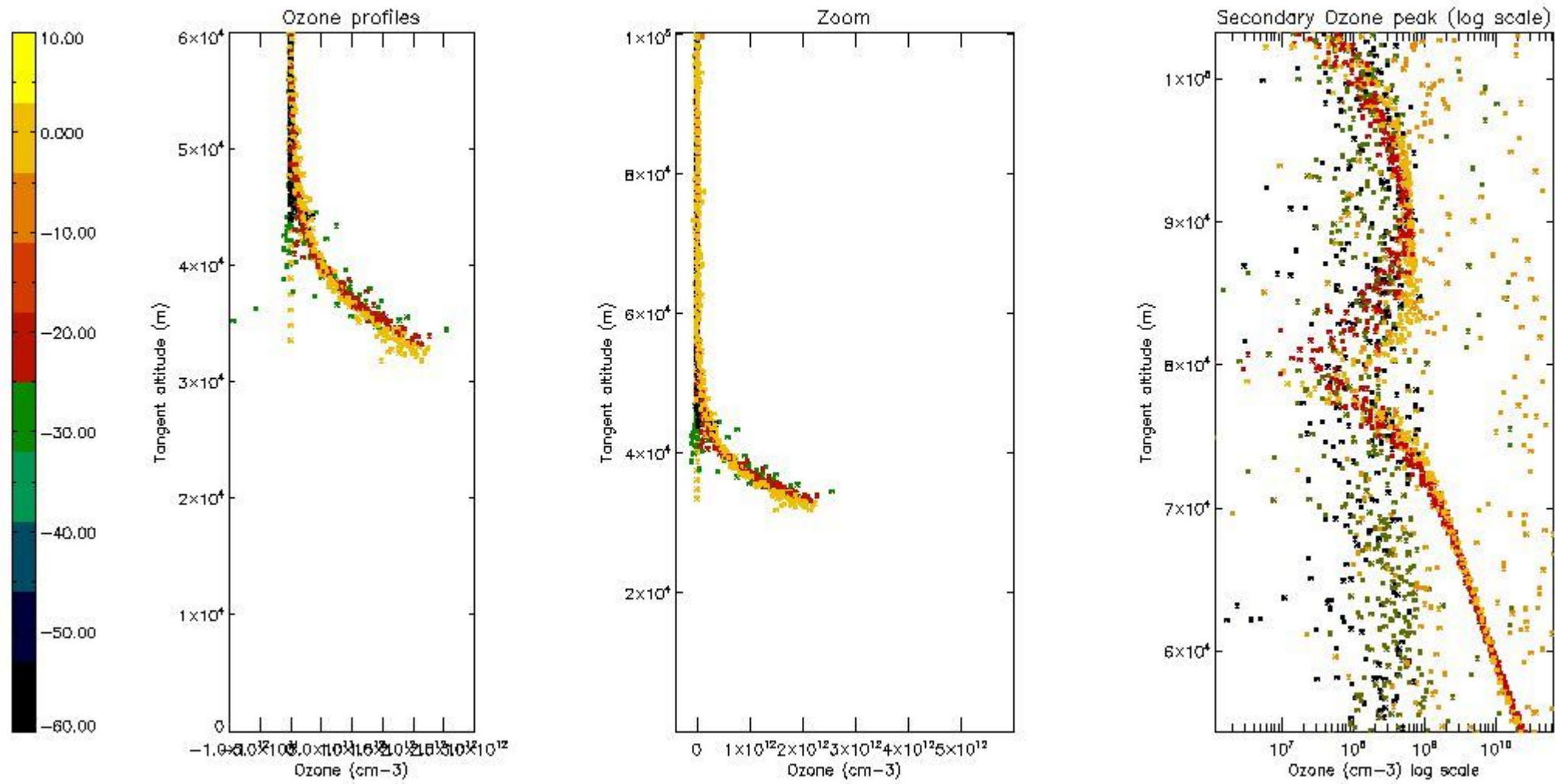
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	13

STD < 10	11
STD < 5	8

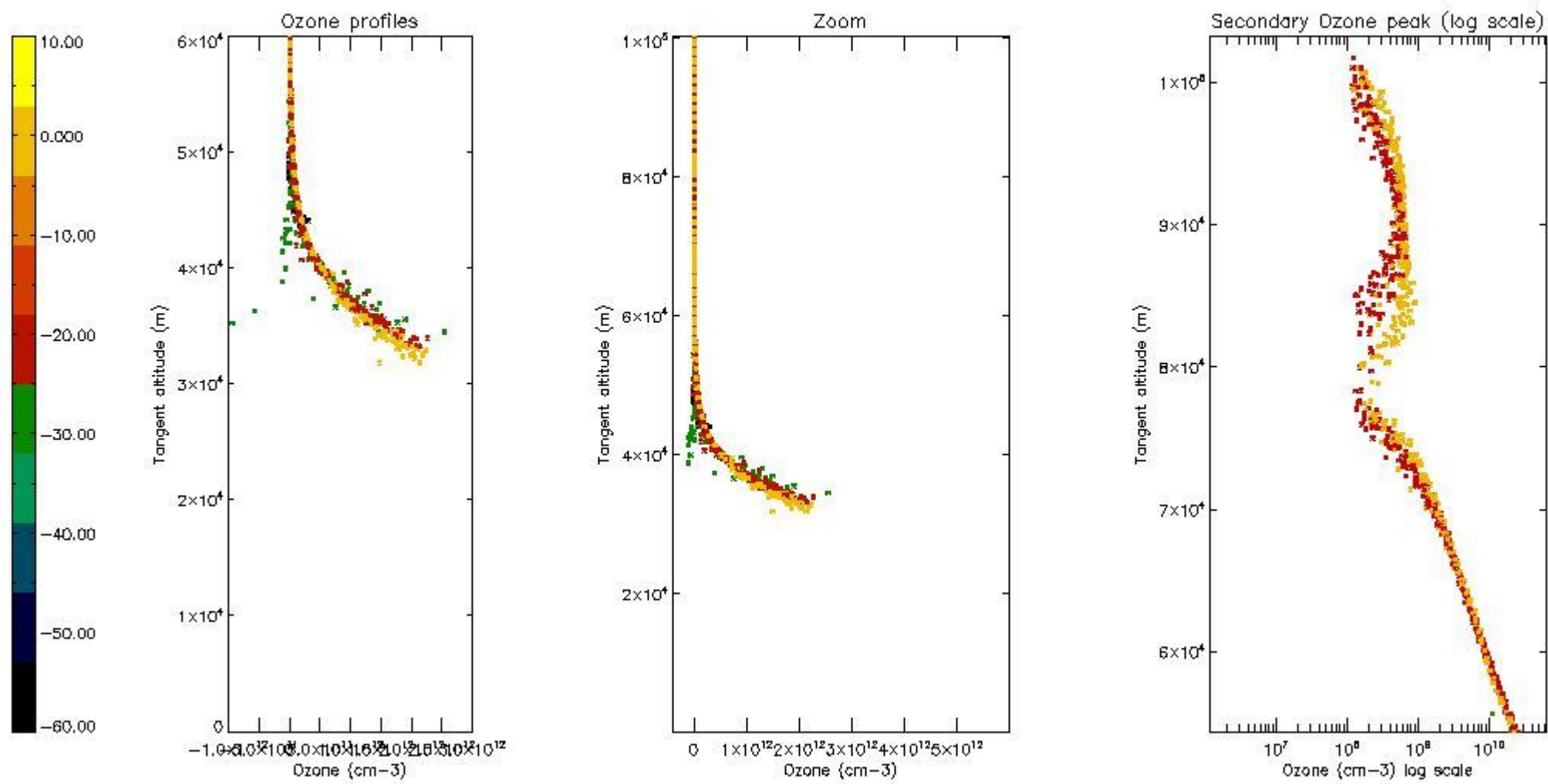
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



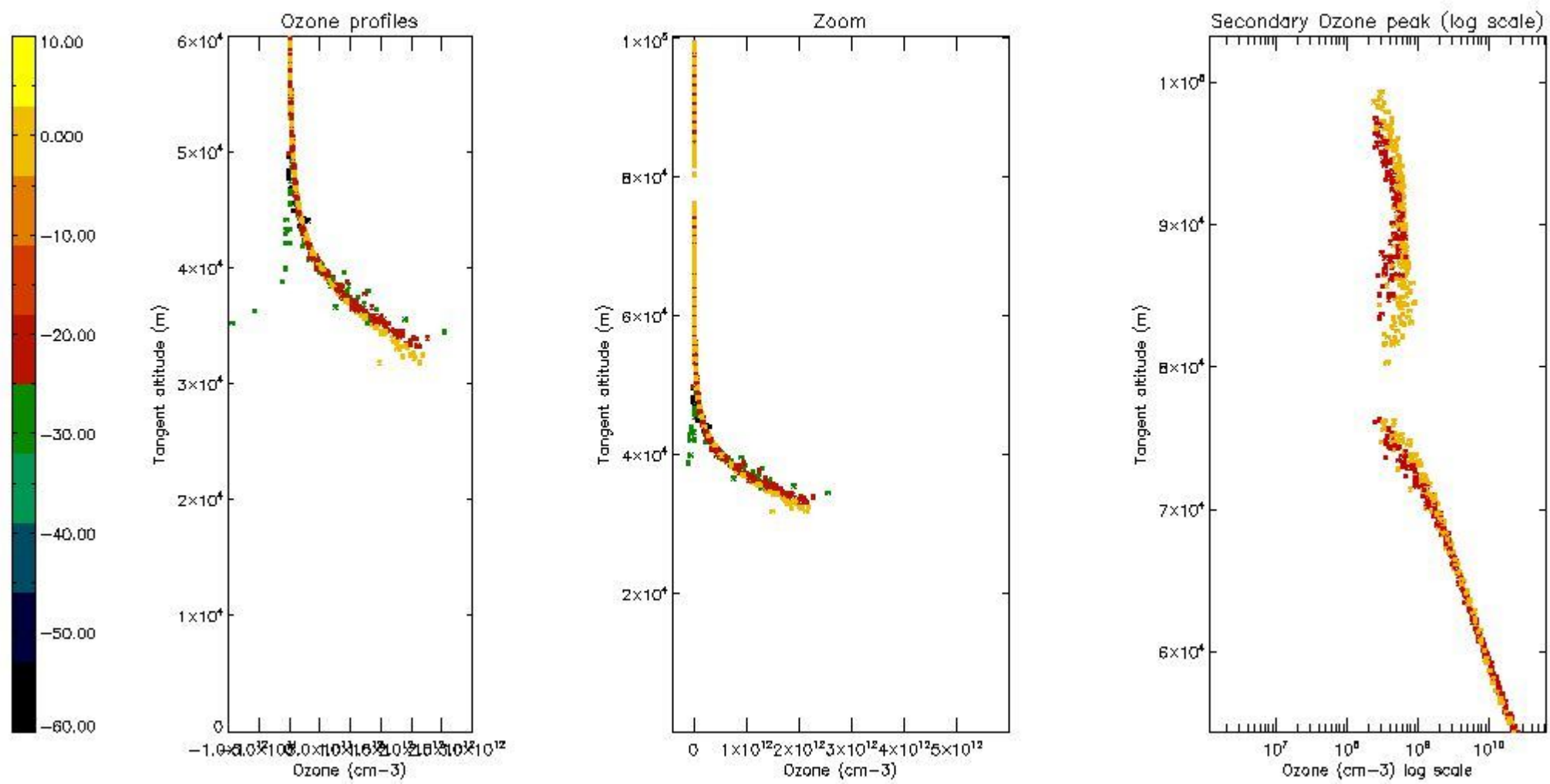
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

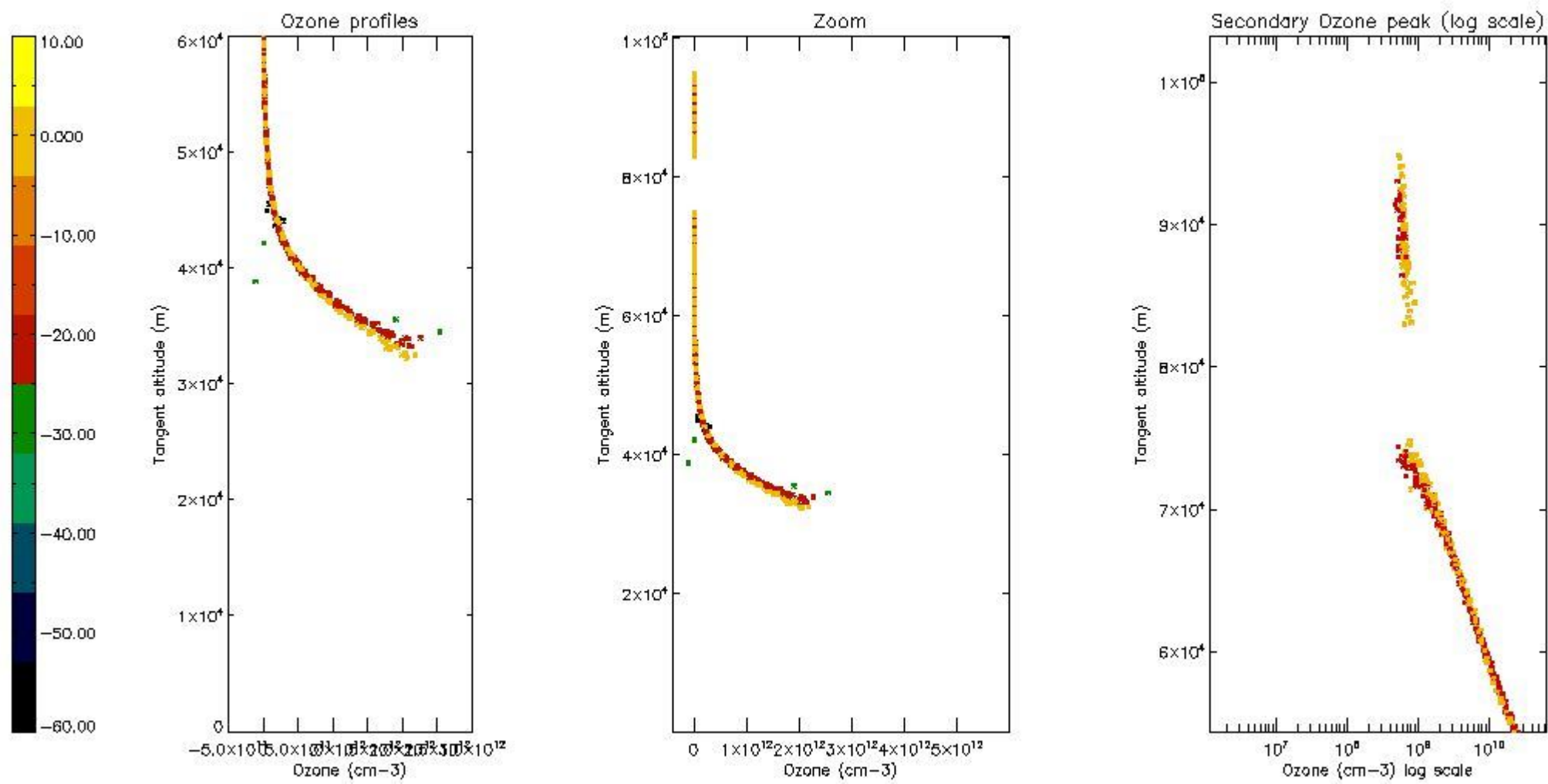
The colorbar represents the latitude.



