

# GOMOS Level 2 Daily Report

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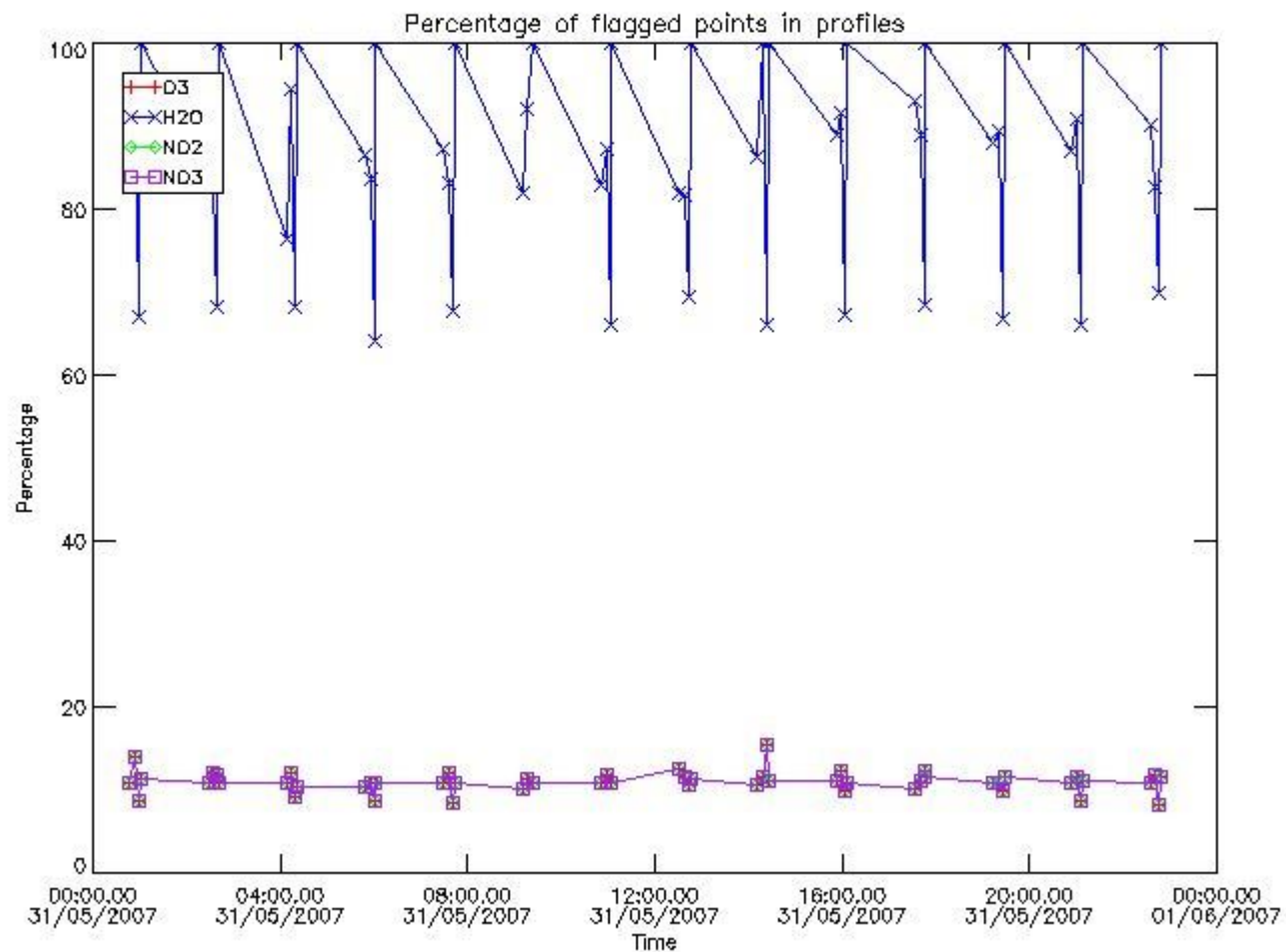


279	GOM_NL__2PRFIN20070531_224646_000000622058_00345_27453_5117.N1	31-MAY-2007 22:46:46	Dark	62.000	63	Bet Gru	2.1500	2800.0	124	27453	No
280	GOM_NL__2PRFIN20070531_224838_000000452058_00345_27453_5118.N1	31-MAY-2007 22:48:38	Dark	44.500	31	Alp Gru	1.7340	15200.	89	27453	No
281	GOM_NL__2PRFIN20070531_225339_000000422058_00345_27453_5119.N1	31-MAY-2007 22:53:39	Straylight	42.000	45	Alp Pav	1.9400	26000.	84	27453	No
282	GOM_NL__2PRFIN20070531_225953_000000412058_00345_27453_5120.N1	31-MAY-2007 22:59:53	Straylight	41.000	141	Bet Ara	2.8400	4600.0	82	27453	No
283	GOM_NL__2PRFIN20070531_230107_000000422058_00345_27453_5121.N1	31-MAY-2007 23:01:07	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	27453	No
284	GOM_NL__2PRFIN20070531_230248_000000452058_00345_27453_5122.N1	31-MAY-2007 23:02:48	Straylight	44.500	40	The Sco	1.8590	7100.0	89	27453	No
285	GOM_NL__2PRFIN20070531_230437_000000462058_00345_27453_5123.N1	31-MAY-2007 23:04:37	Twilight_stray	46.000	25	35Lam Sco	1.6200	28000.	92	27453	No
286	GOM_NL__2PRFIN20070531_230624_000000442058_00345_27453_5124.N1	31-MAY-2007 23:06:24	Twilight_stray	44.000	75	26Eps Sco	2.2910	4250.0	88	27453	No
287	GOM_NL__2PRFIN20070531_231118_000000382058_00345_27453_5125.N1	31-MAY-2007 23:11:18	Bright	38.000	97	8Bet1Sco	2.5610	30000.	76	27453	No
288	GOM_NL__2PRFIN20070531_231358_000000422058_00345_27453_5126.N1	31-MAY-2007 23:13:58	Bright	41.500	98	13Zet Oph	2.5710	30000.	83	27453	No
289	GOM_NL__2PRFIN20070531_231609_000000392058_00345_27453_5127.N1	31-MAY-2007 23:16:09	Bright	39.000	120	1Del Oph	2.7340	3200.0	78	27453	No
290	GOM_NL__2PRFIN20070531_231910_000000372058_00345_27453_5128.N1	31-MAY-2007 23:19:10	Bright	36.500	102	24Alp Ser	2.6000	4250.0	73	27453	No
291	GOM_NL__2PRFIN20070531_232505_000000372058_00345_27453_5129.N1	31-MAY-2007 23:25:05	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	27453	No
292	GOM_NL__2PRFIN20070531_233542_000000382058_00345_27453_5130.N1	31-MAY-2007 23:35:42	Bright	37.500	119	14Eta Dra	2.7270	4700.0	75	27453	No
293	GOM_NL__2PRFIN20070531_233822_000000382058_00345_27453_5131.N1	31-MAY-2007 23:38:22	Bright	38.000	60	7Bet UMi	2.0810	3950.0	76	27453	No
294	GOM_NL__2PRFIN20070531_234302_000000352058_00345_27453_5132.N1	31-MAY-2007 23:43:02	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	27453	No
295	GOM_NL__2PRFIN20070531_235105_000000362058_00345_27453_5133.N1	31-MAY-2007 23:51:05	Bright	35.500	76	27Gam Cas	2.3000	30000.	71	27453	No
296	GOM_NL__2PRFIN20070531_235849_000000572058_00345_27453_5134.N1	31-MAY-2007 23:58:49	Bright	56.500	53	43Bet And	2.0480	3300.0	113	27453	No

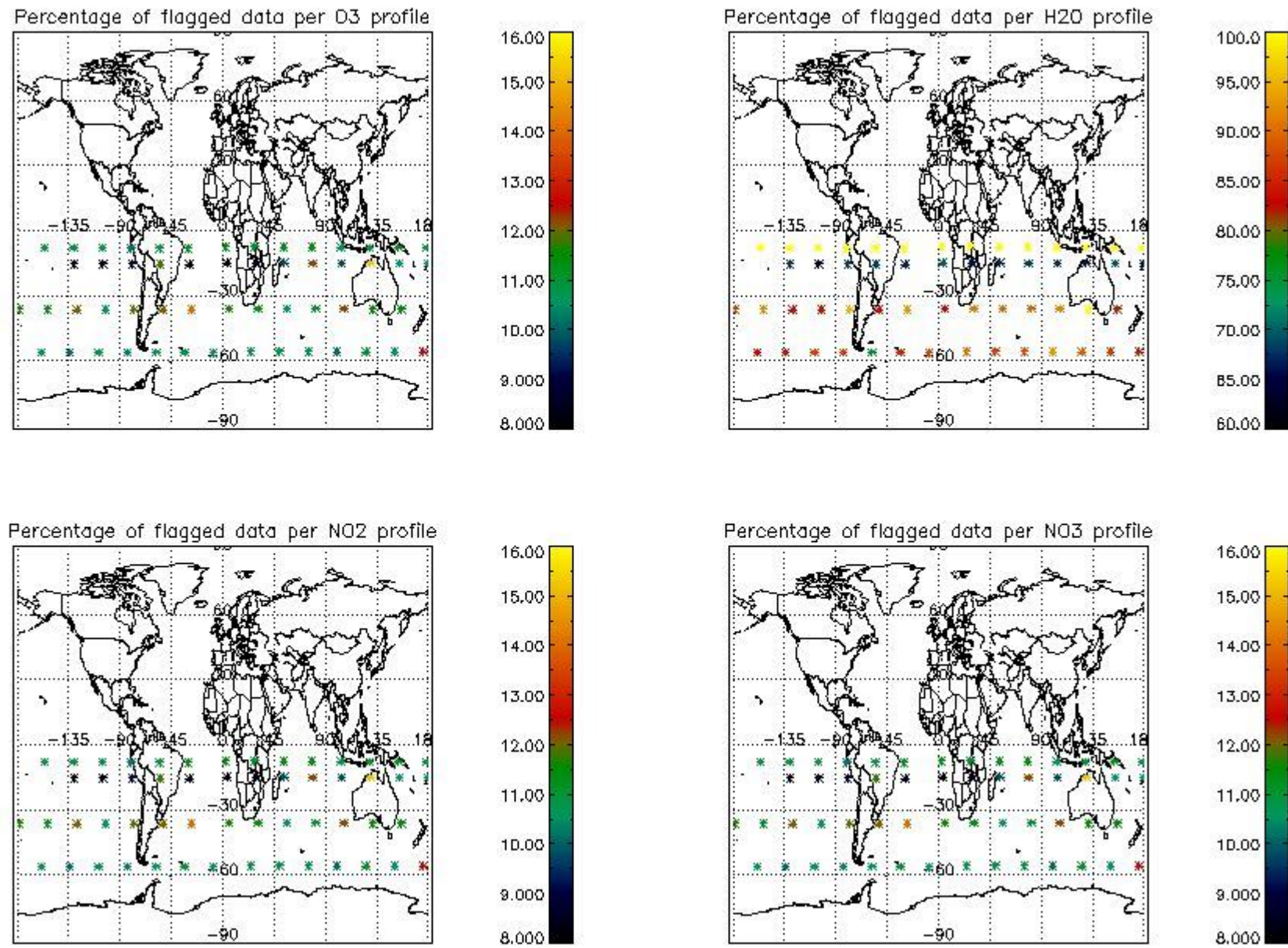
### 3. Quality information per product

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)



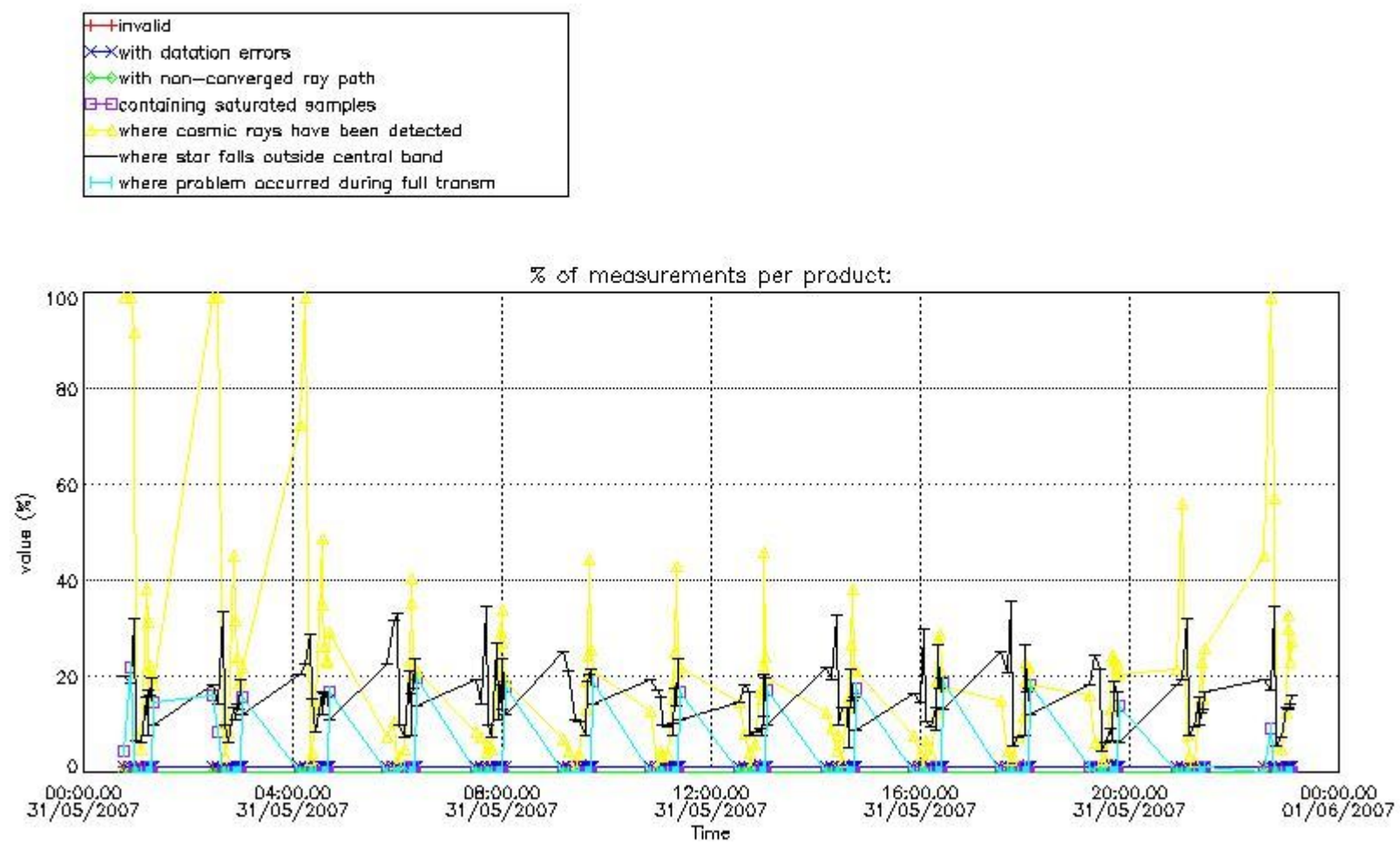
### 4. Level 1 quality information per product

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.

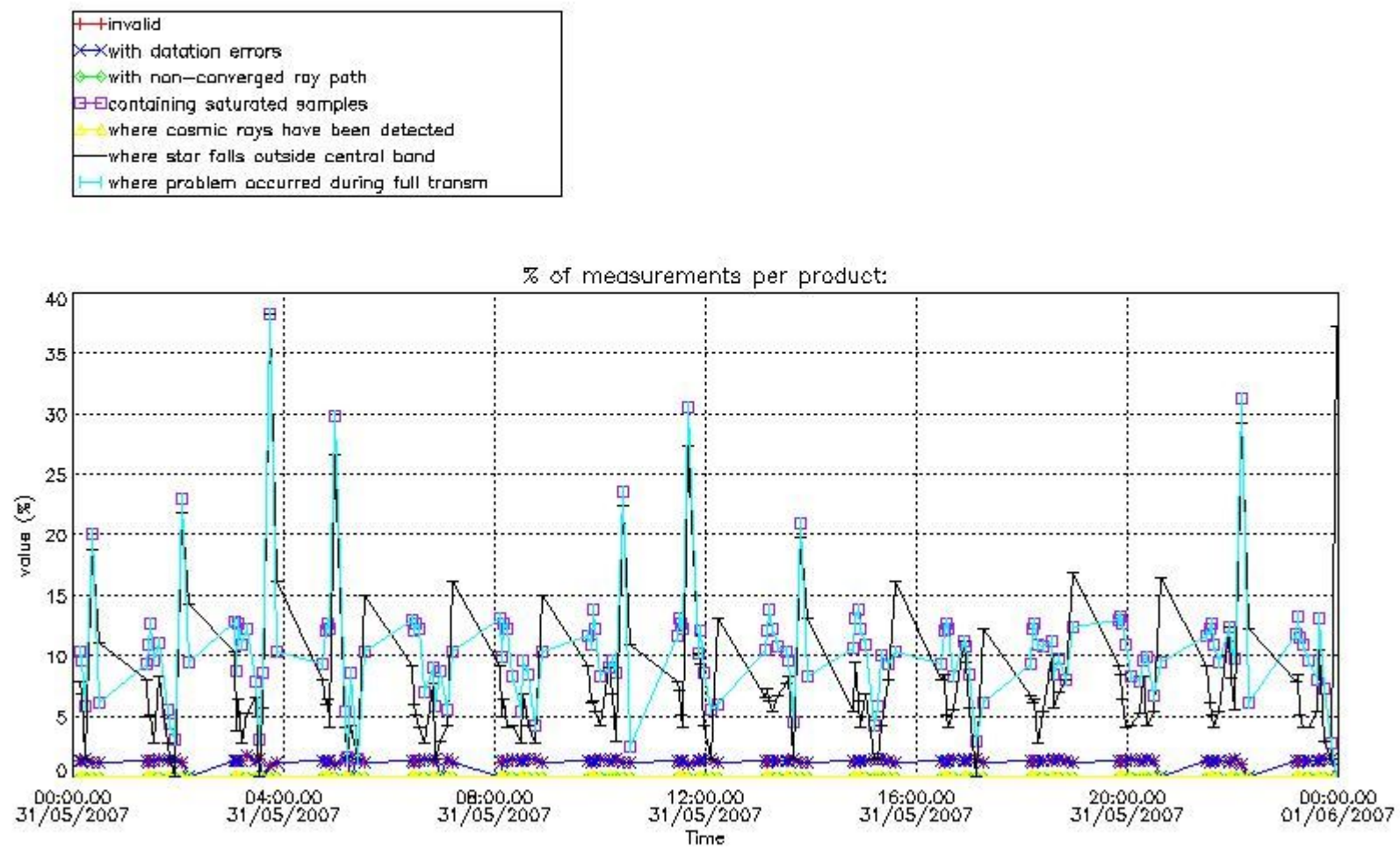
#### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





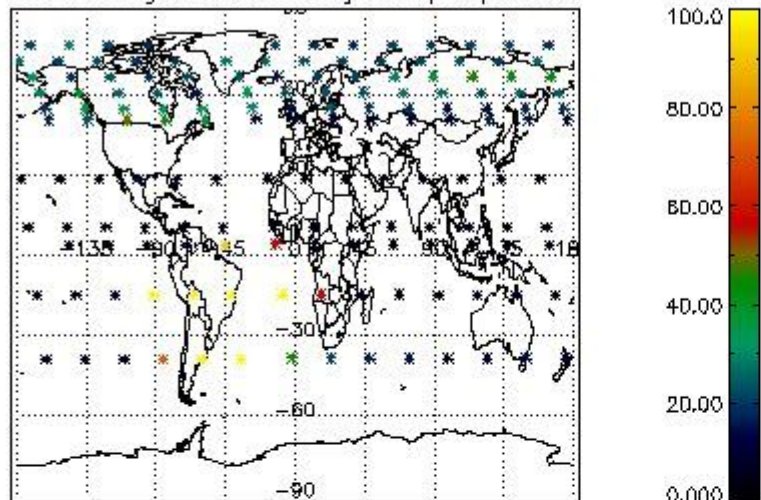
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



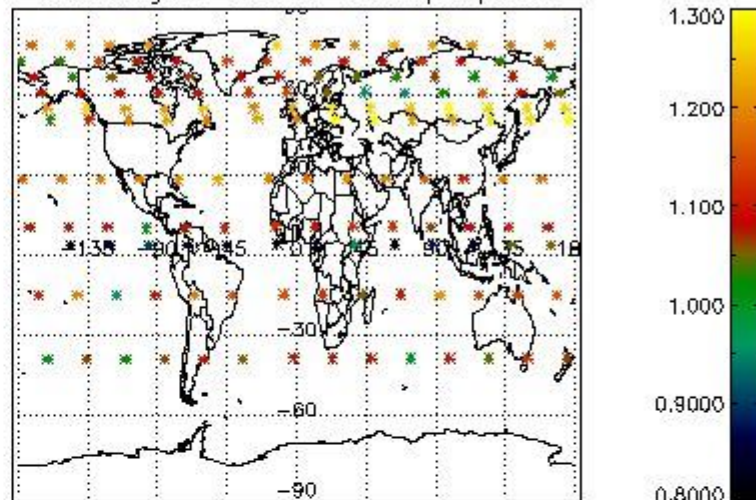
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

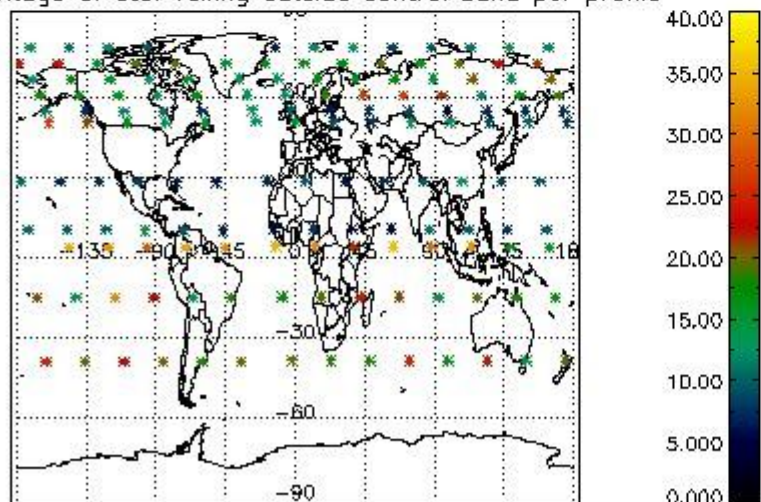
Percentage of cosmic ray hits per profile



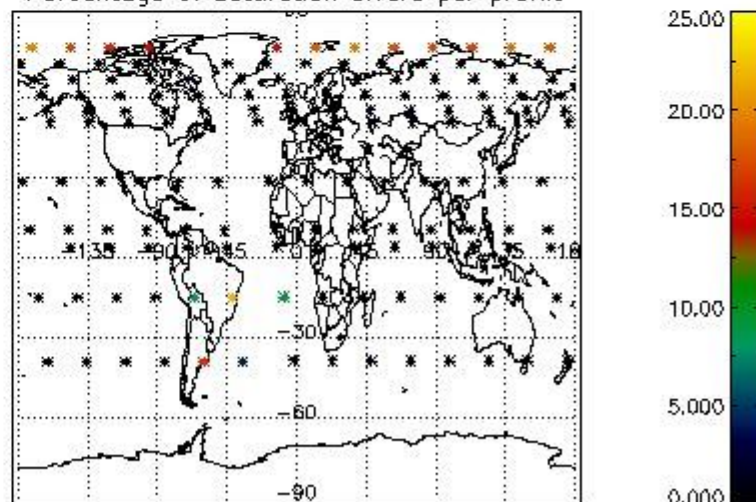
Percentage of datation errors per profile



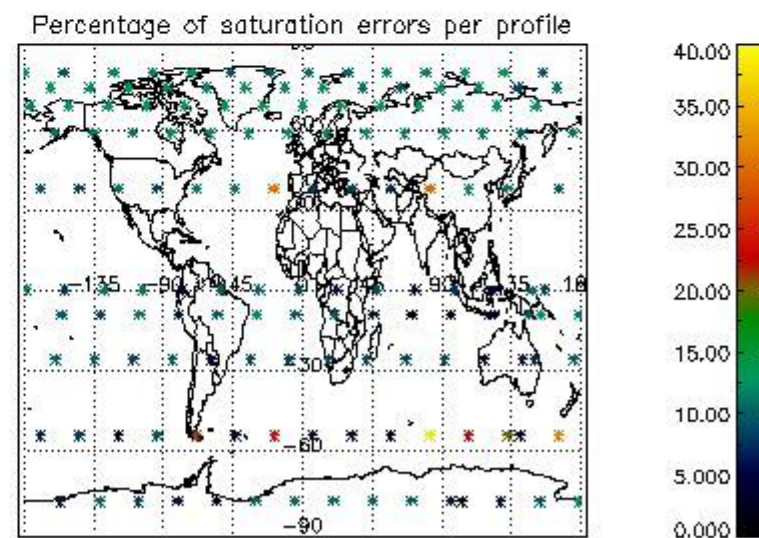
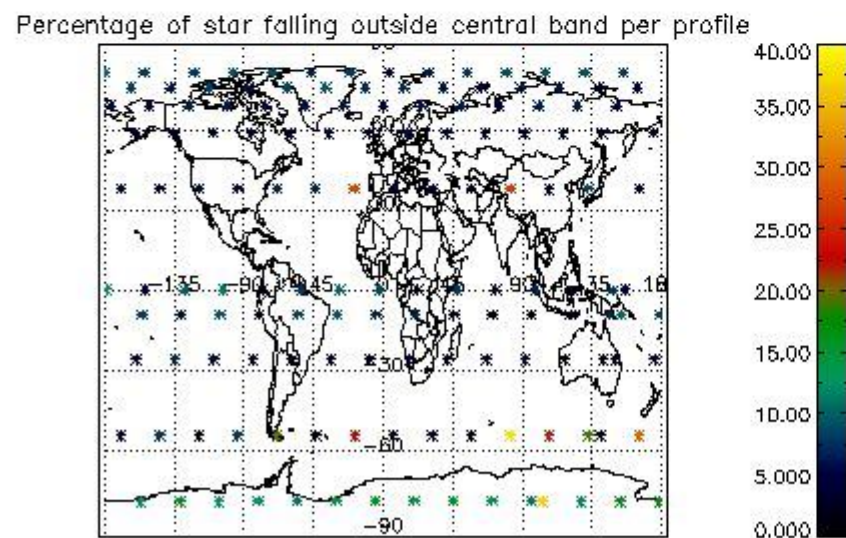
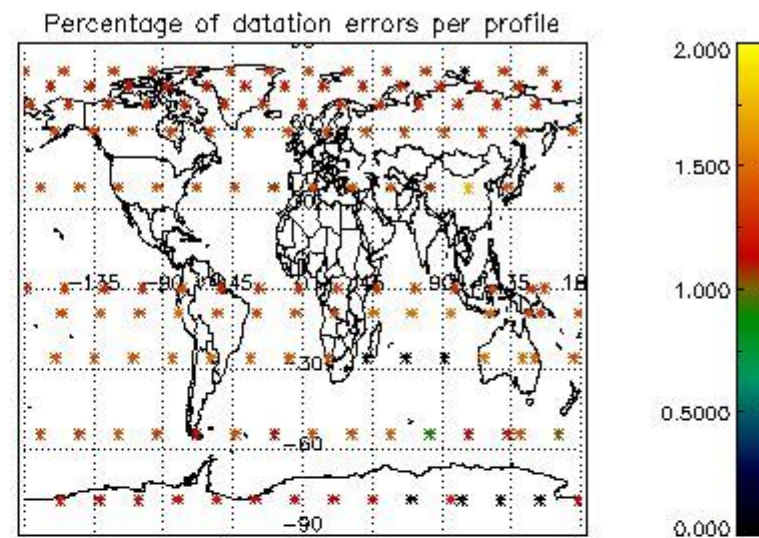
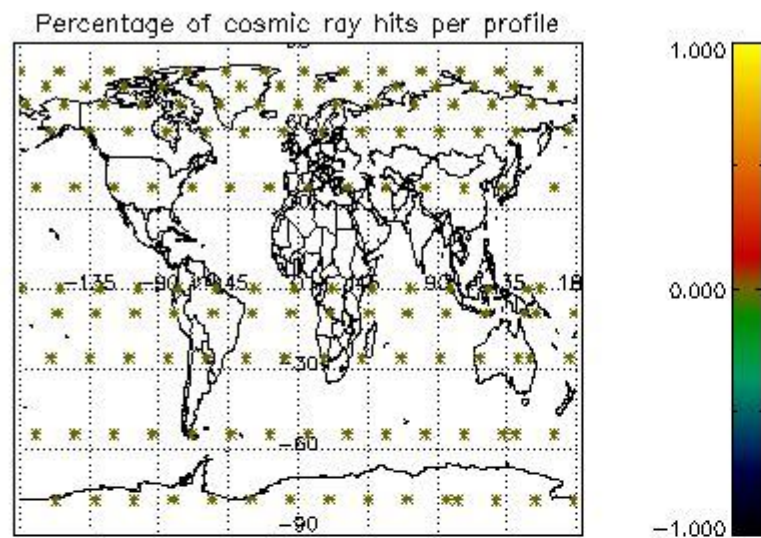
Percentage of star falling outside central band per profile



