

# 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	18APR2013 14:08:49
Data source version	GOMOS/6.01
Start time of products	26-02-2012 (26FEB2012 00:00:00)
Stop time of products	27-02-2012 (27FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	16
Nb of prods with errors	0

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

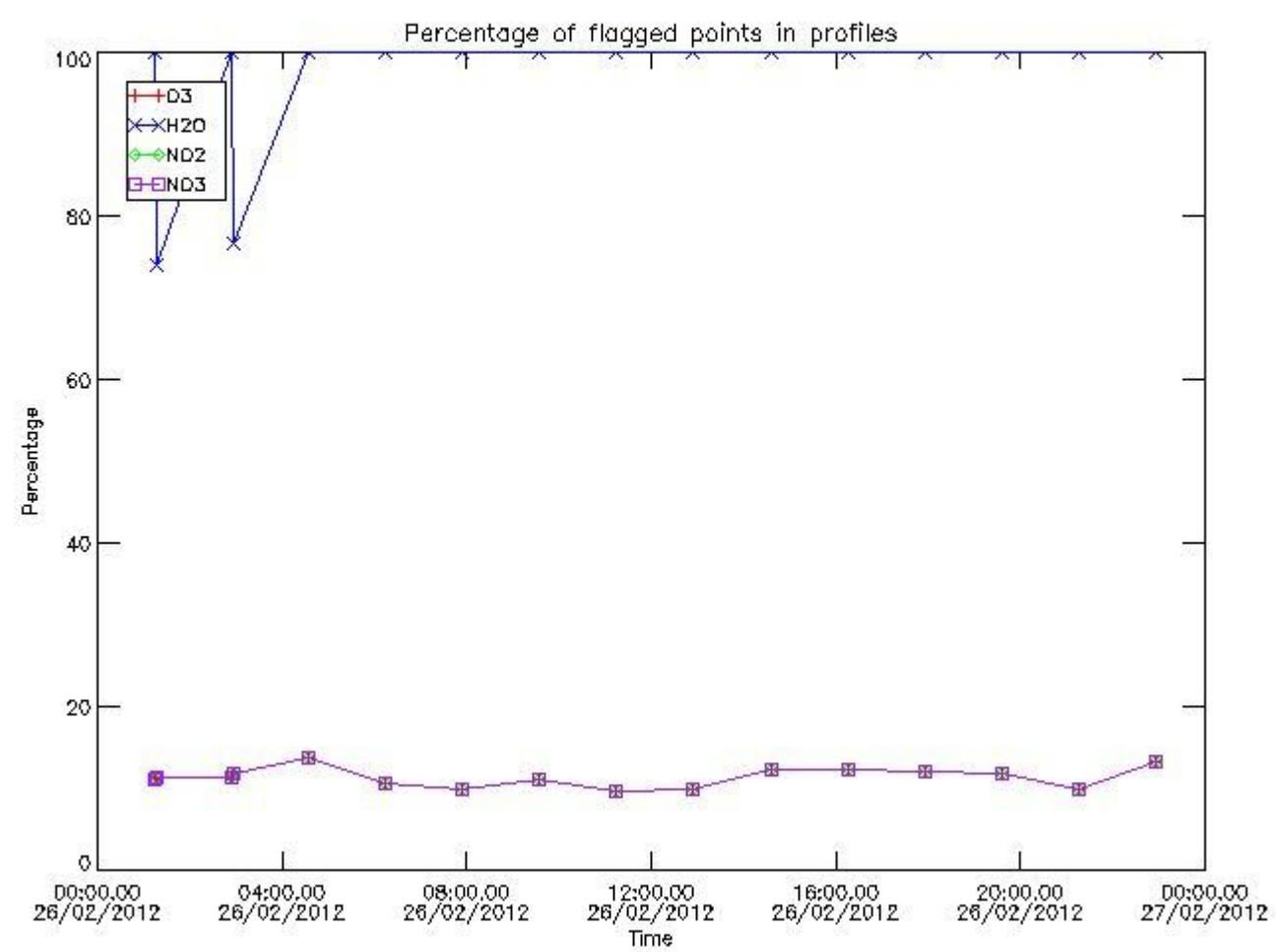
**!Warning: No products without errors in BRIGHT limb conditions found**

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120226_011305_000000463112_00089_52258_6988.N1	26-FEB-2012 01:13:05	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52258	No
2	GOM_NL__2PRFIN20120226_011643_000000543112_00089_52258_6989.N1	26-FEB-2012 01:16:43	Dark	53.500	26	Gam Cru	1.6240	2900.0	107	52258	No
3	GOM_NL__2PRFIN20120226_025320_000000453112_00090_52259_6994.N1	26-FEB-2012 02:53:20	Dark	45.000	10	Bet Cen	0.61000	28000.	90	52259	No
4	GOM_NL__2PRFIN20120226_025659_000000563112_00090_52259_6995.N1	26-FEB-2012 02:56:59	Dark	55.500	26	Gam Cru	1.6240	2900.0	111	52259	No
5	GOM_NL__2PRFIN20120226_043334_000000413112_00091_52260_7005.N1	26-FEB-2012 04:33:34	Dark	40.500	10	Bet Cen	0.61000	28000.	81	52260	No
6	GOM_NL__2PRFIN20120226_061349_000000483112_00092_52261_7014.N1	26-FEB-2012 06:13:49	Dark	47.500	10	Bet Cen	0.61000	28000.	95	52261	No
7	GOM_NL__2PRFIN20120226_075403_000000523112_00093_52262_7036.N1	26-FEB-2012 07:54:03	Dark	51.500	10	Bet Cen	0.61000	28000.	103	52262	No
8	GOM_NL__2PRFIN20120226_093418_000000463112_00094_52263_7105.N1	26-FEB-2012 09:34:18	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52263	No
9	GOM_NL__2PRFIN20120226_111432_000000533112_00095_52264_7135.N1	26-FEB-2012 11:14:32	Dark	53.000	10	Bet Cen	0.61000	28000.	106	52264	No
10	GOM_NL__2PRFIN20120226_125447_000000513112_00096_52265_7165.N1	26-FEB-2012 12:54:47	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52265	No
11	GOM_NL__2PRFIN20120226_143501_000000413112_00097_52266_7194.N1	26-FEB-2012 14:35:01	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52266	No
12	GOM_NL__2PRFIN20120226_161516_000000413112_00098_52267_7230.N1	26-FEB-2012 16:15:16	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52267	No
13	GOM_NL__2PRFIN20120226_175531_000000423112_00099_52268_7281.N1	26-FEB-2012 17:55:31	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52268	No
14	GOM_NL__2PRFIN20120226_193545_000000473112_00100_52269_7287.N1	26-FEB-2012 19:35:45	Dark	47.000	10	Bet Cen	0.61000	28000.	94	52269	No
15	GOM_NL__2PRFIN20120226_211600_000000513112_00101_52270_7295.N1	26-FEB-2012 21:16:00	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52270	No
16	GOM_NL__2PRFIN20120226_225614_000000423112_00102_52271_7308.N1	26-FEB-2012 22:56:14	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52271	No

## 3. Quality information per product

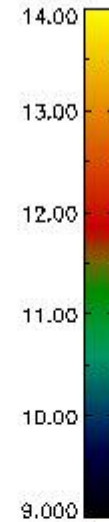
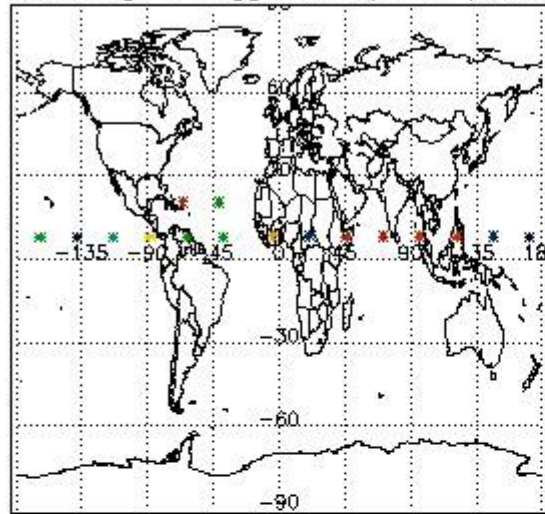
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

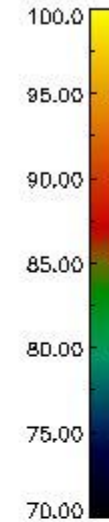
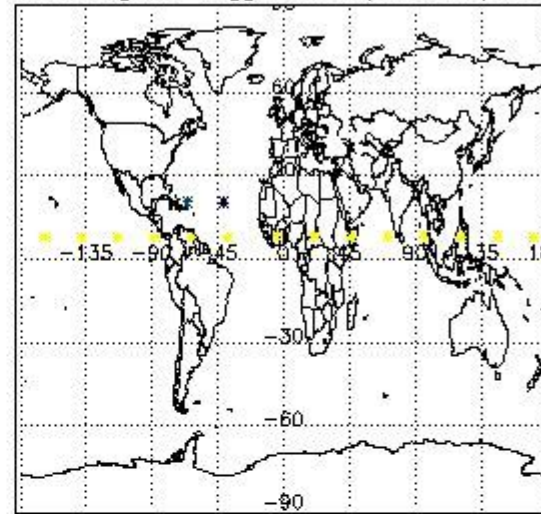


3.2 Plot quality information per product (world map)

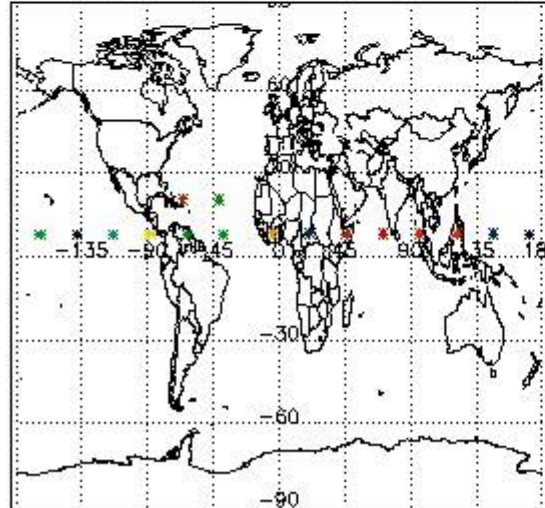
Percentage of flagged data per O3 profile



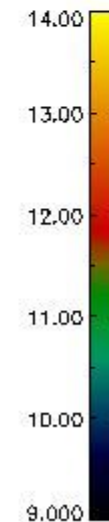
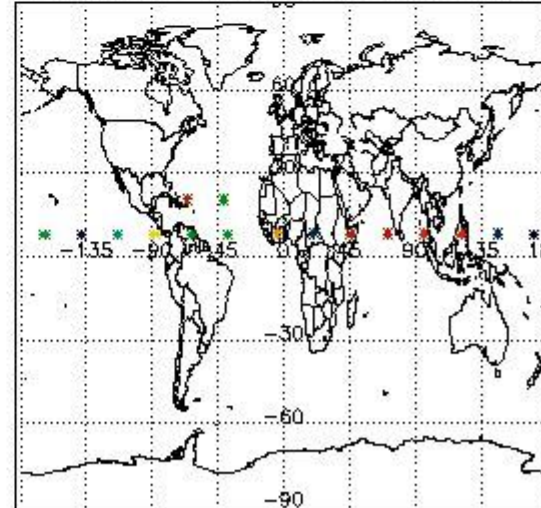
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

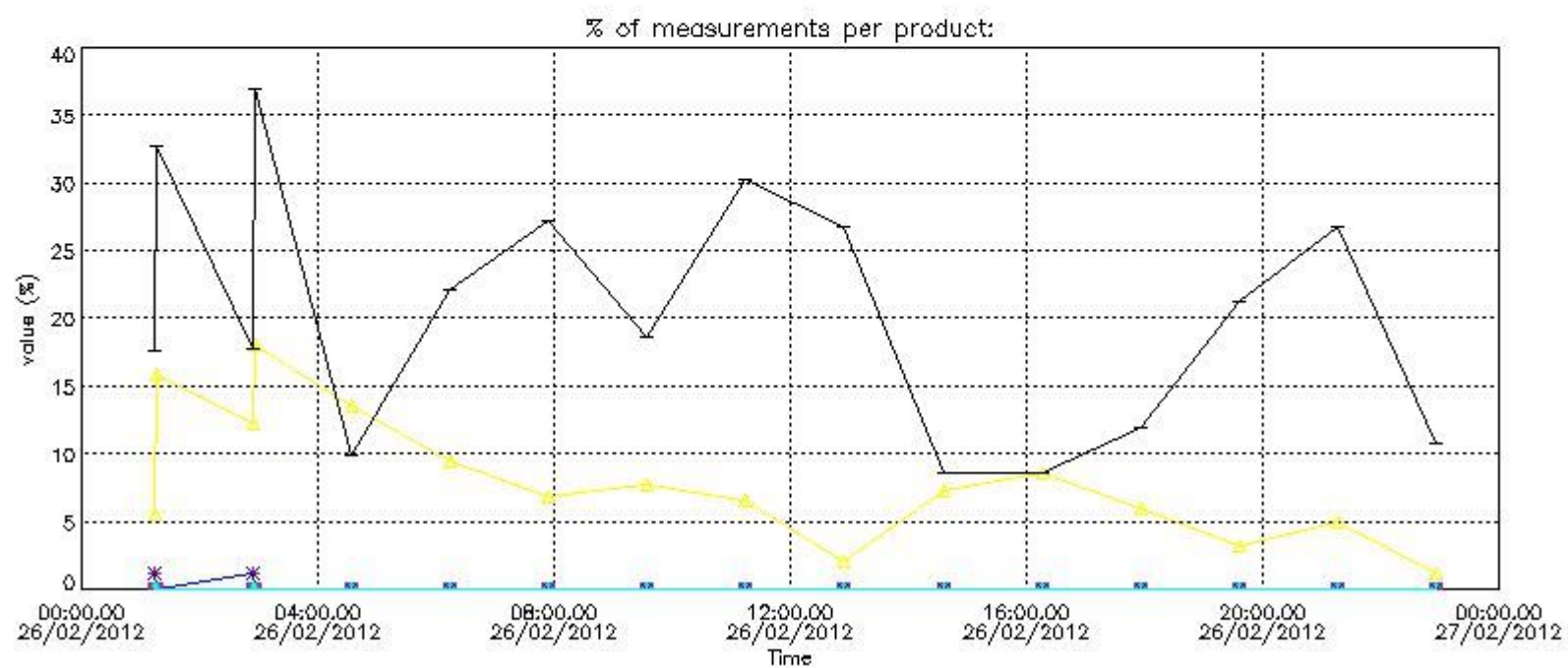


#### 4. Level 1 quality information per product

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

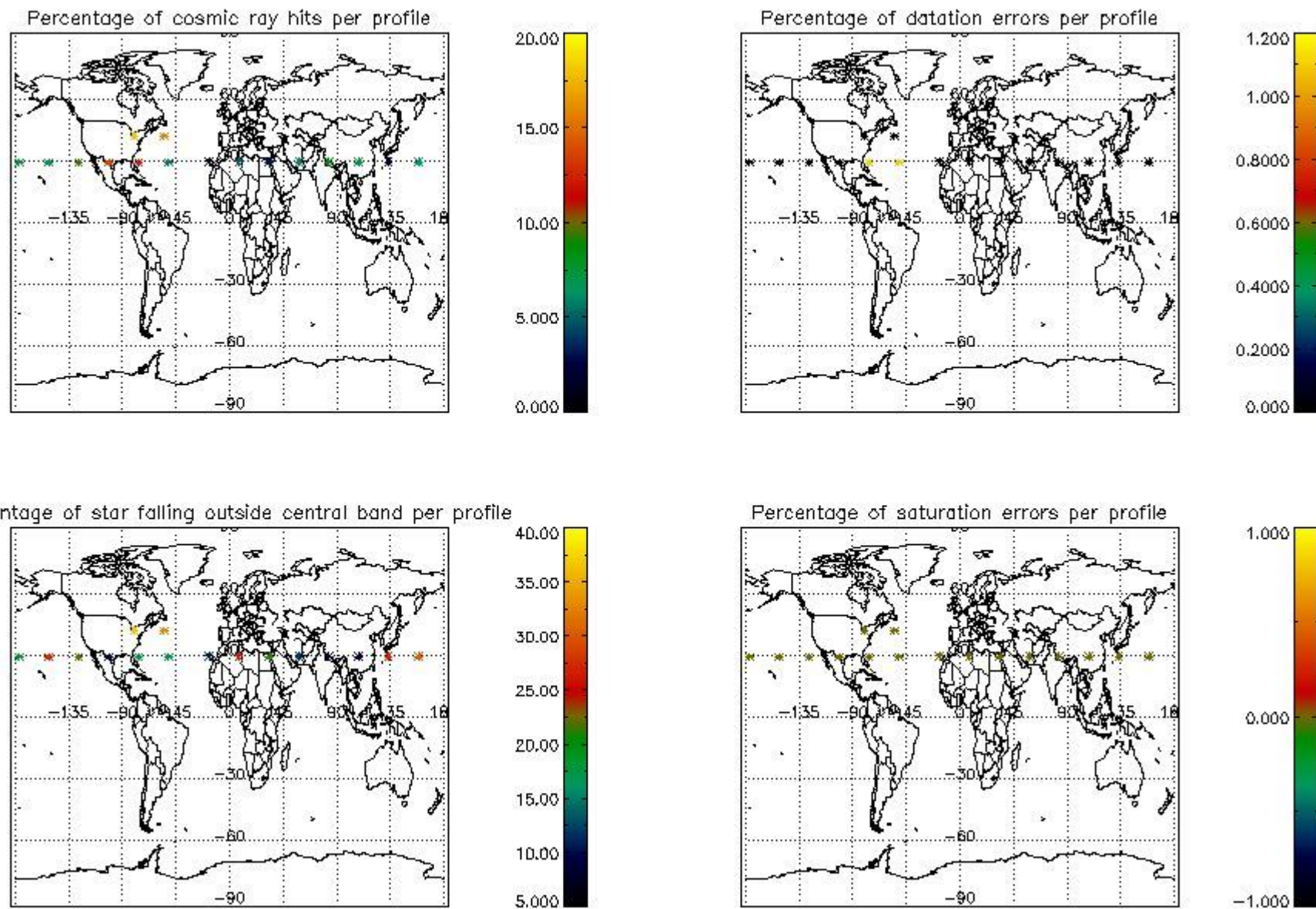


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!Warning: No products without errors in descending found

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

**!Warning: No products without errors in descending found**

### 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:

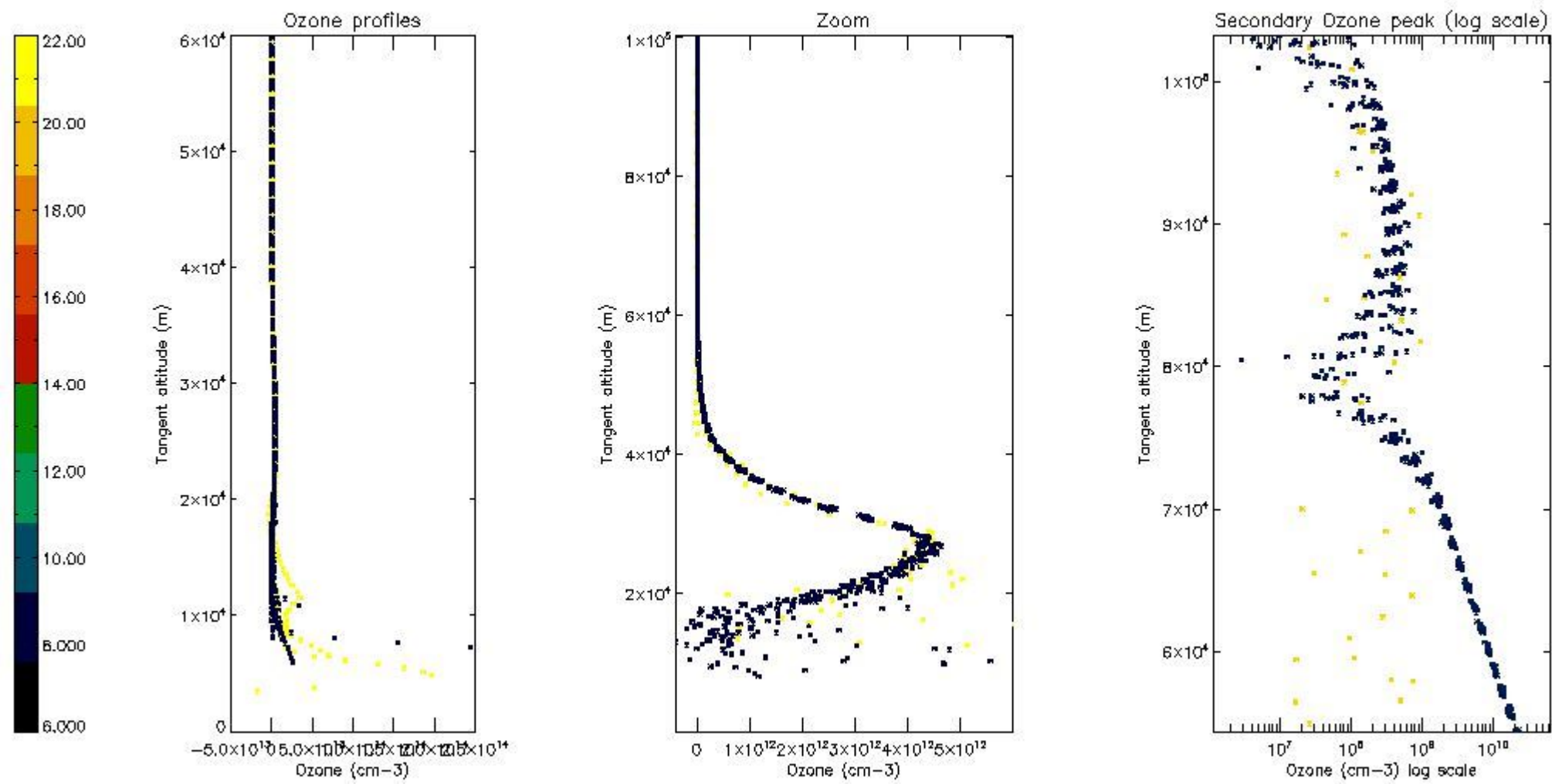
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	100
STD < 20	69
STD < 10	61
STD < 5	51

