

# 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	17APR2013 21:26:39
Data source version	GOMOS/6.01
Start time of products	18-12-2002 (18DEC2002 00:00:00)
Stop time of products	19-12-2002 (19DEC2002 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	11
Nb of prods with errors	0

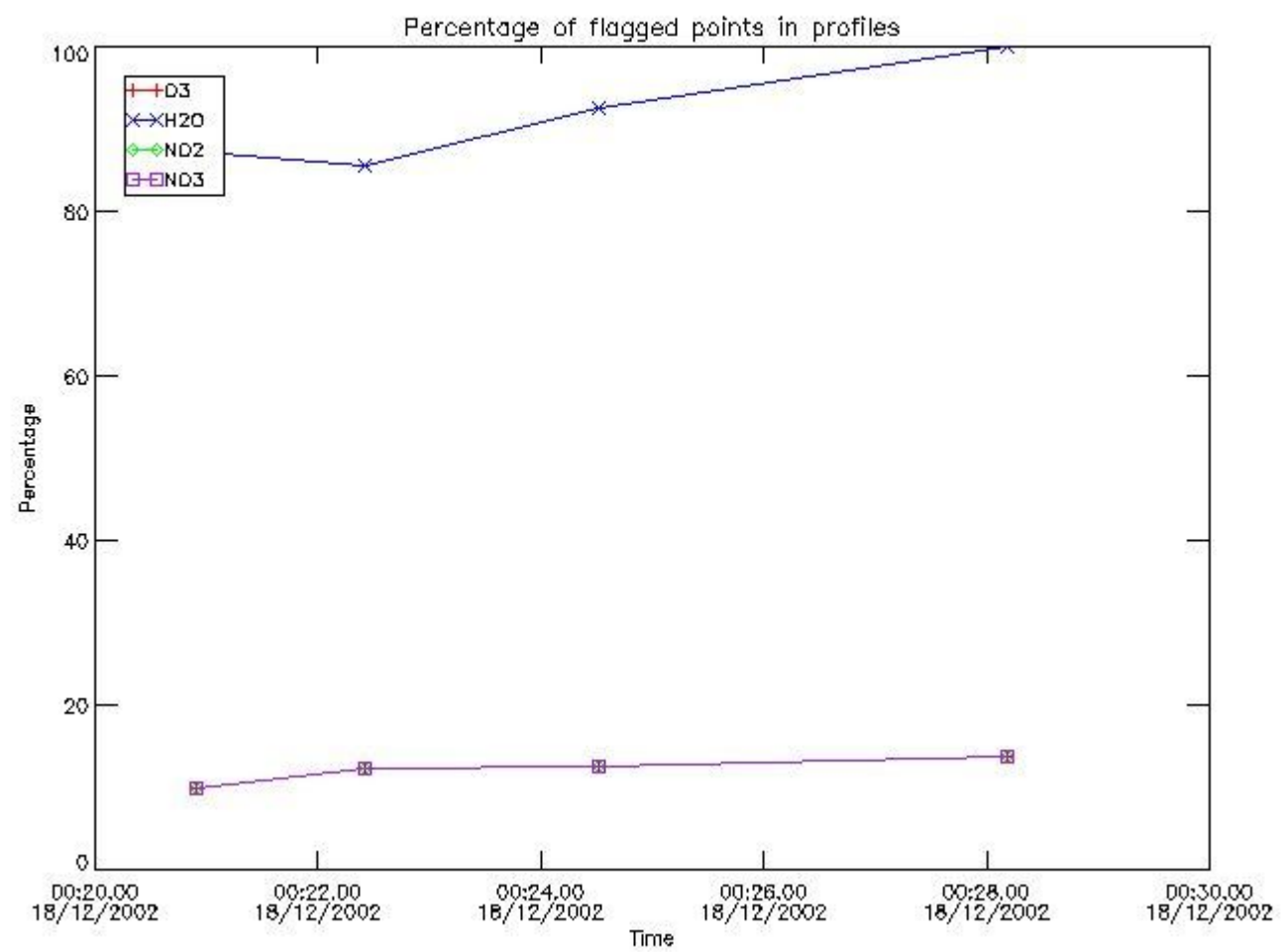
## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20021218_000038_000000382012_00116_04178_0387.N1	18-DEC-2002 00:00:38	Bright	37.500	180	27Gam Boo	3.0400	8000.0	75	4178	No
2	GOM_NL__2PRFIN20021218_000354_000000542012_00116_04178_0388.N1	18-DEC-2002 00:03:54	Bright	54.000	83		2.3780	11000.	108	4178	No
3	GOM_NL__2PRFIN20021218_000715_000000462012_00116_04178_0389.N1	18-DEC-2002 00:07:15	Bright	45.500	111	8Eta Boo	2.6800	6000.0	91	4178	No
4	GOM_NL__2PRFIN20021218_000901_000000352012_00116_04178_0390.N1	18-DEC-2002 00:09:01	Bright	35.000	102	24Alp Ser	2.6000	4250.0	70	4178	No
5	GOM_NL__2PRFIN20021218_001124_000000572012_00116_04178_0391.N1	18-DEC-2002 00:11:24	Bright	56.500	138	47Eps Vir	2.8280	4700.0	113	4178	No
6	GOM_NL__2PRFIN20021218_001559_000000392012_00116_04178_0392.N1	18-DEC-2002 00:15:59	Bright	39.000	122	9Alp2Lib	2.7470	9700.0	78	4178	No
7	GOM_NL__2PRFIN20021218_001723_000000532012_00116_04178_0393.N1	18-DEC-2002 00:17:23	Twilight	53.000	15	67Alp Vir	0.97600	28000.	106	4178	No
8	GOM_NL__2PRFIN20021218_002054_000000512012_00116_04178_0394.N1	18-DEC-2002 00:20:54	Dark	51.000	169	46Gam Hya	2.9910	4700.0	102	4178	No
9	GOM_NL__2PRFIN20021218_002225_000000462012_00116_04178_0395.N1	18-DEC-2002 00:22:25	Dark	45.500	54	5The Cen	2.0550	4500.0	91	4178	No
10	GOM_NL__2PRFIN20021218_002430_000000412012_00116_04178_0396.N1	18-DEC-2002 00:24:30	Dark	40.500	78	Alp Lup	2.3040	28000.	81	4178	No
11	GOM_NL__2PRFIN20021218_002811_000000452012_00116_04178_0397.N1	18-DEC-2002 00:28:11	Dark	44.500	64	Gam Cen	2.2000	10600.	89	4178	No

## 3. Quality information per product

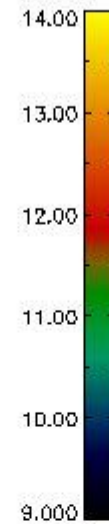
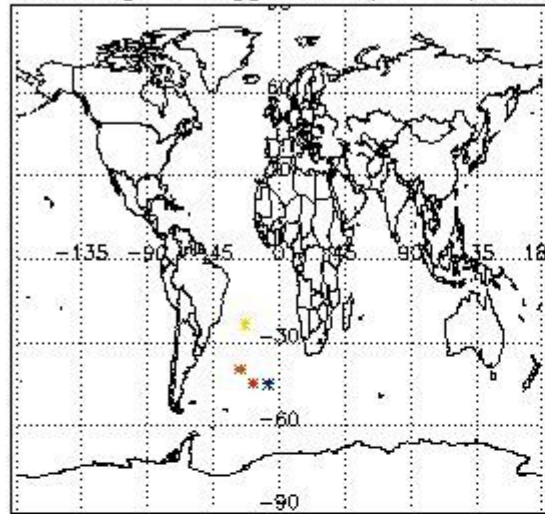
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

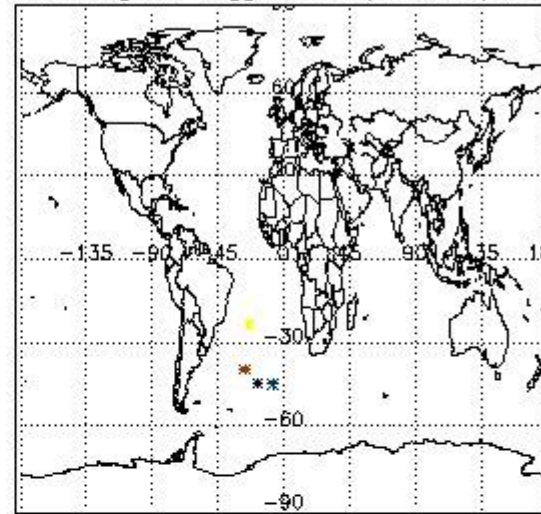


*3.2 Plot quality information per product (world map)*

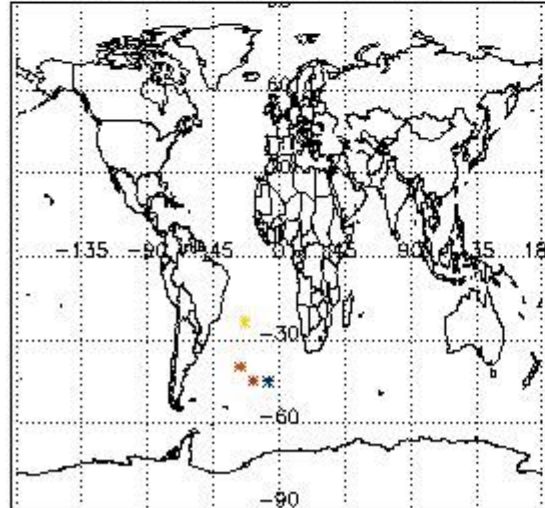
Percentage of flagged data per O3 profile



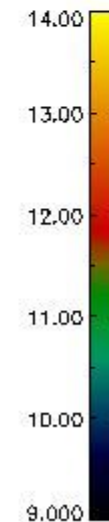
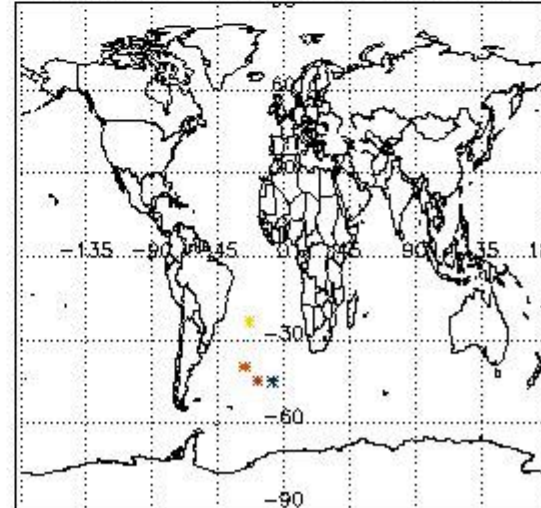
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

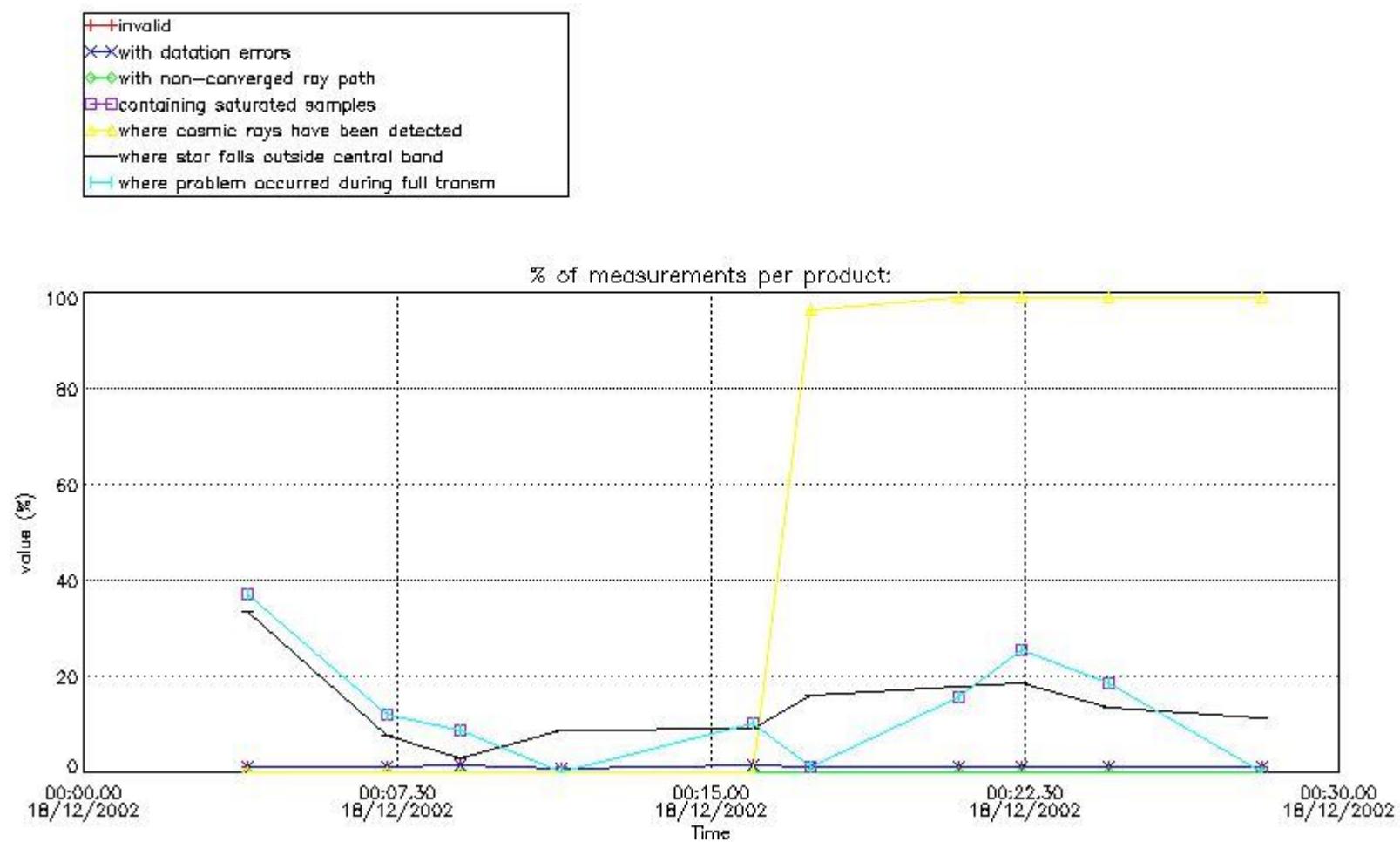


#### 4. Level 1 quality information per product

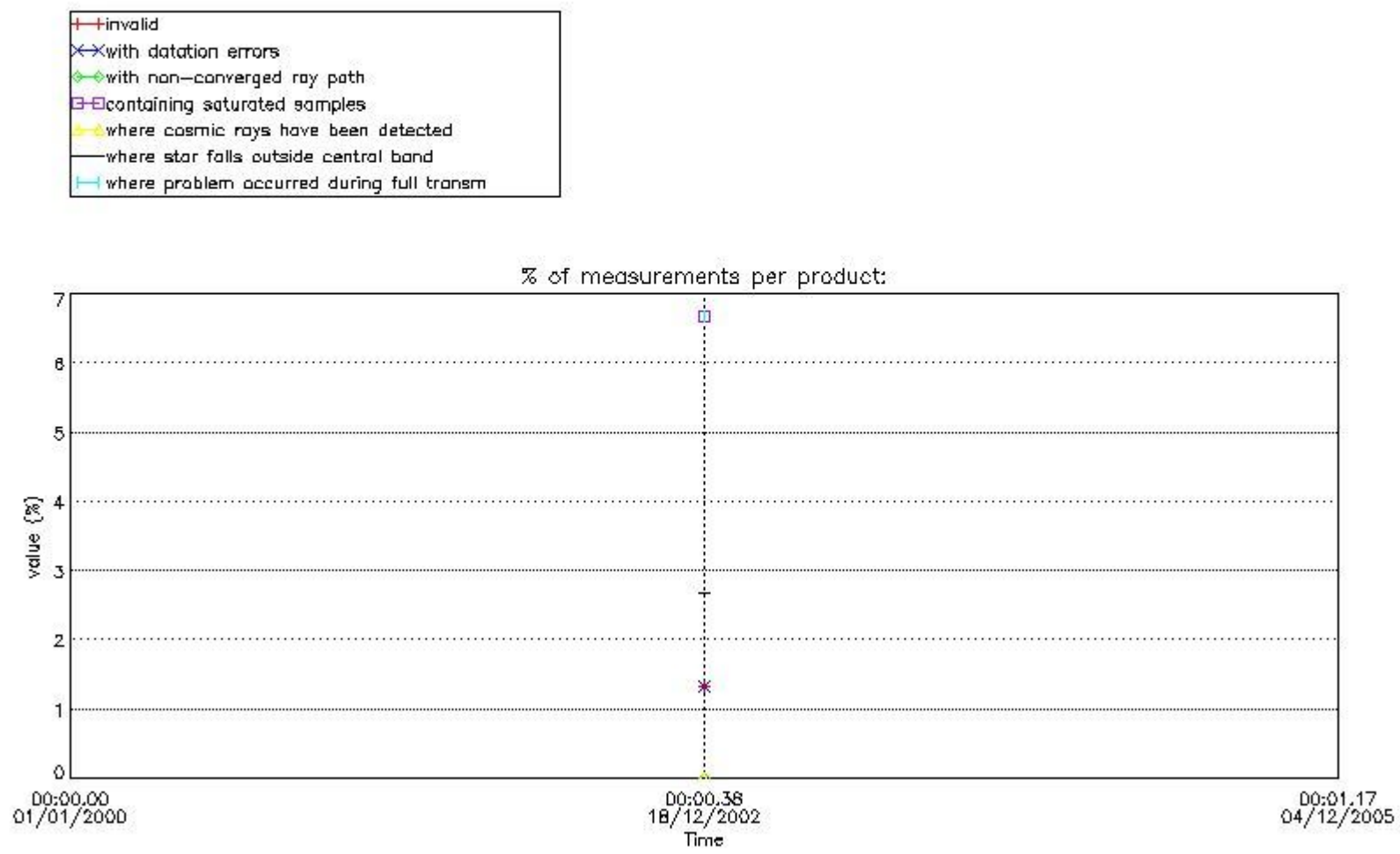
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



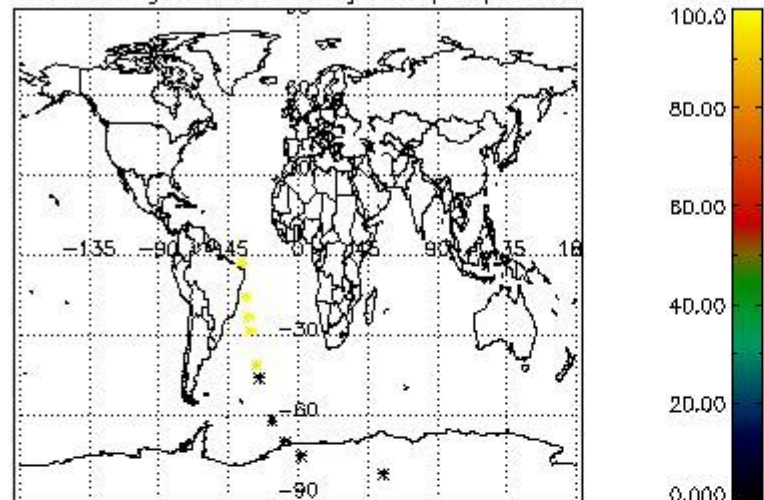
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



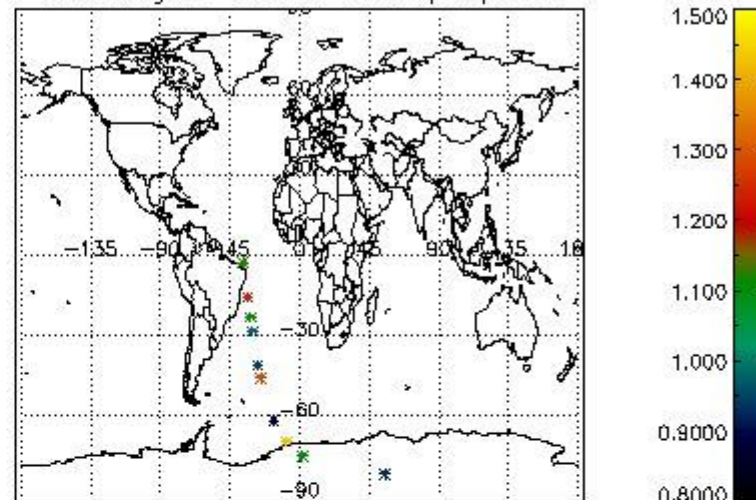
4.2 Plot quality information per product coming from level 1b processing (world map)

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

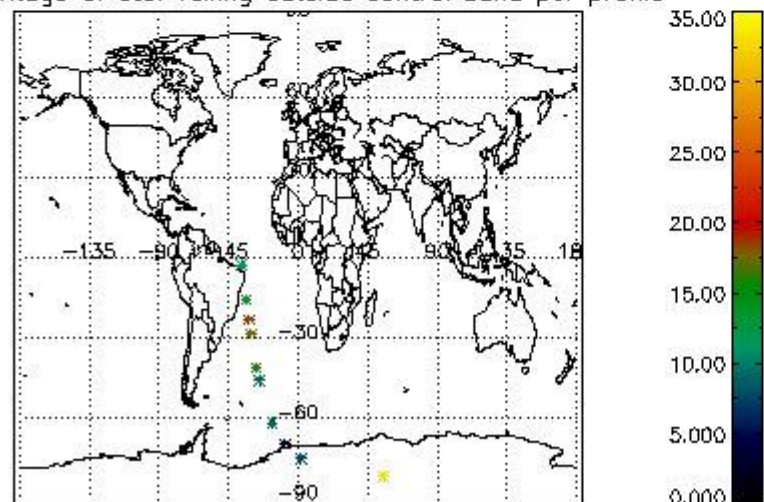
Percentage of cosmic ray hits per profile



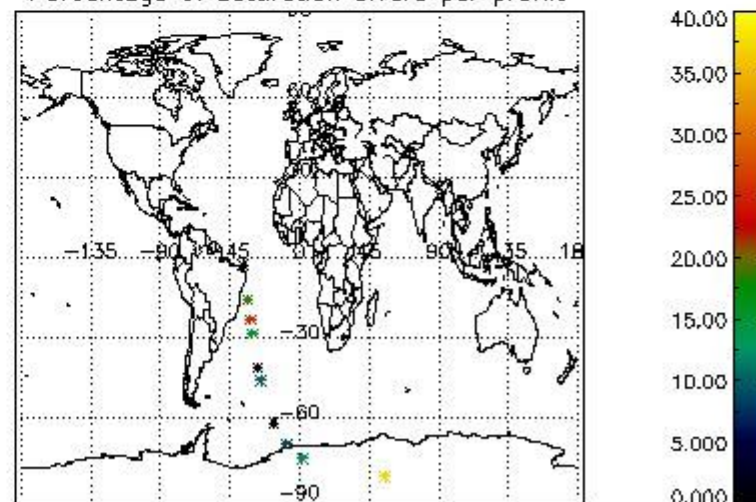
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

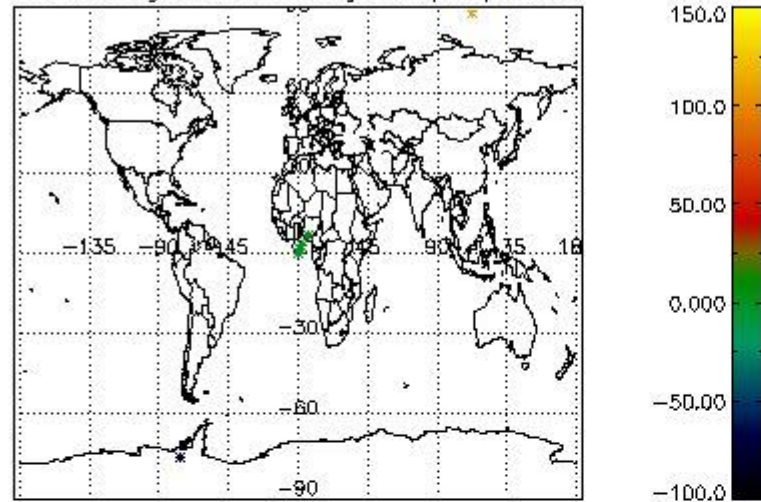


Percentage of saturation errors per profile

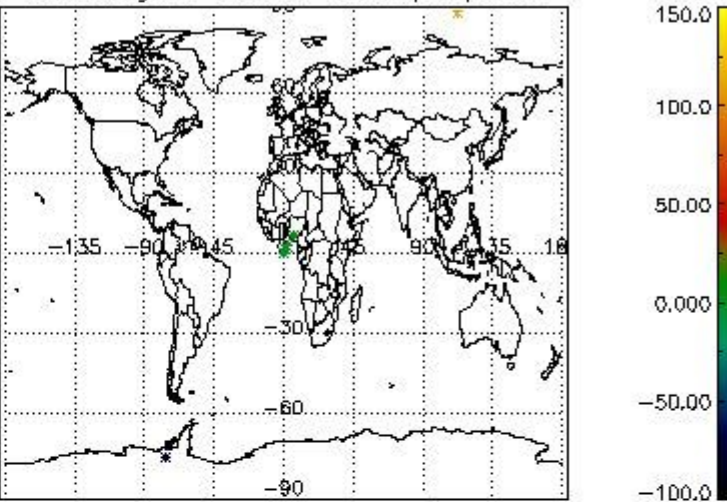


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

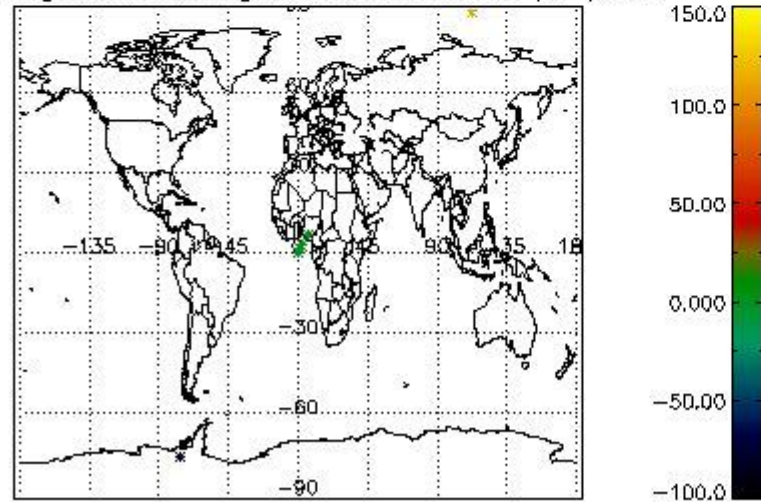
Percentage of cosmic ray hits per profile



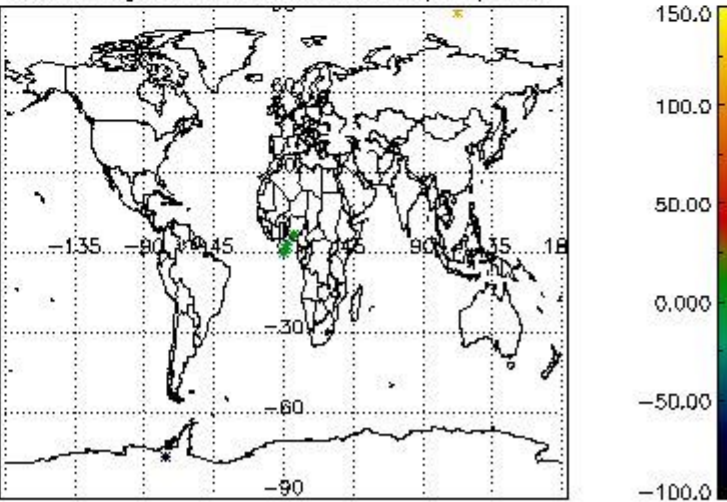
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 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.

