

# GOMOS Level 2 Daily Report

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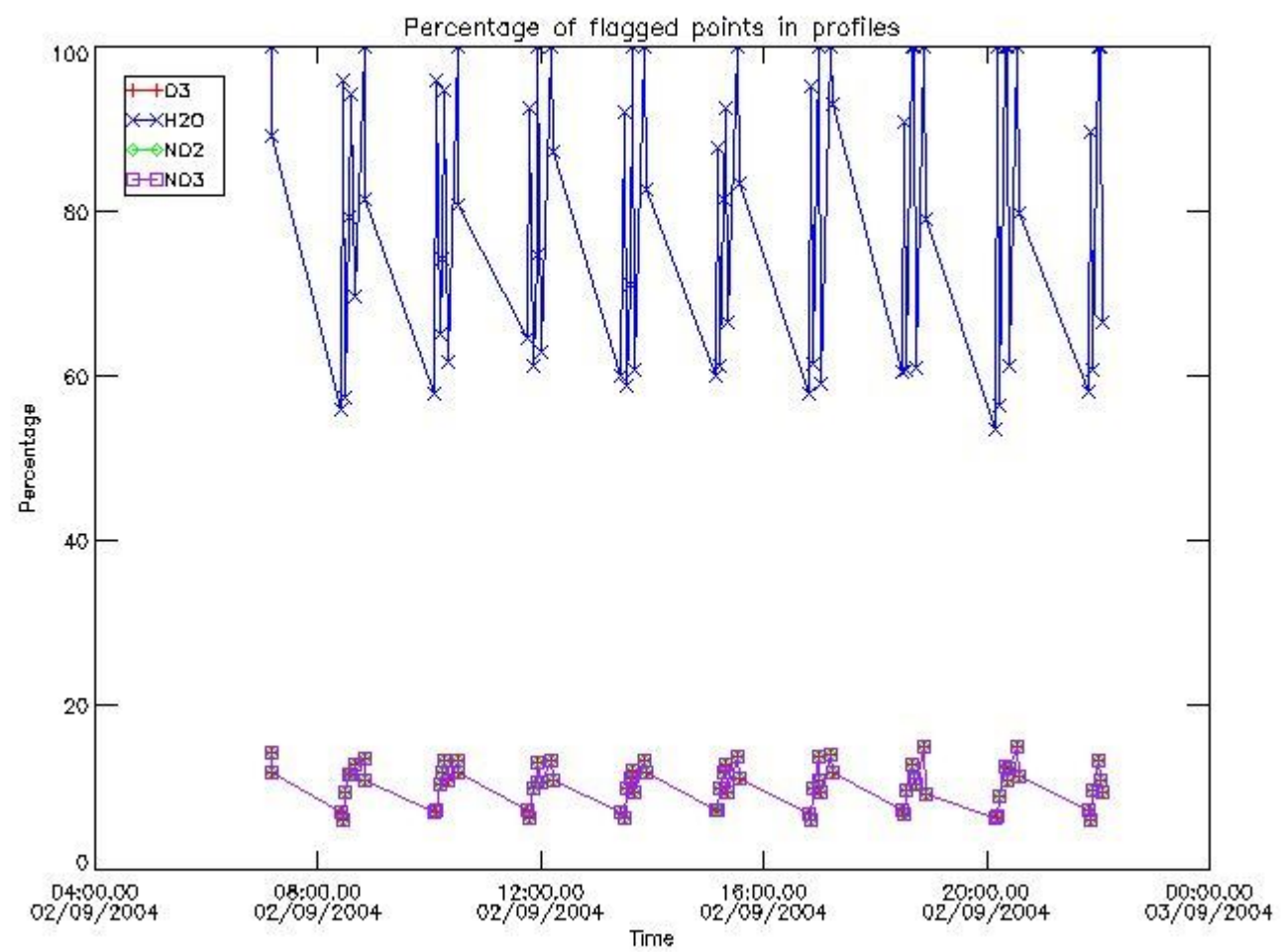


279	GOM_NL__2PRFIN20040902_211424_000000372030_00043_13123_3481.N1	02-SEP-2004 21:14:24	Bright	37.000	89	5Alp Cep	2.4510	8000.0	74	13123	No
280	GOM_NL__2PRFIN20040902_211655_000000442030_00043_13123_3482.N1	02-SEP-2004 21:16:55	Bright	43.500	74	11Bet Cas	2.2680	6600.0	87	13123	No
281	GOM_NL__2PRFIN20040902_211901_000000462030_00043_13123_3483.N1	02-SEP-2004 21:19:01	Bright	46.000	76	27Gam Cas	2.3000	30000.	92	13123	No
282	GOM_NL__2PRFIN20040902_212205_000000382030_00043_13123_3484.N1	02-SEP-2004 21:22:05	Bright	37.500	49	1Alp UMi	1.9900	6300.0	75	13123	No
283	GOM_NL__2PRFIN20040902_212359_000000932030_00043_13123_3485.N1	02-SEP-2004 21:23:59	Bright	93.000	73	57Gam1And	2.2600	13100.	186	13123	No
284	GOM_NL__2PRFIN20040902_212838_000000362030_00043_13123_3486.N1	02-SEP-2004 21:28:38	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	13123	No
285	GOM_NL__2PRFIN20040902_213000_000000342030_00043_13123_3487.N1	02-SEP-2004 21:30:00	Bright	34.000	82	48Bet UMa	2.3650	10600.	68	13123	No
286	GOM_NL__2PRFIN20040902_213358_000000602030_00043_13123_3488.N1	02-SEP-2004 21:33:58	Bright	60.000	6	13Alp Aur	0.080000	3400.0	120	13123	No
287	GOM_NL__2PRFIN20040902_213749_000000502030_00043_13123_3489.N1	02-SEP-2004 21:37:49	Bright	49.500	107	37The Aur	2.6490	11000.	99	13123	No
288	GOM_NL__2PRFIN20040902_214011_000000412030_00043_13123_3490.N1	02-SEP-2004 21:40:11	Bright	40.500	17	78Bet Gem	1.1610	4500.0	81	13123	No
289	GOM_NL__2PRFIN20040902_214147_000000702030_00043_13123_3491.N1	02-SEP-2004 21:41:47	Twilight	70.000	28	12Bet Tau	1.6500	15200.	140	13123	No
290	GOM_NL__2PRFIN20040902_214456_000000542030_00043_13123_3492.N1	02-SEP-2004 21:44:56	Twilight	54.000	44	24Gam Gem	1.9280	11000.	108	13123	No
291	GOM_NL__2PRFIN20040902_214656_000000472030_00043_13123_3493.N1	02-SEP-2004 21:46:56	Twilight	47.000	8	10Alp CMi	0.40000	6500.0	94	13123	No
292	GOM_NL__2PRFIN20040902_214946_000000782030_00043_13123_3494.N1	02-SEP-2004 21:49:46	Dark	78.000	14	58Alp Ori	0.87000	3000.0	156	13123	No
293	GOM_NL__2PRFIN20040902_215217_000000872030_00043_13123_3495.N1	02-SEP-2004 21:52:17	Dark	86.500	27	24Gam Ori	1.6360	26000.	173	13123	No
294	GOM_NL__2PRFIN20040902_215445_000000532030_00043_13123_3496.N1	02-SEP-2004 21:54:45	Dark	52.500	1	9Alp CMa	-1.4400	11000.	105	13123	No
295	GOM_NL__2PRFIN20040902_220042_000000392030_00043_13123_3497.N1	02-SEP-2004 22:00:42	Dark	38.500	34	Gam2Vel	1.7930	23000.	77	13123	No
296	GOM_NL__2PRFIN20040902_220212_000000472030_00043_13123_3498.N1	02-SEP-2004 22:02:12	Dark	47.000	108	Alp Col	2.6520	15200.	94	13123	No
297	GOM_NL__2PRFIN20040902_220409_000000542030_00043_13123_3499.N1	02-SEP-2004 22:04:09	Dark	53.500	2	Alp Car	-0.73600	7000.0	107	13123	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.

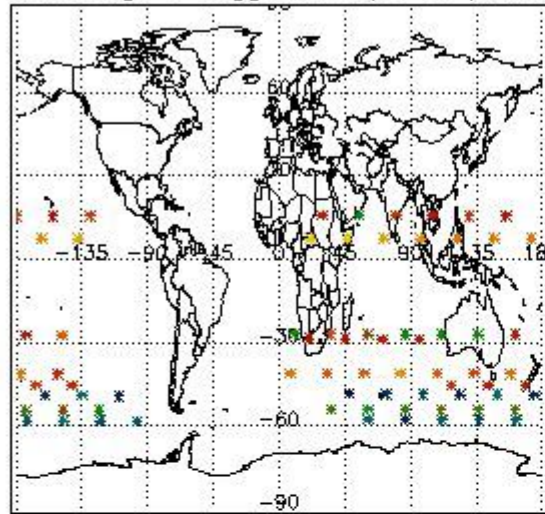
#### *3.1 Plot quality information per product (time dependant)*



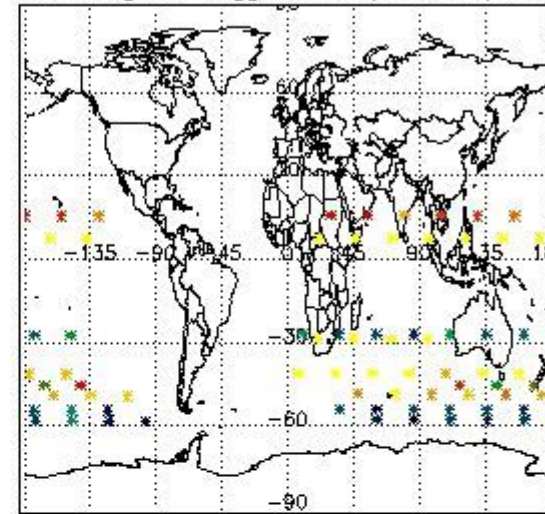
*3.2 Plot quality information per product (world map)*



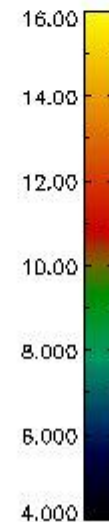
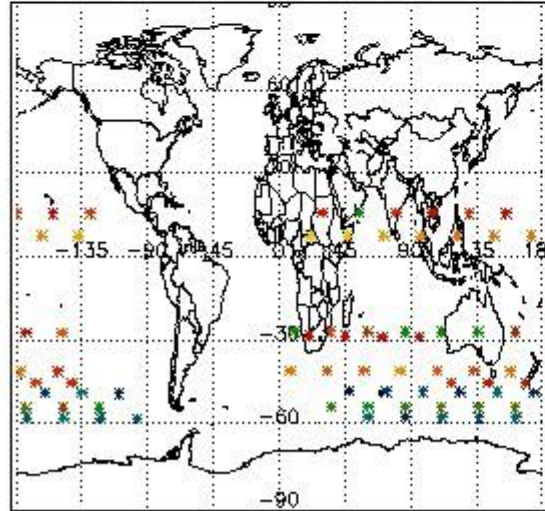
Percentage of flagged data per O3 profile



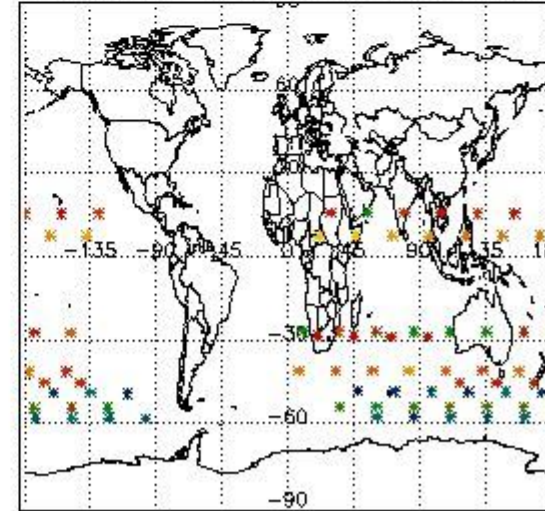
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

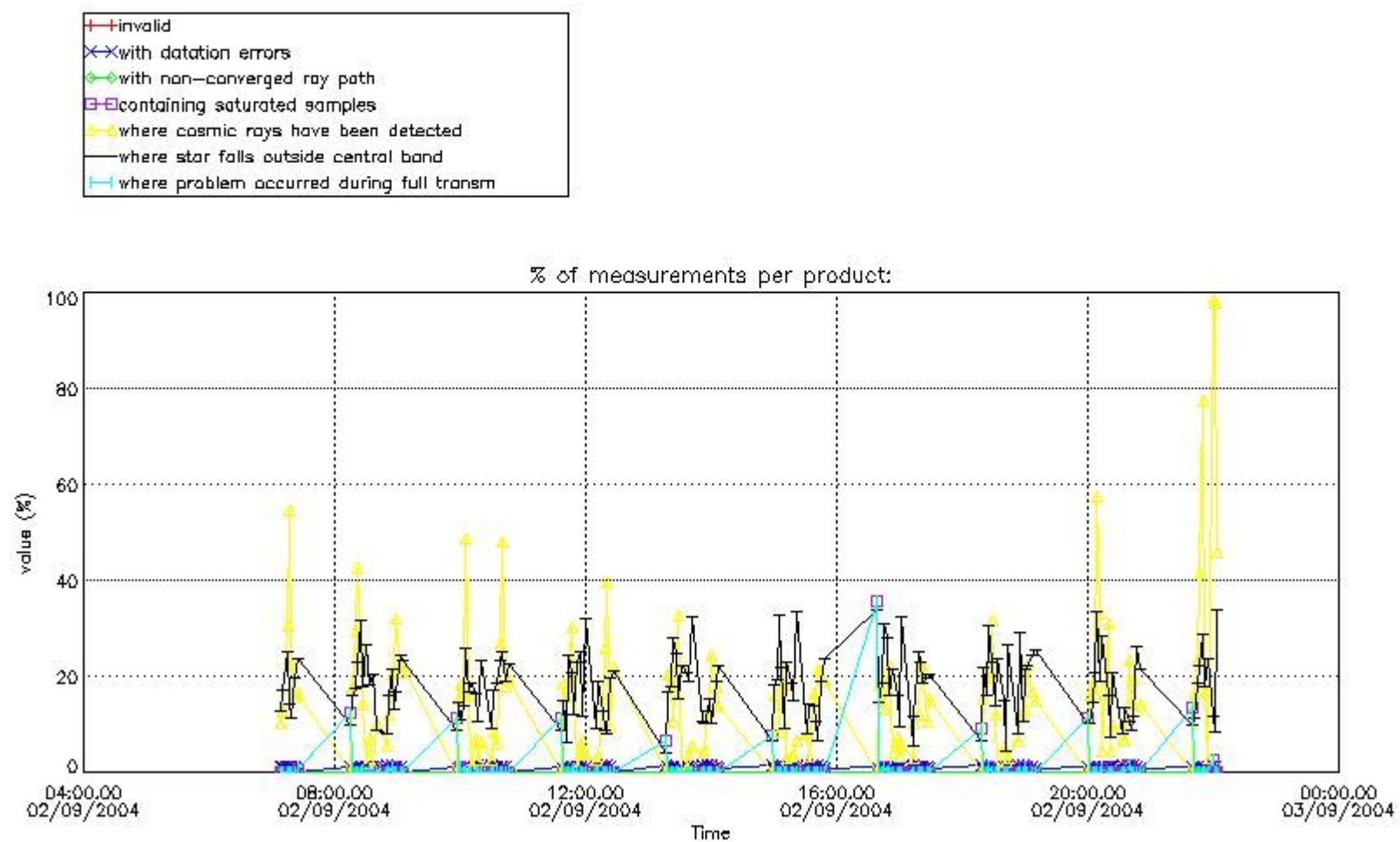


#### 4. Level 1 quality information per product

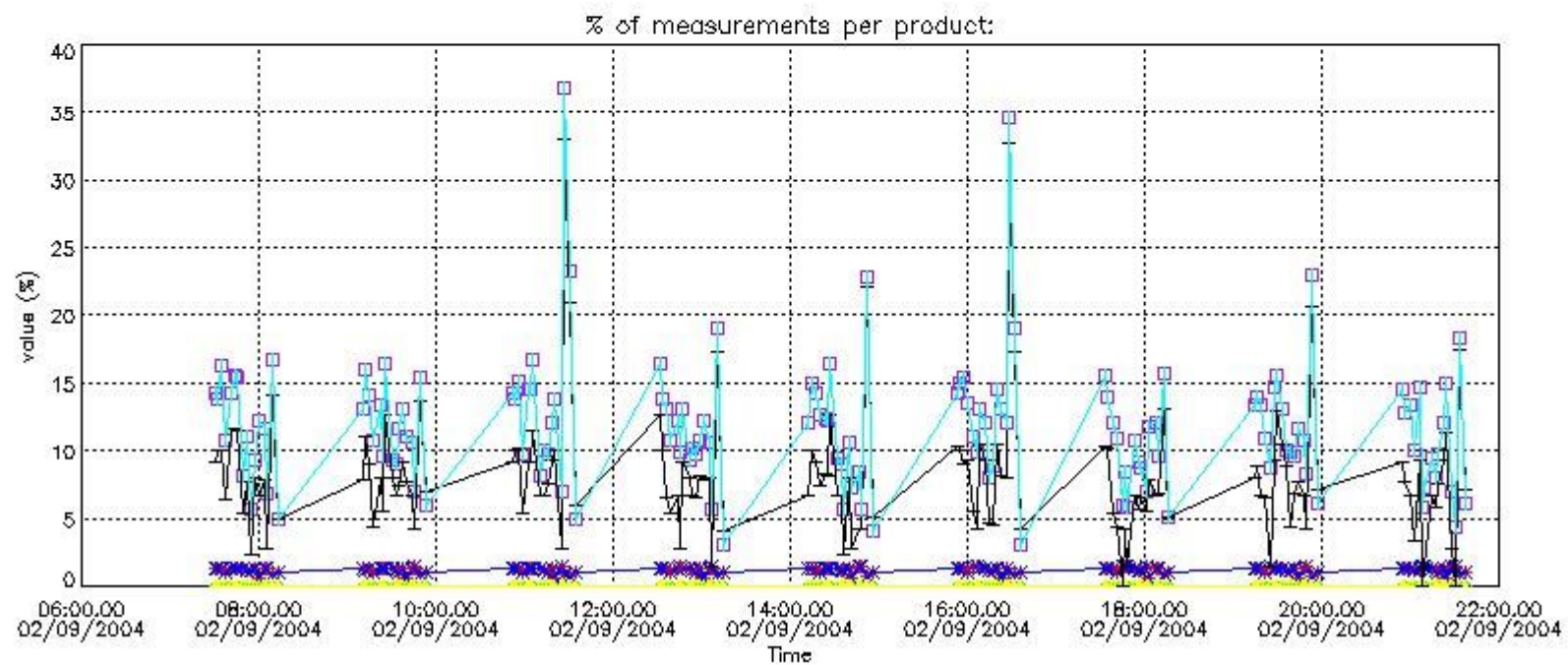
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



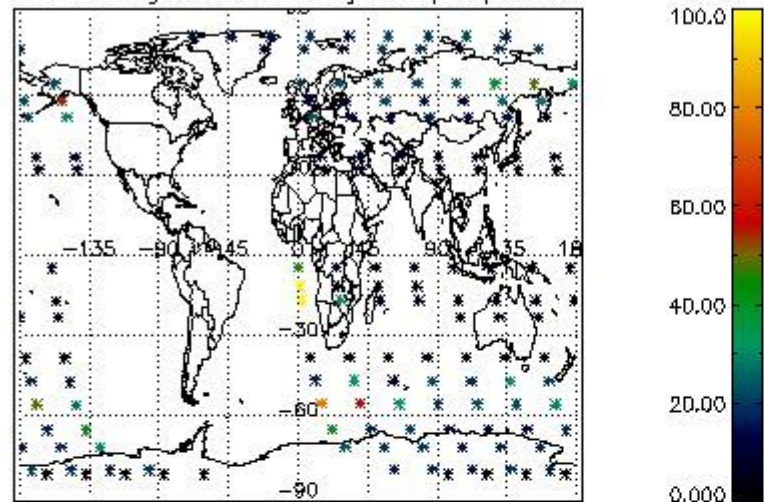
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



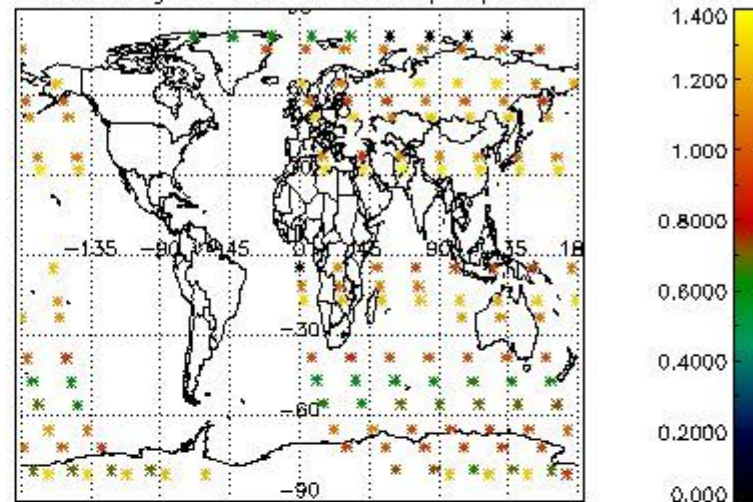
4.2 Plot quality information per product coming from level 1b processing (world map)

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

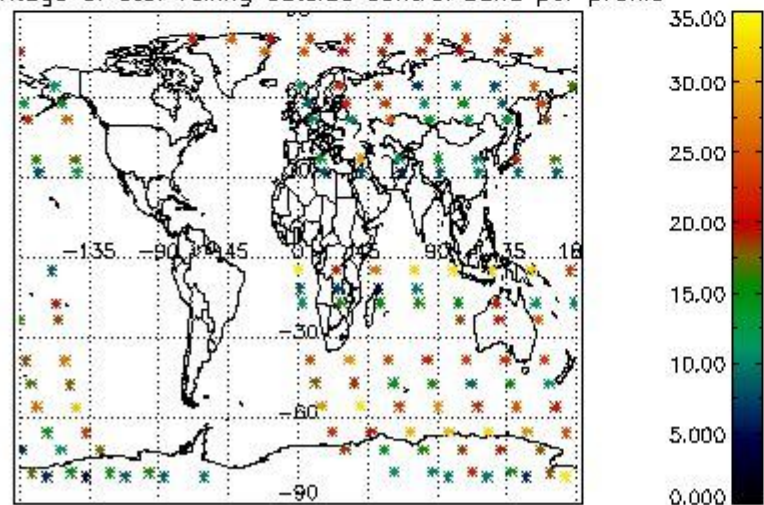
Percentage of cosmic ray hits per profile



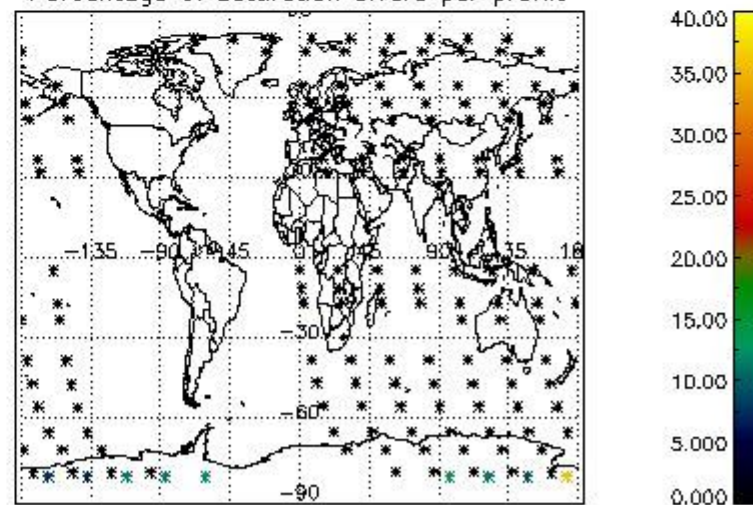
Percentage of datation errors per profile



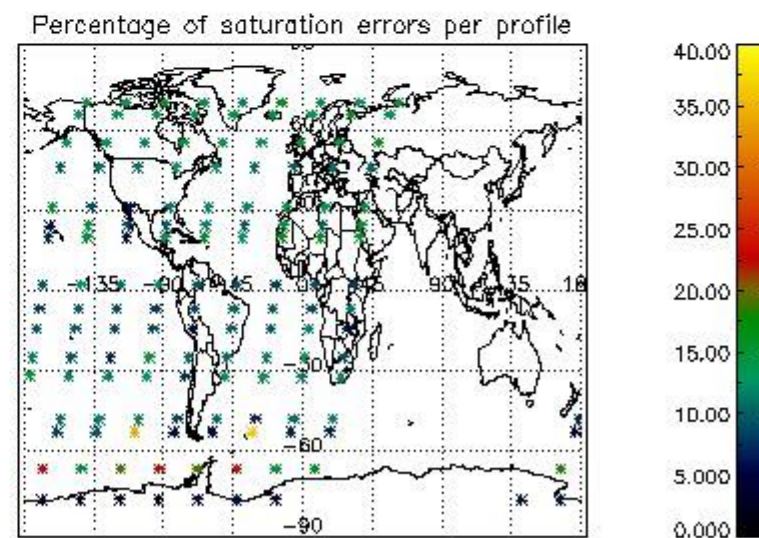
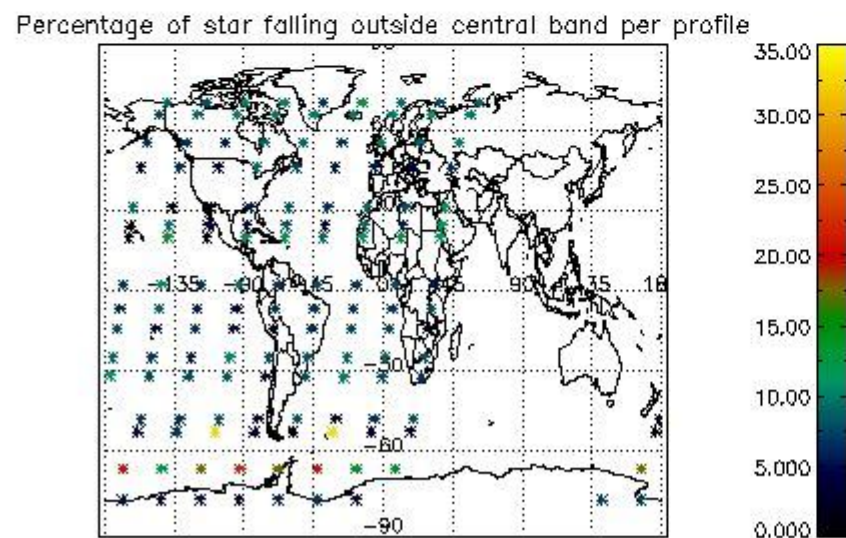
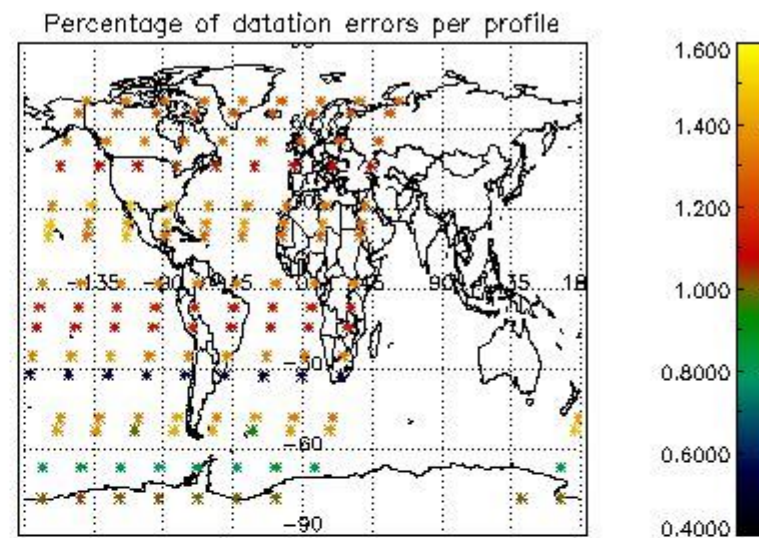
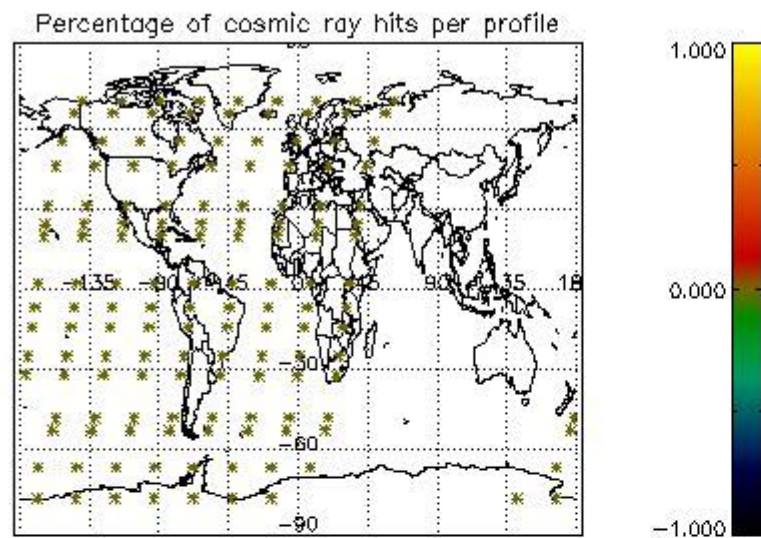
Percentage of star falling outside central band per profile



