

# GOMOS Level 2 Daily Report

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

Item	Value
Time of report generation	23APR2013 11:17:32
Data source version	GOMOS/6.01
Start time of products	14-11-2007 (14NOV2007 00:00:00)
Stop time of products	15-11-2007 (15NOV2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	268
Nb of prods with errors	0

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

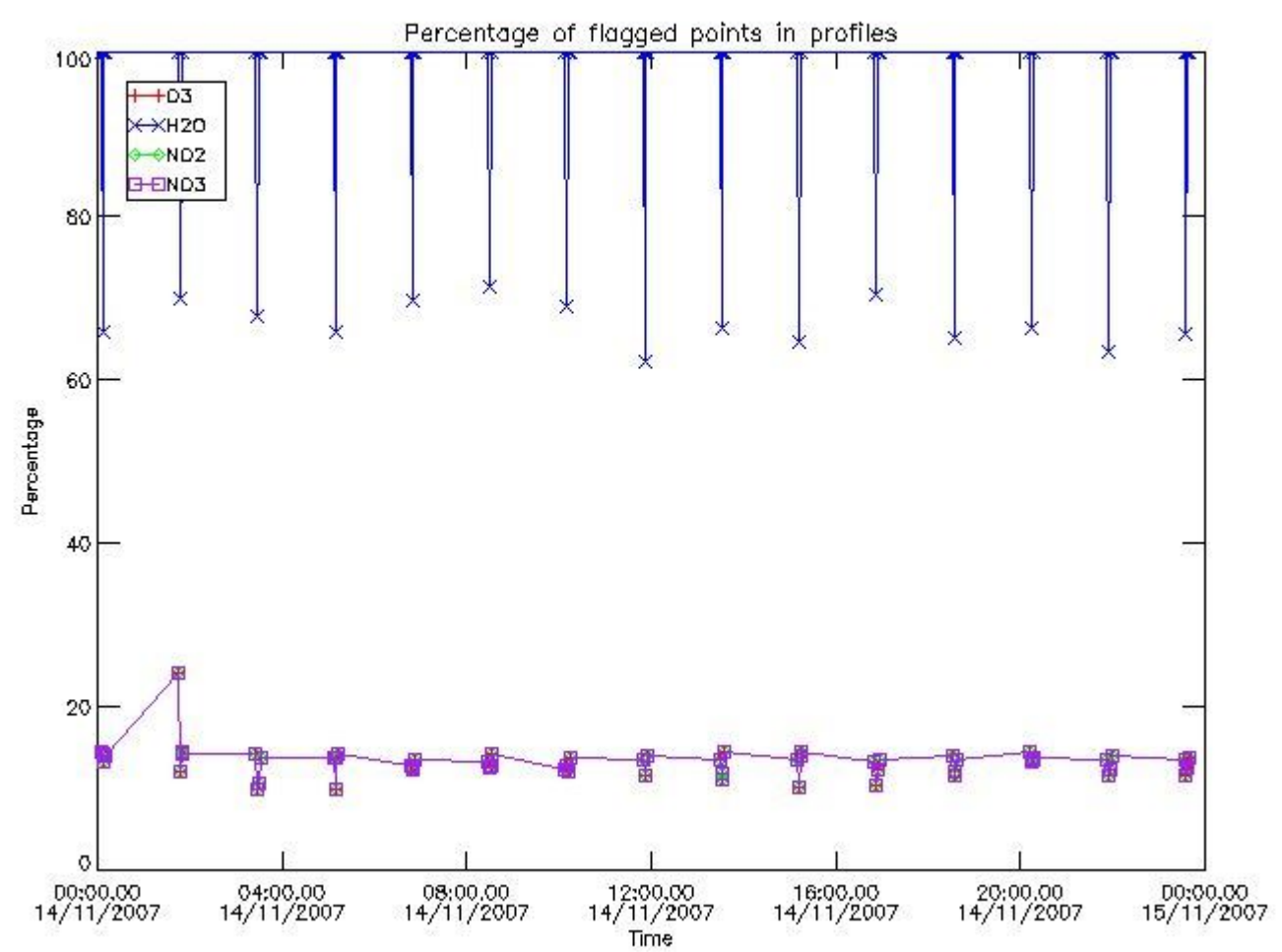
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20071114_000440_000000392063_00216_29829_1299.N1	14-NOV-2007 00:04:40	Dark	38.500	64	Gam Cen	2.2000	10600.	77	29829	No
2	GOM_NL__2PRFIN20071114_000657_000000392063_00216_29829_1300.N1	14-NOV-2007 00:06:57	Dark	38.500	26	Gam Cru	1.6240	2900.0	77	29829	No
3	GOM_NL__2PRFIN20071114_000835_000000402063_00216_29829_1301.N1	14-NOV-2007 00:08:35	Dark	39.500	12	Alp1Cru	0.77500	30000.	79	29829	No
4	GOM_NL__2PRFIN20071114_001033_000000372063_00217_29830_1302.N1	14-NOV-2007 00:10:33	Dark	36.500	124	The Car	2.7640	30000.	73	29830	No
5	GOM_NL__2PRFIN20071114_002845_000000392063_00217_29830_1303.N1	14-NOV-2007 00:28:45	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29830	No
6	GOM_NL__2PRFIN20071114_004634_000000372063_00217_29830_1304.N1	14-NOV-2007 00:46:34	Bright	37.000	105	6Bet Ari	2.6450	8900.0	74	29830	No
7	GOM_NL__2PRFIN20071114_005037_000000382063_00217_29830_1305.N1	14-NOV-2007 00:50:37	Bright	37.500	173	4Bet Tri	3.0040	8900.0	75	29830	No
8	GOM_NL__2PRFIN20071114_005241_000000372063_00217_29830_1306.N1	14-NOV-2007 00:52:41	Bright	36.500	73	57Gam1And	2.2600	13100.	73	29830	No
9	GOM_NL__2PRFIN20071114_005655_000000382063_00217_29830_1307.N1	14-NOV-2007 00:56:55	Bright	37.500	68	18Alp Cas	2.2250	4500.0	75	29830	No
10	GOM_NL__2PRFIN20071114_010554_000000332063_00217_29830_1308.N1	14-NOV-2007 01:05:54	Bright	33.000	49	1Alp UMi	1.9900	6300.0	66	29830	No
11	GOM_NL__2PRFIN20071114_011012_000000372063_00217_29830_1309.N1	14-NOV-2007 01:10:12	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	29830	No
12	GOM_NL__2PRFIN20071114_011552_000000372063_00217_29830_1310.N1	14-NOV-2007 01:15:52	Bright	37.000	32	77Eps UMa	1.7630	11000.	74	29830	No
13	GOM_NL__2PRFIN20071114_011728_000000352063_00217_29830_1311.N1	14-NOV-2007 01:17:28	Bright	34.500	39	85Eta UMa	1.8540	24000.	69	29830	No
14	GOM_NL__2PRFIN20071114_012057_000000362063_00217_29830_1312.N1	14-NOV-2007 01:20:57	Bright	35.500	152	12Alp2CVn	2.8900	11000.	71	29830	No
15	GOM_NL__2PRFIN20071114_012559_000000332063_00217_29830_1313.N1	14-NOV-2007 01:25:59	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29830	No
16	GOM_NL__2PRFIN20071114_012838_000000332063_00217_29830_1314.N1	14-NOV-2007 01:28:38	Bright	33.000	138	47Eps Vir	2.8280	4700.0	66	29830	No
17	GOM_NL__2PRFIN20071114_013225_000000332063_00217_29830_1315.N1	14-NOV-2007 01:32:25	Bright	33.000	121	29Gam Vir	2.7400	7200.0	66	29830	No
18	GOM_NL__2PRFIN20071114_013854_000000402063_00217_29830_1316.N1	14-NOV-2007 01:38:54	Twilight	39.500	171	2Eps Crv	3.0010	4250.0	79	29830	No
19	GOM_NL__2PRFIN20071114_014516_000000382063_00217_29830_1317.N1	14-NOV-2007 01:45:16	Dark	38.000	64	Gam Cen	2.2000	10600.	76	29830	No
20	GOM_NL__2PRFIN20071114_014733_000000422063_00217_29830_1318.N1	14-NOV-2007 01:47:33	Dark	42.000	26	Gam Cru	1.6240	2900.0	84	29830	No
21	GOM_NL__2PRFIN20071114_014911_000000392063_00217_29830_1319.N1	14-NOV-2007 01:49:11	Dark	39.000	12	Alp1Cru	0.77500	30000.	78	29830	No
22	GOM_NL__2PRFIN20071114_015109_000000362063_00218_29831_1311.N1	14-NOV-2007 01:51:09	Dark	36.000	124	The Car	2.7640	30000.	72	29831	No
23	GOM_NL__2PRFIN20071114_020921_000000382063_00218_29831_1312.N1	14-NOV-2007 02:09:21	Straylight	38.000	157	The1Eri	2.9060	9300.0	76	29831	No
24	GOM_NL__2PRFIN20071114_022710_000000372063_00218_29831_1313.N1	14-NOV-2007 02:27:10	Bright	37.000	105	6Bet Ari	2.6450	8900.0	74	29831	No
25	GOM_NL__2PRFIN20071114_023113_000000372063_00218_29831_1314.N1	14-NOV-2007 02:31:13	Bright	36.500	173	4Bet Tri	3.0040	8900.0	73	29831	No
26	GOM_NL__2PRFIN20071114_023317_000000532063_00218_29831_1315.N1	14-NOV-2007 02:33:17	Bright	53.000	73	57Gam1And	2.2600	13100.	106	29831	No
27	GOM_NL__2PRFIN20071114_023731_000000362063_00218_29831_1316.N1	14-NOV-2007 02:37:31	Bright	36.000	68	18Alp Cas	2.2250	4500.0	72	29831	No
28	GOM_NL__2PRFIN20071114_024630_000000322063_00218_29831_1317.N1	14-NOV-2007 02:46:30	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	29831	No
29	GOM_NL__2PRFIN20071114_025048_000000372063_00218_29831_1318.N1	14-NOV-2007 02:50:48	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	29831	No
30	GOM_NL__2PRFIN20071114_025628_000000372063_00218_29831_1319.N1	14-NOV-2007 02:56:28	Bright	36.500	32	77Eps UMa	1.7630	11000.	73	29831	No
31	GOM_NL__2PRFIN20071114_025804_000000352063_00218_29831_1320.N1	14-NOV-2007 02:58:04	Bright	35.000	39	85Eta UMa	1.8540	24000.	70	29831	No
32	GOM_NL__2PRFIN20071114_030133_000000532063_00218_29831_1321.N1	14-NOV-2007 03:01:33	Bright	53.000	152	12Alp2CVn	2.8900	11000.	106	29831	No
33	GOM_NL__2PRFIN20071114_030635_000000332063_00218_29831_1322.N1	14-NOV-2007 03:06:35	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29831	No
34	GOM_NL__2PRFIN20071114_030914_000000342063_00218_29831_1323.N1	14-NOV-2007 03:09:14	Bright	33.500	138	47Eps Vir	2.8280	4700.0	67	29831	No
35	GOM_NL__2PRFIN20071114_031301_000000352063_00218_29831_1324.N1	14-NOV-2007 03:13:01	Bright	34.500	121	29Gam Vir	2.7400	7200.0	69	29831	No
36	GOM_NL__2PRFIN20071114_031800_000000412063_00218_29831_1325.N1	14-NOV-2007 03:18:00	Tw_and_stray	41.000	100	4Gam Crv	2.5800	13100.	82	29831	No
37	GOM_NL__2PRFIN20071114_031931_000000442063_00218_29831_1326.N1	14-NOV-2007 03:19:31	Twilight	43.500	171	2Eps Crv	3.0010	4250.0	87	29831	No
38	GOM_NL__2PRFIN20071114_032552_000000362063_00218_29831_1327.N1	14-NOV-2007 03:25:52	Dark	36.000	64	Gam Cen	2.2000	10600.	72	29831	No
39	GOM_NL__2PRFIN20071114_032809_000000522063_00218_29831_1328.N1	14-NOV-2007 03:28:09	Dark	51.500	26	Gam Cru	1.6240	2900.0	103	29831	No
40	GOM_NL__2PRFIN20071114_032947_000000482063_00218_29831_1329.N1	14-NOV-2007 03:29:47	Dark	48.000	12	Alp1Cru	0.77500	30000.	96	29831	No
41	GOM_NL__2PRFIN20071114_033145_000000372063_00219_29832_1319.N1	14-NOV-2007 03:31:45	Dark	37.000	124	The Car	2.7640	30000.	74	29832	No
42	GOM_NL__2PRFIN20071114_034957_000000392063_00219_29832_1320.N1	14-NOV-2007 03:49:57	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29832	No





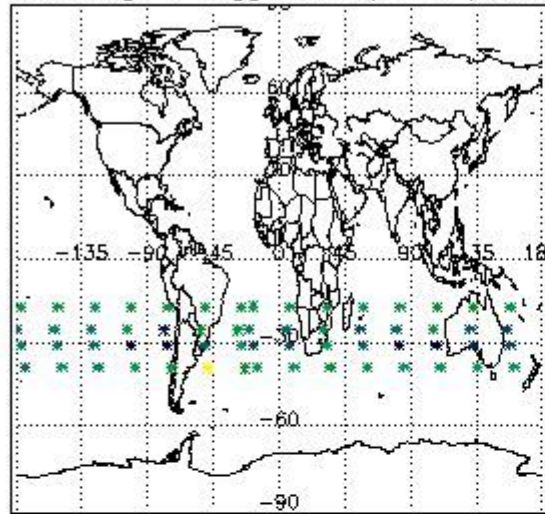




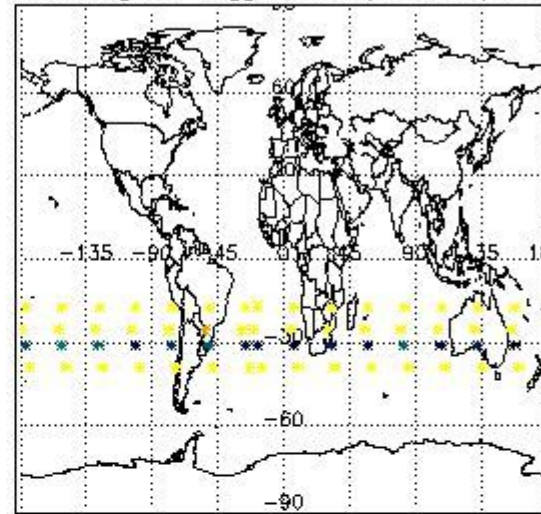


3.2 Plot quality information per product (world map)

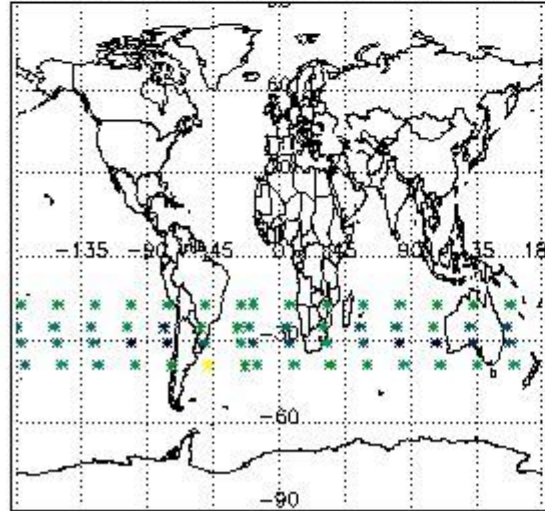
Percentage of flagged data per O3 profile



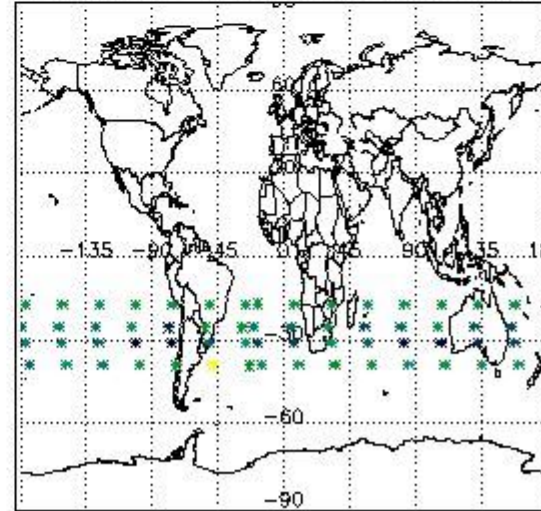
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



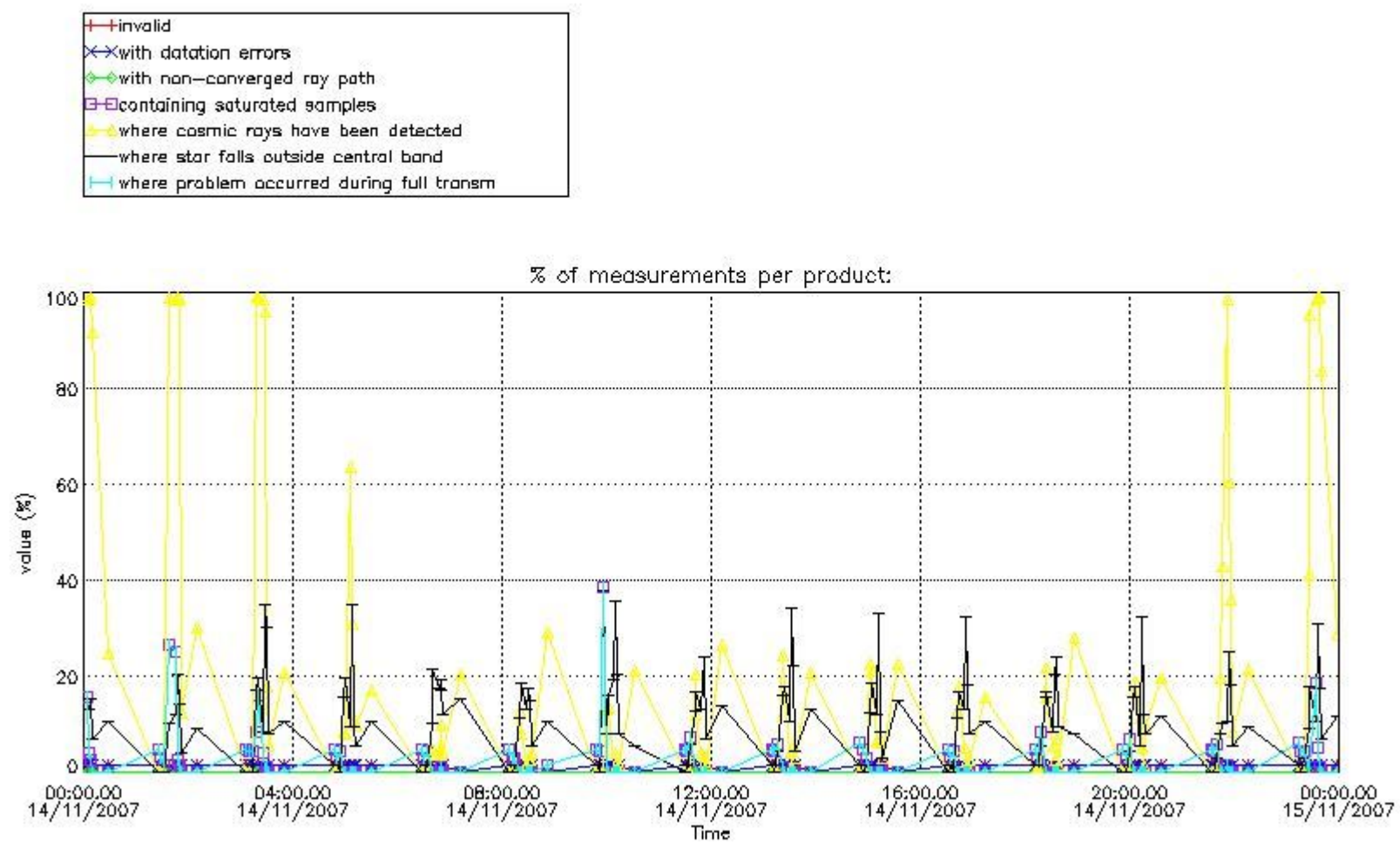
#### 4. Level 1 quality information per product

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.

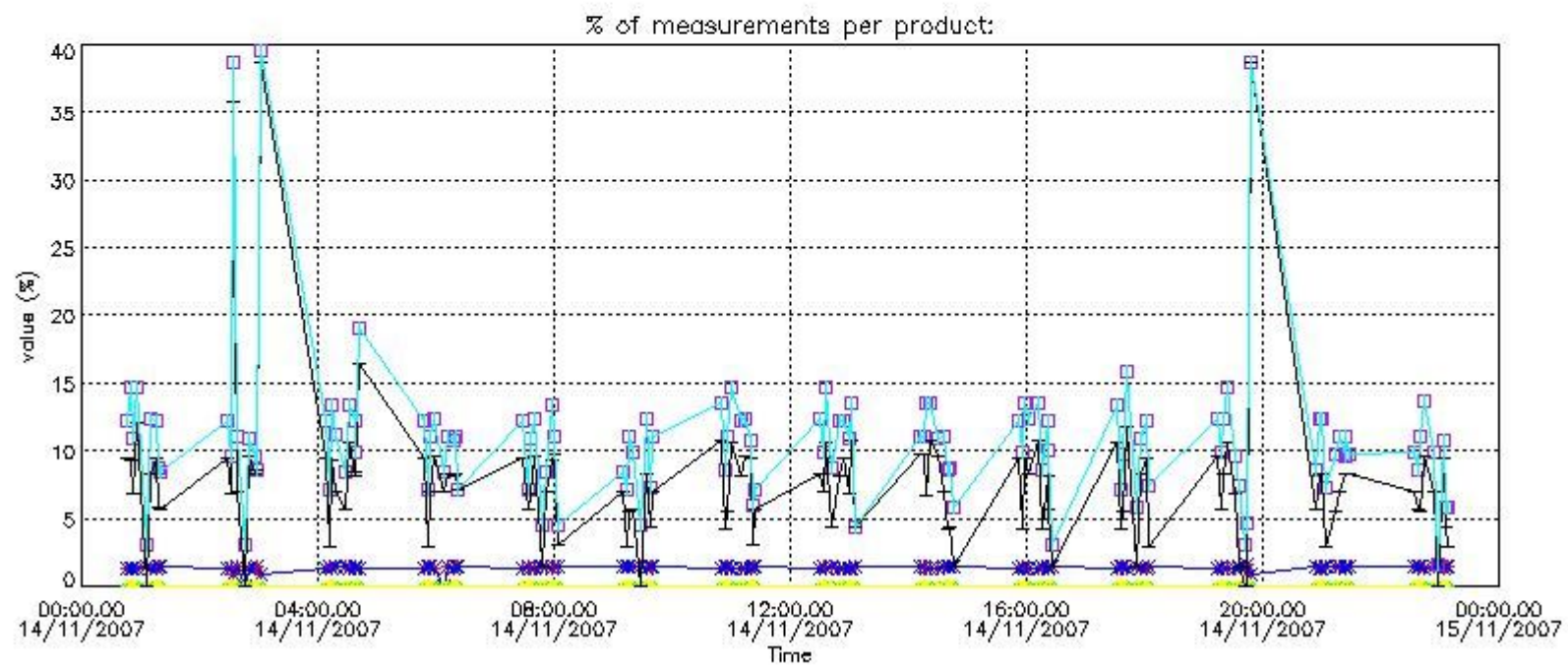
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





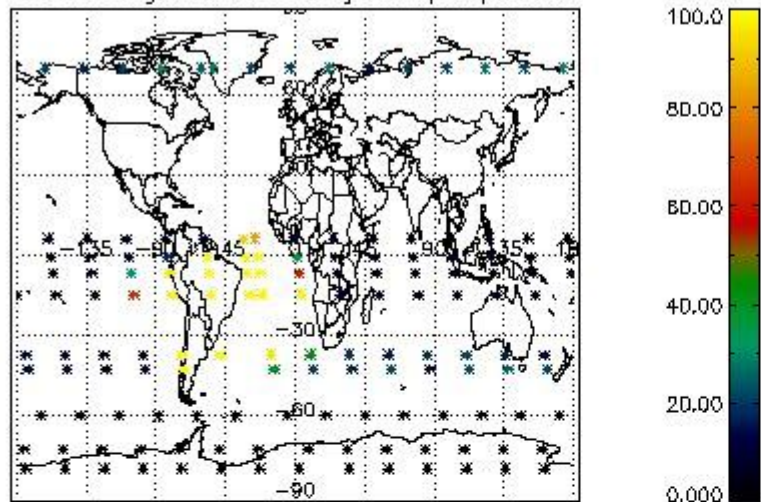
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



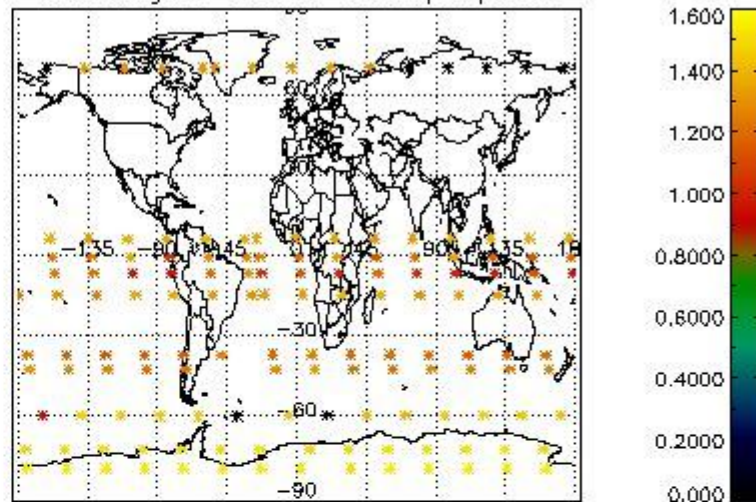
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

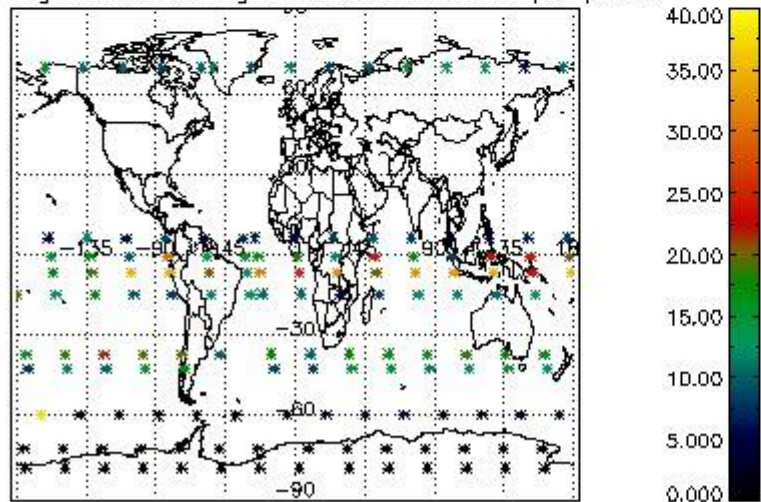
Percentage of cosmic ray hits per profile



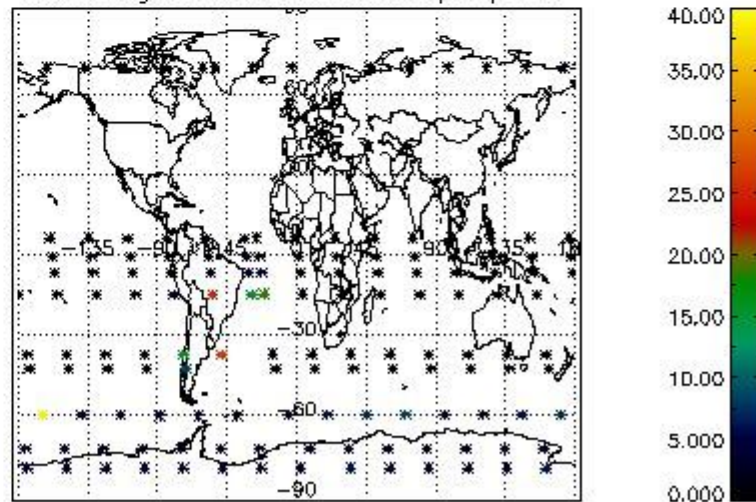
Percentage of datation errors per profile



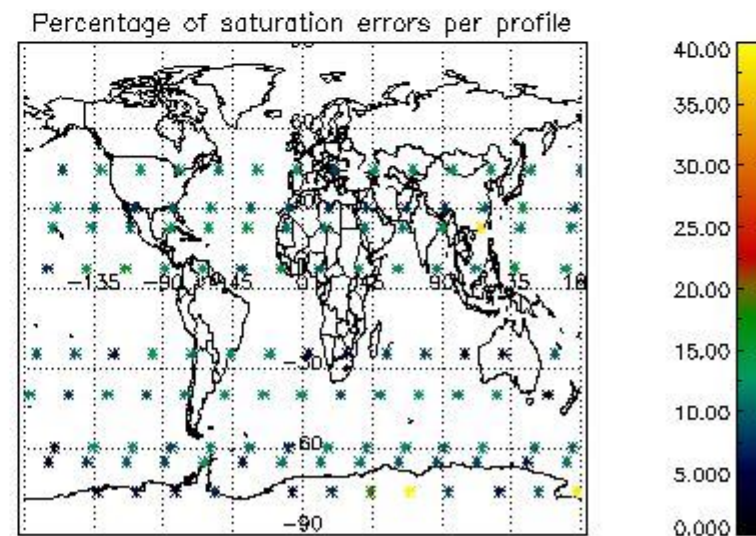
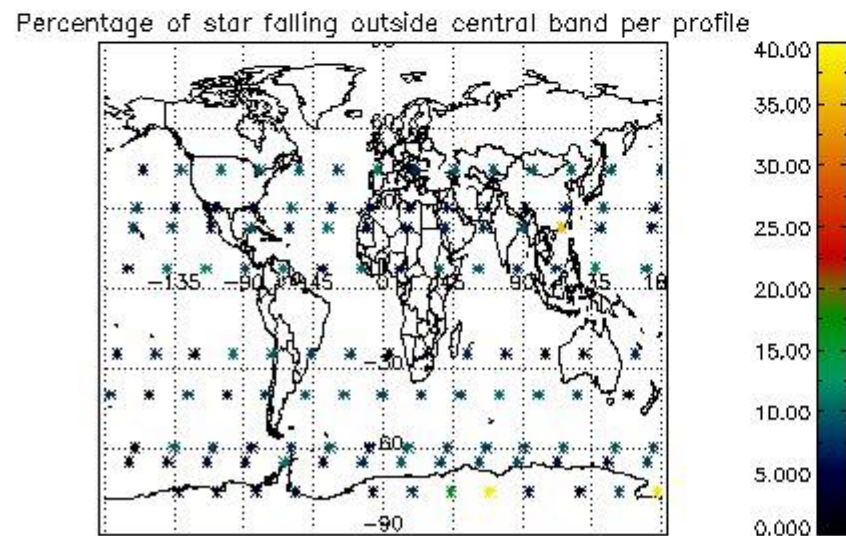
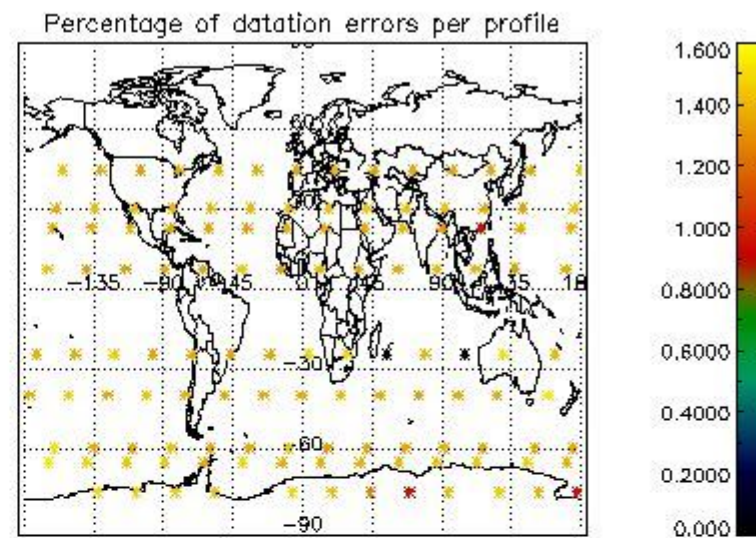
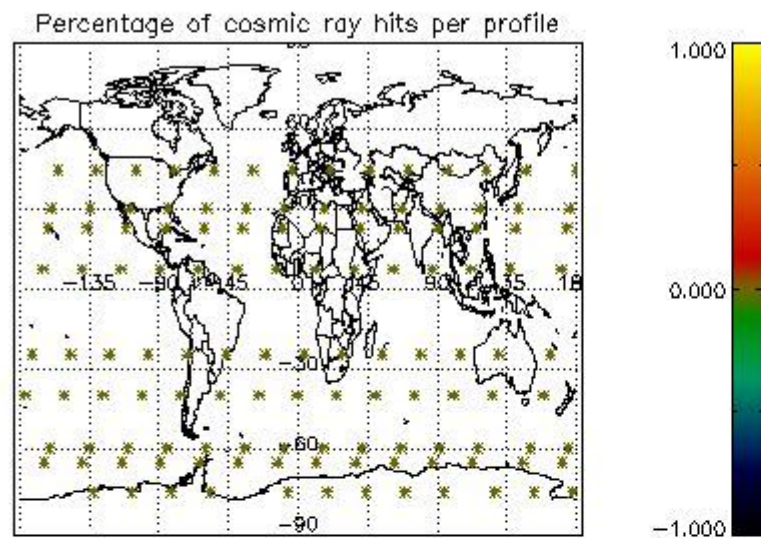
Percentage of star falling outside central band per profile



