

# 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	18APR2013 14:08:05
Data source version	GOMOS/6.01
Start time of products	23-02-2012 (23FEB2012 00:00:00)
Stop time of products	24-02-2012 (24FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	41
Nb of prods with errors	0

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

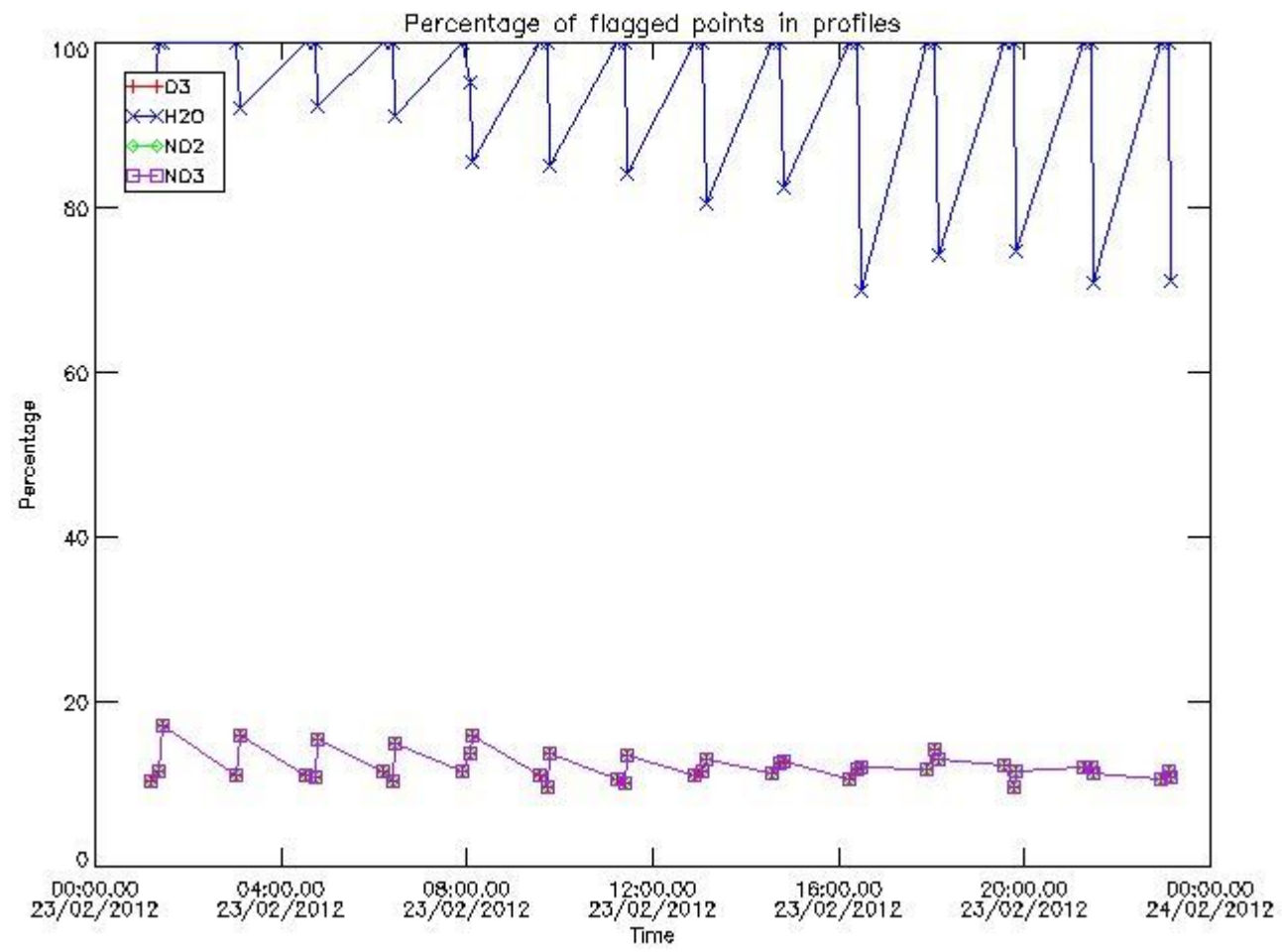
**!Warning: No products without errors in BRIGHT limb contitions found**

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120223_011158_000000503112_00045_52214_5663.N1	23-FEB-2012 01:11:58	Dark	49.500	40	The Sco	1.8590	7100.0	99	52214	No
2	GOM_NL__2PRFIN20120223_012240_000000453112_00046_52215_5665.N1	23-FEB-2012 01:22:40	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52215	No
3	GOM_NL__2PRFIN20120223_012621_000000303112_00046_52215_5666.N1	23-FEB-2012 01:26:21	Dark	30.000	26	Gam Cru	1.6240	2900.0	60	52215	No
4	GOM_NL__2PRFIN20120223_030255_000000463112_00047_52216_5675.N1	23-FEB-2012 03:02:55	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52216	No
5	GOM_NL__2PRFIN20120223_030636_000000323112_00047_52216_5676.N1	23-FEB-2012 03:06:36	Dark	31.500	26	Gam Cru	1.6240	2900.0	63	52216	No
6	GOM_NL__2PRFIN20120223_043227_000000513112_00047_52216_5677.N1	23-FEB-2012 04:32:27	Dark	50.500	40	The Sco	1.8590	7100.0	101	52216	No
7	GOM_NL__2PRFIN20120223_044310_000000473112_00048_52217_5691.N1	23-FEB-2012 04:43:10	Dark	46.500	10	Bet Cen	0.61000	28000.	93	52217	No
8	GOM_NL__2PRFIN20120223_044650_000000333112_00048_52217_5692.N1	23-FEB-2012 04:46:50	Dark	32.500	26	Gam Cru	1.6240	2900.0	65	52217	No
9	GOM_NL__2PRFIN20120223_061241_000000453112_00048_52217_5693.N1	23-FEB-2012 06:12:41	Dark	44.500	40	The Sco	1.8590	7100.0	89	52217	No
10	GOM_NL__2PRFIN20120223_062324_000000493112_00049_52218_5723.N1	23-FEB-2012 06:23:24	Dark	49.000	10	Bet Cen	0.61000	28000.	98	52218	No
11	GOM_NL__2PRFIN20120223_062705_000000343112_00049_52218_5724.N1	23-FEB-2012 06:27:05	Dark	33.500	26	Gam Cru	1.6240	2900.0	67	52218	No
12	GOM_NL__2PRFIN20120223_075256_000000453112_00049_52218_5725.N1	23-FEB-2012 07:52:56	Dark	44.500	40	The Sco	1.8590	7100.0	89	52218	No
13	GOM_NL__2PRFIN20120223_080339_000000413112_00050_52219_5743.N1	23-FEB-2012 08:03:39	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52219	No
14	GOM_NL__2PRFIN20120223_080719_000000353112_00050_52219_5744.N1	23-FEB-2012 08:07:19	Dark	34.500	26	Gam Cru	1.6240	2900.0	69	52219	No
15	GOM_NL__2PRFIN20120223_093311_000000463112_00050_52219_5745.N1	23-FEB-2012 09:33:11	Dark	46.000	40	The Sco	1.8590	7100.0	92	52219	No
16	GOM_NL__2PRFIN20120223_094353_000000543112_00051_52220_5777.N1	23-FEB-2012 09:43:53	Dark	53.500	10	Bet Cen	0.61000	28000.	107	52220	No
17	GOM_NL__2PRFIN20120223_094734_000000373112_00051_52220_5778.N1	23-FEB-2012 09:47:34	Dark	36.500	26	Gam Cru	1.6240	2900.0	73	52220	No
18	GOM_NL__2PRFIN20120223_111325_000000483112_00051_52220_5779.N1	23-FEB-2012 11:13:25	Dark	48.000	40	The Sco	1.8590	7100.0	96	52220	No
19	GOM_NL__2PRFIN20120223_112408_000000513112_00052_52221_6103.N1	23-FEB-2012 11:24:08	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52221	No
20	GOM_NL__2PRFIN20120223_112748_000000383112_00052_52221_6104.N1	23-FEB-2012 11:27:48	Dark	37.500	26	Gam Cru	1.6240	2900.0	75	52221	No
21	GOM_NL__2PRFIN20120223_125340_000000463112_00052_52221_6105.N1	23-FEB-2012 12:53:40	Dark	45.500	40	The Sco	1.8590	7100.0	91	52221	No
22	GOM_NL__2PRFIN20120223_130422_000000453112_00053_52222_5850.N1	23-FEB-2012 13:04:22	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52222	No
23	GOM_NL__2PRFIN20120223_130803_000000393112_00053_52222_5851.N1	23-FEB-2012 13:08:03	Dark	38.500	26	Gam Cru	1.6240	2900.0	77	52222	No
24	GOM_NL__2PRFIN20120223_143354_000000453112_00053_52222_5852.N1	23-FEB-2012 14:33:54	Dark	45.000	40	The Sco	1.8590	7100.0	90	52222	No
25	GOM_NL__2PRFIN20120223_144437_000000413112_00054_52223_5959.N1	23-FEB-2012 14:44:37	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52223	No
26	GOM_NL__2PRFIN20120223_144817_000000403112_00054_52223_5960.N1	23-FEB-2012 14:48:17	Dark	39.500	26	Gam Cru	1.6240	2900.0	79	52223	No
27	GOM_NL__2PRFIN20120223_161409_000000483112_00054_52223_5961.N1	23-FEB-2012 16:14:09	Dark	48.000	40	The Sco	1.8590	7100.0	96	52223	No
28	GOM_NL__2PRFIN20120223_162451_000000443112_00055_52224_5963.N1	23-FEB-2012 16:24:51	Dark	43.500	10	Bet Cen	0.61000	28000.	87	52224	No
29	GOM_NL__2PRFIN20120223_162832_000000423112_00055_52224_5964.N1	23-FEB-2012 16:28:32	Dark	41.500	26	Gam Cru	1.6240	2900.0	83	52224	No
30	GOM_NL__2PRFIN20120223_175423_000000443112_00055_52224_5965.N1	23-FEB-2012 17:54:23	Dark	43.500	40	The Sco	1.8590	7100.0	87	52224	No
31	GOM_NL__2PRFIN20120223_180506_000000433112_00056_52225_5989.N1	23-FEB-2012 18:05:06	Dark	43.000	10	Bet Cen	0.61000	28000.	86	52225	No
32	GOM_NL__2PRFIN20120223_180846_000000433112_00056_52225_5990.N1	23-FEB-2012 18:08:46	Dark	42.500	26	Gam Cru	1.6240	2900.0	85	52225	No
33	GOM_NL__2PRFIN20120223_193438_000000423112_00056_52225_5991.N1	23-FEB-2012 19:34:38	Dark	41.500	40	The Sco	1.8590	7100.0	83	52225	No
34	GOM_NL__2PRFIN20120223_194520_000000533112_00057_52226_6024.N1	23-FEB-2012 19:45:20	Dark	52.500	10	Bet Cen	0.61000	28000.	105	52226	No
35	GOM_NL__2PRFIN20120223_194900_000000443112_00057_52226_6025.N1	23-FEB-2012 19:49:00	Dark	43.500	26	Gam Cru	1.6240	2900.0	87	52226	No
36	GOM_NL__2PRFIN20120223_211452_000000423112_00057_52226_6026.N1	23-FEB-2012 21:14:52	Dark	42.000	40	The Sco	1.8590	7100.0	84	52226	No
37	GOM_NL__2PRFIN20120223_212535_000000423112_00058_52227_6059.N1	23-FEB-2012 21:25:35	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52227	No
38	GOM_NL__2PRFIN20120223_212915_000000453112_00058_52227_6060.N1	23-FEB-2012 21:29:15	Dark	44.500	26	Gam Cru	1.6240	2900.0	89	52227	No
39	GOM_NL__2PRFIN20120223_225507_000000483112_00058_52227_6061.N1	23-FEB-2012 22:55:07	Dark	48.000	40	The Sco	1.8590	7100.0	96	52227	No
40	GOM_NL__2PRFIN20120223_230549_000000443112_00059_52228_6084.N1	23-FEB-2012 23:05:49	Dark	44.000	10	Bet Cen	0.61000	28000.	88	52228	No
41	GOM_NL__2PRFIN20120223_230929_000000473112_00059_52228_6085.N1	23-FEB-2012 23:09:29	Dark	46.500	26	Gam Cru	1.6240	2900.0	93	52228	No

### 3. Quality information per product

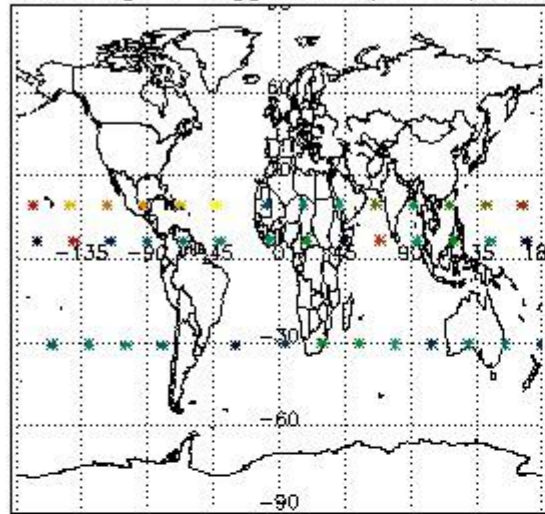
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

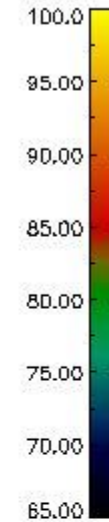
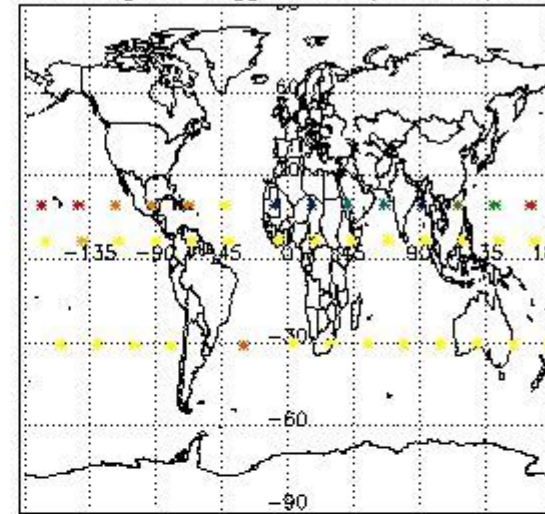


#### 3.2 Plot quality information per product (world map)

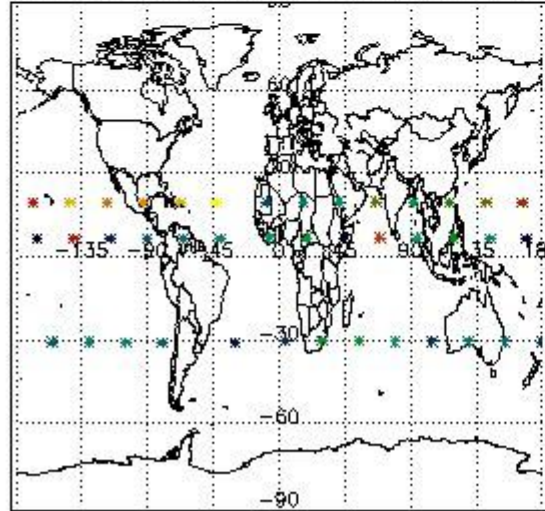
Percentage of flagged data per O3 profile



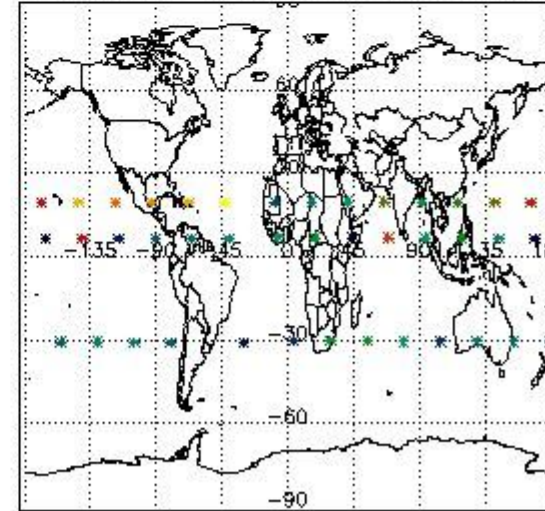
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

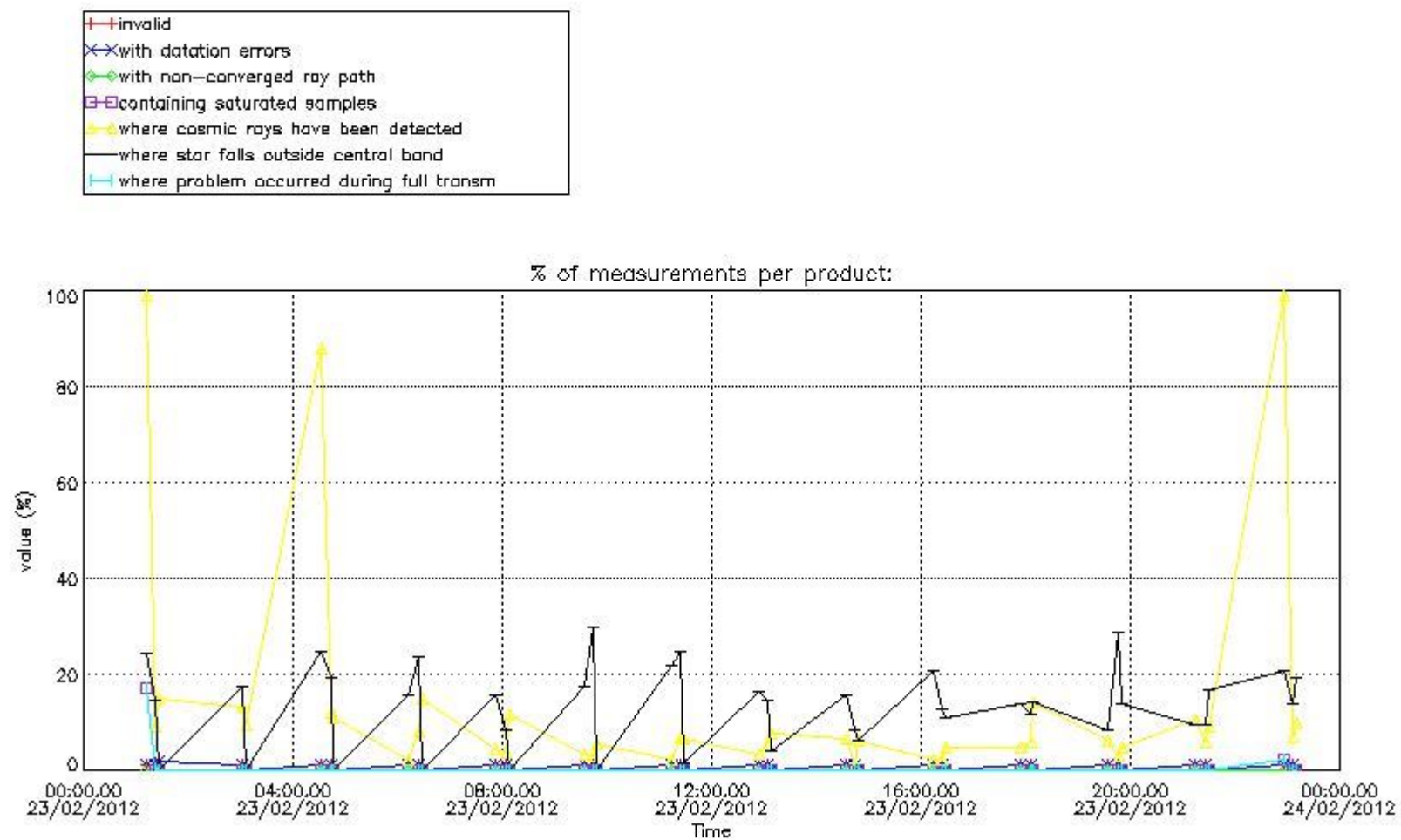


#### 4. Level 1 quality information per product

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

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

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

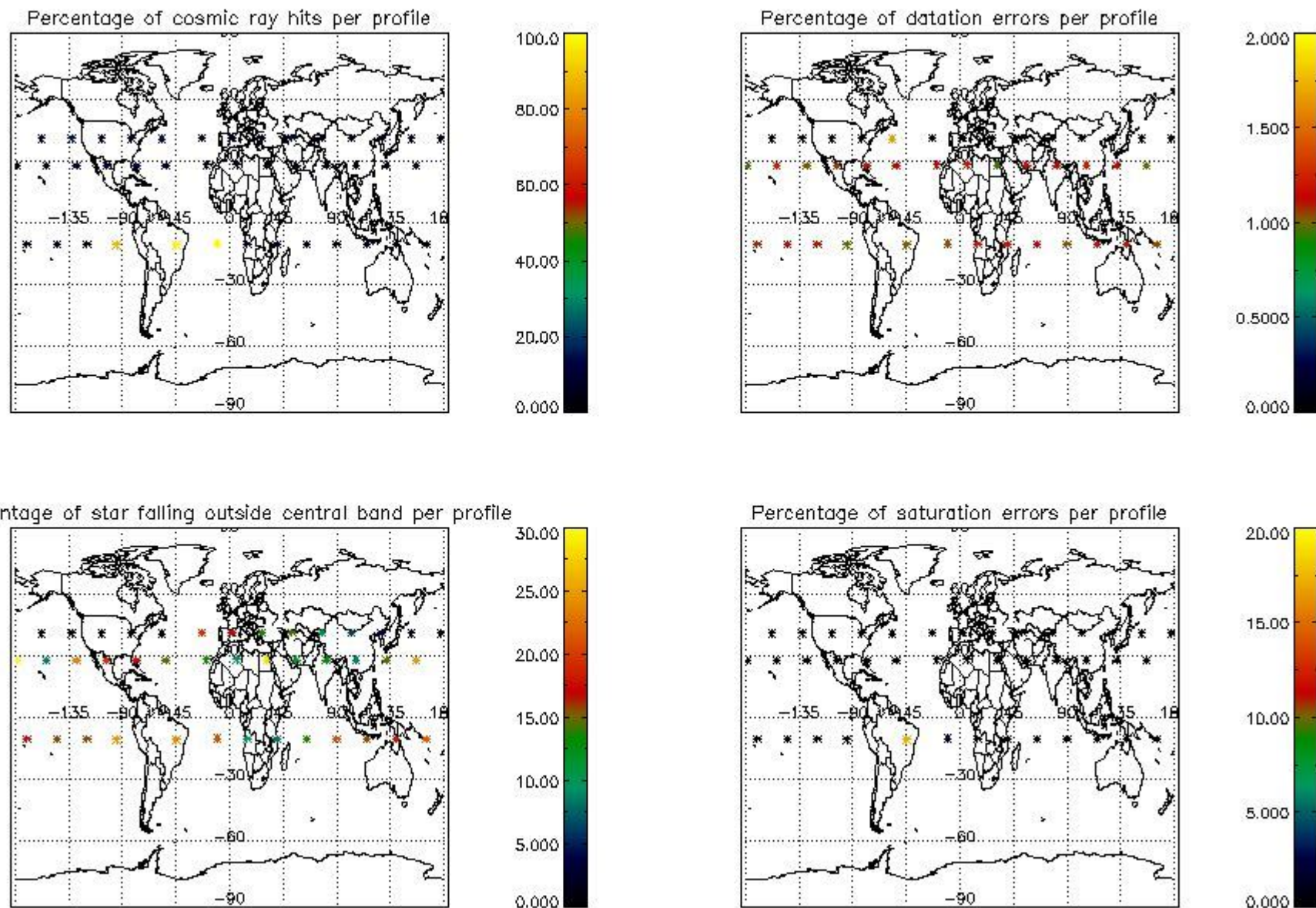


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!Warning: No products without errors in descending found

