

# GOMOS Level 2 Daily Report

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This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	24APR2013 13:12:24
Data source version	GOMOS/6.01
Start time of products	04-05-2011 (04MAY2011 00:00:00)
Stop time of products	05-05-2011 (05MAY2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	13
Nb of prods with errors	0

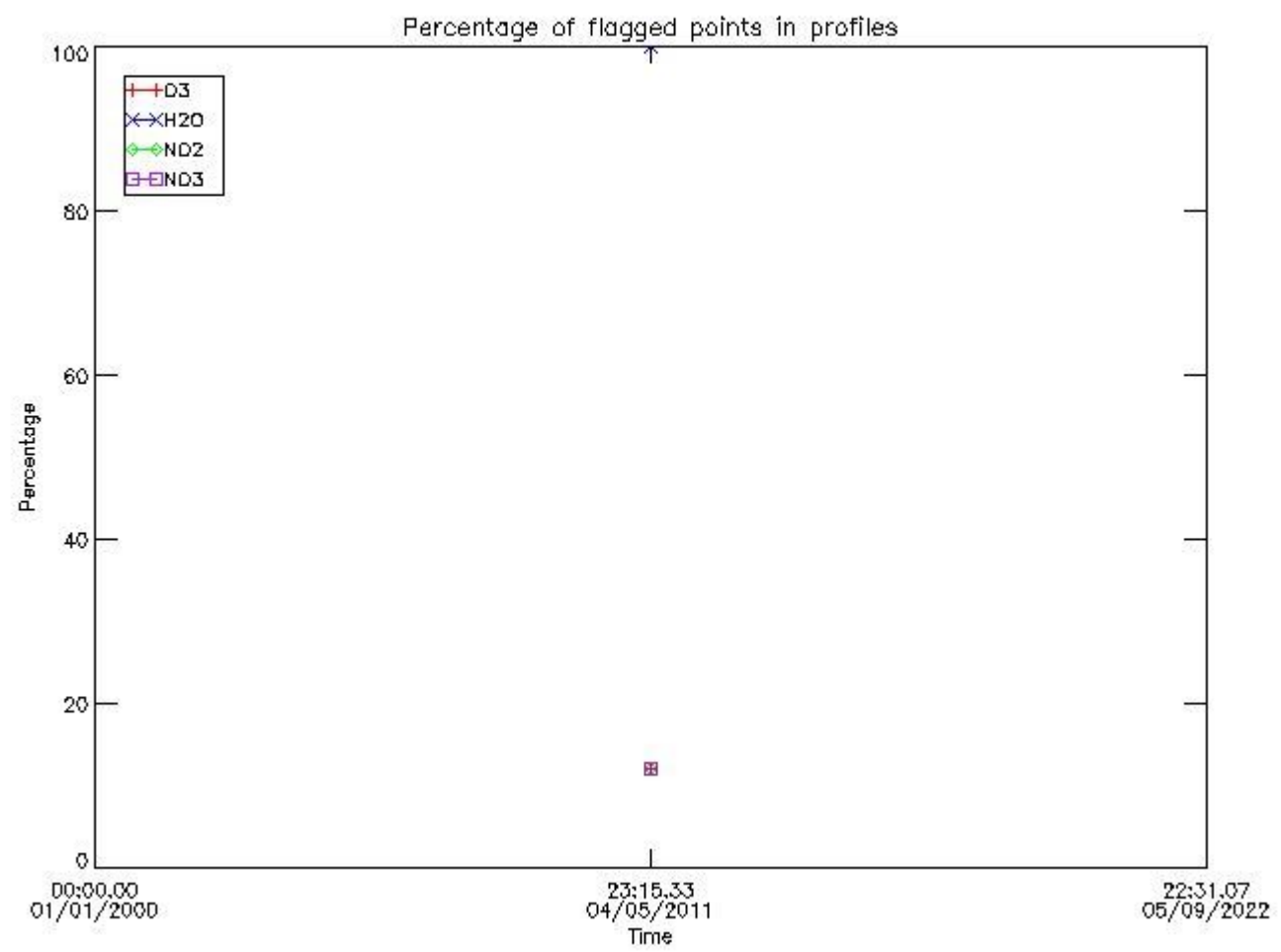
## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20110504_231533_000000423102_00131_47990_3347.N1	04-MAY-2011 23:15:33	Dark	42.000	45	Alp Pav	1.9400	26000.	84	47990	No
2	GOM_NL__2PRFIN20110504_232304_000000433102_00131_47990_3348.N1	04-MAY-2011 23:23:04	Straylight	43.000	141	Bet Ara	2.8400	4600.0	86	47990	No
3	GOM_NL__2PRFIN20110504_232510_000000553102_00131_47990_3349.N1	04-MAY-2011 23:25:10	Straylight	55.000	40	The Sco	1.8590	7100.0	110	47990	No
4	GOM_NL__2PRFIN20110504_232658_000000593102_00131_47990_3350.N1	04-MAY-2011 23:26:58	Straylight	59.000	25	35Lam Sco	1.6200	28000.	118	47990	No
5	GOM_NL__2PRFIN20110504_232949_000000573102_00131_47990_3351.N1	04-MAY-2011 23:29:49	Straylight	56.500	75	26Eps Sco	2.2910	4250.0	113	47990	No
6	GOM_NL__2PRFIN20110504_233321_000000703102_00131_47990_3352.N1	04-MAY-2011 23:33:21	Twilight	70.000	16	21Alp Sco	1.0200	3000.0	140	47990	No
7	GOM_NL__2PRFIN20110504_233523_000000613102_00131_47990_3353.N1	04-MAY-2011 23:35:23	Twilight	60.500	80	7Del Sco	2.3160	30000.	121	47990	No
8	GOM_NL__2PRFIN20110504_233822_000000433102_00131_47990_3354.N1	04-MAY-2011 23:38:22	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	47990	No
9	GOM_NL__2PRFIN20110504_234029_000000463102_00131_47990_3355.N1	04-MAY-2011 23:40:29	Bright	45.500	104	27Bet Lib	2.6140	13100.	91	47990	No
10	GOM_NL__2PRFIN20110504_234847_000000373102_00131_47990_3356.N1	04-MAY-2011 23:48:47	Bright	37.000	111	8Eta Boo	2.6800	6000.0	74	47990	No
11	GOM_NL__2PRFIN20110504_235206_000000423102_00131_47990_3357.N1	04-MAY-2011 23:52:06	Bright	42.000	83		2.3780	11000.	84	47990	No
12	GOM_NL__2PRFIN20110504_235510_000000413102_00131_47990_3358.N1	04-MAY-2011 23:55:10	Bright	41.000	180	27Gam Boo	3.0400	8000.0	82	47990	No
13	GOM_NL__2PRFIN20110504_235738_000000383102_00131_47990_3359.N1	04-MAY-2011 23:57:38	Bright	37.500	39	85Eta UMa	1.8540	24000.	75	47990	No

## 3. Quality information per product

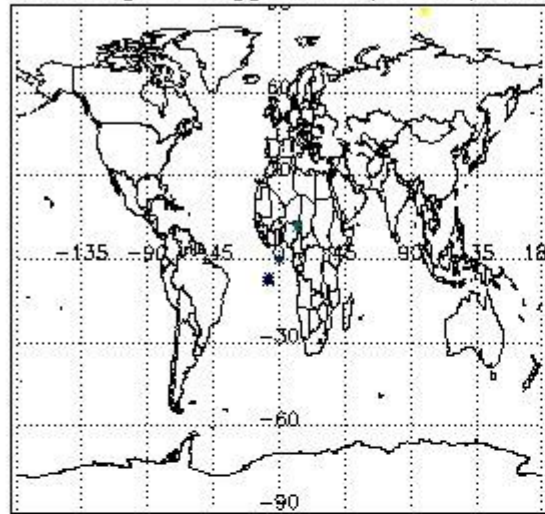
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

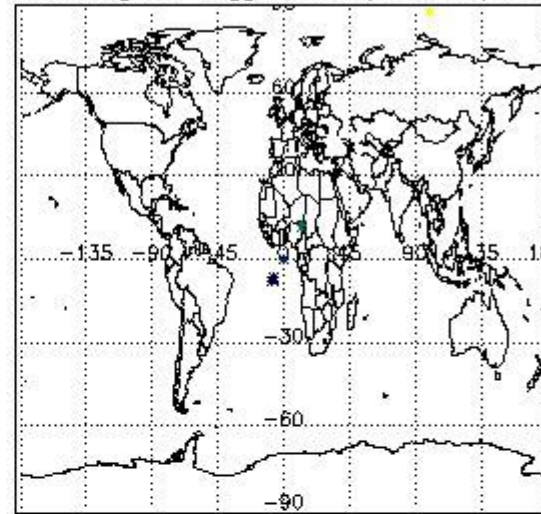


*3.2 Plot quality information per product (world map)*

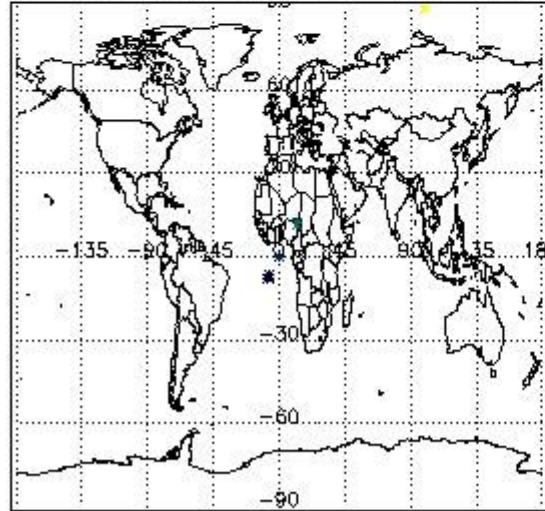
Percentage of flagged data per O3 profile



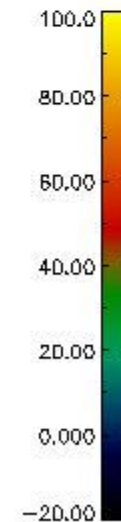
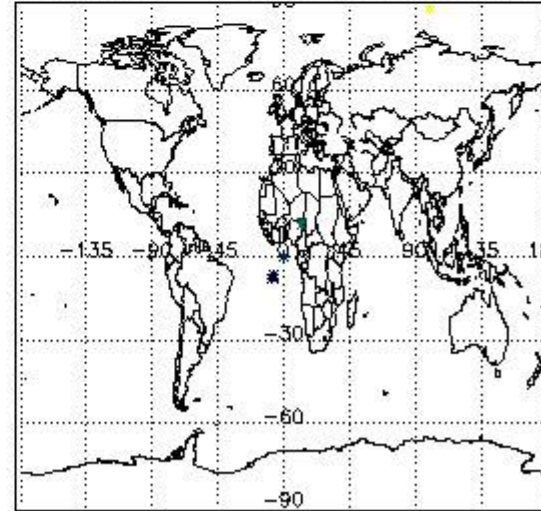
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

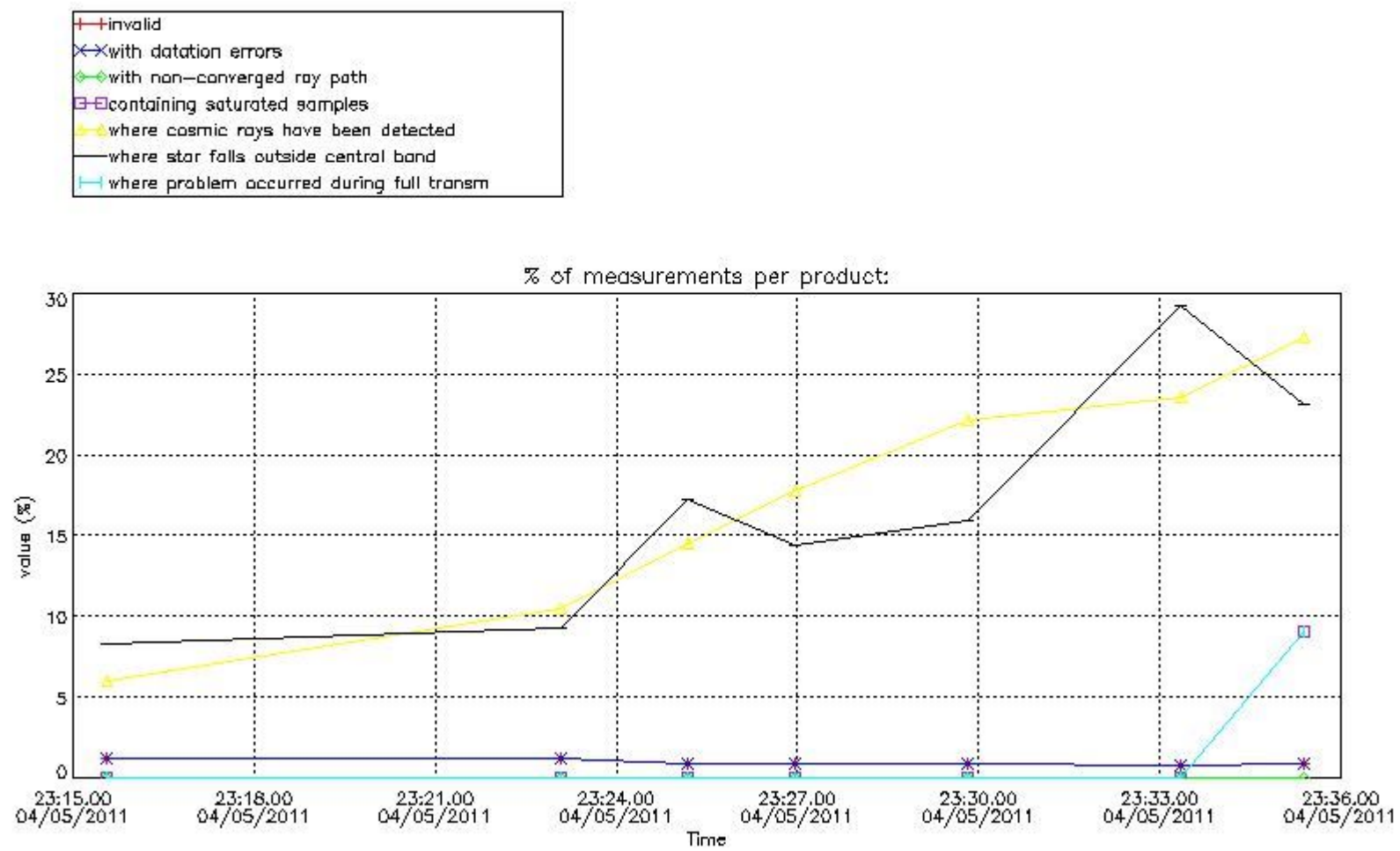


#### 4. Level 1 quality information per product

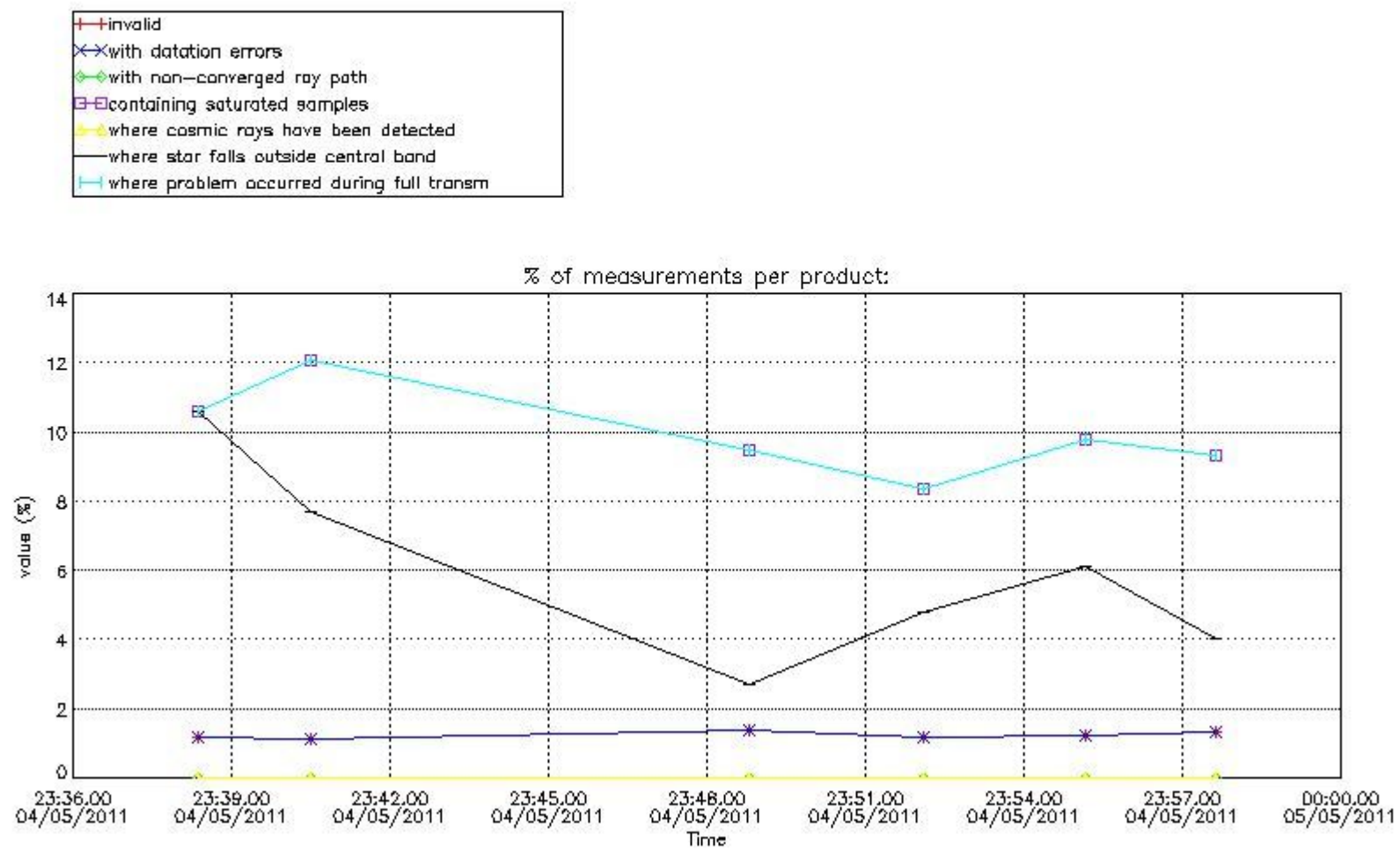
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



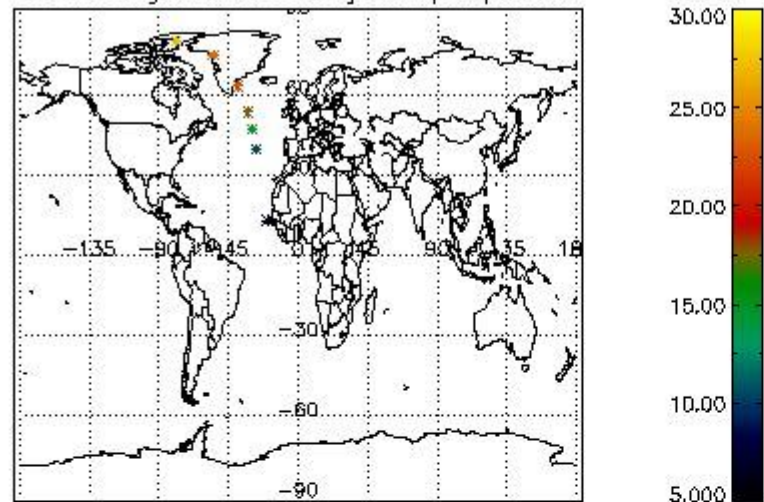
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



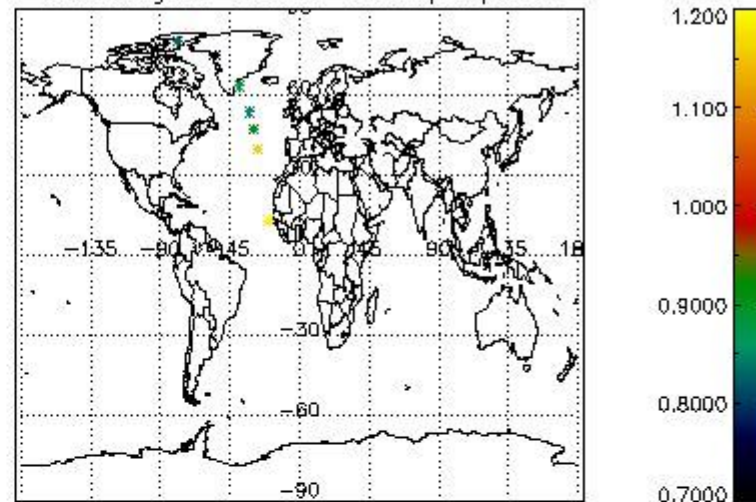
4.2 Plot quality information per product coming from level 1b processing (world map)

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

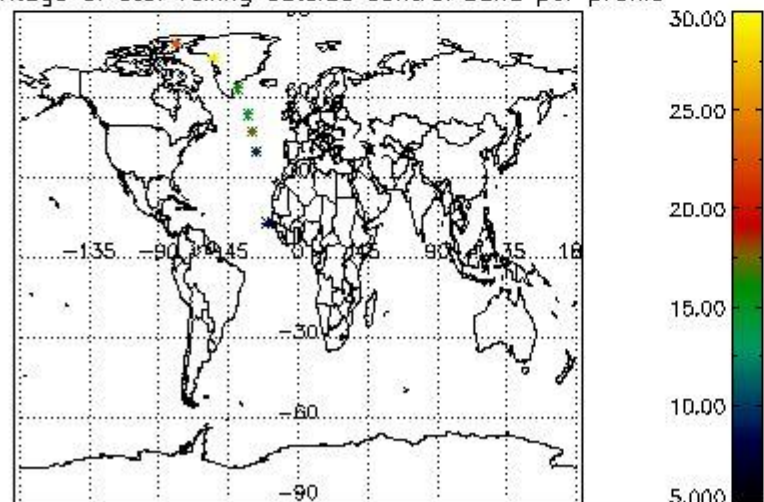
Percentage of cosmic ray hits per profile



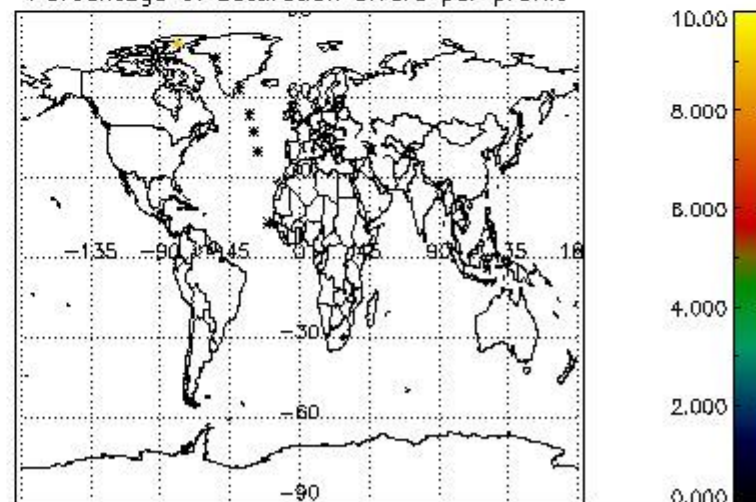
Percentage of datation errors per profile



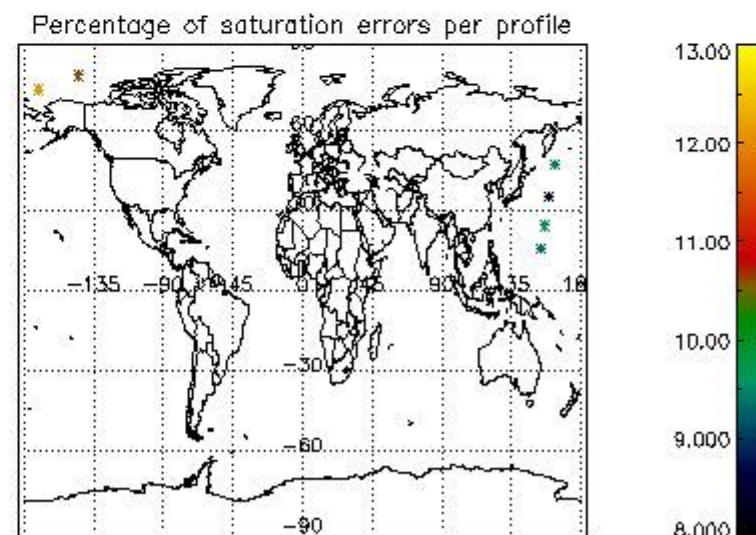
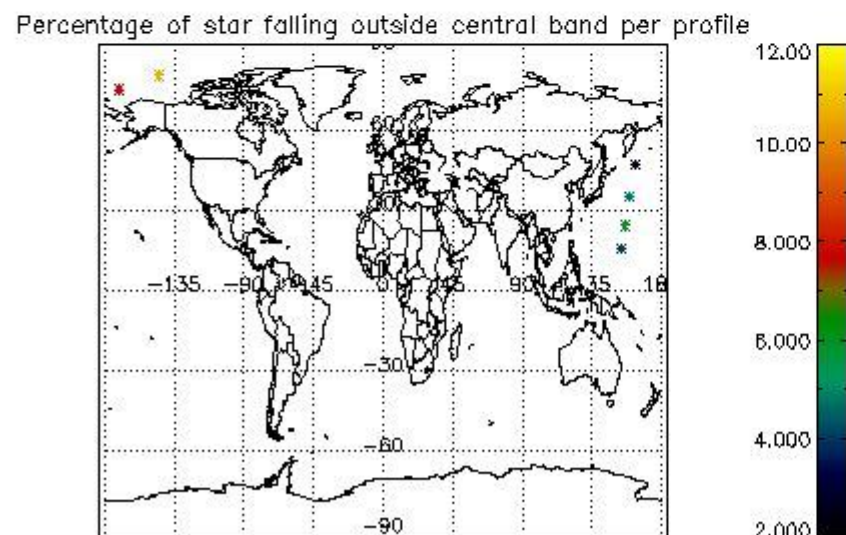
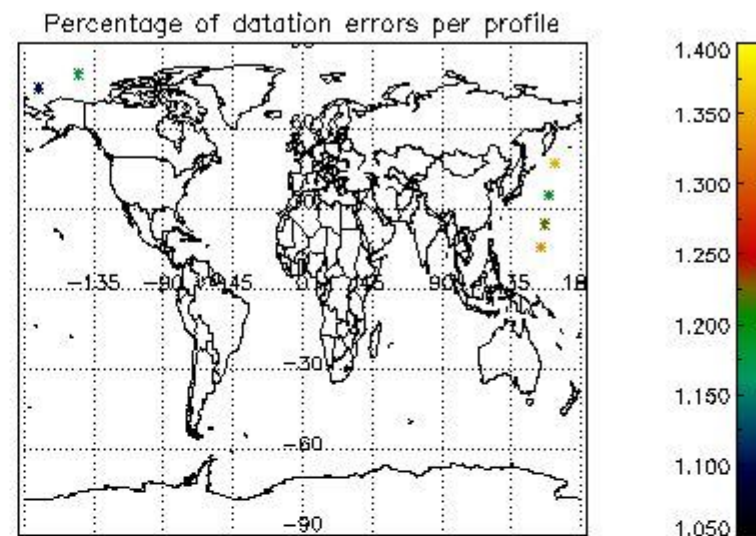
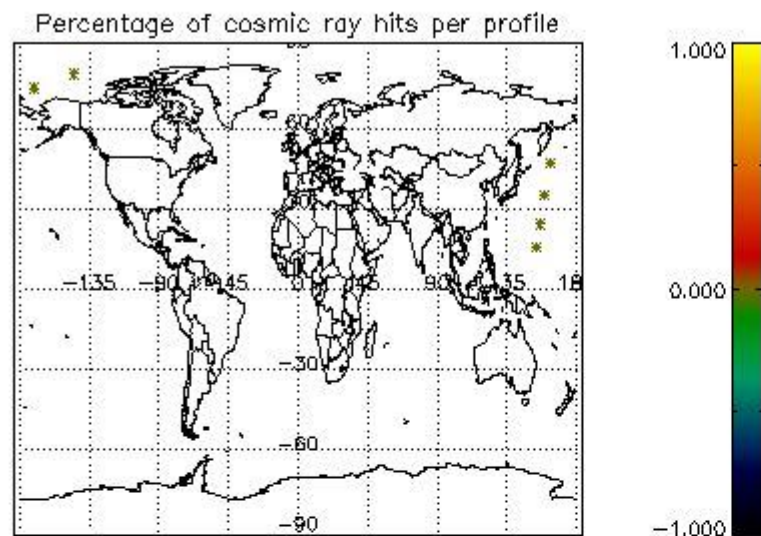
Percentage of star falling outside central band per profile



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.

