

# 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	23APR2013 06:04:03
Data source version	GOMOS/6.01
Start time of products	27-09-2007 (27SEP2007 00:00:00)
Stop time of products	28-09-2007 (28SEP2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	16
Nb of prods with errors	0

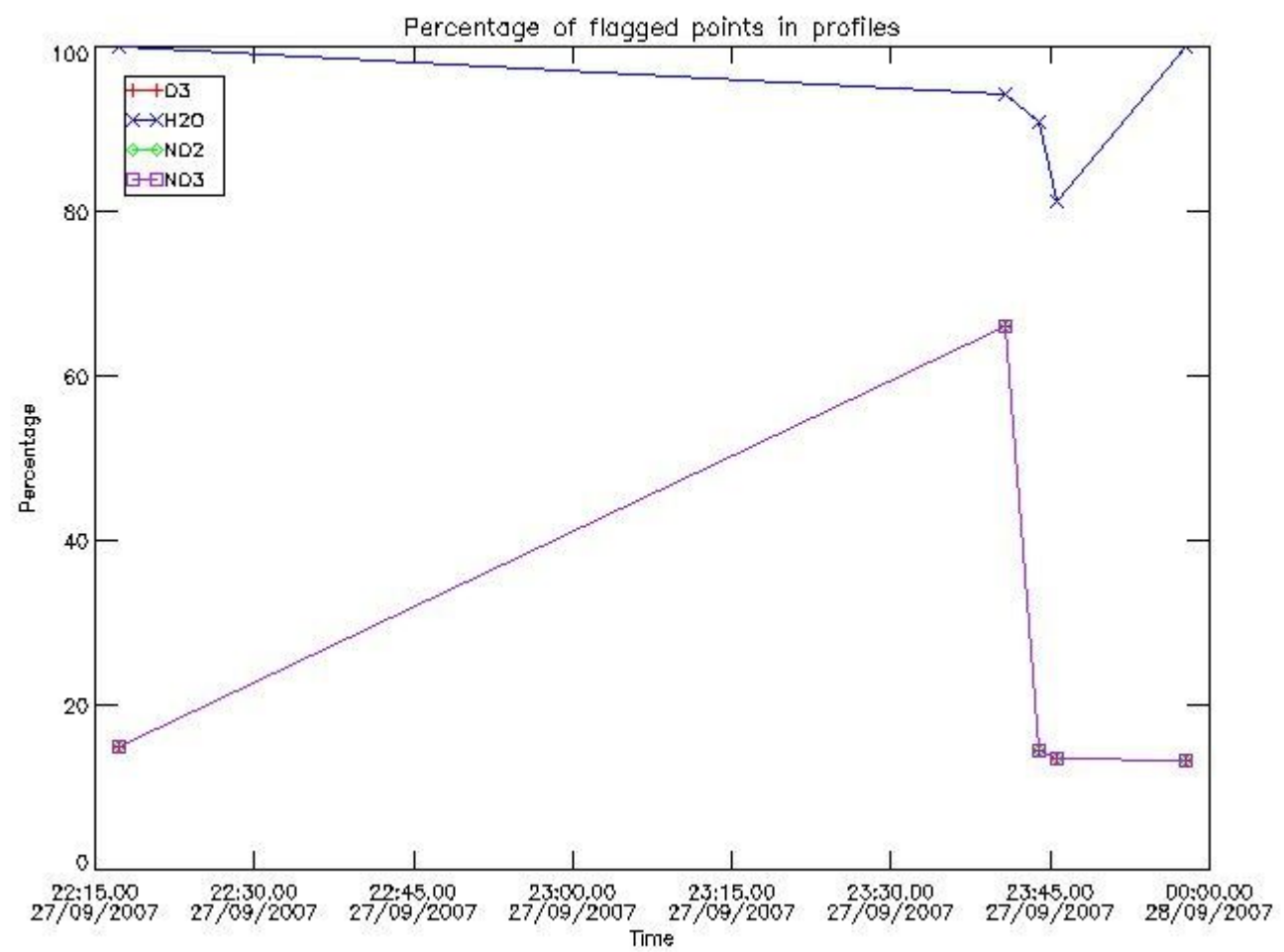
## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20070927_221709_000000382062_00044_29156_8429.N1	27-SEP-2007 22:17:09	Dark	37.500	143	Alp Hyi	2.8570	7200.0	75	29156	No
2	GOM_NL__2PRFIN20070927_222849_000000402062_00044_29156_8430.N1	27-SEP-2007 22:28:49	Straylight	39.500	18	24Alp PsA	1.1660	9700.0	79	29156	No
3	GOM_NL__2PRFIN20070927_223729_000000382062_00044_29156_8431.N1	27-SEP-2007 22:37:29	Bright	38.000	162	34Alp Aqr	2.9440	5350.0	76	29156	No
4	GOM_NL__2PRFIN20070927_224539_000000352062_00044_29156_8432.N1	27-SEP-2007 22:45:39	Bright	35.000	164	44Eta Peg	2.9480	5400.0	70	29156	No
5	GOM_NL__2PRFIN20070927_225507_000000352062_00044_29156_8433.N1	27-SEP-2007 22:55:07	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	29156	No
6	GOM_NL__2PRFIN20070927_230226_000000372062_00044_29156_8434.N1	27-SEP-2007 23:02:26	Bright	37.000	49	1Alp UMi	1.9900	6300.0	74	29156	No
7	GOM_NL__2PRFIN20070927_230414_000000352062_00044_29156_8435.N1	27-SEP-2007 23:04:14	Bright	35.000	60	7Bet UMi	2.0810	3950.0	70	29156	No
8	GOM_NL__2PRFIN20070927_231016_000000522062_00044_29156_8436.N1	27-SEP-2007 23:10:16	Bright	52.000	36	50Alp UMa	1.8000	6300.0	104	29156	No
9	GOM_NL__2PRFIN20070927_231145_000000522062_00044_29156_8437.N1	27-SEP-2007 23:11:45	Bright	52.000	82	48Bet UMa	2.3650	10600.0	104	29156	No
10	GOM_NL__2PRFIN20070927_231456_000000342062_00044_29156_8438.N1	27-SEP-2007 23:14:56	Bright	33.500	174	52Psi UMa	3.0040	4400.0	67	29156	No
11	GOM_NL__2PRFIN20070927_232135_000000342062_00044_29156_8439.N1	27-SEP-2007 23:21:35	Bright	34.000	166	17Eps Leo	2.9800	6000.0	68	29156	No
12	GOM_NL__2PRFIN20070927_233100_000000442062_00044_29156_8440.N1	27-SEP-2007 23:31:00	Twilight	43.500	48	30Alp Hya	1.9770	4100.0	87	29156	No
13	GOM_NL__2PRFIN20070927_234041_000000432062_00044_29156_8441.N1	27-SEP-2007 23:40:41	Dark	43.000	65	Lam Vel	2.2040	4400.0	86	29156	No
14	GOM_NL__2PRFIN20070927_234359_000000392062_00044_29156_8442.N1	27-SEP-2007 23:43:59	Dark	38.500	46	Del Vel	1.9540	10600.0	77	29156	No
15	GOM_NL__2PRFIN20070927_234534_000000382062_00044_29156_8443.N1	27-SEP-2007 23:45:34	Dark	37.500	41	Eps Car	1.8600	4100.0	75	29156	No
16	GOM_NL__2PRFIN20070927_235745_000000392062_00045_29157_8443.N1	27-SEP-2007 23:57:45	Dark	38.500	143	Alp Hyi	2.8570	7200.0	77	29157	No

## 3. Quality information per product

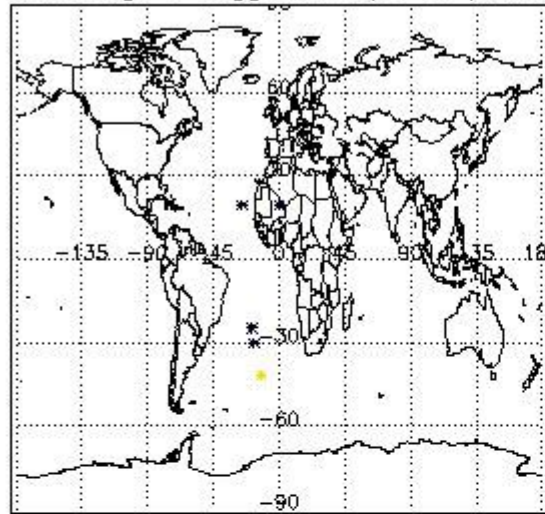
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

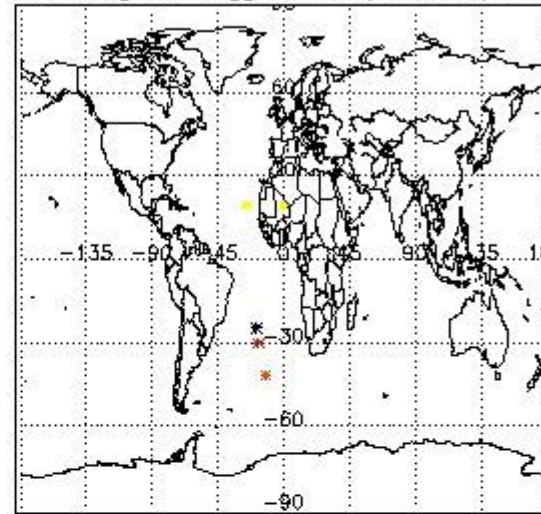


*3.2 Plot quality information per product (world map)*

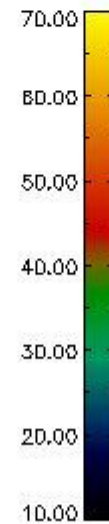
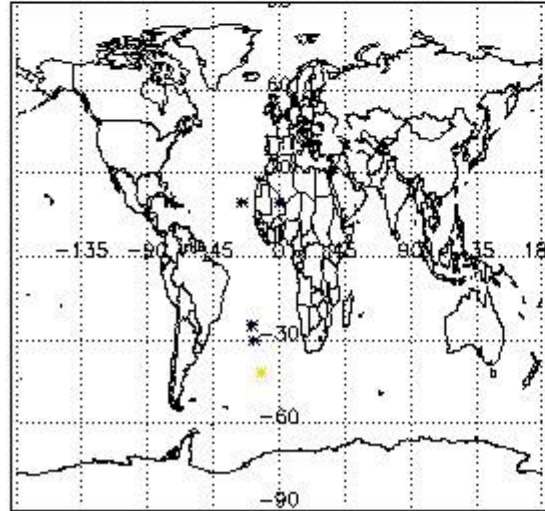
Percentage of flagged data per O3 profile



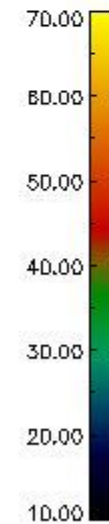
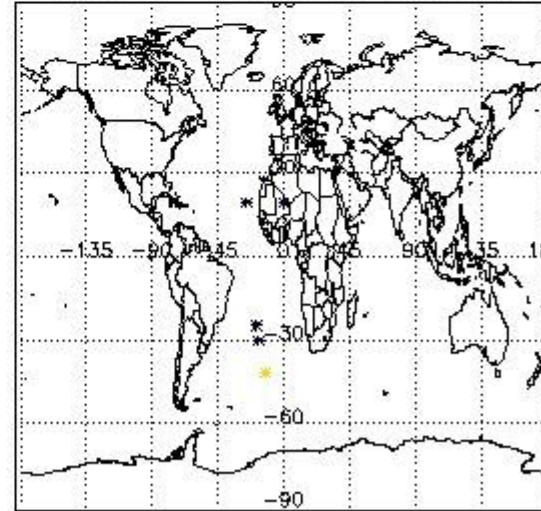
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

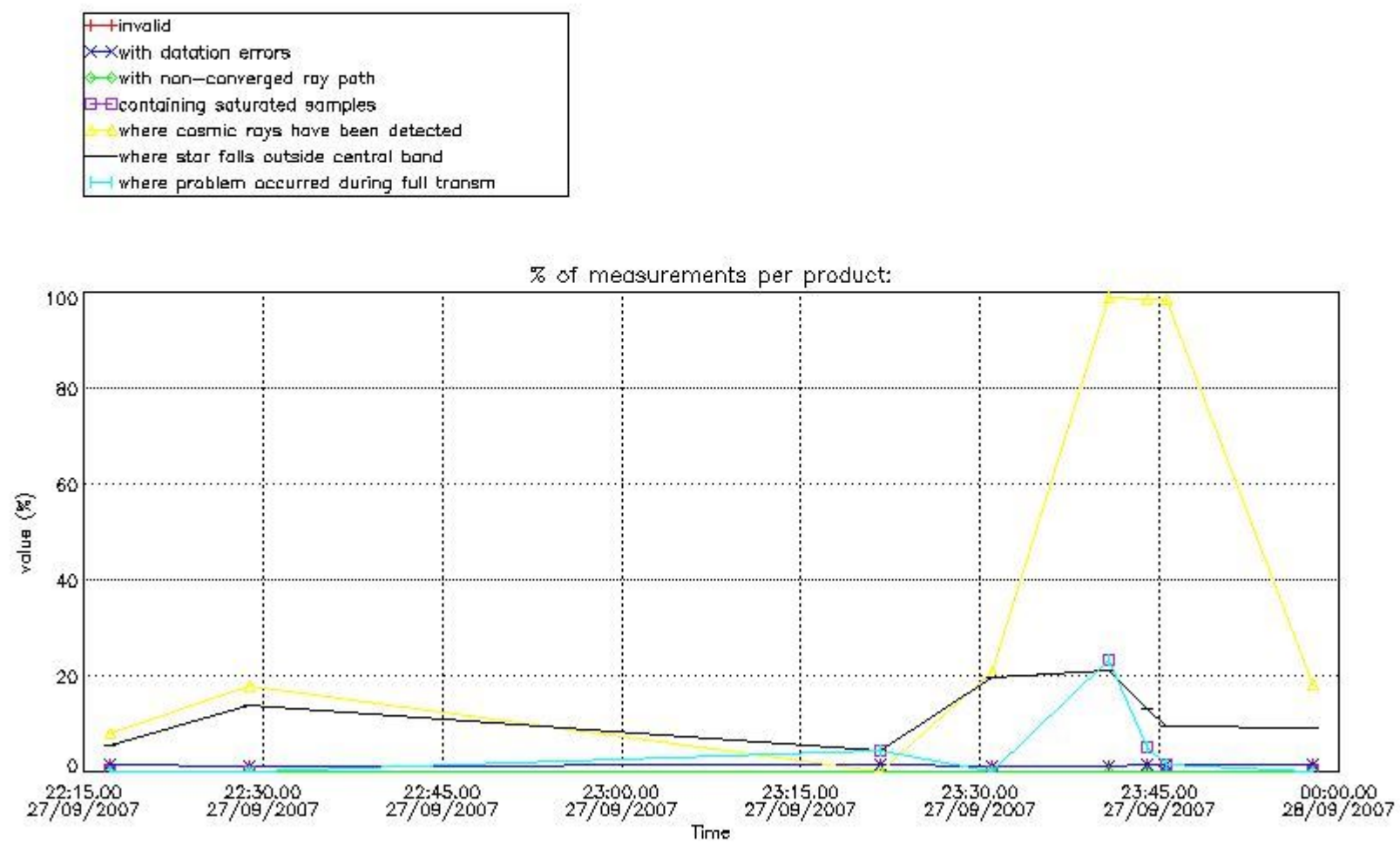


#### 4. Level 1 quality information per product

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.

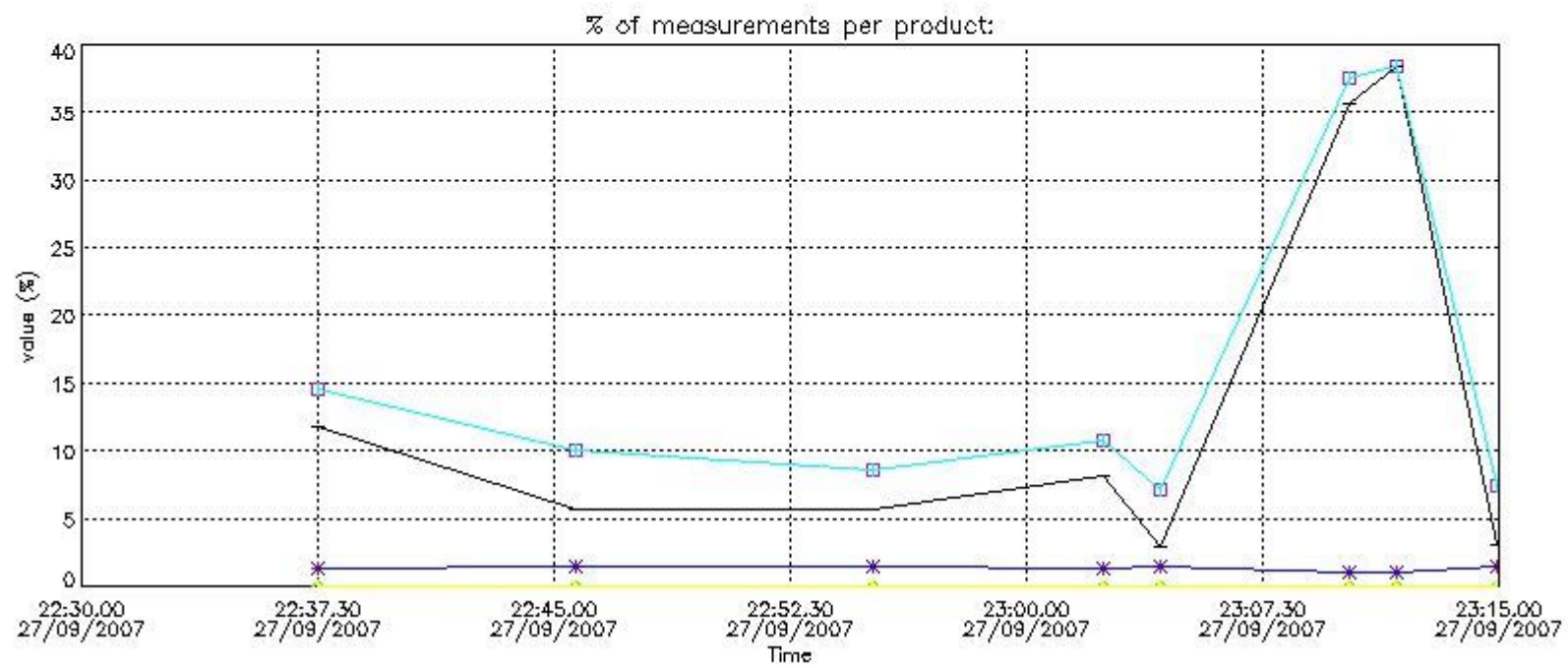
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

###### 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

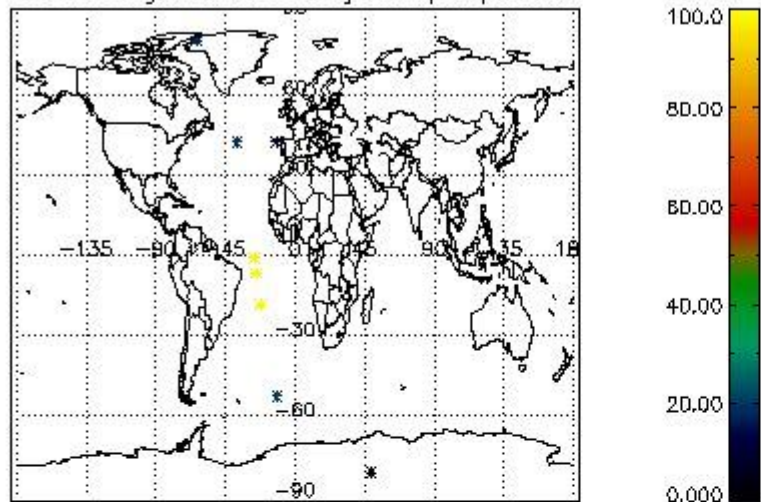




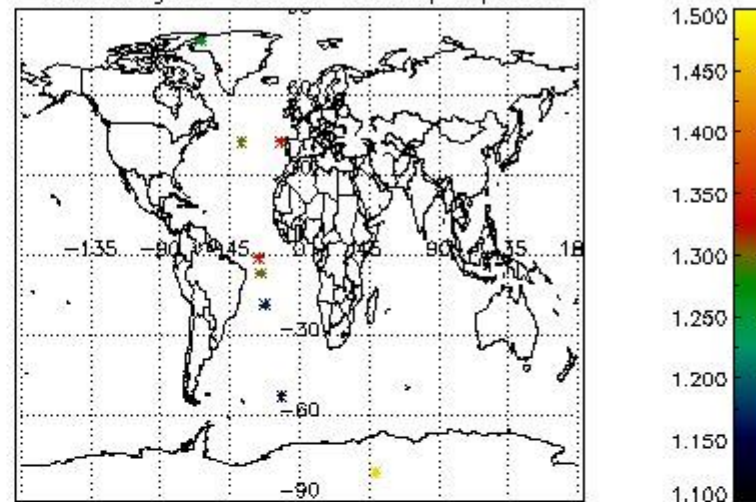
4.2 Plot quality information per product coming from level 1b processing (world map)

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

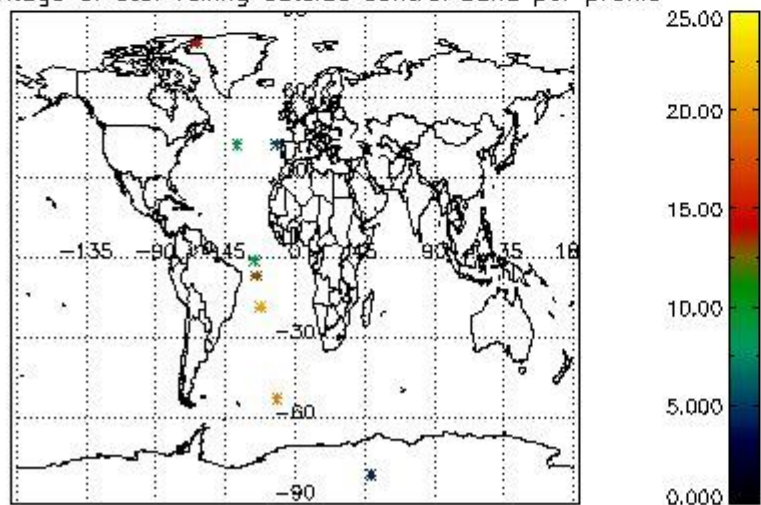
Percentage of cosmic ray hits per profile



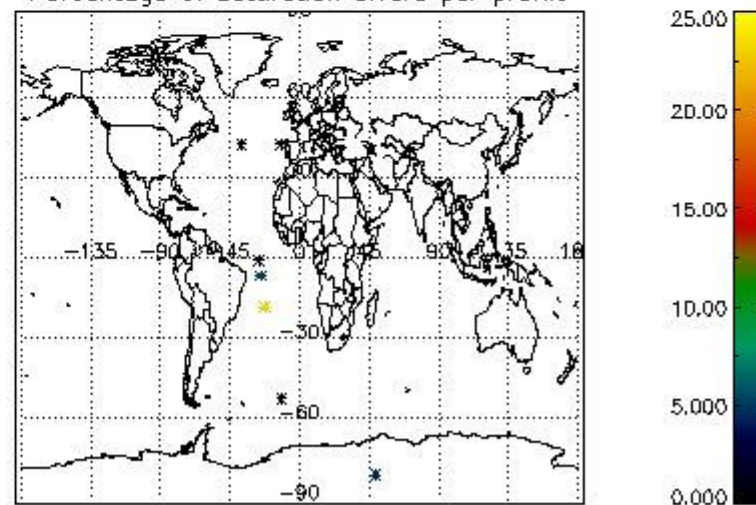
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

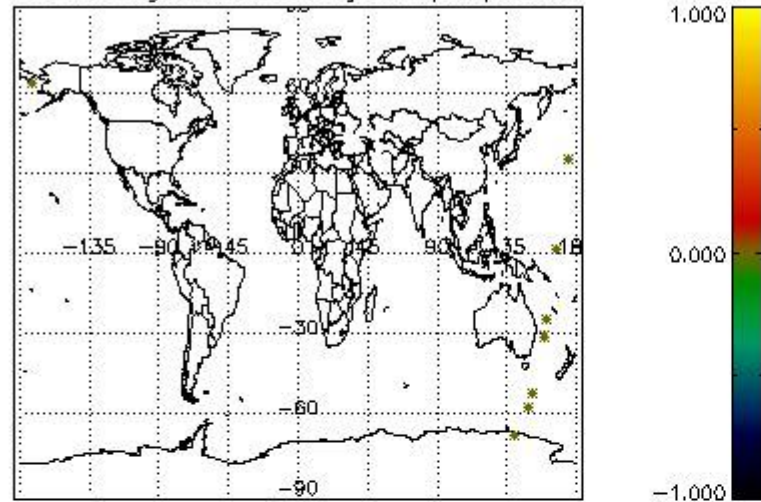


Percentage of saturation errors per profile

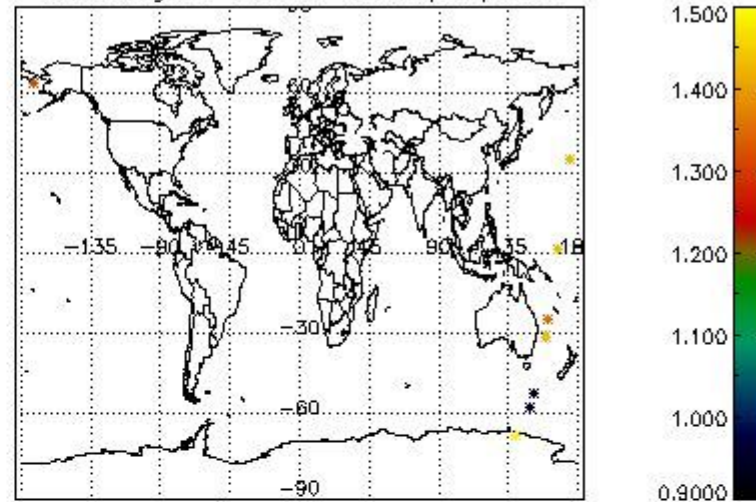


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

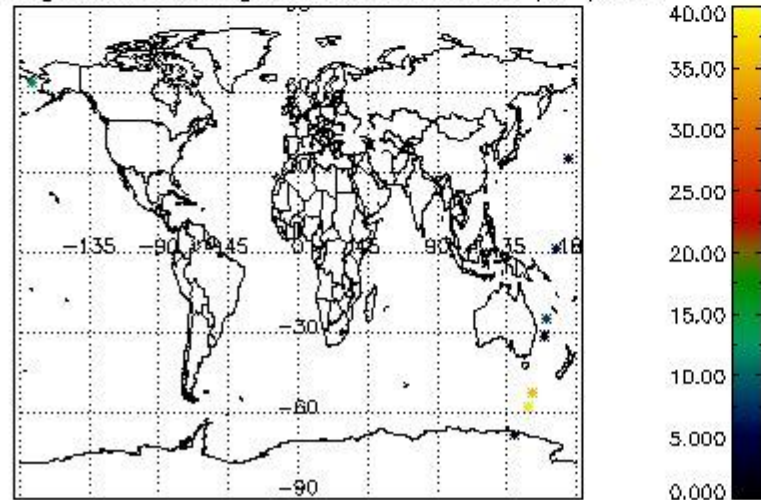
Percentage of cosmic ray hits per profile



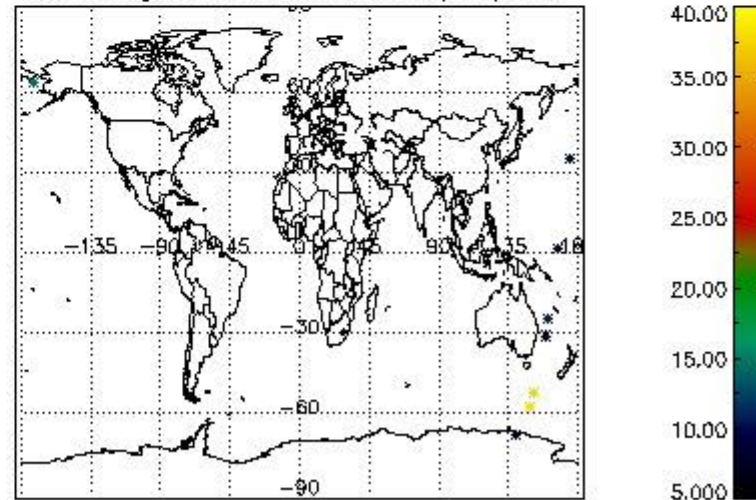
Percentage of datation errors per profile



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.

