

# 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	19APR2013 11:52:08
Data source version	GOMOS/6.01
Start time of products	15-03-2003 (15MAR2003 00:00:00)
Stop time of products	16-03-2003 (16MAR2003 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	72
Nb of prods with errors	0

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

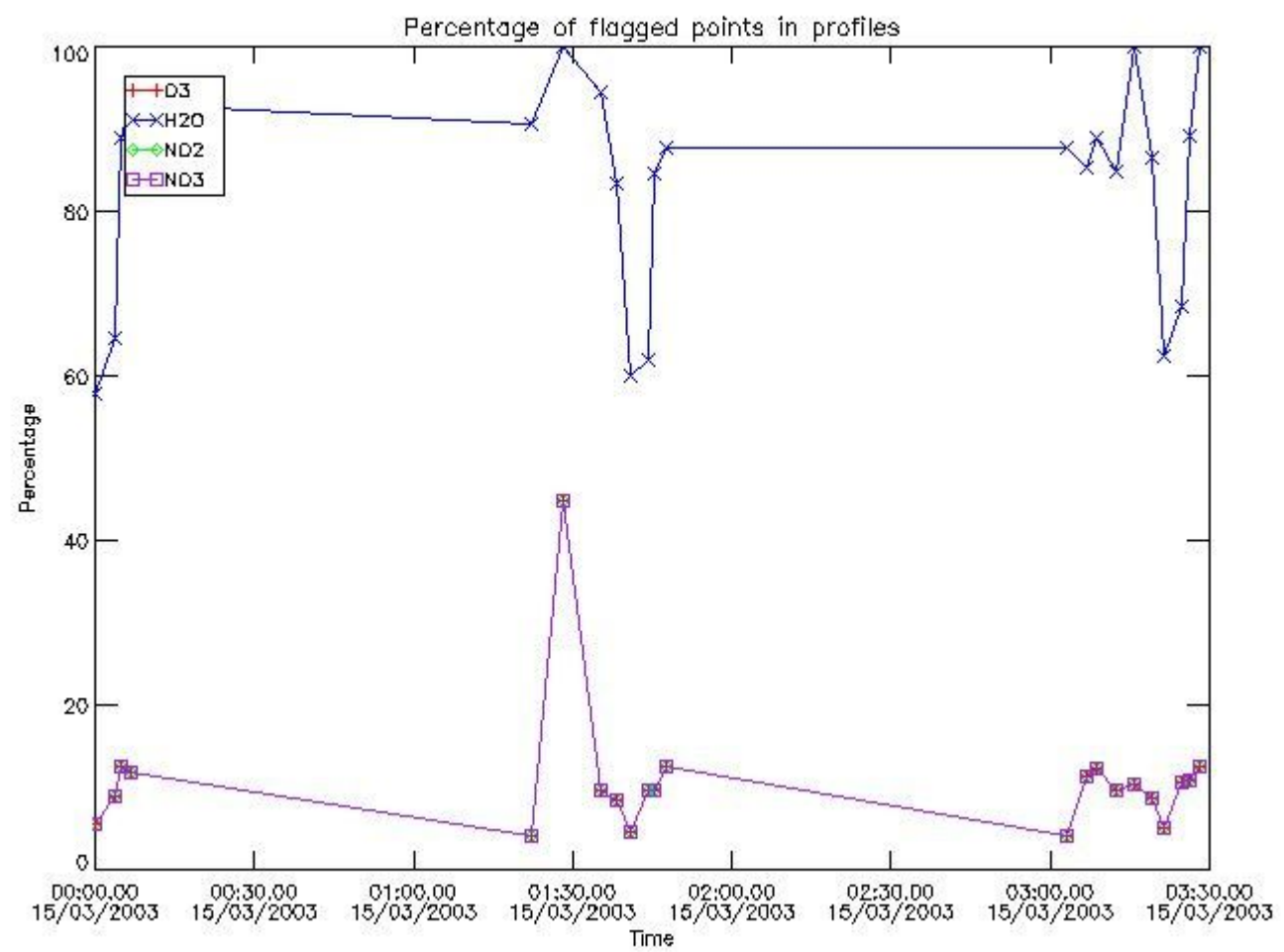
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20030315_000007_000001122014_00360_05424_5990.N1	15-MAR-2003 00:00:07	Dark	112.00	16	21Alp Sco	1.0200	3000.0	224	5424	No
2	GOM_NL__2PRFIN20030315_000337_000000572014_00360_05424_5991.N1	15-MAR-2003 00:03:37	Dark	57.000	4	Alp1Cen	-0.010000	5800.0	114	5424	No
3	GOM_NL__2PRFIN20030315_000451_000000412014_00360_05424_5992.N1	15-MAR-2003 00:04:51	Dark	41.000	10	Bet Cen	0.61000	28000.	82	5424	No
4	GOM_NL__2PRFIN20030315_000651_000000442014_00360_05424_5993.N1	15-MAR-2003 00:06:51	Dark	43.500	12	Alp1Cru	0.77500	30000.	87	5424	No
5	GOM_NL__2PRFIN20030315_000807_000000522014_00360_05424_5994.N1	15-MAR-2003 00:08:07	Straylight	52.000	26	Gam Cru	1.6240	2900.0	104	5424	No
6	GOM_NL__2PRFIN20030315_001002_000000642014_00360_05424_5995.N1	15-MAR-2003 00:10:02	Straylight	64.000	54	5The Cen	2.0550	4500.0	128	5424	No
7	GOM_NL__2PRFIN20030315_001204_000000372014_00360_05424_5996.N1	15-MAR-2003 00:12:04	Straylight	37.000	113	Mu Vel	2.6920	5000.0	74	5424	No
8	GOM_NL__2PRFIN20030315_001753_000000572014_00360_05424_5997.N1	15-MAR-2003 00:17:53	Straylight	56.500	106	9Bet Crv	2.6480	5600.0	113	5424	No
9	GOM_NL__2PRFIN20030315_002016_000000532014_00360_05424_5998.N1	15-MAR-2003 00:20:16	Straylight	53.000	100	4Gam Crv	2.5800	13100.	106	5424	No
10	GOM_NL__2PRFIN20030315_002312_000001102014_00360_05424_5999.N1	15-MAR-2003 00:23:12	Bright	109.50	15	67Alp Vir	0.97600	28000.	219	5424	No
11	GOM_NL__2PRFIN20030315_002705_000000622014_00360_05424_6000.N1	15-MAR-2003 00:27:05	Bright	62.000	121	29Gam Vir	2.7400	7200.0	124	5424	No
12	GOM_NL__2PRFIN20030315_002941_000000392014_00360_05424_6001.N1	15-MAR-2003 00:29:41	Bright	39.000	22	32Alp Leo	1.3600	15200.	78	5424	No
13	GOM_NL__2PRFIN20030315_003158_000000402014_00360_05424_6002.N1	15-MAR-2003 00:31:58	Bright	39.500	51	41Gam1Leo	2.0100	4500.0	79	5424	No
14	GOM_NL__2PRFIN20030315_003409_000000822014_00360_05424_6003.N1	15-MAR-2003 00:34:09	Bright	81.500	138	47Eps Vir	2.8280	4700.0	163	5424	No
15	GOM_NL__2PRFIN20030315_003950_000000412014_00360_05424_6004.N1	15-MAR-2003 00:39:50	Bright	40.500	174	52Psi UMa	3.0040	4400.0	81	5424	No
16	GOM_NL__2PRFIN20030315_004300_000000392014_00360_05424_6005.N1	15-MAR-2003 00:43:00	Bright	39.000	82	48Bet UMa	2.3650	10600.	78	5424	No
17	GOM_NL__2PRFIN20030315_004428_000000392014_00360_05424_6006.N1	15-MAR-2003 00:44:28	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	5424	No
18	GOM_NL__2PRFIN20030315_004614_000000482014_00360_05424_6007.N1	15-MAR-2003 00:46:14	Bright	47.500	32	77Eps UMa	1.7630	11000.	95	5424	No
19	GOM_NL__2PRFIN20030315_004818_000000562014_00360_05424_6008.N1	15-MAR-2003 00:48:18	Bright	56.000	39	85Eta UMa	1.8540	24000.	112	5424	No
20	GOM_NL__2PRFIN20030315_005147_000000352014_00360_05424_6009.N1	15-MAR-2003 00:51:47	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	5424	No
21	GOM_NL__2PRFIN20030315_005544_000000492014_00360_05424_6010.N1	15-MAR-2003 00:55:44	Bright	49.000	119	14Eta Dra	2.7270	4700.0	98	5424	No
22	GOM_NL__2PRFIN20030315_005933_000000372014_00360_05424_6011.N1	15-MAR-2003 00:59:33	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	5424	No
23	GOM_NL__2PRFIN20030315_010135_000000522014_00360_05424_6012.N1	15-MAR-2003 01:01:35	Bright	51.500	69	33Gam Dra	2.2310	3800.0	103	5424	No
24	GOM_NL__2PRFIN20030315_010440_000000362014_00360_05424_6013.N1	15-MAR-2003 01:04:40	Bright	35.500	19	50Alp Cyg	1.2460	10500.	71	5424	No
25	GOM_NL__2PRFIN20030315_010614_000000382014_00360_05424_6014.N1	15-MAR-2003 01:06:14	Bright	37.500	66	37Gam Cyg	2.2080	5900.0	75	5424	No
26	GOM_NL__2PRFIN20030315_010755_000000382014_00360_05424_6015.N1	15-MAR-2003 01:07:55	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	5424	No
27	GOM_NL__2PRFIN20030315_011609_000000522014_00360_05424_6016.N1	15-MAR-2003 01:16:09	Twilight	52.000	11	53Alp Aql	0.76500	8000.0	104	5424	No
28	GOM_NL__2PRFIN20030315_012218_000001232014_00360_05424_6017.N1	15-MAR-2003 01:22:18	Dark	122.50	59	55Alp Oph	2.0800	8900.0	245	5424	No
29	GOM_NL__2PRFIN20030315_012813_000000442014_00360_05424_6018.N1	15-MAR-2003 01:28:13	Dark	44.000	57	34Sig Sgr	2.0660	26000.	88	5424	No
30	GOM_NL__2PRFIN20030315_013513_000000542014_00361_05425_5312.N1	15-MAR-2003 01:35:13	Dark	53.500	25	35Lam Sco	1.6200	28000.	107	5425	No
31	GOM_NL__2PRFIN20030315_013821_000000612014_00361_05425_5313.N1	15-MAR-2003 01:38:21	Dark	61.000	75	26Eps Sco	2.2910	4250.0	122	5425	No
32	GOM_NL__2PRFIN20030315_014046_000001132014_00361_05425_5314.N1	15-MAR-2003 01:40:46	Dark	113.00	16	21Alp Sco	1.0200	3000.0	226	5425	No
33	GOM_NL__2PRFIN20030315_014414_000000532014_00361_05425_5315.N1	15-MAR-2003 01:44:14	Dark	53.000	4	Alp1Cen	-0.010000	5800.0	106	5425	No
34	GOM_NL__2PRFIN20030315_014528_000000532014_00361_05425_5316.N1	15-MAR-2003 01:45:28	Dark	52.500	10	Bet Cen	0.61000	28000.	105	5425	No
35	GOM_NL__2PRFIN20030315_014728_000000412014_00361_05425_5317.N1	15-MAR-2003 01:47:28	Dark	41.000	12	Alp1Cru	0.77500	30000.	82	5425	No
36	GOM_NL__2PRFIN20030315_014843_000000502014_00361_05425_5318.N1	15-MAR-2003 01:48:43	Straylight	49.500	26	Gam Cru	1.6240	2900.0	99	5425	No
37	GOM_NL__2PRFIN20030315_015038_000000642014_00361_05425_5319.N1	15-MAR-2003 01:50:38	Straylight	63.500	54	5The Cen	2.0550	4500.0	127	5425	No
38	GOM_NL__2PRFIN20030315_015240_000000432014_00361_05425_5320.N1	15-MAR-2003 01:52:40	Straylight	42.500	113	Mu Vel	2.6920	5000.0	85	5425	No
39	GOM_NL__2PRFIN20030315_015829_000000552014_00361_05425_5321.N1	15-MAR-2003 01:58:29	Straylight	55.000	106	9Bet Crv	2.6480	5600.0	110	5425	No
40	GOM_NL__2PRFIN20030315_020052_000000532014_00361_05425_5322.N1	15-MAR-2003 02:00:52	Straylight	52.500	100	4Gam Crv	2.5800	13100.	105	5425	No
41	GOM_NL__2PRFIN20030315_020345_000001072014_00361_05425_5323.N1	15-MAR-2003 02:03:45	Bright	107.00	15	67Alp Vir	0.97600	28000.	214	5425	No
42	GOM_NL__2PRFIN20030315_020739_000000632014_00361_05425_5324.N1	15-MAR-2003 02:07:39	Bright	62.500	121	29Gam Vir	2.7400	7200.0	125	5425	No