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

**!Warning: No products without errors in descending found**

### 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:

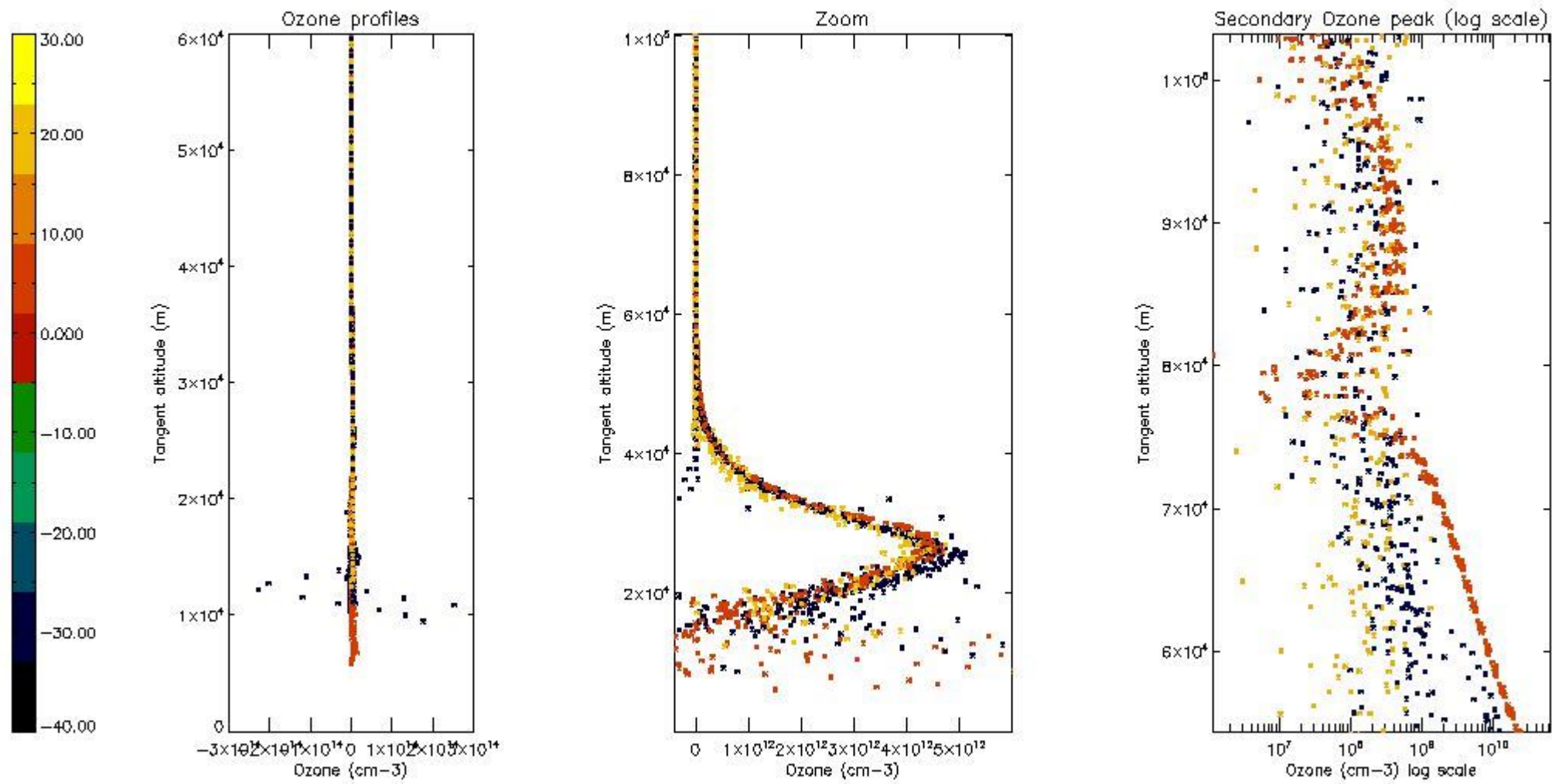
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	100
STD < 20	45
STD < 10	36
STD < 5	22

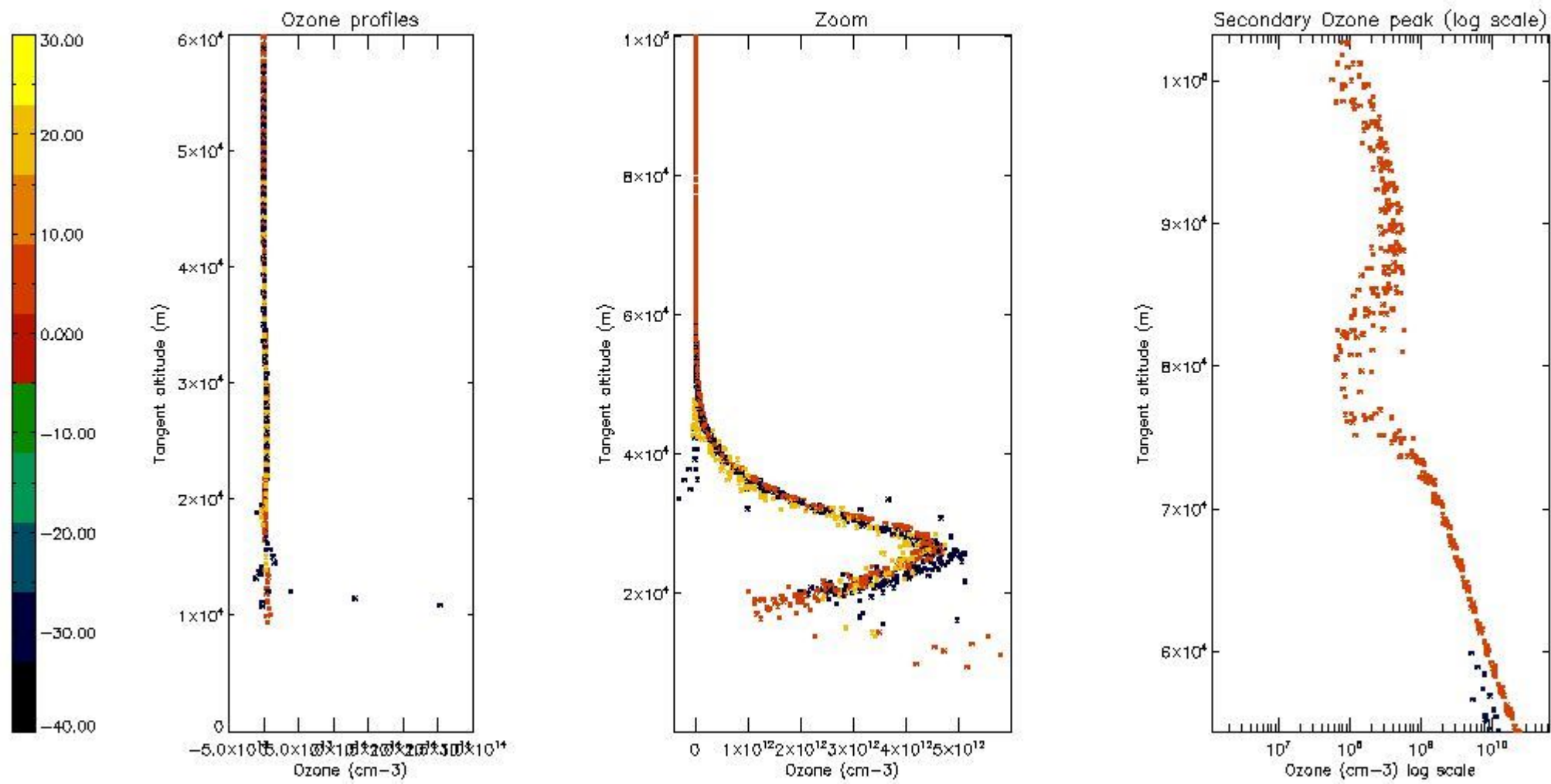
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

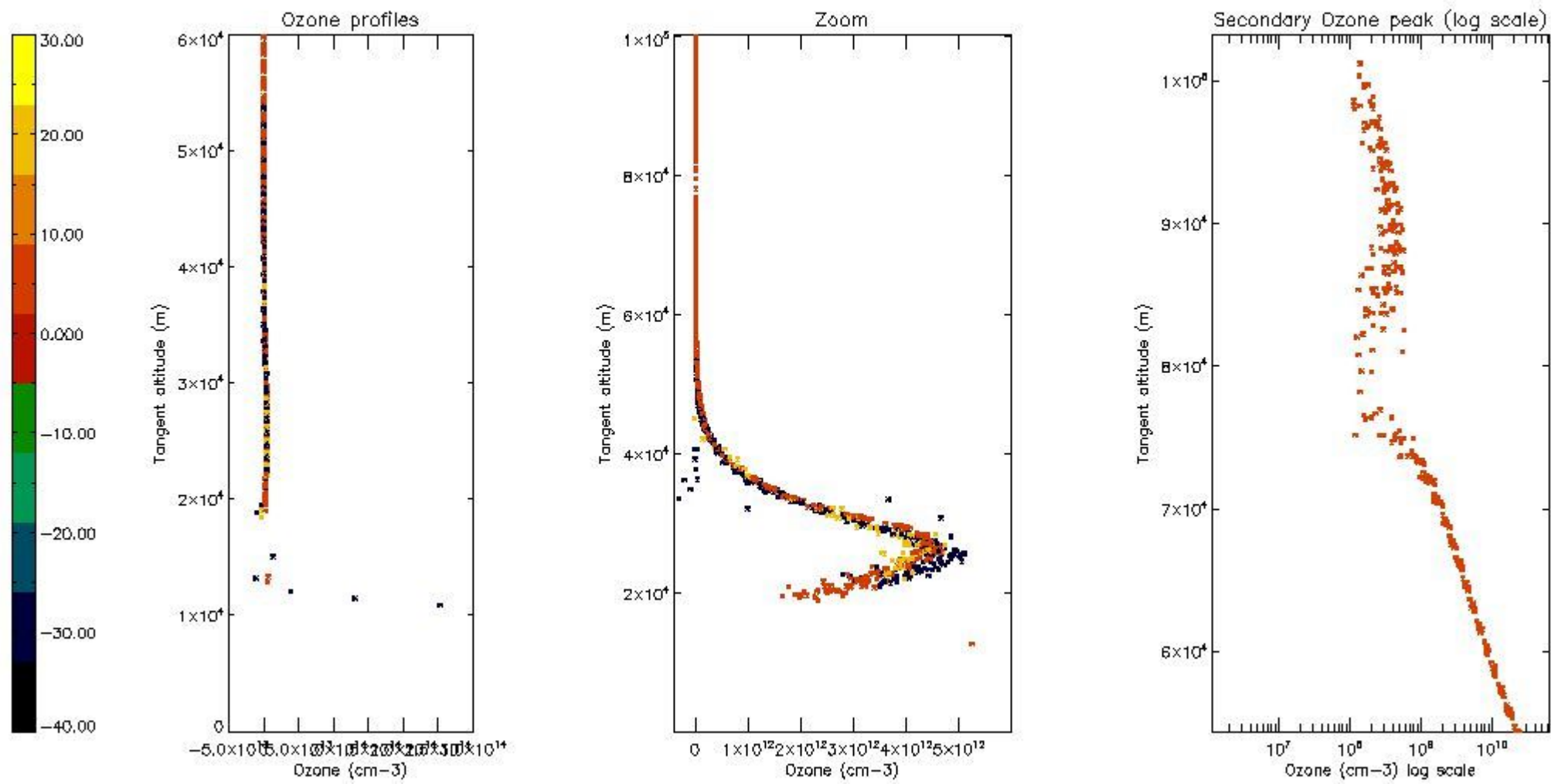
The colorbar represents the latitude.



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

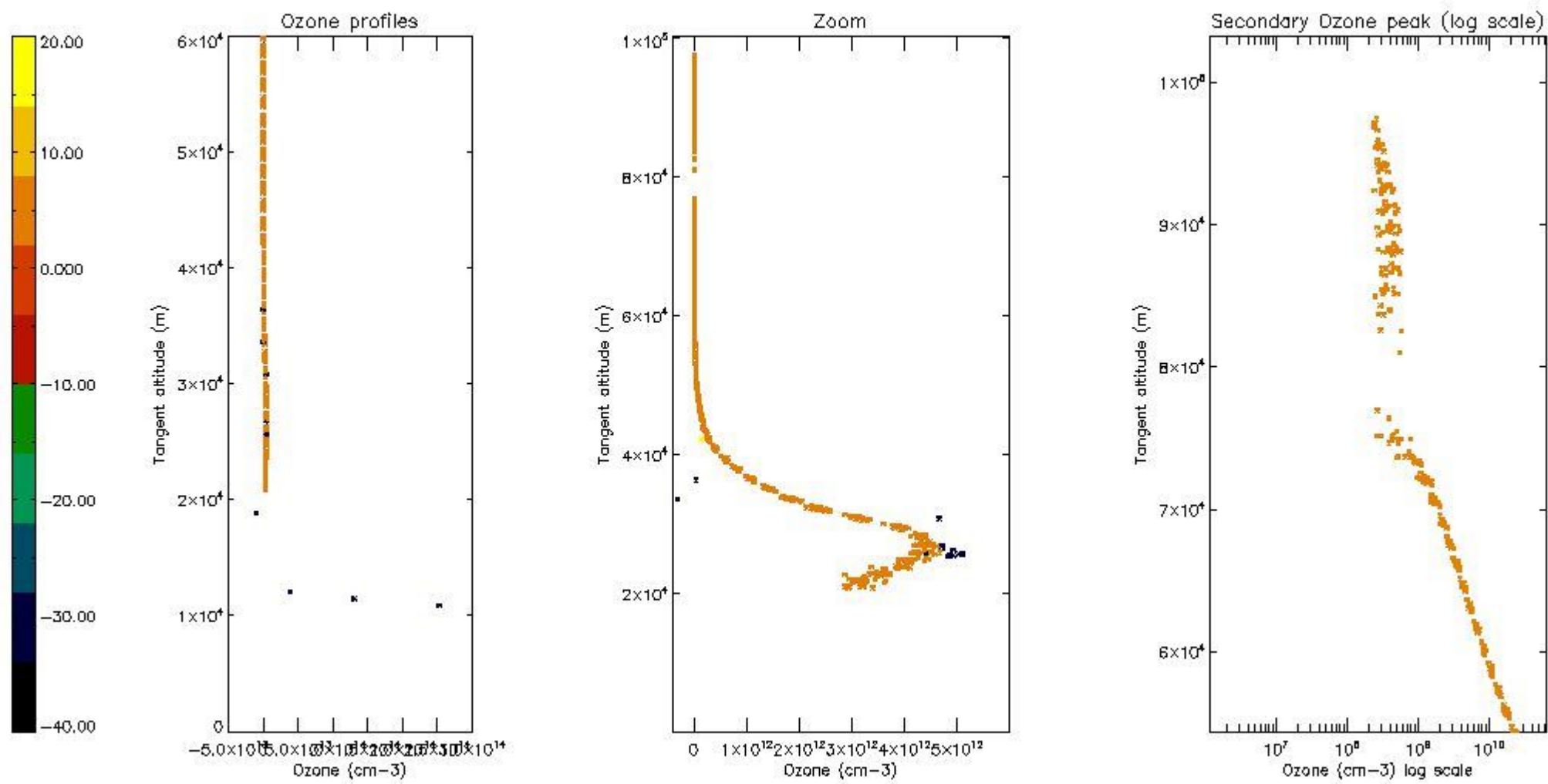
The colorbar represents the latitude.





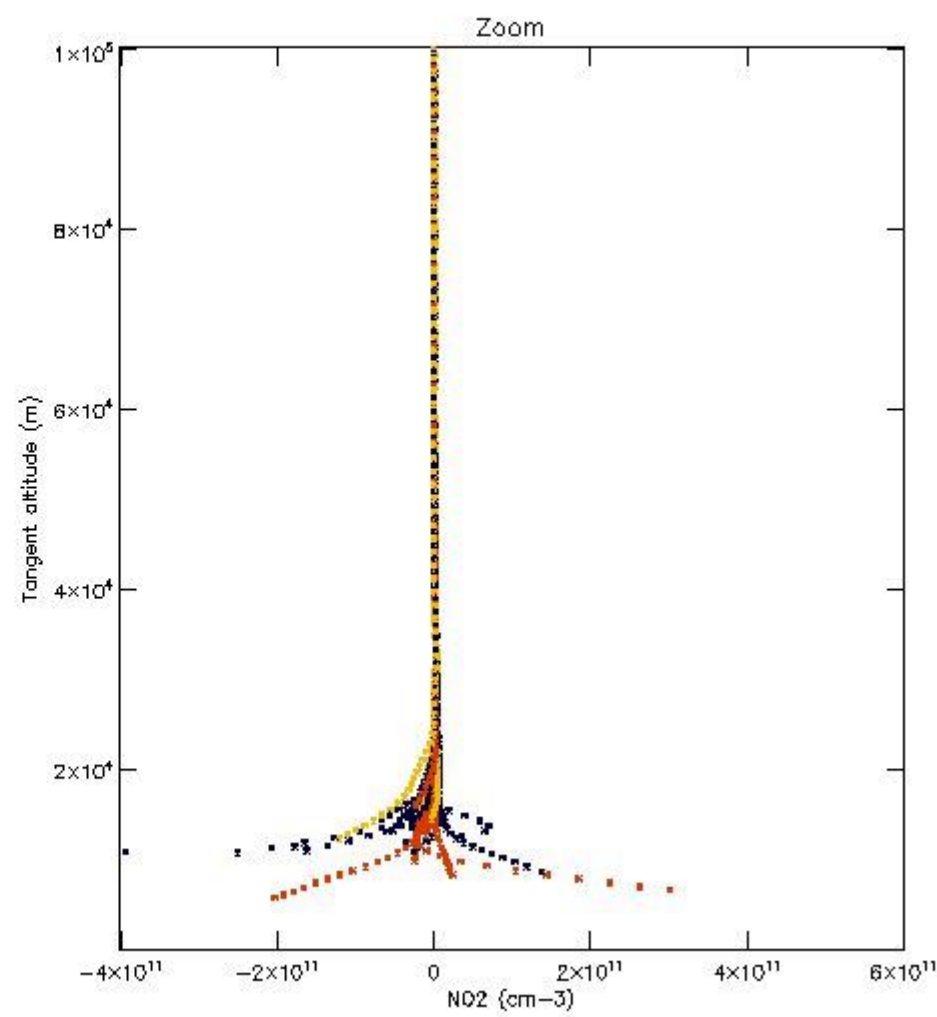
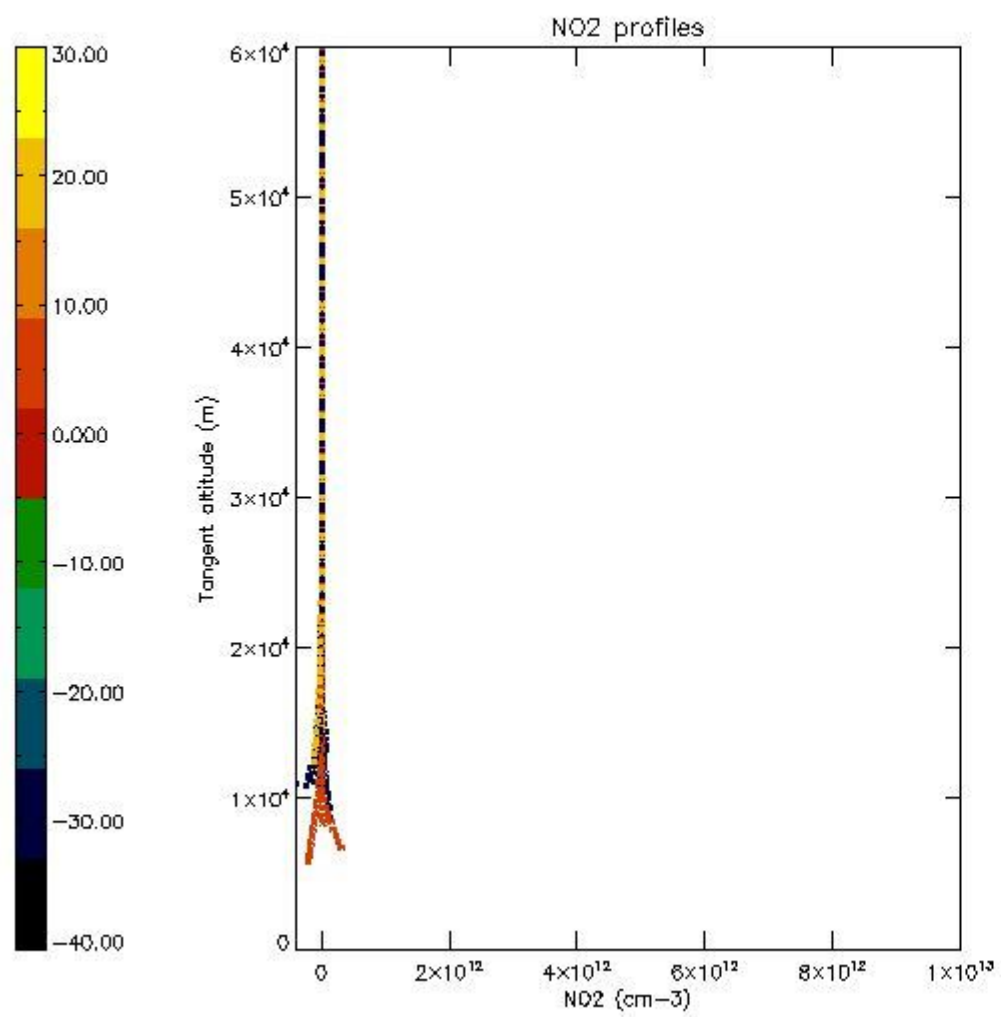
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



