

# GOMOS Level 2 Daily Report

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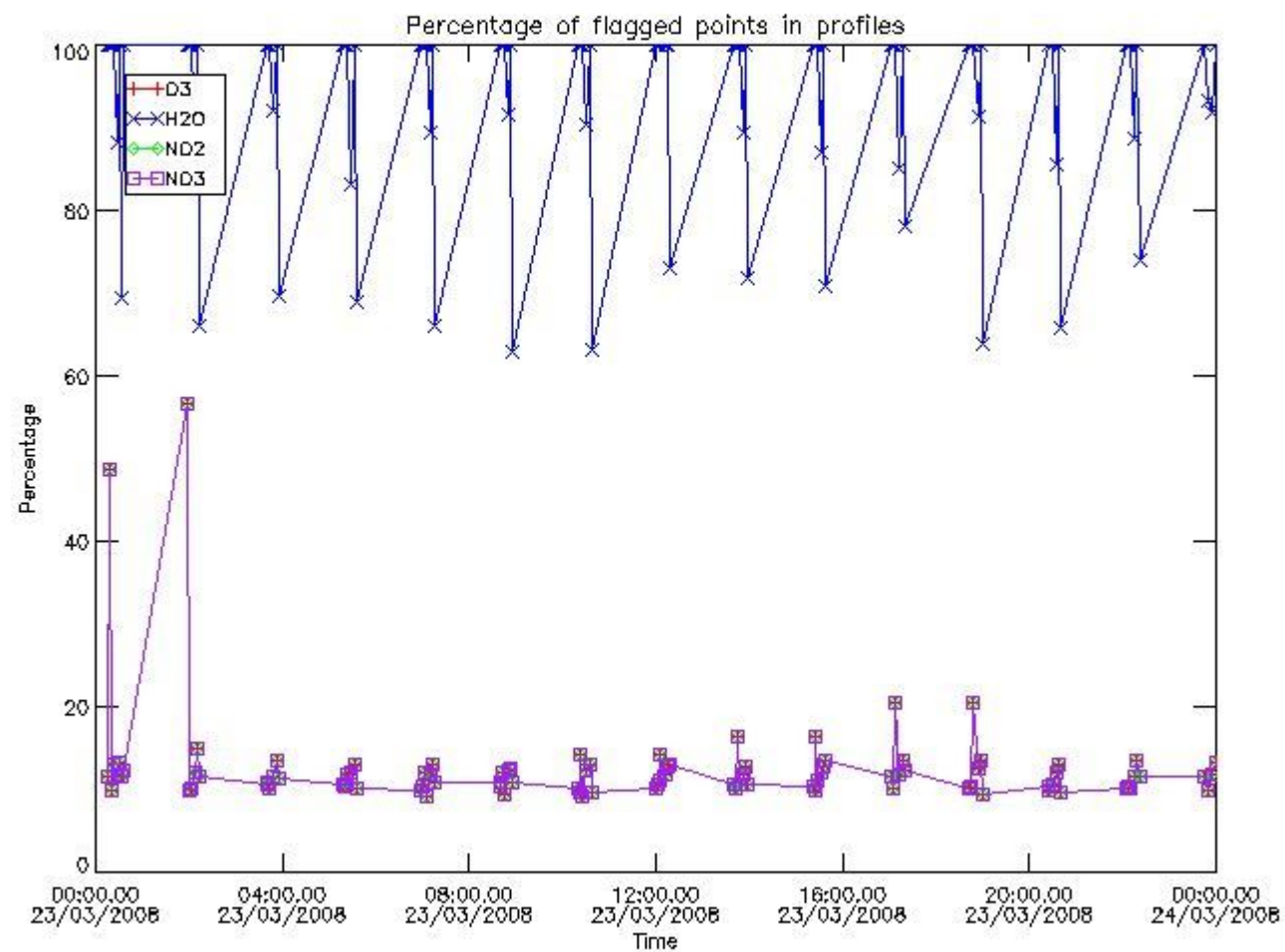


338	GOM_NL__2PRFIN20080323_223704_000000472067_00087_31704_7109.N1	23-MAR-2008 22:37:04	Twilight_stray	46.500	100	4Gam Crv	2.5800	13100.	93	31704	No
339	GOM_NL__2PRFIN20080323_224721_000000422067_00087_31704_7110.N1	23-MAR-2008 22:47:21	Bright	41.500	62	94Bet Leo	2.1360	9700.0	83	31704	No
340	GOM_NL__2PRFIN20080323_224846_000000392067_00087_31704_7111.N1	23-MAR-2008 22:48:46	Bright	38.500	96	68Del Leo	2.5600	9300.0	77	31704	No
341	GOM_NL__2PRFIN20080323_225542_000000362067_00087_31704_7112.N1	23-MAR-2008 22:55:42	Bright	36.000	174	52Psi UMa	3.0040	4400.0	72	31704	No
342	GOM_NL__2PRFIN20080323_225859_000000372067_00087_31704_7113.N1	23-MAR-2008 22:58:59	Bright	37.000	82	48Bet UMa	2.3650	10600.	74	31704	No
343	GOM_NL__2PRFIN20080323_230031_000000382067_00087_31704_7114.N1	23-MAR-2008 23:00:31	Bright	37.500	36	50Alp UMa	1.8000	6300.0	75	31704	No
344	GOM_NL__2PRFIN20080323_230212_000000452067_00087_31704_7115.N1	23-MAR-2008 23:02:12	Bright	44.500	55	79Zet UMa	2.0600	10200.	89	31704	No
345	GOM_NL__2PRFIN20080323_230717_000000412067_00087_31704_7116.N1	23-MAR-2008 23:07:17	Bright	41.000	60	7Bet UMi	2.0810	3950.0	82	31704	No
346	GOM_NL__2PRFIN20080323_231606_000000472067_00087_31704_7117.N1	23-MAR-2008 23:16:06	Bright	46.500	89	5Alp Cep	2.4510	8000.0	93	31704	No
347	GOM_NL__2PRFIN20080323_232115_000000372067_00087_31704_7118.N1	23-MAR-2008 23:21:15	Bright	36.500	19	50Alp Cyg	1.2460	10500.	73	31704	No
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349	GOM_NL__2PRFIN20080323_232443_000000392067_00087_31704_7120.N1	23-MAR-2008 23:24:43	Bright	39.000	92	53Eps Cyg	2.5000	4500.0	78	31704	No
350	GOM_NL__2PRFIN20080323_233346_000000592067_00087_31704_7121.N1	23-MAR-2008 23:33:46	Twilight_stray	59.000	11	53Alp Aql	0.76500	8000.0	118	31704	No
351	GOM_NL__2PRFIN20080323_234446_000000492067_00087_31704_7122.N1	23-MAR-2008 23:44:46	Dark	48.500	155	41Pi Sgr	2.9000	6600.0	97	31704	No
352	GOM_NL__2PRFIN20080323_235030_000000522067_00087_31704_7123.N1	23-MAR-2008 23:50:30	Dark	51.500	38	20Eps Sgr	1.8360	11000.	103	31704	No
353	GOM_NL__2PRFIN20080323_235551_000000432067_00088_31705_7358.N1	23-MAR-2008 23:55:51	Dark	43.000	141	Bet Ara	2.8400	4600.0	86	31705	No
354	GOM_NL__2PRFIN20080323_235915_000000392067_00088_31705_7359.N1	23-MAR-2008 23:59:15	Dark	38.500	134	Bet TrA	2.8100	6600.0	77	31705	No

### 3. Quality information per product

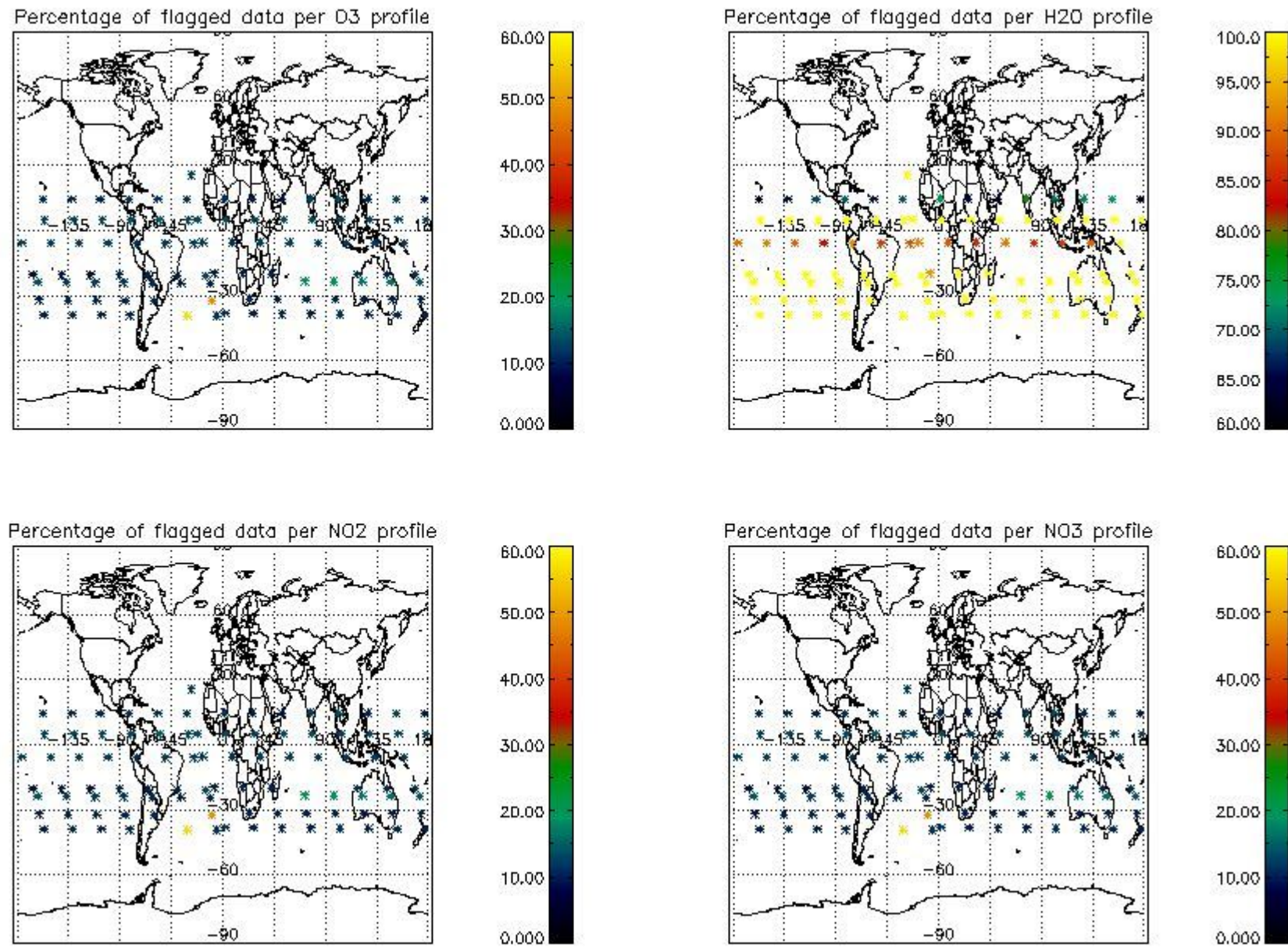
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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





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

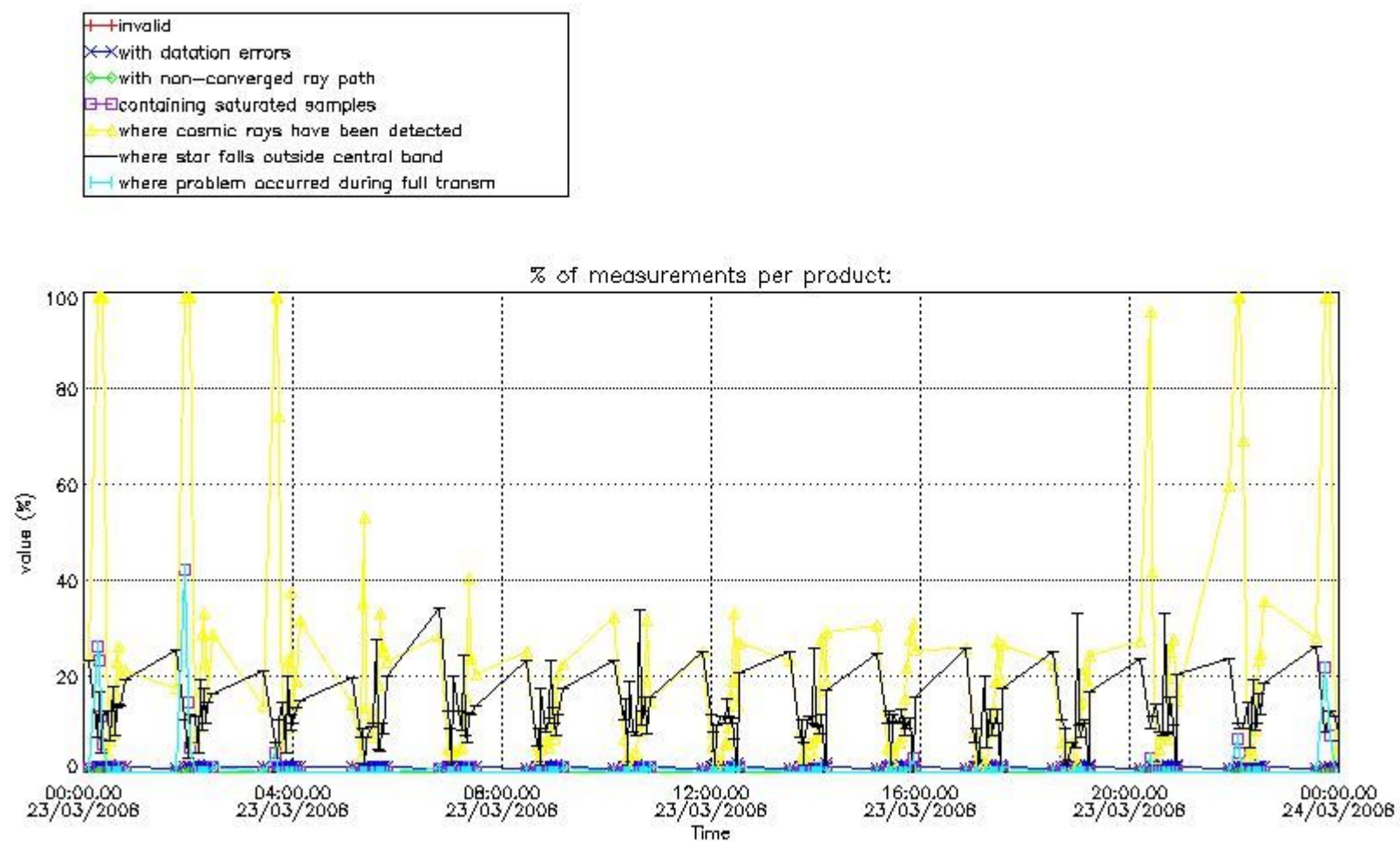


### 4. Level 1 quality information per product

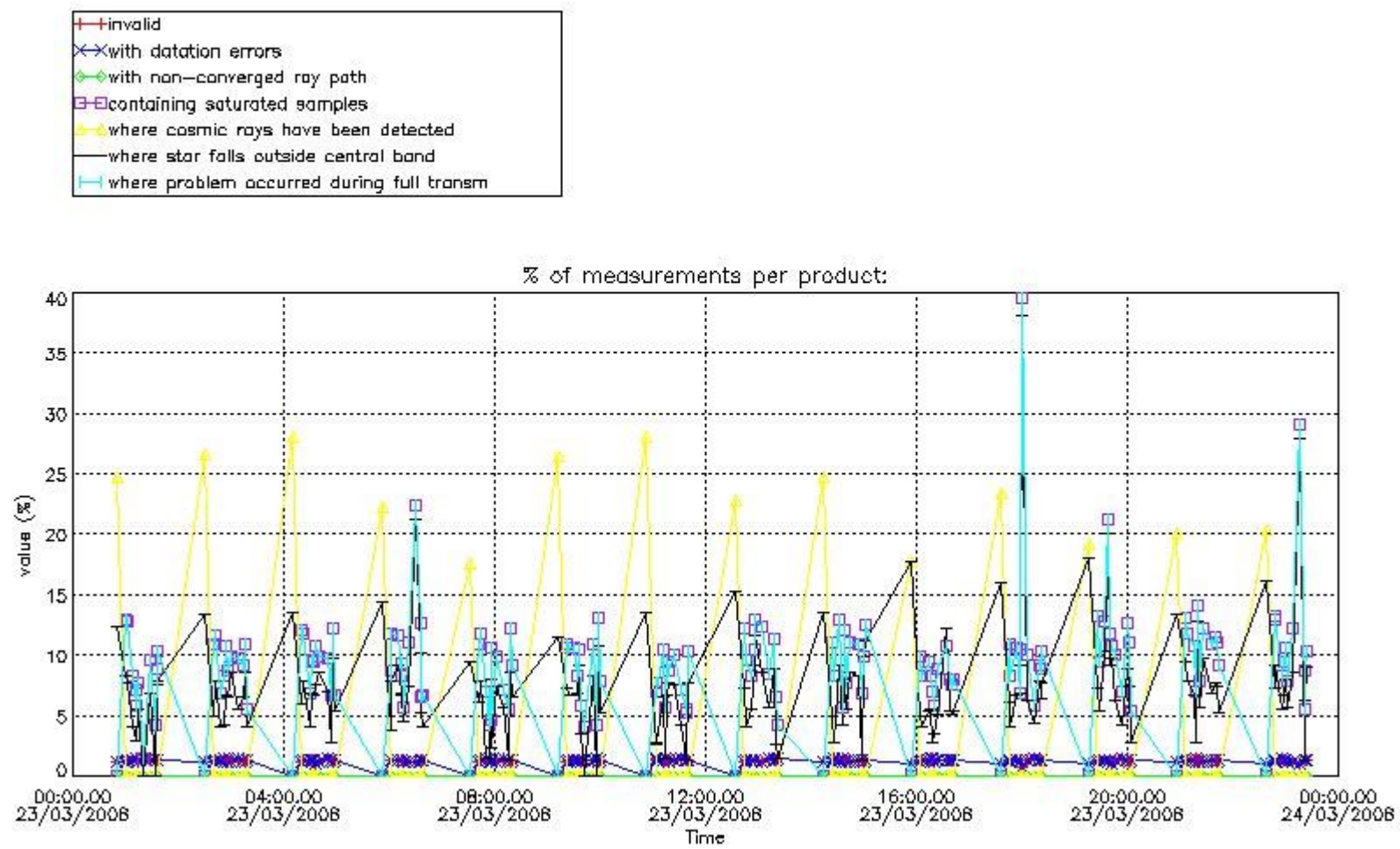
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

#### 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

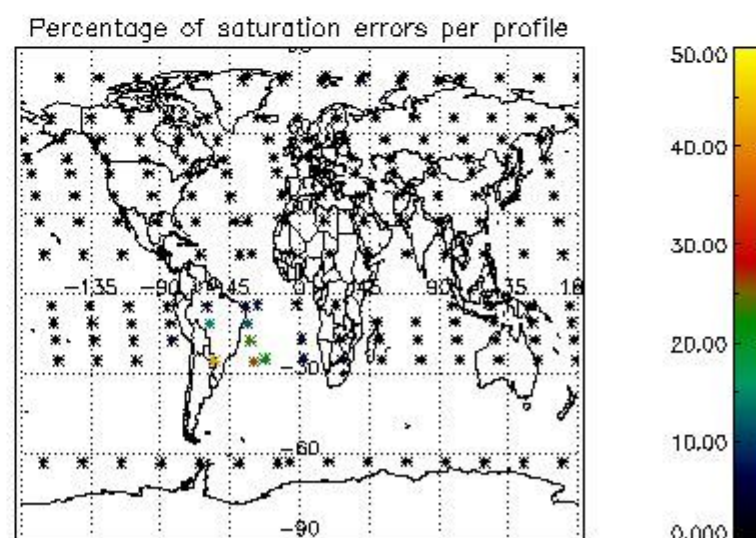
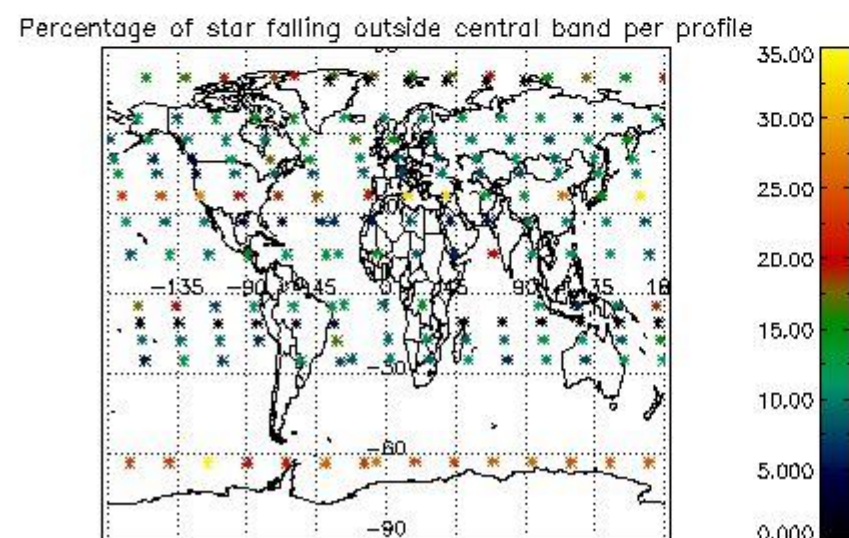
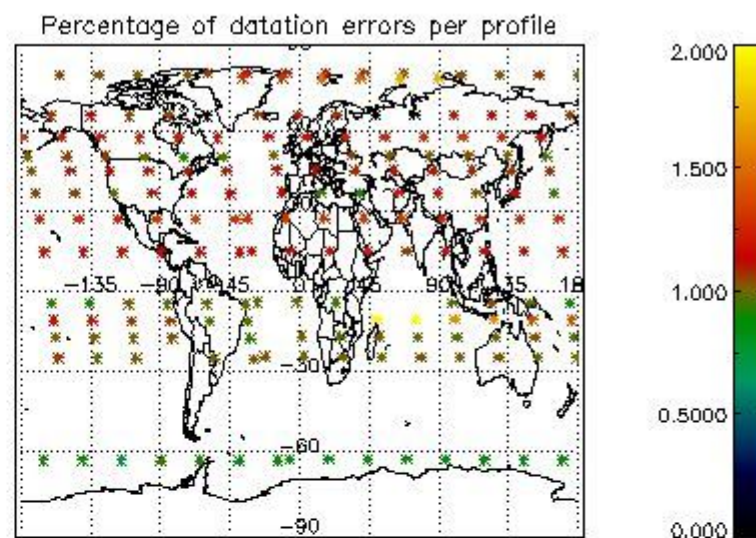
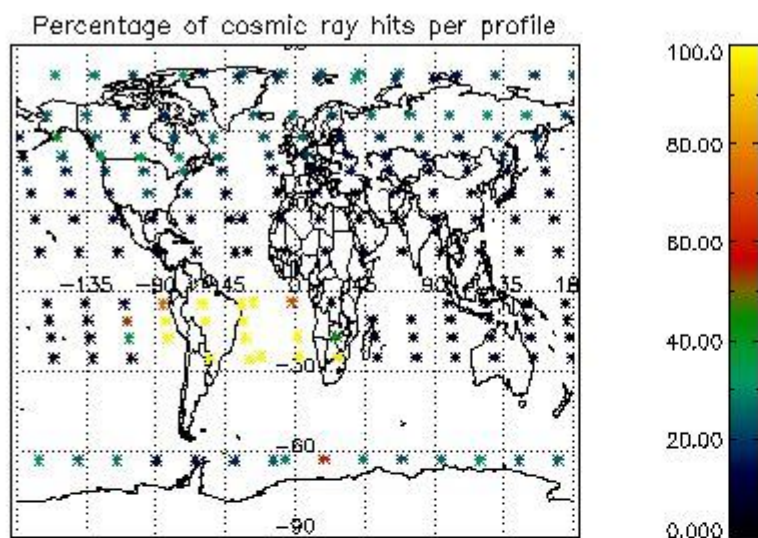


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

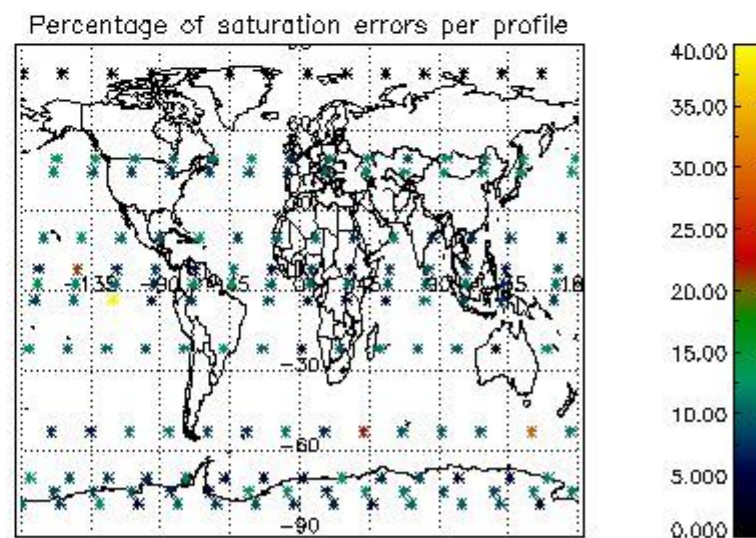
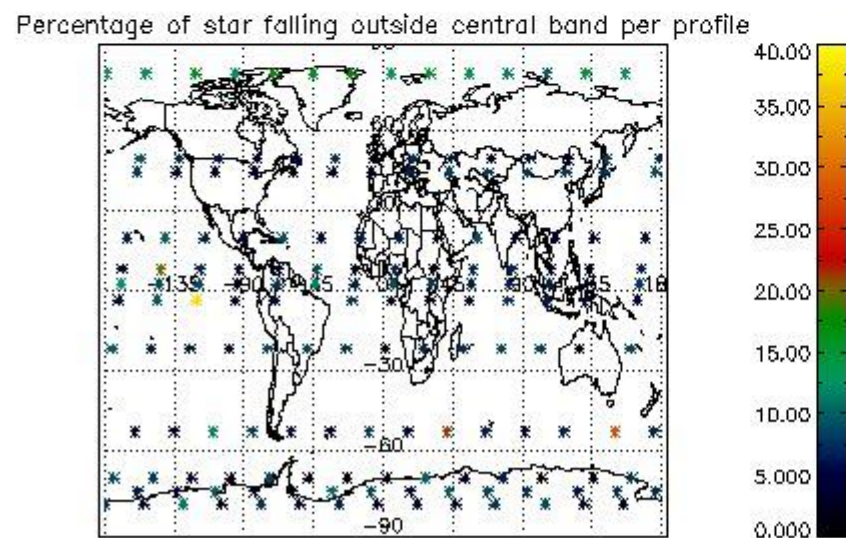
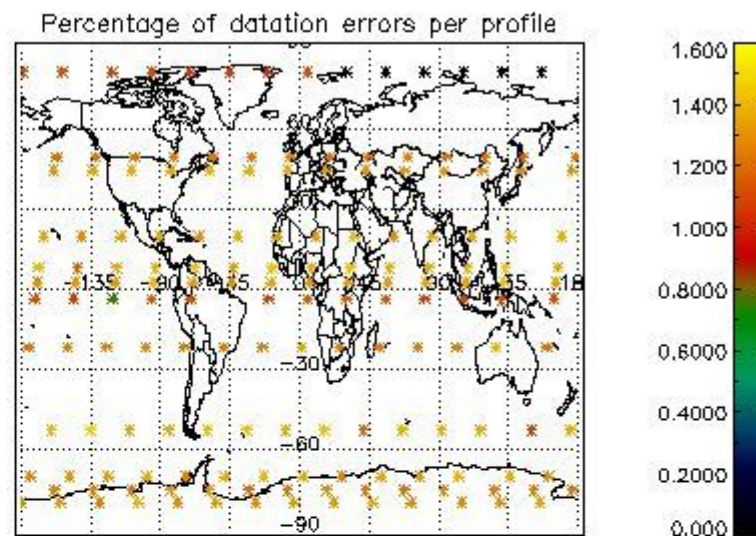
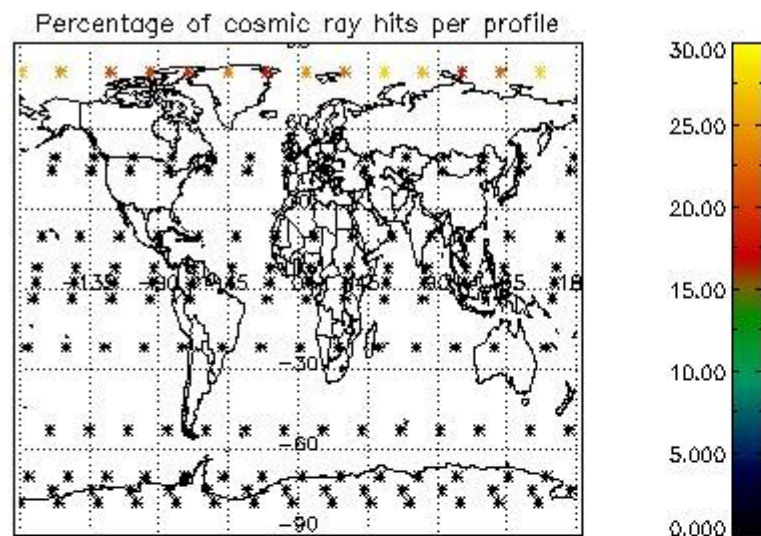