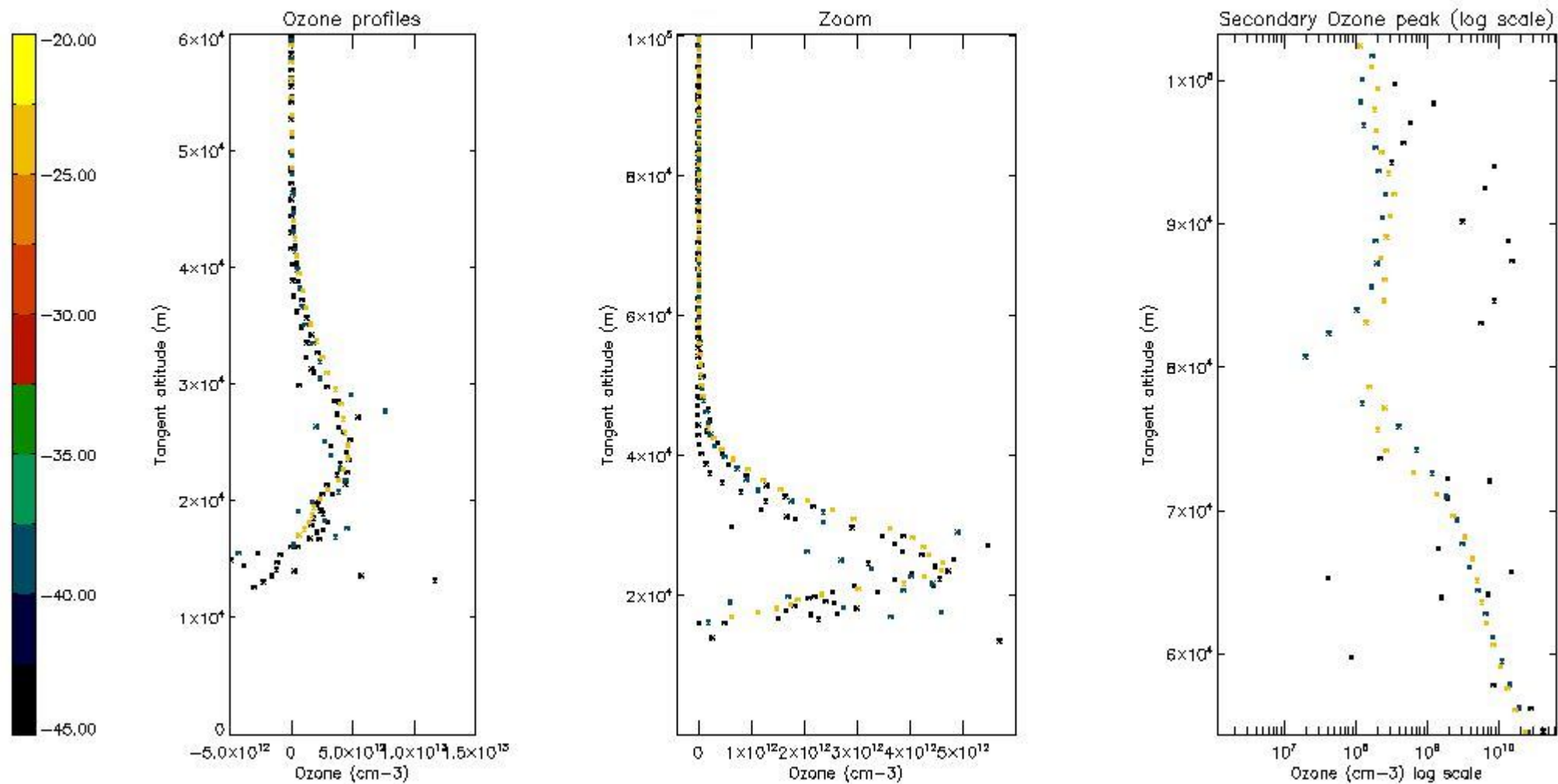
Criteria	% of total production
All STD	37
STD < 20	12



STD < 10	7
STD < 5	6

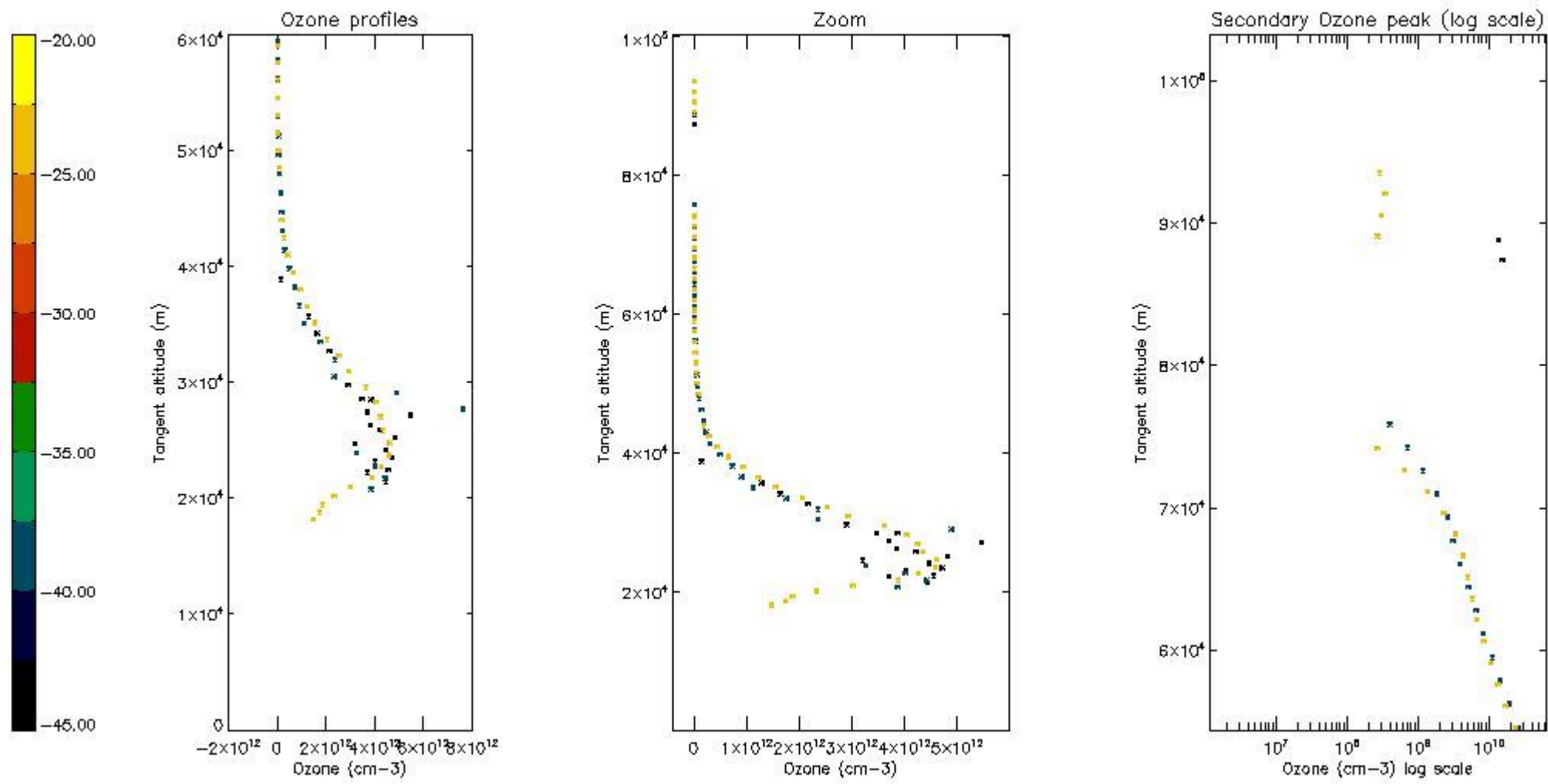
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



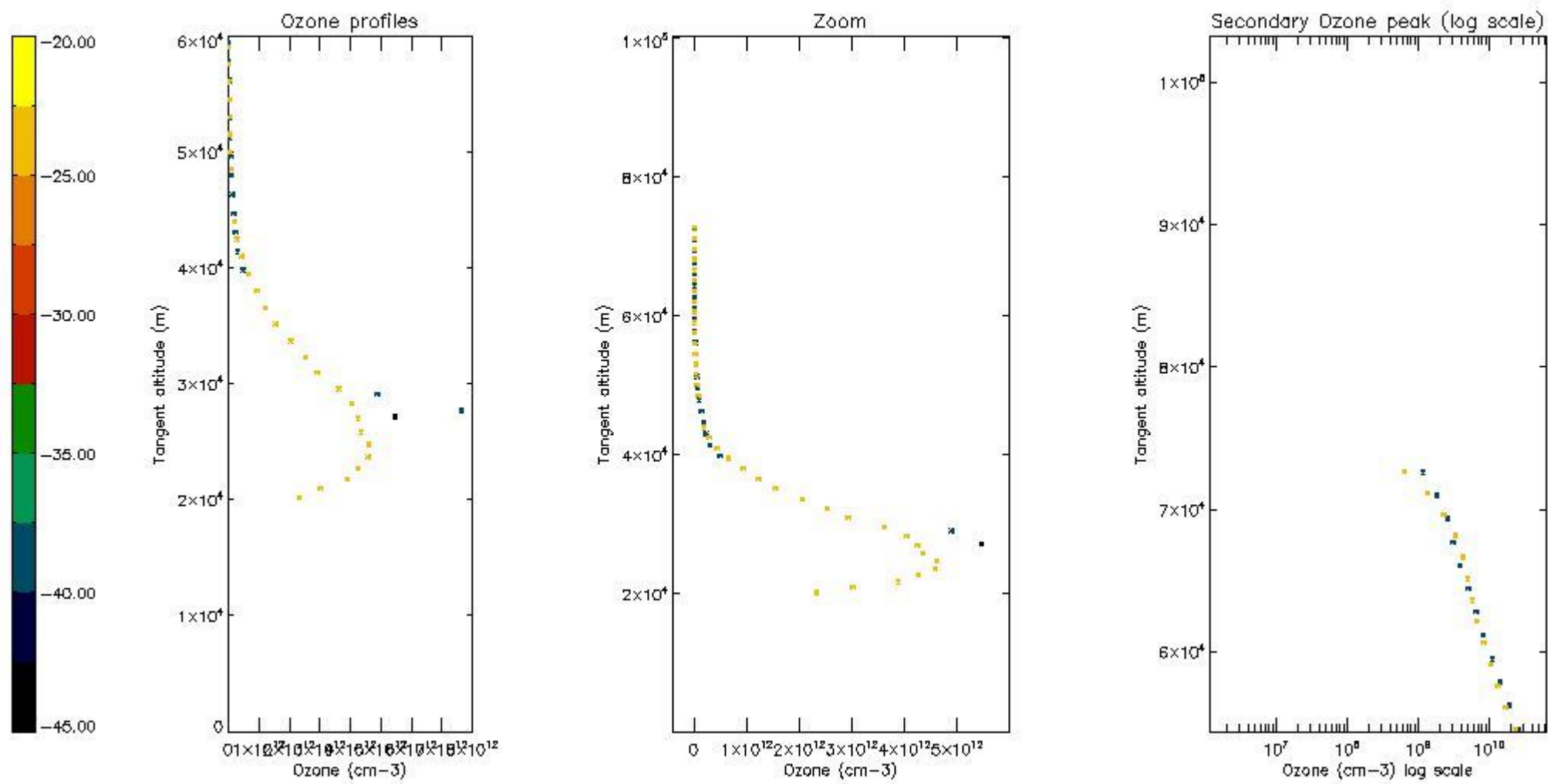
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



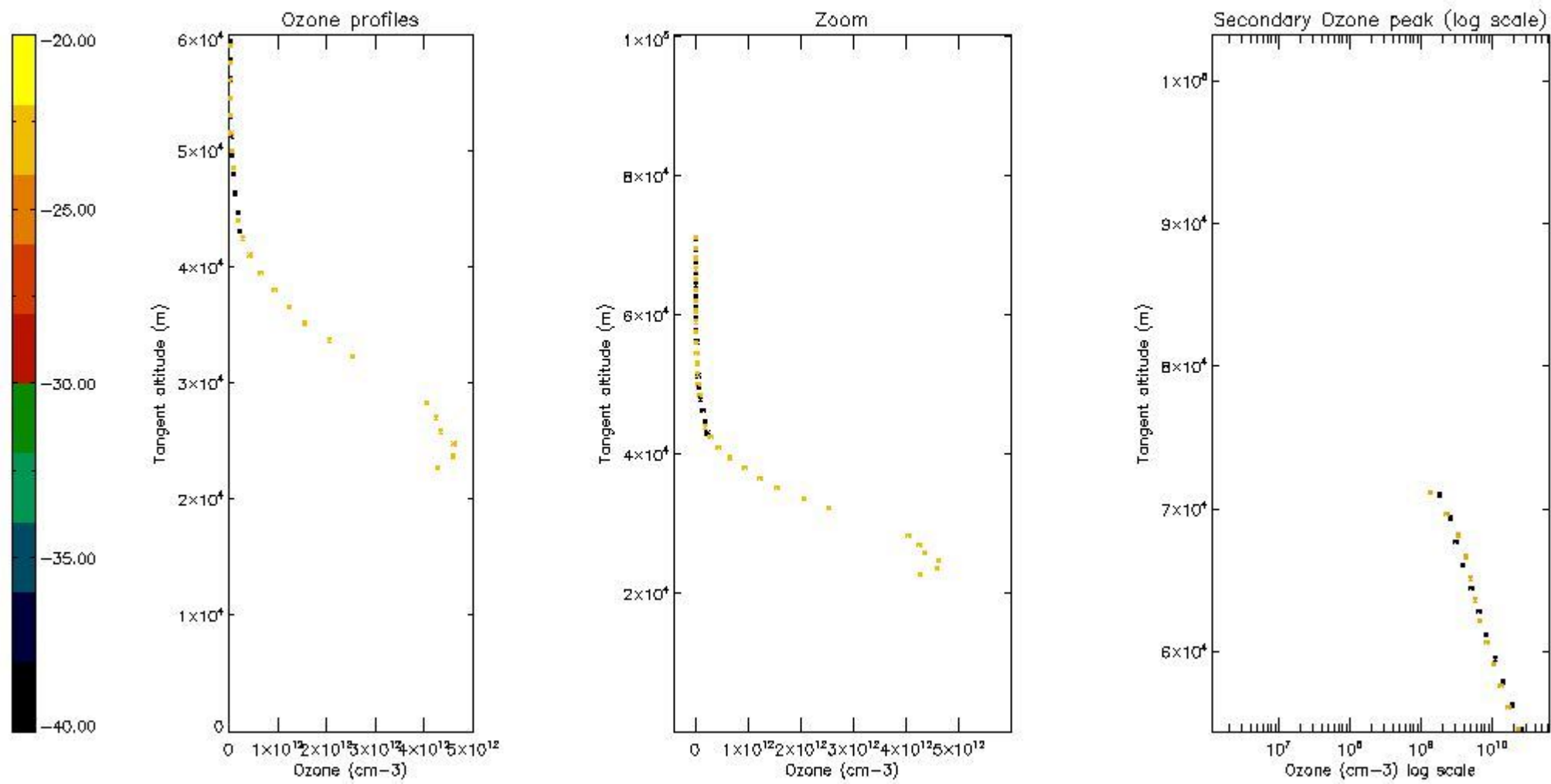
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



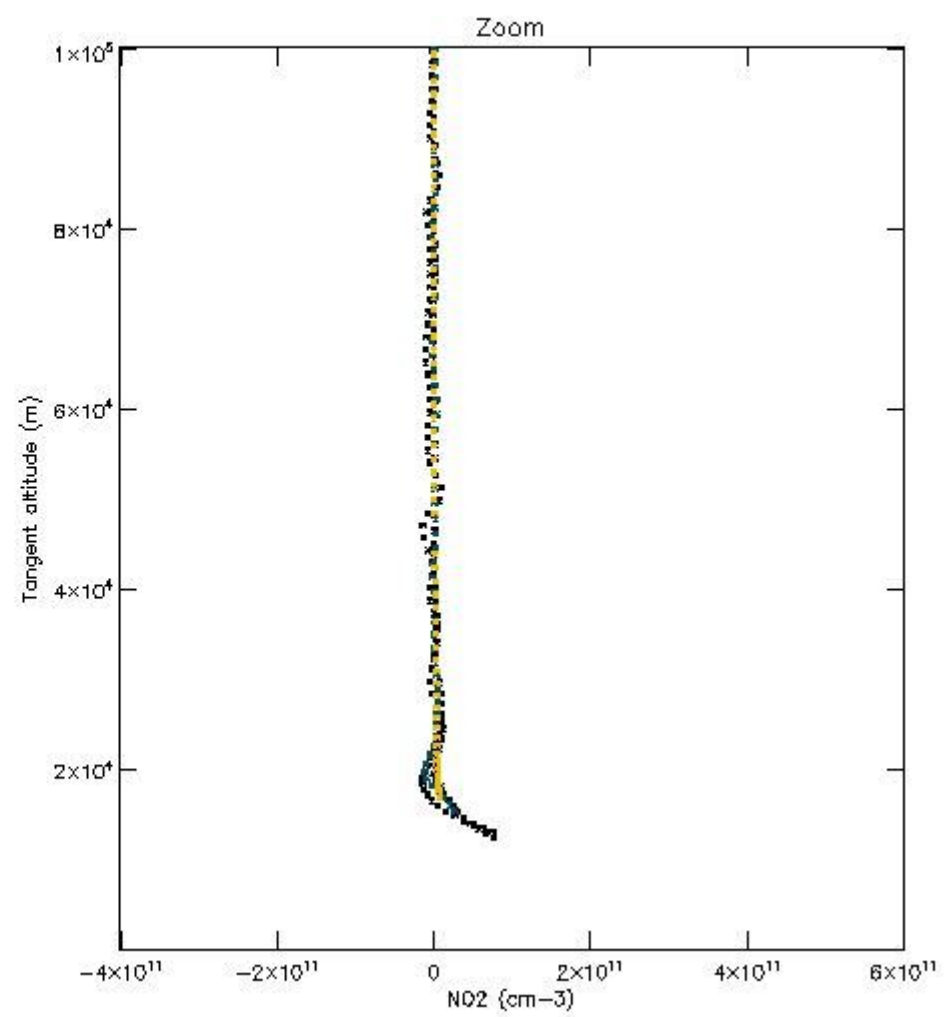
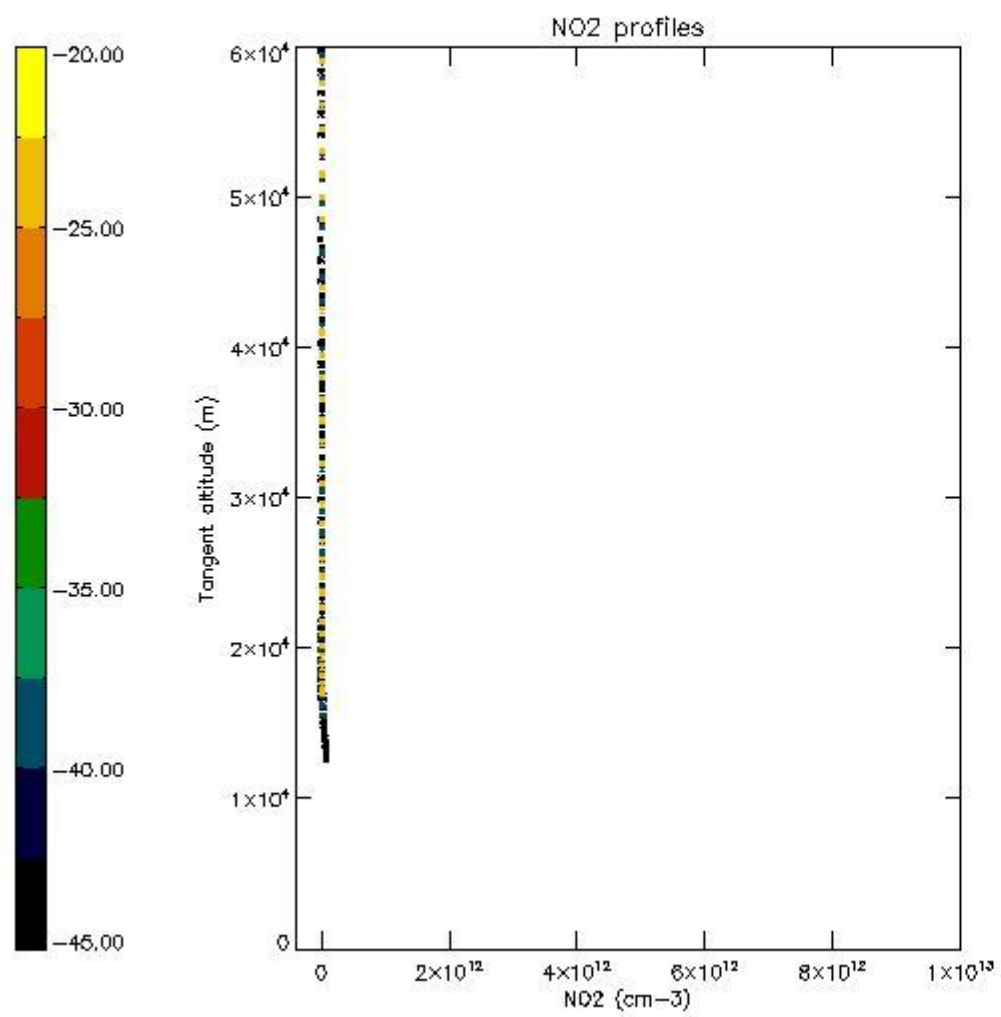
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



