

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [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.

Item	Value
Time of report generation	18APR2013 14:07:05
Data source version	GOMOS/6.01
Start time of products	19-02-2012 (19FEB2012 00:00:00)
Stop time of products	20-02-2012 (20FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	14
Nb of prods with errors	0

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

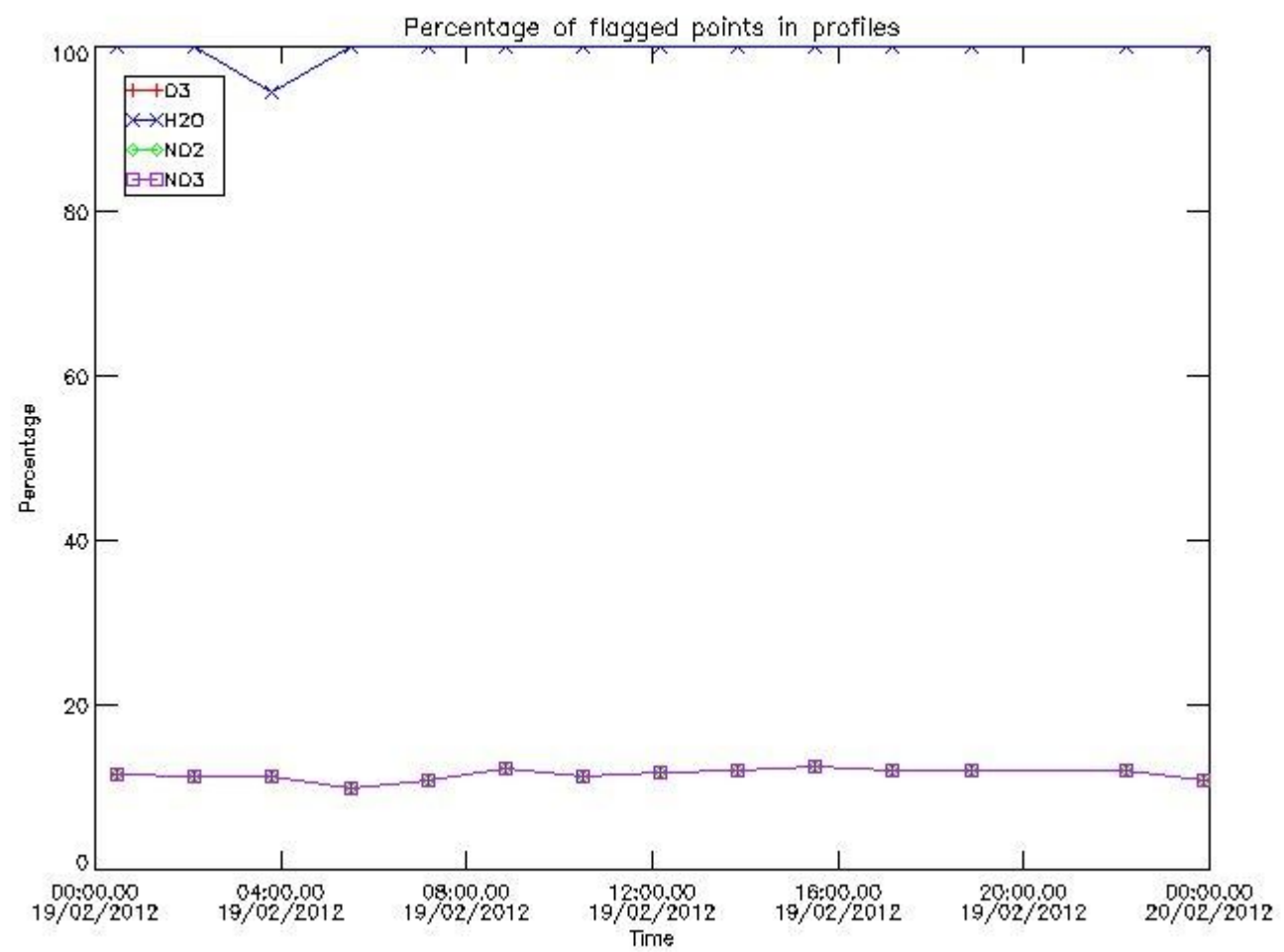
**!Warning: No products without errors in BRIGHT limb conditions found**

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20120219_002838_000000483111_00419_52157_4004.N1	19-FEB-2012 00:28:38	Dark	47.500	10	Bet Cen	0.61000	28000.	95	52157	No
2	GOM_NL__2PRFIN20120219_020853_000000453111_00420_52158_4016.N1	19-FEB-2012 02:08:53	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52158	No
3	GOM_NL__2PRFIN20120219_034907_000000453111_00421_52159_4054.N1	19-FEB-2012 03:49:07	Dark	44.500	10	Bet Cen	0.61000	28000.	89	52159	No
4	GOM_NL__2PRFIN20120219_052922_000000513111_00422_52160_4063.N1	19-FEB-2012 05:29:22	Dark	50.500	10	Bet Cen	0.61000	28000.	101	52160	No
5	GOM_NL__2PRFIN20120219_070937_000000473111_00423_52161_4070.N1	19-FEB-2012 07:09:37	Dark	46.500	10	Bet Cen	0.61000	28000.	93	52161	No
6	GOM_NL__2PRFIN20120219_084951_000000413111_00424_52162_4675.N1	19-FEB-2012 08:49:51	Dark	41.000	10	Bet Cen	0.61000	28000.	82	52162	No
7	GOM_NL__2PRFIN20120219_103006_000000533111_00425_52163_4701.N1	19-FEB-2012 10:30:06	Dark	53.000	10	Bet Cen	0.61000	28000.	106	52163	No
8	GOM_NL__2PRFIN20120219_121020_000000433111_00426_52164_4763.N1	19-FEB-2012 12:10:20	Dark	42.500	10	Bet Cen	0.61000	28000.	85	52164	No
9	GOM_NL__2PRFIN20120219_135035_000000423111_00427_52165_4786.N1	19-FEB-2012 13:50:35	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52165	No
10	GOM_NL__2PRFIN20120219_153049_000000403111_00428_52166_4919.N1	19-FEB-2012 15:30:49	Dark	40.000	10	Bet Cen	0.61000	28000.	80	52166	No
11	GOM_NL__2PRFIN20120219_171104_000000423111_00429_52167_4945.N1	19-FEB-2012 17:11:04	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52167	No
12	GOM_NL__2PRFIN20120219_185118_000000423111_00430_52168_4972.N1	19-FEB-2012 18:51:18	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52168	No
13	GOM_NL__2PRFIN20120219_221147_000000423112_00001_52170_5020.N1	19-FEB-2012 22:11:47	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52170	No
14	GOM_NL__2PRFIN20120219_235202_000000463112_00002_52171_5032.N1	19-FEB-2012 23:52:02	Dark	46.000	10	Bet Cen	0.61000	28000.	92	52171	No

## 3. Quality information per product

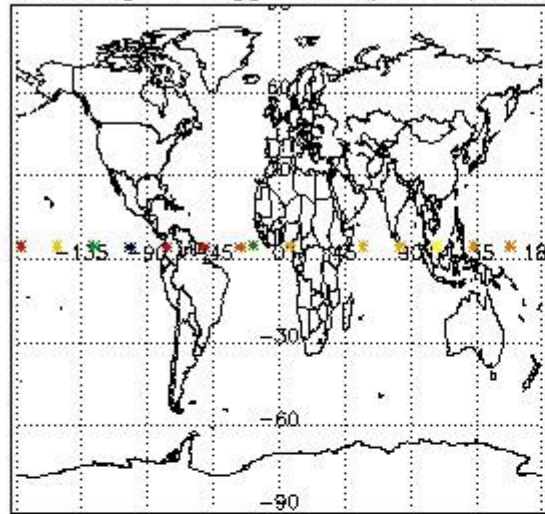
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

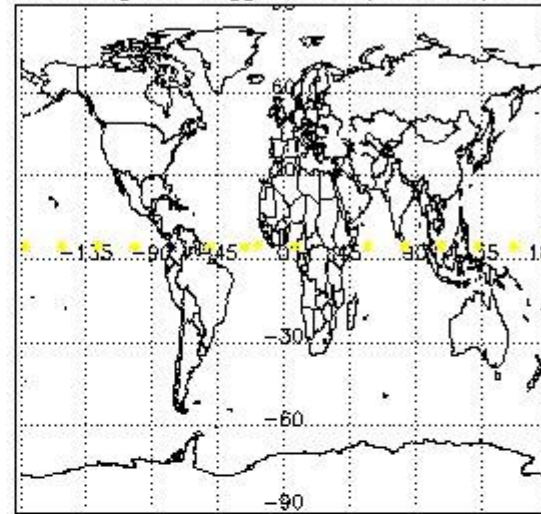


*3.2 Plot quality information per product (world map)*

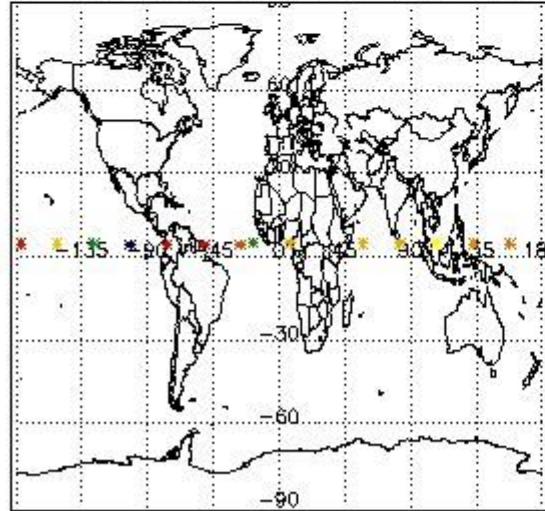
Percentage of flagged data per O3 profile



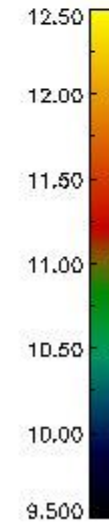
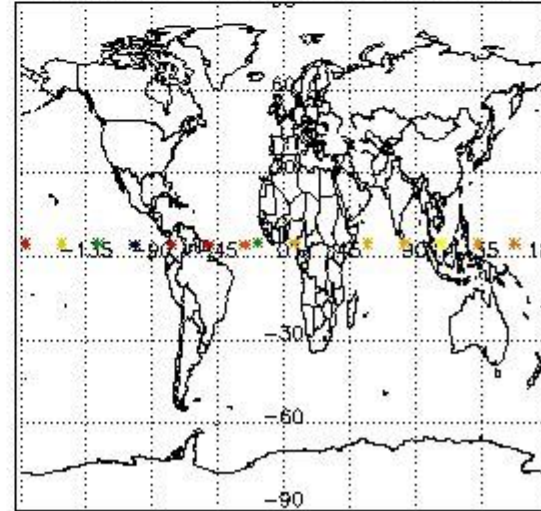
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

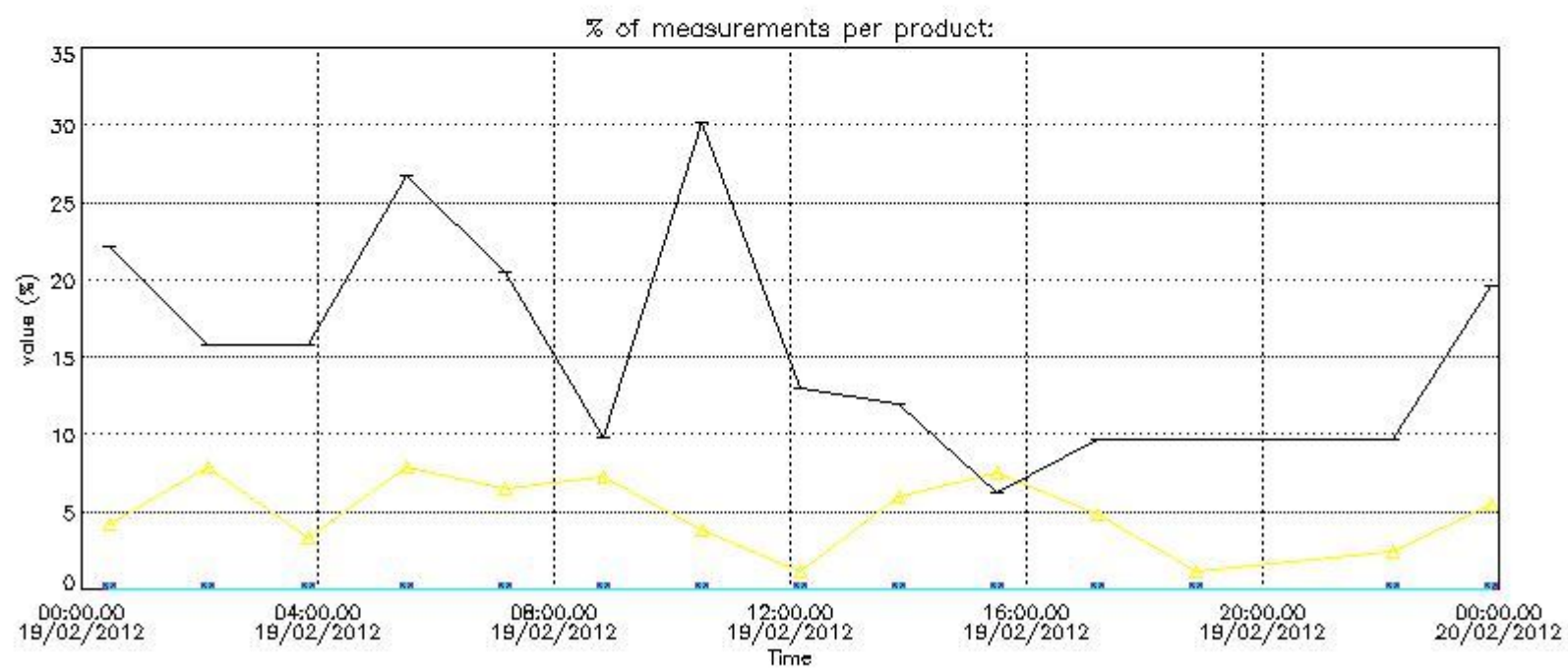


#### 4. Level 1 quality information per product

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



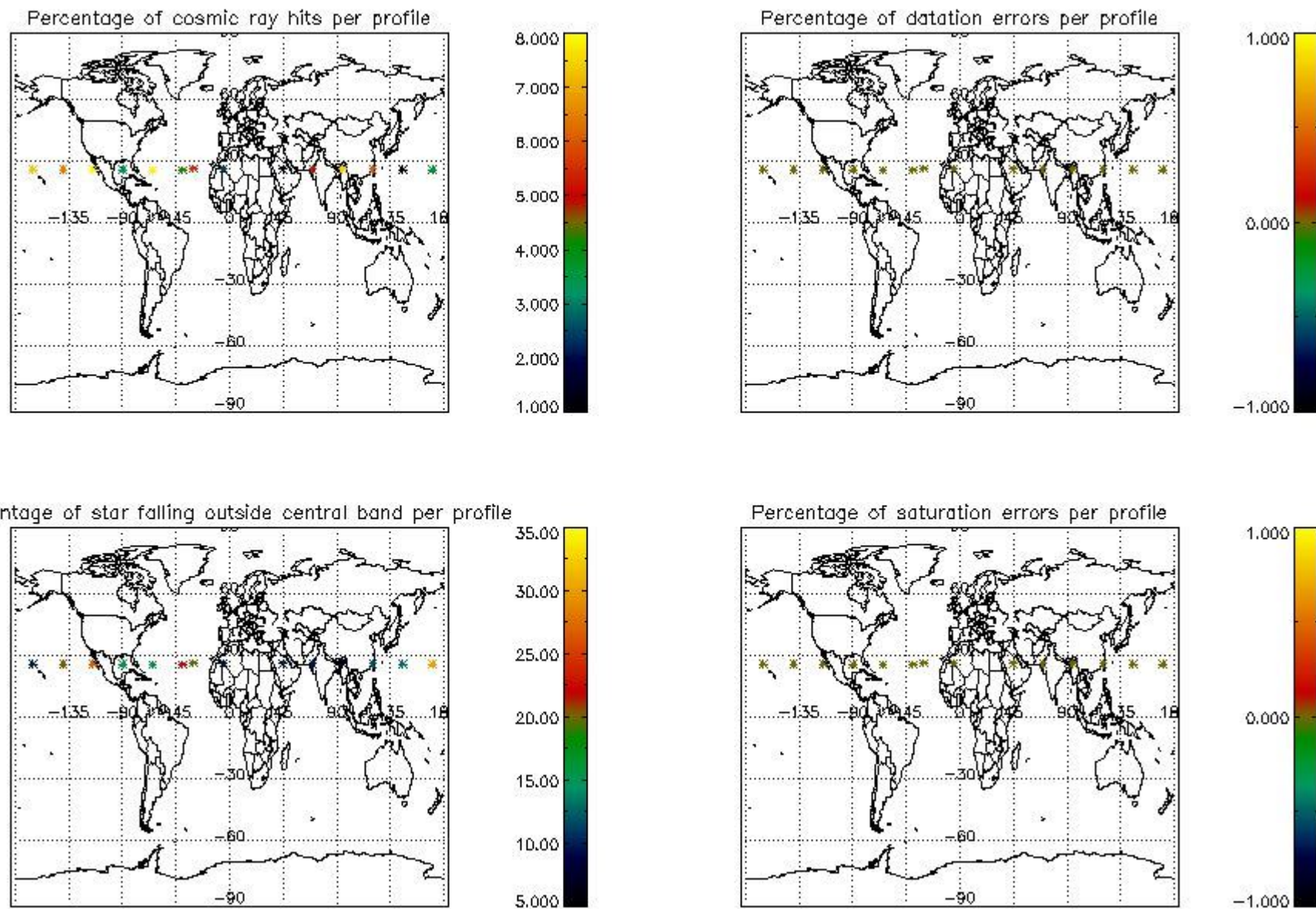
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!Warning: No products without errors in descending found

4.2 Plot quality information per product comming 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:

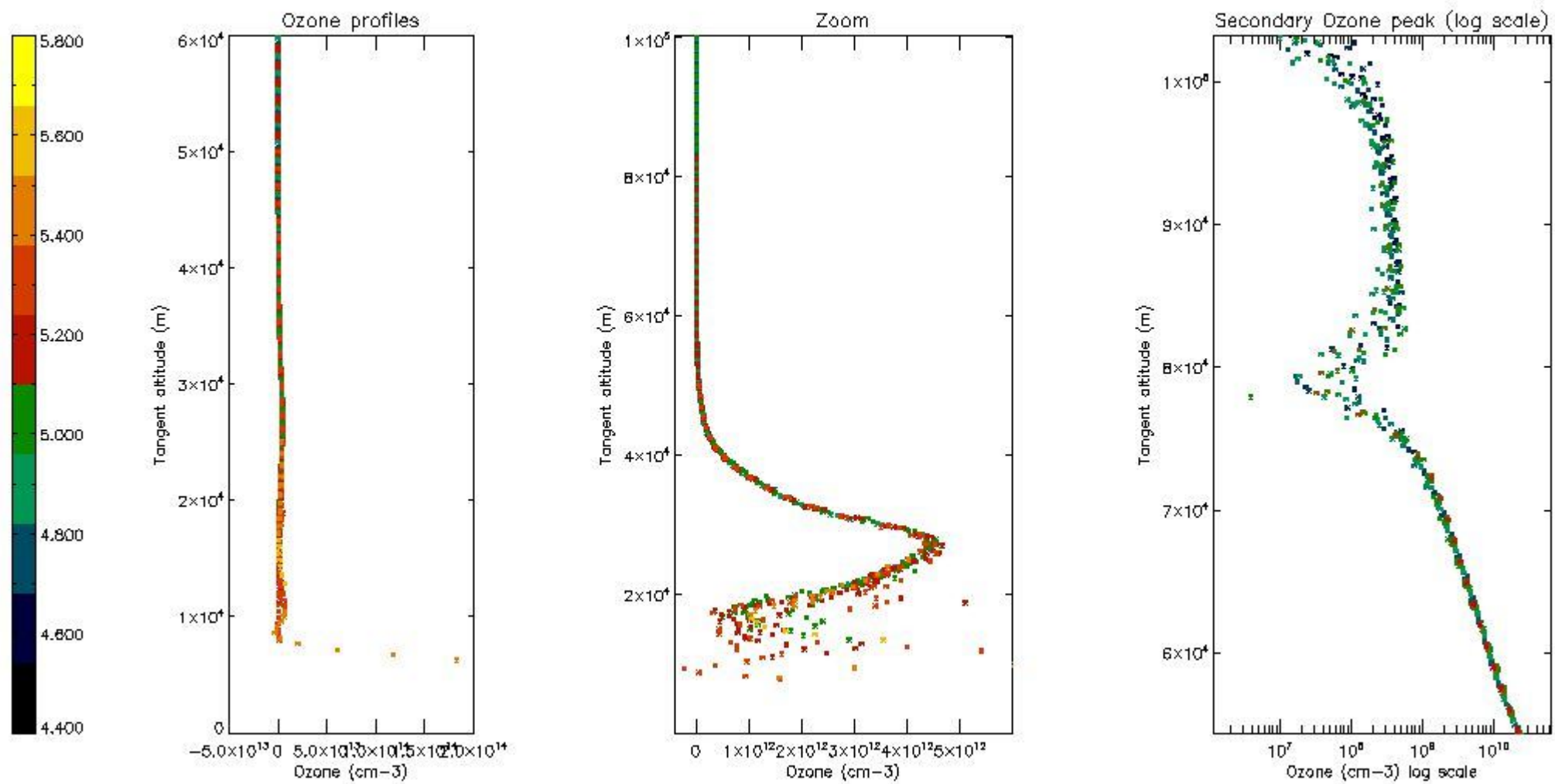
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	77
STD < 10	70
STD < 5	62