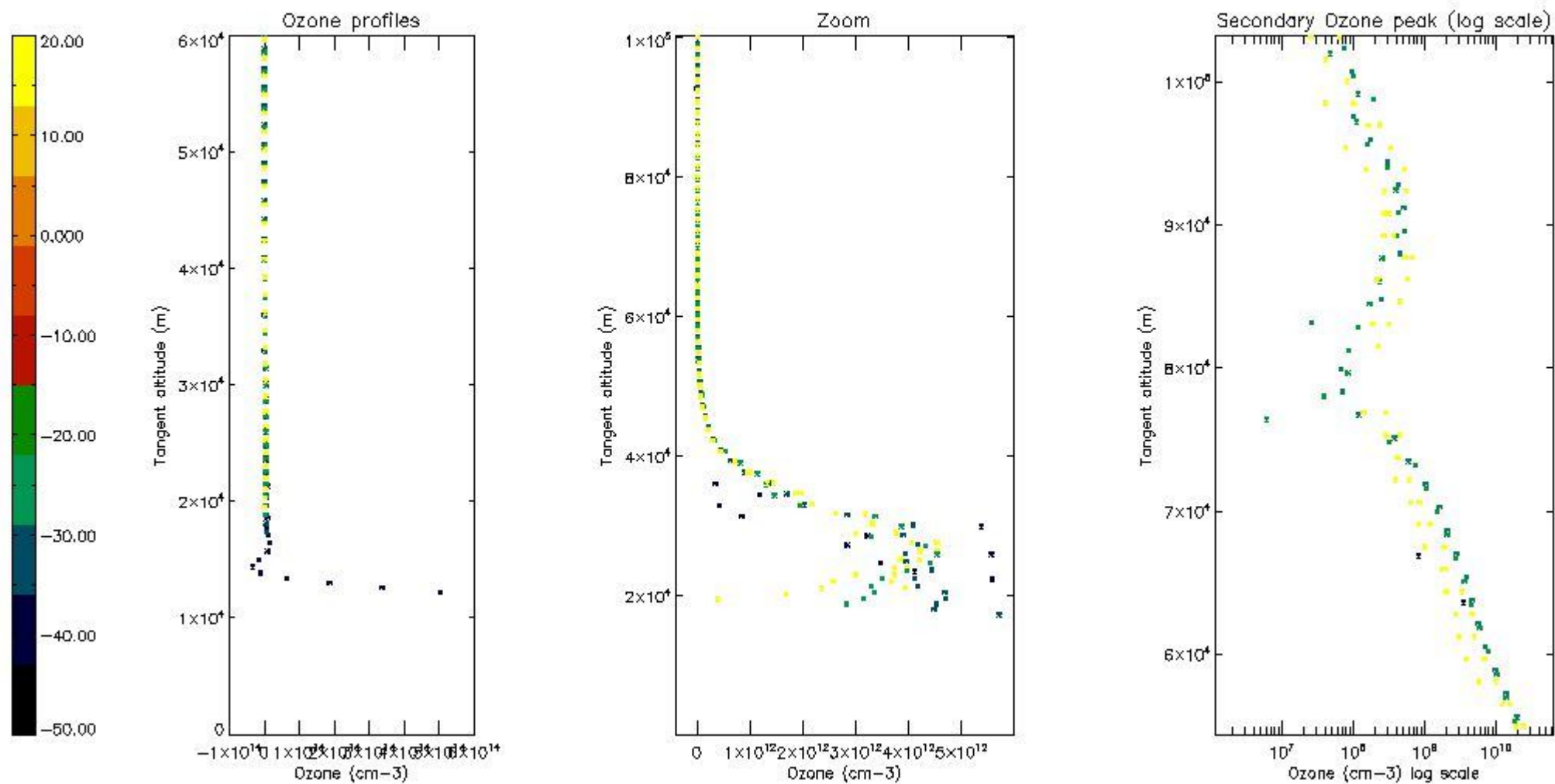
Criteria	% of total production
All STD	28
STD < 20	14



STD < 10	10
STD < 5	1

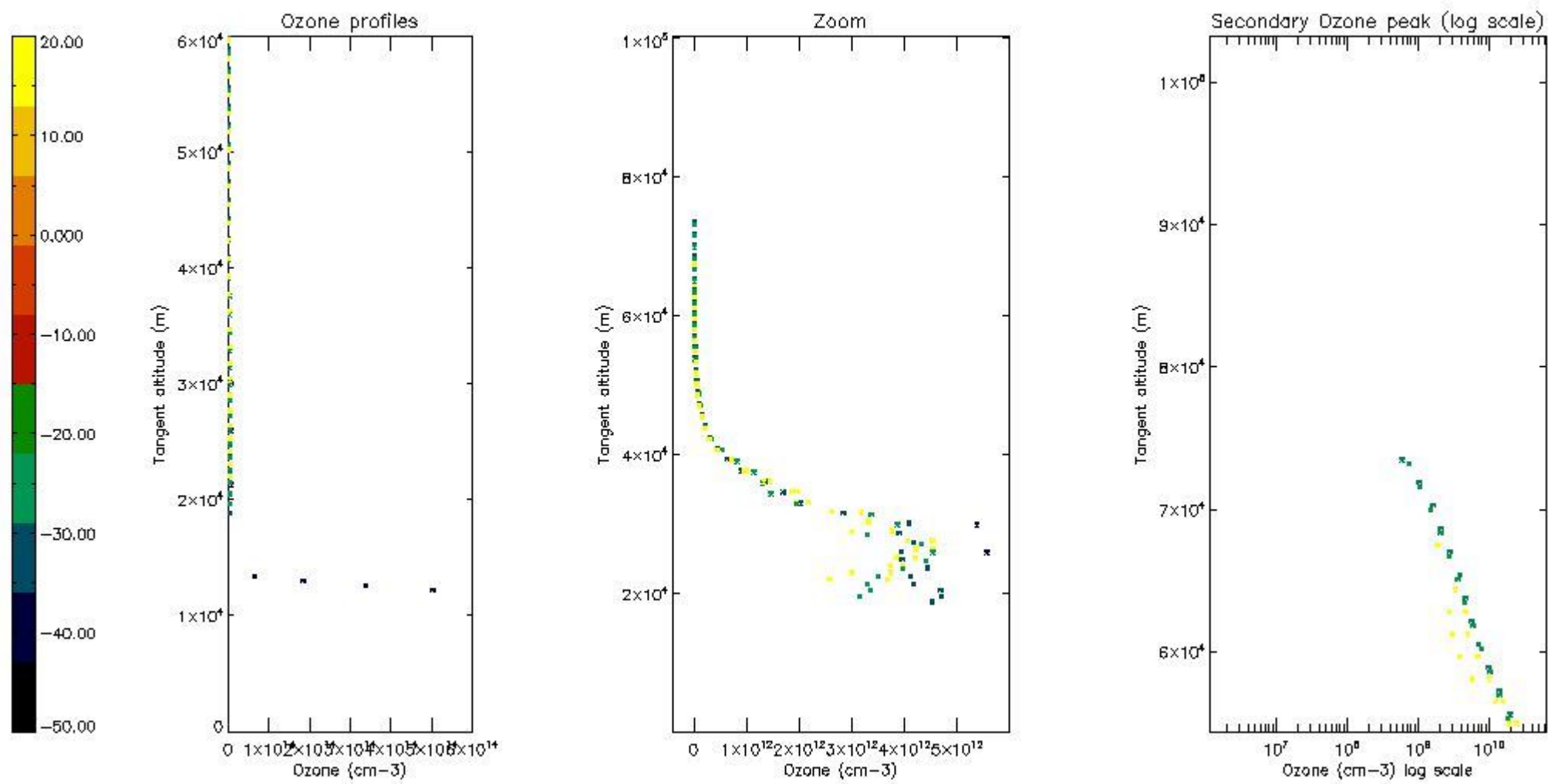
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



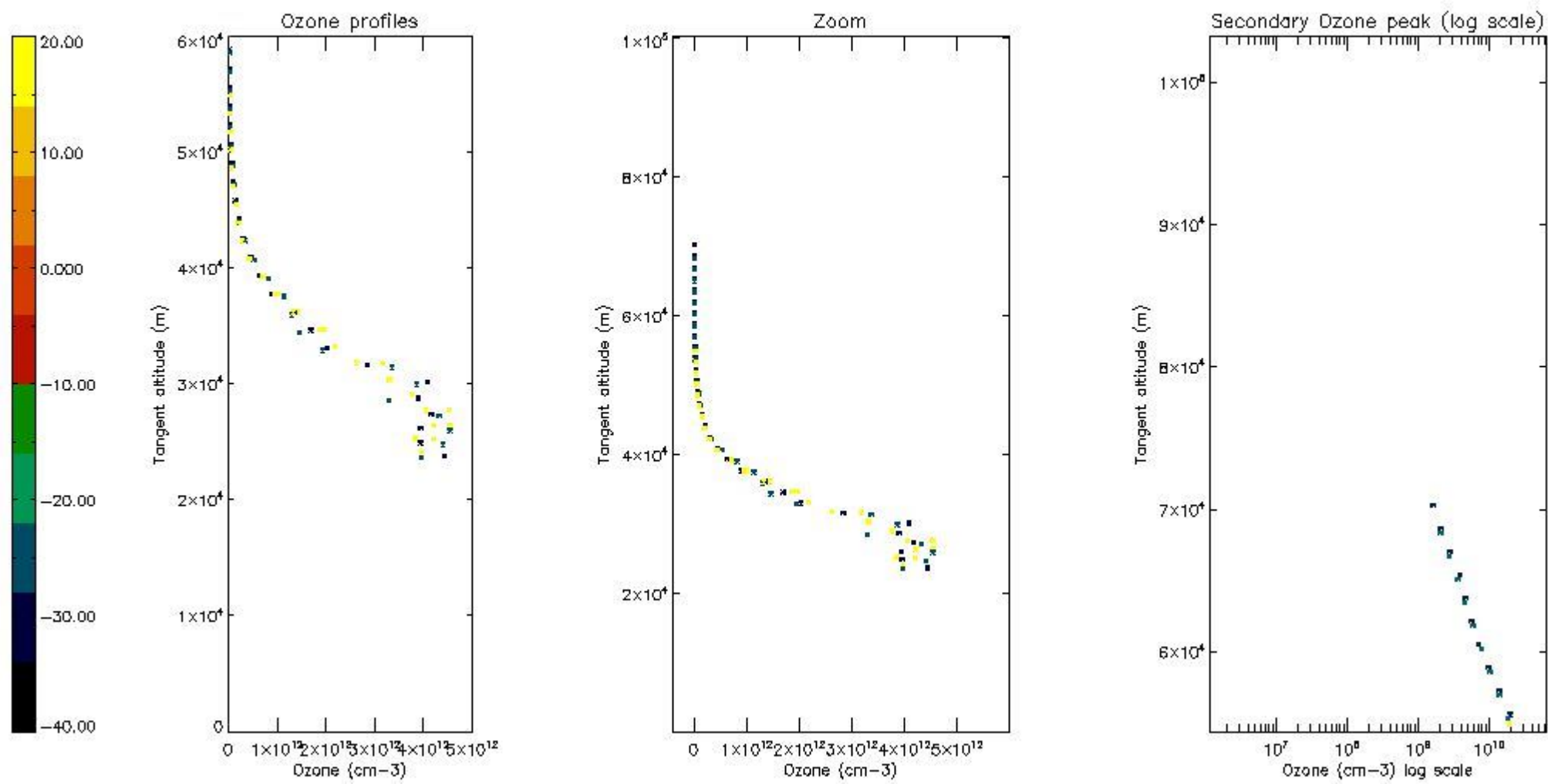
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



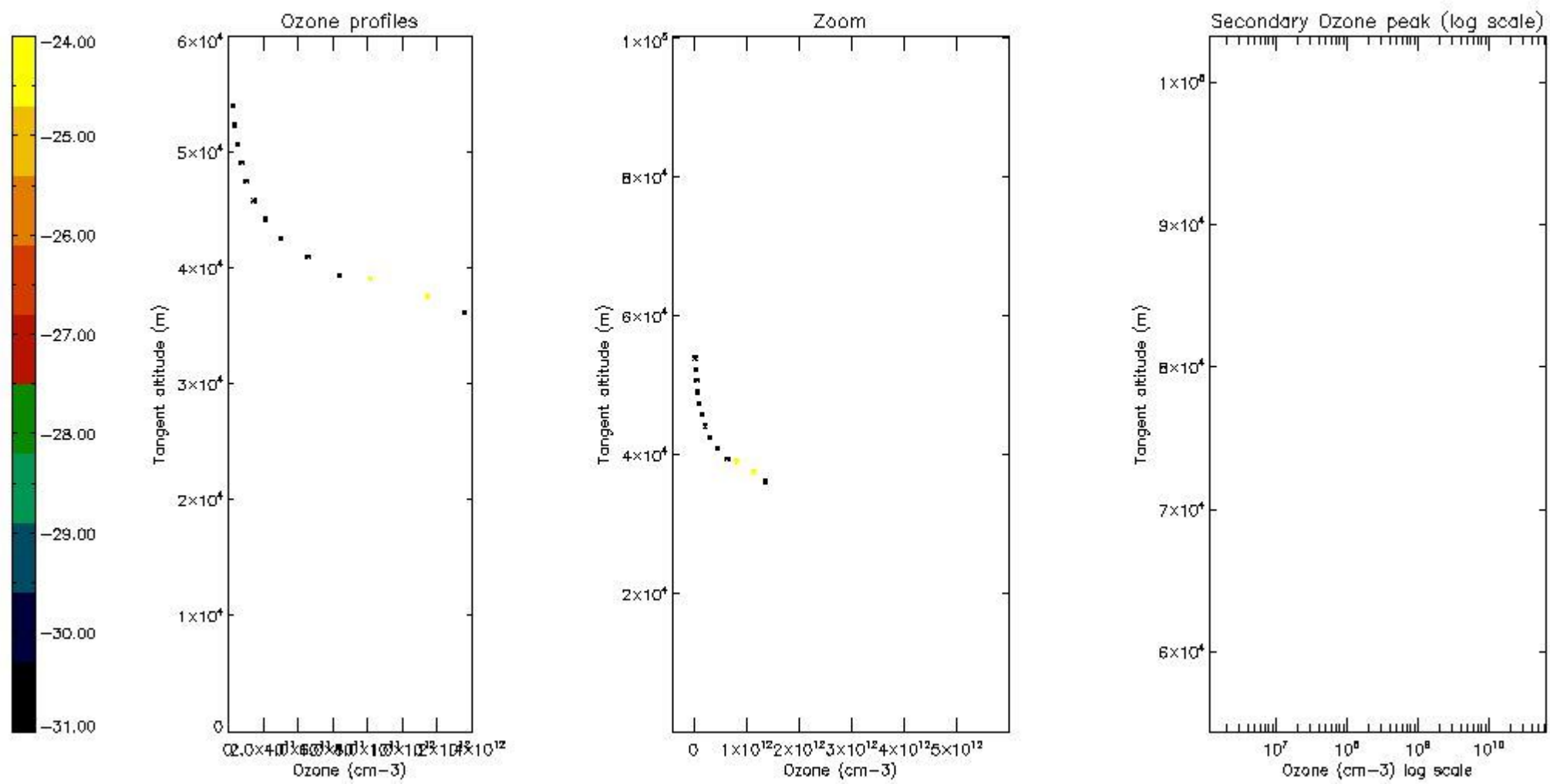
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

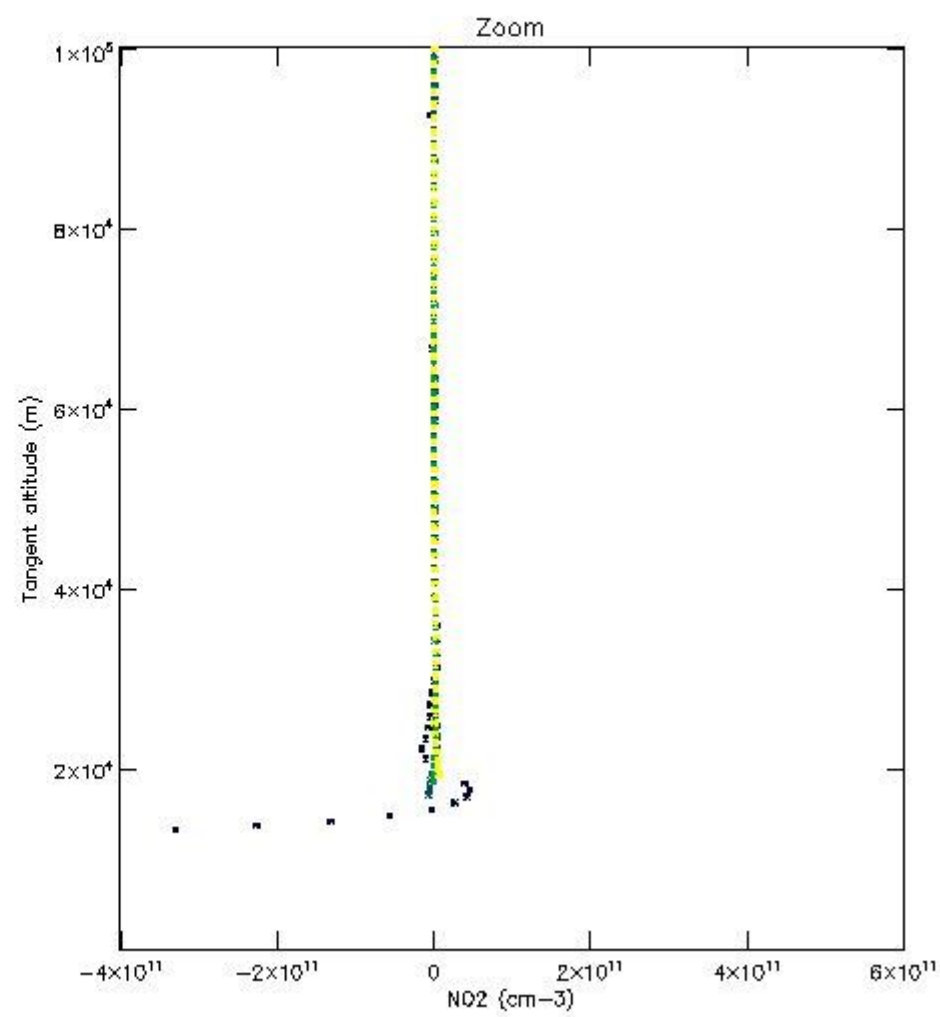
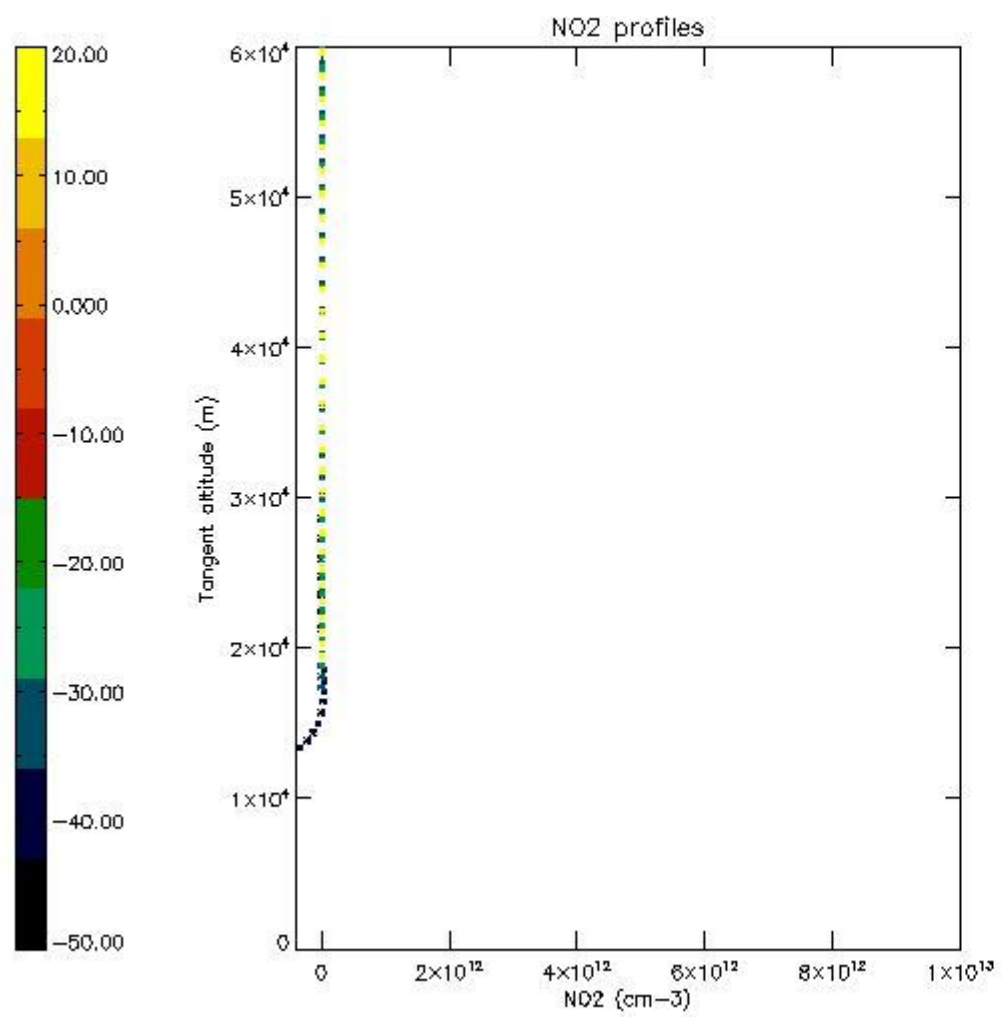
The colorbar represents the latitude.