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

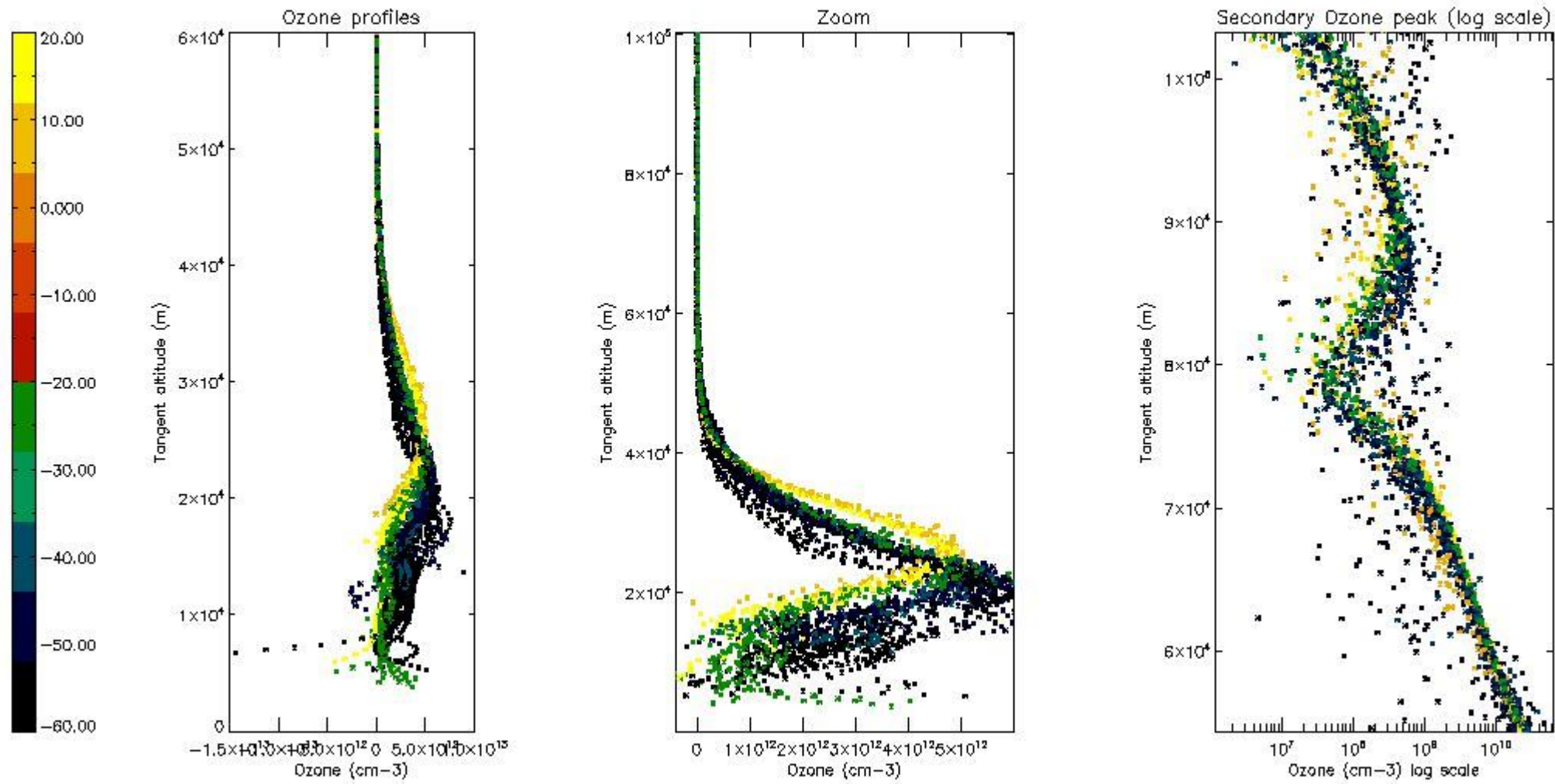
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	27
STD < 20	17

STD < 10	15
STD < 5	12

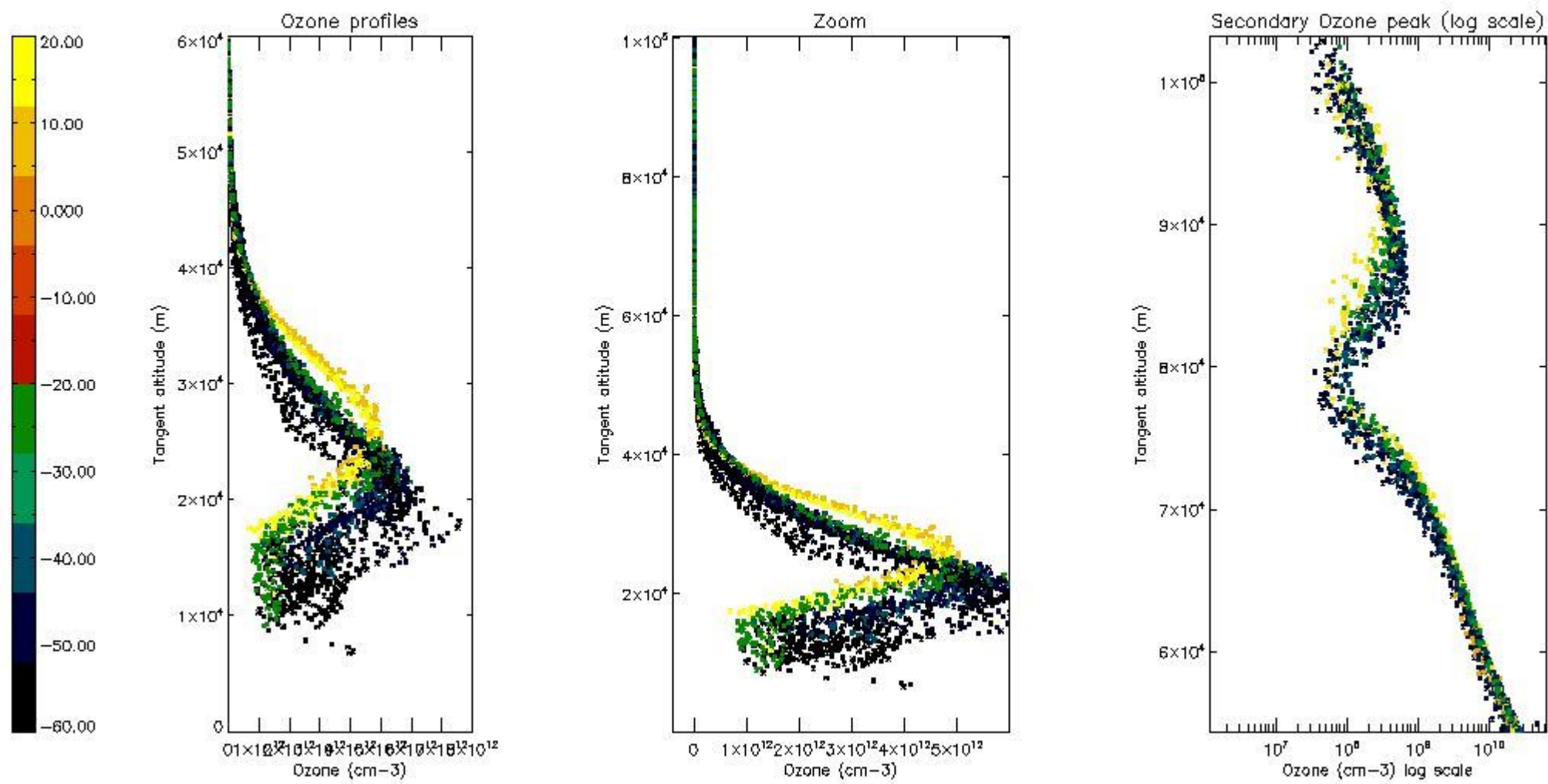
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



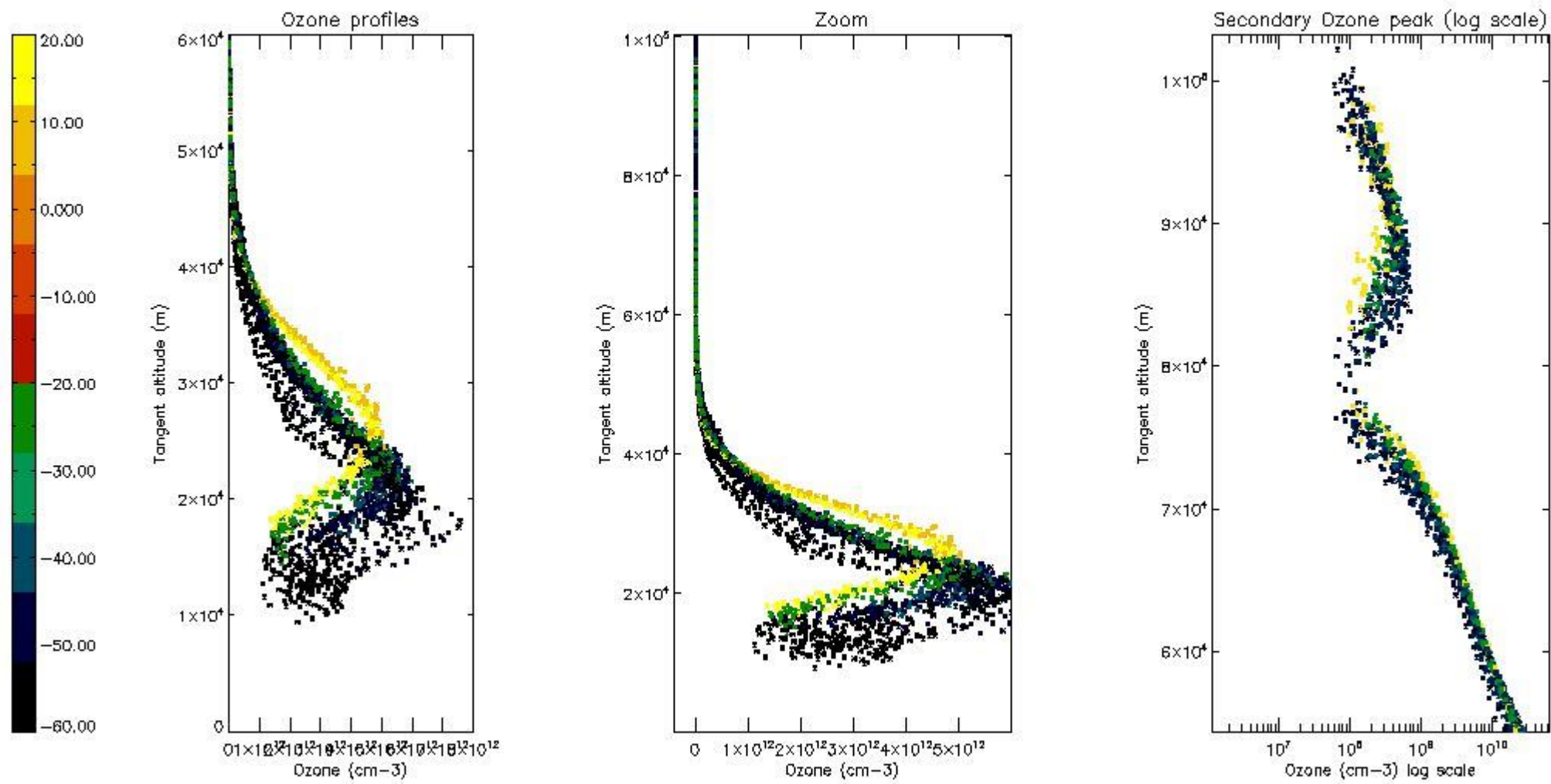
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

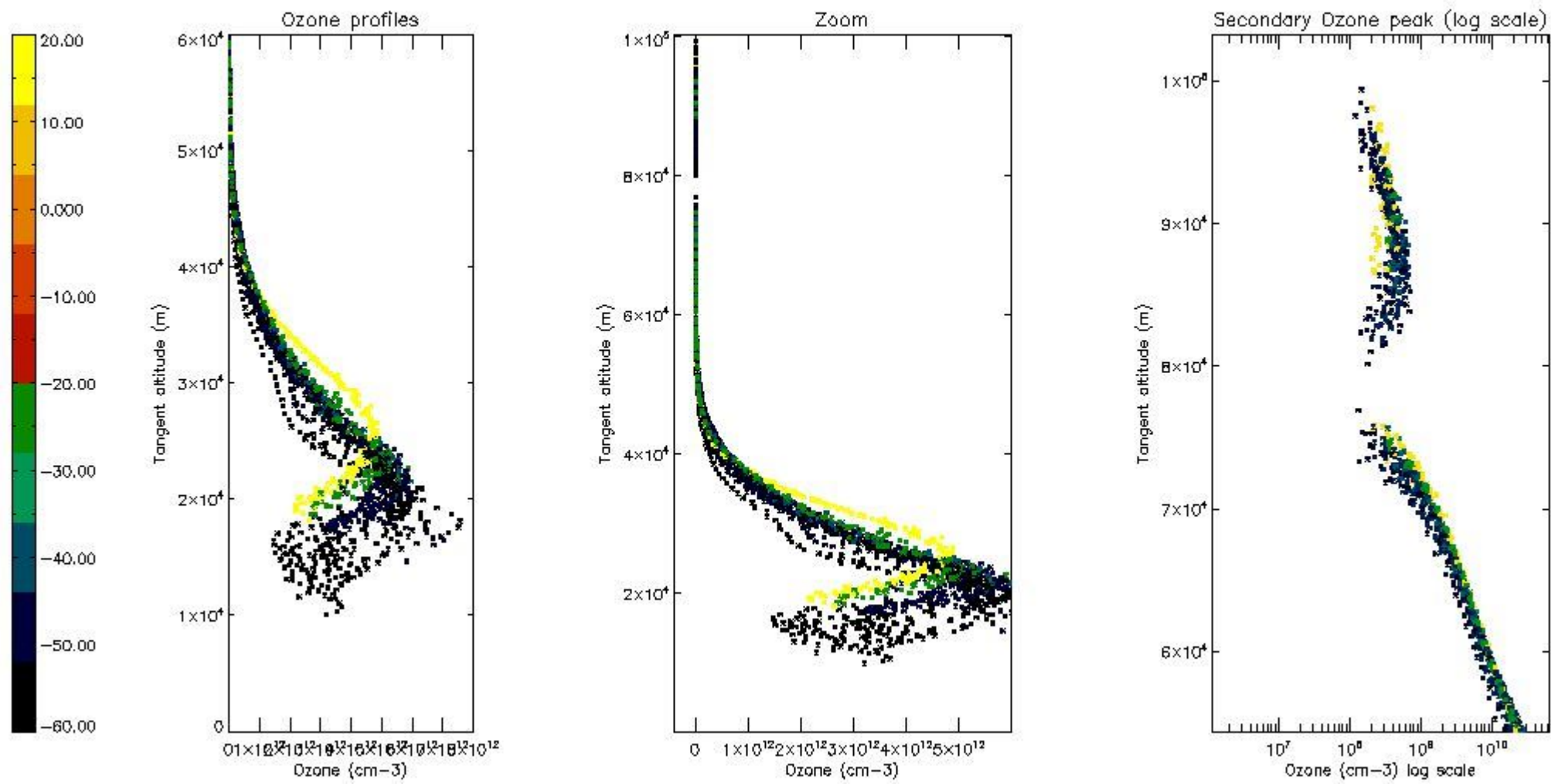
The colorbar represents the latitude.



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

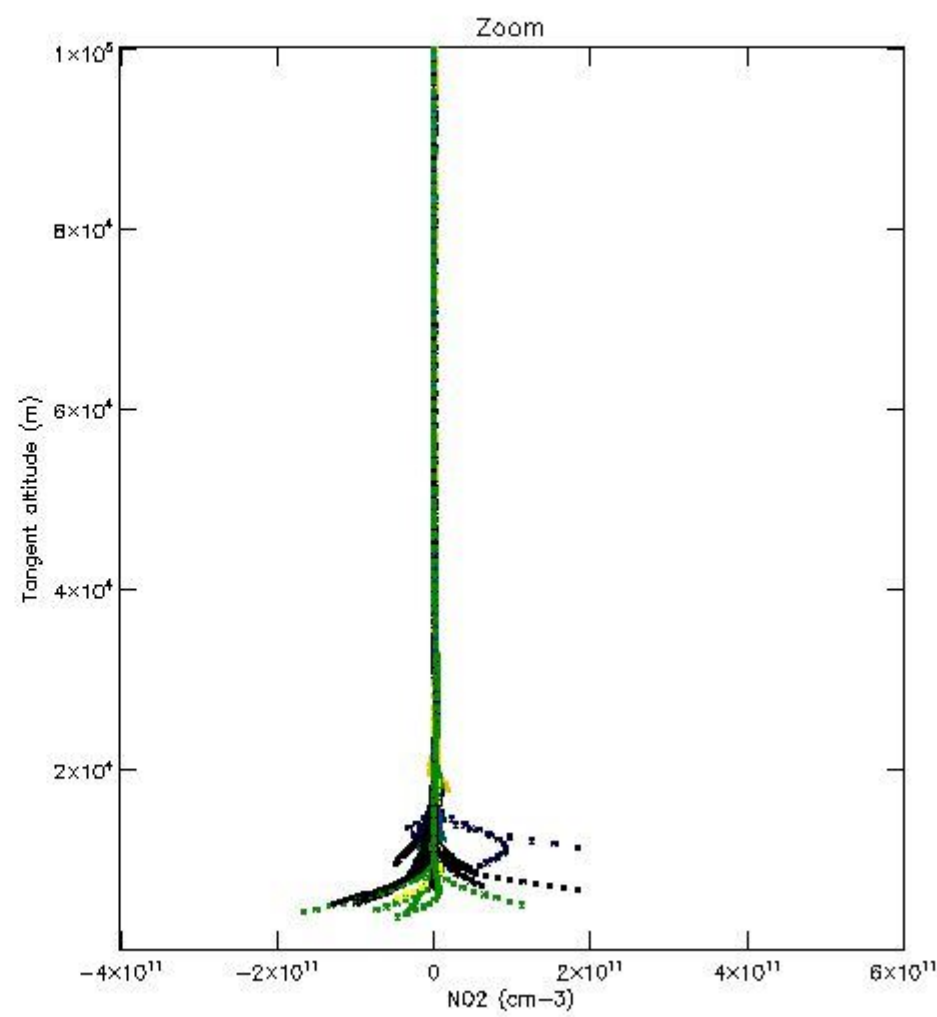
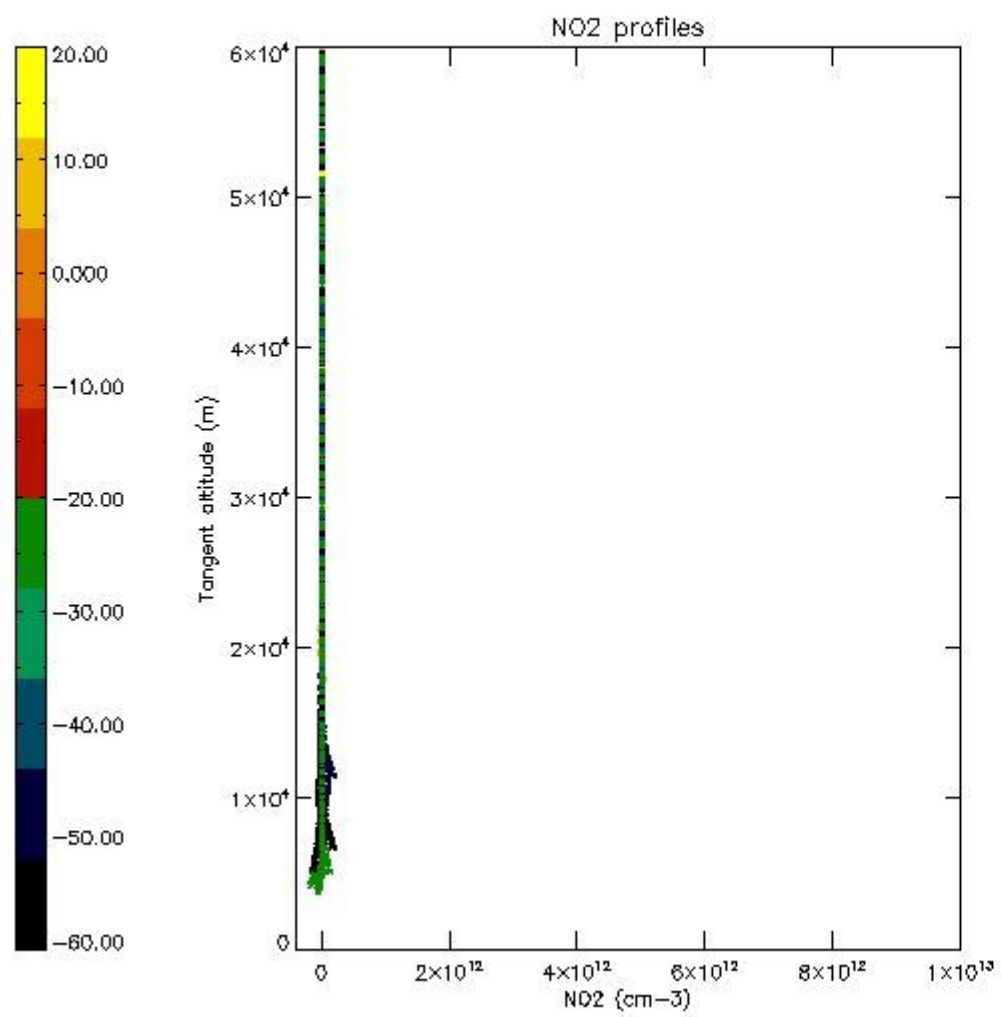
The colorbar represents the latitude.