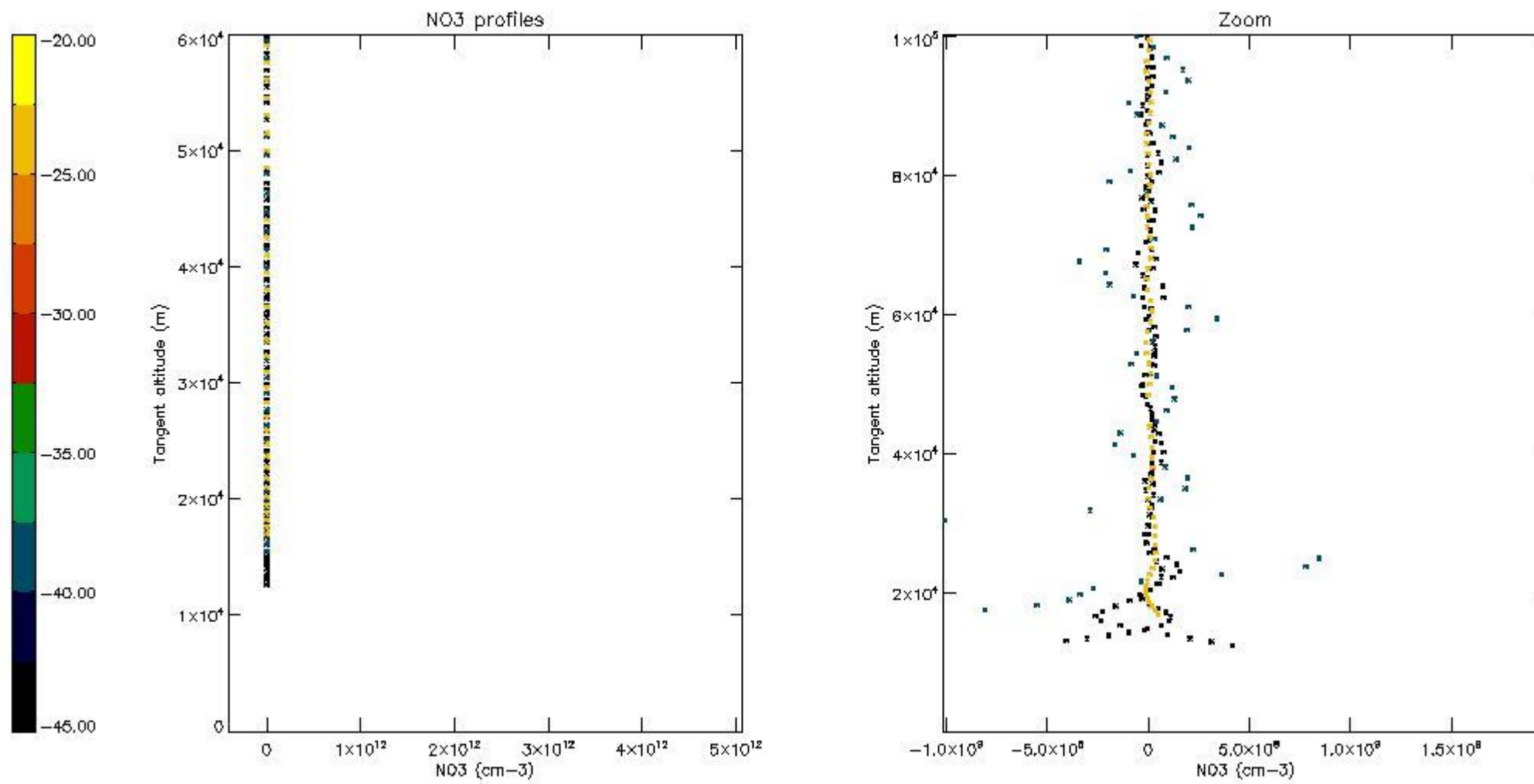
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

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_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	18-DEC-2002 00:00:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-DEC-2002 00:00:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-DEC-2002 00:00:38

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

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### [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](#)

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#### [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 \(dark without errors\)](#)

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Store outputs in DB	Yes
Nb of level 2 prods	11
Nb of prods with errors	0

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

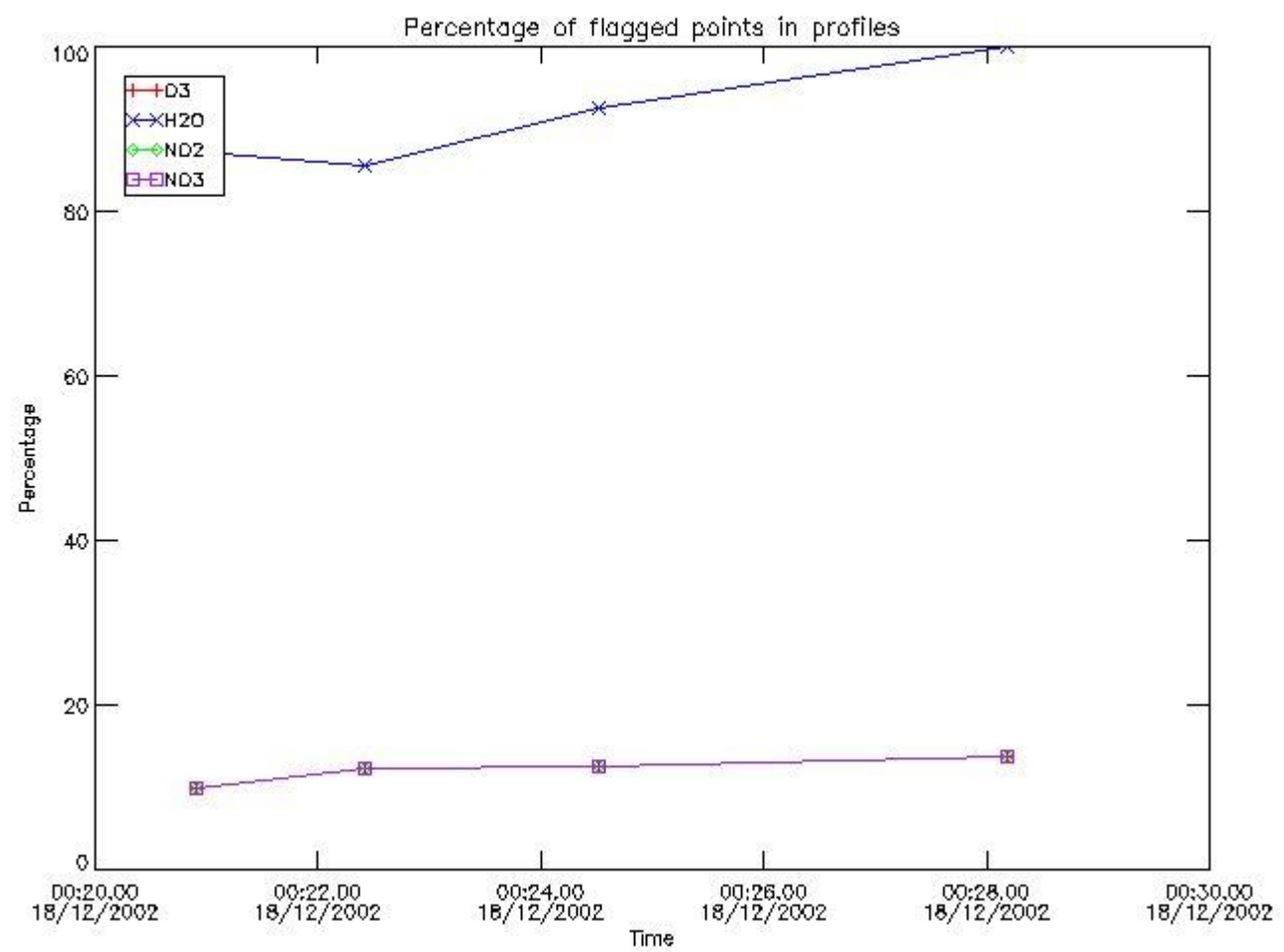
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20021218_000038_000000382012_00116_04178_0387.N1	18-DEC-2002 00:00:38	Bright	37.500	180	27Gam Boo	3.0400	8000.0	75	4178	No
2	GOM_NL__2PRFIN20021218_000354_000000542012_00116_04178_0388.N1	18-DEC-2002 00:03:54	Bright	54.000	83		2.3780	11000.	108	4178	No
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5	GOM_NL__2PRFIN20021218_001124_000000572012_00116_04178_0391.N1	18-DEC-2002 00:11:24	Bright	56.500	138	47Eps Vir	2.8280	4700.0	113	4178	No
6	GOM_NL__2PRFIN20021218_001559_000000392012_00116_04178_0392.N1	18-DEC-2002 00:15:59	Bright	39.000	122	9Alp2Lib	2.7470	9700.0	78	4178	No
7	GOM_NL__2PRFIN20021218_001723_000000532012_00116_04178_0393.N1	18-DEC-2002 00:17:23	Twilight	53.000	15	67Alp Vir	0.97600	28000.	106	4178	No
8	GOM_NL__2PRFIN20021218_002054_000000512012_00116_04178_0394.N1	18-DEC-2002 00:20:54	Dark	51.000	169	46Gam Hya	2.9910	4700.0	102	4178	No
9	GOM_NL__2PRFIN20021218_002225_000000462012_00116_04178_0395.N1	18-DEC-2002 00:22:25	Dark	45.500	54	5The Cen	2.0550	4500.0	91	4178	No
10	GOM_NL__2PRFIN20021218_002430_000000412012_00116_04178_0396.N1	18-DEC-2002 00:24:30	Dark	40.500	78	Alp Lup	2.3040	28000.	81	4178	No
11	GOM_NL__2PRFIN20021218_002811_000000452012_00116_04178_0397.N1	18-DEC-2002 00:28:11	Dark	44.500	64	Gam Cen	2.2000	10600.	89	4178	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.

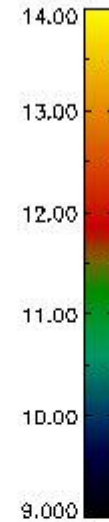
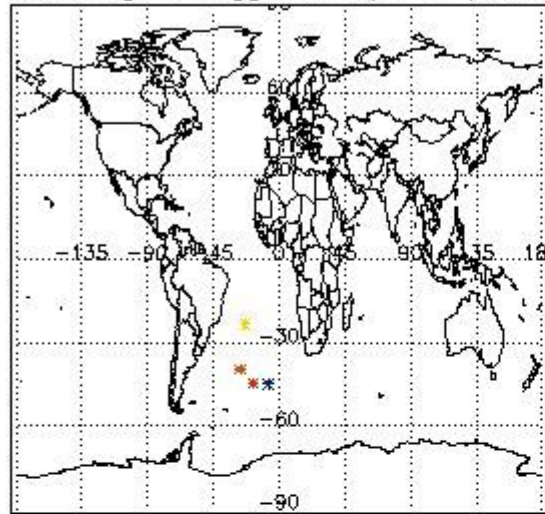
### 3.1 Plot quality information per product (time dependant)



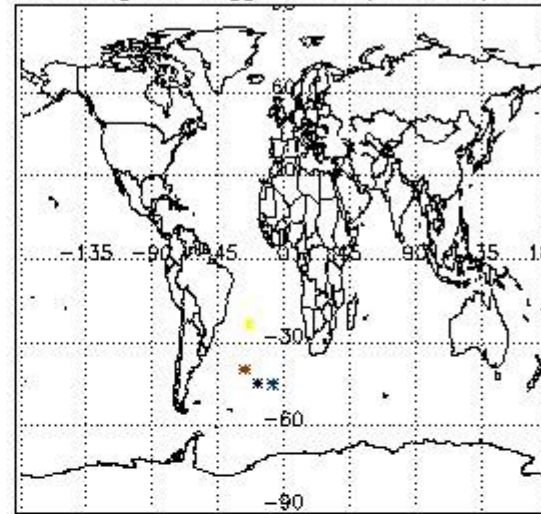


*3.2 Plot quality information per product (world map)*

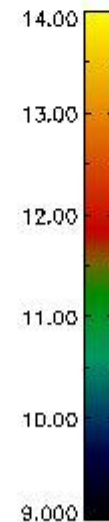
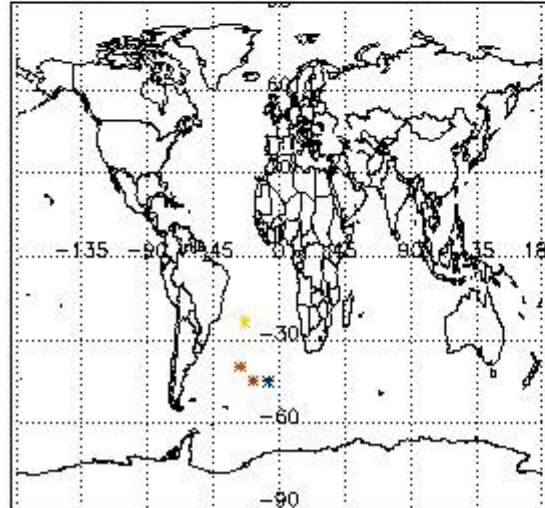
Percentage of flagged data per O3 profile



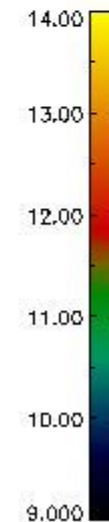
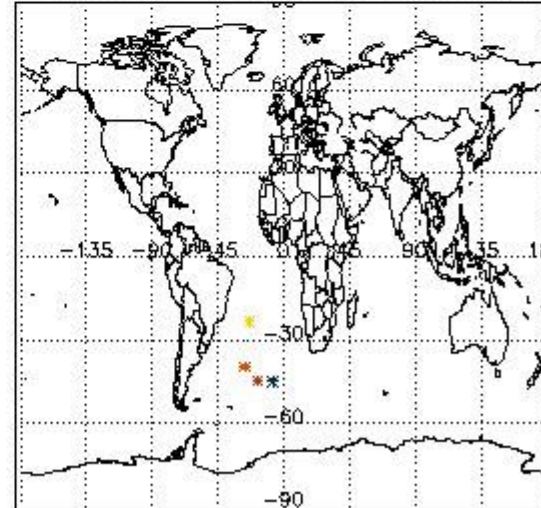
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

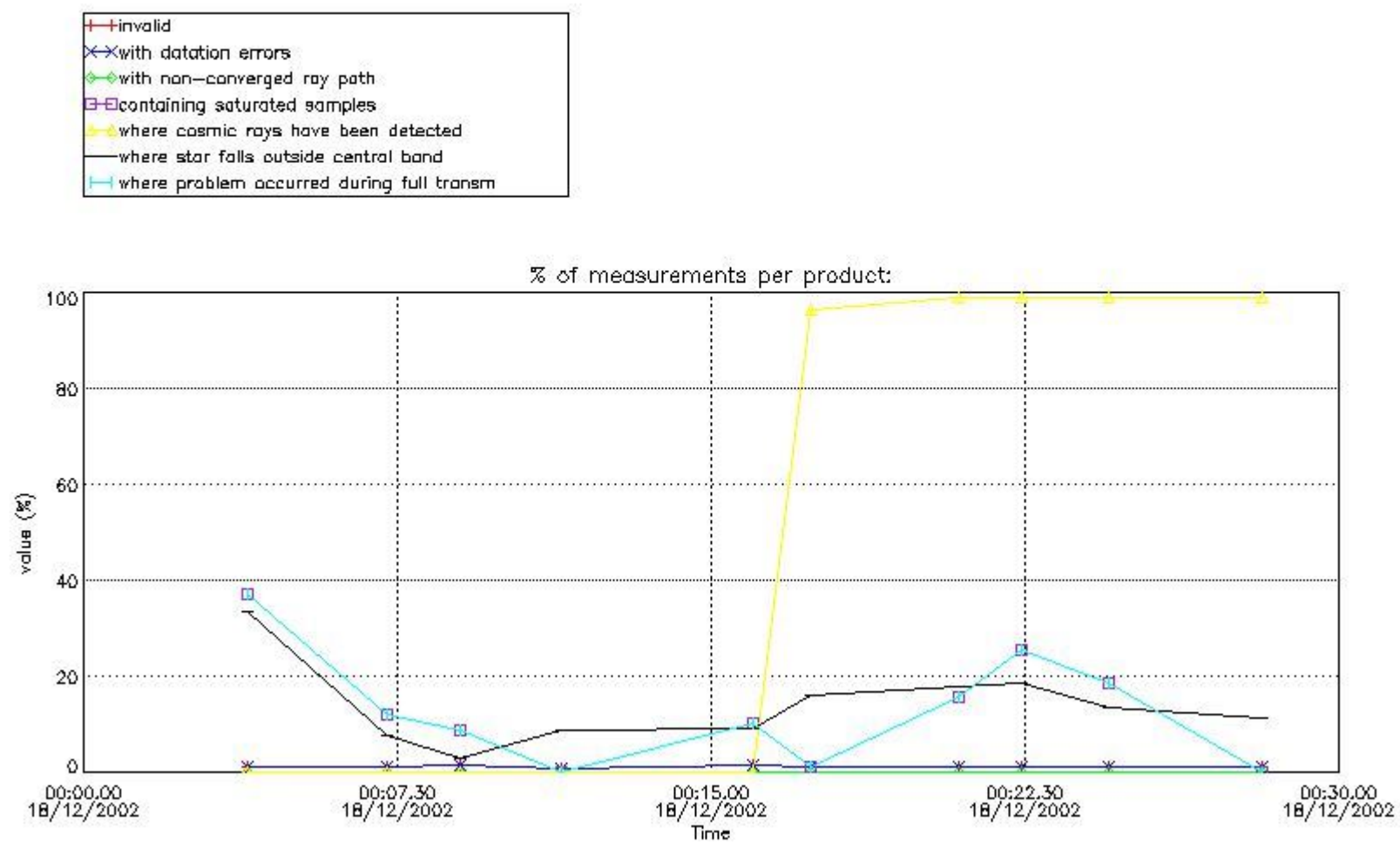


#### 4. Level 1 quality information per product

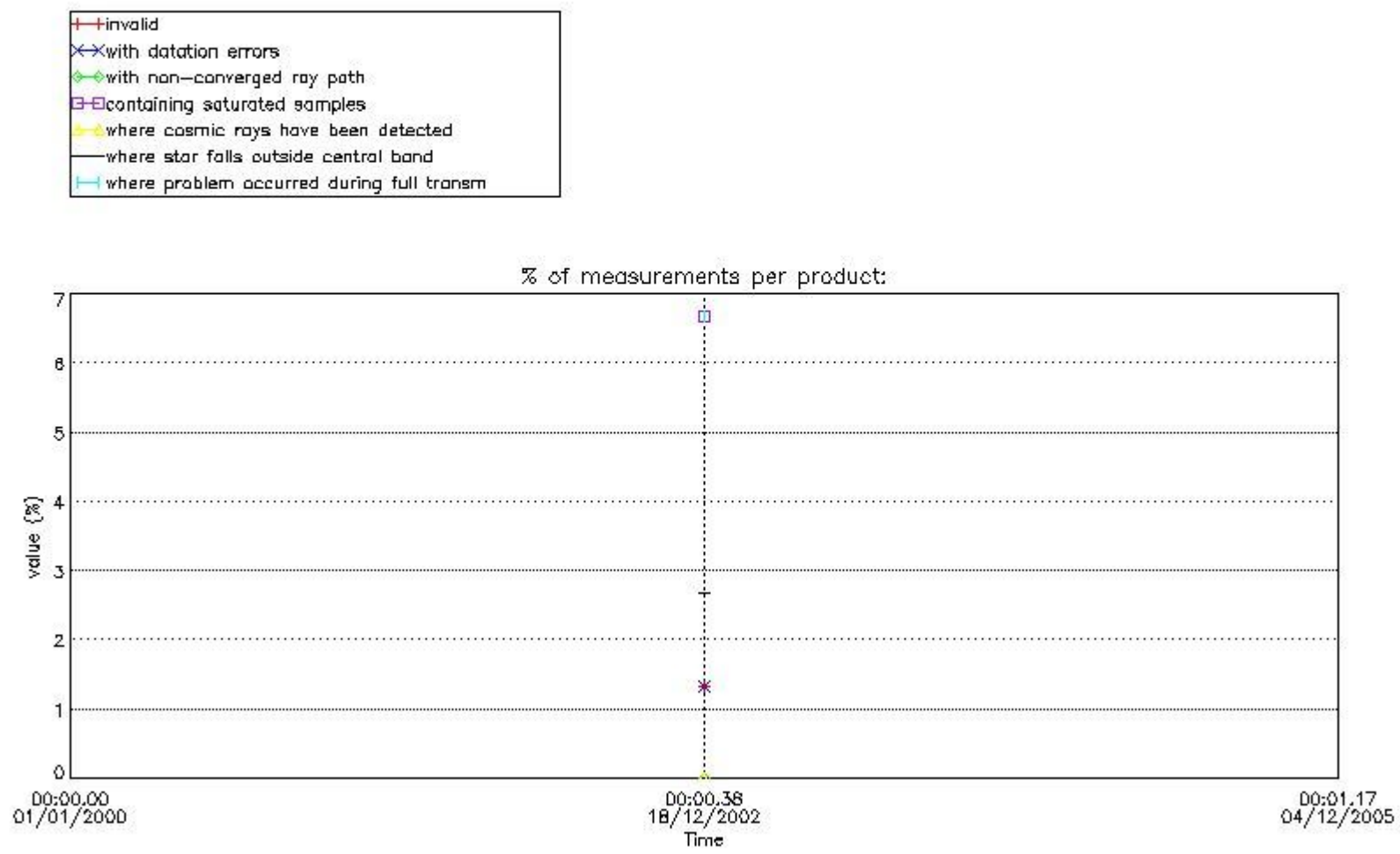
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



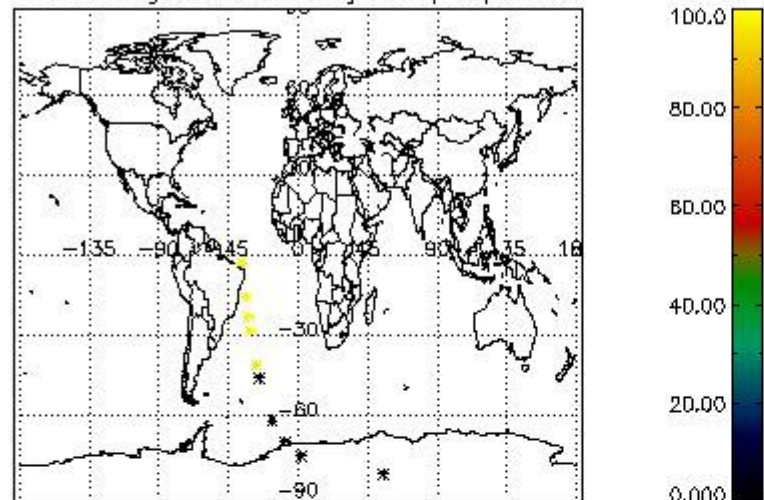
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



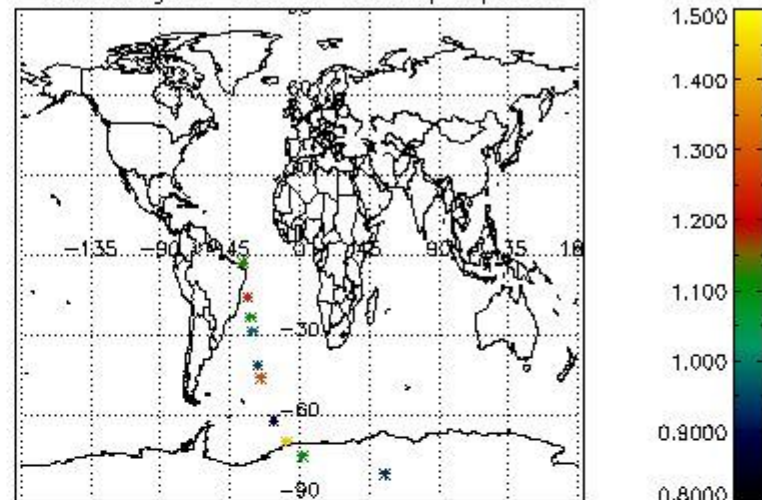
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

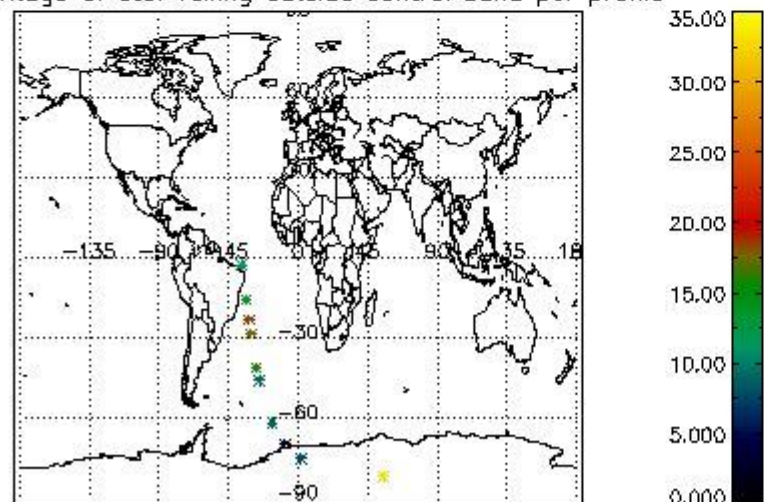
Percentage of cosmic ray hits per profile



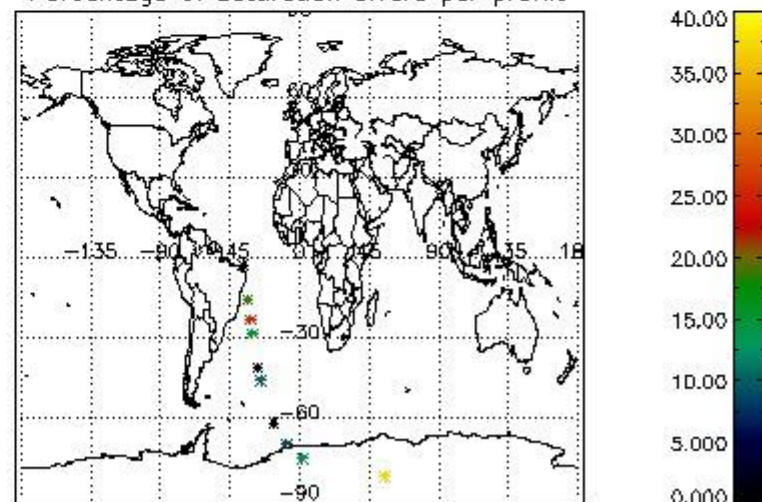
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