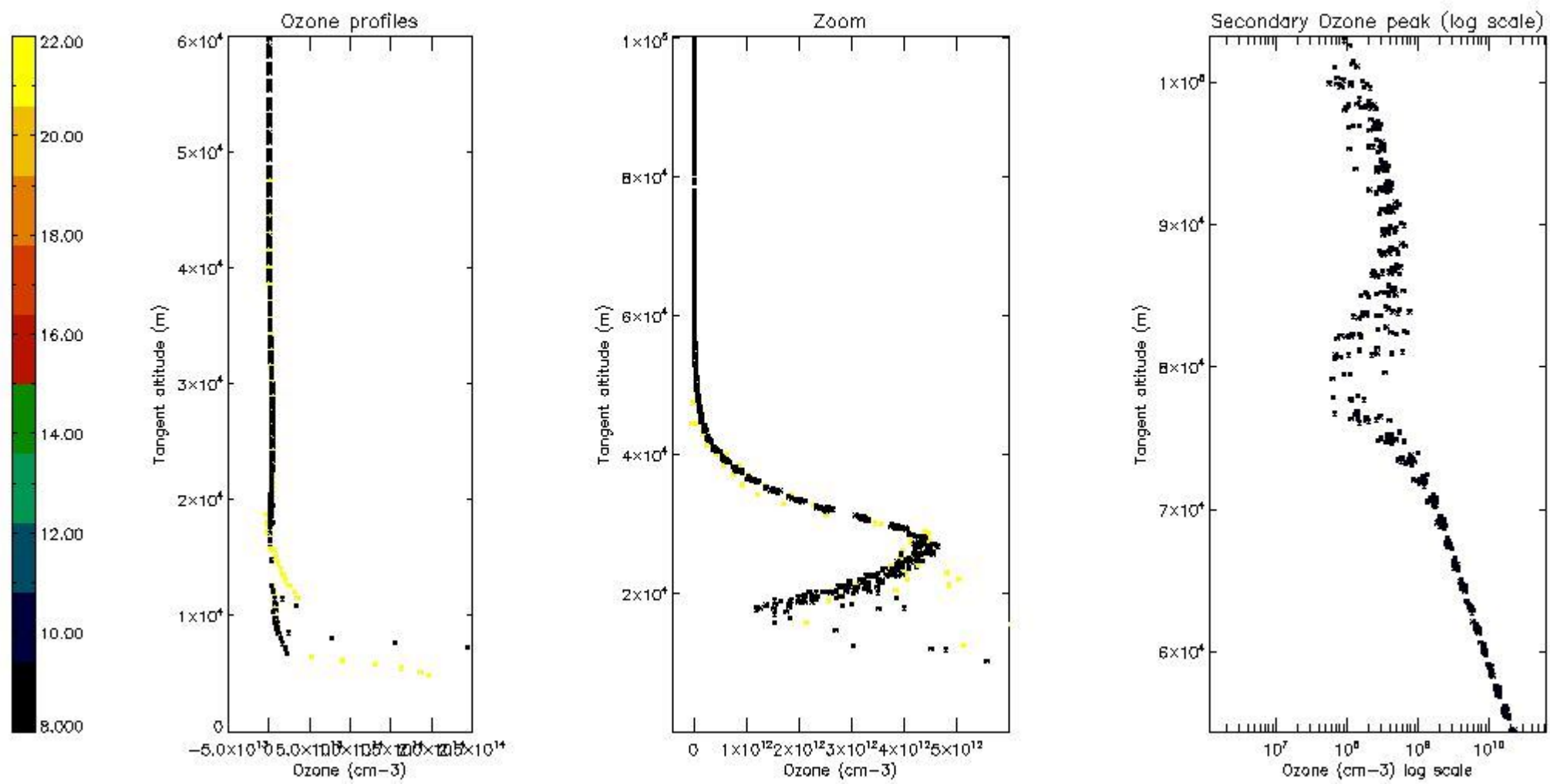
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

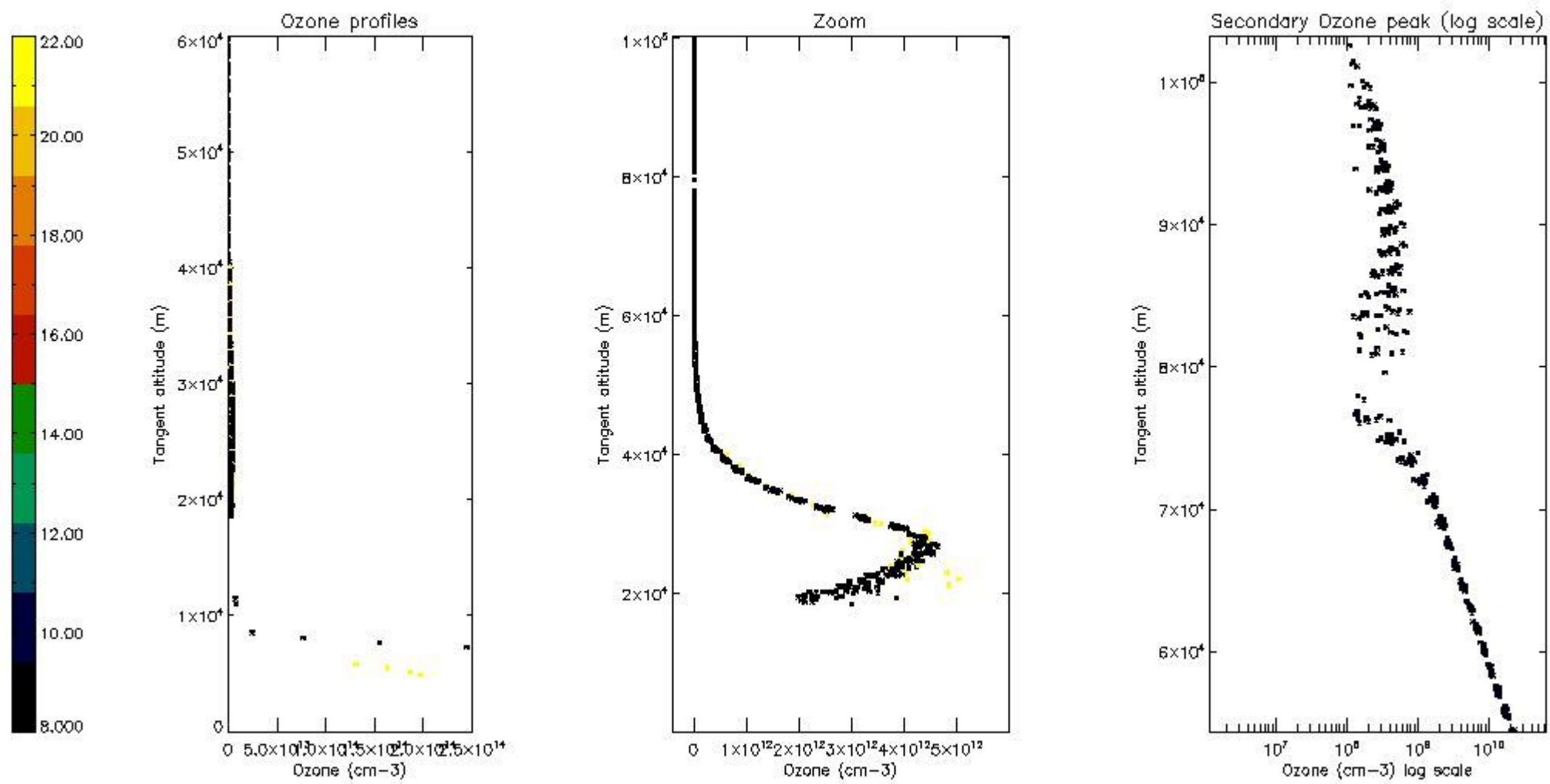
The colorbar represents the latitude.



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

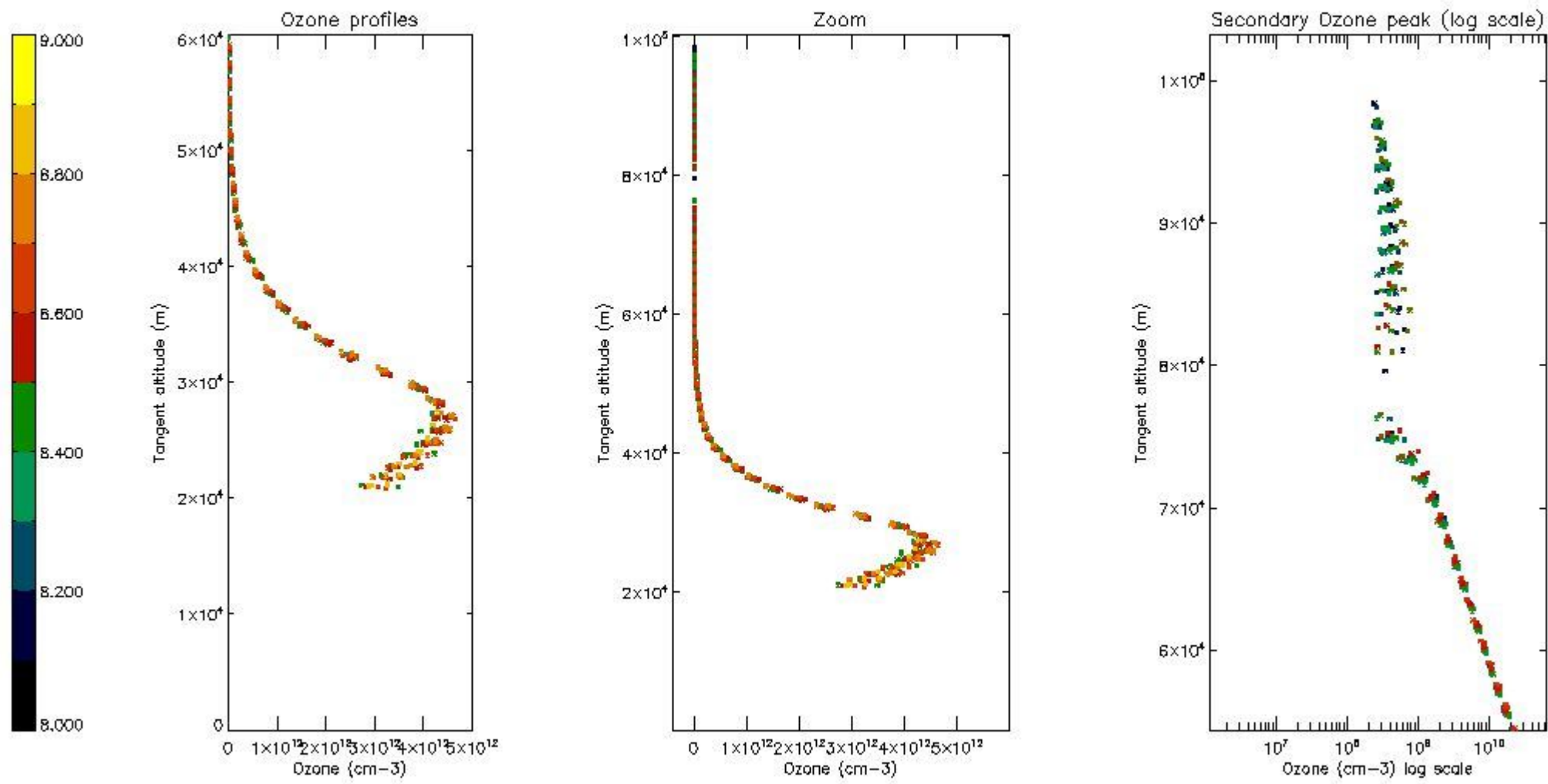
The colorbar represents the latitude.





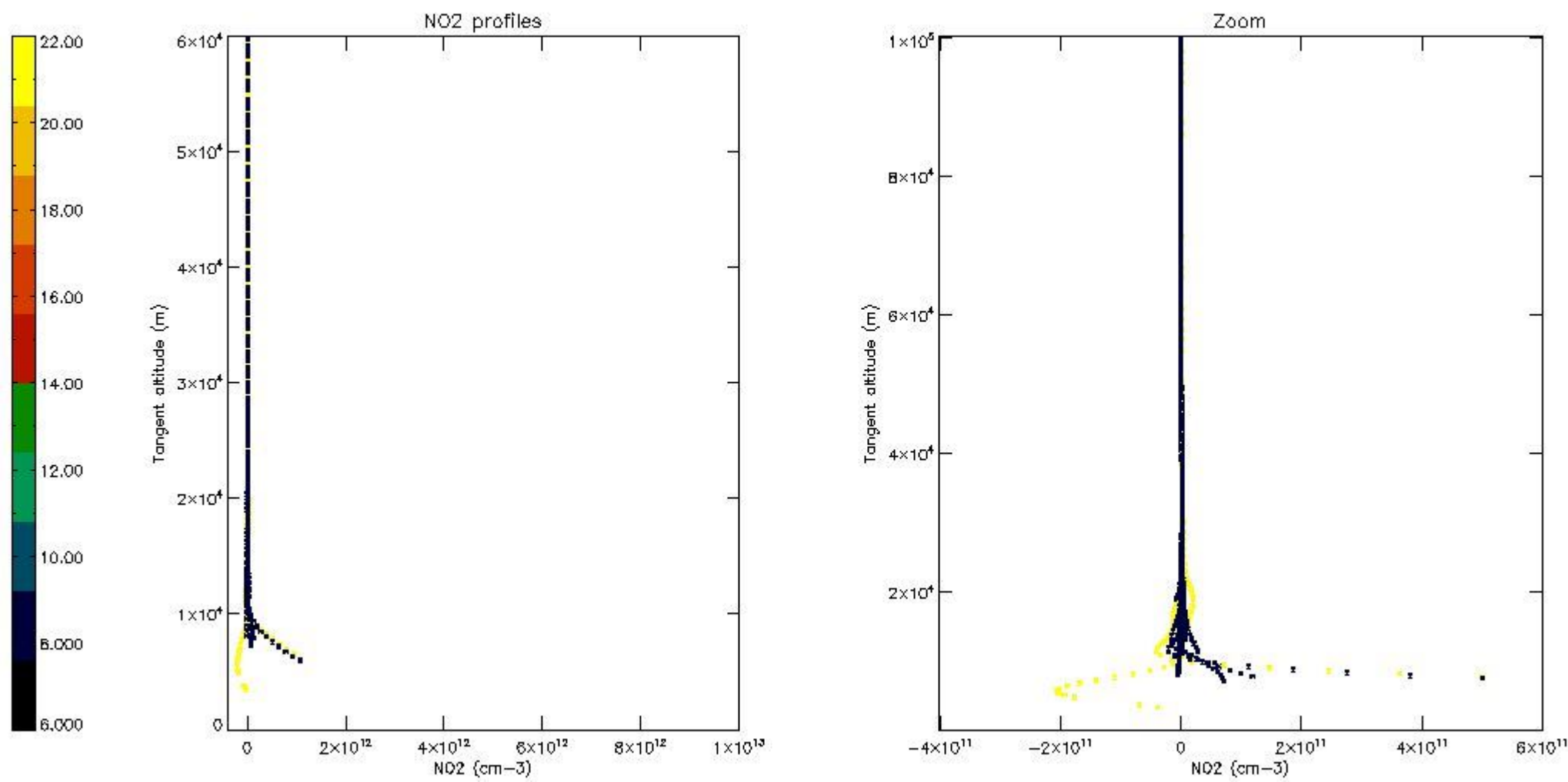
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



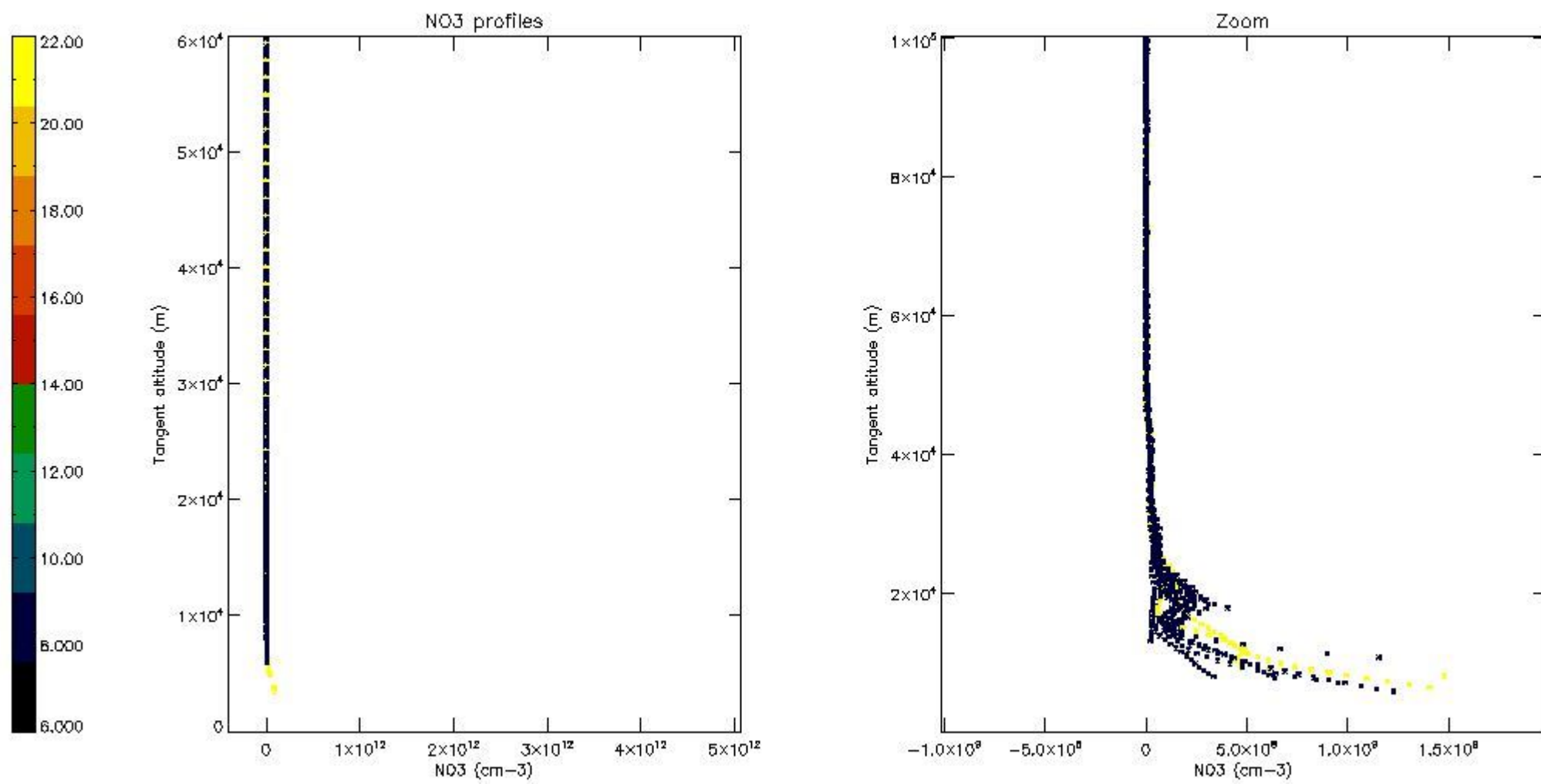
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



