

# GOMOS Level 2 Daily Report

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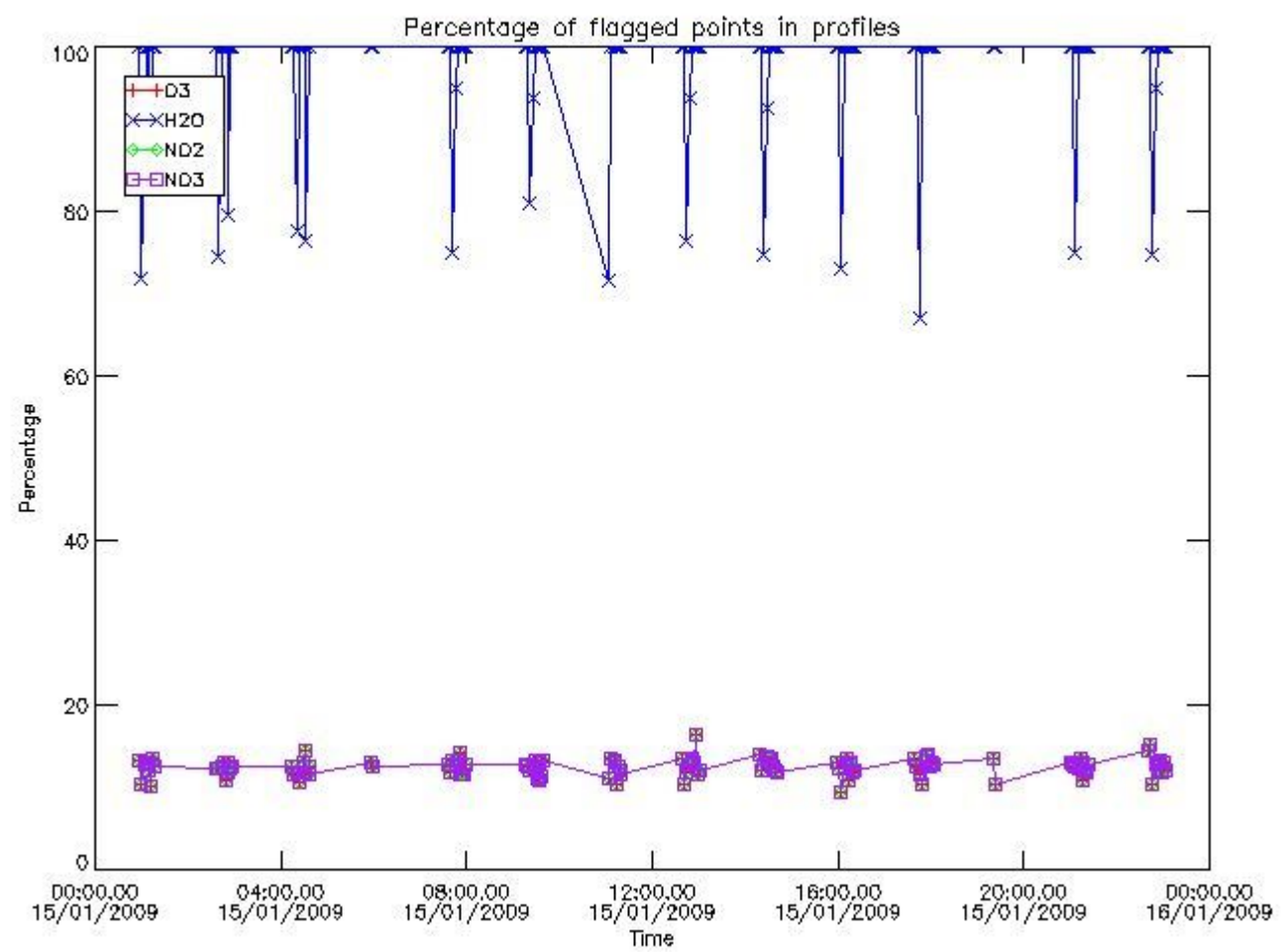
338	GOM_NL__2PRFIN20090115_224648_000000542075_00345_35970_4269.N1	15-JAN-2009 22:46:48	Dark	54.000	4	Alp1Cen	-0.010000	5800.0	108	35970	No
339	GOM_NL__2PRFIN20090115_225112_000000402075_00345_35970_4270.N1	15-JAN-2009 22:51:12	Dark	40.000	12	Alp1Cru	0.77500	30000.	80	35970	No
340	GOM_NL__2PRFIN20090115_225426_000000402075_00345_35970_4271.N1	15-JAN-2009 22:54:26	Dark	39.500	124	The Car	2.7640	30000.	79	35970	No
341	GOM_NL__2PRFIN20090115_225546_000000392075_00345_35970_4272.N1	15-JAN-2009 22:55:46	Dark	38.500	29	Bet Car	1.6720	10200.	77	35970	No
342	GOM_NL__2PRFIN20090115_225743_000000442075_00345_35970_4273.N1	15-JAN-2009 22:57:43	Dark	43.500	71	lot Car	2.2460	7700.0	87	35970	No
343	GOM_NL__2PRFIN20090115_225935_000000422075_00345_35970_4274.N1	15-JAN-2009 22:59:35	Dark	42.000	46	Del Vel	1.9540	10600.	84	35970	No
344	GOM_NL__2PRFIN20090115_230218_000000432075_00345_35970_4275.N1	15-JAN-2009 23:02:18	Dark	43.000	34	Gam2Vel	1.7930	23000.	86	35970	No
345	GOM_NL__2PRFIN20090115_230426_000000432075_00345_35970_4276.N1	15-JAN-2009 23:04:26	Dark	42.500	70	Zet Pup	2.2460	39000.	85	35970	No
346	GOM_NL__2PRFIN20090115_230606_000000442075_00345_35970_4277.N1	15-JAN-2009 23:06:06	Straylight	44.000	117	Pi Pup	2.7060	3800.0	88	35970	No
347	GOM_NL__2PRFIN20090115_230839_000000432075_00345_35970_4278.N1	15-JAN-2009 23:08:39	Straylight	43.000	23	21Eps CMa	1.5020	26000.	86	35970	No
348	GOM_NL__2PRFIN20090115_231003_000000412075_00345_35970_4279.N1	15-JAN-2009 23:10:03	Straylight	40.500	179	24Omi2CMa	3.0320	24000.	81	35970	No
349	GOM_NL__2PRFIN20090115_231216_000000482075_00345_35970_4280.N1	15-JAN-2009 23:12:16	Straylight	47.500	1	9Alp CMa	-1.4400	11000.	95	35970	No
350	GOM_NL__2PRFIN20090115_231926_000000502075_00345_35970_4281.N1	15-JAN-2009 23:19:26	Tw_i_and_stray	49.500	14	58Alp Ori	0.87000	3000.0	99	35970	No
351	GOM_NL__2PRFIN20090115_232155_000000542075_00345_35970_4282.N1	15-JAN-2009 23:21:55	Bright	54.000	44	24Gam Gem	1.9280	11000.	108	35970	No
352	GOM_NL__2PRFIN20090115_232323_000000362075_00345_35970_4283.N1	15-JAN-2009 23:23:23	Bright	36.000	176	23Zet Tau	3.0200	22000.	72	35970	No
353	GOM_NL__2PRFIN20090115_232747_000000372075_00345_35970_4284.N1	15-JAN-2009 23:27:47	Bright	37.000	107	37The Aur	2.6490	11000.	74	35970	No
354	GOM_NL__2PRFIN20090115_232957_000000402075_00345_35970_4285.N1	15-JAN-2009 23:29:57	Bright	40.000	42	34Bet Aur	1.9000	10200.	80	35970	No
355	GOM_NL__2PRFIN20090115_234232_000000342075_00345_35970_4286.N1	15-JAN-2009 23:42:32	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	35970	No
356	GOM_NL__2PRFIN20090115_234628_000000362075_00345_35970_4287.N1	15-JAN-2009 23:46:28	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	35970	No
357	GOM_NL__2PRFIN20090115_235047_000000382075_00345_35970_4288.N1	15-JAN-2009 23:50:47	Bright	38.000	119	14Eta Dra	2.7270	4700.0	76	35970	No
358	GOM_NL__2PRFIN20090115_235324_000000372075_00345_35970_4289.N1	15-JAN-2009 23:53:24	Bright	37.000	130	23Bet Dra	2.7990	5800.0	74	35970	No
359	GOM_NL__2PRFIN20090115_235941_000000542075_00345_35970_4290.N1	15-JAN-2009 23:59:41	Bright	54.000	133	40Zet Her	2.8070	6000.0	108	35970	No

### 3. Quality information per product

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

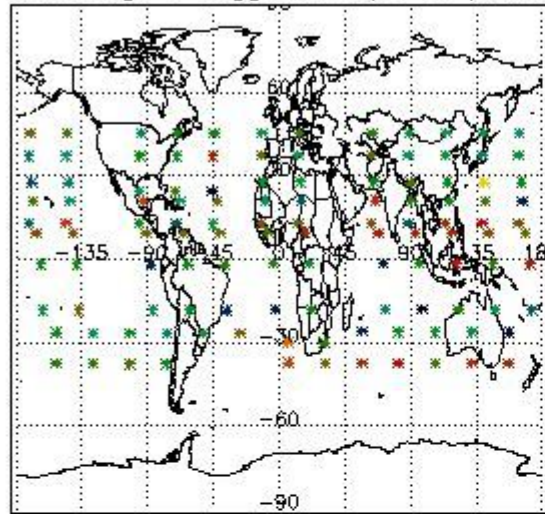
#### 3.1 Plot quality information per product (time dependant)



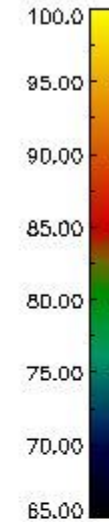
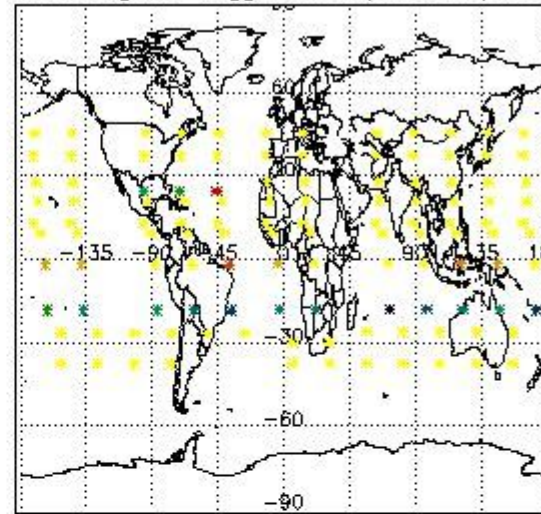


3.2 Plot quality information per product (world map)

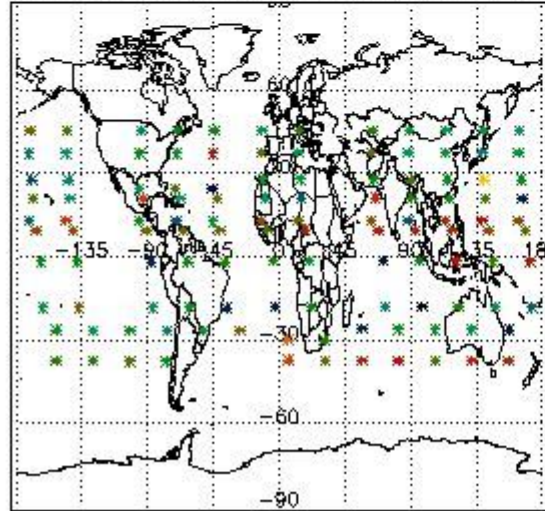
Percentage of flagged data per O3 profile



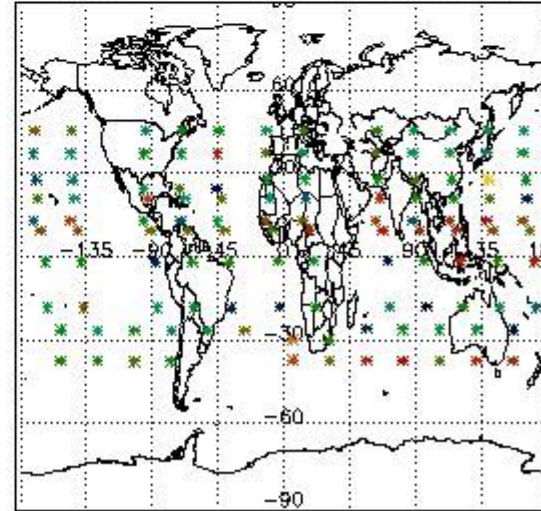
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

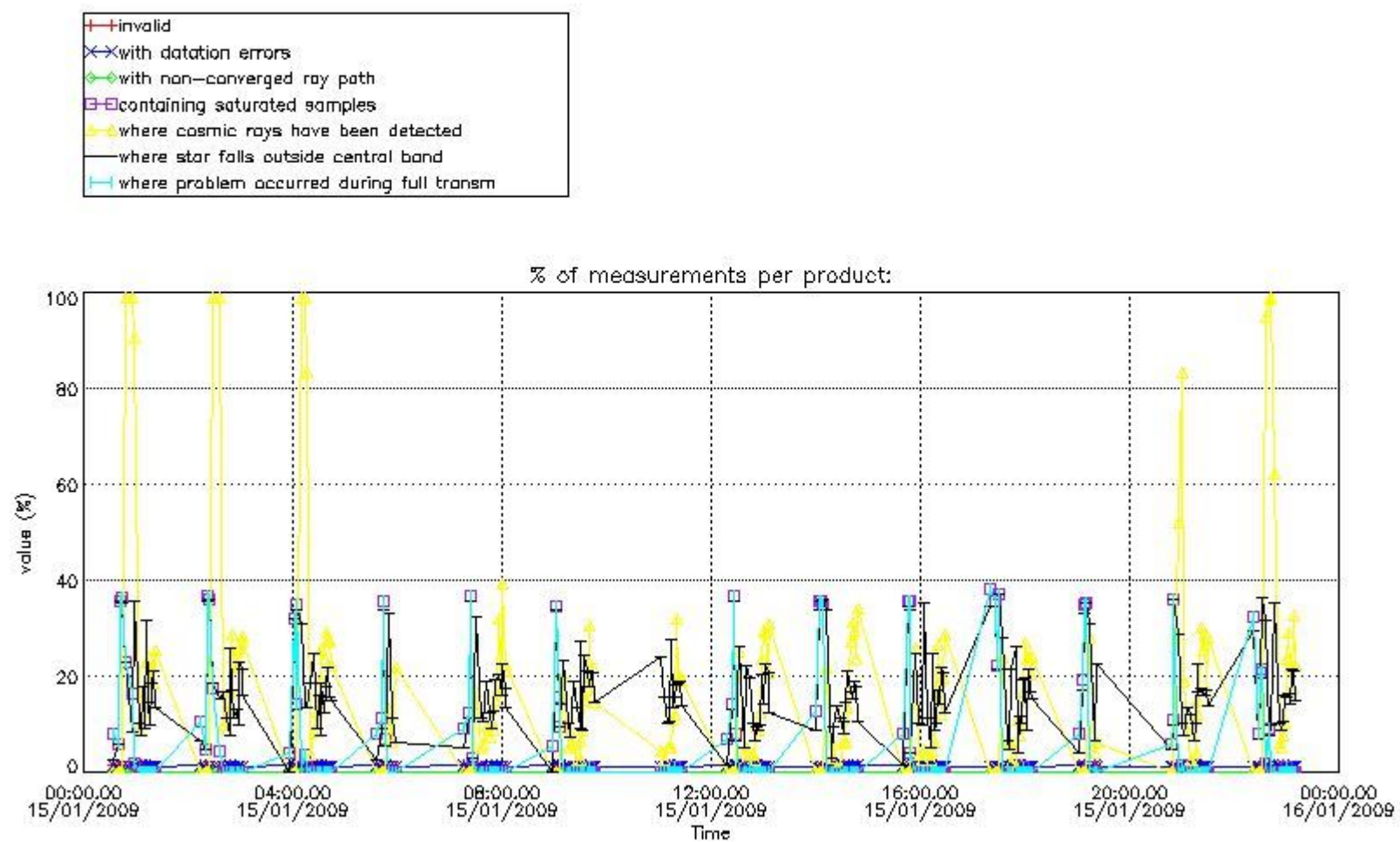


#### 4. Level 1 quality information per product

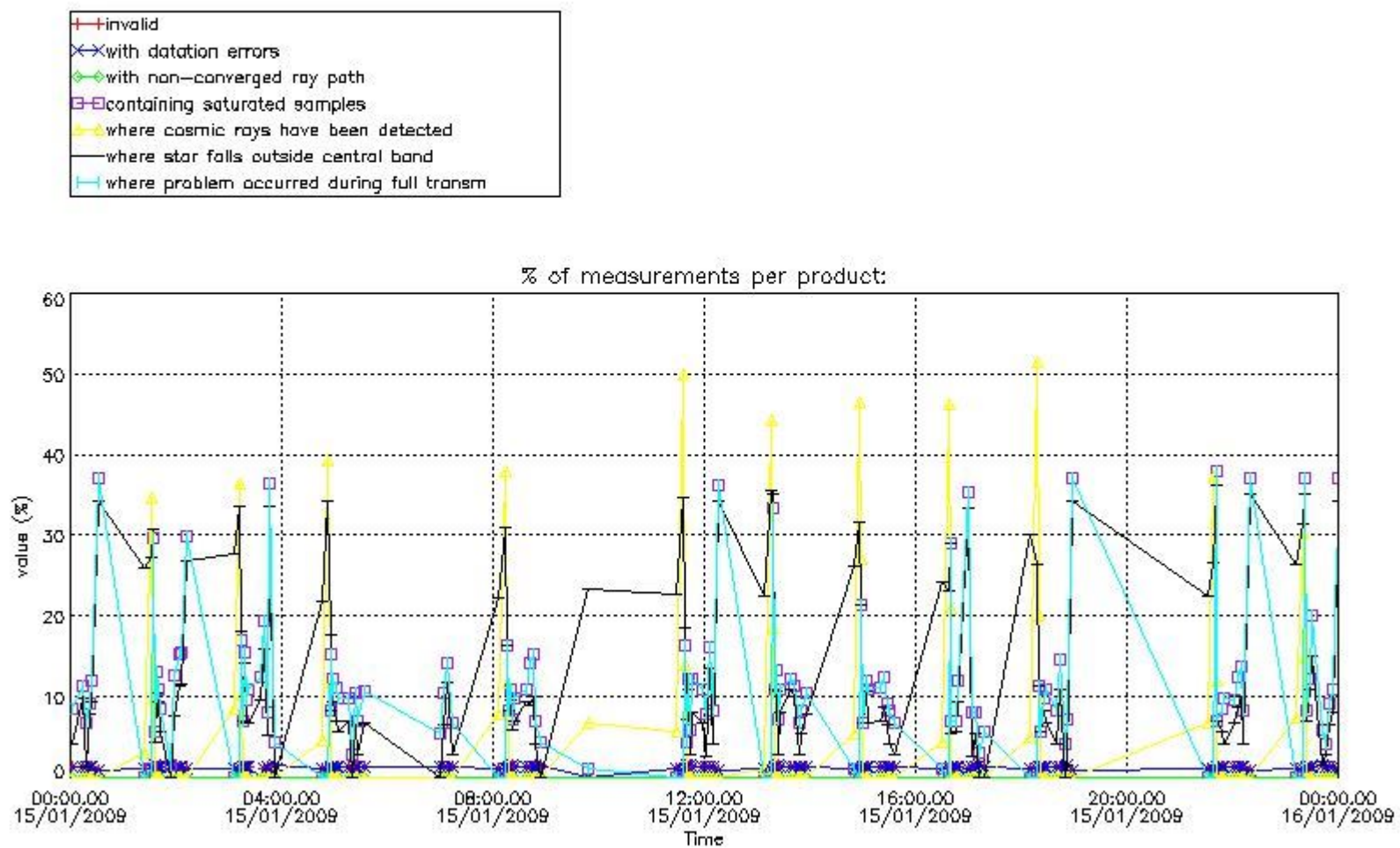
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

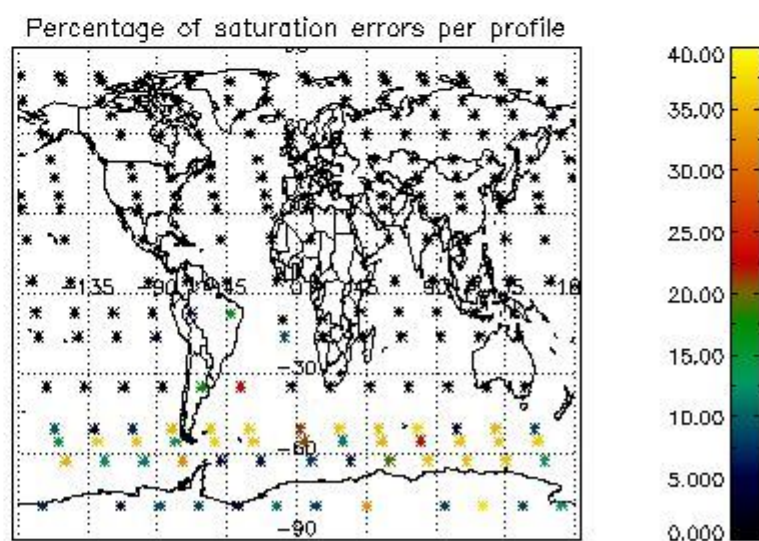
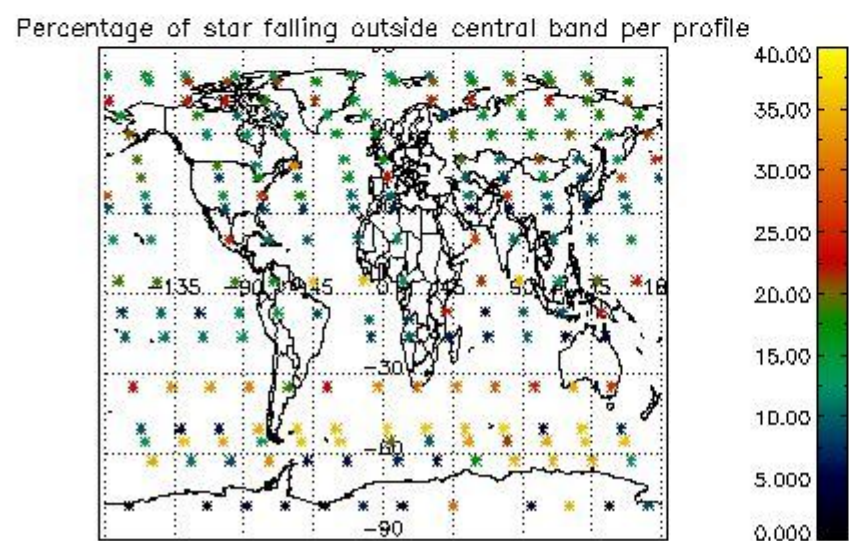
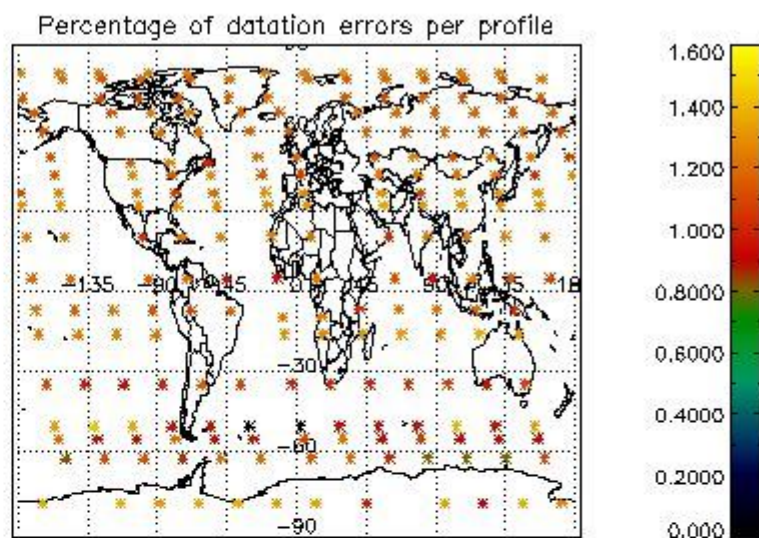
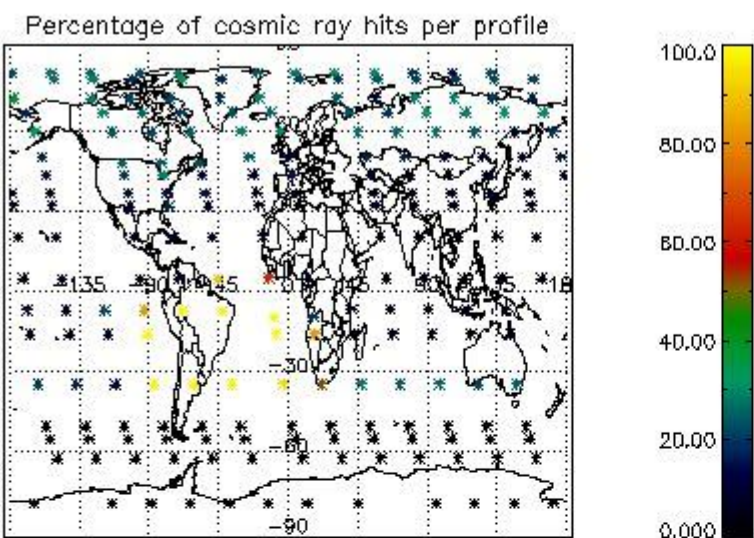