*4.2 Plot quality information per product coming from level 1b processing (world map)*

*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

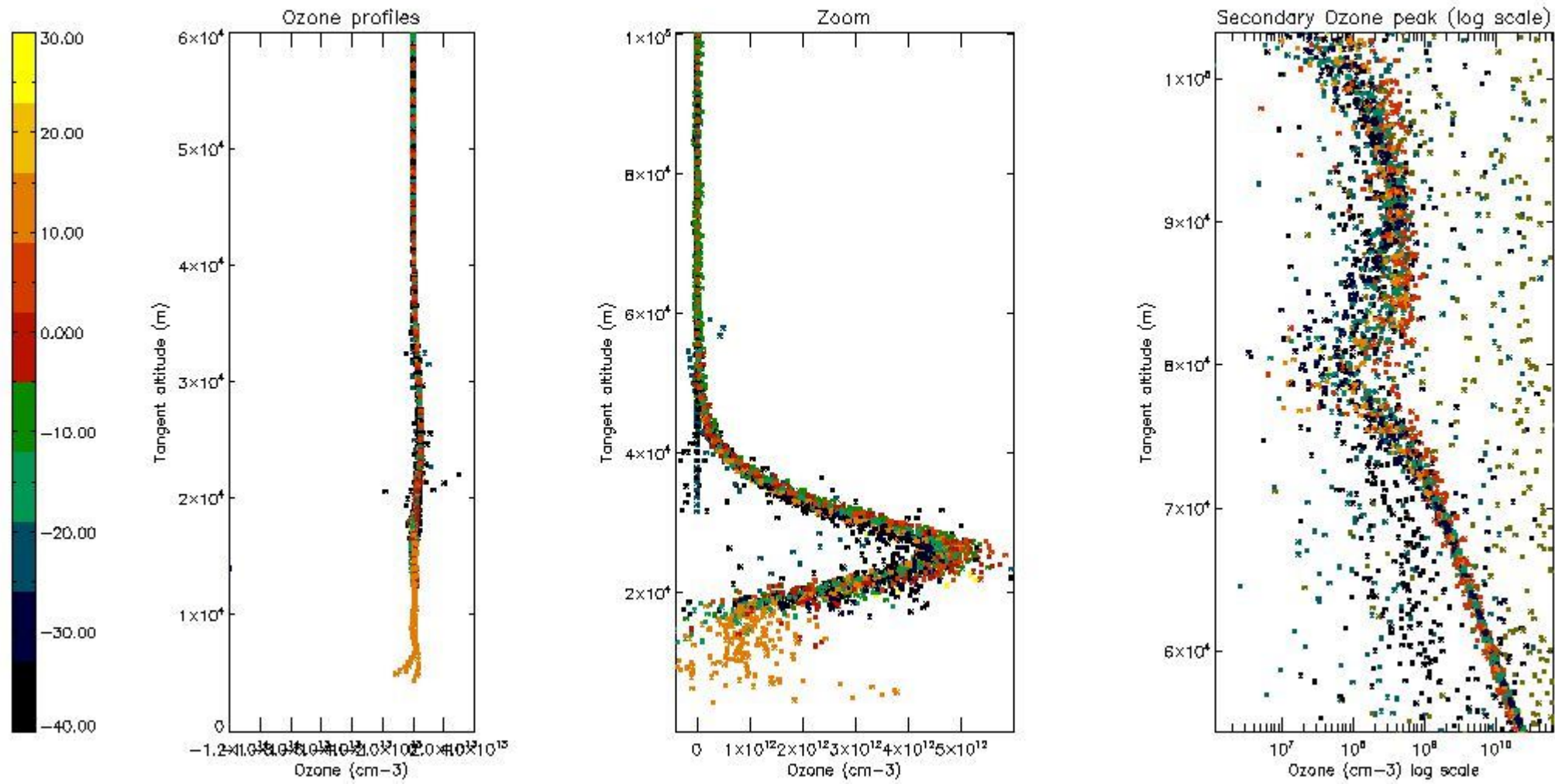
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	13

STD < 10	9
STD < 5	6

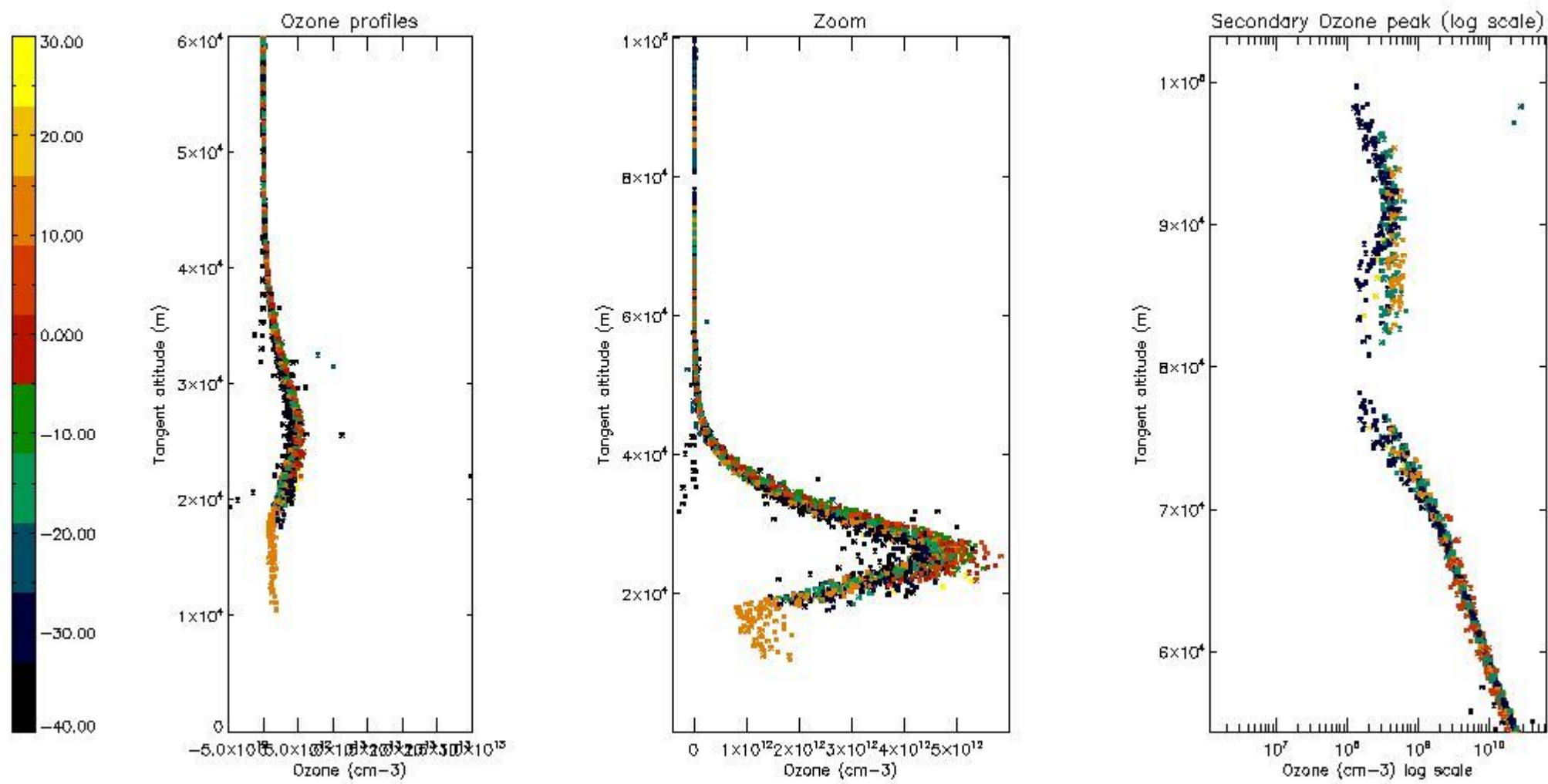
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



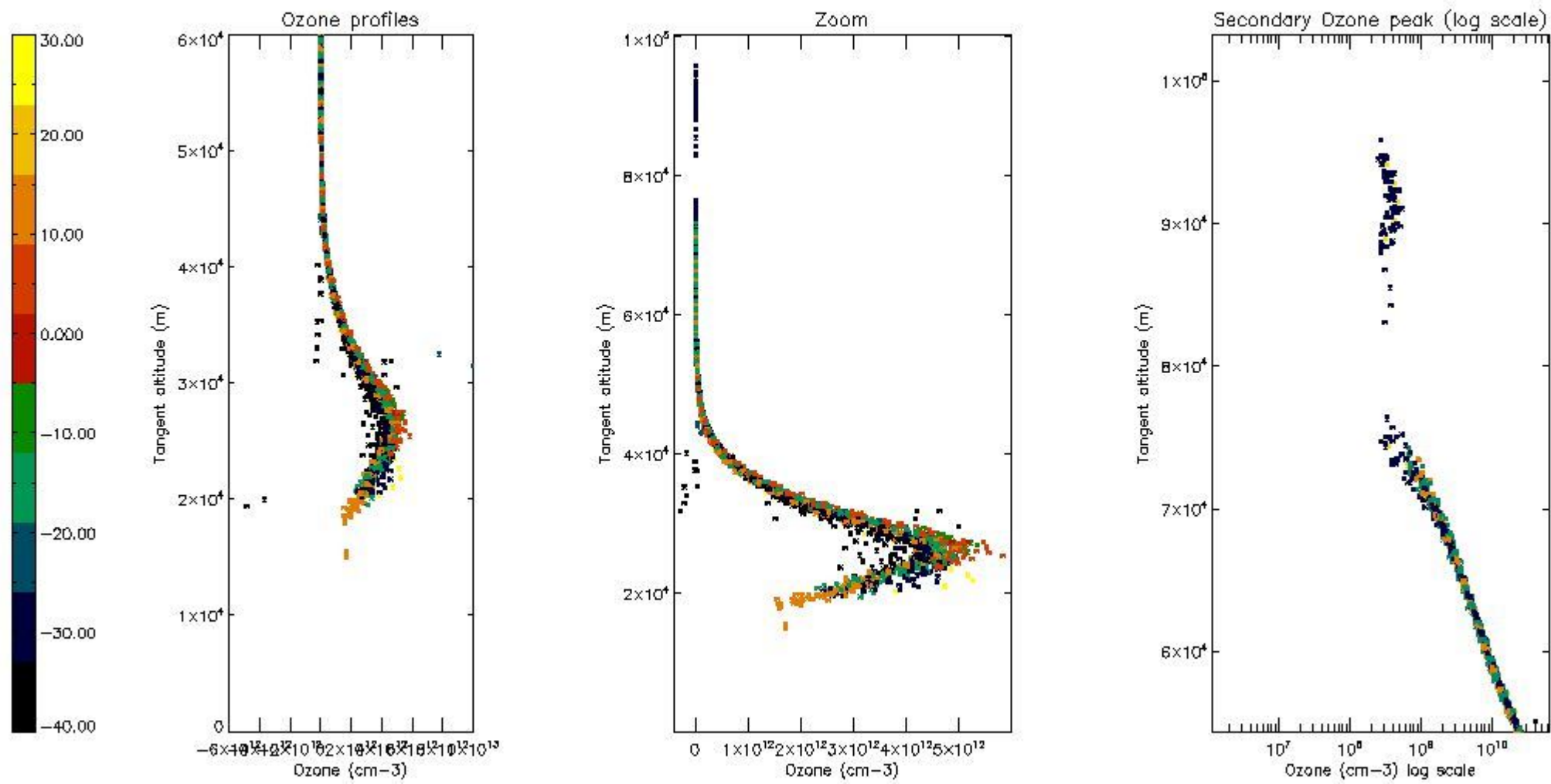
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

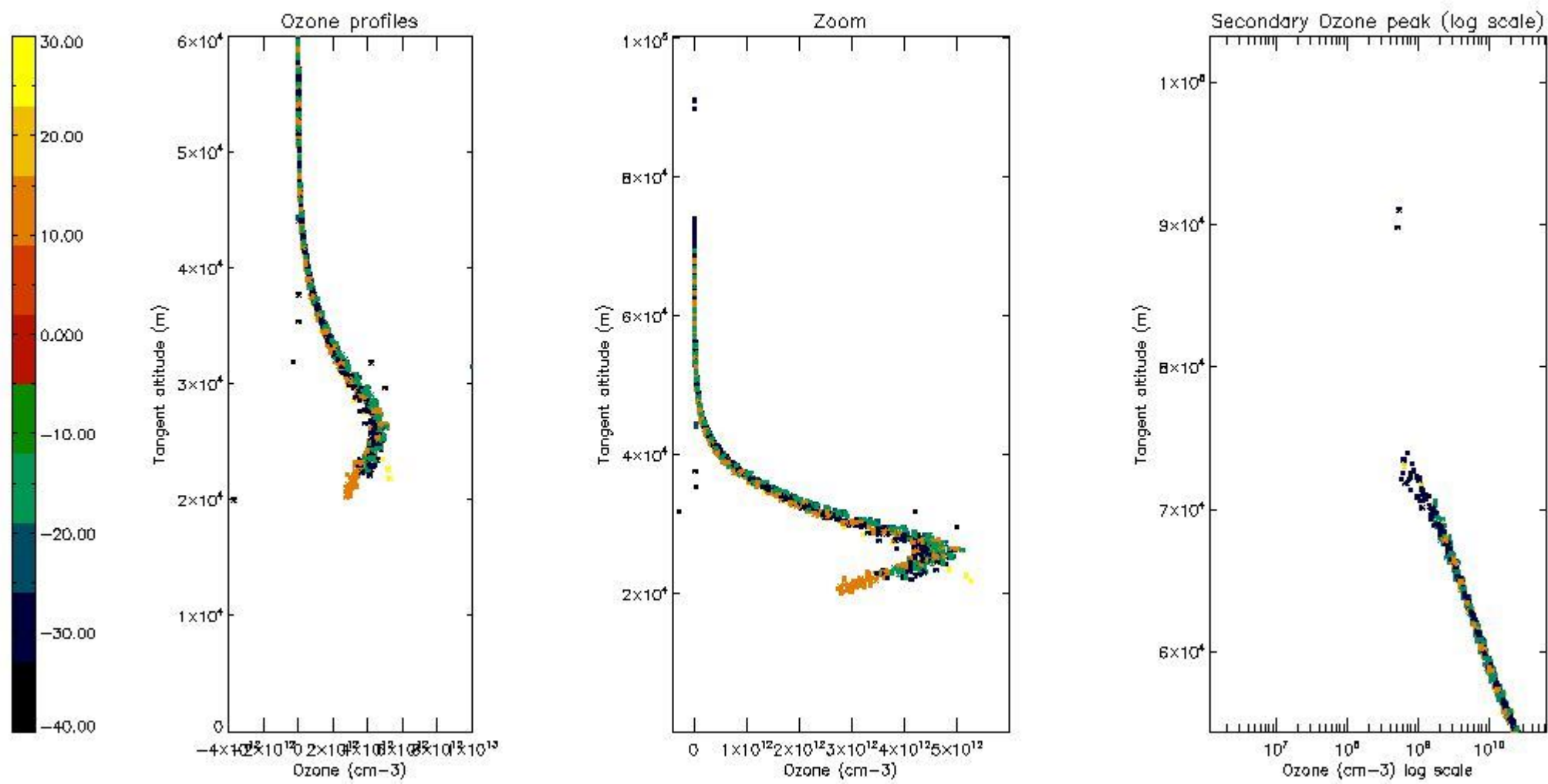
The colorbar represents the latitude.



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

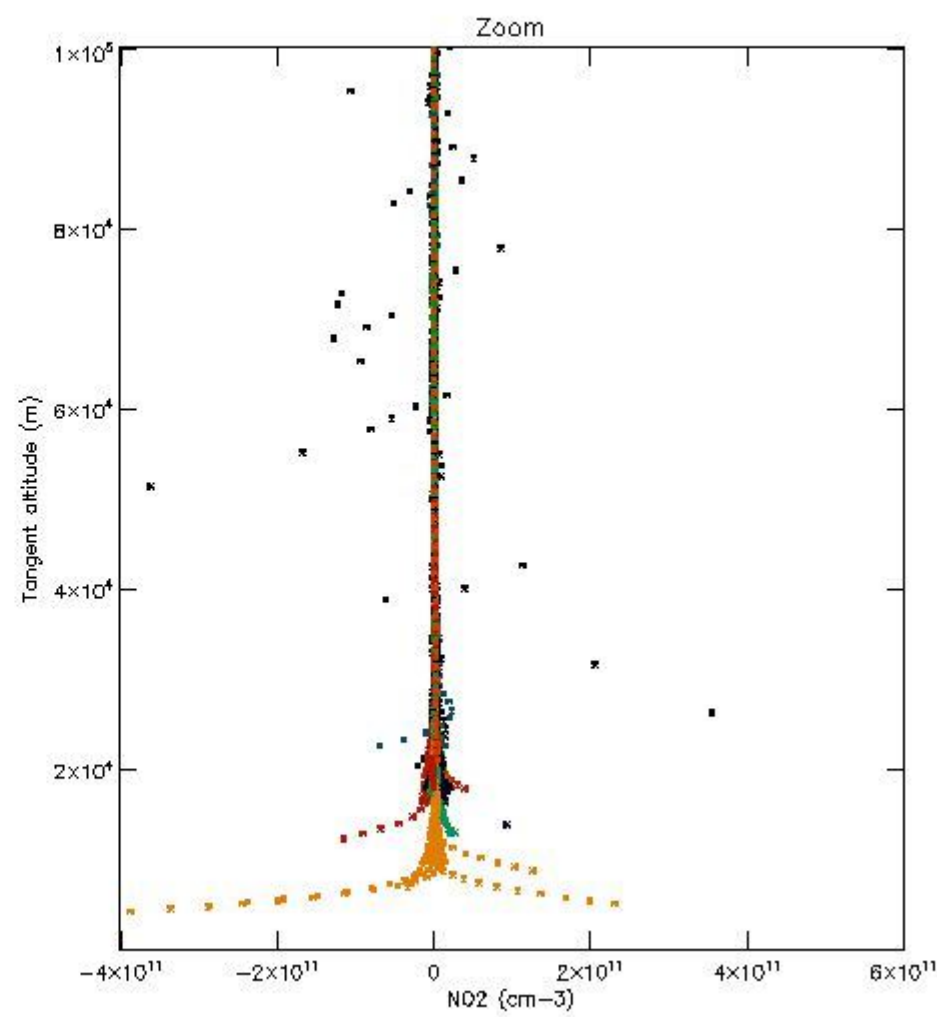
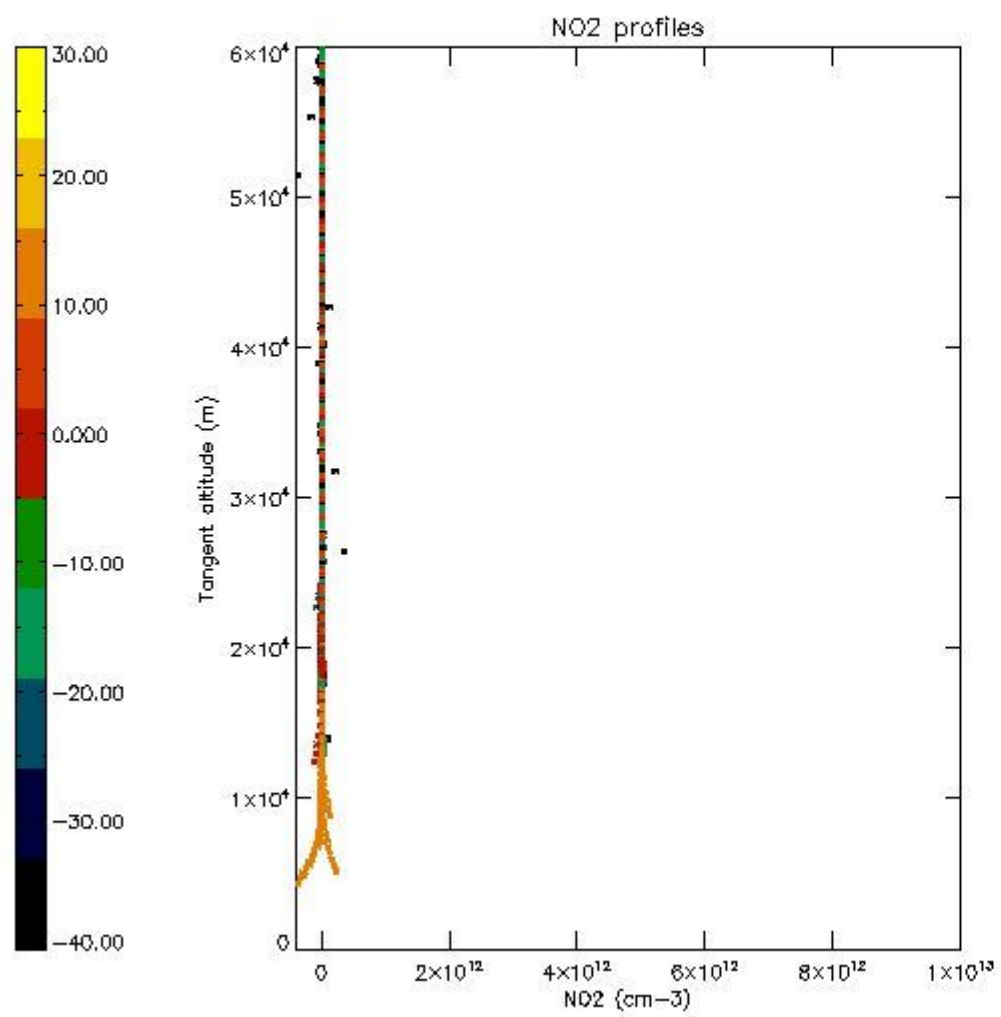
The colorbar represents the latitude.





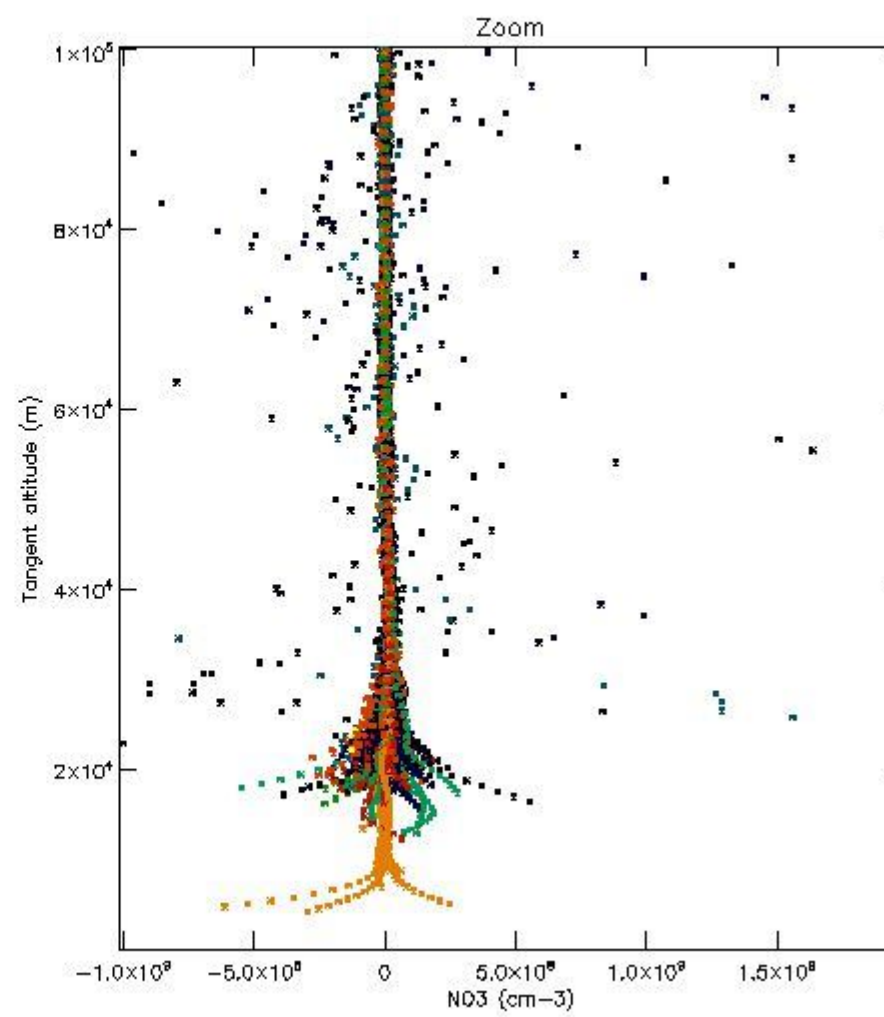
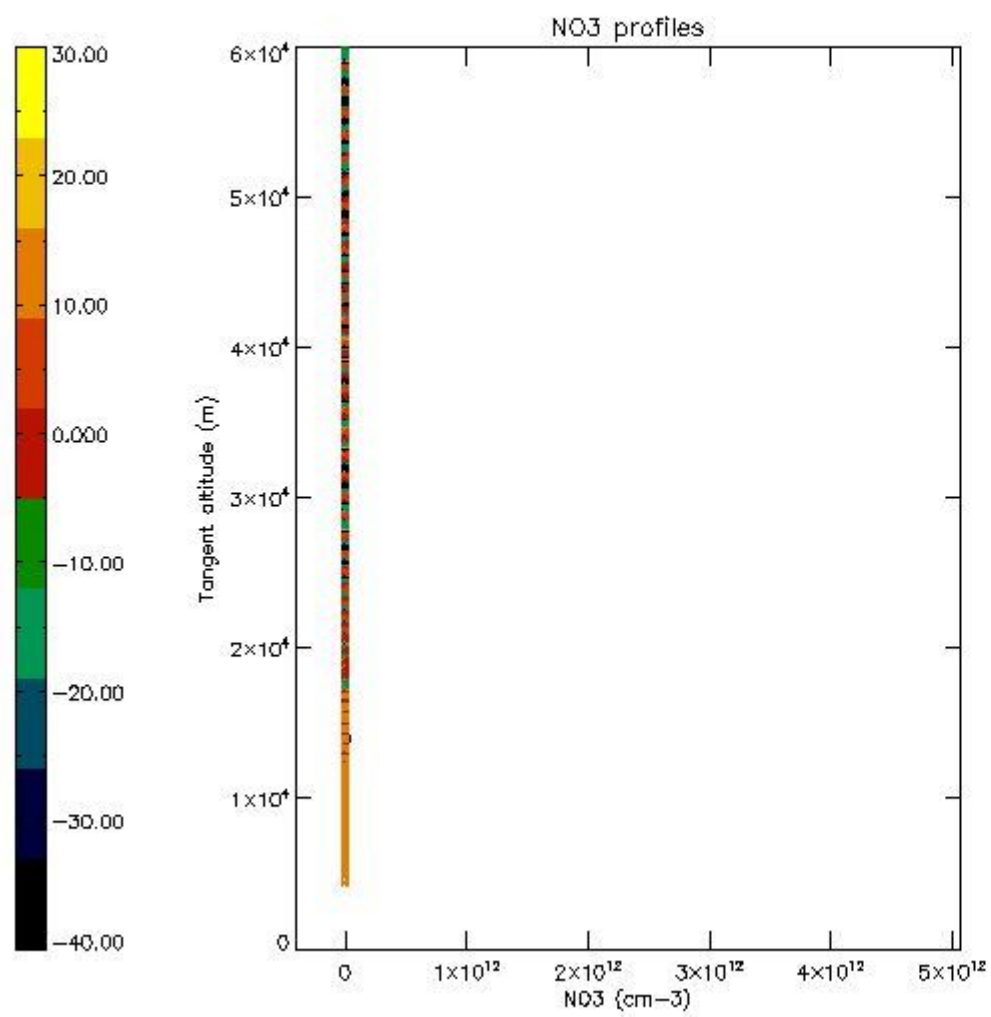
5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)

The colorbar represents the latitude.