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

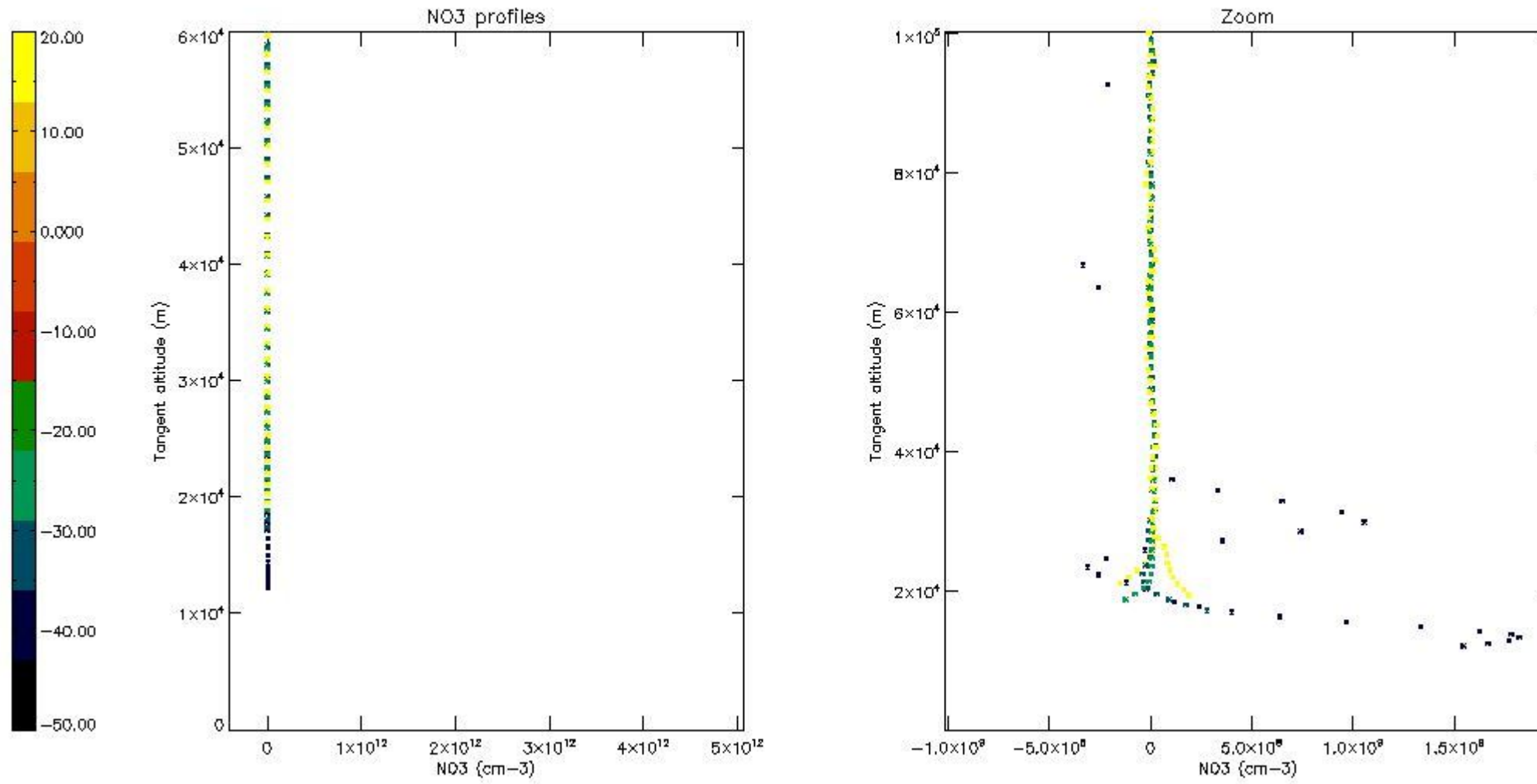
The colorbar represents the latitude.





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

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-SEP-2007 22:17:09
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-SEP-2007 22:17:09
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-SEP-2007 22:17:09

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

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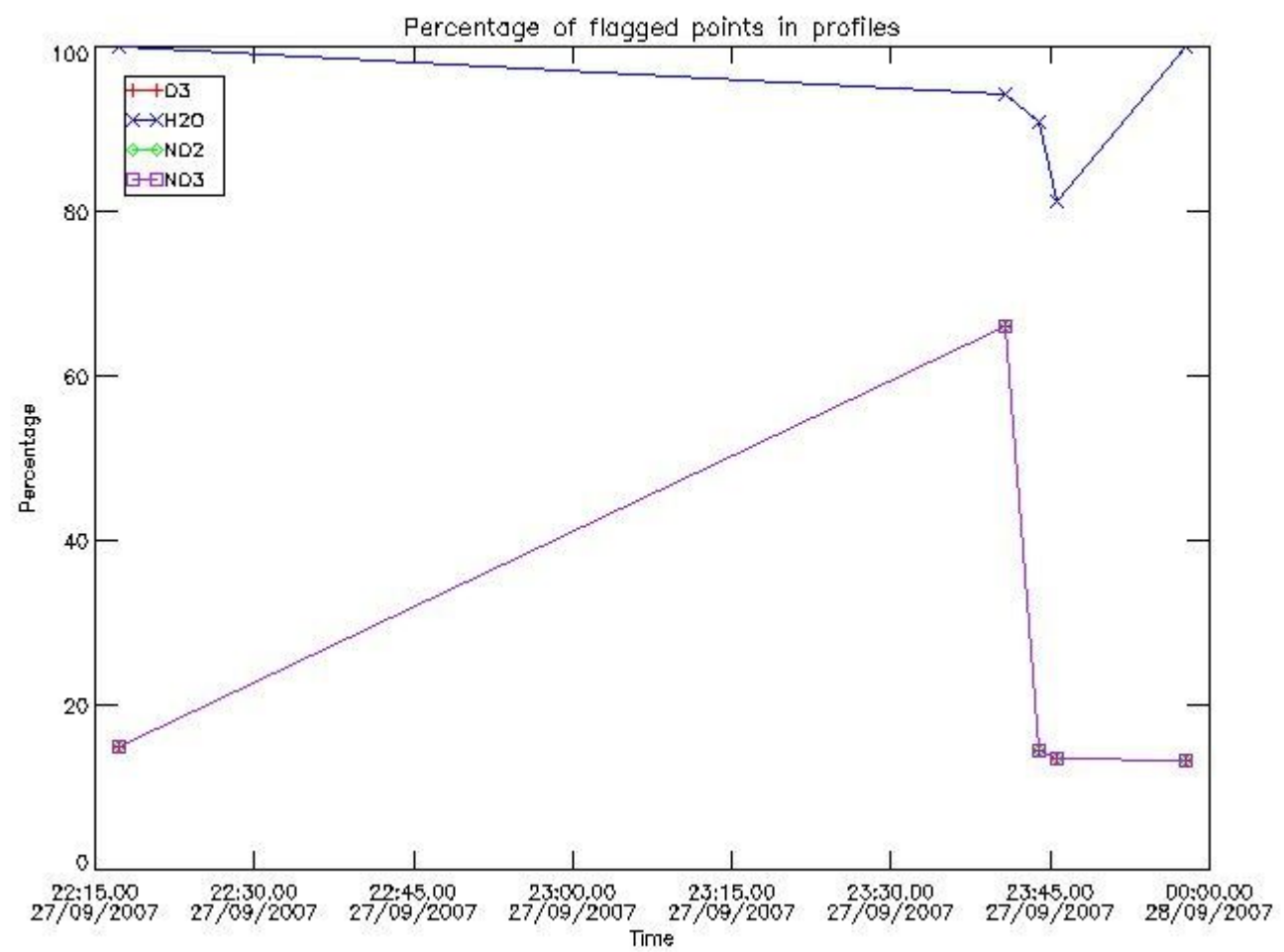
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## 3. Quality information per product

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.

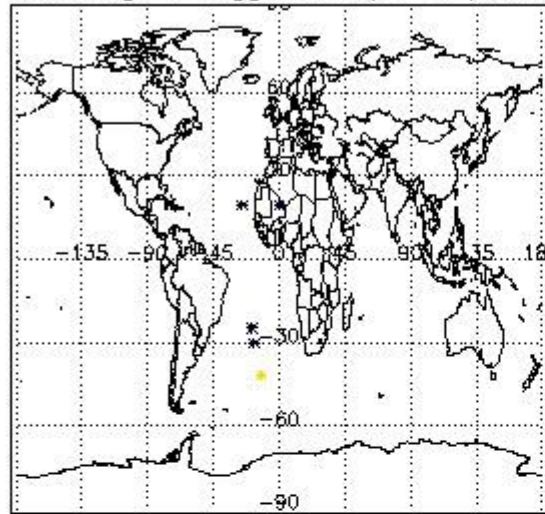
### 3.1 Plot quality information per product (time dependant)



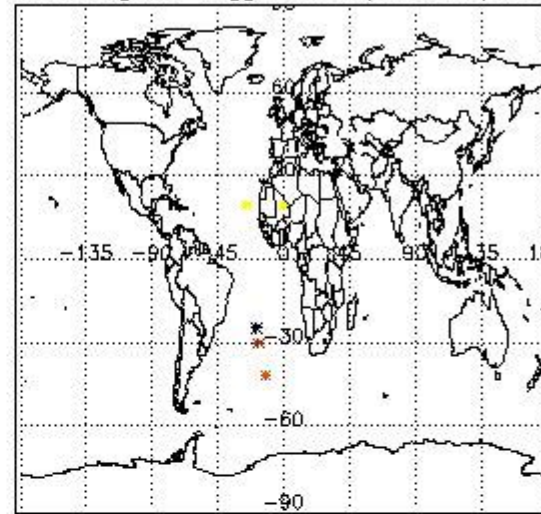


*3.2 Plot quality information per product (world map)*

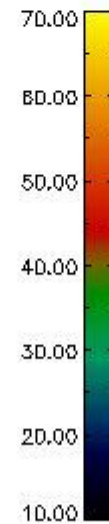
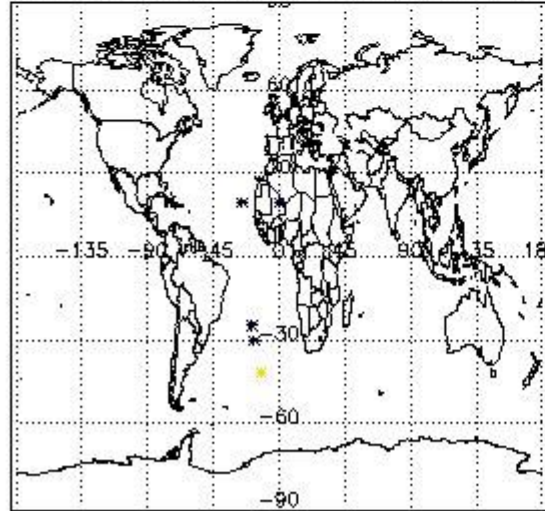
Percentage of flagged data per O3 profile



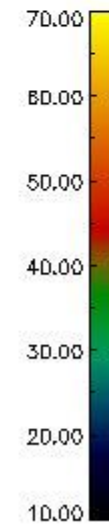
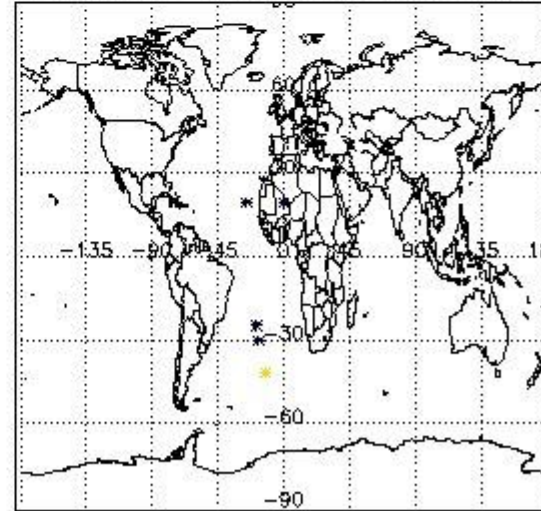
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

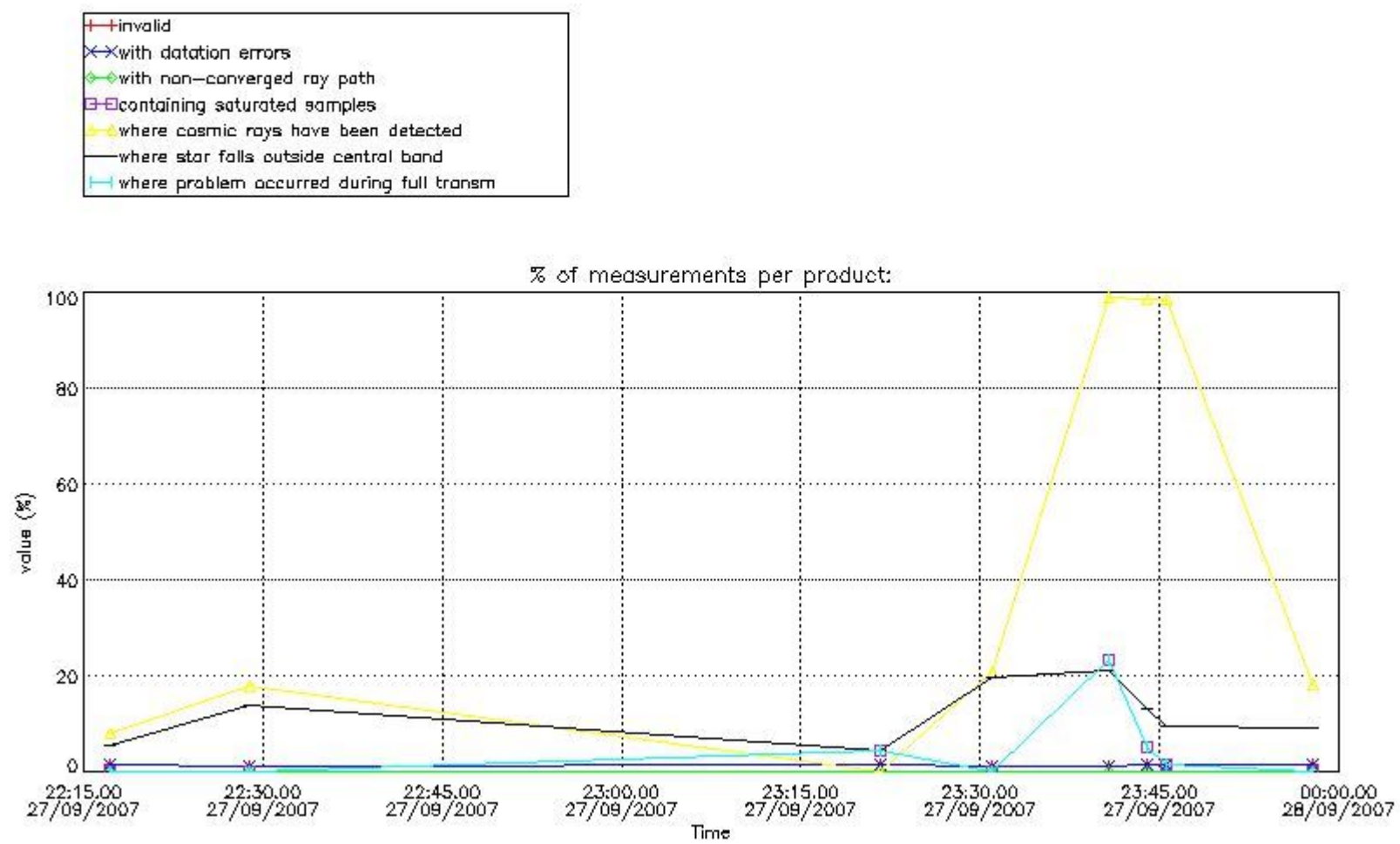


#### 4. Level 1 quality information per product

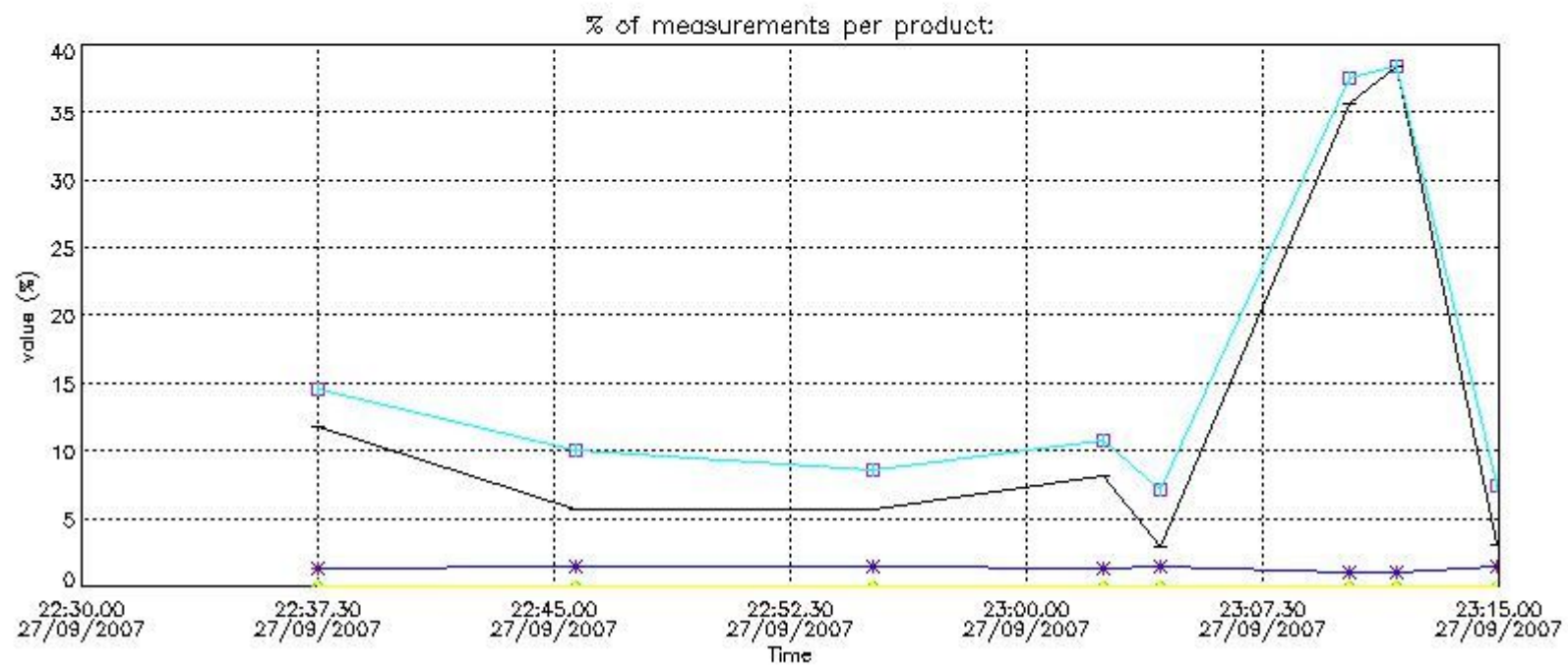
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

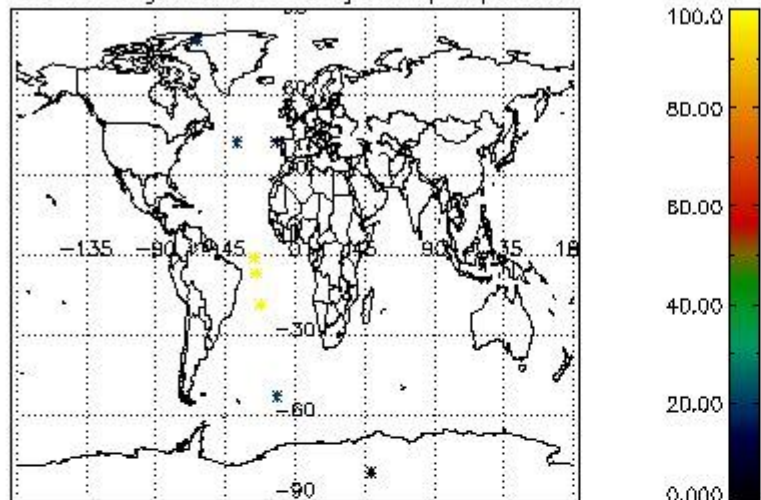


4.2 Plot quality information per product coming from level 1b processing (world map)

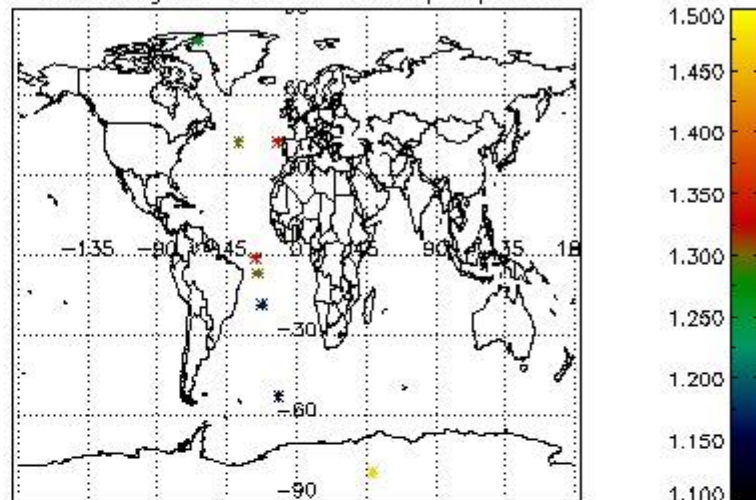
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



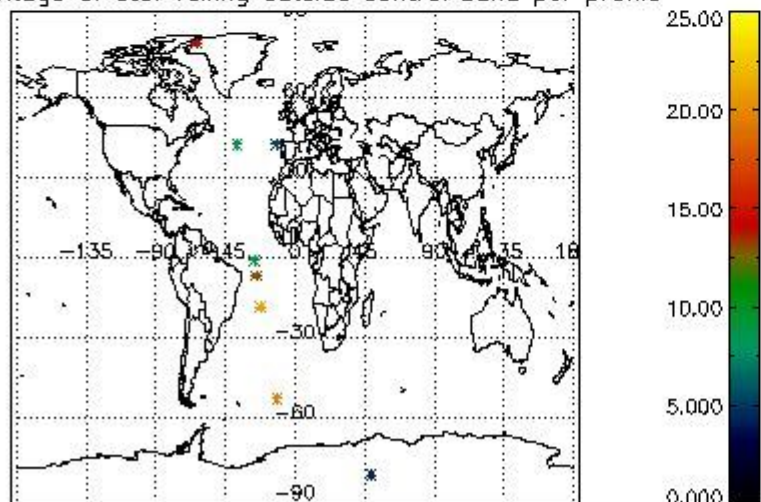
Percentage of cosmic ray hits per profile



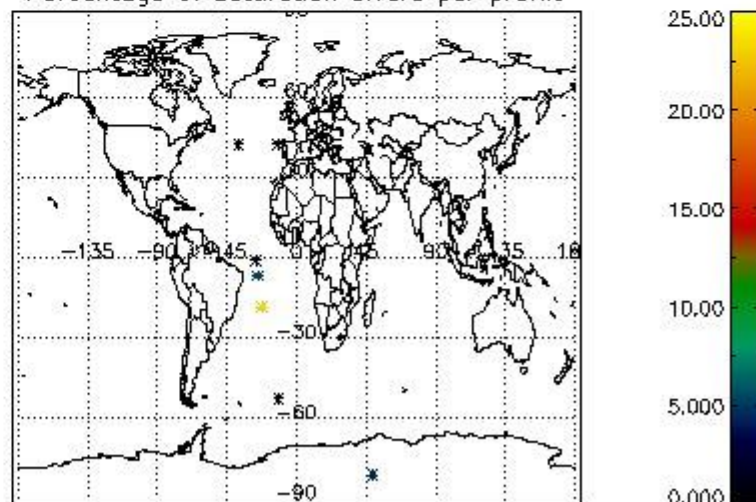
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

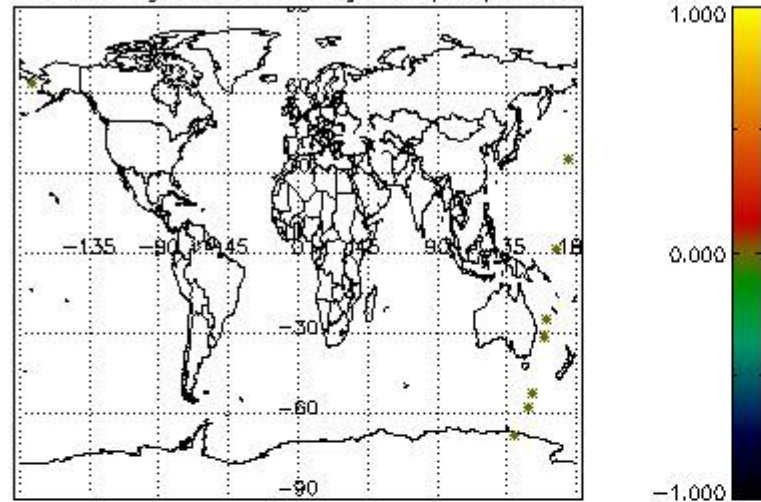


Percentage of saturation errors per profile

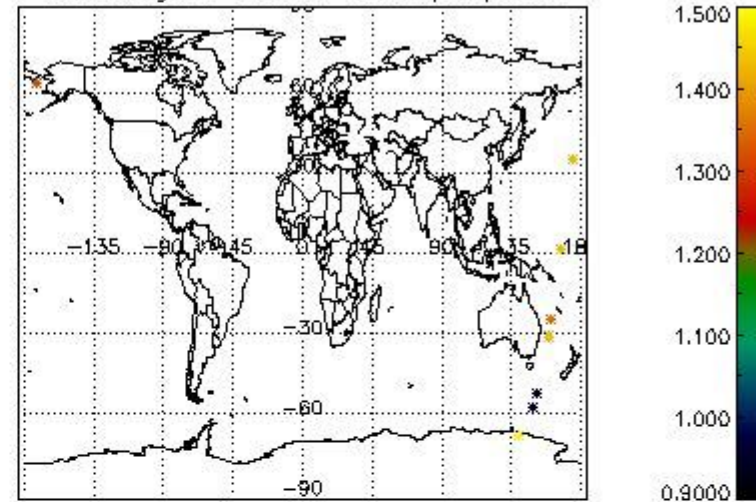


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

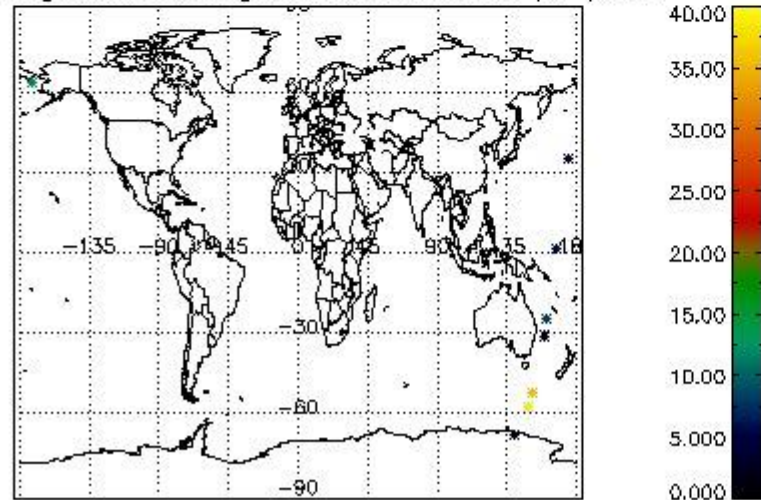
Percentage of cosmic ray hits per profile