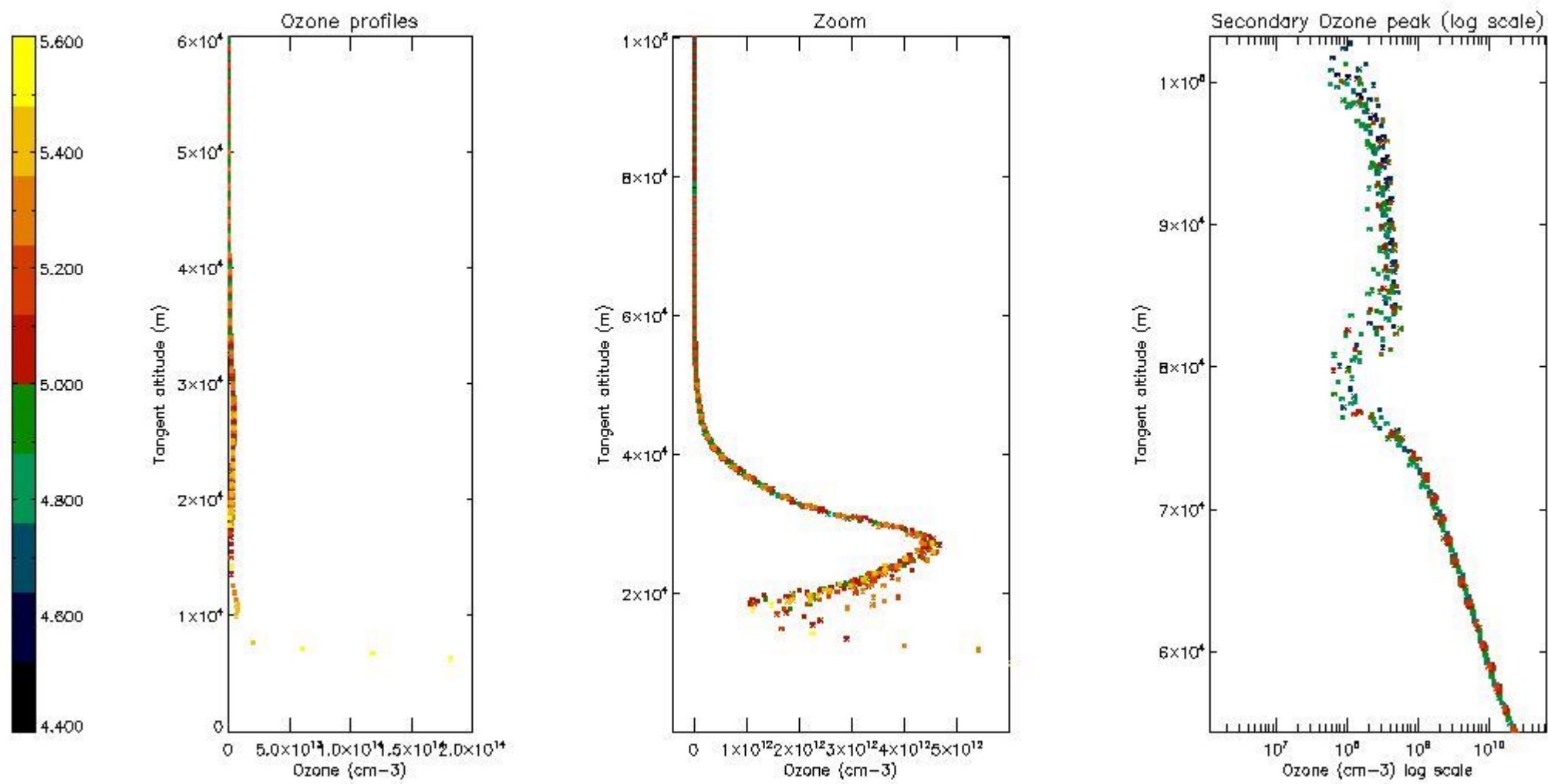
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

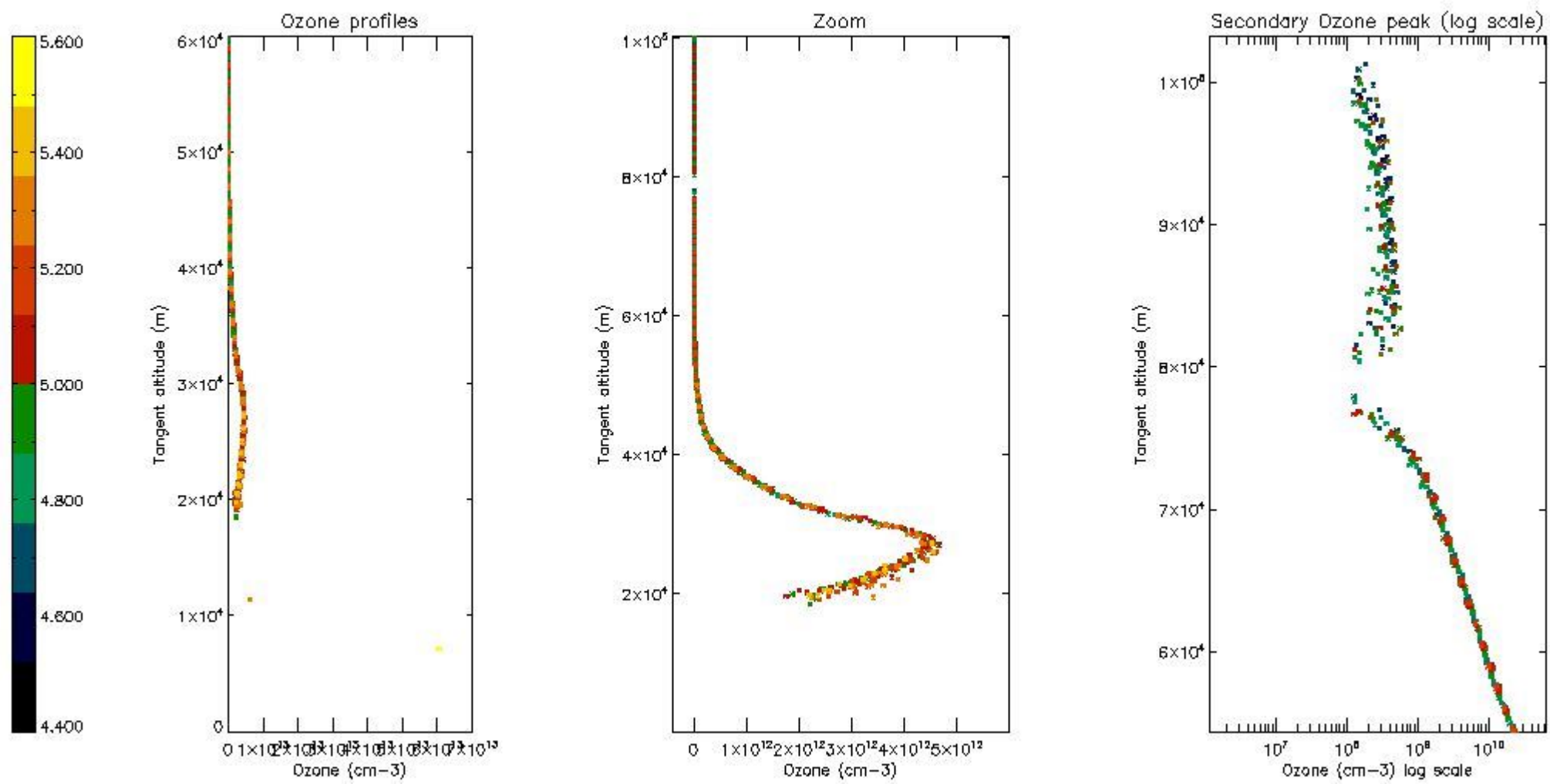
The colorbar represents the latitude.



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

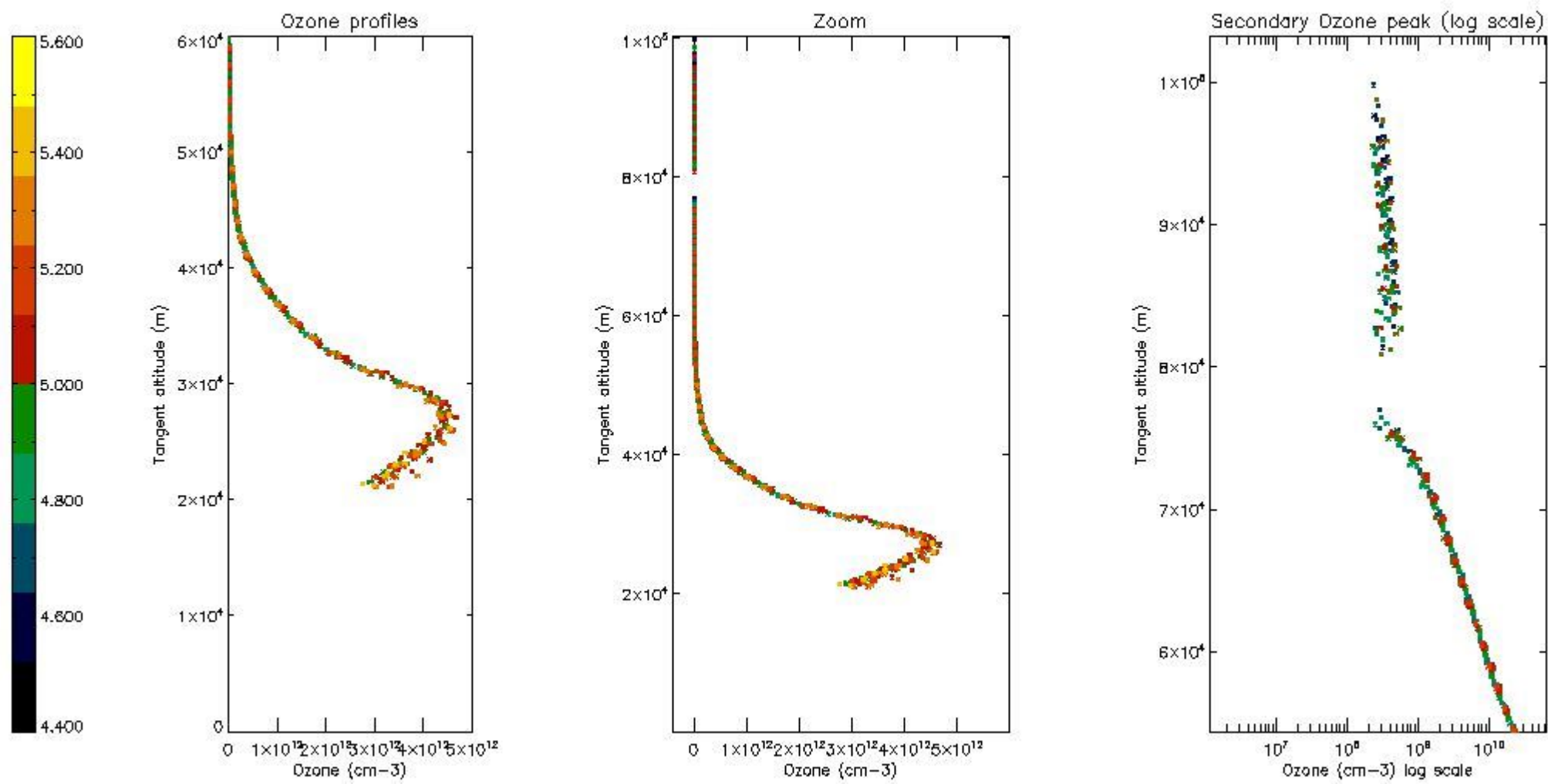
The colorbar represents the latitude.





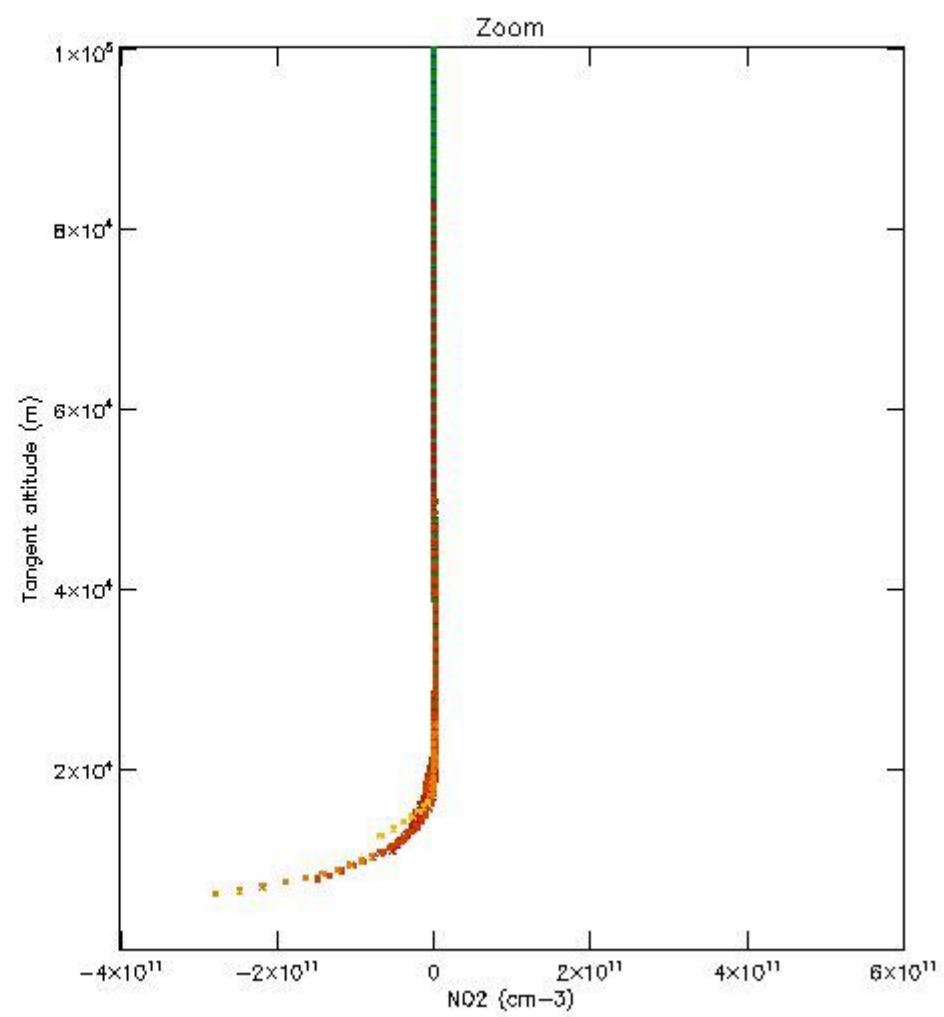
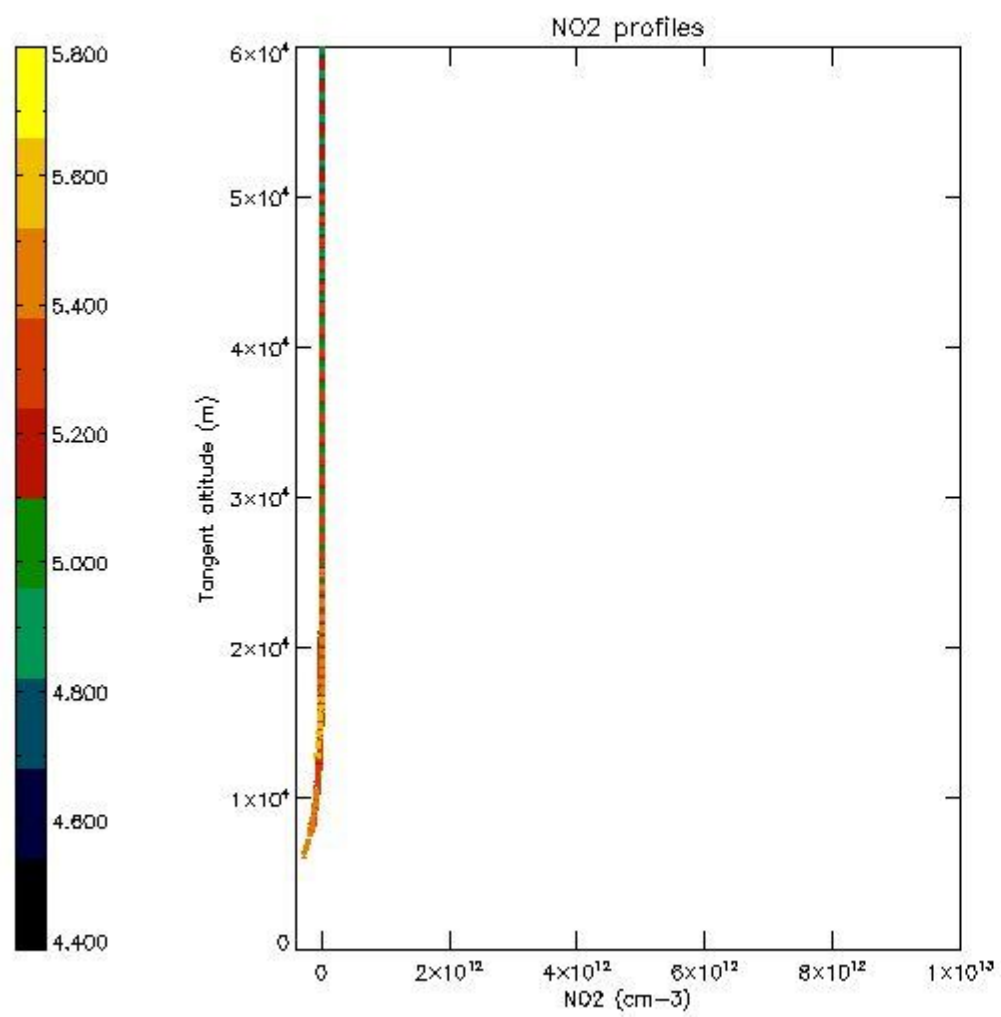
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



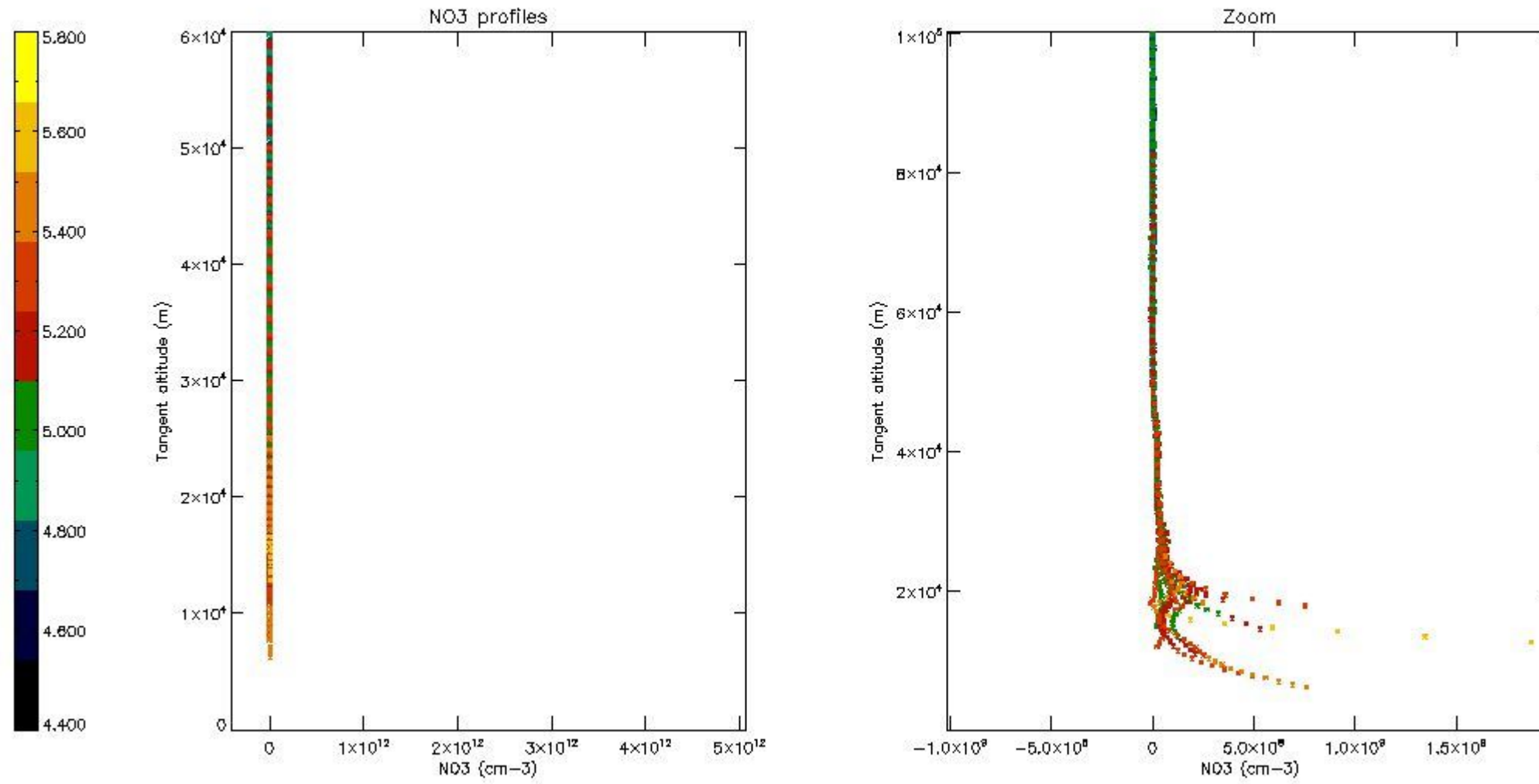
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