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

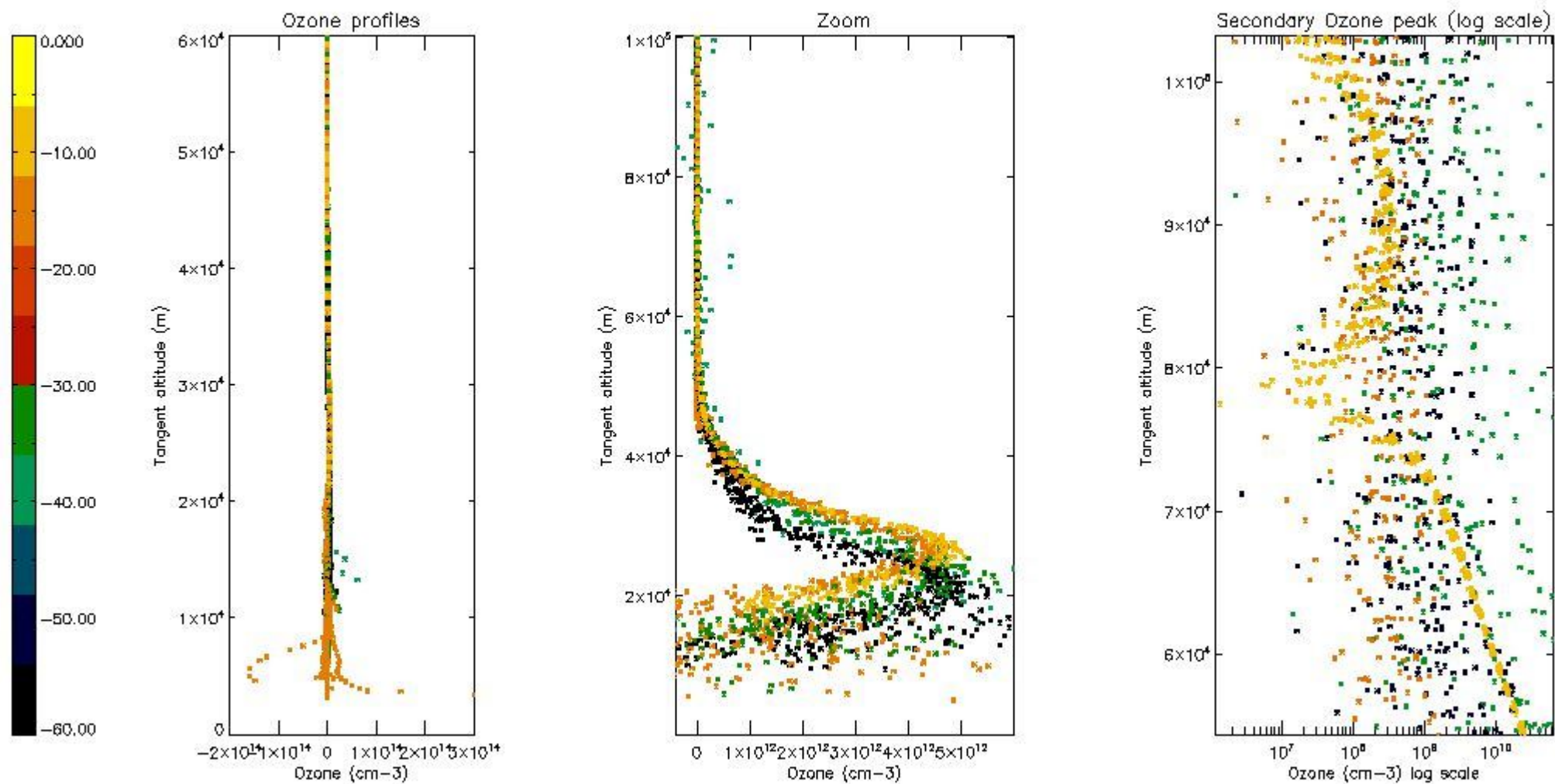
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	22
STD < 20	8

STD < 10	4
STD < 5	3

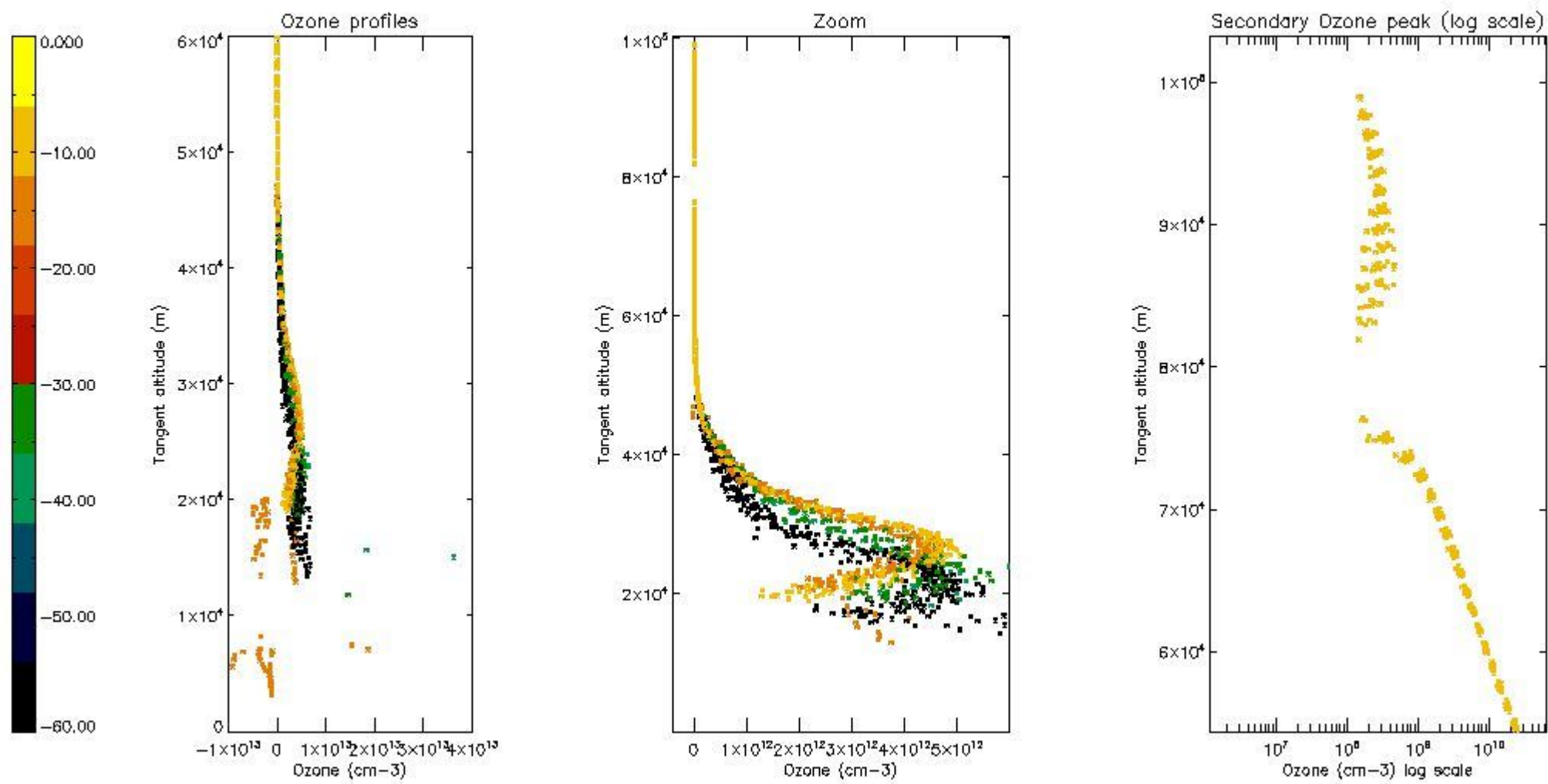
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



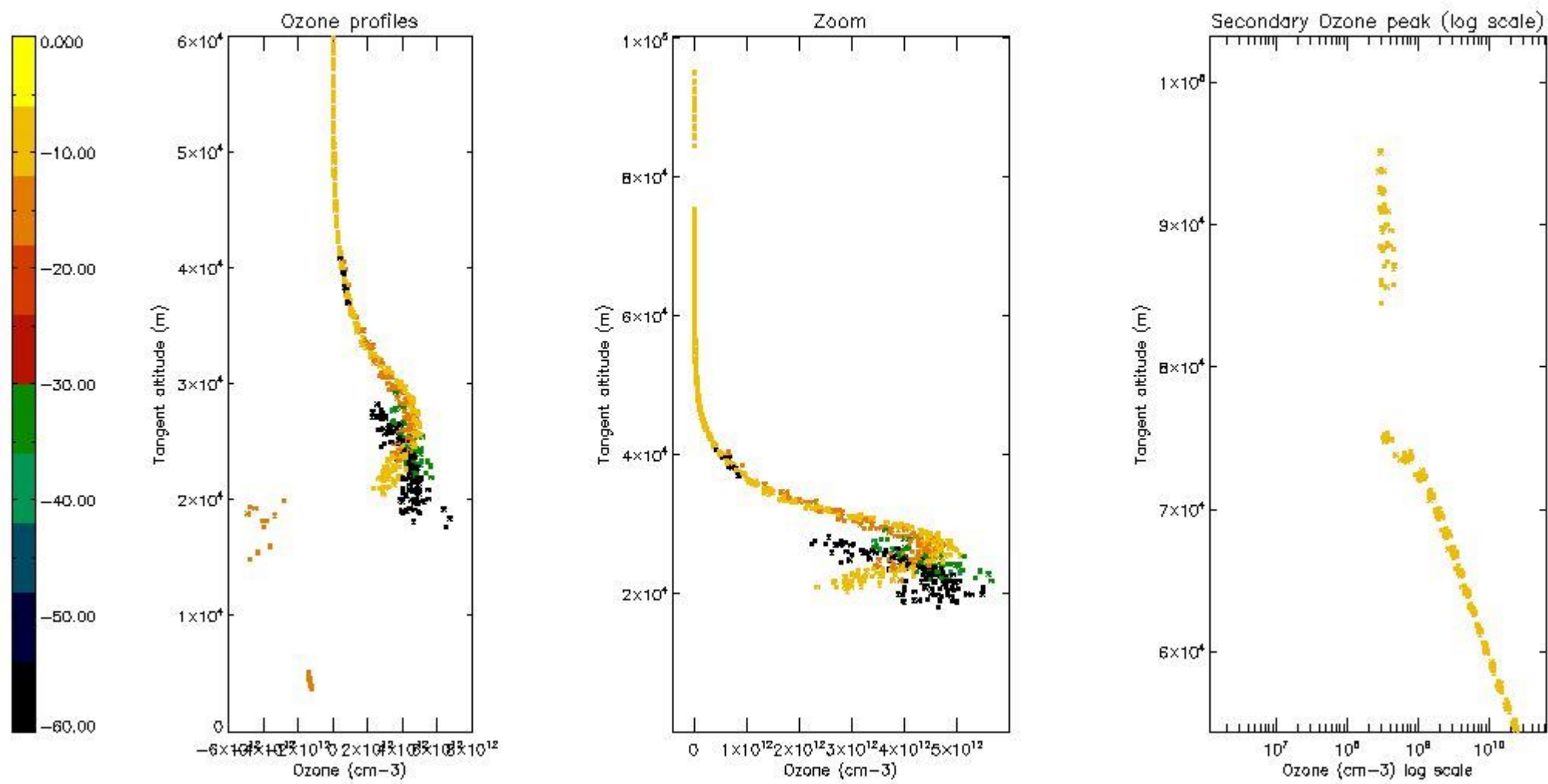
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



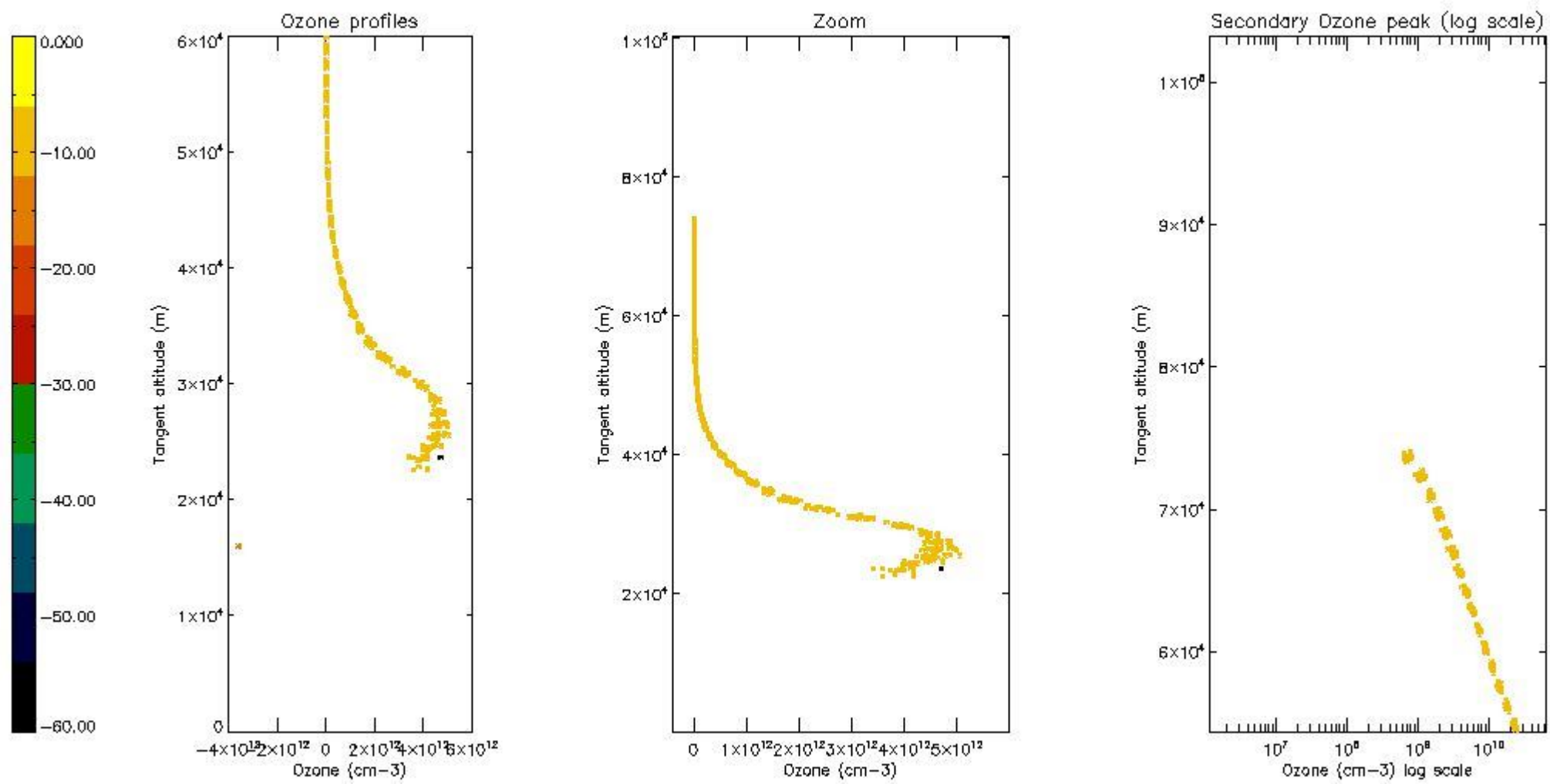
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



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

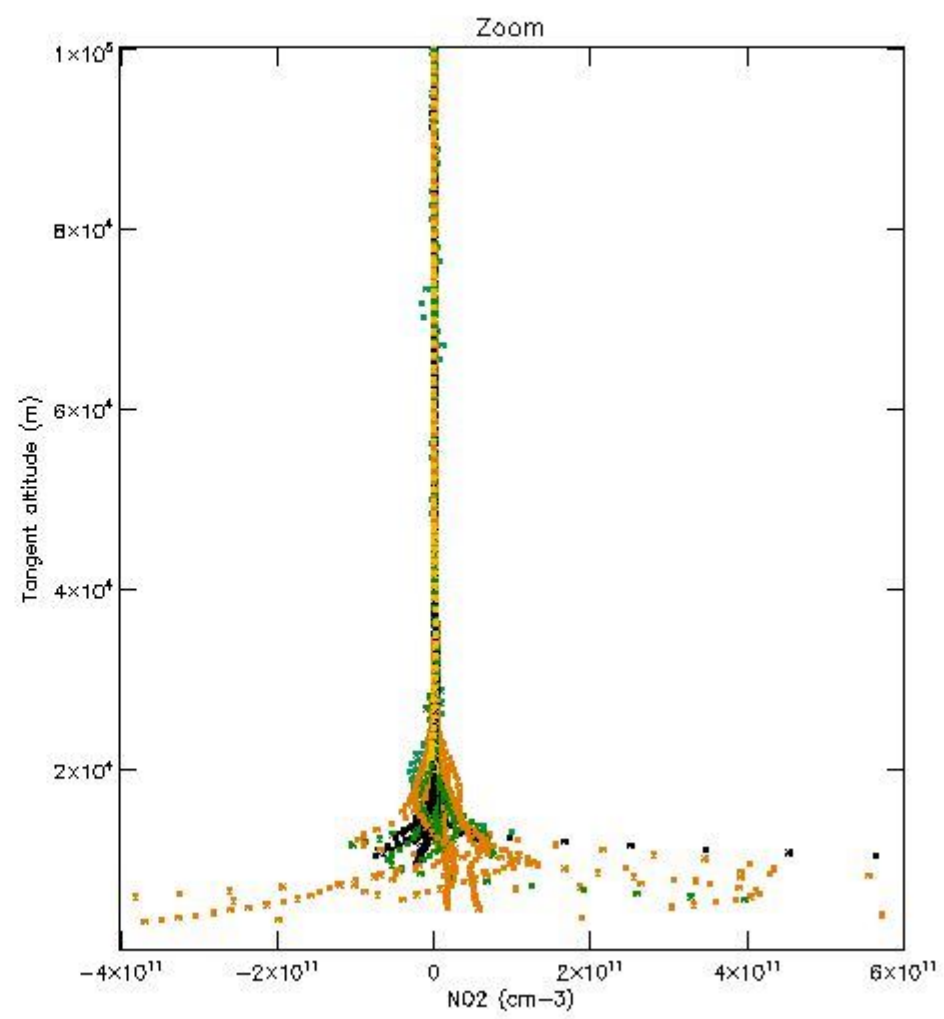
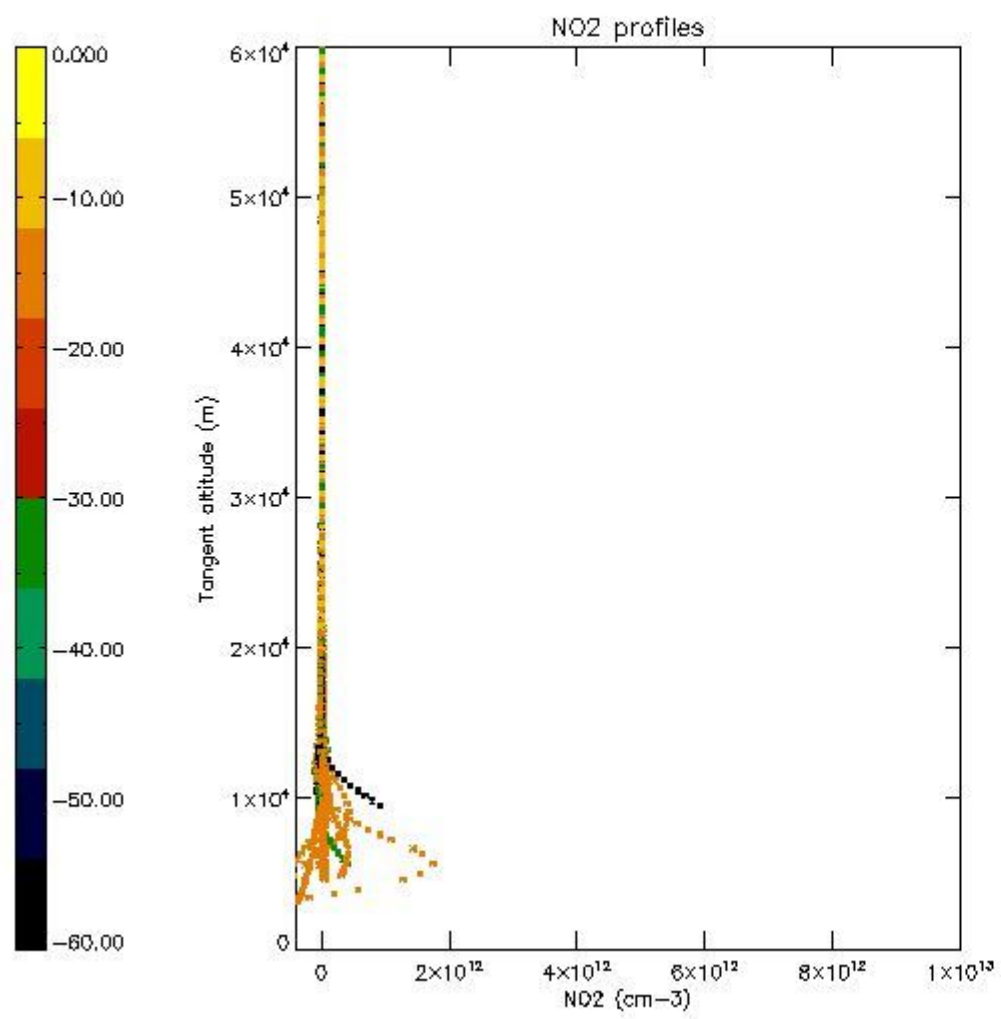
The colorbar represents the latitude.



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

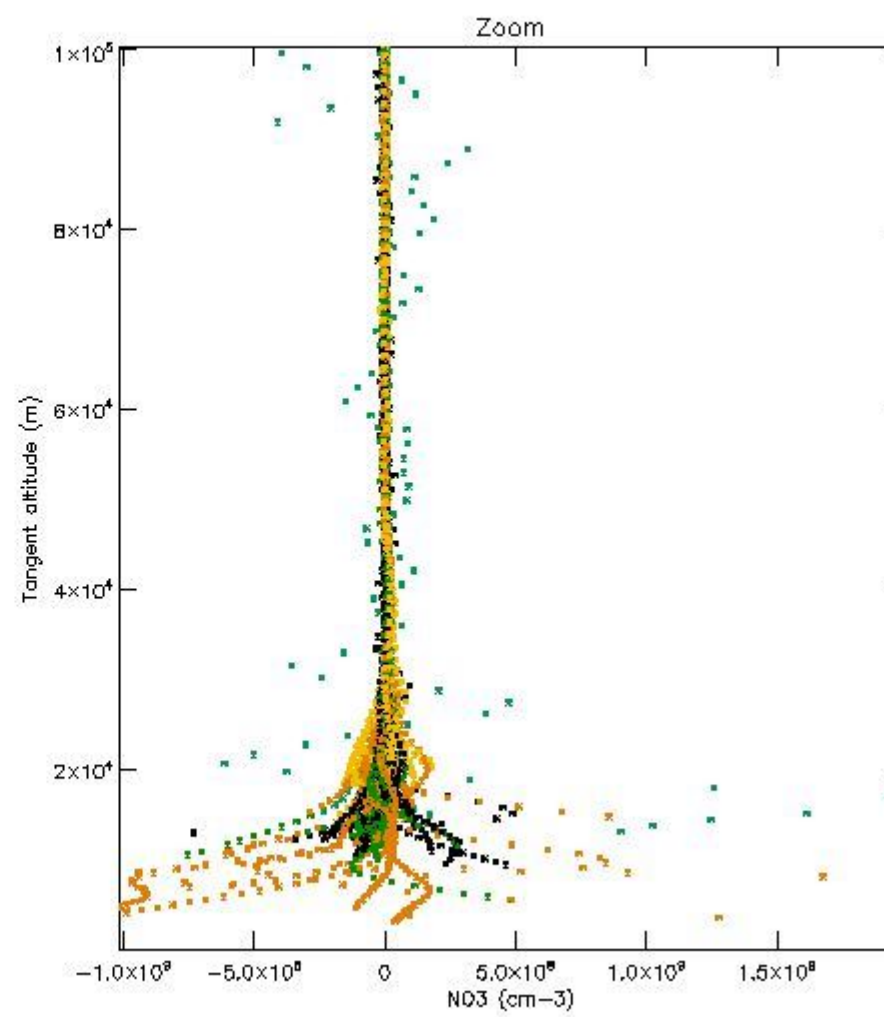
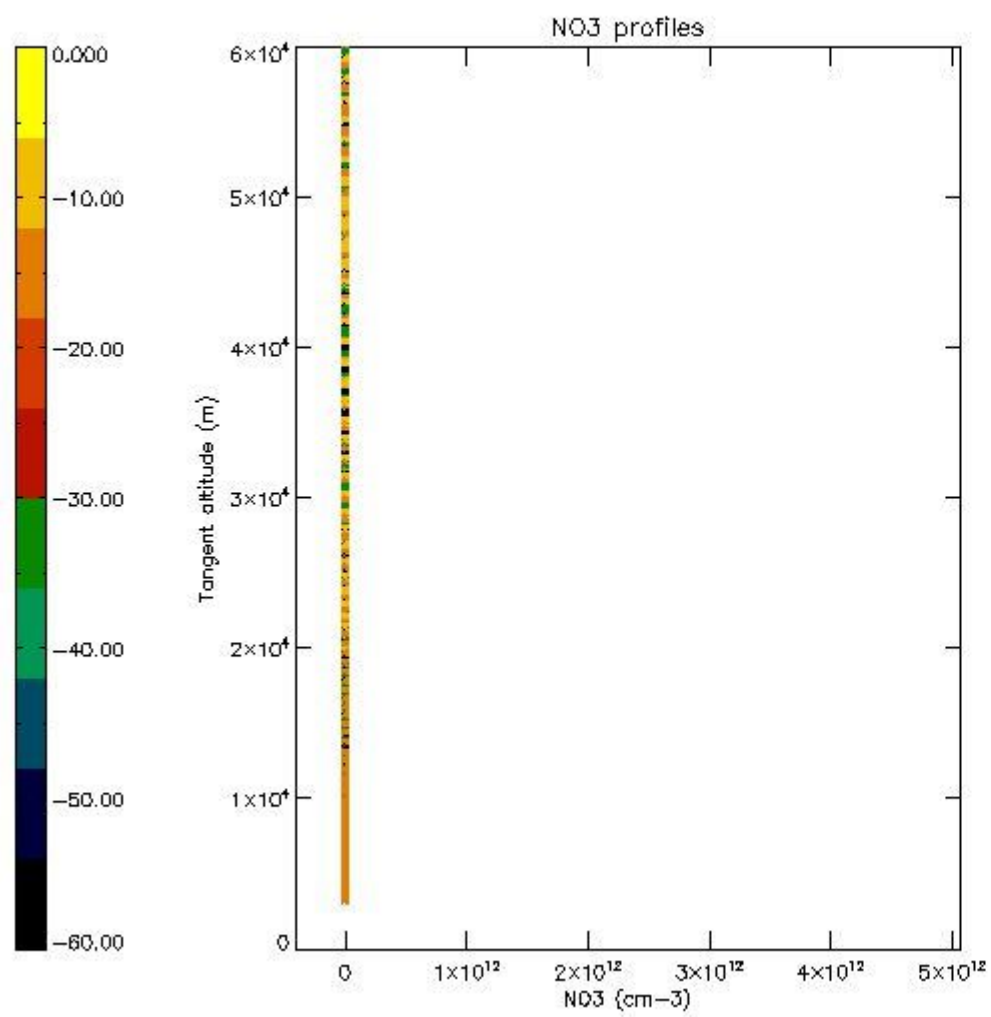
The colorbar represents the latitude.





