

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [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](#)







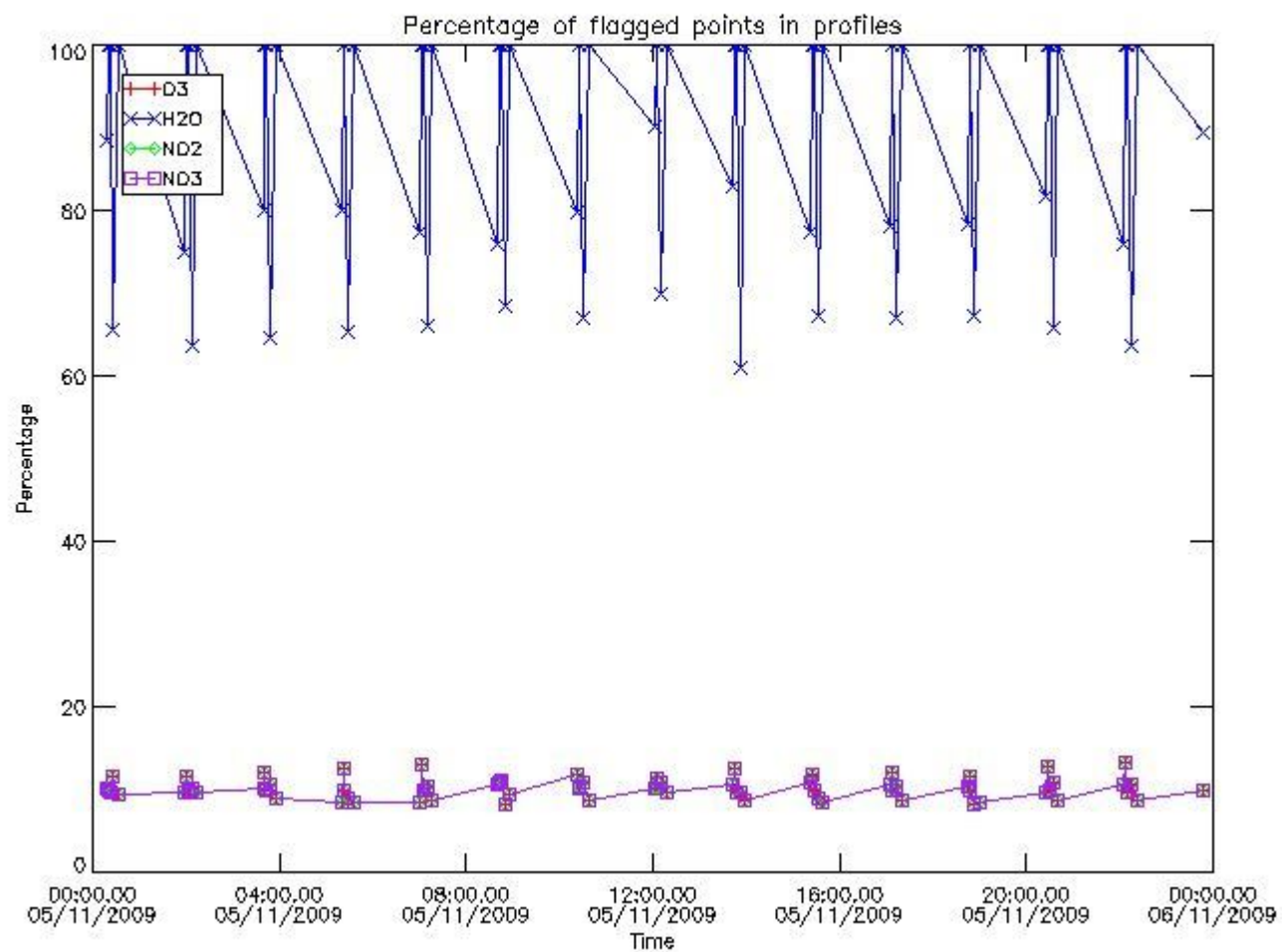


220	GOM_NL__2PRFIN20091105_222124_000000592084_00044_40178_8707.N1	05-NOV-2009 22:21:24	Dark	58.500	108	Alp Col	2.6520	15200.	117	40178	No
221	GOM_NL__2PRFIN20091105_223224_000000572084_00044_40178_8708.N1	05-NOV-2009 22:32:24	Straylight	57.000	165	34Gam Eri	2.9500	3200.0	114	40178	No
222	GOM_NL__2PRFIN20091105_223823_000000532084_00044_40178_8709.N1	05-NOV-2009 22:38:23	Twilight_stray	53.000	94	92Alp Cet	2.5260	3100.0	106	40178	No
223	GOM_NL__2PRFIN20091105_224346_000000412084_00044_40178_8710.N1	05-NOV-2009 22:43:46	Bright	41.000	50	13Alp Ari	2.0070	4250.0	82	40178	No
224	GOM_NL__2PRFIN20091105_224711_000000382084_00044_40178_8711.N1	05-NOV-2009 22:47:11	Bright	38.000	173	4Bet Tri	3.0040	8900.0	76	40178	No
225	GOM_NL__2PRFIN20091105_224914_000000392084_00044_40178_8712.N1	05-NOV-2009 22:49:14	Bright	38.500	73	57Gam1And	2.2600	13100.	77	40178	No
226	GOM_NL__2PRFIN20091105_225200_000000492084_00044_40178_8713.N1	05-NOV-2009 22:52:00	Bright	49.000	149	45Eps Per	2.8880	30000.	98	40178	No
227	GOM_NL__2PRFIN20091105_231014_000000432084_00044_40178_8714.N1	05-NOV-2009 23:10:14	Bright	42.500	36	50Alp UMa	1.8000	6300.0	85	40178	No
228	GOM_NL__2PRFIN20091105_231151_000000422084_00044_40178_8715.N1	05-NOV-2009 23:11:51	Bright	42.000	82	48Bet UMa	2.3650	10600.	84	40178	No
229	GOM_NL__2PRFIN20091105_231539_000000382084_00044_40178_8716.N1	05-NOV-2009 23:15:39	Bright	37.500	174	52Psi UMa	3.0040	4400.0	75	40178	No
230	GOM_NL__2PRFIN20091105_232322_000000572084_00044_40178_8717.N1	05-NOV-2009 23:23:22	Bright	56.500	96	68Del Leo	2.5600	9300.0	113	40178	No
231	GOM_NL__2PRFIN20091105_232449_000000752084_00044_40178_8718.N1	05-NOV-2009 23:24:49	Bright	75.000	51	41Gam1Leo	2.0100	4500.0	150	40178	No
232	GOM_NL__2PRFIN20091105_232817_000000662084_00044_40178_8719.N1	05-NOV-2009 23:28:17	Twilight_stray	65.500	22	32Alp Leo	1.3600	15200.	131	40178	No
233	GOM_NL__2PRFIN20091105_234630_000000622084_00045_40179_8714.N1	05-NOV-2009 23:46:30	Dark	61.500	65	Lam Vel	2.2040	4400.0	123	40179	No

### 3. Quality information per product

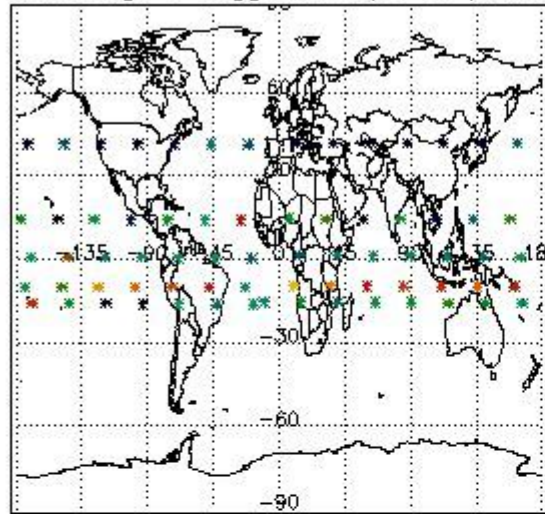
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

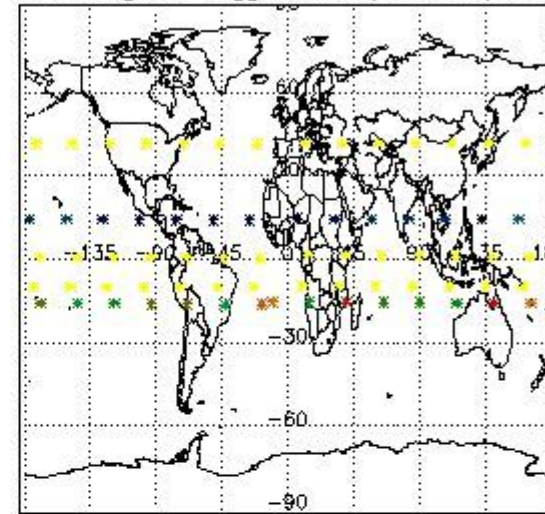


#### 3.2 Plot quality information per product (world map)

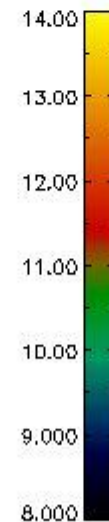
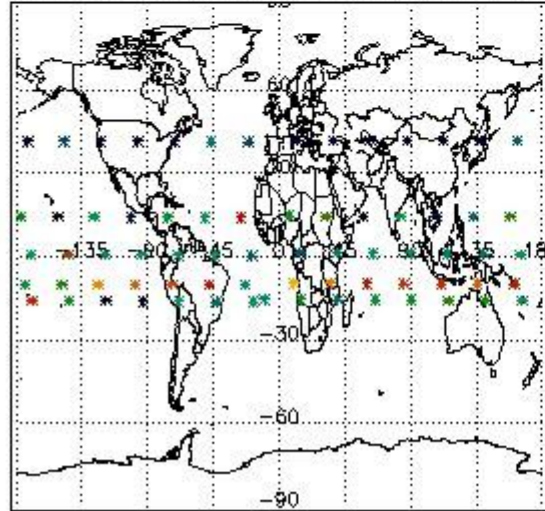
Percentage of flagged data per O3 profile



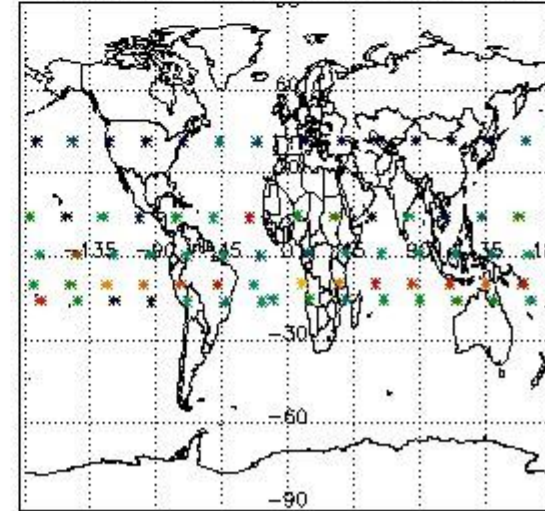
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

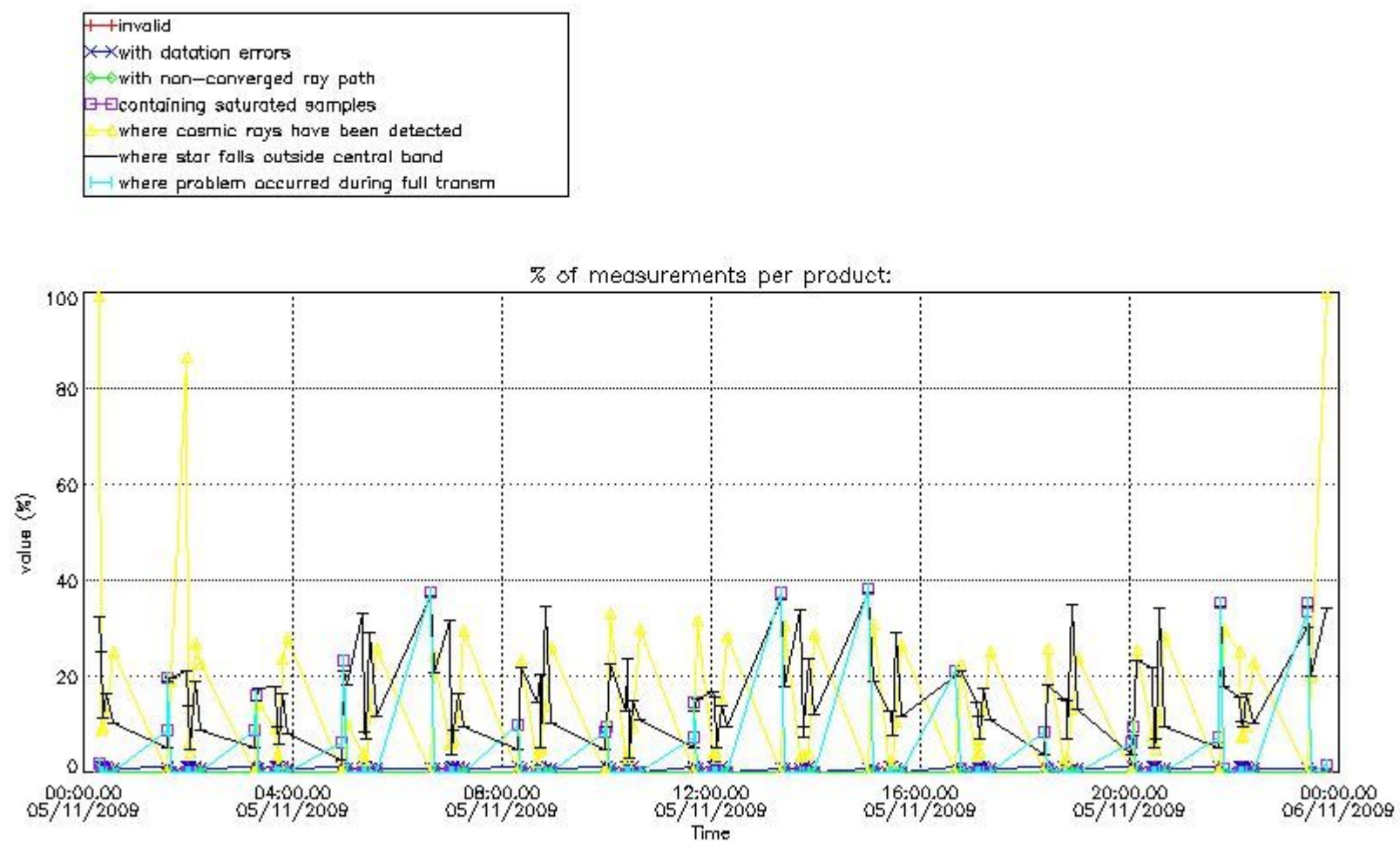


#### 4. Level 1 quality information per product

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

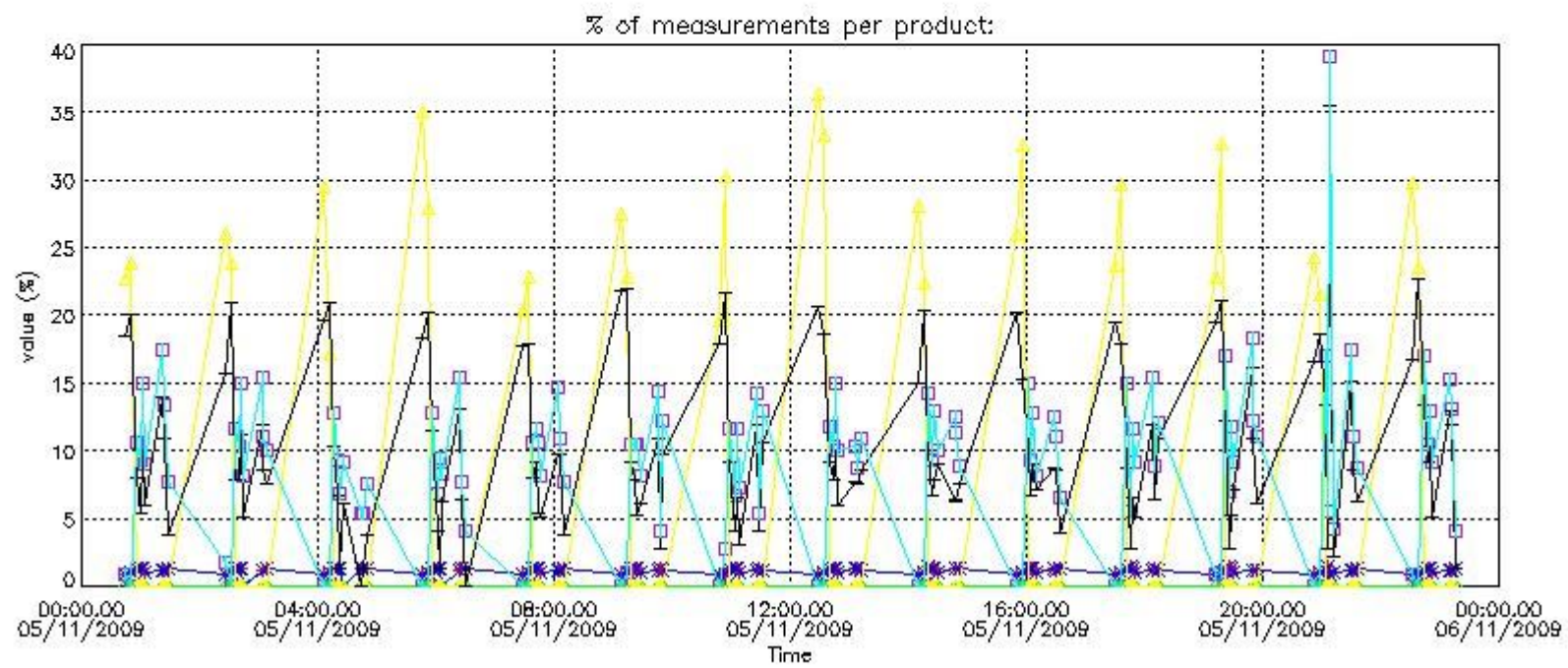
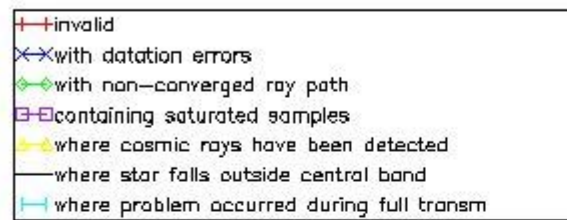
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



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

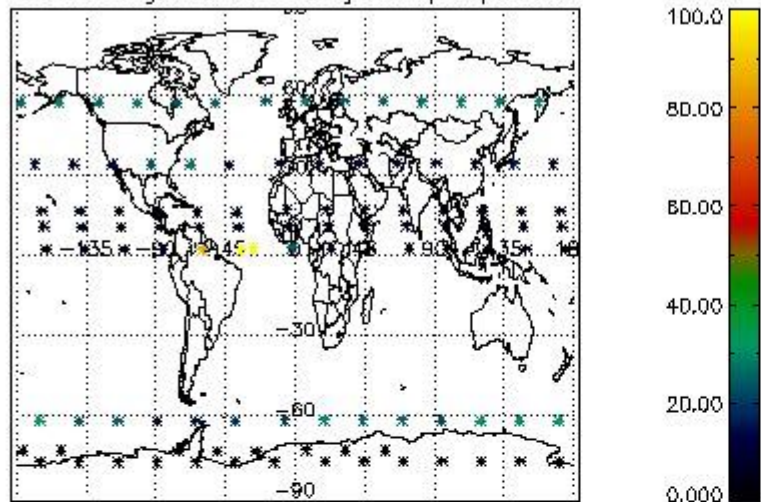




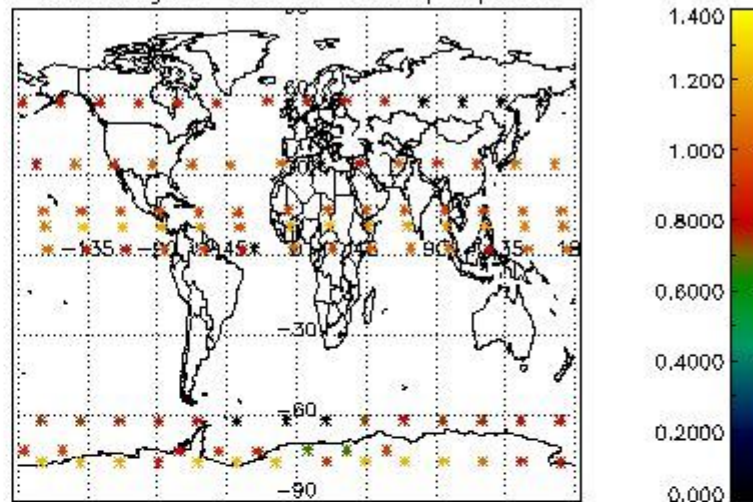
4.2 Plot quality information per product coming from level 1b processing (world map)

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

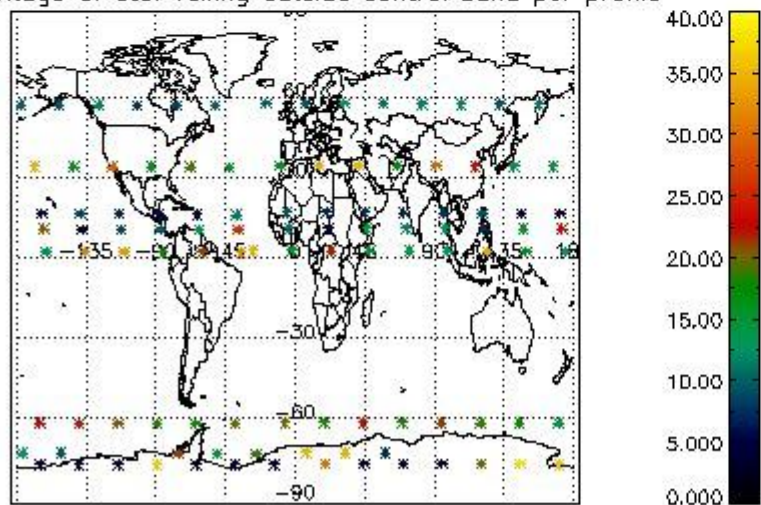
Percentage of cosmic ray hits per profile



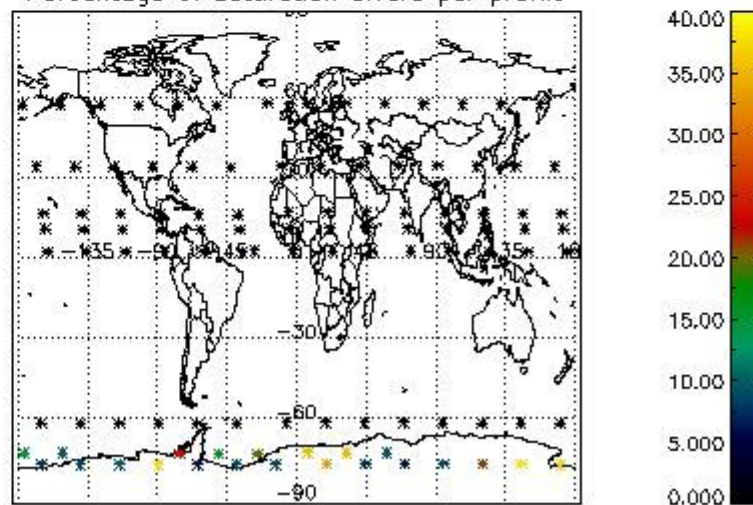
Percentage of datation errors per profile



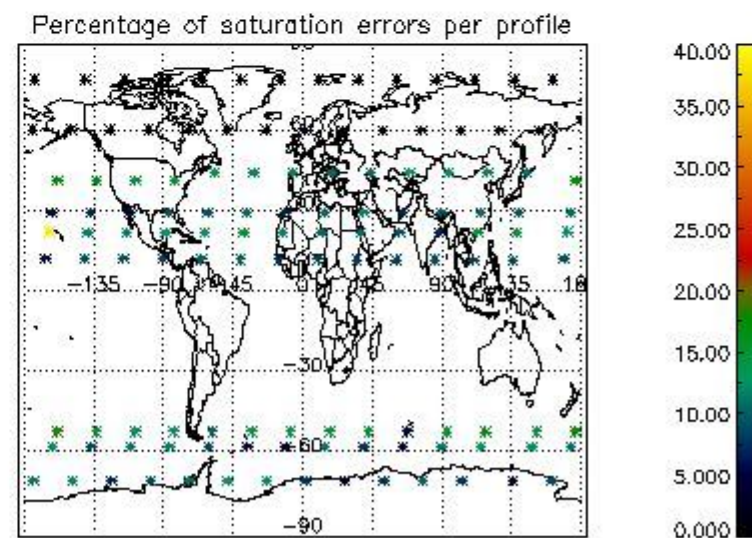
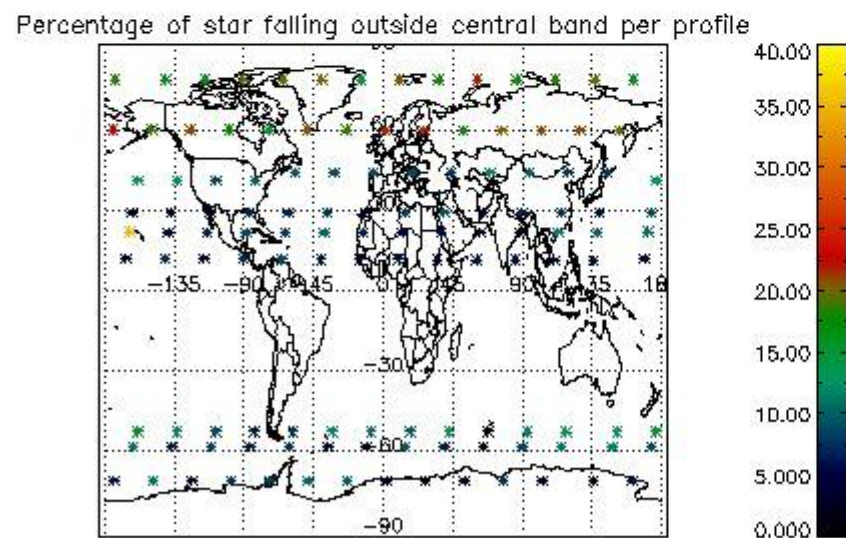
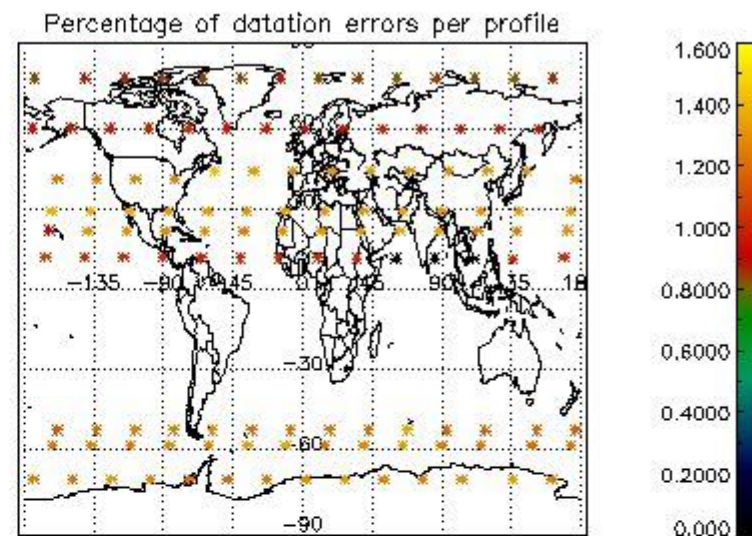
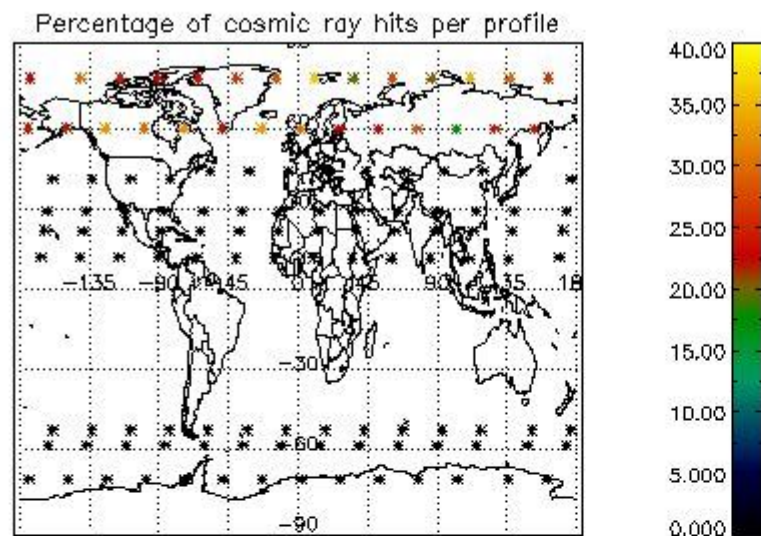
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 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

