

# GOMOS Level 2 Daily Report

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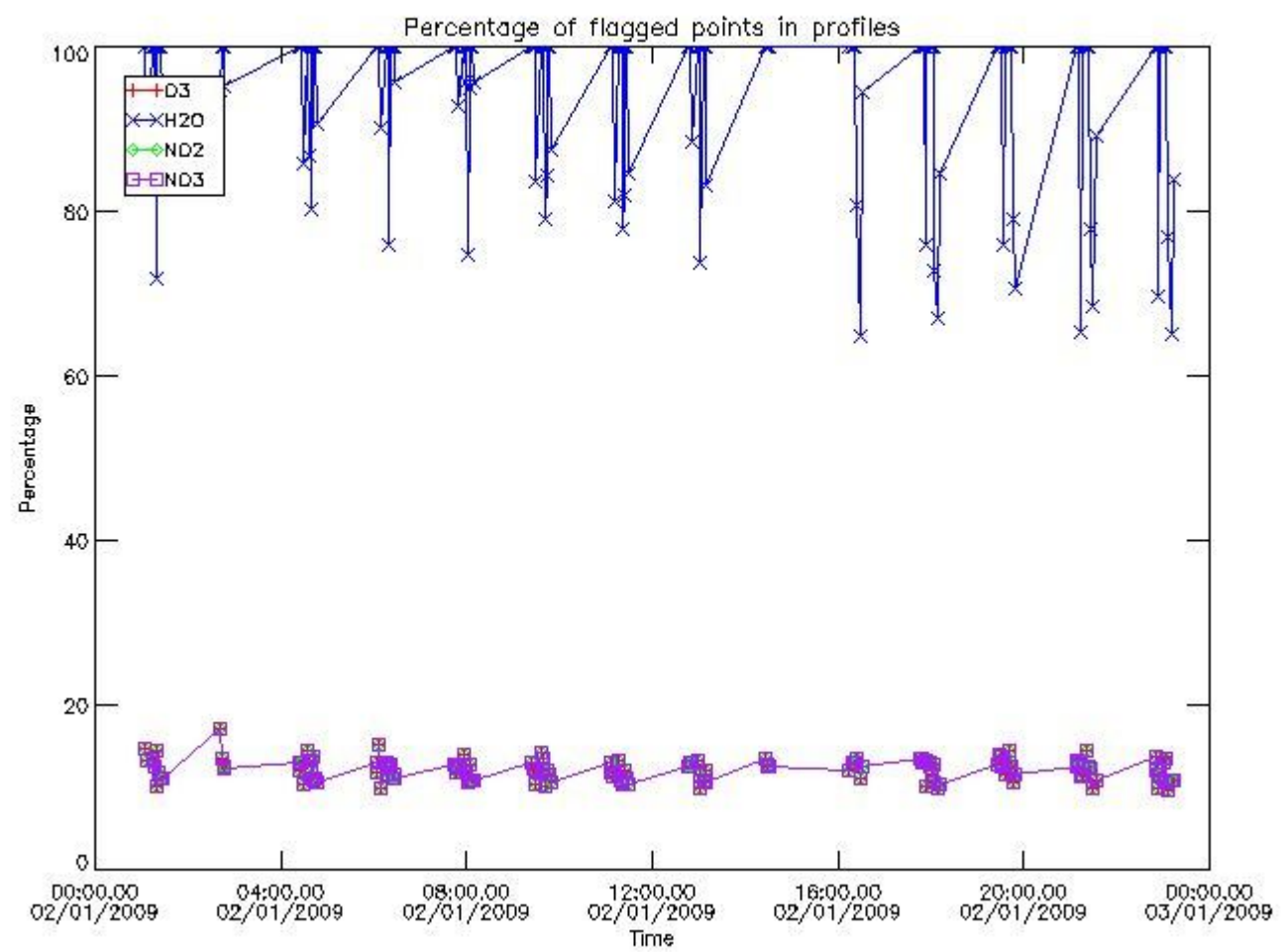
338	GOM_NL__2PRFIN20090102_214720_000000542075_00158_35783_0641.N1	02-JAN-2009 21:47:20	Twilight	54.000	14	58Alp Ori	0.87000	3000.0	108	35783	No
339	GOM_NL__2PRFIN20090102_215117_000000402075_00158_35783_0642.N1	02-JAN-2009 21:51:17	Bright	39.500	176	23Zet Tau	3.0200	22000.	79	35783	No
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342	GOM_NL__2PRFIN20090102_215609_000000392075_00158_35783_0645.N1	02-JAN-2009 21:56:09	Bright	38.500	107	37The Aur	2.6490	11000.	77	35783	No
343	GOM_NL__2PRFIN20090102_215819_000000432075_00158_35783_0646.N1	02-JAN-2009 21:58:19	Bright	43.000	6	13Alp Aur	0.080000	3400.0	86	35783	No
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350	GOM_NL__2PRFIN20090102_223726_000000352075_00158_35783_0653.N1	02-JAN-2009 22:37:26	Bright	35.000	120	1Del Oph	2.7340	3200.0	70	35783	No
351	GOM_NL__2PRFIN20090102_224018_000000372075_00158_35783_0654.N1	02-JAN-2009 22:40:18	Bright	37.000	104	27Bet Lib	2.6140	13100.	74	35783	No
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356	GOM_NL__2PRFIN20090102_225413_000000522075_00159_35784_0656.N1	02-JAN-2009 22:54:13	Dark	51.500	4	Alp1Cen	-0.010000	5800.0	103	35784	No
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358	GOM_NL__2PRFIN20090102_230131_000000402075_00159_35784_0658.N1	02-JAN-2009 23:01:31	Dark	39.500	124	The Car	2.7640	30000.	79	35784	No
359	GOM_NL__2PRFIN20090102_230323_000000482075_00159_35784_0659.N1	02-JAN-2009 23:03:23	Dark	48.000	29	Bet Car	1.6720	10200.	96	35784	No
360	GOM_NL__2PRFIN20090102_230451_000000422075_00159_35784_0660.N1	02-JAN-2009 23:04:51	Dark	41.500	71	lot Car	2.2460	7700.0	83	35784	No
361	GOM_NL__2PRFIN20090102_230623_000000532075_00159_35784_0661.N1	02-JAN-2009 23:06:23	Dark	52.500	41	Eps Car	1.8600	4100.0	105	35784	No
362	GOM_NL__2PRFIN20090102_231031_000000522075_00159_35784_0662.N1	02-JAN-2009 23:10:31	Dark	52.000	2	Alp Car	-0.73600	7000.0	104	35784	No
363	GOM_NL__2PRFIN20090102_231348_000000472075_00159_35784_0663.N1	02-JAN-2009 23:13:48	Dark	47.000	117	Pi Pup	2.7060	3800.0	94	35784	No
364	GOM_NL__2PRFIN20090102_231634_000000452075_00159_35784_0664.N1	02-JAN-2009 23:16:34	Straylight	45.000	23	21Eps CMa	1.5020	26000.	90	35784	No
365	GOM_NL__2PRFIN20090102_231805_000000432075_00159_35784_0665.N1	02-JAN-2009 23:18:05	Straylight	43.000	179	24Omi2CMa	3.0320	24000.	86	35784	No
366	GOM_NL__2PRFIN20090102_232030_000000502075_00159_35784_0666.N1	02-JAN-2009 23:20:30	Straylight	49.500	1	9Alp CMa	-1.4400	11000.	99	35784	No
367	GOM_NL__2PRFIN20090102_232338_000000442075_00159_35784_0667.N1	02-JAN-2009 23:23:38	Straylight	44.000	7	19Bet Ori	0.10000	14000.	88	35784	No
368	GOM_NL__2PRFIN20090102_232528_000000422075_00159_35784_0668.N1	02-JAN-2009 23:25:28	Straylight	41.500	30	46Eps Ori	1.6940	30000.	83	35784	No
369	GOM_NL__2PRFIN20090102_232756_000000512075_00159_35784_0669.N1	02-JAN-2009 23:27:56	Twilight	51.000	14	58Alp Ori	0.87000	3000.0	102	35784	No
370	GOM_NL__2PRFIN20090102_233154_000000392075_00159_35784_0670.N1	02-JAN-2009 23:31:54	Bright	38.500	176	23Zet Tau	3.0200	22000.	77	35784	No
371	GOM_NL__2PRFIN20090102_233400_000000382075_00159_35784_0671.N1	02-JAN-2009 23:34:00	Bright	38.000	28	12Bet Tau	1.6500	15200.	76	35784	No
372	GOM_NL__2PRFIN20090102_233518_000000382075_00159_35784_0672.N1	02-JAN-2009 23:35:18	Bright	37.500	114	31ot Aur	2.6930	4600.0	75	35784	No
373	GOM_NL__2PRFIN20090102_233644_000000392075_00159_35784_0673.N1	02-JAN-2009 23:36:44	Bright	38.500	107	37The Aur	2.6490	11000.	77	35784	No
374	GOM_NL__2PRFIN20090102_233854_000000402075_00159_35784_0674.N1	02-JAN-2009 23:38:54	Bright	40.000	6	13Alp Aur	0.080000	3400.0	80	35784	No
375	GOM_NL__2PRFIN20090102_235108_000000362075_00159_35784_0675.N1	02-JAN-2009 23:51:08	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	35784	No
376	GOM_NL__2PRFIN20090102_235532_000000362075_00159_35784_0676.N1	02-JAN-2009 23:55:32	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	35784	No
377	GOM_NL__2PRFIN20090102_235927_000000382075_00159_35784_0677.N1	02-JAN-2009 23:59:27	Bright	37.500	119	14Eta Dra	2.7270	4700.0	75	35784	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.

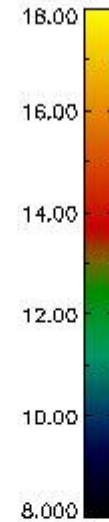
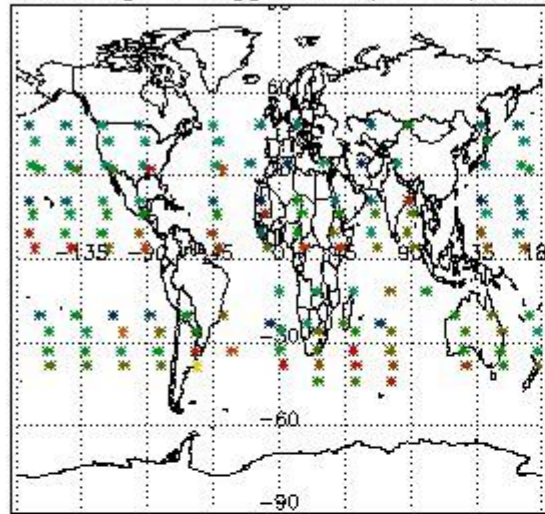
#### 3.1 Plot quality information per product (time dependant)



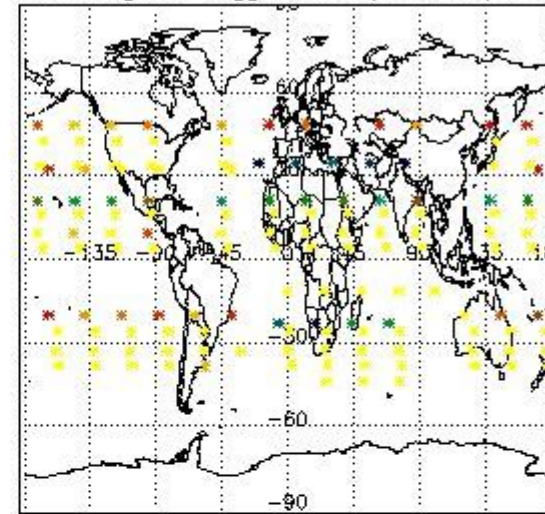


3.2 Plot quality information per product (world map)

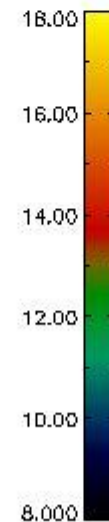
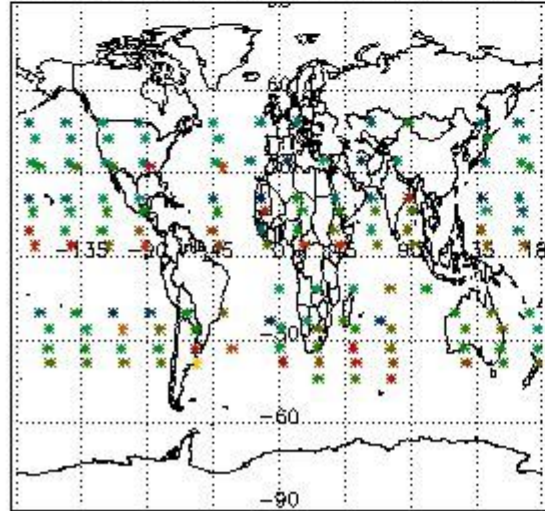
Percentage of flagged data per O3 profile



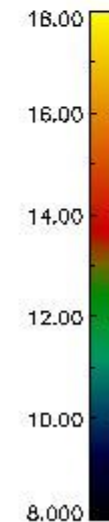
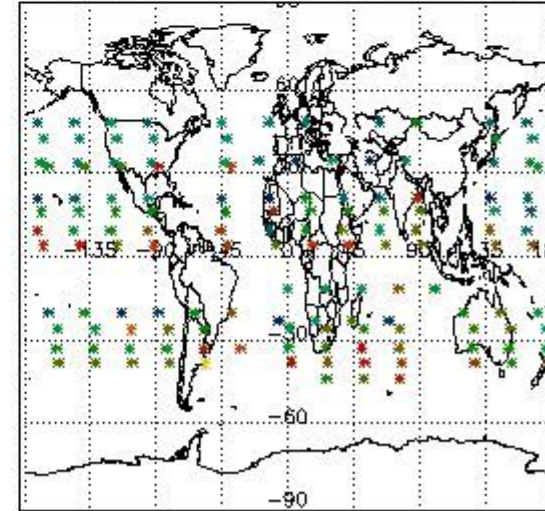
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

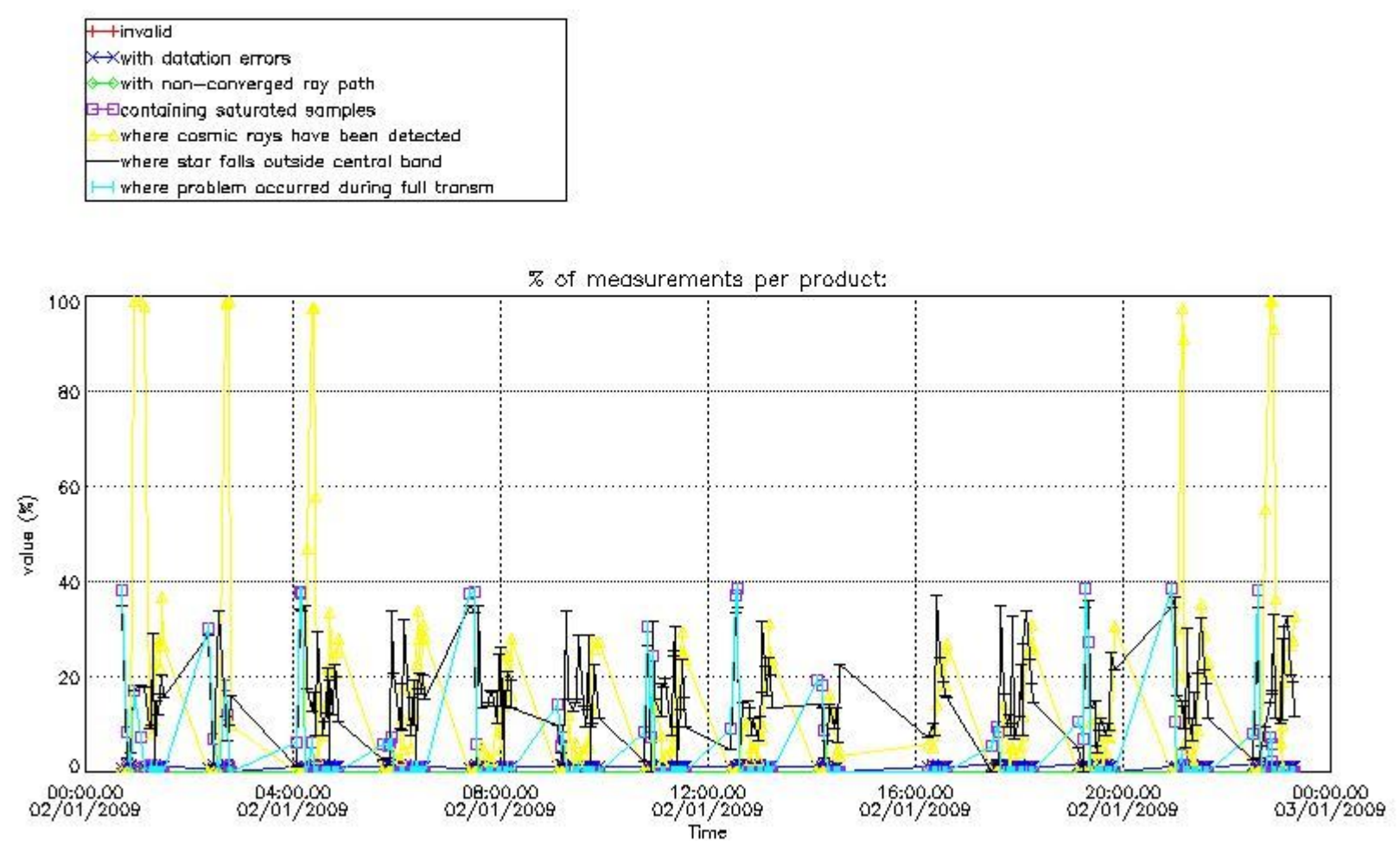


#### 4. Level 1 quality information per product

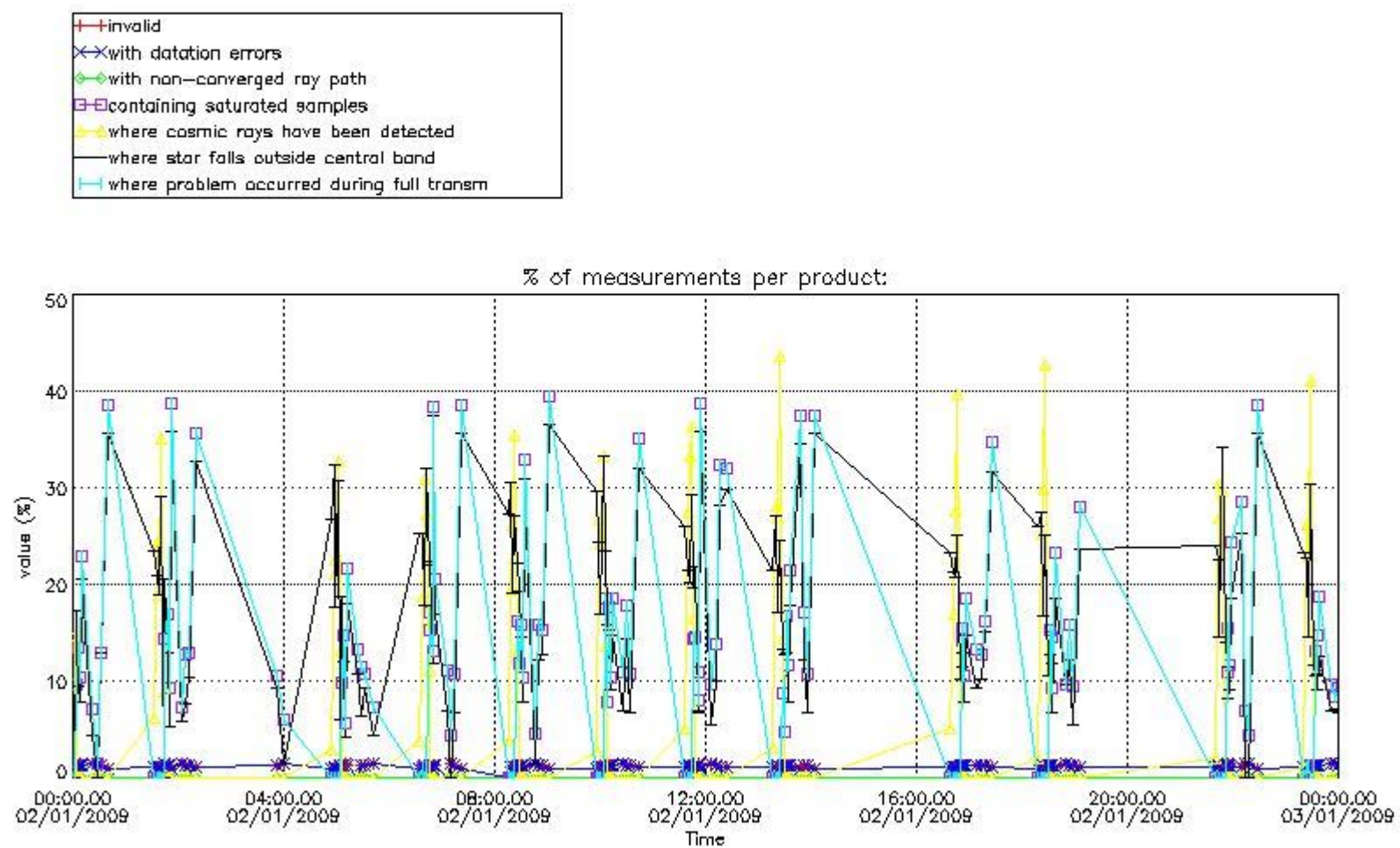
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

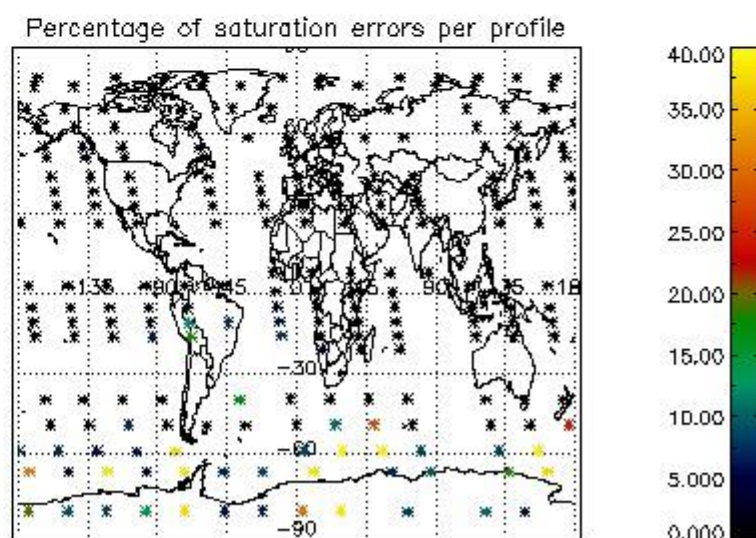
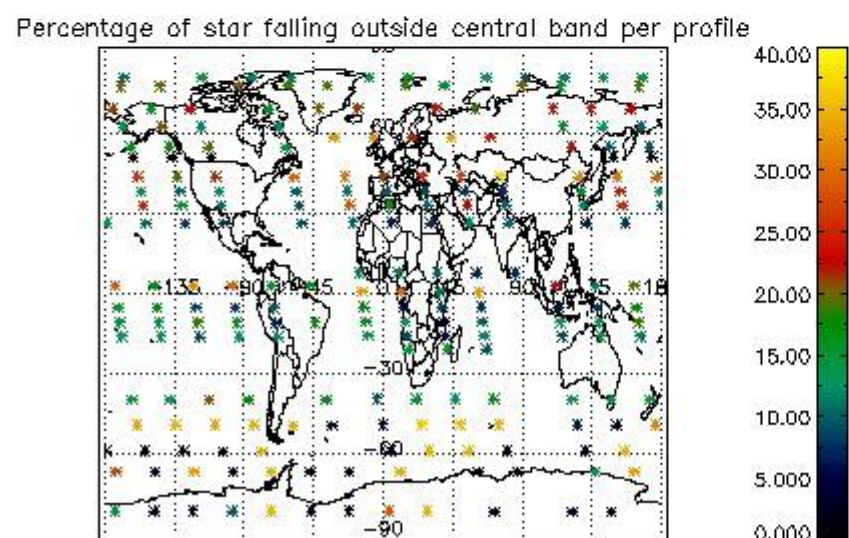
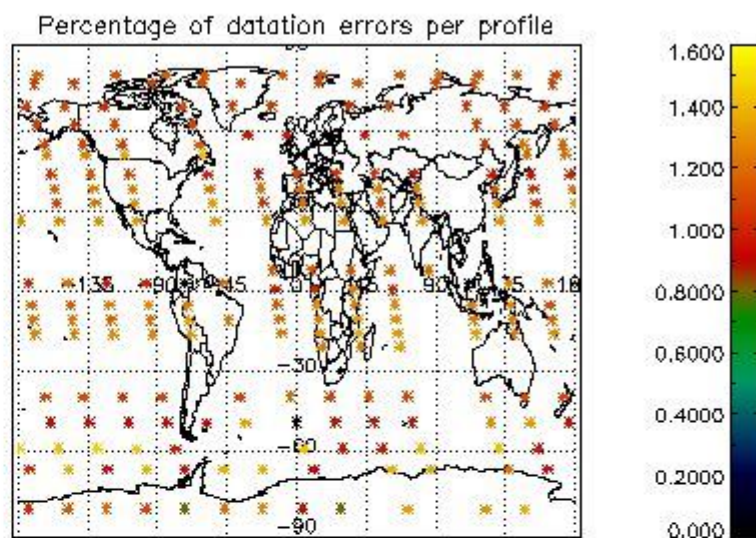
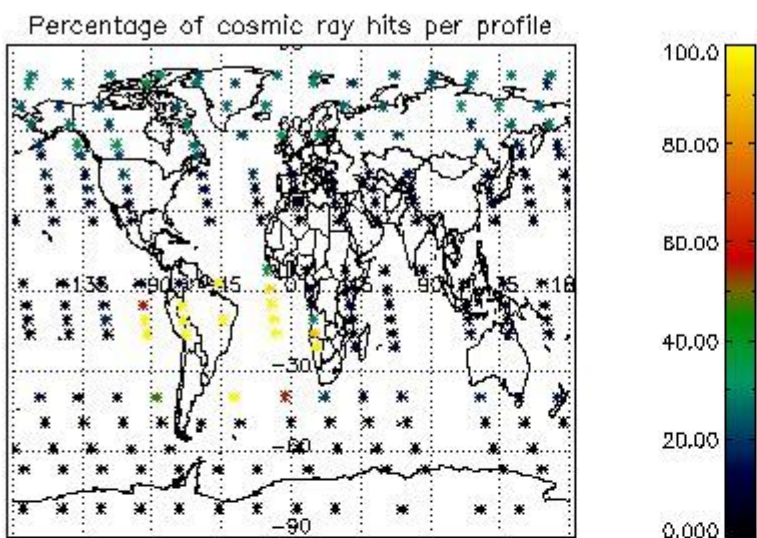


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



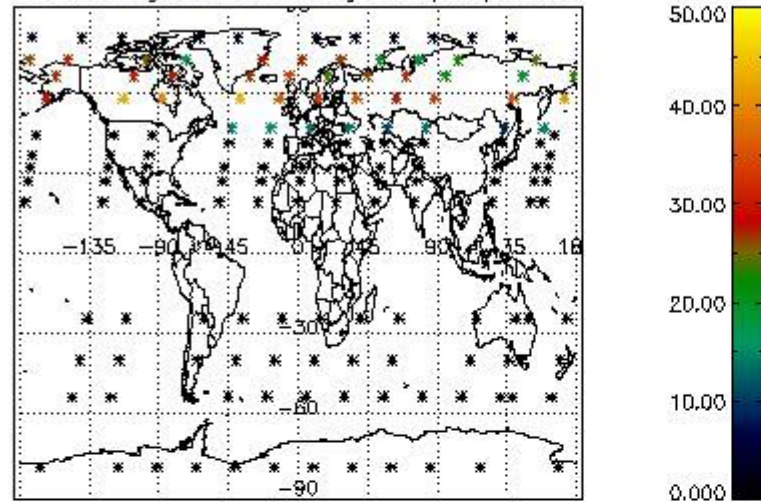
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