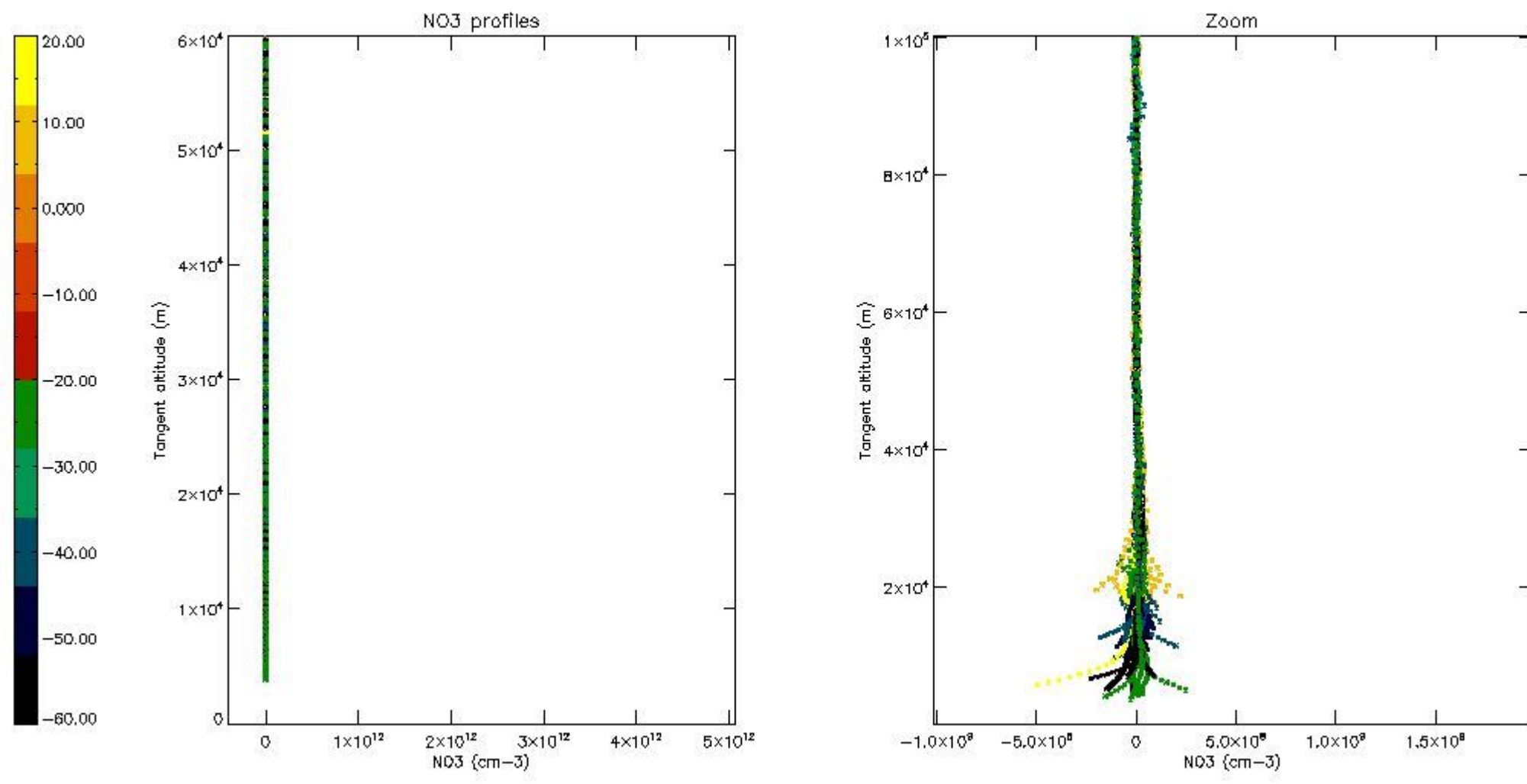
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



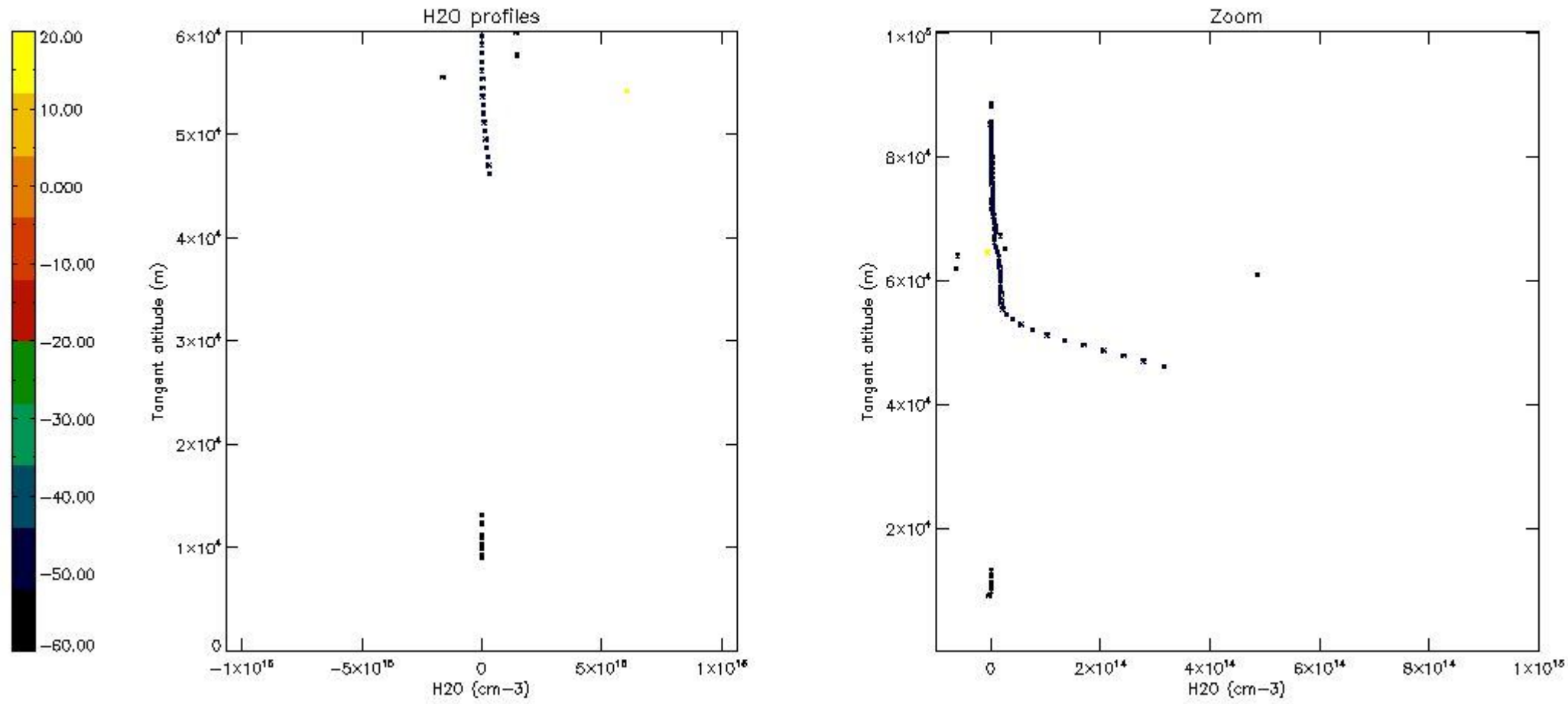
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	02-SEP-2004 07:08:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	02-SEP-2004 07:08:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	02-SEP-2004 07:08:58

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

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

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

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

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

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

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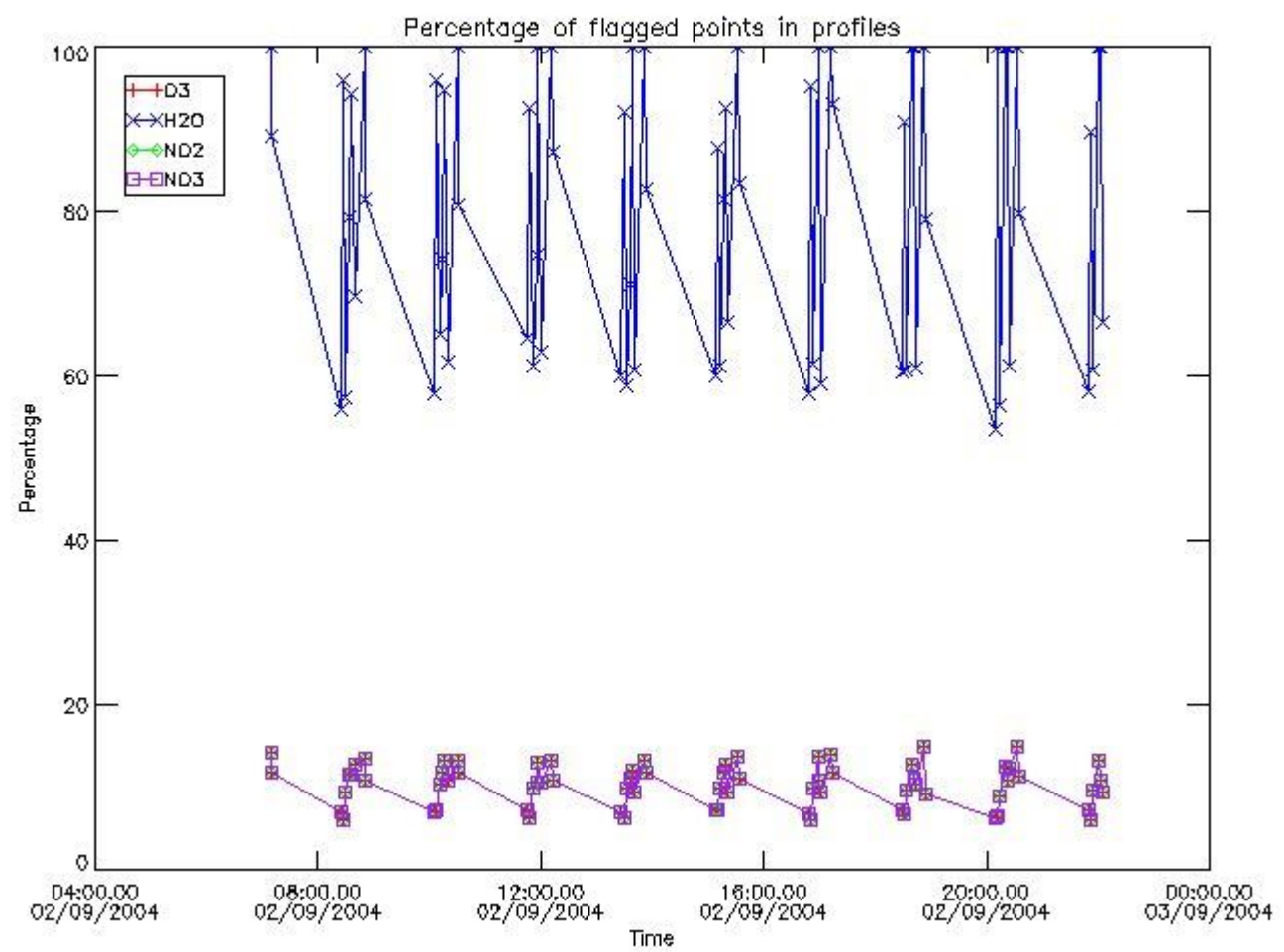


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291	GOM_NL__2PRFIN20040902_214656_000000472030_00043_13123_3493.N1	02-SEP-2004 21:46:56	Twilight	47.000	8	10Alp CMi	0.40000	6500.0	94	13123	No
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294	GOM_NL__2PRFIN20040902_215445_000000532030_00043_13123_3496.N1	02-SEP-2004 21:54:45	Dark	52.500	1	9Alp CMa	-1.4400	11000.	105	13123	No
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296	GOM_NL__2PRFIN20040902_220212_000000472030_00043_13123_3498.N1	02-SEP-2004 22:02:12	Dark	47.000	108	Alp Col	2.6520	15200.	94	13123	No
297	GOM_NL__2PRFIN20040902_220409_000000542030_00043_13123_3499.N1	02-SEP-2004 22:04:09	Dark	53.500	2	Alp Car	-0.73600	7000.0	107	13123	No

### 3. Quality information per product

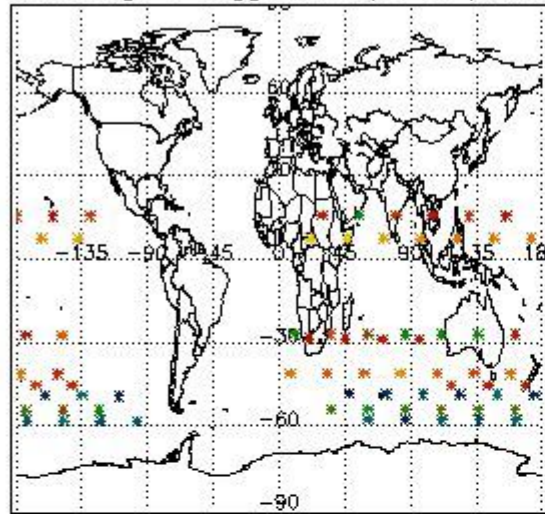
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

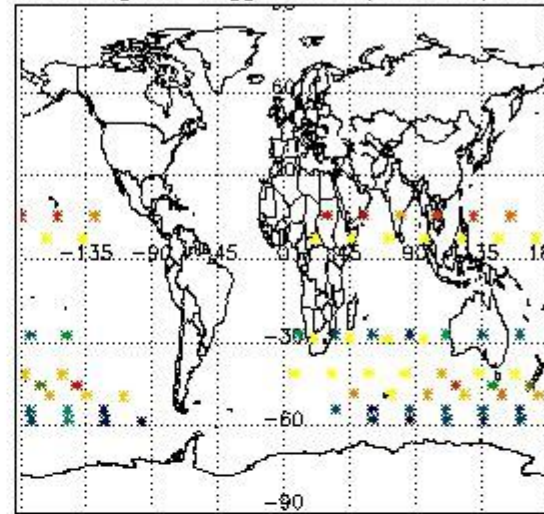


*3.2 Plot quality information per product (world map)*

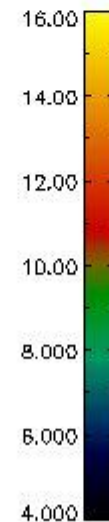
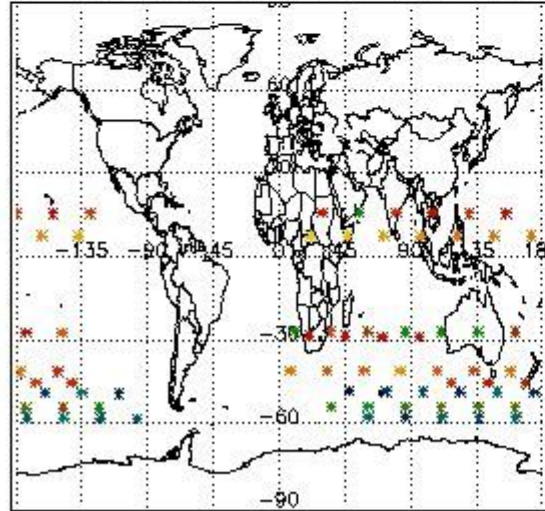
Percentage of flagged data per O3 profile



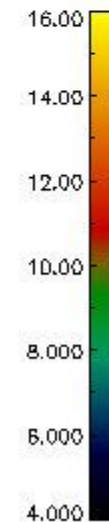
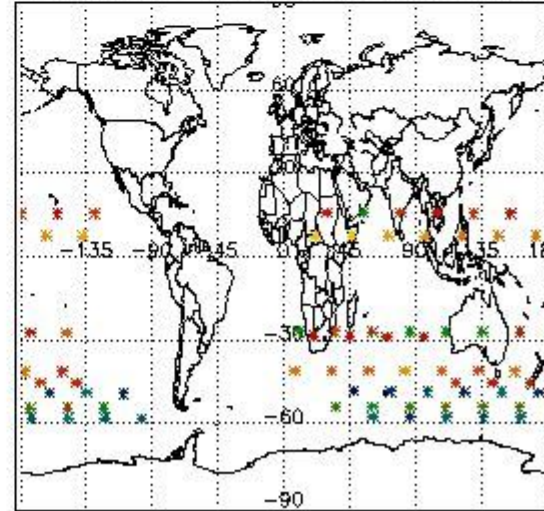
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

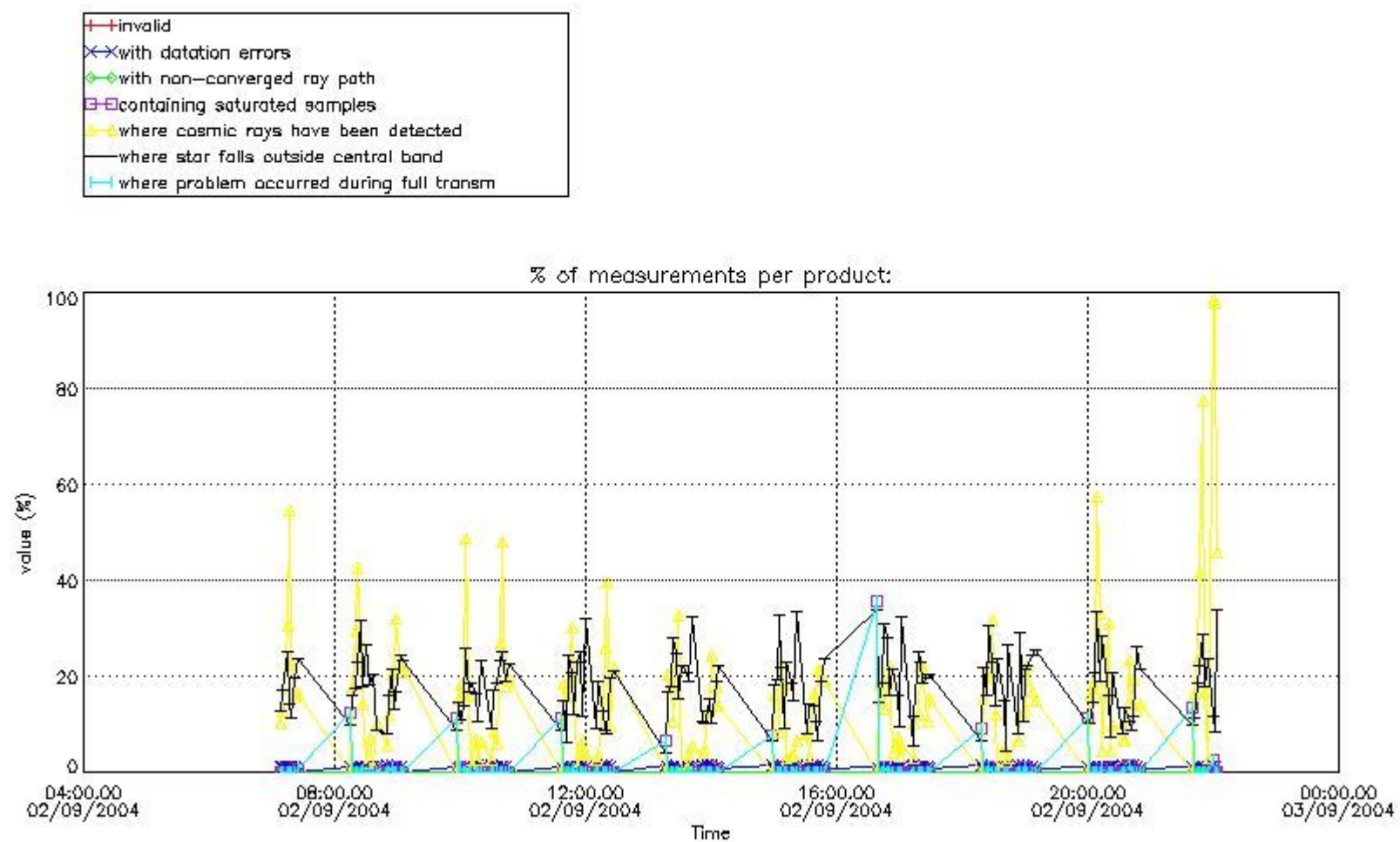


#### 4. Level 1 quality information per product

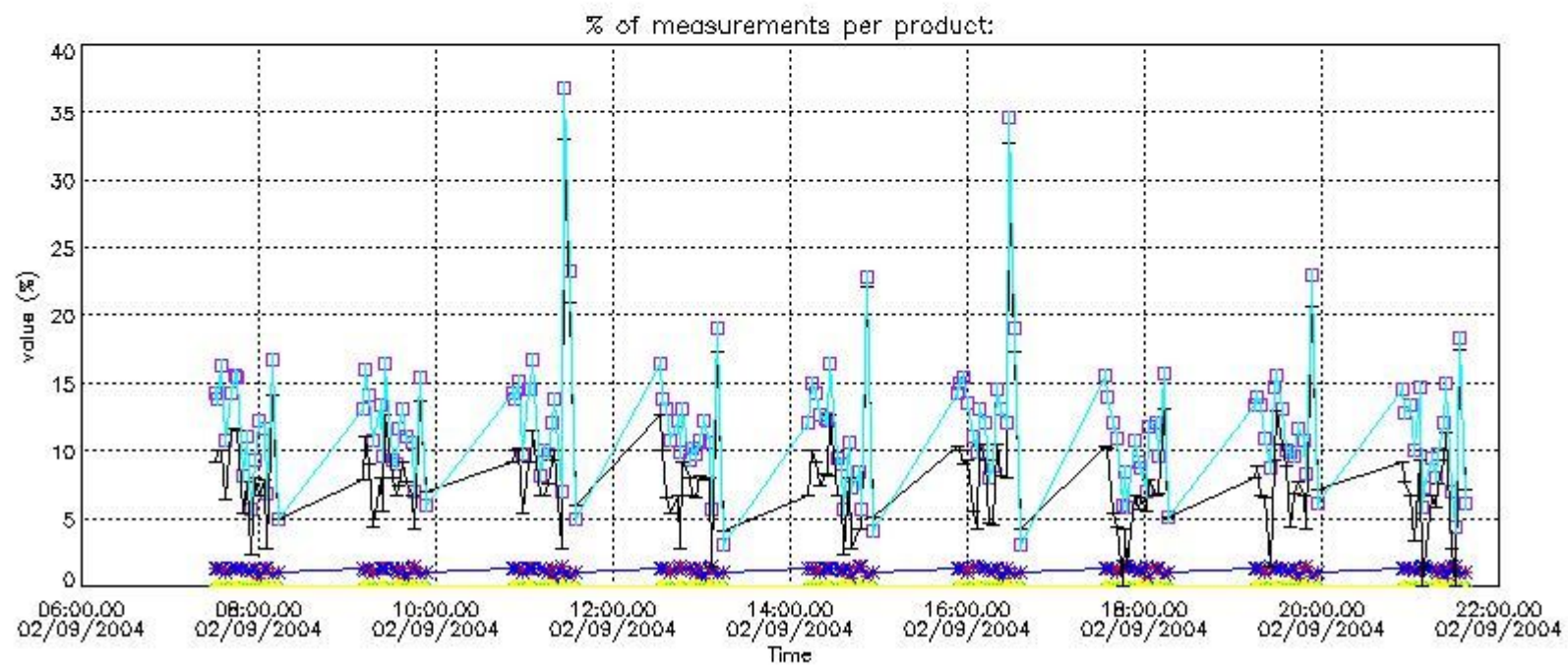
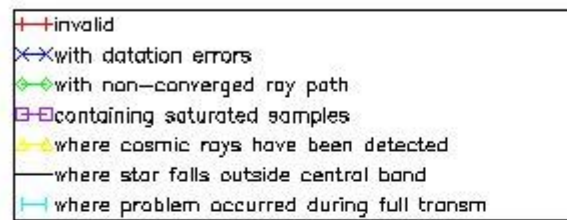
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



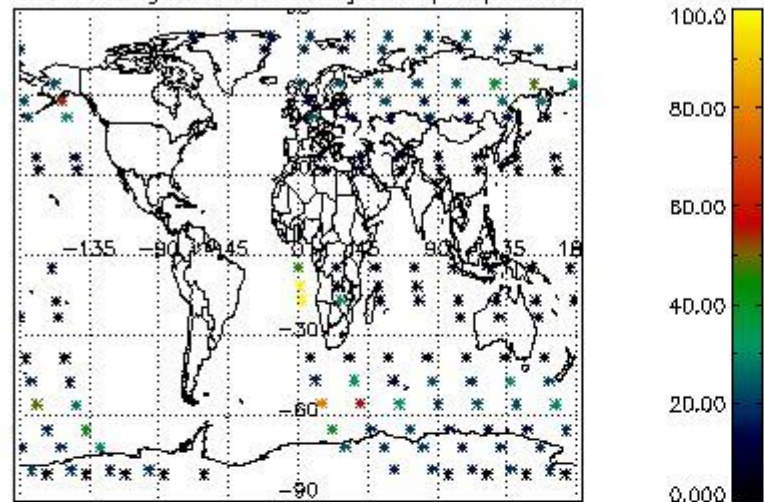
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



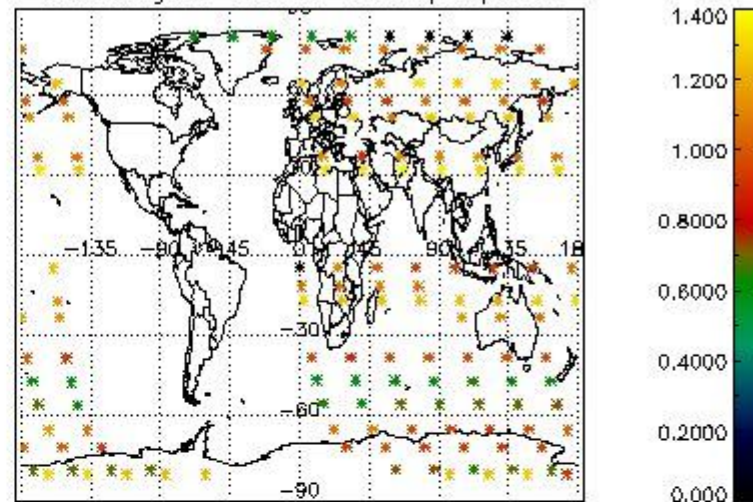
4.2 Plot quality information per product coming from level 1b processing (world map)

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

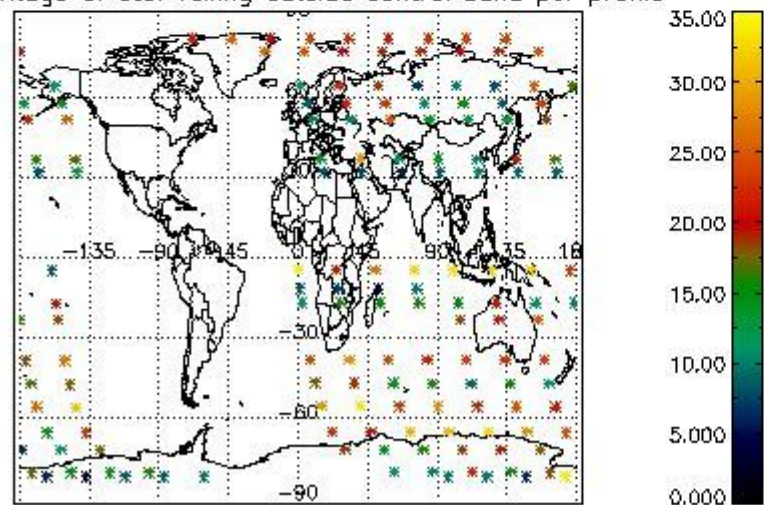
Percentage of cosmic ray hits per profile



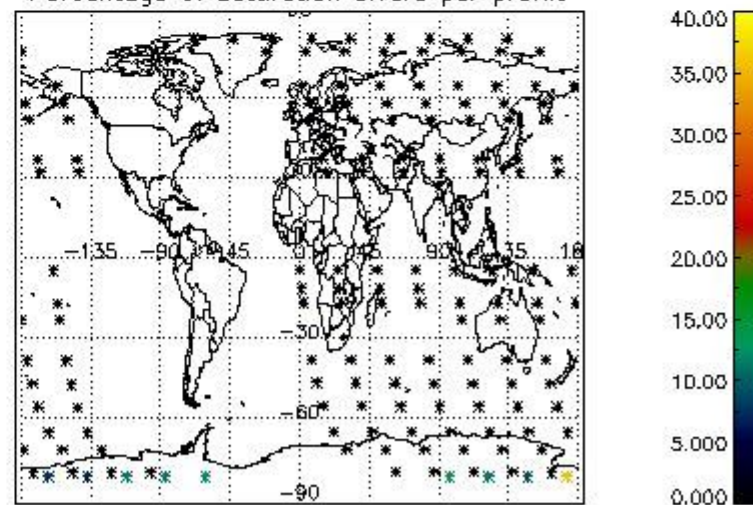
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

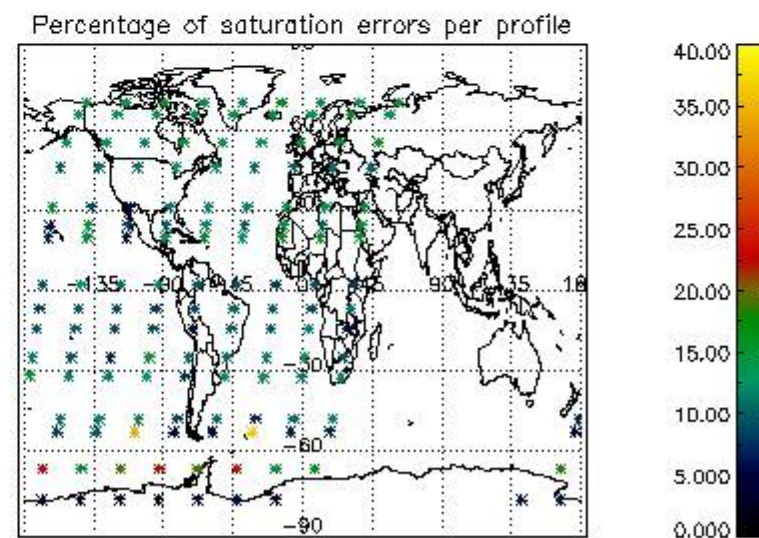
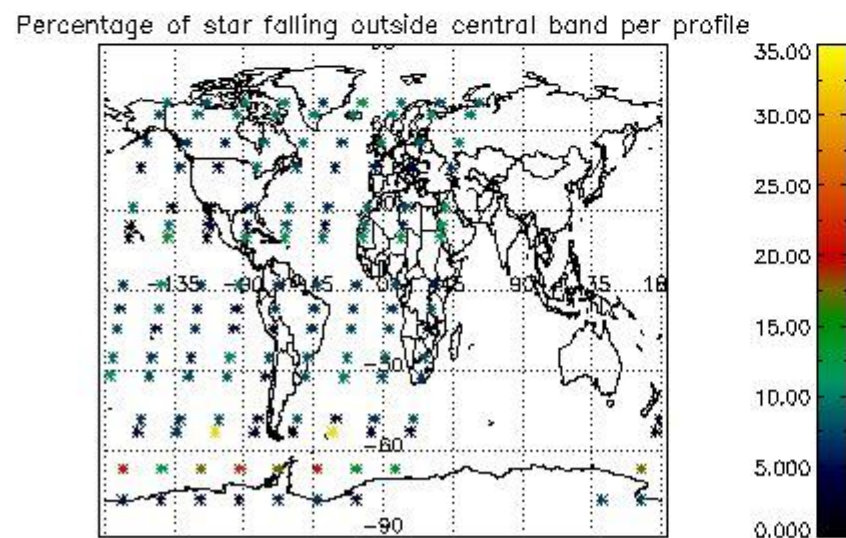
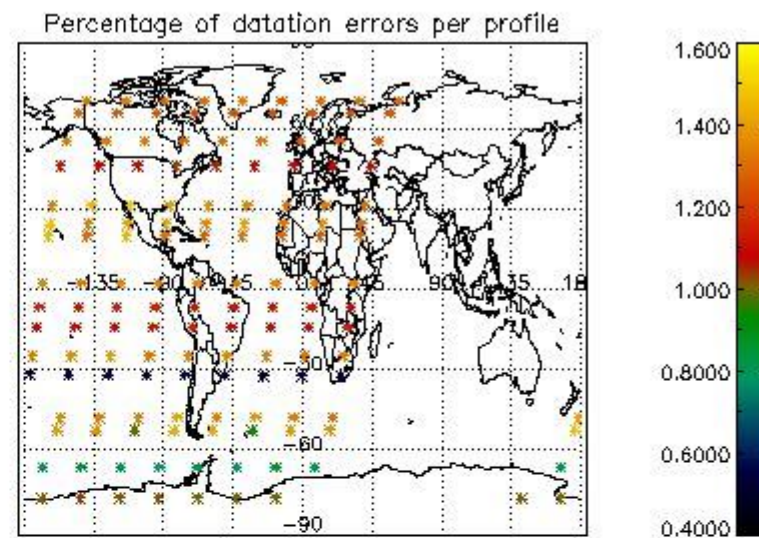
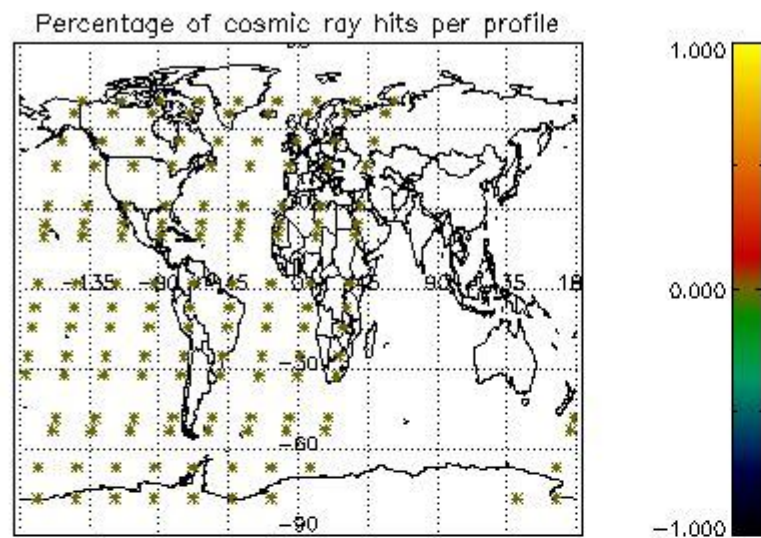