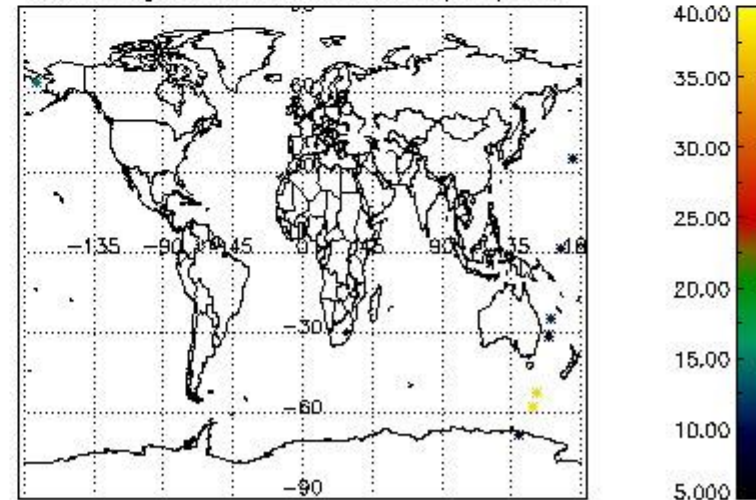
Percentage of datation errors per profile



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

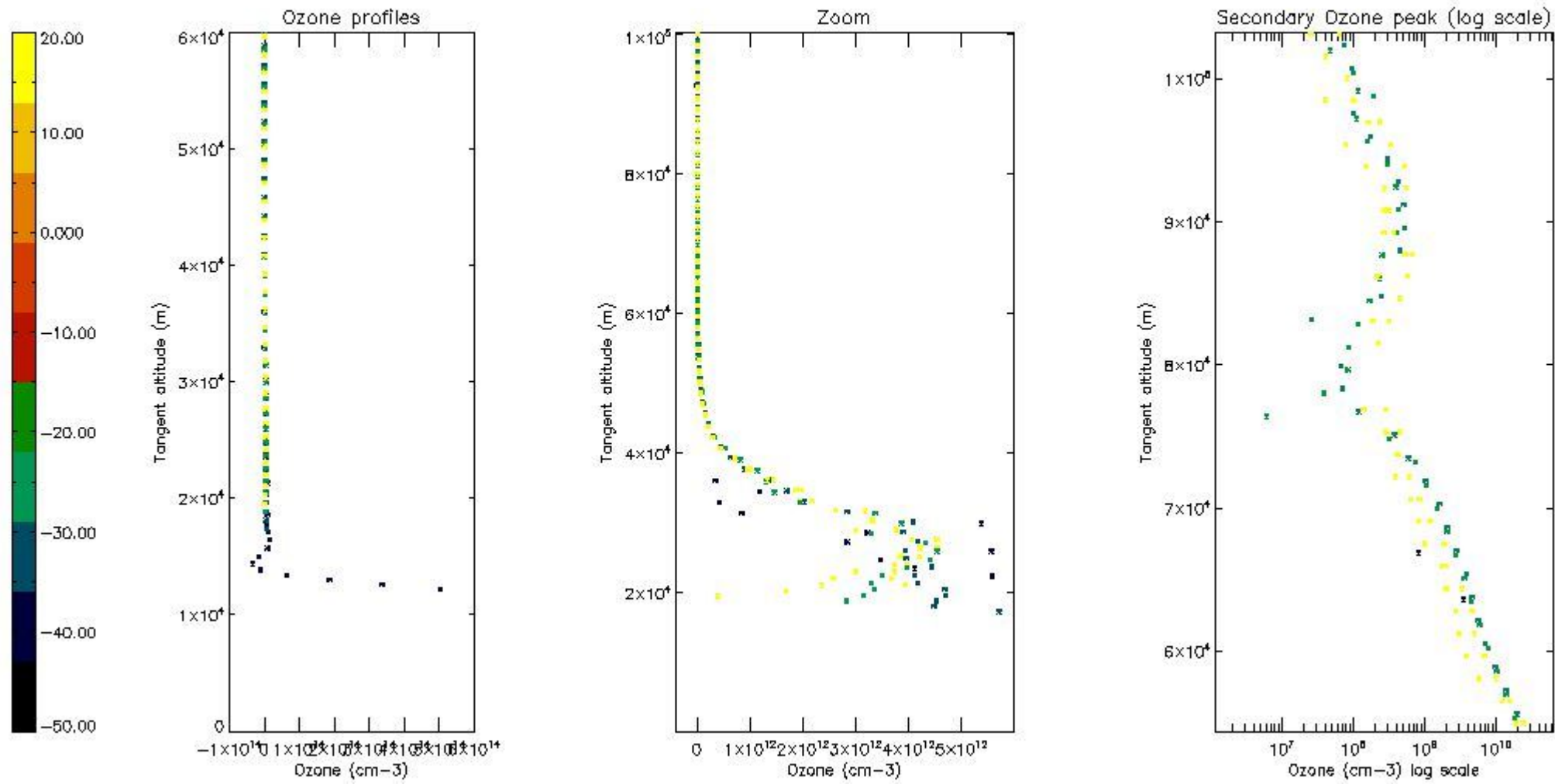
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	28
STD < 20	14

STD < 10	10
STD < 5	1

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

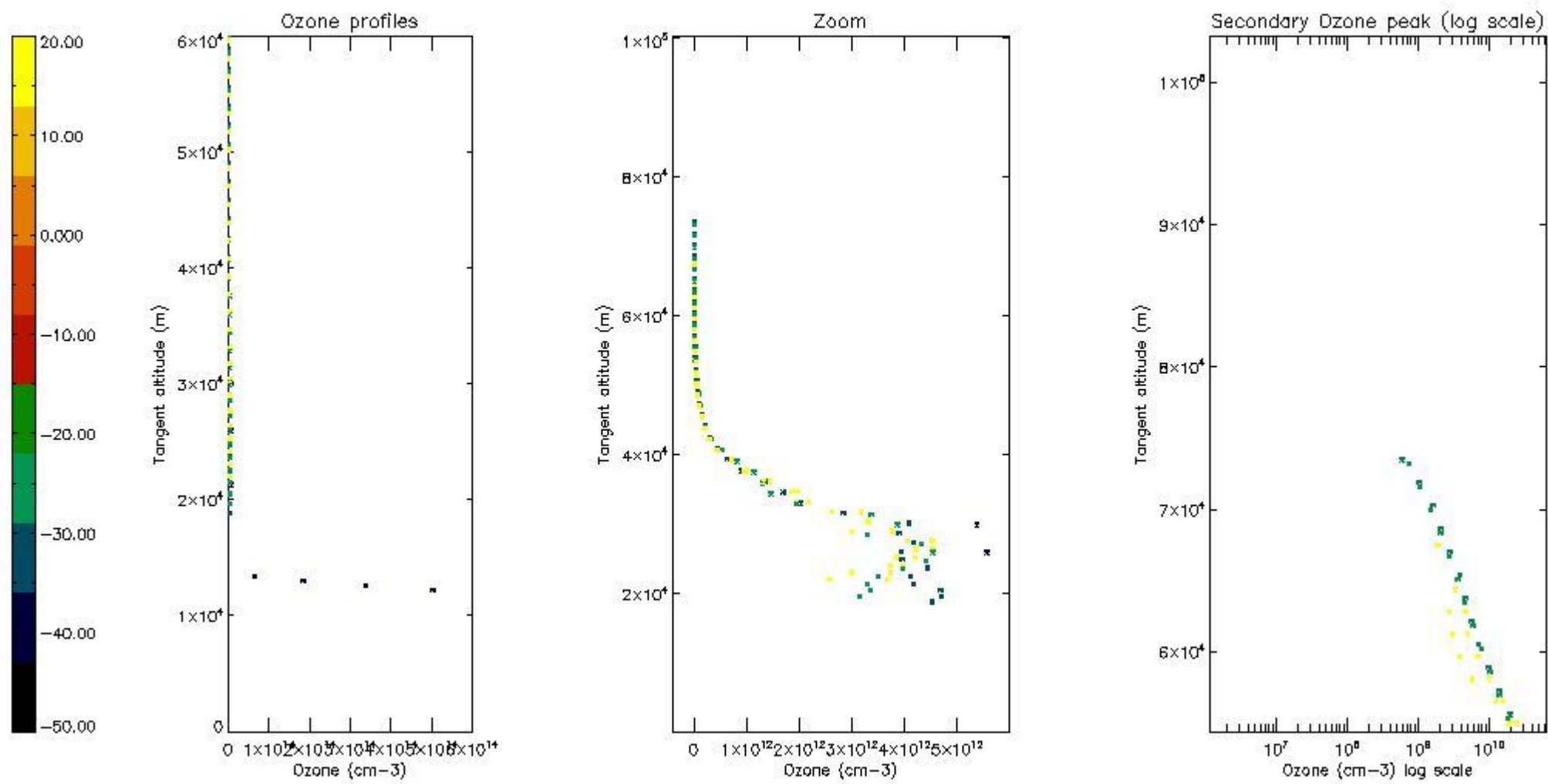
The colorbar represents the latitude.



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

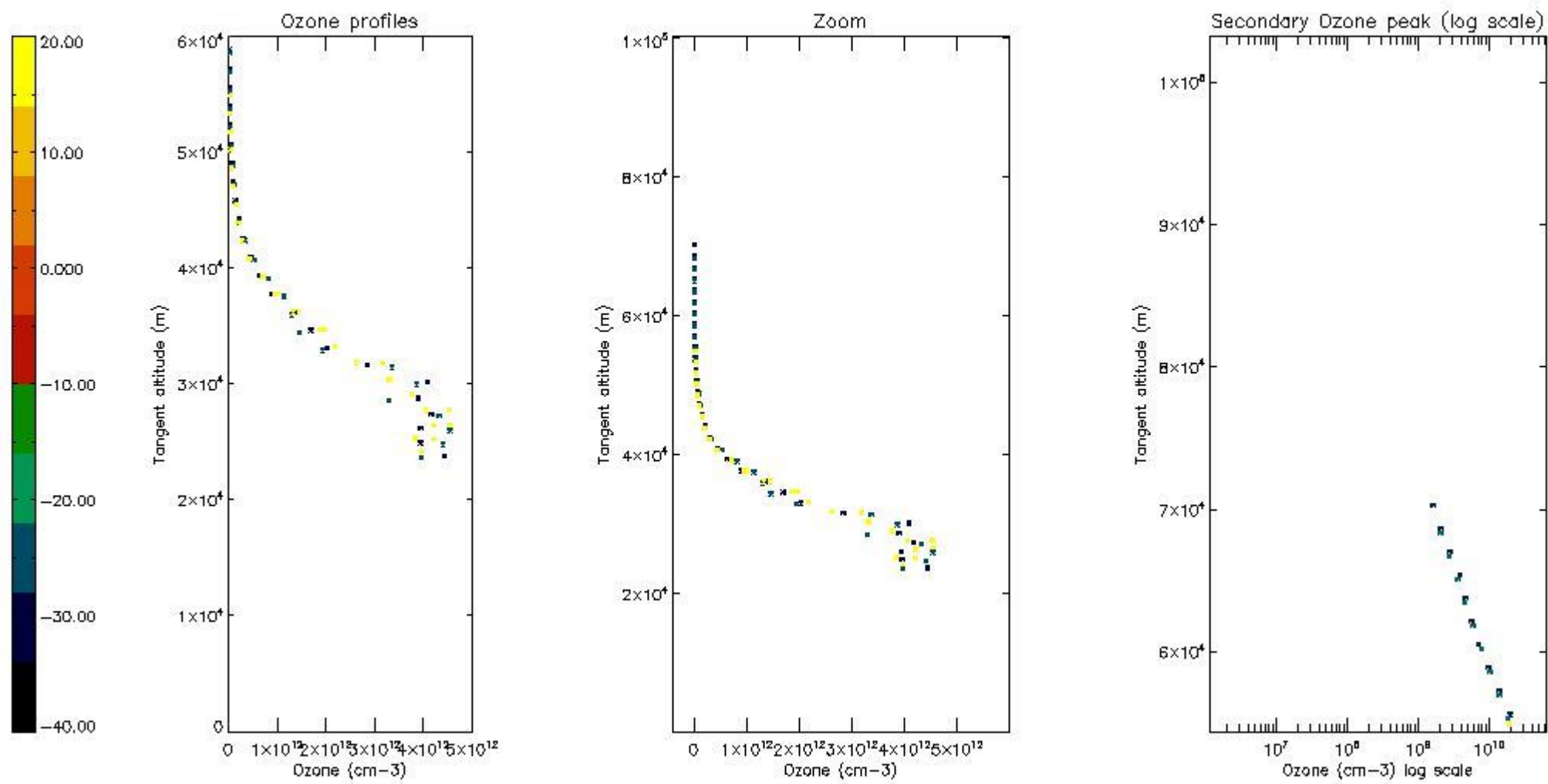
The colorbar represents the latitude.





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

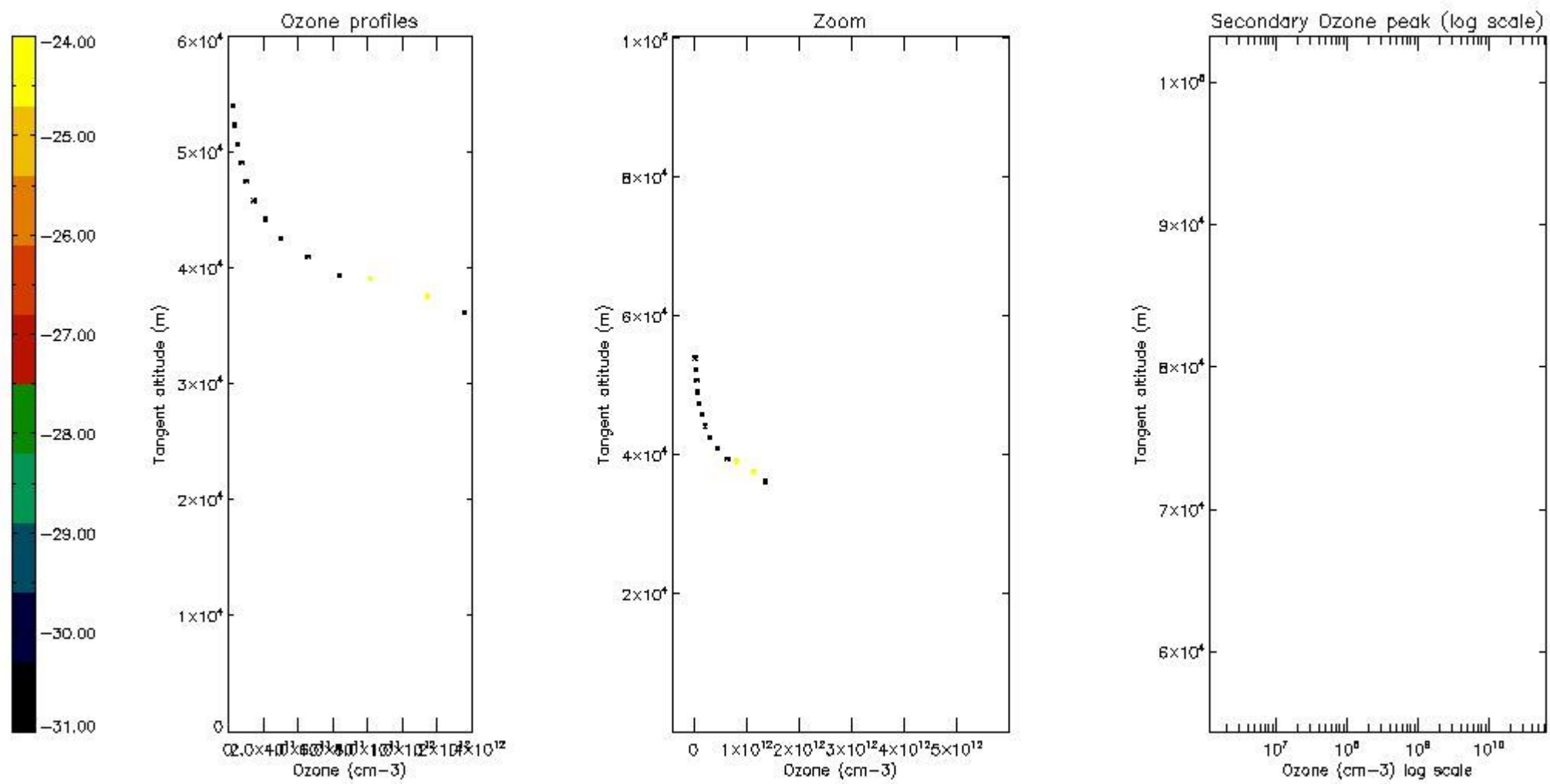
The colorbar represents the latitude.



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

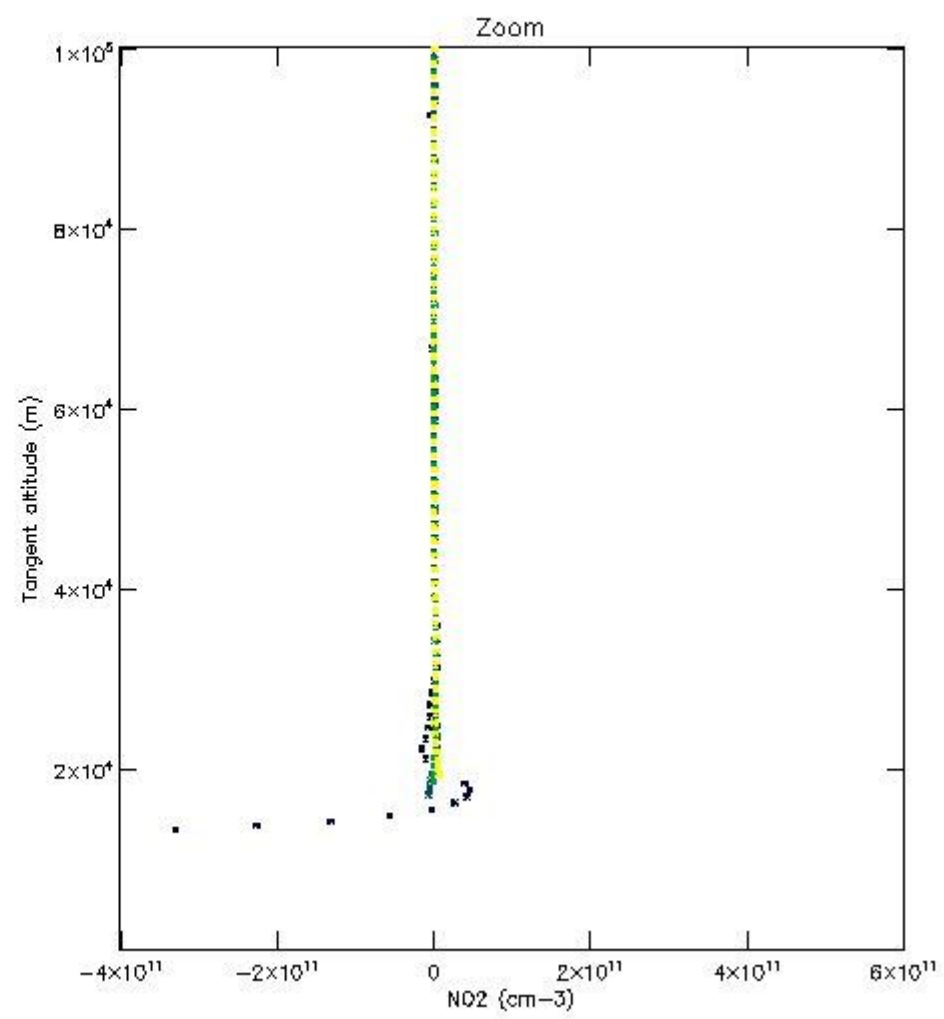
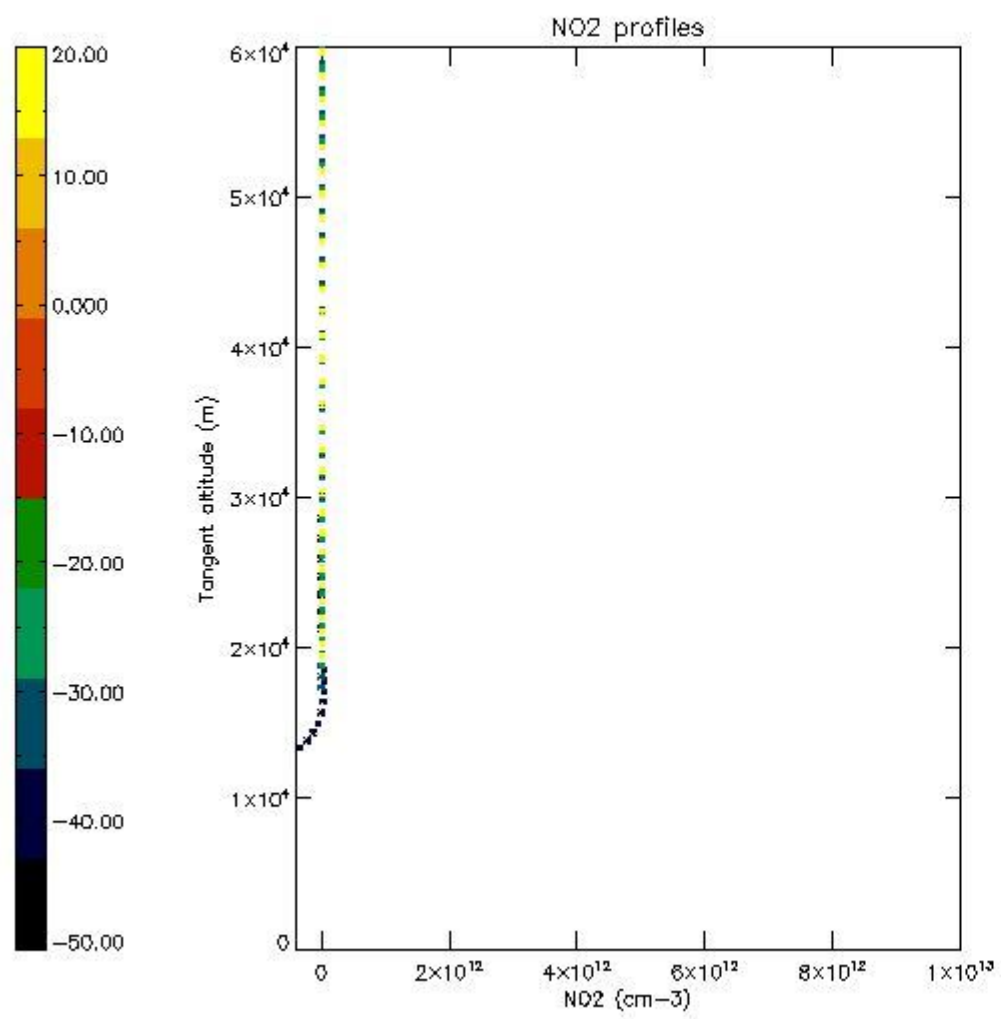
The colorbar represents the latitude.





