

# 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	25APR2013 21:42:19
Data source version	GOMOS/6.01
Start time of products	04-11-2008 (04NOV2008 00:00:00)
Stop time of products	05-11-2008 (05NOV2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	205
Nb of prods with errors	0

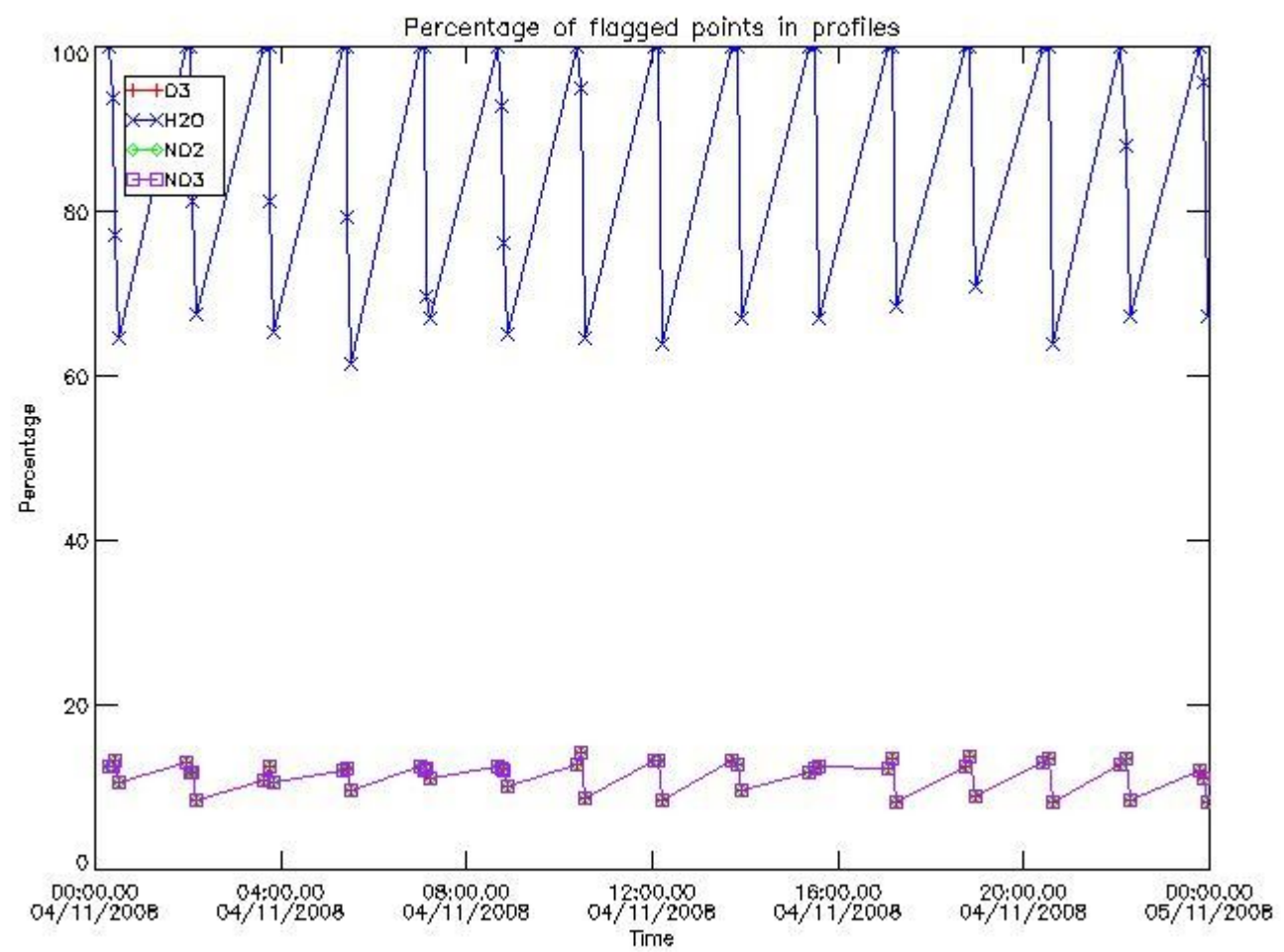
## 2. Summary of processed GOM\_NL\_\_2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20081104_001747_000000412073_00302_34925_9111.N1	04-NOV-2008 00:17:47	Dark	40.500	113	Mu Vel	2.6920	5000.0	81	34925	No
2	GOM_NL__2PRFIN20081104_002306_000000412073_00303_34926_9108.N1	04-NOV-2008 00:23:06	Dark	40.500	46	Del Vel	1.9540	10600.	81	34926	No
3	GOM_NL__2PRFIN20081104_002423_000000422073_00303_34926_9109.N1	04-NOV-2008 00:24:23	Dark	42.000	41	Eps Car	1.8600	4100.0	84	34926	No
4	GOM_NL__2PRFIN20081104_002938_000000492073_00303_34926_9110.N1	04-NOV-2008 00:29:38	Dark	48.500	2	Alp Car	-0.73600	7000.0	97	34926	No
5	GOM_NL__2PRFIN20081104_003934_000000402073_00303_34926_9111.N1	04-NOV-2008 00:39:34	Straylight	40.000	157	The1Eri	2.9060	9300.0	80	34926	No
6	GOM_NL__2PRFIN20081104_005806_000000392073_00303_34926_9112.N1	04-NOV-2008 00:58:06	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34926	No
7	GOM_NL__2PRFIN20081104_010212_000000362073_00303_34926_9113.N1	04-NOV-2008 01:02:12	Bright	36.000	53	43Bet And	2.0480	3300.0	72	34926	No
8	GOM_NL__2PRFIN20081104_010427_000000392073_00303_34926_9114.N1	04-NOV-2008 01:04:27	Bright	39.000	73	57Gam1And	2.2600	13100.	78	34926	No
9	GOM_NL__2PRFIN20081104_010808_000000352073_00303_34926_9115.N1	04-NOV-2008 01:08:08	Bright	34.500	68	18Alp Cas	2.2250	4500.0	69	34926	No
10	GOM_NL__2PRFIN20081104_011722_000000362073_00303_34926_9116.N1	04-NOV-2008 01:17:22	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	34926	No
11	GOM_NL__2PRFIN20081104_012120_000000372073_00303_34926_9117.N1	04-NOV-2008 01:21:20	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	34926	No
12	GOM_NL__2PRFIN20081104_012526_000000392073_00303_34926_9118.N1	04-NOV-2008 01:25:26	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	34926	No
13	GOM_NL__2PRFIN20081104_012703_000000572073_00303_34926_9119.N1	04-NOV-2008 01:27:03	Bright	57.000	82	48Bet UMa	2.3650	10600.	114	34926	No
14	GOM_NL__2PRFIN20081104_013048_000000402073_00303_34926_9120.N1	04-NOV-2008 01:30:48	Bright	39.500	174	52Psi UMa	3.0040	4400.0	79	34926	No
15	GOM_NL__2PRFIN20081104_013824_000000402073_00303_34926_9121.N1	04-NOV-2008 01:38:24	Bright	40.000	96	68Del Leo	2.5600	9300.0	80	34926	No
16	GOM_NL__2PRFIN20081104_015823_000000392073_00303_34926_9122.N1	04-NOV-2008 01:58:23	Dark	39.000	113	Mu Vel	2.6920	5000.0	78	34926	No
17	GOM_NL__2PRFIN20081104_020342_000000432073_00304_34927_9133.N1	04-NOV-2008 02:03:42	Dark	43.000	46	Del Vel	1.9540	10600.	86	34927	No
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19	GOM_NL__2PRFIN20081104_021015_000000612073_00304_34927_9135.N1	04-NOV-2008 02:10:15	Dark	60.500	2	Alp Car	-0.73600	7000.0	121	34927	No
20	GOM_NL__2PRFIN20081104_022011_000000412073_00304_34927_9136.N1	04-NOV-2008 02:20:11	Straylight	41.000	157	The1Eri	2.9060	9300.0	82	34927	No
21	GOM_NL__2PRFIN20081104_023841_000000392073_00304_34927_9137.N1	04-NOV-2008 02:38:41	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34927	No
22	GOM_NL__2PRFIN20081104_024248_000000372073_00304_34927_9138.N1	04-NOV-2008 02:42:48	Bright	36.500	53	43Bet And	2.0480	3300.0	73	34927	No
23	GOM_NL__2PRFIN20081104_024503_000000392073_00304_34927_9139.N1	04-NOV-2008 02:45:03	Bright	38.500	73	57Gam1And	2.2600	13100.	77	34927	No
24	GOM_NL__2PRFIN20081104_024844_000000352073_00304_34927_9140.N1	04-NOV-2008 02:48:44	Bright	35.000	68	18Alp Cas	2.2250	4500.0	70	34927	No
25	GOM_NL__2PRFIN20081104_025757_000000322073_00304_34927_9141.N1	04-NOV-2008 02:57:57	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	34927	No
26	GOM_NL__2PRFIN20081104_030156_000000362073_00304_34927_9142.N1	04-NOV-2008 03:01:56	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	34927	No
27	GOM_NL__2PRFIN20081104_030601_000000402073_00304_34927_9143.N1	04-NOV-2008 03:06:01	Bright	39.500	36	50Alp UMa	1.8000	6300.0	79	34927	No
28	GOM_NL__2PRFIN20081104_030739_000000392073_00304_34927_9144.N1	04-NOV-2008 03:07:39	Bright	39.000	82	48Bet UMa	2.3650	10600.	78	34927	No
29	GOM_NL__2PRFIN20081104_031124_000000392073_00304_34927_9145.N1	04-NOV-2008 03:11:24	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34927	No
30	GOM_NL__2PRFIN20081104_031900_000000582073_00304_34927_9146.N1	04-NOV-2008 03:19:00	Bright	58.000	96	68Del Leo	2.5600	9300.0	116	34927	No
31	GOM_NL__2PRFIN20081104_033900_000000472073_00304_34927_9147.N1	04-NOV-2008 03:39:00	Dark	47.000	113	Mu Vel	2.6920	5000.0	94	34927	No
32	GOM_NL__2PRFIN20081104_034419_000000412073_00305_34928_9148.N1	04-NOV-2008 03:44:19	Dark	40.500	46	Del Vel	1.9540	10600.	81	34928	No
33	GOM_NL__2PRFIN20081104_034536_000000412073_00305_34928_9149.N1	04-NOV-2008 03:45:36	Dark	40.500	41	Eps Car	1.8600	4100.0	81	34928	No
34	GOM_NL__2PRFIN20081104_035052_000000482073_00305_34928_9150.N1	04-NOV-2008 03:50:52	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	34928	No
35	GOM_NL__2PRFIN20081104_040047_000000412073_00305_34928_9151.N1	04-NOV-2008 04:00:47	Straylight	40.500	157	The1Eri	2.9060	9300.0	81	34928	No
36	GOM_NL__2PRFIN20081104_041917_000000372073_00305_34928_9152.N1	04-NOV-2008 04:19:17	Bright	36.500	105	6Bet Ari	2.6450	8900.0	73	34928	No
37	GOM_NL__2PRFIN20081104_042324_000000362073_00305_34928_9153.N1	04-NOV-2008 04:23:24	Bright	35.500	53	43Bet And	2.0480	3300.0	71	34928	No
38	GOM_NL__2PRFIN20081104_042539_000000382073_00305_34928_9154.N1	04-NOV-2008 04:25:39	Bright	38.000	73	57Gam1And	2.2600	13100.	76	34928	No
39	GOM_NL__2PRFIN20081104_042920_000000352073_00305_34928_9155.N1	04-NOV-2008 04:29:20	Bright	34.500	68	18Alp Cas	2.2250	4500.0	69	34928	No
40	GOM_NL__2PRFIN20081104_043834_000000362073_00305_34928_9156.N1	04-NOV-2008 04:38:34	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	34928	No
41	GOM_NL__2PRFIN20081104_044232_000000362073_00305_34928_9157.N1	04-NOV-2008 04:42:32	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	34928	No
42	GOM_NL__2PRFIN20081104_044637_000000382073_00305_34928_9158.N1	04-NOV-2008 04:46:37	Bright	38.000	36	50Alp UMa	1.8000	6300.0	76	34928	No



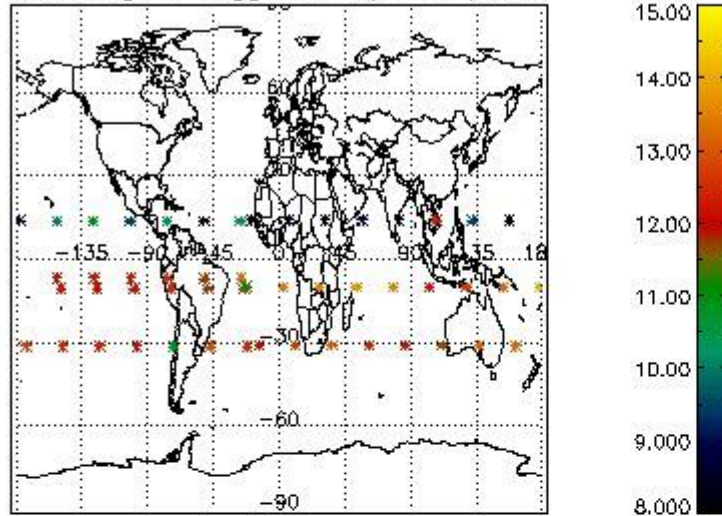




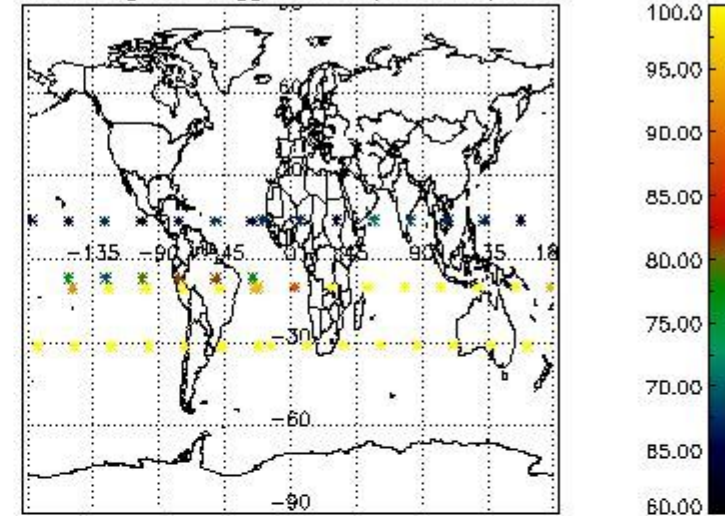


3.2 Plot quality information per product (world map)

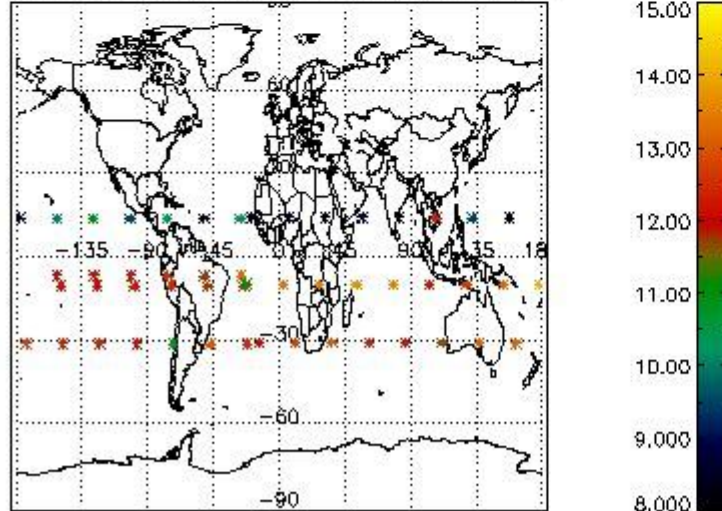
Percentage of flagged data per O3 profile



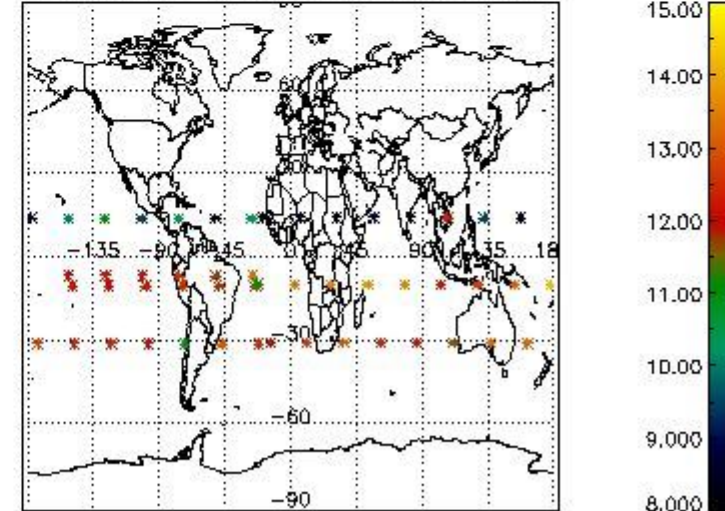
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

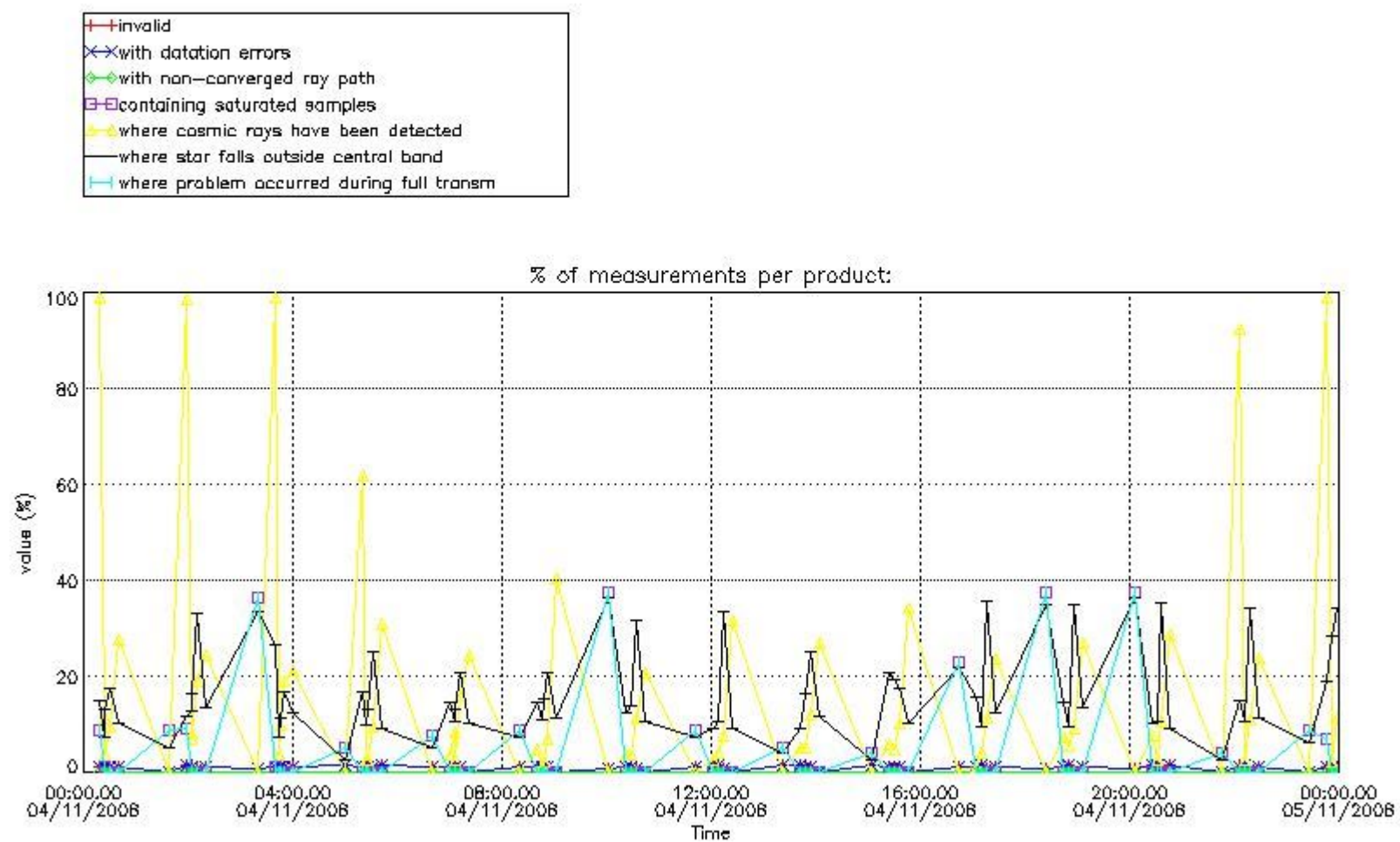


#### 4. Level 1 quality information per product

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.

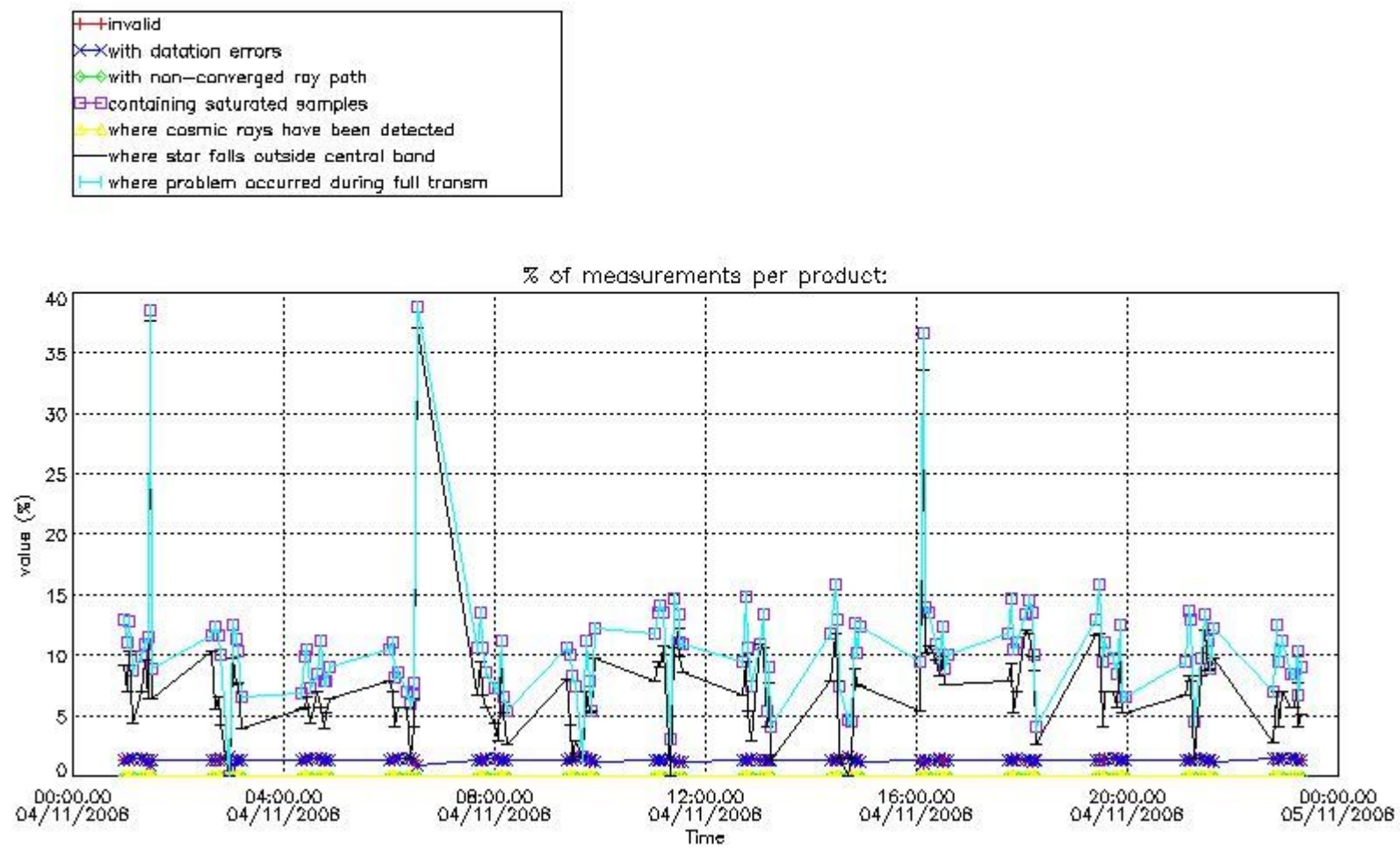
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



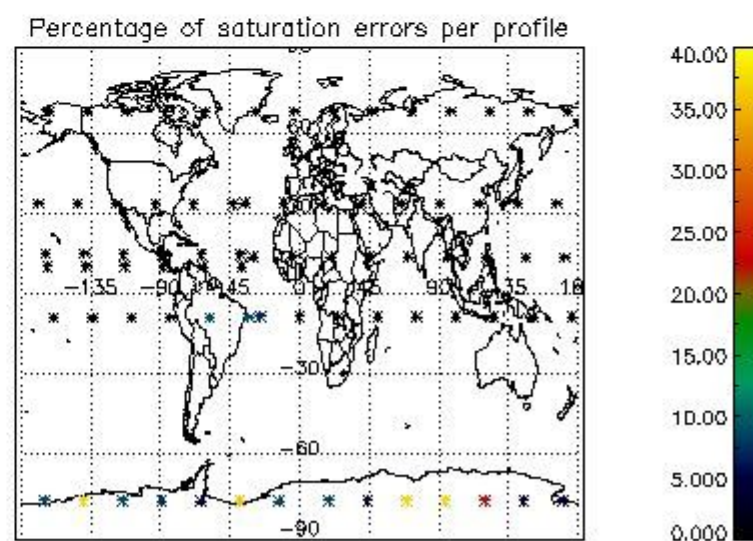
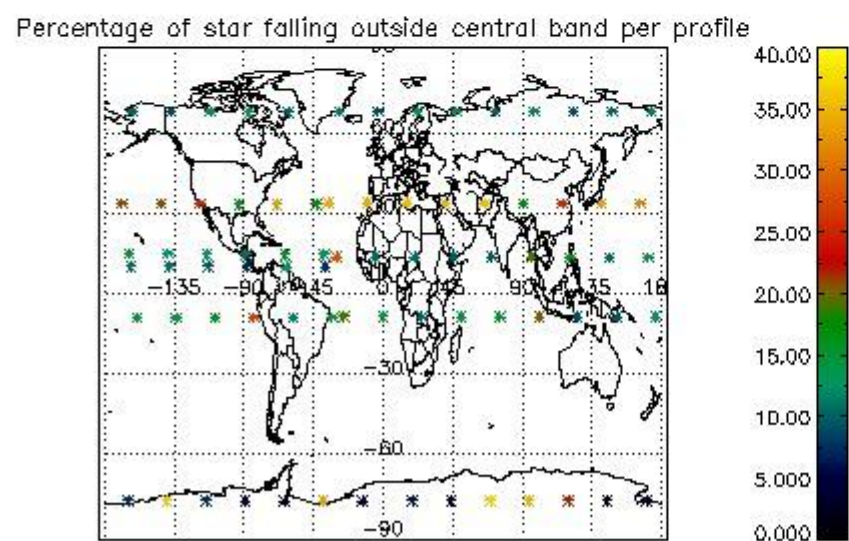
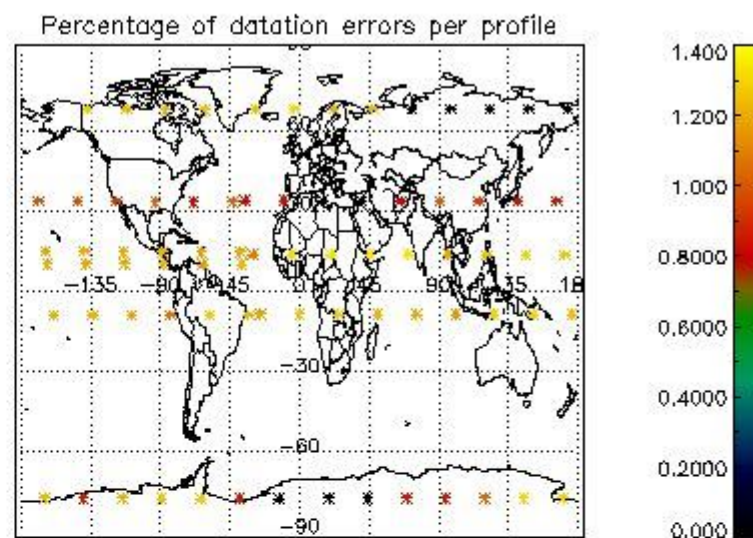
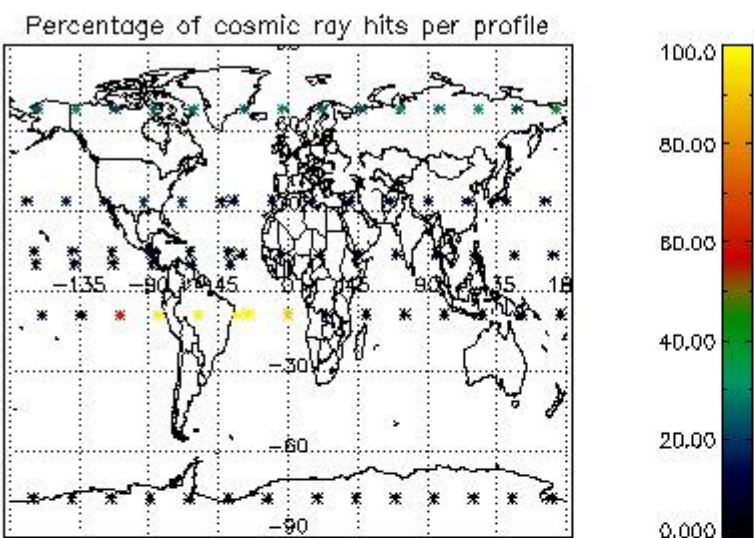
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