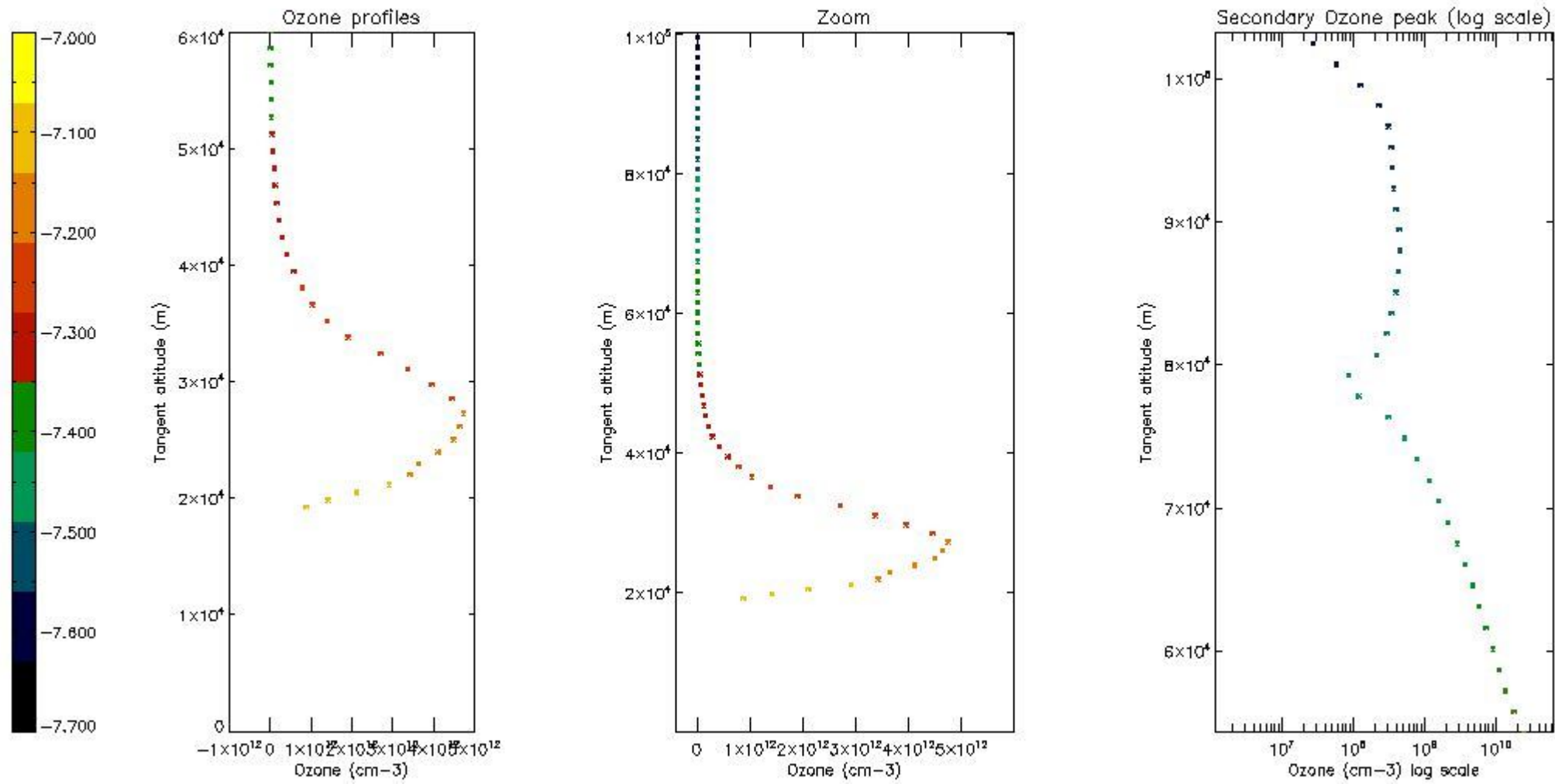
Criteria	% of total production
All STD	7
STD < 20	5



STD < 10	4
STD < 5	3

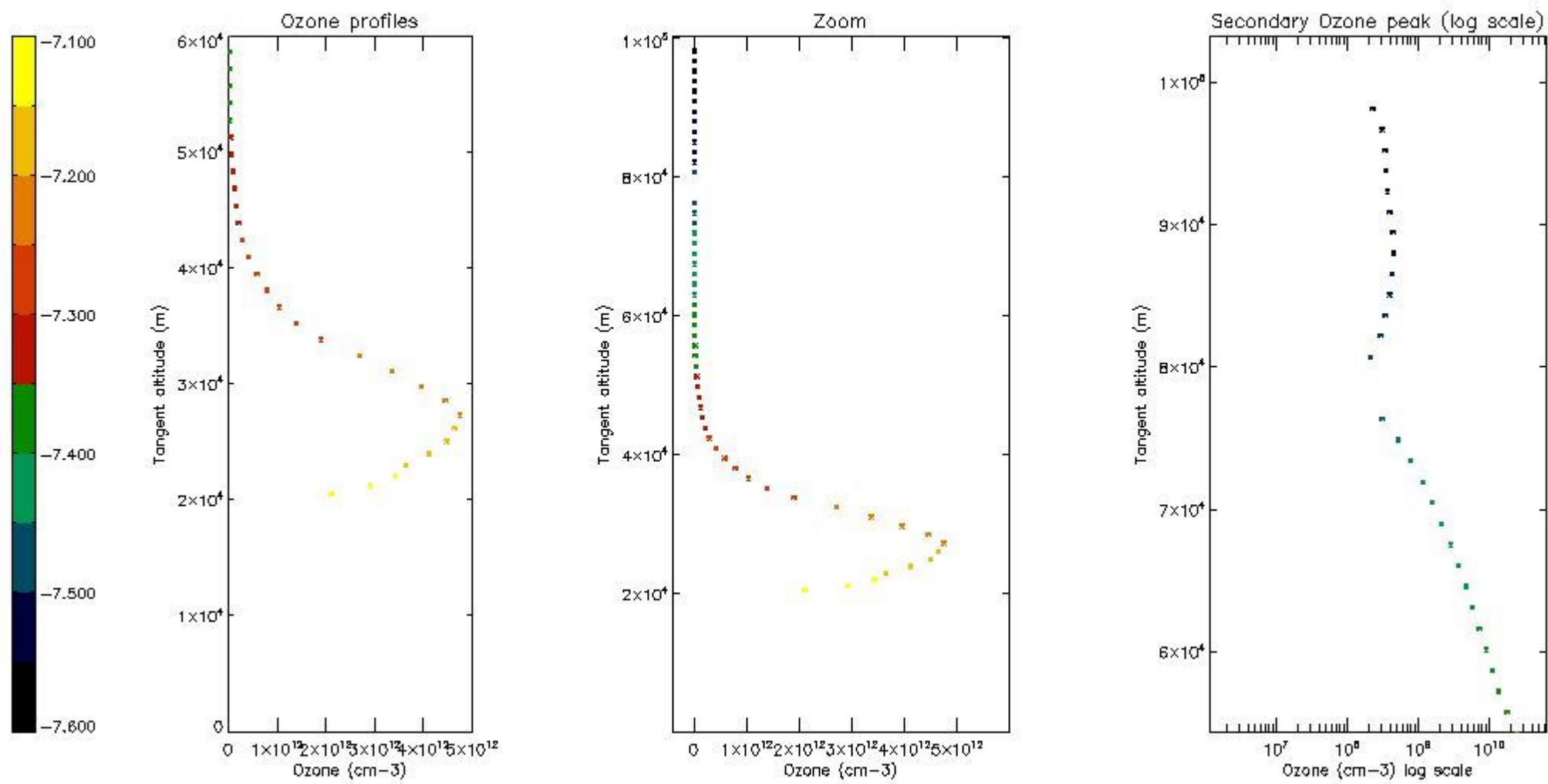
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



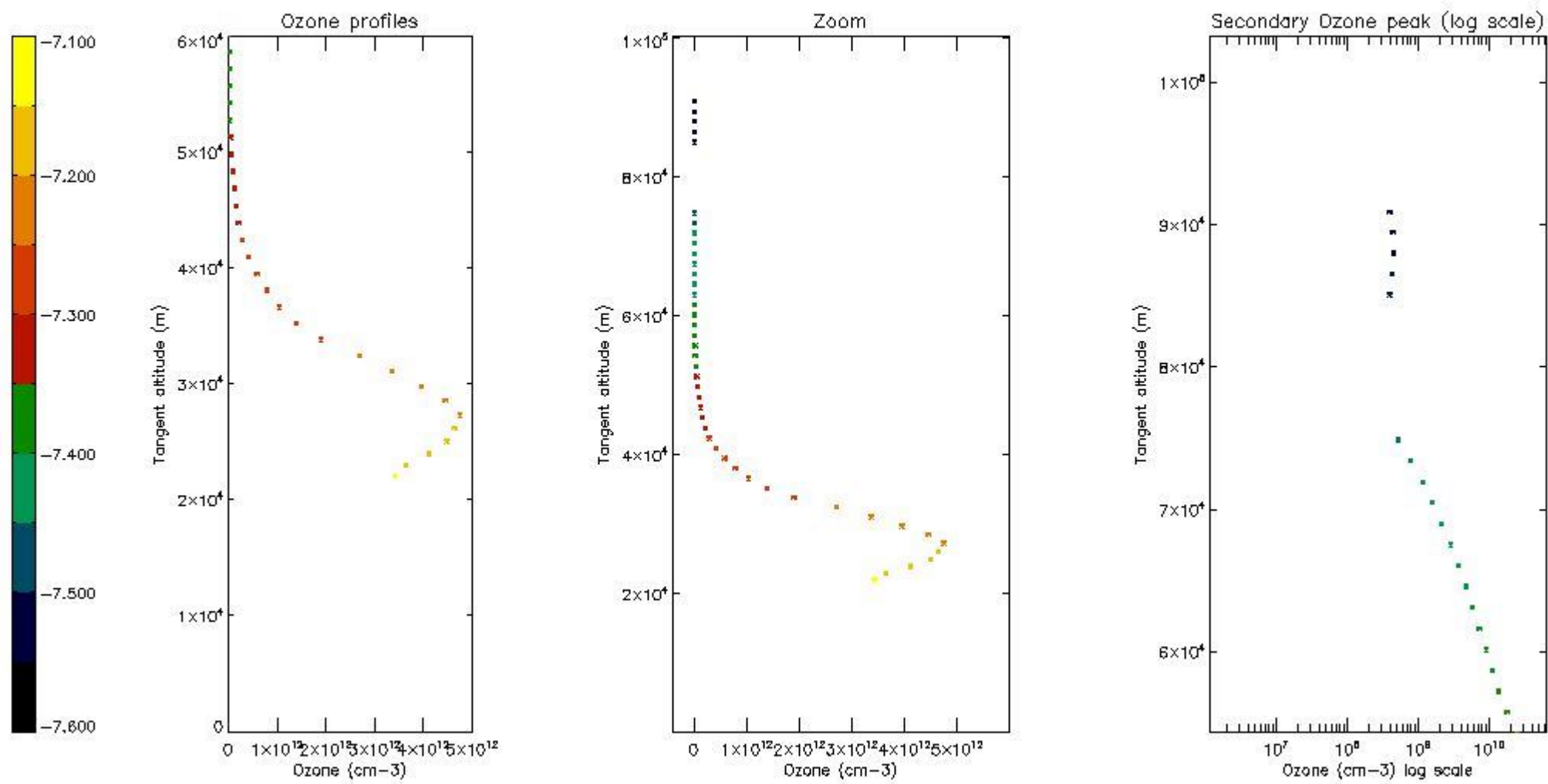
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



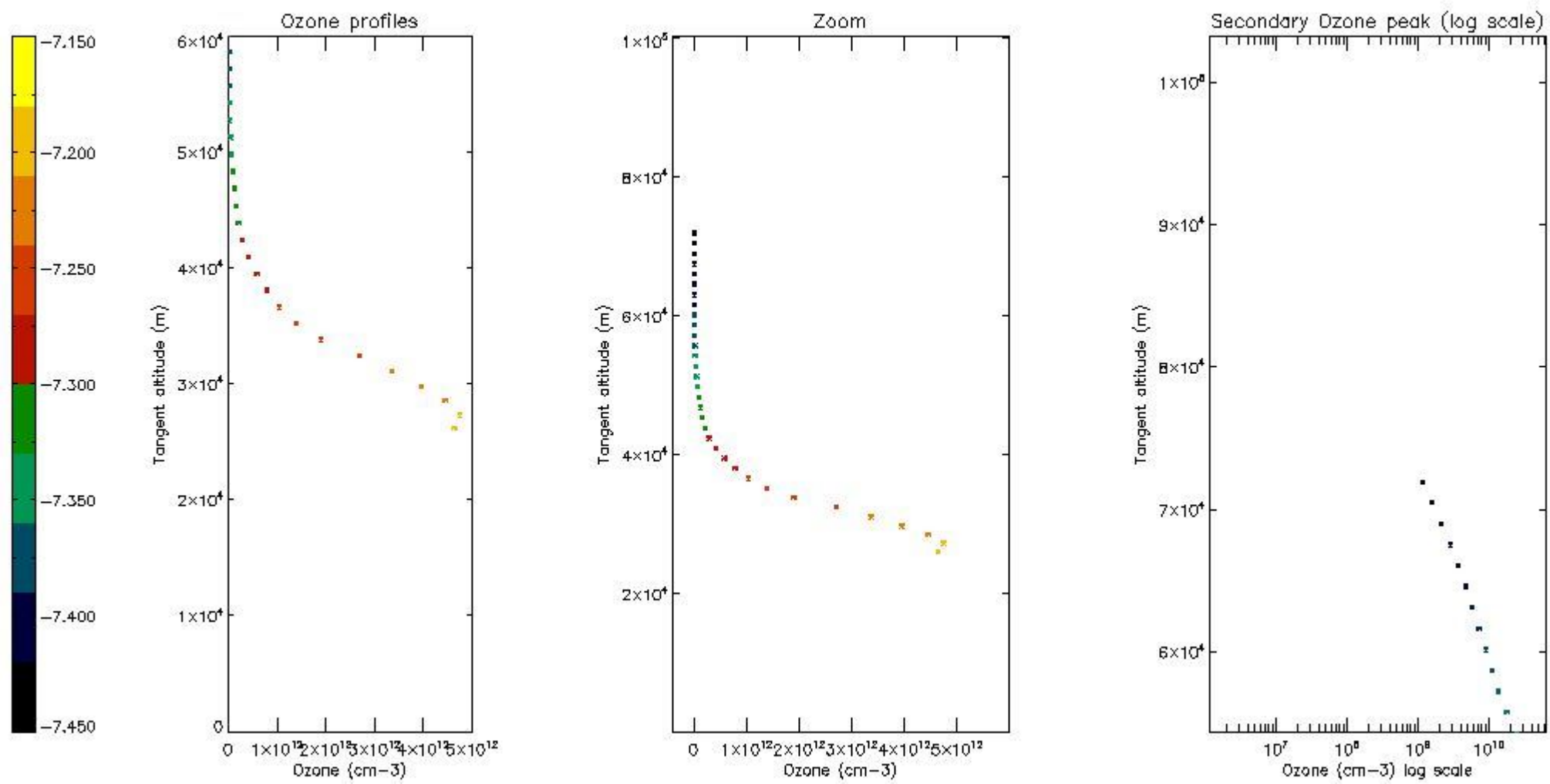
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



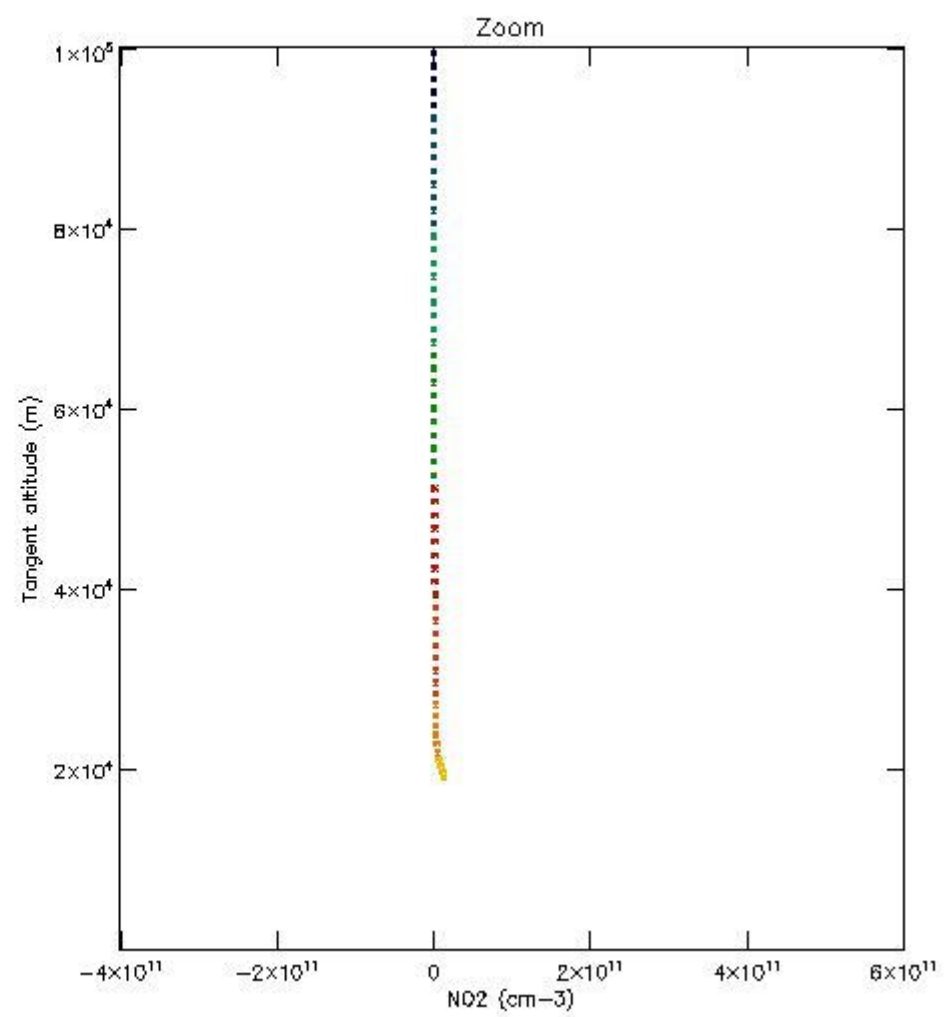
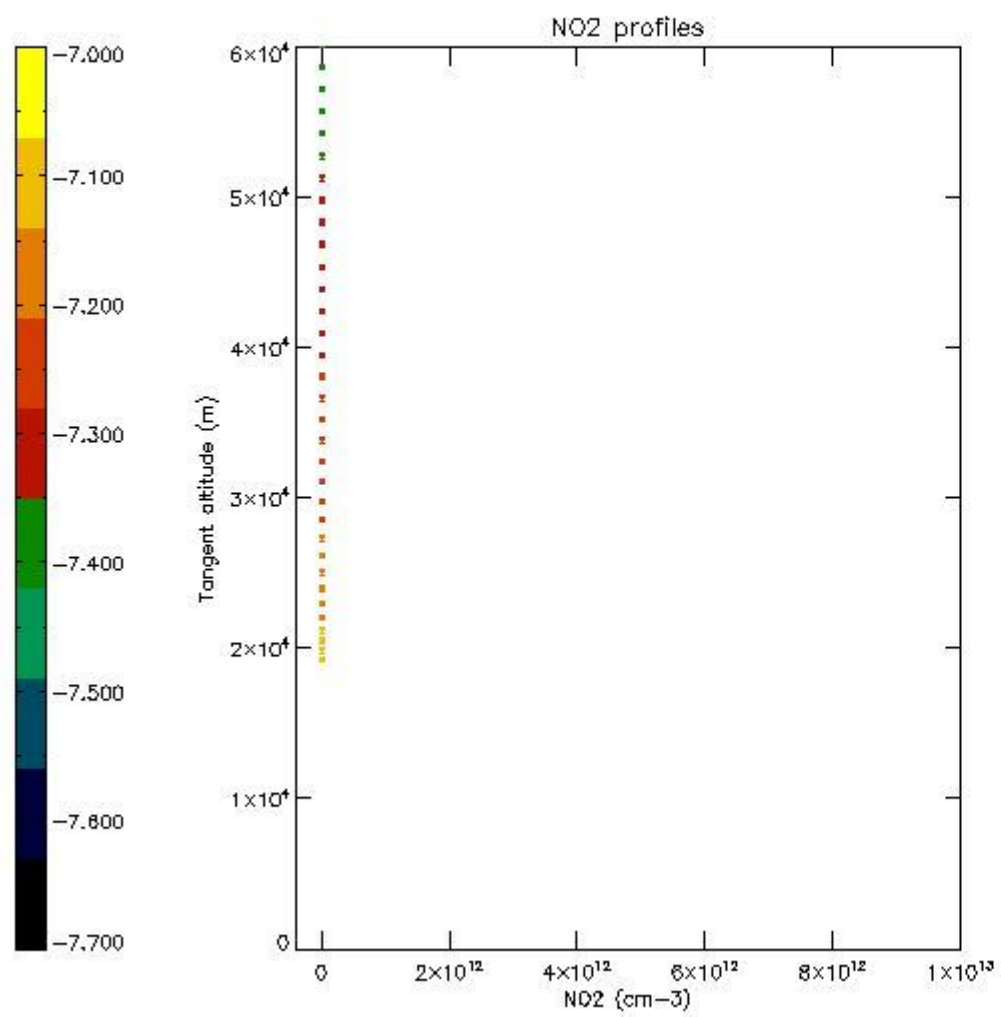
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