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_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	19-FEB-2012 00:28:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	19-FEB-2012 00:28:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	19-FEB-2012 00:28:38



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

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

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

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

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### [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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Time of report generation	18APR2013 14:07:05
Data source version	GOMOS/6.01
Start time of products	19-02-2012 (19FEB2012 00:00:00)
Stop time of products	20-02-2012 (20FEB2012 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	14
Nb of prods with errors	0

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

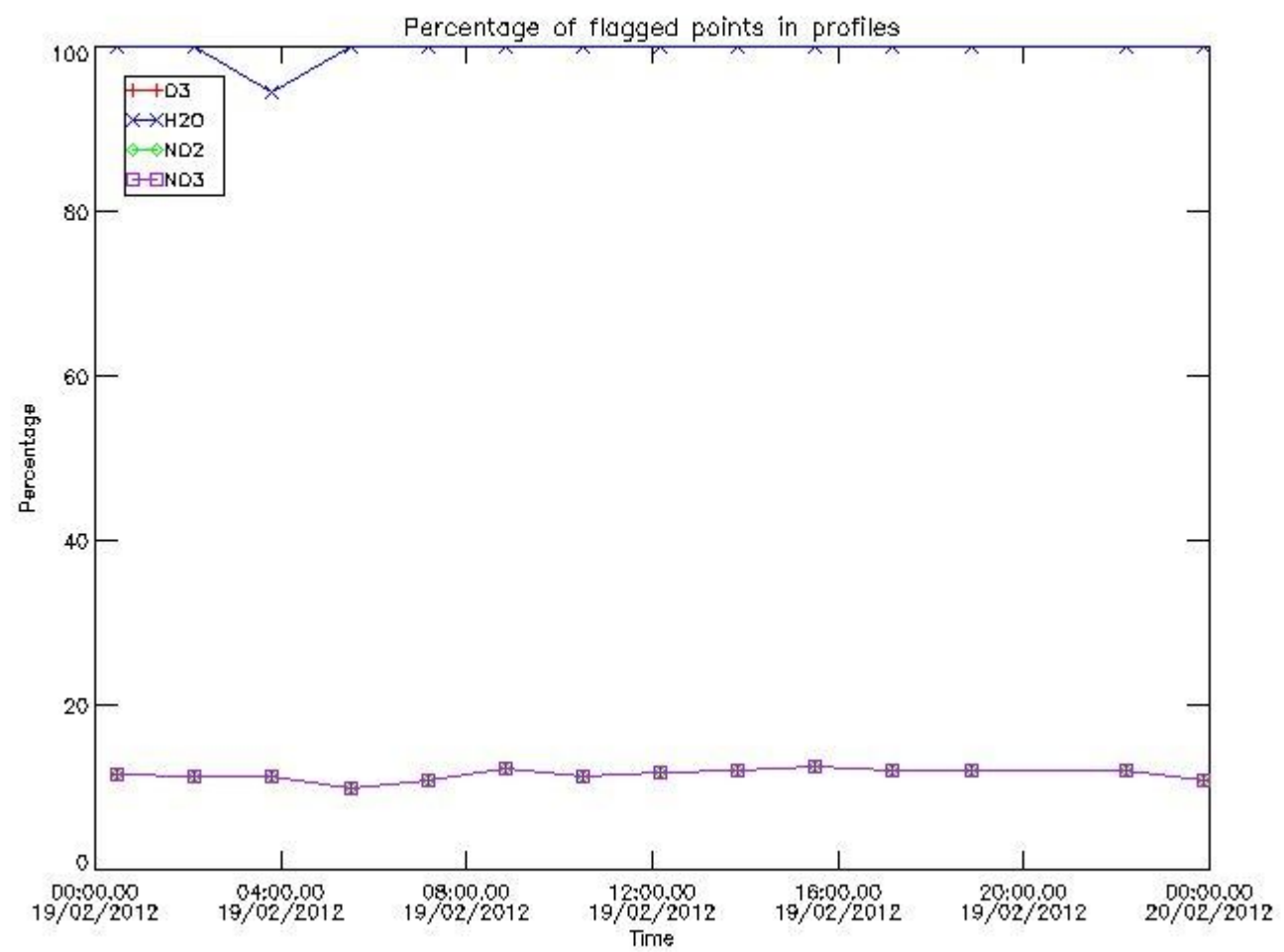
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9	GOM_NL__2PRFIN20120219_135035_000000423111_00427_52165_4786.N1	19-FEB-2012 13:50:35	Dark	42.000	10	Bet Cen	0.61000	28000.	84	52165	No
10	GOM_NL__2PRFIN20120219_153049_000000403111_00428_52166_4919.N1	19-FEB-2012 15:30:49	Dark	40.000	10	Bet Cen	0.61000	28000.	80	52166	No
11	GOM_NL__2PRFIN20120219_171104_000000423111_00429_52167_4945.N1	19-FEB-2012 17:11:04	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52167	No
12	GOM_NL__2PRFIN20120219_185118_000000423111_00430_52168_4972.N1	19-FEB-2012 18:51:18	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52168	No
13	GOM_NL__2PRFIN20120219_221147_000000423112_00001_52170_5020.N1	19-FEB-2012 22:11:47	Dark	41.500	10	Bet Cen	0.61000	28000.	83	52170	No
14	GOM_NL__2PRFIN20120219_235202_000000463112_00002_52171_5032.N1	19-FEB-2012 23:52:02	Dark	46.000	10	Bet Cen	0.61000	28000.	92	52171	No

## 3. Quality information per product

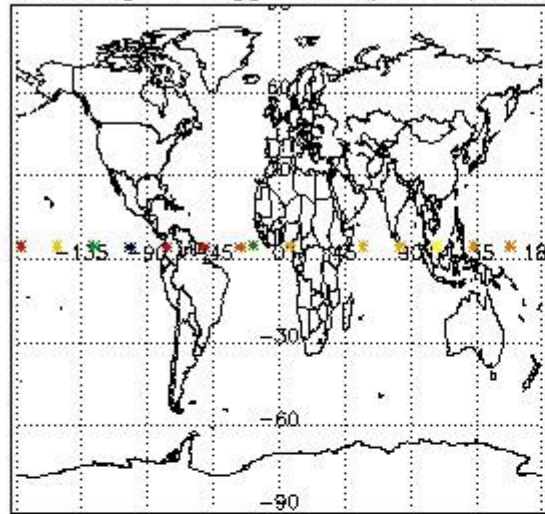
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

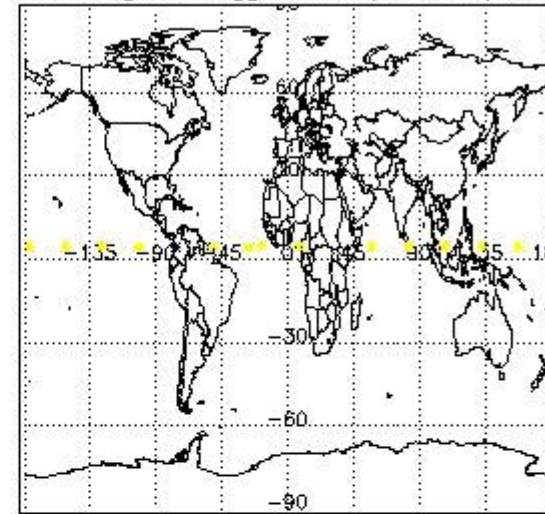


*3.2 Plot quality information per product (world map)*

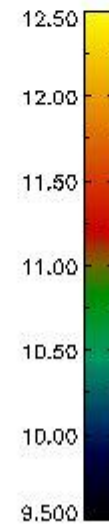
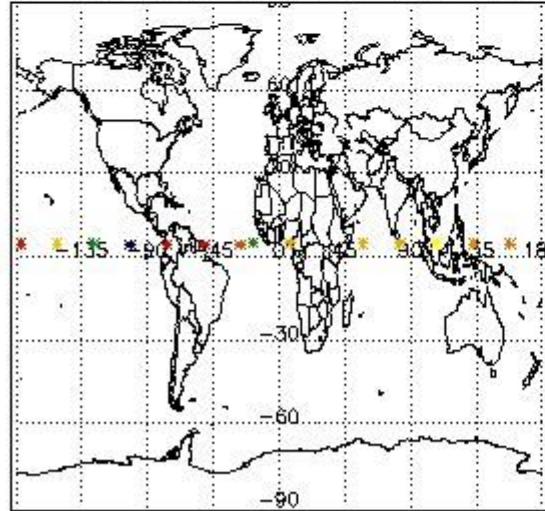
Percentage of flagged data per O3 profile



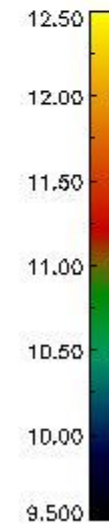
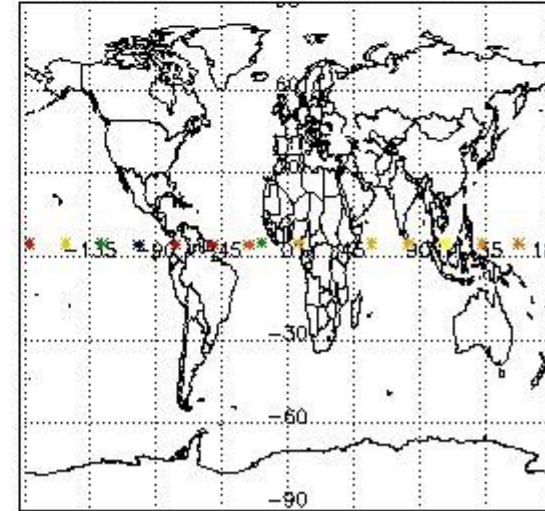
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



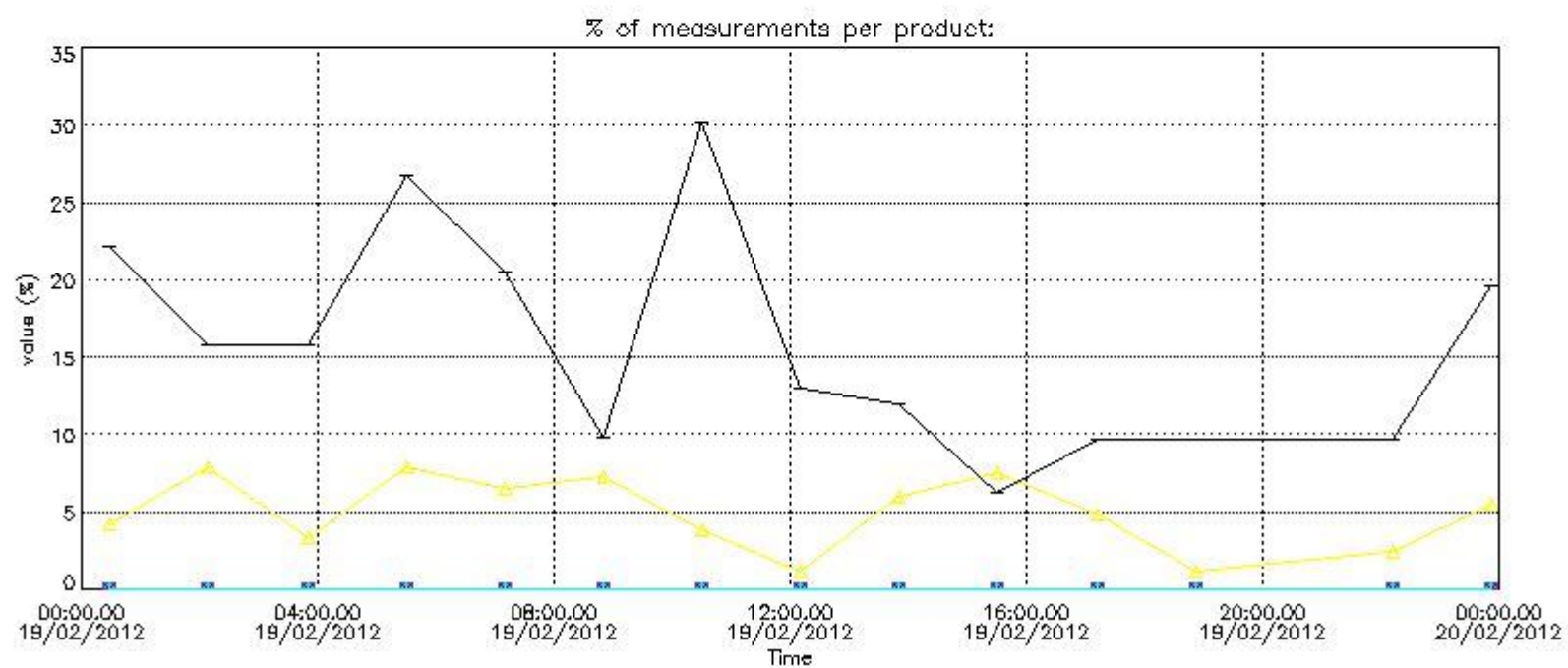
#### 4. Level 1 quality information per product

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



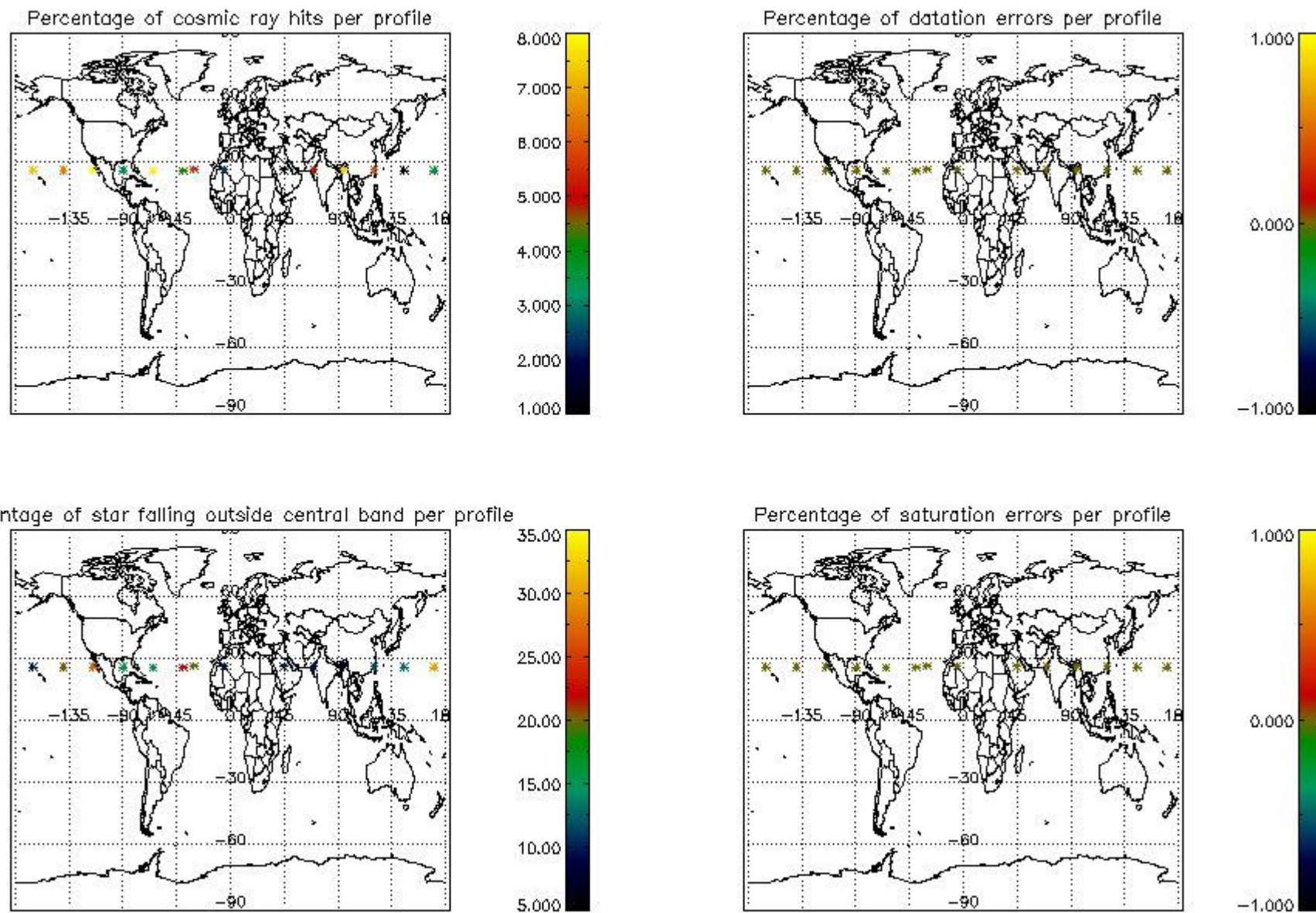


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

!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:

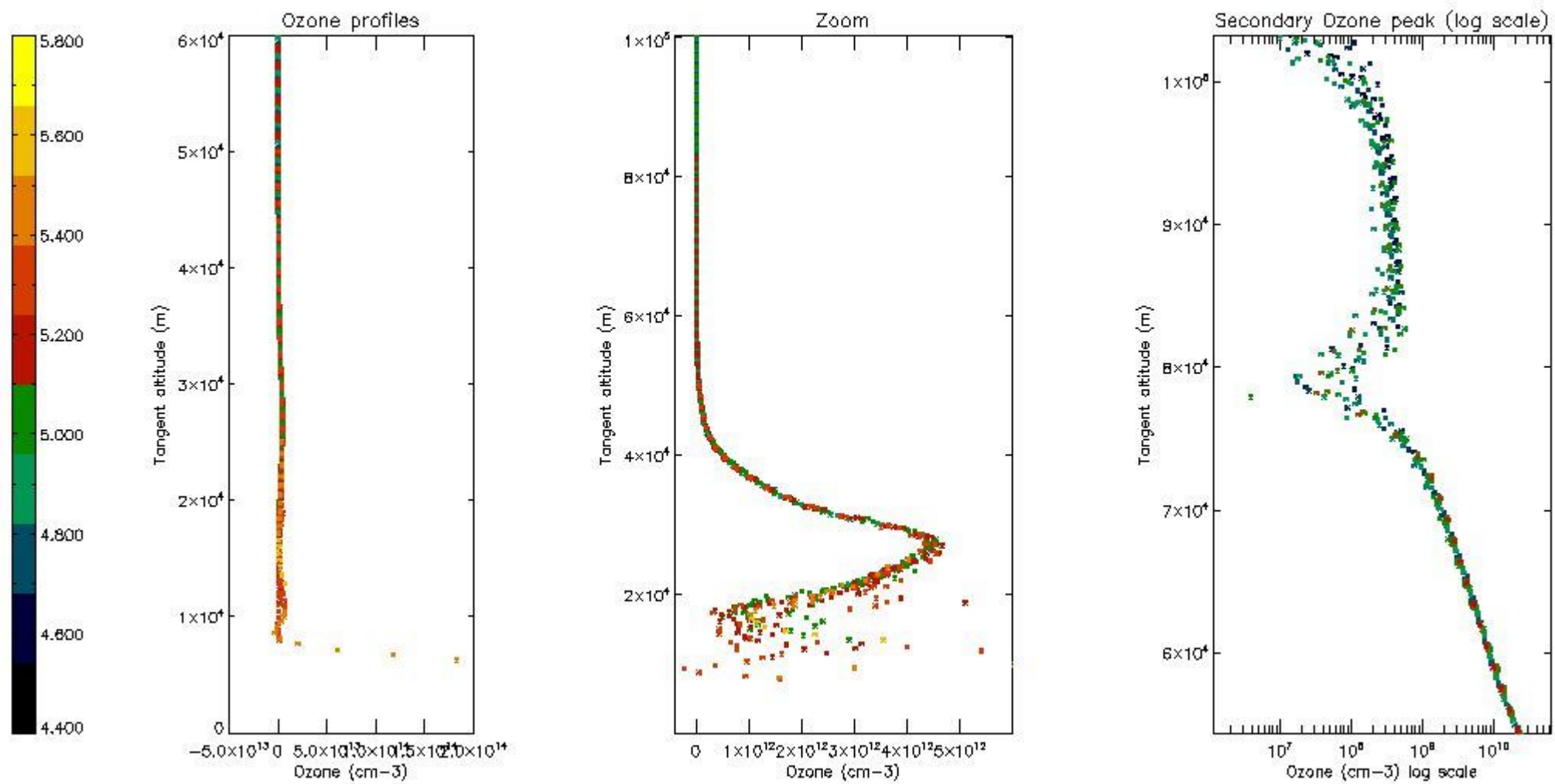
- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