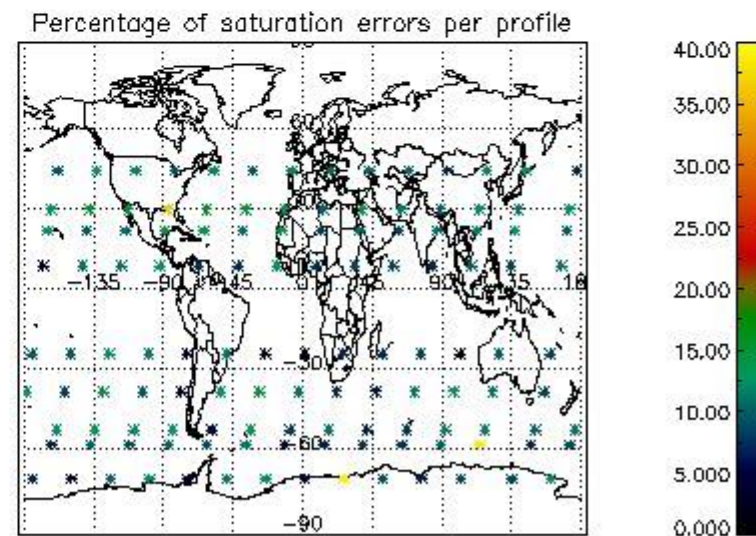
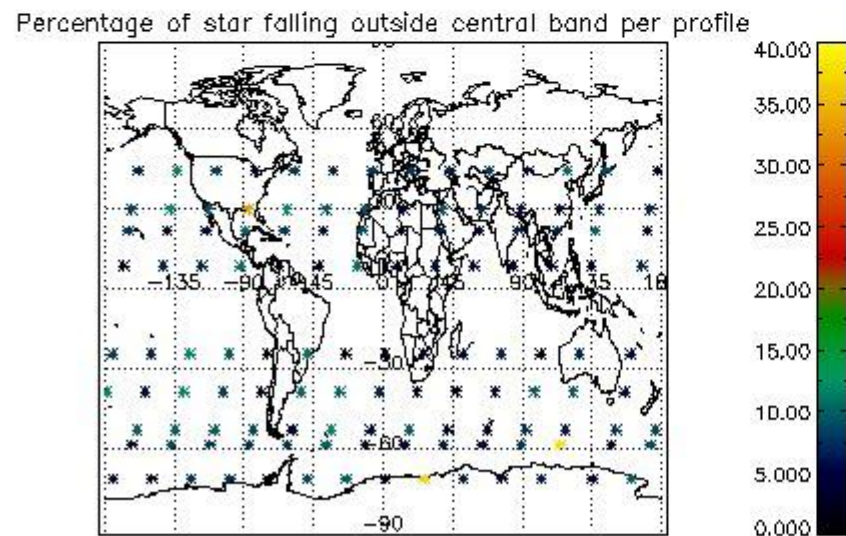
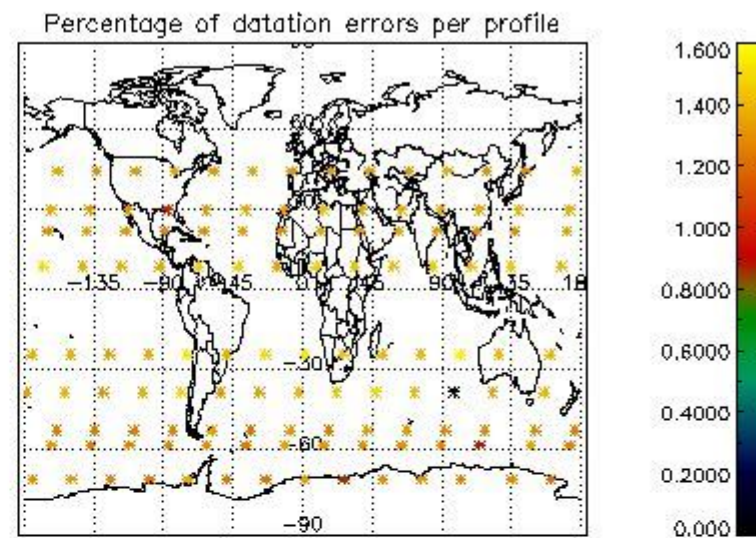
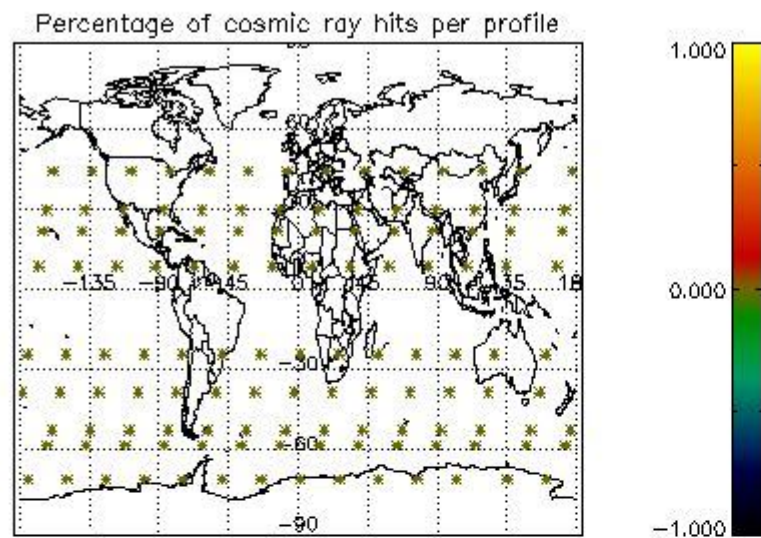


#### 4.2 Plot quality information per product coming from level 1b processing (world map)

##### 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

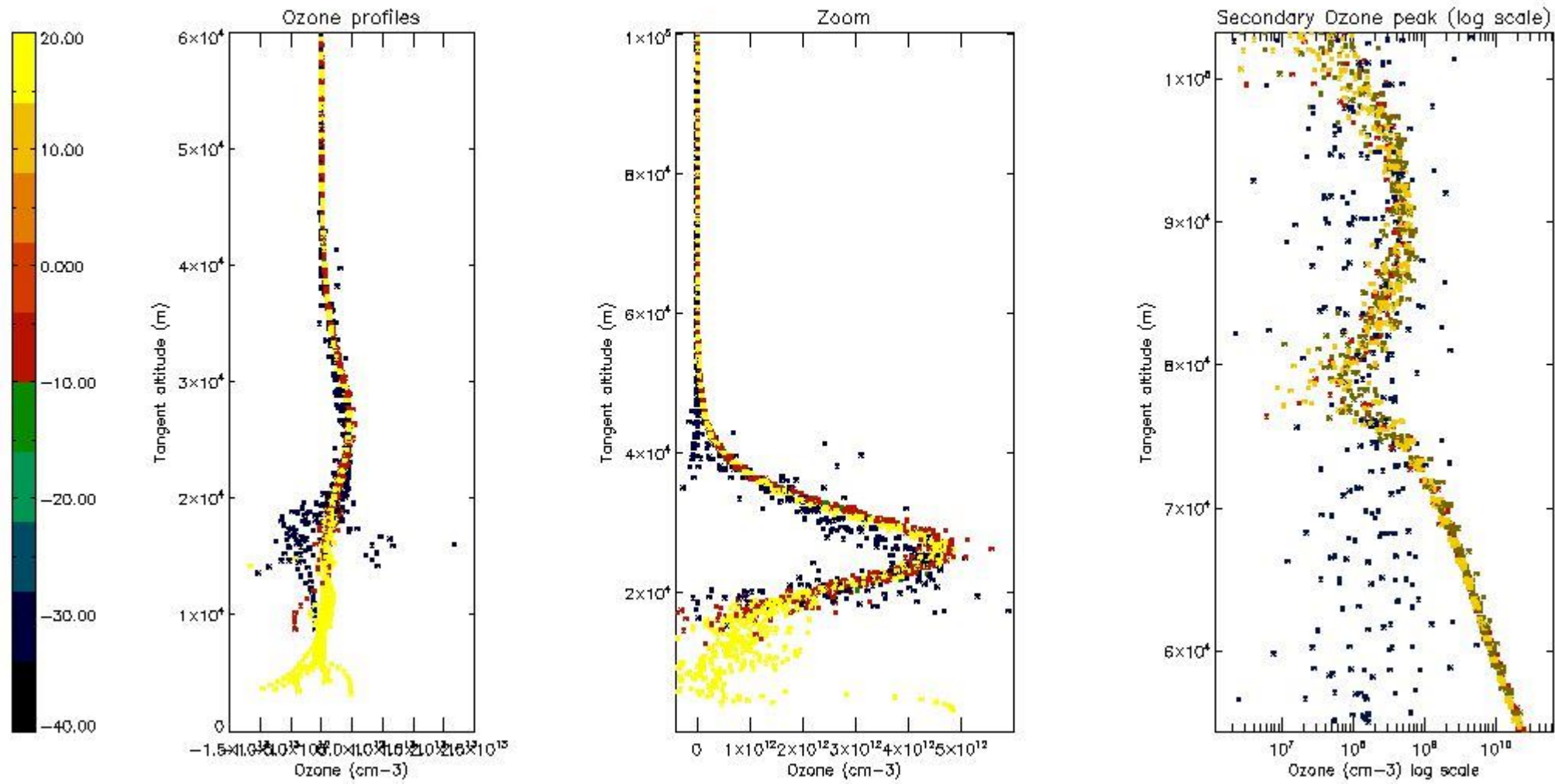
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	16

STD < 10	12
STD < 5	7

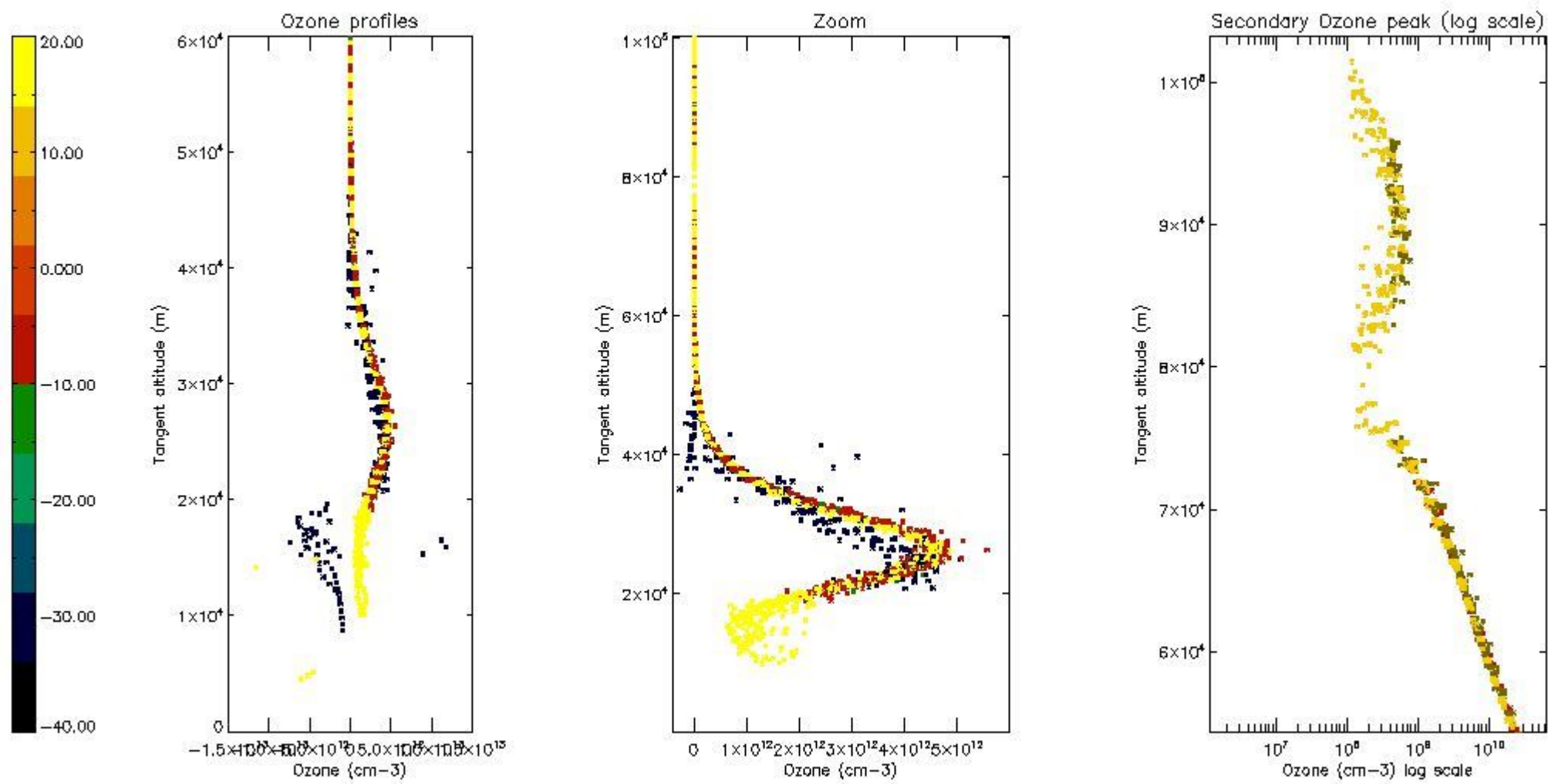
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



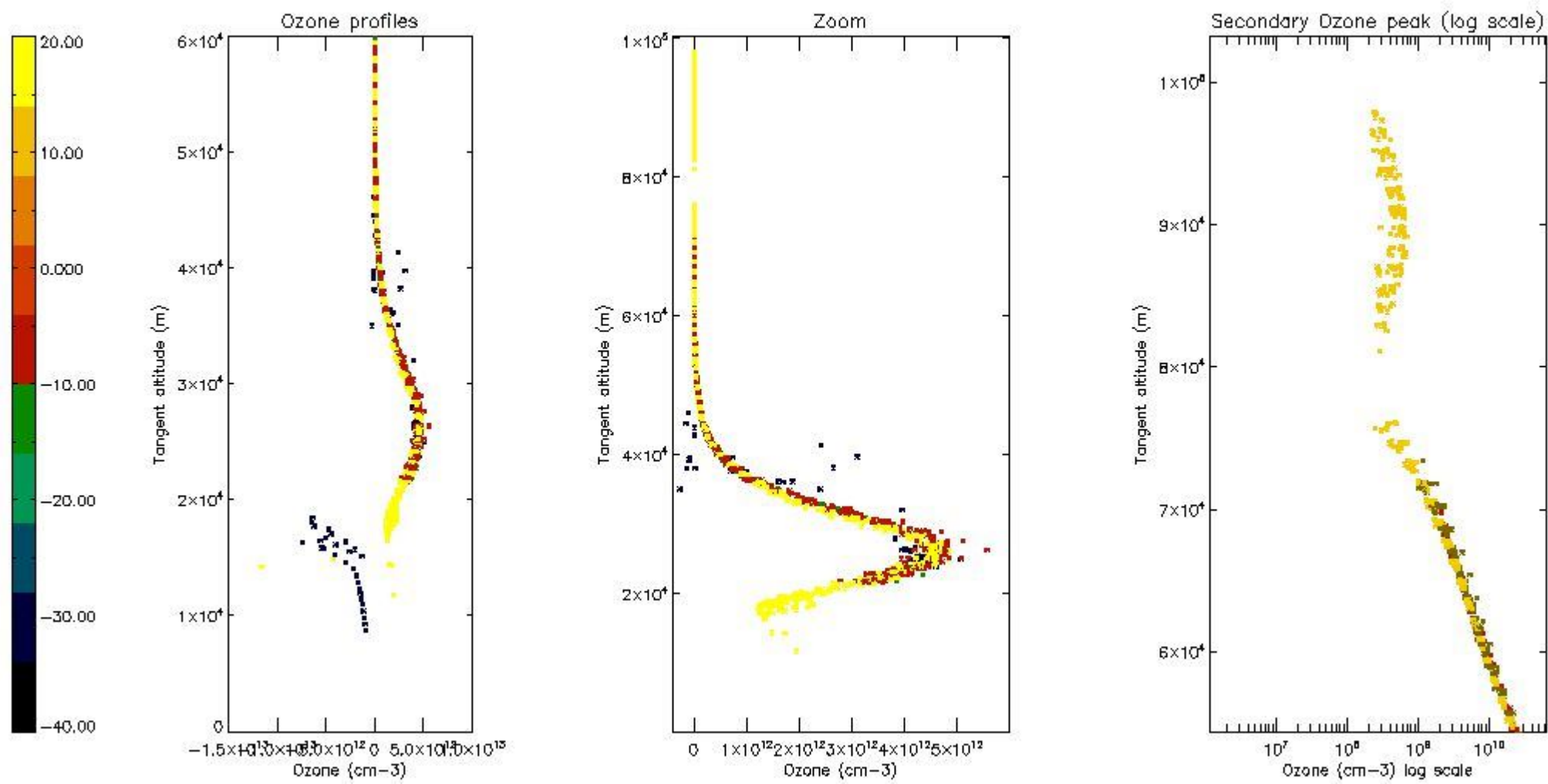
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



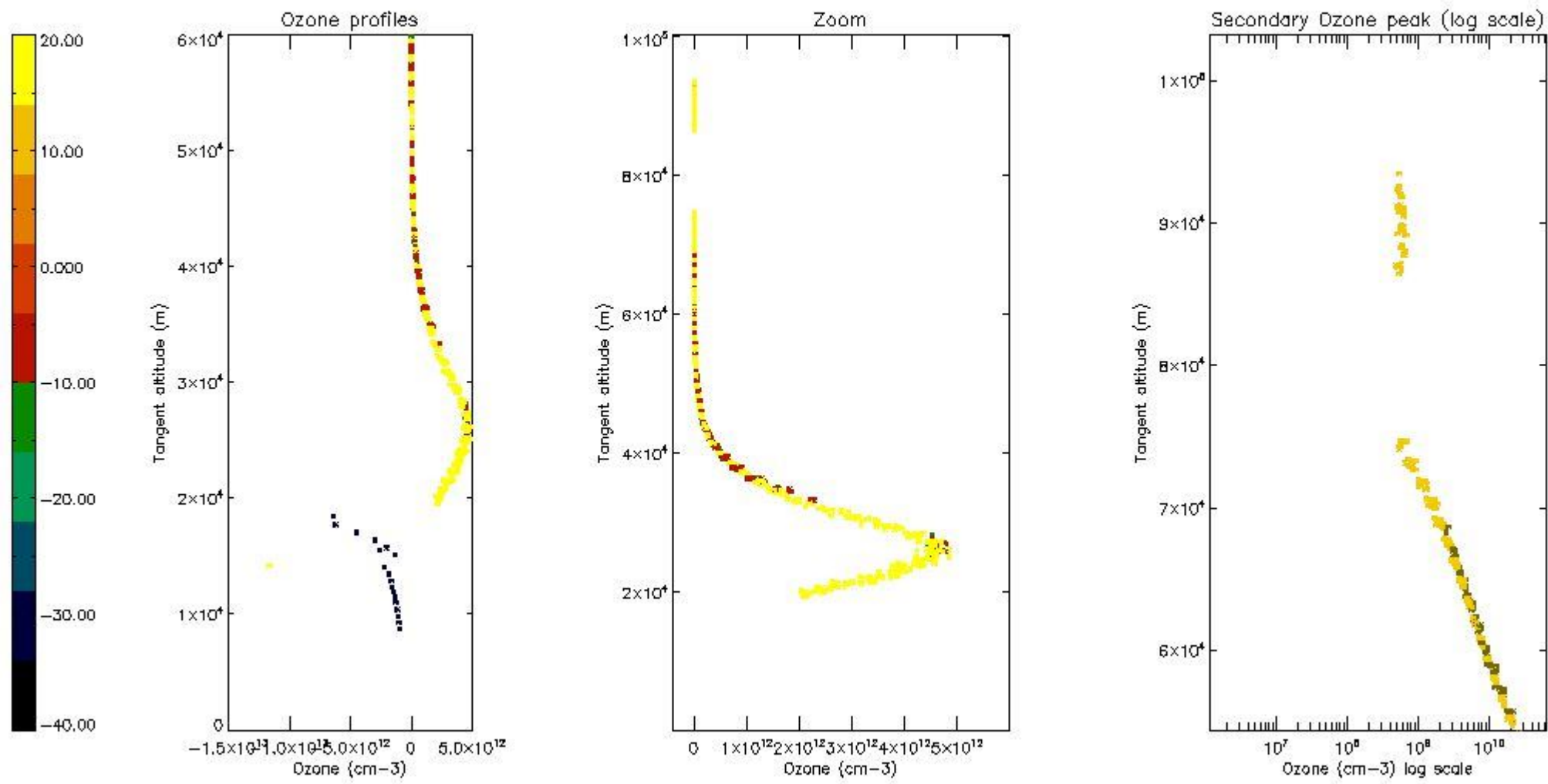
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



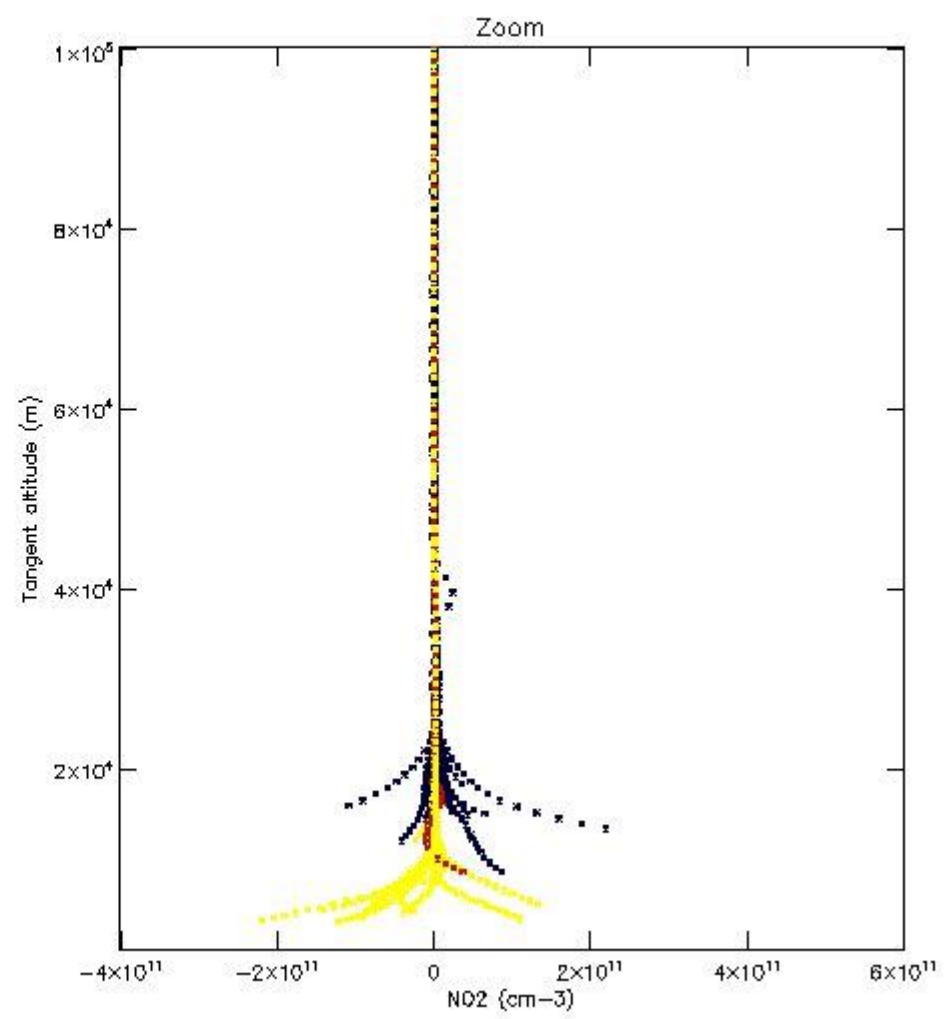
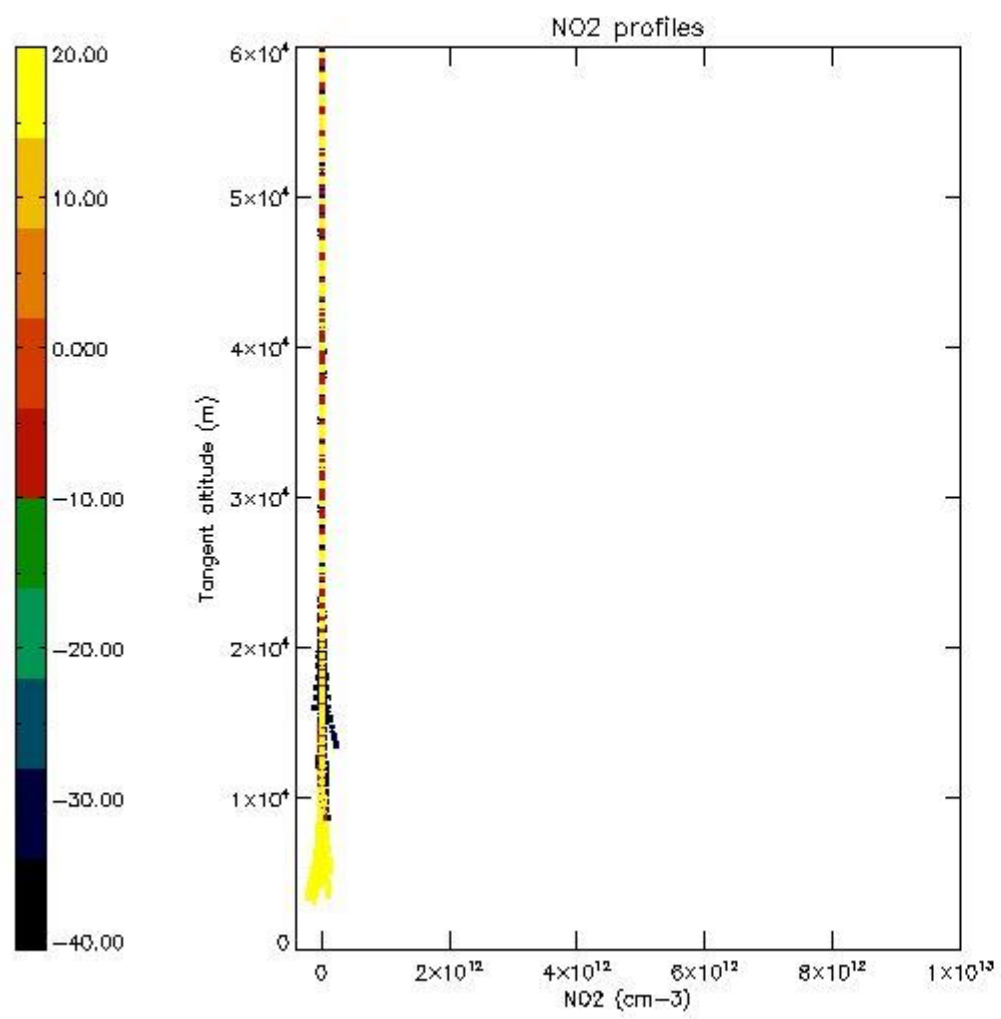
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

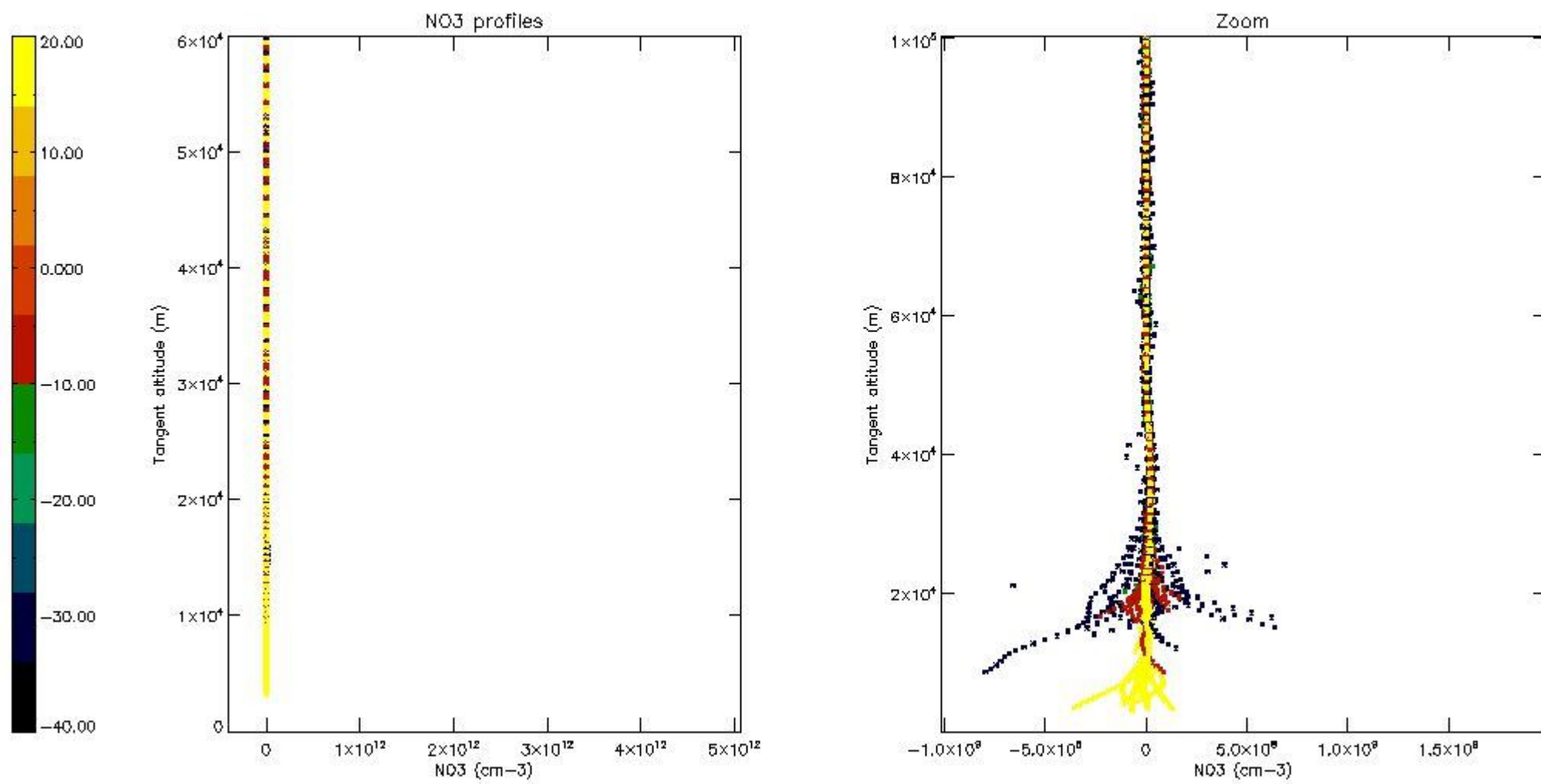
The colorbar represents the latitude.