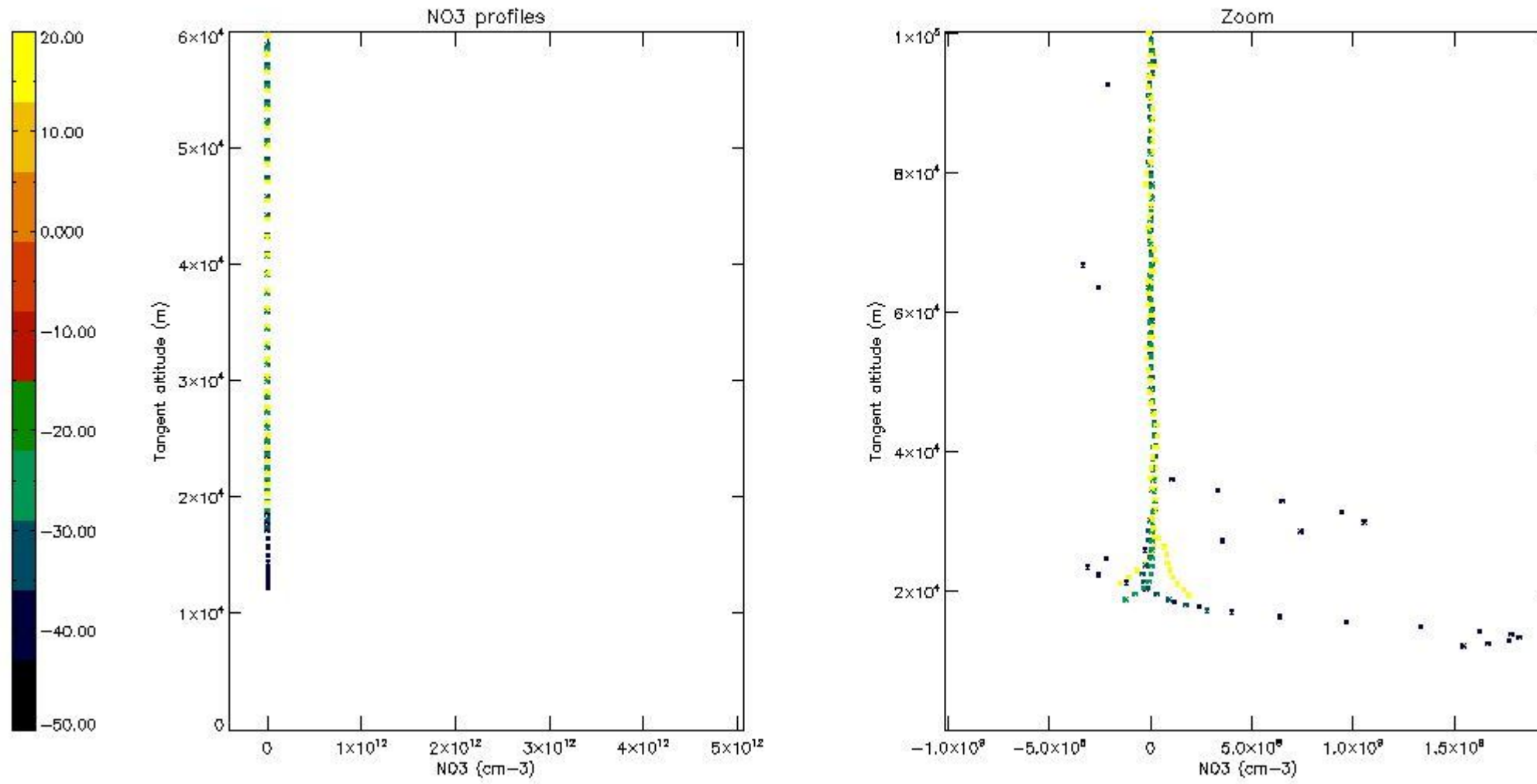
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

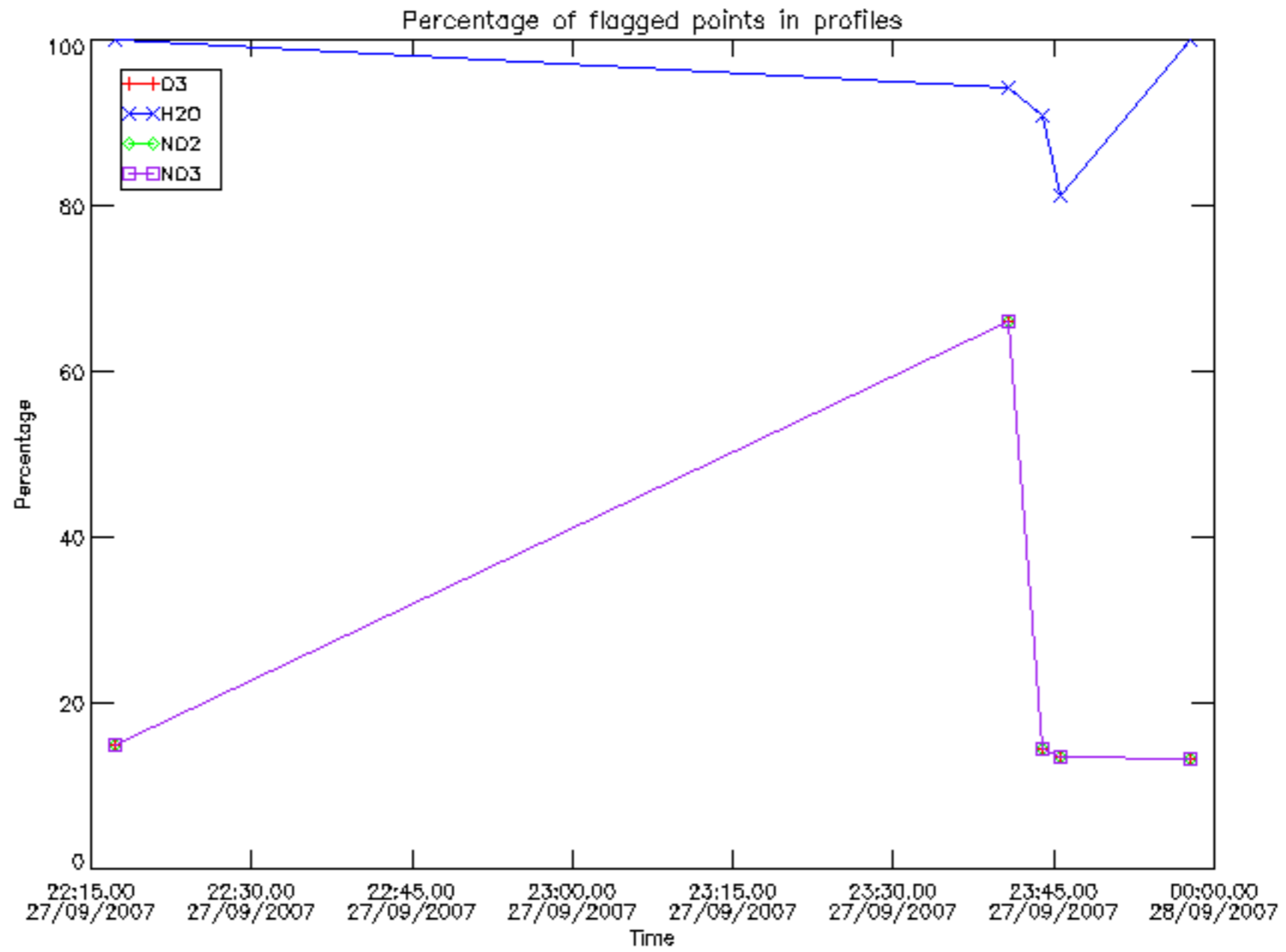
The colorbar represents the latitude.



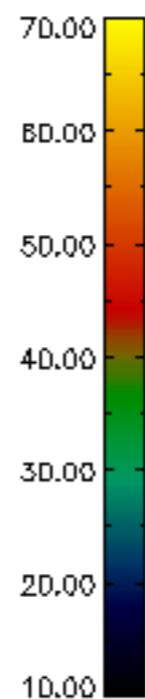
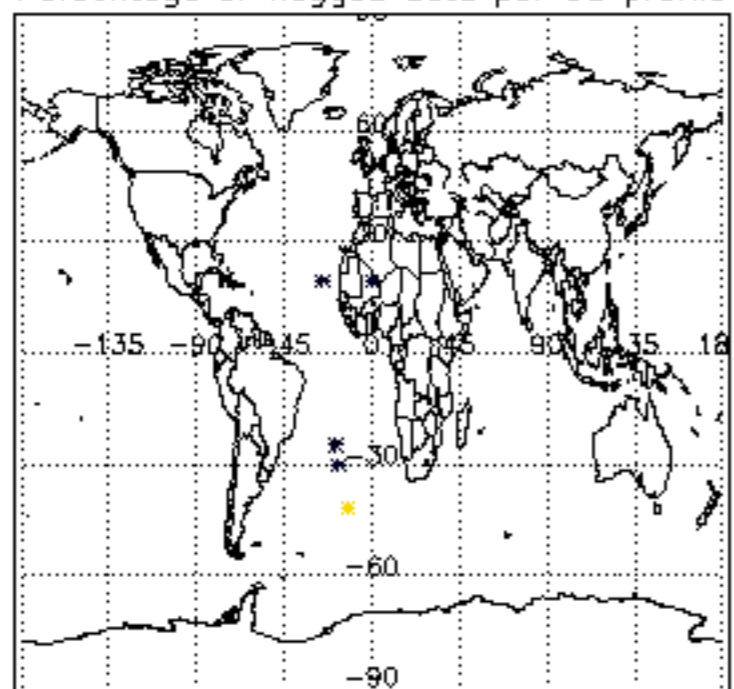
## 6. Auxiliary Data Files used for the production reported in section 2

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

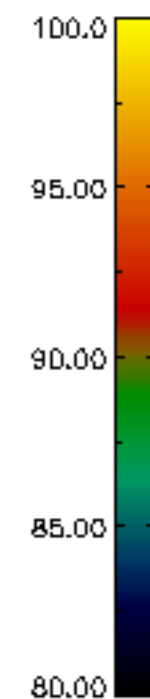
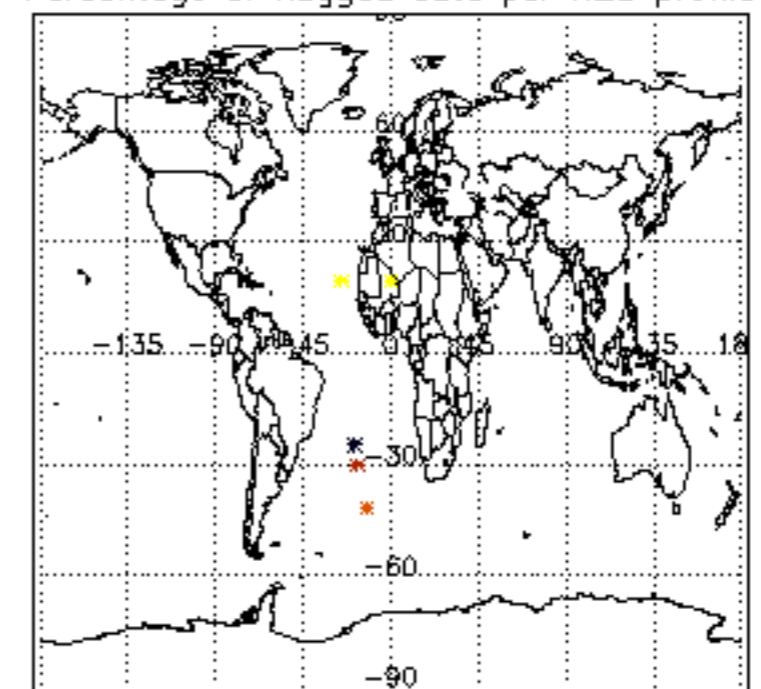
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-SEP-2007 22:17:09
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-SEP-2007 22:17:09
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-SEP-2007 22:17:09



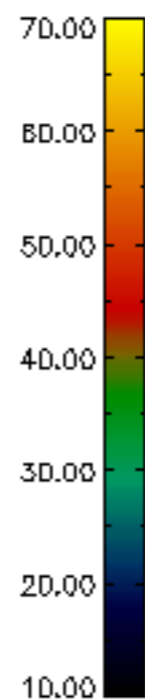
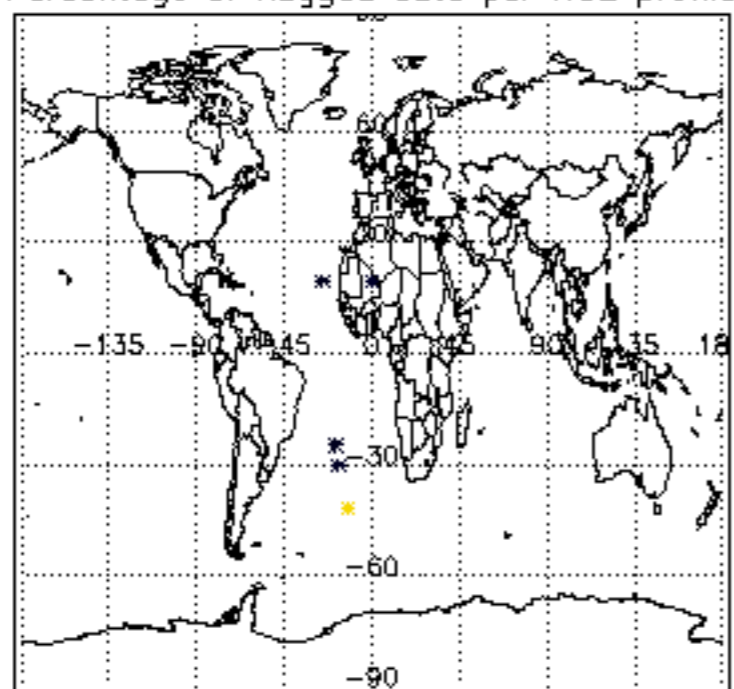
Percentage of flagged data per D3 profile



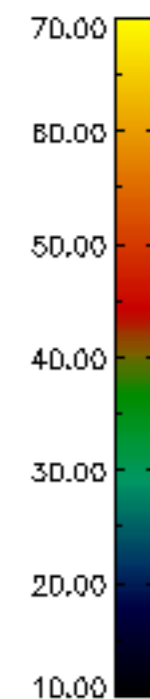
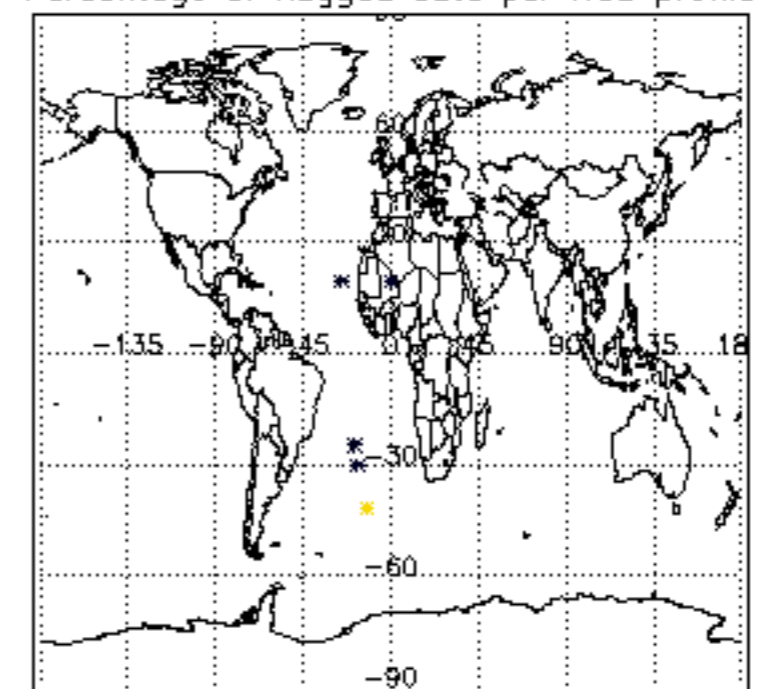
Percentage of flagged data per H2O profile



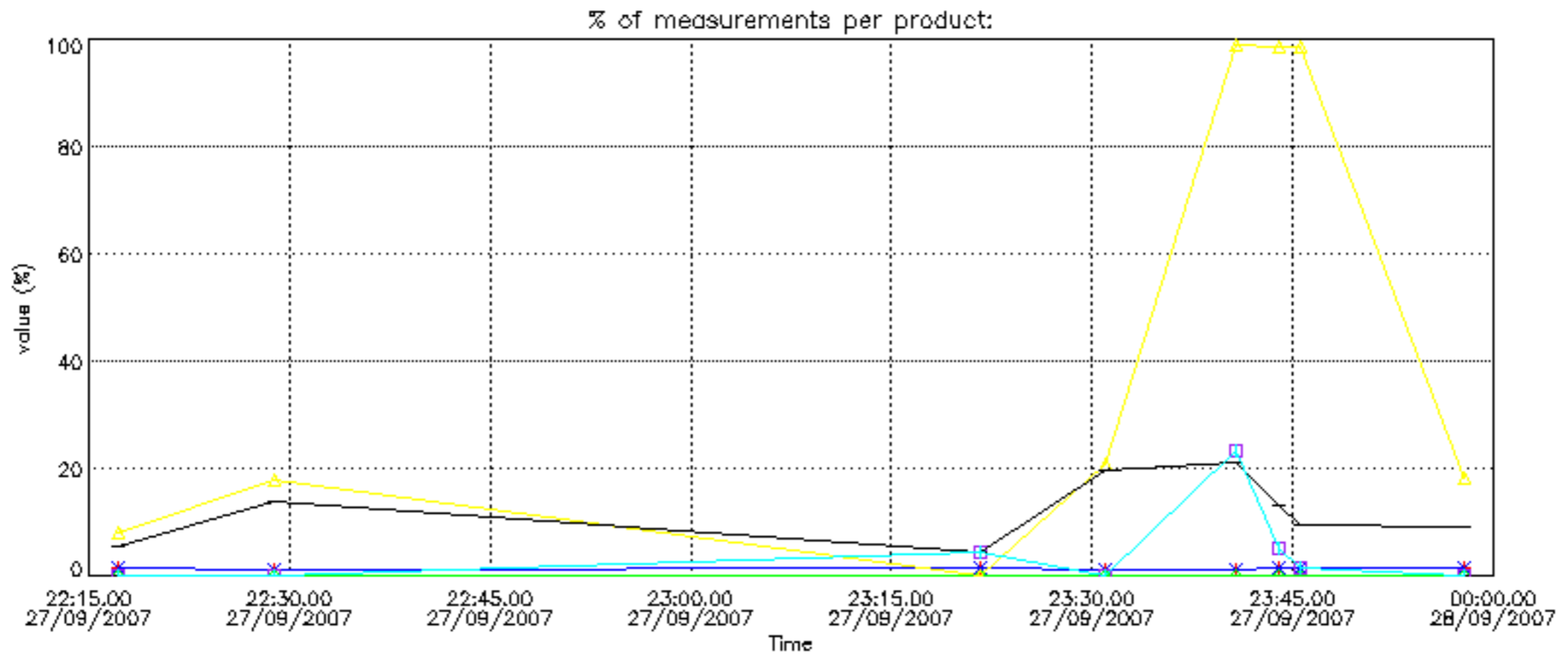
Percentage of flagged data per NO2 profile

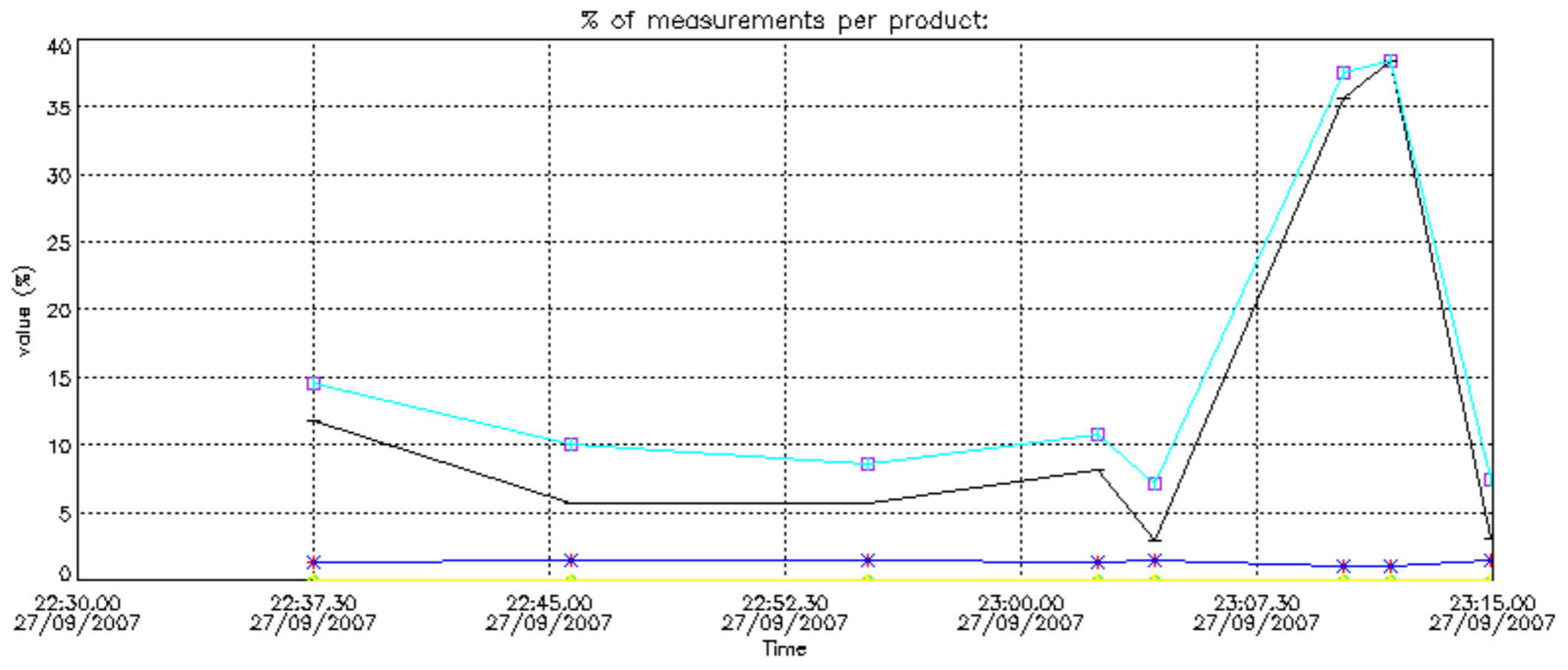


Percentage of flagged data per NO3 profile

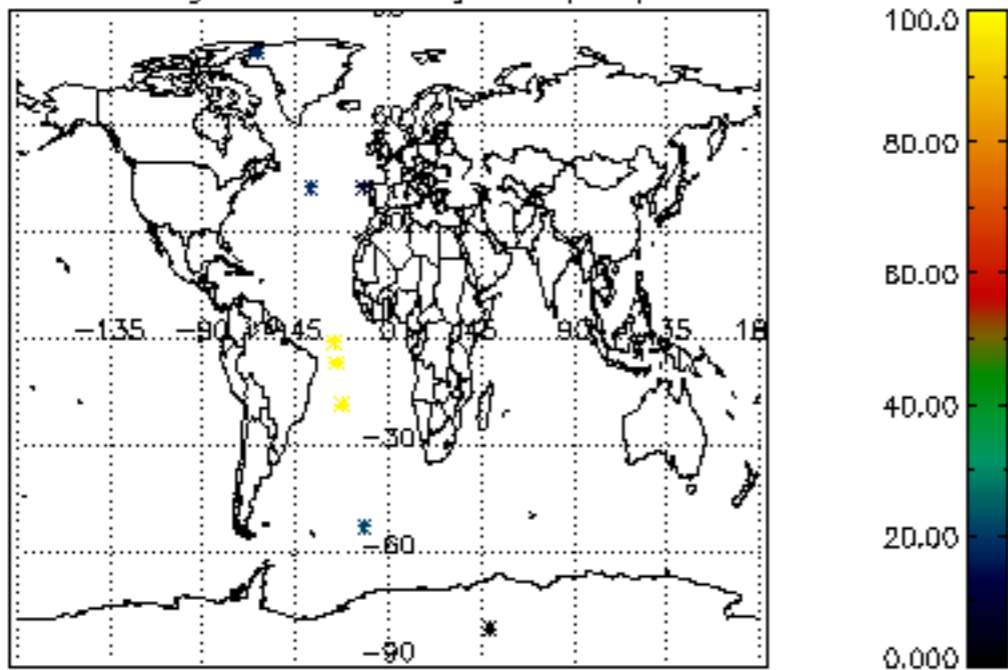




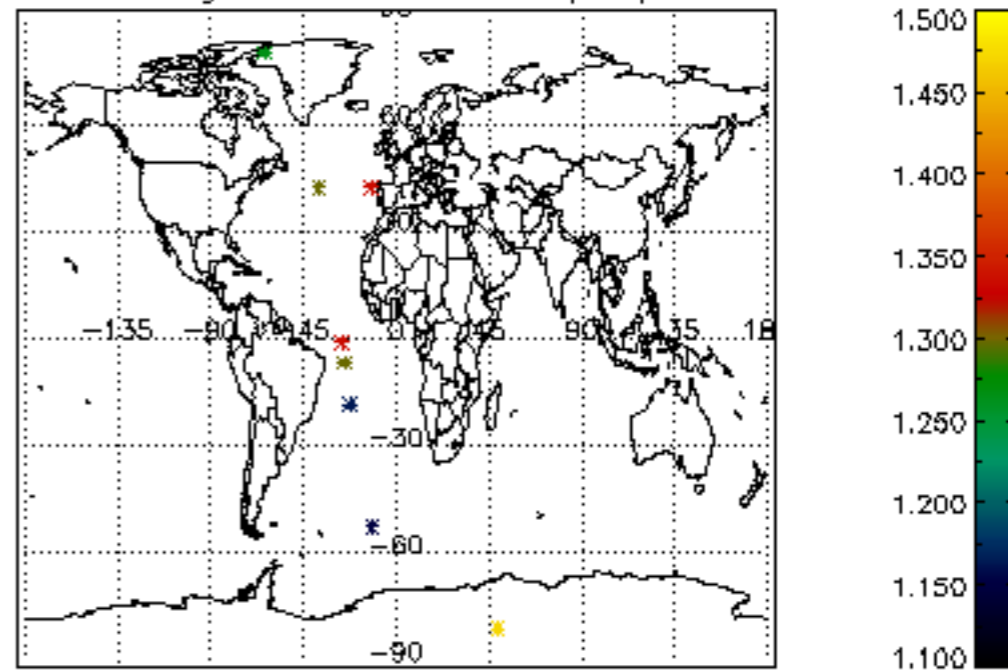




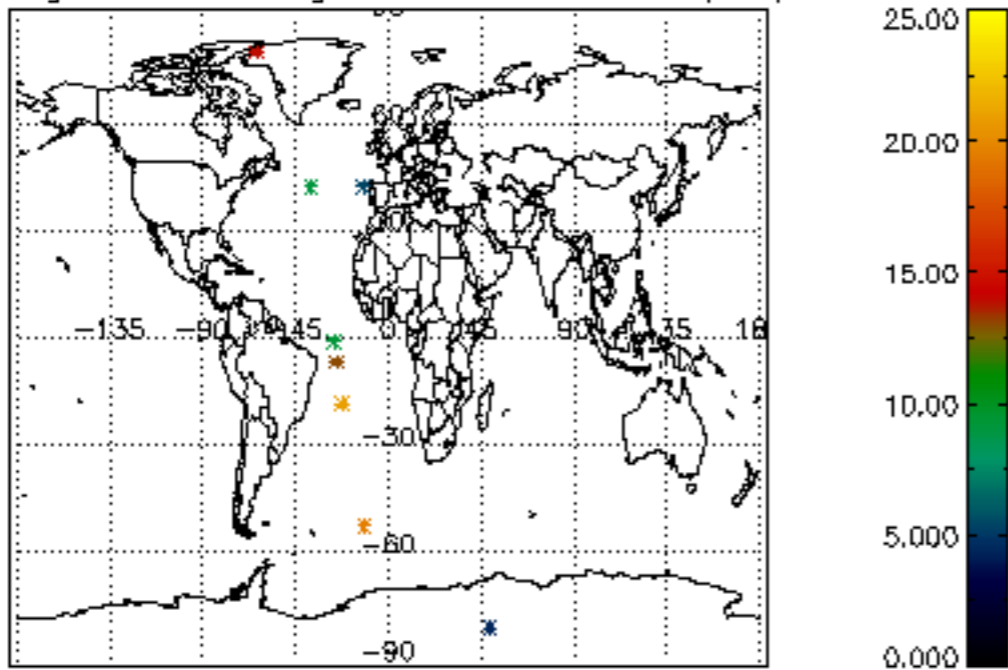
Percentage of cosmic ray hits per profile