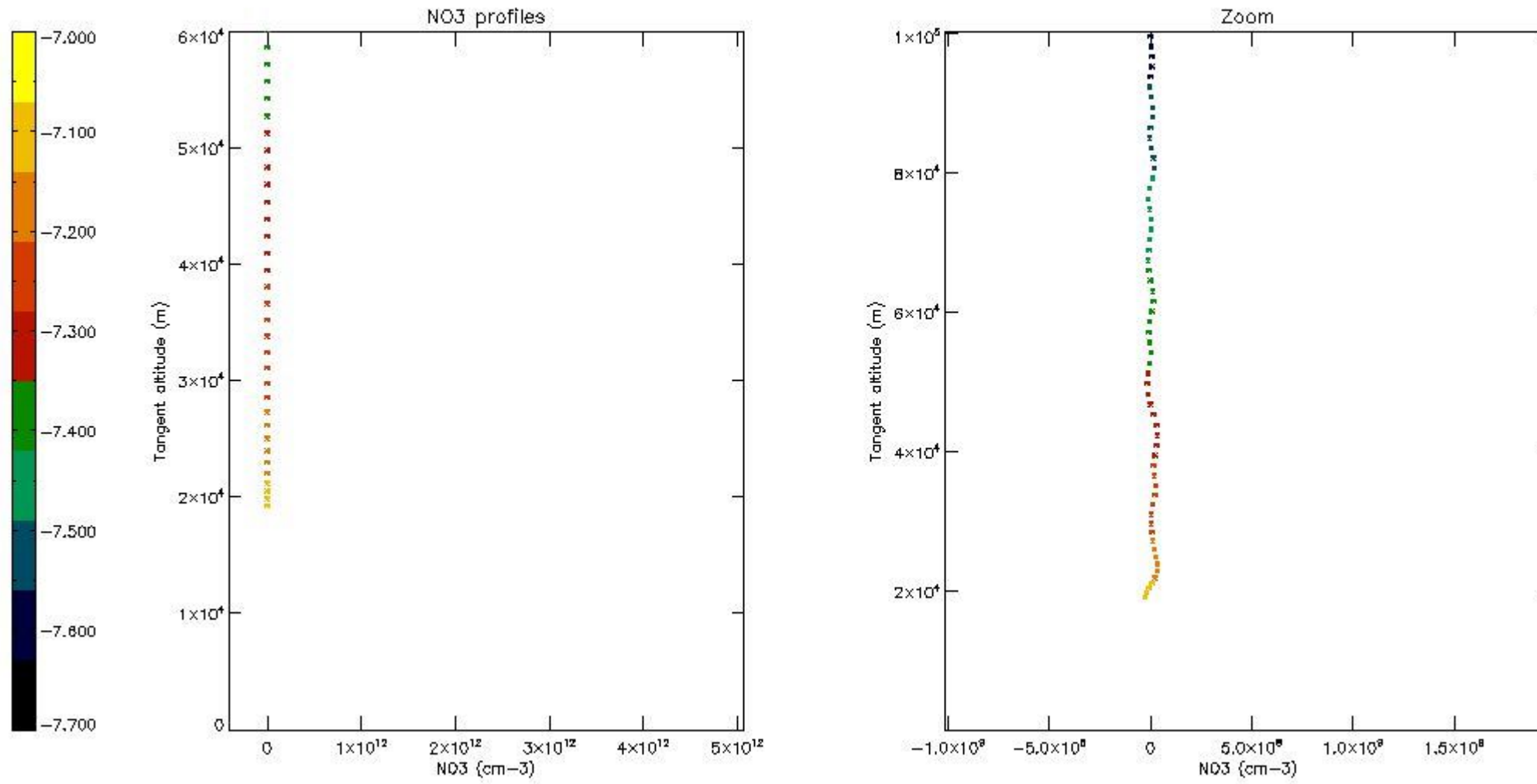
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



## 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	04-MAY-2011 23:15:33
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-MAY-2011 23:15:33
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-MAY-2011 23:15:33

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

#### [3.2 Plot of level 2 quality information per product \(world map\)](#)

### [4. Level 1 Quality information per product \(stored on level 2 products\)](#)

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

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

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

#### [4.2 Plot of level 1 quality information per product \(world map\)](#)

##### [4.2.1 Plot of level 1 quality information per product \(world map\): ASCENDING](#)

##### [4.2.2 Plot of level 1 quality information per product \(world map\): DESCENDING](#)

### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

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

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

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

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

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

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

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

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

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

This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

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Data source version	GOMOS/6.01
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Store outputs in DB	Yes
Nb of level 2 prods	13
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

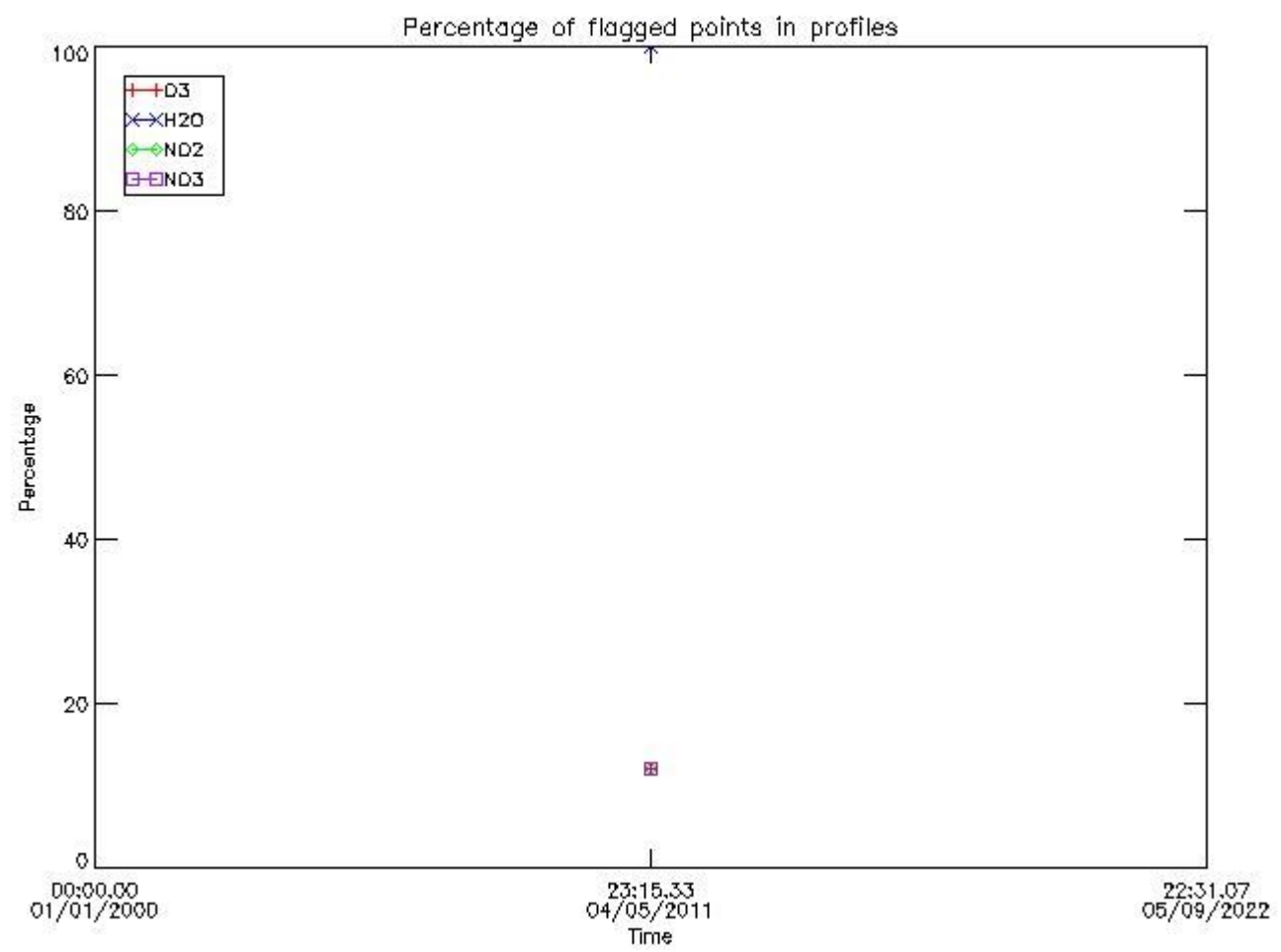
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
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7	GOM_NL__2PRFIN20110504_233523_000000613102_00131_47990_3353.N1	04-MAY-2011 23:35:23	Twilight	60.500	80	7Del Sco	2.3160	30000.	121	47990	No
8	GOM_NL__2PRFIN20110504_233822_000000433102_00131_47990_3354.N1	04-MAY-2011 23:38:22	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	47990	No
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10	GOM_NL__2PRFIN20110504_234847_000000373102_00131_47990_3356.N1	04-MAY-2011 23:48:47	Bright	37.000	111	8Eta Boo	2.6800	6000.0	74	47990	No
11	GOM_NL__2PRFIN20110504_235206_000000423102_00131_47990_3357.N1	04-MAY-2011 23:52:06	Bright	42.000	83		2.3780	11000.	84	47990	No
12	GOM_NL__2PRFIN20110504_235510_000000413102_00131_47990_3358.N1	04-MAY-2011 23:55:10	Bright	41.000	180	27Gam Boo	3.0400	8000.0	82	47990	No
13	GOM_NL__2PRFIN20110504_235738_000000383102_00131_47990_3359.N1	04-MAY-2011 23:57:38	Bright	37.500	39	85Eta UMa	1.8540	24000.	75	47990	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.

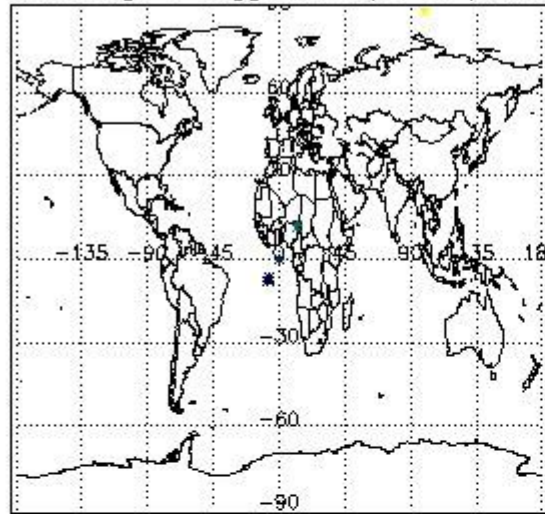
### 3.1 Plot quality information per product (time dependant)



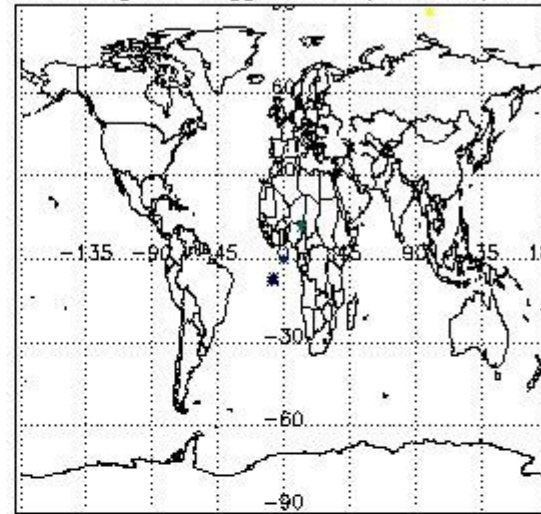


*3.2 Plot quality information per product (world map)*

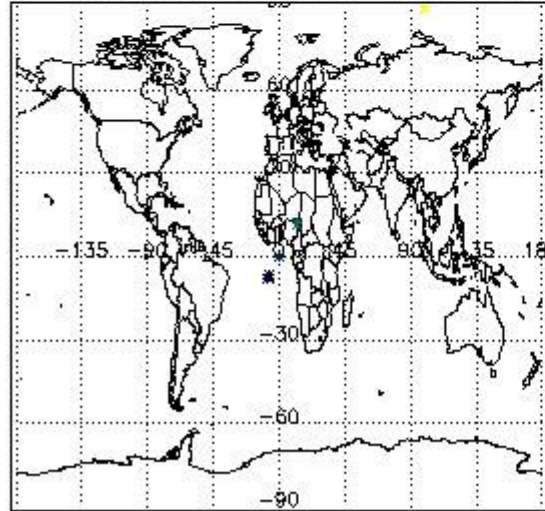
Percentage of flagged data per O3 profile



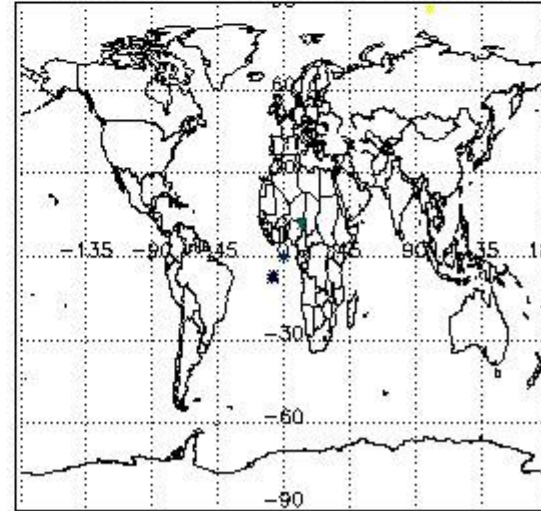
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

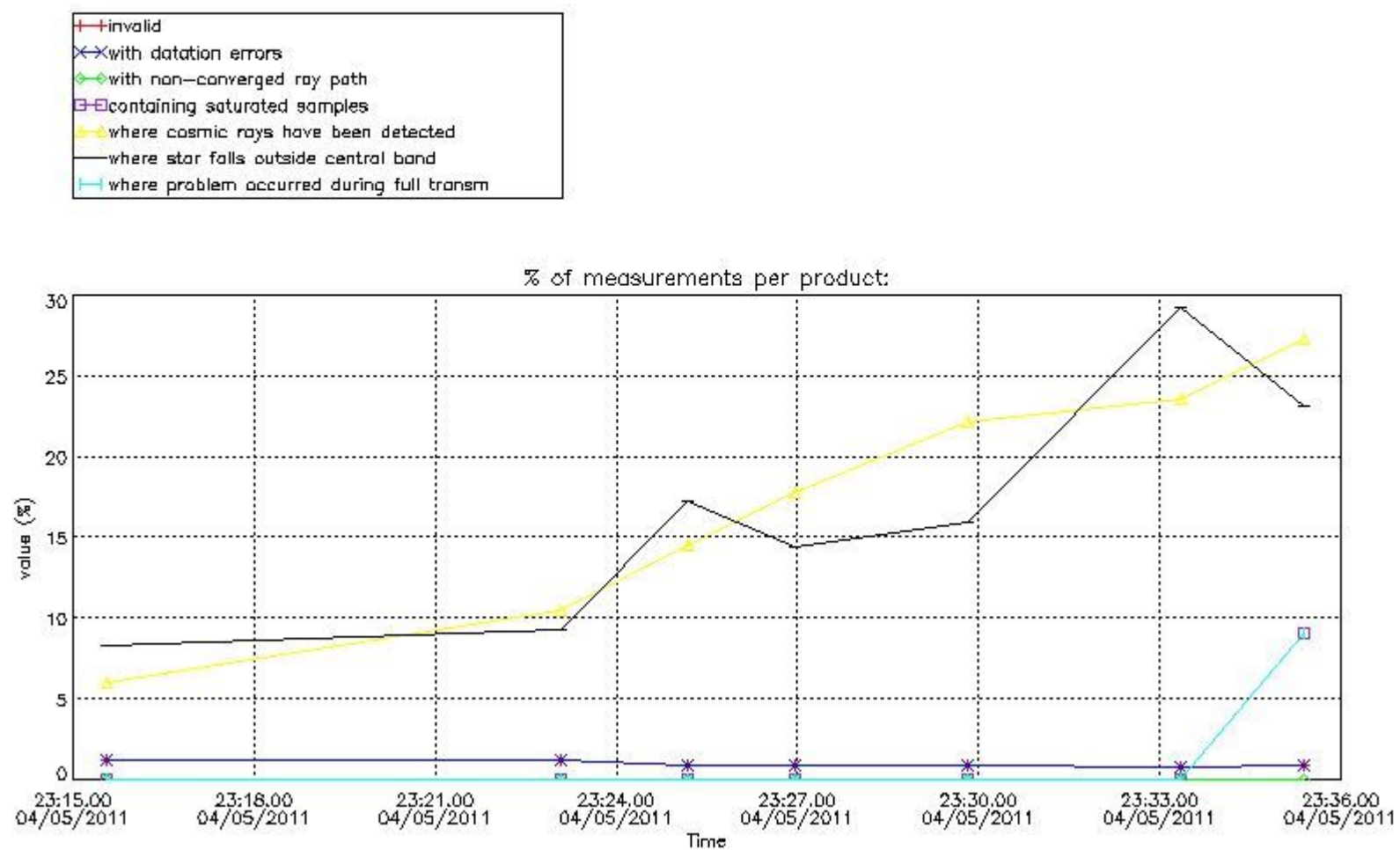


#### 4. Level 1 quality information per product

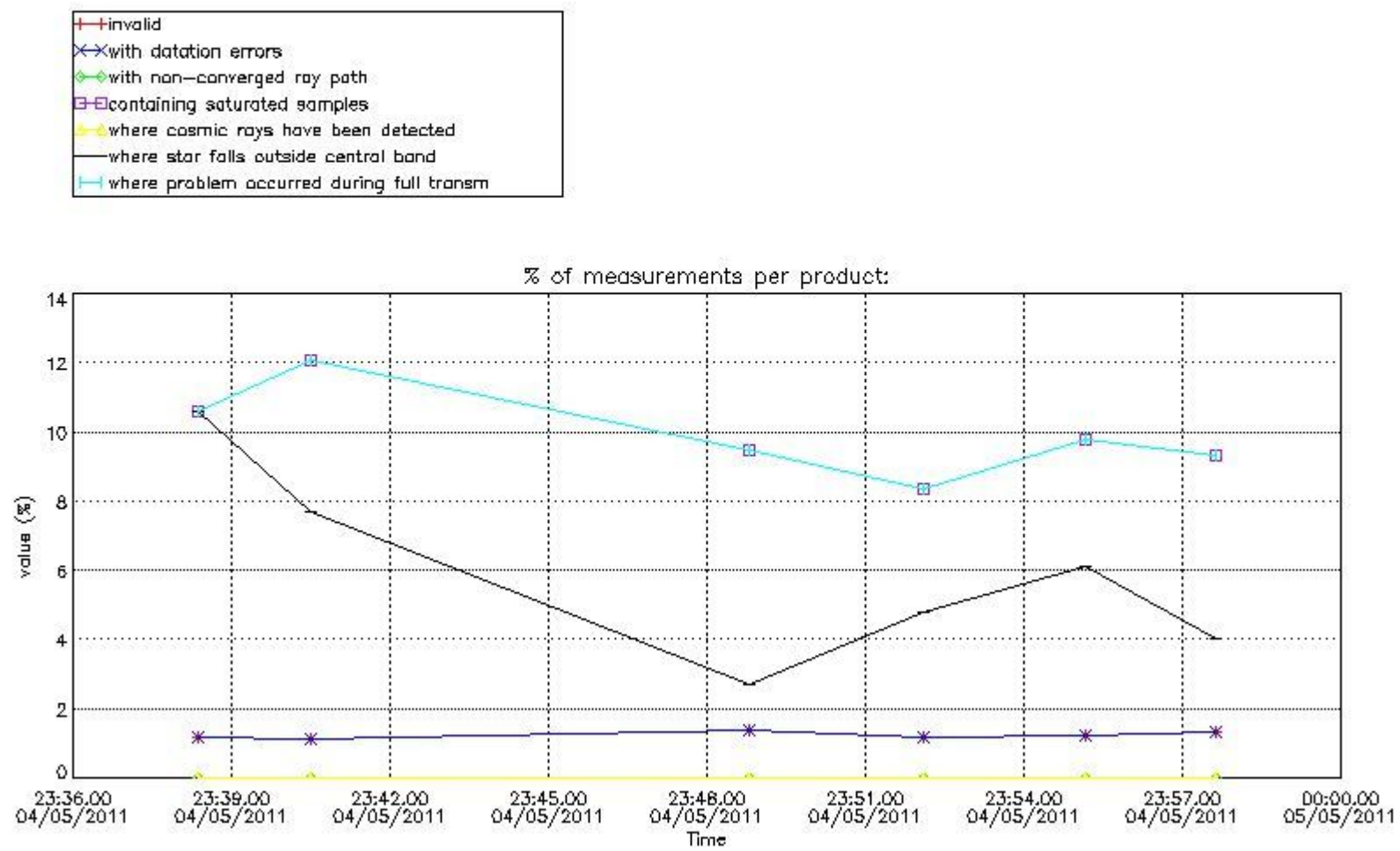
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



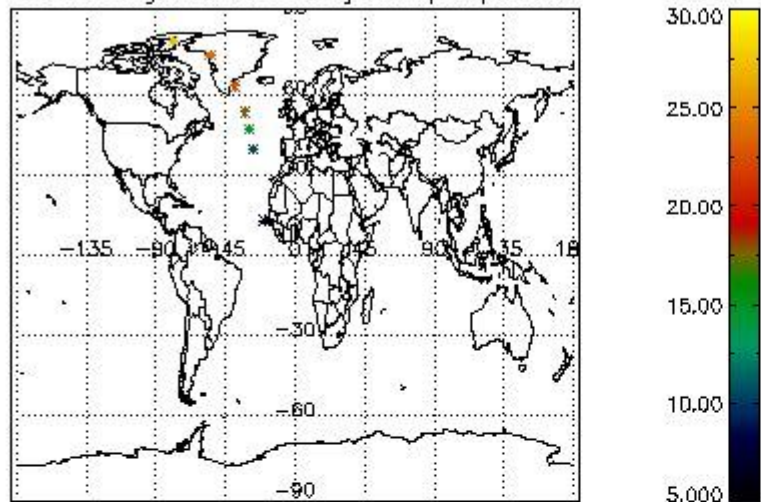
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



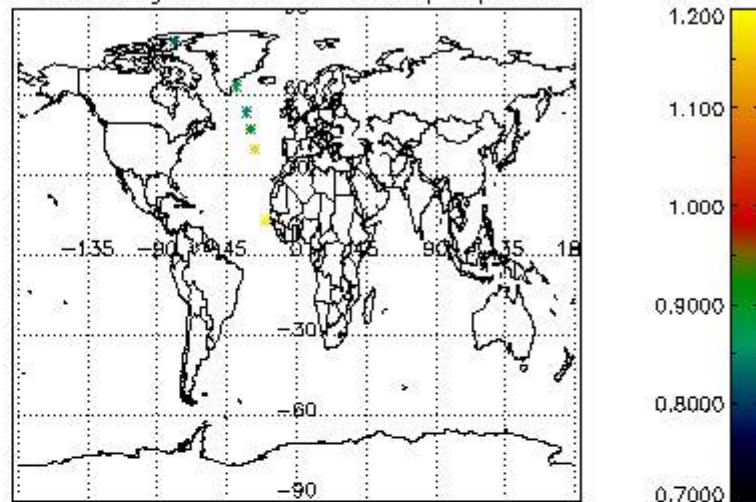
4.2 Plot quality information per product coming from level 1b processing (world map)

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

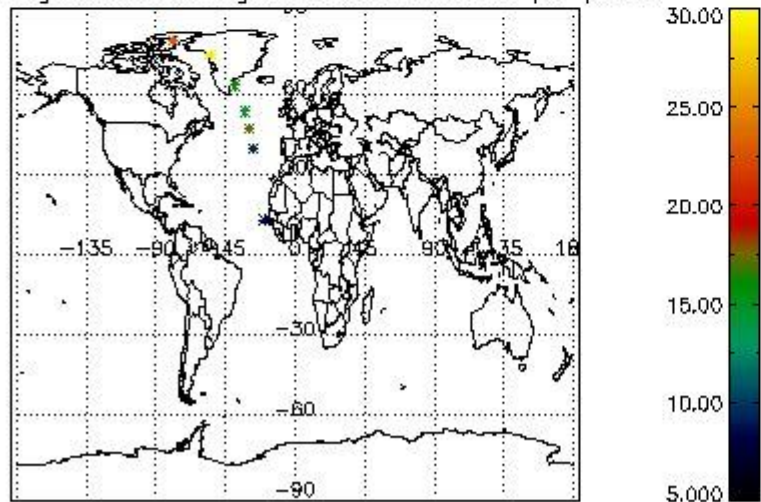
Percentage of cosmic ray hits per profile



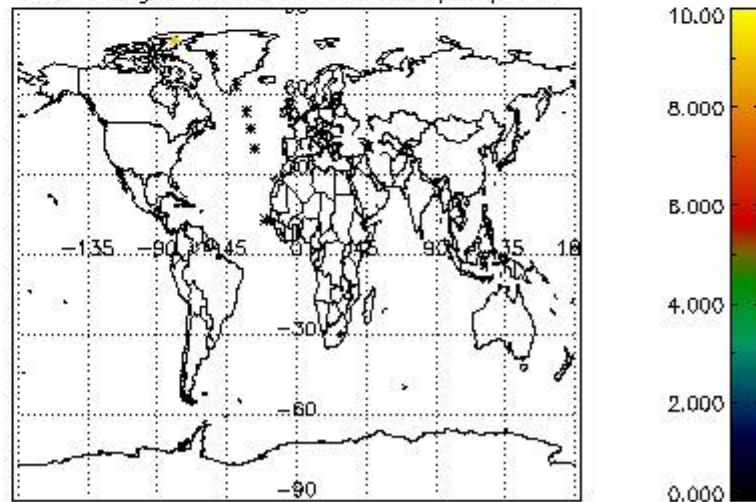
Percentage of datation errors per profile