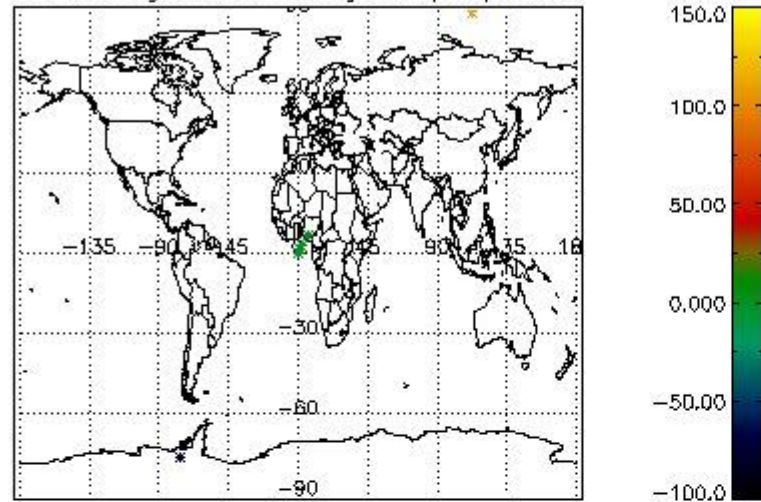


Percentage of saturation errors per profile

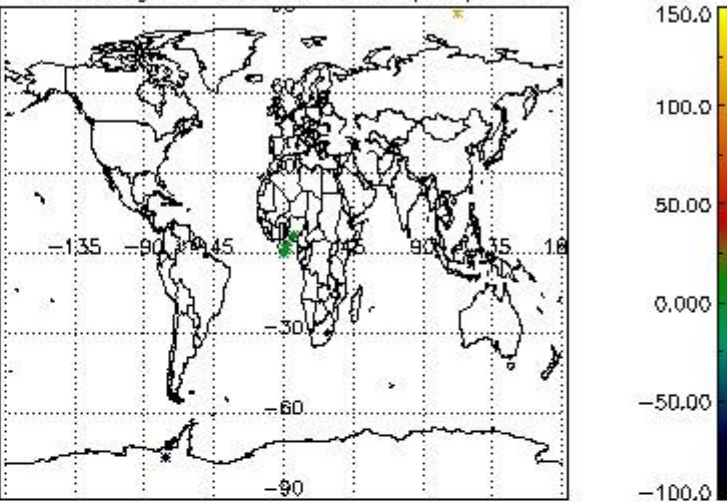


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

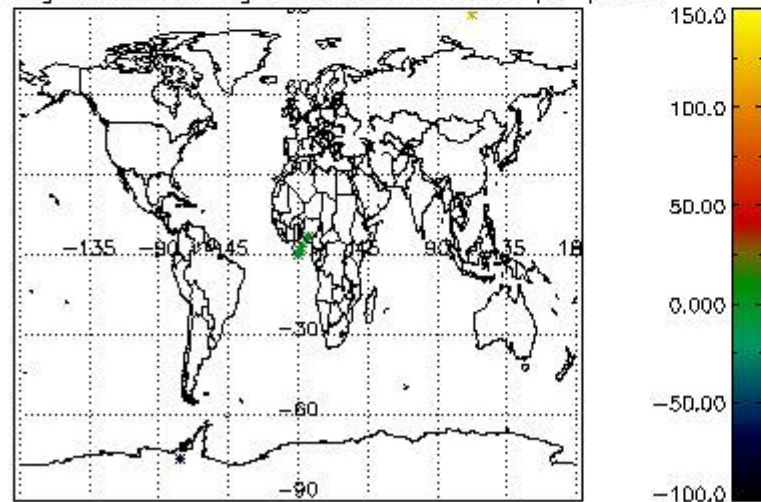
Percentage of cosmic ray hits per profile



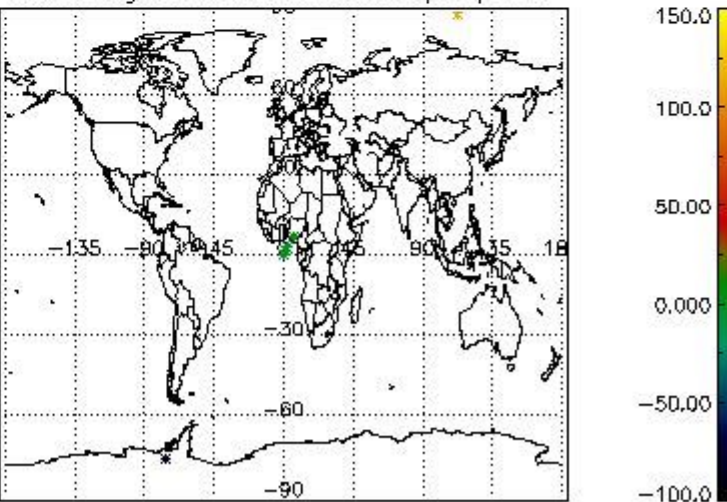
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 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

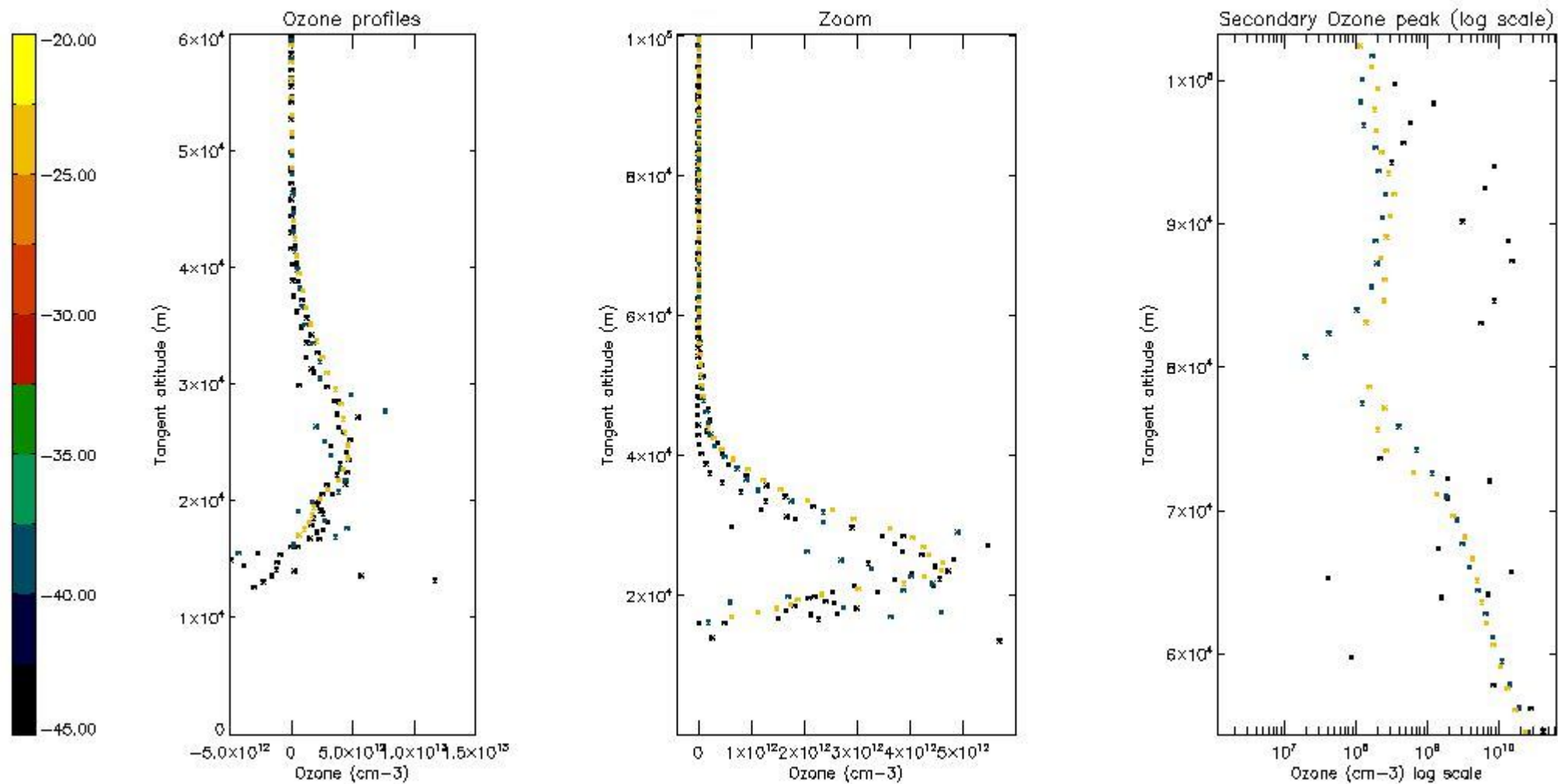
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	12

STD < 10	7
STD < 5	6

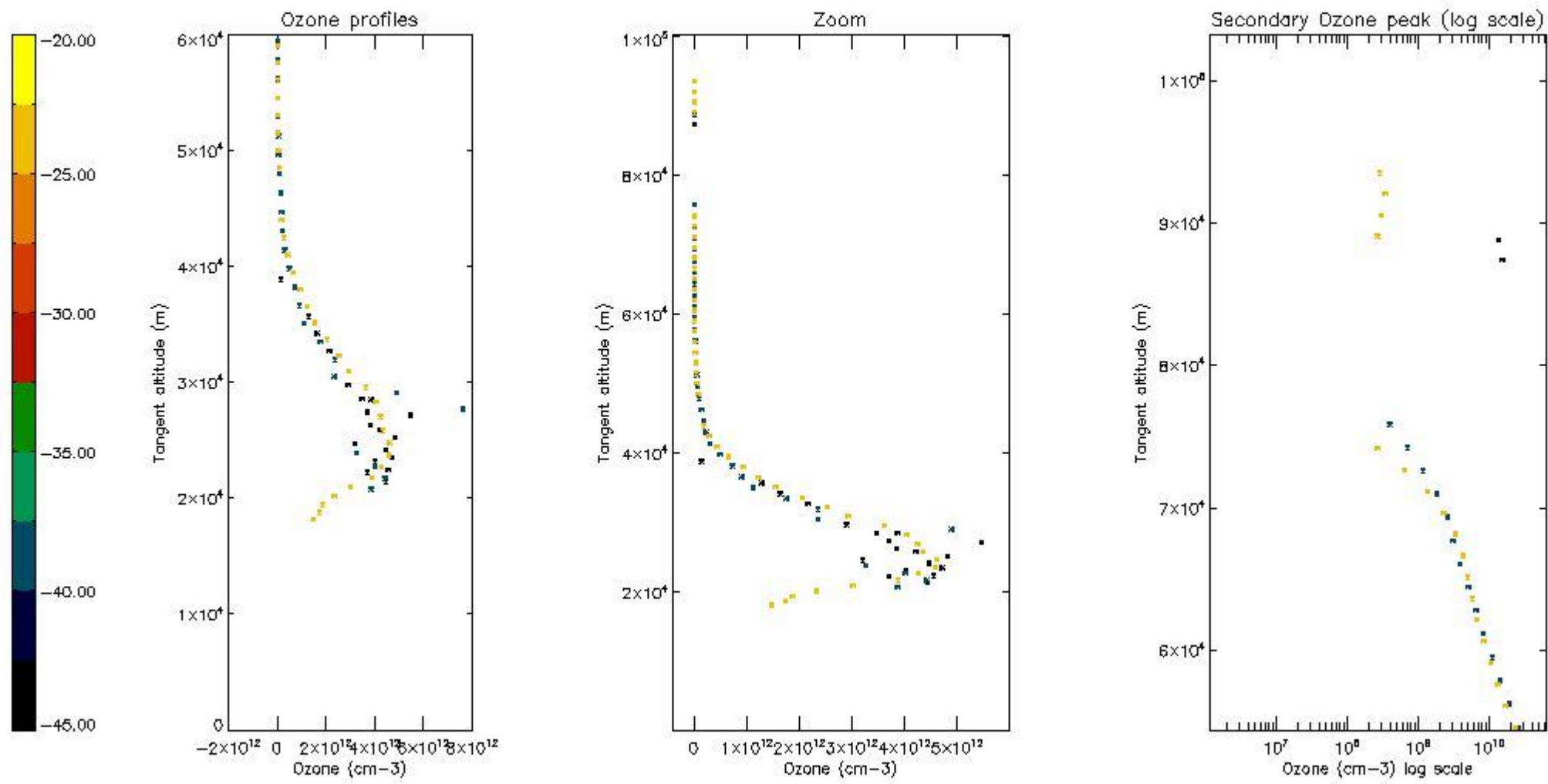
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

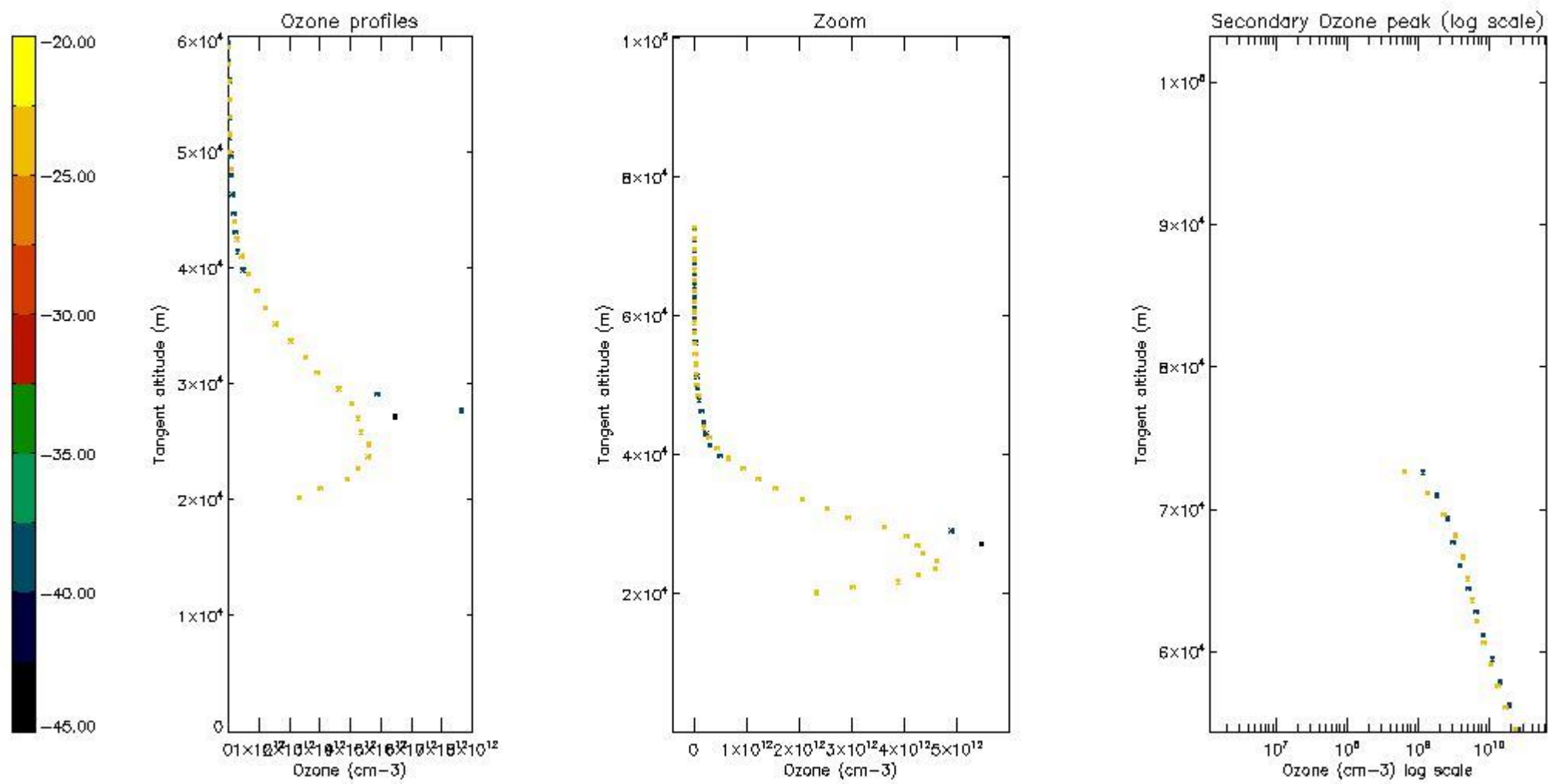
The colorbar represents the latitude.



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

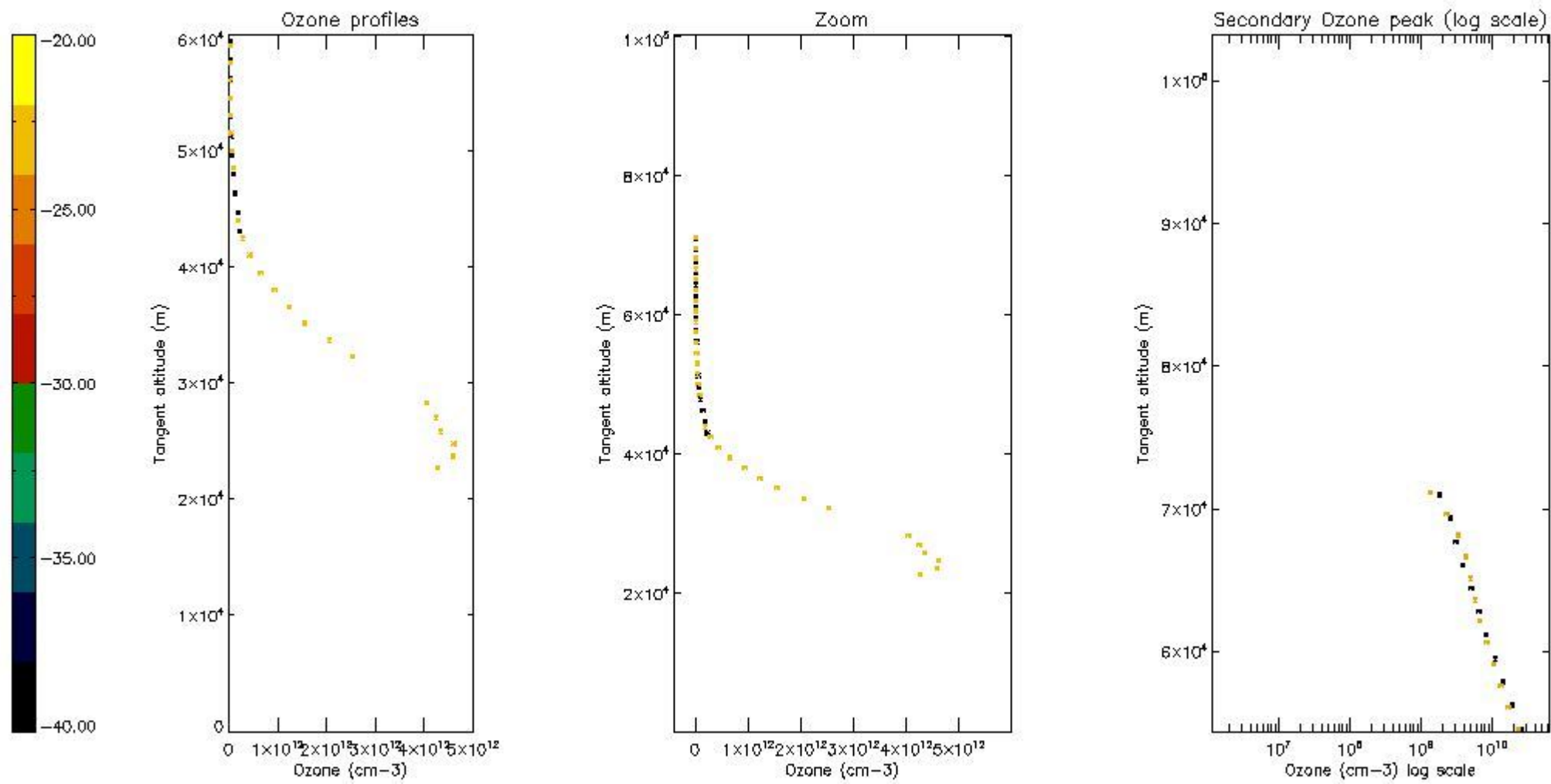
The colorbar represents the latitude.





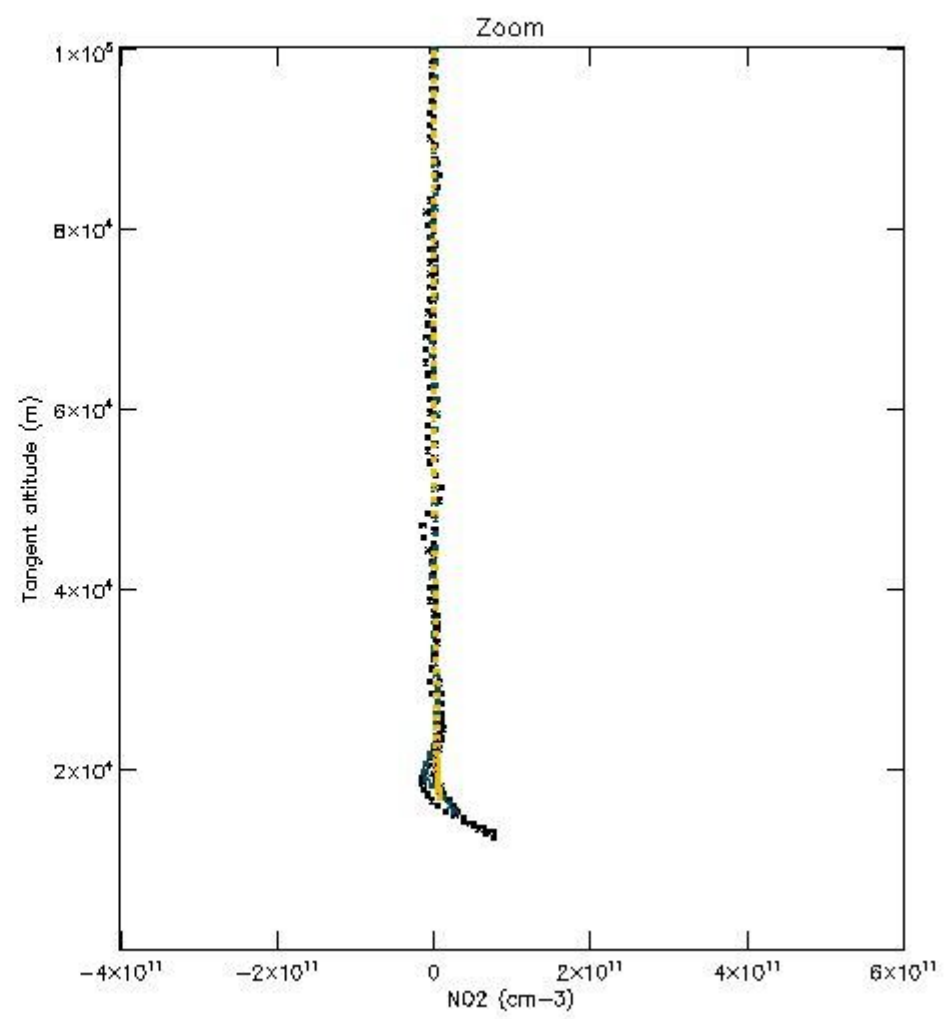
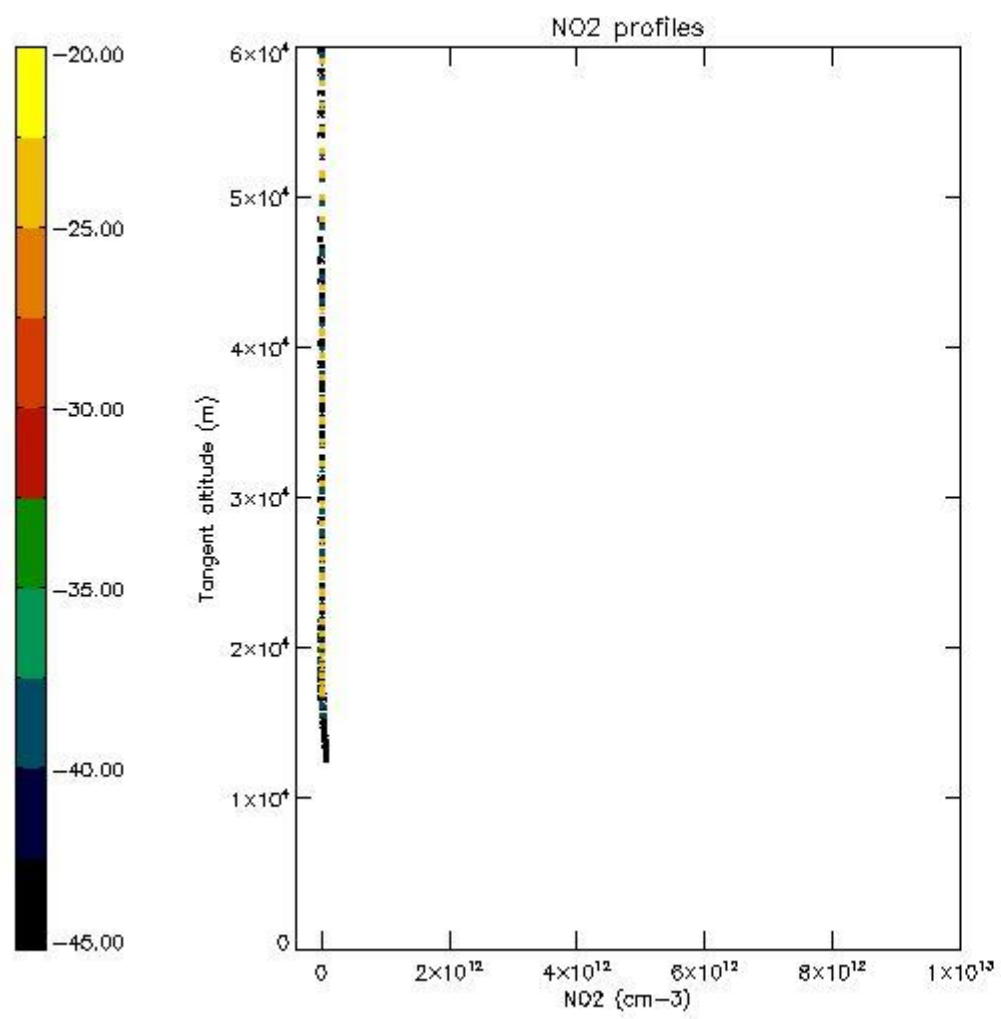
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