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

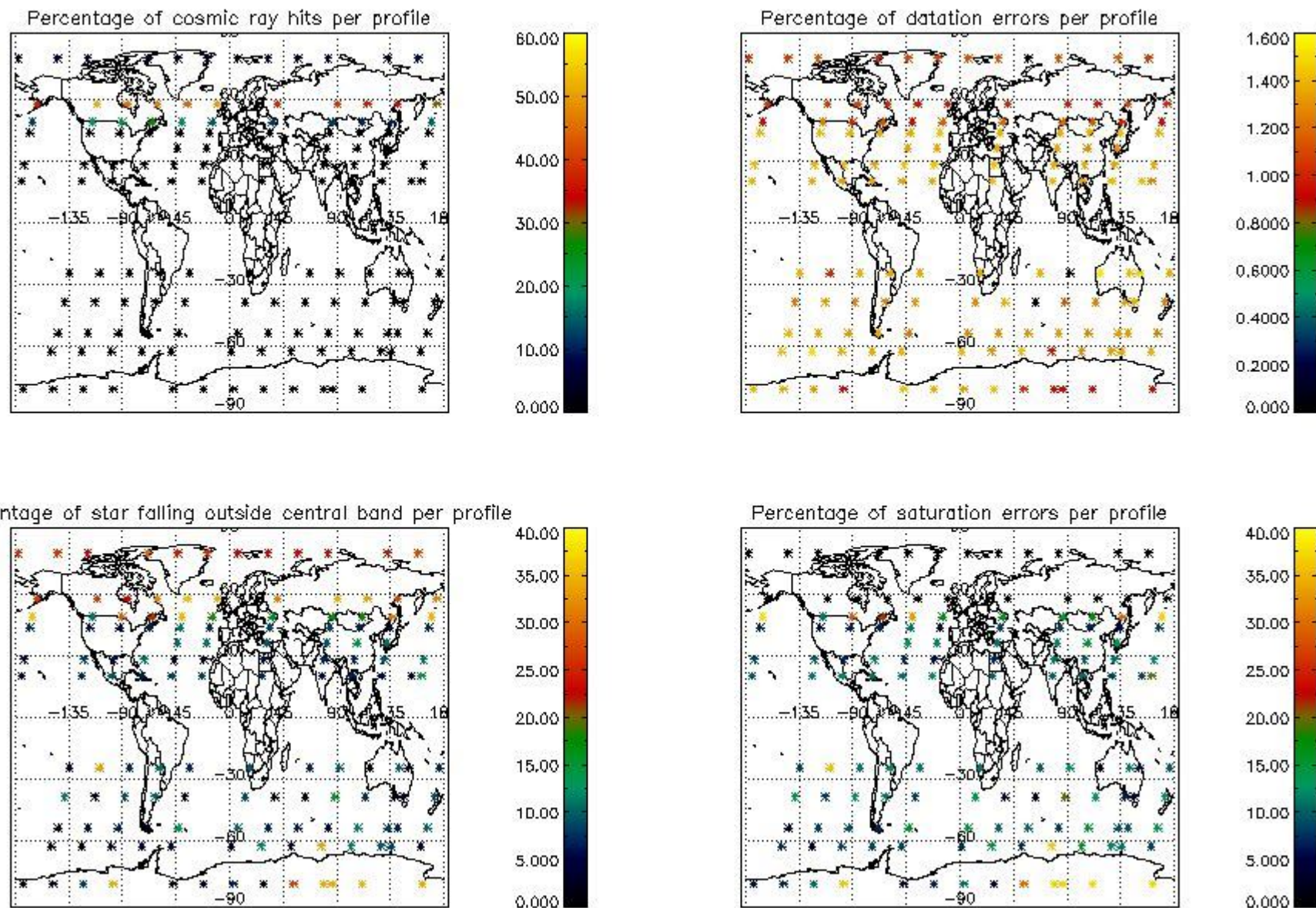


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

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

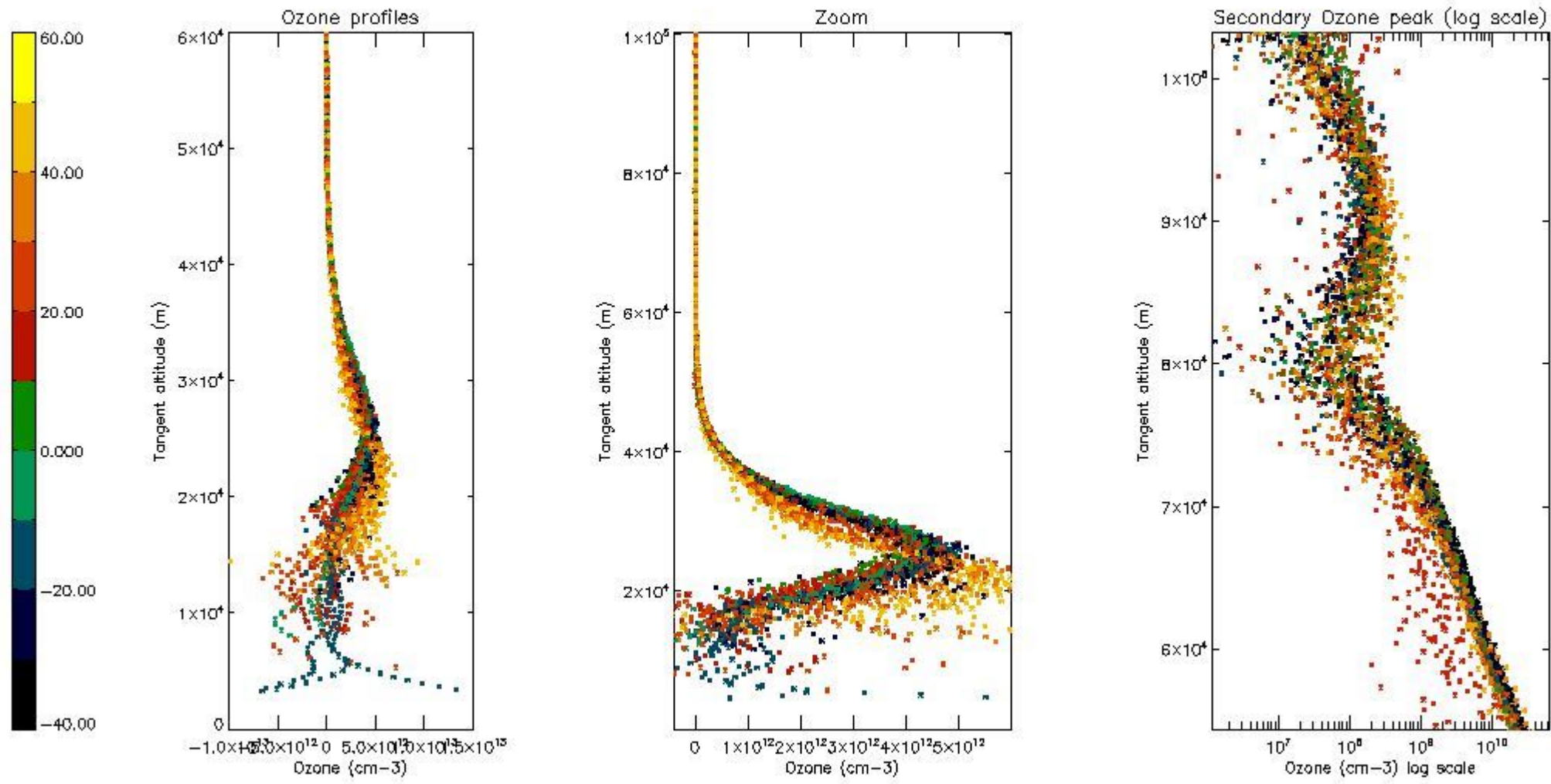
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	17
STD < 5	12

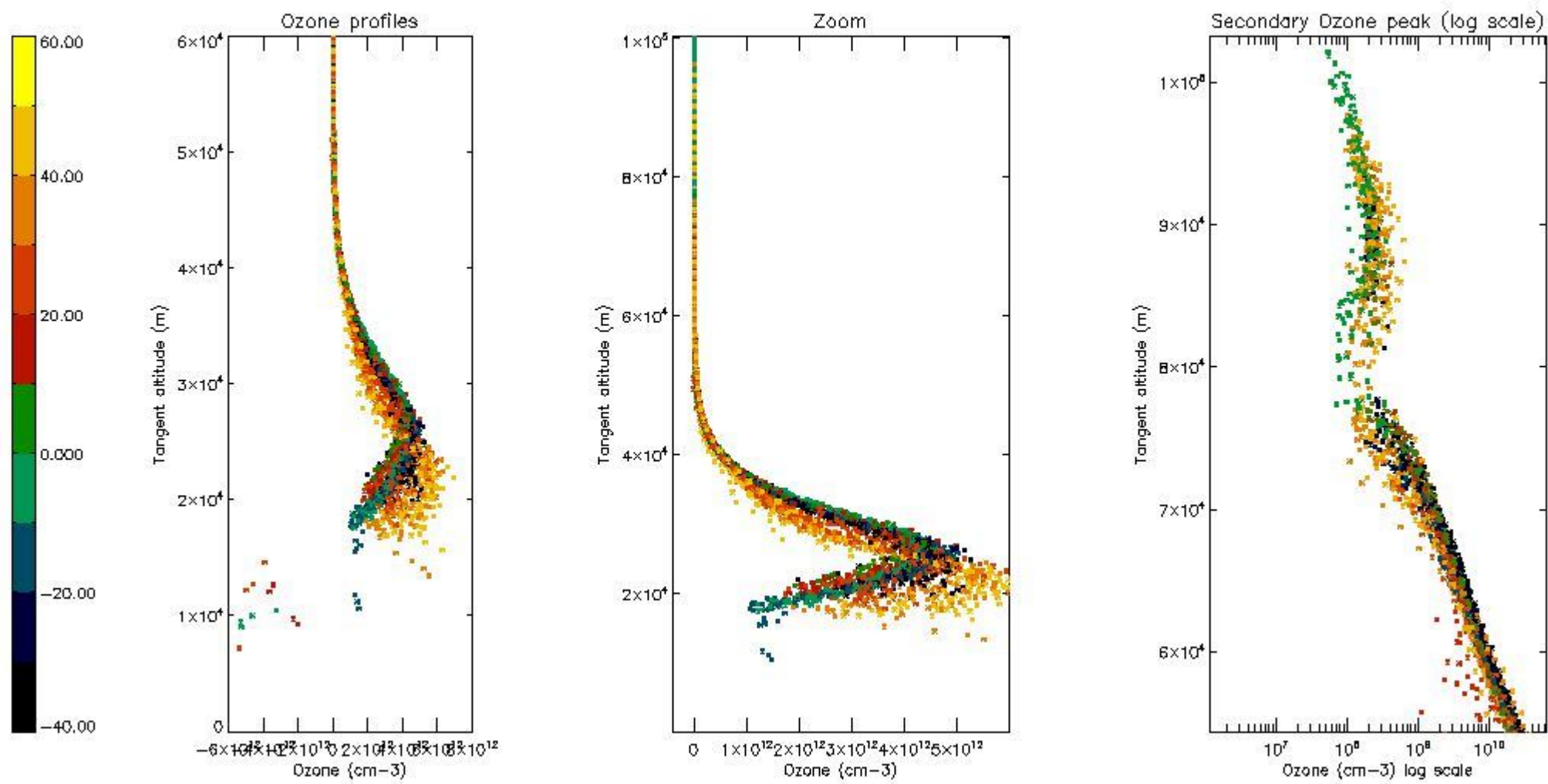
*5.2 Plot ozone profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

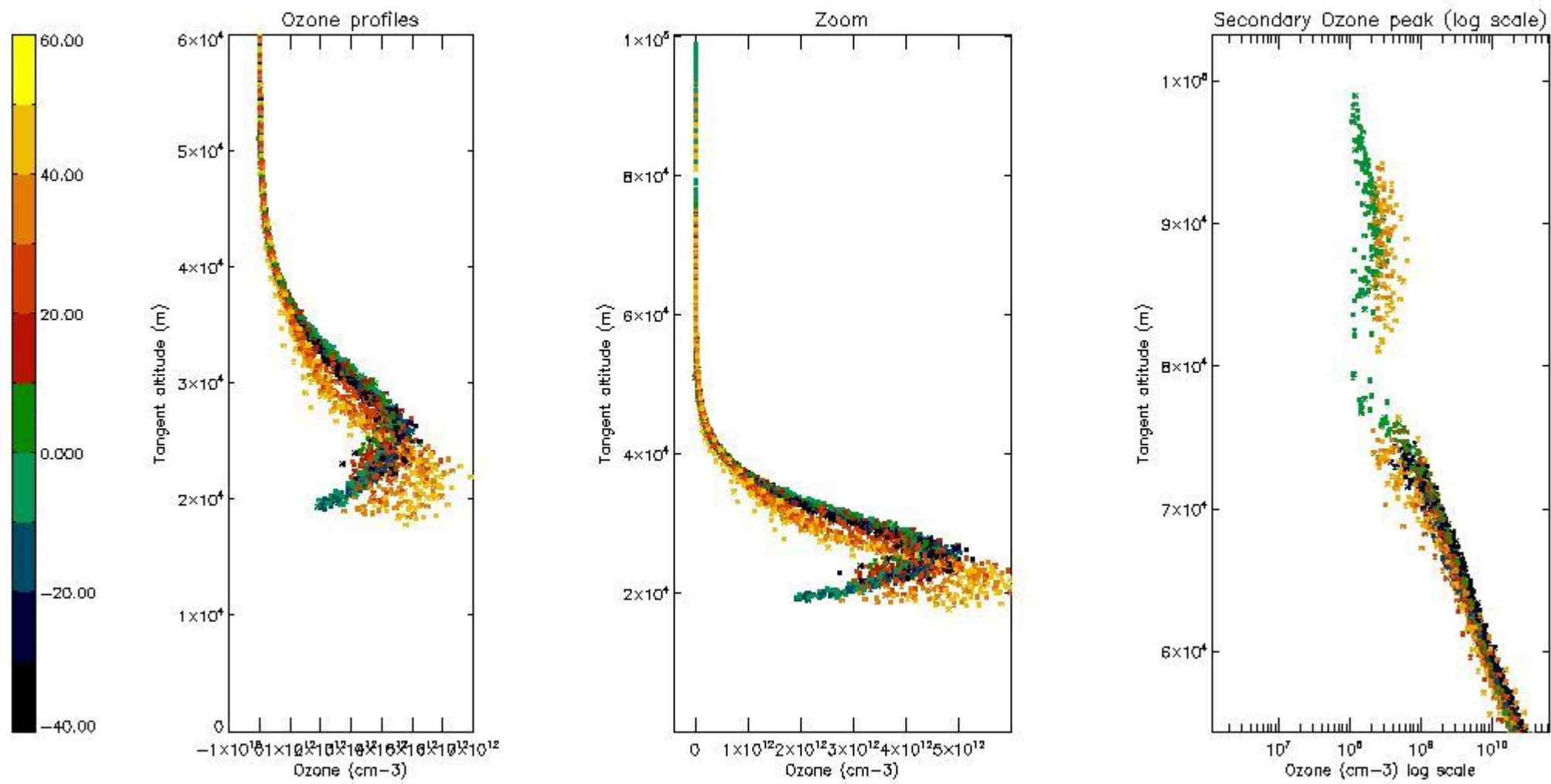
The colorbar represents the latitude.



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

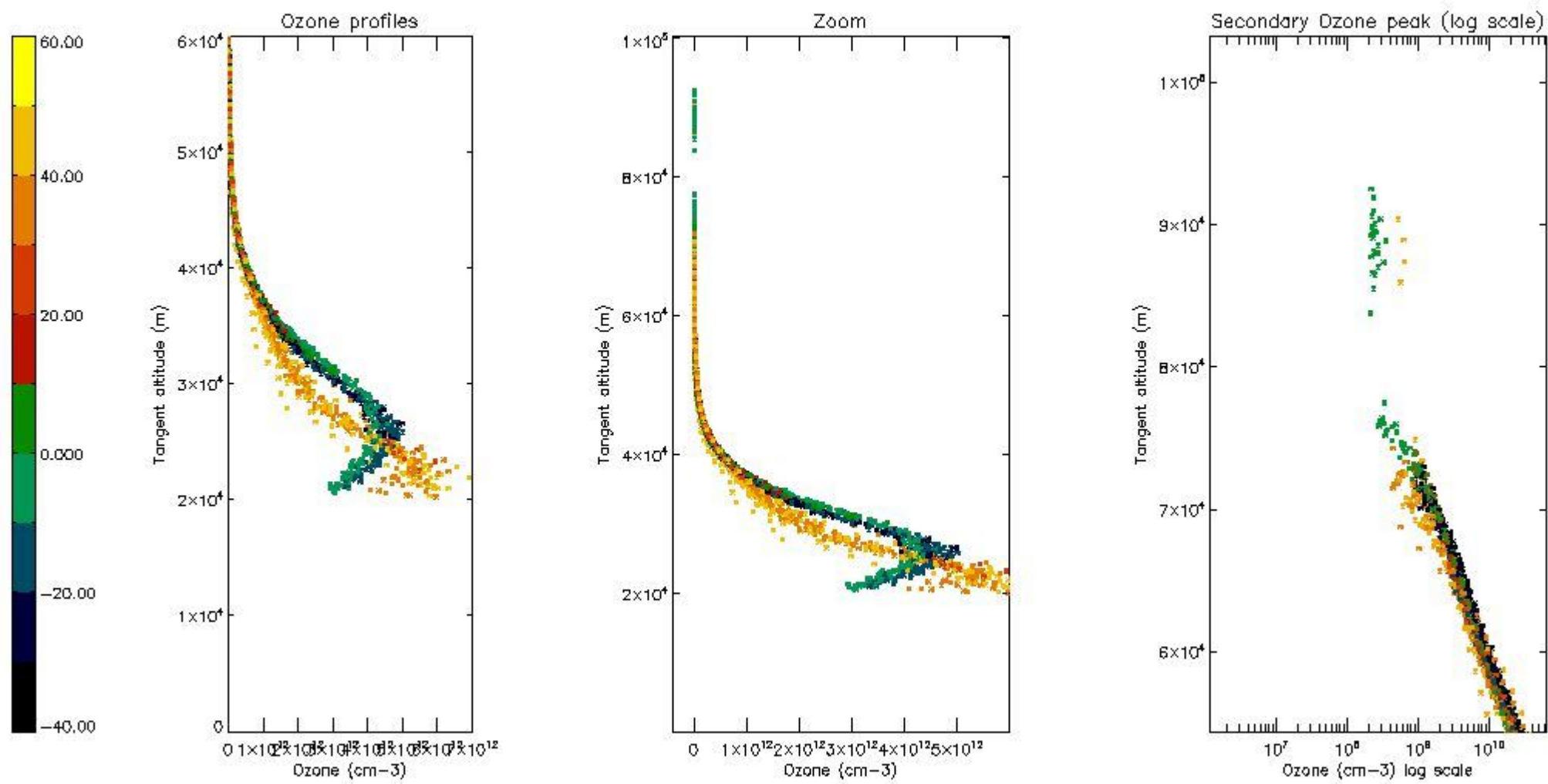
The colorbar represents the latitude.





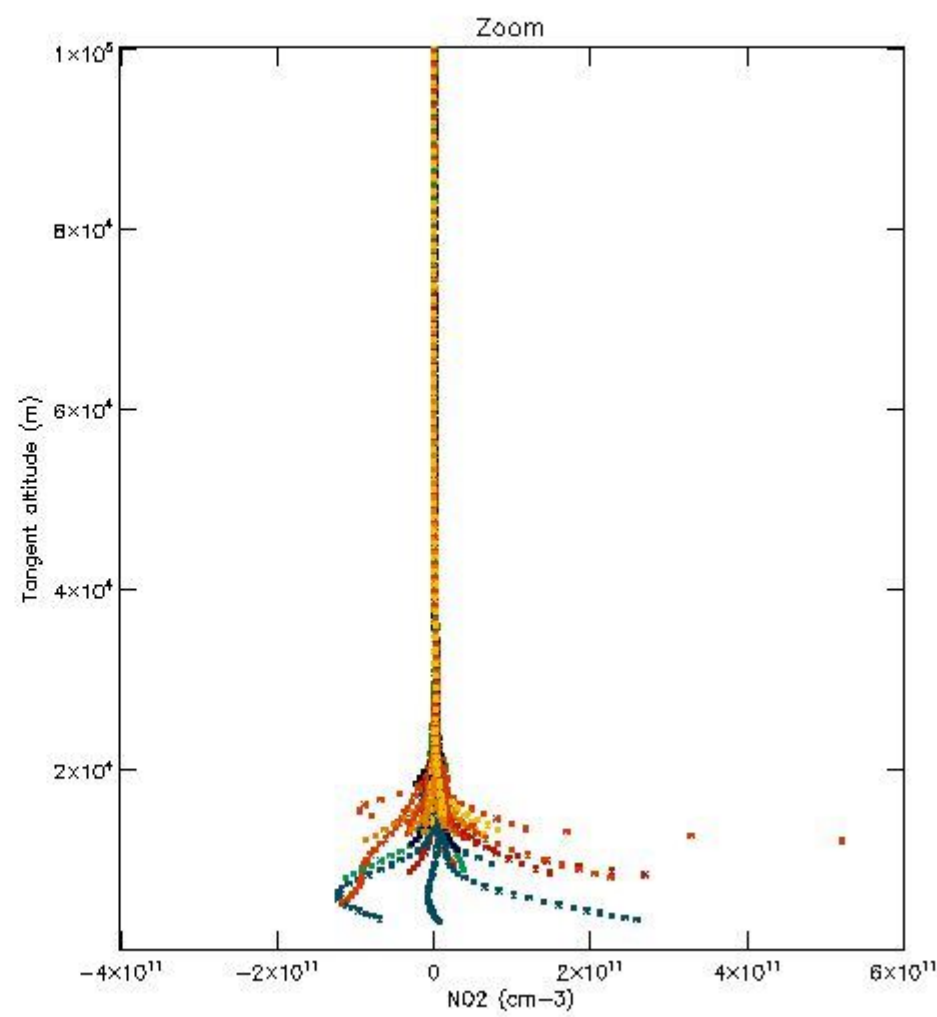
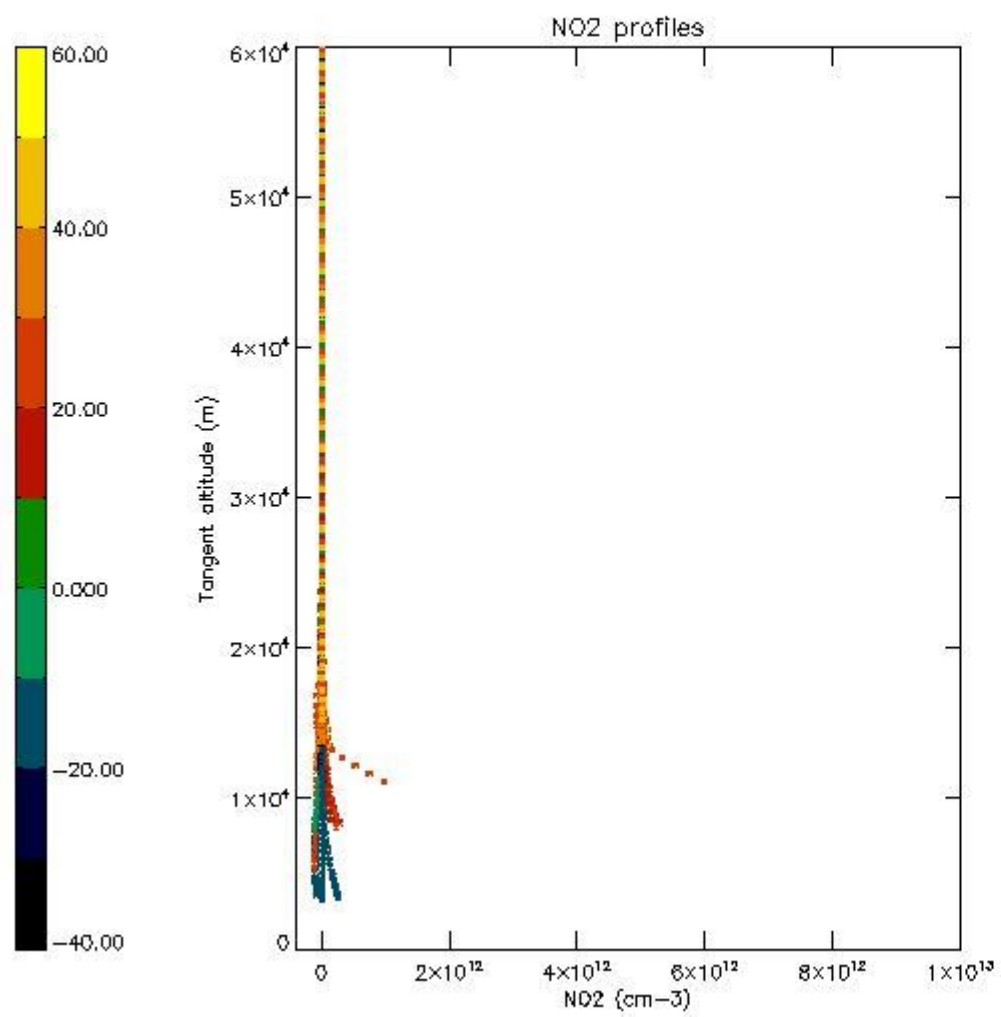
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



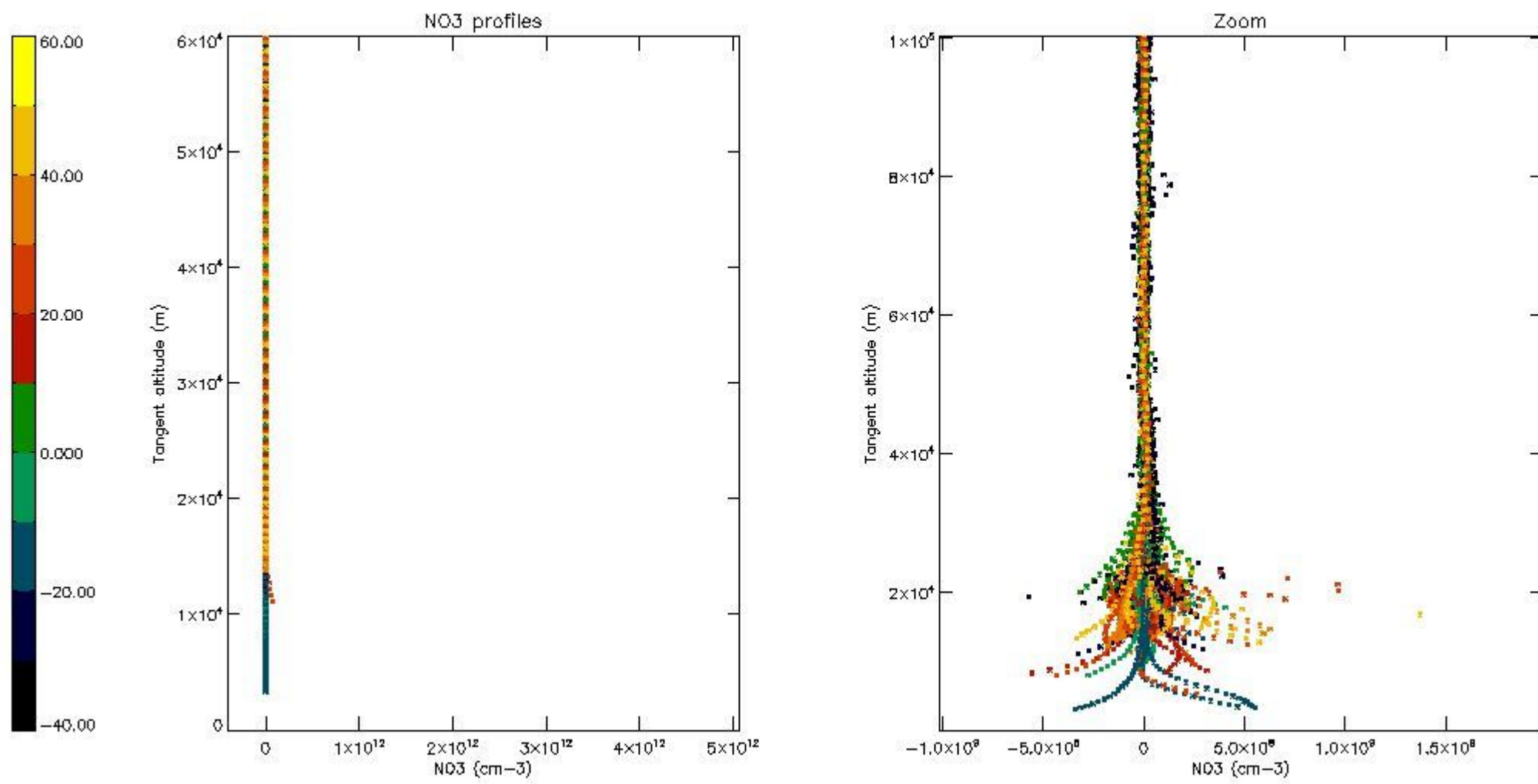
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