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

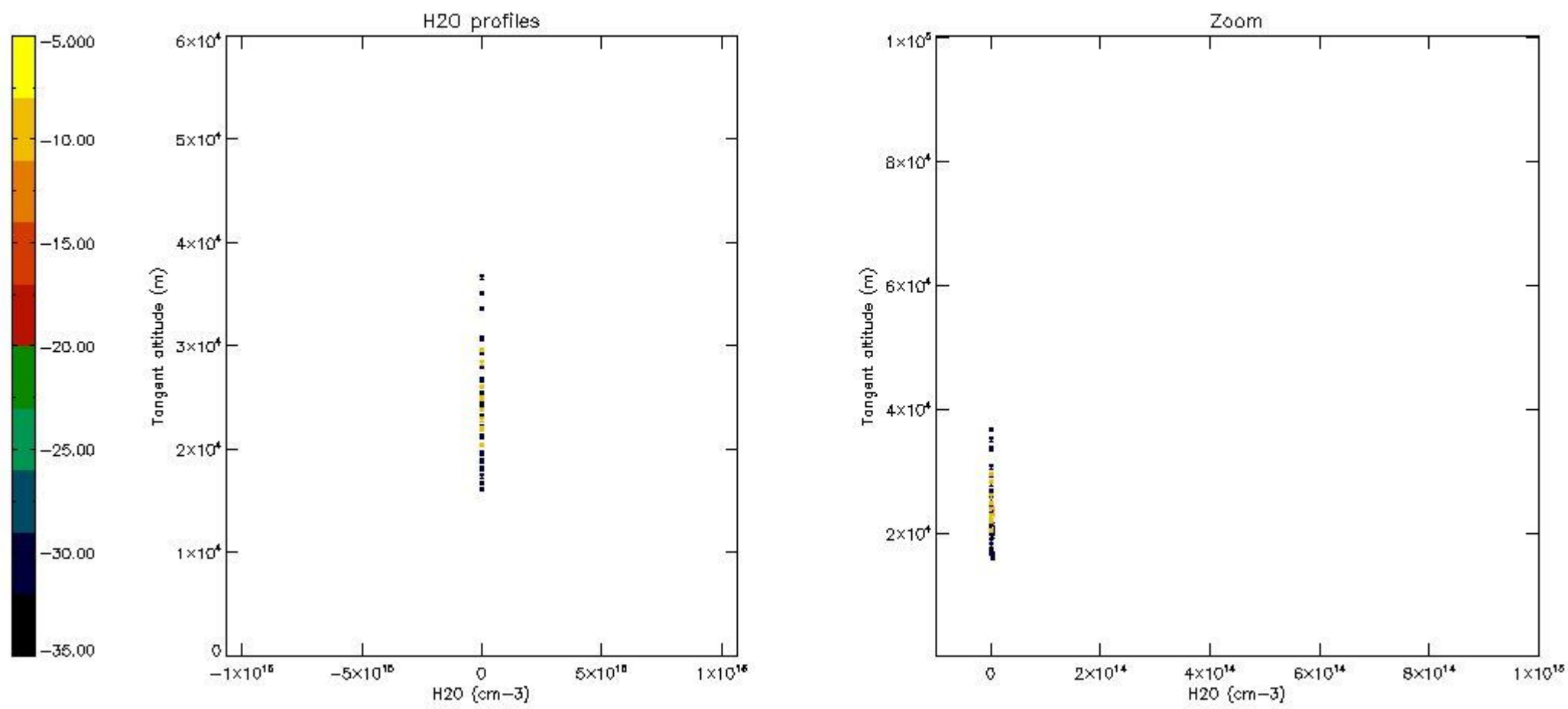
The colorbar represents the latitude.





5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-NOV-2008 00:17:47
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-NOV-2008 00:17:47
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-NOV-2008 00:17:47

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

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

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

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

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

This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

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Time of report generation	25APR2013 21:42:19
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Start time of products	04-11-2008 (04NOV2008 00:00:00)
Stop time of products	05-11-2008 (05NOV2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	205
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__2PRFIN20081104_001747_000000412073_00302_34925_9111.N1	04-NOV-2008 00:17:47	Dark	40.500	113	Mu Vel	2.6920	5000.0	81	34925	No
2	GOM_NL__2PRFIN20081104_002306_000000412073_00303_34926_9108.N1	04-NOV-2008 00:23:06	Dark	40.500	46	Del Vel	1.9540	10600.	81	34926	No
3	GOM_NL__2PRFIN20081104_002423_000000422073_00303_34926_9109.N1	04-NOV-2008 00:24:23	Dark	42.000	41	Eps Car	1.8600	4100.0	84	34926	No
4	GOM_NL__2PRFIN20081104_002938_000000492073_00303_34926_9110.N1	04-NOV-2008 00:29:38	Dark	48.500	2	Alp Car	-0.73600	7000.0	97	34926	No
5	GOM_NL__2PRFIN20081104_003934_000000402073_00303_34926_9111.N1	04-NOV-2008 00:39:34	Straylight	40.000	157	The1Eri	2.9060	9300.0	80	34926	No
6	GOM_NL__2PRFIN20081104_005806_000000392073_00303_34926_9112.N1	04-NOV-2008 00:58:06	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34926	No
7	GOM_NL__2PRFIN20081104_010212_000000362073_00303_34926_9113.N1	04-NOV-2008 01:02:12	Bright	36.000	53	43Bet And	2.0480	3300.0	72	34926	No
8	GOM_NL__2PRFIN20081104_010427_000000392073_00303_34926_9114.N1	04-NOV-2008 01:04:27	Bright	39.000	73	57Gam1And	2.2600	13100.	78	34926	No
9	GOM_NL__2PRFIN20081104_010808_000000352073_00303_34926_9115.N1	04-NOV-2008 01:08:08	Bright	34.500	68	18Alp Cas	2.2250	4500.0	69	34926	No
10	GOM_NL__2PRFIN20081104_011722_000000362073_00303_34926_9116.N1	04-NOV-2008 01:17:22	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	34926	No
11	GOM_NL__2PRFIN20081104_012120_000000372073_00303_34926_9117.N1	04-NOV-2008 01:21:20	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	34926	No
12	GOM_NL__2PRFIN20081104_012526_000000392073_00303_34926_9118.N1	04-NOV-2008 01:25:26	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	34926	No
13	GOM_NL__2PRFIN20081104_012703_000000572073_00303_34926_9119.N1	04-NOV-2008 01:27:03	Bright	57.000	82	48Bet UMa	2.3650	10600.	114	34926	No
14	GOM_NL__2PRFIN20081104_013048_000000402073_00303_34926_9120.N1	04-NOV-2008 01:30:48	Bright	39.500	174	52Psi UMa	3.0040	4400.0	79	34926	No
15	GOM_NL__2PRFIN20081104_013824_000000402073_00303_34926_9121.N1	04-NOV-2008 01:38:24	Bright	40.000	96	68Del Leo	2.5600	9300.0	80	34926	No
16	GOM_NL__2PRFIN20081104_015823_000000392073_00303_34926_9122.N1	04-NOV-2008 01:58:23	Dark	39.000	113	Mu Vel	2.6920	5000.0	78	34926	No
17	GOM_NL__2PRFIN20081104_020342_000000432073_00304_34927_9133.N1	04-NOV-2008 02:03:42	Dark	43.000	46	Del Vel	1.9540	10600.	86	34927	No
18	GOM_NL__2PRFIN20081104_020459_000000432073_00304_34927_9134.N1	04-NOV-2008 02:04:59	Dark	43.000	41	Eps Car	1.8600	4100.0	86	34927	No
19	GOM_NL__2PRFIN20081104_021015_000000612073_00304_34927_9135.N1	04-NOV-2008 02:10:15	Dark	60.500	2	Alp Car	-0.73600	7000.0	121	34927	No
20	GOM_NL__2PRFIN20081104_022011_000000412073_00304_34927_9136.N1	04-NOV-2008 02:20:11	Straylight	41.000	157	The1Eri	2.9060	9300.0	82	34927	No
21	GOM_NL__2PRFIN20081104_023841_000000392073_00304_34927_9137.N1	04-NOV-2008 02:38:41	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34927	No
22	GOM_NL__2PRFIN20081104_024248_000000372073_00304_34927_9138.N1	04-NOV-2008 02:42:48	Bright	36.500	53	43Bet And	2.0480	3300.0	73	34927	No
23	GOM_NL__2PRFIN20081104_024503_000000392073_00304_34927_9139.N1	04-NOV-2008 02:45:03	Bright	38.500	73	57Gam1And	2.2600	13100.	77	34927	No
24	GOM_NL__2PRFIN20081104_024844_000000352073_00304_34927_9140.N1	04-NOV-2008 02:48:44	Bright	35.000	68	18Alp Cas	2.2250	4500.0	70	34927	No
25	GOM_NL__2PRFIN20081104_025757_000000322073_00304_34927_9141.N1	04-NOV-2008 02:57:57	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	34927	No
26	GOM_NL__2PRFIN20081104_030156_000000362073_00304_34927_9142.N1	04-NOV-2008 03:01:56	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	34927	No
27	GOM_NL__2PRFIN20081104_030601_000000402073_00304_34927_9143.N1	04-NOV-2008 03:06:01	Bright	39.500	36	50Alp UMa	1.8000	6300.0	79	34927	No
28	GOM_NL__2PRFIN20081104_030739_000000392073_00304_34927_9144.N1	04-NOV-2008 03:07:39	Bright	39.000	82	48Bet UMa	2.3650	10600.	78	34927	No
29	GOM_NL__2PRFIN20081104_031124_000000392073_00304_34927_9145.N1	04-NOV-2008 03:11:24	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34927	No
30	GOM_NL__2PRFIN20081104_031900_000000582073_00304_34927_9146.N1	04-NOV-2008 03:19:00	Bright	58.000	96	68Del Leo	2.5600	9300.0	116	34927	No
31	GOM_NL__2PRFIN20081104_033900_000000472073_00304_34927_9147.N1	04-NOV-2008 03:39:00	Dark	47.000	113	Mu Vel	2.6920	5000.0	94	34927	No
32	GOM_NL__2PRFIN20081104_034419_000000412073_00305_34928_9148.N1	04-NOV-2008 03:44:19	Dark	40.500	46	Del Vel	1.9540	10600.	81	34928	No
33	GOM_NL__2PRFIN20081104_034536_000000412073_00305_34928_9149.N1	04-NOV-2008 03:45:36	Dark	40.500	41	Eps Car	1.8600	4100.0	81	34928	No
34	GOM_NL__2PRFIN20081104_035052_000000482073_00305_34928_9150.N1	04-NOV-2008 03:50:52	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	34928	No
35	GOM_NL__2PRFIN20081104_040047_000000412073_00305_34928_9151.N1	04-NOV-2008 04:00:47	Straylight	40.500	157	The1Eri	2.9060	9300.0	81	34928	No
36	GOM_NL__2PRFIN20081104_041917_000000372073_00305_34928_9152.N1	04-NOV-2008 04:19:17	Bright	36.500	105	6Bet Ari	2.6450	8900.0	73	34928	No
37	GOM_NL__2PRFIN20081104_042324_000000362073_00305_34928_9153.N1	04-NOV-2008 04:23:24	Bright	35.500	53	43Bet And	2.0480	3300.0	71	34928	No
38	GOM_NL__2PRFIN20081104_042539_000000382073_00305_34928_9154.N1	04-NOV-2008 04:25:39	Bright	38.000	73	57Gam1And	2.2600	13100.	76	34928	No
39	GOM_NL__2PRFIN20081104_042920_000000352073_00305_34928_9155.N1	04-NOV-2008 04:29:20	Bright	34.500	68	18Alp Cas	2.2250	4500.0	69	34928	No
40	GOM_NL__2PRFIN20081104_043834_000000362073_00305_34928_9156.N1	04-NOV-2008 04:38:34	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	34928	No
41	GOM_NL__2PRFIN20081104_044232_000000362073_00305_34928_9157.N1	04-NOV-2008 04:42:32	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	34928	No
42	GOM_NL__2PRFIN20081104_044637_000000382073_00305_34928_9158.N1	04-NOV-2008 04:46:37	Bright	38.000	36	50Alp UMa	1.8000	6300.0	76	34928	No



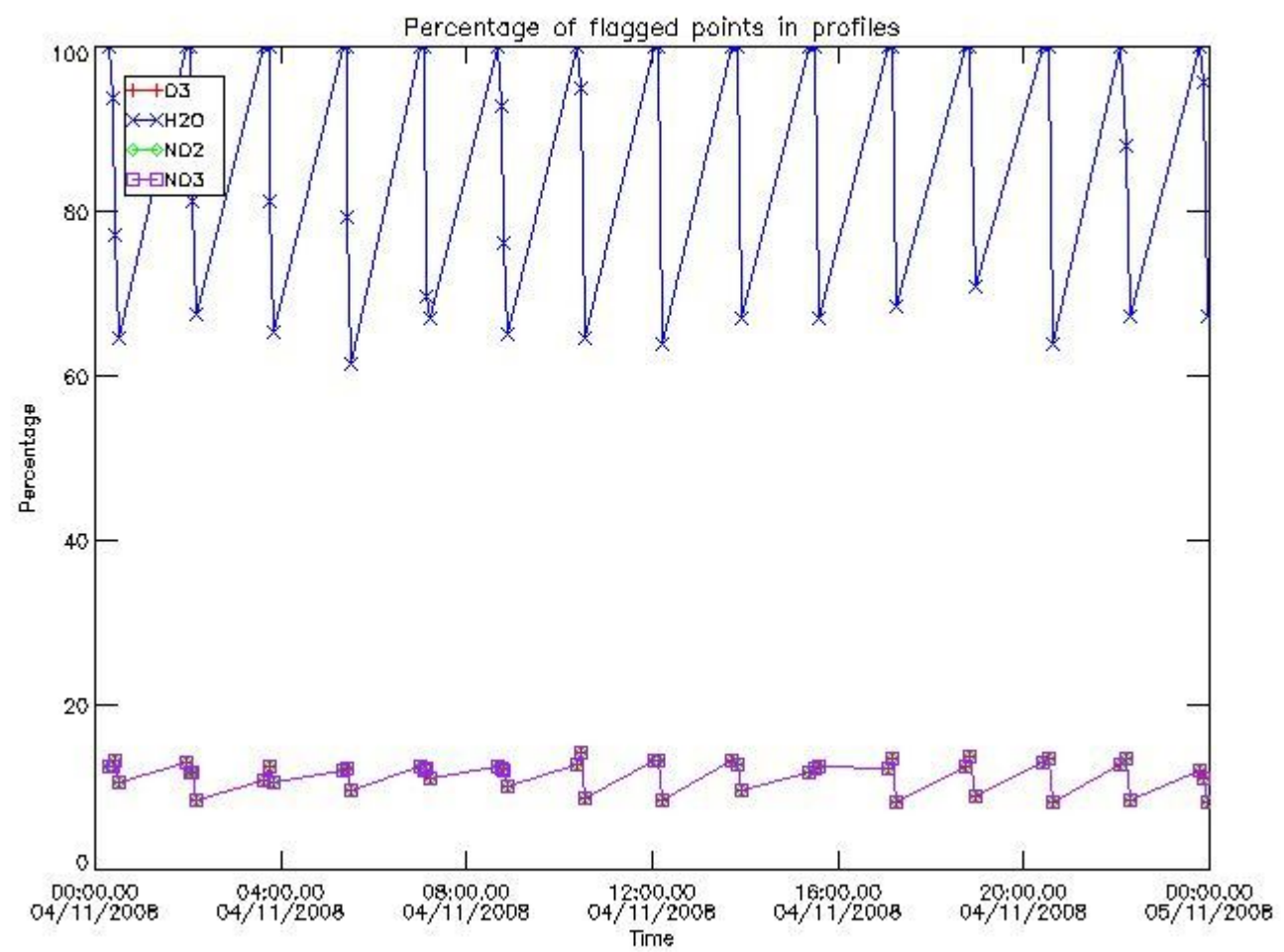


161	GOM_NL__2PRFIN20081104_184427_000000412073_00313_34936_9279.N1	04-NOV-2008 18:44:27	Dark	41.000	113	Mu Vel	2.6920	5000.0	82	34936	No
162	GOM_NL__2PRFIN20081104_185042_000000372073_00314_34937_9280.N1	04-NOV-2008 18:50:42	Dark	37.000	29	Bet Car	1.6720	10200.	74	34937	No
163	GOM_NL__2PRFIN20081104_185622_000000622073_00314_34937_9281.N1	04-NOV-2008 18:56:22	Dark	61.500	2	Alp Car	-0.73600	7000.0	123	34937	No
164	GOM_NL__2PRFIN20081104_190613_000000412073_00314_34937_9282.N1	04-NOV-2008 19:06:13	Straylight	41.000	157	The1Eri	2.9060	9300.0	82	34937	No
165	GOM_NL__2PRFIN20081104_192440_000000392073_00314_34937_9283.N1	04-NOV-2008 19:24:40	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34937	No
166	GOM_NL__2PRFIN20081104_192848_000000382073_00314_34937_9284.N1	04-NOV-2008 19:28:48	Bright	38.000	53	43Bet And	2.0480	3300.0	76	34937	No
167	GOM_NL__2PRFIN20081104_193100_000000372073_00314_34937_9285.N1	04-NOV-2008 19:31:00	Bright	37.000	73	57Gam1And	2.2600	13100.	74	34937	No
168	GOM_NL__2PRFIN20081104_193444_000000362073_00314_34937_9286.N1	04-NOV-2008 19:34:44	Bright	36.000	68	18Alp Cas	2.2250	4500.0	72	34937	No
169	GOM_NL__2PRFIN20081104_194357_000000362073_00314_34937_9287.N1	04-NOV-2008 19:43:57	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	34937	No
170	GOM_NL__2PRFIN20081104_194757_000000362073_00314_34937_9288.N1	04-NOV-2008 19:47:57	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	34937	No
171	GOM_NL__2PRFIN20081104_195200_000000402073_00314_34937_9289.N1	04-NOV-2008 19:52:00	Bright	40.000	36	50Alp UMa	1.8000	6300.0	80	34937	No
172	GOM_NL__2PRFIN20081104_195337_000000382073_00314_34937_9290.N1	04-NOV-2008 19:53:37	Bright	38.000	82	48Bet UMa	2.3650	10600.	76	34937	No
173	GOM_NL__2PRFIN20081104_195723_000000392073_00314_34937_9291.N1	04-NOV-2008 19:57:23	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34937	No
174	GOM_NL__2PRFIN20081104_200502_000000592073_00314_34937_9292.N1	04-NOV-2008 20:05:02	Bright	59.000	96	68Del Leo	2.5600	9300.0	118	34937	No
175	GOM_NL__2PRFIN20081104_202504_000000392073_00314_34937_9293.N1	04-NOV-2008 20:25:04	Dark	39.000	113	Mu Vel	2.6920	5000.0	78	34937	No
176	GOM_NL__2PRFIN20081104_203119_000000382073_00315_34938_9293.N1	04-NOV-2008 20:31:19	Dark	37.500	29	Bet Car	1.6720	10200.	75	34938	No
177	GOM_NL__2PRFIN20081104_203659_000000612073_00315_34938_9294.N1	04-NOV-2008 20:36:59	Dark	61.000	2	Alp Car	-0.73600	7000.0	122	34938	No
178	GOM_NL__2PRFIN20081104_204650_000000392073_00315_34938_9295.N1	04-NOV-2008 20:46:50	Straylight	38.500	157	The1Eri	2.9060	9300.0	77	34938	No
179	GOM_NL__2PRFIN20081104_210516_000000372073_00315_34938_9296.N1	04-NOV-2008 21:05:16	Bright	37.000	105	6Bet Ari	2.6450	8900.0	74	34938	No
180	GOM_NL__2PRFIN20081104_210924_000000372073_00315_34938_9297.N1	04-NOV-2008 21:09:24	Bright	36.500	53	43Bet And	2.0480	3300.0	73	34938	No
181	GOM_NL__2PRFIN20081104_211136_000000392073_00315_34938_9298.N1	04-NOV-2008 21:11:36	Bright	38.500	73	57Gam1And	2.2600	13100.	77	34938	No
182	GOM_NL__2PRFIN20081104_211520_000000332073_00315_34938_9299.N1	04-NOV-2008 21:15:20	Bright	33.000	68	18Alp Cas	2.2250	4500.0	66	34938	No
183	GOM_NL__2PRFIN20081104_212433_000000362073_00315_34938_9300.N1	04-NOV-2008 21:24:33	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	34938	No
184	GOM_NL__2PRFIN20081104_212833_000000382073_00315_34938_9301.N1	04-NOV-2008 21:28:33	Bright	37.500	60	7Bet UMi	2.0810	3950.0	75	34938	No
185	GOM_NL__2PRFIN20081104_213235_000000402073_00315_34938_9302.N1	04-NOV-2008 21:32:35	Bright	40.000	36	50Alp UMa	1.8000	6300.0	80	34938	No
186	GOM_NL__2PRFIN20081104_213413_000000402073_00315_34938_9303.N1	04-NOV-2008 21:34:13	Bright	39.500	82	48Bet UMa	2.3650	10600.	79	34938	No
187	GOM_NL__2PRFIN20081104_213759_000000412073_00315_34938_9304.N1	04-NOV-2008 21:37:59	Bright	41.000	174	52Psi UMa	3.0040	4400.0	82	34938	No
188	GOM_NL__2PRFIN20081104_214539_000000382073_00315_34938_9305.N1	04-NOV-2008 21:45:39	Bright	38.000	96	68Del Leo	2.5600	9300.0	76	34938	No
189	GOM_NL__2PRFIN20081104_220540_000000402073_00315_34938_9306.N1	04-NOV-2008 22:05:40	Dark	40.000	113	Mu Vel	2.6920	5000.0	80	34938	No
190	GOM_NL__2PRFIN20081104_221155_000000382073_00316_34939_9308.N1	04-NOV-2008 22:11:55	Dark	38.000	29	Bet Car	1.6720	10200.	76	34939	No
191	GOM_NL__2PRFIN20081104_221735_000000602073_00316_34939_9309.N1	04-NOV-2008 22:17:35	Dark	60.000	2	Alp Car	-0.73600	7000.0	120	34939	No
192	GOM_NL__2PRFIN20081104_222726_000000402073_00316_34939_9310.N1	04-NOV-2008 22:27:26	Straylight	40.000	157	The1Eri	2.9060	9300.0	80	34939	No
193	GOM_NL__2PRFIN20081104_224551_000000362073_00316_34939_9311.N1	04-NOV-2008 22:45:51	Bright	36.000	105	6Bet Ari	2.6450	8900.0	72	34939	No
194	GOM_NL__2PRFIN20081104_225000_000000362073_00316_34939_9312.N1	04-NOV-2008 22:50:00	Bright	36.000	53	43Bet And	2.0480	3300.0	72	34939	No
195	GOM_NL__2PRFIN20081104_225212_000000372073_00316_34939_9313.N1	04-NOV-2008 22:52:12	Bright	37.000	73	57Gam1And	2.2600	13100.	74	34939	No
196	GOM_NL__2PRFIN20081104_225555_000000362073_00316_34939_9314.N1	04-NOV-2008 22:55:55	Bright	35.500	68	18Alp Cas	2.2250	4500.0	71	34939	No
197	GOM_NL__2PRFIN20081104_230509_000000362073_00316_34939_9315.N1	04-NOV-2008 23:05:09	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	34939	No
198	GOM_NL__2PRFIN20081104_230909_000000362073_00316_34939_9316.N1	04-NOV-2008 23:09:09	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	34939	No
199	GOM_NL__2PRFIN20081104_231311_000000392073_00316_34939_9317.N1	04-NOV-2008 23:13:11	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	34939	No
200	GOM_NL__2PRFIN20081104_231448_000000382073_00316_34939_9318.N1	04-NOV-2008 23:14:48	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	34939	No
201	GOM_NL__2PRFIN20081104_231835_000000392073_00316_34939_9319.N1	04-NOV-2008 23:18:35	Bright	39.000	174	52Psi UMa	3.0040	4400.0	78	34939	No
202	GOM_NL__2PRFIN20081104_232615_000000402073_00316_34939_9320.N1	04-NOV-2008 23:26:15	Bright	40.000	96	68Del Leo	2.5600	9300.0	80	34939	No
203	GOM_NL__2PRFIN20081104_234616_000000432073_00316_34939_9321.N1	04-NOV-2008 23:46:16	Dark	42.500	113	Mu Vel	2.6920	5000.0	85	34939	No
204	GOM_NL__2PRFIN20081104_235231_000000462073_00317_34940_9321.N1	04-NOV-2008 23:52:31	Dark	46.000	29	Bet Car	1.6720	10200.	92	34940	No
205	GOM_NL__2PRFIN20081104_235812_000000622073_00317_34940_9322.N1	04-NOV-2008 23:58:12	Dark	61.500	2	Alp Car	-0.73600	7000.0	123	34940	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.

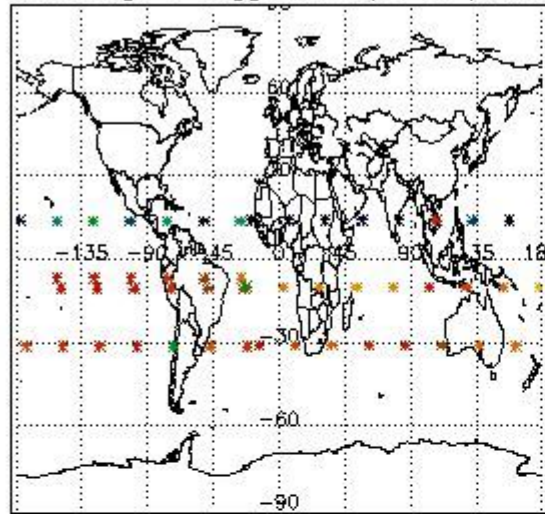
#### 3.1 Plot quality information per product (time dependant)



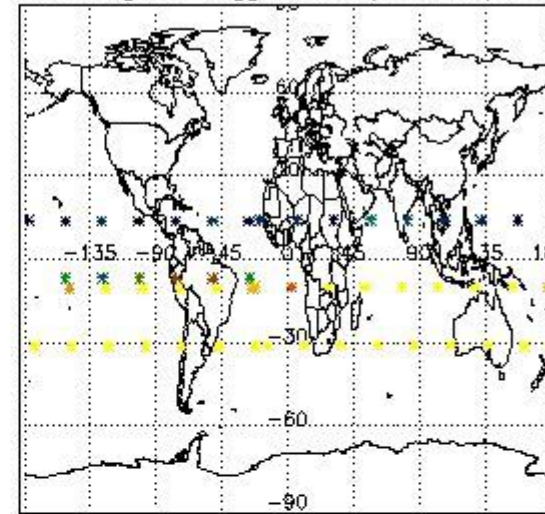
*3.2 Plot quality information per product (world map)*



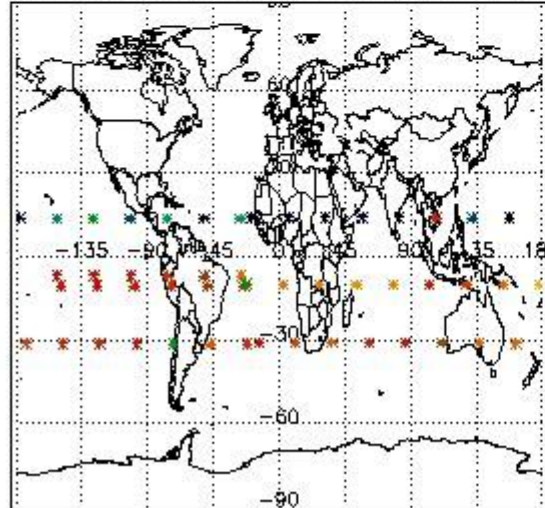
Percentage of flagged data per O3 profile



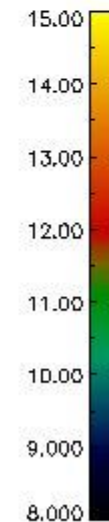
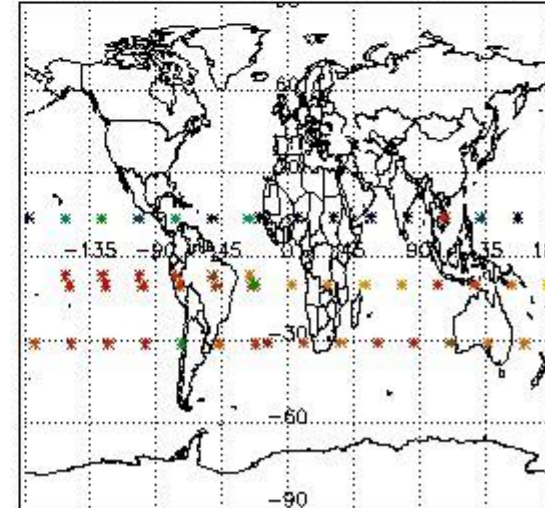
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