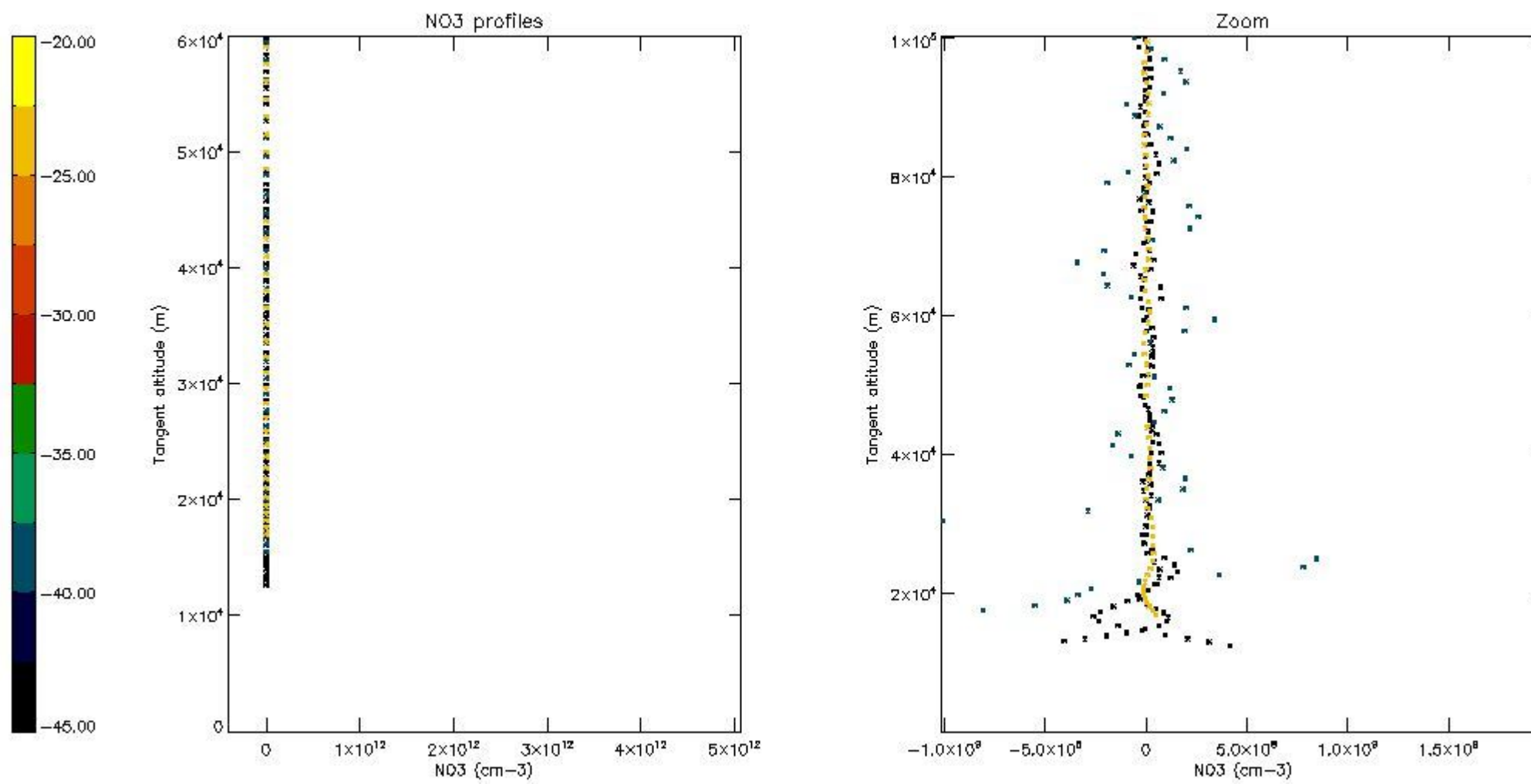
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

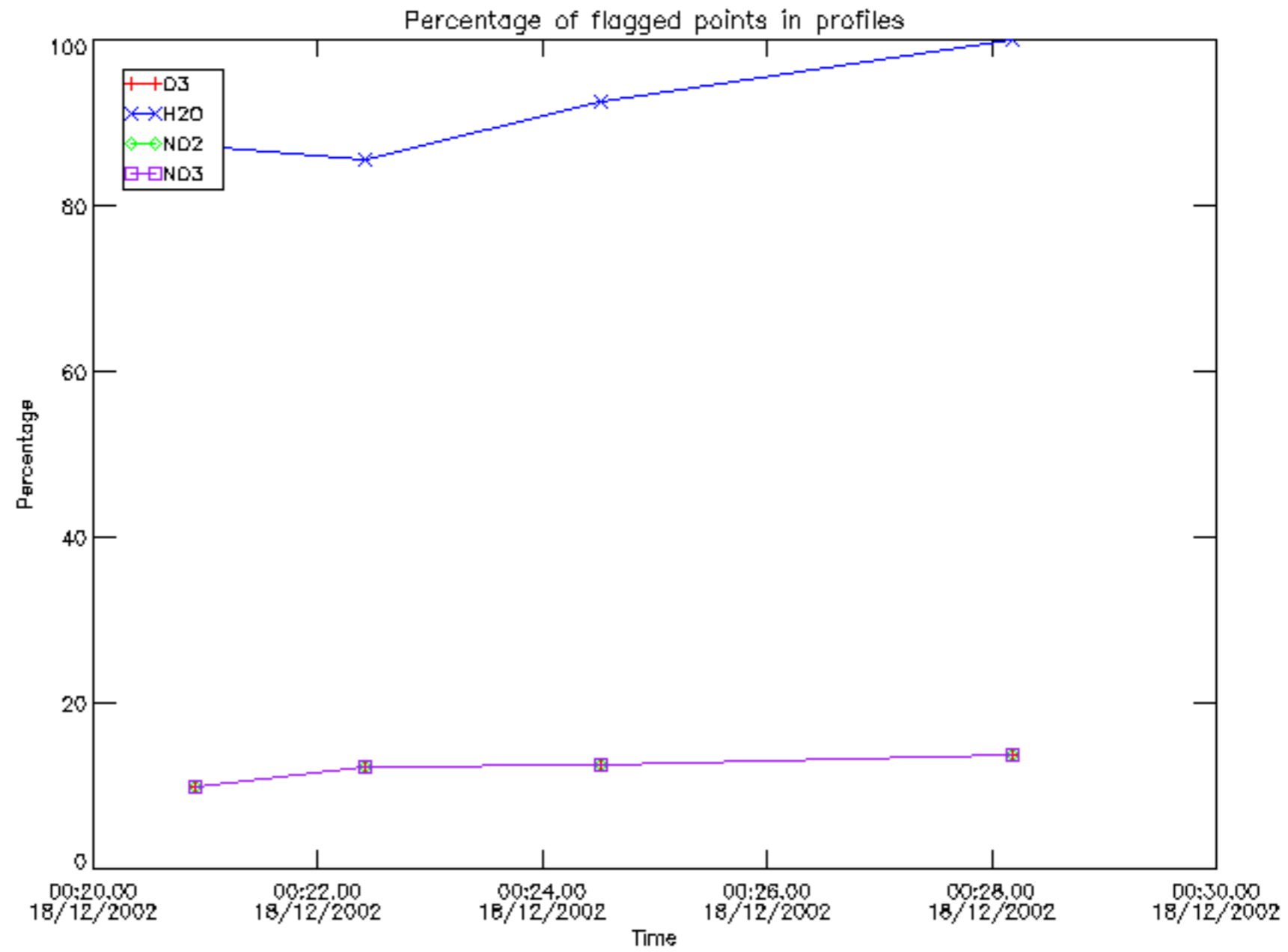
The colorbar represents the latitude.



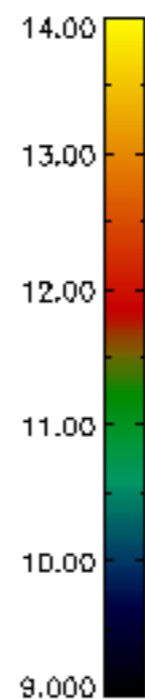
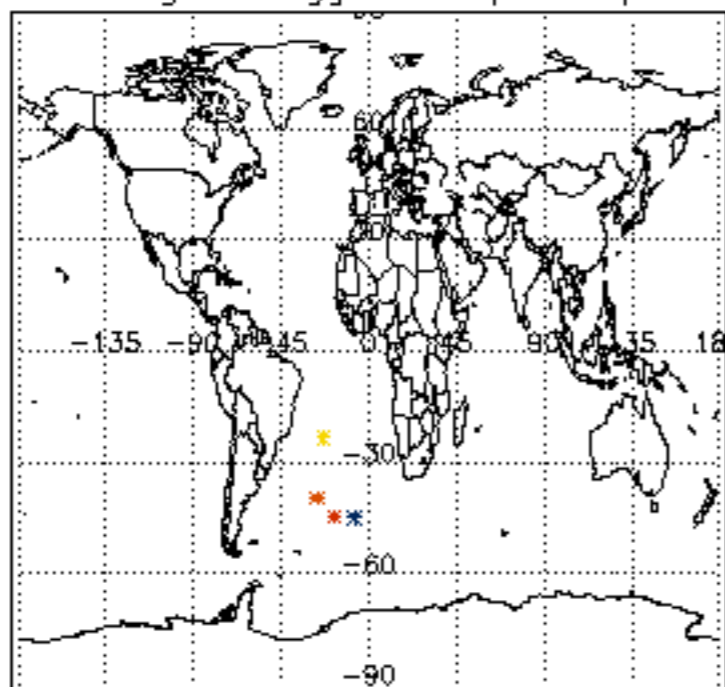
## 6. Auxiliary Data Files used for the production reported in section 2

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.

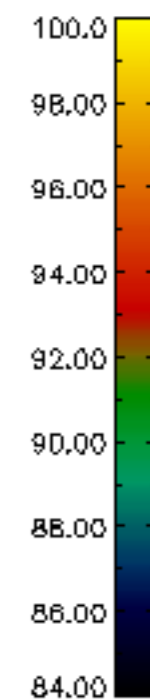
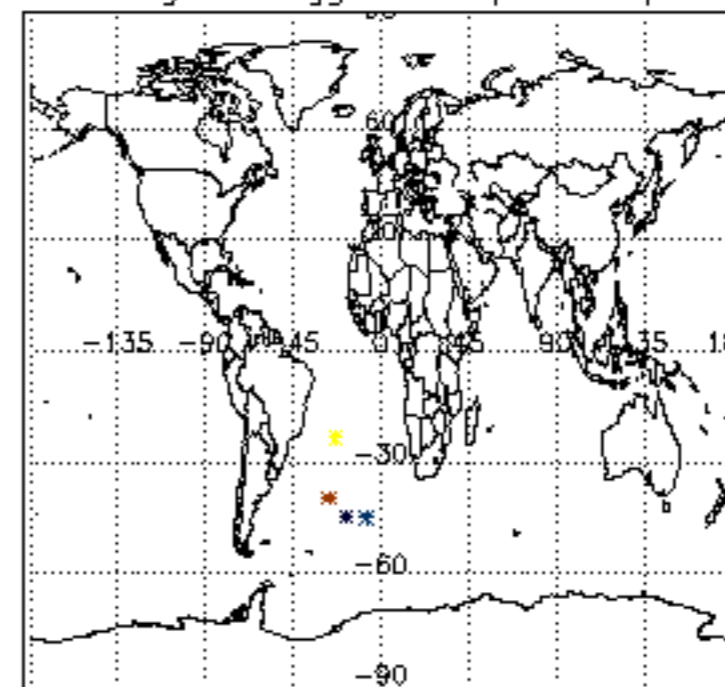
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	18-DEC-2002 00:00:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-DEC-2002 00:00:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-DEC-2002 00:00:38



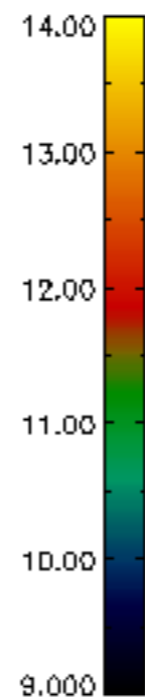
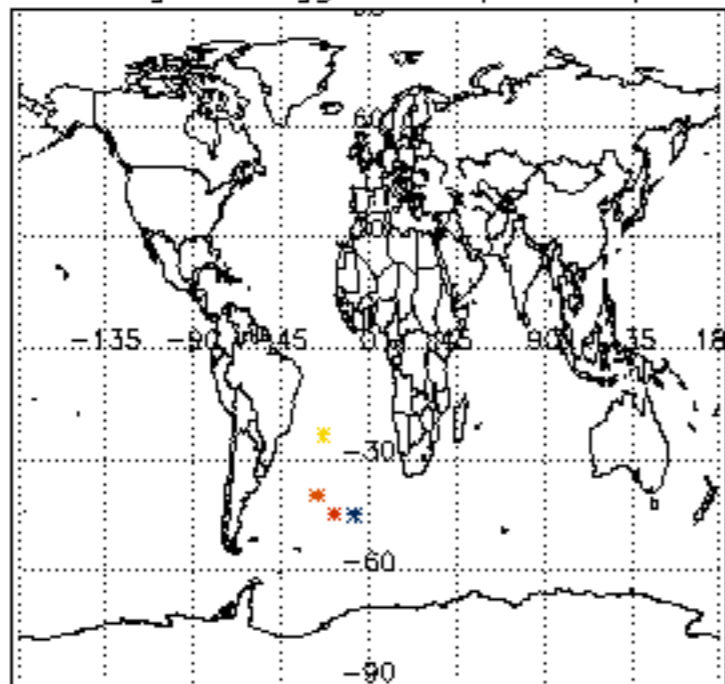
Percentage of flagged data per D3 profile



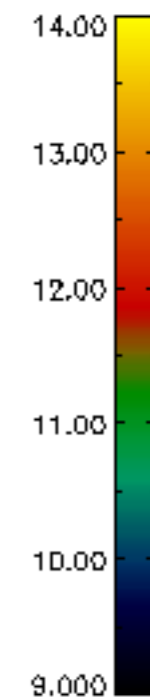
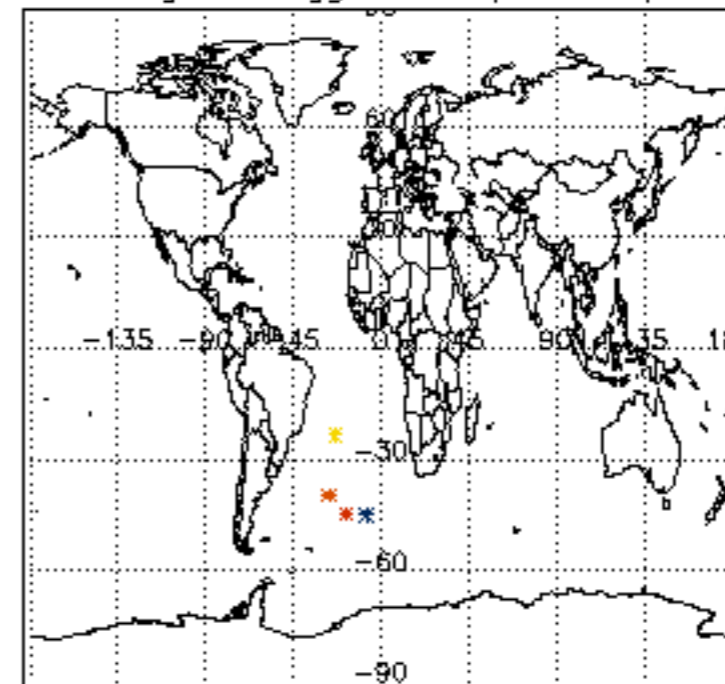
Percentage of flagged data per H2O profile

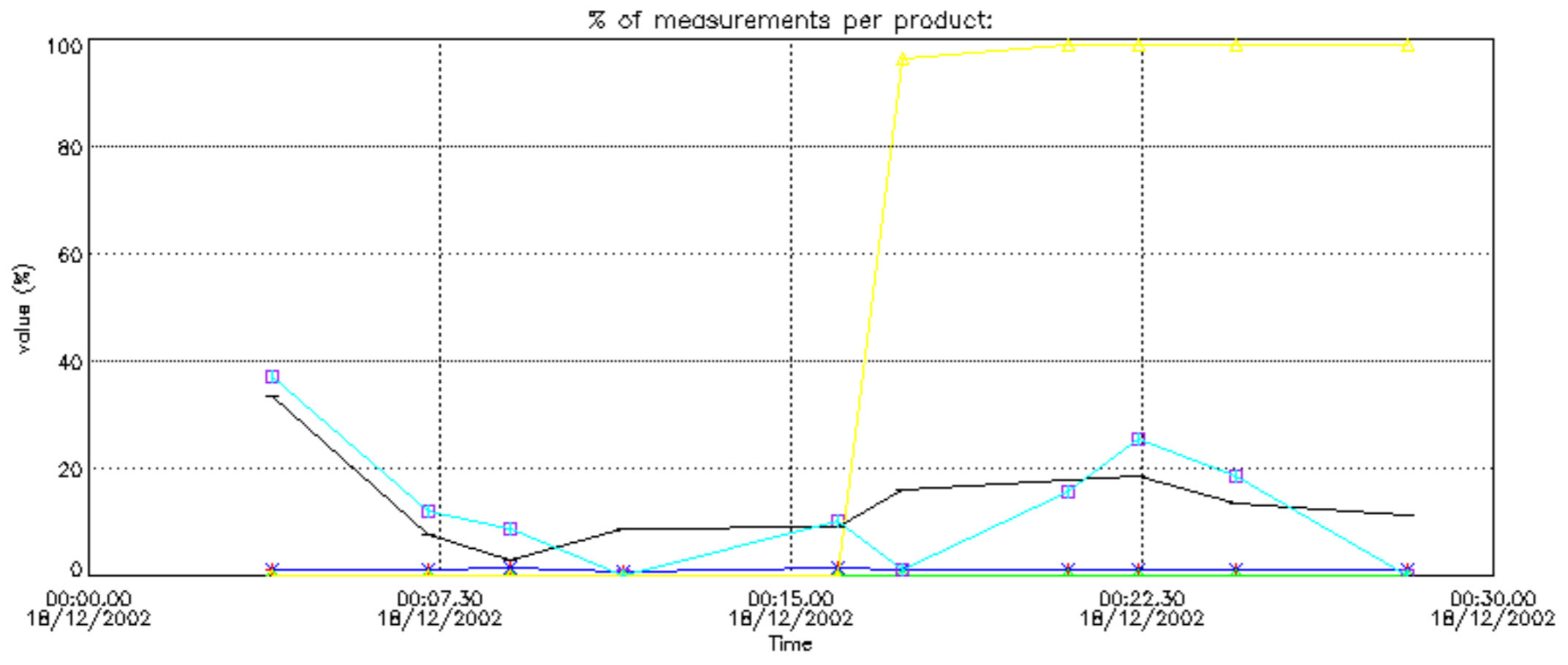


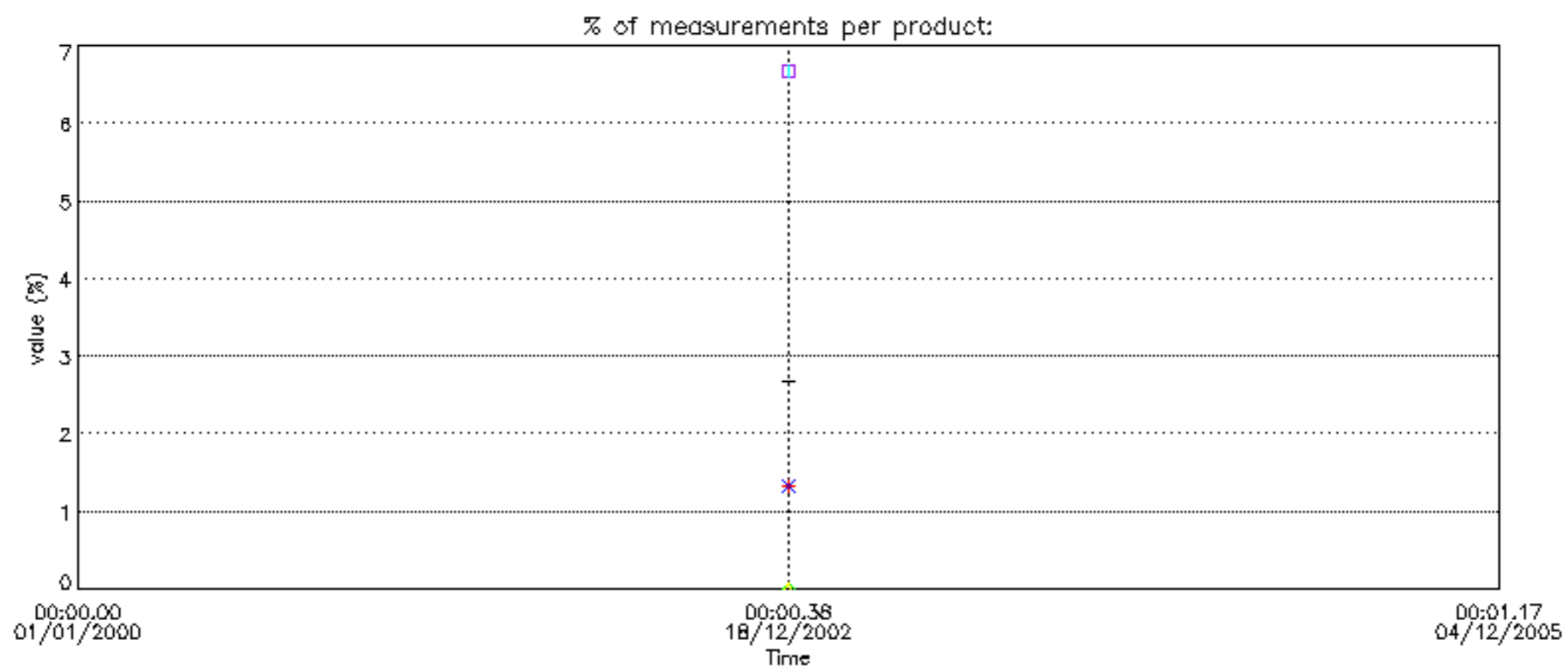
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

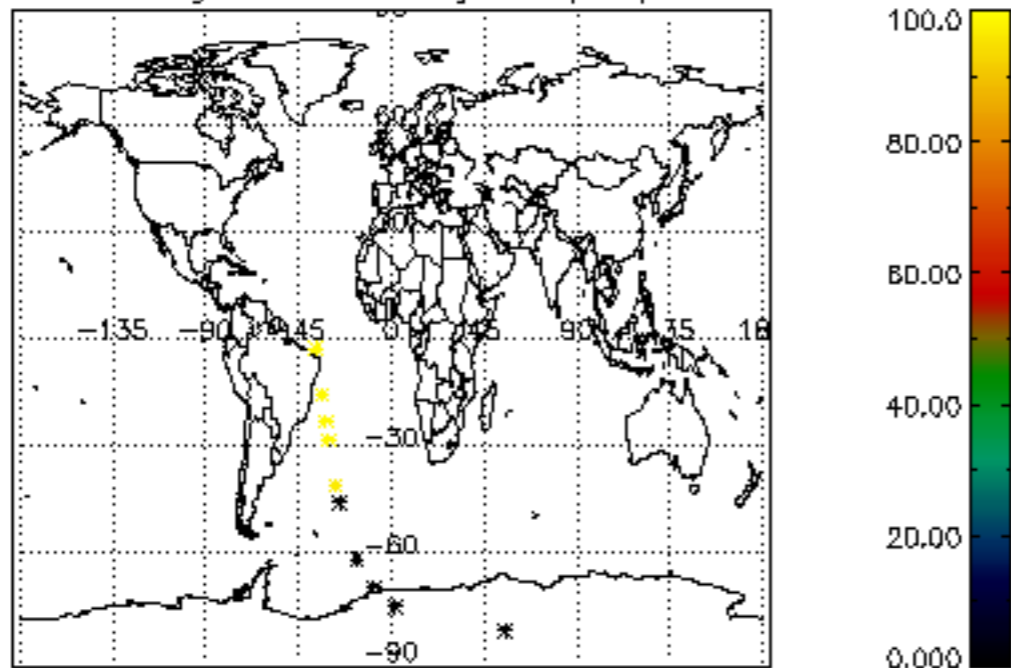




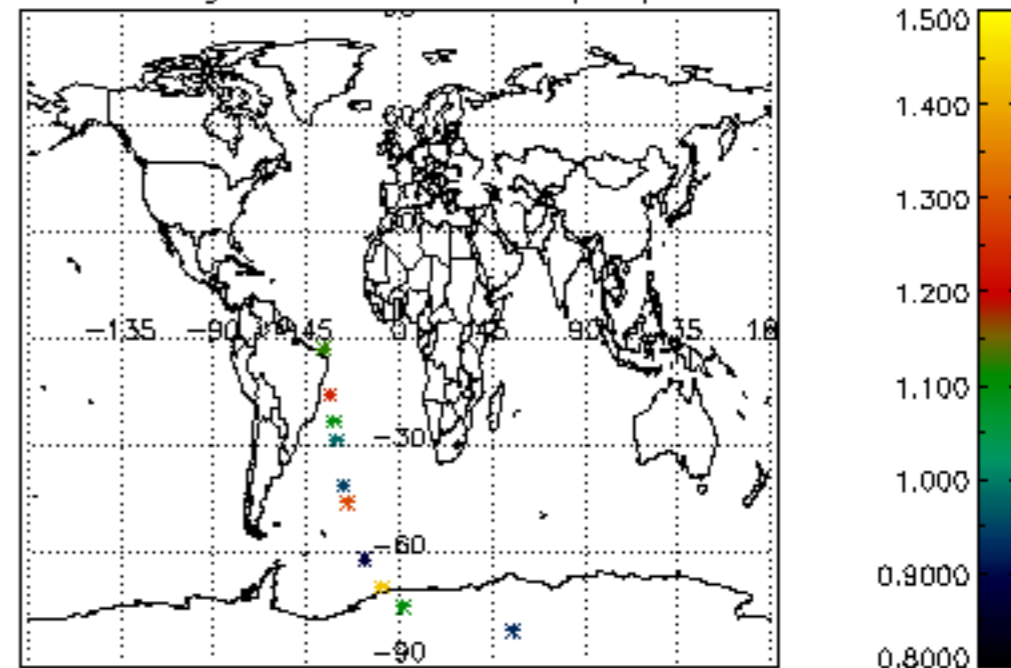




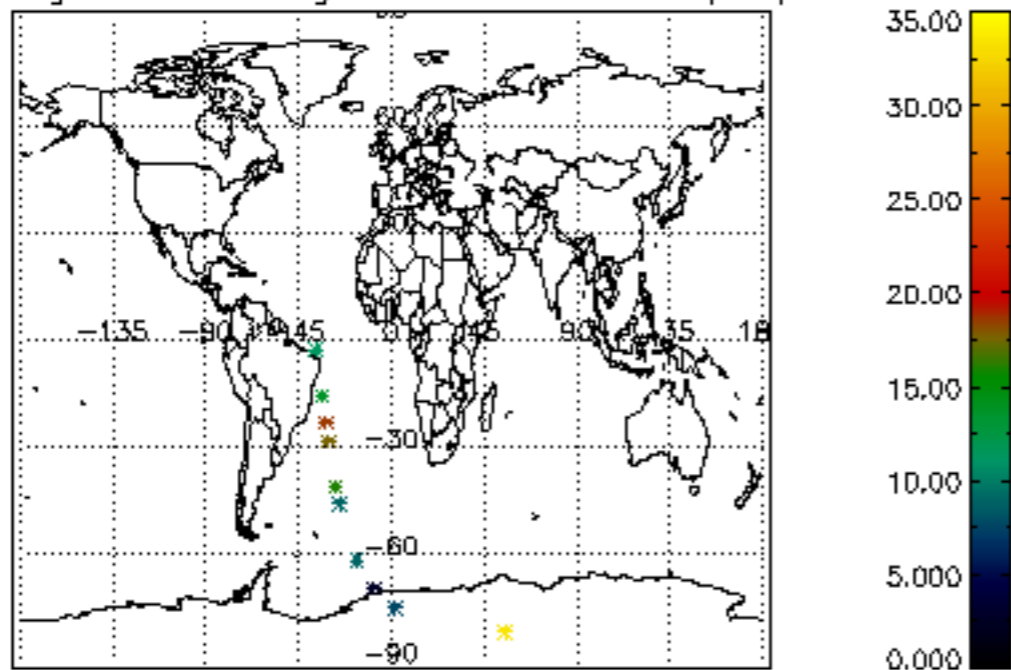
Percentage of cosmic ray hits per profile



