

# 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	26APR2013 11:52:00
Data source version	GOMOS/6.01
Start time of products	16-08-2009 (16AUG2009 00:00:00)
Stop time of products	17-08-2009 (17AUG2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	241
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__2PRFIN20090816_002011_000000492081_00374_39005_8576.N1	16-AUG-2009 00:20:11	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	39005	No
2	GOM_NL__2PRFIN20090816_003244_000000502081_00374_39005_8577.N1	16-AUG-2009 00:32:44	Bright	49.500	6	13Alp Aur	0.080000	3400.0	99	39005	No
3	GOM_NL__2PRFIN20090816_003538_000000402081_00374_39005_8578.N1	16-AUG-2009 00:35:38	Bright	40.000	107	37The Aur	2.6490	11000.	80	39005	No
4	GOM_NL__2PRFIN20090816_003721_000000582081_00374_39005_8579.N1	16-AUG-2009 00:37:21	Twilight	57.500	114	3lot Aur	2.6930	4600.0	115	39005	No
5	GOM_NL__2PRFIN20090816_004105_000000452081_00374_39005_8580.N1	16-AUG-2009 00:41:05	Twilight	45.000	176	23Zet Tau	3.0200	22000.	90	39005	No
6	GOM_NL__2PRFIN20090816_004502_000000502081_00374_39005_8581.N1	16-AUG-2009 00:45:02	Dark	49.500	14	58Alp Ori	0.87000	3000.0	99	39005	No
7	GOM_NL__2PRFIN20090816_004813_000000512081_00374_39005_8582.N1	16-AUG-2009 00:48:13	Dark	50.500	30	46Eps Ori	1.6940	30000.	101	39005	No
8	GOM_NL__2PRFIN20090816_004938_000000462081_00374_39005_8583.N1	16-AUG-2009 00:49:38	Dark	46.000	125	44lot Ori	2.7700	30000.	92	39005	No
9	GOM_NL__2PRFIN20090816_005113_000000612081_00374_39005_8584.N1	16-AUG-2009 00:51:13	Dark	60.500	7	19Bet Ori	0.10000	14000.	121	39005	No
10	GOM_NL__2PRFIN20090816_005305_000000462081_00374_39005_8585.N1	16-AUG-2009 00:53:05	Dark	46.000	101	11Alp Lep	2.5820	7000.0	92	39005	No
11	GOM_NL__2PRFIN20090816_010655_000000522081_00375_39006_8584.N1	16-AUG-2009 01:06:55	Dark	51.500	157	The1Eri	2.9060	9300.0	103	39006	No
12	GOM_NL__2PRFIN20090816_011646_000000532081_00375_39006_8585.N1	16-AUG-2009 01:16:46	Straylight	53.000	84	Alp Phe	2.3970	4500.0	106	39006	No
13	GOM_NL__2PRFIN20090816_012418_000000532081_00375_39006_8586.N1	16-AUG-2009 01:24:18	Twilight	52.500	18	24Alp PsA	1.1660	9700.0	105	39006	No
14	GOM_NL__2PRFIN20090816_012958_000000442081_00375_39006_8587.N1	16-AUG-2009 01:29:58	Bright	43.500	142	49Del Cap	2.8500	8900.0	87	39006	No
15	GOM_NL__2PRFIN20090816_013326_000000402081_00375_39006_8588.N1	16-AUG-2009 01:33:26	Bright	40.000	154	22Bet Aqr	2.8990	5700.0	80	39006	No
16	GOM_NL__2PRFIN20090816_013529_000000482081_00375_39006_8589.N1	16-AUG-2009 01:35:29	Bright	48.000	162	34Alp Aqr	2.9440	5350.0	96	39006	No
17	GOM_NL__2PRFIN20090816_013841_000000472081_00375_39006_8590.N1	16-AUG-2009 01:38:41	Bright	47.000	61	8Eps Peg	2.1000	3900.0	94	39006	No
18	GOM_NL__2PRFIN20090816_020046_000000442081_00375_39006_8591.N1	16-AUG-2009 02:00:46	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	39006	No
19	GOM_NL__2PRFIN20090816_021320_000000492081_00375_39006_8592.N1	16-AUG-2009 02:13:20	Bright	49.000	6	13Alp Aur	0.080000	3400.0	98	39006	No
20	GOM_NL__2PRFIN20090816_021614_000000412081_00375_39006_8593.N1	16-AUG-2009 02:16:14	Bright	41.000	107	37The Aur	2.6490	11000.	82	39006	No
21	GOM_NL__2PRFIN20090816_021757_000000562081_00375_39006_8594.N1	16-AUG-2009 02:17:57	Twilight	55.500	114	3lot Aur	2.6930	4600.0	111	39006	No
22	GOM_NL__2PRFIN20090816_022141_000000472081_00375_39006_8595.N1	16-AUG-2009 02:21:41	Twilight	46.500	176	23Zet Tau	3.0200	22000.	93	39006	No
23	GOM_NL__2PRFIN20090816_022538_000000502081_00375_39006_8596.N1	16-AUG-2009 02:25:38	Dark	50.000	14	58Alp Ori	0.87000	3000.0	100	39006	No
24	GOM_NL__2PRFIN20090816_022850_000000492081_00375_39006_8597.N1	16-AUG-2009 02:28:50	Dark	48.500	30	46Eps Ori	1.6940	30000.	97	39006	No
25	GOM_NL__2PRFIN20090816_023015_000000442081_00375_39006_8598.N1	16-AUG-2009 02:30:15	Dark	44.000	125	44lot Ori	2.7700	30000.	88	39006	No
26	GOM_NL__2PRFIN20090816_023149_000000662081_00375_39006_8599.N1	16-AUG-2009 02:31:49	Dark	65.500	7	19Bet Ori	0.10000	14000.	131	39006	No
27	GOM_NL__2PRFIN20090816_023341_000000472081_00375_39006_8600.N1	16-AUG-2009 02:33:41	Dark	46.500	101	11Alp Lep	2.5820	7000.0	93	39006	No
28	GOM_NL__2PRFIN20090816_024732_000000522081_00376_39007_8600.N1	16-AUG-2009 02:47:32	Dark	52.000	157	The1Eri	2.9060	9300.0	104	39007	No
29	GOM_NL__2PRFIN20090816_025723_000000542081_00376_39007_8601.N1	16-AUG-2009 02:57:23	Straylight	54.000	84	Alp Phe	2.3970	4500.0	108	39007	No
30	GOM_NL__2PRFIN20090816_030454_000000522081_00376_39007_8602.N1	16-AUG-2009 03:04:54	Twilight	52.000	18	24Alp PsA	1.1660	9700.0	104	39007	No
31	GOM_NL__2PRFIN20090816_031034_000000432081_00376_39007_8603.N1	16-AUG-2009 03:10:34	Bright	43.000	142	49Del Cap	2.8500	8900.0	86	39007	No
32	GOM_NL__2PRFIN20090816_031402_000000412081_00376_39007_8604.N1	16-AUG-2009 03:14:02	Bright	40.500	154	22Bet Aqr	2.8990	5700.0	81	39007	No
33	GOM_NL__2PRFIN20090816_031605_000000502081_00376_39007_8605.N1	16-AUG-2009 03:16:05	Bright	49.500	162	34Alp Aqr	2.9440	5350.0	99	39007	No
34	GOM_NL__2PRFIN20090816_031916_000000462081_00376_39007_8606.N1	16-AUG-2009 03:19:16	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39007	No
35	GOM_NL__2PRFIN20090816_034121_000000442081_00376_39007_8607.N1	16-AUG-2009 03:41:21	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	39007	No
36	GOM_NL__2PRFIN20090816_035356_000000532081_00376_39007_8608.N1	16-AUG-2009 03:53:56	Bright	53.000	6	13Alp Aur	0.080000	3400.0	106	39007	No
37	GOM_NL__2PRFIN20090816_035650_000000402081_00376_39007_8609.N1	16-AUG-2009 03:56:50	Bright	39.500	107	37The Aur	2.6490	11000.	79	39007	No
38	GOM_NL__2PRFIN20090816_035833_000000542081_00376_39007_8610.N1	16-AUG-2009 03:58:33	Twilight	54.000	114	3lot Aur	2.6930	4600.0	108	39007	No
39	GOM_NL__2PRFIN20090816_040217_000000492081_00376_39007_8611.N1	16-AUG-2009 04:02:17	Twilight	49.000	176	23Zet Tau	3.0200	22000.	98	39007	No
40	GOM_NL__2PRFIN20090816_040615_000000592081_00376_39007_8612.N1	16-AUG-2009 04:06:15	Dark	59.000	14	58Alp Ori	0.87000	3000.0	118	39007	No
41	GOM_NL__2PRFIN20090816_040926_000000462081_00376_39007_8613.N1	16-AUG-2009 04:09:26	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	39007	No
42	GOM_NL__2PRFIN20090816_041052_000000462081_00376_39007_8614.N1	16-AUG-2009 04:10:52	Dark	45.500	125	44lot Ori	2.7700	30000.	91	39007	No





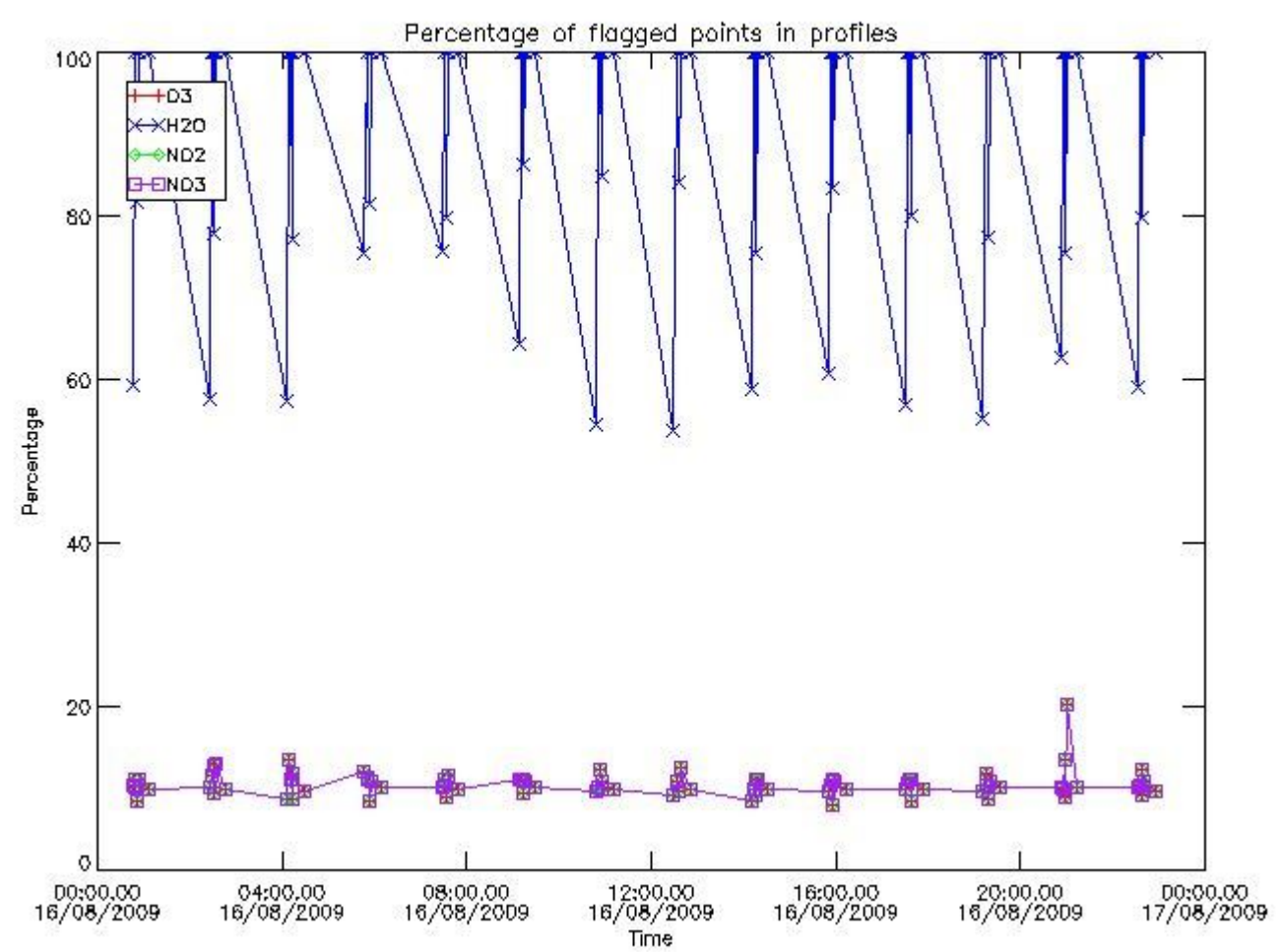


220	GOM_NL__2PRFIN20090816_214238_000000482081_00387_39018_8786.N1	16-AUG-2009 21:42:38	Bright	47.500	162	34Alp Aqr	2.9440	5350.0	95	39018	No
221	GOM_NL__2PRFIN20090816_214548_000000462081_00387_39018_8787.N1	16-AUG-2009 21:45:48	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39018	No
222	GOM_NL__2PRFIN20090816_220535_000000502081_00387_39018_8788.N1	16-AUG-2009 22:05:35	Bright	49.500	74	11Bet Cas	2.2680	6600.0	99	39018	No
223	GOM_NL__2PRFIN20090816_220748_000000452081_00387_39018_8789.N1	16-AUG-2009 22:07:48	Bright	44.500	76	27Gam Cas	2.3000	30000.	89	39018	No
224	GOM_NL__2PRFIN20090816_222030_000000622081_00387_39018_8790.N1	16-AUG-2009 22:20:30	Bright	62.000	6	13Alp Aur	0.080000	3400.0	124	39018	No
225	GOM_NL__2PRFIN20090816_222325_000000412081_00387_39018_8791.N1	16-AUG-2009 22:23:25	Bright	41.000	107	37The Aur	2.6490	11000.	82	39018	No
226	GOM_NL__2PRFIN20090816_222633_000000532081_00387_39018_8792.N1	16-AUG-2009 22:26:33	Twilight	52.500	28	12Bet Tau	1.6500	15200.	105	39018	No
227	GOM_NL__2PRFIN20090816_222856_000000492081_00387_39018_8793.N1	16-AUG-2009 22:28:56	Twilight	48.500	176	23Zet Tau	3.0200	22000.	97	39018	No
228	GOM_NL__2PRFIN20090816_223255_000000512081_00387_39018_8794.N1	16-AUG-2009 22:32:55	Dark	50.500	14	58Alp Ori	0.87000	3000.0	101	39018	No
229	GOM_NL__2PRFIN20090816_223608_000000502081_00387_39018_8795.N1	16-AUG-2009 22:36:08	Dark	49.500	30	46Eps Ori	1.6940	30000.	99	39018	No
230	GOM_NL__2PRFIN20090816_223734_000000462081_00387_39018_8796.N1	16-AUG-2009 22:37:34	Dark	46.000	125	44Iot Ori	2.7700	30000.	92	39018	No
231	GOM_NL__2PRFIN20090816_223910_000000552081_00387_39018_8797.N1	16-AUG-2009 22:39:10	Dark	55.000	7	19Bet Ori	0.10000	14000.	110	39018	No
232	GOM_NL__2PRFIN20090816_224101_000000472081_00387_39018_8798.N1	16-AUG-2009 22:41:01	Dark	47.000	101	11Alp Lep	2.5820	7000.0	94	39018	No
233	GOM_NL__2PRFIN20090816_225458_000000542081_00388_39019_8803.N1	16-AUG-2009 22:54:58	Dark	53.500	157	The1Eri	2.9060	9300.0	107	39019	No
234	GOM_NL__2PRFIN20090816_230444_000000582081_00388_39019_8804.N1	16-AUG-2009 23:04:44	Straylight	57.500	84	Alp Phe	2.3970	4500.0	115	39019	No
235	GOM_NL__2PRFIN20090816_231210_000000532081_00388_39019_8805.N1	16-AUG-2009 23:12:10	Twilight	52.500	18	24Alp PsA	1.1660	9700.0	105	39019	No
236	GOM_NL__2PRFIN20090816_231747_000000602081_00388_39019_8806.N1	16-AUG-2009 23:17:47	Bright	60.000	142	49Del Cap	2.8500	8900.0	120	39019	No
237	GOM_NL__2PRFIN20090816_232113_000000402081_00388_39019_8807.N1	16-AUG-2009 23:21:13	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	39019	No
238	GOM_NL__2PRFIN20090816_232313_000000482081_00388_39019_8808.N1	16-AUG-2009 23:23:13	Bright	47.500	162	34Alp Aqr	2.9440	5350.0	95	39019	No
239	GOM_NL__2PRFIN20090816_232624_000000462081_00388_39019_8809.N1	16-AUG-2009 23:26:24	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39019	No
240	GOM_NL__2PRFIN20090816_234610_000000472081_00388_39019_8810.N1	16-AUG-2009 23:46:10	Bright	47.000	74	11Bet Cas	2.2680	6600.0	94	39019	No
241	GOM_NL__2PRFIN20090816_234823_000000472081_00388_39019_8811.N1	16-AUG-2009 23:48:23	Bright	47.000	76	27Gam Cas	2.3000	30000.	94	39019	No

### 3. Quality information per product

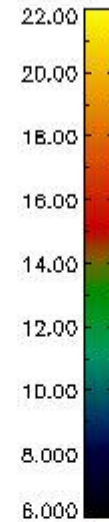
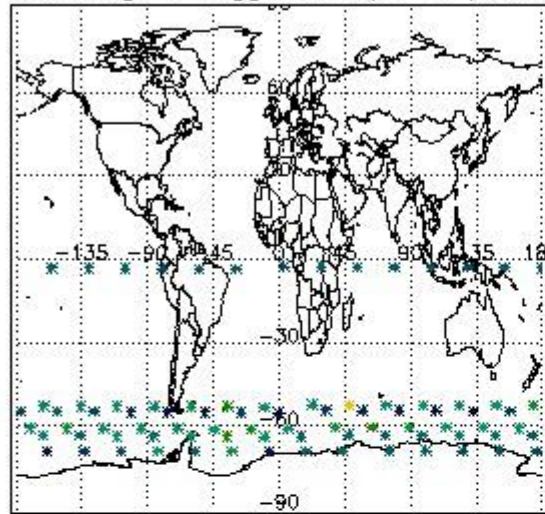
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

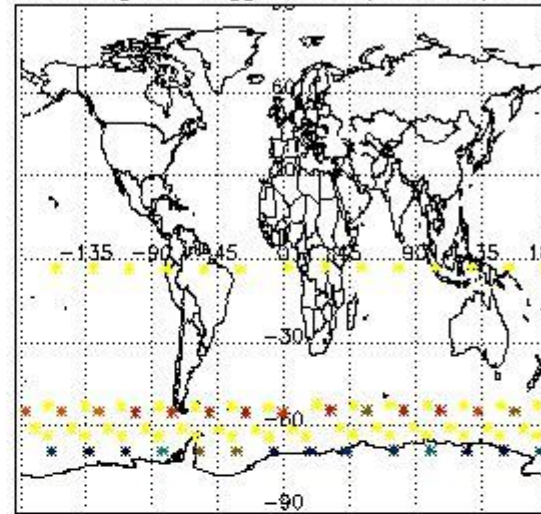


3.2 Plot quality information per product (world map)

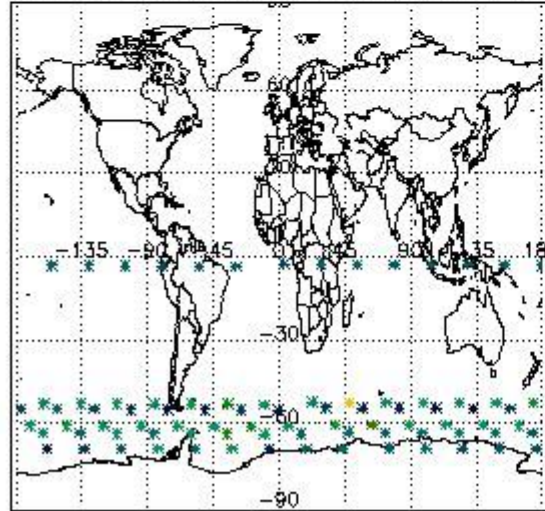
Percentage of flagged data per O3 profile



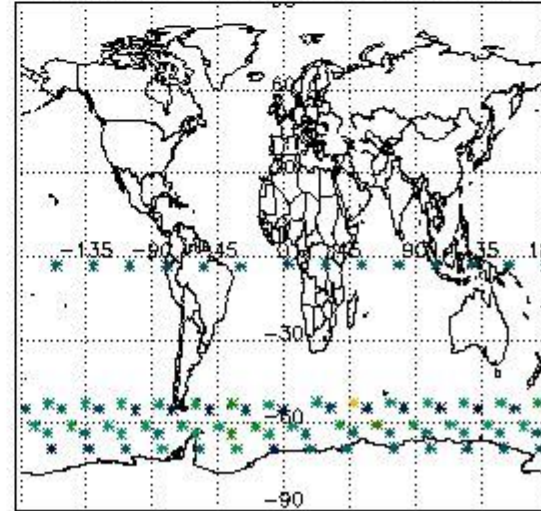
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



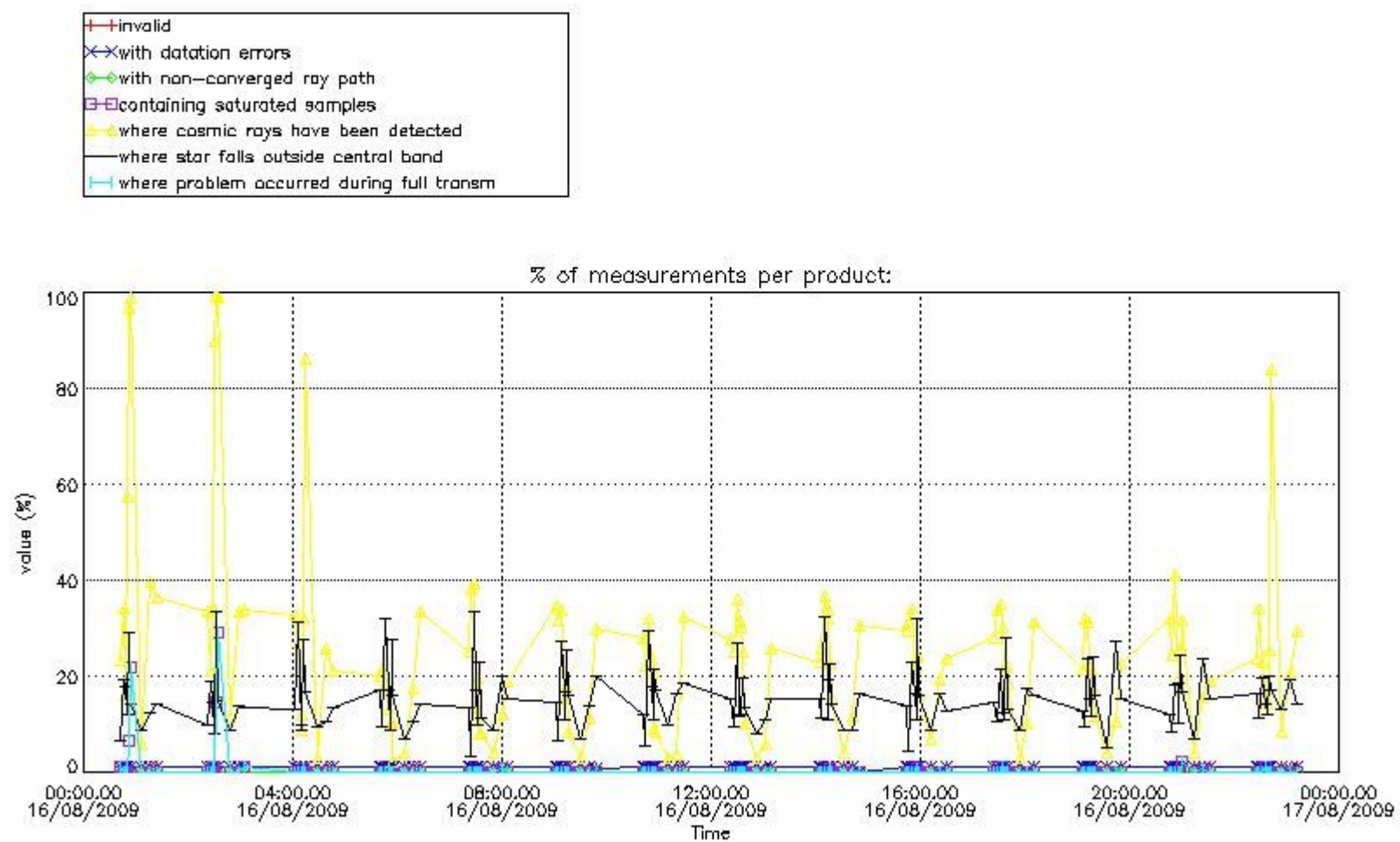
#### 4. Level 1 quality information per product

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.

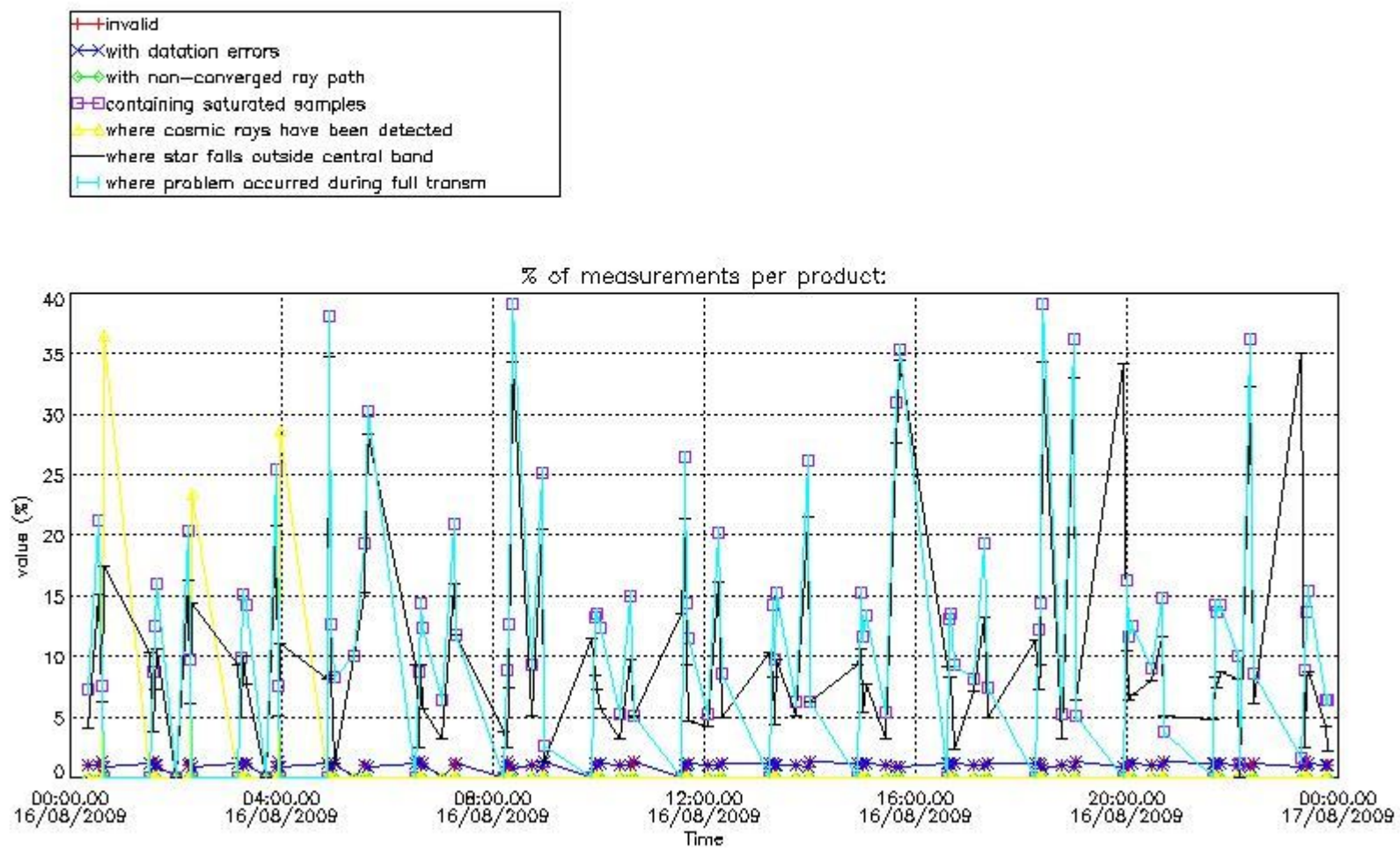
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