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

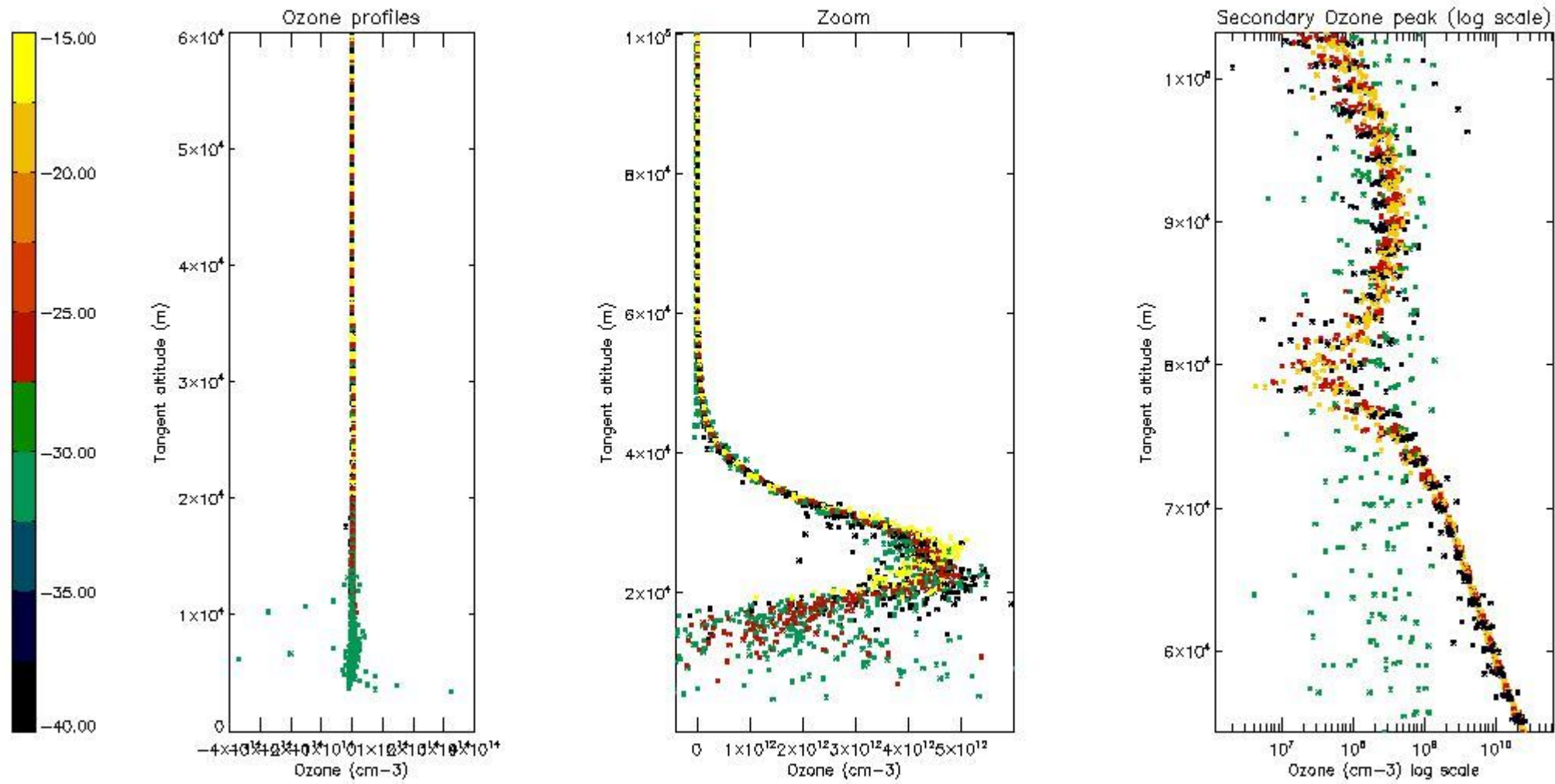
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	25
STD < 20	14

STD < 10	11
STD < 5	7

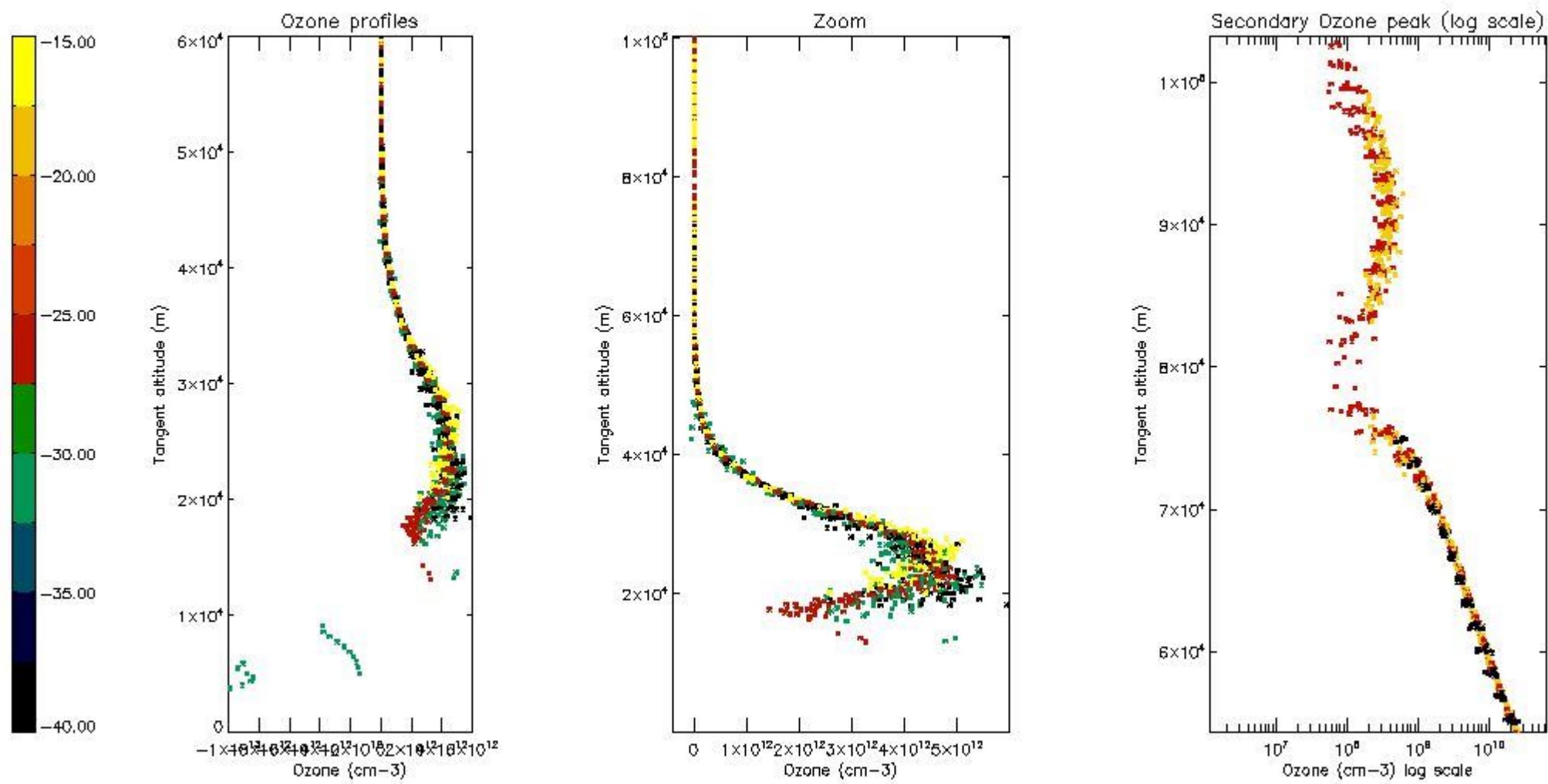
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



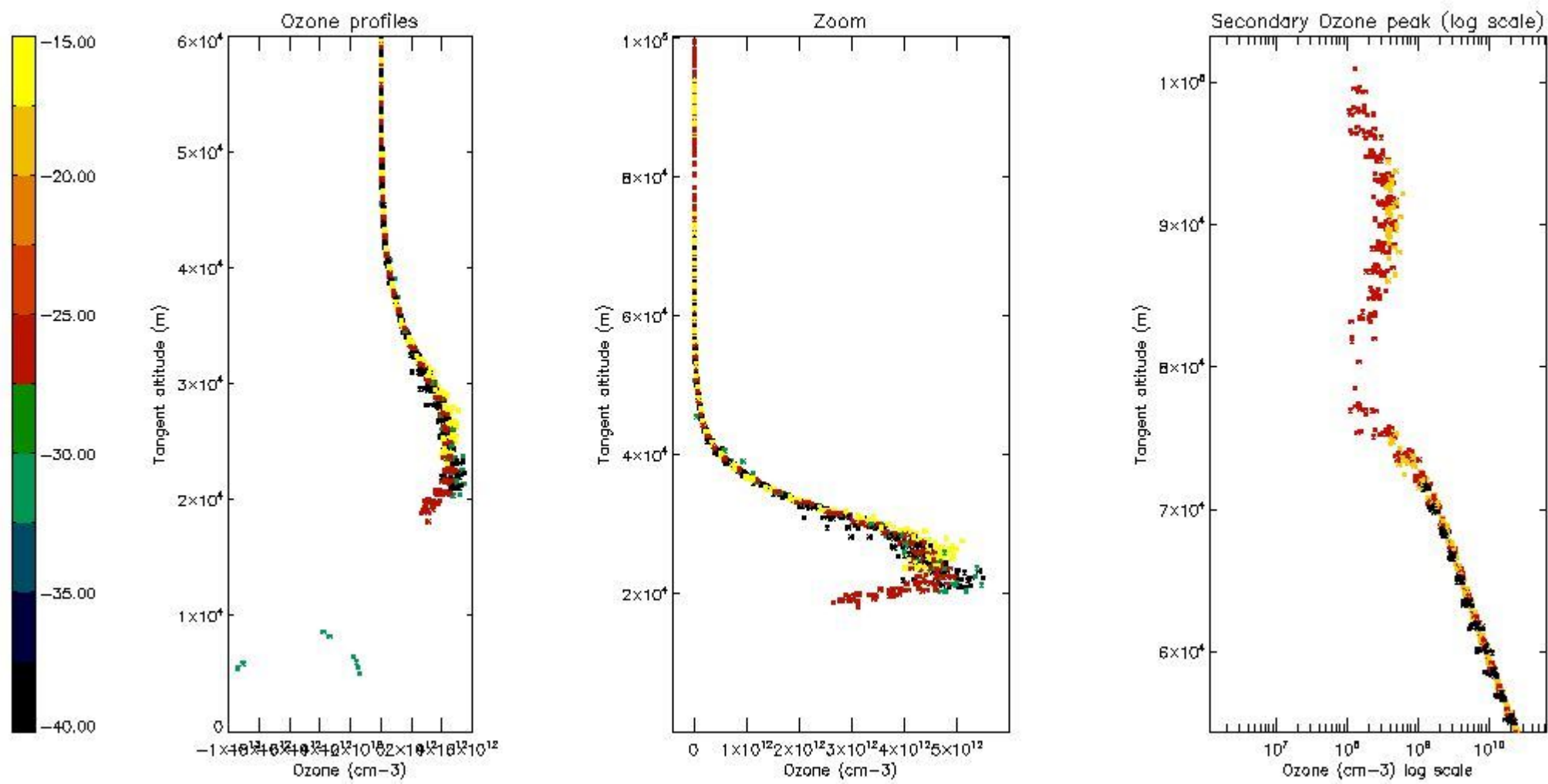
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



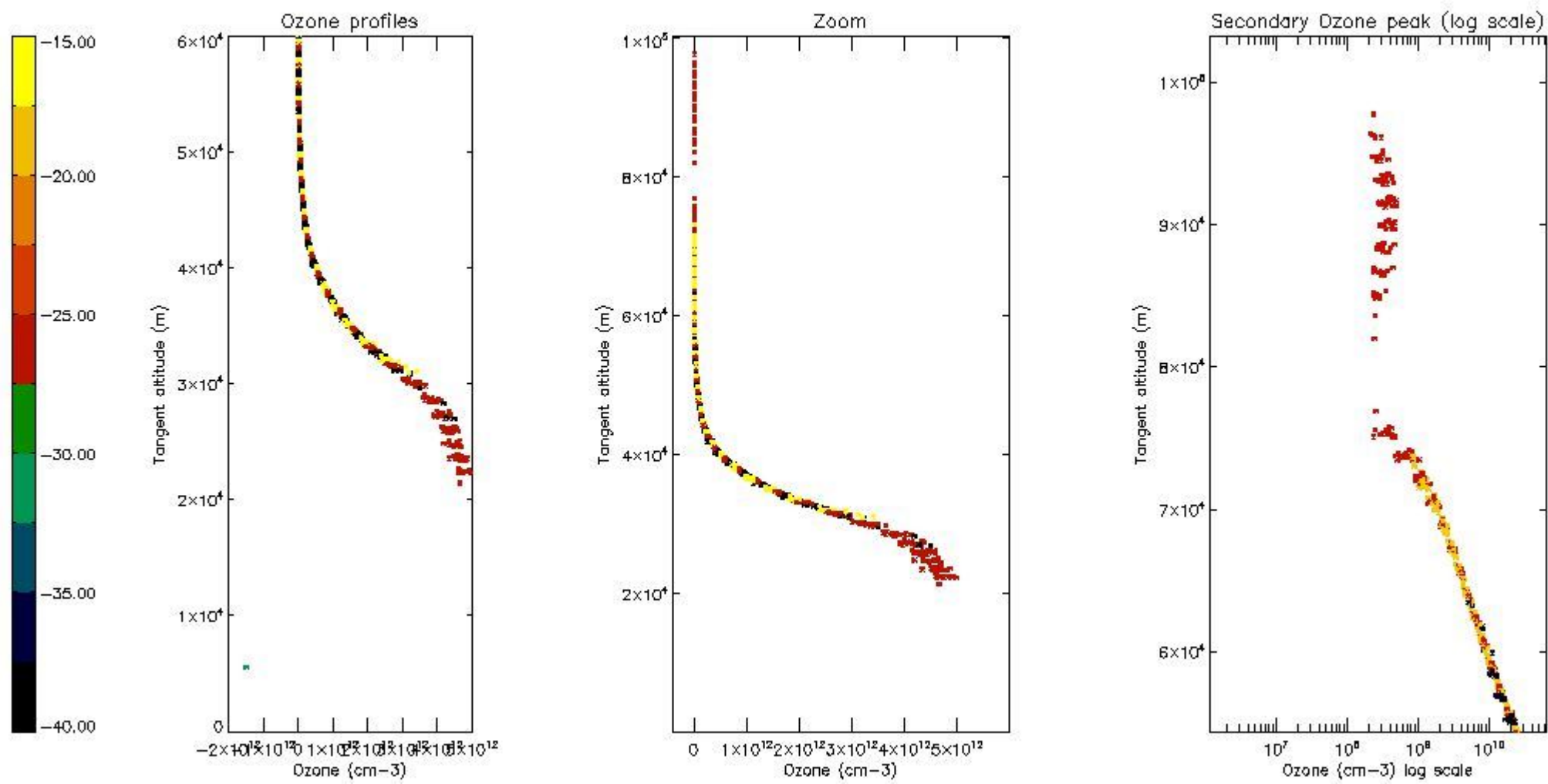
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

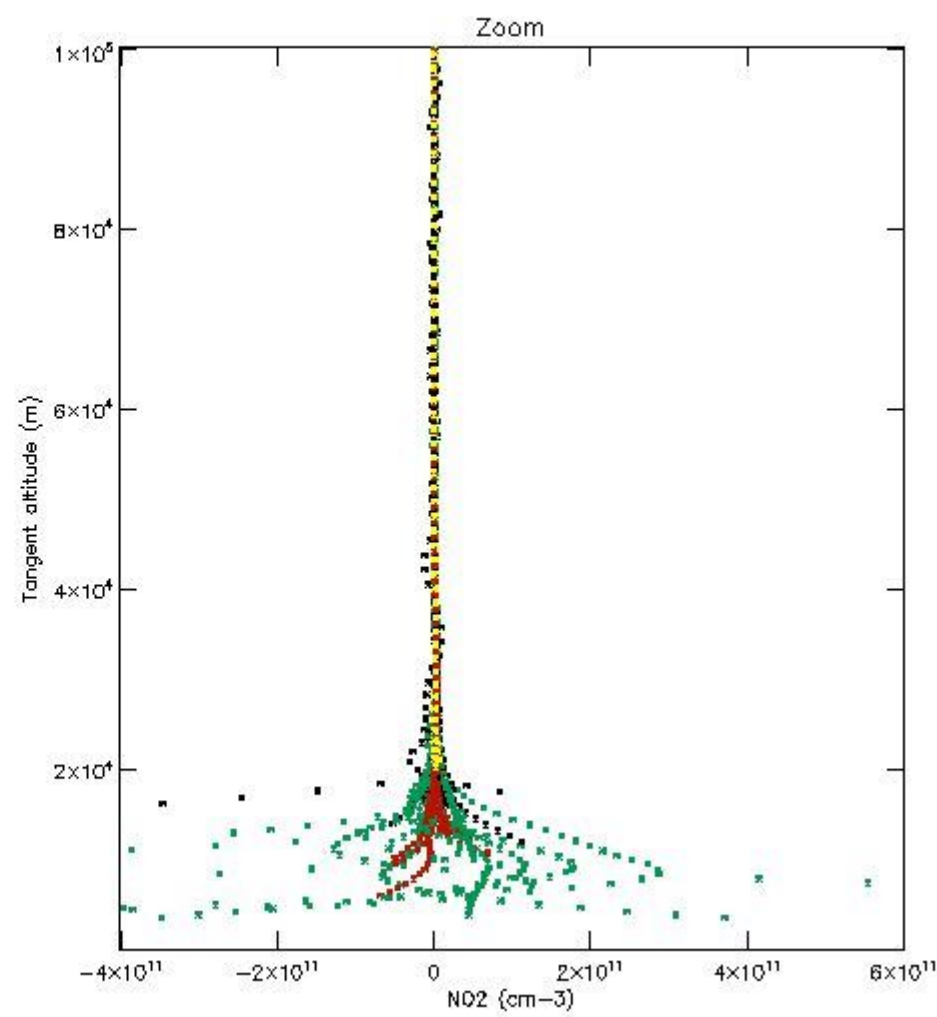
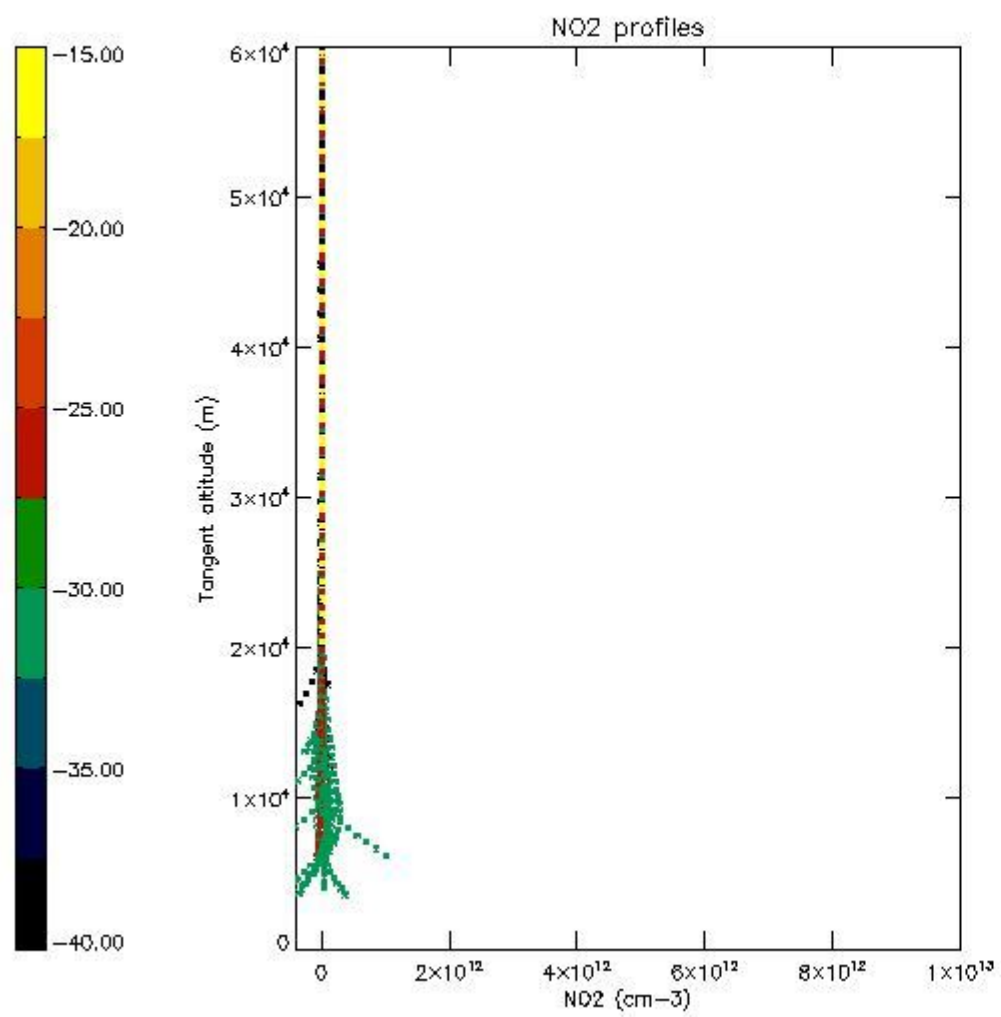
The colorbar represents the latitude.



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

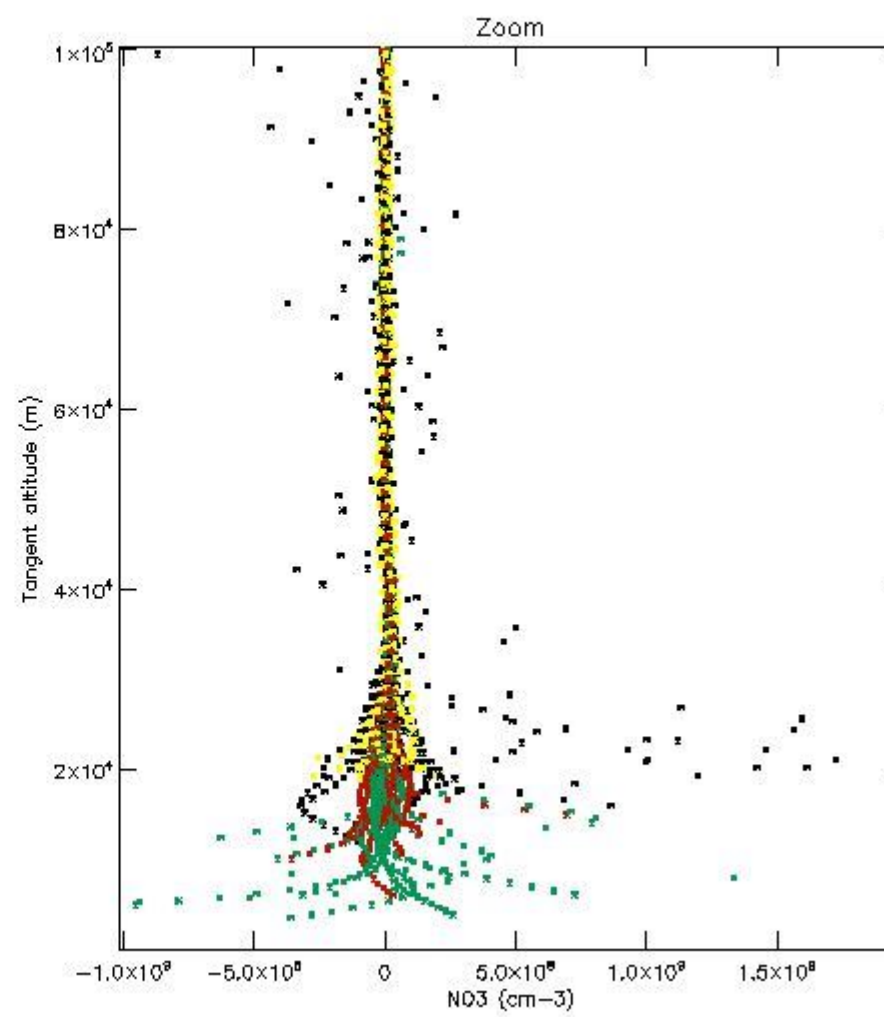
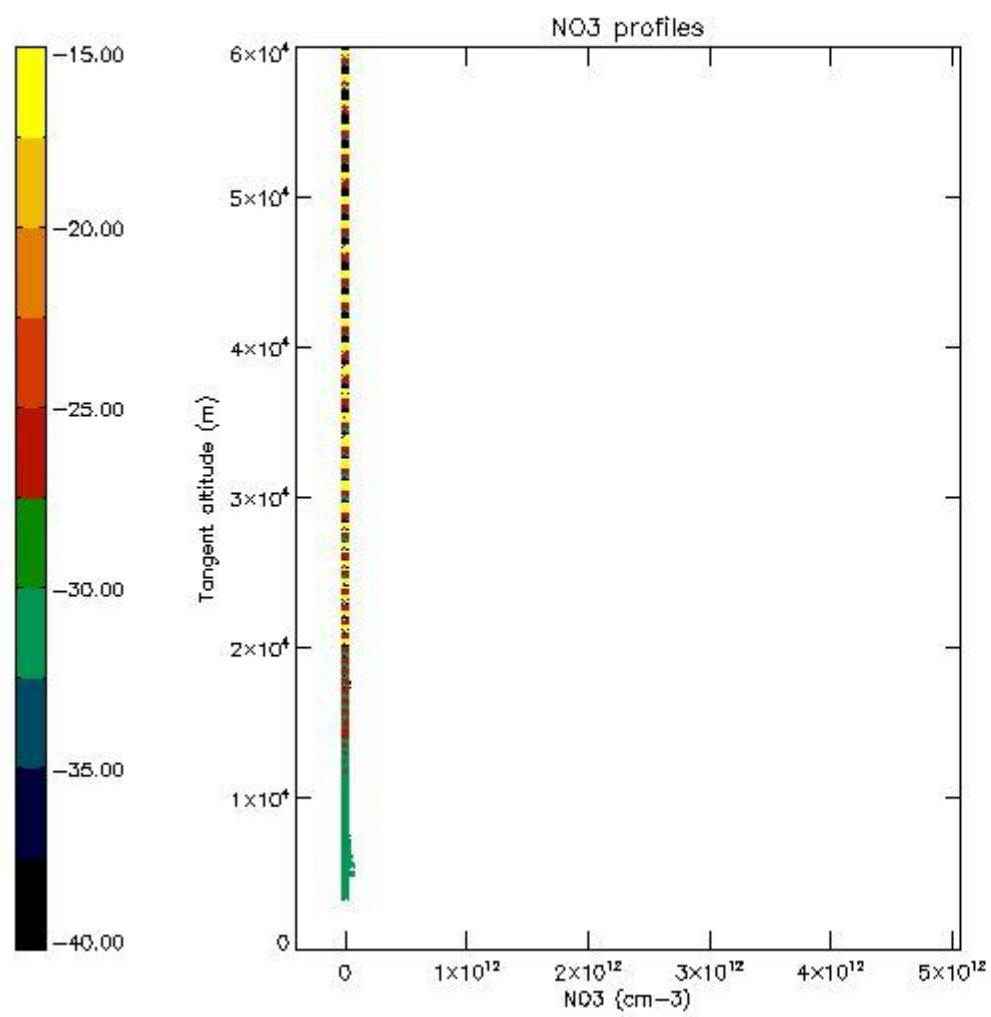
The colorbar represents the latitude.