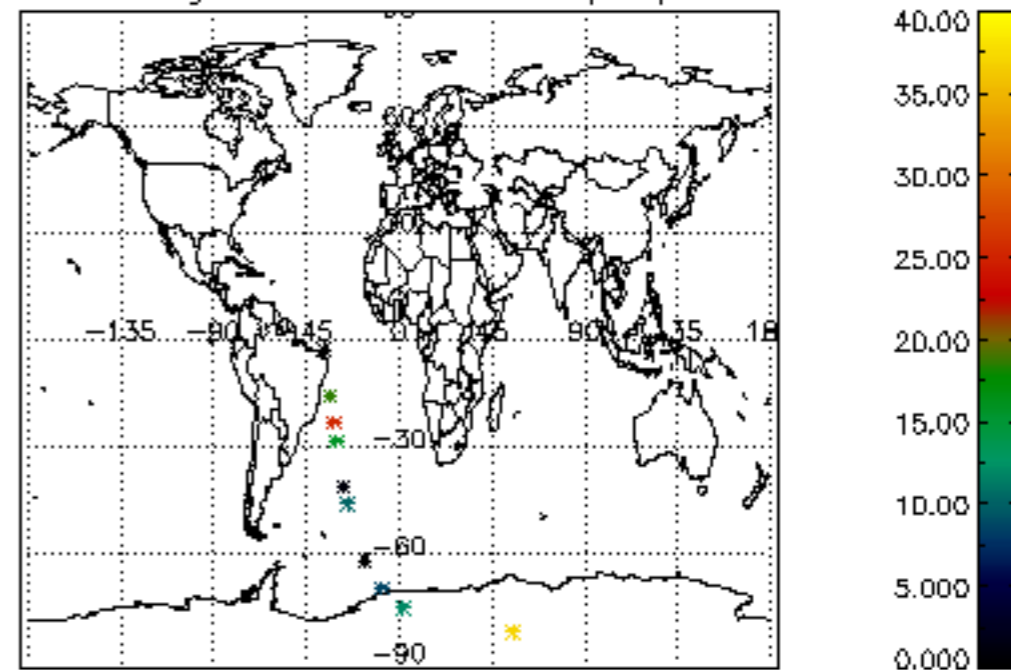
Percentage of datation errors per profile



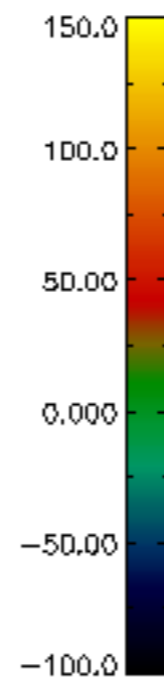
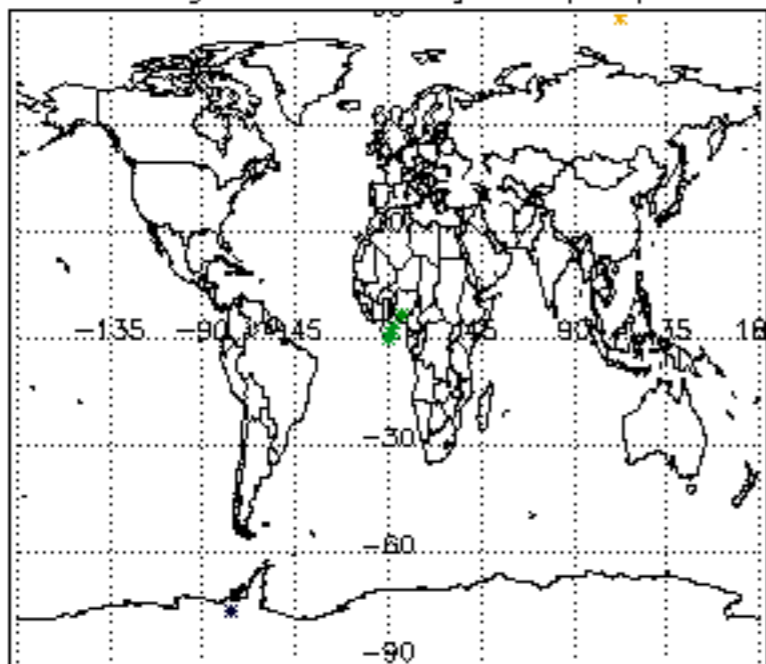
Percentage of star falling outside central band per profile



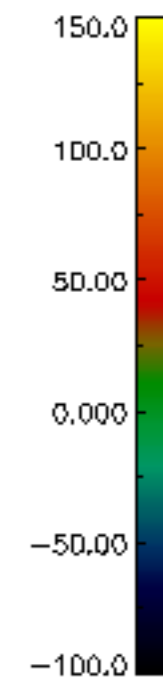
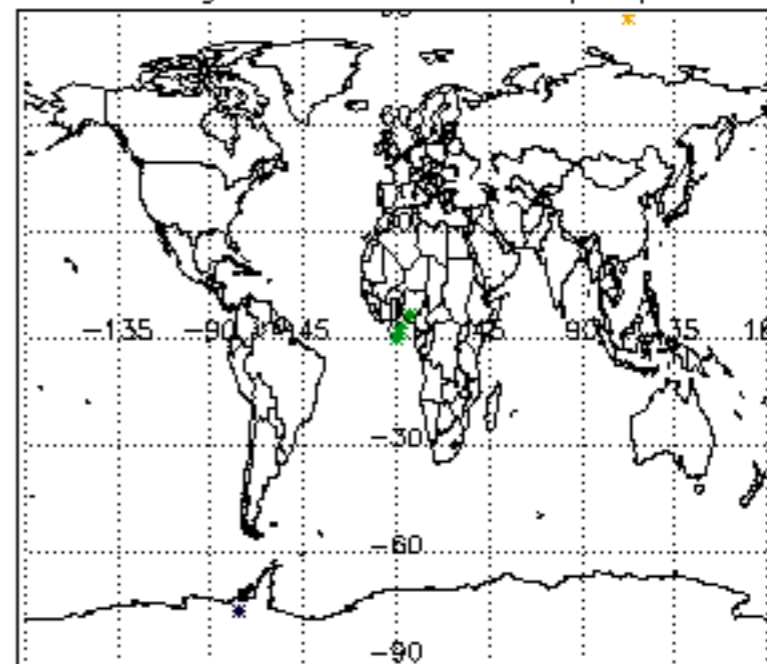
Percentage of saturation errors per profile



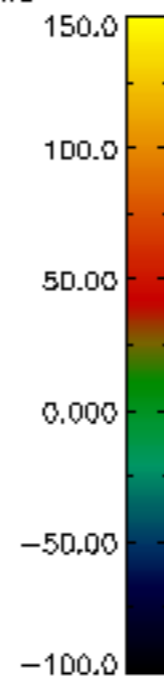
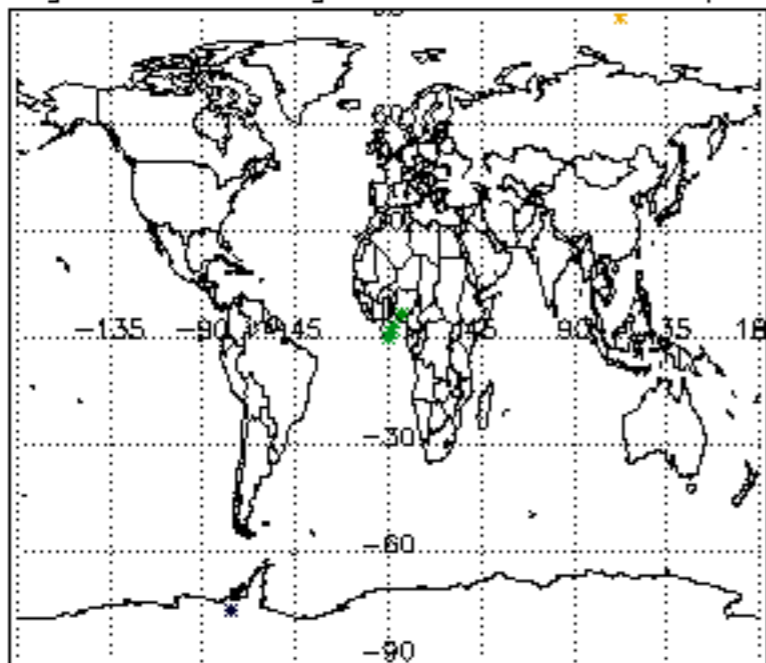
Percentage of cosmic ray hits per profile



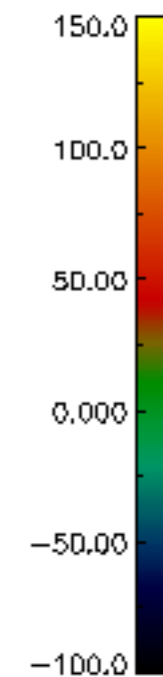
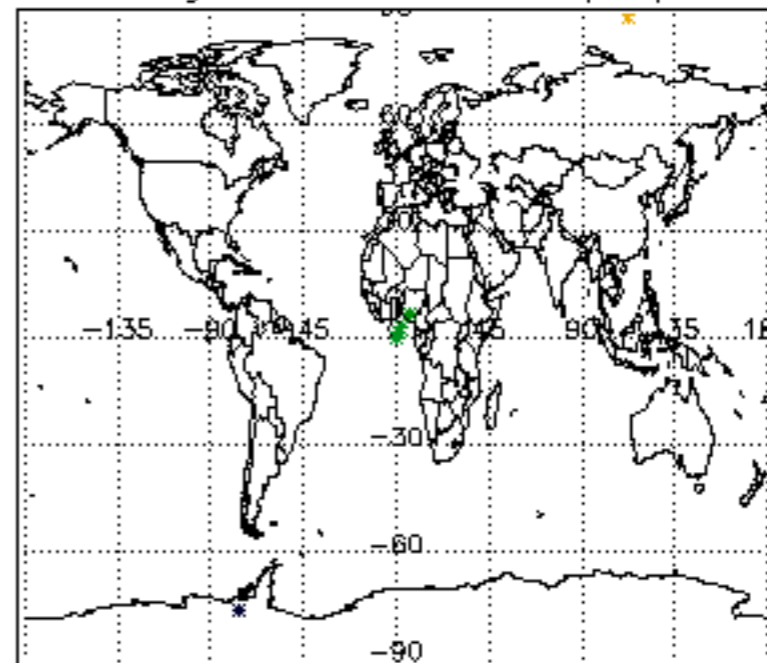
Percentage of datation errors per profile

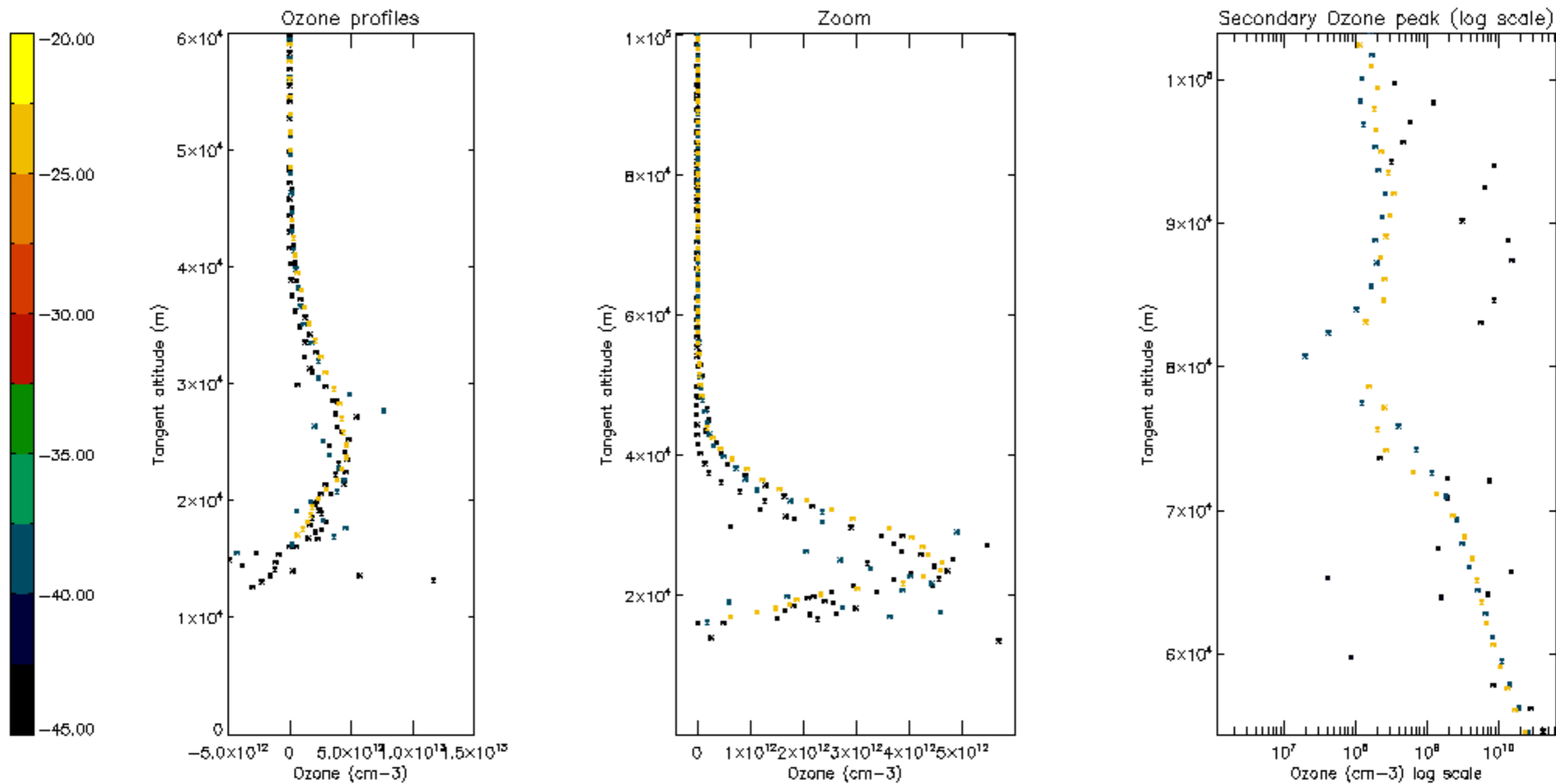


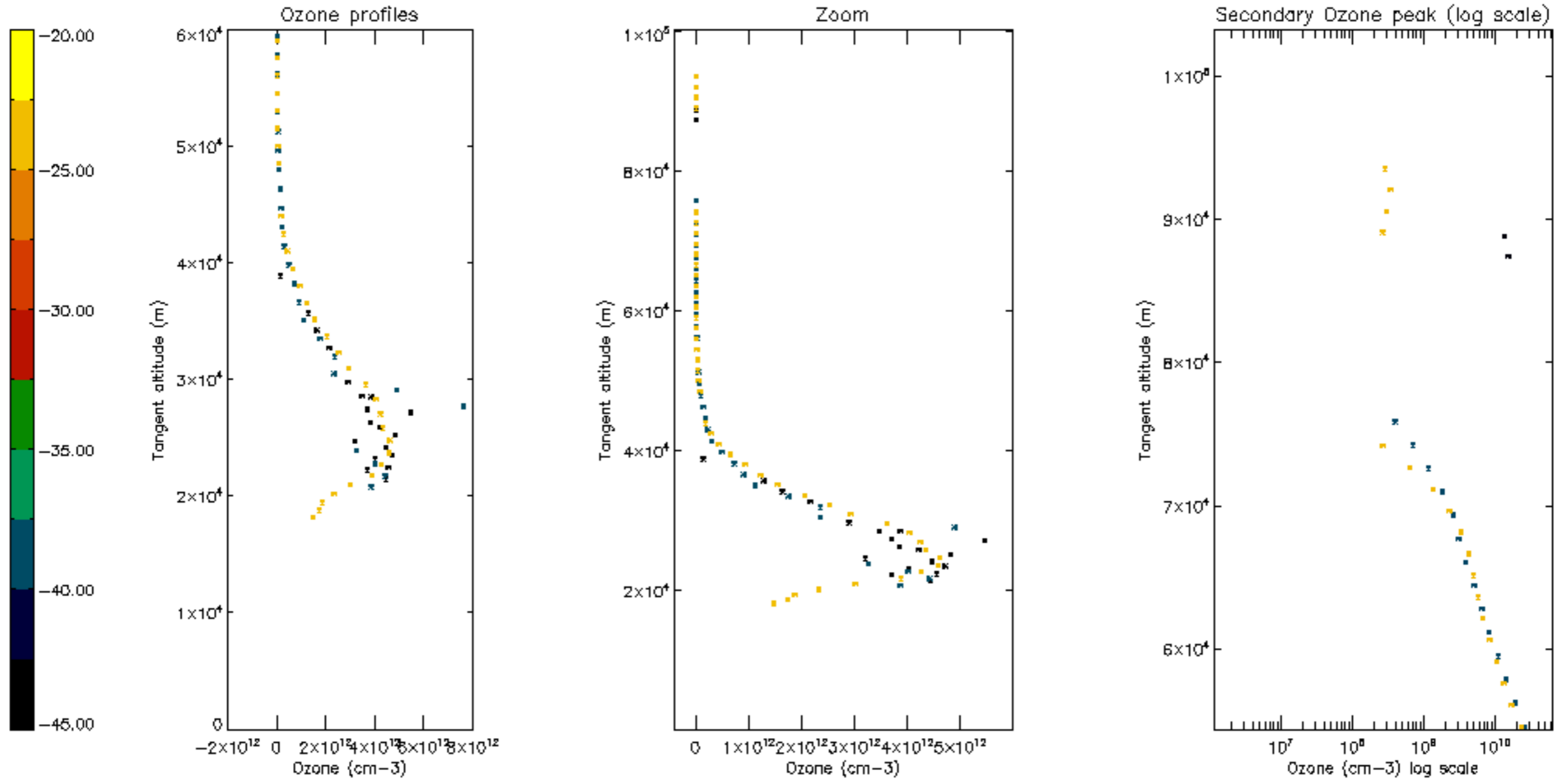
Percentage of star falling outside central band per profile

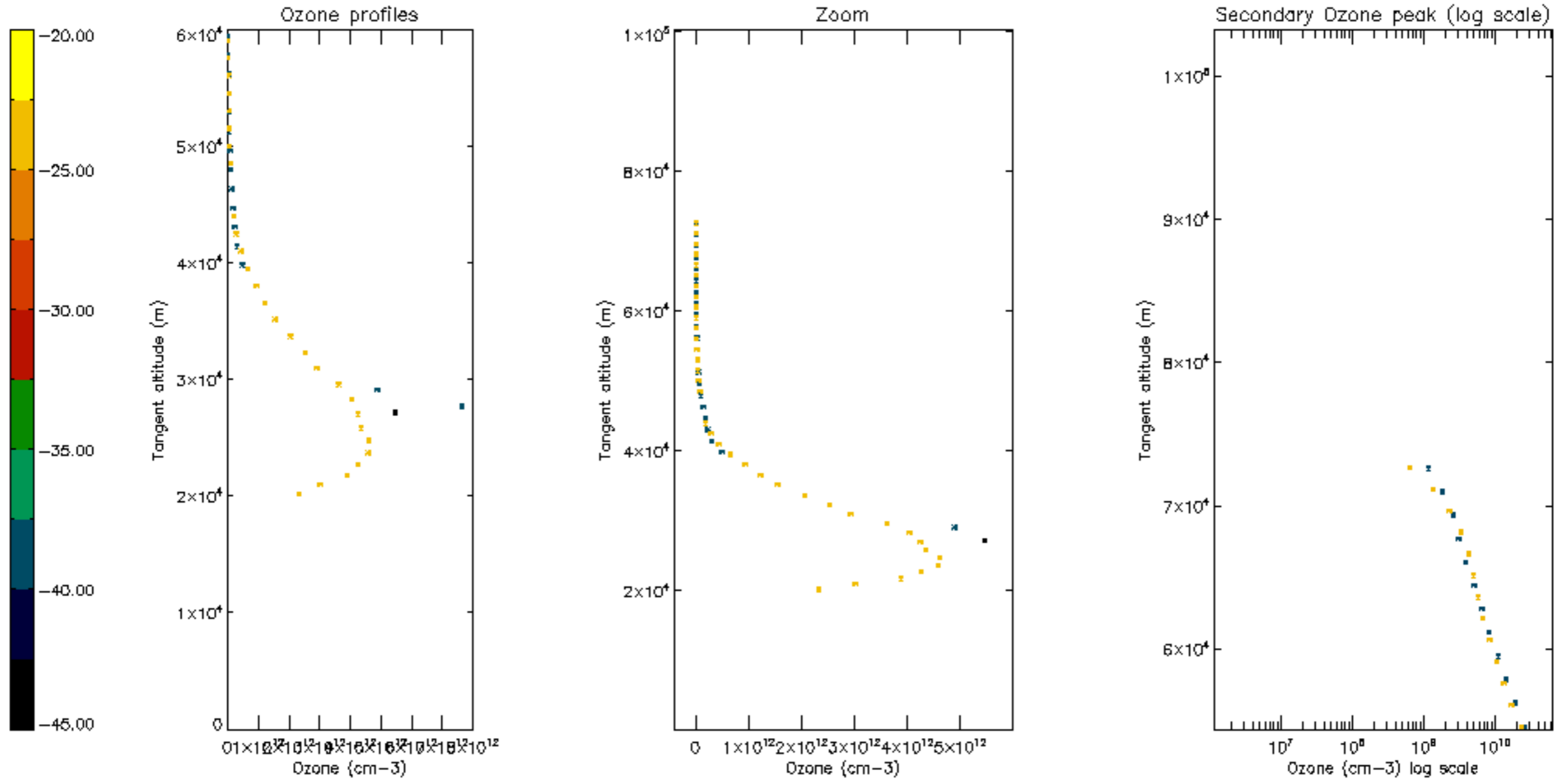


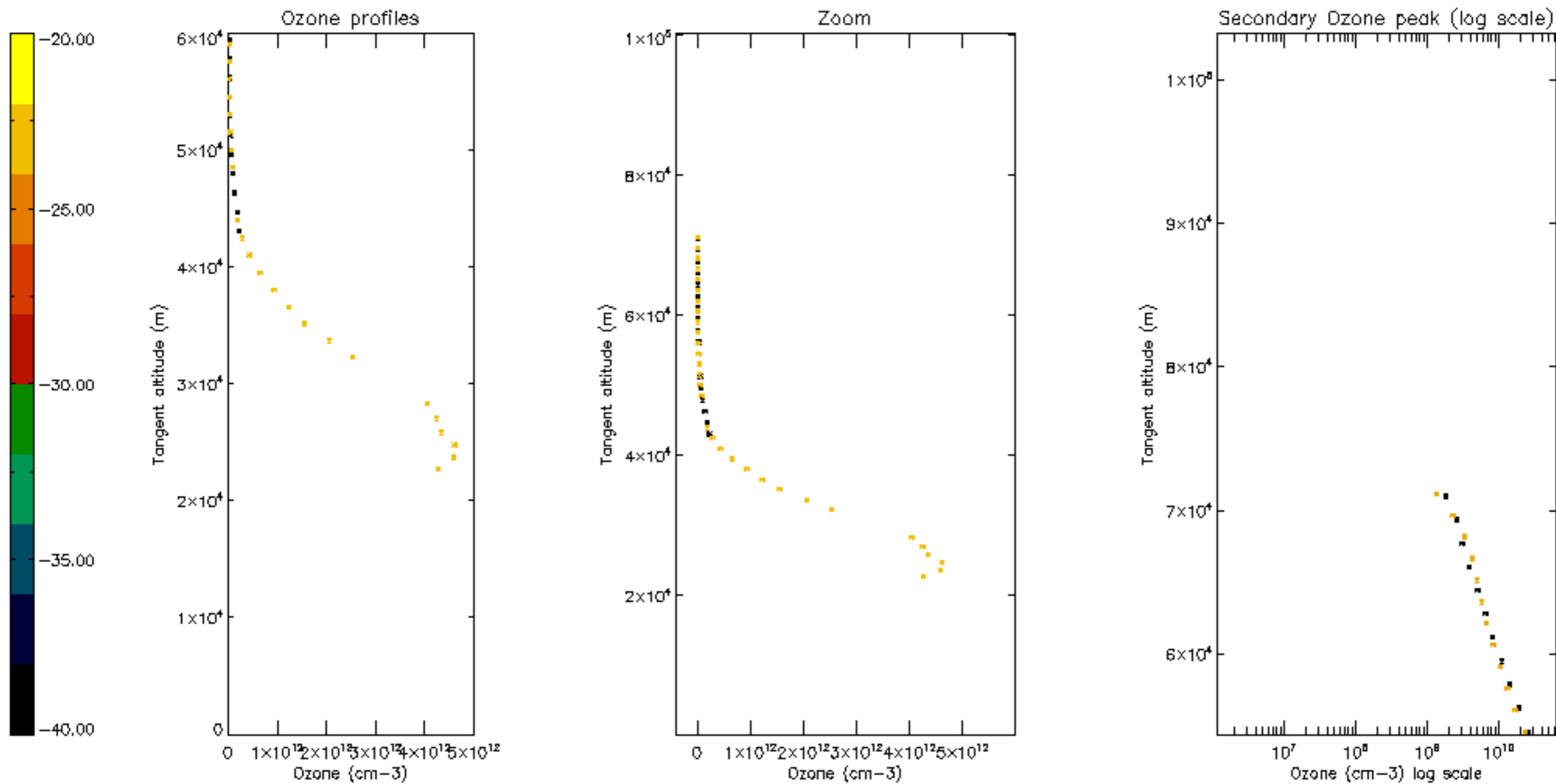
Percentage of saturation errors per profile