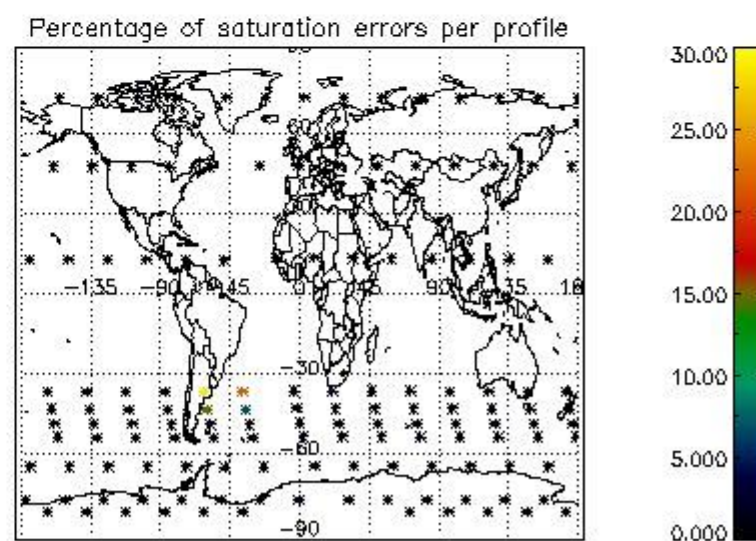
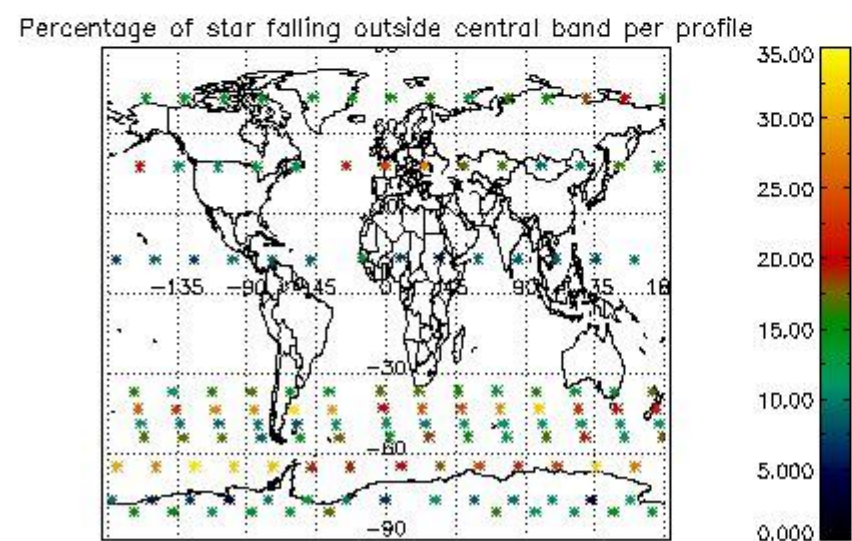
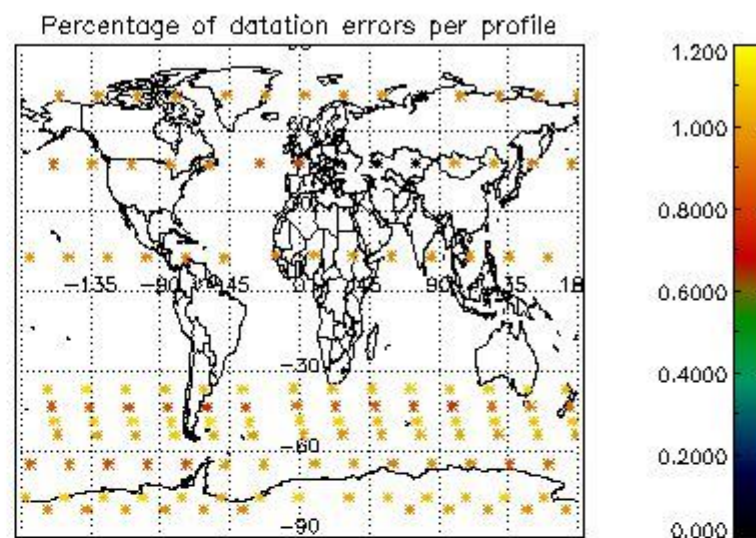
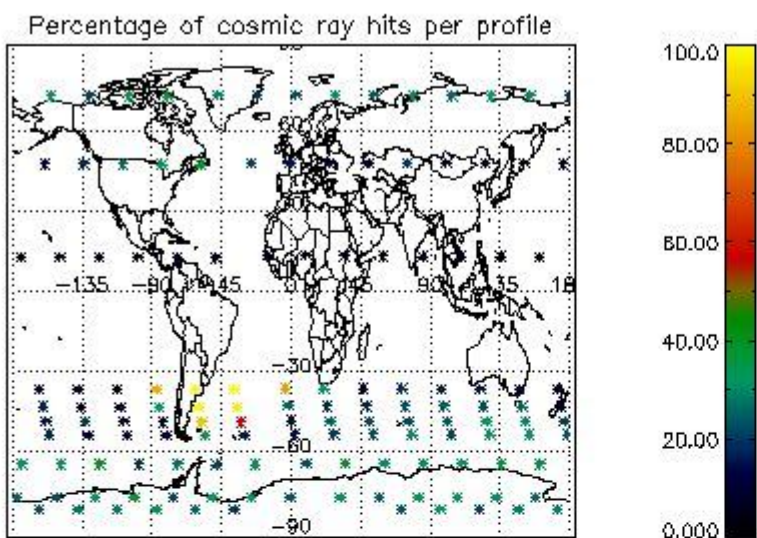


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



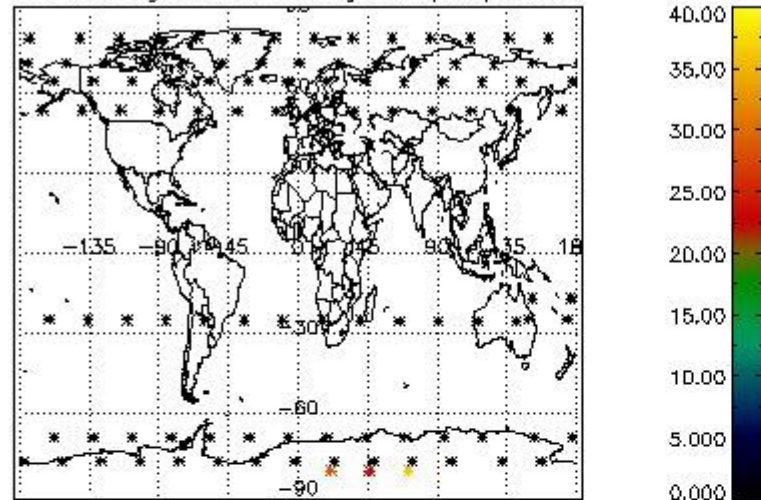
4.2 Plot quality information per product coming from level 1b processing (world map)

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

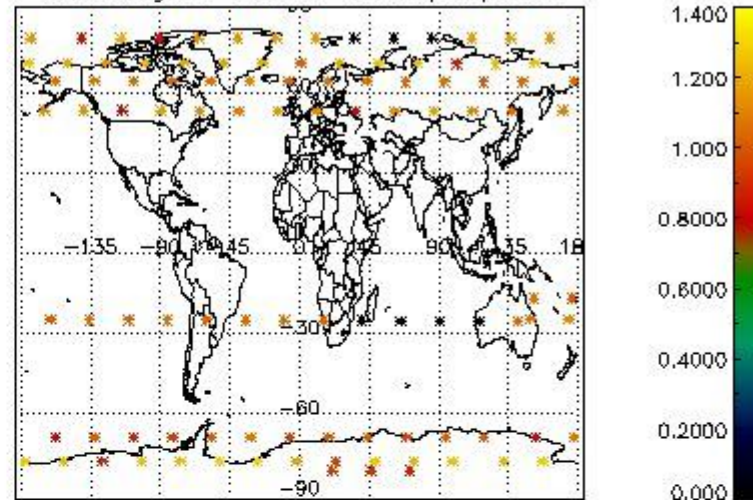


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

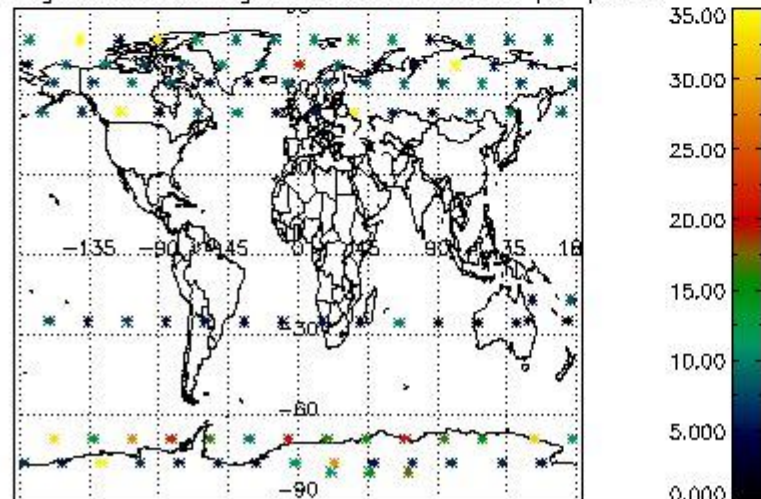
Percentage of cosmic ray hits per profile



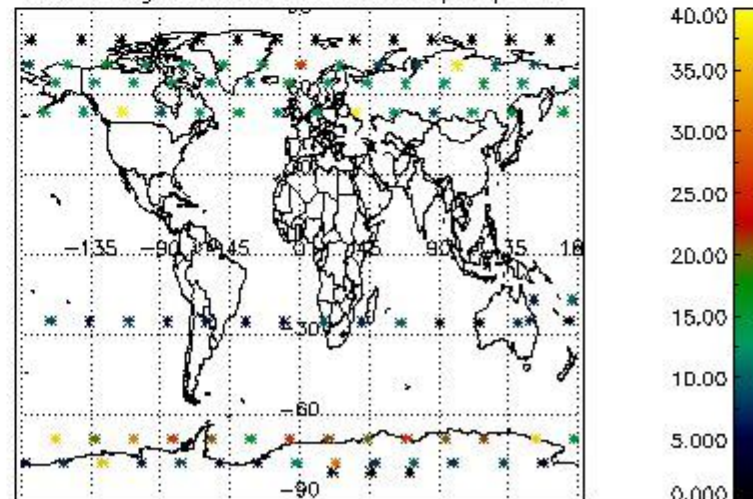
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

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

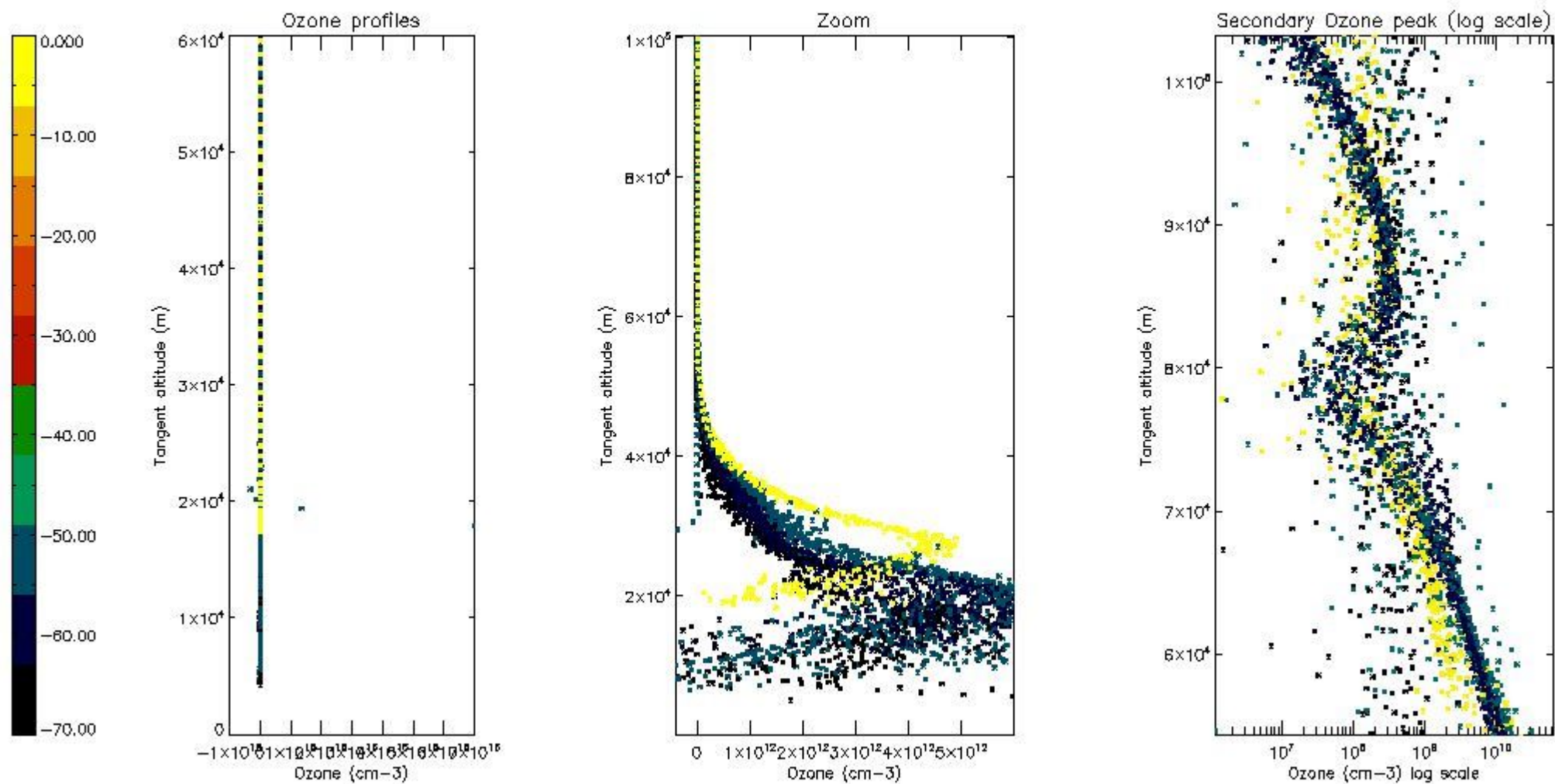
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	19

STD < 10	14
STD < 5	9

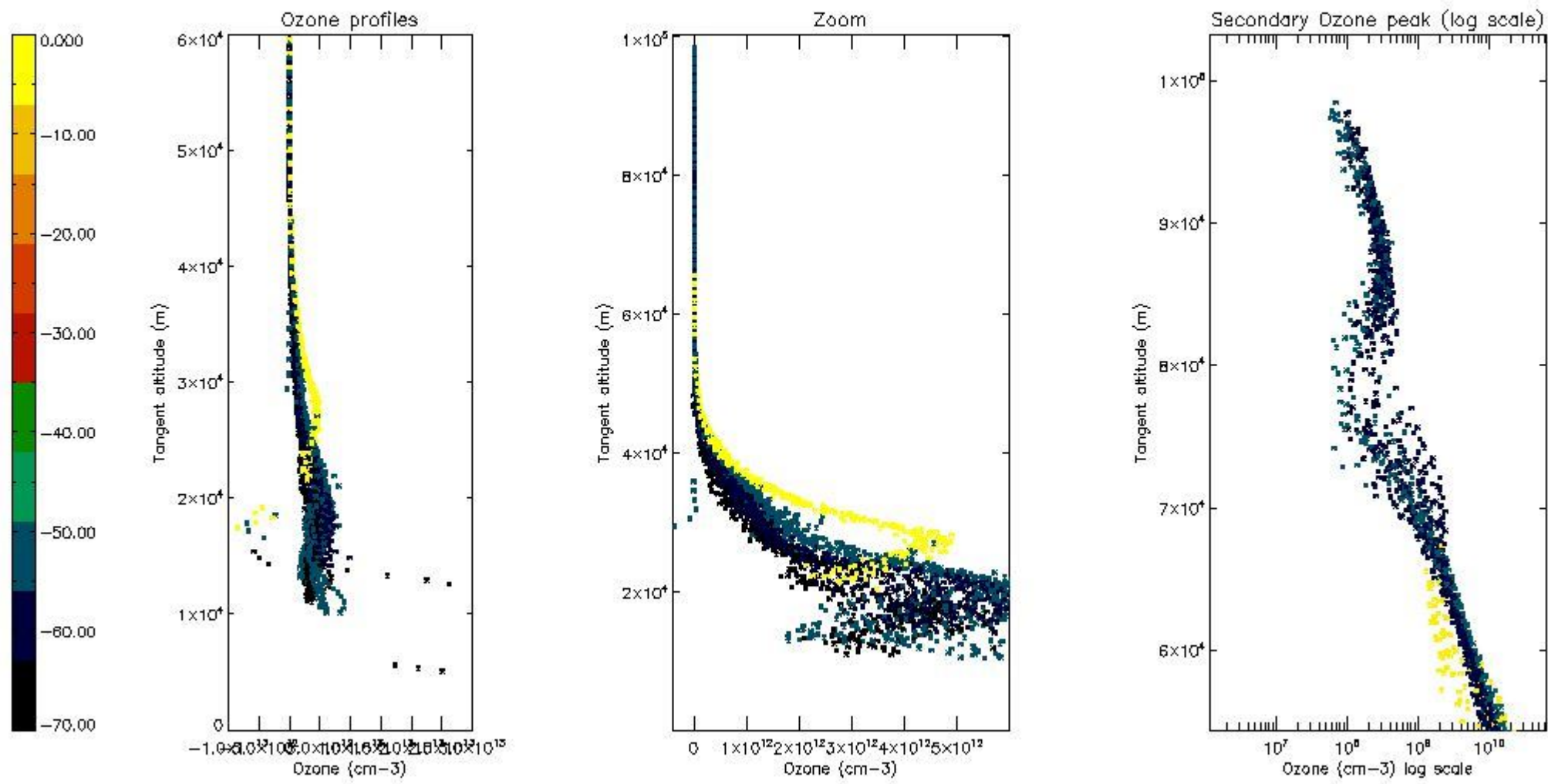
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



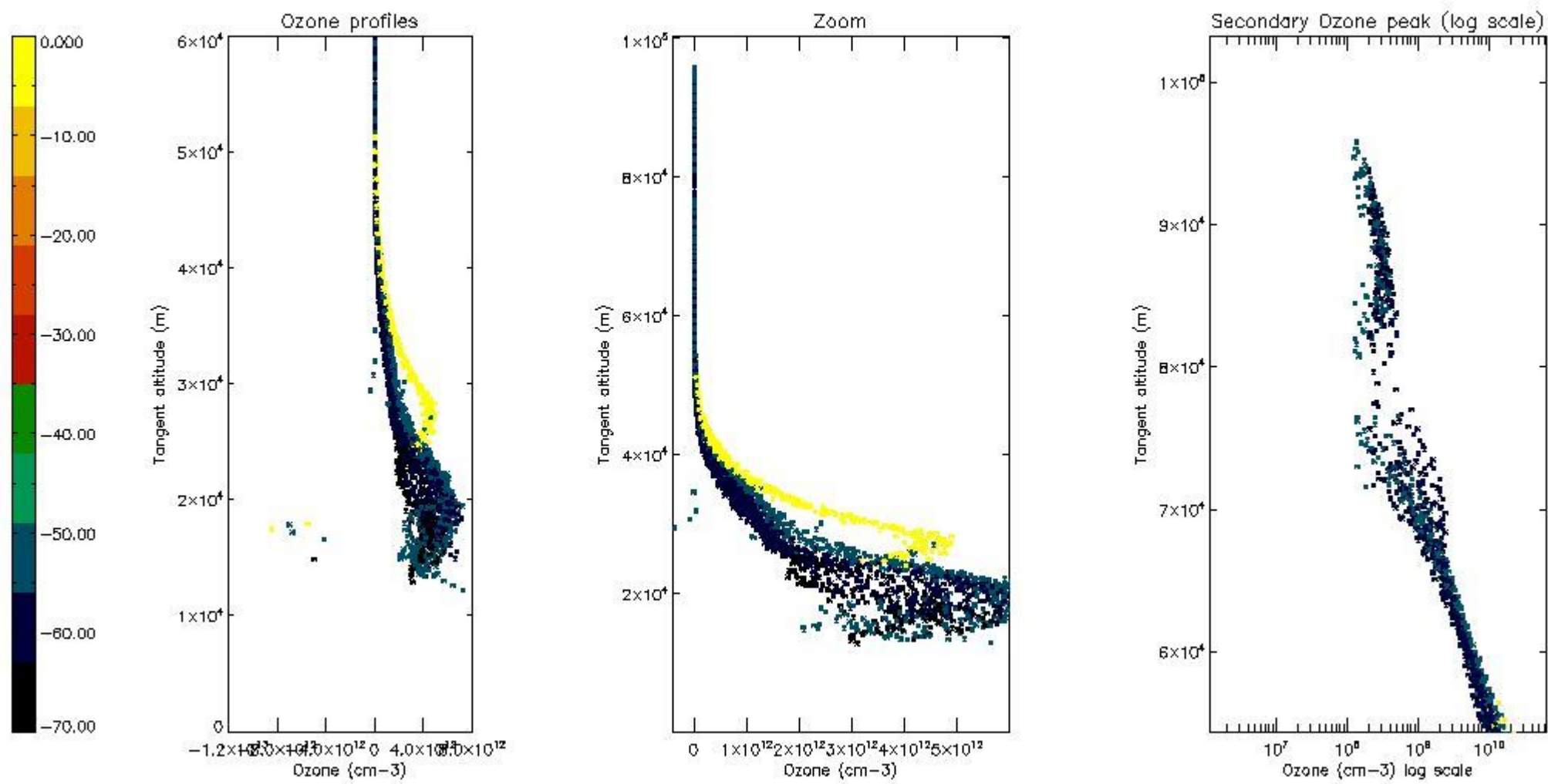
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



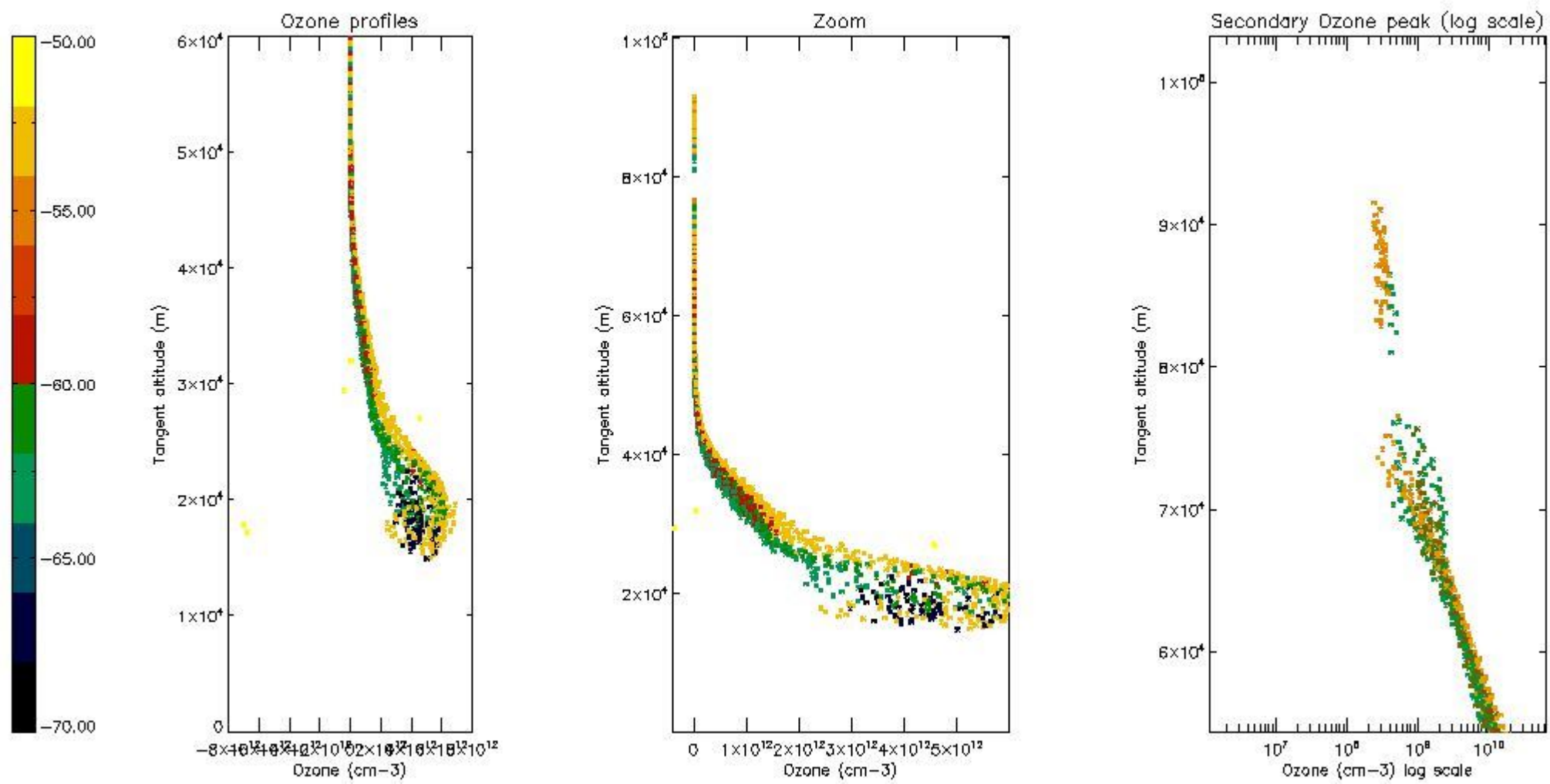
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



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

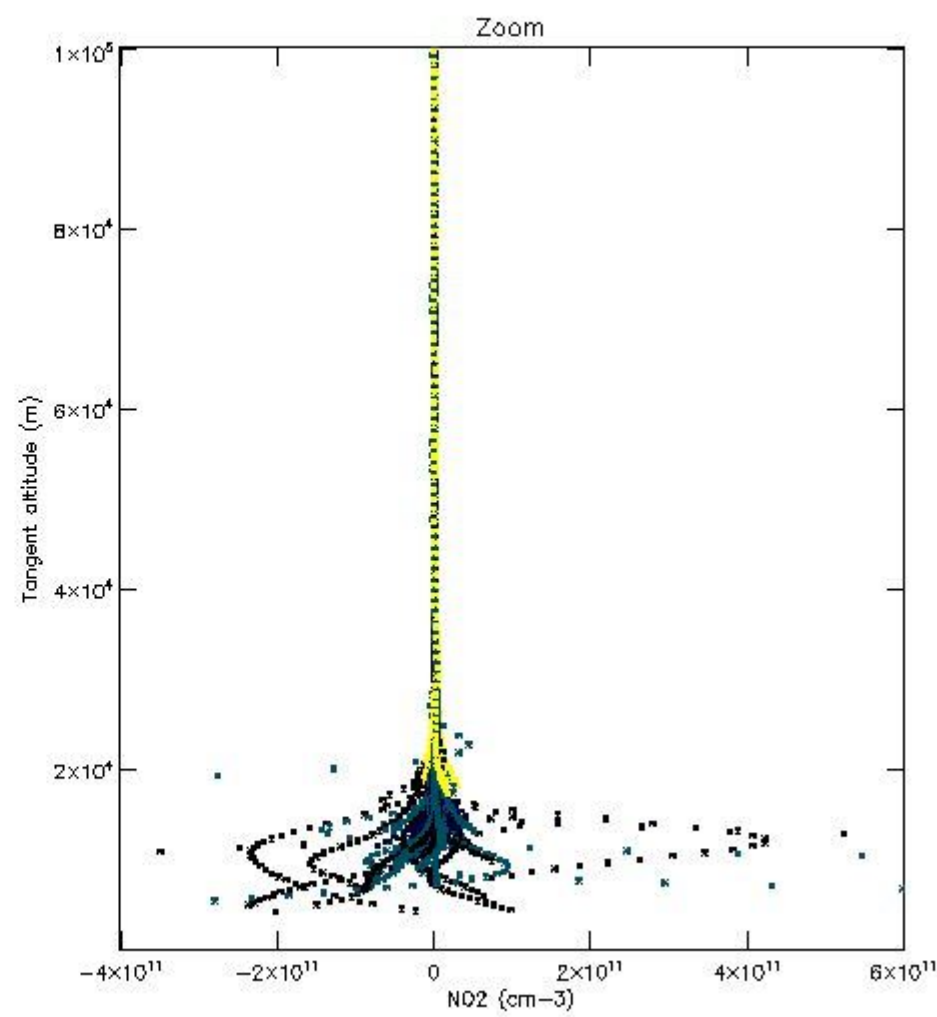
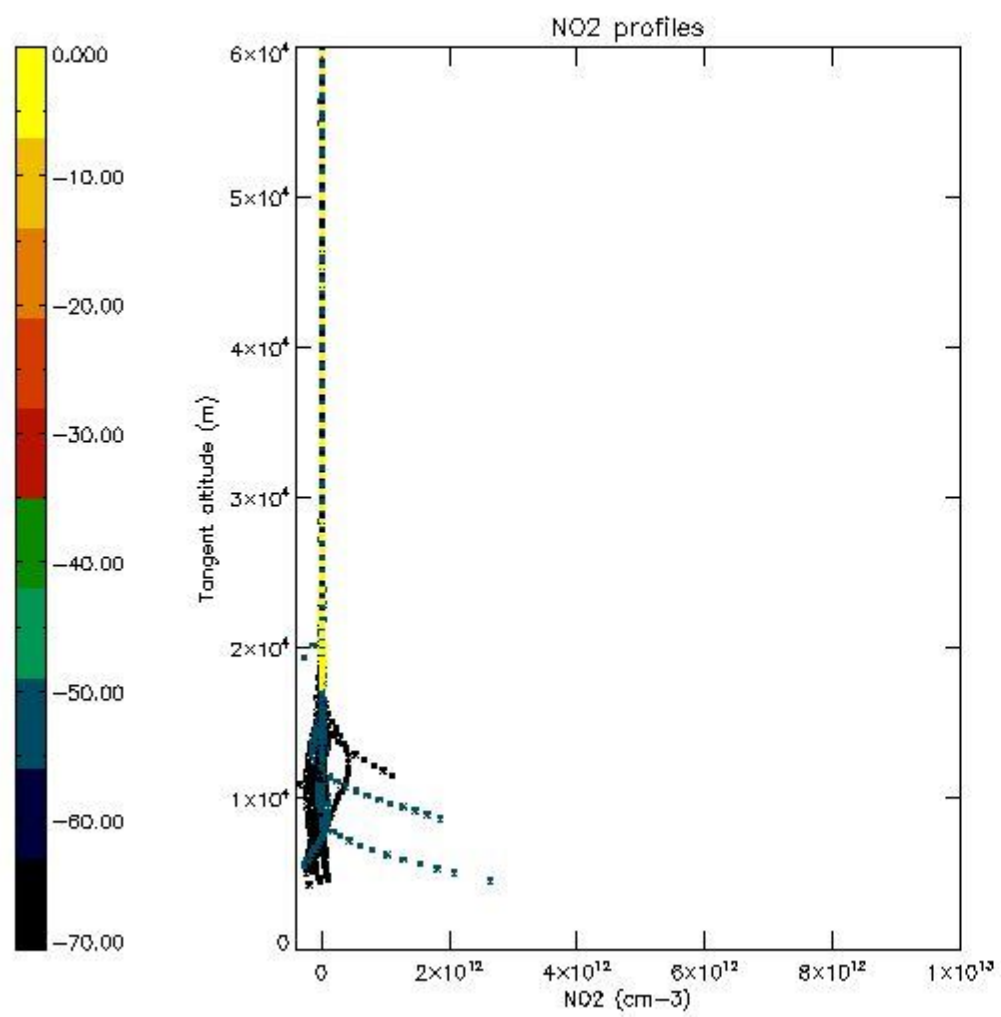
The colorbar represents the latitude.