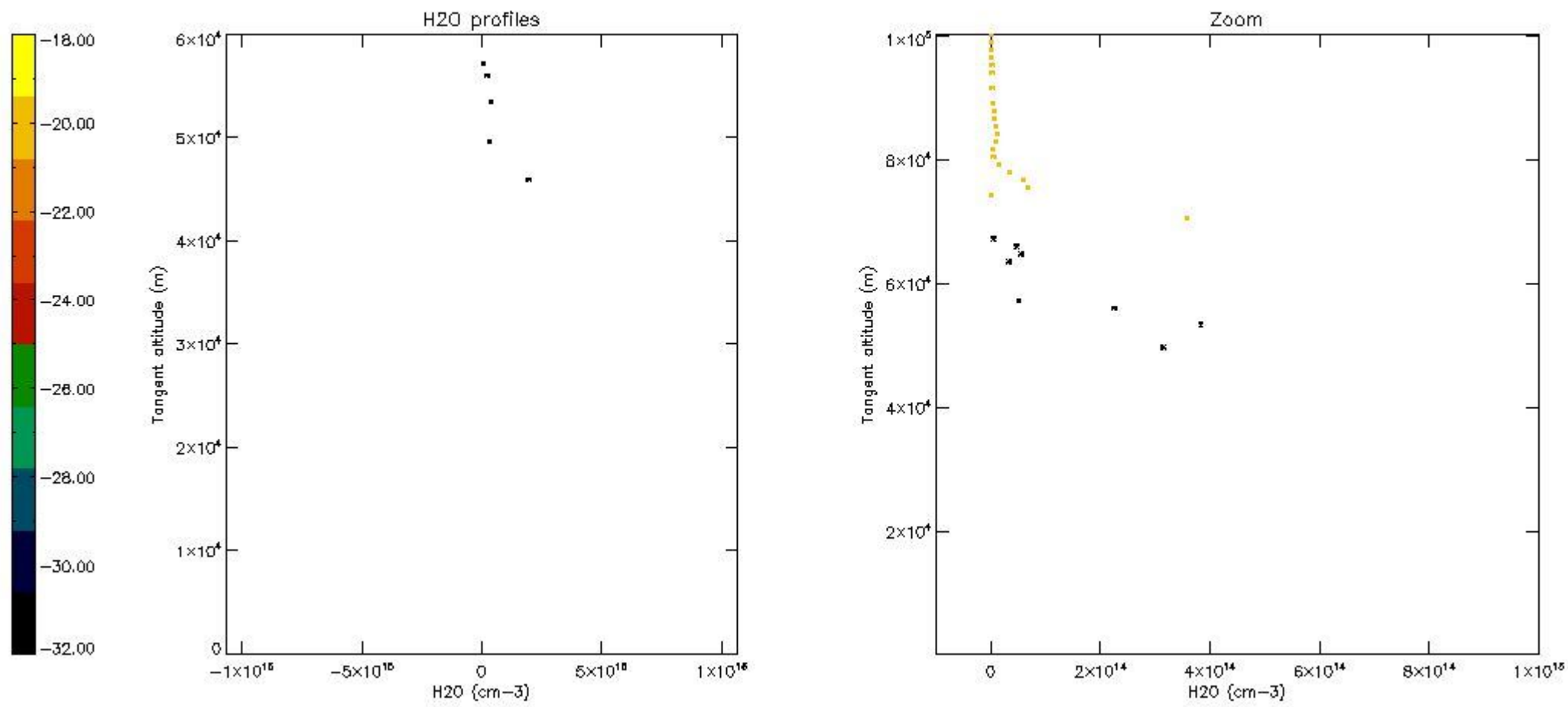
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	23-MAR-2008 00:05:15
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-MAR-2008 00:05:15
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-MAR-2008 00:05:15

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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](#)

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

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

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

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

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

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

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

#### [5.8 Plot H2O profiles \(only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors\) for all STD](#)

### [6. Auxiliary Data Files used for the production reported in section 2](#)













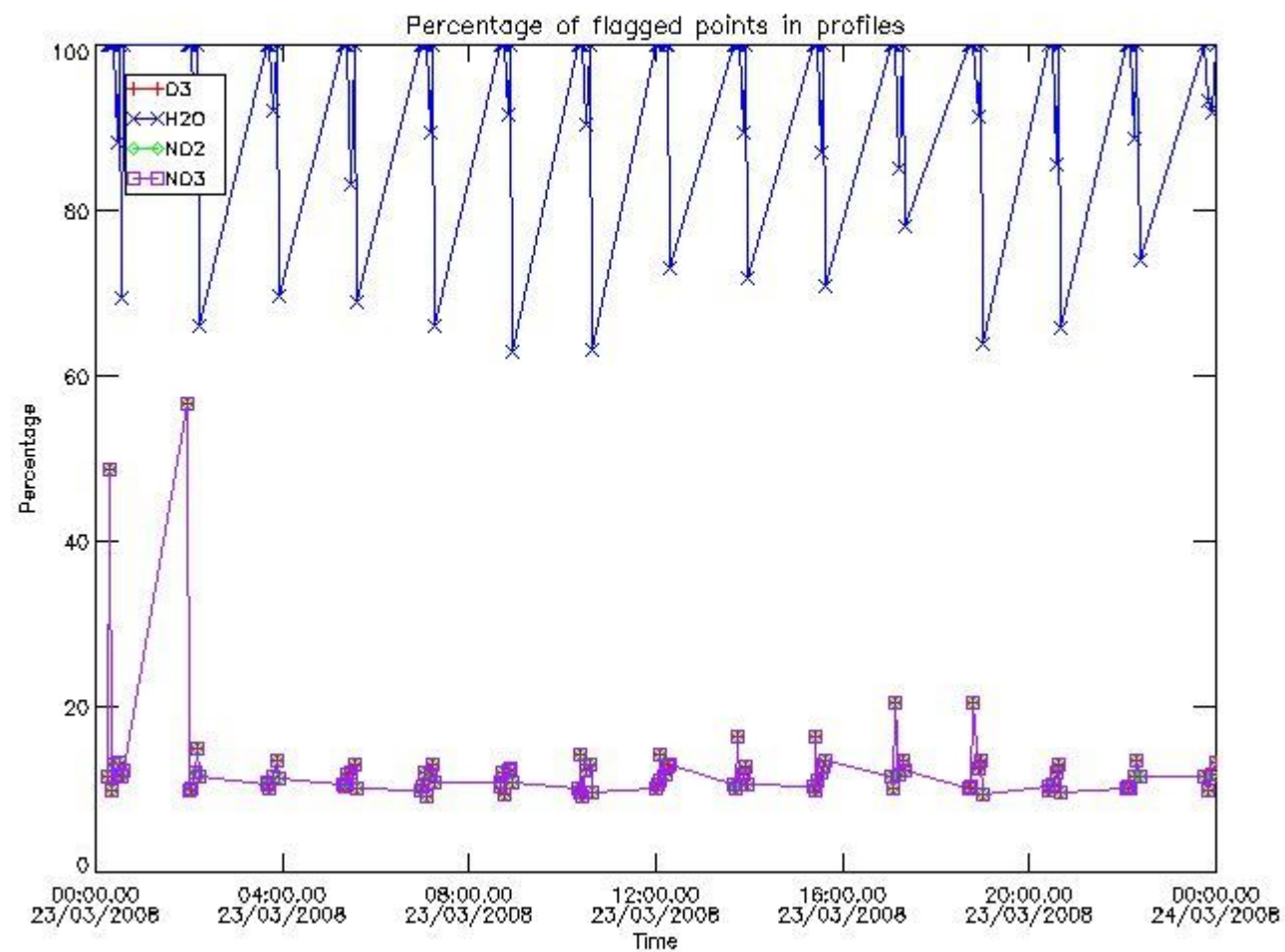


338	GOM_NL__2PRFIN20080323_223704_000000472067_00087_31704_7109.N1	23-MAR-2008 22:37:04	Twilight_stray	46.500	100	4Gam Crv	2.5800	13100.	93	31704	No
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343	GOM_NL__2PRFIN20080323_230031_000000382067_00087_31704_7114.N1	23-MAR-2008 23:00:31	Bright	37.500	36	50Alp UMa	1.8000	6300.0	75	31704	No
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346	GOM_NL__2PRFIN20080323_231606_000000472067_00087_31704_7117.N1	23-MAR-2008 23:16:06	Bright	46.500	89	5Alp Cep	2.4510	8000.0	93	31704	No
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349	GOM_NL__2PRFIN20080323_232443_000000392067_00087_31704_7120.N1	23-MAR-2008 23:24:43	Bright	39.000	92	53Eps Cyg	2.5000	4500.0	78	31704	No
350	GOM_NL__2PRFIN20080323_233346_000000592067_00087_31704_7121.N1	23-MAR-2008 23:33:46	Twilight_stray	59.000	11	53Alp Aql	0.76500	8000.0	118	31704	No
351	GOM_NL__2PRFIN20080323_234446_000000492067_00087_31704_7122.N1	23-MAR-2008 23:44:46	Dark	48.500	155	41Pi Sgr	2.9000	6600.0	97	31704	No
352	GOM_NL__2PRFIN20080323_235030_000000522067_00087_31704_7123.N1	23-MAR-2008 23:50:30	Dark	51.500	38	20Eps Sgr	1.8360	11000.	103	31704	No
353	GOM_NL__2PRFIN20080323_235551_000000432067_00088_31705_7358.N1	23-MAR-2008 23:55:51	Dark	43.000	141	Bet Ara	2.8400	4600.0	86	31705	No
354	GOM_NL__2PRFIN20080323_235915_000000392067_00088_31705_7359.N1	23-MAR-2008 23:59:15	Dark	38.500	134	Bet TrA	2.8100	6600.0	77	31705	No

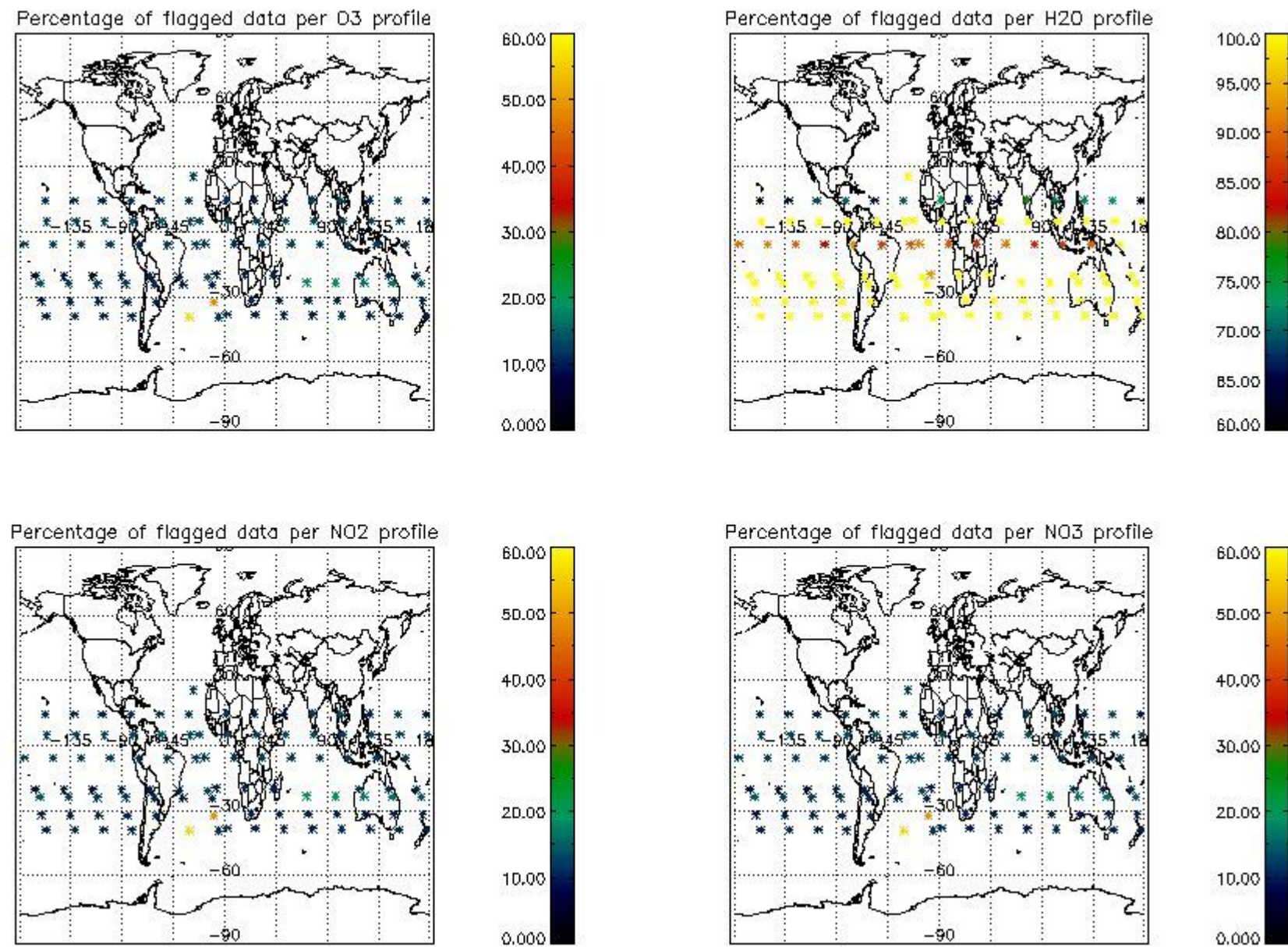
### 3. Quality information per product

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)

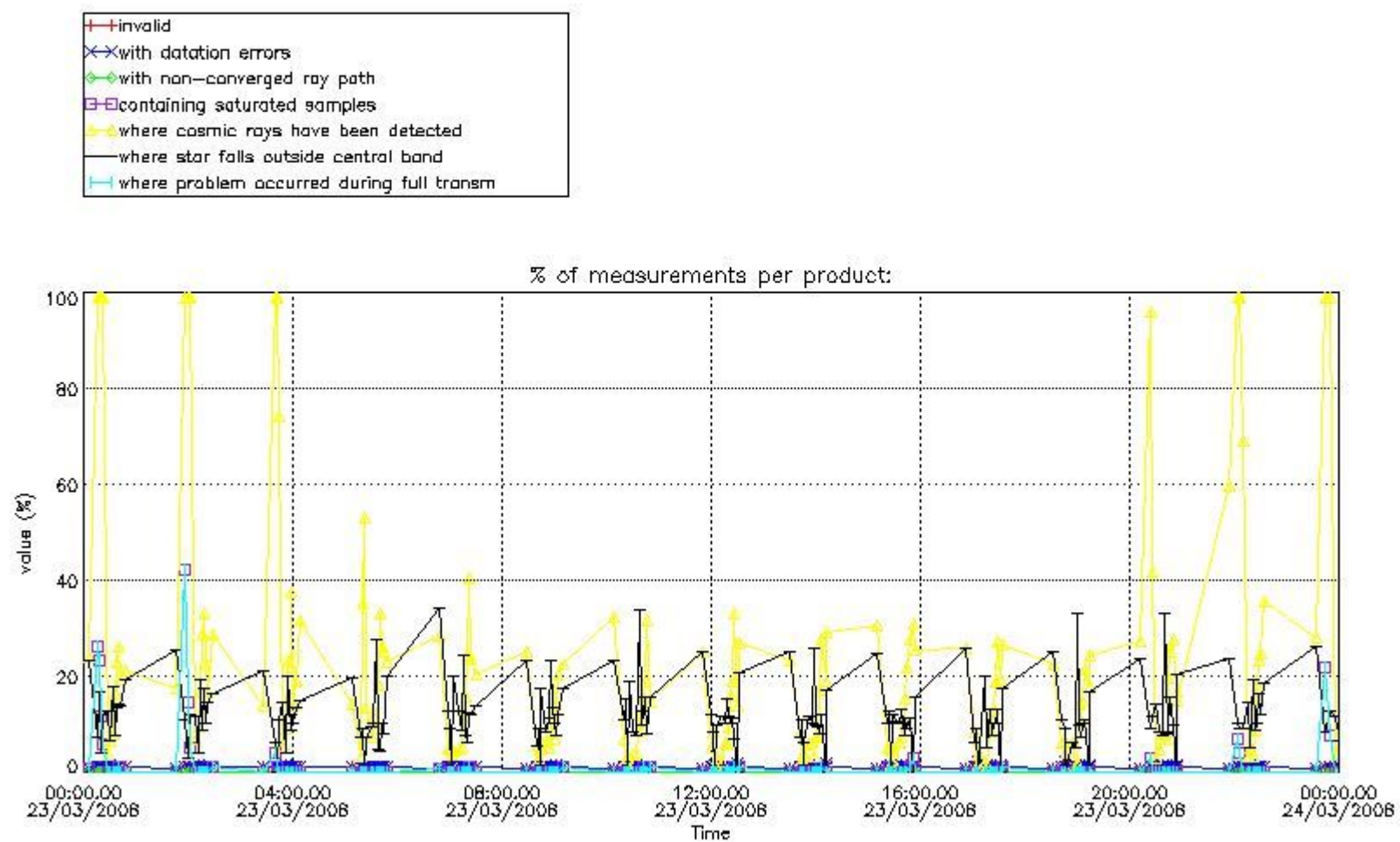


### 4. Level 1 quality information per product

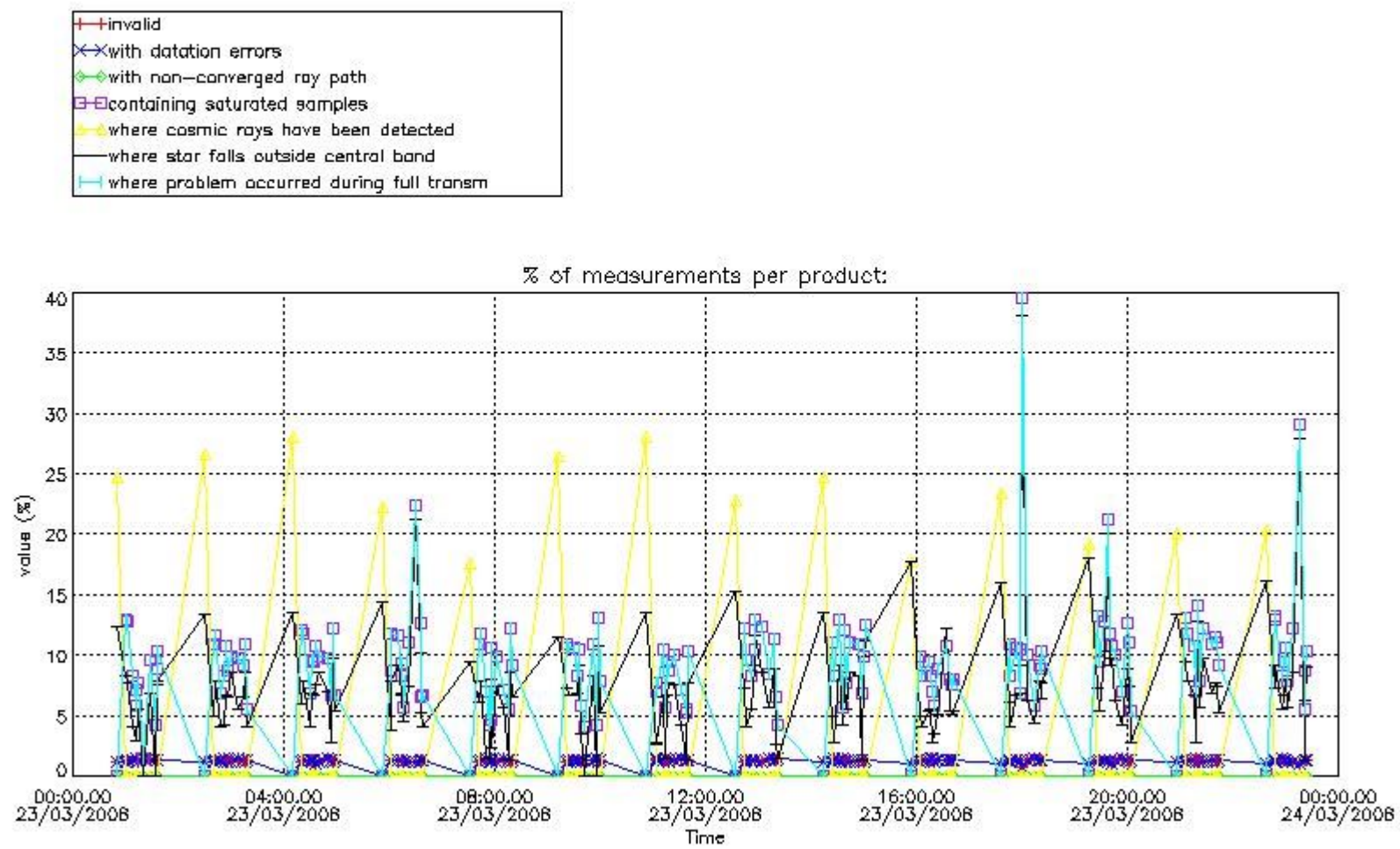
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

#### 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

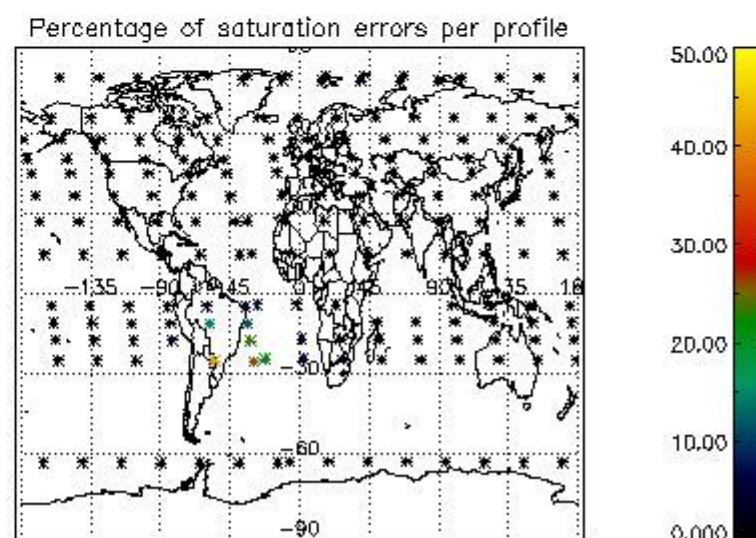
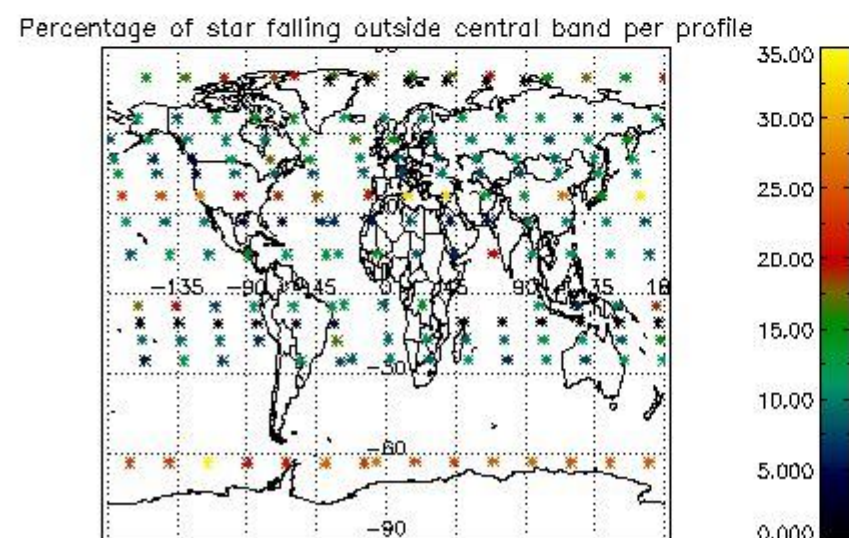
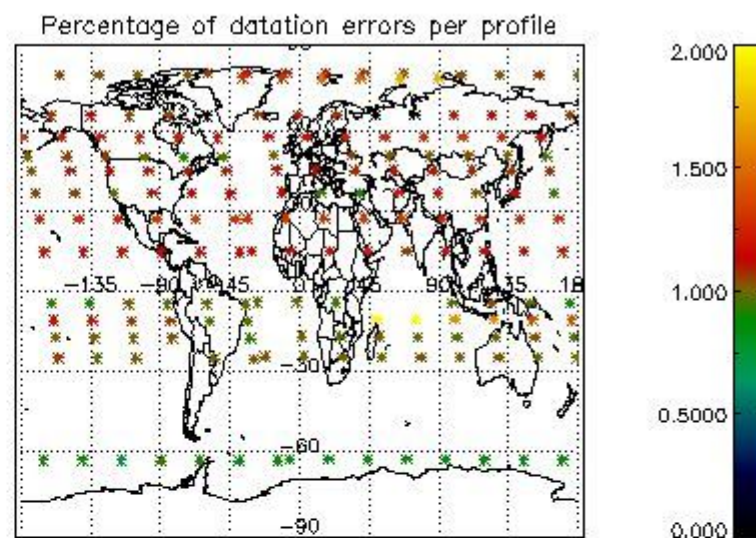
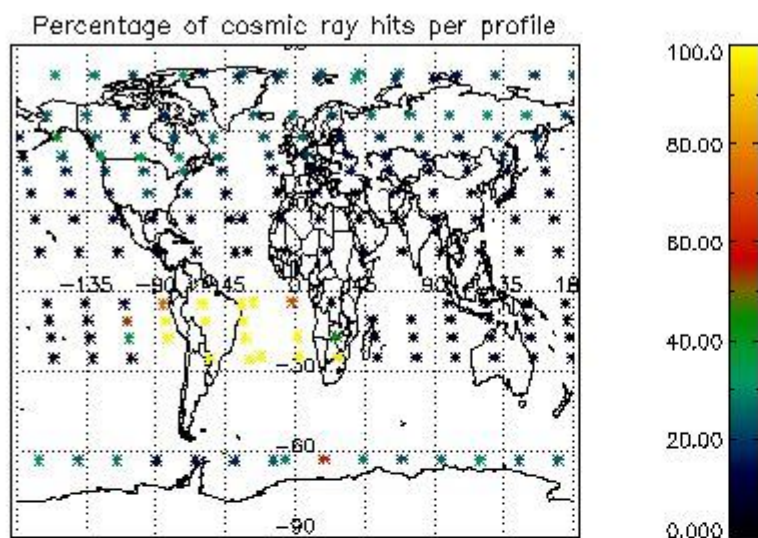