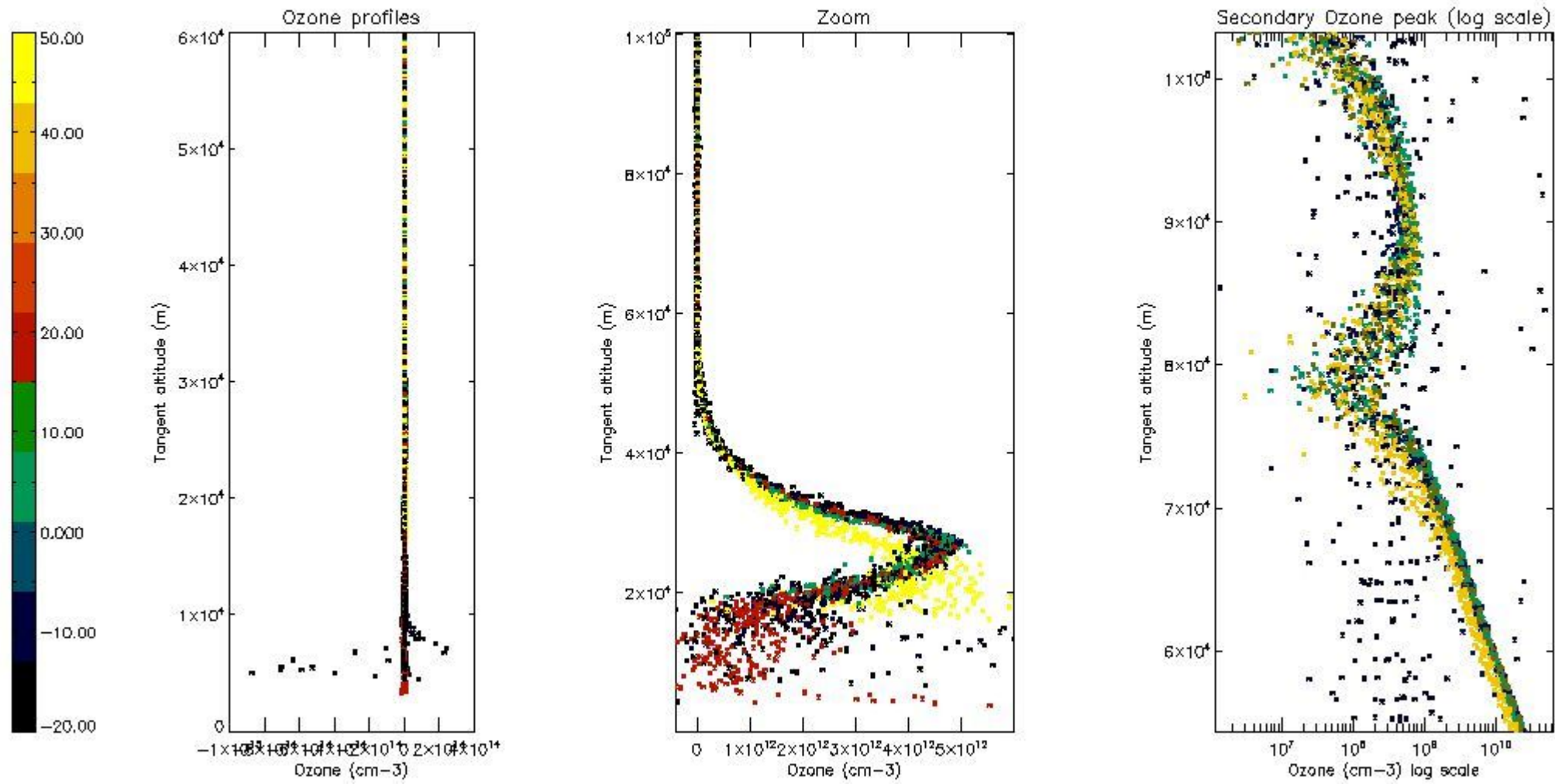
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	34
STD < 20	19

STD < 10	16
STD < 5	11

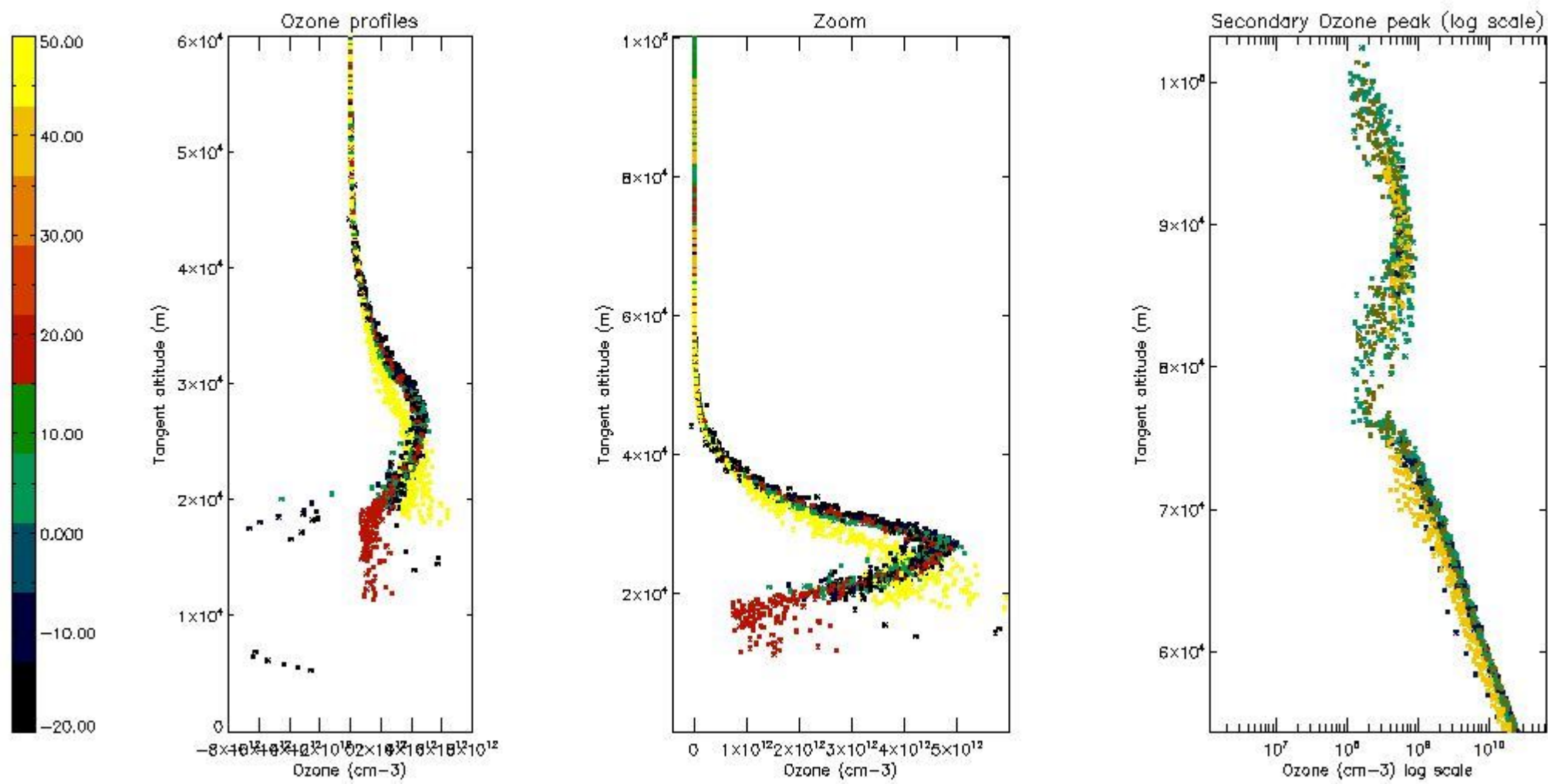
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



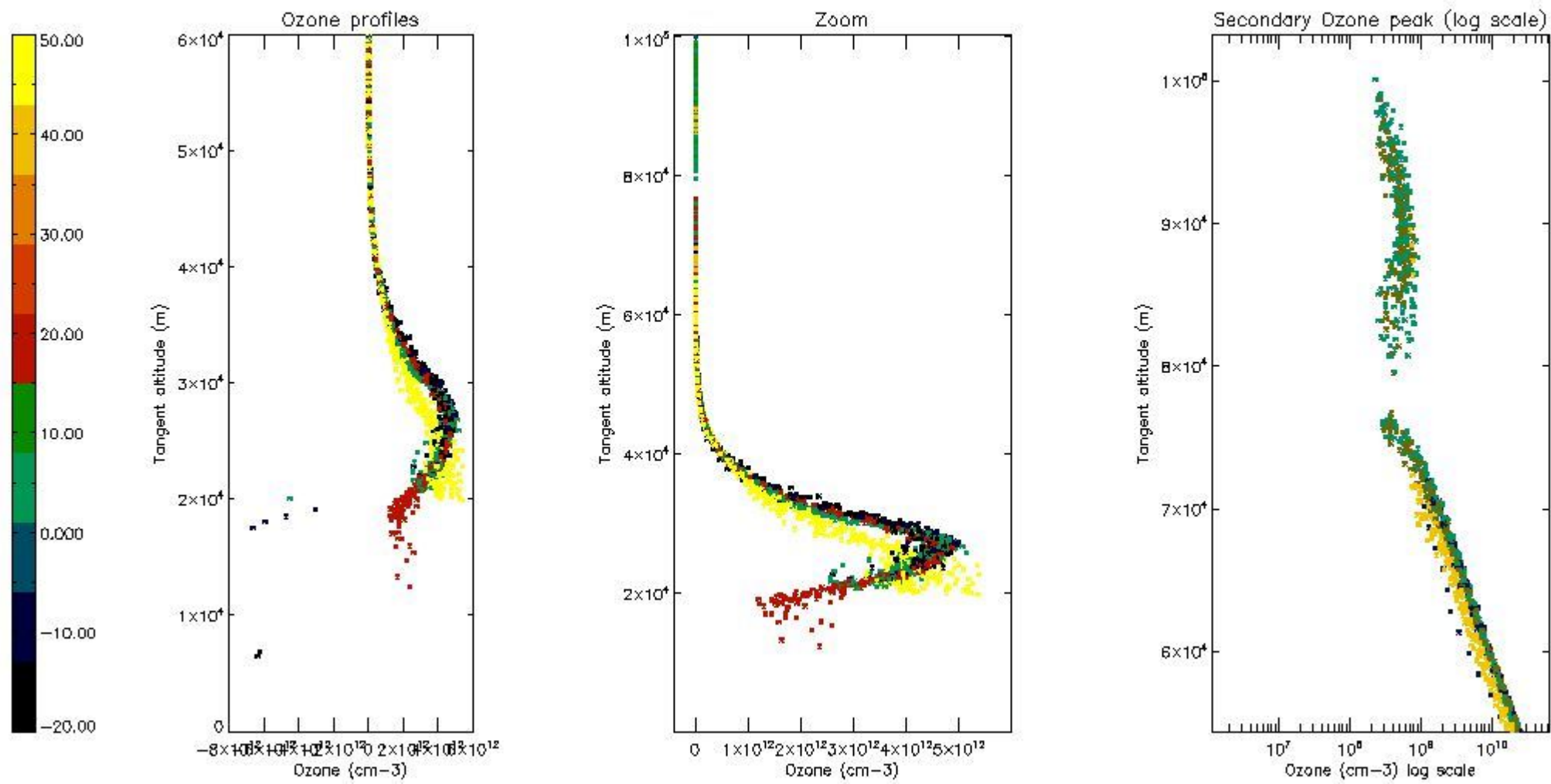
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



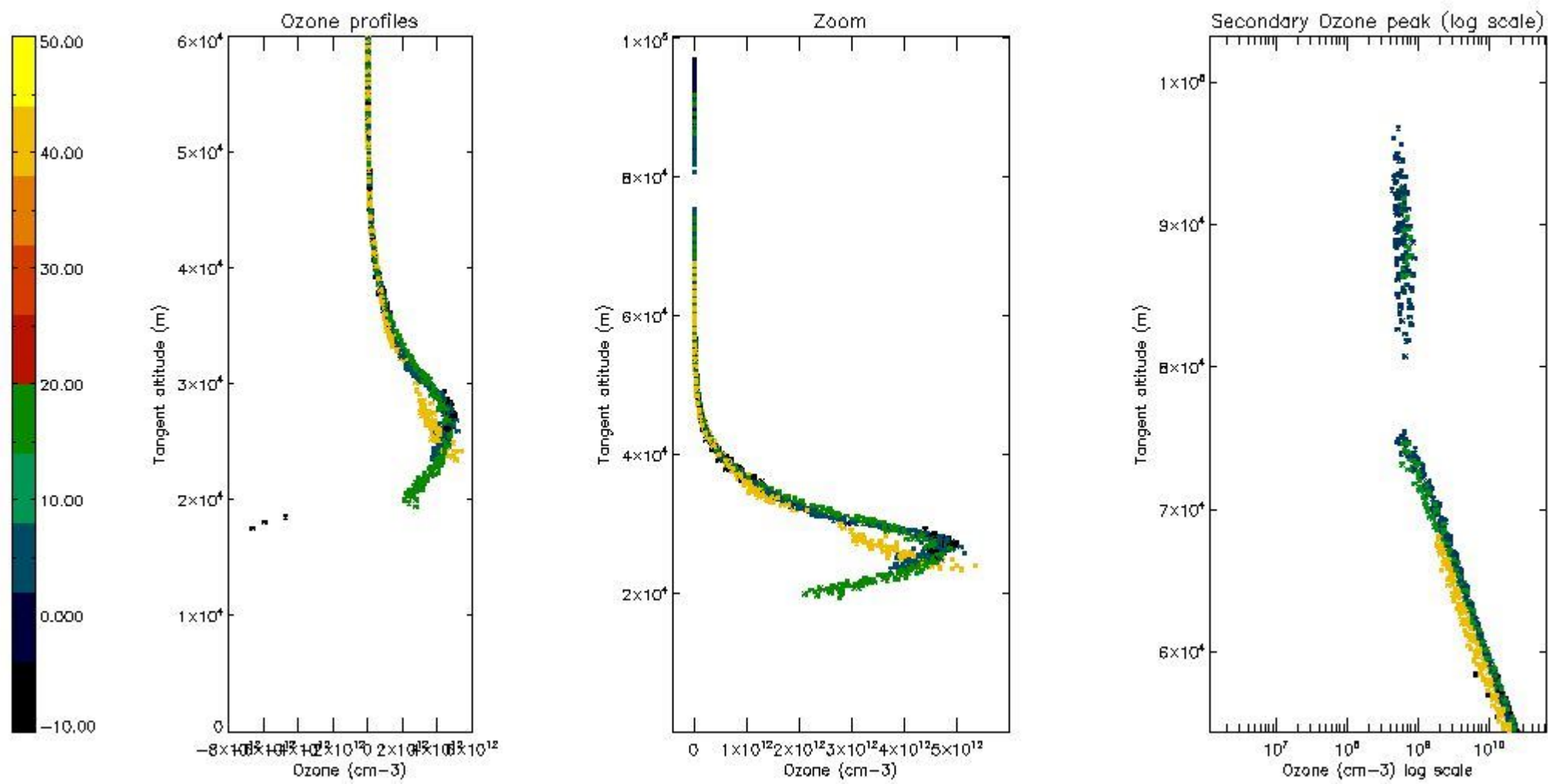
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



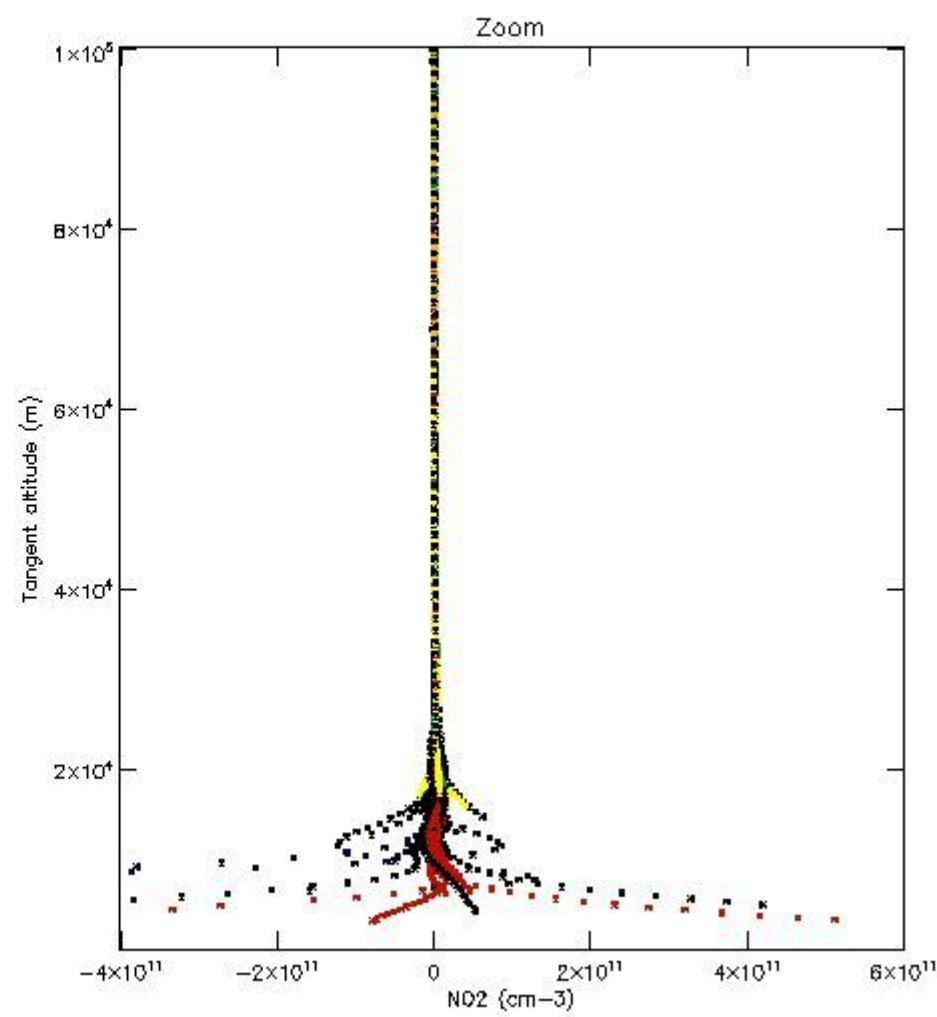
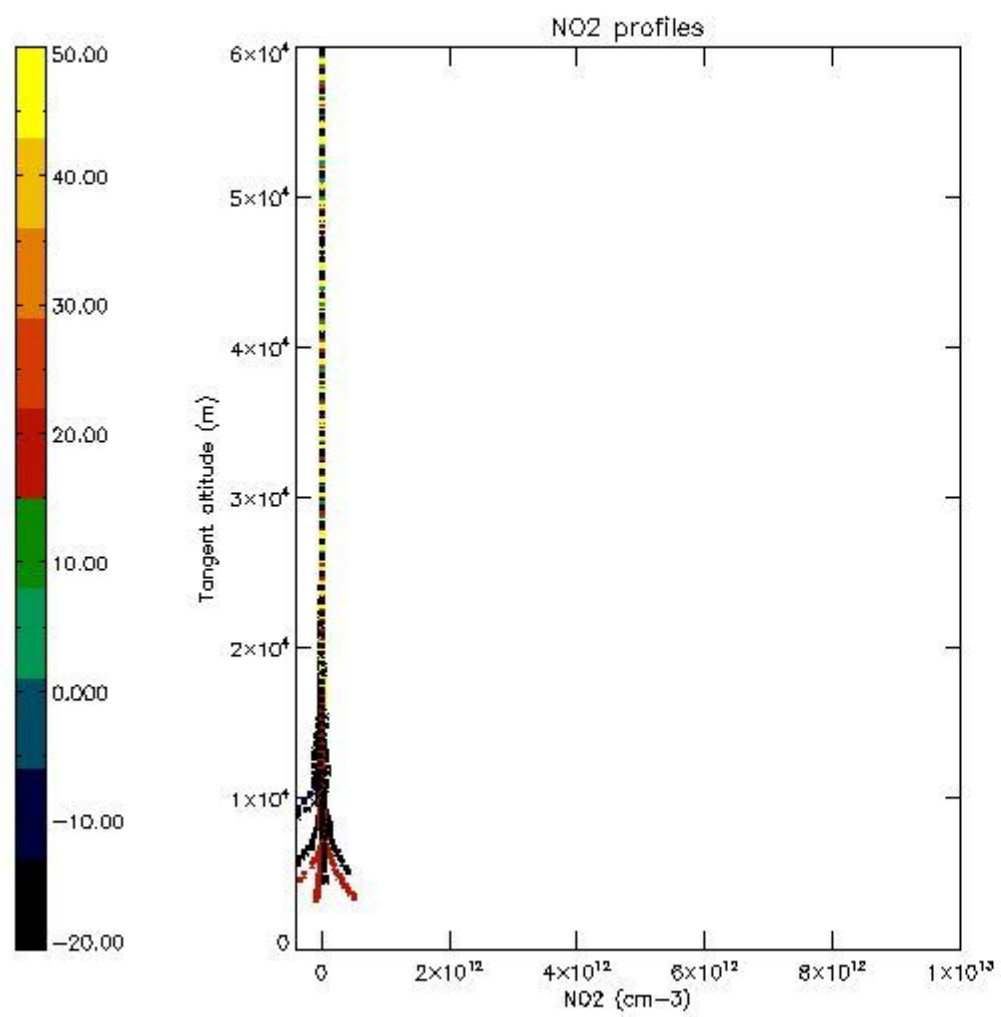
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

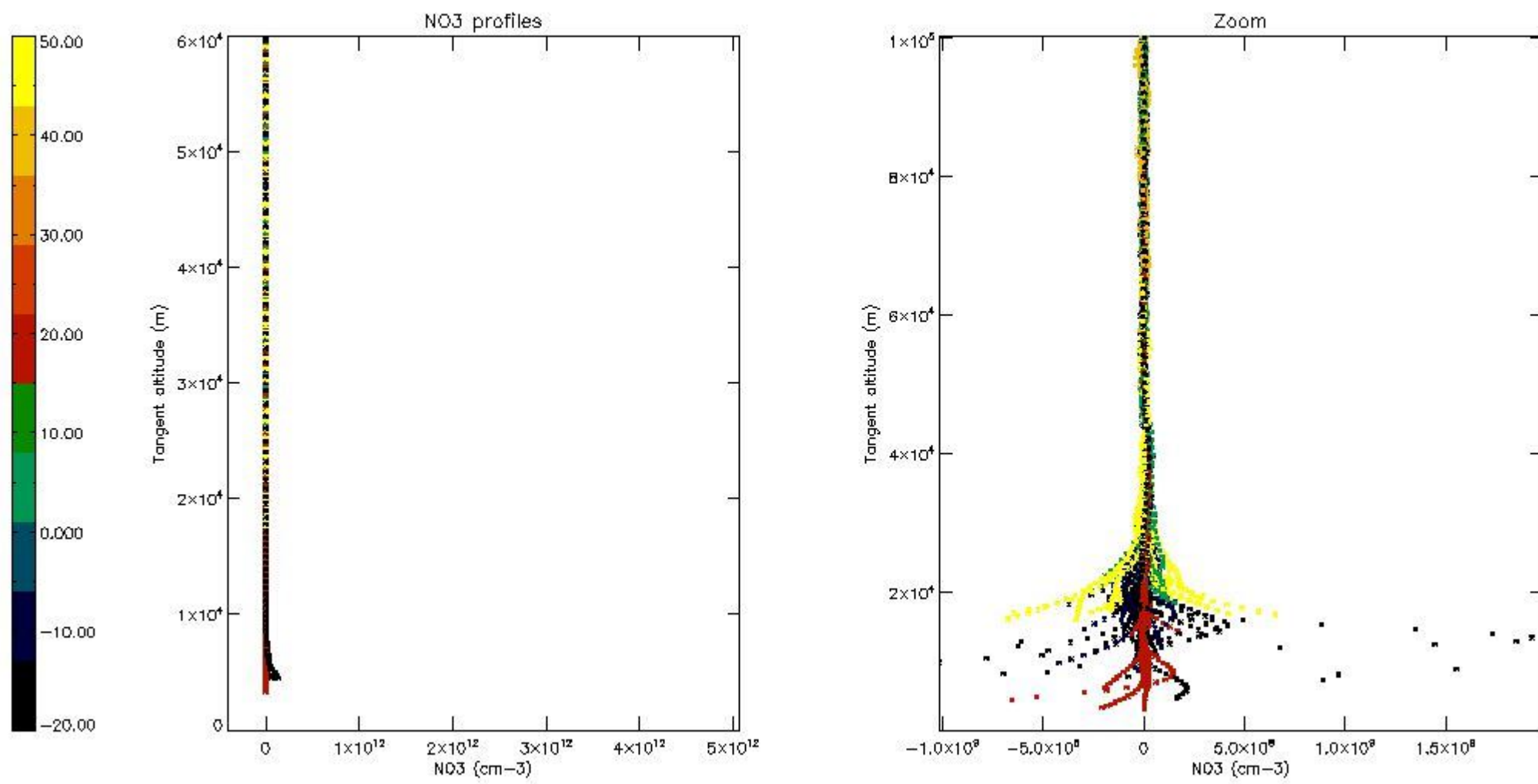
The colorbar represents the latitude.