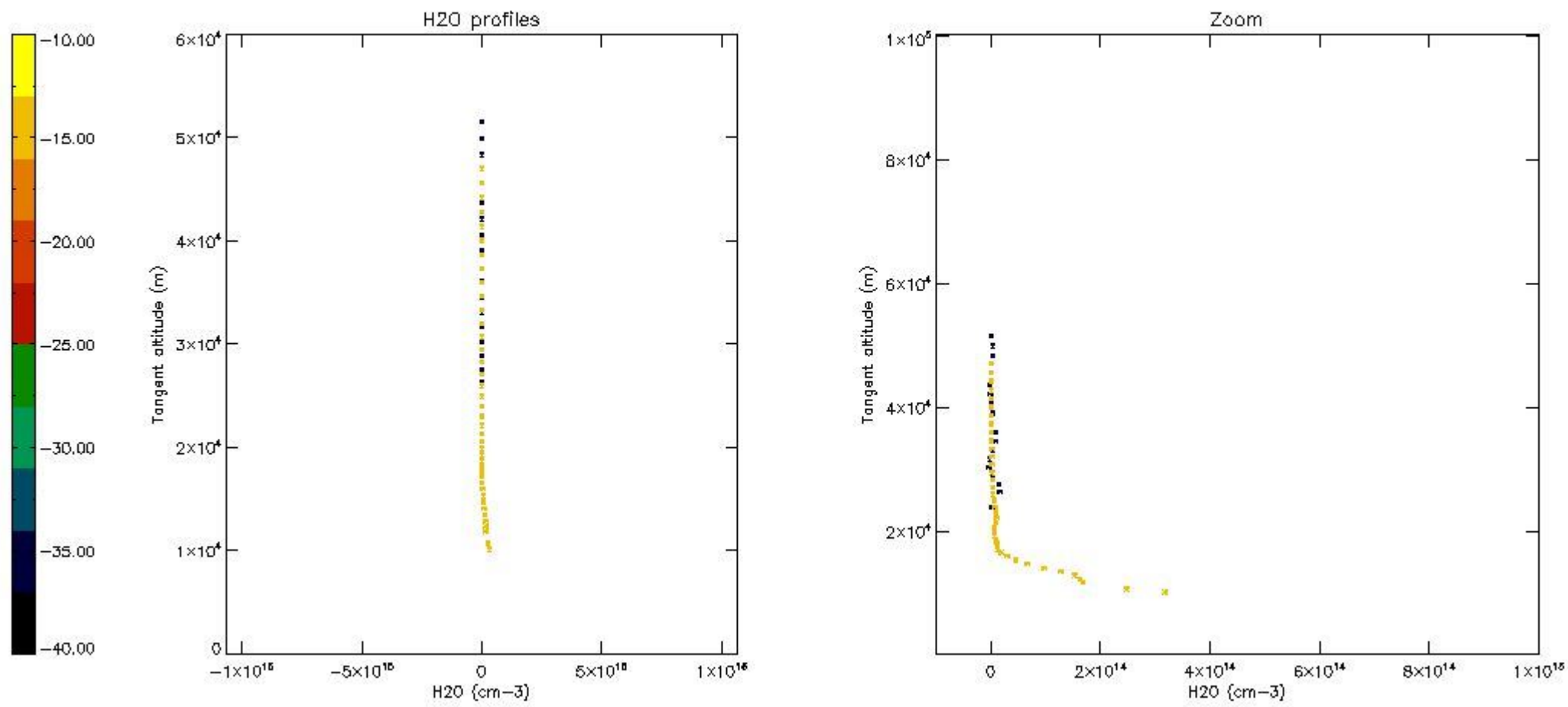
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	31-MAY-2007 00:07:23
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	31-MAY-2007 00:07:23
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	31-MAY-2007 00:07:23

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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](#)











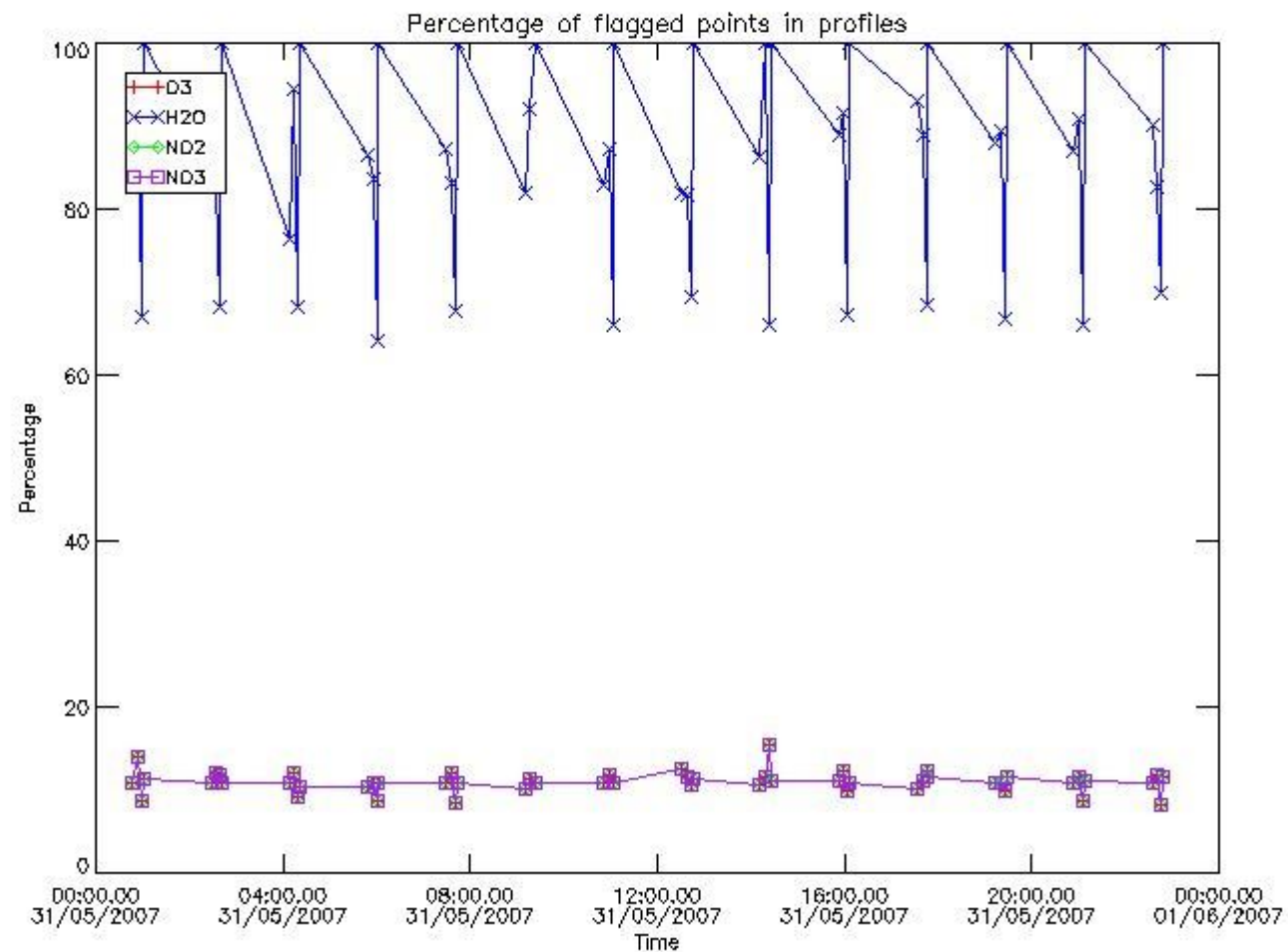


279	GOM_NL__2PRFIN20070531_224646_000000622058_00345_27453_5117.N1	31-MAY-2007 22:46:46	Dark	62.000	63	Bet Gru	2.1500	2800.0	124	27453	No
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283	GOM_NL__2PRFIN20070531_230107_000000422058_00345_27453_5121.N1	31-MAY-2007 23:01:07	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	27453	No
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291	GOM_NL__2PRFIN20070531_232505_000000372058_00345_27453_5129.N1	31-MAY-2007 23:25:05	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	27453	No
292	GOM_NL__2PRFIN20070531_233542_000000382058_00345_27453_5130.N1	31-MAY-2007 23:35:42	Bright	37.500	119	14Eta Dra	2.7270	4700.0	75	27453	No
293	GOM_NL__2PRFIN20070531_233822_000000382058_00345_27453_5131.N1	31-MAY-2007 23:38:22	Bright	38.000	60	7Bet UMi	2.0810	3950.0	76	27453	No
294	GOM_NL__2PRFIN20070531_234302_000000352058_00345_27453_5132.N1	31-MAY-2007 23:43:02	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	27453	No
295	GOM_NL__2PRFIN20070531_235105_000000362058_00345_27453_5133.N1	31-MAY-2007 23:51:05	Bright	35.500	76	27Gam Cas	2.3000	30000.	71	27453	No
296	GOM_NL__2PRFIN20070531_235849_000000572058_00345_27453_5134.N1	31-MAY-2007 23:58:49	Bright	56.500	53	43Bet And	2.0480	3300.0	113	27453	No

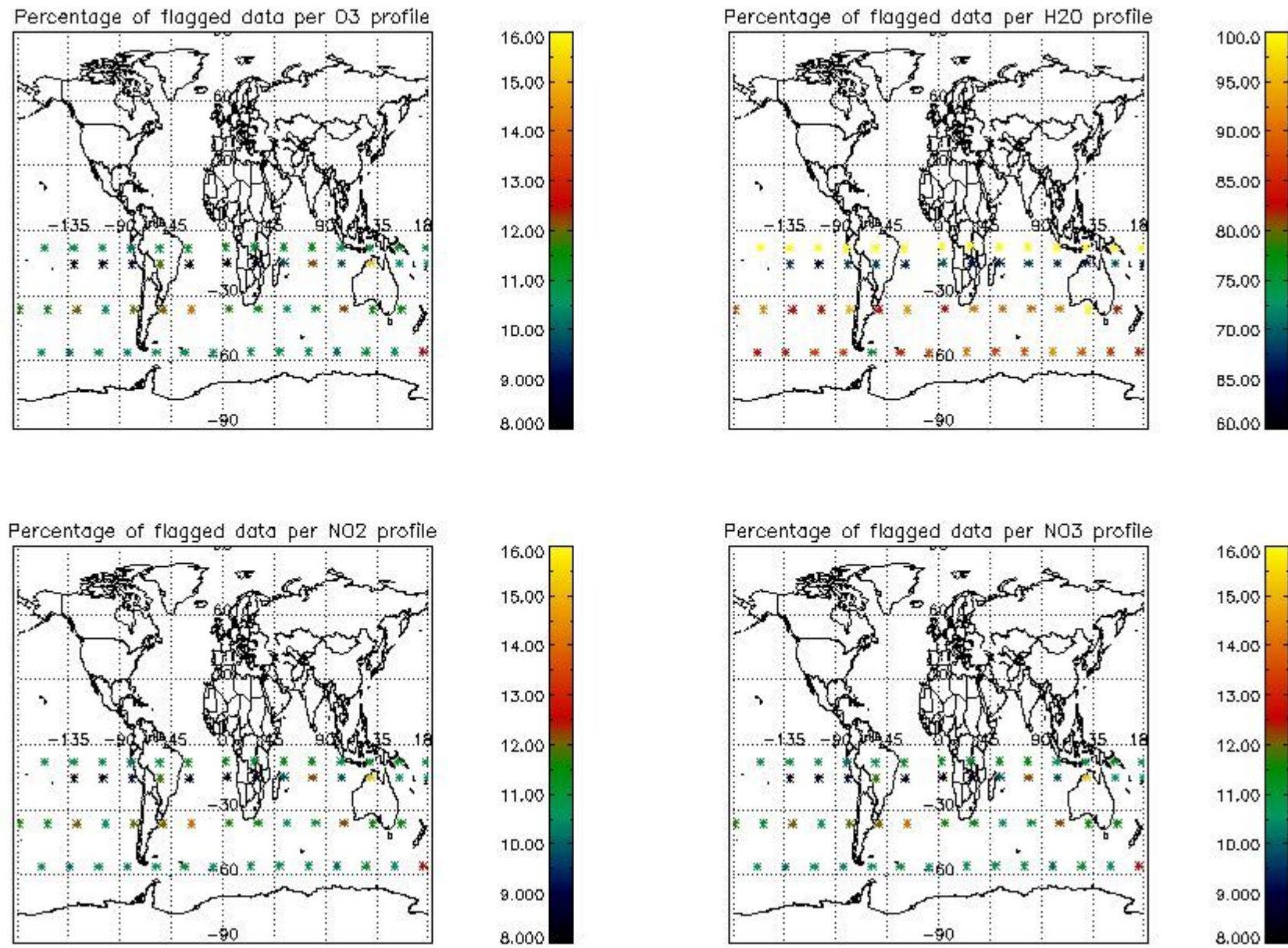
### 3. Quality information per product

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)

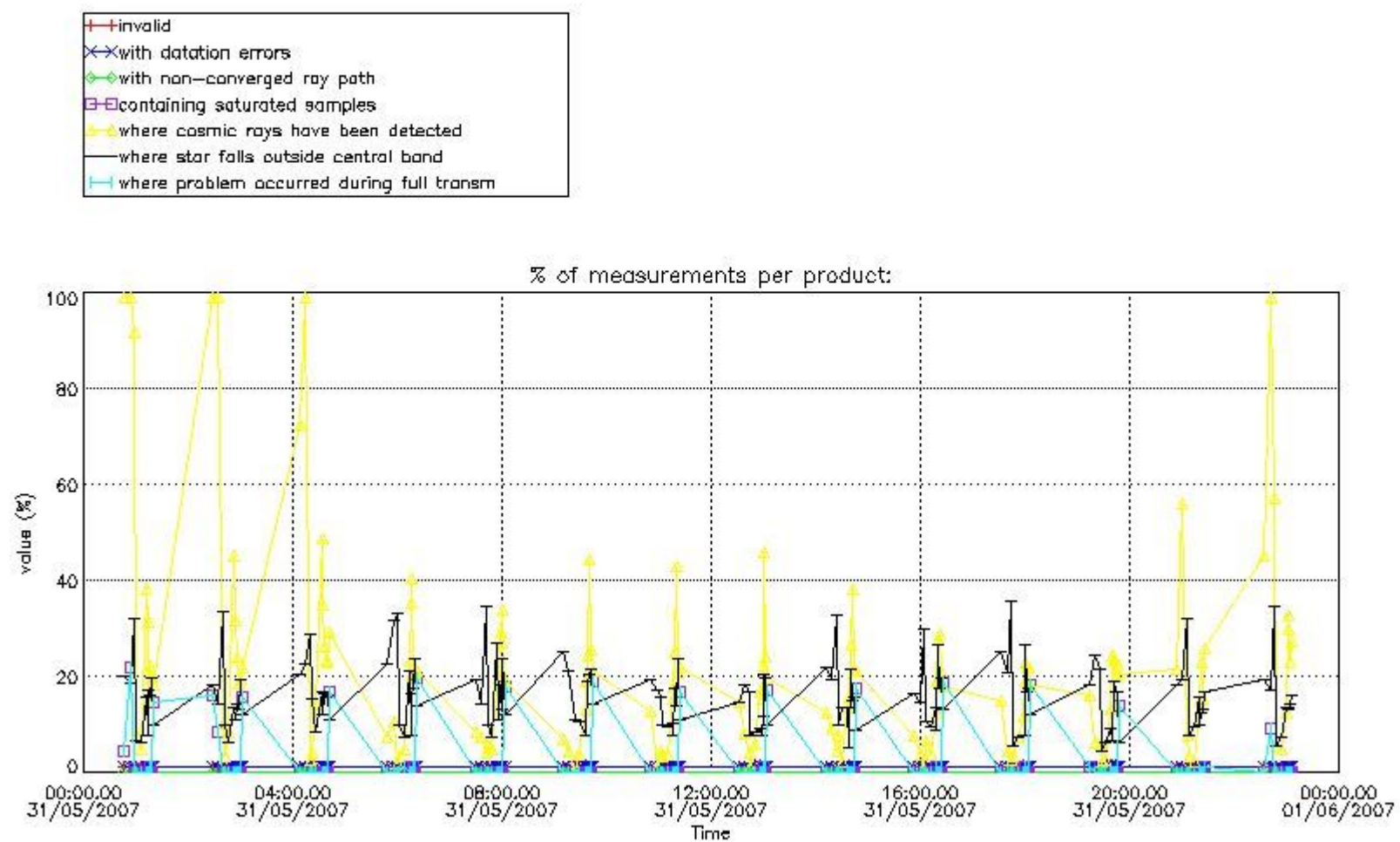


### 4. Level 1 quality information per product

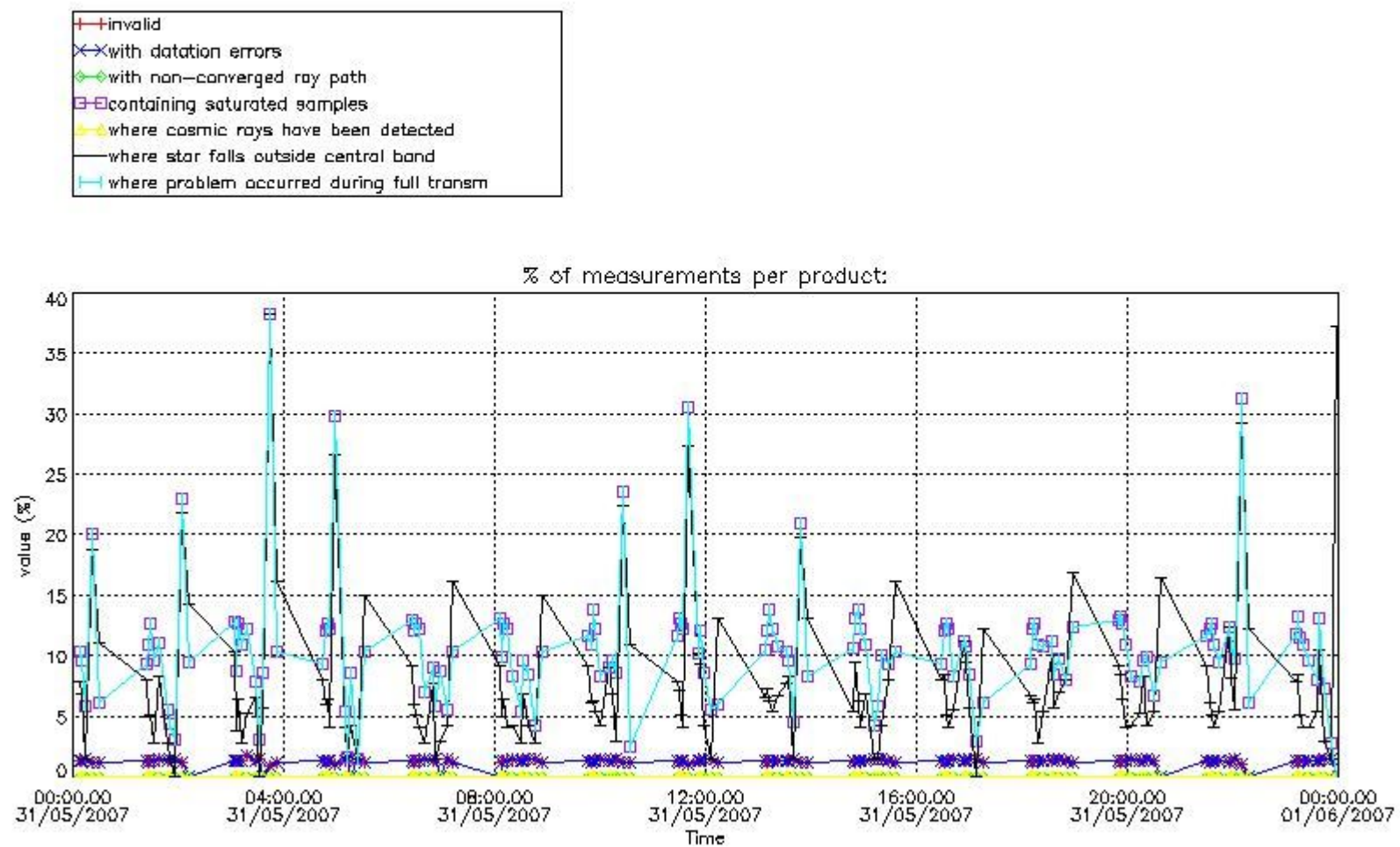
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

#### 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



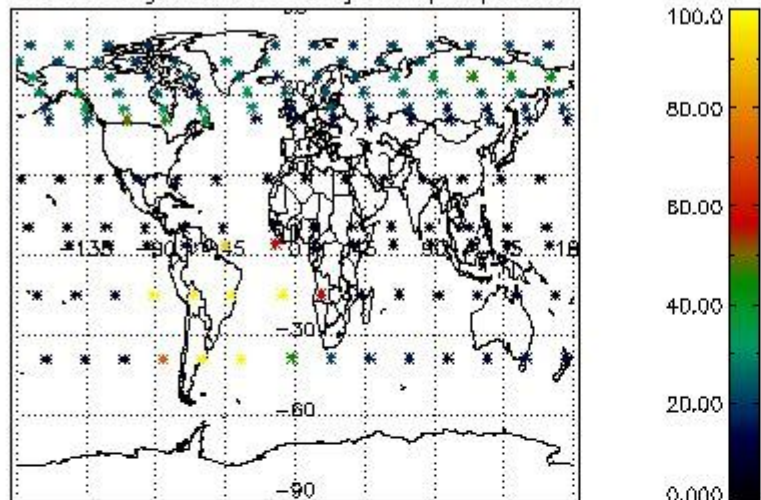
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



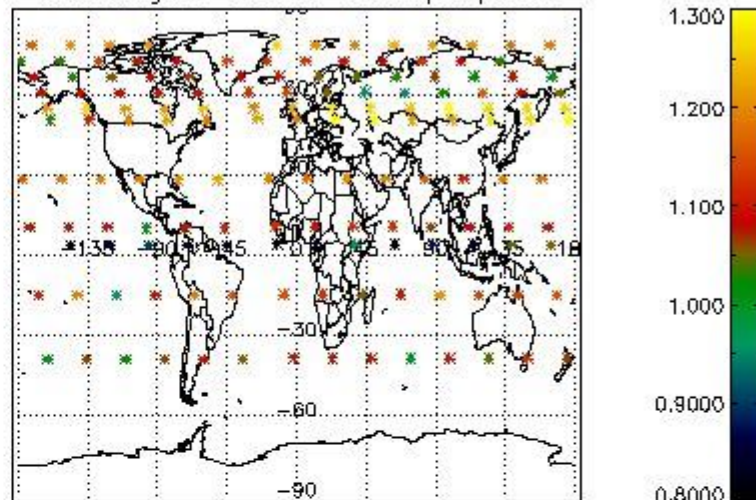
4.2 Plot quality information per product coming from level 1b processing (world map)

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

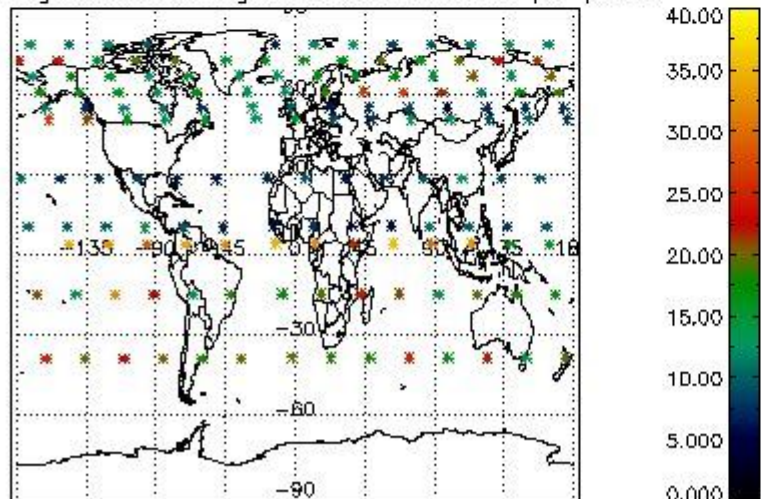
Percentage of cosmic ray hits per profile



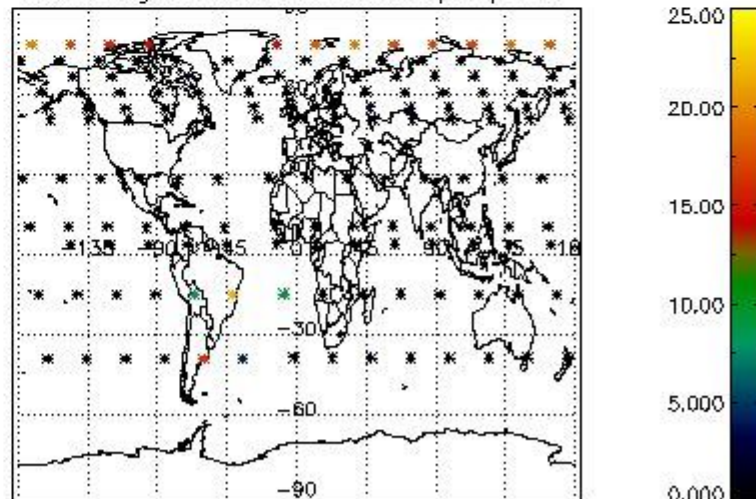
Percentage of datation errors per profile



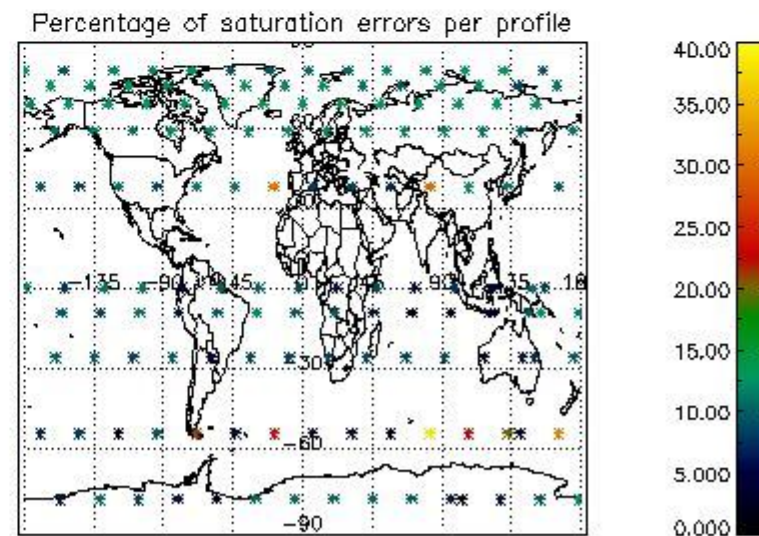
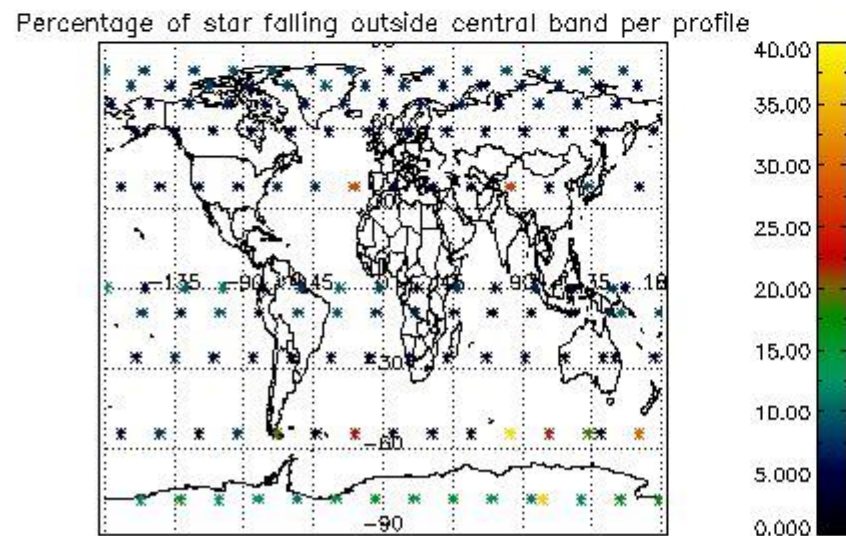
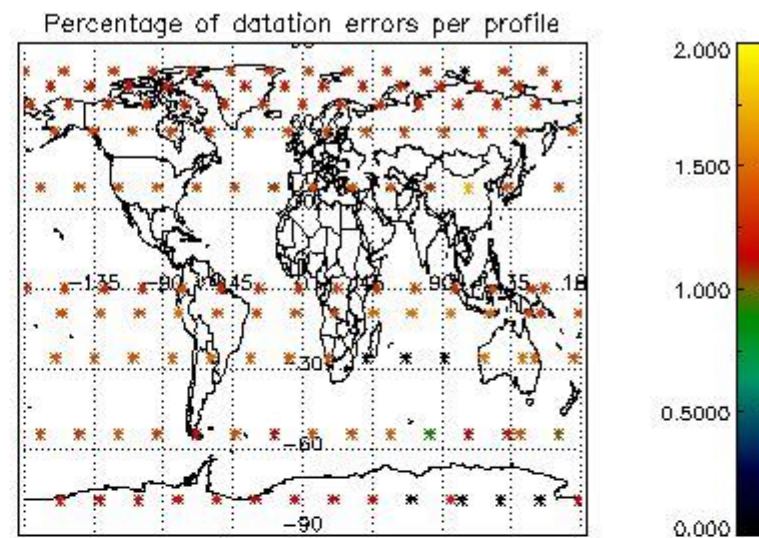
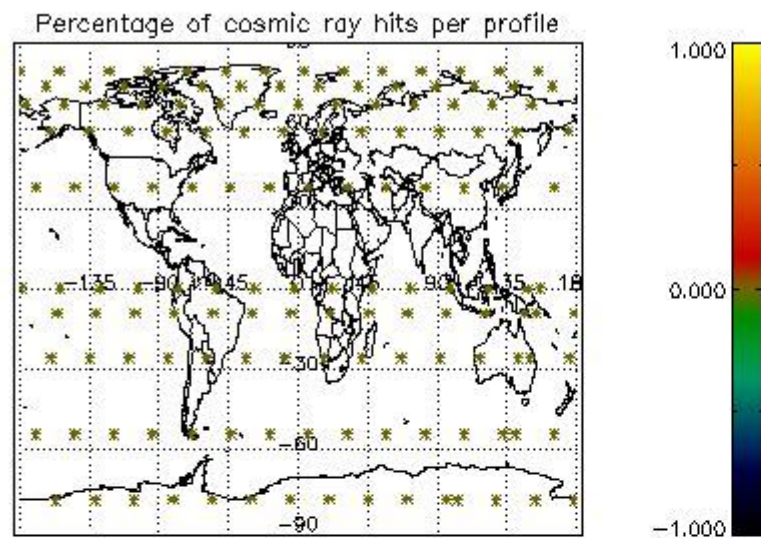
Percentage of star falling outside central band per profile