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

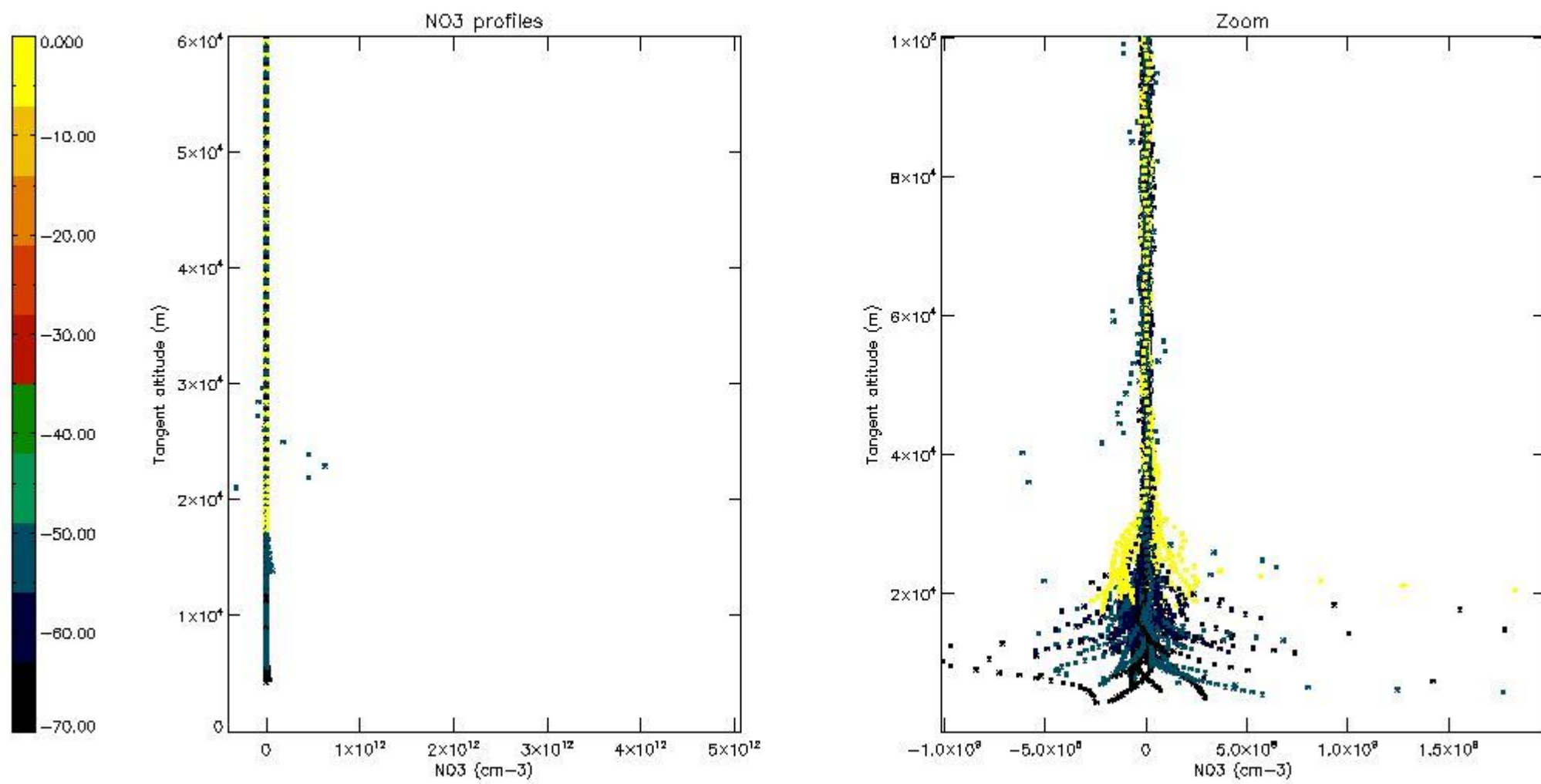
The colorbar represents the latitude.





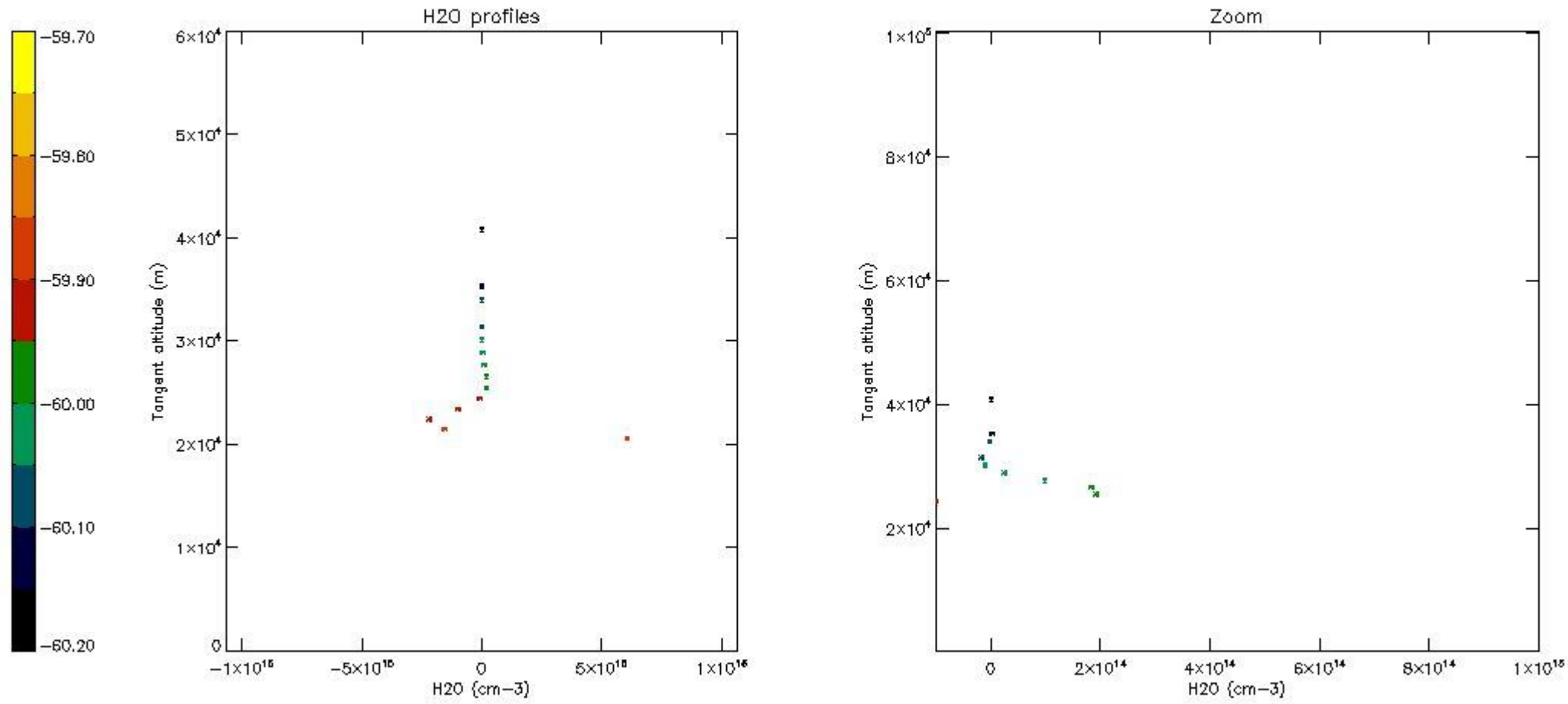
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	16-AUG-2009 00:20:11
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-AUG-2009 00:20:11
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-AUG-2009 00:20:11

# 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	26APR2013 11:52:00
Data source version	GOMOS/6.01
Start time of products	16-08-2009 (16AUG2009 00:00:00)
Stop time of products	17-08-2009 (17AUG2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	241
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__2PRFIN20090816_002011_000000492081_00374_39005_8576.N1	16-AUG-2009 00:20:11	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	39005	No
2	GOM_NL__2PRFIN20090816_003244_000000502081_00374_39005_8577.N1	16-AUG-2009 00:32:44	Bright	49.500	6	13Alp Aur	0.080000	3400.0	99	39005	No
3	GOM_NL__2PRFIN20090816_003538_000000402081_00374_39005_8578.N1	16-AUG-2009 00:35:38	Bright	40.000	107	37The Aur	2.6490	11000.	80	39005	No
4	GOM_NL__2PRFIN20090816_003721_000000582081_00374_39005_8579.N1	16-AUG-2009 00:37:21	Twilight	57.500	114	3lot Aur	2.6930	4600.0	115	39005	No
5	GOM_NL__2PRFIN20090816_004105_000000452081_00374_39005_8580.N1	16-AUG-2009 00:41:05	Twilight	45.000	176	23Zet Tau	3.0200	22000.	90	39005	No
6	GOM_NL__2PRFIN20090816_004502_000000502081_00374_39005_8581.N1	16-AUG-2009 00:45:02	Dark	49.500	14	58Alp Ori	0.87000	3000.0	99	39005	No
7	GOM_NL__2PRFIN20090816_004813_000000512081_00374_39005_8582.N1	16-AUG-2009 00:48:13	Dark	50.500	30	46Eps Ori	1.6940	30000.	101	39005	No
8	GOM_NL__2PRFIN20090816_004938_000000462081_00374_39005_8583.N1	16-AUG-2009 00:49:38	Dark	46.000	125	44lot Ori	2.7700	30000.	92	39005	No
9	GOM_NL__2PRFIN20090816_005113_000000612081_00374_39005_8584.N1	16-AUG-2009 00:51:13	Dark	60.500	7	19Bet Ori	0.10000	14000.	121	39005	No
10	GOM_NL__2PRFIN20090816_005305_000000462081_00374_39005_8585.N1	16-AUG-2009 00:53:05	Dark	46.000	101	11Alp Lep	2.5820	7000.0	92	39005	No
11	GOM_NL__2PRFIN20090816_010655_000000522081_00375_39006_8584.N1	16-AUG-2009 01:06:55	Dark	51.500	157	The1Eri	2.9060	9300.0	103	39006	No
12	GOM_NL__2PRFIN20090816_011646_000000532081_00375_39006_8585.N1	16-AUG-2009 01:16:46	Straylight	53.000	84	Alp Phe	2.3970	4500.0	106	39006	No
13	GOM_NL__2PRFIN20090816_012418_000000532081_00375_39006_8586.N1	16-AUG-2009 01:24:18	Twilight	52.500	18	24Alp PsA	1.1660	9700.0	105	39006	No
14	GOM_NL__2PRFIN20090816_012958_000000442081_00375_39006_8587.N1	16-AUG-2009 01:29:58	Bright	43.500	142	49Del Cap	2.8500	8900.0	87	39006	No
15	GOM_NL__2PRFIN20090816_013326_000000402081_00375_39006_8588.N1	16-AUG-2009 01:33:26	Bright	40.000	154	22Bet Aqr	2.8990	5700.0	80	39006	No
16	GOM_NL__2PRFIN20090816_013529_000000482081_00375_39006_8589.N1	16-AUG-2009 01:35:29	Bright	48.000	162	34Alp Aqr	2.9440	5350.0	96	39006	No
17	GOM_NL__2PRFIN20090816_013841_000000472081_00375_39006_8590.N1	16-AUG-2009 01:38:41	Bright	47.000	61	8Eps Peg	2.1000	3900.0	94	39006	No
18	GOM_NL__2PRFIN20090816_020046_000000442081_00375_39006_8591.N1	16-AUG-2009 02:00:46	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	39006	No
19	GOM_NL__2PRFIN20090816_021320_000000492081_00375_39006_8592.N1	16-AUG-2009 02:13:20	Bright	49.000	6	13Alp Aur	0.080000	3400.0	98	39006	No
20	GOM_NL__2PRFIN20090816_021614_000000412081_00375_39006_8593.N1	16-AUG-2009 02:16:14	Bright	41.000	107	37The Aur	2.6490	11000.	82	39006	No
21	GOM_NL__2PRFIN20090816_021757_000000562081_00375_39006_8594.N1	16-AUG-2009 02:17:57	Twilight	55.500	114	3lot Aur	2.6930	4600.0	111	39006	No
22	GOM_NL__2PRFIN20090816_022141_000000472081_00375_39006_8595.N1	16-AUG-2009 02:21:41	Twilight	46.500	176	23Zet Tau	3.0200	22000.	93	39006	No
23	GOM_NL__2PRFIN20090816_022538_000000502081_00375_39006_8596.N1	16-AUG-2009 02:25:38	Dark	50.000	14	58Alp Ori	0.87000	3000.0	100	39006	No
24	GOM_NL__2PRFIN20090816_022850_000000492081_00375_39006_8597.N1	16-AUG-2009 02:28:50	Dark	48.500	30	46Eps Ori	1.6940	30000.	97	39006	No
25	GOM_NL__2PRFIN20090816_023015_000000442081_00375_39006_8598.N1	16-AUG-2009 02:30:15	Dark	44.000	125	44lot Ori	2.7700	30000.	88	39006	No
26	GOM_NL__2PRFIN20090816_023149_000000662081_00375_39006_8599.N1	16-AUG-2009 02:31:49	Dark	65.500	7	19Bet Ori	0.10000	14000.	131	39006	No
27	GOM_NL__2PRFIN20090816_023341_000000472081_00375_39006_8600.N1	16-AUG-2009 02:33:41	Dark	46.500	101	11Alp Lep	2.5820	7000.0	93	39006	No
28	GOM_NL__2PRFIN20090816_024732_000000522081_00376_39007_8600.N1	16-AUG-2009 02:47:32	Dark	52.000	157	The1Eri	2.9060	9300.0	104	39007	No
29	GOM_NL__2PRFIN20090816_025723_000000542081_00376_39007_8601.N1	16-AUG-2009 02:57:23	Straylight	54.000	84	Alp Phe	2.3970	4500.0	108	39007	No
30	GOM_NL__2PRFIN20090816_030454_000000522081_00376_39007_8602.N1	16-AUG-2009 03:04:54	Twilight	52.000	18	24Alp PsA	1.1660	9700.0	104	39007	No
31	GOM_NL__2PRFIN20090816_031034_000000432081_00376_39007_8603.N1	16-AUG-2009 03:10:34	Bright	43.000	142	49Del Cap	2.8500	8900.0	86	39007	No
32	GOM_NL__2PRFIN20090816_031402_000000412081_00376_39007_8604.N1	16-AUG-2009 03:14:02	Bright	40.500	154	22Bet Aqr	2.8990	5700.0	81	39007	No
33	GOM_NL__2PRFIN20090816_031605_000000502081_00376_39007_8605.N1	16-AUG-2009 03:16:05	Bright	49.500	162	34Alp Aqr	2.9440	5350.0	99	39007	No
34	GOM_NL__2PRFIN20090816_031916_000000462081_00376_39007_8606.N1	16-AUG-2009 03:19:16	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39007	No
35	GOM_NL__2PRFIN20090816_034121_000000442081_00376_39007_8607.N1	16-AUG-2009 03:41:21	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	39007	No
36	GOM_NL__2PRFIN20090816_035356_000000532081_00376_39007_8608.N1	16-AUG-2009 03:53:56	Bright	53.000	6	13Alp Aur	0.080000	3400.0	106	39007	No
37	GOM_NL__2PRFIN20090816_035650_000000402081_00376_39007_8609.N1	16-AUG-2009 03:56:50	Bright	39.500	107	37The Aur	2.6490	11000.	79	39007	No
38	GOM_NL__2PRFIN20090816_035833_000000542081_00376_39007_8610.N1	16-AUG-2009 03:58:33	Twilight	54.000	114	3lot Aur	2.6930	4600.0	108	39007	No
39	GOM_NL__2PRFIN20090816_040217_000000492081_00376_39007_8611.N1	16-AUG-2009 04:02:17	Twilight	49.000	176	23Zet Tau	3.0200	22000.	98	39007	No
40	GOM_NL__2PRFIN20090816_040615_000000592081_00376_39007_8612.N1	16-AUG-2009 04:06:15	Dark	59.000	14	58Alp Ori	0.87000	3000.0	118	39007	No
41	GOM_NL__2PRFIN20090816_040926_000000462081_00376_39007_8613.N1	16-AUG-2009 04:09:26	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	39007	No
42	GOM_NL__2PRFIN20090816_041052_000000462081_00376_39007_8614.N1	16-AUG-2009 04:10:52	Dark	45.500	125	44lot Ori	2.7700	30000.	91	39007	No







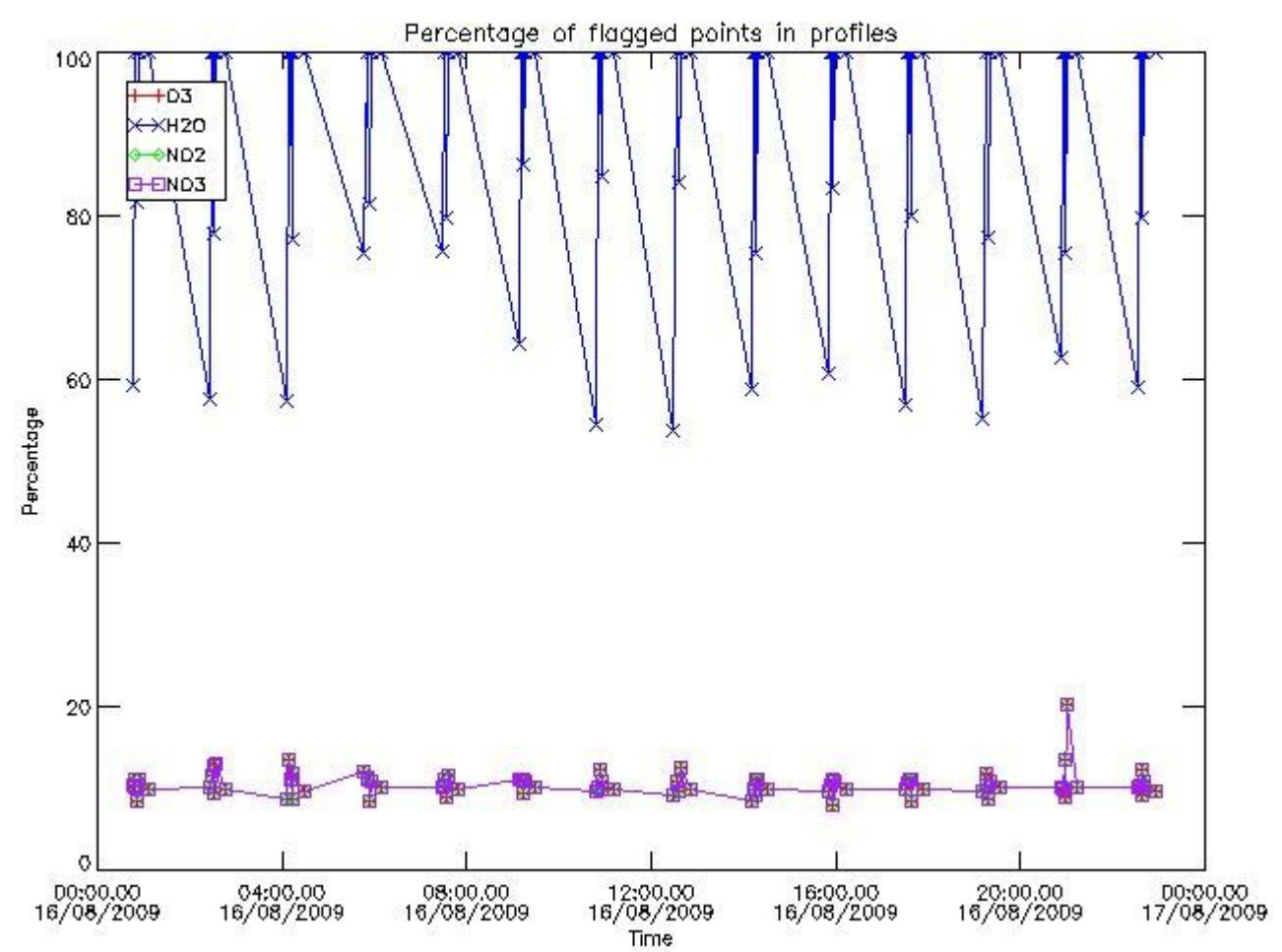


220	GOM_NL__2PRFIN20090816_214238_000000482081_00387_39018_8786.N1	16-AUG-2009 21:42:38	Bright	47.500	162	34Alp Aqr	2.9440	5350.0	95	39018	No
221	GOM_NL__2PRFIN20090816_214548_000000462081_00387_39018_8787.N1	16-AUG-2009 21:45:48	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39018	No
222	GOM_NL__2PRFIN20090816_220535_000000502081_00387_39018_8788.N1	16-AUG-2009 22:05:35	Bright	49.500	74	11Bet Cas	2.2680	6600.0	99	39018	No
223	GOM_NL__2PRFIN20090816_220748_000000452081_00387_39018_8789.N1	16-AUG-2009 22:07:48	Bright	44.500	76	27Gam Cas	2.3000	30000.	89	39018	No
224	GOM_NL__2PRFIN20090816_222030_000000622081_00387_39018_8790.N1	16-AUG-2009 22:20:30	Bright	62.000	6	13Alp Aur	0.080000	3400.0	124	39018	No
225	GOM_NL__2PRFIN20090816_222325_000000412081_00387_39018_8791.N1	16-AUG-2009 22:23:25	Bright	41.000	107	37The Aur	2.6490	11000.	82	39018	No
226	GOM_NL__2PRFIN20090816_222633_000000532081_00387_39018_8792.N1	16-AUG-2009 22:26:33	Twilight	52.500	28	12Bet Tau	1.6500	15200.	105	39018	No
227	GOM_NL__2PRFIN20090816_222856_000000492081_00387_39018_8793.N1	16-AUG-2009 22:28:56	Twilight	48.500	176	23Zet Tau	3.0200	22000.	97	39018	No
228	GOM_NL__2PRFIN20090816_223255_000000512081_00387_39018_8794.N1	16-AUG-2009 22:32:55	Dark	50.500	14	58Alp Ori	0.87000	3000.0	101	39018	No
229	GOM_NL__2PRFIN20090816_223608_000000502081_00387_39018_8795.N1	16-AUG-2009 22:36:08	Dark	49.500	30	46Eps Ori	1.6940	30000.	99	39018	No
230	GOM_NL__2PRFIN20090816_223734_000000462081_00387_39018_8796.N1	16-AUG-2009 22:37:34	Dark	46.000	125	44Iot Ori	2.7700	30000.	92	39018	No
231	GOM_NL__2PRFIN20090816_223910_000000552081_00387_39018_8797.N1	16-AUG-2009 22:39:10	Dark	55.000	7	19Bet Ori	0.10000	14000.	110	39018	No
232	GOM_NL__2PRFIN20090816_224101_000000472081_00387_39018_8798.N1	16-AUG-2009 22:41:01	Dark	47.000	101	11Alp Lep	2.5820	7000.0	94	39018	No
233	GOM_NL__2PRFIN20090816_225458_000000542081_00388_39019_8803.N1	16-AUG-2009 22:54:58	Dark	53.500	157	The1Eri	2.9060	9300.0	107	39019	No
234	GOM_NL__2PRFIN20090816_230444_000000582081_00388_39019_8804.N1	16-AUG-2009 23:04:44	Straylight	57.500	84	Alp Phe	2.3970	4500.0	115	39019	No
235	GOM_NL__2PRFIN20090816_231210_000000532081_00388_39019_8805.N1	16-AUG-2009 23:12:10	Twilight	52.500	18	24Alp PsA	1.1660	9700.0	105	39019	No
236	GOM_NL__2PRFIN20090816_231747_000000602081_00388_39019_8806.N1	16-AUG-2009 23:17:47	Bright	60.000	142	49Del Cap	2.8500	8900.0	120	39019	No
237	GOM_NL__2PRFIN20090816_232113_000000402081_00388_39019_8807.N1	16-AUG-2009 23:21:13	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	39019	No
238	GOM_NL__2PRFIN20090816_232313_000000482081_00388_39019_8808.N1	16-AUG-2009 23:23:13	Bright	47.500	162	34Alp Aqr	2.9440	5350.0	95	39019	No
239	GOM_NL__2PRFIN20090816_232624_000000462081_00388_39019_8809.N1	16-AUG-2009 23:26:24	Bright	45.500	61	8Eps Peg	2.1000	3900.0	91	39019	No
240	GOM_NL__2PRFIN20090816_234610_000000472081_00388_39019_8810.N1	16-AUG-2009 23:46:10	Bright	47.000	74	11Bet Cas	2.2680	6600.0	94	39019	No
241	GOM_NL__2PRFIN20090816_234823_000000472081_00388_39019_8811.N1	16-AUG-2009 23:48:23	Bright	47.000	76	27Gam Cas	2.3000	30000.	94	39019	No

### 3. Quality information per product

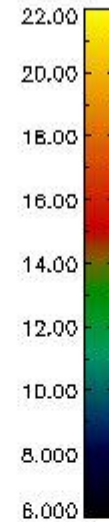
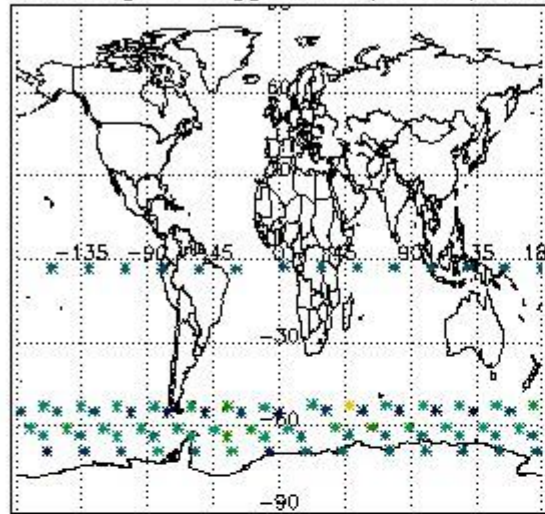
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

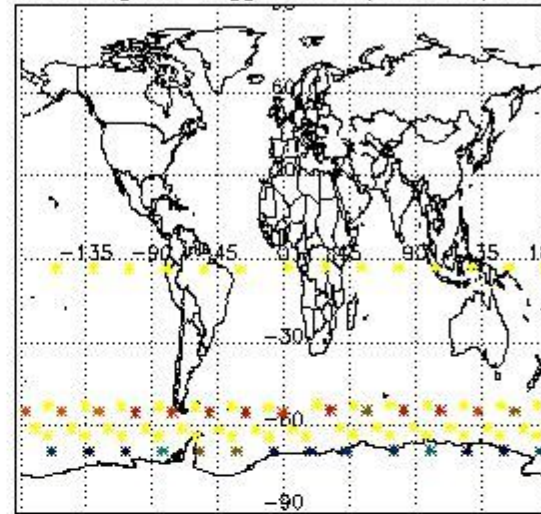


3.2 Plot quality information per product (world map)

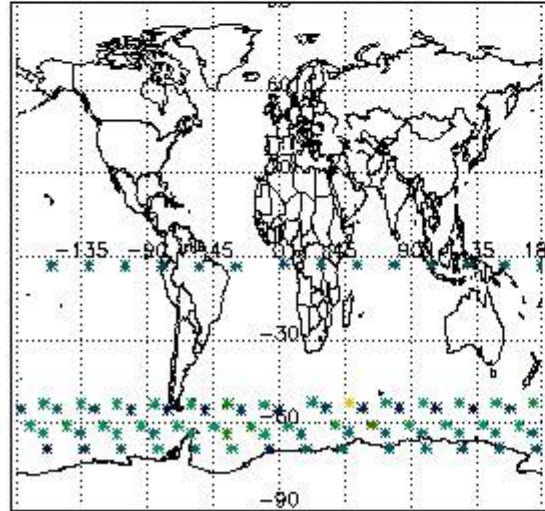
Percentage of flagged data per O3 profile



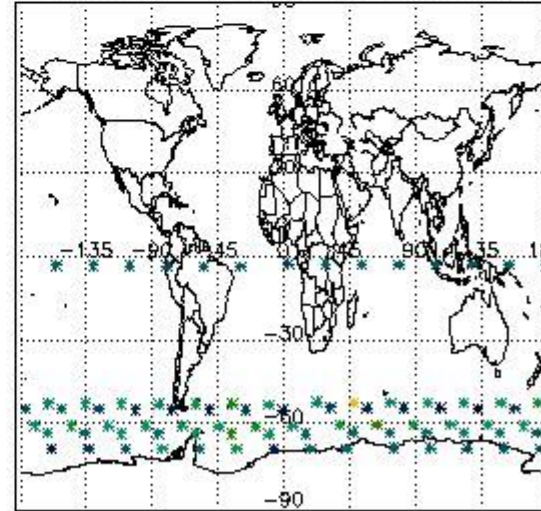
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

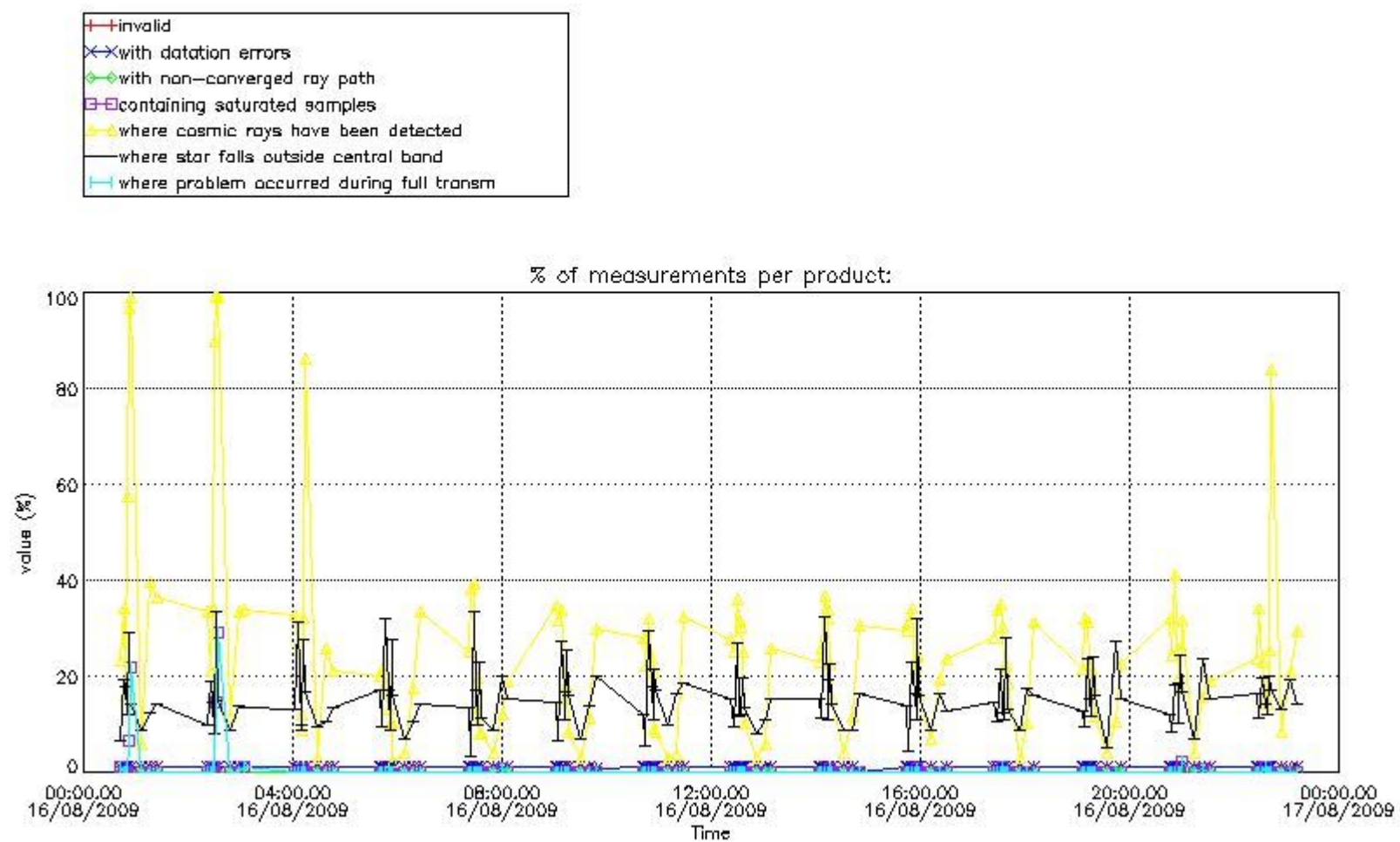


#### 4. Level 1 quality information per product

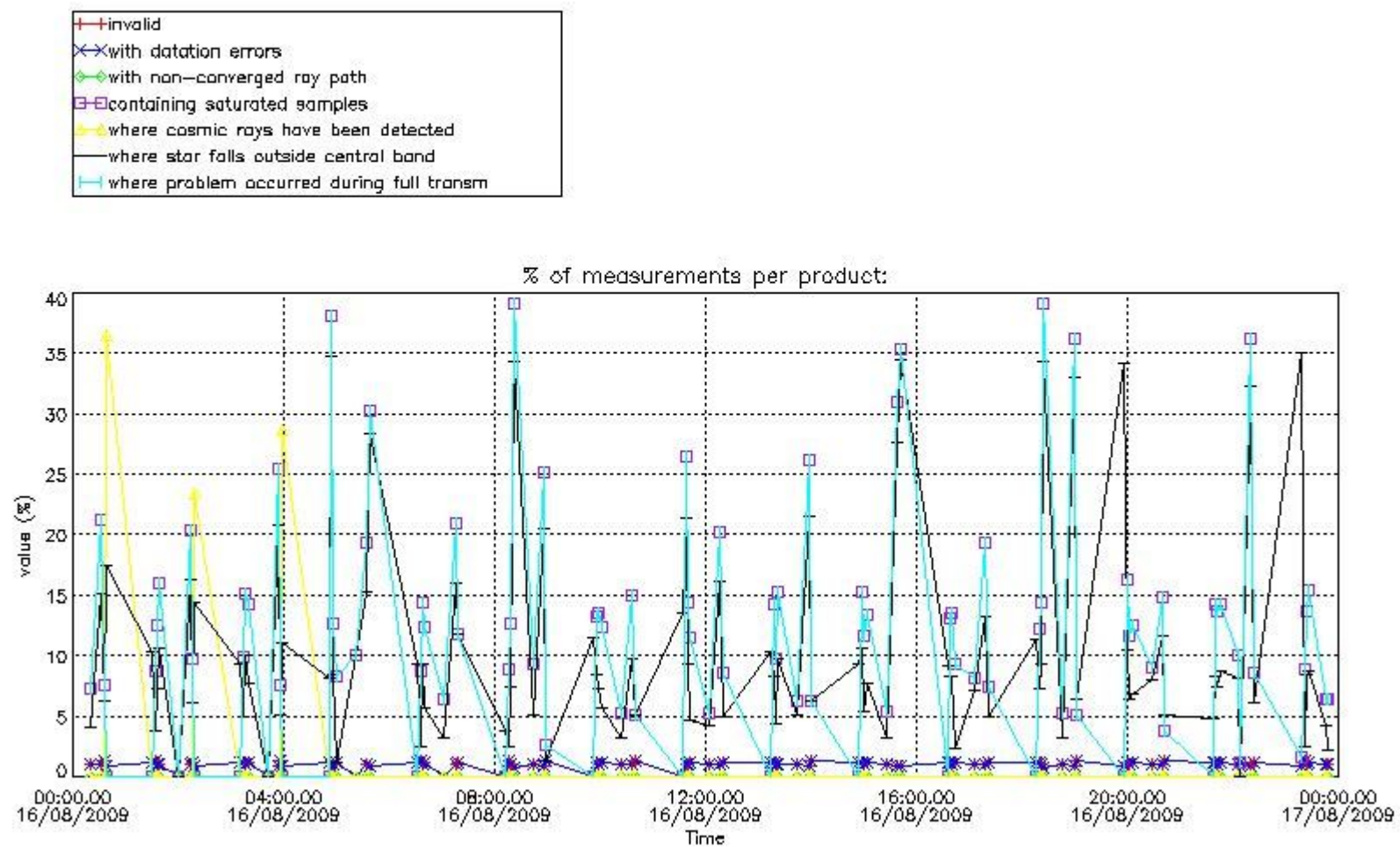
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