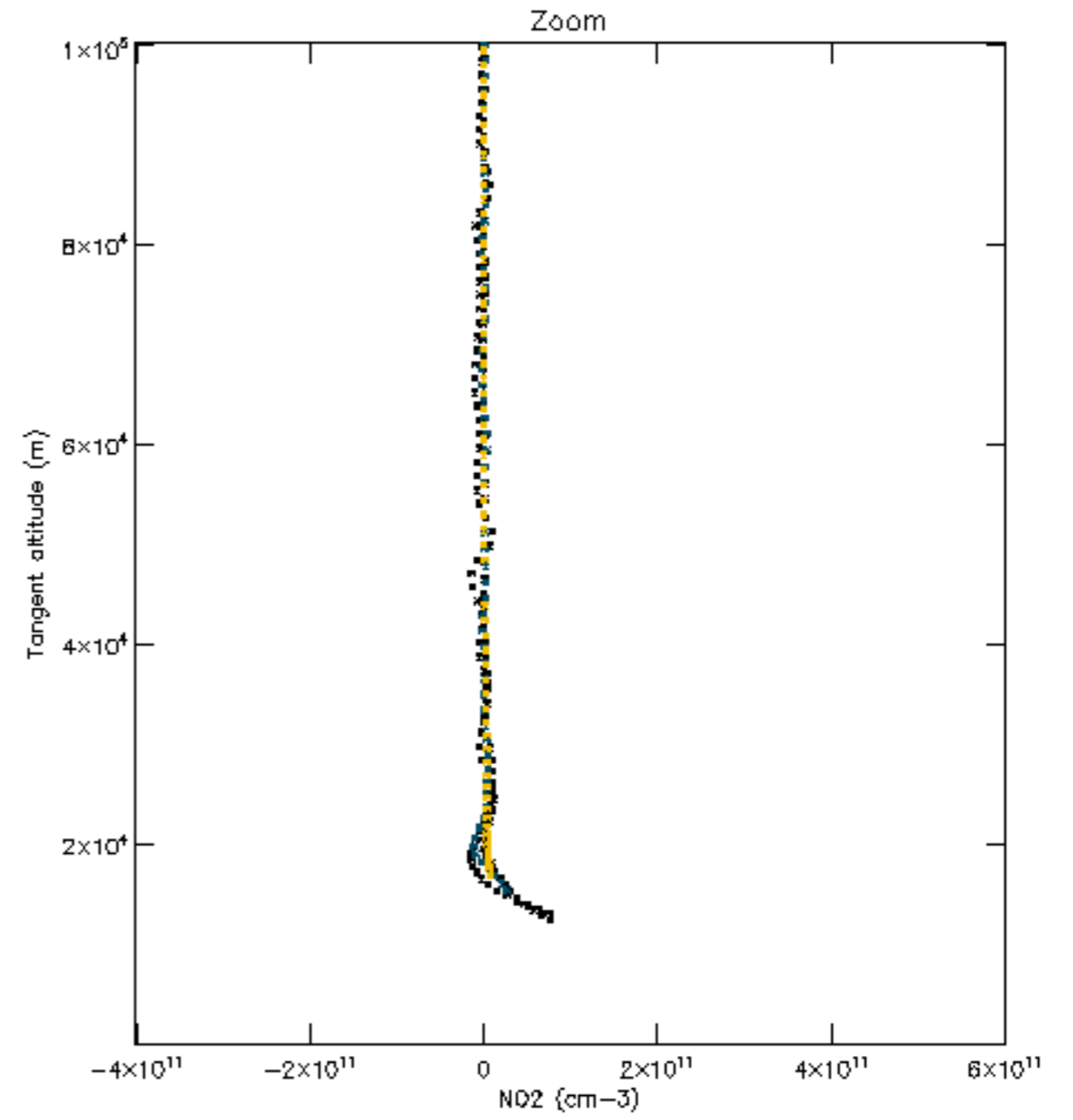
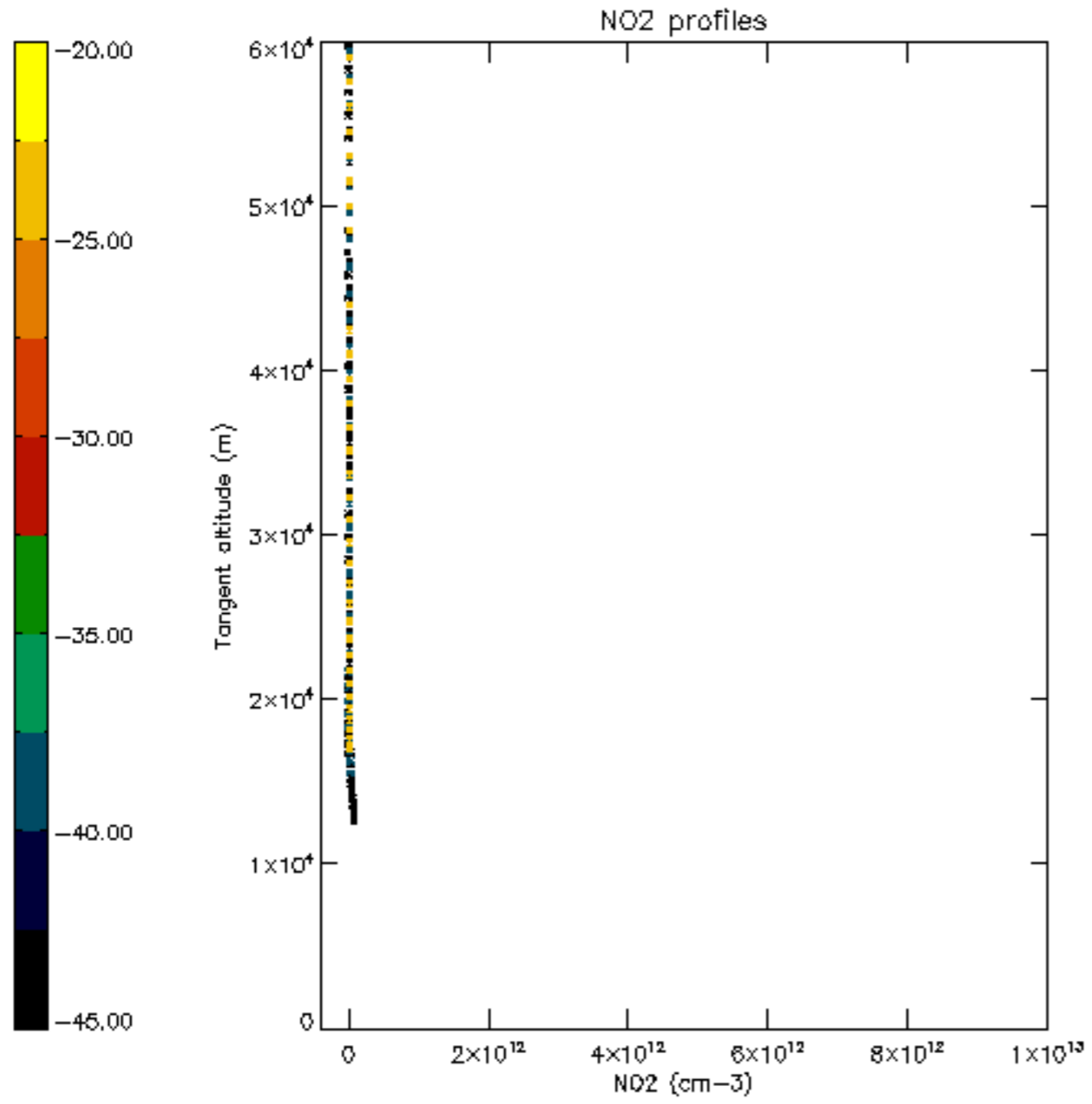


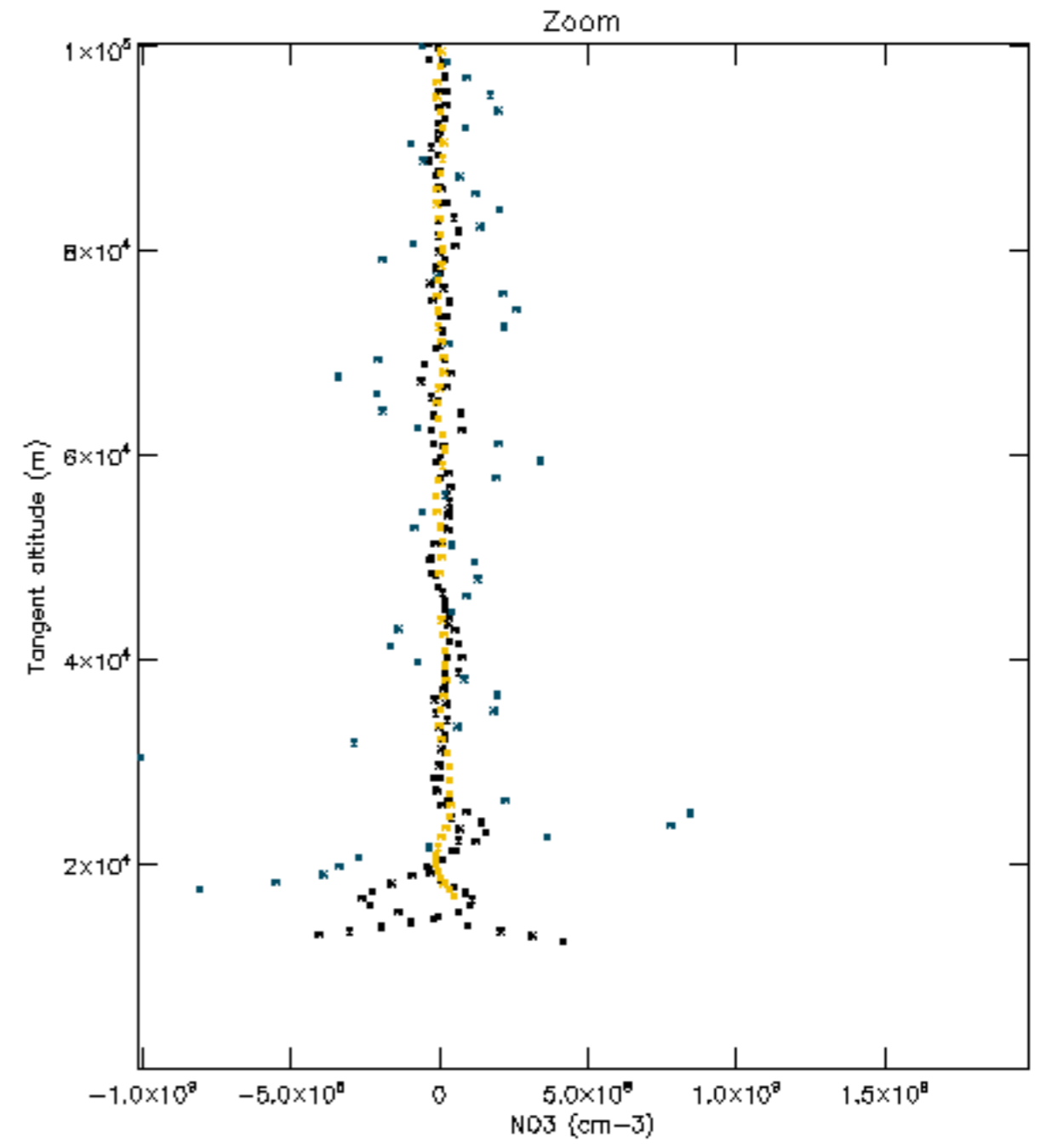
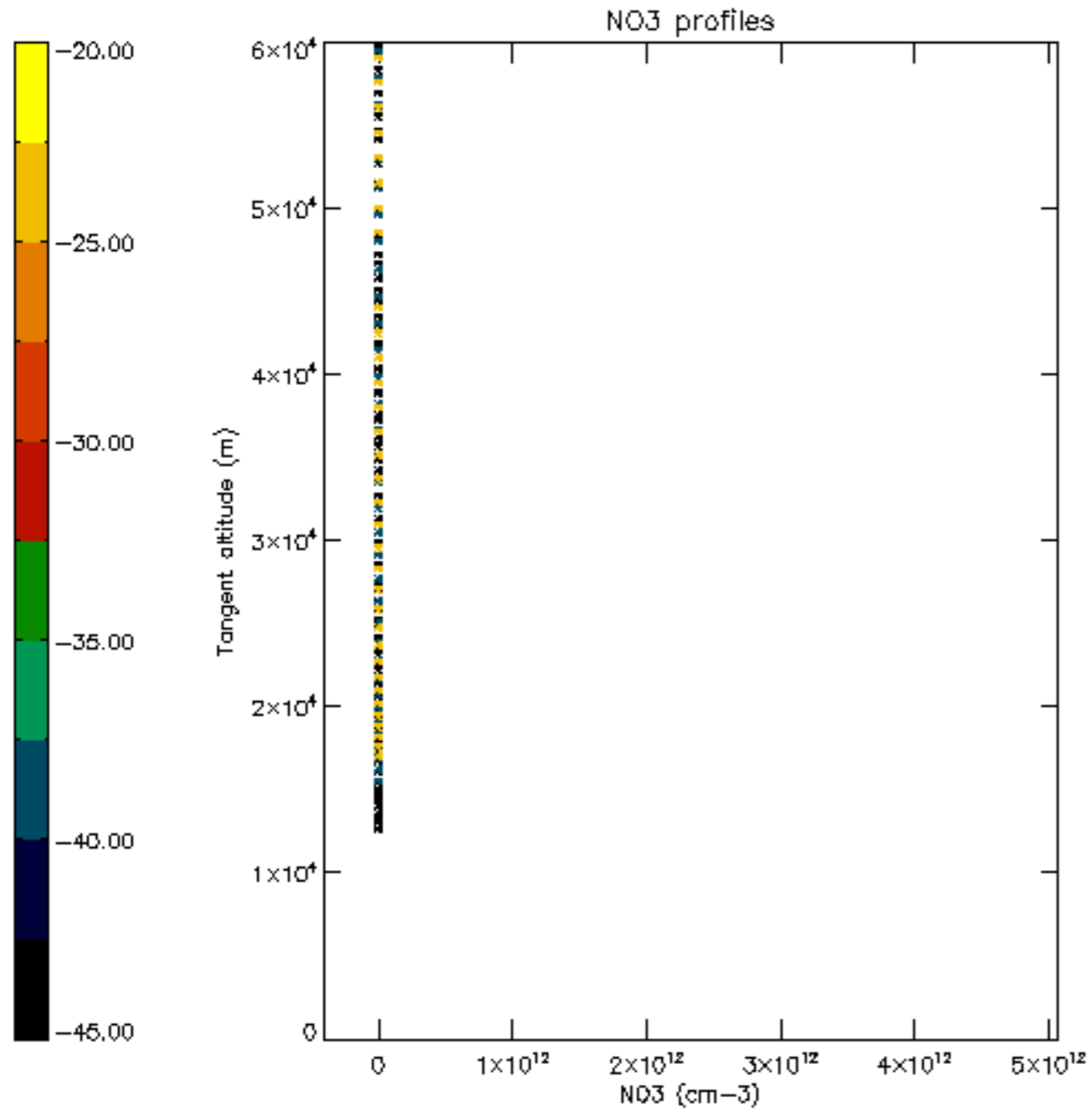




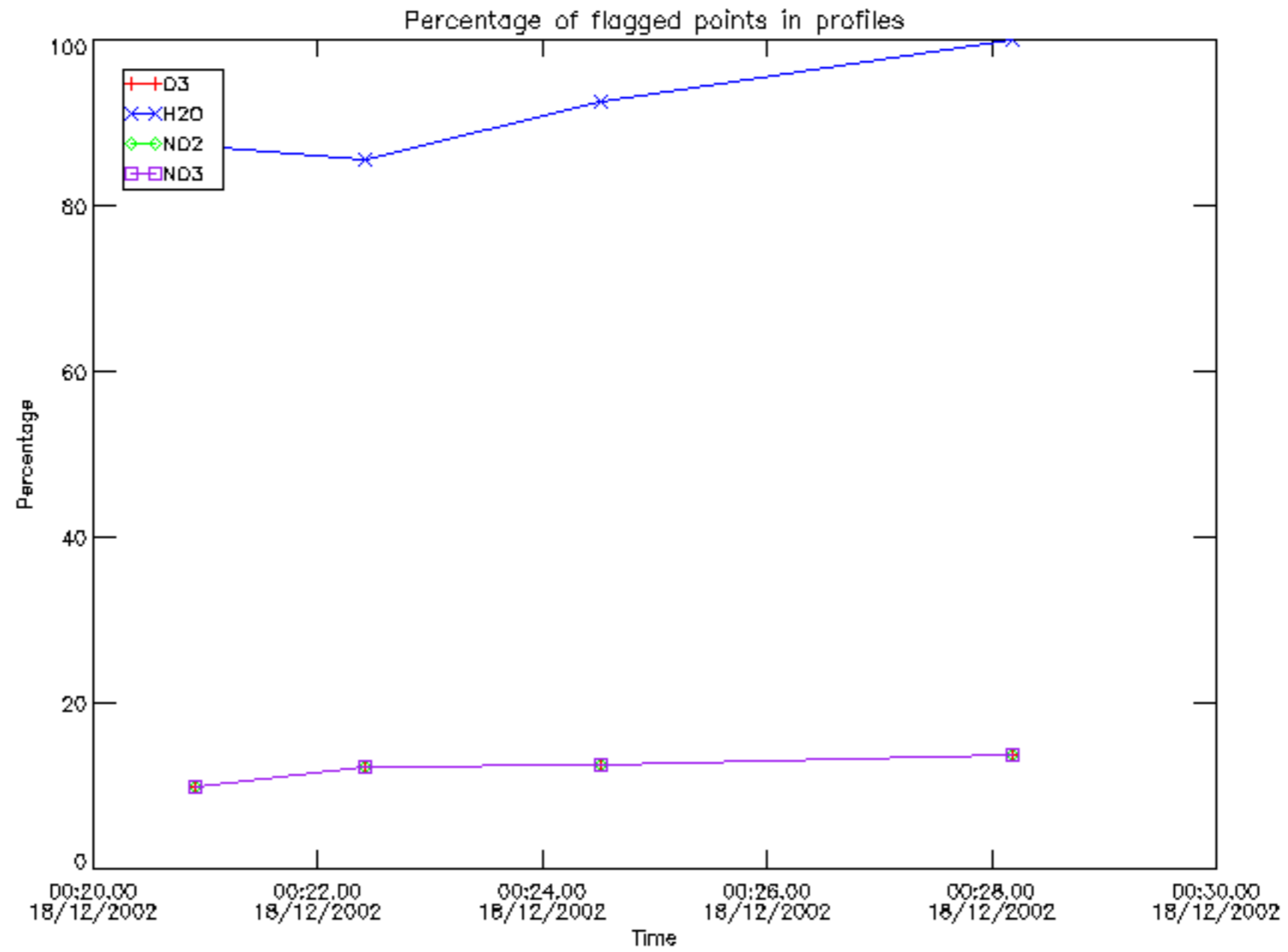




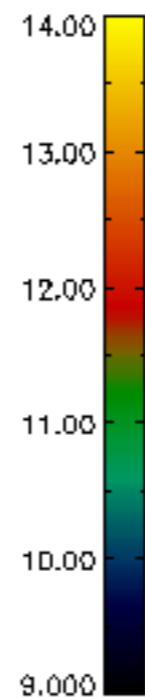
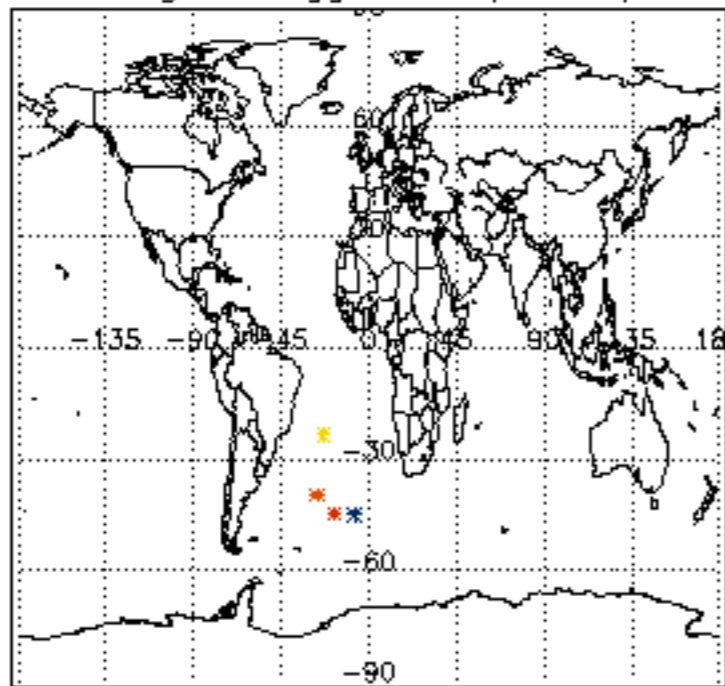




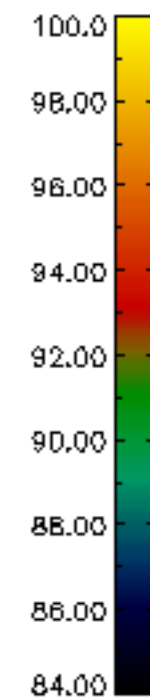
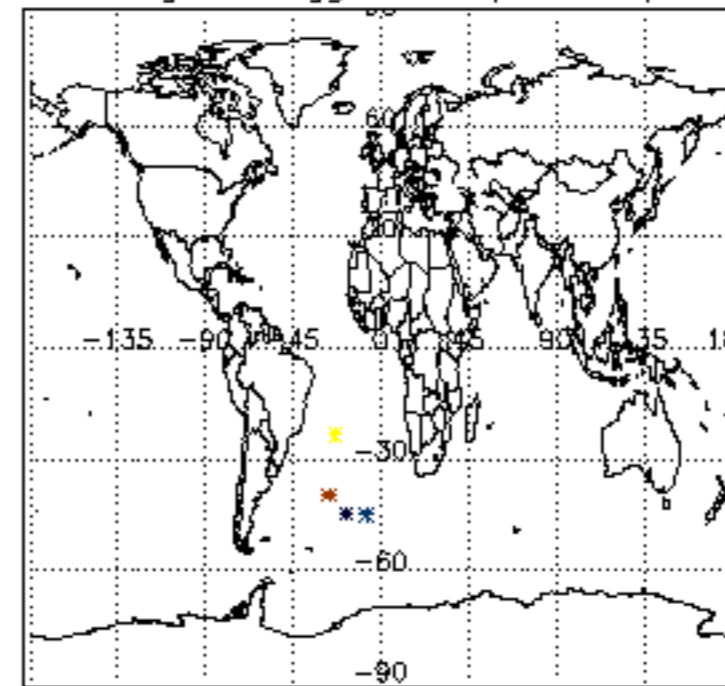