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

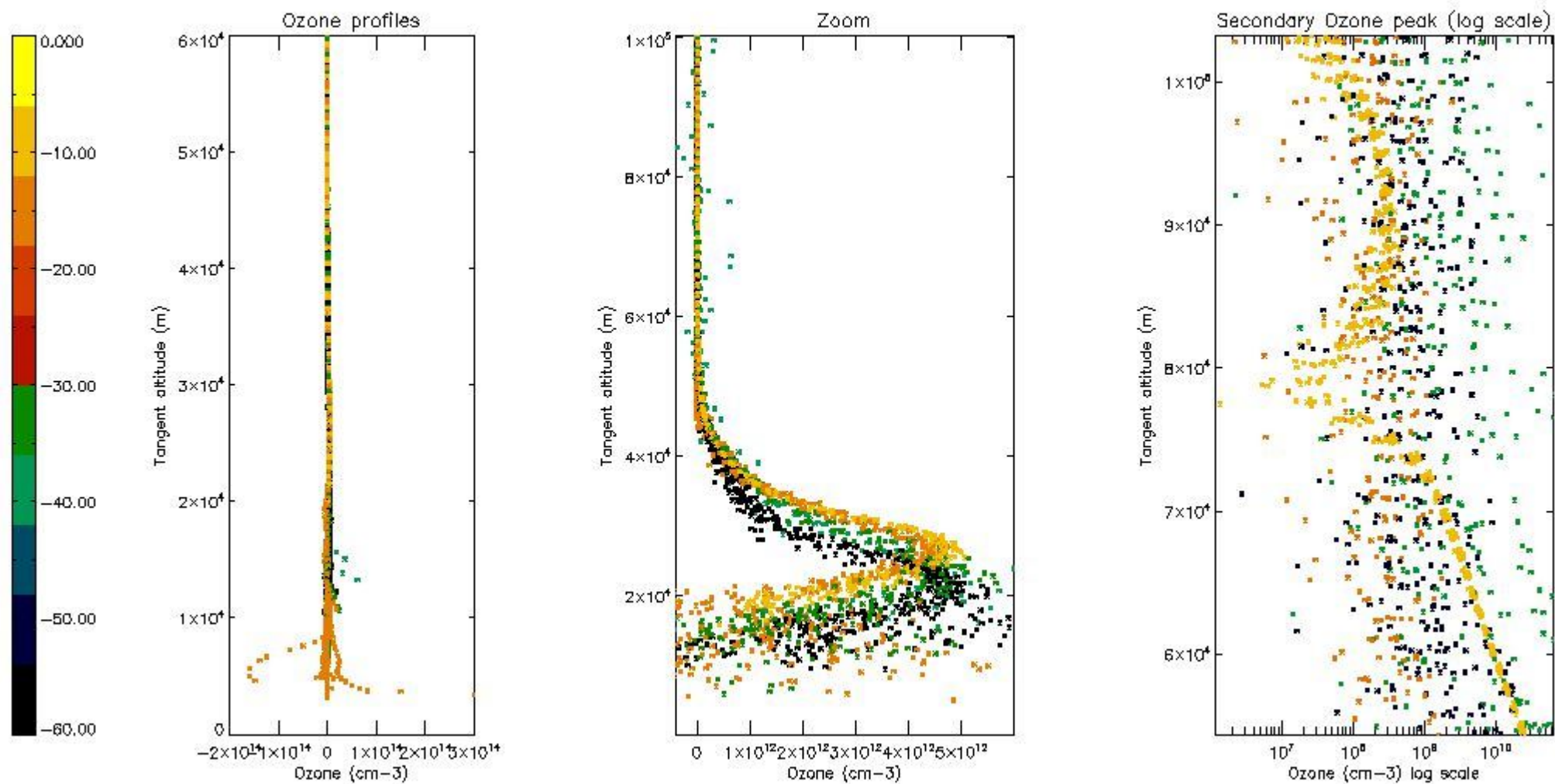
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	22
STD < 20	8

STD < 10	4
STD < 5	3

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

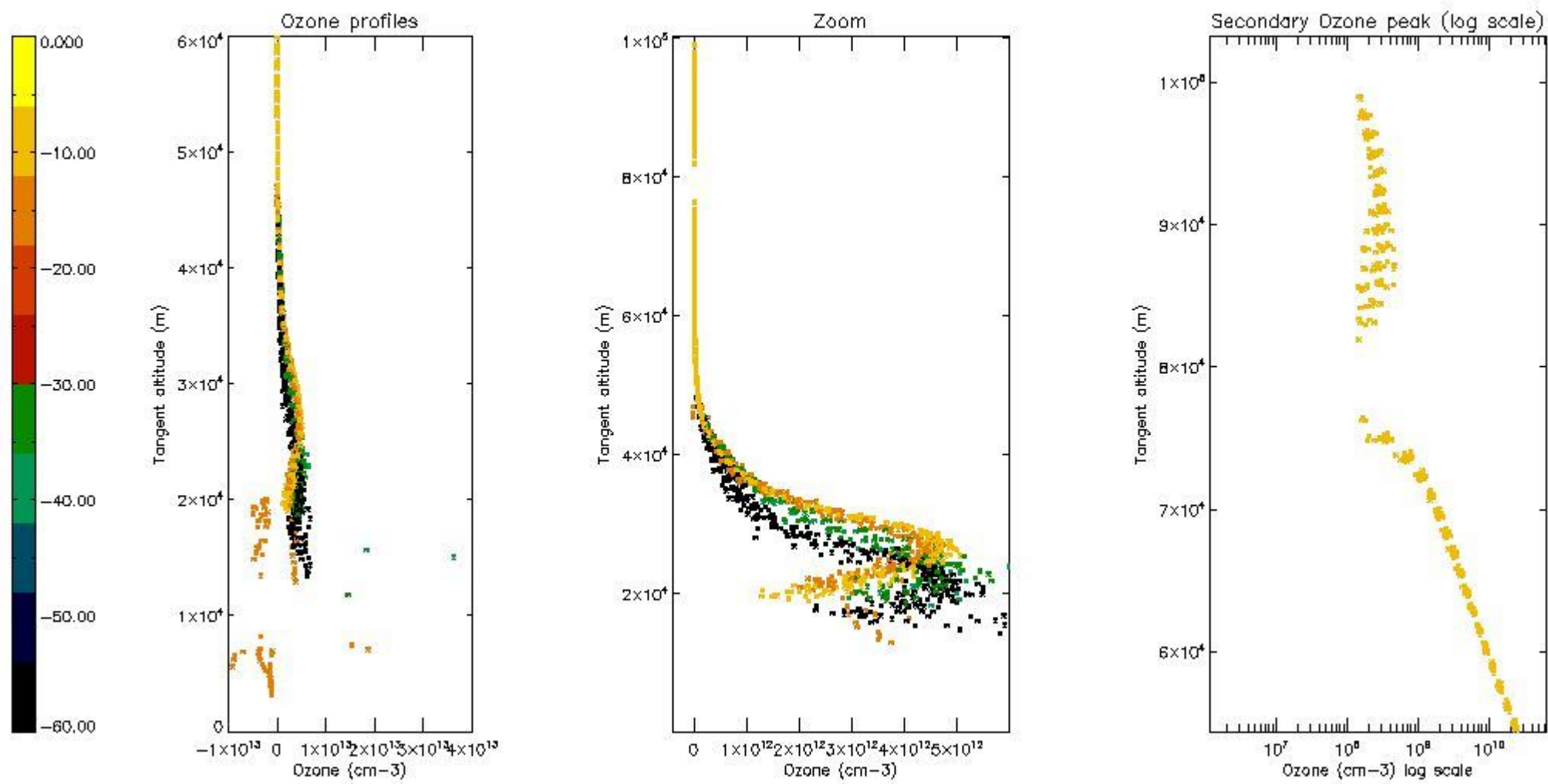
The colorbar represents the latitude.



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

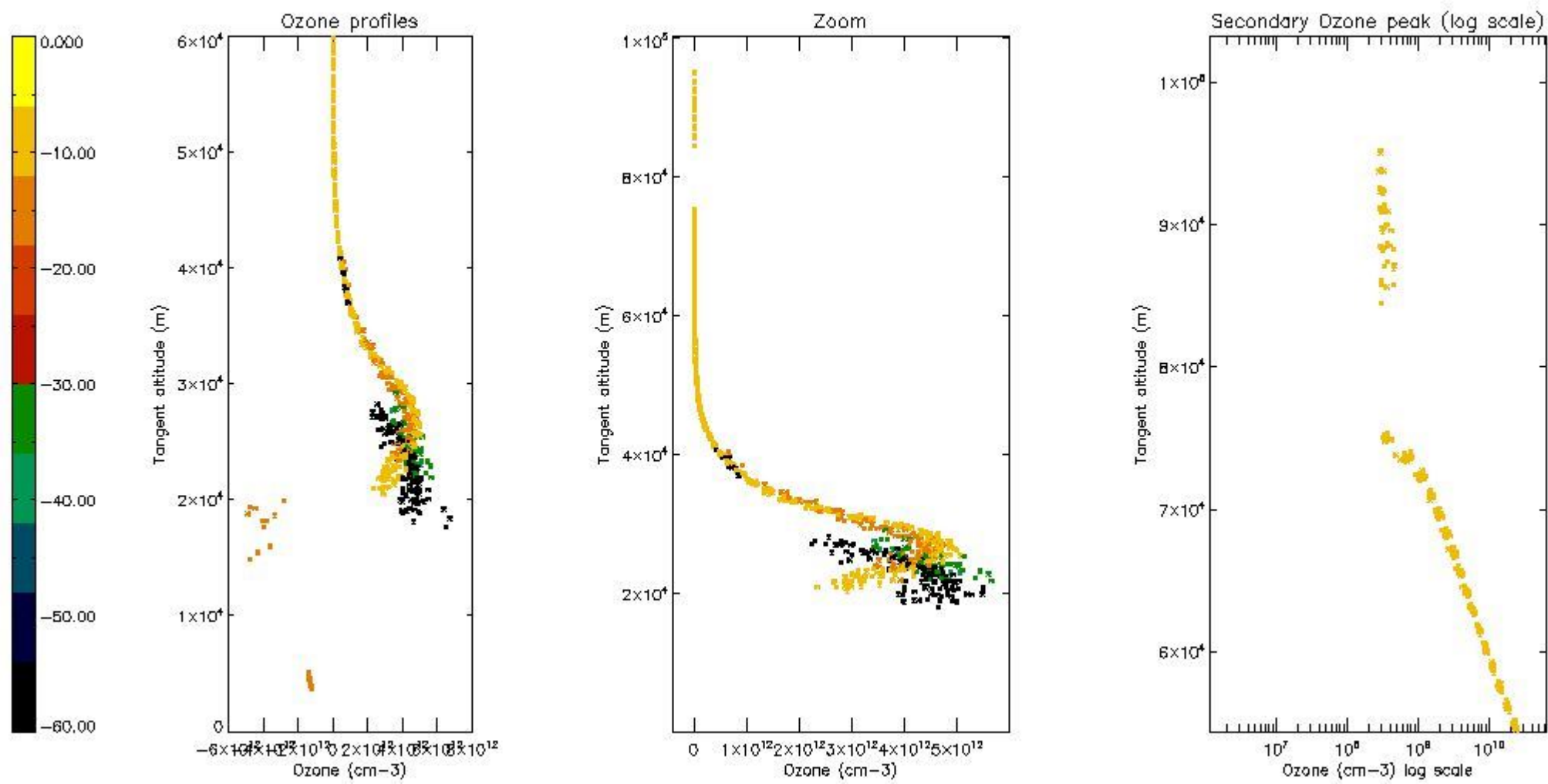
The colorbar represents the latitude.





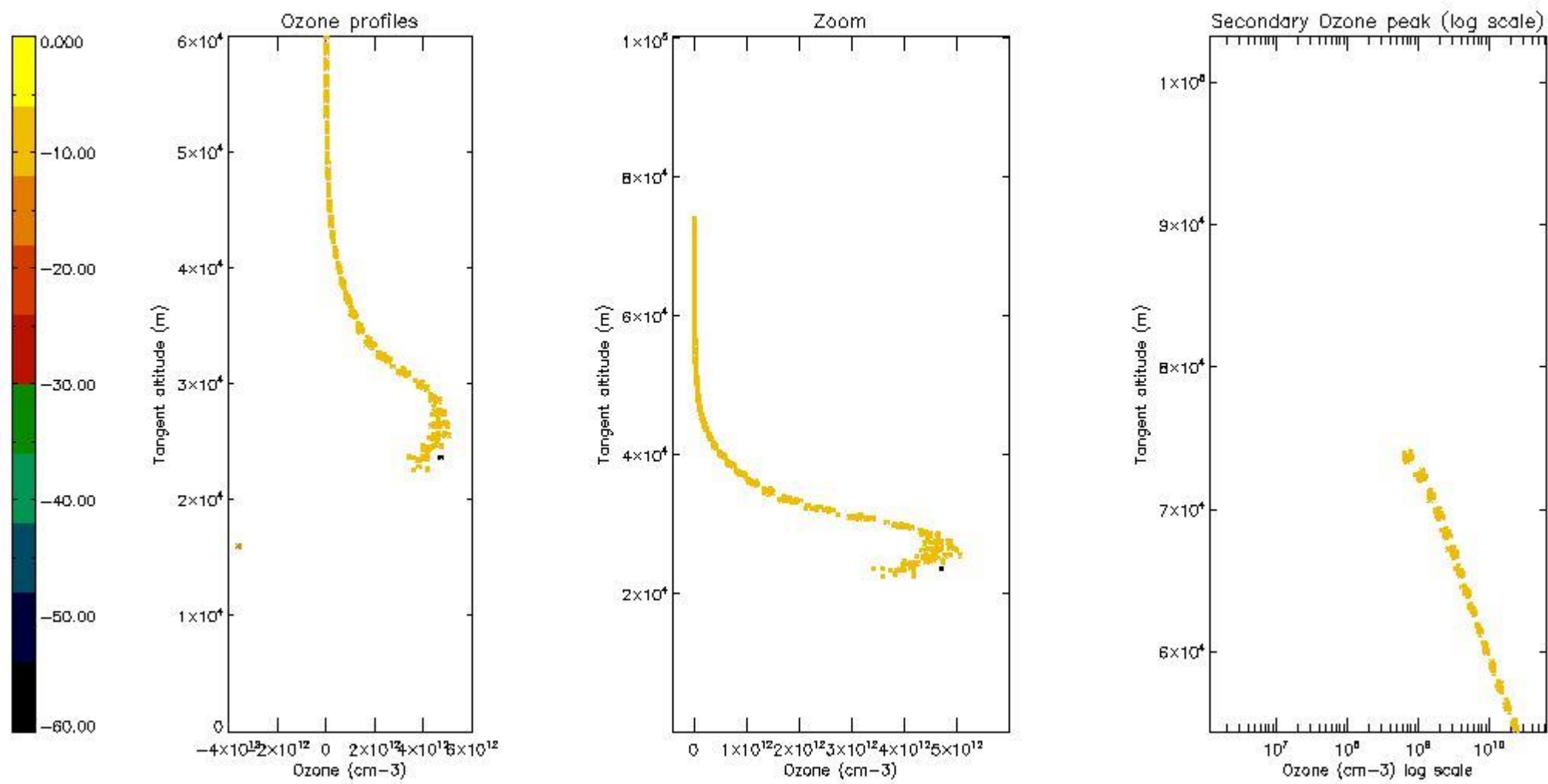
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



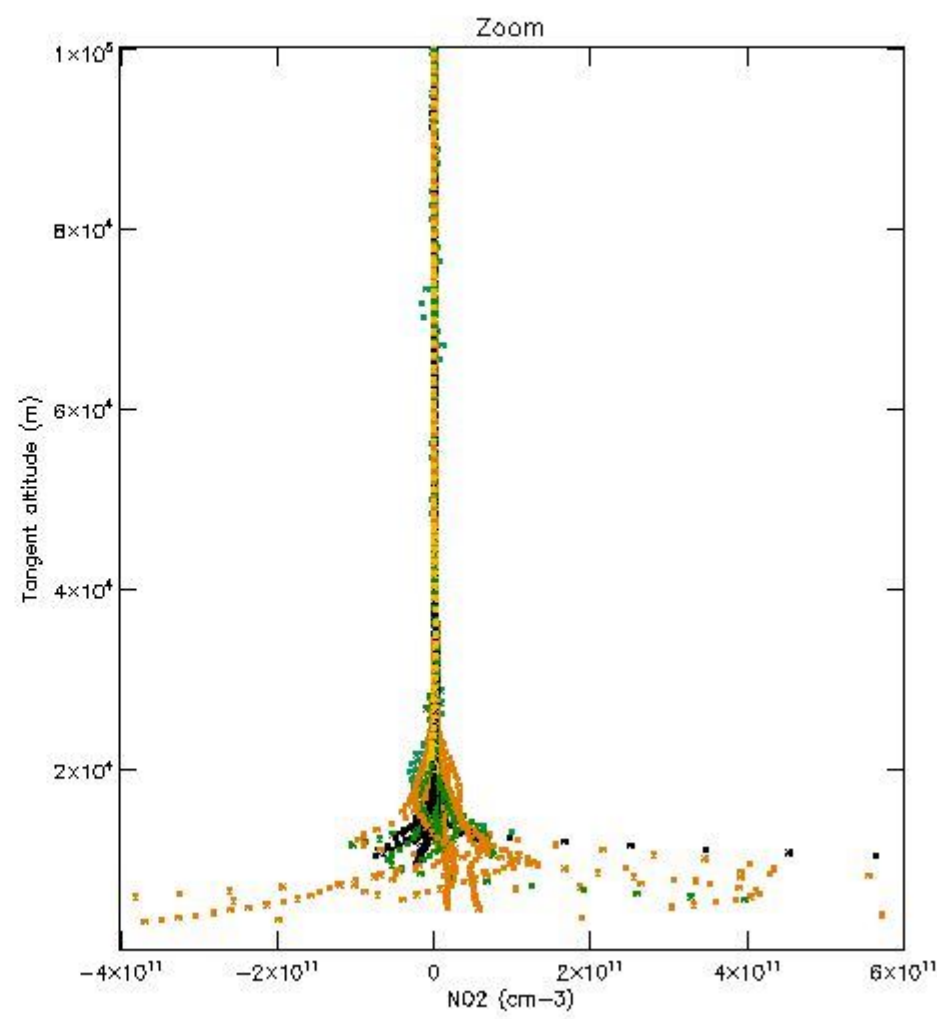
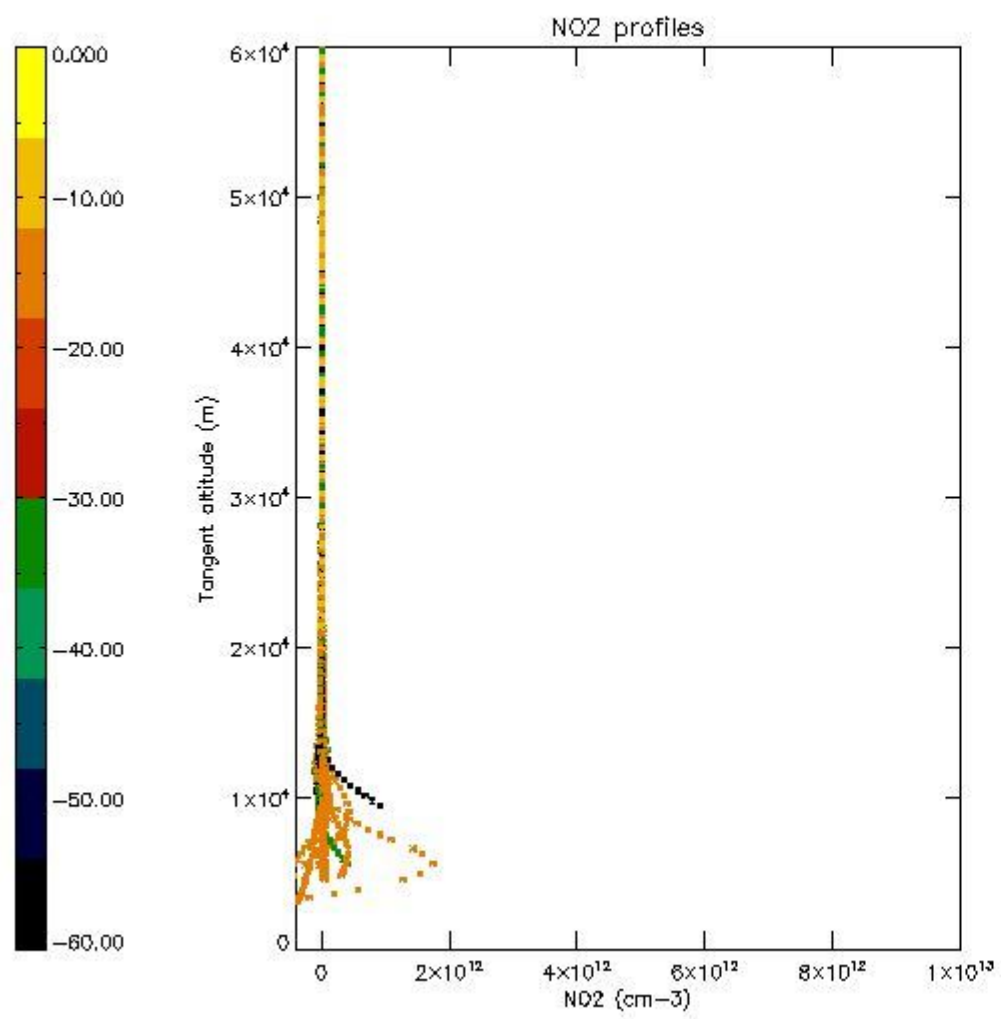
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



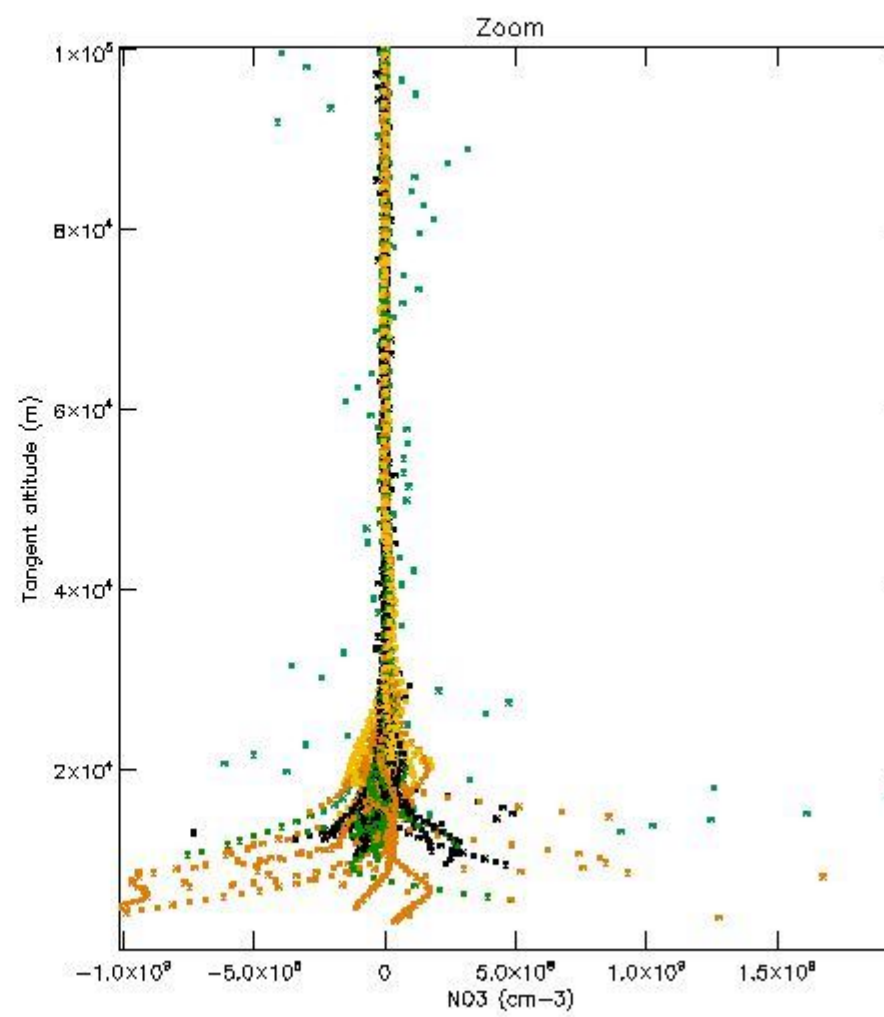
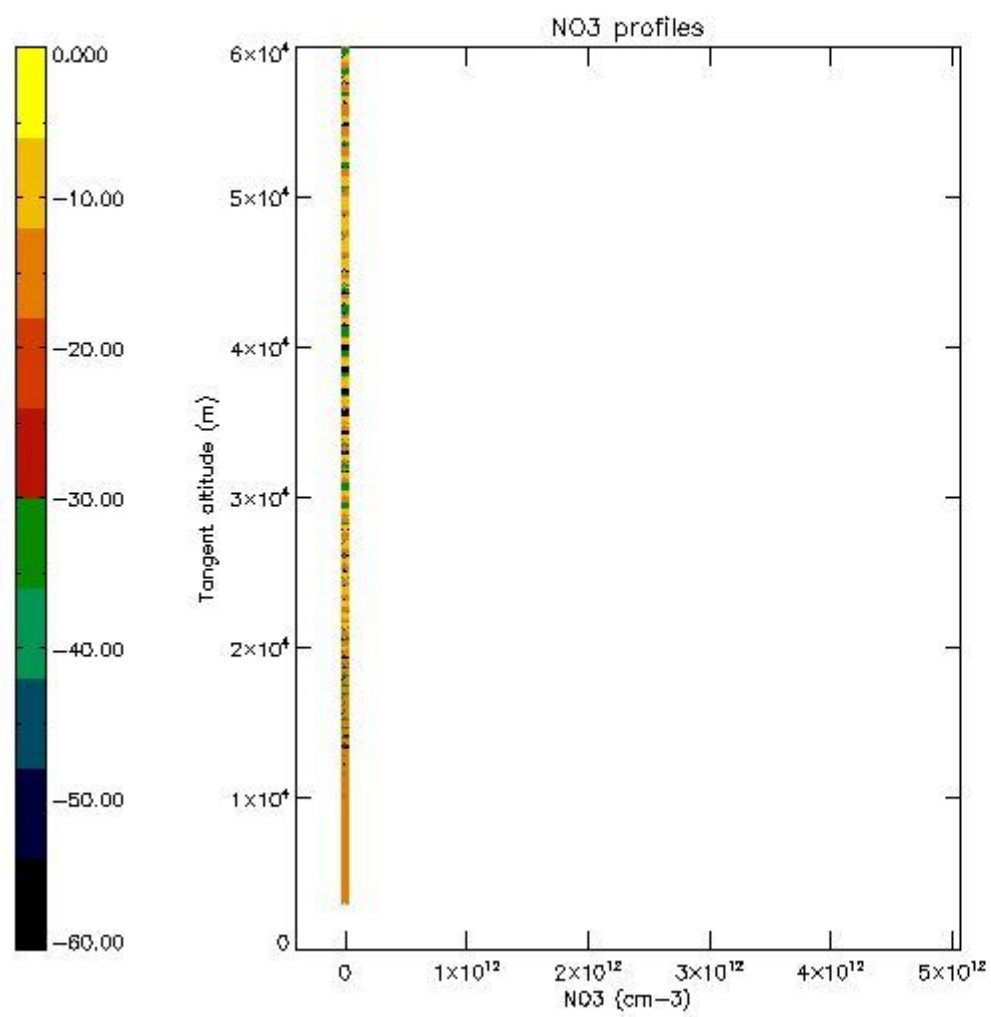
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