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

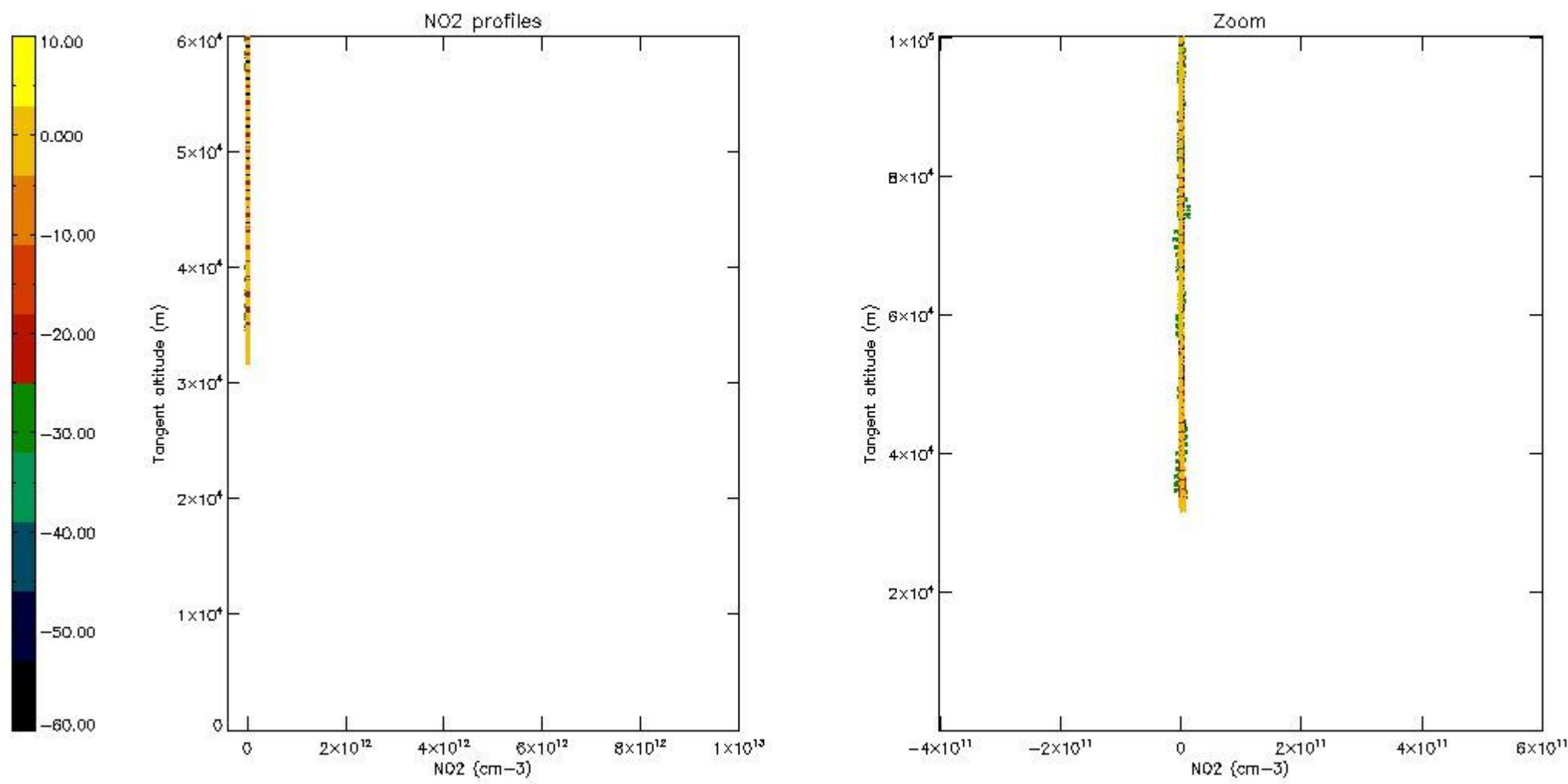
The colorbar represents the latitude.





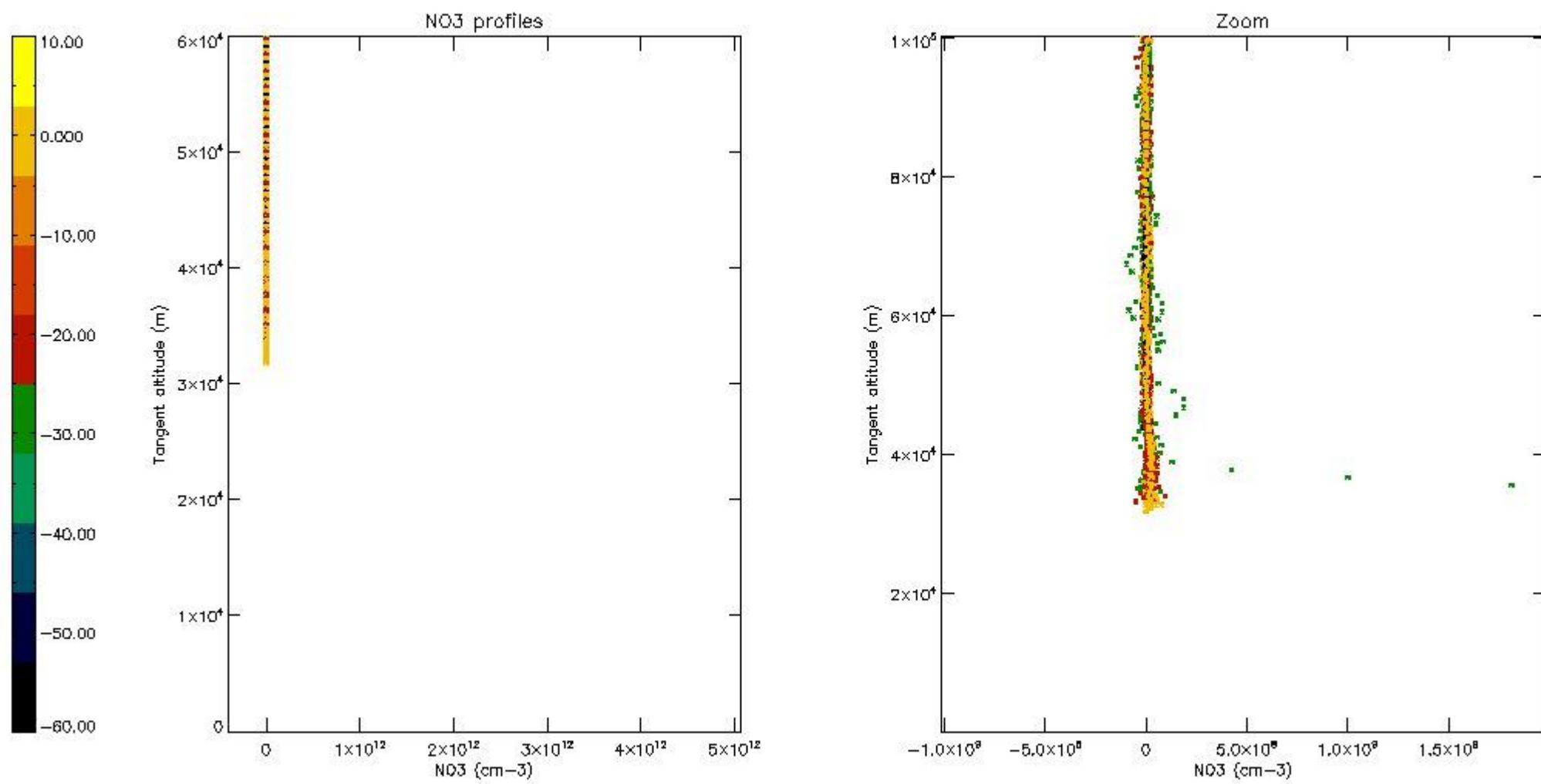
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



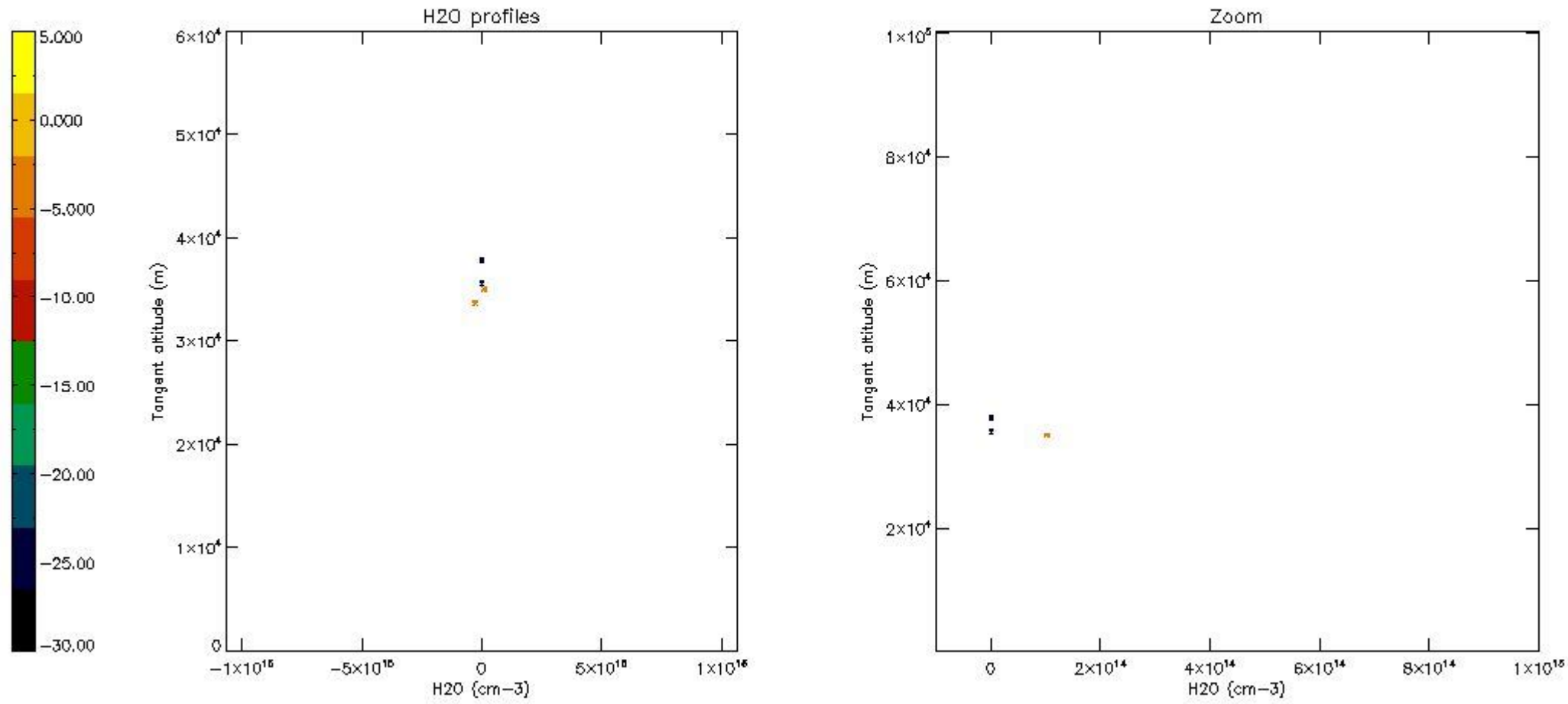
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot 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)

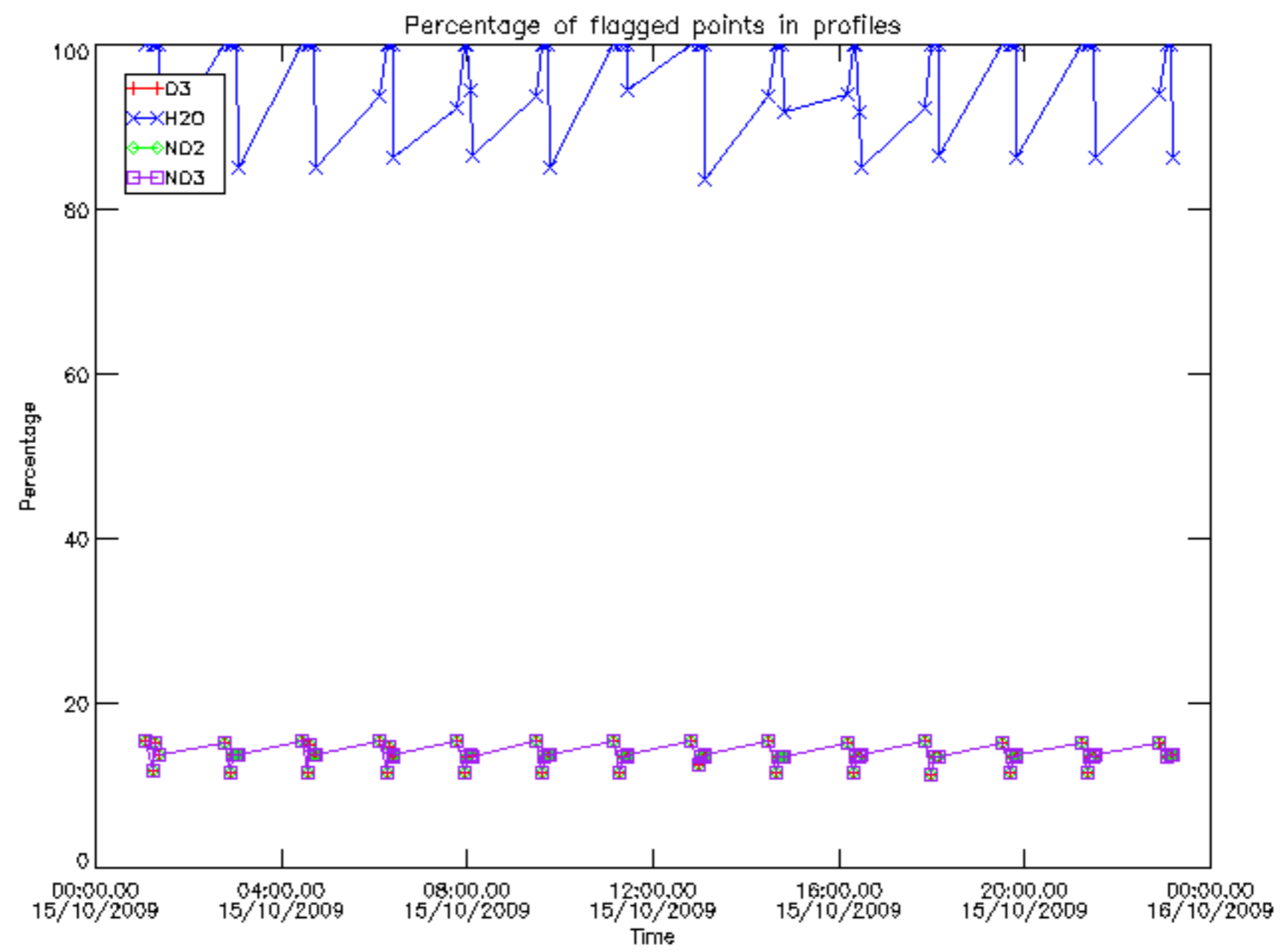
The colorbar represents the latitude.



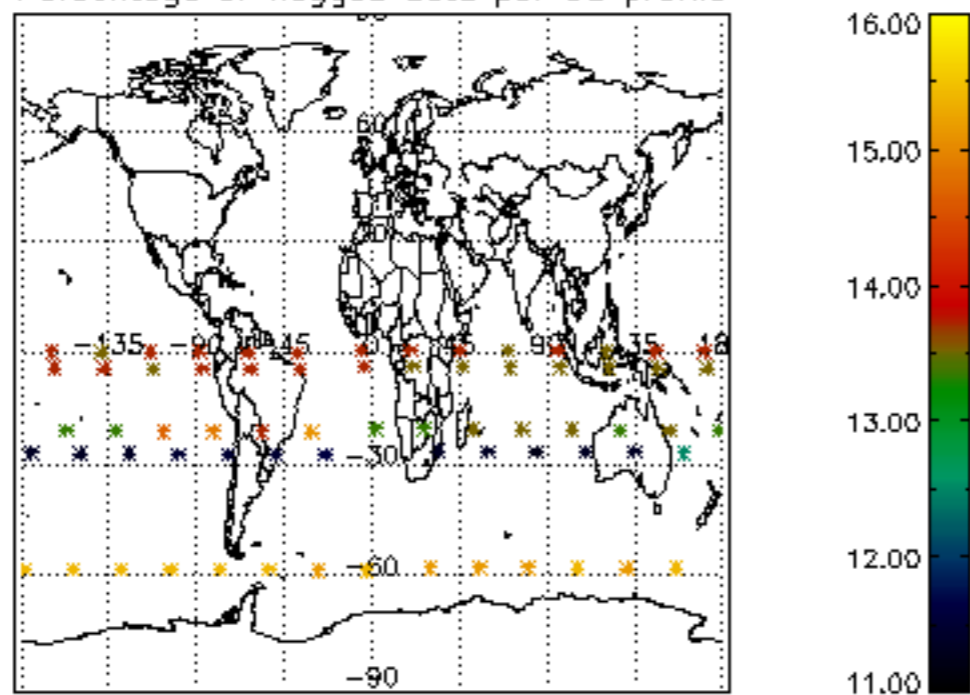
## 6. Auxiliary Data Files used for the production reported in section 2

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.