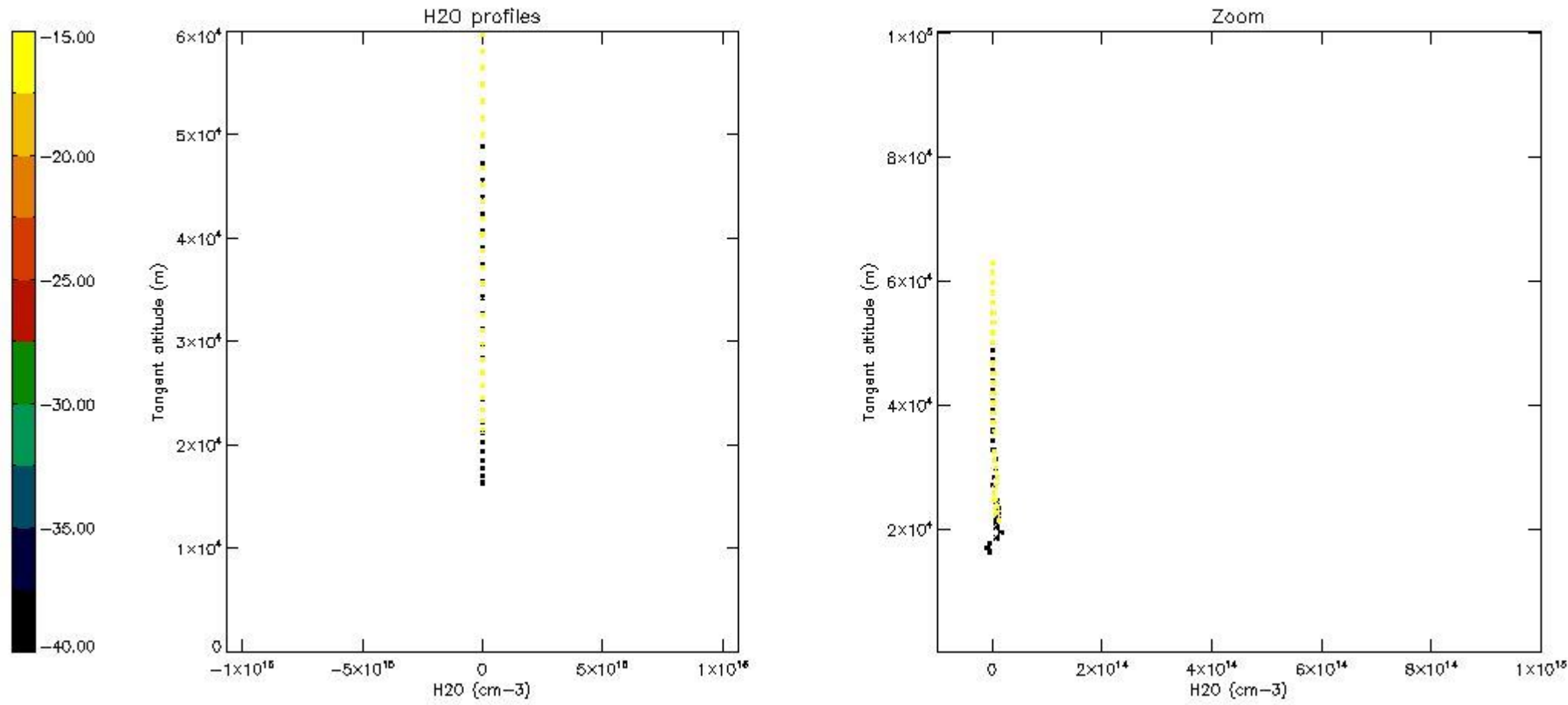
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	14-NOV-2007 00:04:40
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	14-NOV-2007 00:04:40
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	14-NOV-2007 00:04:40

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#### [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](#)

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#### [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.

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Time of report generation	23APR2013 11:17:32
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Start time of products	14-11-2007 (14NOV2007 00:00:00)
Stop time of products	15-11-2007 (15NOV2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	268
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__2PRFIN20071114_000440_000000392063_00216_29829_1299.N1	14-NOV-2007 00:04:40	Dark	38.500	64	Gam Cen	2.2000	10600.	77	29829	No
2	GOM_NL__2PRFIN20071114_000657_000000392063_00216_29829_1300.N1	14-NOV-2007 00:06:57	Dark	38.500	26	Gam Cru	1.6240	2900.0	77	29829	No
3	GOM_NL__2PRFIN20071114_000835_000000402063_00216_29829_1301.N1	14-NOV-2007 00:08:35	Dark	39.500	12	Alp1Cru	0.77500	30000.	79	29829	No
4	GOM_NL__2PRFIN20071114_001033_000000372063_00217_29830_1302.N1	14-NOV-2007 00:10:33	Dark	36.500	124	The Car	2.7640	30000.	73	29830	No
5	GOM_NL__2PRFIN20071114_002845_000000392063_00217_29830_1303.N1	14-NOV-2007 00:28:45	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29830	No
6	GOM_NL__2PRFIN20071114_004634_000000372063_00217_29830_1304.N1	14-NOV-2007 00:46:34	Bright	37.000	105	6Bet Ari	2.6450	8900.0	74	29830	No
7	GOM_NL__2PRFIN20071114_005037_000000382063_00217_29830_1305.N1	14-NOV-2007 00:50:37	Bright	37.500	173	4Bet Tri	3.0040	8900.0	75	29830	No
8	GOM_NL__2PRFIN20071114_005241_000000372063_00217_29830_1306.N1	14-NOV-2007 00:52:41	Bright	36.500	73	57Gam1And	2.2600	13100.	73	29830	No
9	GOM_NL__2PRFIN20071114_005655_000000382063_00217_29830_1307.N1	14-NOV-2007 00:56:55	Bright	37.500	68	18Alp Cas	2.2250	4500.0	75	29830	No
10	GOM_NL__2PRFIN20071114_010554_000000332063_00217_29830_1308.N1	14-NOV-2007 01:05:54	Bright	33.000	49	1Alp UMi	1.9900	6300.0	66	29830	No
11	GOM_NL__2PRFIN20071114_011012_000000372063_00217_29830_1309.N1	14-NOV-2007 01:10:12	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	29830	No
12	GOM_NL__2PRFIN20071114_011552_000000372063_00217_29830_1310.N1	14-NOV-2007 01:15:52	Bright	37.000	32	77Eps UMa	1.7630	11000.	74	29830	No
13	GOM_NL__2PRFIN20071114_011728_000000352063_00217_29830_1311.N1	14-NOV-2007 01:17:28	Bright	34.500	39	85Eta UMa	1.8540	24000.	69	29830	No
14	GOM_NL__2PRFIN20071114_012057_000000362063_00217_29830_1312.N1	14-NOV-2007 01:20:57	Bright	35.500	152	12Alp2CVn	2.8900	11000.	71	29830	No
15	GOM_NL__2PRFIN20071114_012559_000000332063_00217_29830_1313.N1	14-NOV-2007 01:25:59	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29830	No
16	GOM_NL__2PRFIN20071114_012838_000000332063_00217_29830_1314.N1	14-NOV-2007 01:28:38	Bright	33.000	138	47Eps Vir	2.8280	4700.0	66	29830	No
17	GOM_NL__2PRFIN20071114_013225_000000332063_00217_29830_1315.N1	14-NOV-2007 01:32:25	Bright	33.000	121	29Gam Vir	2.7400	7200.0	66	29830	No
18	GOM_NL__2PRFIN20071114_013854_000000402063_00217_29830_1316.N1	14-NOV-2007 01:38:54	Twilight	39.500	171	2Eps Crv	3.0010	4250.0	79	29830	No
19	GOM_NL__2PRFIN20071114_014516_000000382063_00217_29830_1317.N1	14-NOV-2007 01:45:16	Dark	38.000	64	Gam Cen	2.2000	10600.	76	29830	No
20	GOM_NL__2PRFIN20071114_014733_000000422063_00217_29830_1318.N1	14-NOV-2007 01:47:33	Dark	42.000	26	Gam Cru	1.6240	2900.0	84	29830	No
21	GOM_NL__2PRFIN20071114_014911_000000392063_00217_29830_1319.N1	14-NOV-2007 01:49:11	Dark	39.000	12	Alp1Cru	0.77500	30000.	78	29830	No
22	GOM_NL__2PRFIN20071114_015109_000000362063_00218_29831_1311.N1	14-NOV-2007 01:51:09	Dark	36.000	124	The Car	2.7640	30000.	72	29831	No
23	GOM_NL__2PRFIN20071114_020921_000000382063_00218_29831_1312.N1	14-NOV-2007 02:09:21	Straylight	38.000	157	The1Eri	2.9060	9300.0	76	29831	No
24	GOM_NL__2PRFIN20071114_022710_000000372063_00218_29831_1313.N1	14-NOV-2007 02:27:10	Bright	37.000	105	6Bet Ari	2.6450	8900.0	74	29831	No
25	GOM_NL__2PRFIN20071114_023113_000000372063_00218_29831_1314.N1	14-NOV-2007 02:31:13	Bright	36.500	173	4Bet Tri	3.0040	8900.0	73	29831	No
26	GOM_NL__2PRFIN20071114_023317_000000532063_00218_29831_1315.N1	14-NOV-2007 02:33:17	Bright	53.000	73	57Gam1And	2.2600	13100.	106	29831	No
27	GOM_NL__2PRFIN20071114_023731_000000362063_00218_29831_1316.N1	14-NOV-2007 02:37:31	Bright	36.000	68	18Alp Cas	2.2250	4500.0	72	29831	No
28	GOM_NL__2PRFIN20071114_024630_000000322063_00218_29831_1317.N1	14-NOV-2007 02:46:30	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	29831	No
29	GOM_NL__2PRFIN20071114_025048_000000372063_00218_29831_1318.N1	14-NOV-2007 02:50:48	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	29831	No
30	GOM_NL__2PRFIN20071114_025628_000000372063_00218_29831_1319.N1	14-NOV-2007 02:56:28	Bright	36.500	32	77Eps UMa	1.7630	11000.	73	29831	No
31	GOM_NL__2PRFIN20071114_025804_000000352063_00218_29831_1320.N1	14-NOV-2007 02:58:04	Bright	35.000	39	85Eta UMa	1.8540	24000.	70	29831	No
32	GOM_NL__2PRFIN20071114_030133_000000532063_00218_29831_1321.N1	14-NOV-2007 03:01:33	Bright	53.000	152	12Alp2CVn	2.8900	11000.	106	29831	No
33	GOM_NL__2PRFIN20071114_030635_000000332063_00218_29831_1322.N1	14-NOV-2007 03:06:35	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29831	No
34	GOM_NL__2PRFIN20071114_030914_000000342063_00218_29831_1323.N1	14-NOV-2007 03:09:14	Bright	33.500	138	47Eps Vir	2.8280	4700.0	67	29831	No
35	GOM_NL__2PRFIN20071114_031301_000000352063_00218_29831_1324.N1	14-NOV-2007 03:13:01	Bright	34.500	121	29Gam Vir	2.7400	7200.0	69	29831	No
36	GOM_NL__2PRFIN20071114_031800_000000412063_00218_29831_1325.N1	14-NOV-2007 03:18:00	Tw_and_stray	41.000	100	4Gam Crv	2.5800	13100.	82	29831	No
37	GOM_NL__2PRFIN20071114_031931_000000442063_00218_29831_1326.N1	14-NOV-2007 03:19:31	Twilight	43.500	171	2Eps Crv	3.0010	4250.0	87	29831	No
38	GOM_NL__2PRFIN20071114_032552_000000362063_00218_29831_1327.N1	14-NOV-2007 03:25:52	Dark	36.000	64	Gam Cen	2.2000	10600.	72	29831	No
39	GOM_NL__2PRFIN20071114_032809_000000522063_00218_29831_1328.N1	14-NOV-2007 03:28:09	Dark	51.500	26	Gam Cru	1.6240	2900.0	103	29831	No
40	GOM_NL__2PRFIN20071114_032947_000000482063_00218_29831_1329.N1	14-NOV-2007 03:29:47	Dark	48.000	12	Alp1Cru	0.77500	30000.	96	29831	No
41	GOM_NL__2PRFIN20071114_033145_000000372063_00219_29832_1319.N1	14-NOV-2007 03:31:45	Dark	37.000	124	The Car	2.7640	30000.	74	29832	No
42	GOM_NL__2PRFIN20071114_034957_000000392063_00219_29832_1320.N1	14-NOV-2007 03:49:57	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29832	No







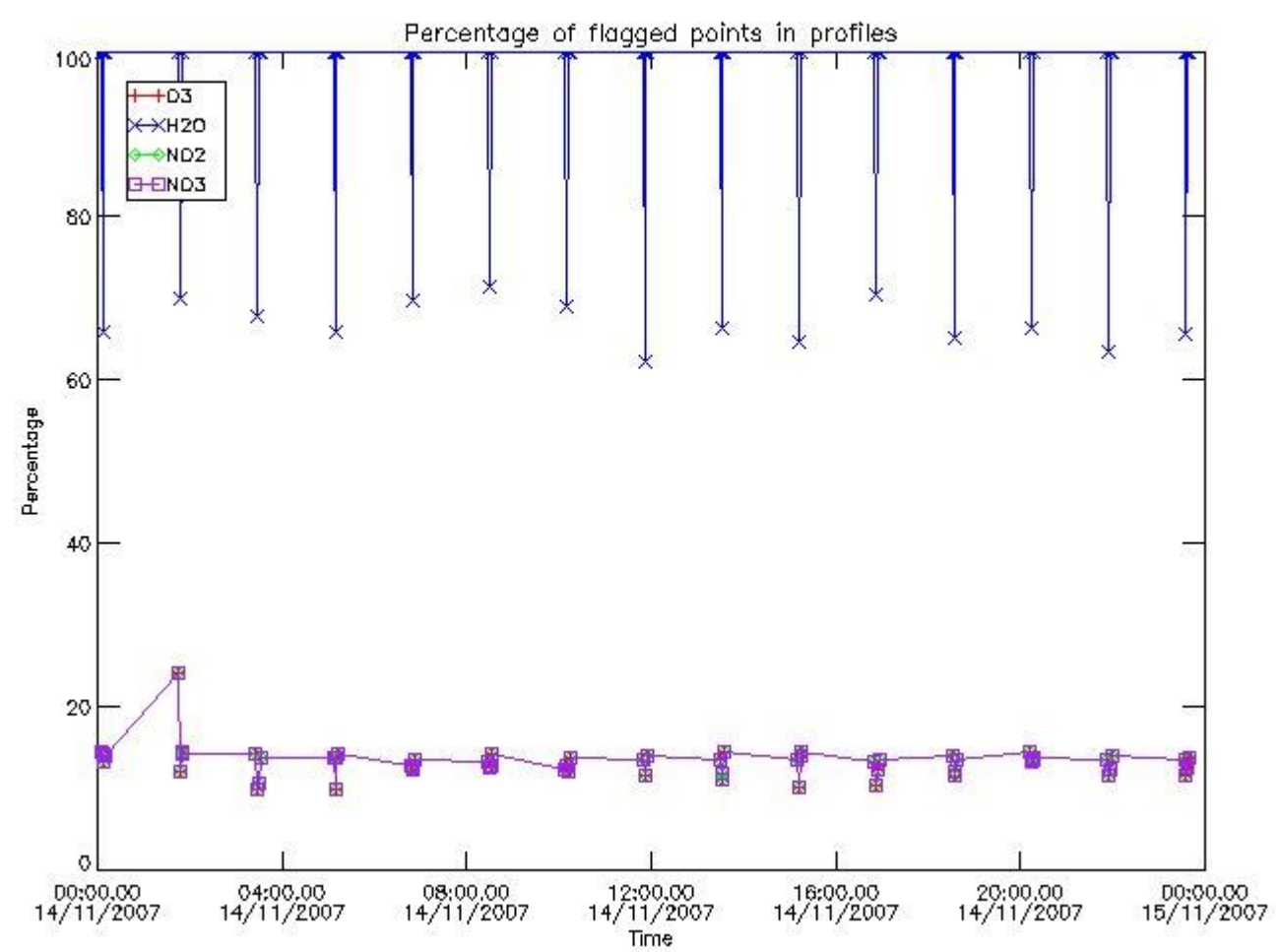


220	GOM_NL__2PRFIN20071114_194734_000000532063_00228_29841_1505.N1	14-NOV-2007 19:47:34	Bright	53.000	152	12Alp2CVn	2.8900	11000.	106	29841	No
221	GOM_NL__2PRFIN20071114_195236_000000332063_00228_29841_1506.N1	14-NOV-2007 19:52:36	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29841	No
222	GOM_NL__2PRFIN20071114_195516_000000332063_00228_29841_1507.N1	14-NOV-2007 19:55:16	Bright	33.000	138	47Eps Vir	2.8280	4700.0	66	29841	No
223	GOM_NL__2PRFIN20071114_195904_000000362063_00228_29841_1508.N1	14-NOV-2007 19:59:04	Bright	35.500	121	29Gam Vir	2.7400	7200.0	71	29841	No
224	GOM_NL__2PRFIN20071114_200404_000000422063_00228_29841_1509.N1	14-NOV-2007 20:04:04	Twilight	41.500	100	4Gam Crv	2.5800	13100.	83	29841	No
225	GOM_NL__2PRFIN20071114_200535_000000432063_00228_29841_1510.N1	14-NOV-2007 20:05:35	Twilight	42.500	171	2Eps Crv	3.0010	4250.0	85	29841	No
226	GOM_NL__2PRFIN20071114_201154_000000362063_00228_29841_1511.N1	14-NOV-2007 20:11:54	Dark	35.500	64	Gam Cen	2.2000	10600.	71	29841	No
227	GOM_NL__2PRFIN20071114_201411_000000502063_00228_29841_1512.N1	14-NOV-2007 20:14:11	Dark	49.500	26	Gam Cru	1.6240	2900.0	99	29841	No
228	GOM_NL__2PRFIN20071114_201548_000000382063_00228_29841_1513.N1	14-NOV-2007 20:15:48	Dark	38.000	12	Alp1Cru	0.77500	30000.	76	29841	No
229	GOM_NL__2PRFIN20071114_201748_000000372063_00229_29842_1509.N1	14-NOV-2007 20:17:48	Dark	37.000	124	The Car	2.7640	30000.	74	29842	No
230	GOM_NL__2PRFIN20071114_203559_000000392063_00229_29842_1510.N1	14-NOV-2007 20:35:59	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29842	No
231	GOM_NL__2PRFIN20071114_205346_000000352063_00229_29842_1511.N1	14-NOV-2007 20:53:46	Bright	35.000	105	6Bet Ari	2.6450	8900.0	70	29842	No
232	GOM_NL__2PRFIN20071114_205748_000000372063_00229_29842_1512.N1	14-NOV-2007 20:57:48	Bright	36.500	173	4Bet Tri	3.0040	8900.0	73	29842	No
233	GOM_NL__2PRFIN20071114_205952_000000372063_00229_29842_1513.N1	14-NOV-2007 20:59:52	Bright	36.500	73	57Gam1And	2.2600	13100.	73	29842	No
234	GOM_NL__2PRFIN20071114_210408_000000352063_00229_29842_1514.N1	14-NOV-2007 21:04:08	Bright	34.500	68	18Alp Cas	2.2250	4500.0	69	29842	No
235	GOM_NL__2PRFIN20071114_211305_000000362063_00229_29842_1515.N1	14-NOV-2007 21:13:05	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	29842	No
236	GOM_NL__2PRFIN20071114_211725_000000362063_00229_29842_1516.N1	14-NOV-2007 21:17:25	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	29842	No
237	GOM_NL__2PRFIN20071114_212304_000000372063_00229_29842_1517.N1	14-NOV-2007 21:23:04	Bright	36.500	32	77Eps UMa	1.7630	11000.	73	29842	No
238	GOM_NL__2PRFIN20071114_212441_000000362063_00229_29842_1518.N1	14-NOV-2007 21:24:41	Bright	36.000	39	85Eta UMa	1.8540	24000.	72	29842	No
239	GOM_NL__2PRFIN20071114_212810_000000362063_00229_29842_1519.N1	14-NOV-2007 21:28:10	Bright	36.000	152	12Alp2CVn	2.8900	11000.	72	29842	No
240	GOM_NL__2PRFIN20071114_213312_000000332063_00229_29842_1520.N1	14-NOV-2007 21:33:12	Bright	32.500	111	8Eta Boo	2.6800	6000.0	65	29842	No
241	GOM_NL__2PRFIN20071114_213552_000000342063_00229_29842_1521.N1	14-NOV-2007 21:35:52	Bright	33.500	138	47Eps Vir	2.8280	4700.0	67	29842	No
242	GOM_NL__2PRFIN20071114_213940_000000352063_00229_29842_1522.N1	14-NOV-2007 21:39:40	Bright	34.500	121	29Gam Vir	2.7400	7200.0	69	29842	No
243	GOM_NL__2PRFIN20071114_214440_000000382063_00229_29842_1523.N1	14-NOV-2007 21:44:40	Twilight	38.000	100	4Gam Crv	2.5800	13100.	76	29842	No
244	GOM_NL__2PRFIN20071114_214611_000000402063_00229_29842_1524.N1	14-NOV-2007 21:46:11	Twilight	39.500	171	2Eps Crv	3.0010	4250.0	79	29842	No
245	GOM_NL__2PRFIN20071114_215230_000000382063_00229_29842_1525.N1	14-NOV-2007 21:52:30	Dark	37.500	64	Gam Cen	2.2000	10600.	75	29842	No
246	GOM_NL__2PRFIN20071114_215447_000000442063_00229_29842_1526.N1	14-NOV-2007 21:54:47	Dark	44.000	26	Gam Cru	1.6240	2900.0	88	29842	No
247	GOM_NL__2PRFIN20071114_215624_000000422063_00229_29842_1527.N1	14-NOV-2007 21:56:24	Dark	41.500	12	Alp1Cru	0.77500	30000.	83	29842	No
248	GOM_NL__2PRFIN20071114_215825_000000372063_00230_29843_1513.N1	14-NOV-2007 21:58:25	Dark	36.500	124	The Car	2.7640	30000.	73	29843	No
249	GOM_NL__2PRFIN20071114_221635_000000382063_00230_29843_1514.N1	14-NOV-2007 22:16:35	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	29843	No
250	GOM_NL__2PRFIN20071114_223422_000000362063_00230_29843_1515.N1	14-NOV-2007 22:34:22	Bright	35.500	105	6Bet Ari	2.6450	8900.0	71	29843	No
251	GOM_NL__2PRFIN20071114_223824_000000352063_00230_29843_1516.N1	14-NOV-2007 22:38:24	Bright	35.000	173	4Bet Tri	3.0040	8900.0	70	29843	No
252	GOM_NL__2PRFIN20071114_224028_000000362063_00230_29843_1517.N1	14-NOV-2007 22:40:28	Bright	36.000	73	57Gam1And	2.2600	13100.	72	29843	No
253	GOM_NL__2PRFIN20071114_224445_000000372063_00230_29843_1518.N1	14-NOV-2007 22:44:45	Bright	36.500	68	18Alp Cas	2.2250	4500.0	73	29843	No
254	GOM_NL__2PRFIN20071114_225341_000000362063_00230_29843_1519.N1	14-NOV-2007 22:53:41	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	29843	No
255	GOM_NL__2PRFIN20071114_225800_000000332063_00230_29843_1520.N1	14-NOV-2007 22:58:00	Bright	32.500	60	7Bet UMi	2.0810	3950.0	65	29843	No
256	GOM_NL__2PRFIN20071114_230340_000000372063_00230_29843_1521.N1	14-NOV-2007 23:03:40	Bright	37.000	32	77Eps UMa	1.7630	11000.	74	29843	No
257	GOM_NL__2PRFIN20071114_230516_000000342063_00230_29843_1522.N1	14-NOV-2007 23:05:16	Bright	34.000	39	85Eta UMa	1.8540	24000.	68	29843	No
258	GOM_NL__2PRFIN20071114_230846_000000342063_00230_29843_1523.N1	14-NOV-2007 23:08:46	Bright	34.000	152	12Alp2CVn	2.8900	11000.	68	29843	No
259	GOM_NL__2PRFIN20071114_231348_000000332063_00230_29843_1524.N1	14-NOV-2007 23:13:48	Bright	33.000	111	8Eta Boo	2.6800	6000.0	66	29843	No
260	GOM_NL__2PRFIN20071114_231628_000000342063_00230_29843_1525.N1	14-NOV-2007 23:16:28	Bright	33.500	138	47Eps Vir	2.8280	4700.0	67	29843	No
261	GOM_NL__2PRFIN20071114_232016_000000352063_00230_29843_1526.N1	14-NOV-2007 23:20:16	Bright	34.500	121	29Gam Vir	2.7400	7200.0	69	29843	No
262	GOM_NL__2PRFIN20071114_232516_000000392063_00230_29843_1527.N1	14-NOV-2007 23:25:16	Twilight	39.000	100	4Gam Crv	2.5800	13100.	78	29843	No
263	GOM_NL__2PRFIN20071114_232647_000000432063_00230_29843_1528.N1	14-NOV-2007 23:26:47	Twilight	42.500	171	2Eps Crv	3.0010	4250.0	85	29843	No
264	GOM_NL__2PRFIN20071114_233306_000000382063_00230_29843_1529.N1	14-NOV-2007 23:33:06	Dark	37.500	64	Gam Cen	2.2000	10600.	75	29843	No
265	GOM_NL__2PRFIN20071114_233523_000000492063_00230_29843_1530.N1	14-NOV-2007 23:35:23	Dark	48.500	26	Gam Cru	1.6240	2900.0	97	29843	No
266	GOM_NL__2PRFIN20071114_233700_000000412063_00230_29843_1531.N1	14-NOV-2007 23:37:00	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	29843	No
267	GOM_NL__2PRFIN20071114_233901_000000372063_00231_29844_1570.N1	14-NOV-2007 23:39:01	Dark	37.000	124	The Car	2.7640	30000.	74	29844	No
268	GOM_NL__2PRFIN20071114_235711_000000392063_00231_29844_1571.N1	14-NOV-2007 23:57:11	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	29844	No

### 3. Quality information per product

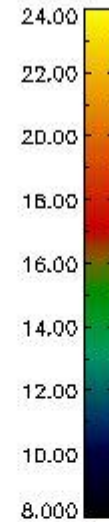
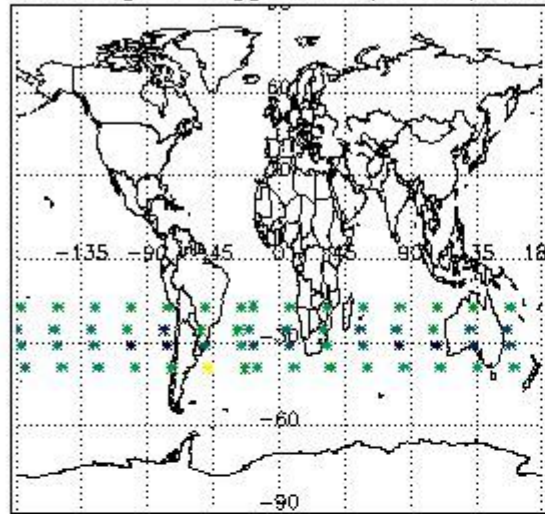
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

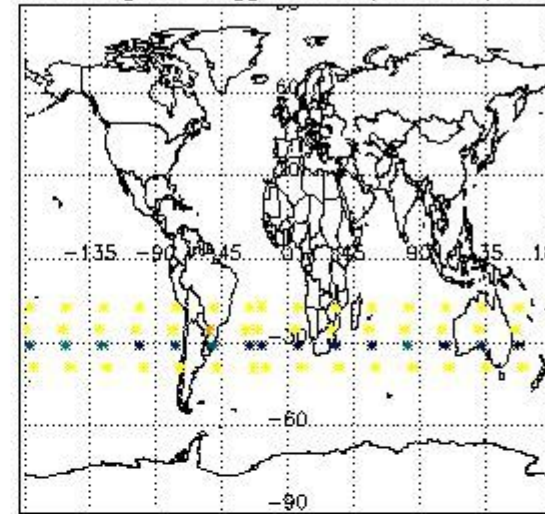


3.2 Plot quality information per product (world map)

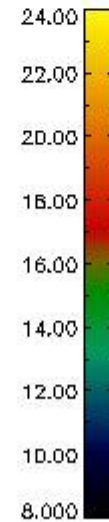
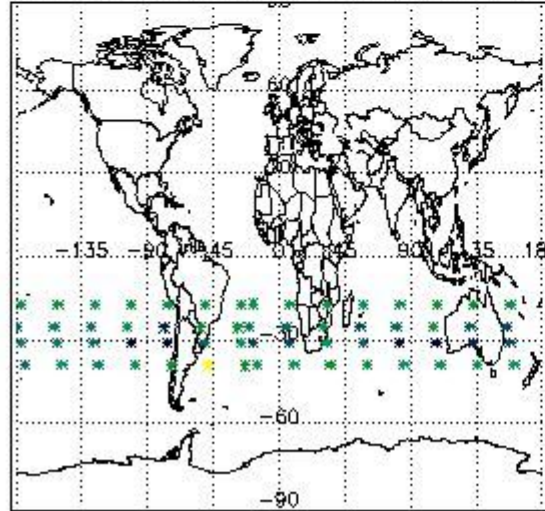
Percentage of flagged data per O3 profile



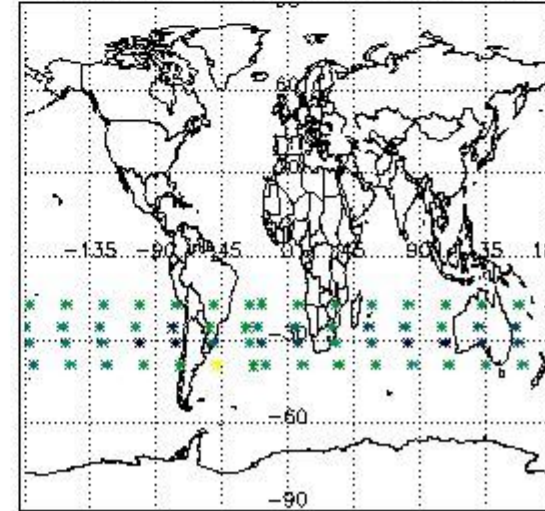
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