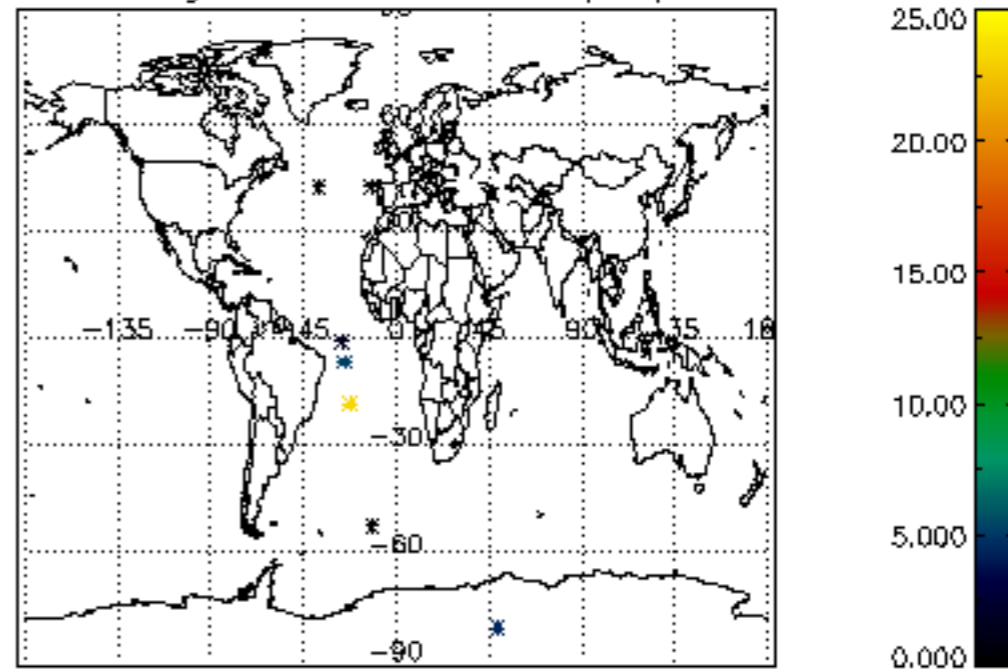
Percentage of datation errors per profile



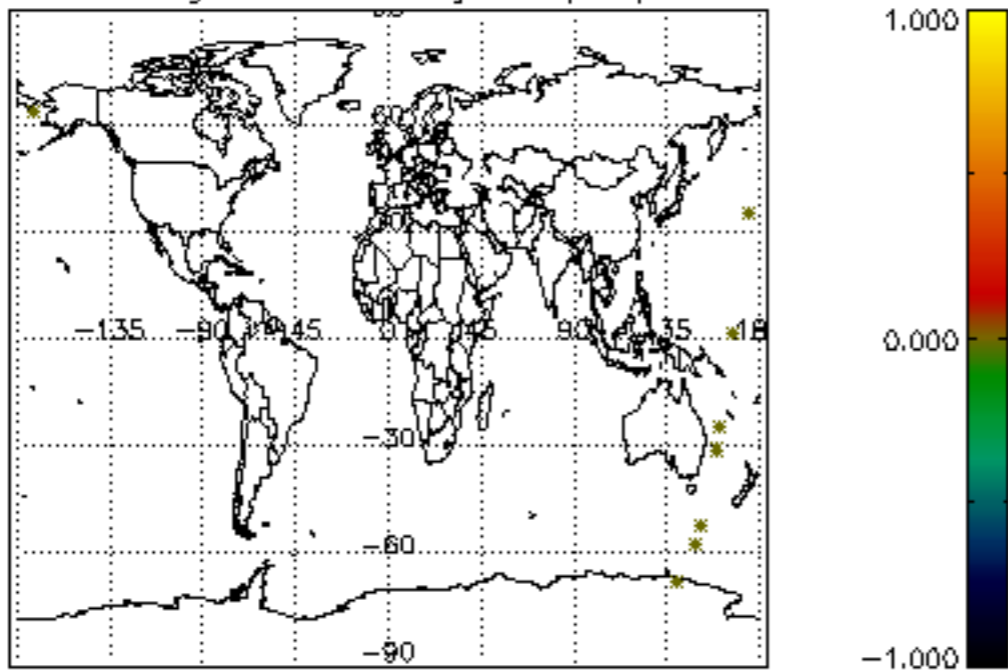
Percentage of star falling outside central band per profile



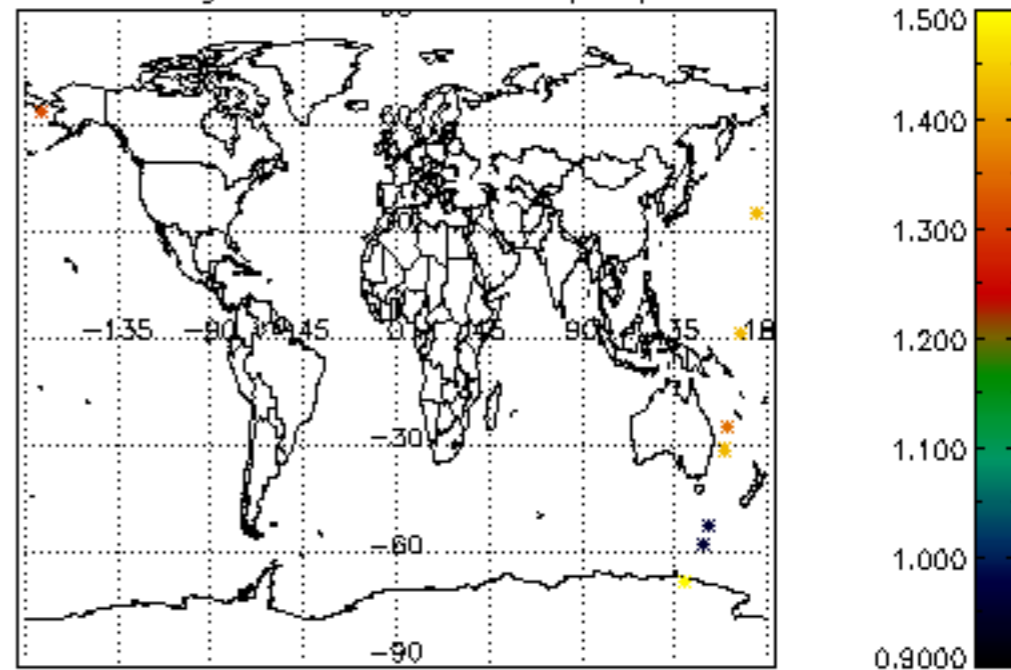
Percentage of saturation errors per profile



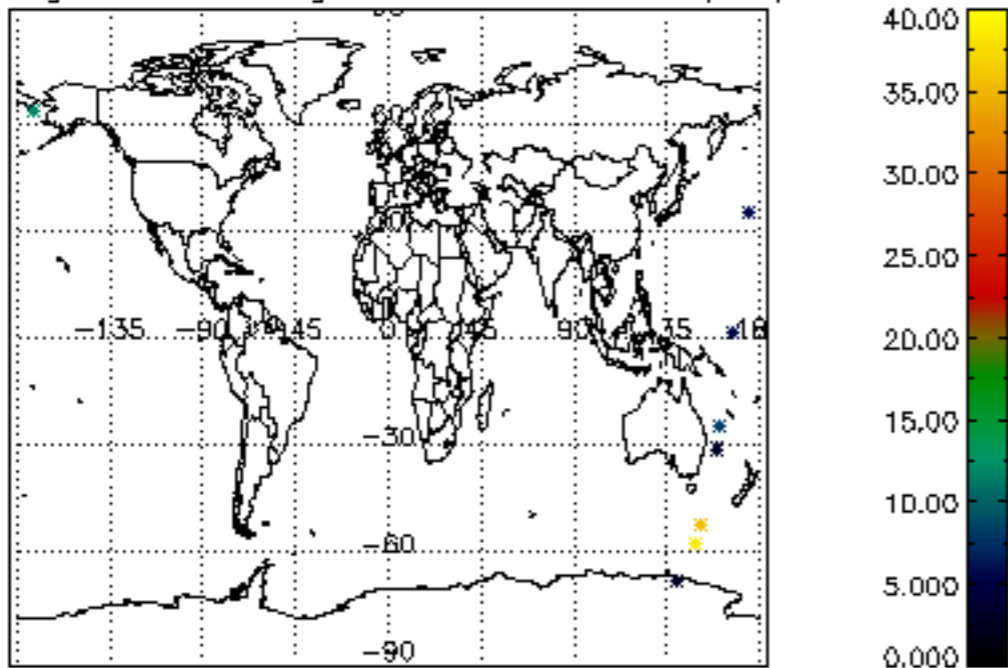
Percentage of cosmic ray hits per profile



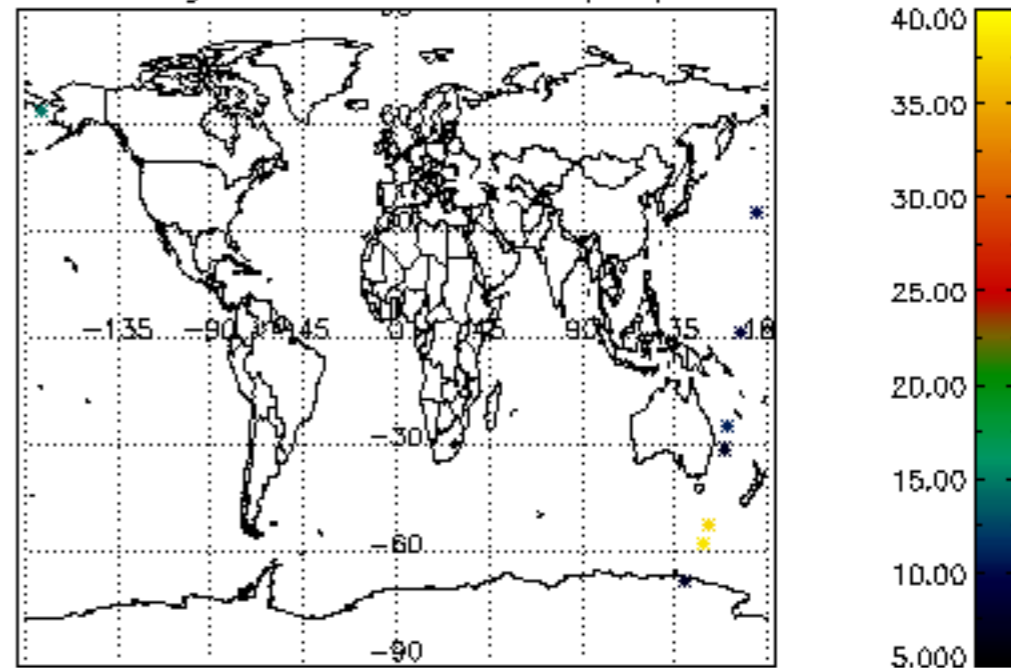
Percentage of datation errors per profile

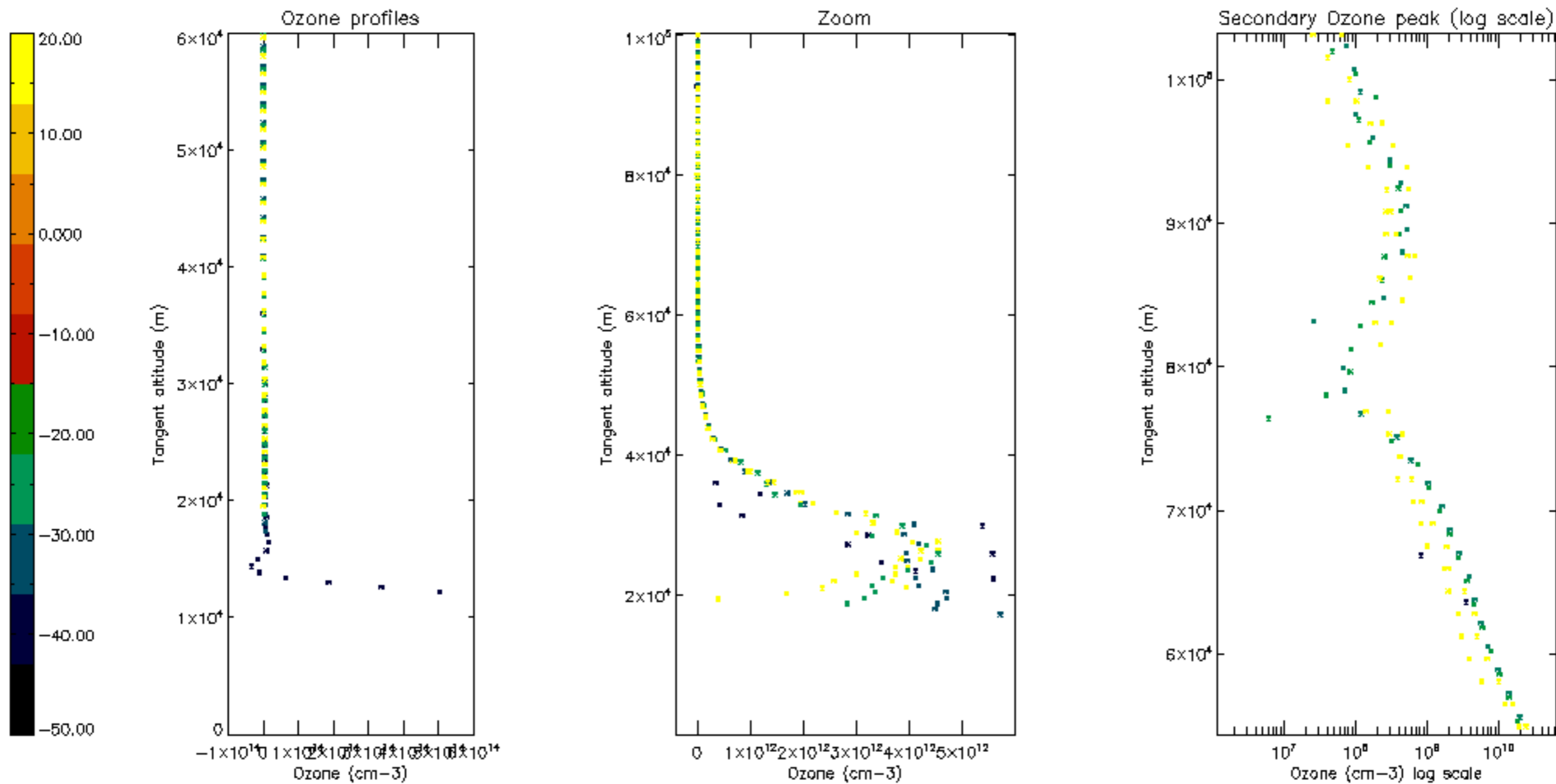


Percentage of star falling outside central band per profile

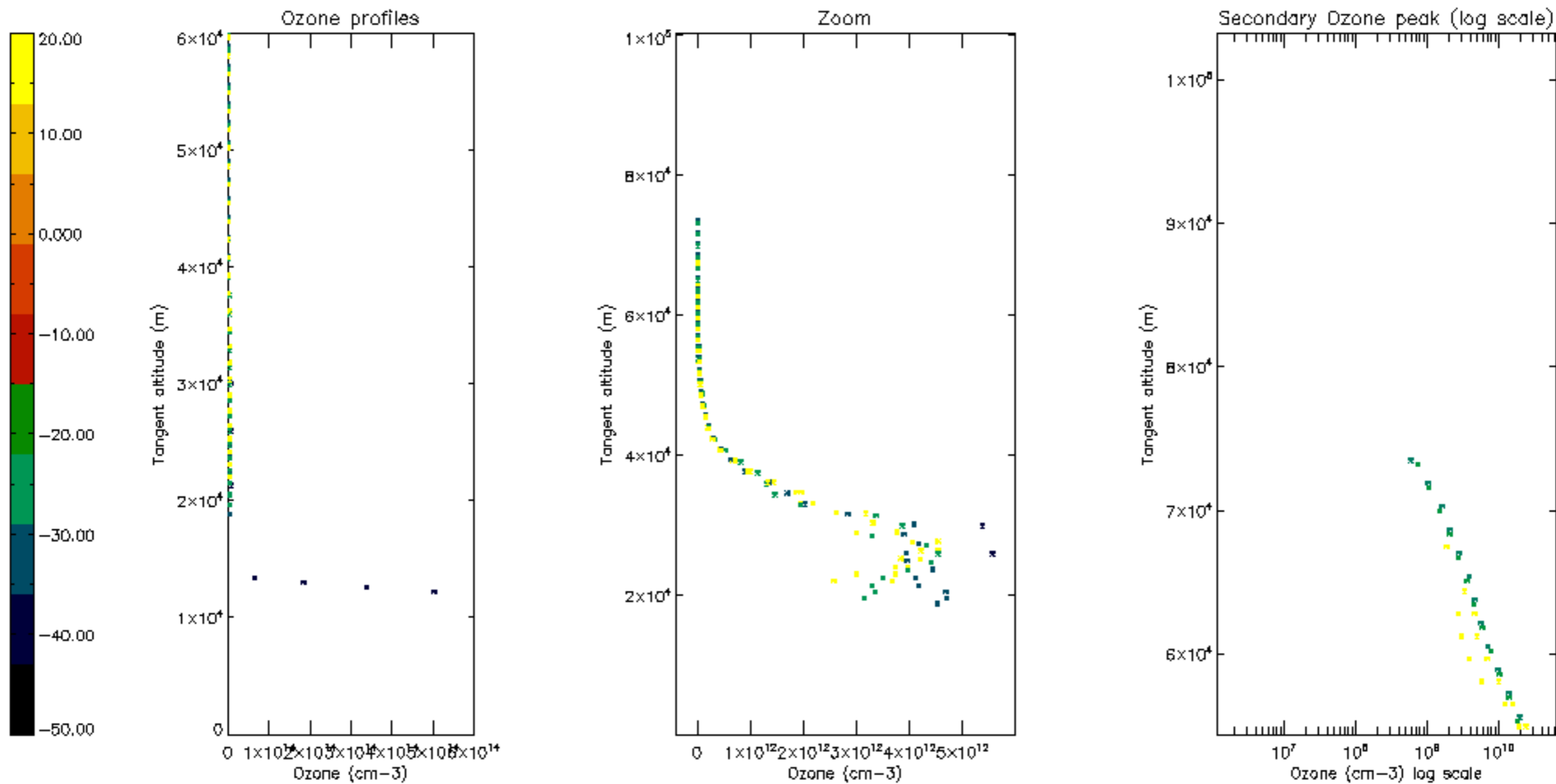


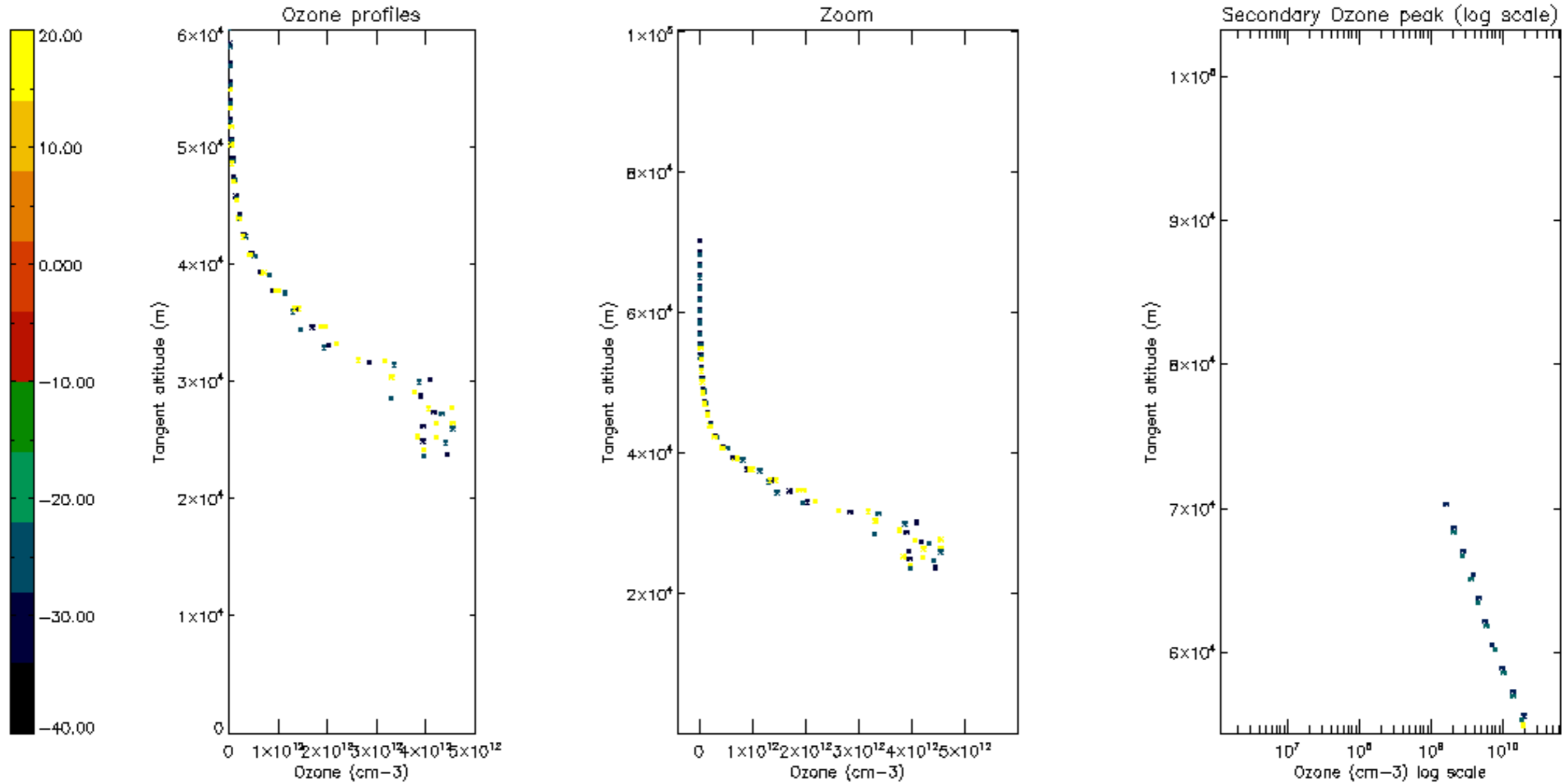
Percentage of saturation errors per profile