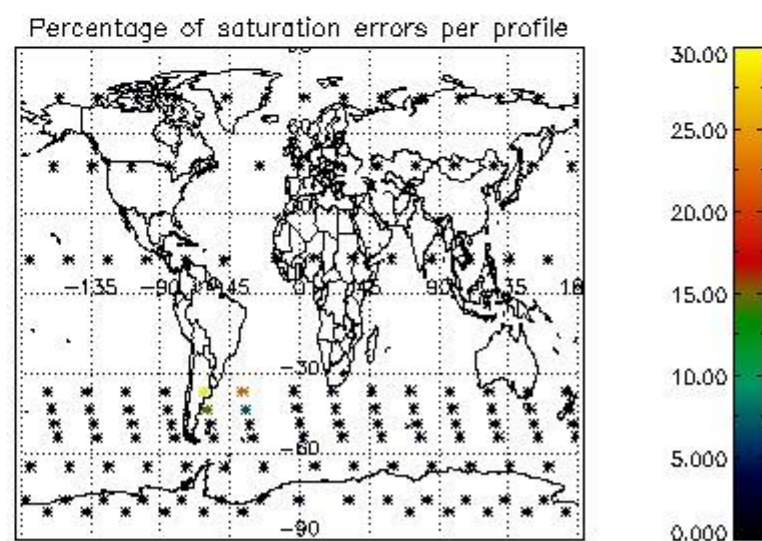
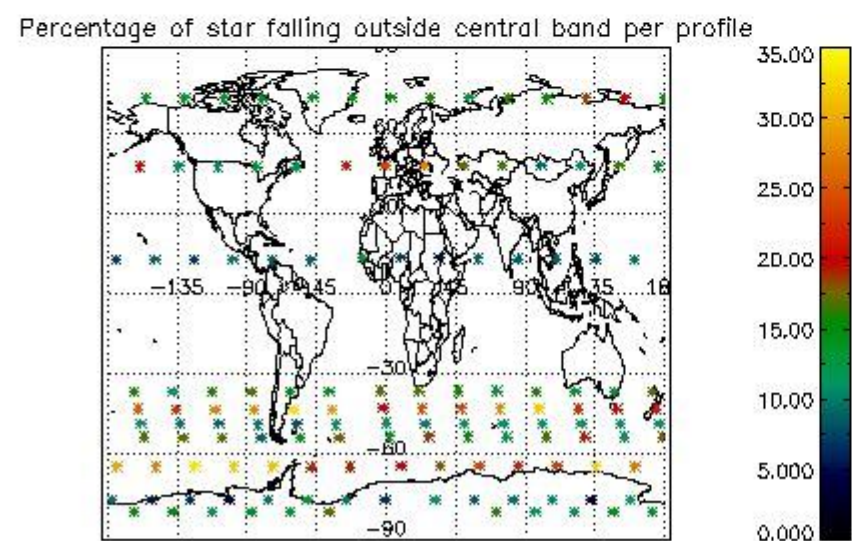
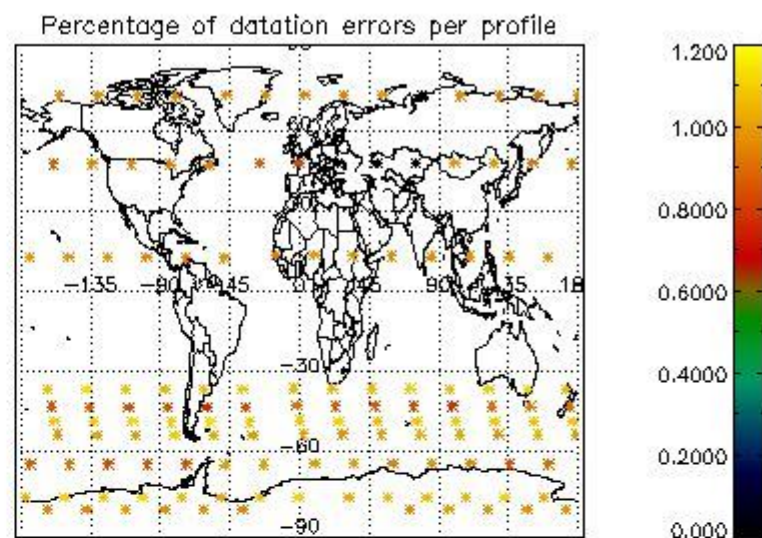
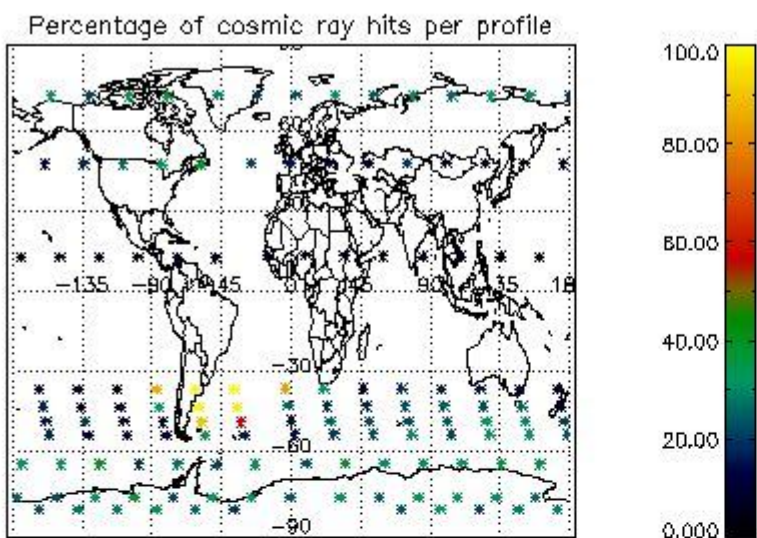


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

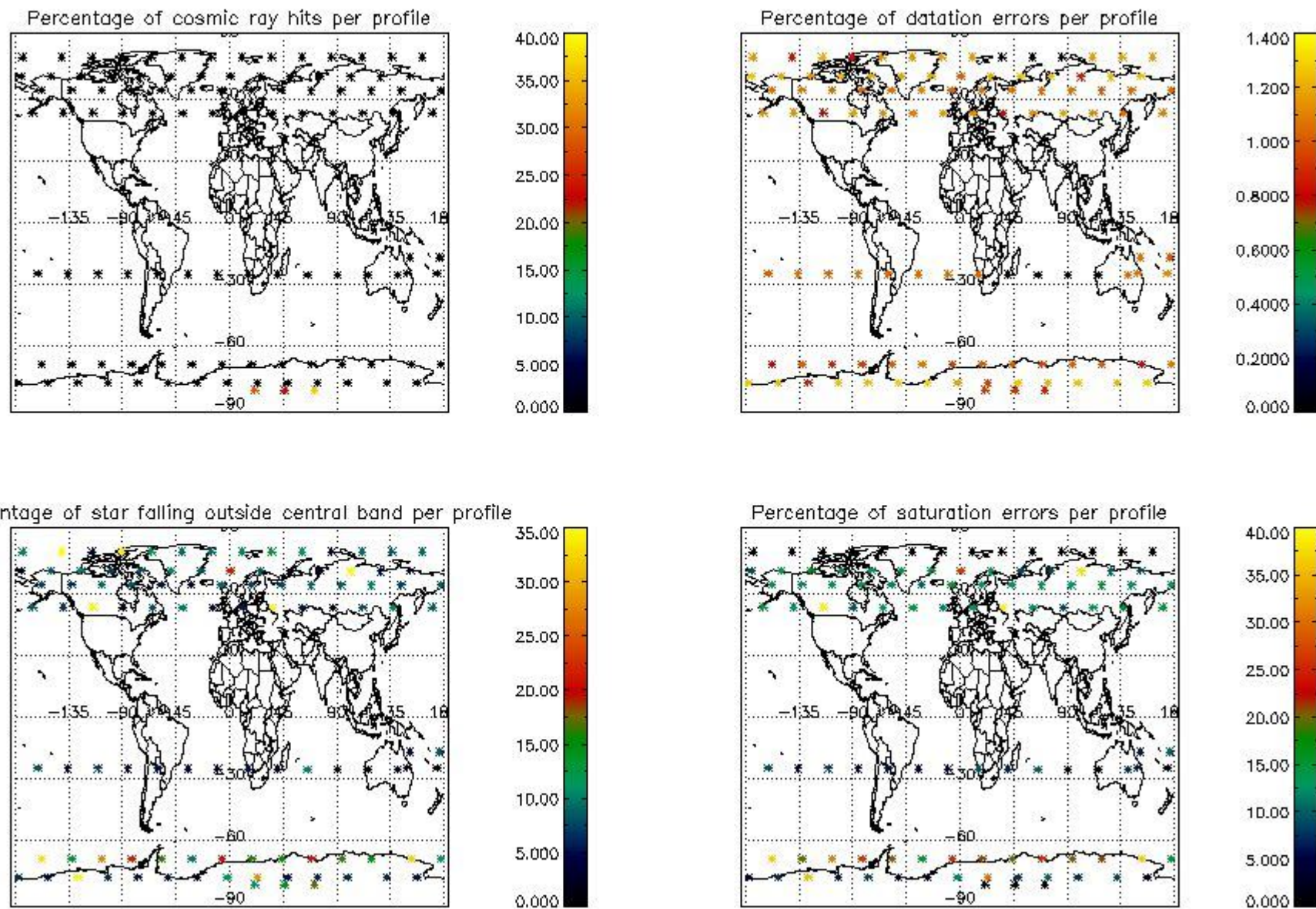


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

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

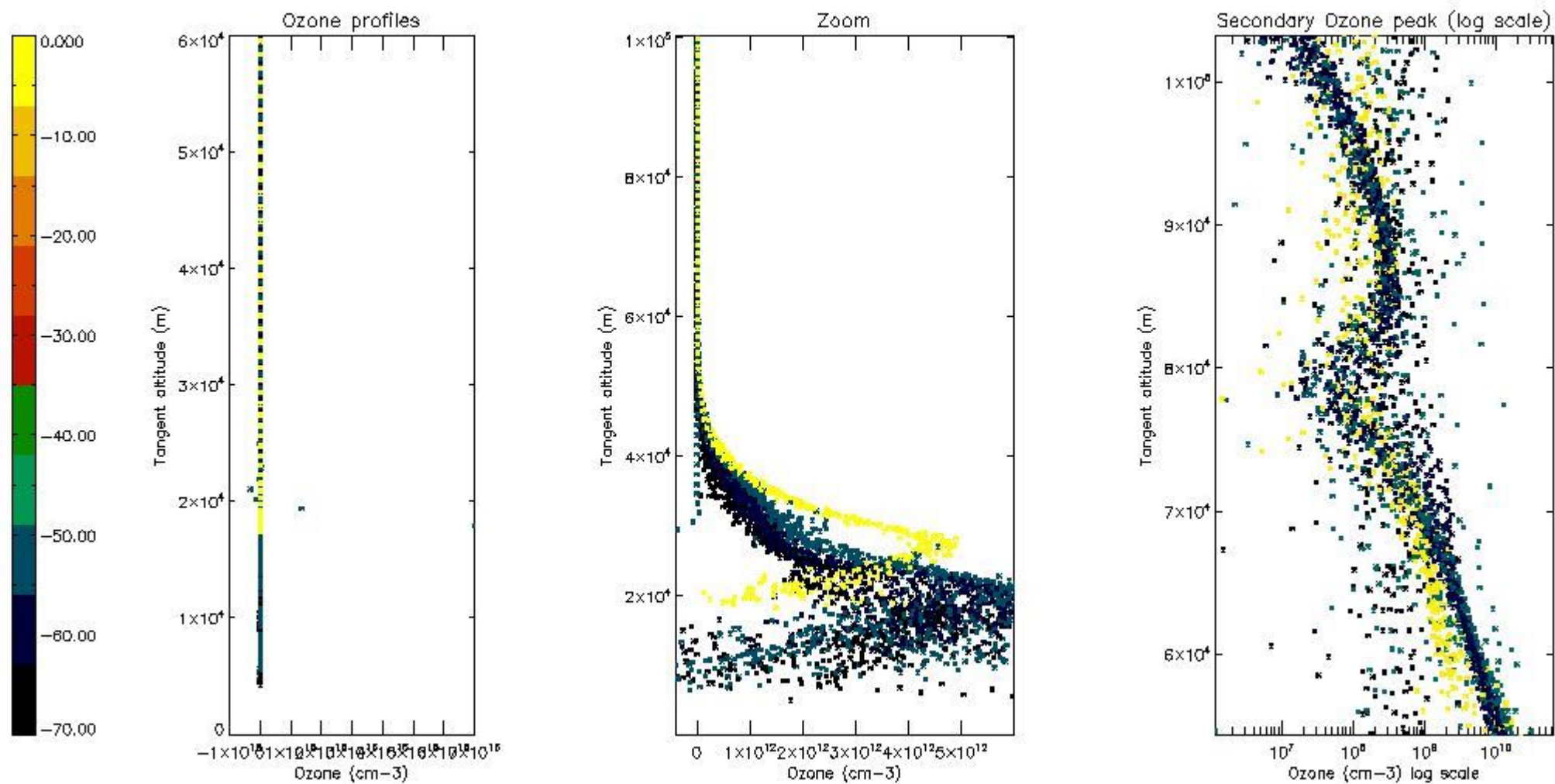
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	19

STD < 10	14
STD < 5	9

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

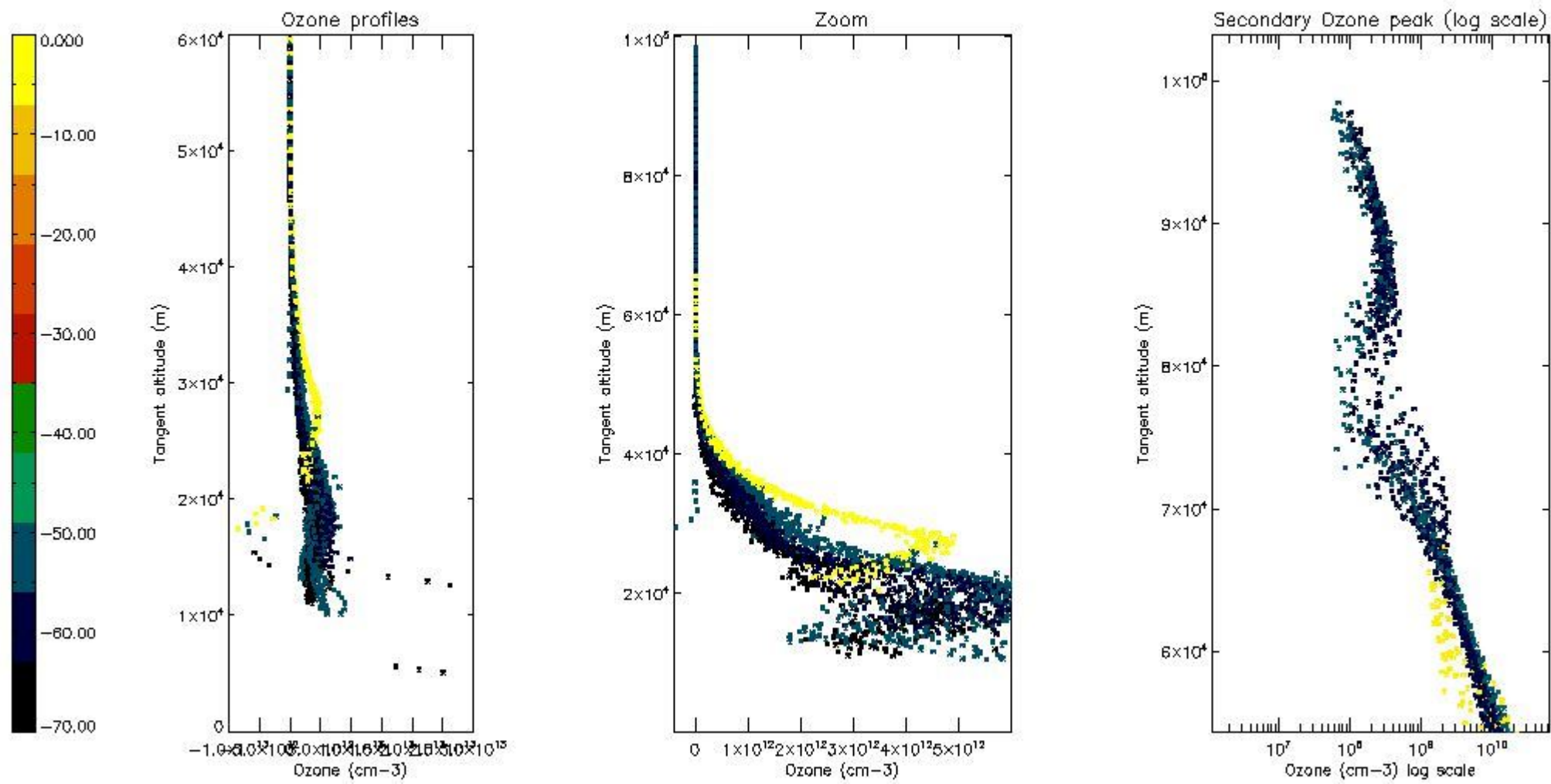
The colorbar represents the latitude.



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

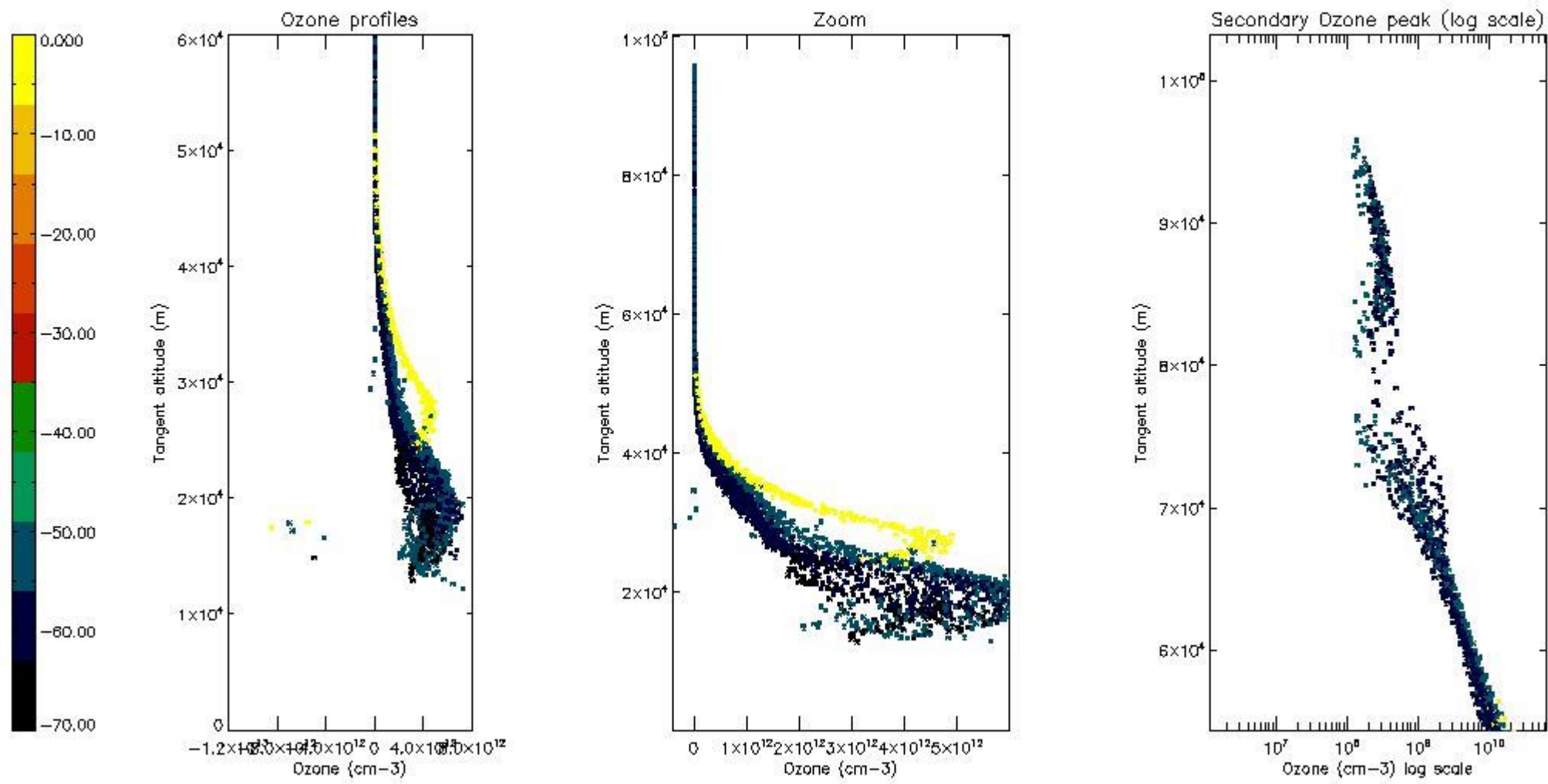
The colorbar represents the latitude.





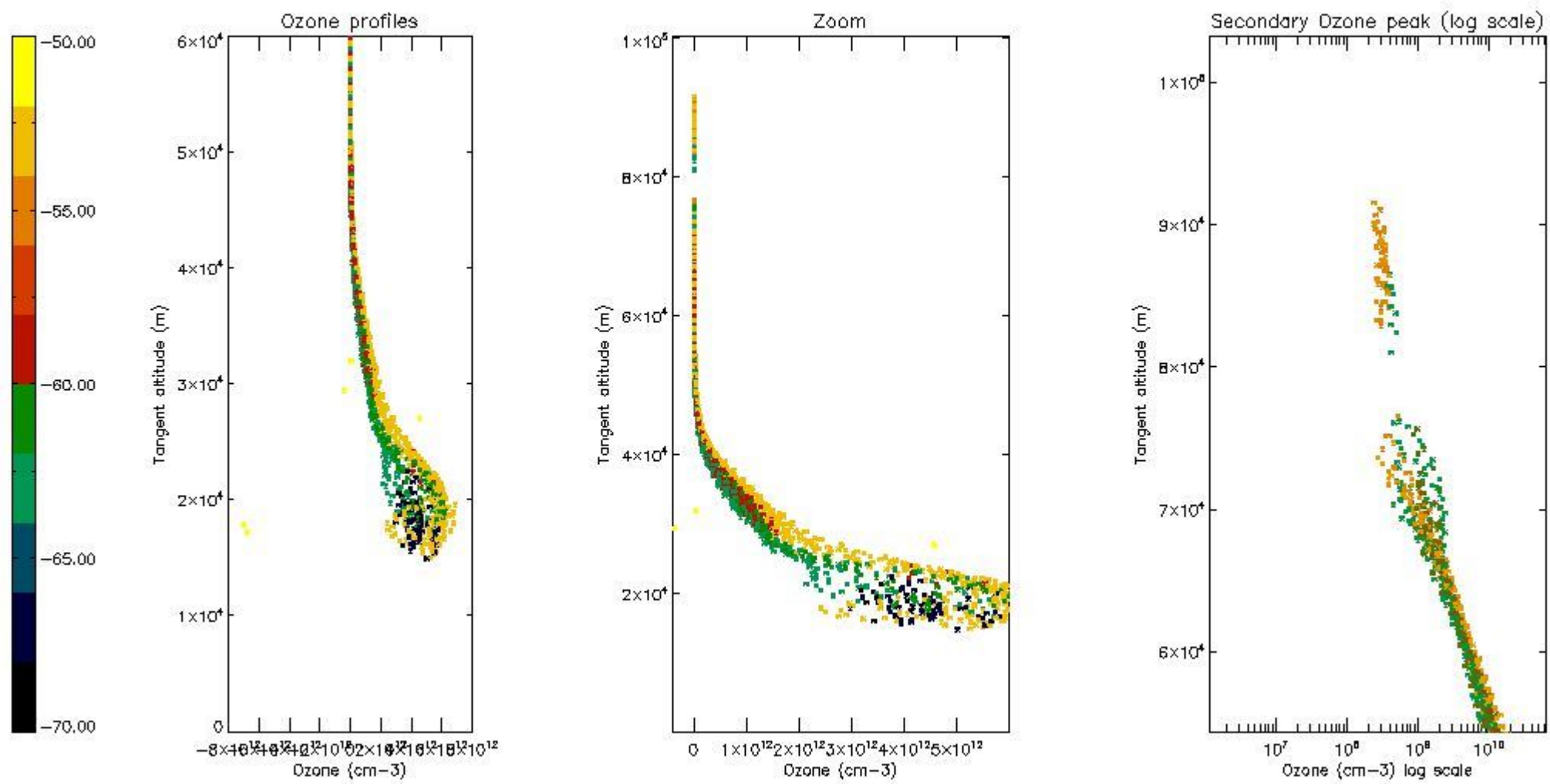
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