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	77
STD < 10	70
STD < 5	62

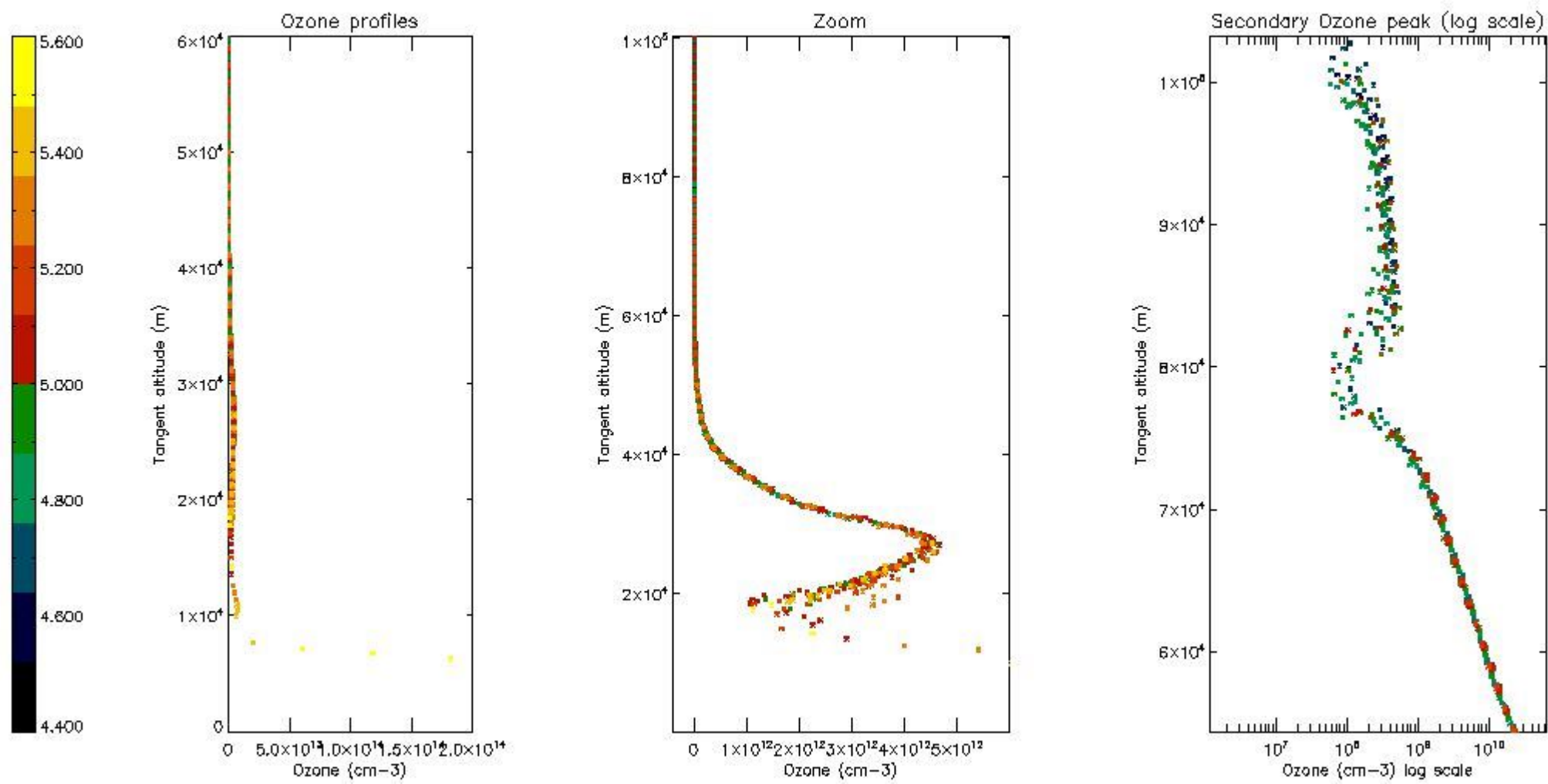
### 5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

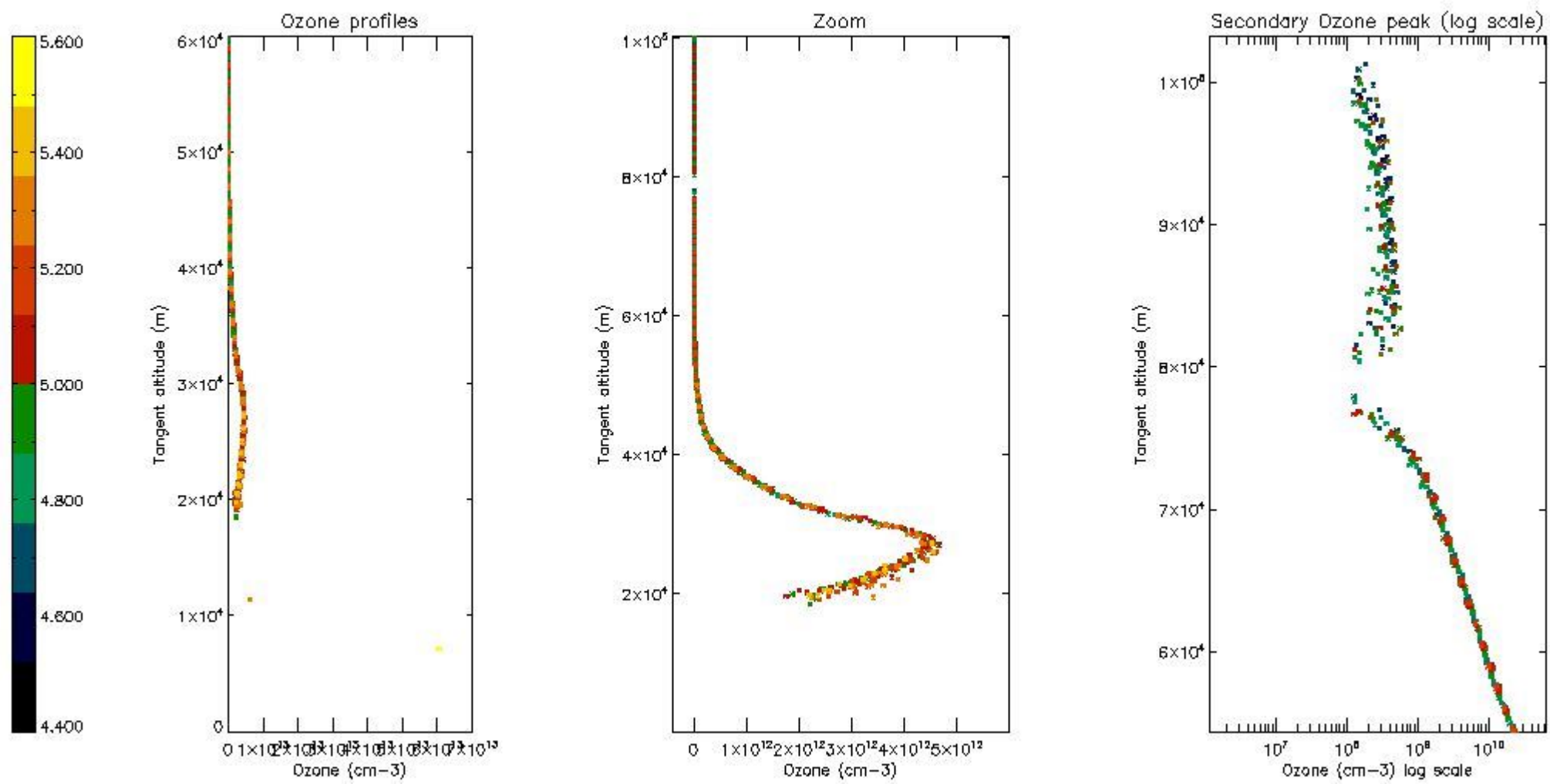
The colorbar represents the latitude.



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

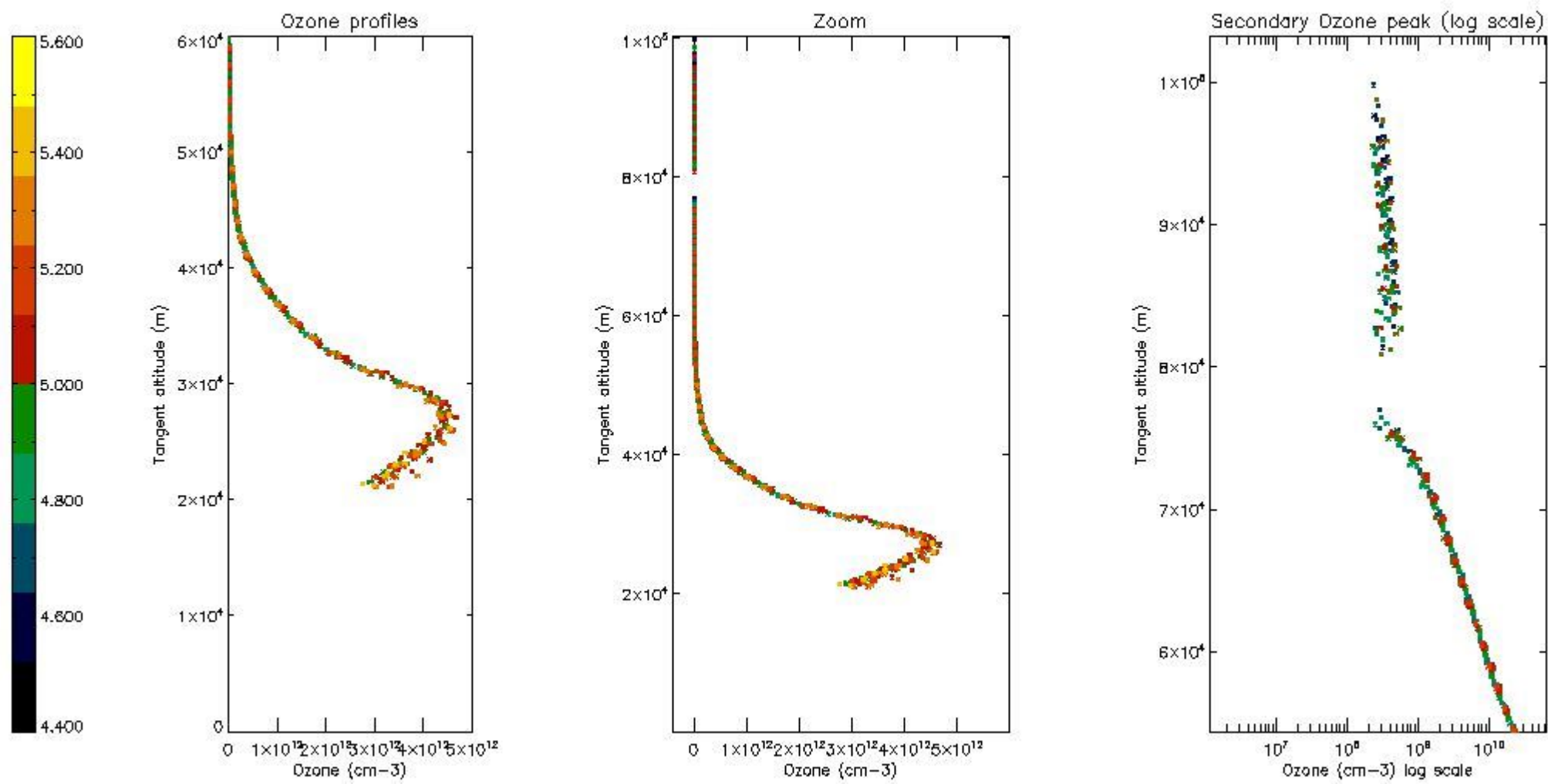
The colorbar represents the latitude.





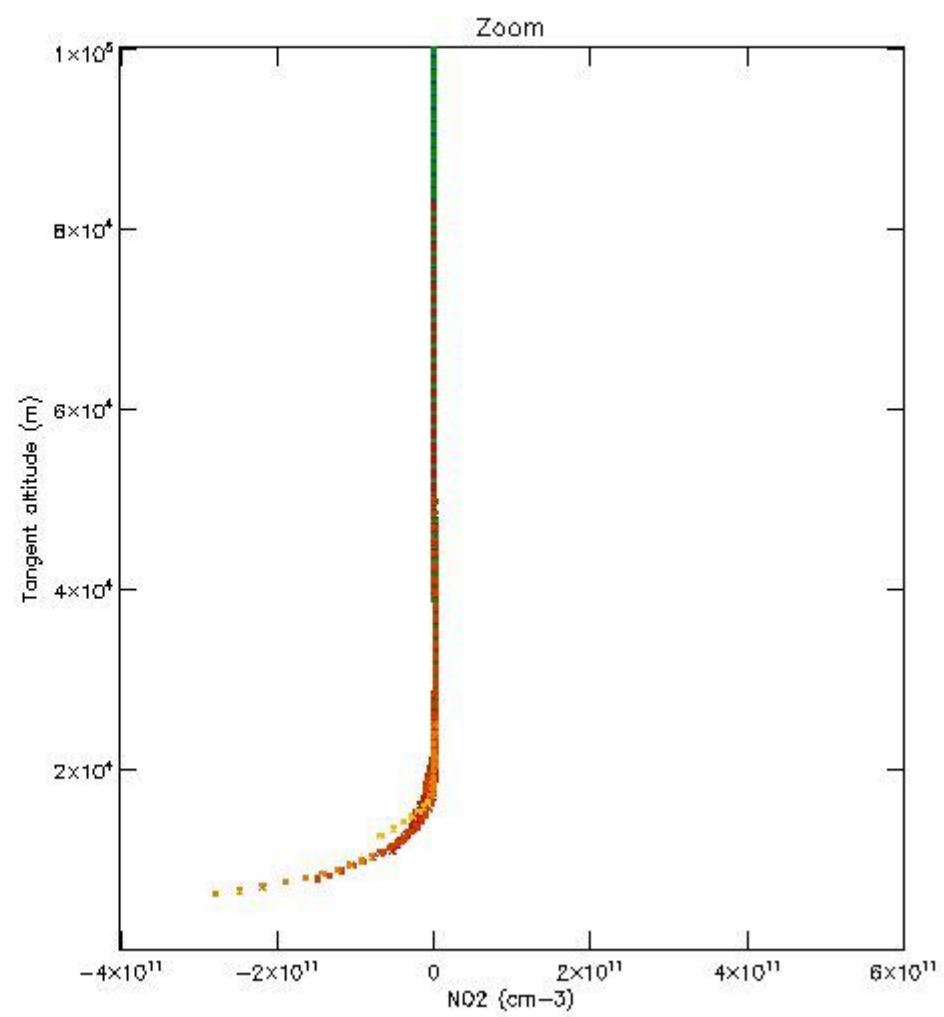
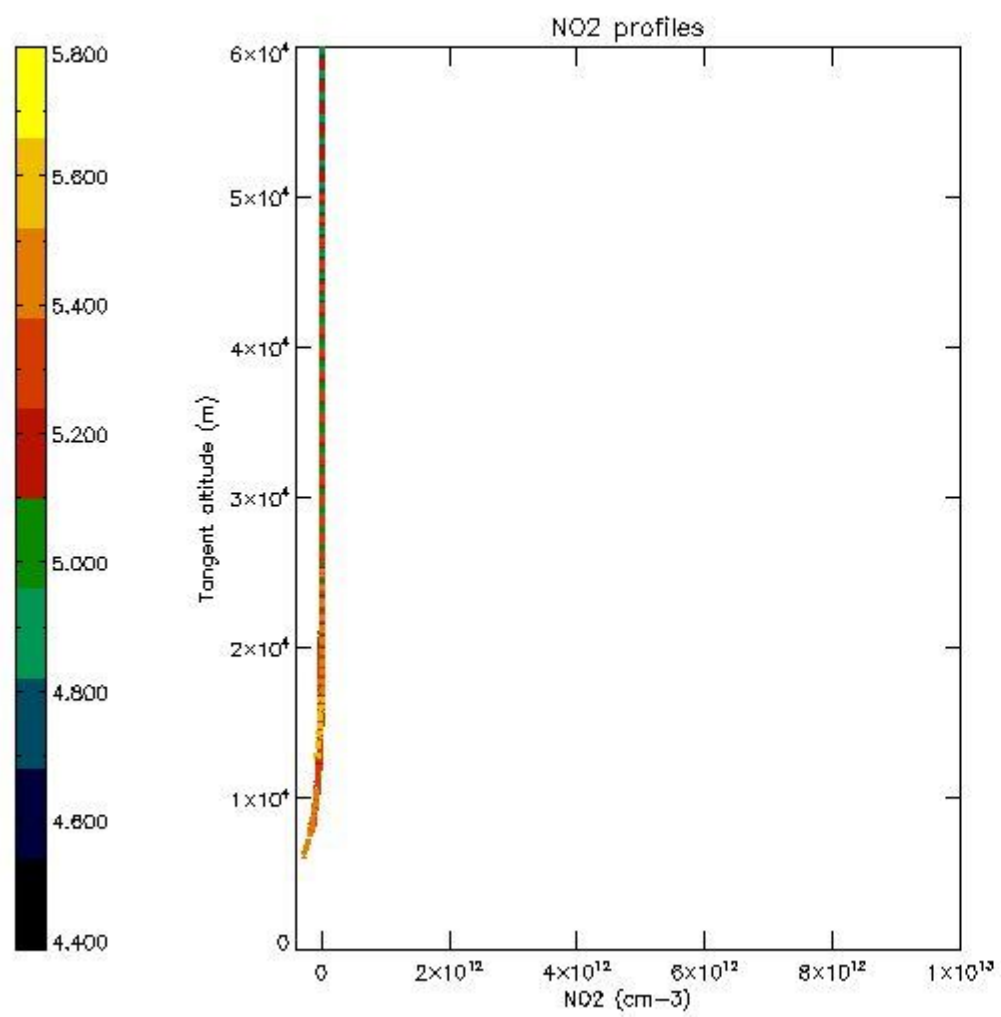
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



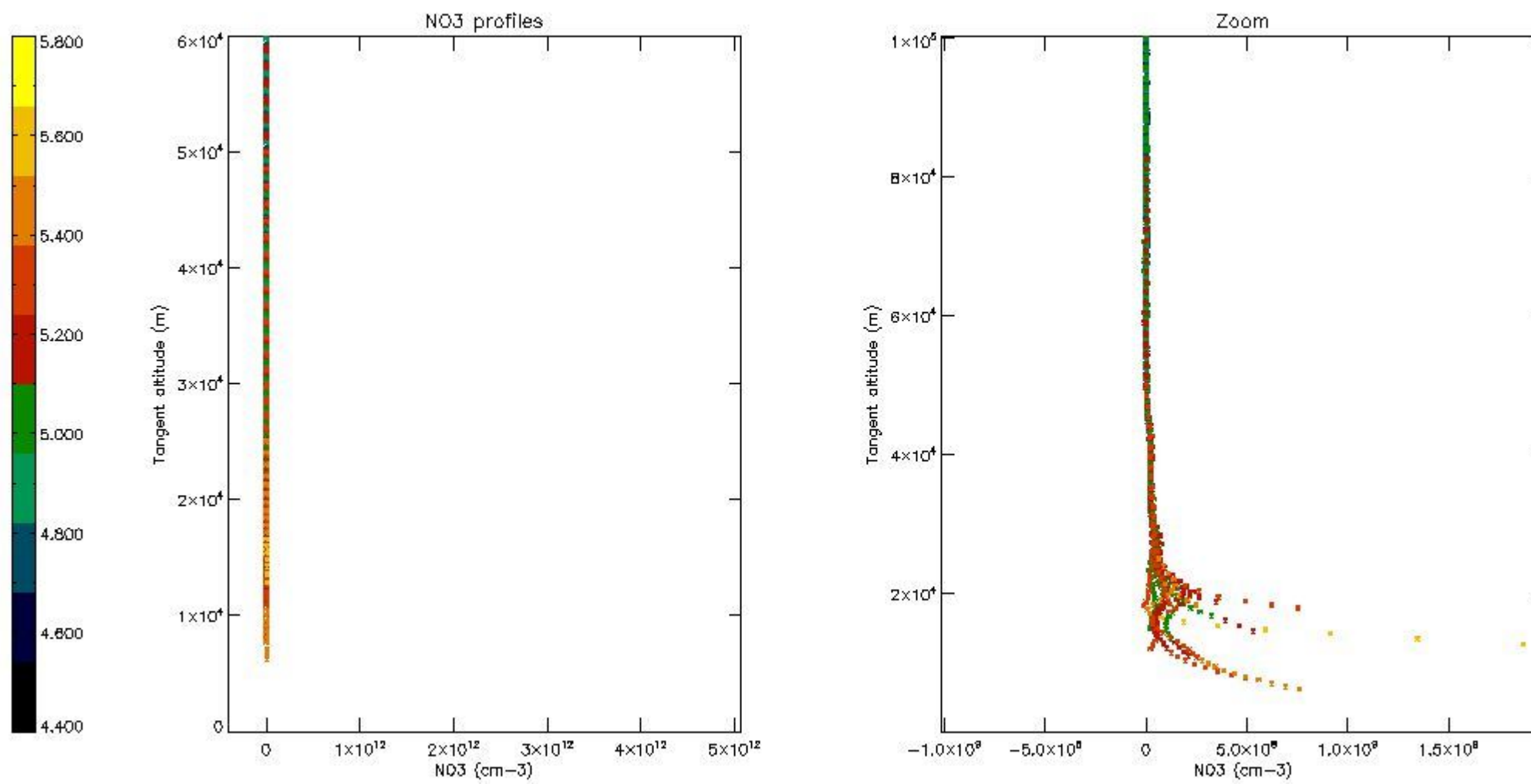
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

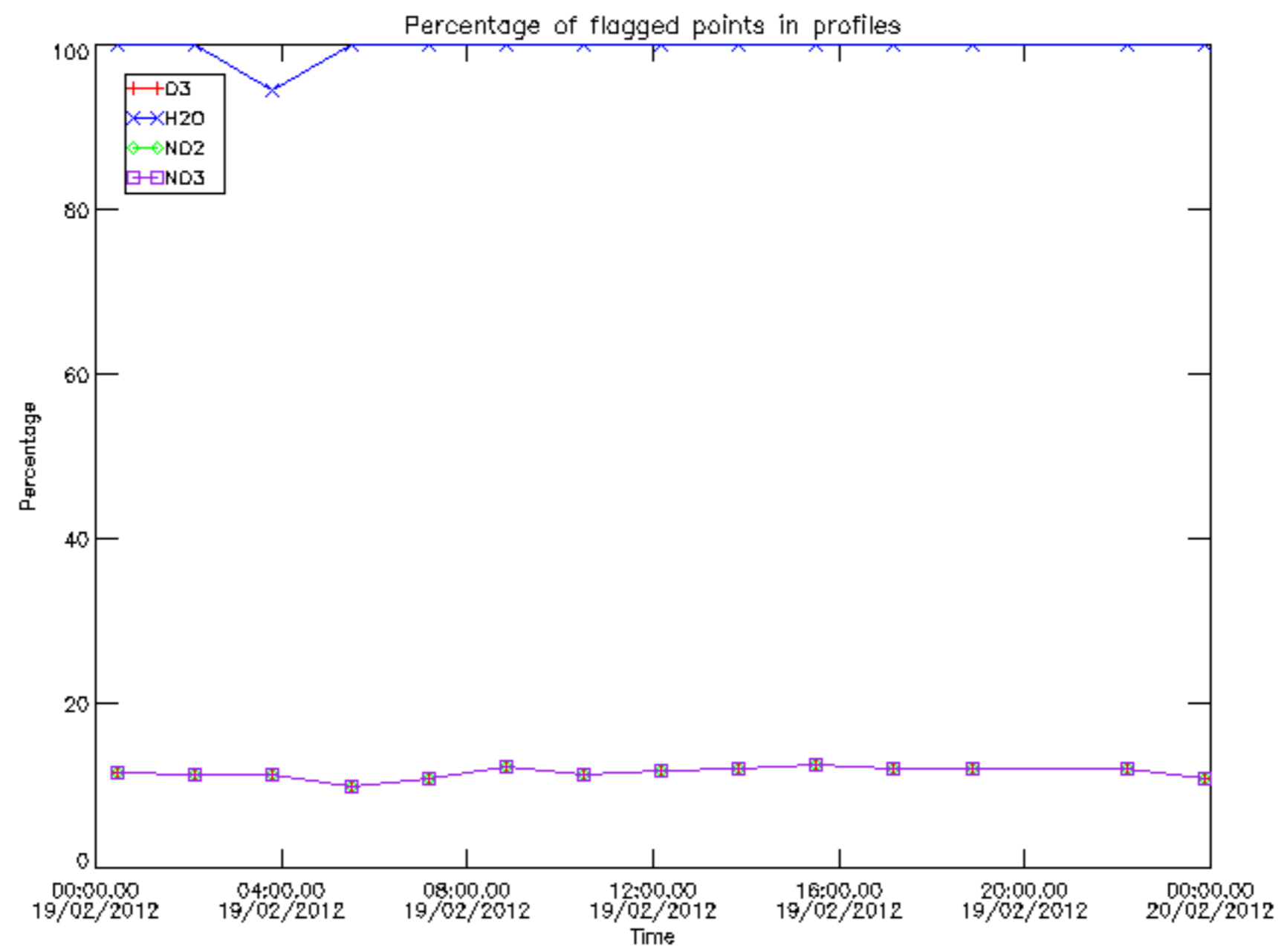
The colorbar represents the latitude.