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



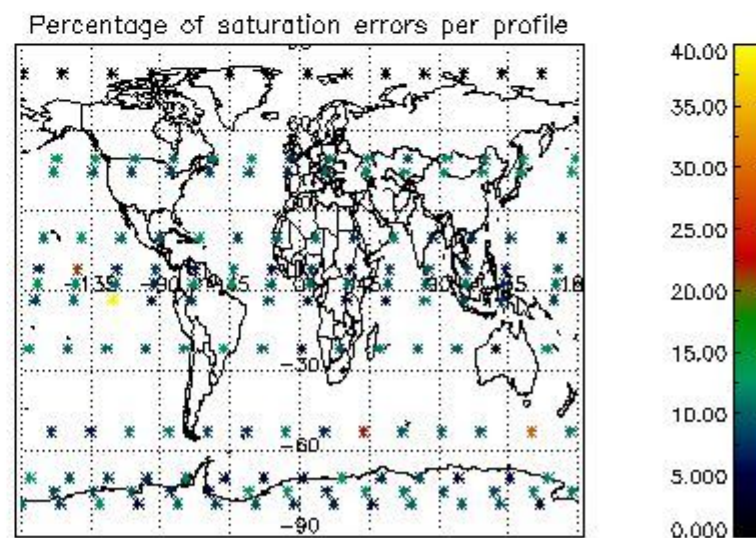
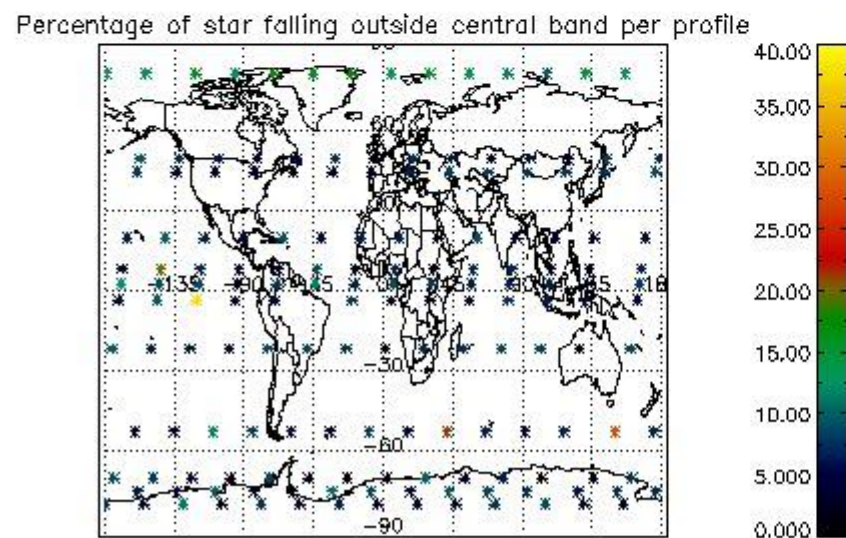
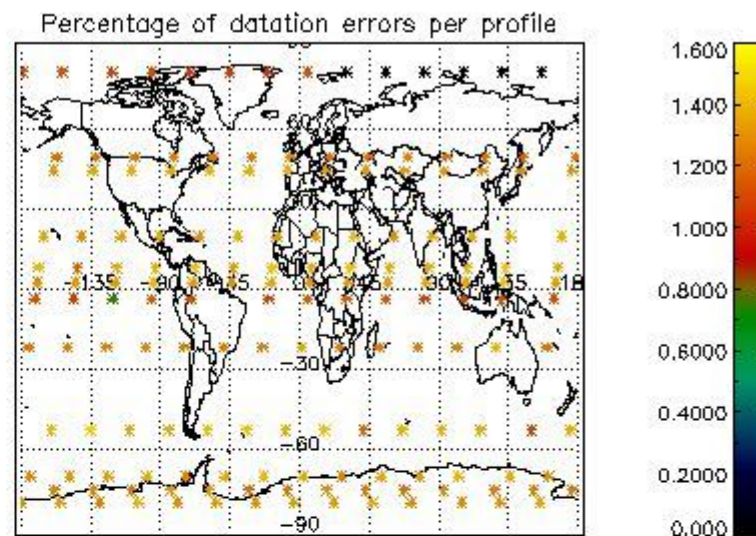
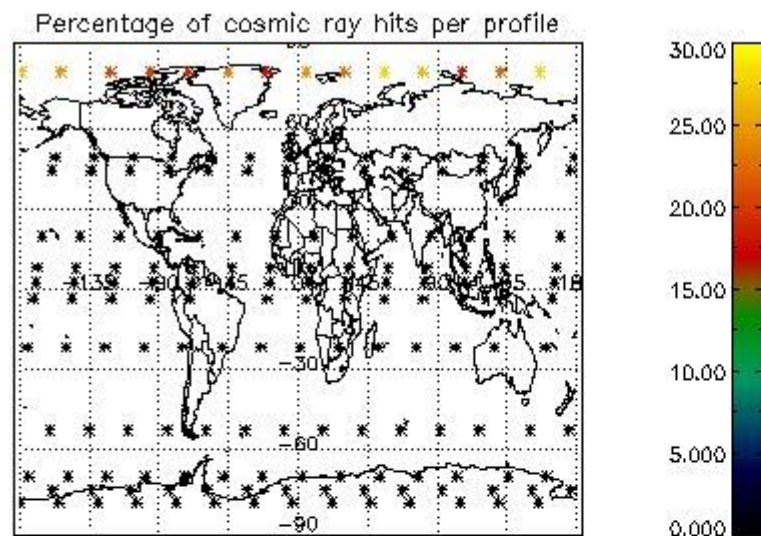
*4.2 Plot quality information per product coming from level 1b processing (world map)*

*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

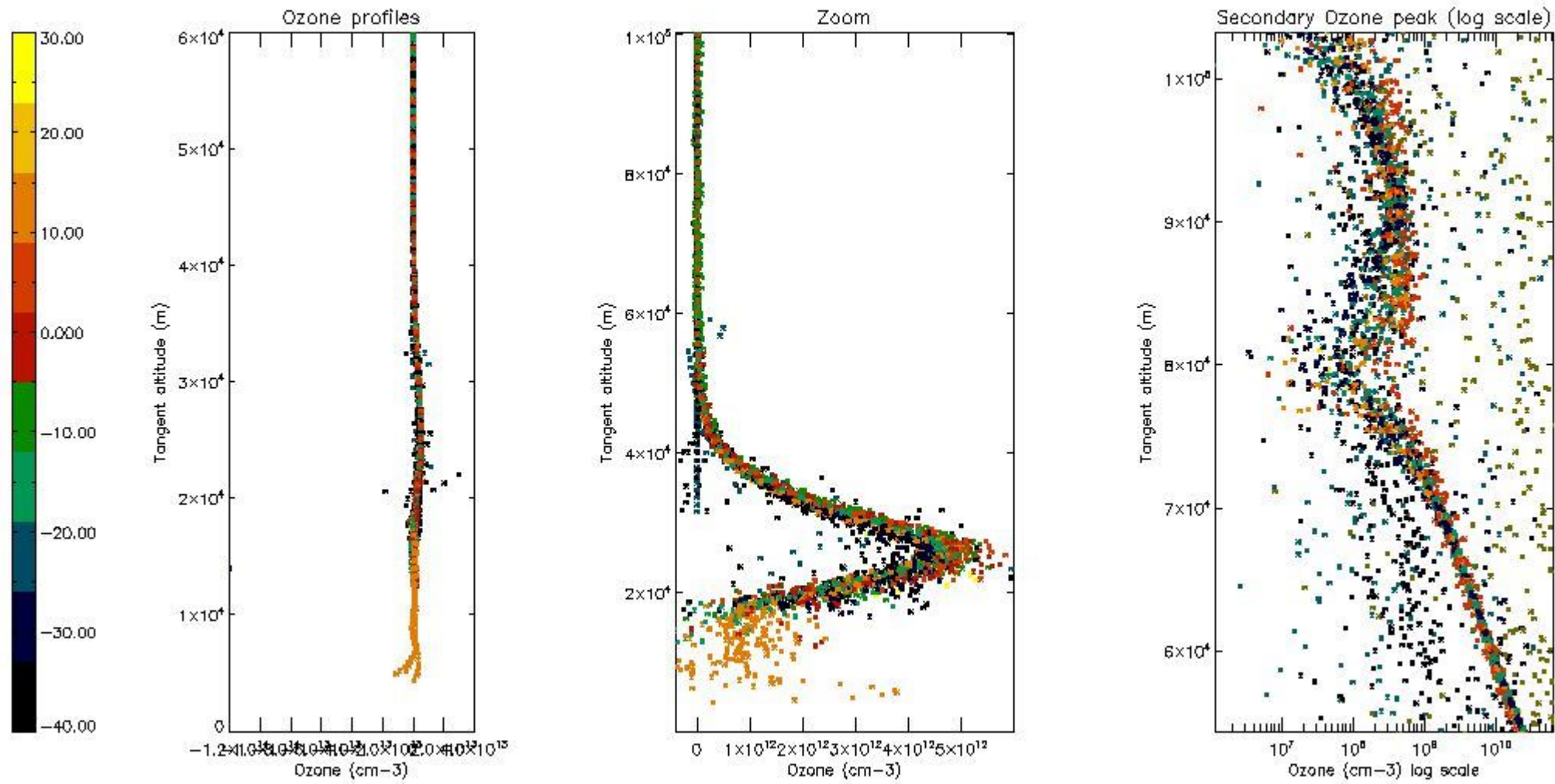
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	13

STD < 10	9
STD < 5	6

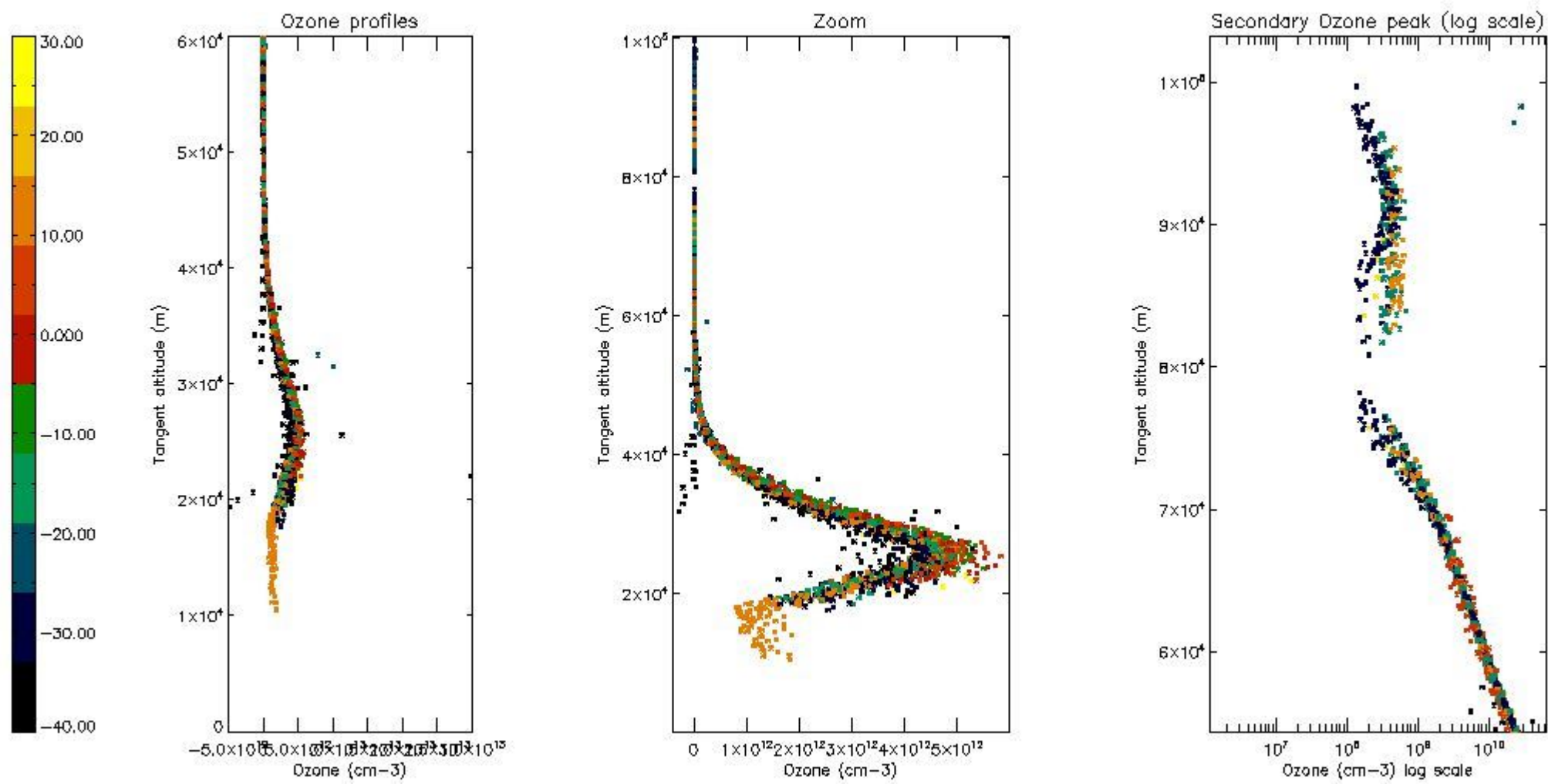
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



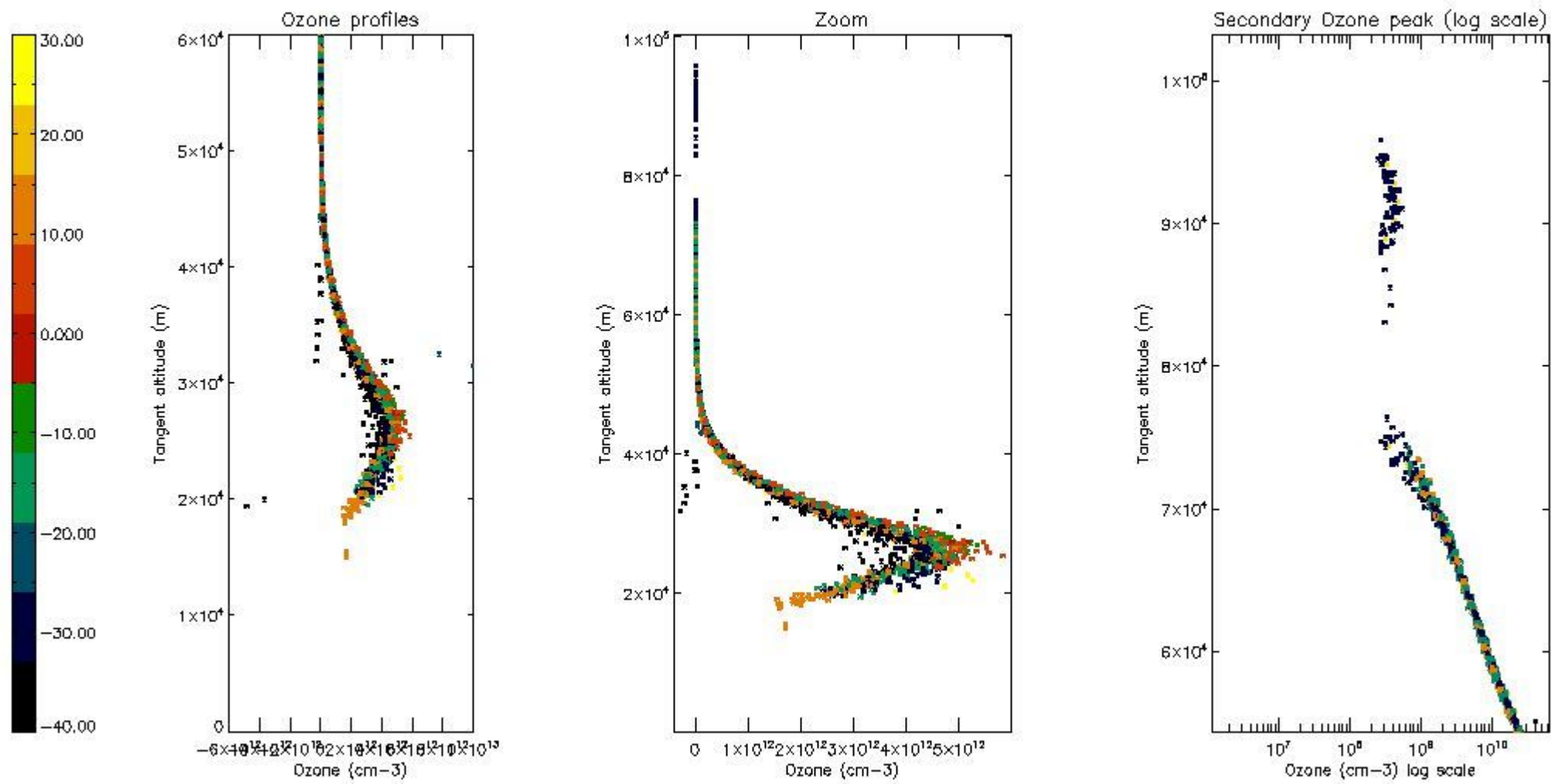
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



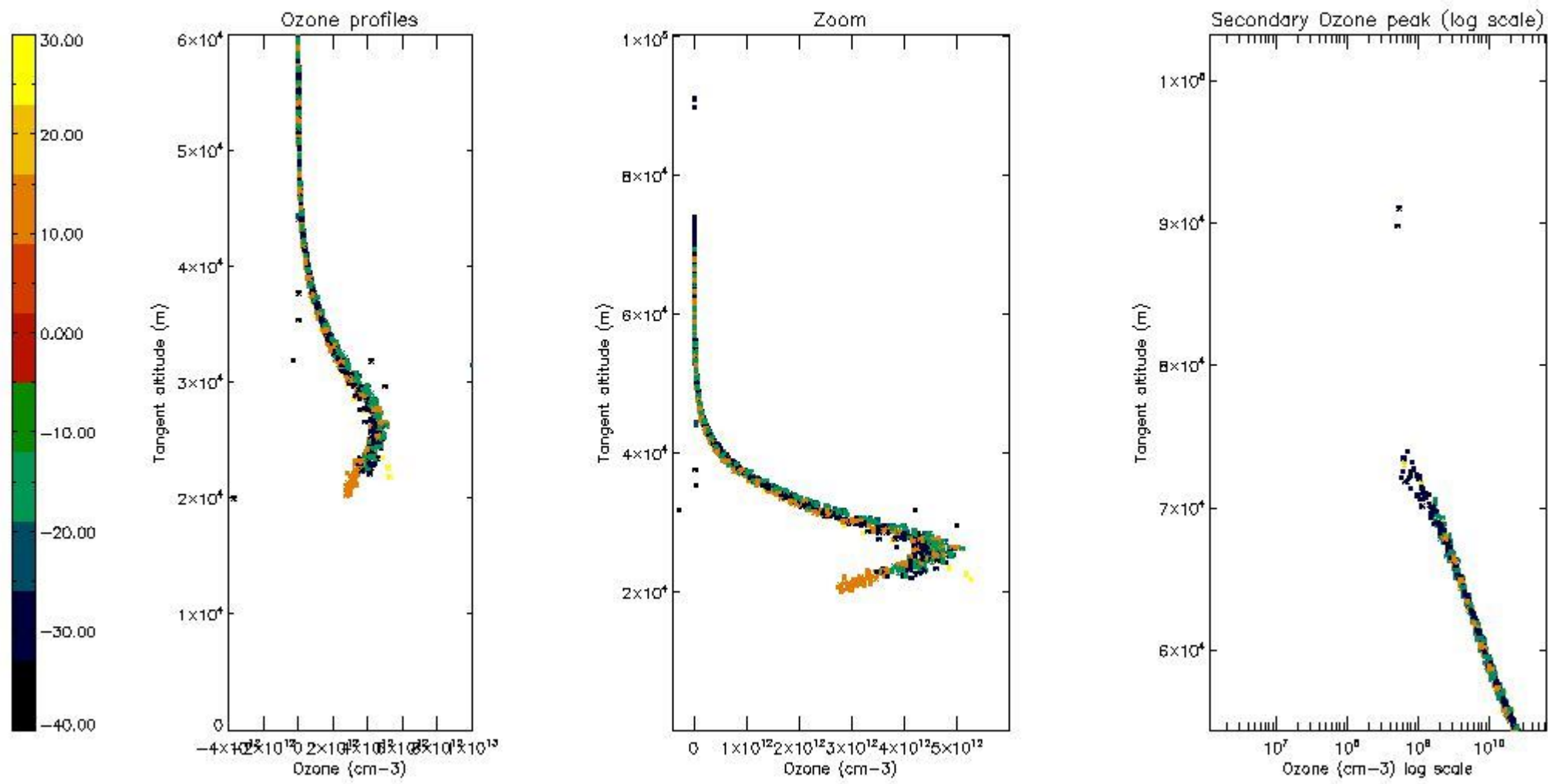
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



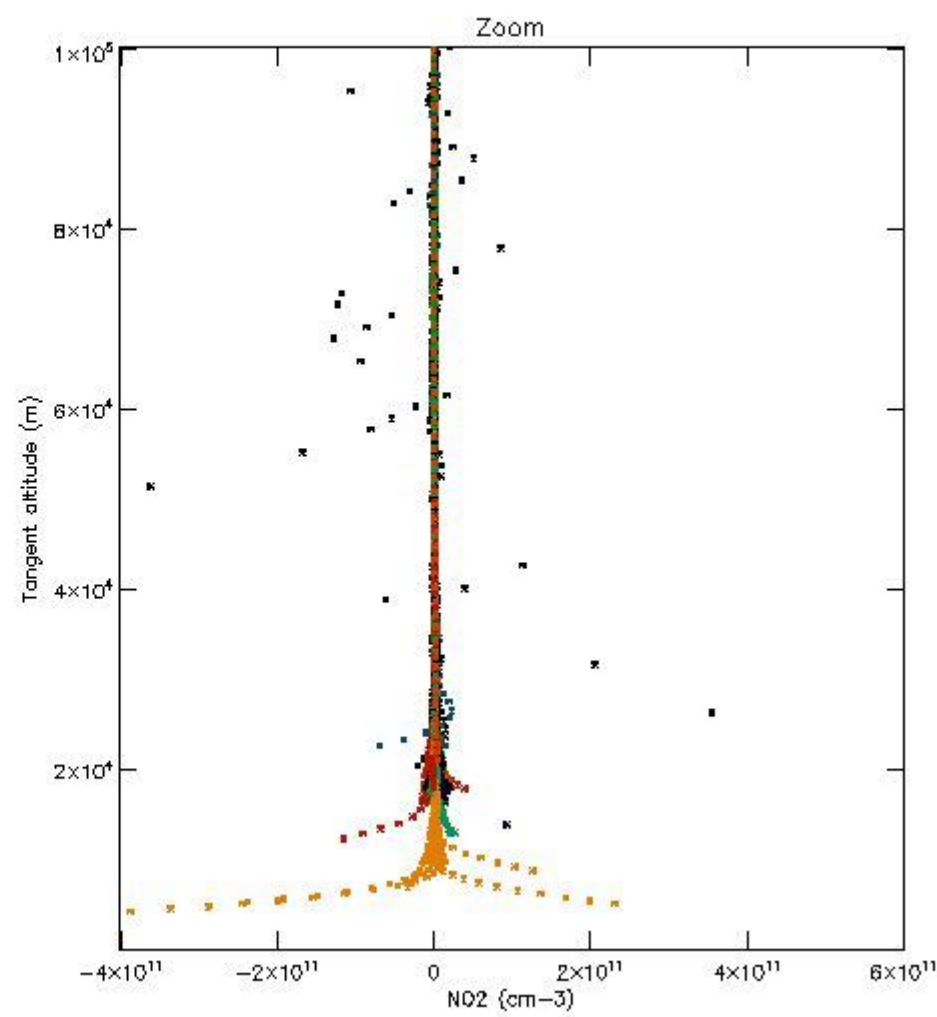
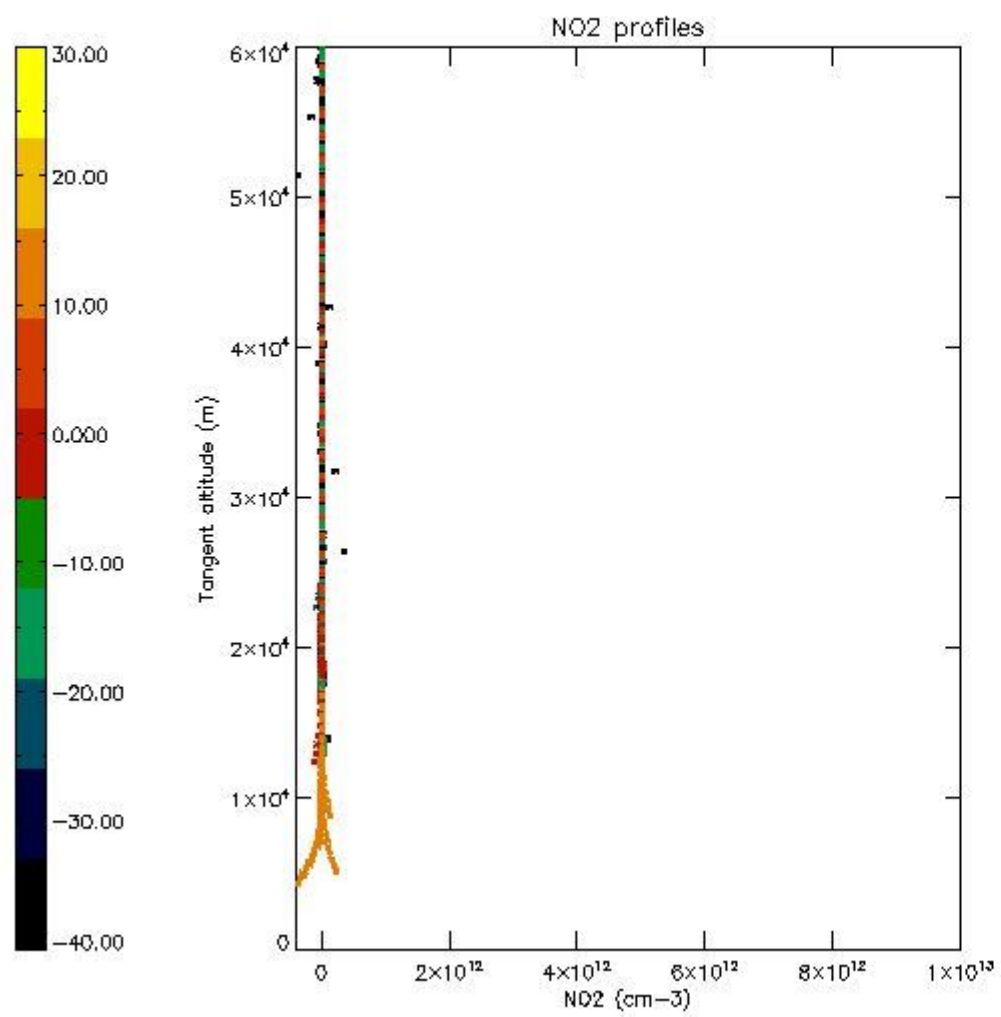
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