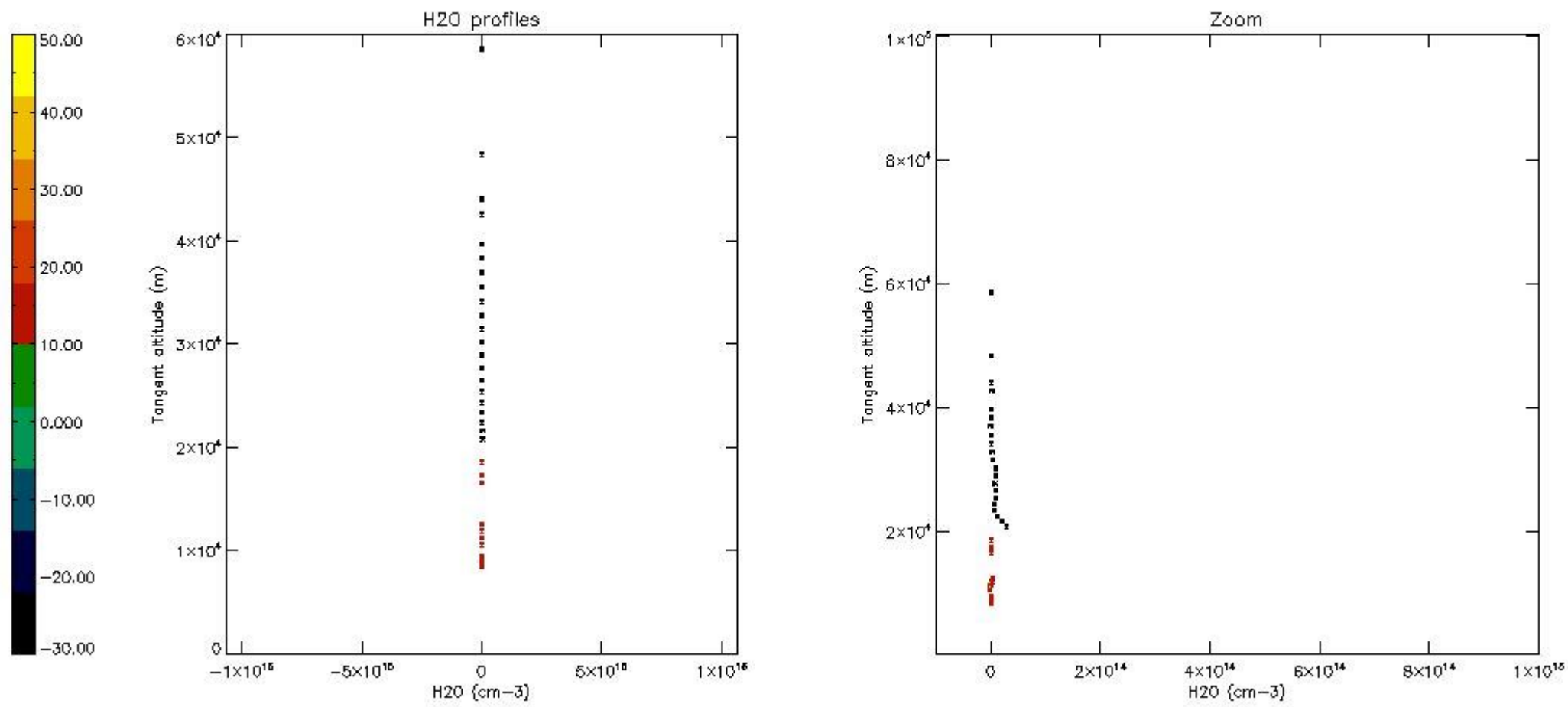
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	15-JAN-2009 00:01:35
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-JAN-2009 00:01:35
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-JAN-2009 00:01:35

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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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##### [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](#)







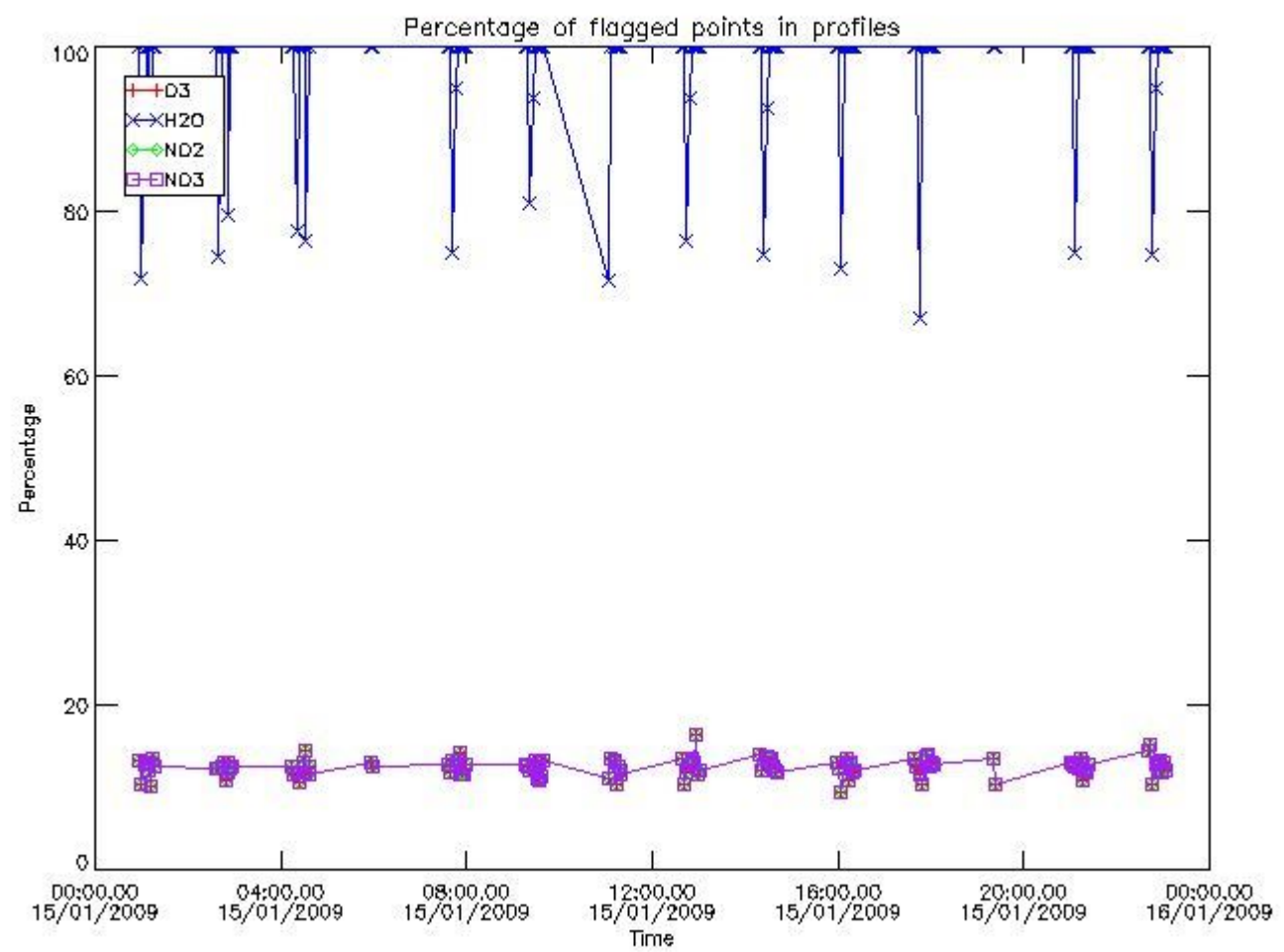






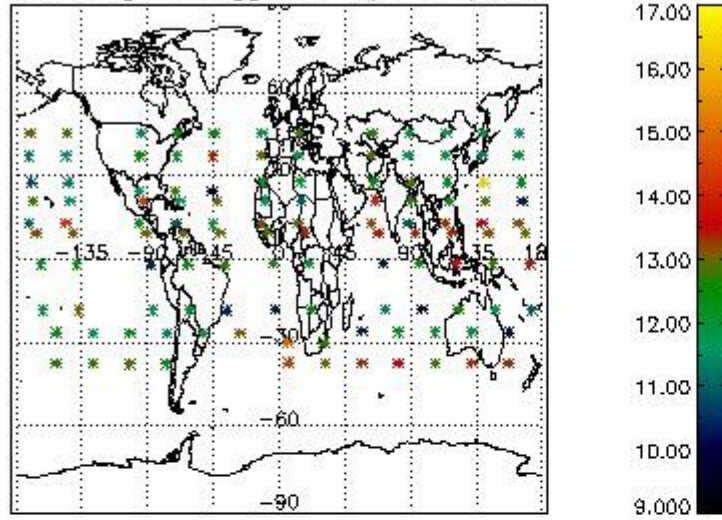




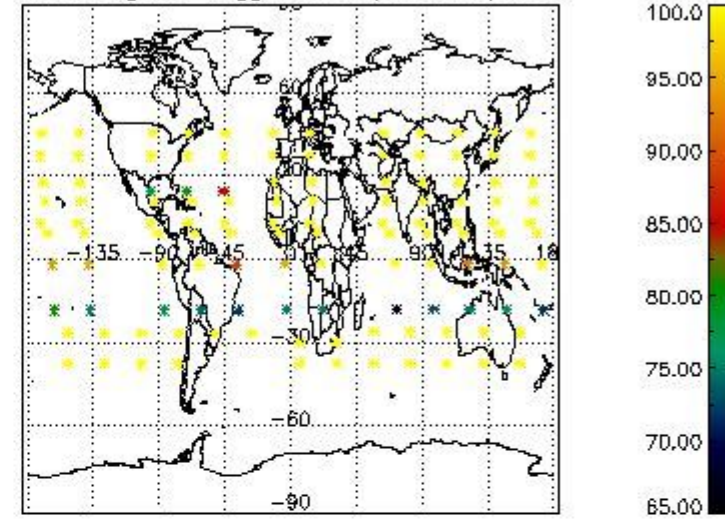


3.2 Plot quality information per product (world map)

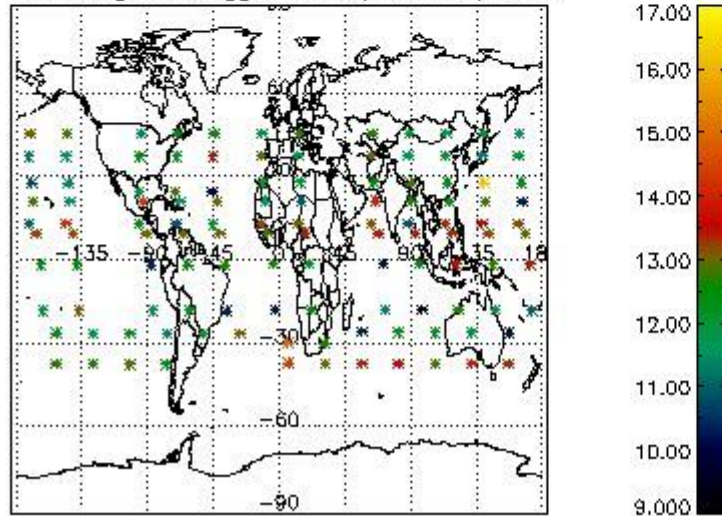
Percentage of flagged data per O3 profile



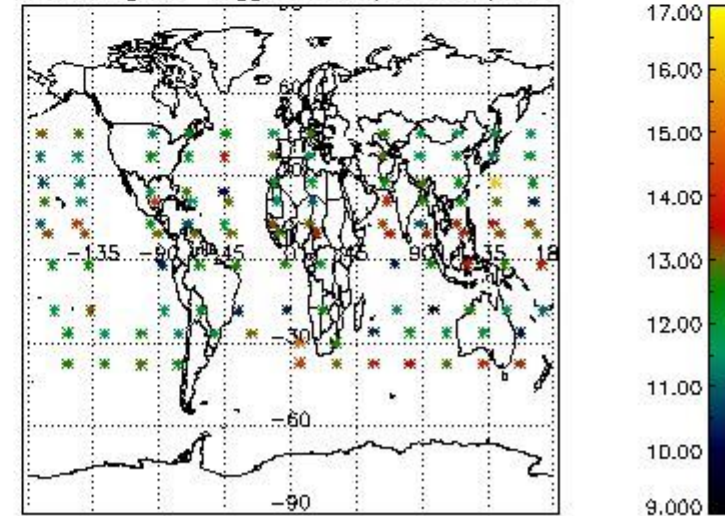
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

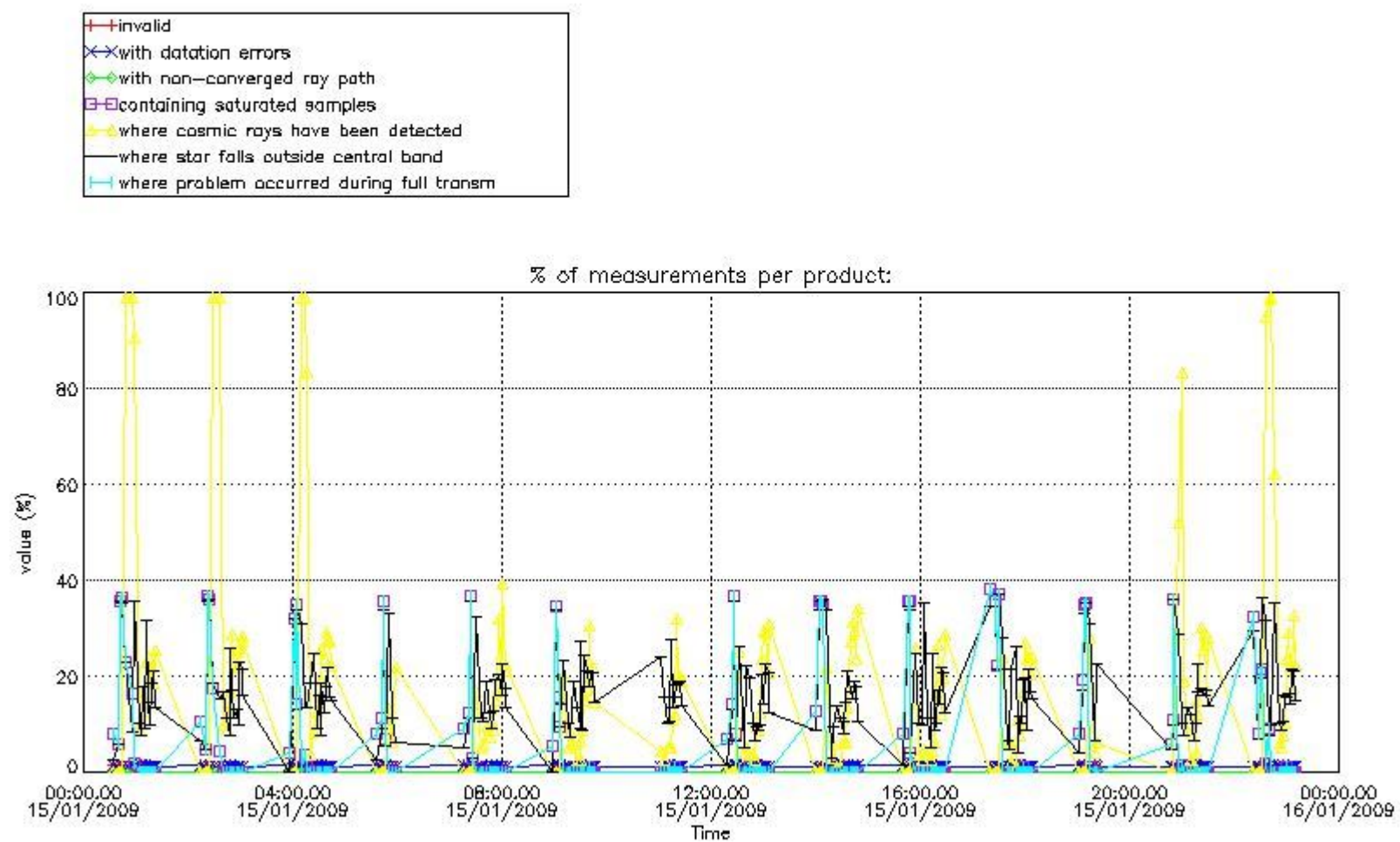


#### 4. Level 1 quality information per product

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

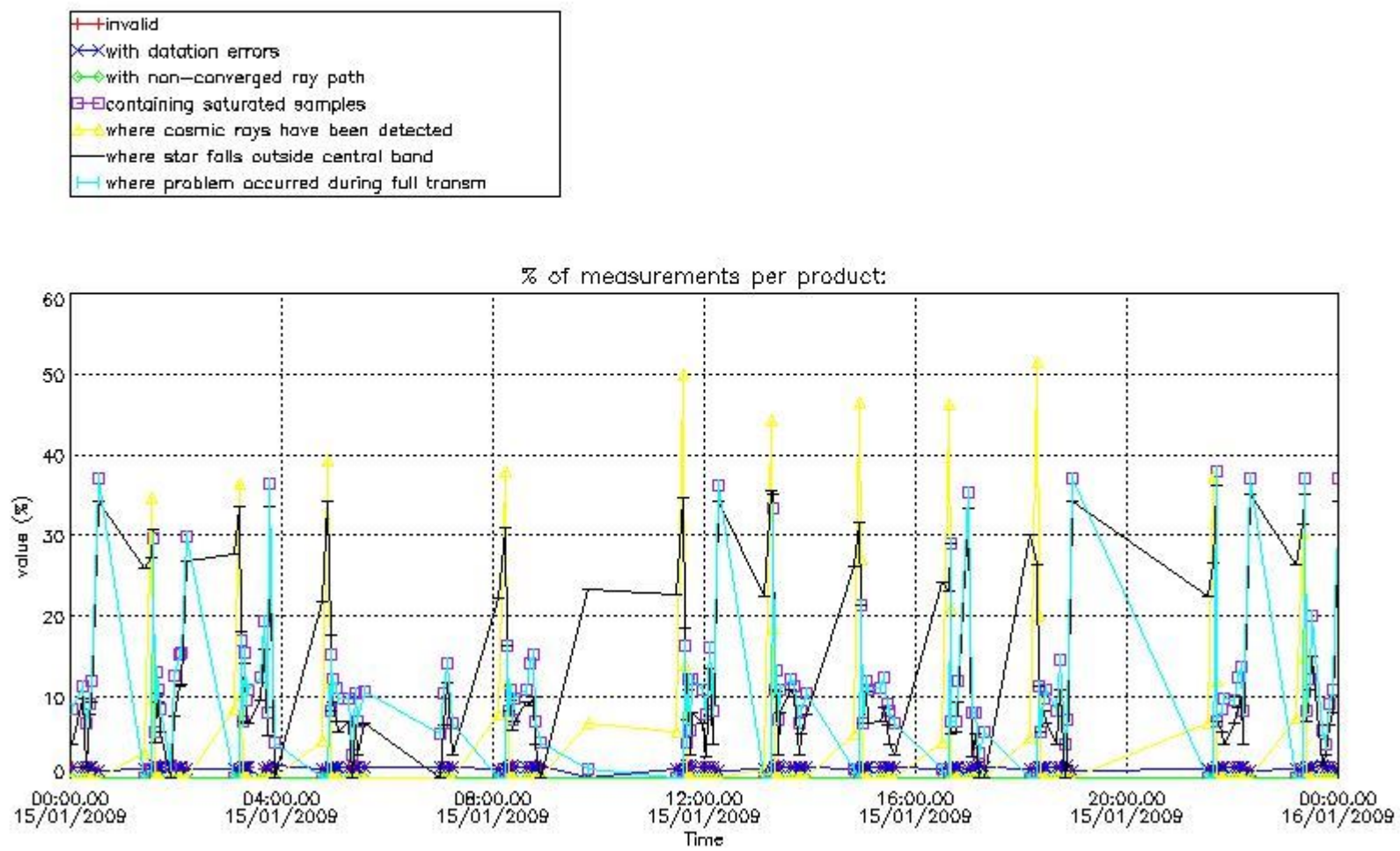
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



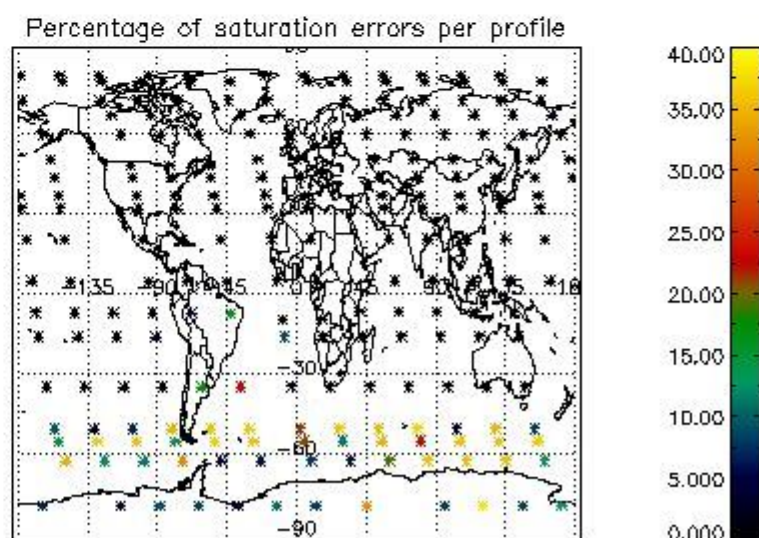
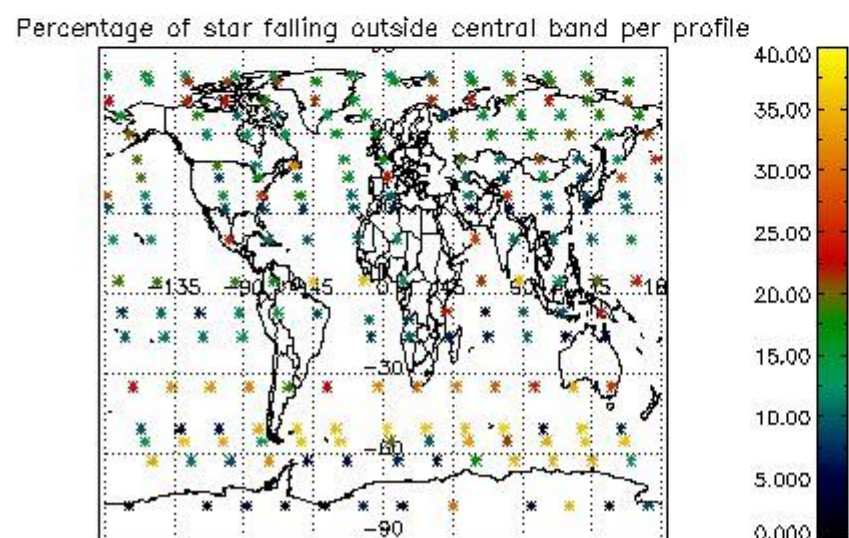
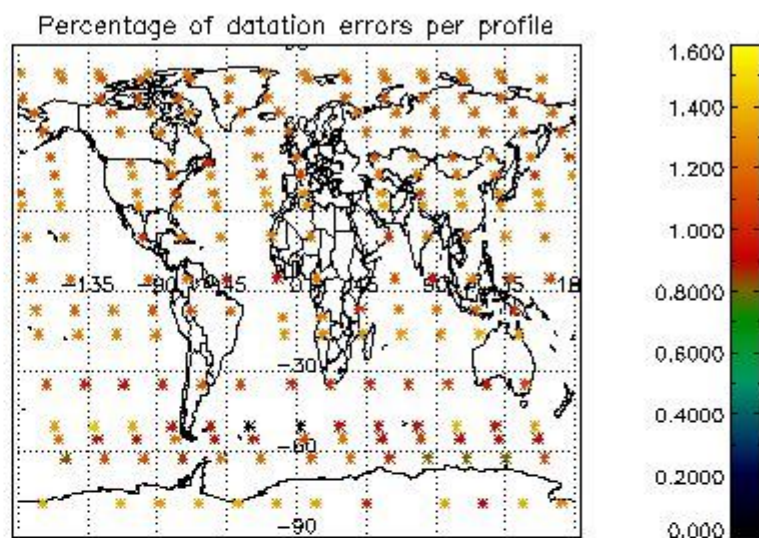
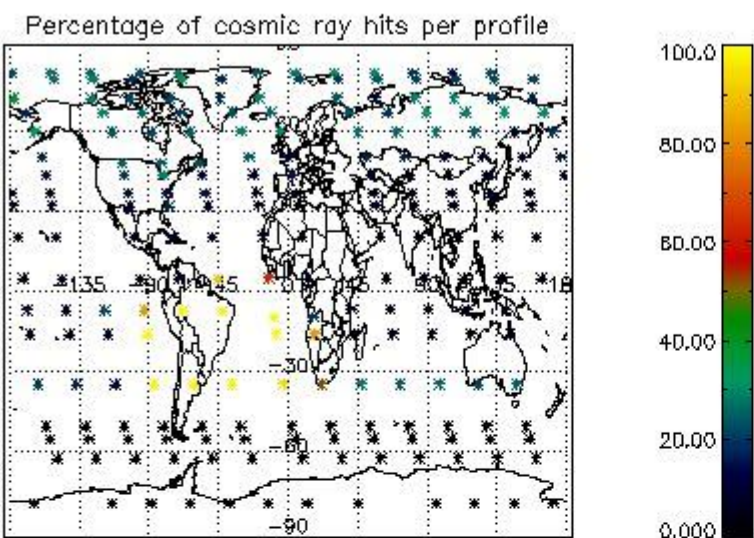
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