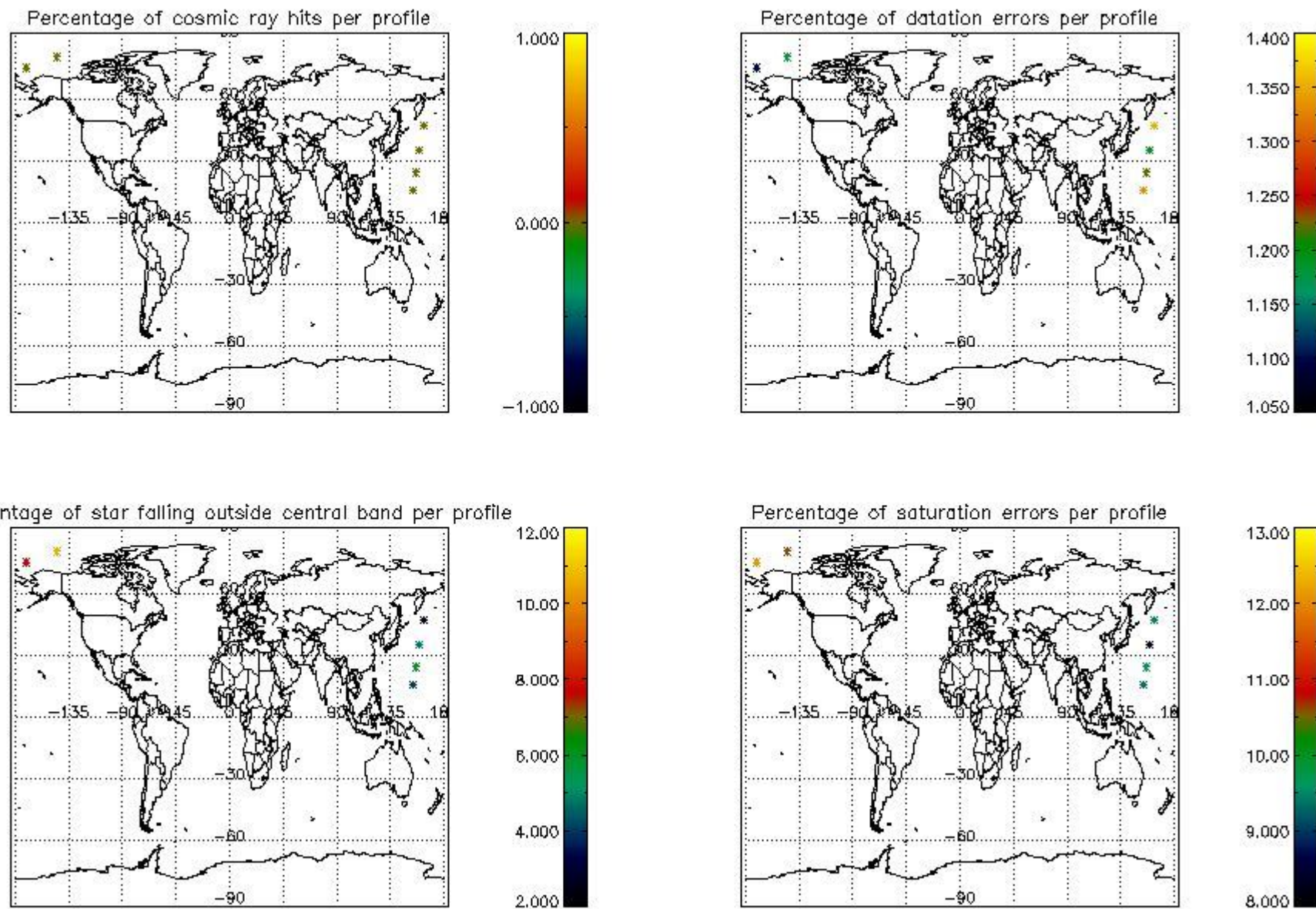
Percentage of star falling outside central band per profile



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

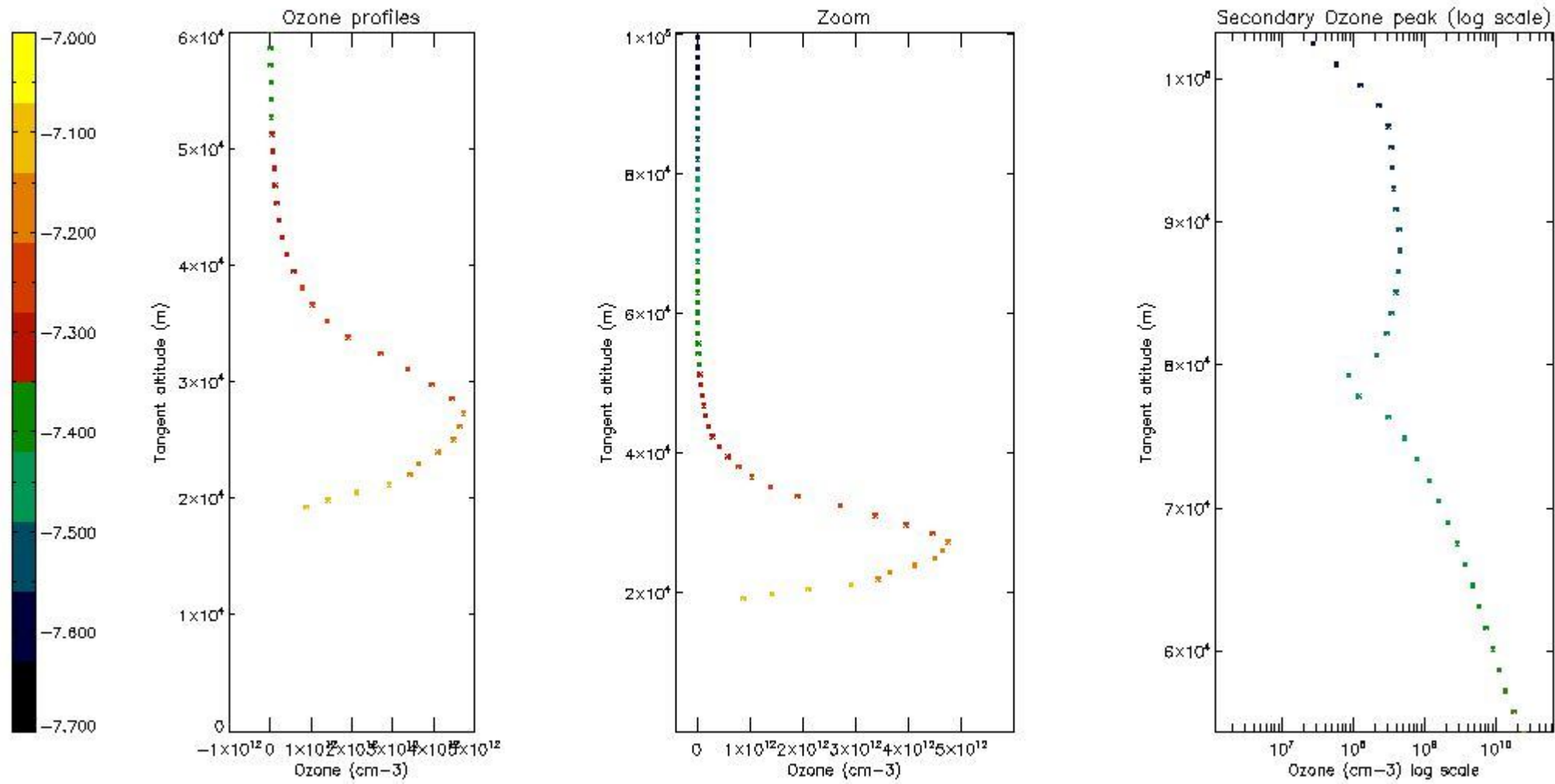
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	7
STD < 20	5

STD < 10	4
STD < 5	3

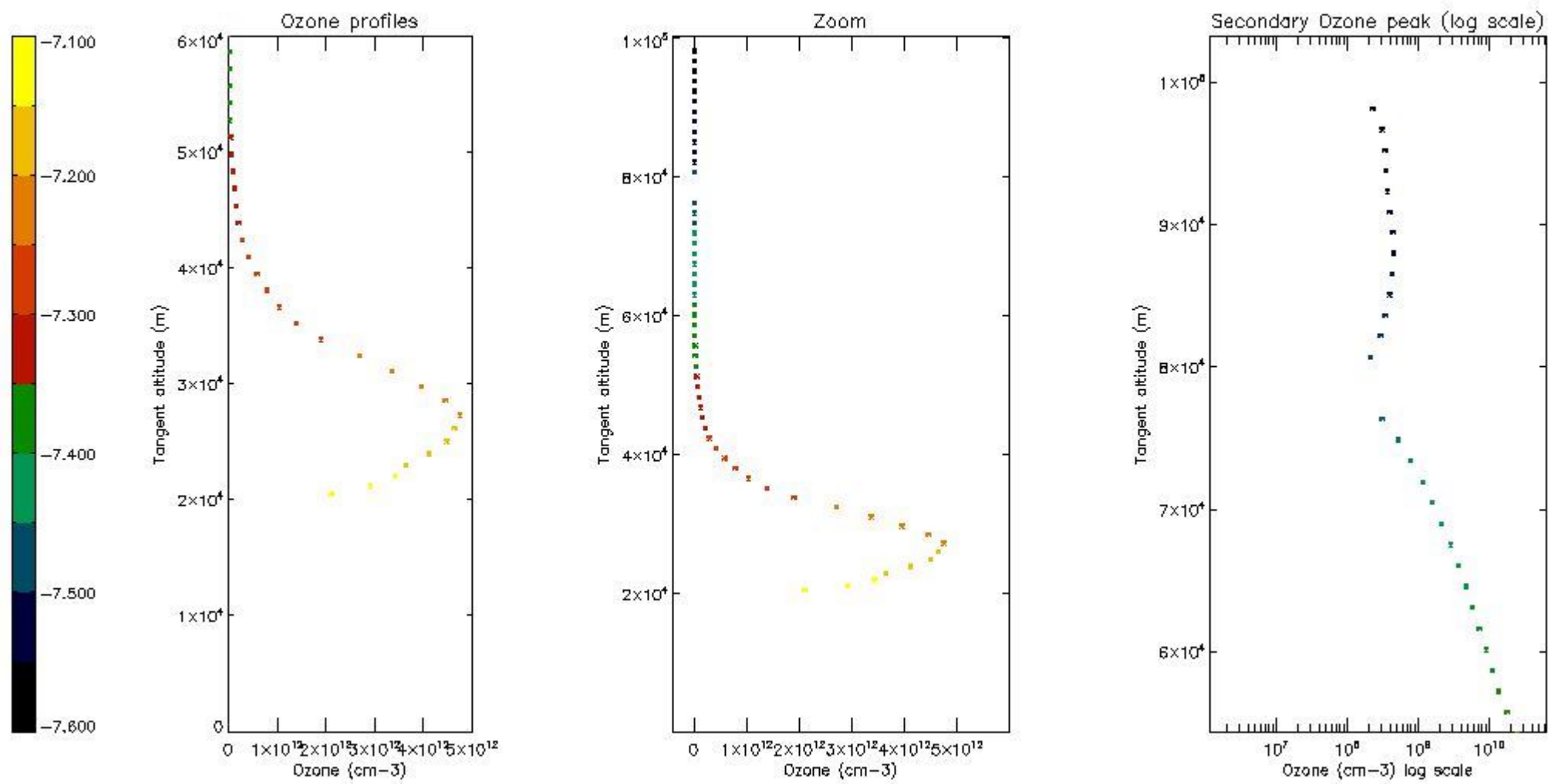
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

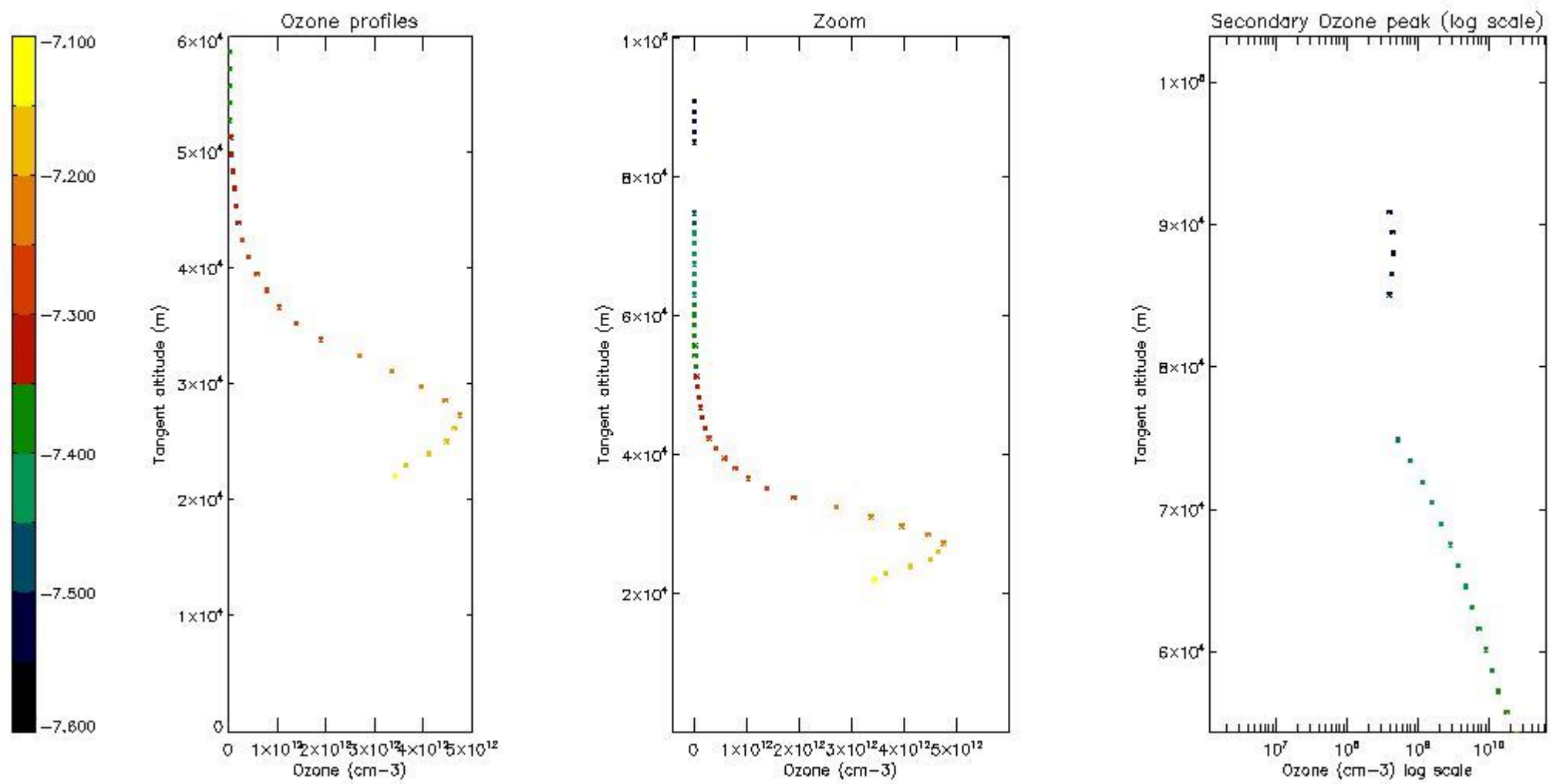
The colorbar represents the latitude.



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

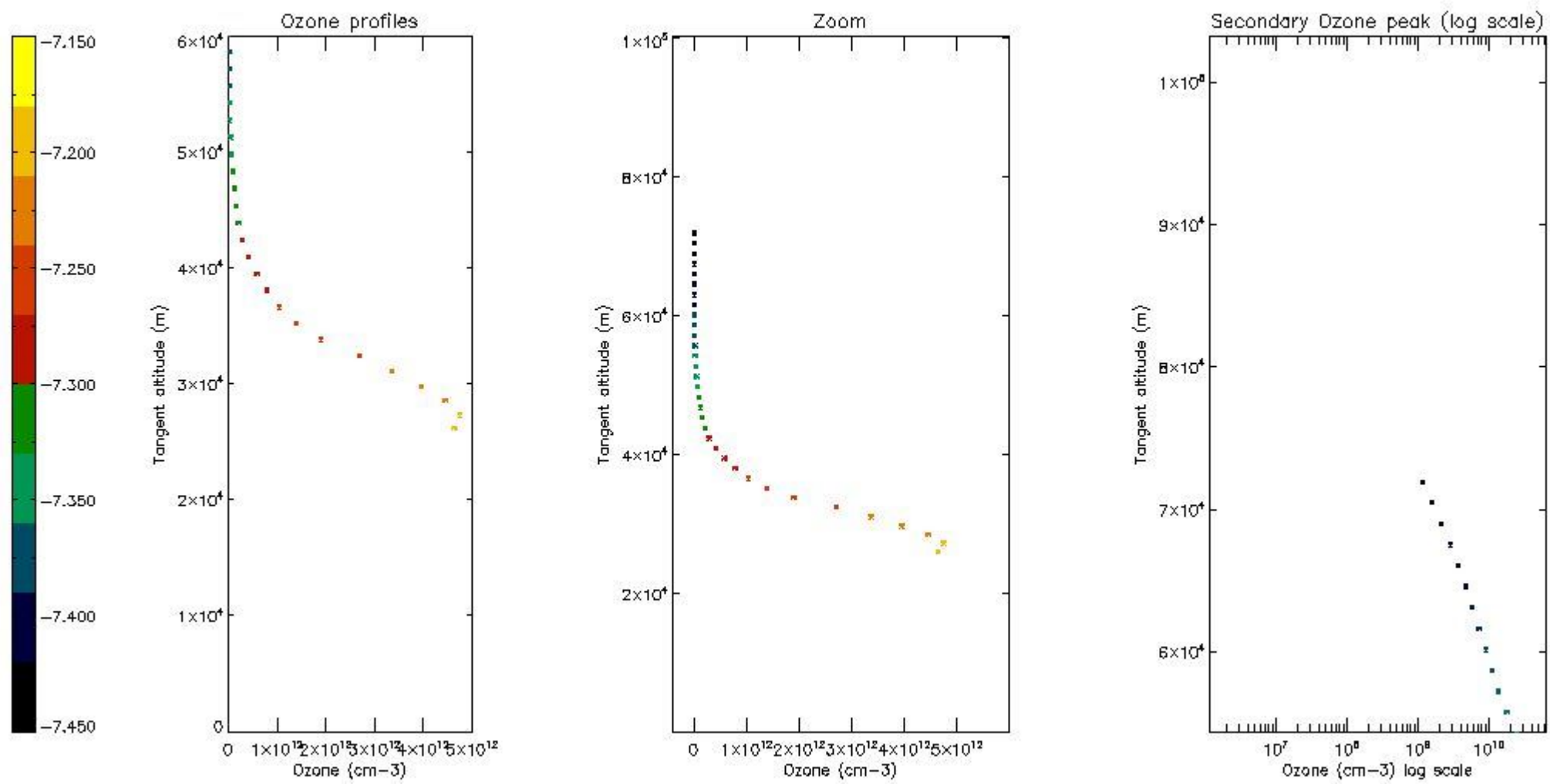
The colorbar represents the latitude.





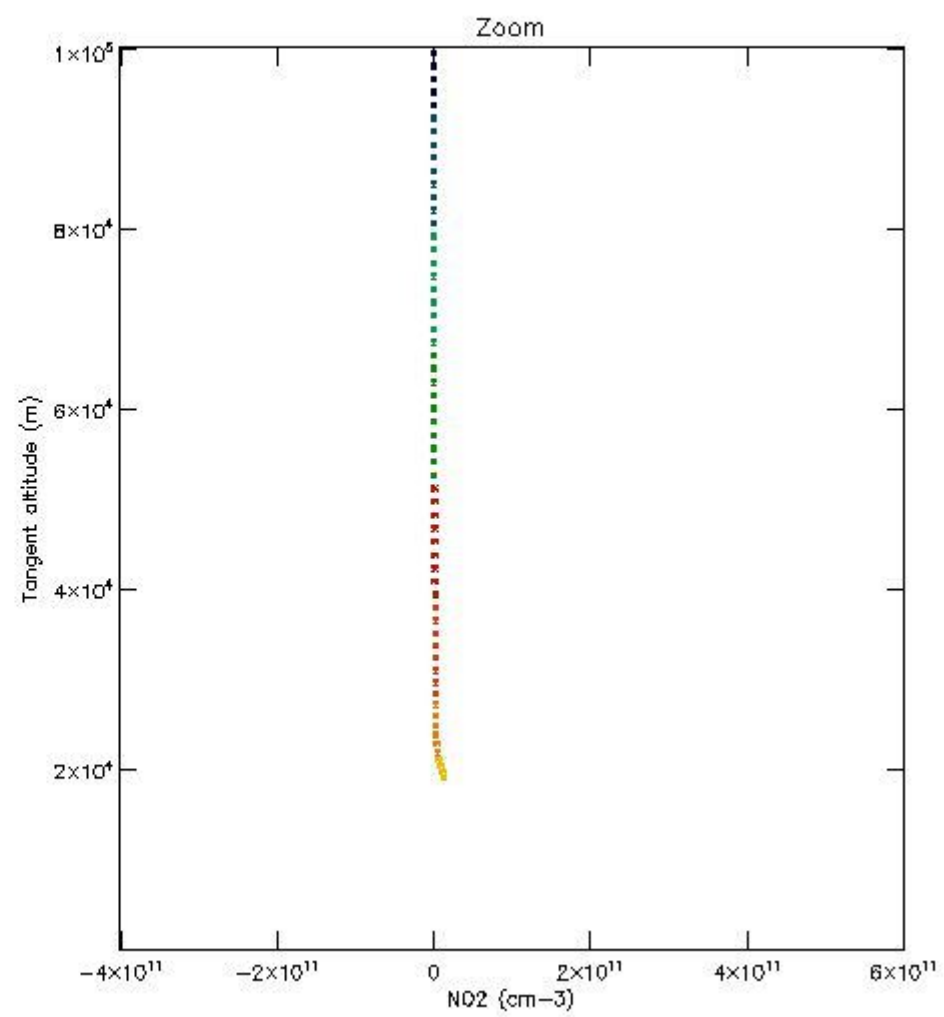
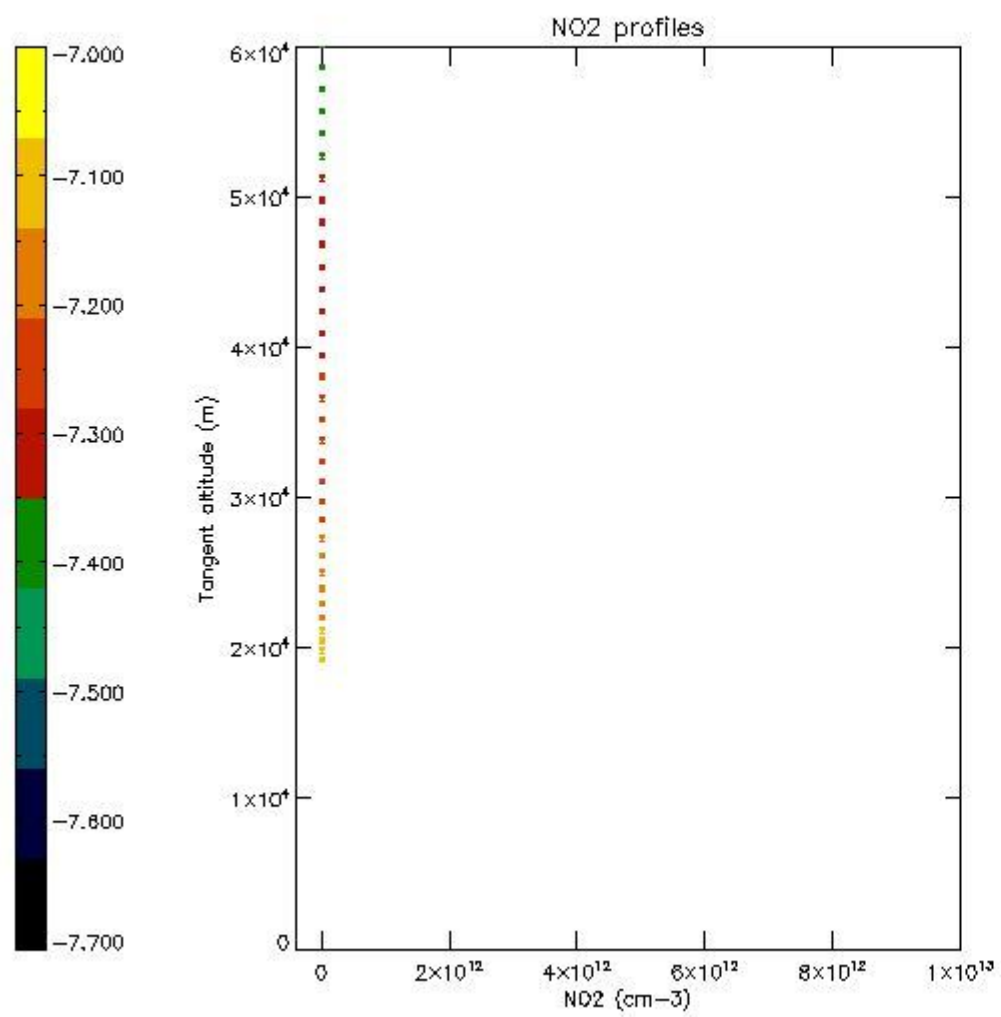
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