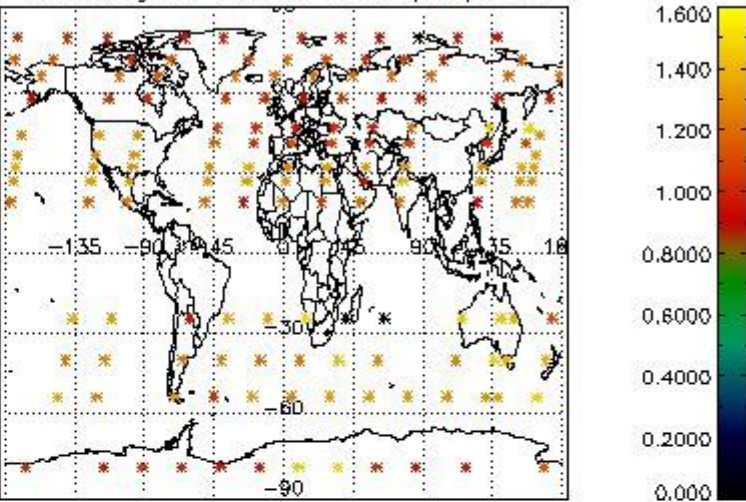


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

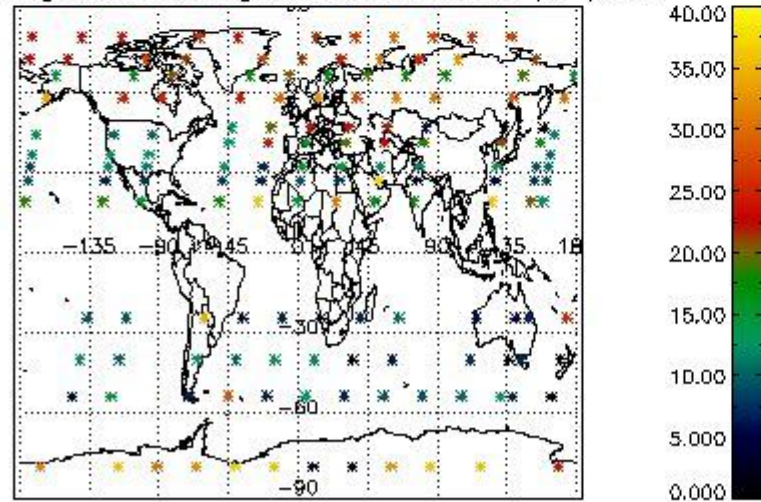
Percentage of cosmic ray hits per profile



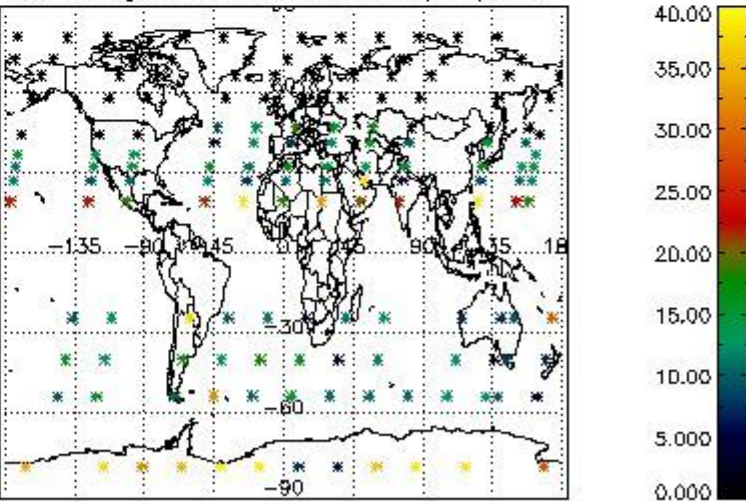
Percentage of datation errors per profile



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

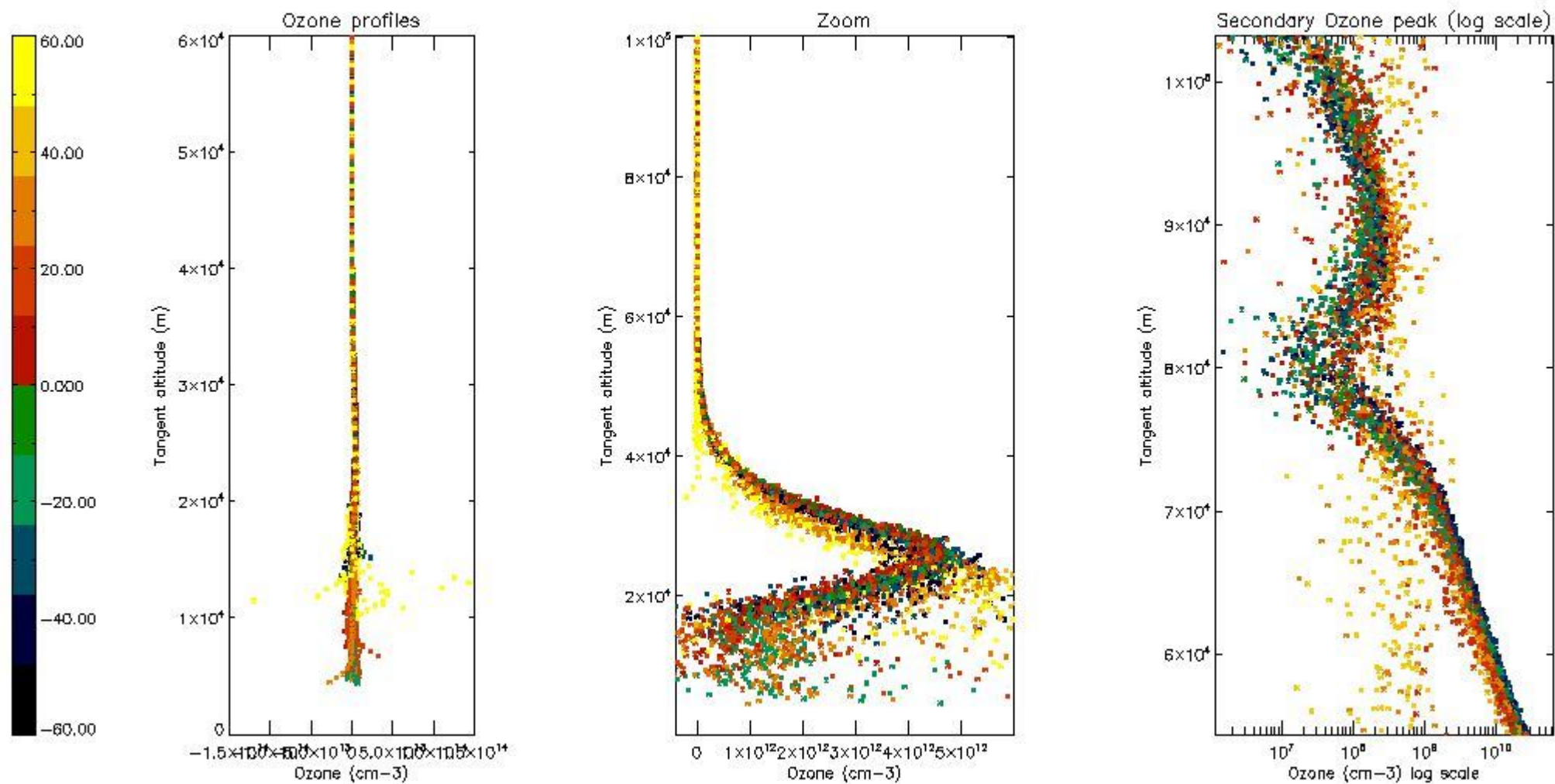
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	20

STD < 10	16
STD < 5	10

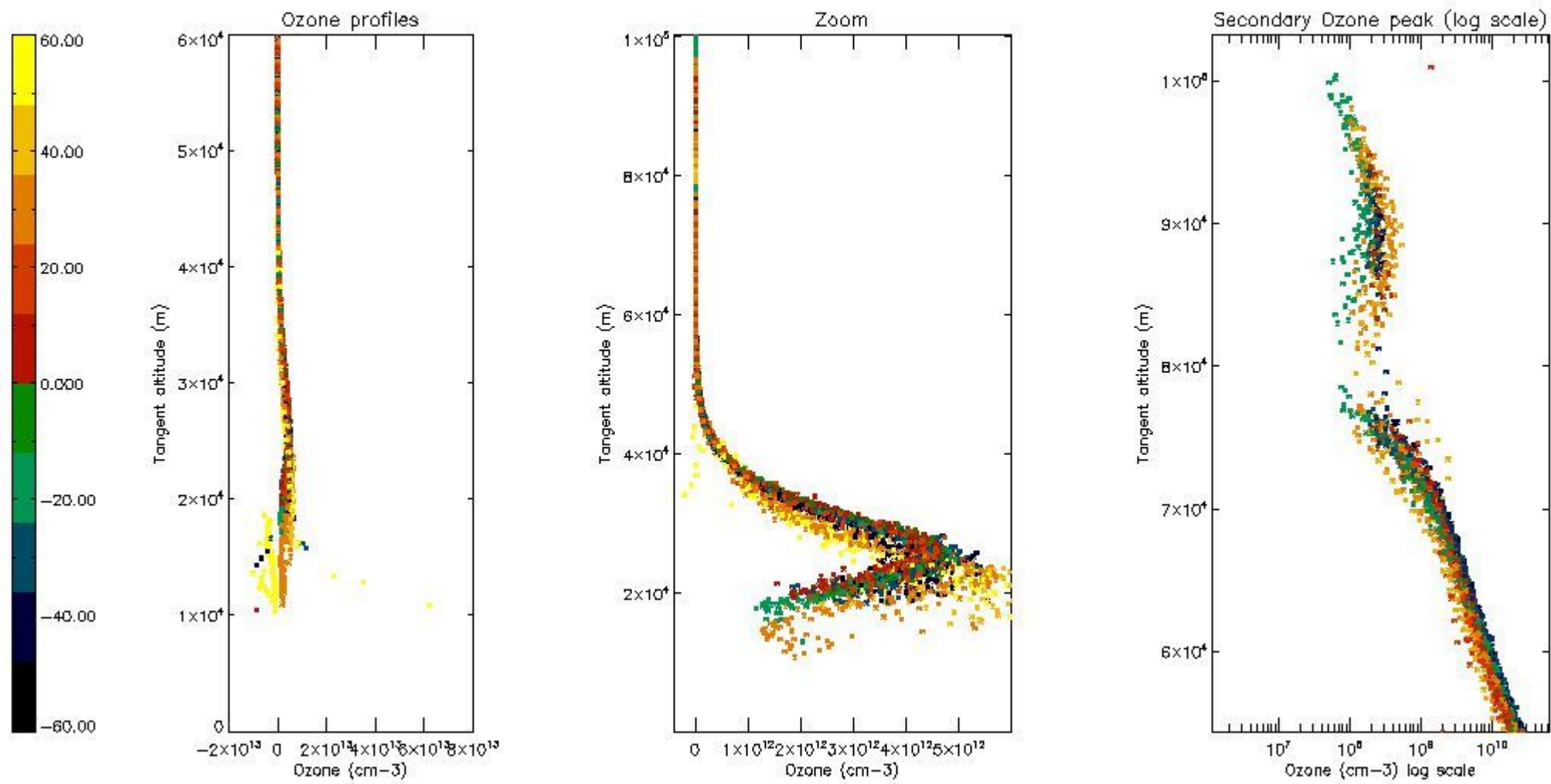
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

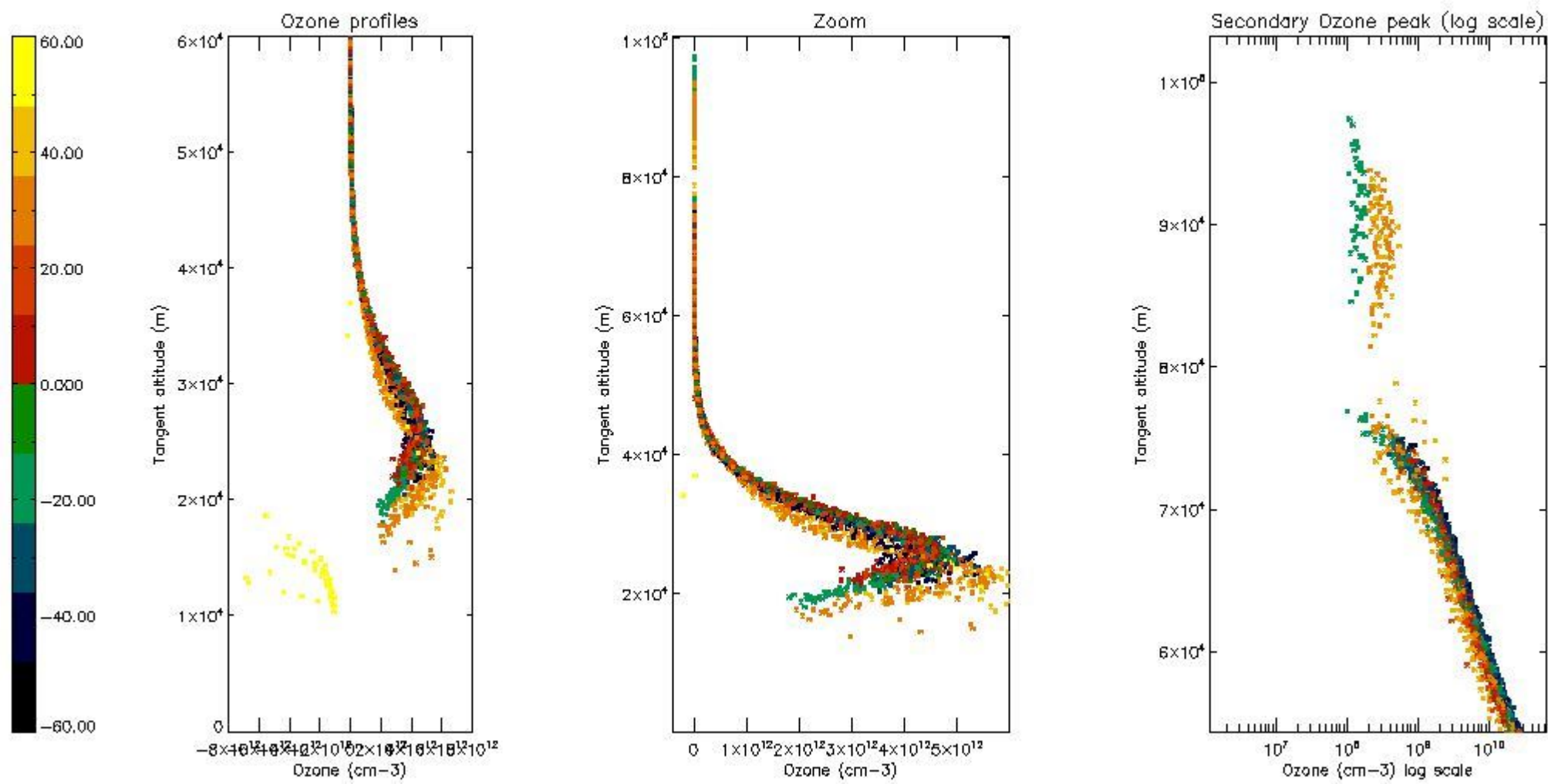
The colorbar represents the latitude.



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

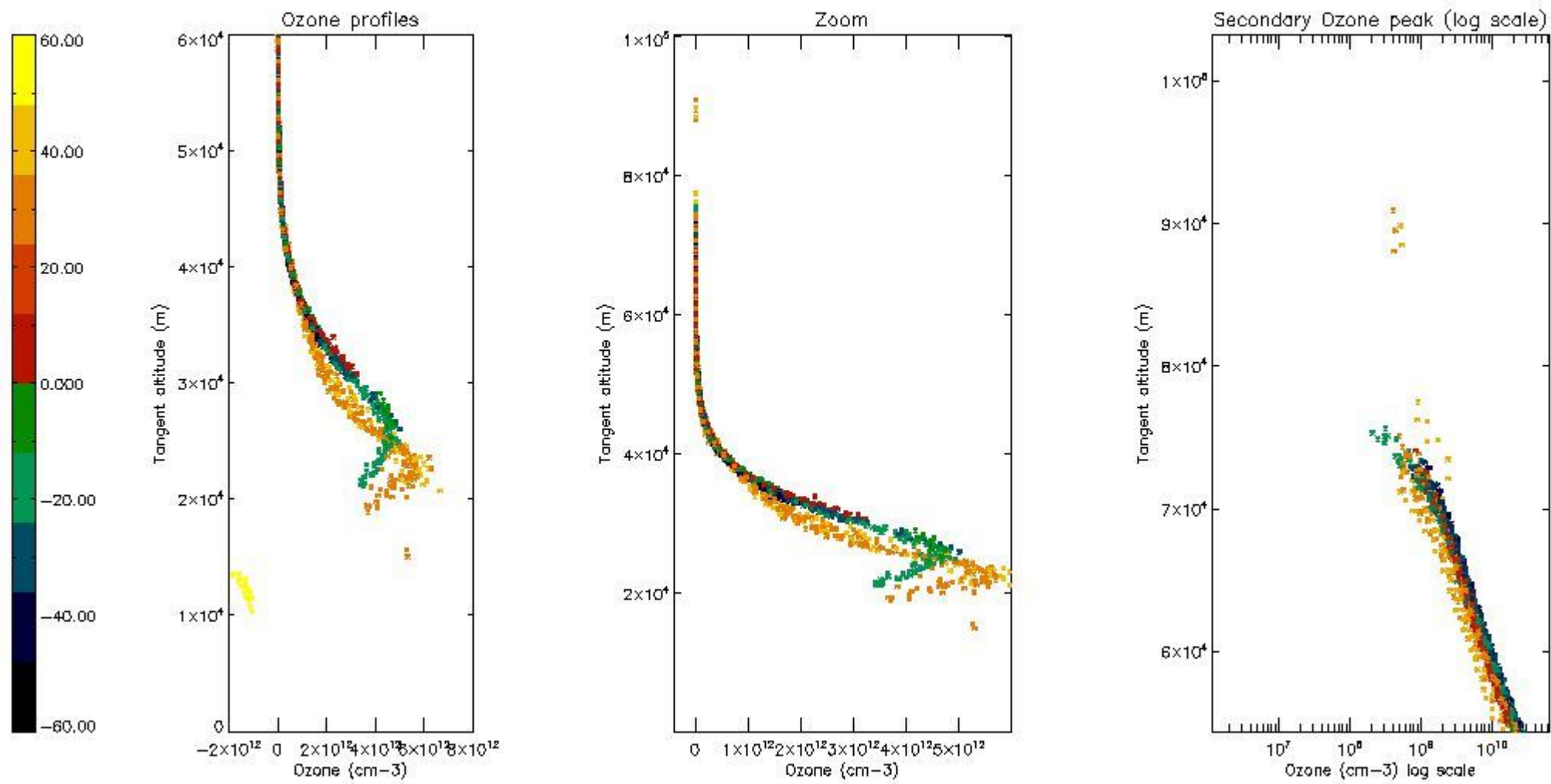
The colorbar represents the latitude.





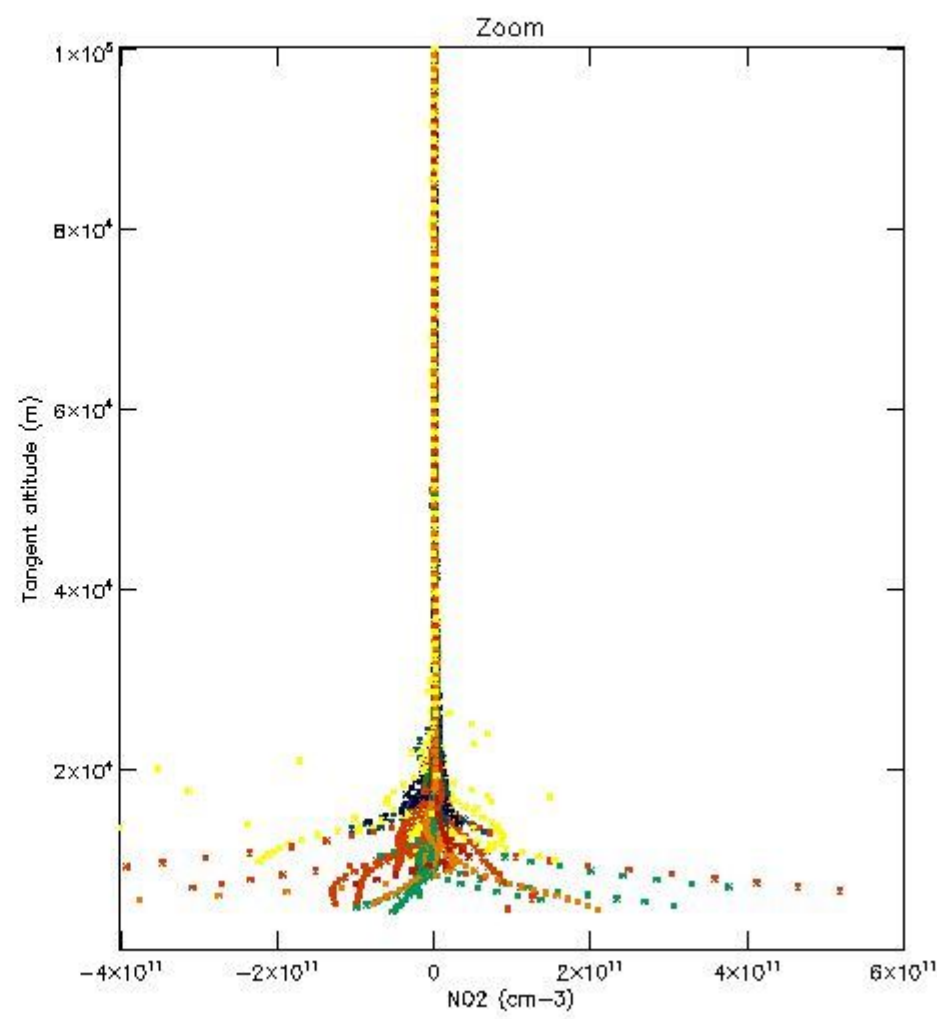
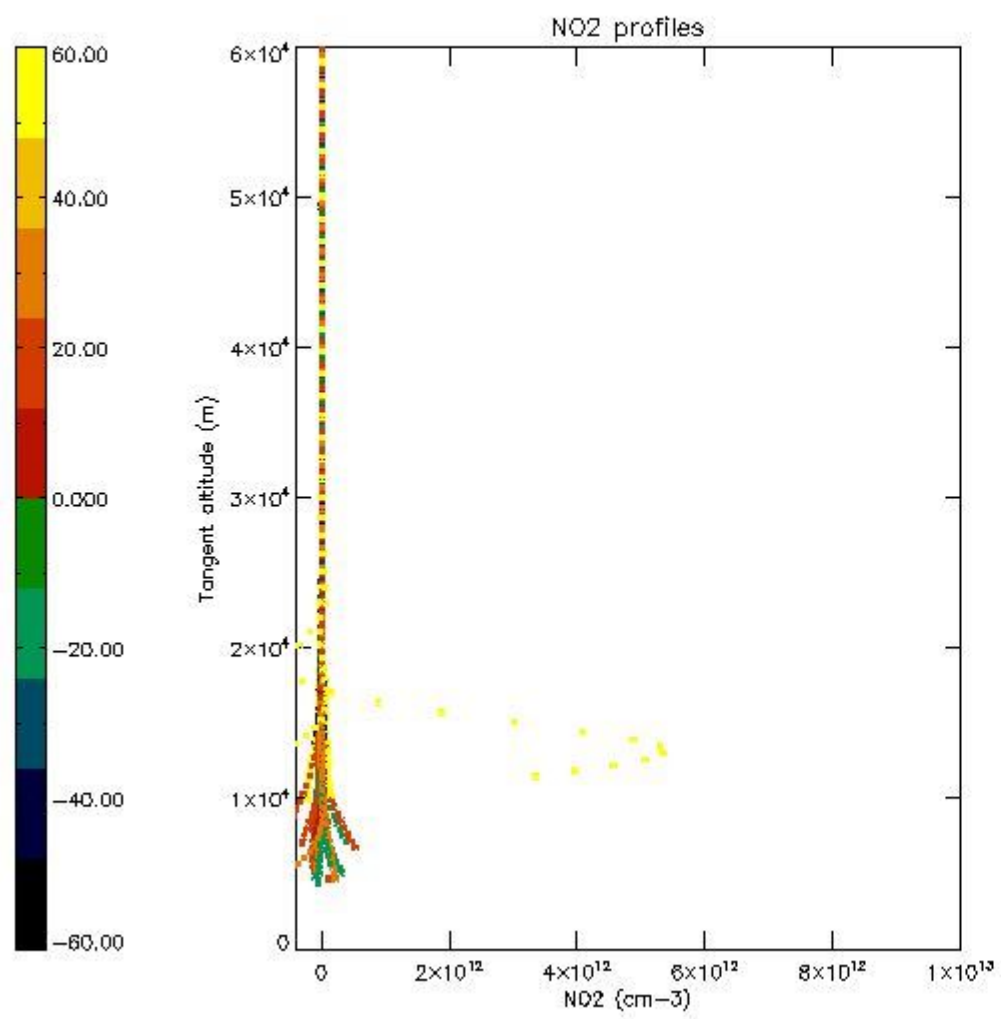
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