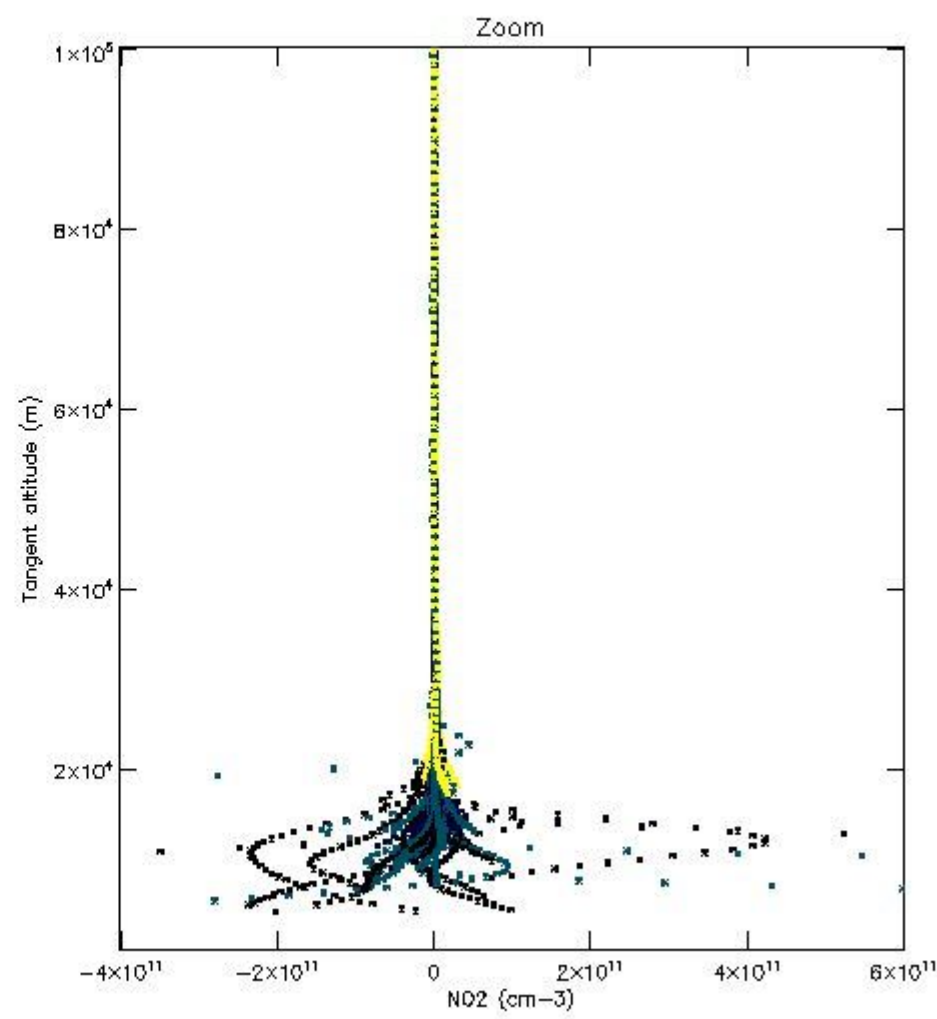
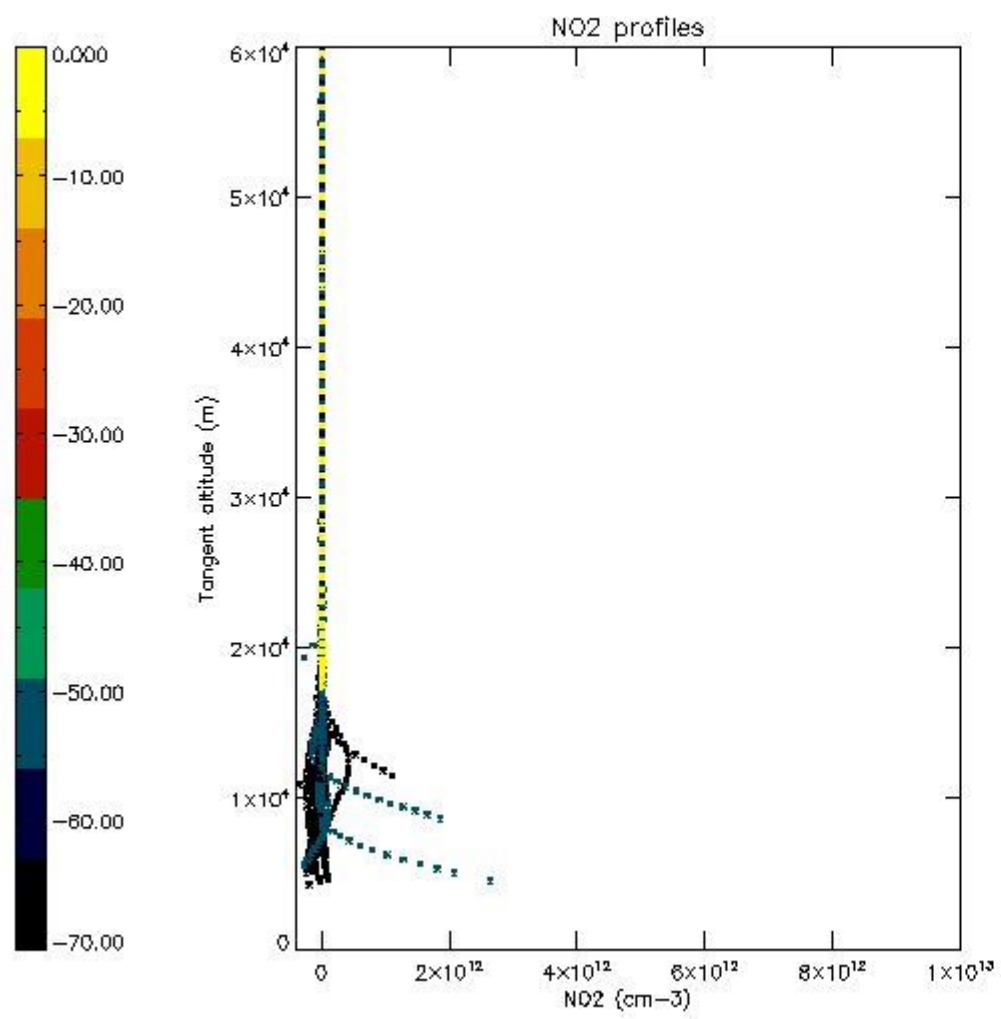
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



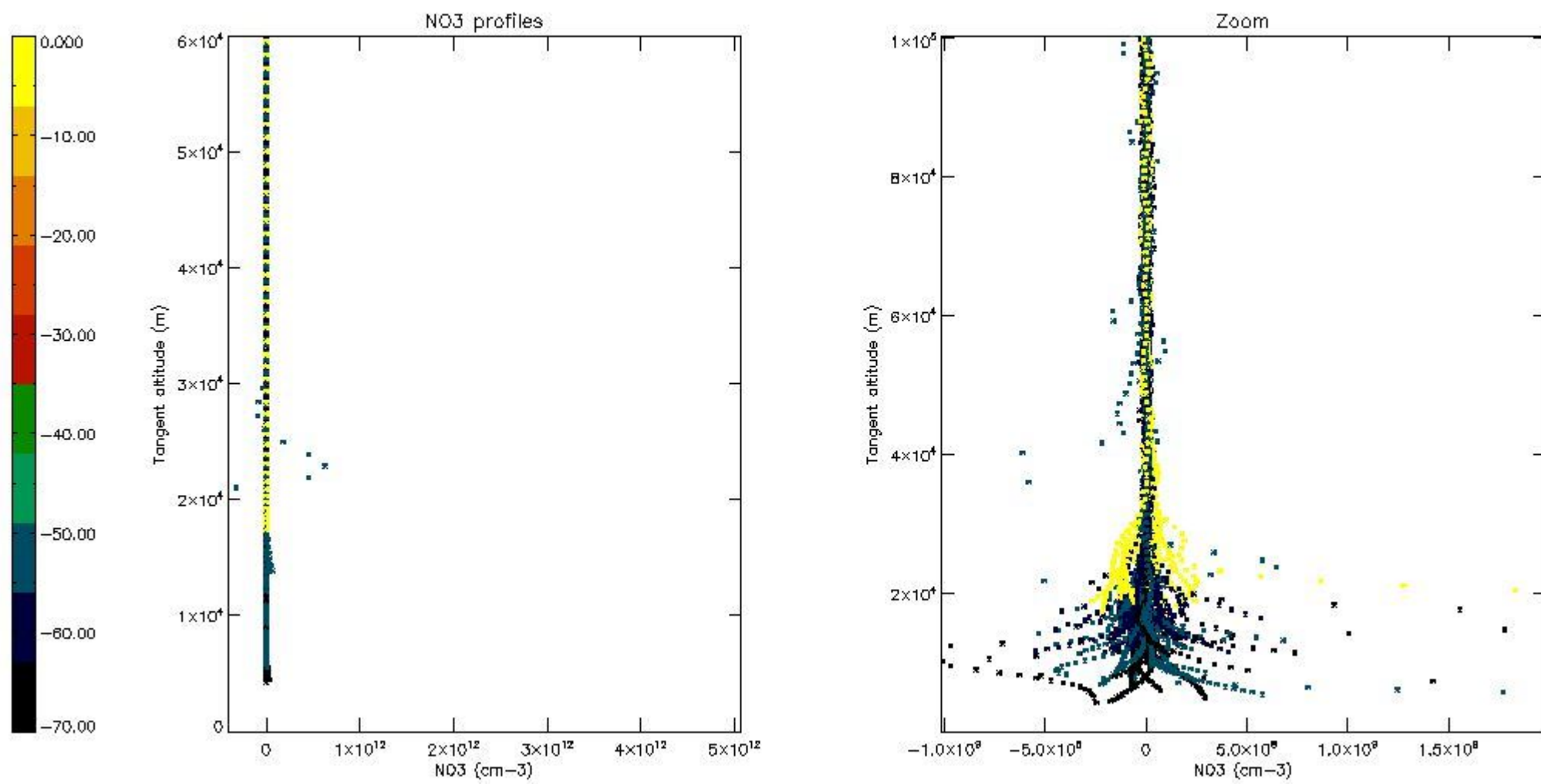
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



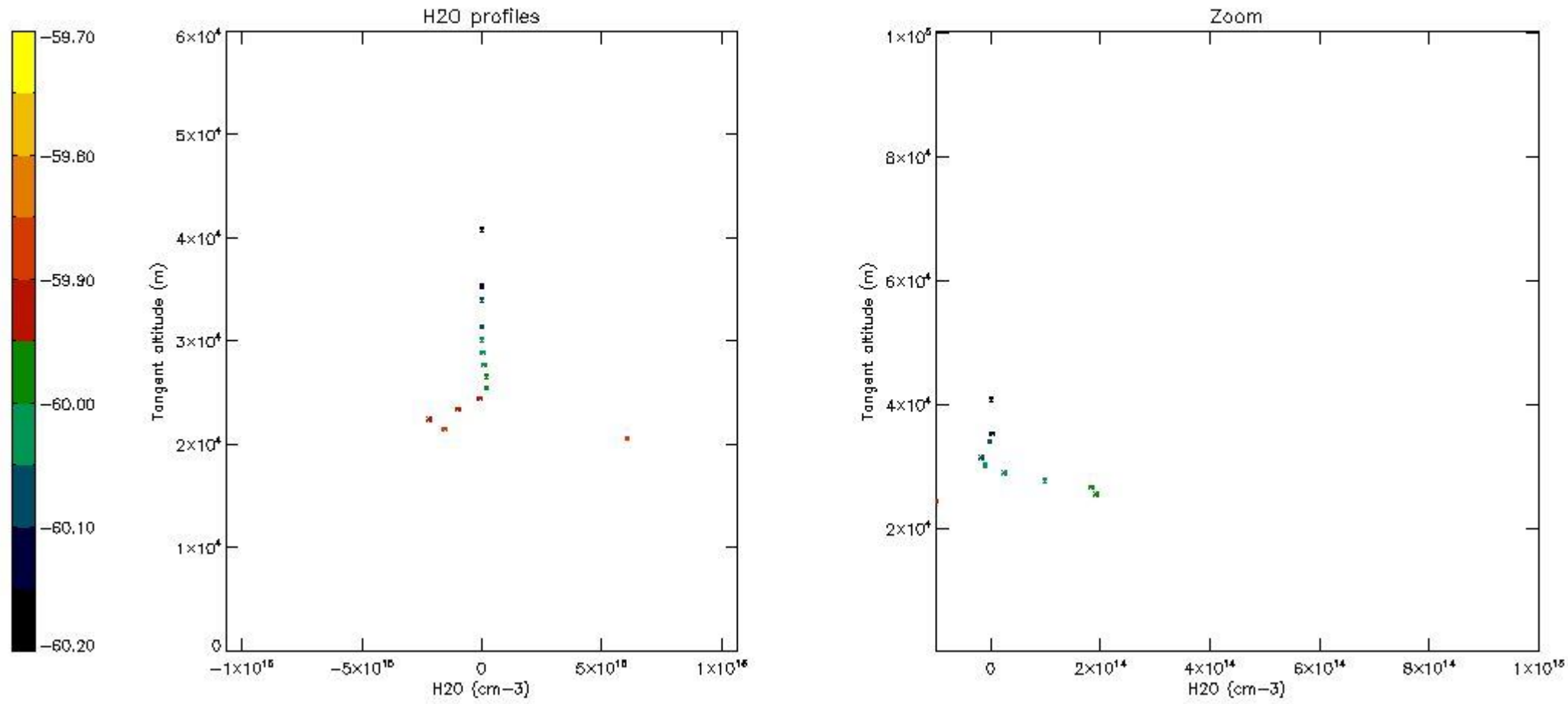
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)*

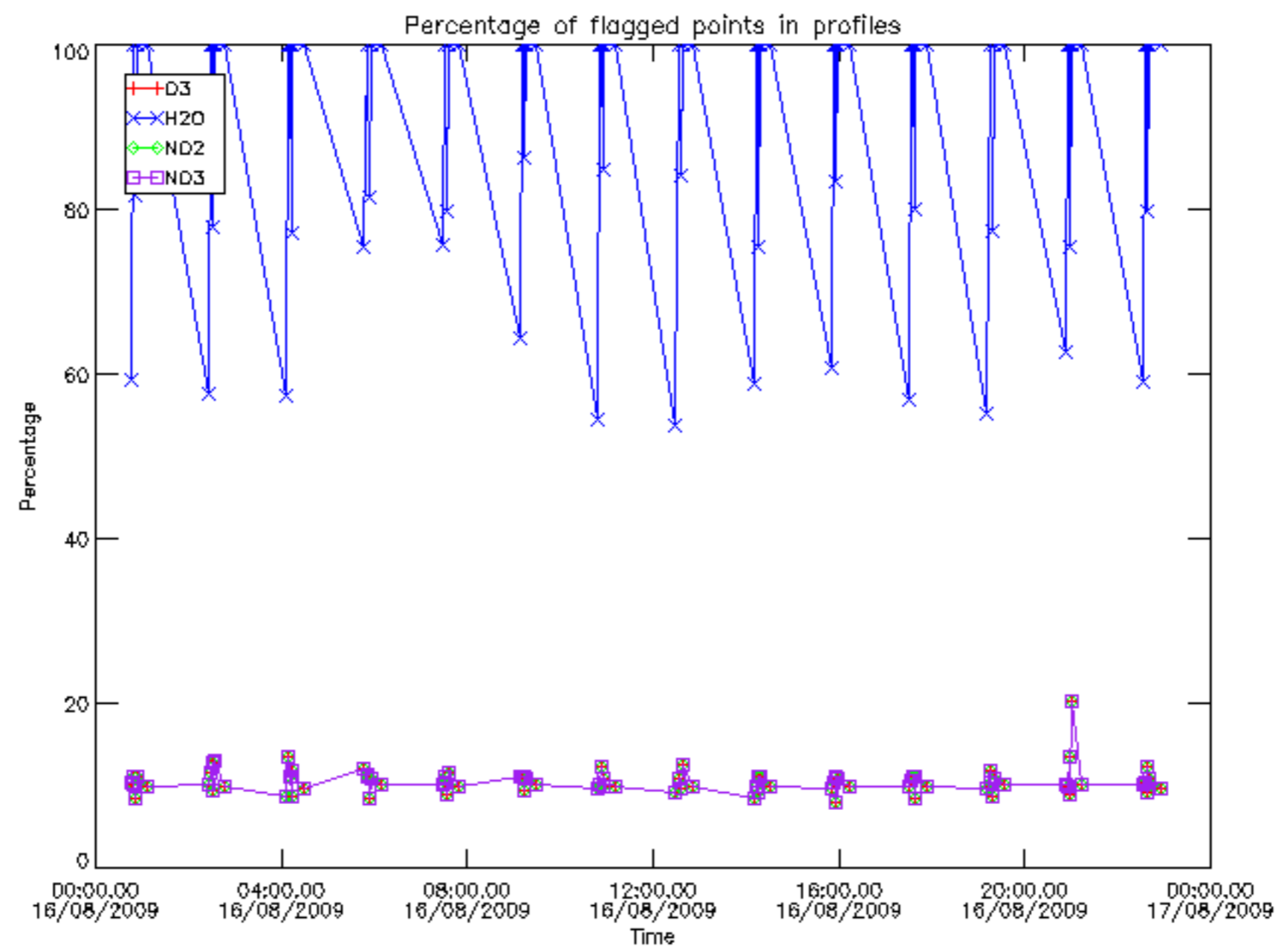
The colorbar represents the latitude.



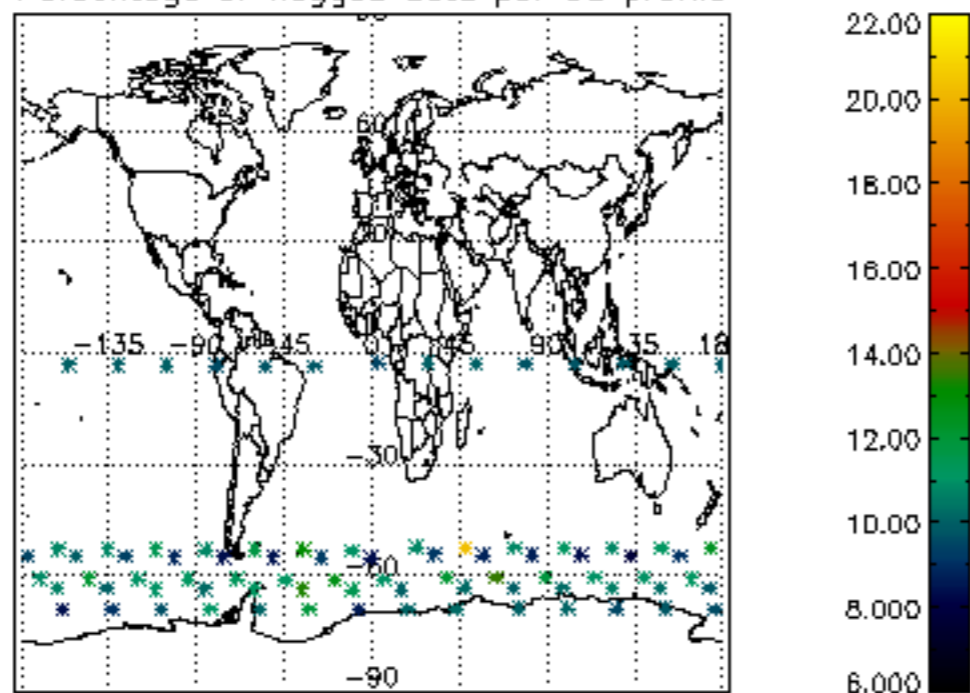
## 6. Auxiliary Data Files used for the production reported in section 2

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.

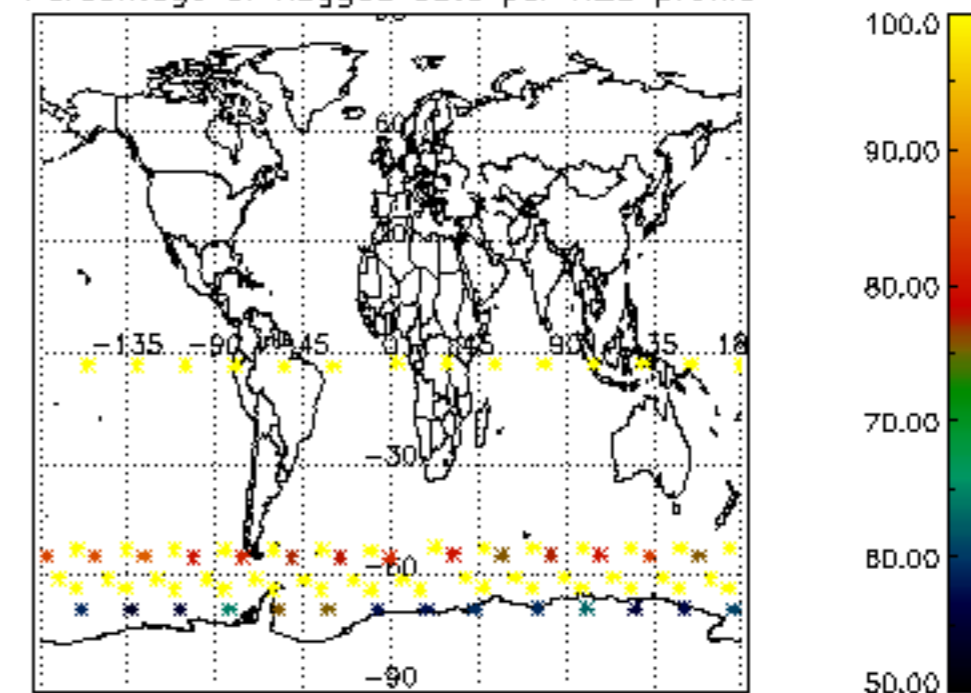
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	16-AUG-2009 00:20:11
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-AUG-2009 00:20:11
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-AUG-2009 00:20:11



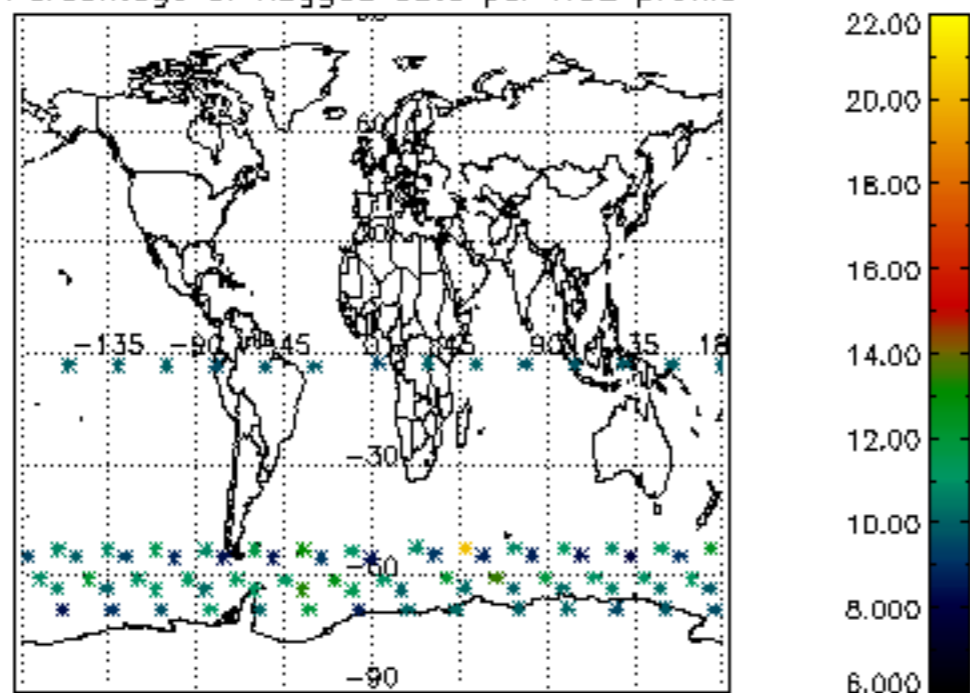
Percentage of flagged data per D3 profile



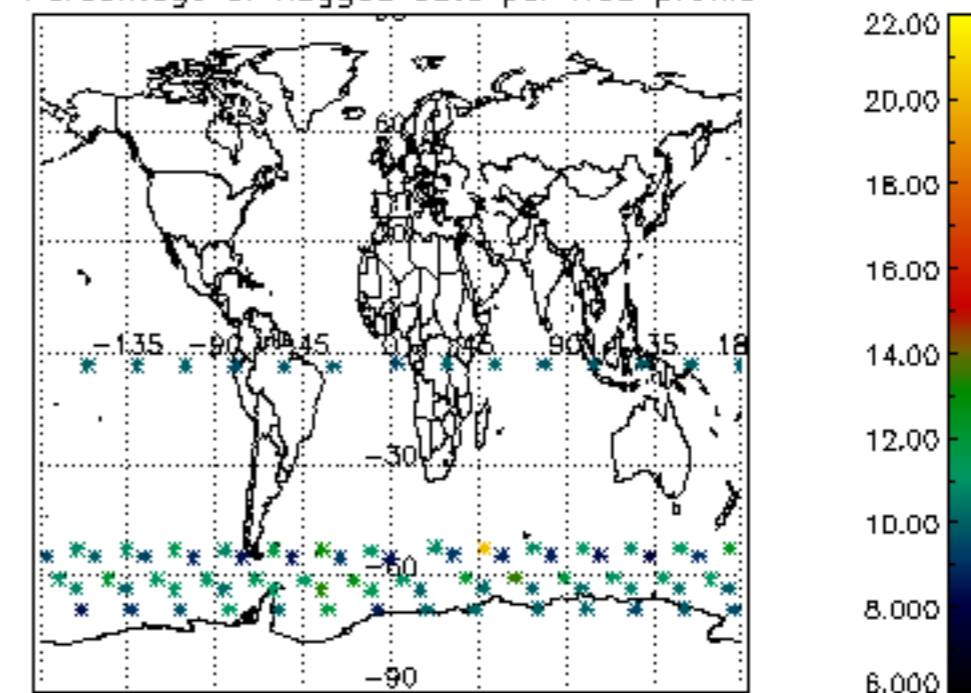
Percentage of flagged data per H2O profile



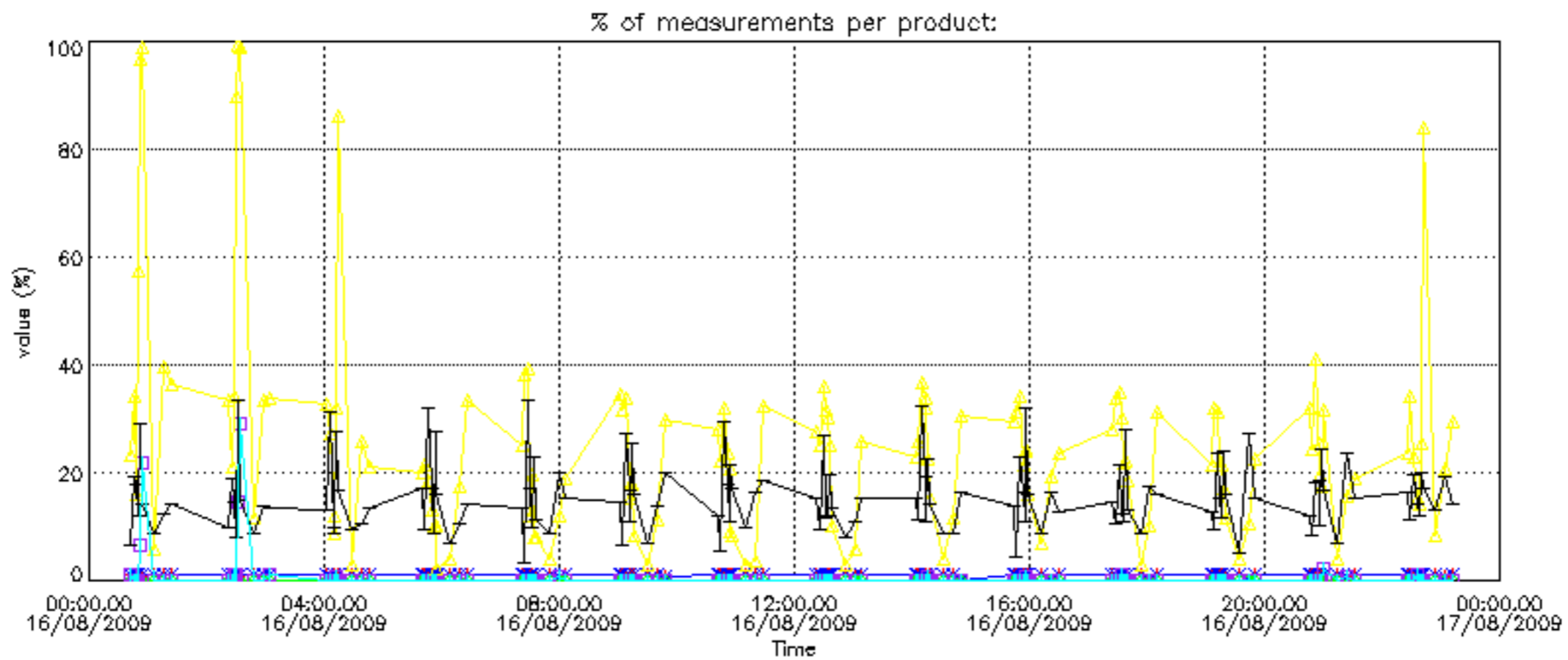
Percentage of flagged data per NO2 profile