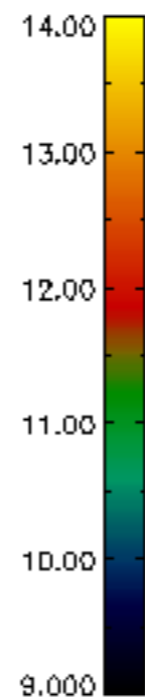
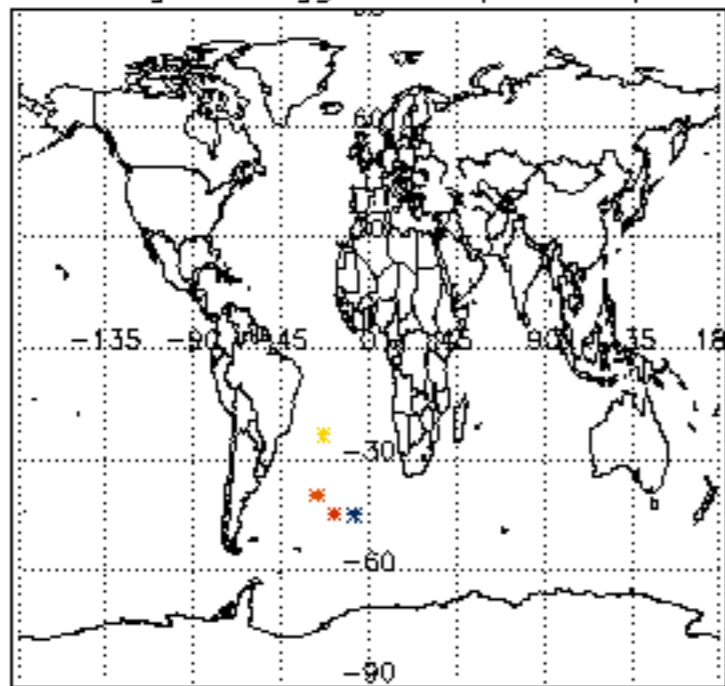
Percentage of flagged data per D3 profile



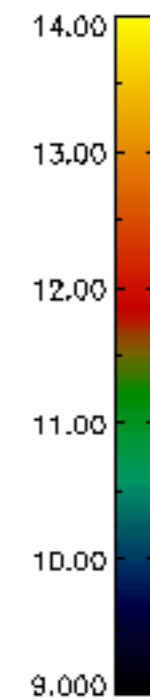
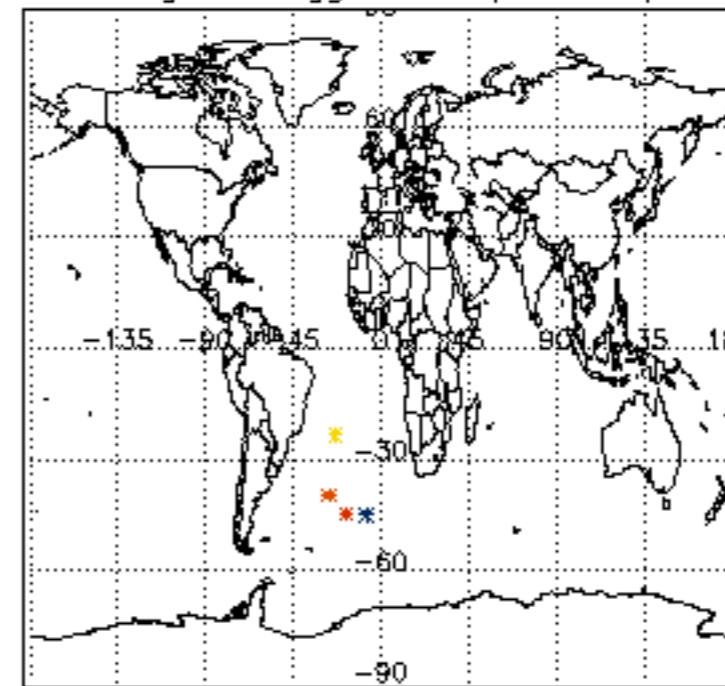
Percentage of flagged data per H2O profile

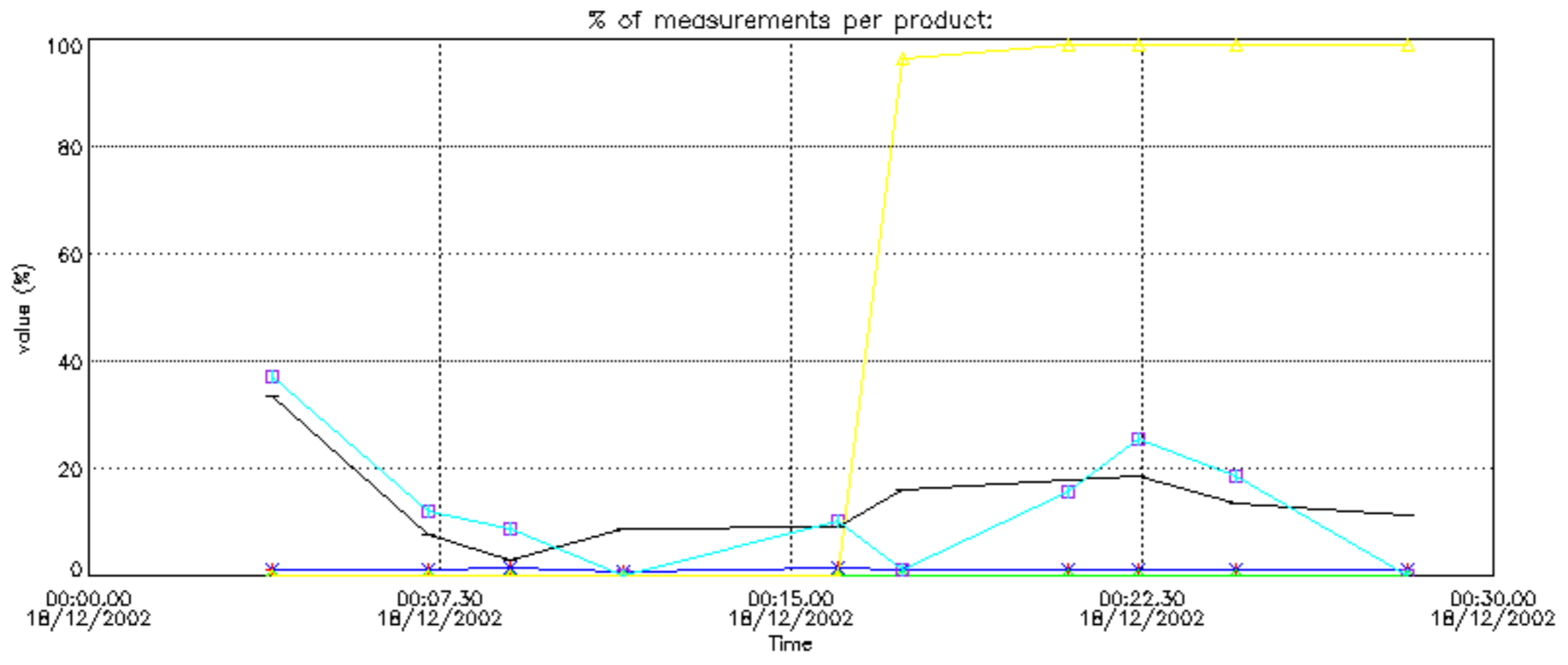


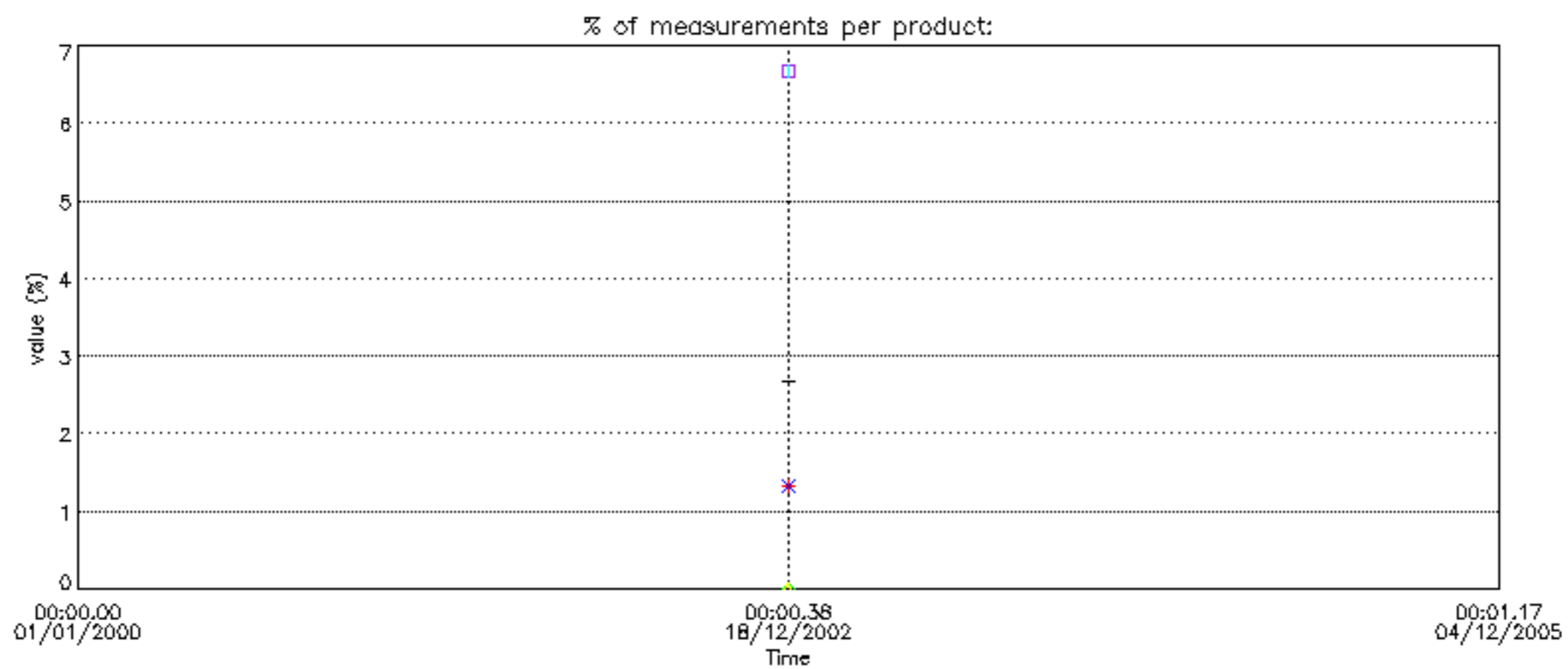
Percentage of flagged data per NO2 profile



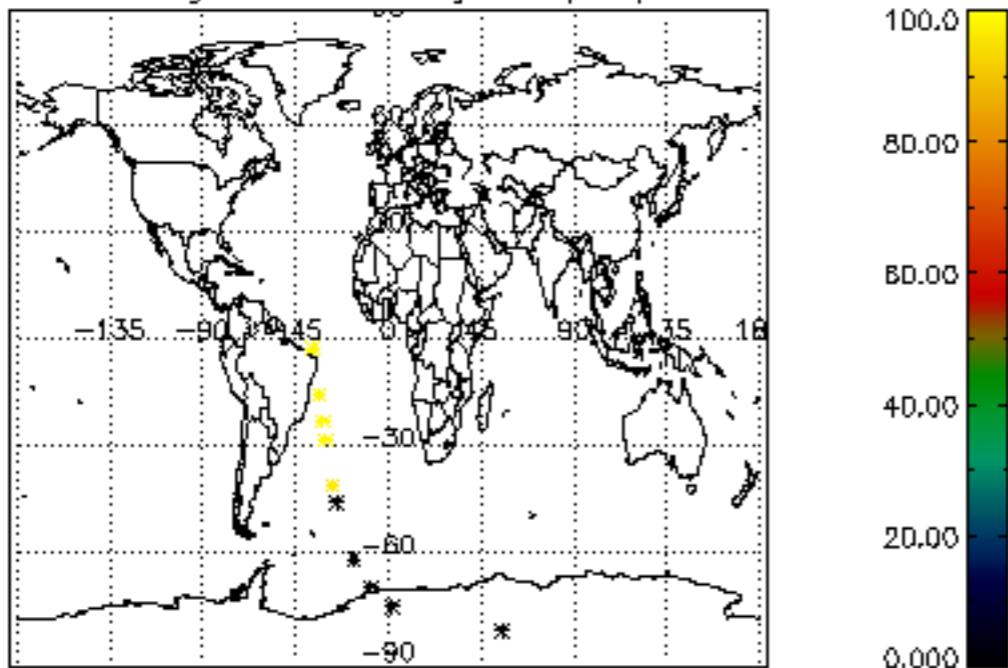
Percentage of flagged data per NO3 profile



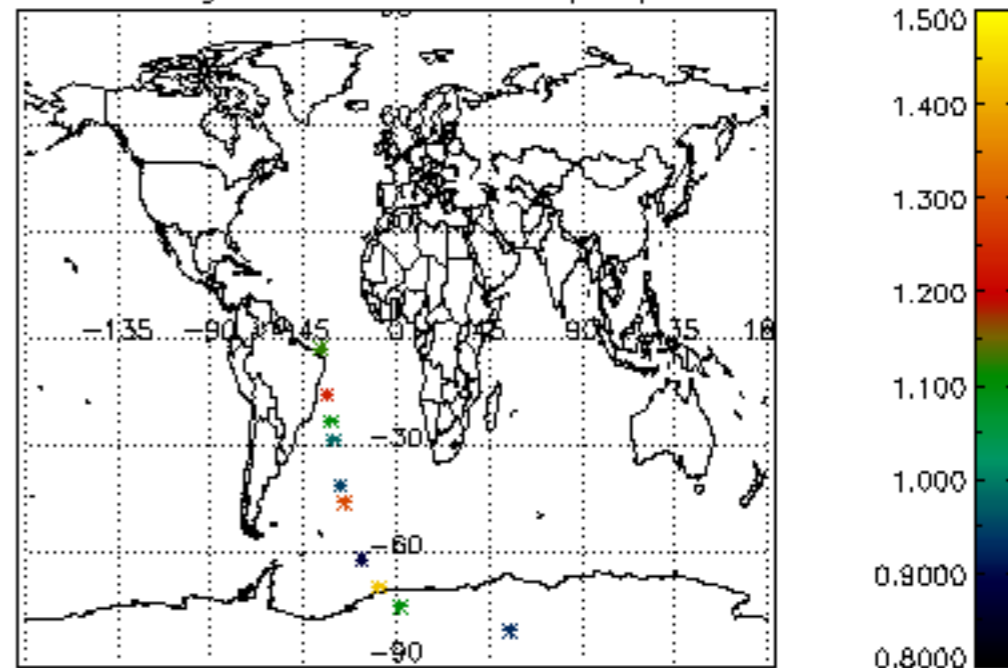




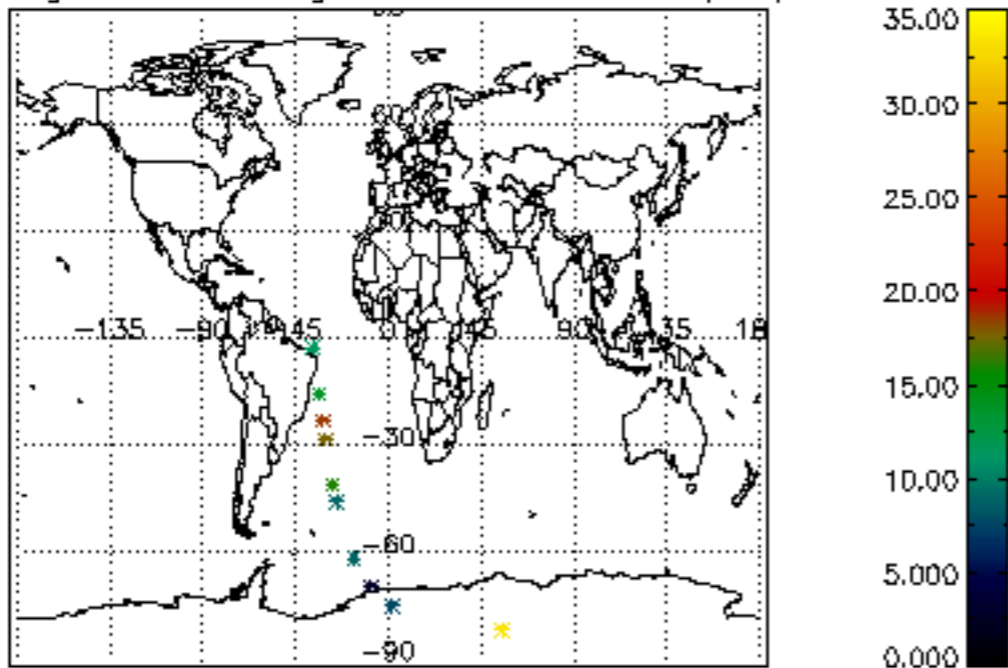
Percentage of cosmic ray hits per profile



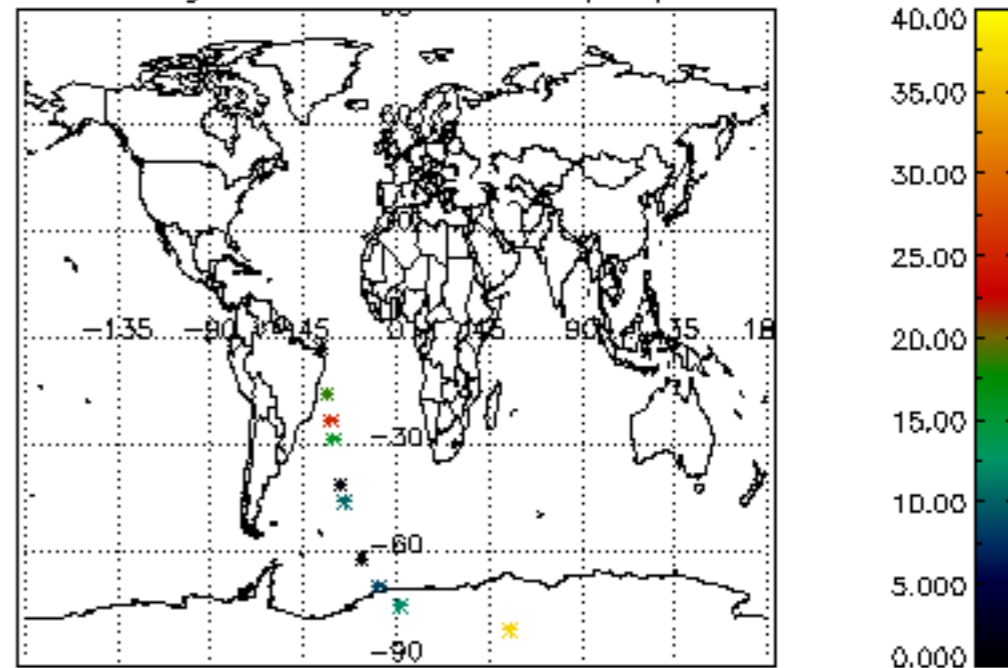
Percentage of datation errors per profile



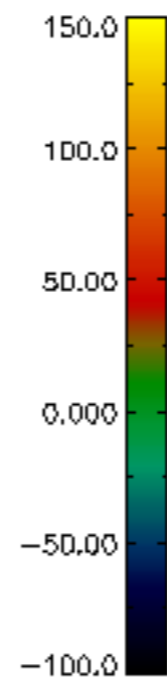
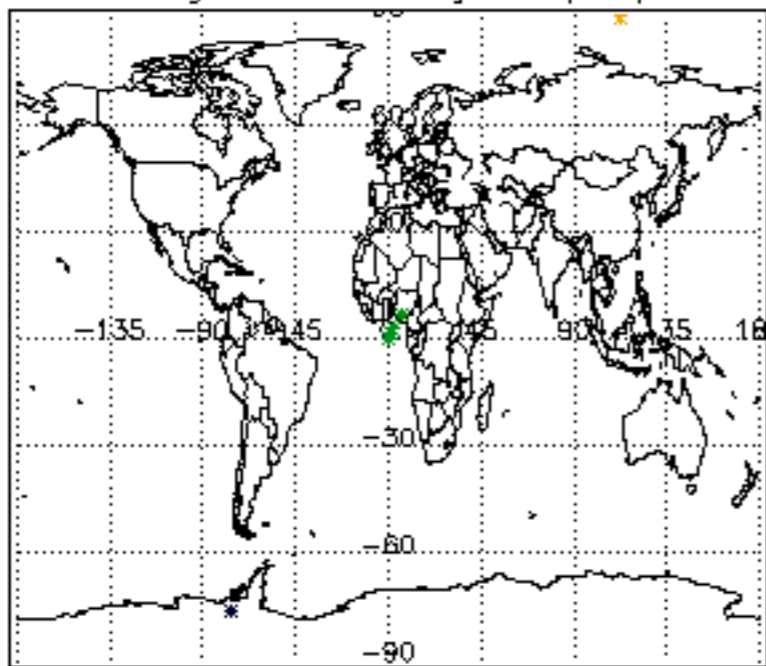
Percentage of star falling outside central band per profile



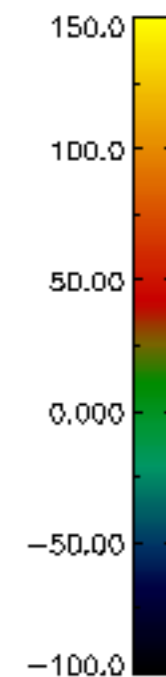
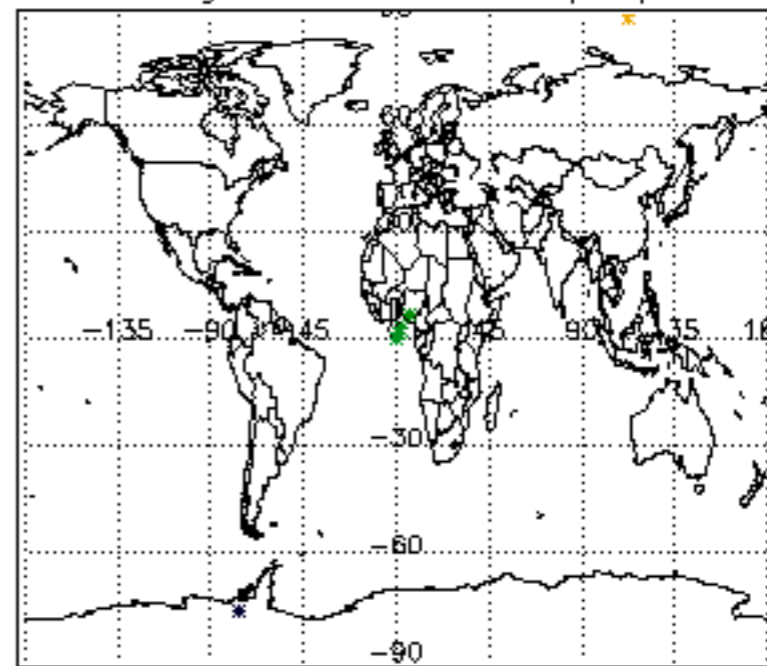
Percentage of saturation errors per profile



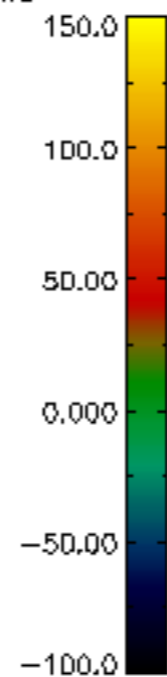
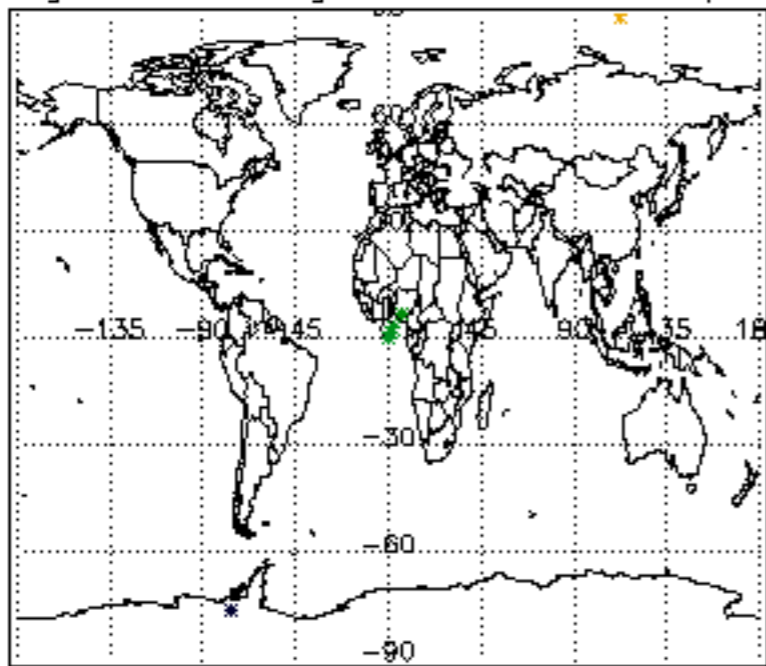
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