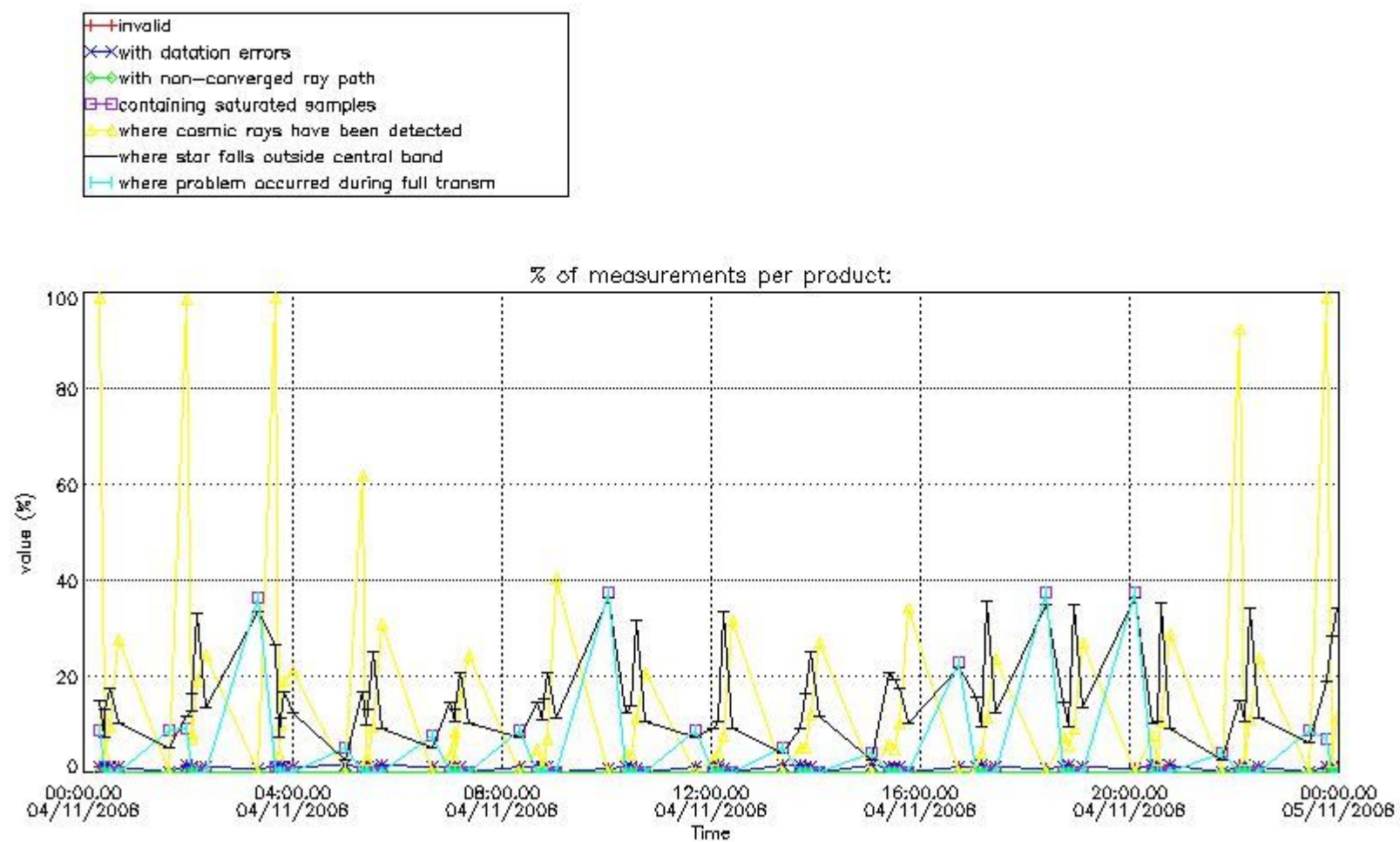


#### 4. Level 1 quality information per product

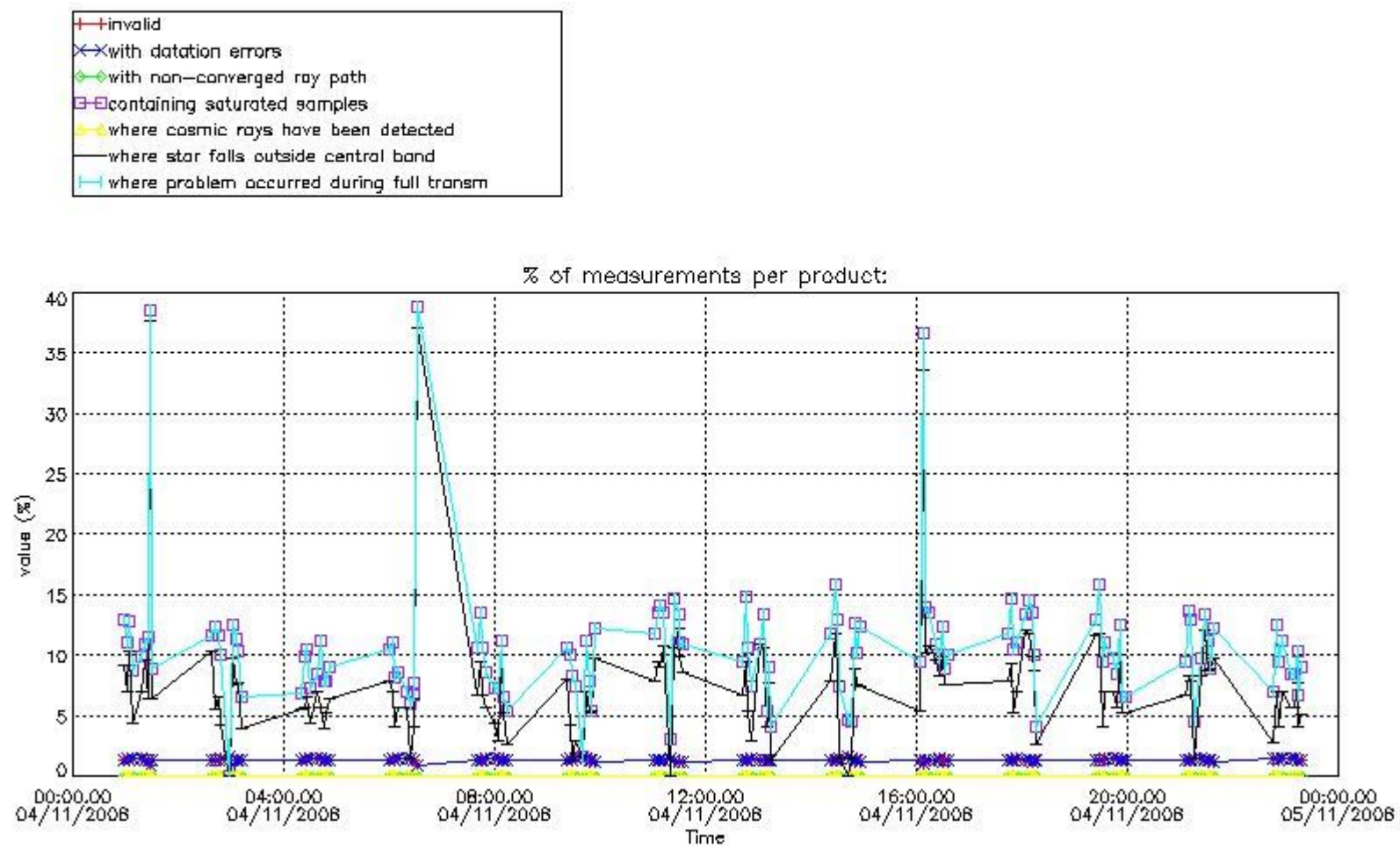
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

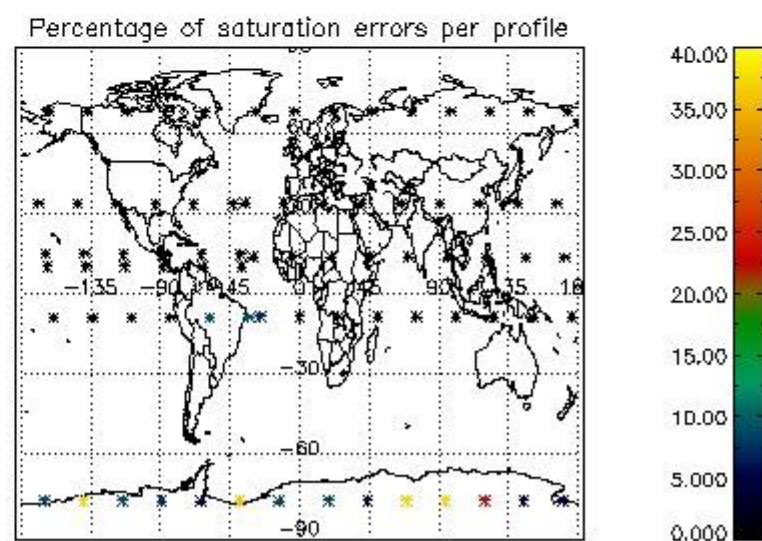
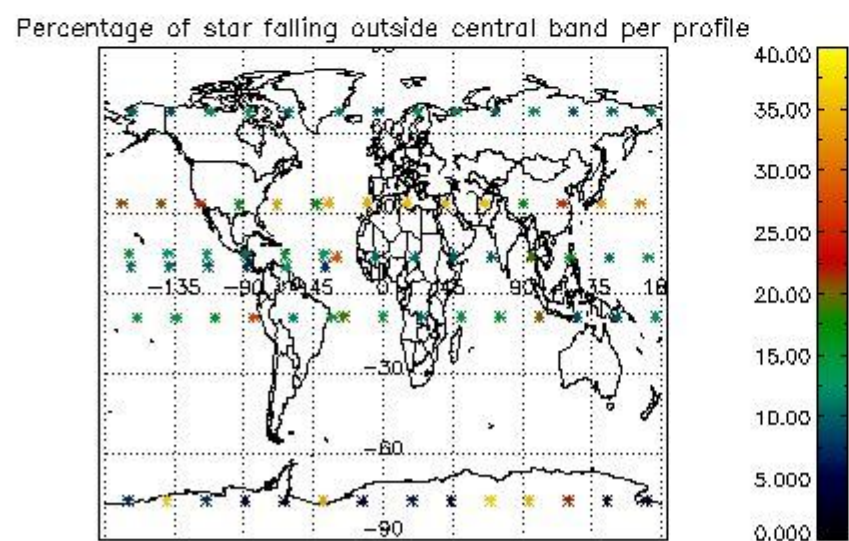
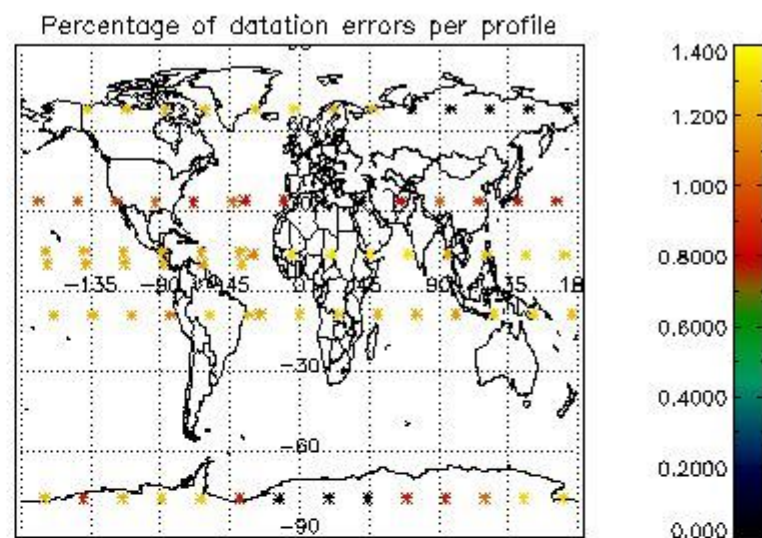
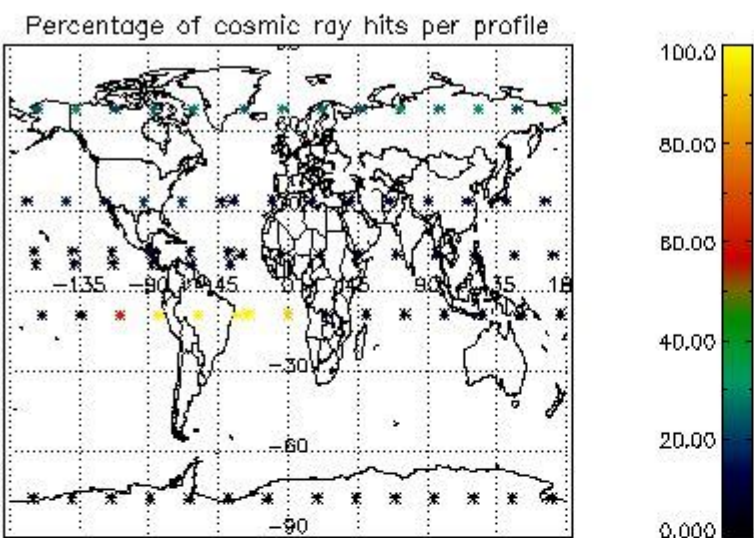


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

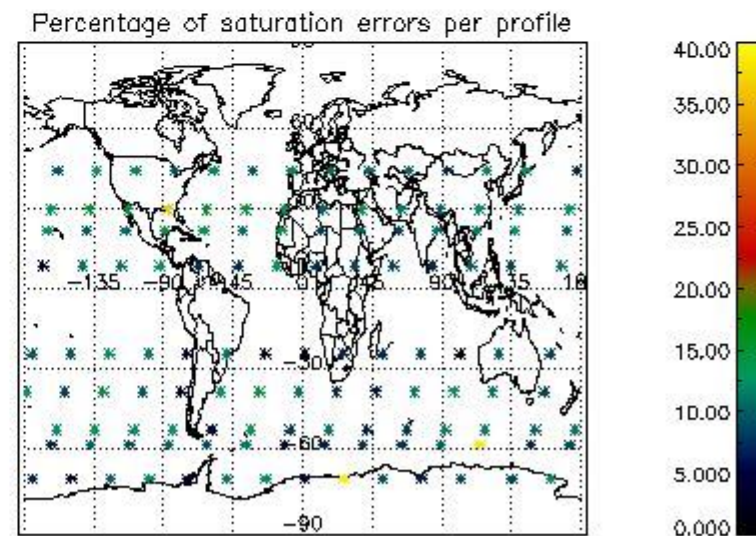
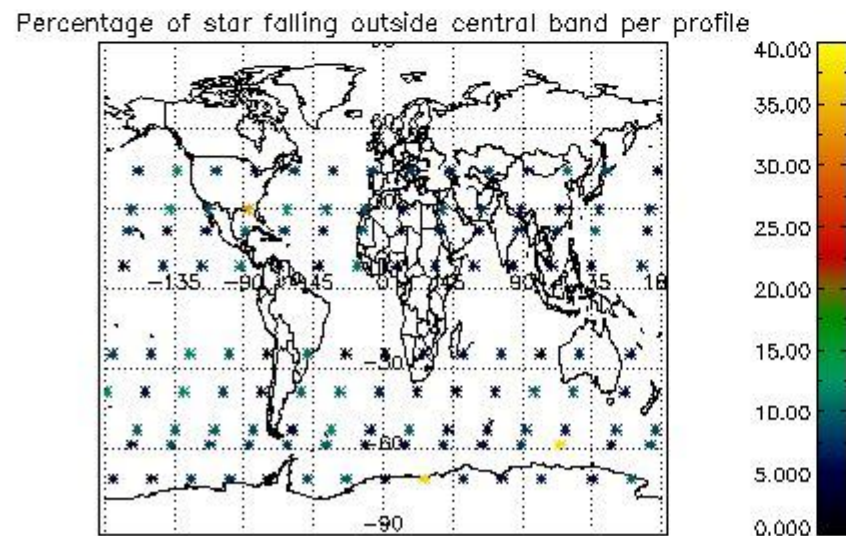
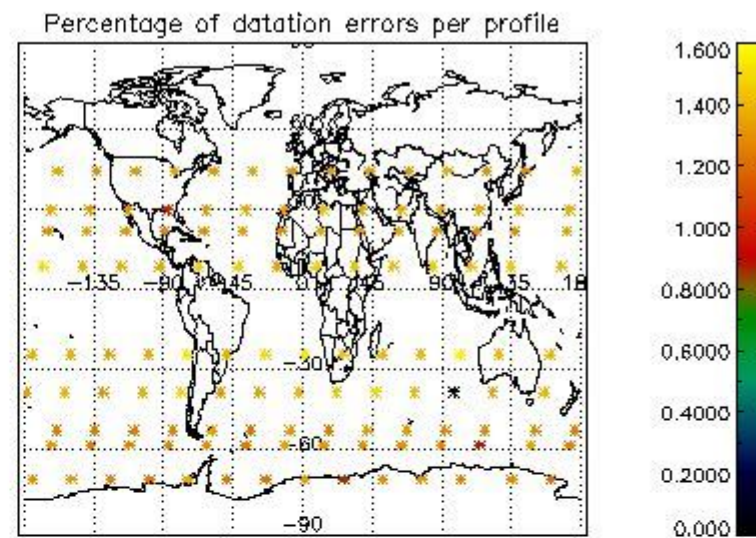
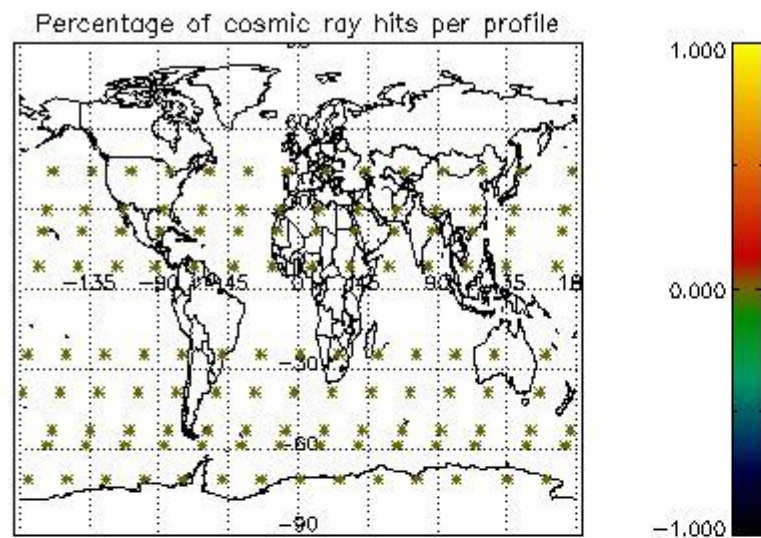


*4.2 Plot quality information per product coming from level 1b processing (world map)*

*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

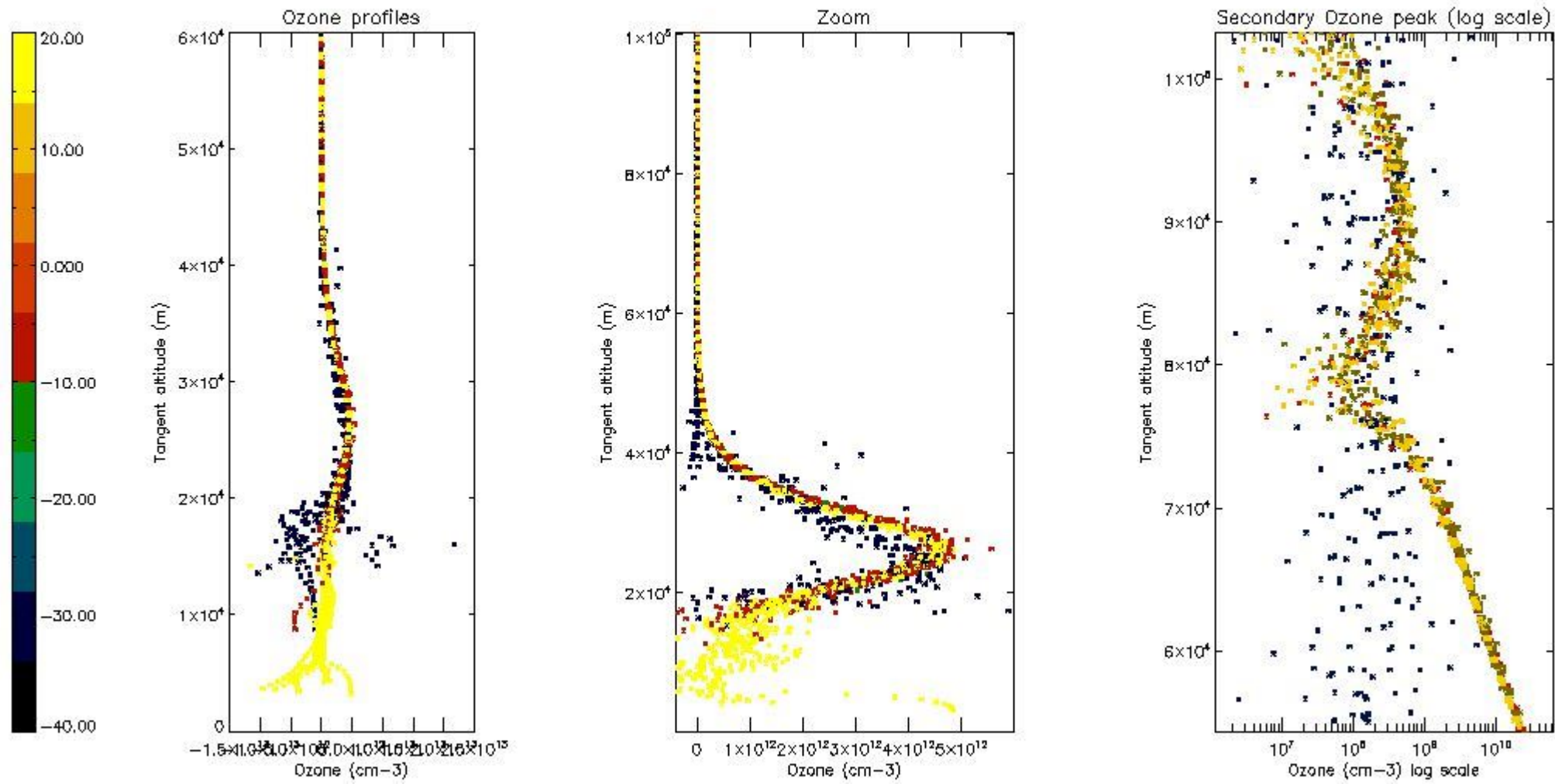
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	16

STD < 10	12
STD < 5	7

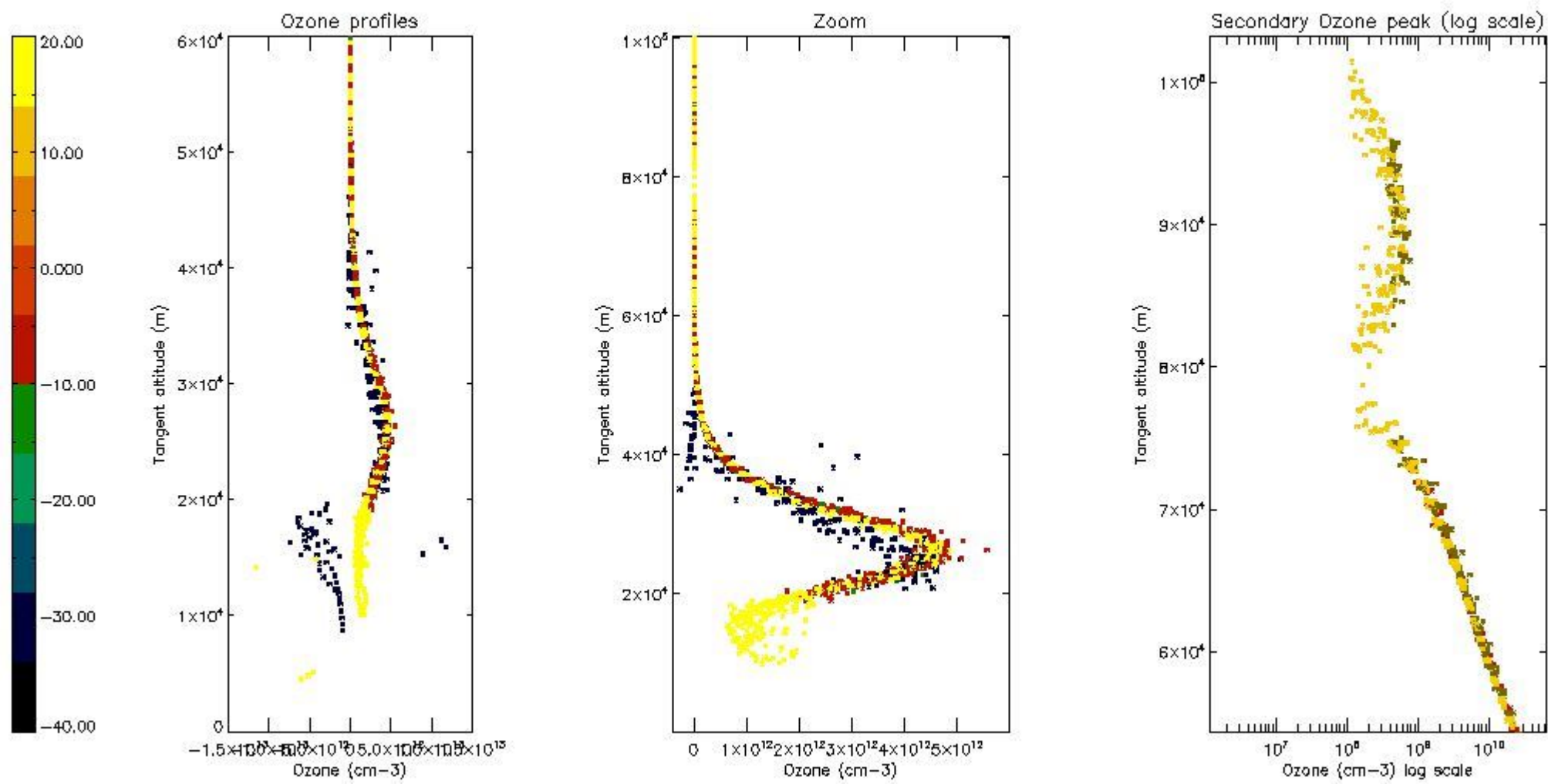
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



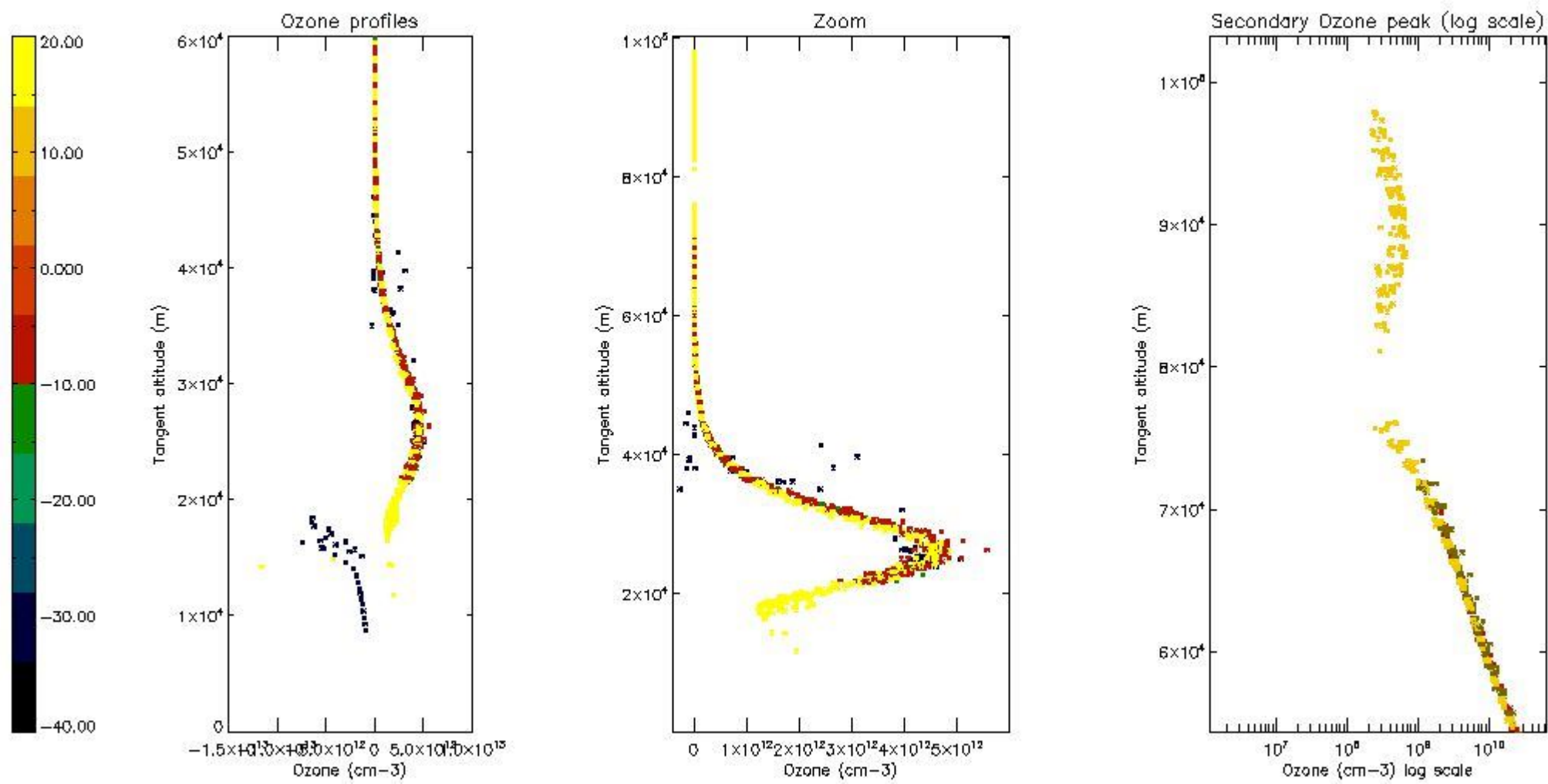
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

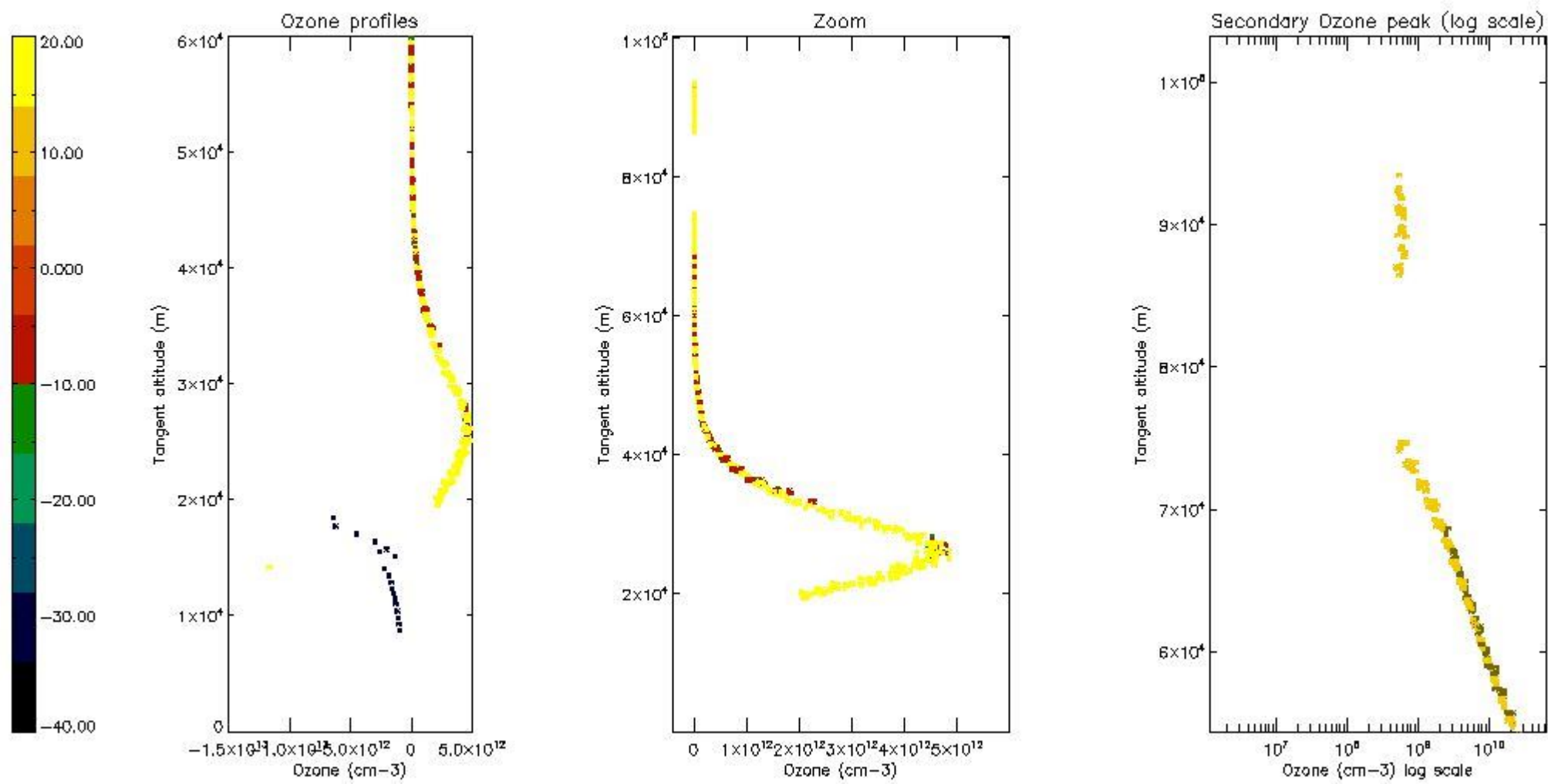
The colorbar represents the latitude.