43	GOM_NL__2PRFIN20030315_021017_000000372014_00361_05425_5325.N1	15-MAR-2003 02:10:17	Bright	36.500	22	32Alp Leo	1.3600	15200.	73	5425	No
44	GOM_NL__2PRFIN20030315_021234_000000402014_00361_05425_5326.N1	15-MAR-2003 02:12:34	Bright	39.500	51	41Gam1Leo	2.0100	4500.0	79	5425	No
45	GOM_NL__2PRFIN20030315_021444_000000812014_00361_05425_5327.N1	15-MAR-2003 02:14:44	Bright	81.000	138	47Eps Vir	2.8280	4700.0	162	5425	No
46	GOM_NL__2PRFIN20030315_022026_000000402014_00361_05425_5328.N1	15-MAR-2003 02:20:26	Bright	39.500	174	52Psi UMa	3.0040	4400.0	79	5425	No
47	GOM_NL__2PRFIN20030315_022335_000000382014_00361_05425_5329.N1	15-MAR-2003 02:23:35	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	5425	No
48	GOM_NL__2PRFIN20030315_022504_000000372014_00361_05425_5330.N1	15-MAR-2003 02:25:04	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	5425	No
49	GOM_NL__2PRFIN20030315_022649_000000472014_00361_05425_5331.N1	15-MAR-2003 02:26:49	Bright	47.000	32	77Eps UMa	1.7630	11000.	94	5425	No
50	GOM_NL__2PRFIN20030315_022852_000000572014_00361_05425_5332.N1	15-MAR-2003 02:28:52	Bright	56.500	39	85Eta UMa	1.8540	24000.	113	5425	No
51	GOM_NL__2PRFIN20030315_023223_000000352014_00361_05425_5333.N1	15-MAR-2003 02:32:23	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	5425	No
52	GOM_NL__2PRFIN20030315_023620_000000492014_00361_05425_5334.N1	15-MAR-2003 02:36:20	Bright	48.500	119	14Eta Dra	2.7270	4700.0	97	5425	No
53	GOM_NL__2PRFIN20030315_024009_000000372014_00361_05425_5335.N1	15-MAR-2003 02:40:09	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	5425	No
54	GOM_NL__2PRFIN20030315_024211_000000512014_00361_05425_5336.N1	15-MAR-2003 02:42:11	Bright	50.500	69	33Gam Dra	2.2310	3800.0	101	5425	No
55	GOM_NL__2PRFIN20030315_024516_000000392014_00361_05425_5337.N1	15-MAR-2003 02:45:16	Bright	38.500	19	50Alp Cyg	1.2460	10500.	77	5425	No
56	GOM_NL__2PRFIN20030315_024650_000000392014_00361_05425_5338.N1	15-MAR-2003 02:46:50	Bright	38.500	66	37Gam Cyg	2.2080	5900.0	77	5425	No
57	GOM_NL__2PRFIN20030315_024831_000000352014_00361_05425_5339.N1	15-MAR-2003 02:48:31	Bright	35.000	92	53Eps Cyg	2.5000	4500.0	70	5425	No
58	GOM_NL__2PRFIN20030315_025646_000000512014_00361_05425_5340.N1	15-MAR-2003 02:56:46	Tw_i_and_stray	51.000	11	53Alp Aql	0.76500	8000.0	102	5425	No
59	GOM_NL__2PRFIN20030315_030257_000001272014_00361_05425_5341.N1	15-MAR-2003 03:02:57	Dark	126.50	59	55Alp Oph	2.0800	8900.0	253	5425	No
60	GOM_NL__2PRFIN20030315_030649_000000452014_00361_05425_5342.N1	15-MAR-2003 03:06:49	Dark	45.000	155	41Pi Sgr	2.9000	6600.0	90	5425	No
61	GOM_NL__2PRFIN20030315_030850_000000462014_00361_05425_5343.N1	15-MAR-2003 03:08:50	Dark	46.000	57	34Sig Sgr	2.0660	26000.	92	5425	No
62	GOM_NL__2PRFIN20030315_031216_000000532014_00361_05425_5344.N1	15-MAR-2003 03:12:16	Dark	53.000	38	20Eps Sgr	1.8360	11000.	106	5425	No
63	GOM_NL__2PRFIN20030315_031550_000000502014_00362_05426_5881.N1	15-MAR-2003 03:15:50	Dark	49.500	25	35Lam Sco	1.6200	28000.	99	5426	No
64	GOM_NL__2PRFIN20030315_031858_000000602014_00362_05426_5882.N1	15-MAR-2003 03:18:58	Dark	59.500	75	26Eps Sco	2.2910	4250.0	119	5426	No
65	GOM_NL__2PRFIN20030315_032124_000000992014_00362_05426_5883.N1	15-MAR-2003 03:21:24	Dark	99.000	16	21Alp Sco	1.0200	3000.0	198	5426	No
66	GOM_NL__2PRFIN20030315_032450_000000482014_00362_05426_5884.N1	15-MAR-2003 03:24:50	Dark	48.000	4	Alp1Cen	-0.010000	5800.0	96	5426	No
67	GOM_NL__2PRFIN20030315_032604_000000472014_00362_05426_5885.N1	15-MAR-2003 03:26:04	Dark	46.500	10	Bet Cen	0.61000	28000.	93	5426	No
68	GOM_NL__2PRFIN20030315_032804_000000412014_00362_05426_5886.N1	15-MAR-2003 03:28:04	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	5426	No
69	GOM_NL__2PRFIN20030315_032919_000000452014_00362_05426_5887.N1	15-MAR-2003 03:29:19	Straylight	45.000	26	Gam Cru	1.6240	2900.0	90	5426	No
70	GOM_NL__2PRFIN20030315_033115_000000652014_00362_05426_5888.N1	15-MAR-2003 03:31:15	Straylight	64.500	54	5The Cen	2.0550	4500.0	129	5426	No
71	GOM_NL__2PRFIN20030315_033316_000000392014_00362_05426_5889.N1	15-MAR-2003 03:33:16	Straylight	39.000	113	Mu Vel	2.6920	5000.0	78	5426	No
72	GOM_NL__2PRFIN20030315_033905_000000222014_00362_05426_5890.N1	15-MAR-2003 03:39:05	Straylight	22.000	106	9Bet Crv	2.6480	5600.0	44	5426	No

### 3. Quality information per product

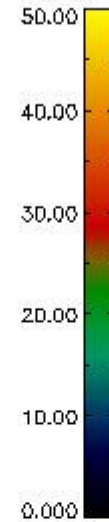
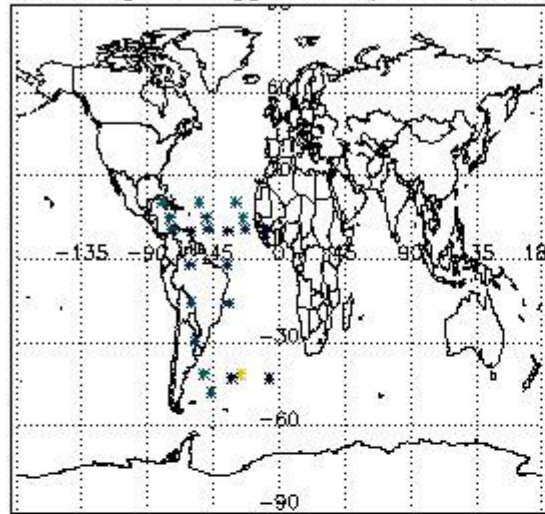
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

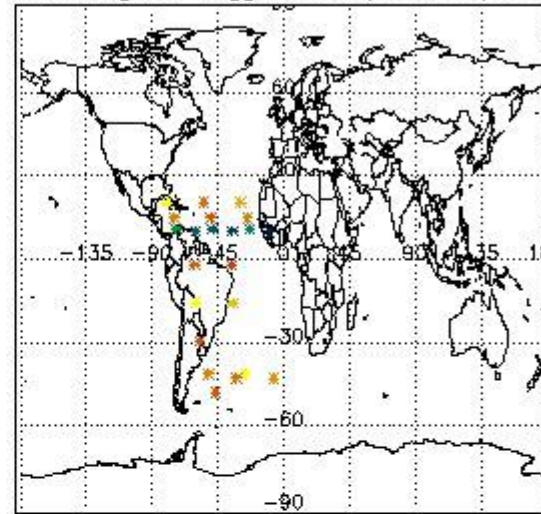


*3.2 Plot quality information per product (world map)*

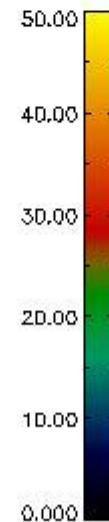
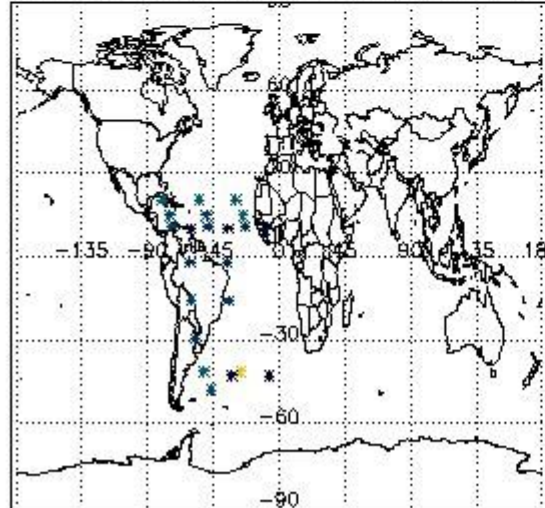
Percentage of flagged data per O3 profile



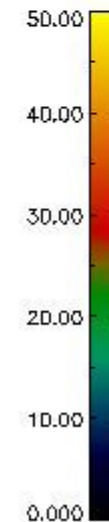
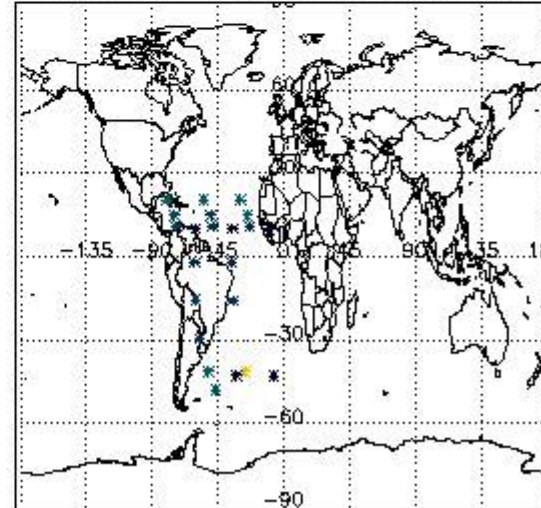
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