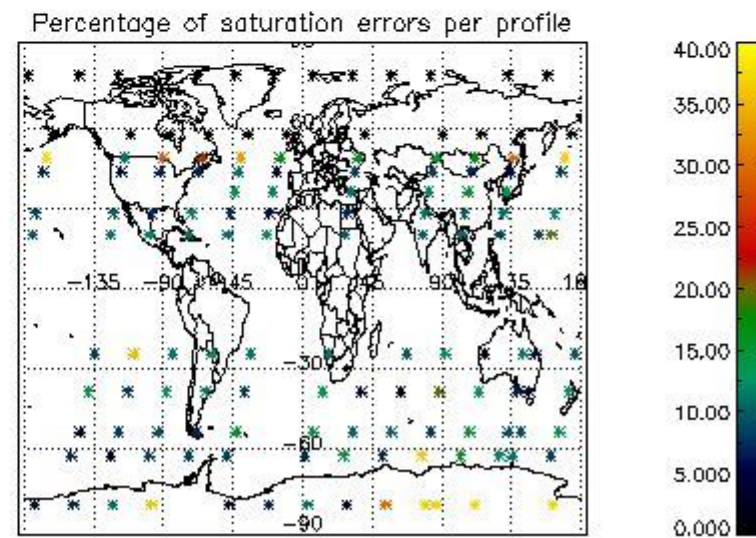
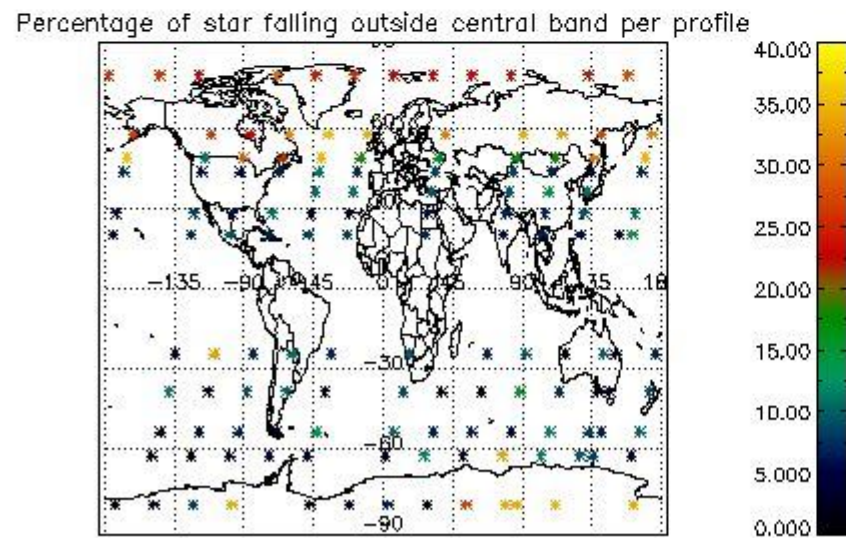
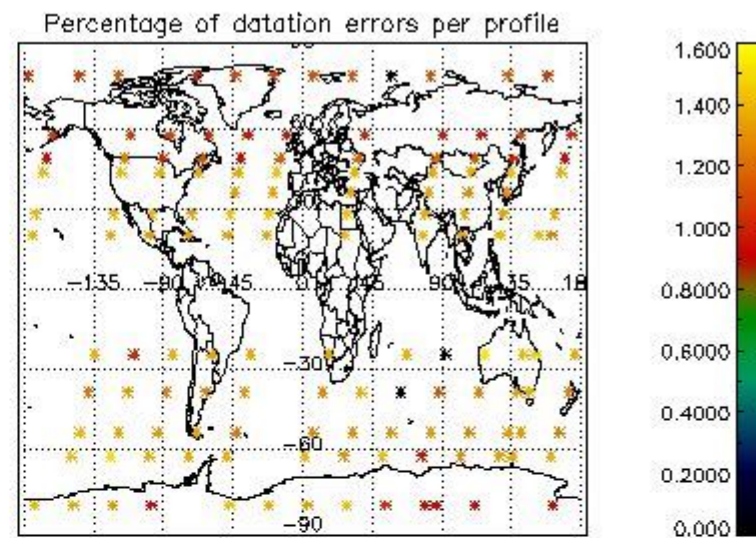
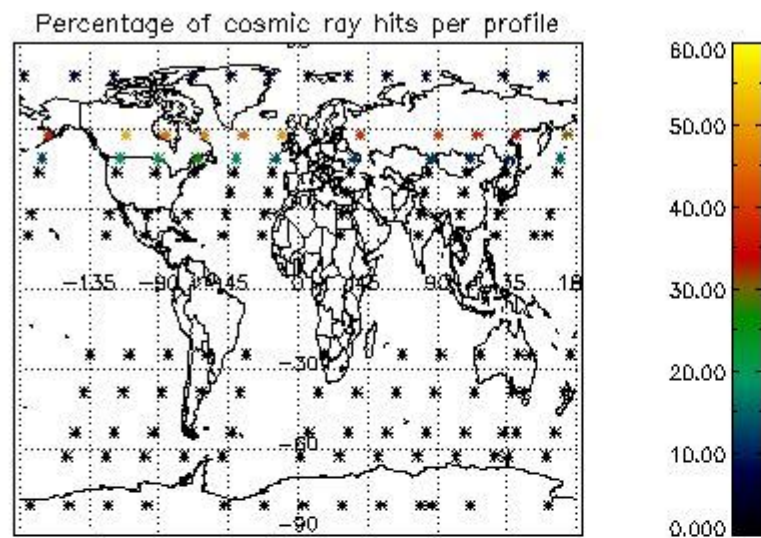


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

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

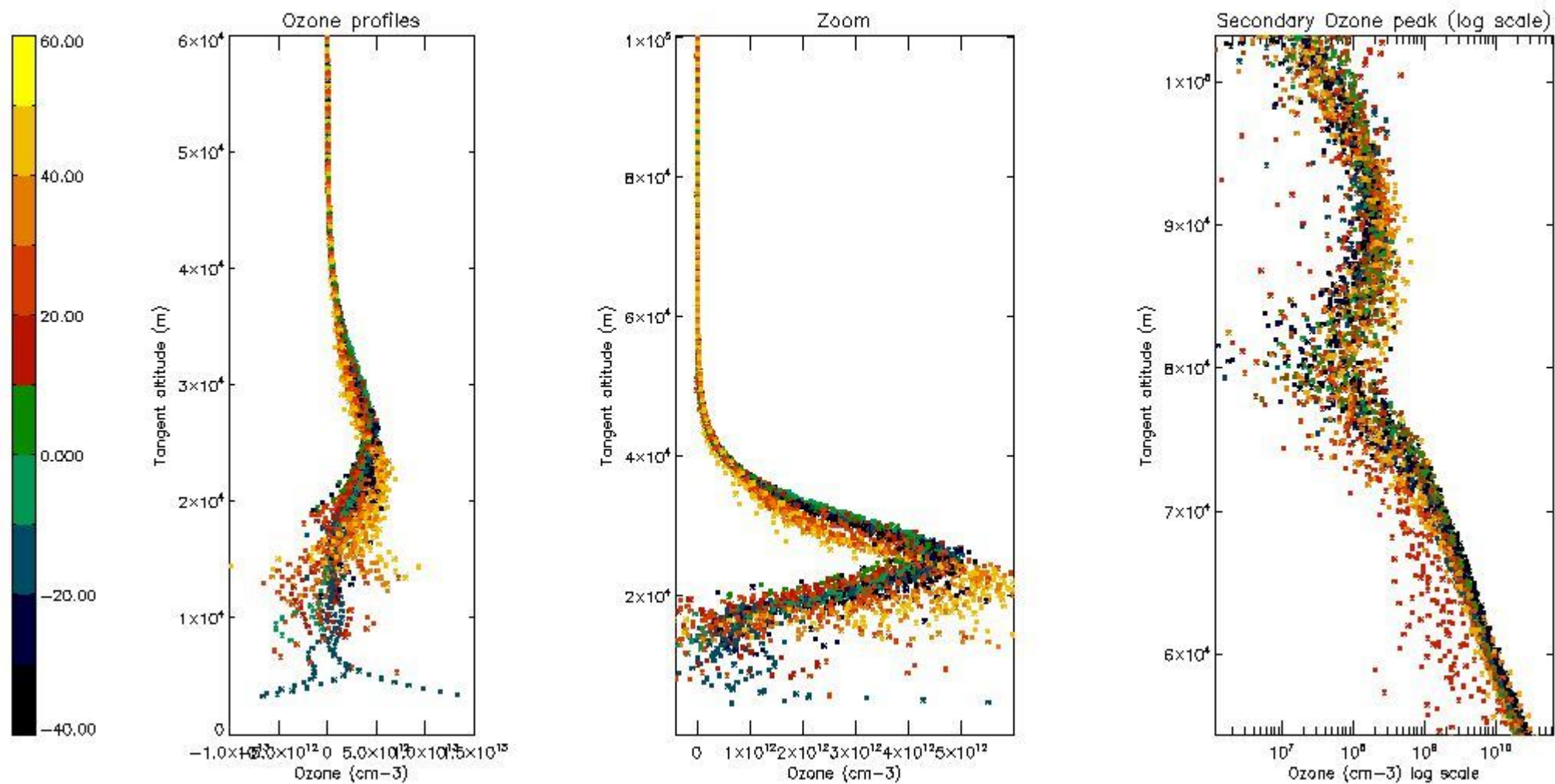
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	17
STD < 5	12

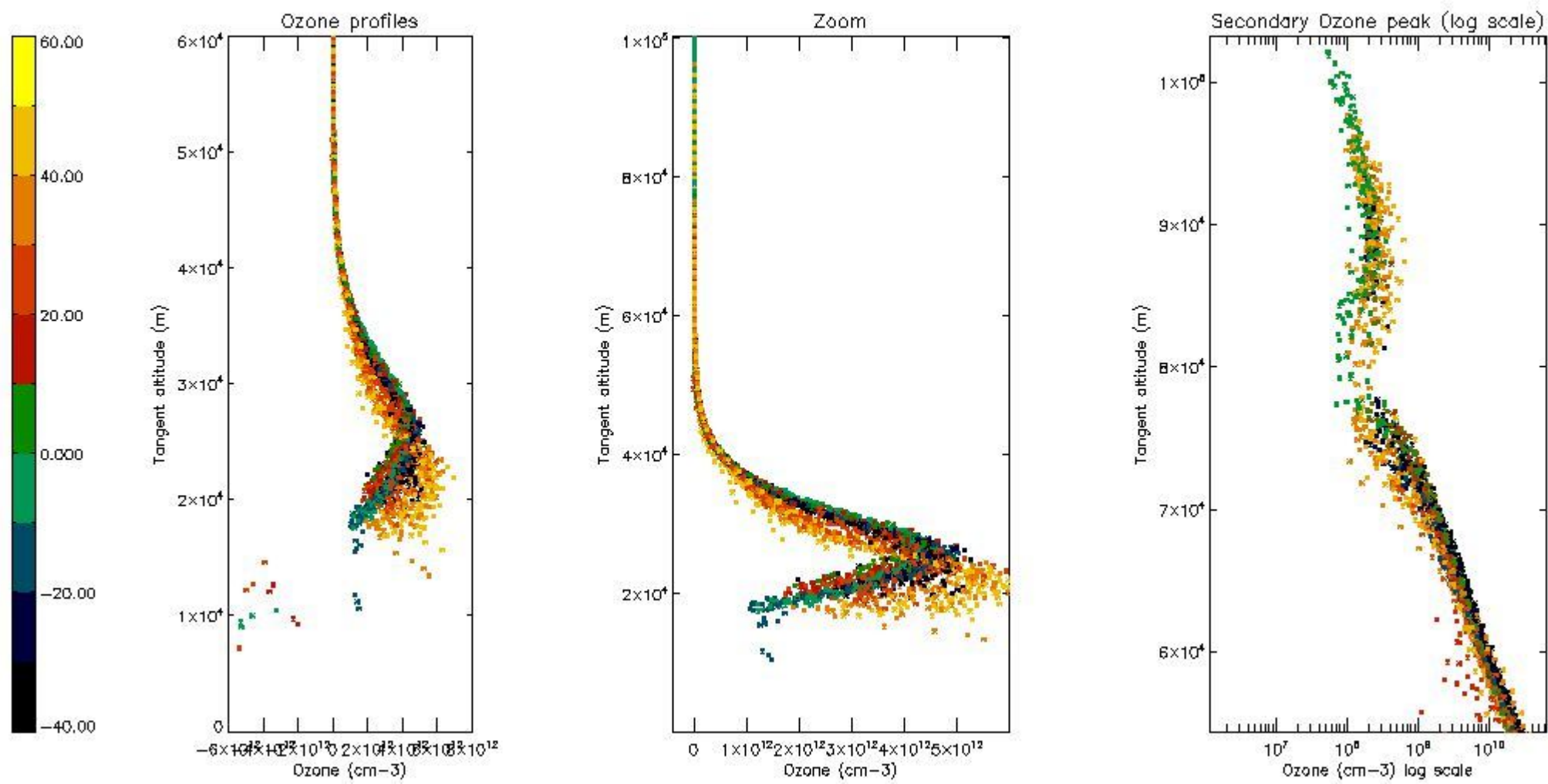
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



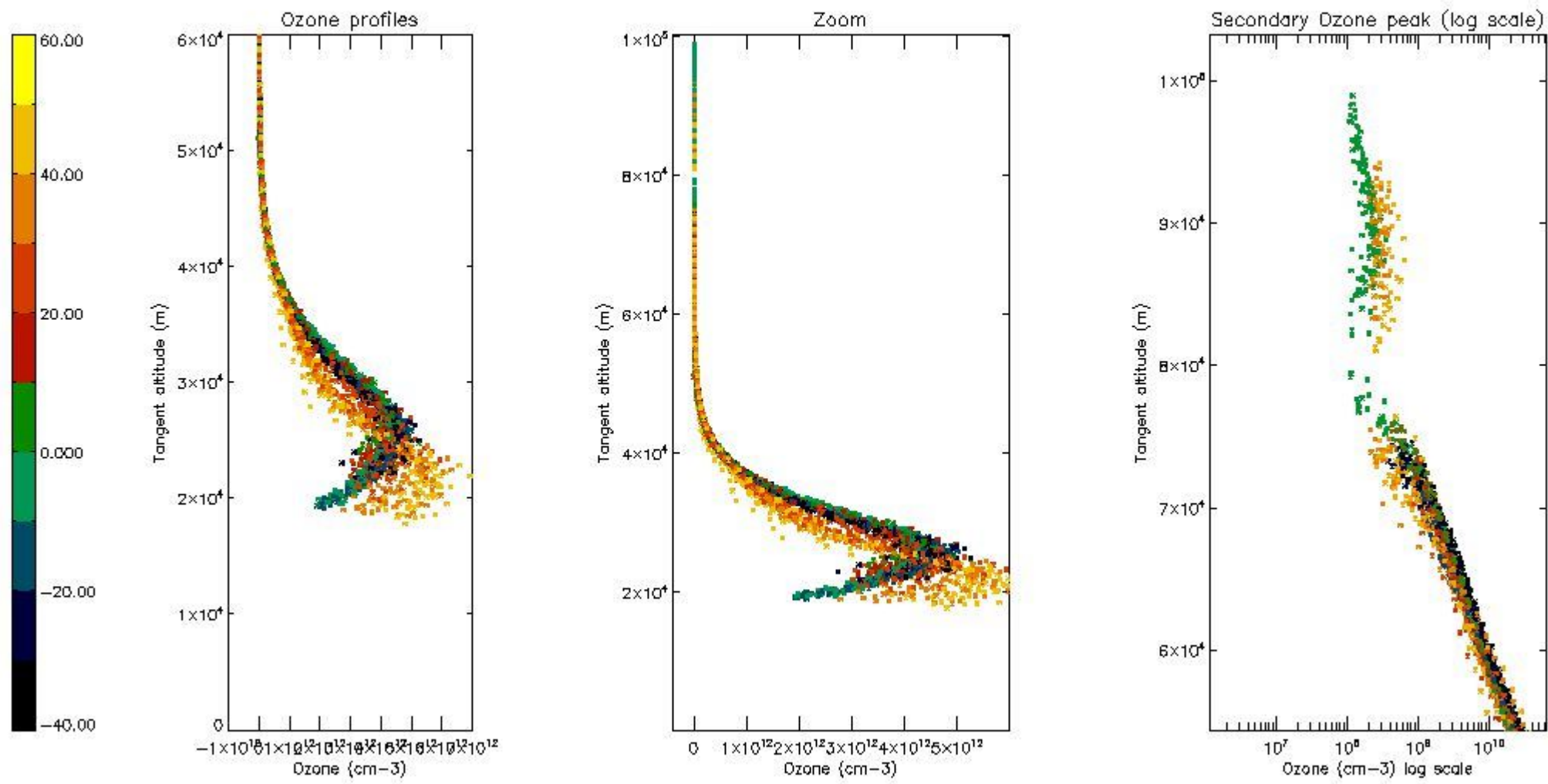
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



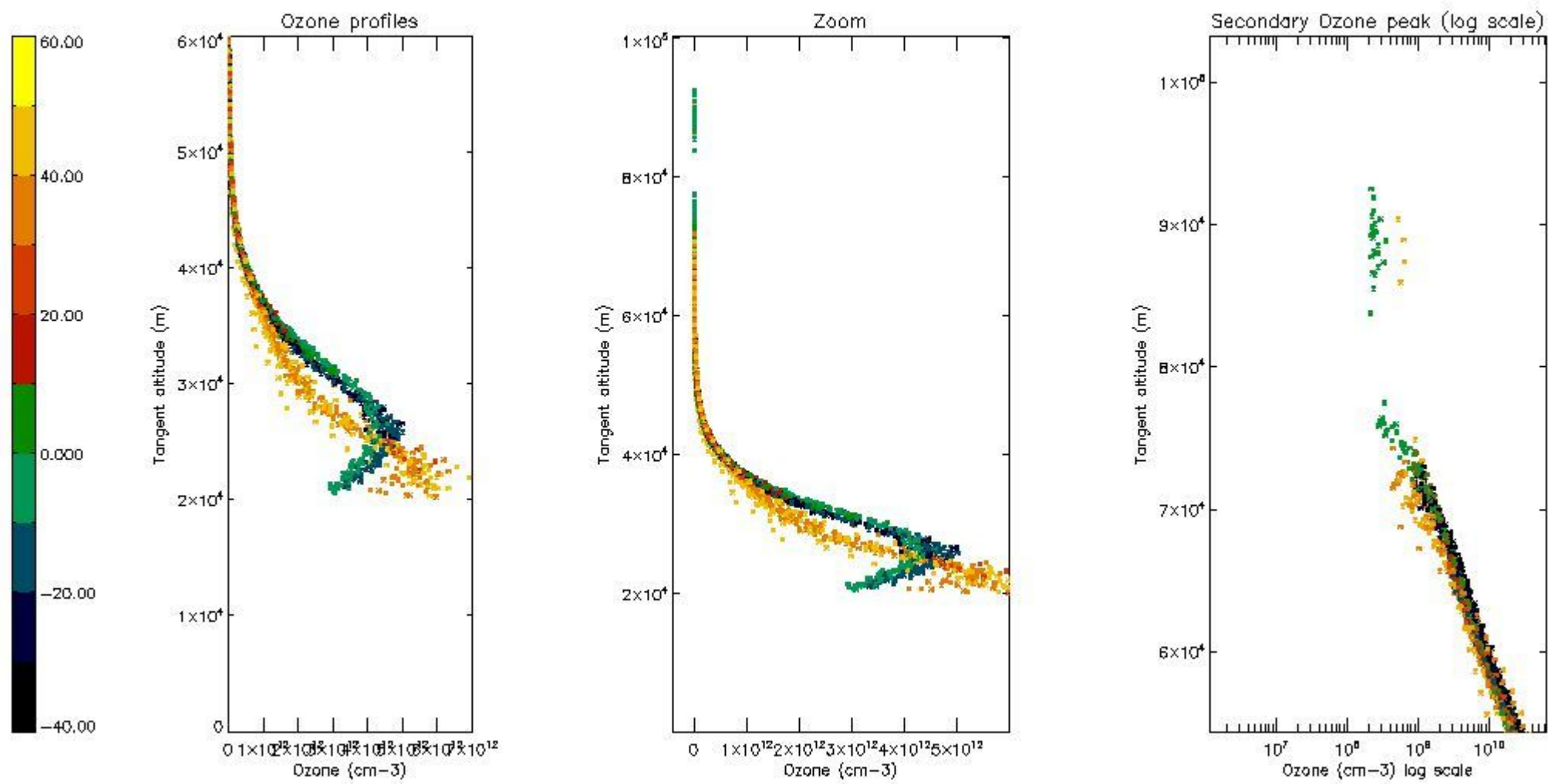
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



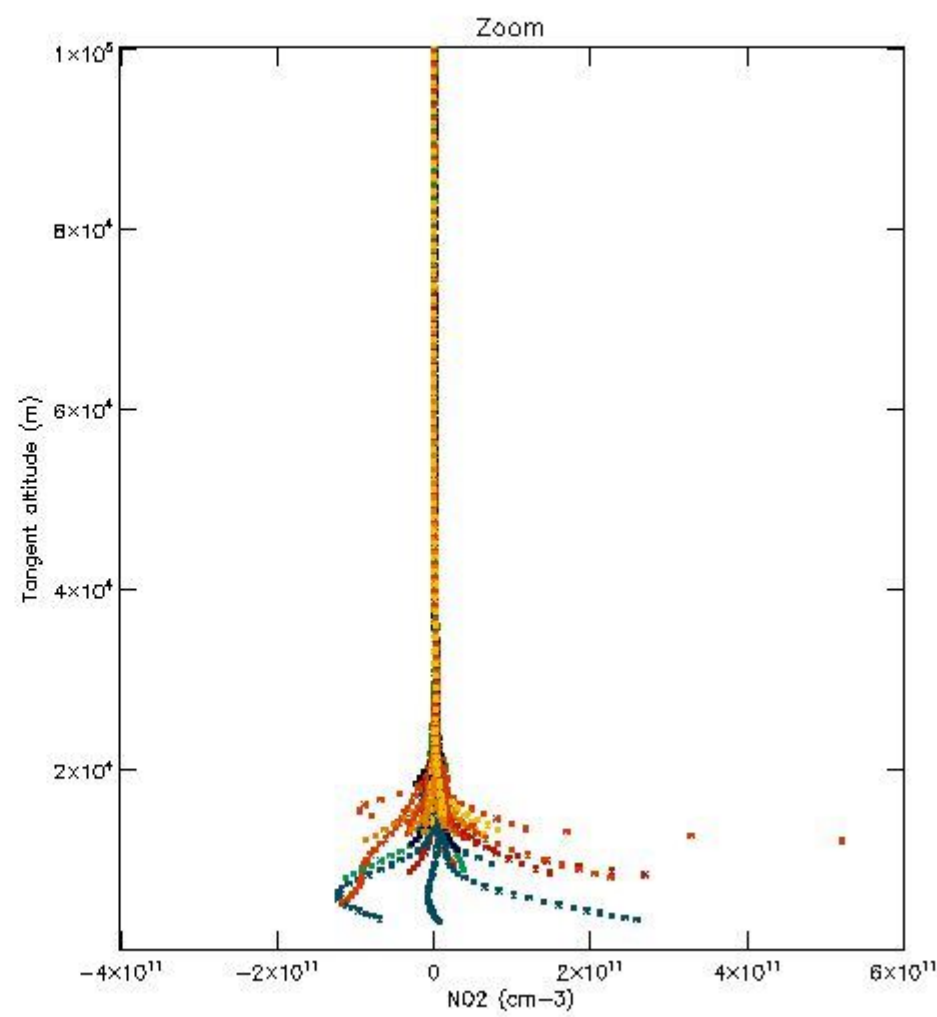
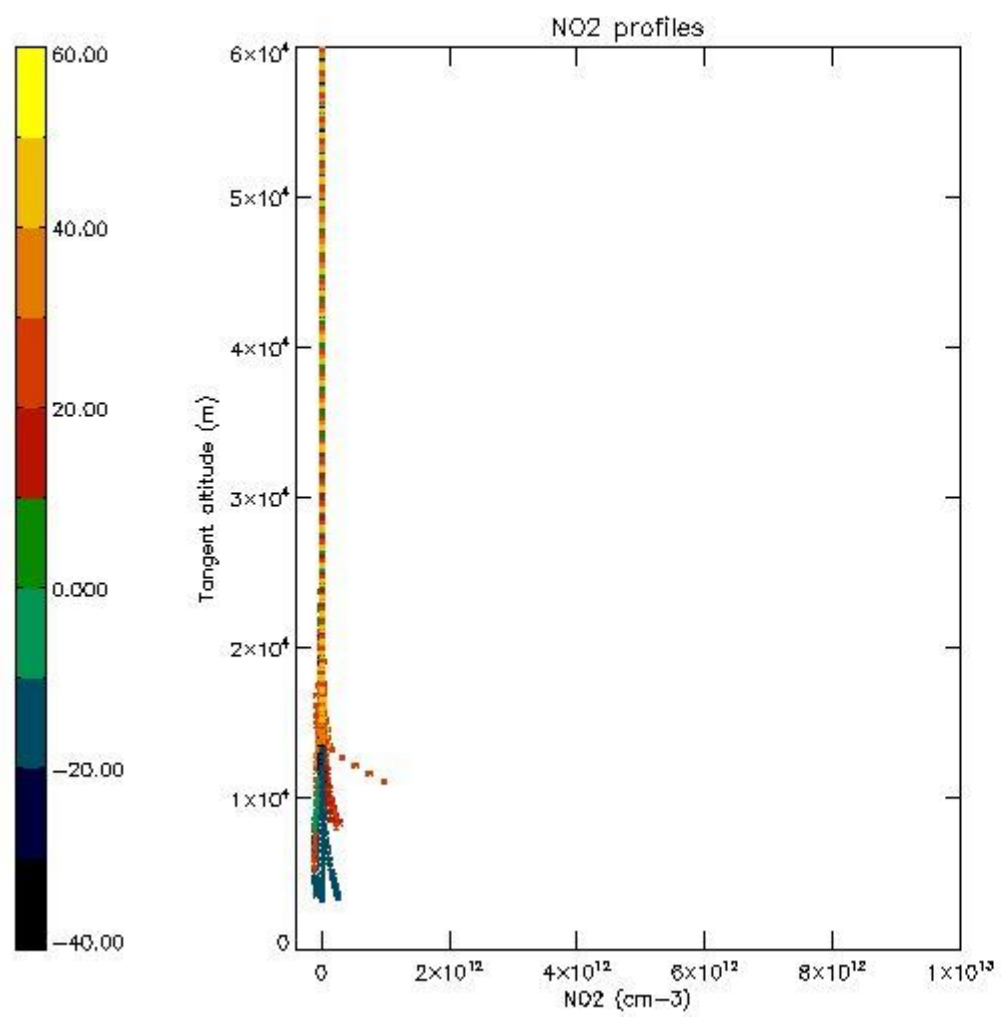
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

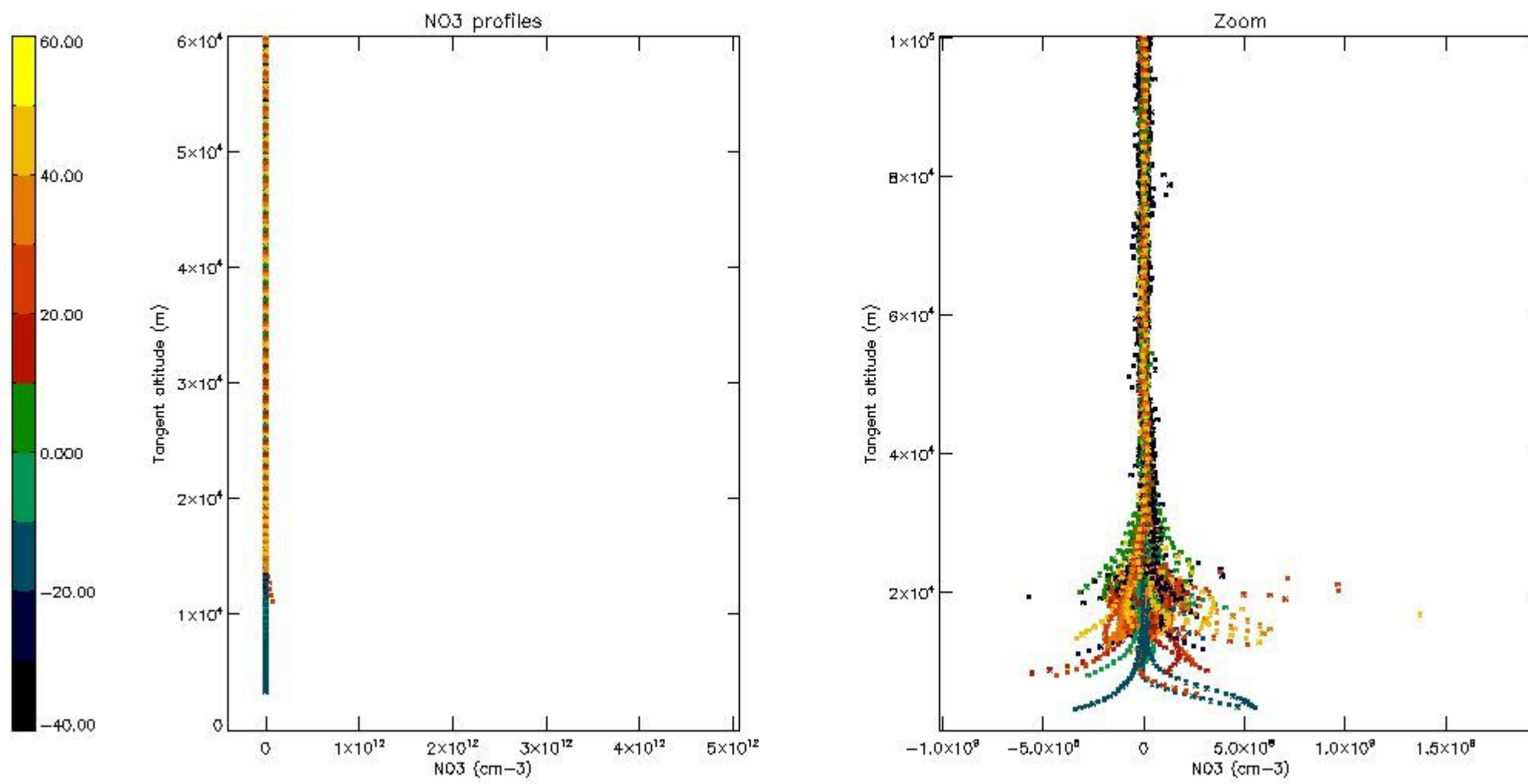
The colorbar represents the latitude.