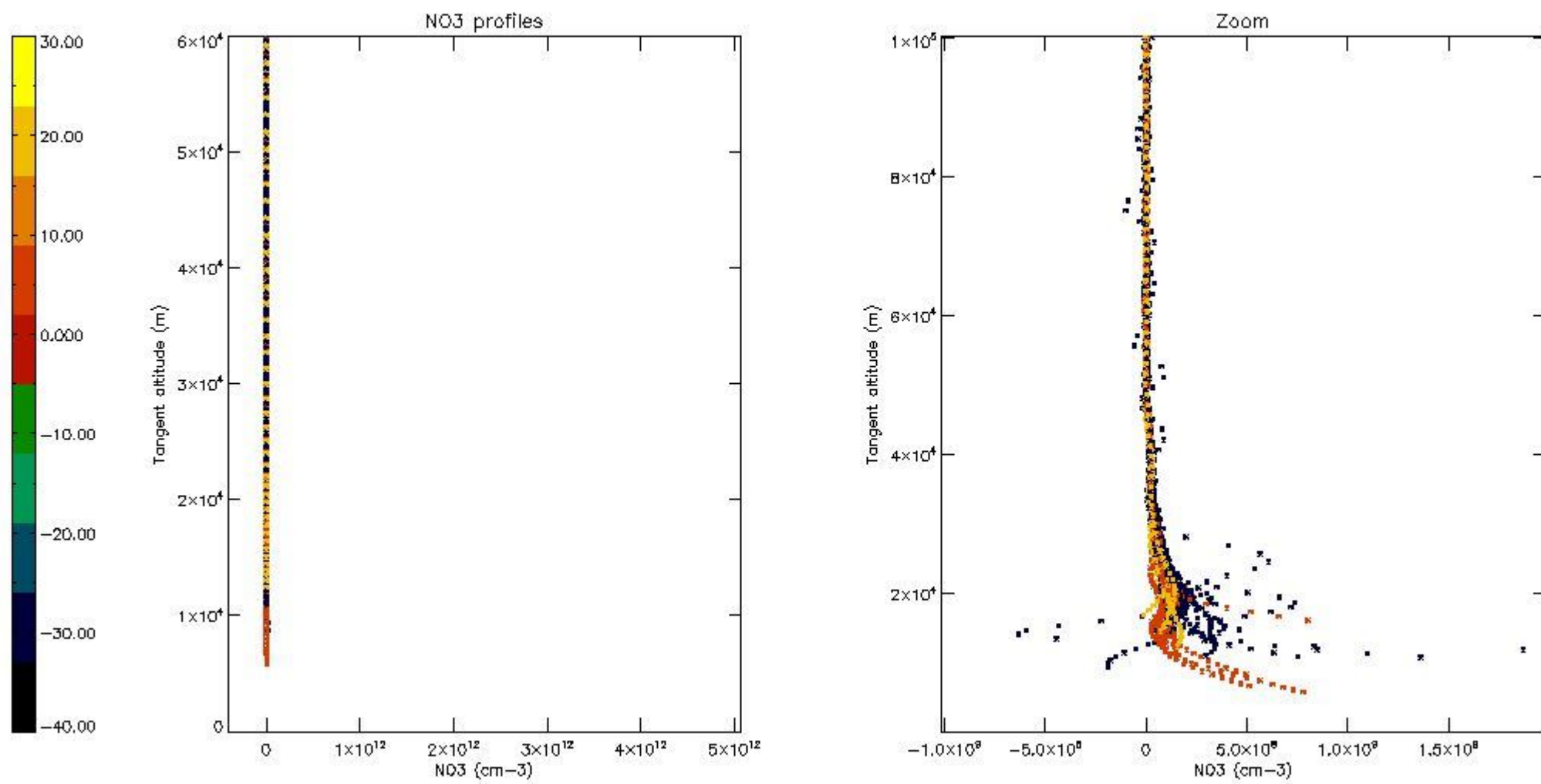
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



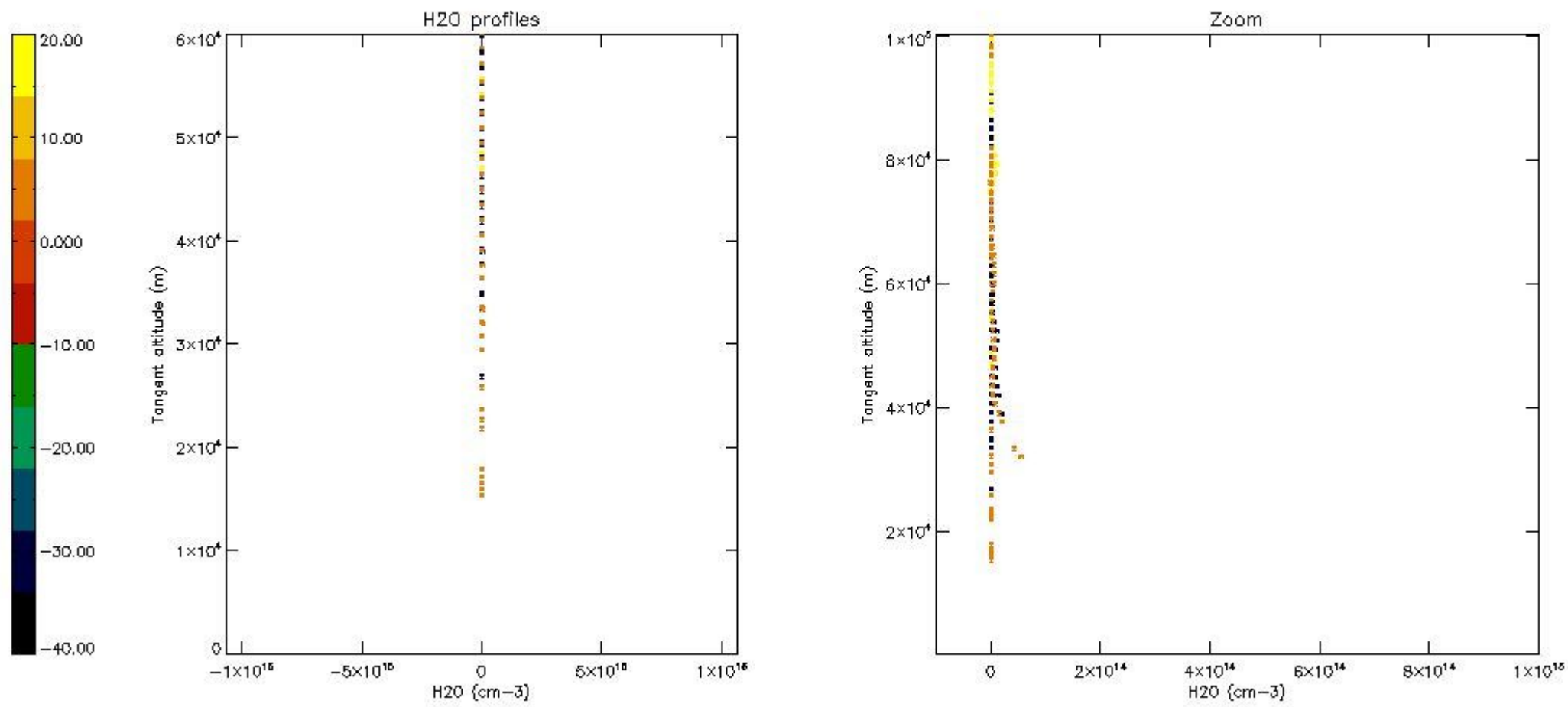
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	23-FEB-2012 01:11:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-FEB-2012 01:11:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-FEB-2012 01:11:58

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

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

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

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

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

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

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

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

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

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

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

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### [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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Start time of products	23-02-2012 (23FEB2012 00:00:00)
Stop time of products	24-02-2012 (24FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	41
Nb of prods with errors	0

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

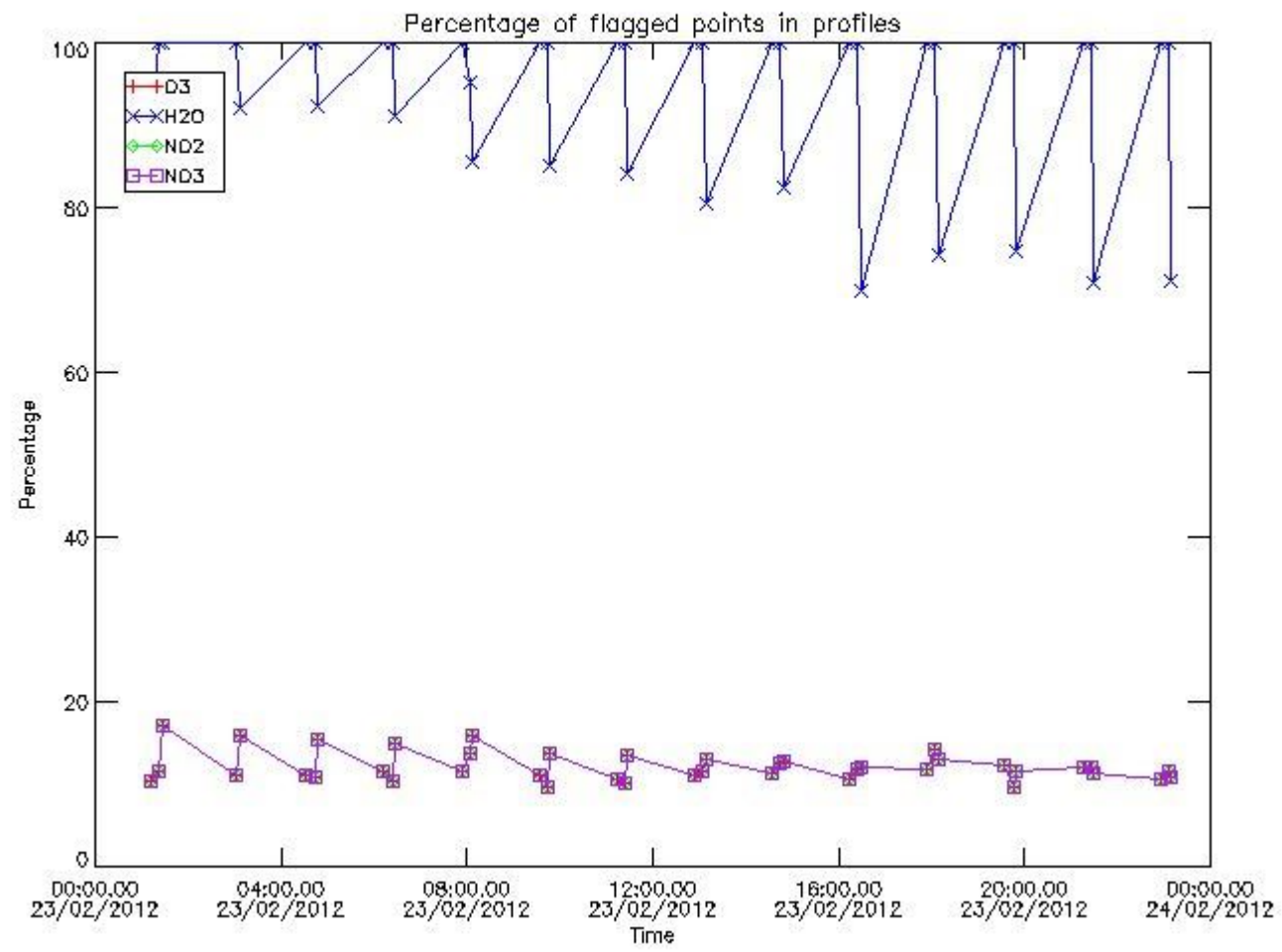
**!Warning: No products without errors in BRIGHT limb conditions found**

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120223_011158_000000503112_00045_52214_5663.N1	23-FEB-2012 01:11:58	Dark	49.500	40	The Sco	1.8590	7100.0	99	52214	No
2	GOM_NL__2PRFIN20120223_012240_000000453112_00046_52215_5665.N1	23-FEB-2012 01:22:40	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52215	No
3	GOM_NL__2PRFIN20120223_012621_000000303112_00046_52215_5666.N1	23-FEB-2012 01:26:21	Dark	30.000	26	Gam Cru	1.6240	2900.0	60	52215	No
4	GOM_NL__2PRFIN20120223_030255_000000463112_00047_52216_5675.N1	23-FEB-2012 03:02:55	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52216	No
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6	GOM_NL__2PRFIN20120223_043227_000000513112_00047_52216_5677.N1	23-FEB-2012 04:32:27	Dark	50.500	40	The Sco	1.8590	7100.0	101	52216	No
7	GOM_NL__2PRFIN20120223_044310_000000473112_00048_52217_5691.N1	23-FEB-2012 04:43:10	Dark	46.500	10	Bet Cen	0.61000	28000.	93	52217	No
8	GOM_NL__2PRFIN20120223_044650_000000333112_00048_52217_5692.N1	23-FEB-2012 04:46:50	Dark	32.500	26	Gam Cru	1.6240	2900.0	65	52217	No
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10	GOM_NL__2PRFIN20120223_062324_000000493112_00049_52218_5723.N1	23-FEB-2012 06:23:24	Dark	49.000	10	Bet Cen	0.61000	28000.	98	52218	No
11	GOM_NL__2PRFIN20120223_062705_000000343112_00049_52218_5724.N1	23-FEB-2012 06:27:05	Dark	33.500	26	Gam Cru	1.6240	2900.0	67	52218	No
12	GOM_NL__2PRFIN20120223_075256_000000453112_00049_52218_5725.N1	23-FEB-2012 07:52:56	Dark	44.500	40	The Sco	1.8590	7100.0	89	52218	No
13	GOM_NL__2PRFIN20120223_080339_000000413112_00050_52219_5743.N1	23-FEB-2012 08:03:39	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52219	No
14	GOM_NL__2PRFIN20120223_080719_000000353112_00050_52219_5744.N1	23-FEB-2012 08:07:19	Dark	34.500	26	Gam Cru	1.6240	2900.0	69	52219	No
15	GOM_NL__2PRFIN20120223_093311_000000463112_00050_52219_5745.N1	23-FEB-2012 09:33:11	Dark	46.000	40	The Sco	1.8590	7100.0	92	52219	No
16	GOM_NL__2PRFIN20120223_094353_000000543112_00051_52220_5777.N1	23-FEB-2012 09:43:53	Dark	53.500	10	Bet Cen	0.61000	28000.	107	52220	No
17	GOM_NL__2PRFIN20120223_094734_000000373112_00051_52220_5778.N1	23-FEB-2012 09:47:34	Dark	36.500	26	Gam Cru	1.6240	2900.0	73	52220	No
18	GOM_NL__2PRFIN20120223_111325_000000483112_00051_52220_5779.N1	23-FEB-2012 11:13:25	Dark	48.000	40	The Sco	1.8590	7100.0	96	52220	No
19	GOM_NL__2PRFIN20120223_112408_000000513112_00052_52221_6103.N1	23-FEB-2012 11:24:08	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52221	No
20	GOM_NL__2PRFIN20120223_112748_000000383112_00052_52221_6104.N1	23-FEB-2012 11:27:48	Dark	37.500	26	Gam Cru	1.6240	2900.0	75	52221	No
21	GOM_NL__2PRFIN20120223_125340_000000463112_00052_52221_6105.N1	23-FEB-2012 12:53:40	Dark	45.500	40	The Sco	1.8590	7100.0	91	52221	No
22	GOM_NL__2PRFIN20120223_130422_000000453112_00053_52222_5850.N1	23-FEB-2012 13:04:22	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52222	No
23	GOM_NL__2PRFIN20120223_130803_000000393112_00053_52222_5851.N1	23-FEB-2012 13:08:03	Dark	38.500	26	Gam Cru	1.6240	2900.0	77	52222	No
24	GOM_NL__2PRFIN20120223_143354_000000453112_00053_52222_5852.N1	23-FEB-2012 14:33:54	Dark	45.000	40	The Sco	1.8590	7100.0	90	52222	No
25	GOM_NL__2PRFIN20120223_144437_000000413112_00054_52223_5959.N1	23-FEB-2012 14:44:37	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52223	No
26	GOM_NL__2PRFIN20120223_144817_000000403112_00054_52223_5960.N1	23-FEB-2012 14:48:17	Dark	39.500	26	Gam Cru	1.6240	2900.0	79	52223	No
27	GOM_NL__2PRFIN20120223_161409_000000483112_00054_52223_5961.N1	23-FEB-2012 16:14:09	Dark	48.000	40	The Sco	1.8590	7100.0	96	52223	No
28	GOM_NL__2PRFIN20120223_162451_000000443112_00055_52224_5963.N1	23-FEB-2012 16:24:51	Dark	43.500	10	Bet Cen	0.61000	28000.	87	52224	No
29	GOM_NL__2PRFIN20120223_162832_000000423112_00055_52224_5964.N1	23-FEB-2012 16:28:32	Dark	41.500	26	Gam Cru	1.6240	2900.0	83	52224	No
30	GOM_NL__2PRFIN20120223_175423_000000443112_00055_52224_5965.N1	23-FEB-2012 17:54:23	Dark	43.500	40	The Sco	1.8590	7100.0	87	52224	No
31	GOM_NL__2PRFIN20120223_180506_000000433112_00056_52225_5989.N1	23-FEB-2012 18:05:06	Dark	43.000	10	Bet Cen	0.61000	28000.	86	52225	No
32	GOM_NL__2PRFIN20120223_180846_000000433112_00056_52225_5990.N1	23-FEB-2012 18:08:46	Dark	42.500	26	Gam Cru	1.6240	2900.0	85	52225	No
33	GOM_NL__2PRFIN20120223_193438_000000423112_00056_52225_5991.N1	23-FEB-2012 19:34:38	Dark	41.500	40	The Sco	1.8590	7100.0	83	52225	No
34	GOM_NL__2PRFIN20120223_194520_000000533112_00057_52226_6024.N1	23-FEB-2012 19:45:20	Dark	52.500	10	Bet Cen	0.61000	28000.	105	52226	No
35	GOM_NL__2PRFIN20120223_194900_000000443112_00057_52226_6025.N1	23-FEB-2012 19:49:00	Dark	43.500	26	Gam Cru	1.6240	2900.0	87	52226	No
36	GOM_NL__2PRFIN20120223_211452_000000423112_00057_52226_6026.N1	23-FEB-2012 21:14:52	Dark	42.000	40	The Sco	1.8590	7100.0	84	52226	No
37	GOM_NL__2PRFIN20120223_212535_000000423112_00058_52227_6059.N1	23-FEB-2012 21:25:35	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52227	No
38	GOM_NL__2PRFIN20120223_212915_000000453112_00058_52227_6060.N1	23-FEB-2012 21:29:15	Dark	44.500	26	Gam Cru	1.6240	2900.0	89	52227	No
39	GOM_NL__2PRFIN20120223_225507_000000483112_00058_52227_6061.N1	23-FEB-2012 22:55:07	Dark	48.000	40	The Sco	1.8590	7100.0	96	52227	No
40	GOM_NL__2PRFIN20120223_230549_000000443112_00059_52228_6084.N1	23-FEB-2012 23:05:49	Dark	44.000	10	Bet Cen	0.61000	28000.	88	52228	No
41	GOM_NL__2PRFIN20120223_230929_000000473112_00059_52228_6085.N1	23-FEB-2012 23:09:29	Dark	46.500	26	Gam Cru	1.6240	2900.0	93	52228	No

### 3. Quality information per product

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

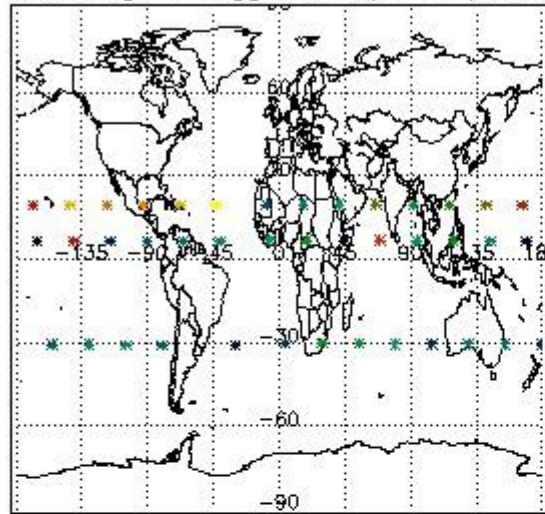
#### 3.1 Plot quality information per product (time dependant)



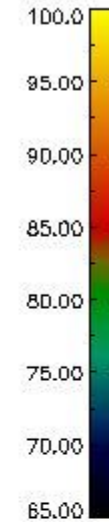
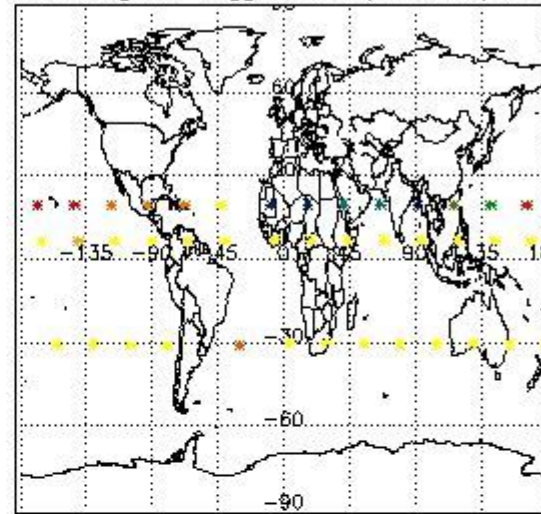
#### 3.2 Plot quality information per product (world map)



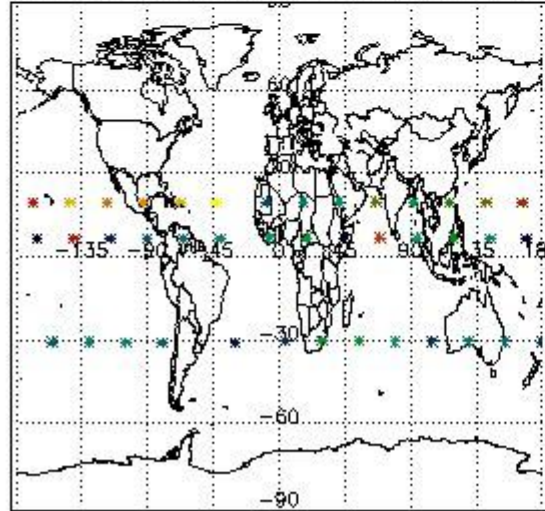
Percentage of flagged data per O3 profile



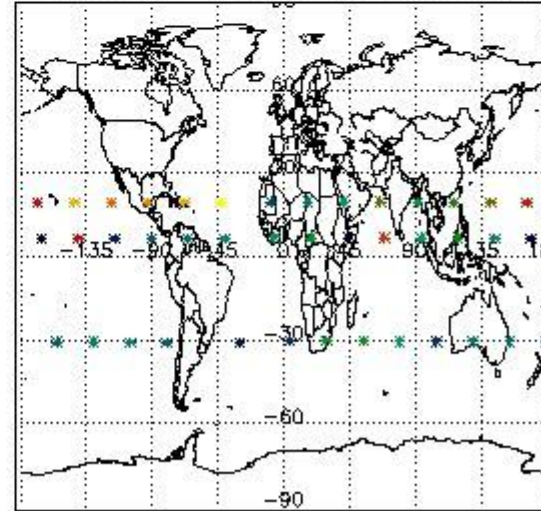
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