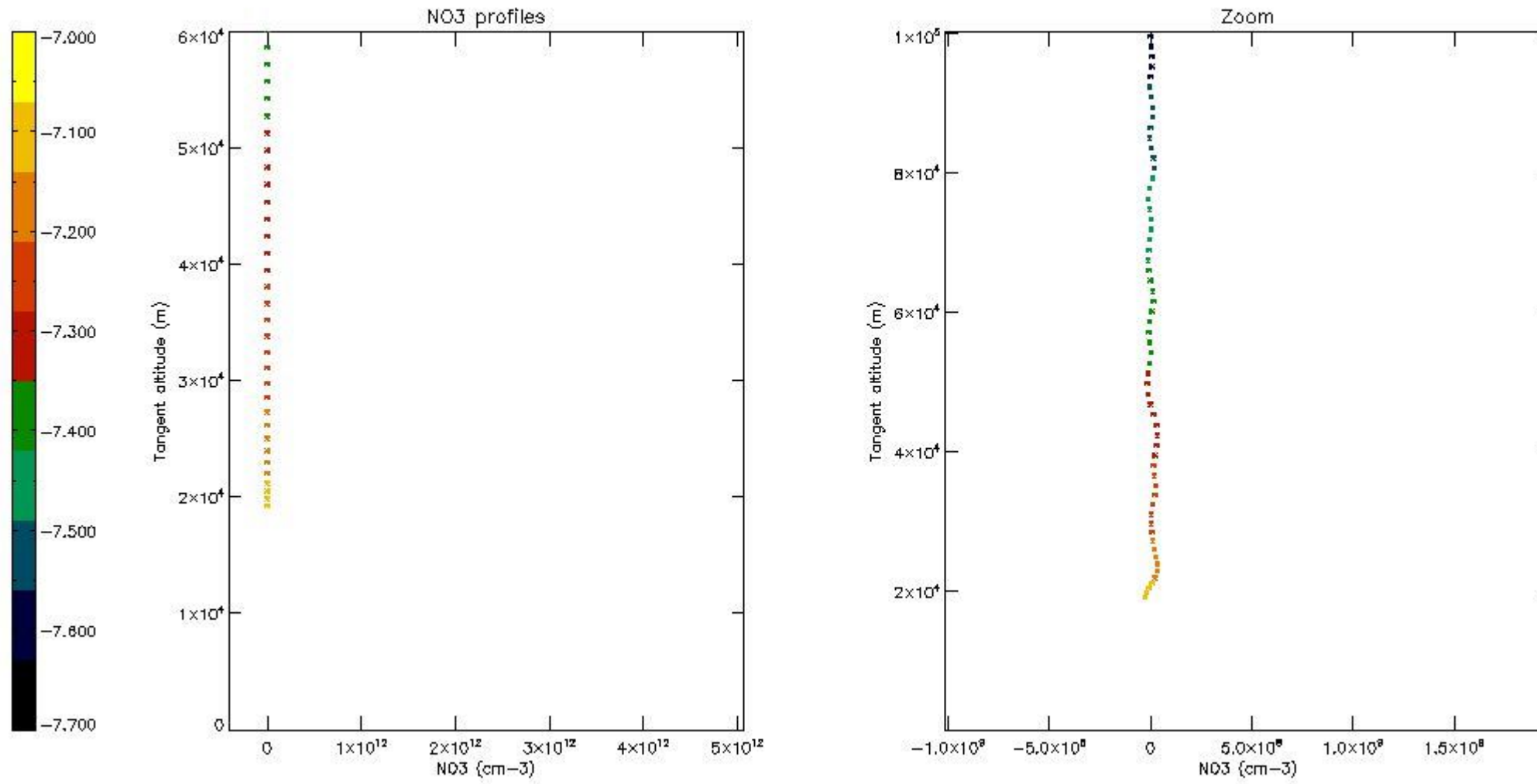
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

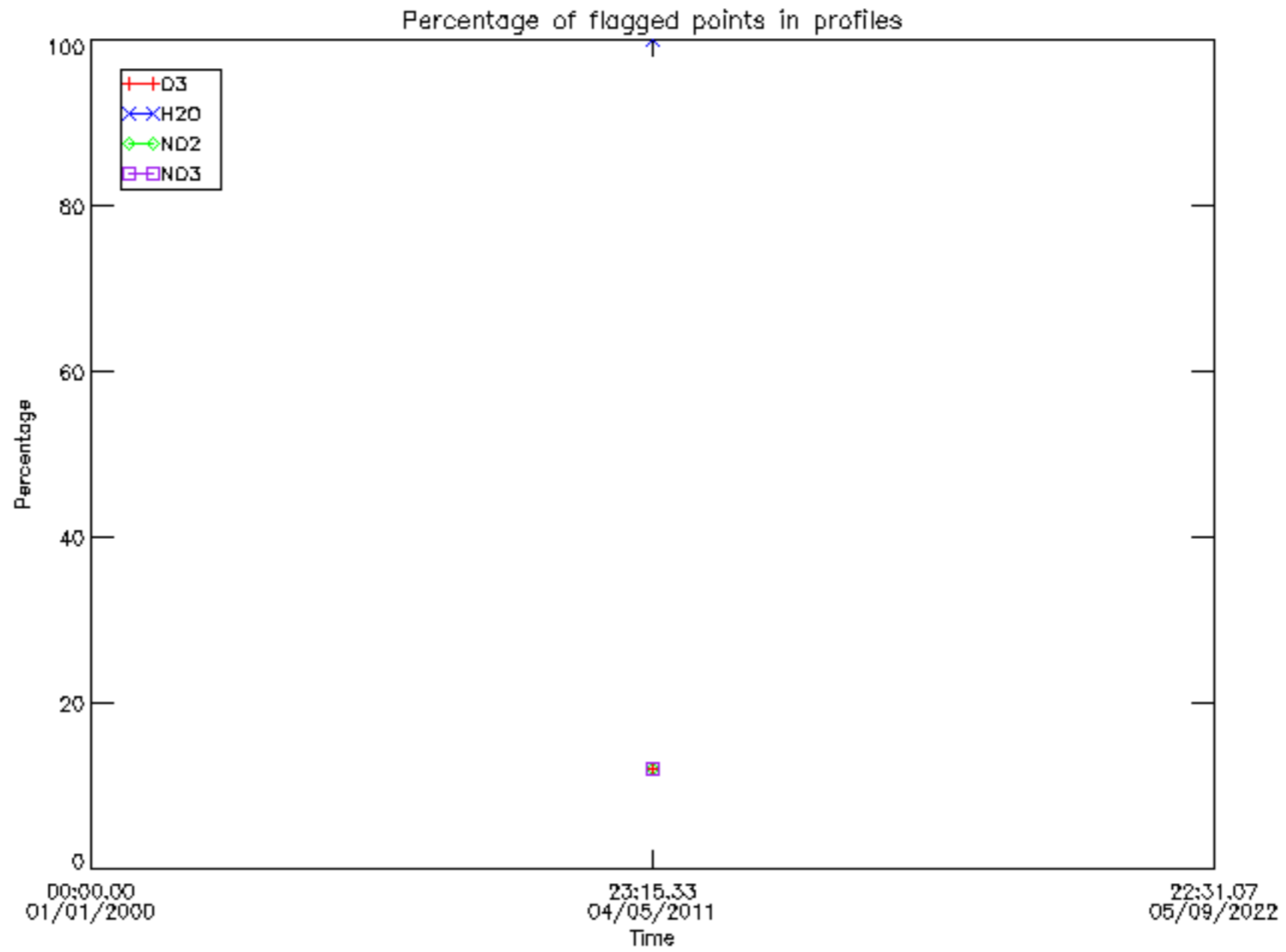
The colorbar represents the latitude.



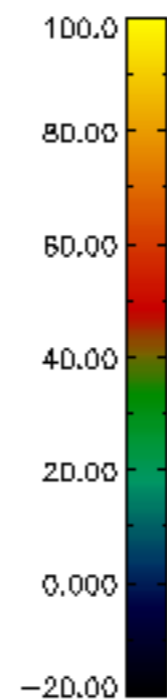
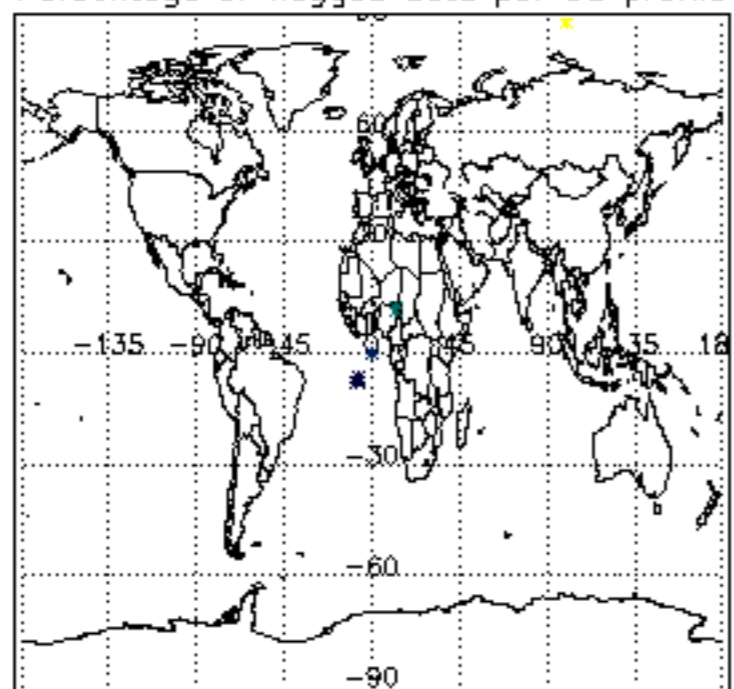
## 6. Auxiliary Data Files used for the production reported in section 2

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.

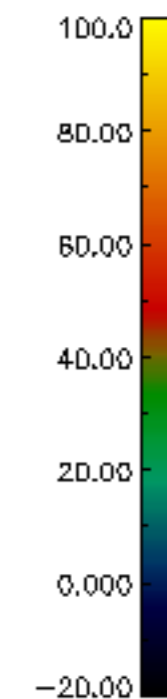
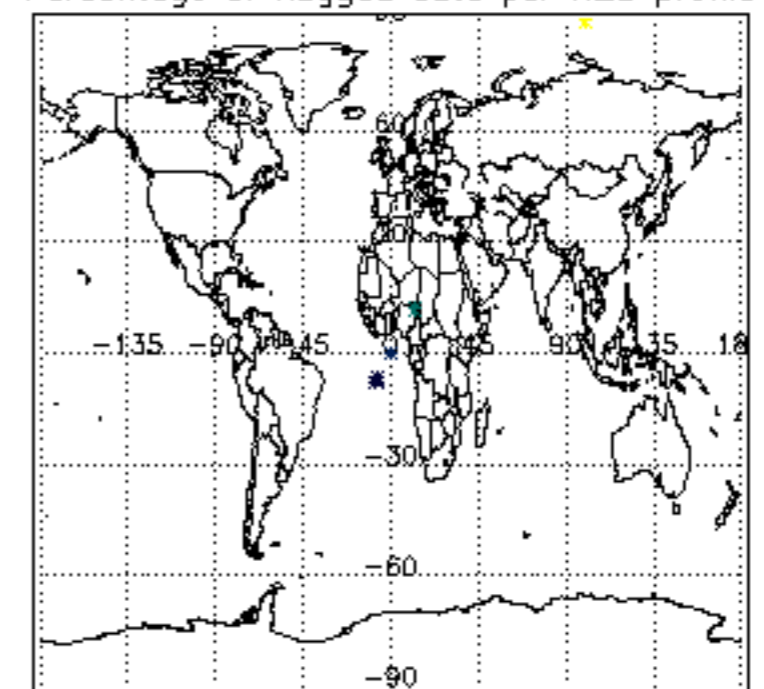
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-MAY-2011 23:15:33
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-MAY-2011 23:15:33
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-MAY-2011 23:15:33



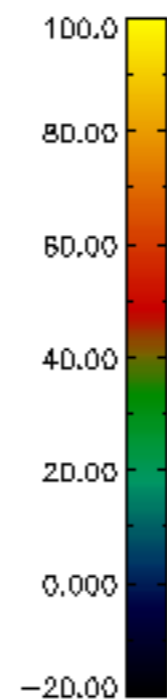
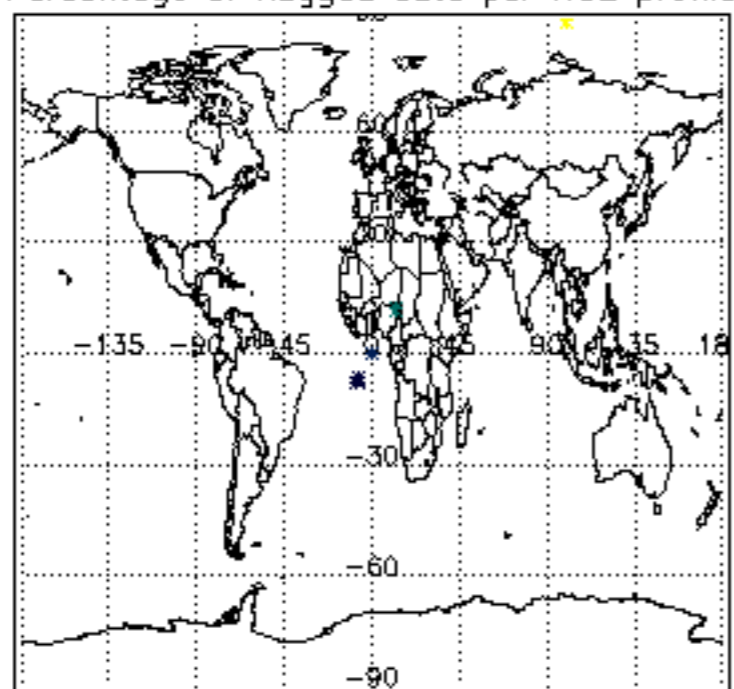
Percentage of flagged data per D3 profile



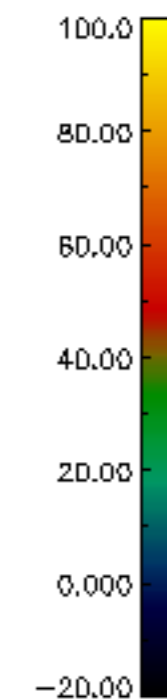
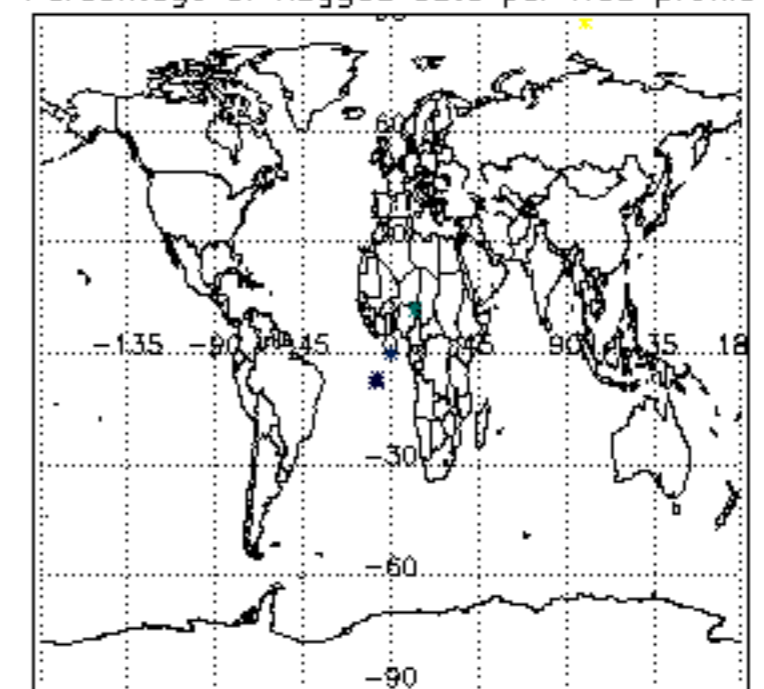
Percentage of flagged data per H2O profile

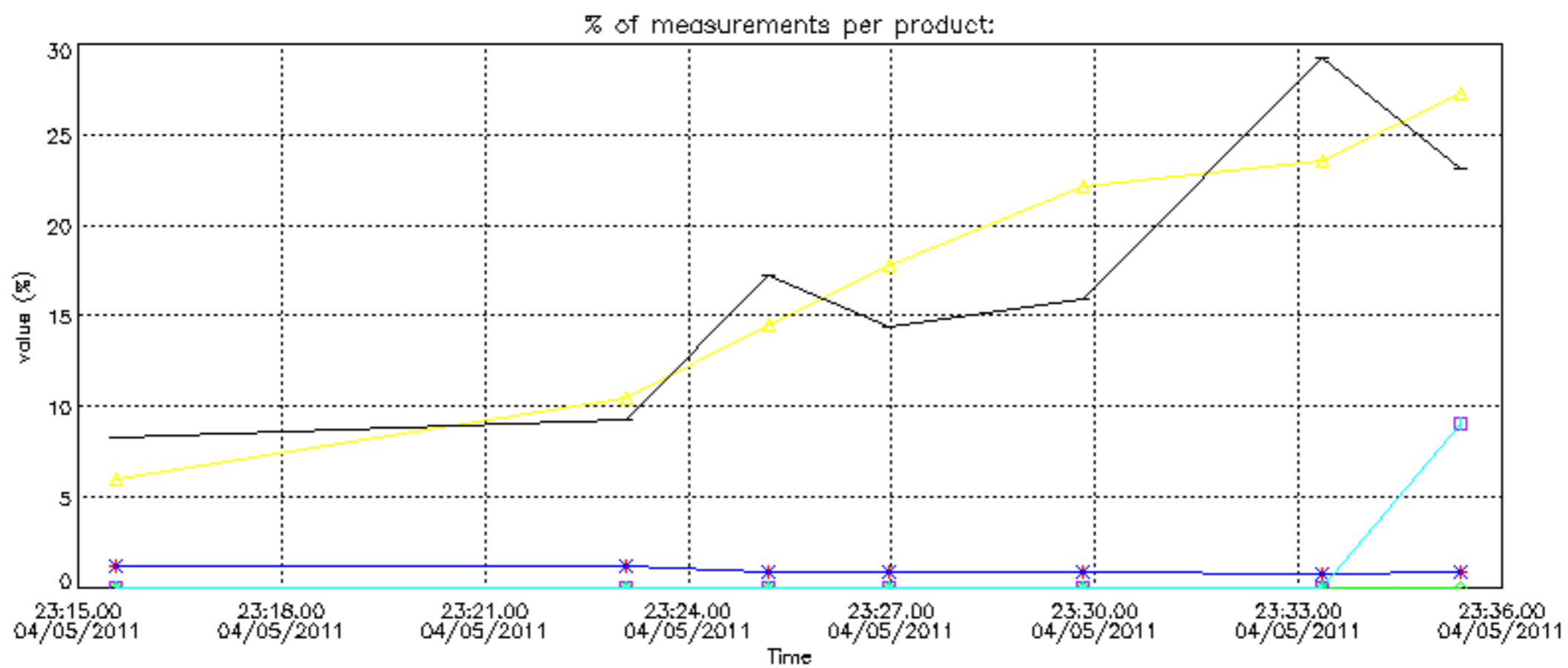


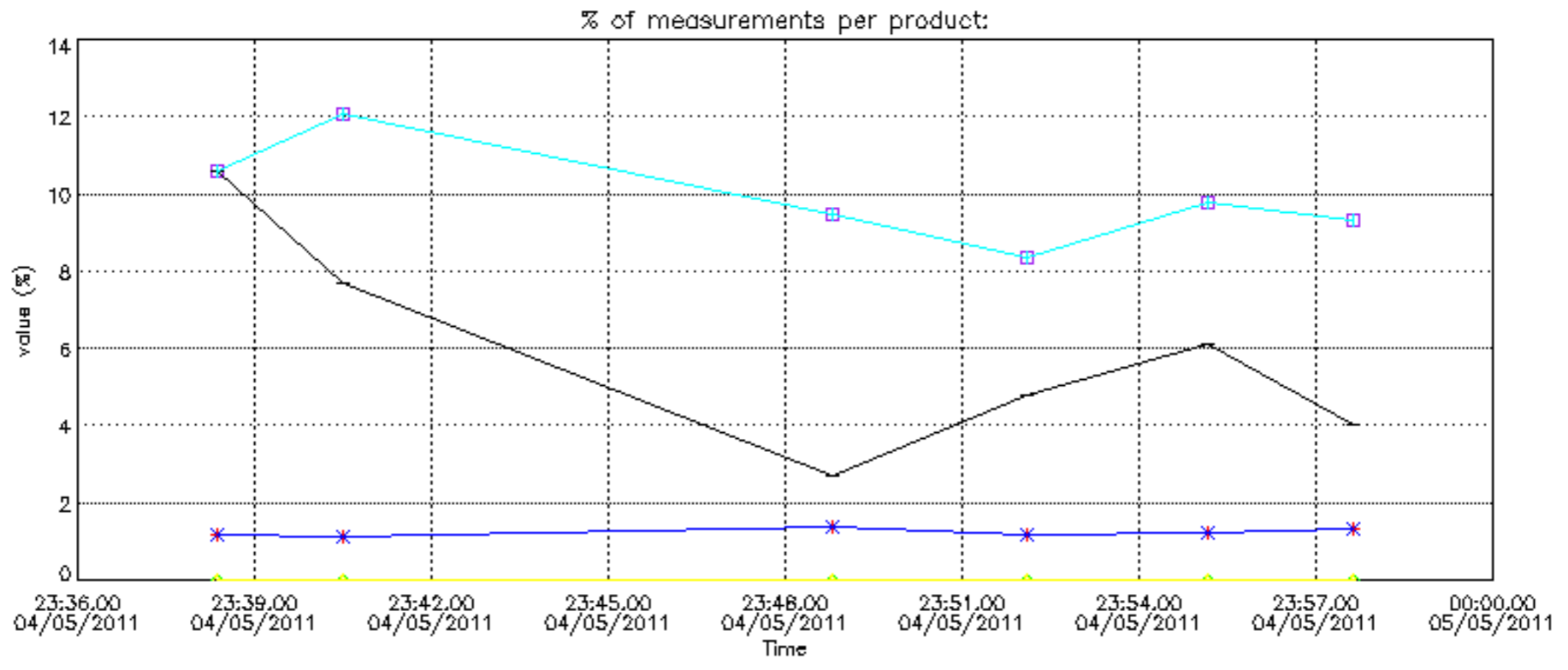
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

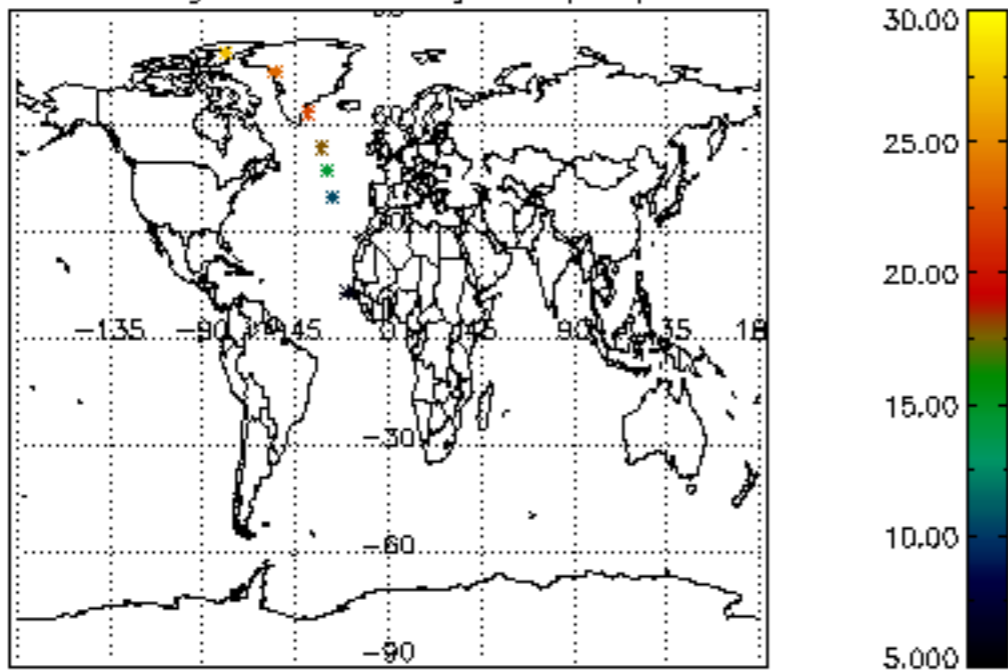




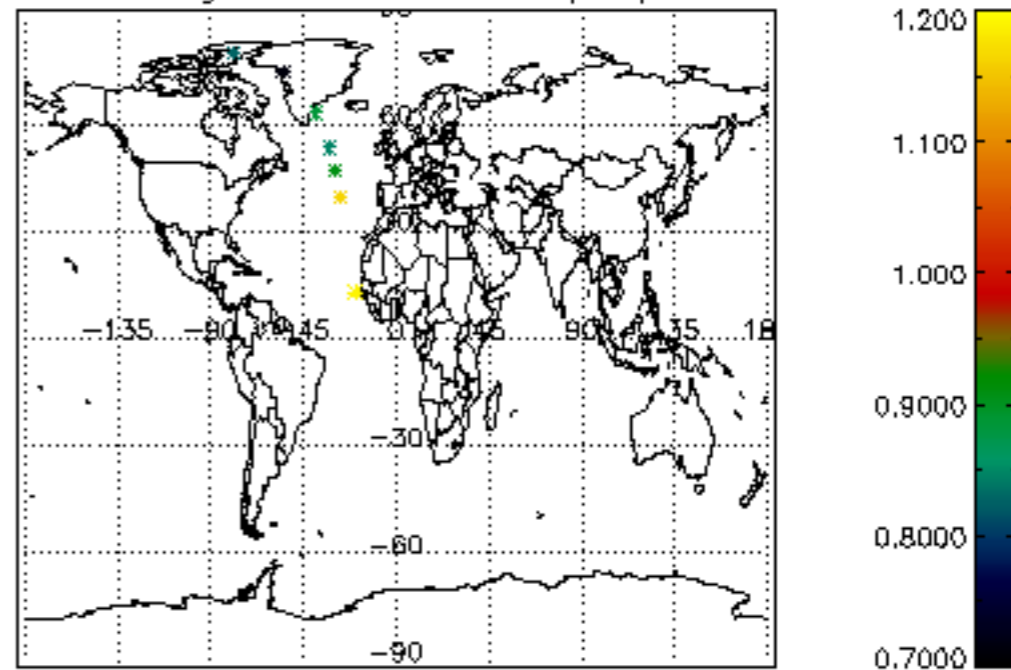




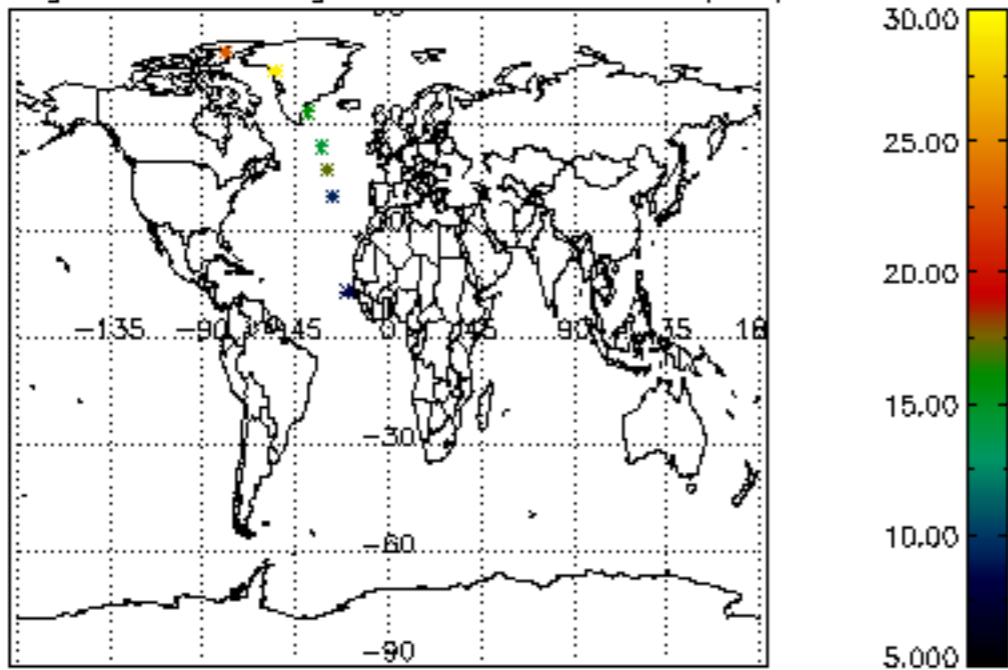
Percentage of cosmic ray hits per profile



