

# 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 14:10:28
Data source version	GOMOS/6.01
Start time of products	05-03-2012 (05MAR2012 00:00:00)
Stop time of products	06-03-2012 (06MAR2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	21
Nb of prods with errors	0

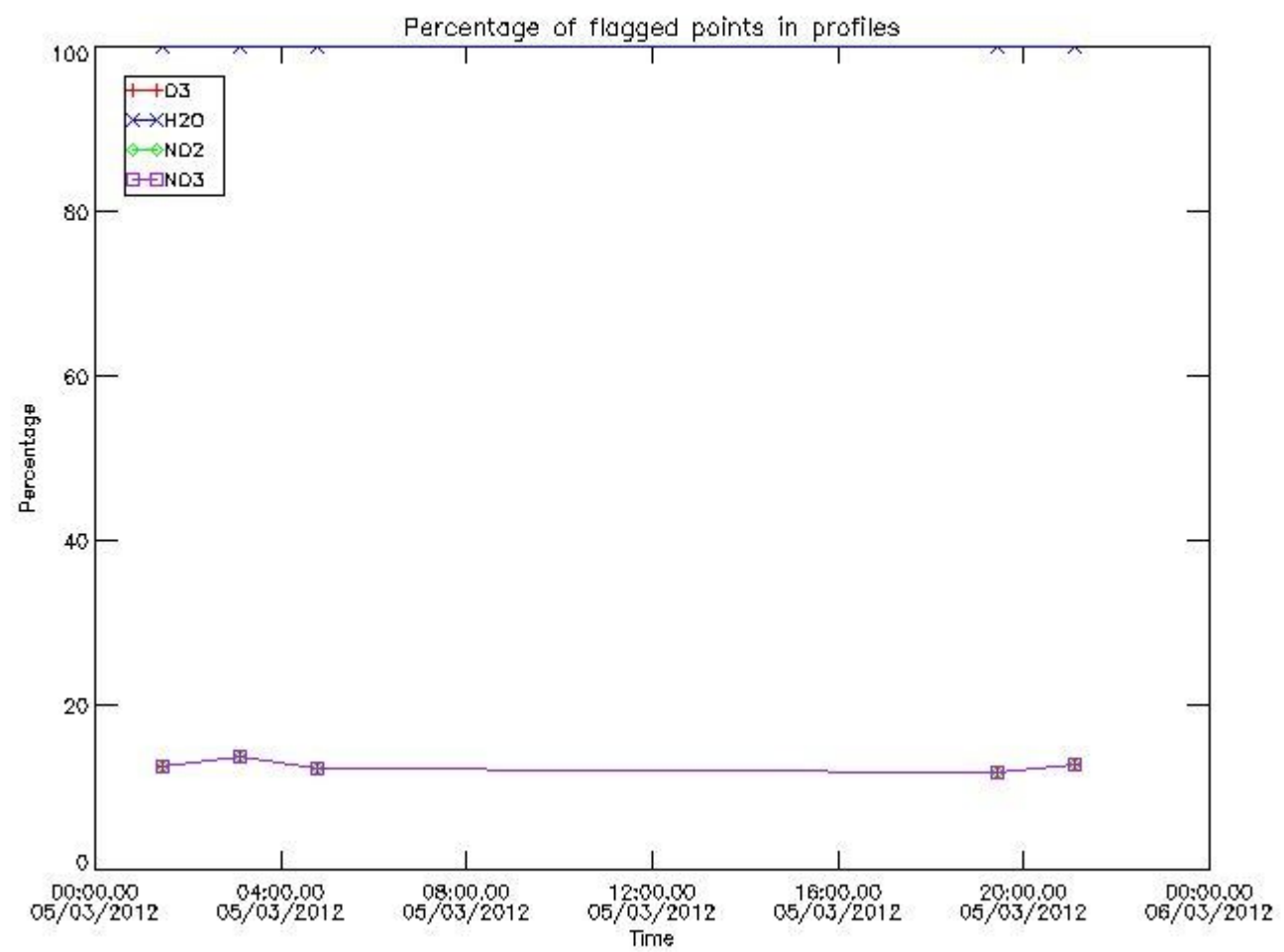
## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120305_005138_000000403112_00203_52372_0329.N1	05-MAR-2012 00:51:38	Bright	40.000	118	50Gam Aql	2.7180	4600.0	80	52372	No
2	GOM_NL__2PRFIN20120305_012630_000000413112_00204_52373_0410.N1	05-MAR-2012 01:26:30	Dark	41.000	99	Del Cen	2.5750	26000.	82	52373	No
3	GOM_NL__2PRFIN20120305_023153_000000393112_00204_52373_0411.N1	05-MAR-2012 02:31:53	Bright	38.500	118	50Gam Aql	2.7180	4600.0	77	52373	No
4	GOM_NL__2PRFIN20120305_030644_000000403112_00205_52374_0421.N1	05-MAR-2012 03:06:44	Dark	40.000	99	Del Cen	2.5750	26000.	80	52374	No
5	GOM_NL__2PRFIN20120305_041207_000000373112_00205_52374_0422.N1	05-MAR-2012 04:12:07	Bright	37.000	118	50Gam Aql	2.7180	4600.0	74	52374	No
6	GOM_NL__2PRFIN20120305_044658_000000413112_00206_52375_0435.N1	05-MAR-2012 04:46:58	Dark	41.000	99	Del Cen	2.5750	26000.	82	52375	No
7	GOM_NL__2PRFIN20120305_055221_000000263112_00206_52375_0436.N1	05-MAR-2012 05:52:21	Twilight	26.000	118	50Gam Aql	2.7180	4600.0	52	52375	No
8	GOM_NL__2PRFIN20120305_062713_000000433112_00207_52376_0483.N1	05-MAR-2012 06:27:13	Straylight	42.500	99	Del Cen	2.5750	26000.	85	52376	No
9	GOM_NL__2PRFIN20120305_080727_000000413112_00208_52377_0505.N1	05-MAR-2012 08:07:27	Straylight	41.000	99	Del Cen	2.5750	26000.	82	52377	No
10	GOM_NL__2PRFIN20120305_094742_000000443112_00209_52378_0555.N1	05-MAR-2012 09:47:42	Straylight	43.500	99	Del Cen	2.5750	26000.	87	52378	No
11	GOM_NL__2PRFIN20120305_112756_000000403112_00210_52379_0582.N1	05-MAR-2012 11:27:56	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52379	No
12	GOM_NL__2PRFIN20120305_130810_000000393112_00211_52380_0616.N1	05-MAR-2012 13:08:10	Straylight	38.500	99	Del Cen	2.5750	26000.	77	52380	No
13	GOM_NL__2PRFIN20120305_144825_000000393112_00212_52381_0678.N1	05-MAR-2012 14:48:25	Straylight	39.000	99	Del Cen	2.5750	26000.	78	52381	No
14	GOM_NL__2PRFIN20120305_162839_000000403112_00213_52382_0695.N1	05-MAR-2012 16:28:39	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52382	No
15	GOM_NL__2PRFIN20120305_180854_000000403112_00214_52383_0726.N1	05-MAR-2012 18:08:54	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52383	No
16	GOM_NL__2PRFIN20120305_191440_000000443112_00214_52383_0727.N1	05-MAR-2012 19:14:40	Bright	43.500	11	53Alp Aql	0.76500	8000.0	87	52383	No
17	GOM_NL__2PRFIN20120305_192643_000000433112_00214_52383_0728.N1	05-MAR-2012 19:26:43	Dark	43.000	103	38Zet Sgr	2.6000	9700.0	86	52383	No
18	GOM_NL__2PRFIN20120305_194908_000000403112_00215_52384_0764.N1	05-MAR-2012 19:49:08	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52384	No
19	GOM_NL__2PRFIN20120305_205455_000000413112_00215_52384_0765.N1	05-MAR-2012 20:54:55	Bright	40.500	11	53Alp Aql	0.76500	8000.0	81	52384	No
20	GOM_NL__2PRFIN20120305_210657_000000403112_00215_52384_0766.N1	05-MAR-2012 21:06:57	Dark	39.500	103	38Zet Sgr	2.6000	9700.0	79	52384	No
21	GOM_NL__2PRFIN20120305_230937_000000423112_00217_52386_0809.N1	05-MAR-2012 23:09:37	Straylight	42.000	99	Del Cen	2.5750	26000.	84	52386	No

## 3. Quality information per product

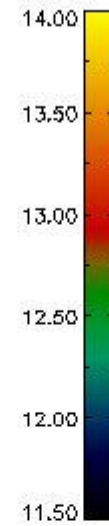
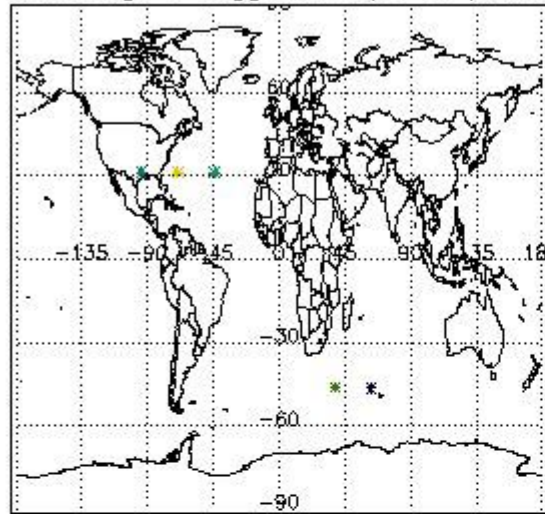
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

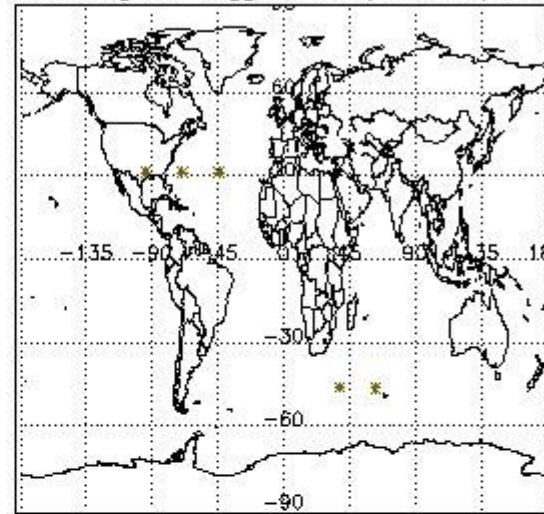


*3.2 Plot quality information per product (world map)*

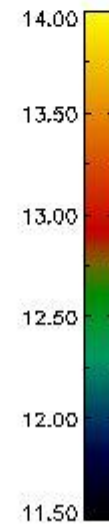
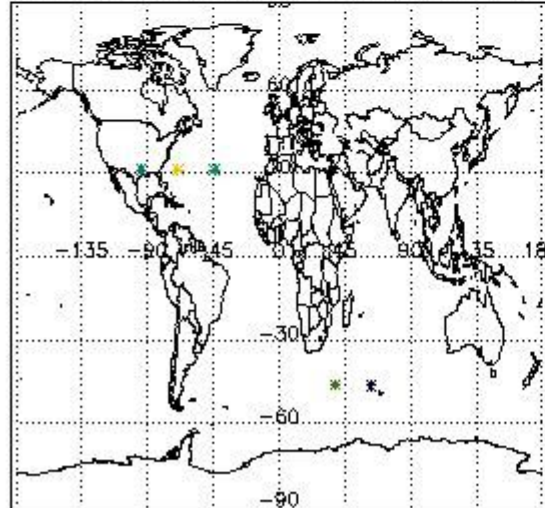
Percentage of flagged data per O3 profile



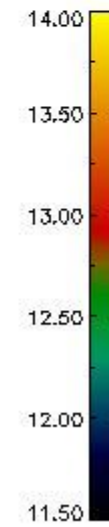
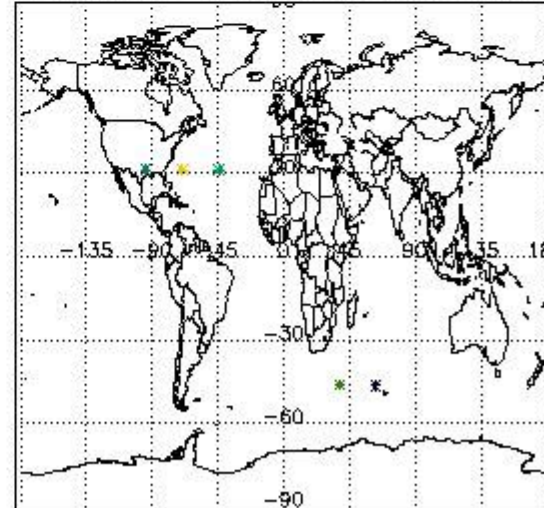
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

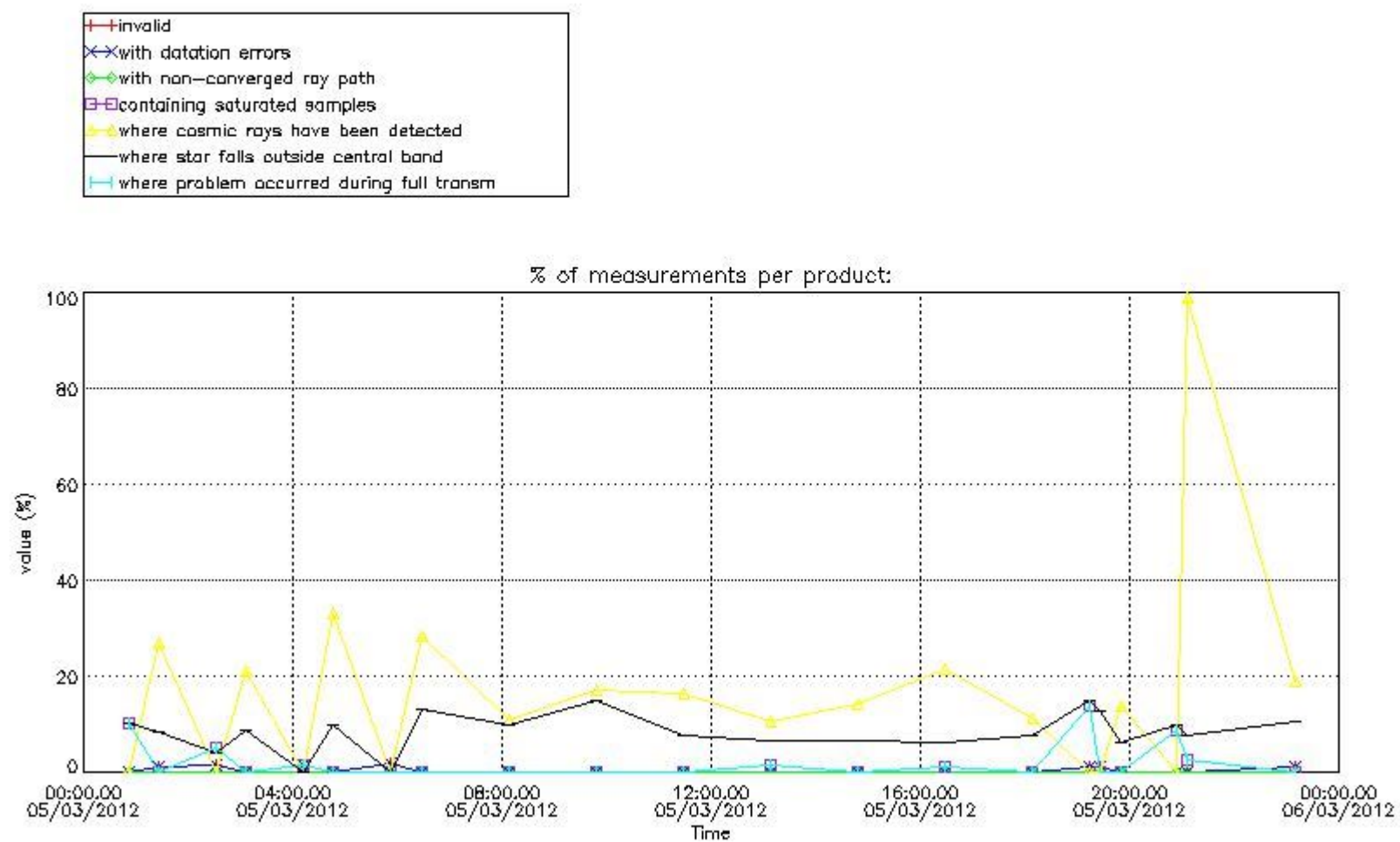


#### 4. Level 1 quality information per product

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

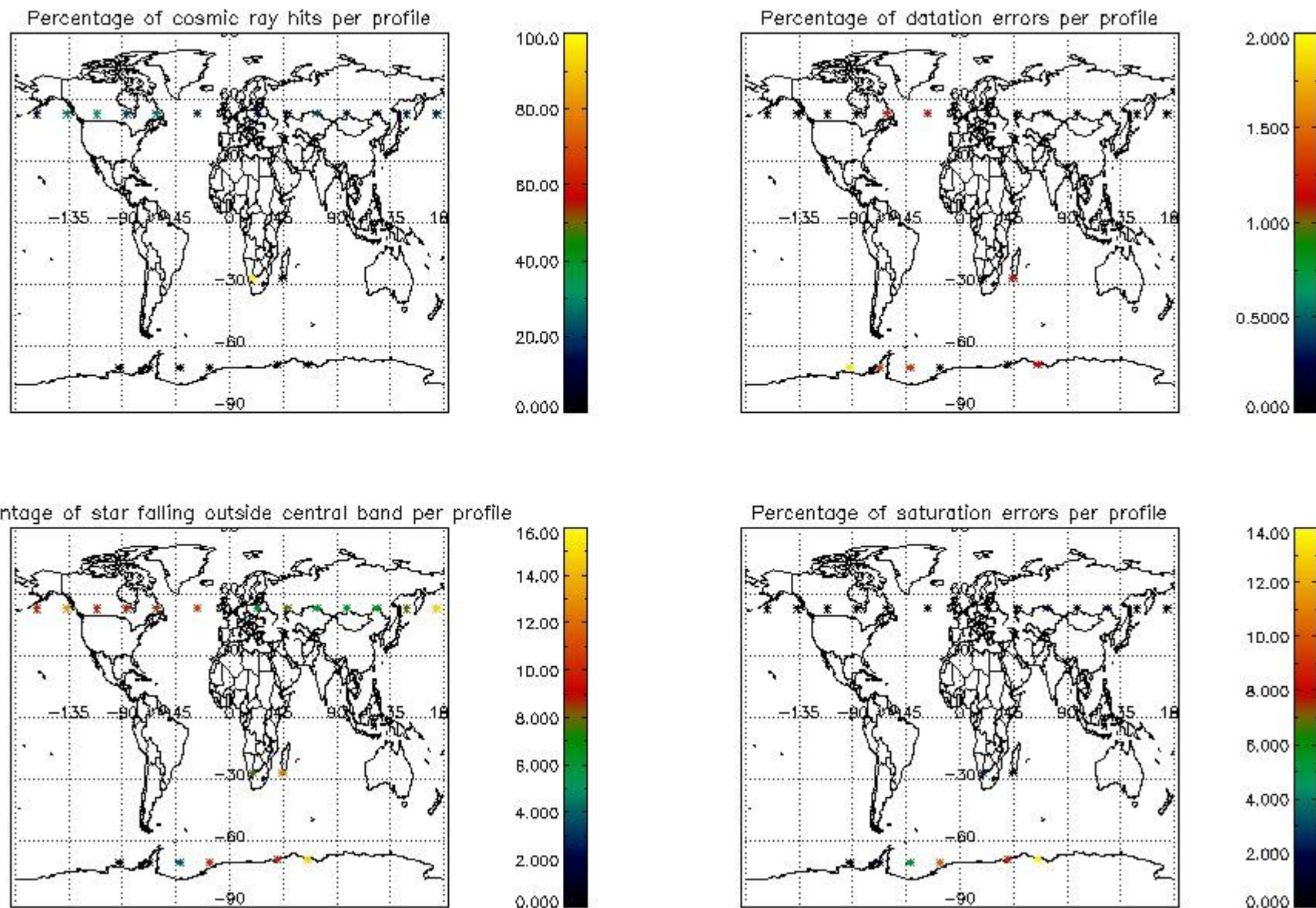


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!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:

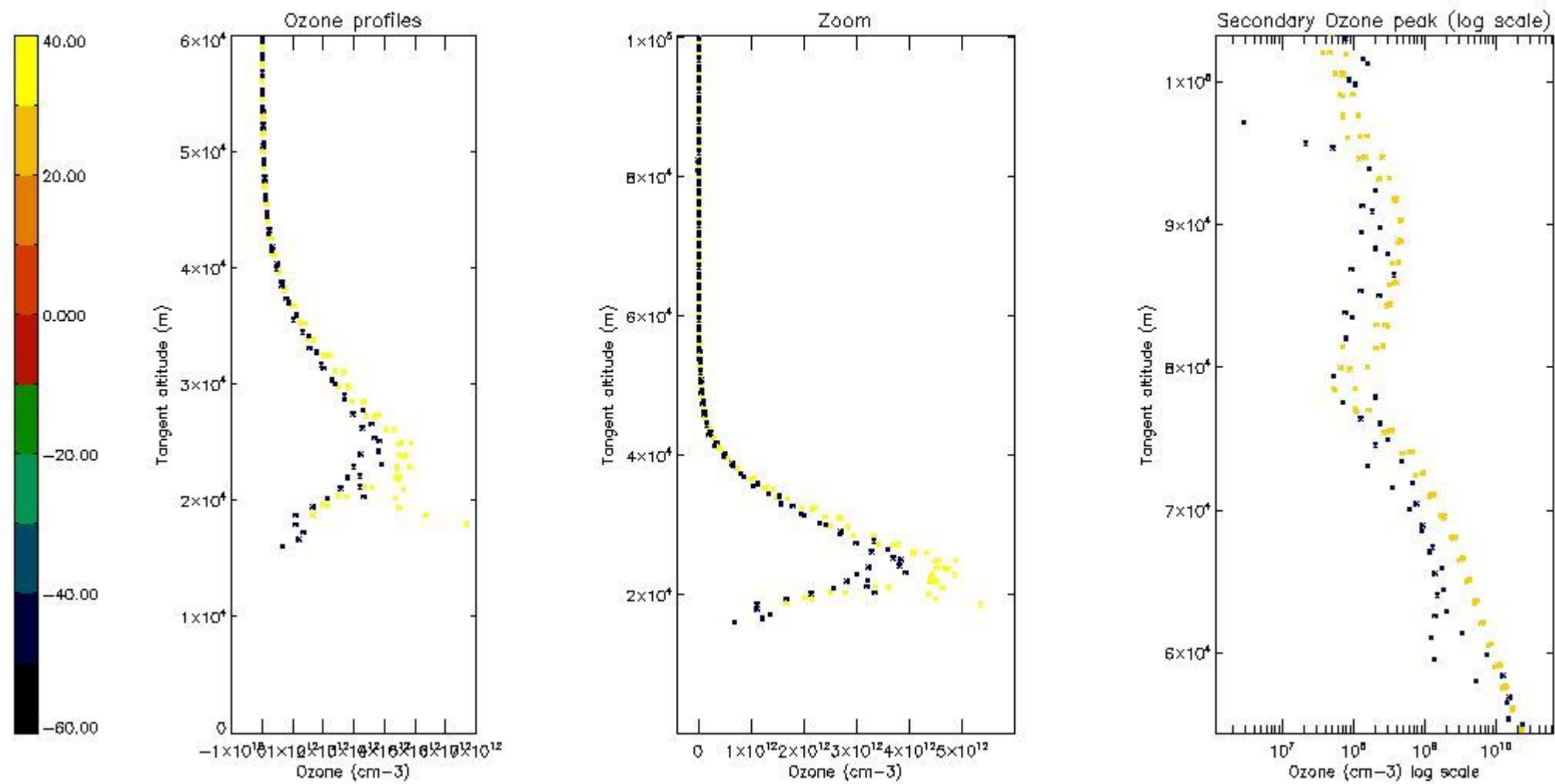
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	25
STD < 20	14
STD < 10	10
STD < 5	5

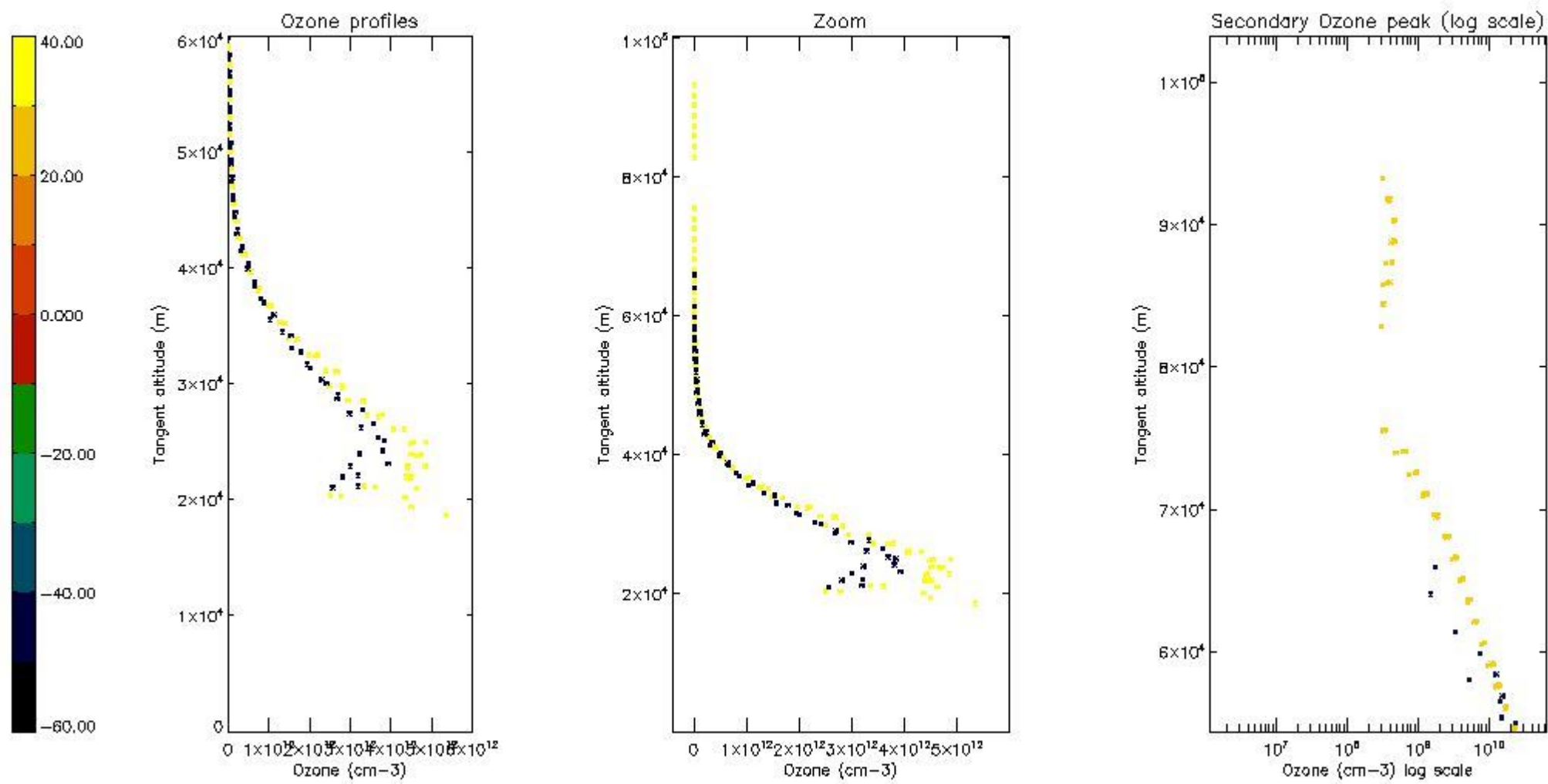
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

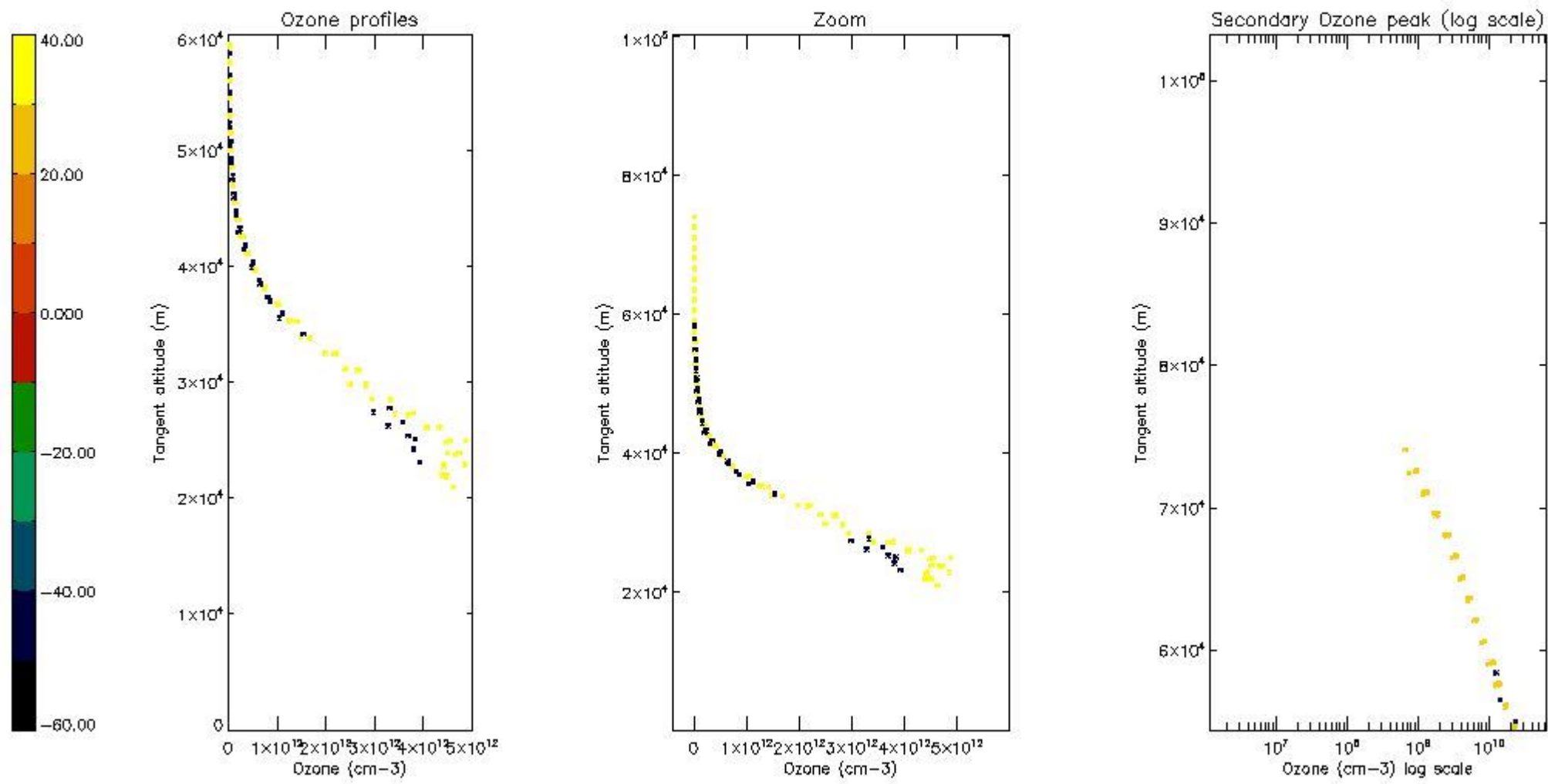
The colorbar represents the latitude.



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

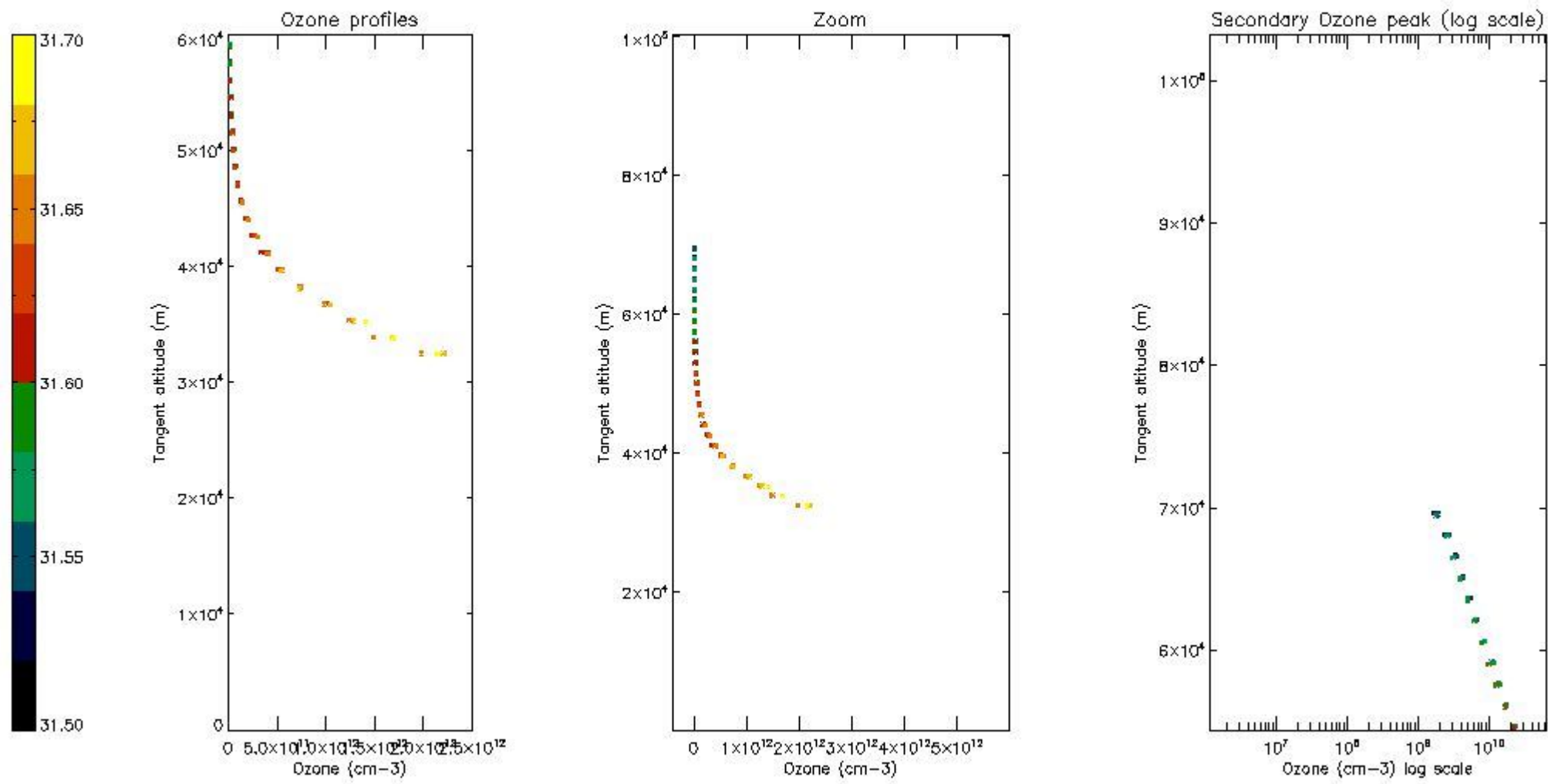
The colorbar represents the latitude.





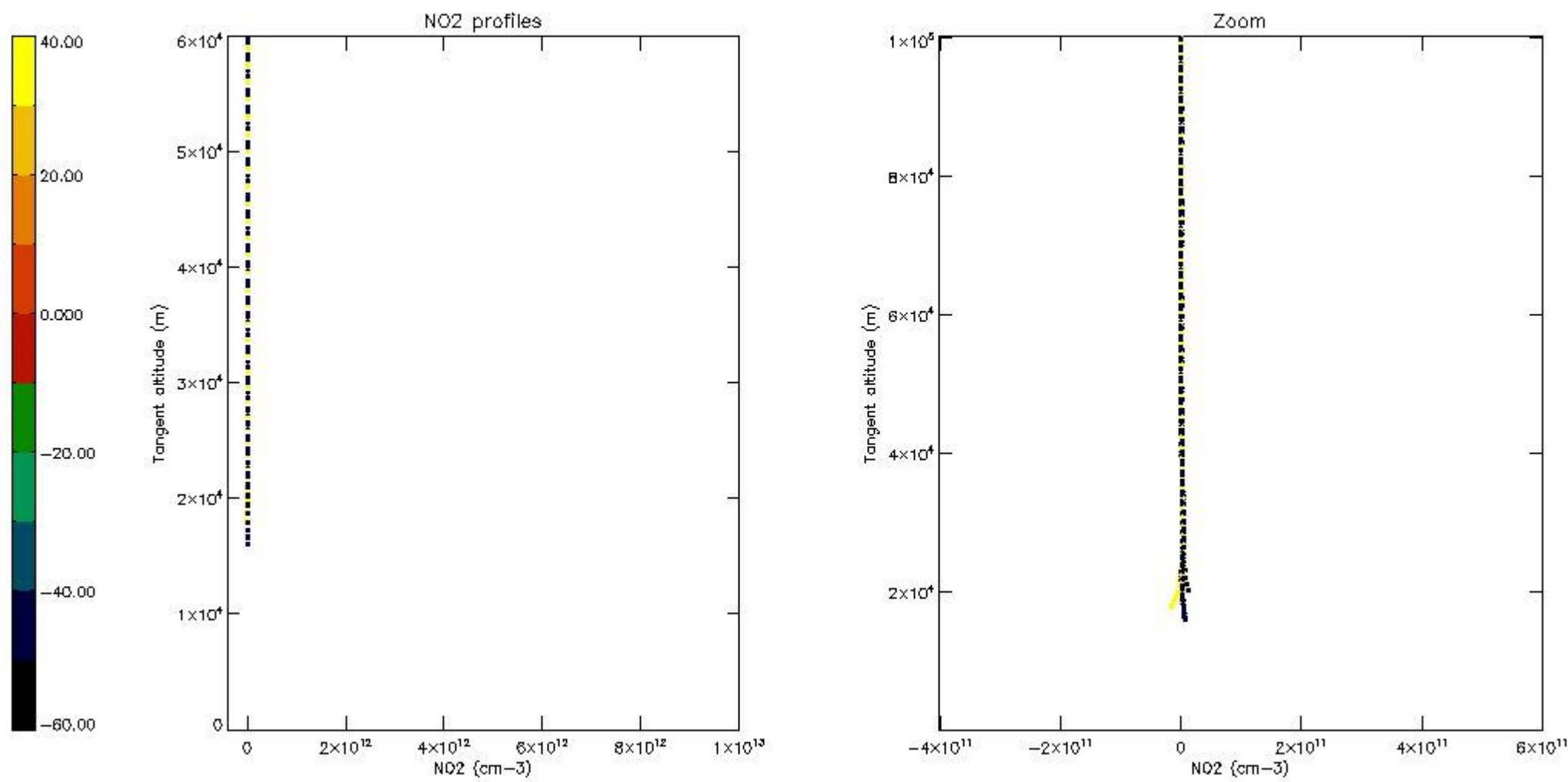
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