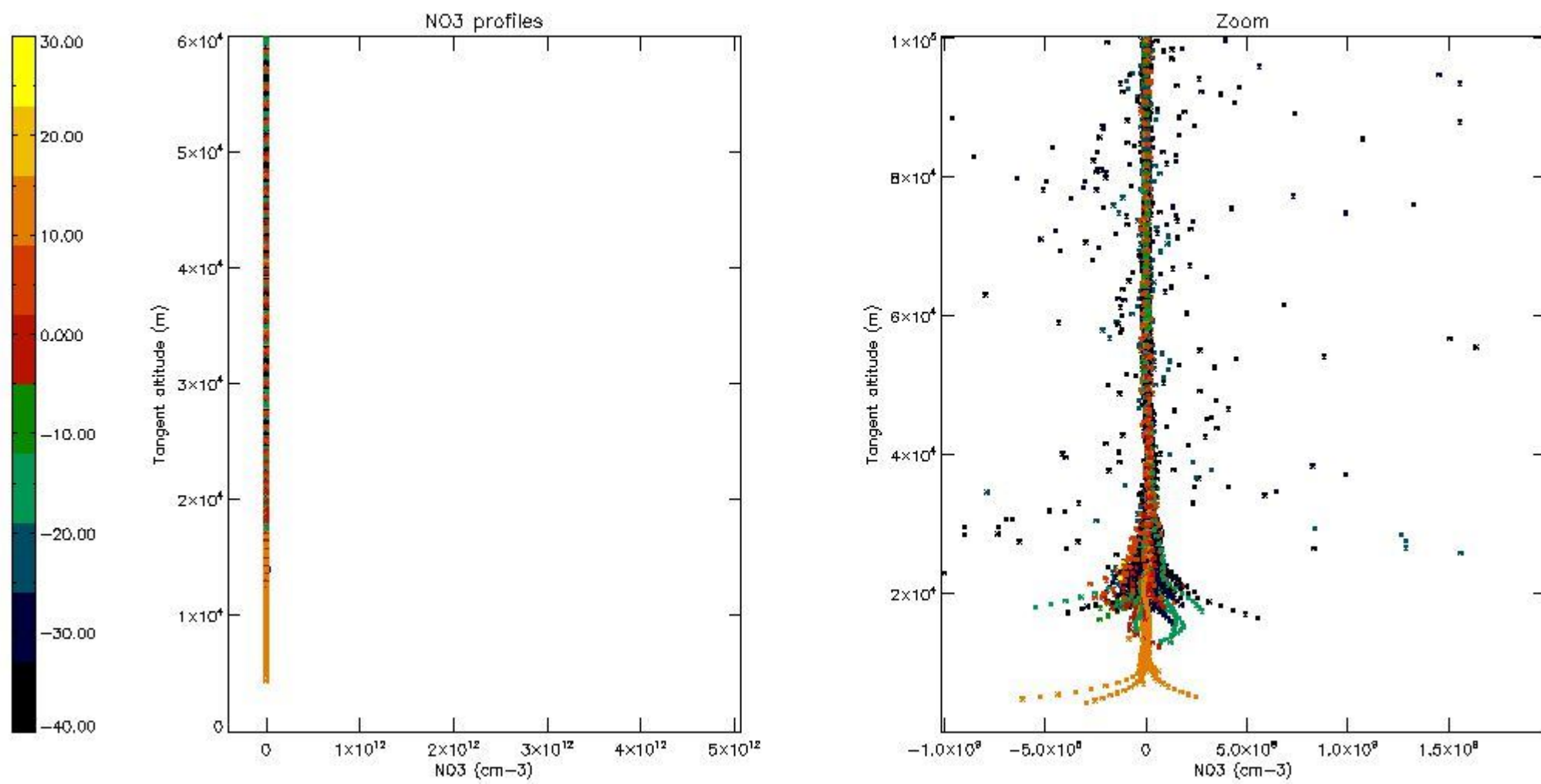
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



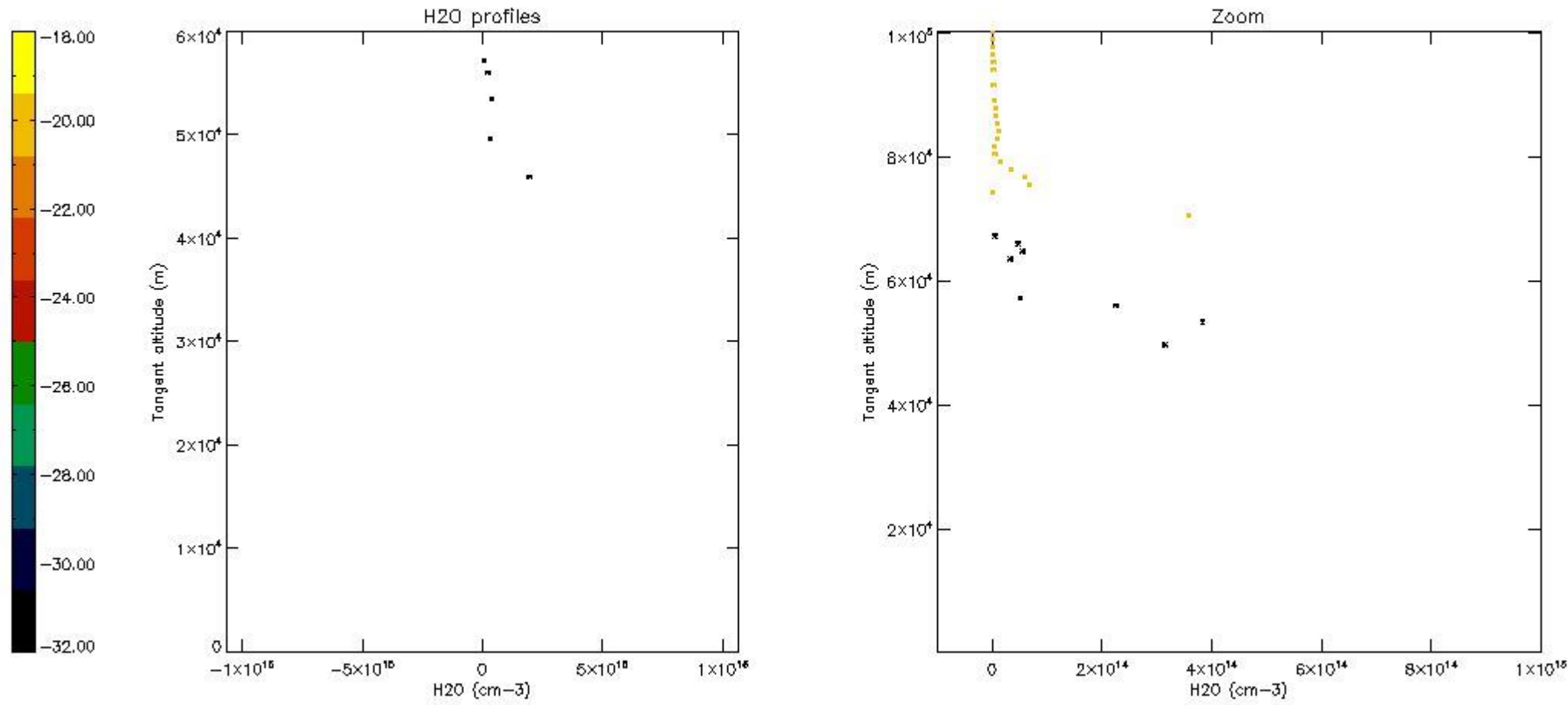
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

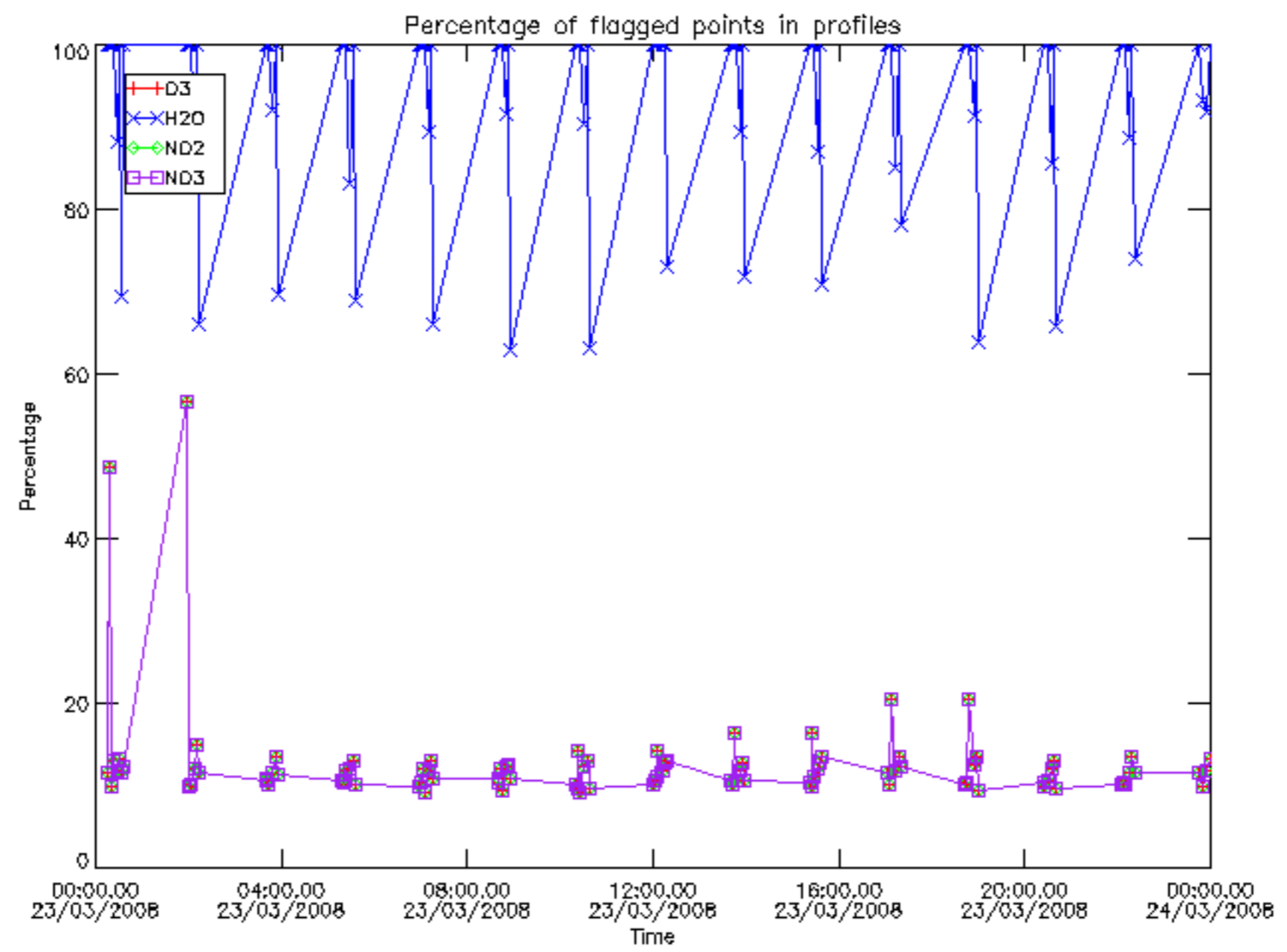


## 6. Auxiliary Data Files used for the production reported in section 2

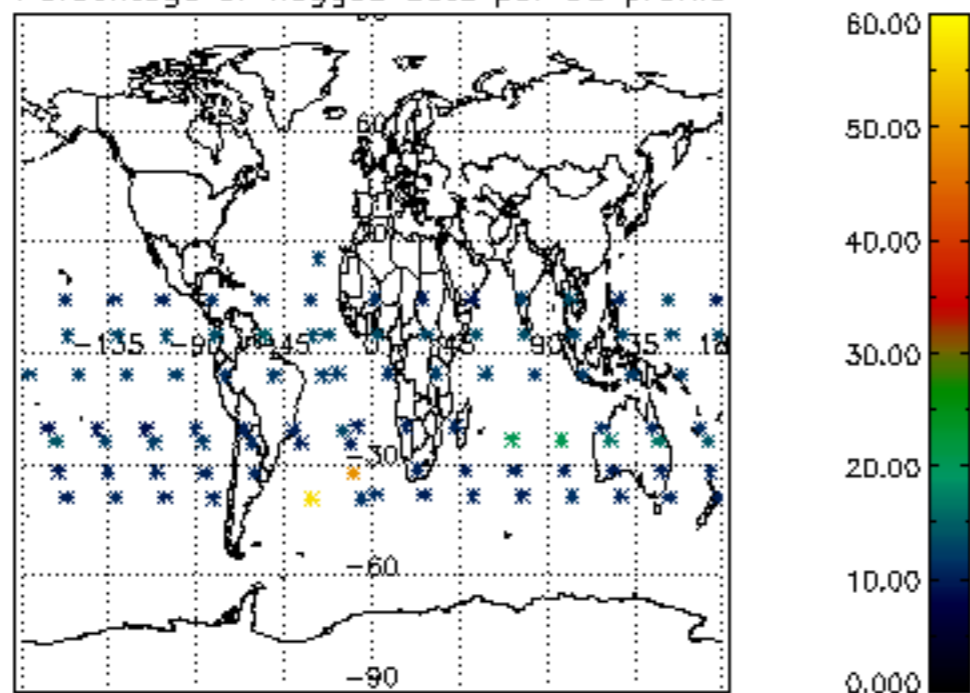
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	23-MAR-2008 00:05:15
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-MAR-2008 00:05:15
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-MAR-2008 00:05:15

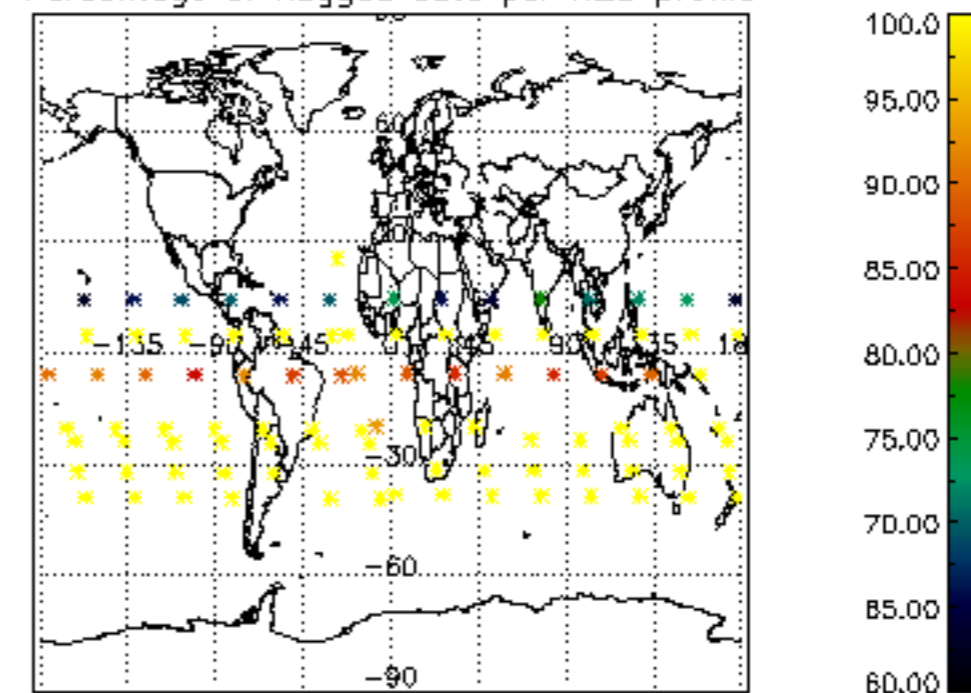




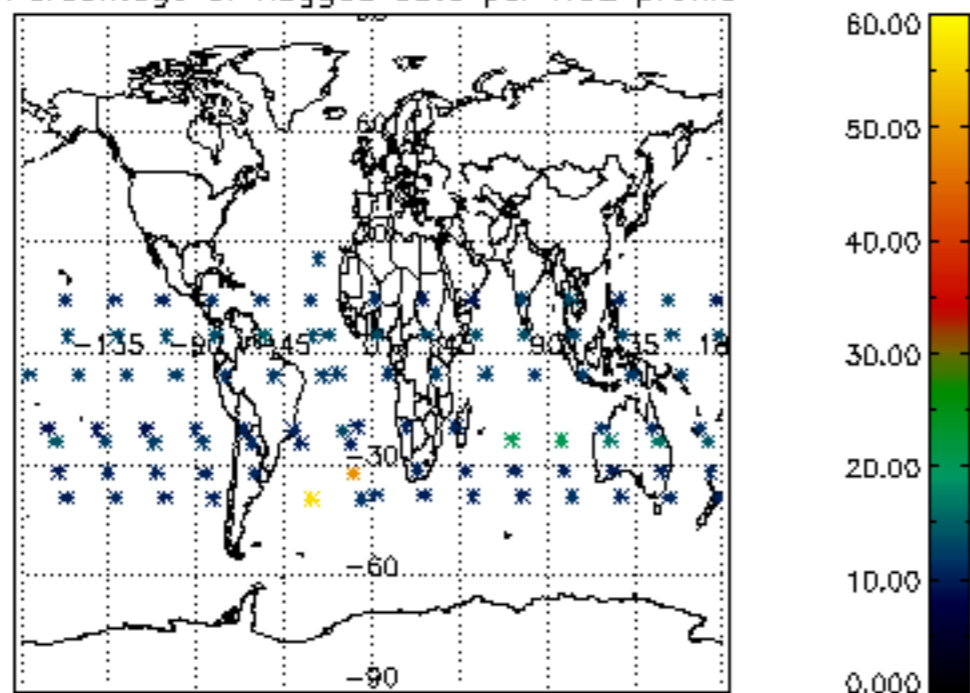
Percentage of flagged data per D3 profile



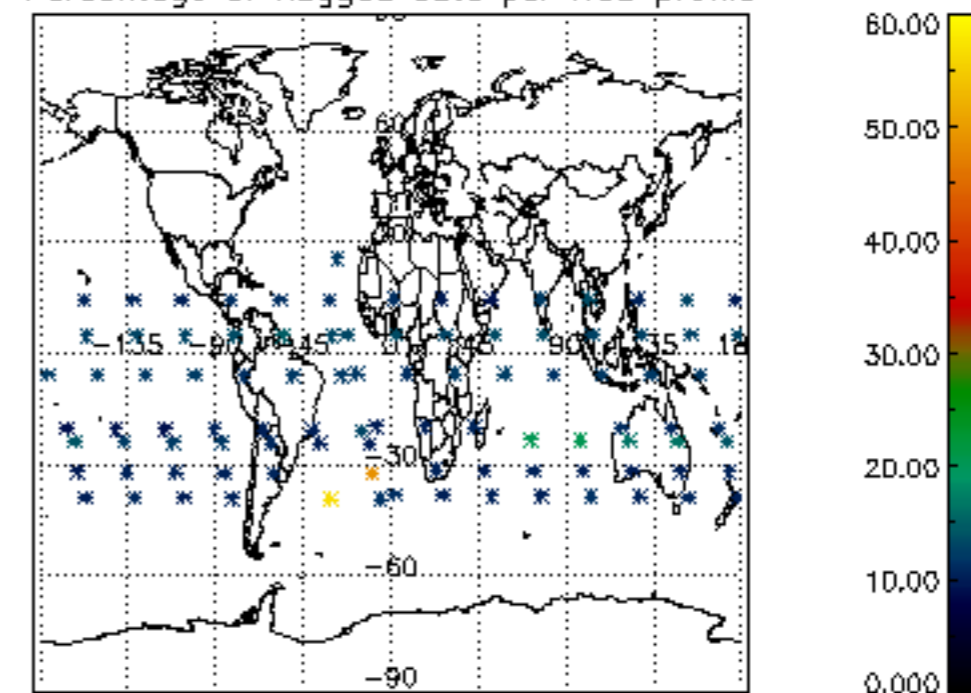
Percentage of flagged data per H2O profile

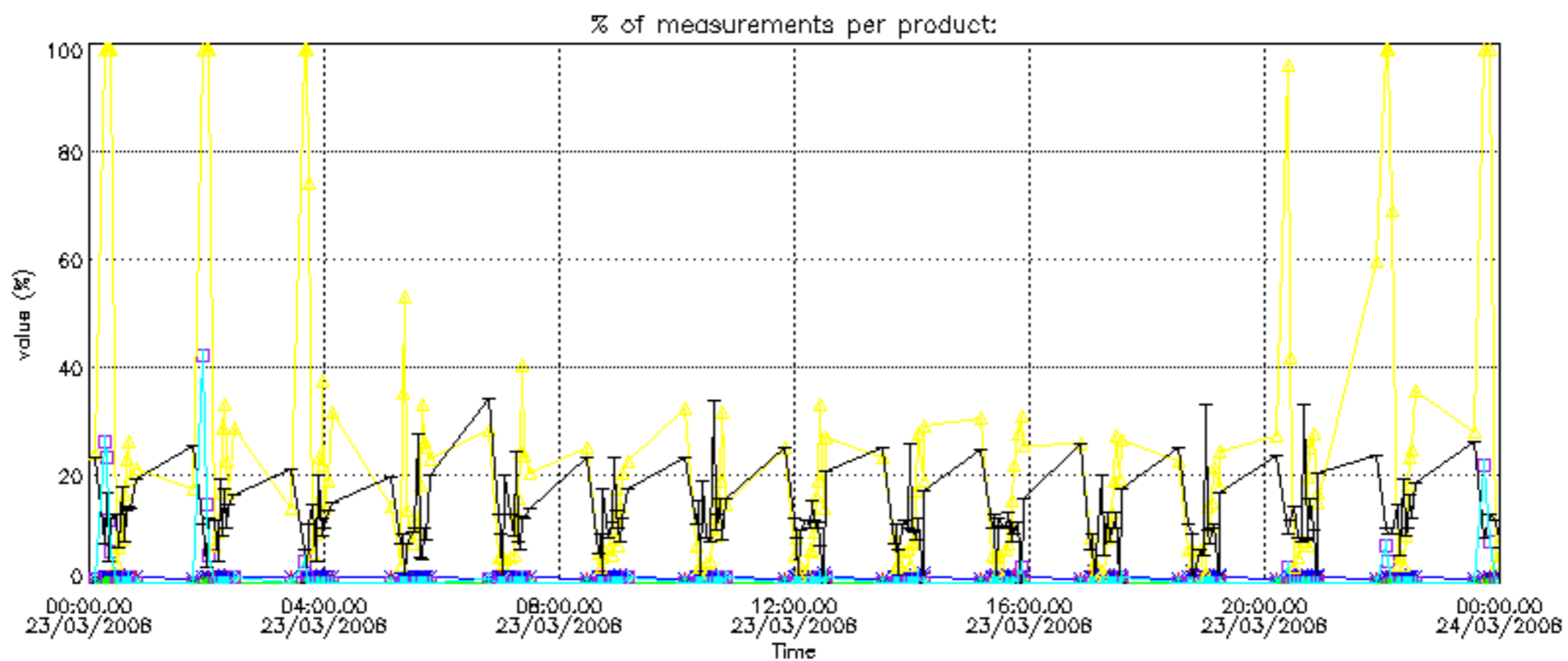


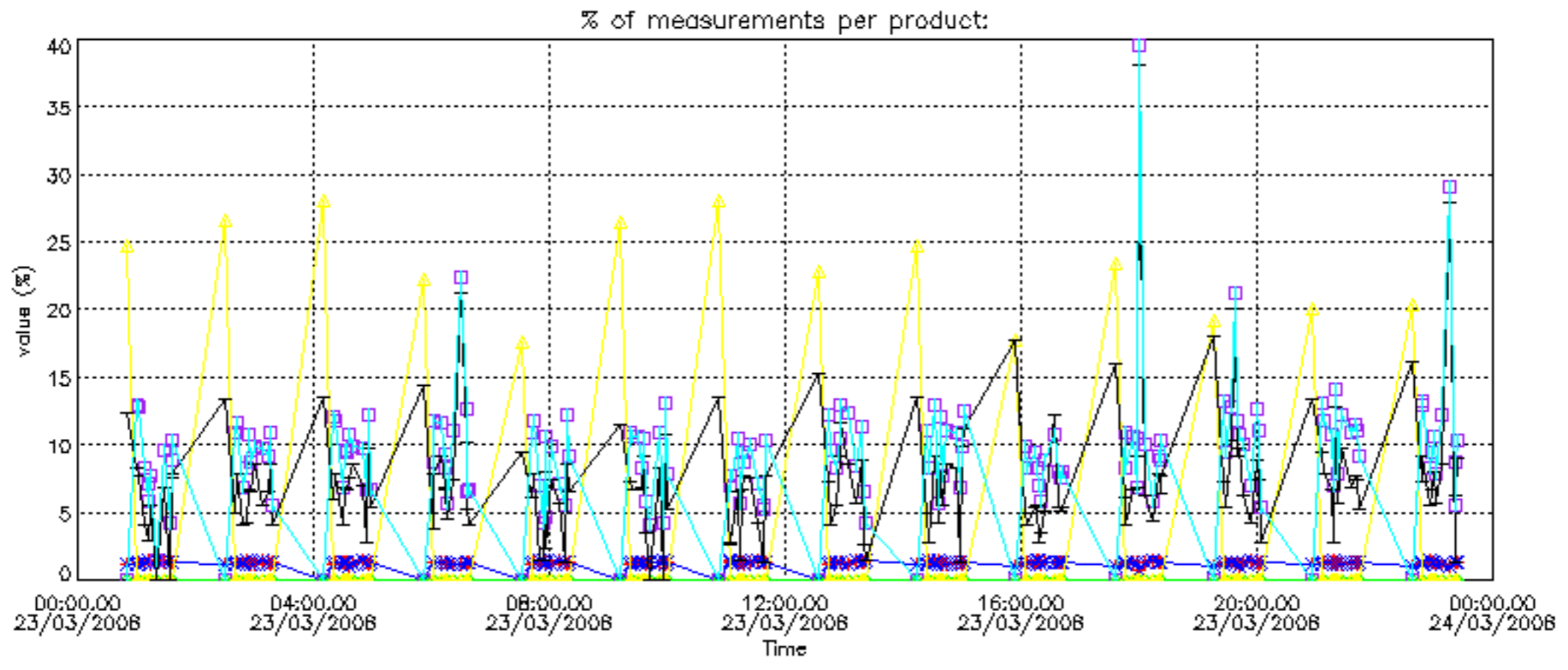
Percentage of flagged data per NO2 profile



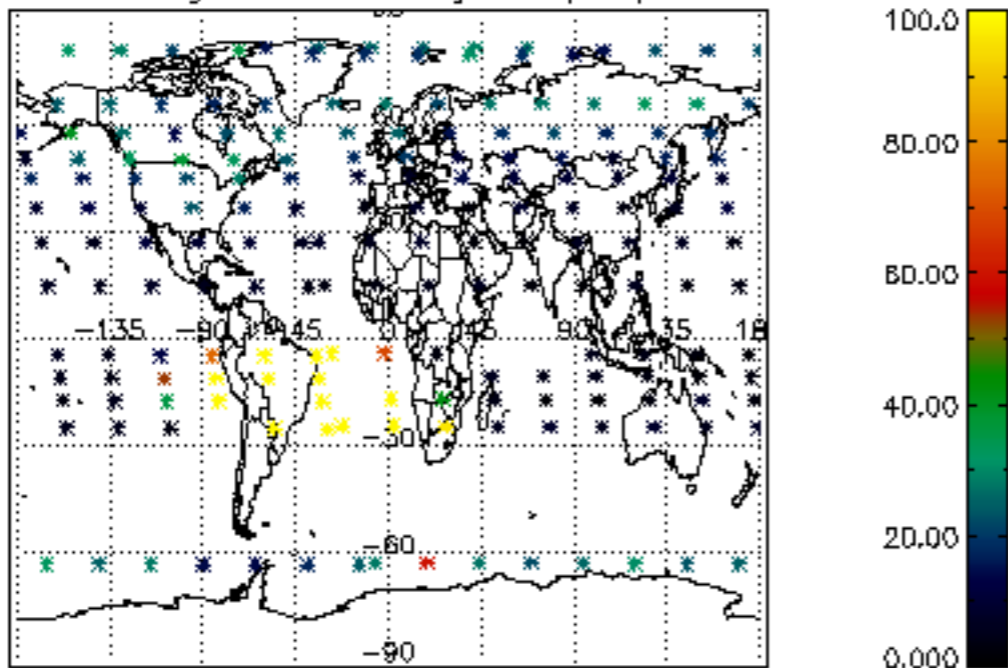
Percentage of flagged data per NO3 profile