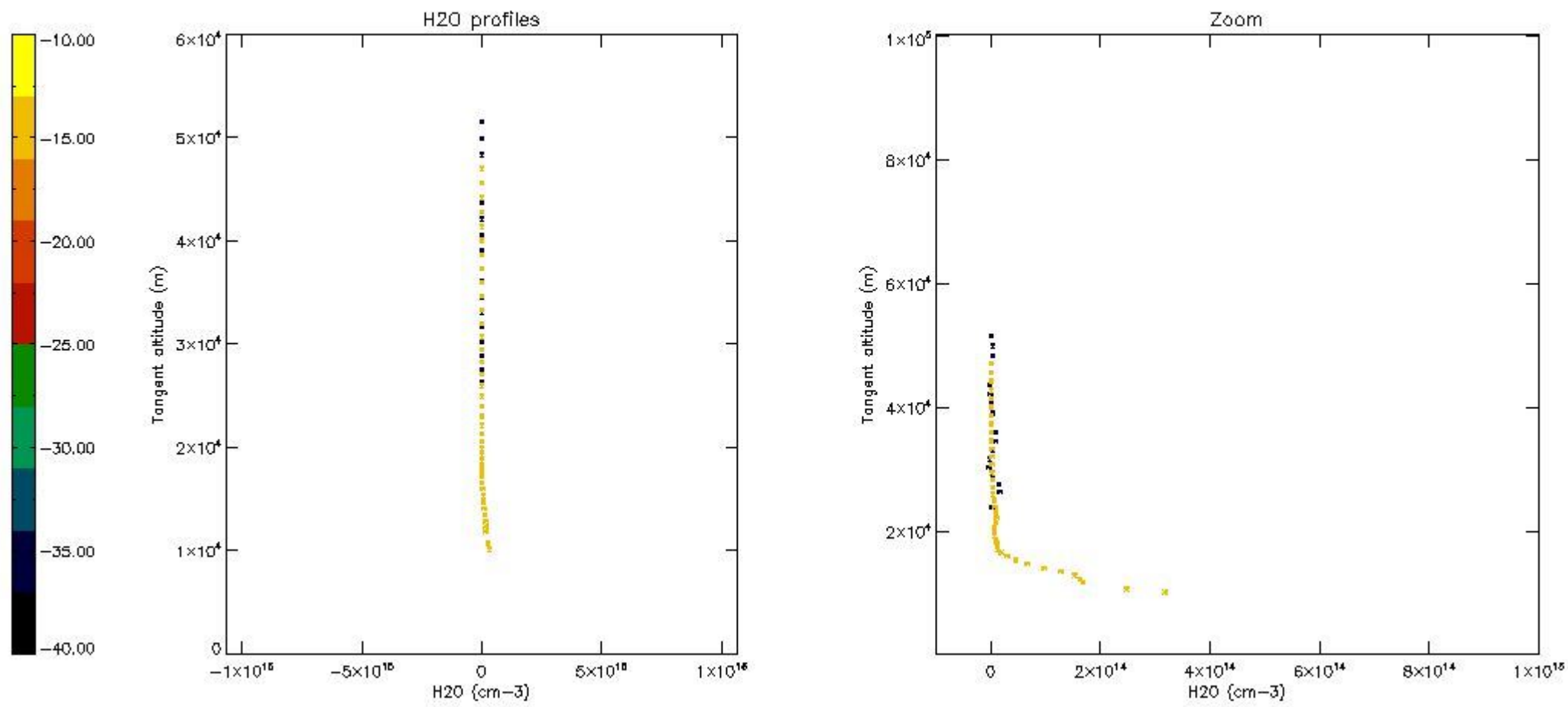
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)*

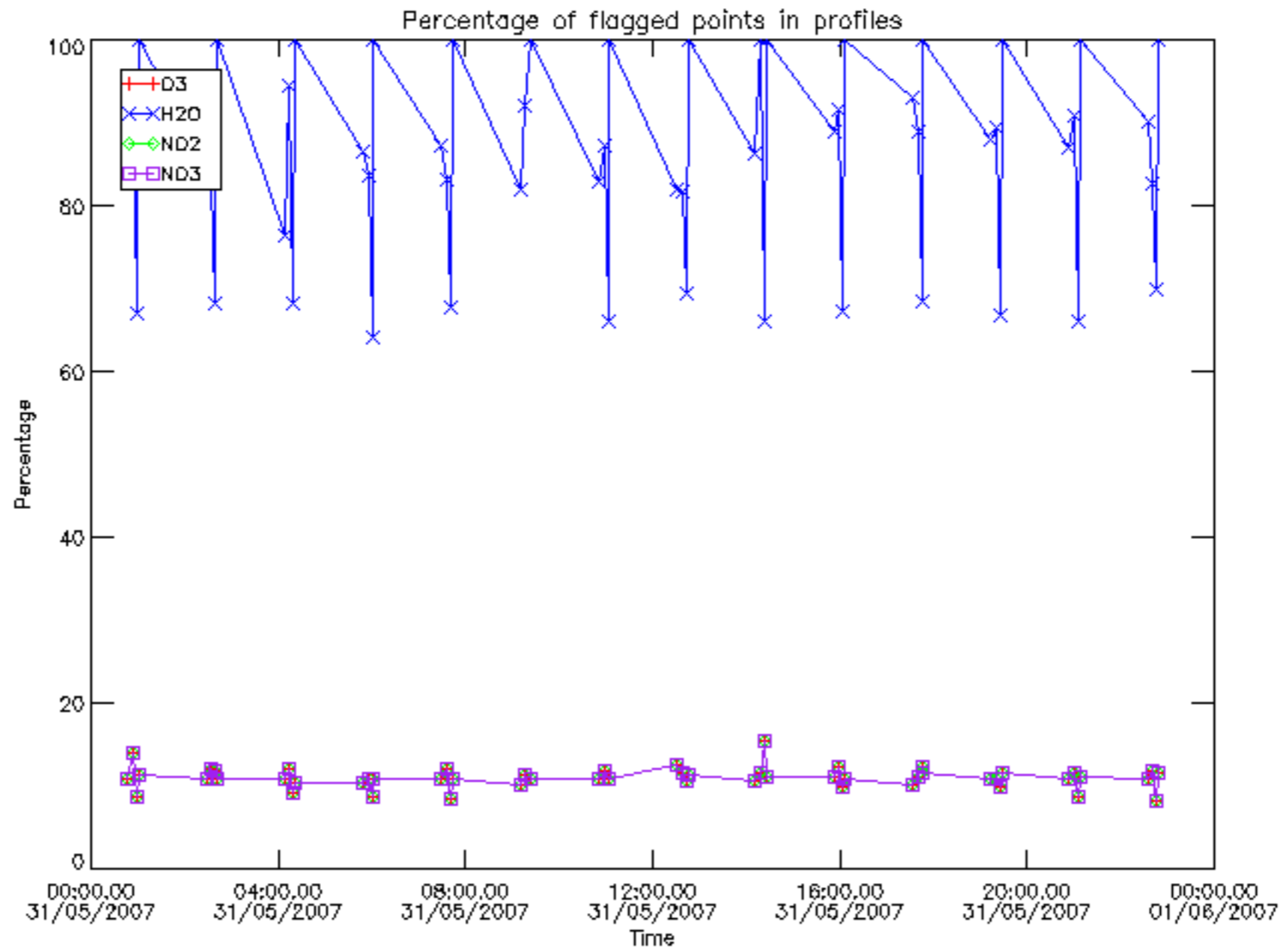
The colorbar represents the latitude.



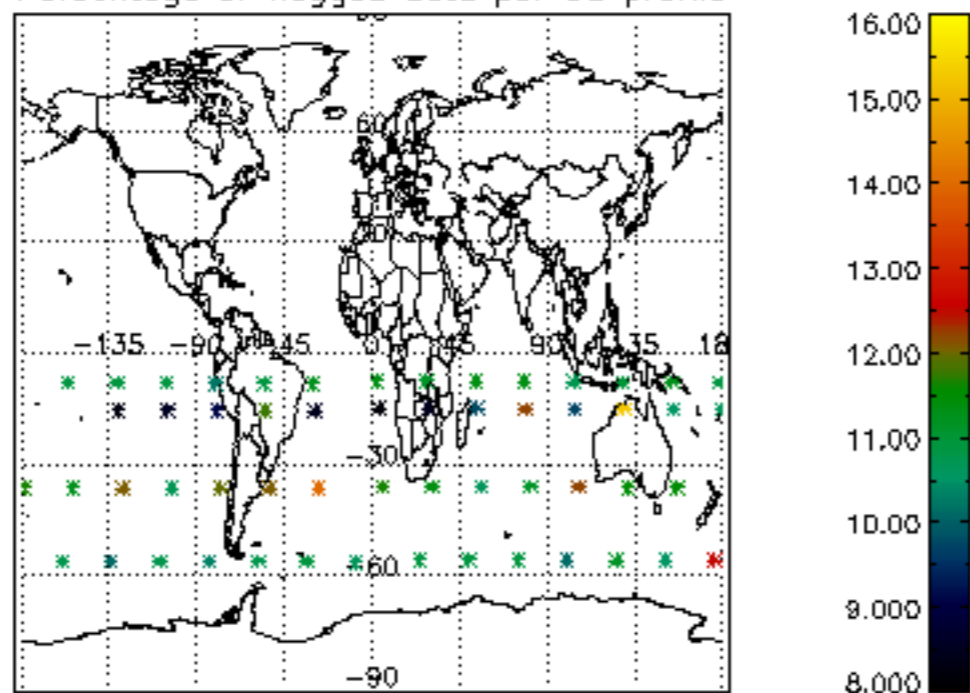
## 6. Auxiliary Data Files used for the production reported in section 2

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.

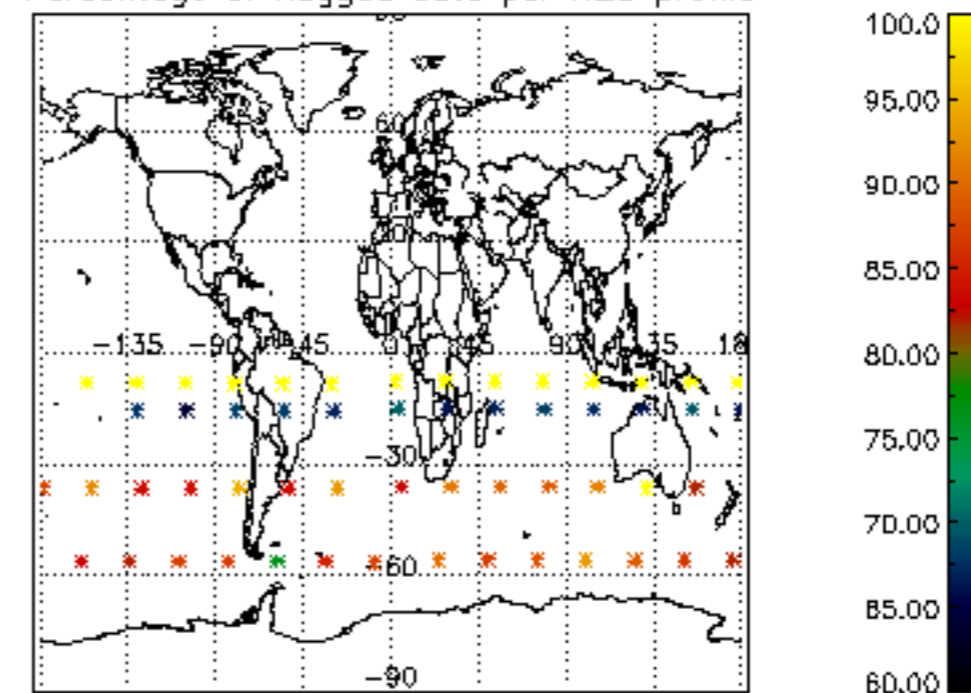
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	31-MAY-2007 00:07:23
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	31-MAY-2007 00:07:23
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	31-MAY-2007 00:07:23



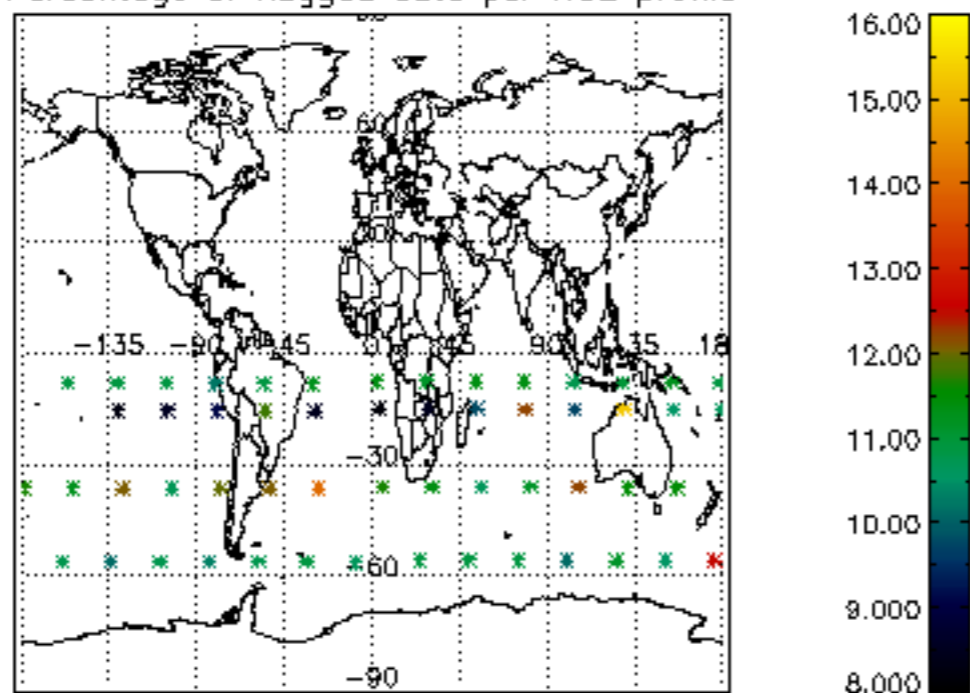
Percentage of flagged data per D3 profile



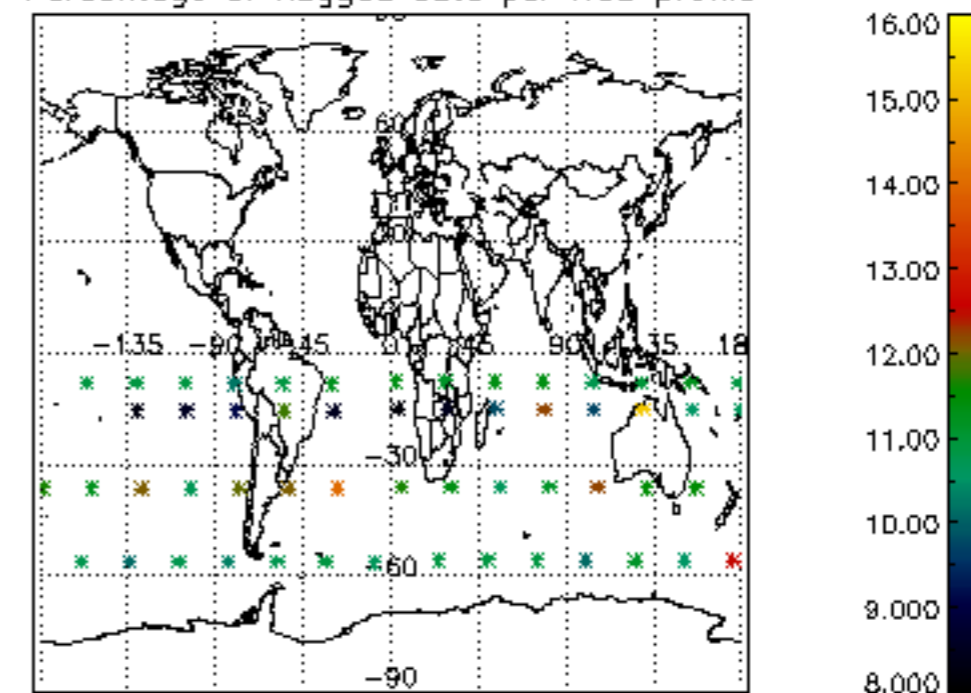
Percentage of flagged data per H2O profile



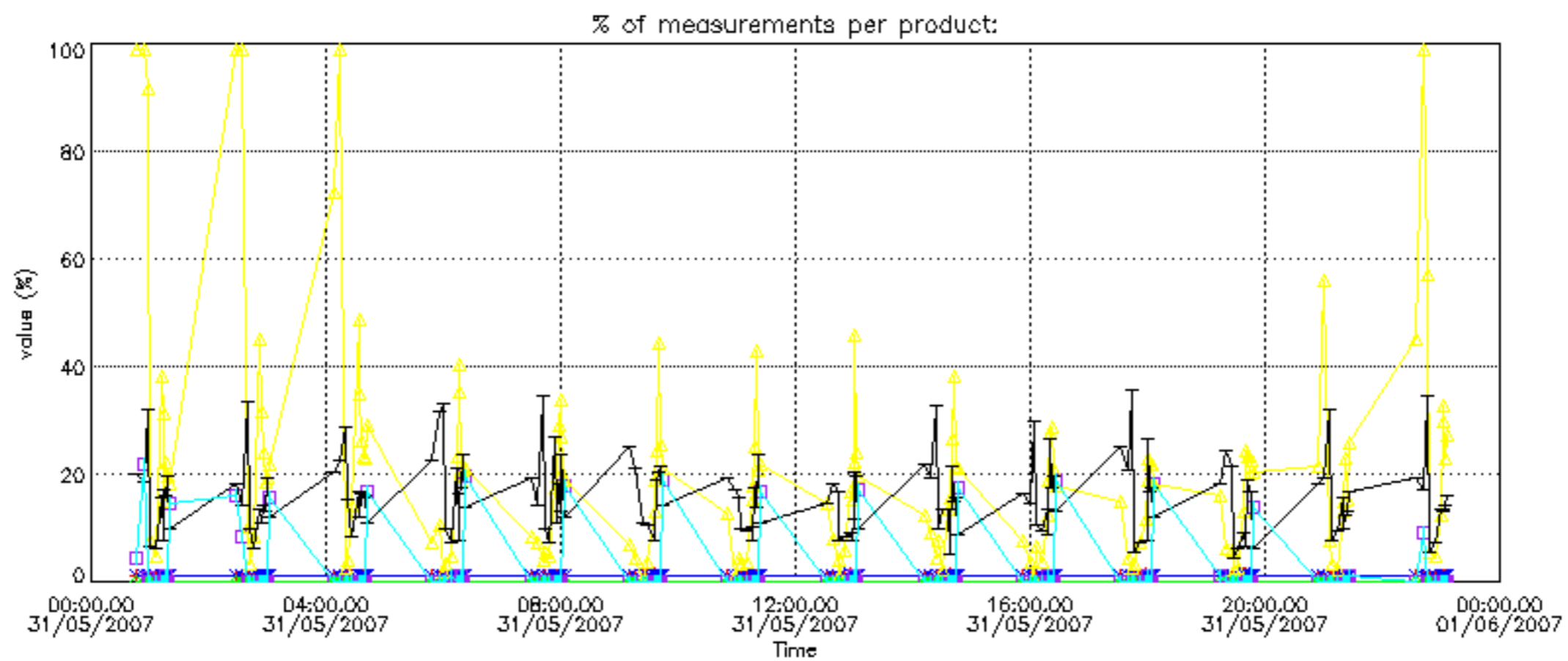
Percentage of flagged data per NO2 profile

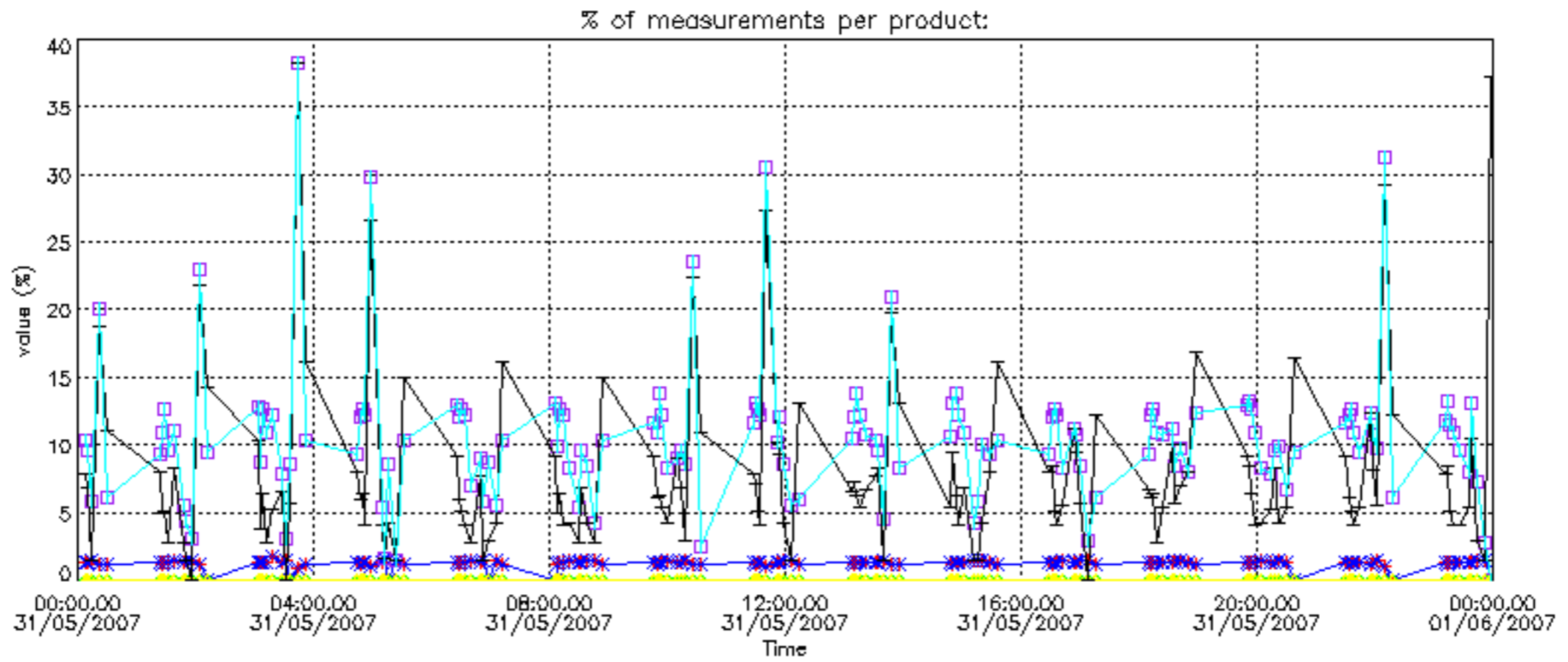


Percentage of flagged data per NO3 profile

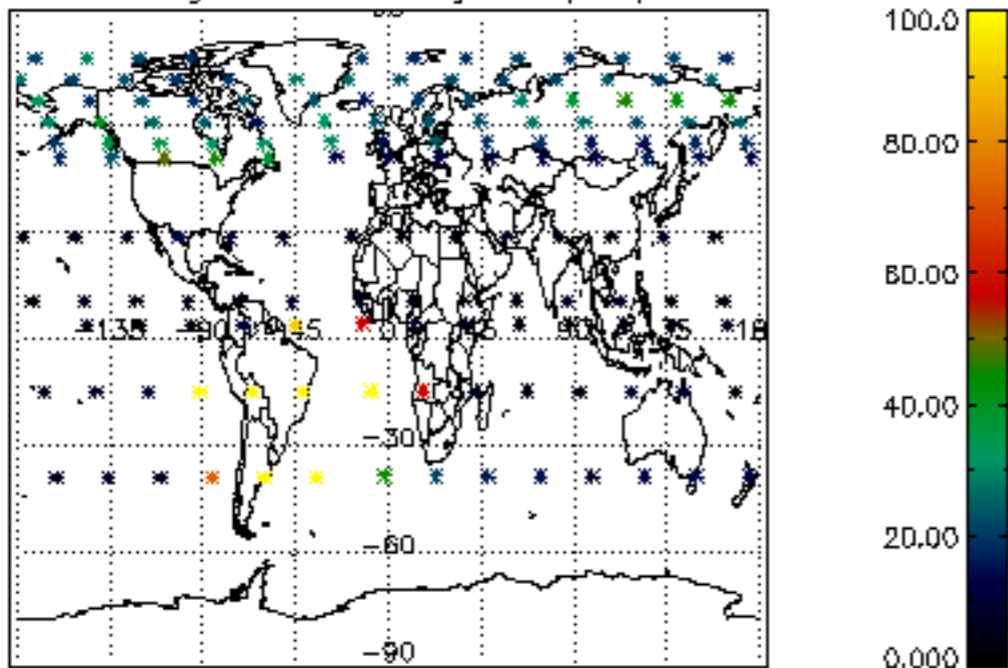




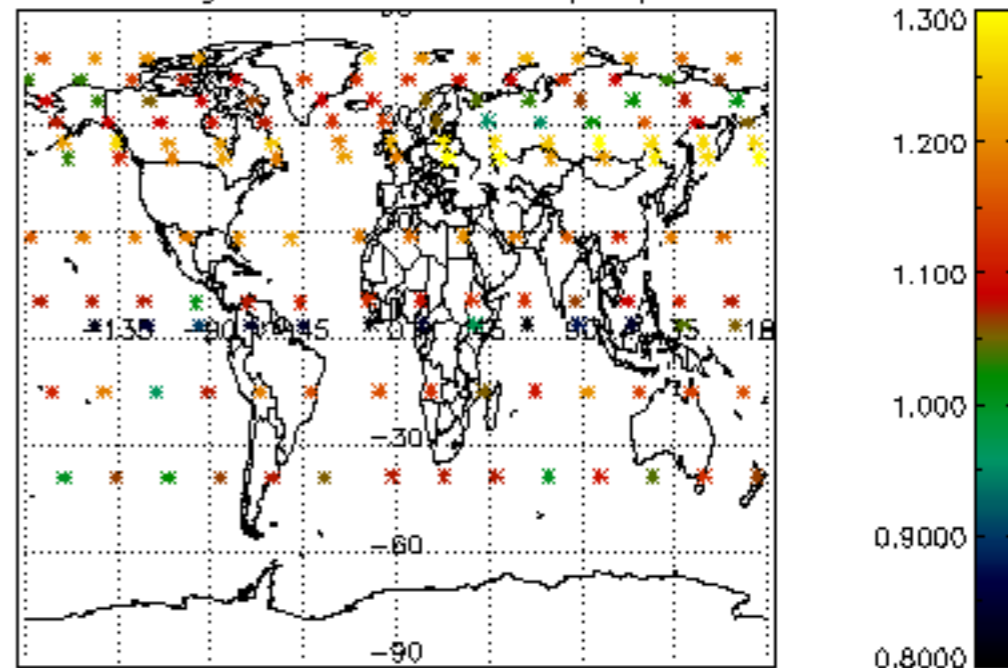




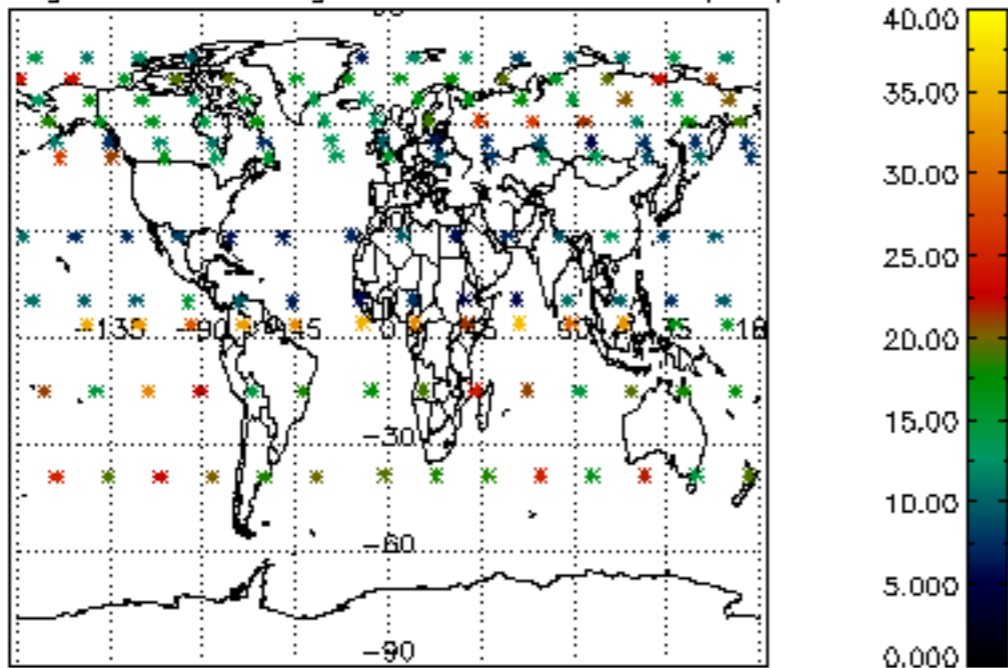
Percentage of cosmic ray hits per profile