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

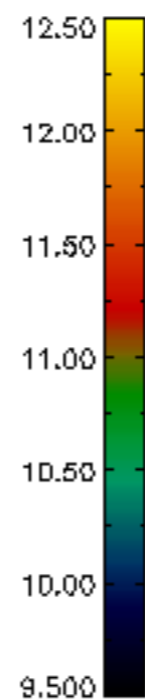
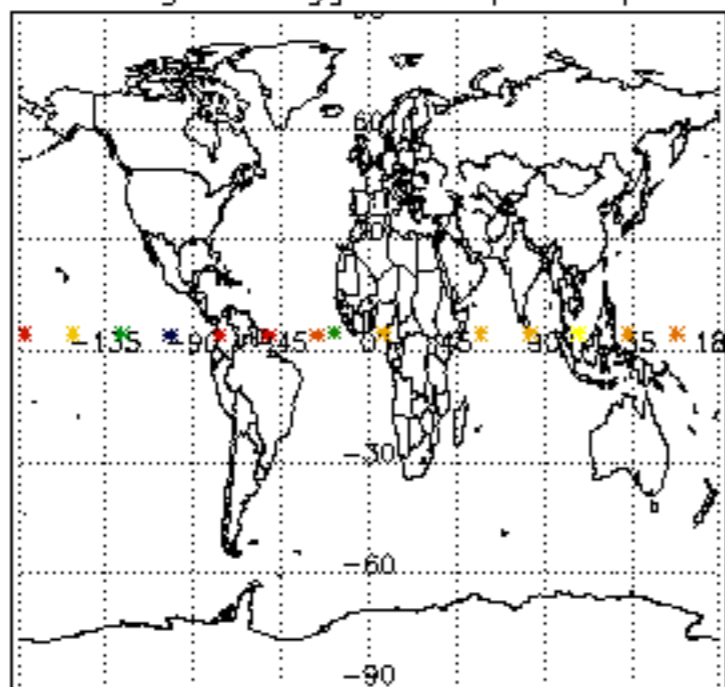
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	19-FEB-2012 00:28:38
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	19-FEB-2012 00:28:38
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	19-FEB-2012 00:28:38

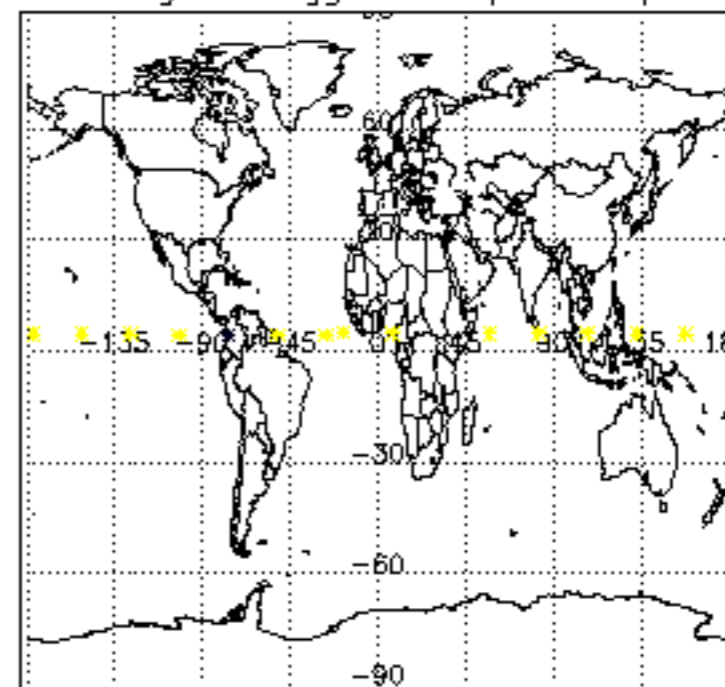




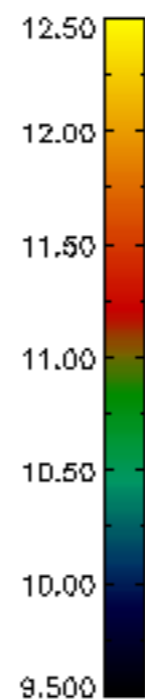
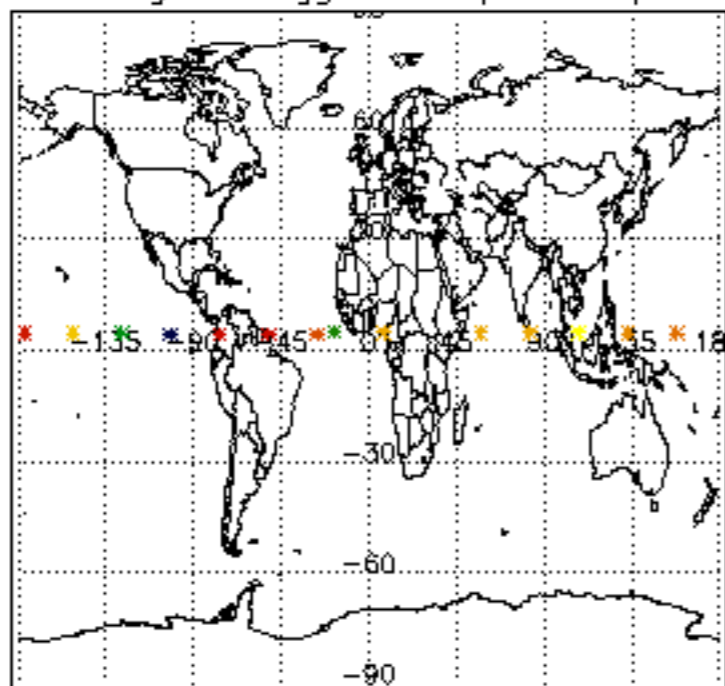
Percentage of flagged data per D3 profile



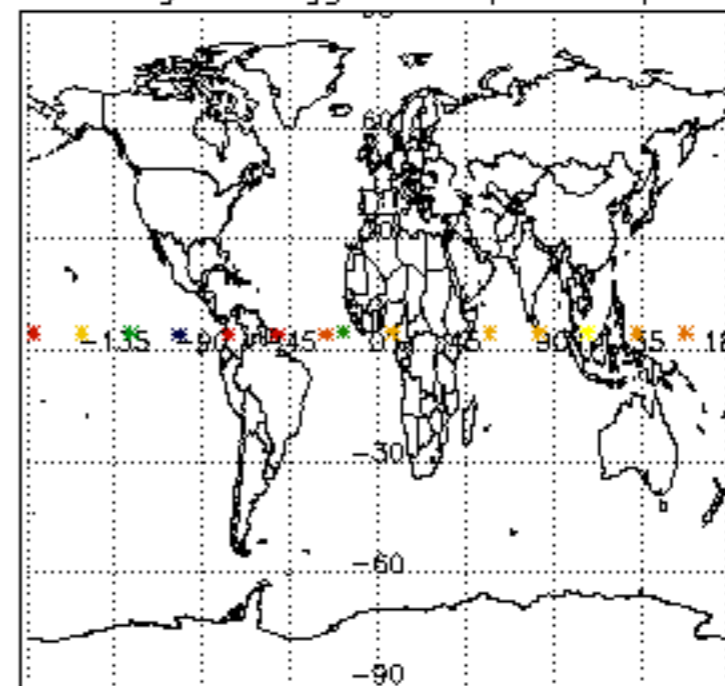
Percentage of flagged data per H2O profile

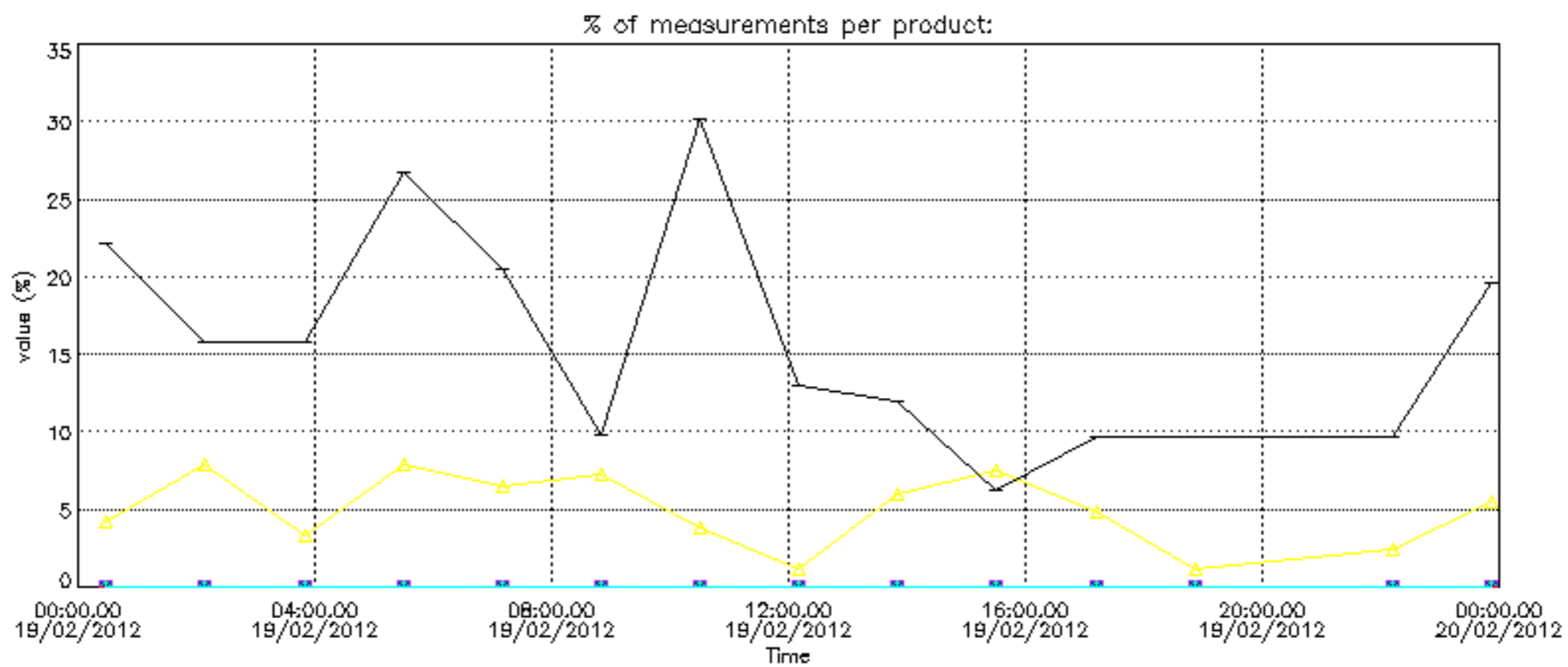


Percentage of flagged data per NO2 profile

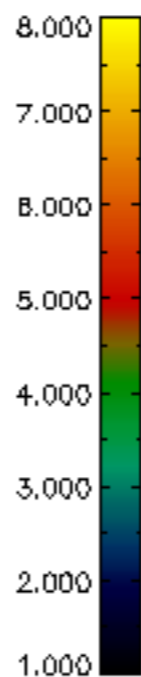
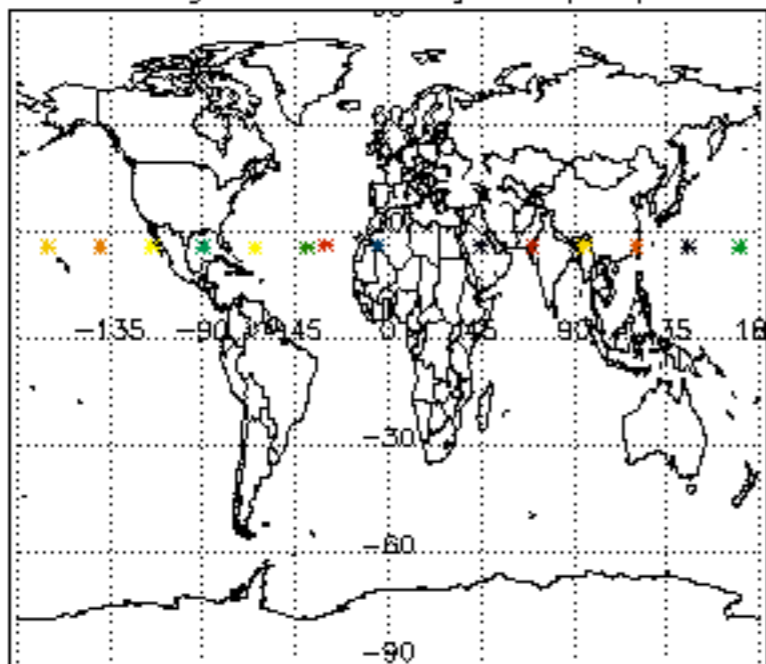


Percentage of flagged data per NO3 profile

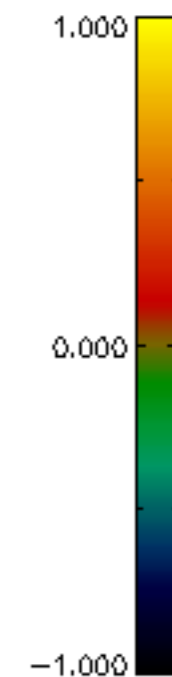
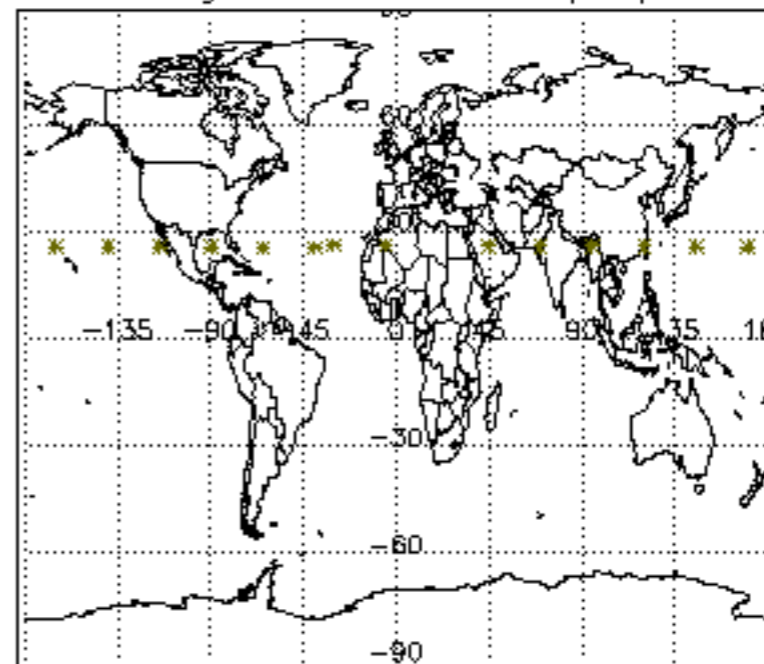




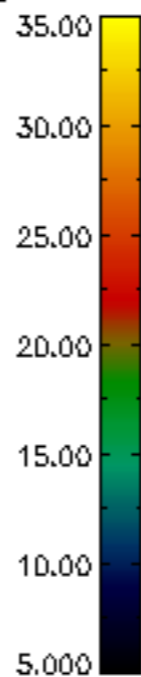
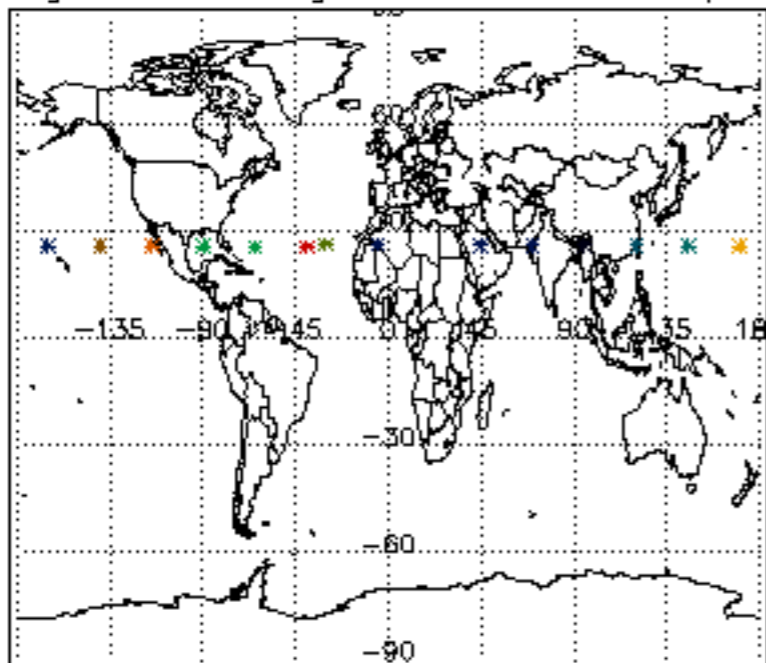
Percentage of cosmic ray hits per profile



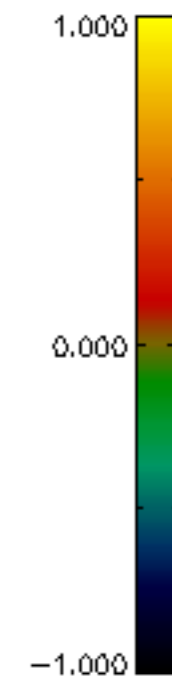
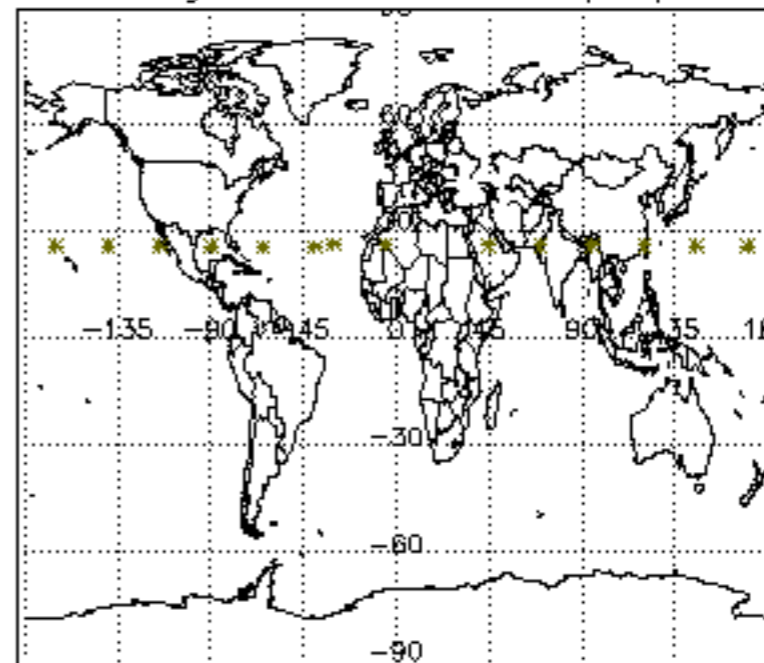
Percentage of datation errors per profile