Percentage of saturation errors per profile



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

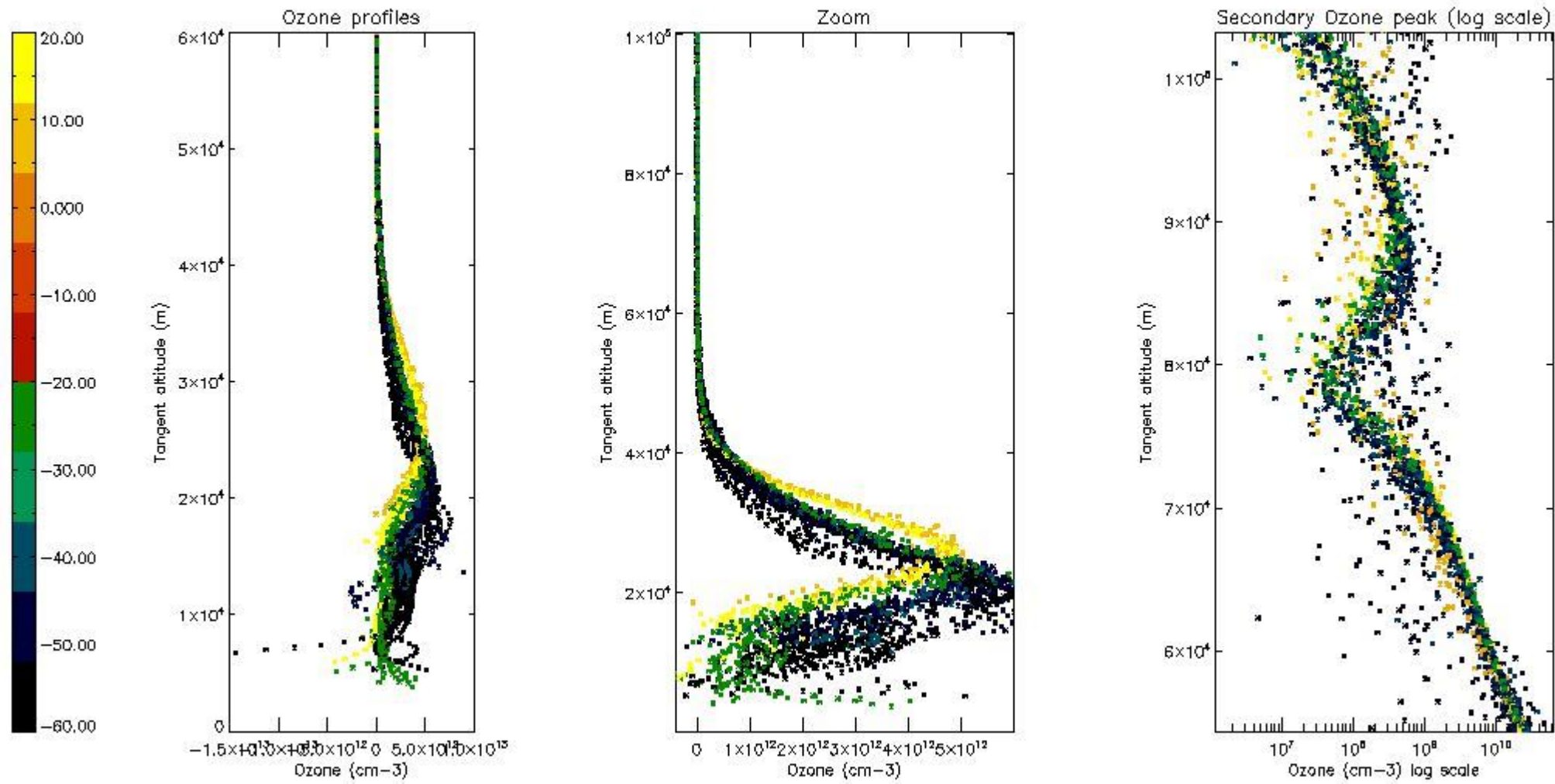
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	27
STD < 20	17

STD < 10	15
STD < 5	12

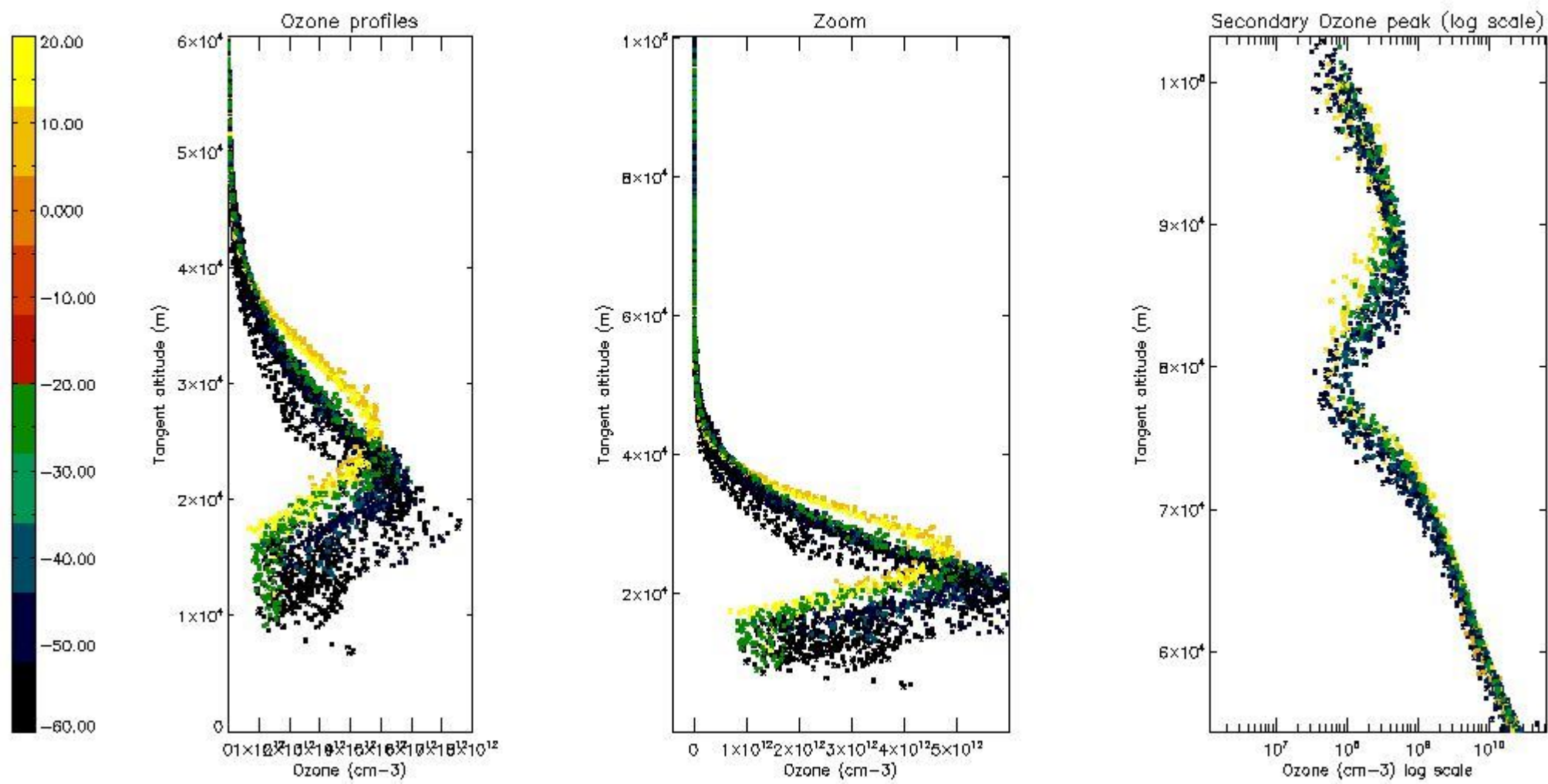
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



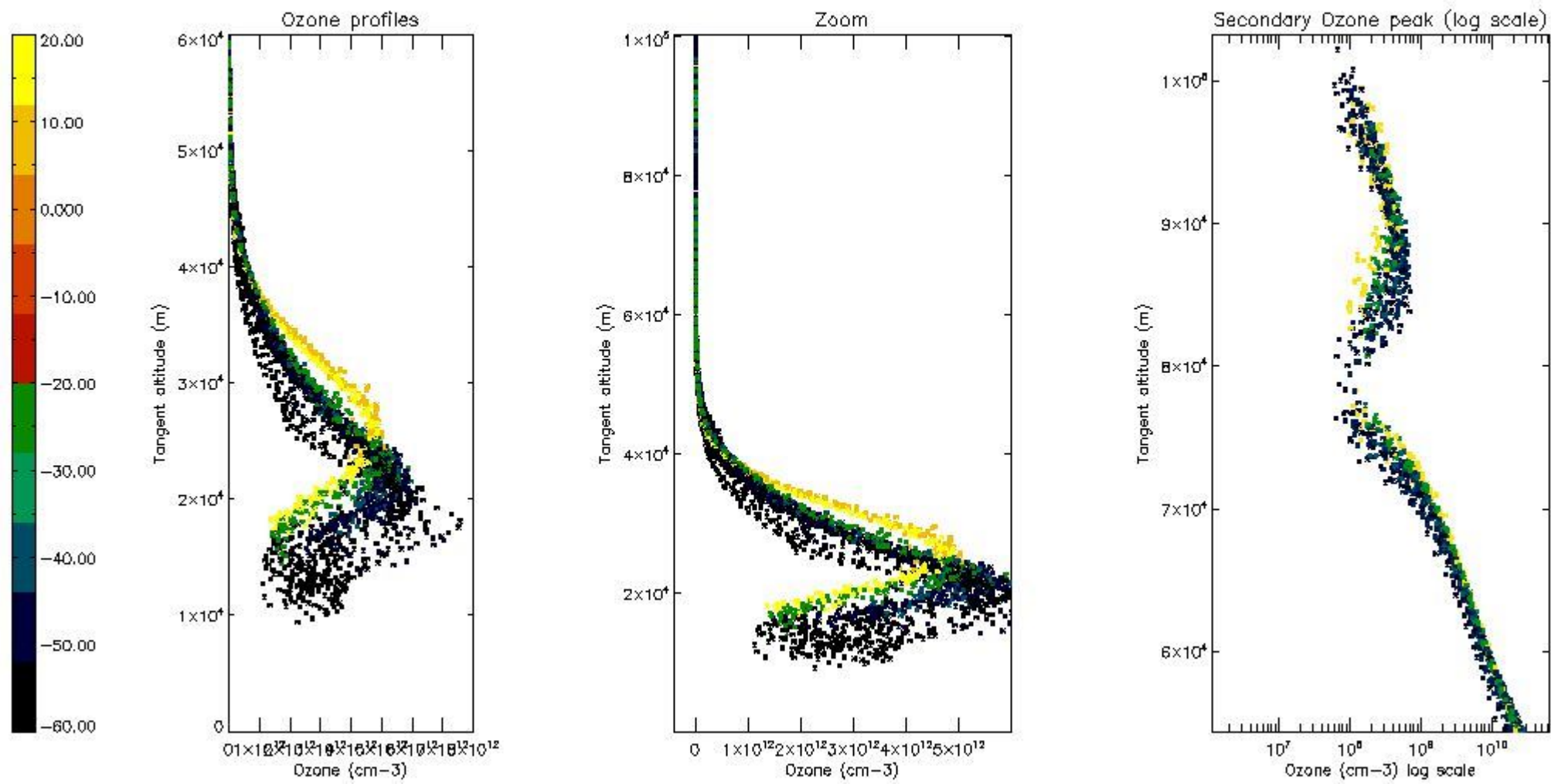
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



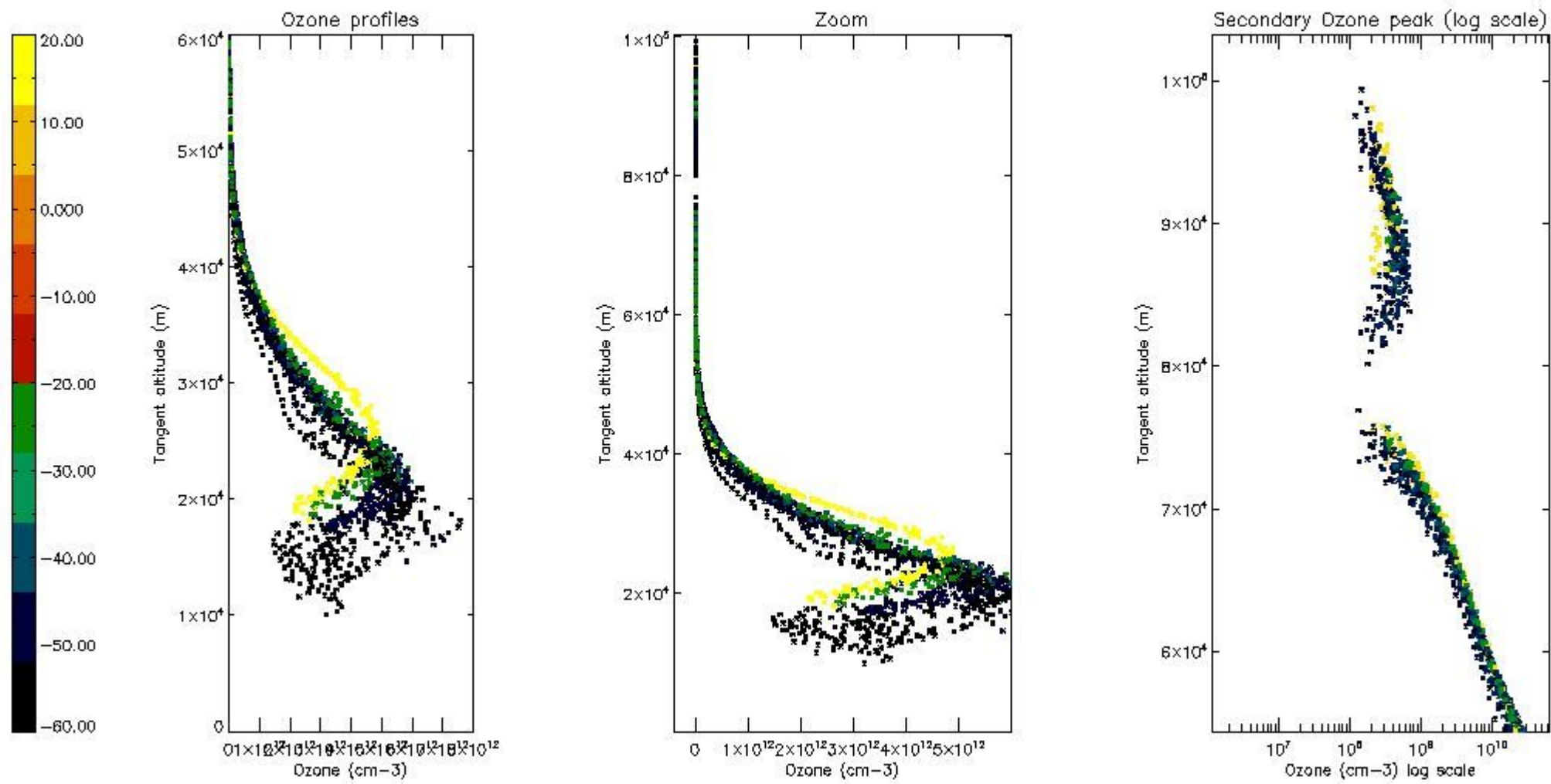
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



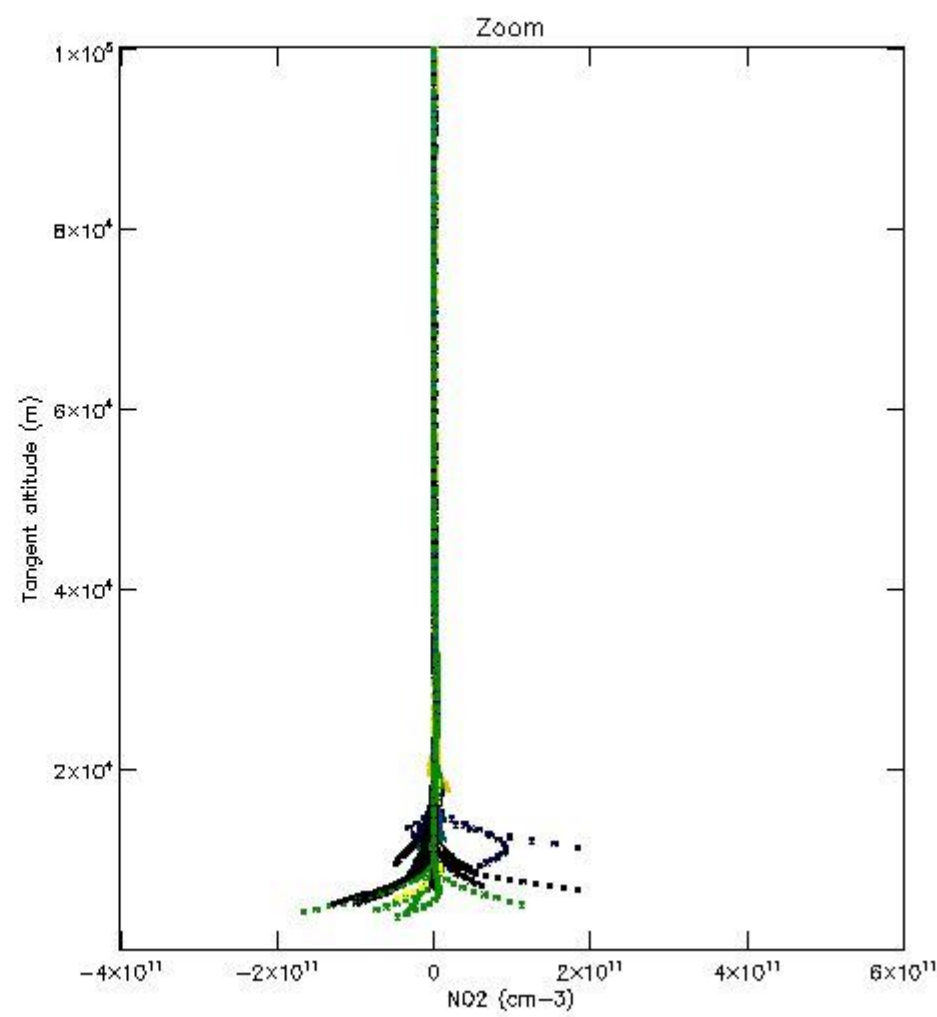
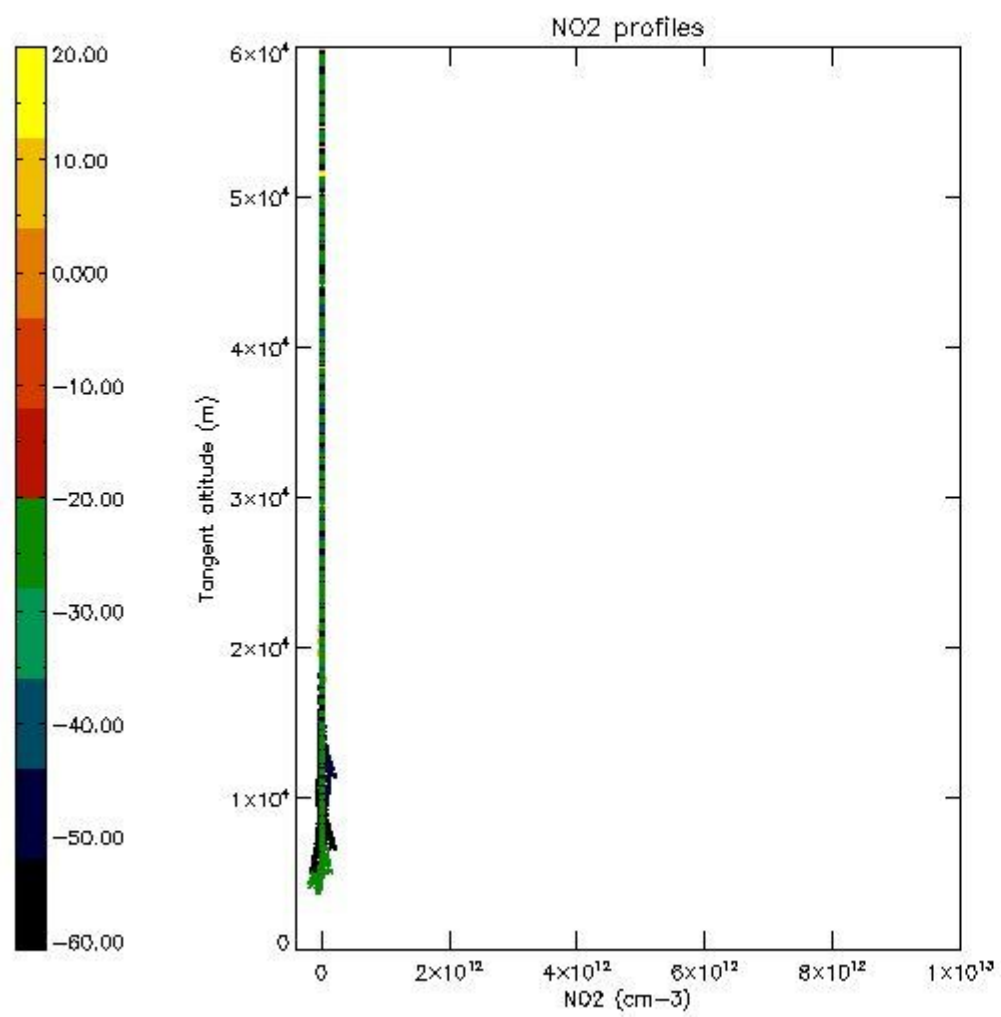
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



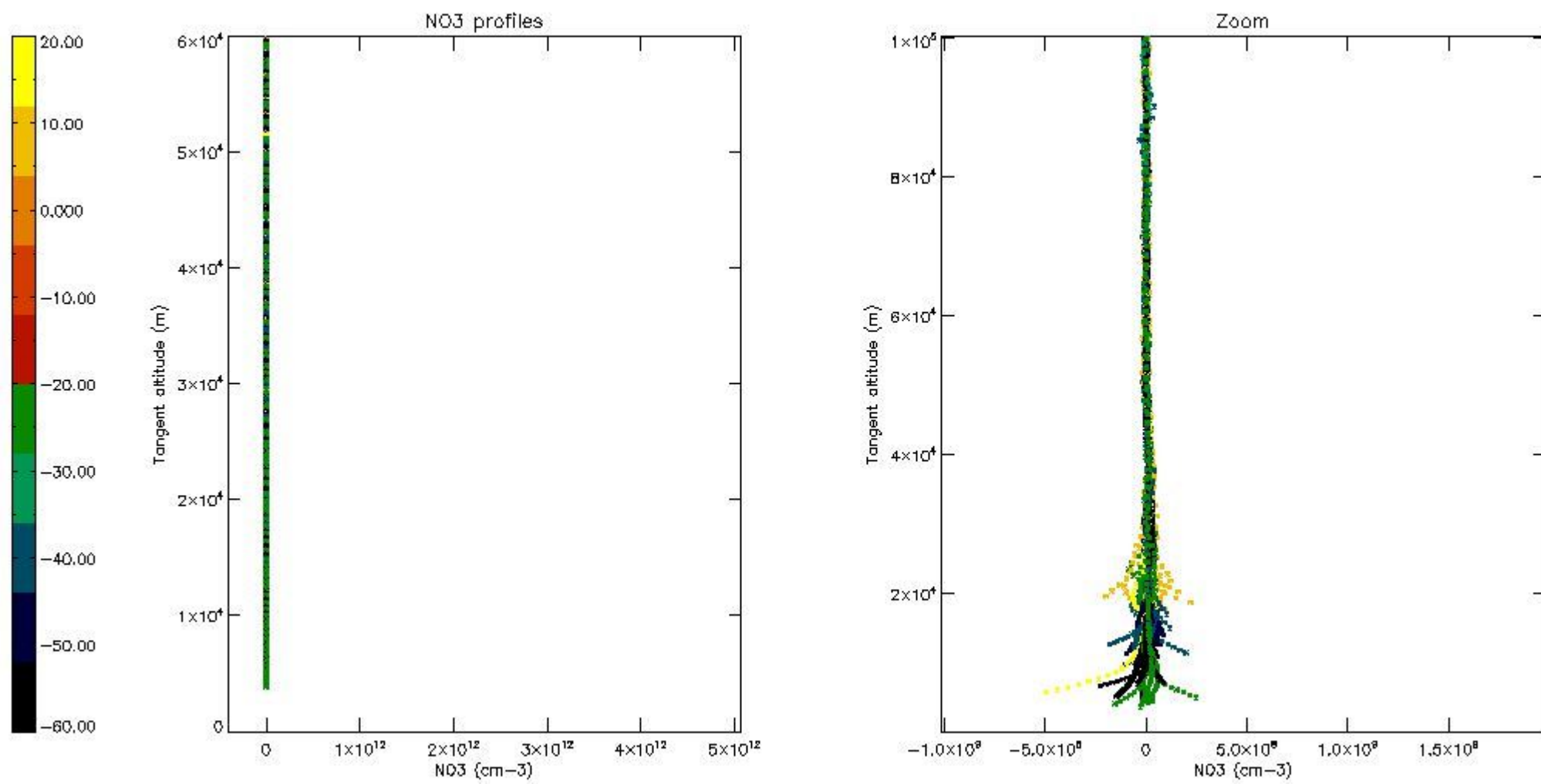
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