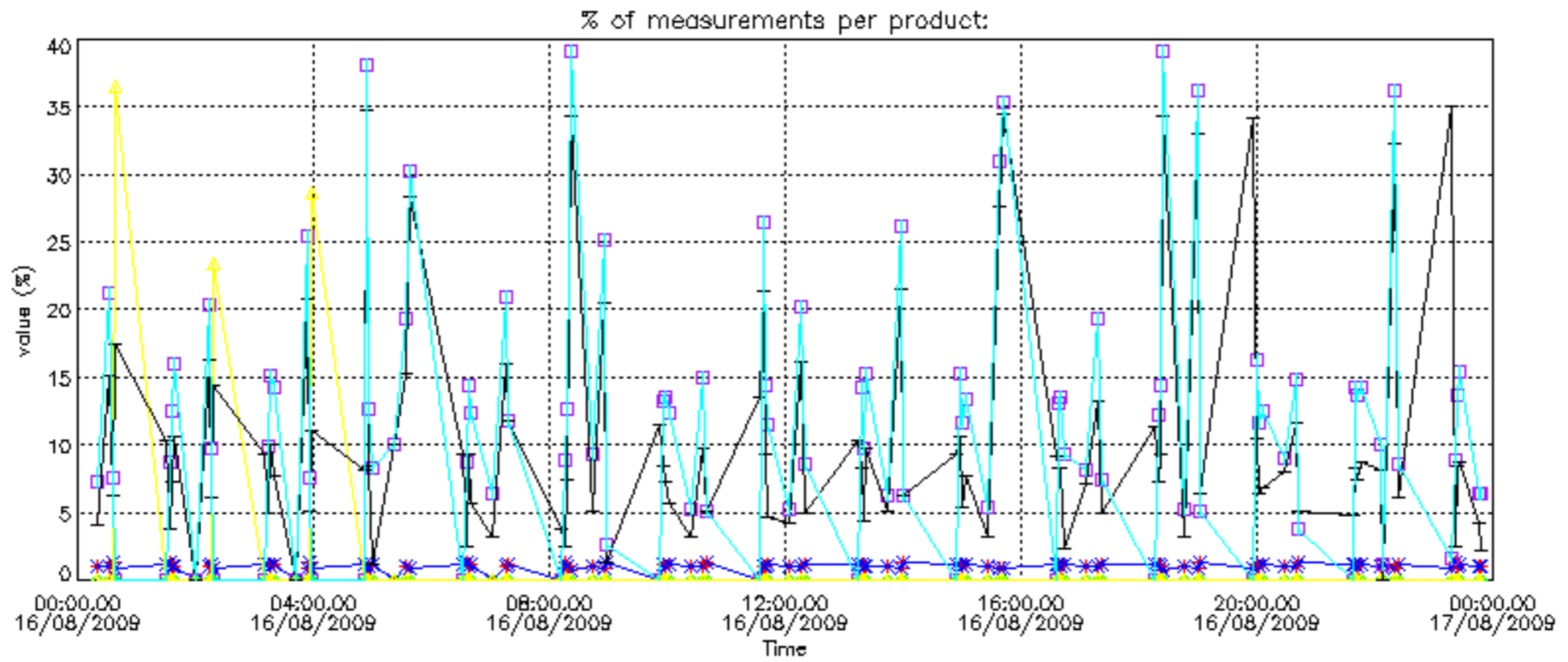


Percentage of flagged data per NO3 profile

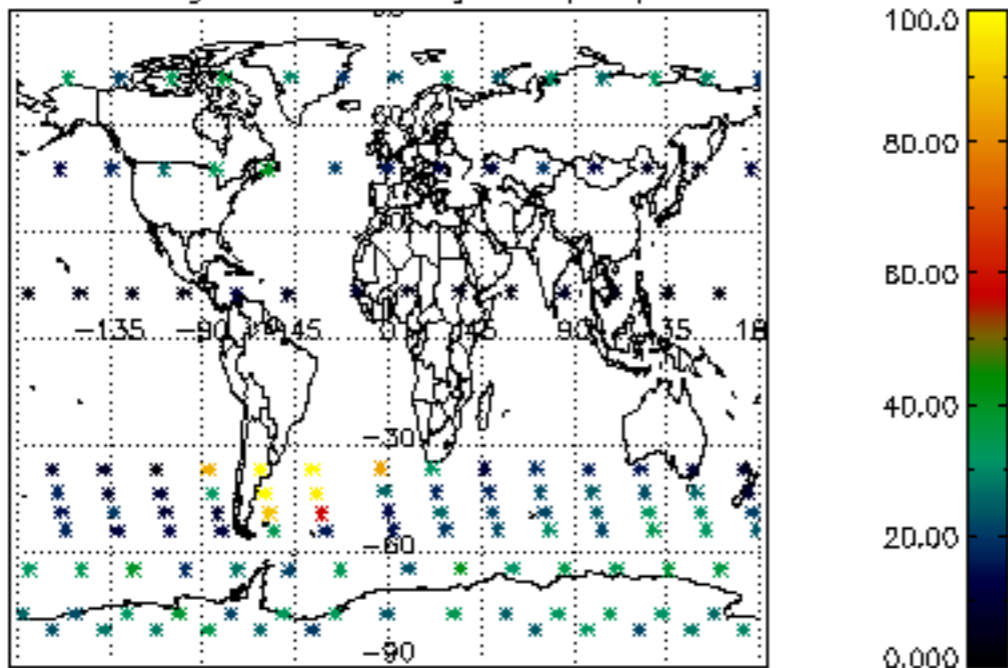




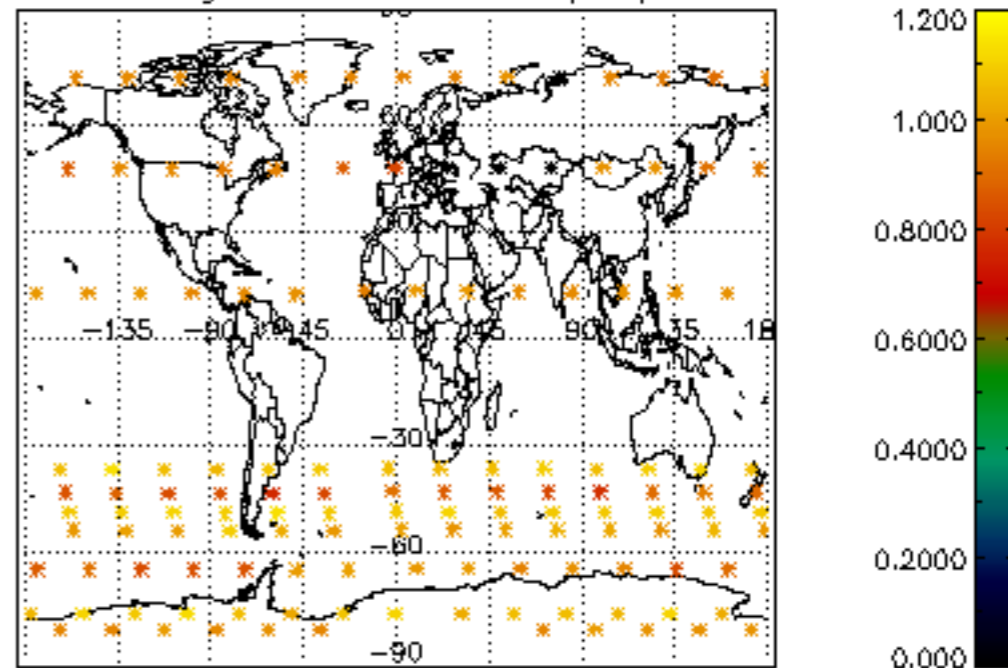




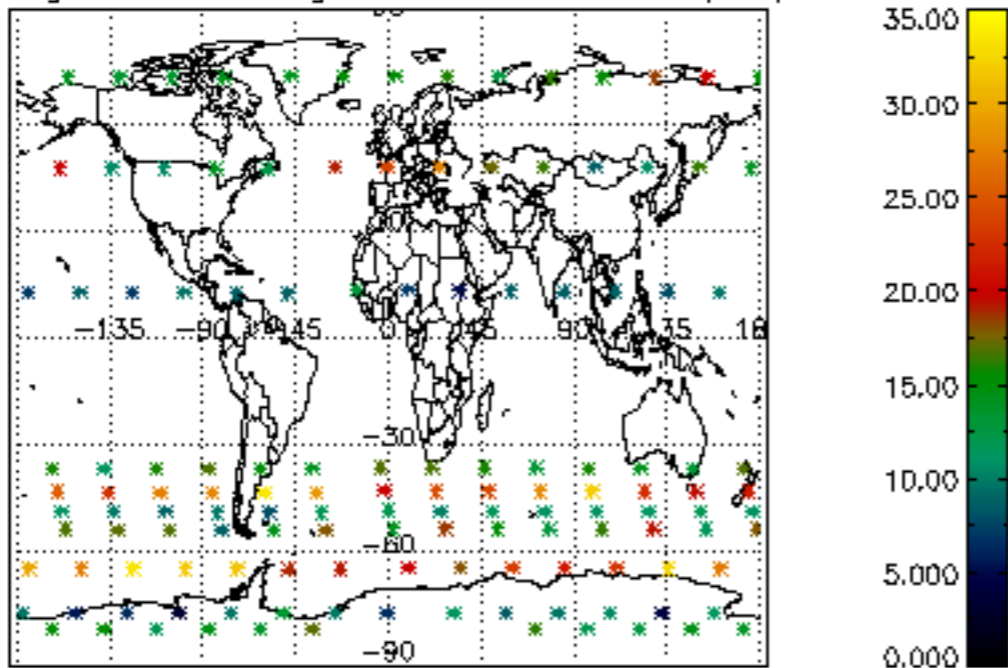
Percentage of cosmic ray hits per profile



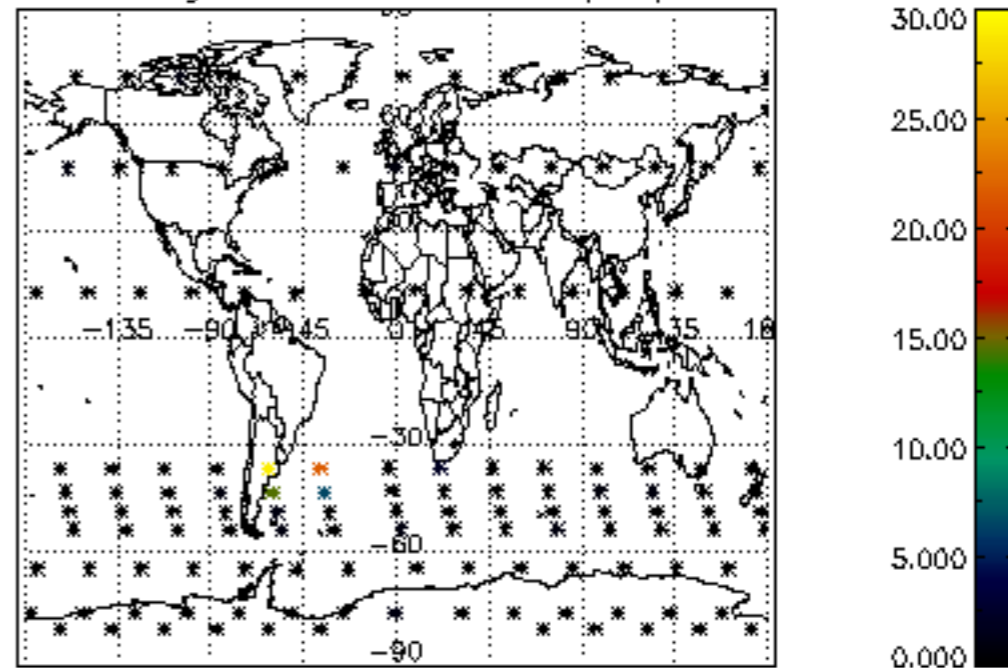
Percentage of datation errors per profile



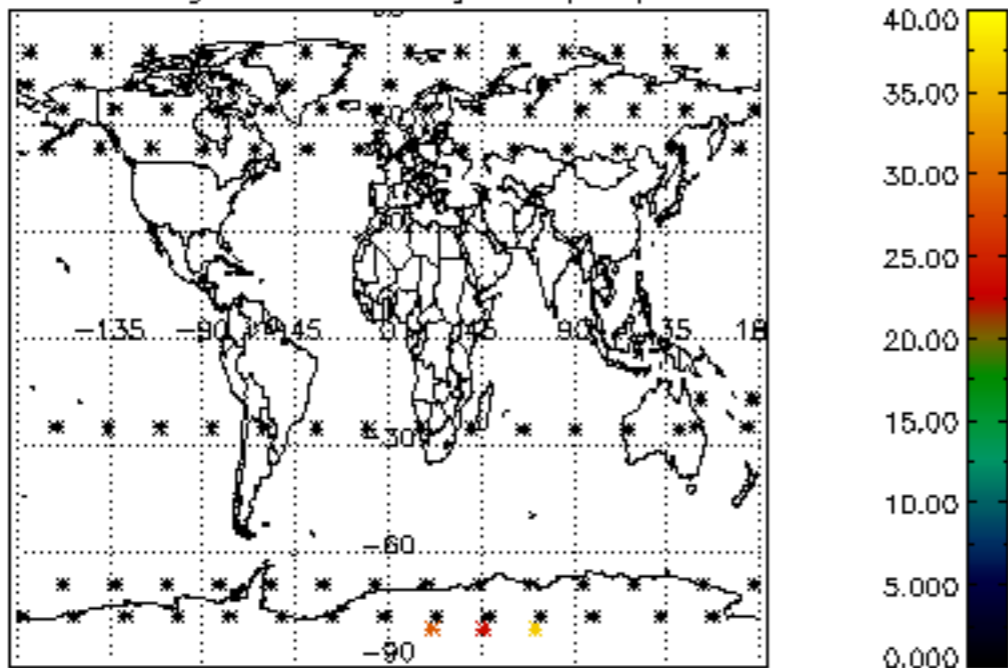
Percentage of star falling outside central band per profile



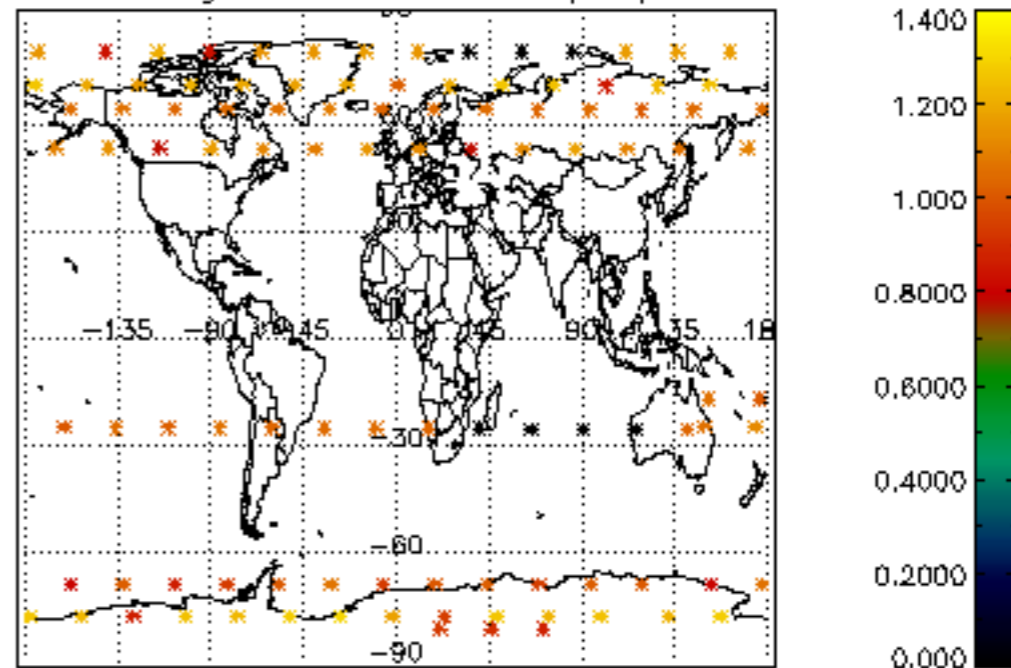
Percentage of saturation errors per profile



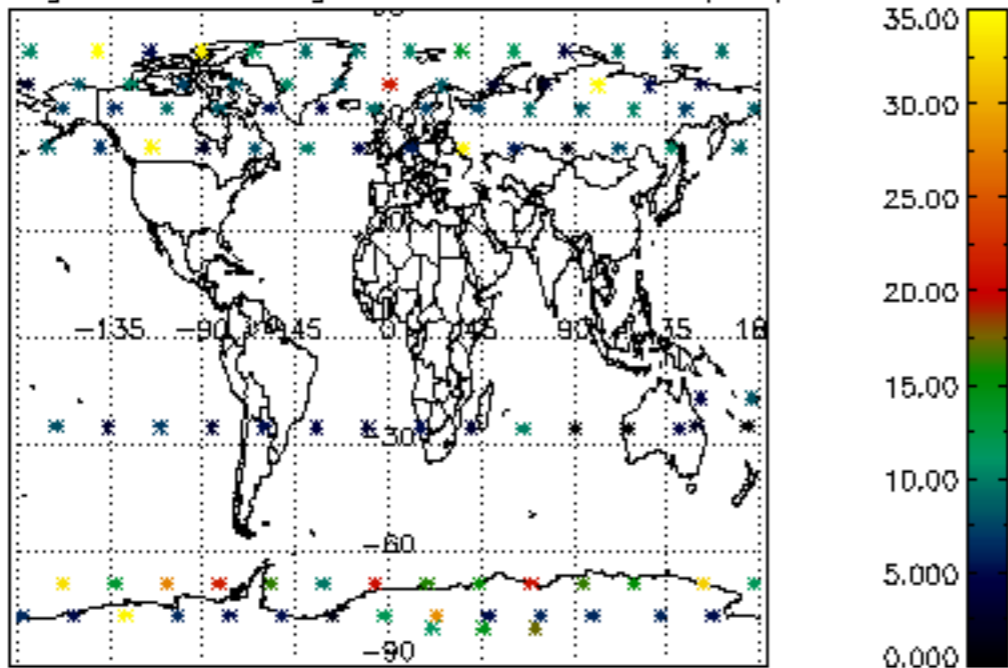
Percentage of cosmic ray hits per profile



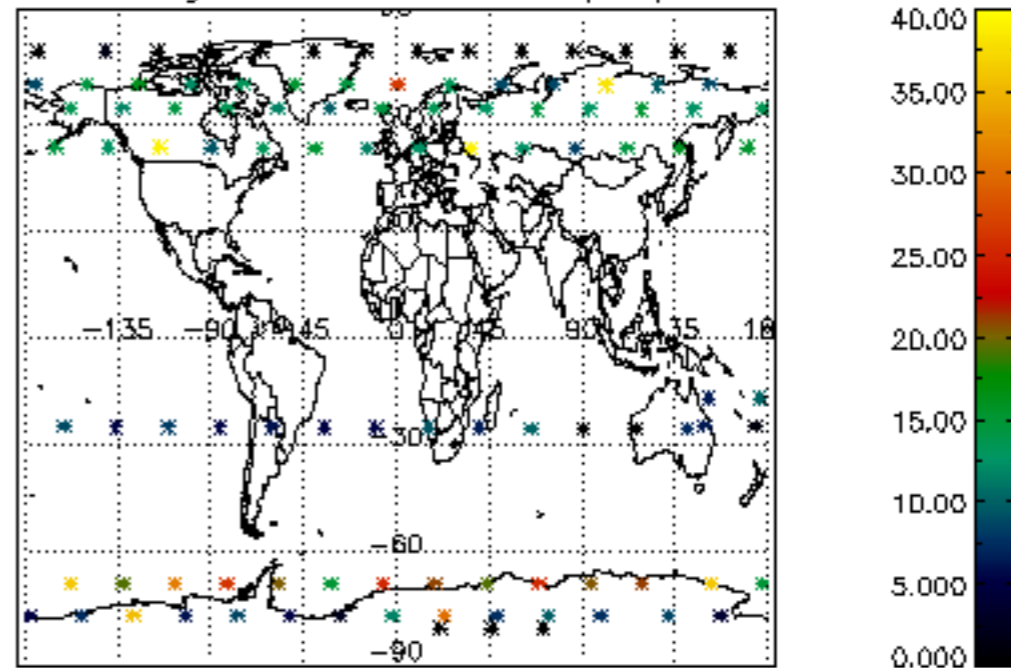
Percentage of datation errors per profile

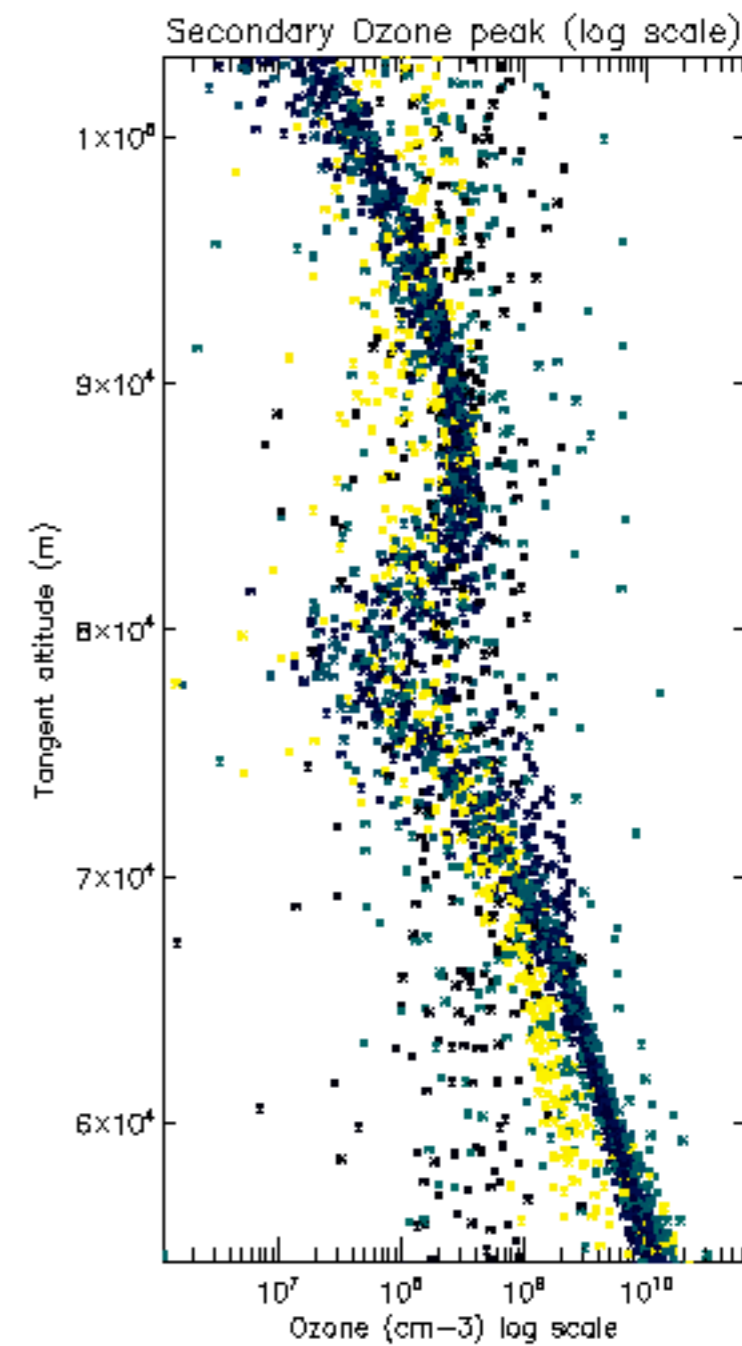
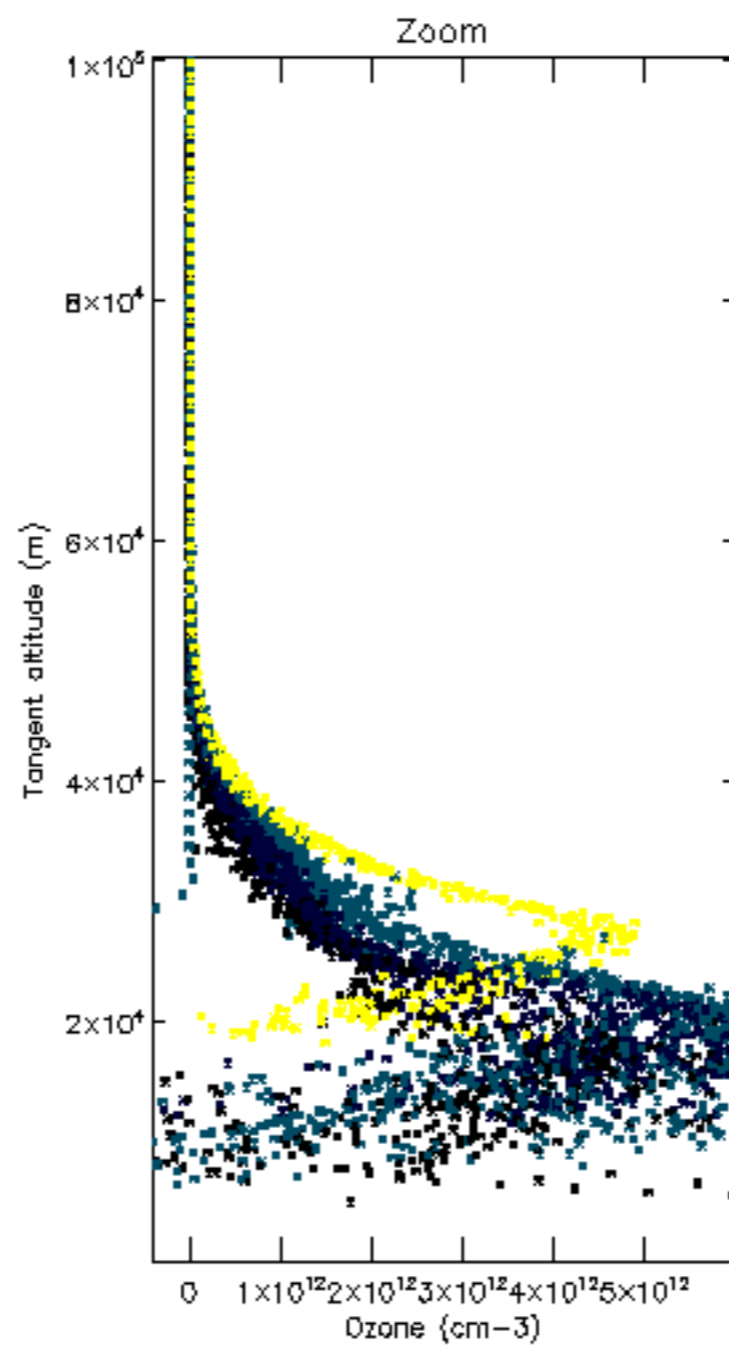
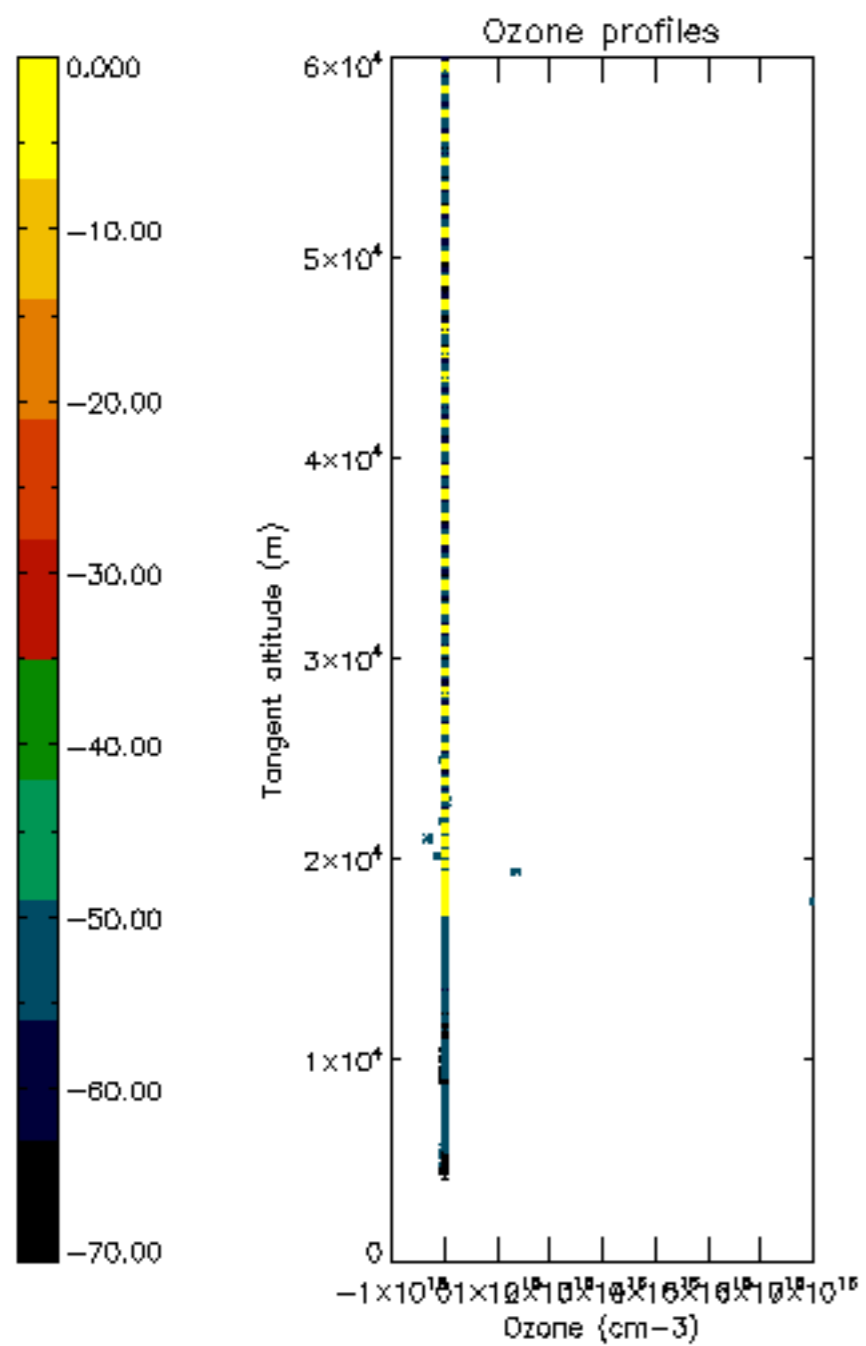


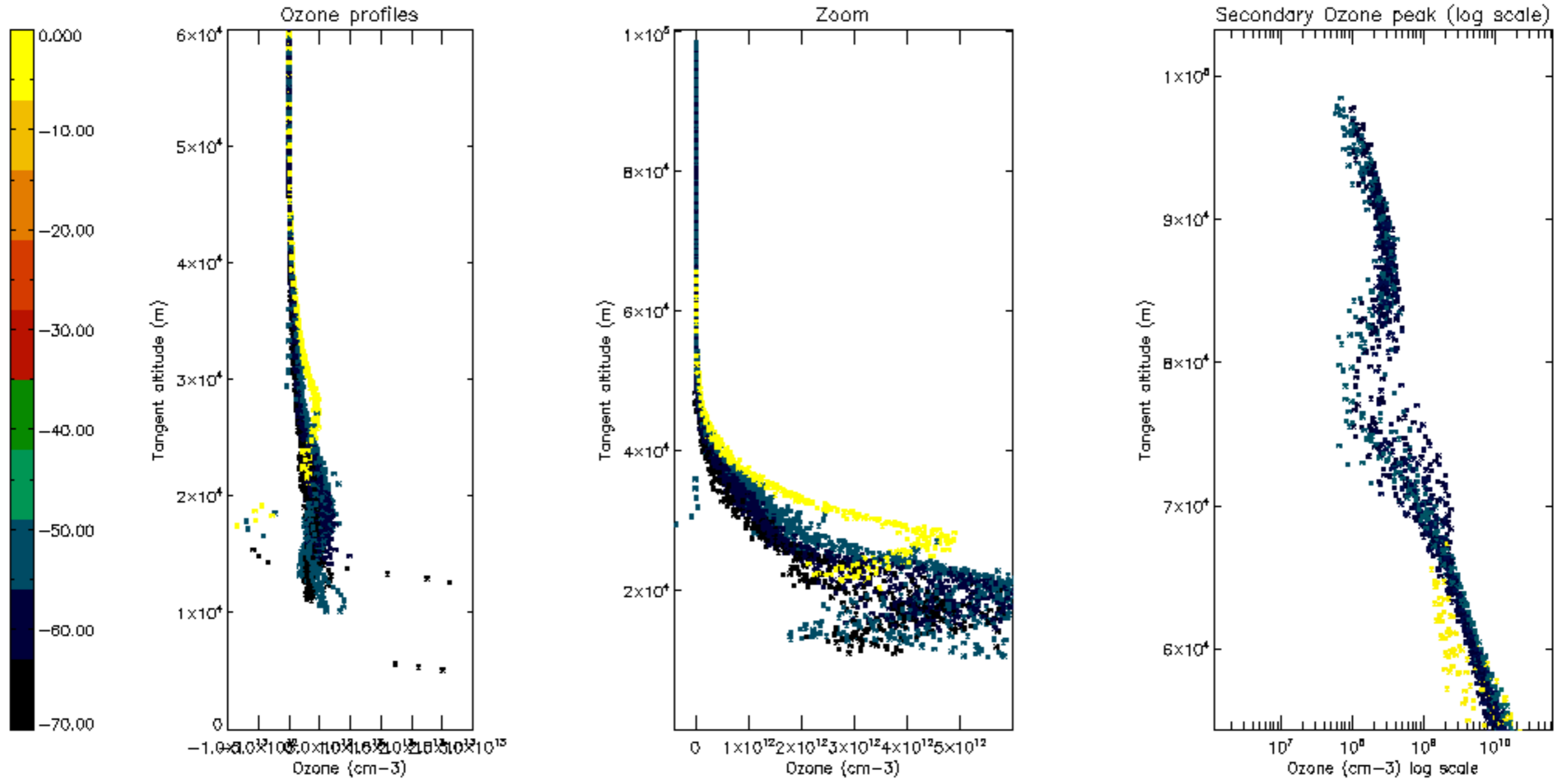
Percentage of star falling outside central band per profile