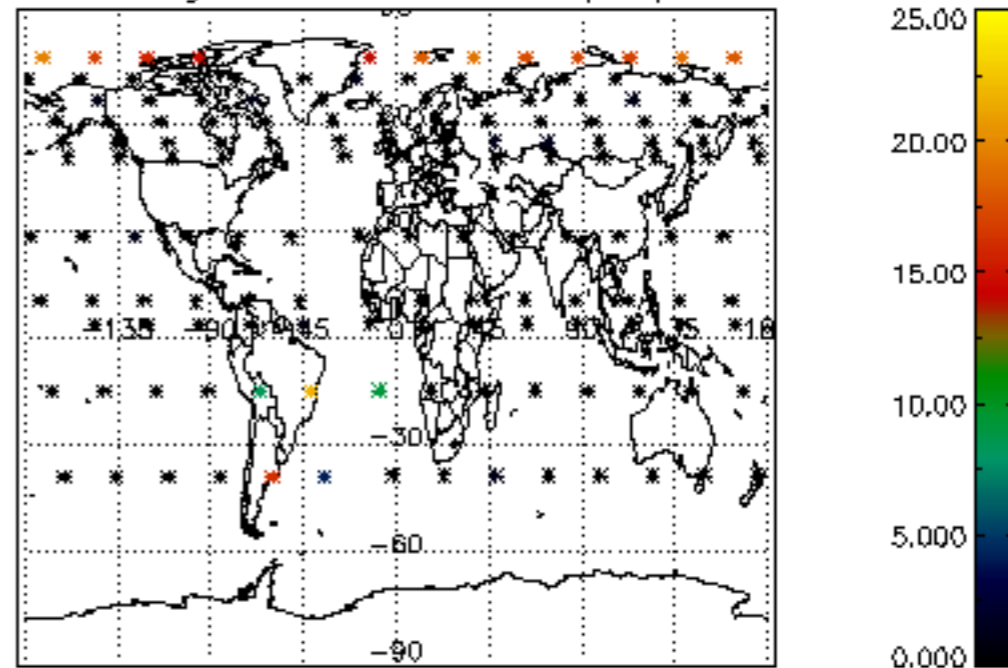
Percentage of datation errors per profile



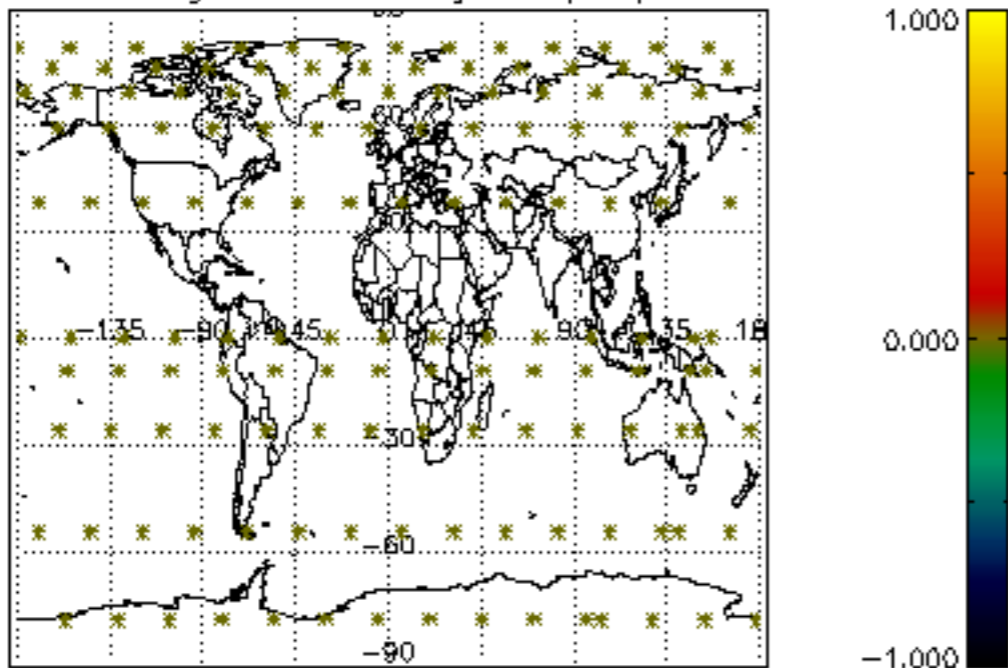
Percentage of star falling outside central band per profile



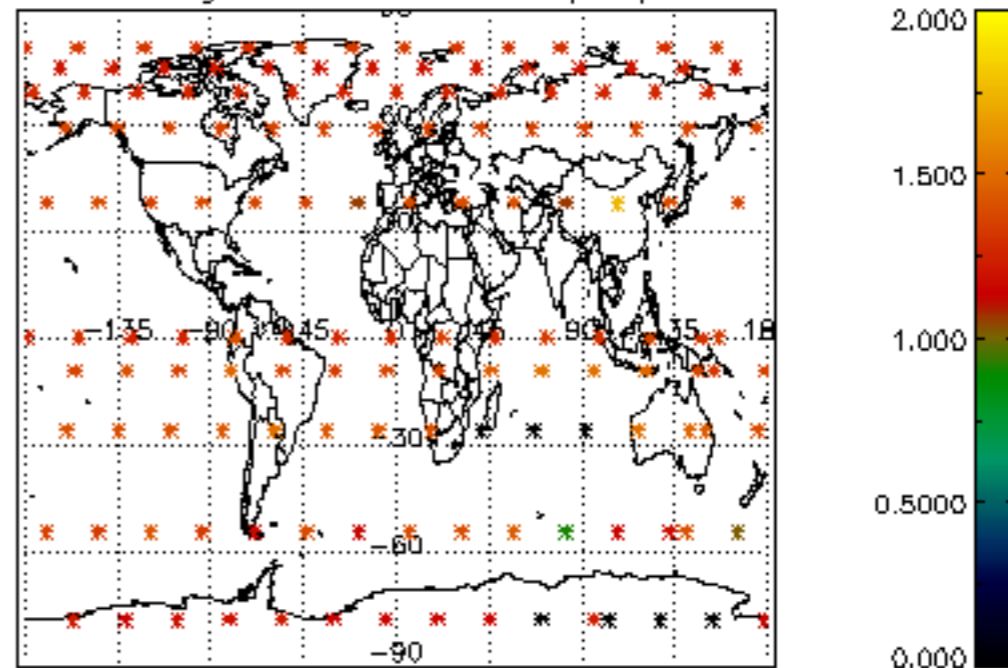
Percentage of saturation errors per profile



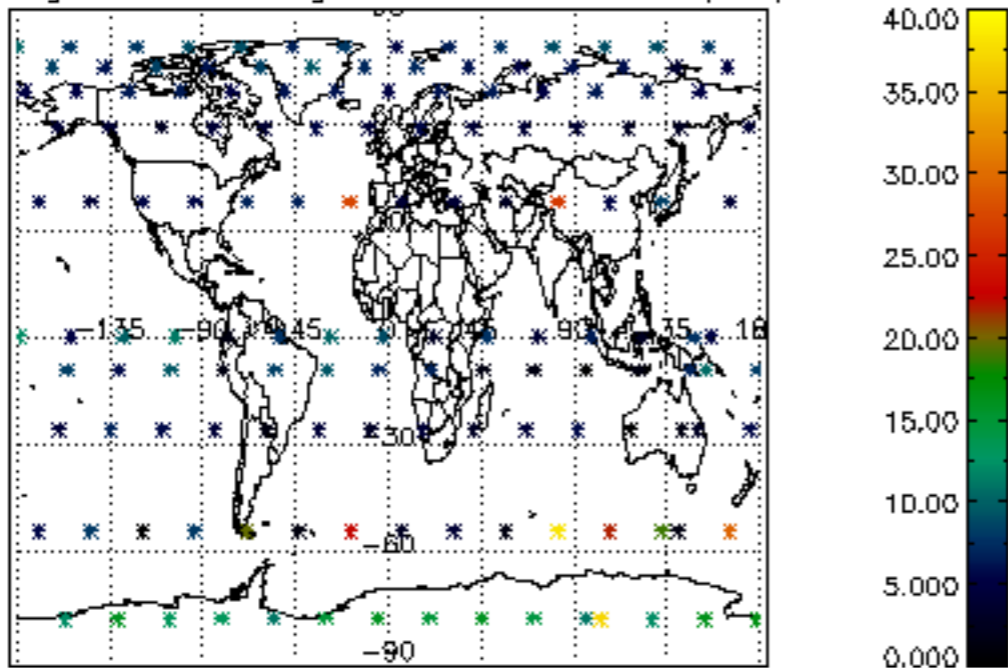
Percentage of cosmic ray hits per profile



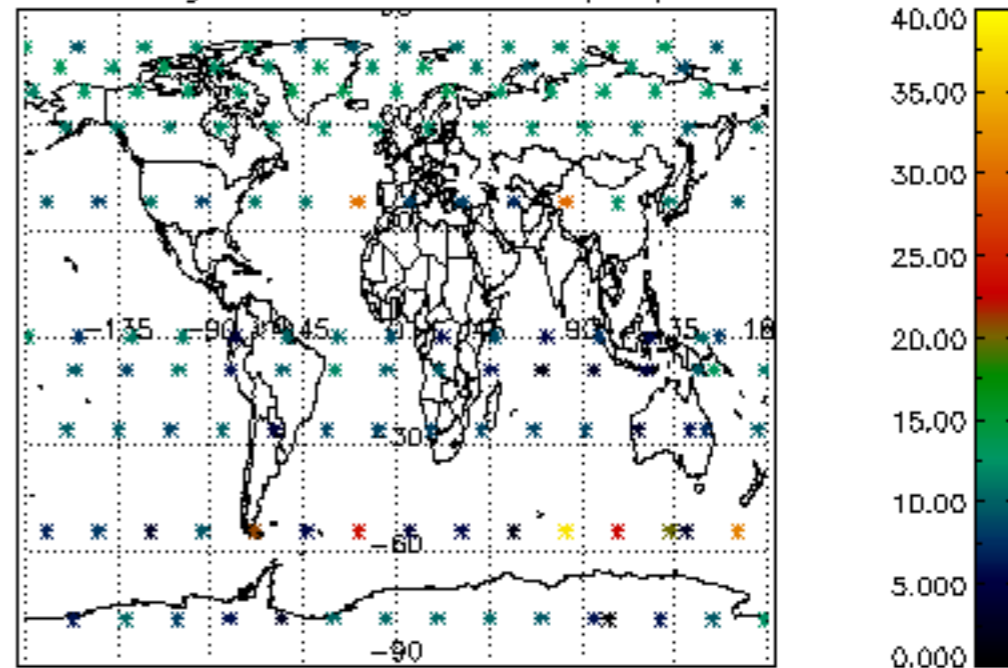
Percentage of datation errors per profile

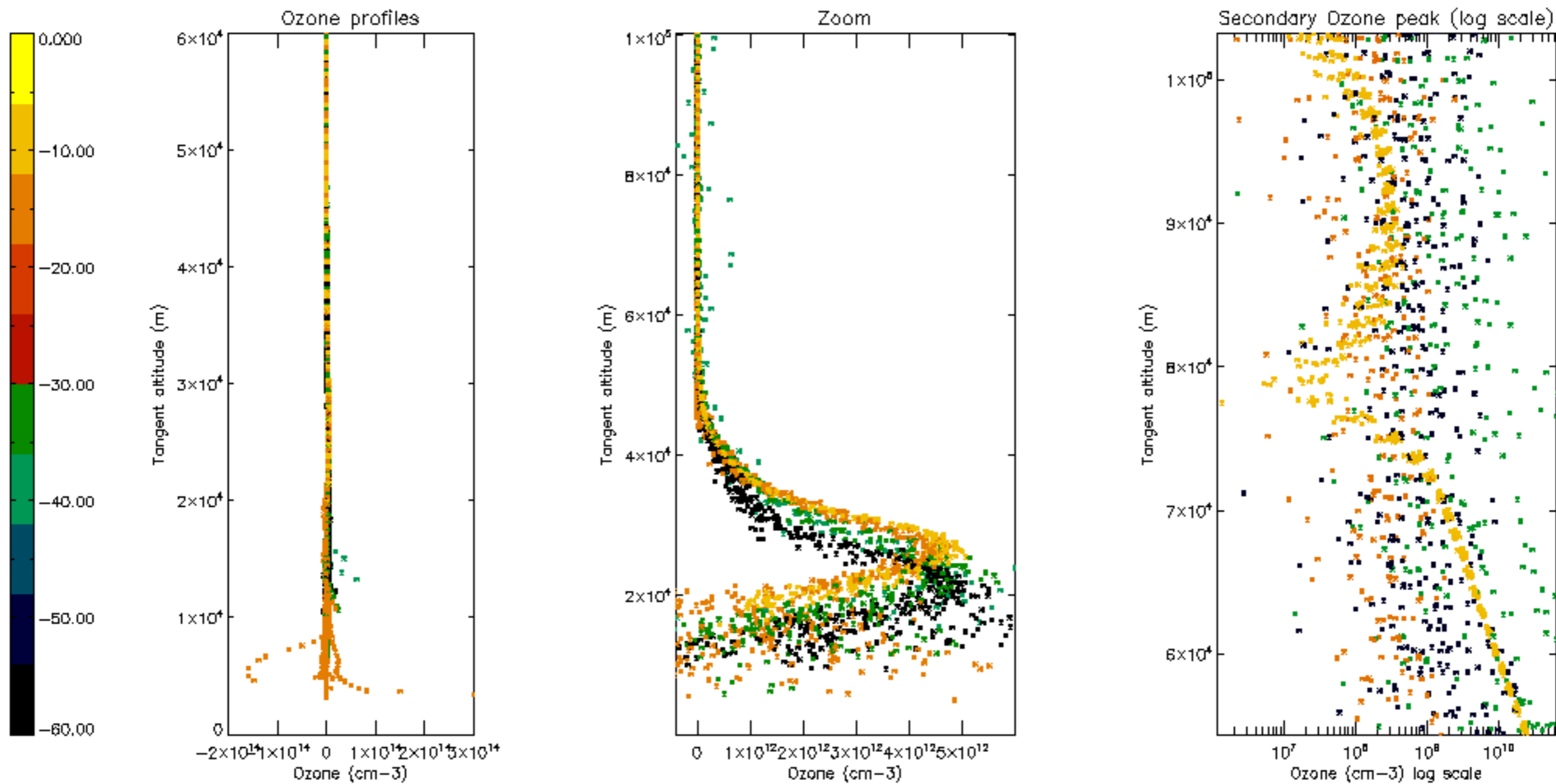


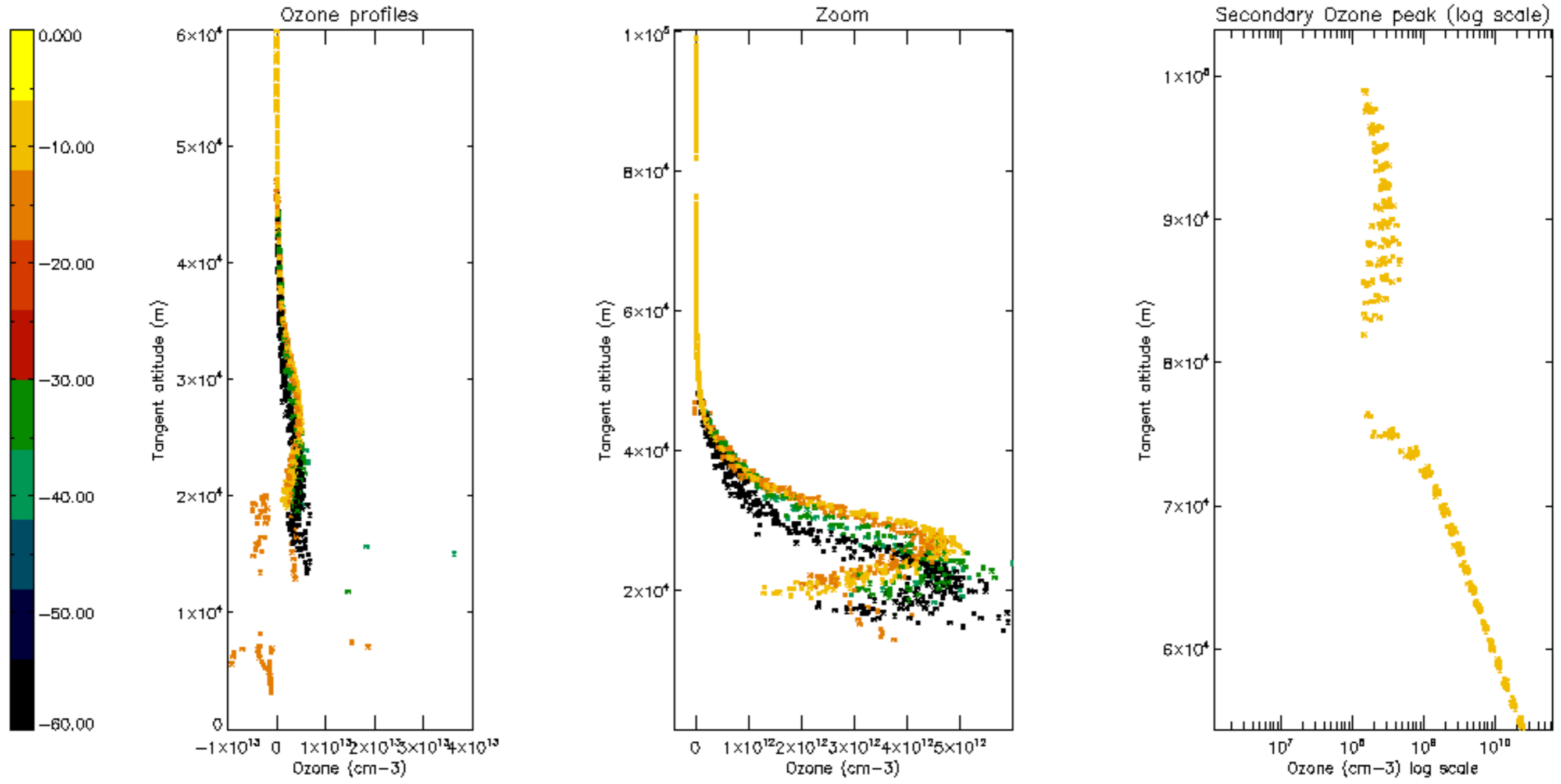
Percentage of star falling outside central band per profile

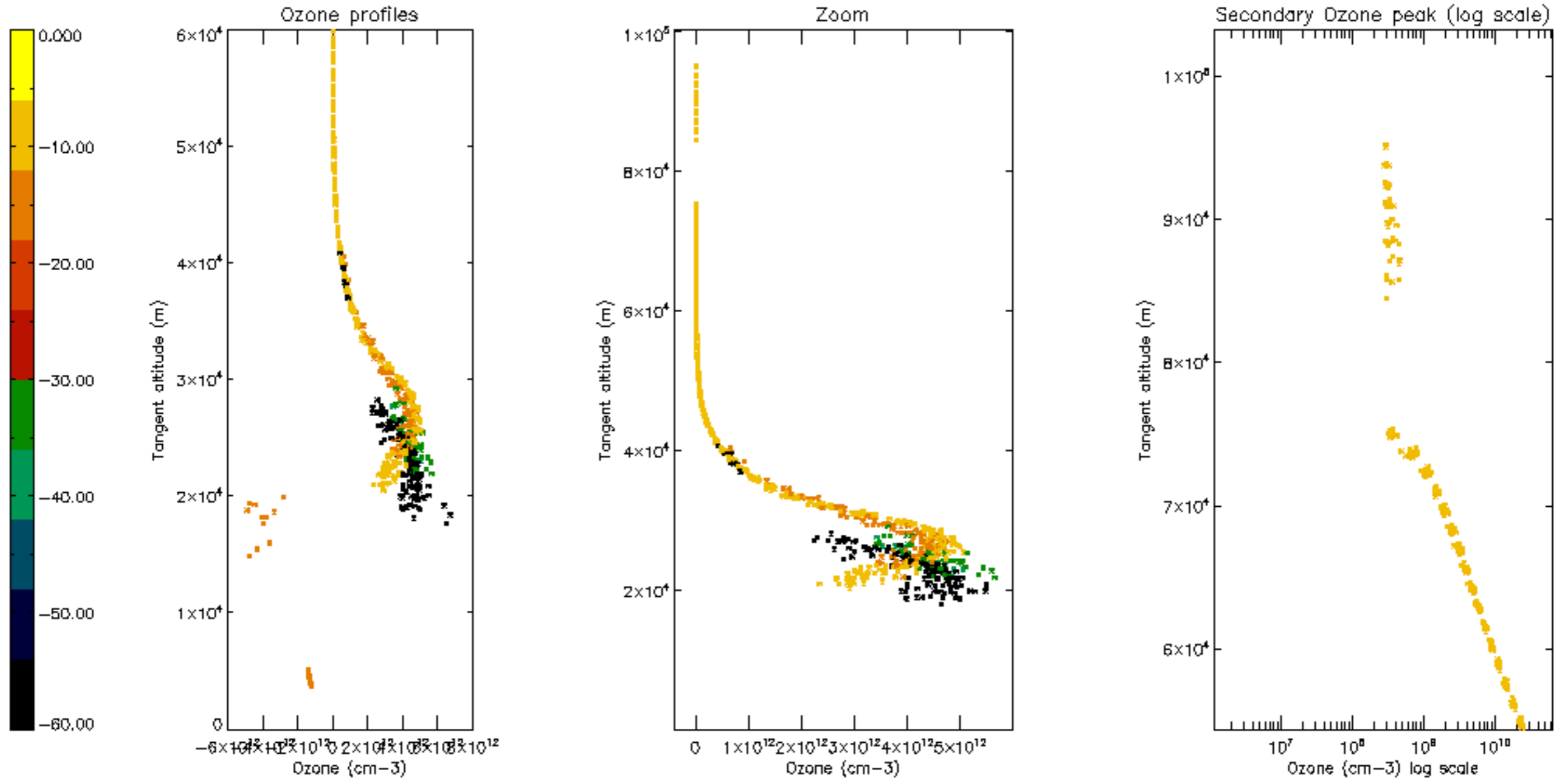


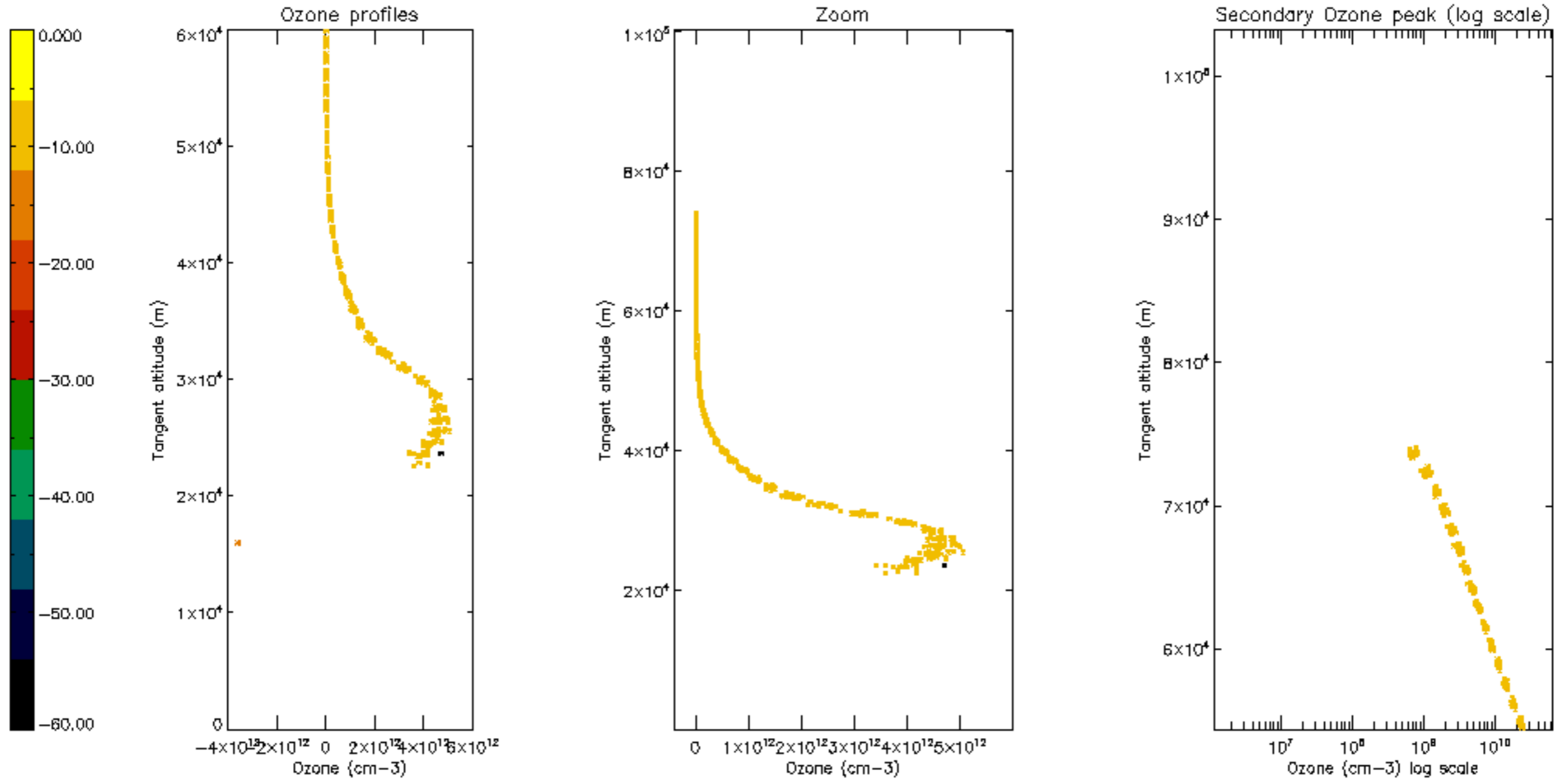
Percentage of saturation errors per profile