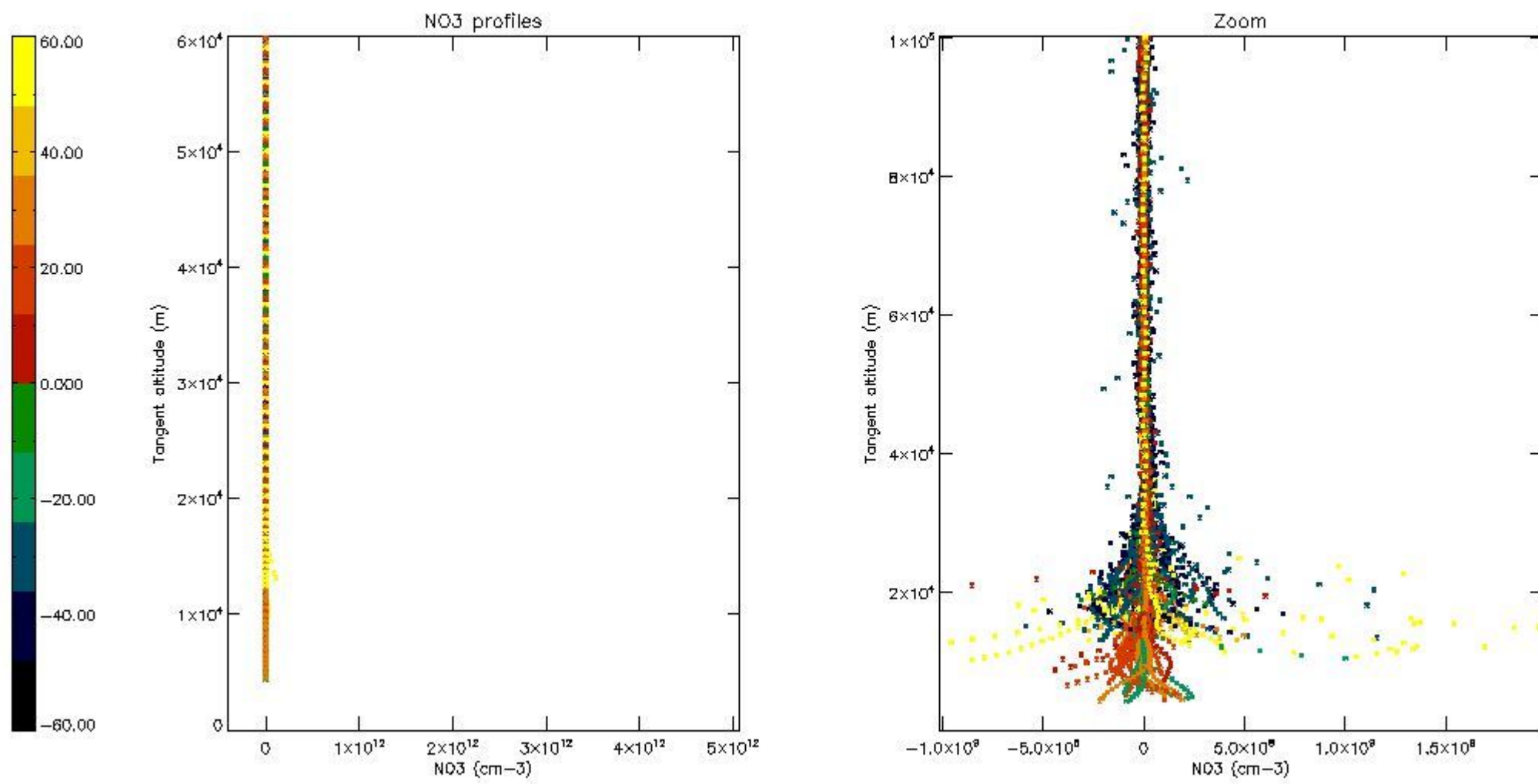
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



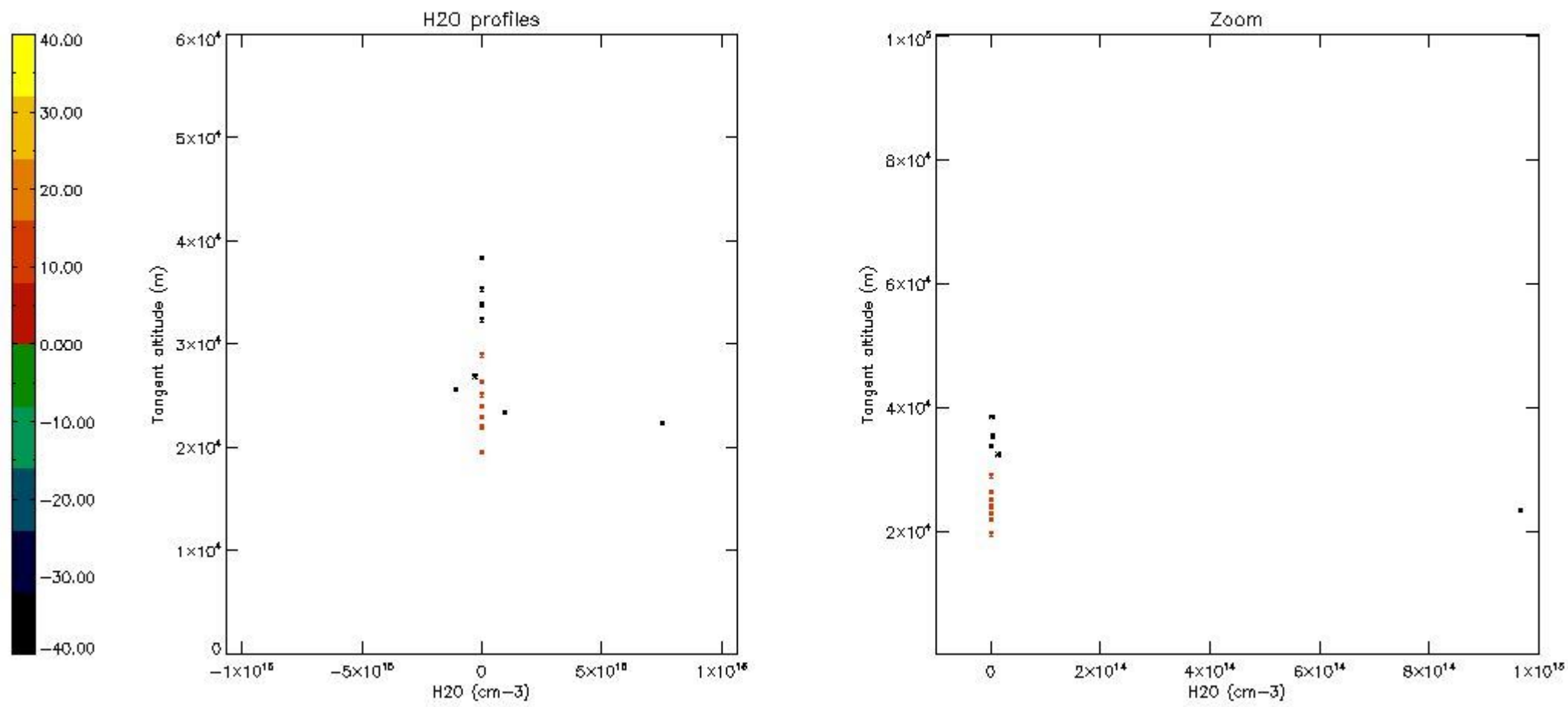
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	02-JAN-2009 00:02:46
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	02-JAN-2009 00:02:46
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	02-JAN-2009 00:02:46

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### [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](#)







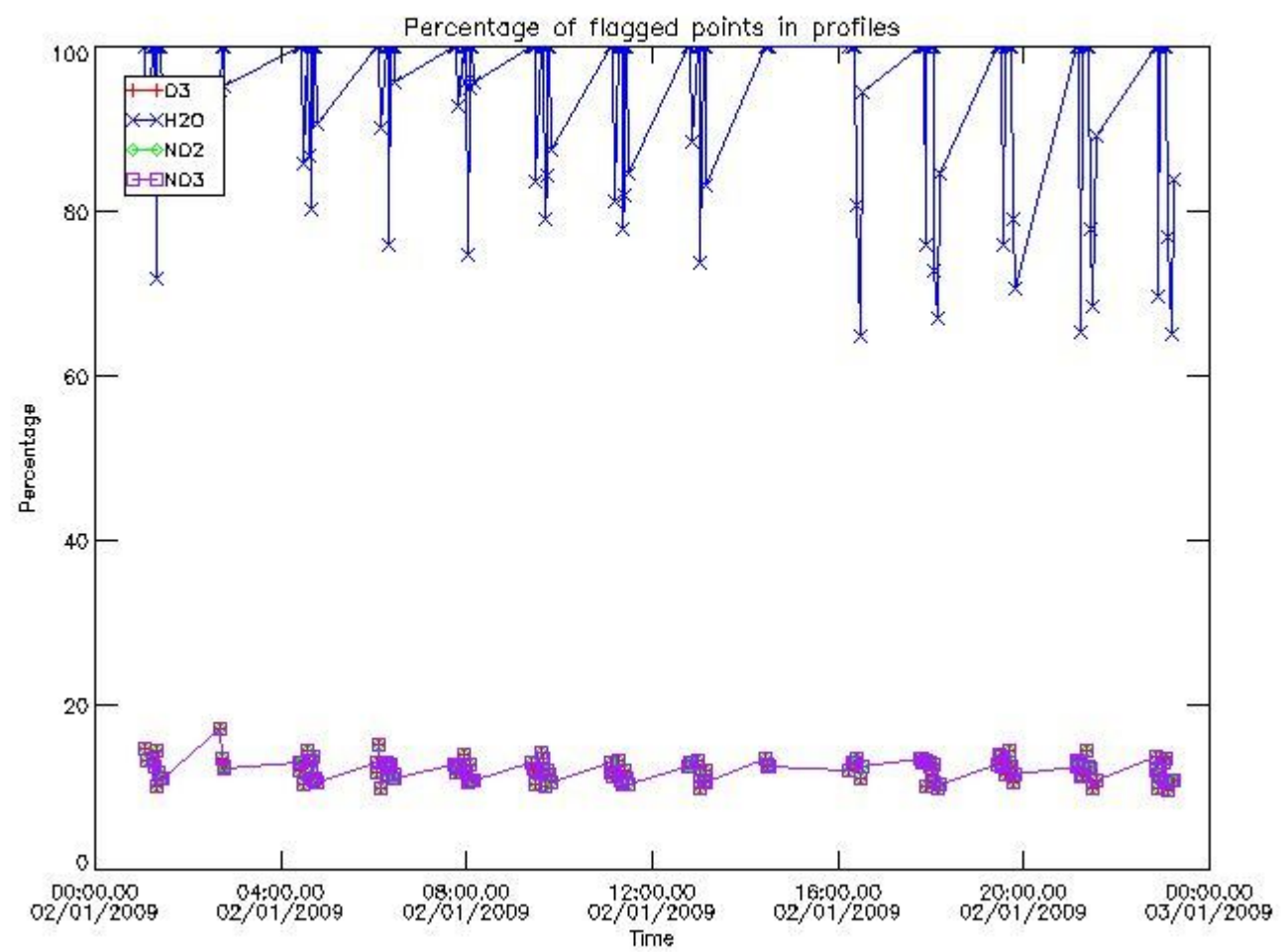






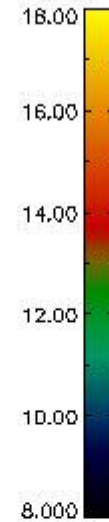
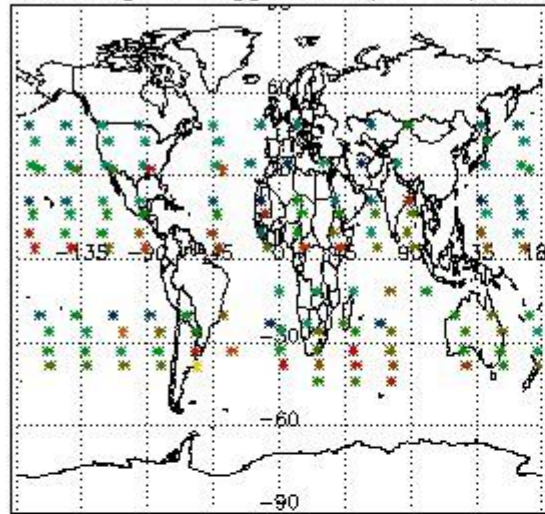




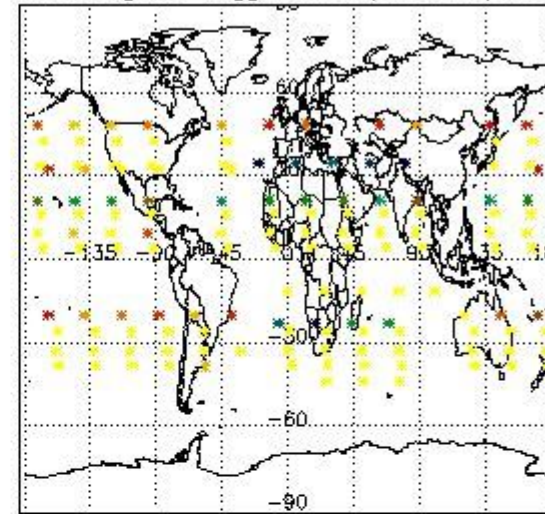


3.2 Plot quality information per product (world map)

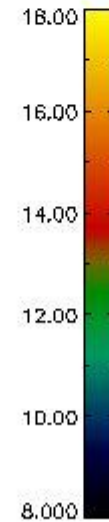
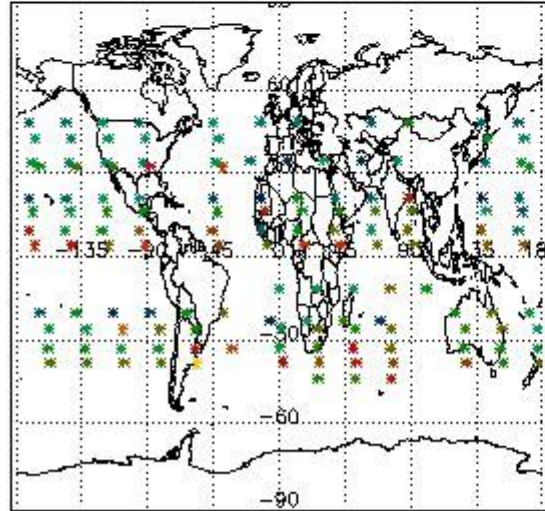
Percentage of flagged data per O3 profile



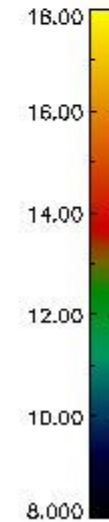
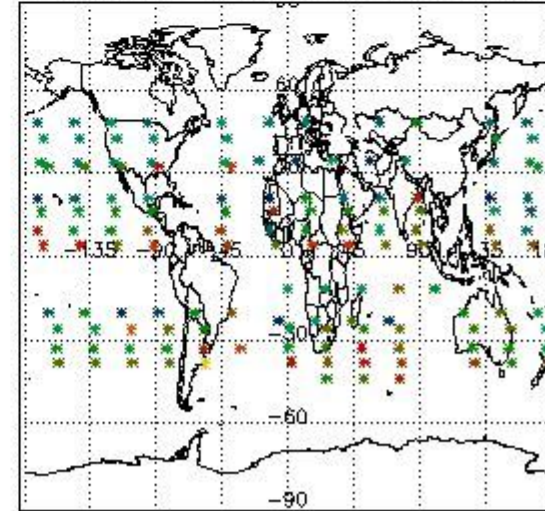
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

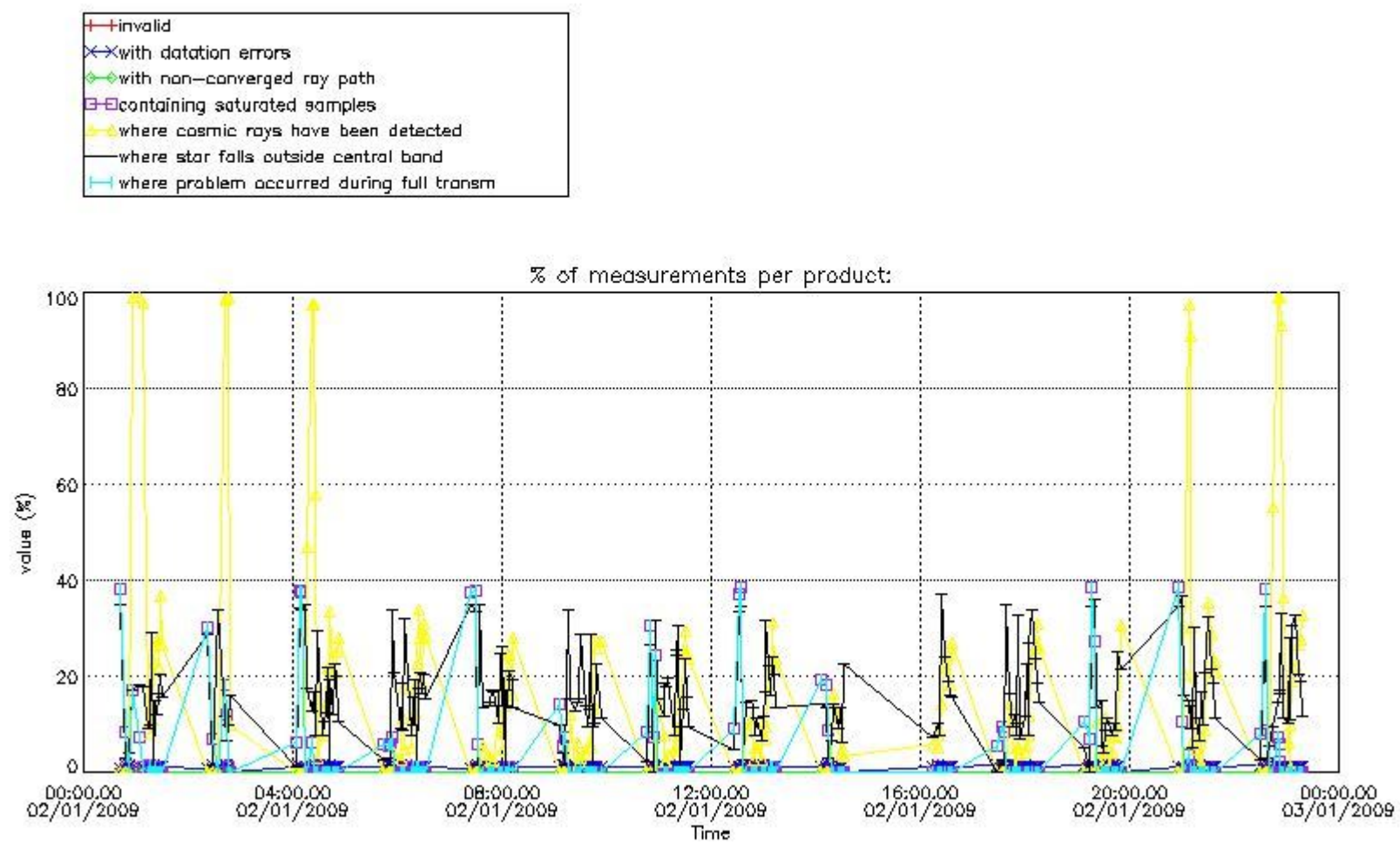


#### 4. Level 1 quality information per product

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.

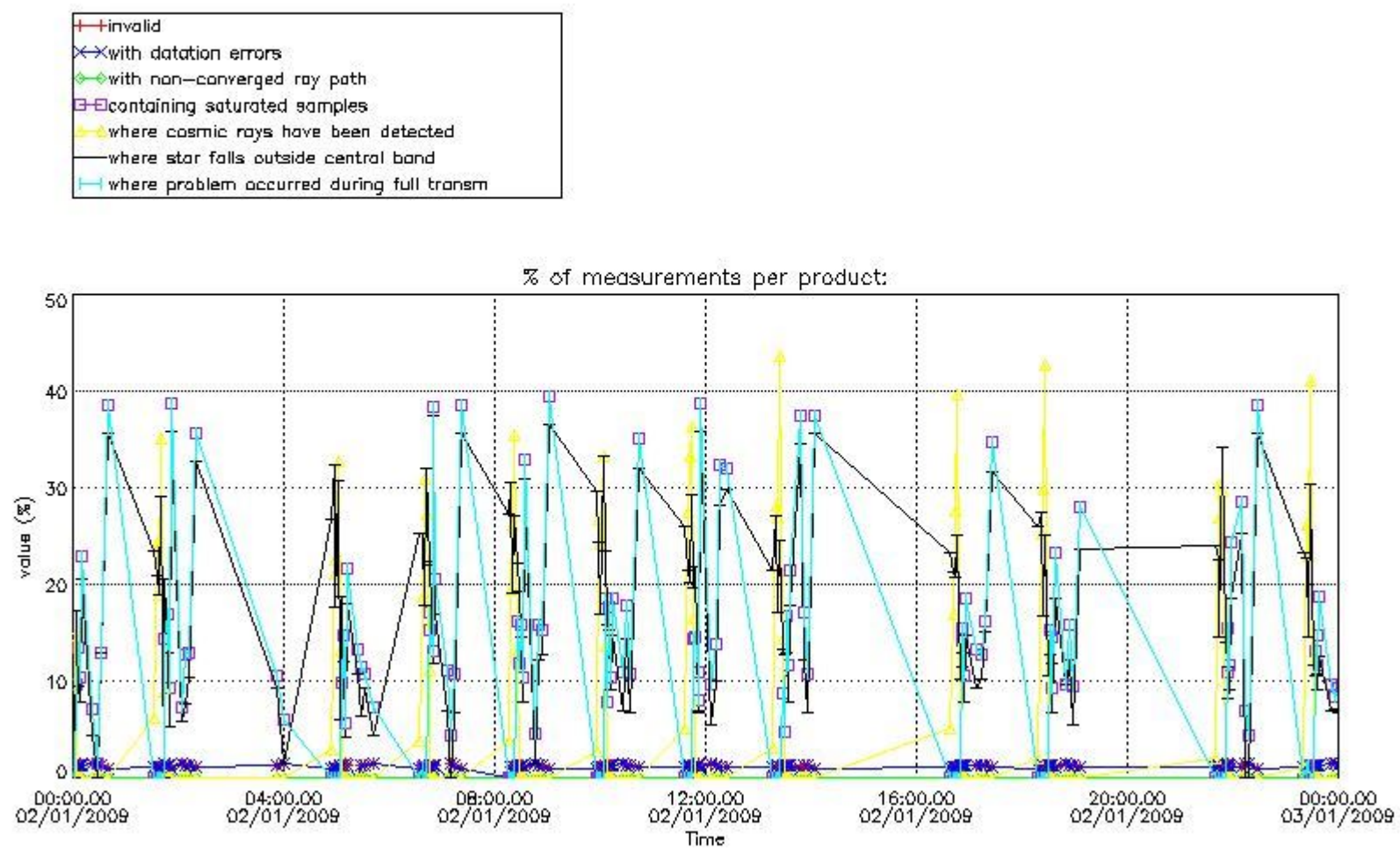
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

###### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes



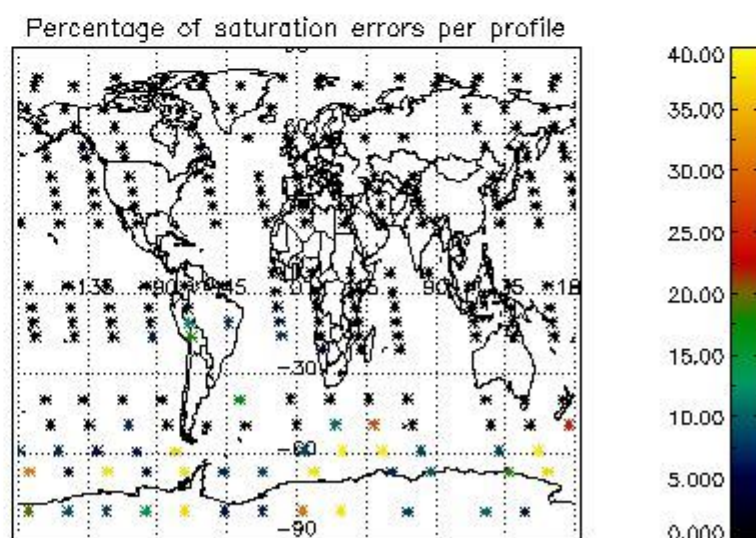
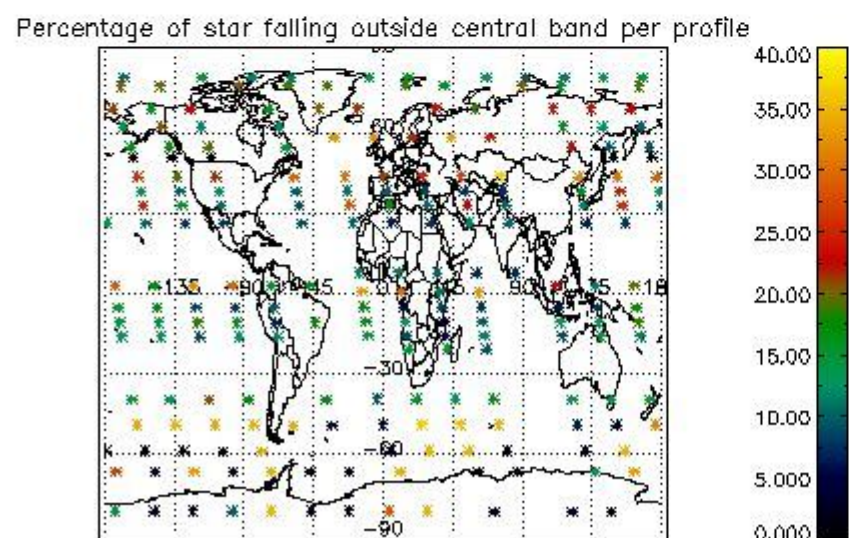
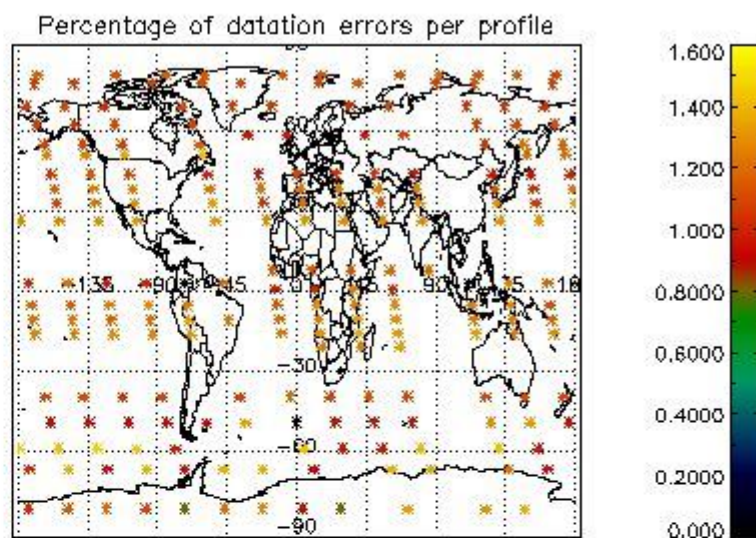
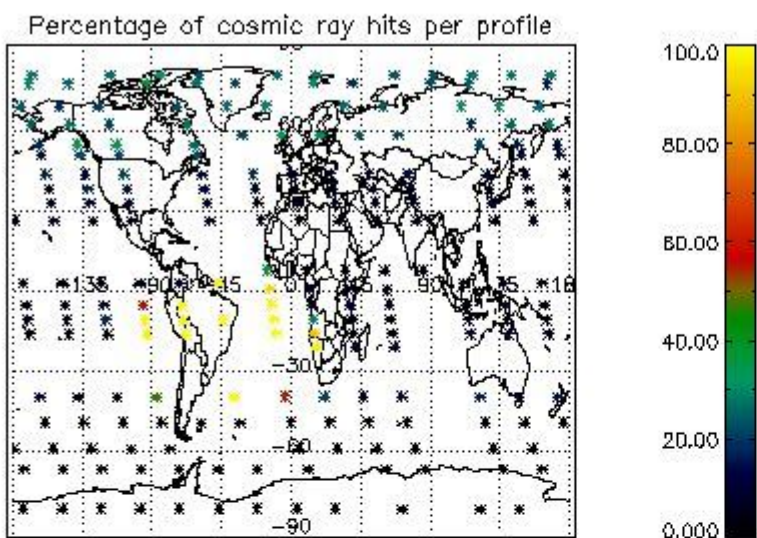
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes





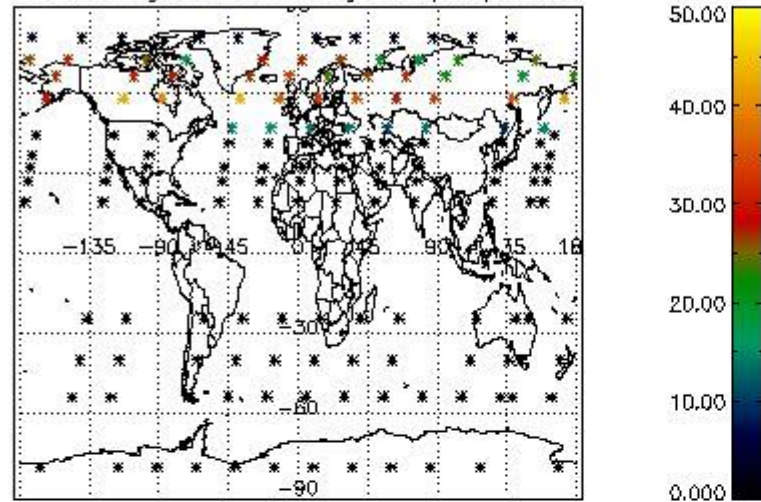
4.2 Plot quality information per product coming from level 1b processing (world map)