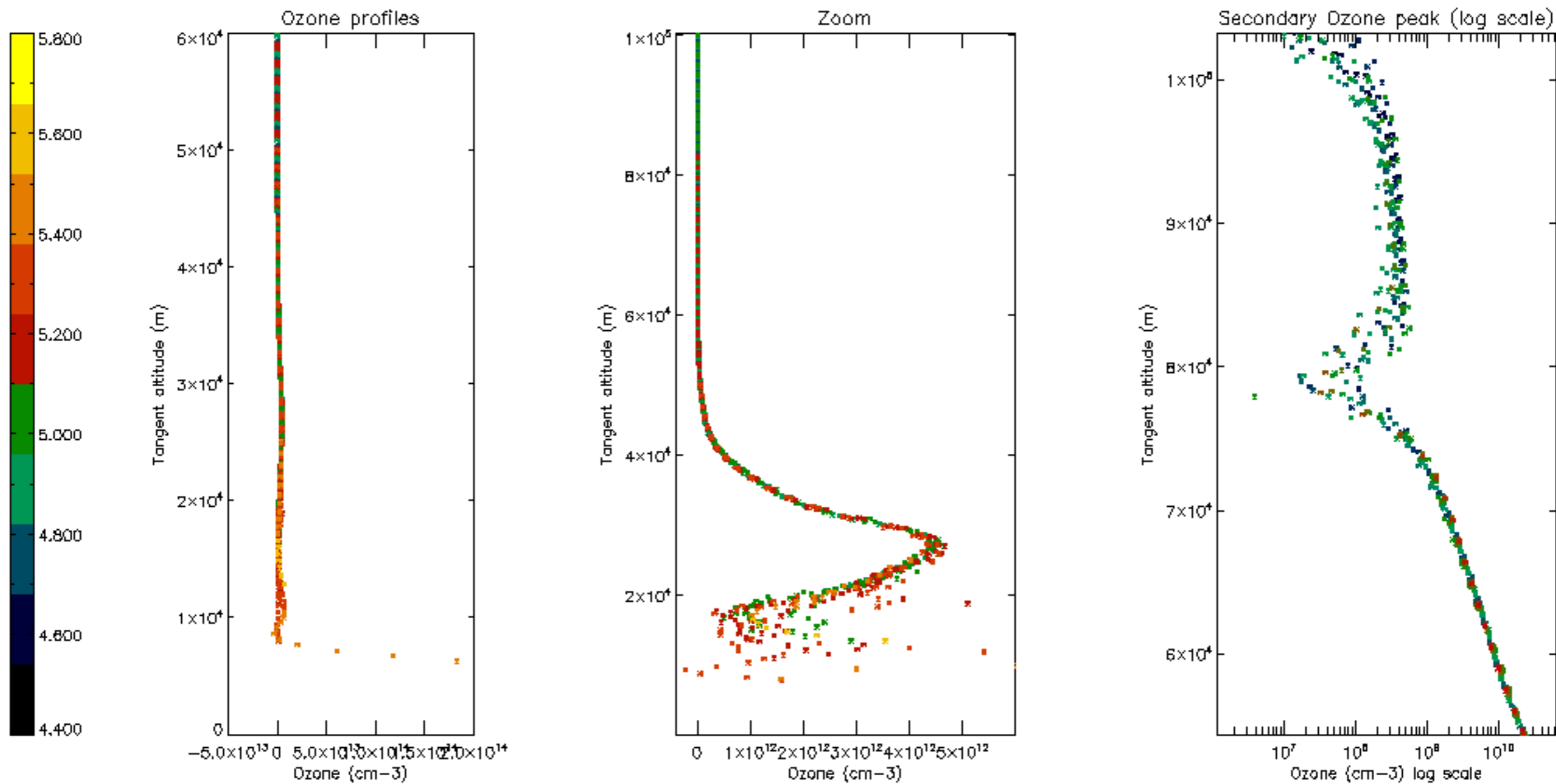


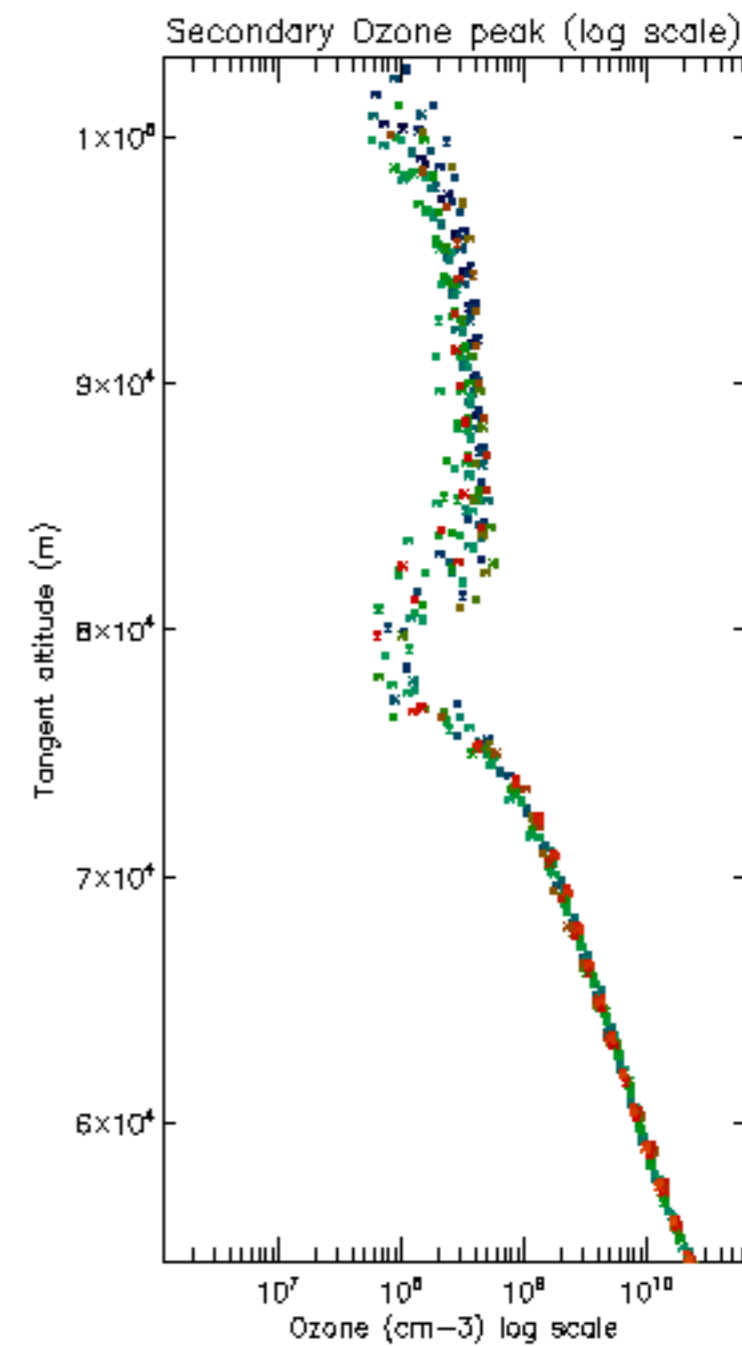
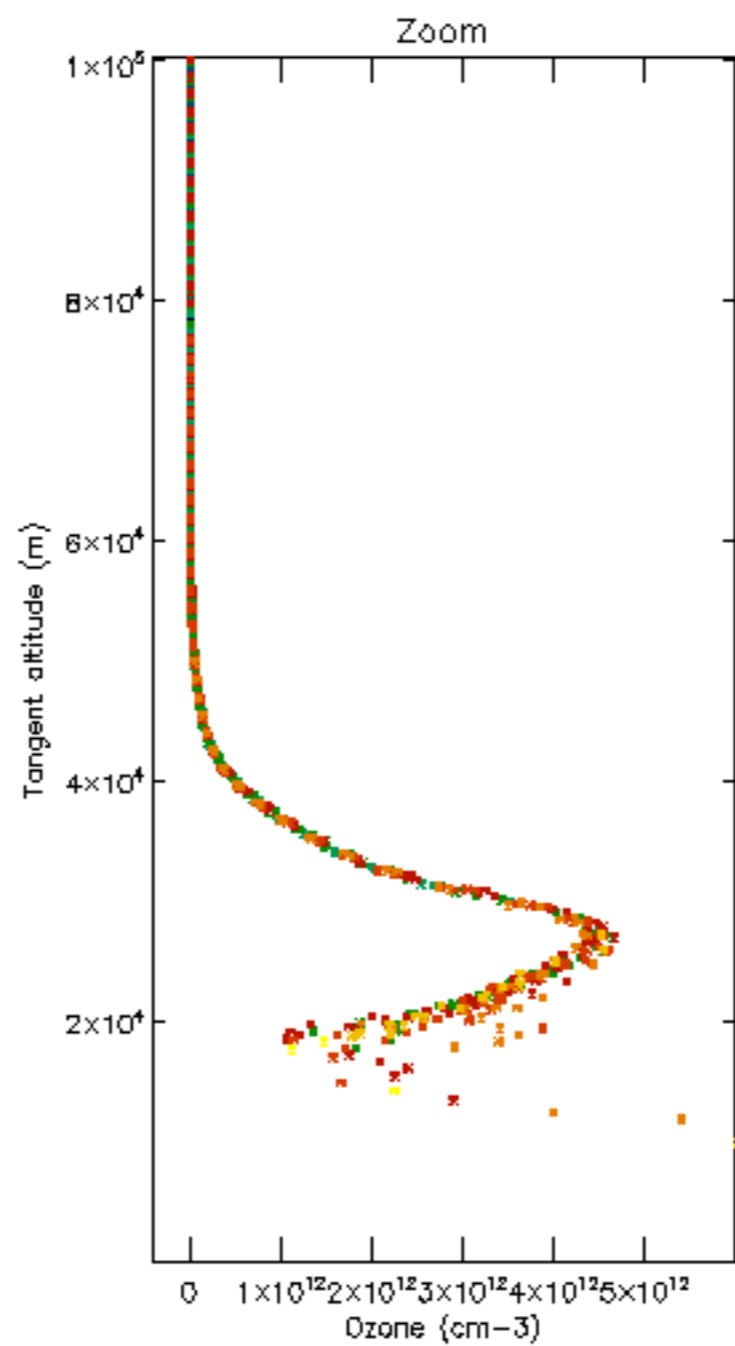
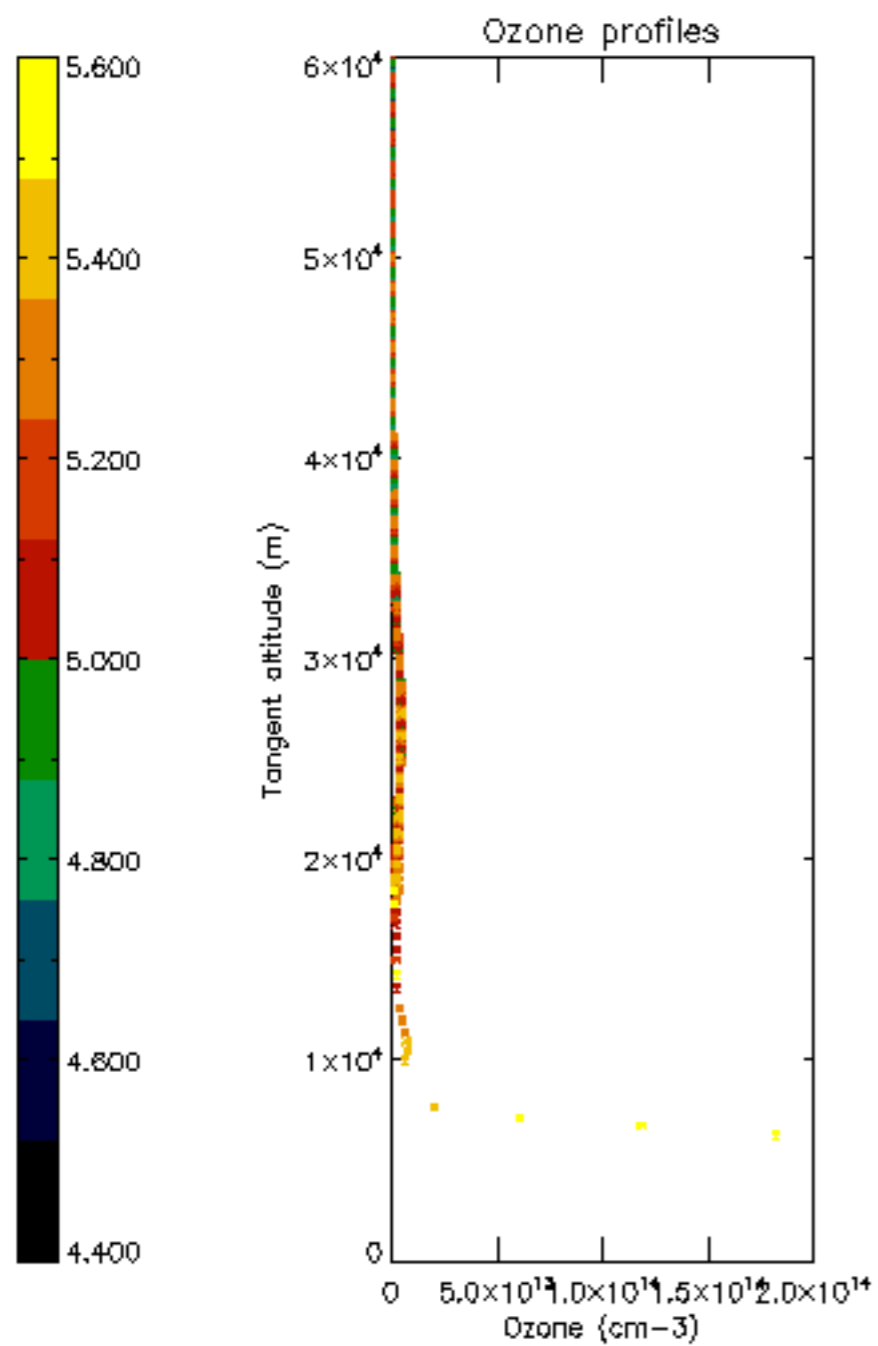
Percentage of star falling outside central band per profile



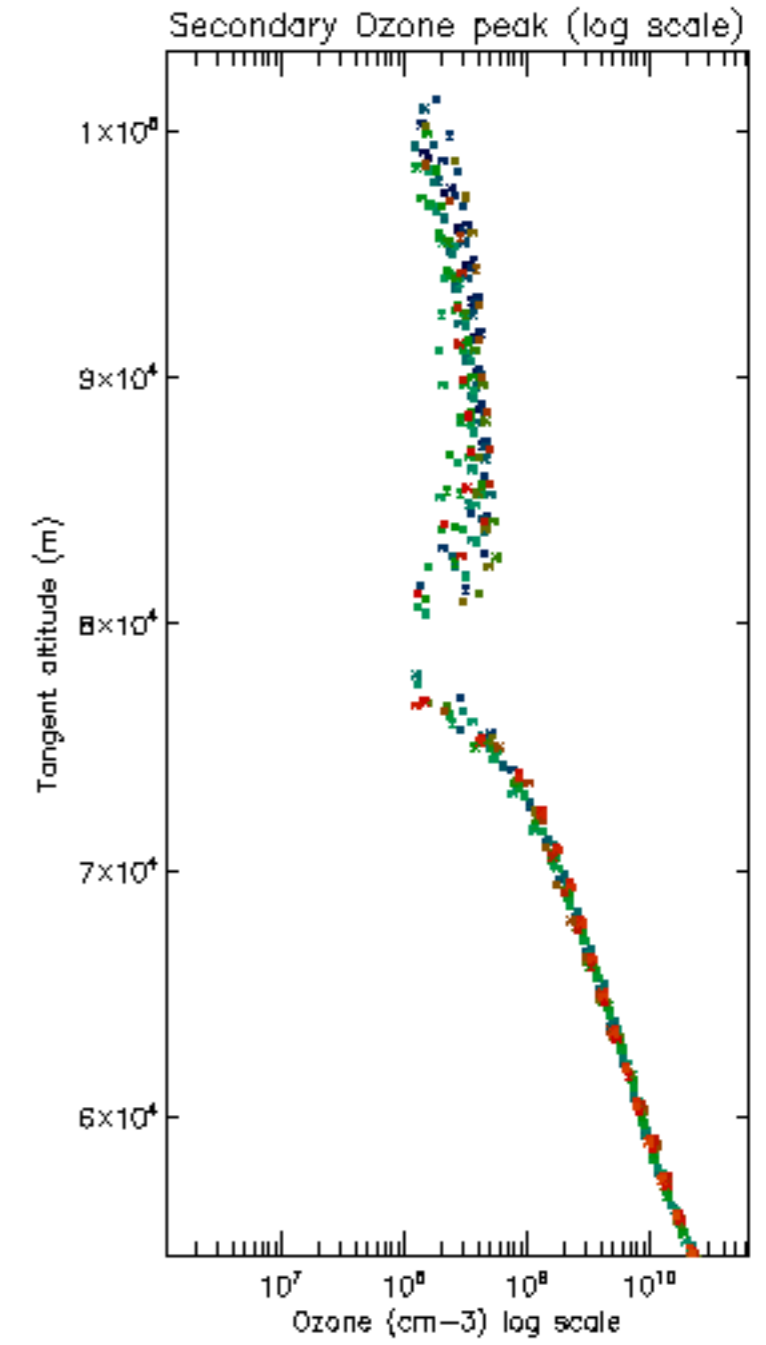
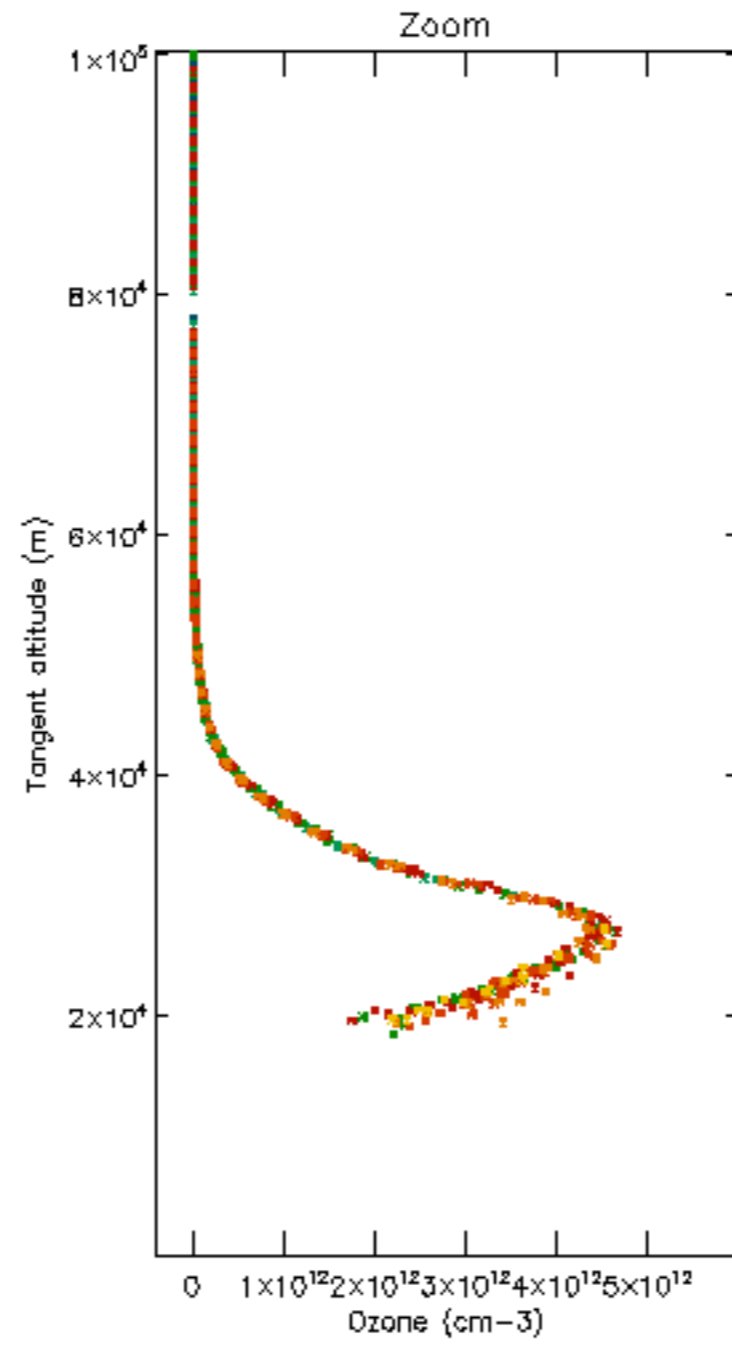
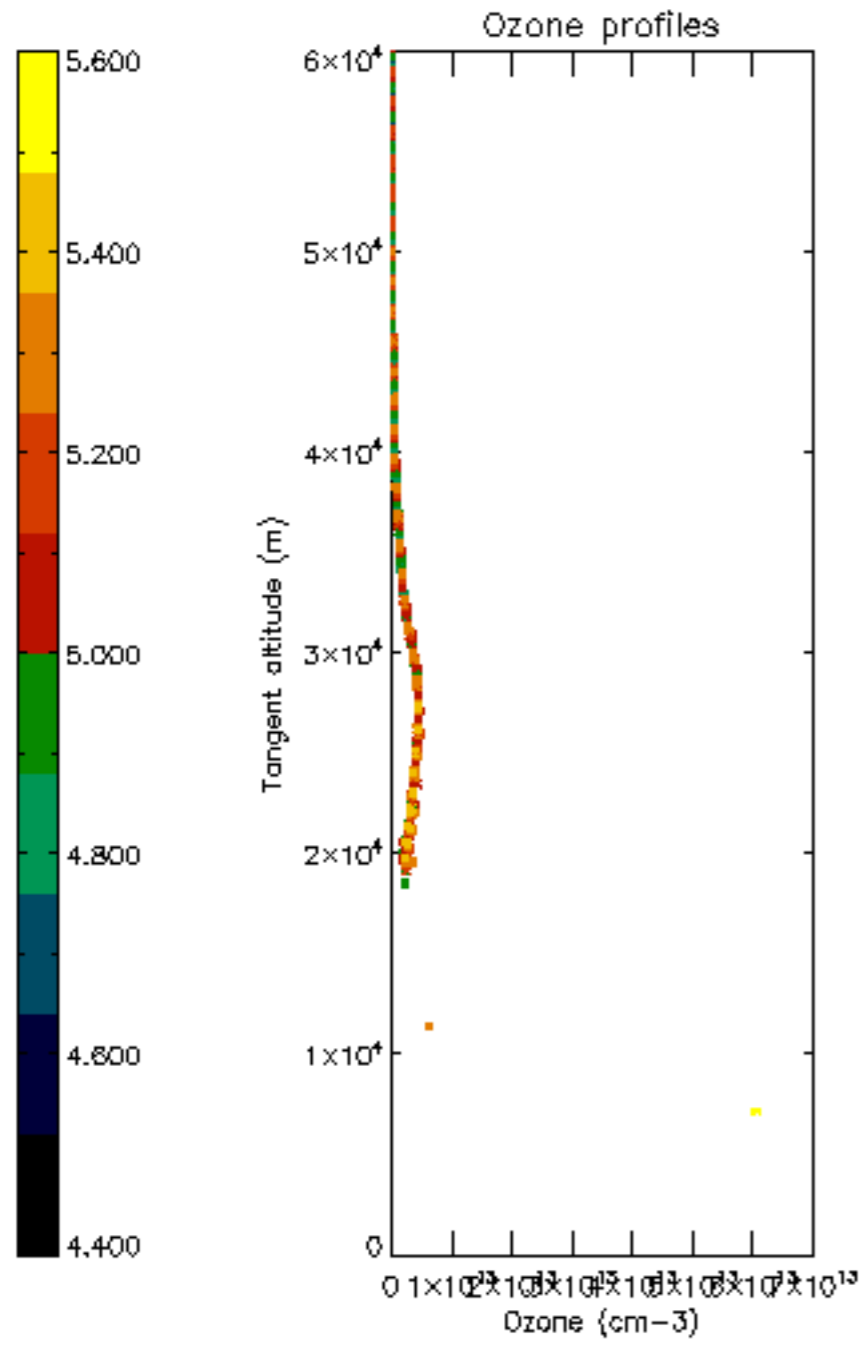
Percentage of saturation errors per profile