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

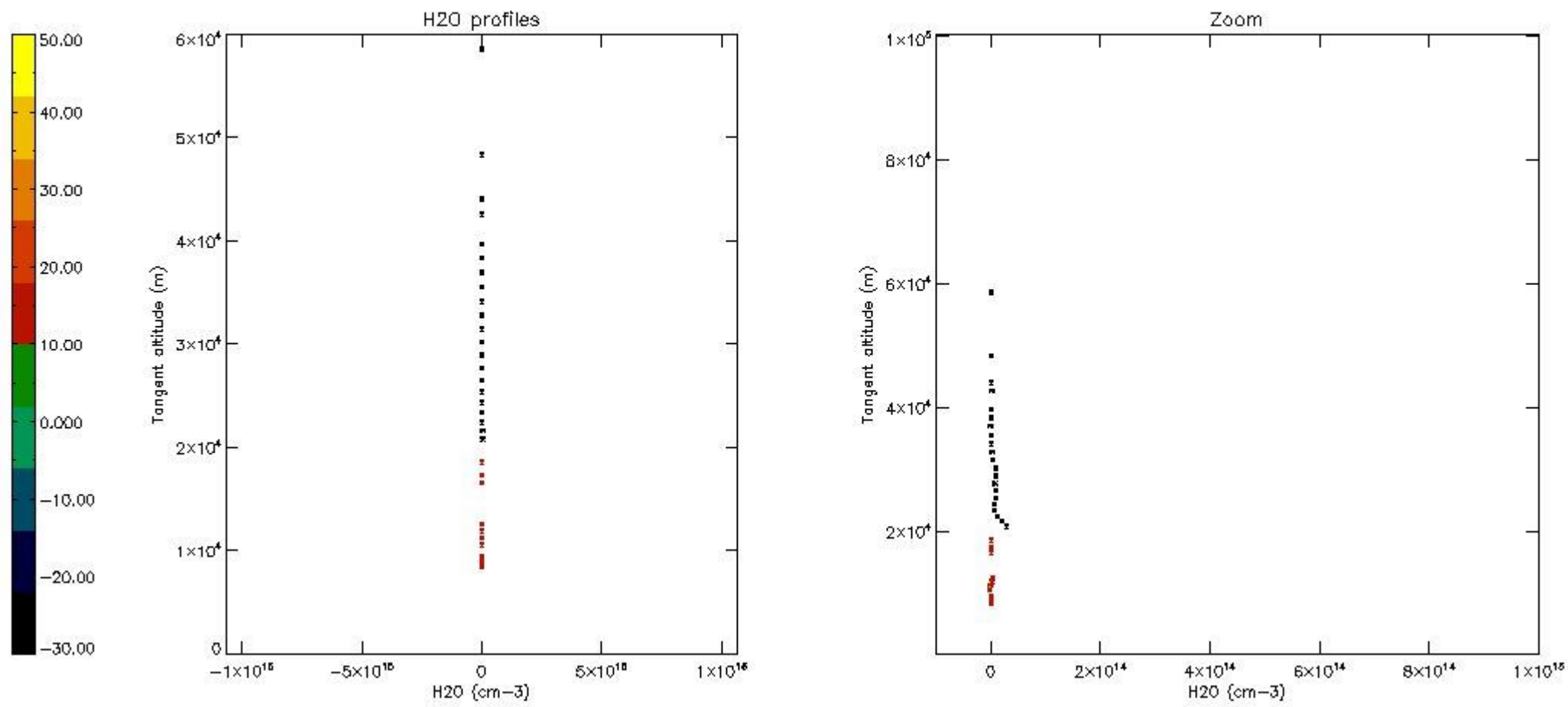
The colorbar represents the latitude.





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

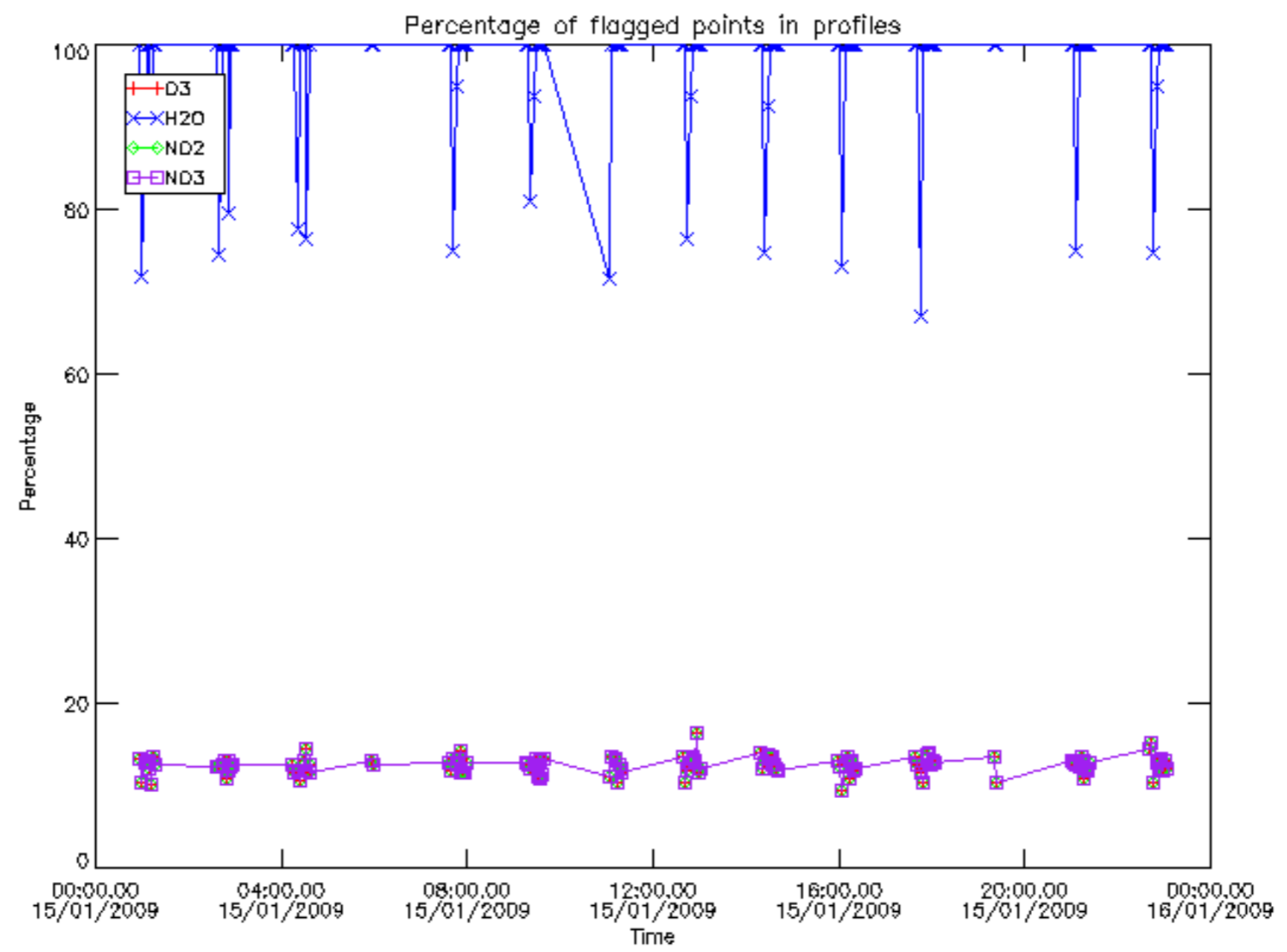
The colorbar represents the latitude.



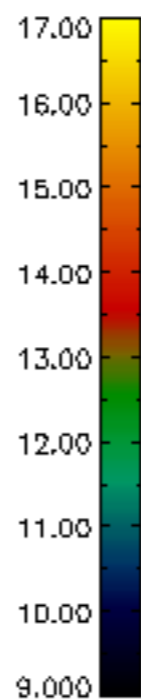
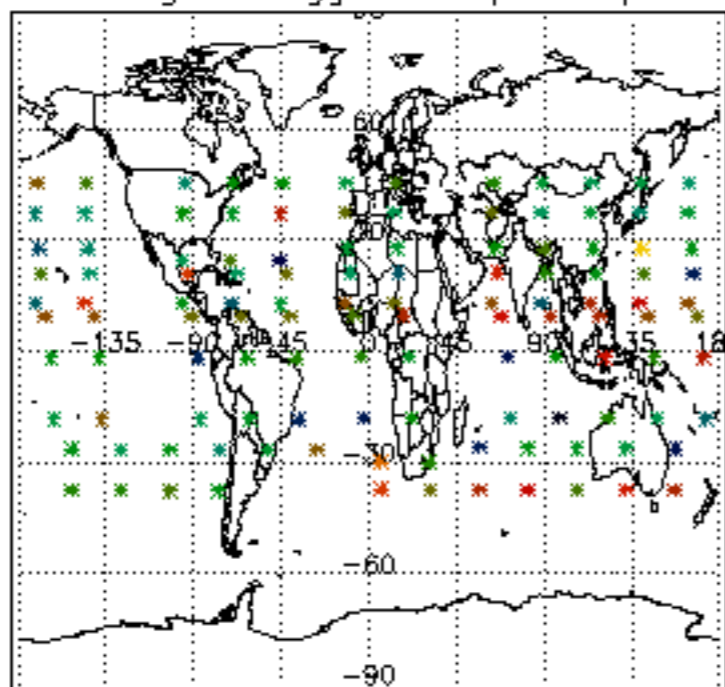
## 6. Auxiliary Data Files used for the production reported in section 2

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.

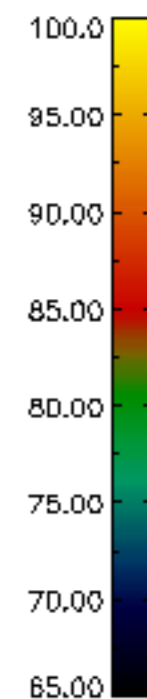
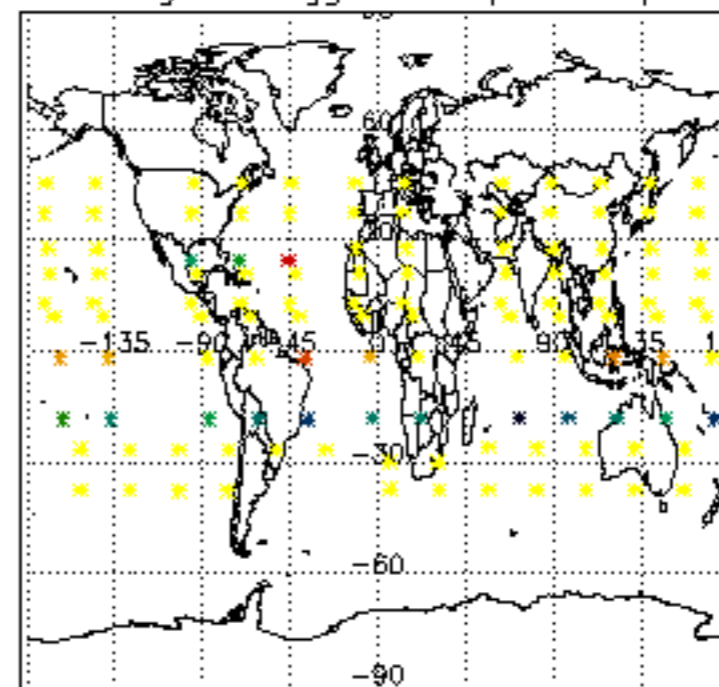
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	15-JAN-2009 00:01:35
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-JAN-2009 00:01:35
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-JAN-2009 00:01:35



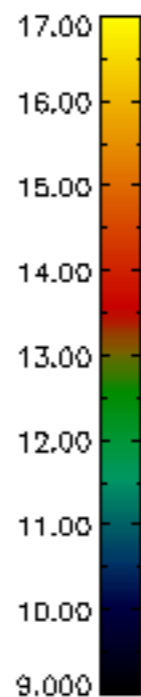
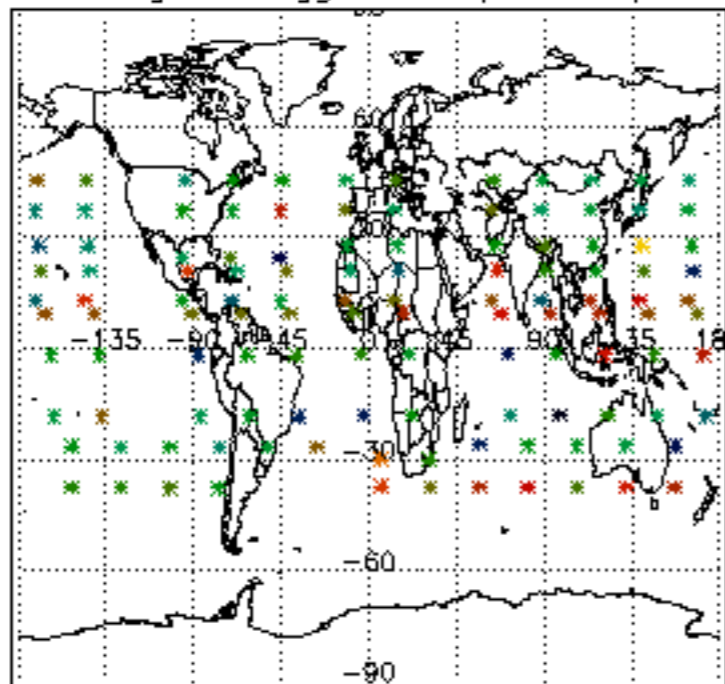
Percentage of flagged data per D3 profile



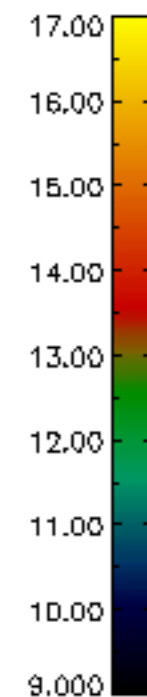
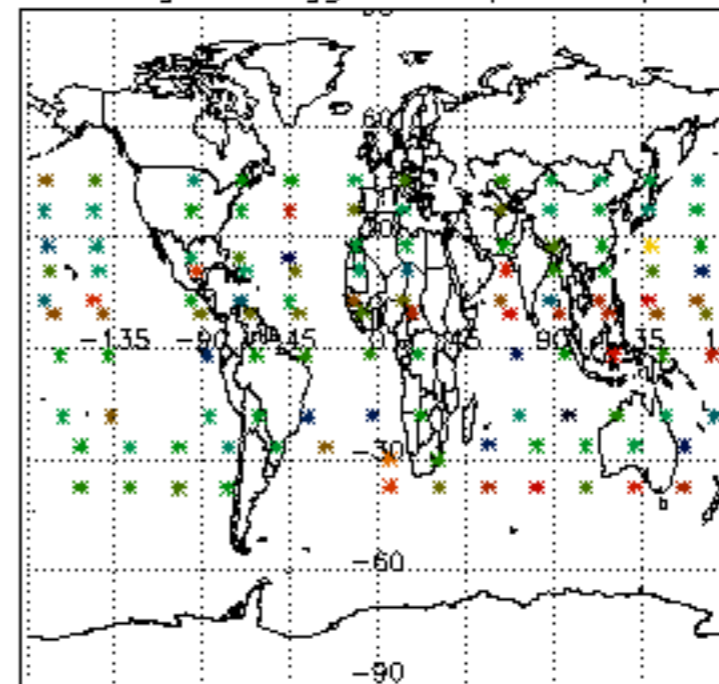
Percentage of flagged data per H2O profile

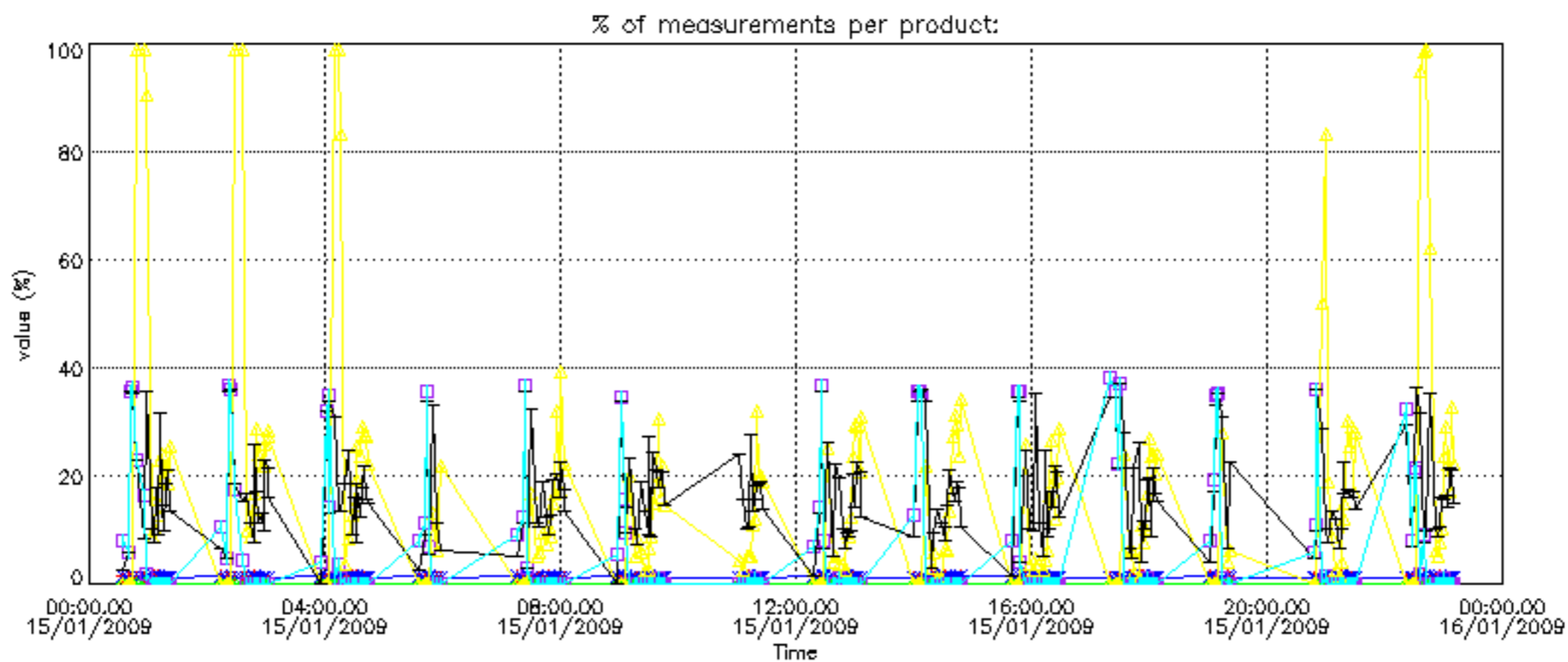


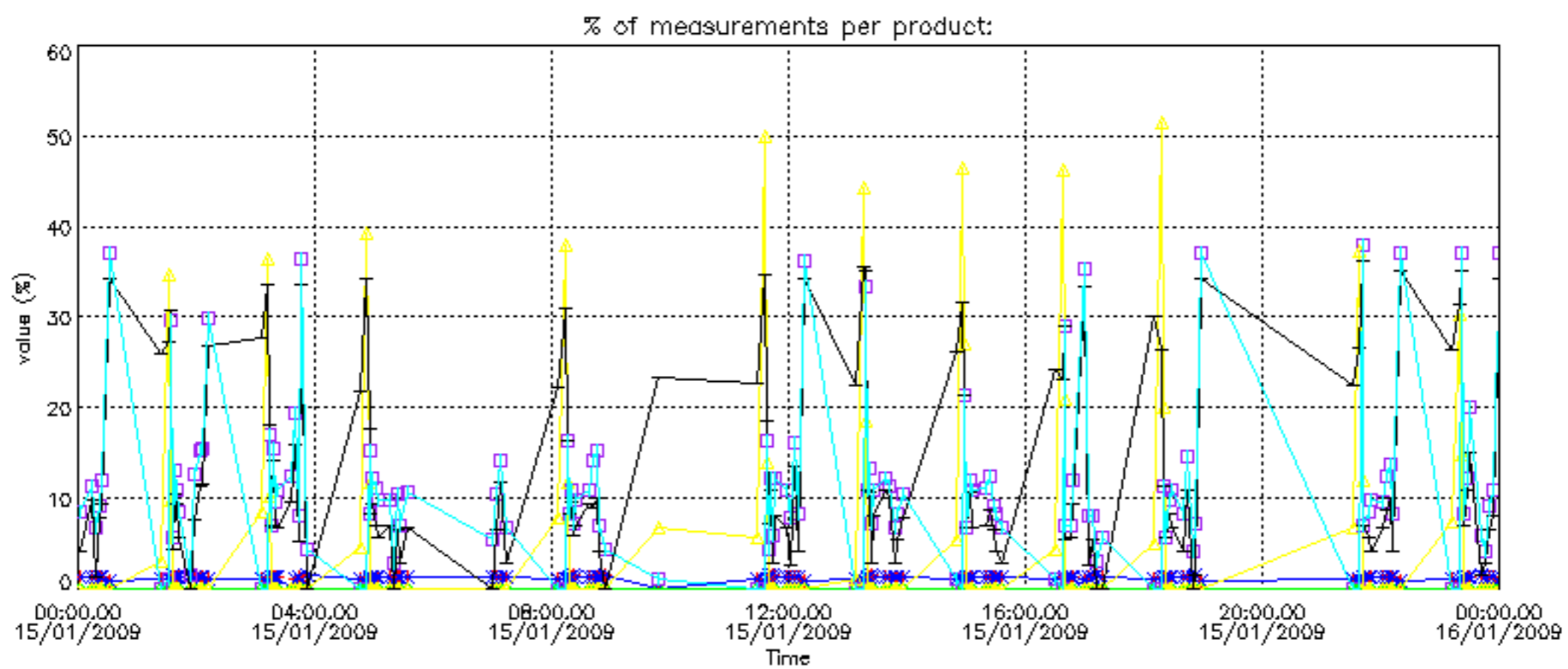
Percentage of flagged data per NO2 profile



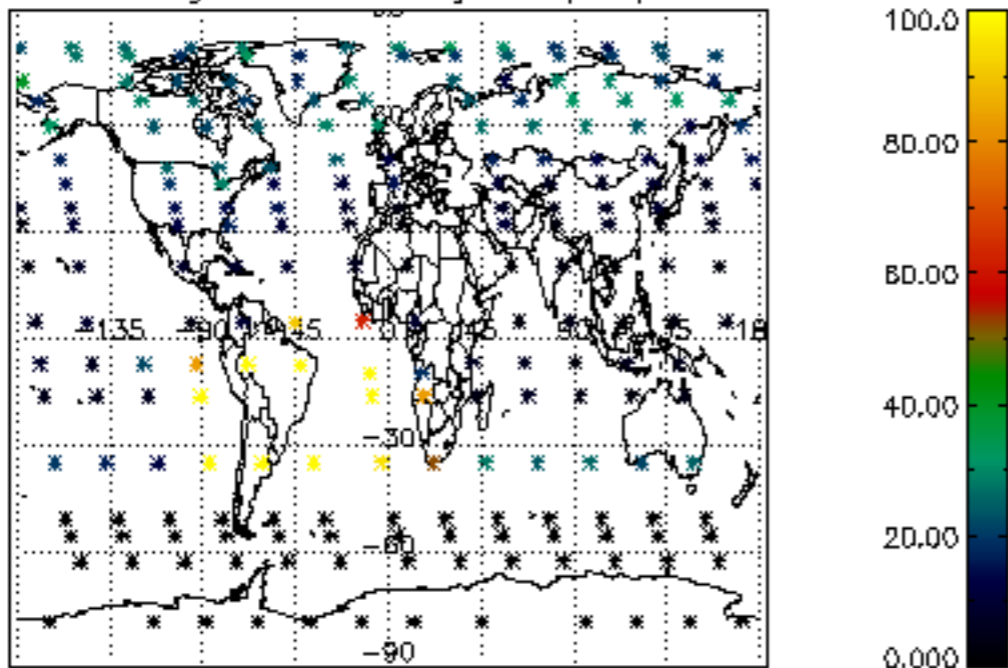
Percentage of flagged data per NO3 profile



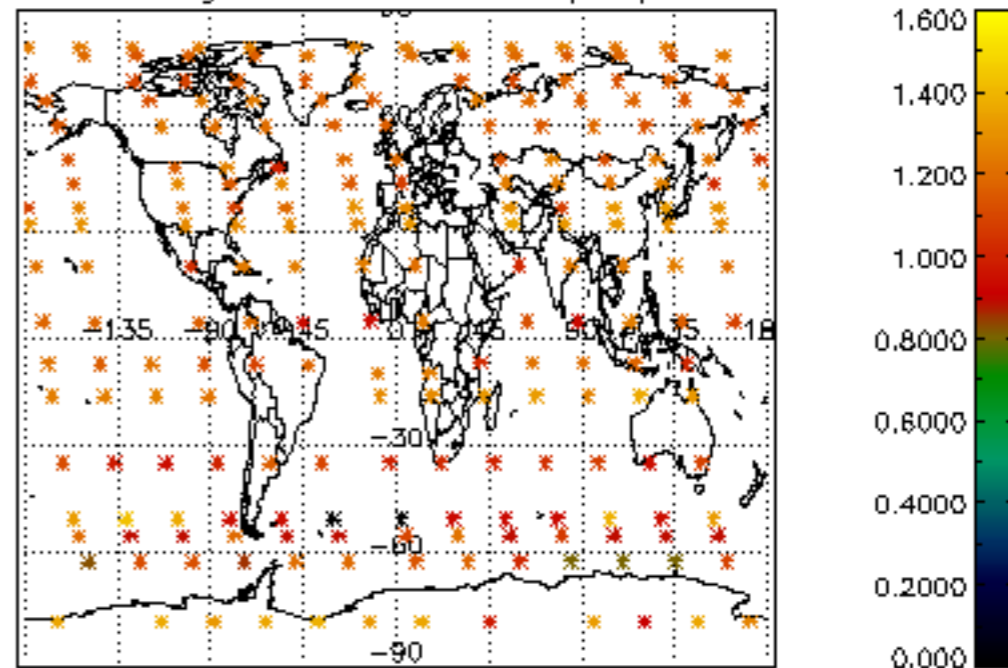




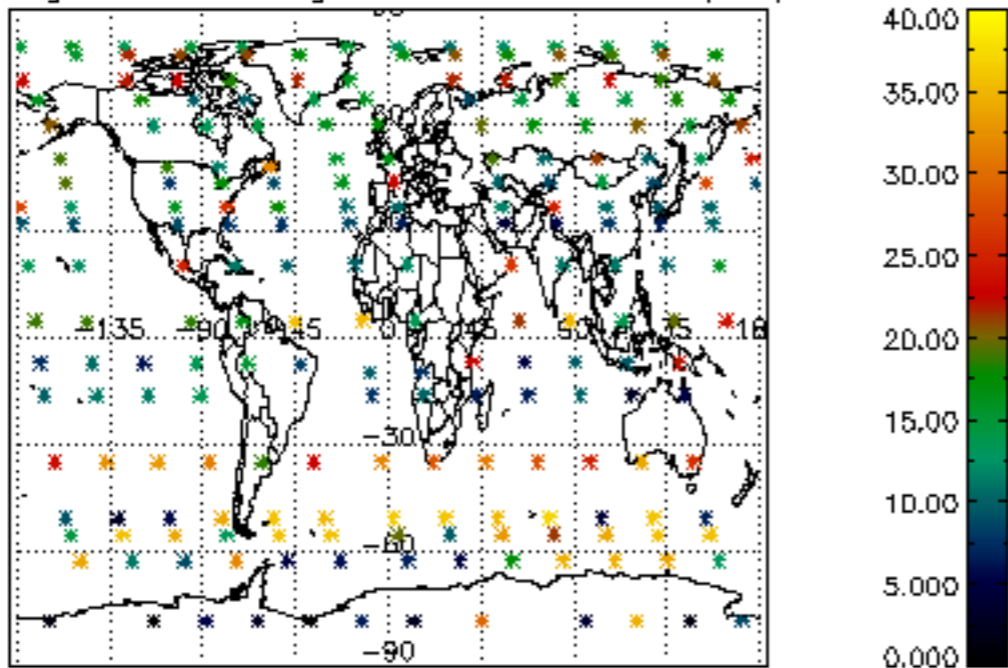
Percentage of cosmic ray hits per profile