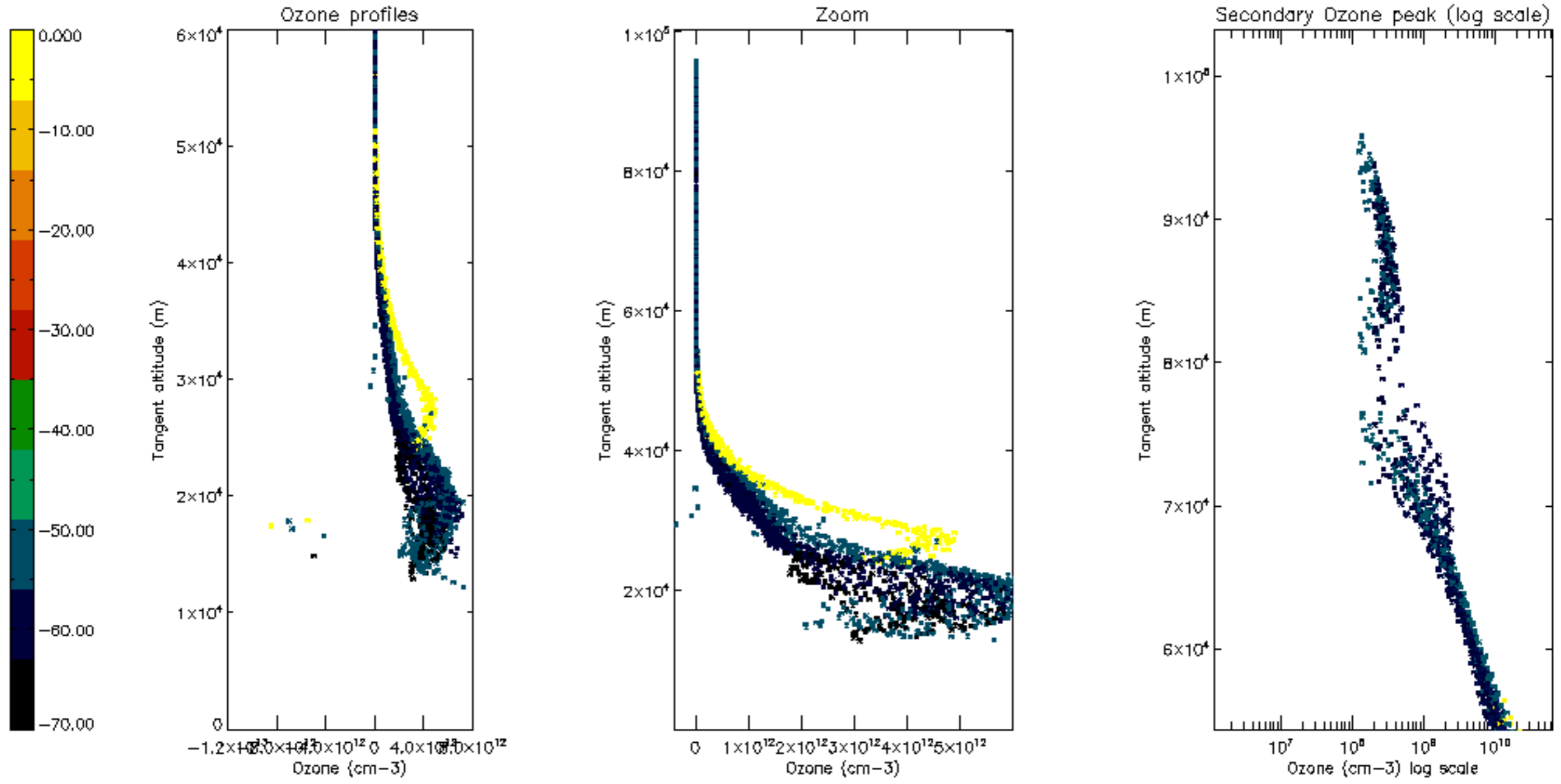


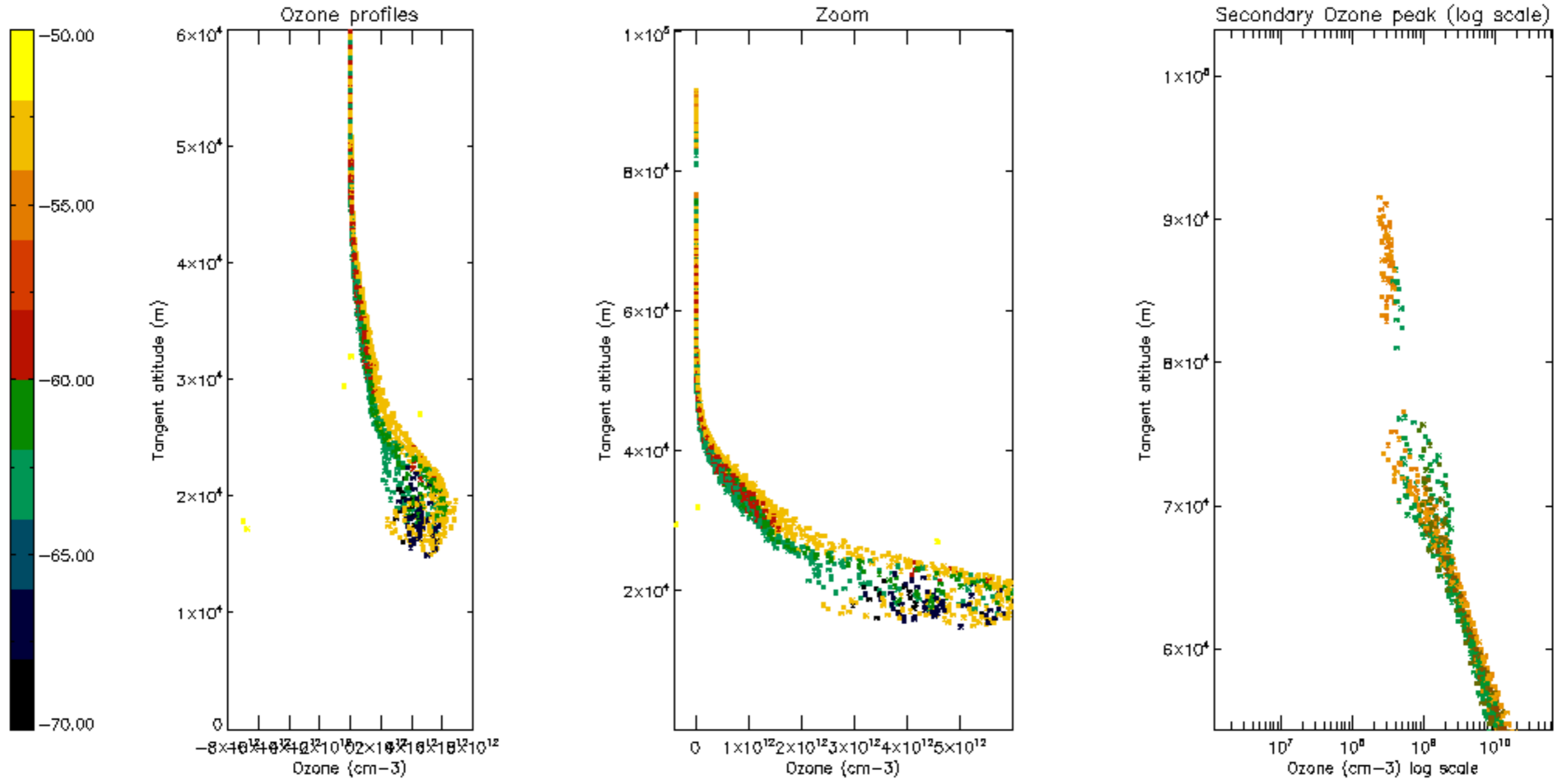
Percentage of saturation errors per profile



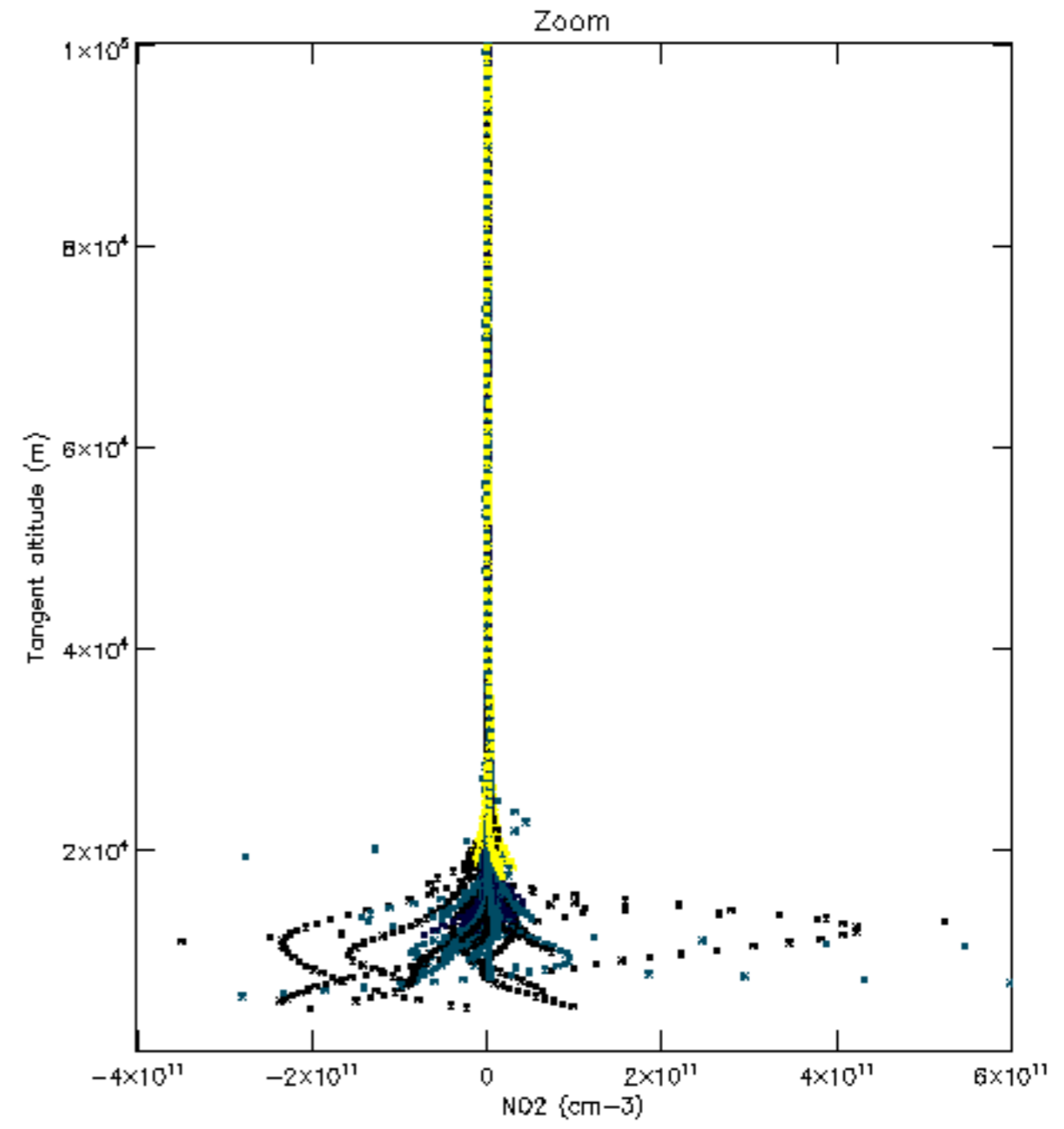
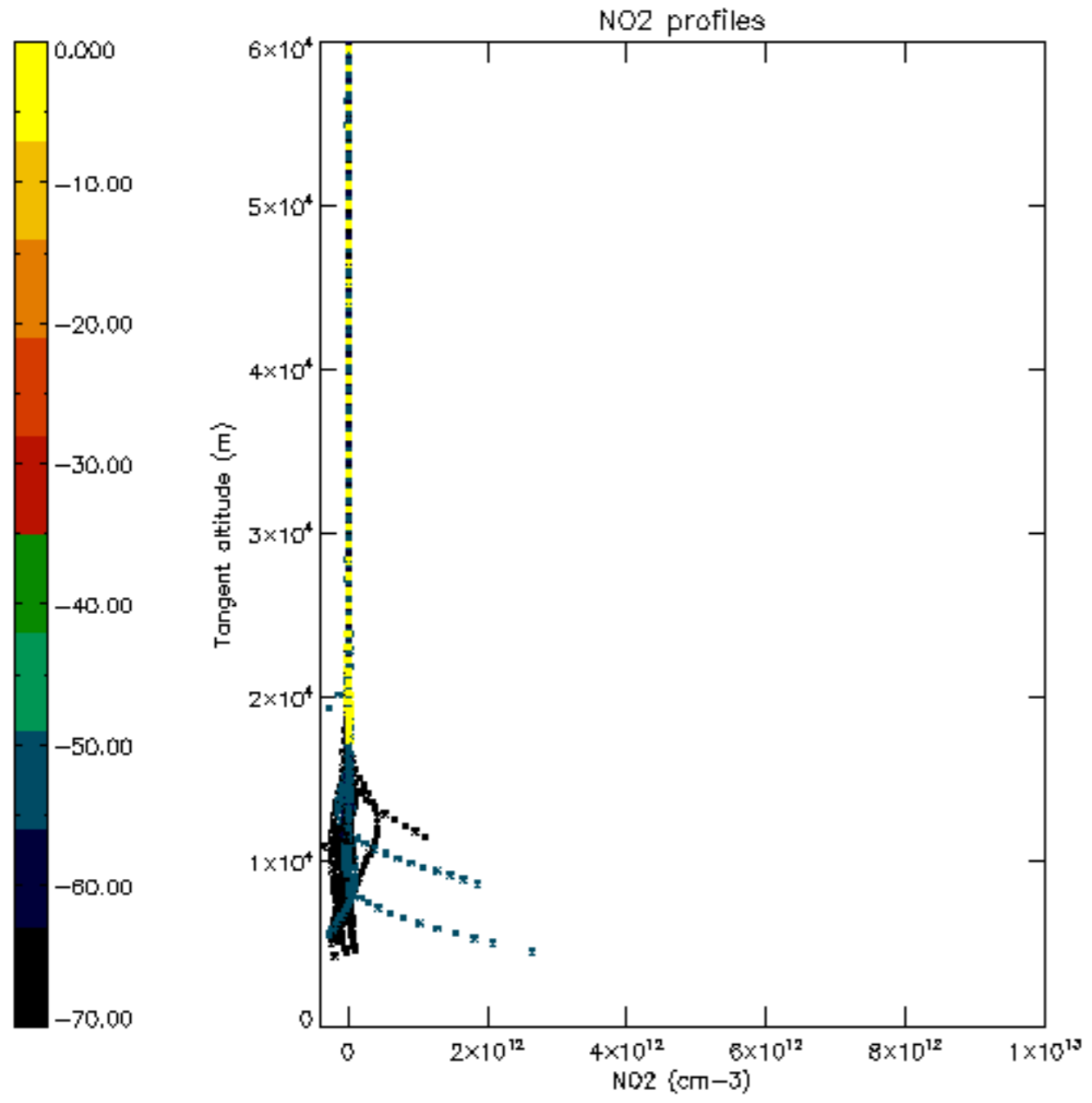


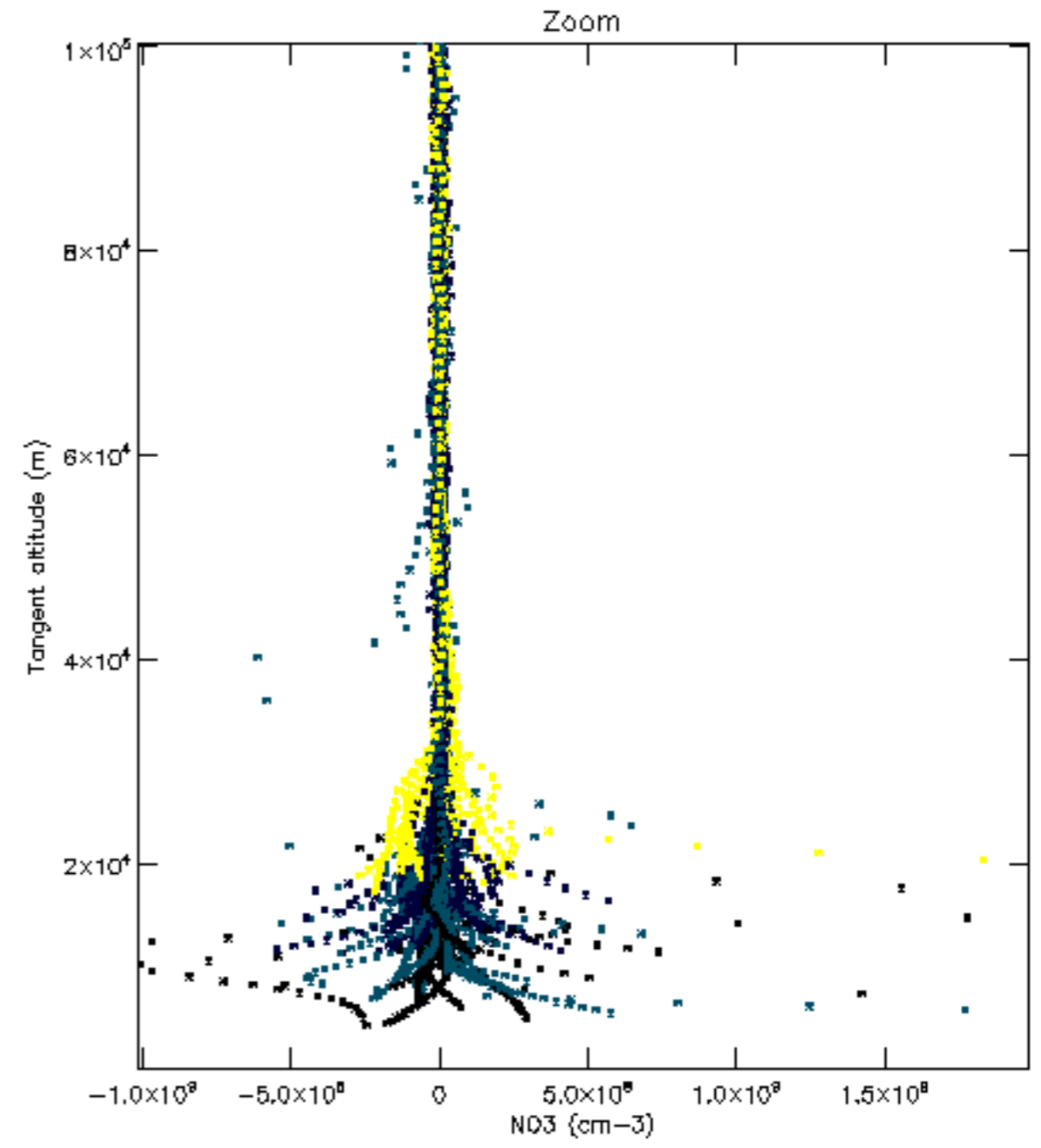
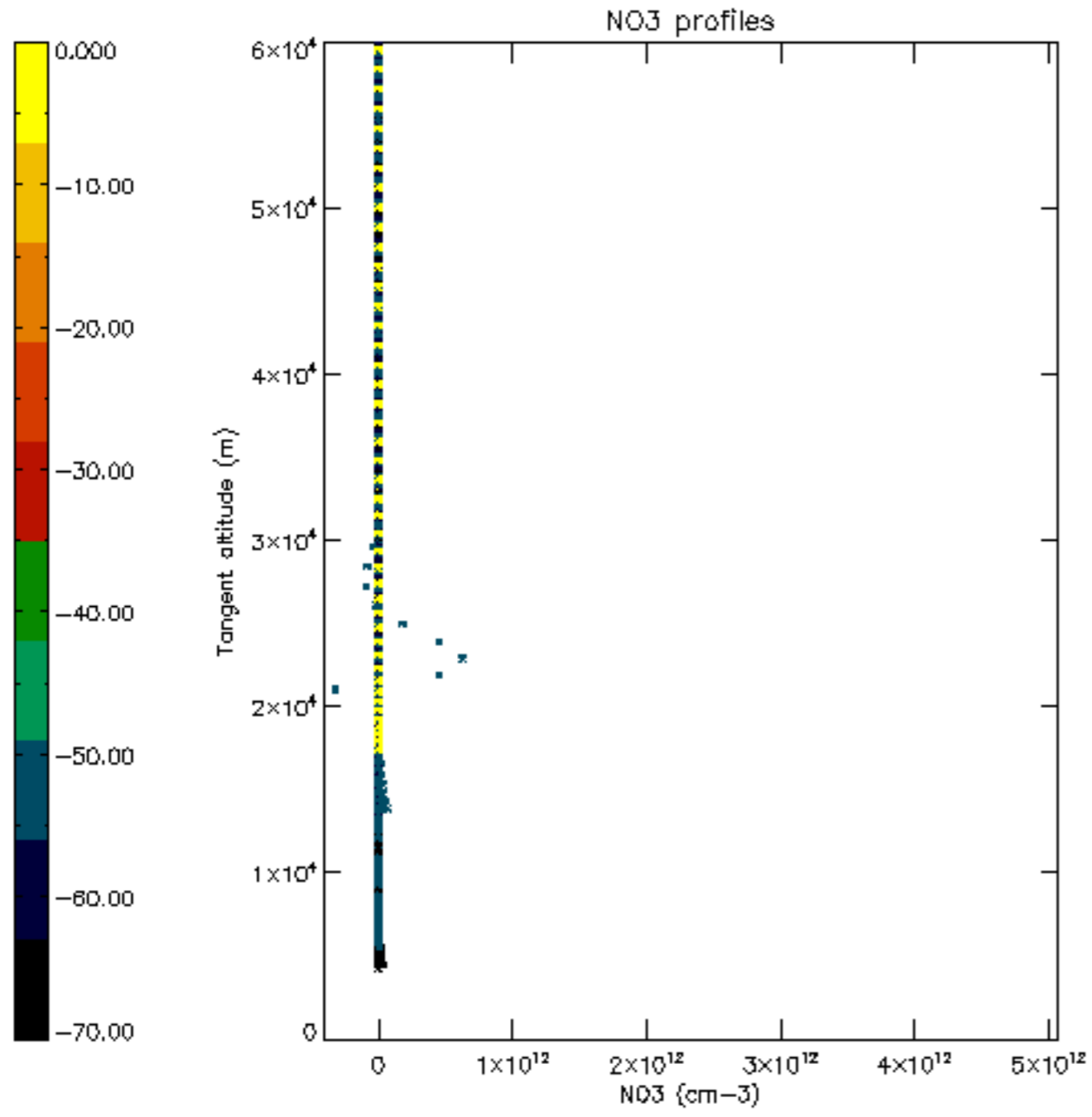


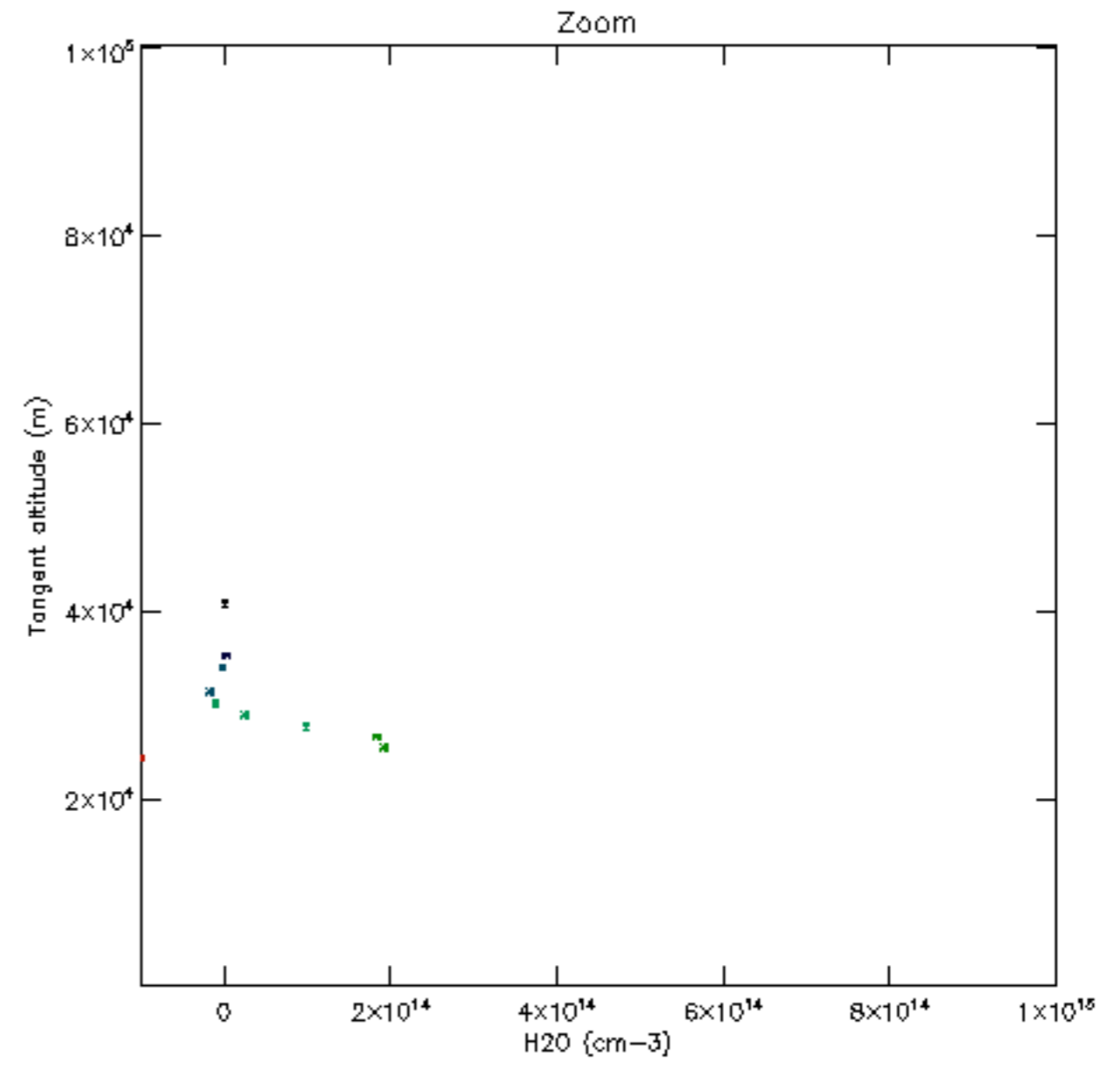
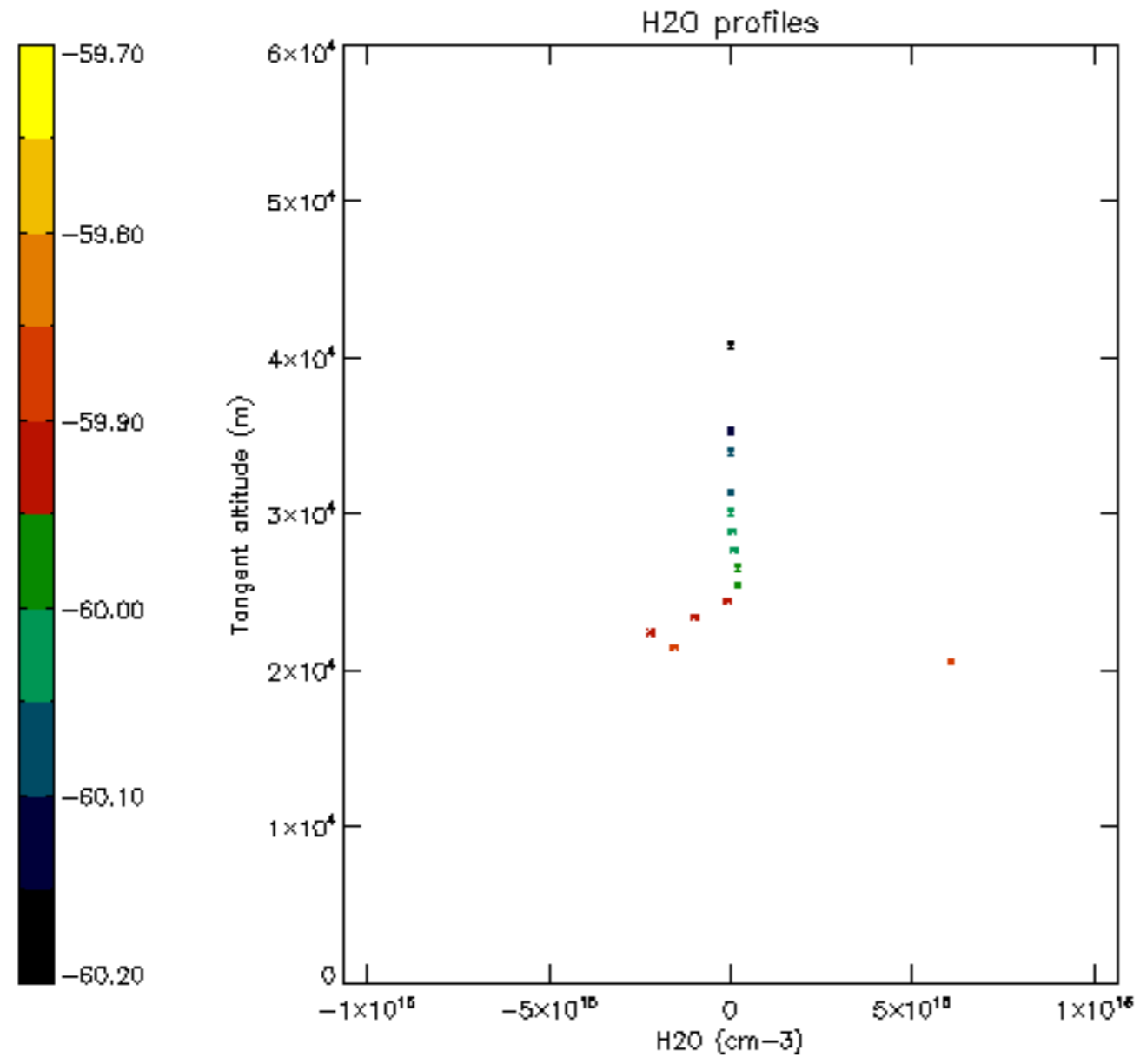