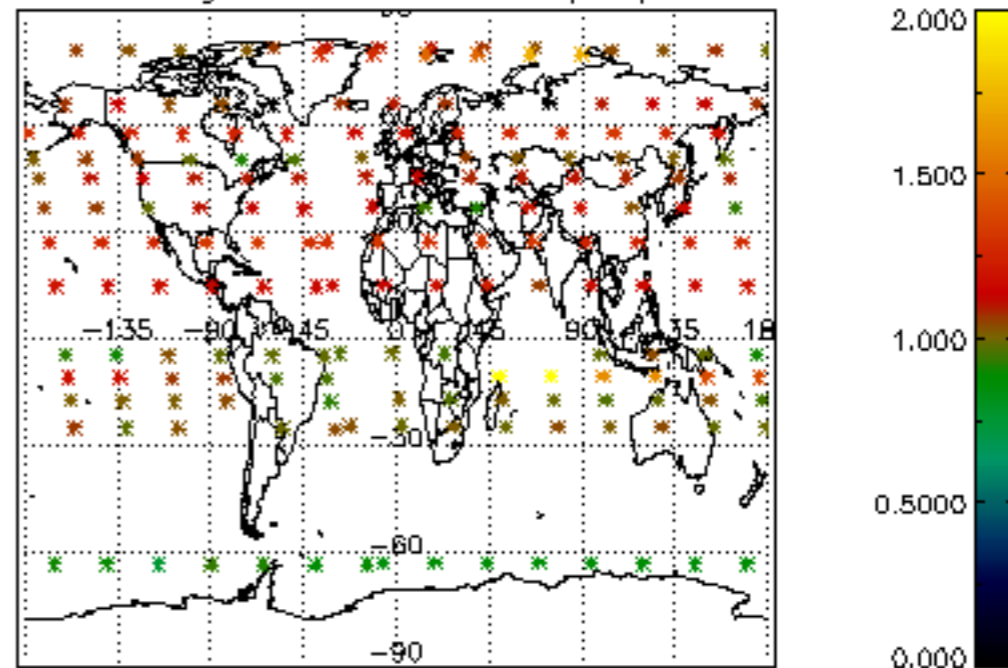




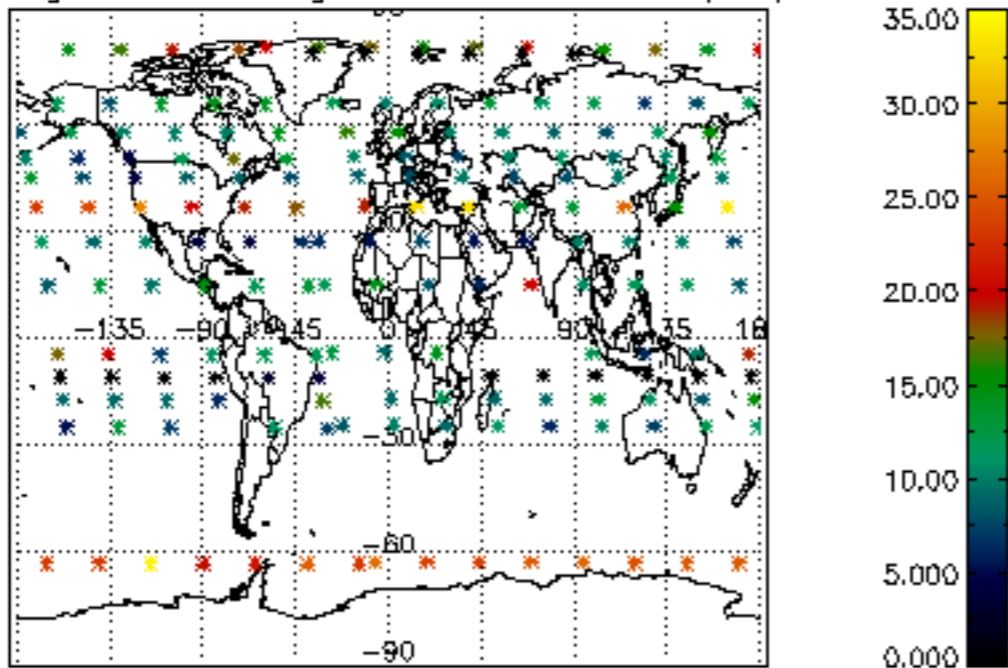
Percentage of cosmic ray hits per profile



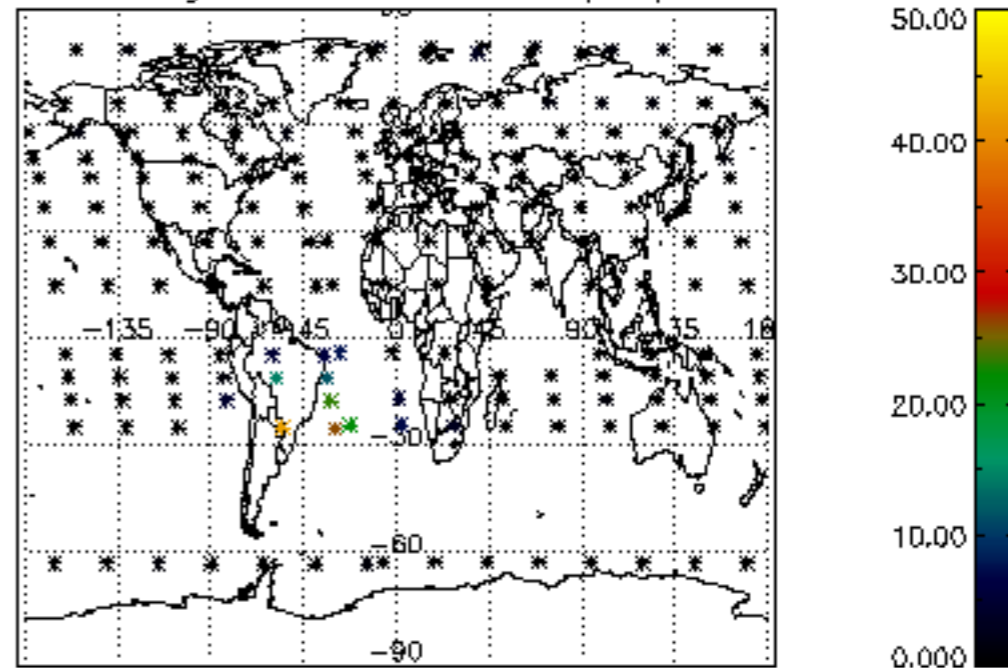
Percentage of datation errors per profile



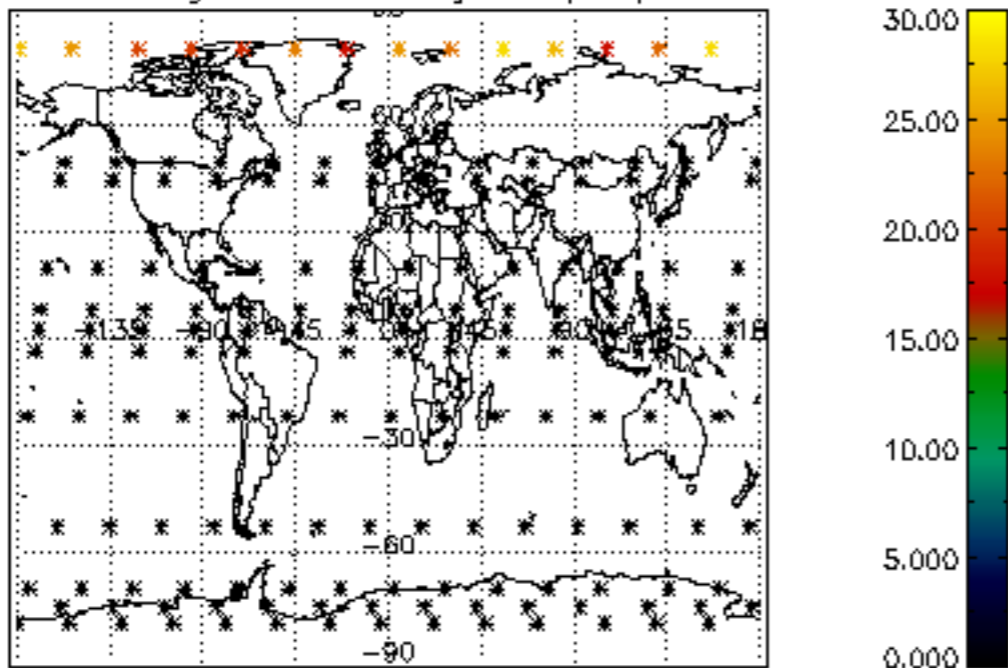
Percentage of star falling outside central band per profile



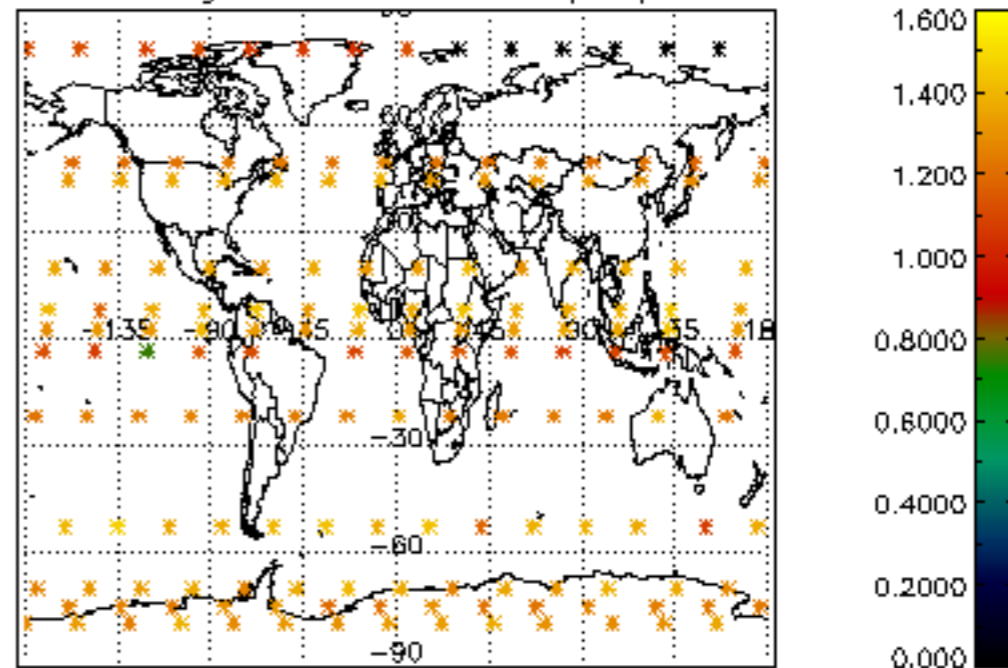
Percentage of saturation errors per profile



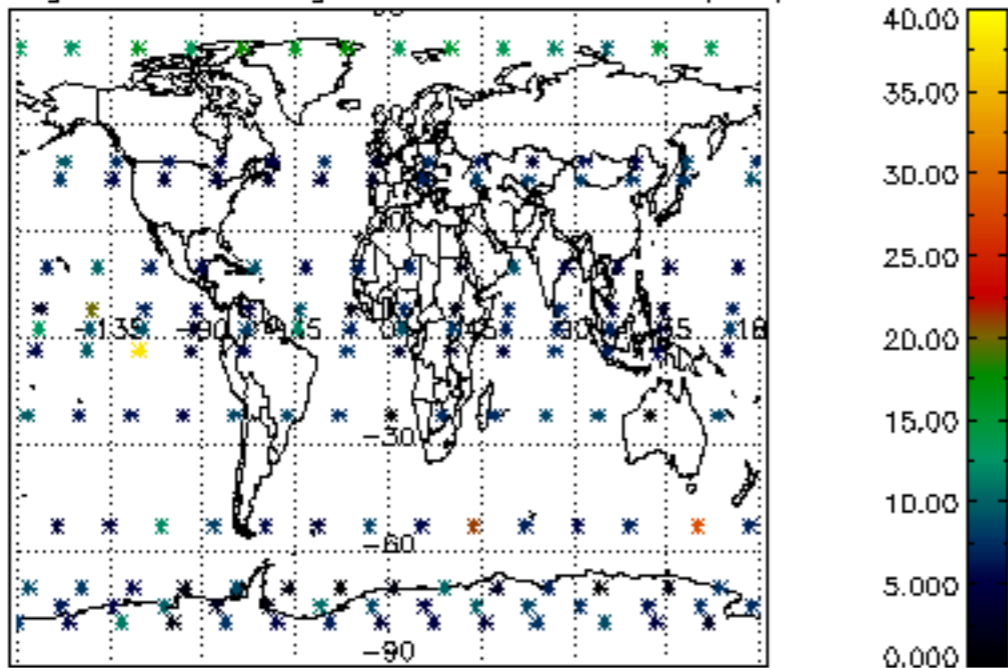
Percentage of cosmic ray hits per profile



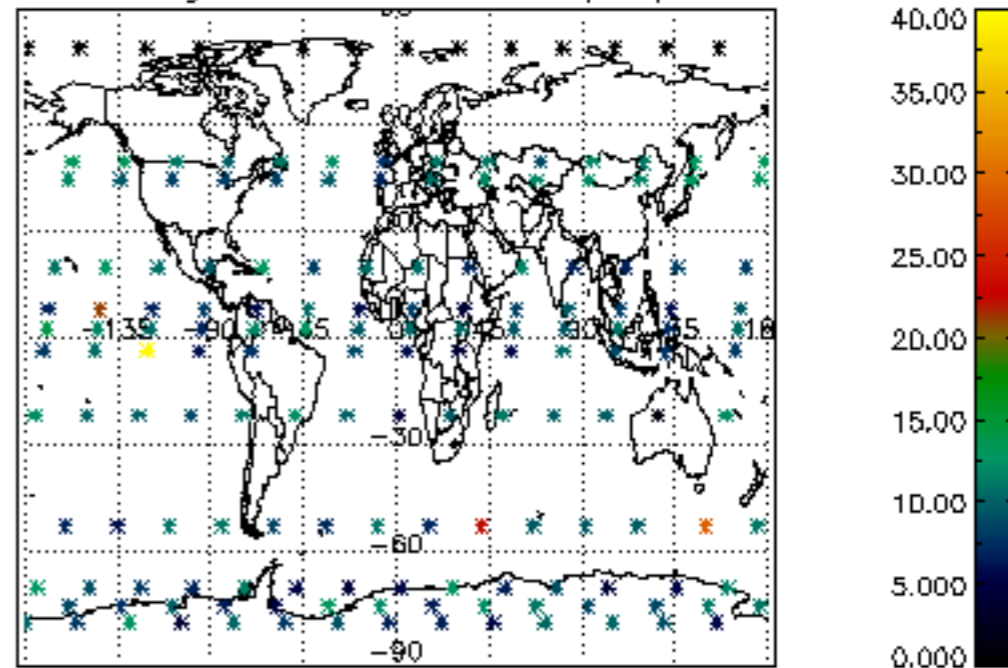
Percentage of datation errors per profile

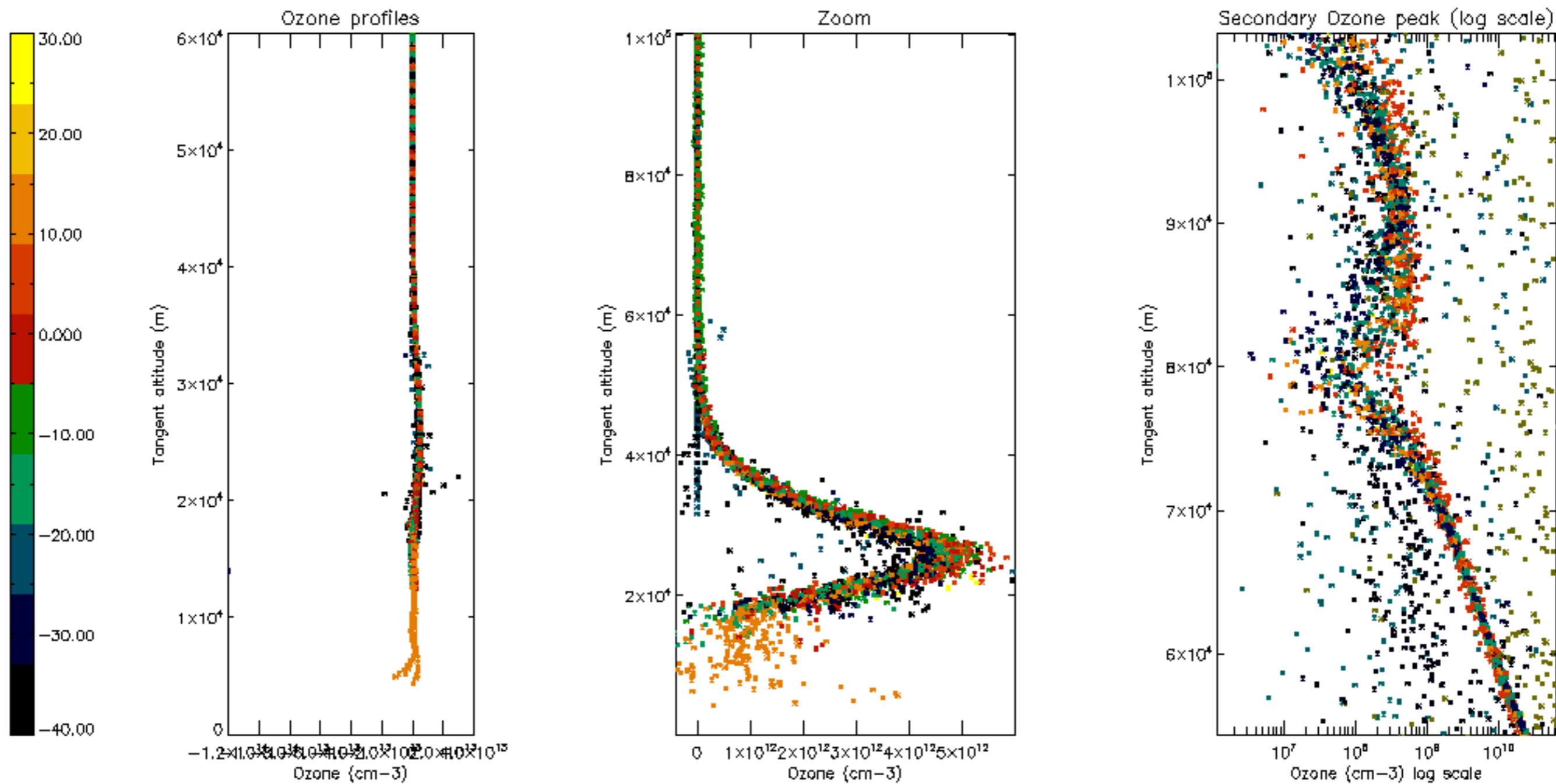


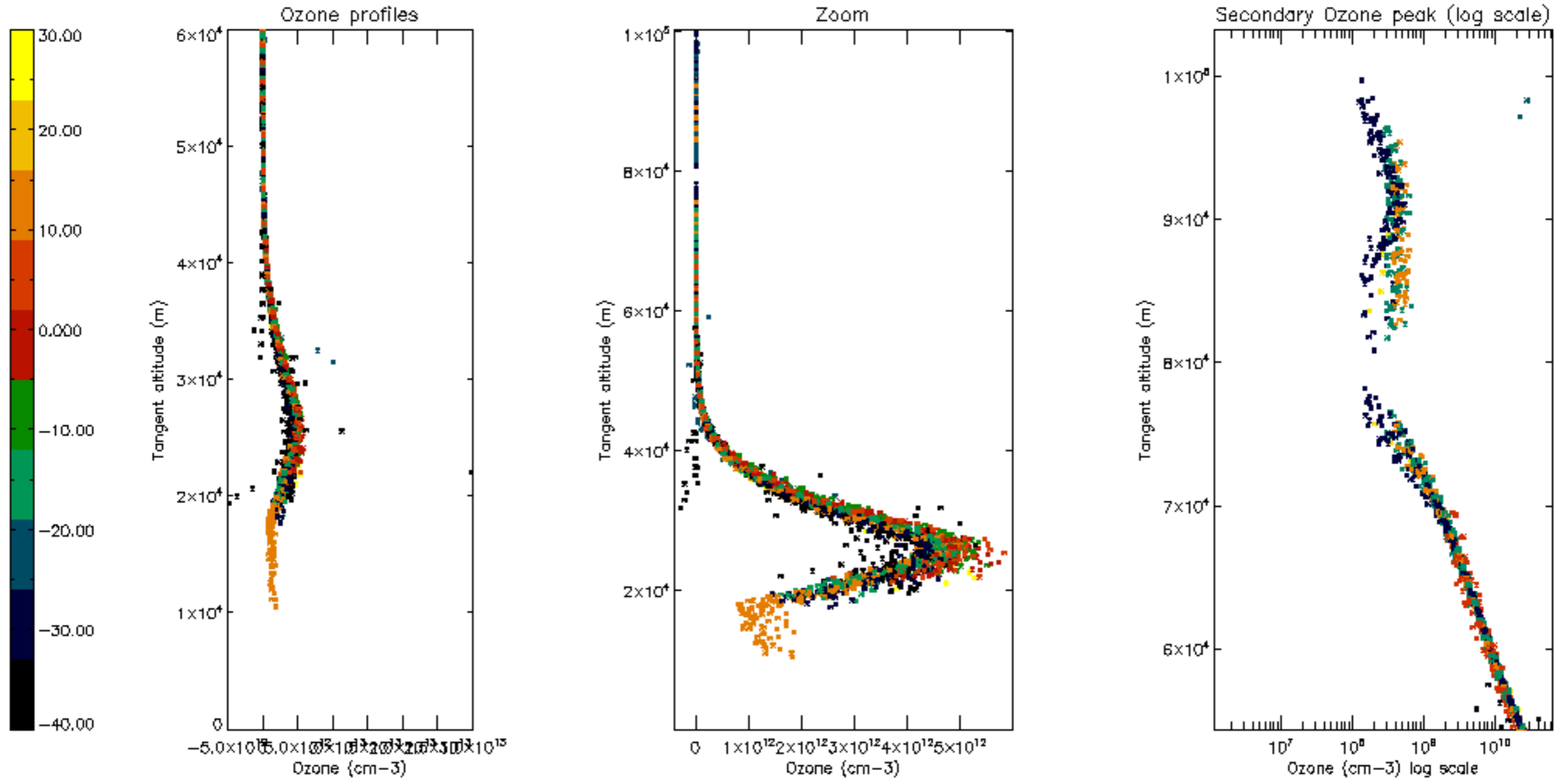
Percentage of star falling outside central band per profile



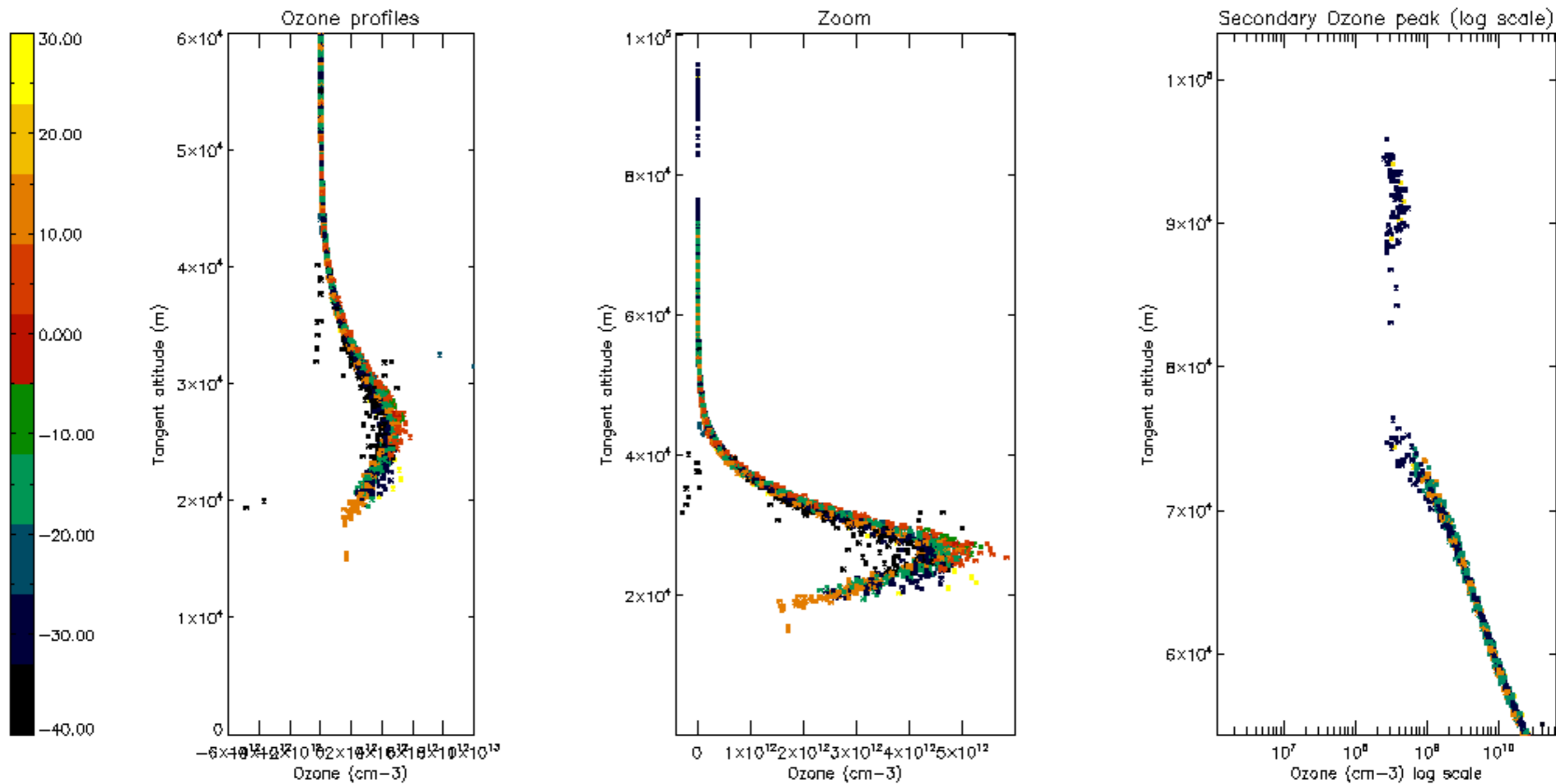
Percentage of saturation errors per profile