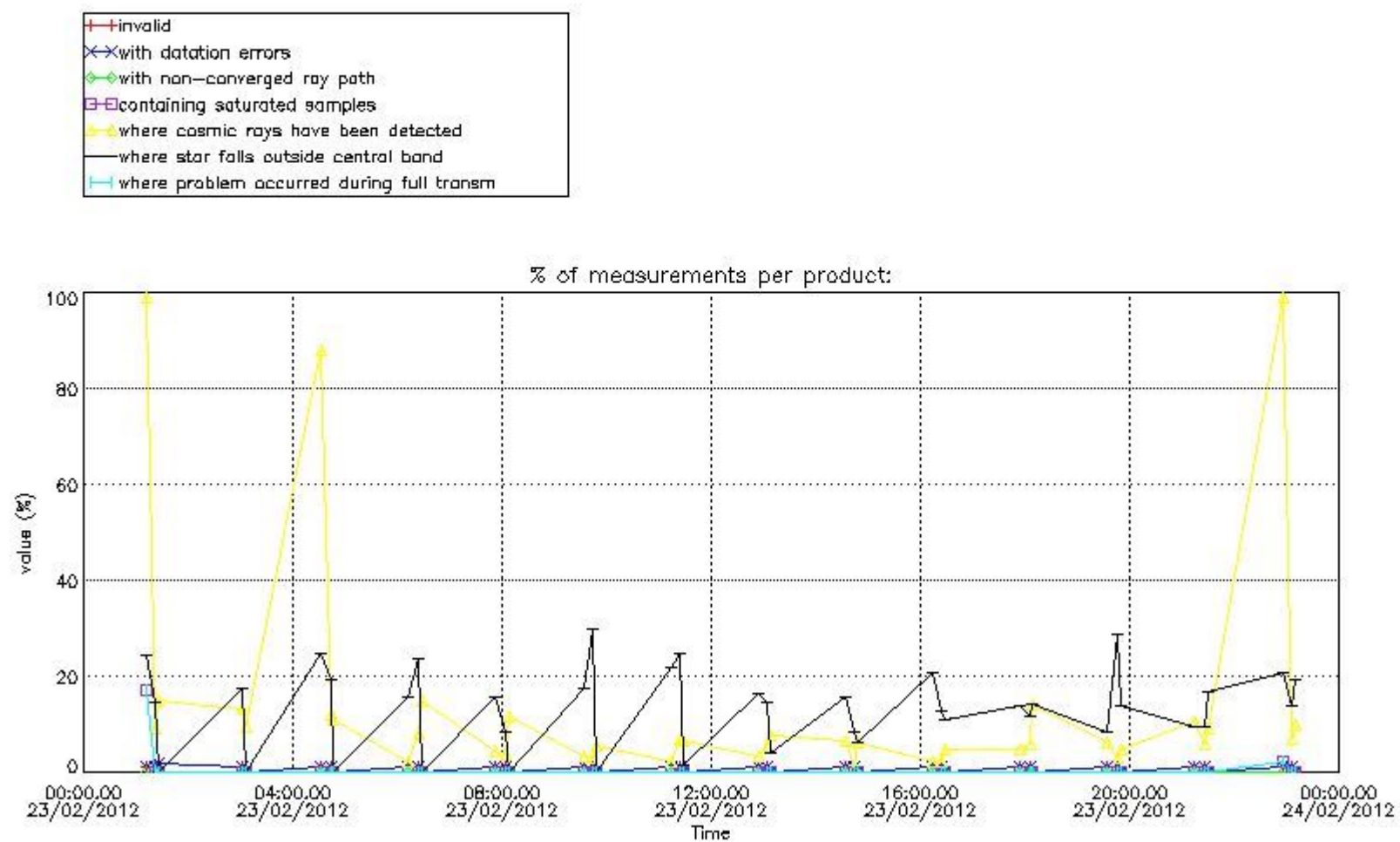


#### 4. Level 1 quality information per product

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

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

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

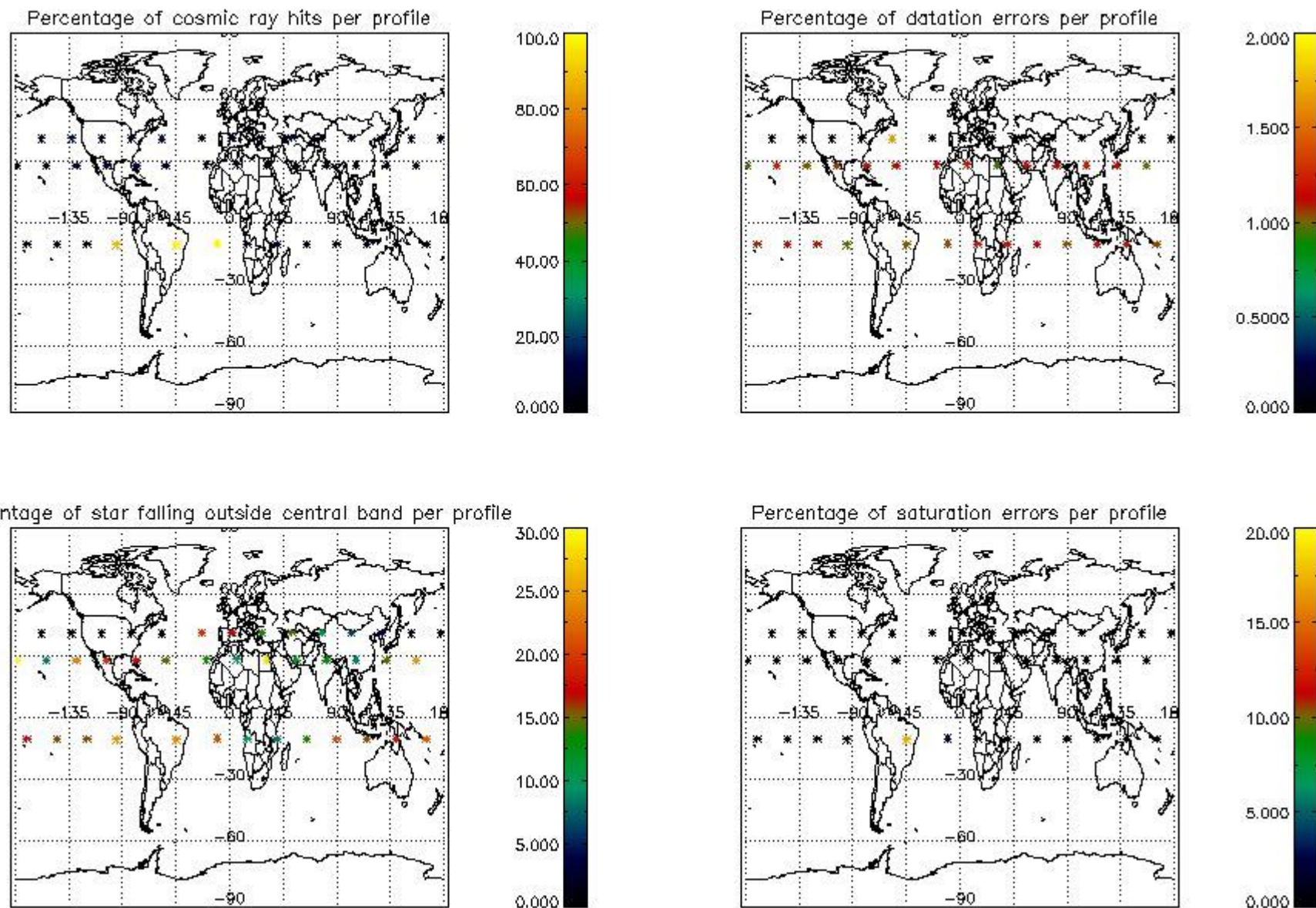


*4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes*

**!Warning: No products without errors in descending found**

*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

**!Warning: No products without errors in descending found**

### 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:

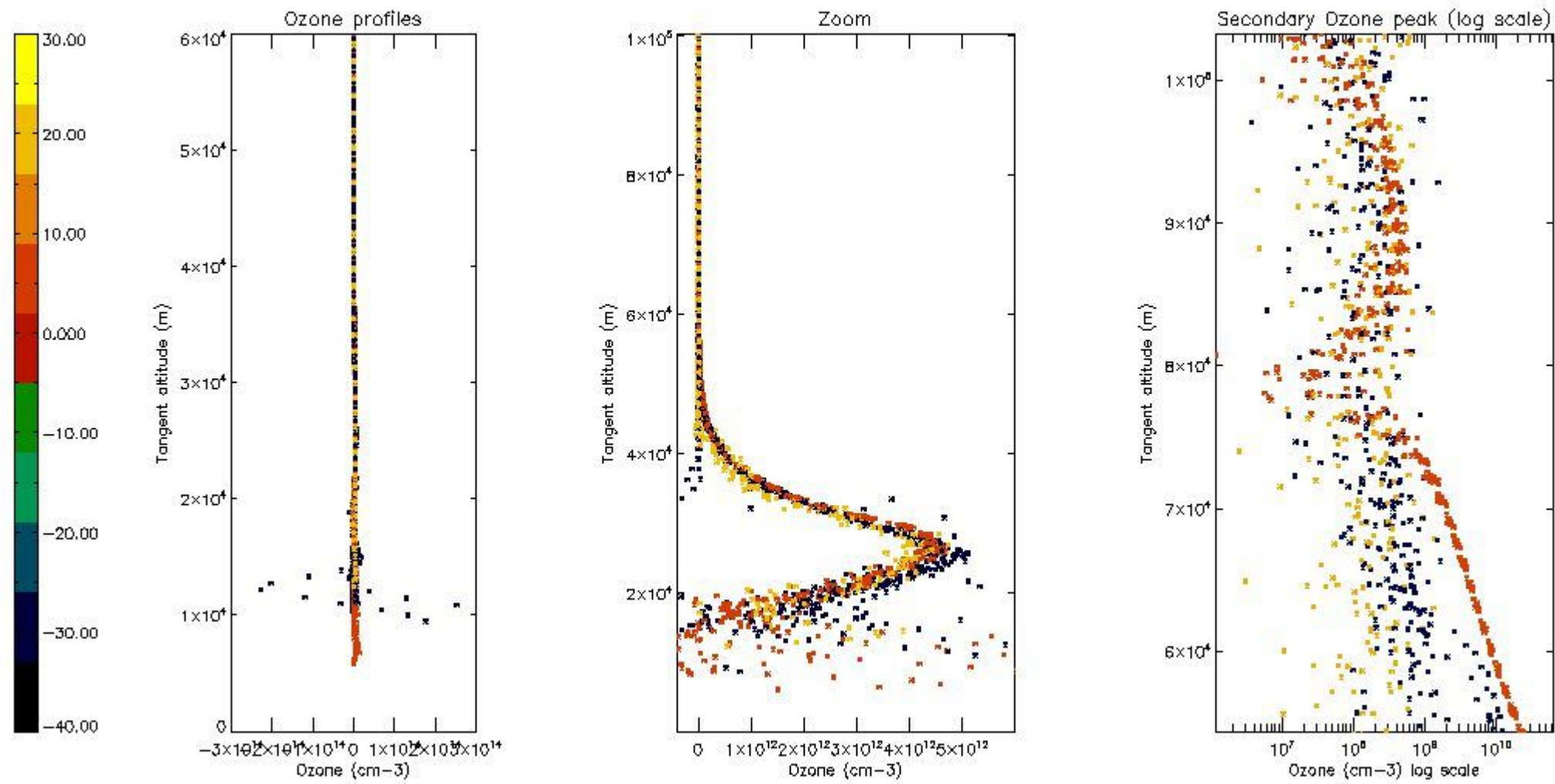
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	100
STD < 20	45
STD < 10	36
STD < 5	22

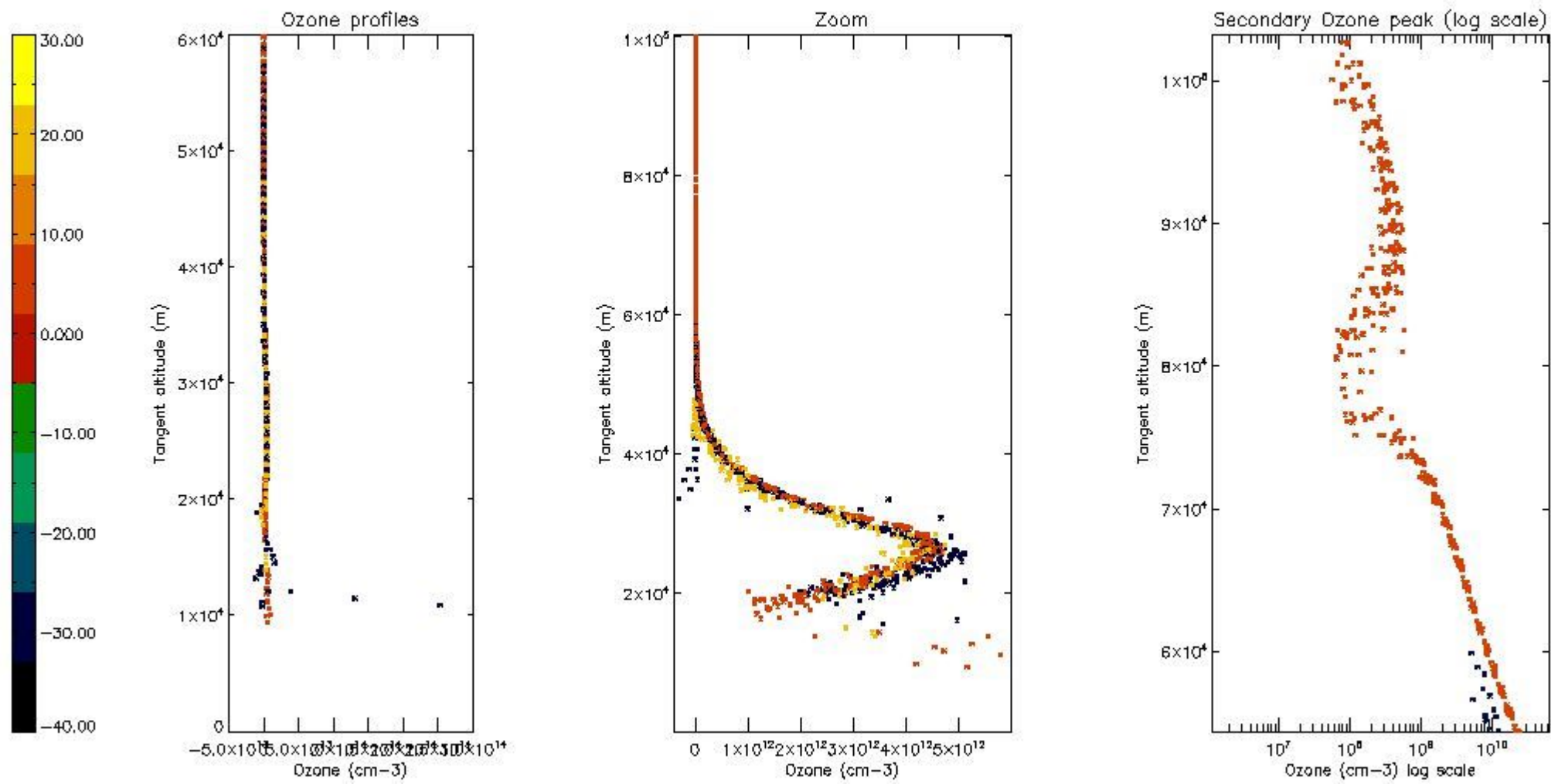
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



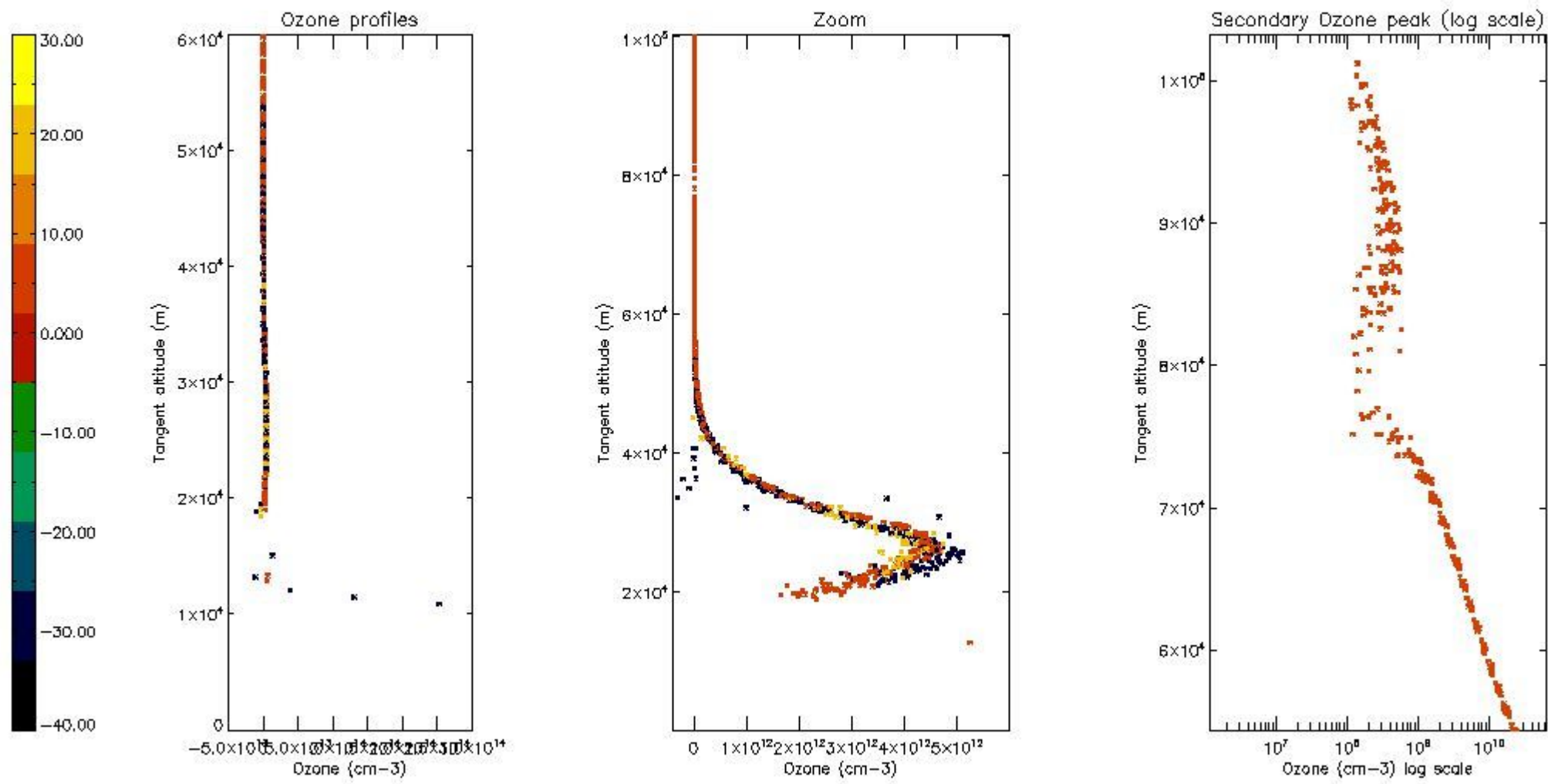
### 5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



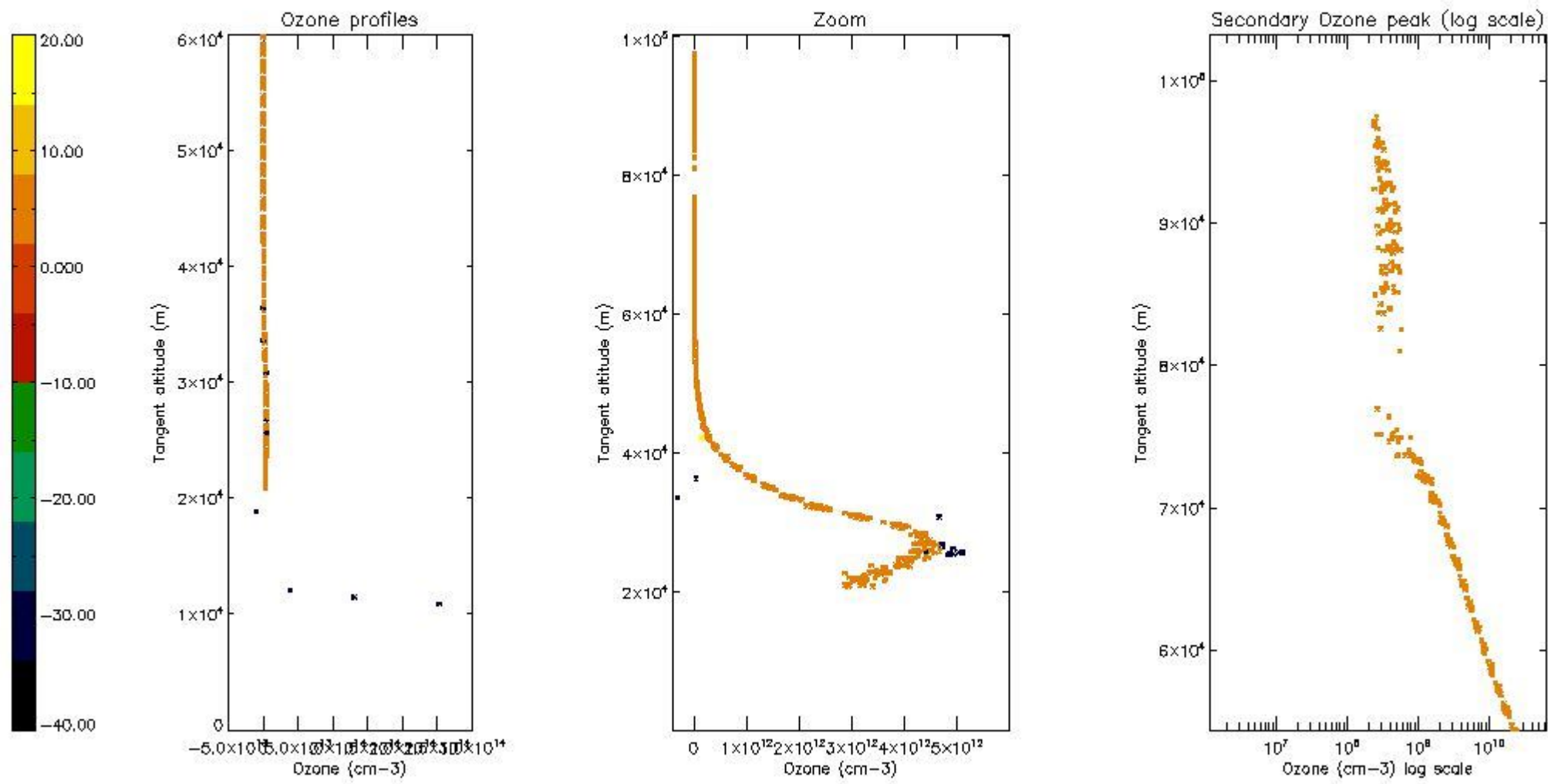
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