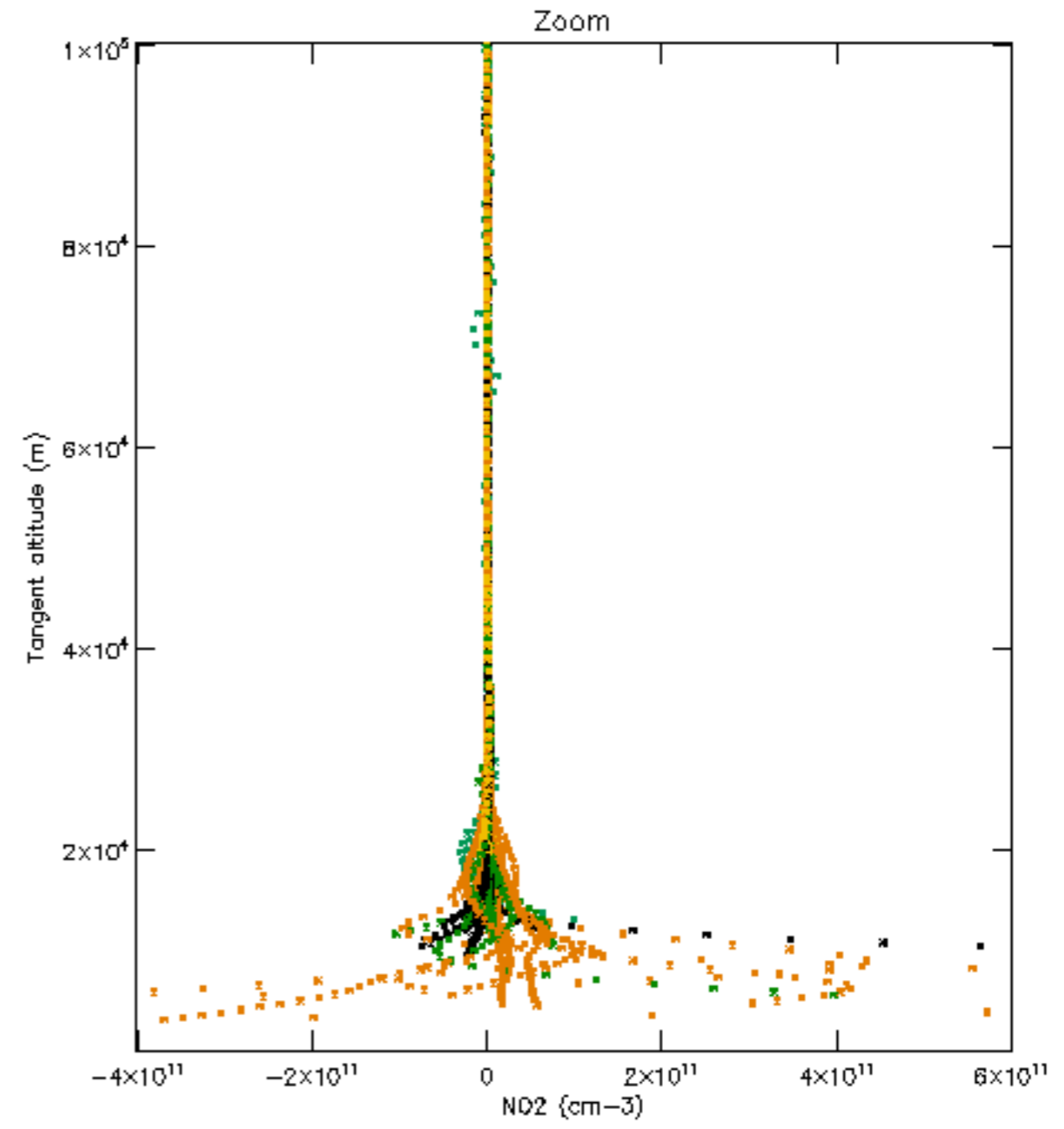
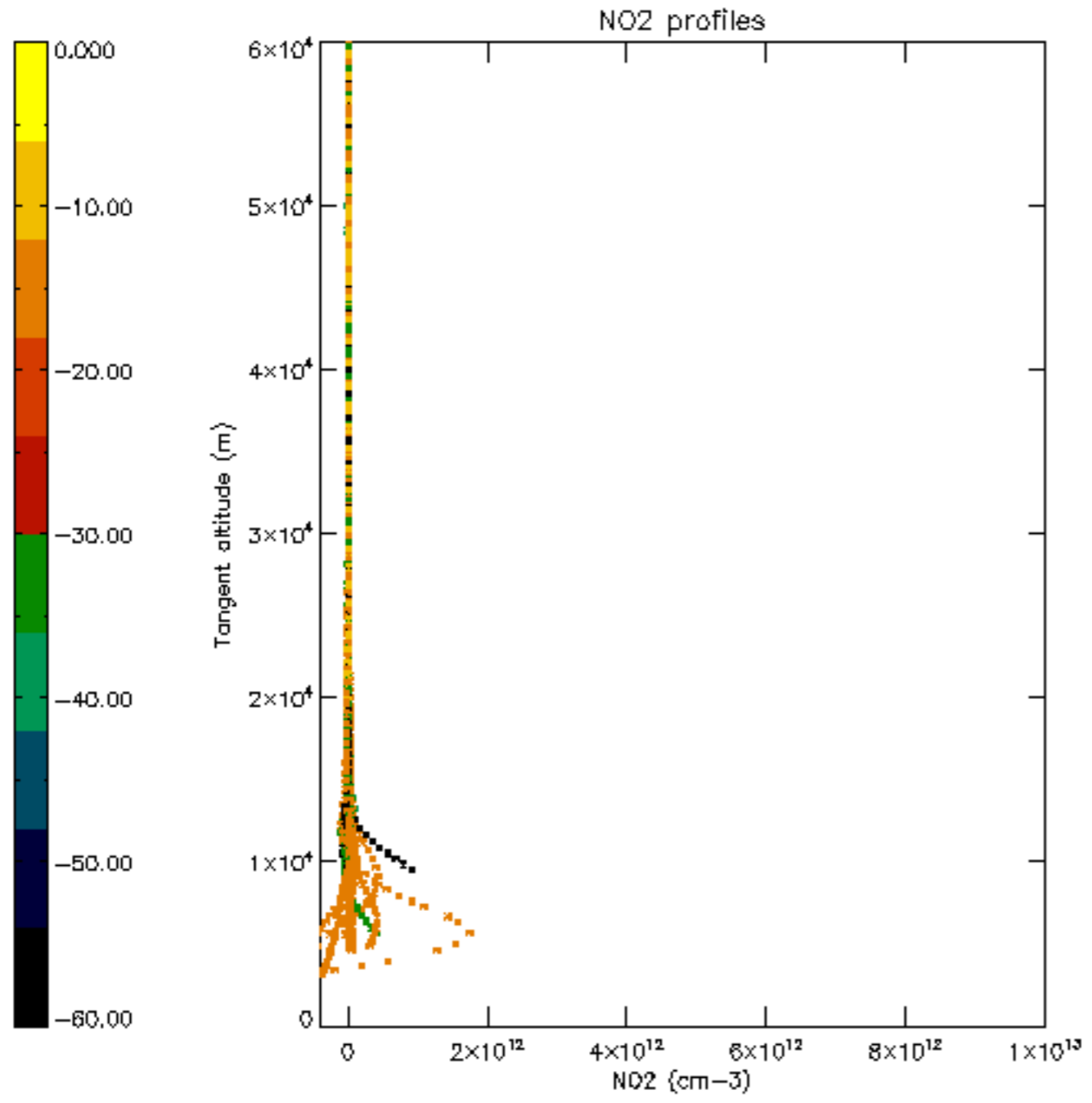


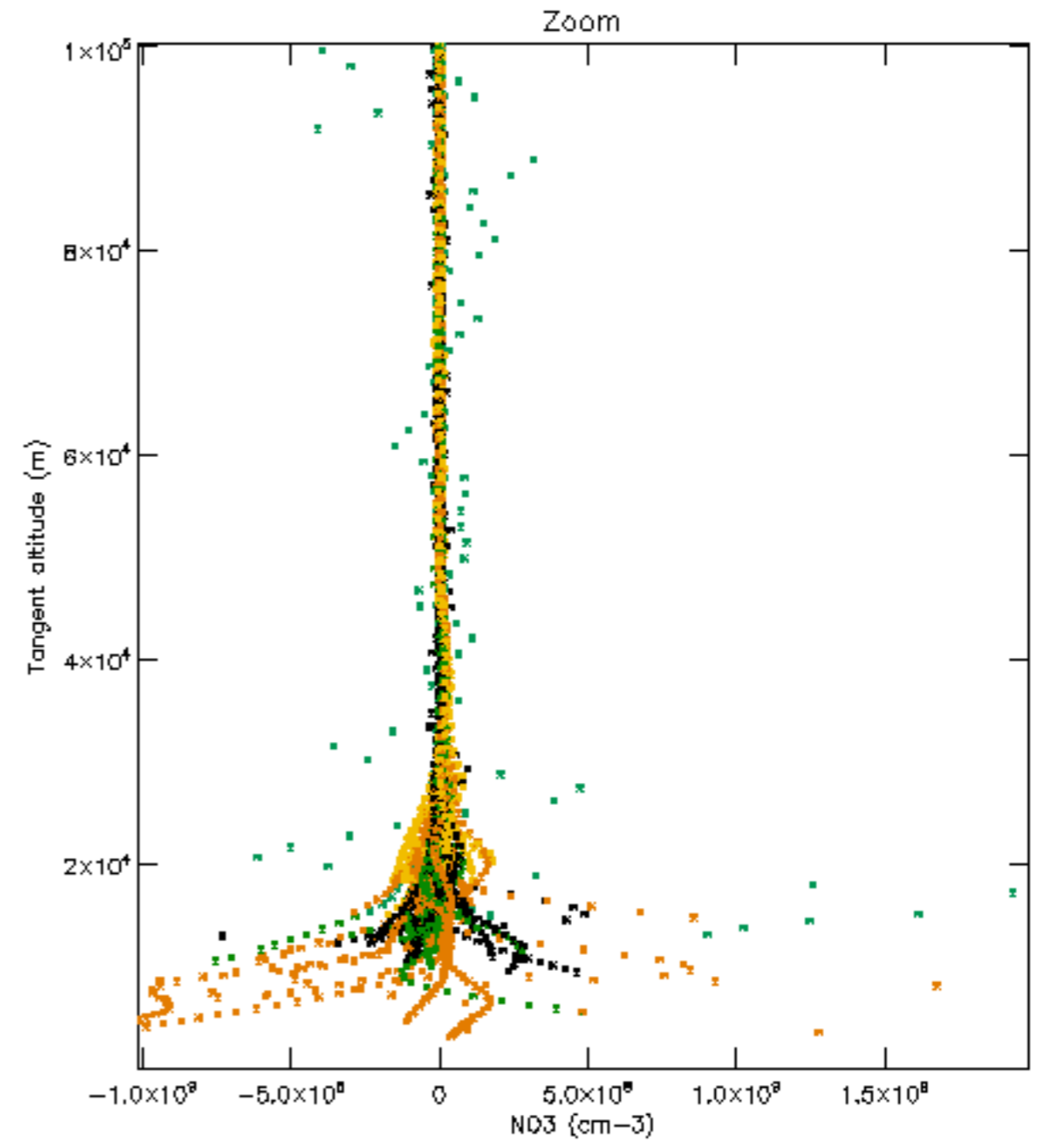
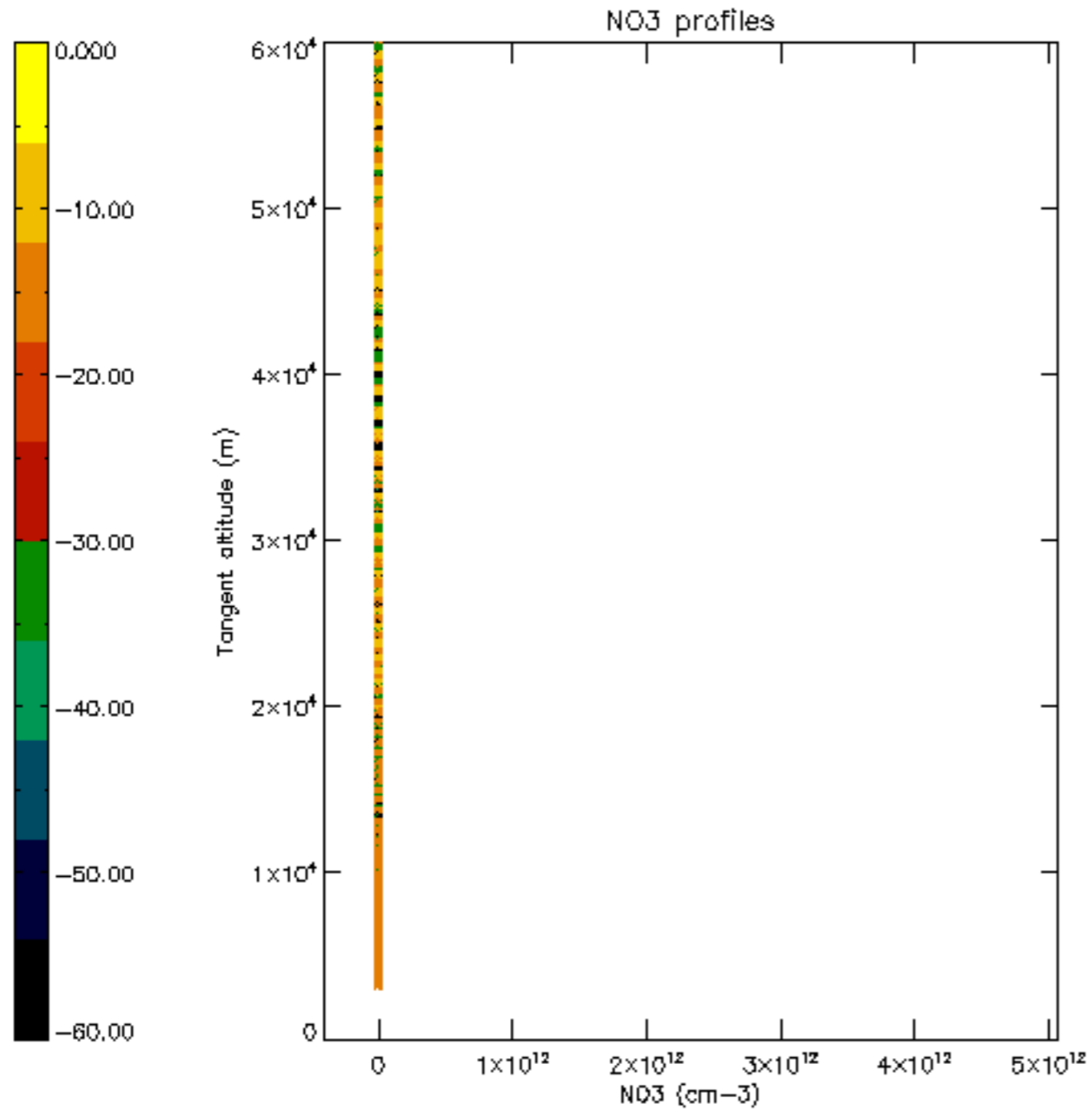


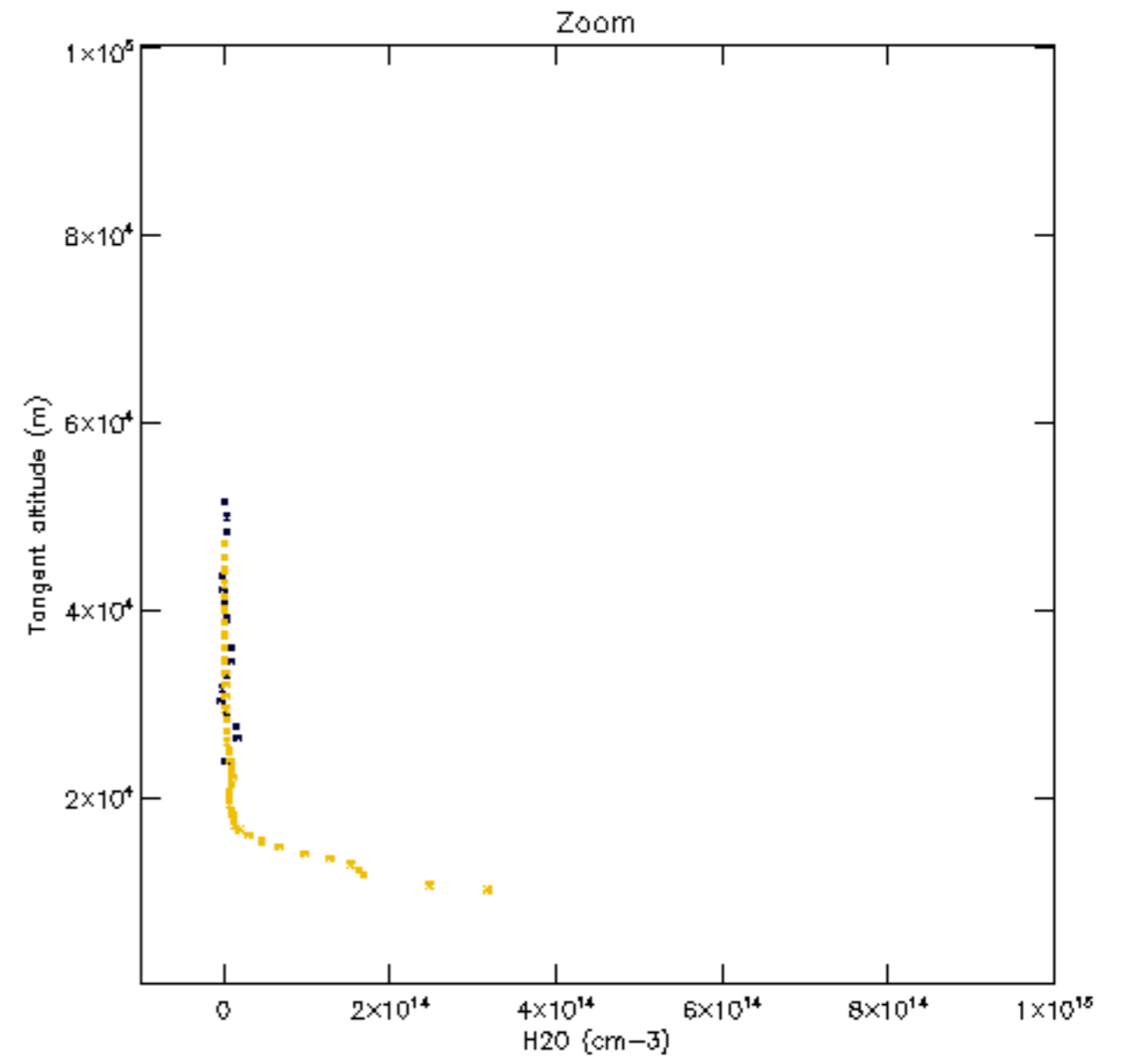
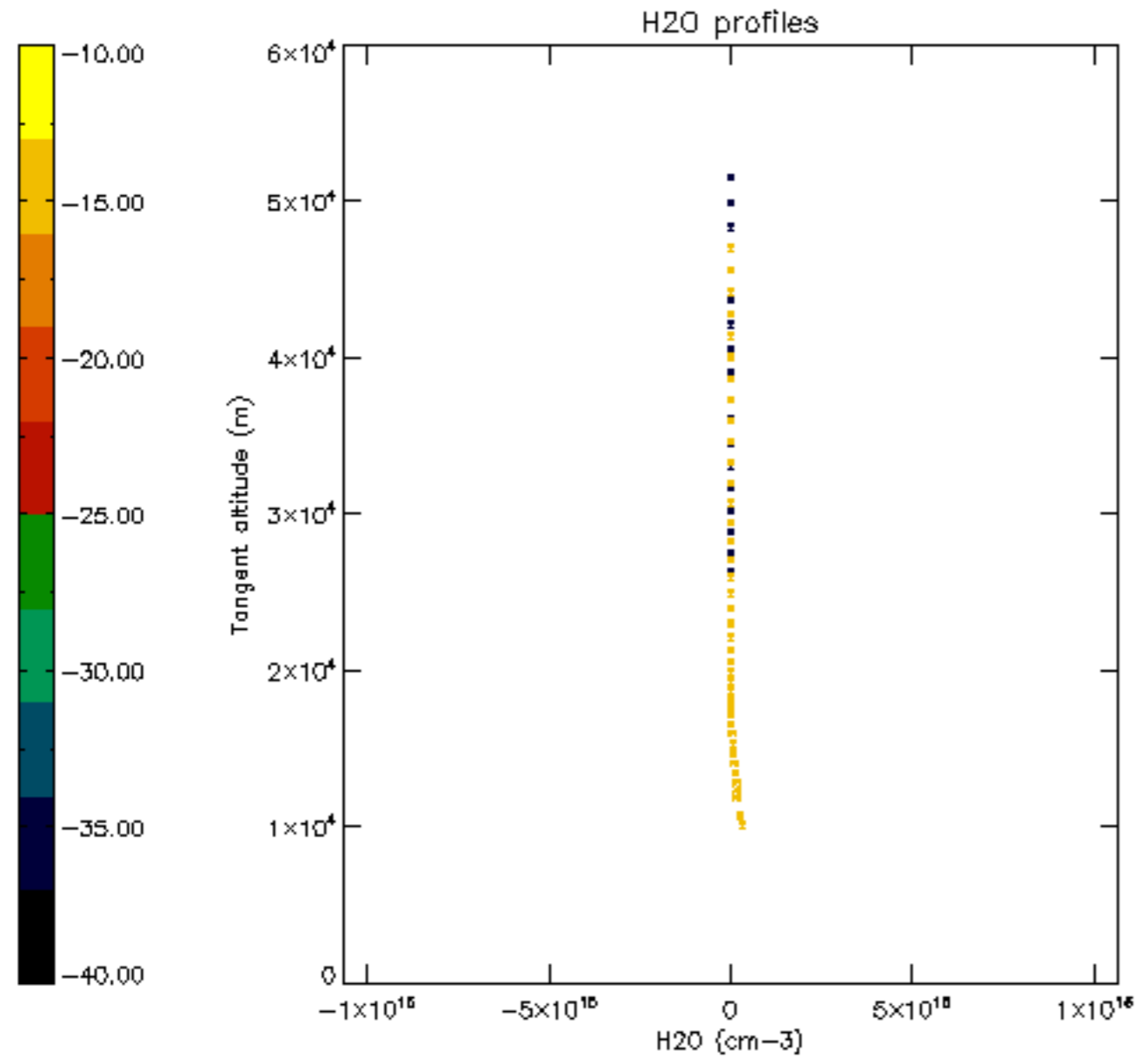


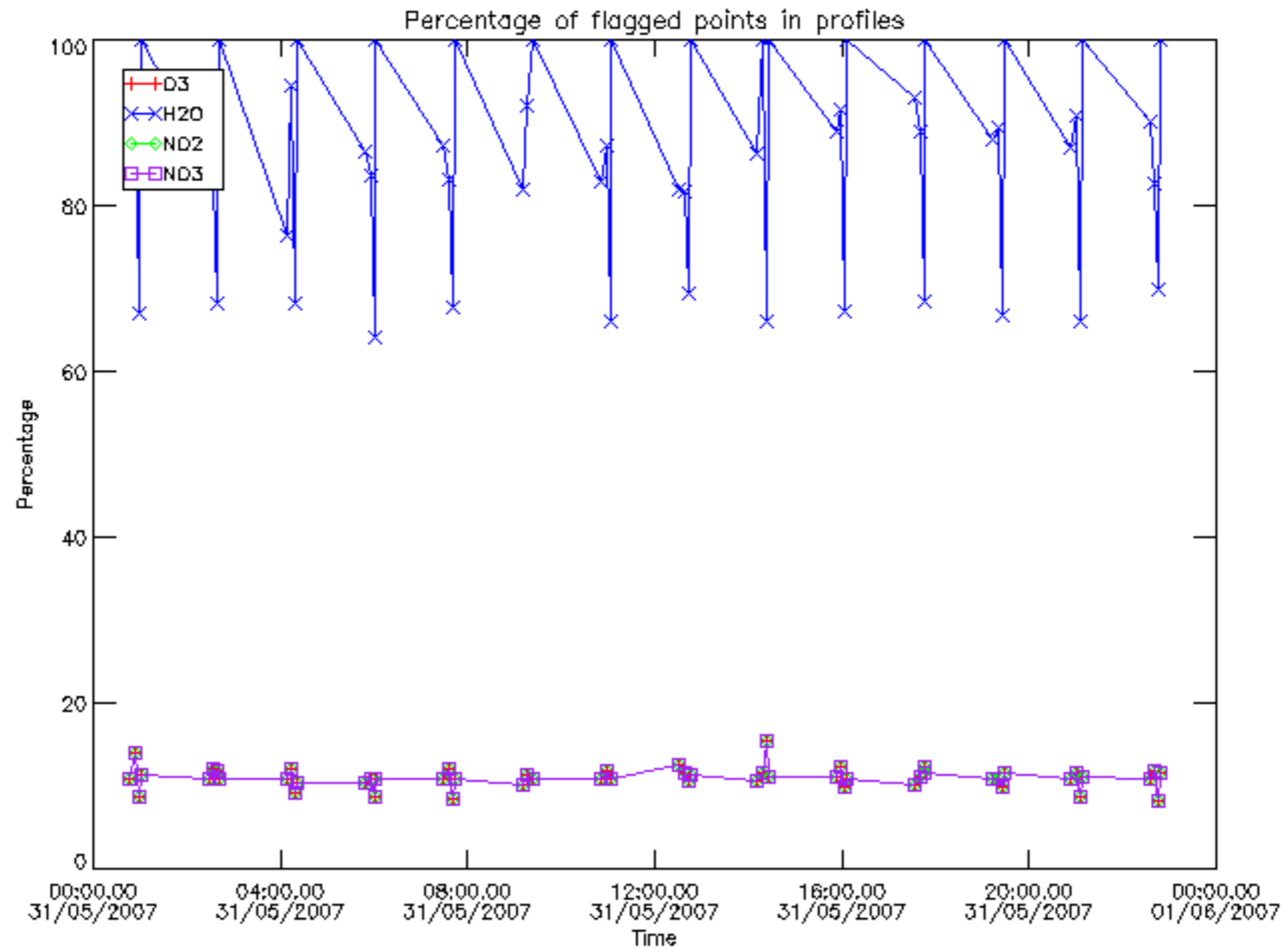




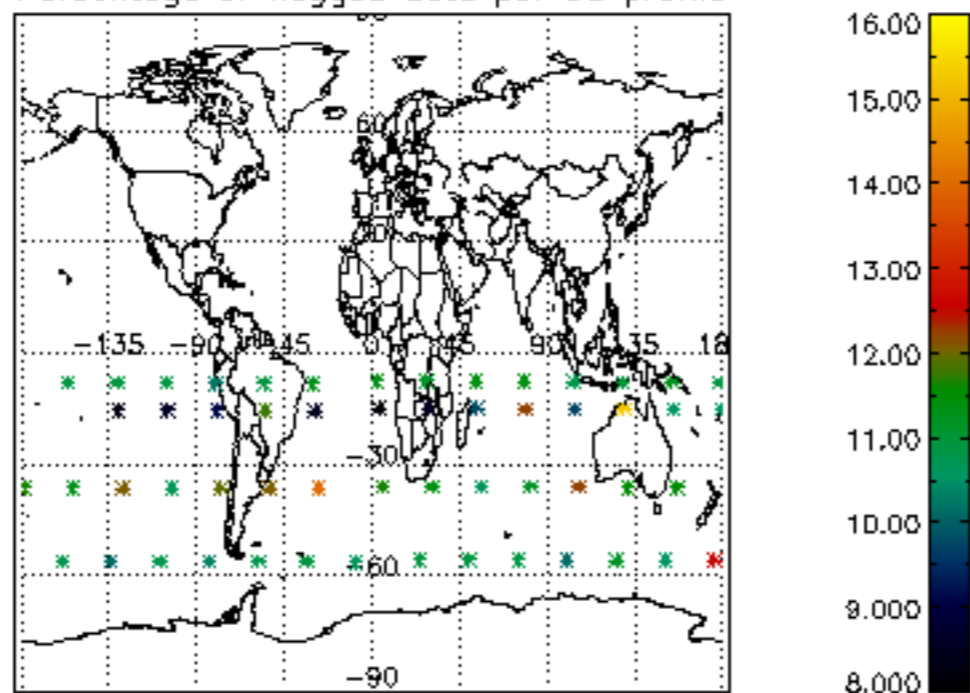




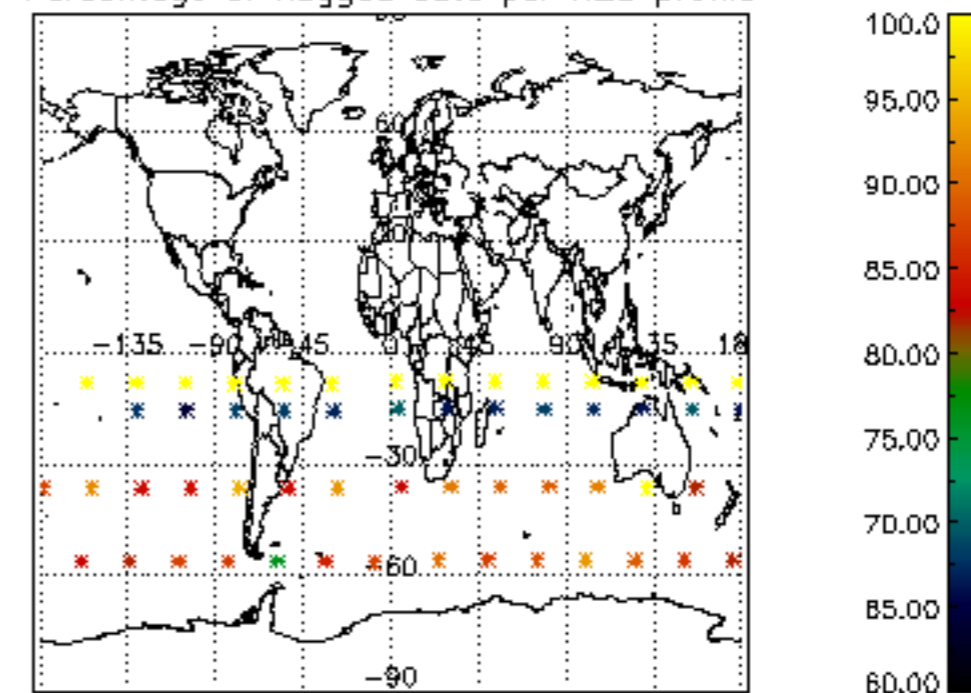




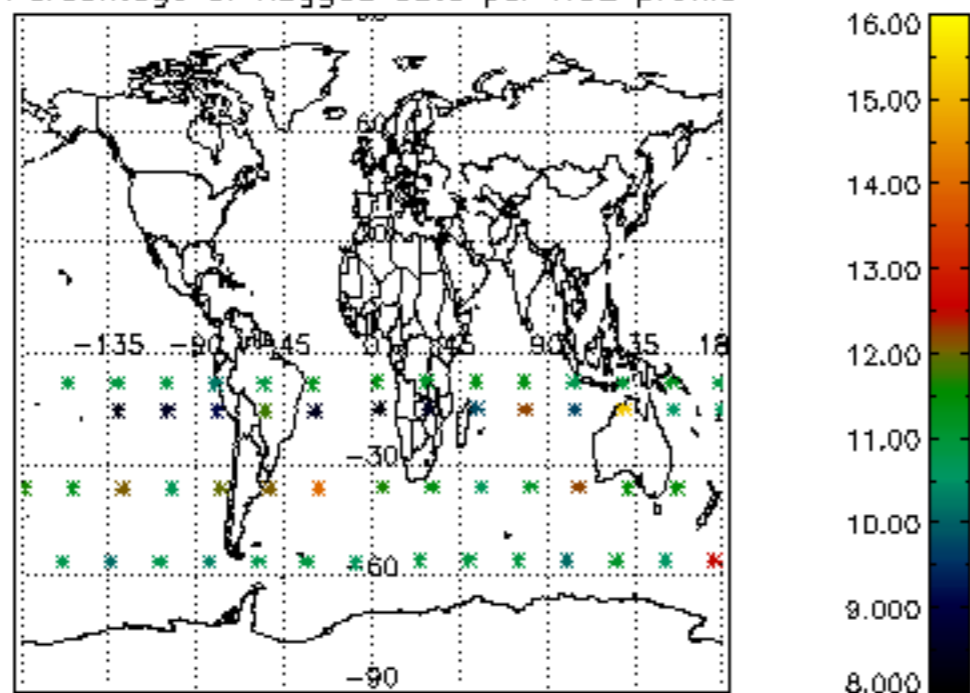
Percentage of flagged data per D3 profile