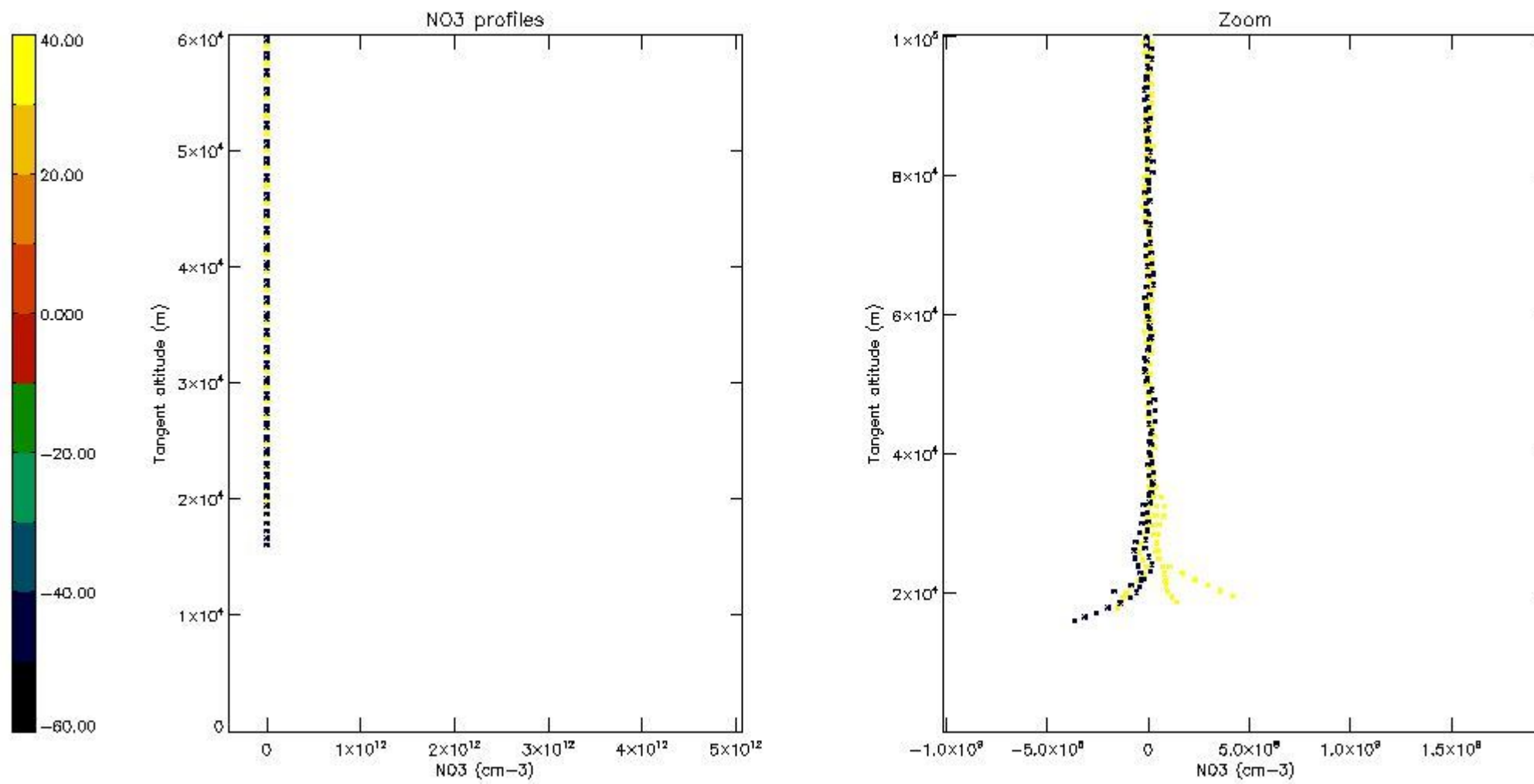
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



## 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	05-MAR-2012 00:51:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-MAR-2012 00:51:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-MAR-2012 00:51:38

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

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

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

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

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

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

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

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

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

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

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

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

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

#### [5.6 Plot NO2 profiles for all STD \(dark without errors\)](#)

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

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Nb of level 2 prods	21
Nb of prods with errors	0

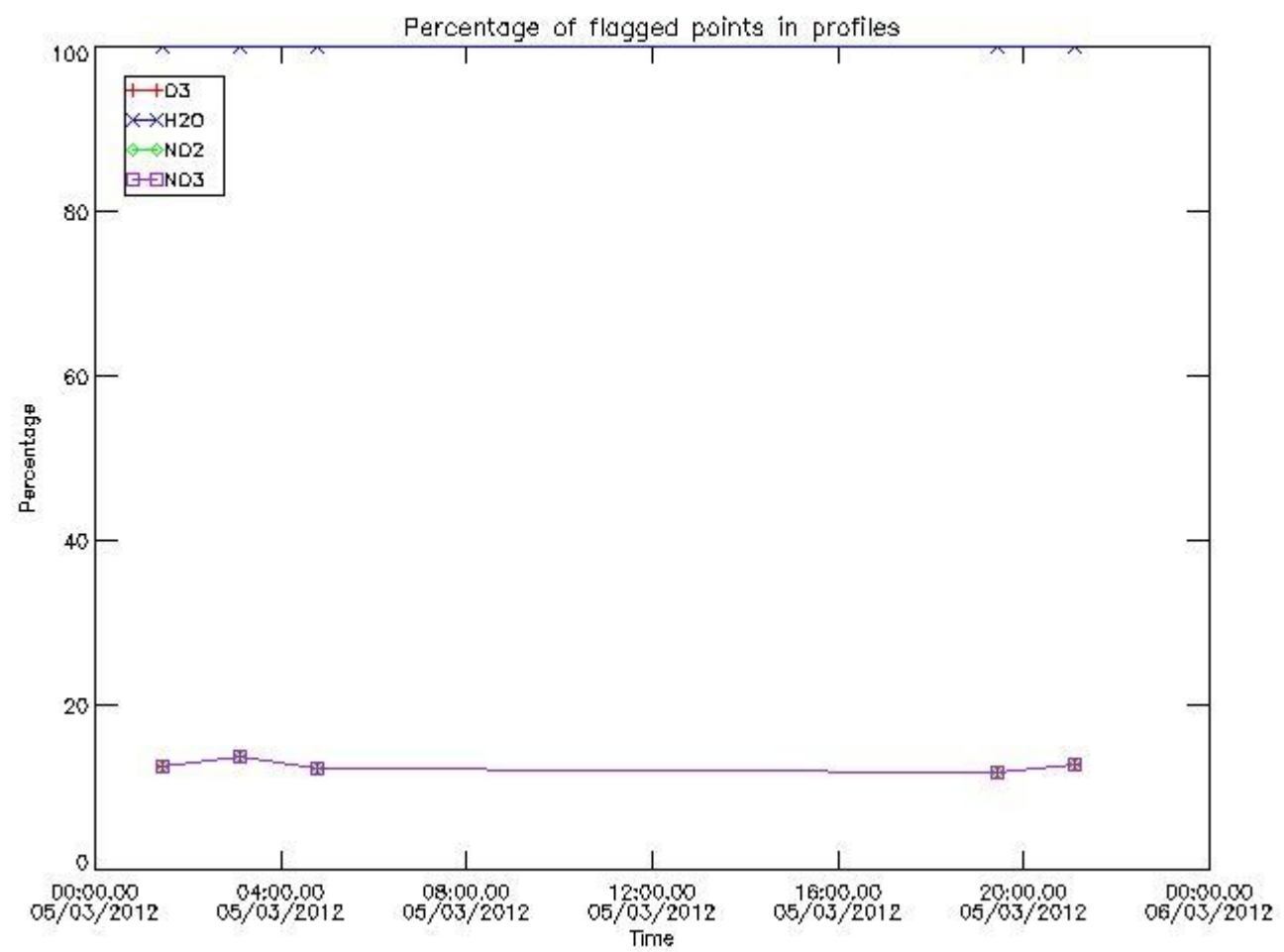
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2	GOM_NL__2PRFIN20120305_012630_000000413112_00204_52373_0410.N1	05-MAR-2012 01:26:30	Dark	41.000	99	Del Cen	2.5750	26000.	82	52373	No
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8	GOM_NL__2PRFIN20120305_062713_000000433112_00207_52376_0483.N1	05-MAR-2012 06:27:13	Straylight	42.500	99	Del Cen	2.5750	26000.	85	52376	No
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13	GOM_NL__2PRFIN20120305_144825_000000393112_00212_52381_0678.N1	05-MAR-2012 14:48:25	Straylight	39.000	99	Del Cen	2.5750	26000.	78	52381	No
14	GOM_NL__2PRFIN20120305_162839_000000403112_00213_52382_0695.N1	05-MAR-2012 16:28:39	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52382	No
15	GOM_NL__2PRFIN20120305_180854_000000403112_00214_52383_0726.N1	05-MAR-2012 18:08:54	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52383	No
16	GOM_NL__2PRFIN20120305_191440_000000443112_00214_52383_0727.N1	05-MAR-2012 19:14:40	Bright	43.500	11	53Alp Aql	0.76500	8000.0	87	52383	No
17	GOM_NL__2PRFIN20120305_192643_000000433112_00214_52383_0728.N1	05-MAR-2012 19:26:43	Dark	43.000	103	38Zet Sgr	2.6000	9700.0	86	52383	No
18	GOM_NL__2PRFIN20120305_194908_000000403112_00215_52384_0764.N1	05-MAR-2012 19:49:08	Straylight	39.500	99	Del Cen	2.5750	26000.	79	52384	No
19	GOM_NL__2PRFIN20120305_205455_000000413112_00215_52384_0765.N1	05-MAR-2012 20:54:55	Bright	40.500	11	53Alp Aql	0.76500	8000.0	81	52384	No
20	GOM_NL__2PRFIN20120305_210657_000000403112_00215_52384_0766.N1	05-MAR-2012 21:06:57	Dark	39.500	103	38Zet Sgr	2.6000	9700.0	79	52384	No
21	GOM_NL__2PRFIN20120305_230937_000000423112_00217_52386_0809.N1	05-MAR-2012 23:09:37	Straylight	42.000	99	Del Cen	2.5750	26000.	84	52386	No

## 3. Quality information per product

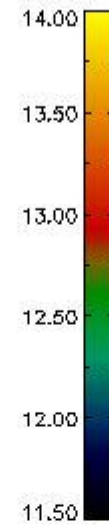
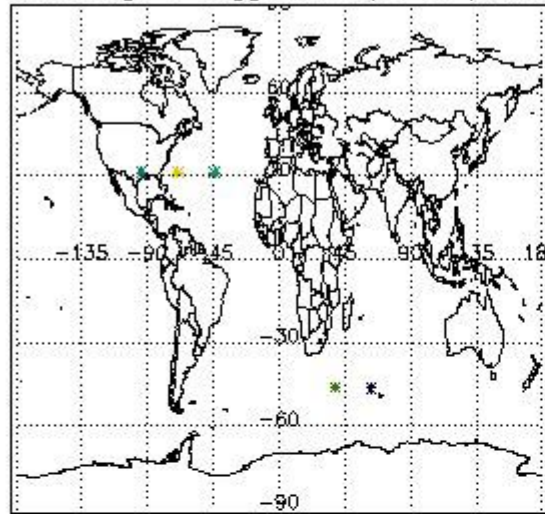
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

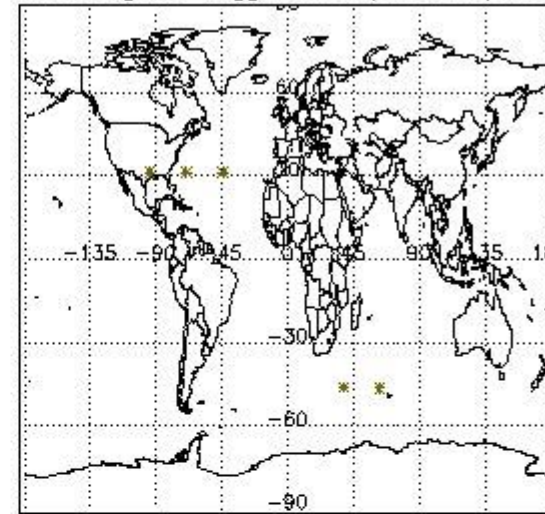


*3.2 Plot quality information per product (world map)*

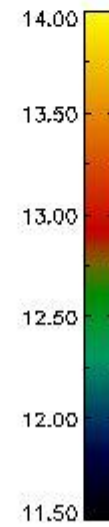
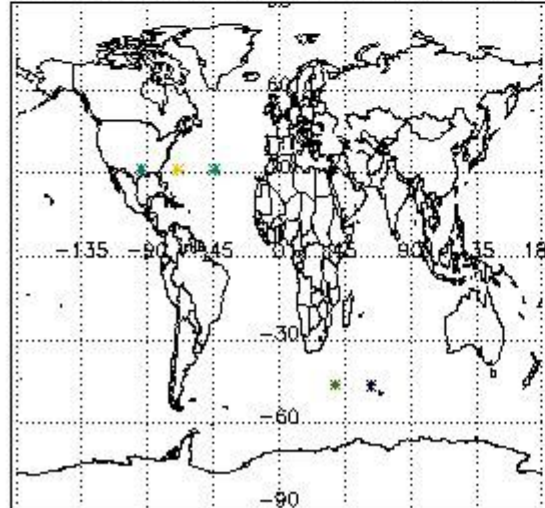
Percentage of flagged data per O3 profile



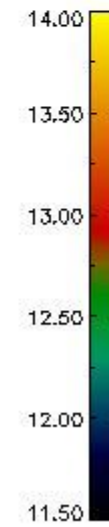
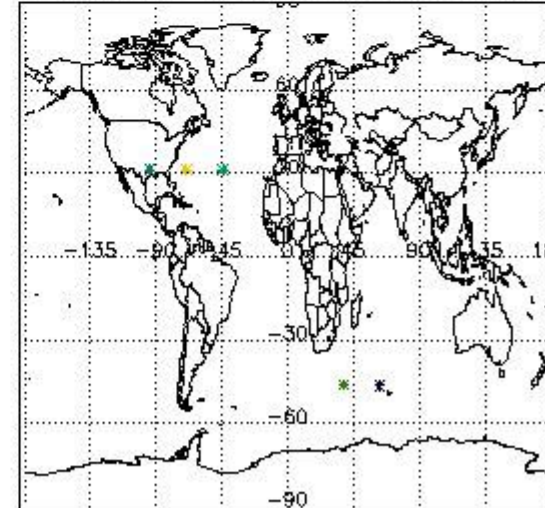
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



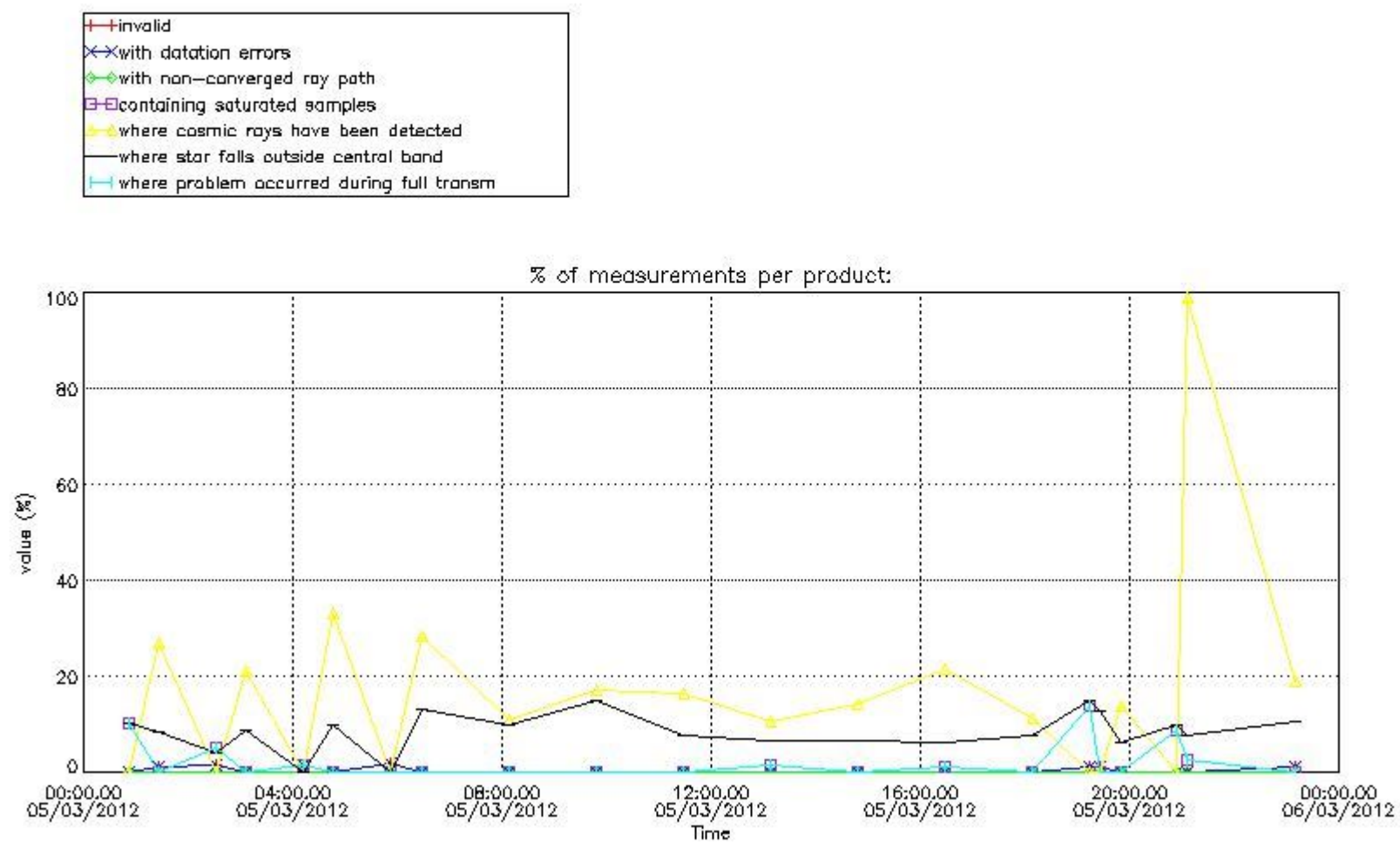
#### 4. Level 1 quality information per product

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



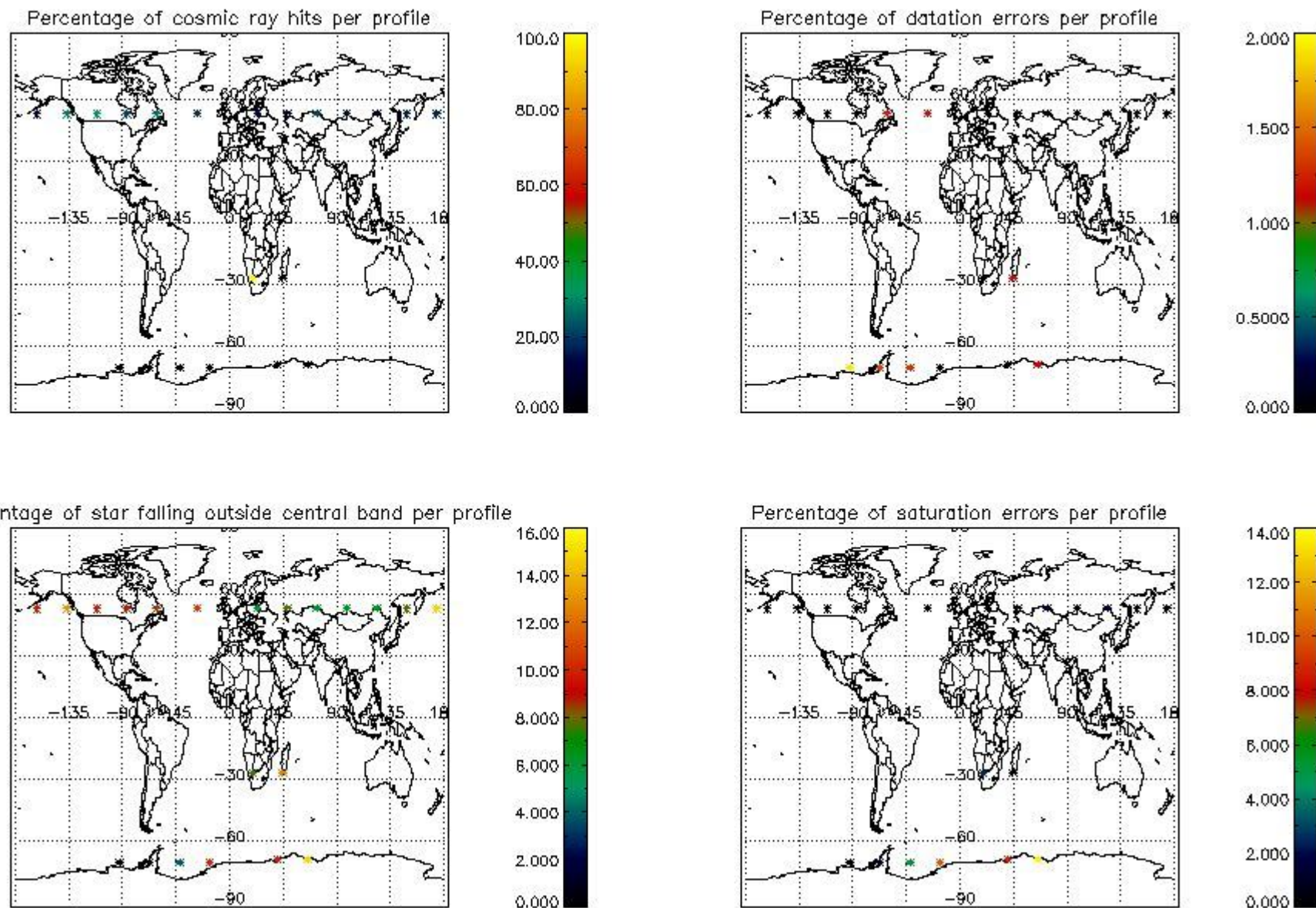


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!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:

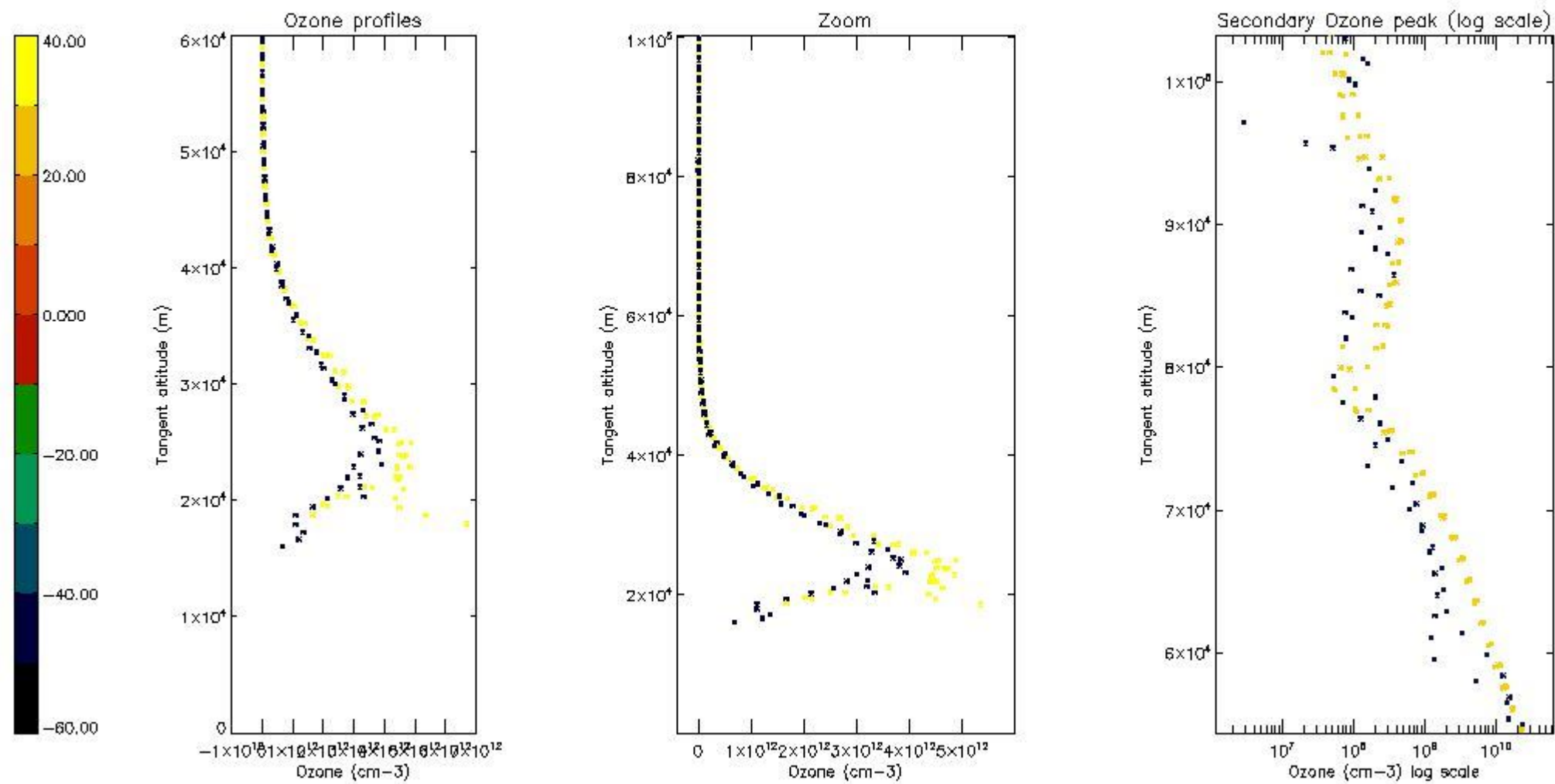
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	25
STD < 20	14
STD < 10	10
STD < 5	5

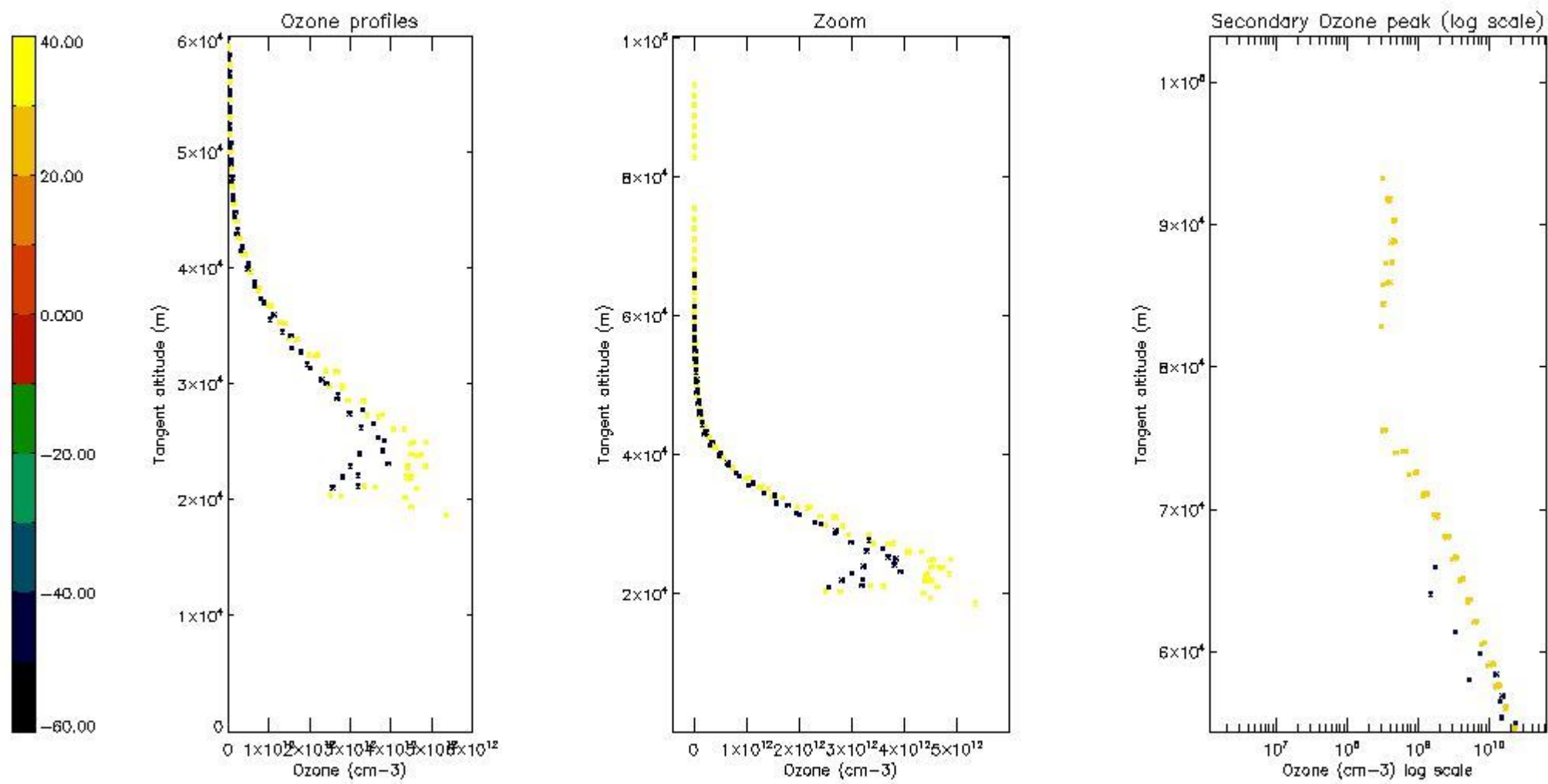
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



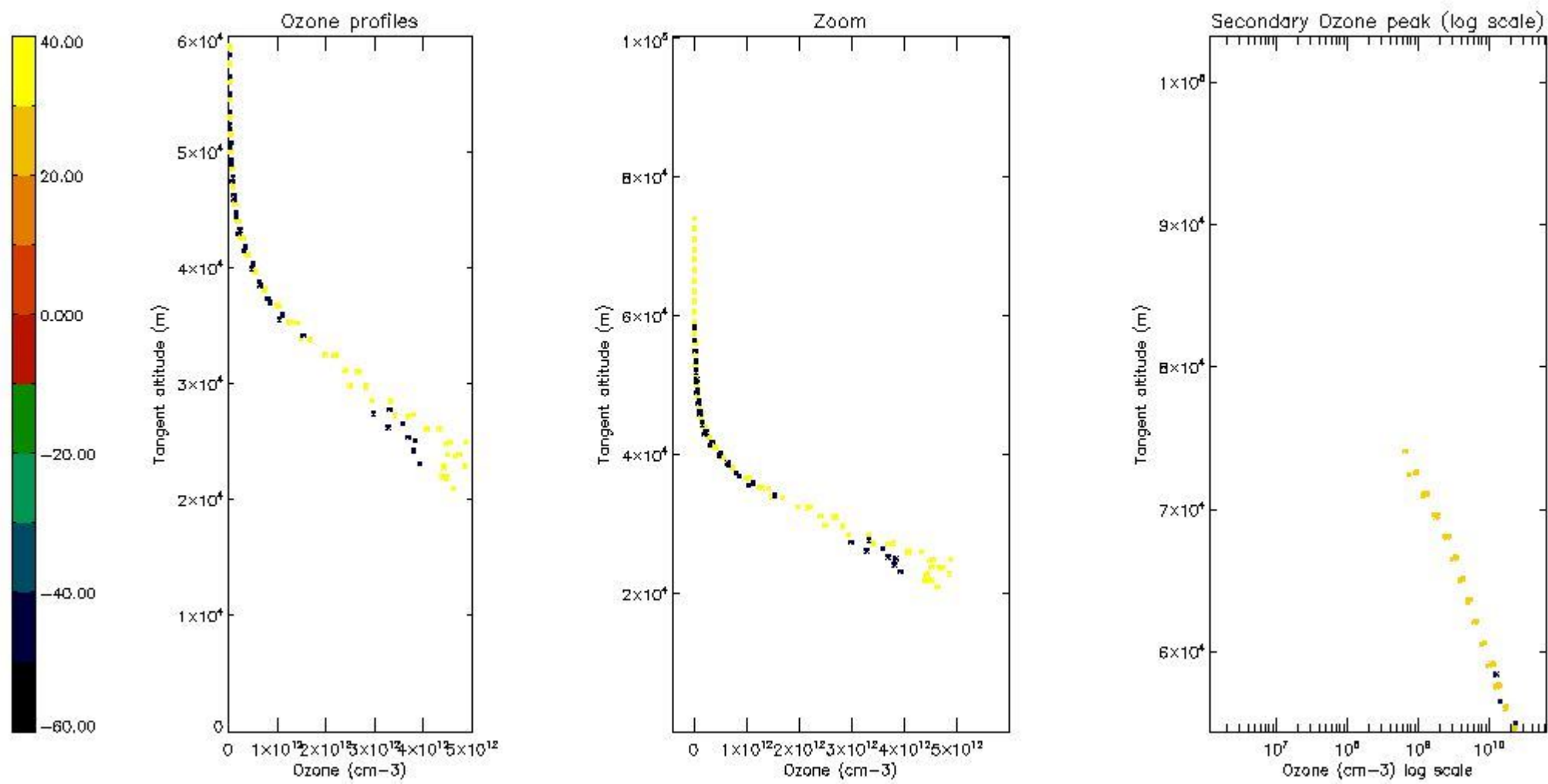
### 5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



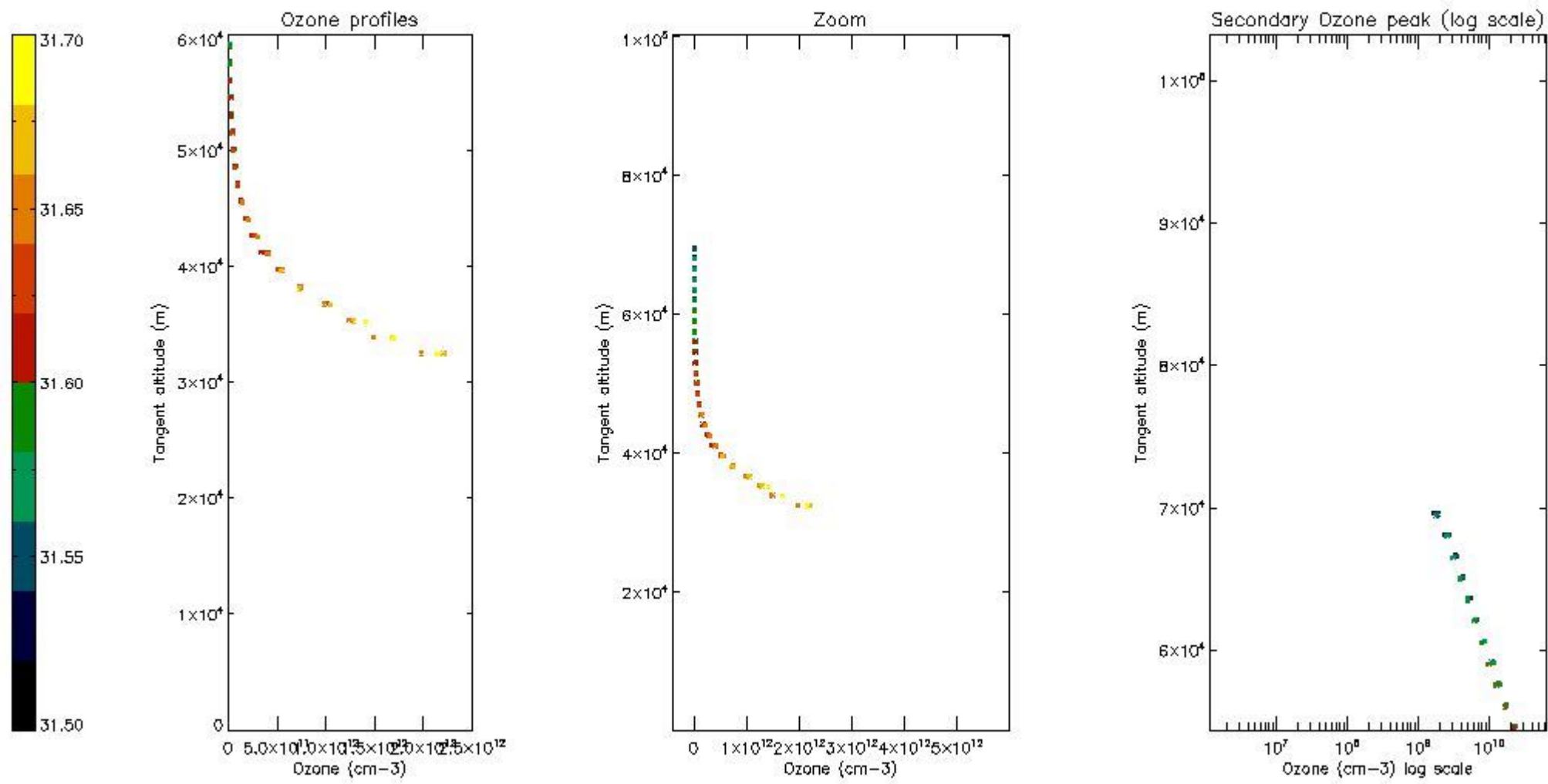
5.4 Plot ozone profiles where  $\text{STD} < 10\%$  (dark without errors)

The colorbar represents the latitude.