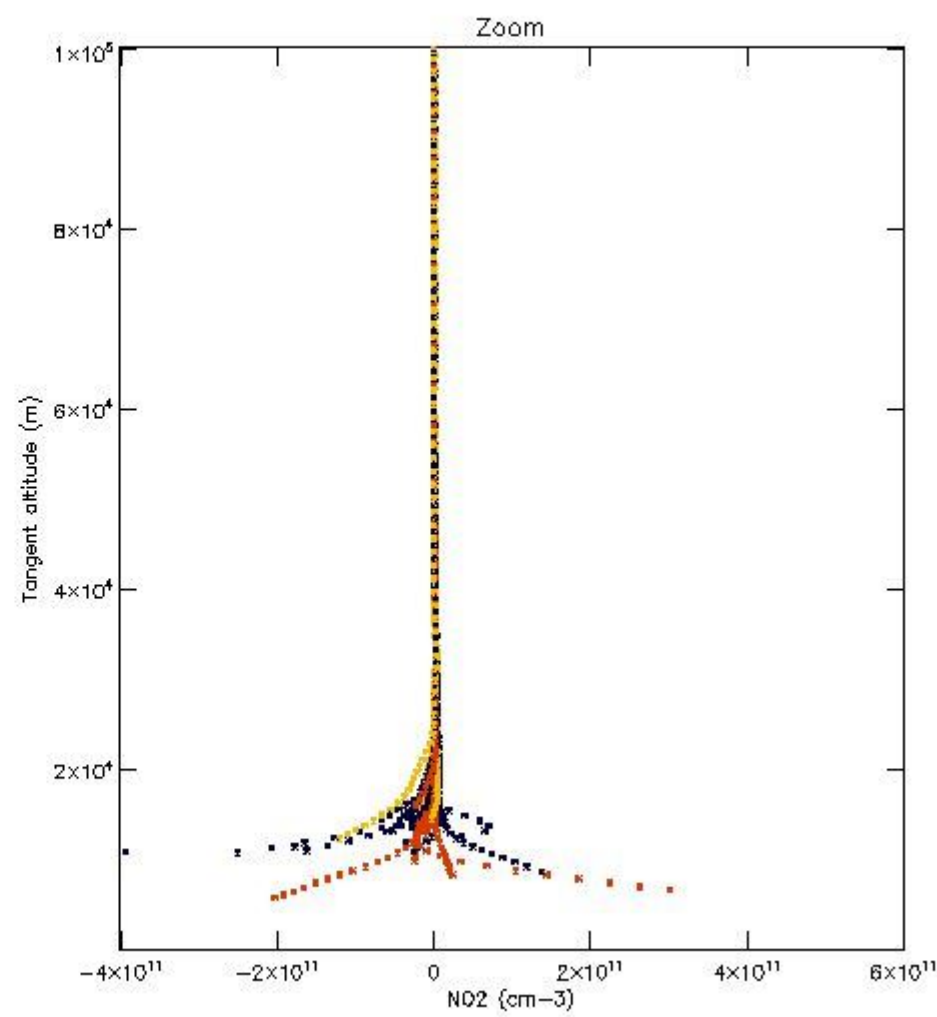
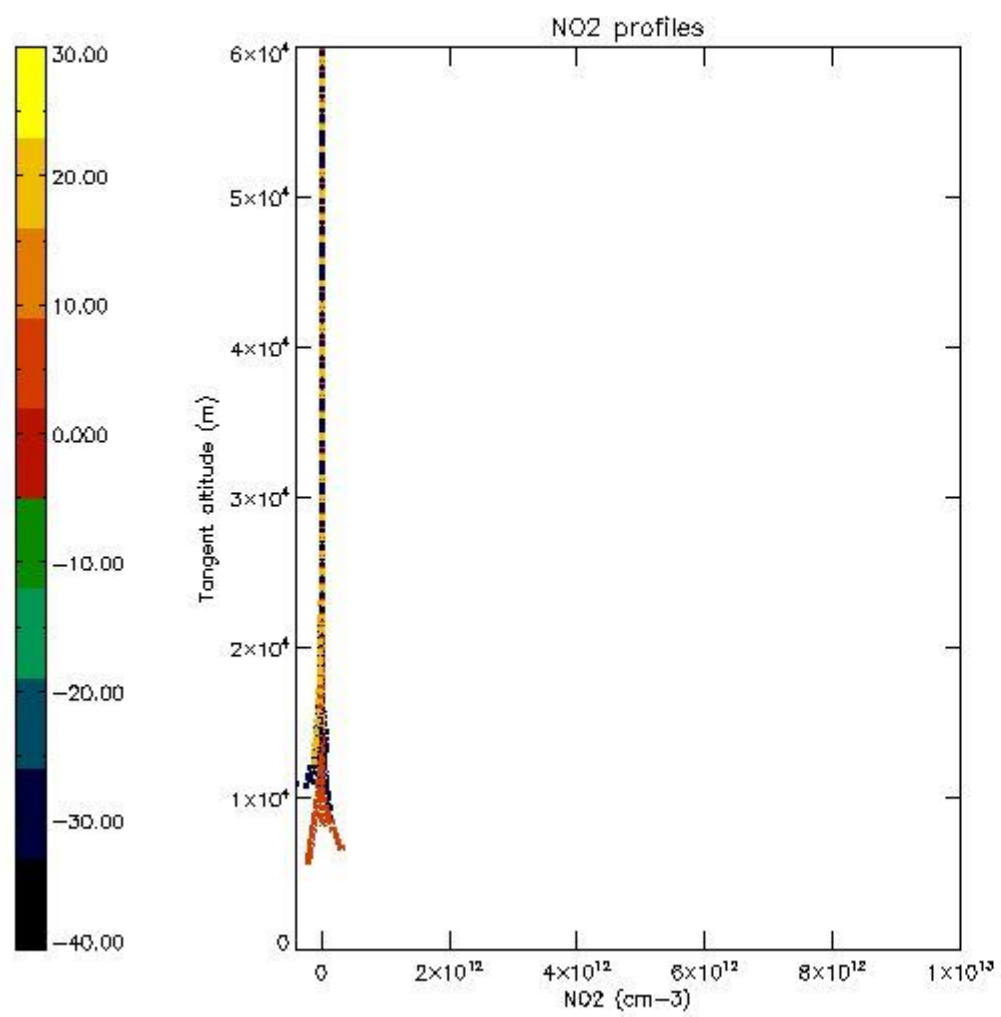
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

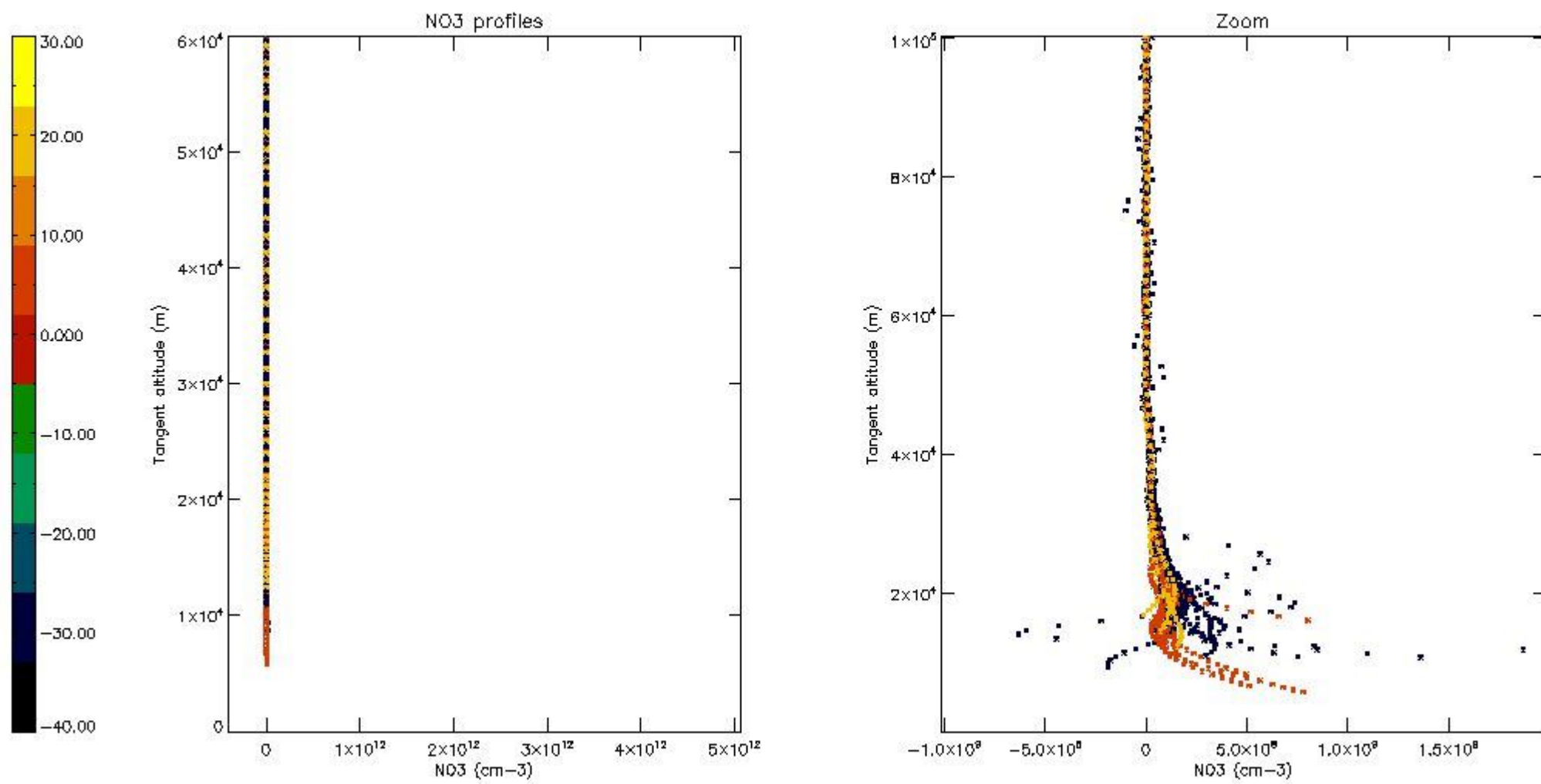
The colorbar represents the latitude.



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

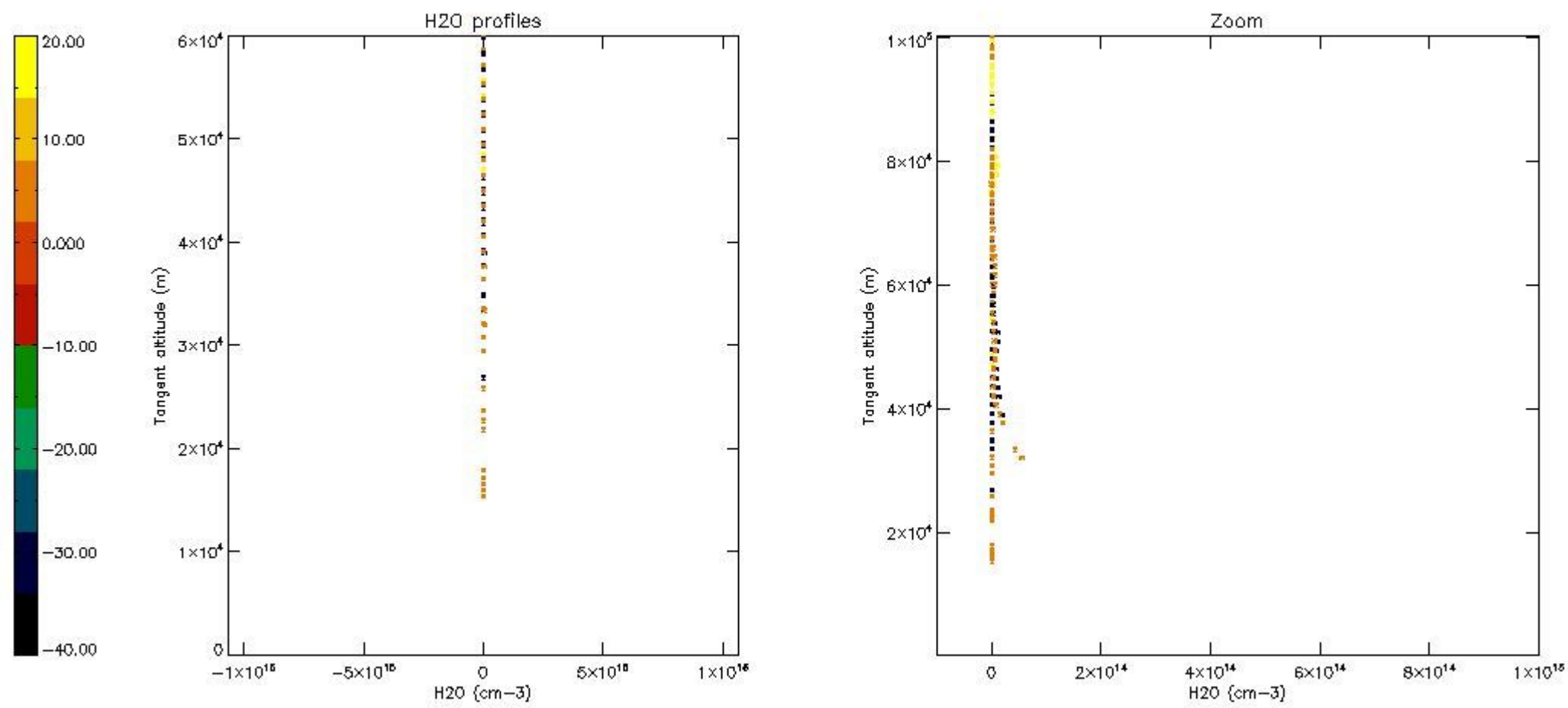
The colorbar represents the latitude.





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)

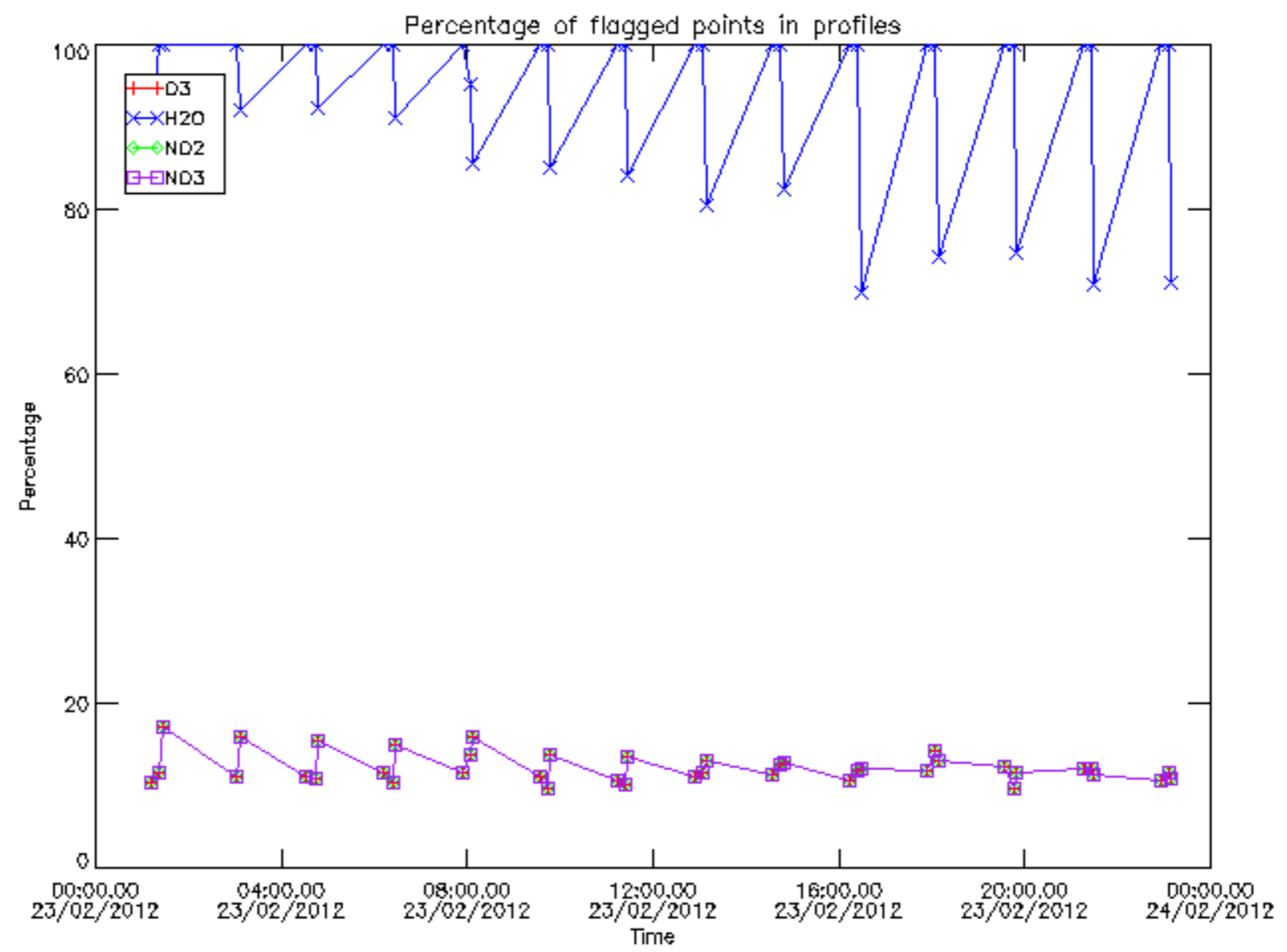
The colorbar represents the latitude.



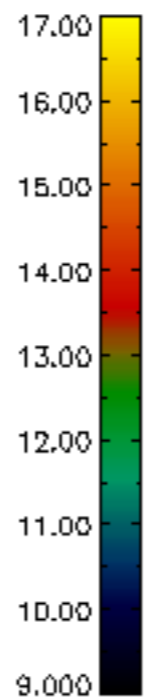
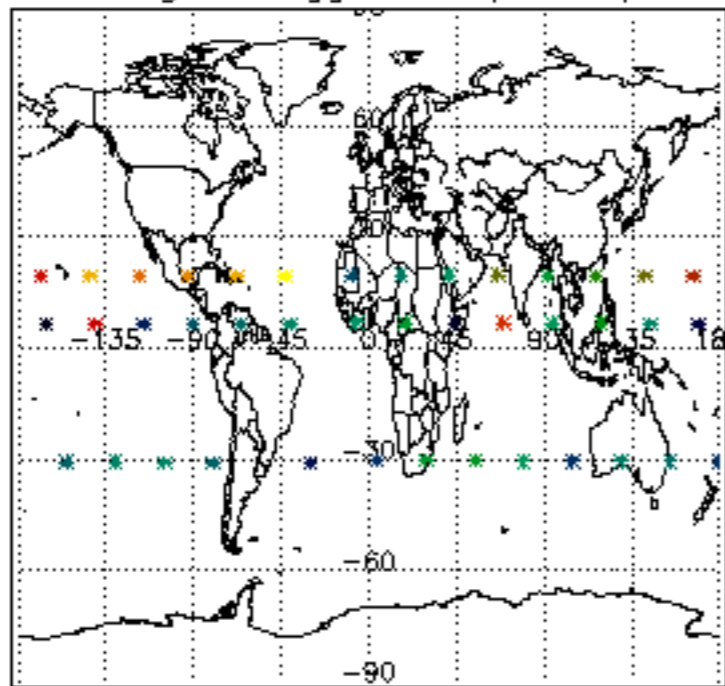
## 6. Auxiliary Data Files used for the production reported in section 2

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.

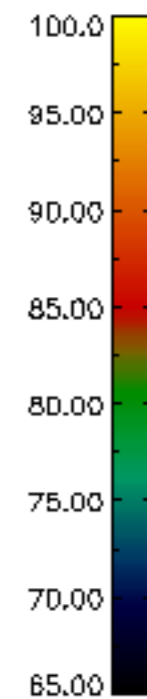
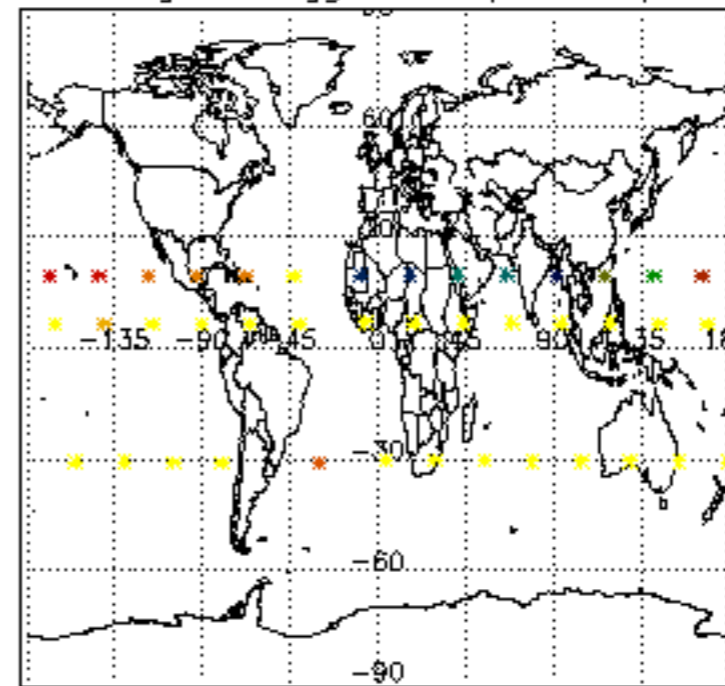
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	23-FEB-2012 01:11:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-FEB-2012 01:11:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-FEB-2012 01:11:58



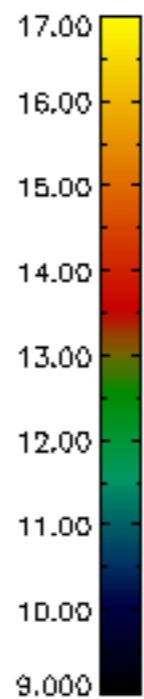
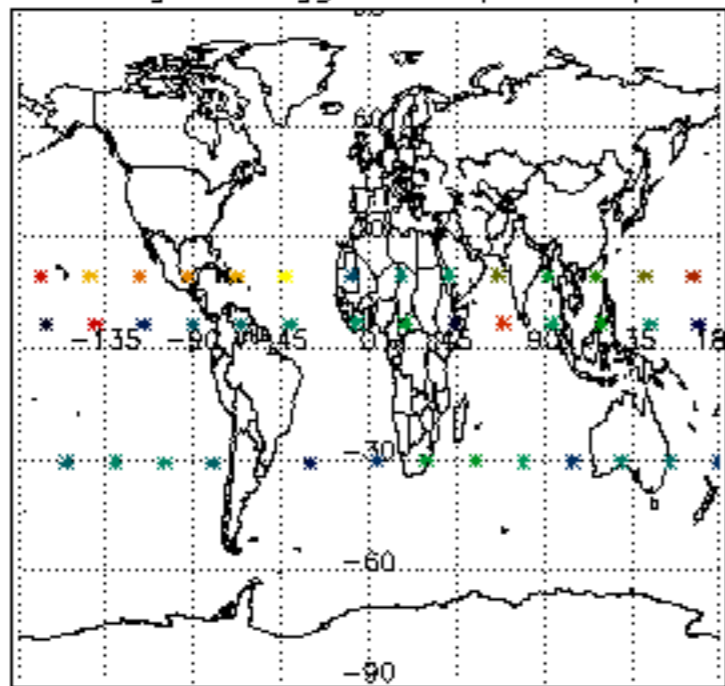
Percentage of flagged data per D3 profile



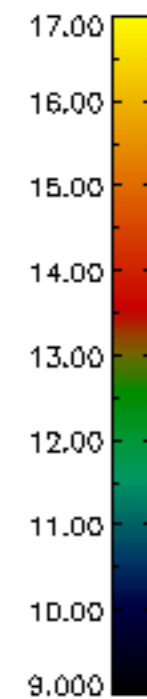
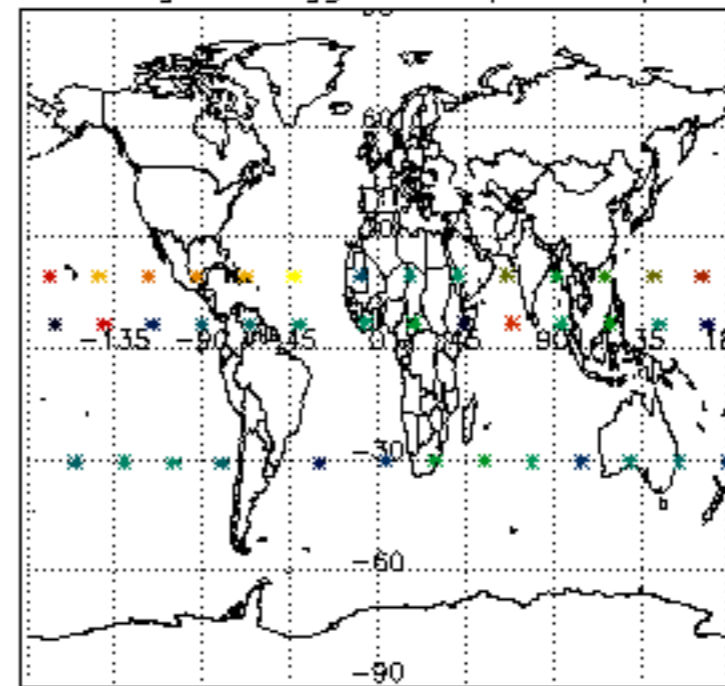
Percentage of flagged data per H2O profile