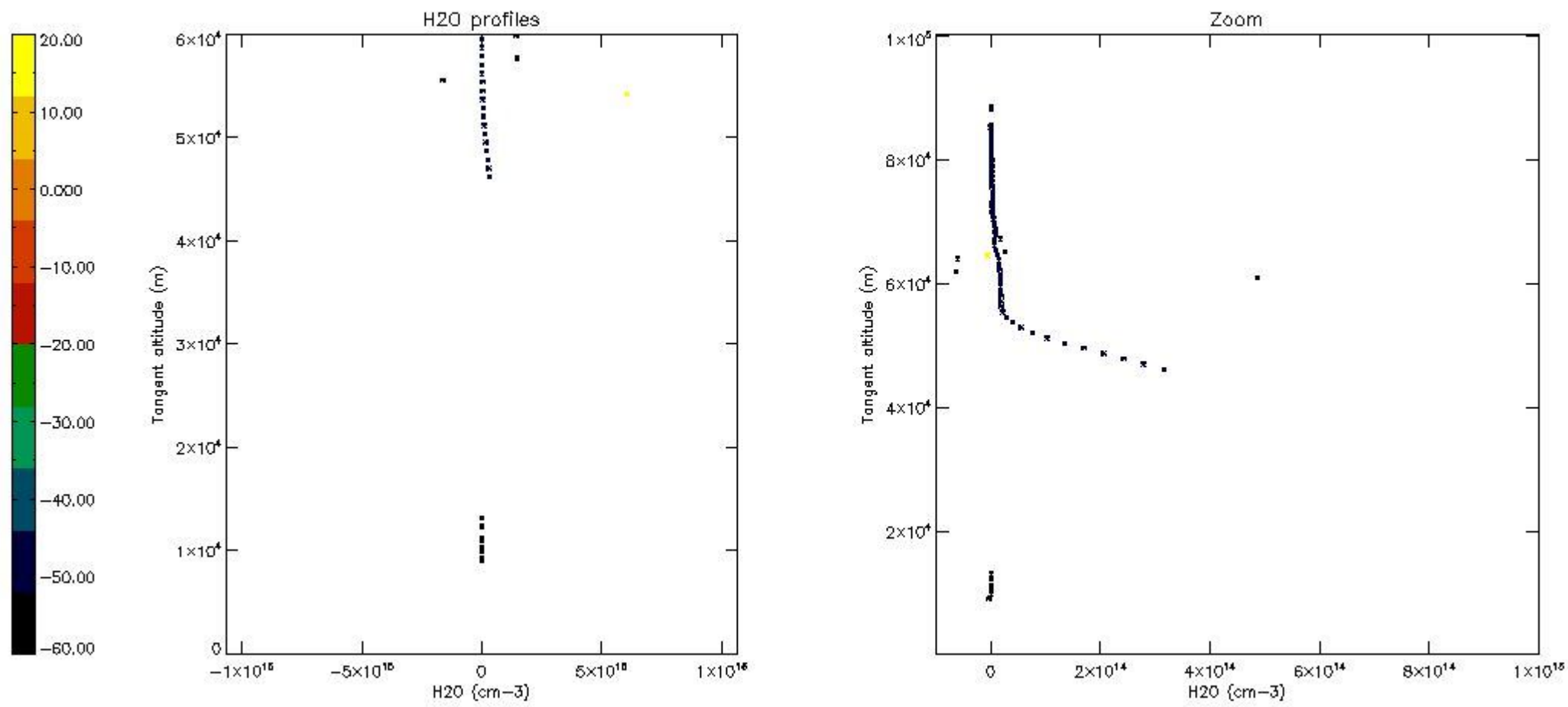
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

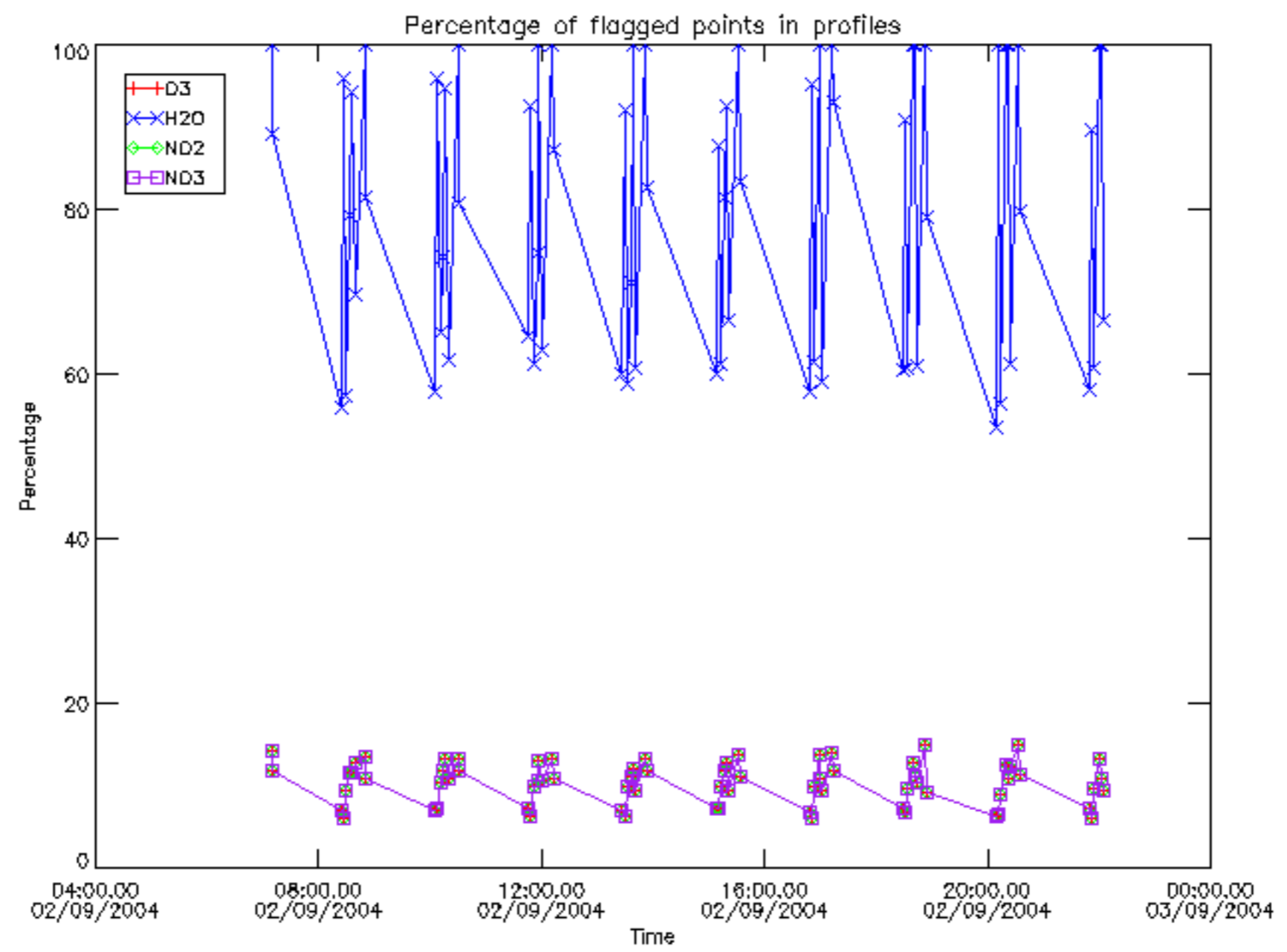


## 6. Auxiliary Data Files used for the production reported in section 2

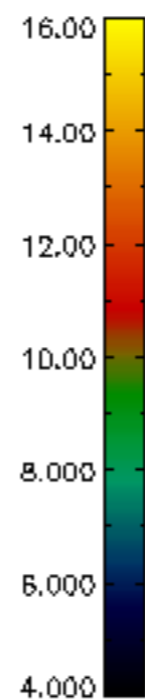
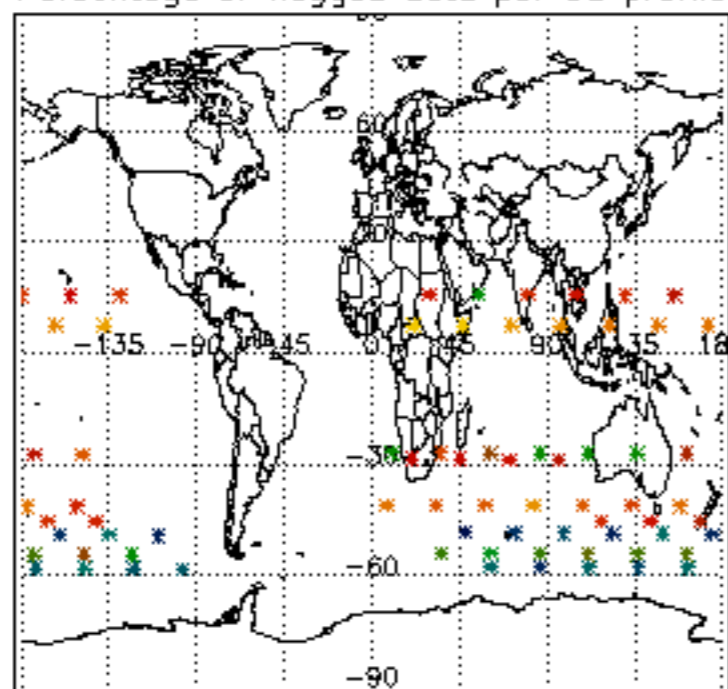
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	02-SEP-2004 07:08:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	02-SEP-2004 07:08:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	02-SEP-2004 07:08:58

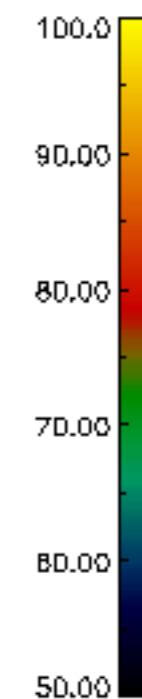
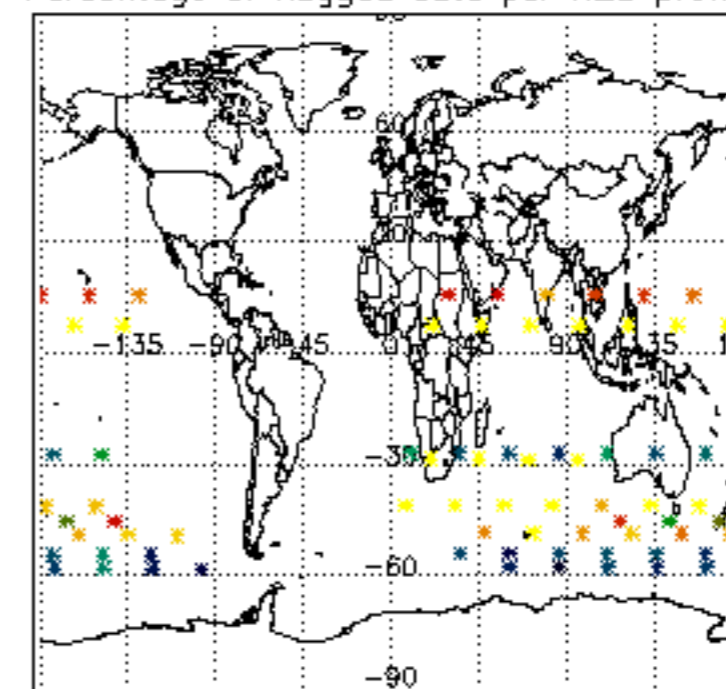




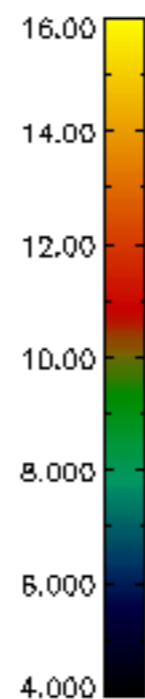
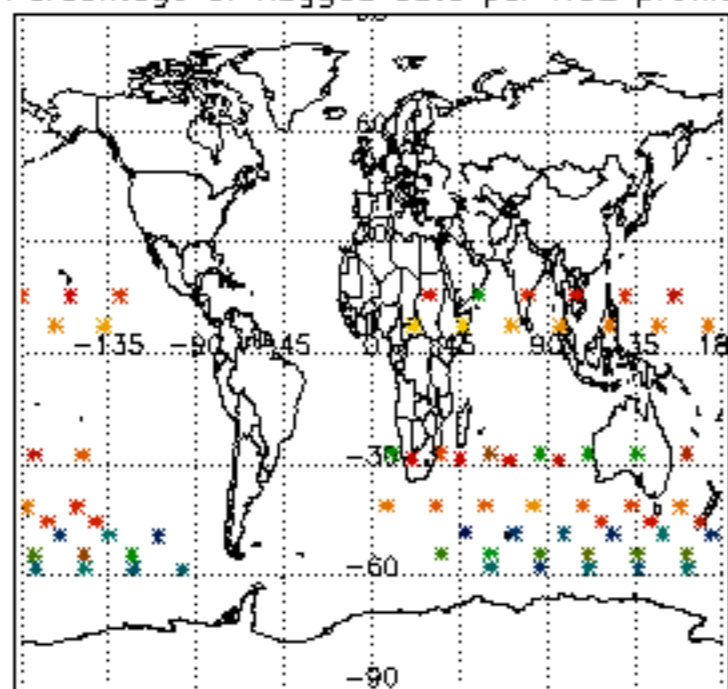
Percentage of flagged data per D3 profile



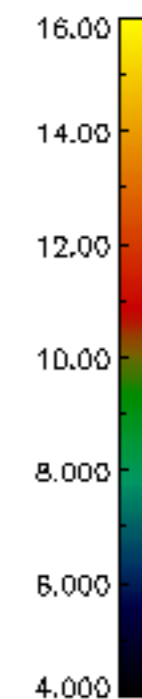
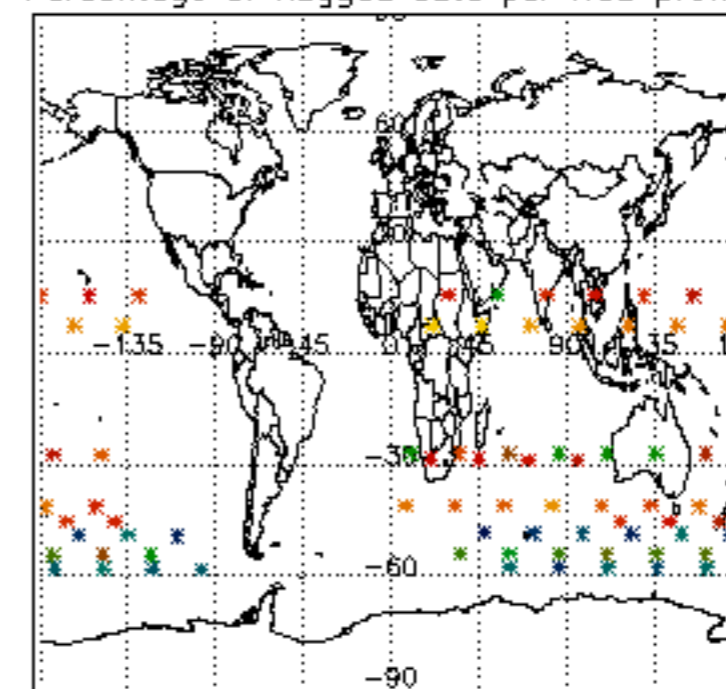
Percentage of flagged data per H2O profile

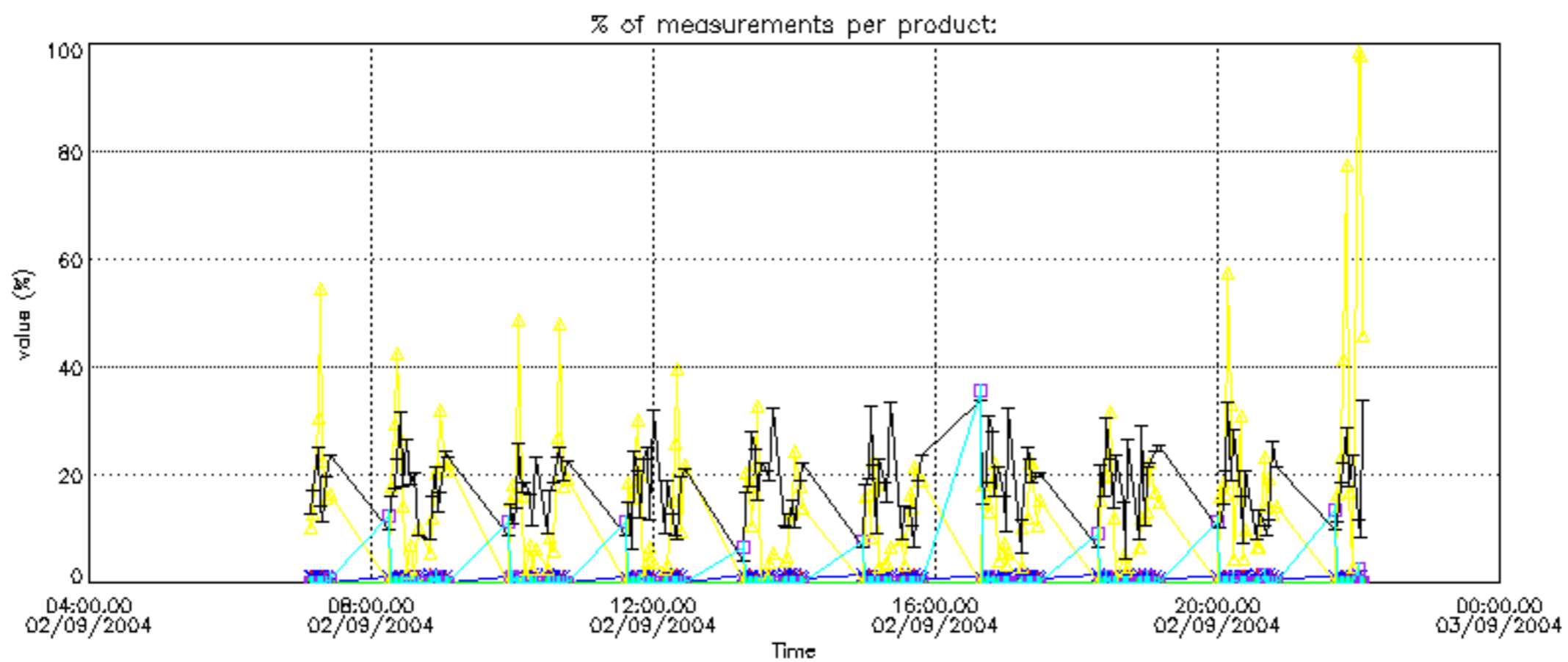


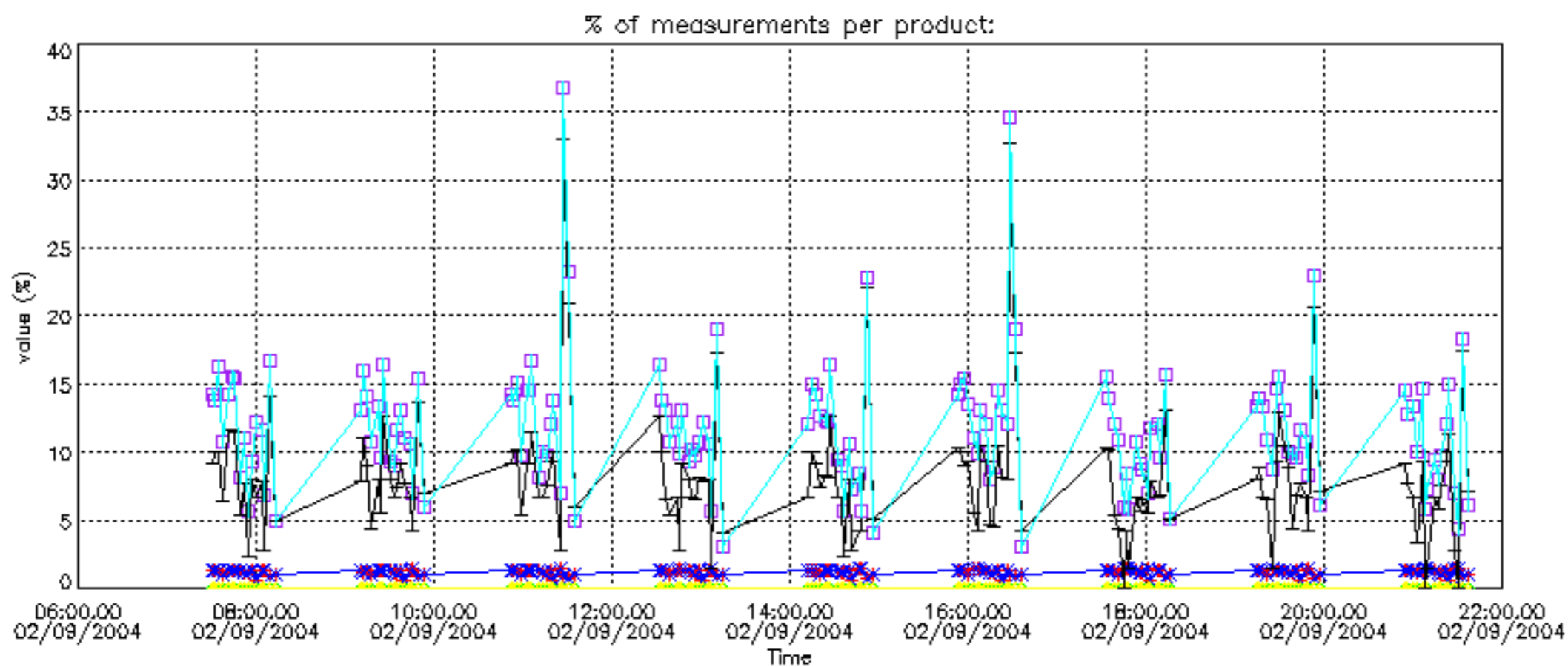
Percentage of flagged data per NO2 profile



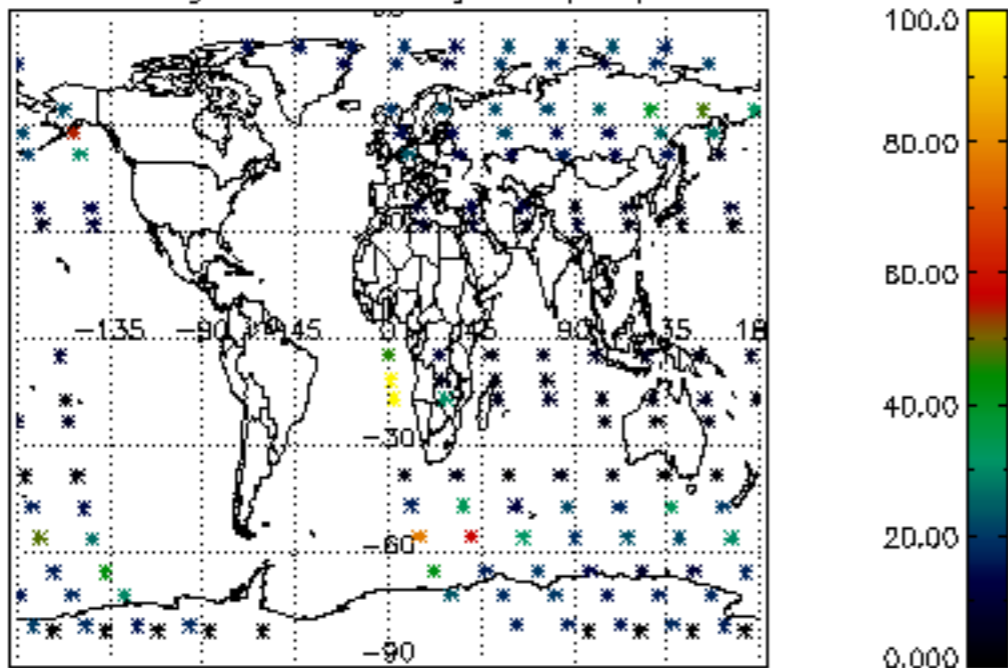
Percentage of flagged data per NO3 profile



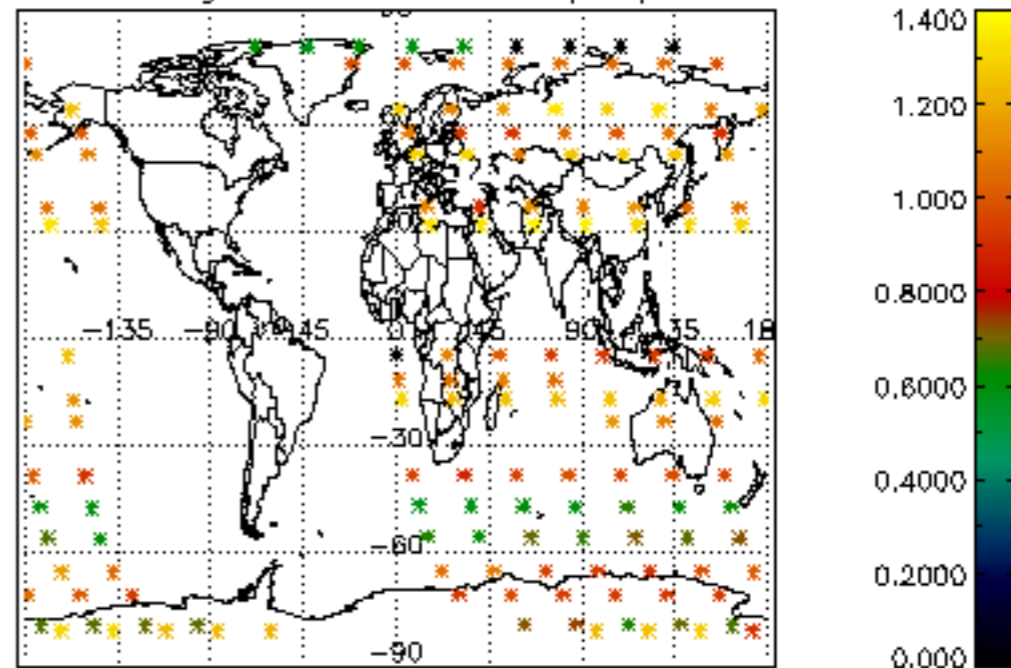




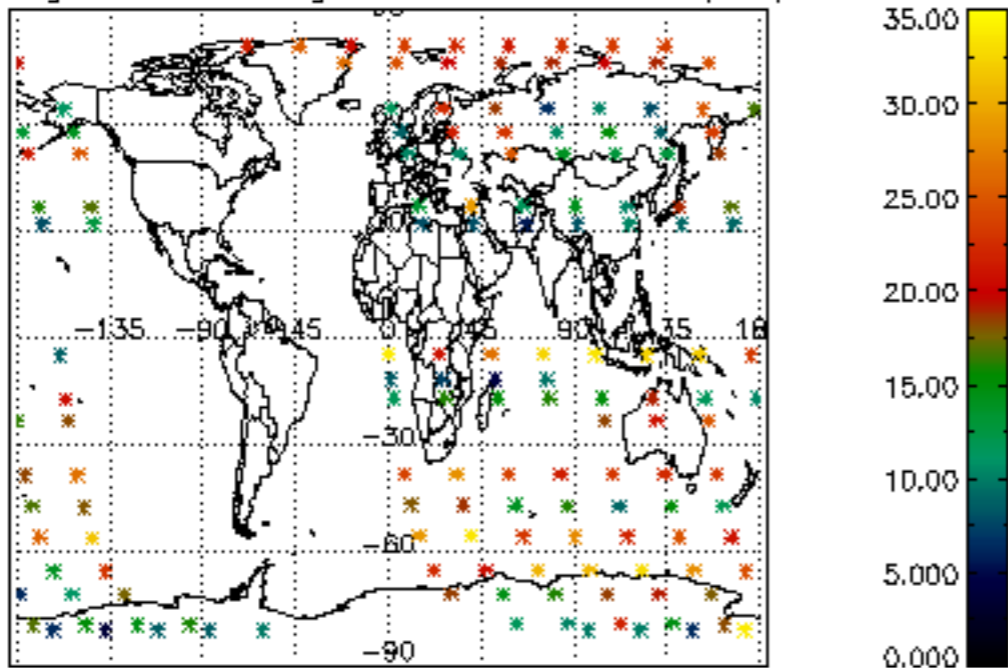
Percentage of cosmic ray hits per profile