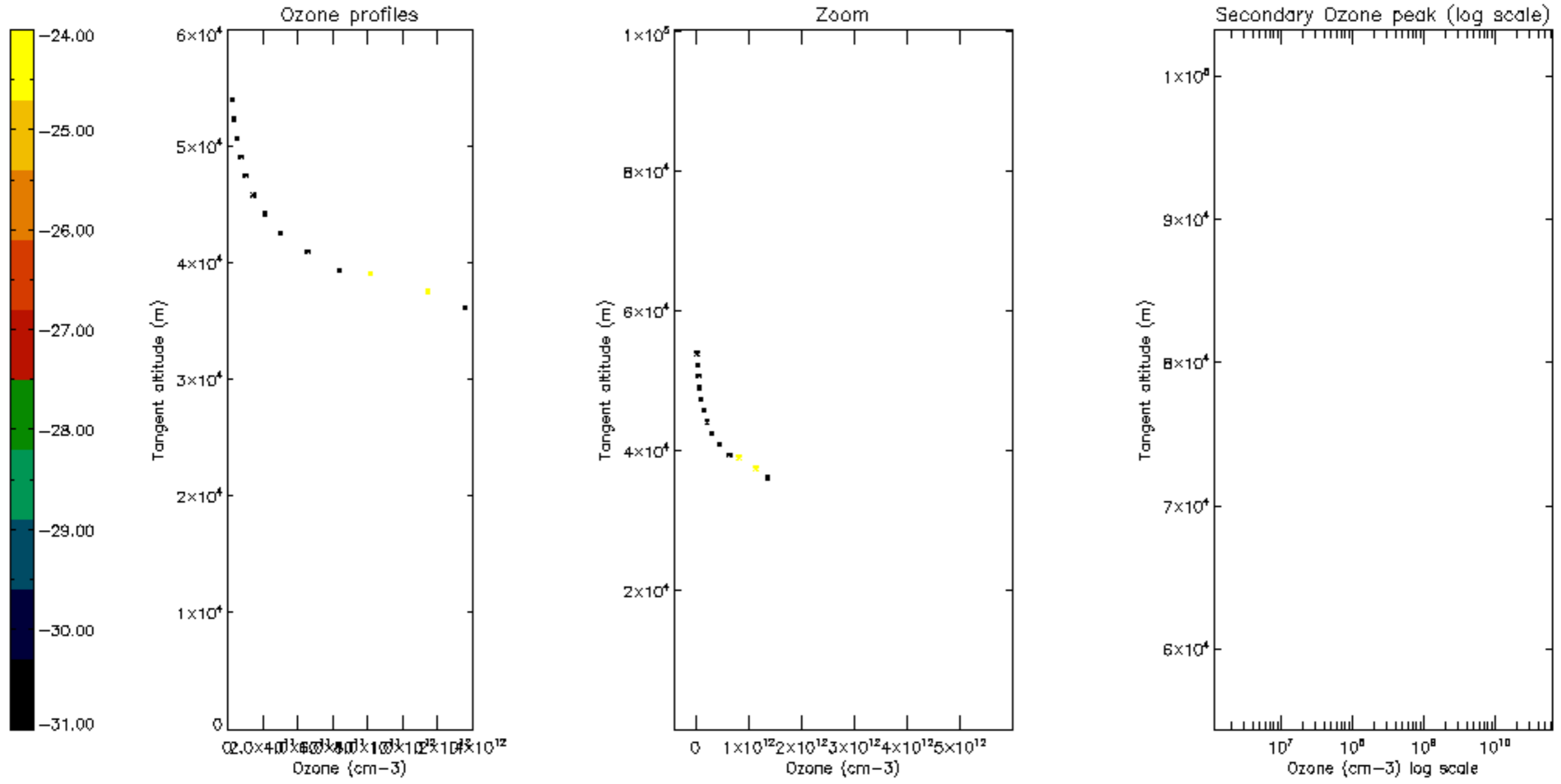


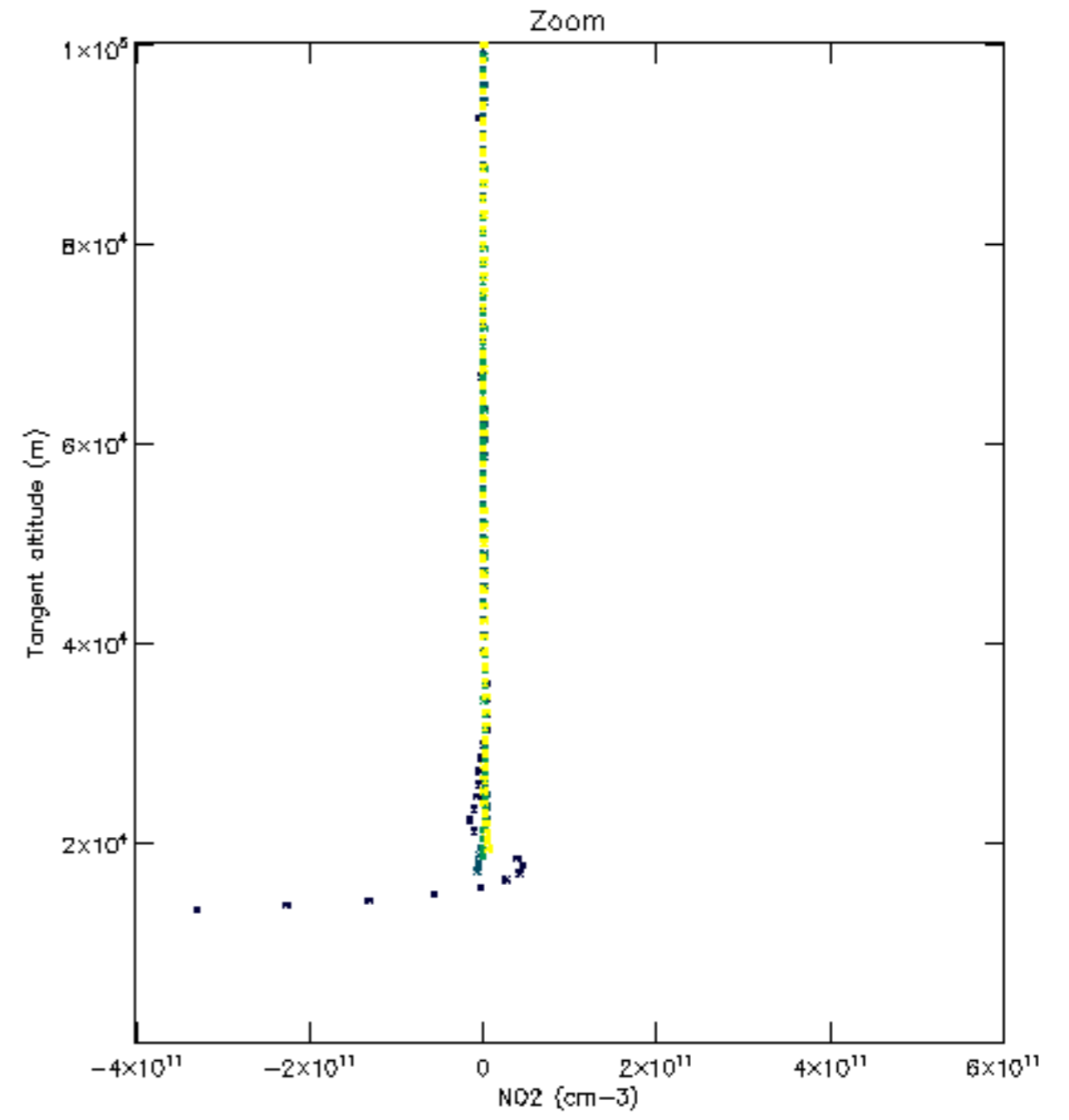
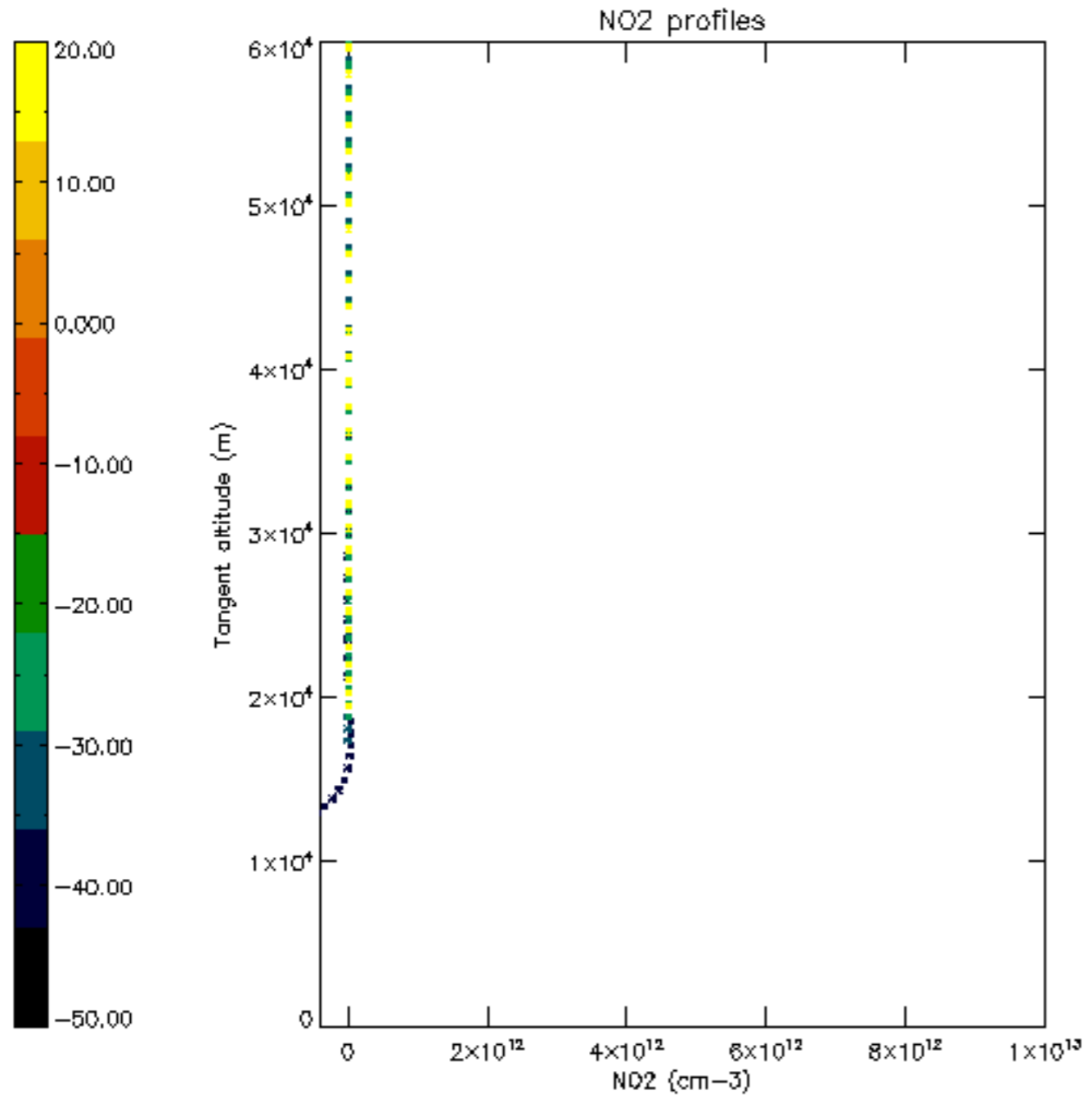


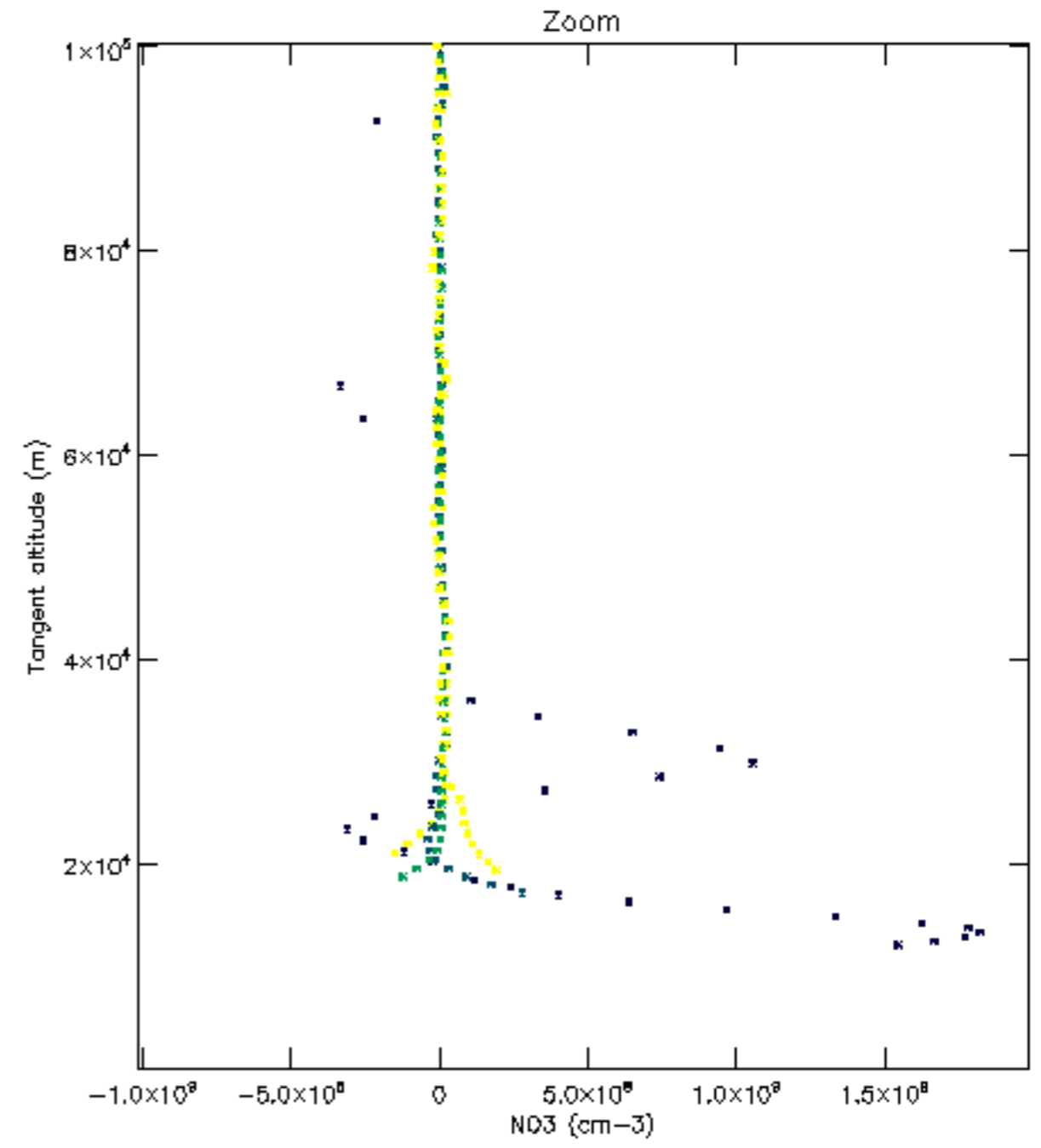
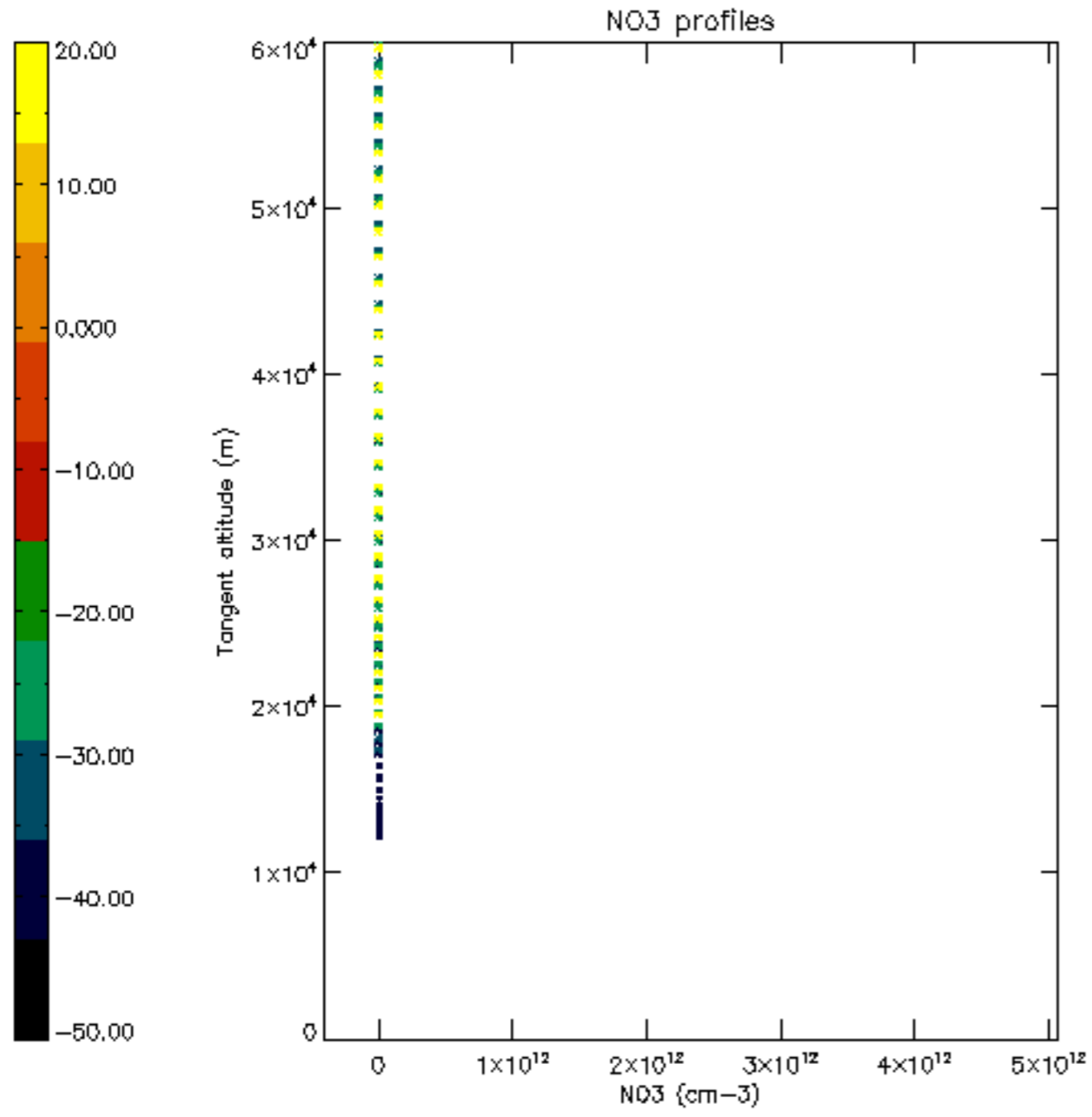




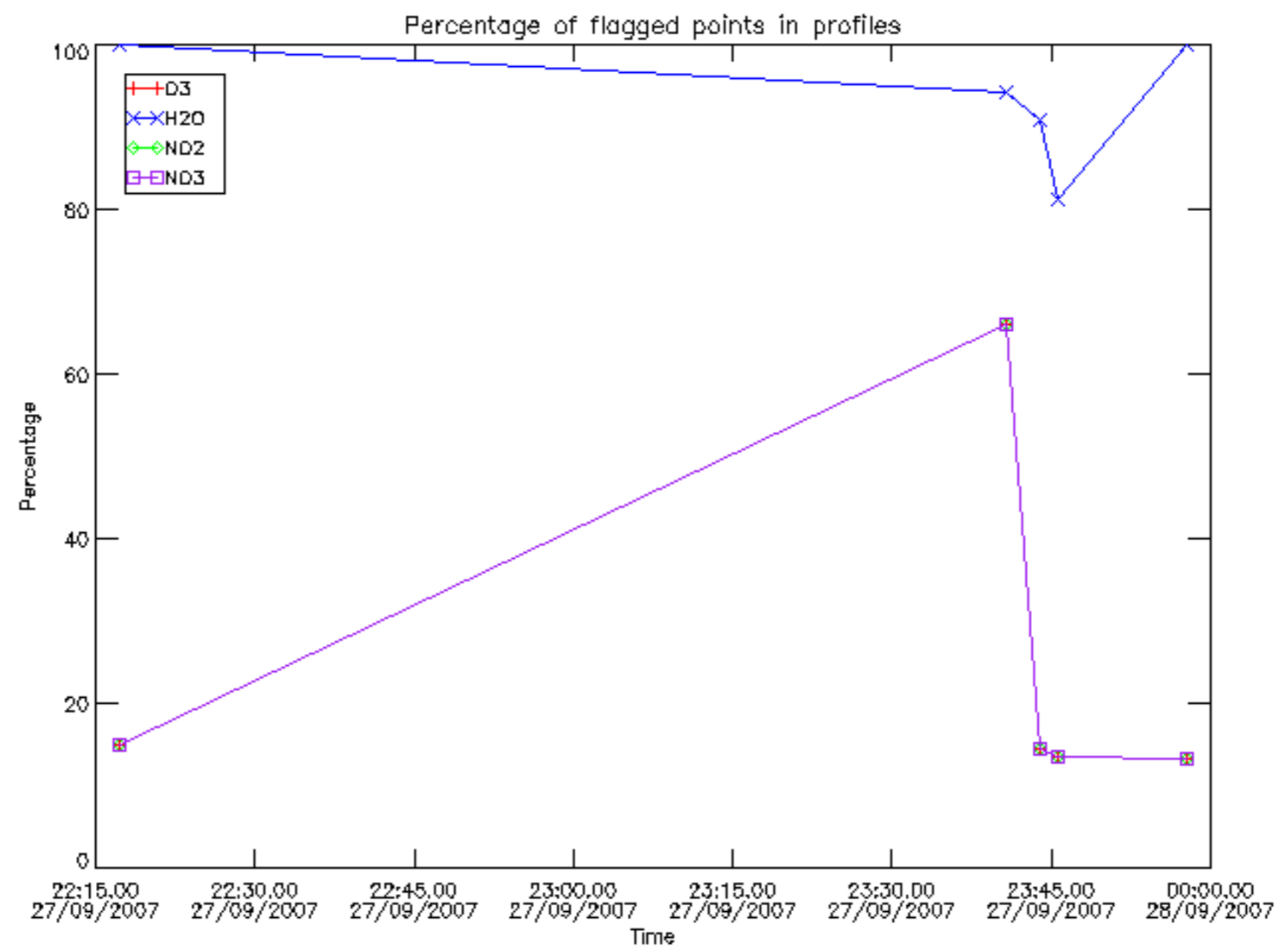




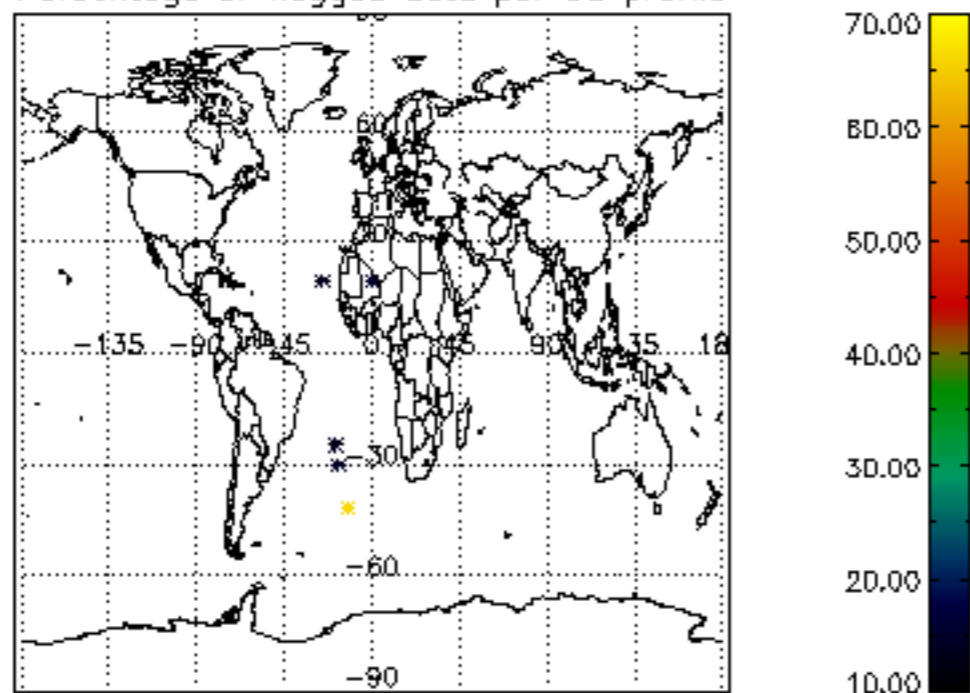




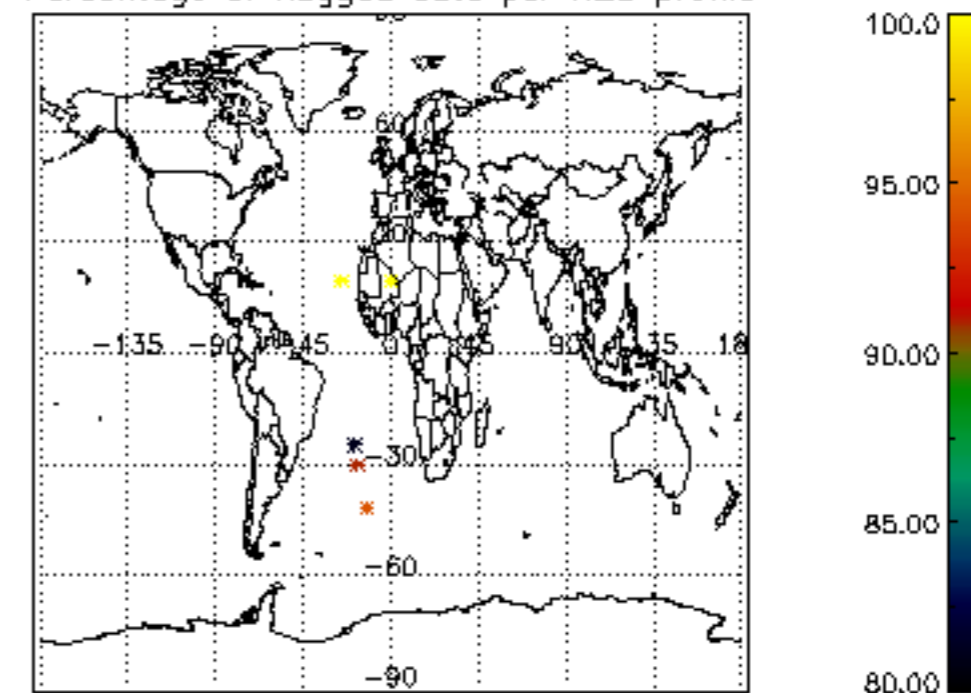




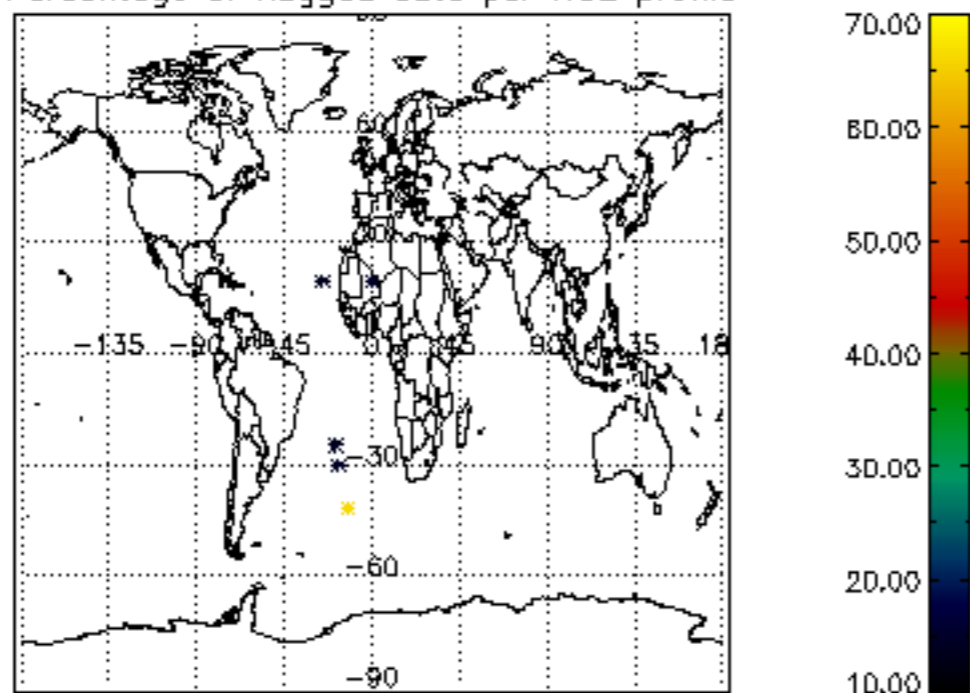
Percentage of flagged data per D3 profile