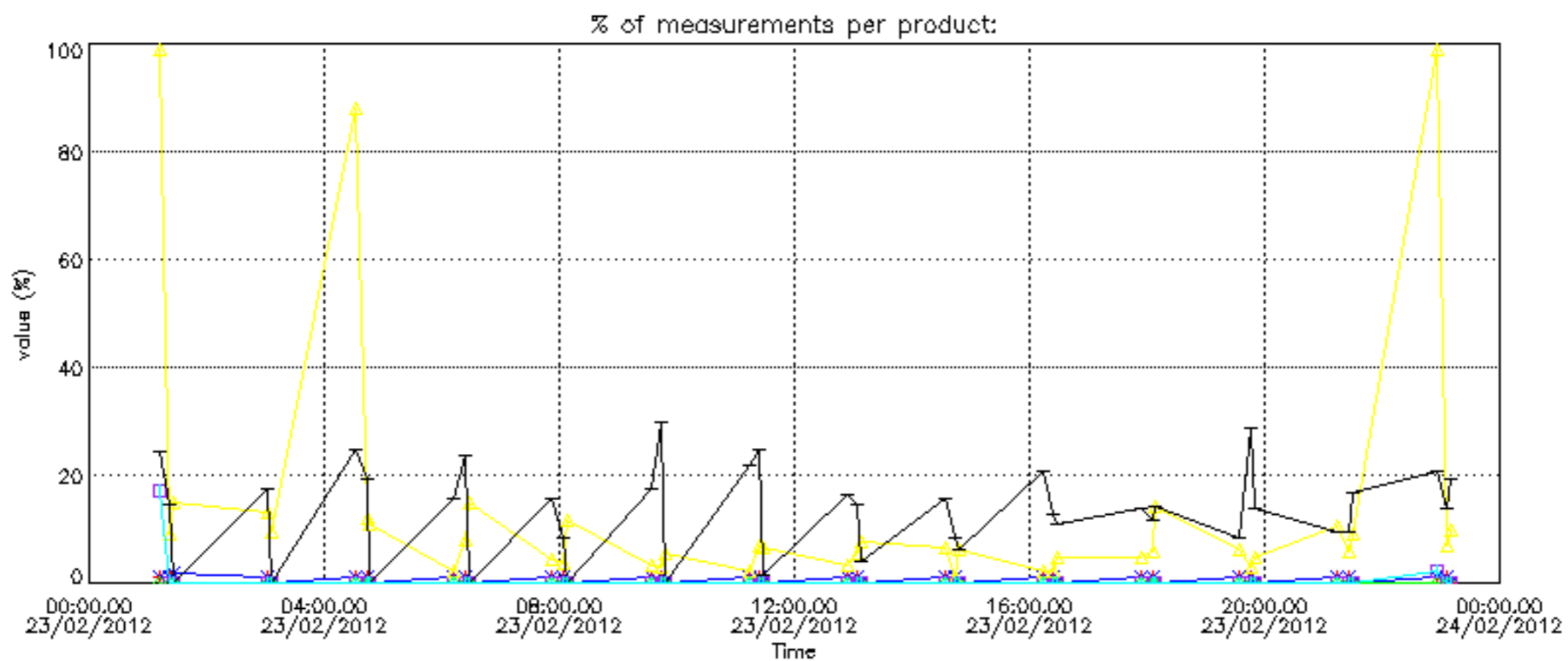


Percentage of flagged data per NO2 profile

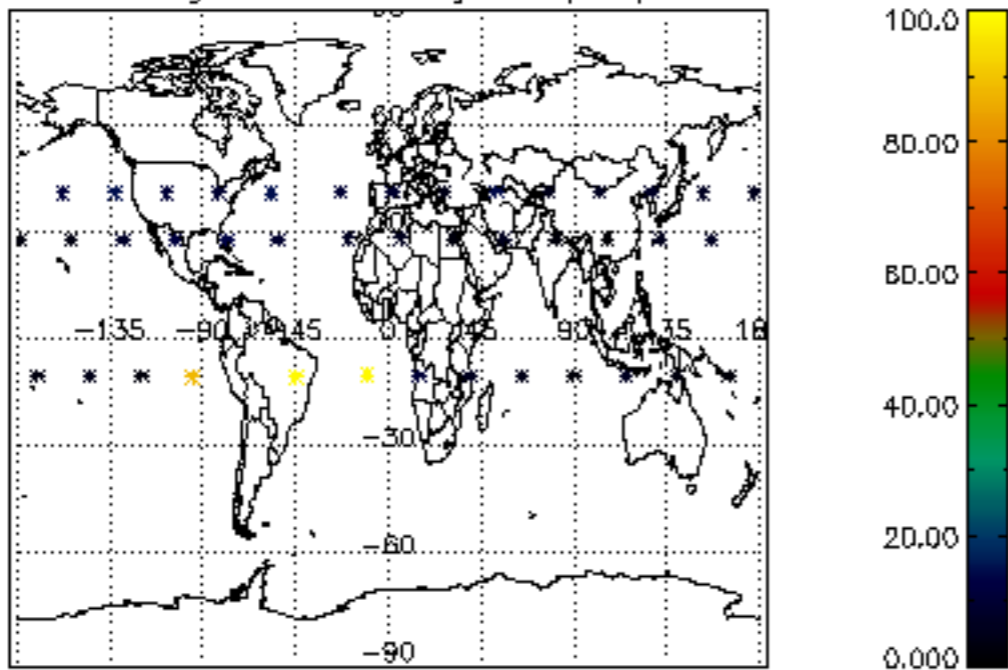


Percentage of flagged data per NO3 profile

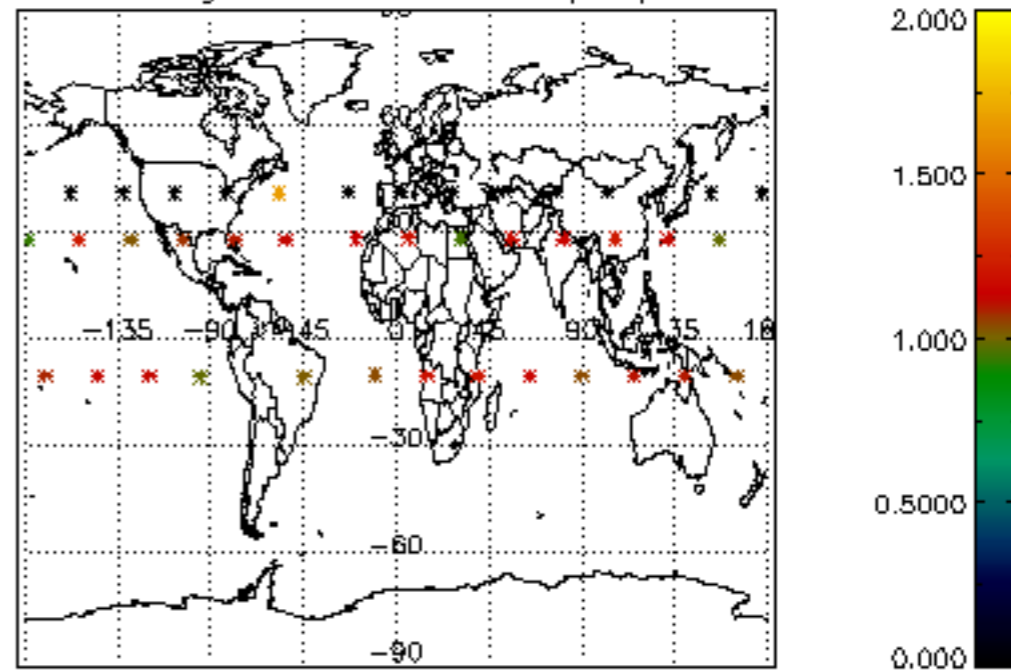




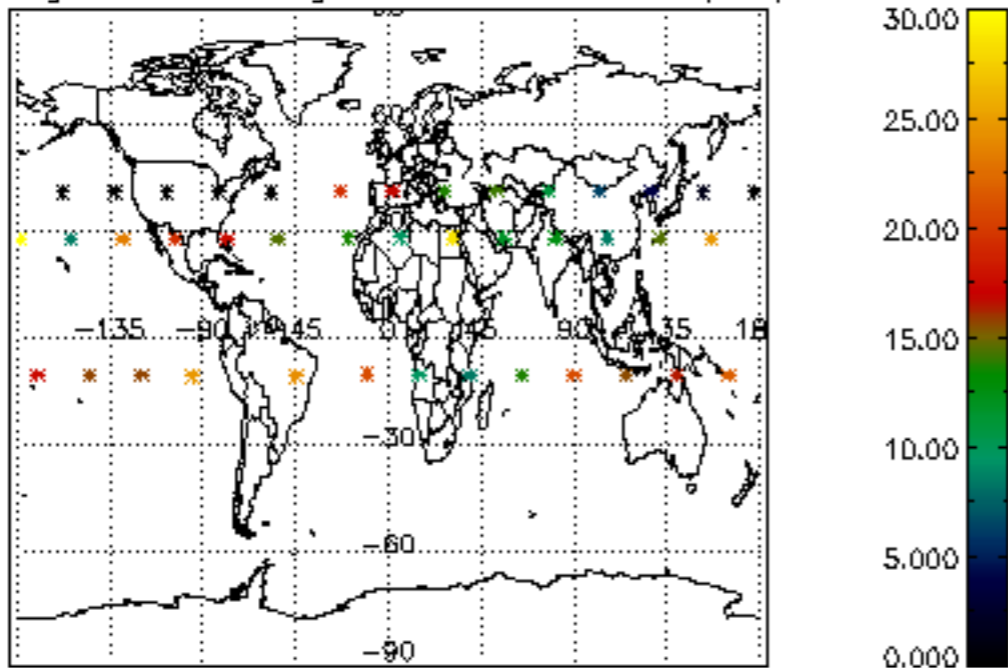
Percentage of cosmic ray hits per profile



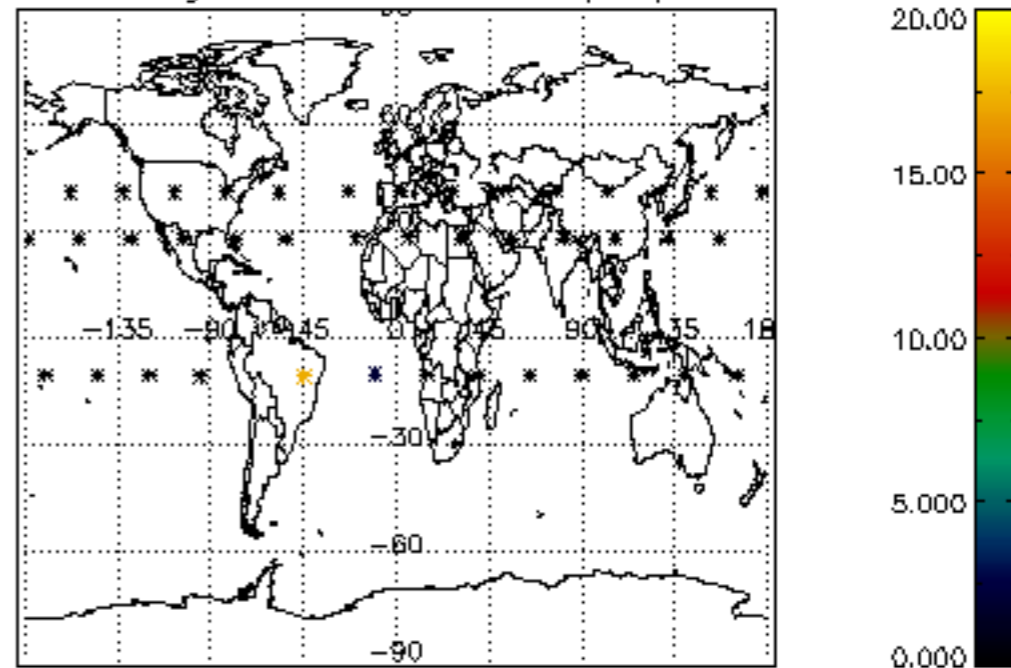
Percentage of datation errors per profile

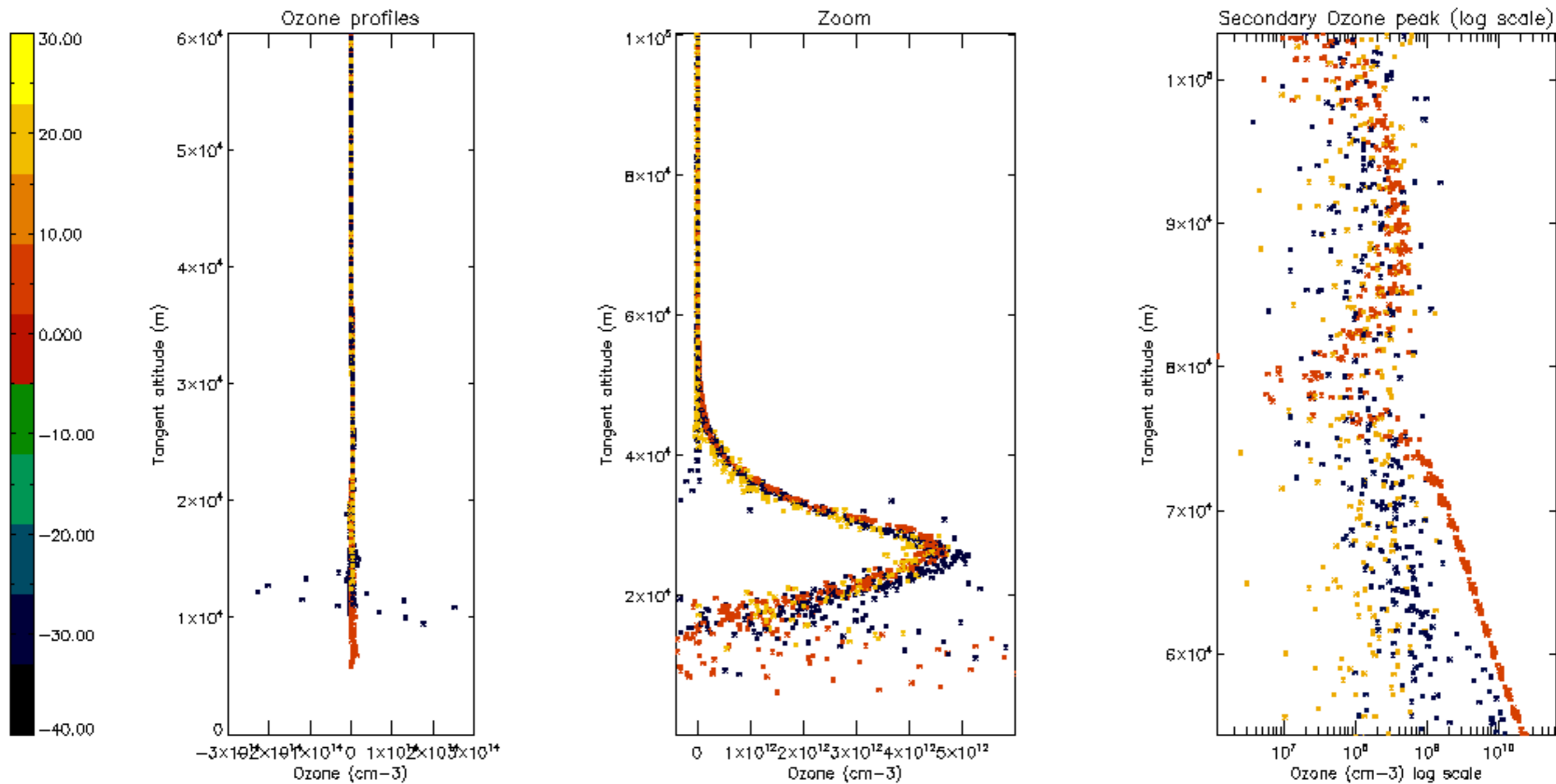


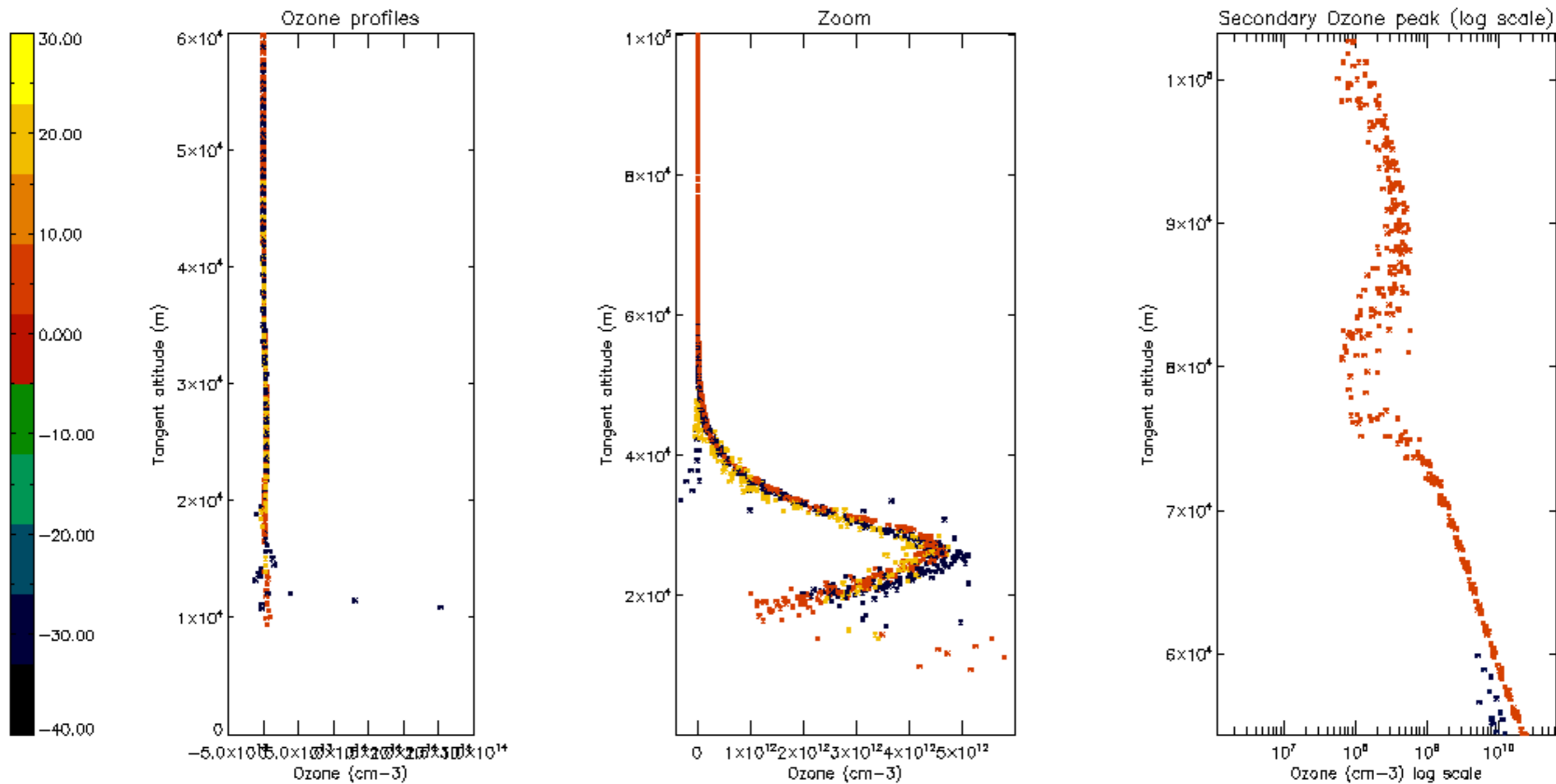
Percentage of star falling outside central band per profile



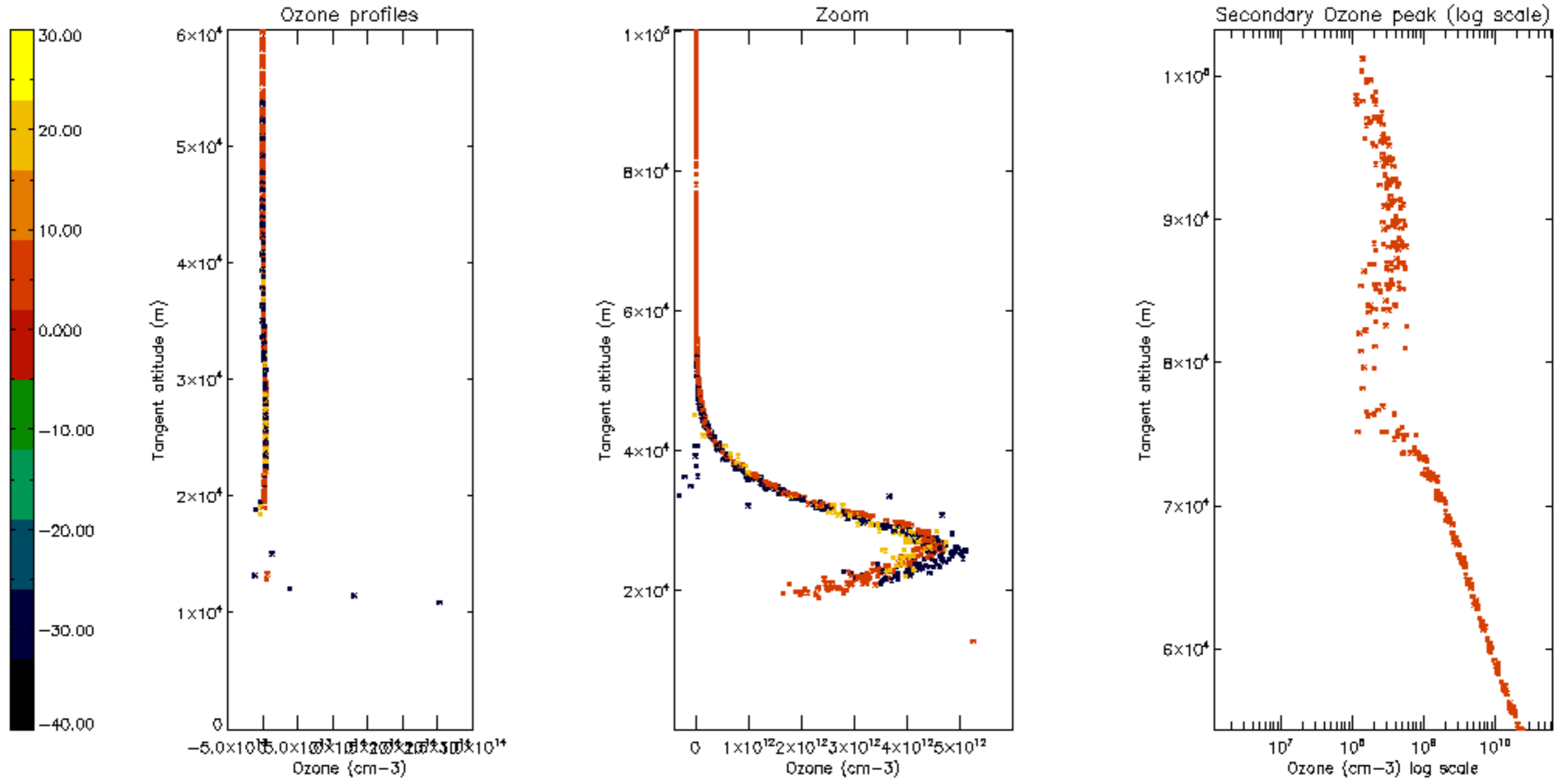
Percentage of saturation errors per profile