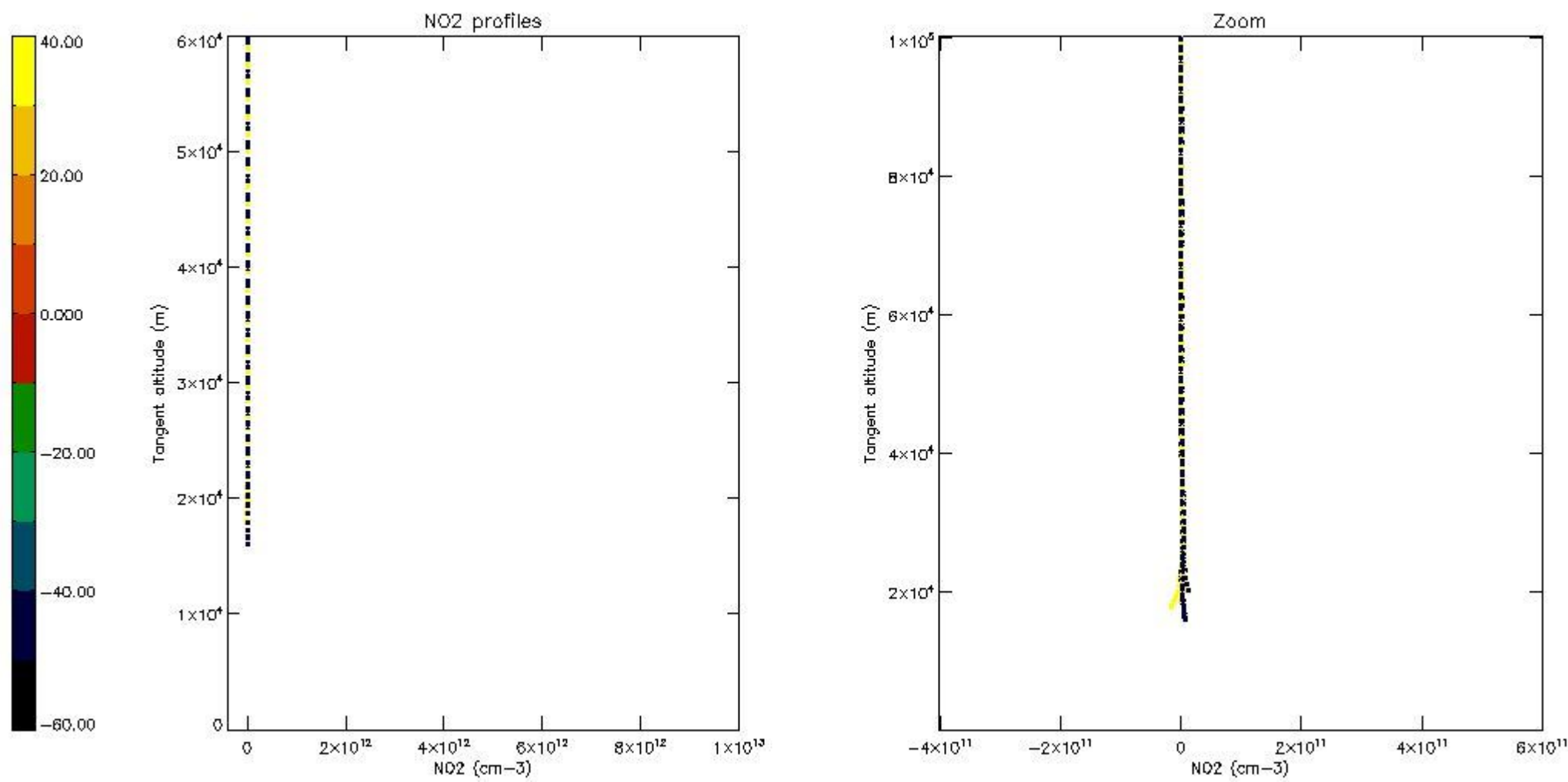
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



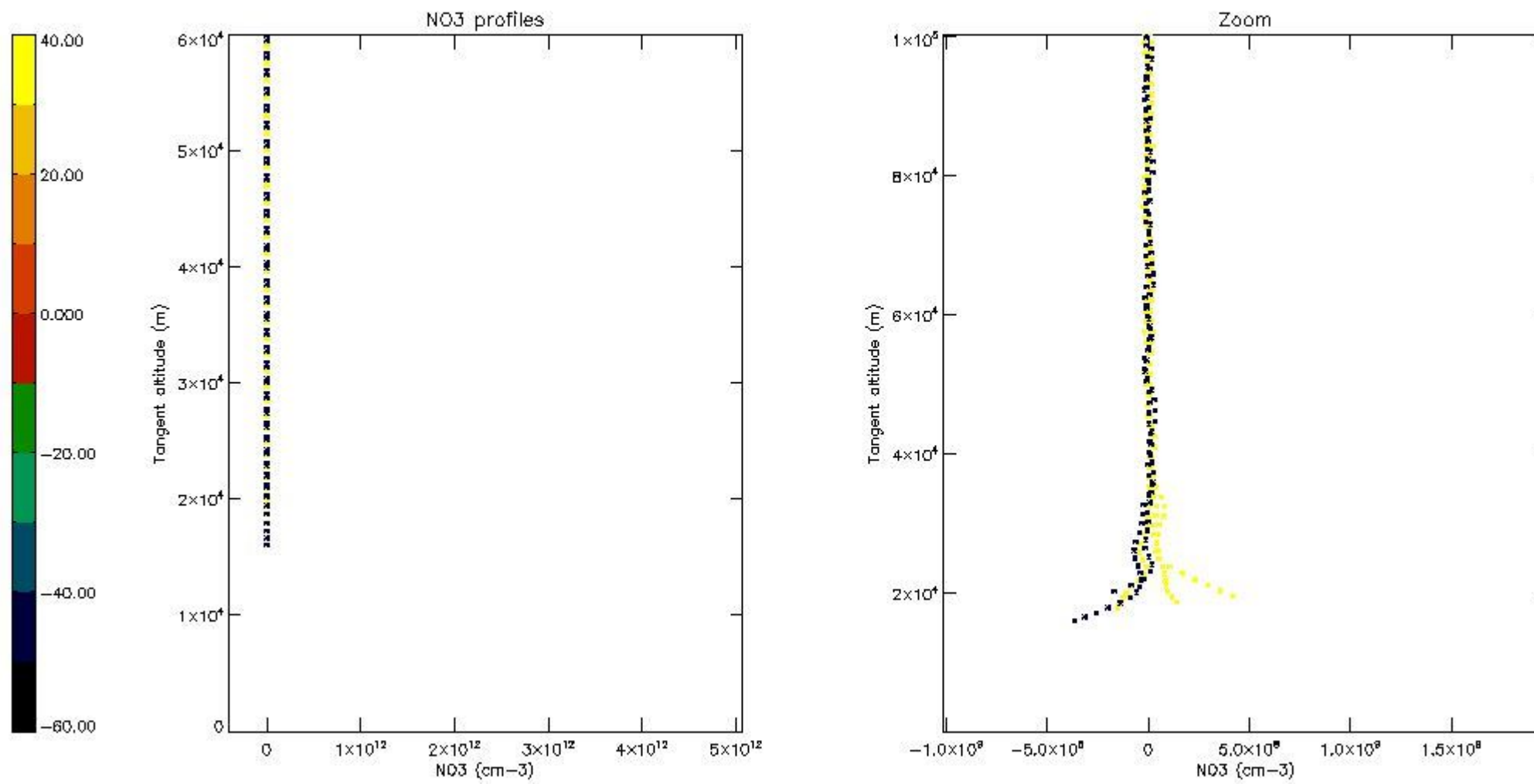
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.

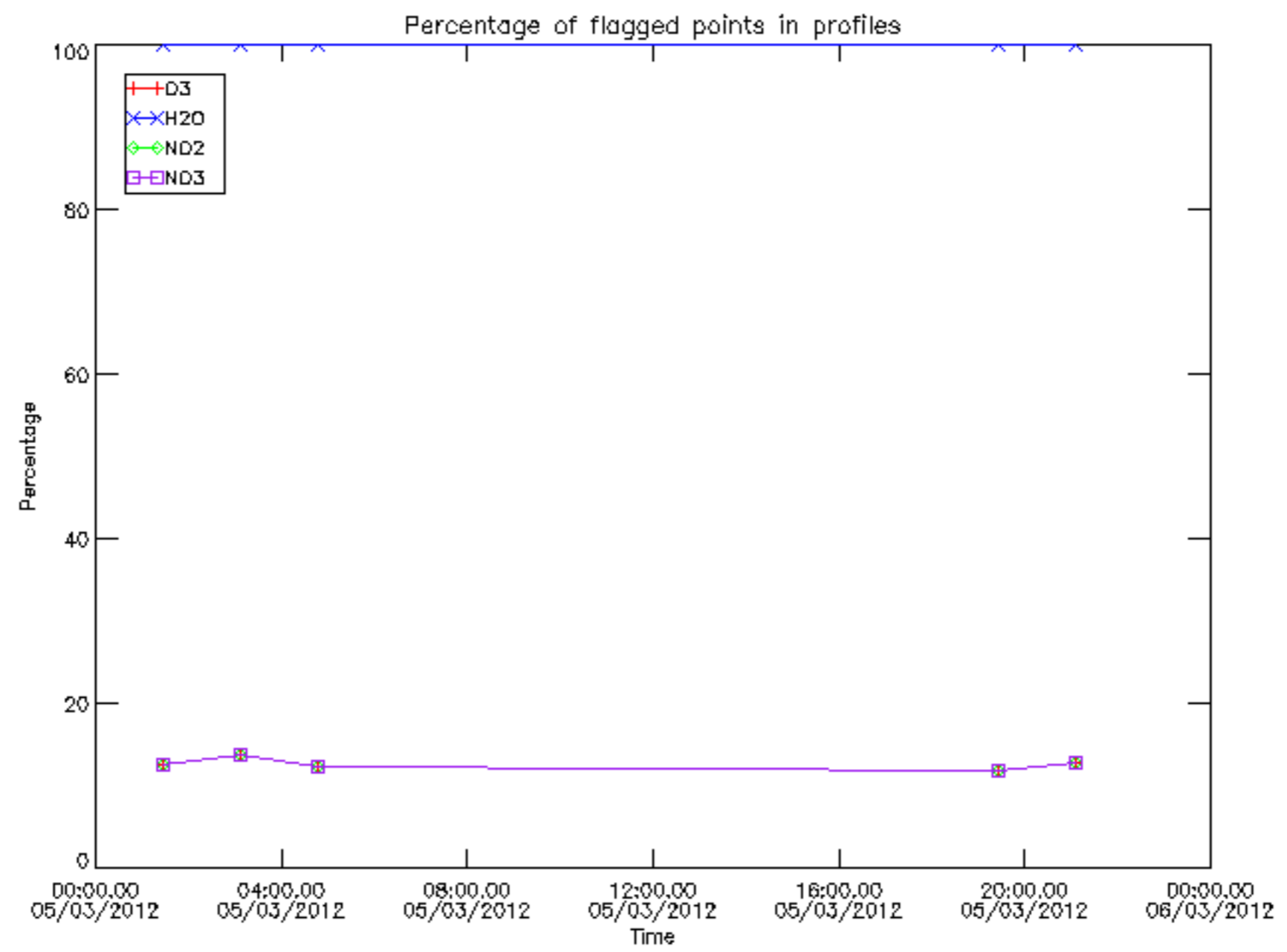


## 6. Auxiliary Data Files used for the production reported in section 2

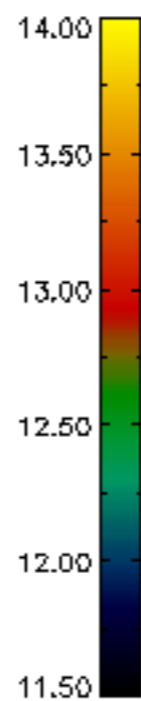
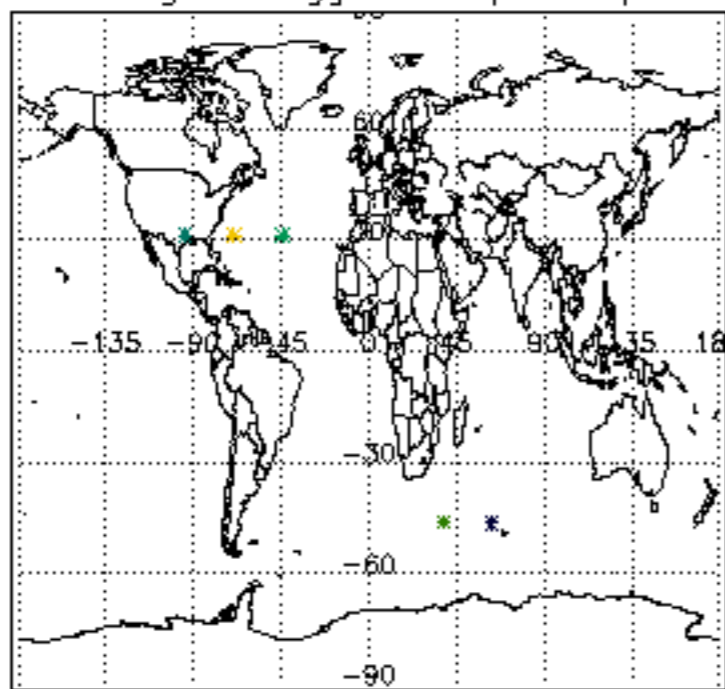
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	05-MAR-2012 00:51:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-MAR-2012 00:51:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-MAR-2012 00:51:38

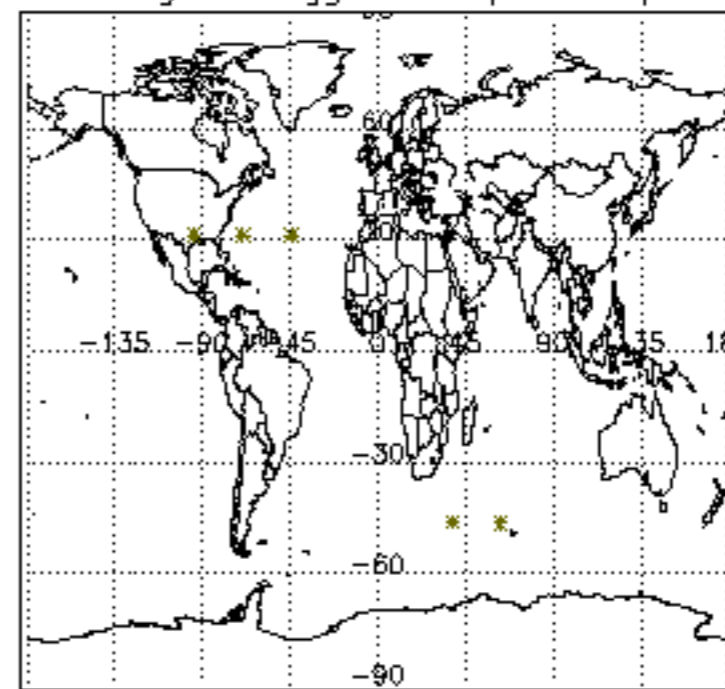




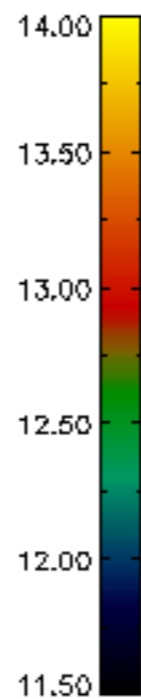
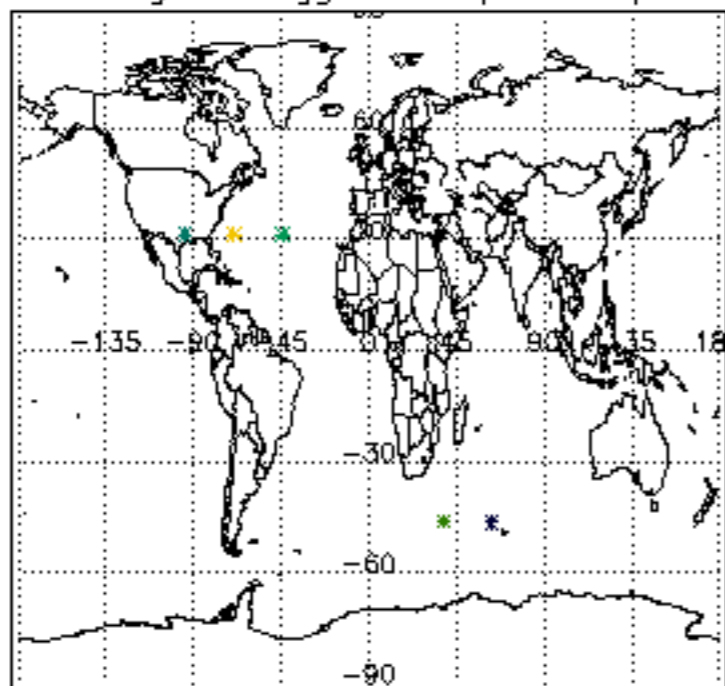
Percentage of flagged data per D3 profile



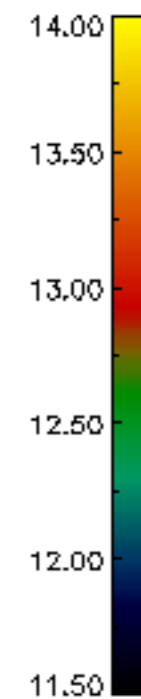
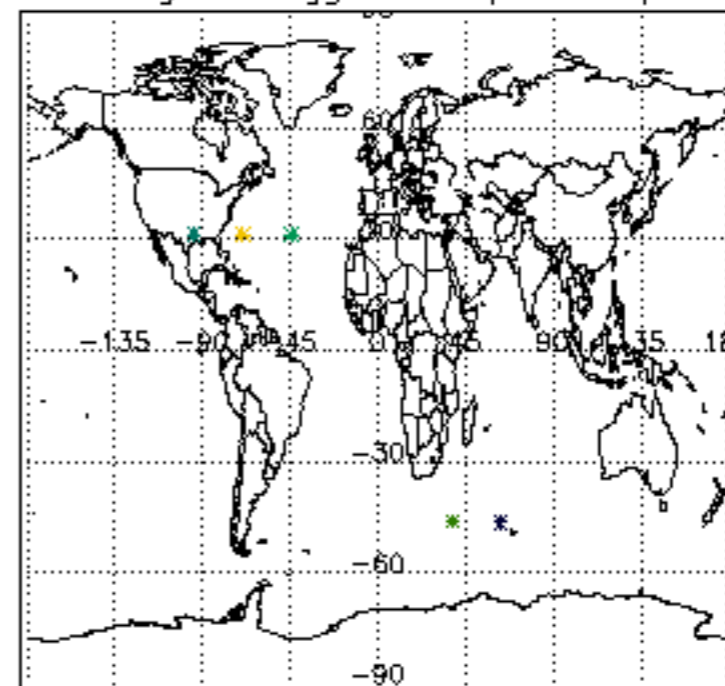
Percentage of flagged data per H2O profile