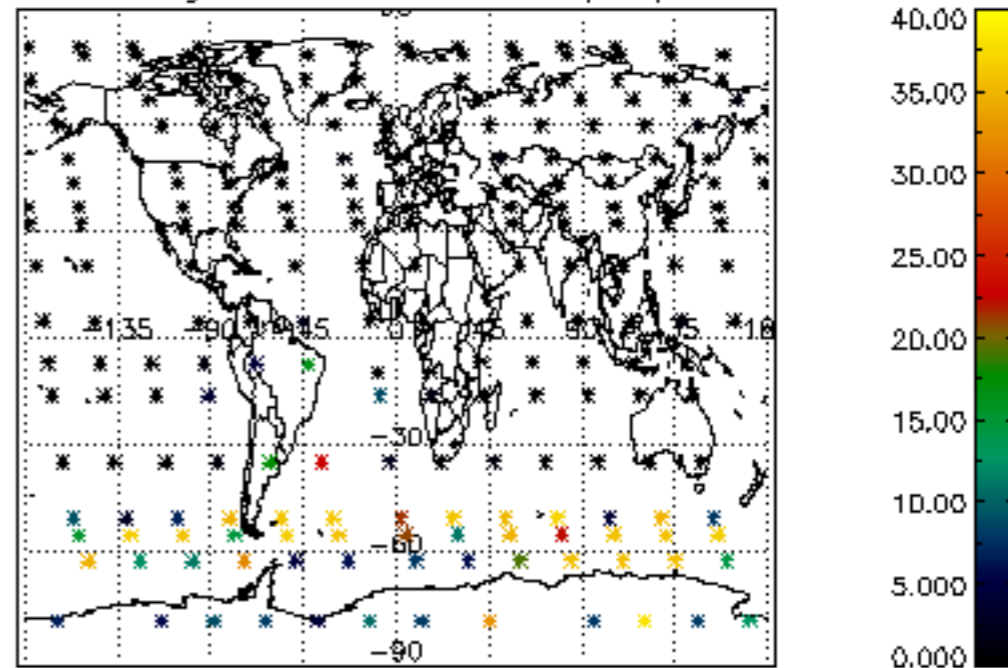
Percentage of datation errors per profile



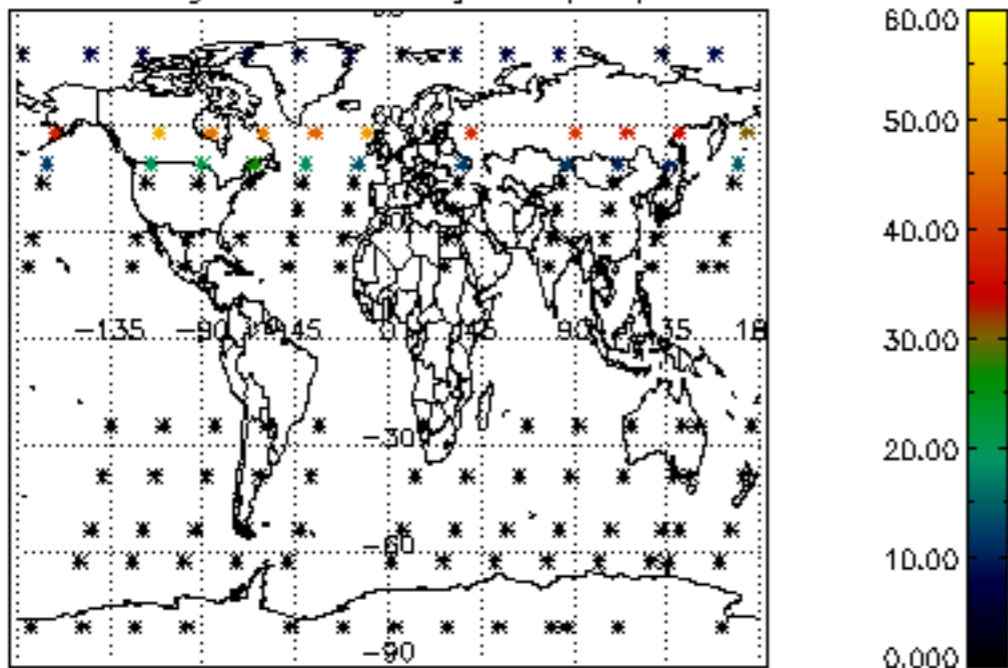
Percentage of star falling outside central band per profile



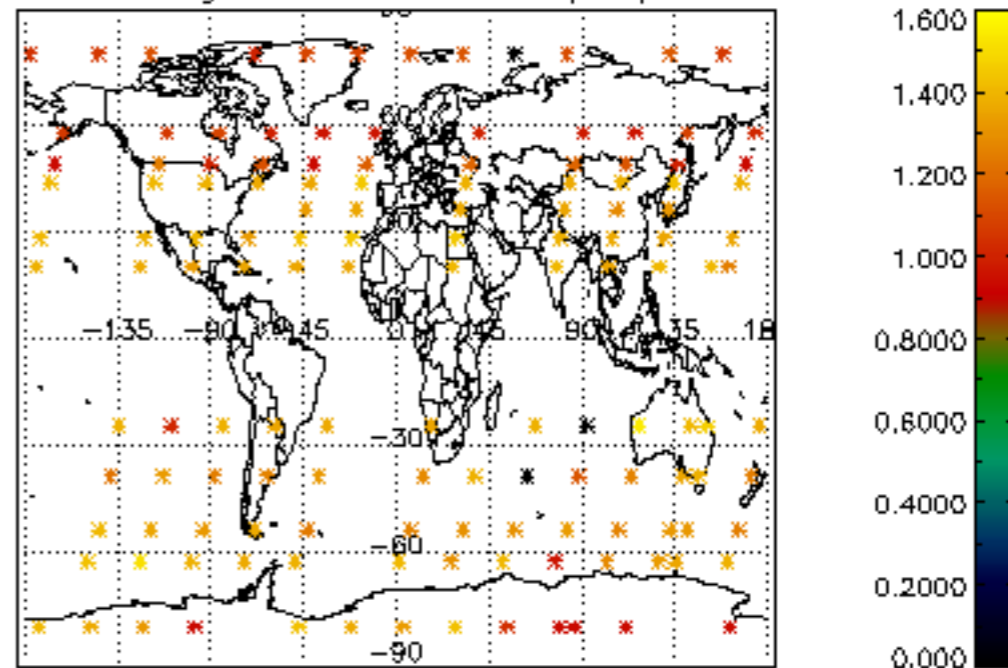
Percentage of saturation errors per profile



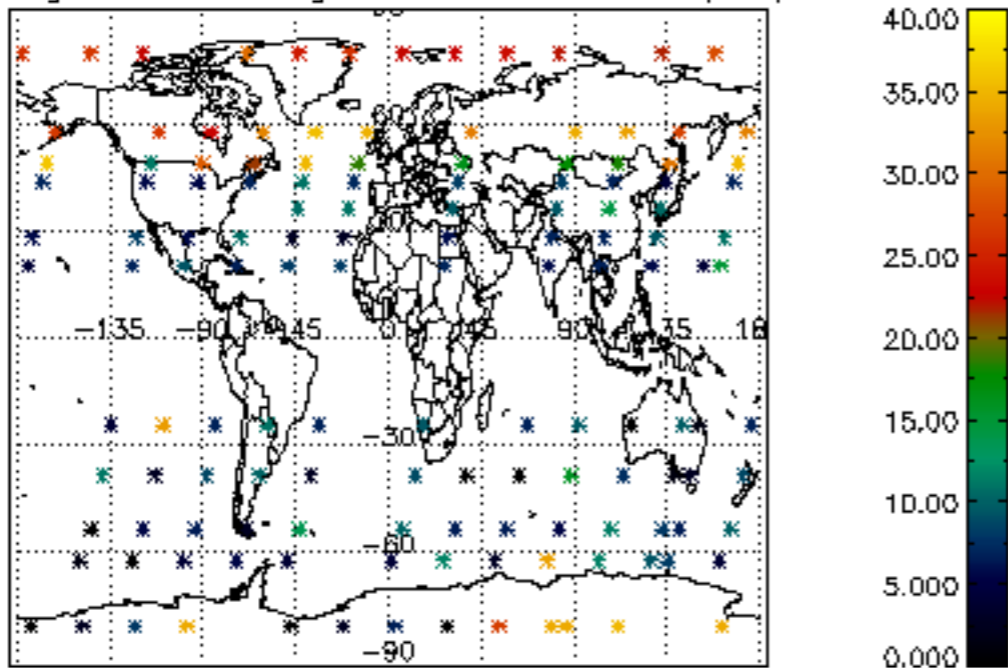
Percentage of cosmic ray hits per profile



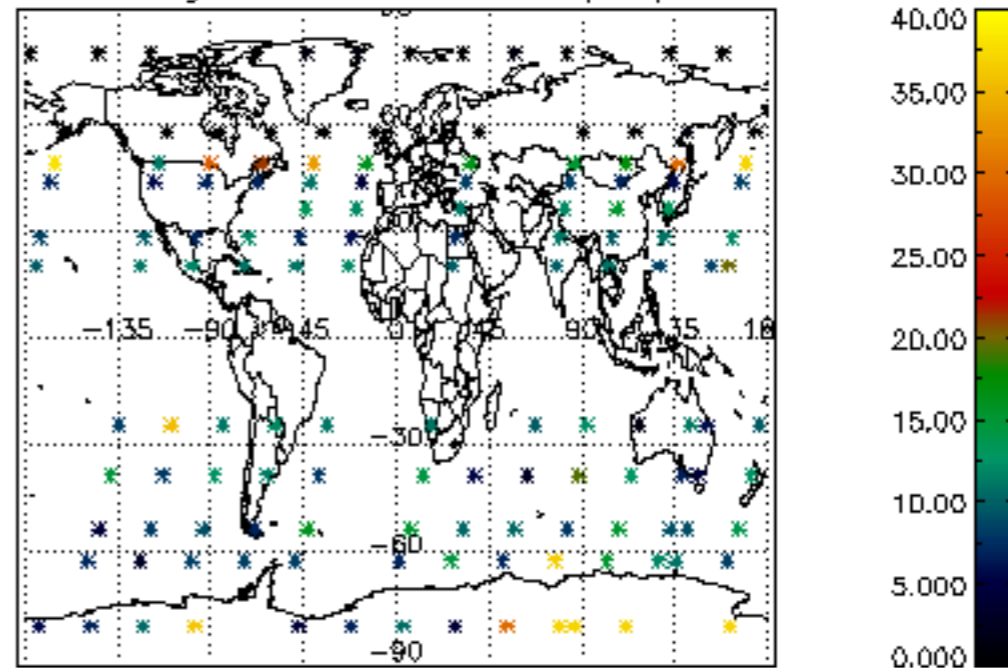
Percentage of datation errors per profile



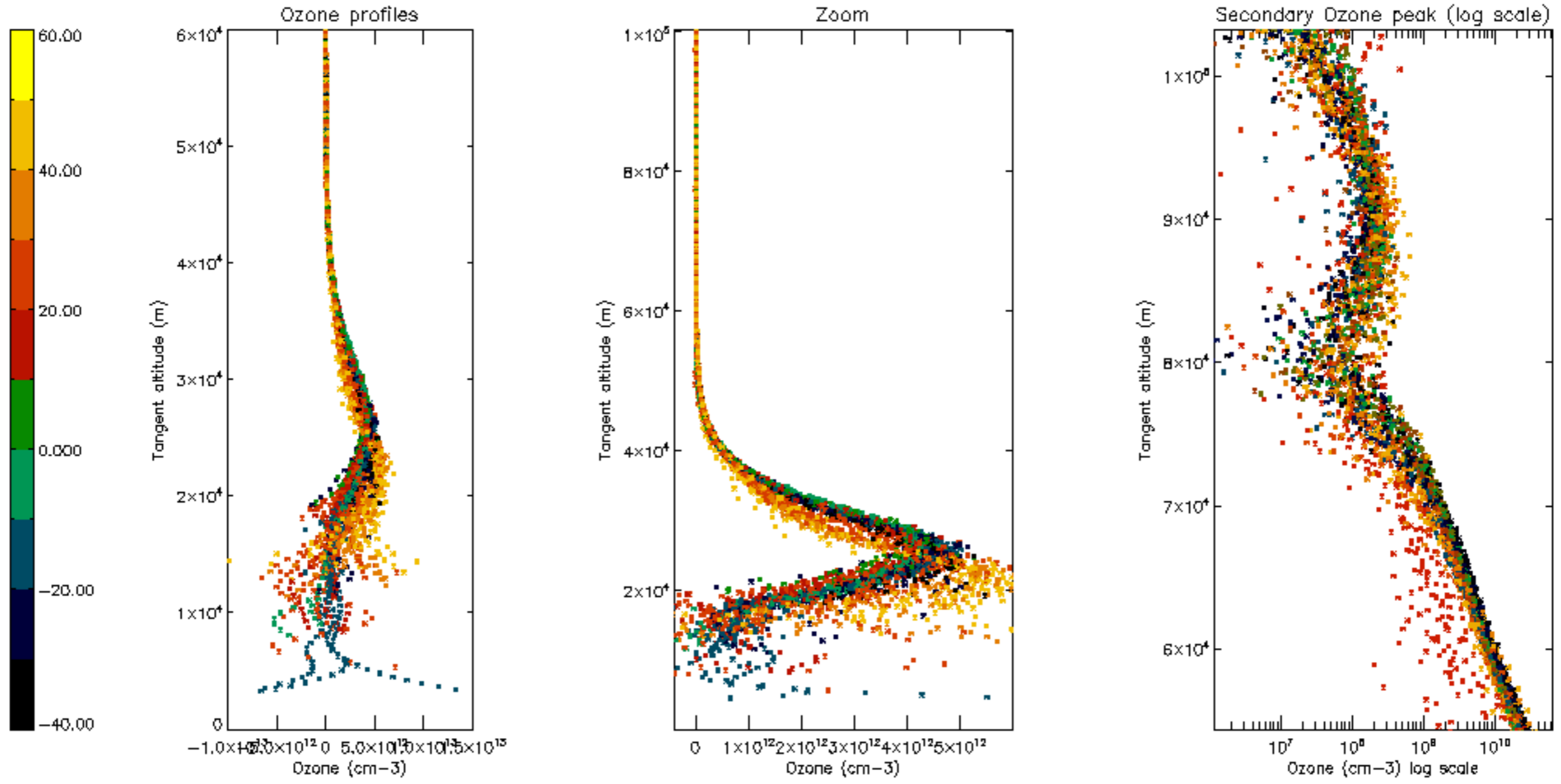
Percentage of star falling outside central band per profile

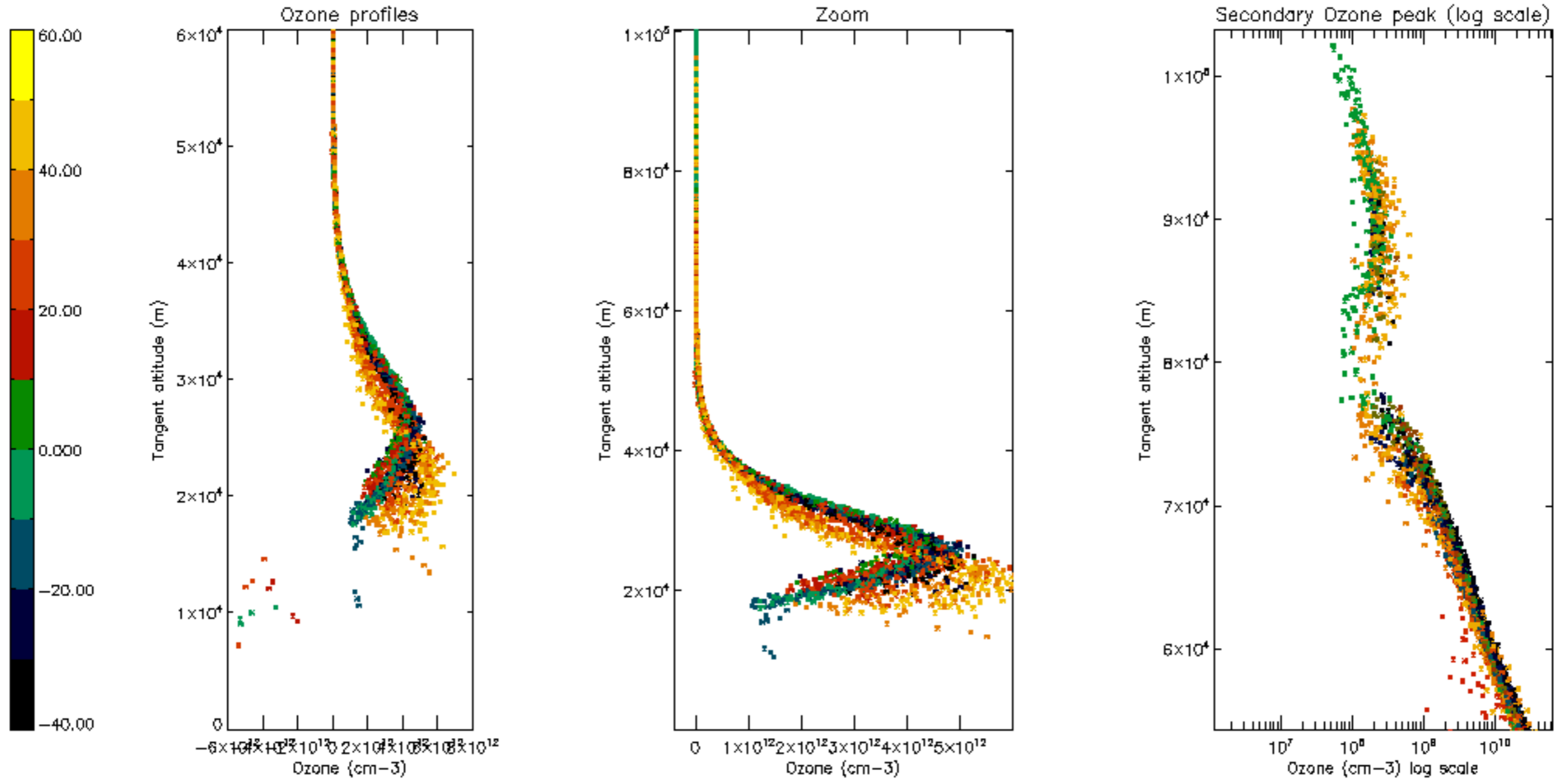


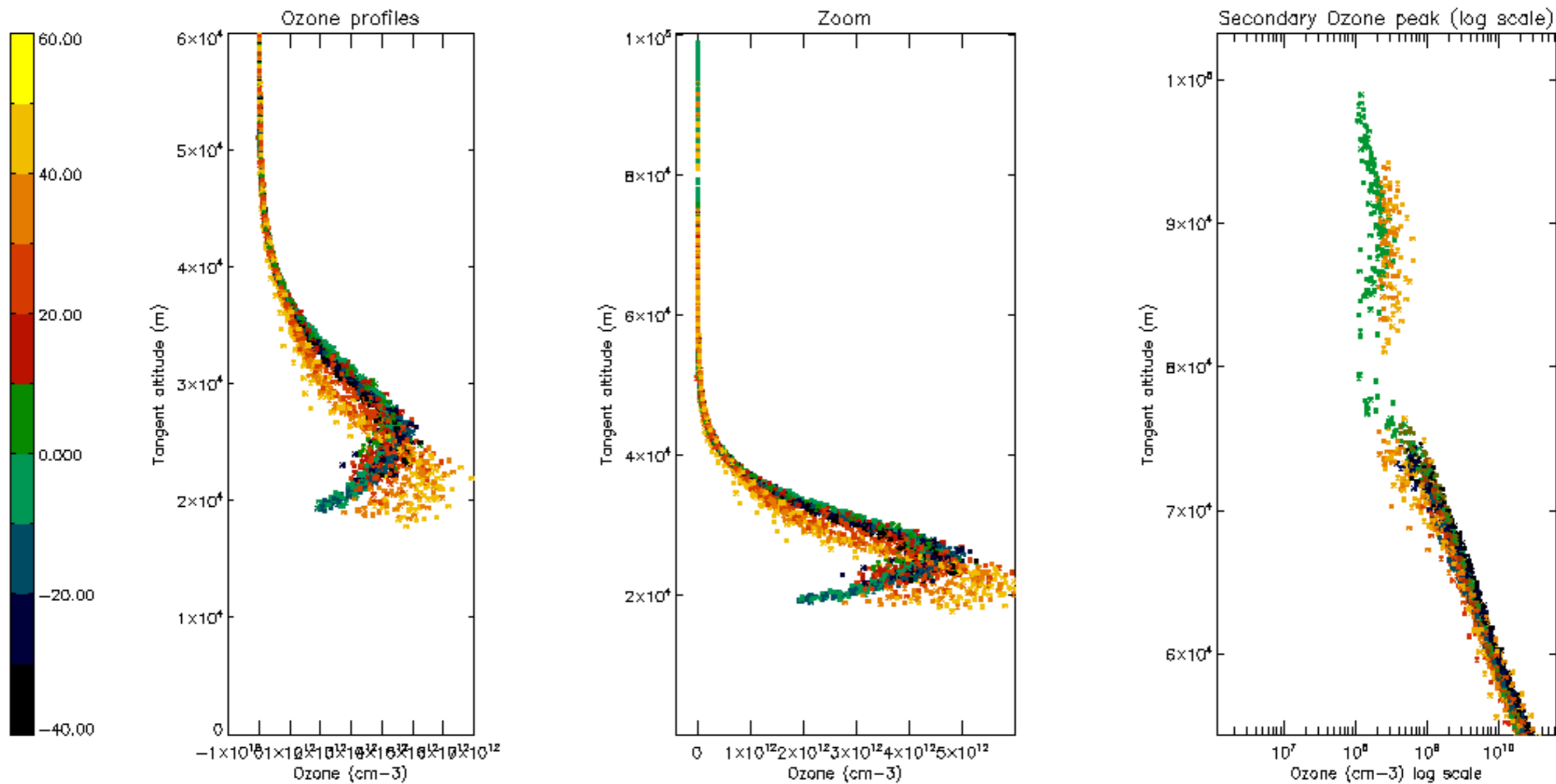
Percentage of saturation errors per profile