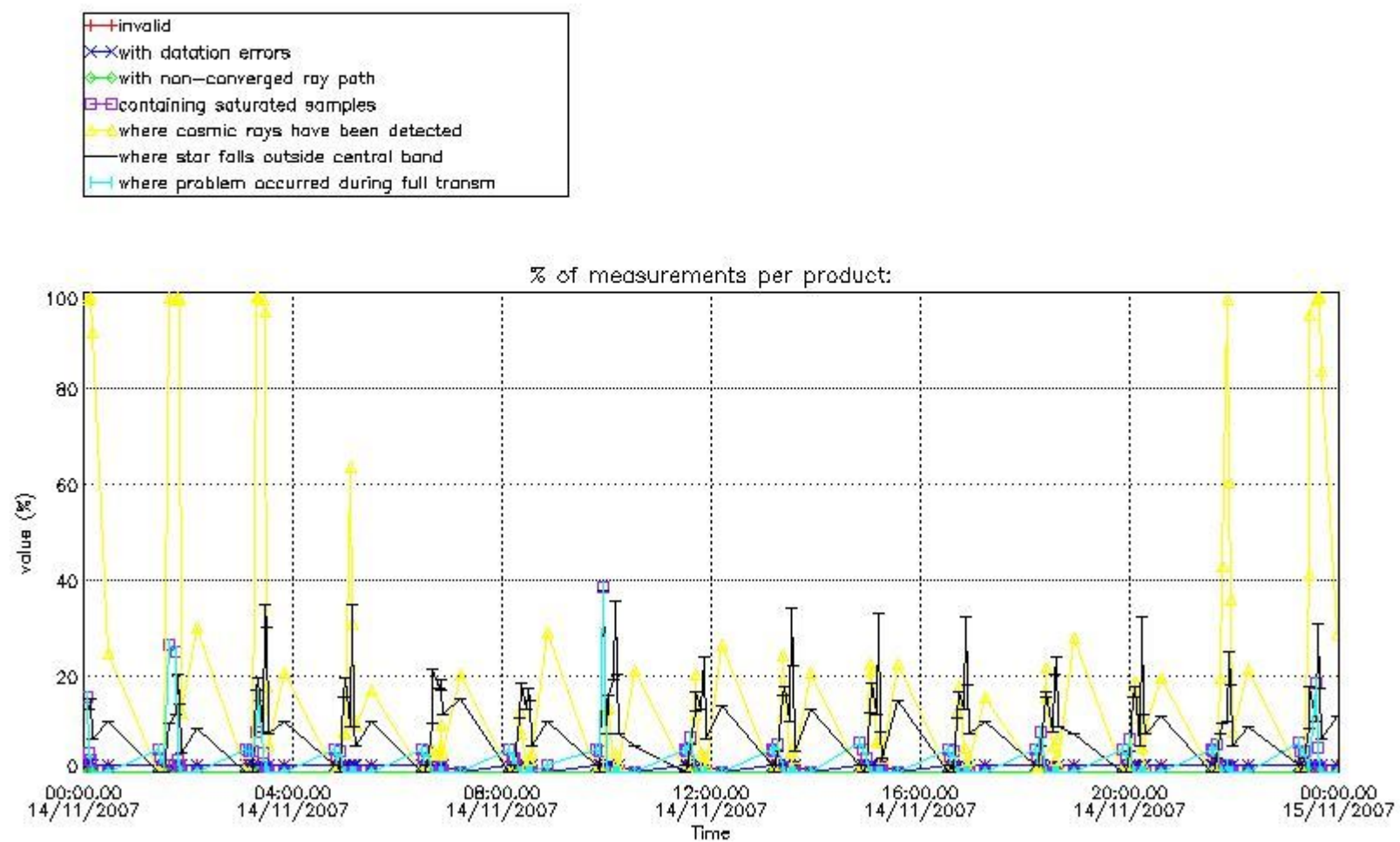


#### 4. Level 1 quality information per product

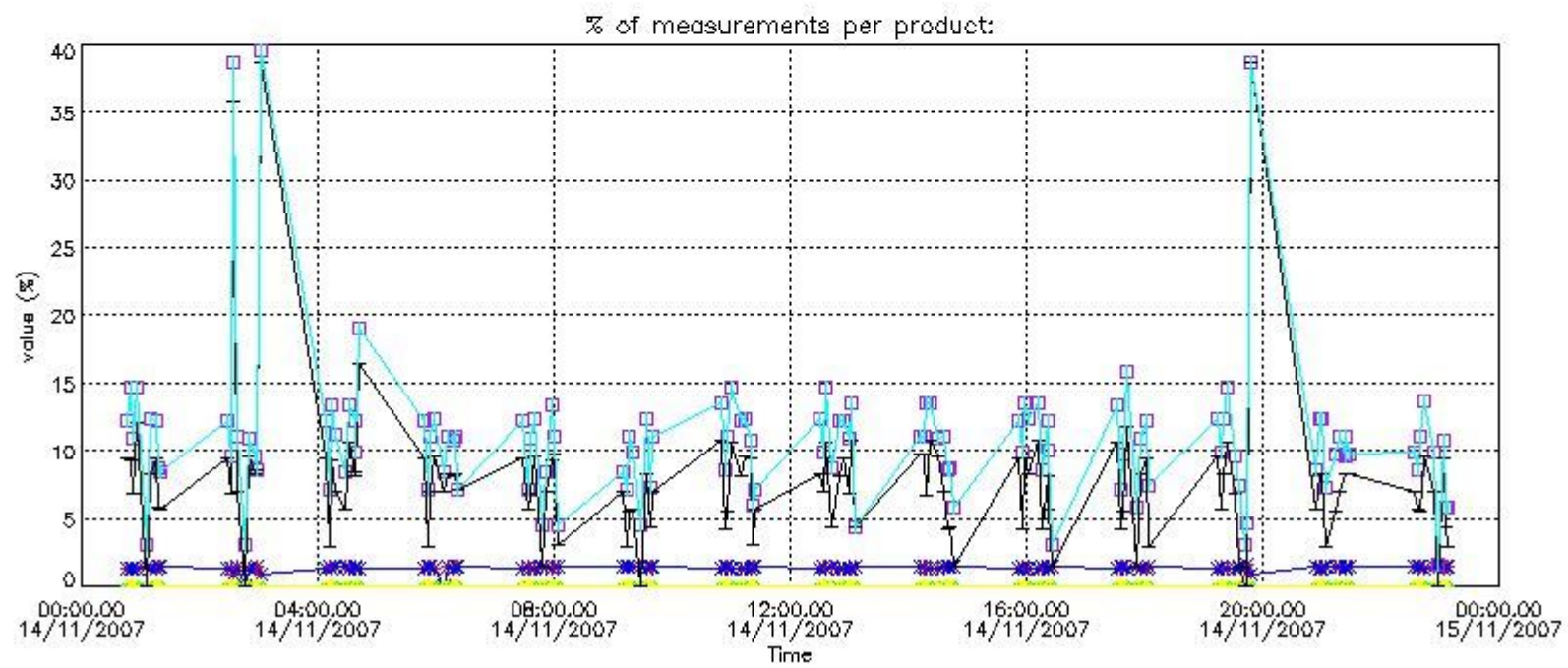
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

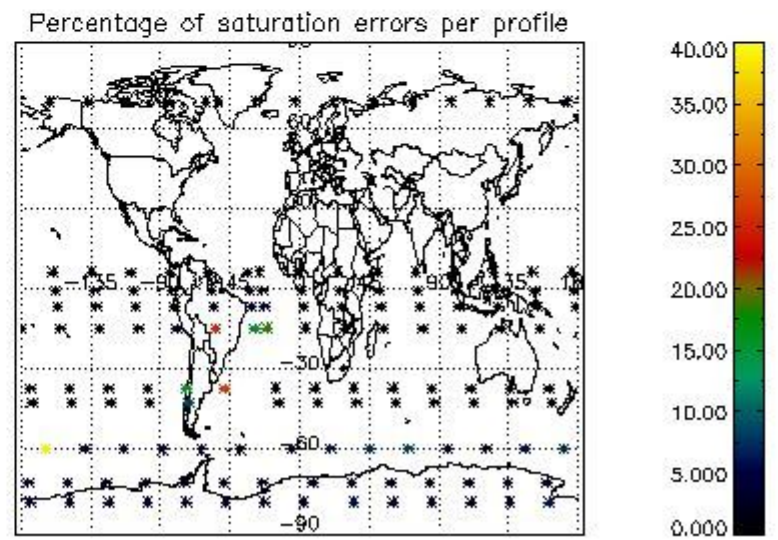
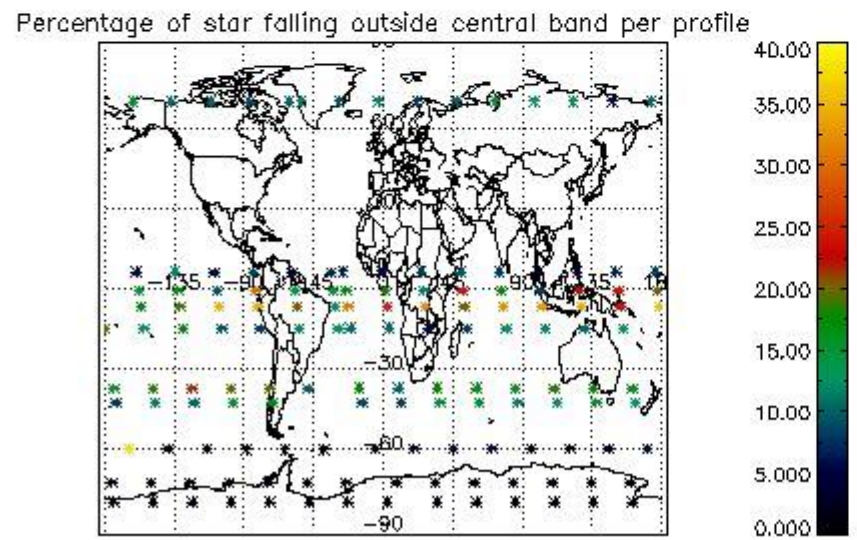
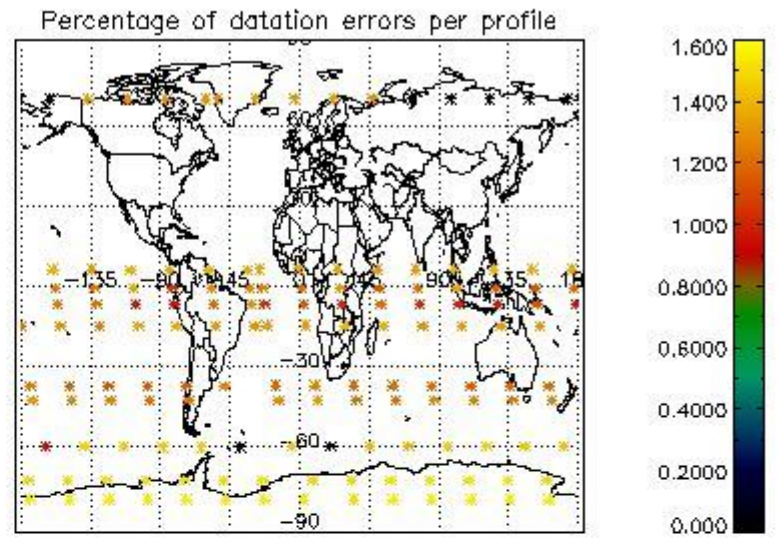
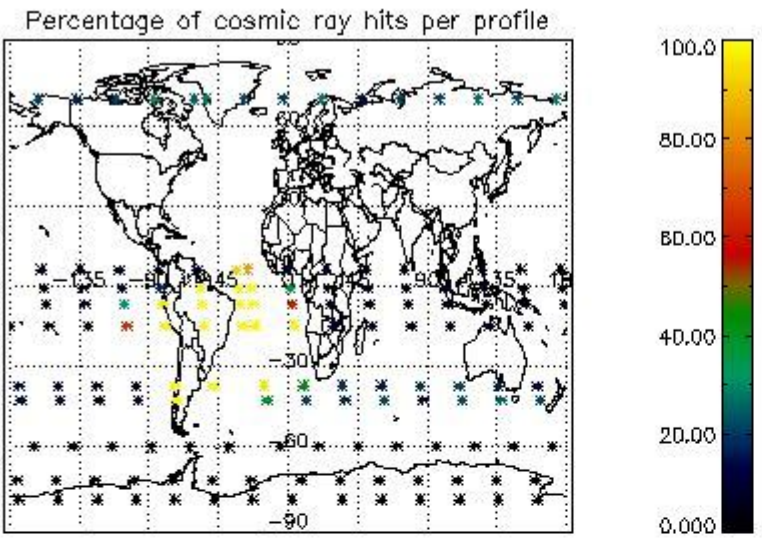


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

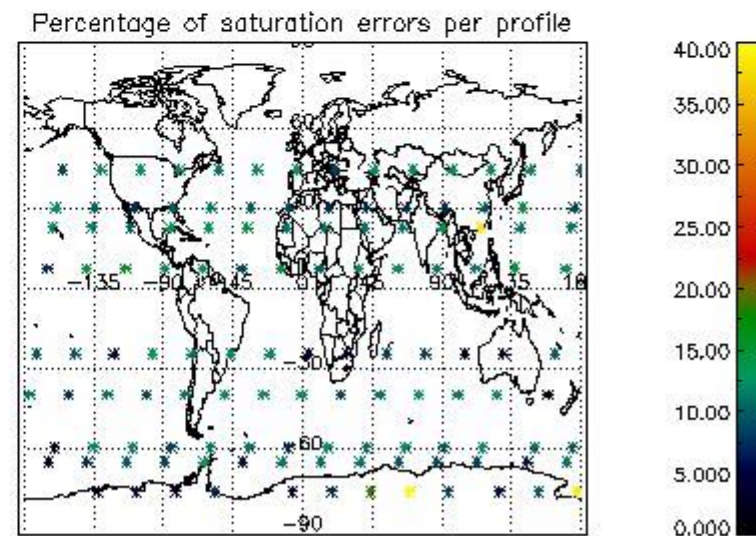
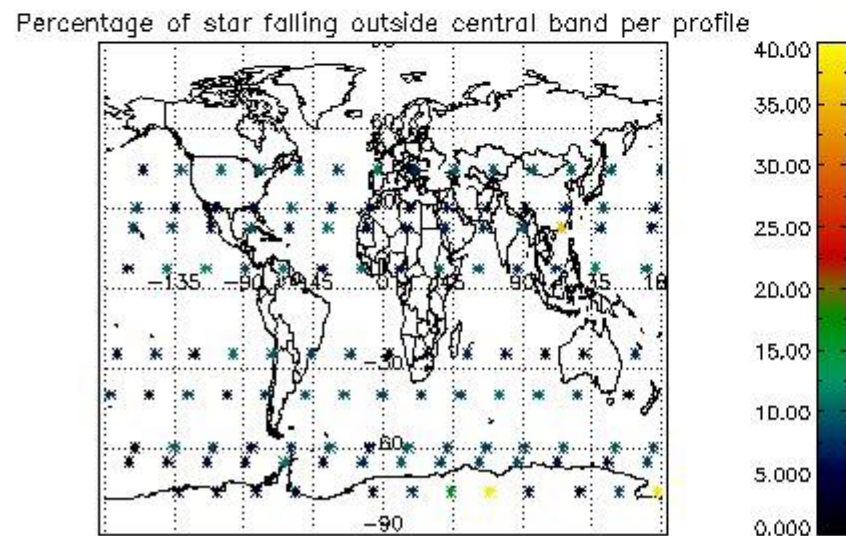
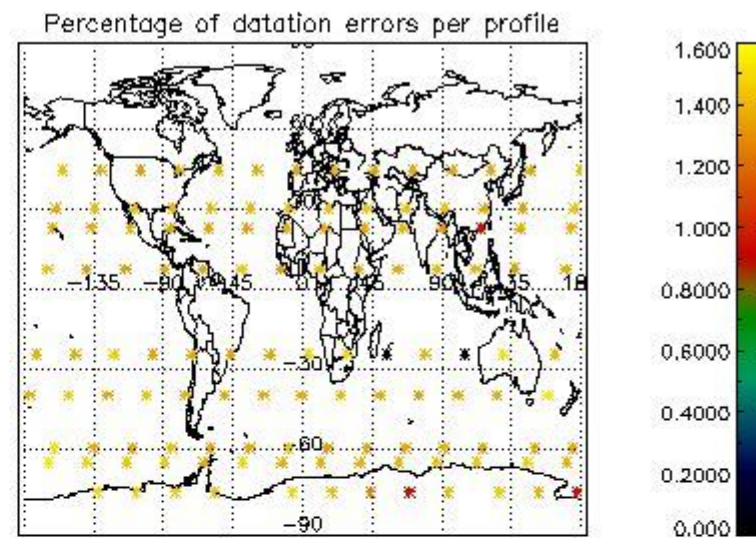
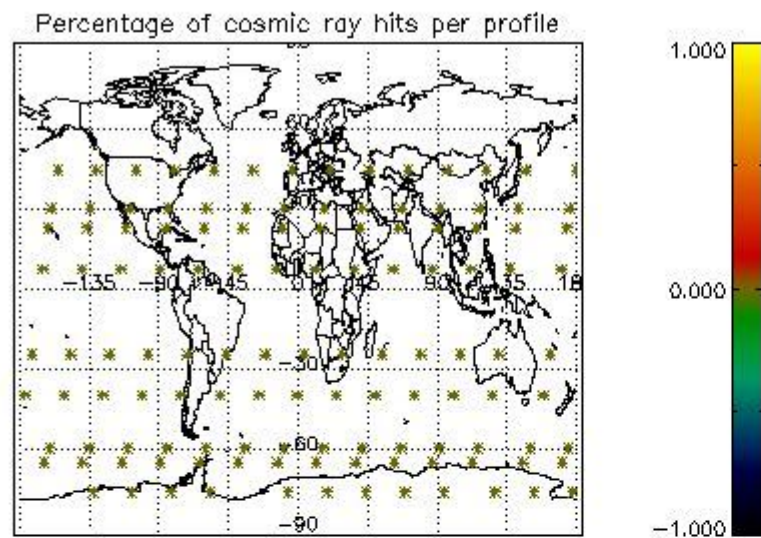


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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

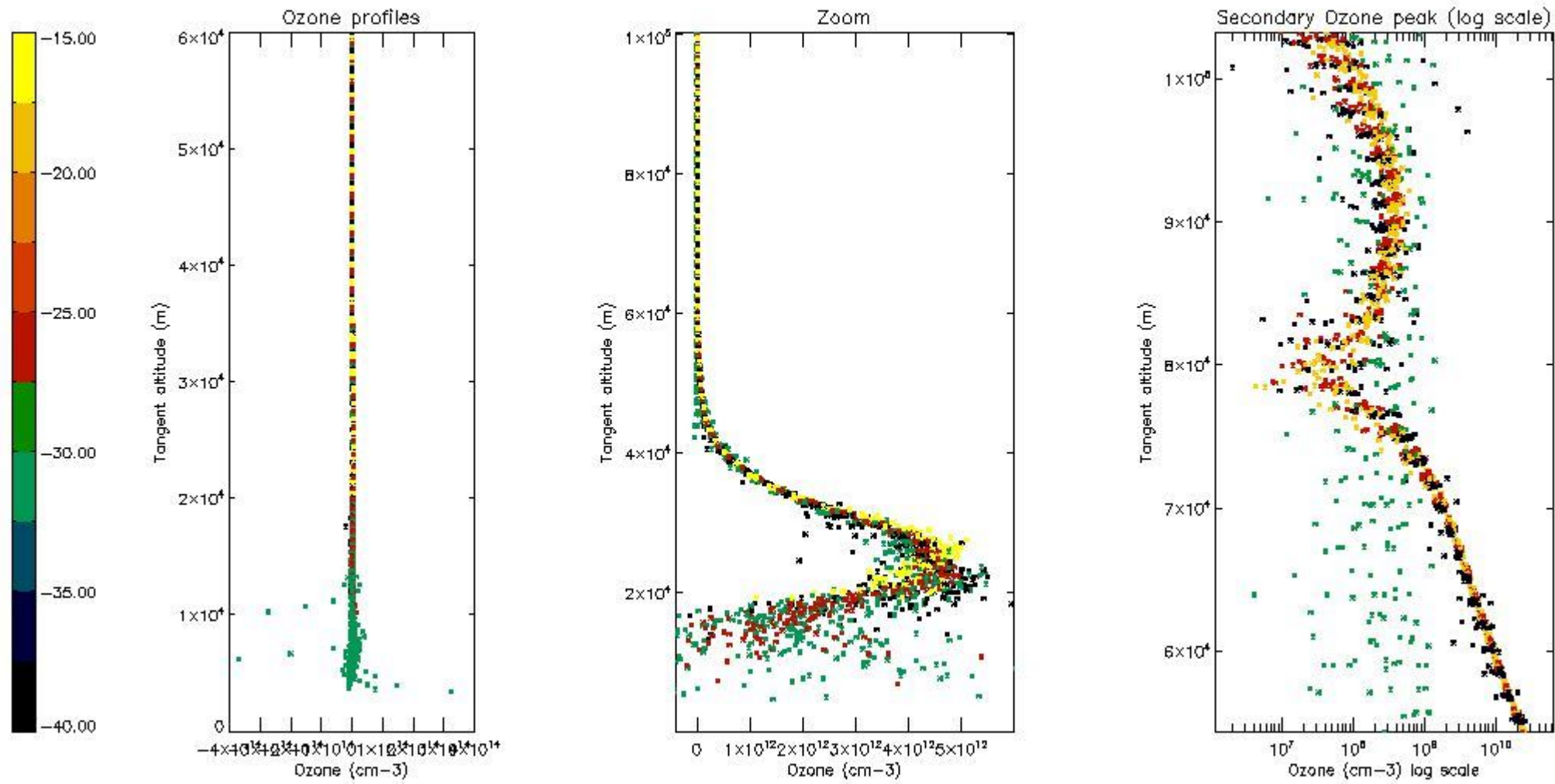
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	25
STD < 20	14

STD < 10	11
STD < 5	7

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

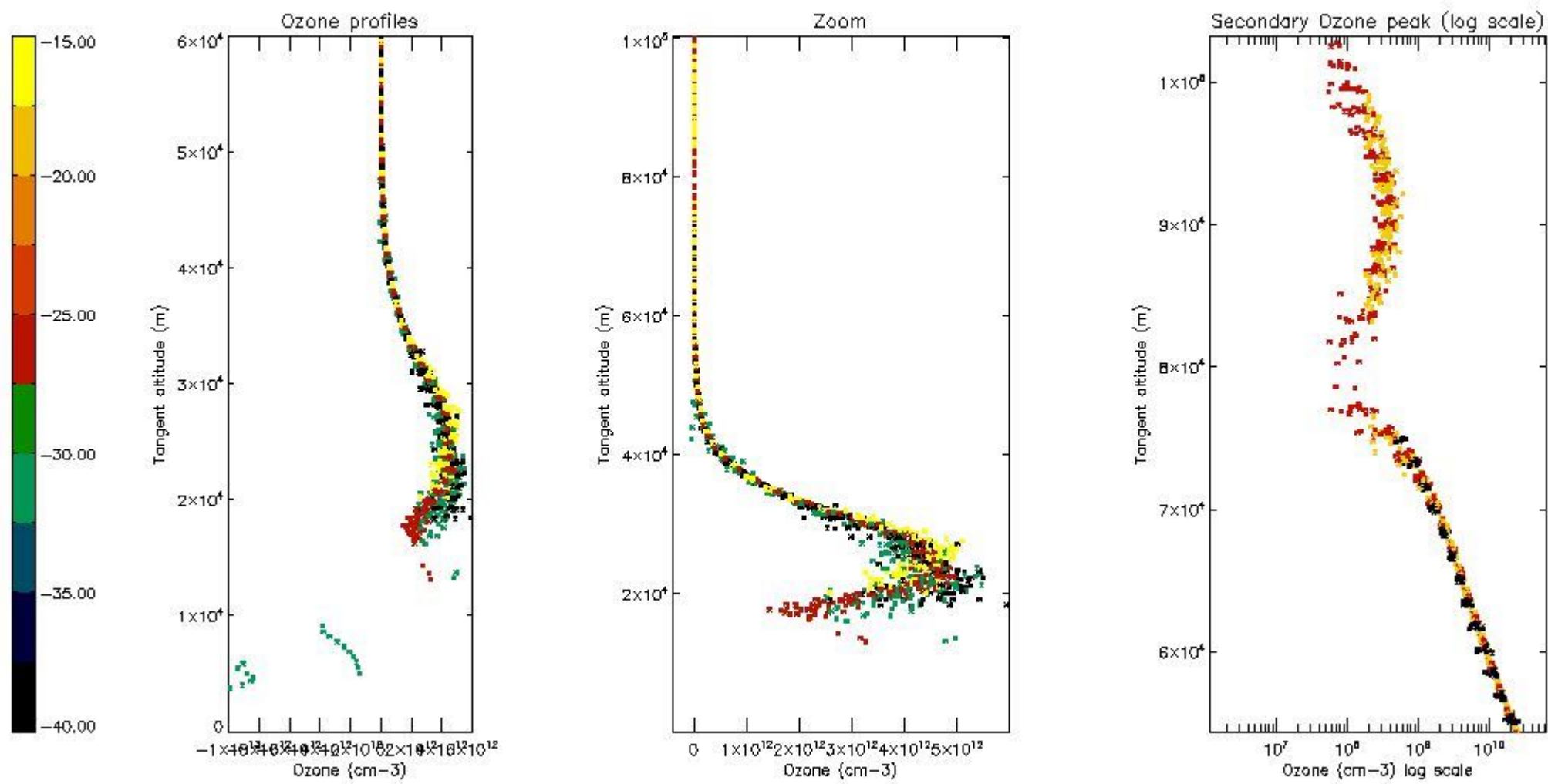
The colorbar represents the latitude.



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

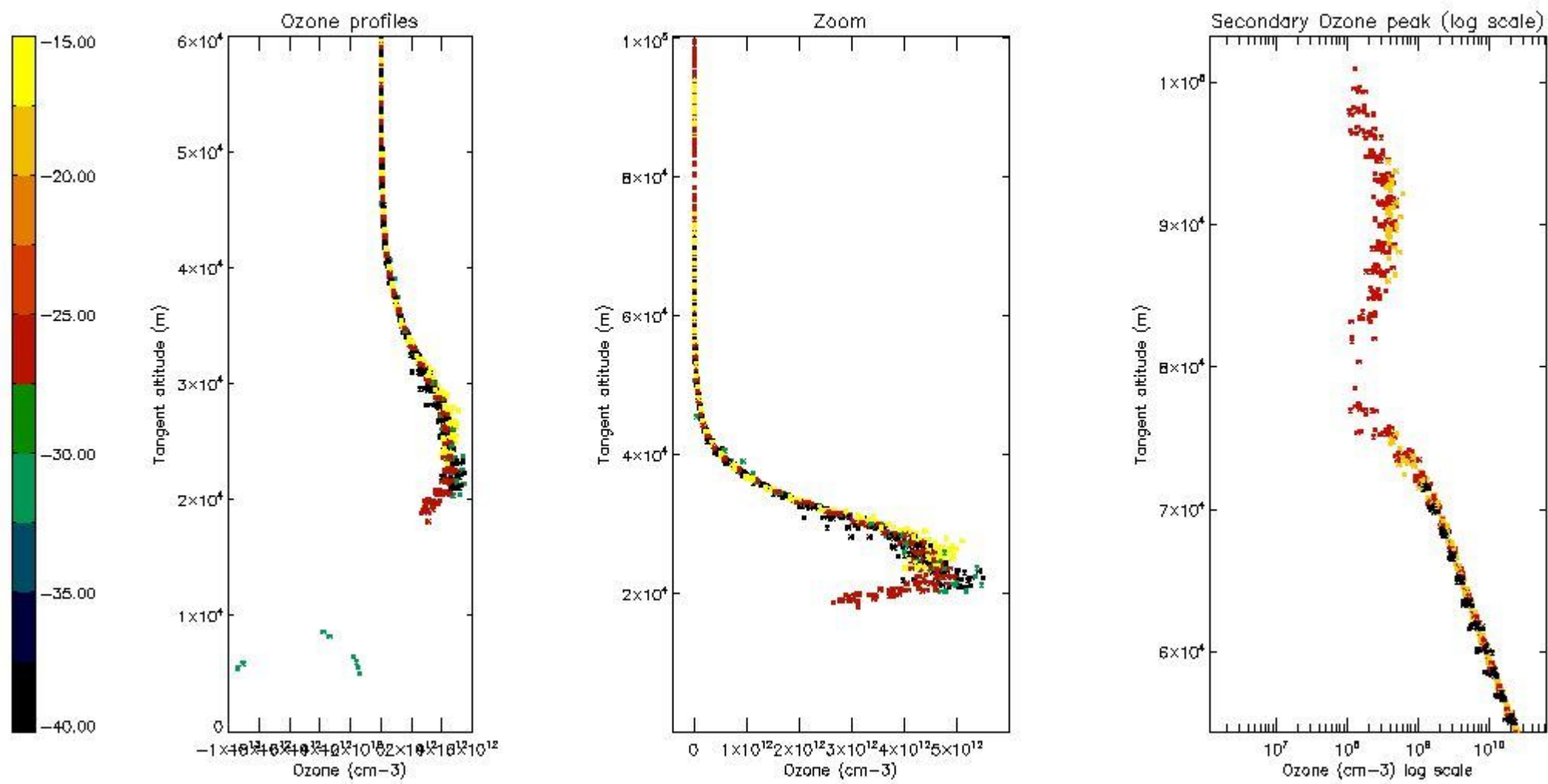
The colorbar represents the latitude.