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

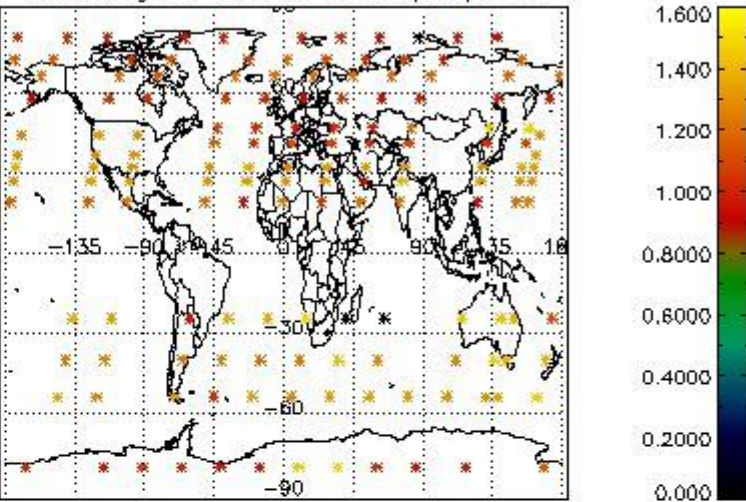


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

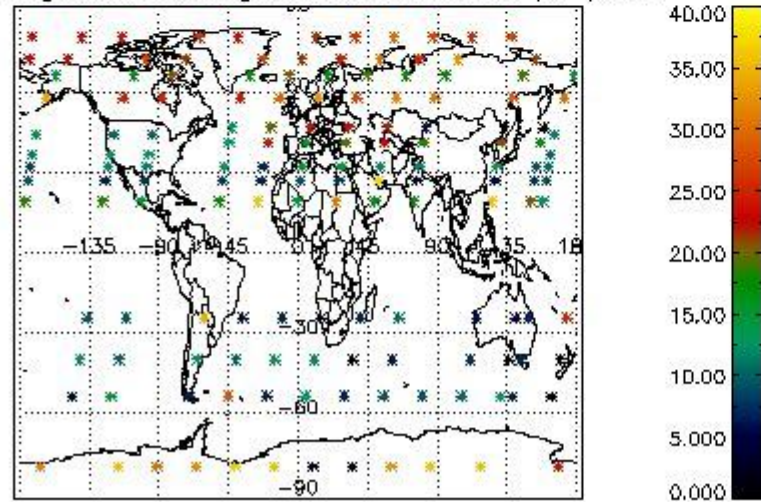
Percentage of cosmic ray hits per profile



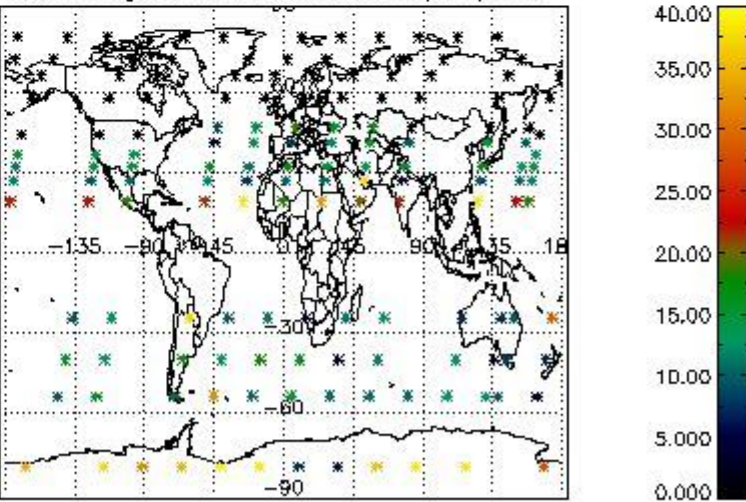
Percentage of datation errors per profile



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

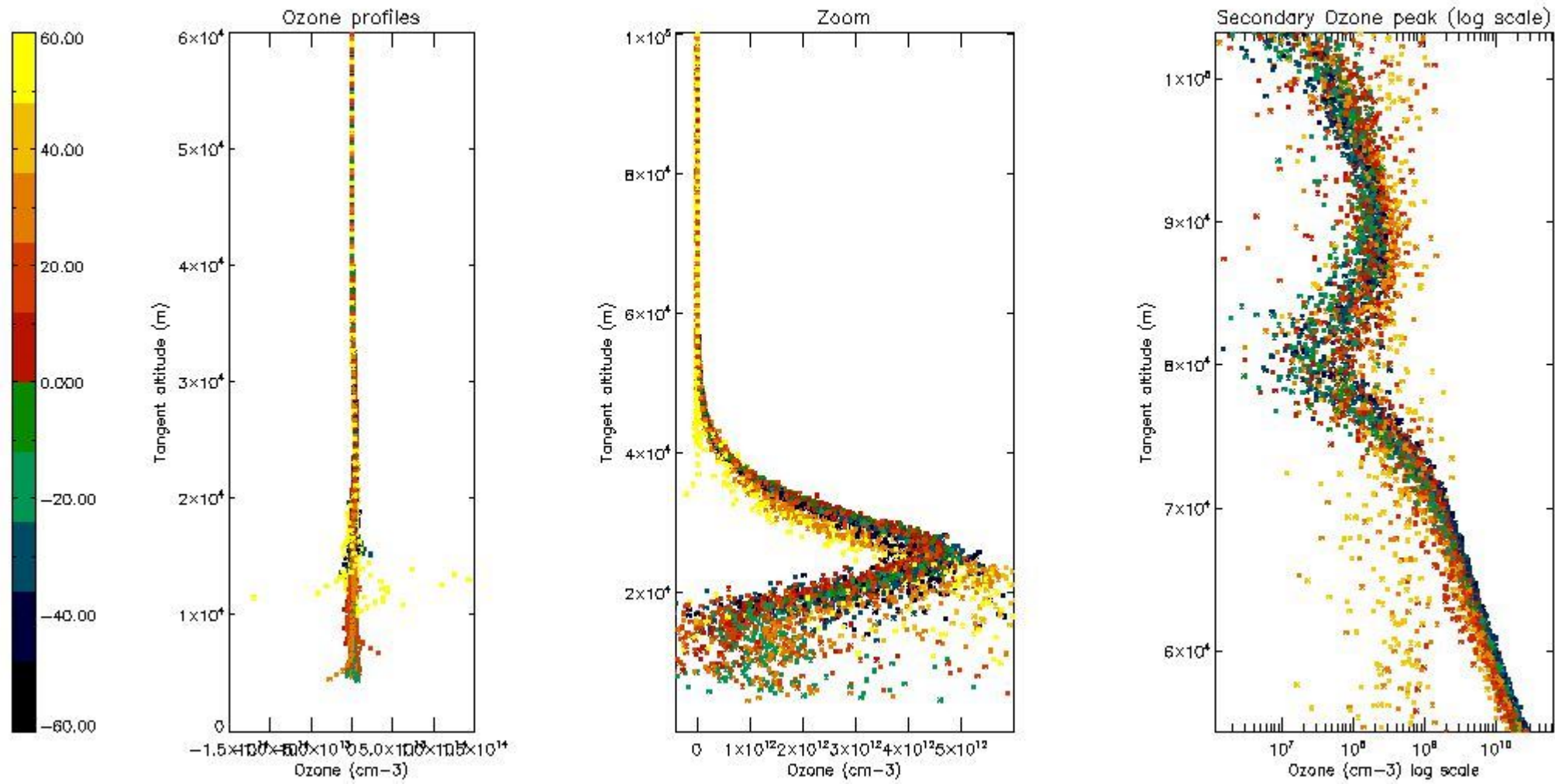
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	20

STD < 10	16
STD < 5	10

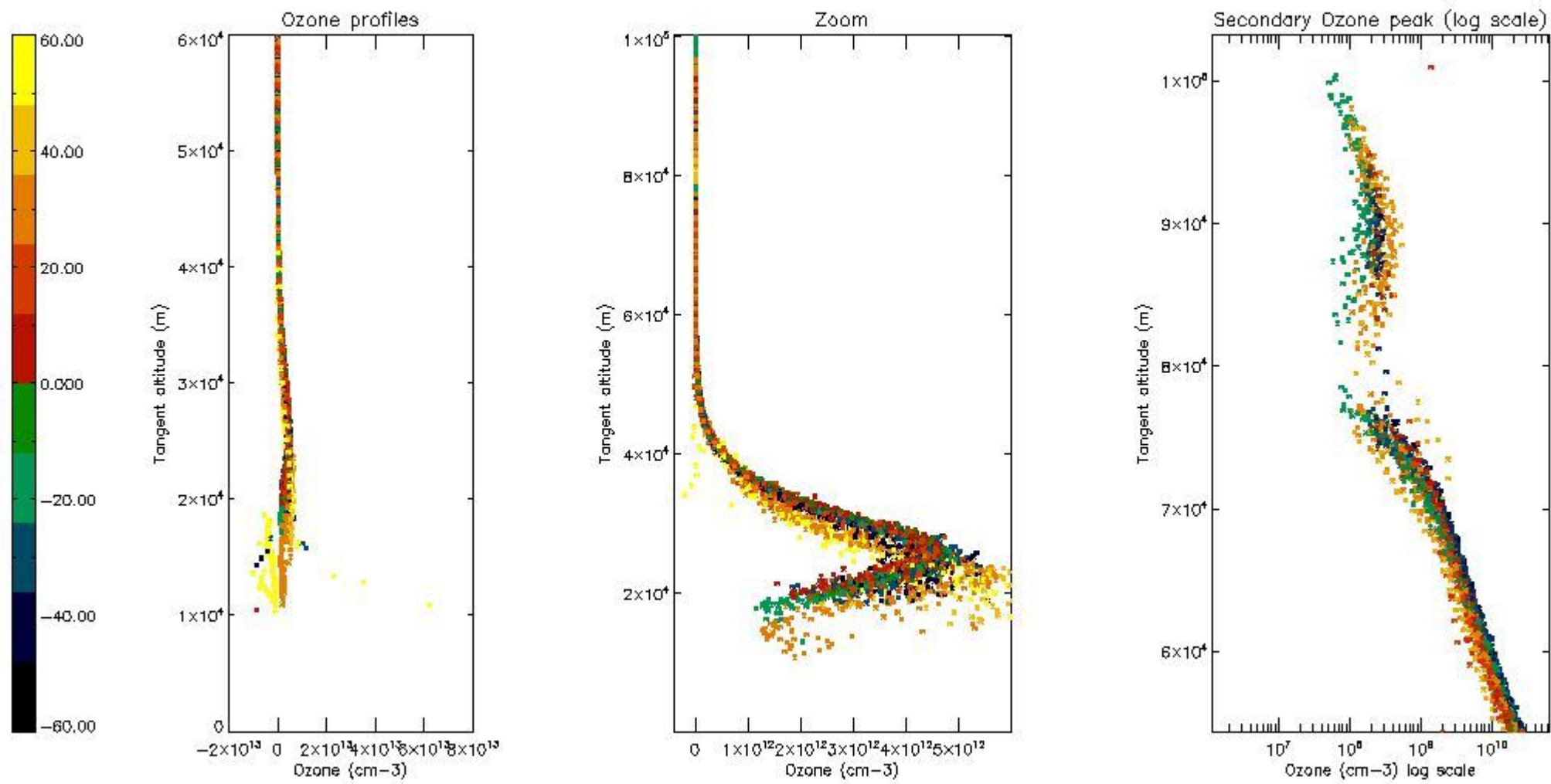
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



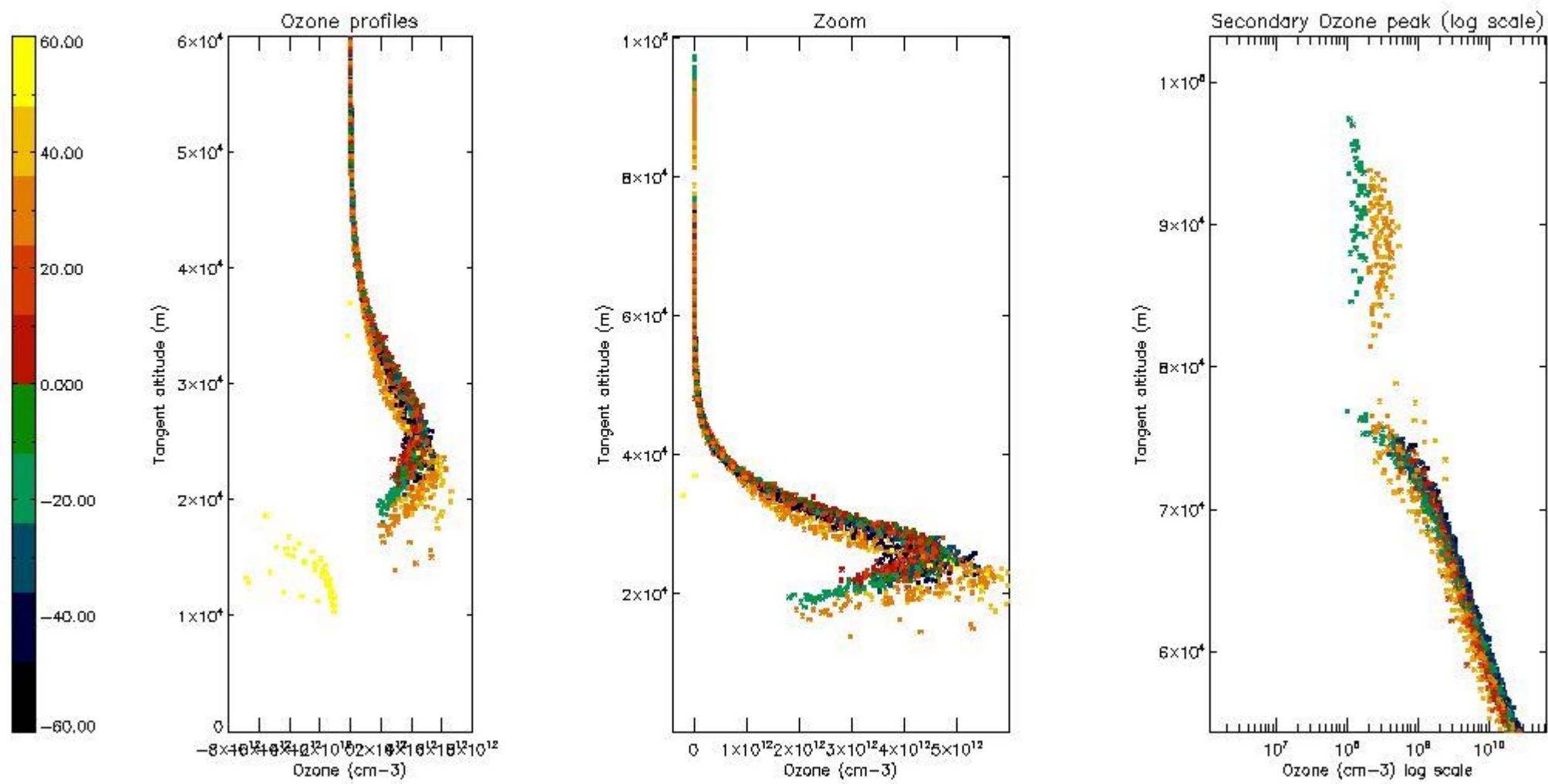
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



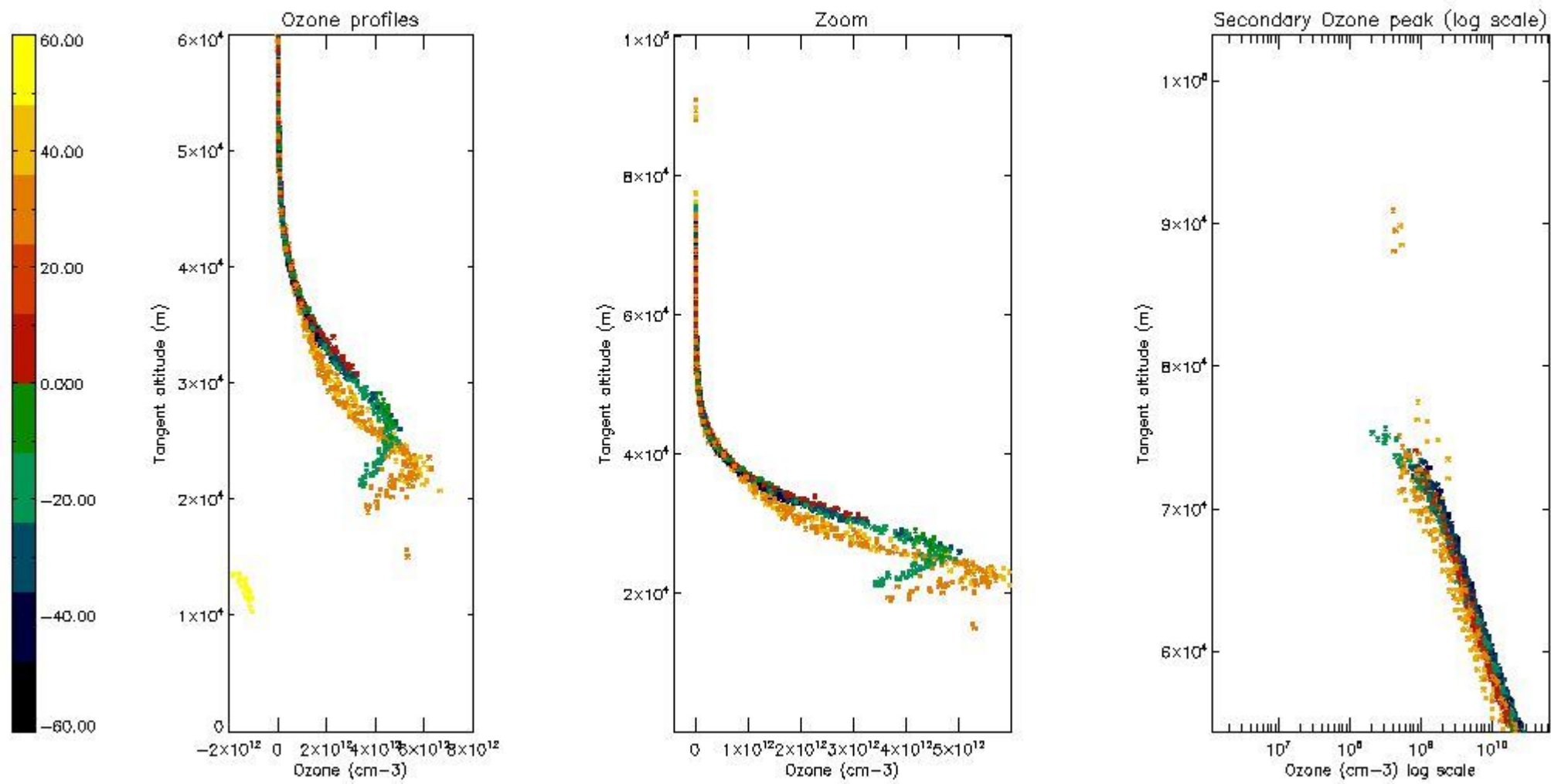
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



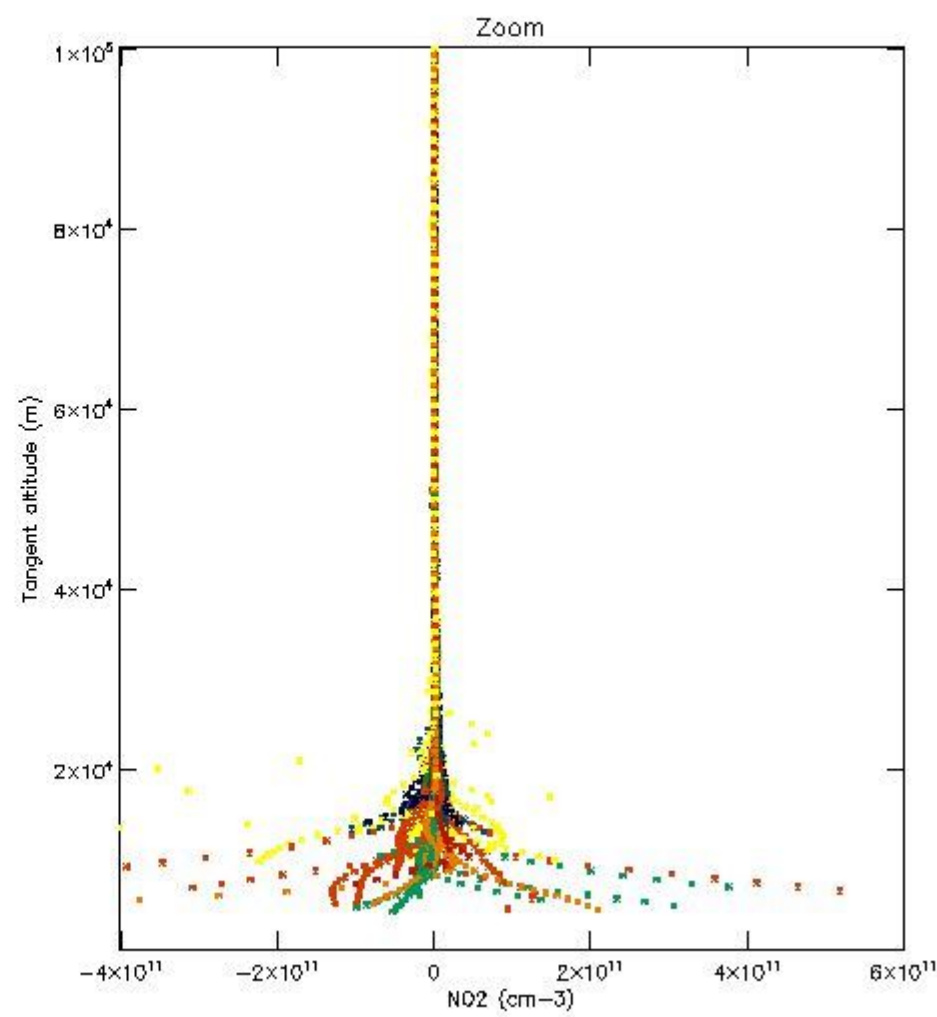
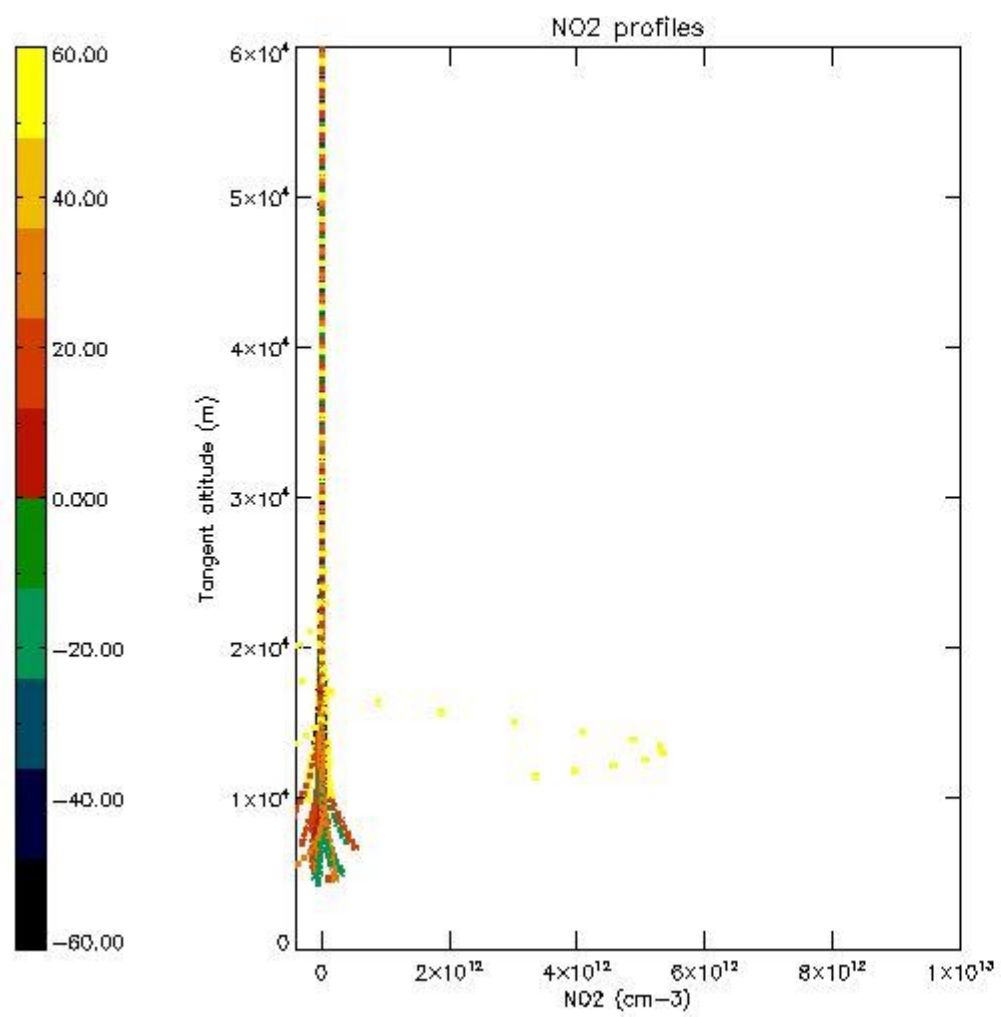
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

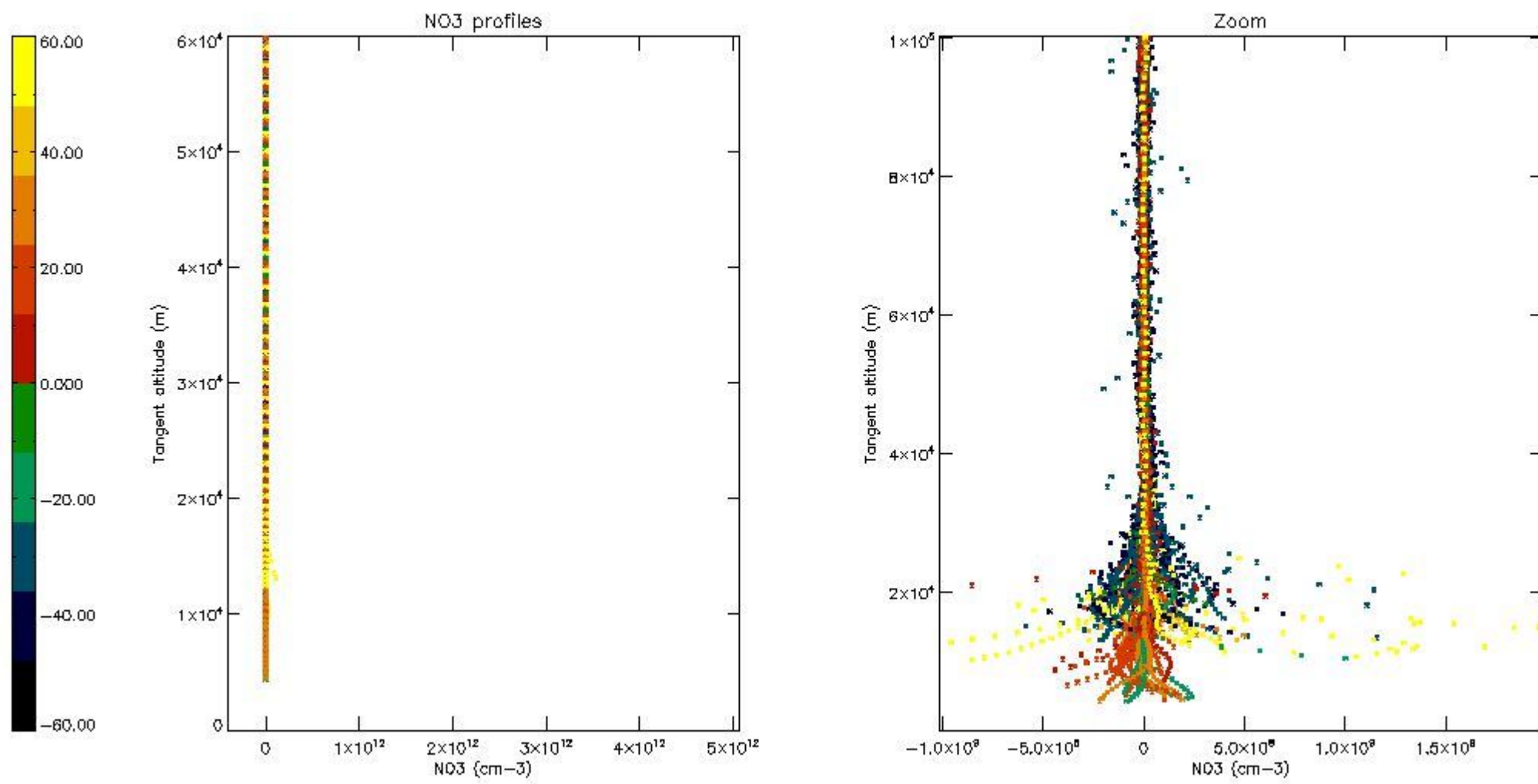
The colorbar represents the latitude.