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

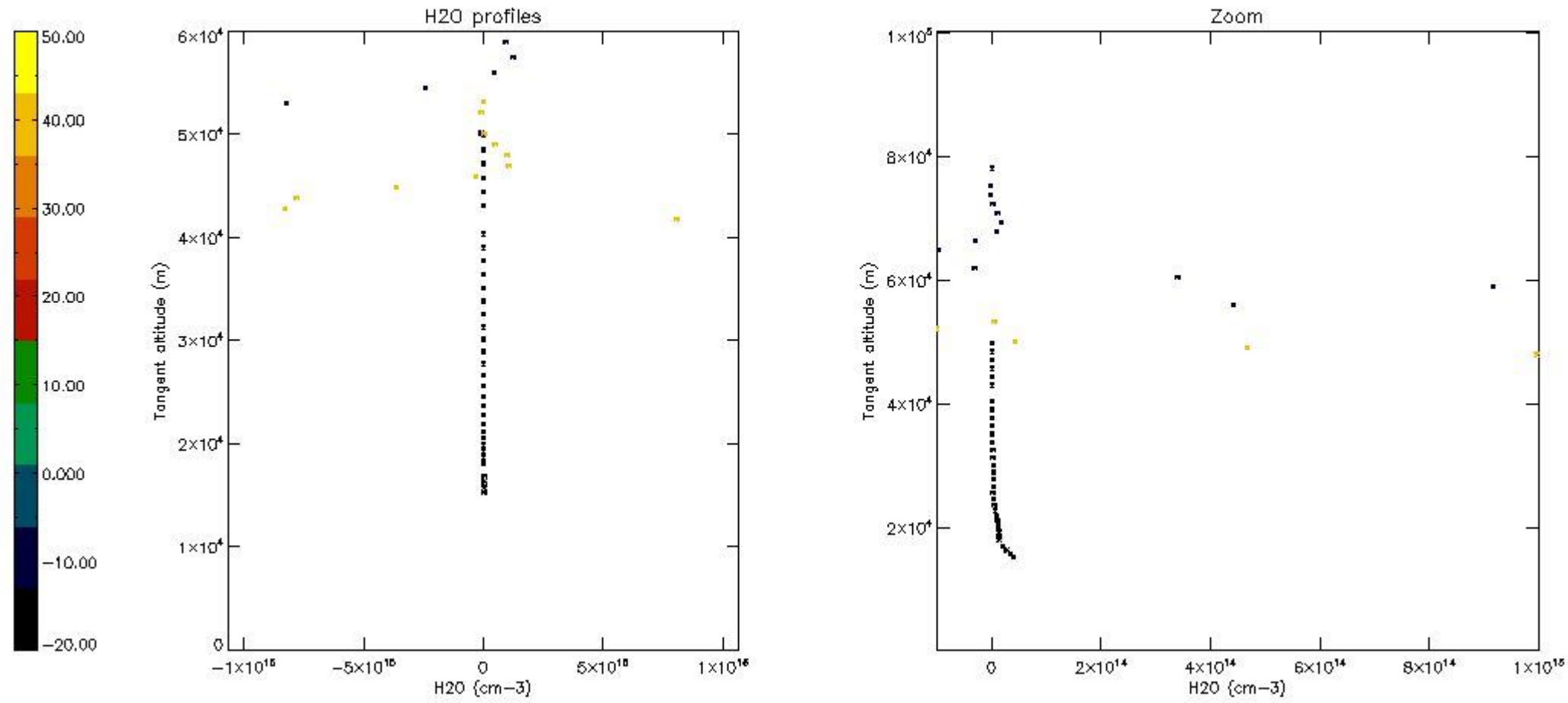
The colorbar represents the latitude.





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	05-NOV-2009 00:17:54
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-NOV-2009 00:17:54
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-NOV-2009 00:17:54

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [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](#)







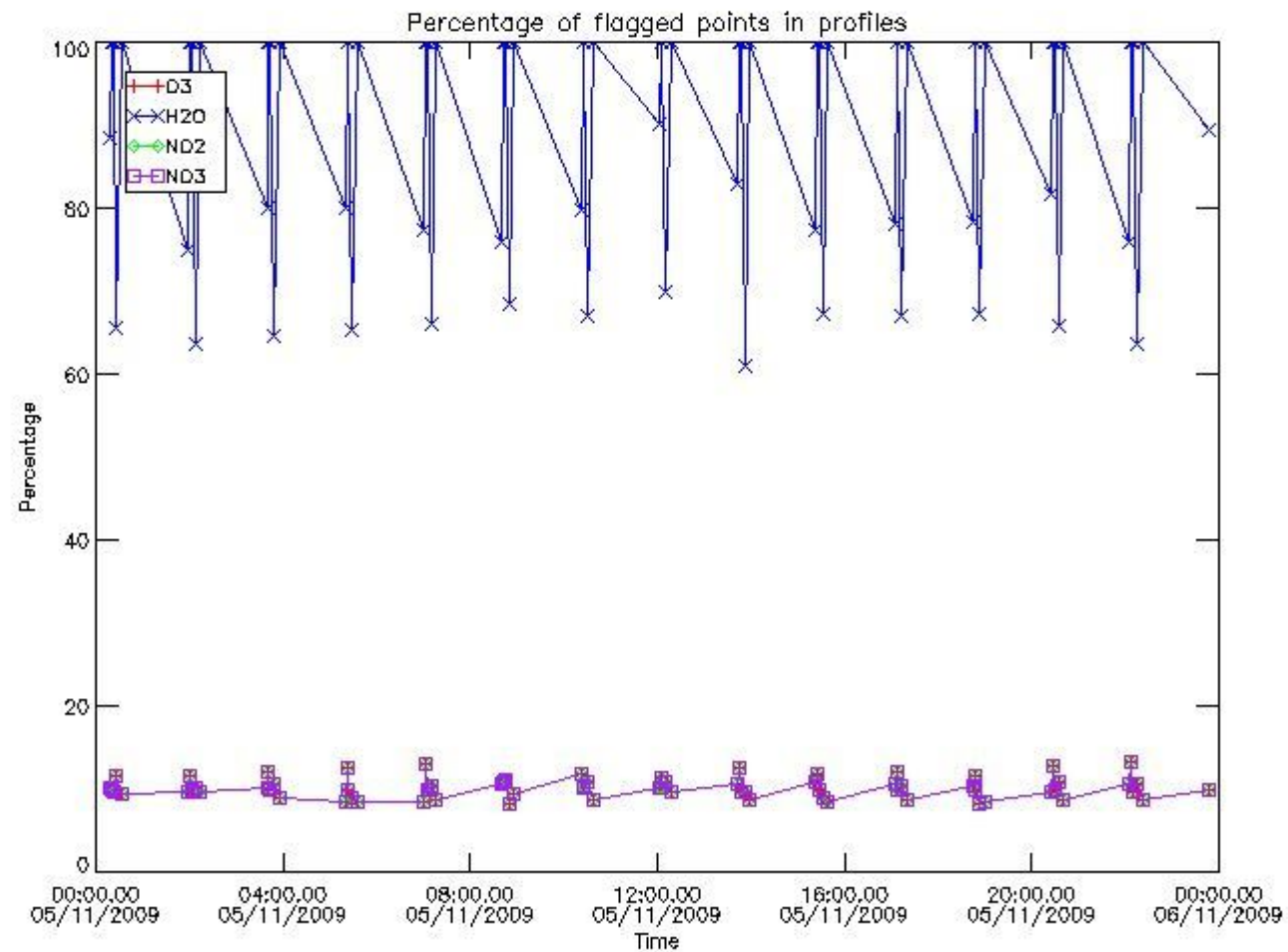


220	GOM_NL__2PRFIN20091105_222124_000000592084_00044_40178_8707.N1	05-NOV-2009 22:21:24	Dark	58.500	108	Alp Col	2.6520	15200.	117	40178	No
221	GOM_NL__2PRFIN20091105_223224_000000572084_00044_40178_8708.N1	05-NOV-2009 22:32:24	Straylight	57.000	165	34Gam Eri	2.9500	3200.0	114	40178	No
222	GOM_NL__2PRFIN20091105_223823_000000532084_00044_40178_8709.N1	05-NOV-2009 22:38:23	Twilight_stray	53.000	94	92Alp Cet	2.5260	3100.0	106	40178	No
223	GOM_NL__2PRFIN20091105_224346_000000412084_00044_40178_8710.N1	05-NOV-2009 22:43:46	Bright	41.000	50	13Alp Ari	2.0070	4250.0	82	40178	No
224	GOM_NL__2PRFIN20091105_224711_000000382084_00044_40178_8711.N1	05-NOV-2009 22:47:11	Bright	38.000	173	4Bet Tri	3.0040	8900.0	76	40178	No
225	GOM_NL__2PRFIN20091105_224914_000000392084_00044_40178_8712.N1	05-NOV-2009 22:49:14	Bright	38.500	73	57Gam1And	2.2600	13100.	77	40178	No
226	GOM_NL__2PRFIN20091105_225200_000000492084_00044_40178_8713.N1	05-NOV-2009 22:52:00	Bright	49.000	149	45Eps Per	2.8880	30000.	98	40178	No
227	GOM_NL__2PRFIN20091105_231014_000000432084_00044_40178_8714.N1	05-NOV-2009 23:10:14	Bright	42.500	36	50Alp UMa	1.8000	6300.0	85	40178	No
228	GOM_NL__2PRFIN20091105_231151_000000422084_00044_40178_8715.N1	05-NOV-2009 23:11:51	Bright	42.000	82	48Bet UMa	2.3650	10600.	84	40178	No
229	GOM_NL__2PRFIN20091105_231539_000000382084_00044_40178_8716.N1	05-NOV-2009 23:15:39	Bright	37.500	174	52Psi UMa	3.0040	4400.0	75	40178	No
230	GOM_NL__2PRFIN20091105_232322_000000572084_00044_40178_8717.N1	05-NOV-2009 23:23:22	Bright	56.500	96	68Del Leo	2.5600	9300.0	113	40178	No
231	GOM_NL__2PRFIN20091105_232449_000000752084_00044_40178_8718.N1	05-NOV-2009 23:24:49	Bright	75.000	51	41Gam1Leo	2.0100	4500.0	150	40178	No
232	GOM_NL__2PRFIN20091105_232817_000000662084_00044_40178_8719.N1	05-NOV-2009 23:28:17	Twilight_stray	65.500	22	32Alp Leo	1.3600	15200.	131	40178	No
233	GOM_NL__2PRFIN20091105_234630_000000622084_00045_40179_8714.N1	05-NOV-2009 23:46:30	Dark	61.500	65	Lam Vel	2.2040	4400.0	123	40179	No

### 3. Quality information per product

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

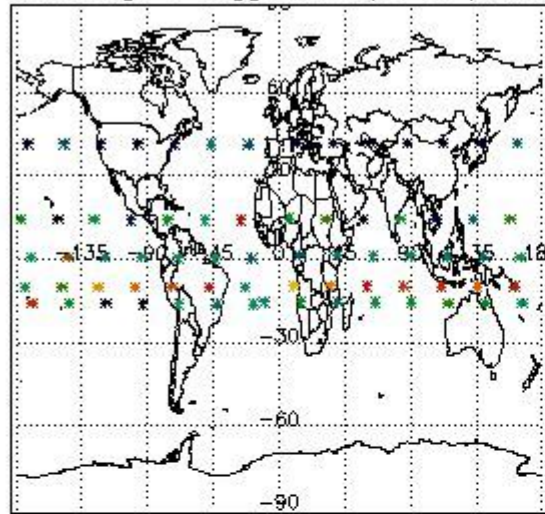
#### 3.1 Plot quality information per product (time dependant)



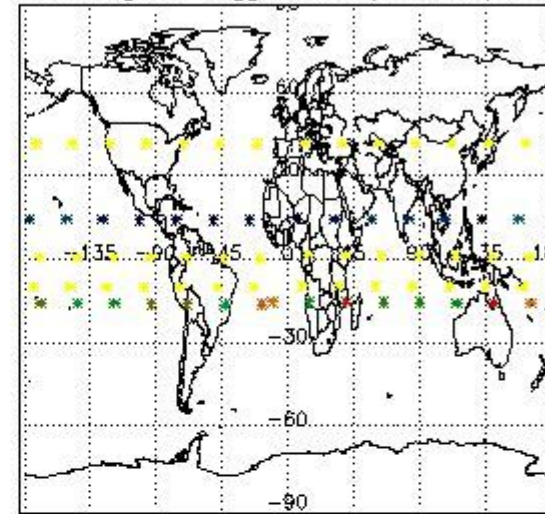
#### 3.2 Plot quality information per product (world map)



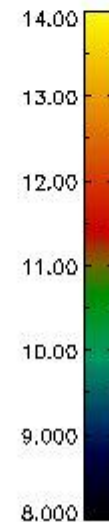
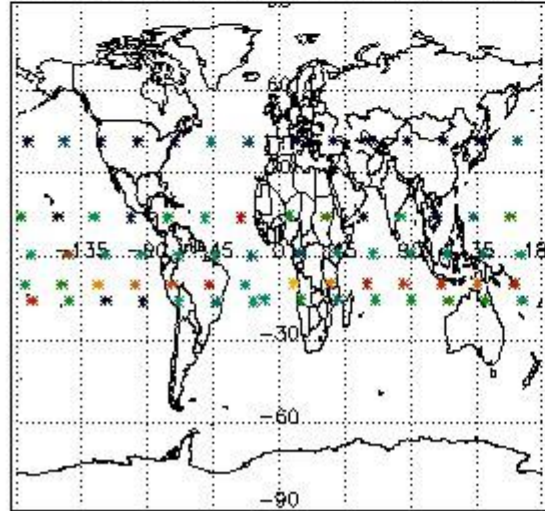
Percentage of flagged data per O3 profile



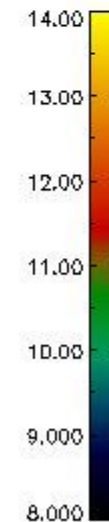
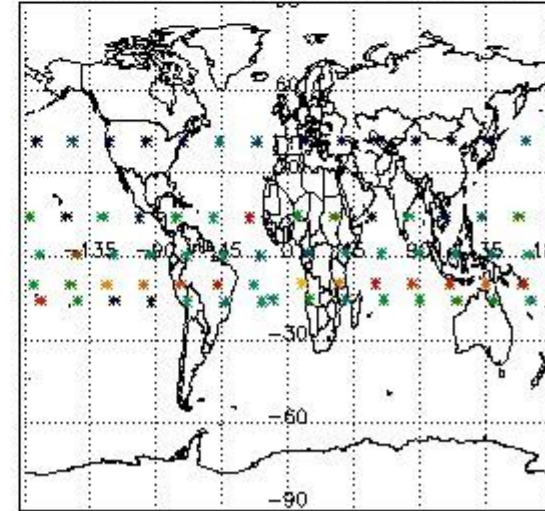
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

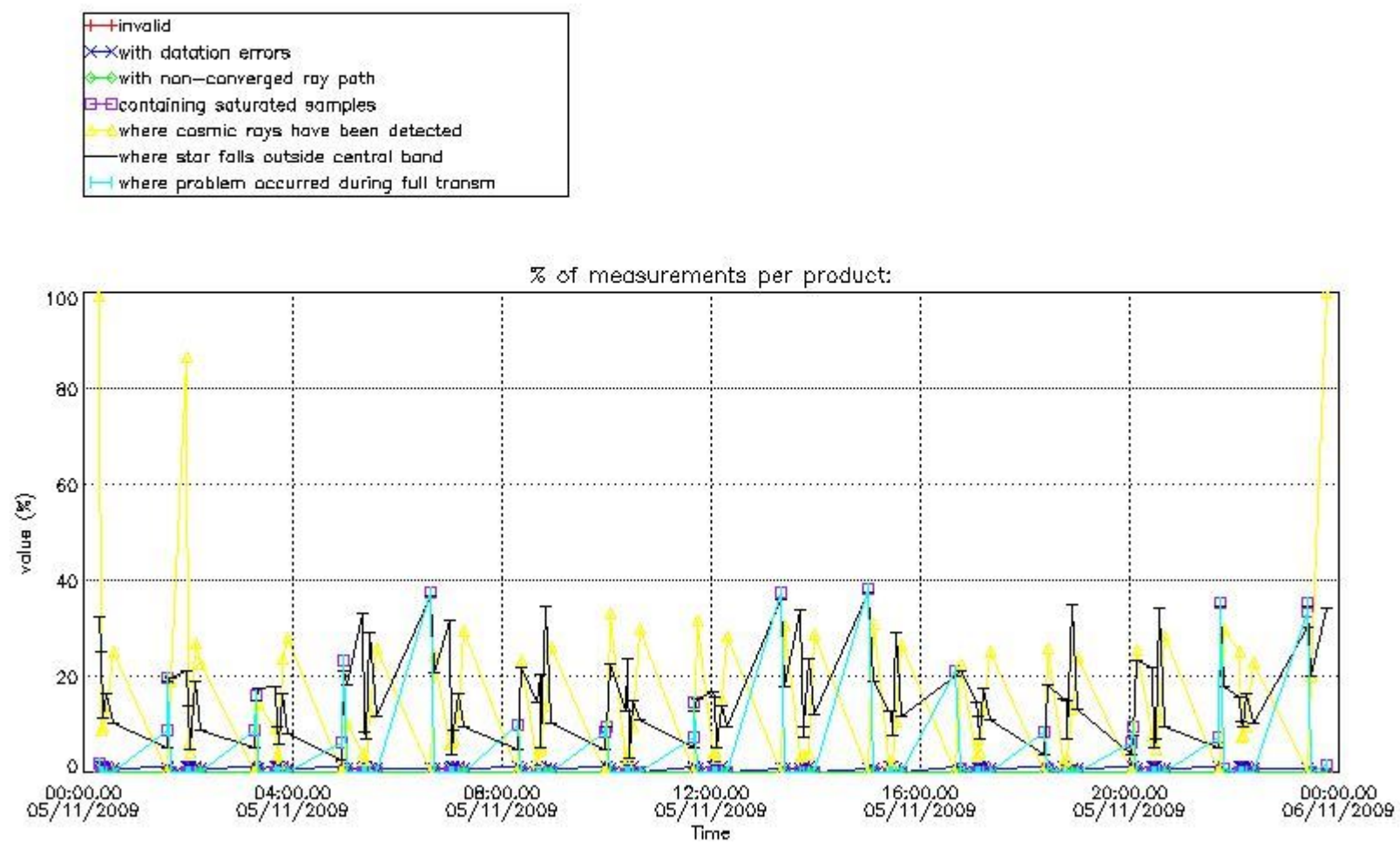


#### 4. Level 1 quality information per product

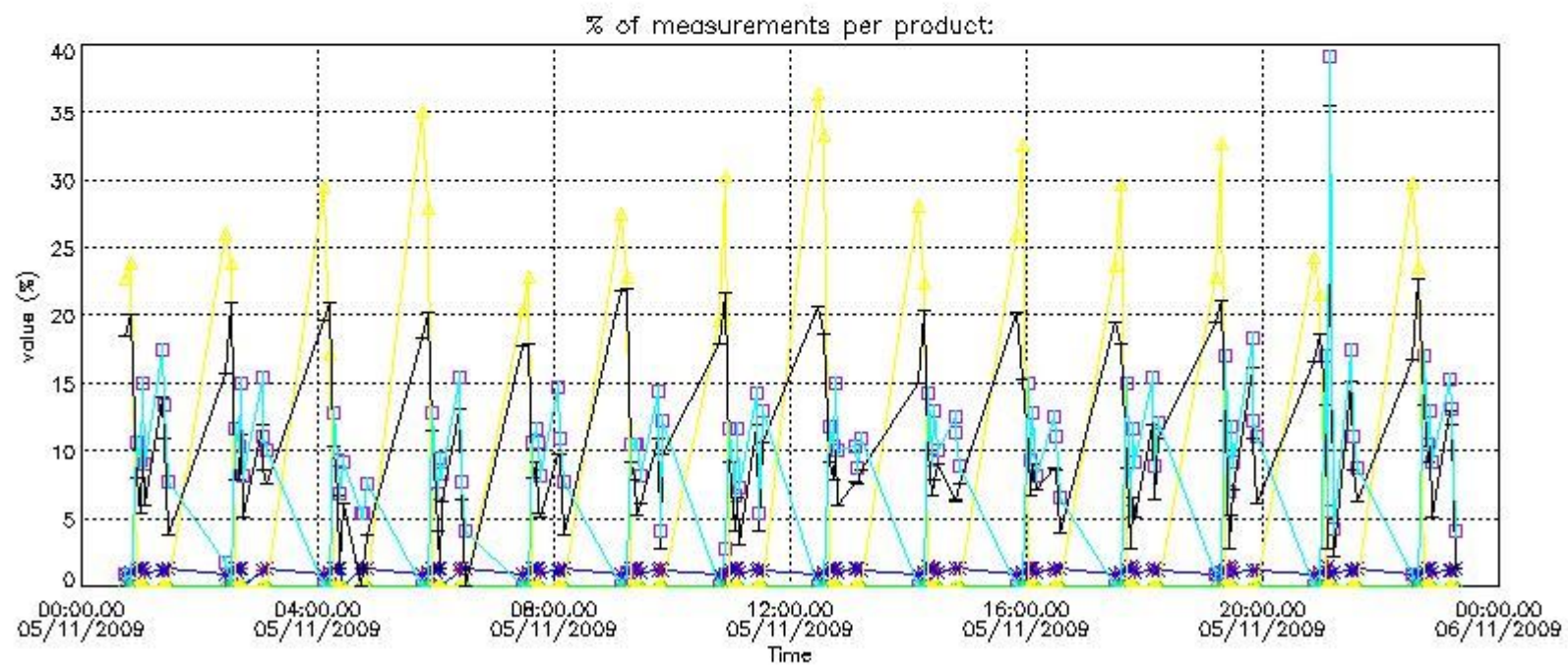
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



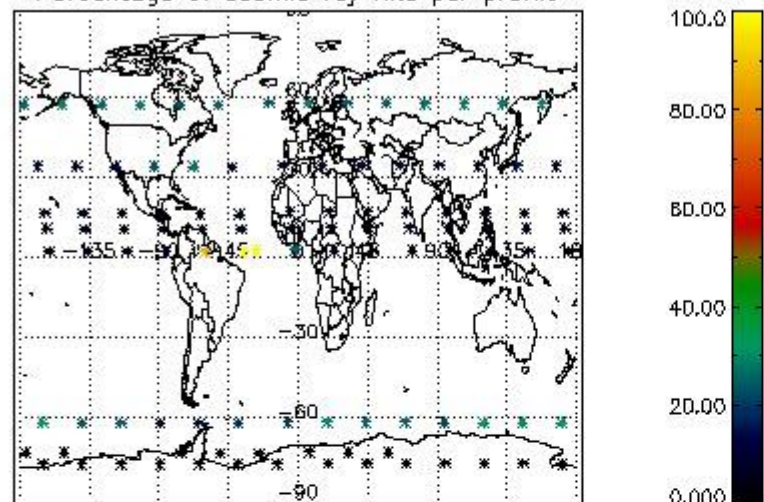
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



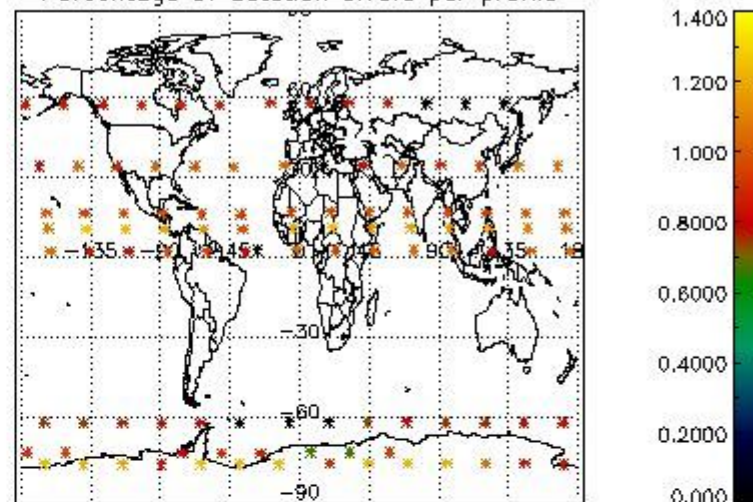
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

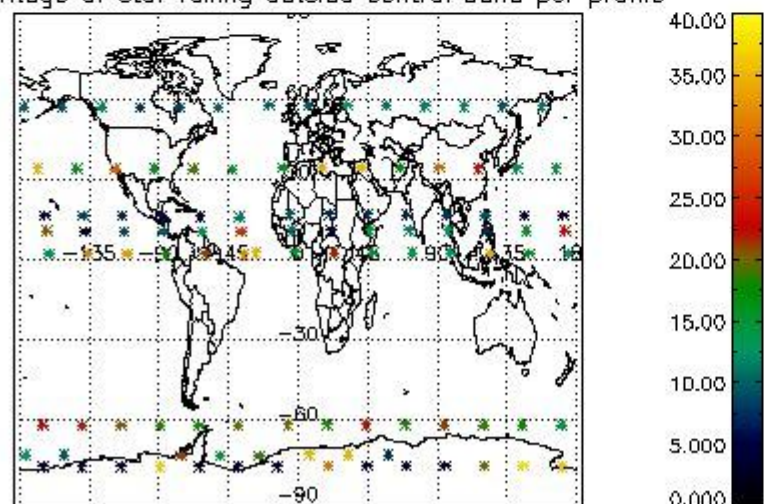
Percentage of cosmic ray hits per profile



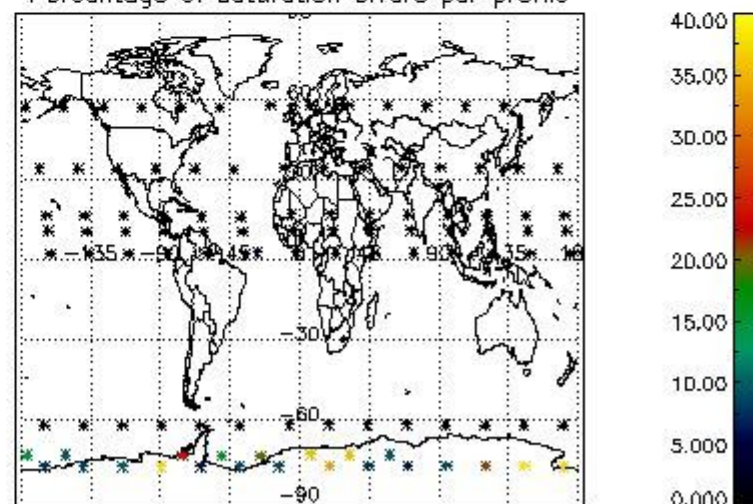
Percentage of datation errors per profile