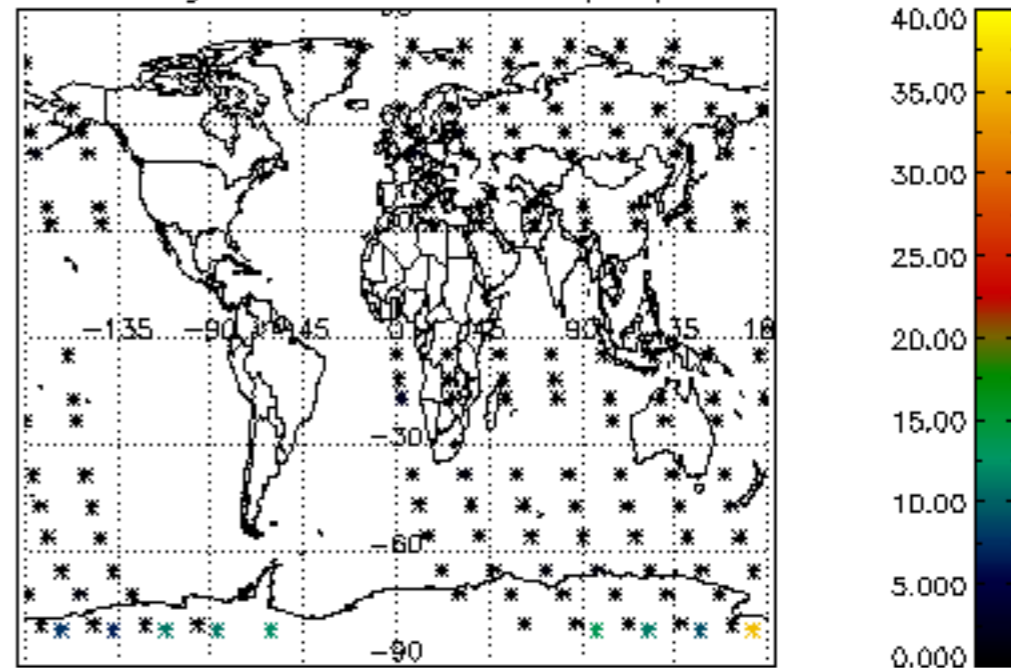
Percentage of datation errors per profile



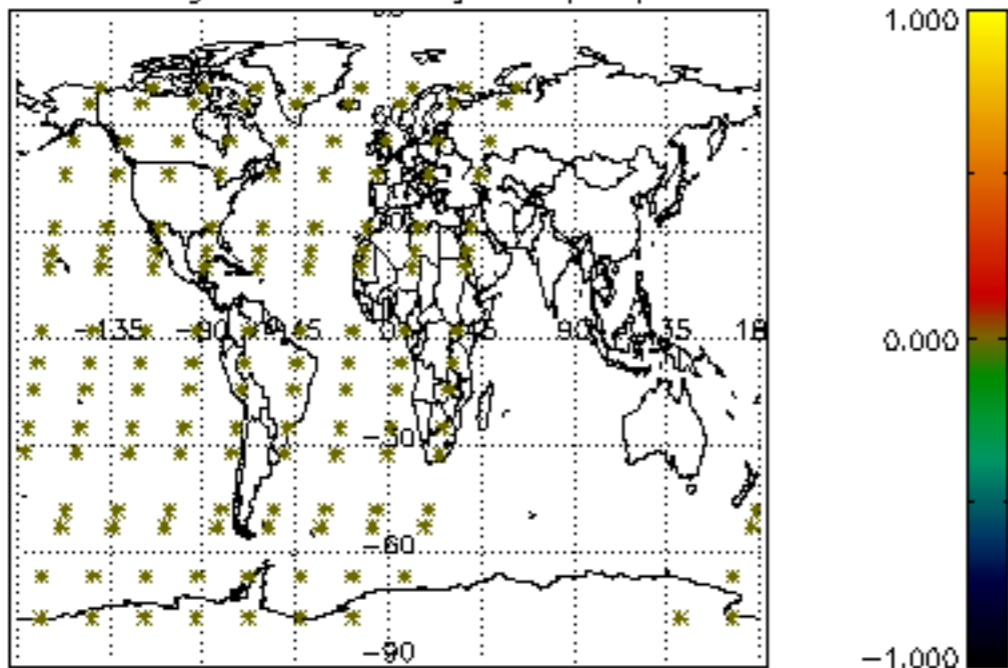
Percentage of star falling outside central band per profile



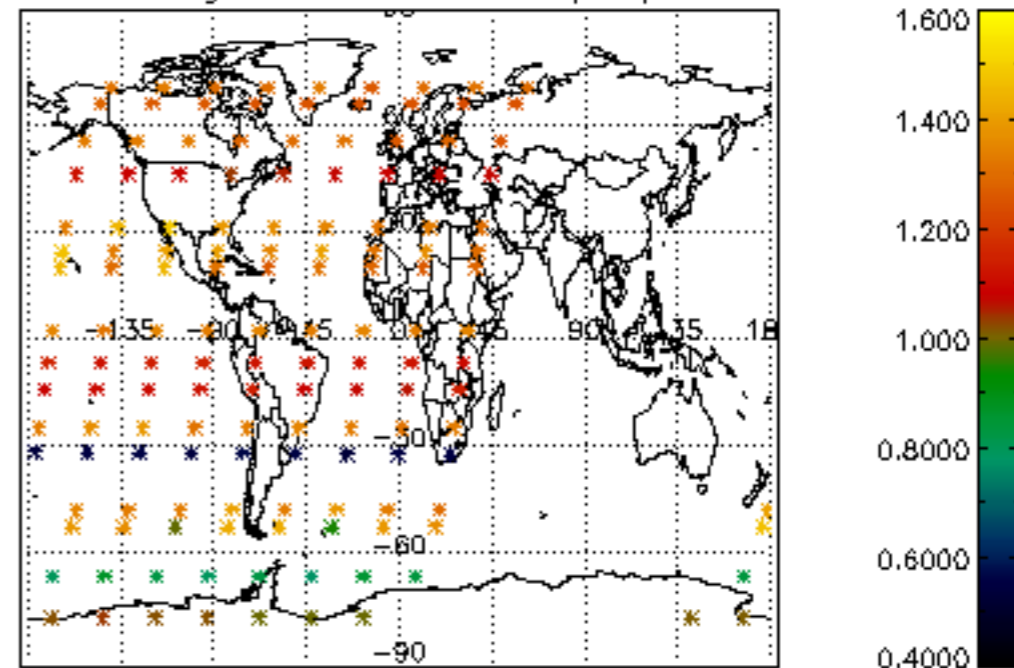
Percentage of saturation errors per profile



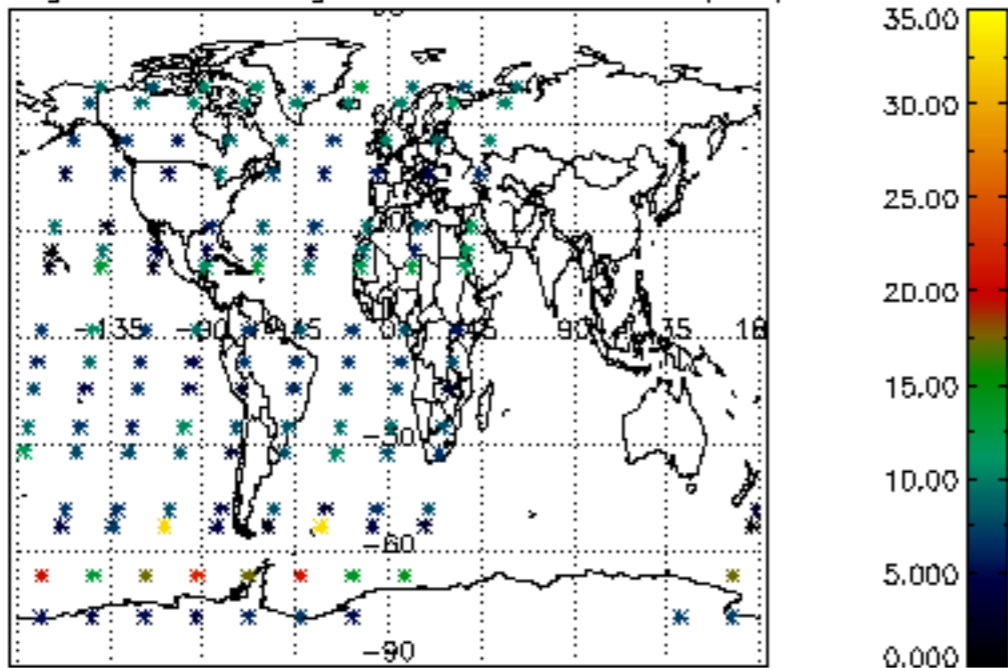
Percentage of cosmic ray hits per profile



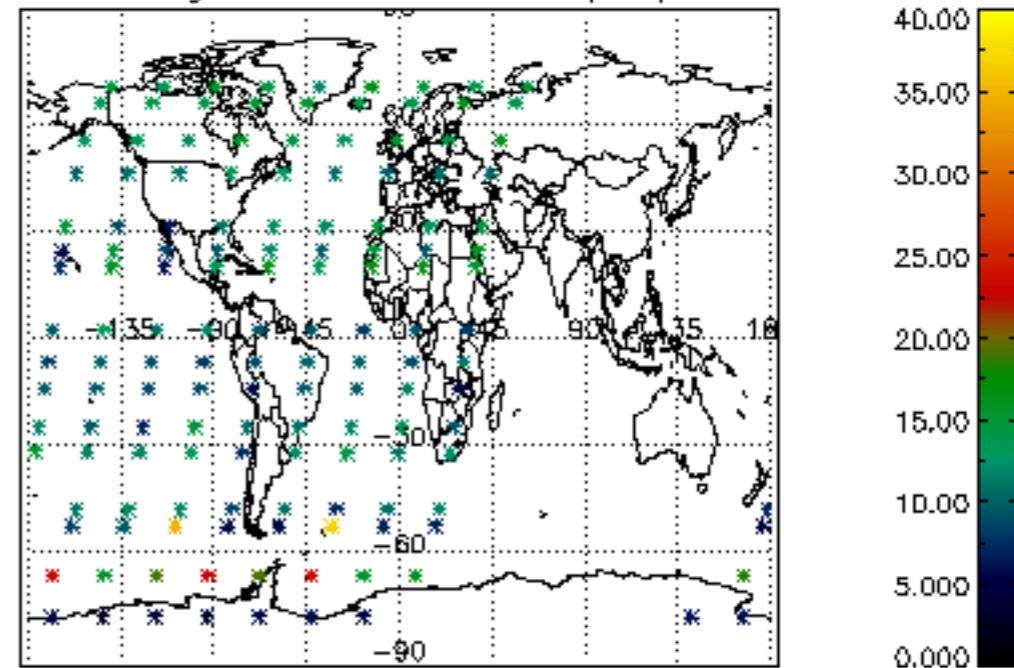
Percentage of datation errors per profile

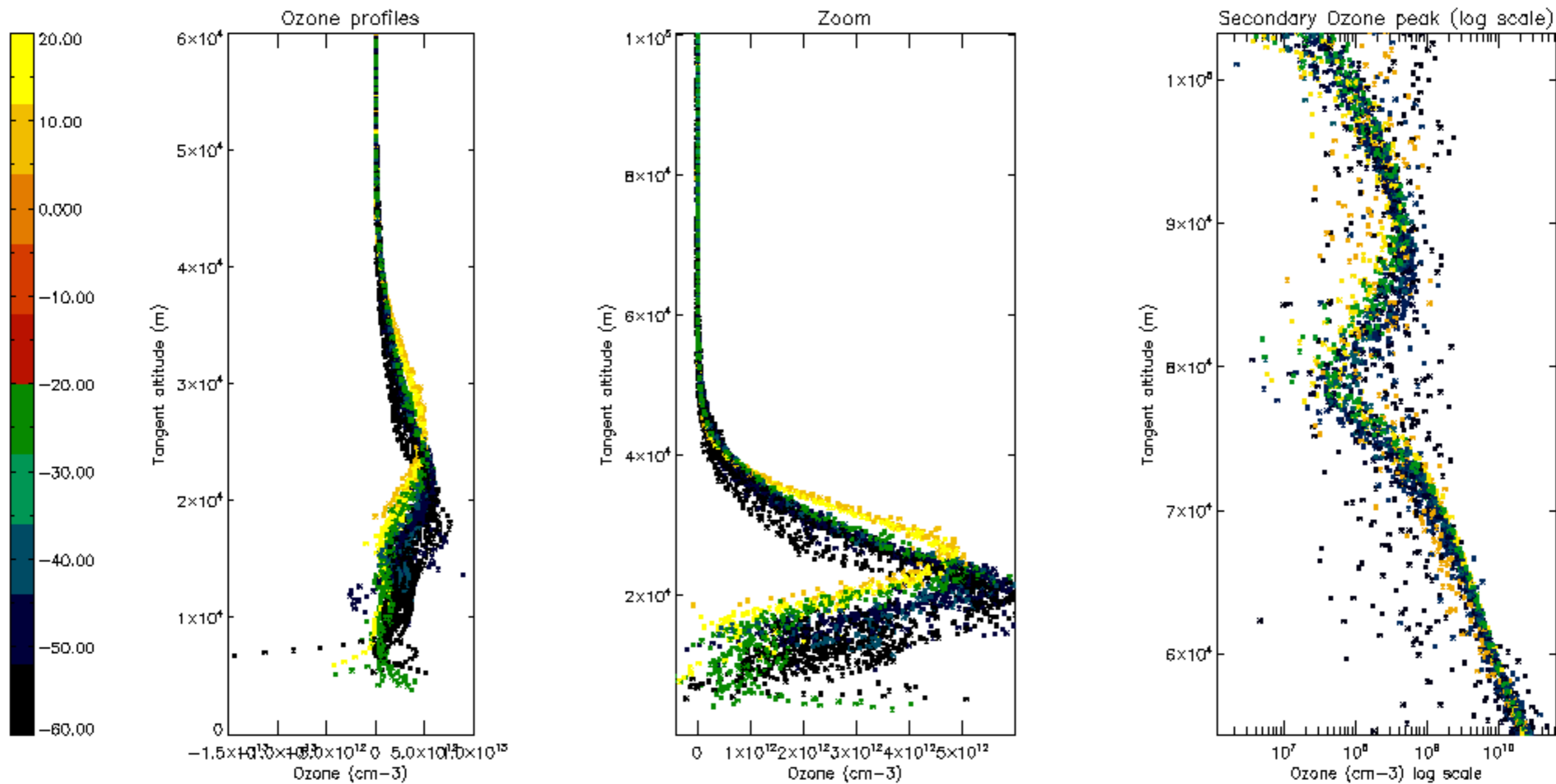


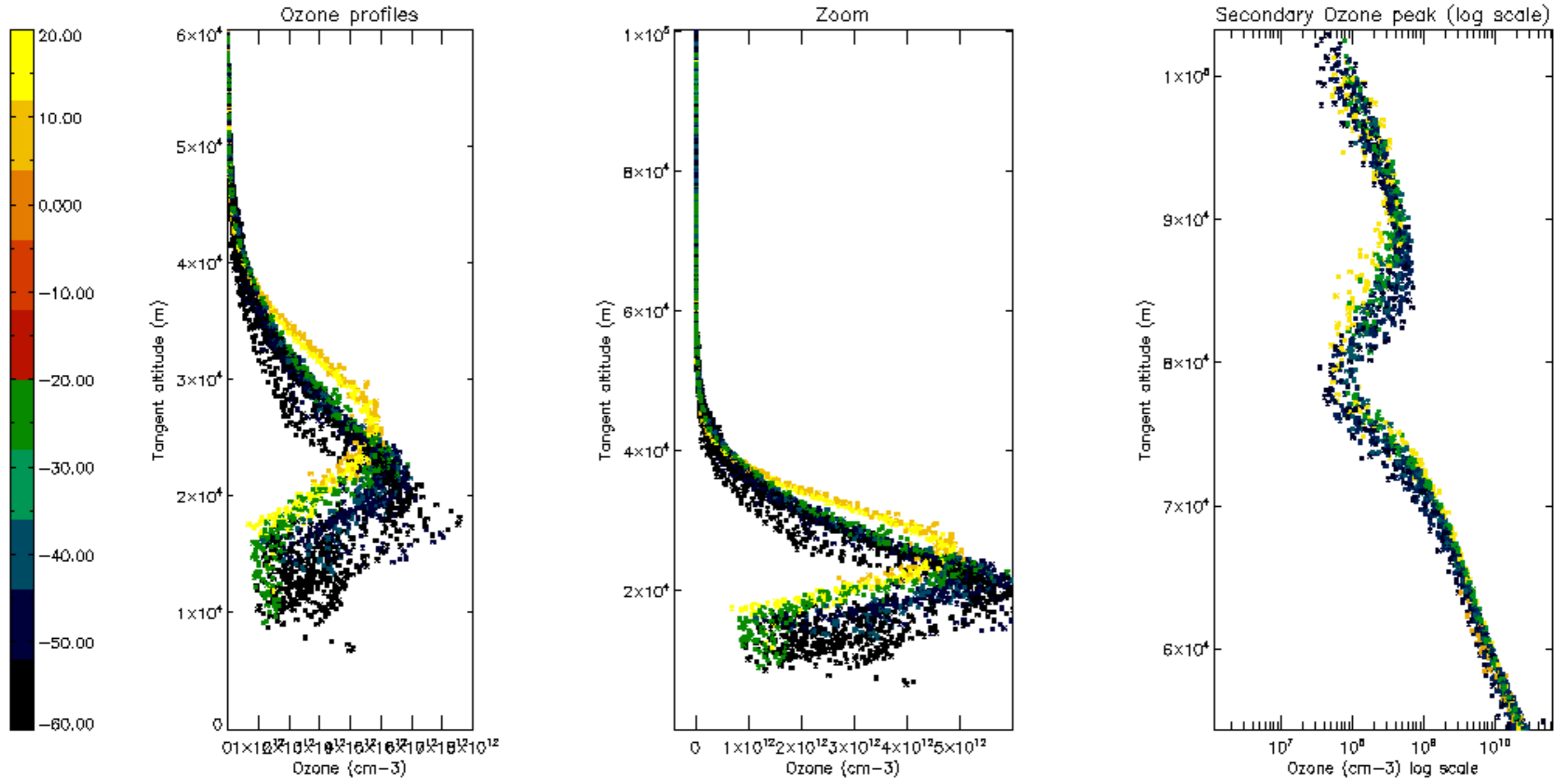
Percentage of star falling outside central band per profile



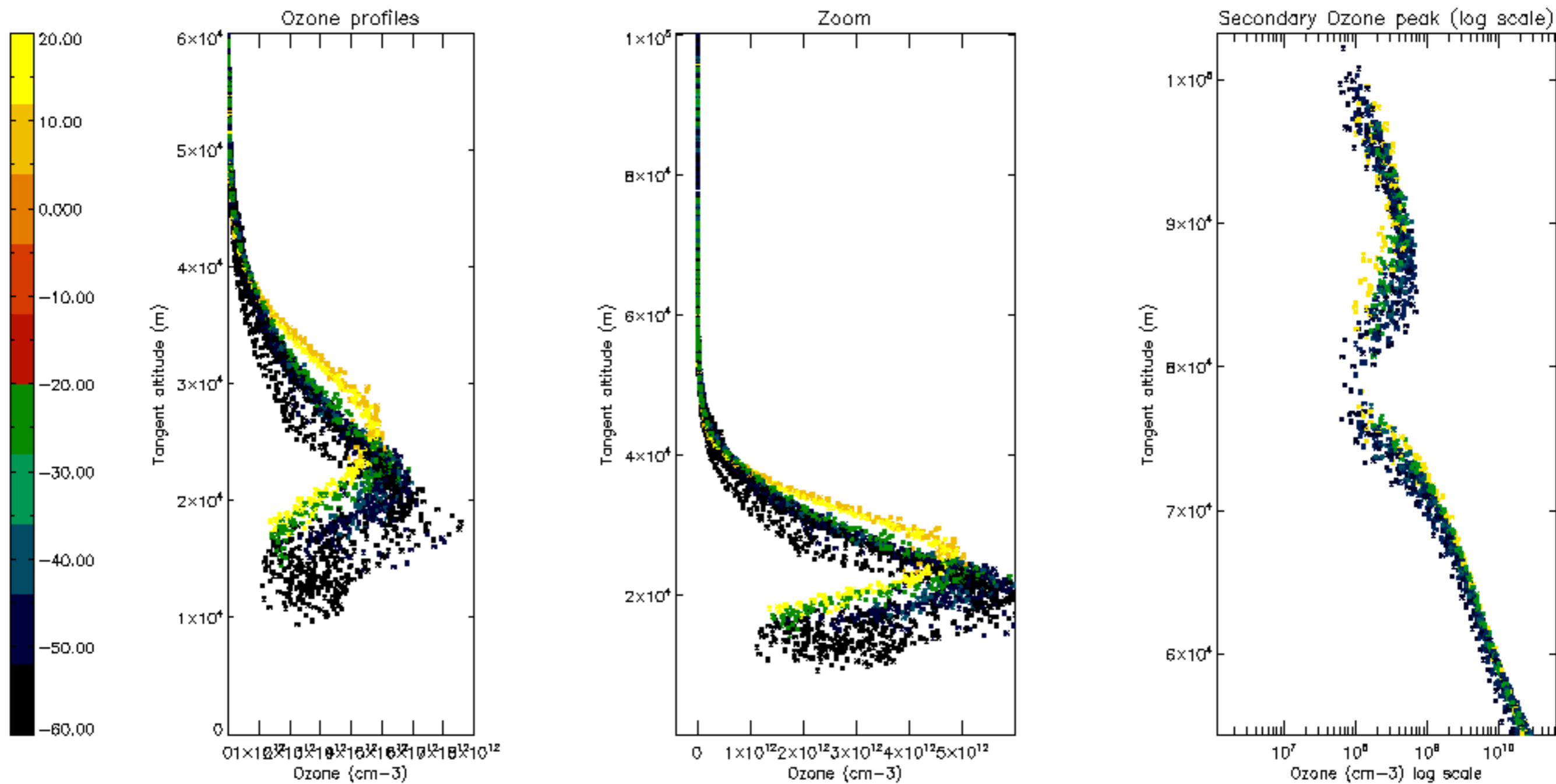
Percentage of saturation errors per profile