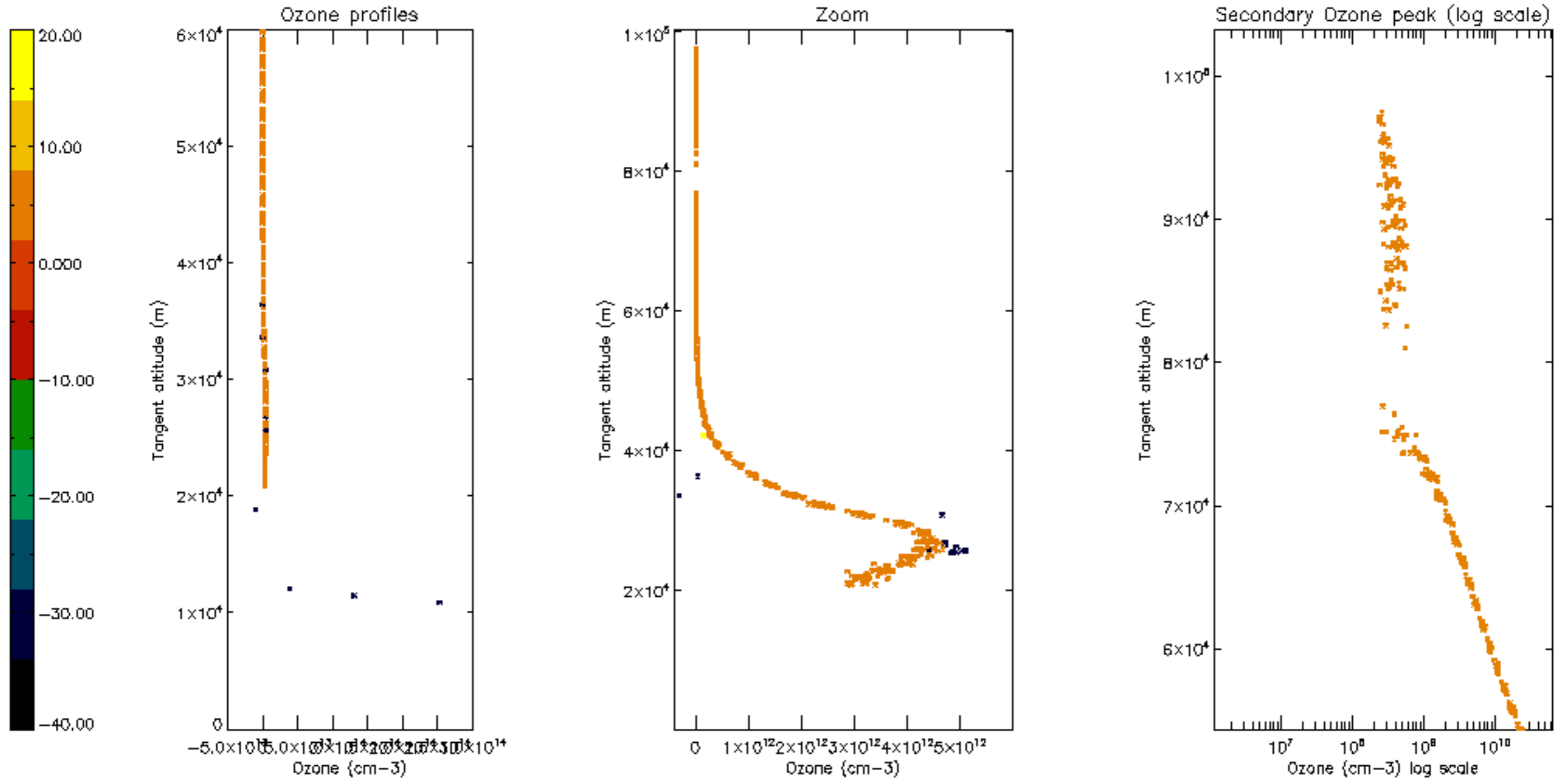


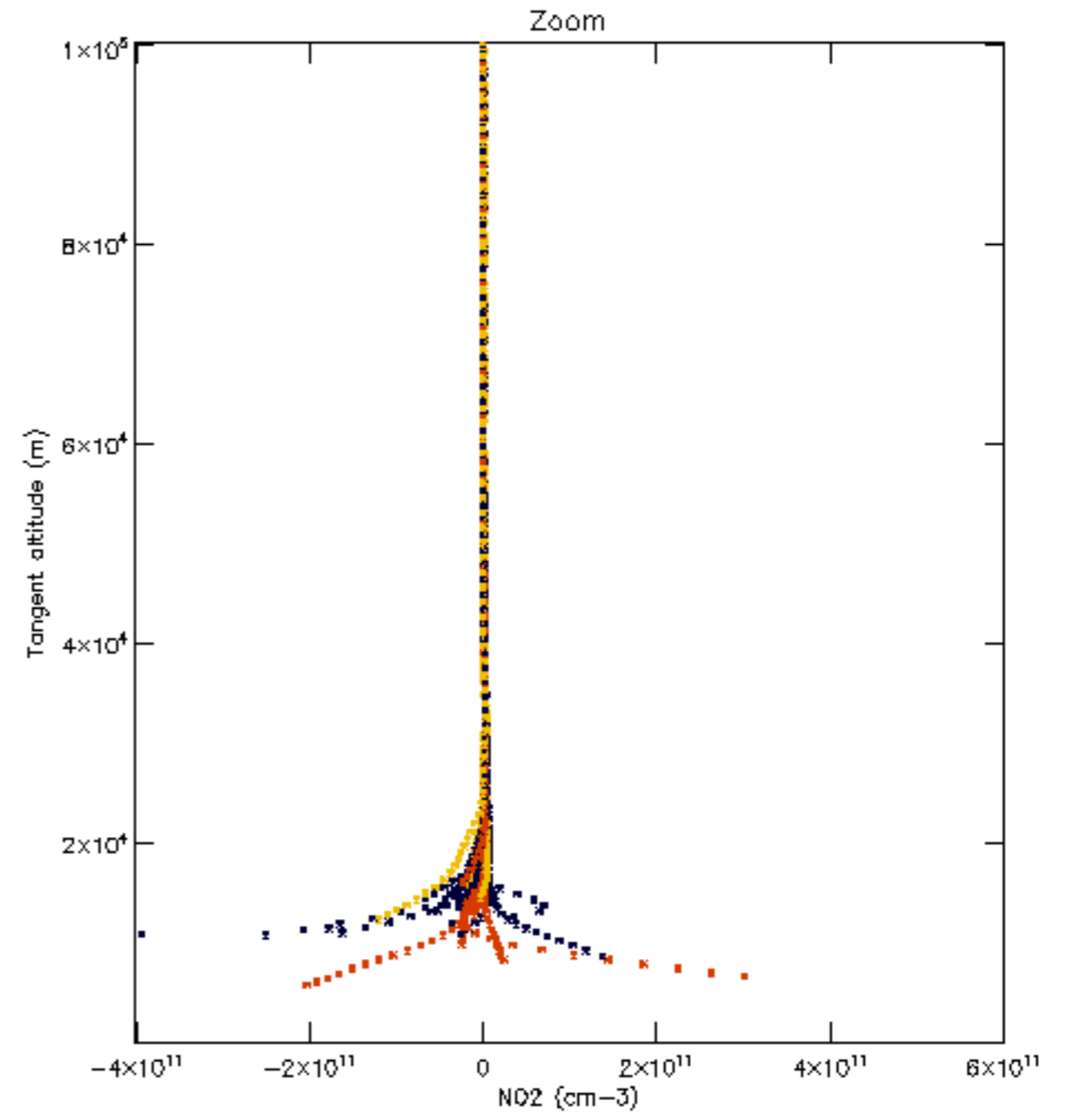
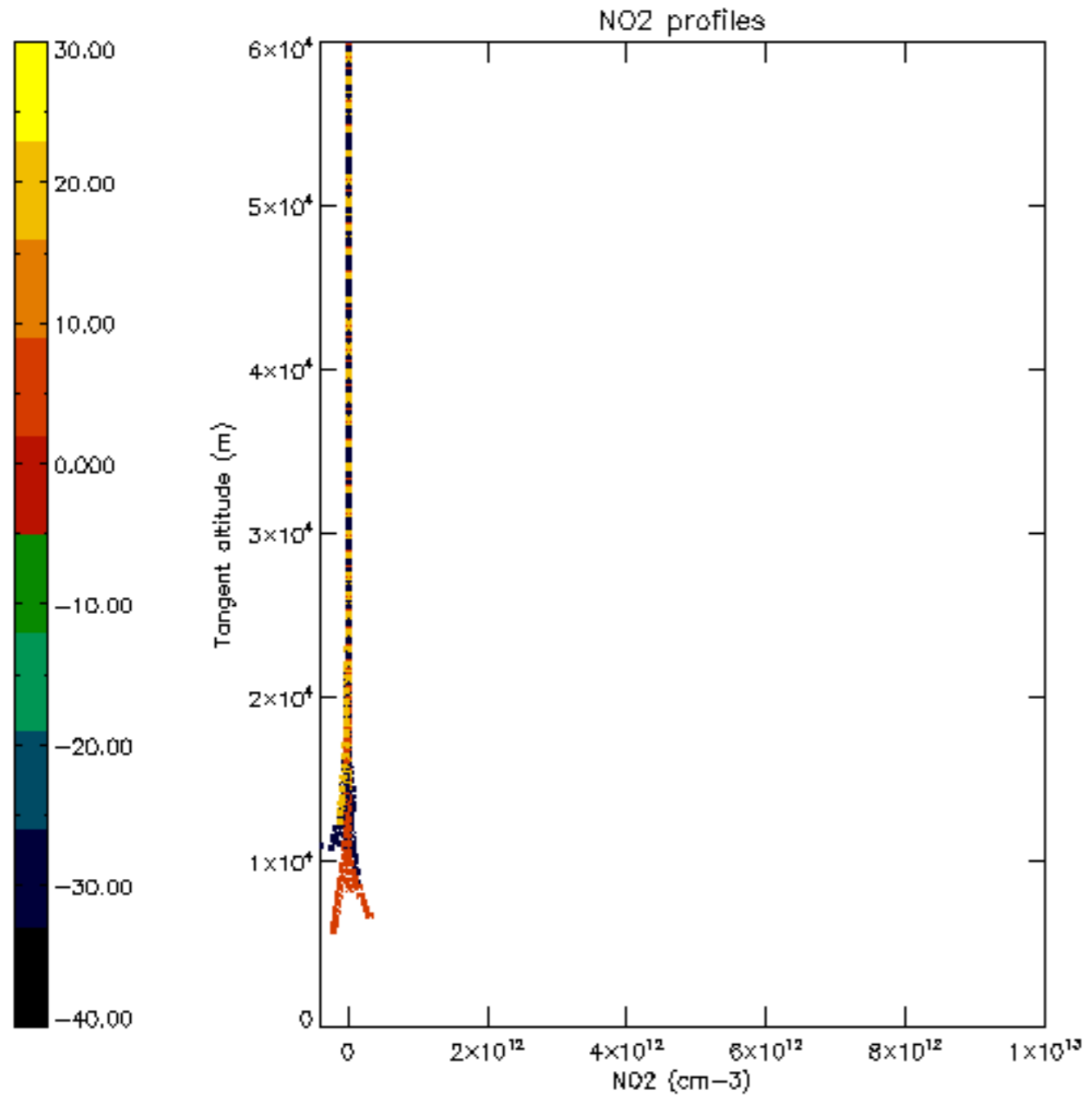


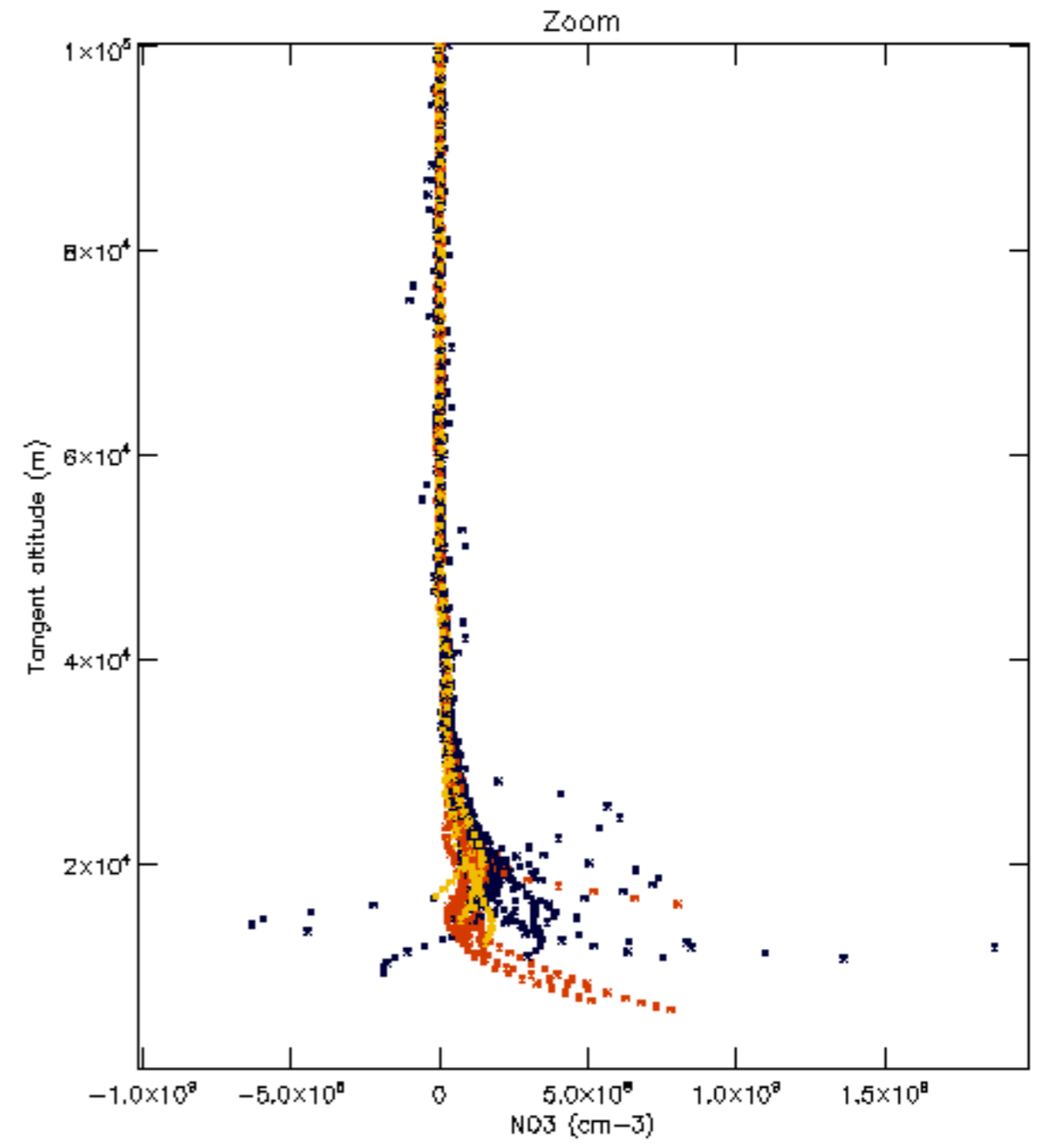
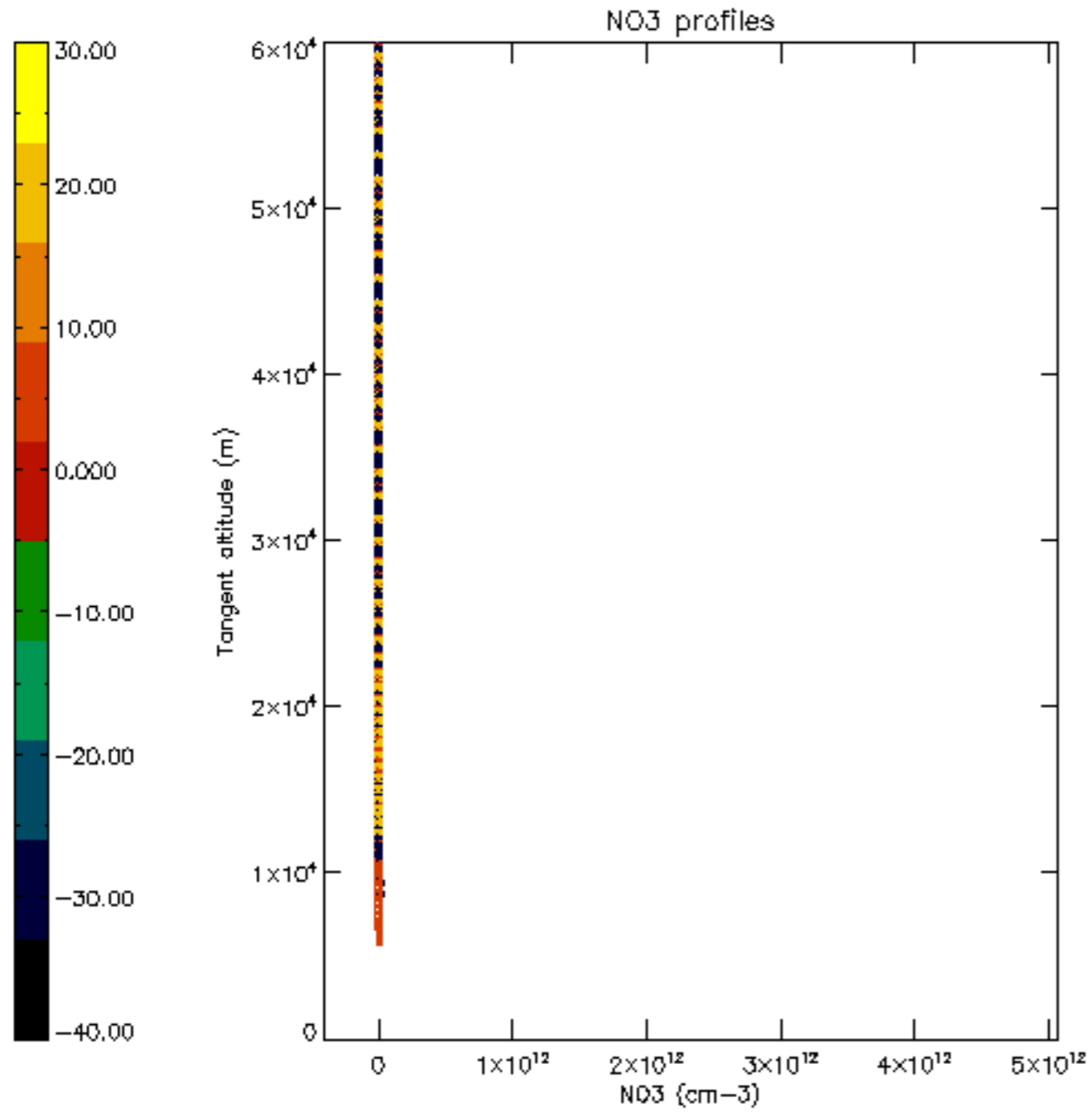


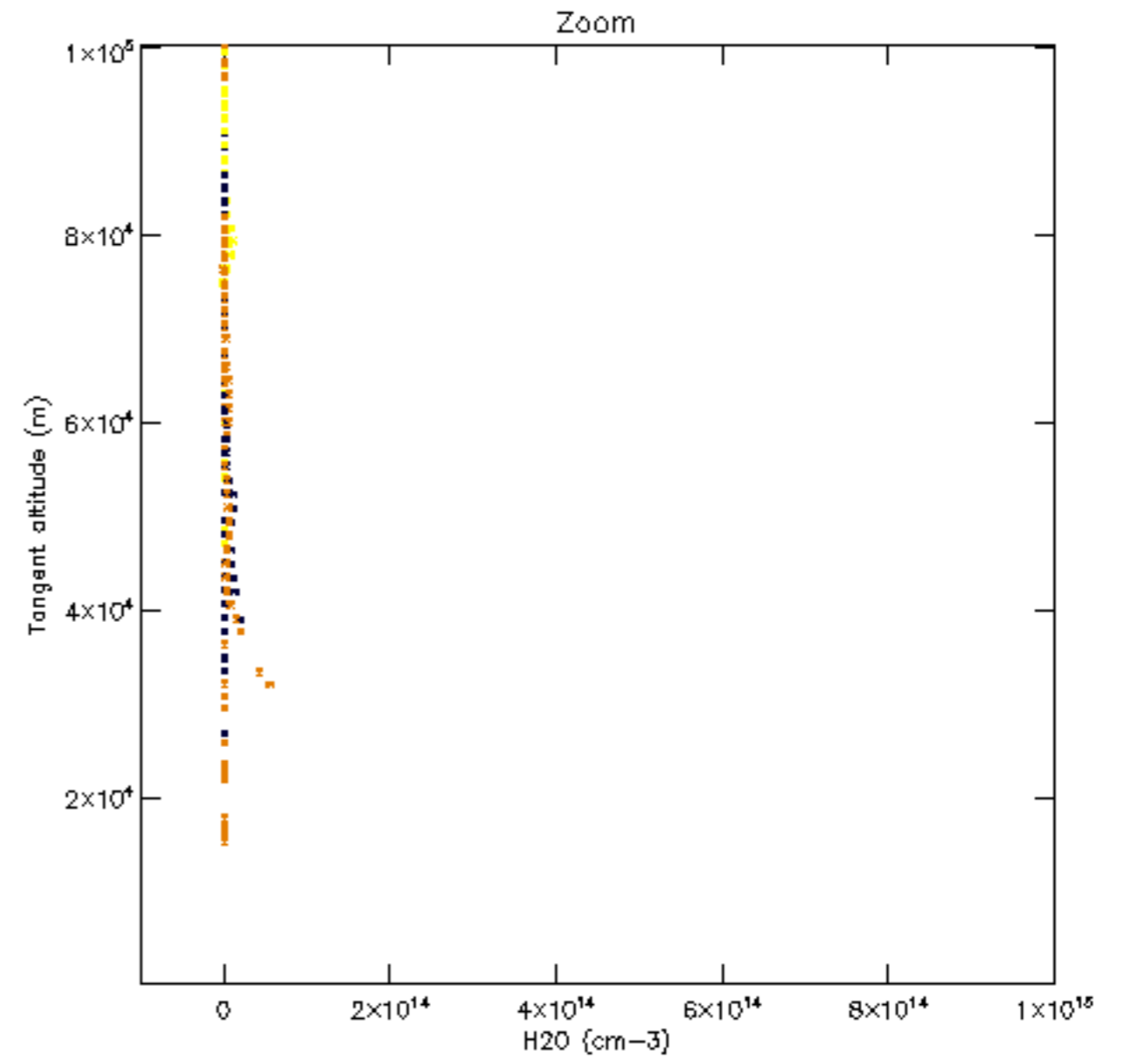
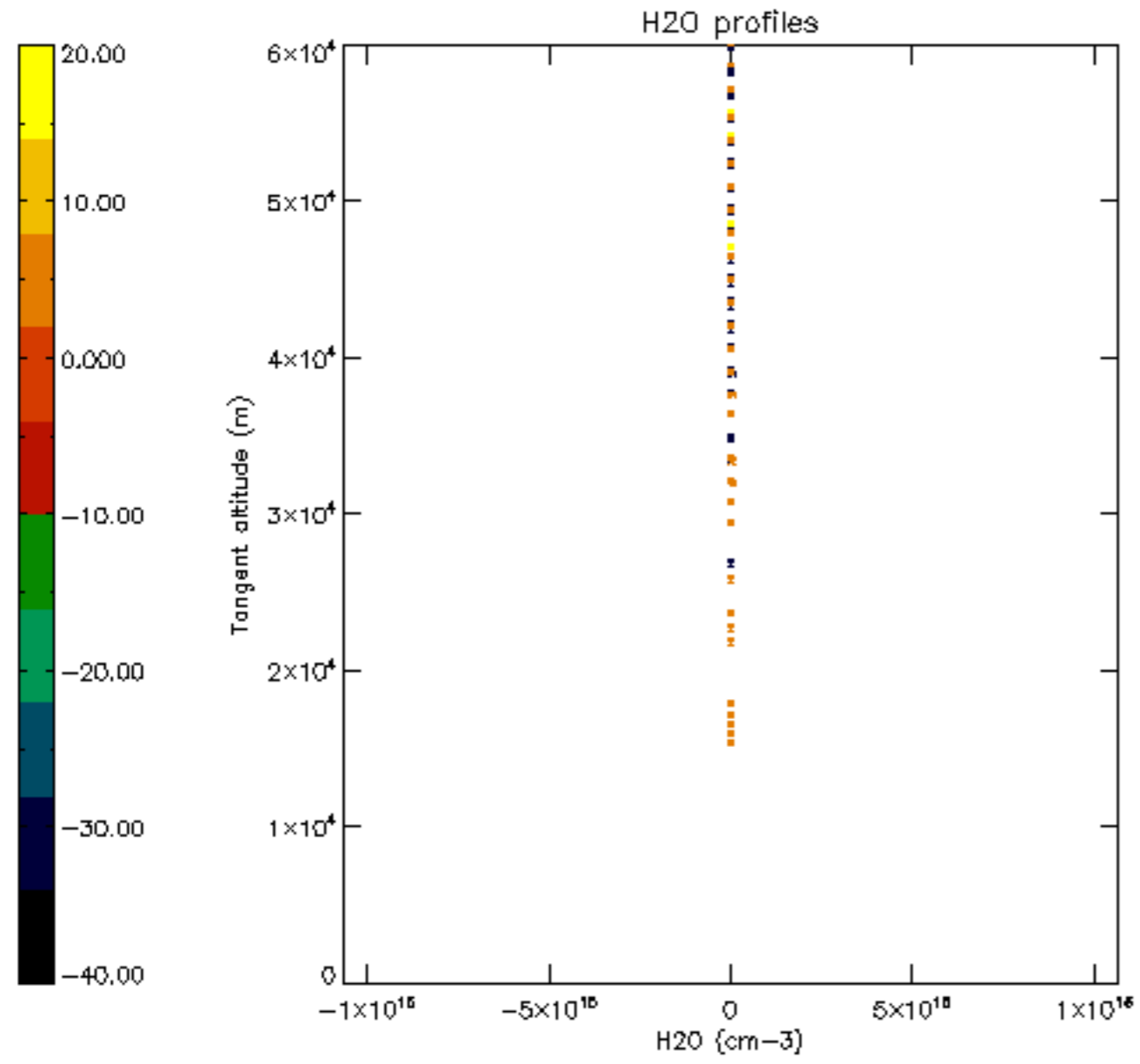