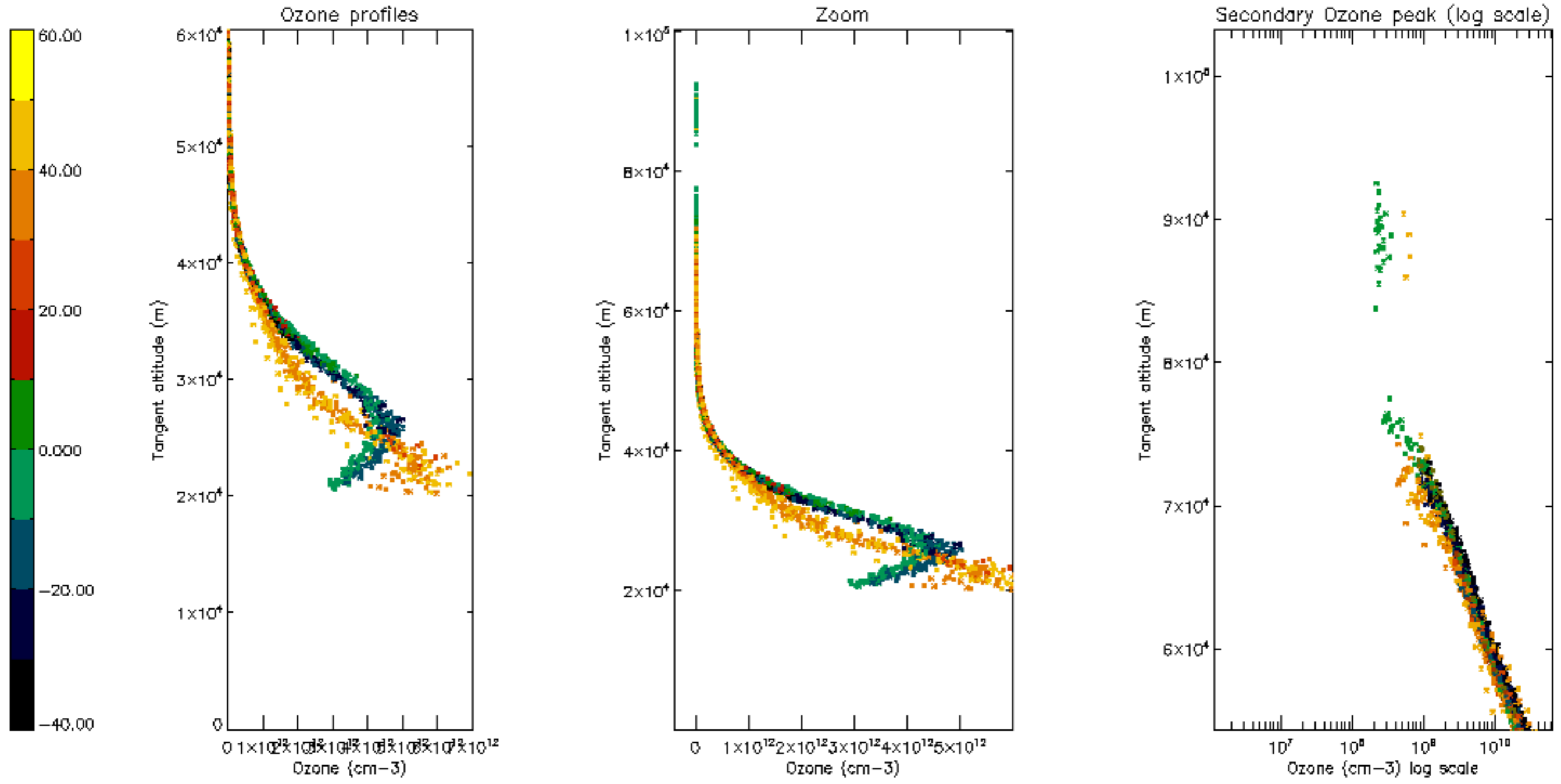


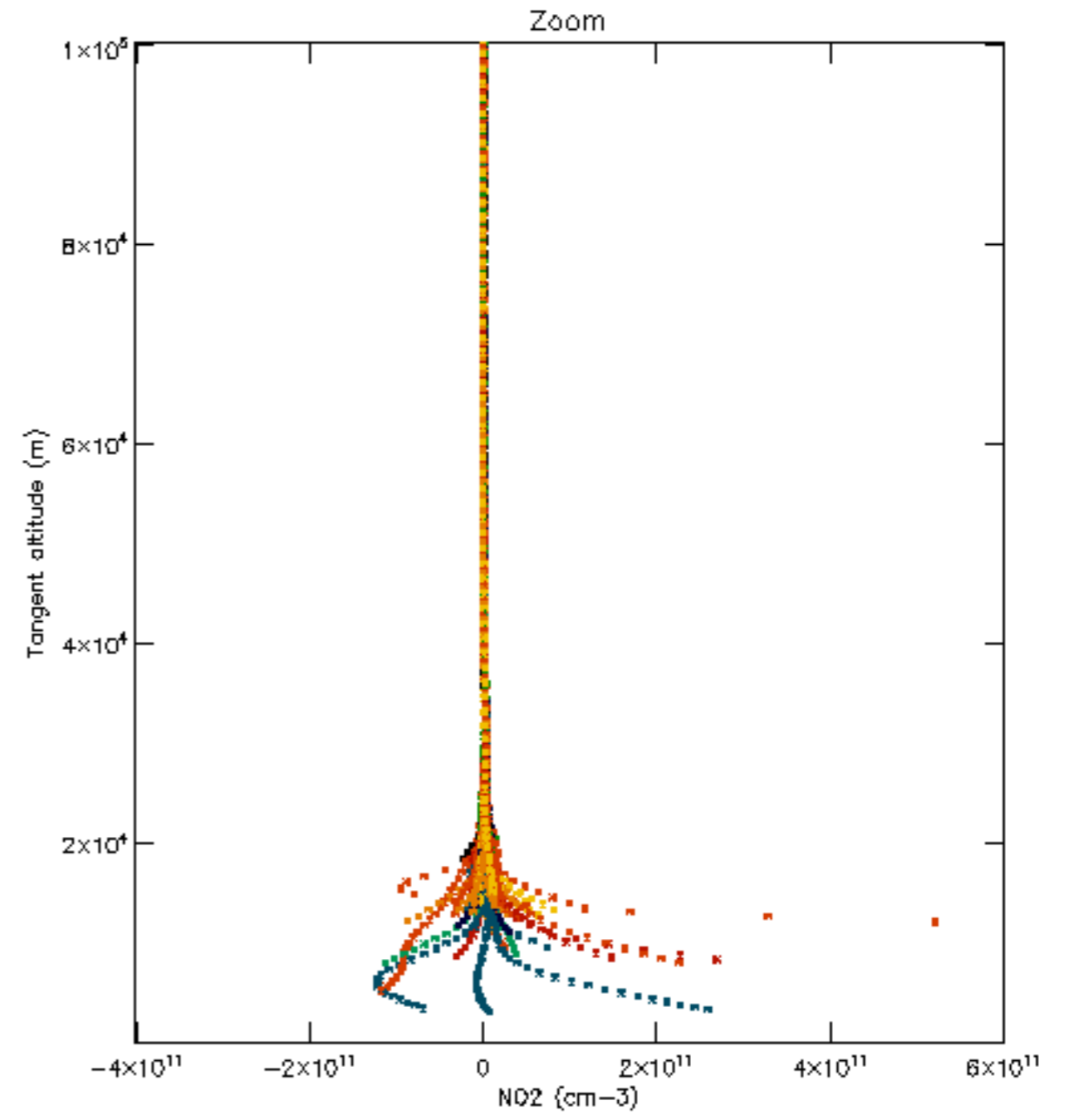
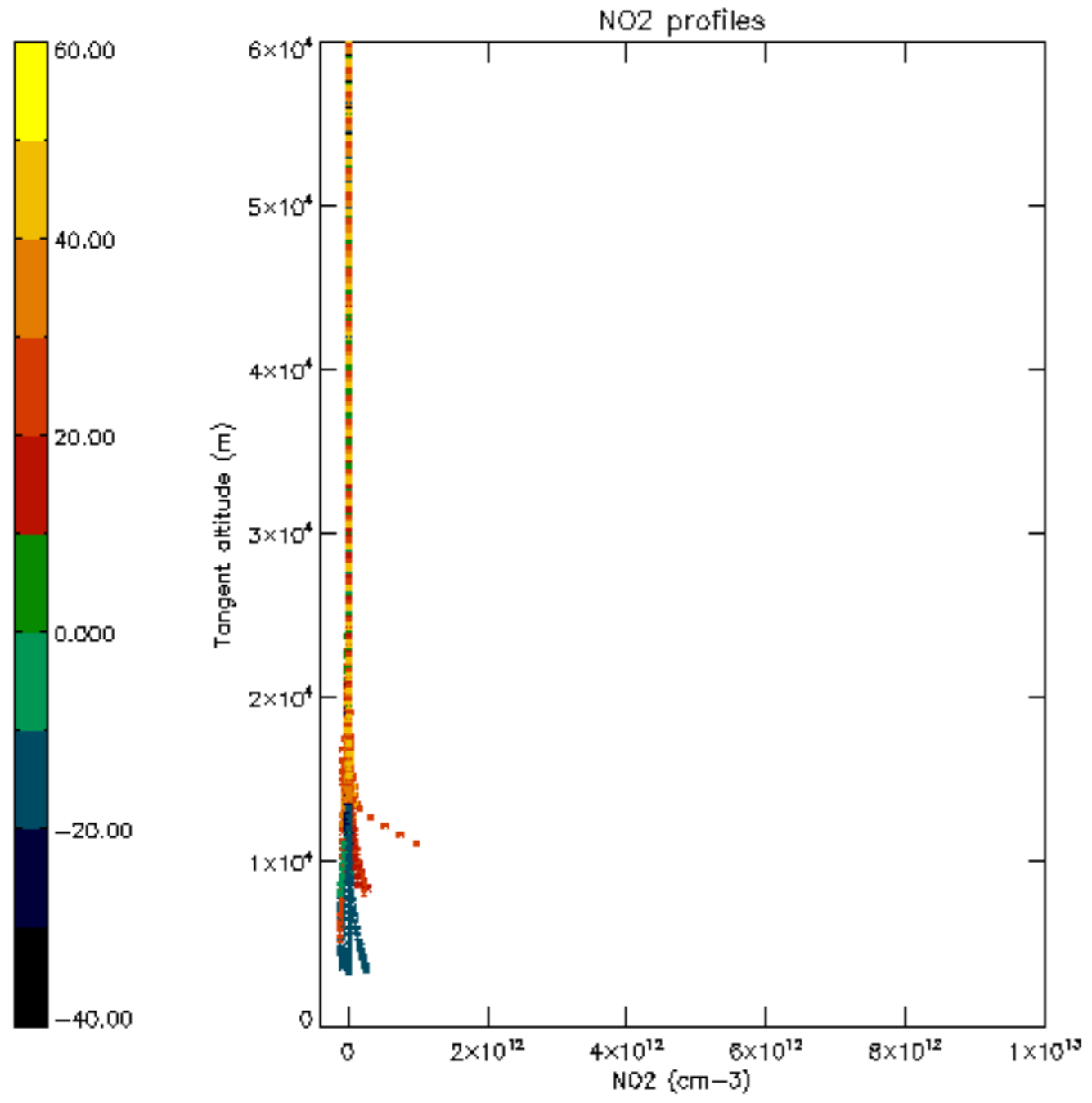


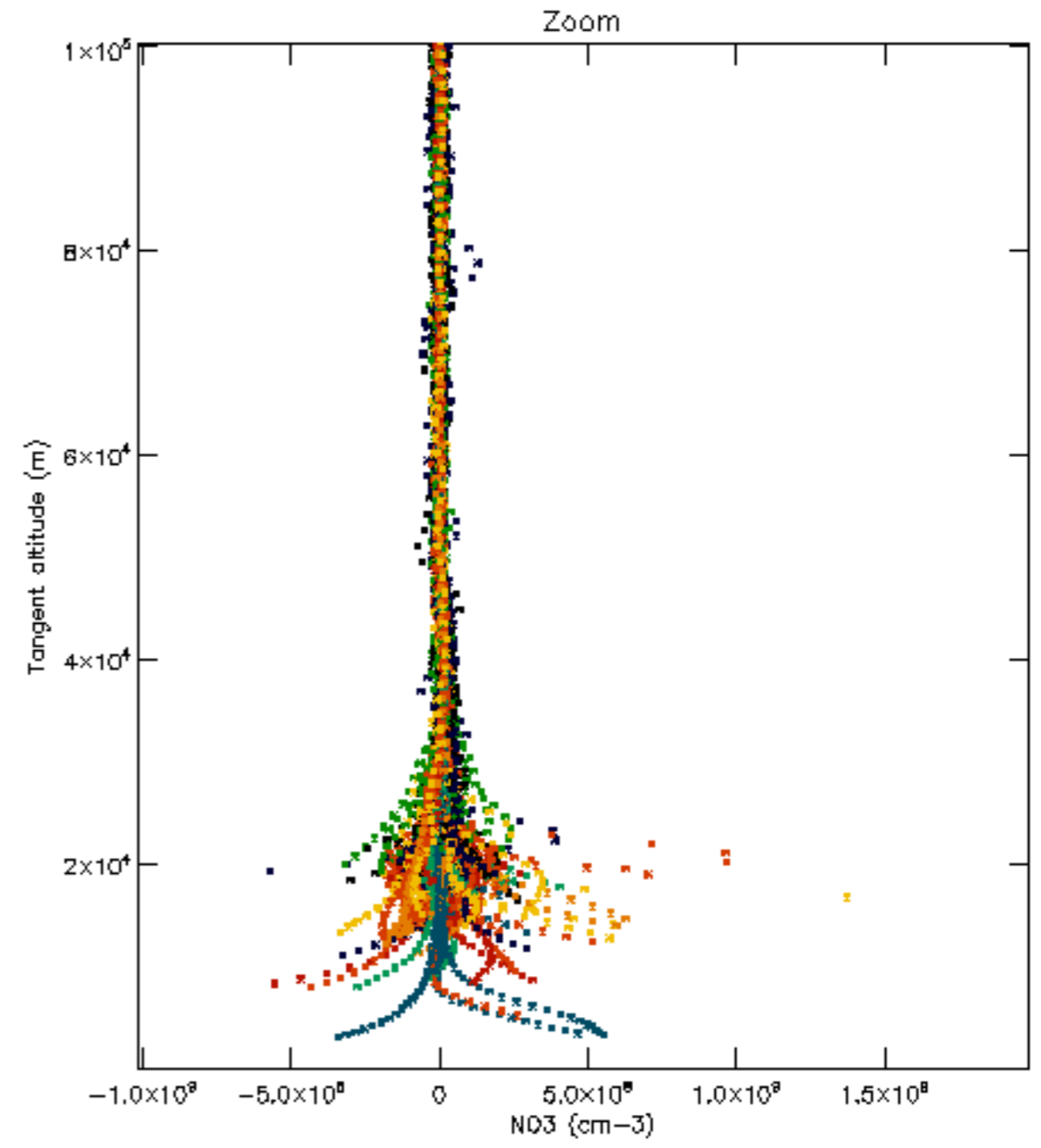
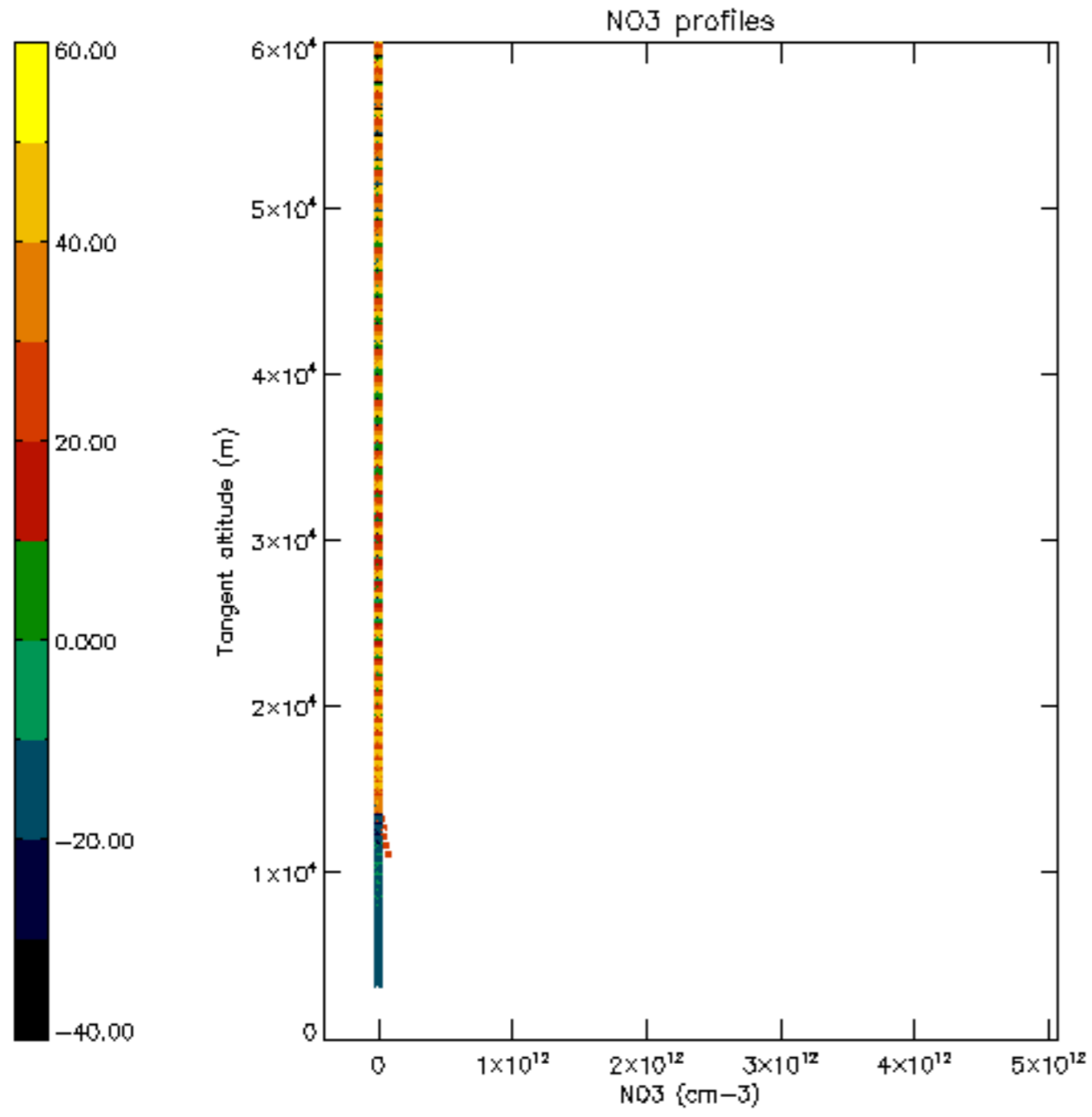


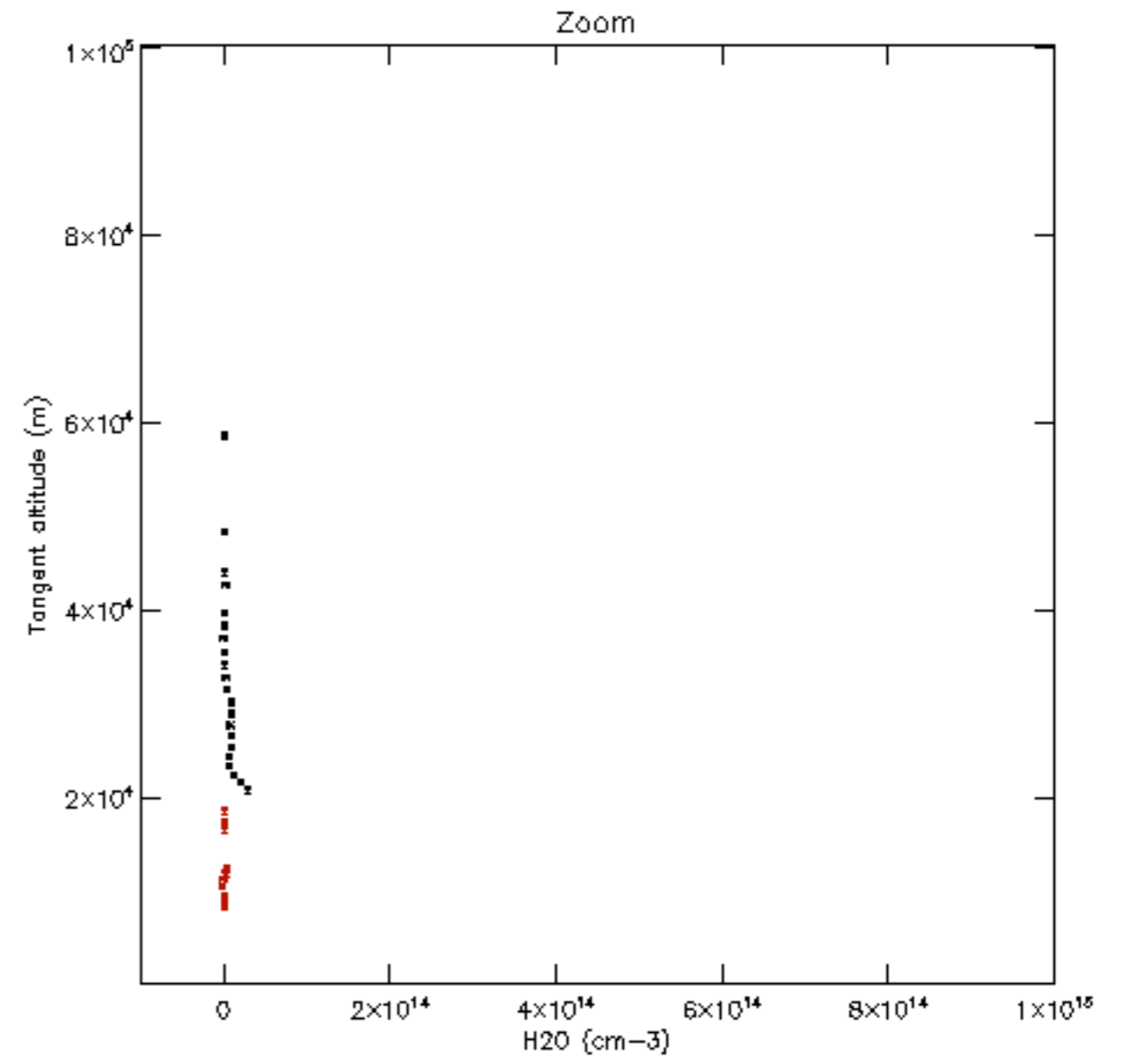
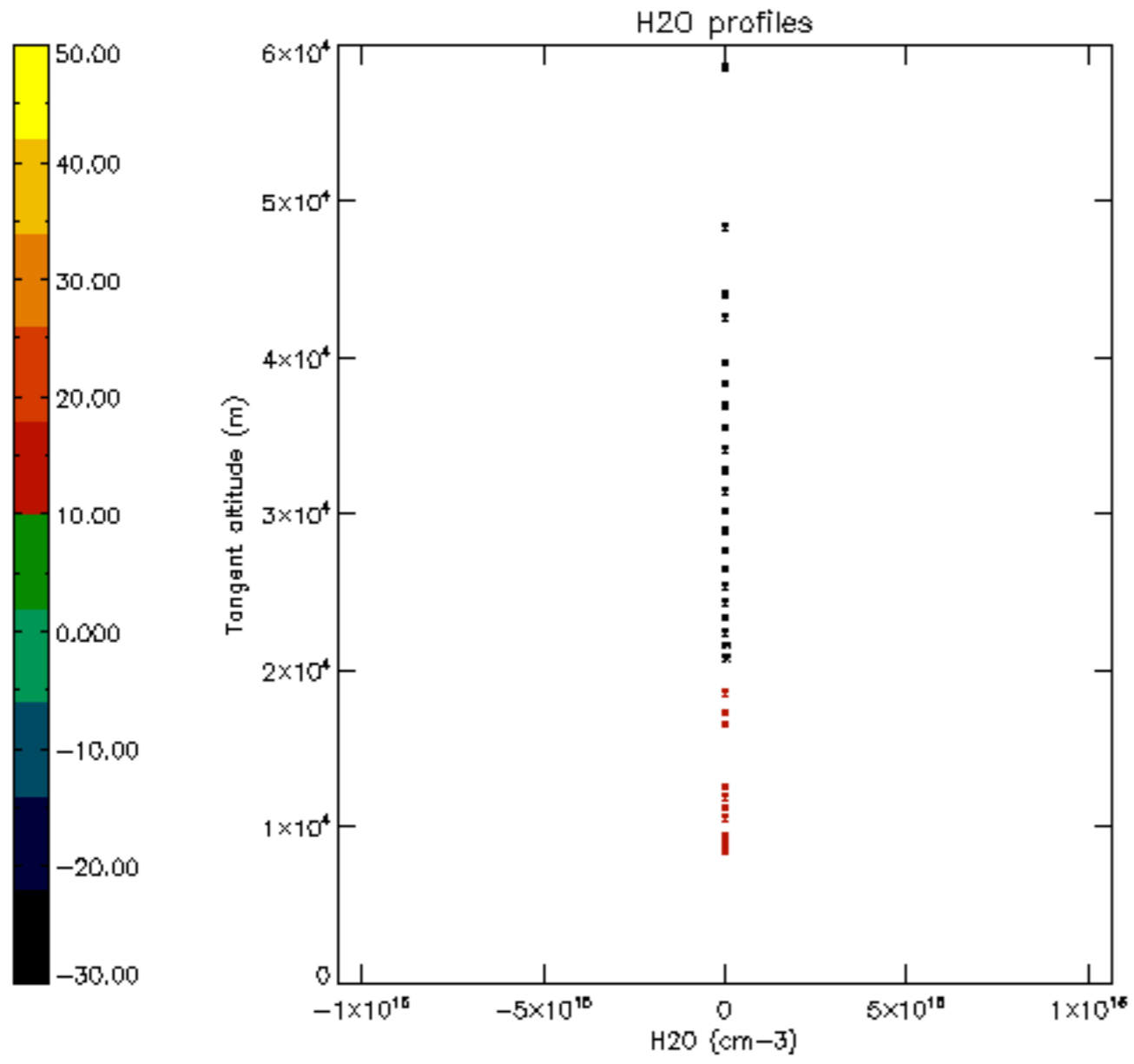


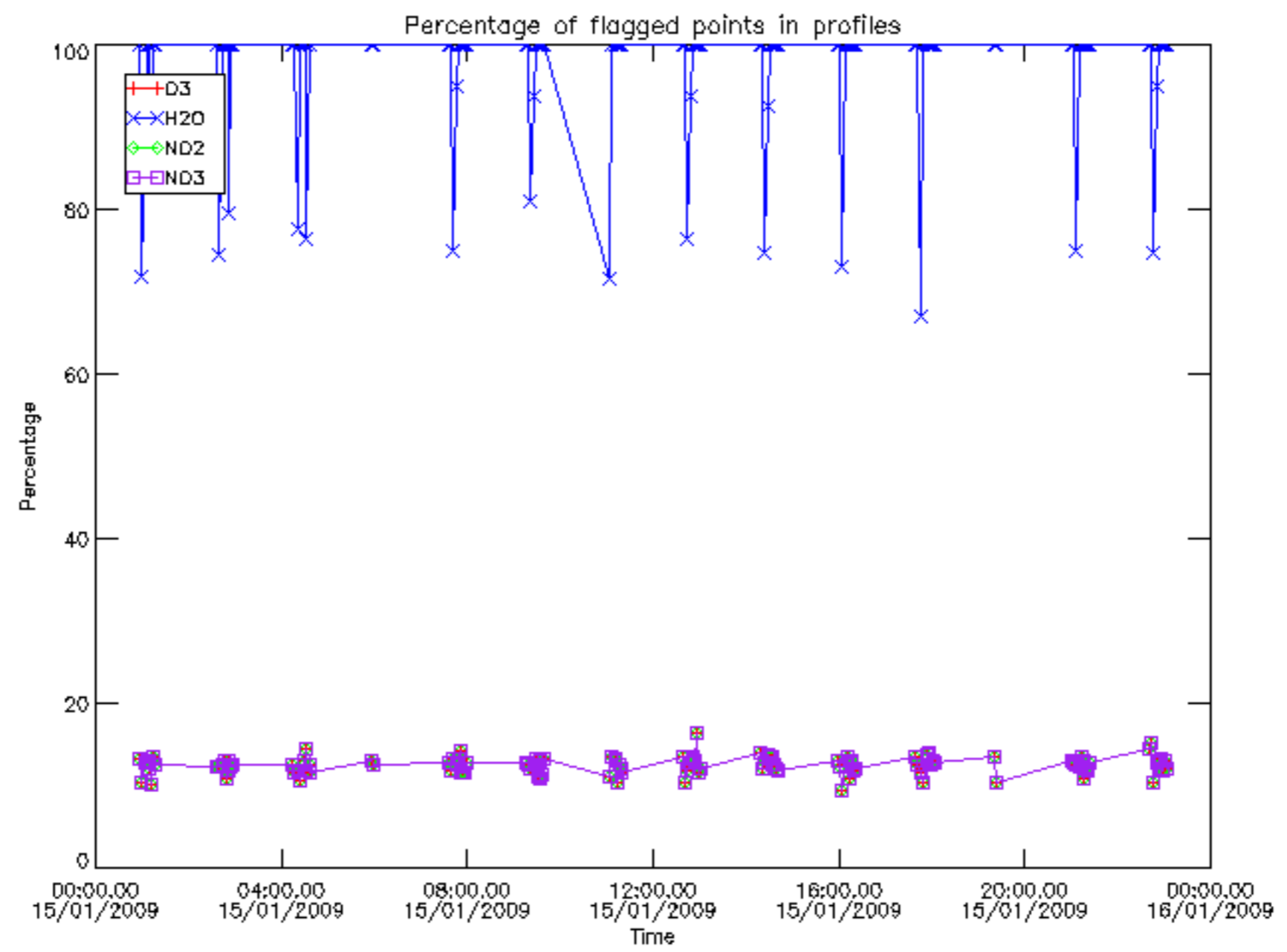






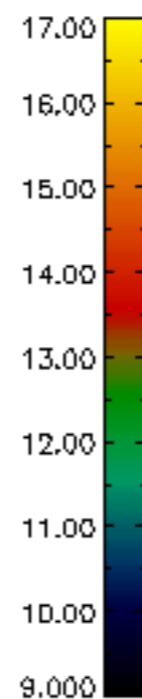
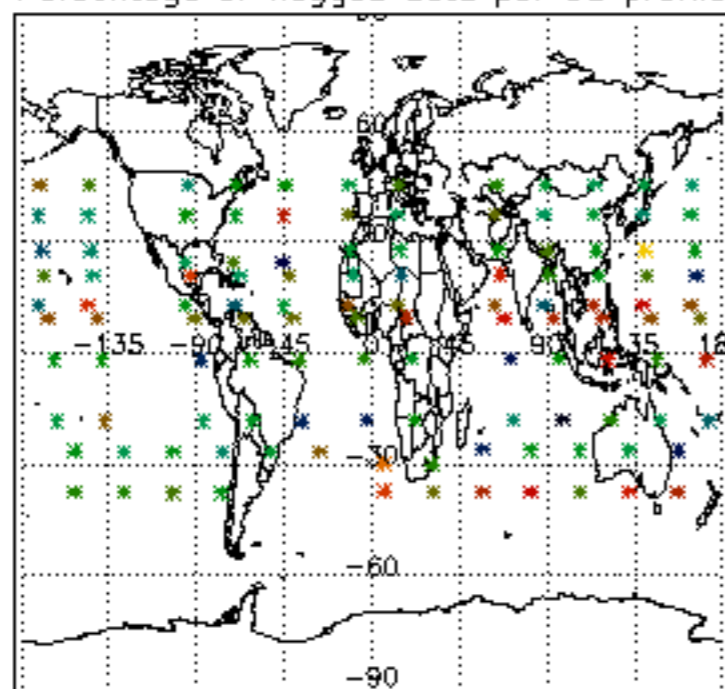