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

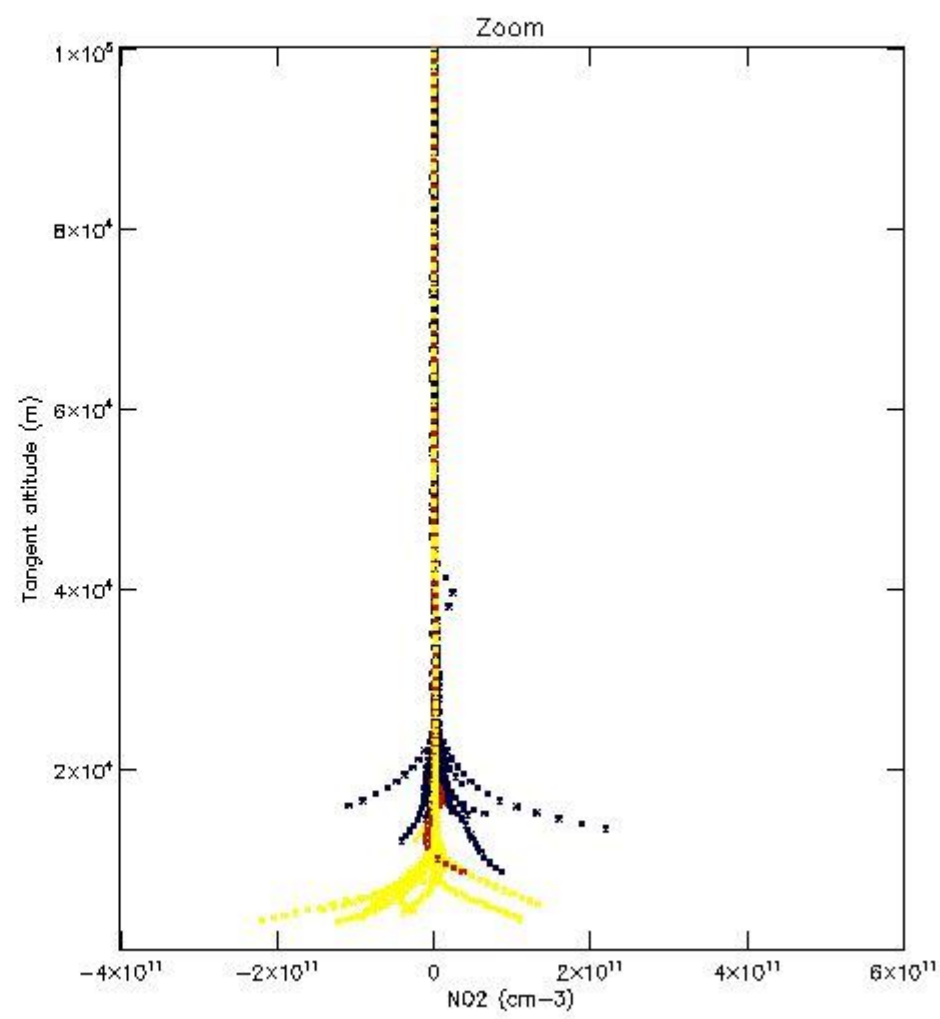
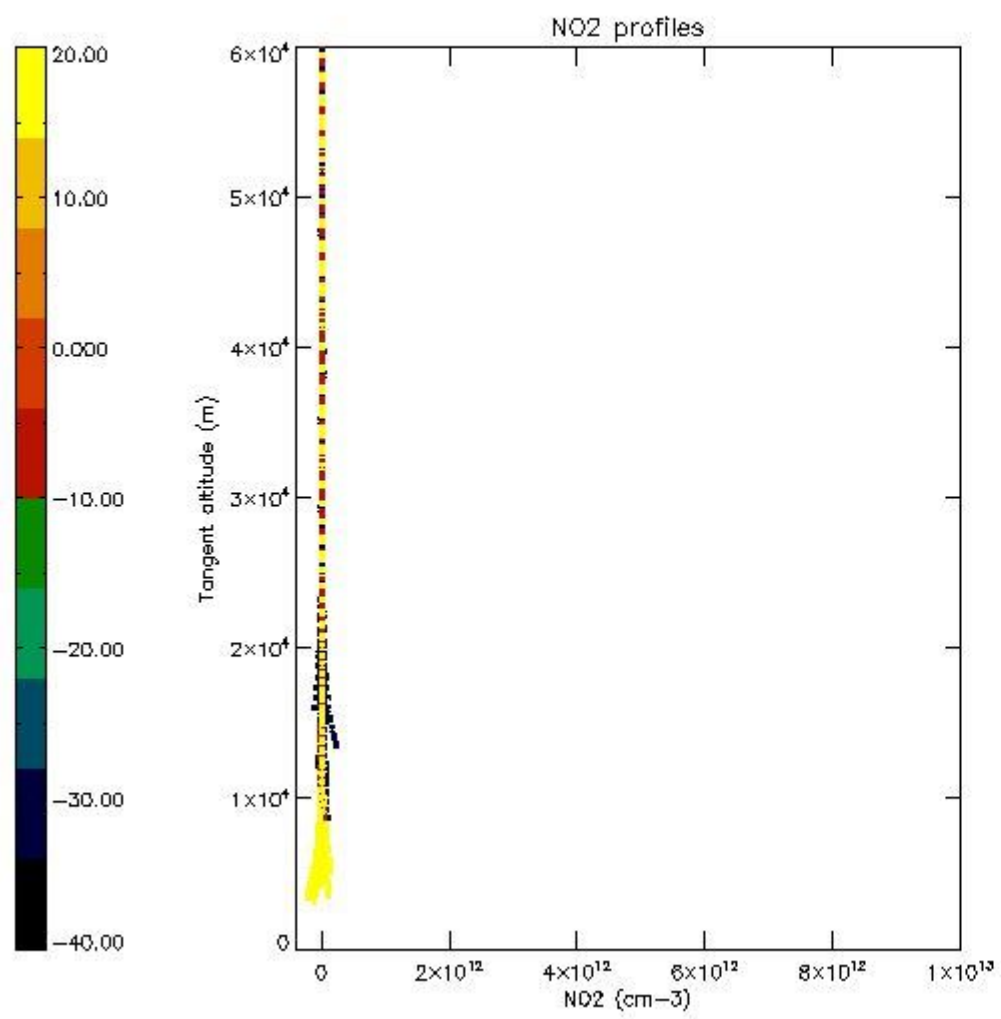
The colorbar represents the latitude.





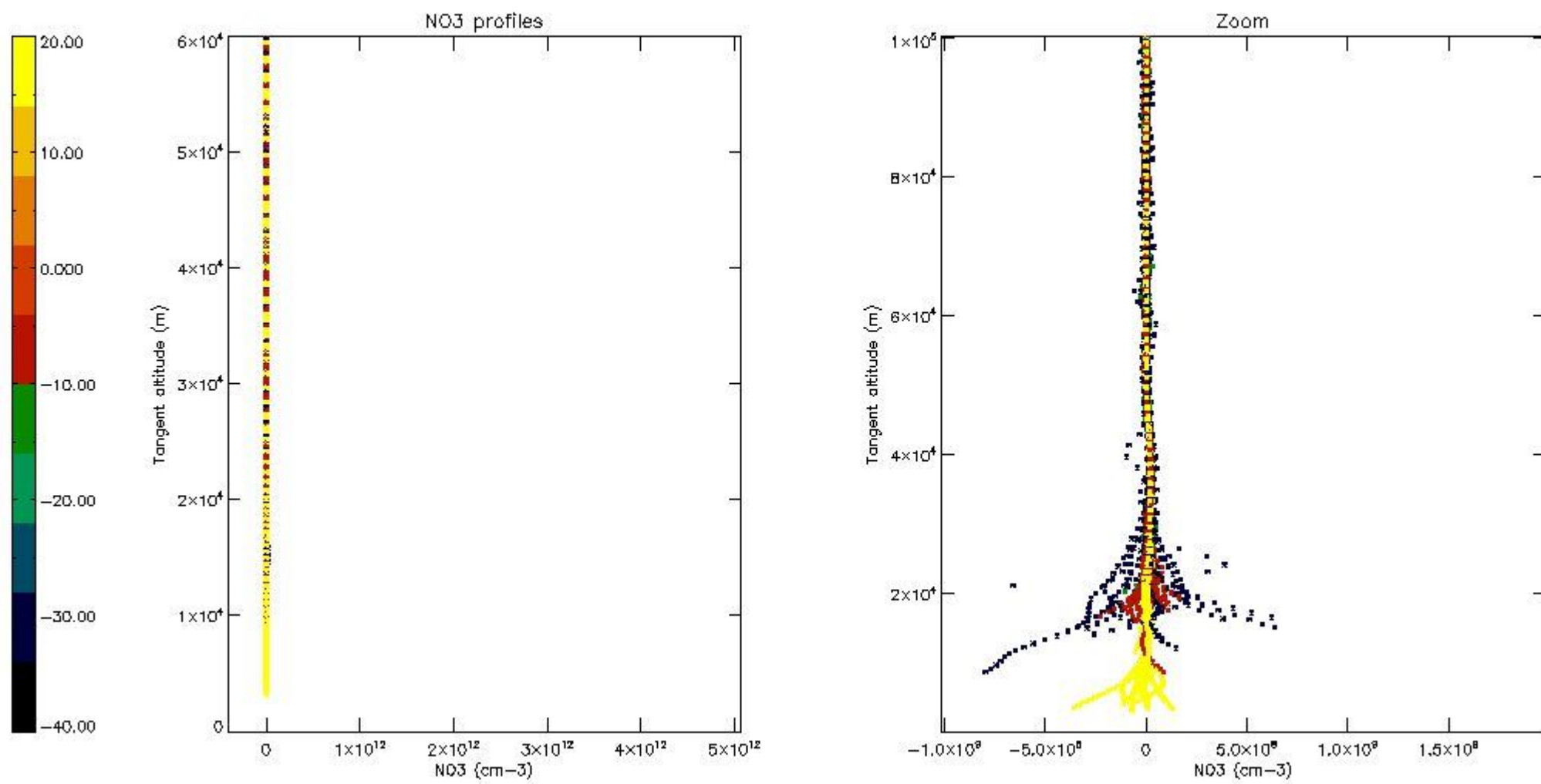
5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)

The colorbar represents the latitude.



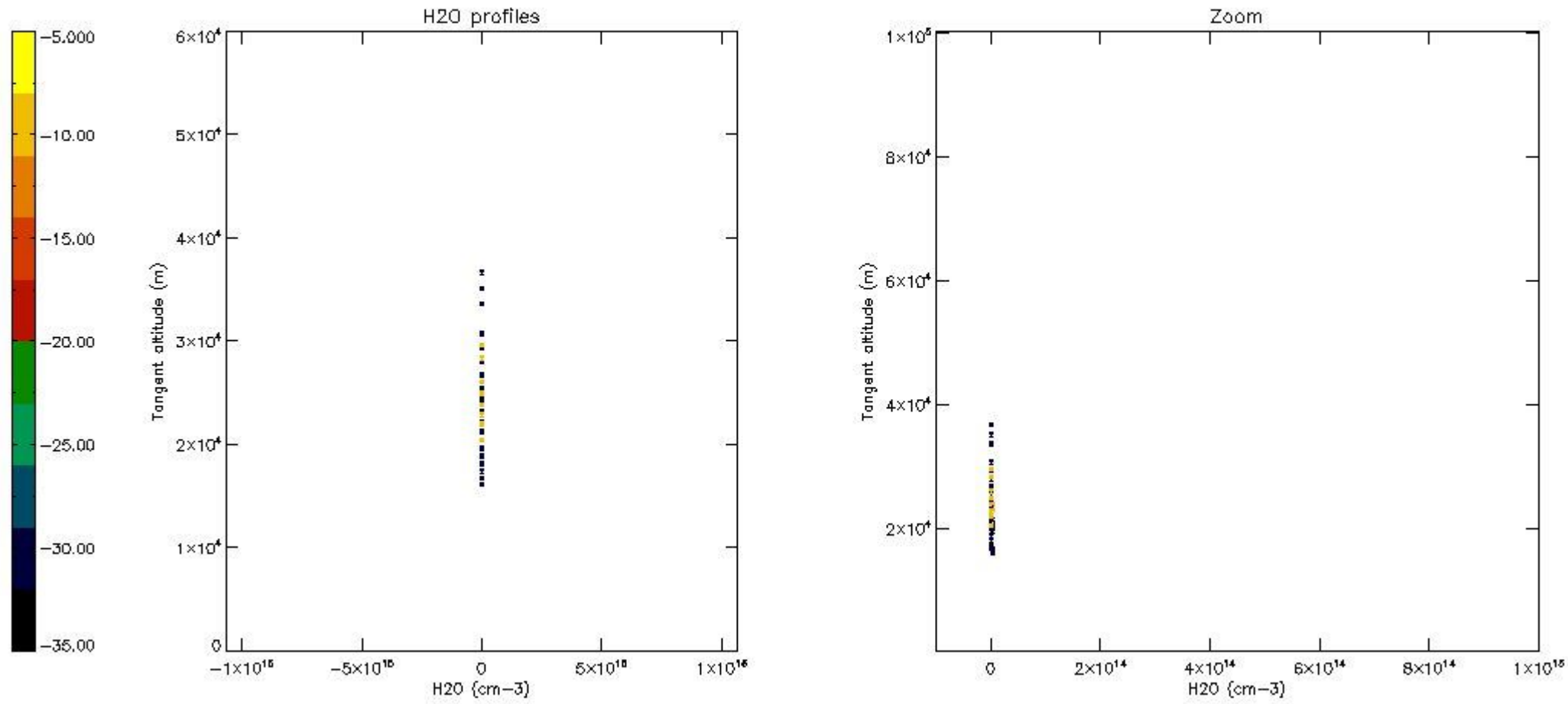
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

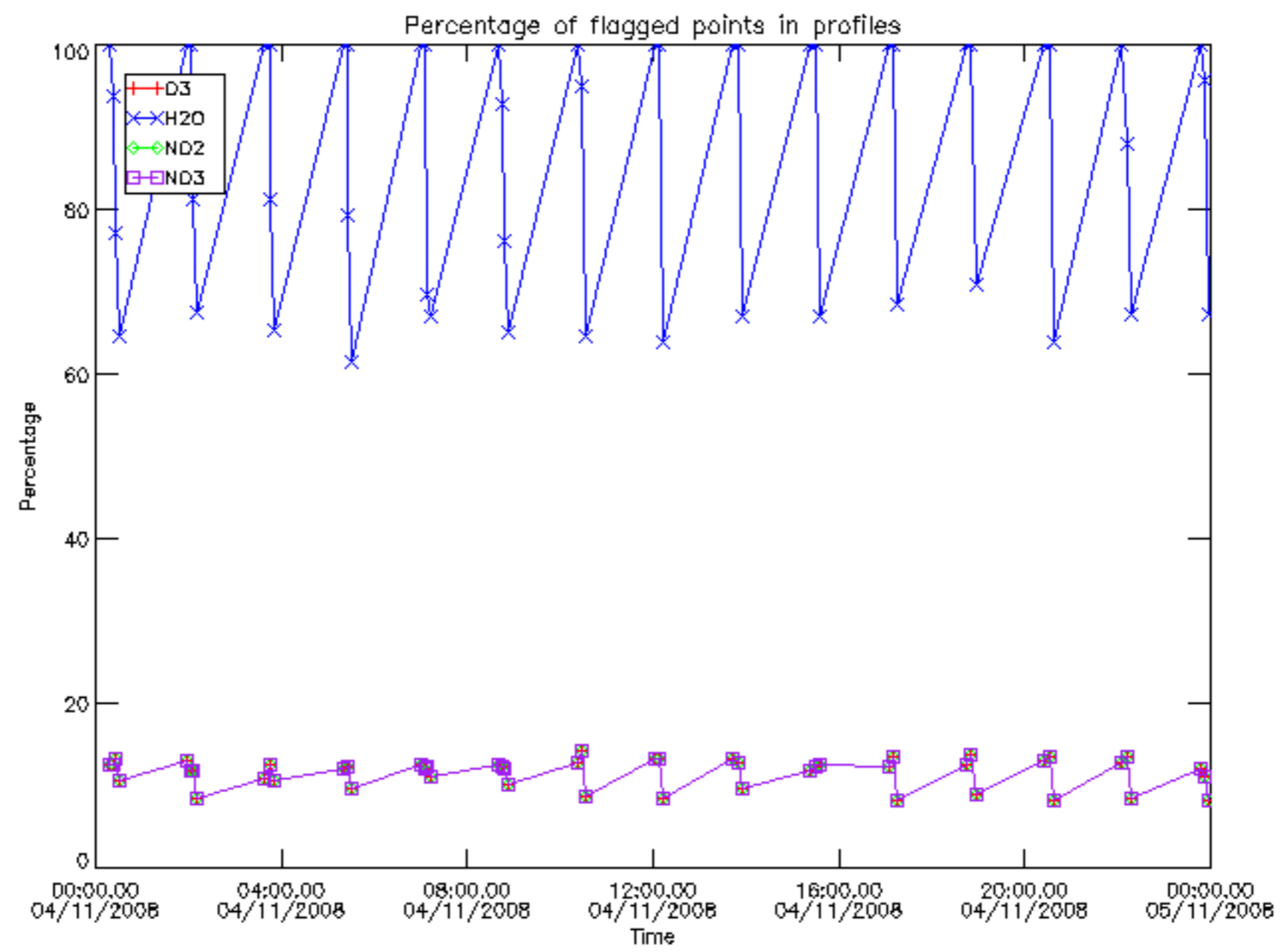
The colorbar represents the latitude.



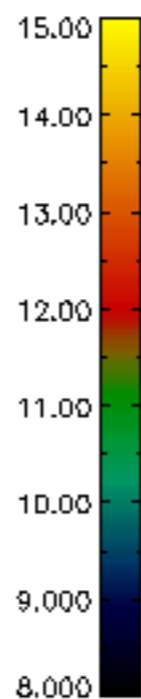
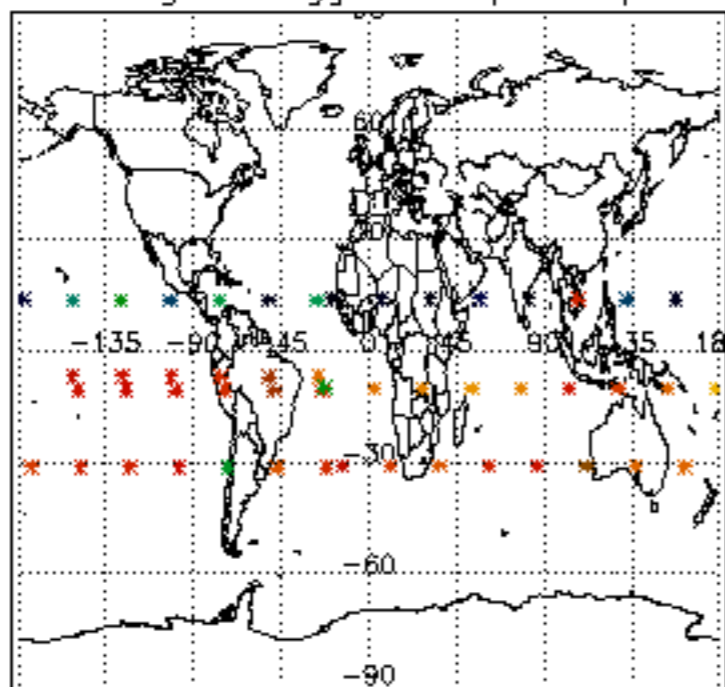
## 6. Auxiliary Data Files used for the production reported in section 2

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

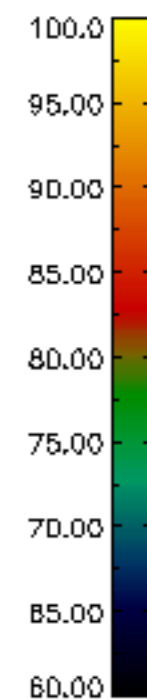
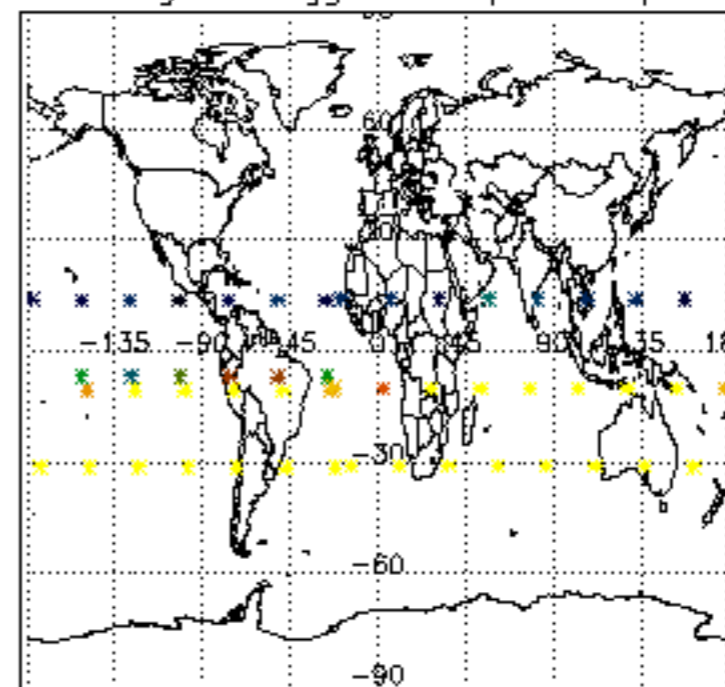
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-NOV-2008 00:17:47
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-NOV-2008 00:17:47
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-NOV-2008 00:17:47



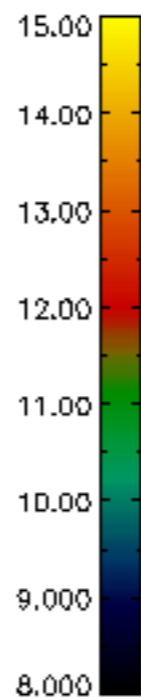
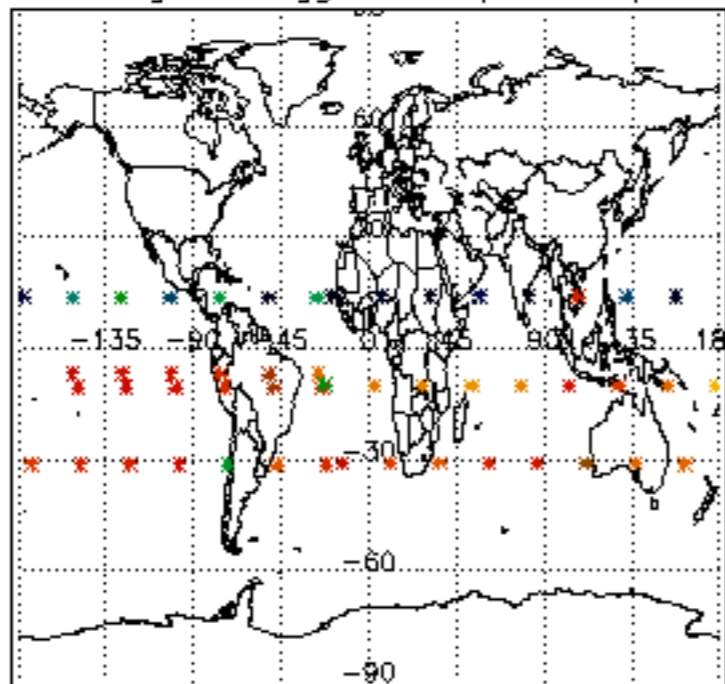
Percentage of flagged data per D3 profile



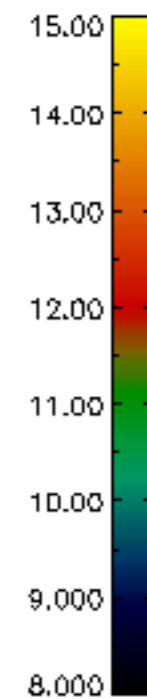
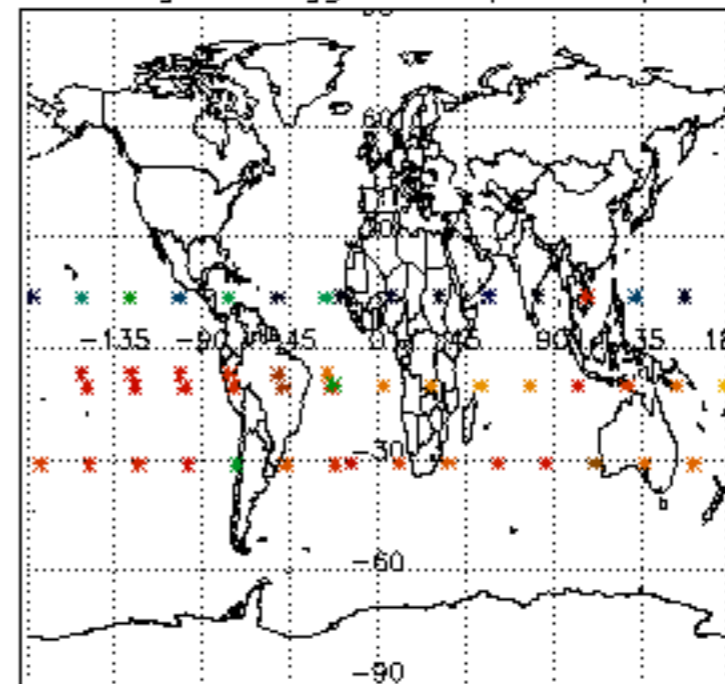
Percentage of flagged data per H2O profile

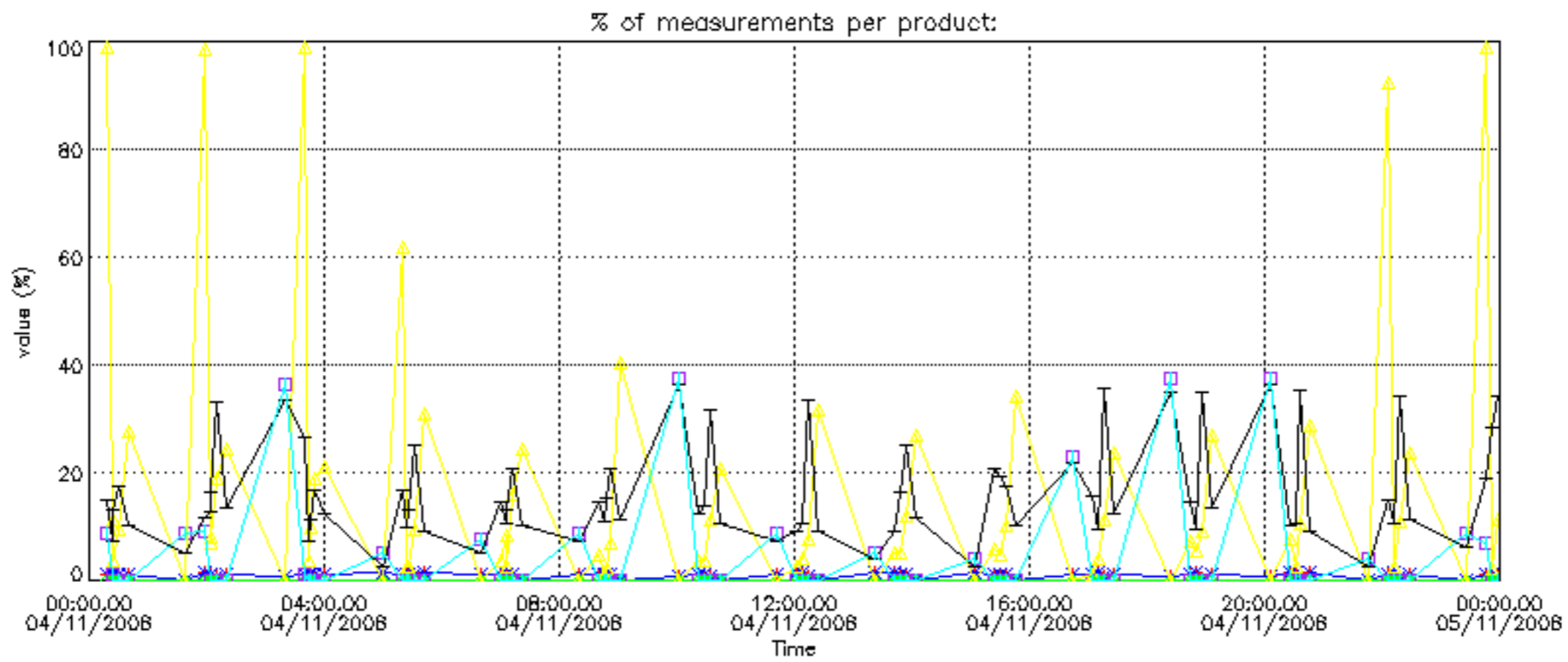


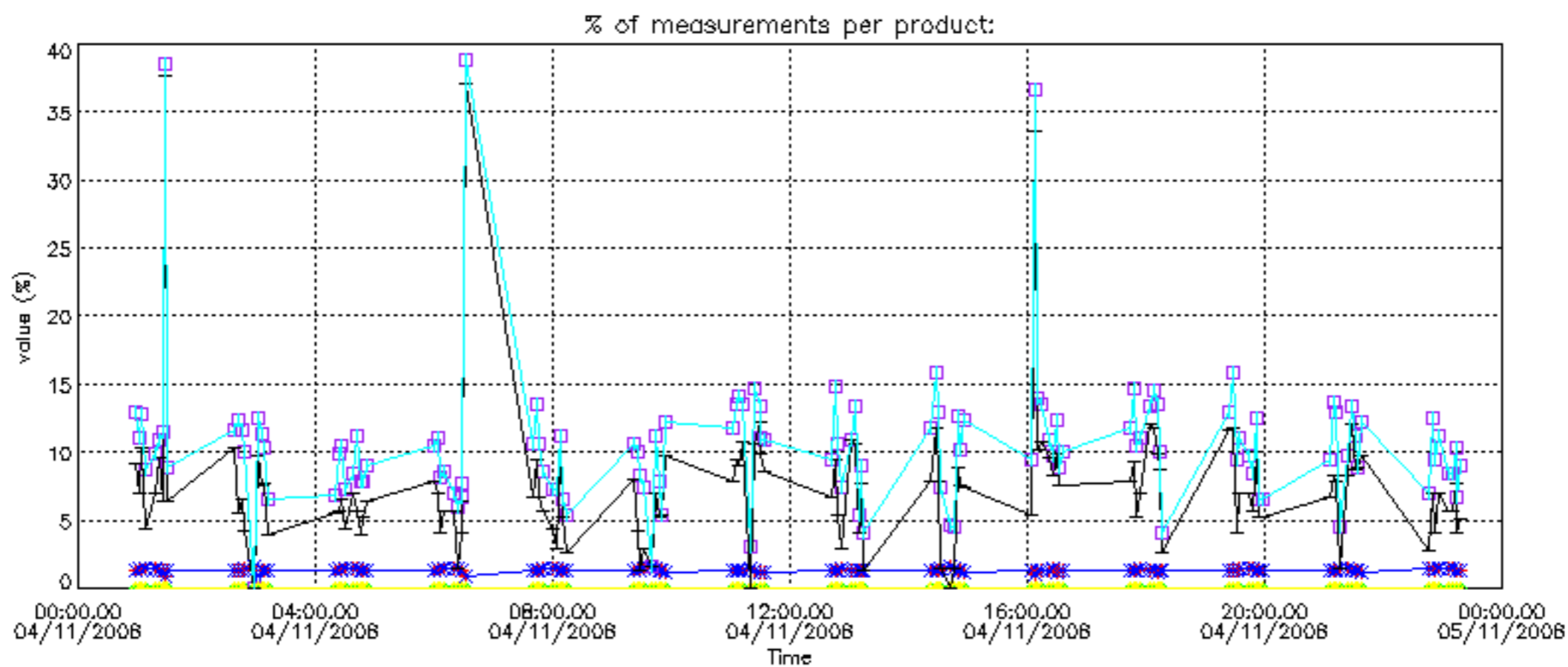
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