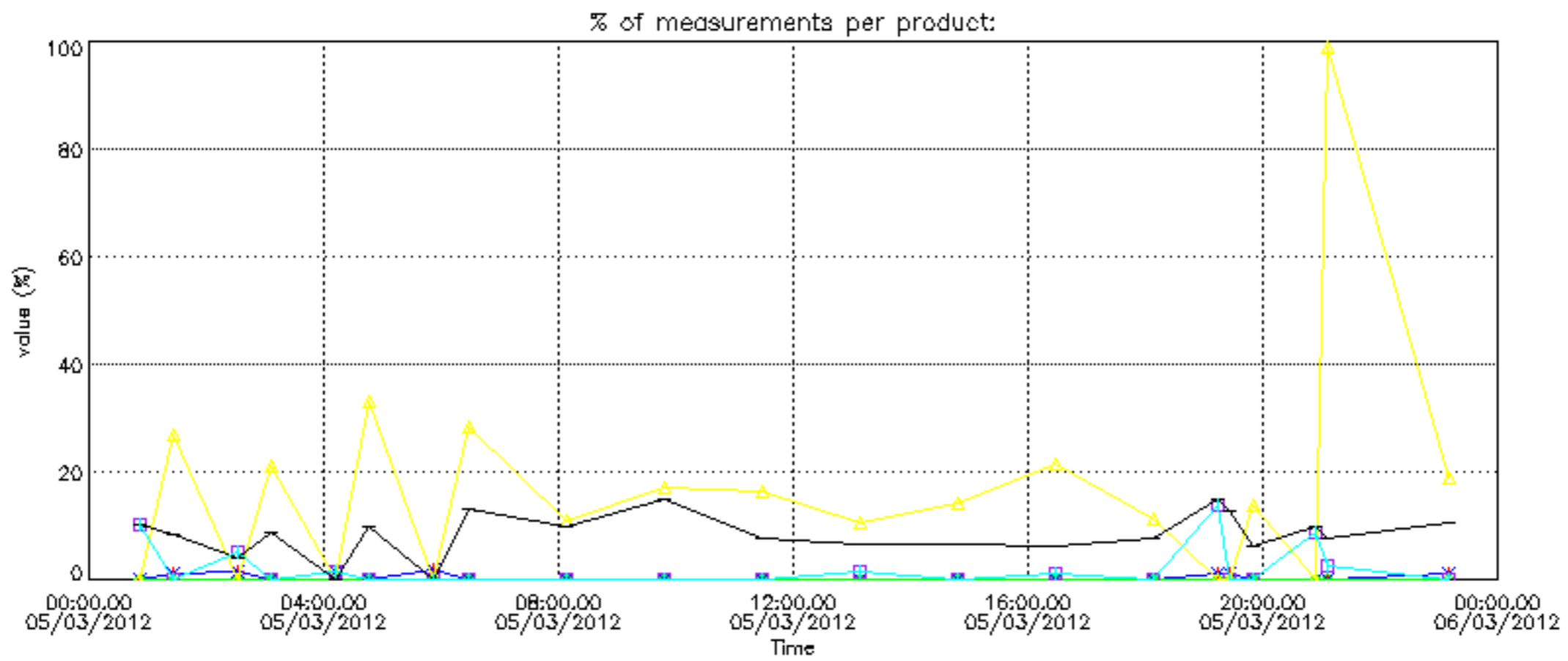


Percentage of flagged data per NO2 profile

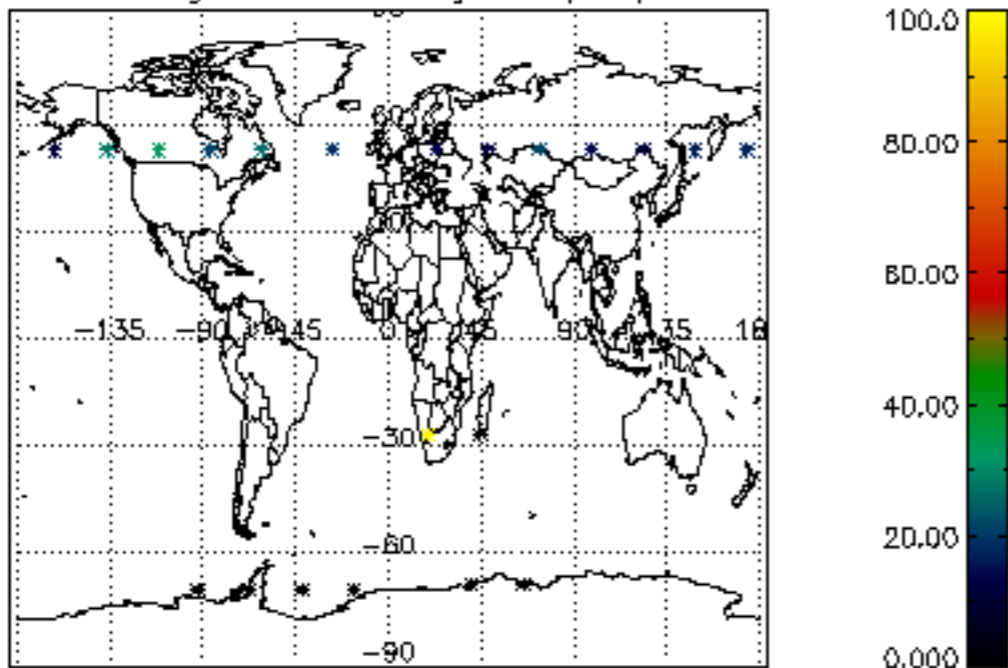


Percentage of flagged data per NO3 profile

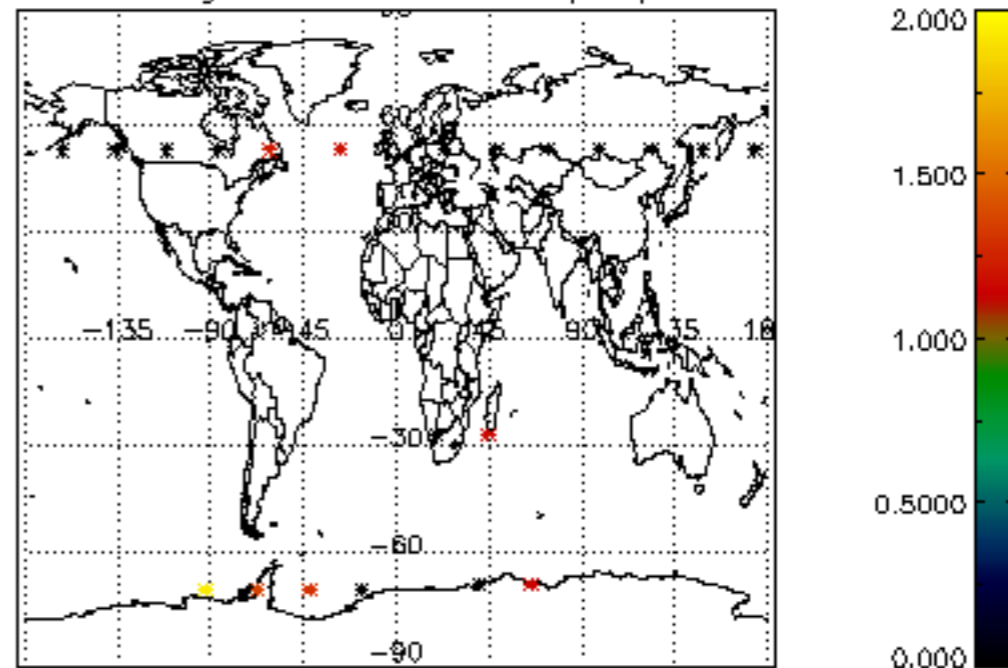




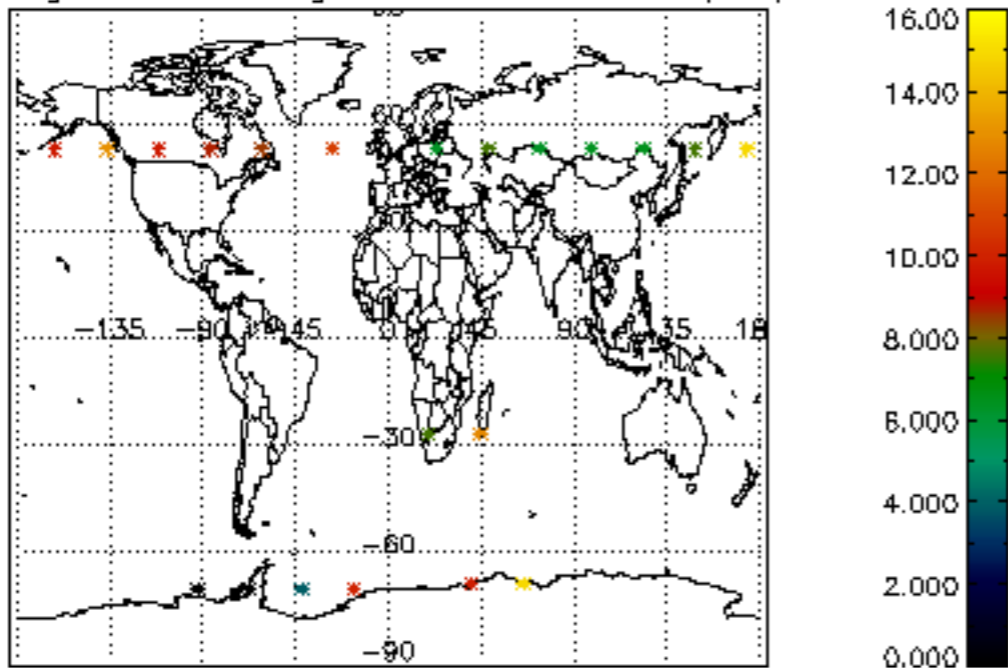
Percentage of cosmic ray hits per profile



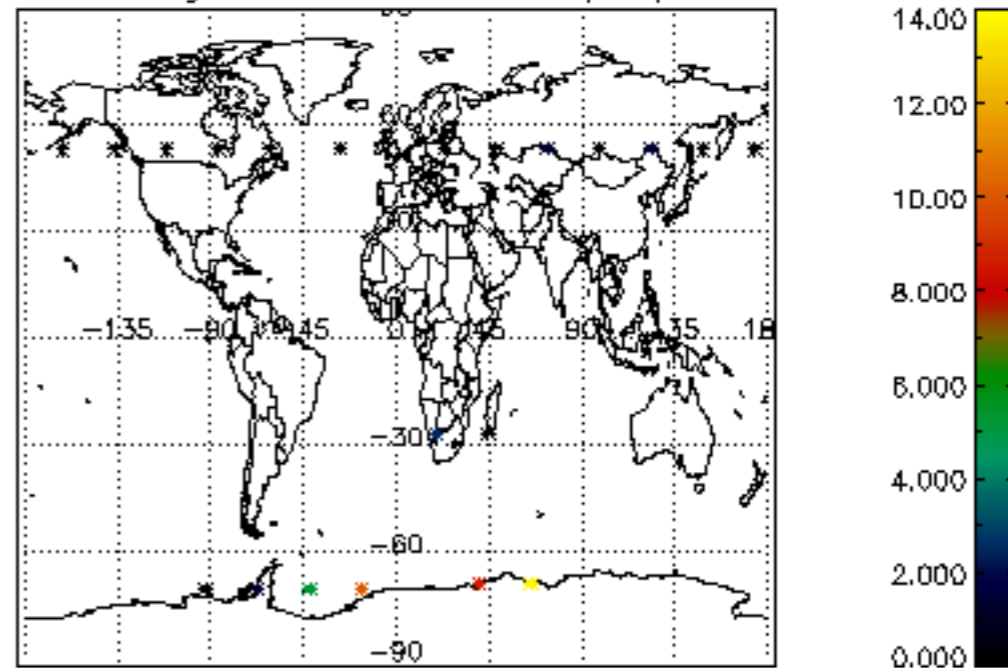
Percentage of datation errors per profile

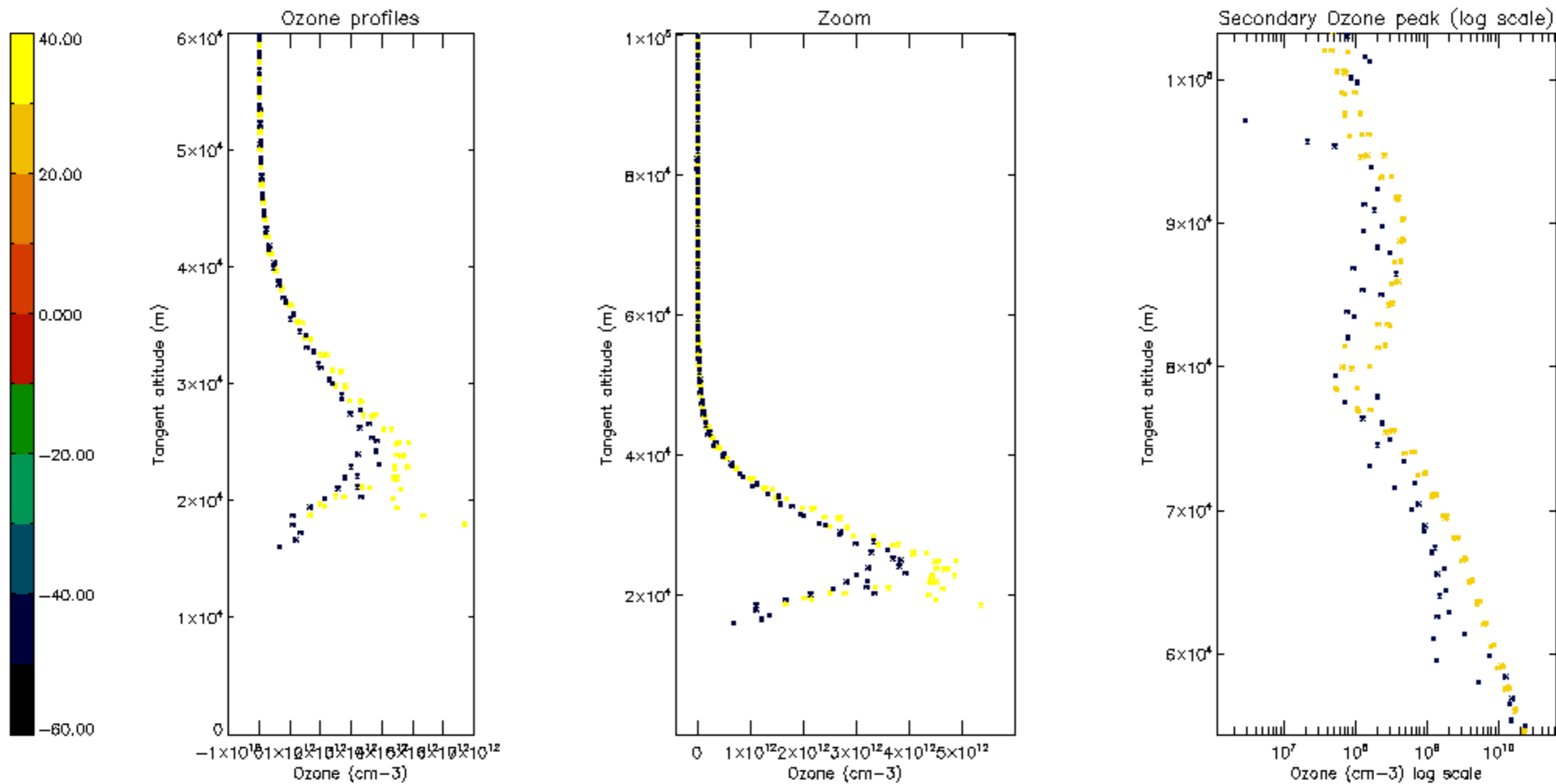


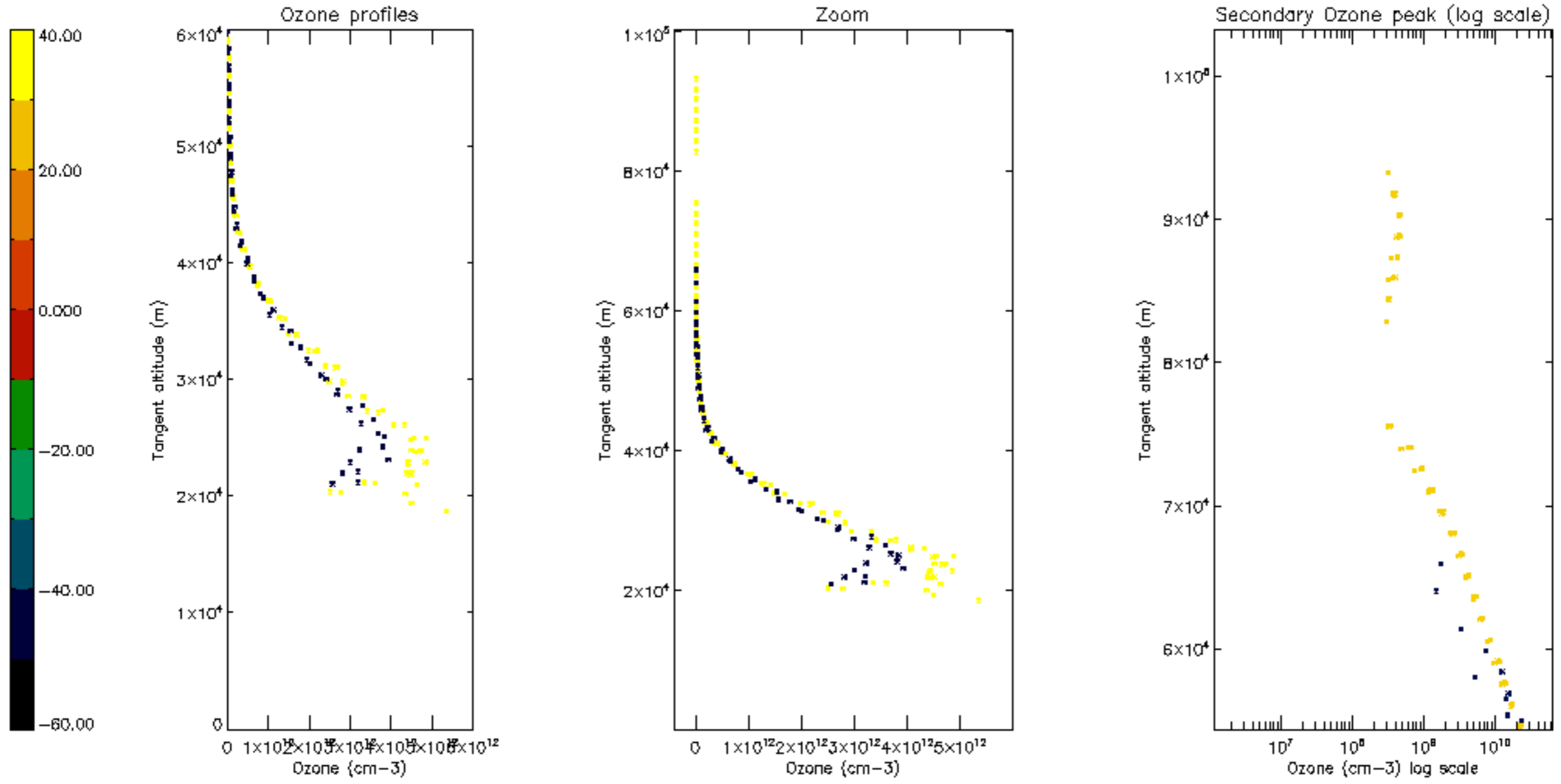
Percentage of star falling outside central band per profile