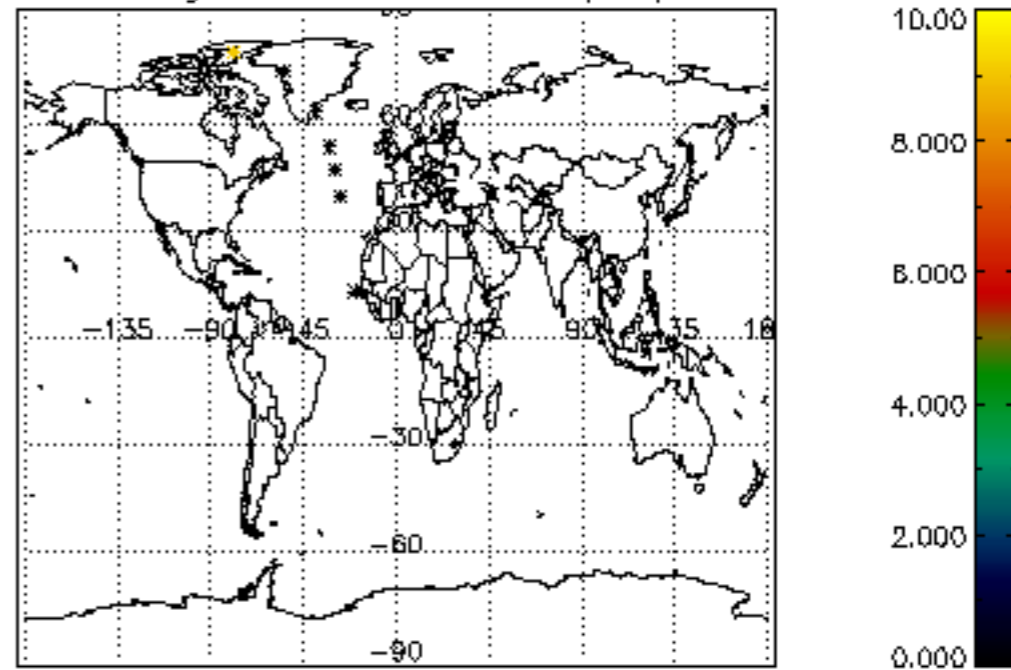
Percentage of datation errors per profile



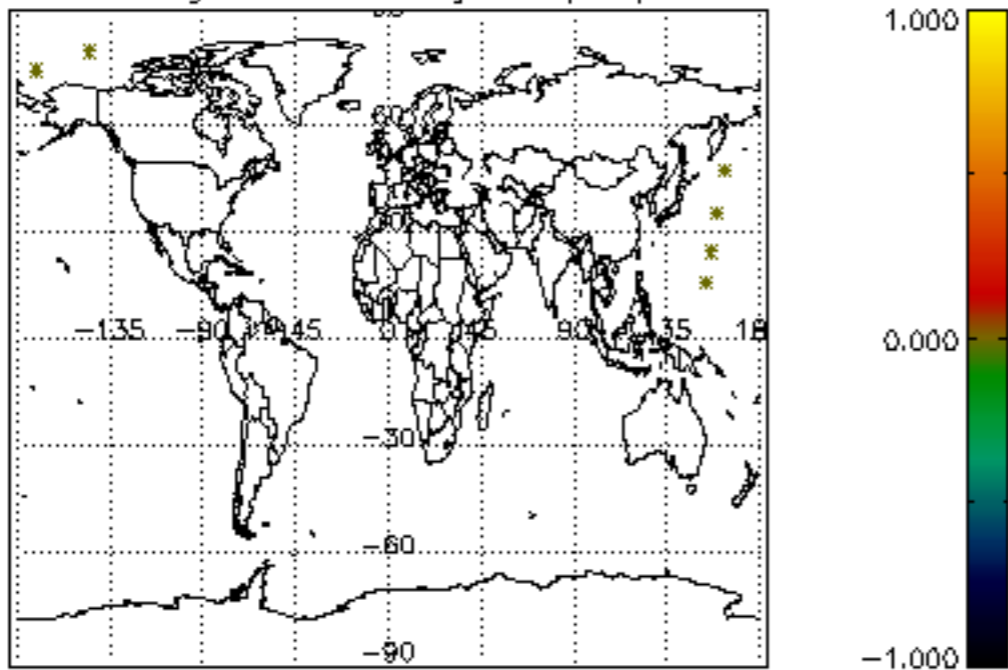
Percentage of star falling outside central band per profile



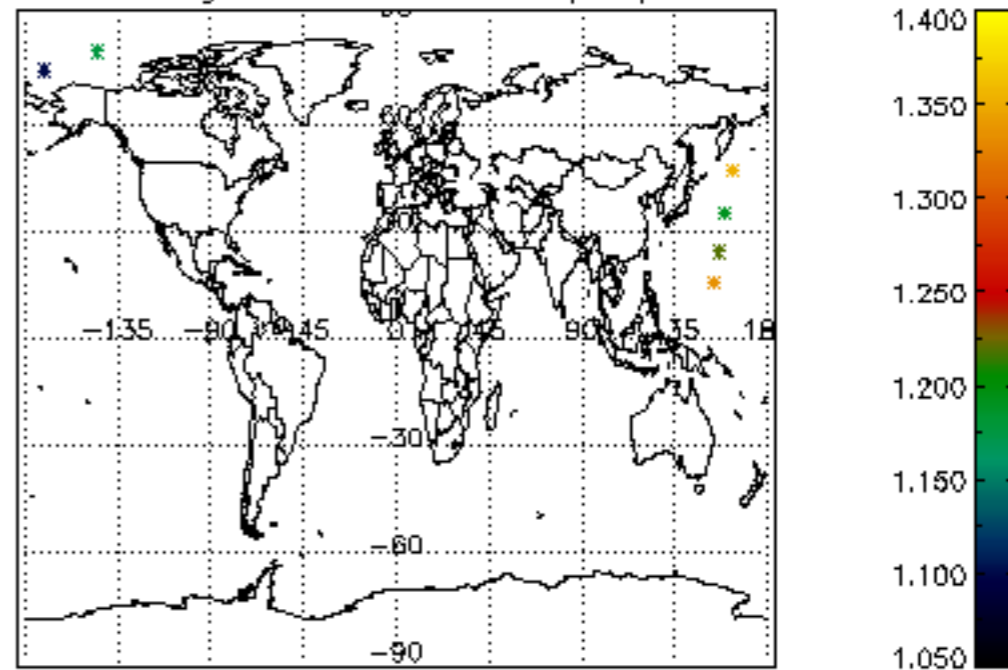
Percentage of saturation errors per profile



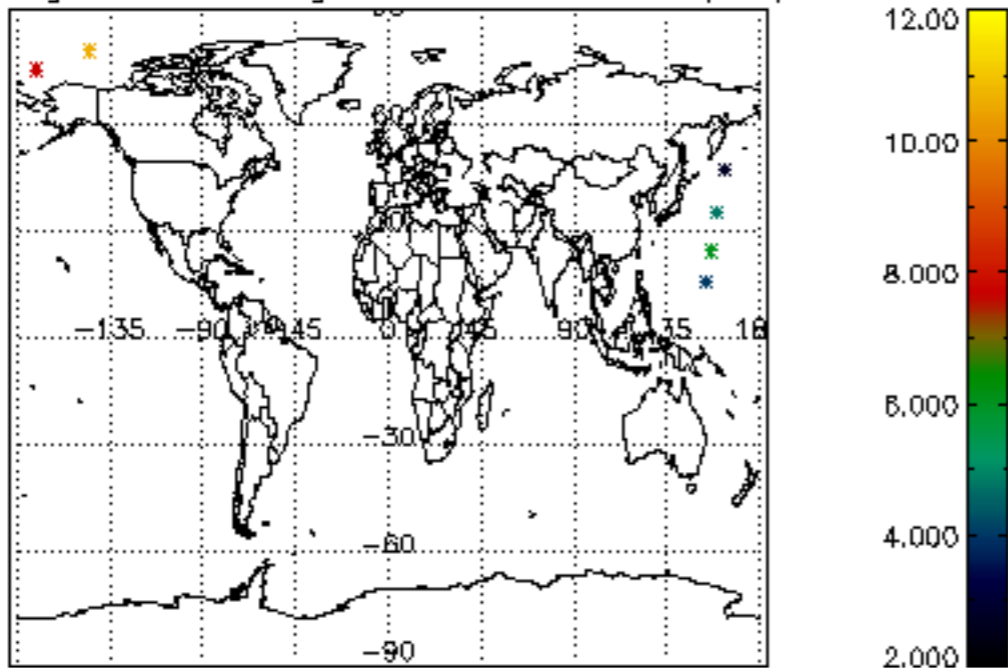
Percentage of cosmic ray hits per profile



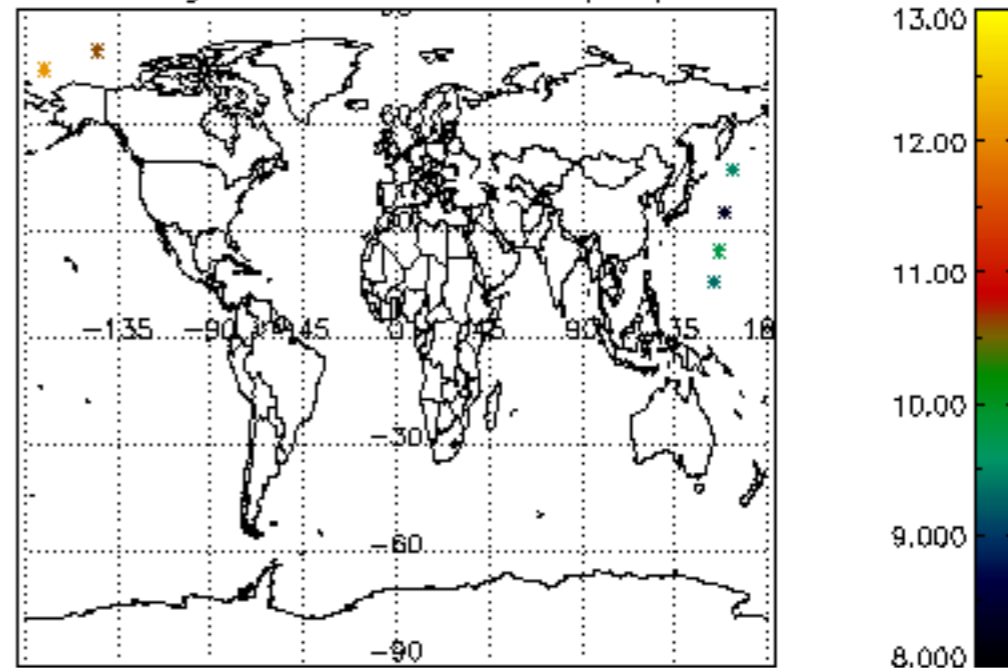
Percentage of datation errors per profile

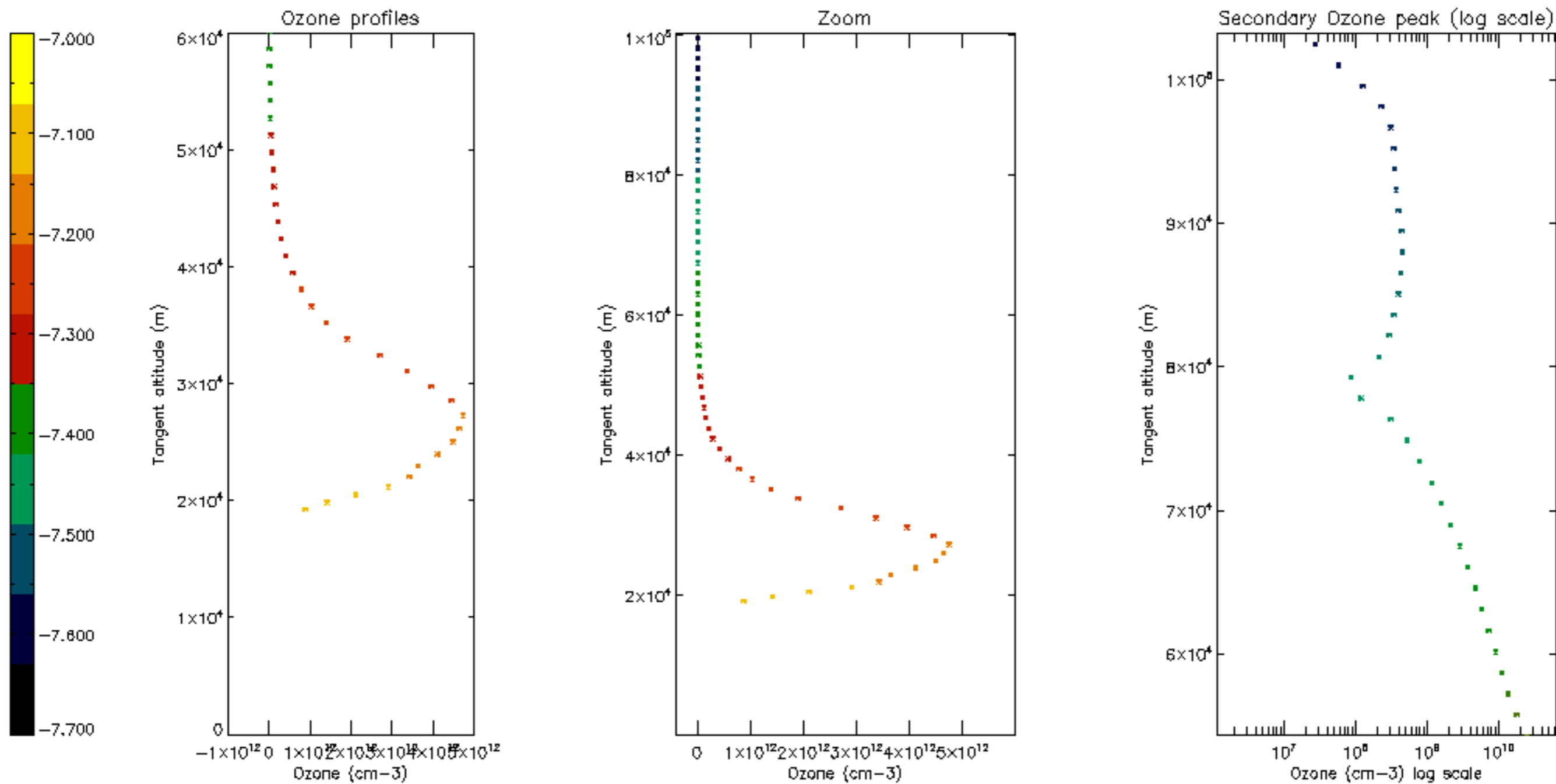


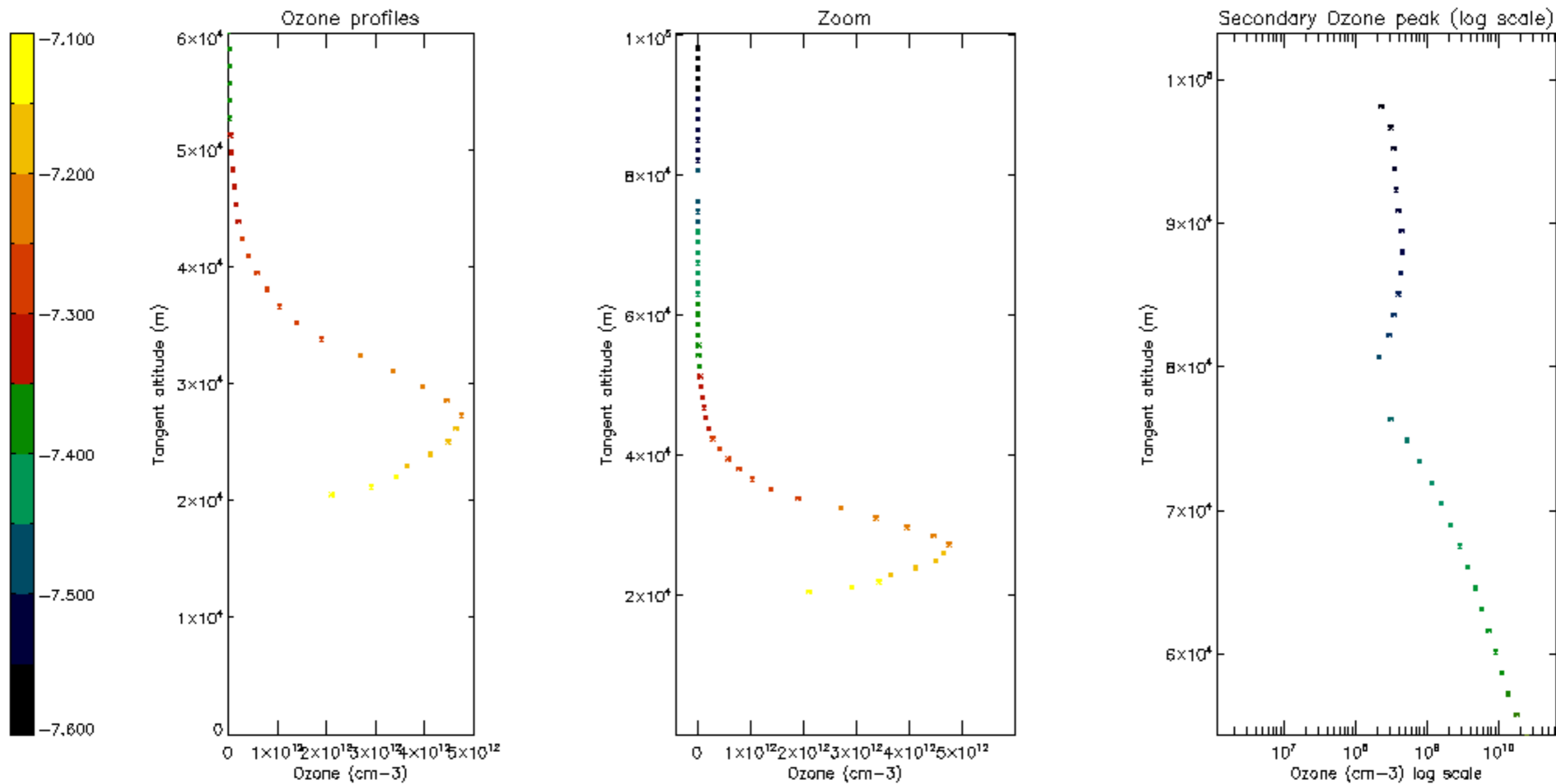
Percentage of star falling outside central band per profile

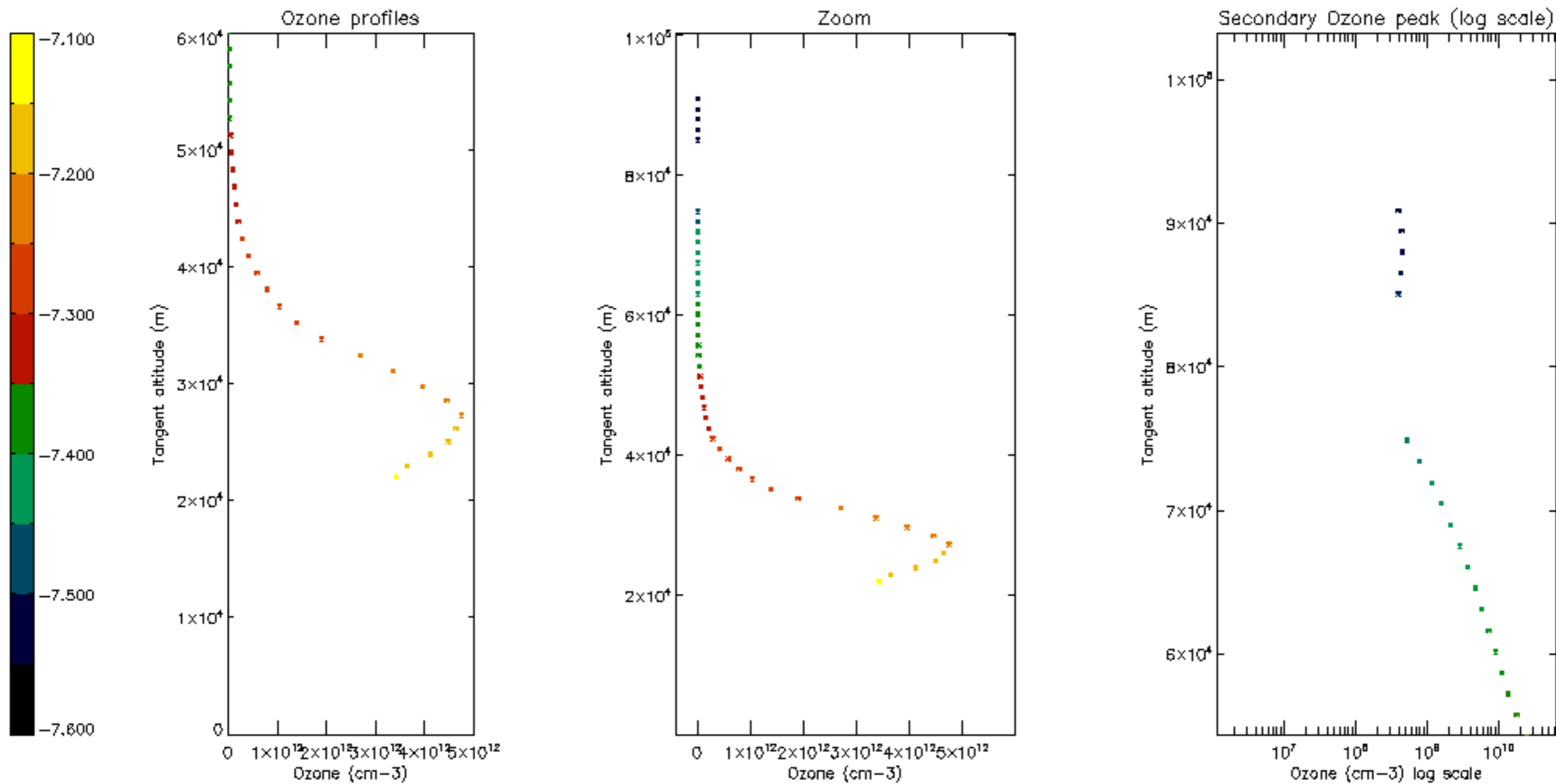


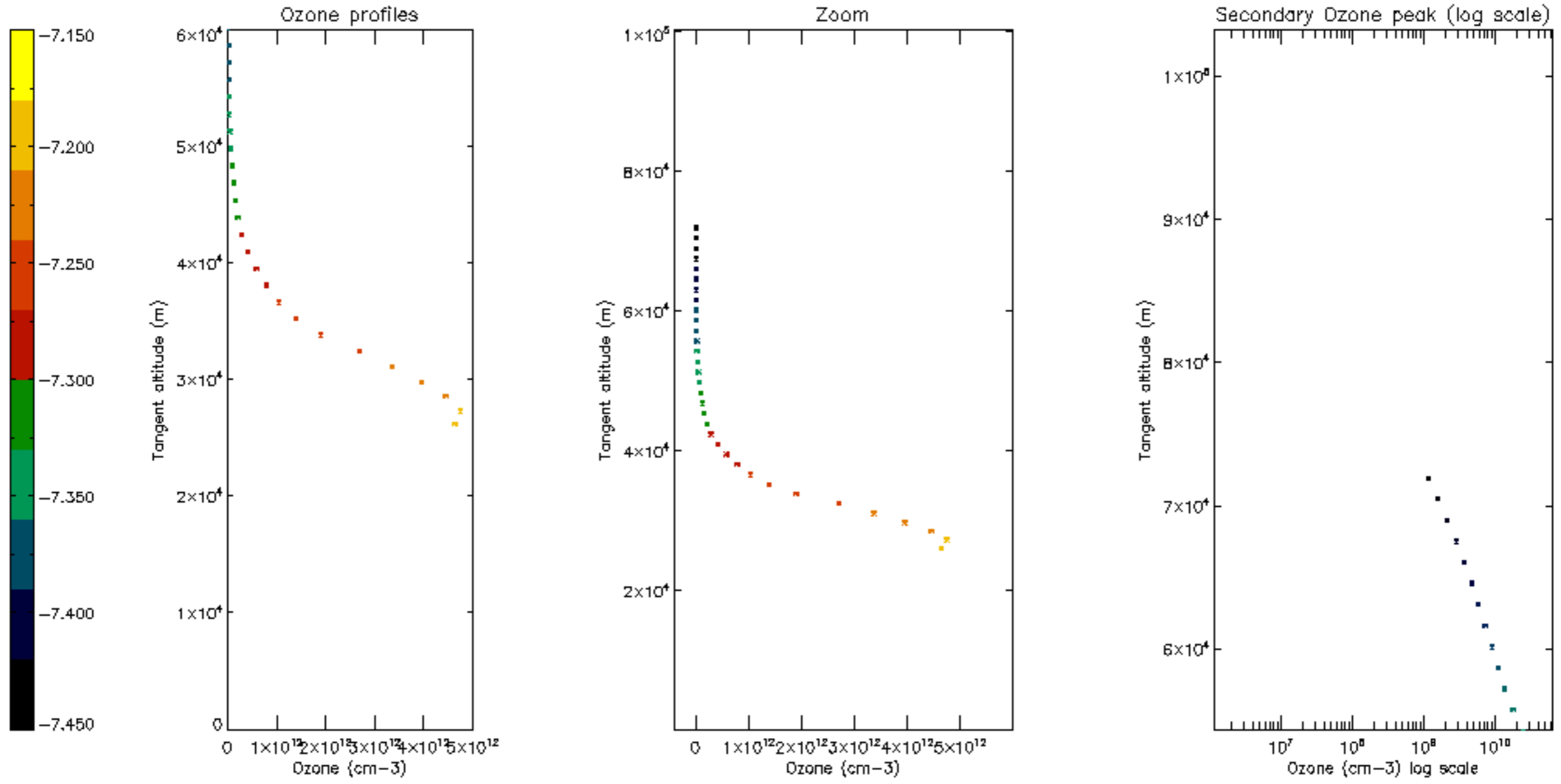
Percentage of saturation errors per profile