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

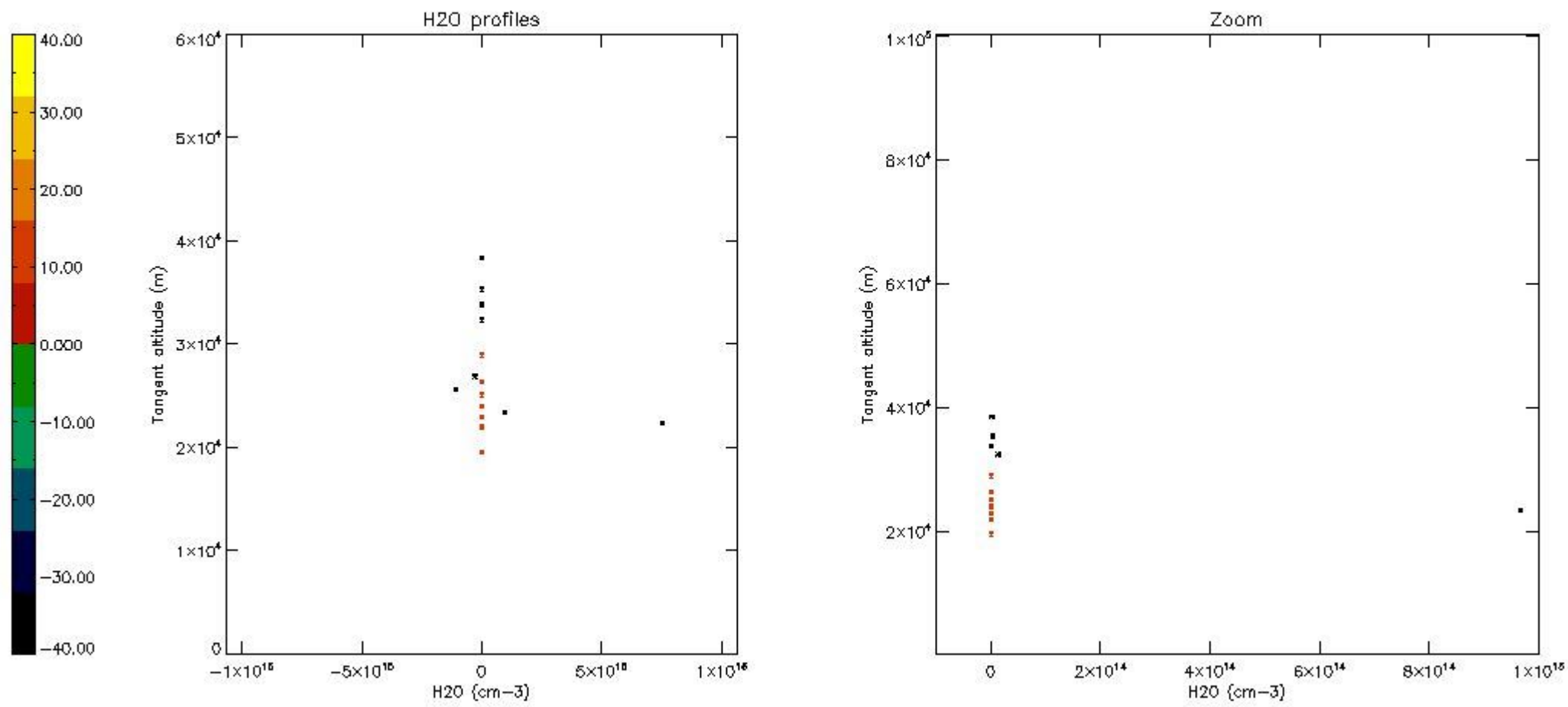
The colorbar represents the latitude.





*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)*

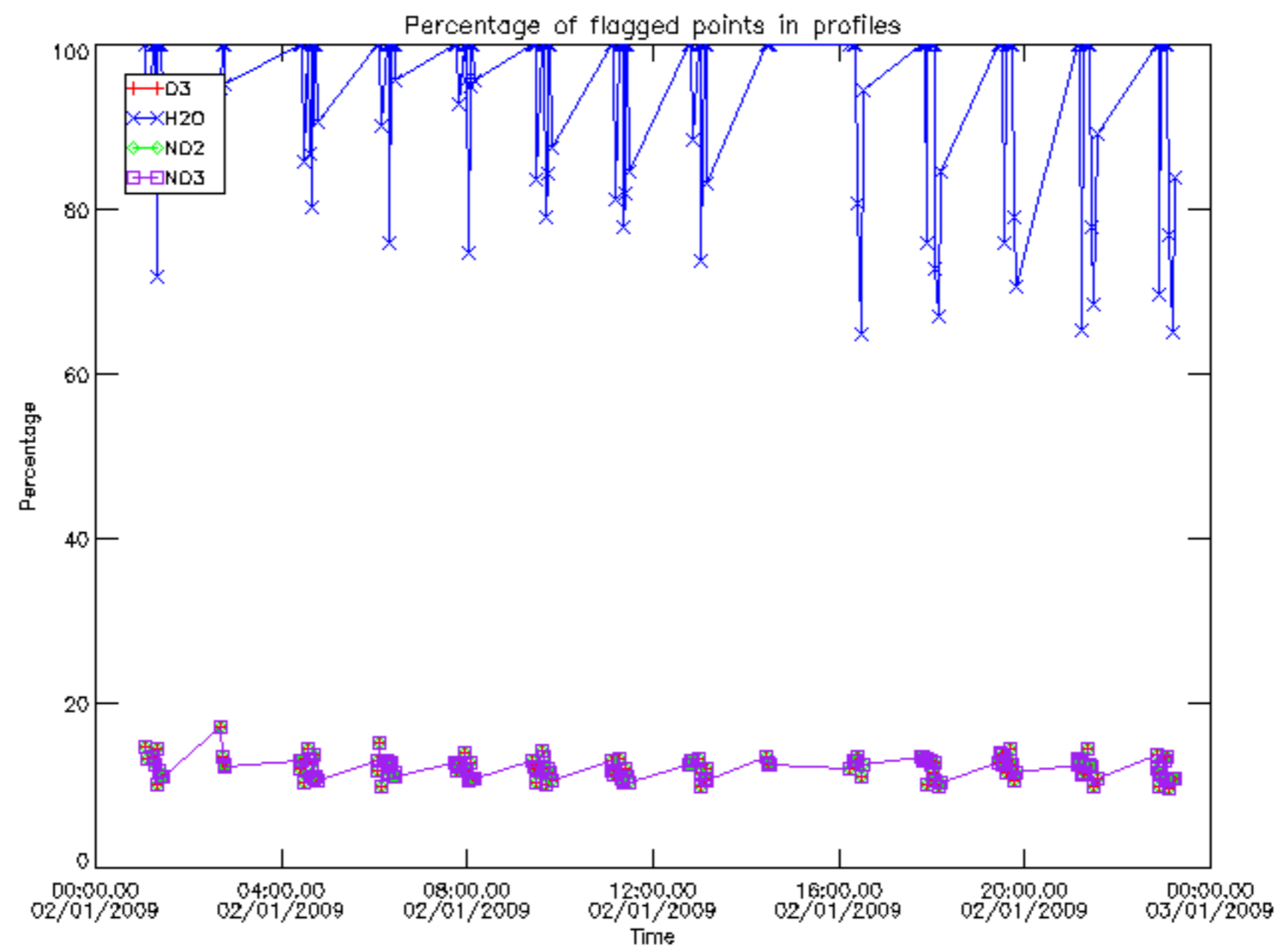
The colorbar represents the latitude.



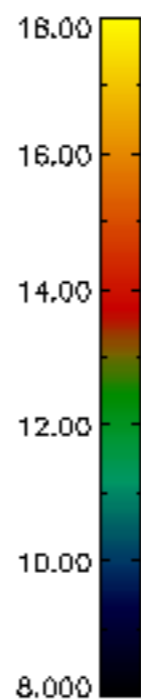
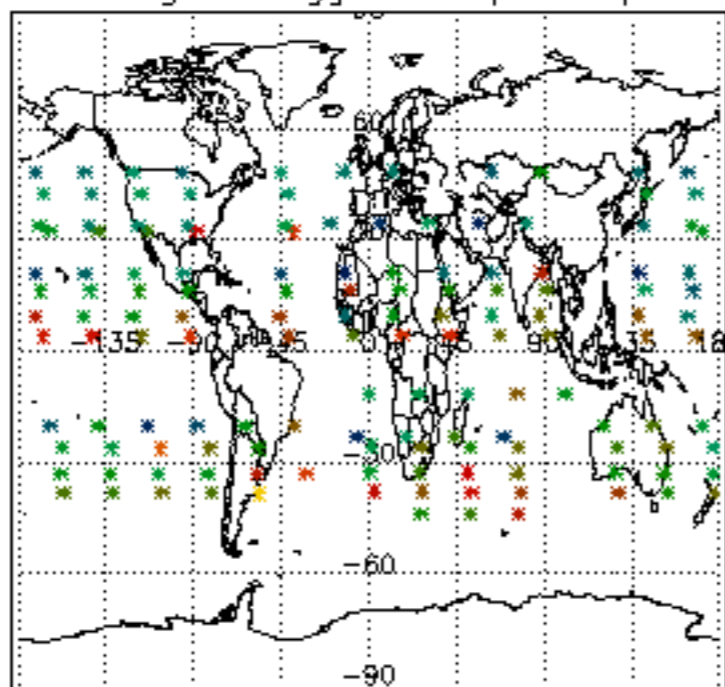
## 6. Auxiliary Data Files used for the production reported in section 2

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.

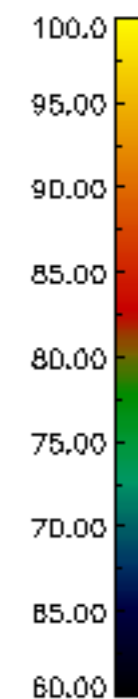
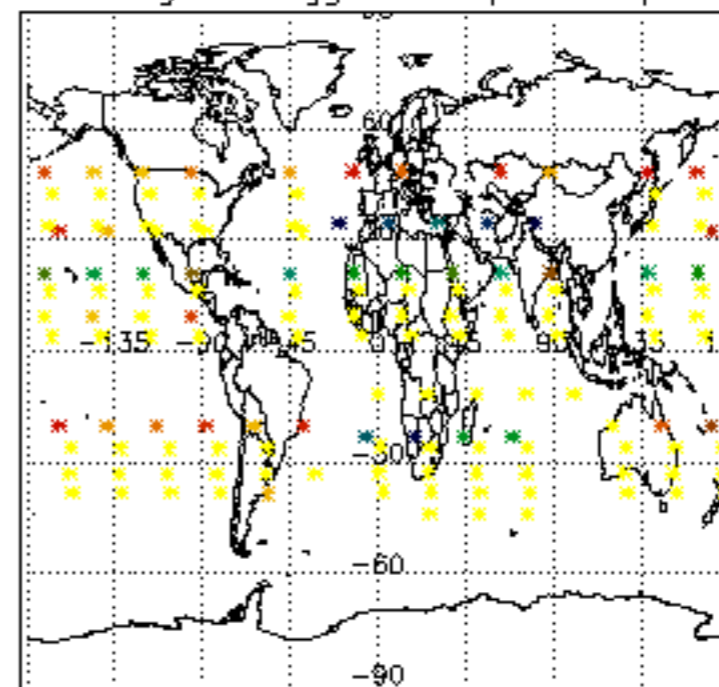
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	02-JAN-2009 00:02:46
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	02-JAN-2009 00:02:46
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	02-JAN-2009 00:02:46



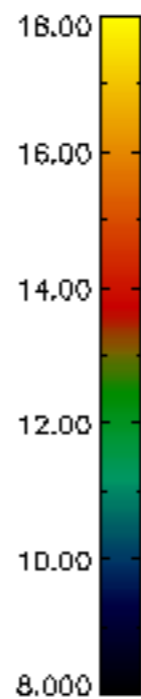
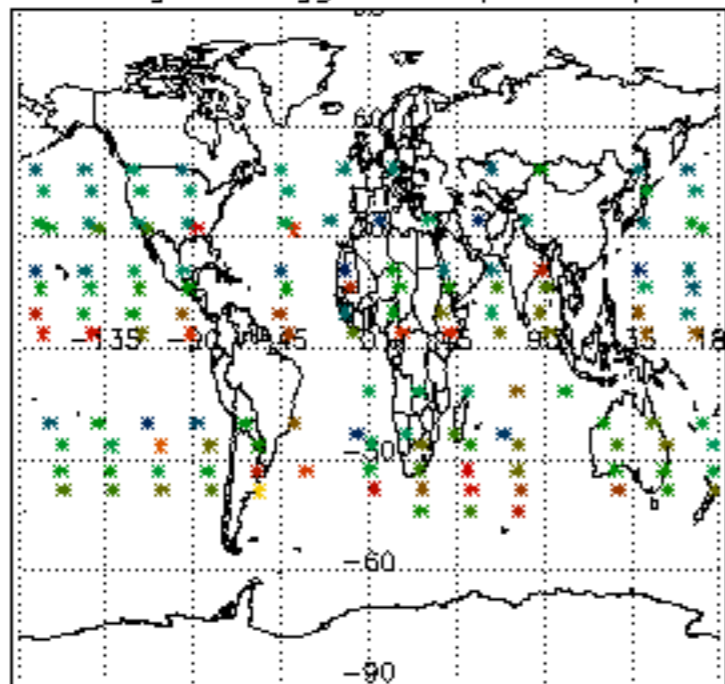
Percentage of flagged data per D3 profile



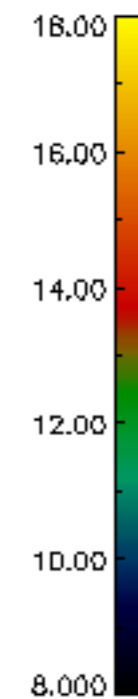
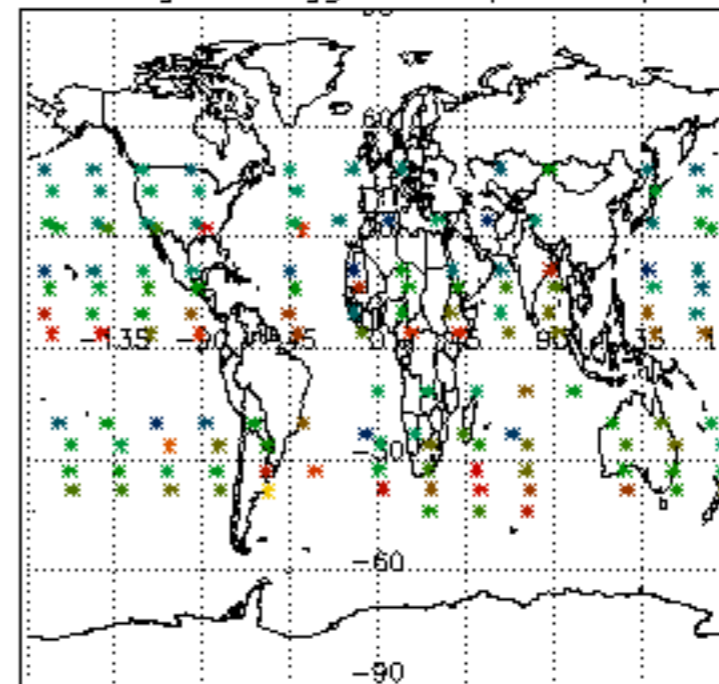
Percentage of flagged data per H2O profile

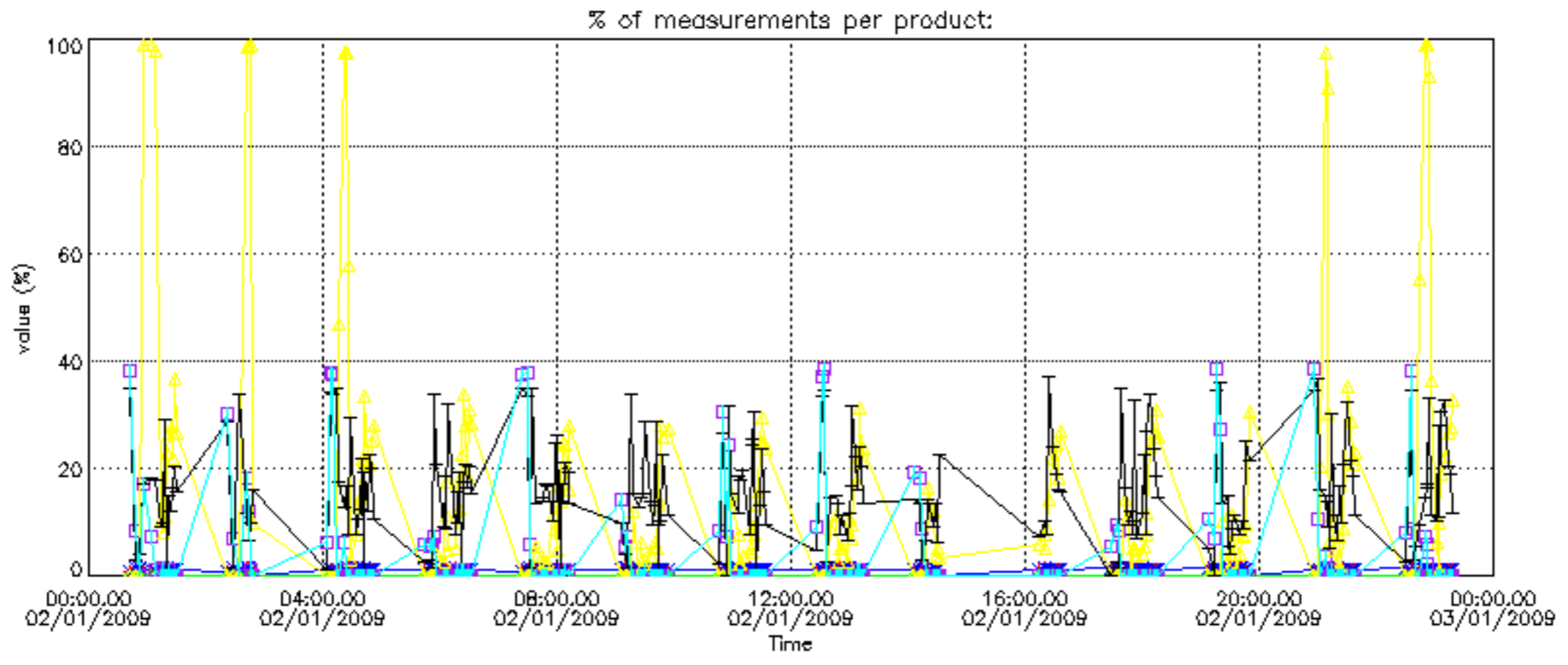


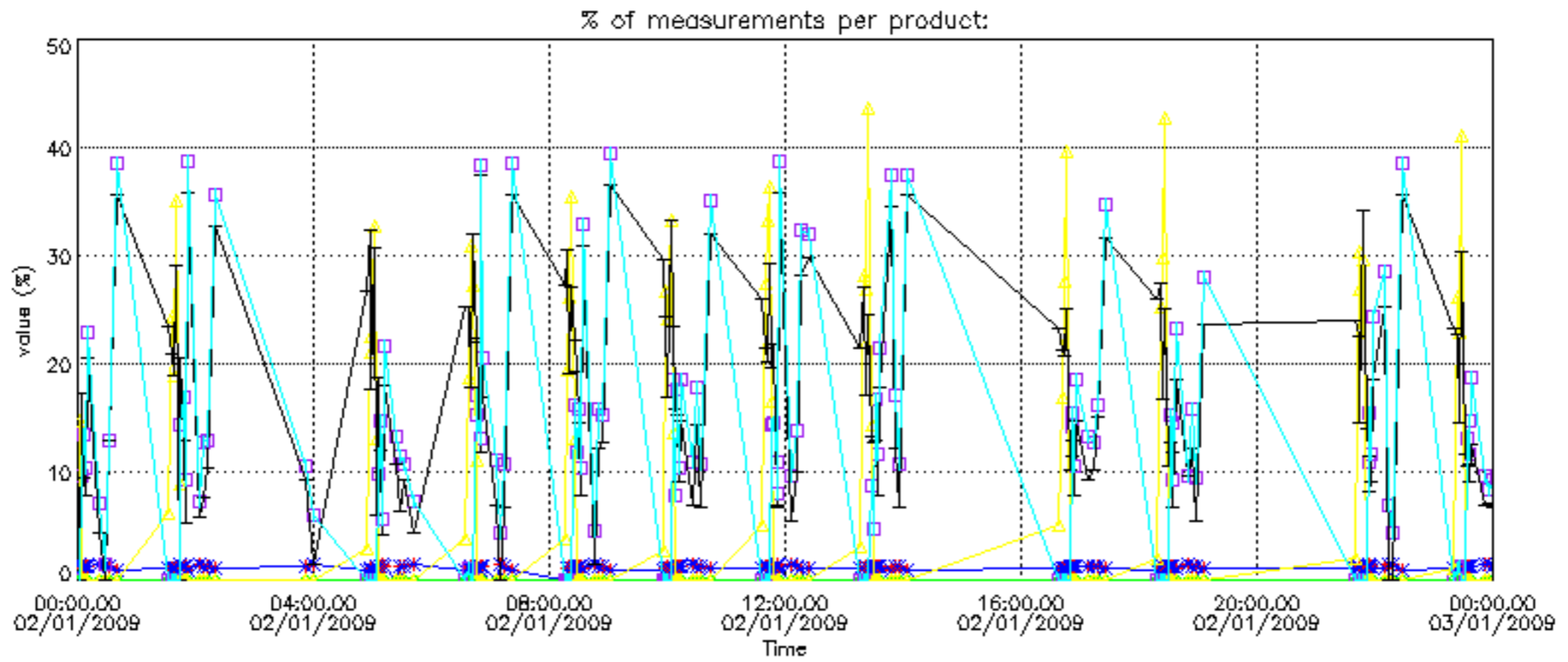
Percentage of flagged data per NO2 profile



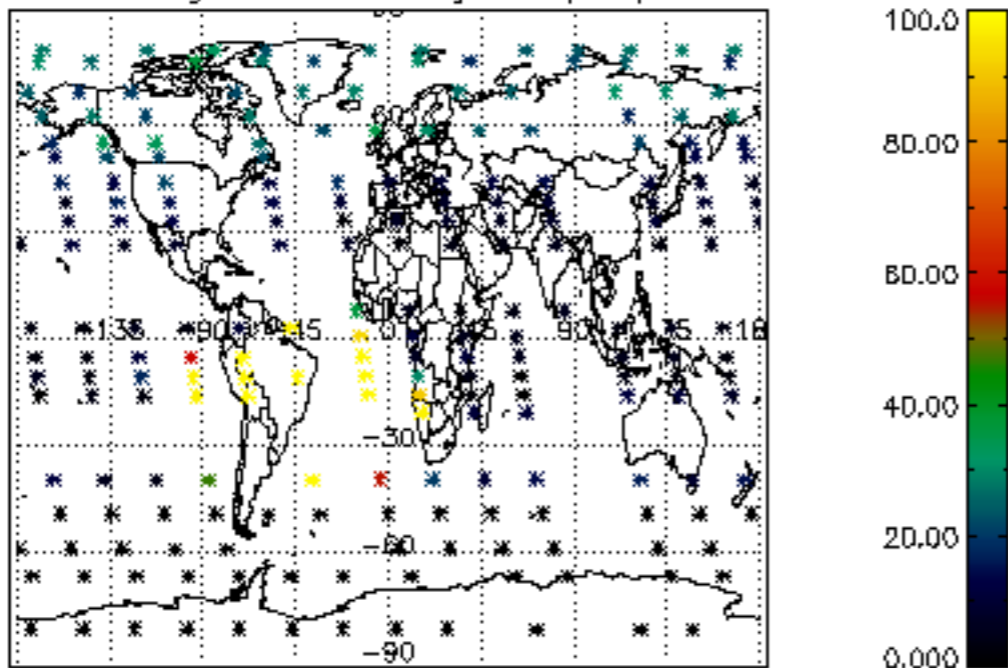
Percentage of flagged data per NO3 profile