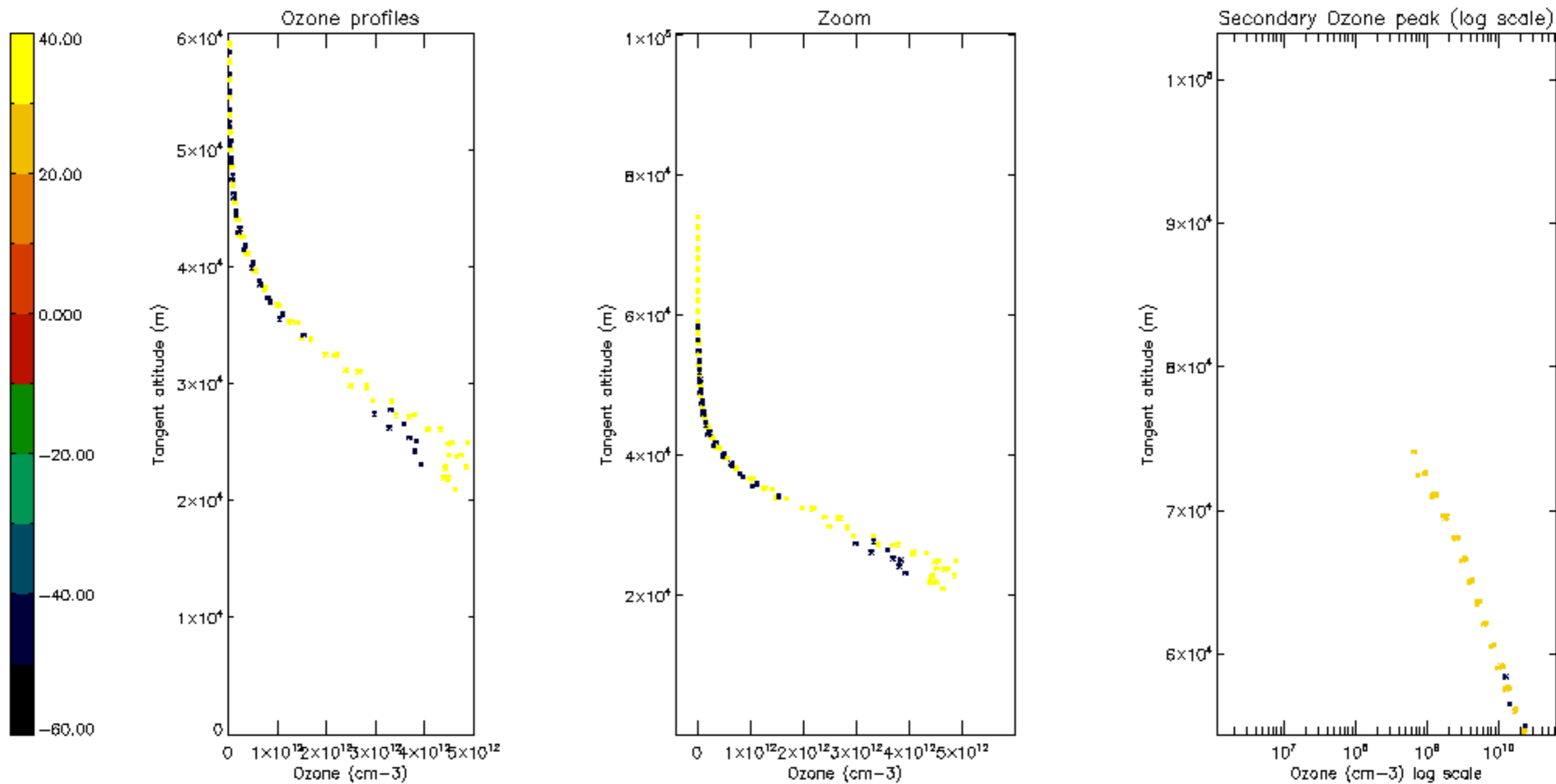


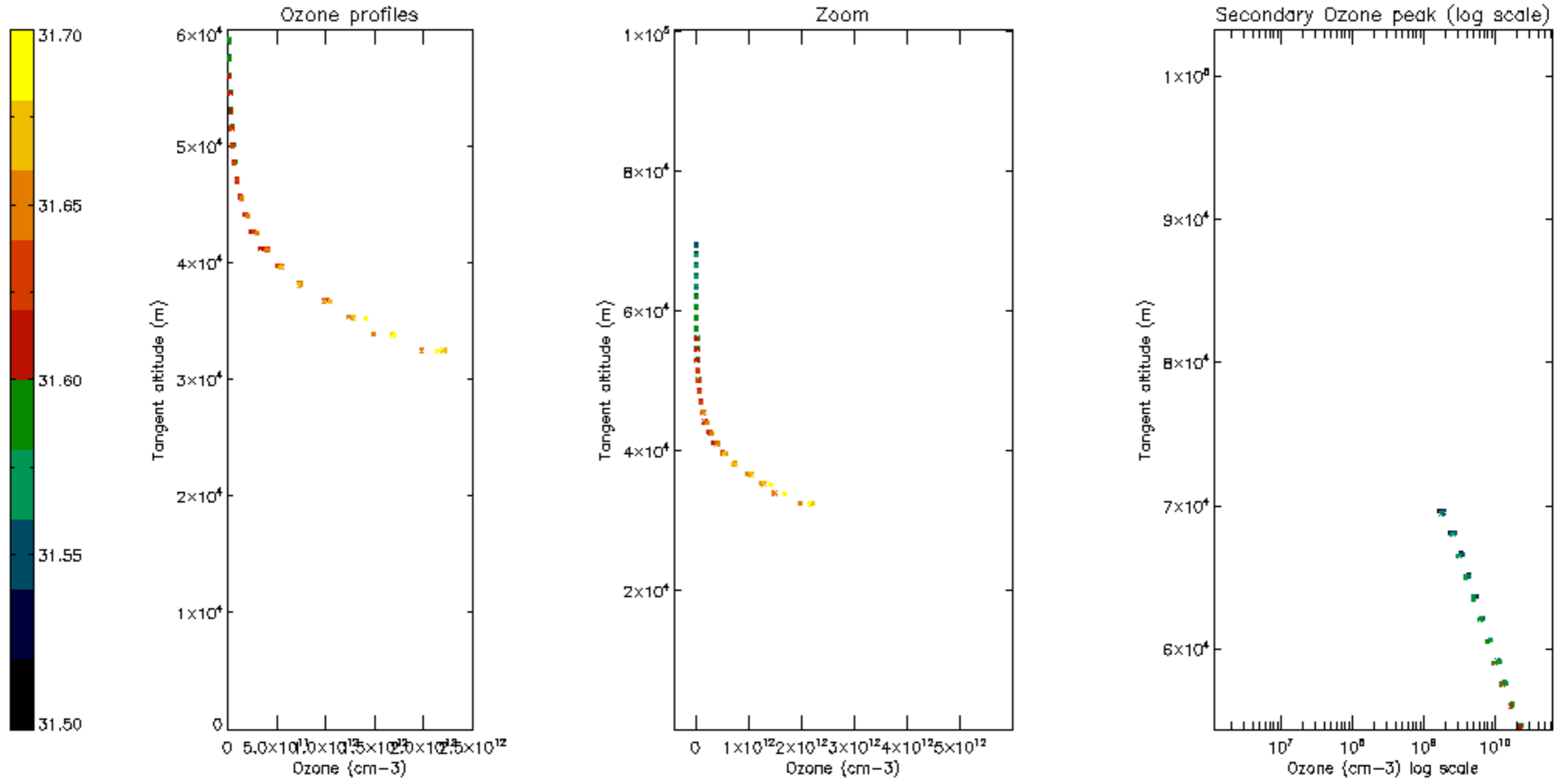
Percentage of saturation errors per profile



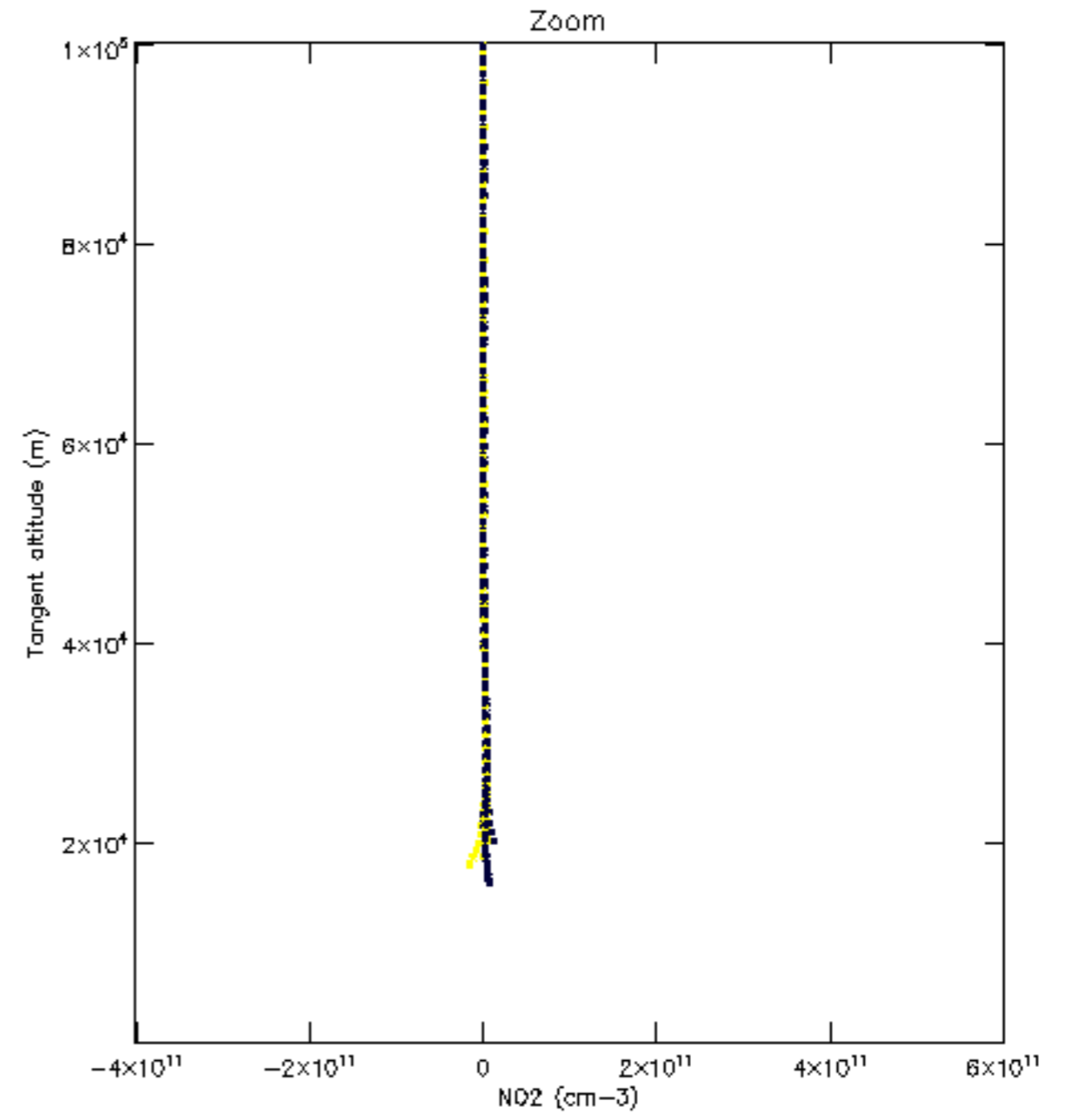
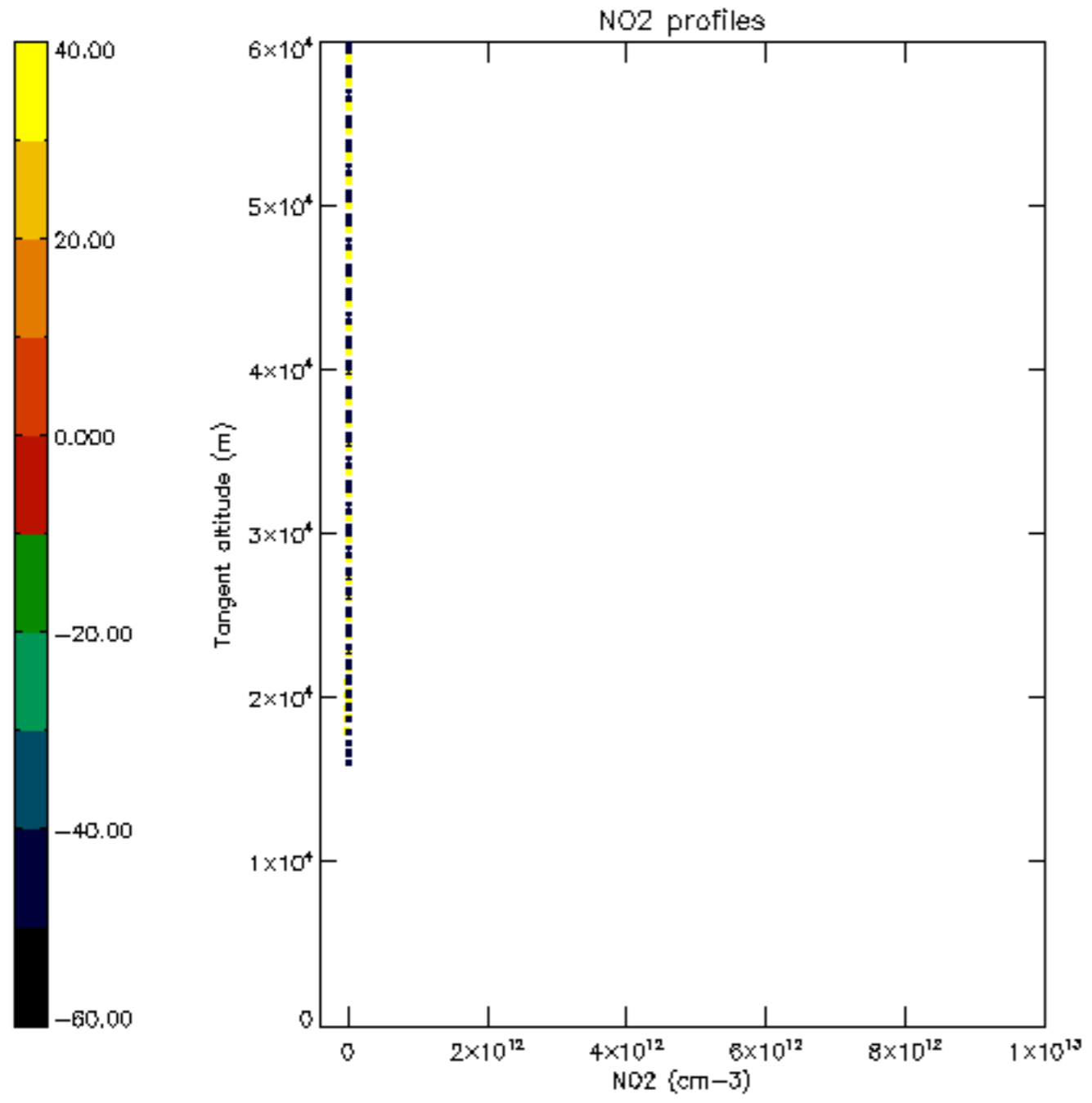


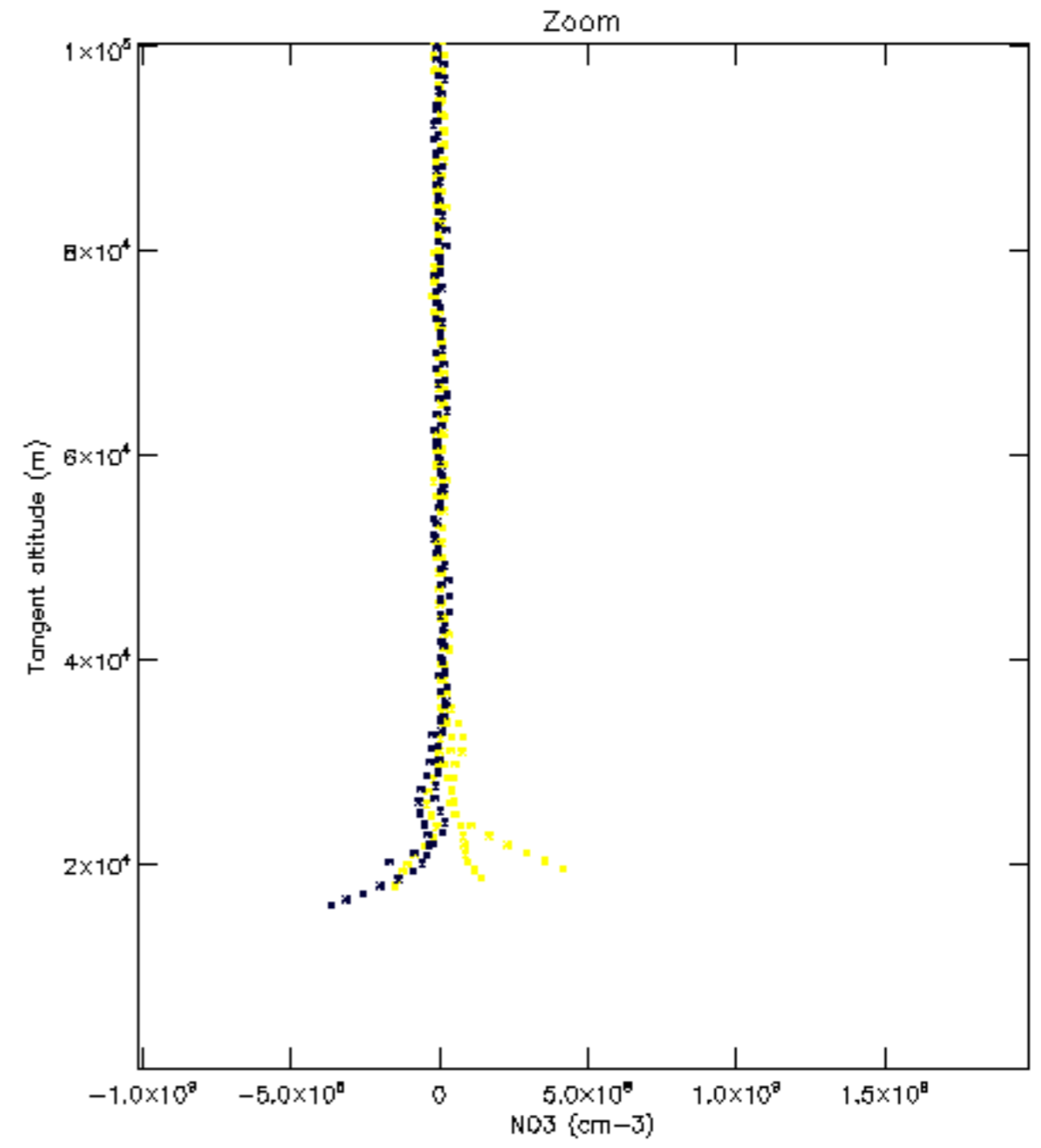
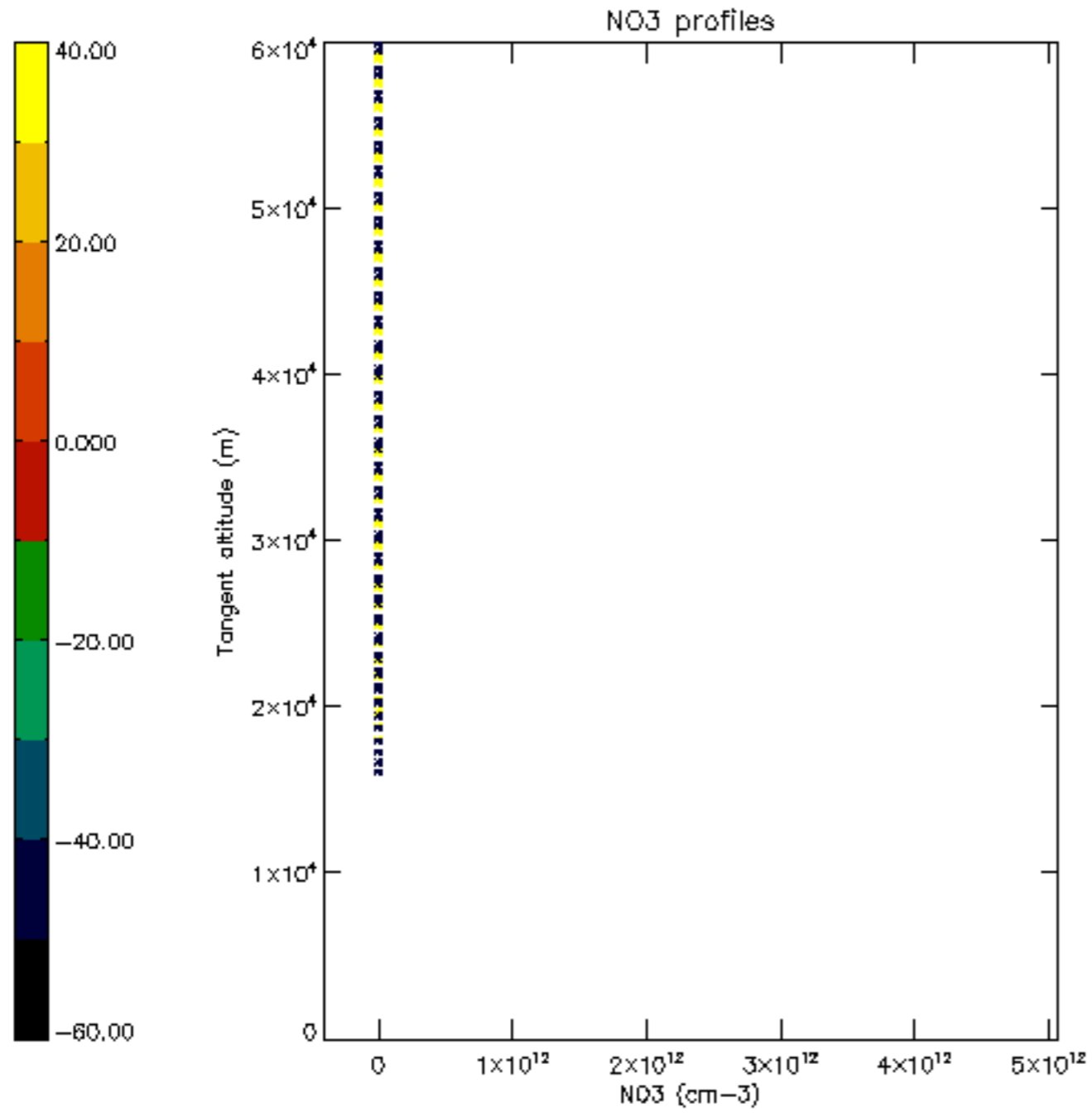