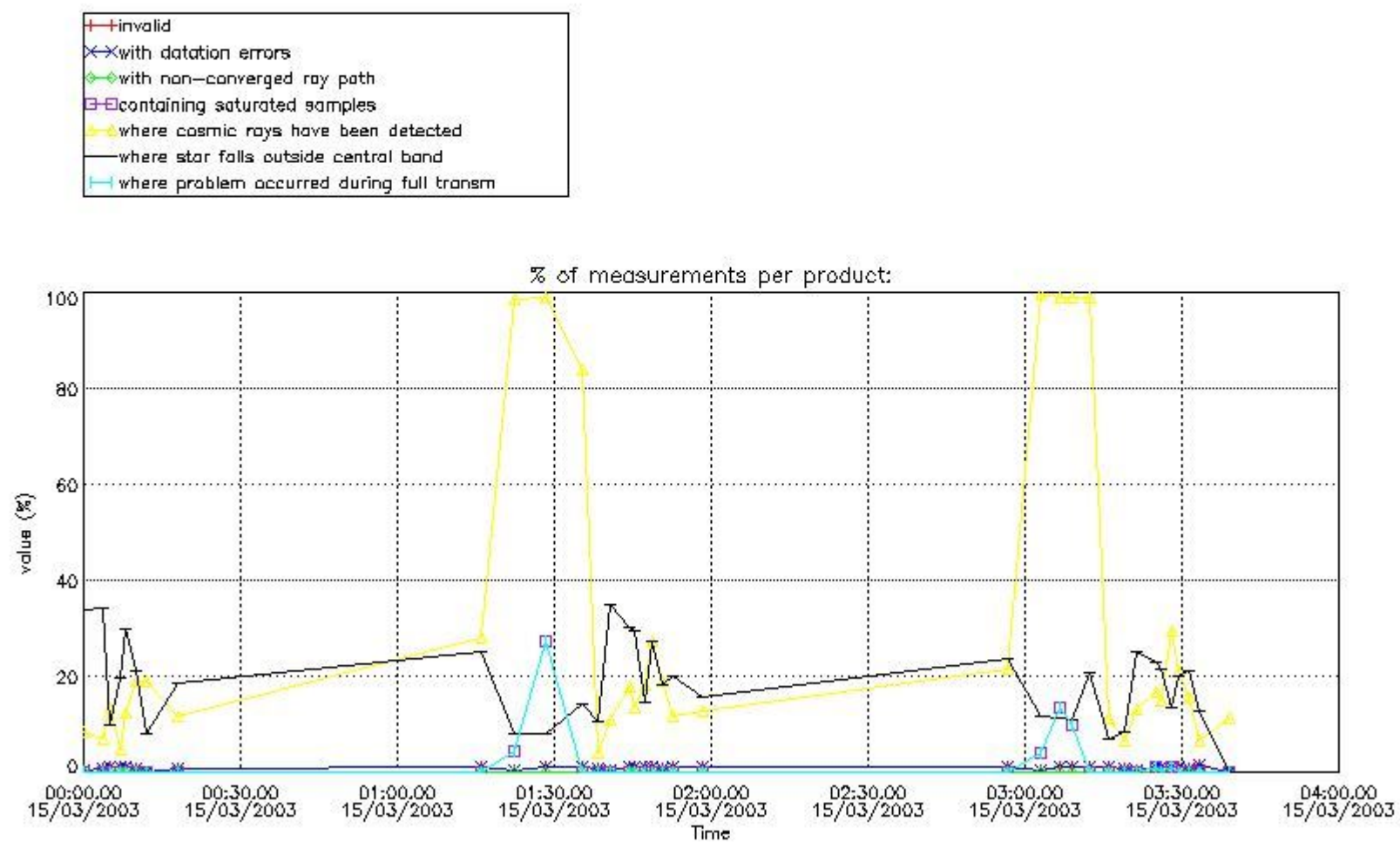


#### 4. Level 1 quality information per product

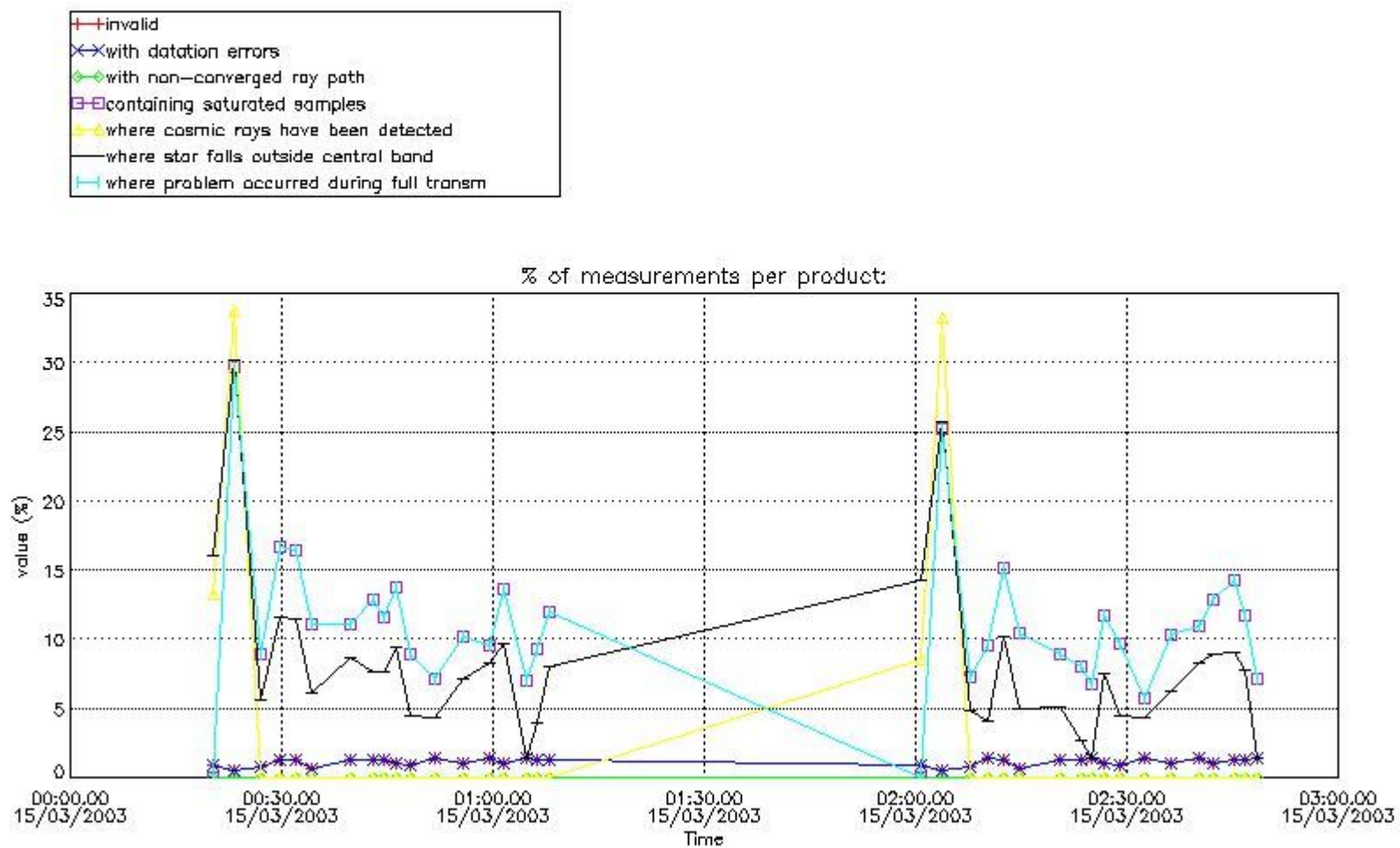
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



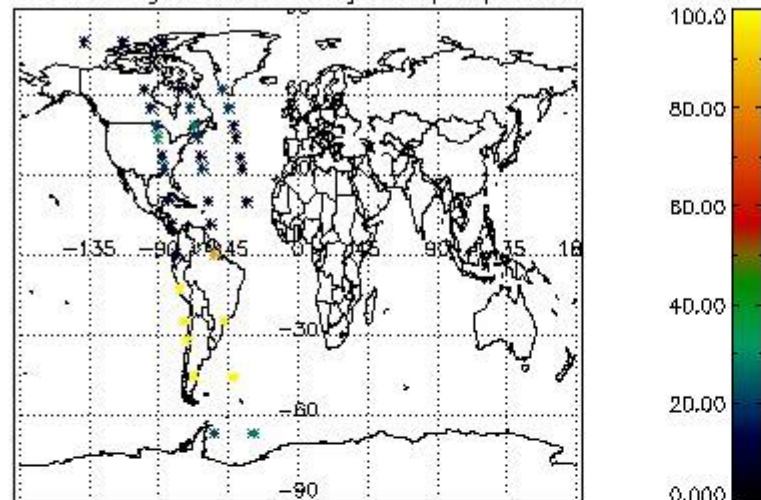
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



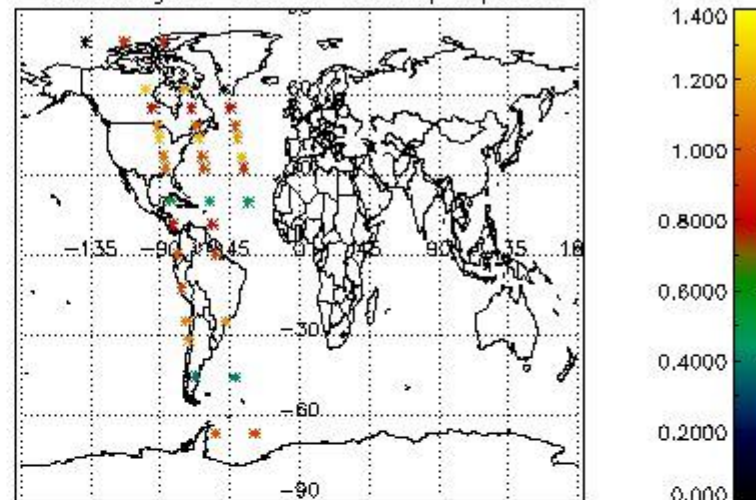
4.2 Plot quality information per product coming from level 1b processing (world map)

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

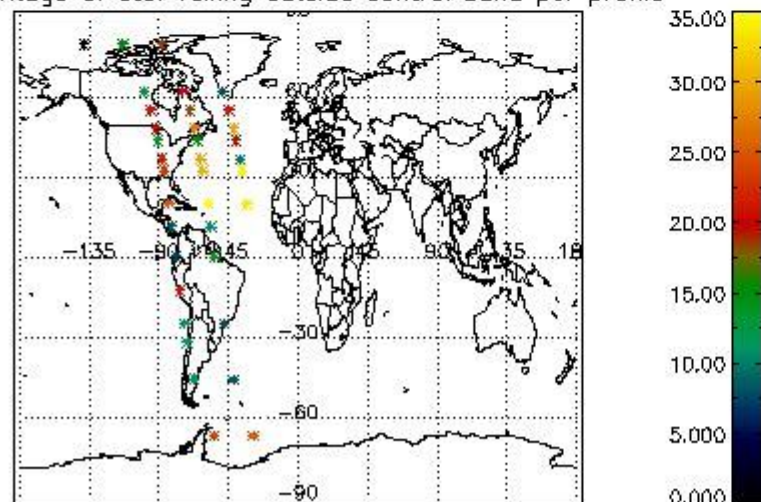
Percentage of cosmic ray hits per profile