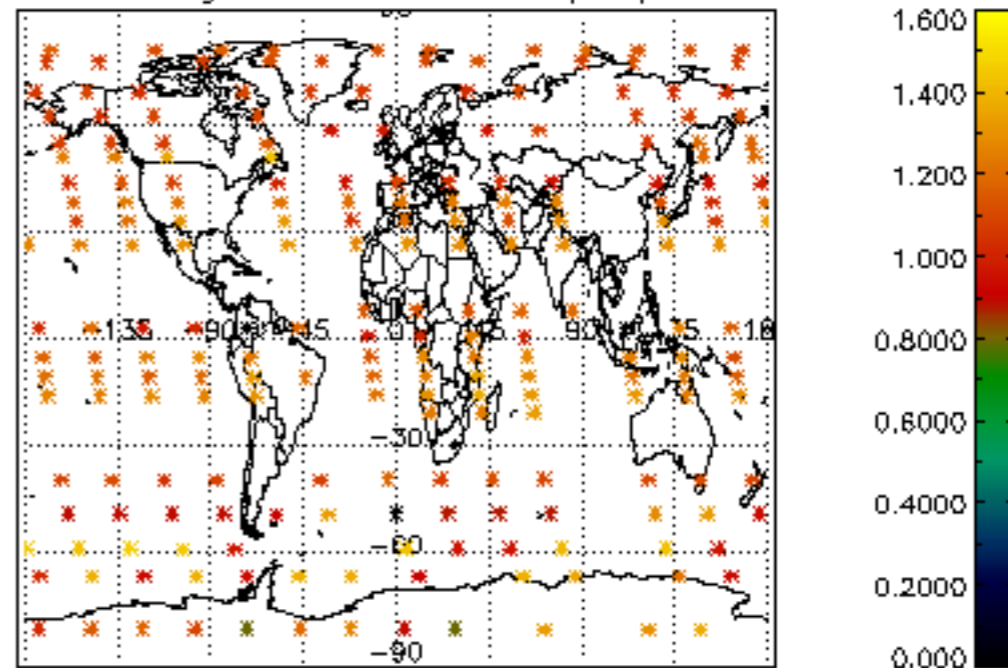




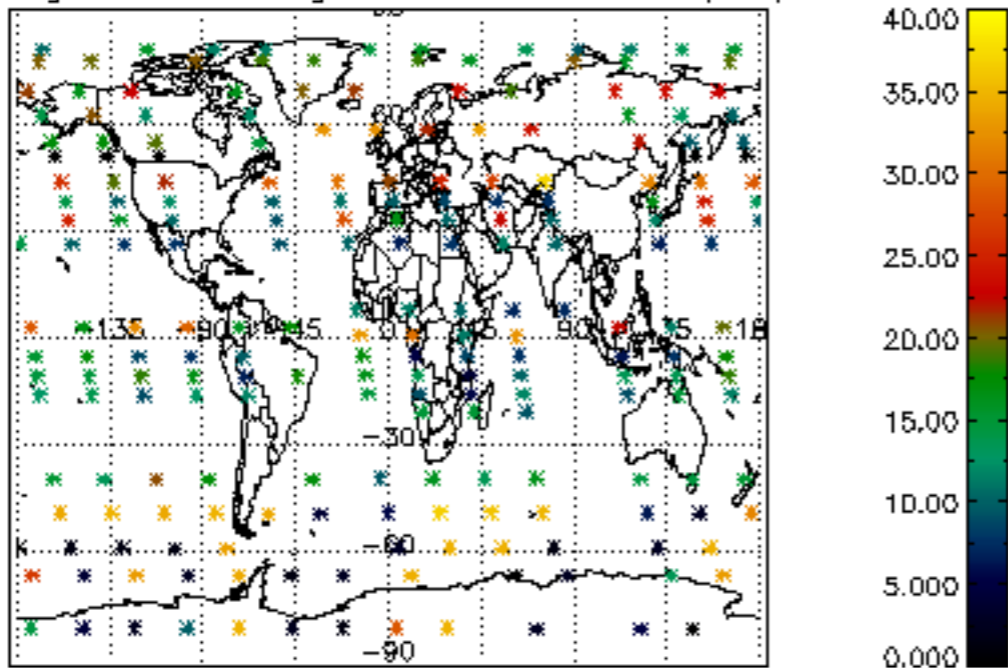
Percentage of cosmic ray hits per profile



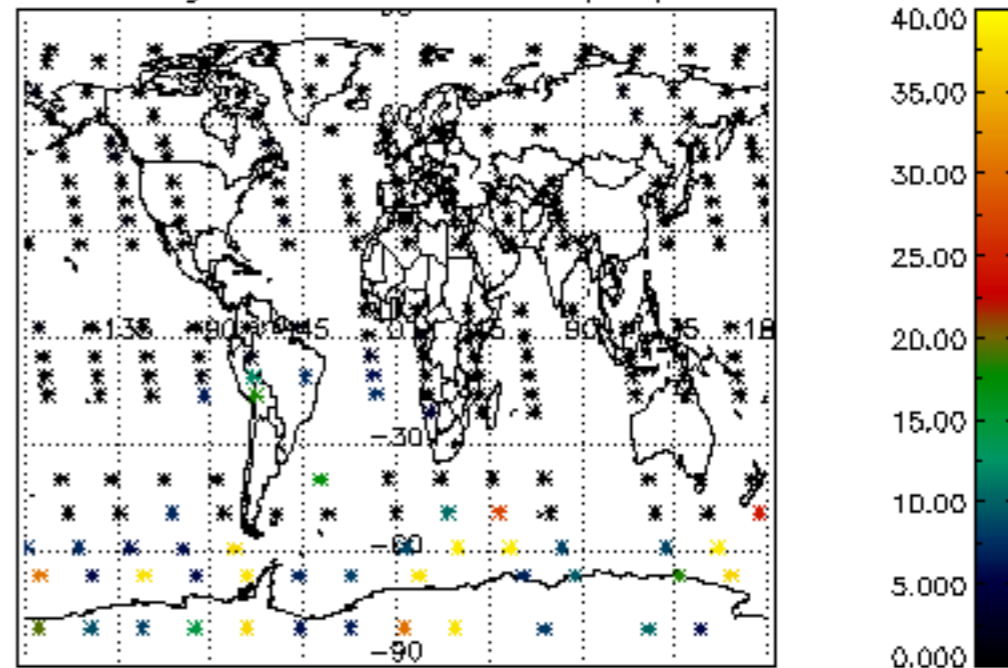
Percentage of datation errors per profile



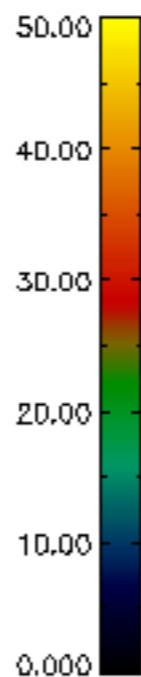
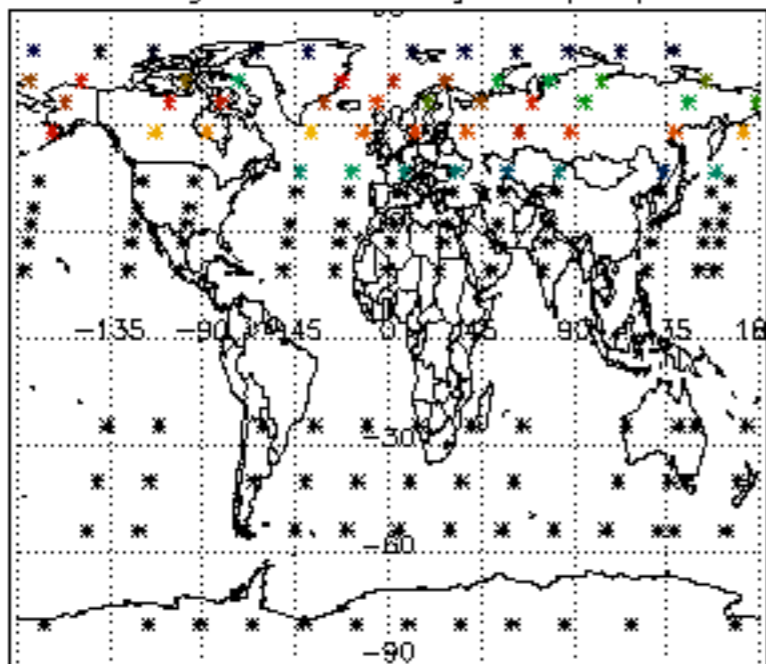
Percentage of star falling outside central band per profile



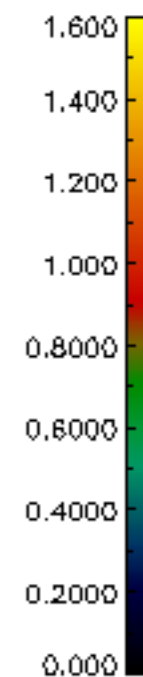
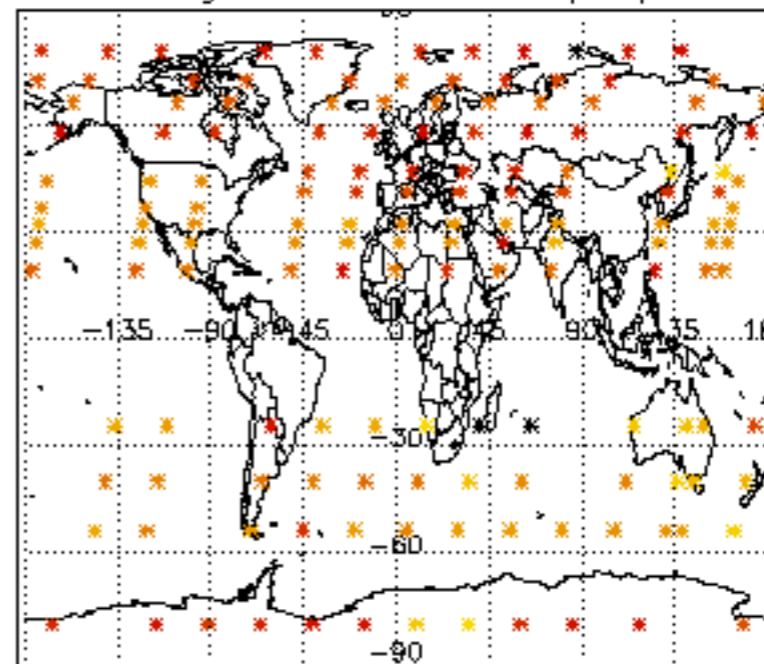
Percentage of saturation errors per profile



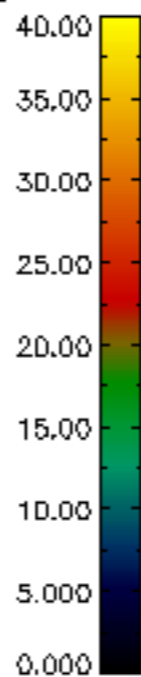
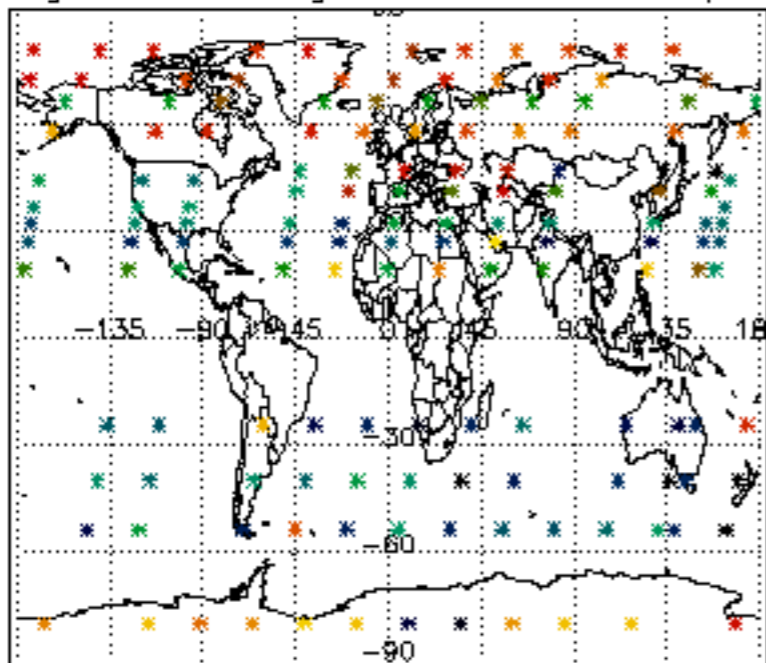
Percentage of cosmic ray hits per profile



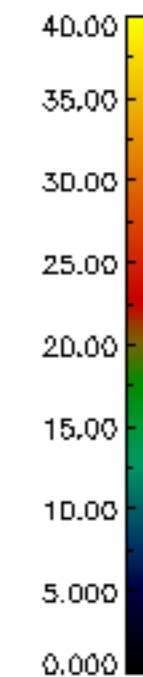
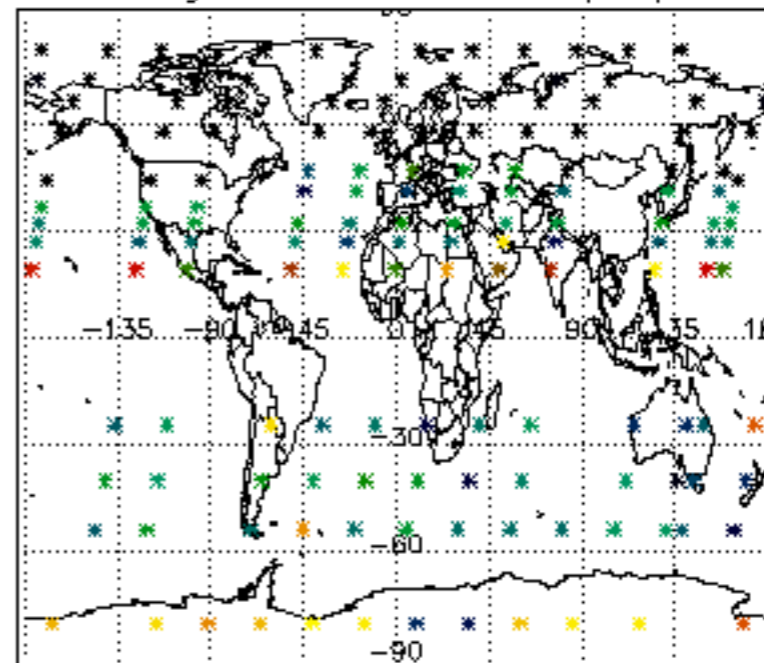
Percentage of datation errors per profile



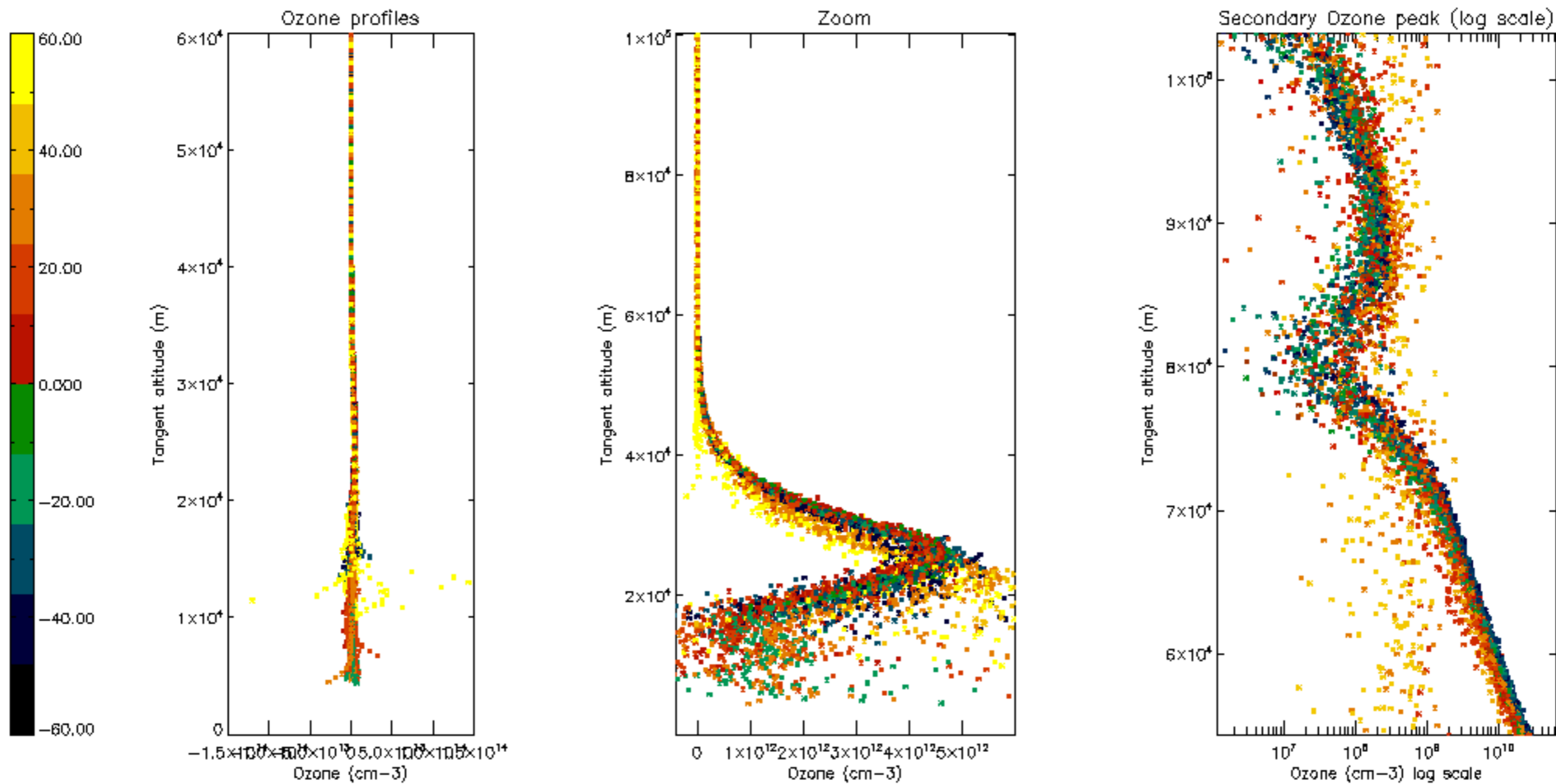
Percentage of star falling outside central band per profile

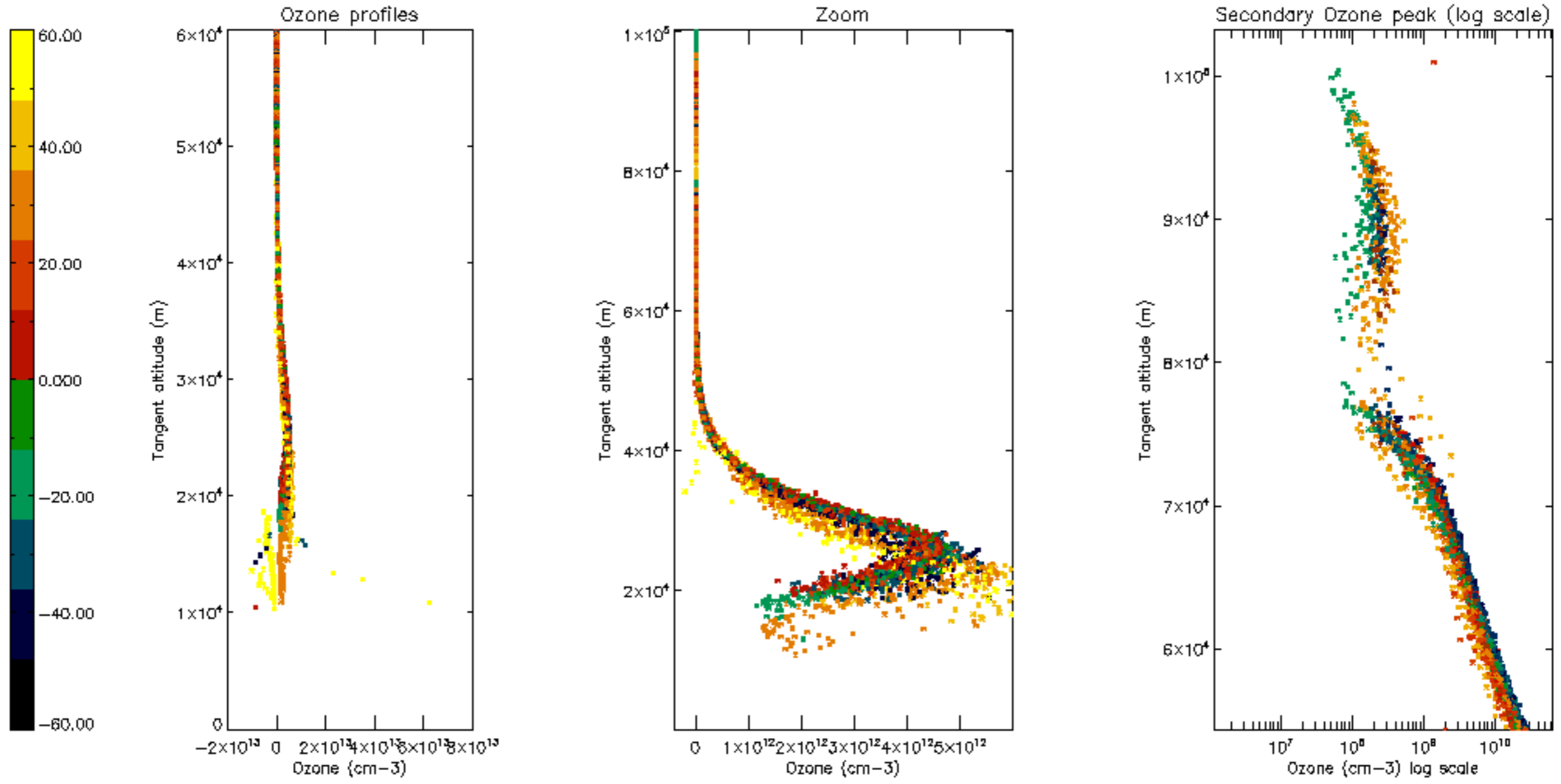


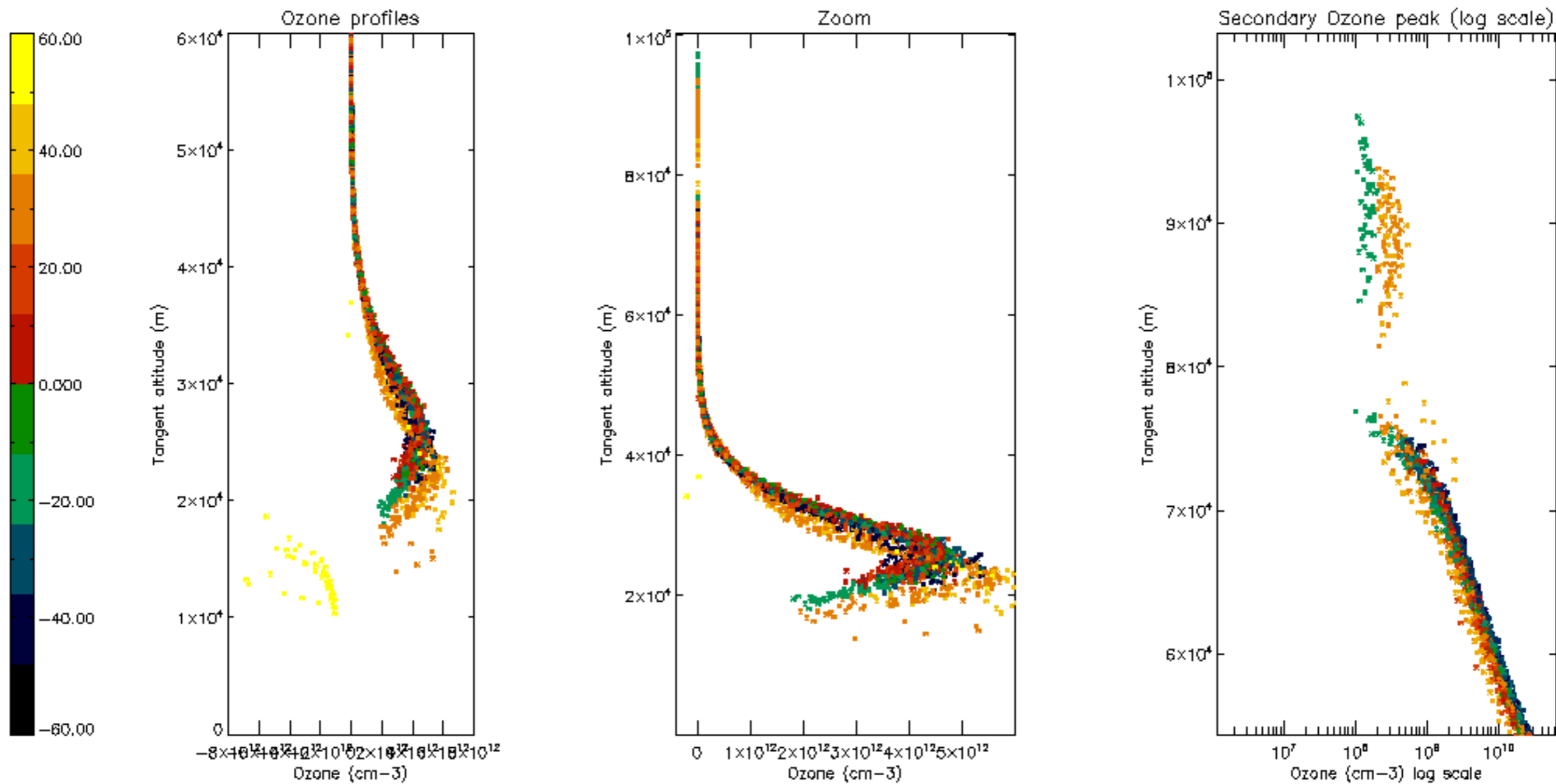
Percentage of saturation errors per profile