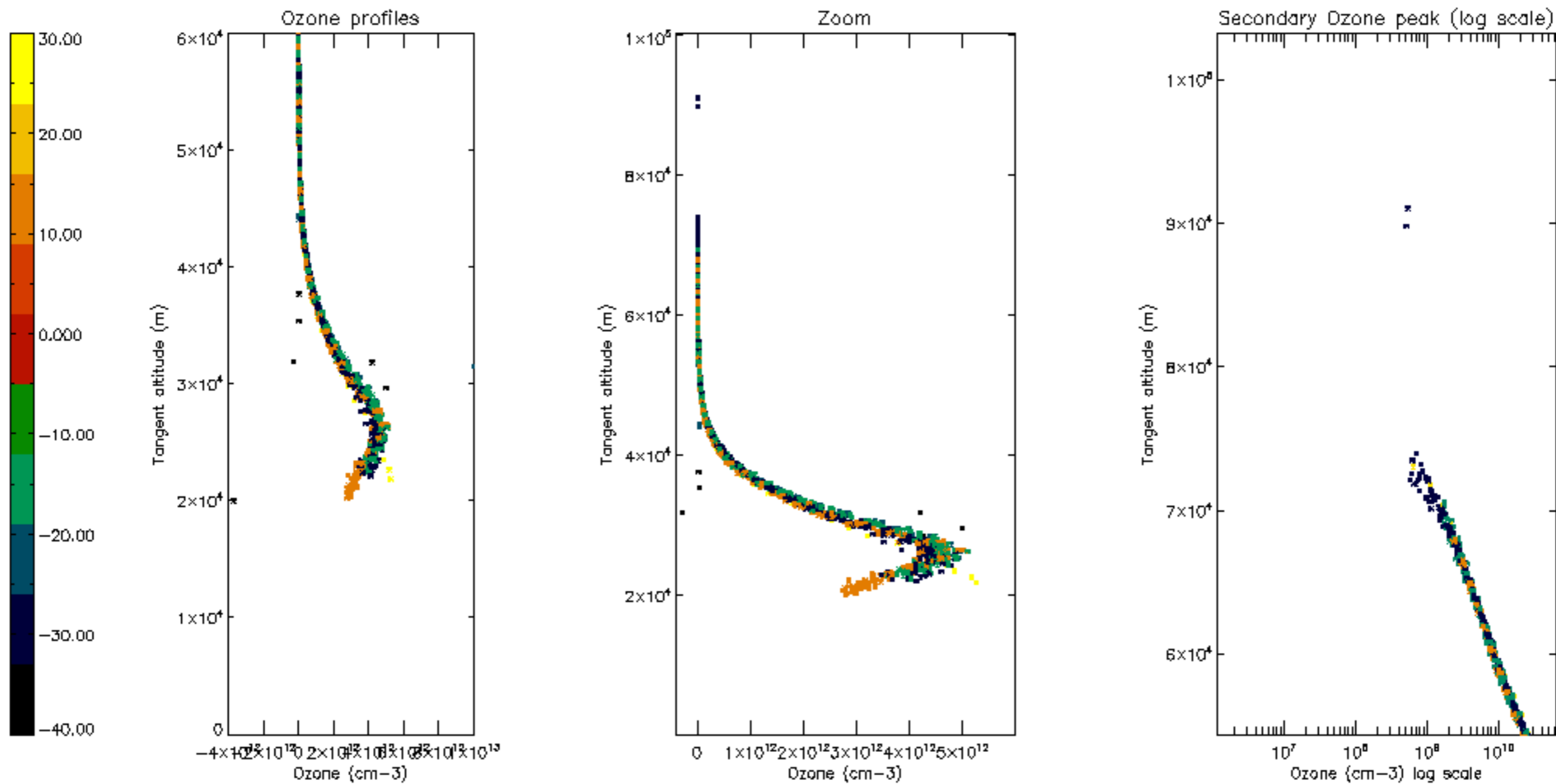


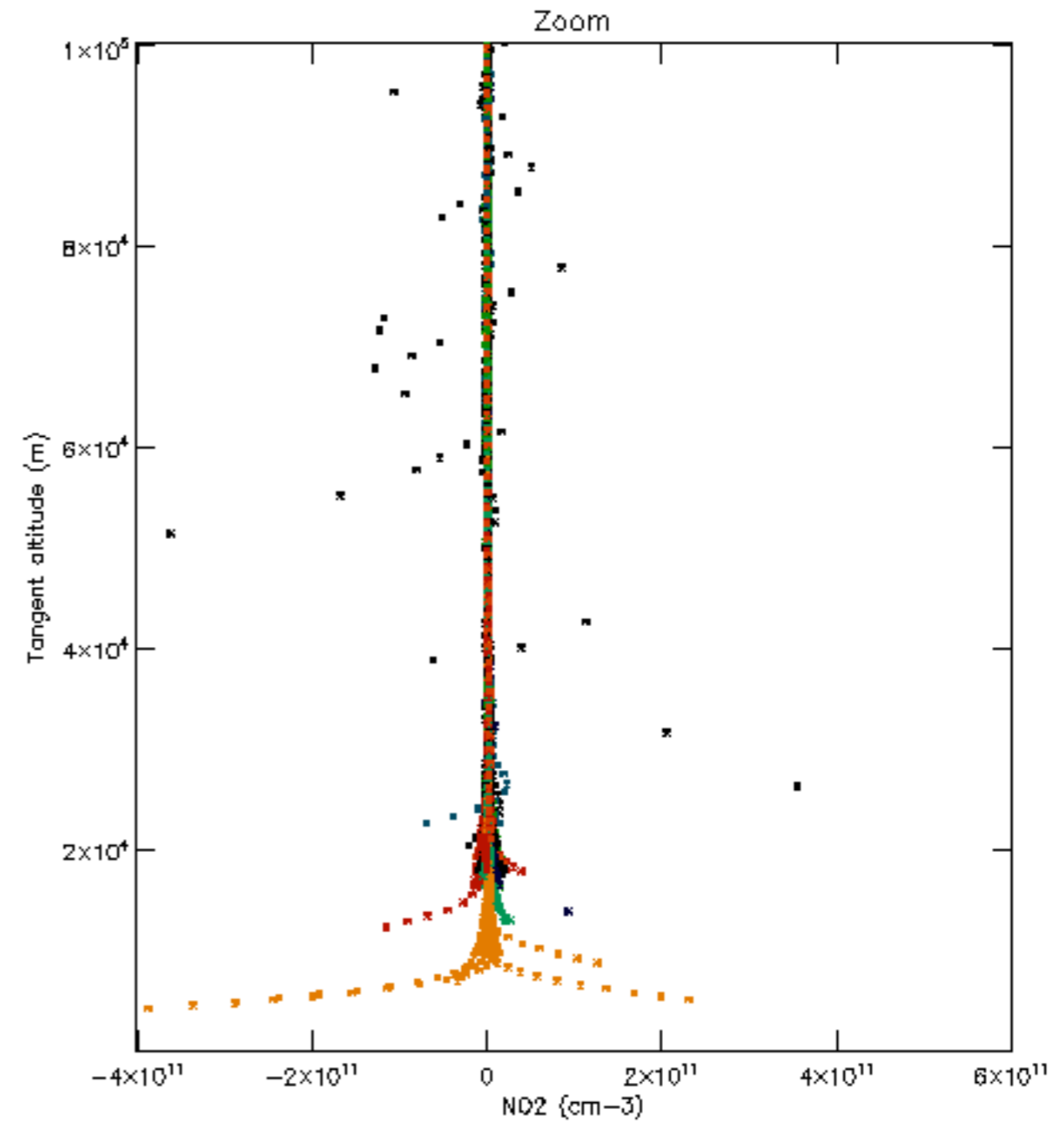
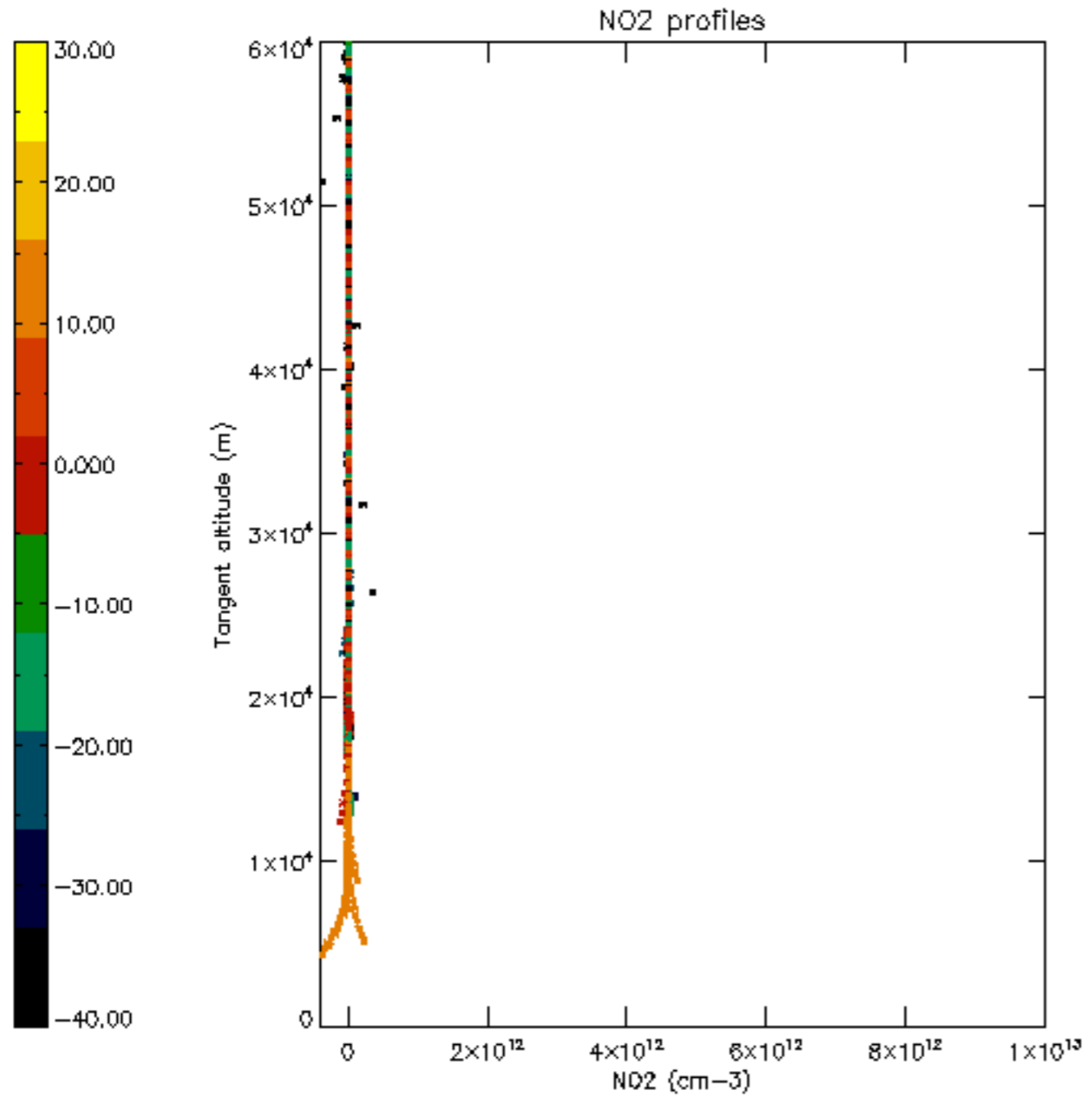


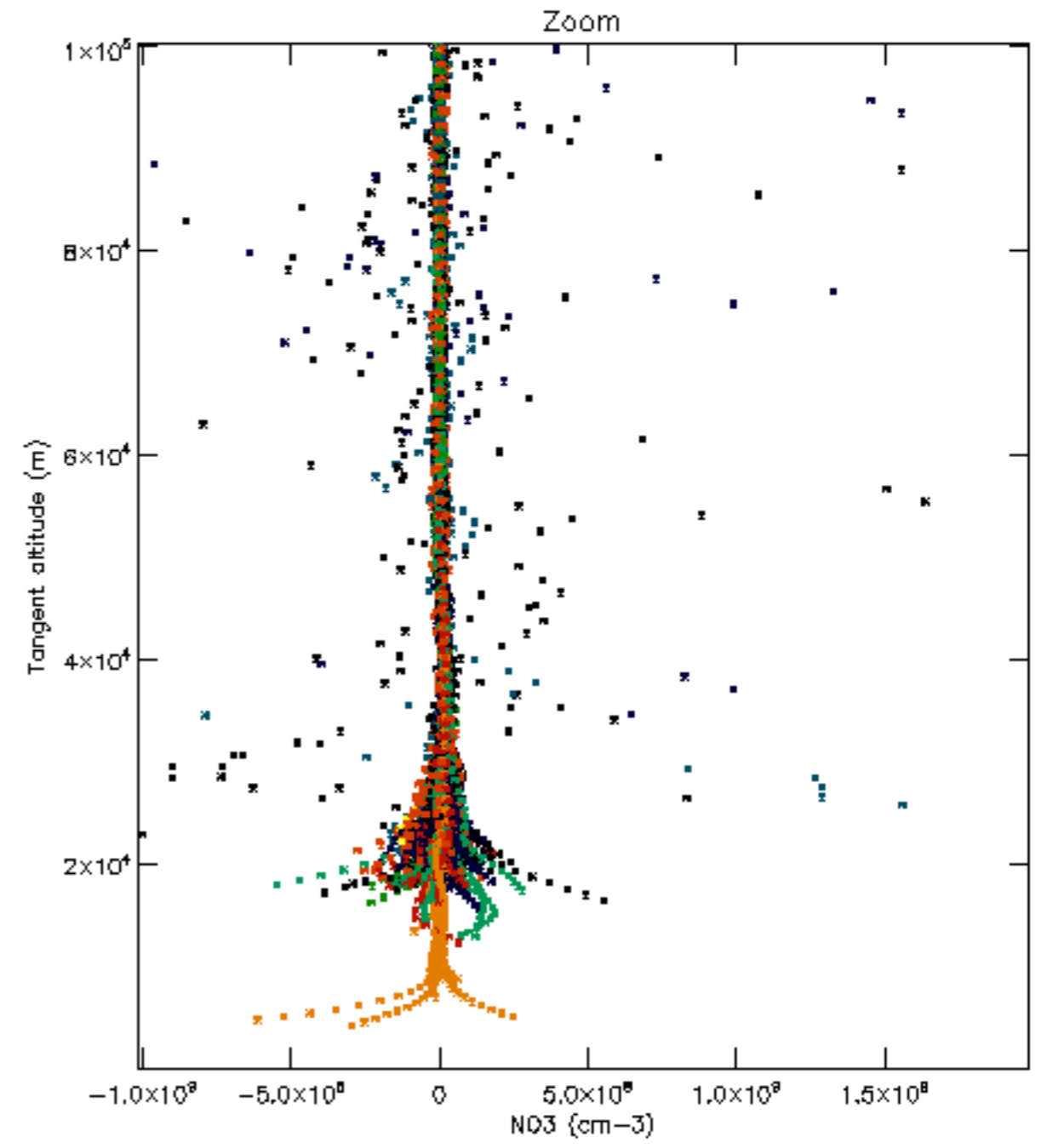
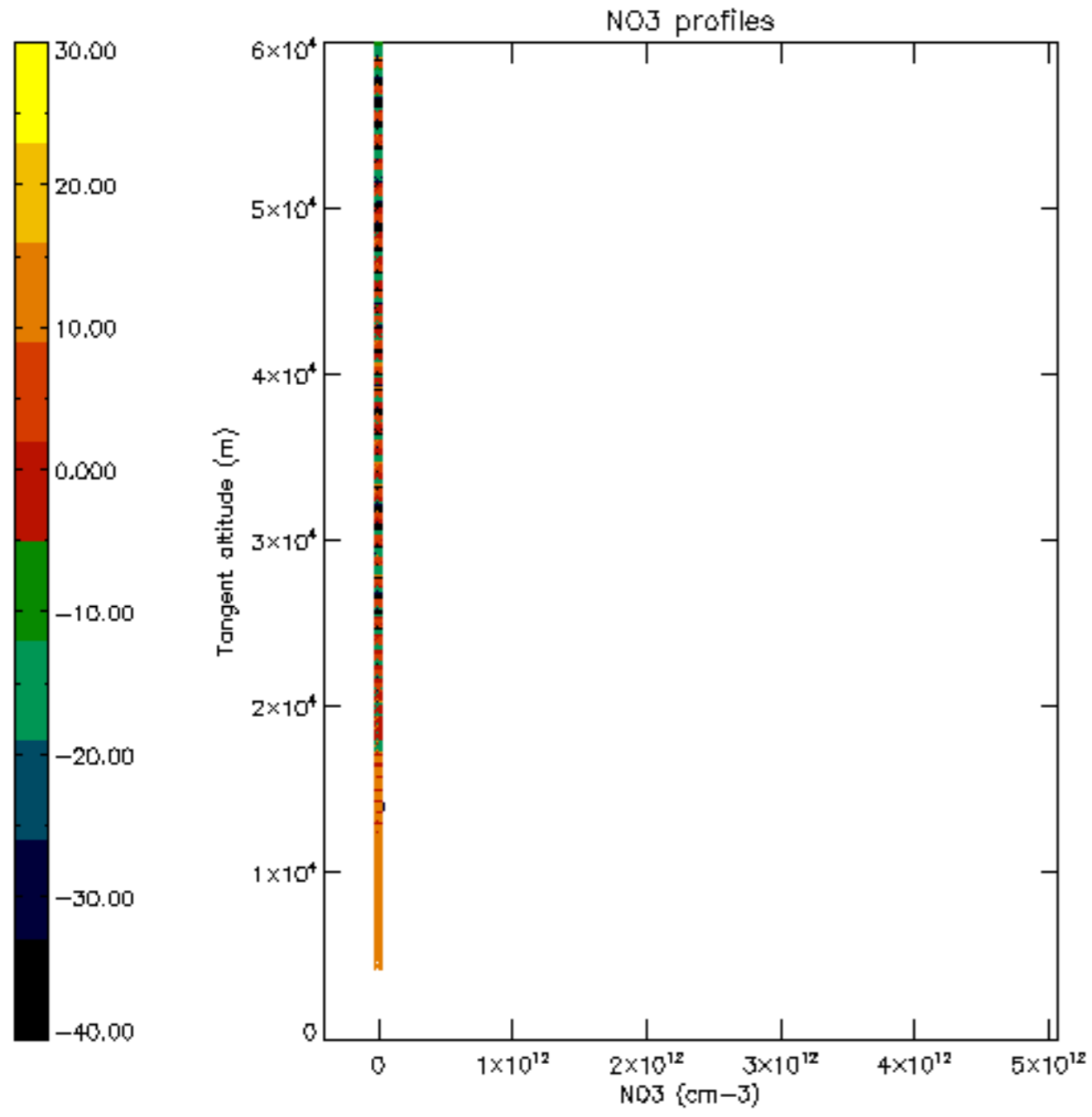


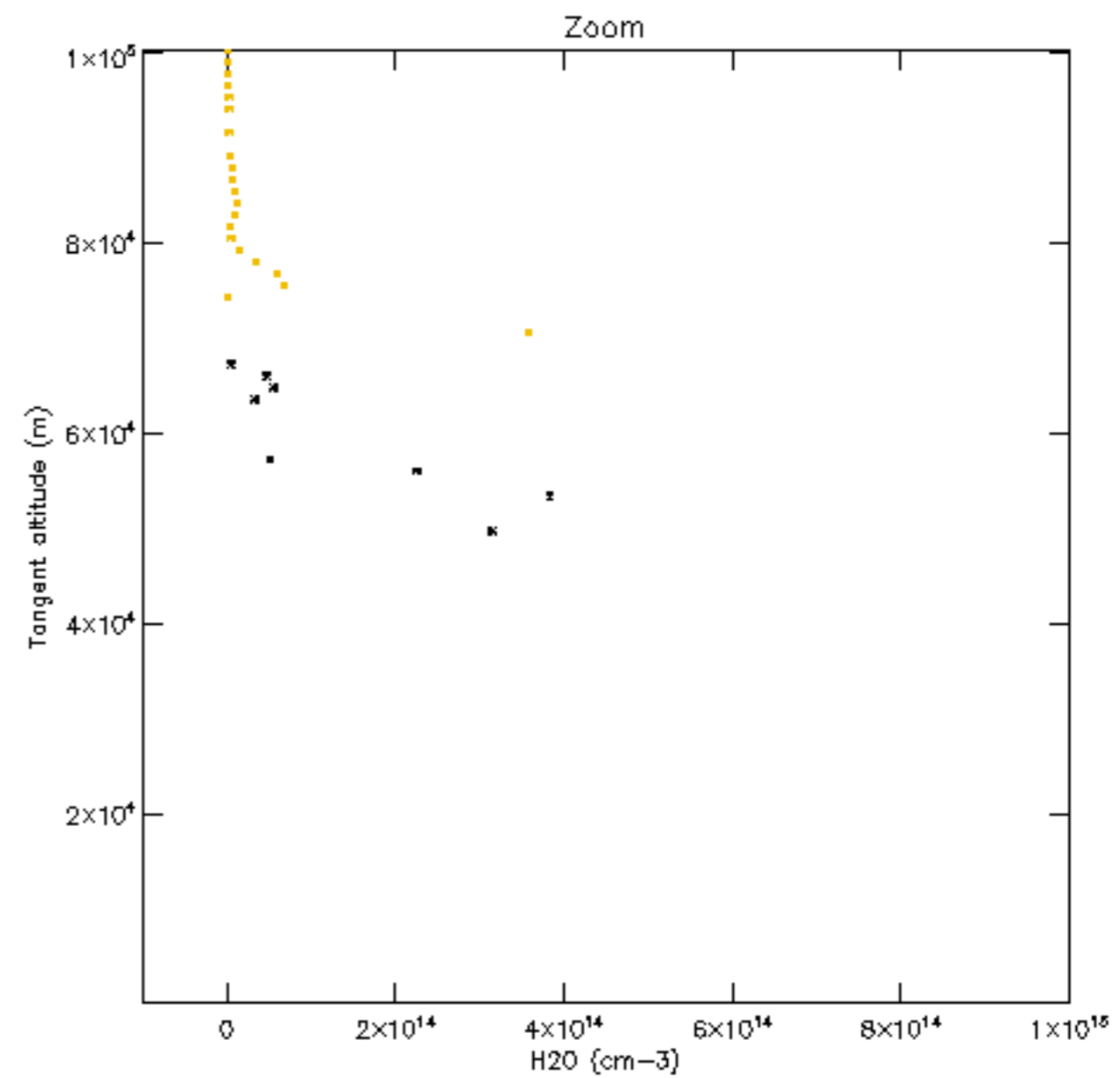
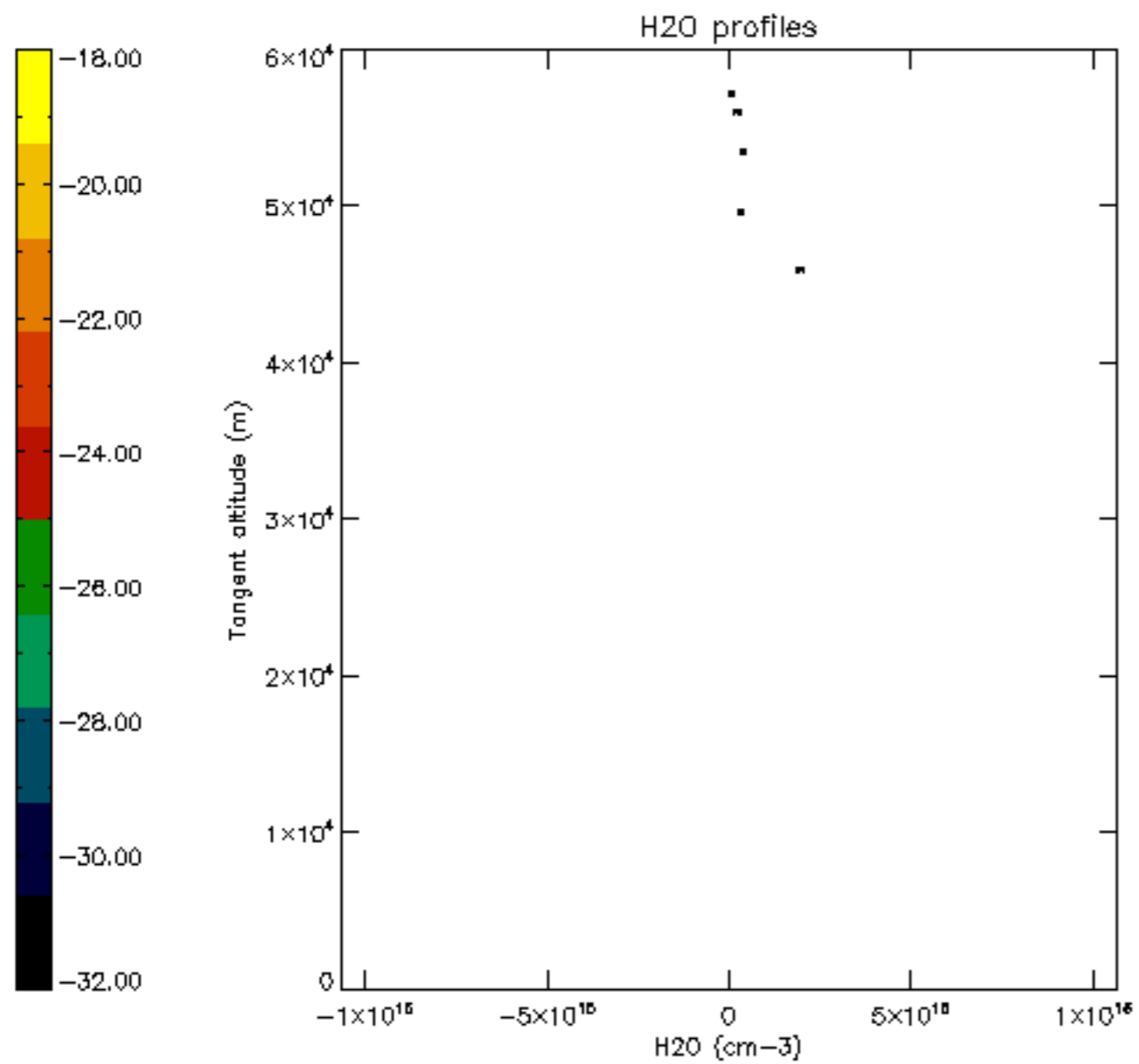


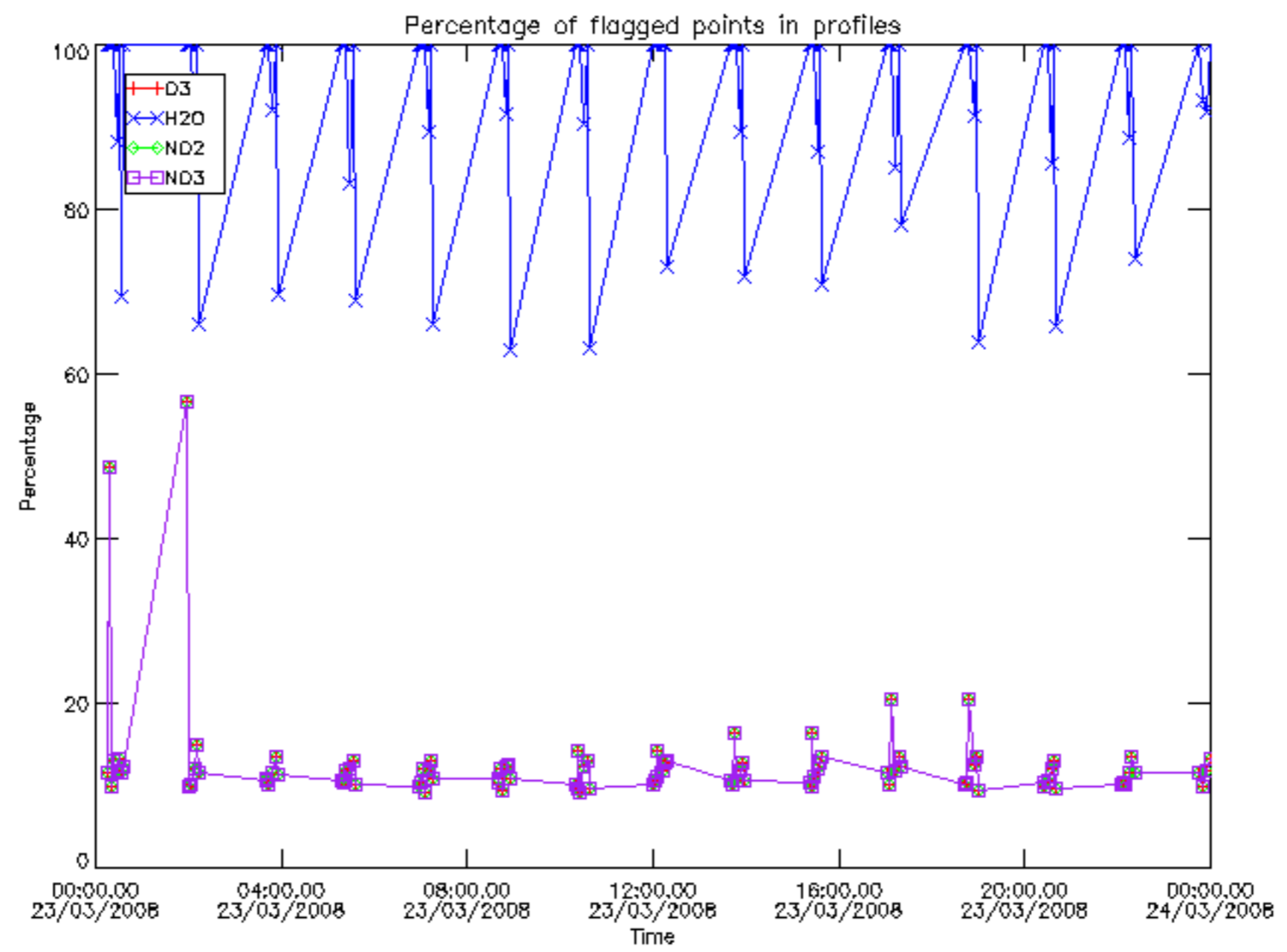




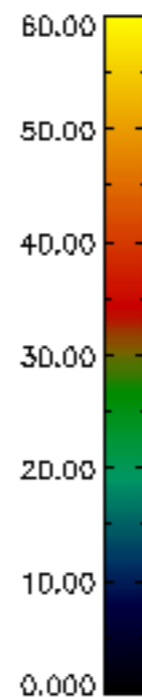
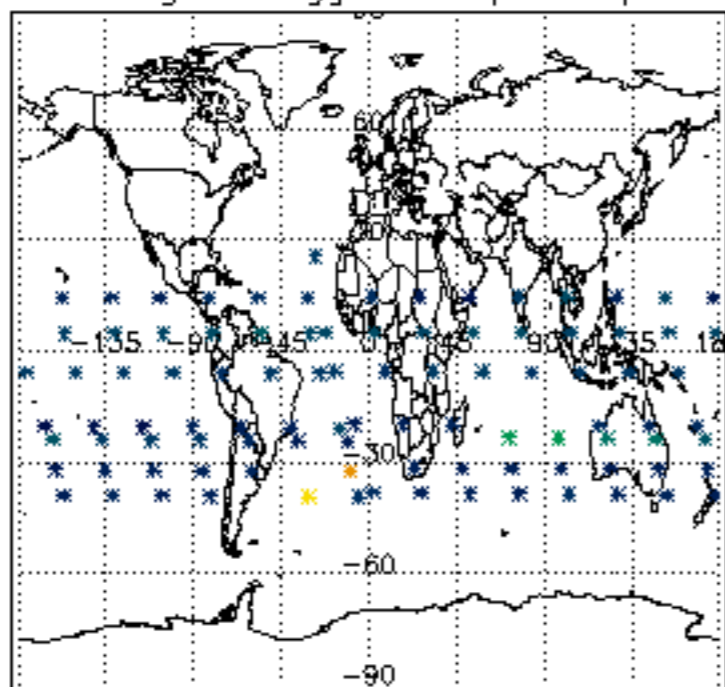