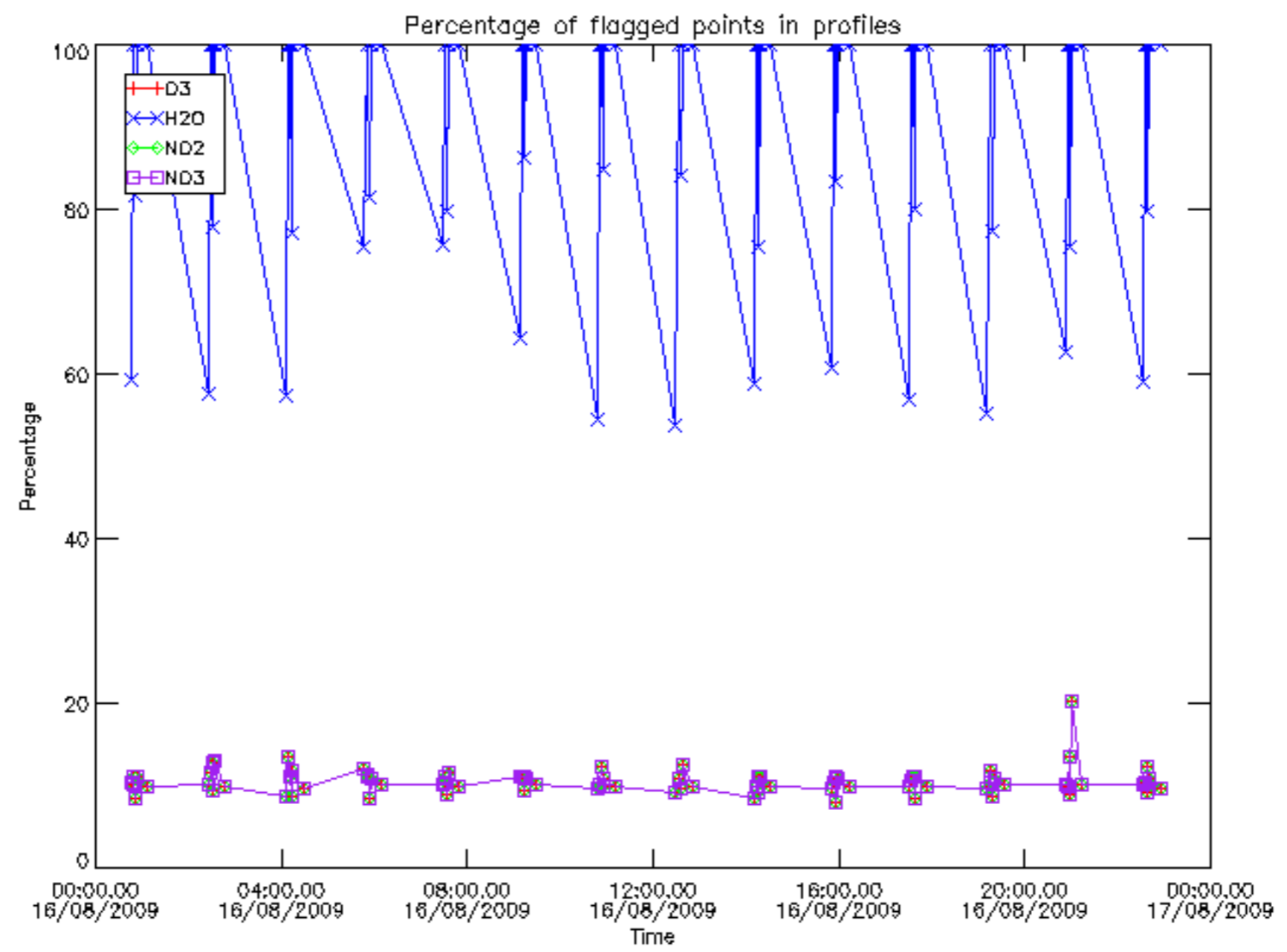




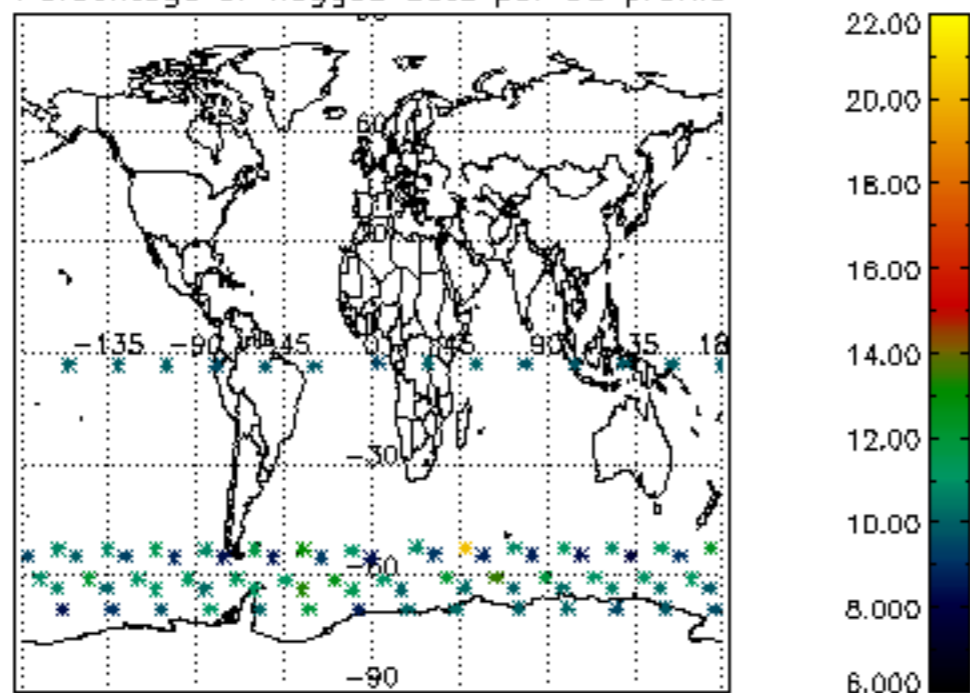




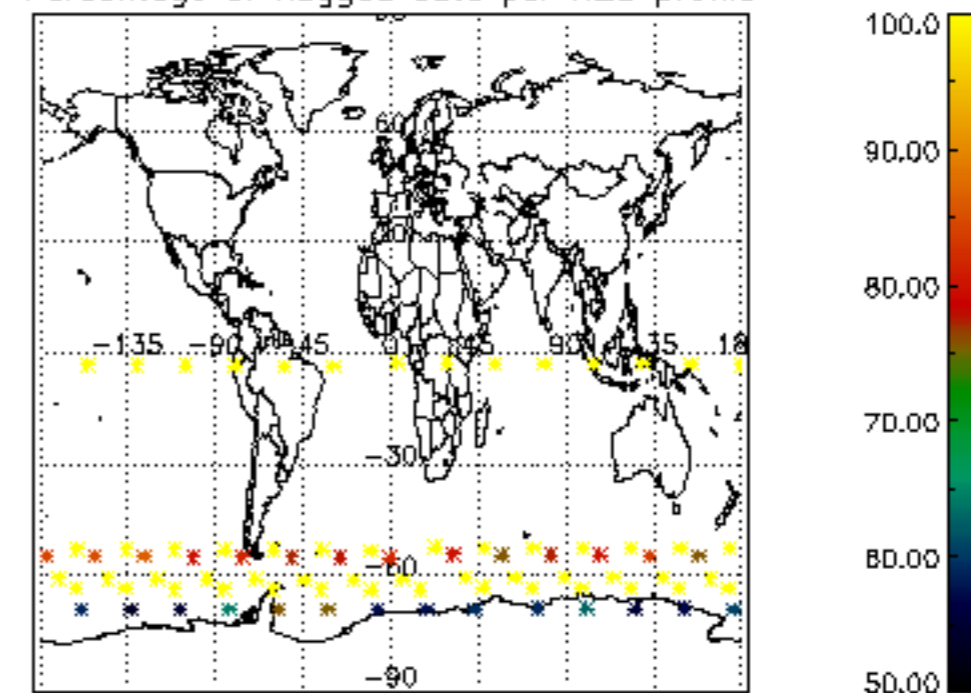




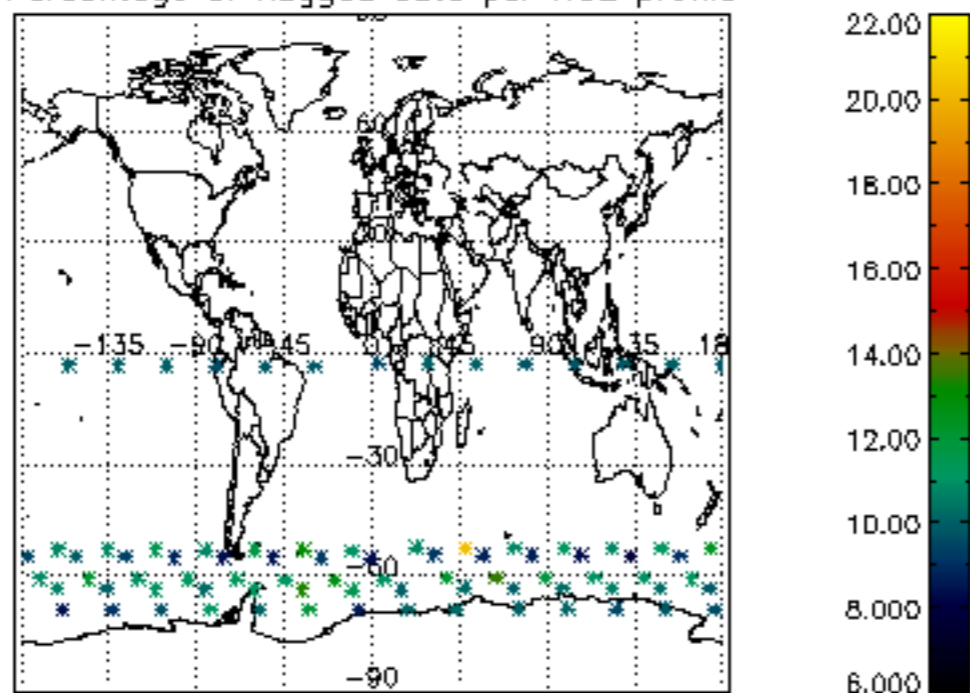
Percentage of flagged data per D3 profile



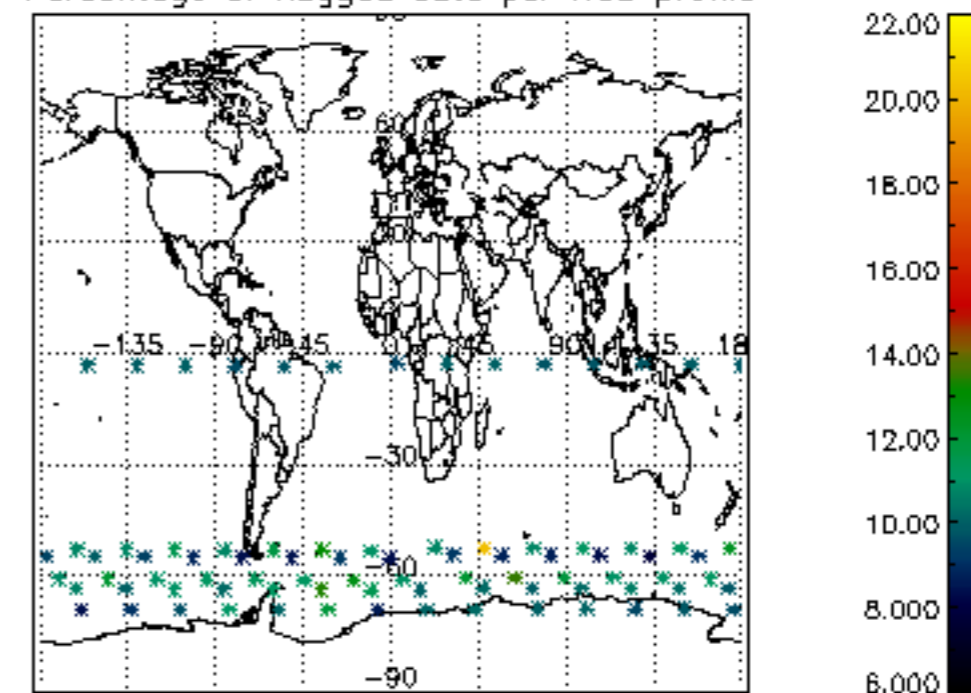
Percentage of flagged data per H2O profile

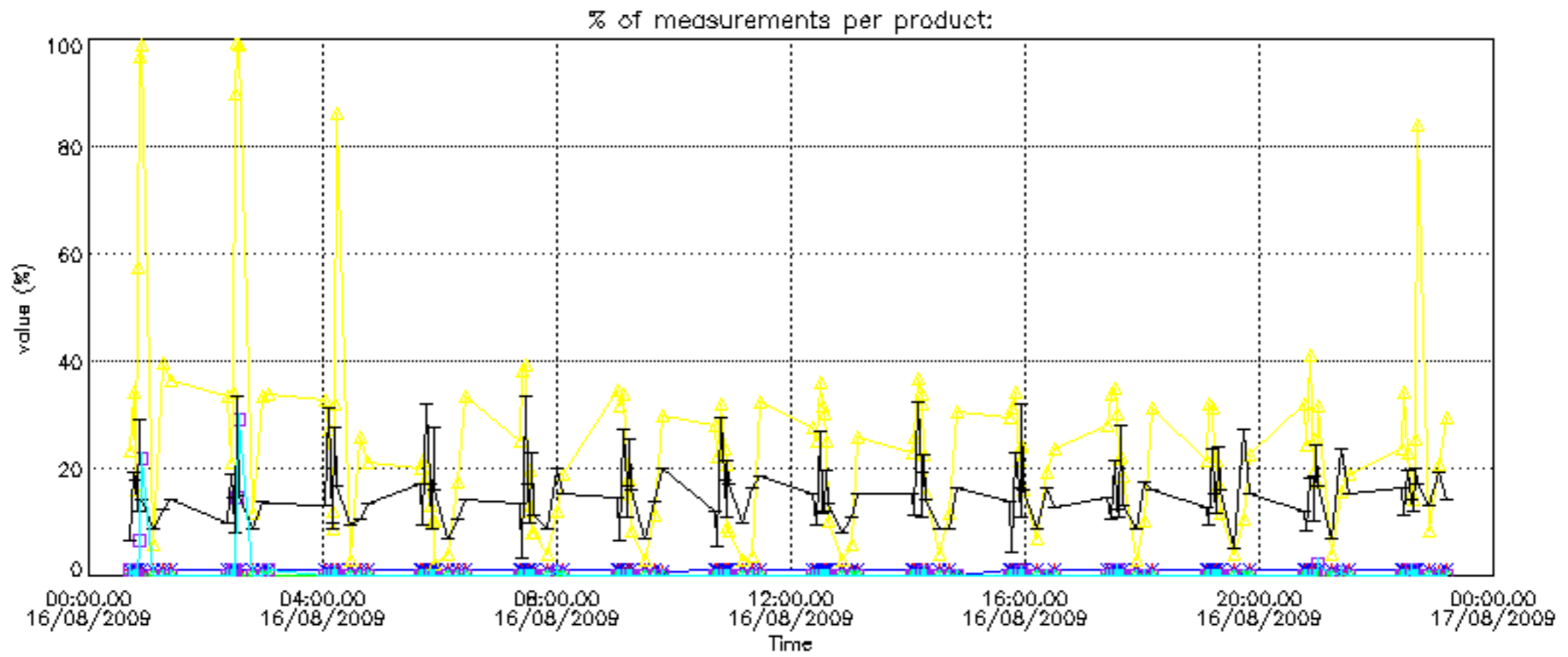


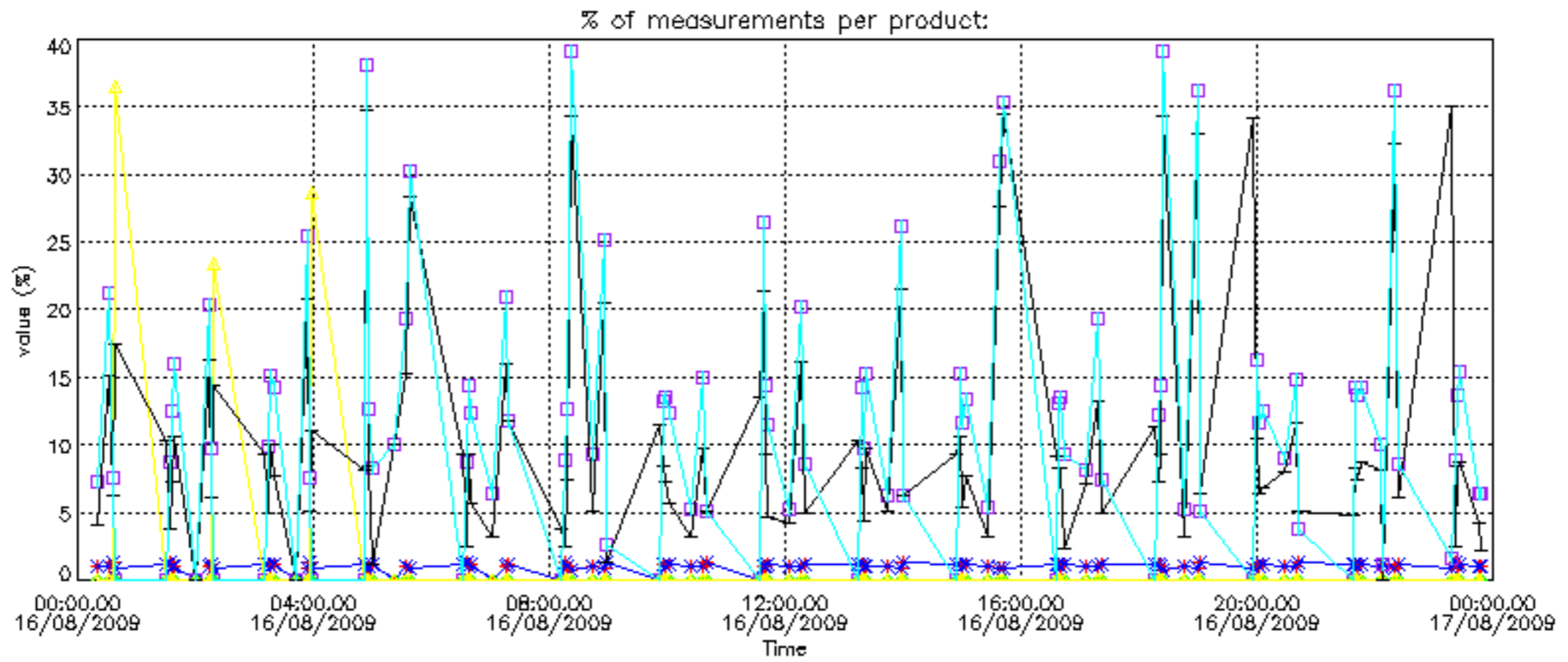
Percentage of flagged data per NO2 profile



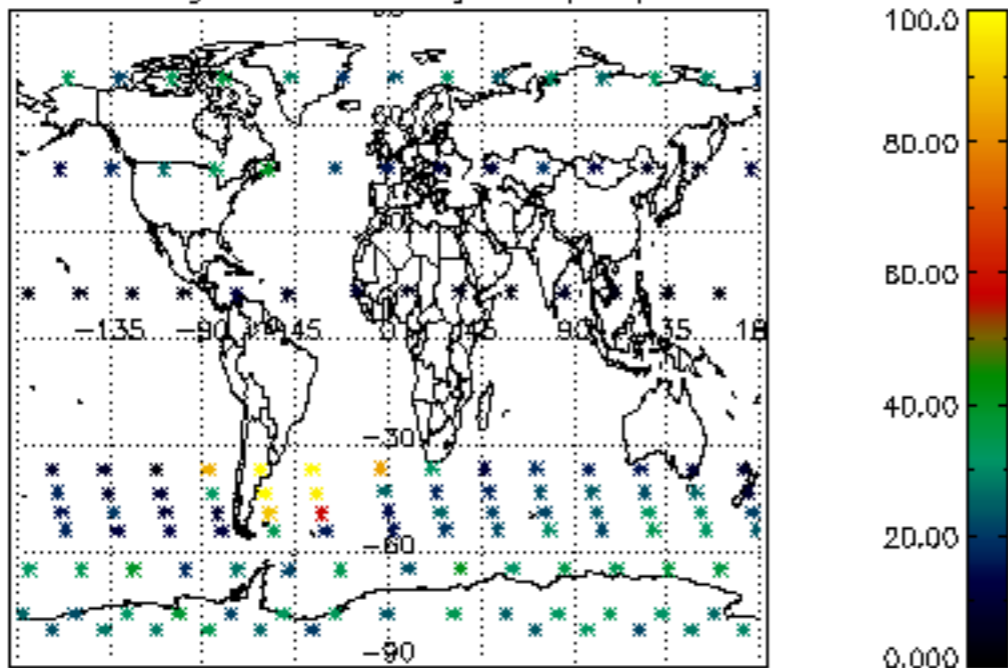
Percentage of flagged data per NO3 profile



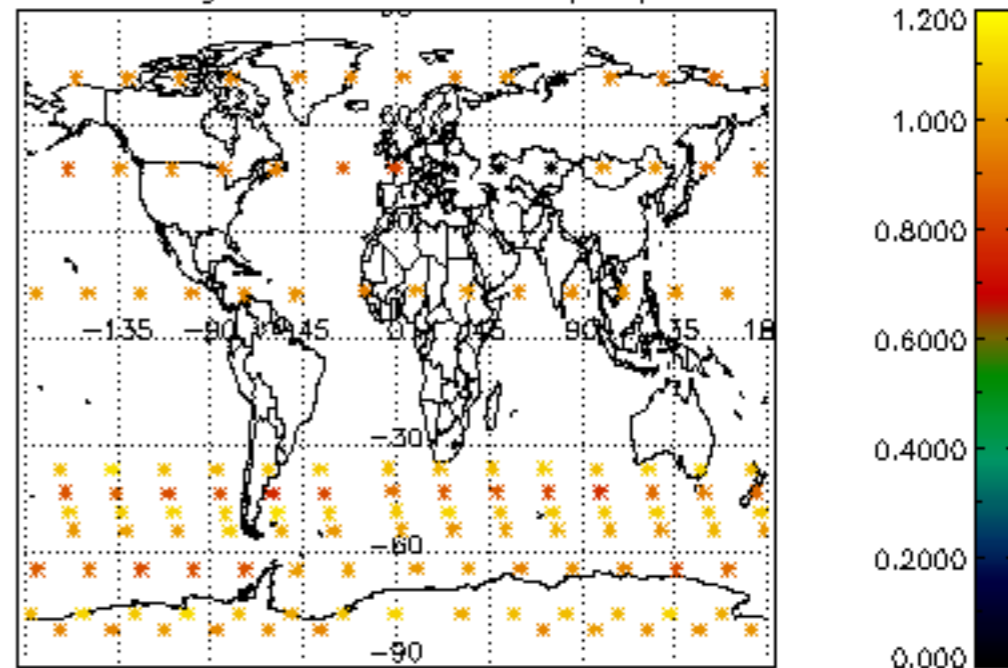




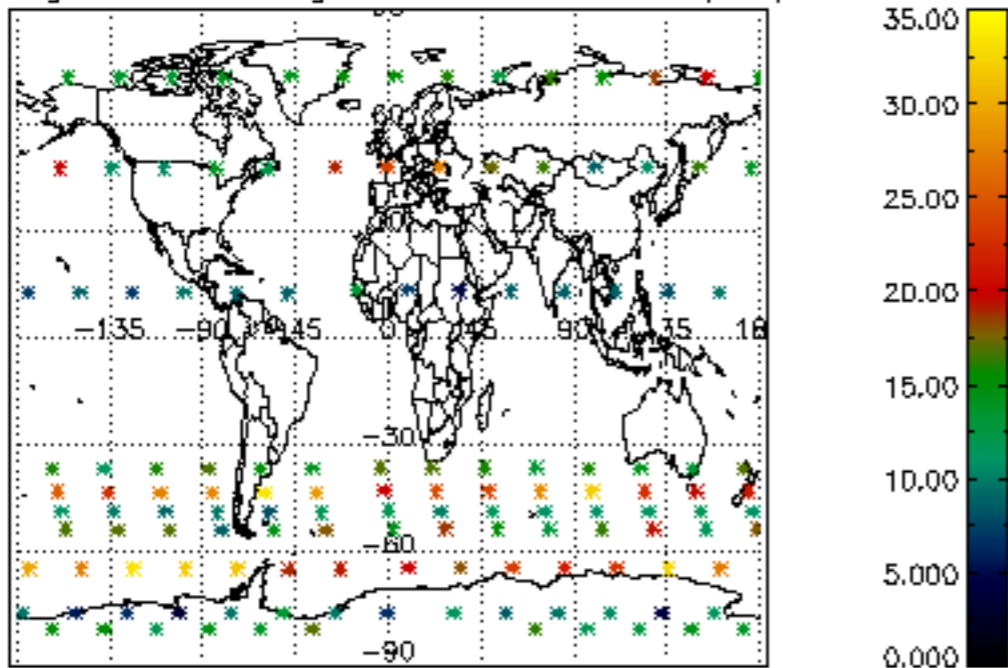
Percentage of cosmic ray hits per profile



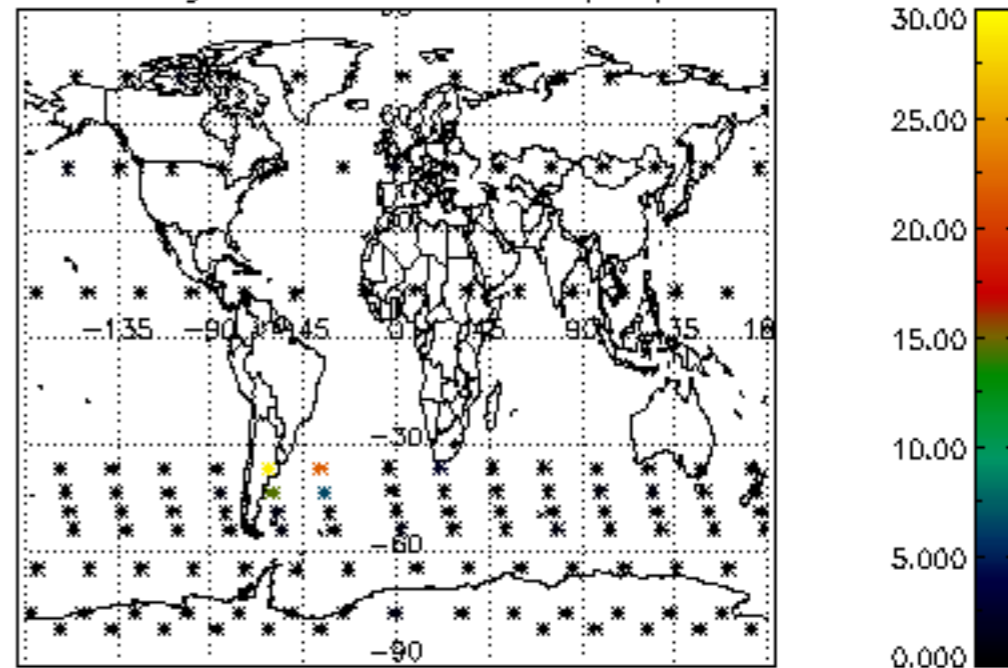
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

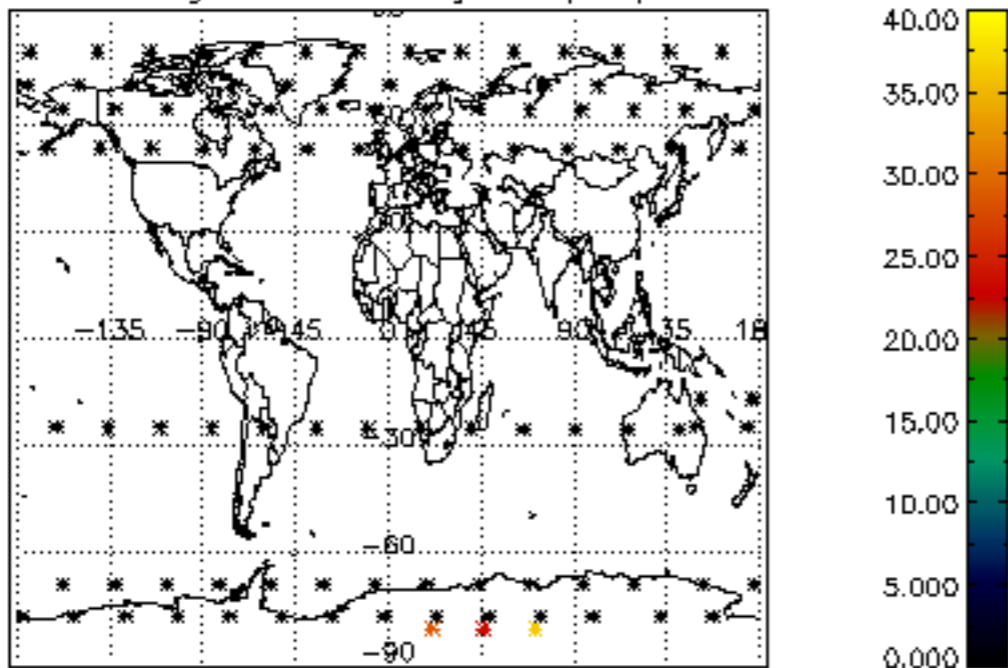


Percentage of saturation errors per profile

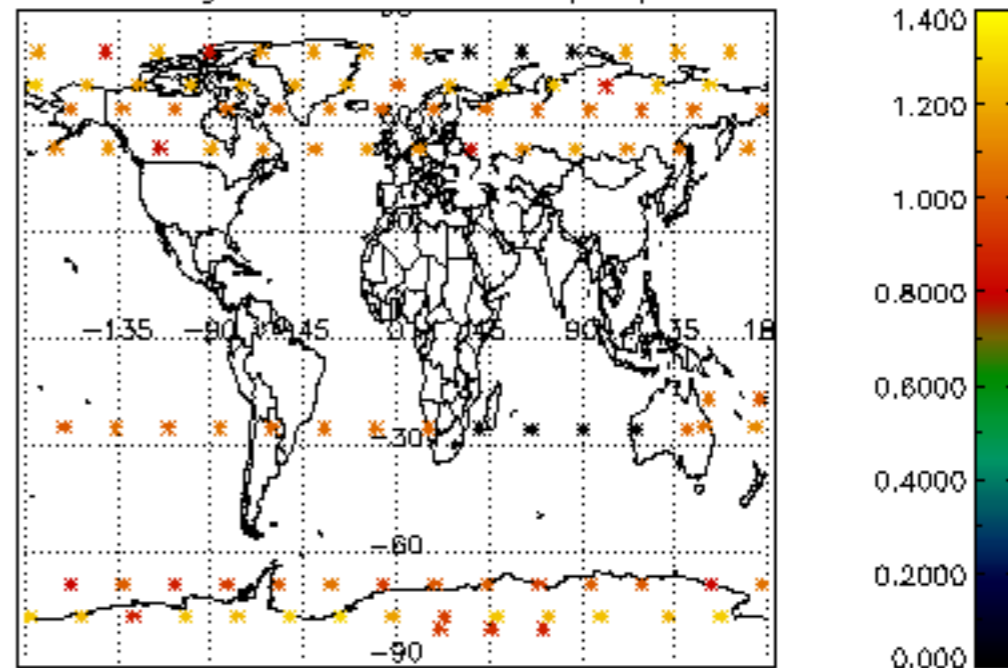




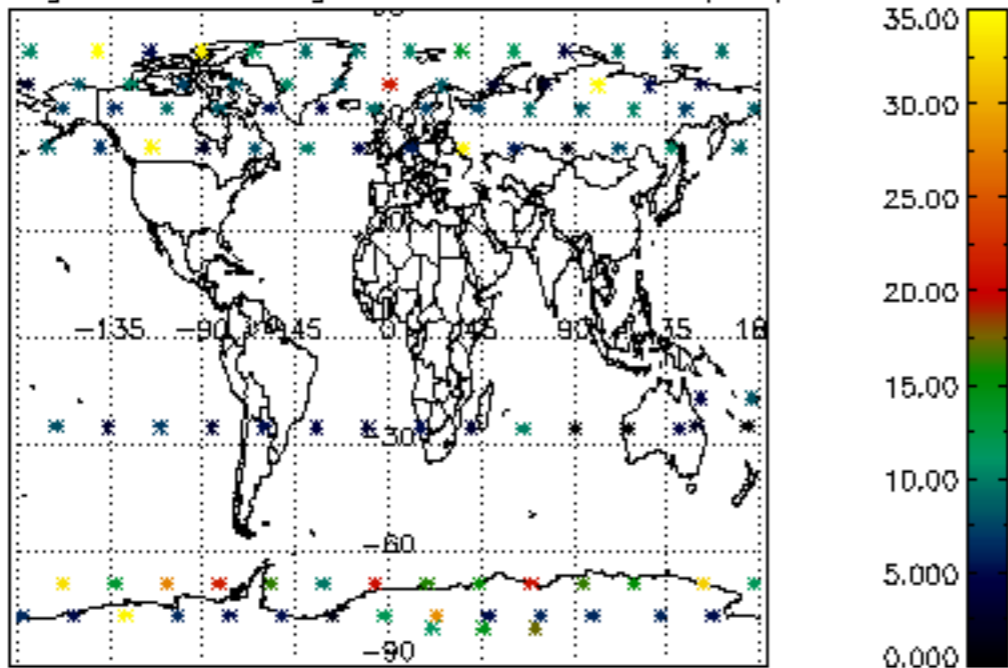
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