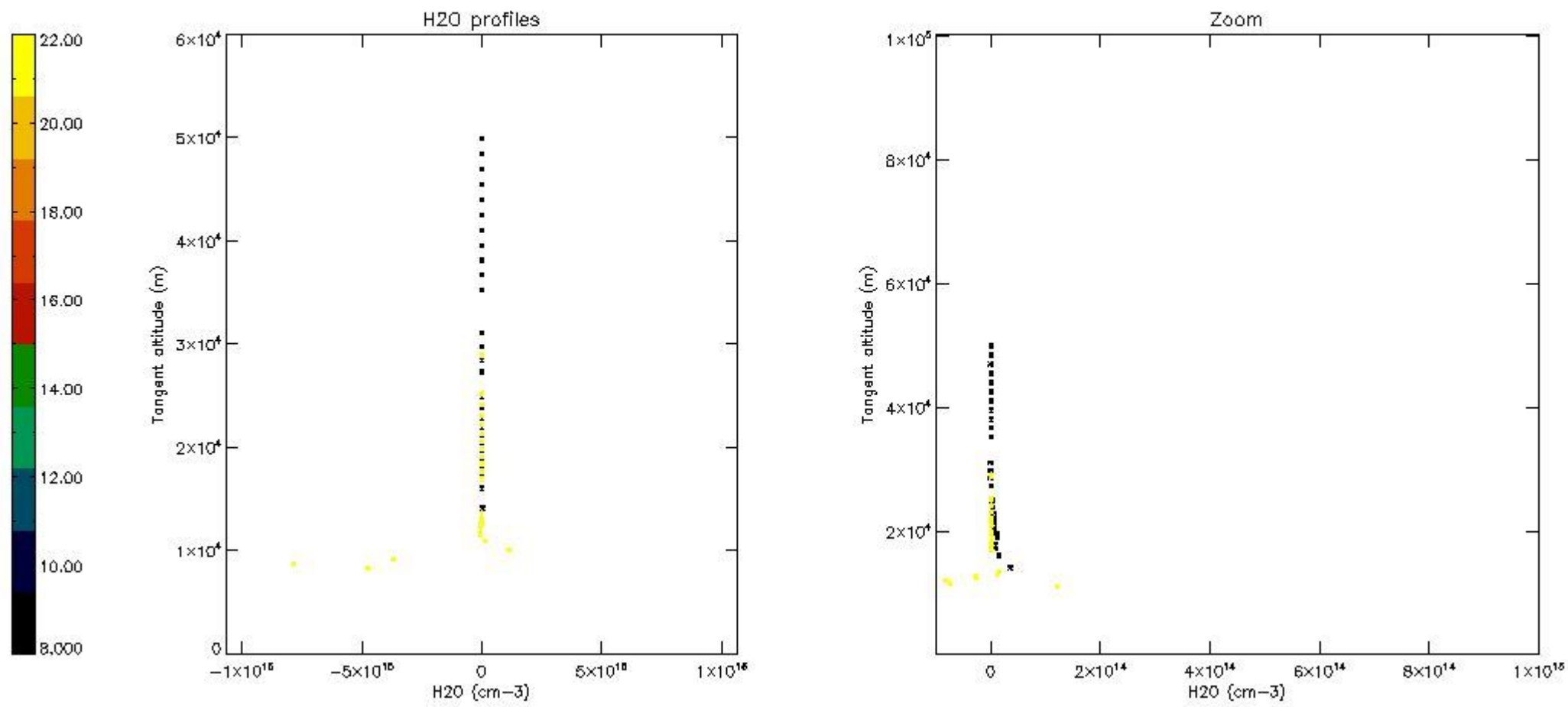
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	26-FEB-2012 01:13:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	26-FEB-2012 01:13:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	26-FEB-2012 01:13:05

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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Stop time of products	27-02-2012 (27FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	16
Nb of prods with errors	0

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

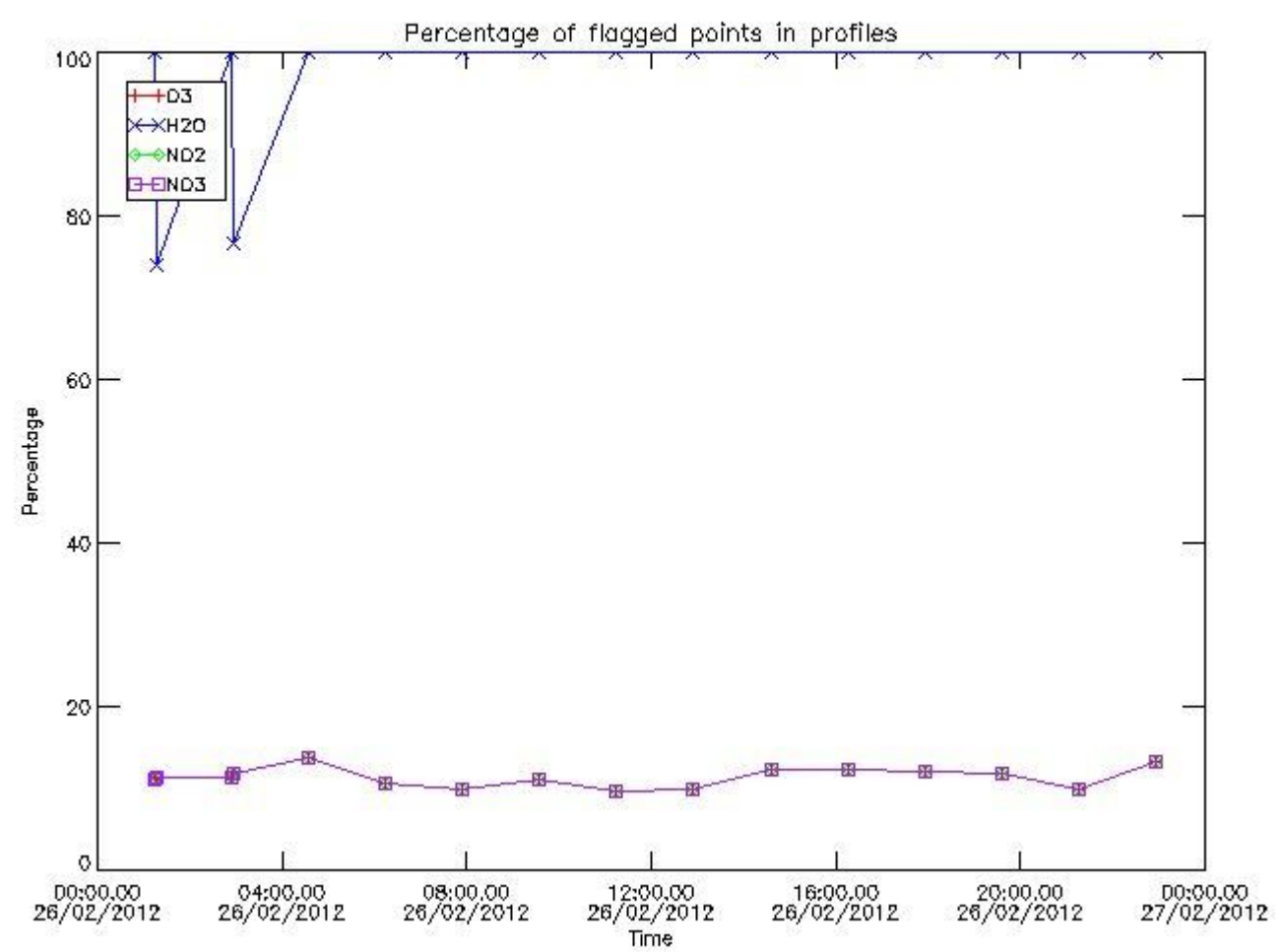
**!Warning: No products without errors in BRIGHT limb conditions found**

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120226_011305_000000463112_00089_52258_6988.N1	26-FEB-2012 01:13:05	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52258	No
2	GOM_NL__2PRFIN20120226_011643_000000543112_00089_52258_6989.N1	26-FEB-2012 01:16:43	Dark	53.500	26	Gam Cru	1.6240	2900.0	107	52258	No
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8	GOM_NL__2PRFIN20120226_093418_000000463112_00094_52263_7105.N1	26-FEB-2012 09:34:18	Dark	45.500	10	Bet Cen	0.61000	28000.	91	52263	No
9	GOM_NL__2PRFIN20120226_111432_000000533112_00095_52264_7135.N1	26-FEB-2012 11:14:32	Dark	53.000	10	Bet Cen	0.61000	28000.	106	52264	No
10	GOM_NL__2PRFIN20120226_125447_000000513112_00096_52265_7165.N1	26-FEB-2012 12:54:47	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52265	No
11	GOM_NL__2PRFIN20120226_143501_000000413112_00097_52266_7194.N1	26-FEB-2012 14:35:01	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52266	No
12	GOM_NL__2PRFIN20120226_161516_000000413112_00098_52267_7230.N1	26-FEB-2012 16:15:16	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52267	No
13	GOM_NL__2PRFIN20120226_175531_000000423112_00099_52268_7281.N1	26-FEB-2012 17:55:31	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52268	No
14	GOM_NL__2PRFIN20120226_193545_000000473112_00100_52269_7287.N1	26-FEB-2012 19:35:45	Dark	47.000	10	Bet Cen	0.61000	28000.	94	52269	No
15	GOM_NL__2PRFIN20120226_211600_000000513112_00101_52270_7295.N1	26-FEB-2012 21:16:00	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52270	No
16	GOM_NL__2PRFIN20120226_225614_000000423112_00102_52271_7308.N1	26-FEB-2012 22:56:14	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52271	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.

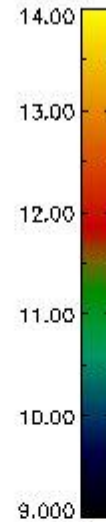
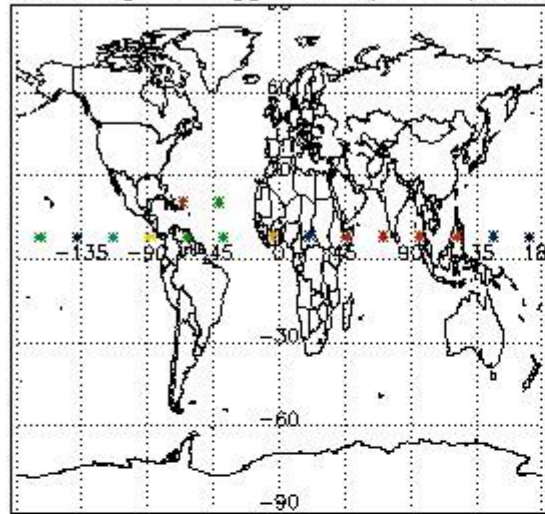
### 3.1 Plot quality information per product (time dependant)



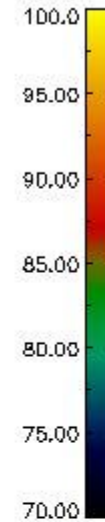
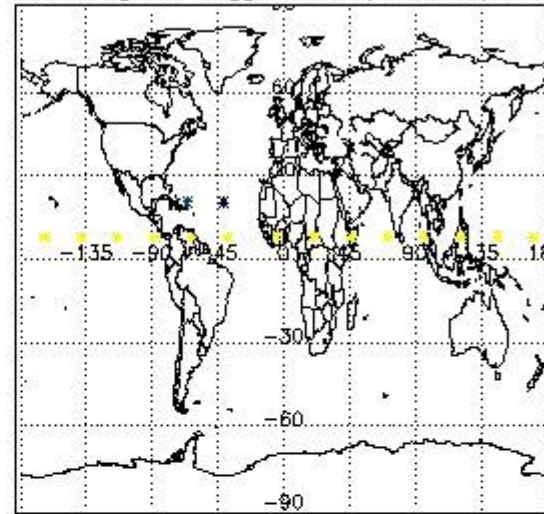
3.2 Plot quality information per product (world map)



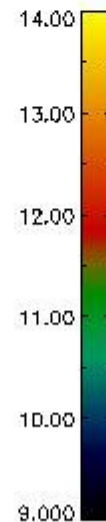
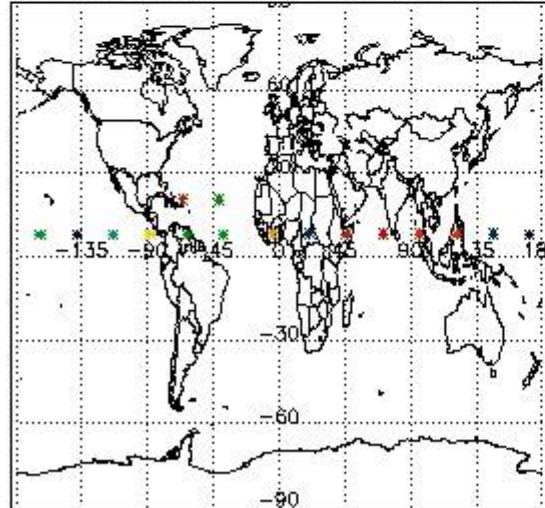
Percentage of flagged data per O3 profile



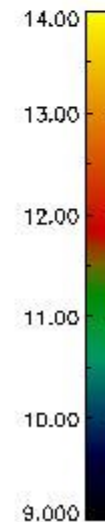
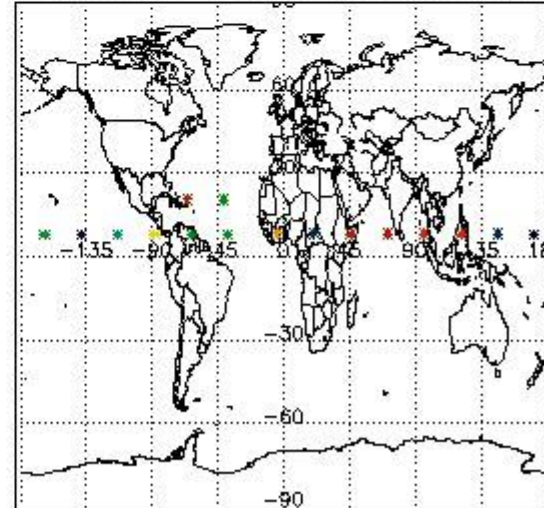
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

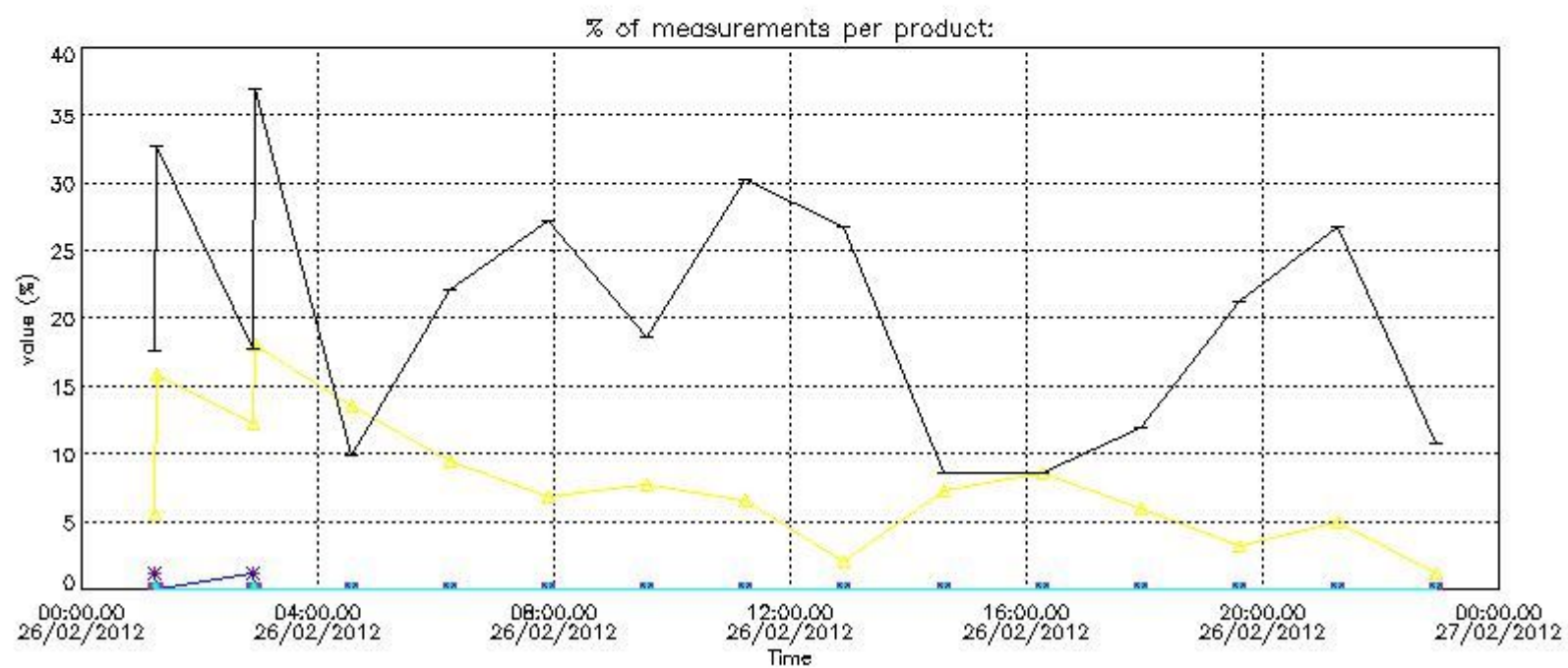
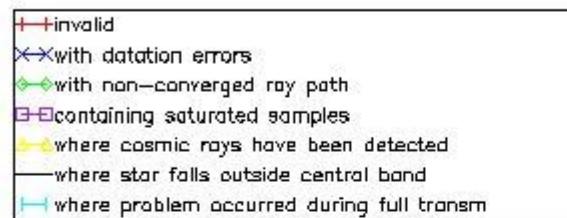


#### 4. Level 1 quality information per product

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

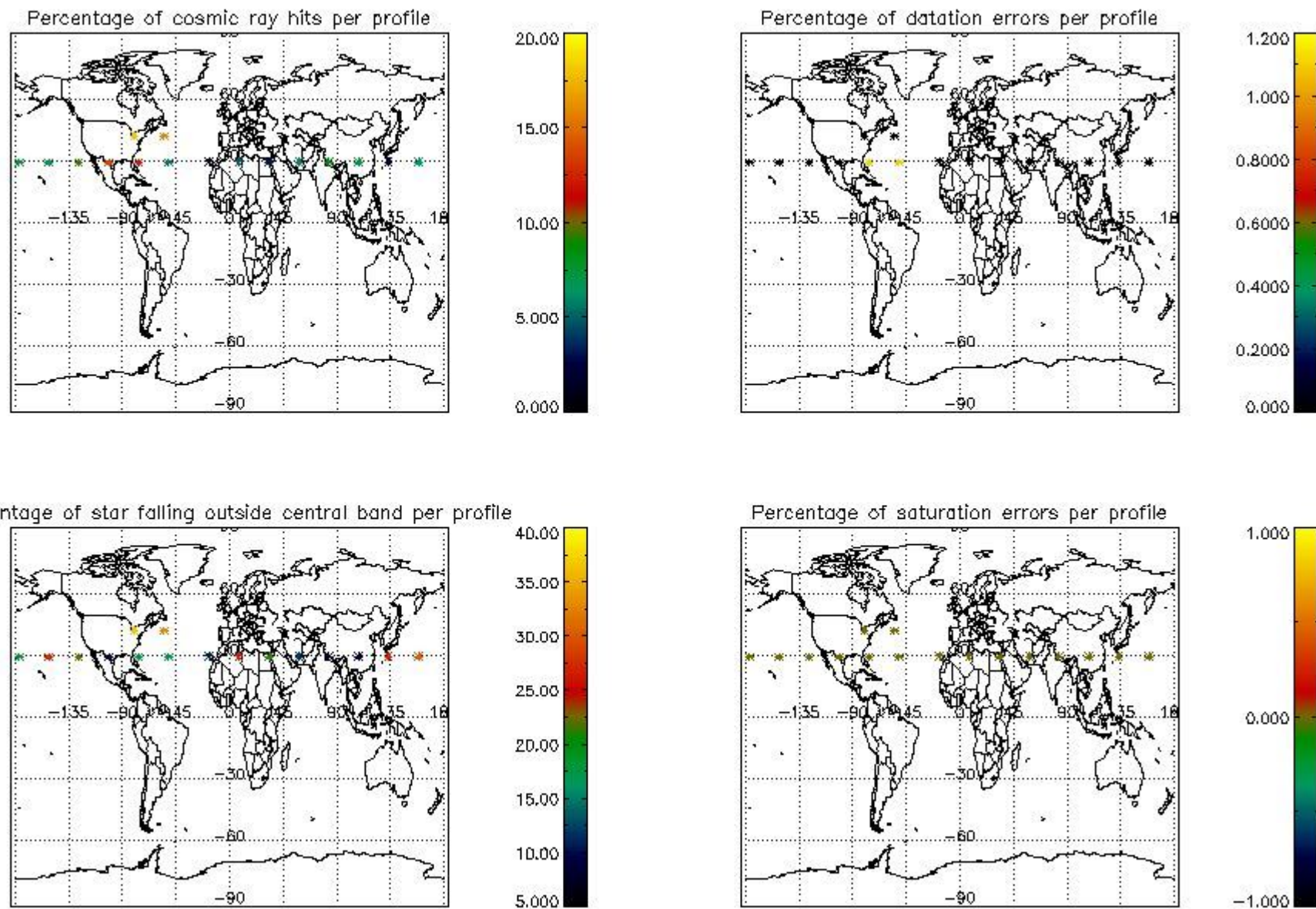


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!Warning: No products without errors in descending found