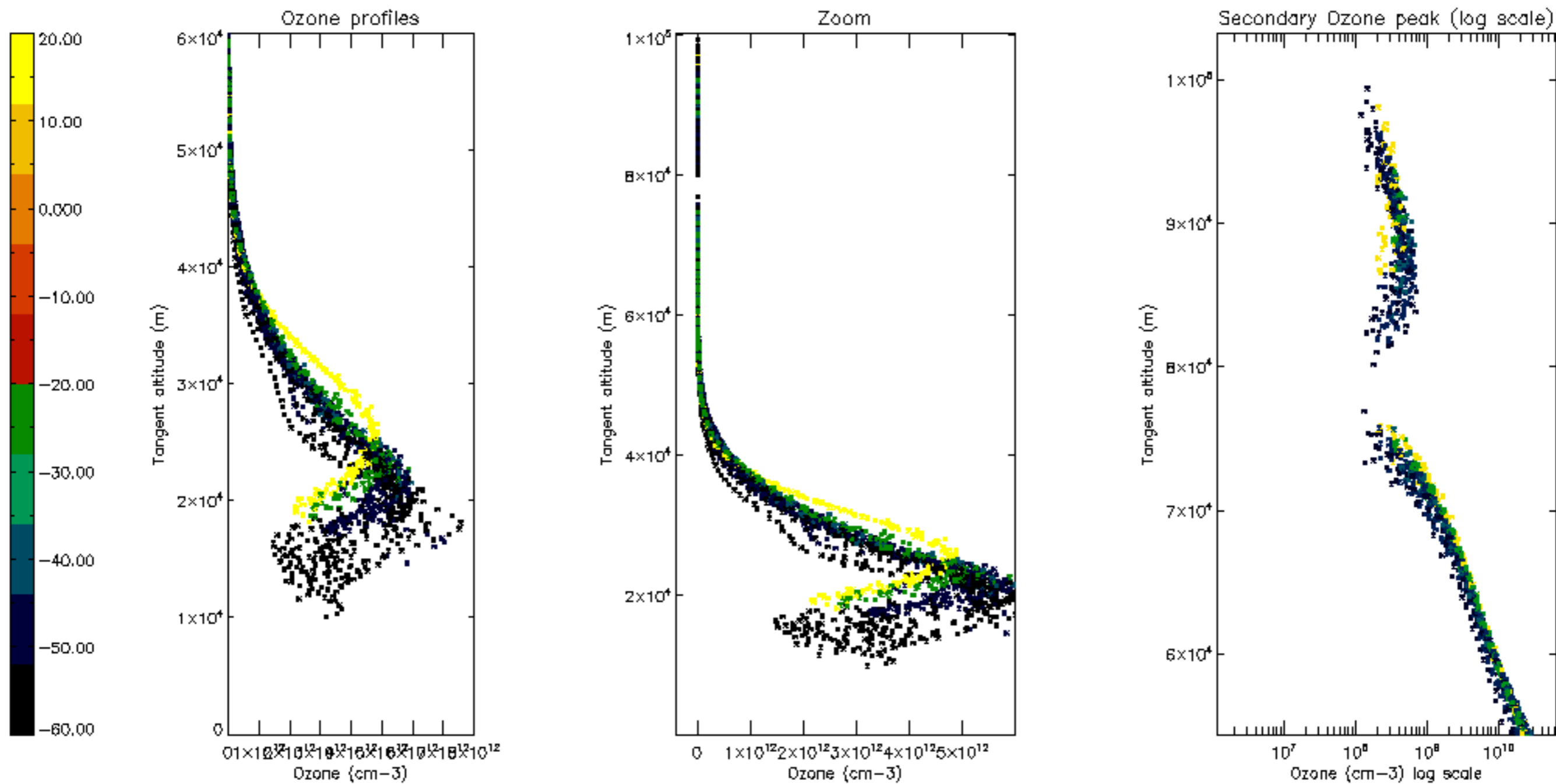


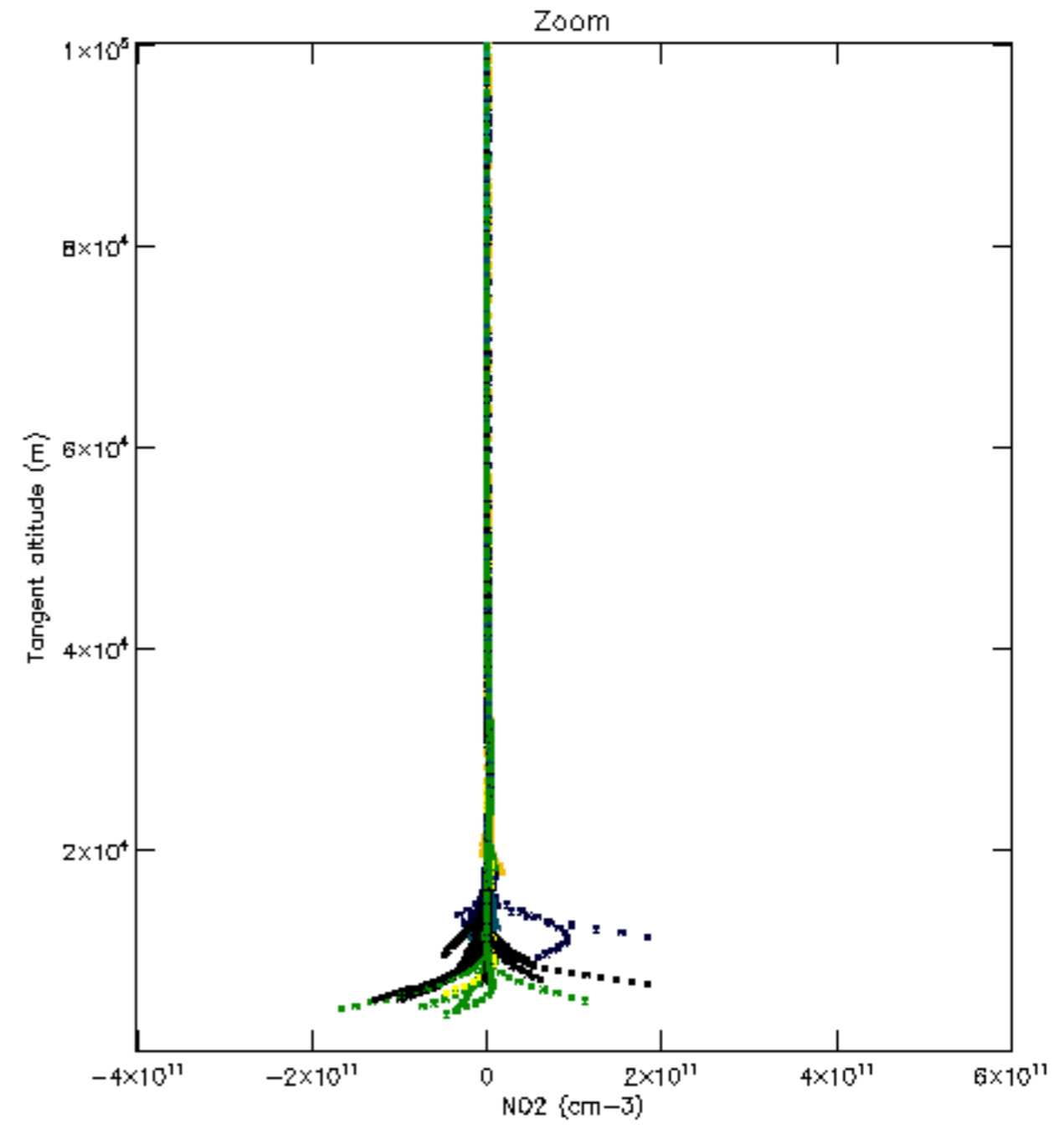
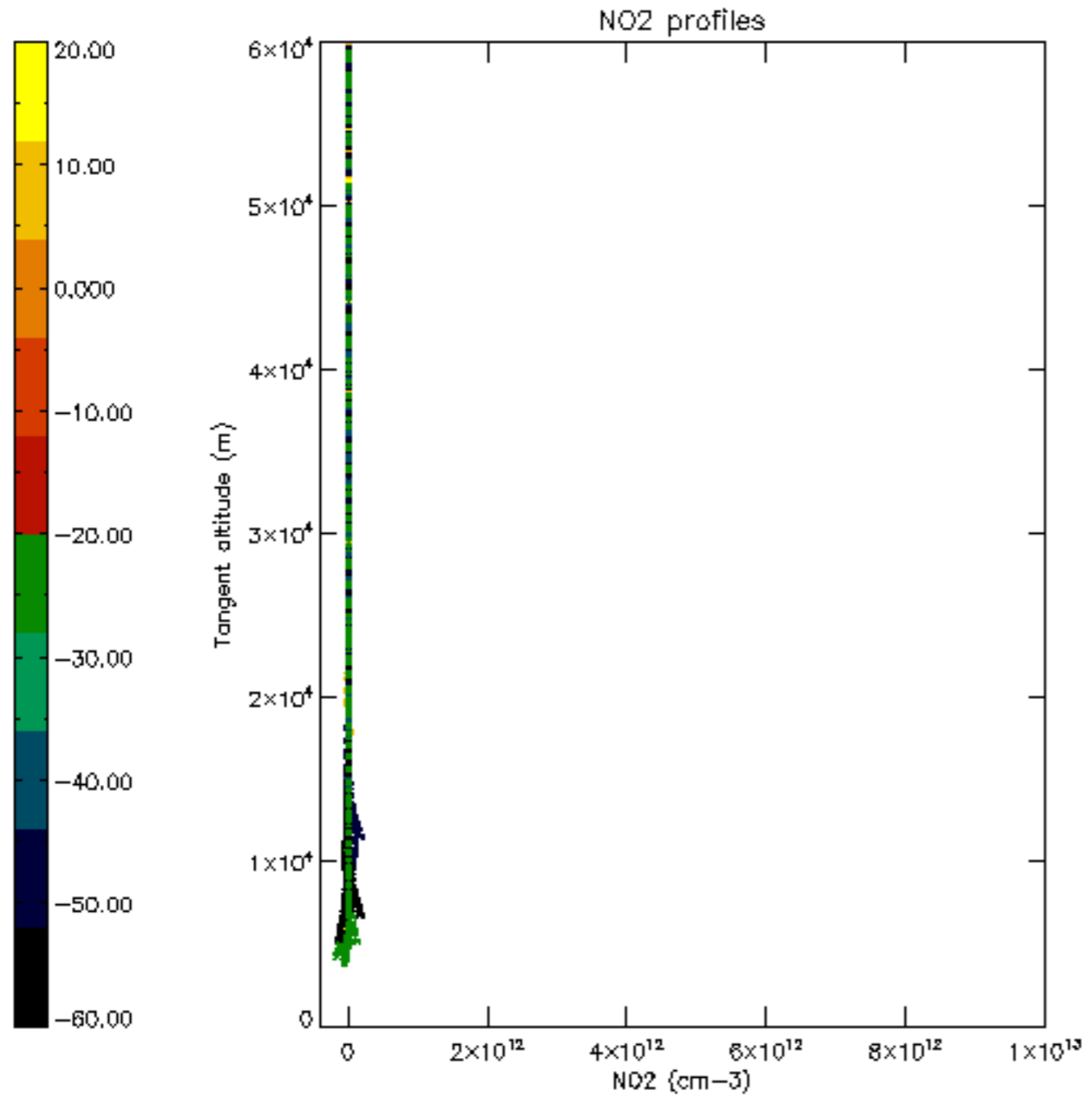


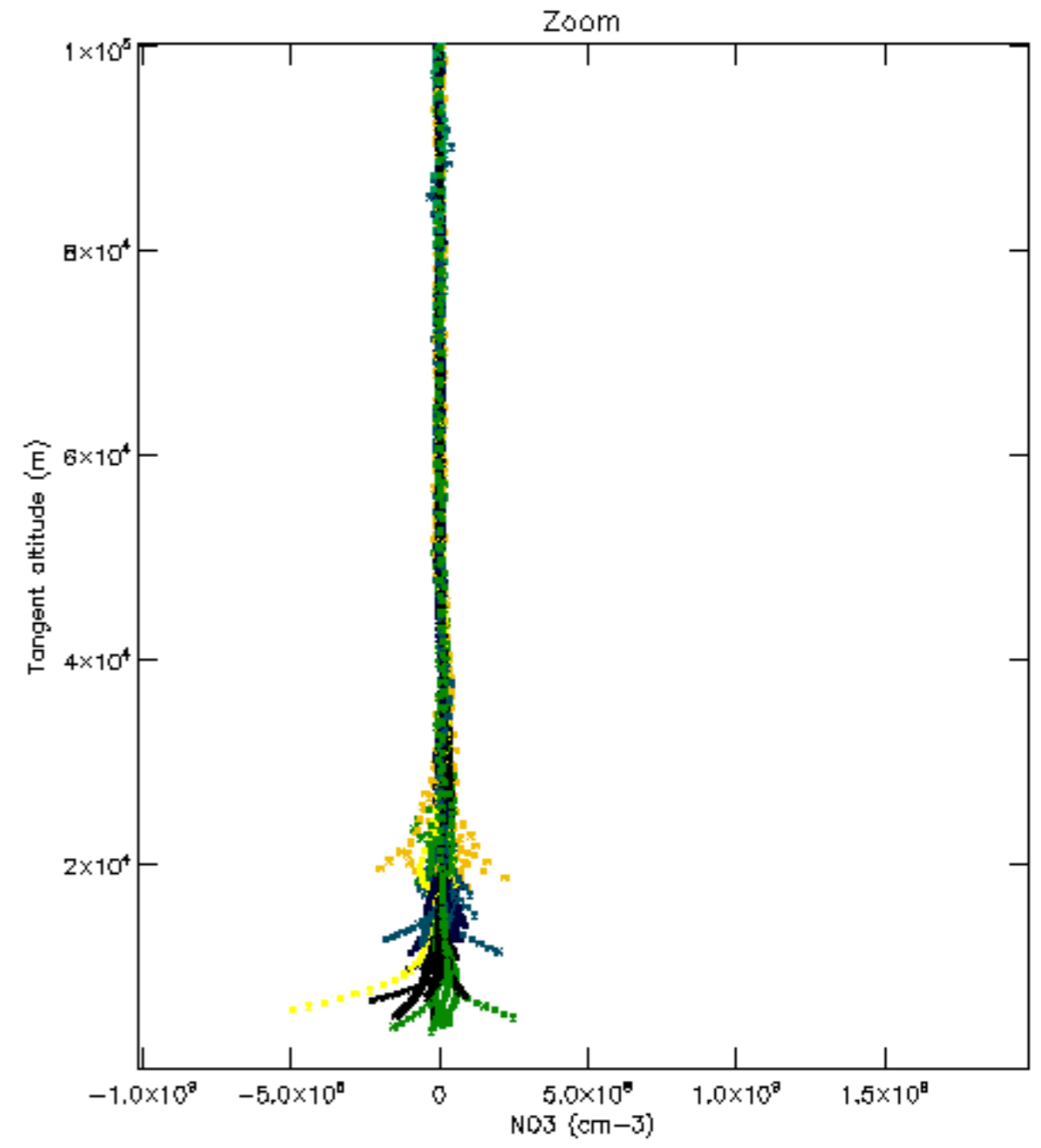
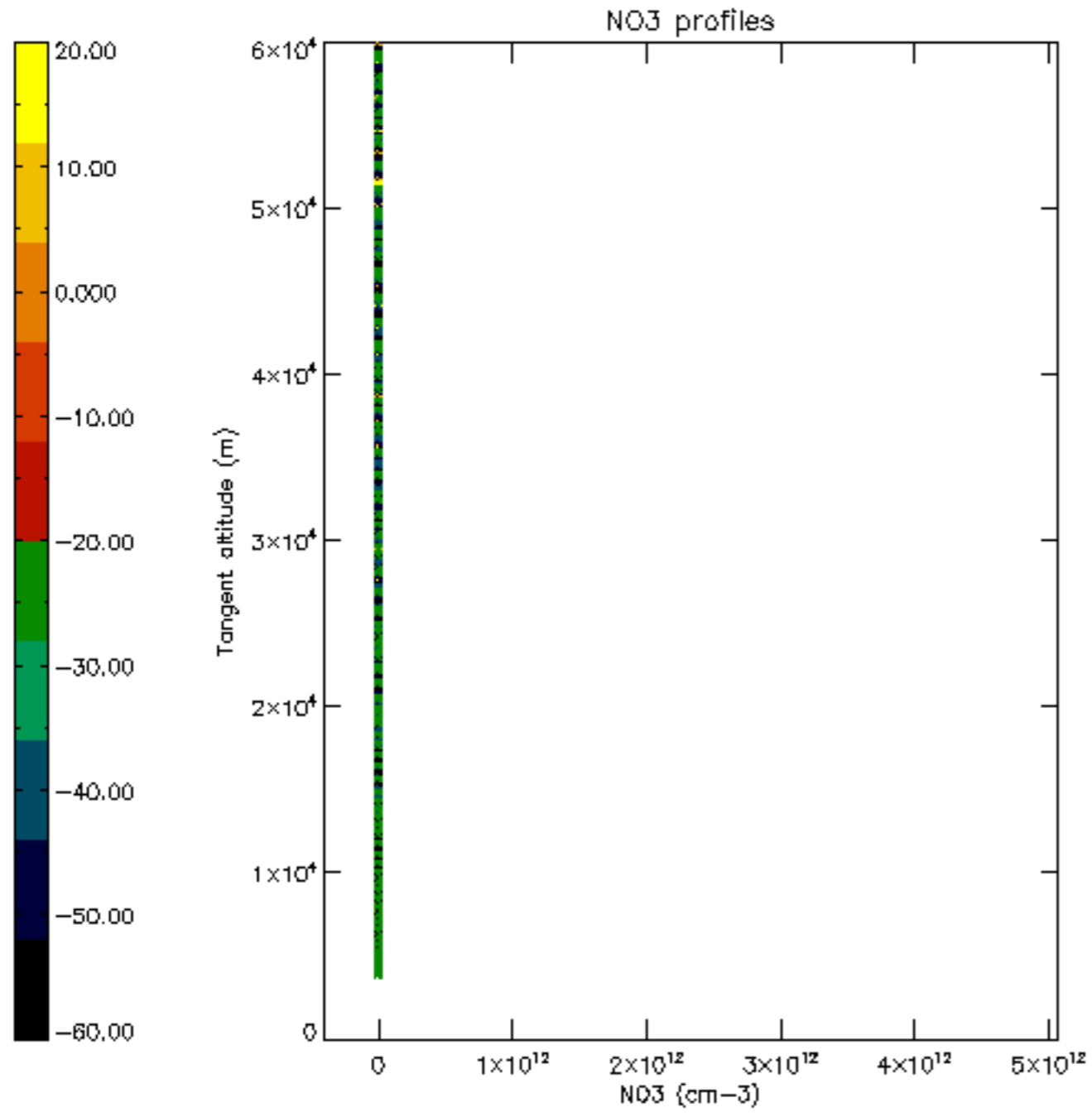


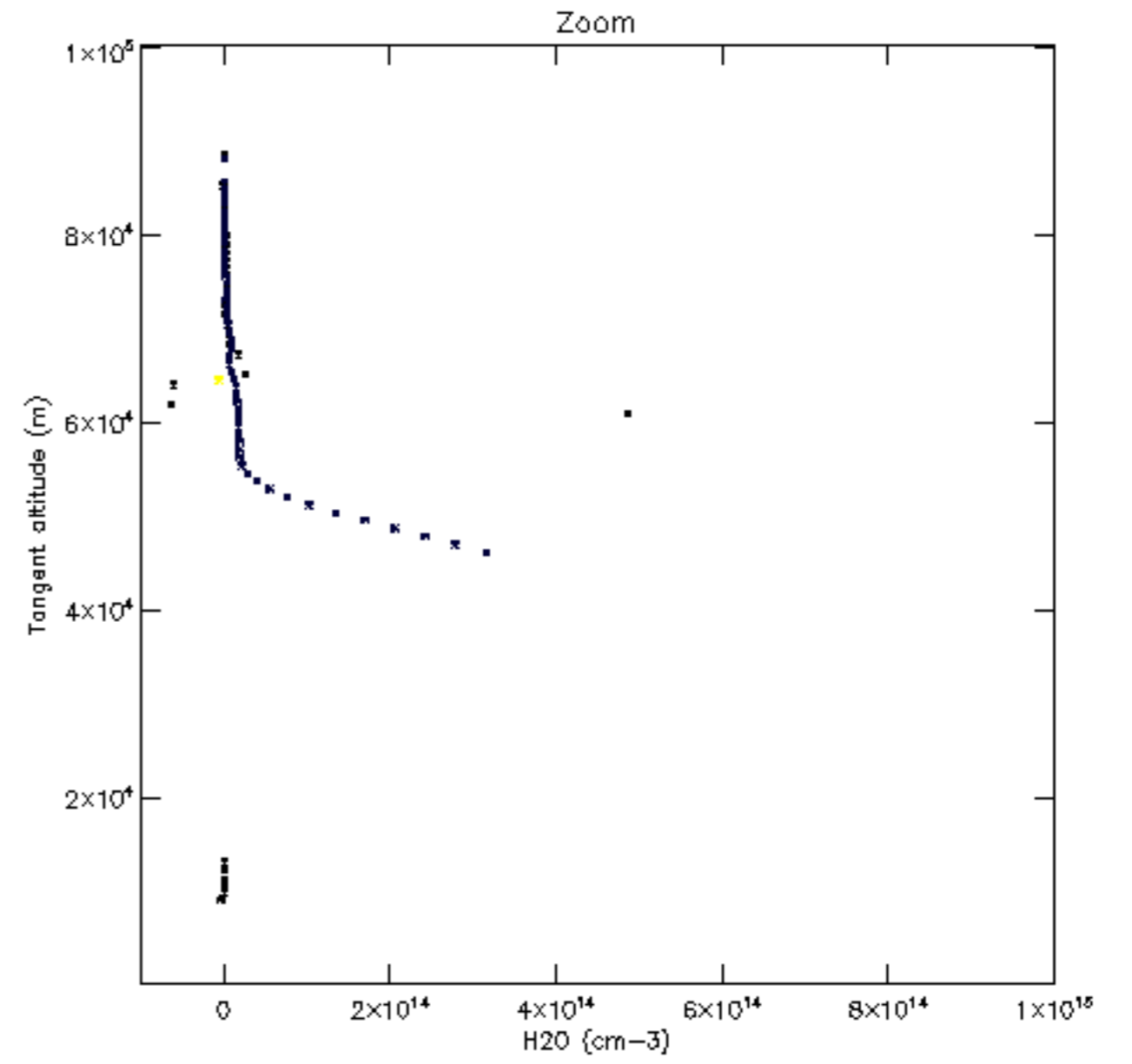
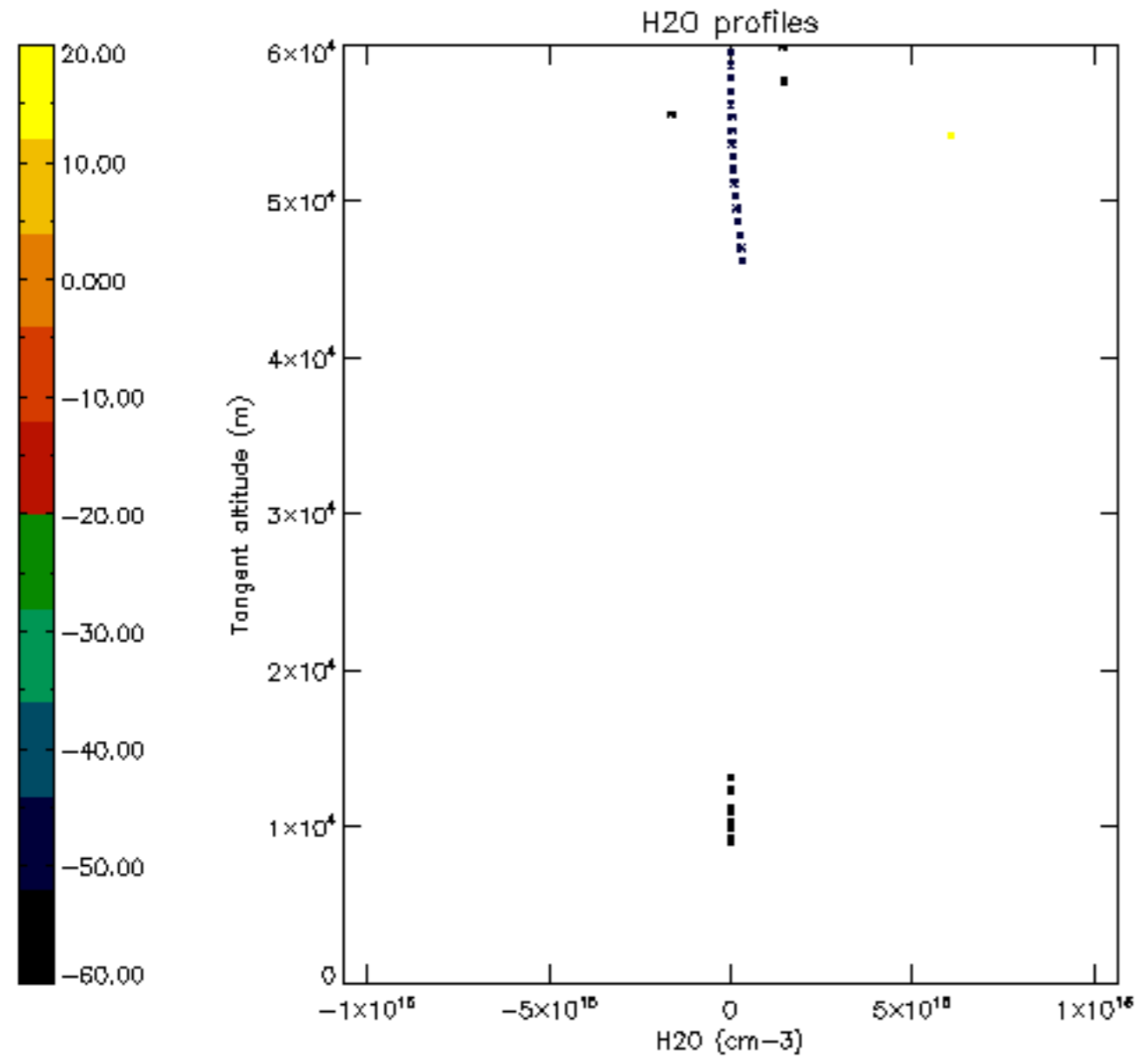


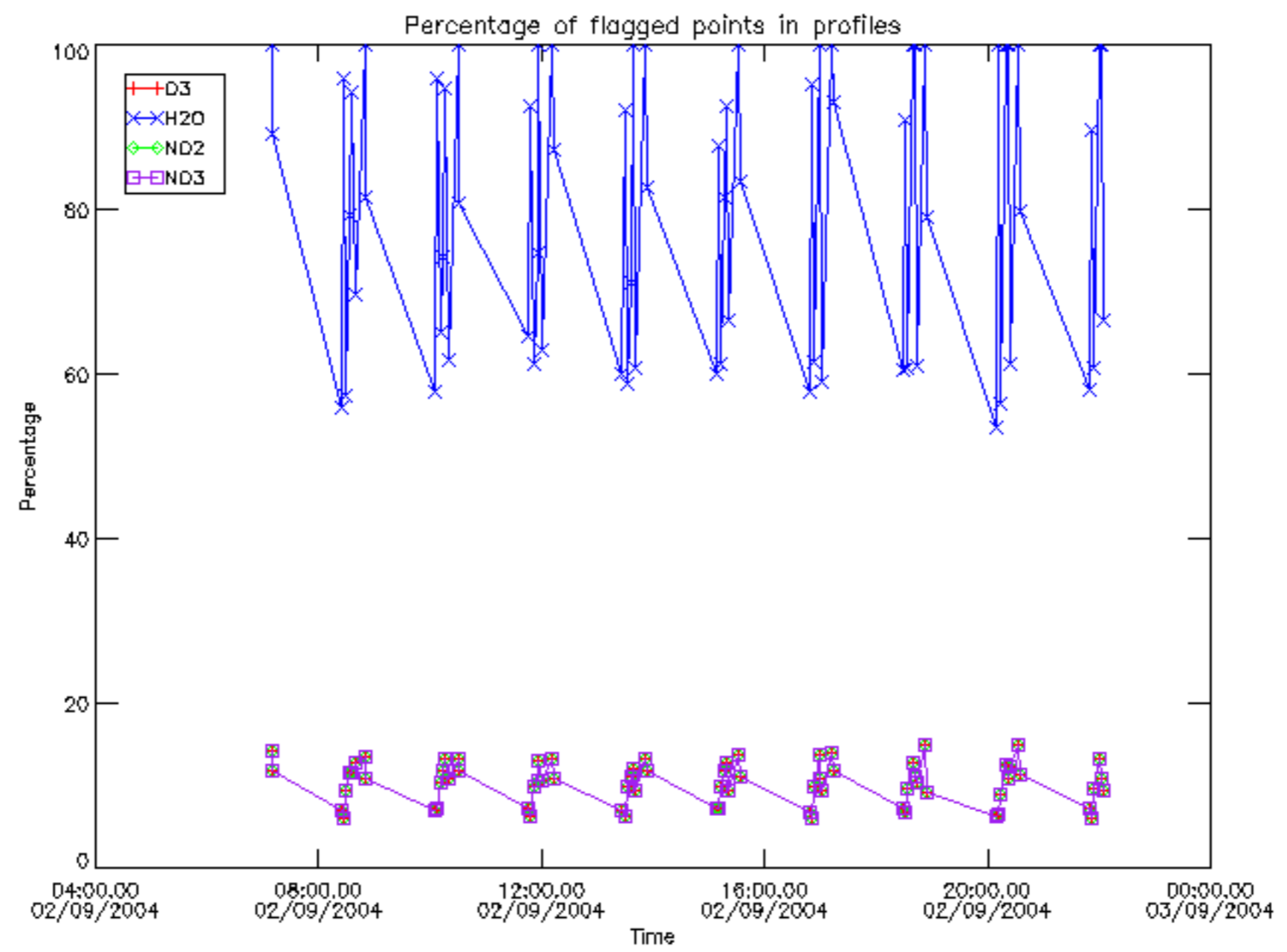




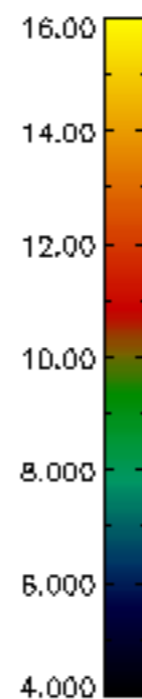
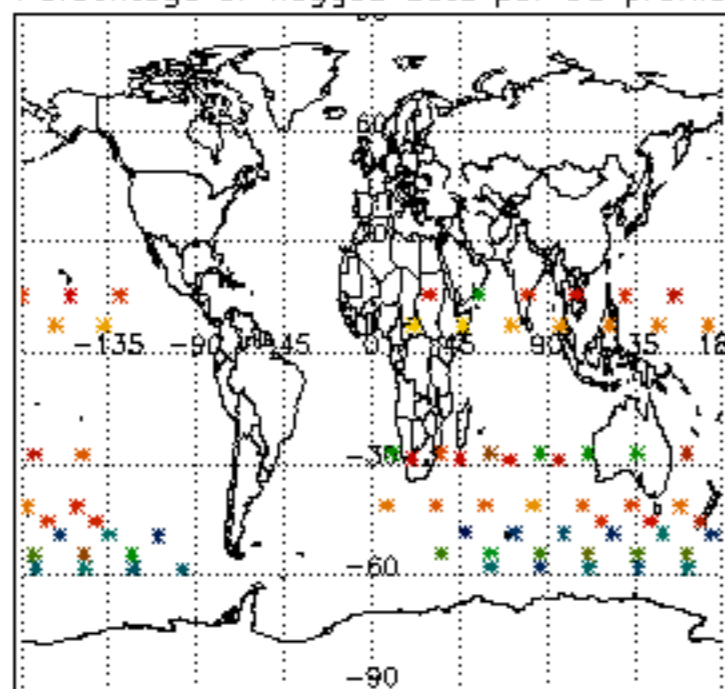