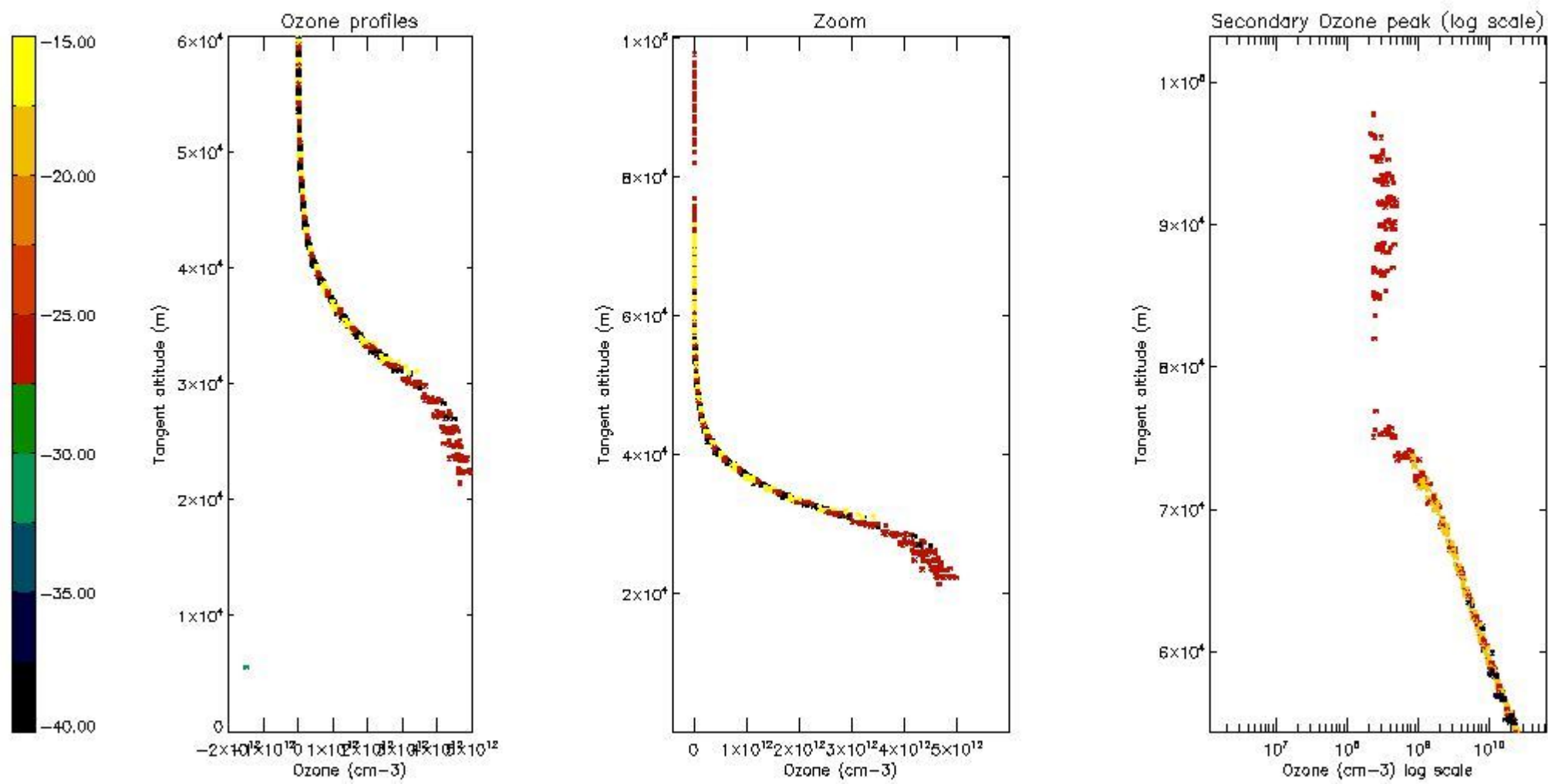
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



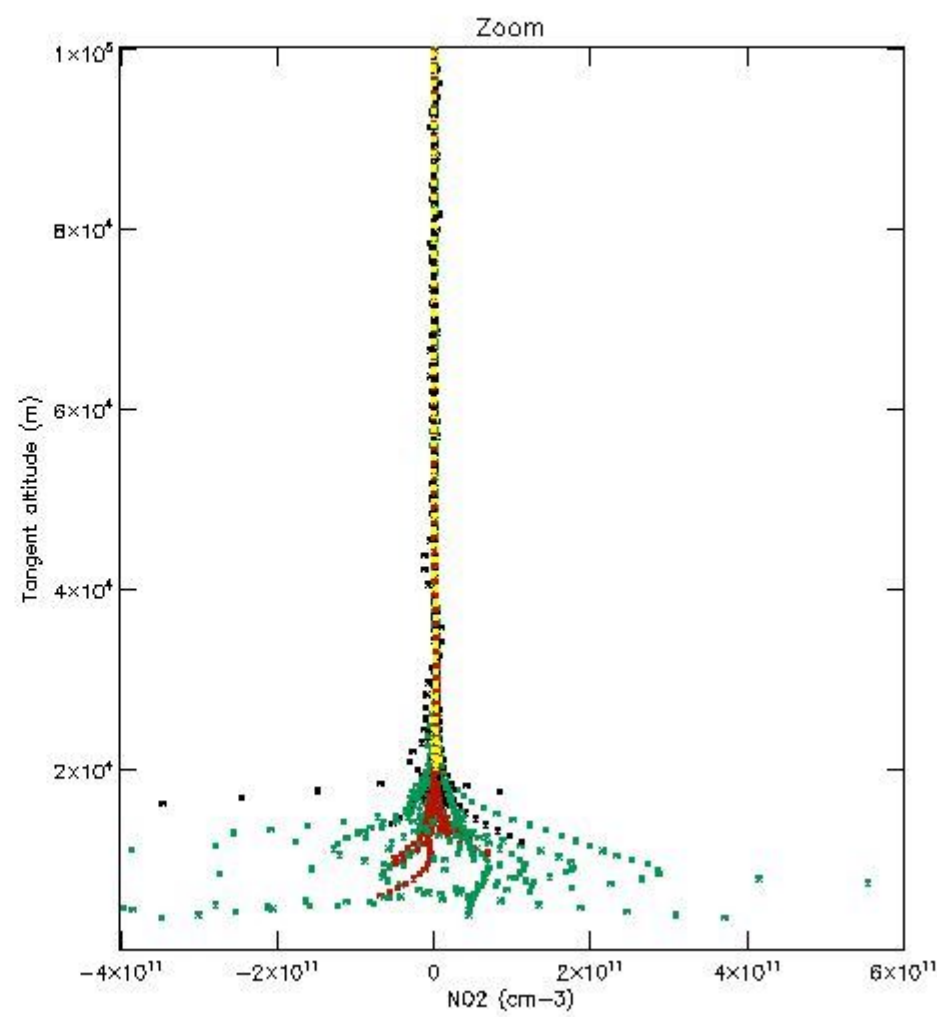
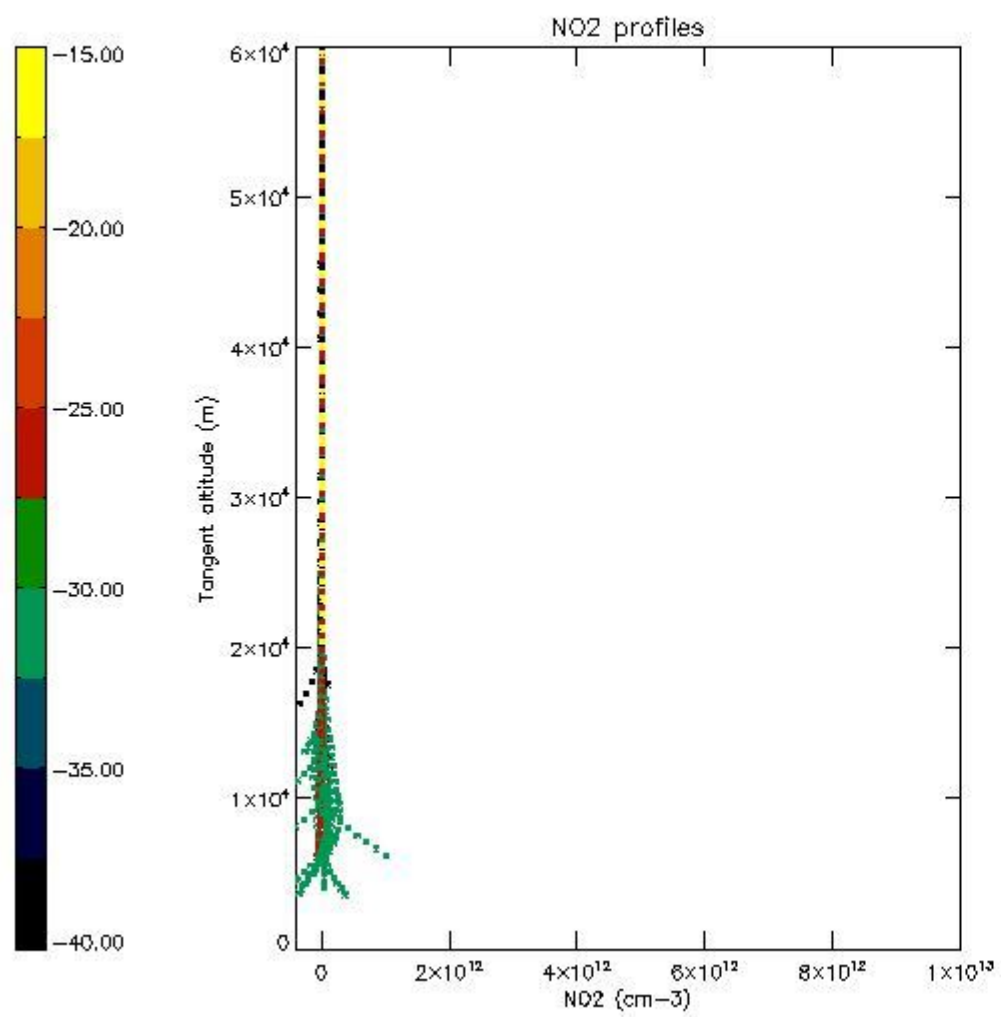
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



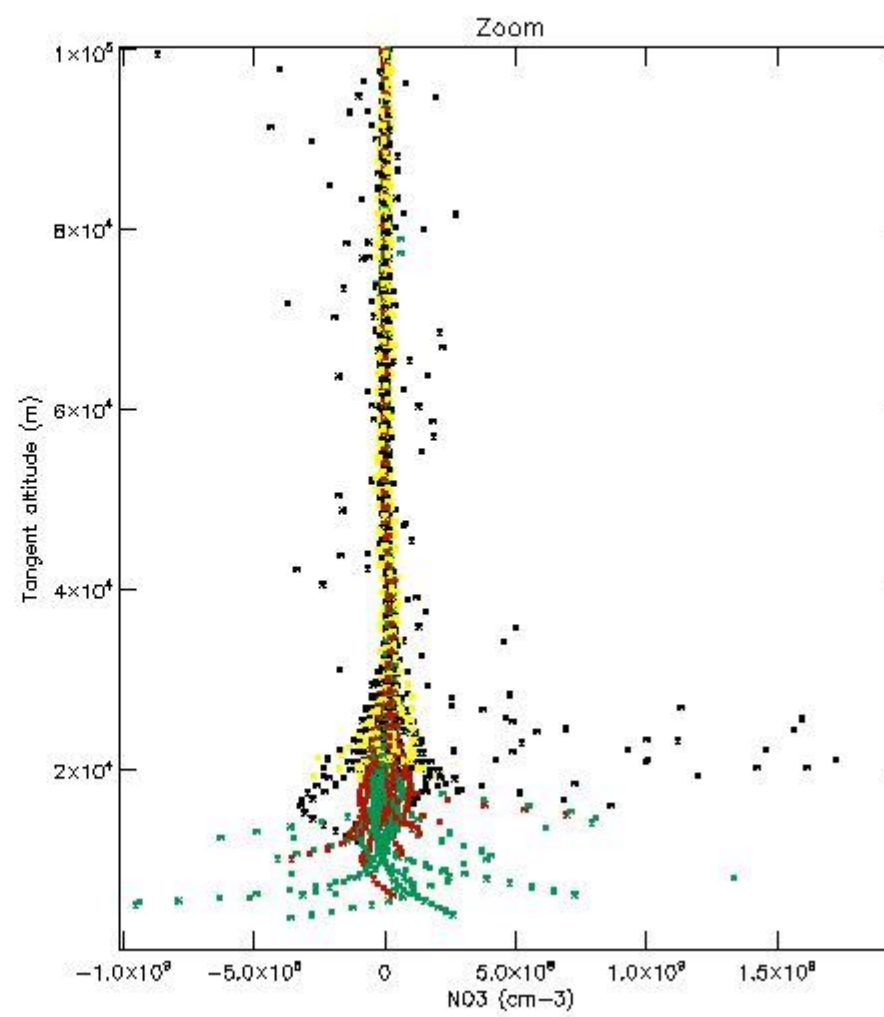
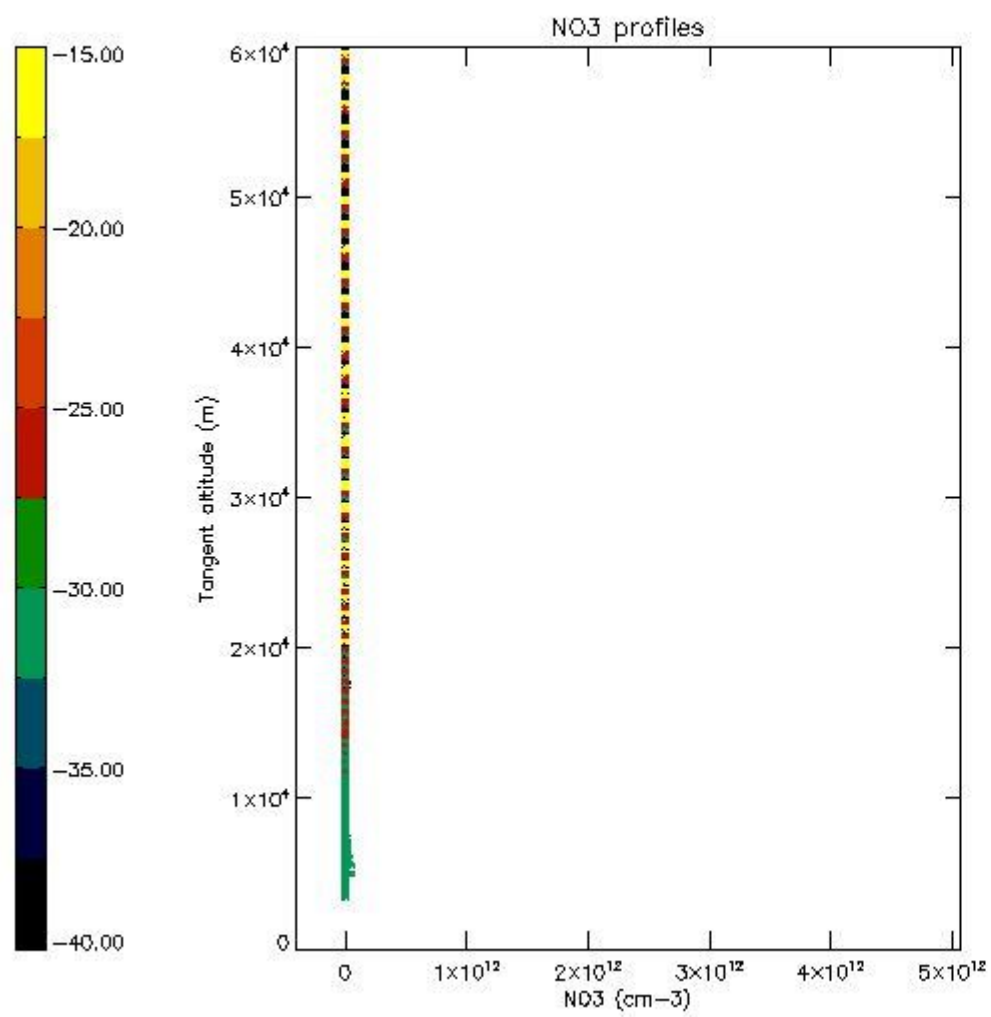
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



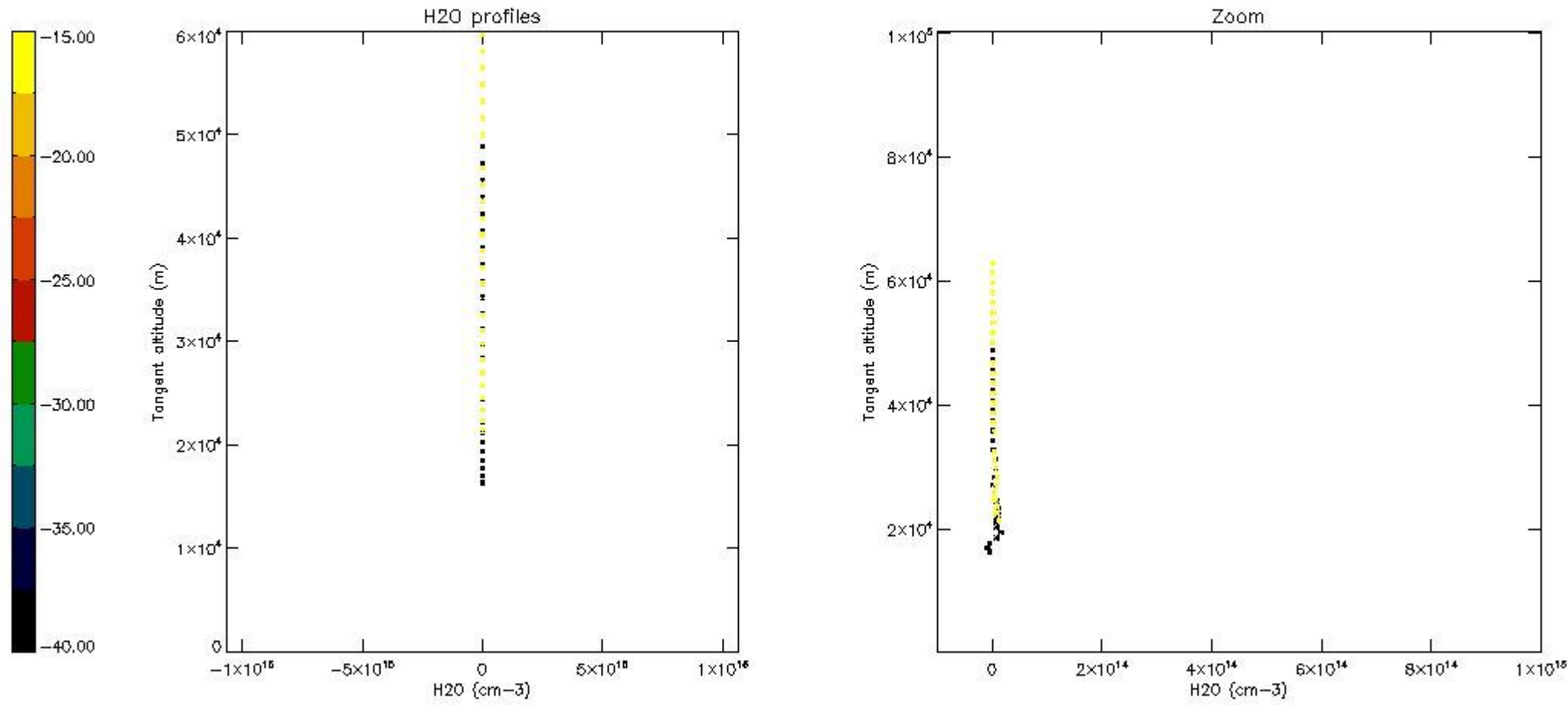
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)*

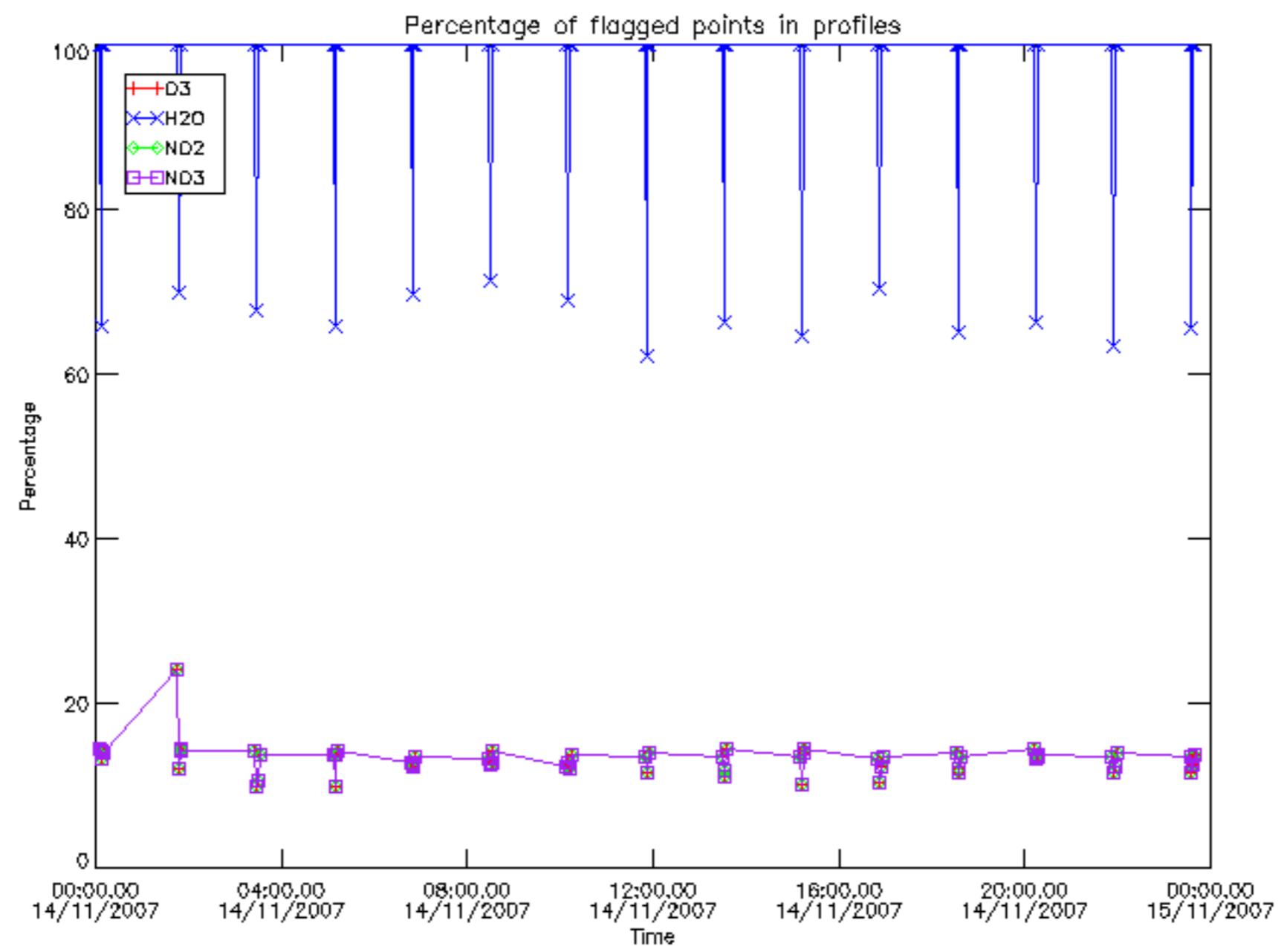
The colorbar represents the latitude.



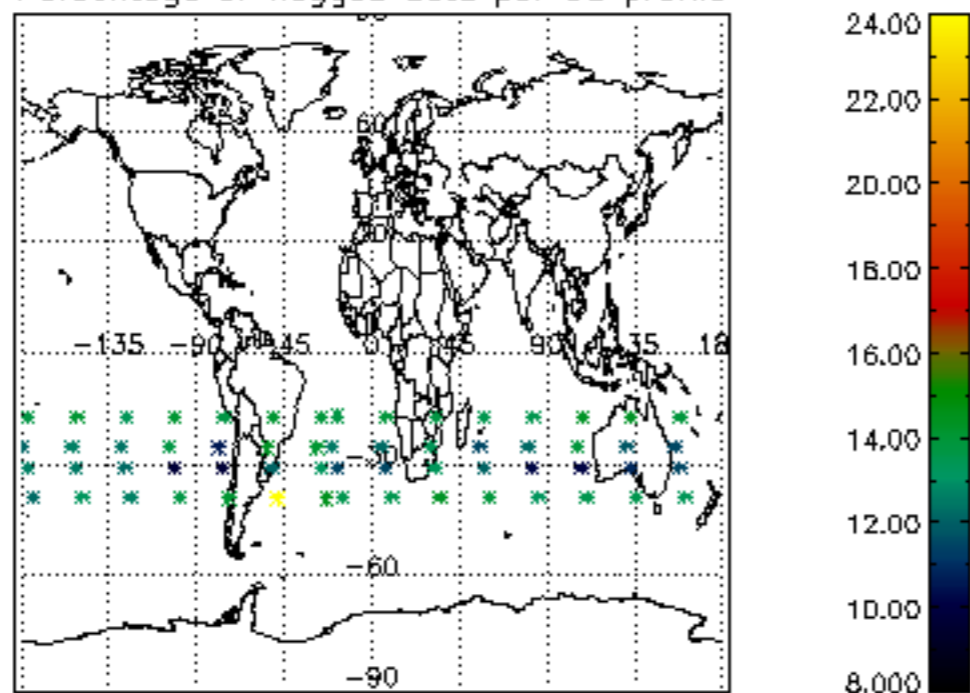
## 6. Auxiliary Data Files used for the production reported in section 2

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.

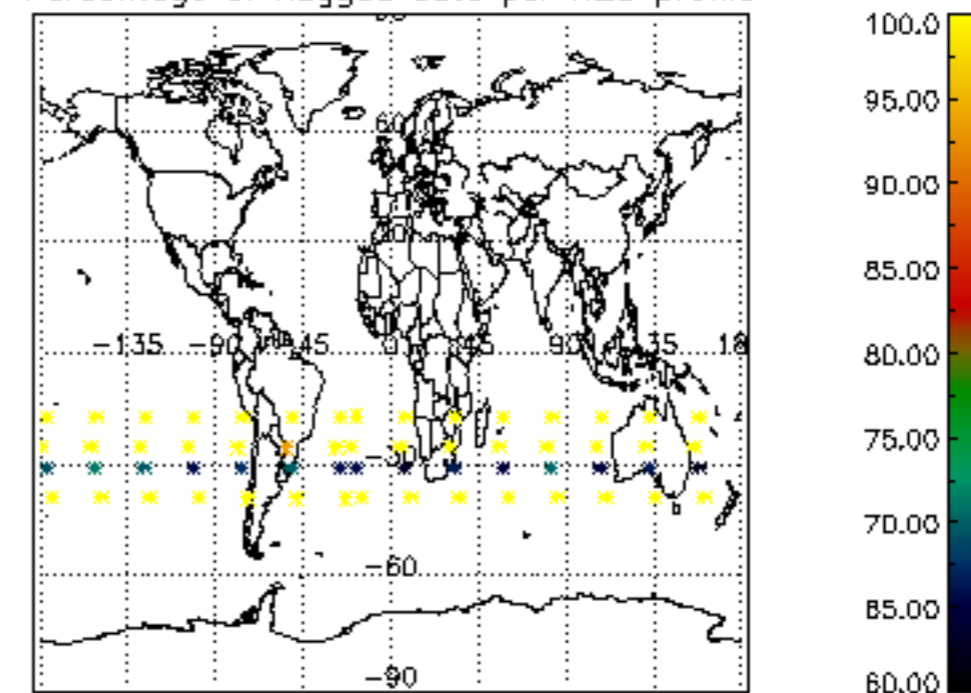
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	14-NOV-2007 00:04:40
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	14-NOV-2007 00:04:40
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	14-NOV-2007 00:04:40



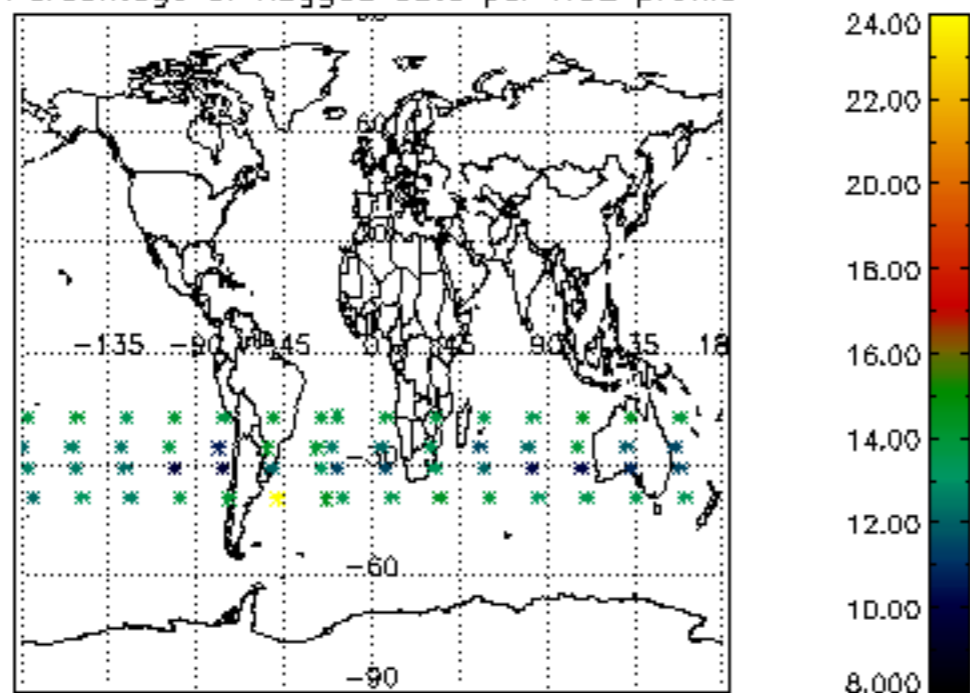
Percentage of flagged data per D3 profile



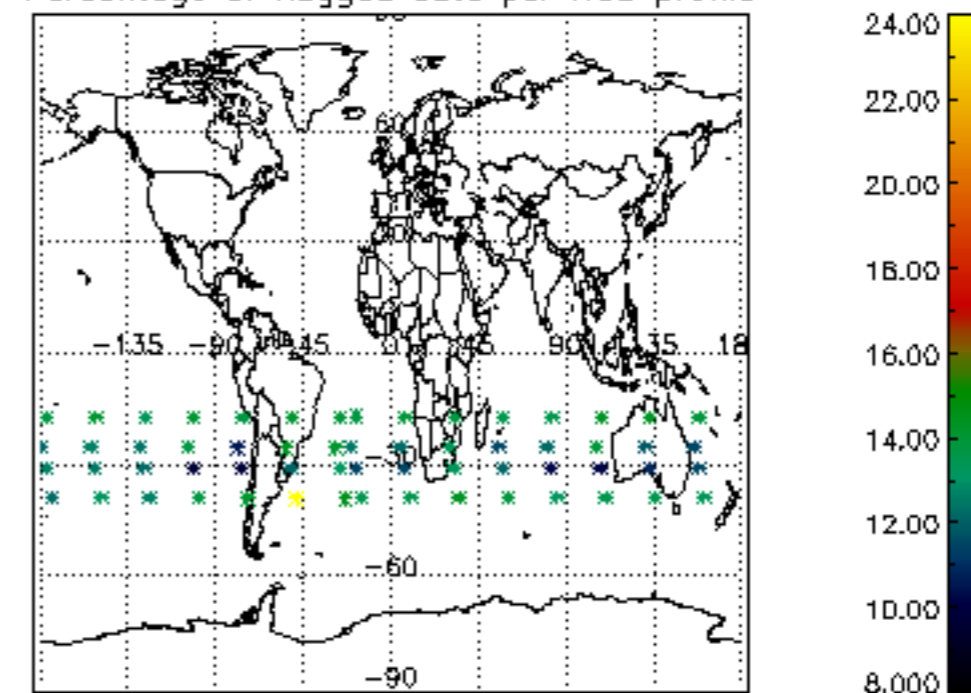
Percentage of flagged data per H2O profile



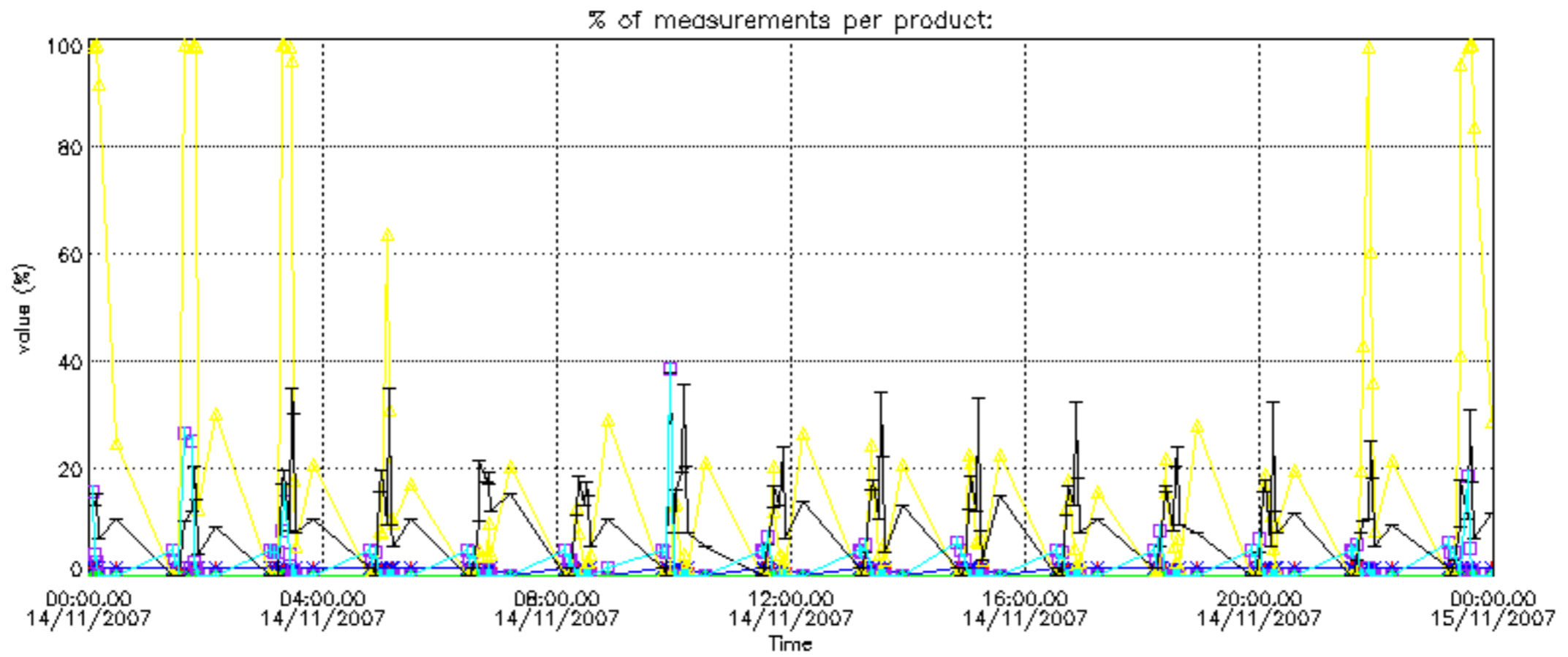
Percentage of flagged data per NO2 profile