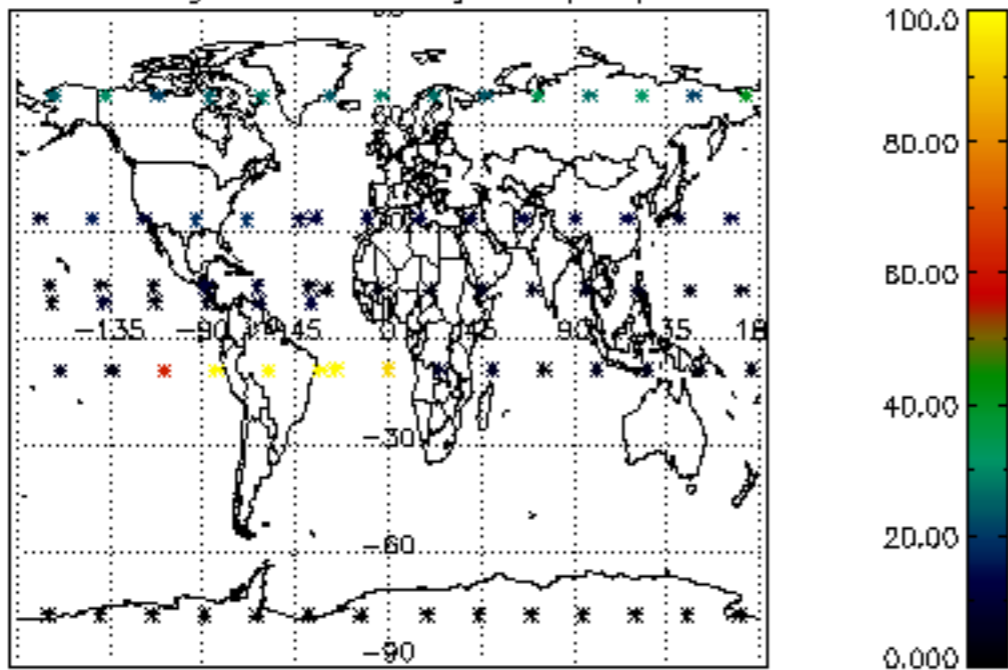




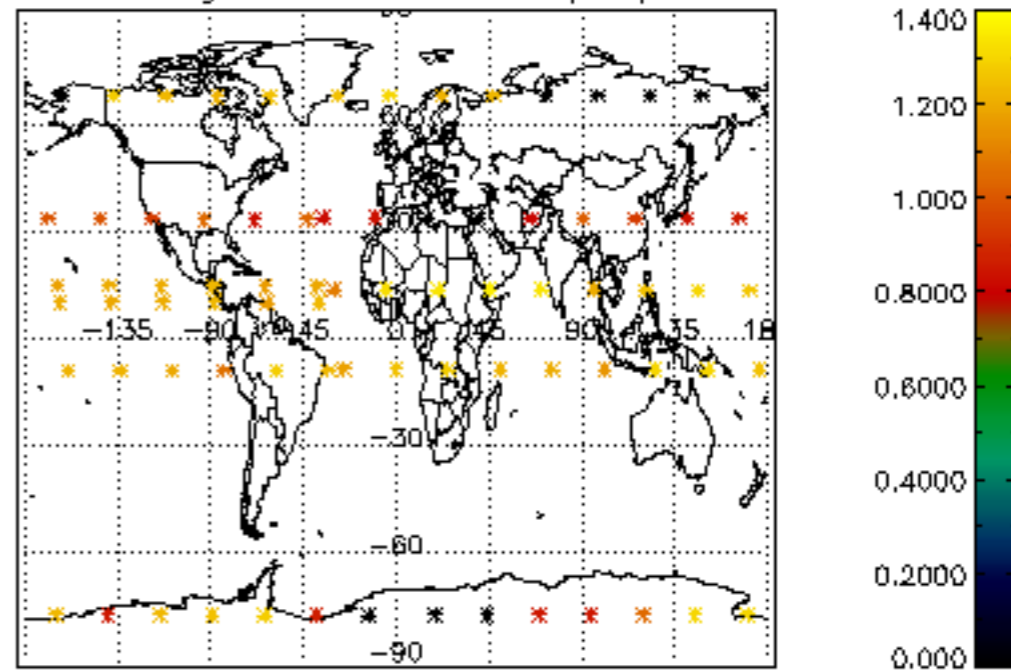




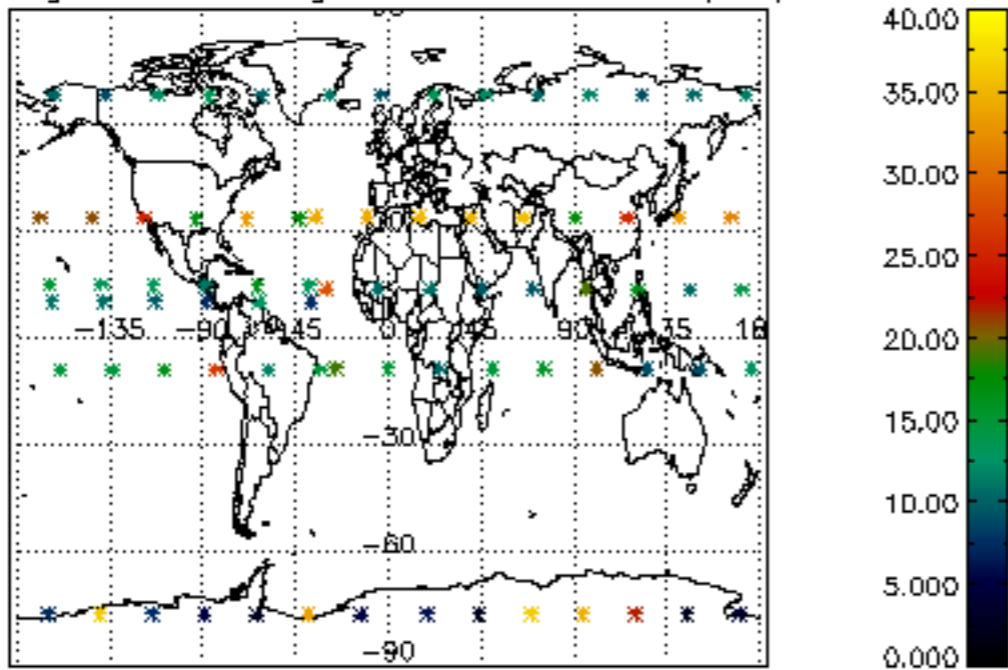
Percentage of cosmic ray hits per profile



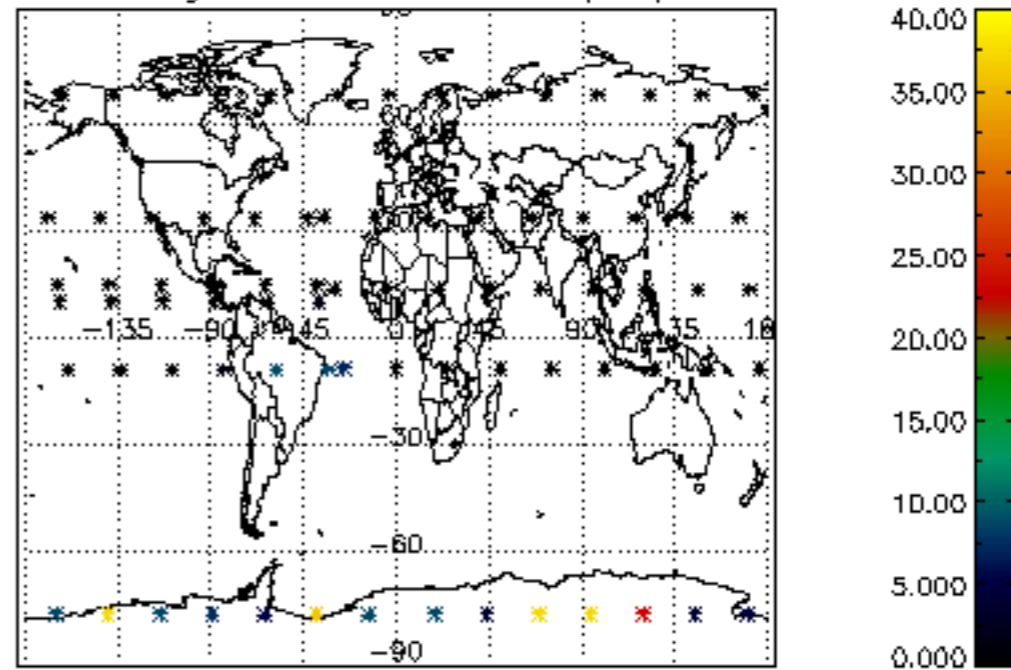
Percentage of datation errors per profile



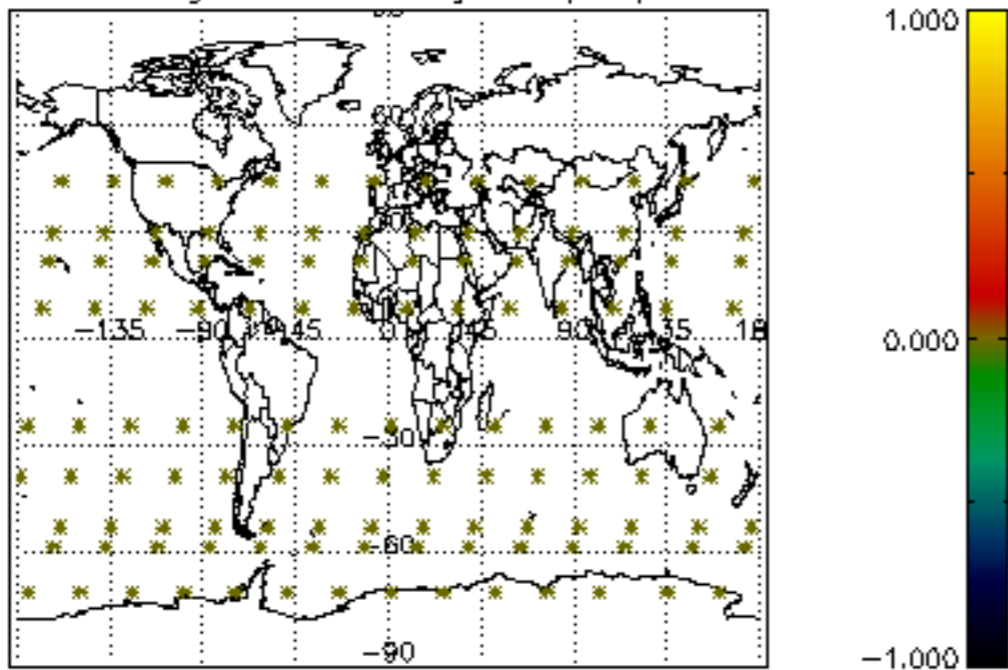
Percentage of star falling outside central band per profile



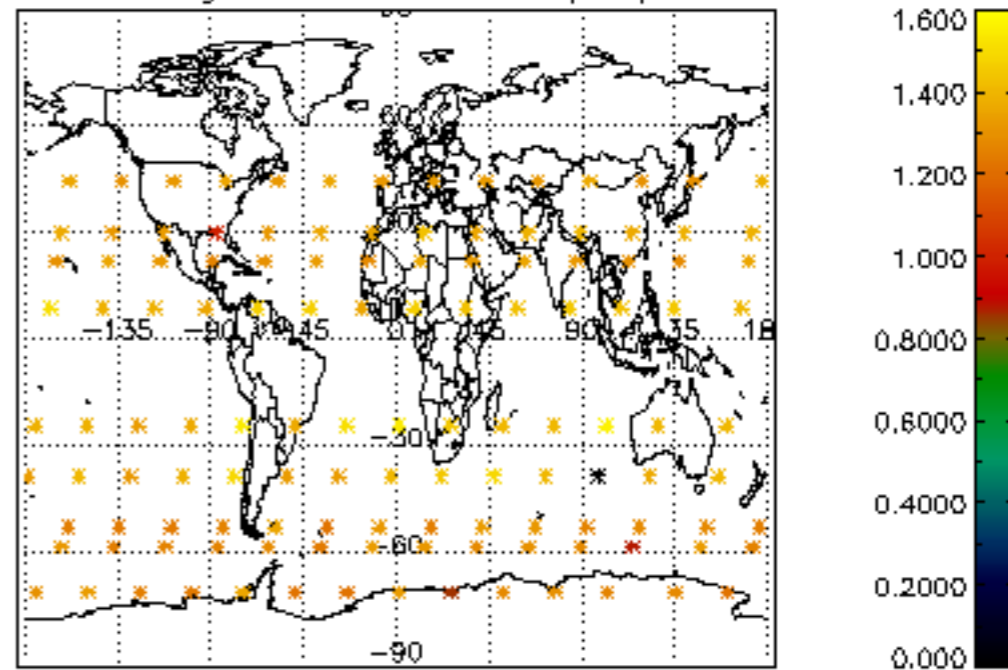
Percentage of saturation errors per profile



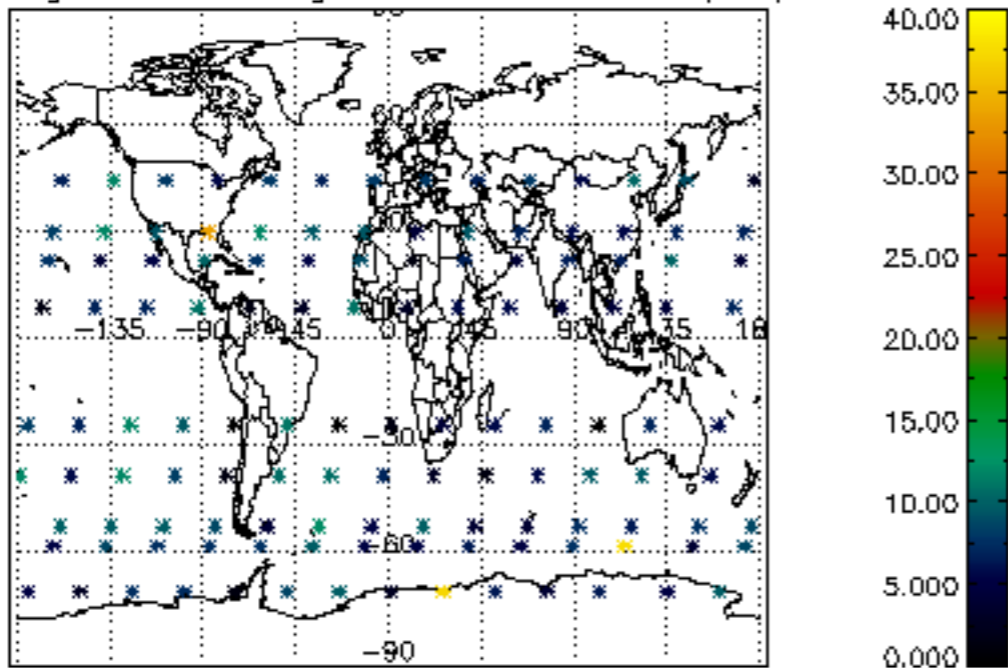
Percentage of cosmic ray hits per profile



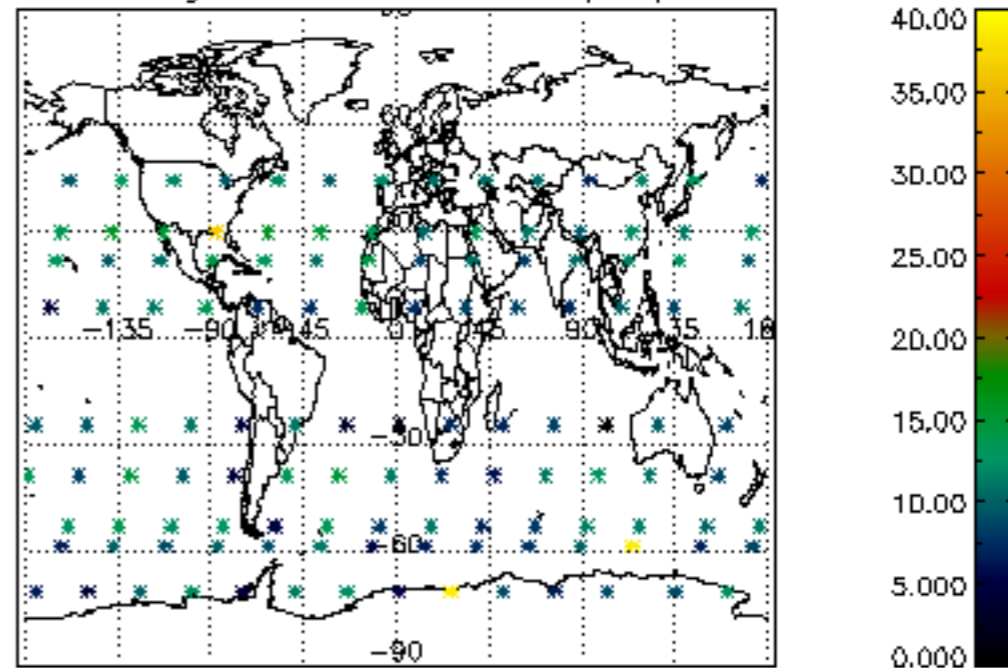
Percentage of datation errors per profile

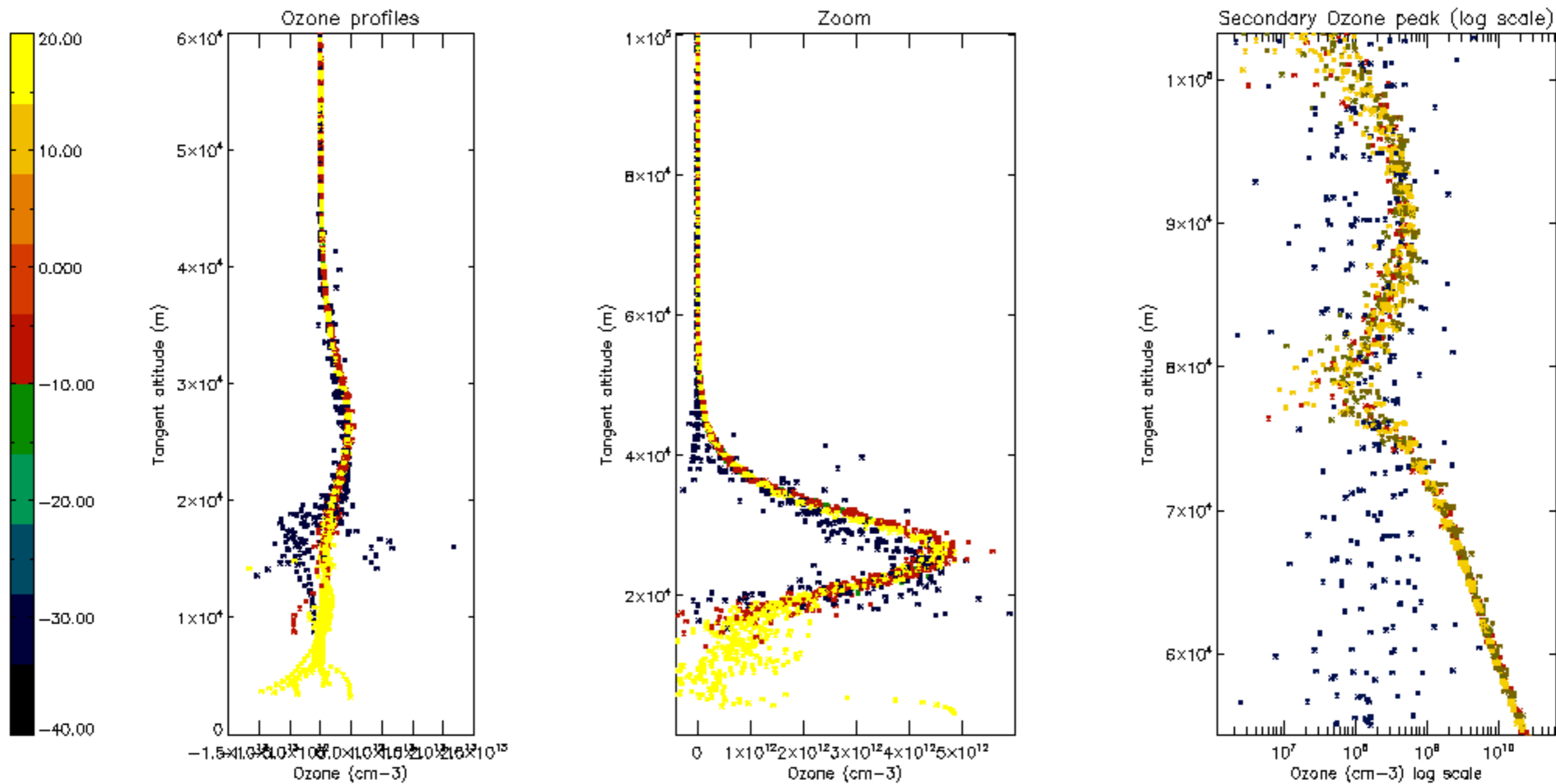


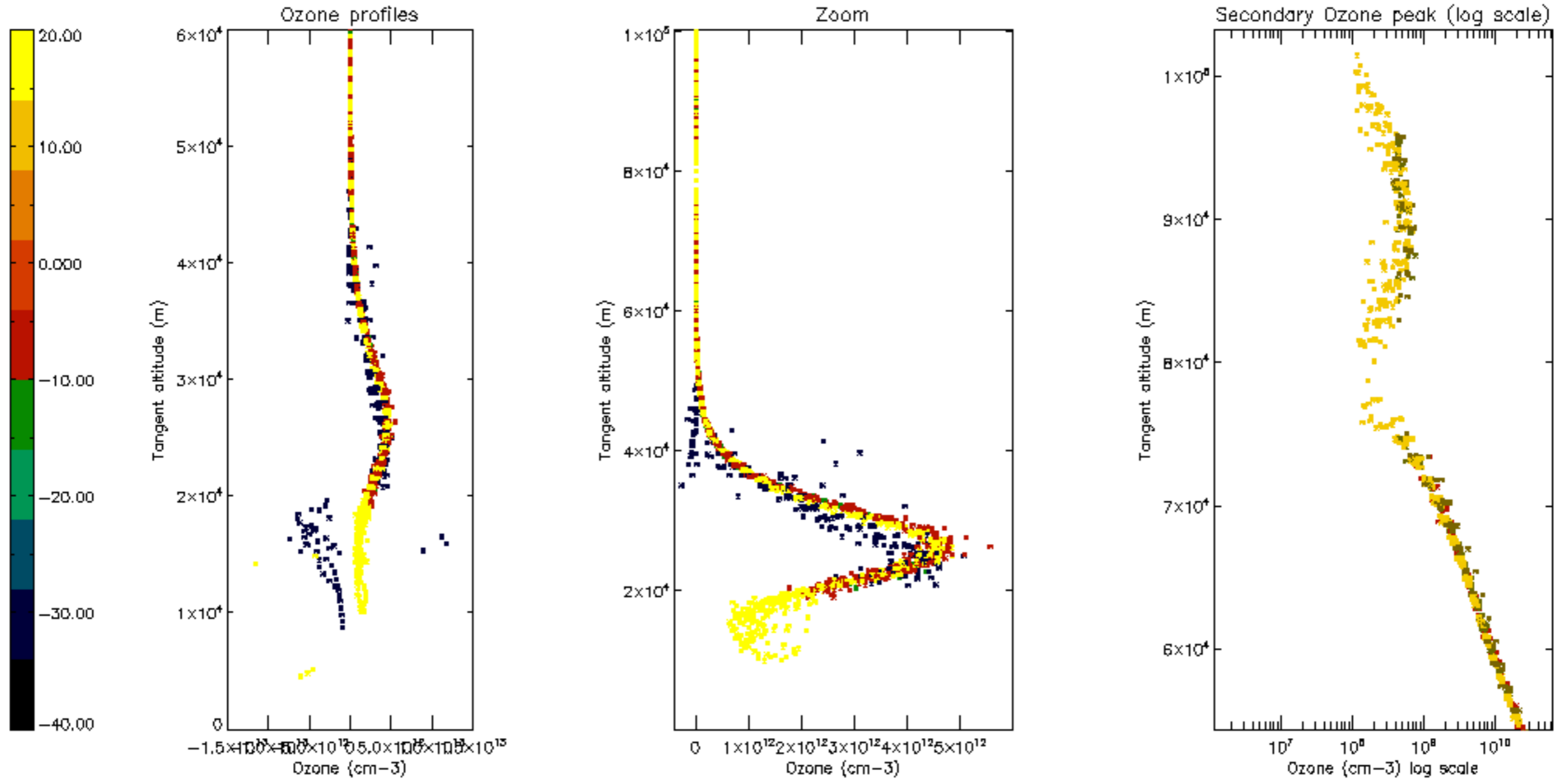
Percentage of star falling outside central band per profile