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

**!Warning: No products without errors in descending found**

### 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:

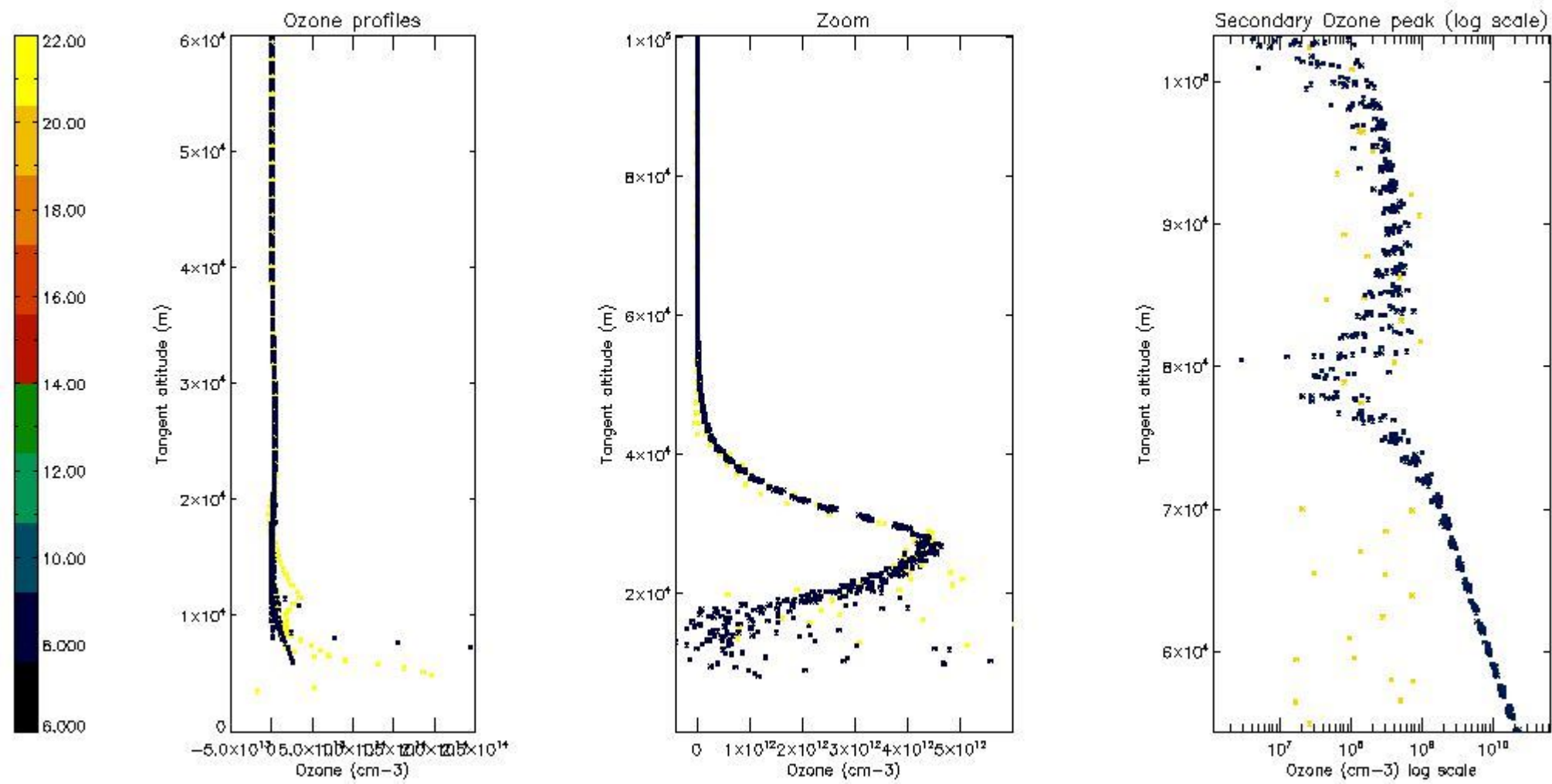
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	100
STD < 20	69
STD < 10	61
STD < 5	51

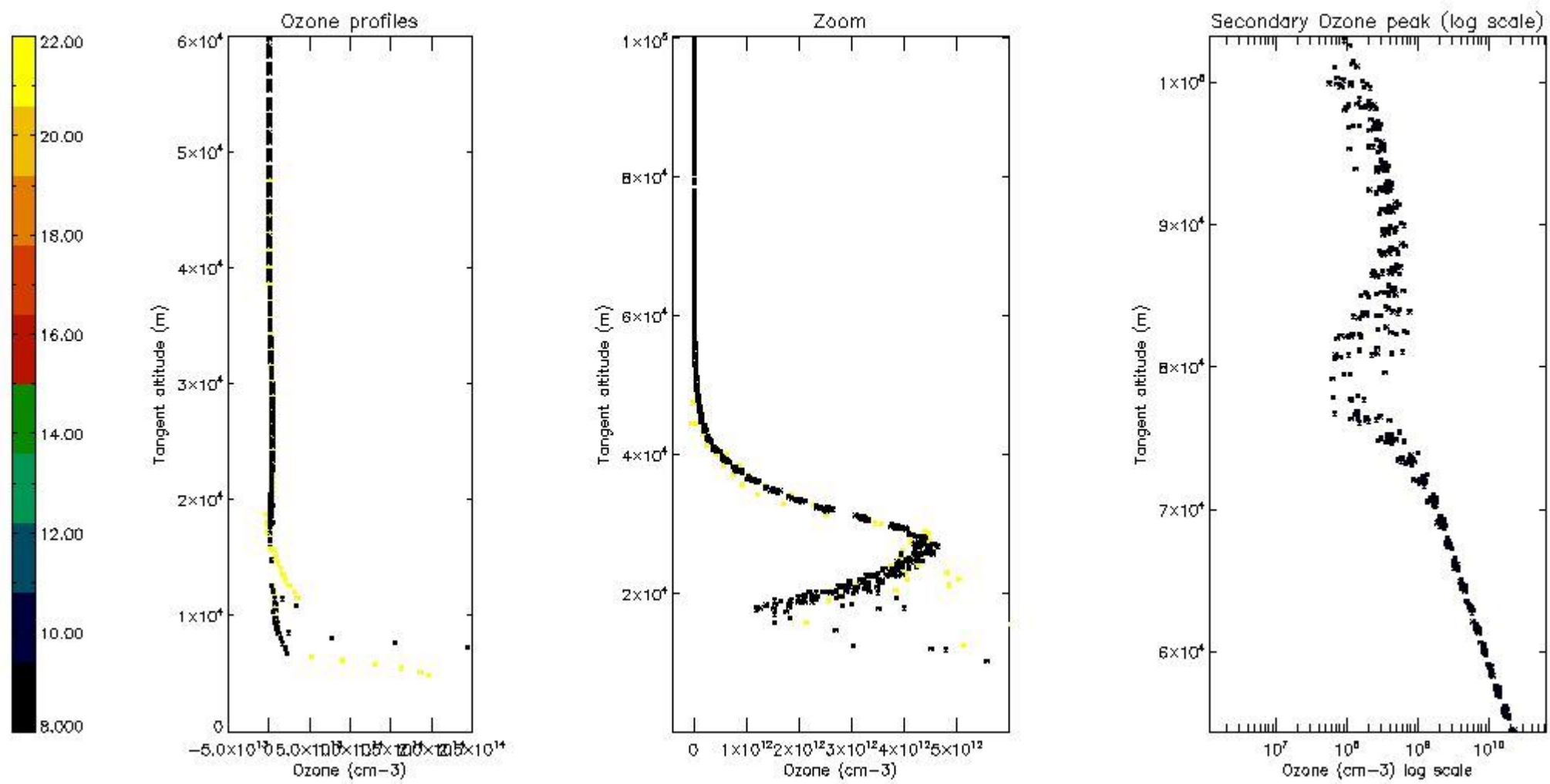
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



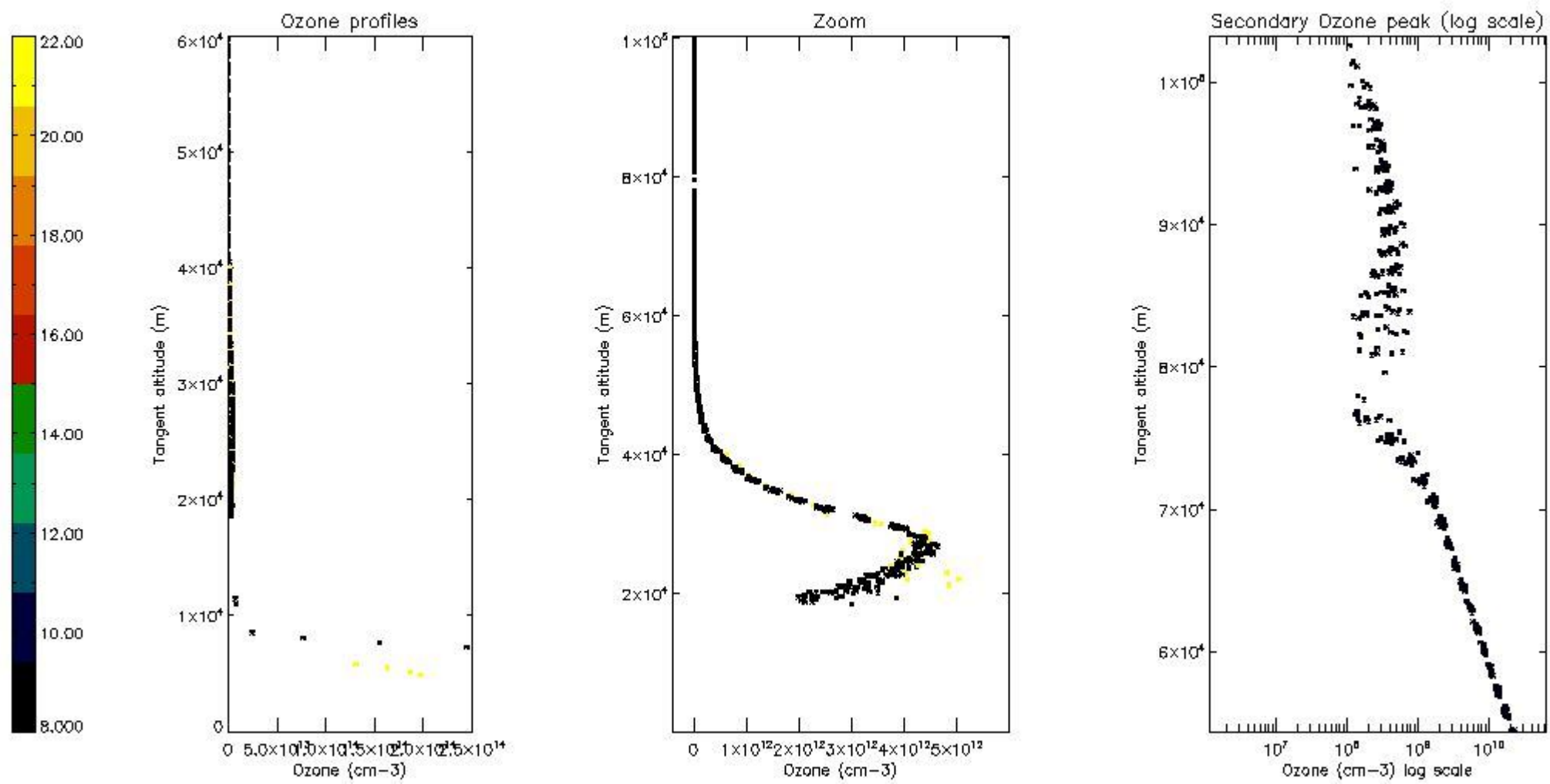
### 5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



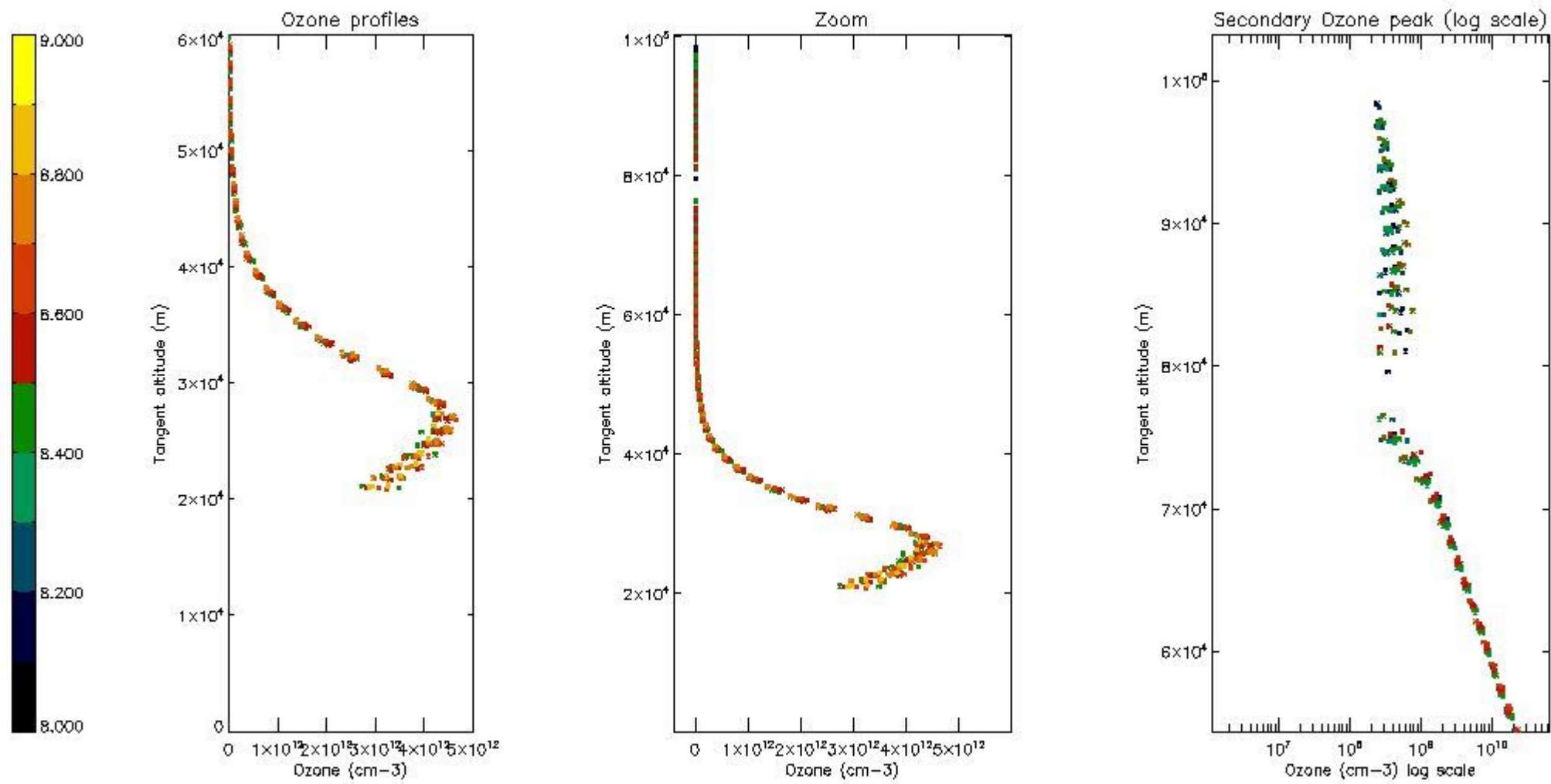
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



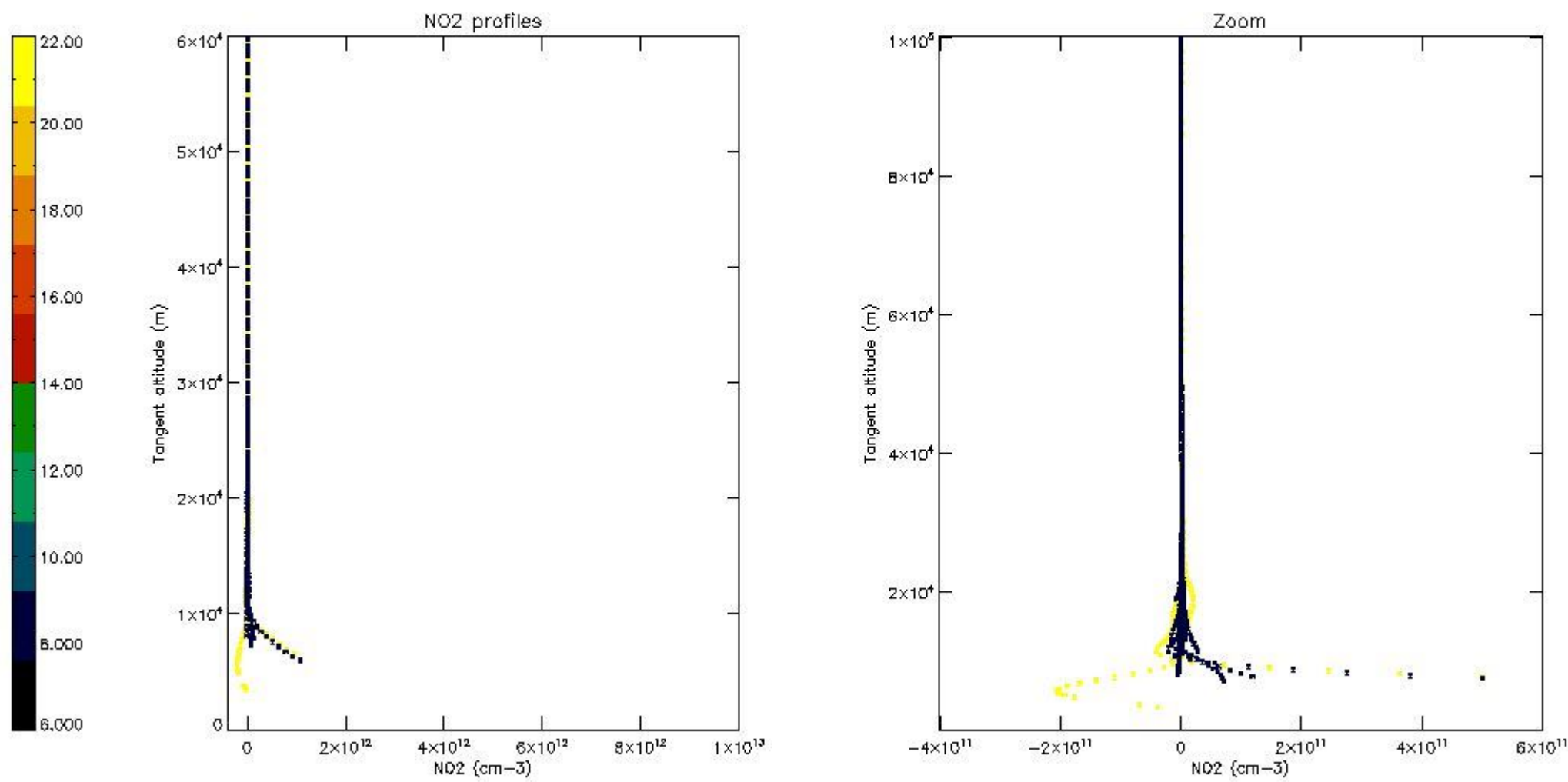
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

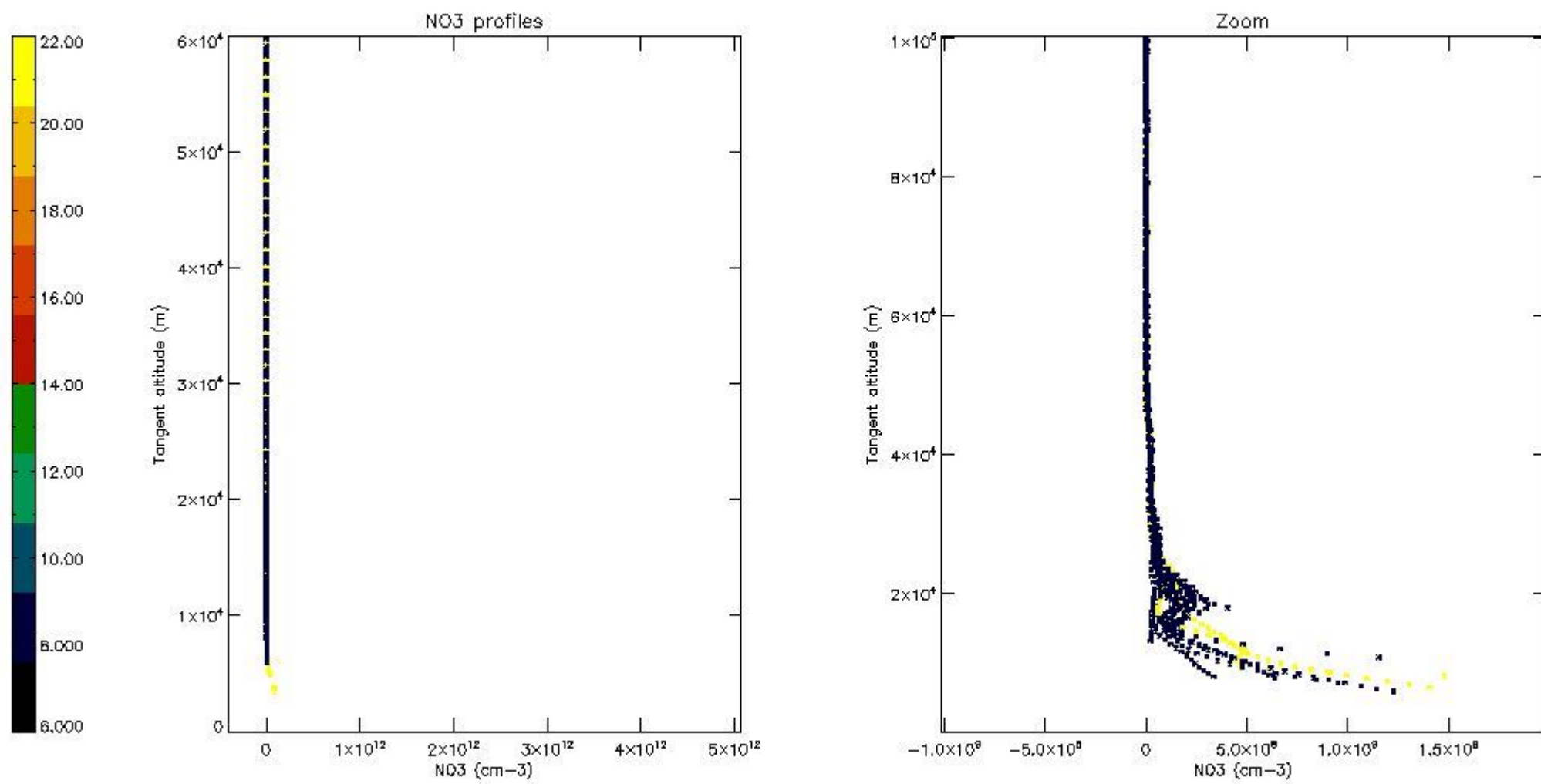
The colorbar represents the latitude.