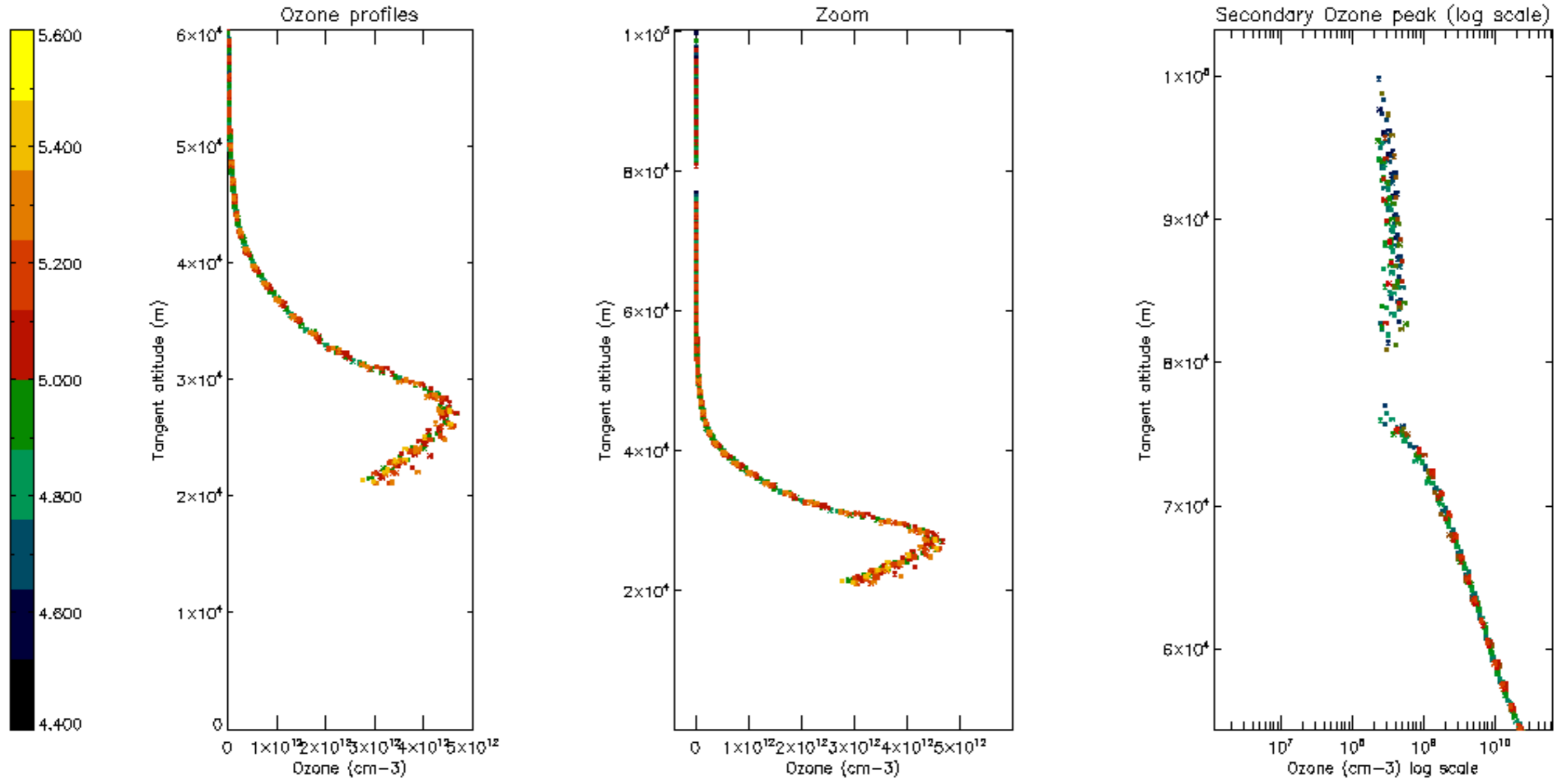


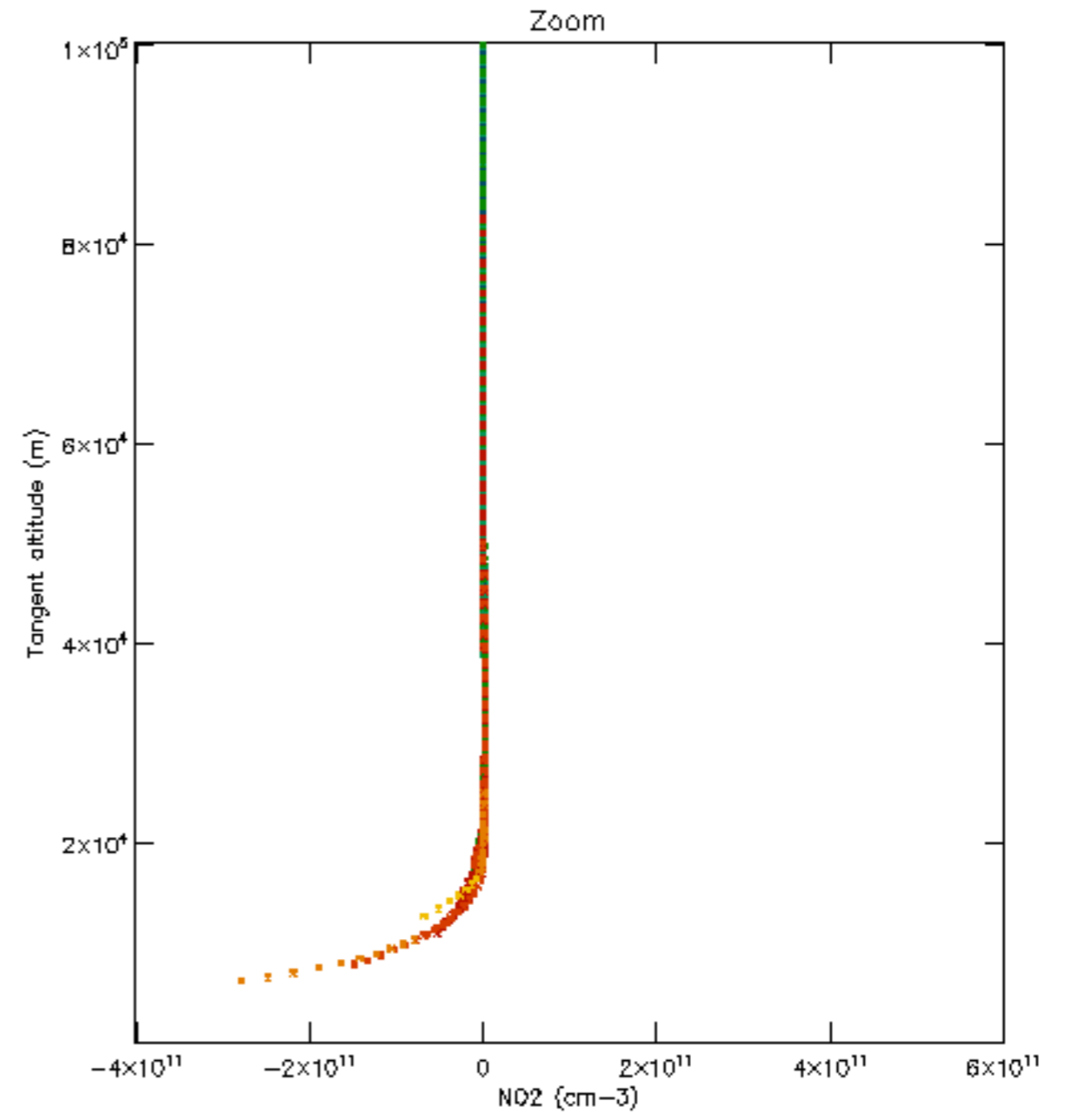
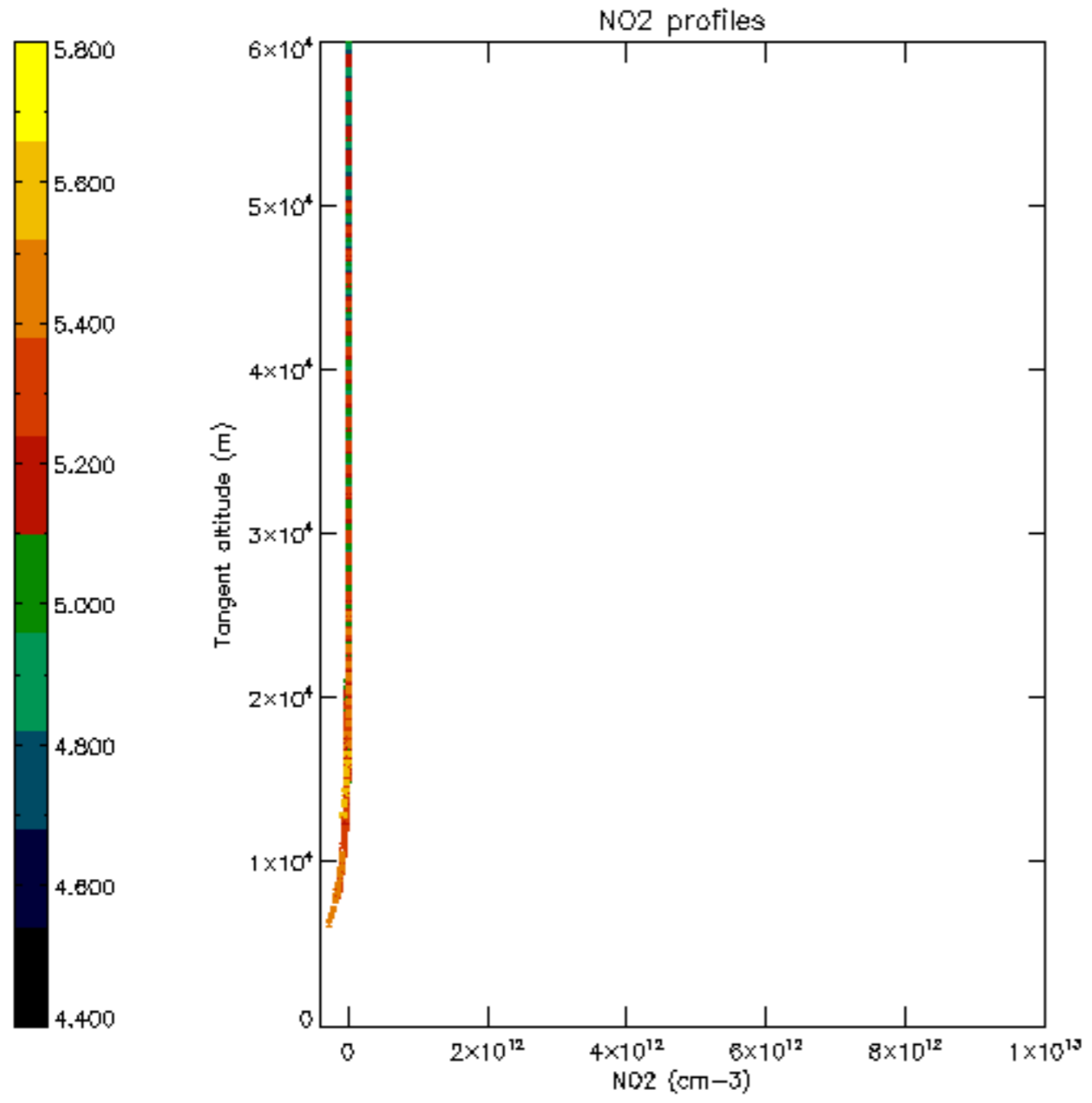


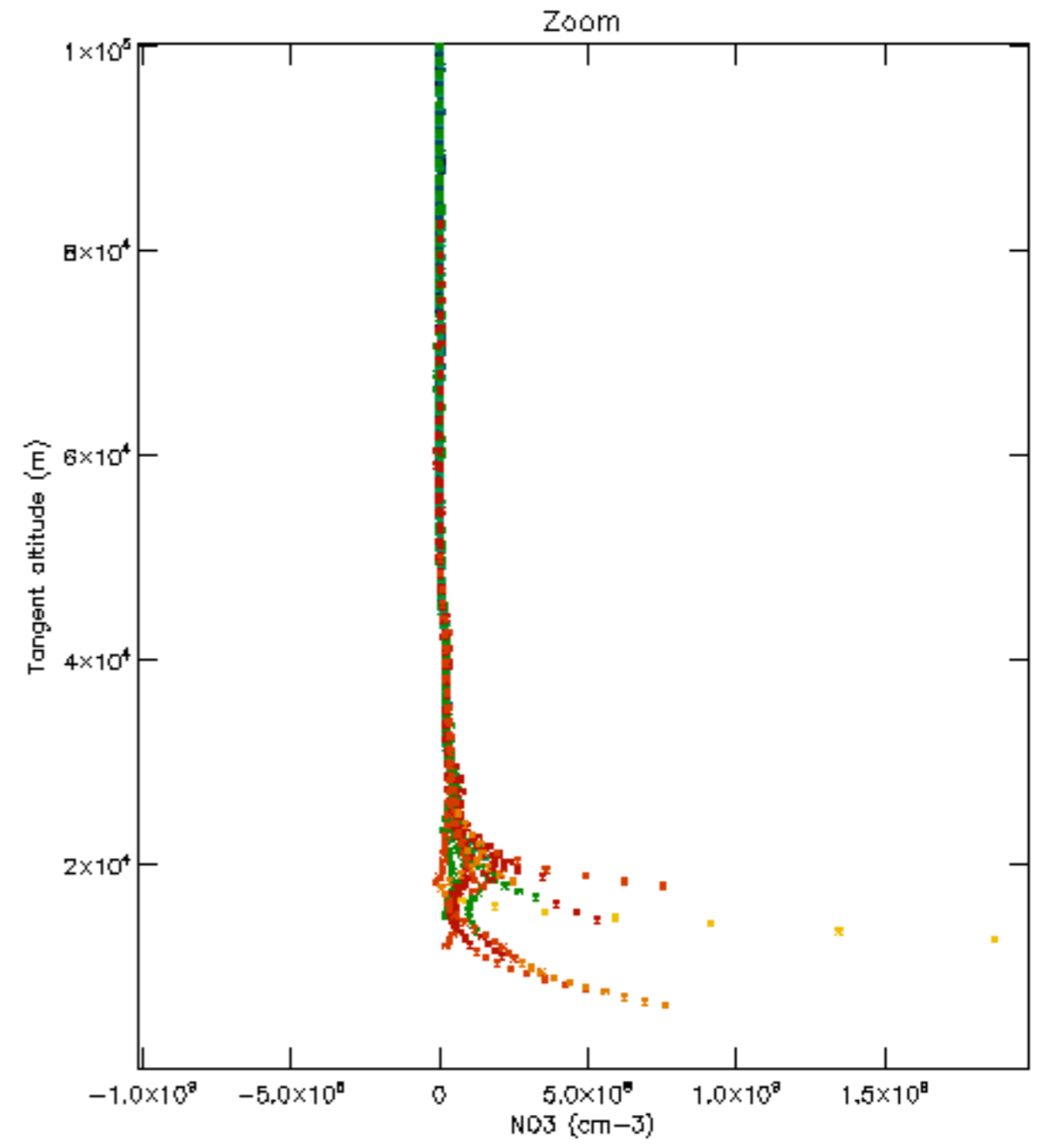
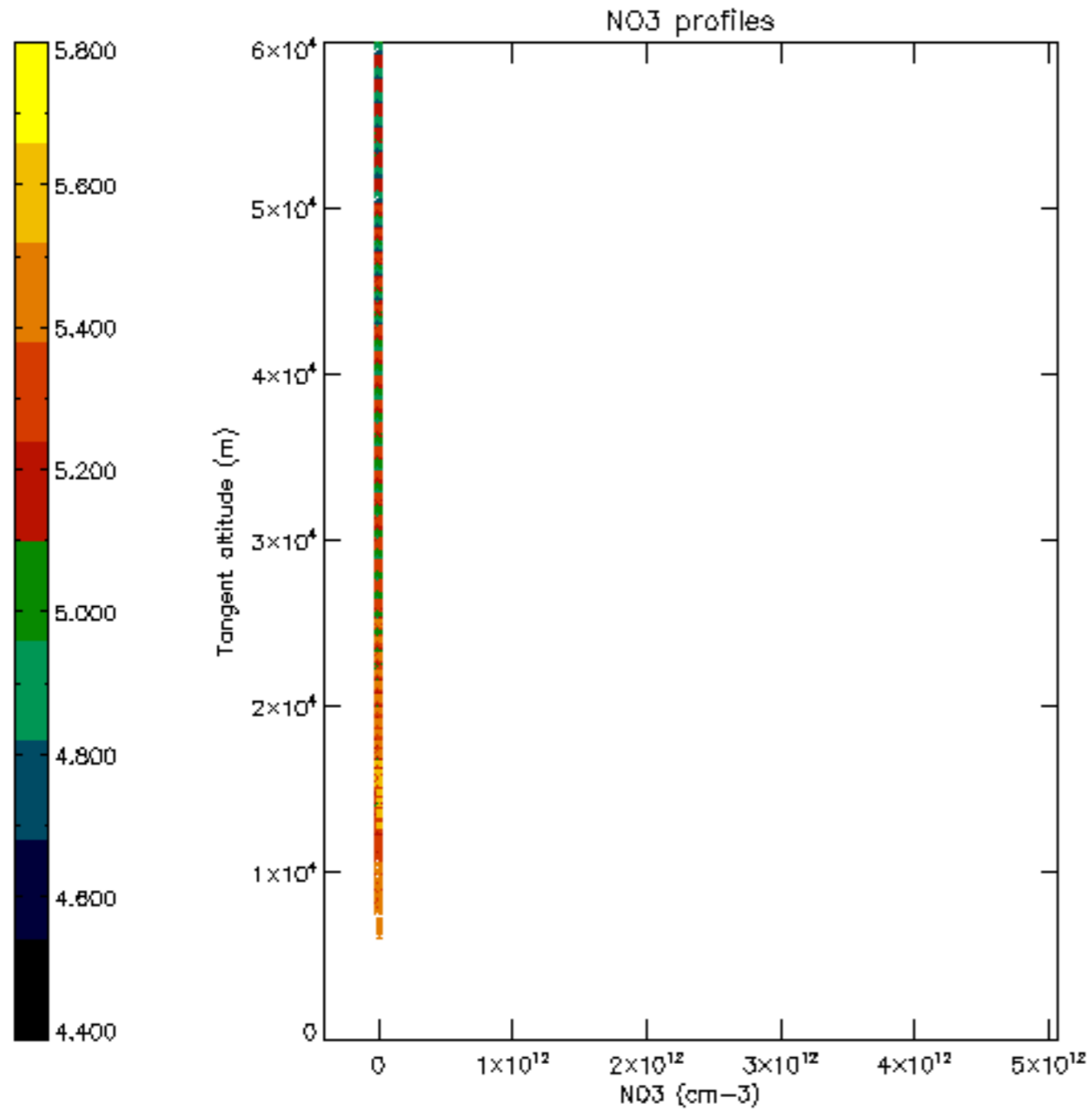