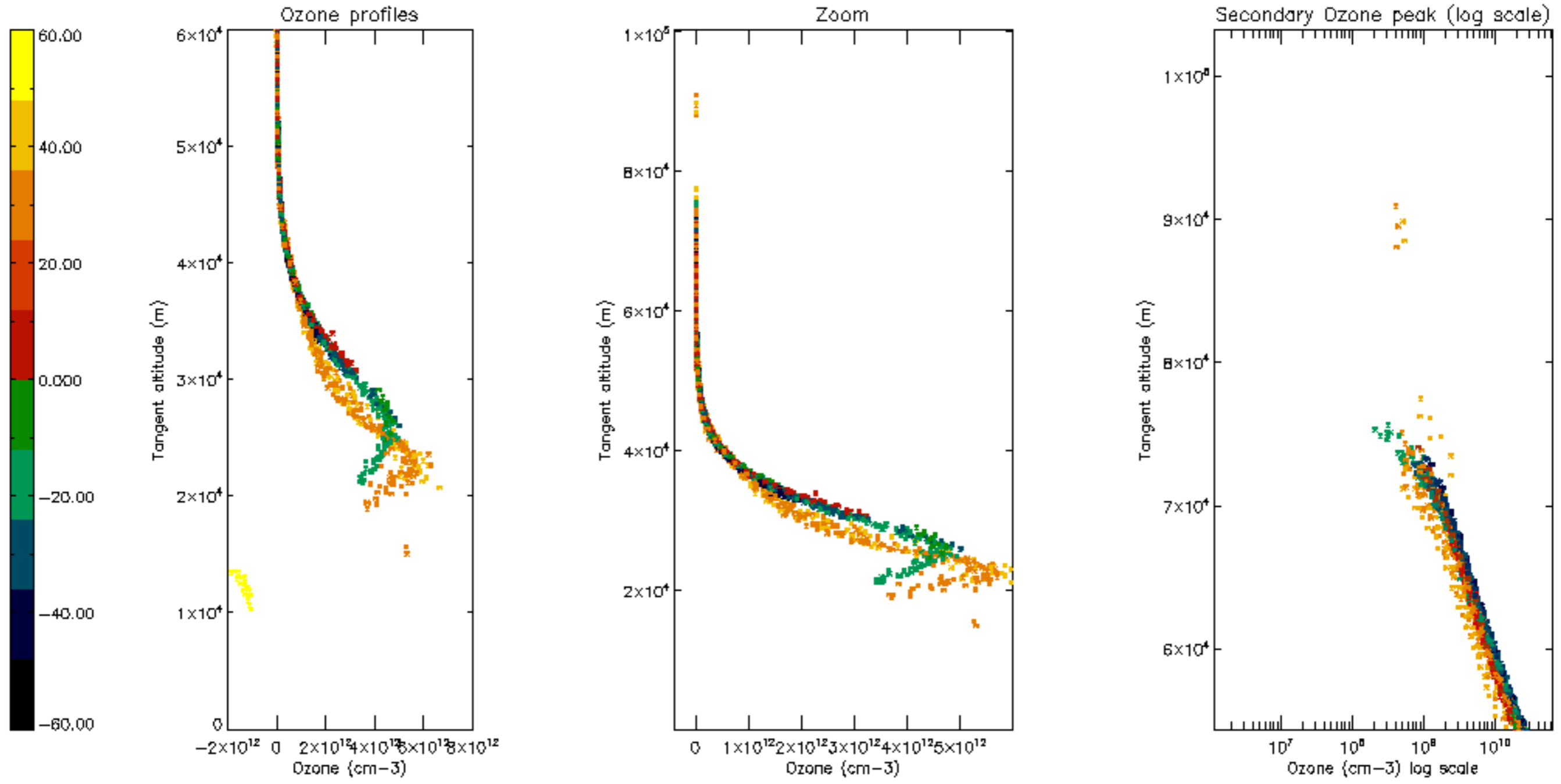


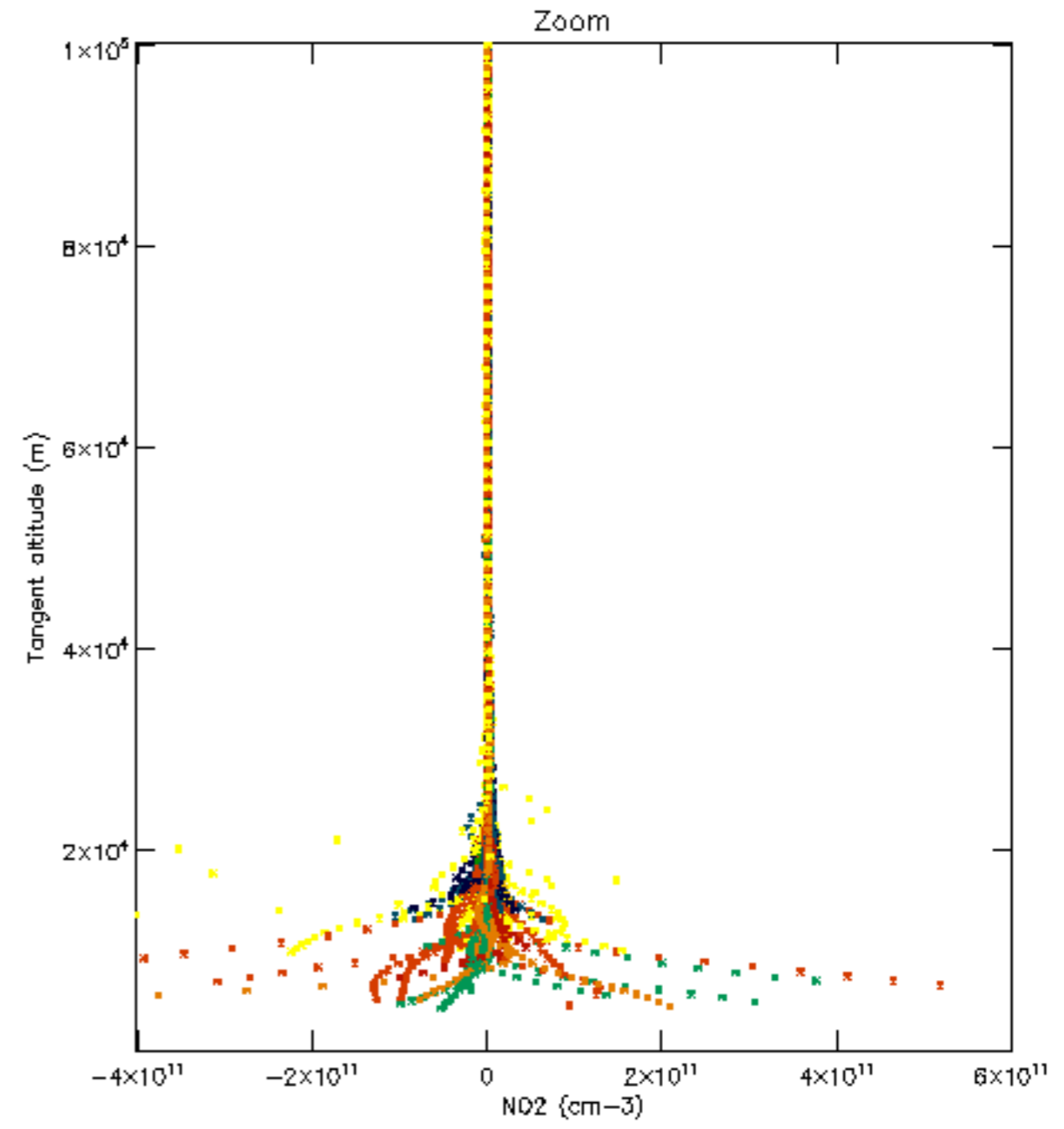
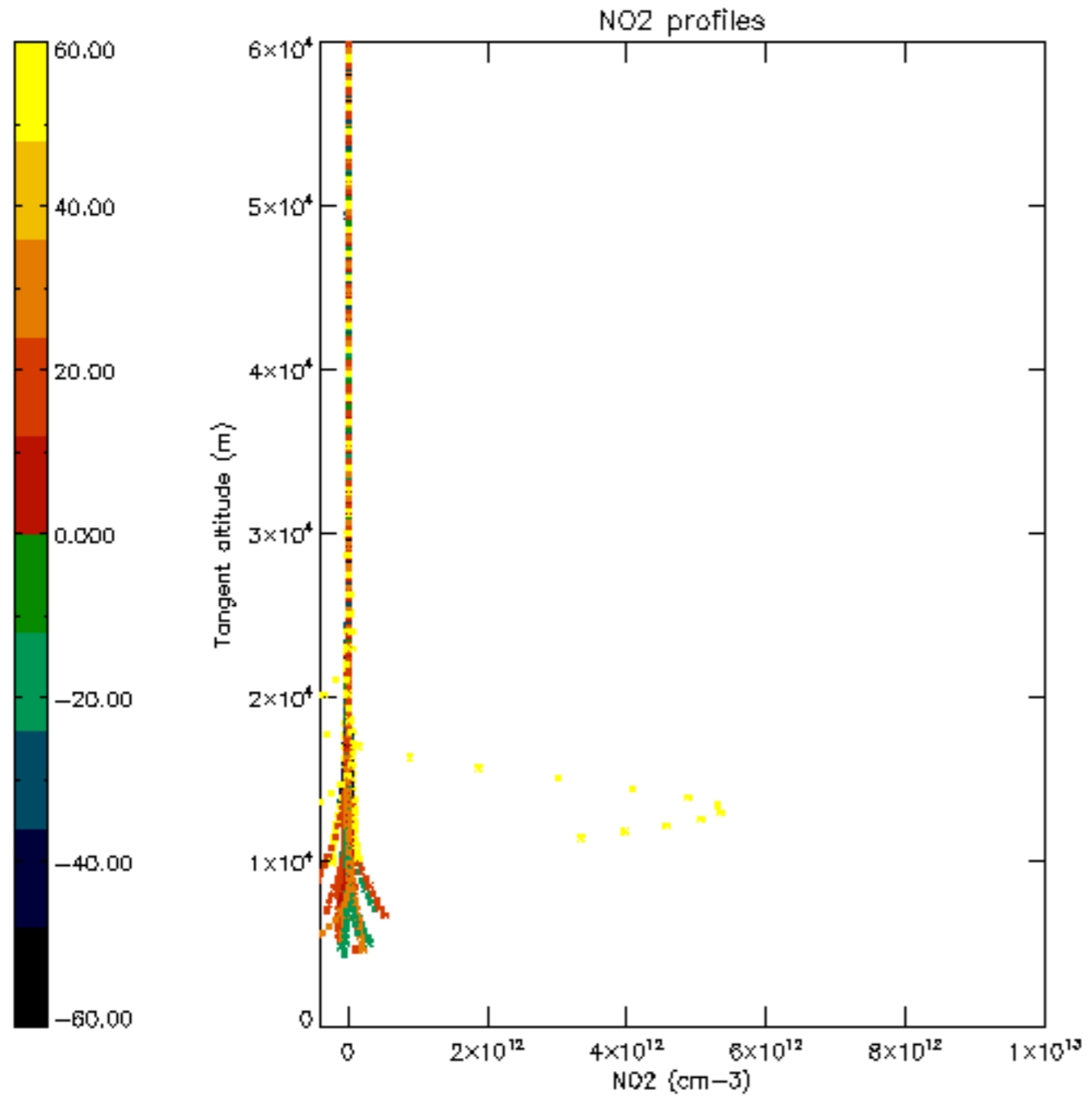


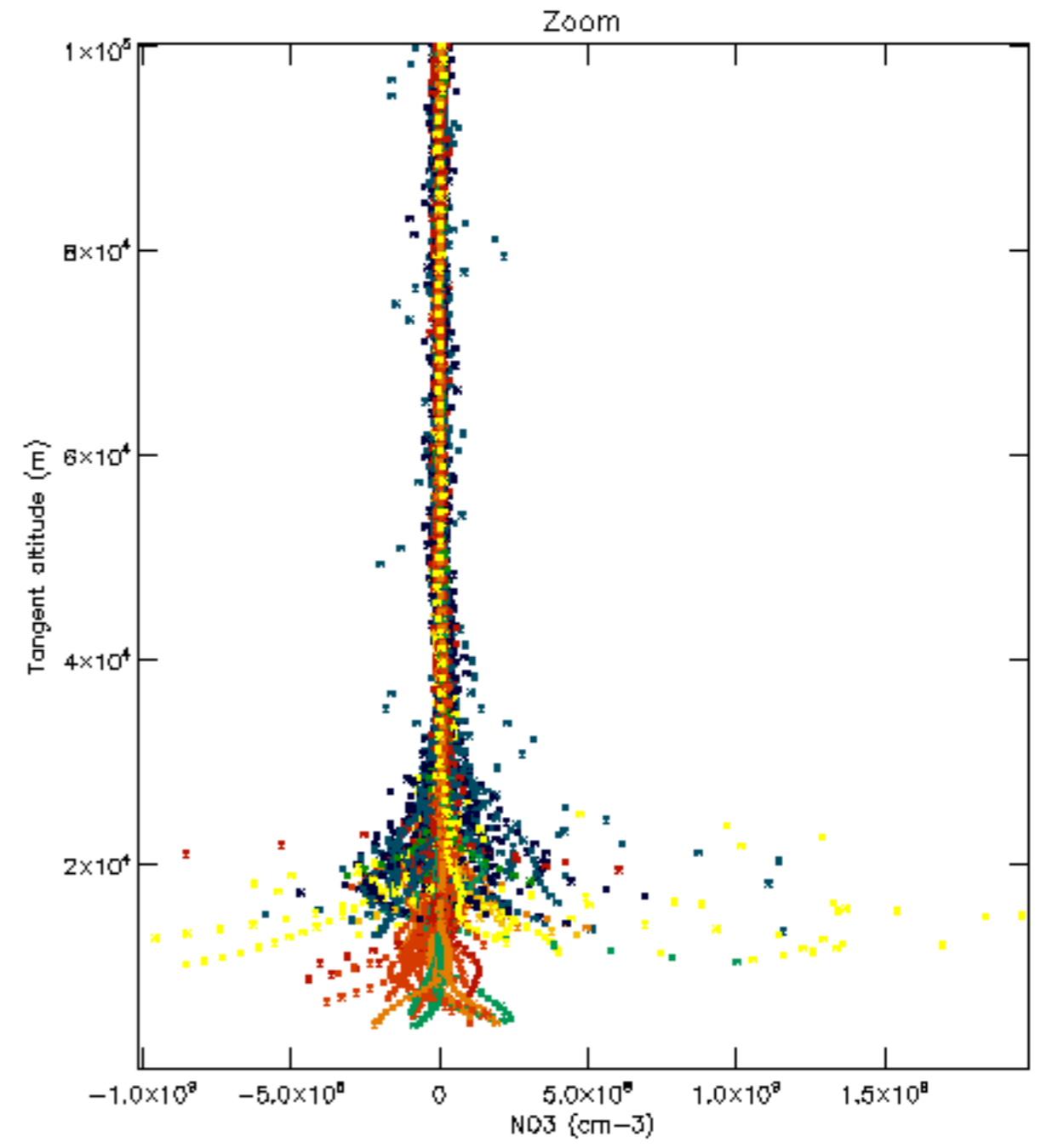
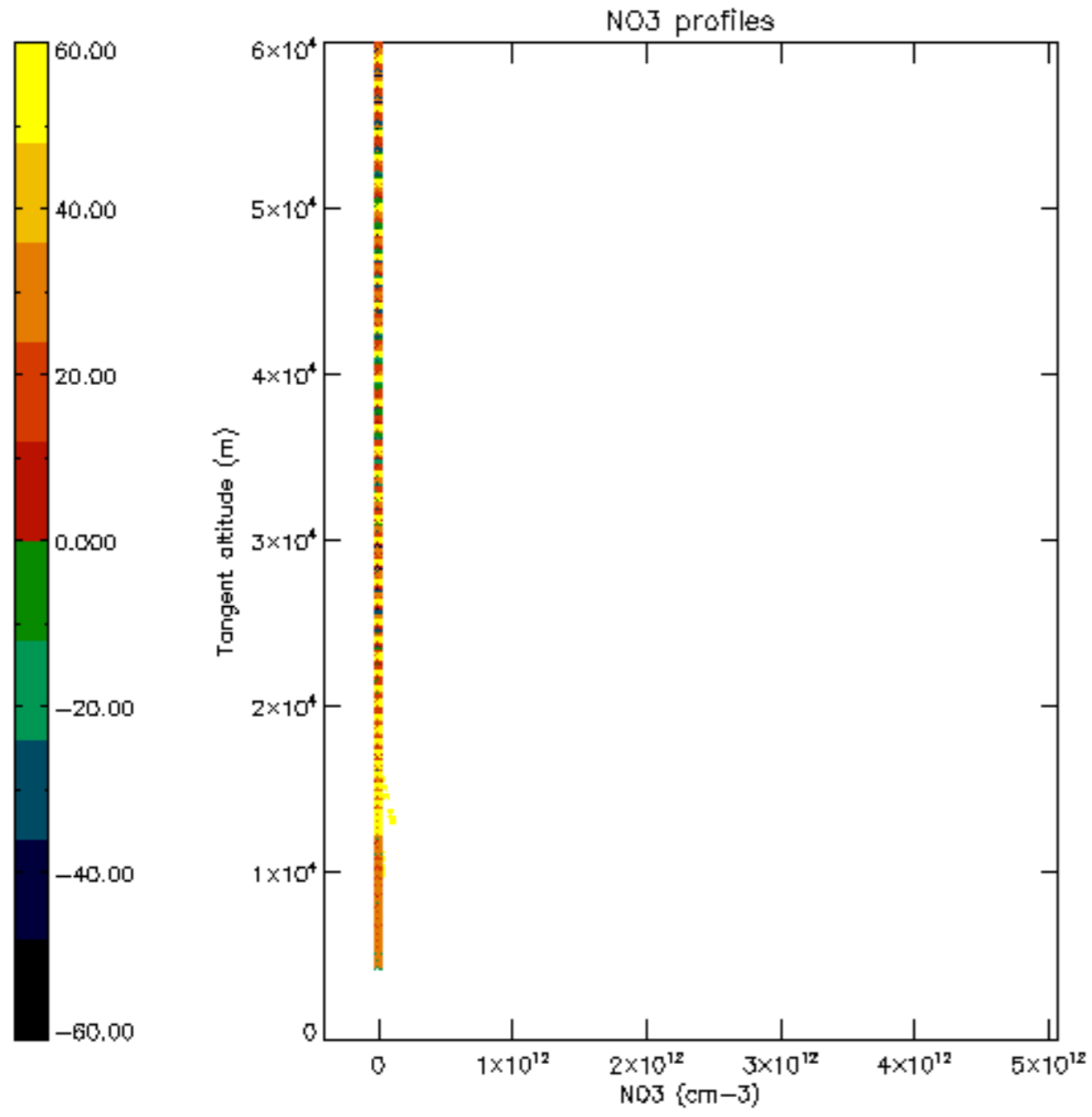


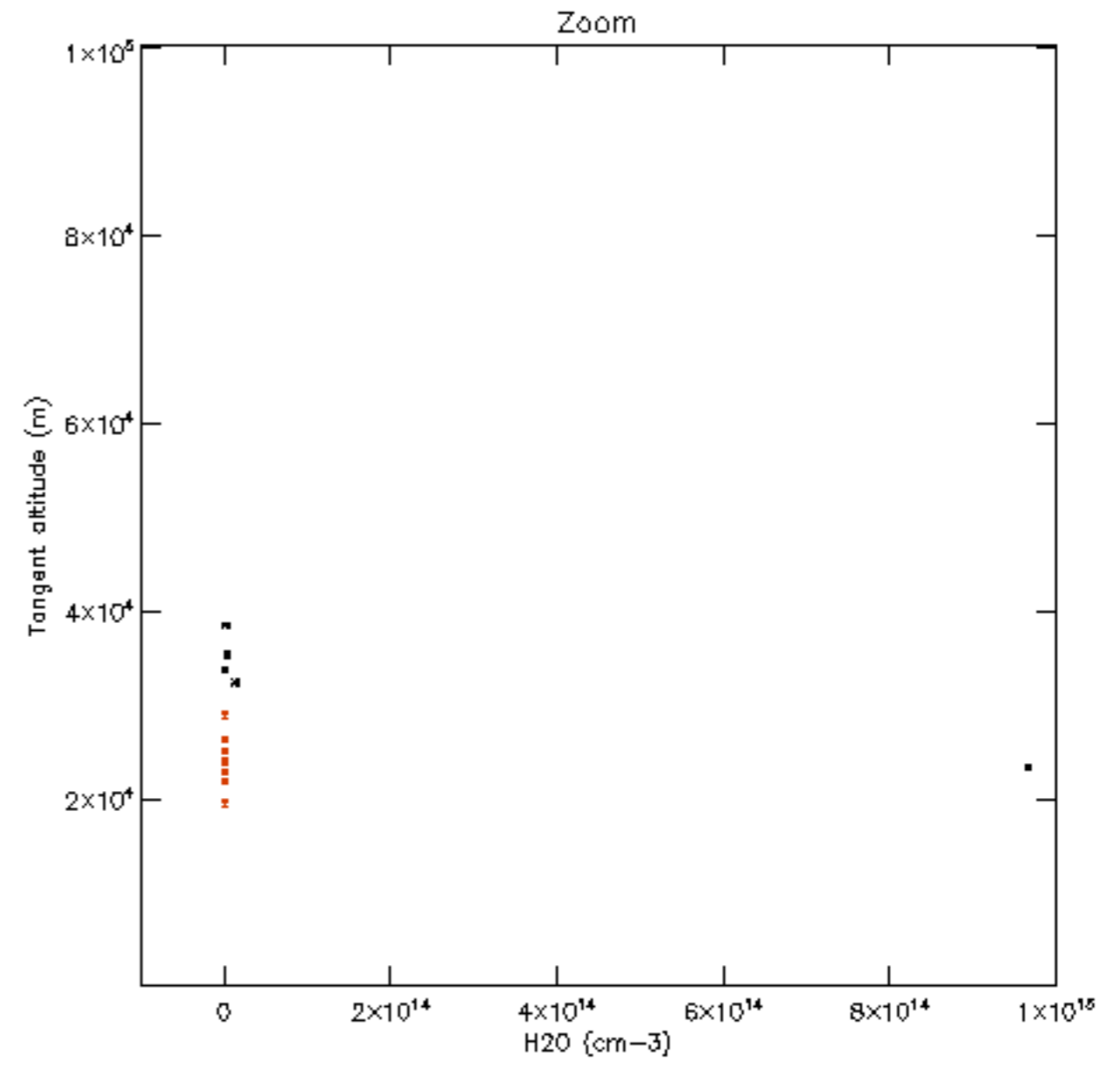
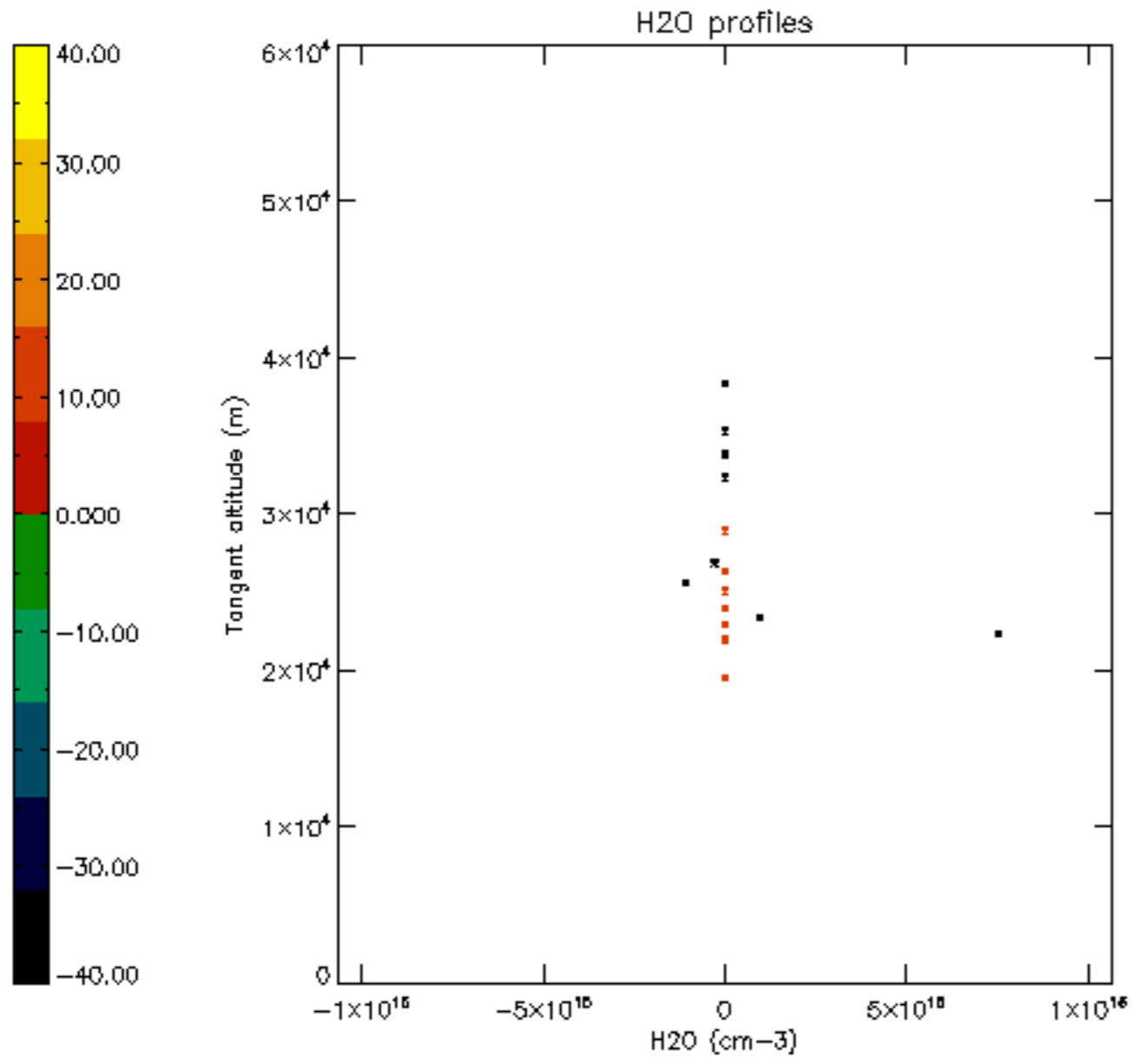


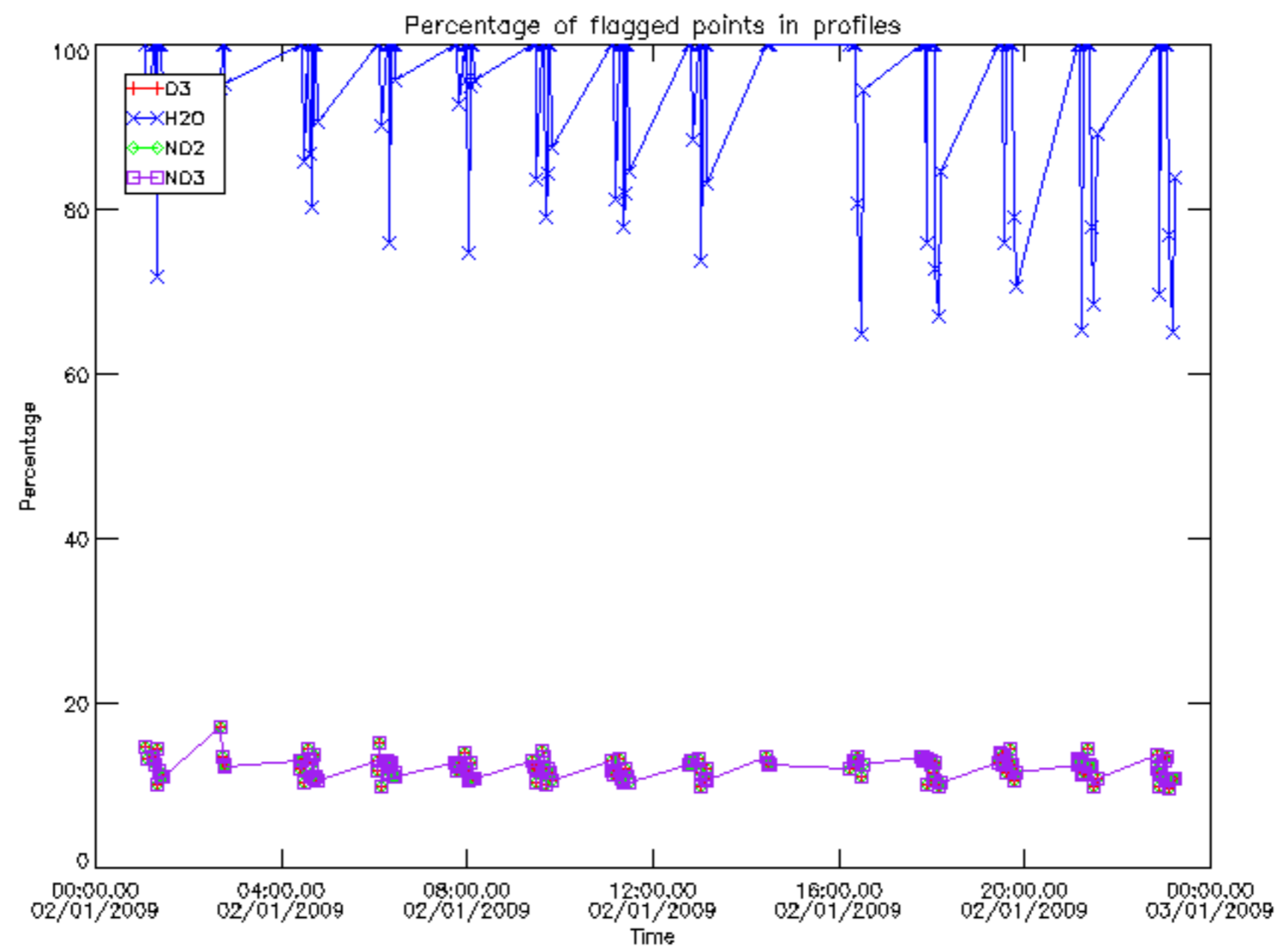






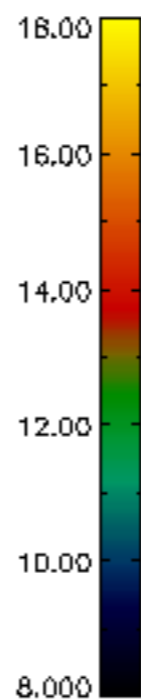
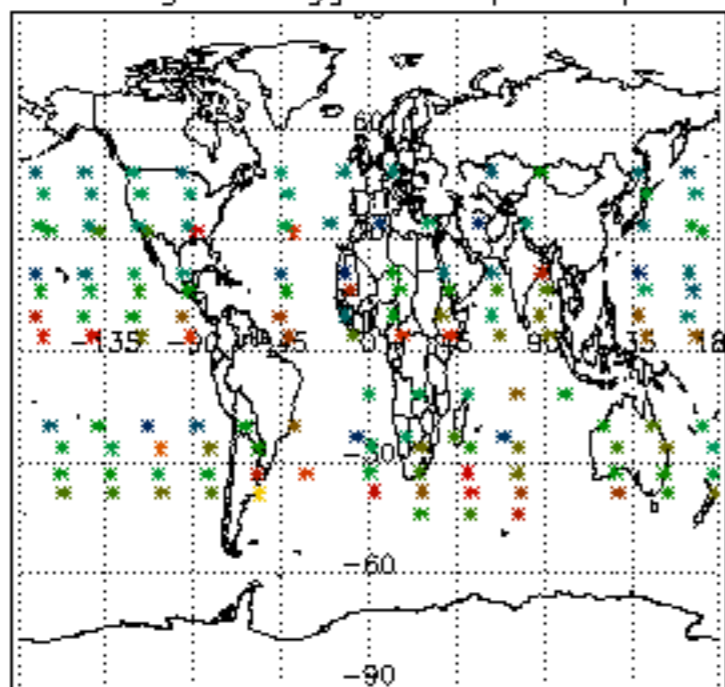