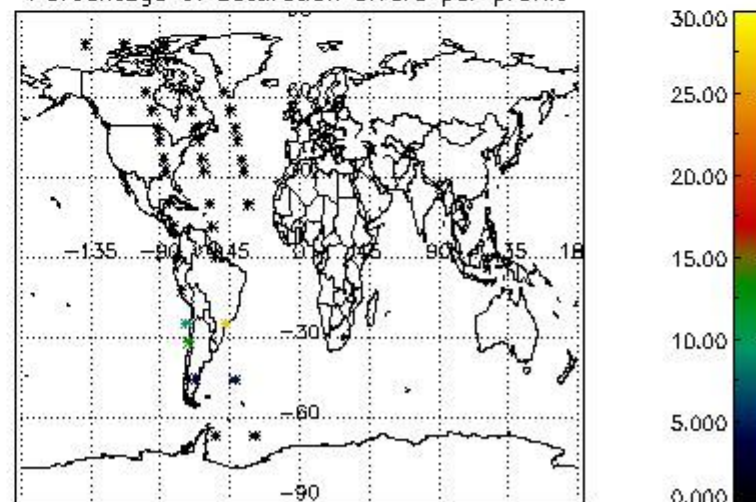
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

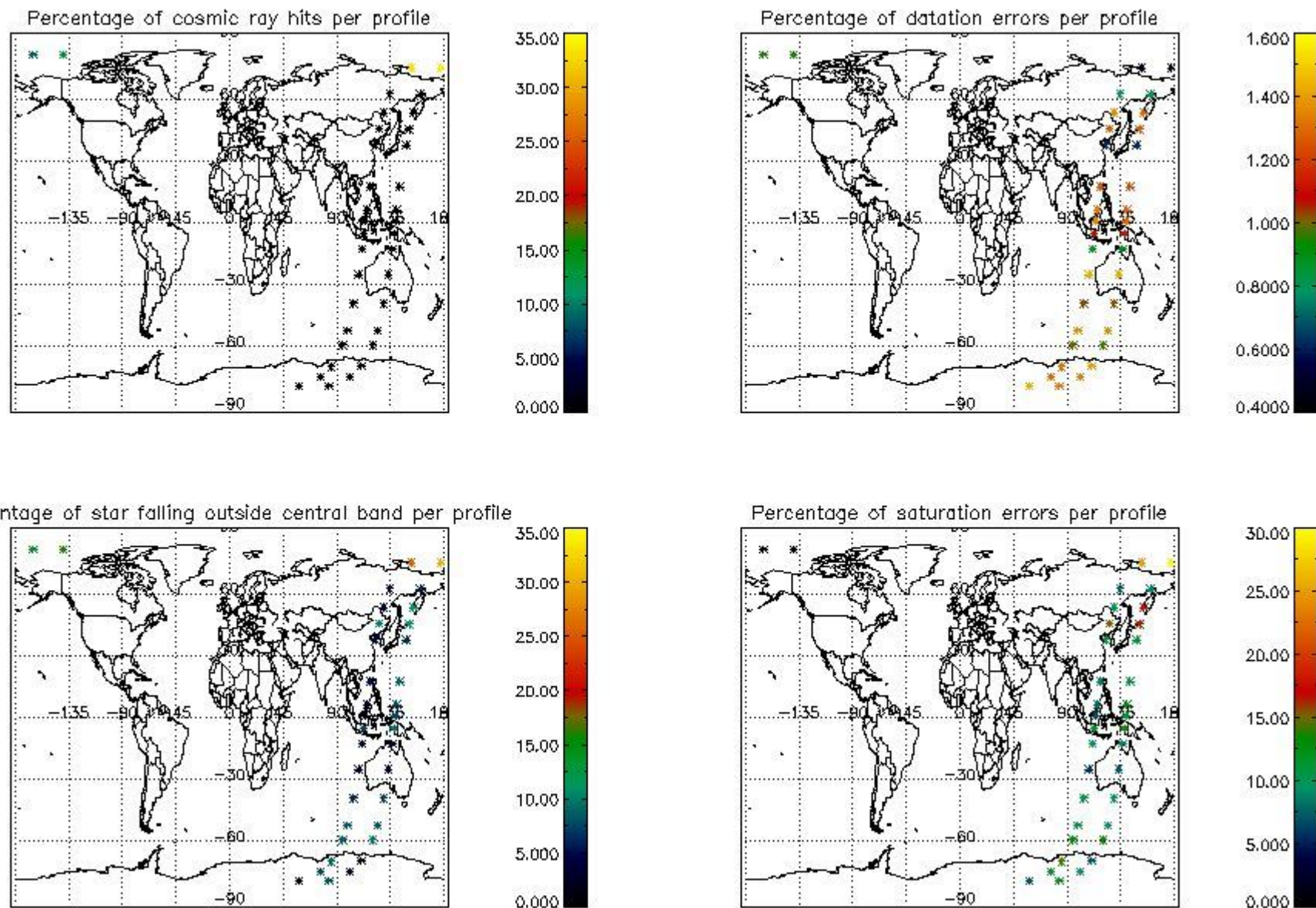


Percentage of saturation errors per profile



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





## 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

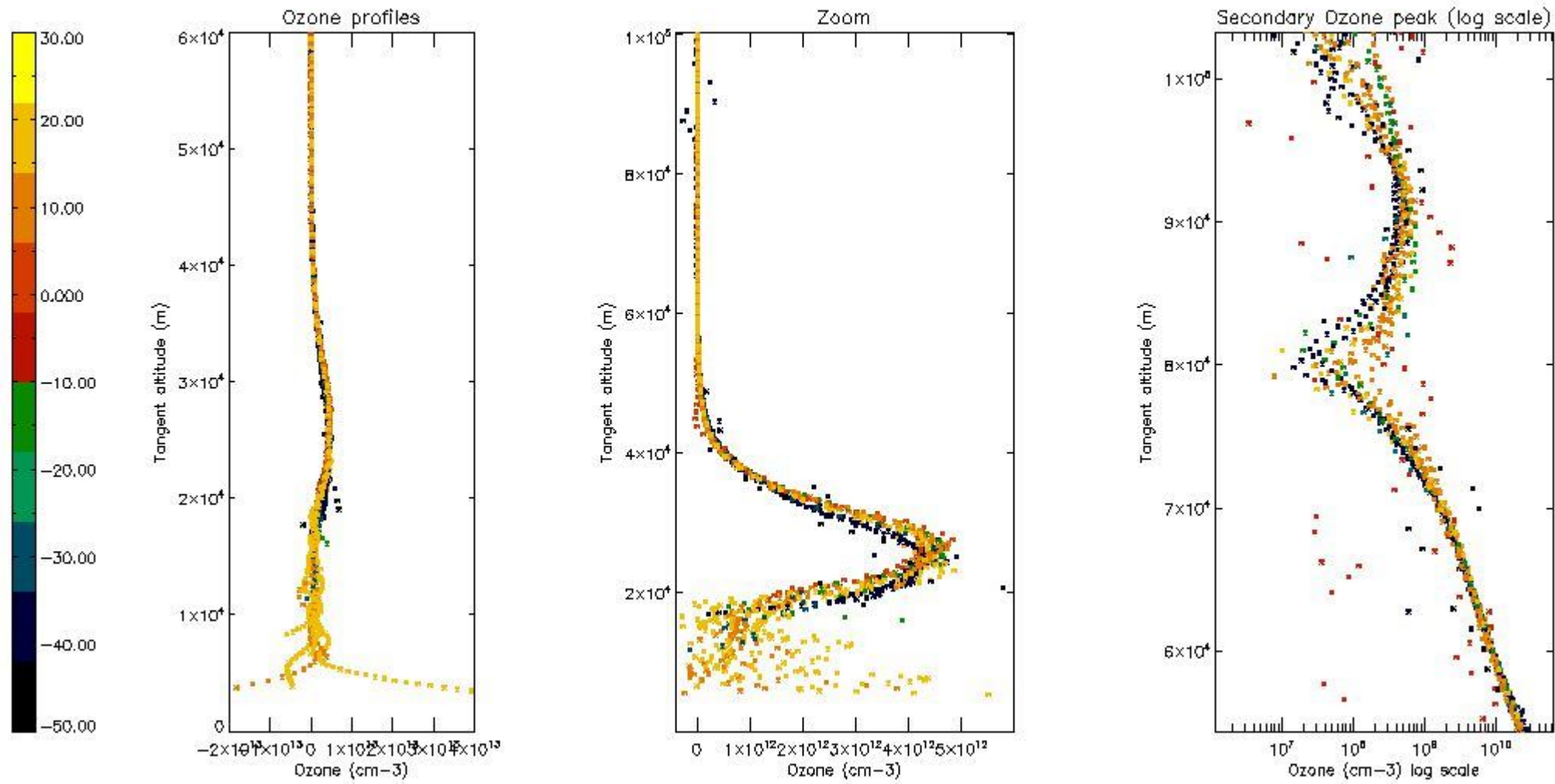
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	24

STD < 10	20
STD < 5	16

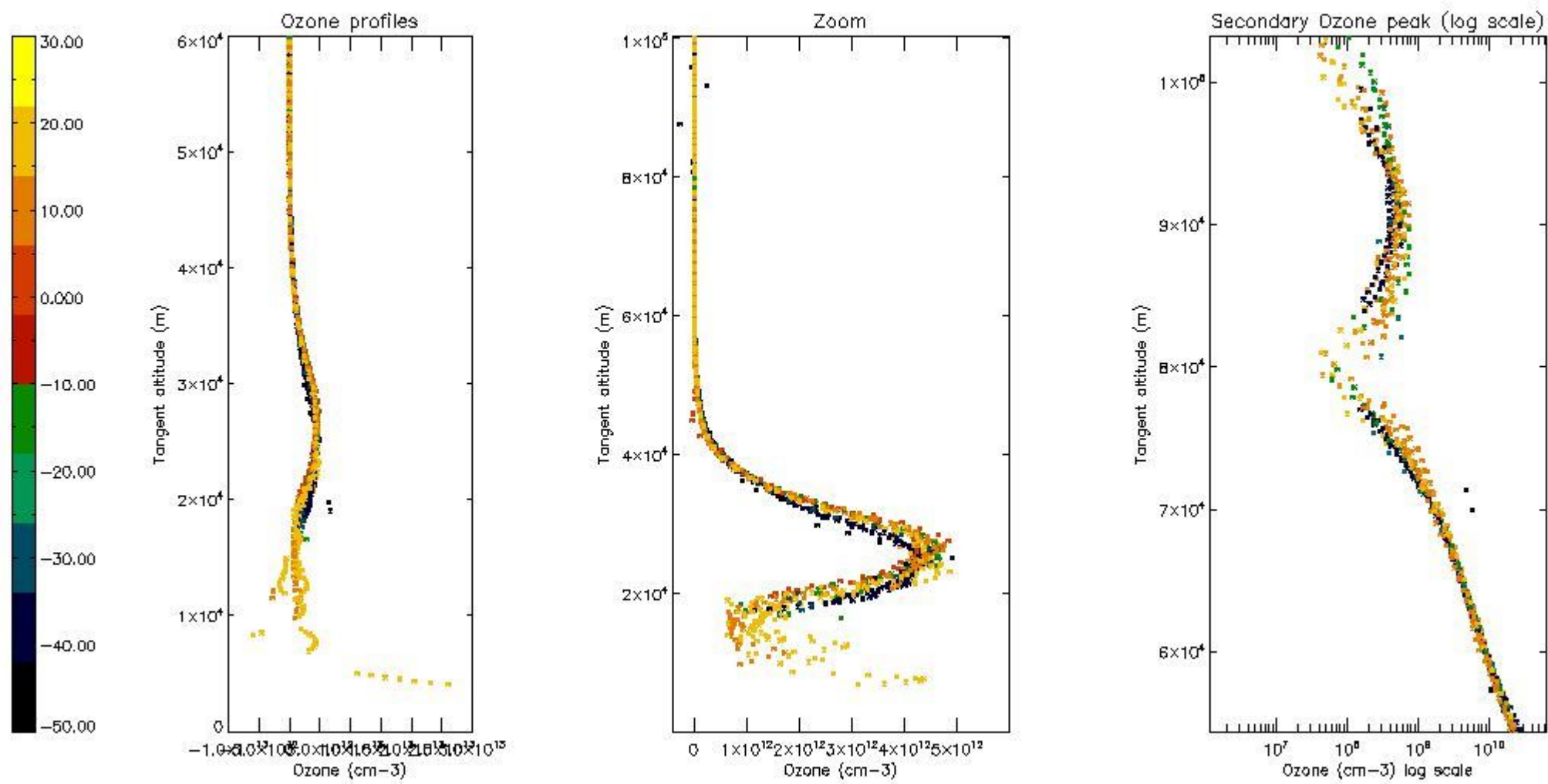
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