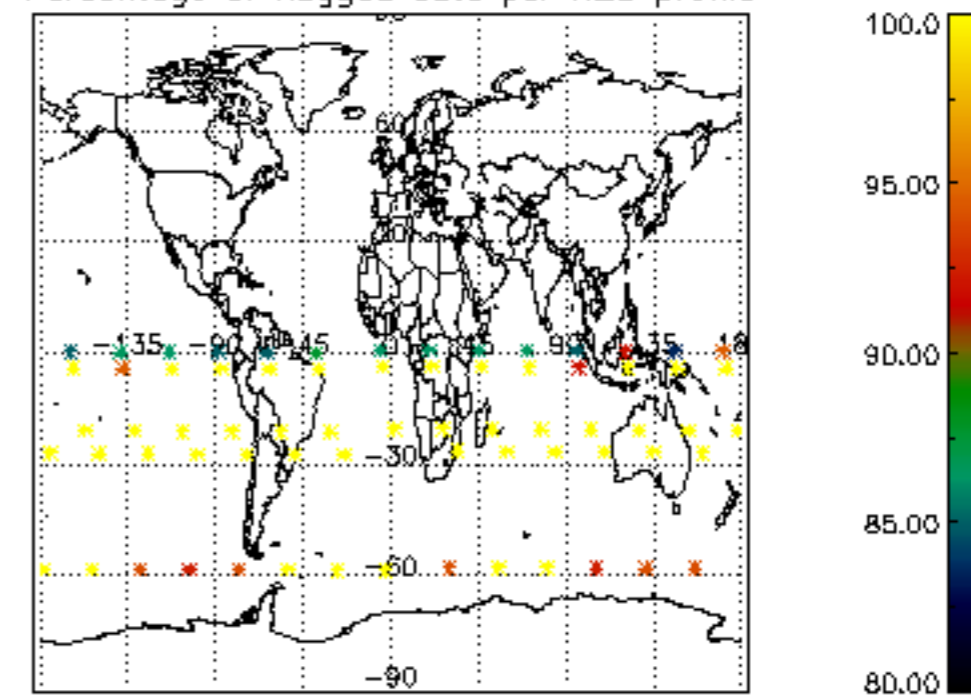
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	15-OCT-2009 00:16:24
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-OCT-2009 00:16:24
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-OCT-2009 00:16:24



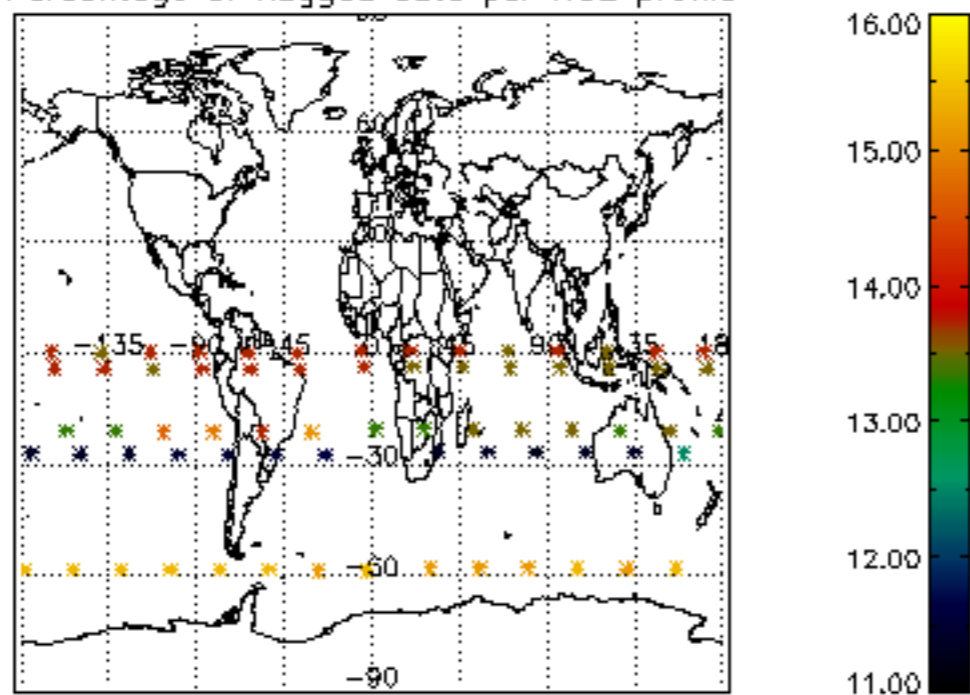
Percentage of flagged data per D3 profile



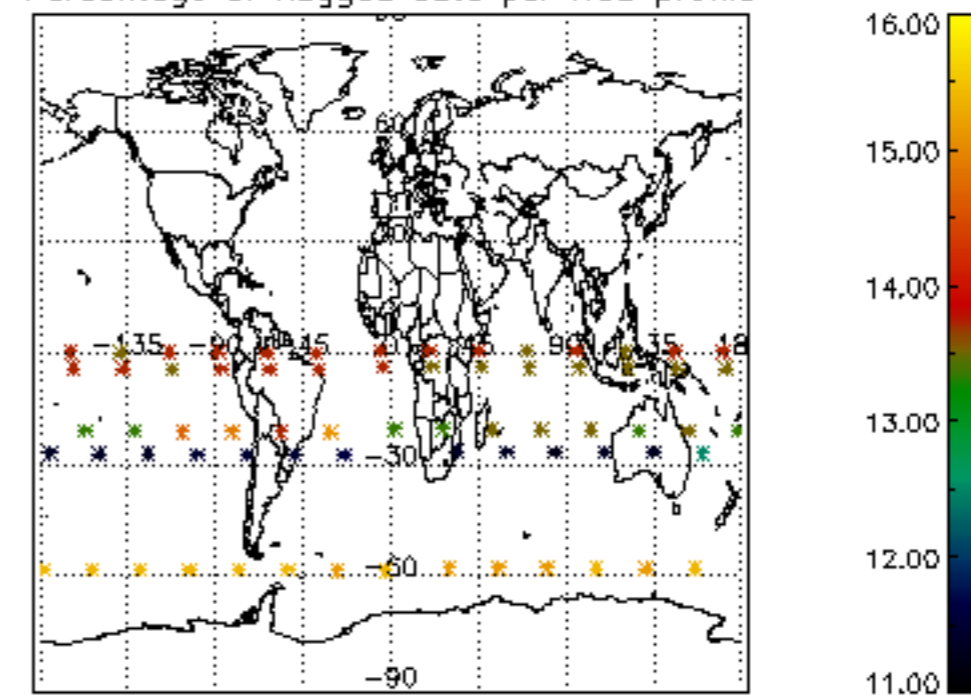
Percentage of flagged data per H2O profile

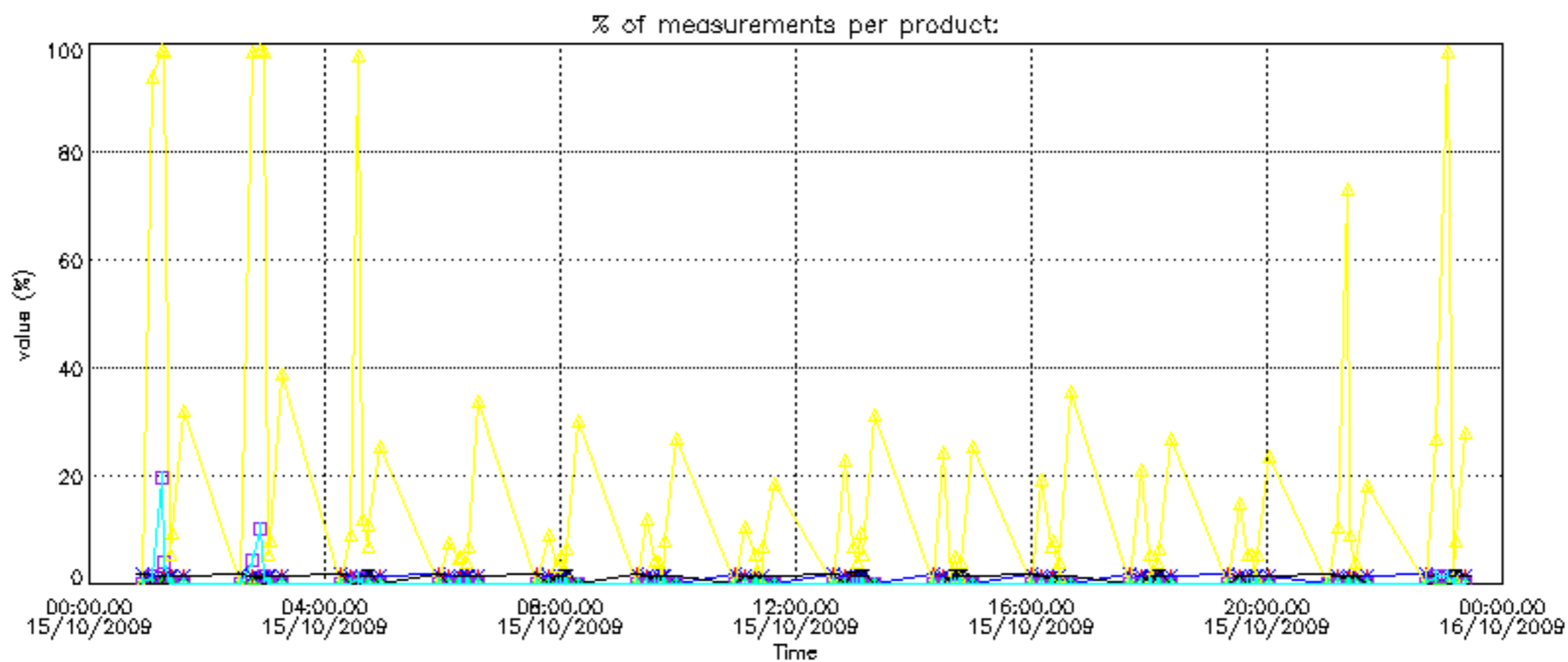


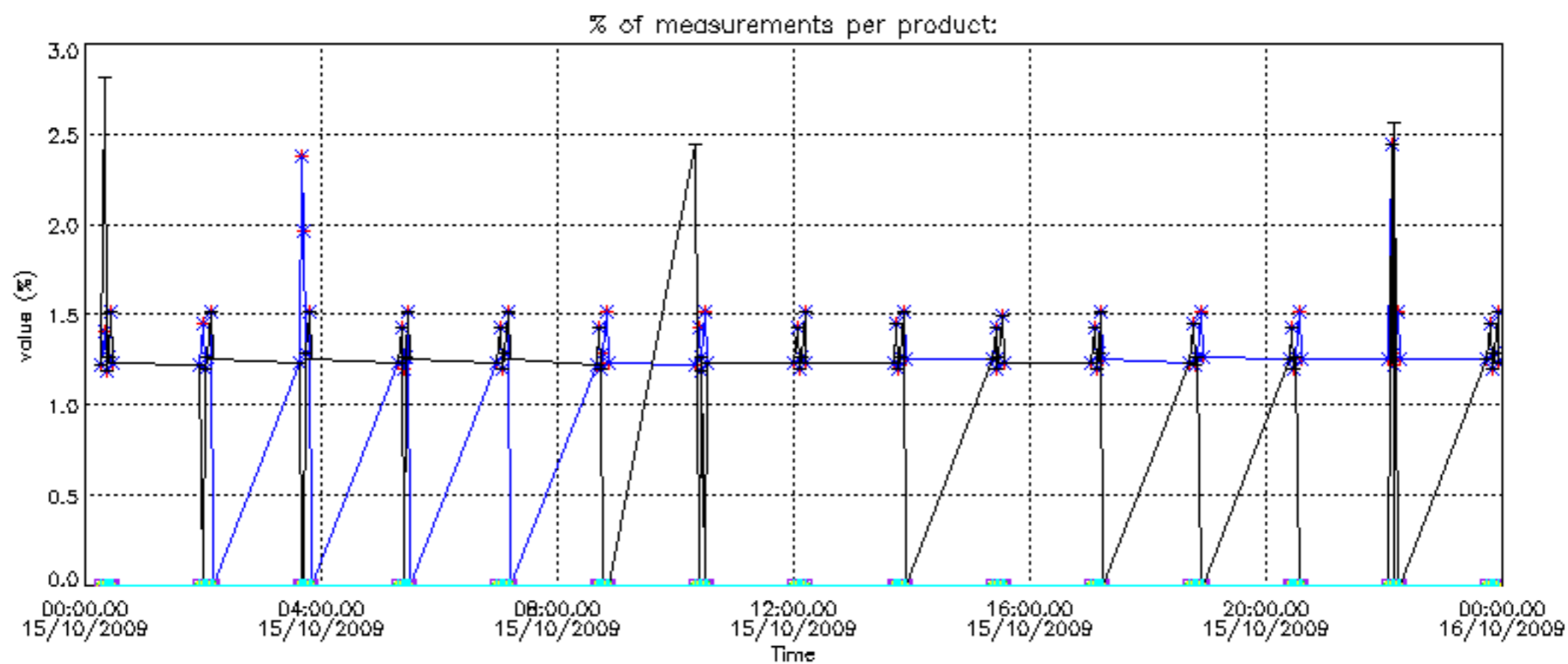
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

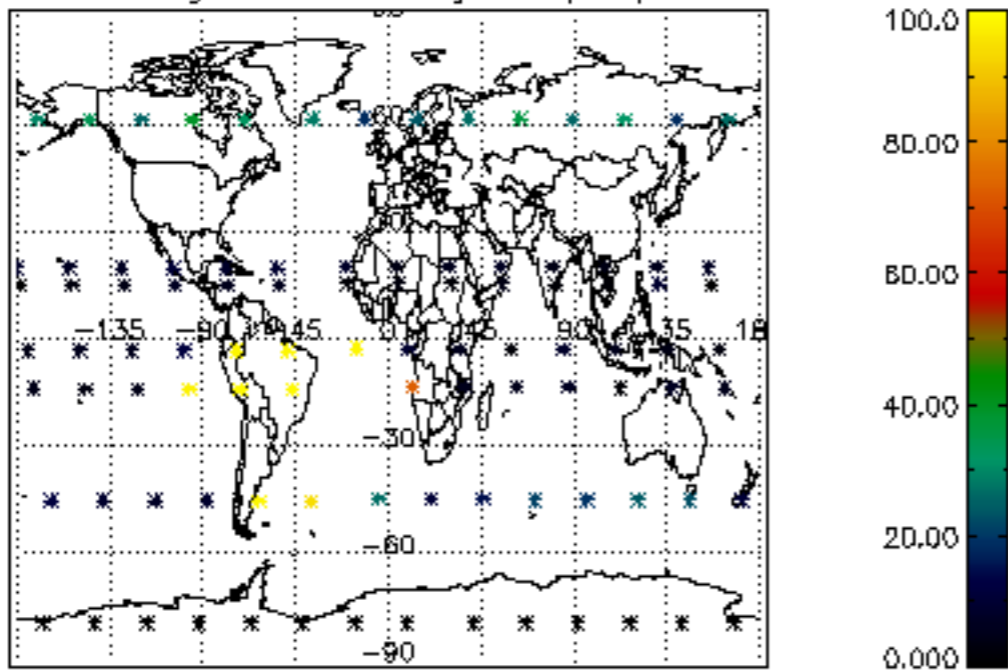




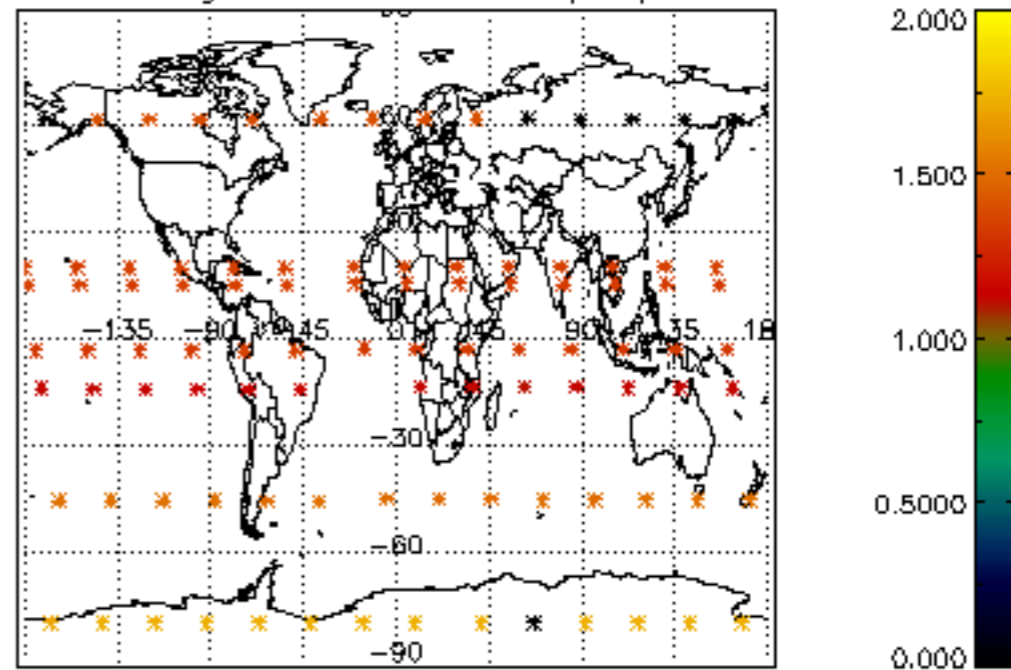




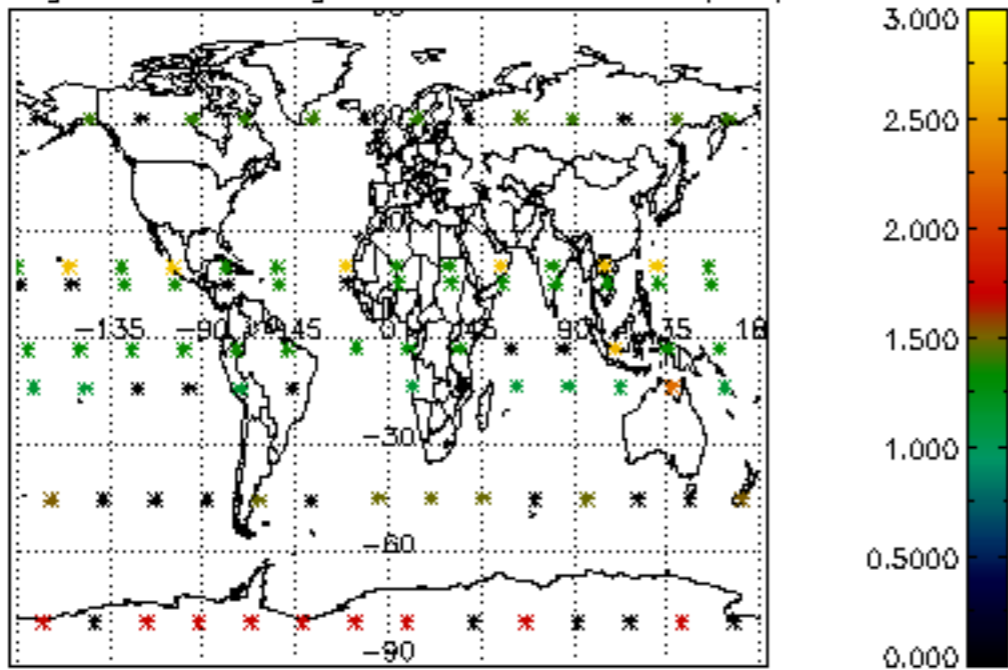
Percentage of cosmic ray hits per profile