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

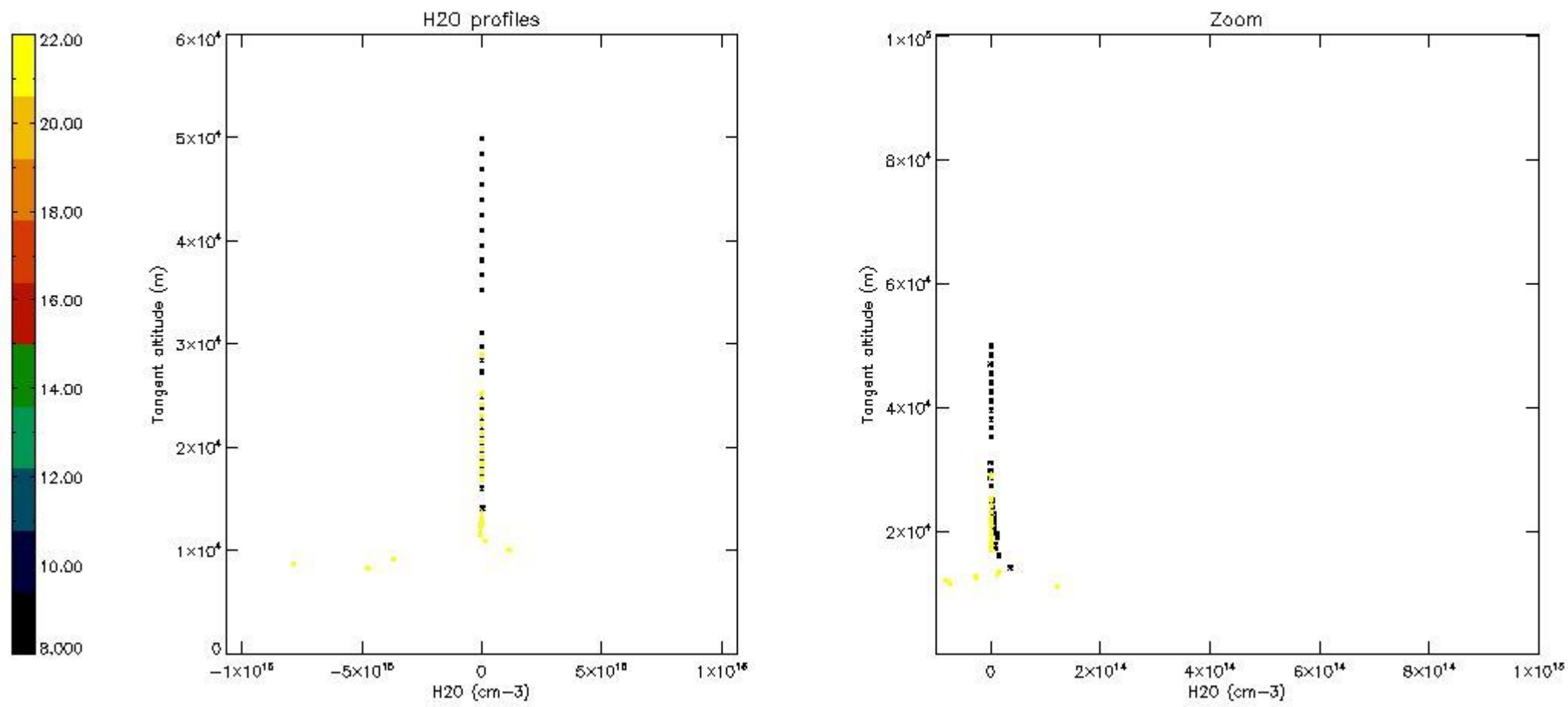
The colorbar represents the latitude.





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)

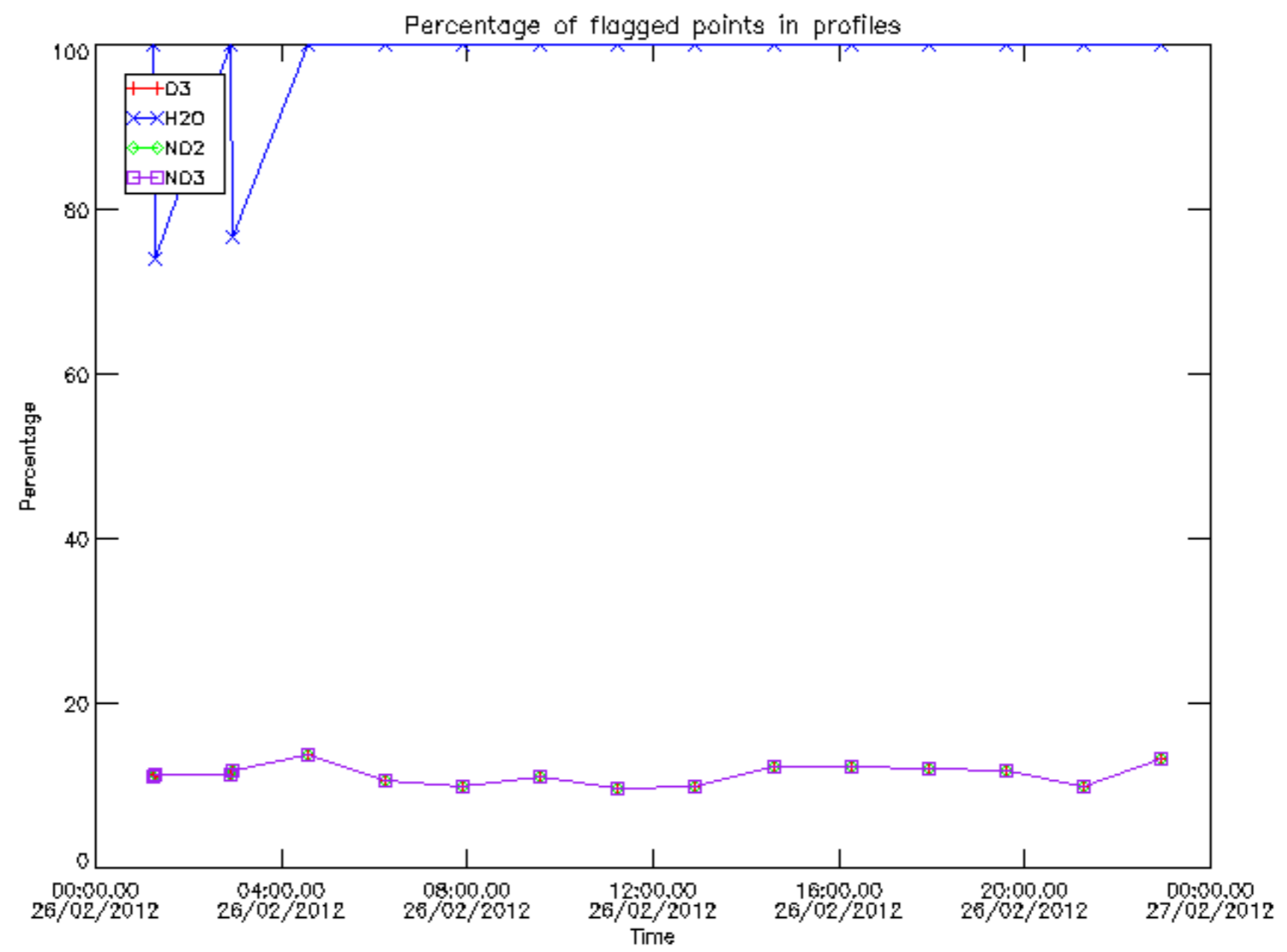
The colorbar represents the latitude.



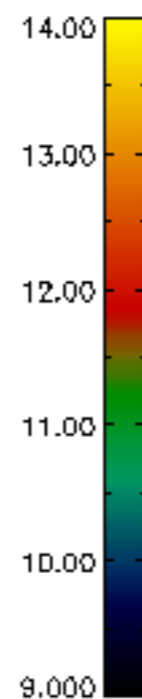
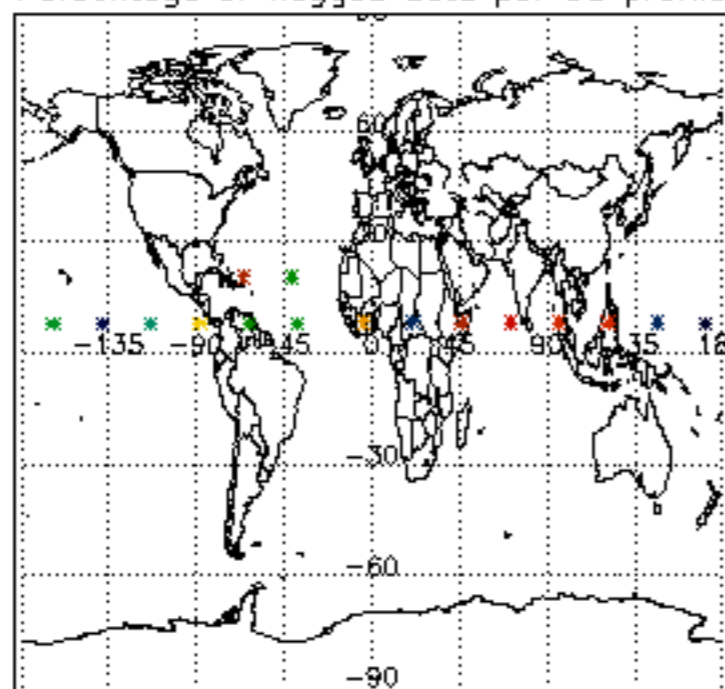
## 6. Auxiliary Data Files used for the production reported in section 2

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.

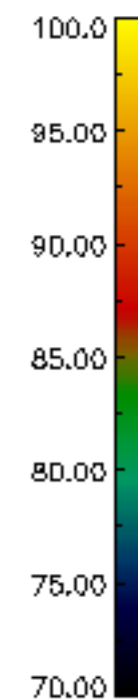
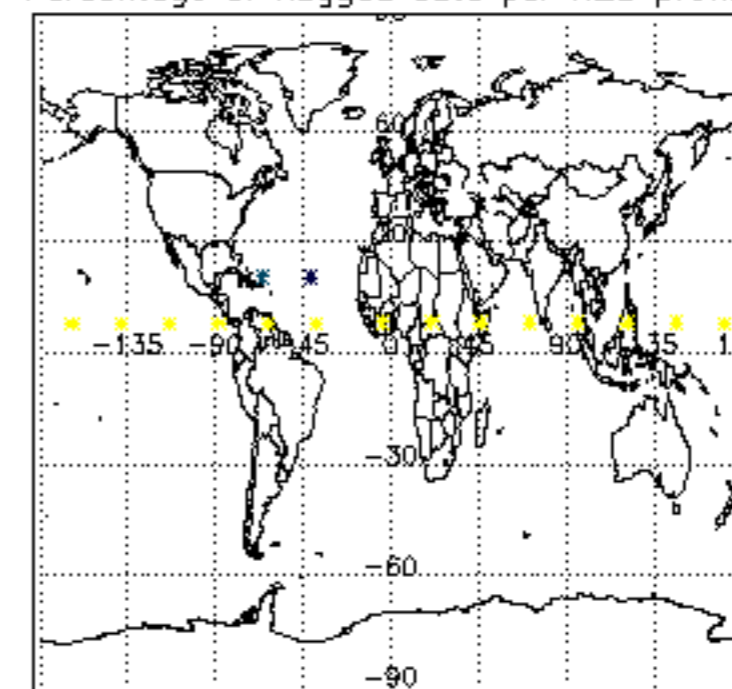
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	26-FEB-2012 01:13:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	26-FEB-2012 01:13:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	26-FEB-2012 01:13:05



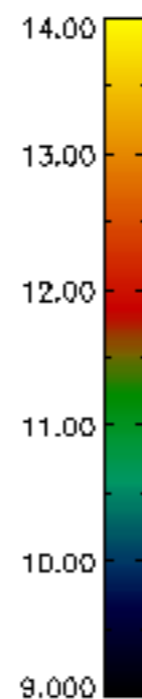
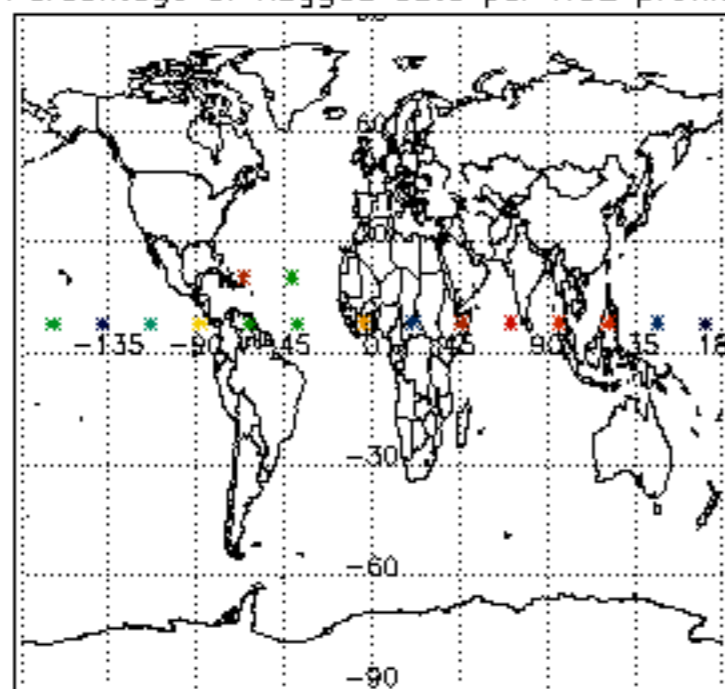
Percentage of flagged data per D3 profile



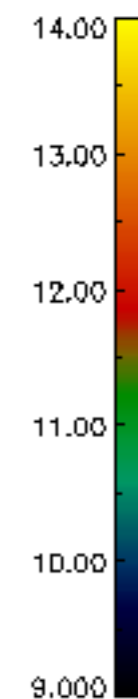
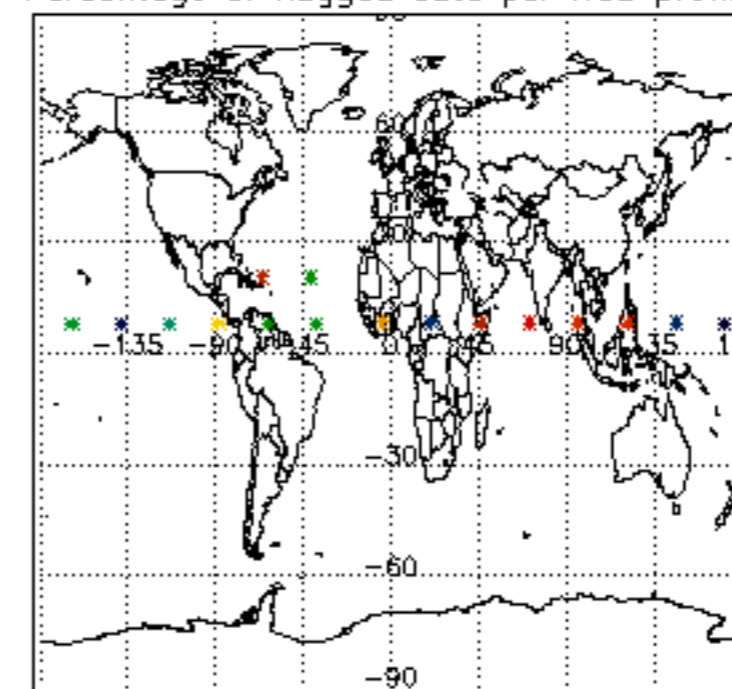
Percentage of flagged data per H2O profile