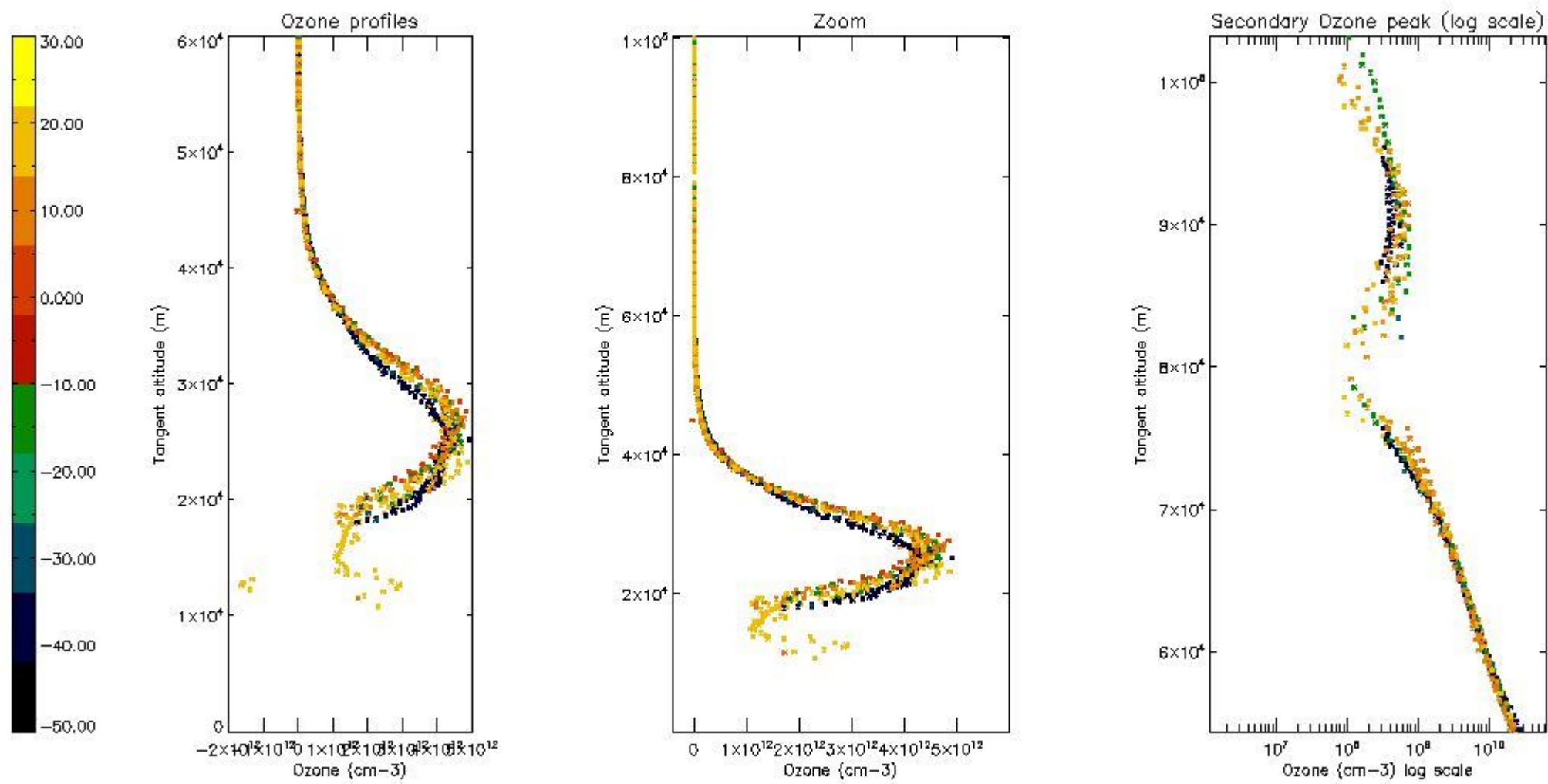
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



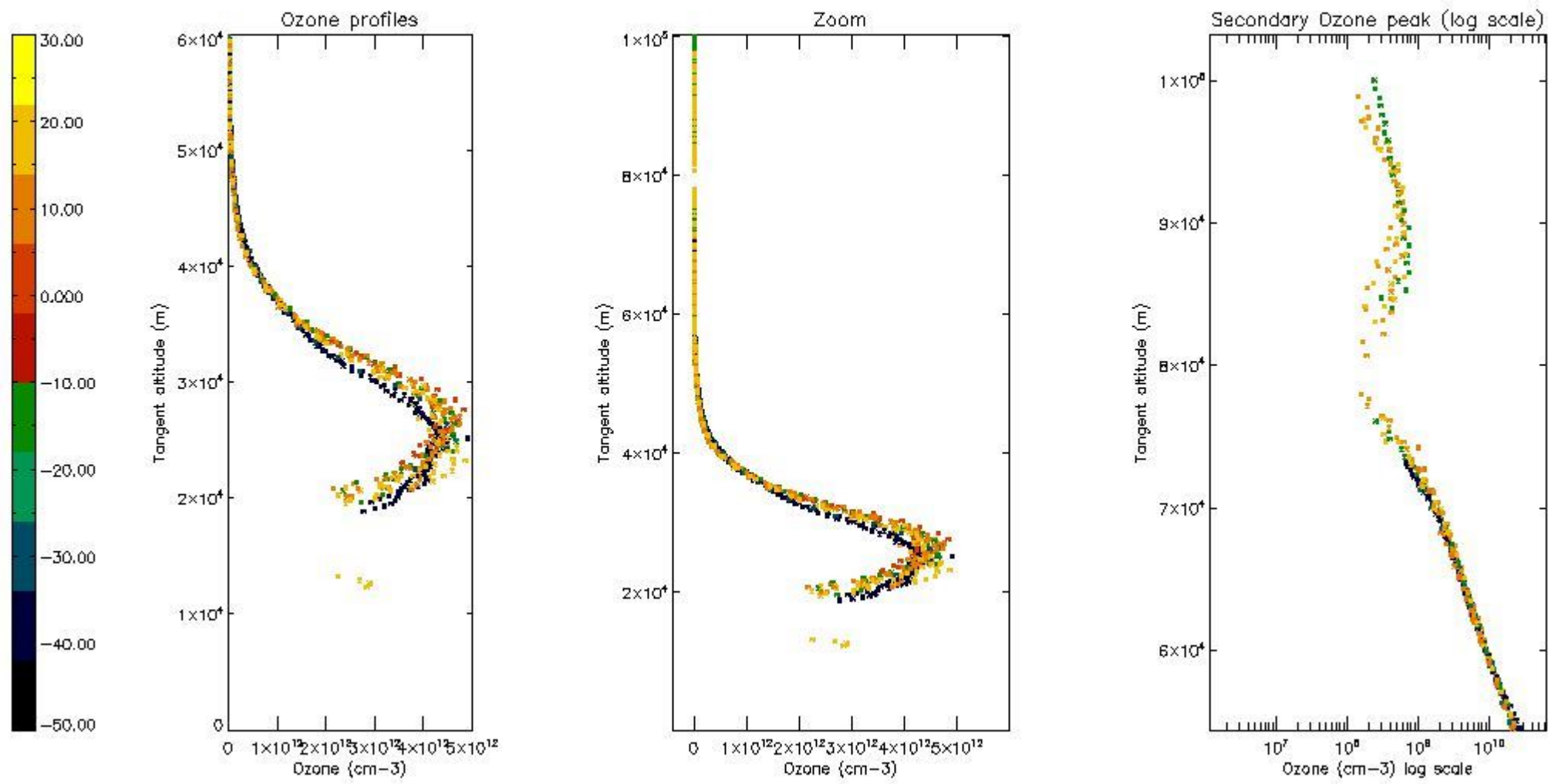
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



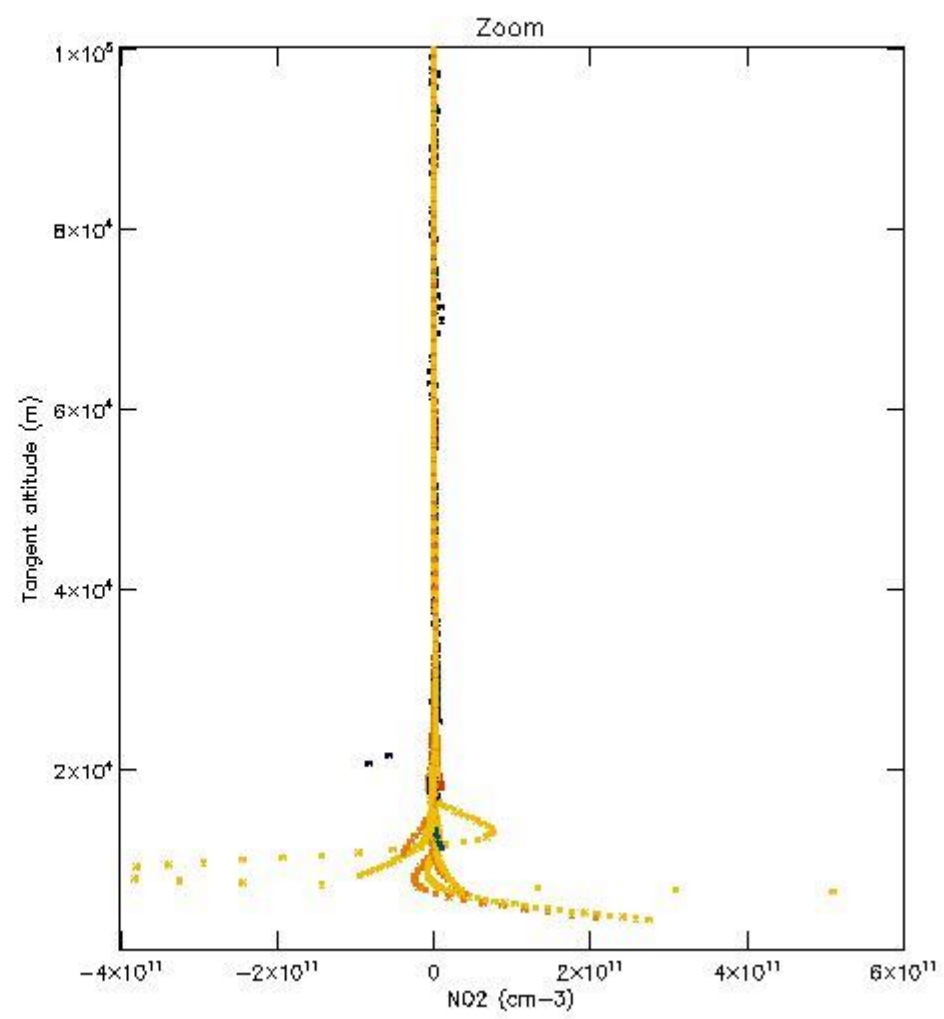
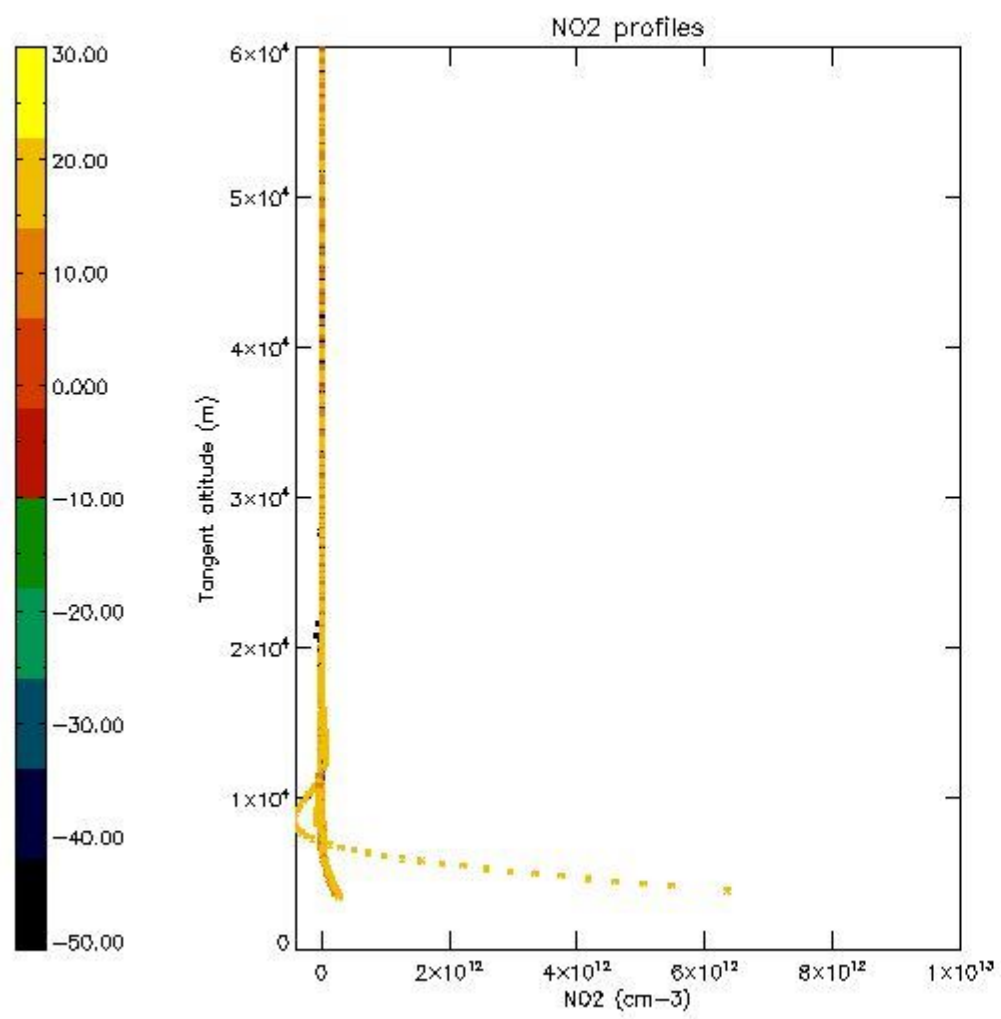
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