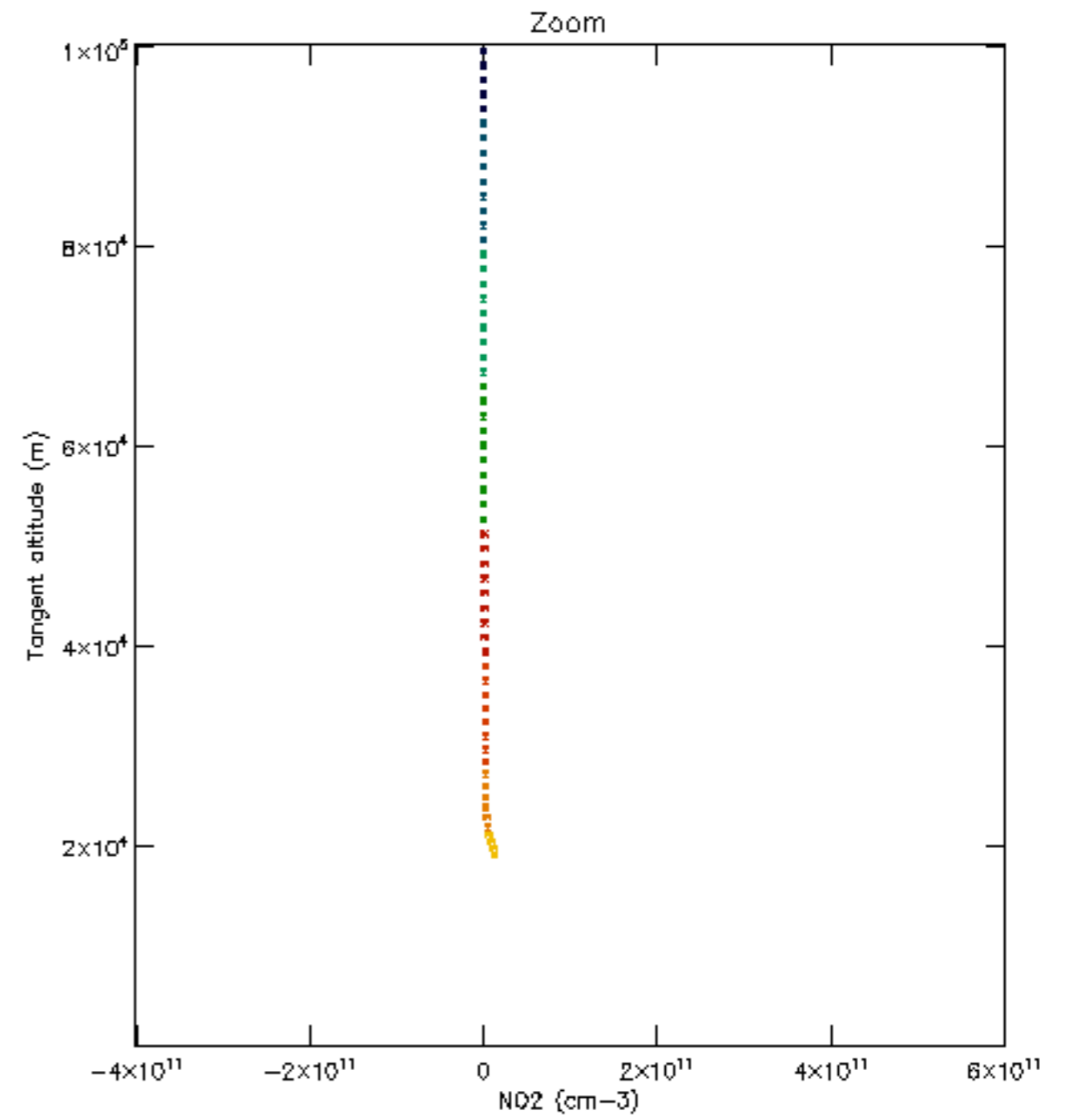
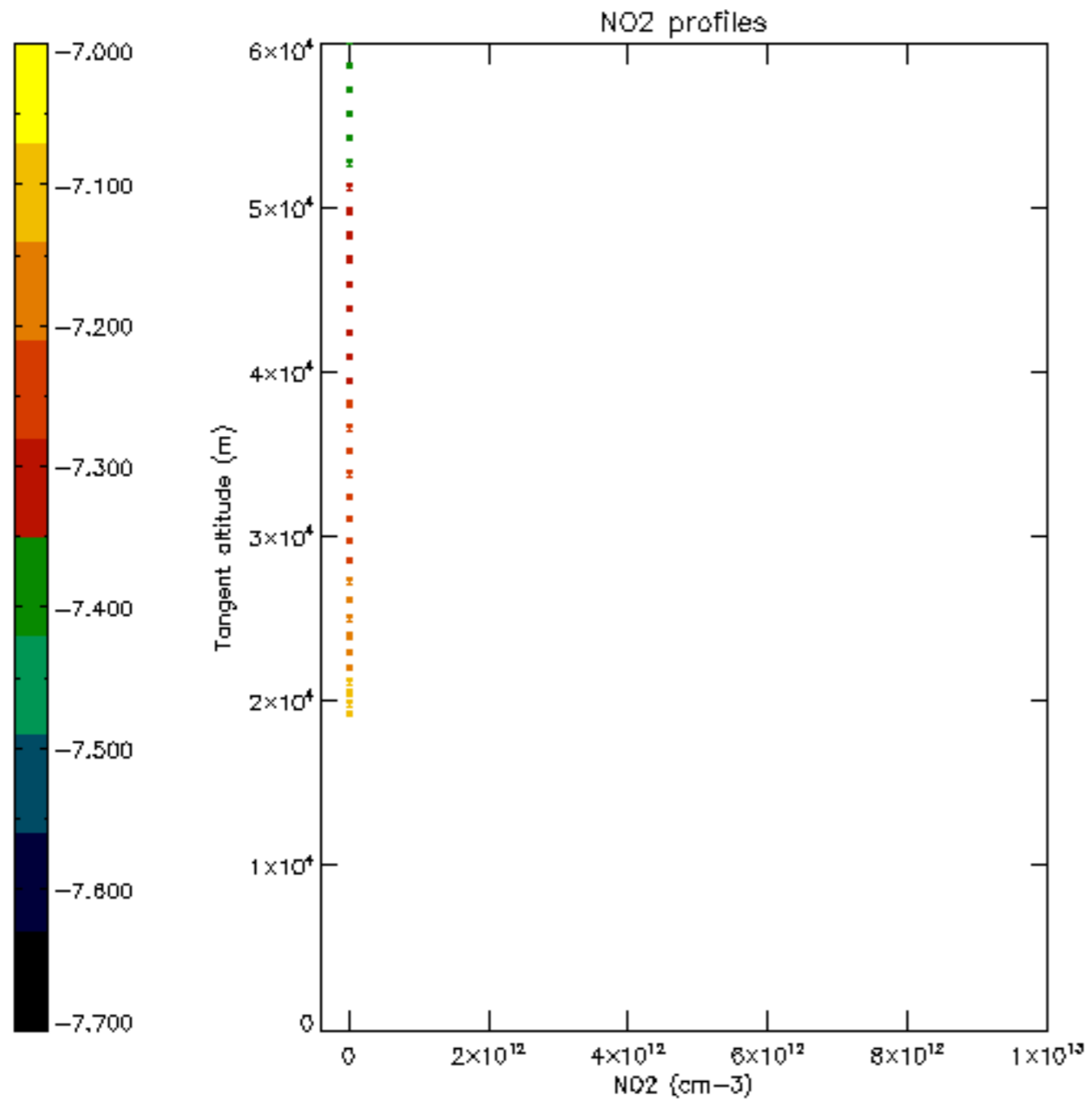


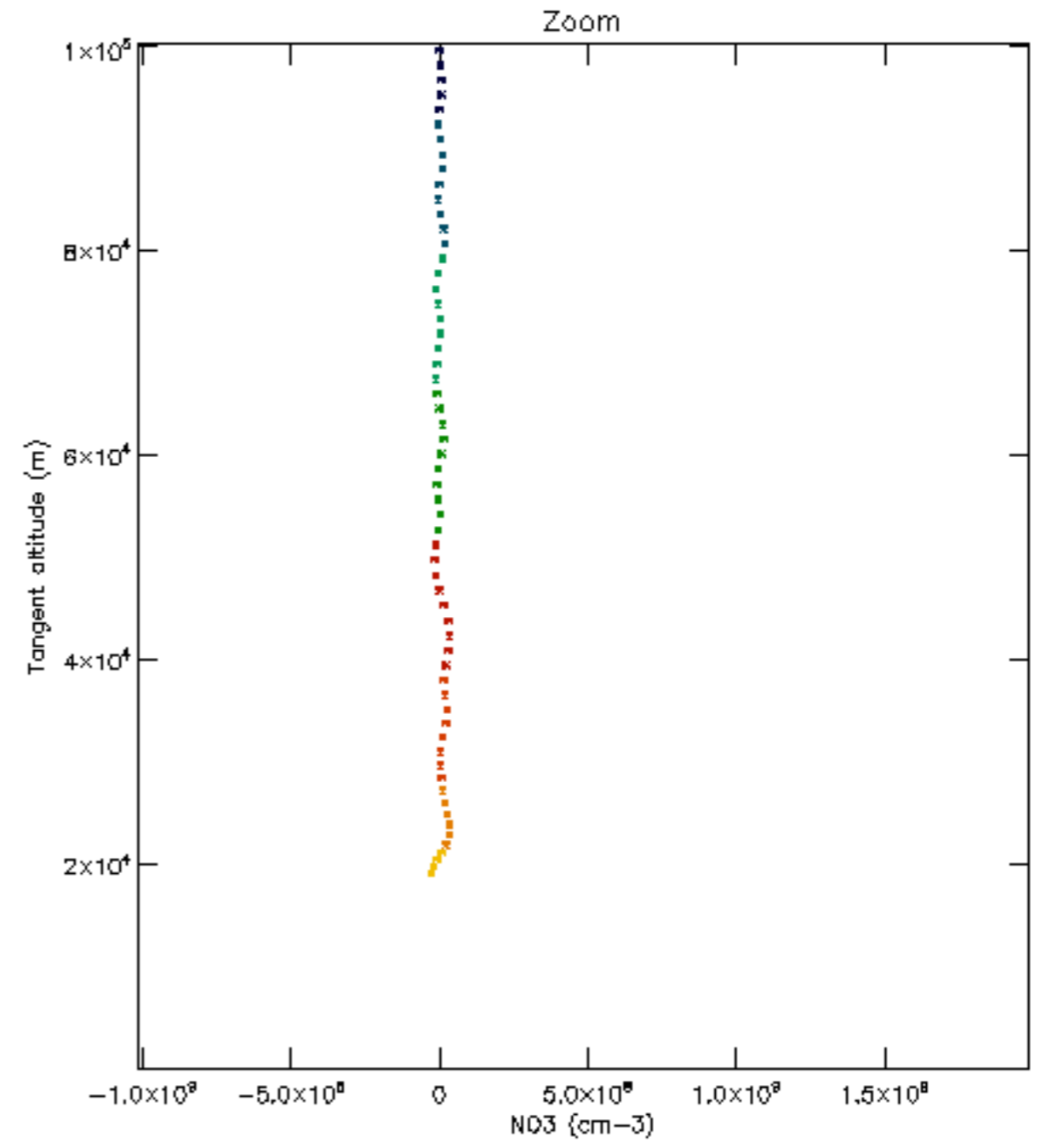
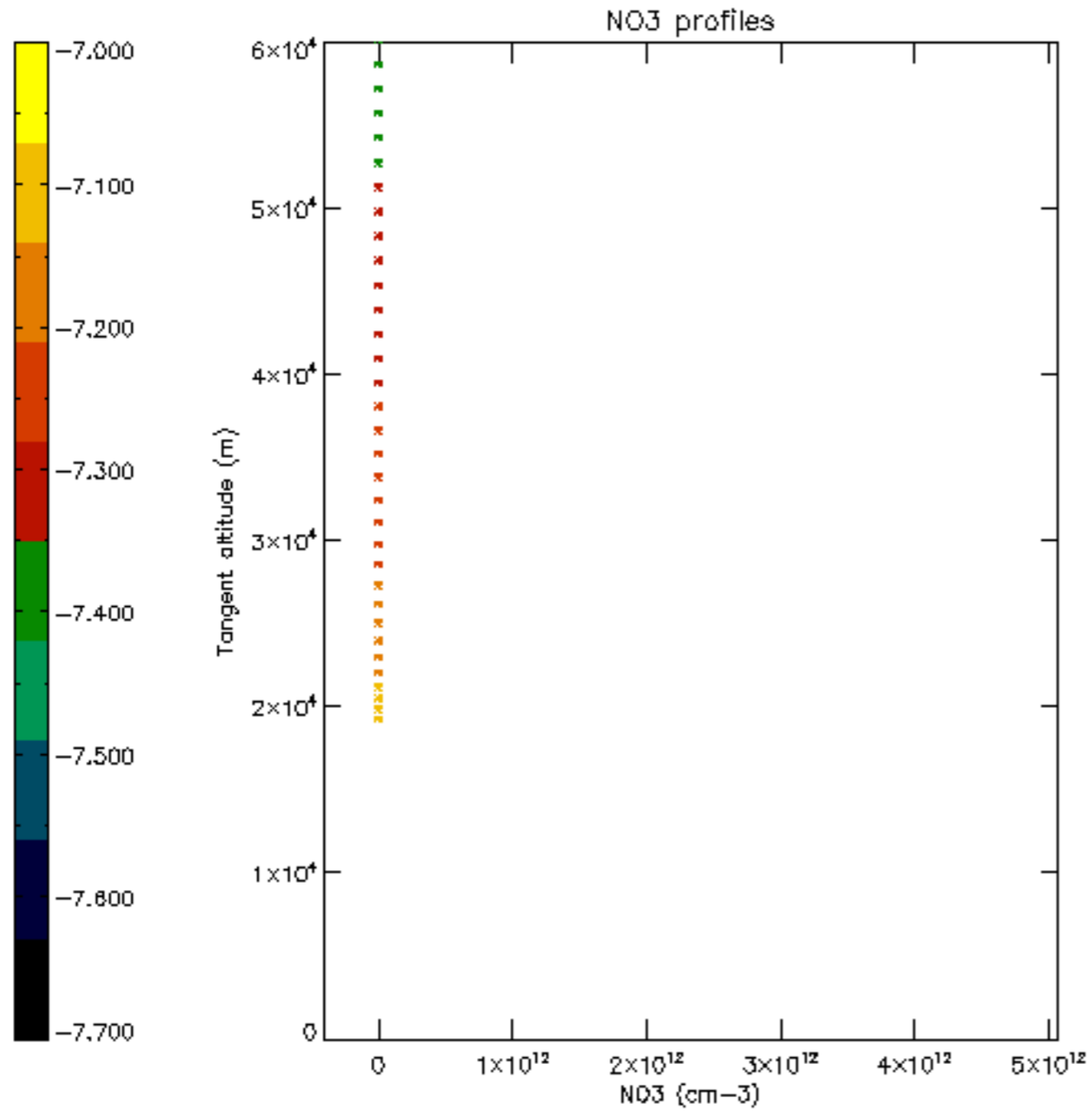




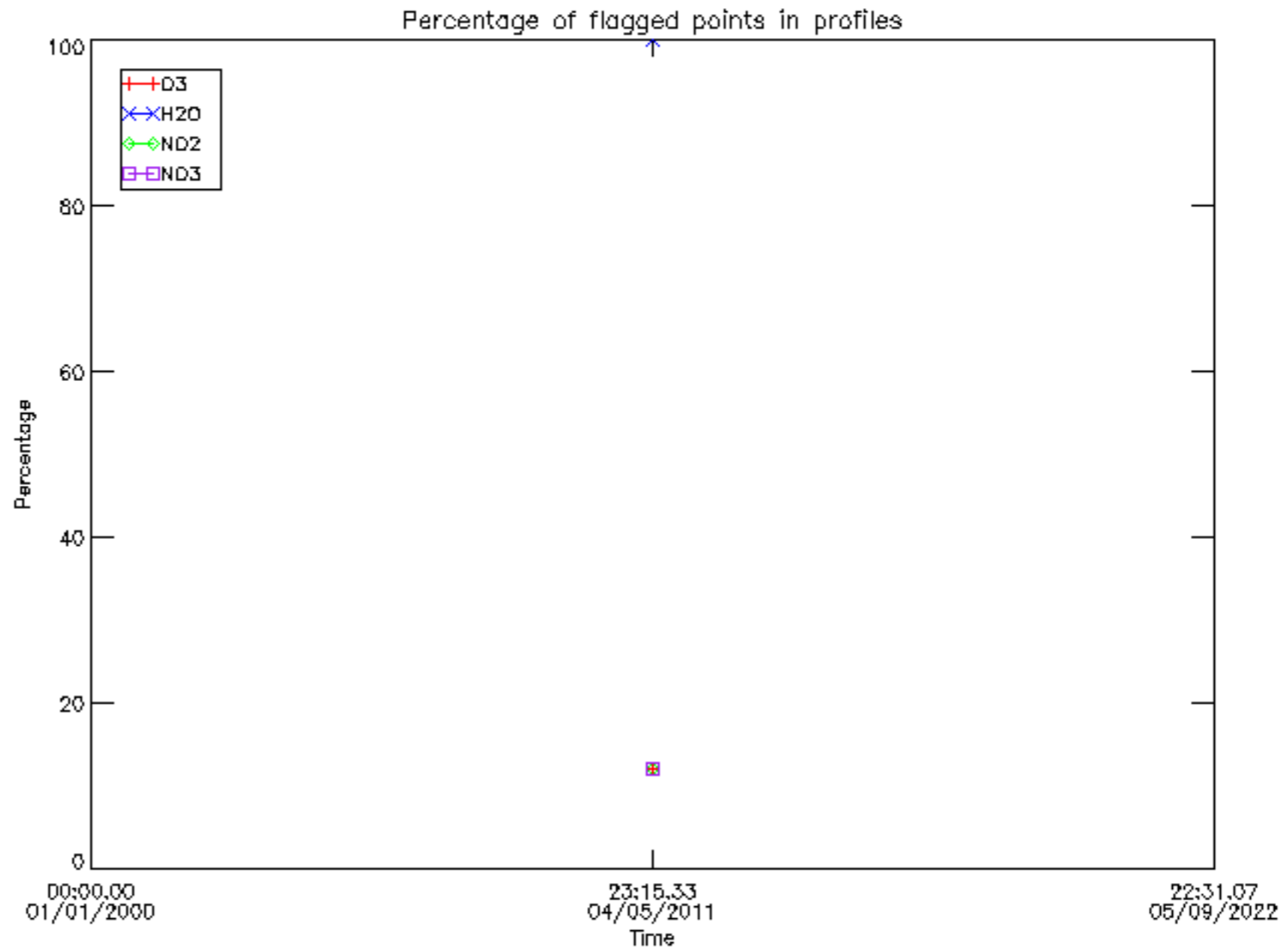




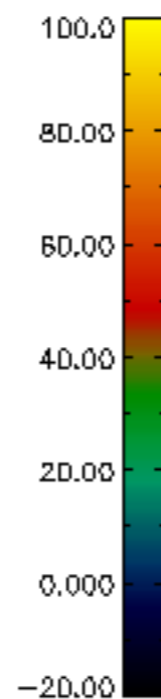
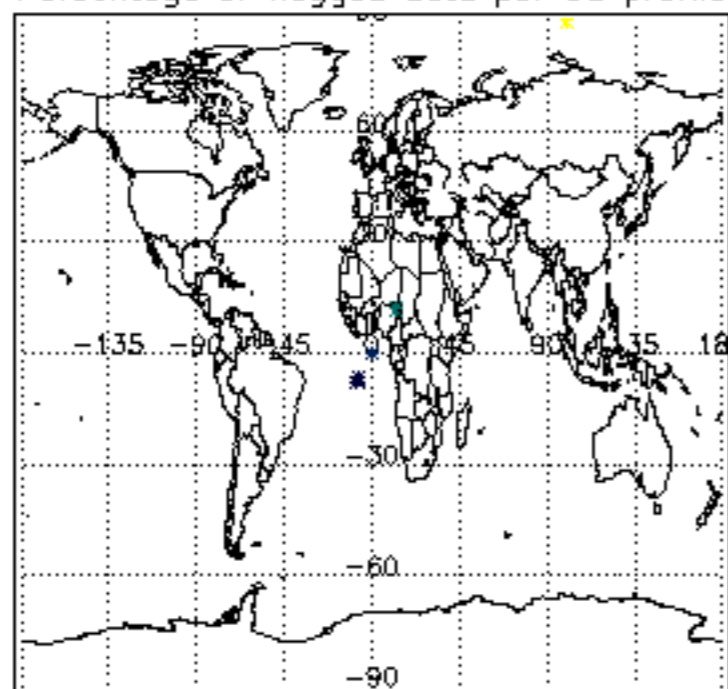




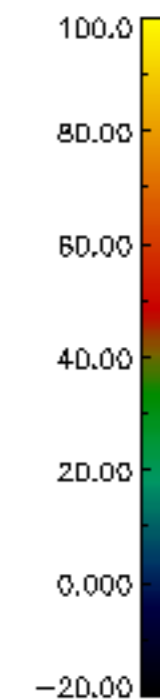
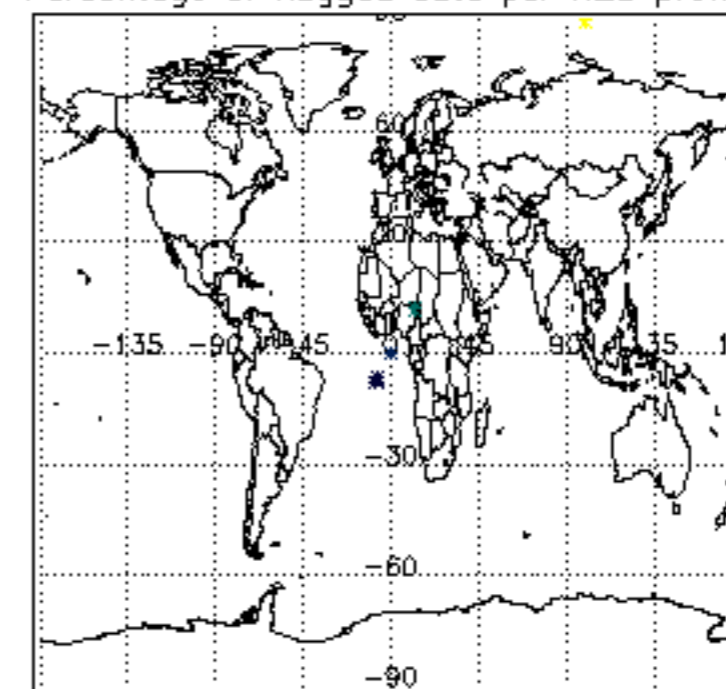