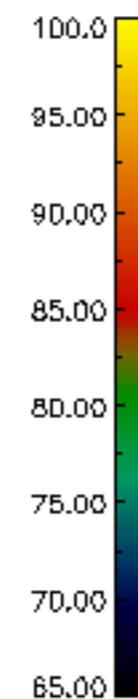
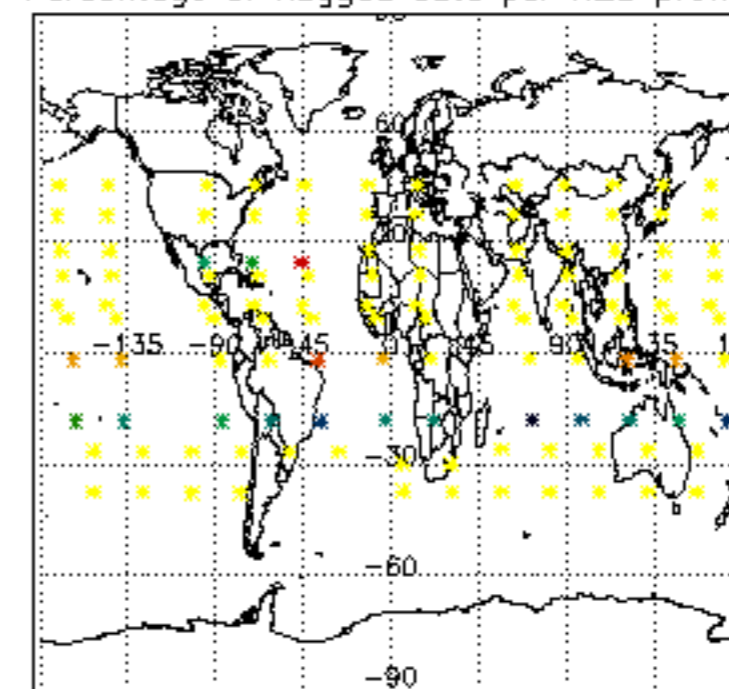




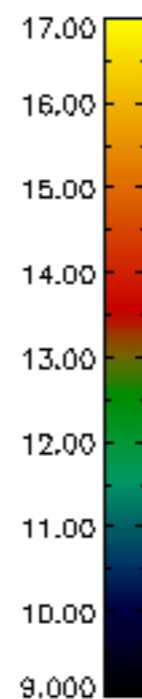
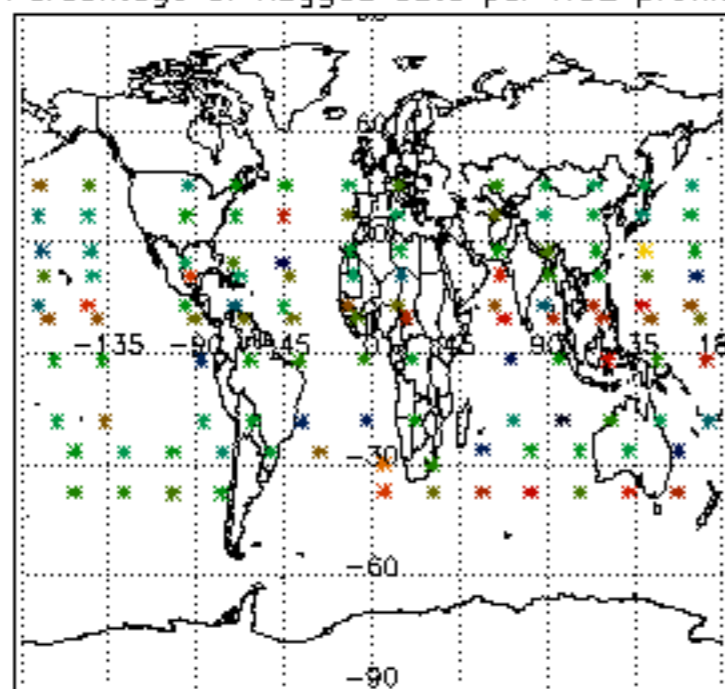
Percentage of flagged data per D3 profile



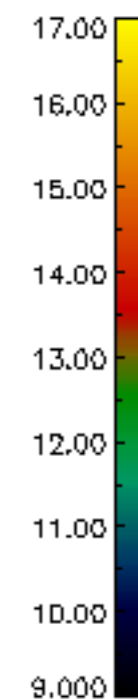
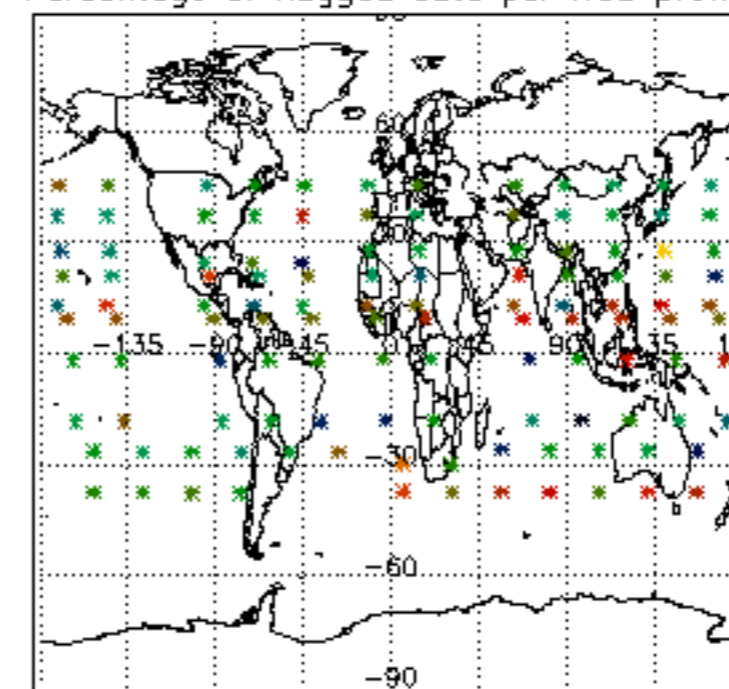
Percentage of flagged data per H2O profile

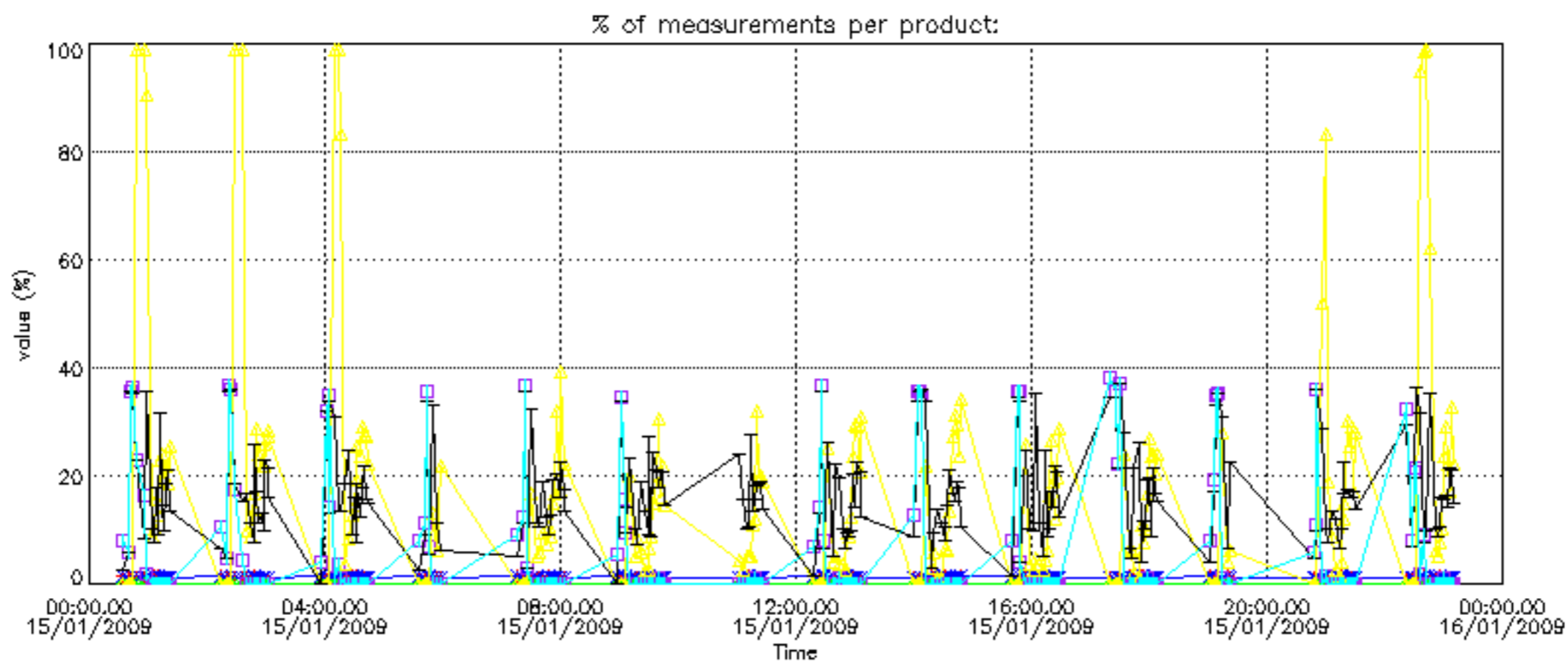


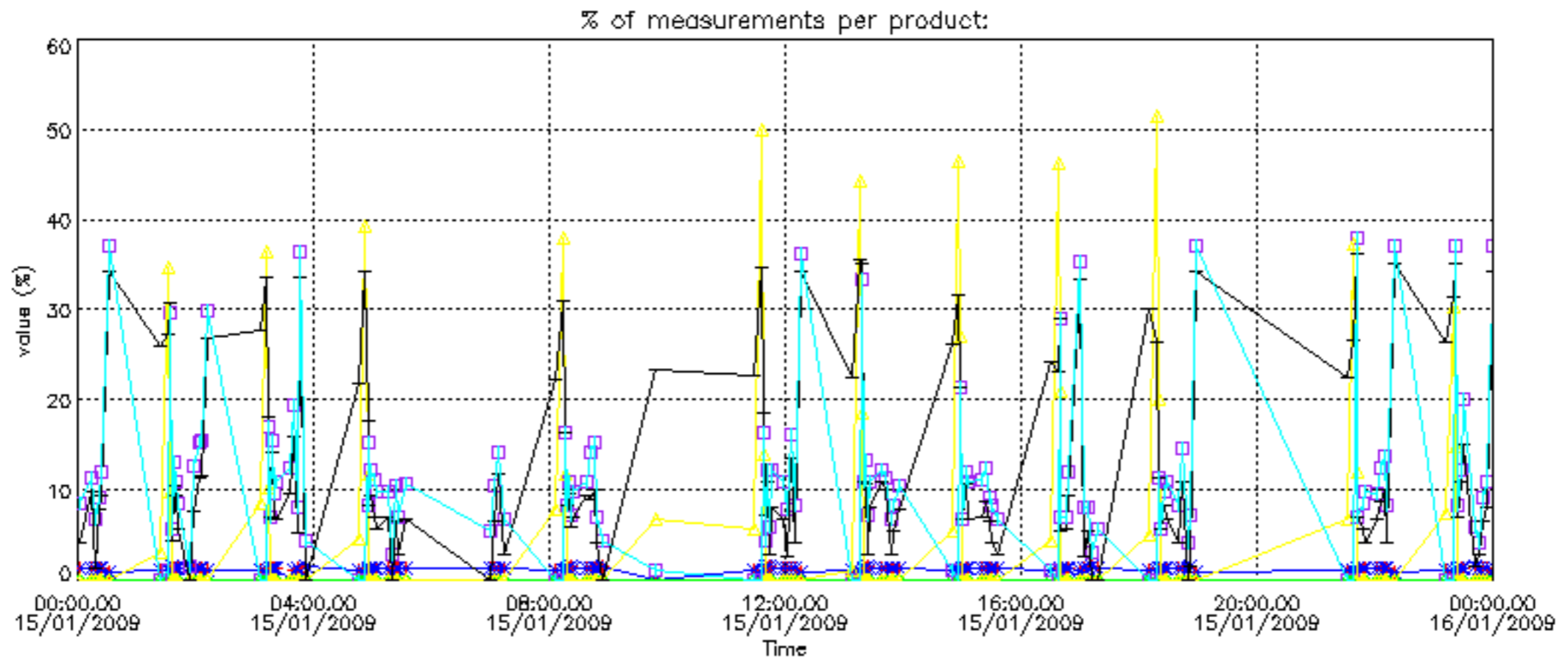
Percentage of flagged data per NO2 profile



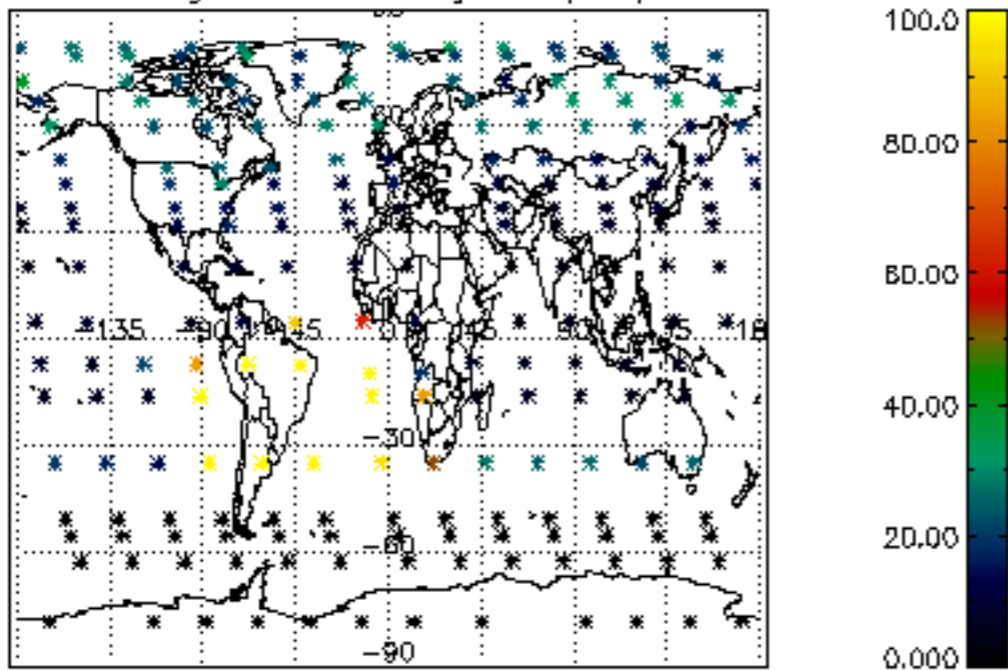
Percentage of flagged data per NO3 profile



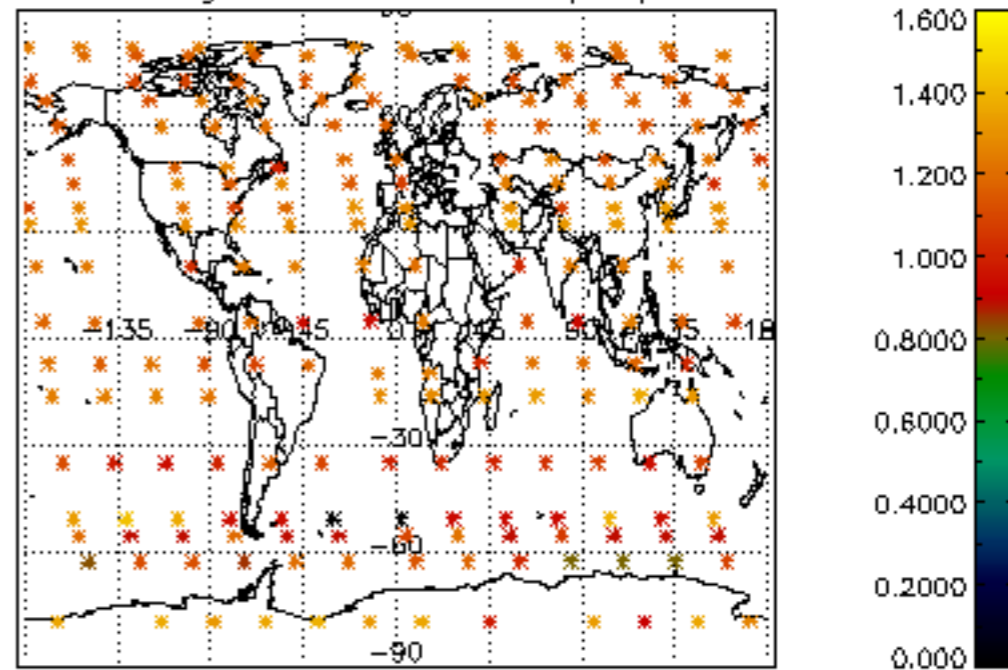




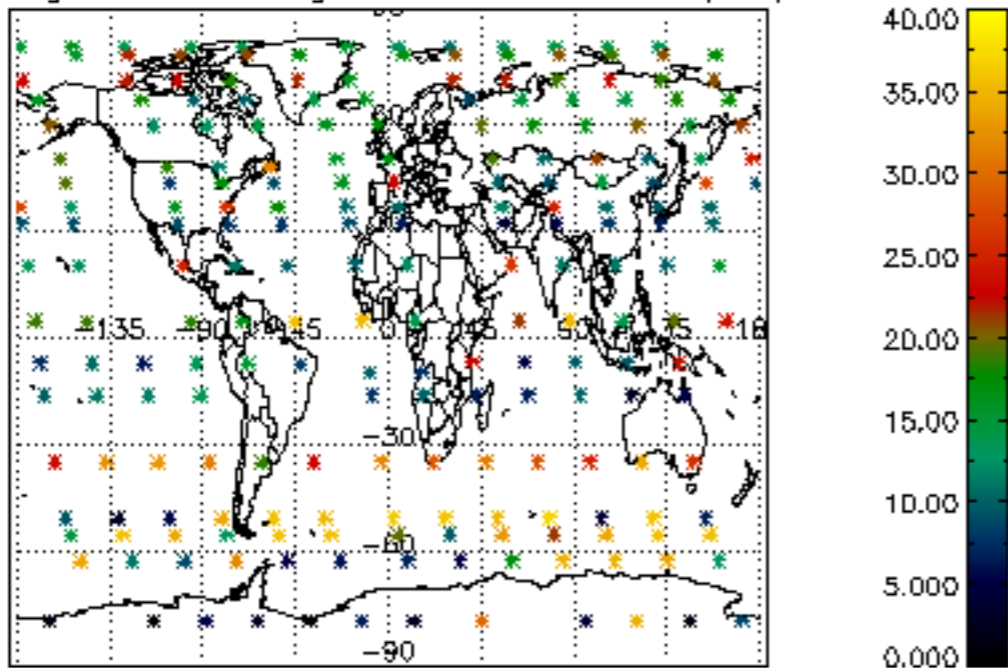
Percentage of cosmic ray hits per profile



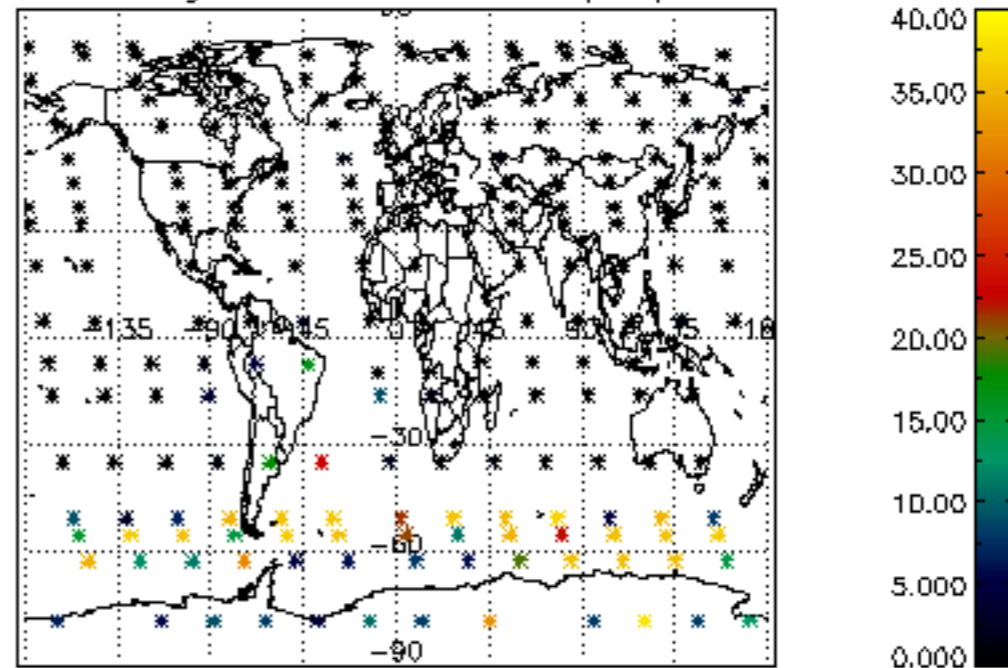
Percentage of datation errors per profile



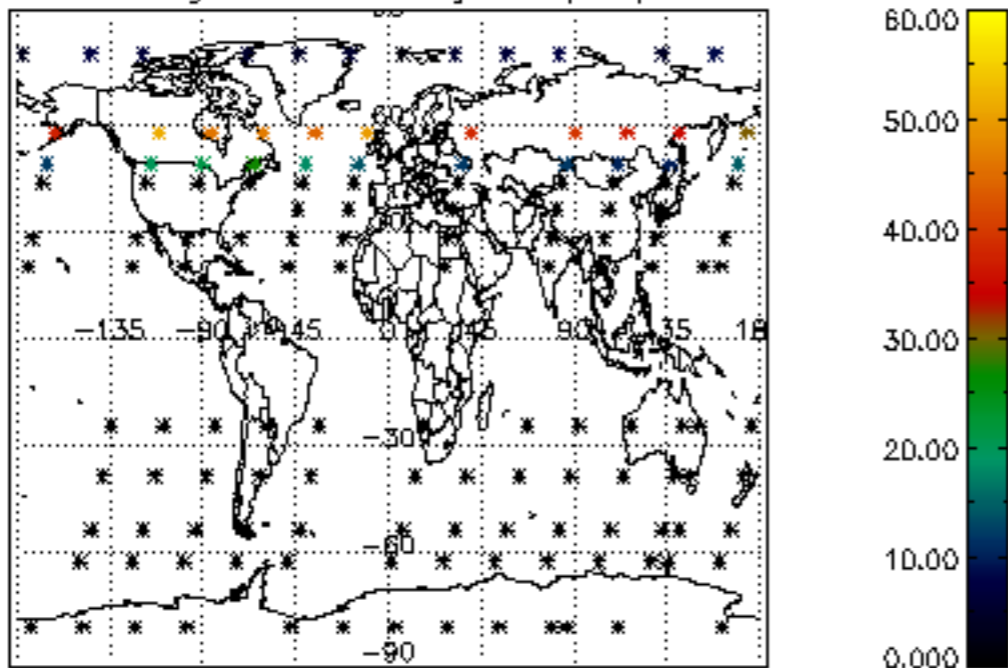
Percentage of star falling outside central band per profile



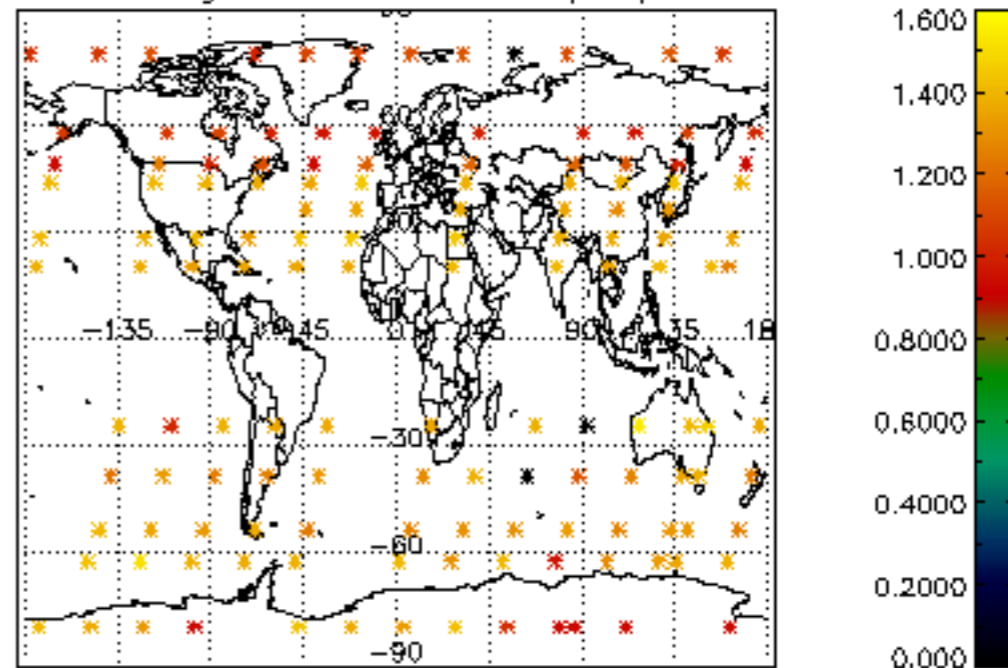
Percentage of saturation errors per profile



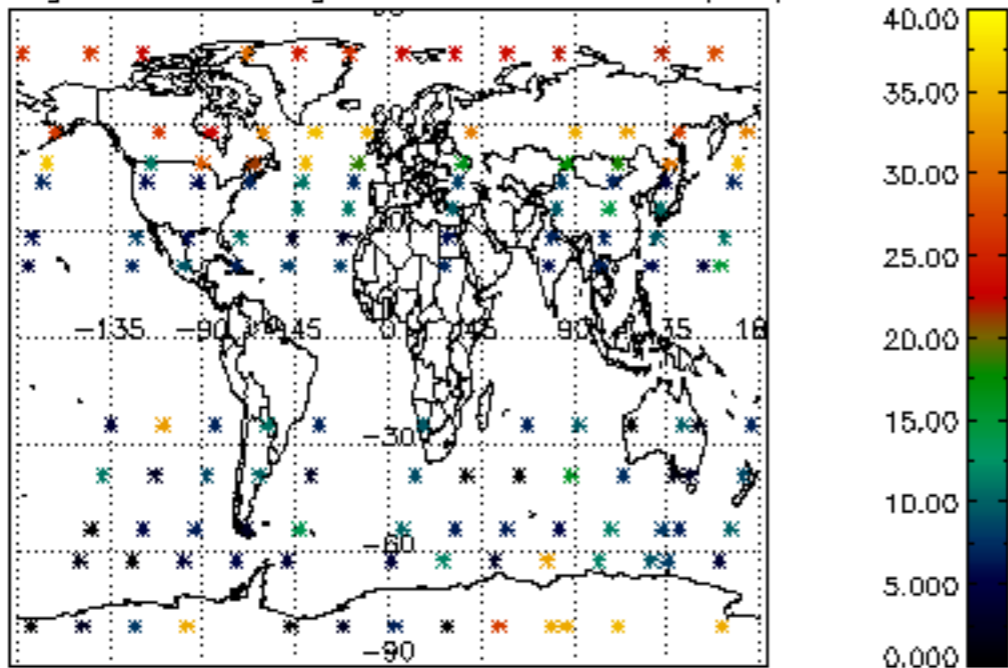
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