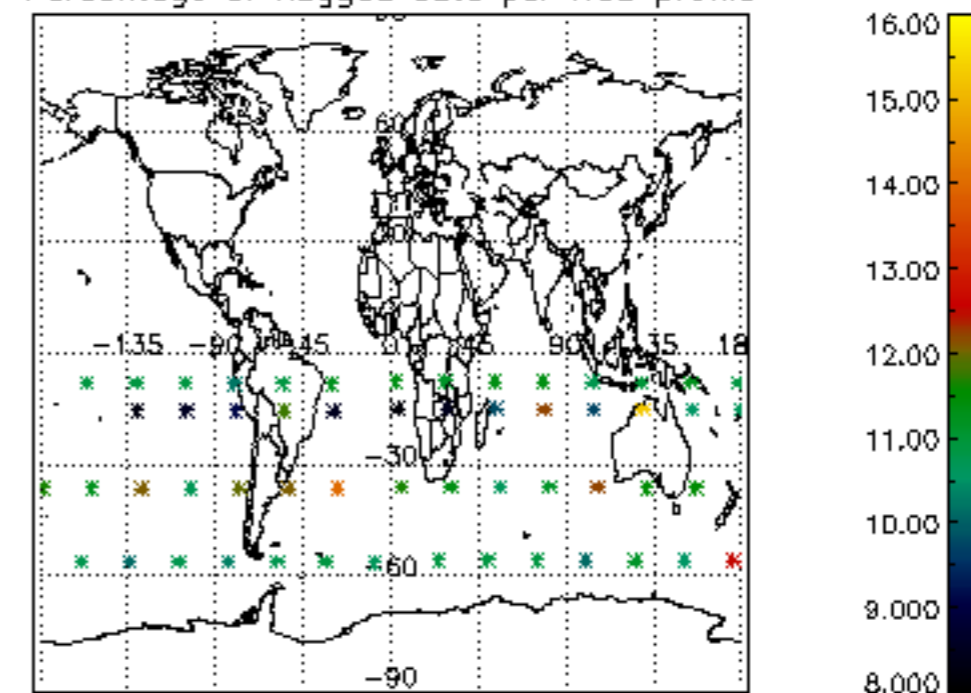
Percentage of flagged data per H2O profile

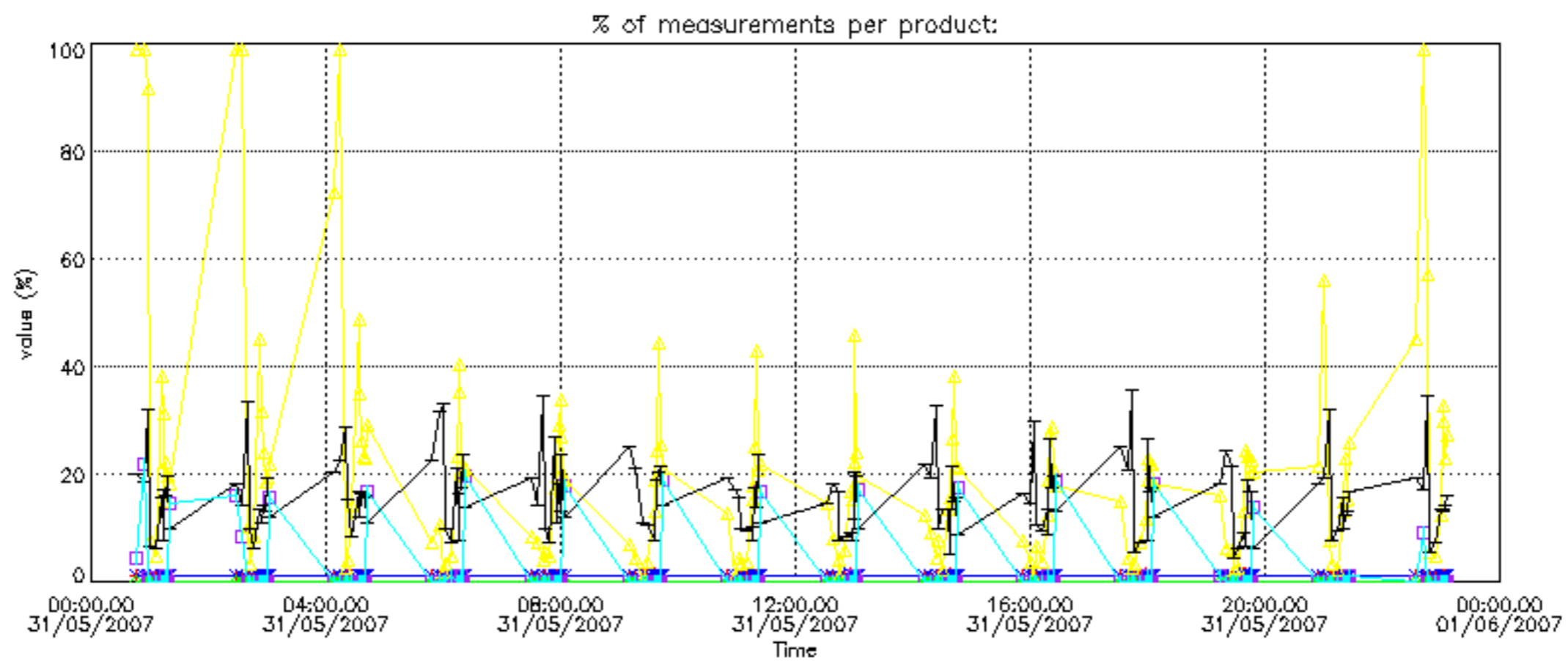
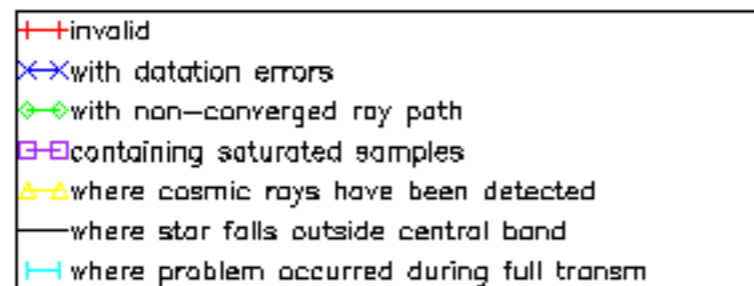


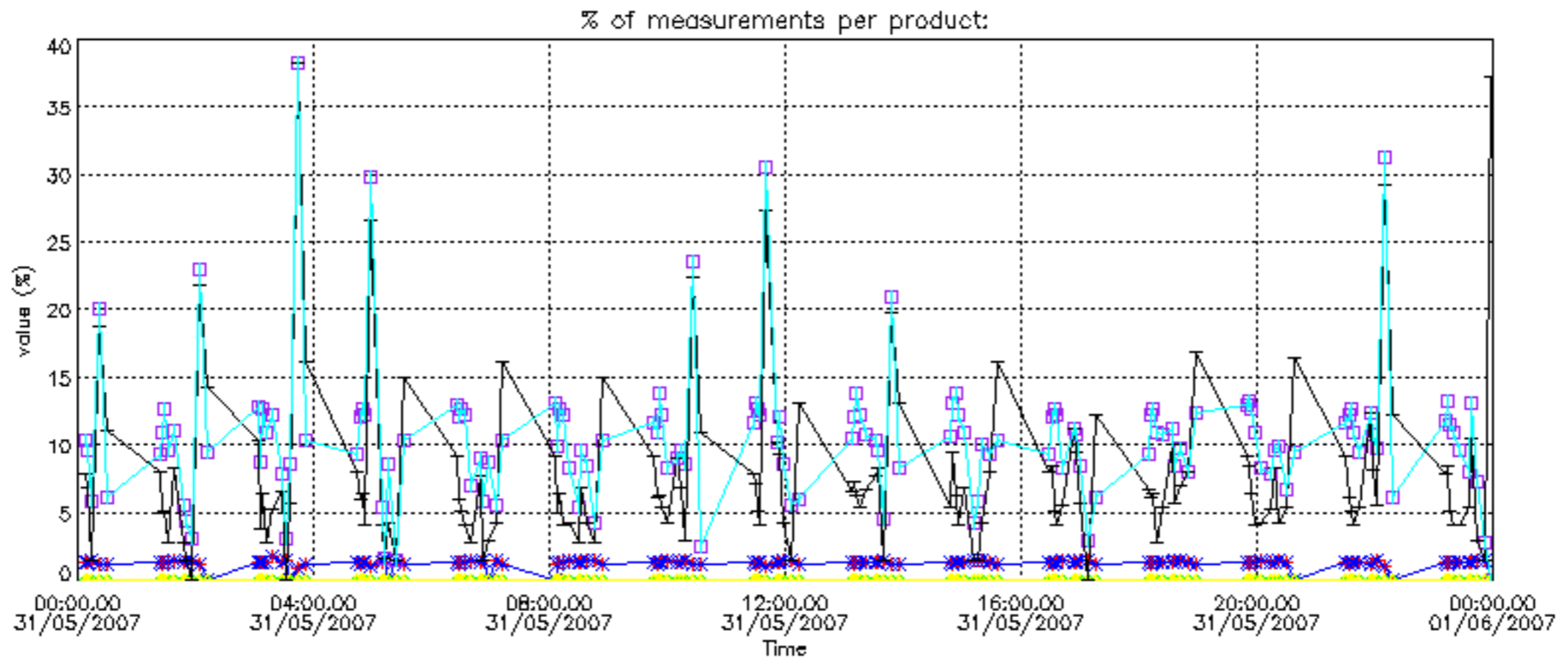
Percentage of flagged data per NO2 profile



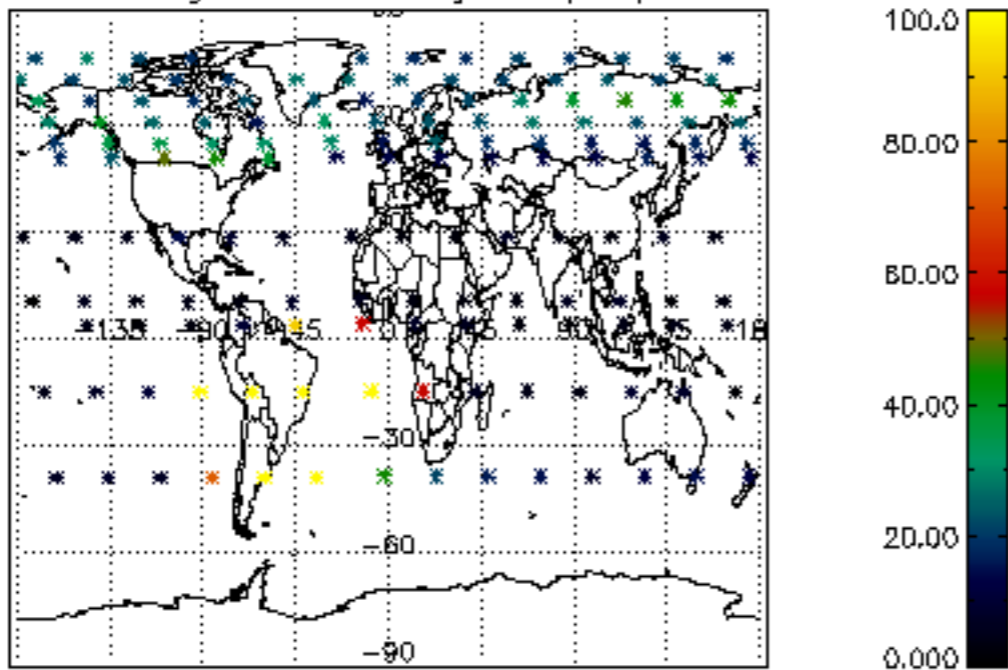
Percentage of flagged data per NO3 profile



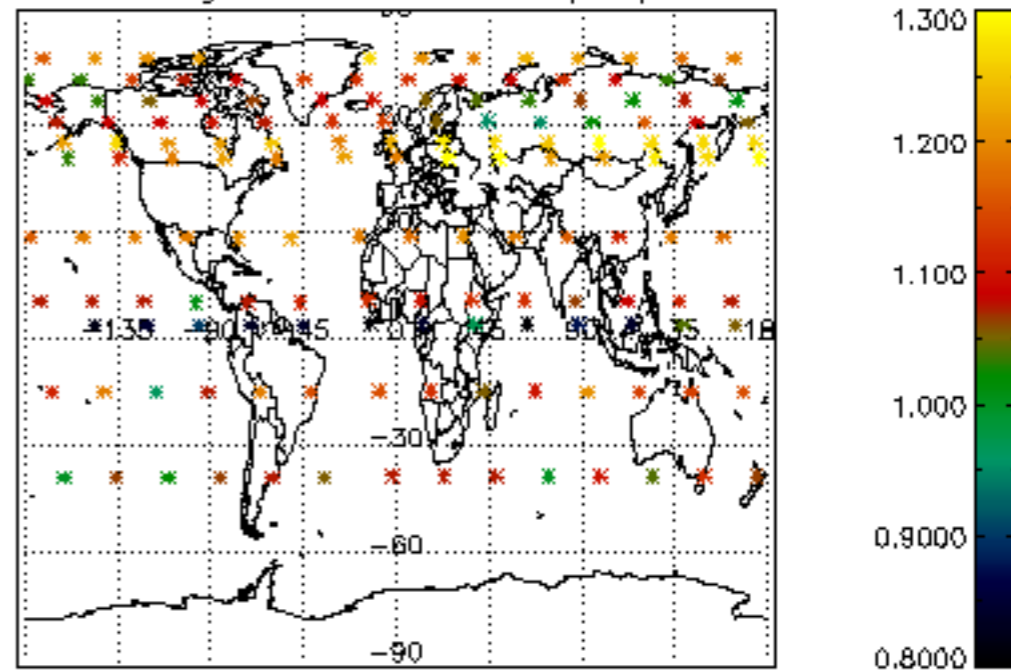




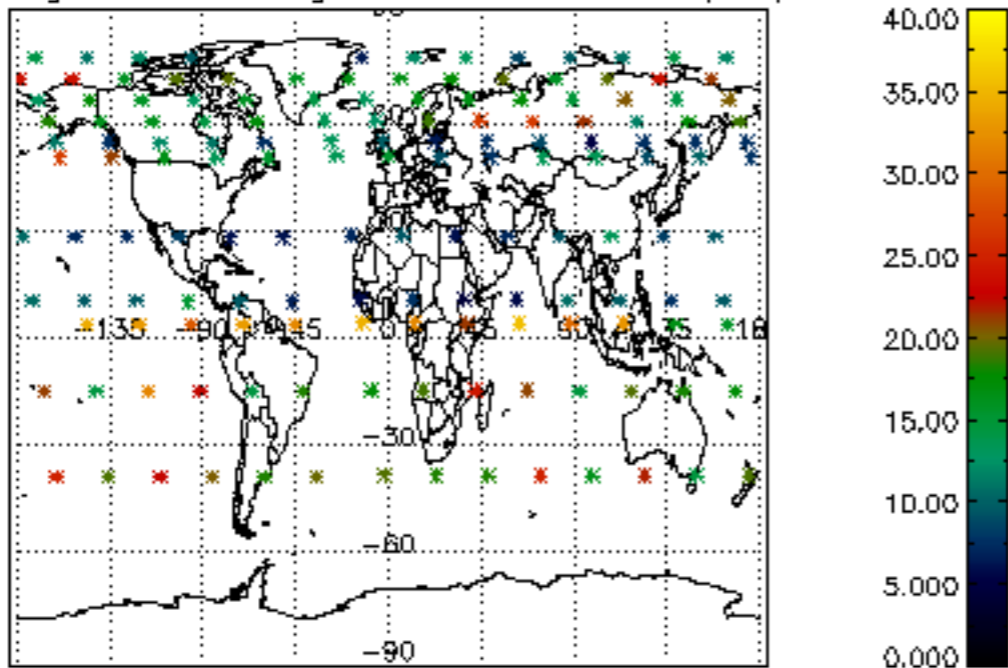
Percentage of cosmic ray hits per profile



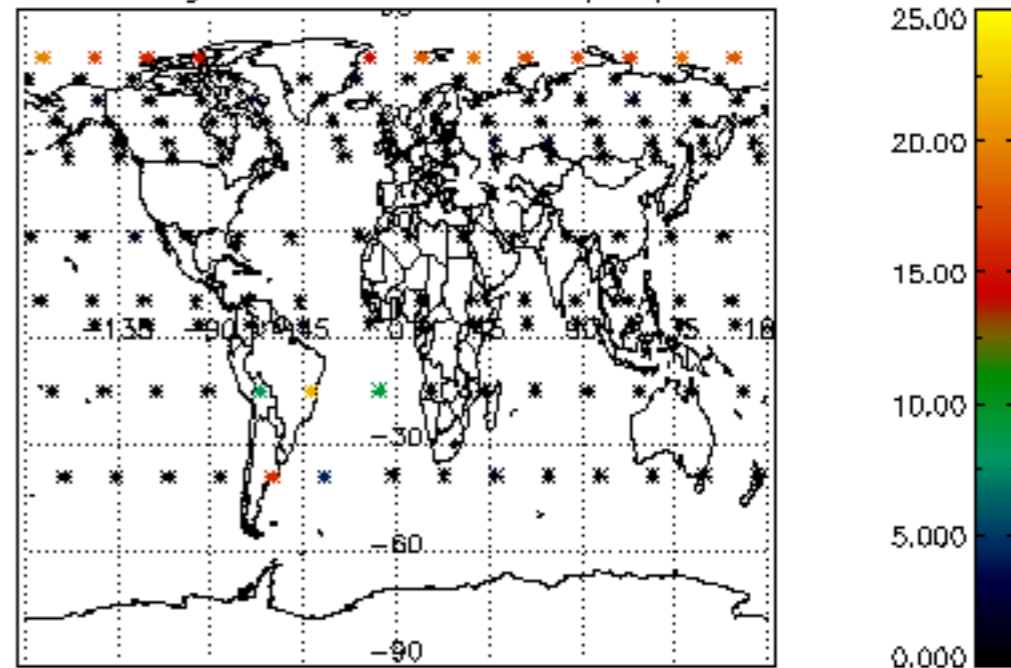
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

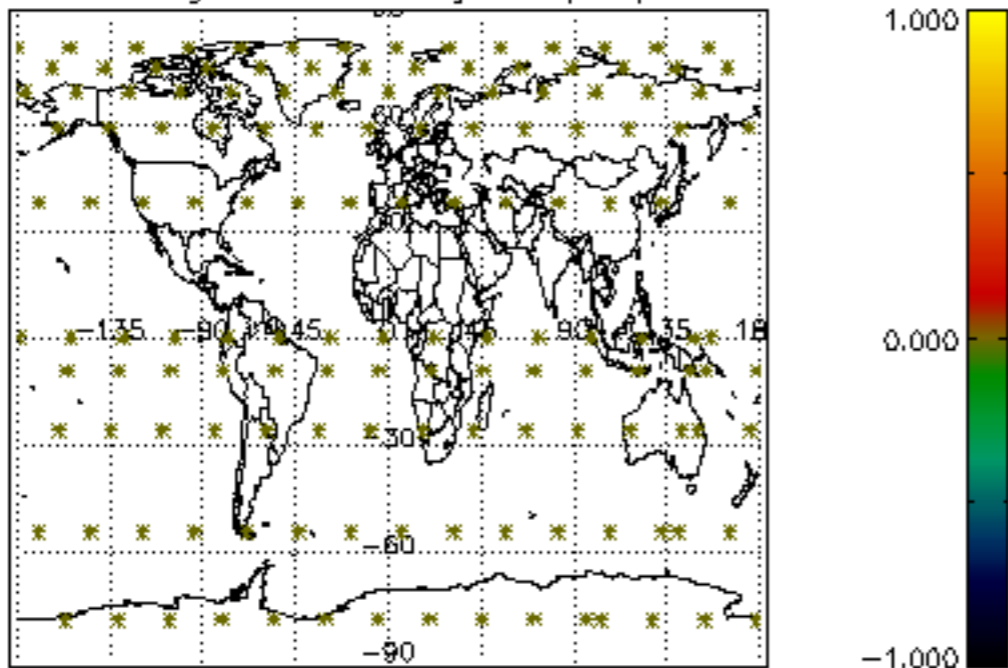


Percentage of saturation errors per profile

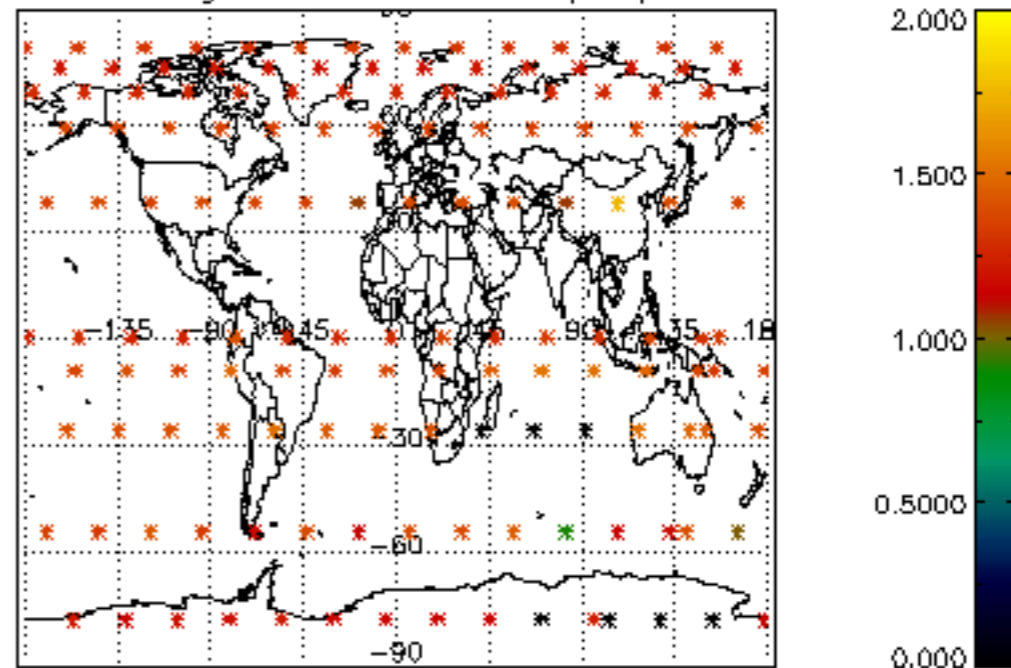




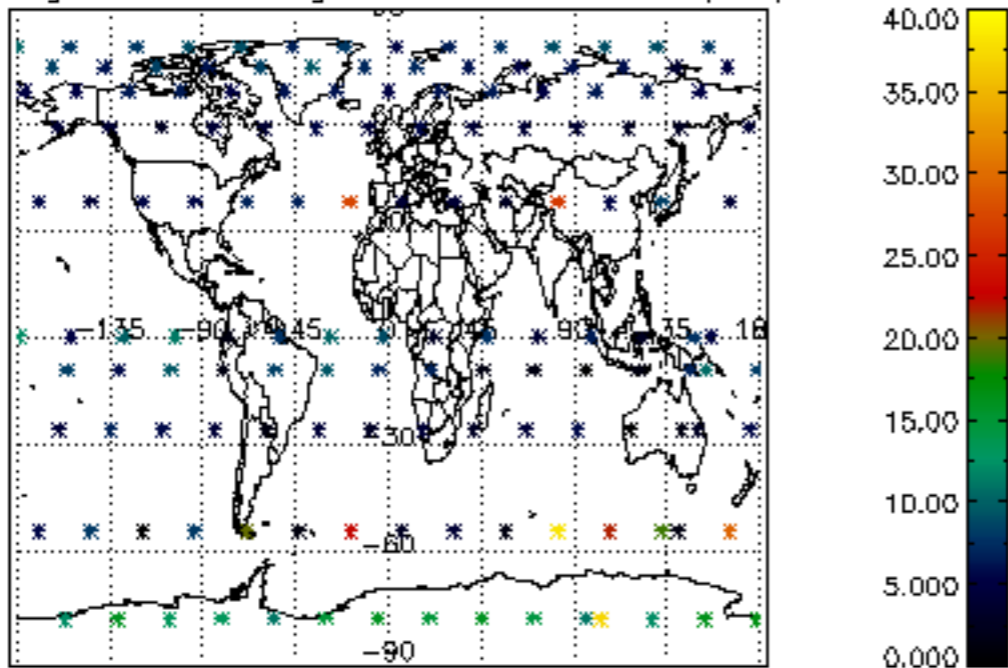
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