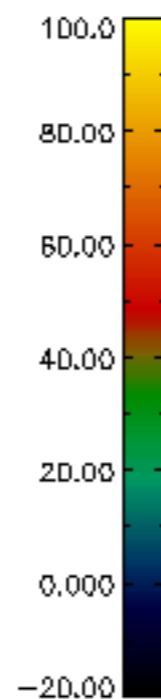
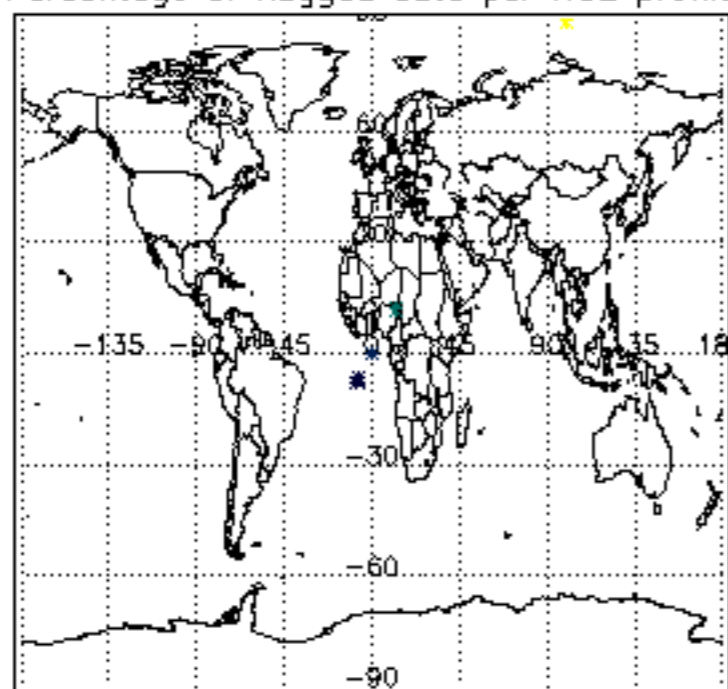
Percentage of flagged data per D3 profile



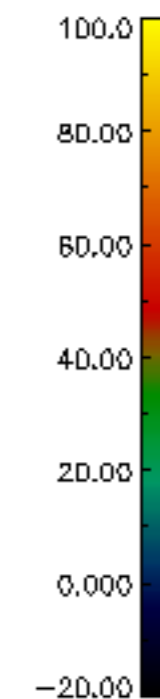
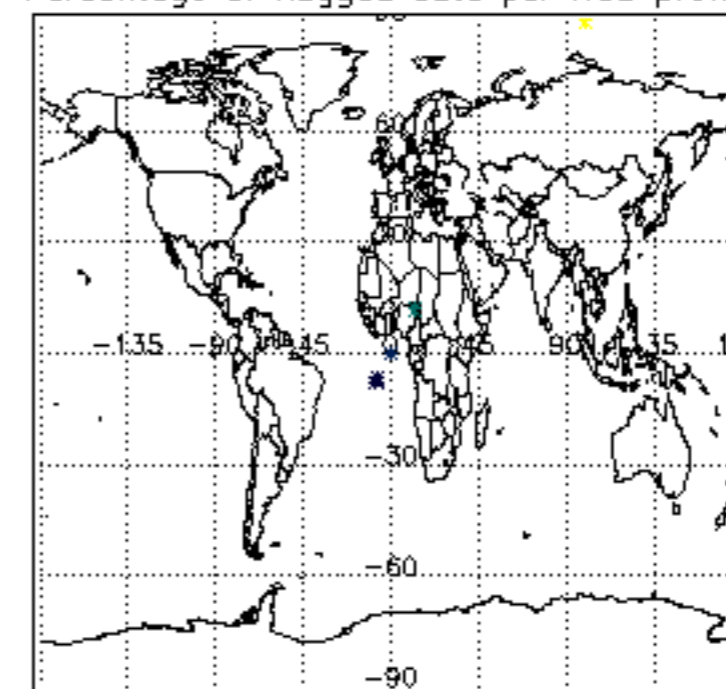
Percentage of flagged data per H2O profile

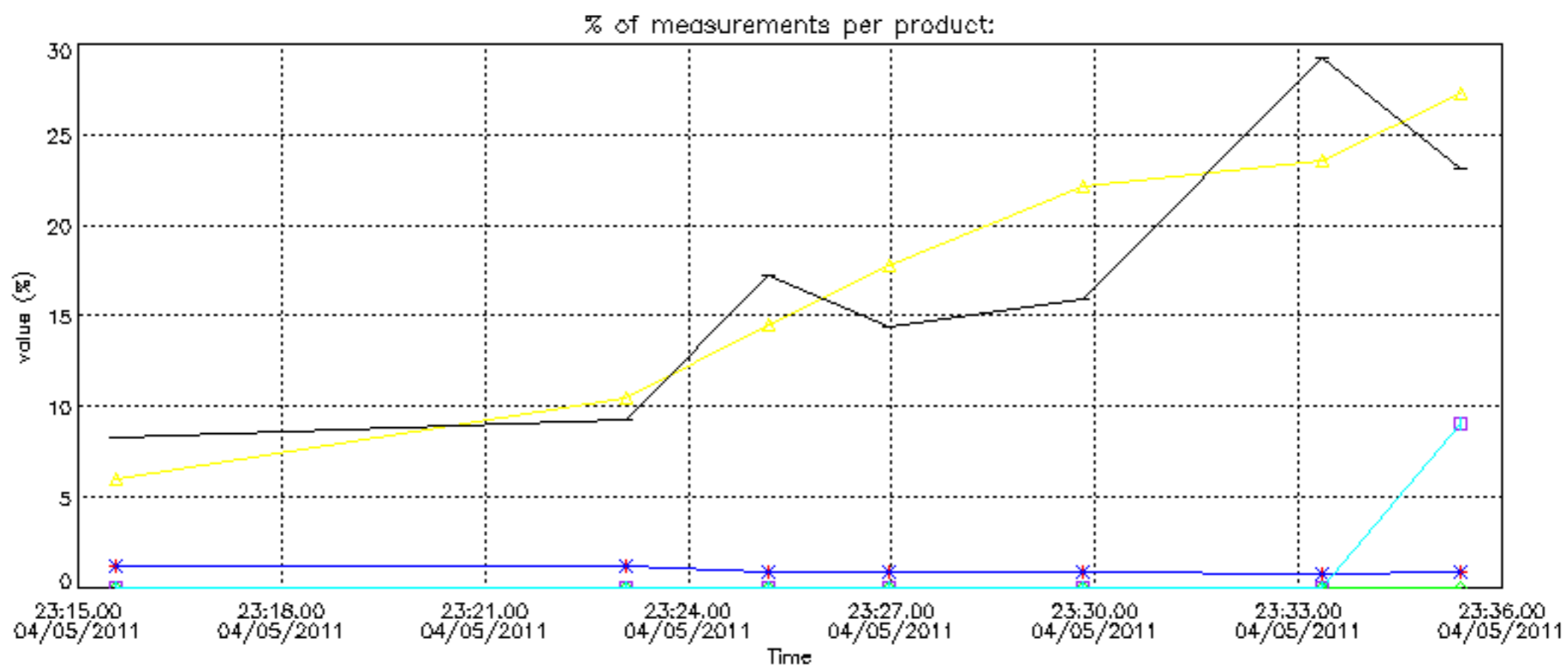


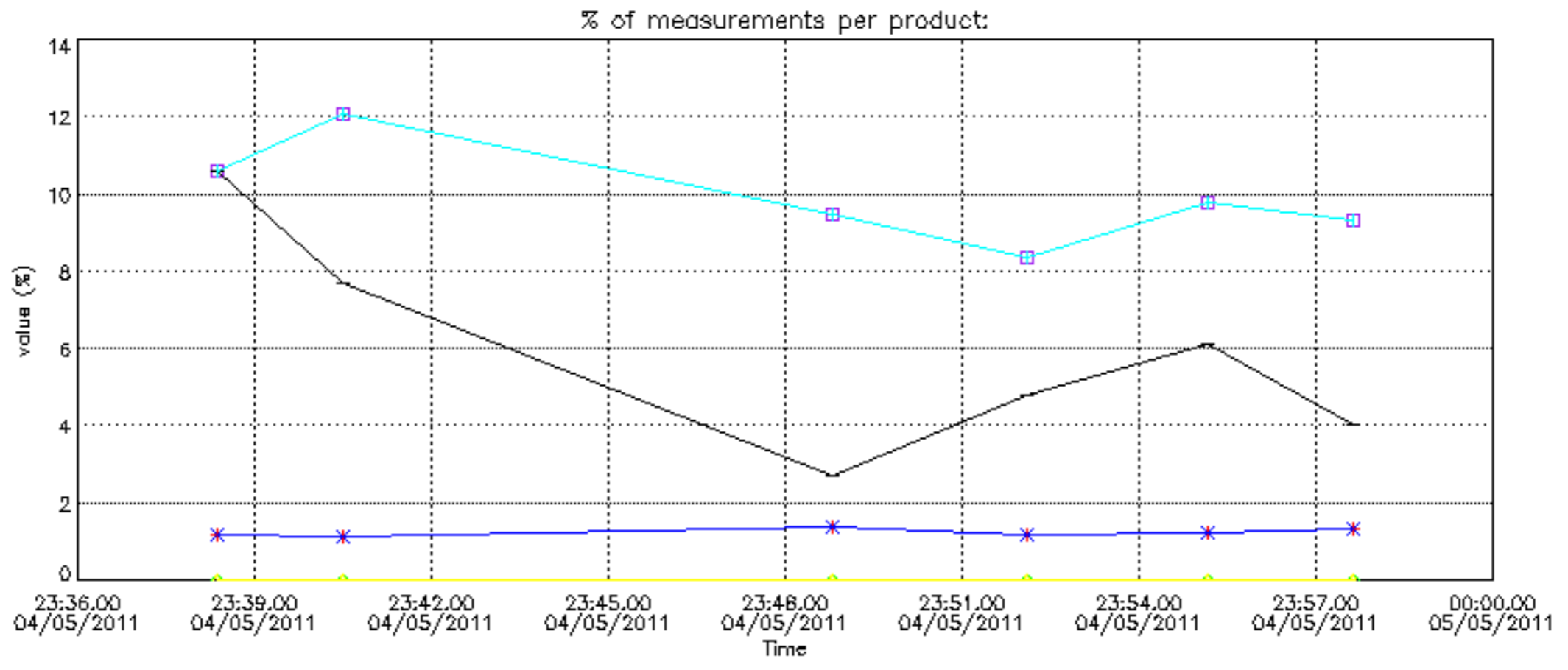
Percentage of flagged data per NO2 profile



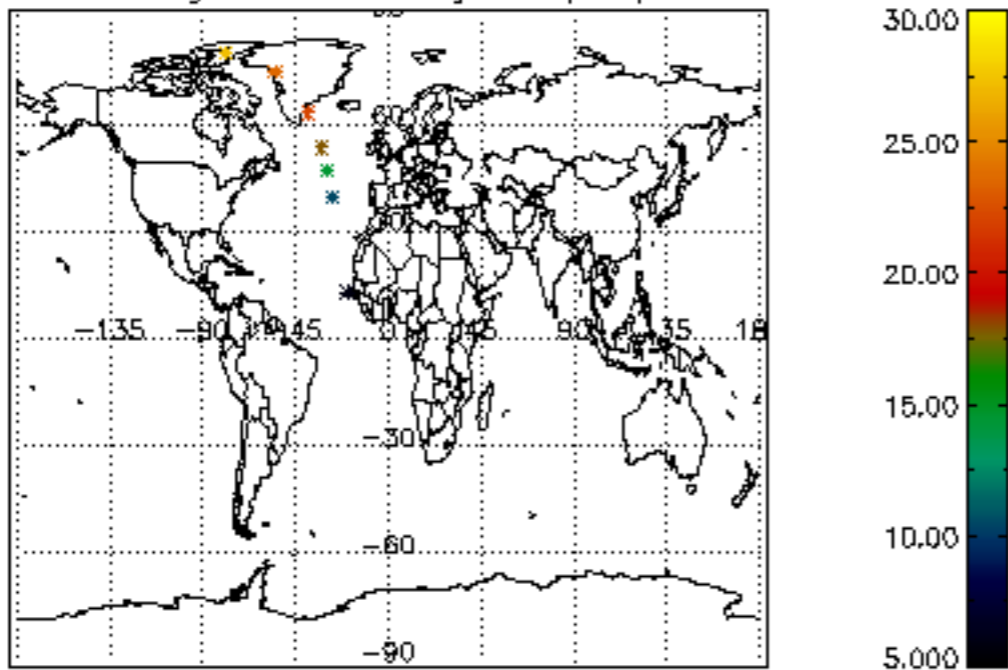
Percentage of flagged data per NO3 profile



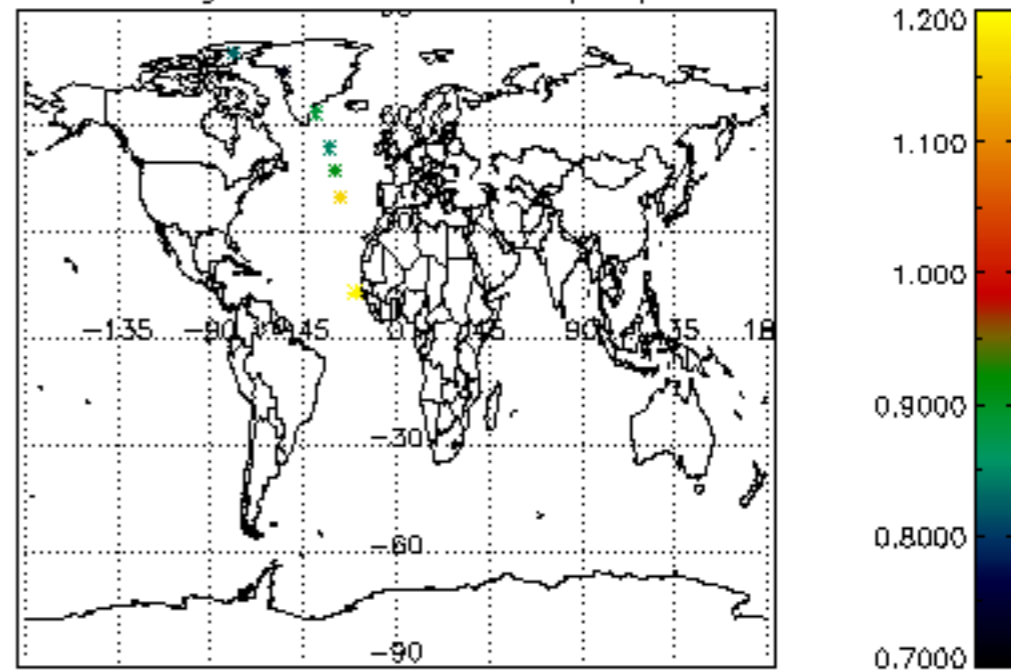




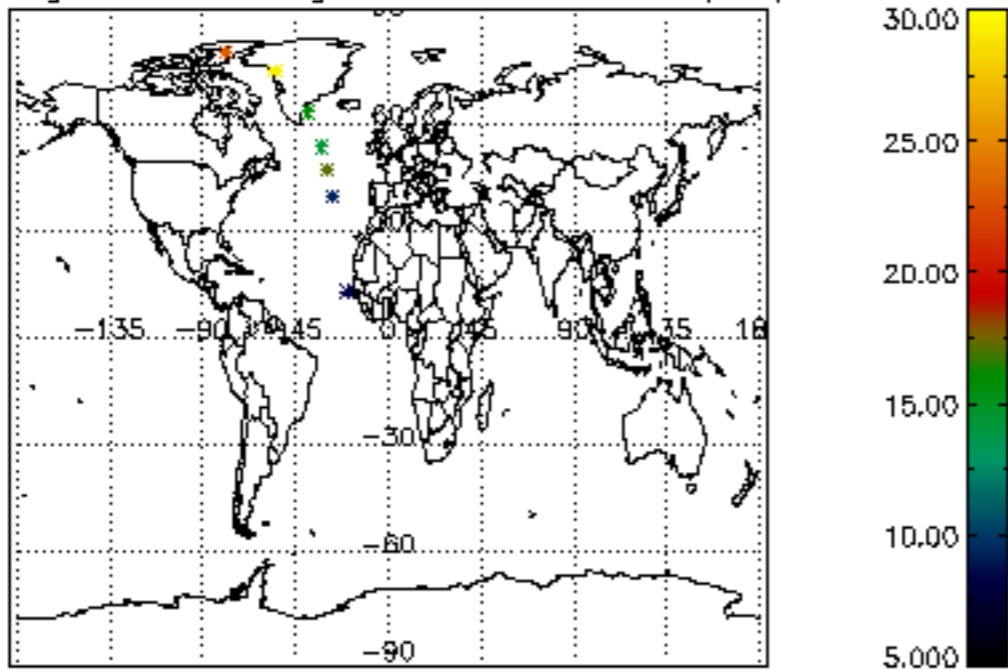
Percentage of cosmic ray hits per profile



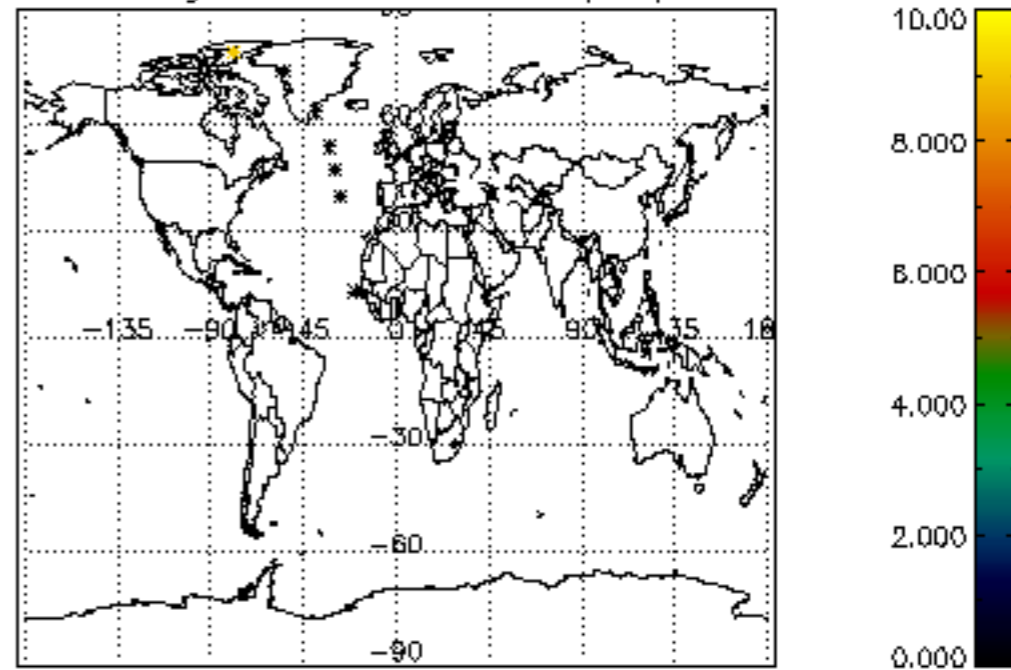
Percentage of datation errors per profile



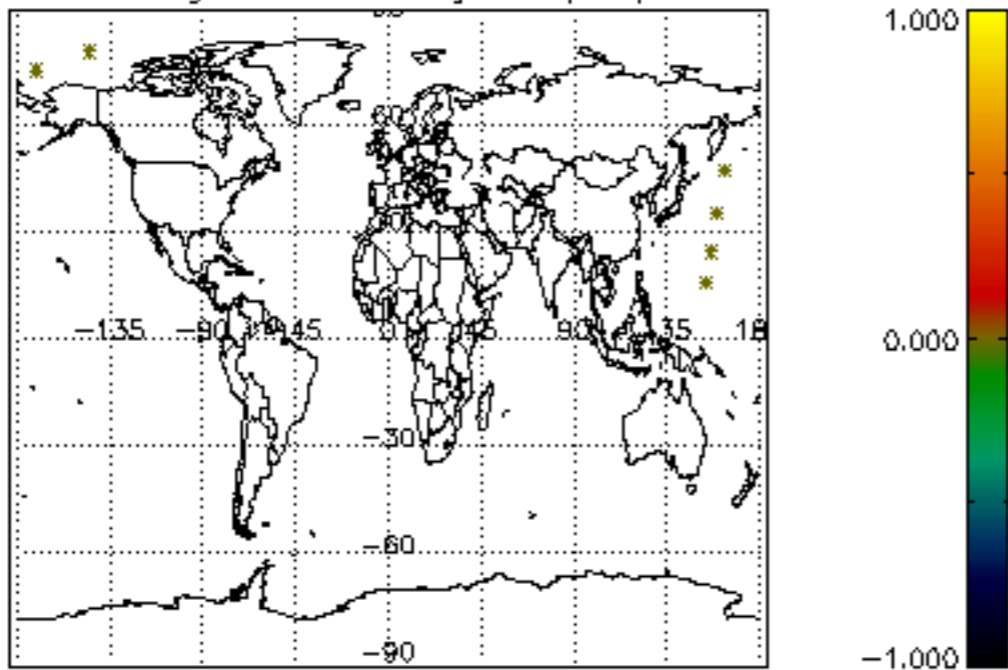
Percentage of star falling outside central band per profile



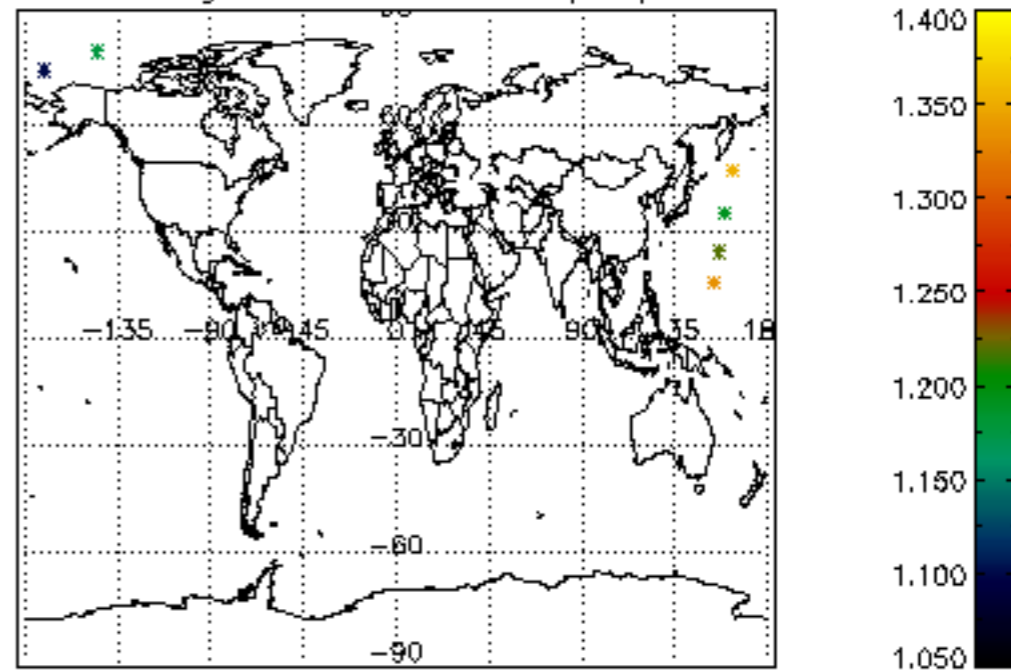
Percentage of saturation errors per profile



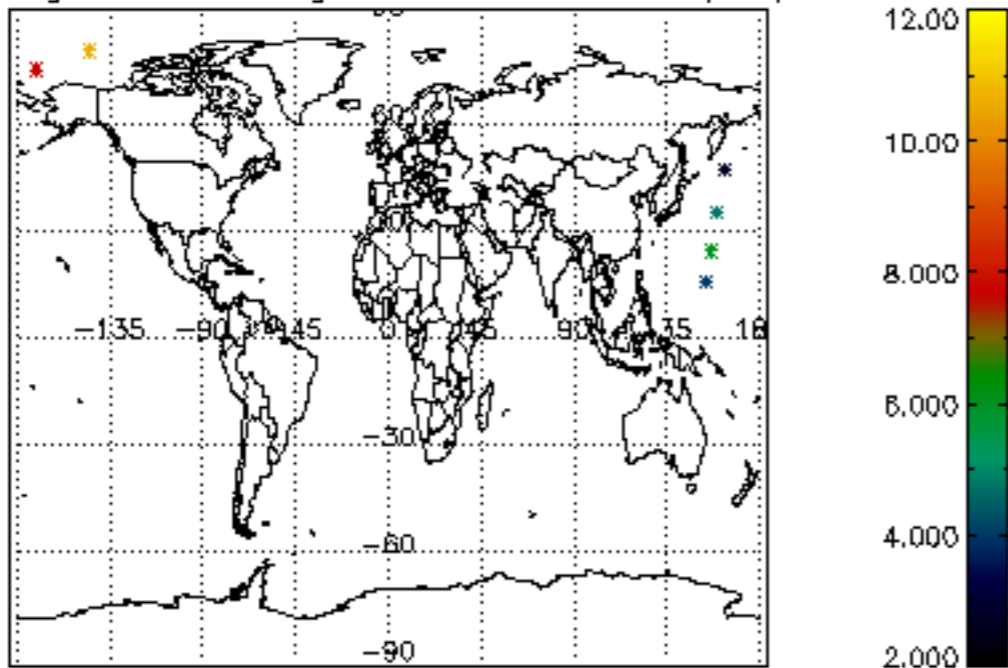
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