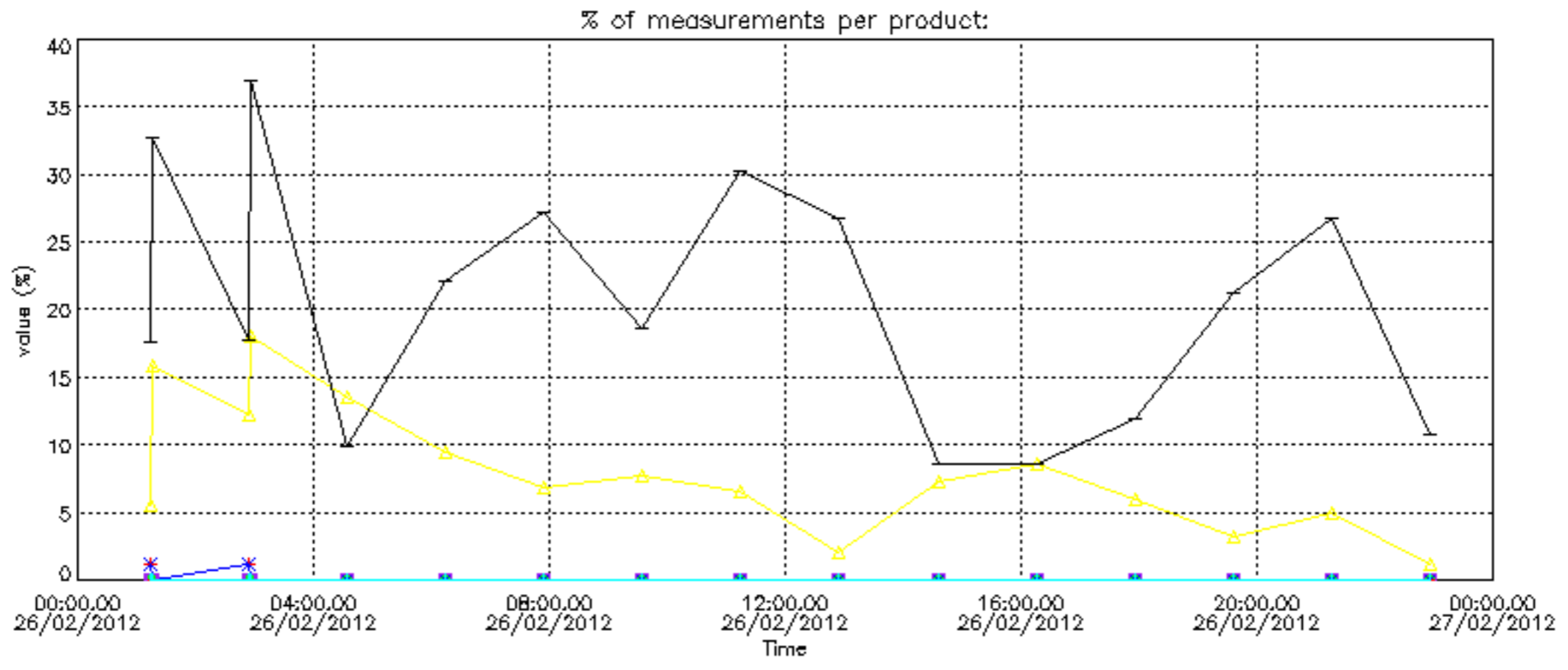


Percentage of flagged data per NO2 profile

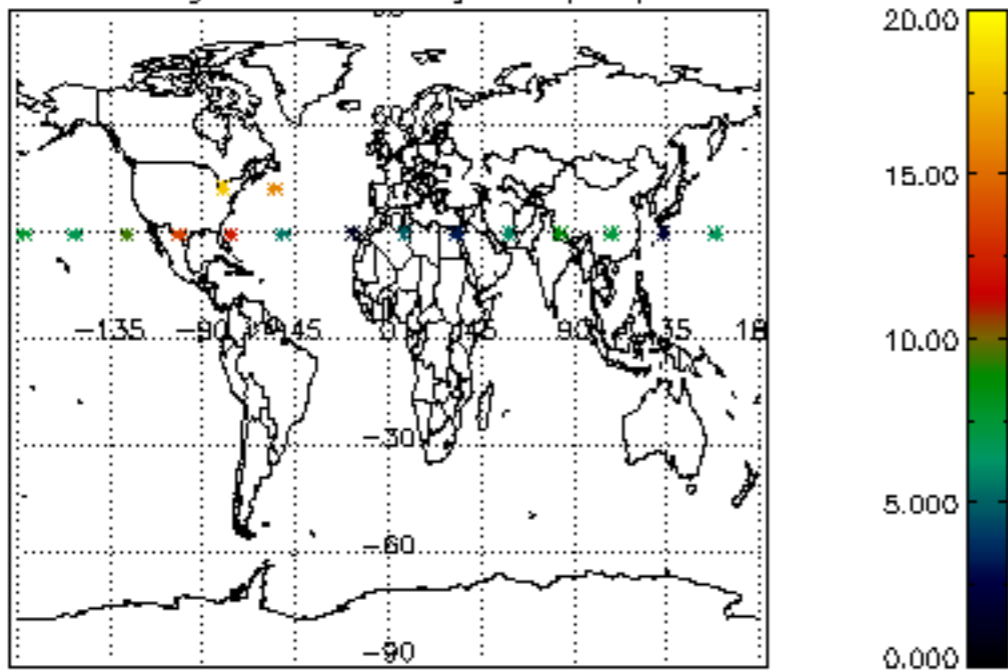


Percentage of flagged data per NO3 profile

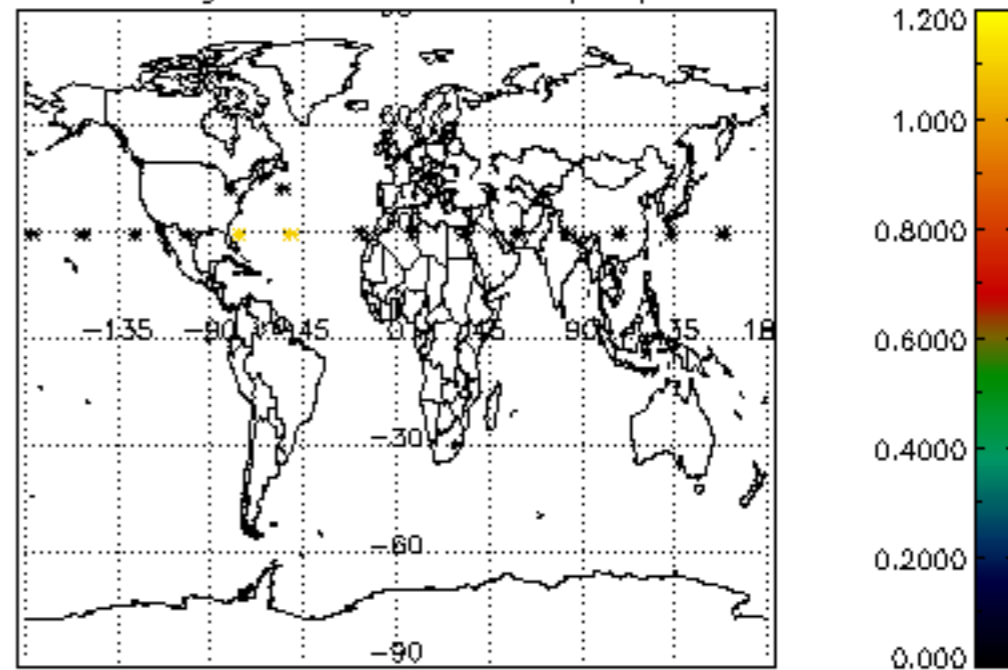




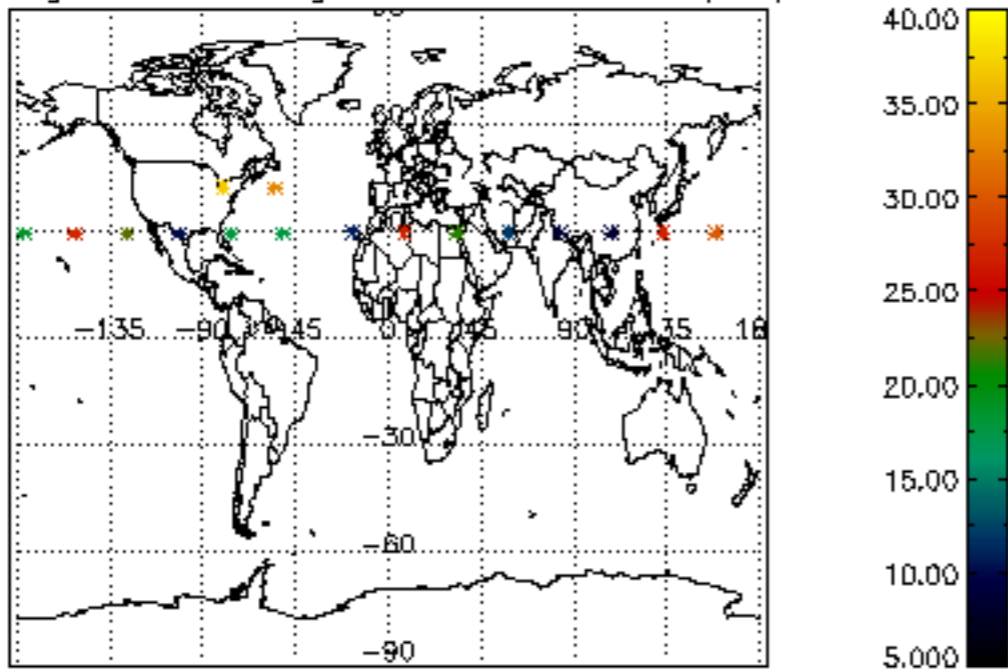
Percentage of cosmic ray hits per profile



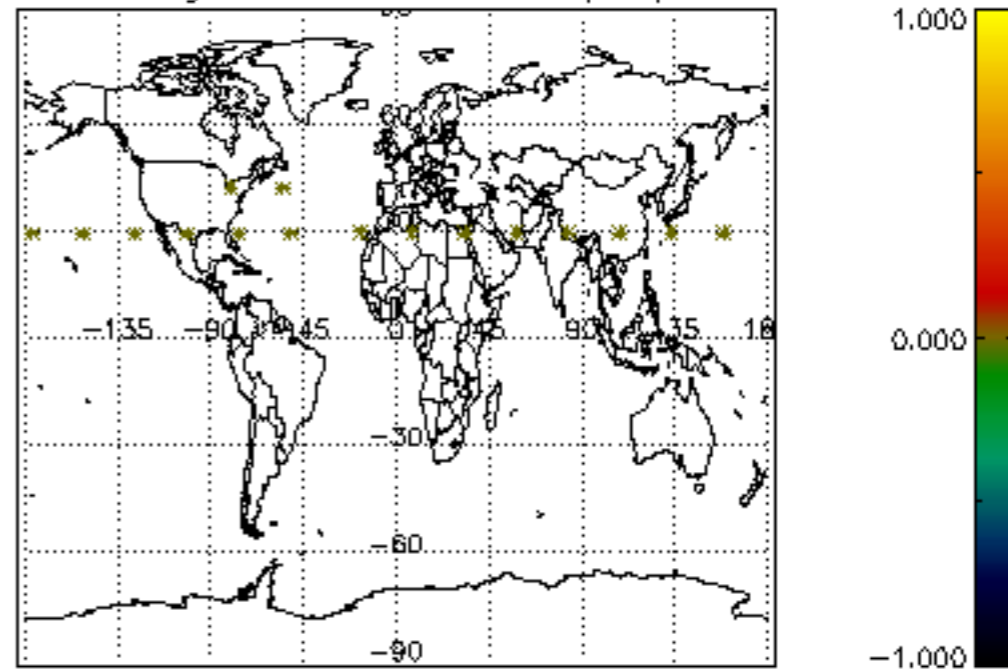
Percentage of datation errors per profile

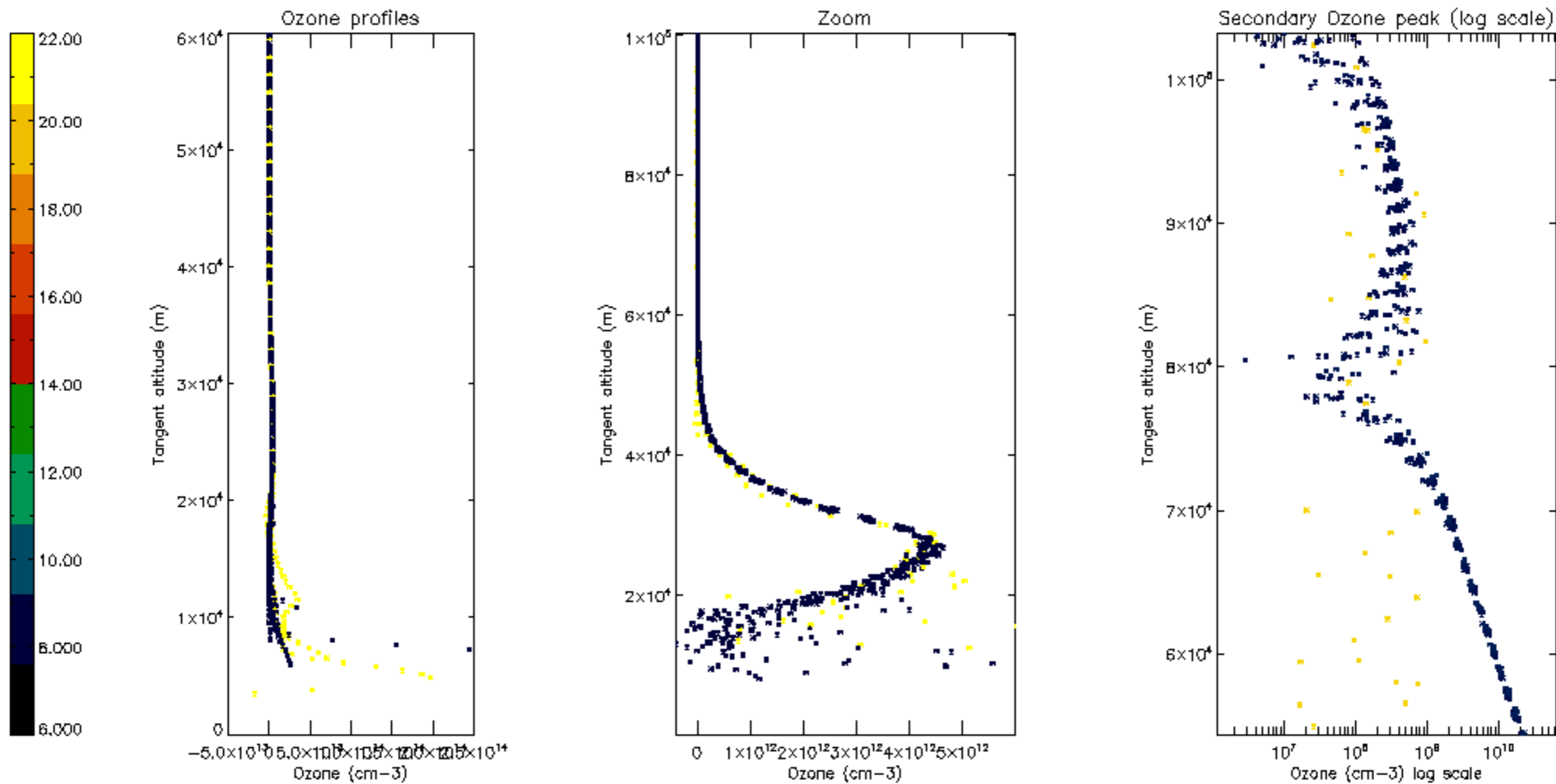


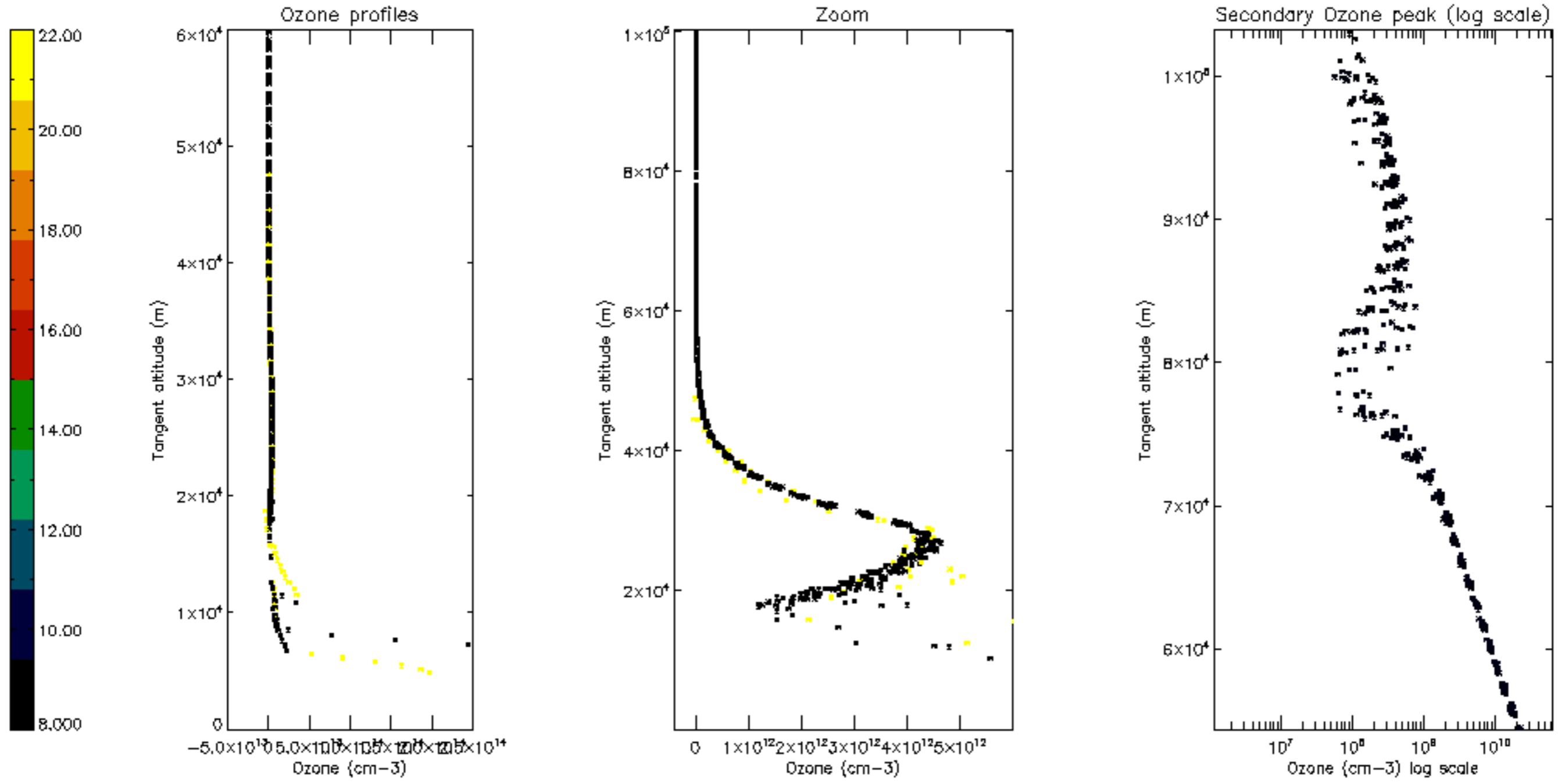
Percentage of star falling outside central band per profile



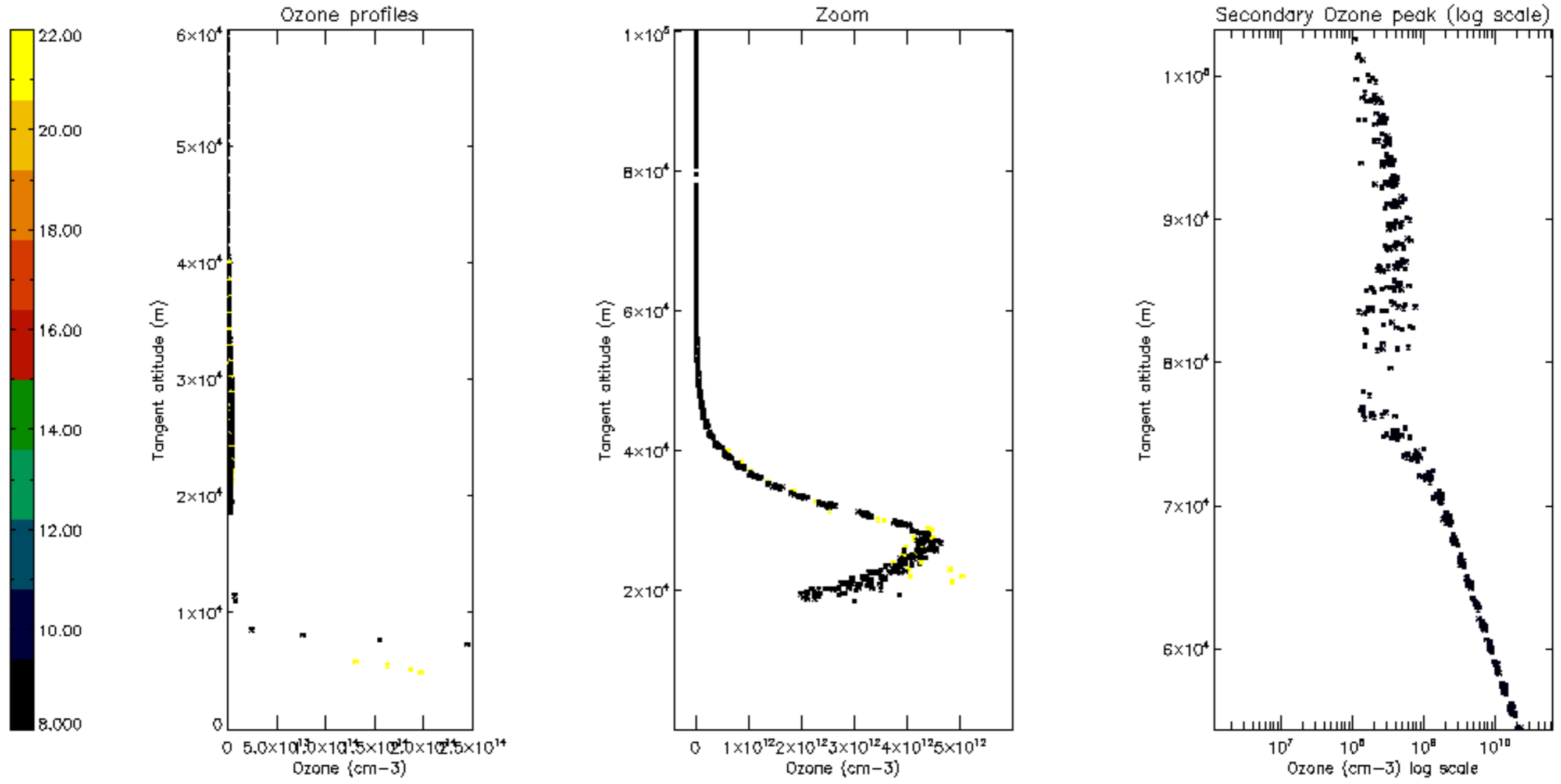
Percentage of saturation errors per profile