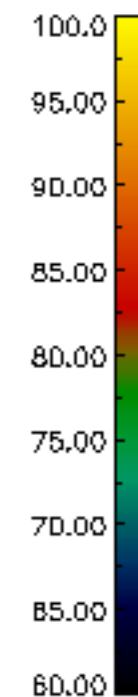
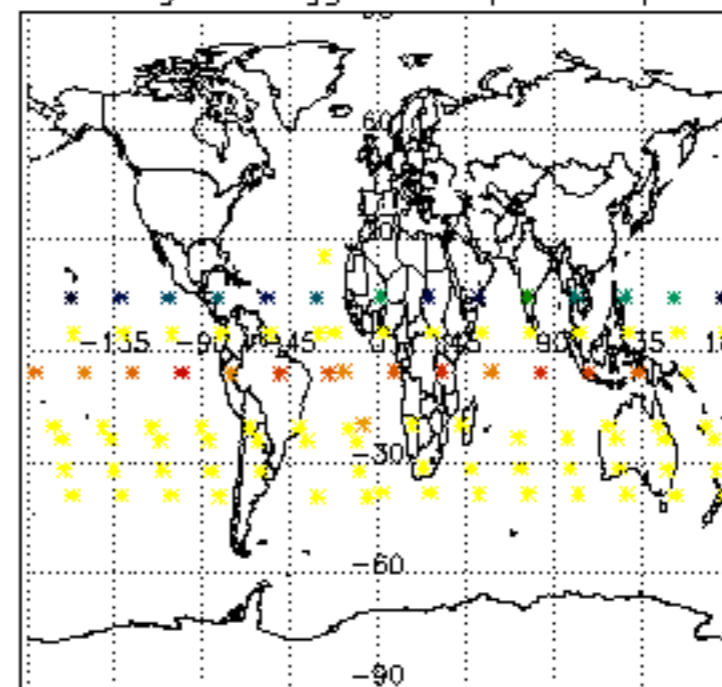




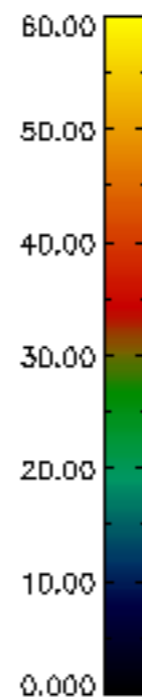
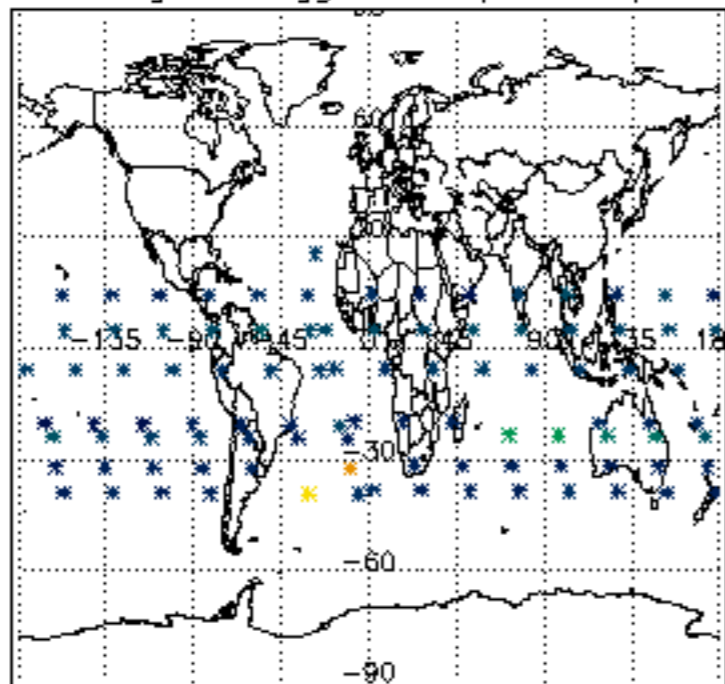
Percentage of flagged data per D3 profile



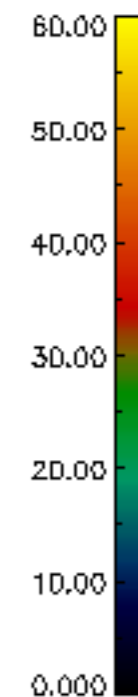
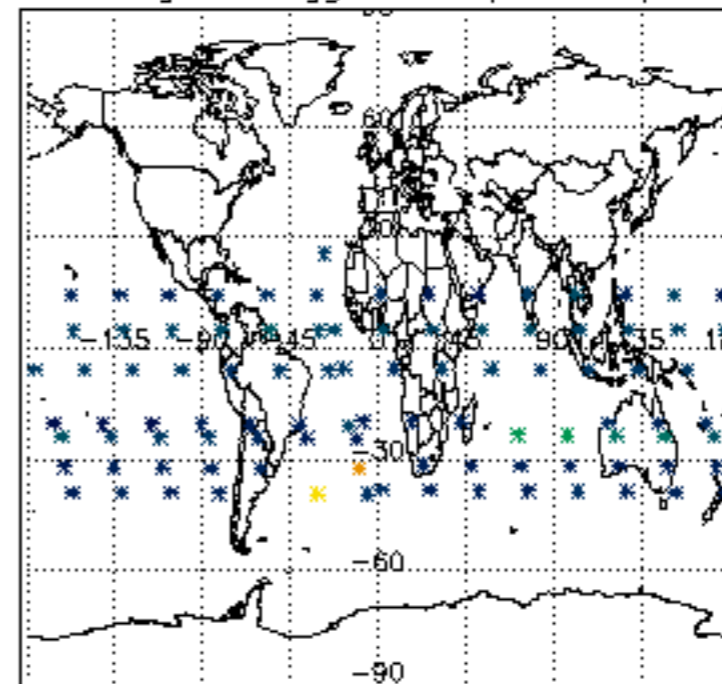
Percentage of flagged data per H2O profile

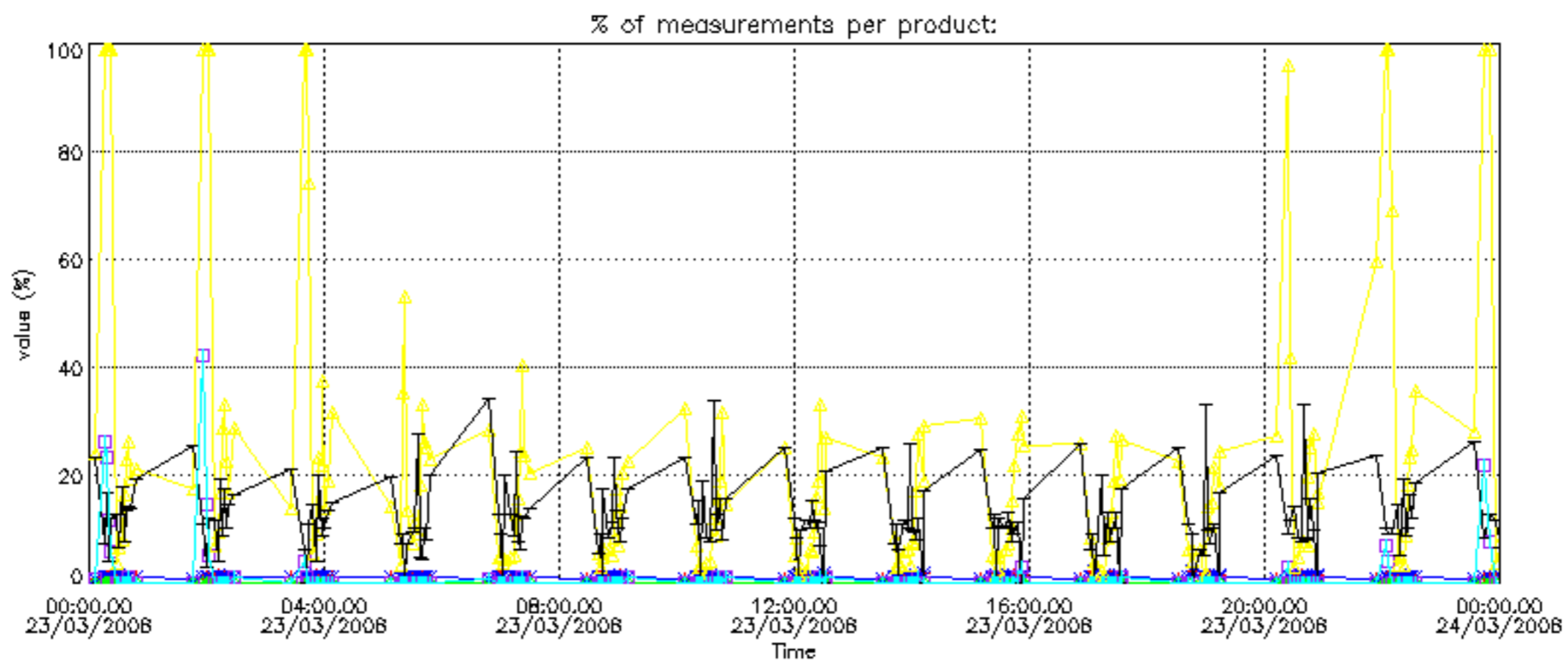


Percentage of flagged data per NO2 profile

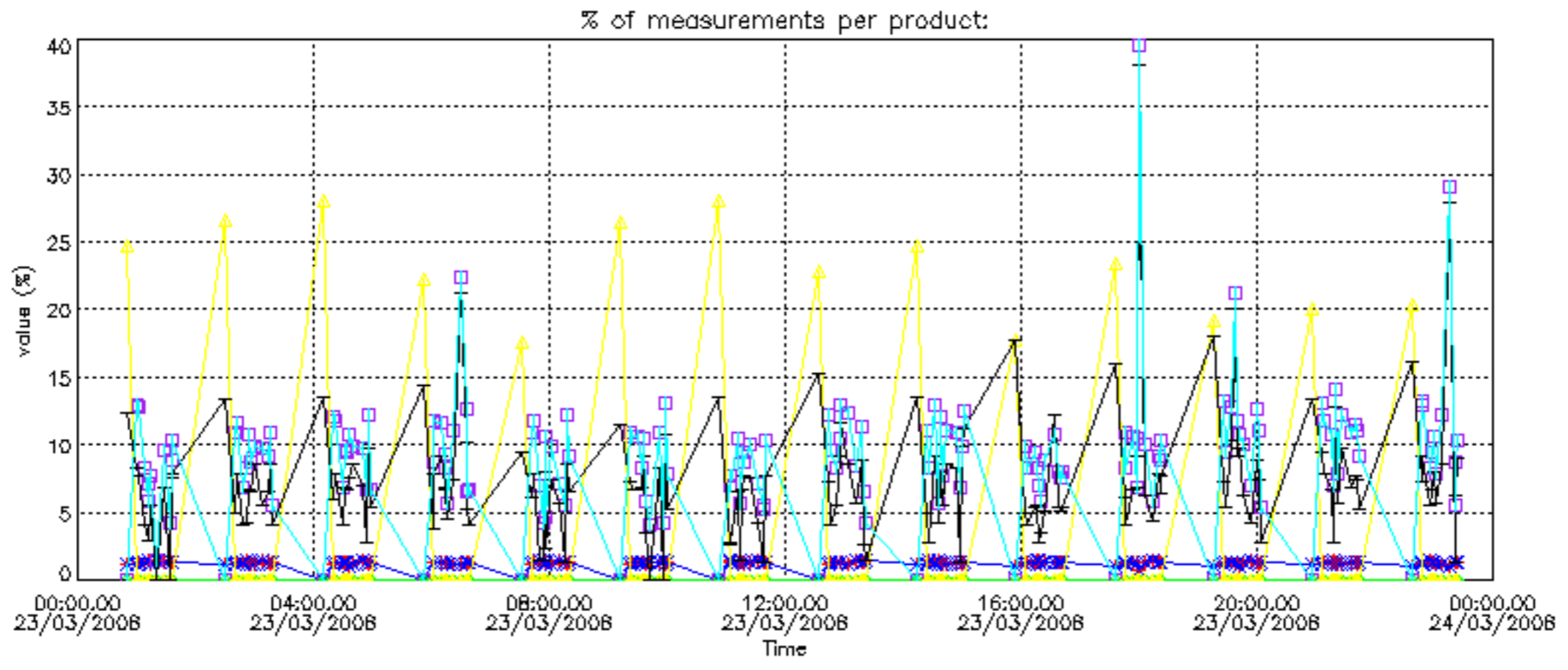


Percentage of flagged data per NO3 profile

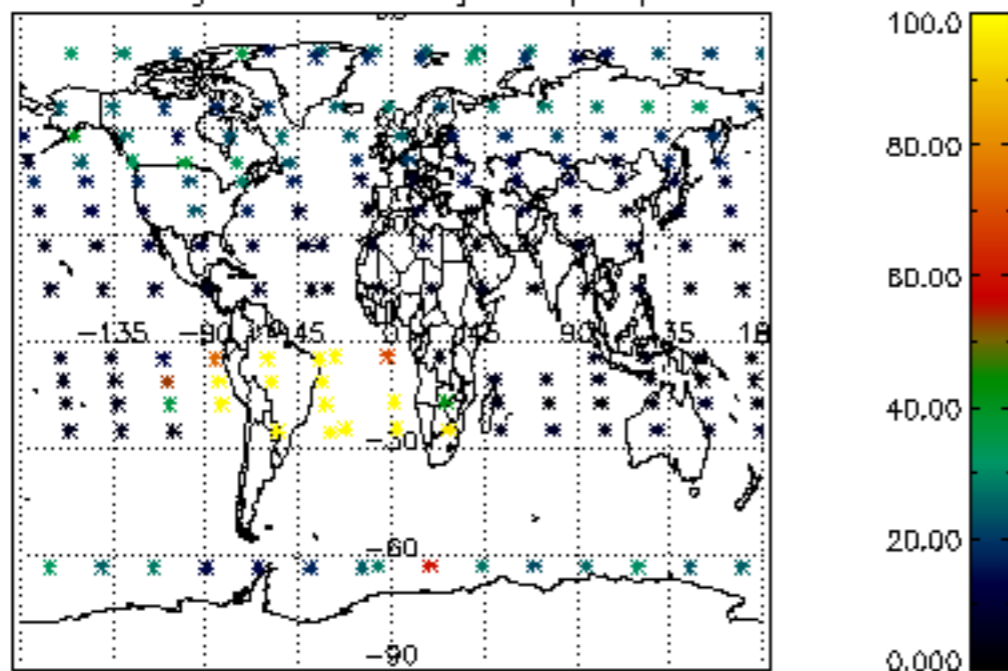




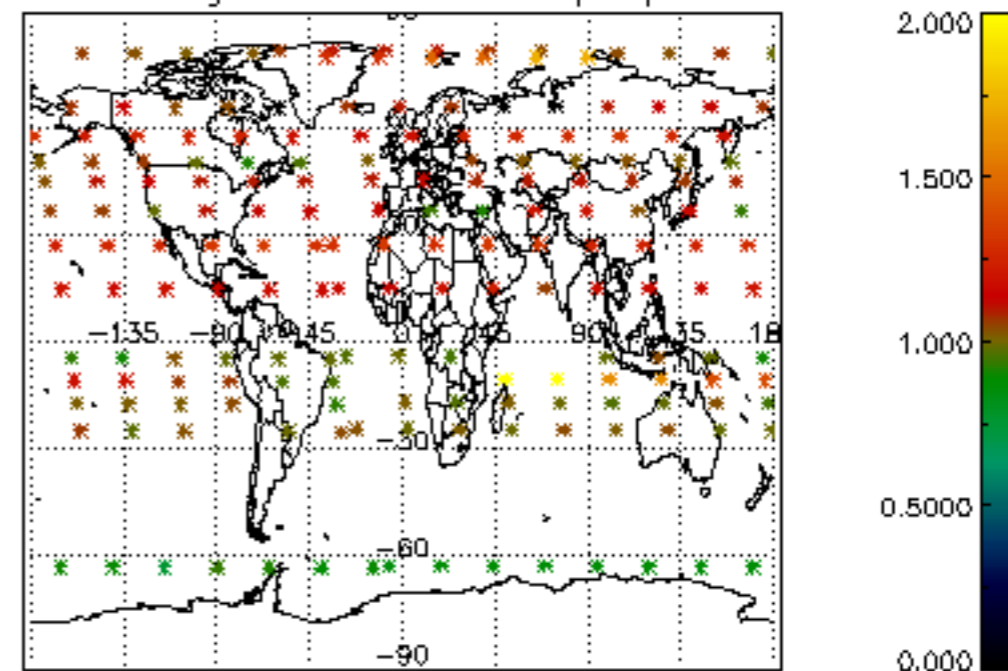




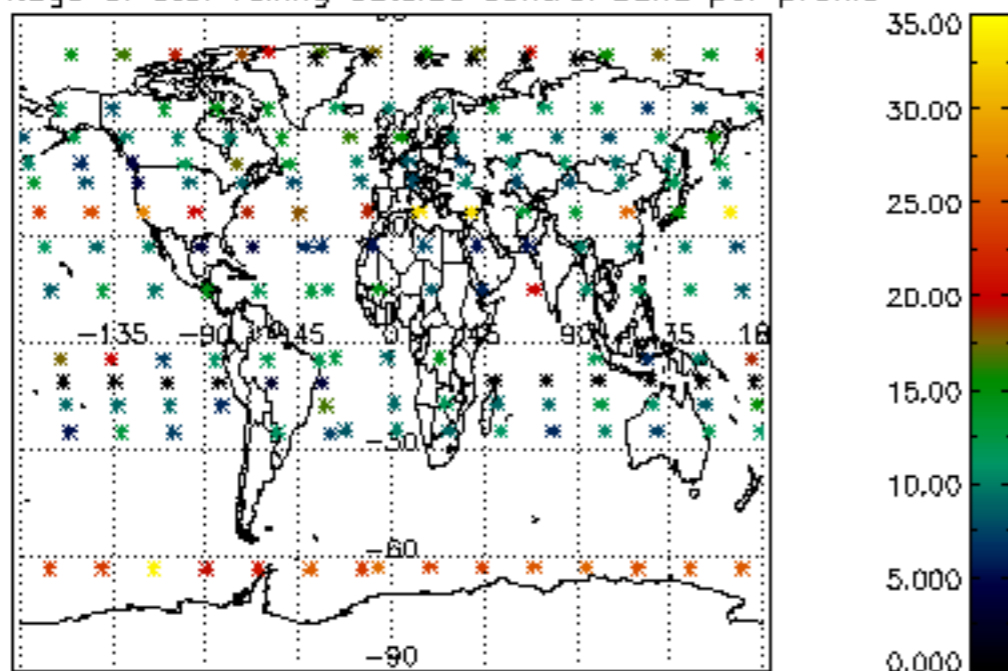
Percentage of cosmic ray hits per profile



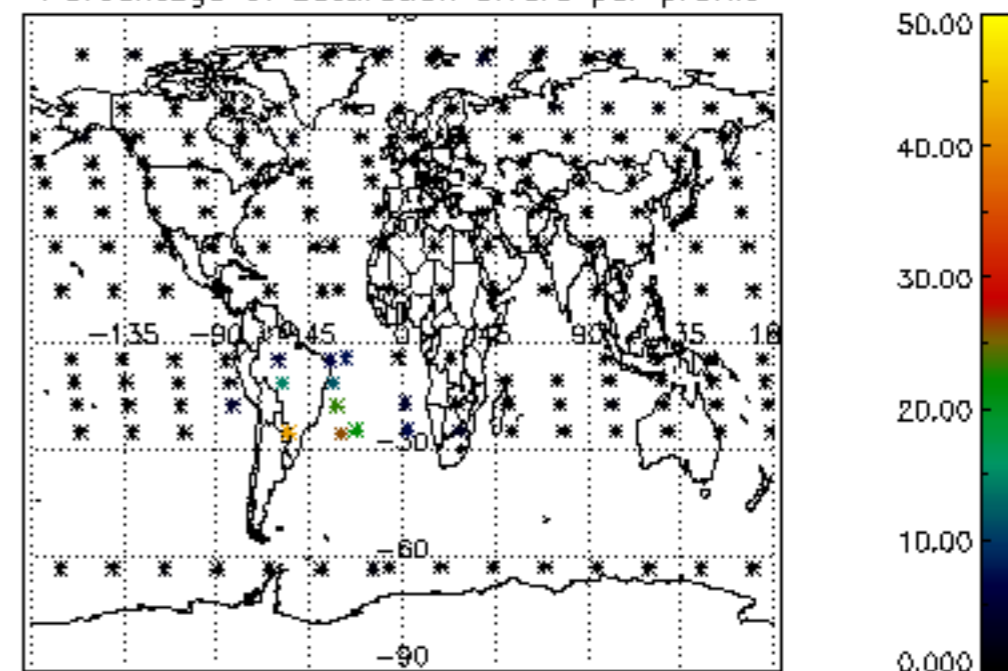
Percentage of datation errors per profile



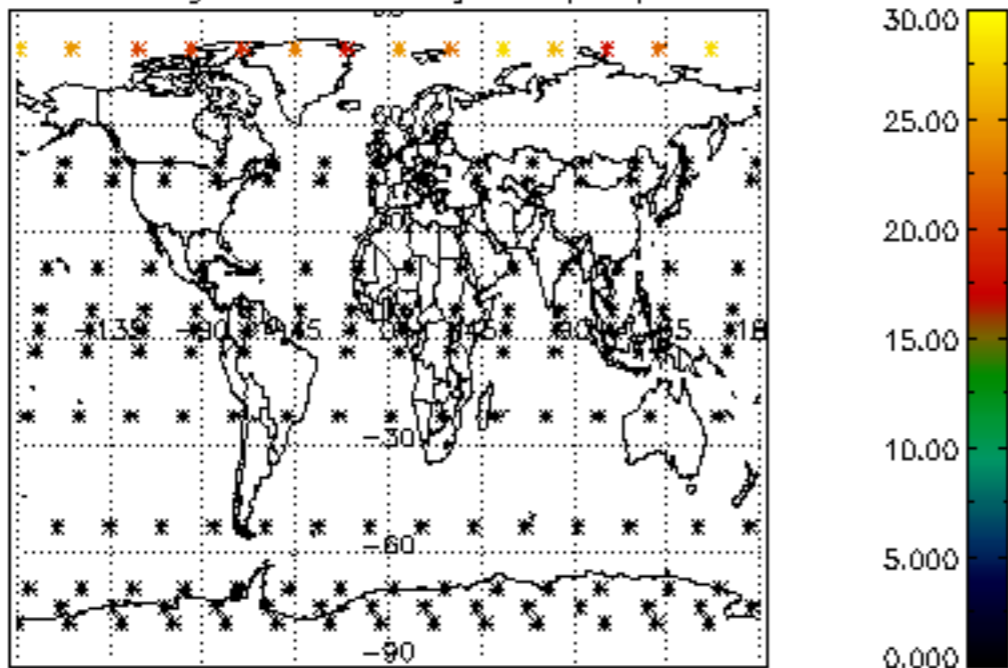
Percentage of star falling outside central band per profile



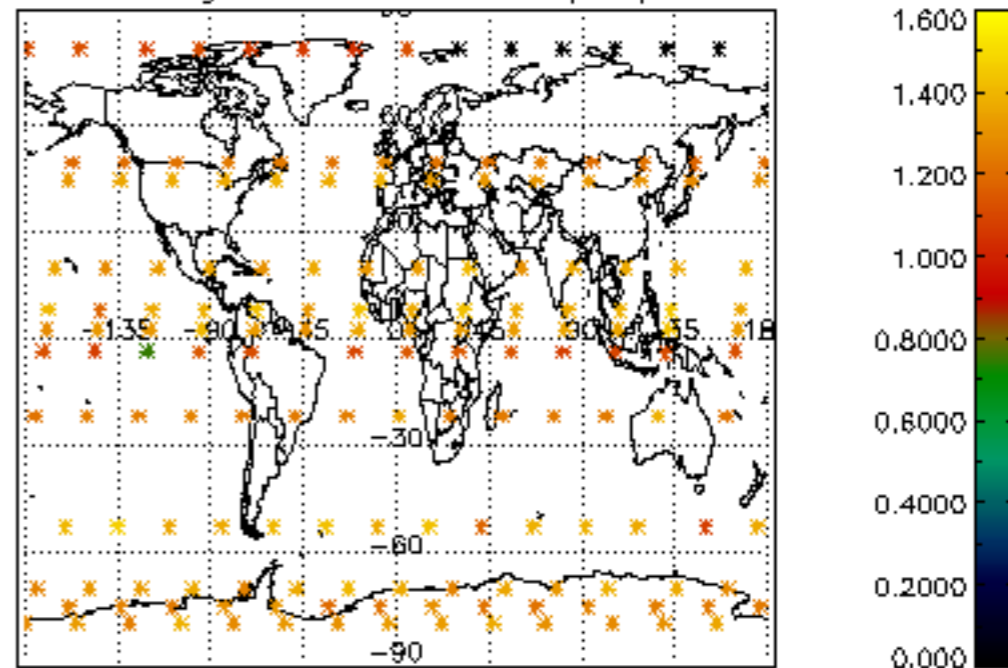
Percentage of saturation errors per profile



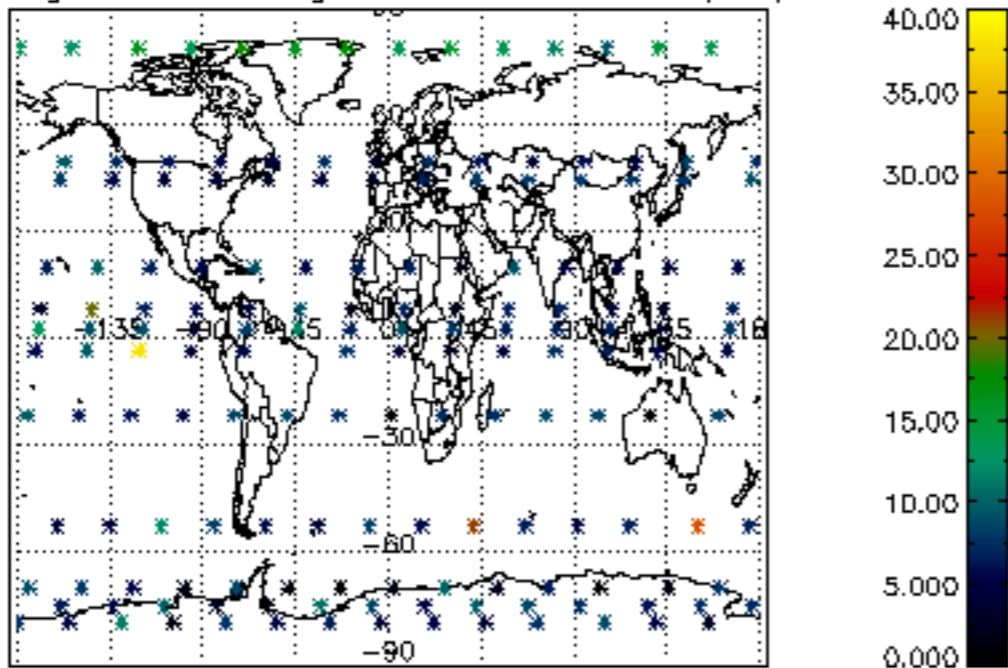
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