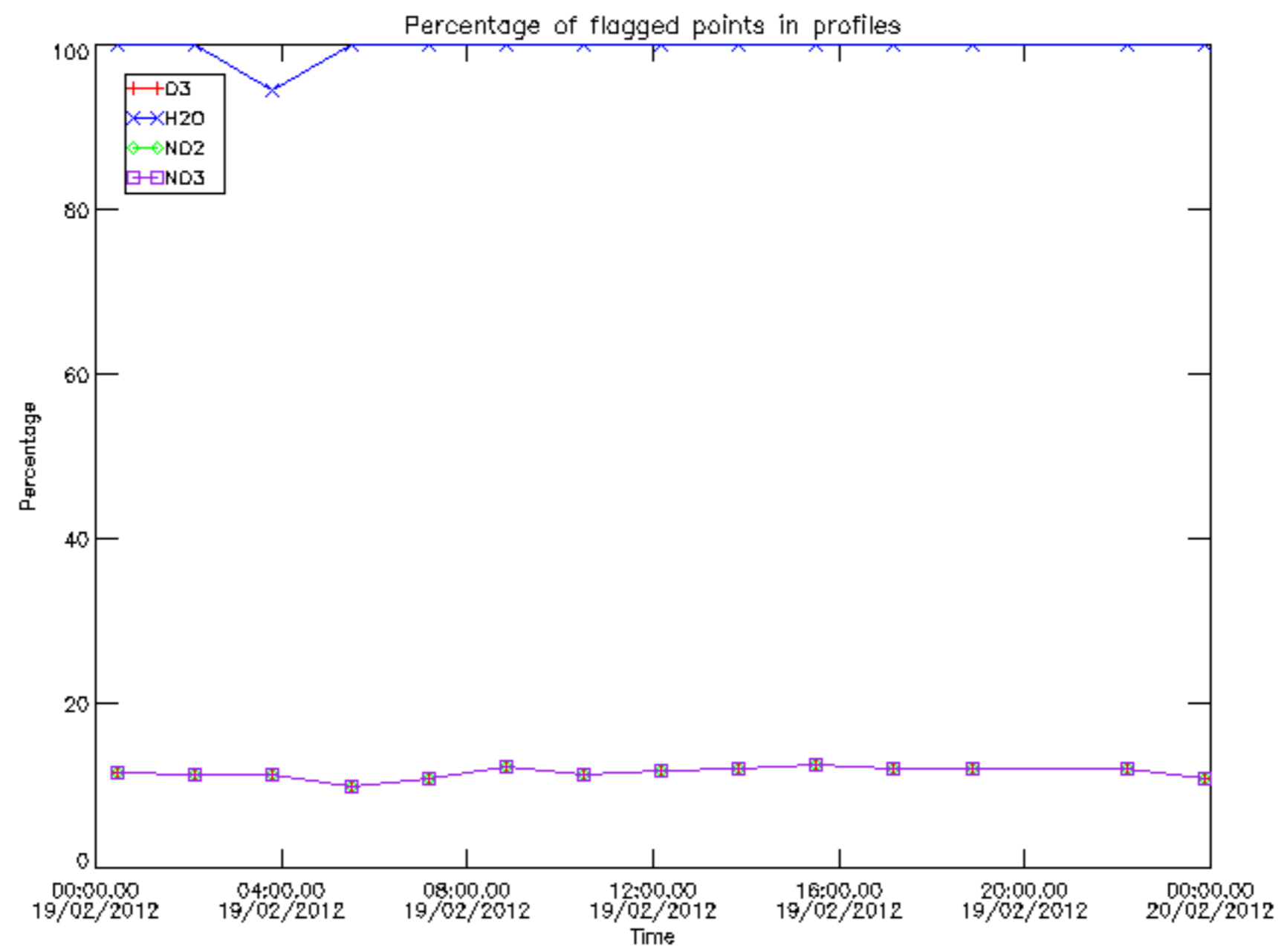






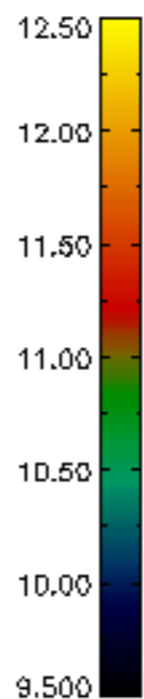
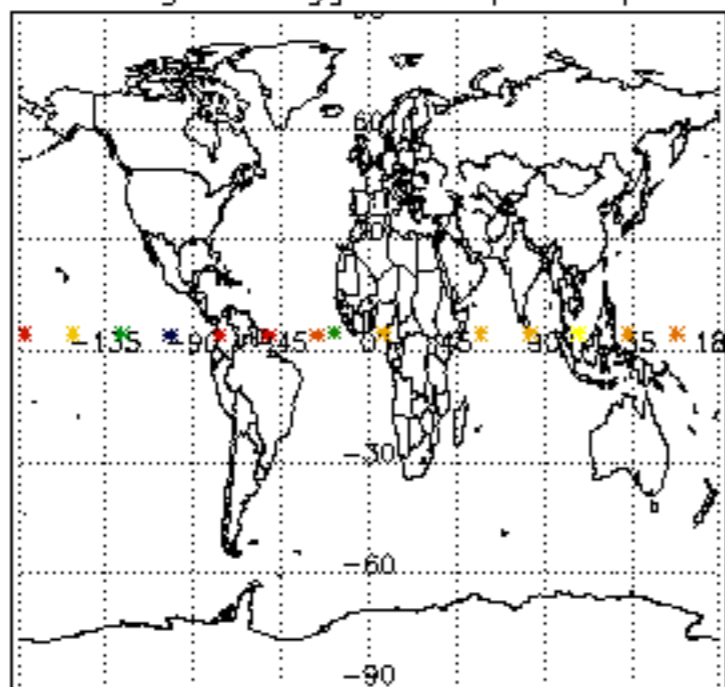




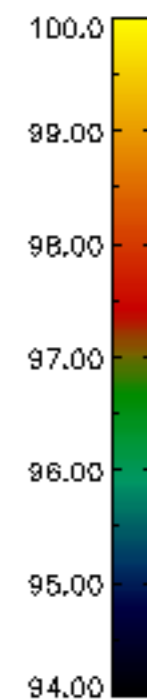
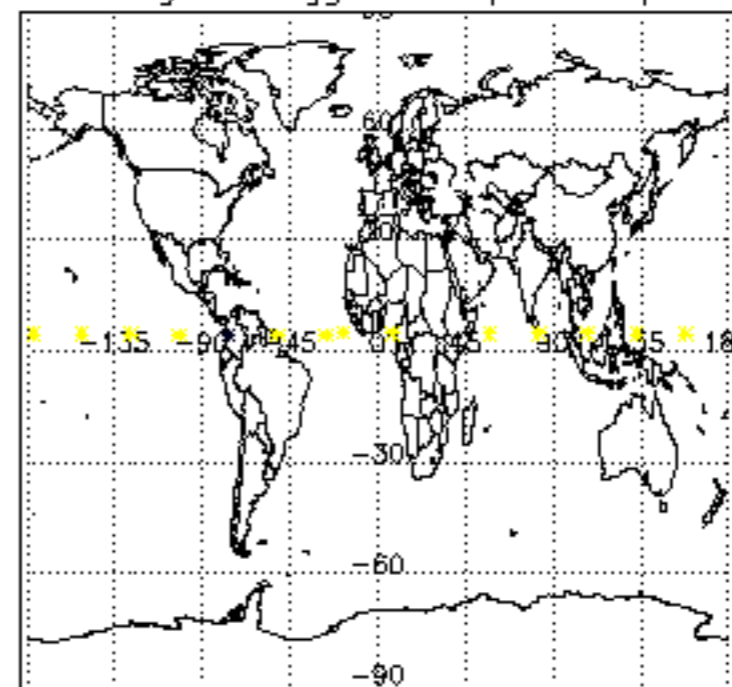




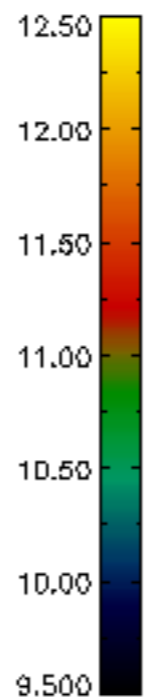
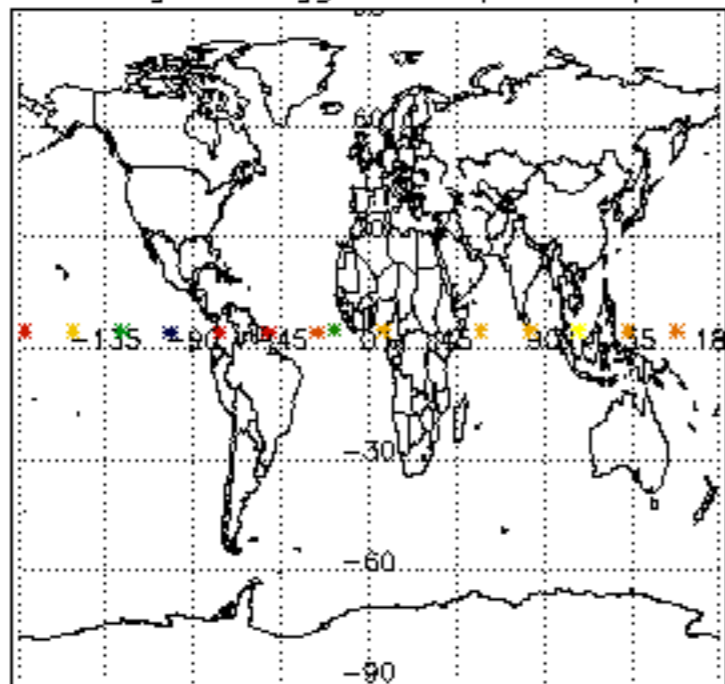
Percentage of flagged data per D3 profile



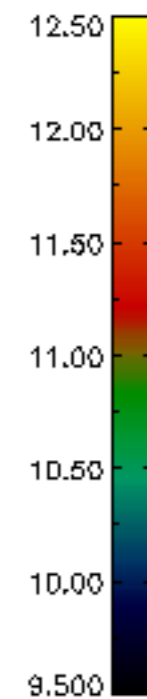
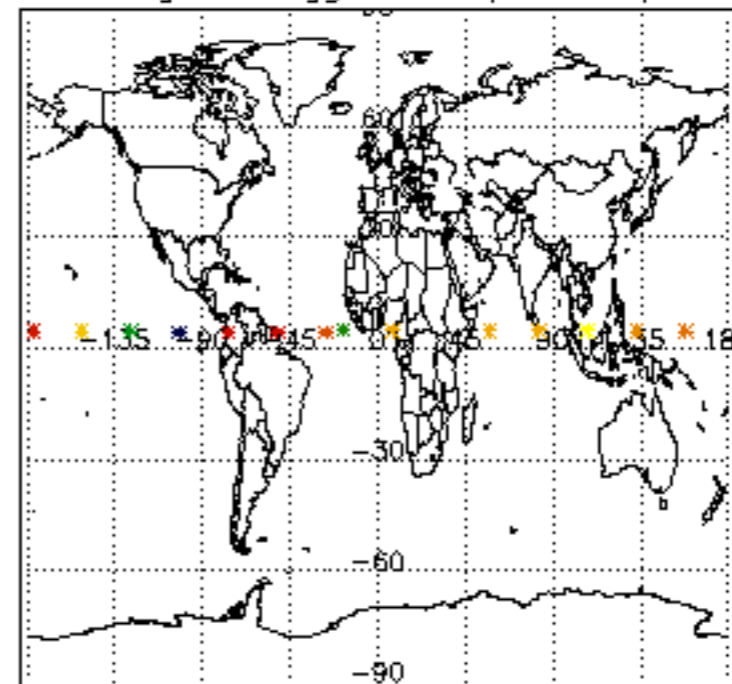
Percentage of flagged data per H2O profile

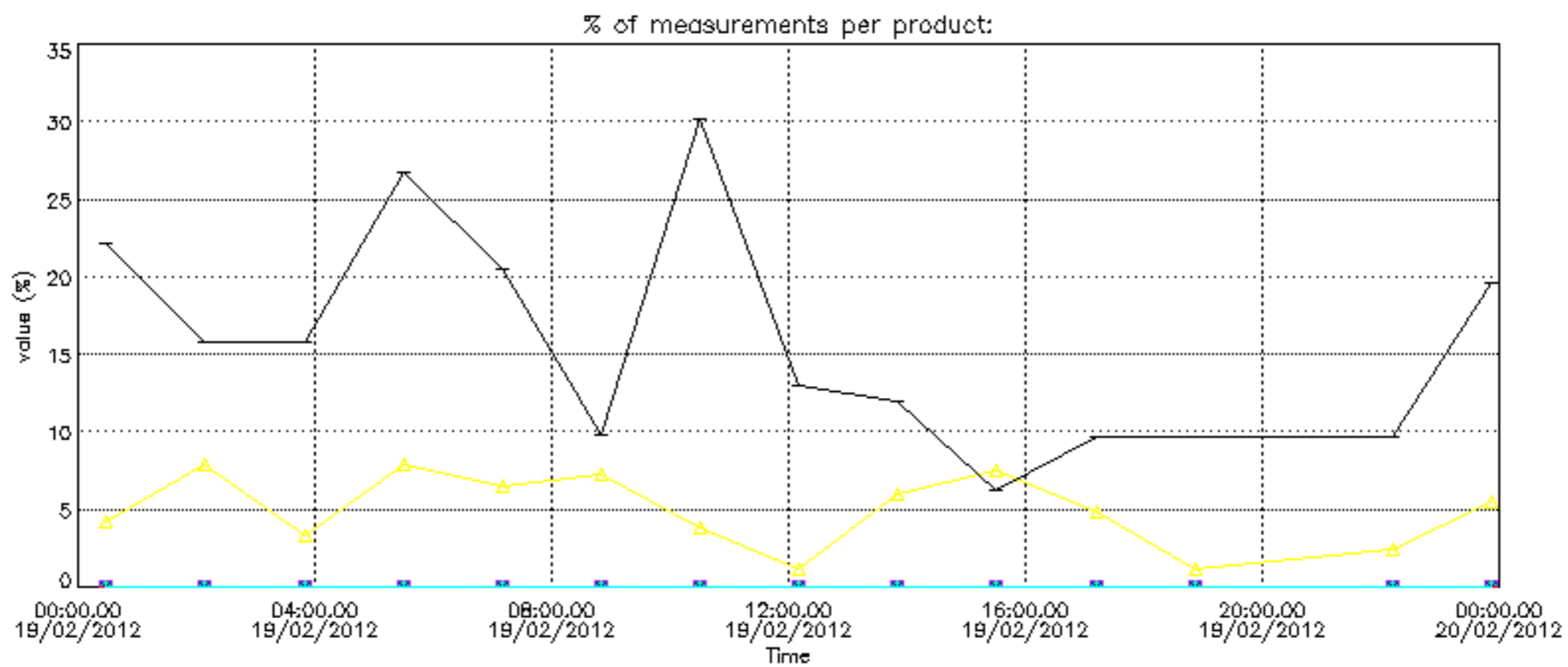


Percentage of flagged data per NO2 profile

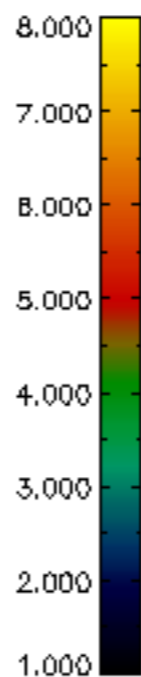
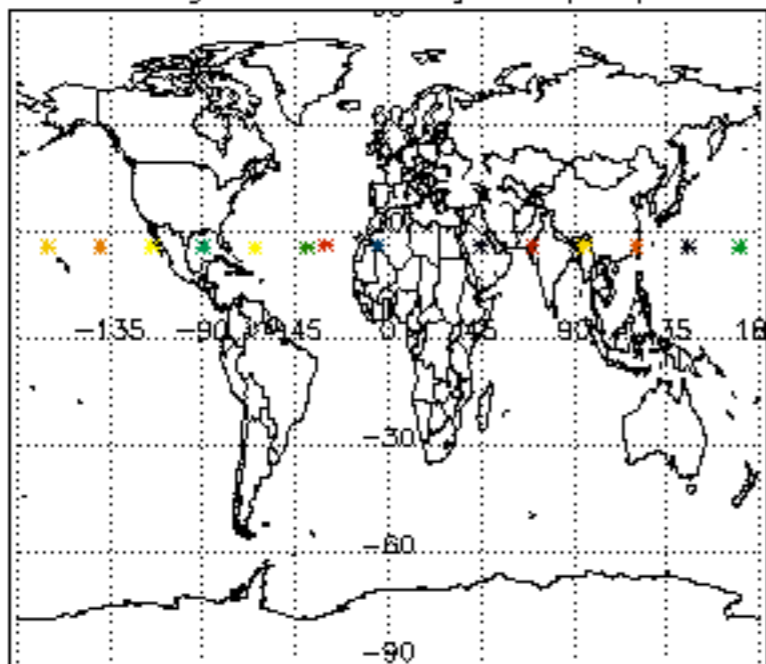


Percentage of flagged data per NO3 profile

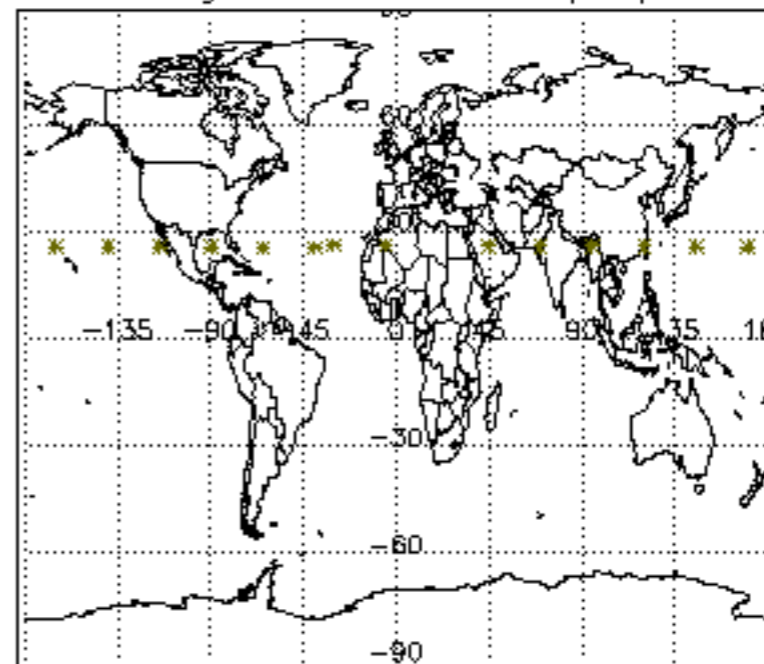




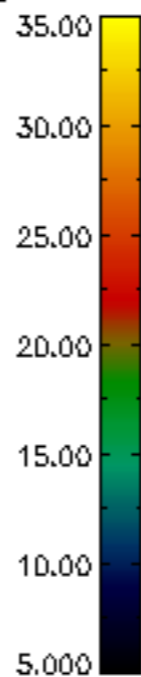
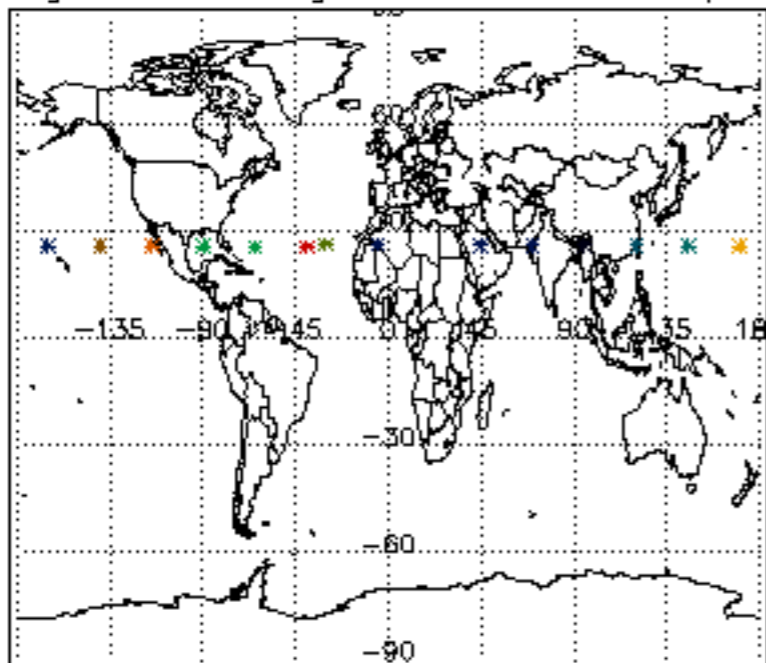
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