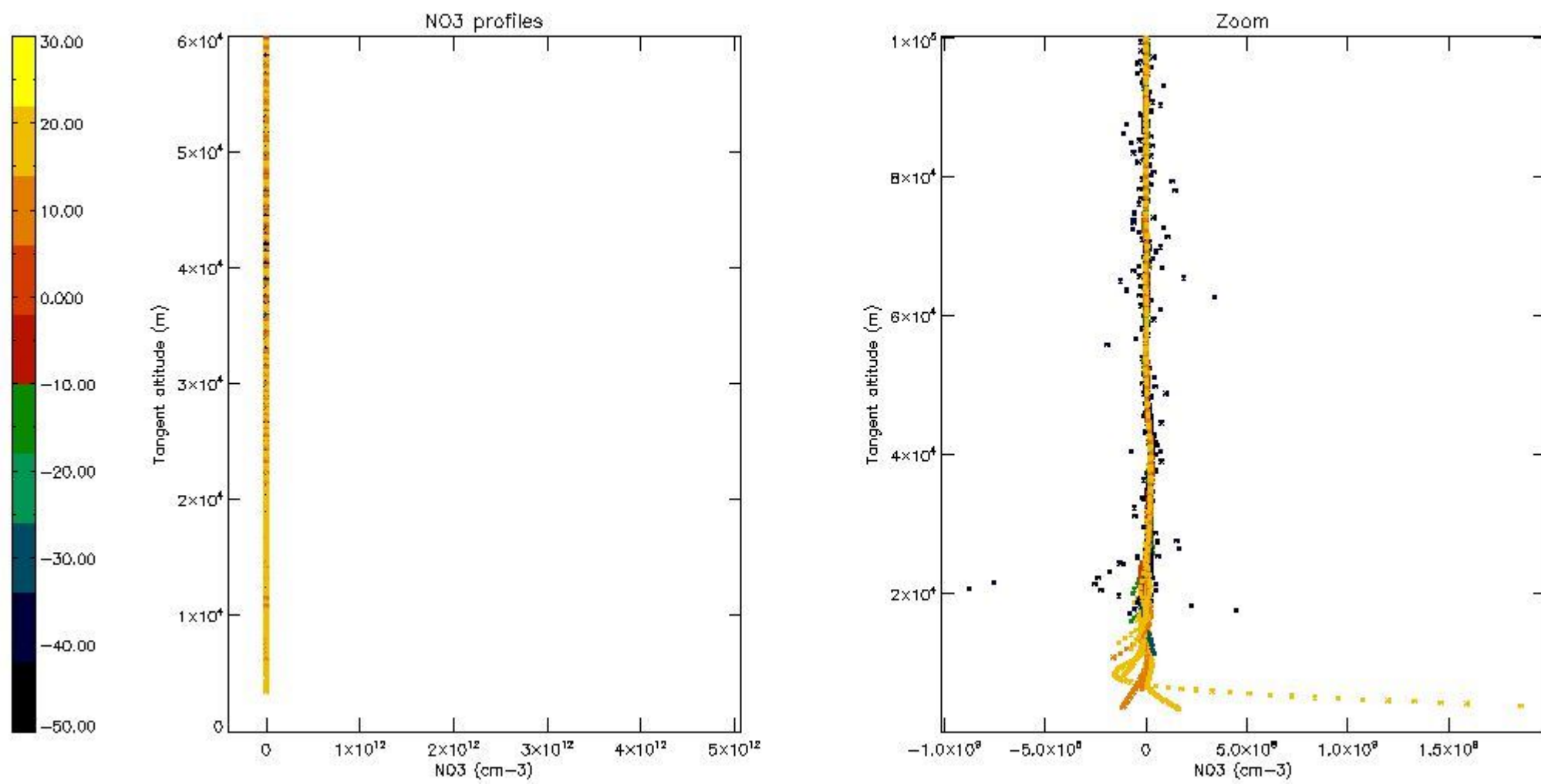
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



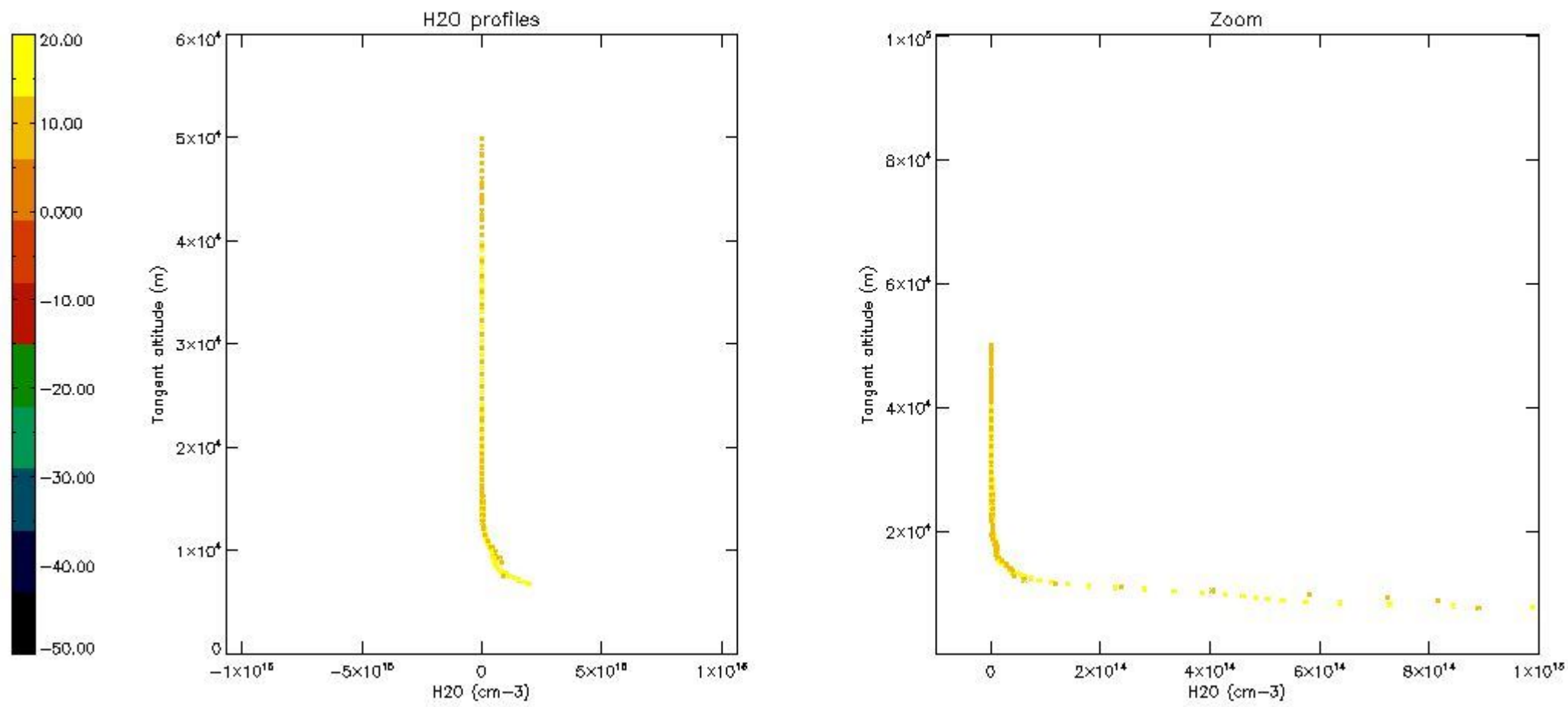
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	15-MAR-2003 00:00:07
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-MAR-2003 00:00:07
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-MAR-2003 00:00:07