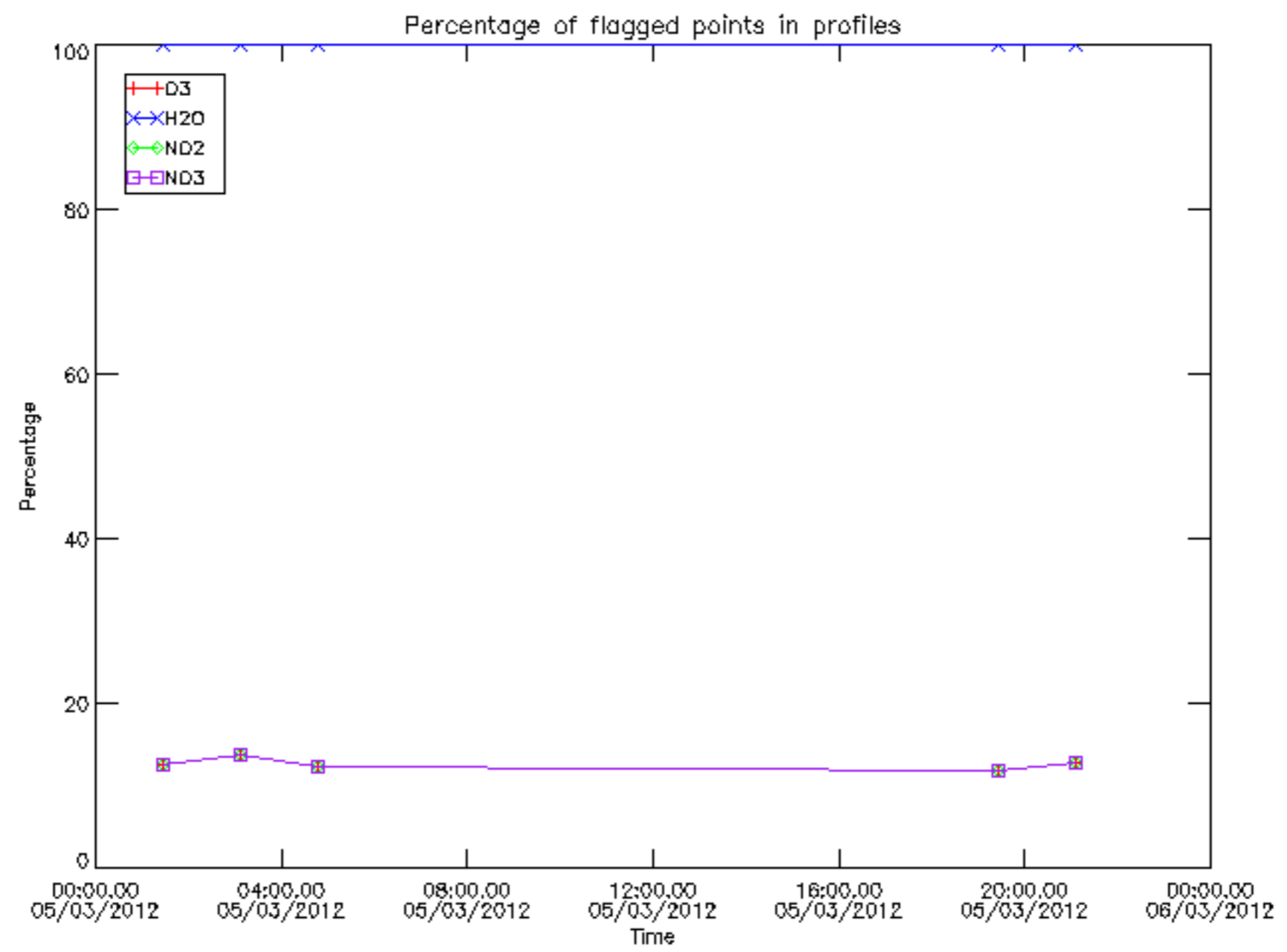




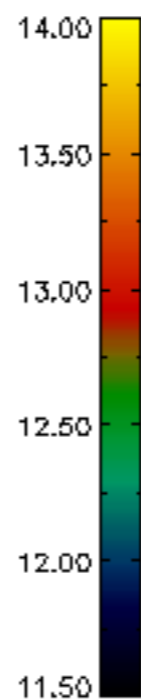
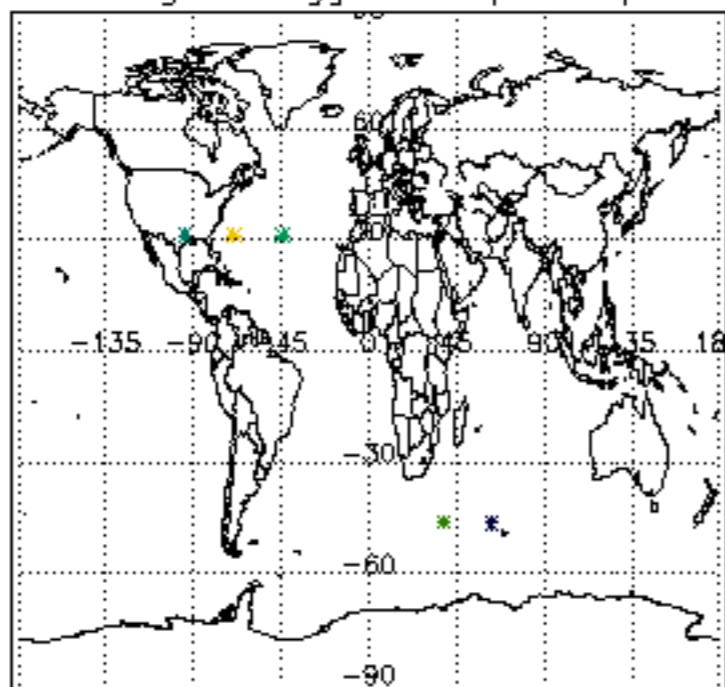




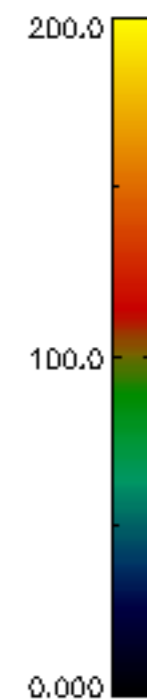
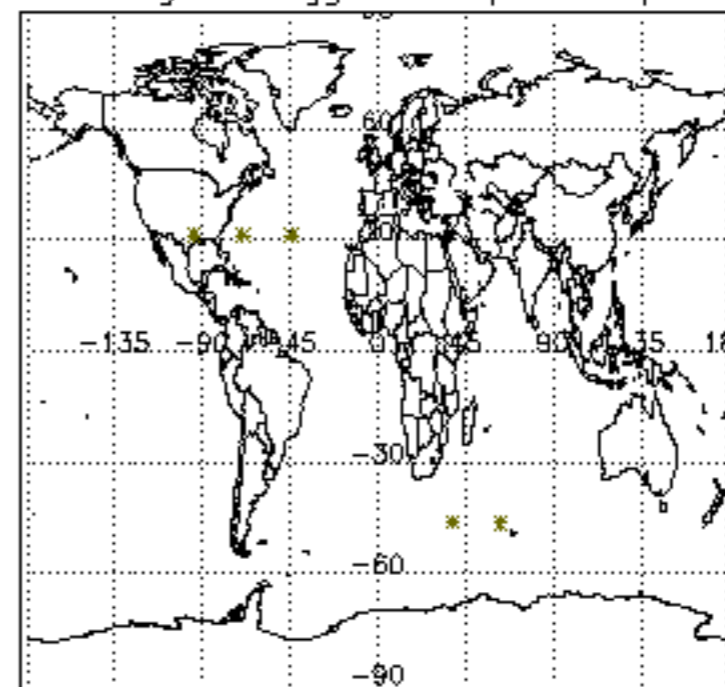




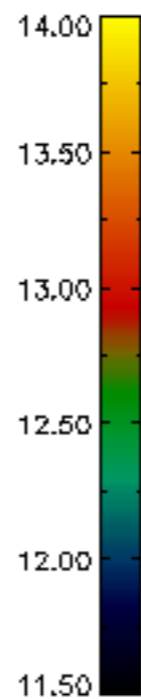
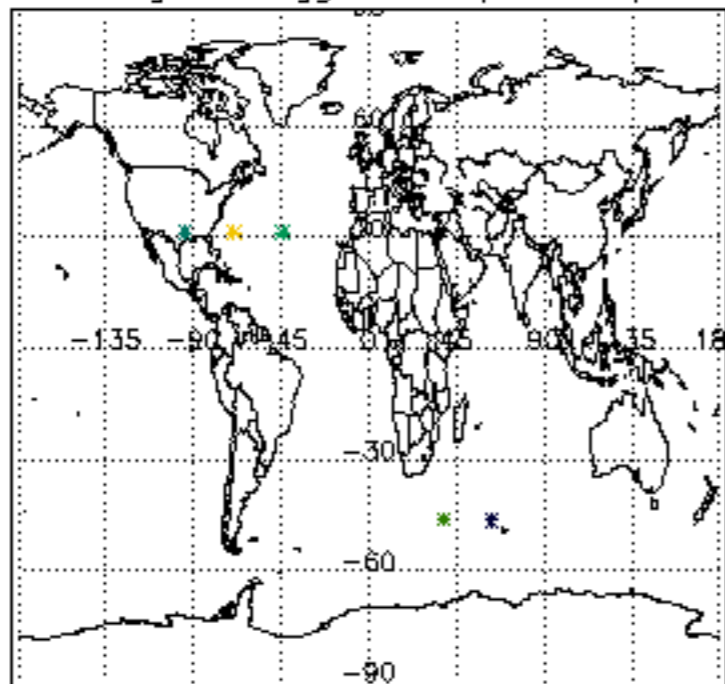
Percentage of flagged data per D3 profile



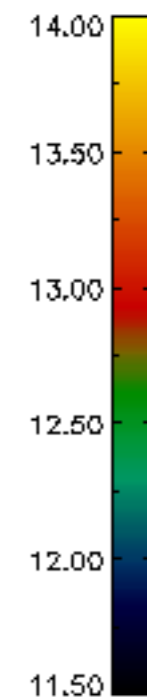
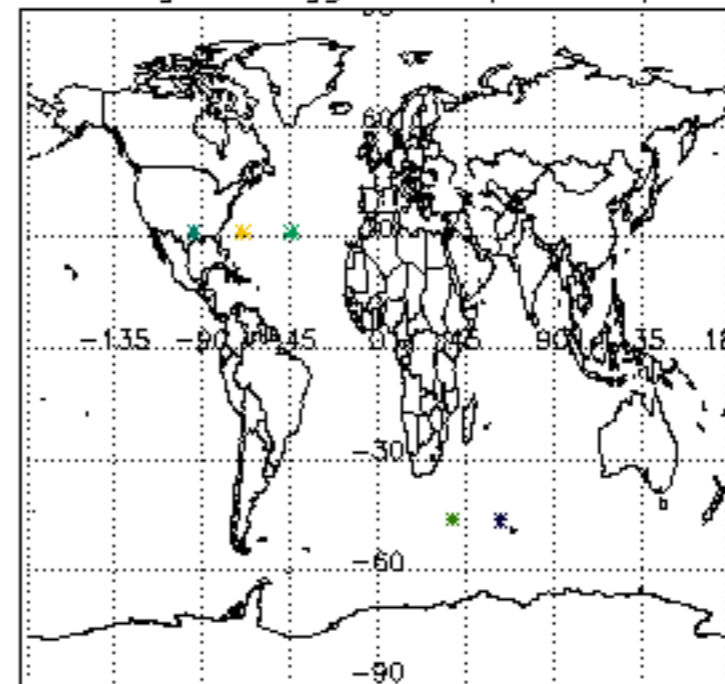
Percentage of flagged data per H2O profile

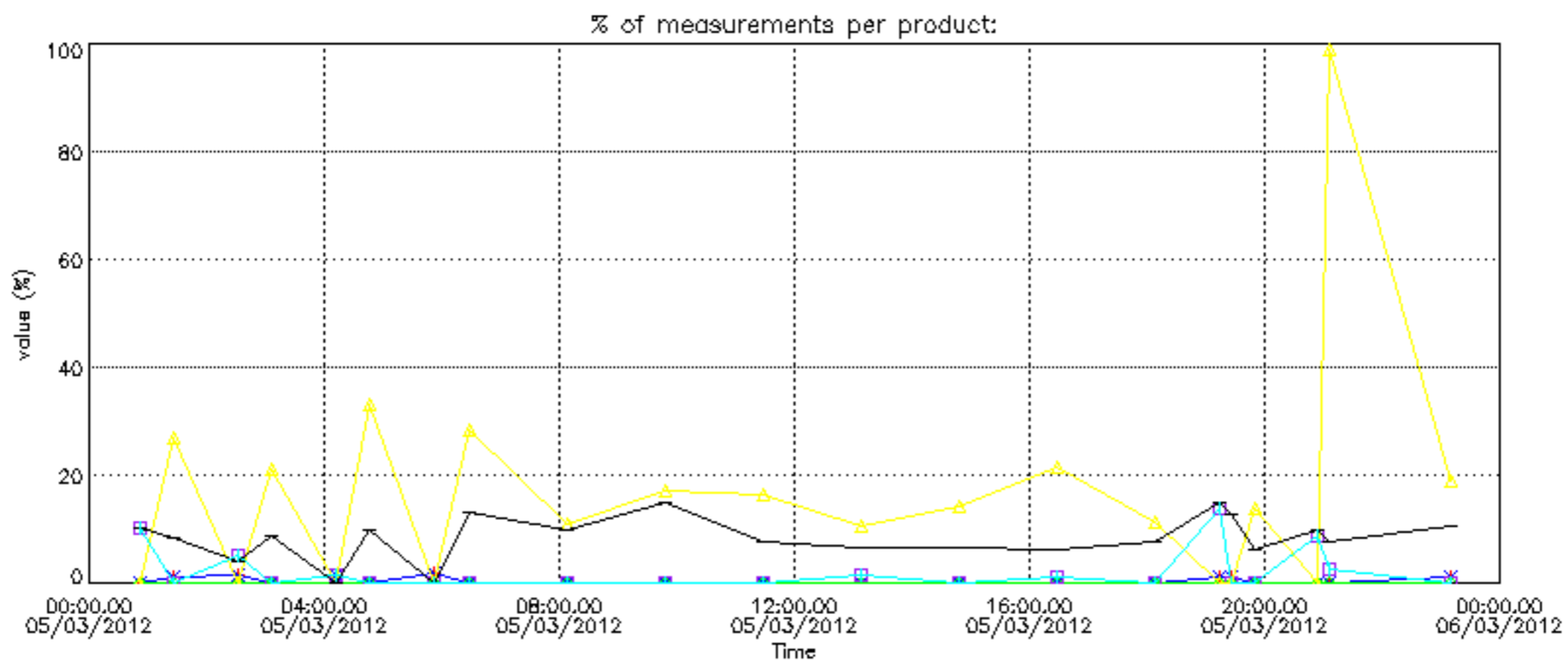


Percentage of flagged data per NO2 profile

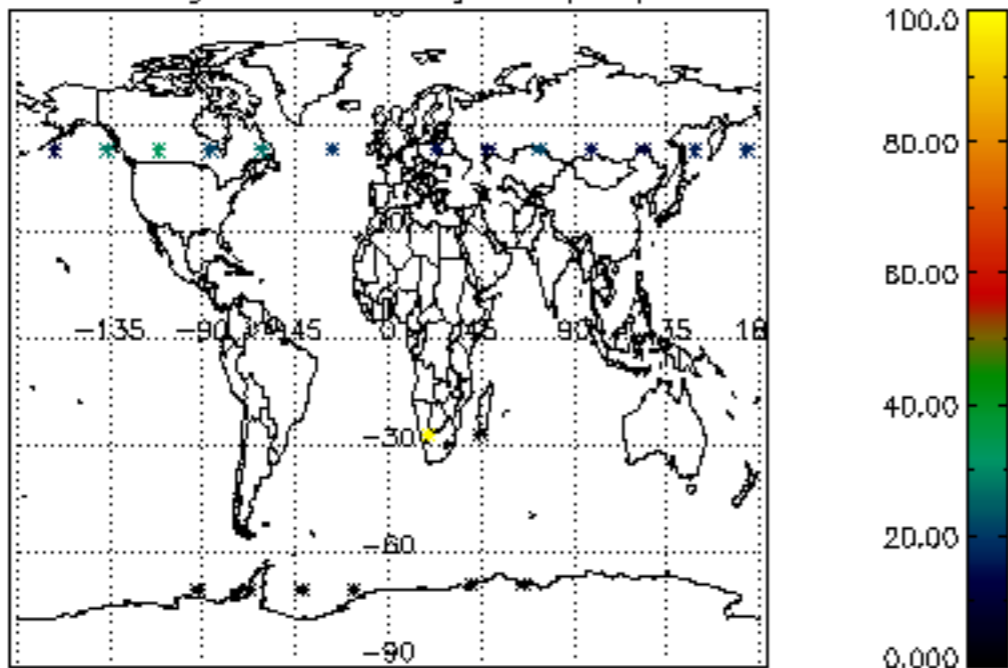


Percentage of flagged data per NO3 profile

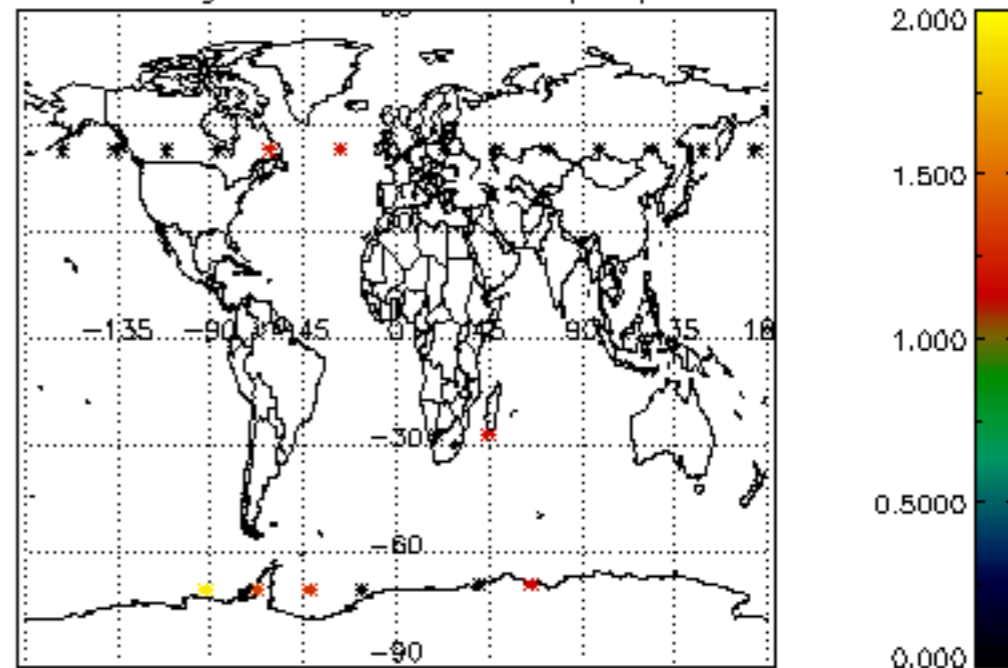




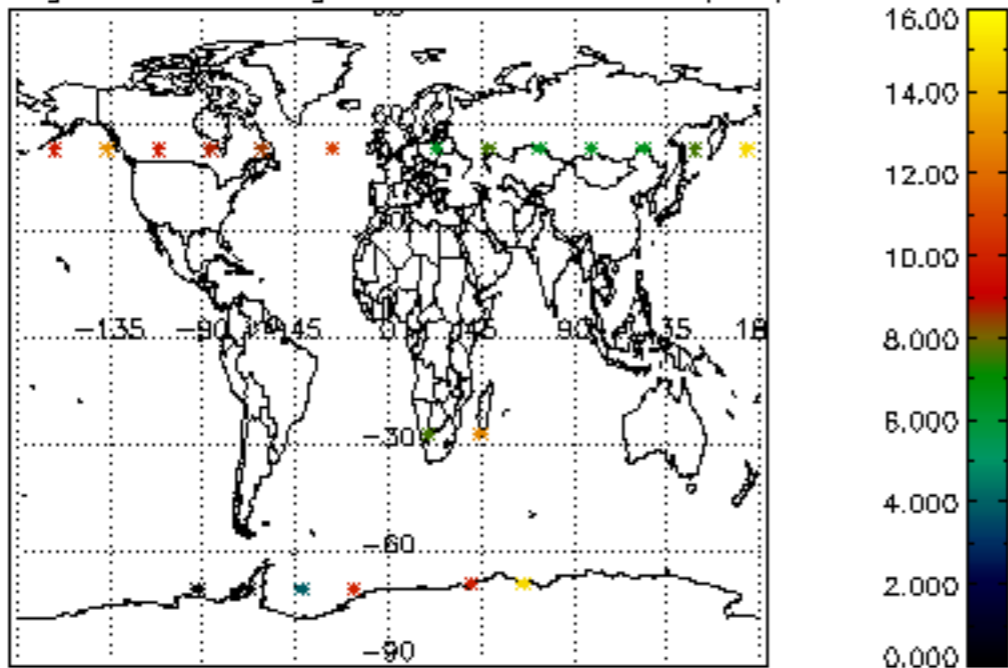
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