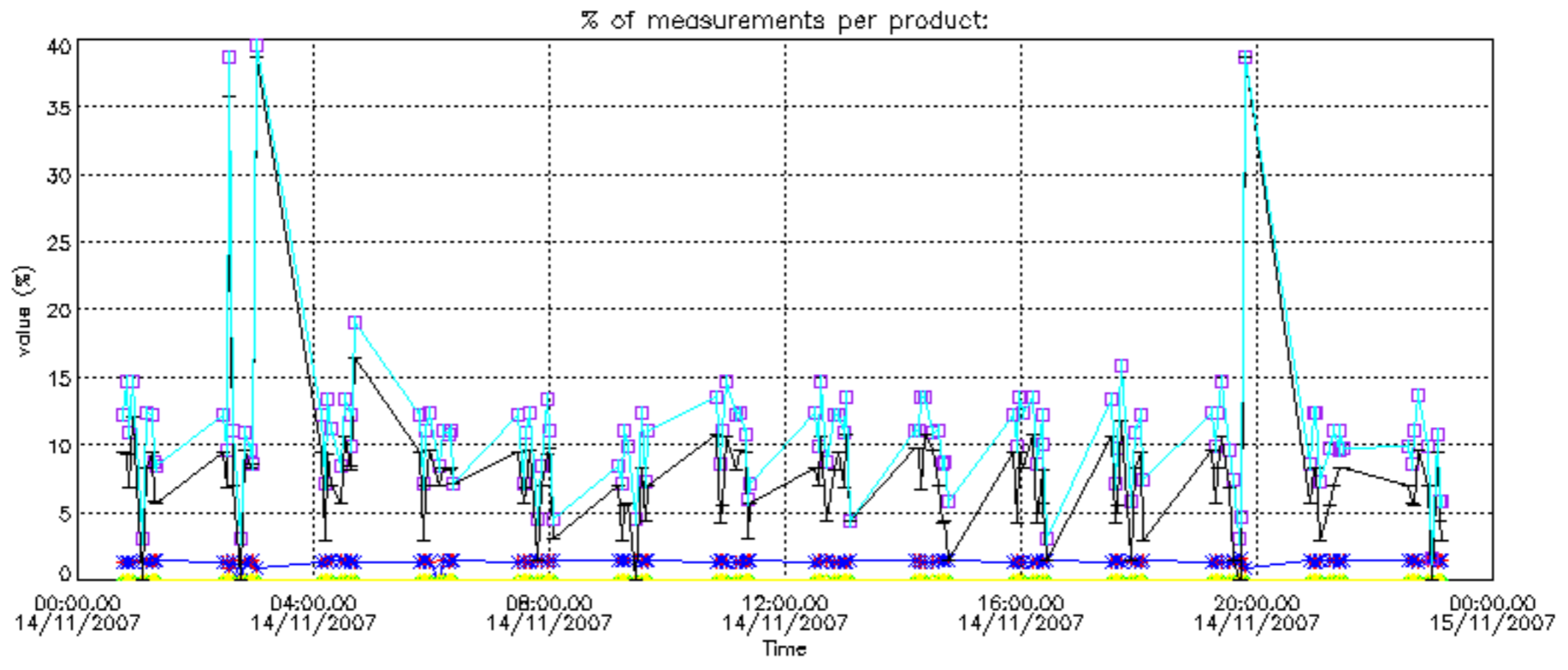


Percentage of flagged data per NO3 profile

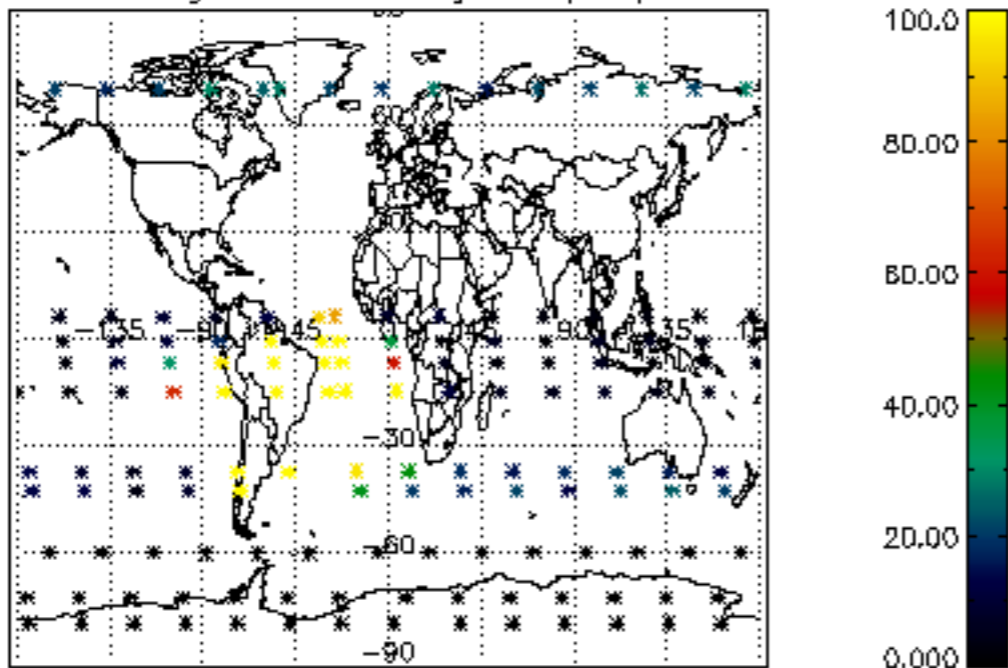




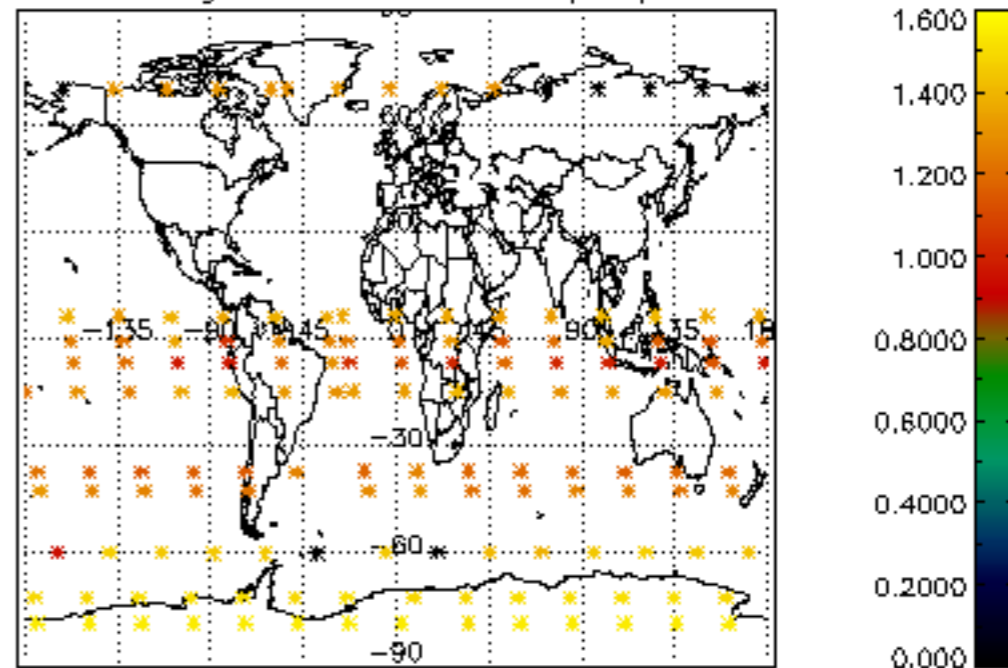




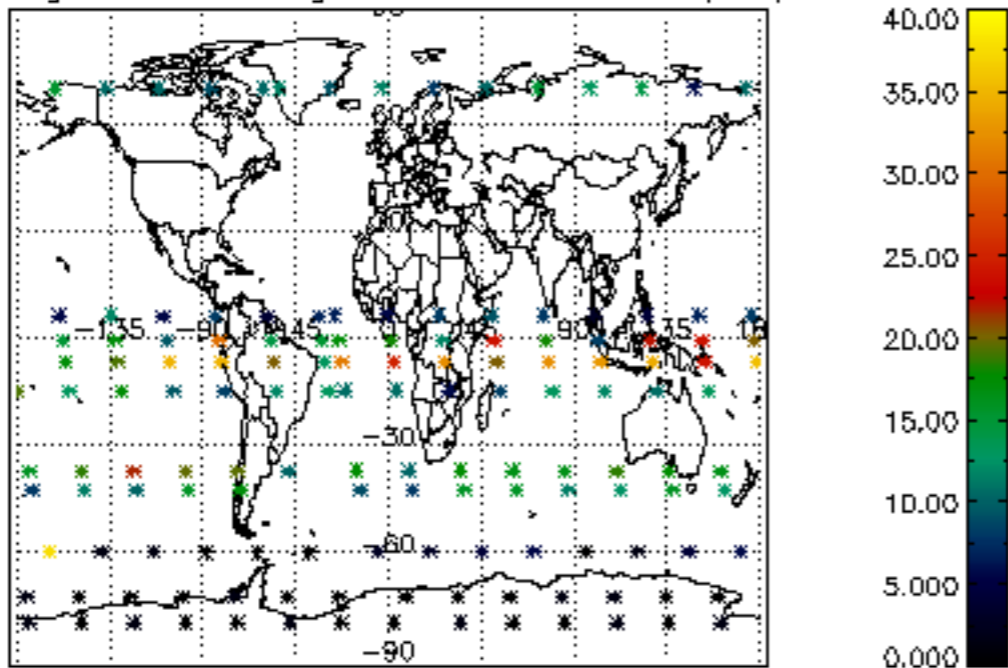
Percentage of cosmic ray hits per profile



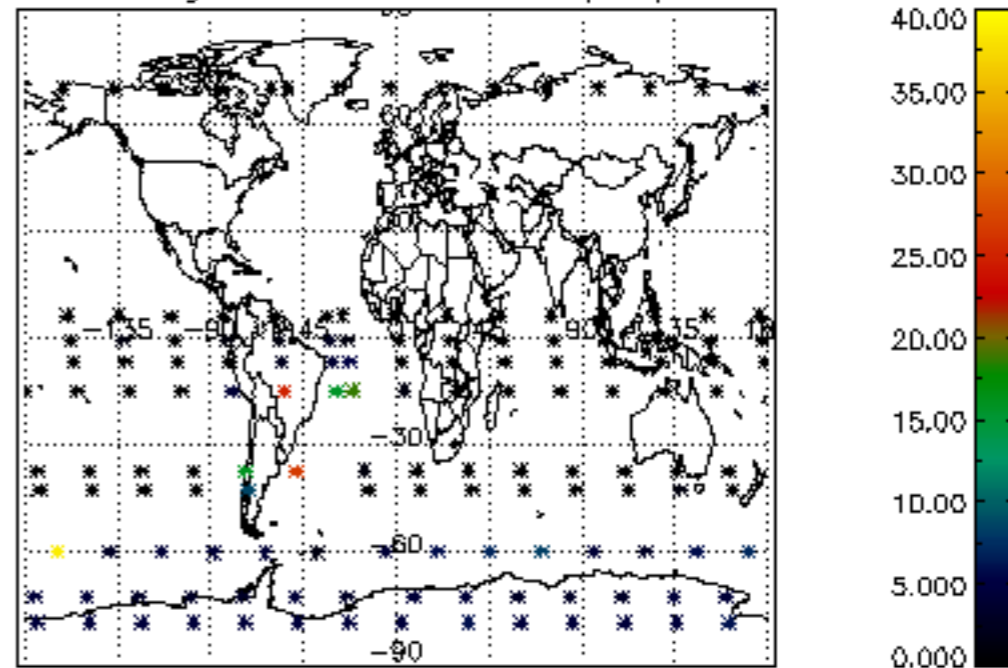
Percentage of datation errors per profile



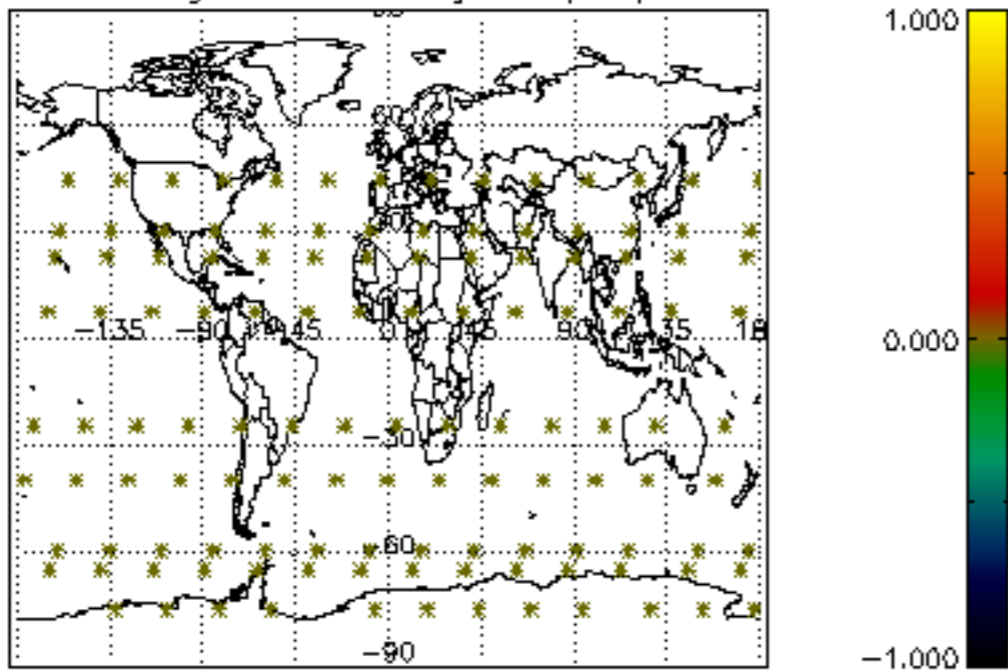
Percentage of star falling outside central band per profile



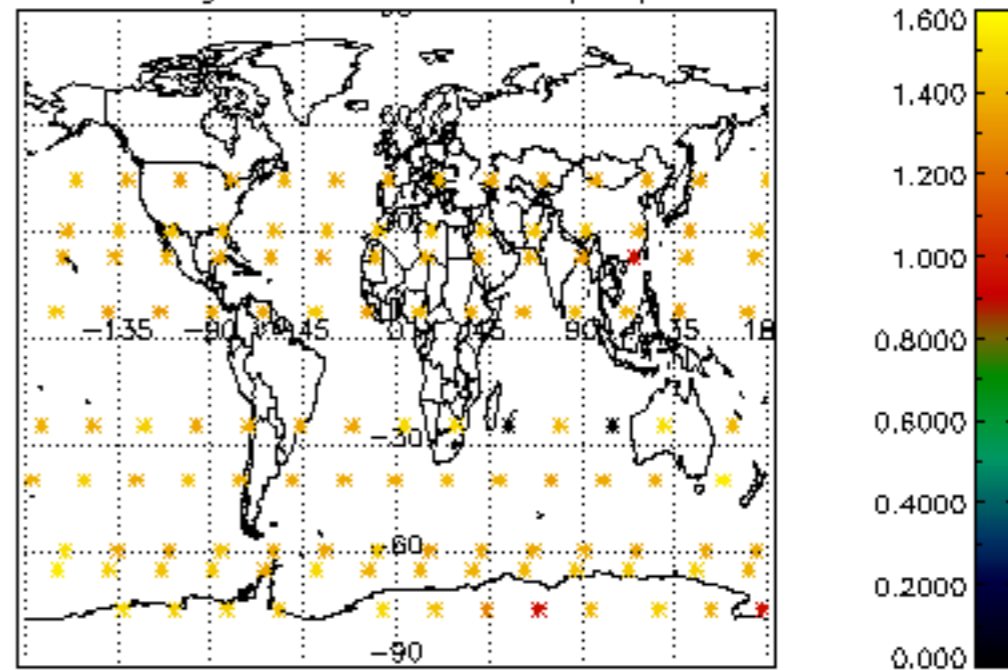
Percentage of saturation errors per profile



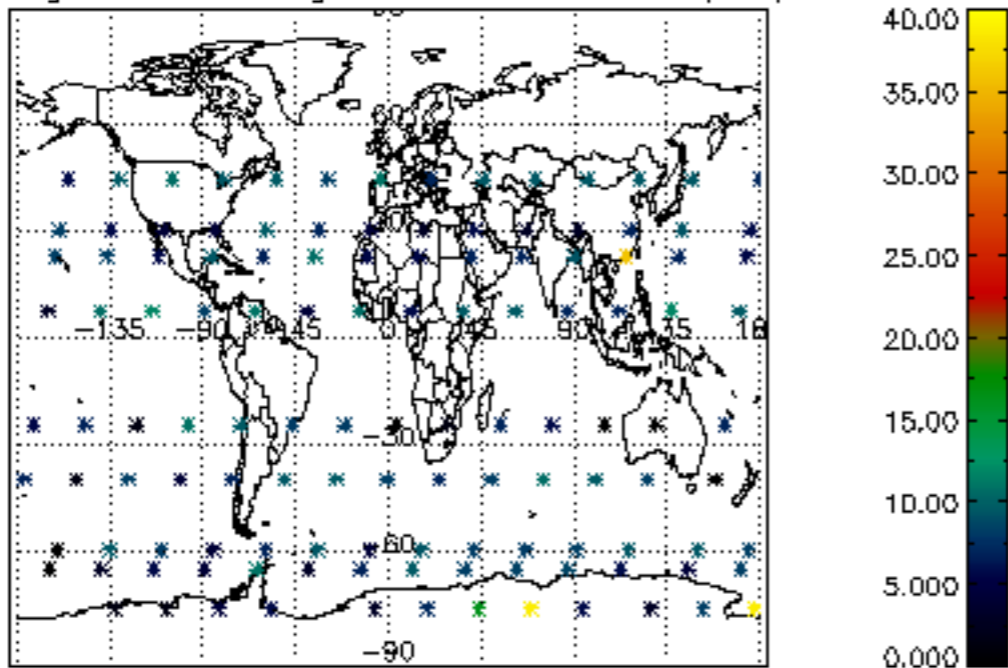
Percentage of cosmic ray hits per profile



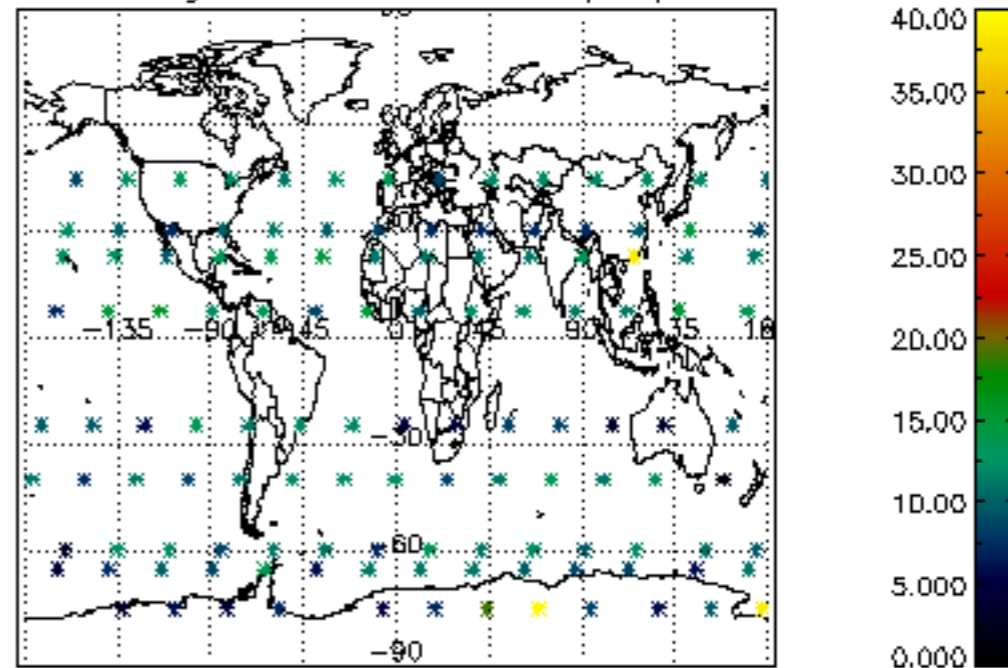
Percentage of datation errors per profile

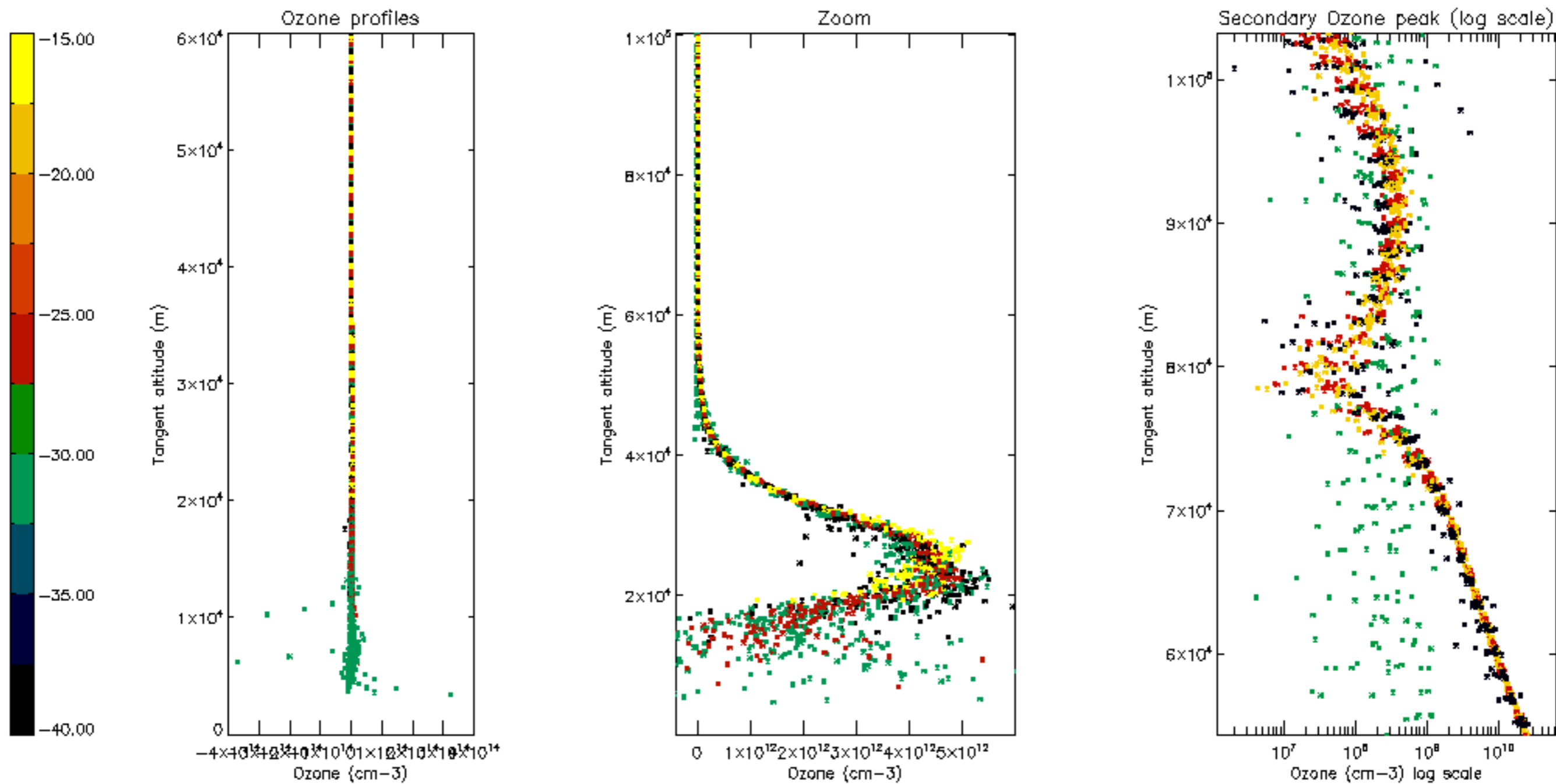


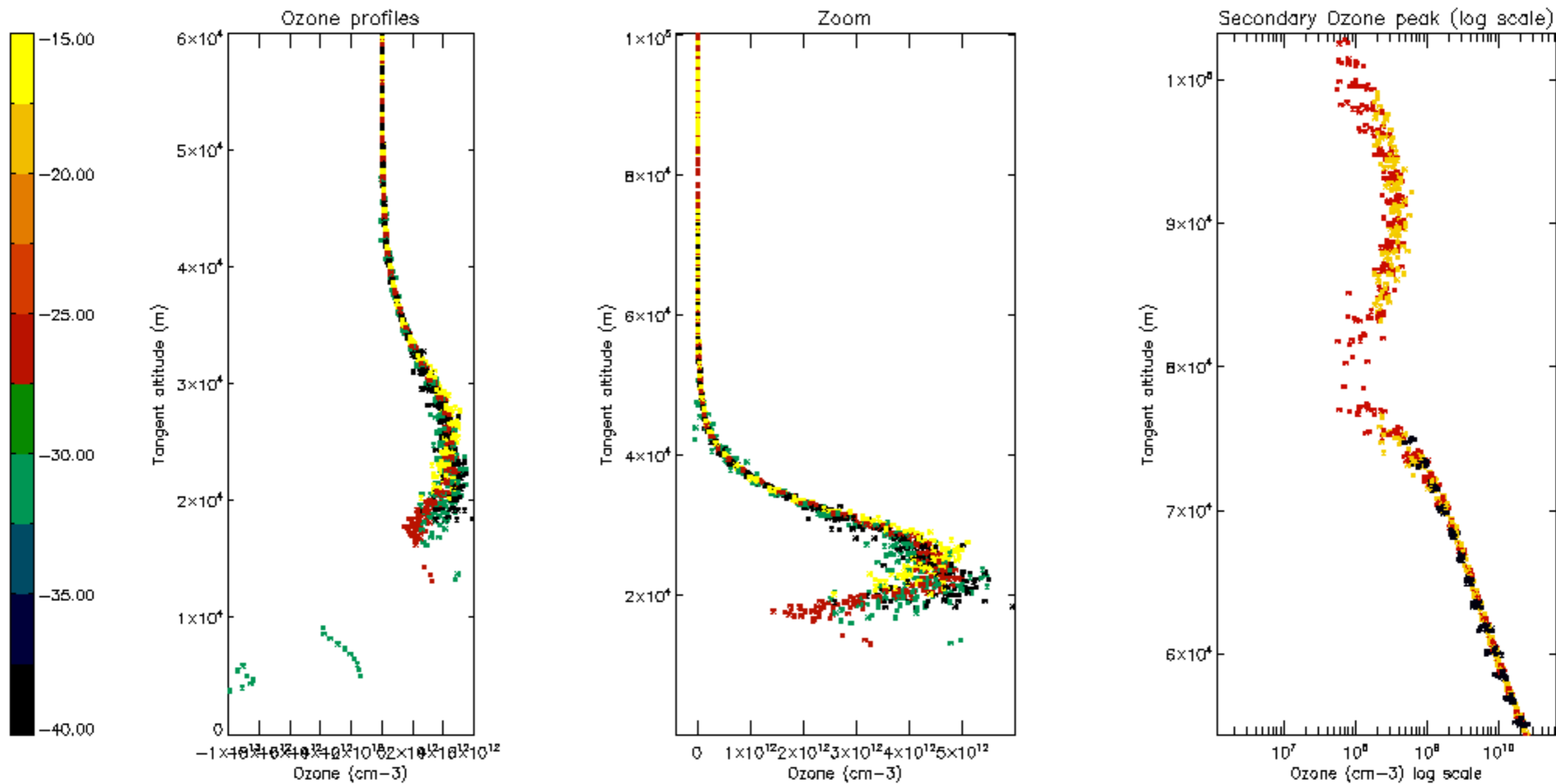
Percentage of star falling outside central band per profile