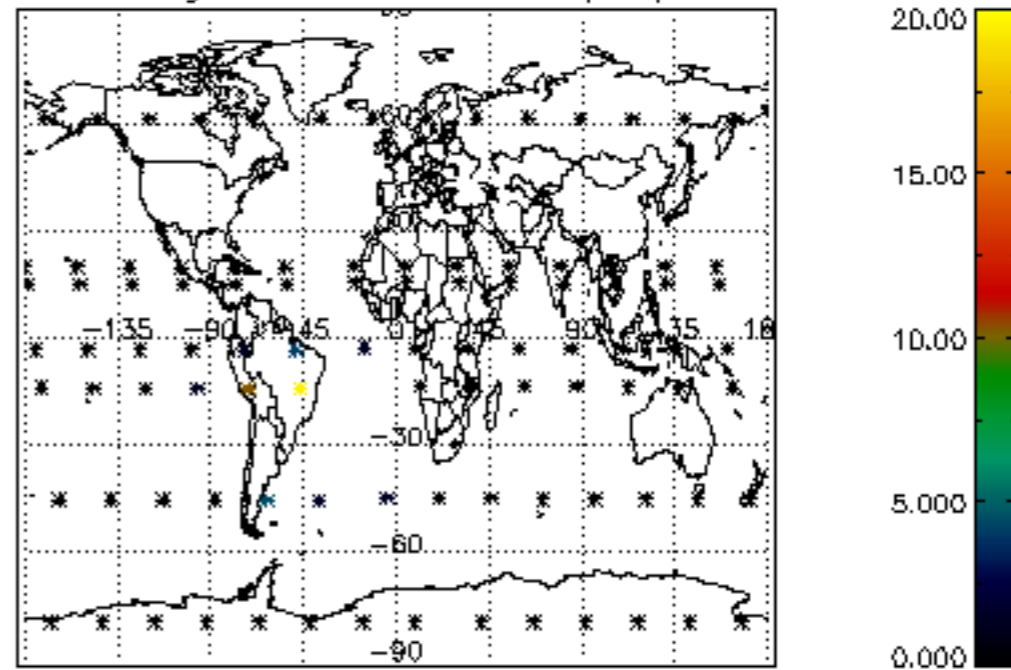
Percentage of datation errors per profile



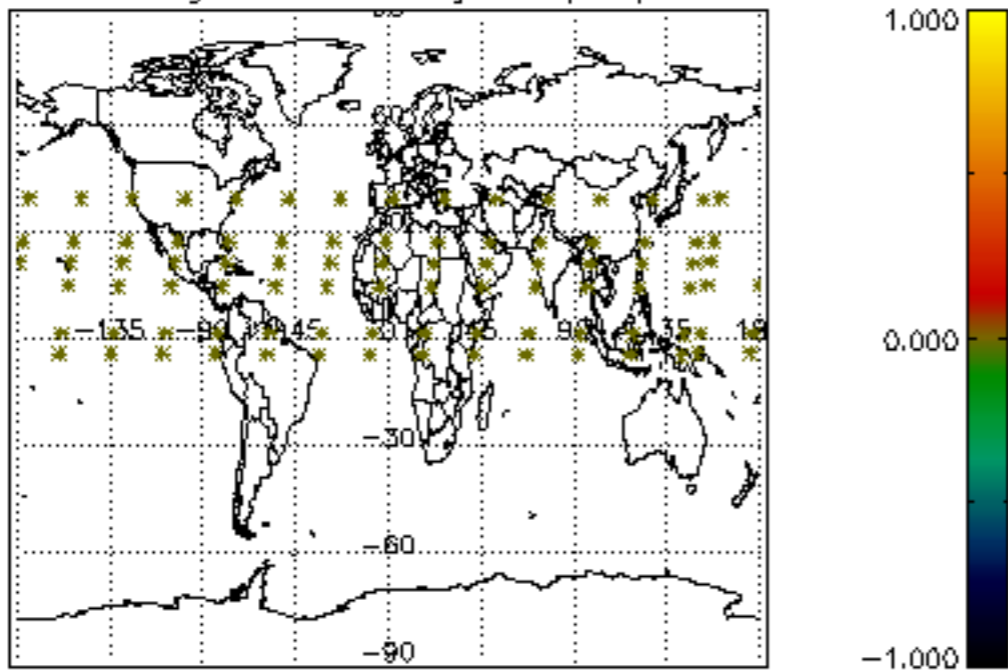
Percentage of star falling outside central band per profile



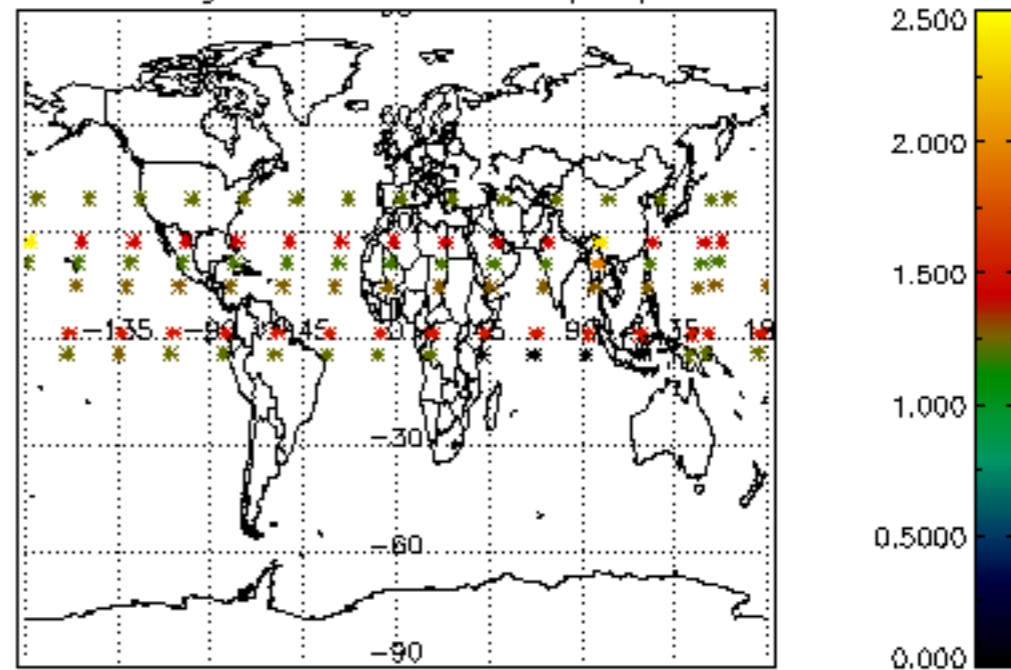
Percentage of saturation errors per profile



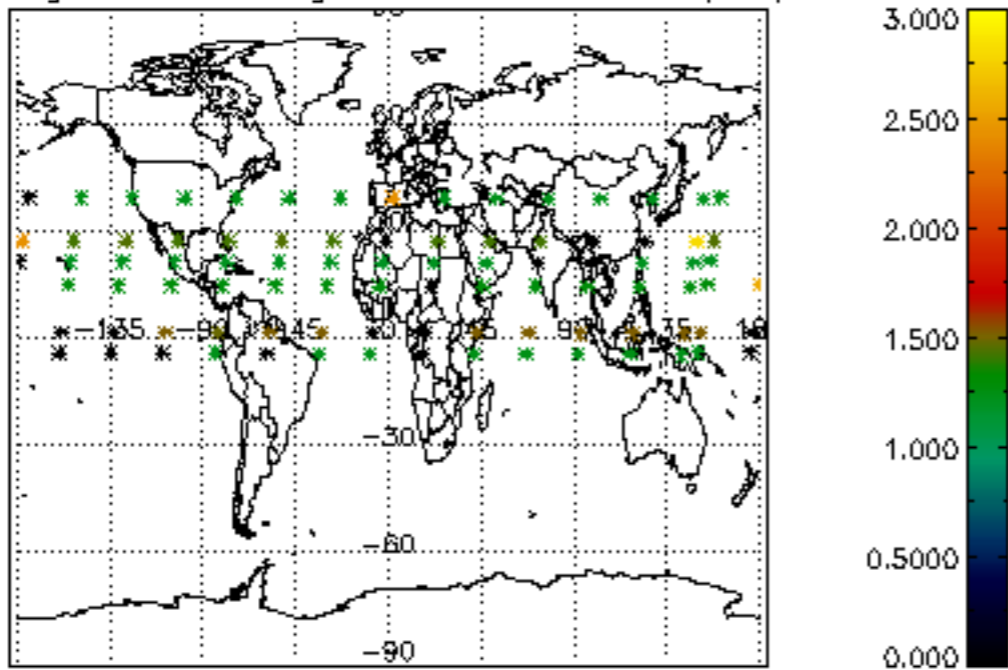
Percentage of cosmic ray hits per profile



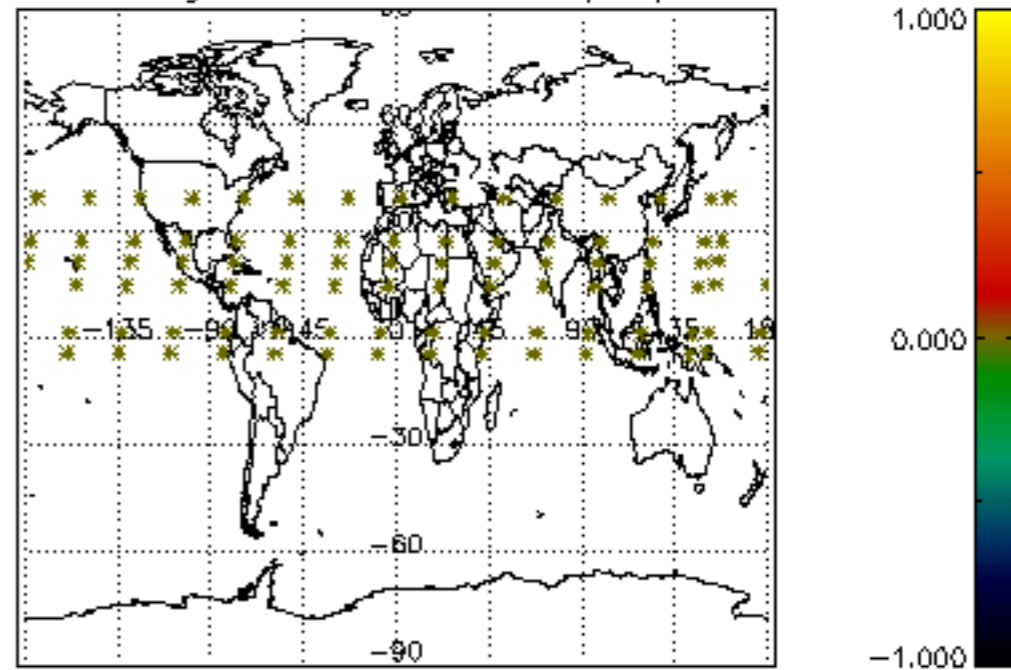
Percentage of datation errors per profile