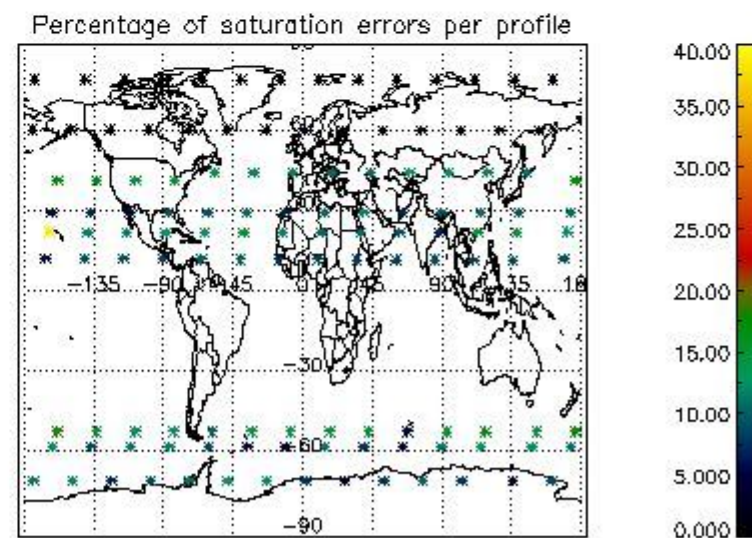
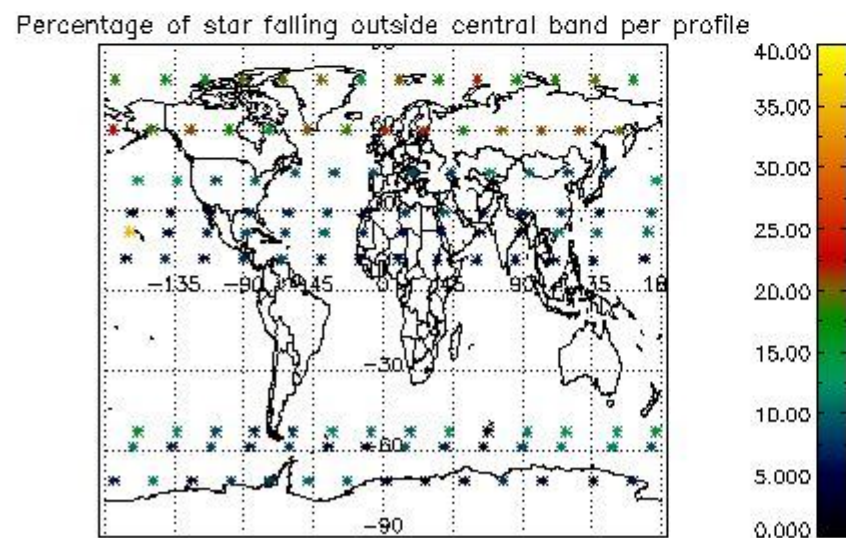
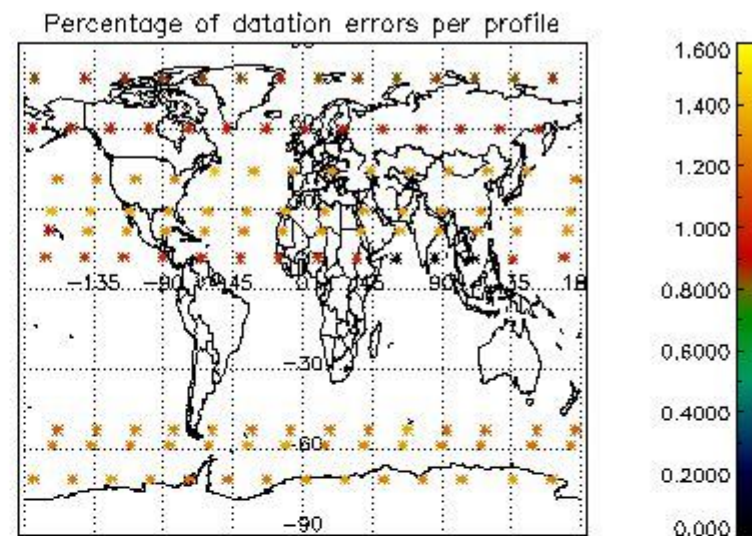
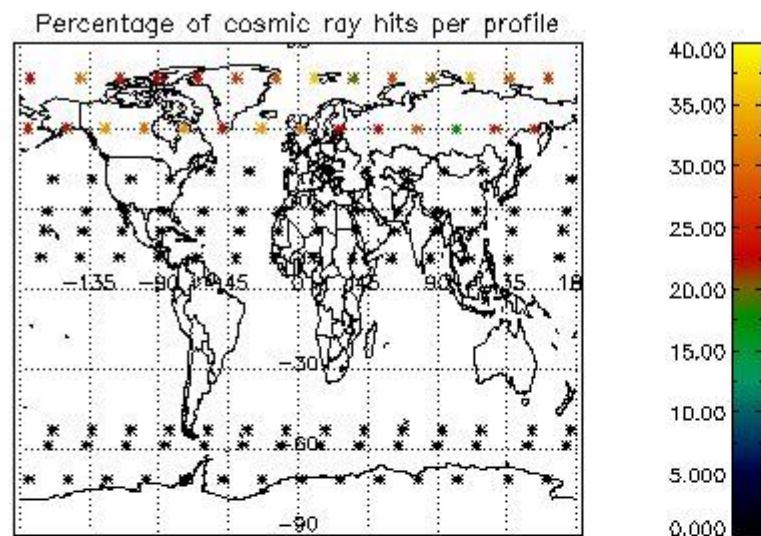
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 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

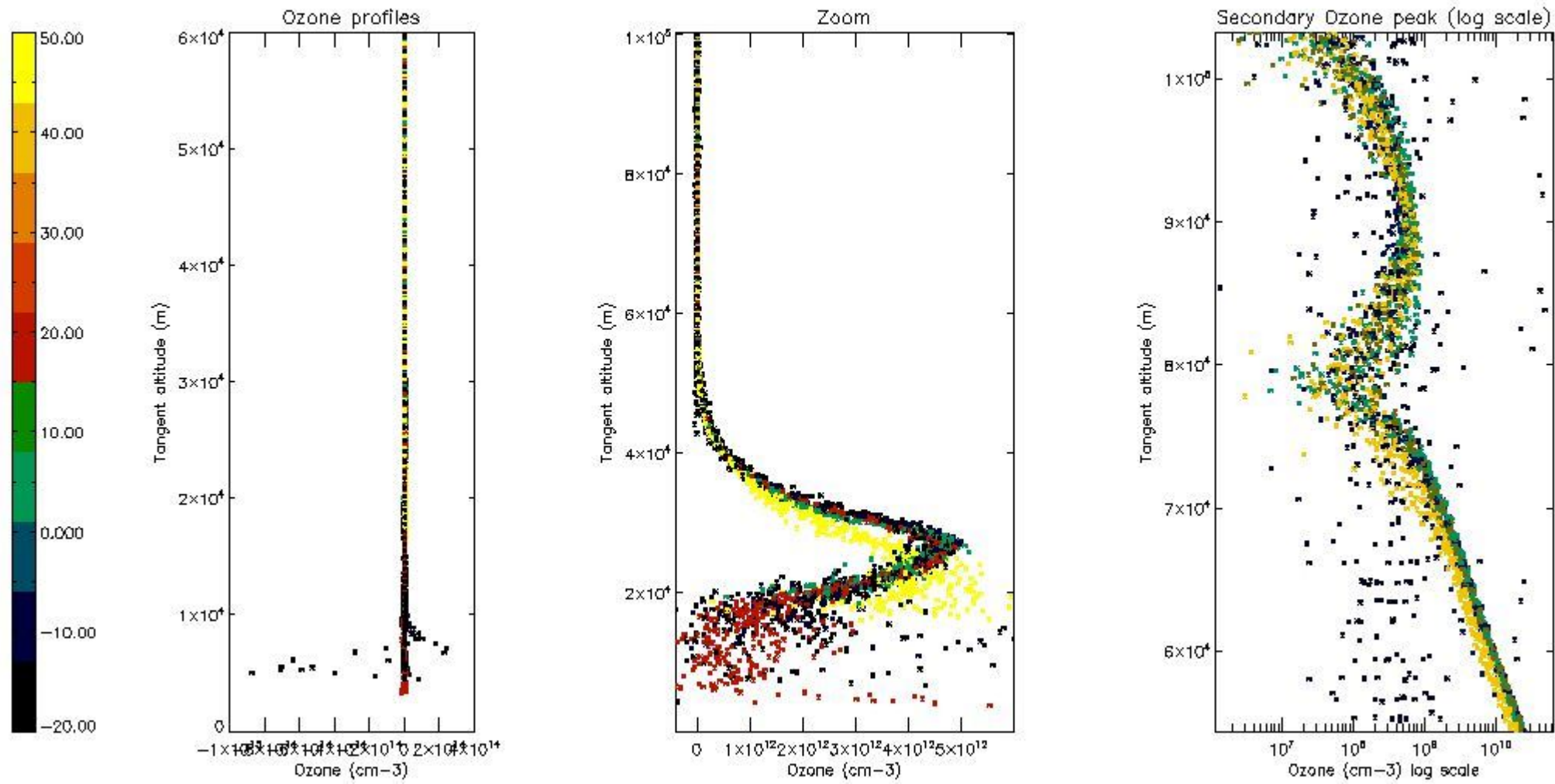
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	34
STD < 20	19

STD < 10	16
STD < 5	11

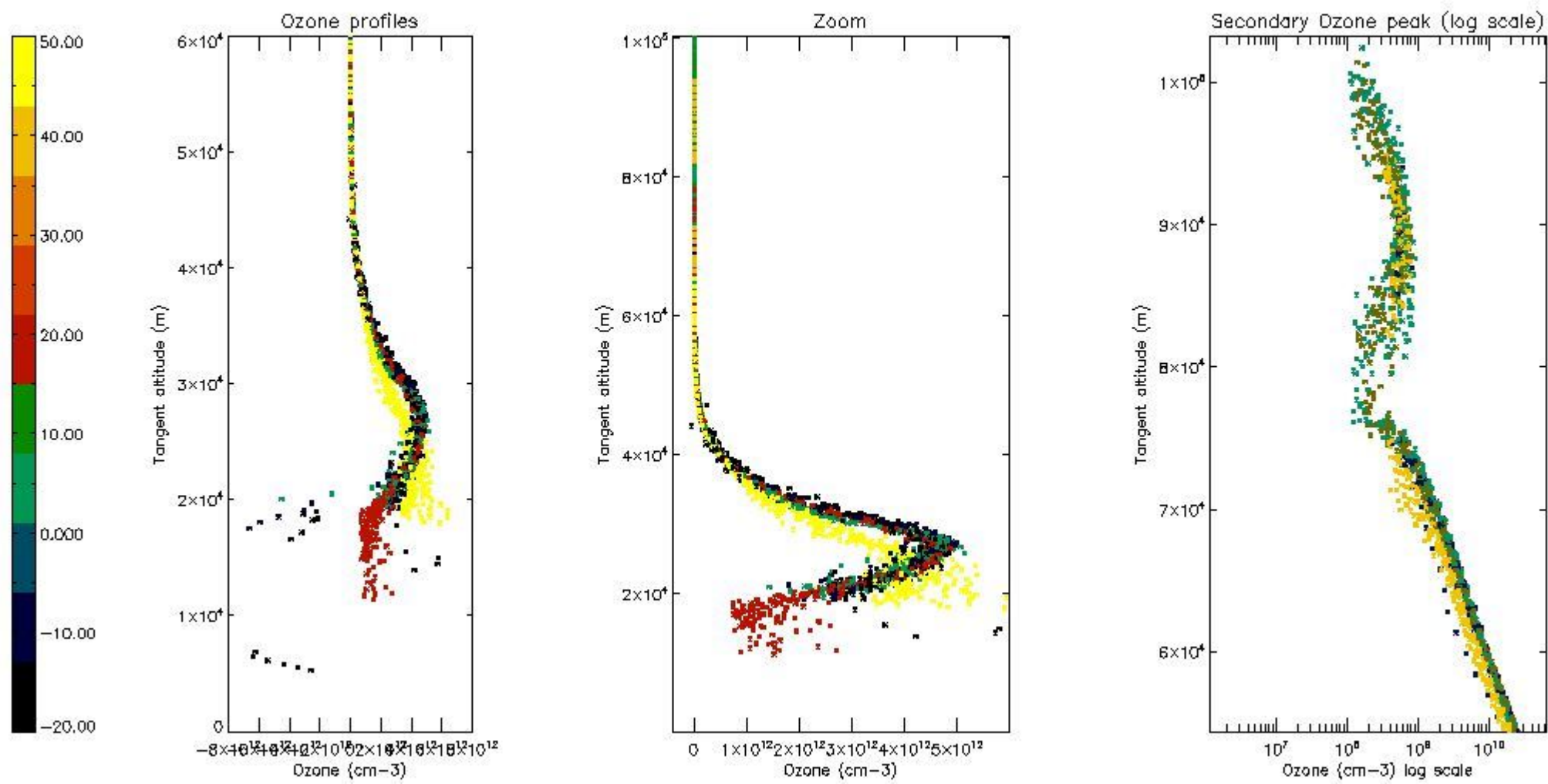
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



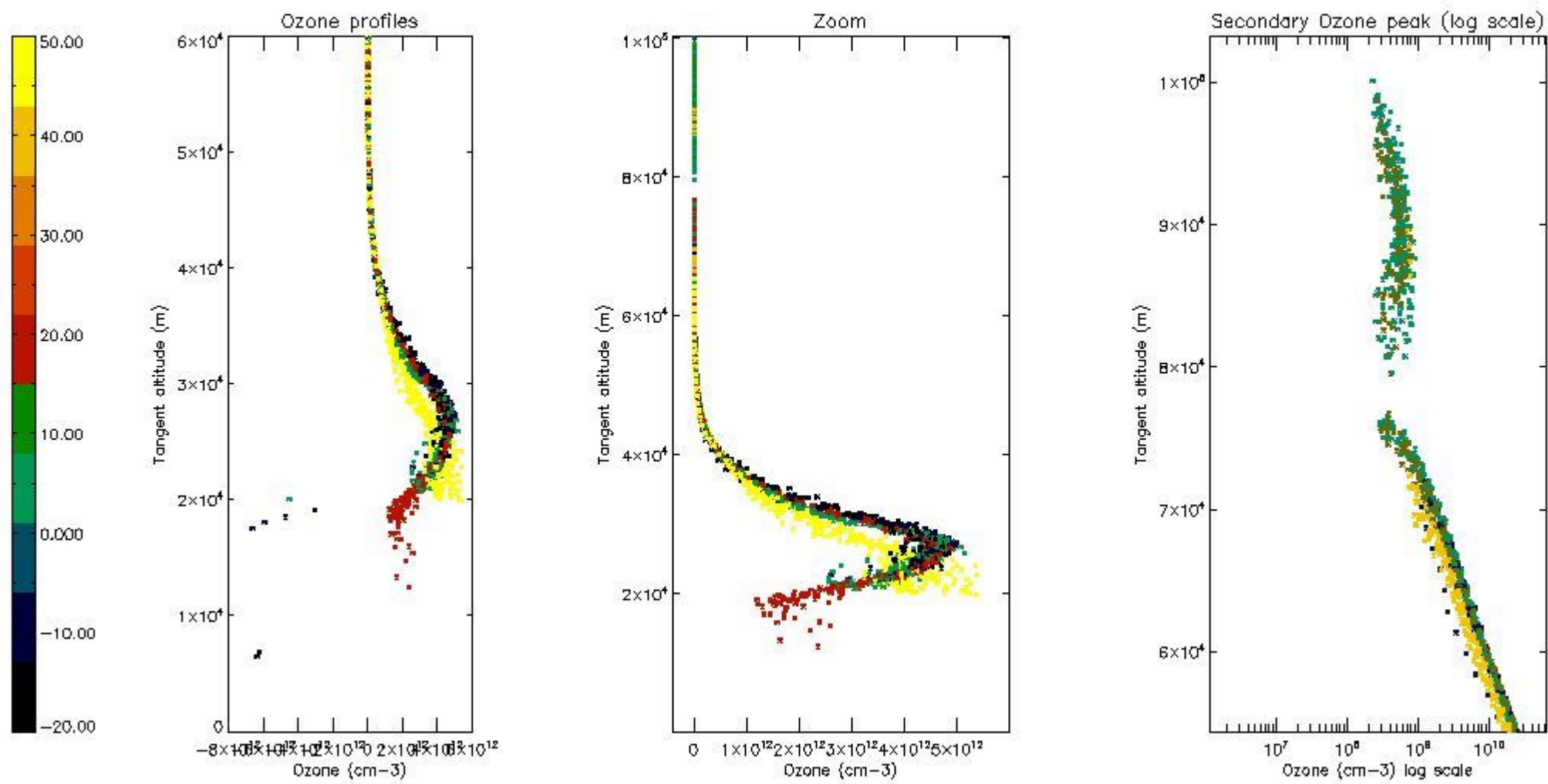
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

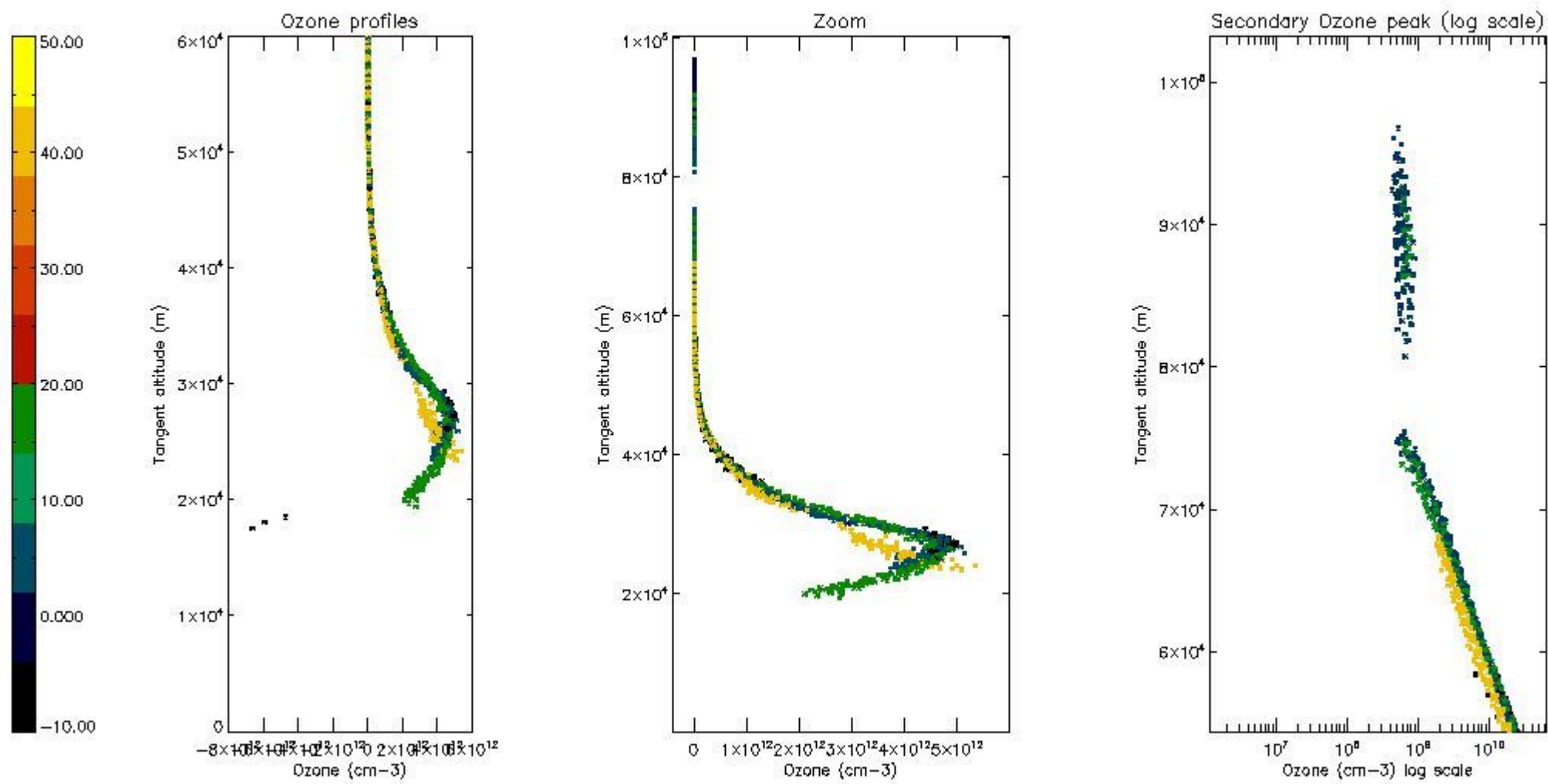
The colorbar represents the latitude.



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

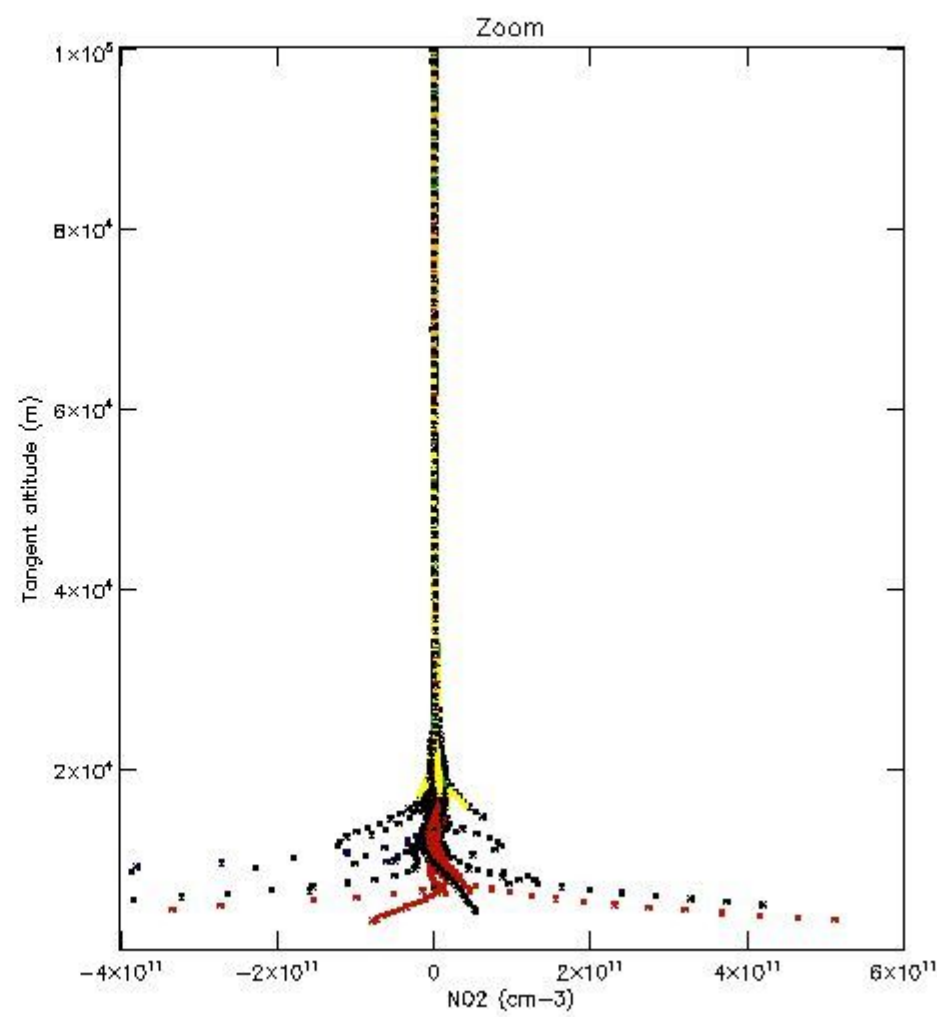
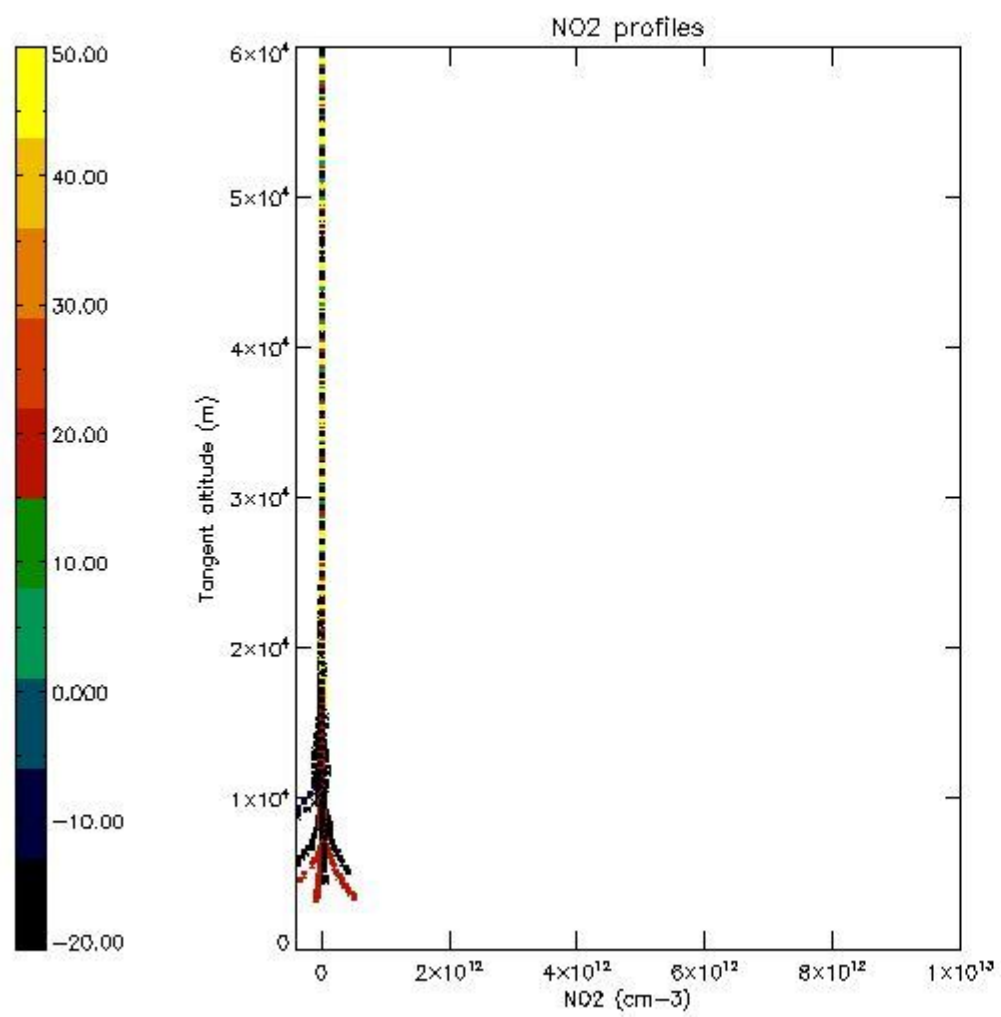
The colorbar represents the latitude.