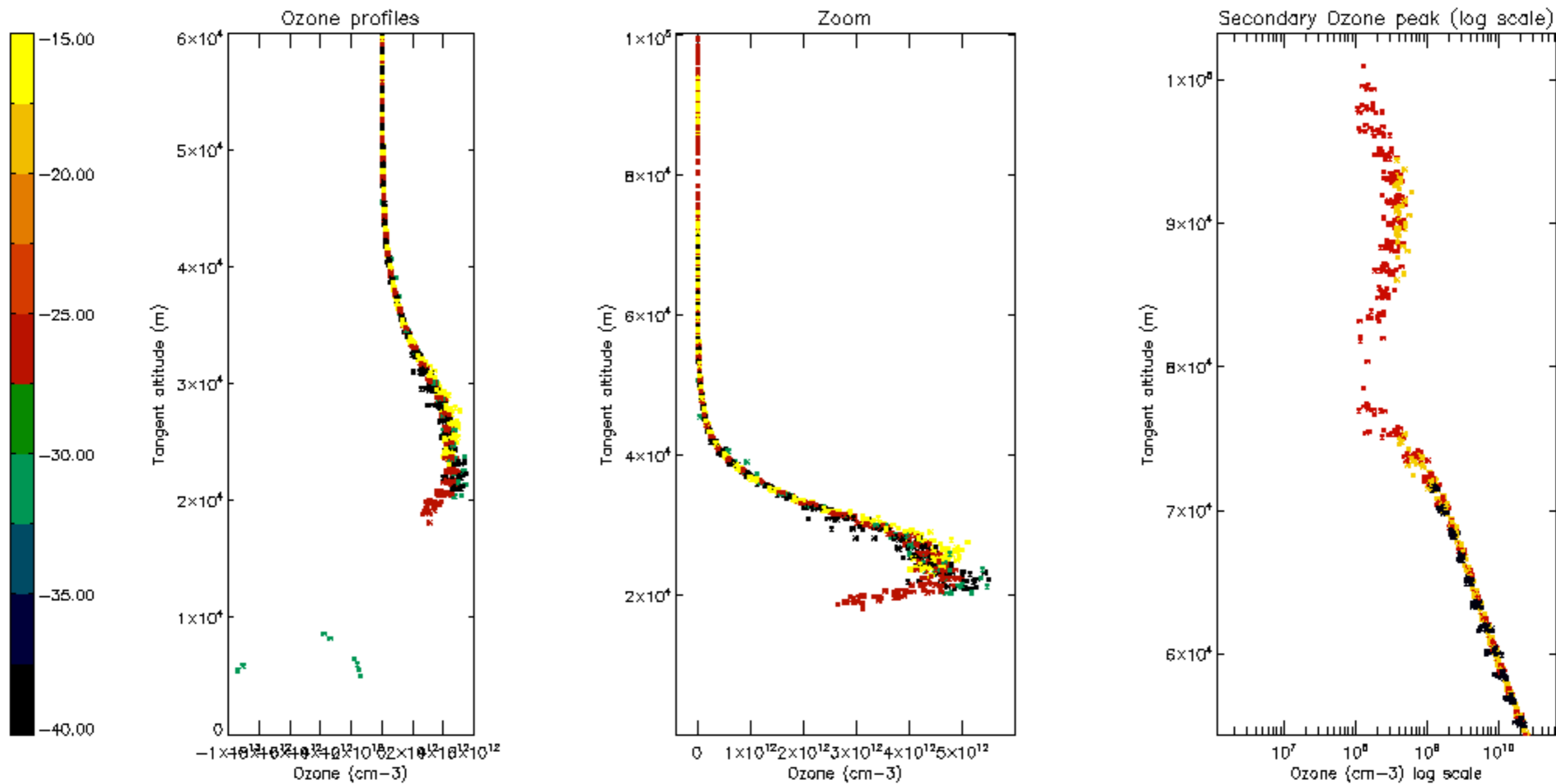


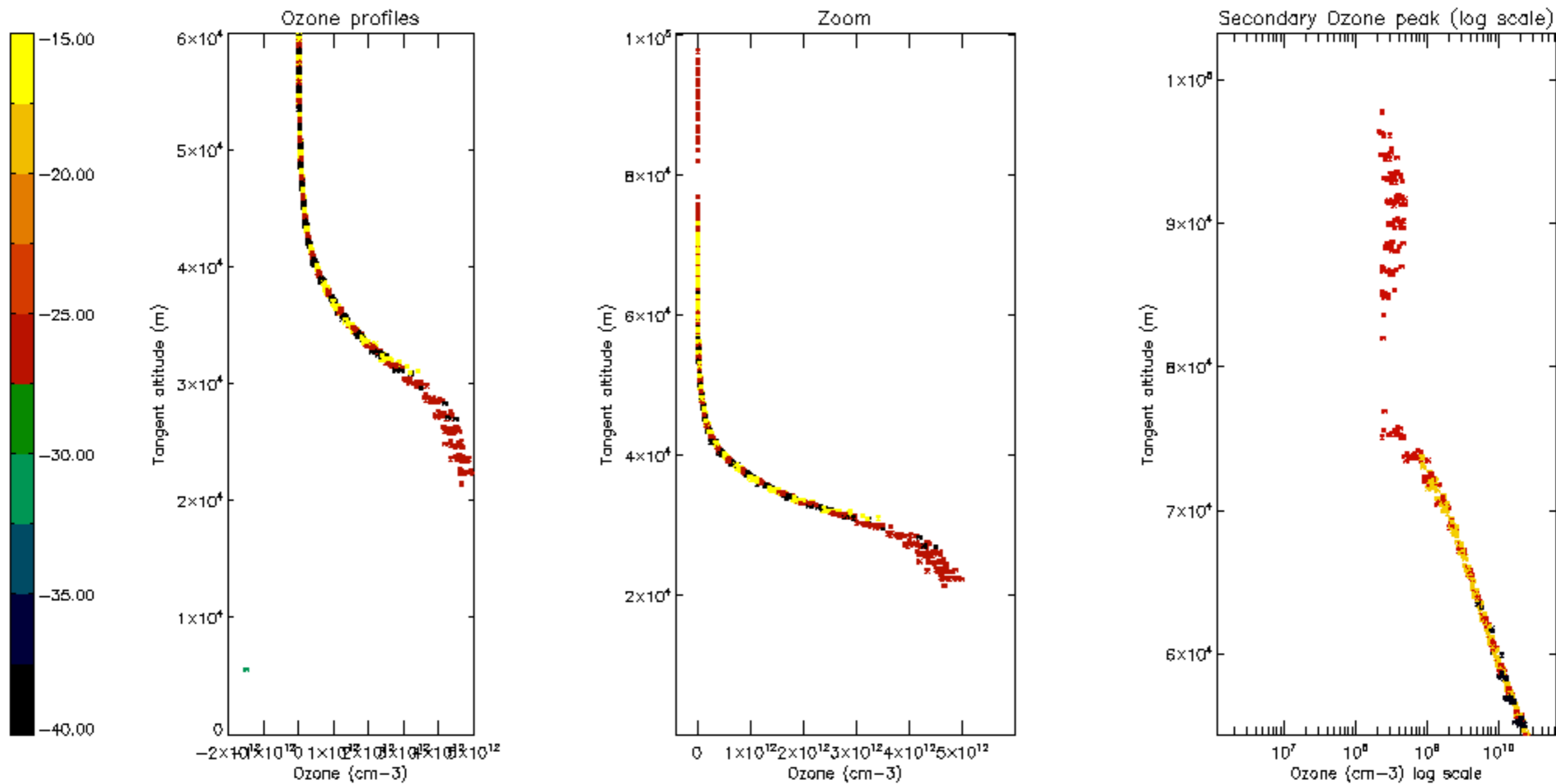
Percentage of saturation errors per profile



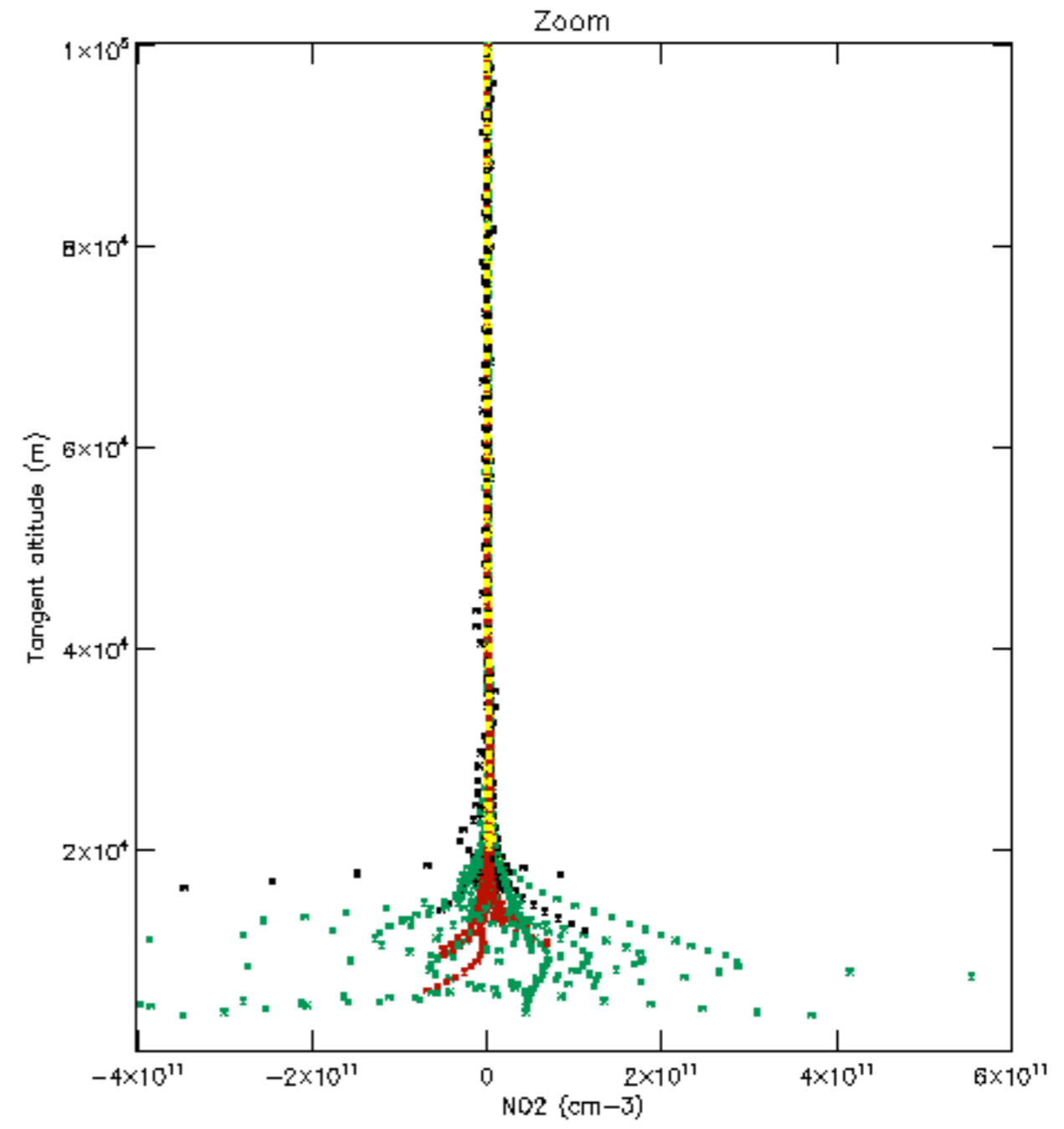
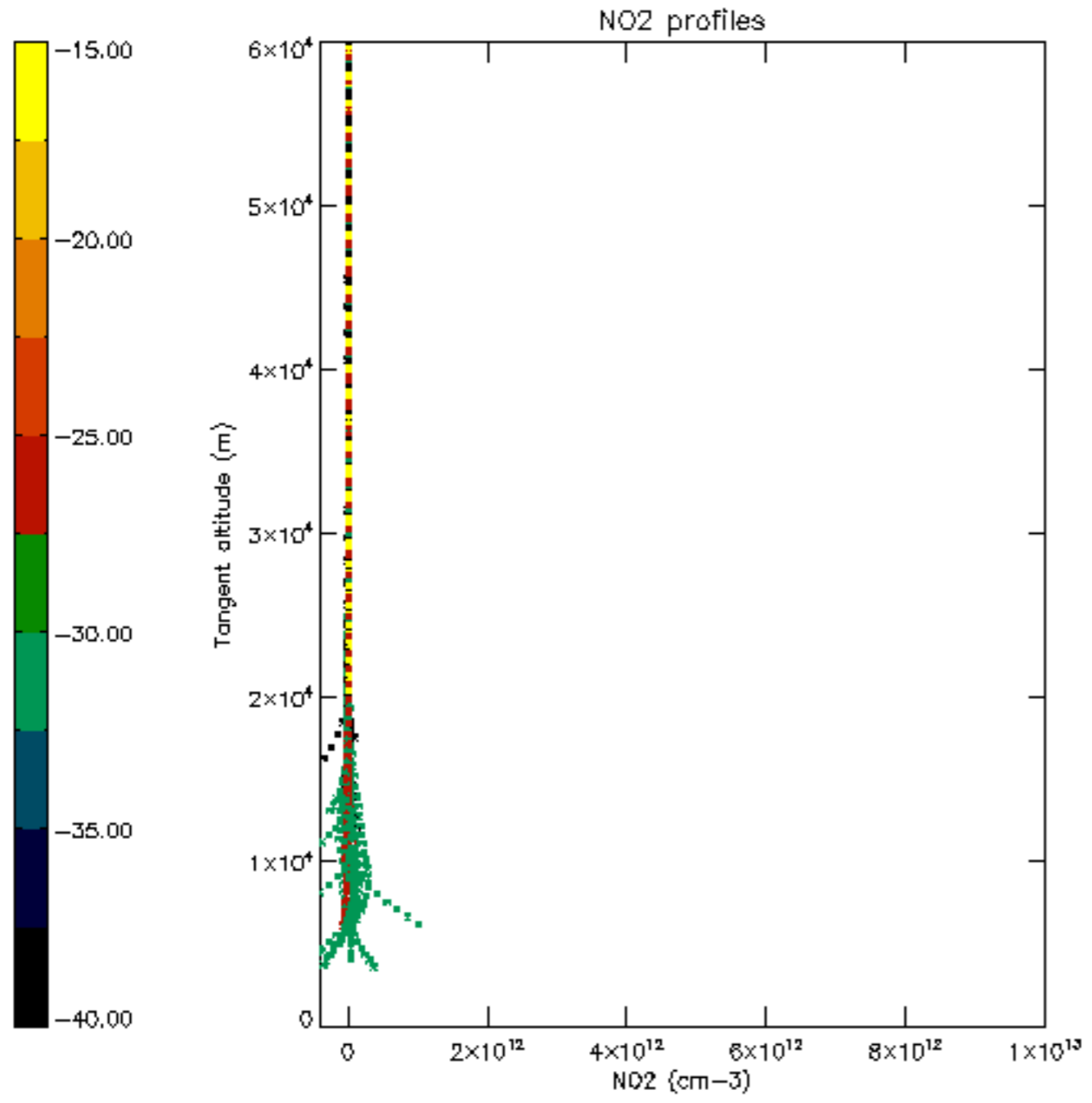


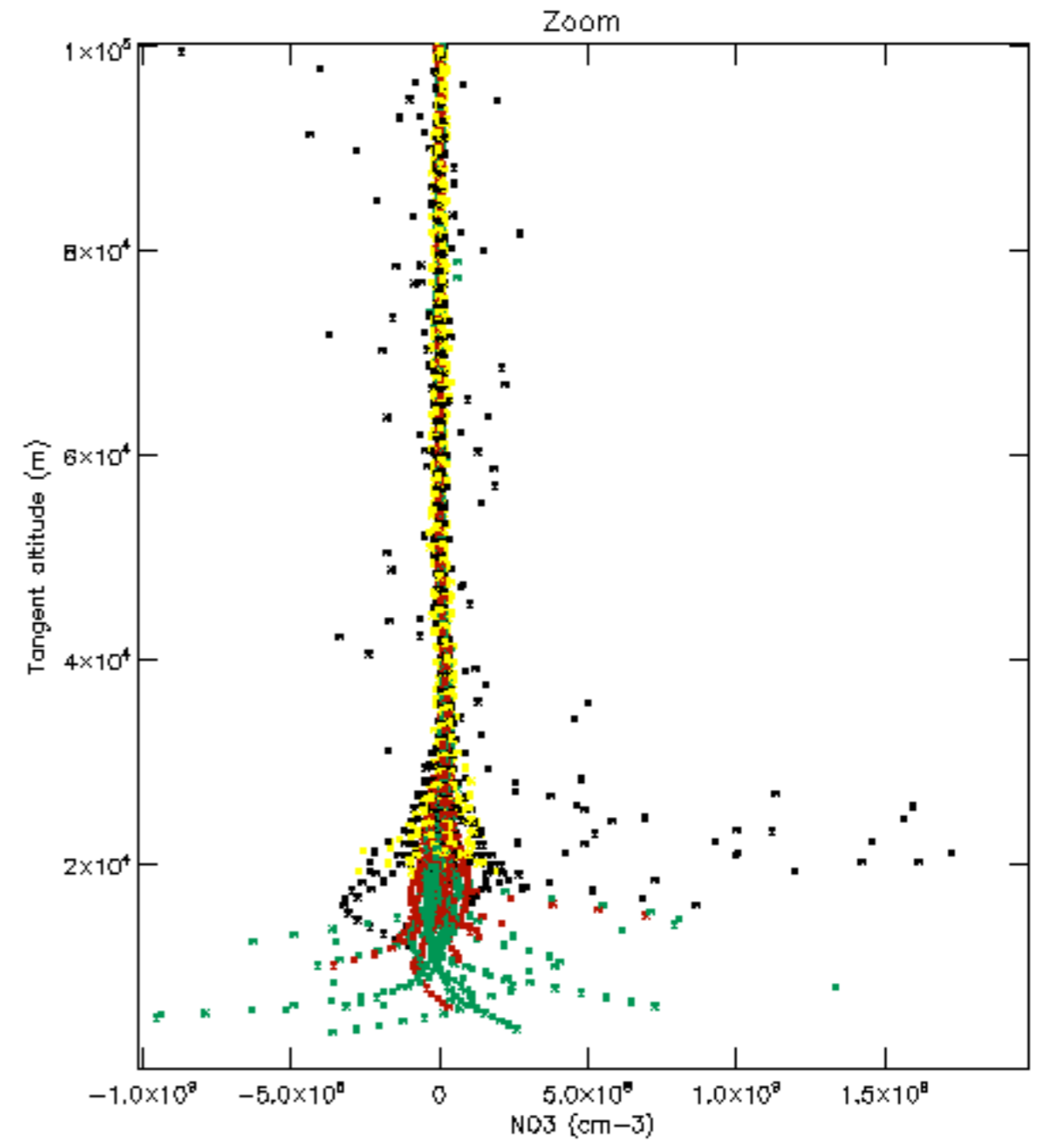
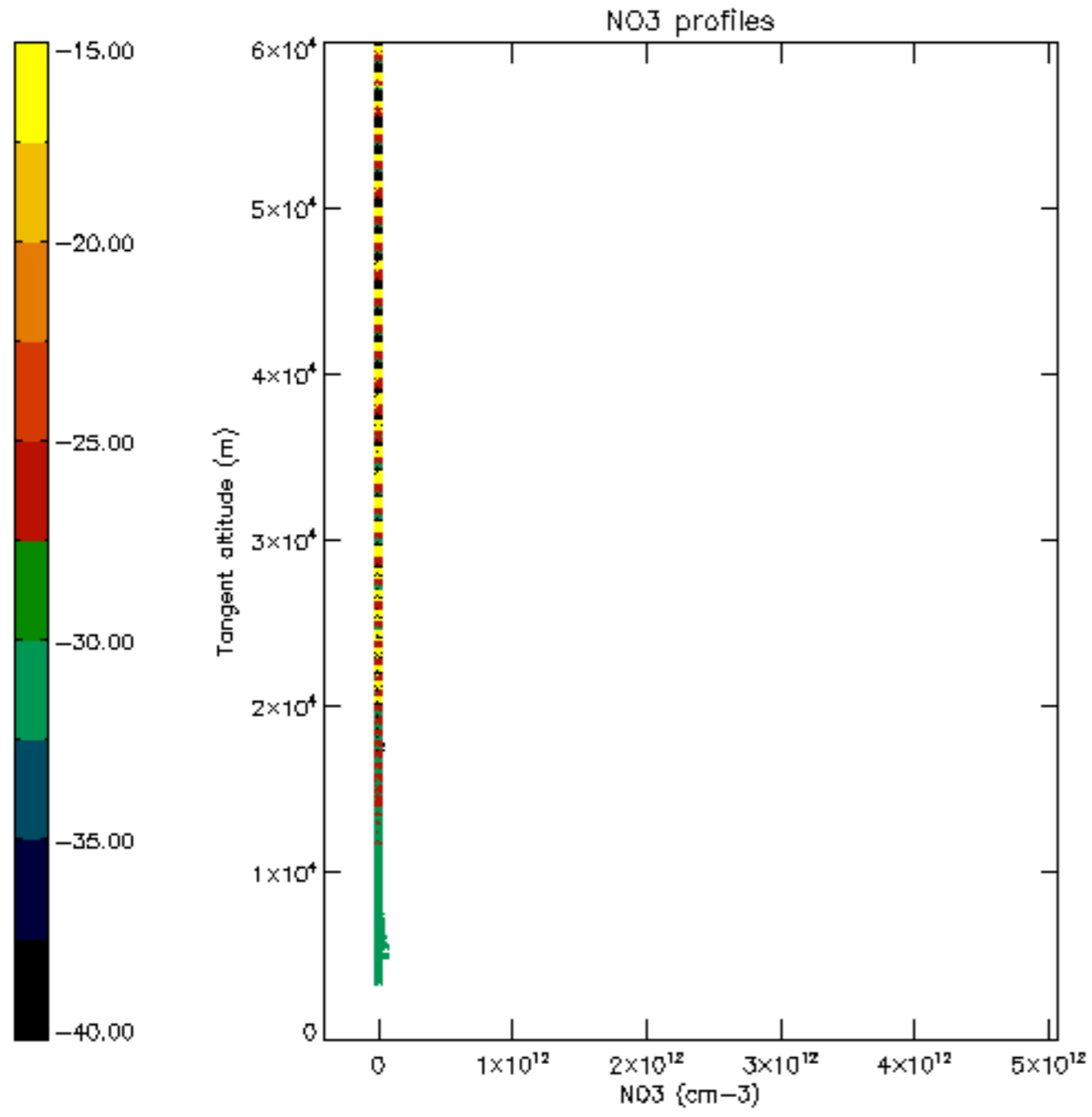


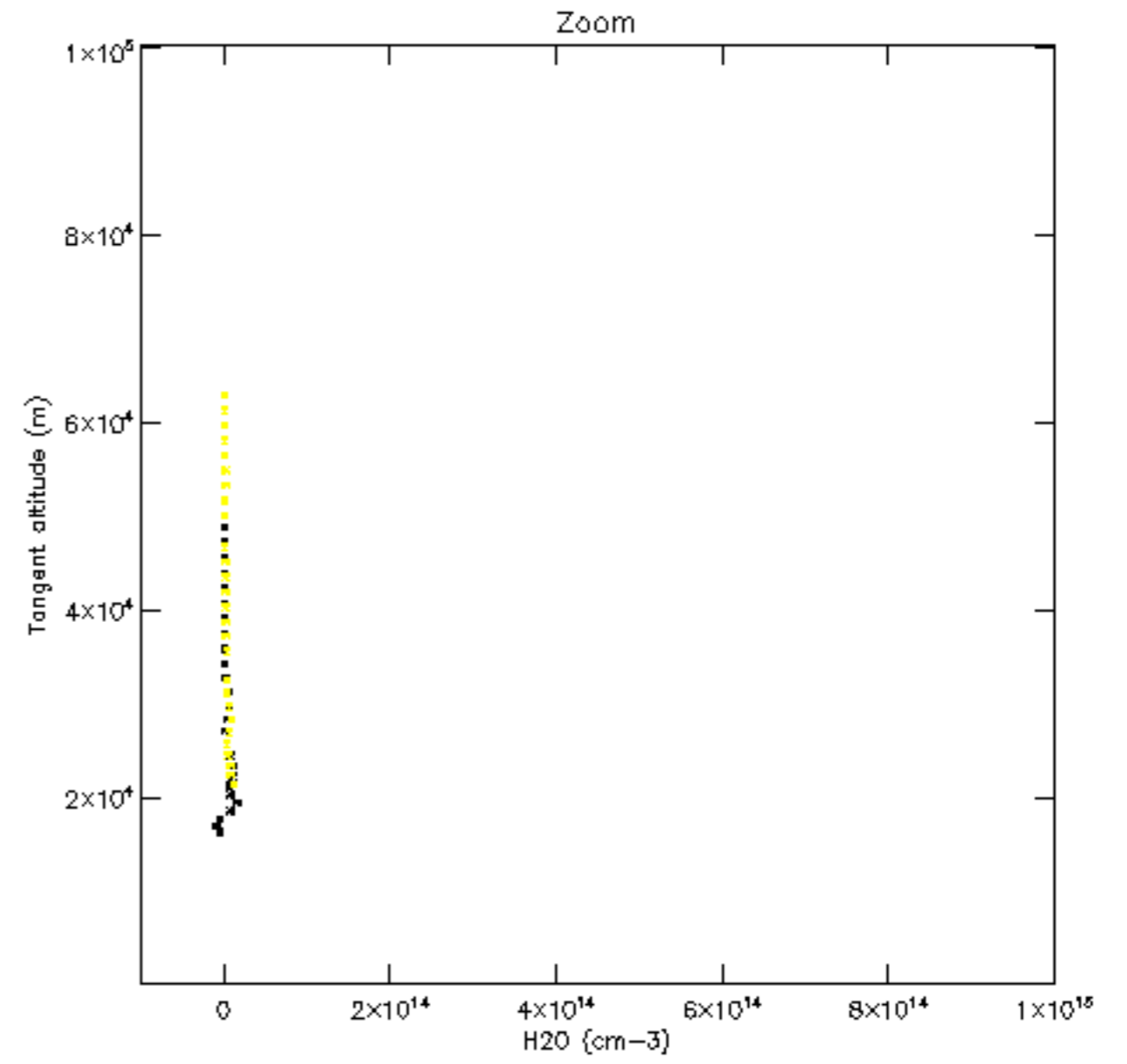
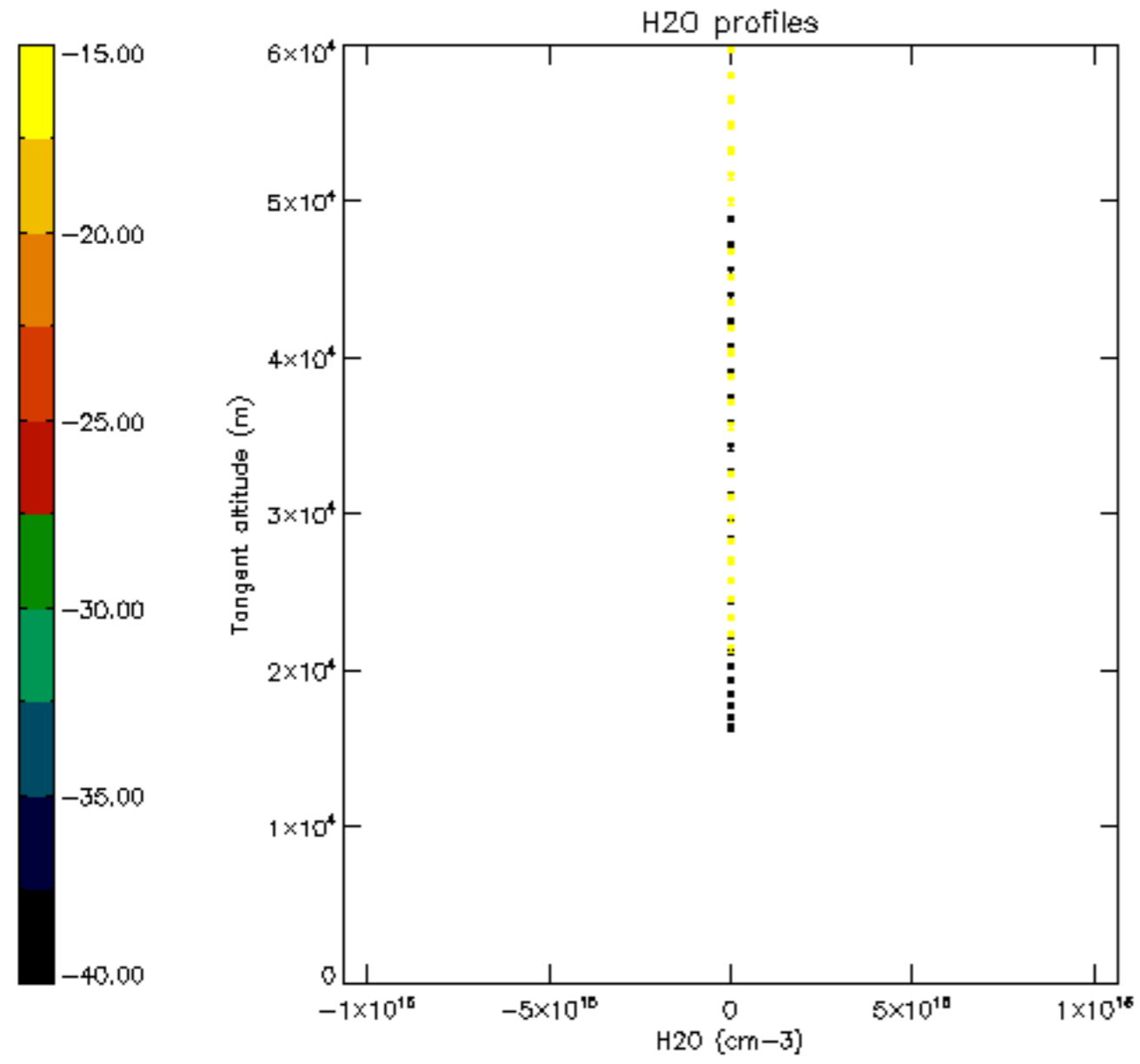