# 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](#)

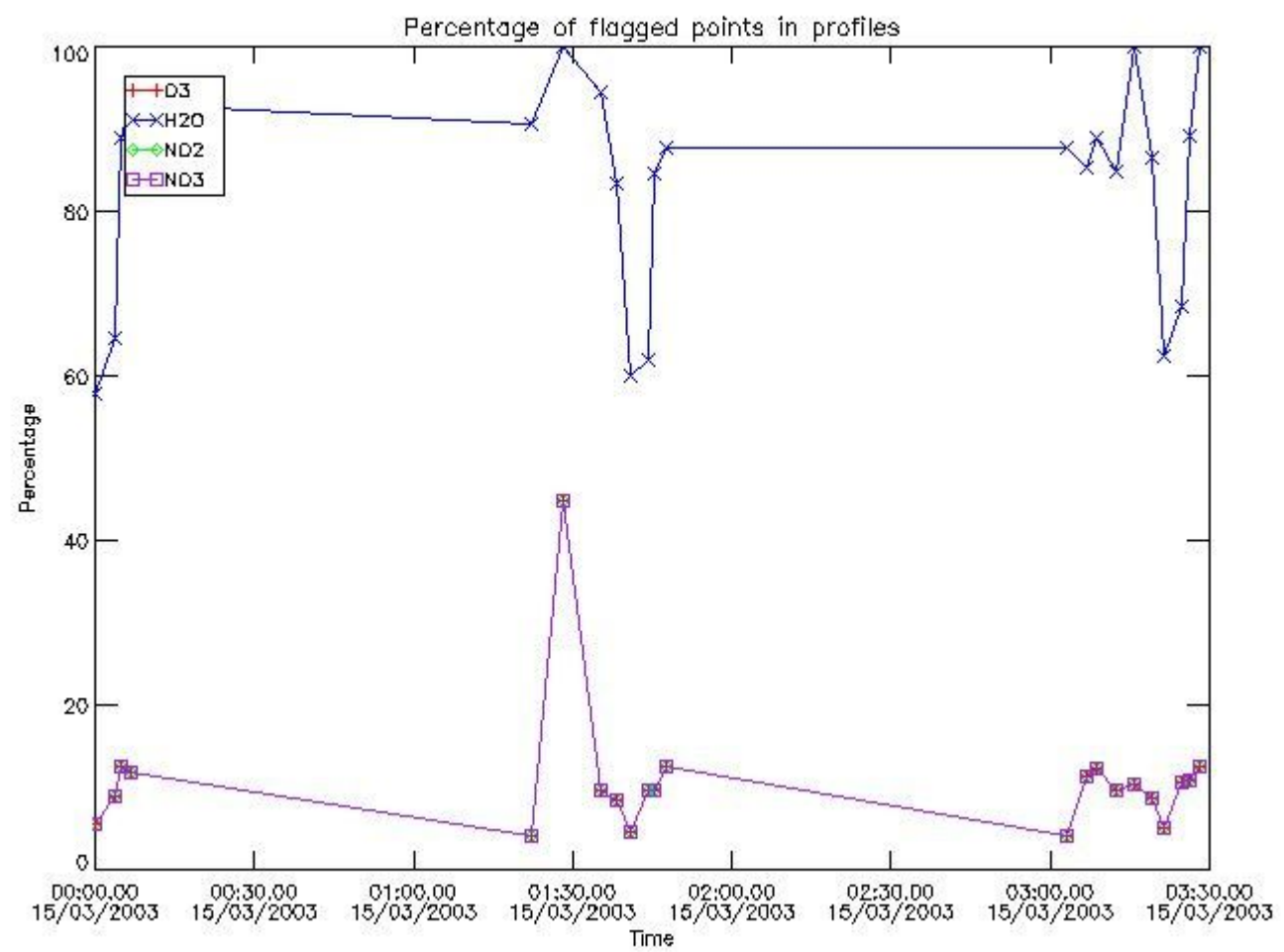


43	GOM_NL__2PRFIN20030315_021017_000000372014_00361_05425_5325.N1	15-MAR-2003 02:10:17	Bright	36.500	22	32Alp Leo	1.3600	15200.	73	5425	No
44	GOM_NL__2PRFIN20030315_021234_000000402014_00361_05425_5326.N1	15-MAR-2003 02:12:34	Bright	39.500	51	41Gam1Leo	2.0100	4500.0	79	5425	No
45	GOM_NL__2PRFIN20030315_021444_000000812014_00361_05425_5327.N1	15-MAR-2003 02:14:44	Bright	81.000	138	47Eps Vir	2.8280	4700.0	162	5425	No
46	GOM_NL__2PRFIN20030315_022026_000000402014_00361_05425_5328.N1	15-MAR-2003 02:20:26	Bright	39.500	174	52Psi UMa	3.0040	4400.0	79	5425	No
47	GOM_NL__2PRFIN20030315_022335_000000382014_00361_05425_5329.N1	15-MAR-2003 02:23:35	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	5425	No
48	GOM_NL__2PRFIN20030315_022504_000000372014_00361_05425_5330.N1	15-MAR-2003 02:25:04	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	5425	No
49	GOM_NL__2PRFIN20030315_022649_000000472014_00361_05425_5331.N1	15-MAR-2003 02:26:49	Bright	47.000	32	77Eps UMa	1.7630	11000.	94	5425	No
50	GOM_NL__2PRFIN20030315_022852_000000572014_00361_05425_5332.N1	15-MAR-2003 02:28:52	Bright	56.500	39	85Eta UMa	1.8540	24000.	113	5425	No
51	GOM_NL__2PRFIN20030315_023223_000000352014_00361_05425_5333.N1	15-MAR-2003 02:32:23	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	5425	No
52	GOM_NL__2PRFIN20030315_023620_000000492014_00361_05425_5334.N1	15-MAR-2003 02:36:20	Bright	48.500	119	14Eta Dra	2.7270	4700.0	97	5425	No
53	GOM_NL__2PRFIN20030315_024009_000000372014_00361_05425_5335.N1	15-MAR-2003 02:40:09	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	5425	No
54	GOM_NL__2PRFIN20030315_024211_000000512014_00361_05425_5336.N1	15-MAR-2003 02:42:11	Bright	50.500	69	33Gam Dra	2.2310	3800.0	101	5425	No
55	GOM_NL__2PRFIN20030315_024516_000000392014_00361_05425_5337.N1	15-MAR-2003 02:45:16	Bright	38.500	19	50Alp Cyg	1.2460	10500.	77	5425	No
56	GOM_NL__2PRFIN20030315_024650_000000392014_00361_05425_5338.N1	15-MAR-2003 02:46:50	Bright	38.500	66	37Gam Cyg	2.2080	5900.0	77	5425	No
57	GOM_NL__2PRFIN20030315_024831_000000352014_00361_05425_5339.N1	15-MAR-2003 02:48:31	Bright	35.000	92	53Eps Cyg	2.5000	4500.0	70	5425	No
58	GOM_NL__2PRFIN20030315_025646_000000512014_00361_05425_5340.N1	15-MAR-2003 02:56:46	Tw_i_and_stray	51.000	11	53Alp Aql	0.76500	8000.0	102	5425	No
59	GOM_NL__2PRFIN20030315_030257_000001272014_00361_05425_5341.N1	15-MAR-2003 03:02:57	Dark	126.50	59	55Alp Oph	2.0800	8900.0	253	5425	No
60	GOM_NL__2PRFIN20030315_030649_000000452014_00361_05425_5342.N1	15-MAR-2003 03:06:49	Dark	45.000	155	41Pi Sgr	2.9000	6600.0	90	5425	No
61	GOM_NL__2PRFIN20030315_030850_000000462014_00361_05425_5343.N1	15-MAR-2003 03:08:50	Dark	46.000	57	34Sig Sgr	2.0660	26000.	92	5425	No
62	GOM_NL__2PRFIN20030315_031216_000000532014_00361_05425_5344.N1	15-MAR-2003 03:12:16	Dark	53.000	38	20Eps Sgr	1.8360	11000.	106	5425	No
63	GOM_NL__2PRFIN20030315_031550_000000502014_00362_05426_5881.N1	15-MAR-2003 03:15:50	Dark	49.500	25	35Lam Sco	1.6200	28000.	99	5426	No
64	GOM_NL__2PRFIN20030315_031858_000000602014_00362_05426_5882.N1	15-MAR-2003 03:18:58	Dark	59.500	75	26Eps Sco	2.2910	4250.0	119	5426	No
65	GOM_NL__2PRFIN20030315_032124_000000992014_00362_05426_5883.N1	15-MAR-2003 03:21:24	Dark	99.000	16	21Alp Sco	1.0200	3000.0	198	5426	No
66	GOM_NL__2PRFIN20030315_032450_000000482014_00362_05426_5884.N1	15-MAR-2003 03:24:50	Dark	48.000	4	Alp1Cen	-0.010000	5800.0	96	5426	No
67	GOM_NL__2PRFIN20030315_032604_000000472014_00362_05426_5885.N1	15-MAR-2003 03:26:04	Dark	46.500	10	Bet Cen	0.61000	28000.	93	5426	No
68	GOM_NL__2PRFIN20030315_032804_000000412014_00362_05426_5886.N1	15-MAR-2003 03:28:04	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	5426	No
69	GOM_NL__2PRFIN20030315_032919_000000452014_00362_05426_5887.N1	15-MAR-2003 03:29:19	Straylight	45.000	26	Gam Cru	1.6240	2900.0	90	5426	No
70	GOM_NL__2PRFIN20030315_033115_000000652014_00362_05426_5888.N1	15-MAR-2003 03:31:15	Straylight	64.500	54	5The Cen	2.0550	4500.0	129	5426	No
71	GOM_NL__2PRFIN20030315_033316_000000392014_00362_05426_5889.N1	15-MAR-2003 03:33:16	Straylight	39.000	113	Mu Vel	2.6920	5000.0	78	5426	No
72	GOM_NL__2PRFIN20030315_033905_000000222014_00362_05426_5890.N1	15-MAR-2003 03:39:05	Straylight	22.000	106	9Bet Crv	2.6480	5600.0	44	5426	No

### 3. Quality information per product

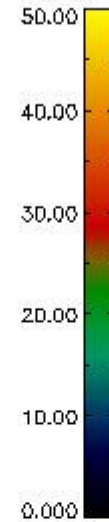
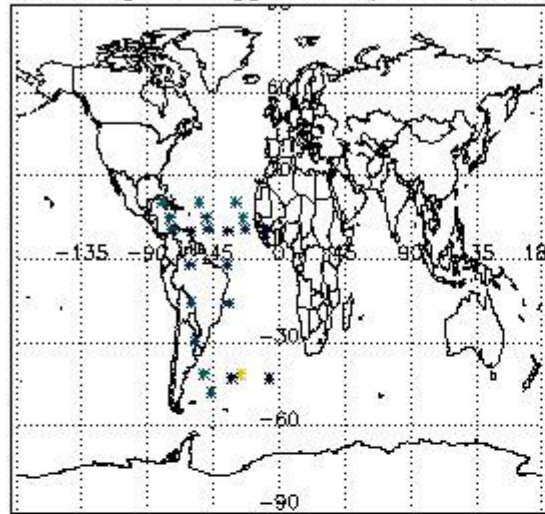
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

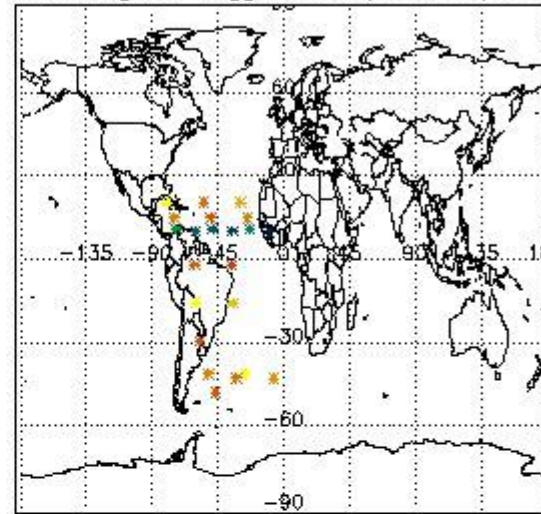


*3.2 Plot quality information per product (world map)*

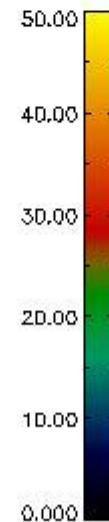
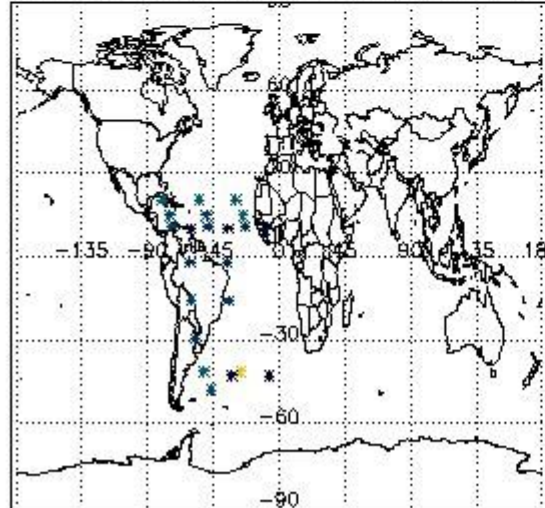
Percentage of flagged data per O3 profile