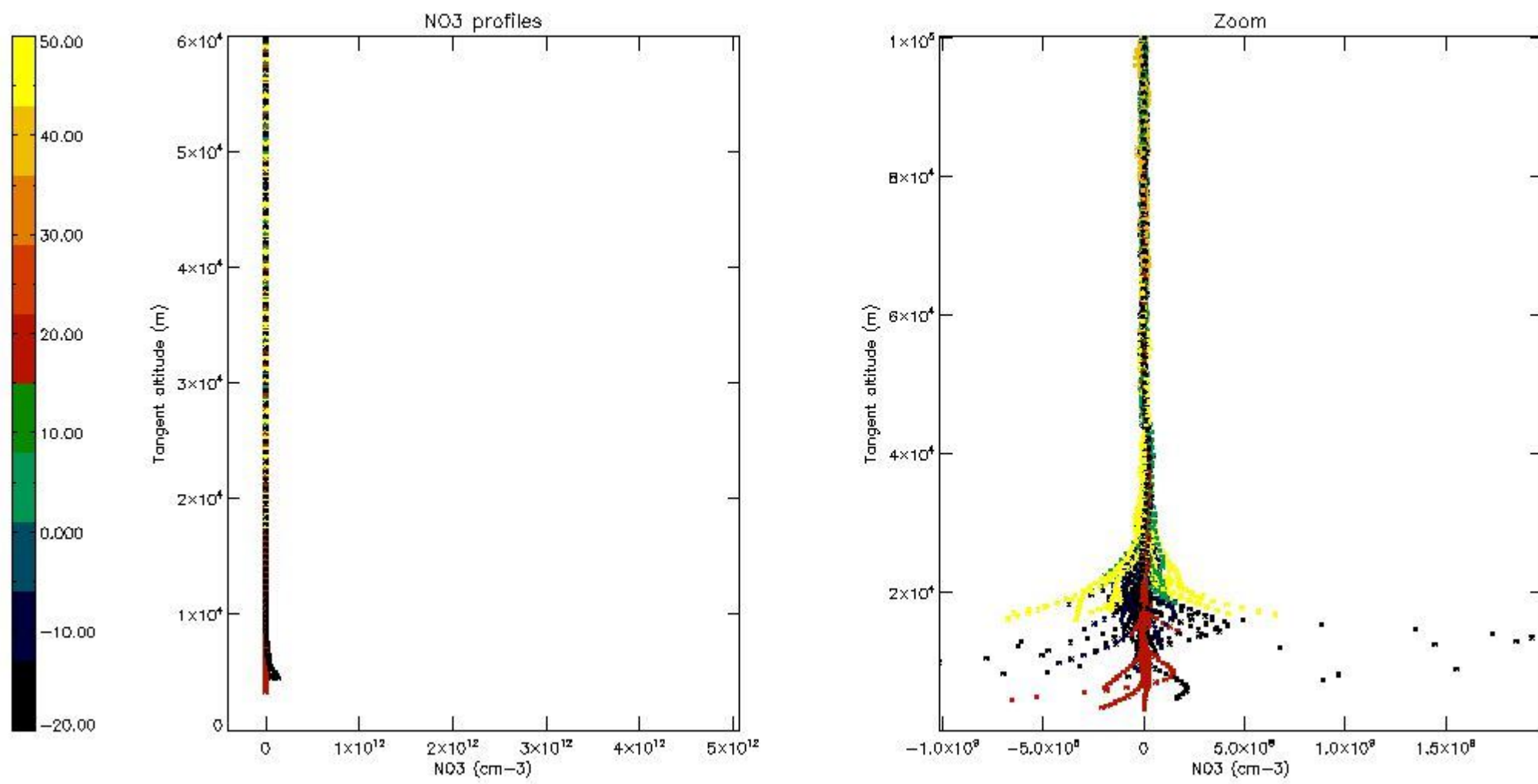
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



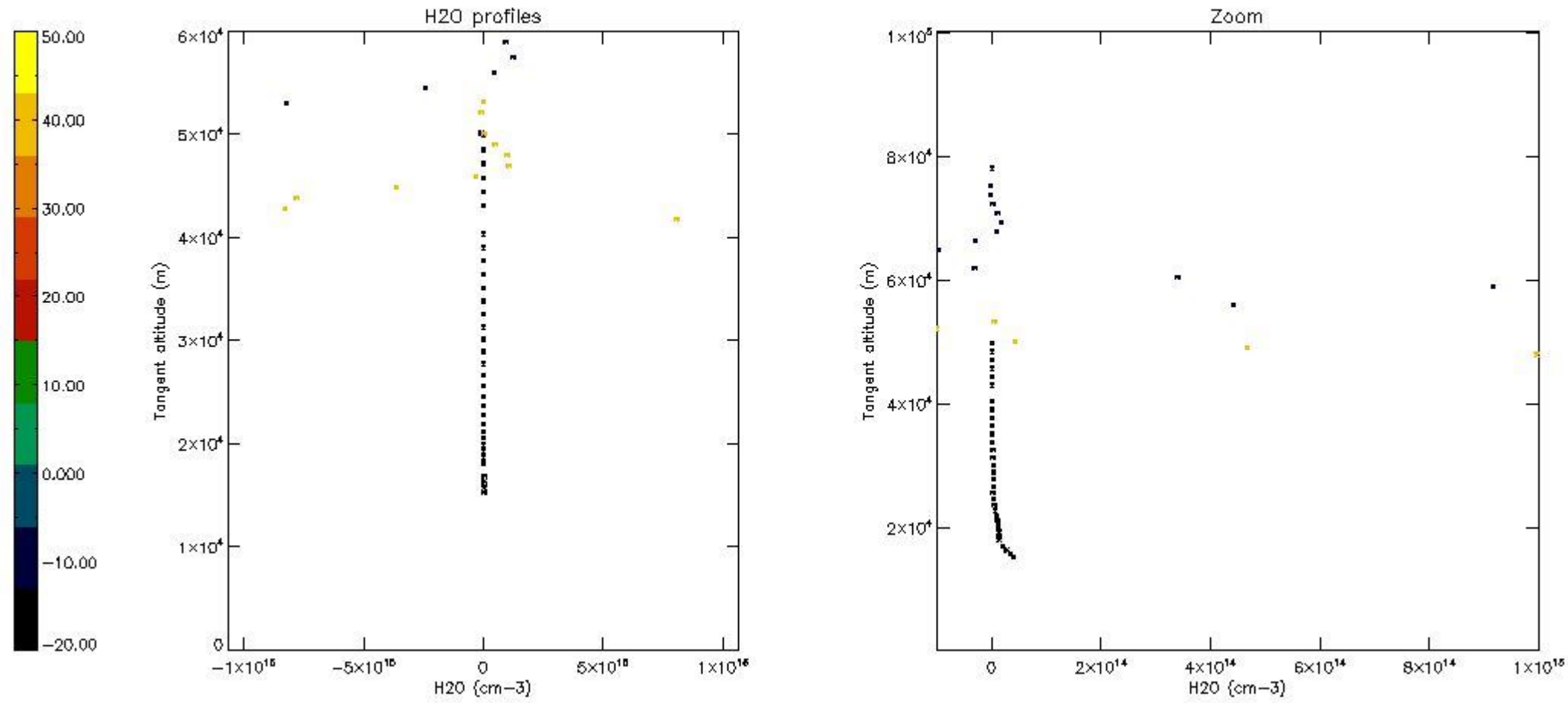
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)

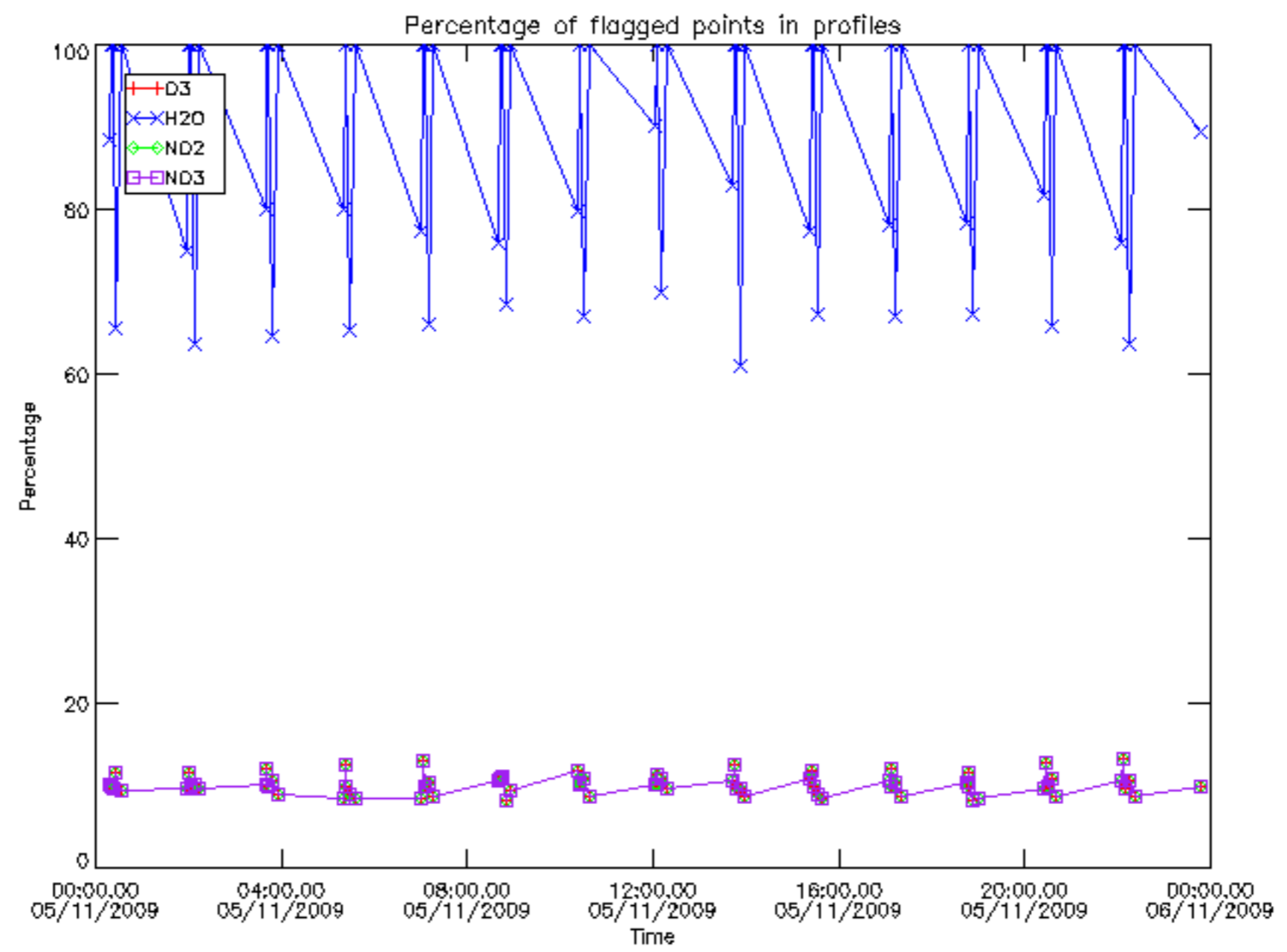
The colorbar represents the latitude.



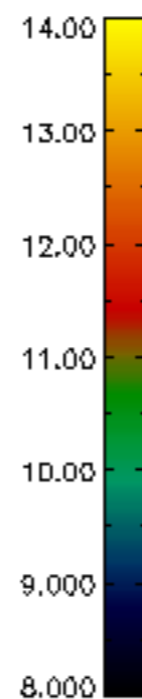
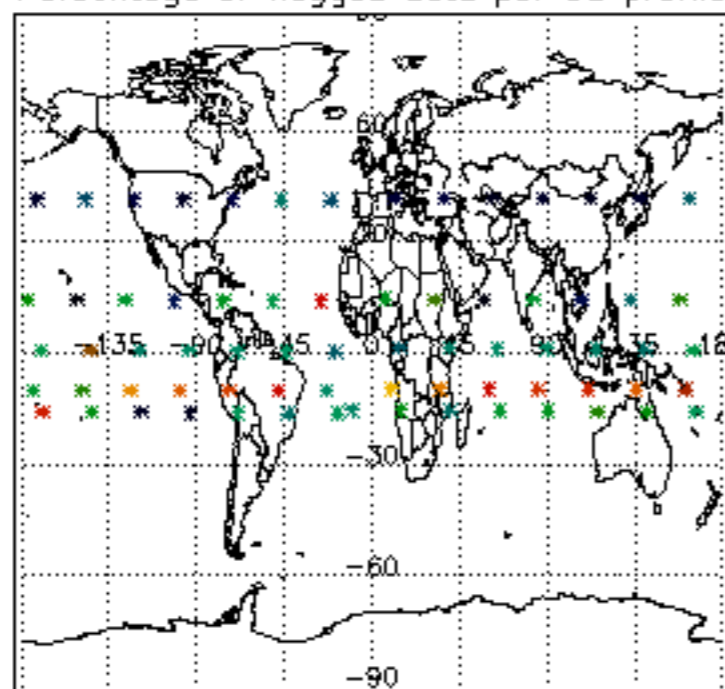
## 6. Auxiliary Data Files used for the production reported in section 2

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.

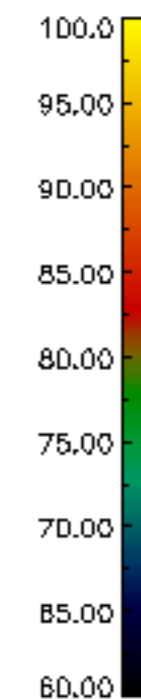
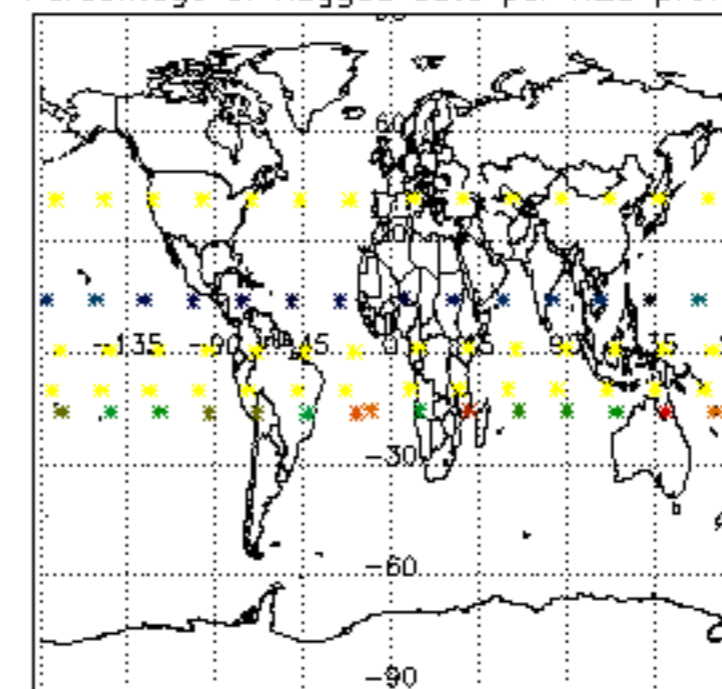
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	05-NOV-2009 00:17:54
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-NOV-2009 00:17:54
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-NOV-2009 00:17:54



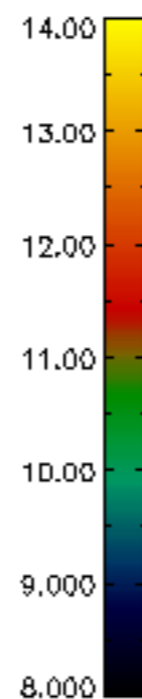
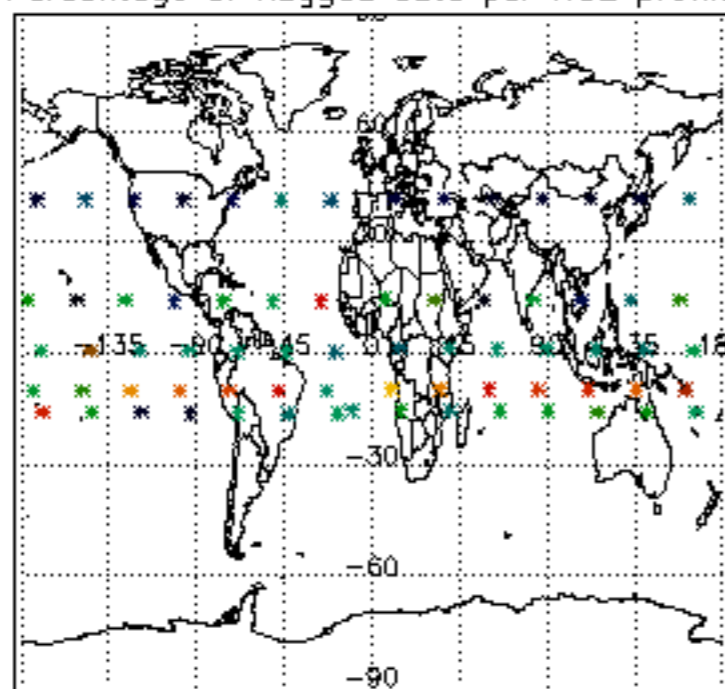
Percentage of flagged data per D3 profile



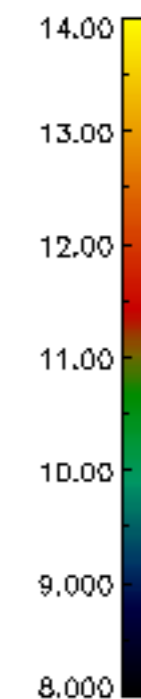
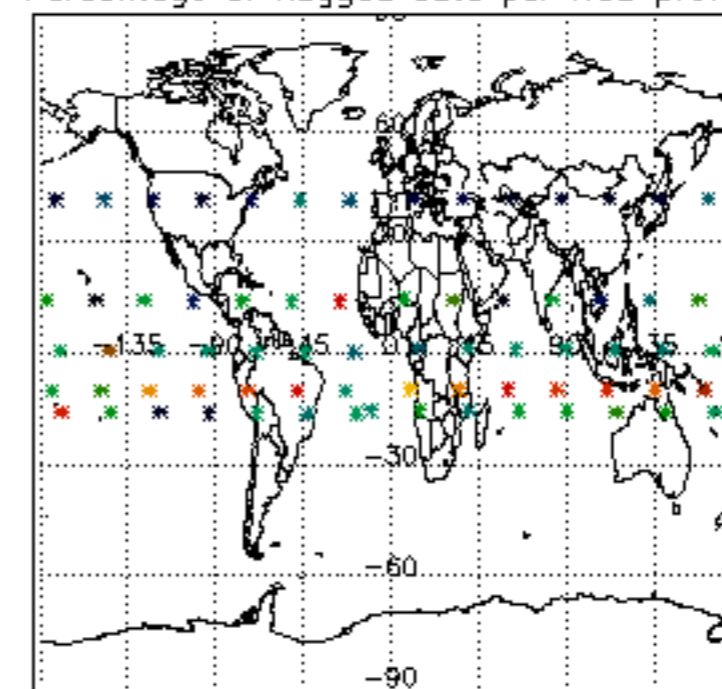
Percentage of flagged data per H2O profile

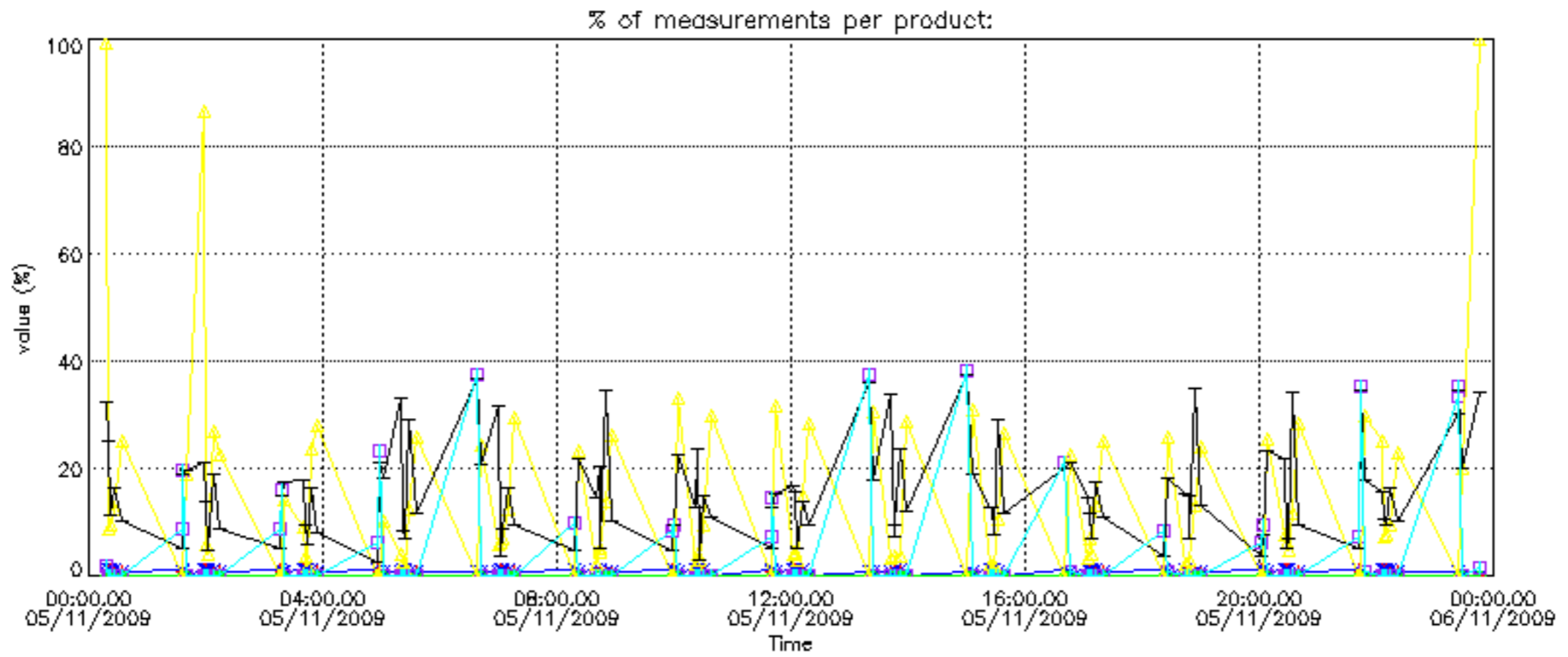


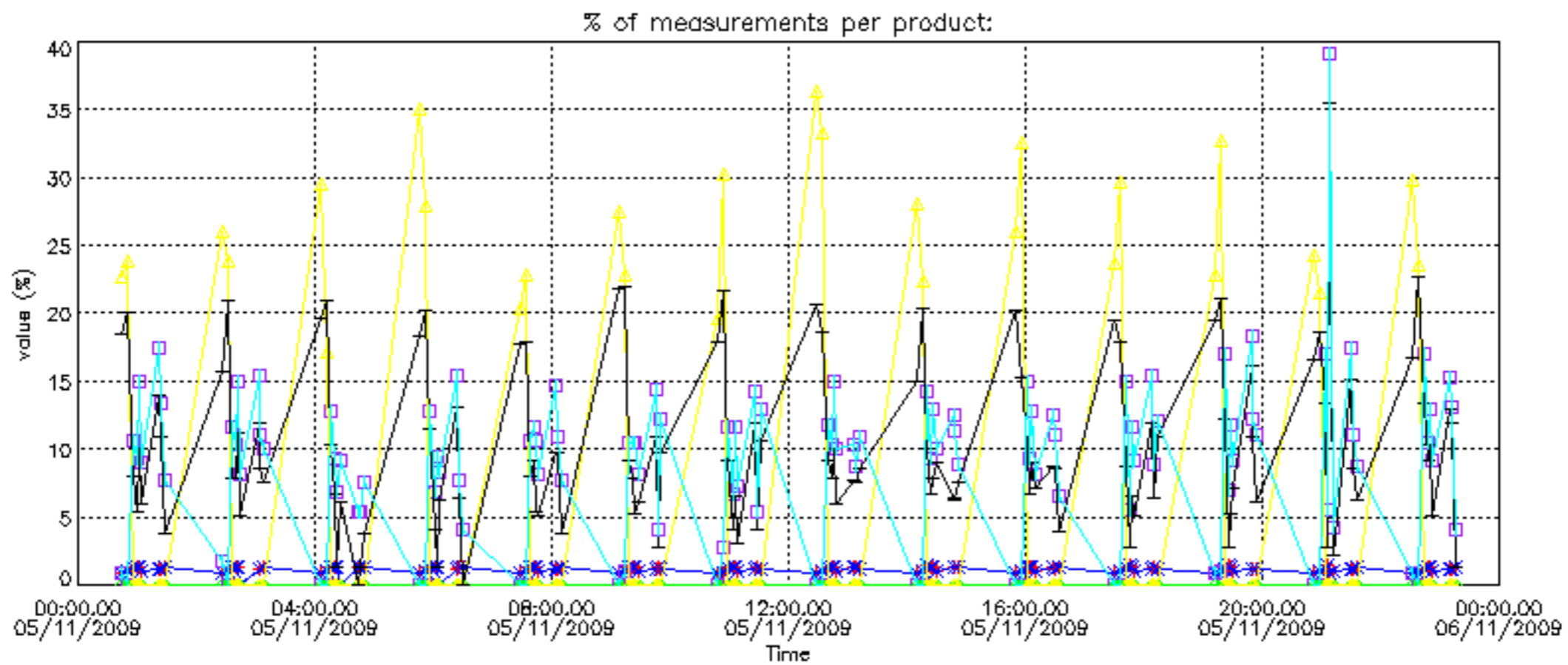
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

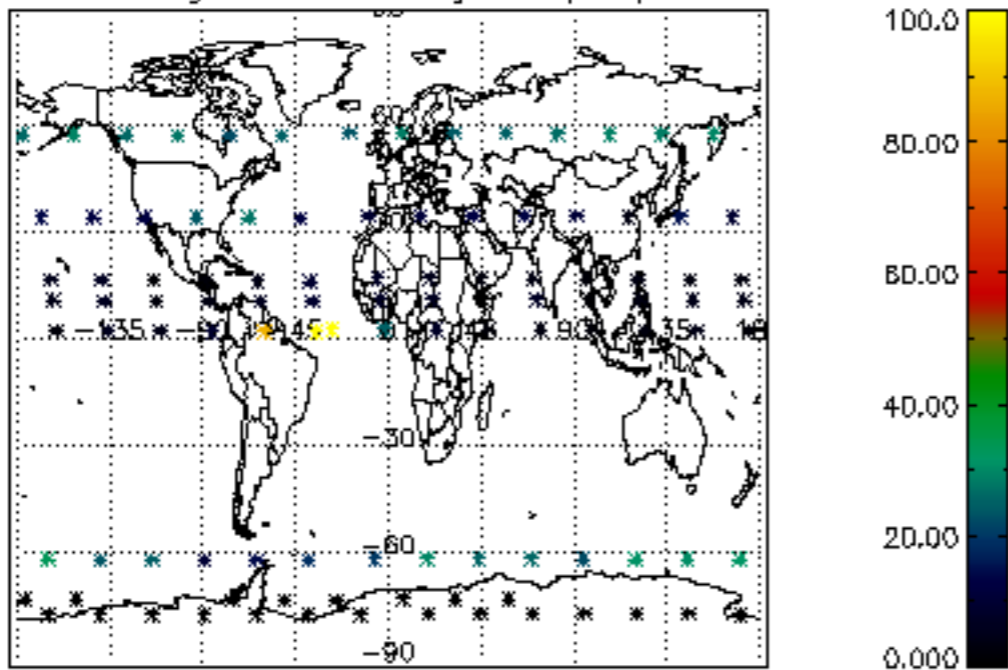




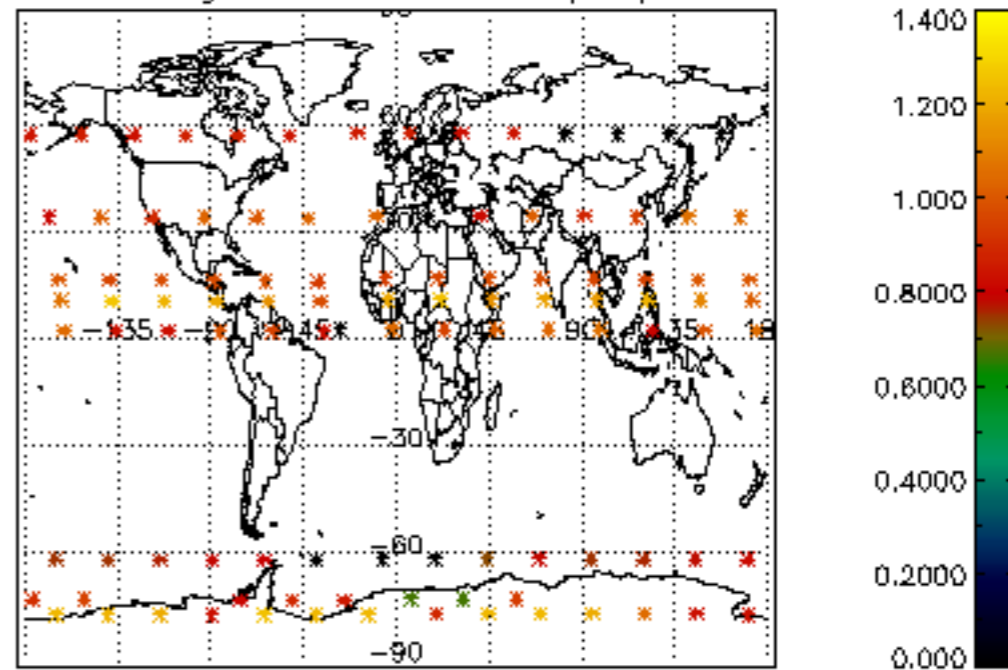




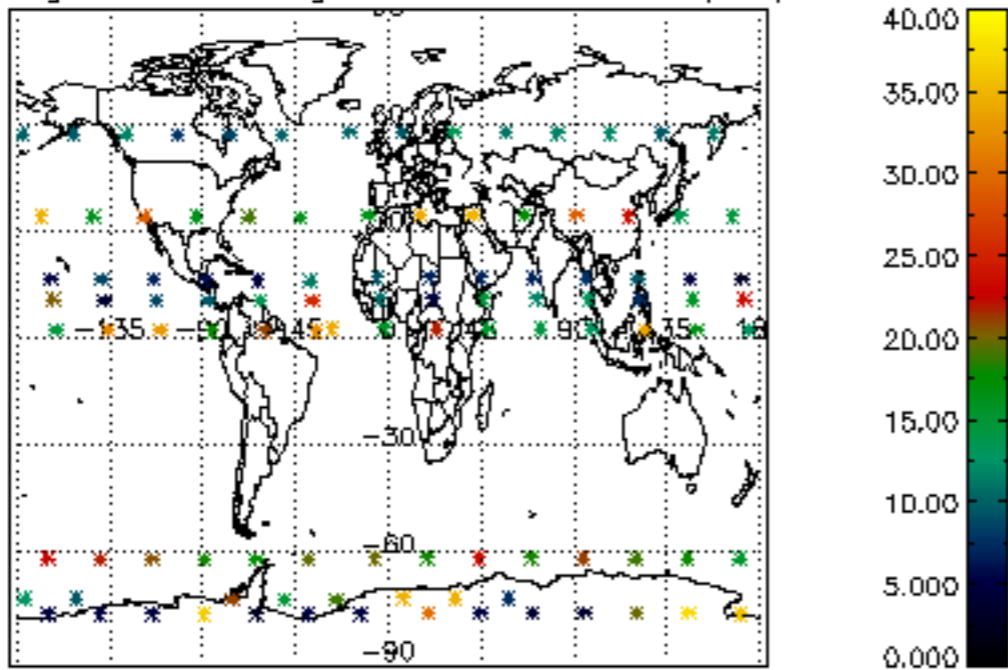
Percentage of cosmic ray hits per profile