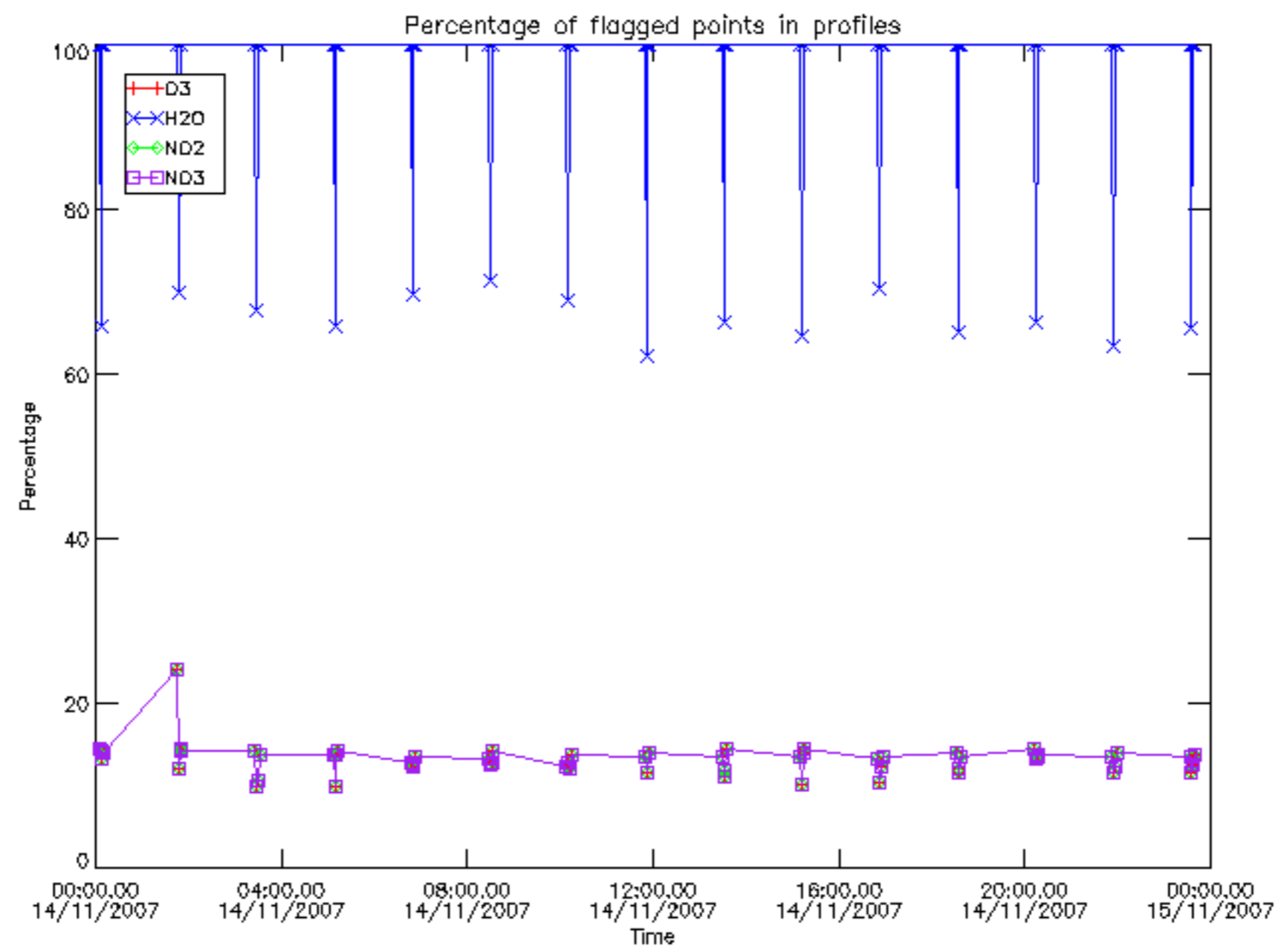




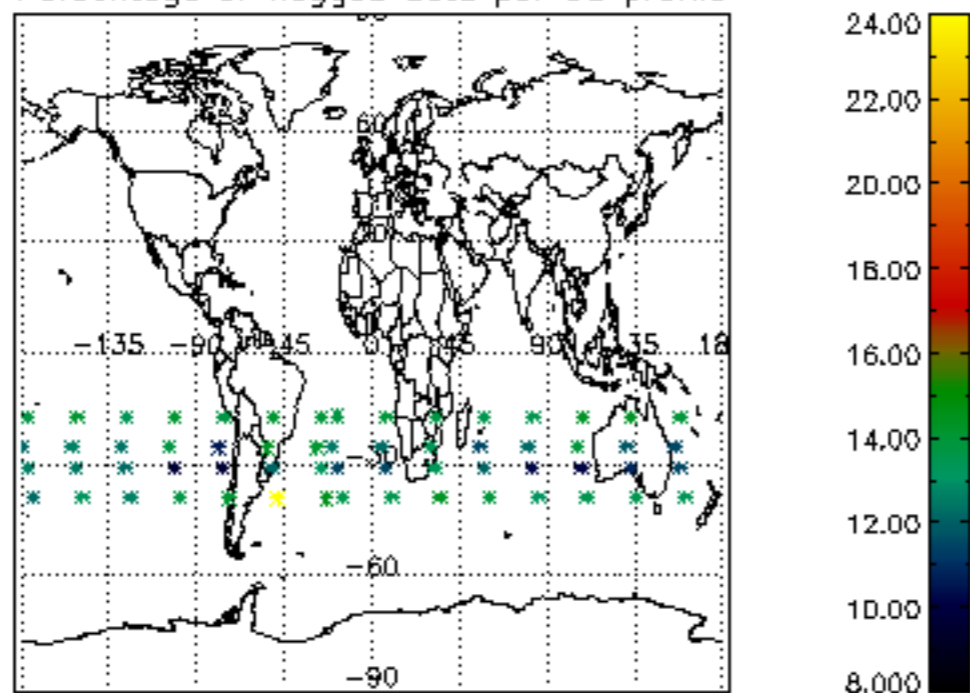




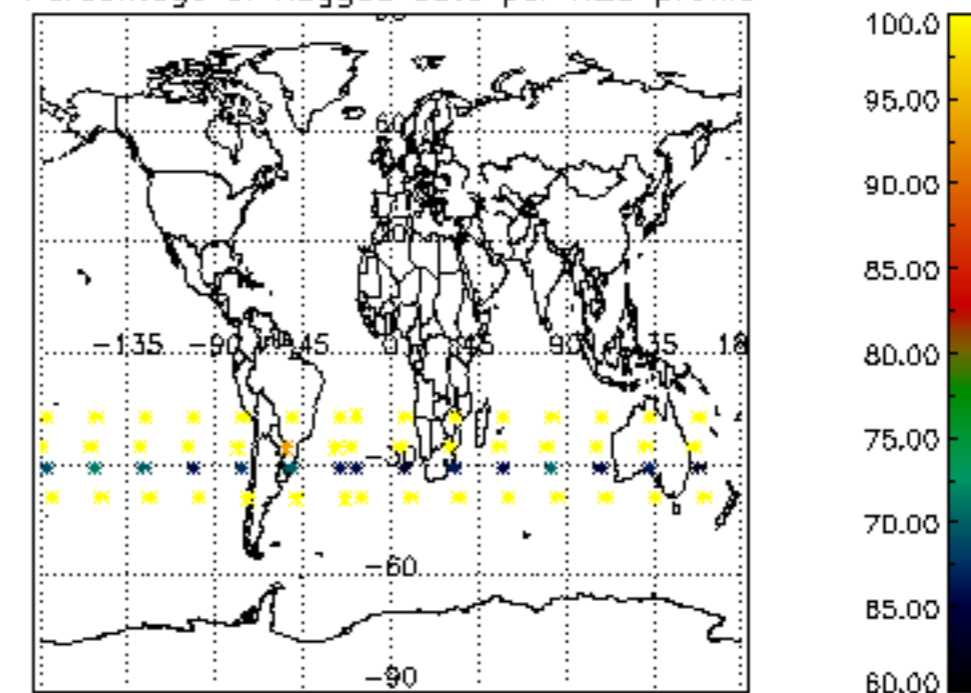




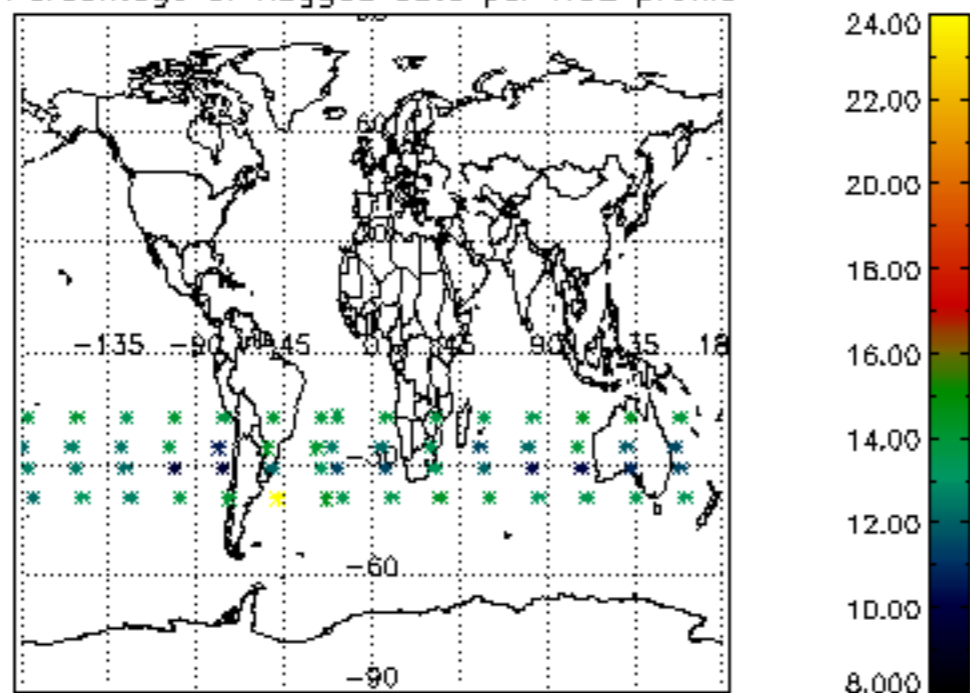
Percentage of flagged data per D3 profile



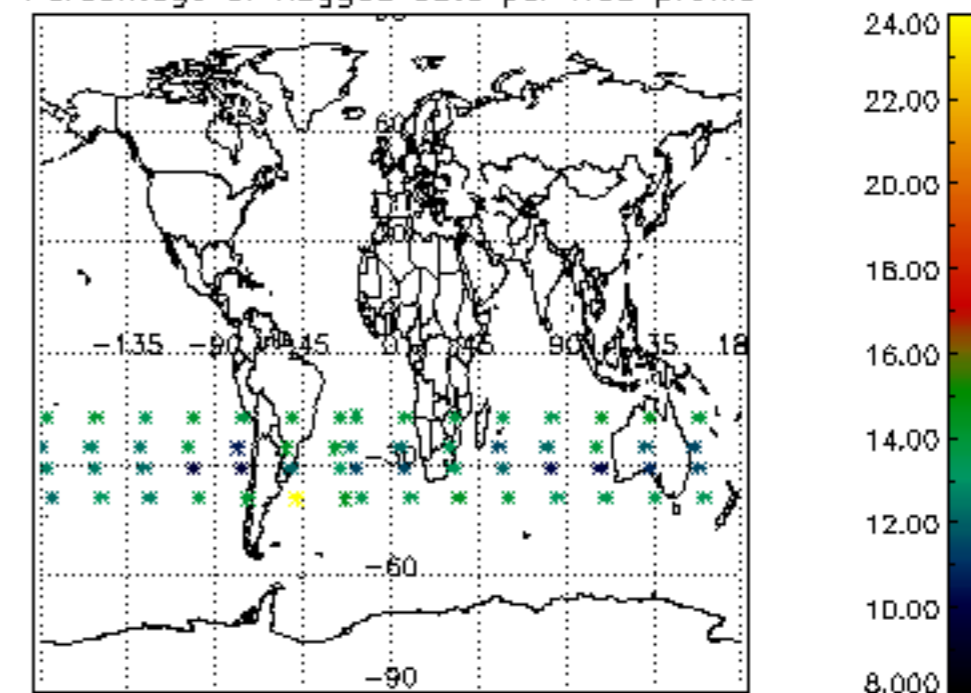
Percentage of flagged data per H2O profile

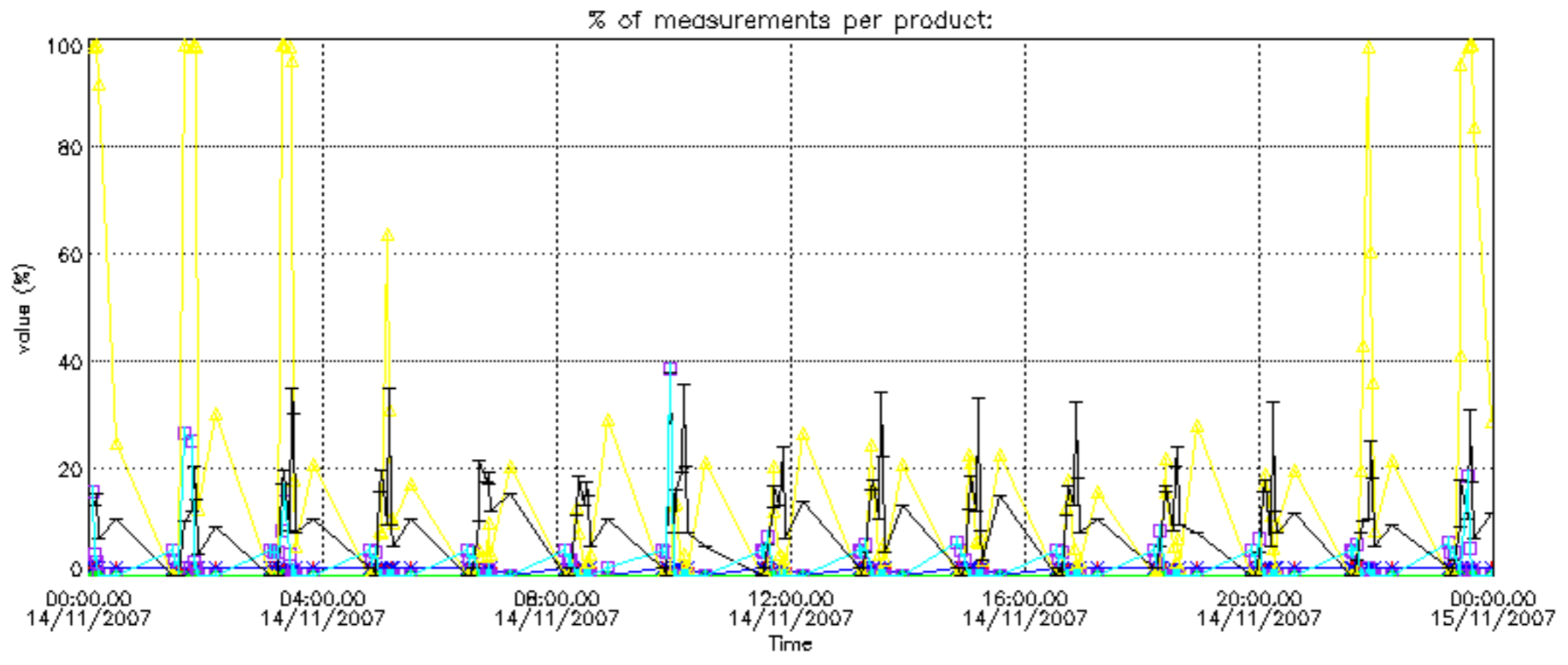


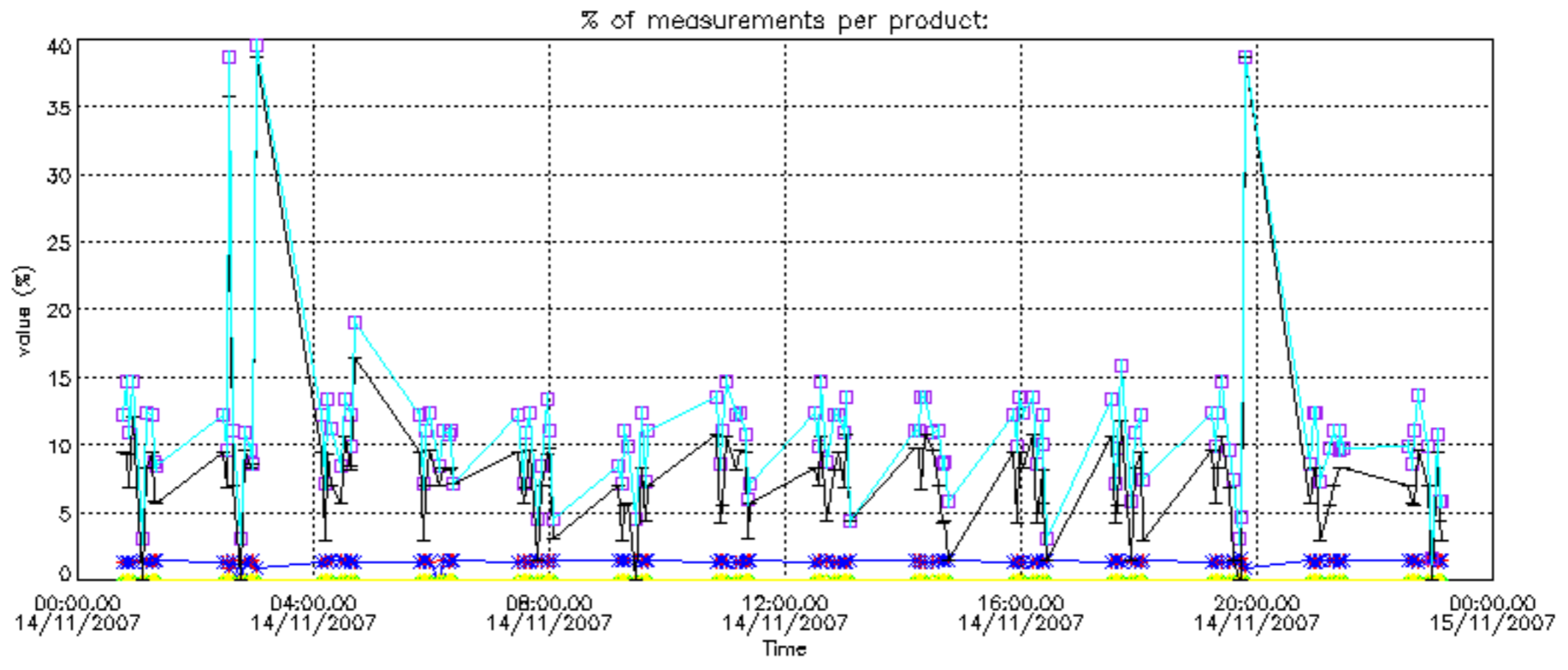
Percentage of flagged data per NO2 profile



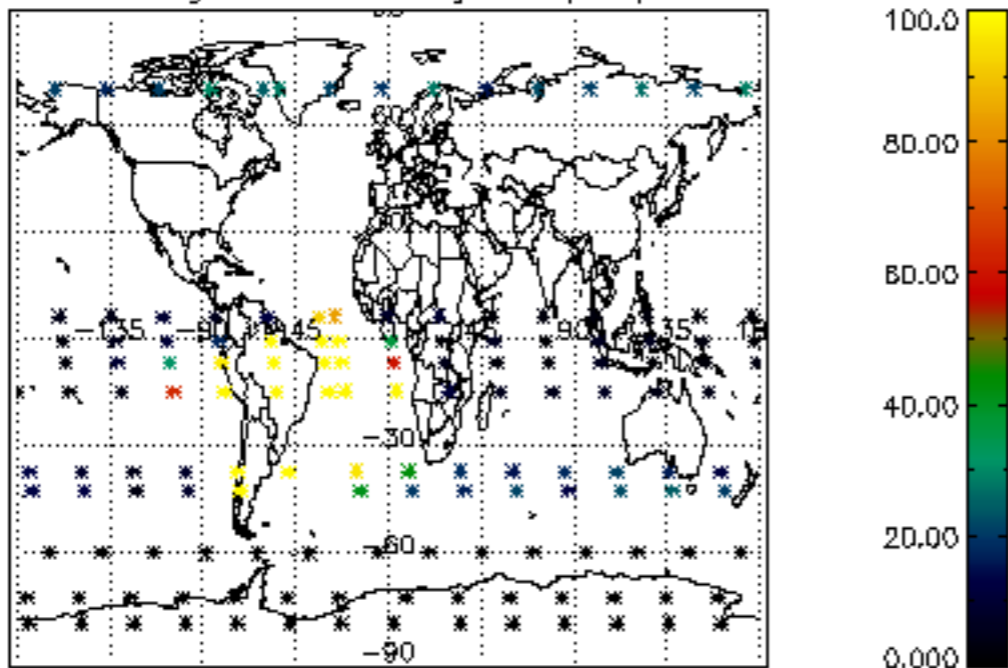
Percentage of flagged data per NO3 profile



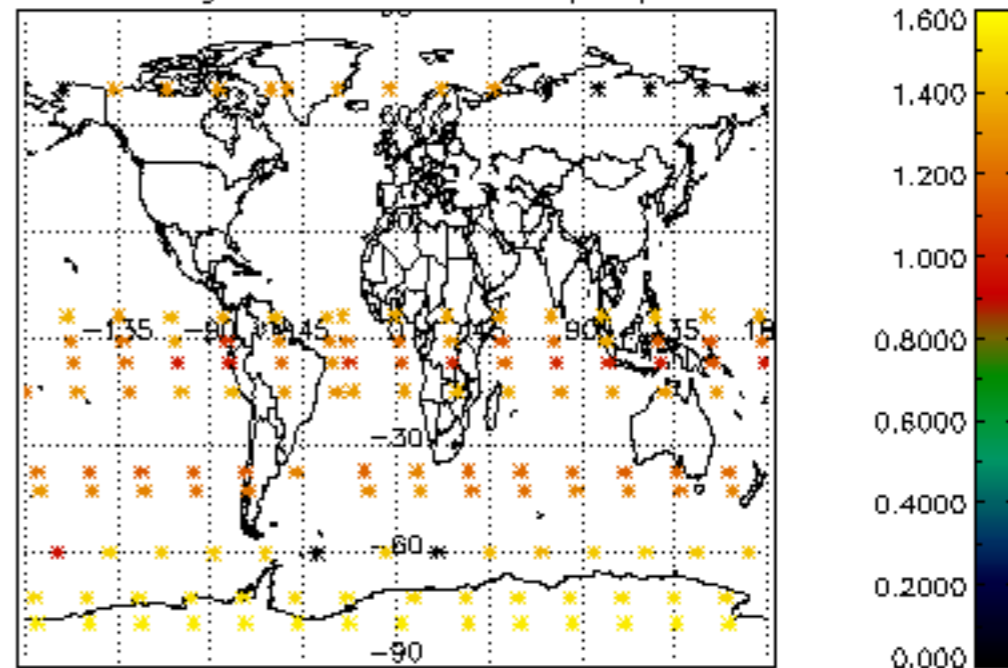




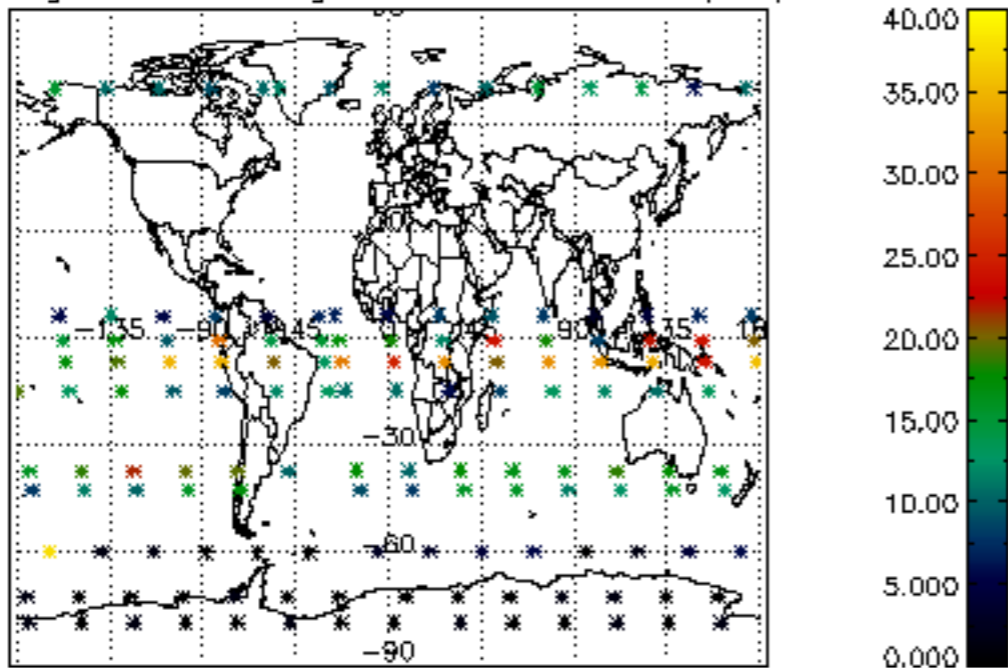
Percentage of cosmic ray hits per profile



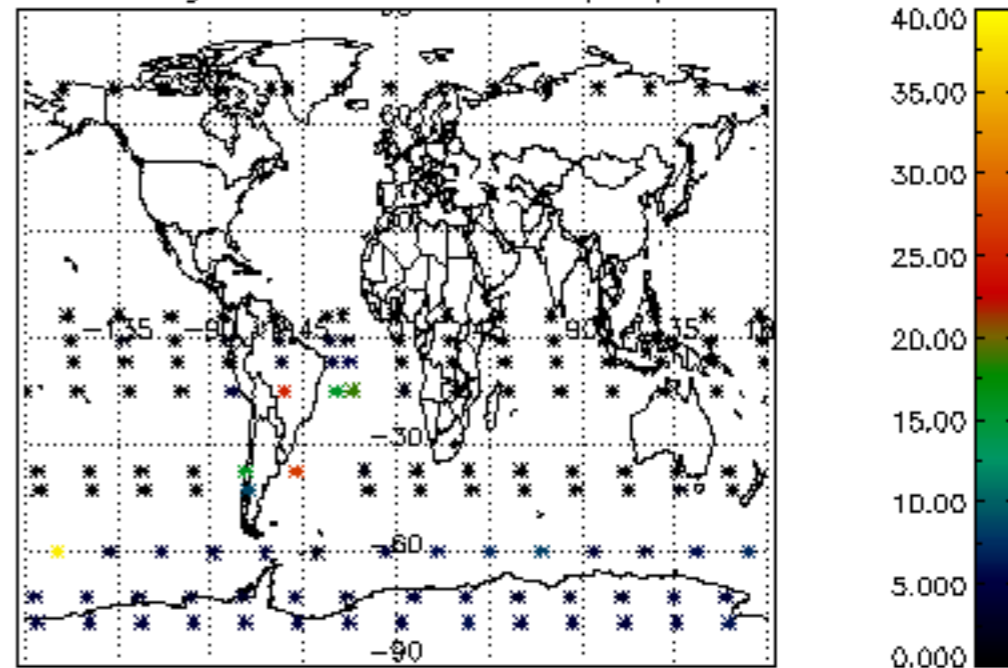
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

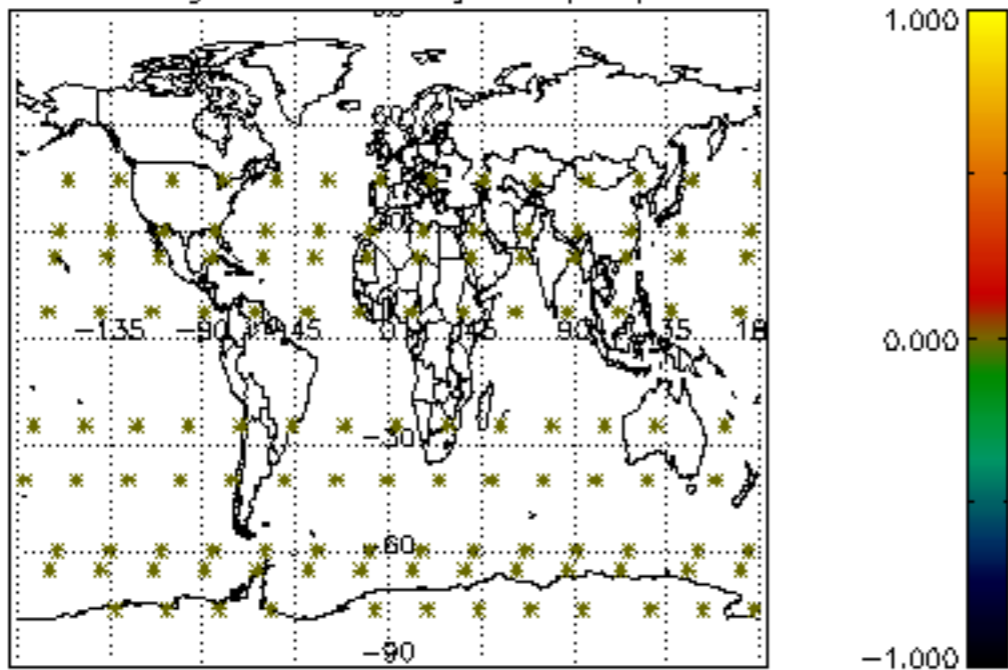


Percentage of saturation errors per profile

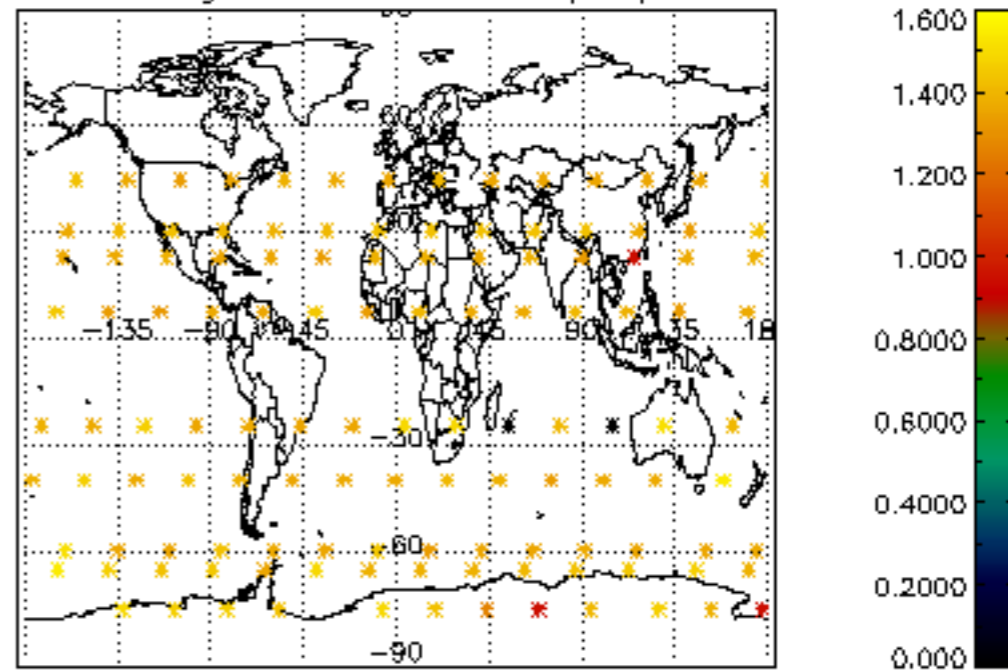




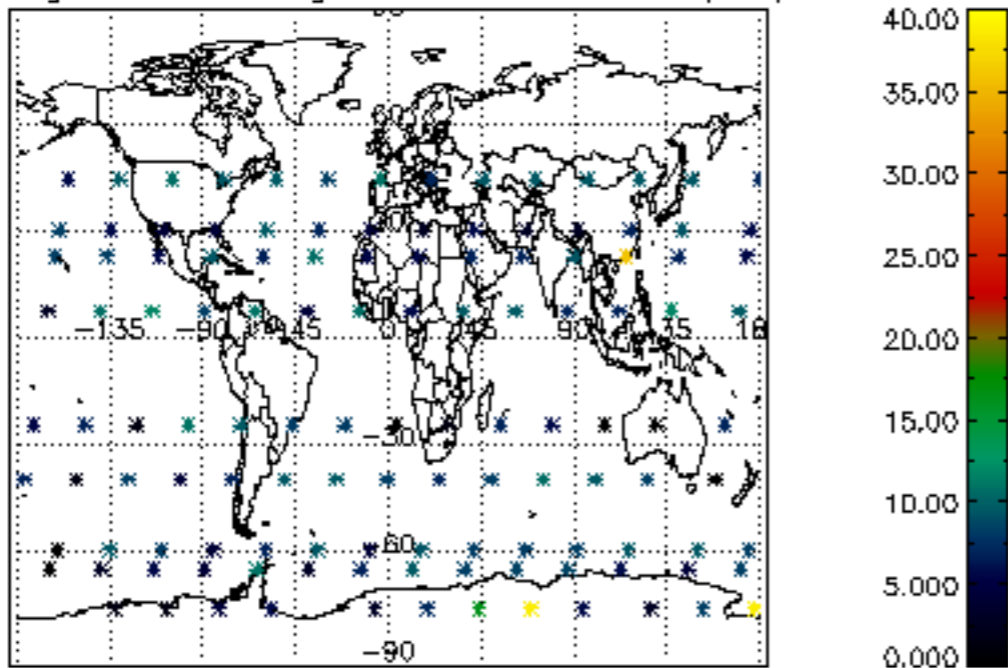
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