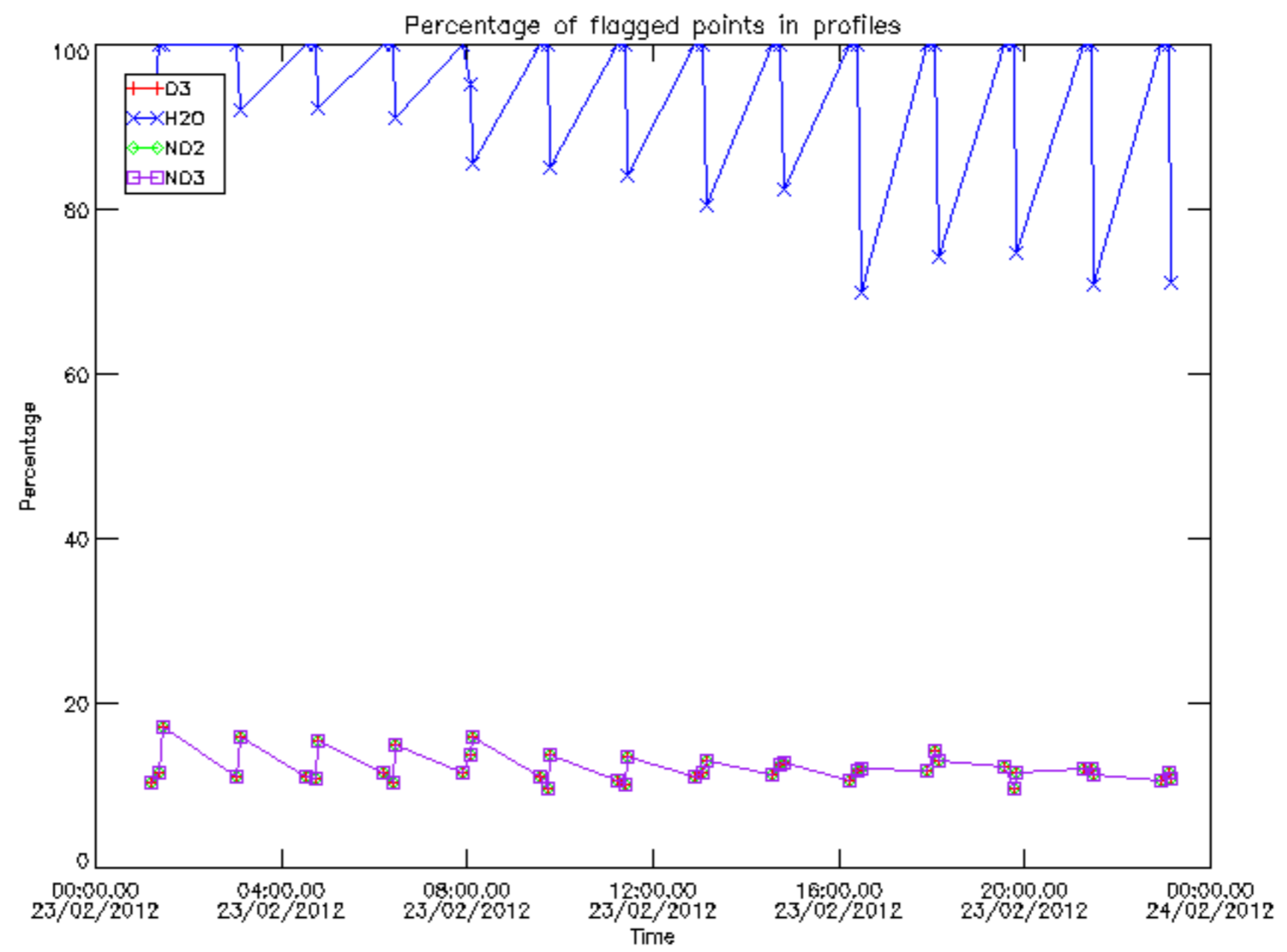




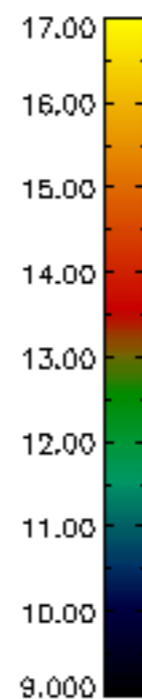
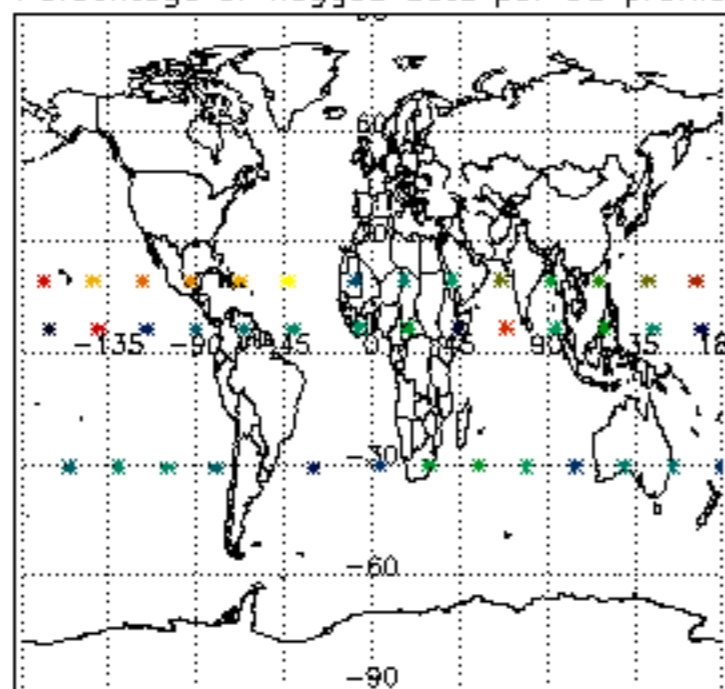




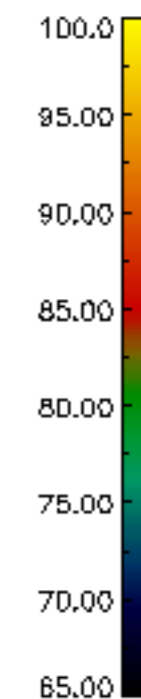
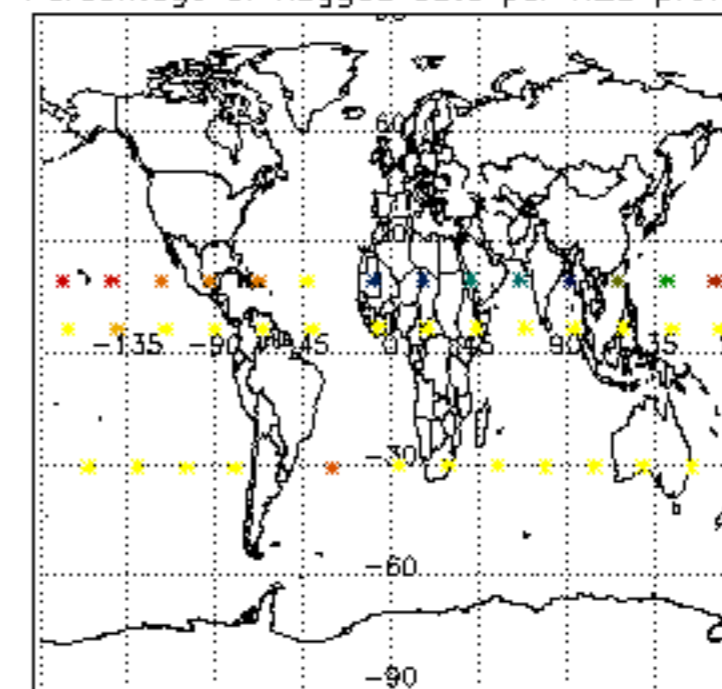




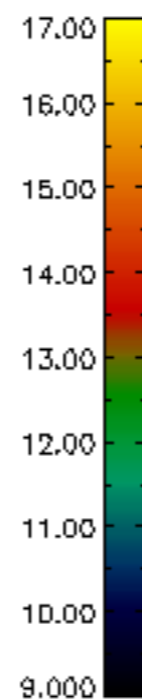
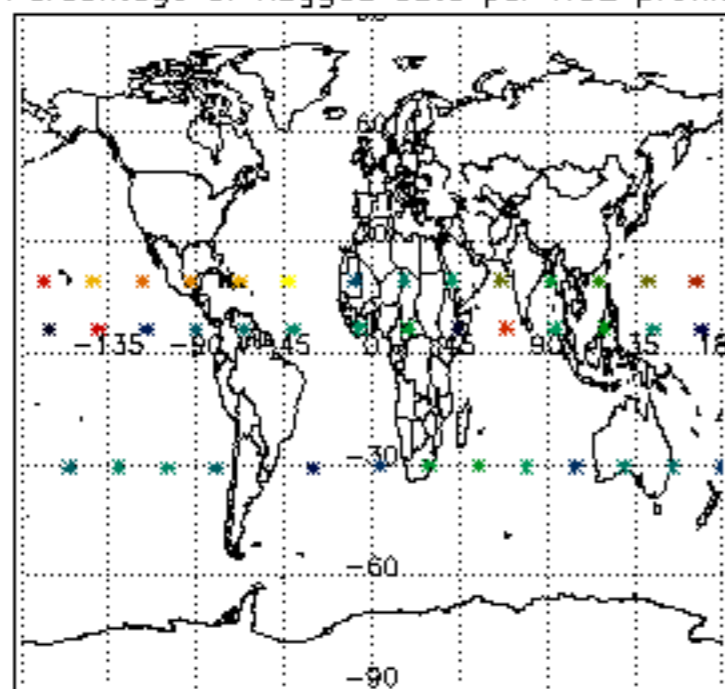
Percentage of flagged data per D3 profile



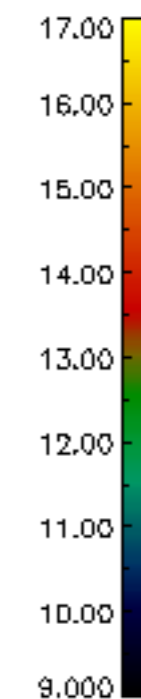
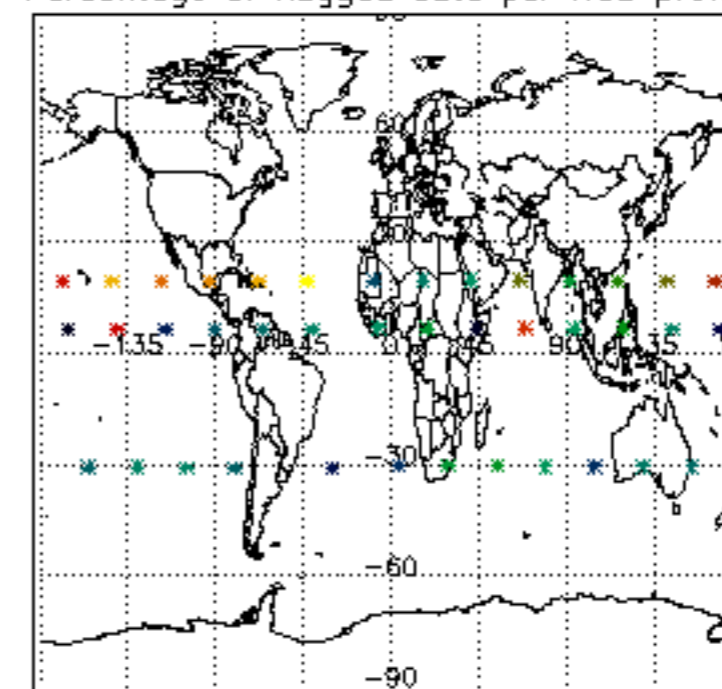
Percentage of flagged data per H2O profile

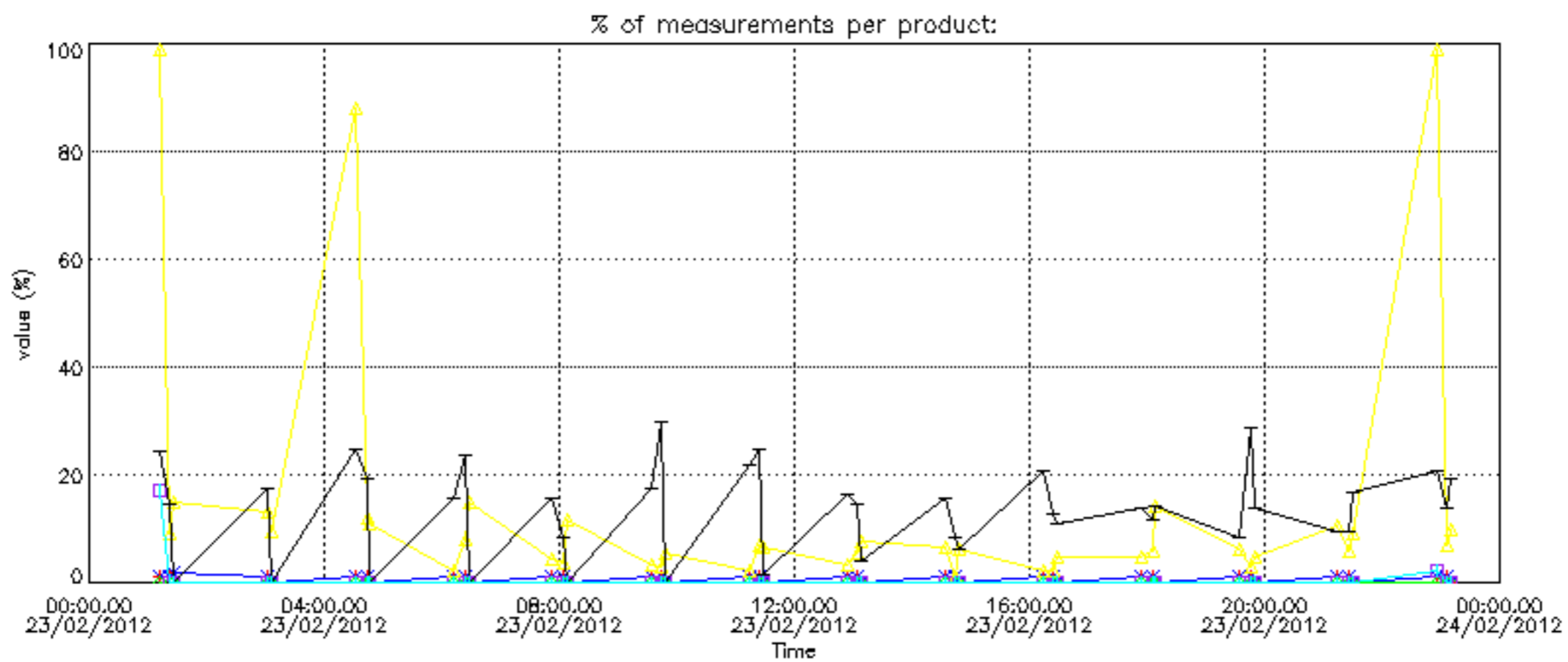


Percentage of flagged data per NO2 profile



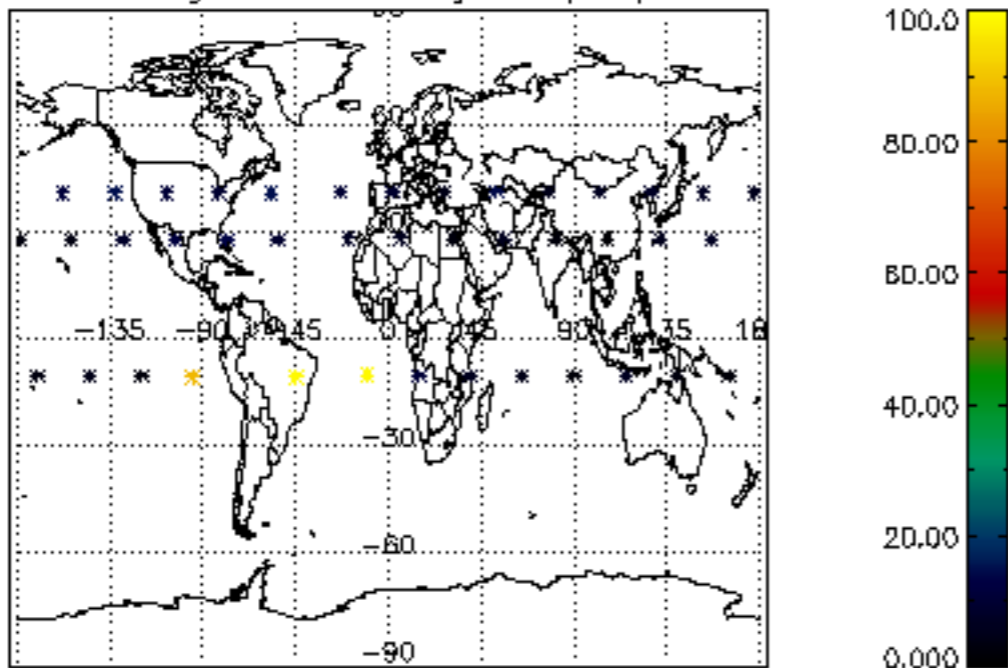
Percentage of flagged data per NO3 profile



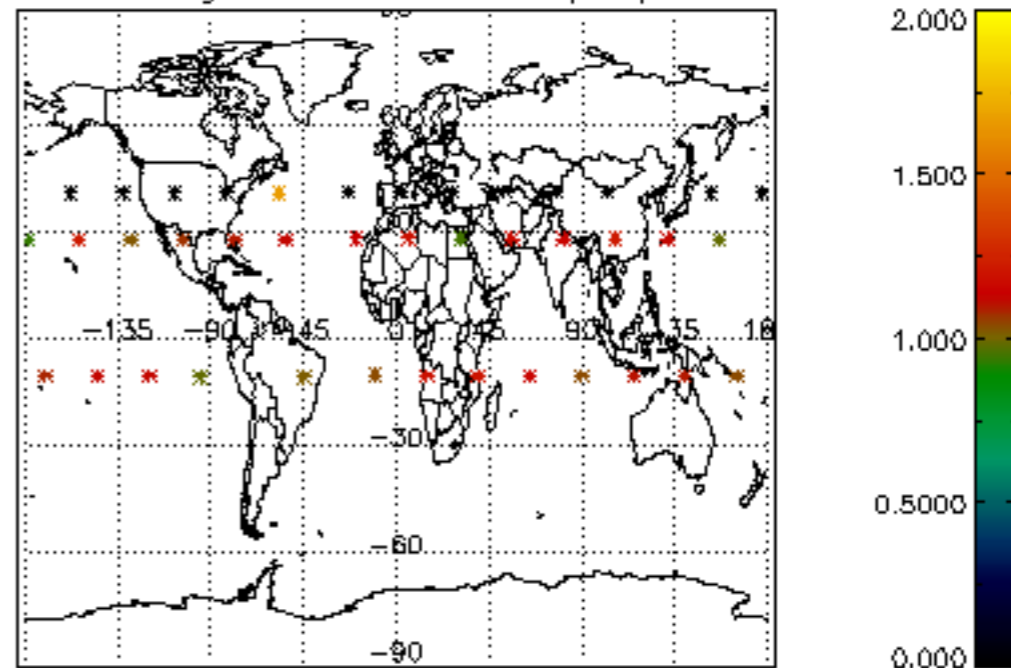




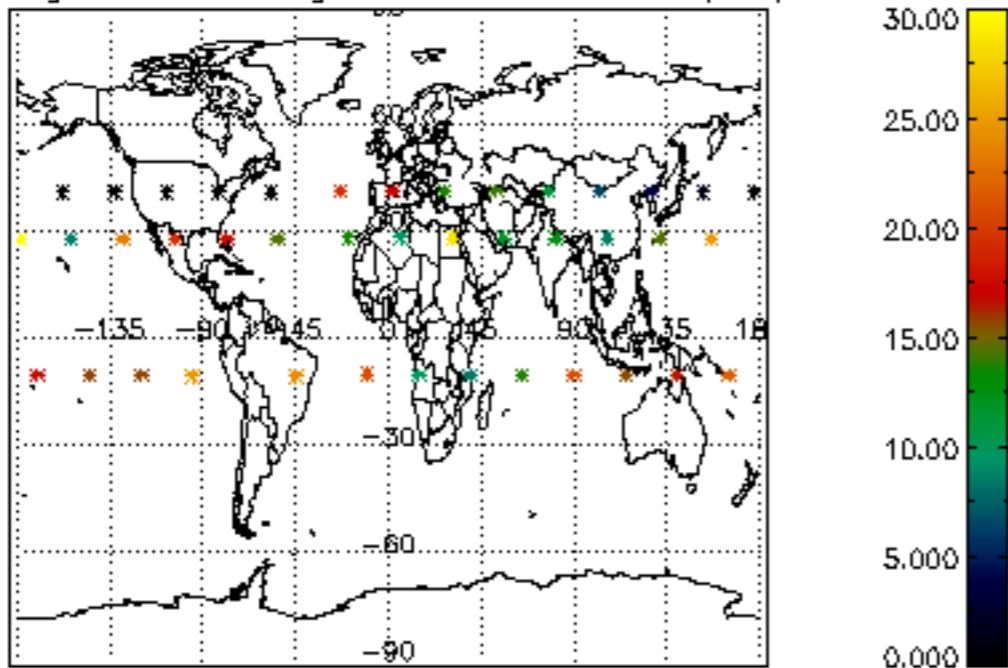
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