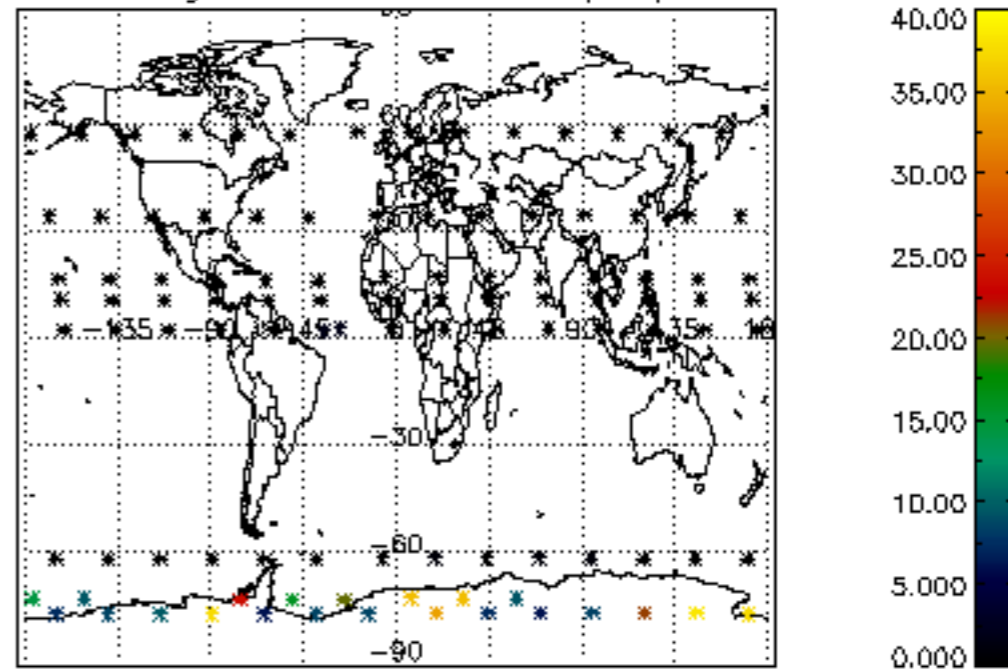
Percentage of datation errors per profile



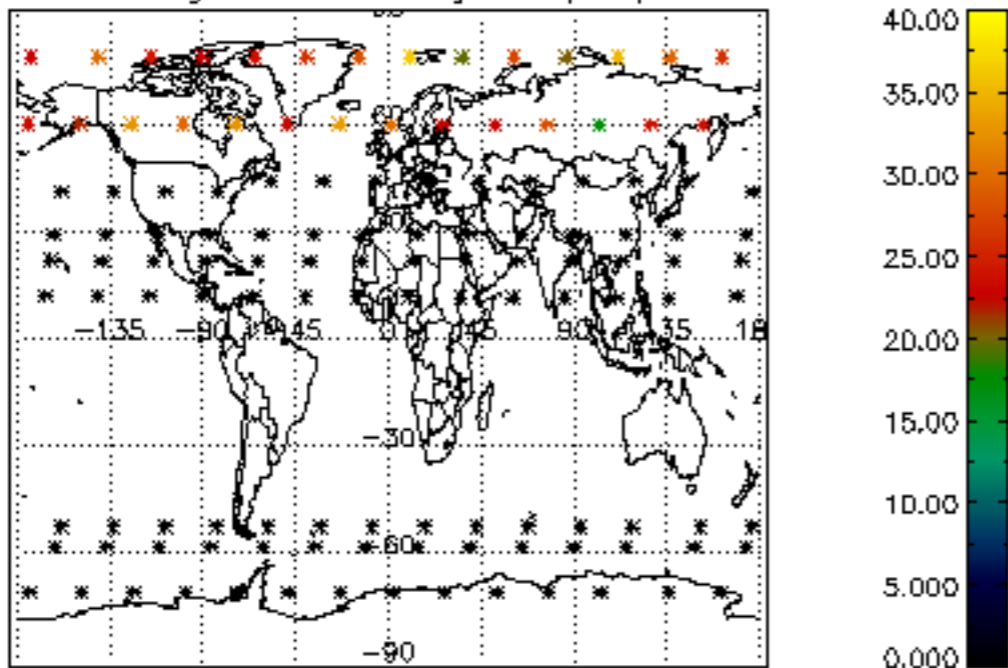
Percentage of star falling outside central band per profile



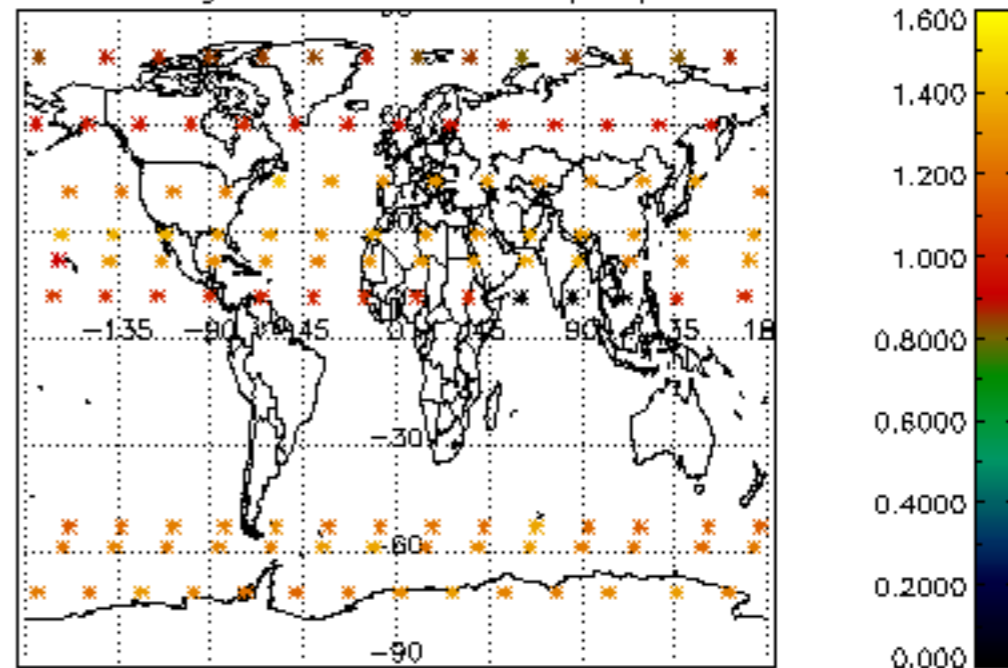
Percentage of saturation errors per profile



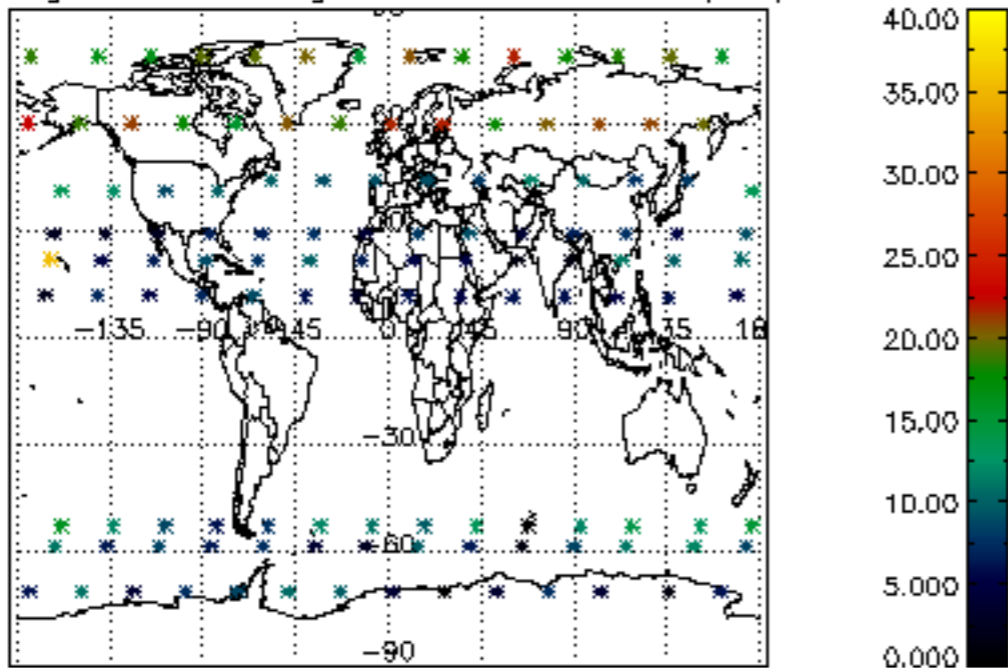
Percentage of cosmic ray hits per profile



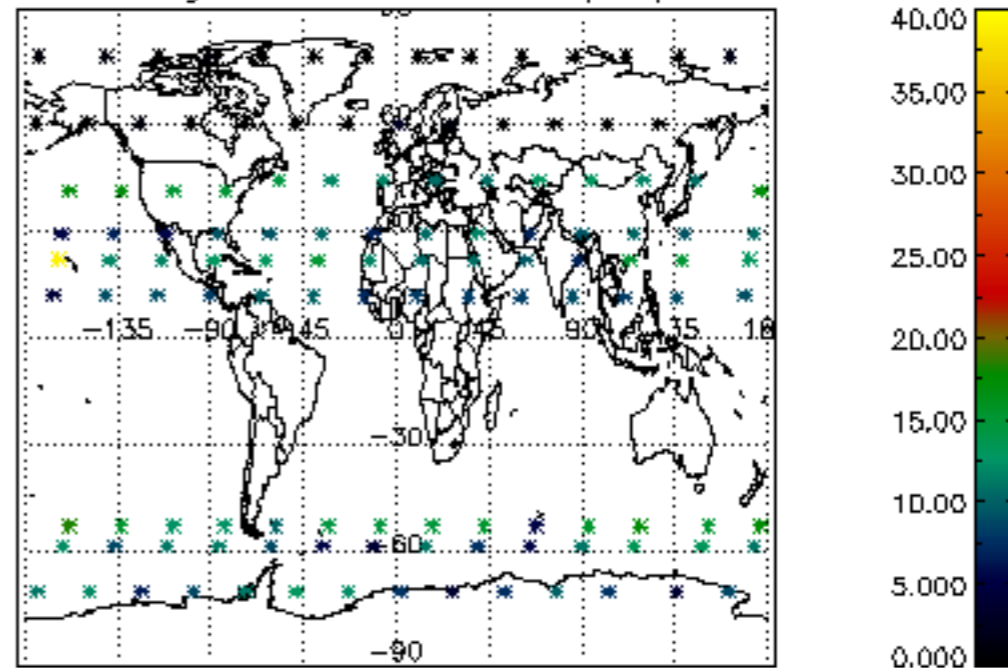
Percentage of datation errors per profile

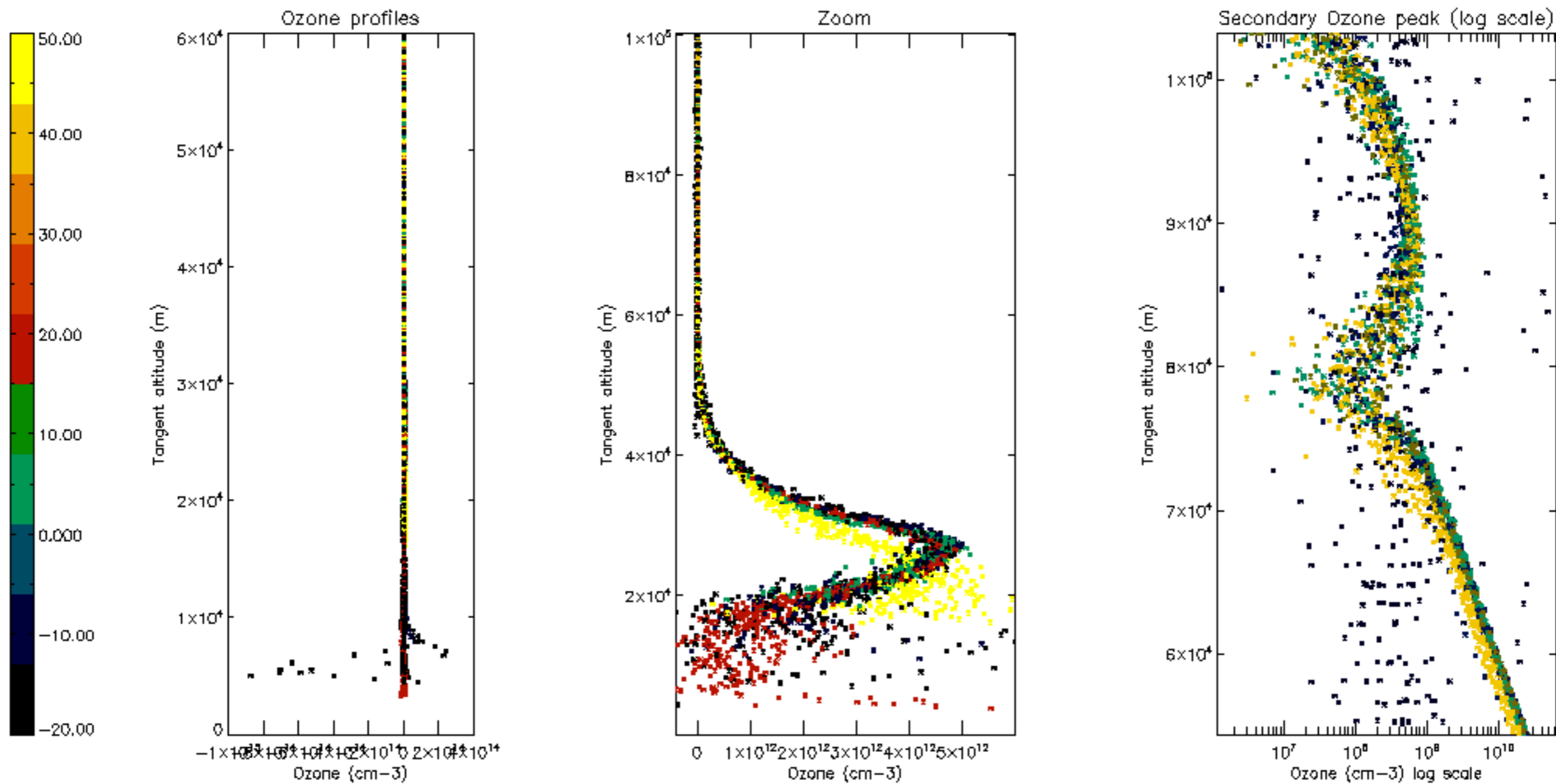


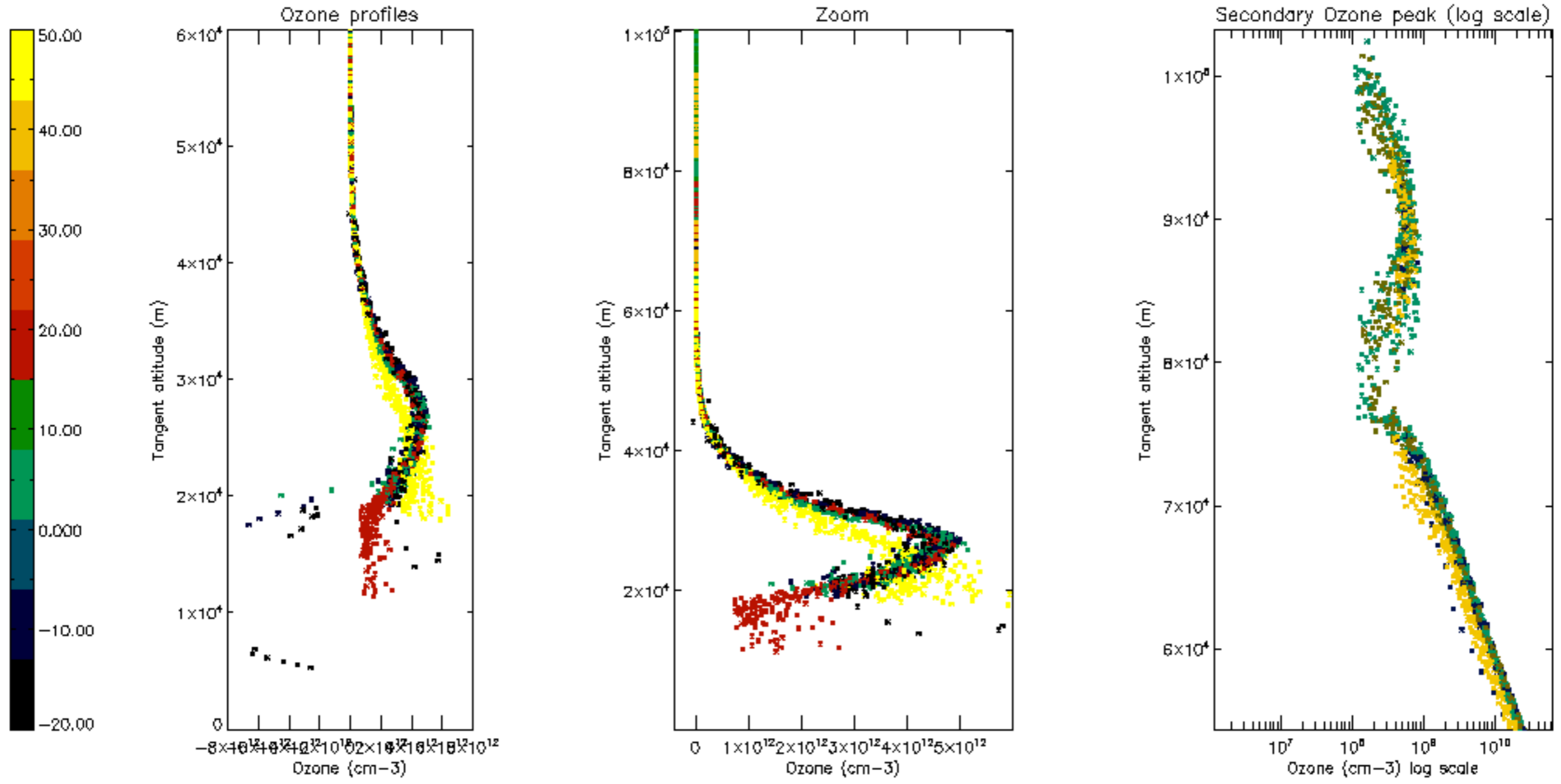
Percentage of star falling outside central band per profile

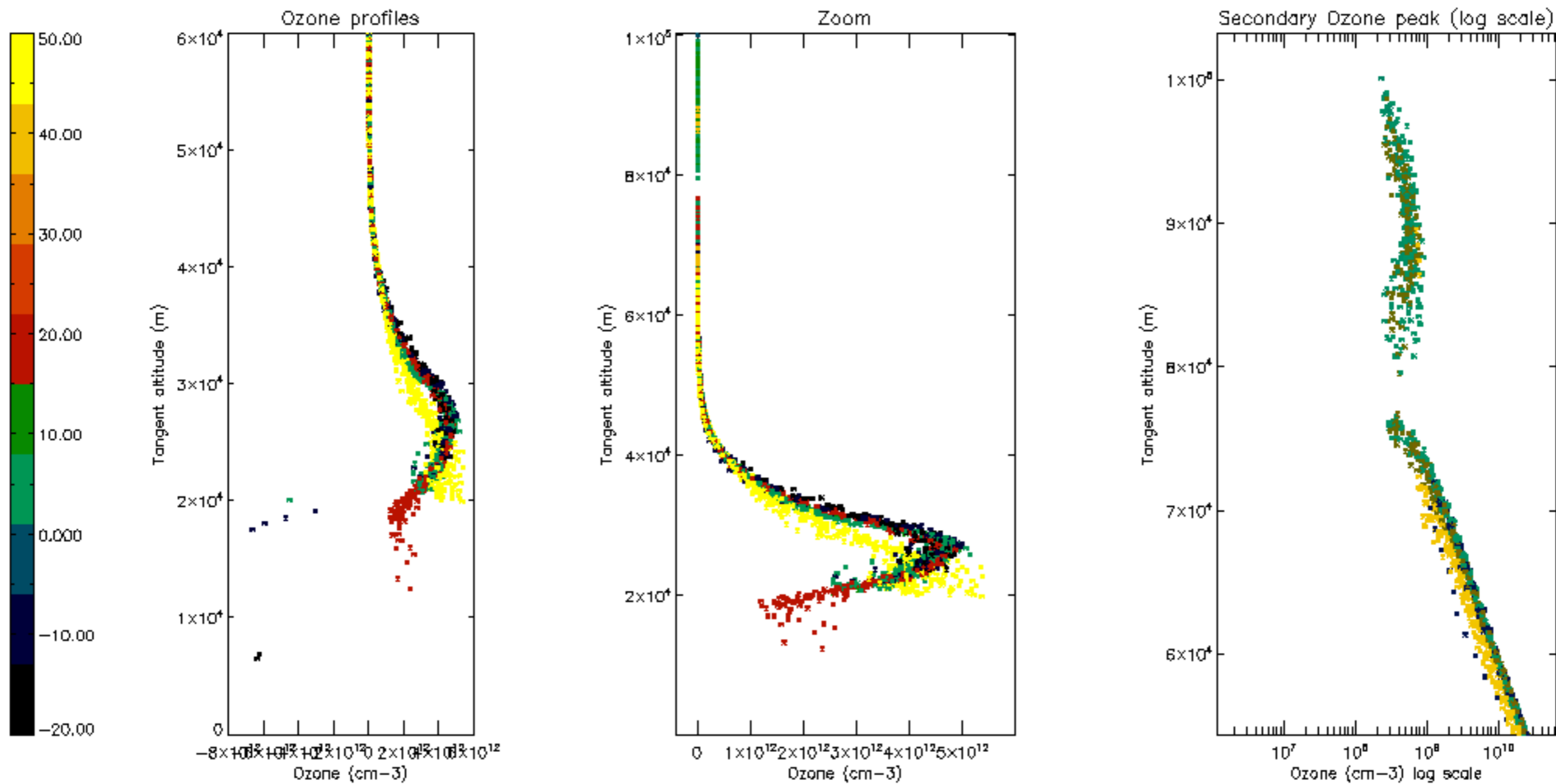


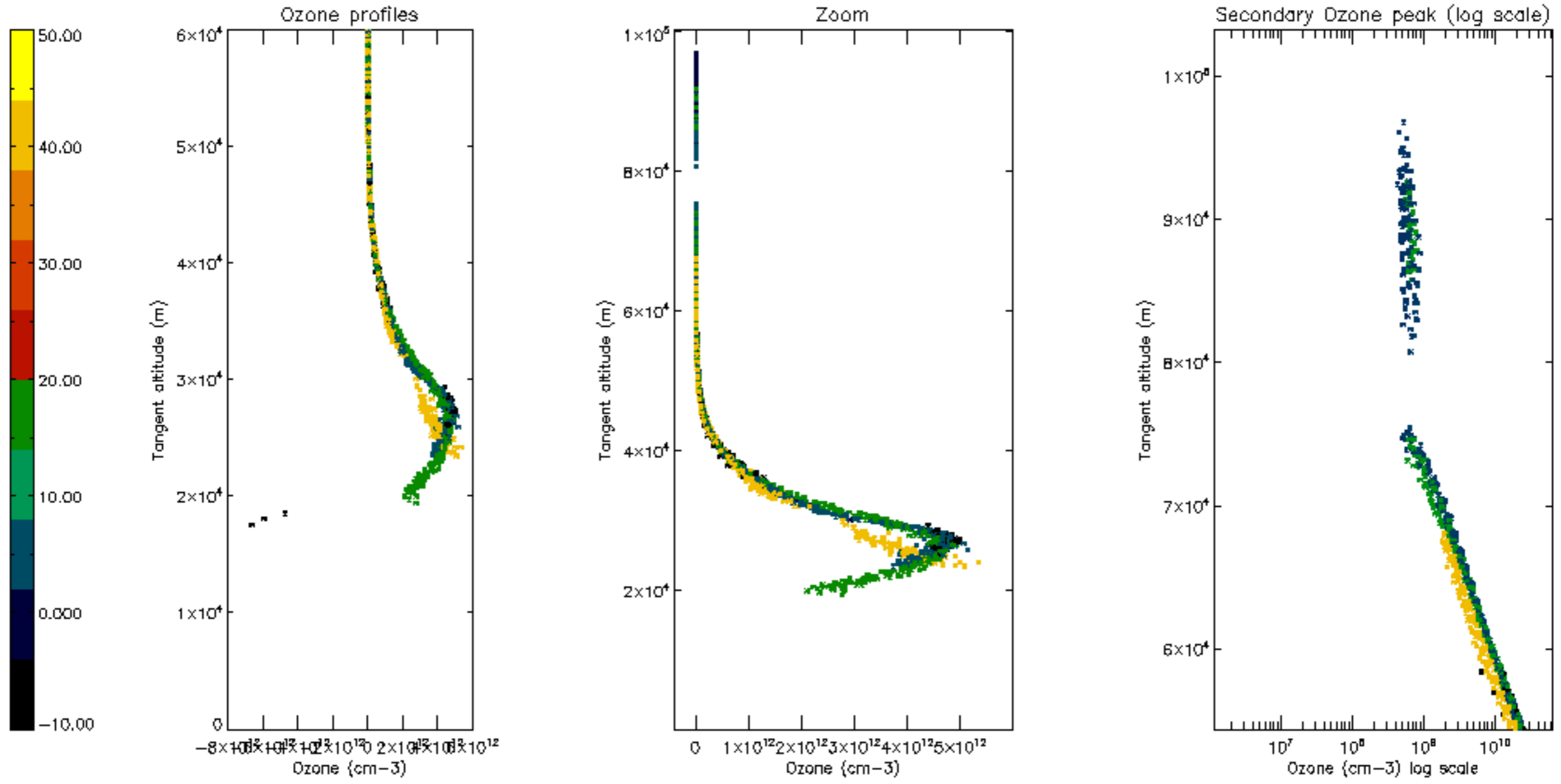
Percentage of saturation errors per profile