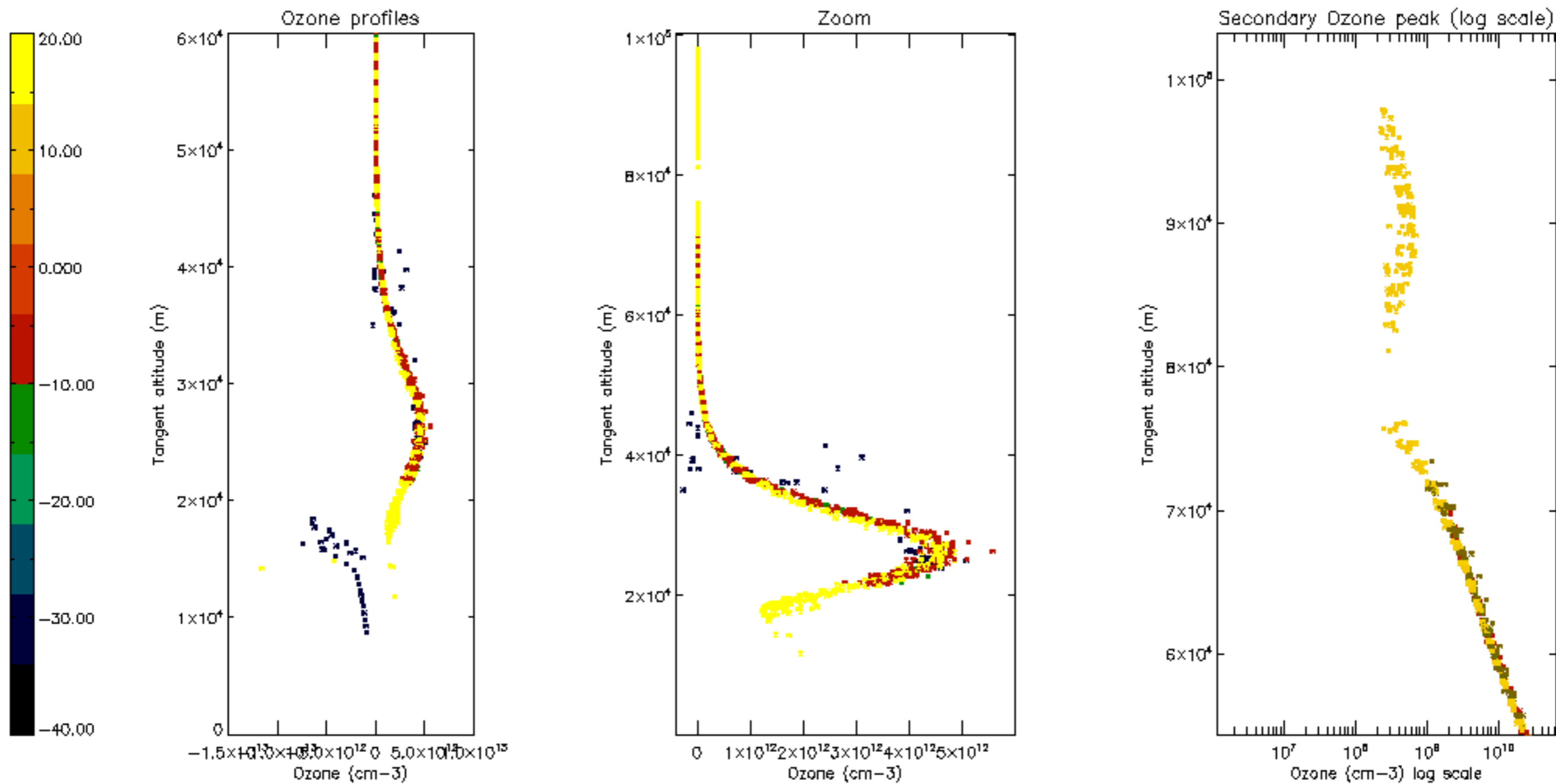


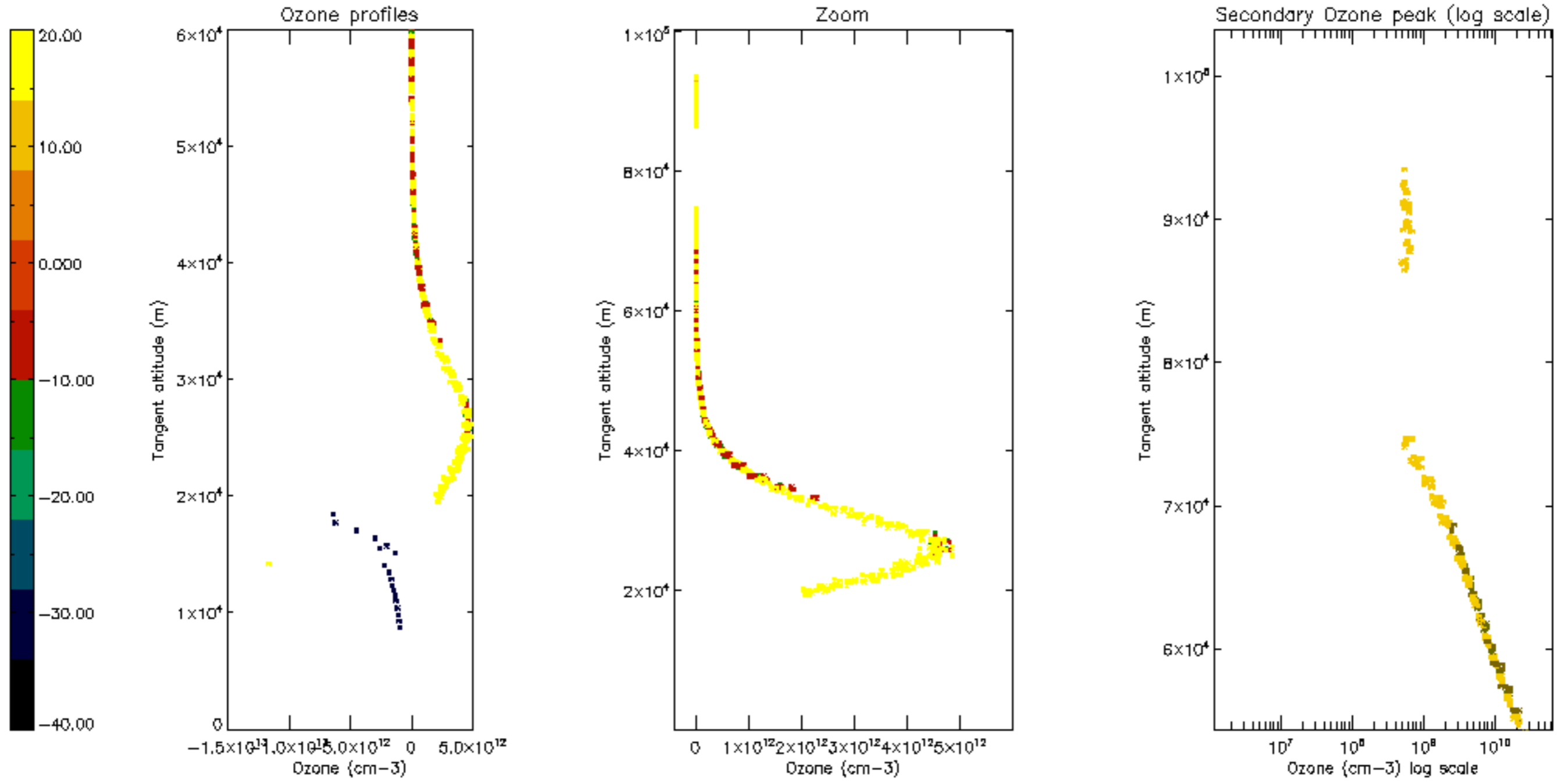
Percentage of saturation errors per profile

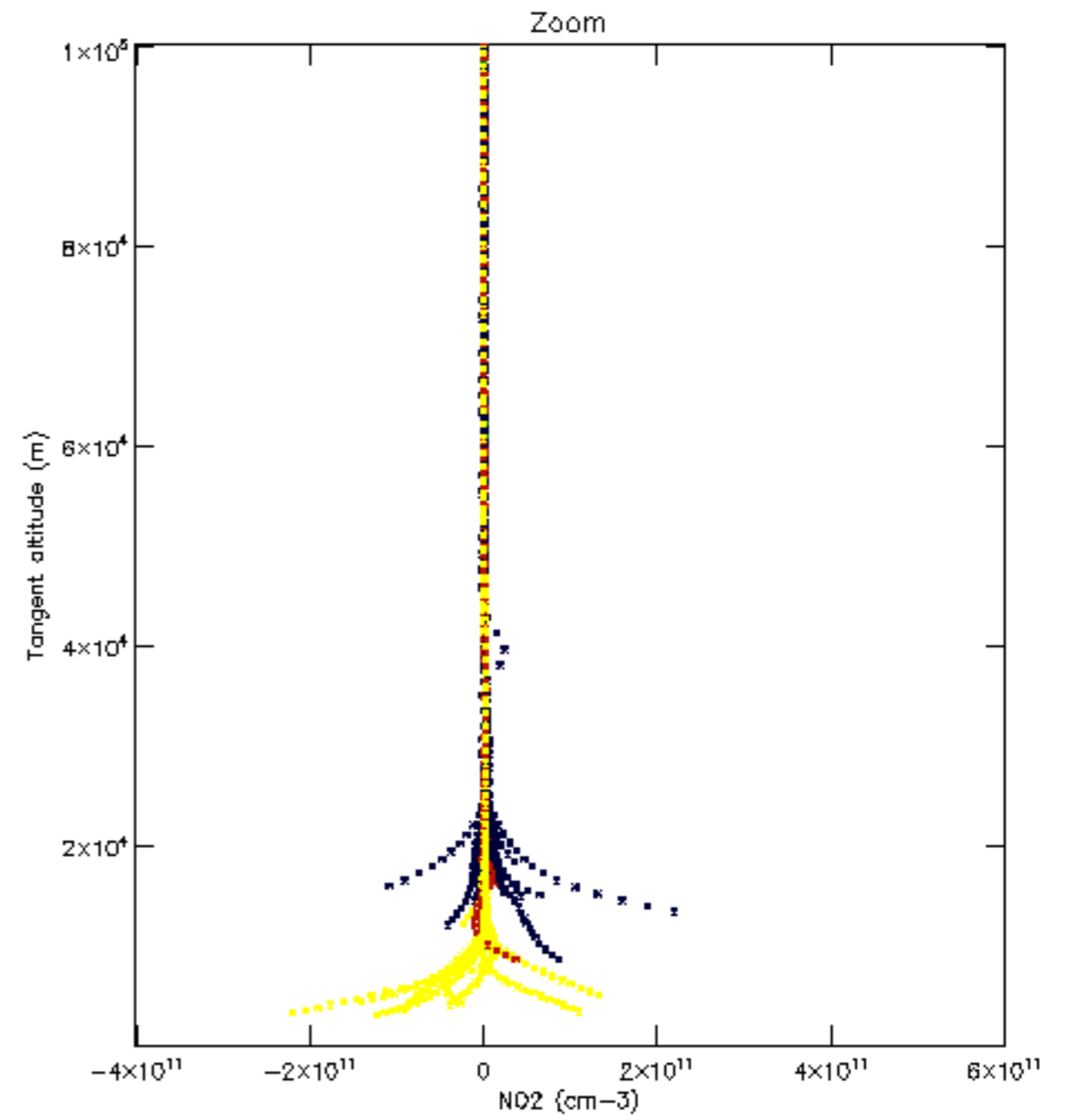
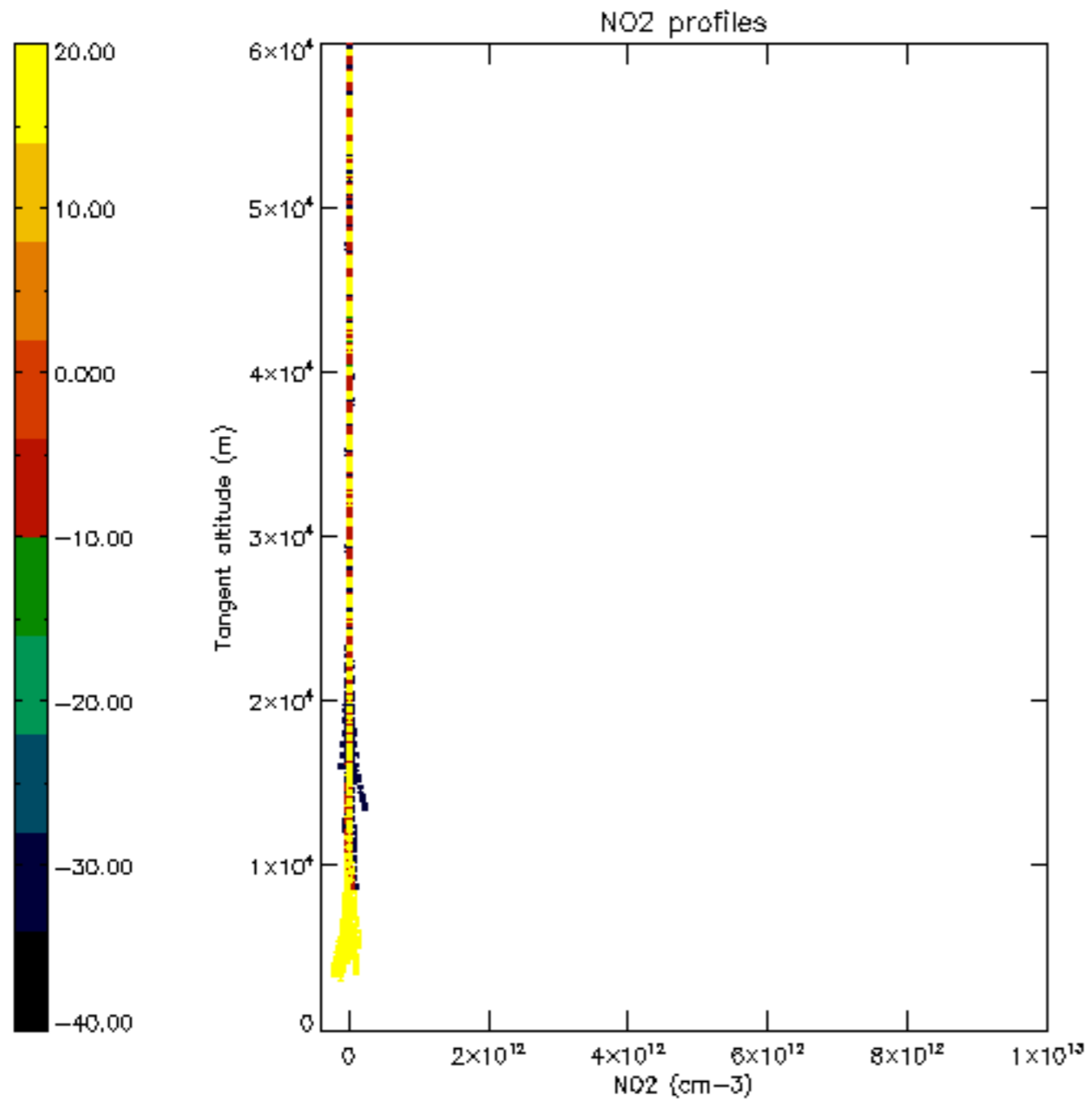


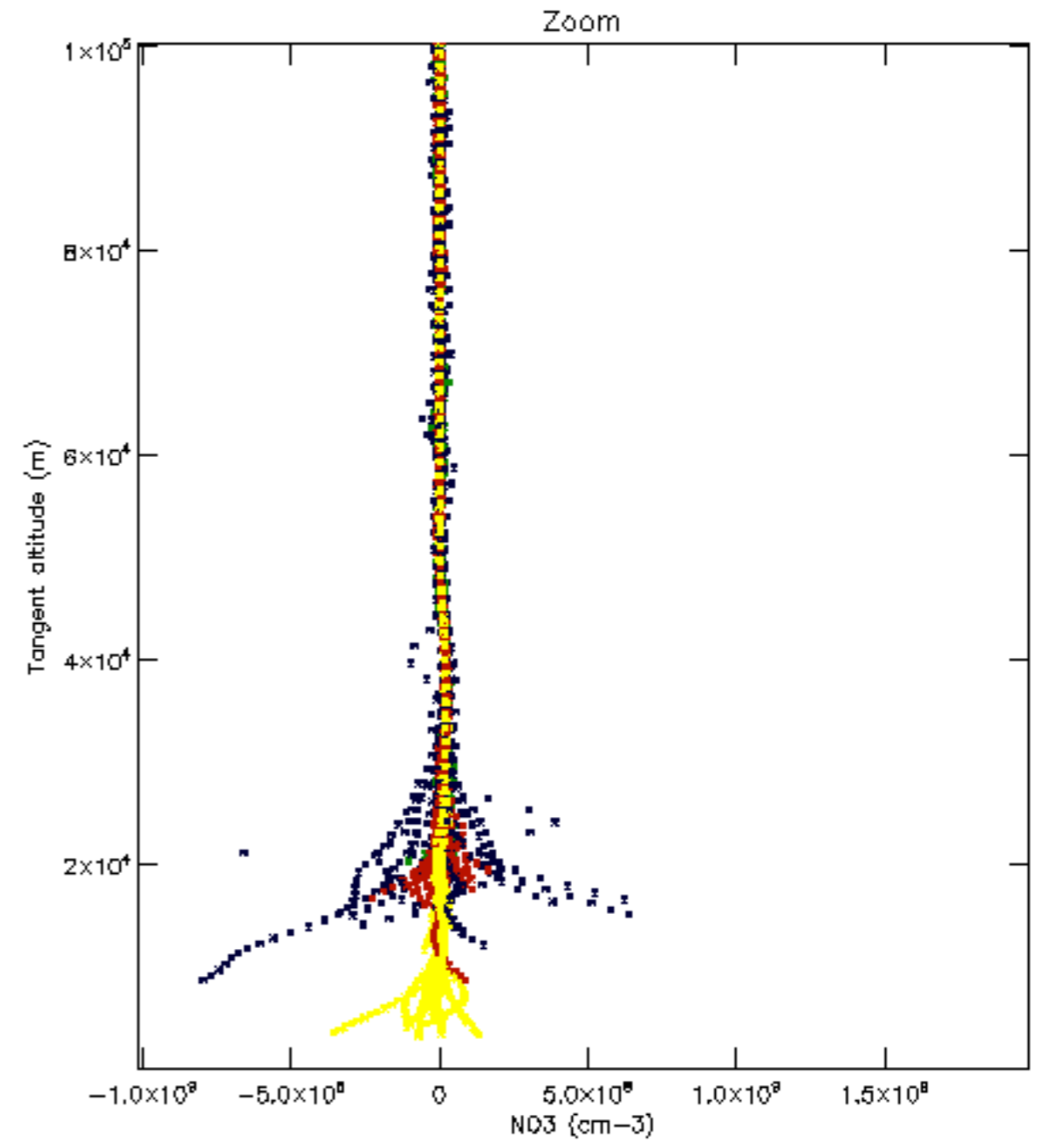
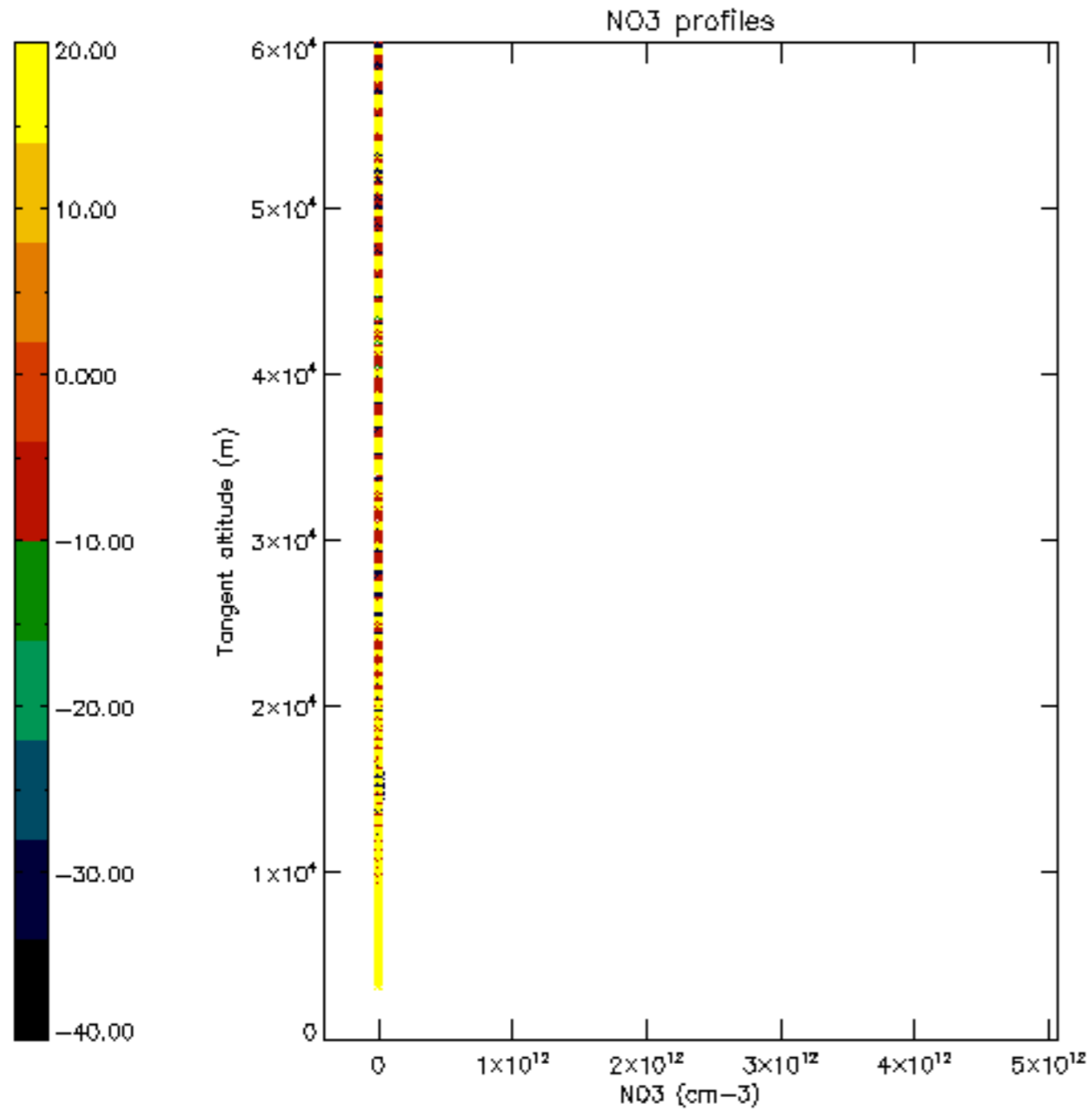




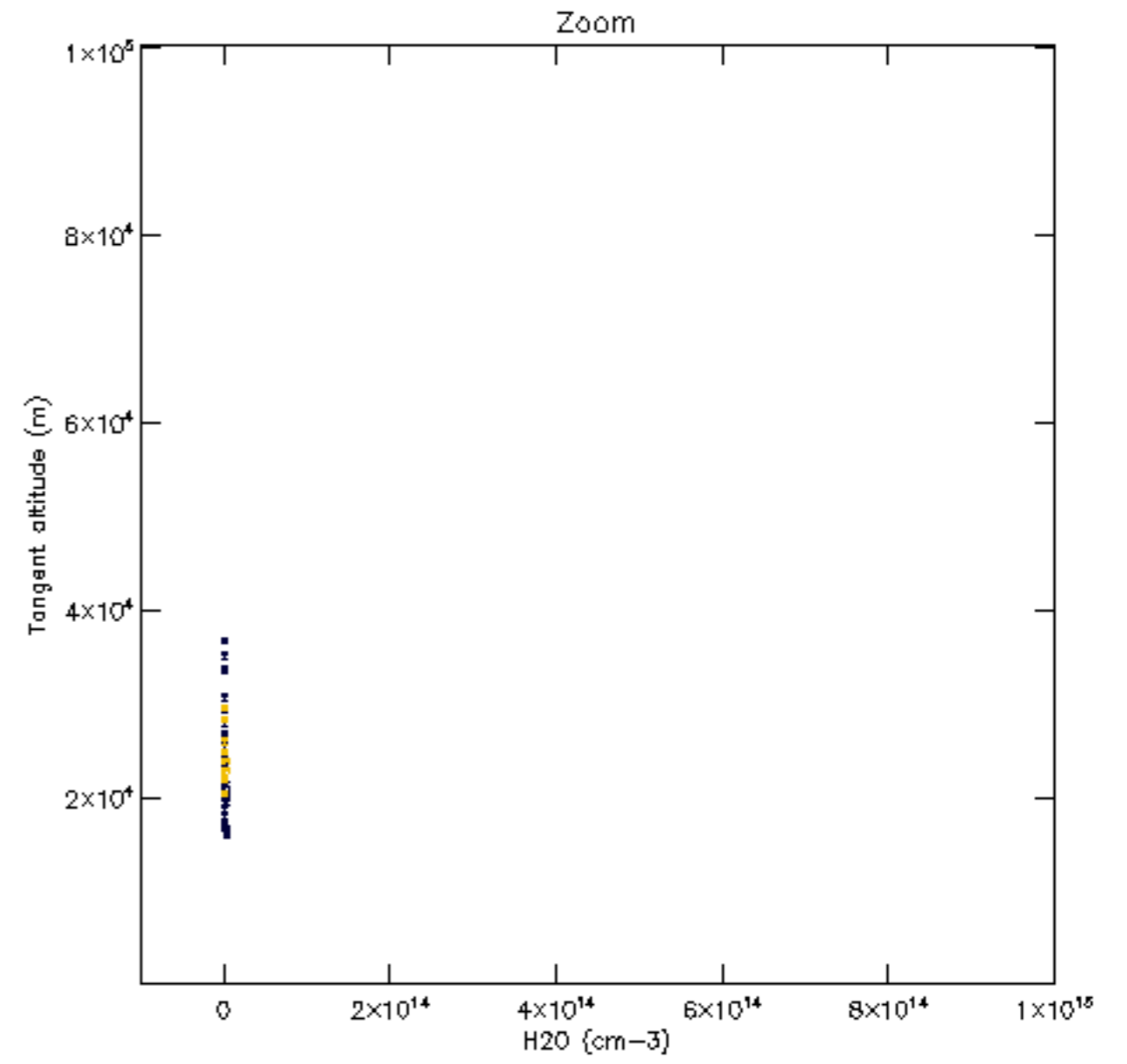
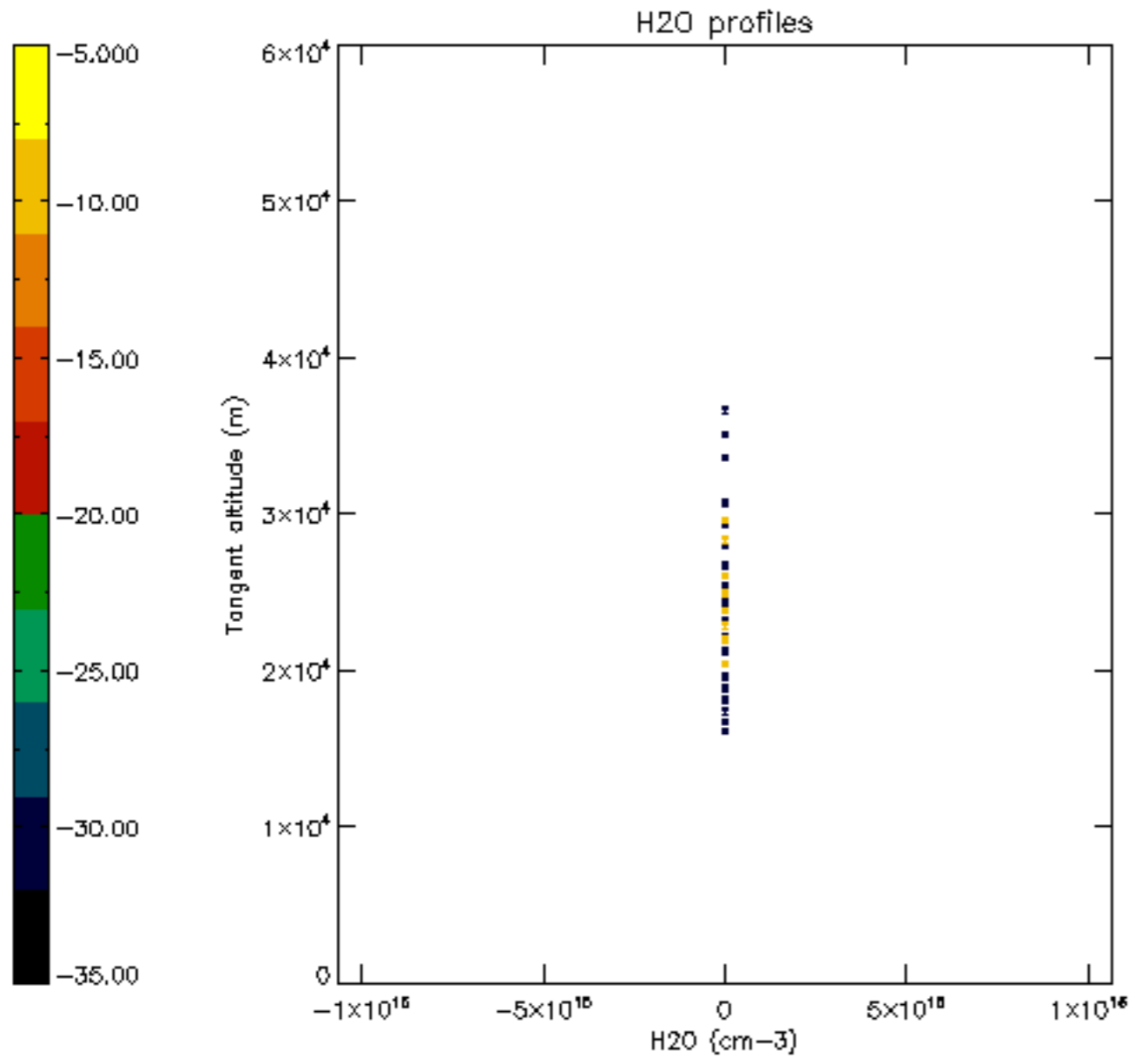