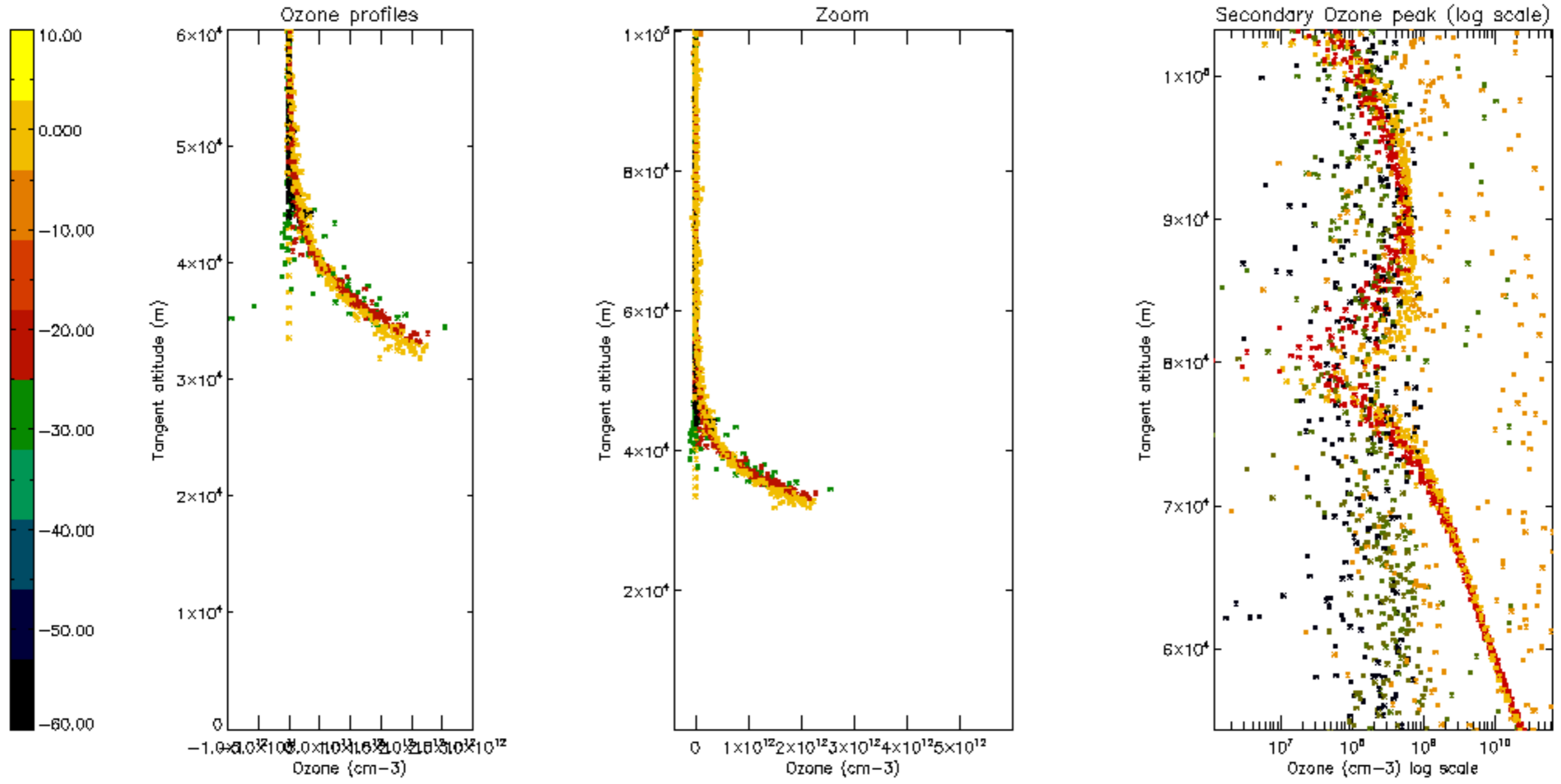


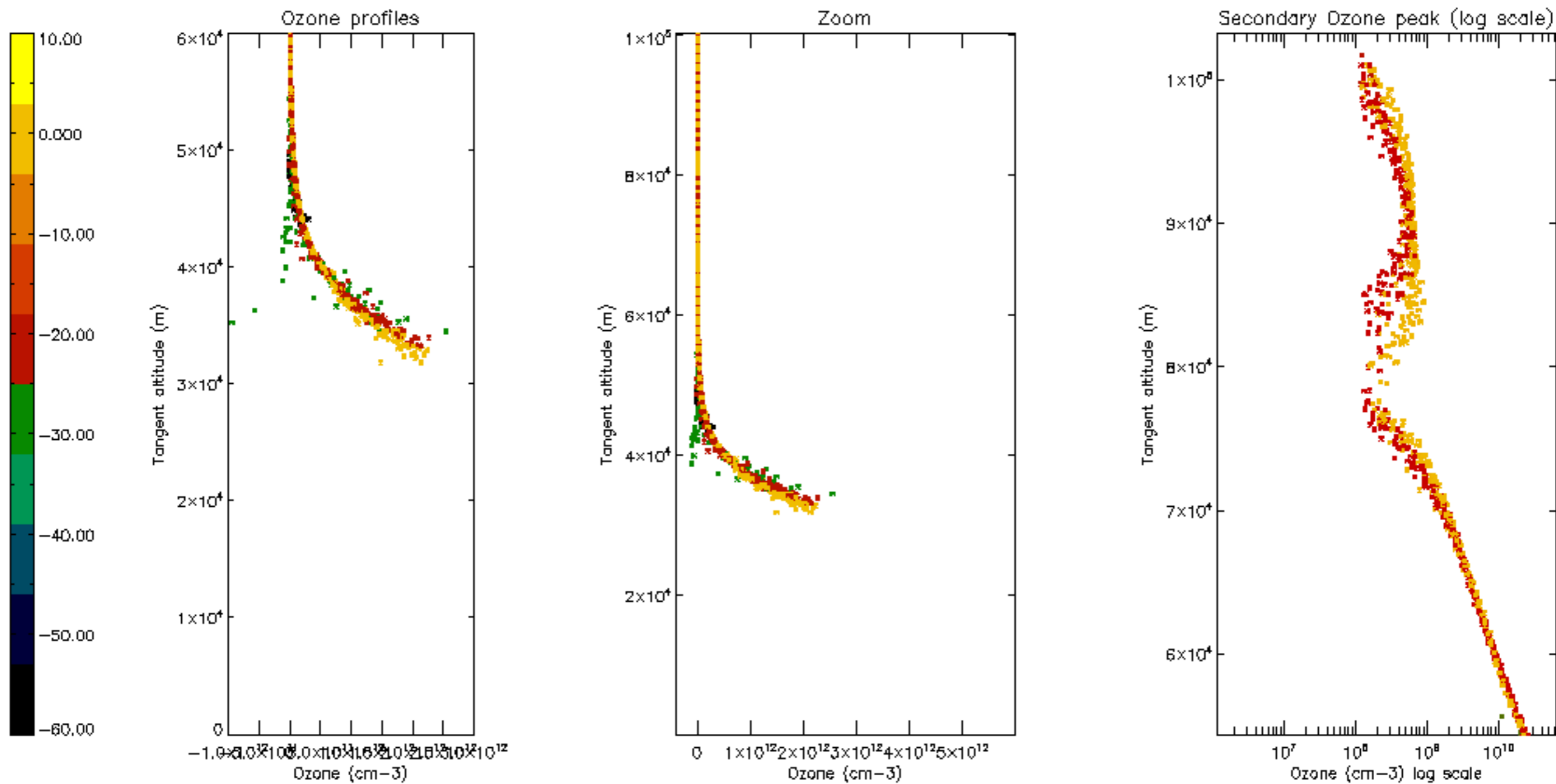
Percentage of star falling outside central band per profile

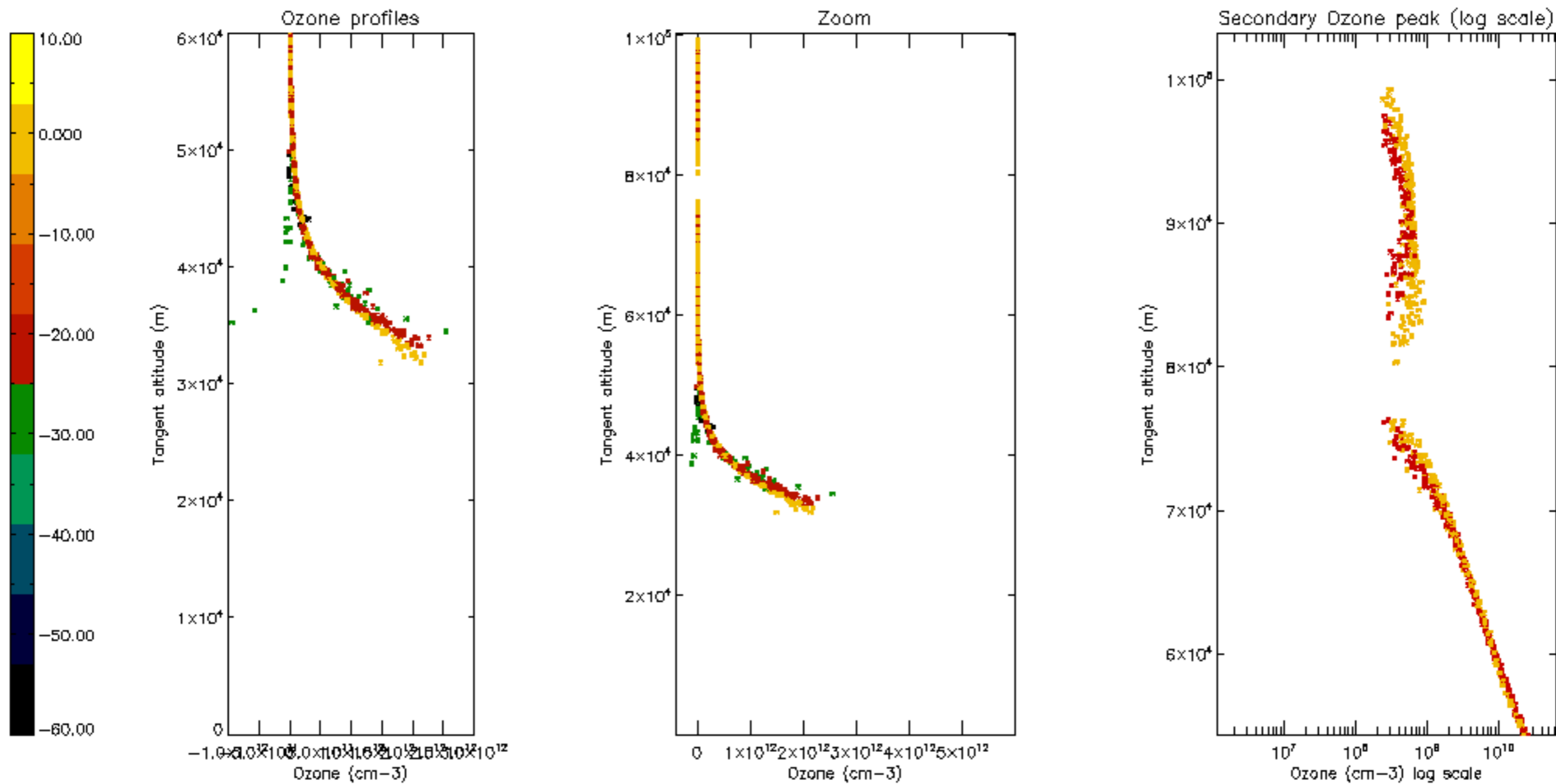


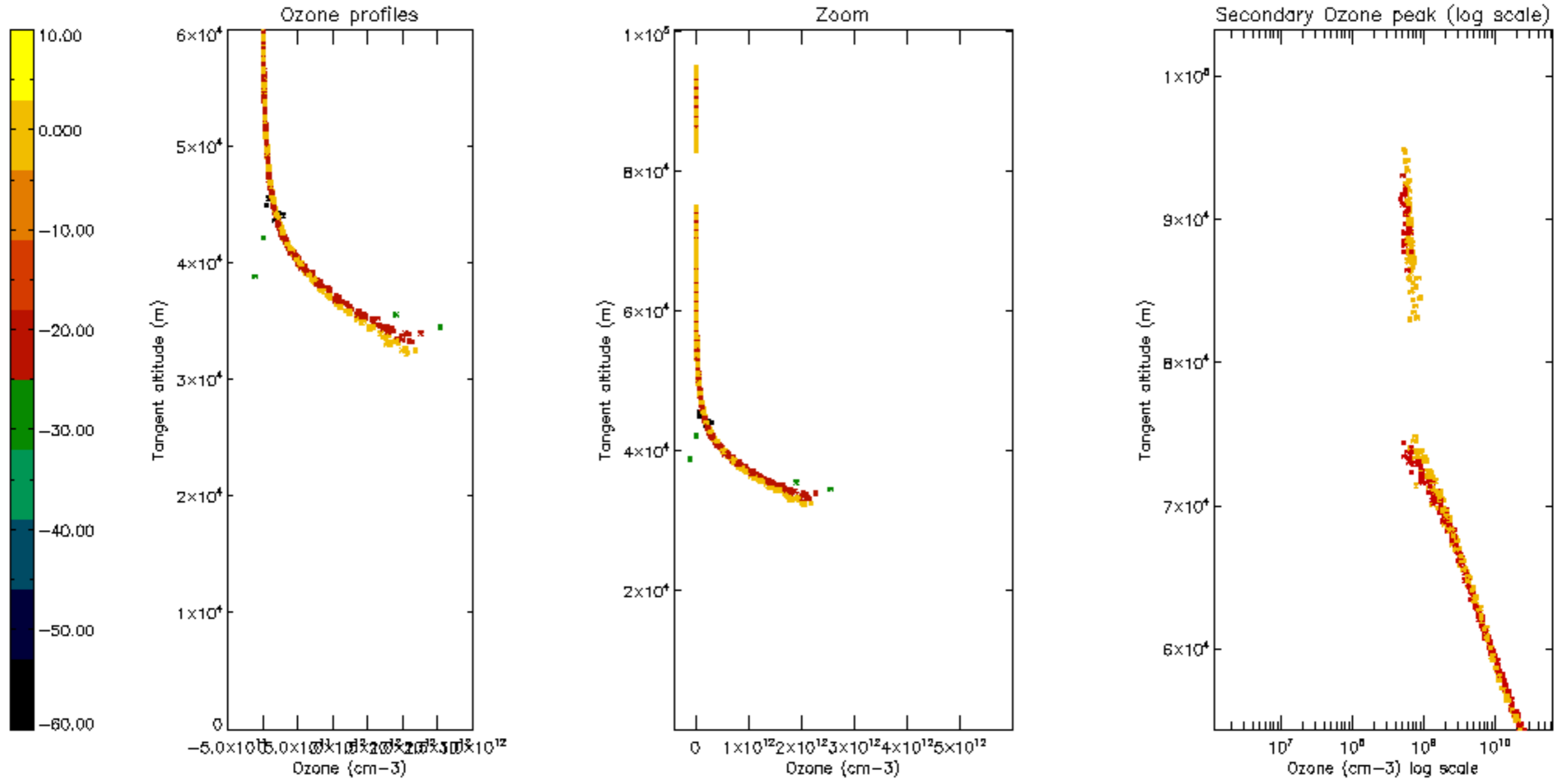
Percentage of saturation errors per profile

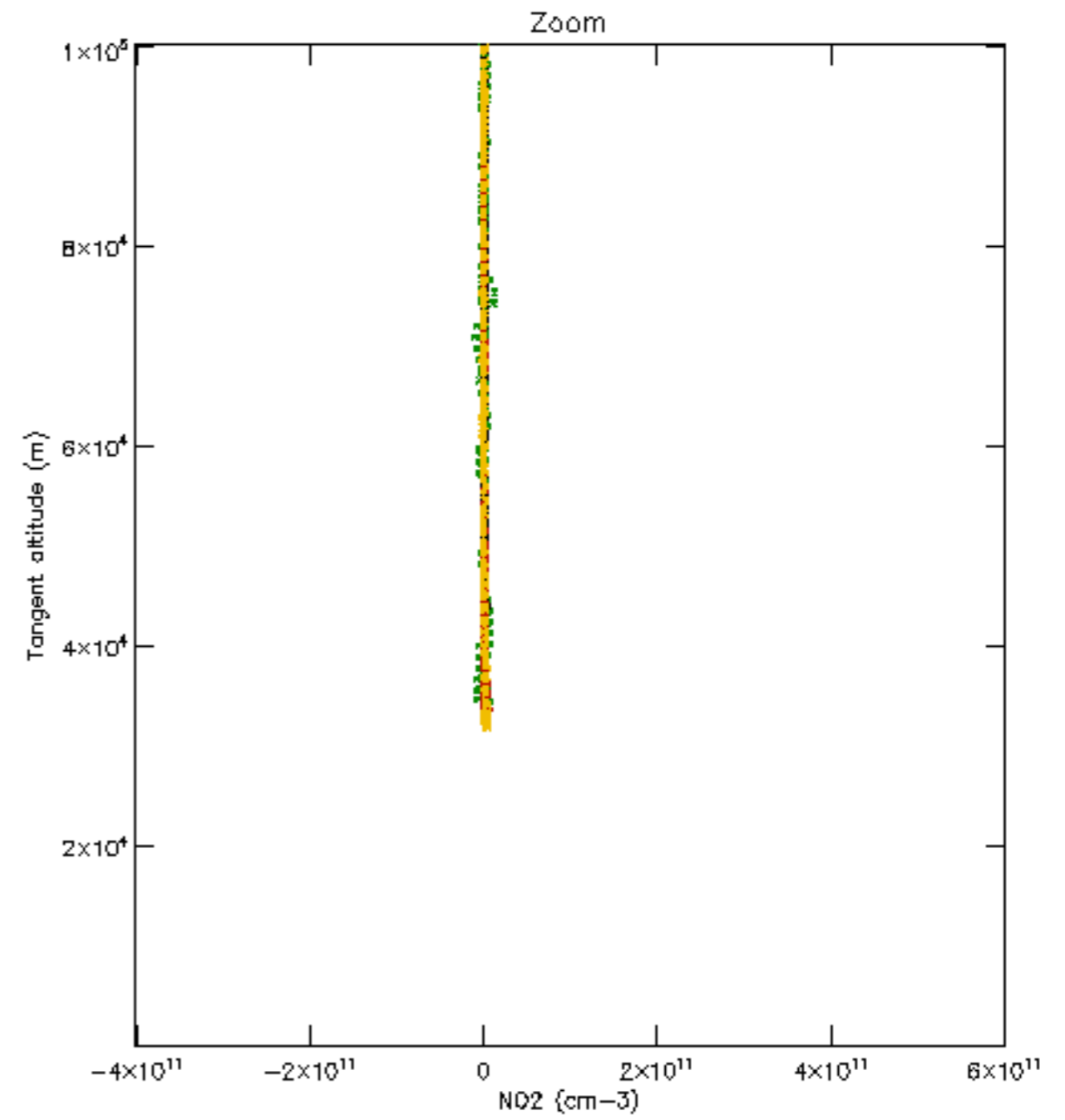
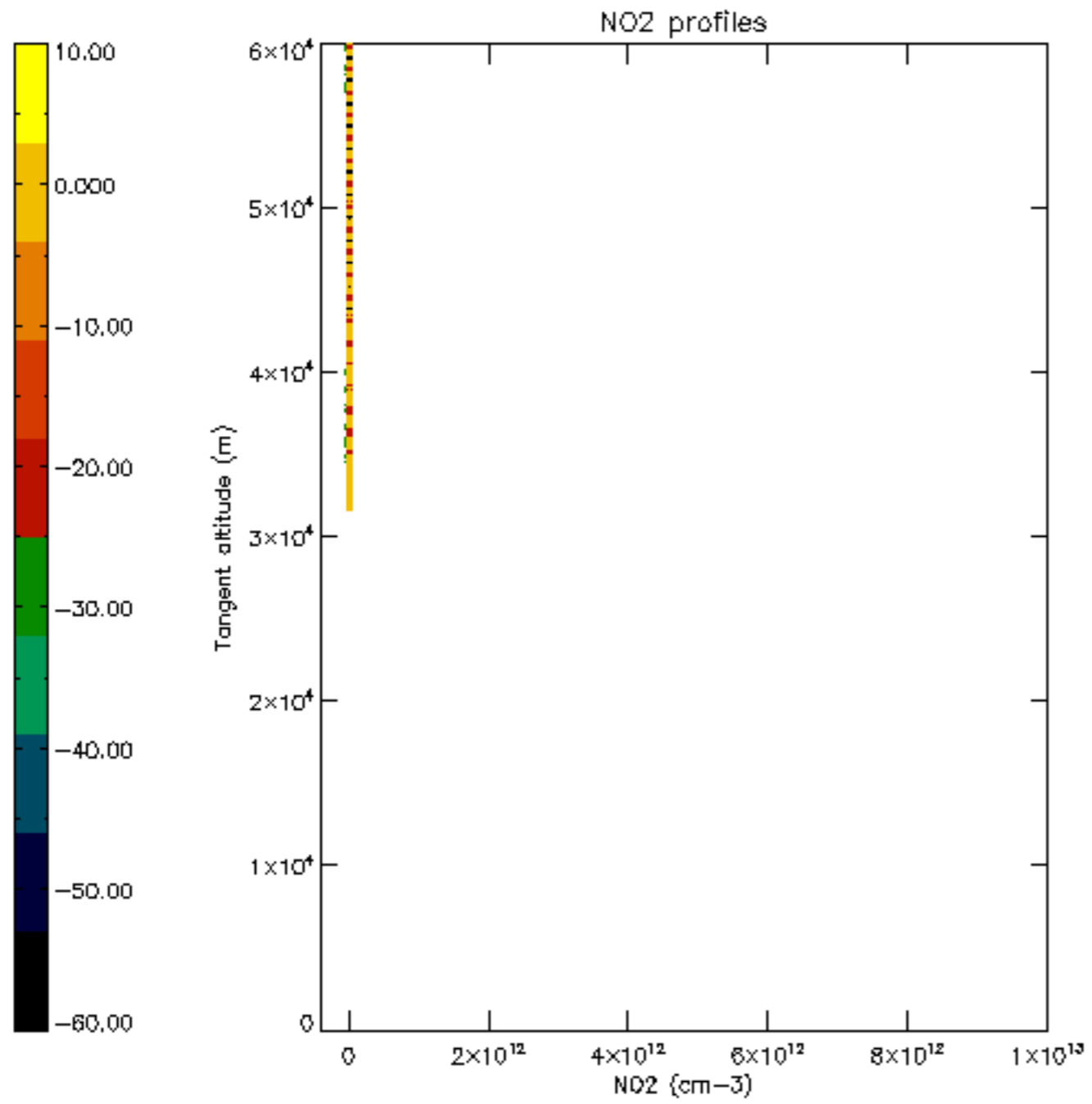