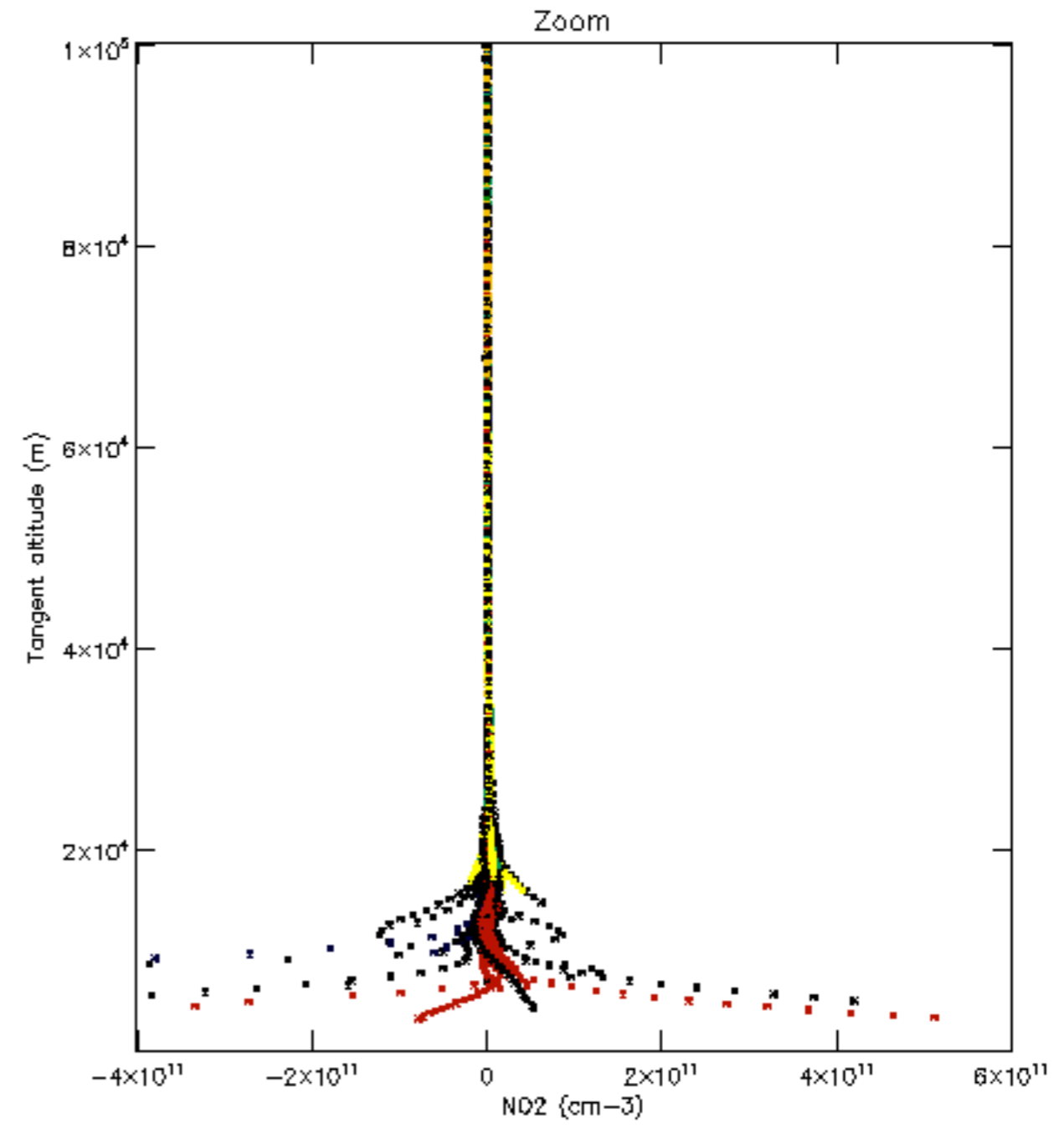
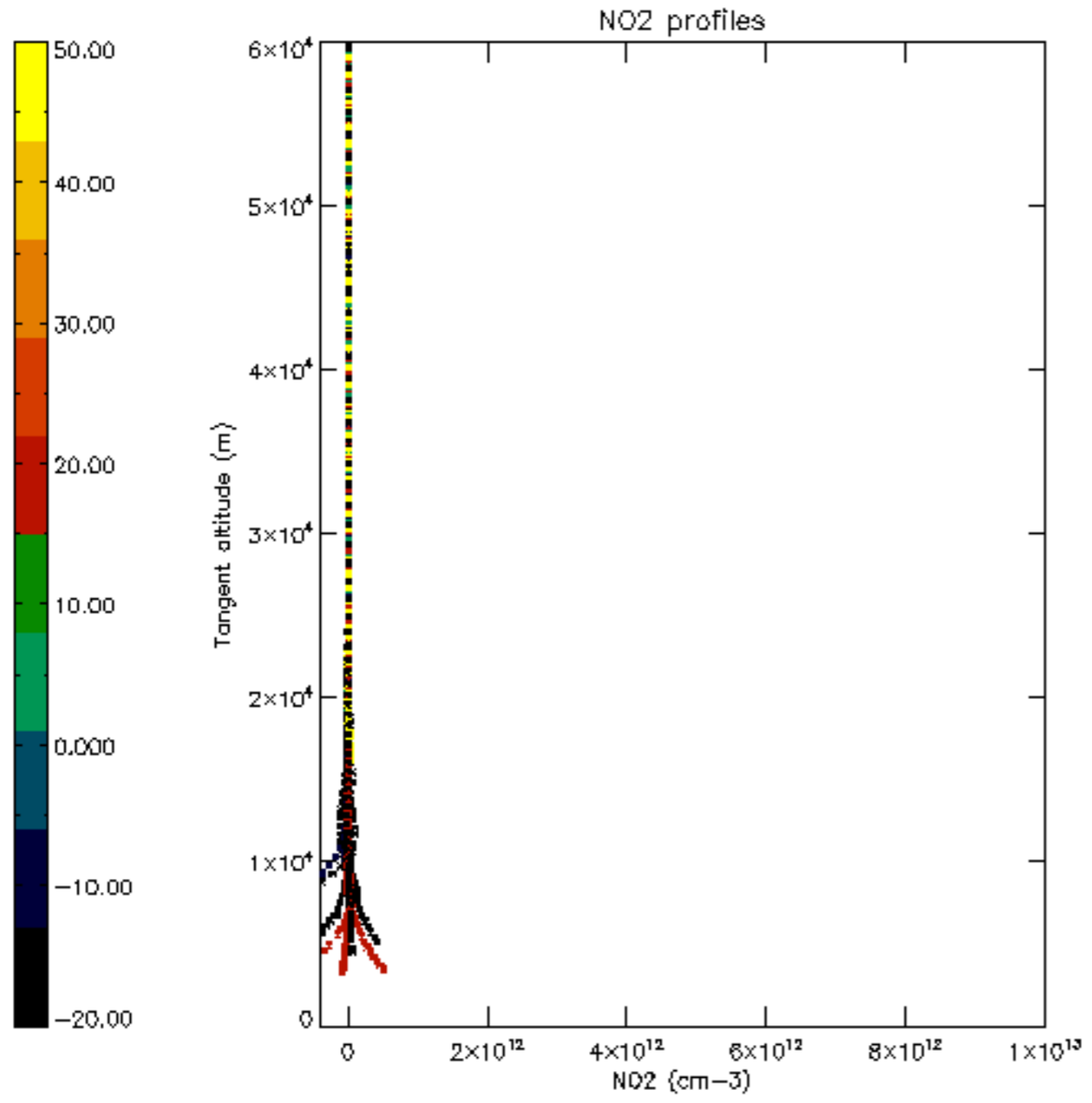


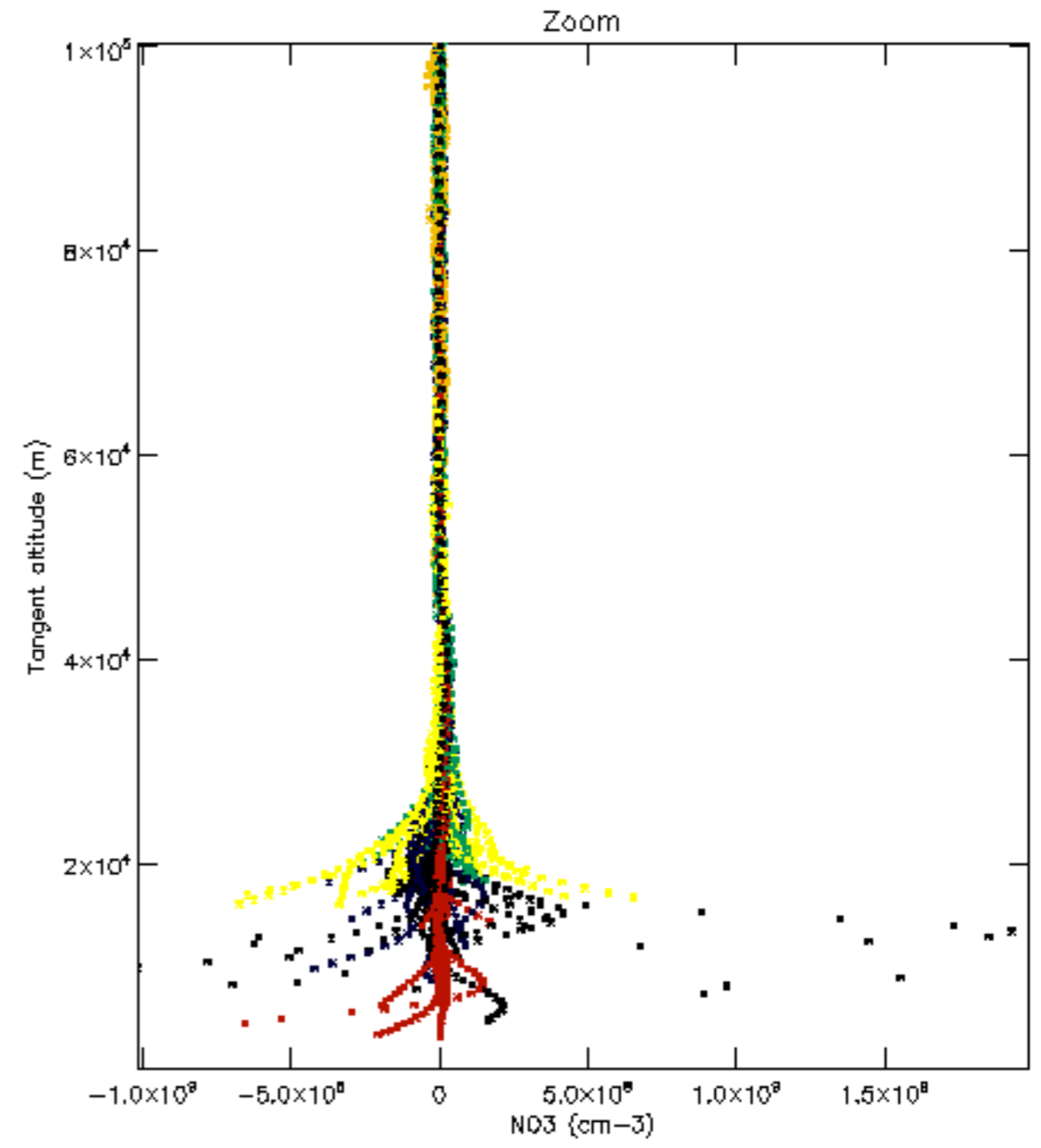
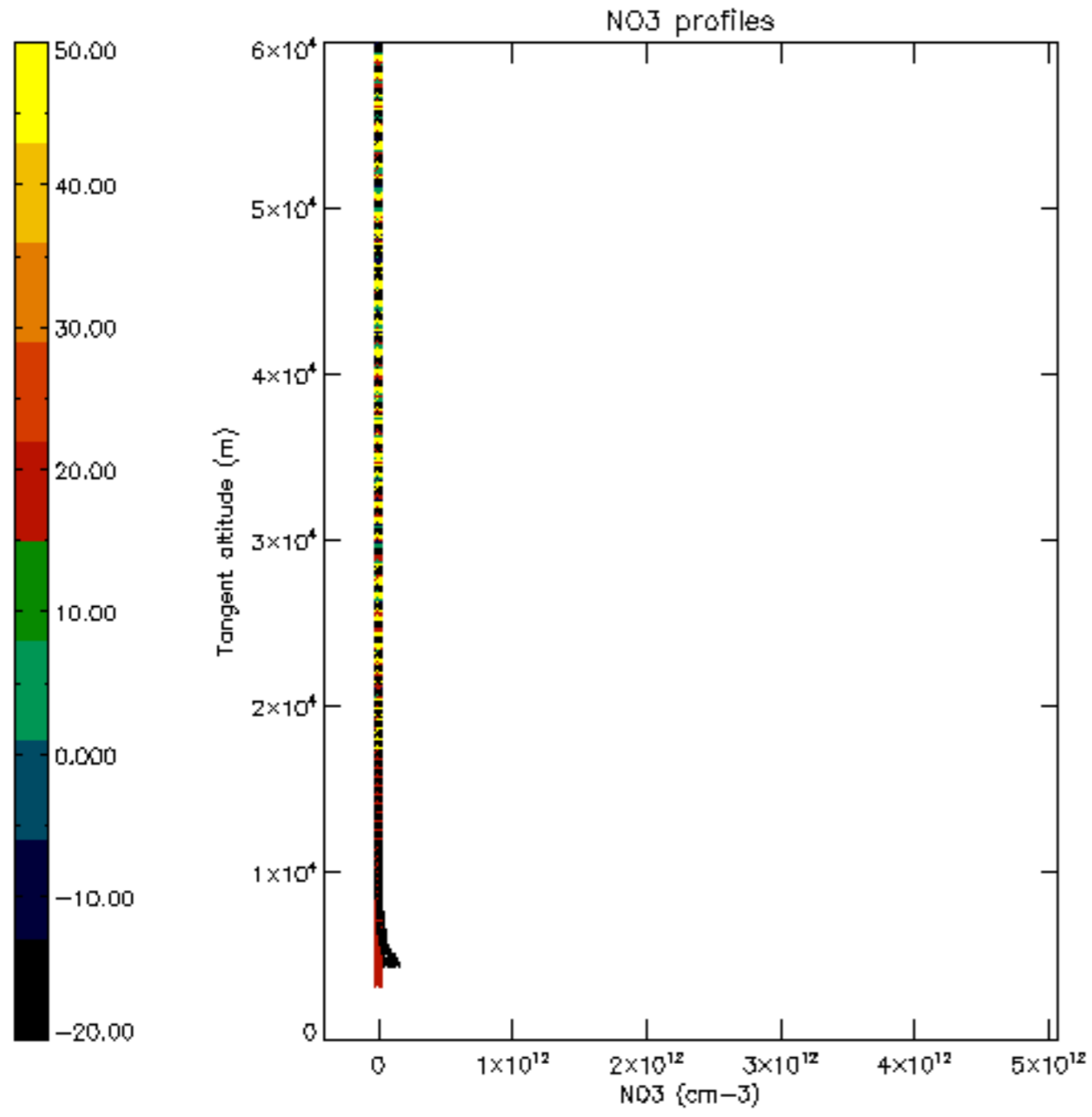




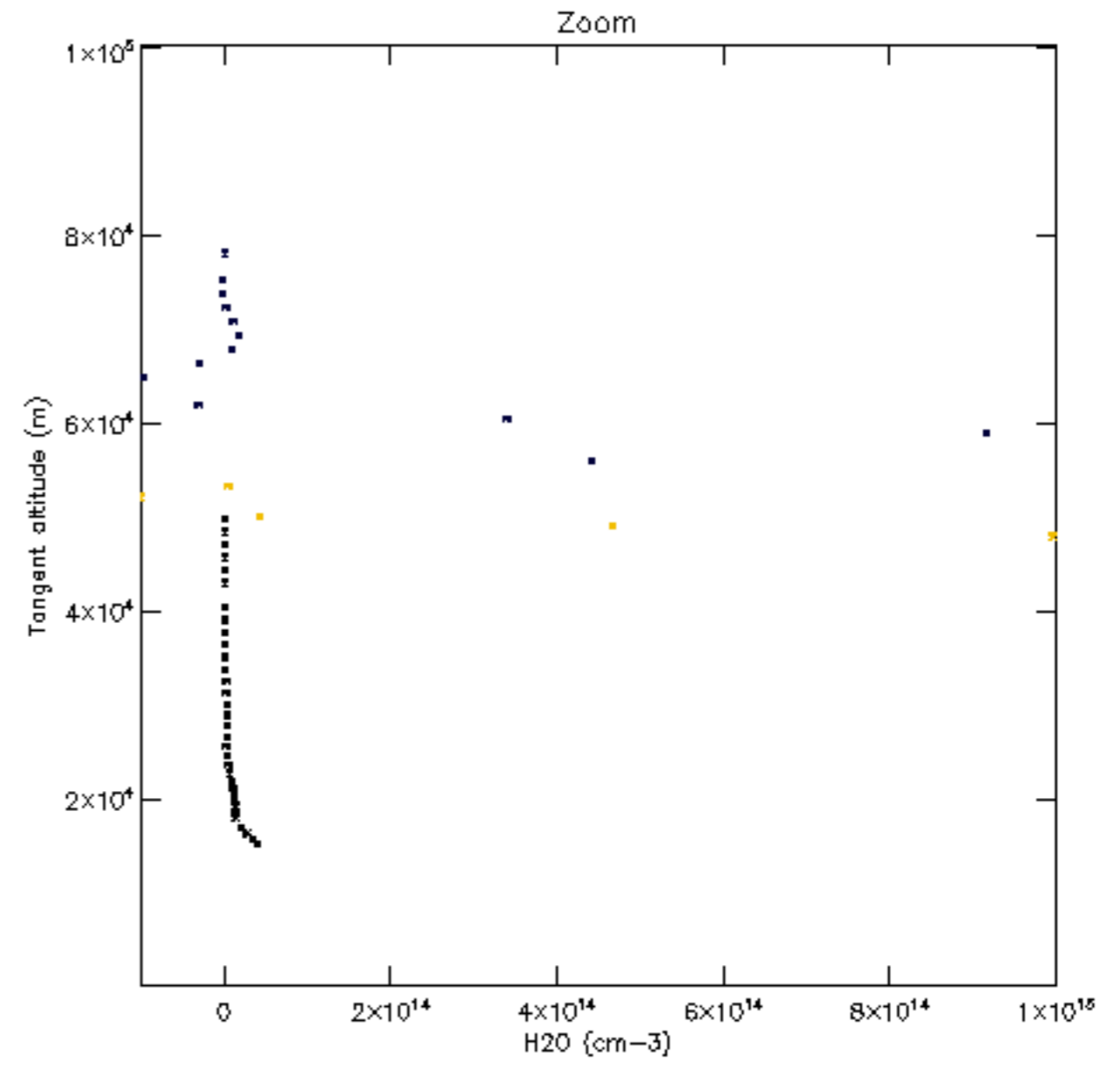
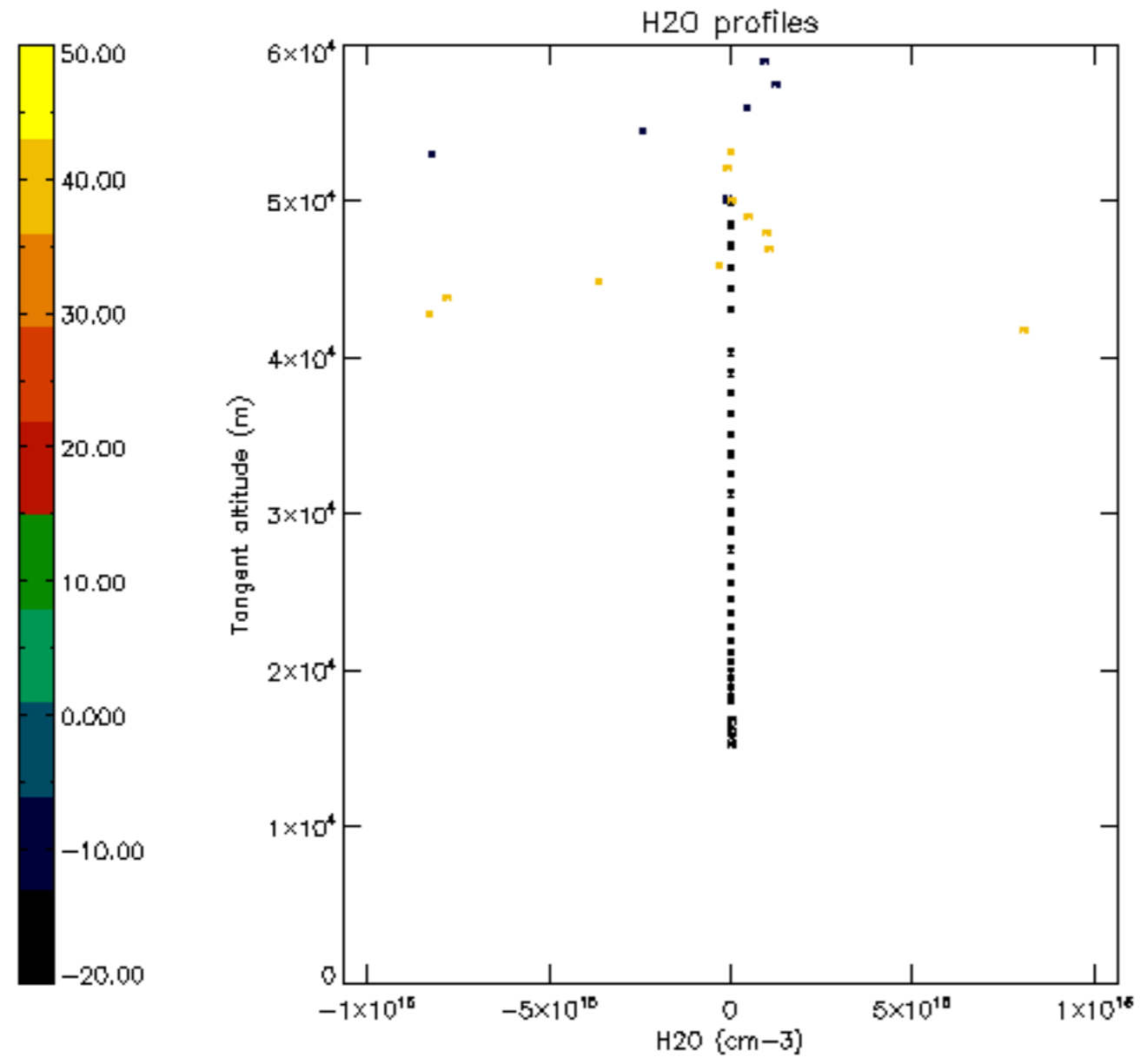


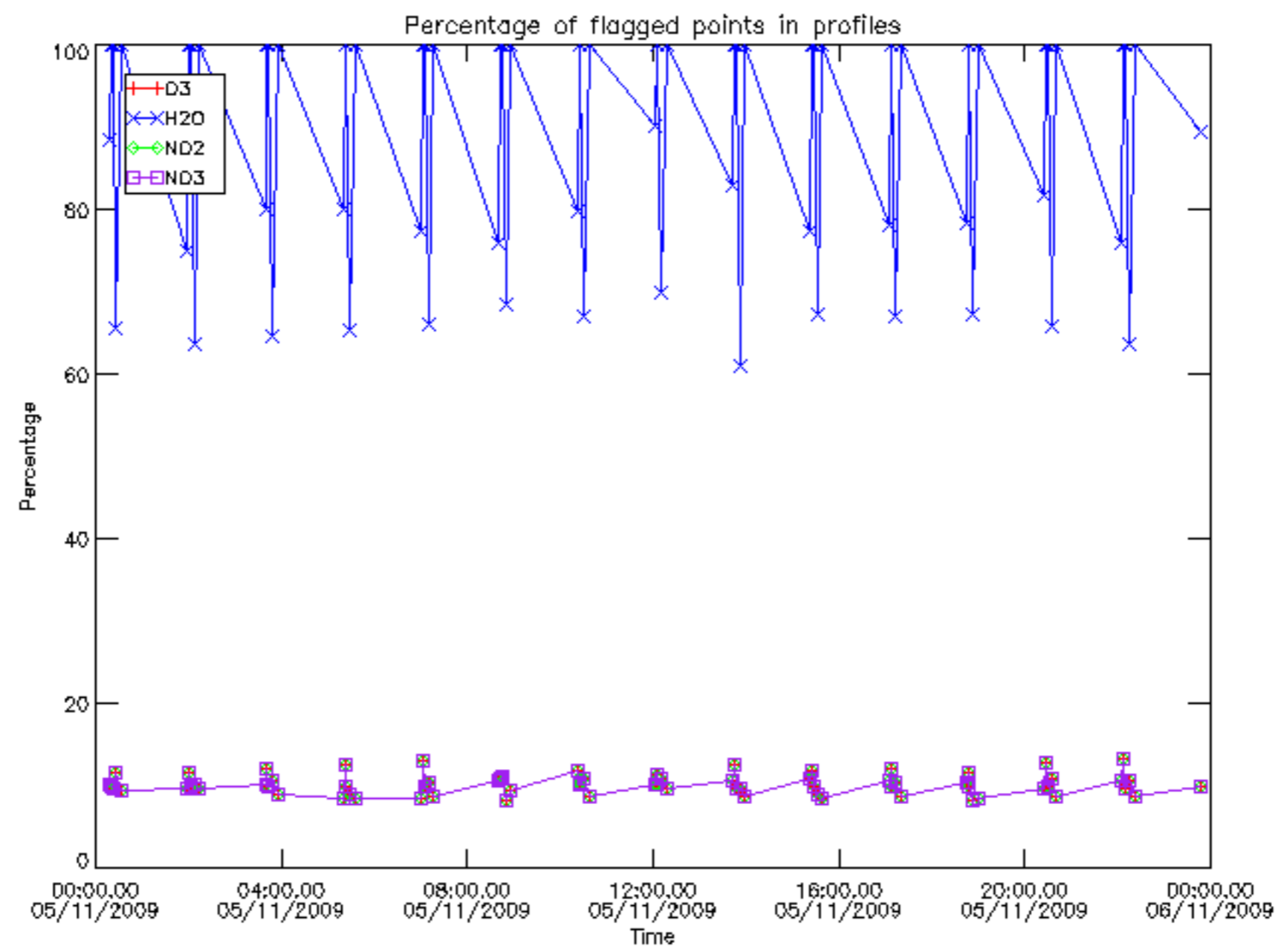




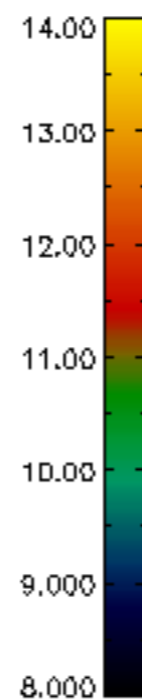
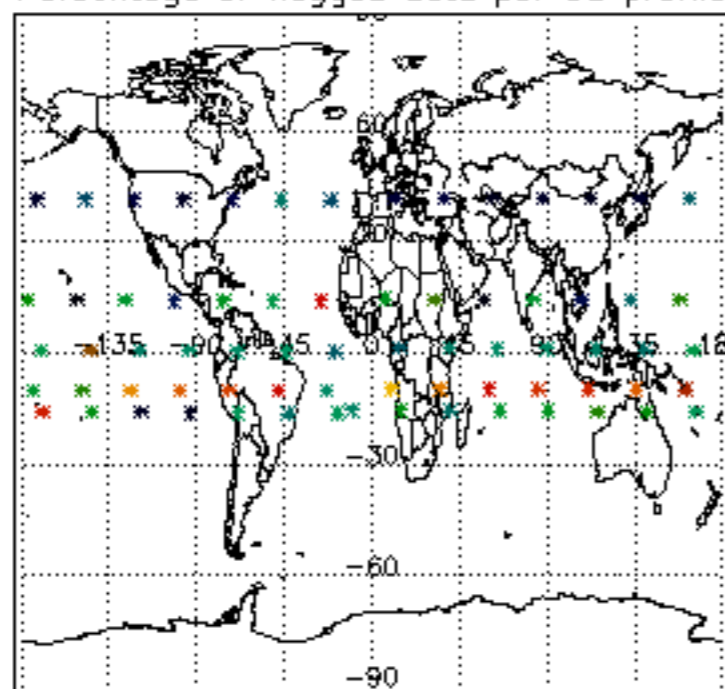