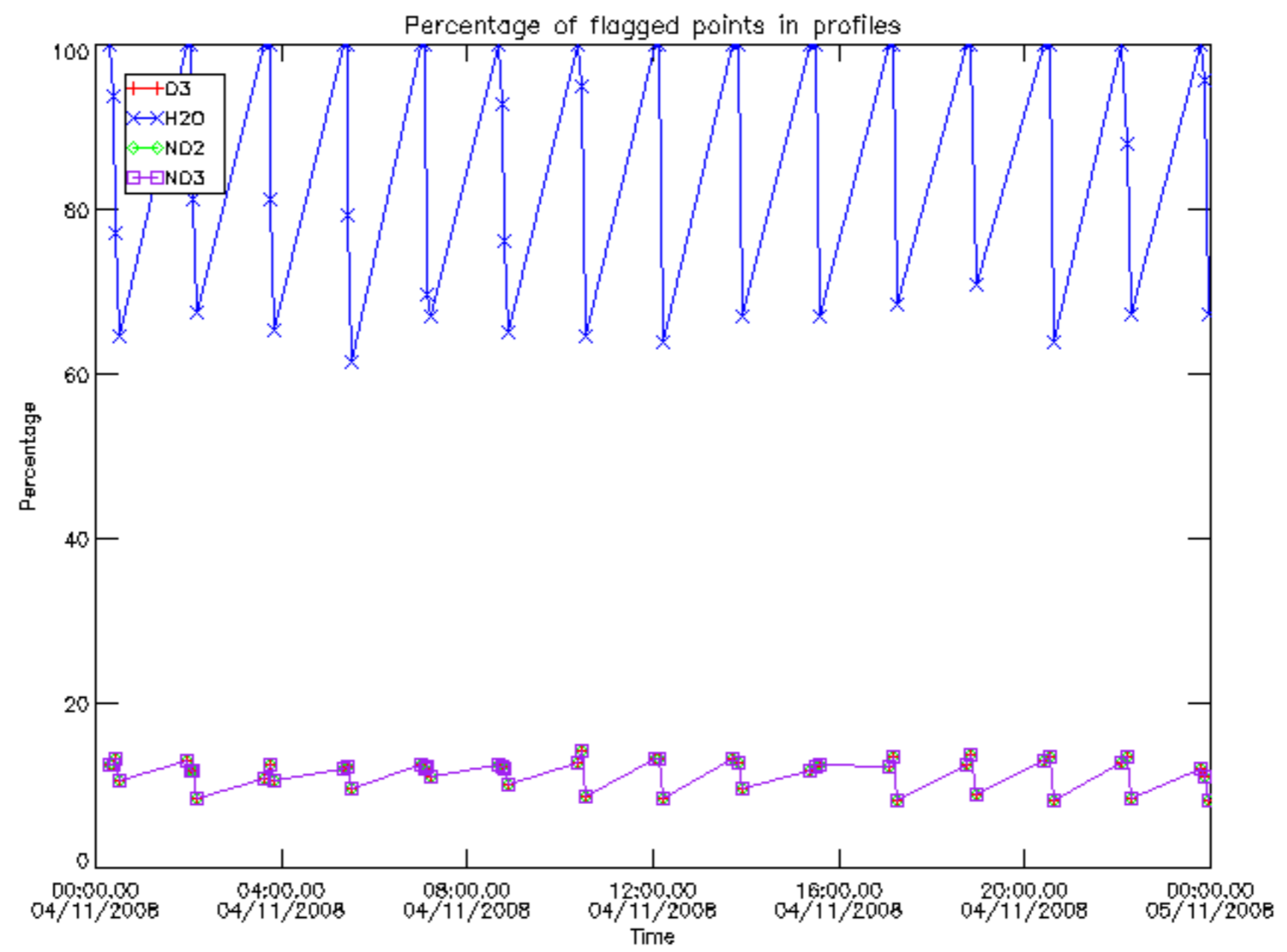




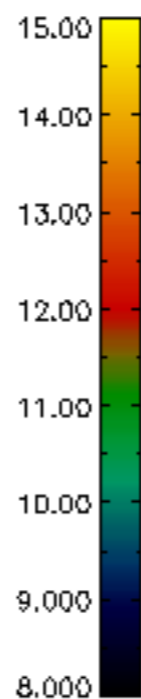
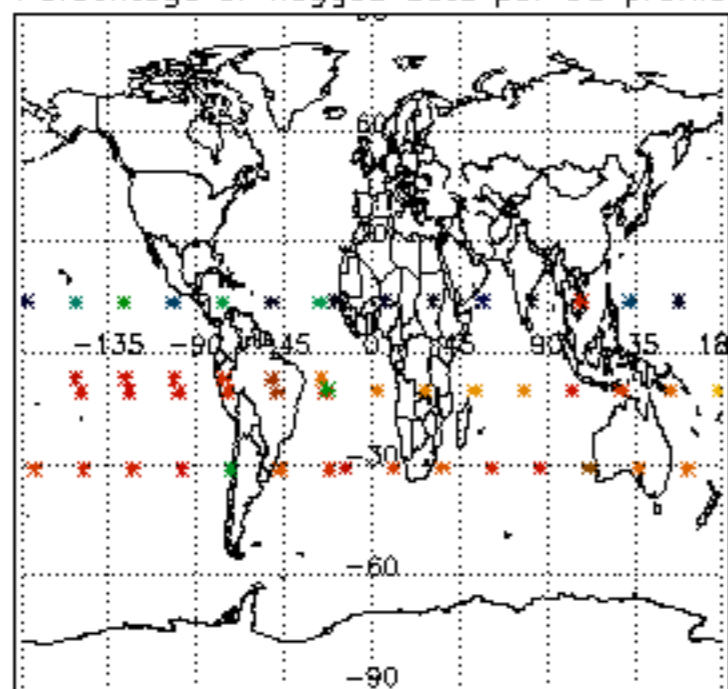




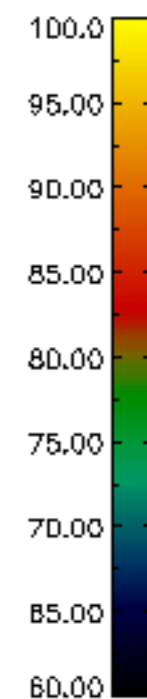
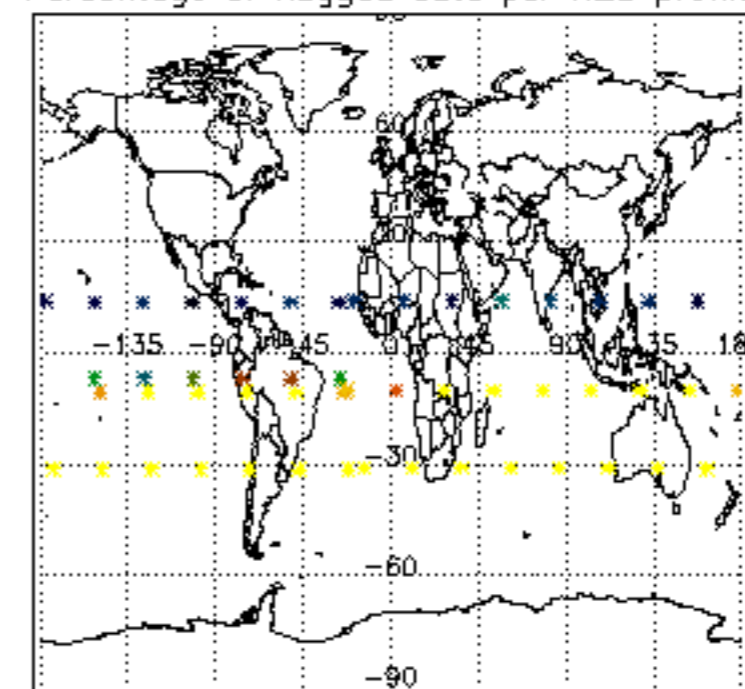




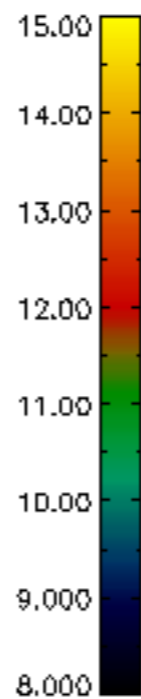
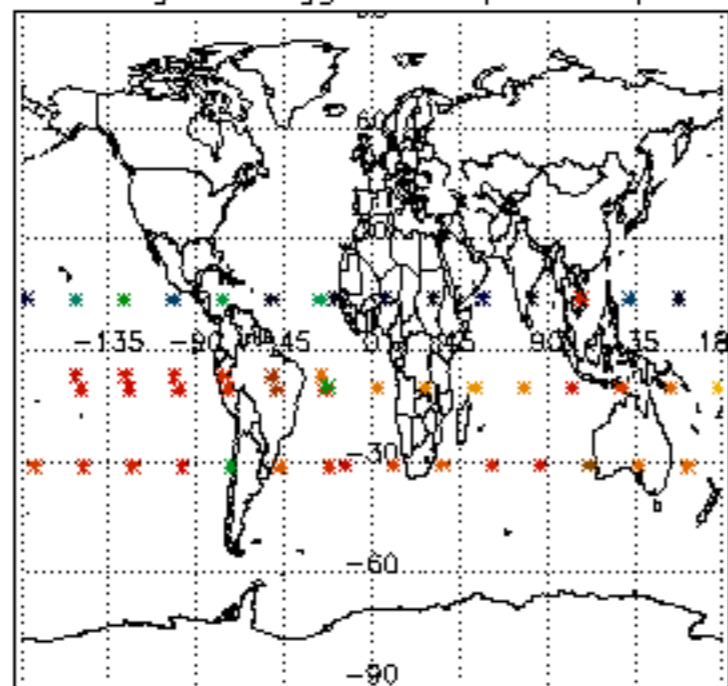
Percentage of flagged data per D3 profile



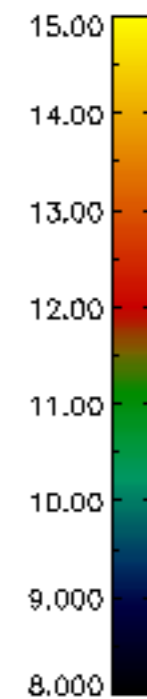
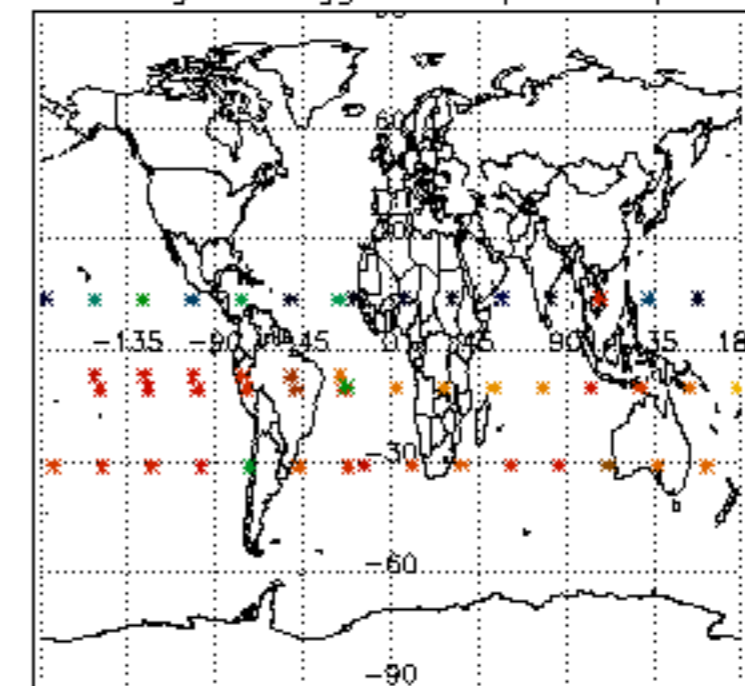
Percentage of flagged data per H2O profile

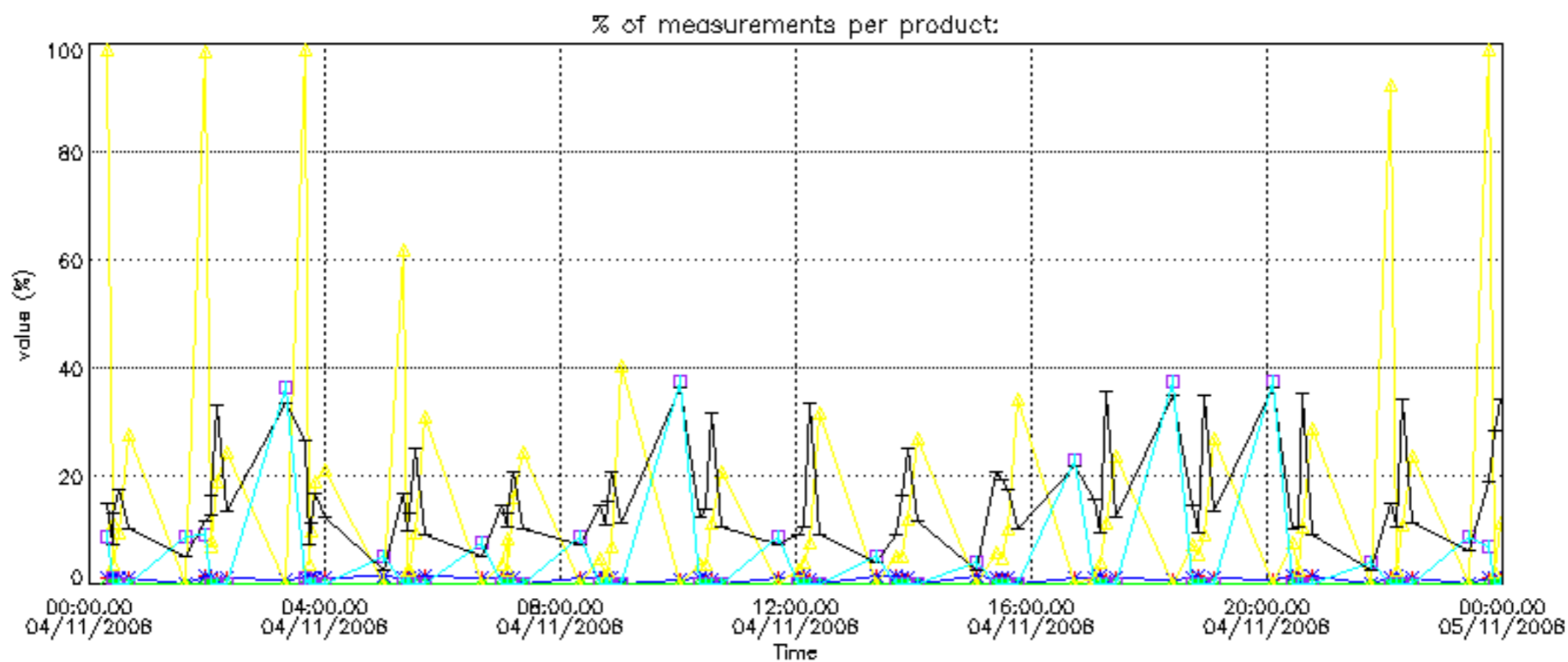


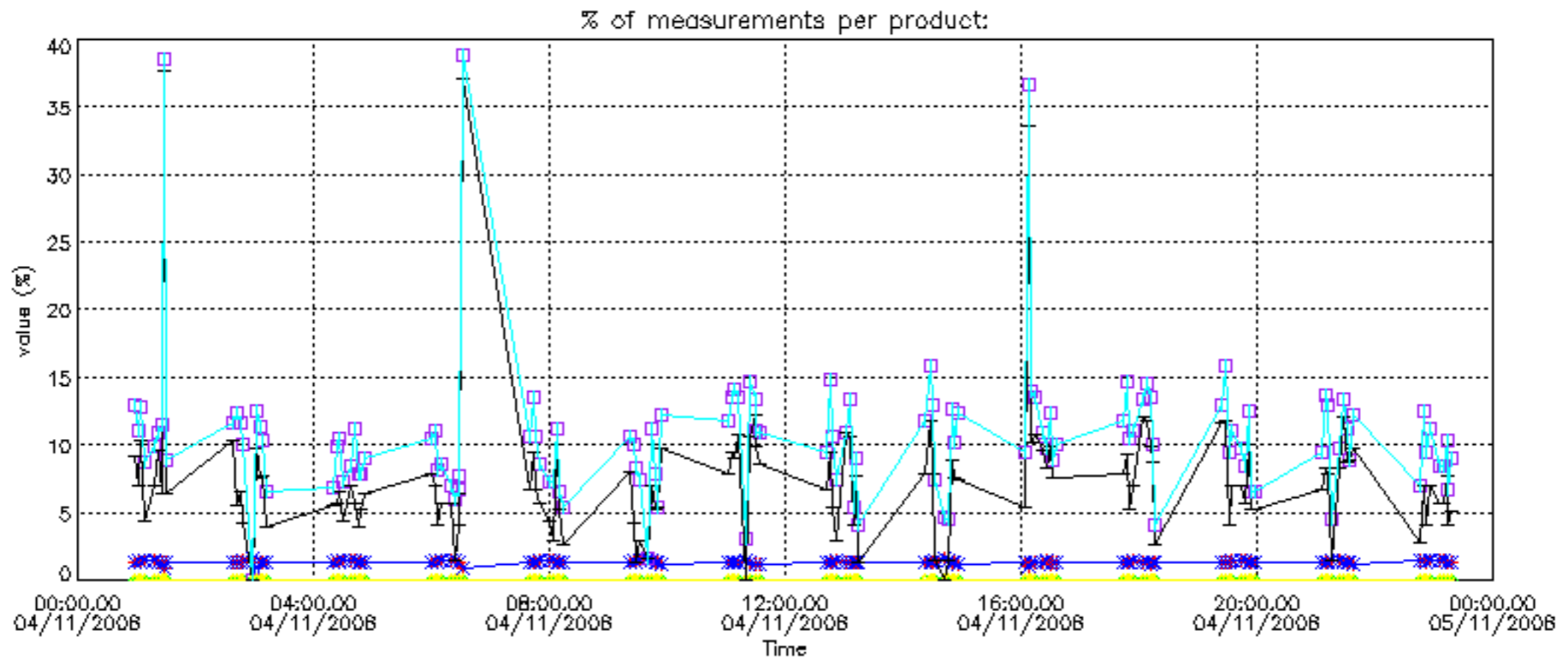
Percentage of flagged data per NO2 profile



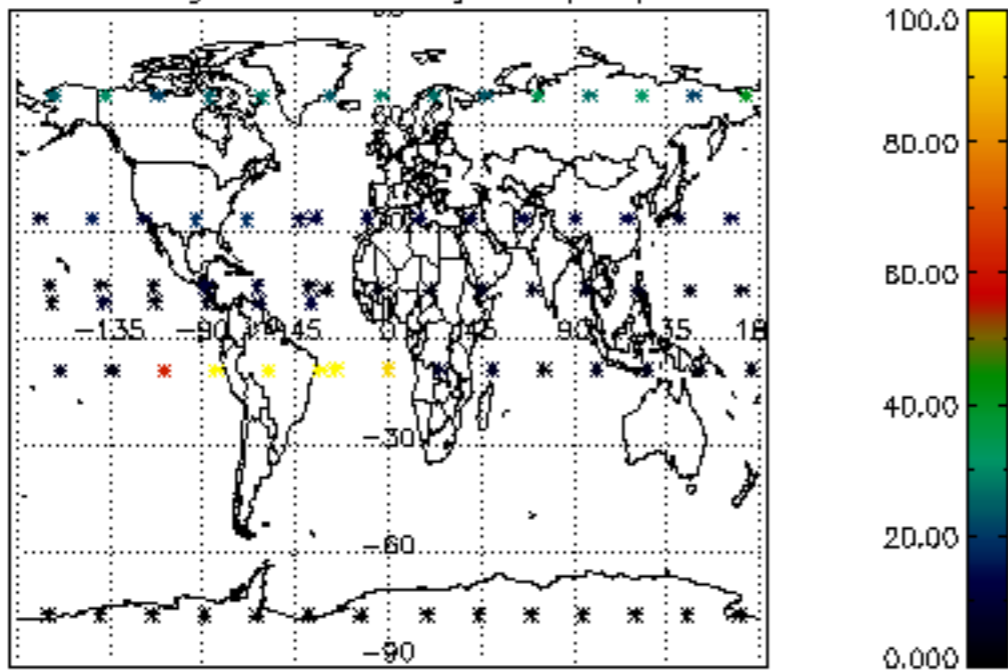
Percentage of flagged data per NO3 profile



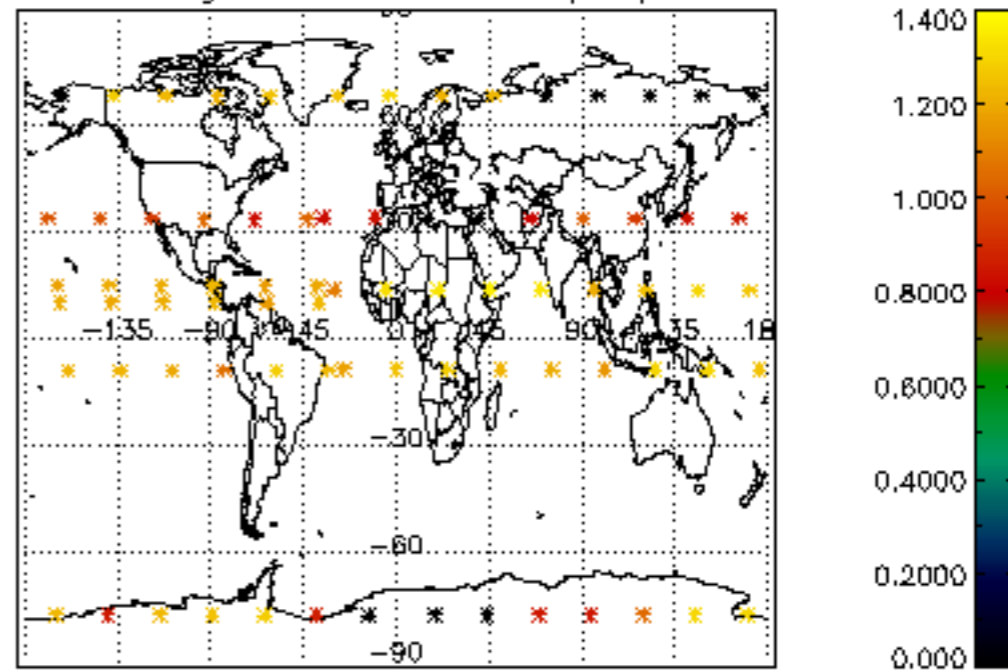




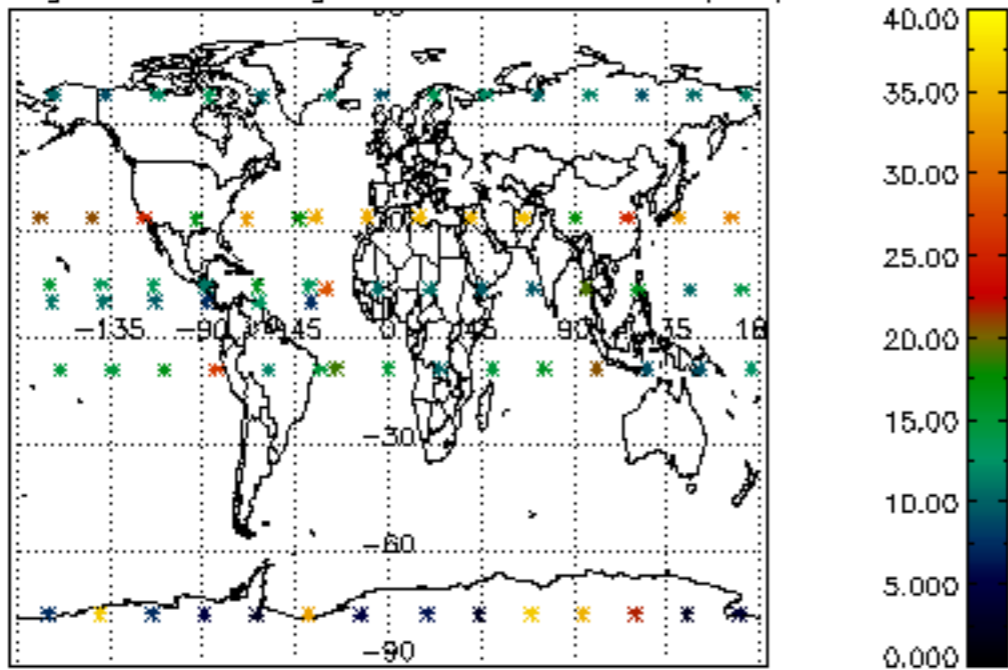
Percentage of cosmic ray hits per profile



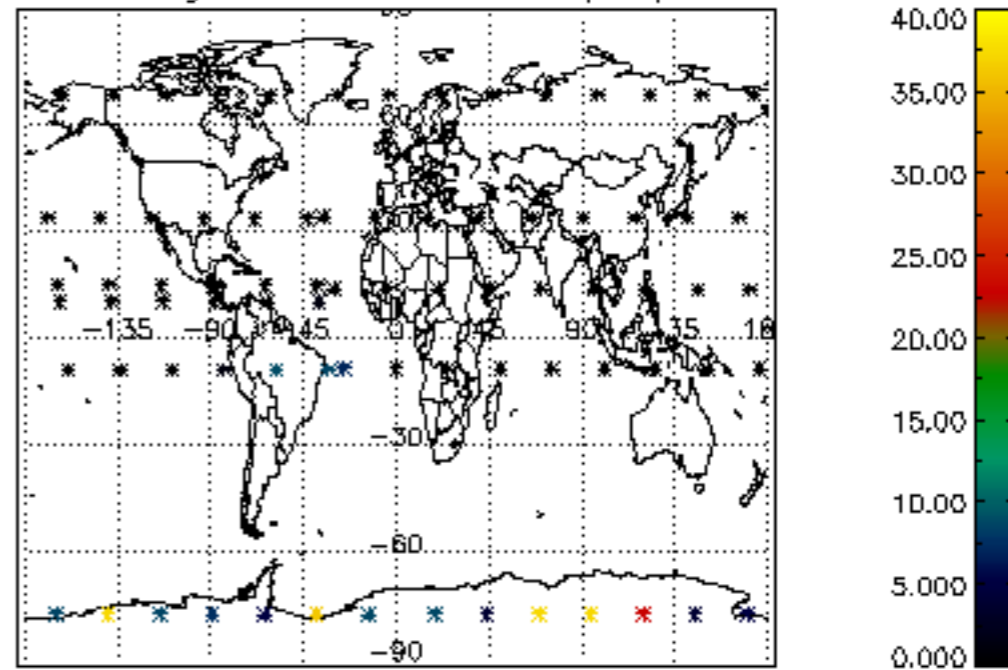
Percentage of datation errors per profile



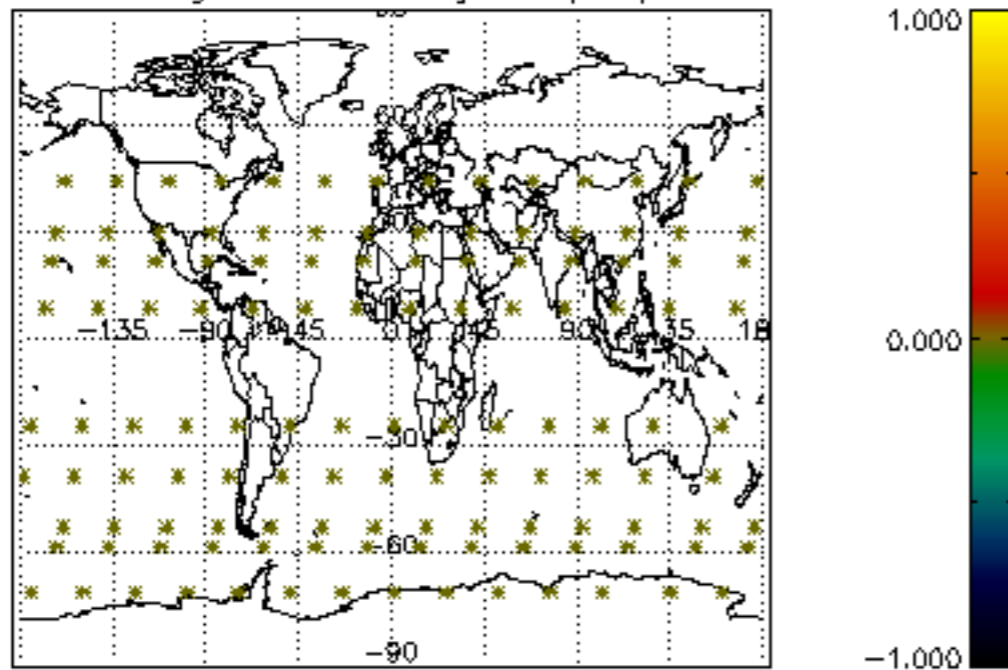
Percentage of star falling outside central band per profile



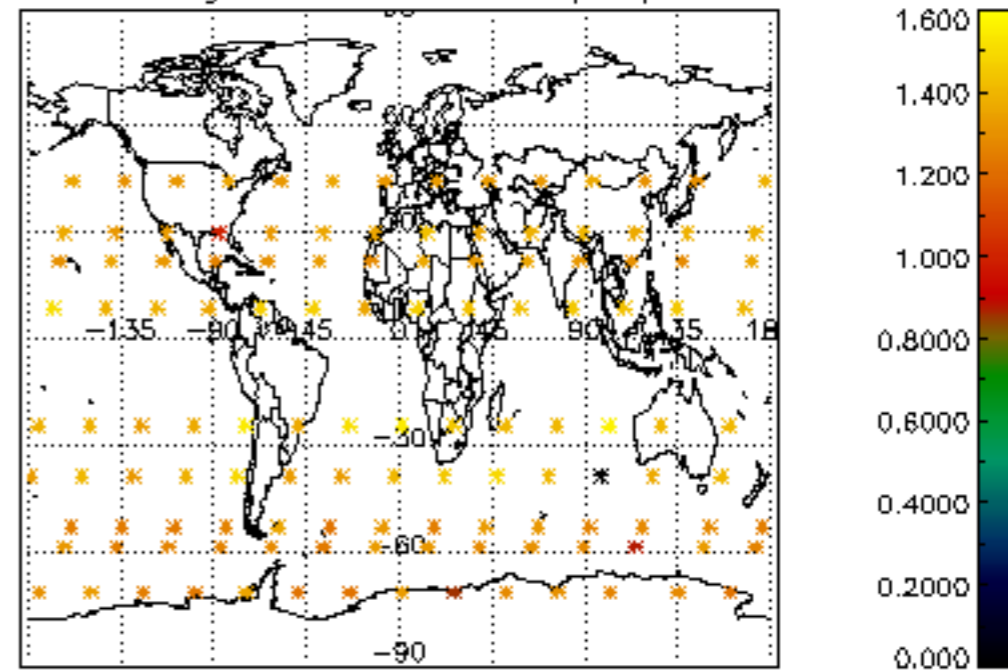
Percentage of saturation errors per profile



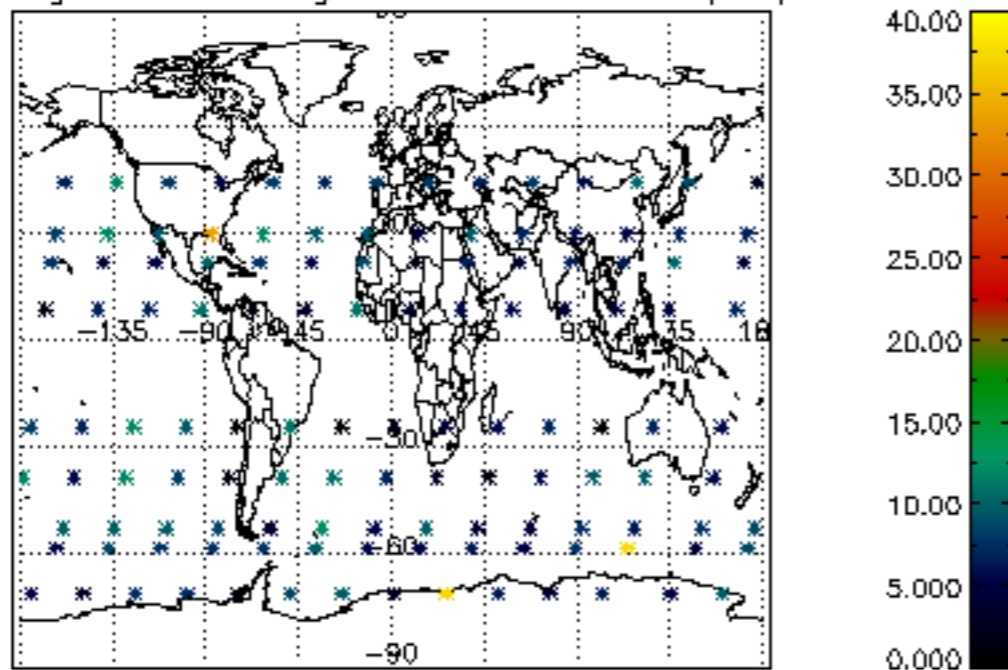
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