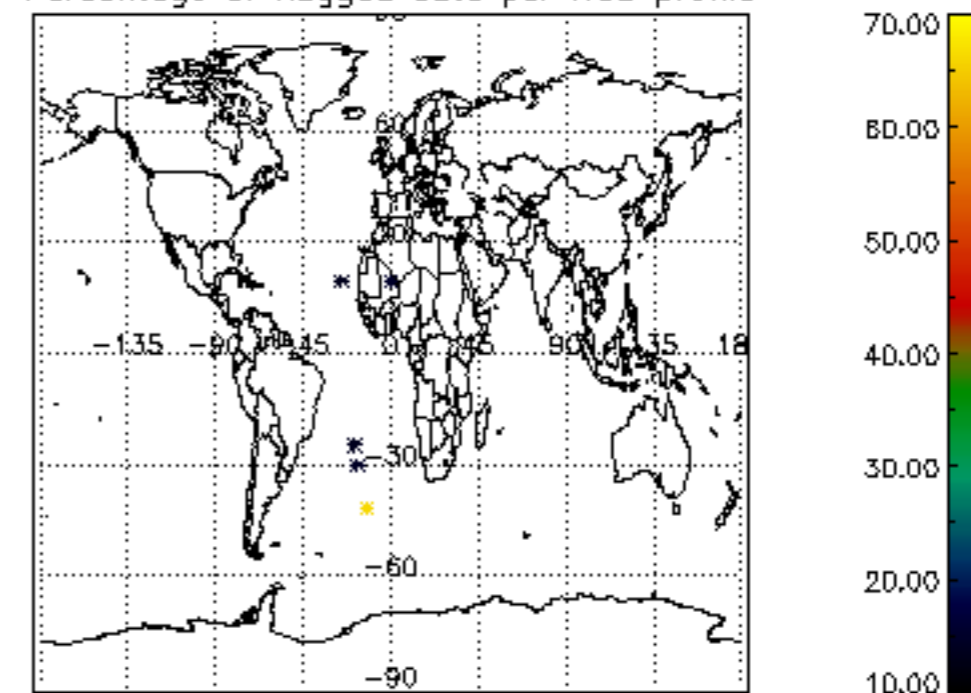
Percentage of flagged data per H2O profile

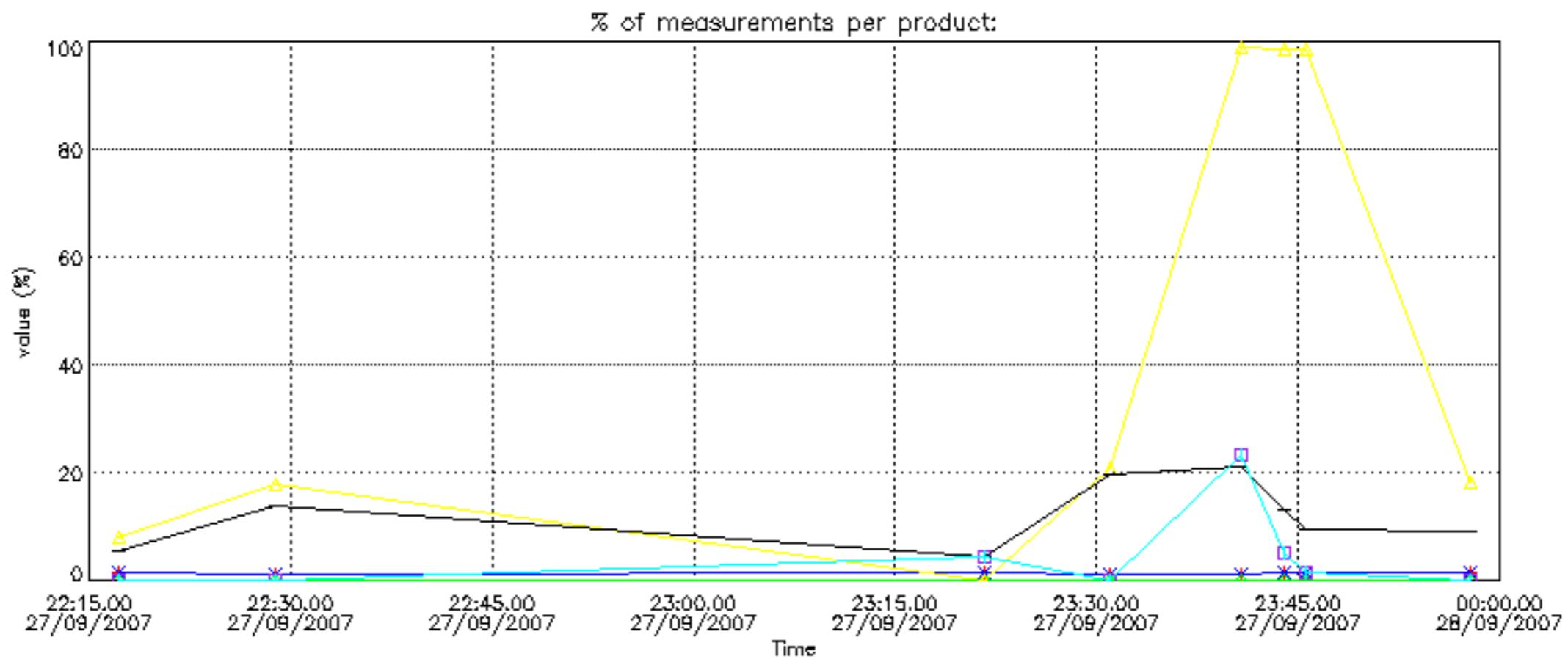


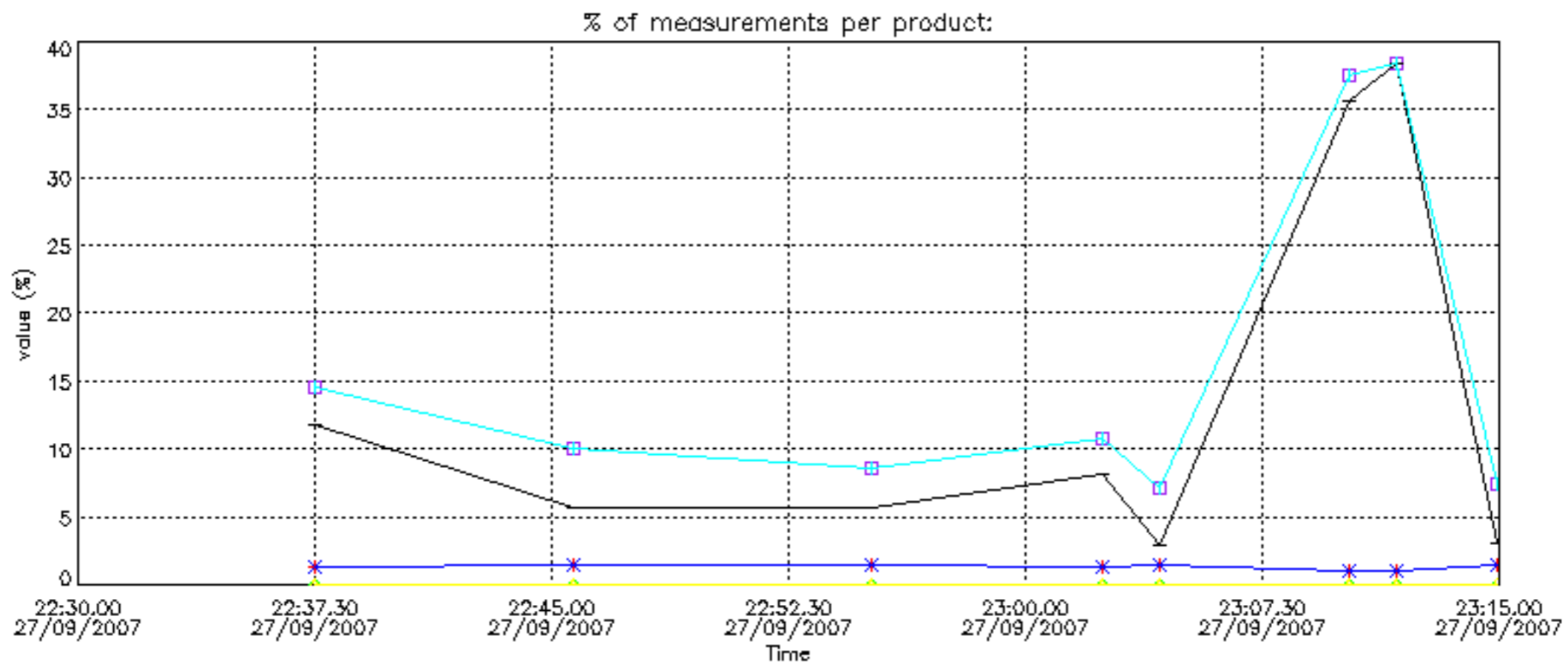
Percentage of flagged data per NO2 profile



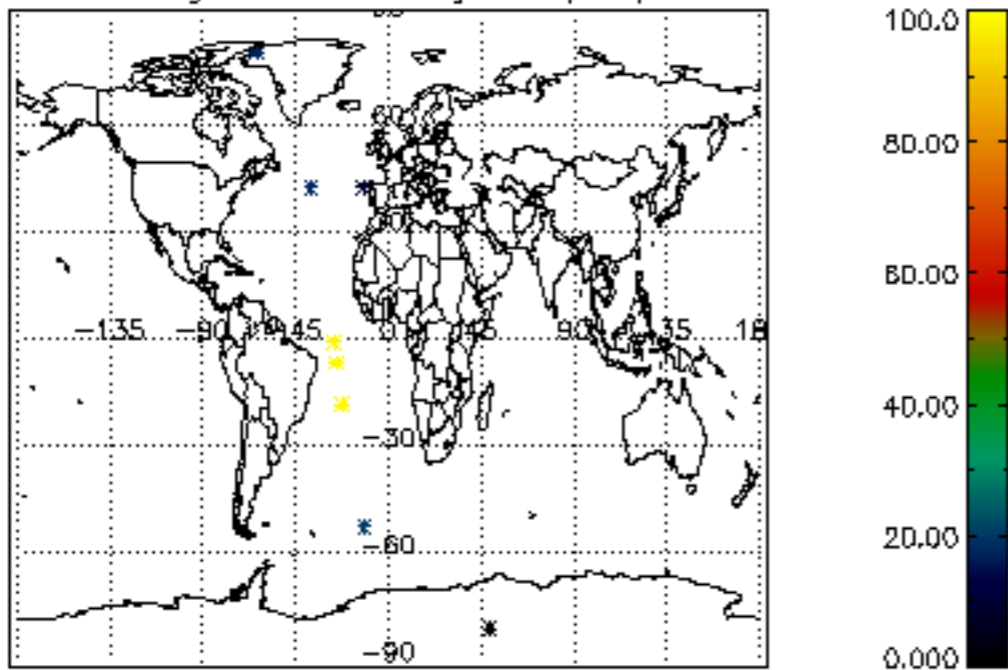
Percentage of flagged data per NO3 profile



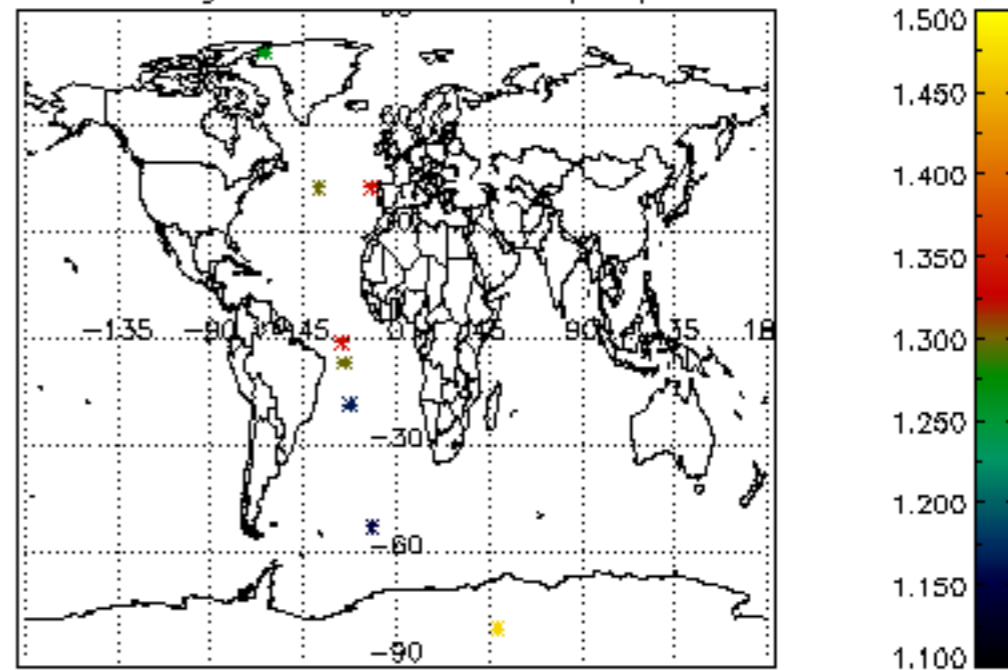




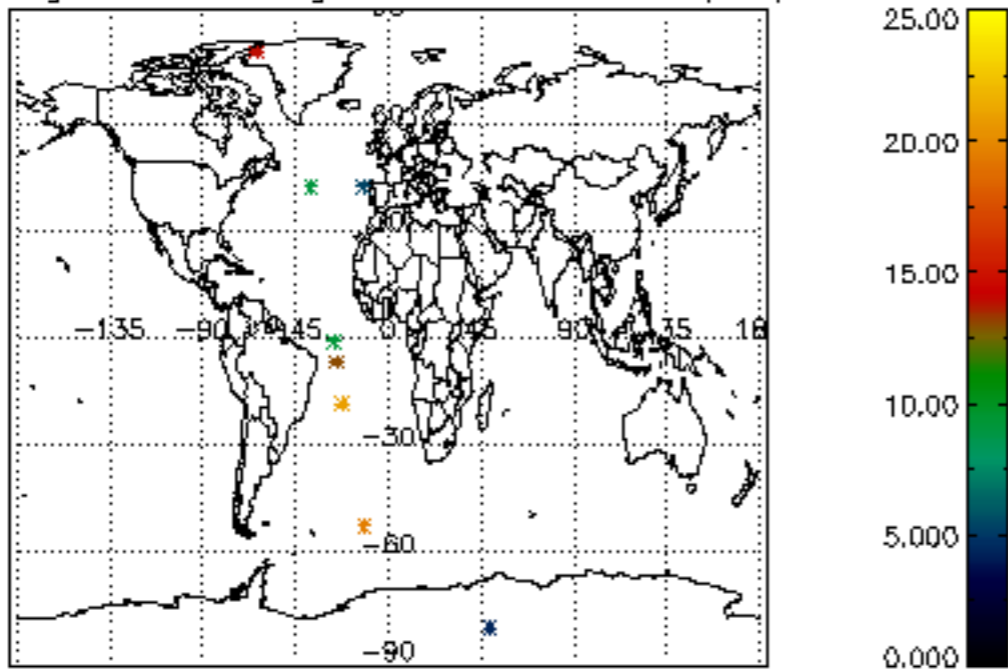
Percentage of cosmic ray hits per profile



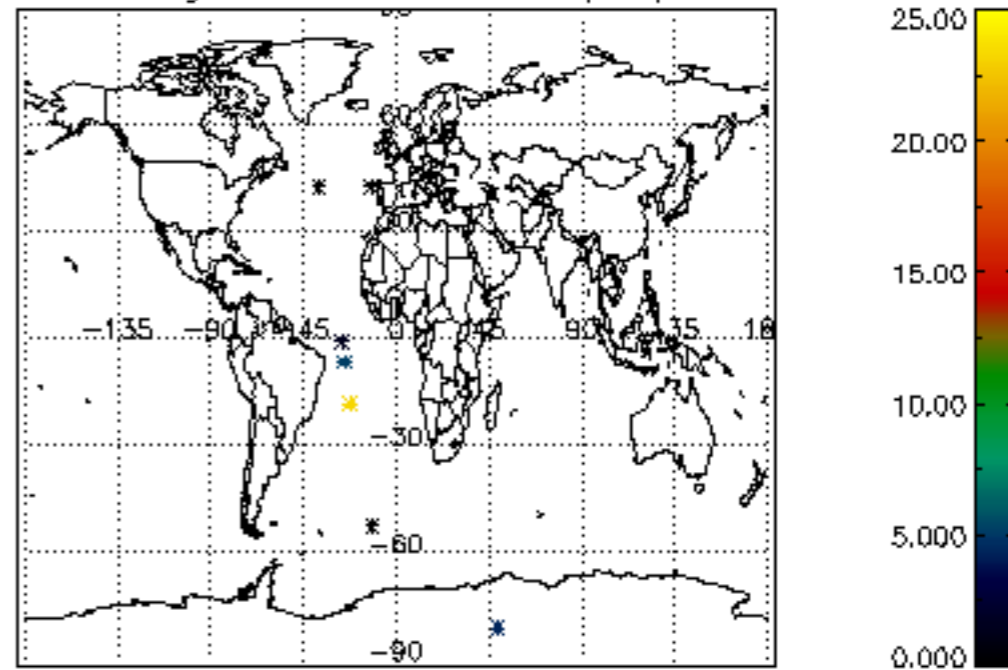
Percentage of datation errors per profile



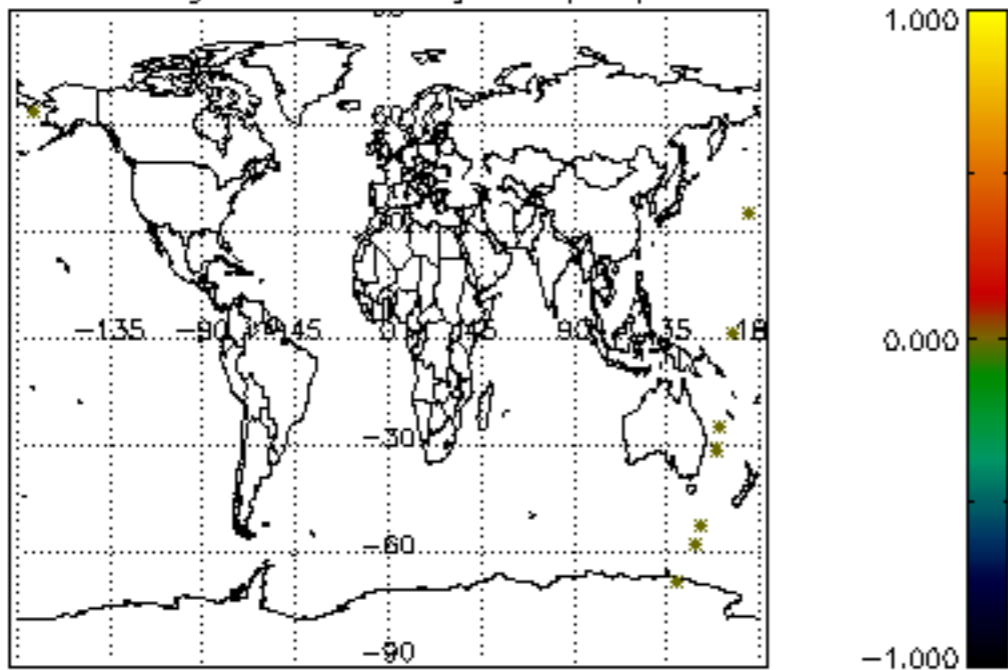
Percentage of star falling outside central band per profile



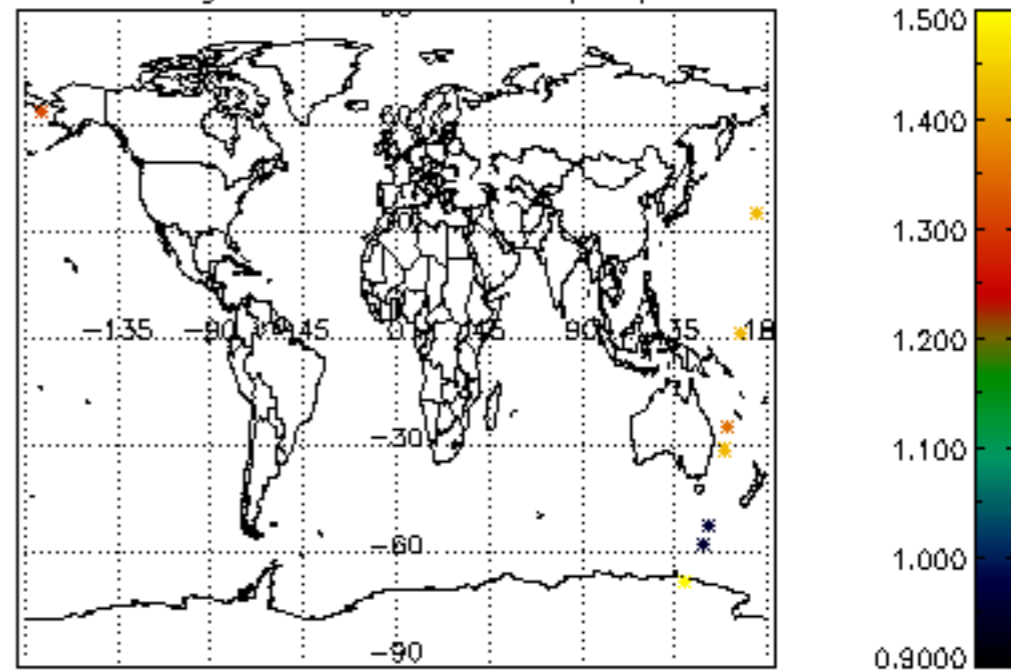
Percentage of saturation errors per profile



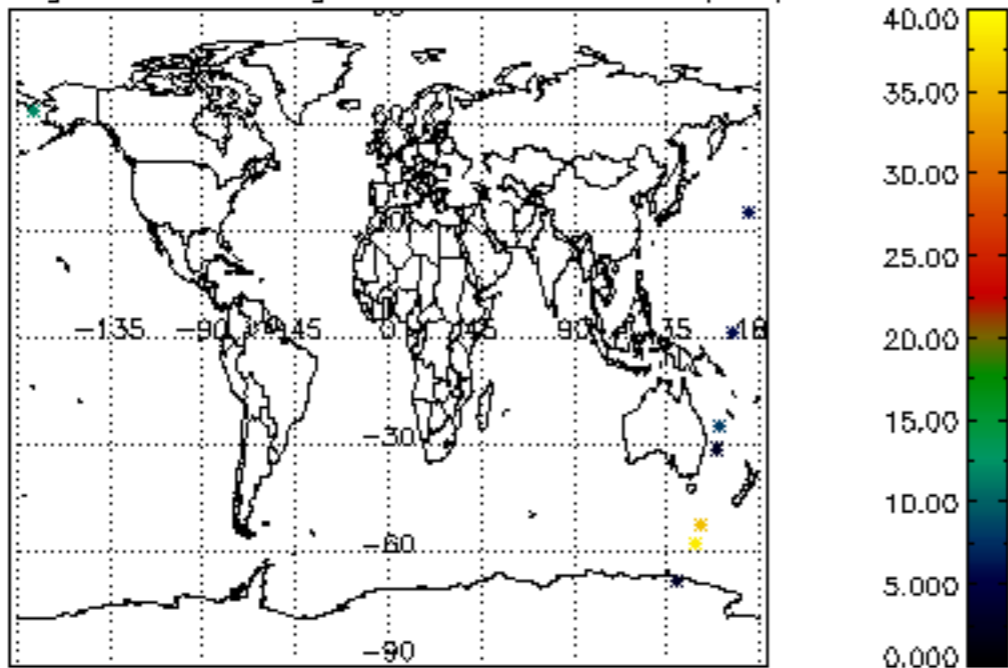
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