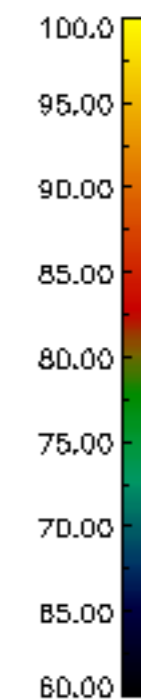
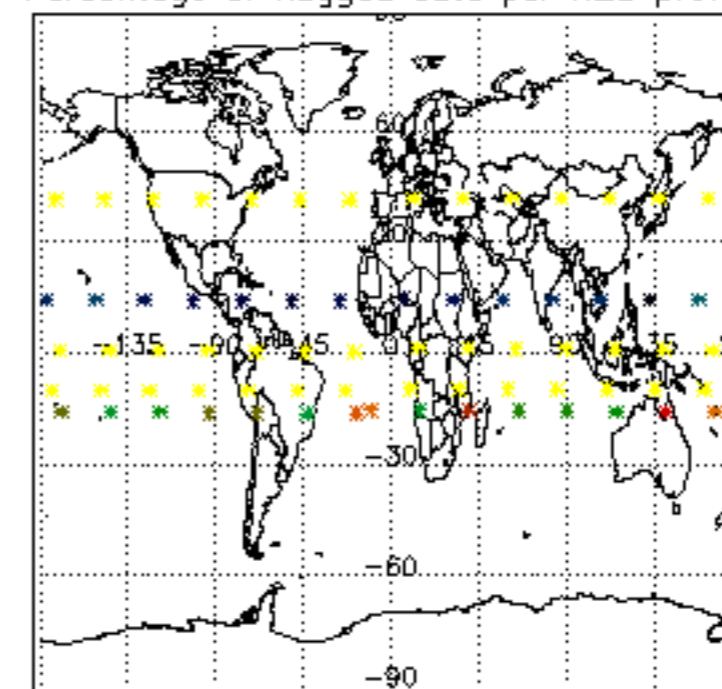




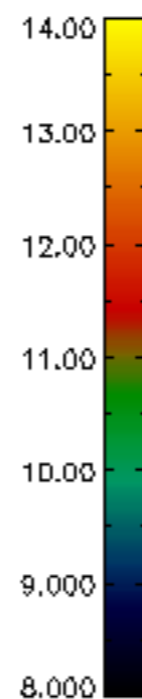
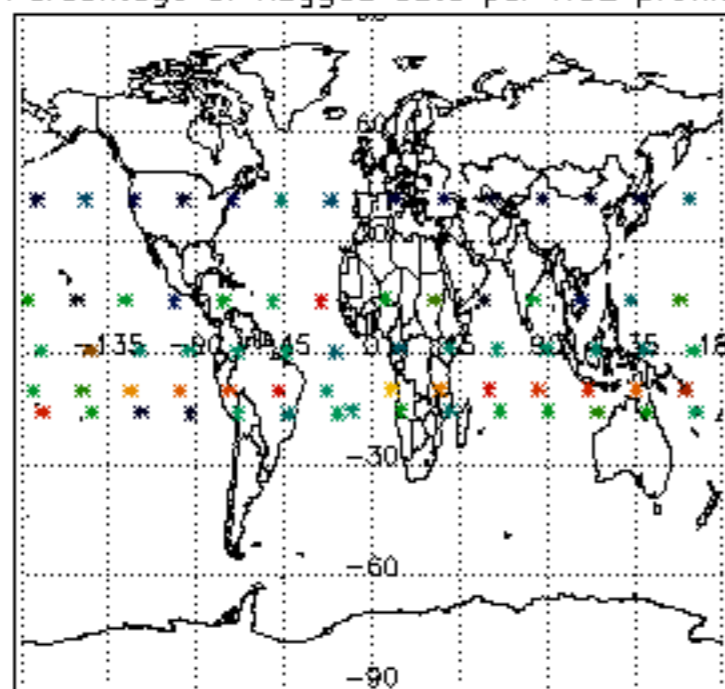
Percentage of flagged data per D3 profile



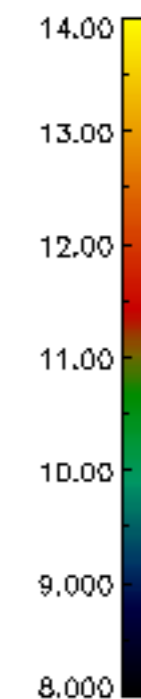
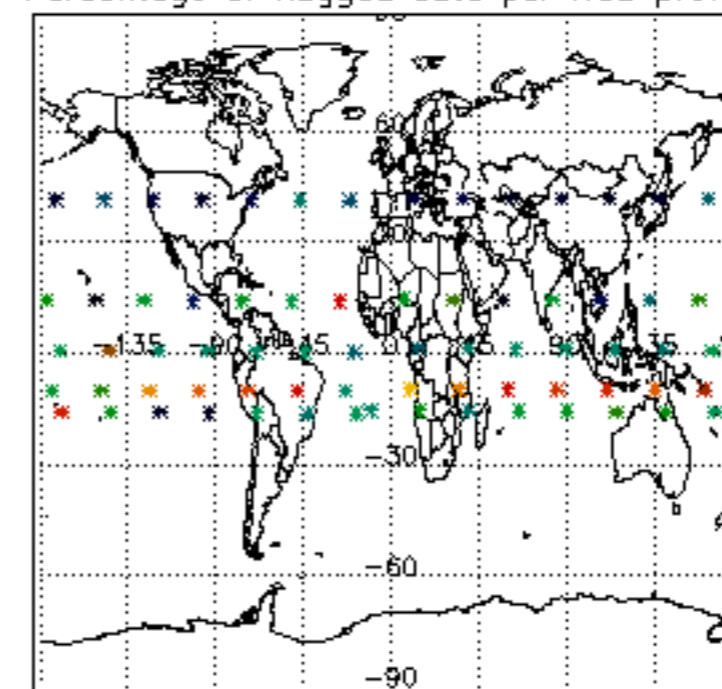
Percentage of flagged data per H2O profile

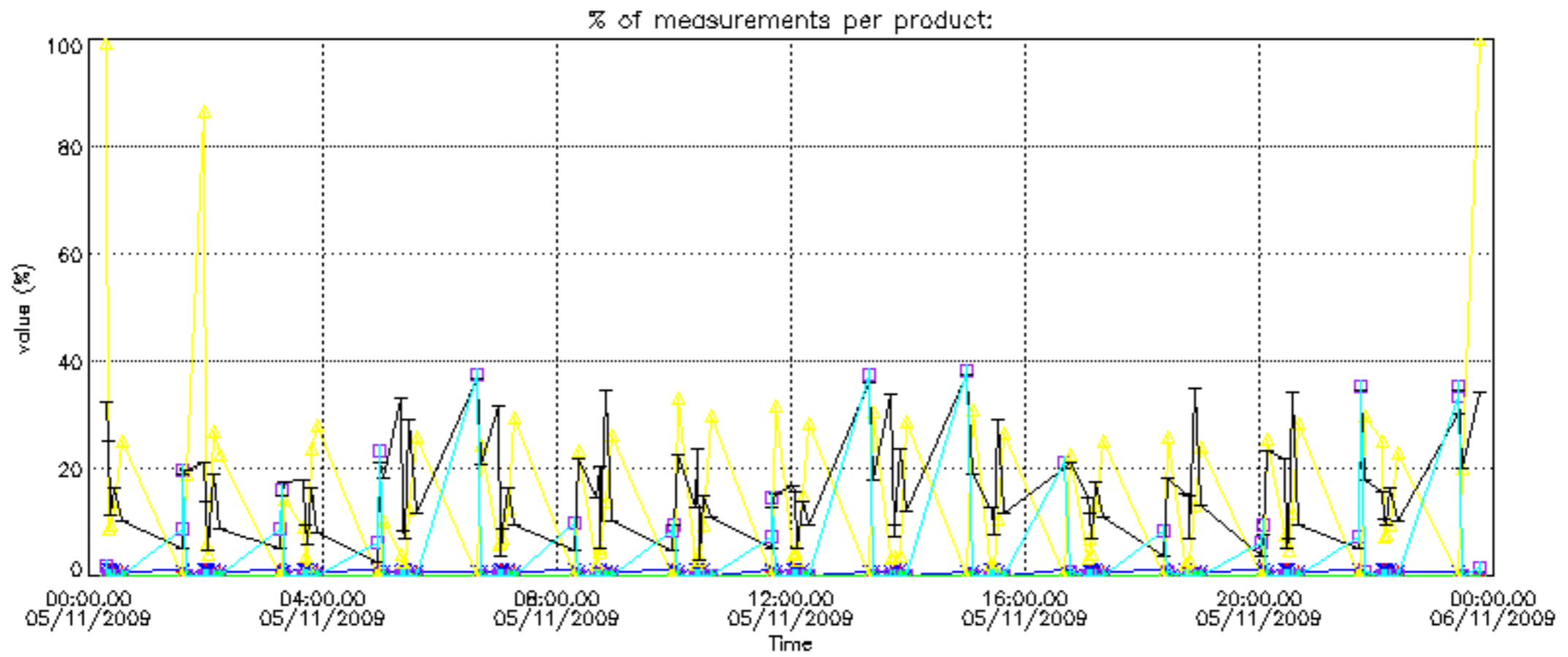


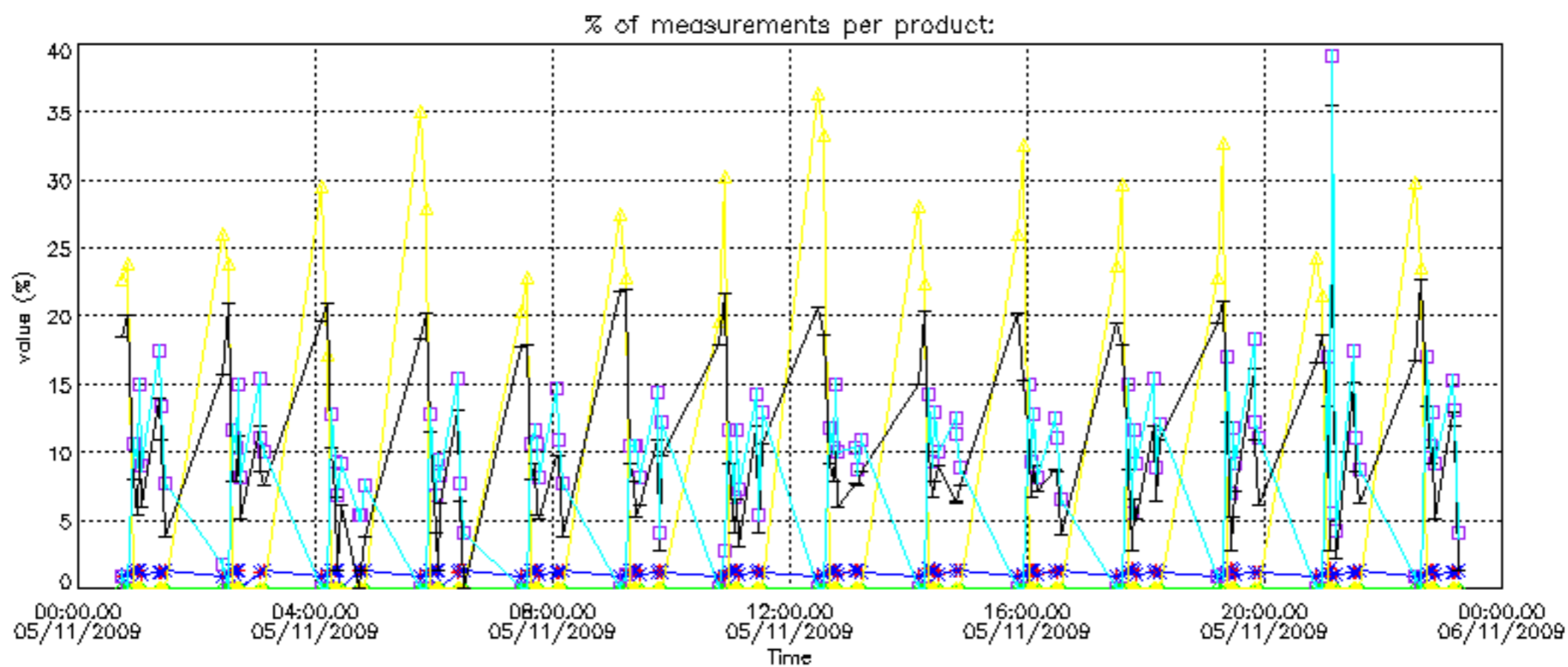
Percentage of flagged data per NO2 profile



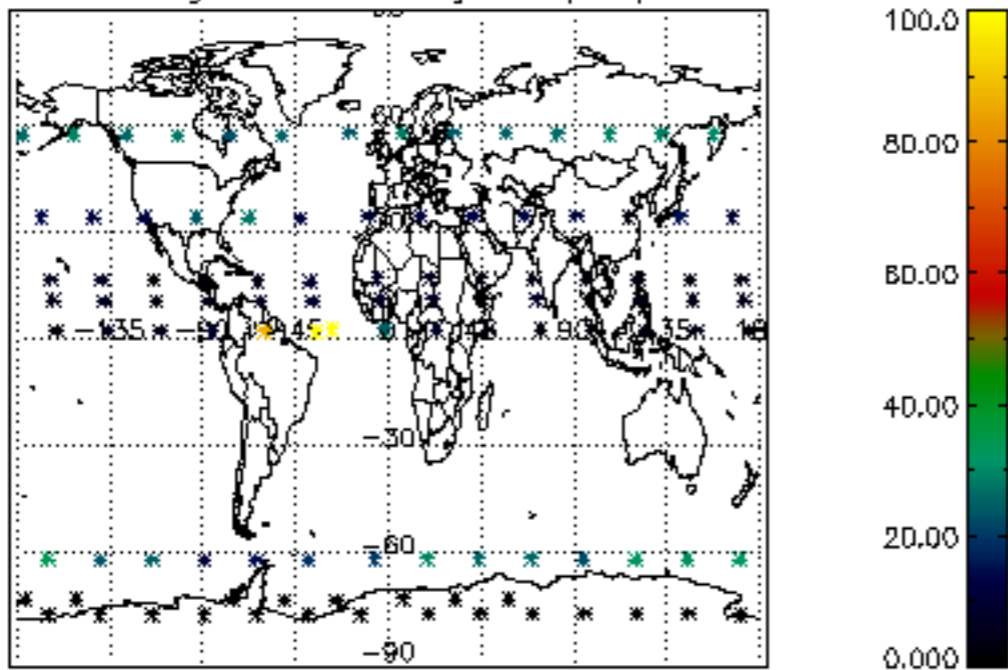
Percentage of flagged data per NO3 profile



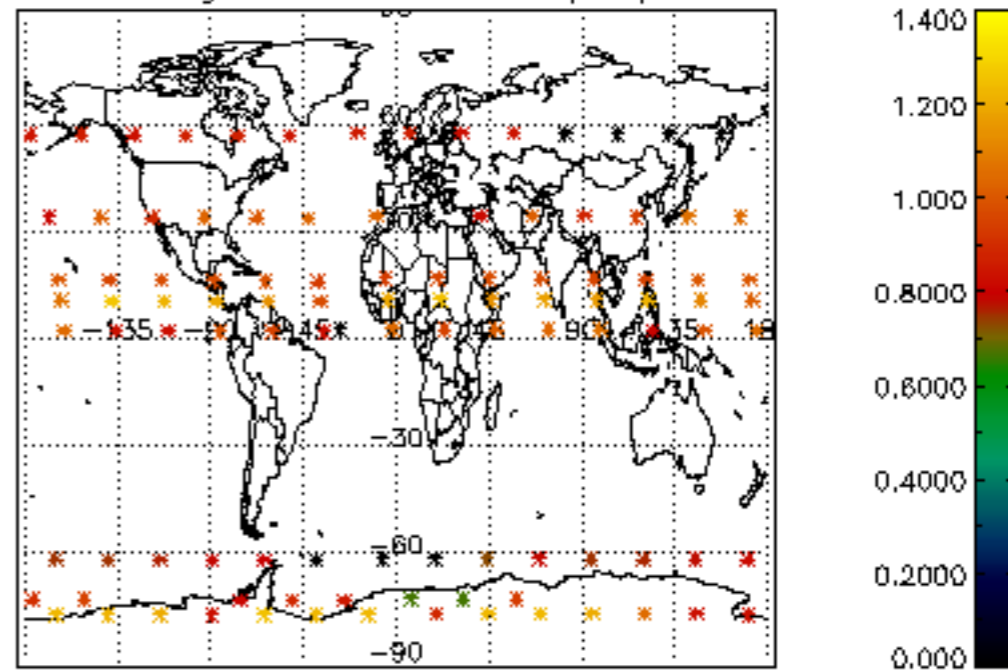




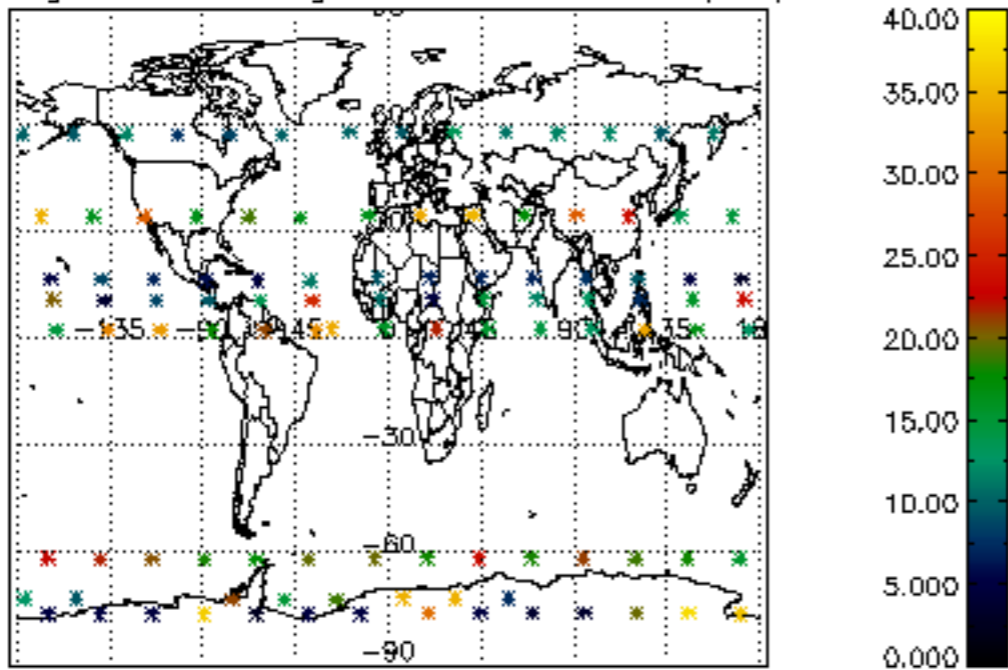
Percentage of cosmic ray hits per profile



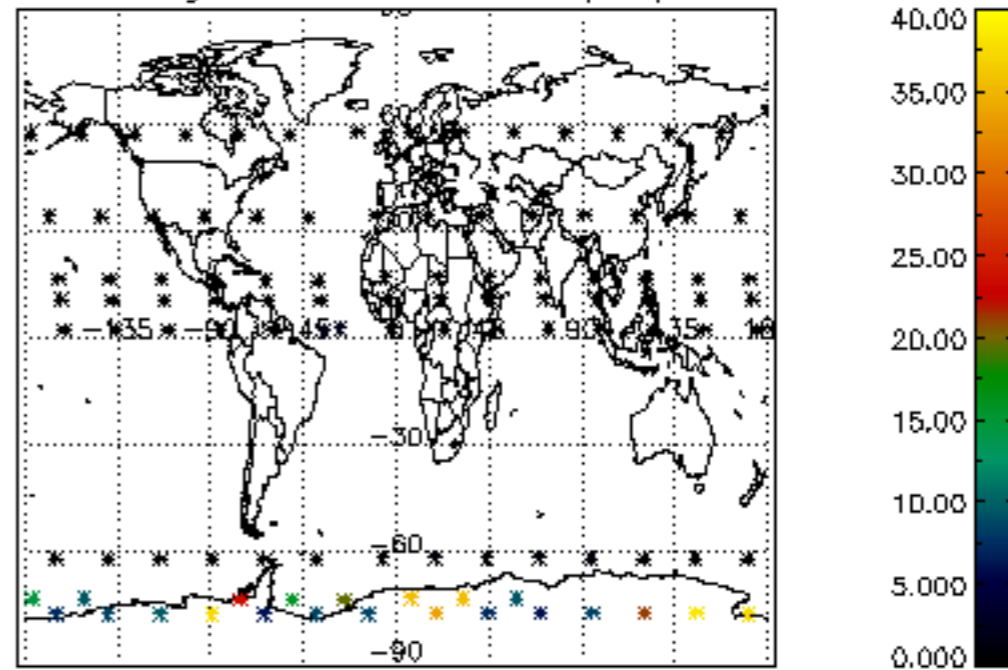
Percentage of datation errors per profile



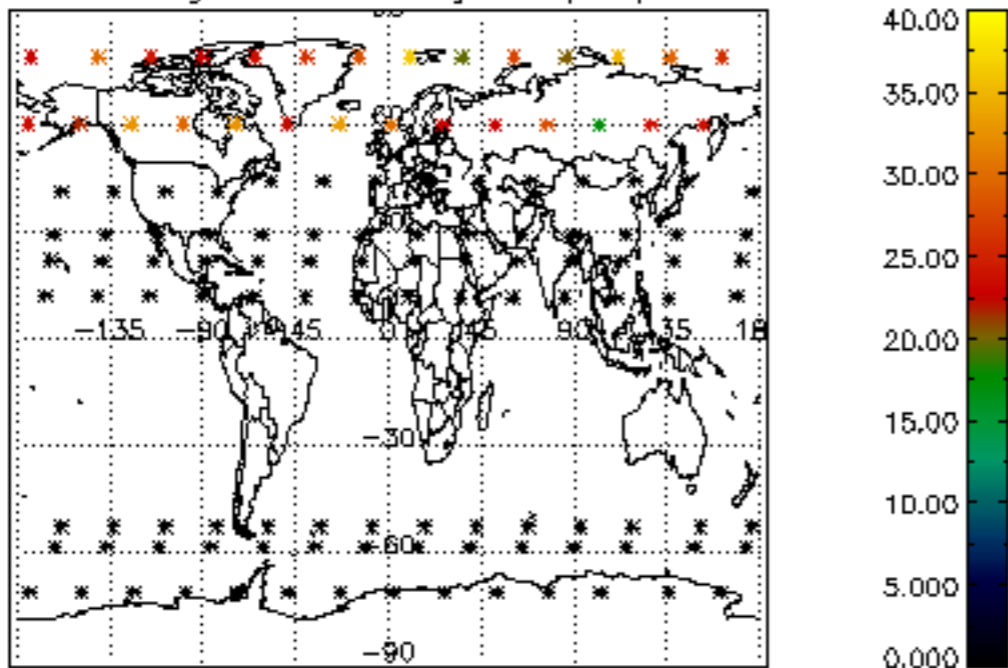
Percentage of star falling outside central band per profile



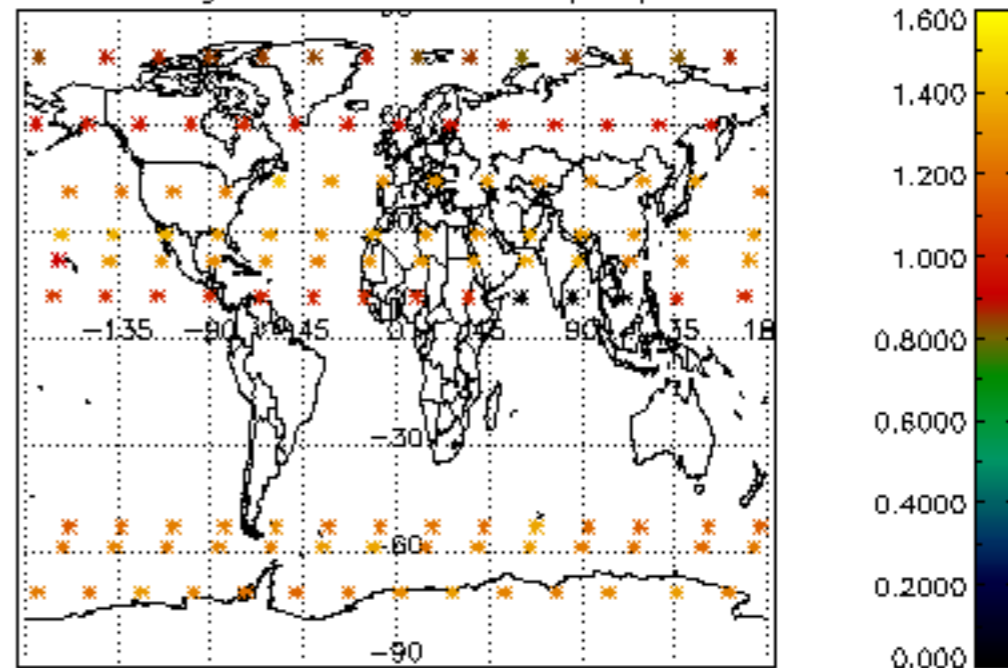
Percentage of saturation errors per profile



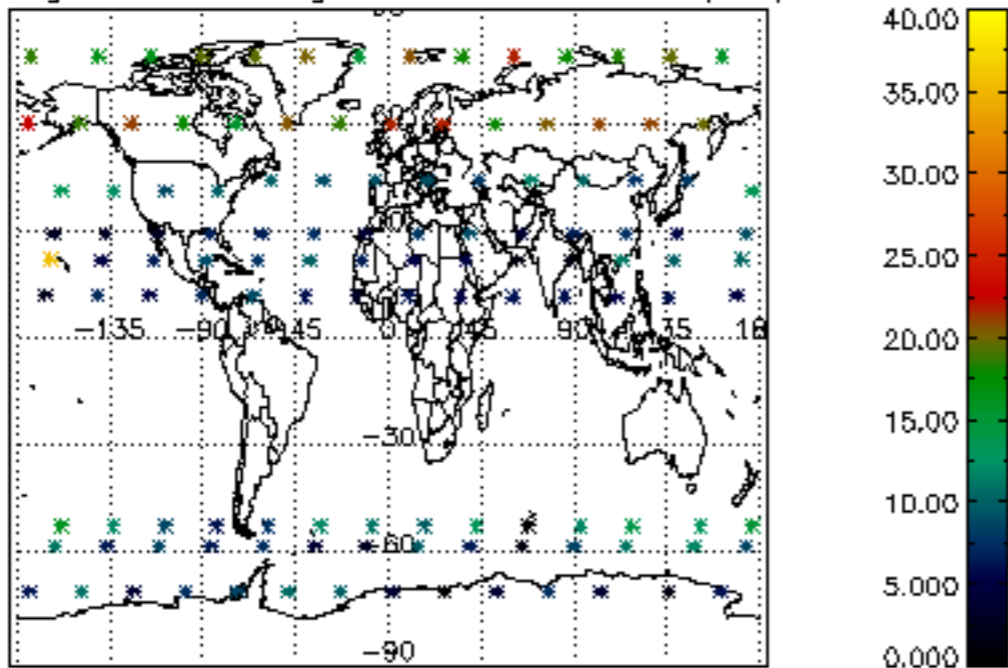
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