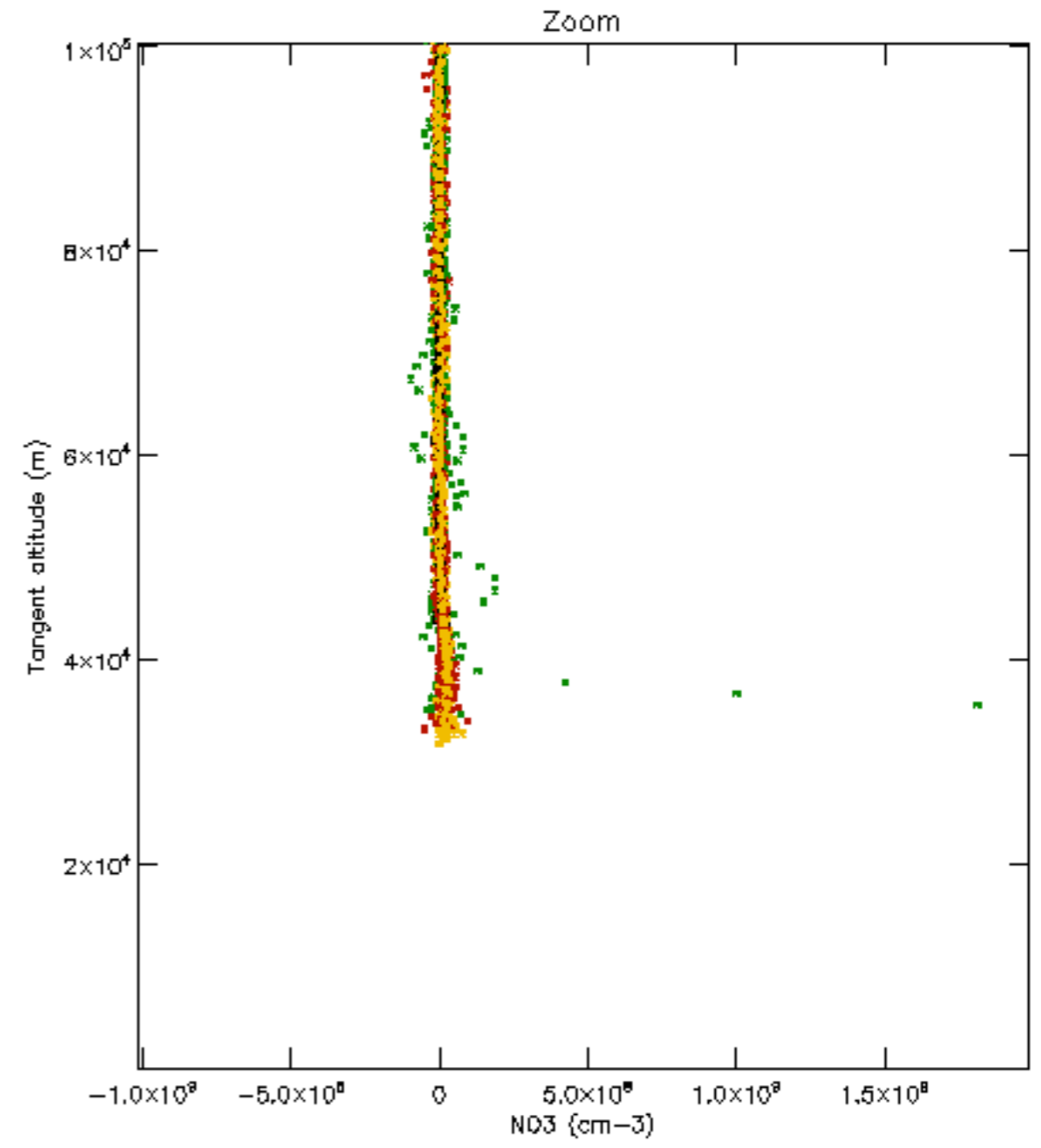
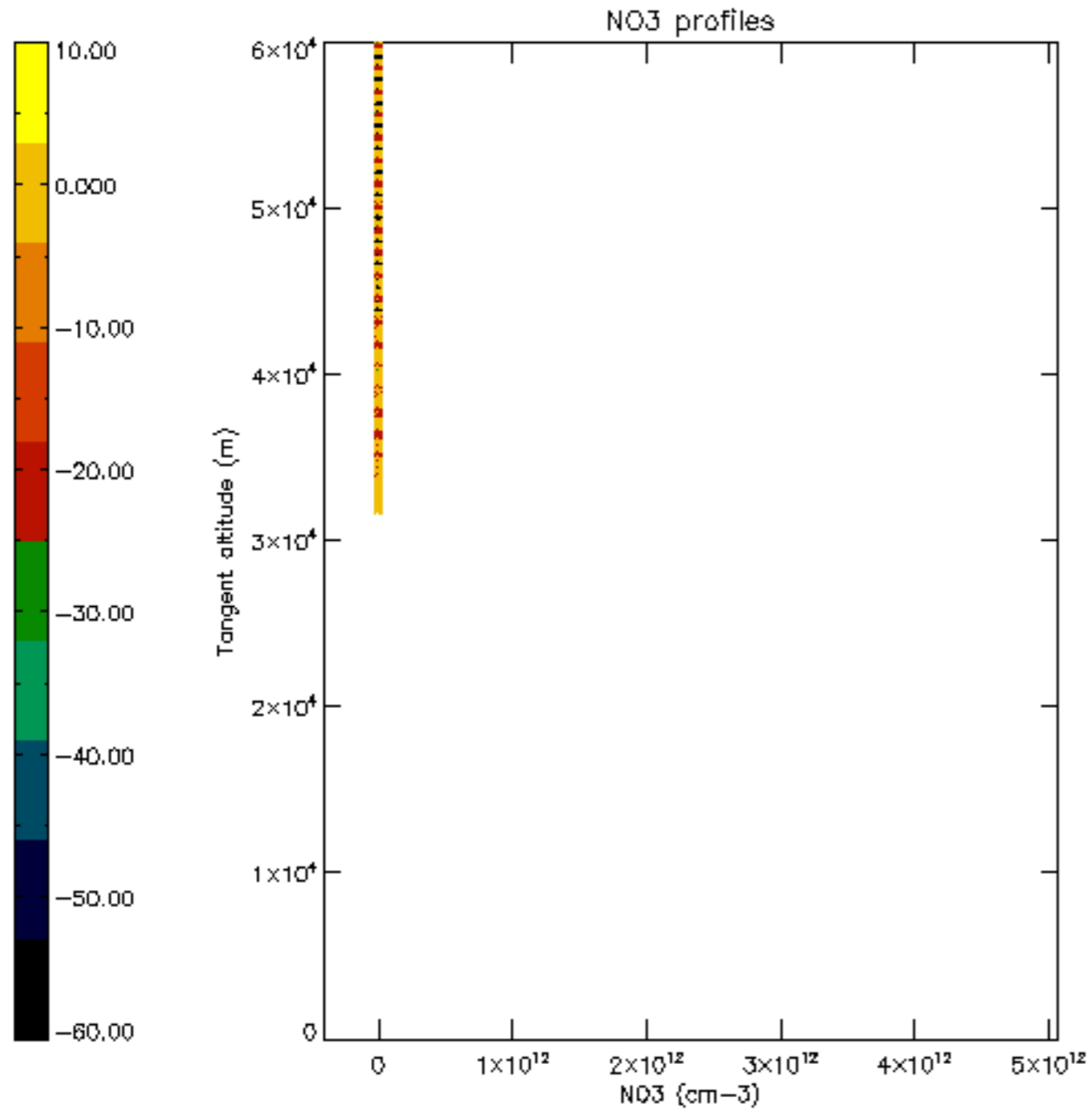




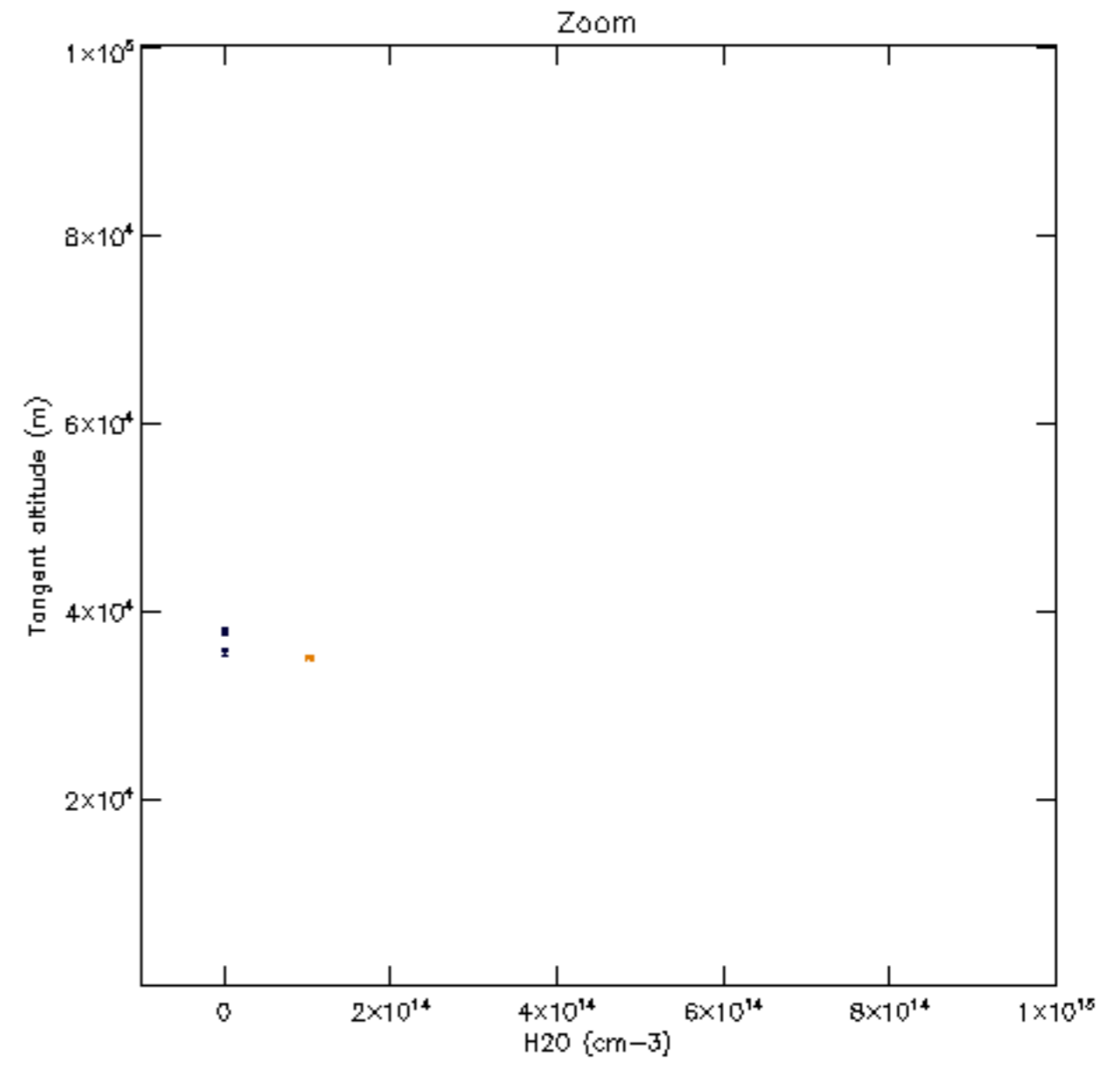
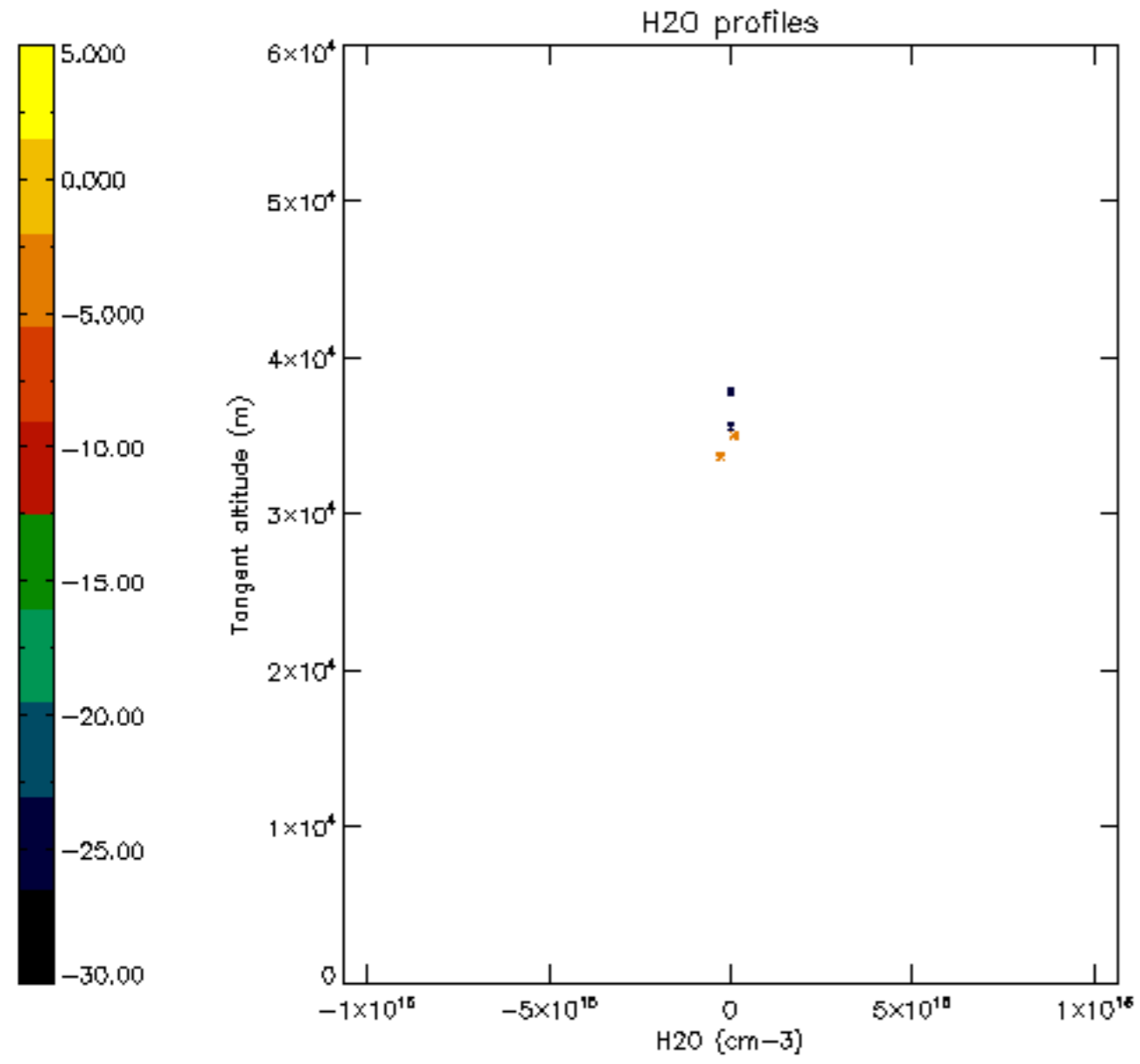