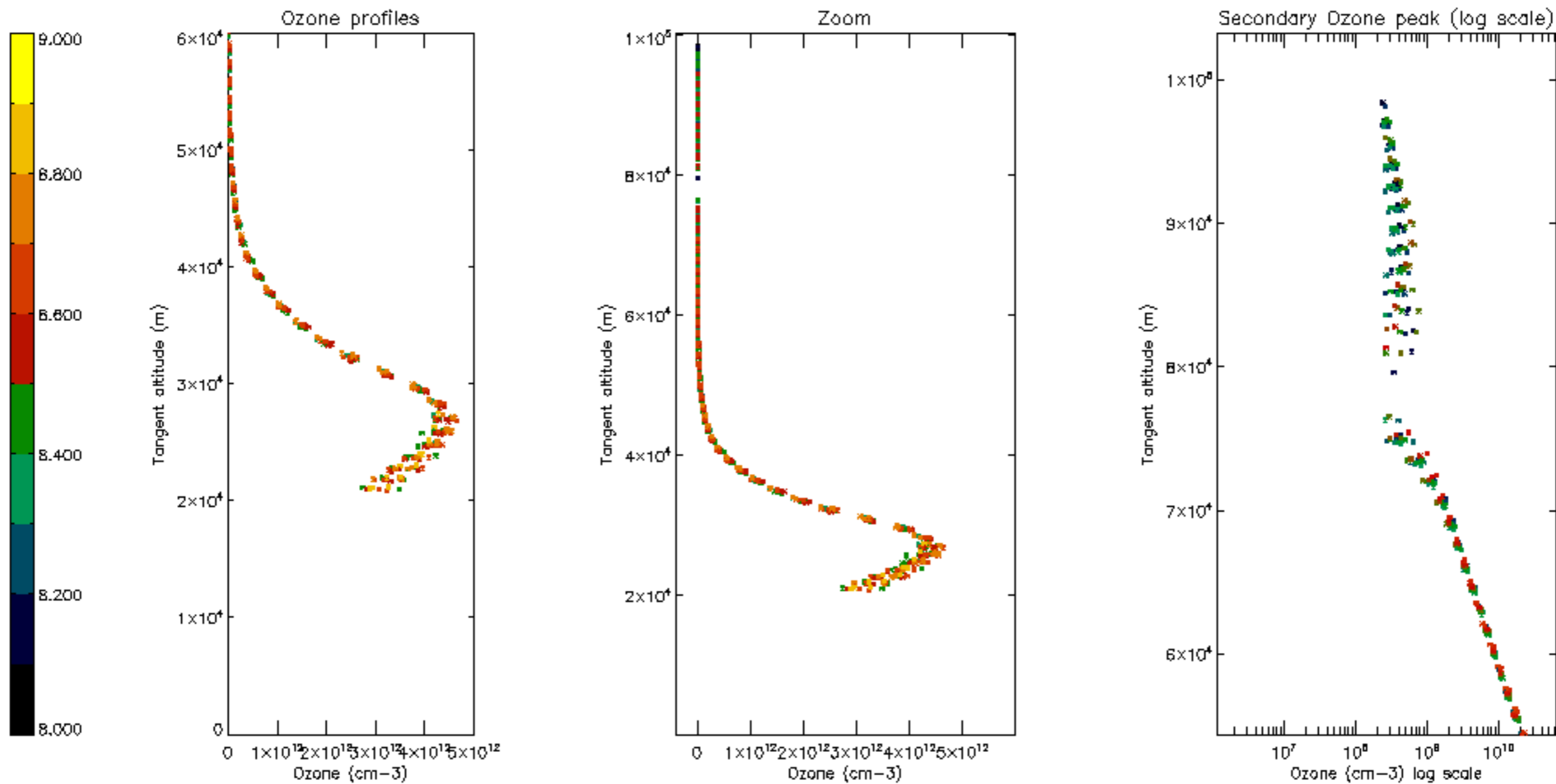


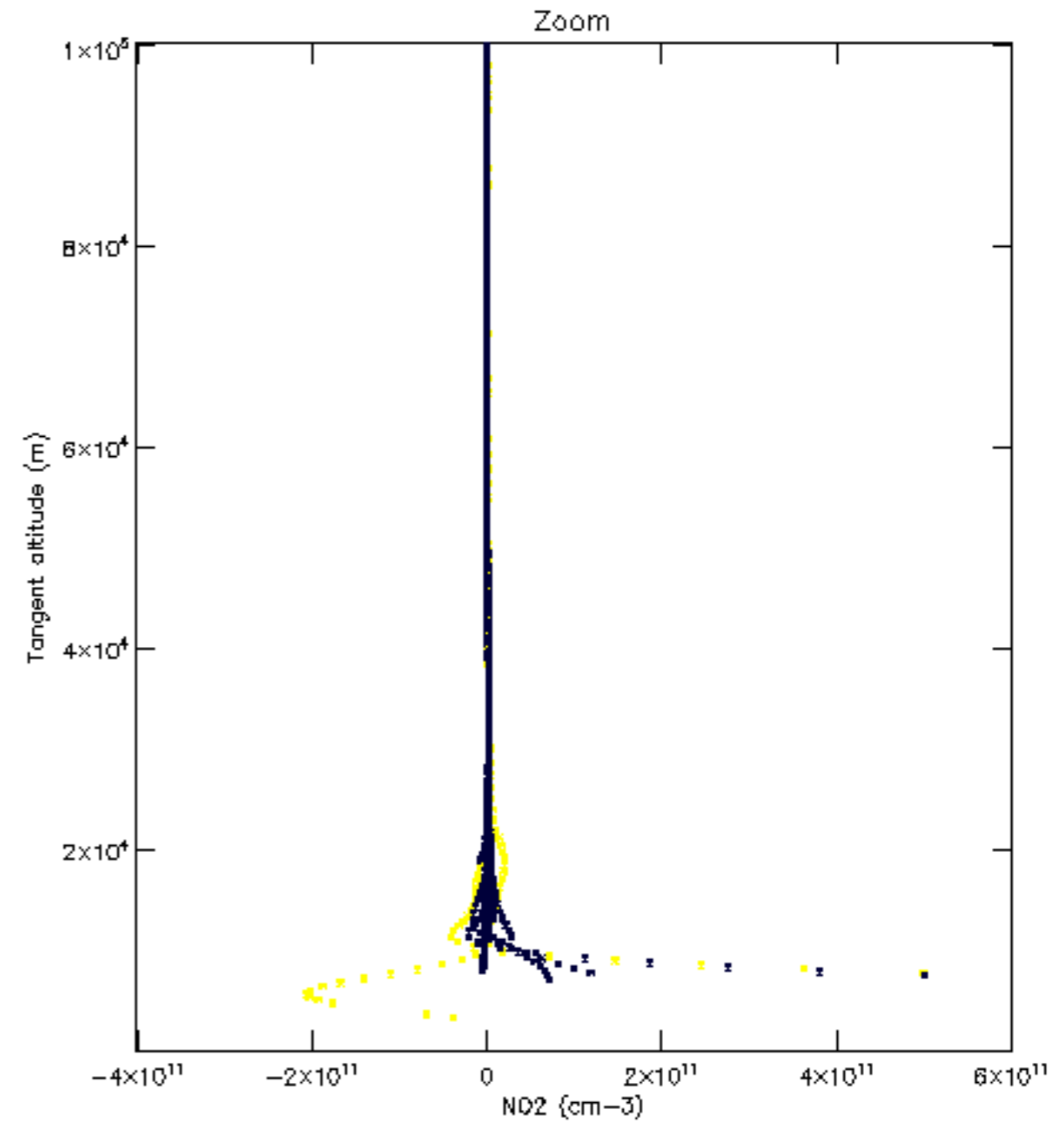
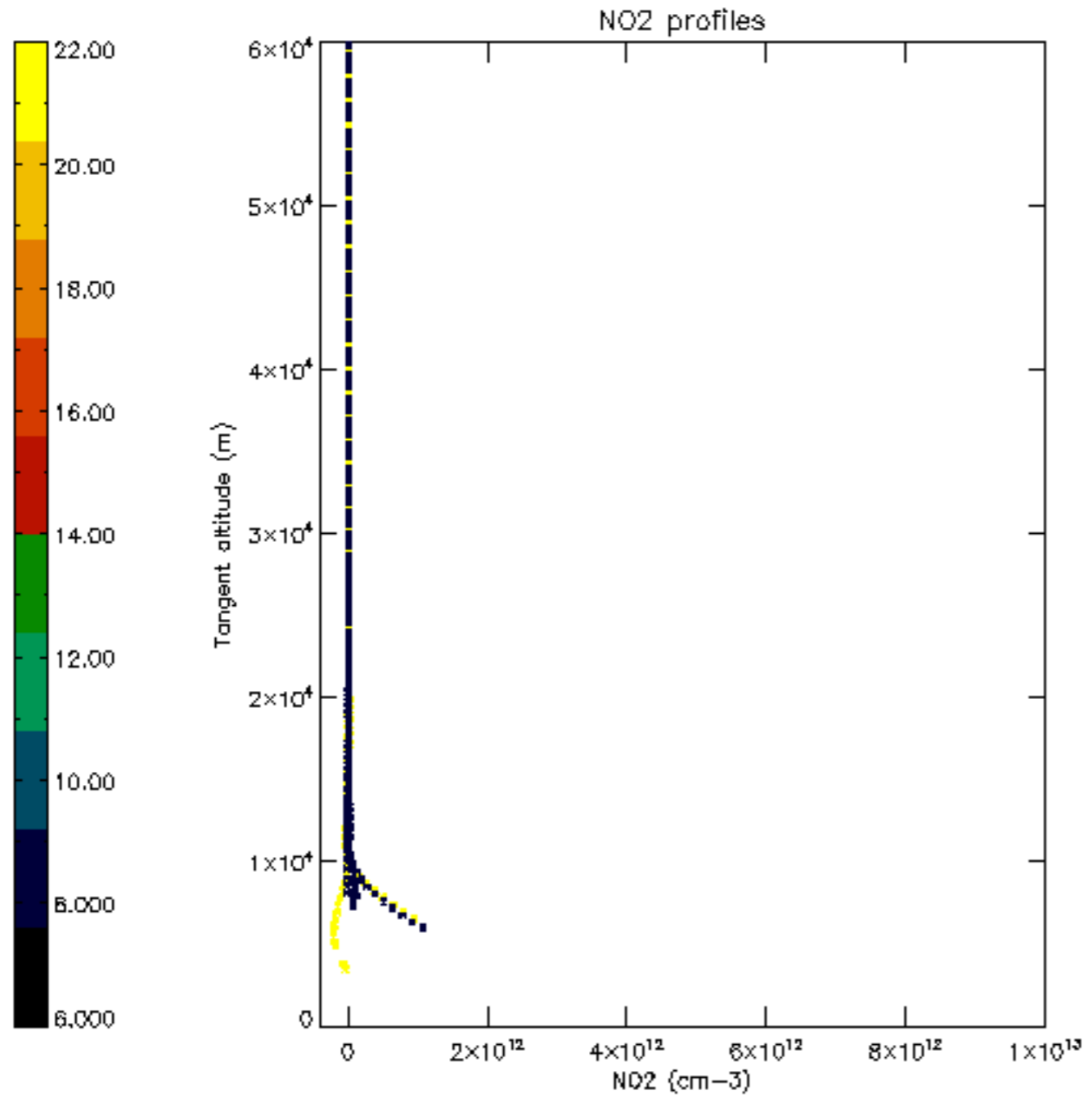


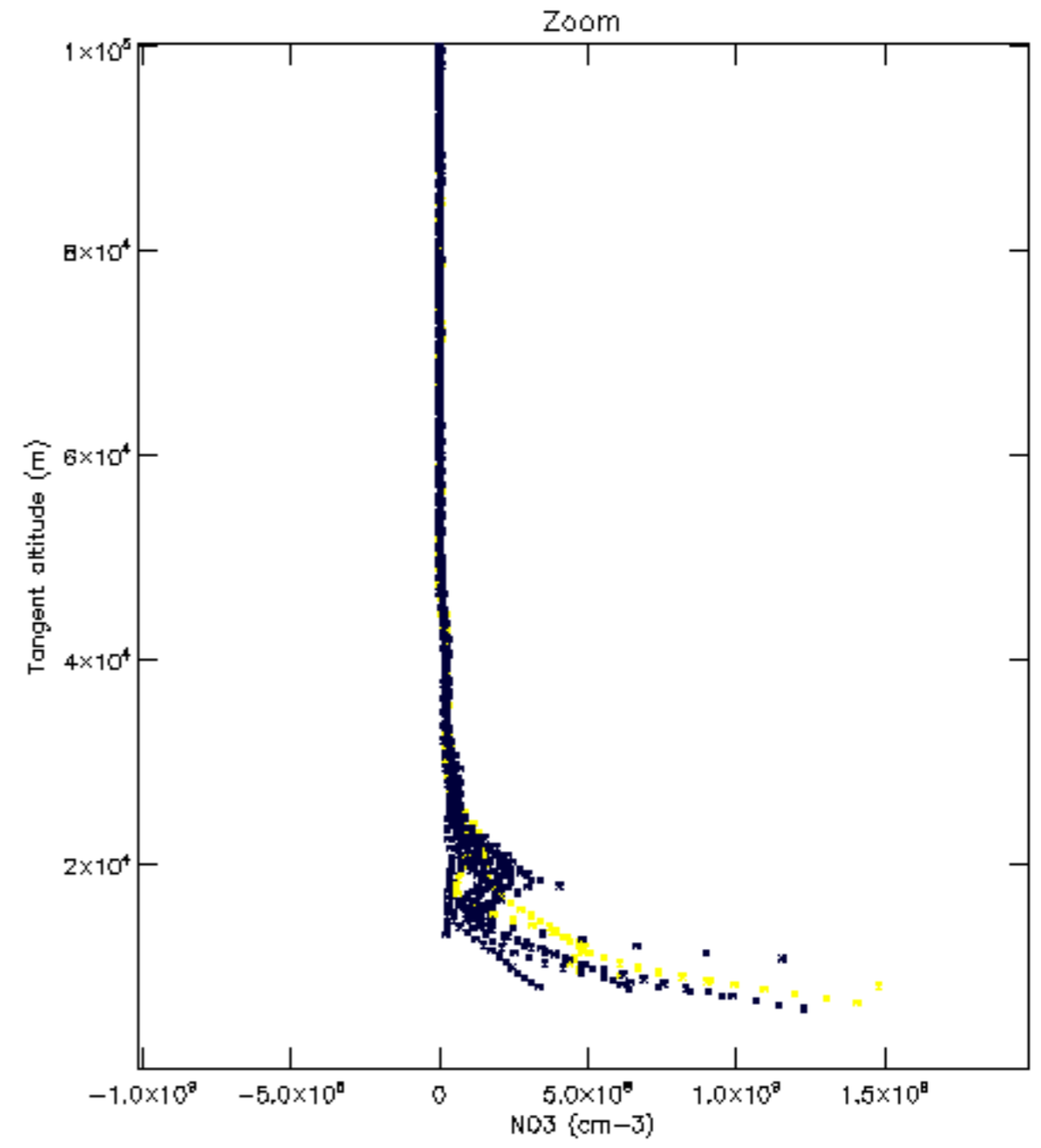
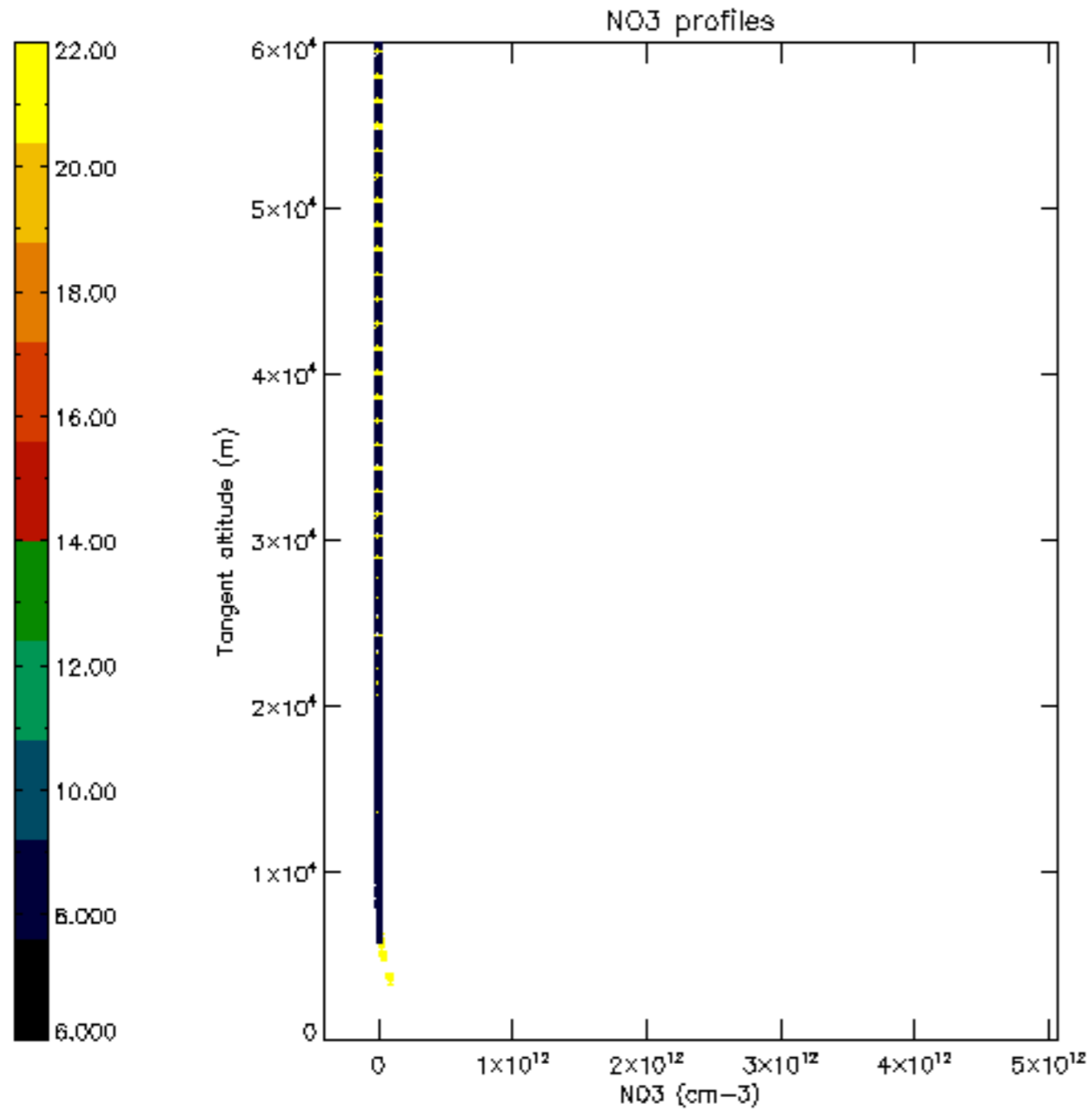


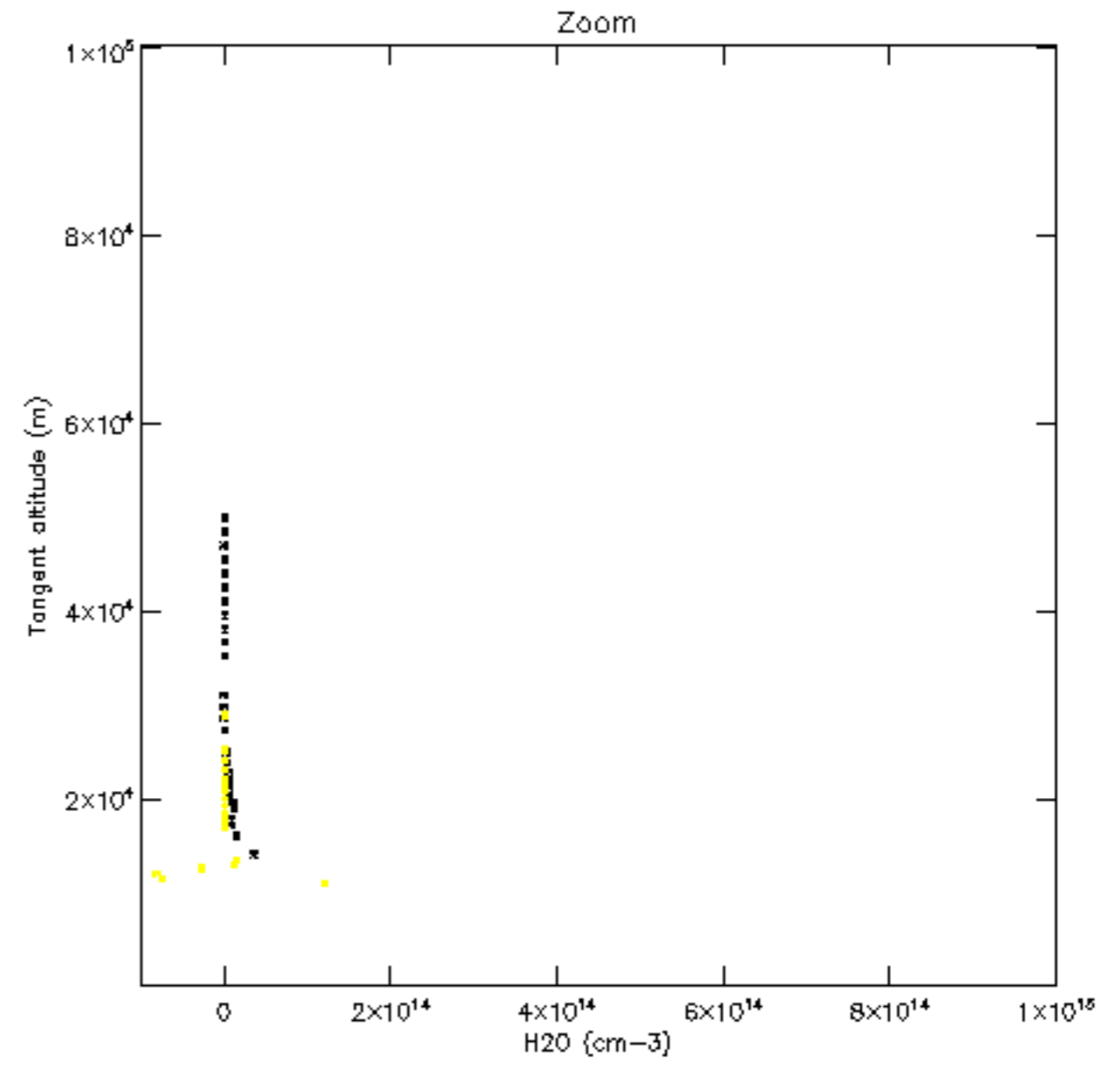
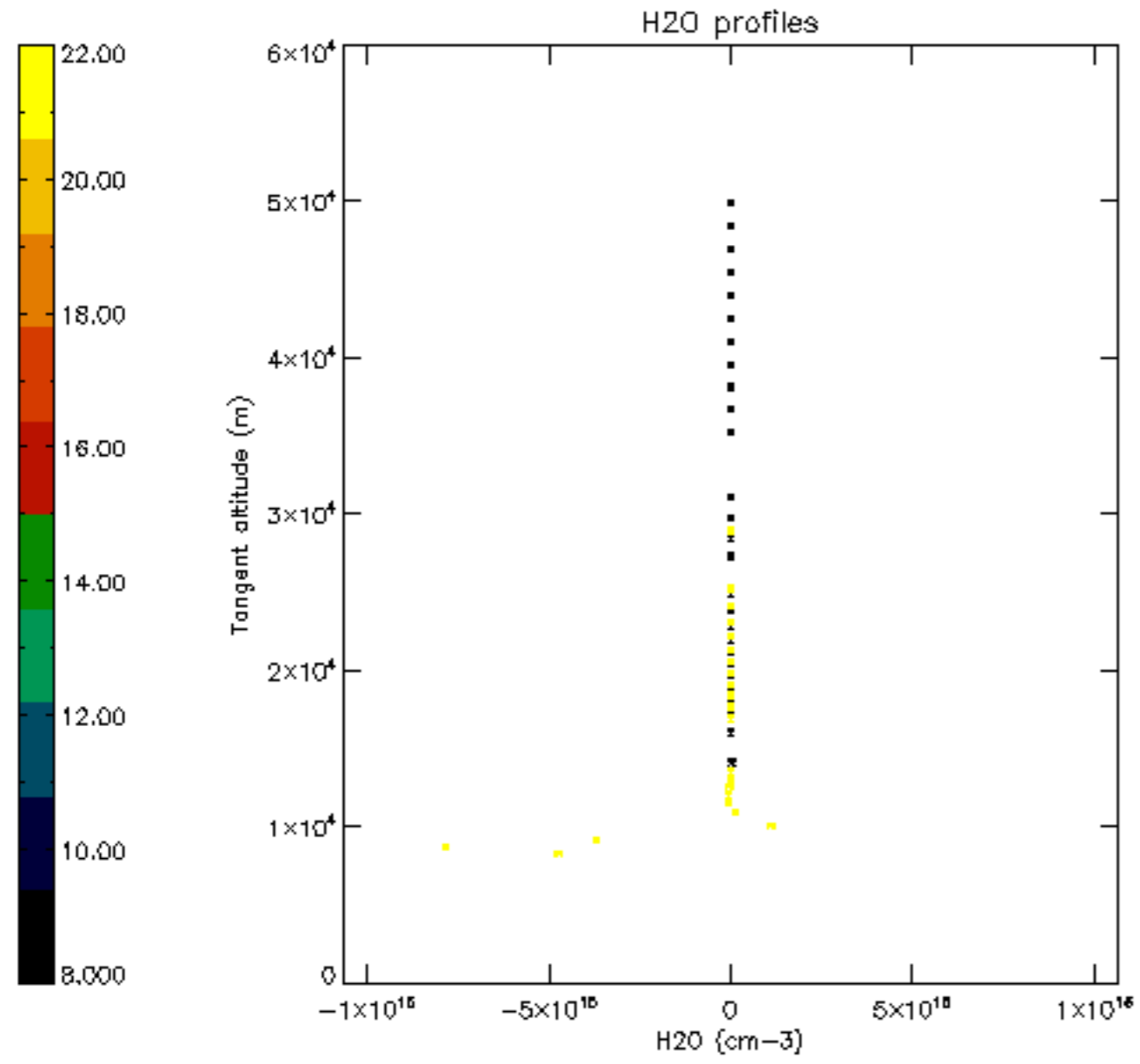