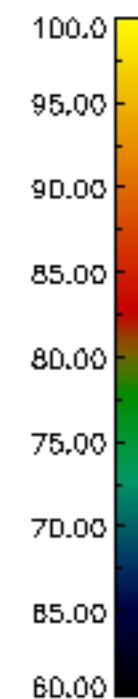
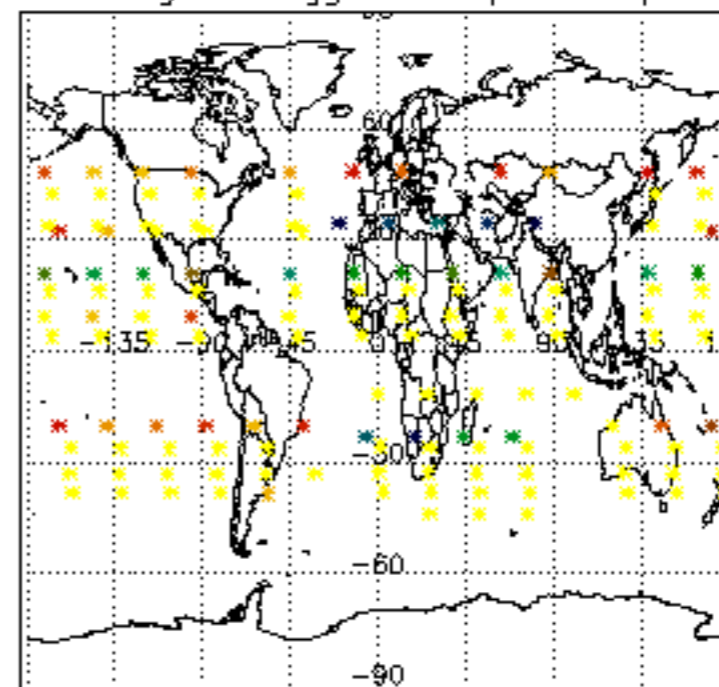




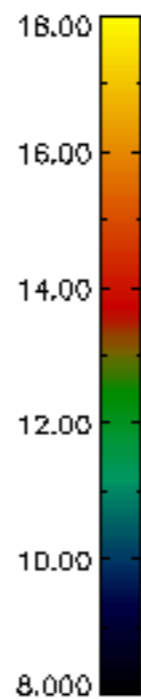
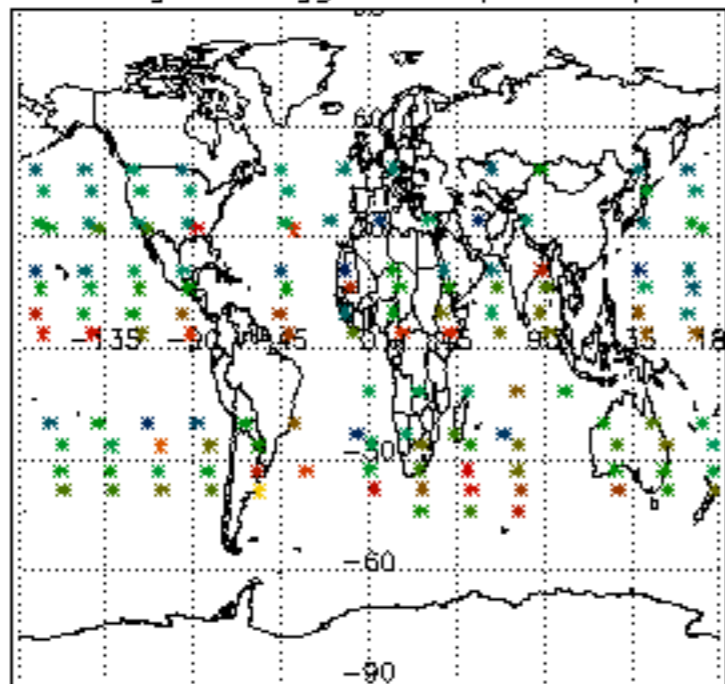
Percentage of flagged data per D3 profile



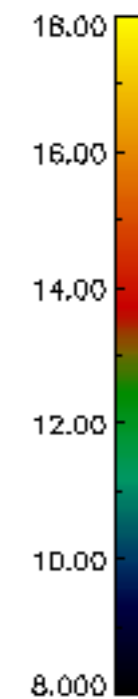
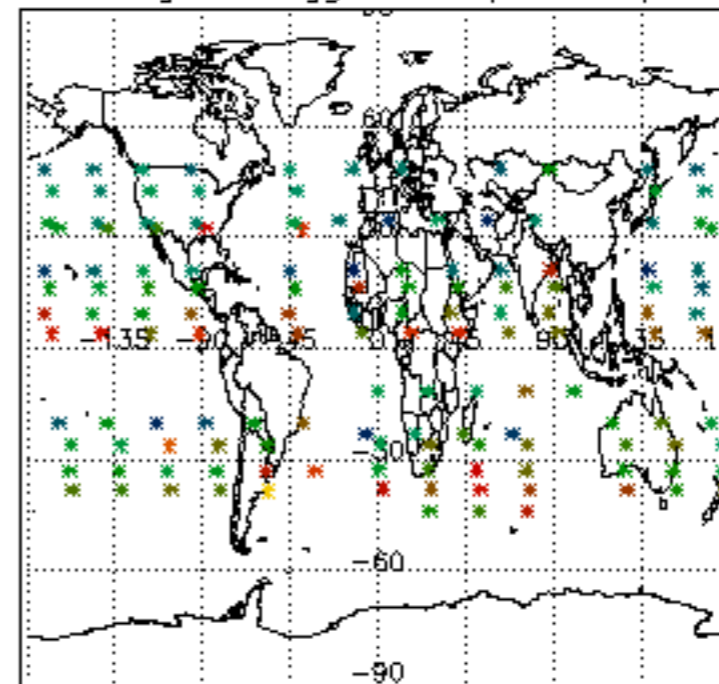
Percentage of flagged data per H2O profile

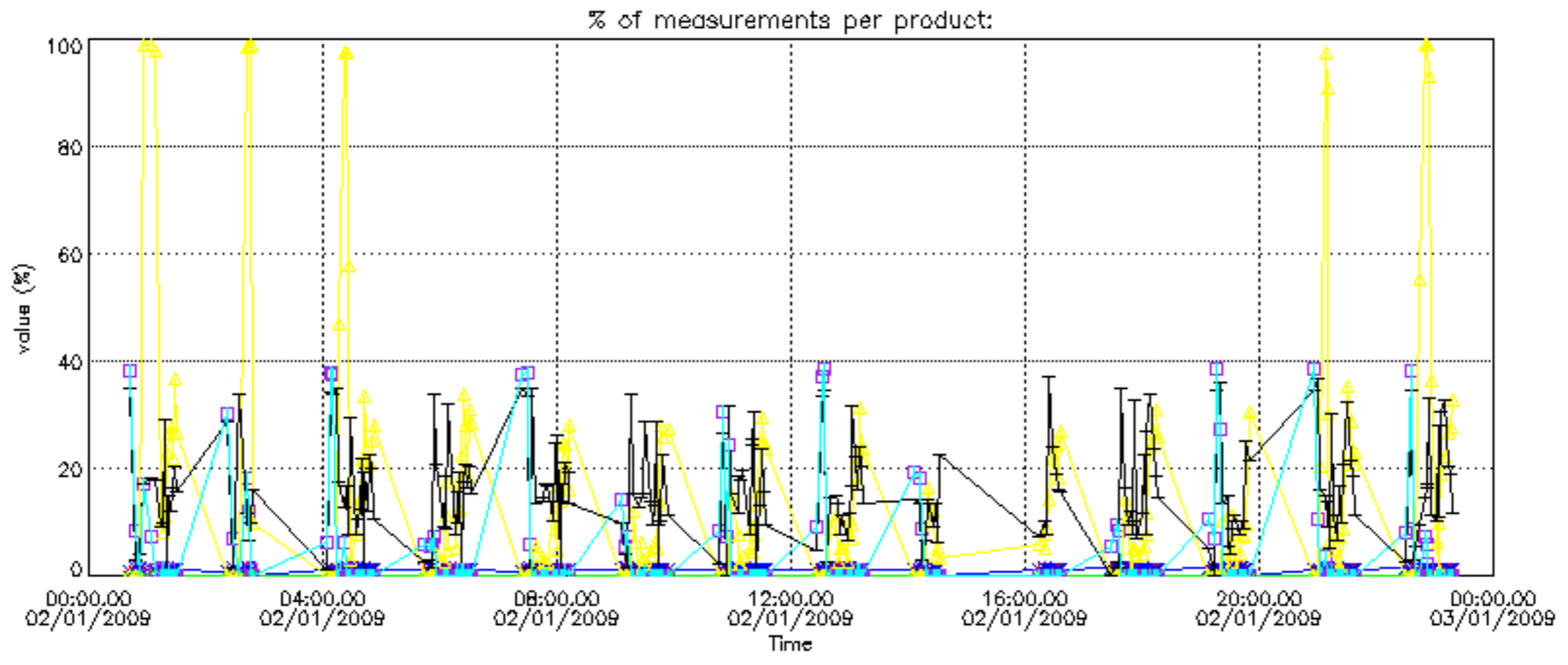


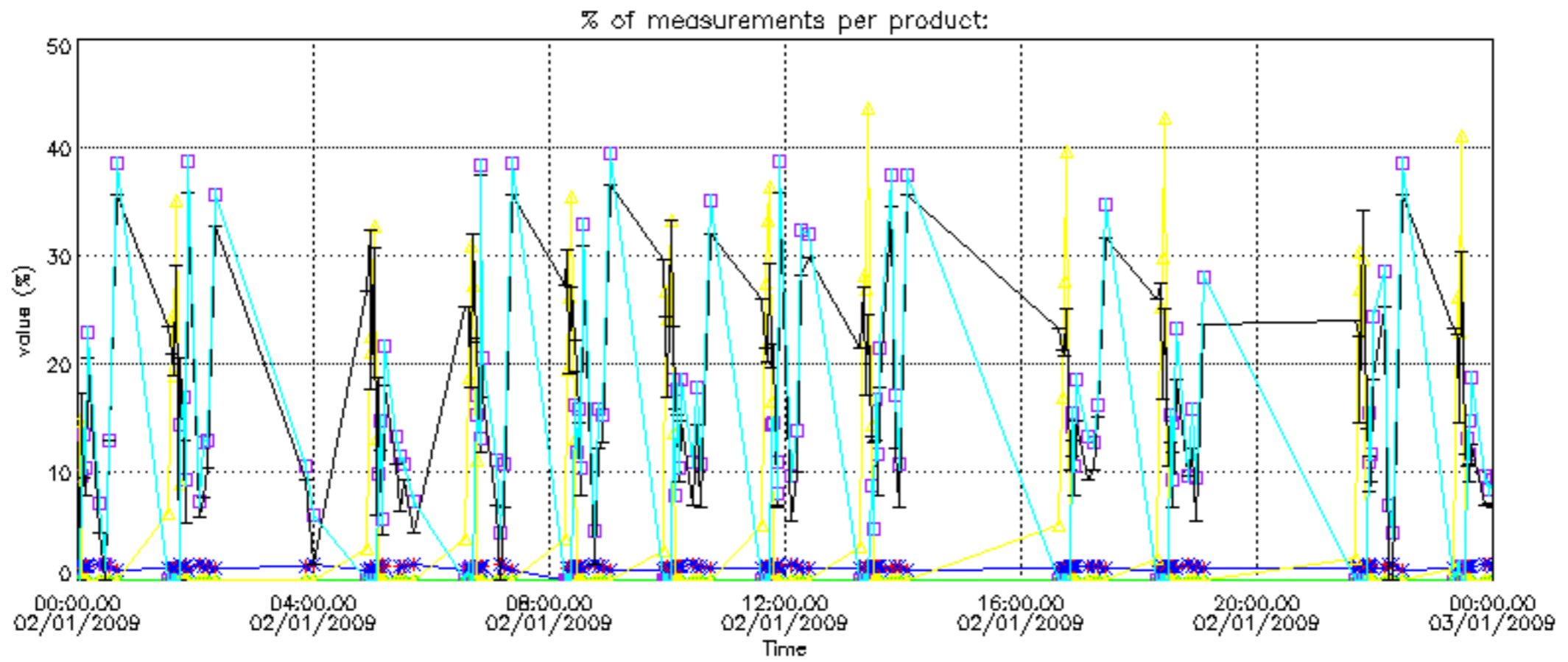
Percentage of flagged data per NO2 profile



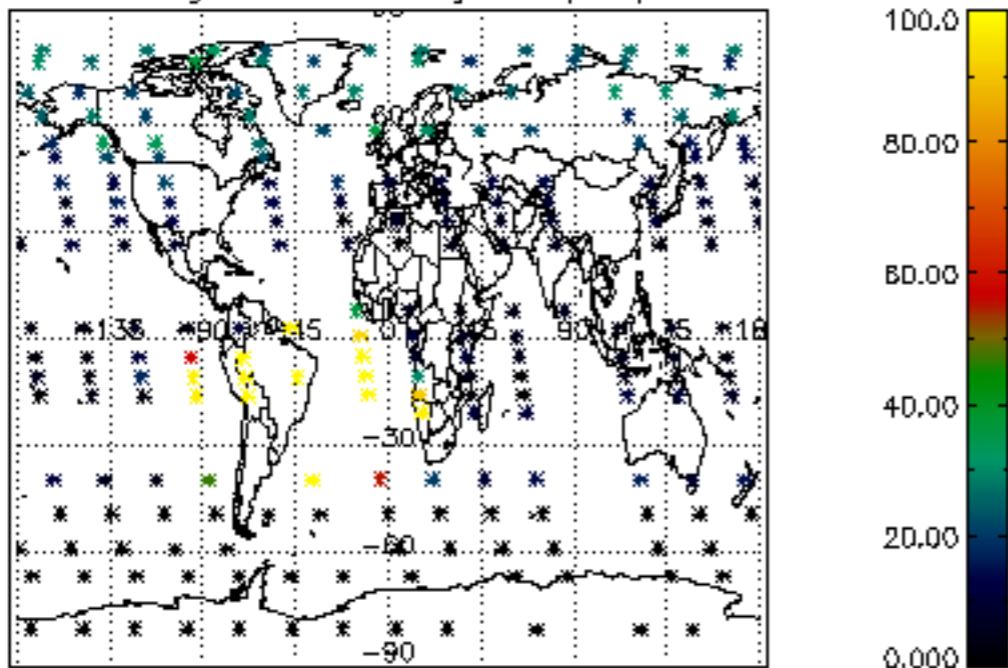
Percentage of flagged data per NO3 profile



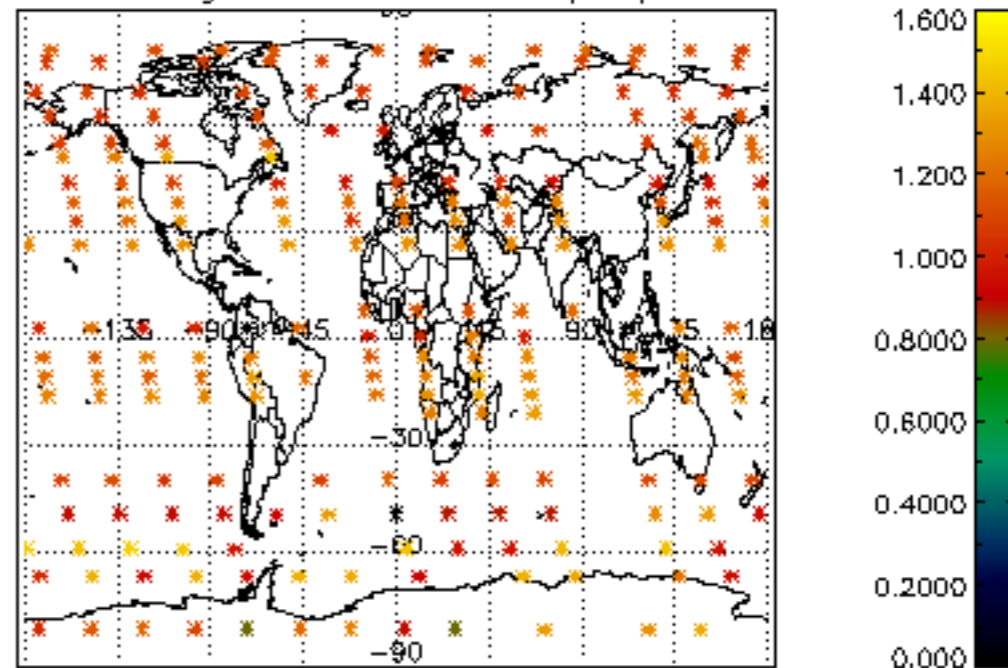




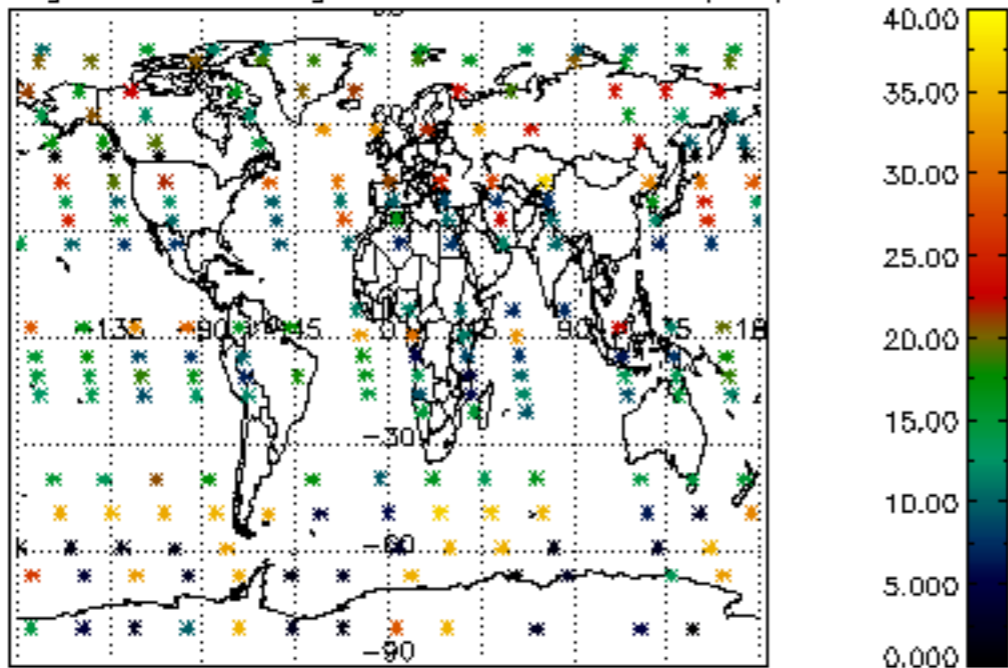
Percentage of cosmic ray hits per profile



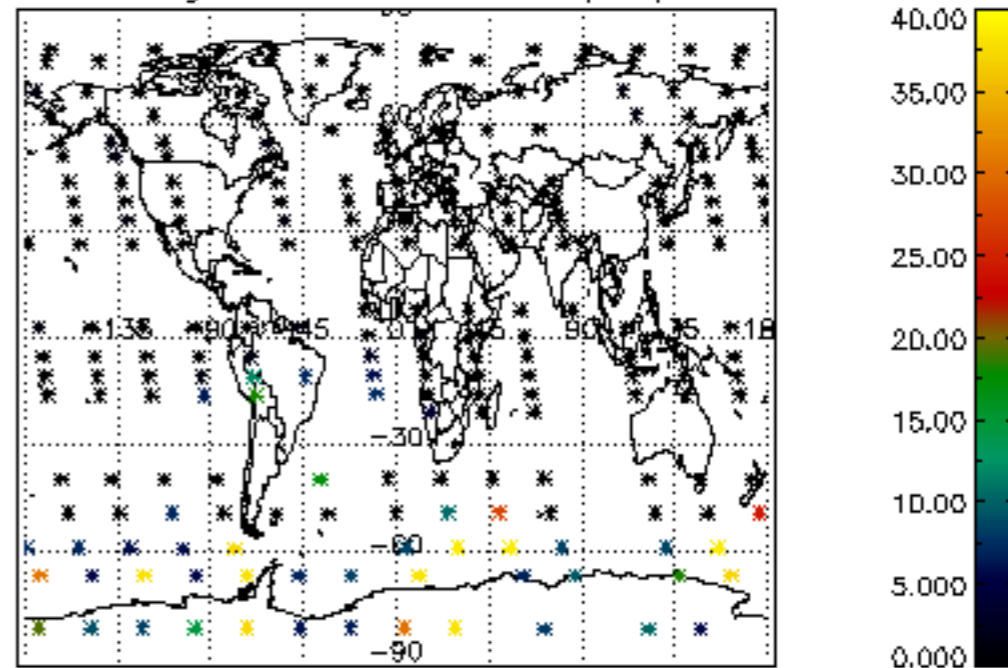
Percentage of datation errors per profile



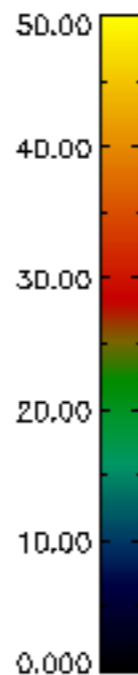
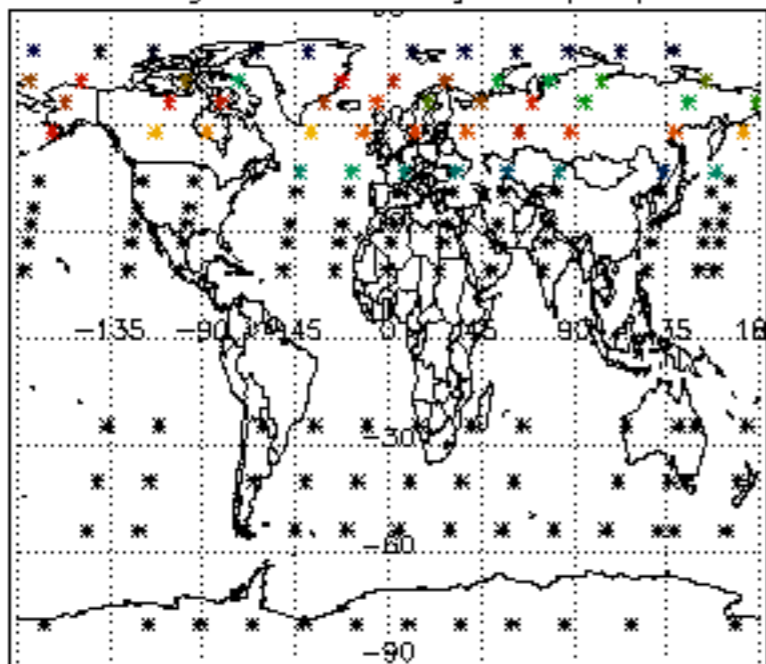
Percentage of star falling outside central band per profile



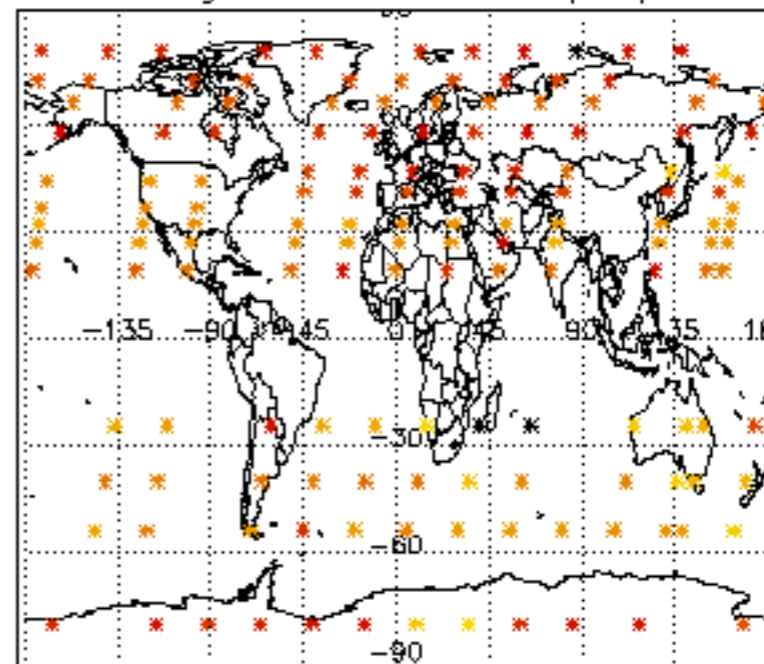
Percentage of saturation errors per profile



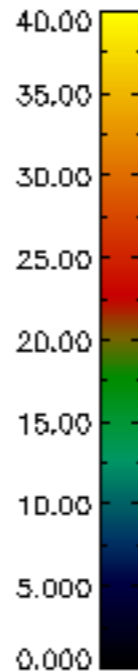
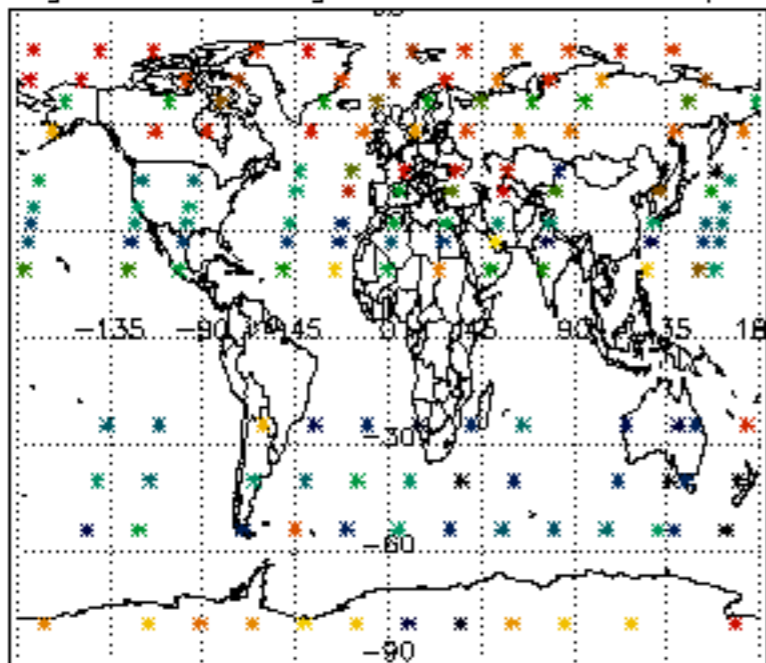
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