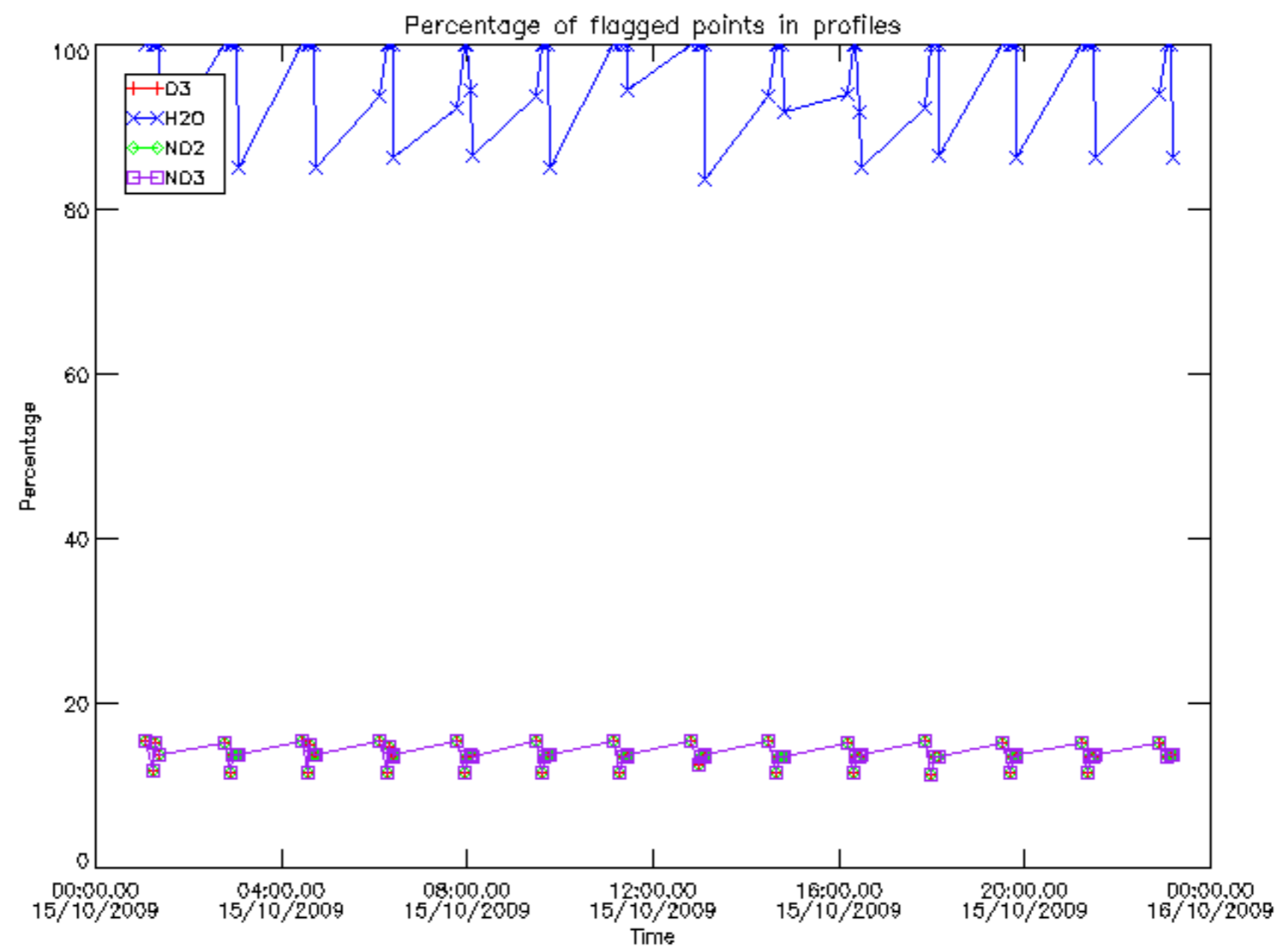




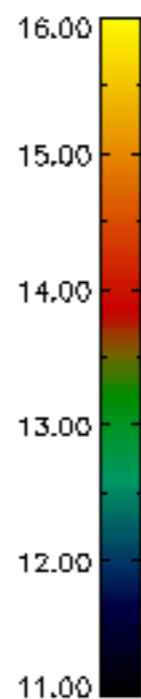
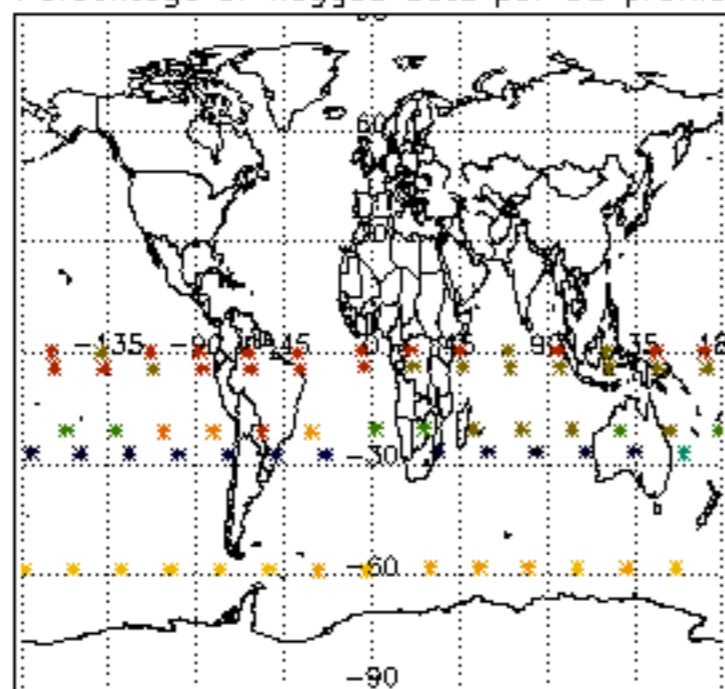




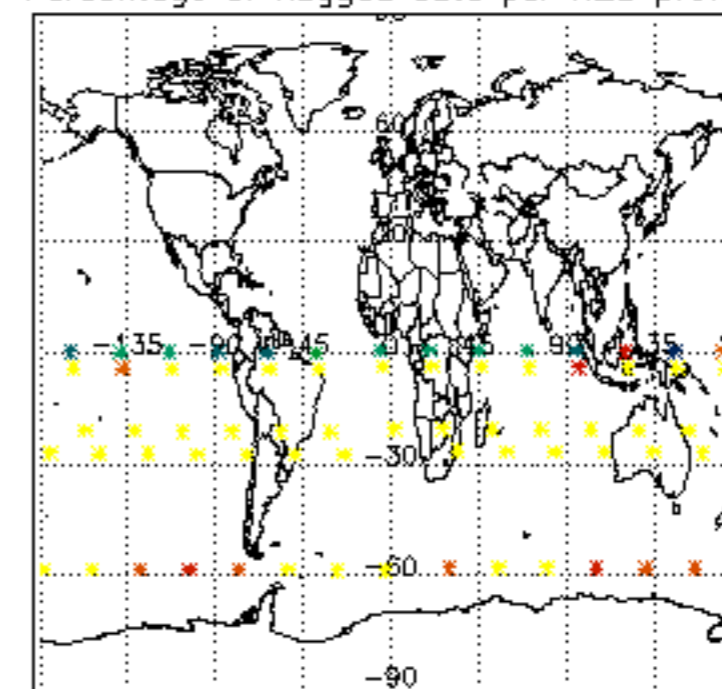




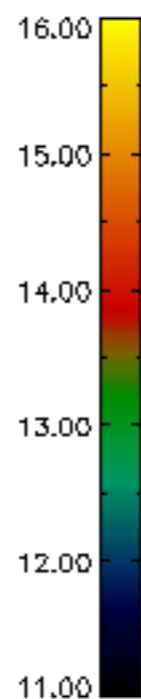
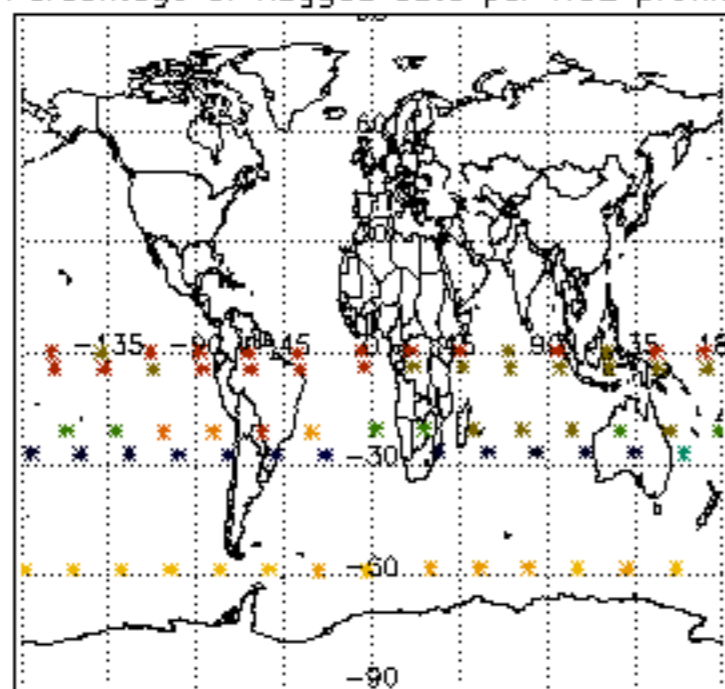
Percentage of flagged data per D3 profile



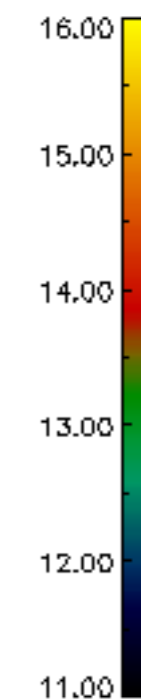
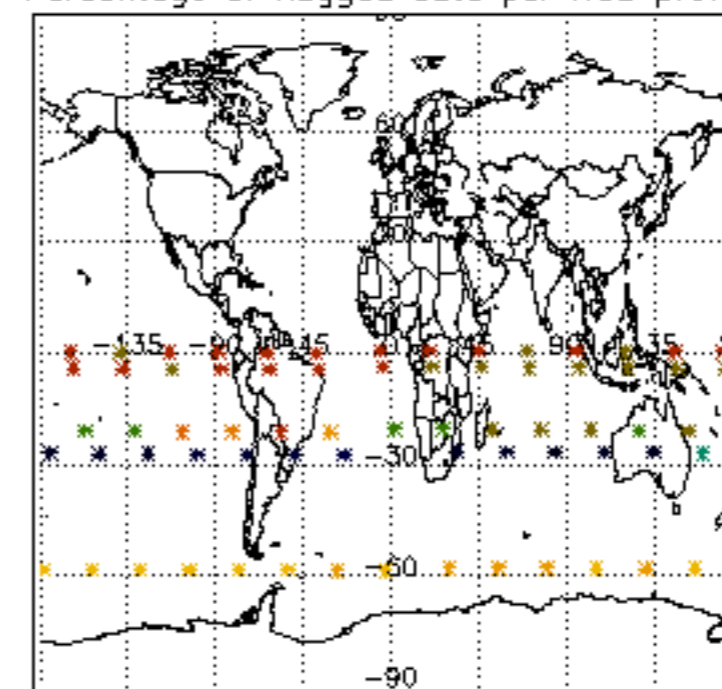
Percentage of flagged data per H2O profile

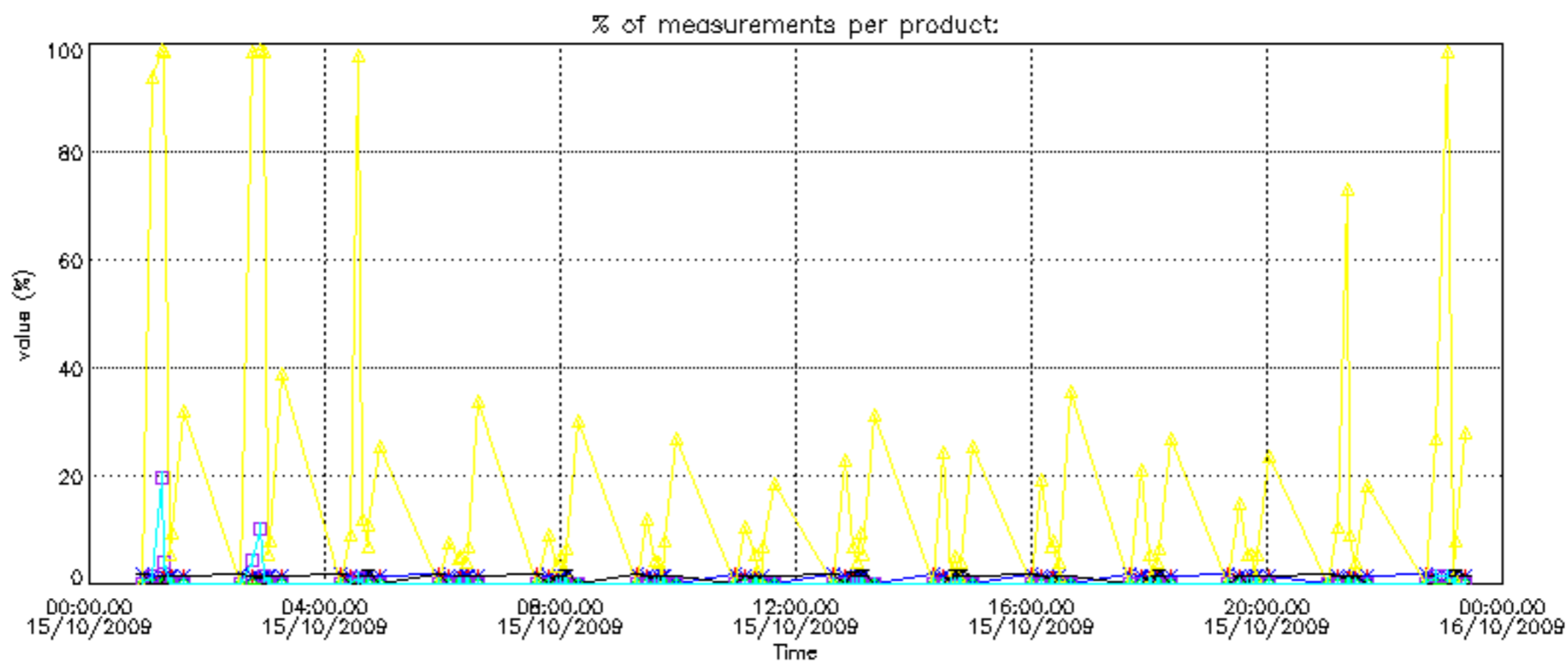


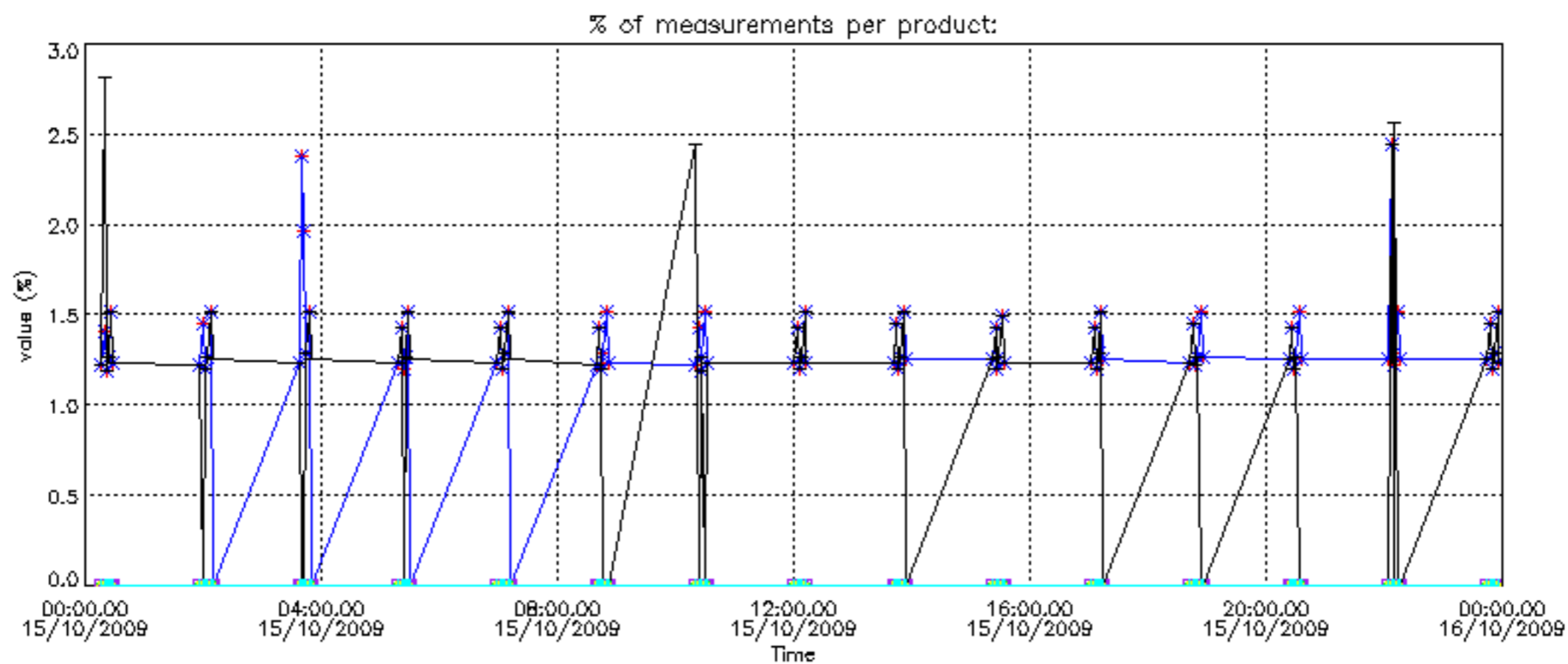
Percentage of flagged data per NO2 profile