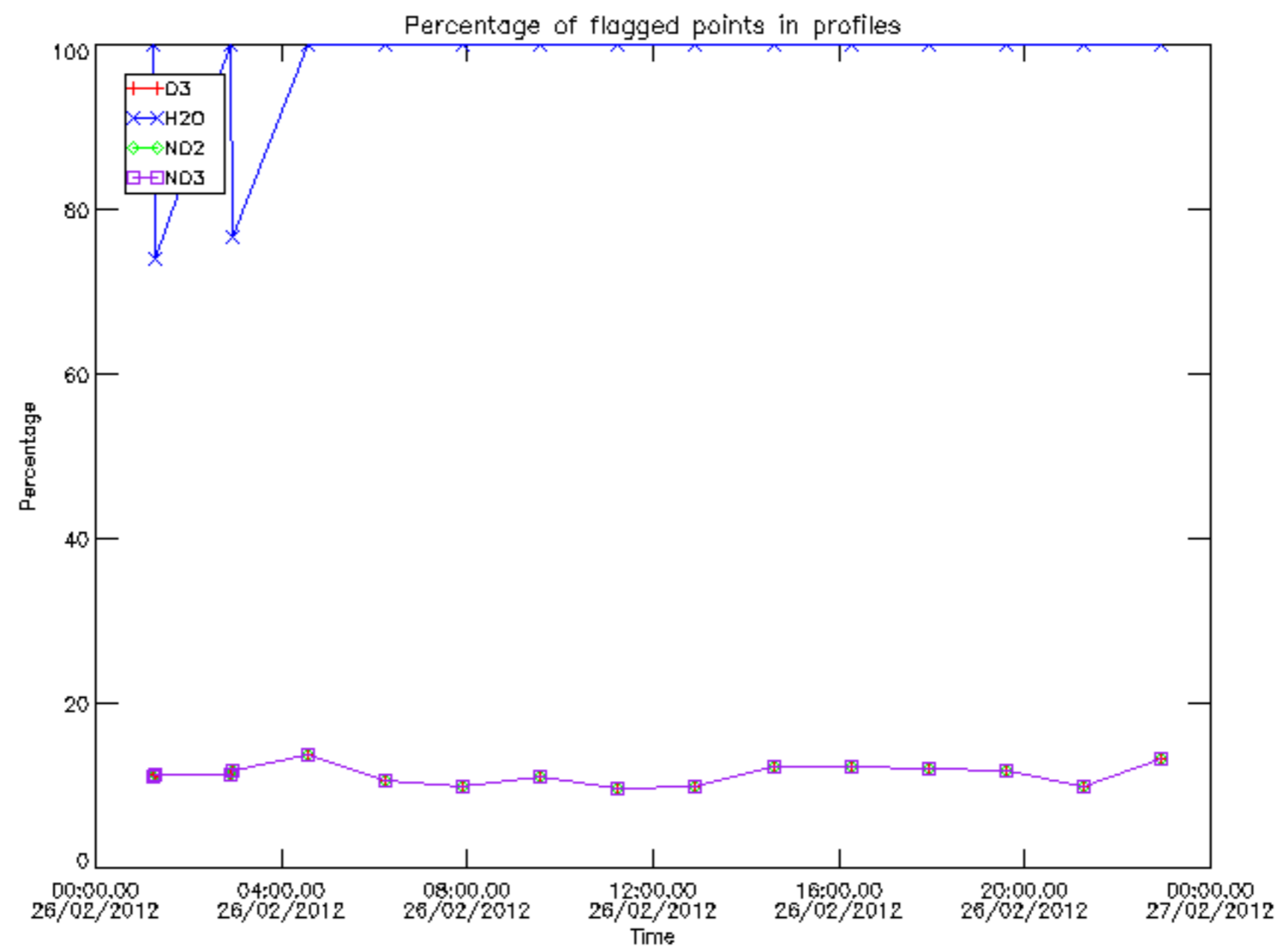




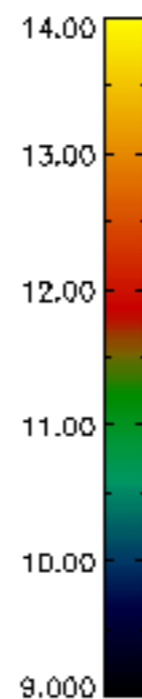
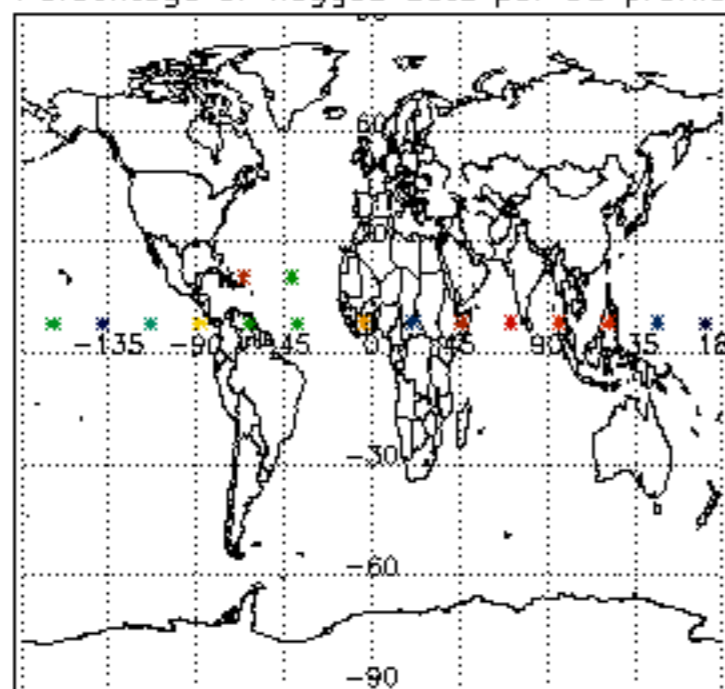




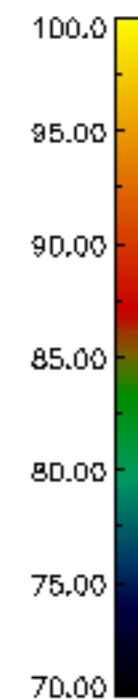
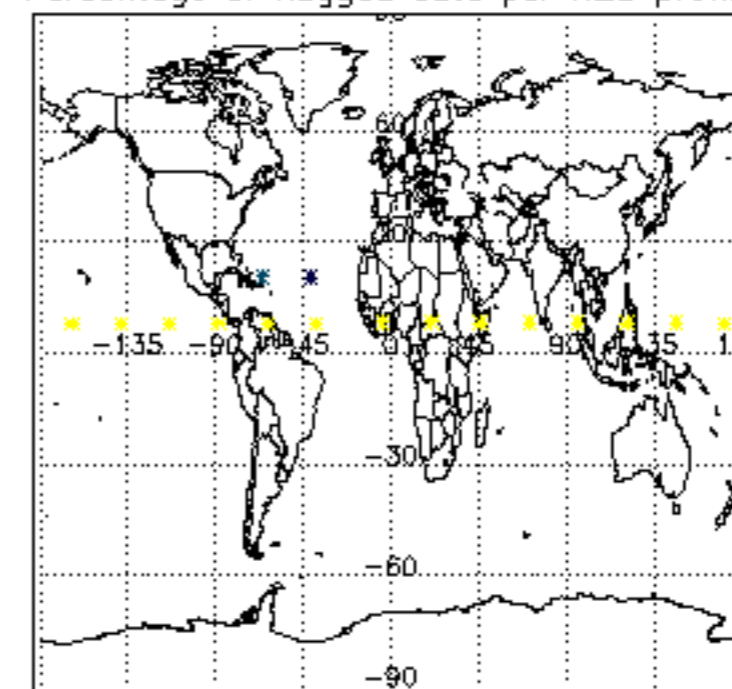




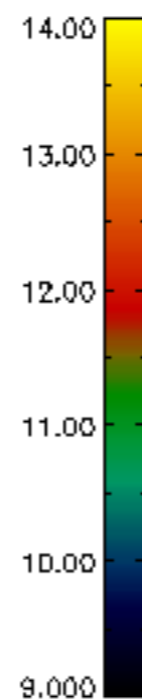
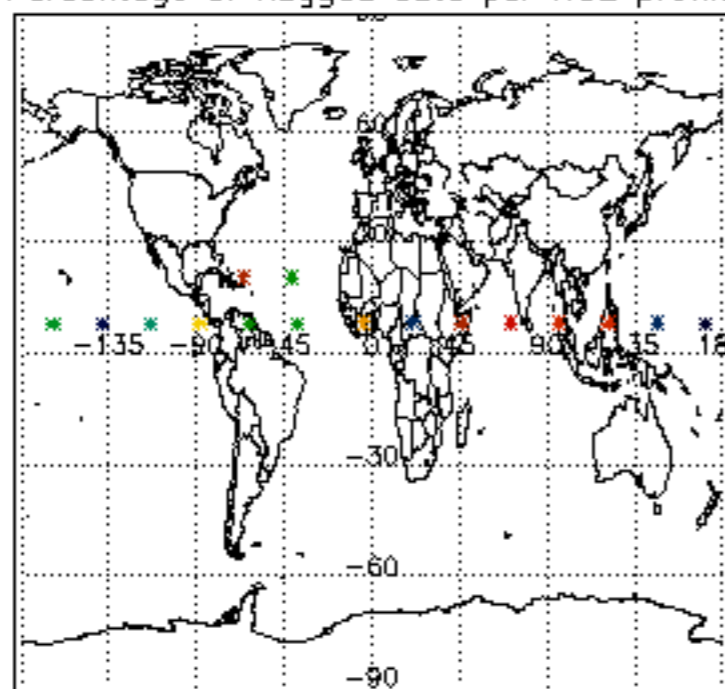
Percentage of flagged data per D3 profile



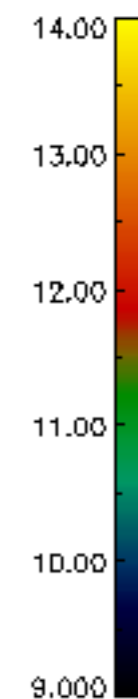
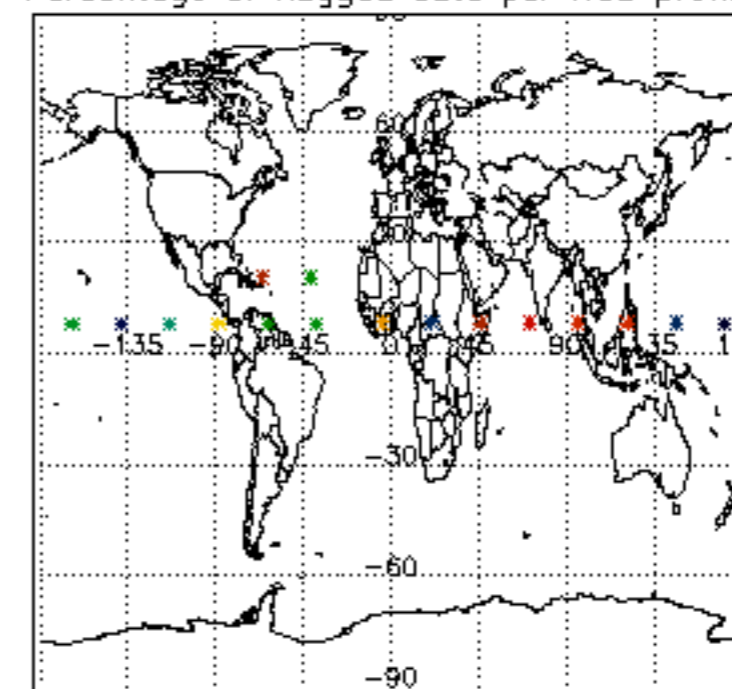
Percentage of flagged data per H2O profile

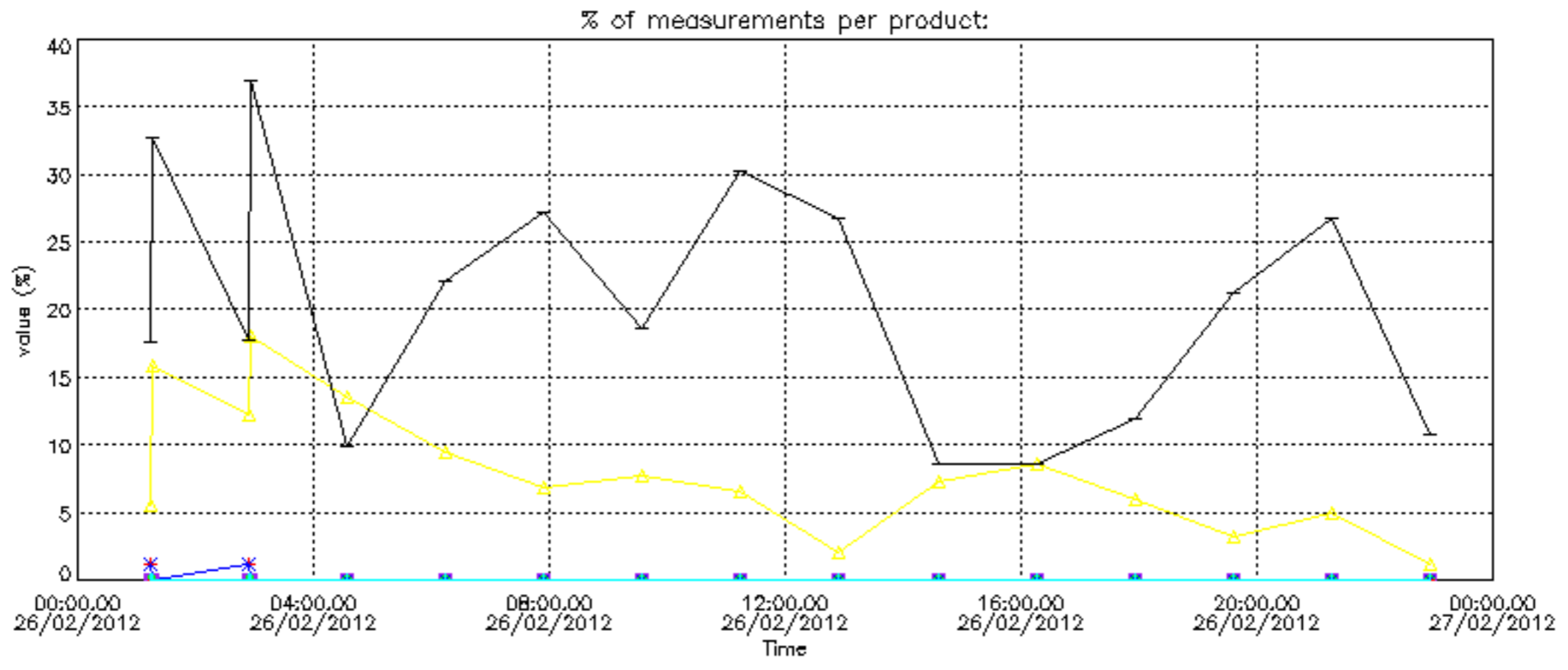


Percentage of flagged data per NO2 profile



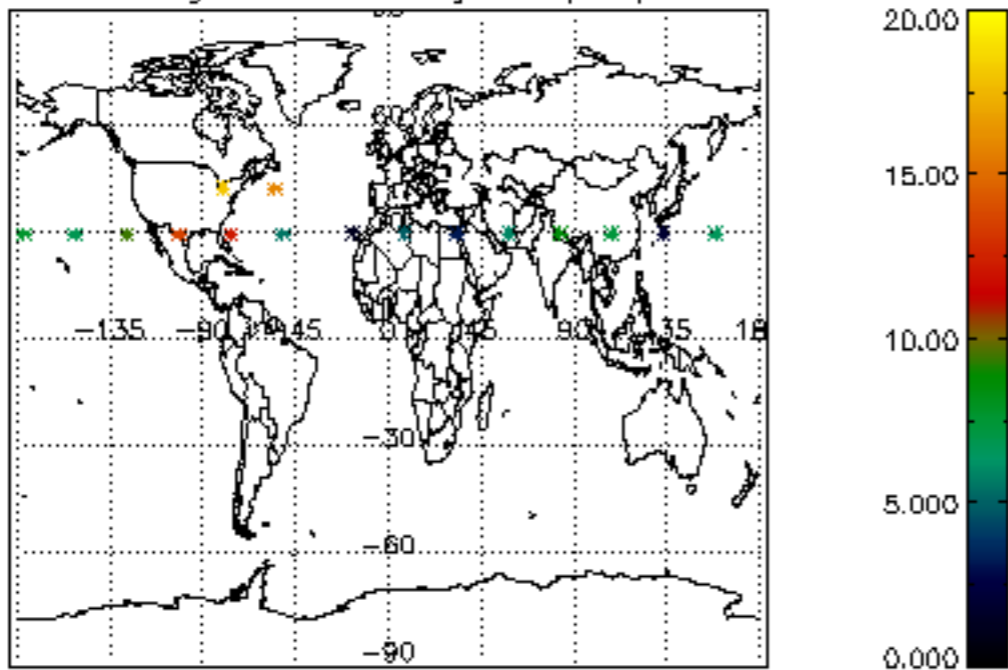
Percentage of flagged data per NO3 profile



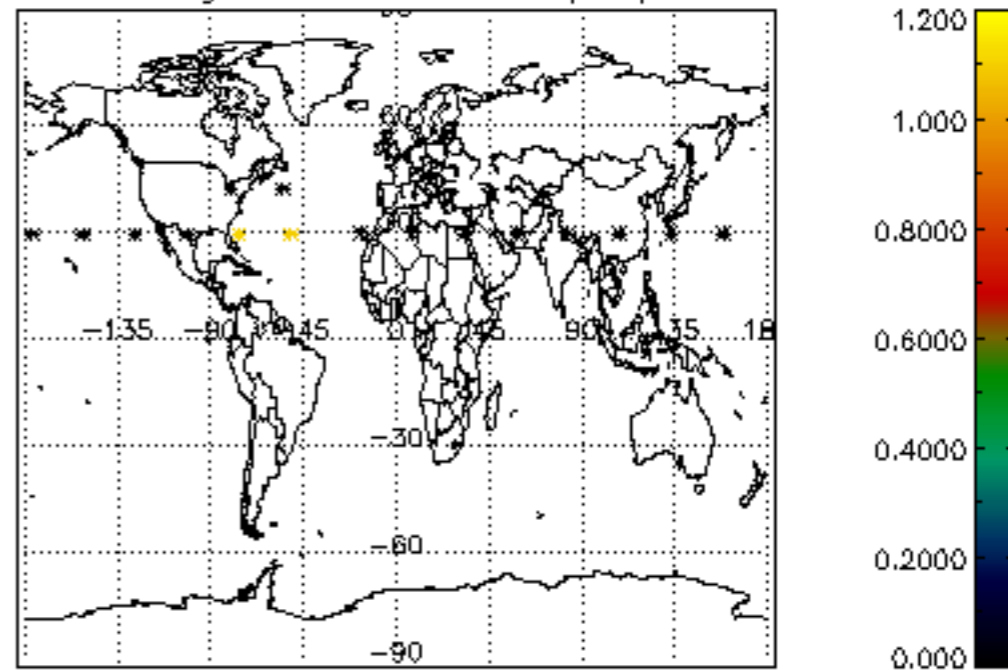




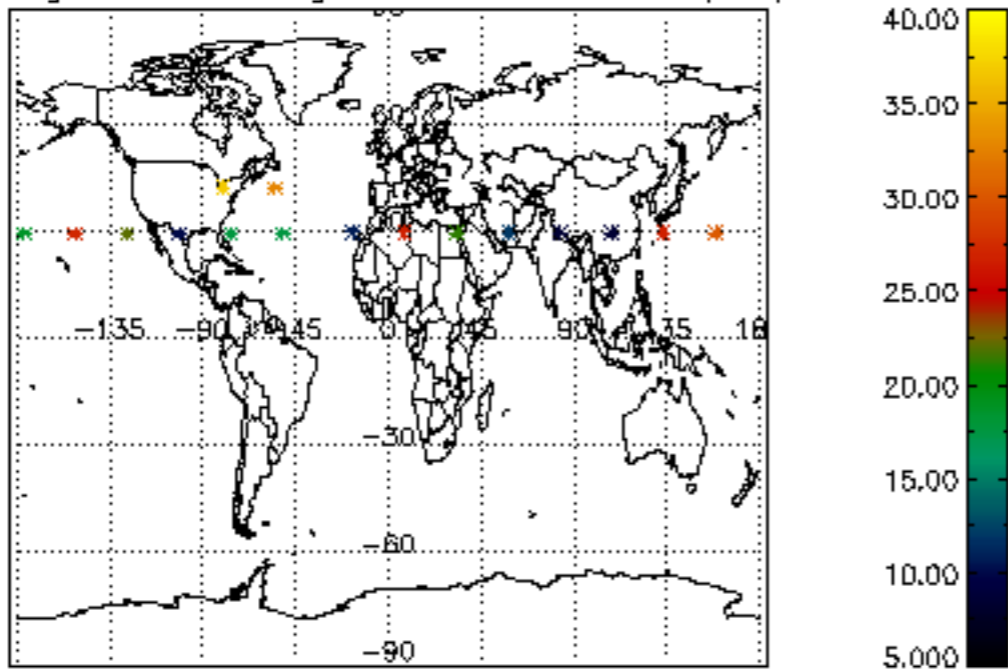
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