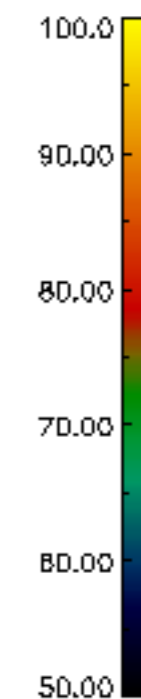
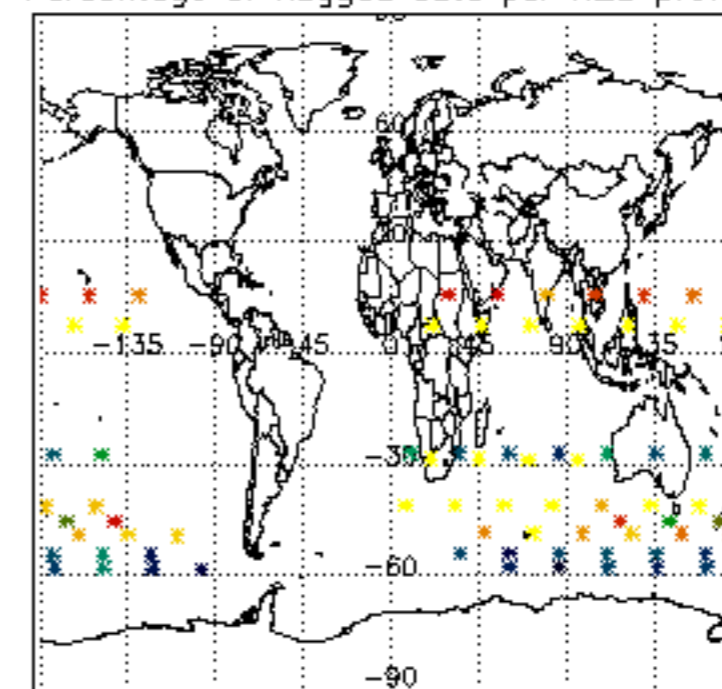




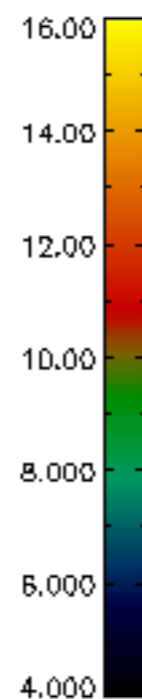
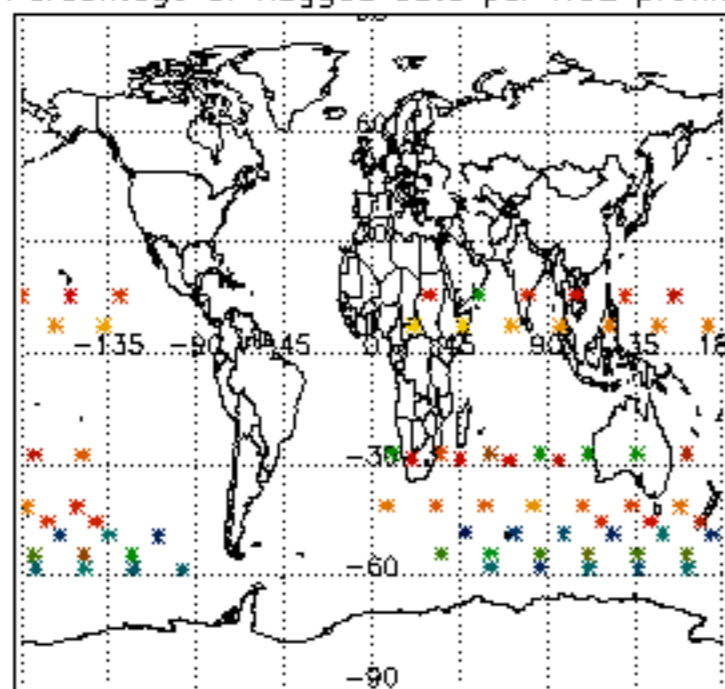
Percentage of flagged data per D3 profile



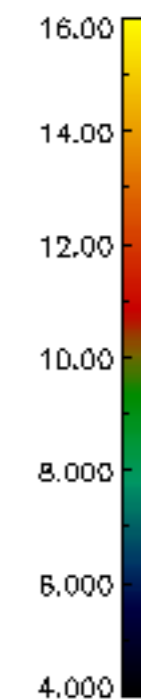
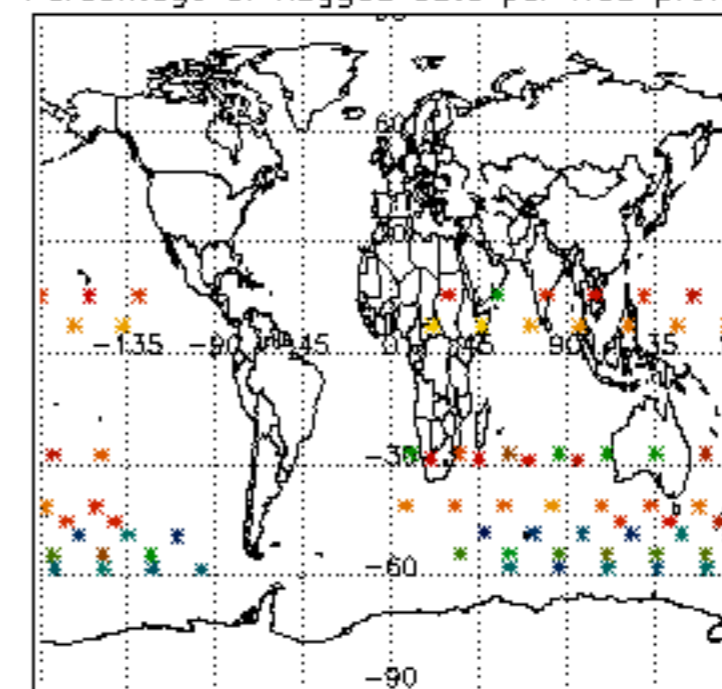
Percentage of flagged data per H2O profile

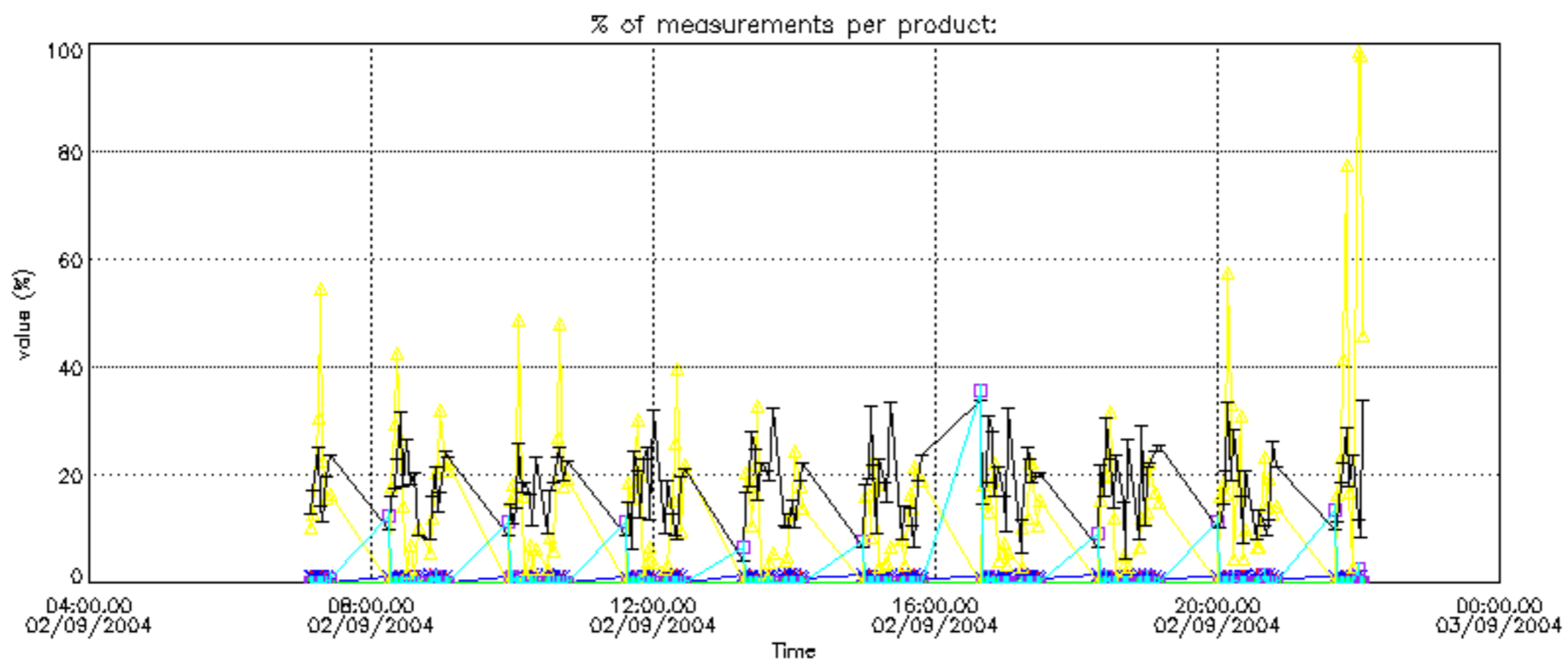


Percentage of flagged data per NO2 profile

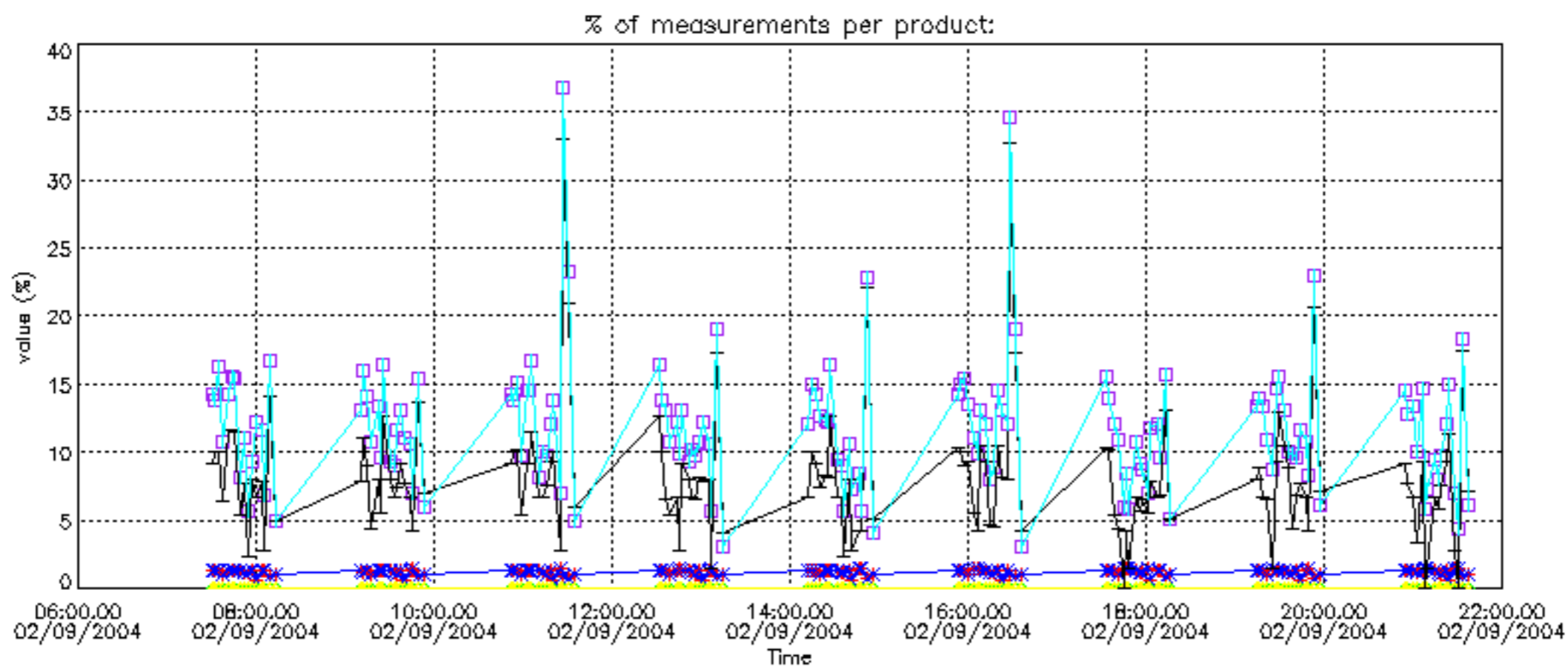


Percentage of flagged data per NO3 profile

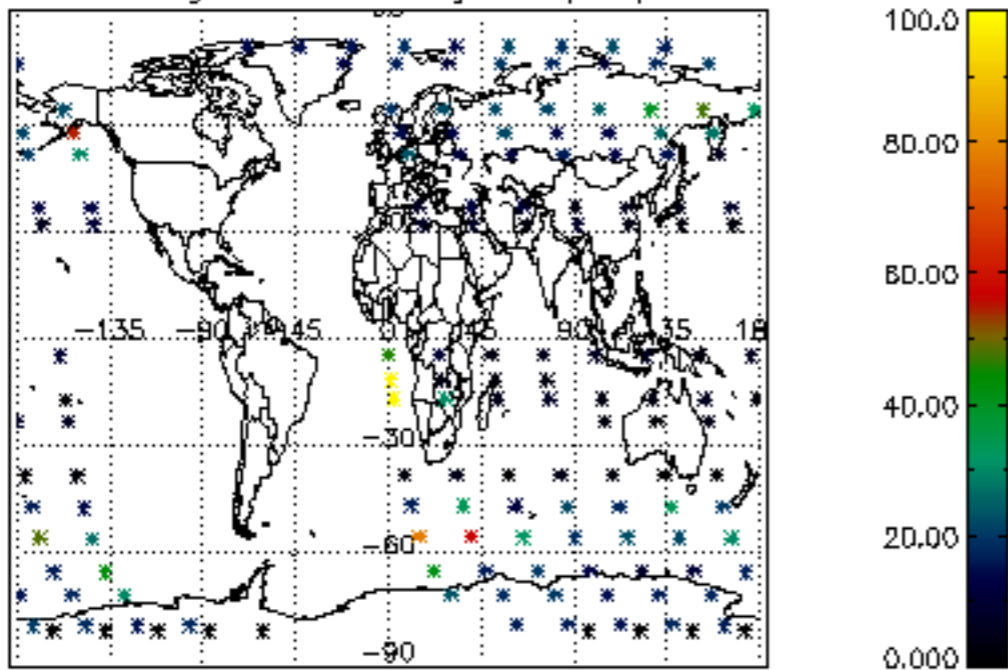




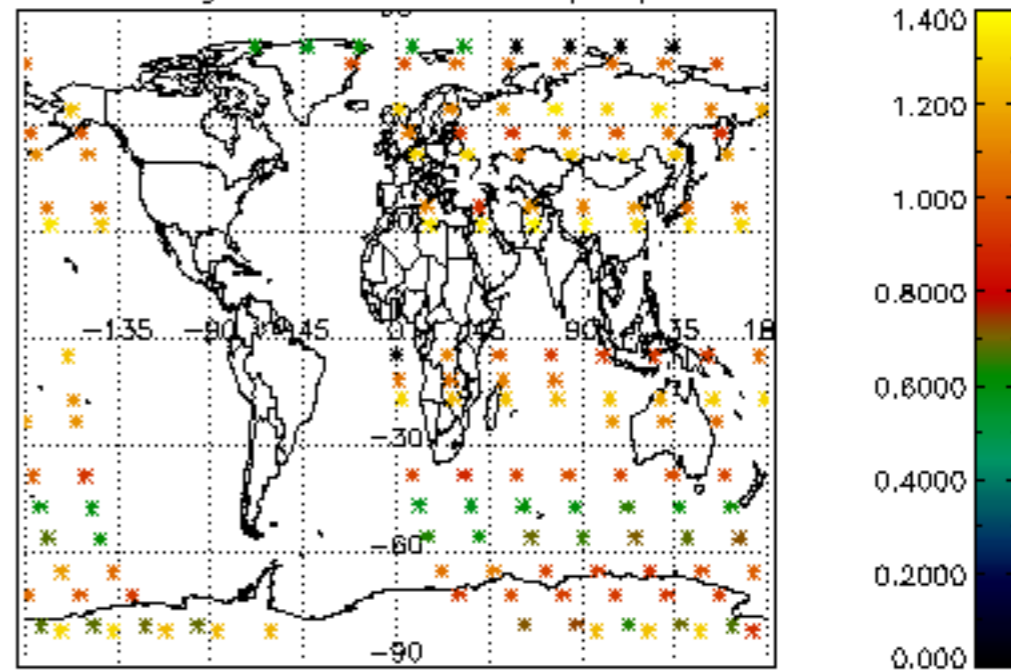




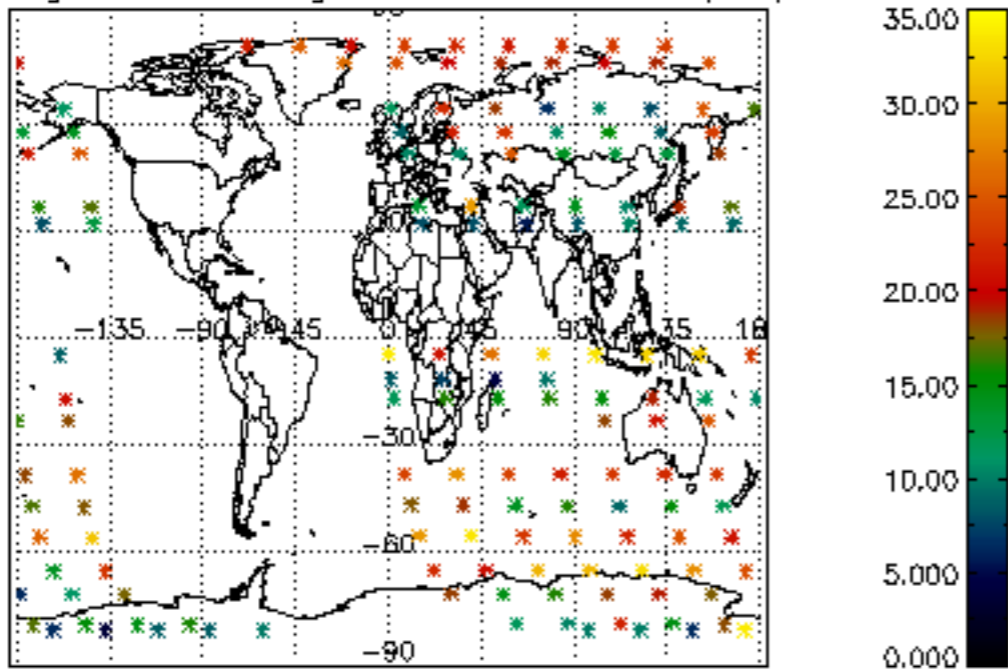
Percentage of cosmic ray hits per profile



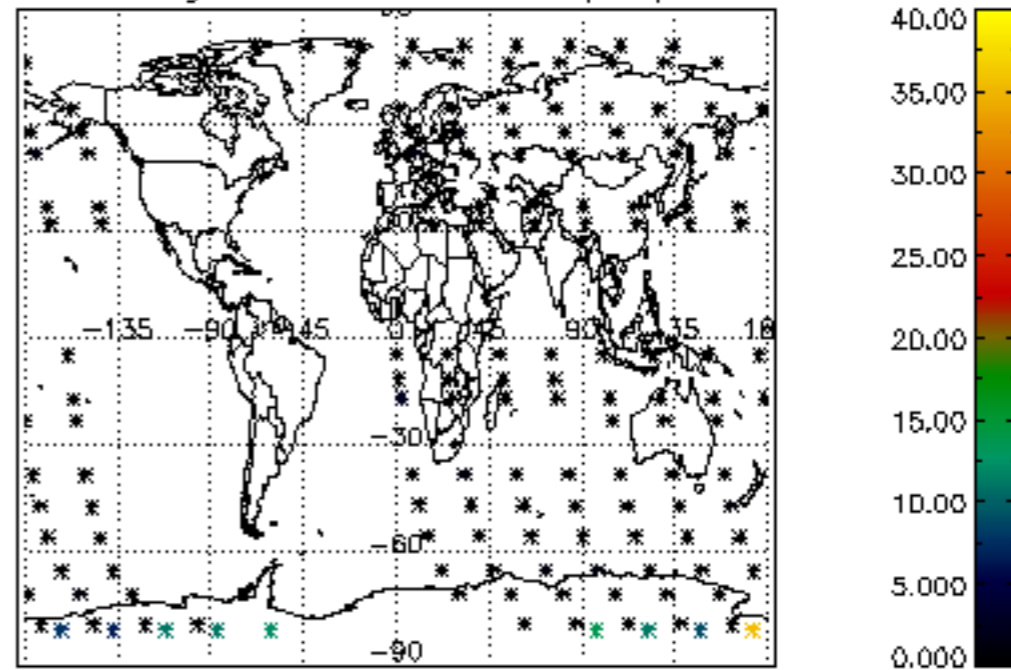
Percentage of datation errors per profile



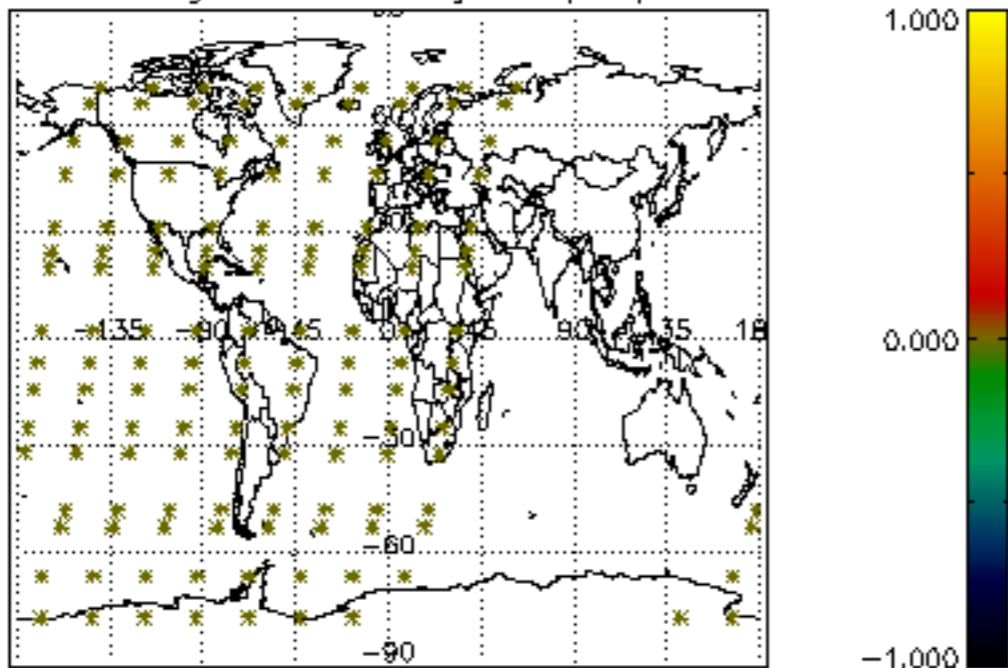
Percentage of star falling outside central band per profile



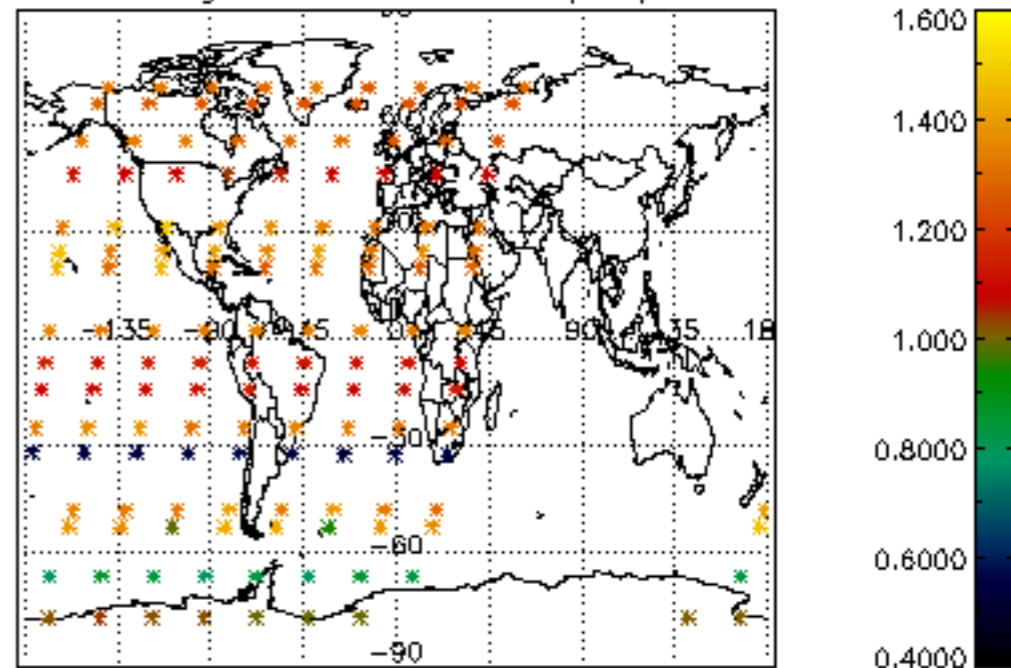
Percentage of saturation errors per profile



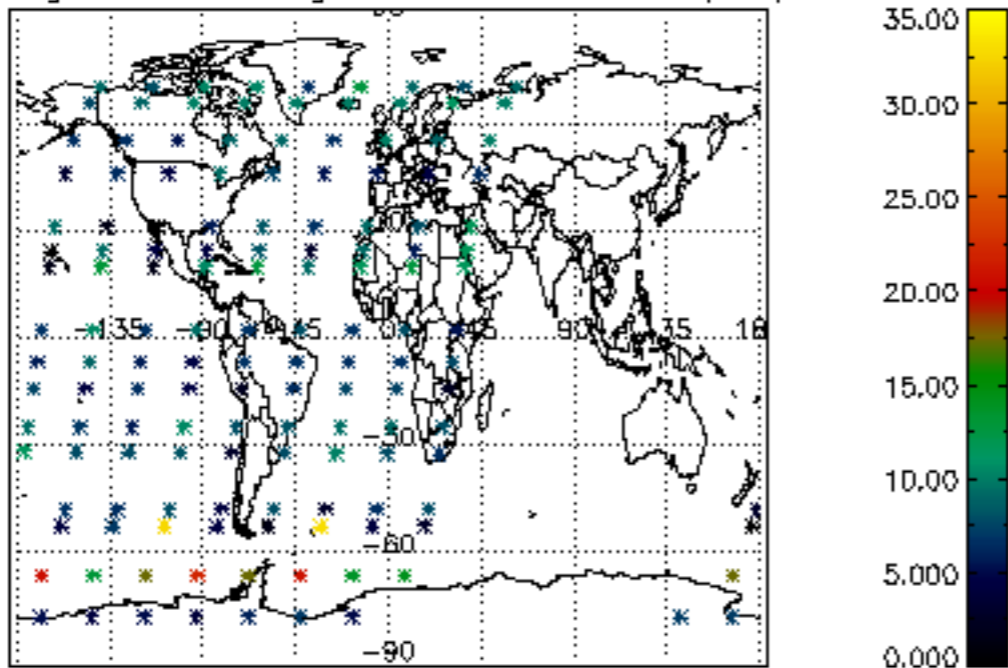
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