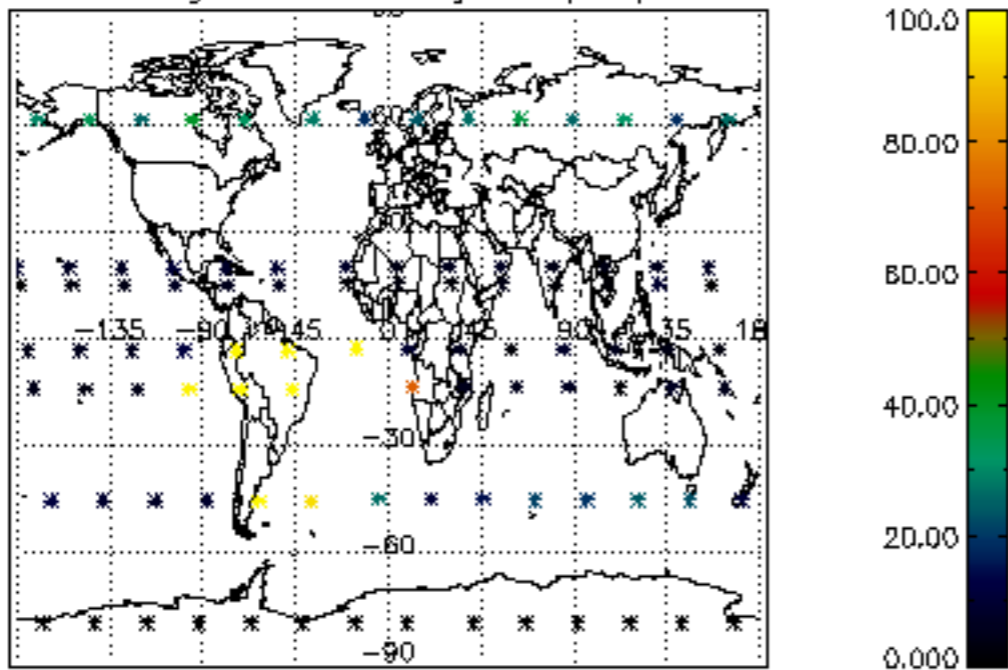
Percentage of flagged data per NO3 profile



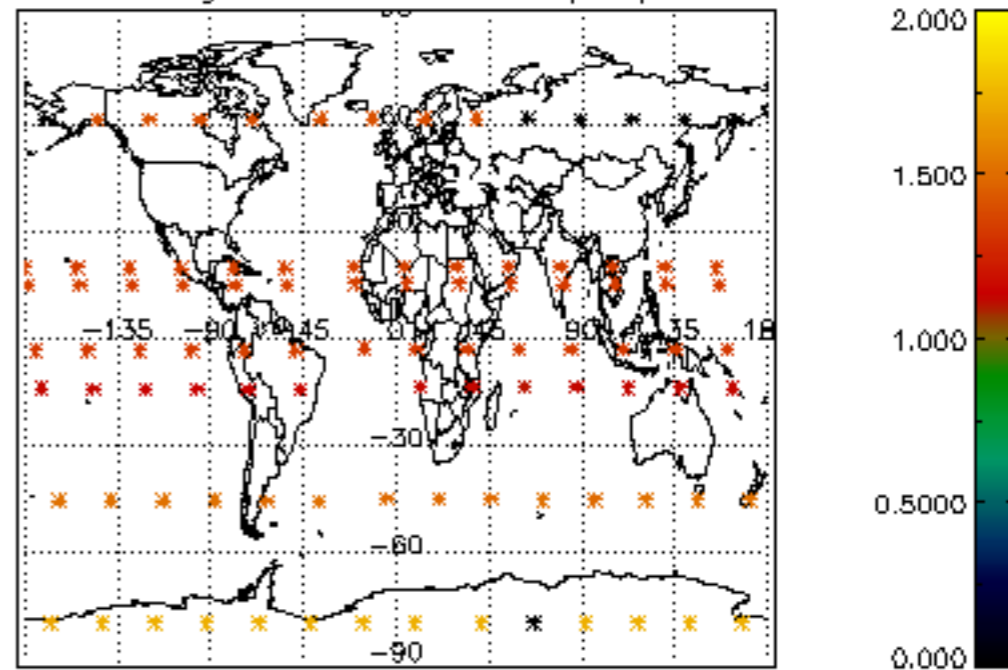




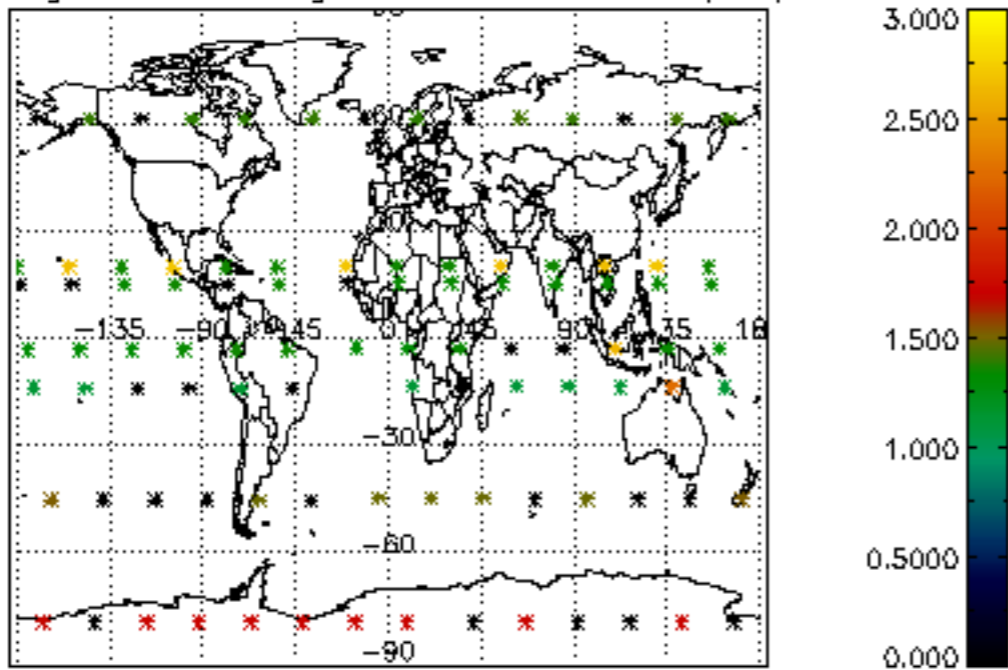
Percentage of cosmic ray hits per profile



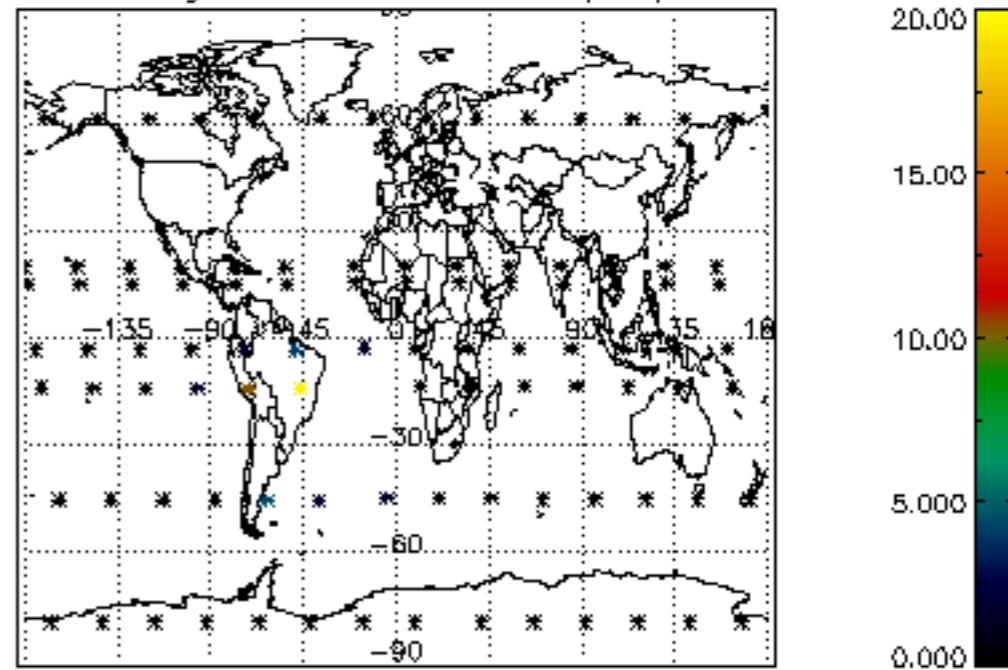
Percentage of datation errors per profile



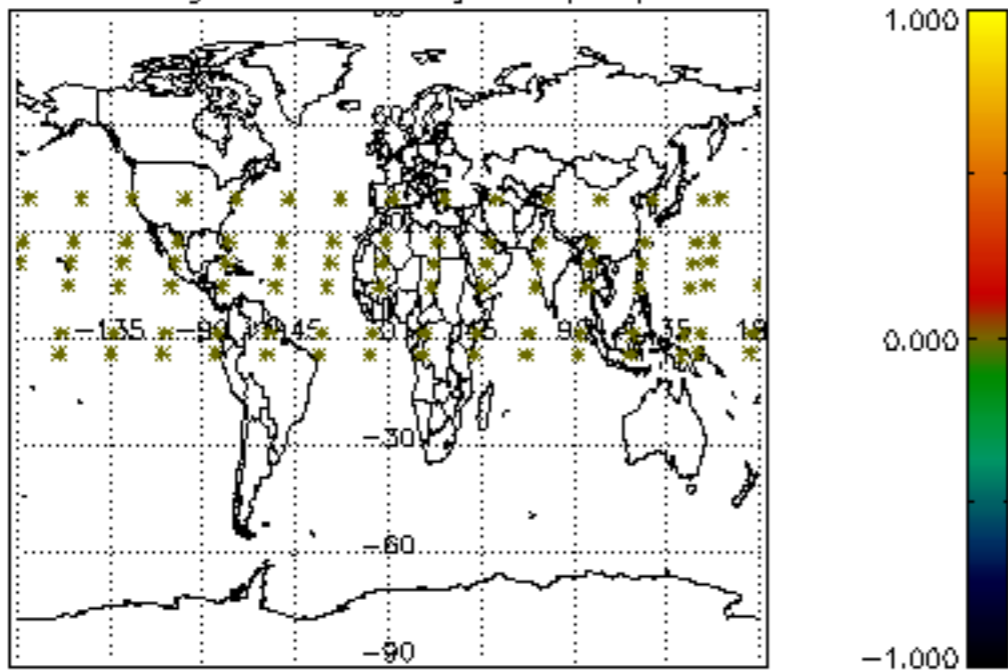
Percentage of star falling outside central band per profile



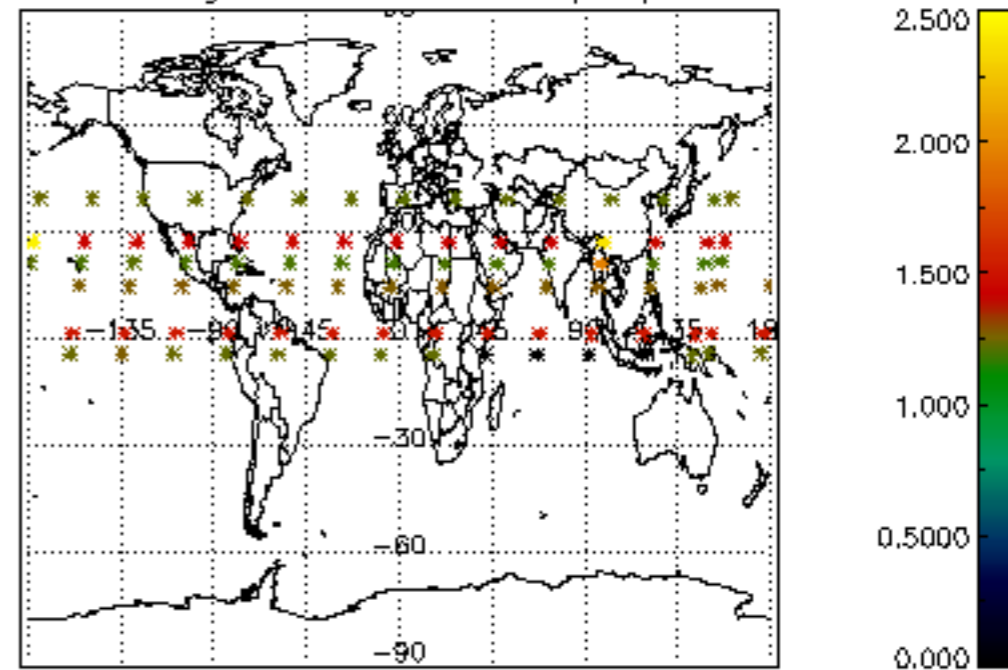
Percentage of saturation errors per profile



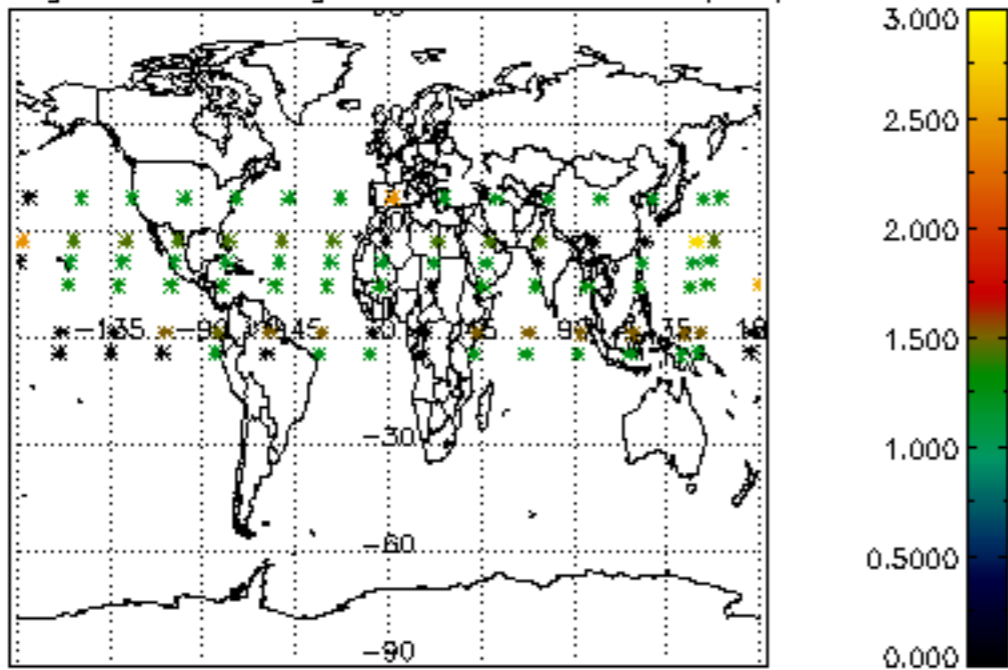
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