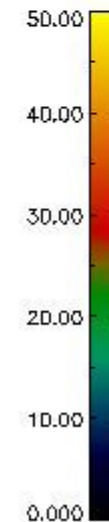
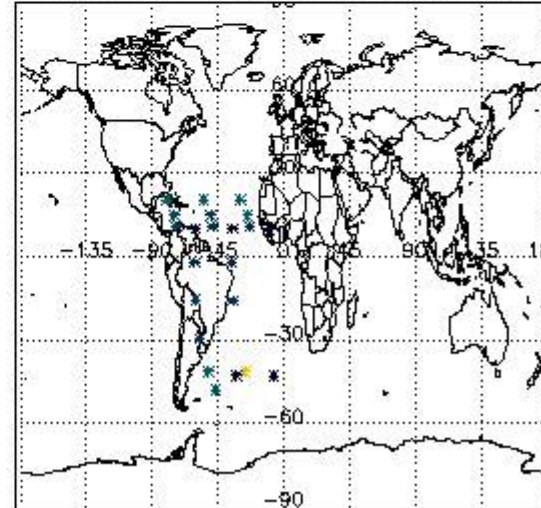
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

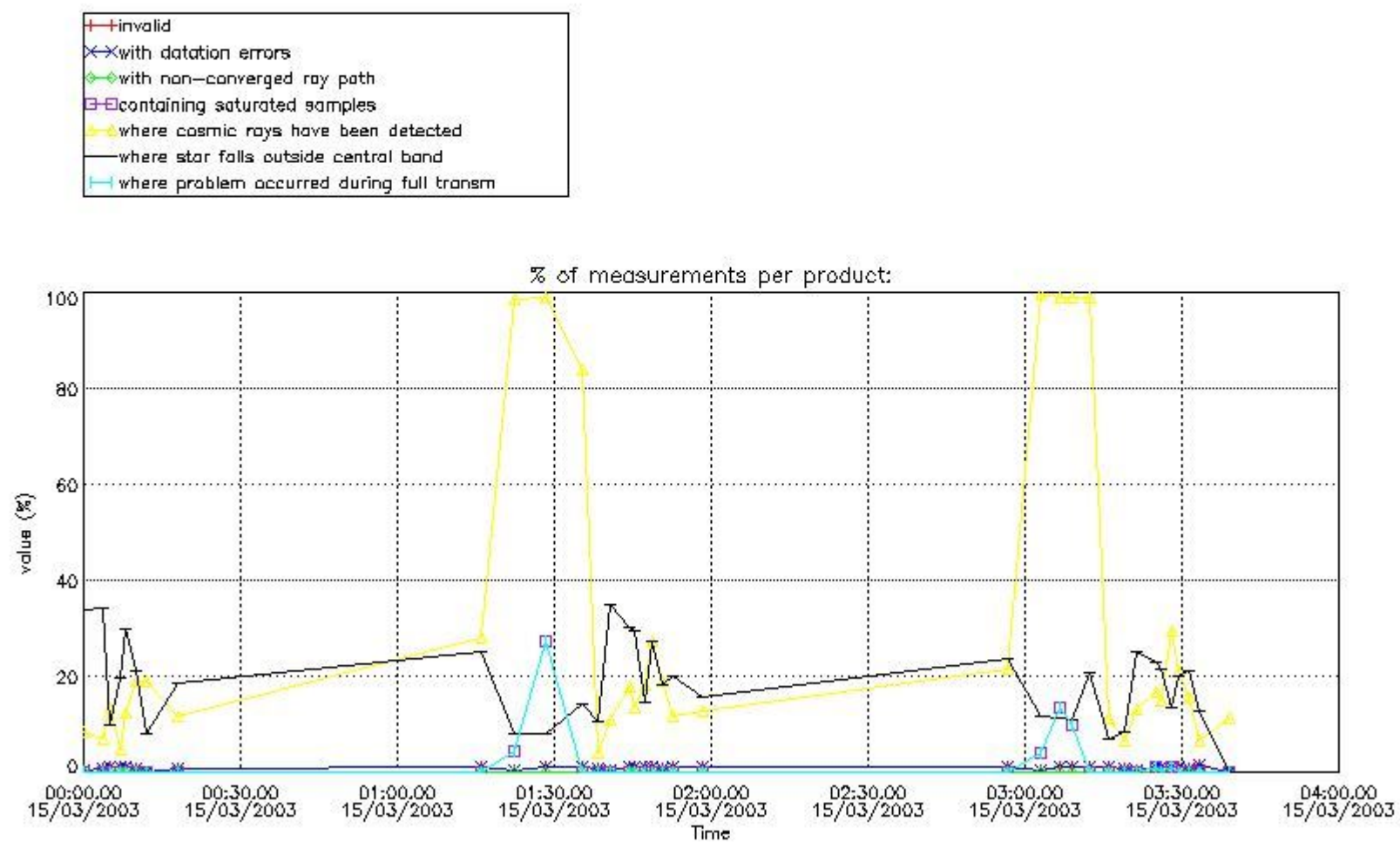


#### 4. Level 1 quality information per product

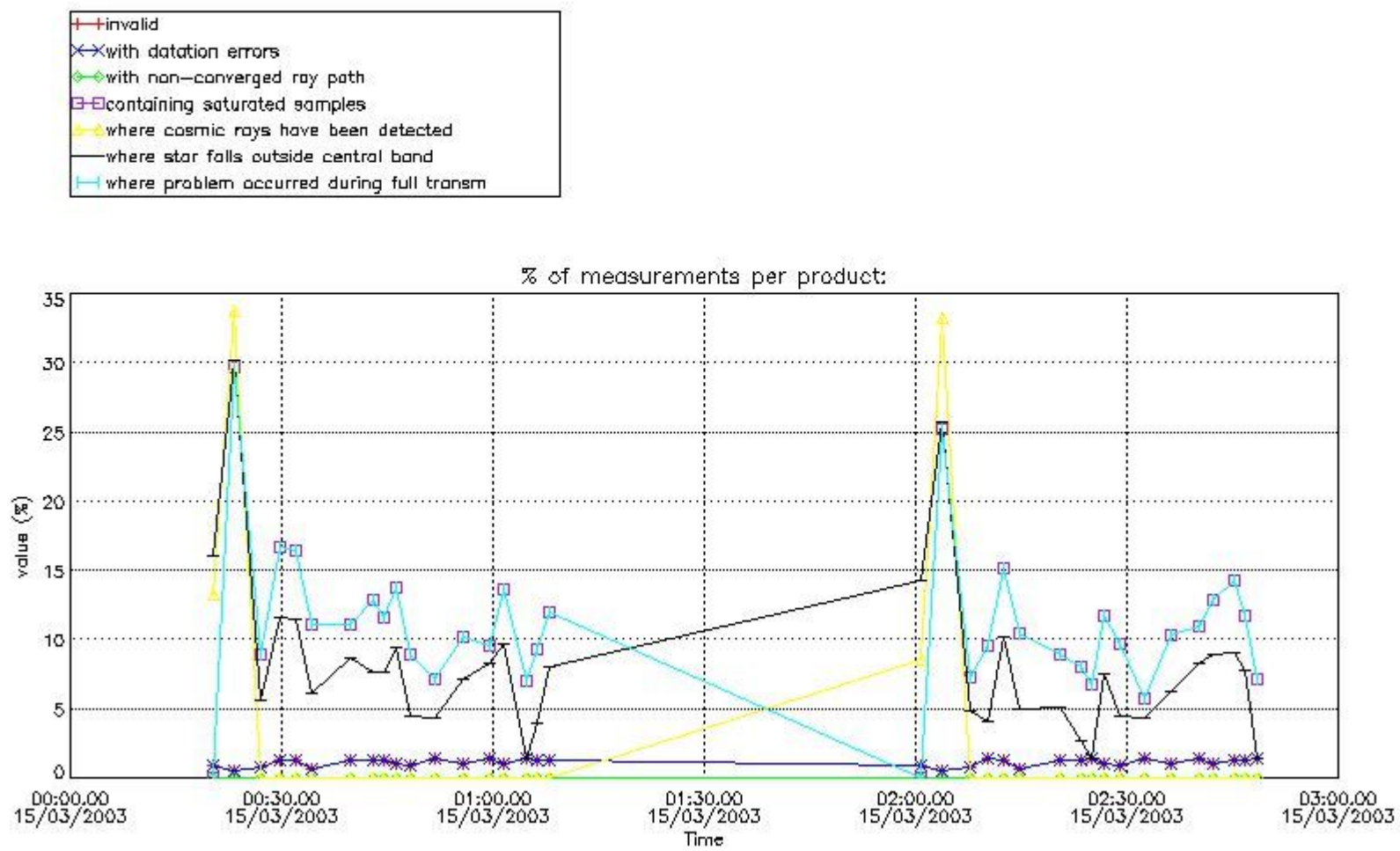
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



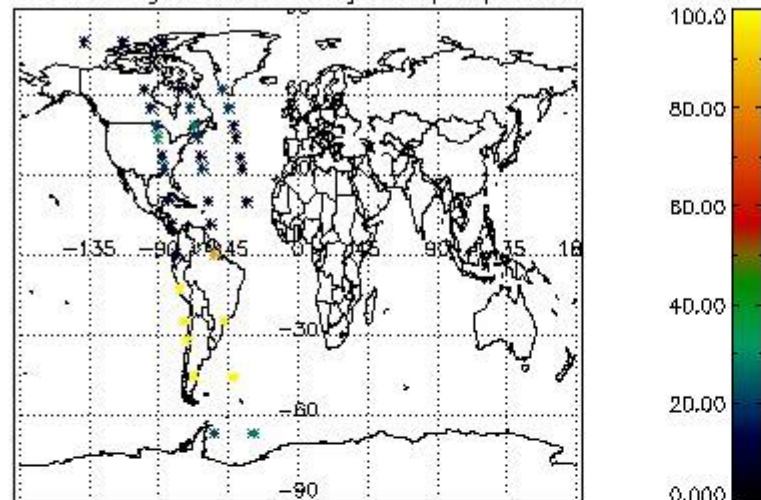
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



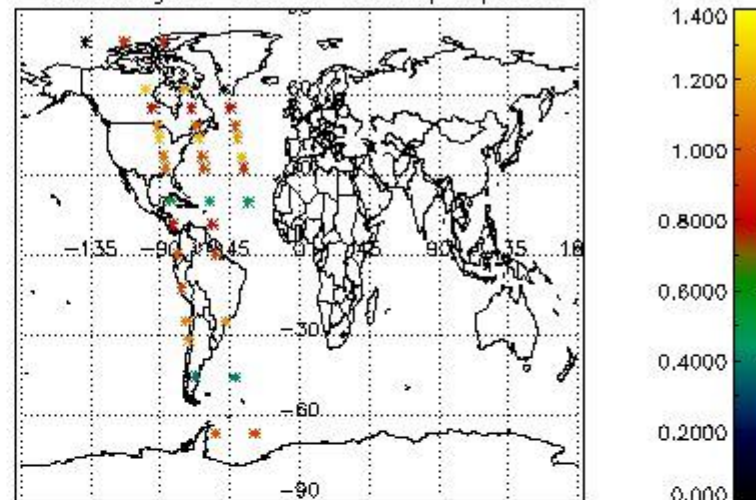
4.2 Plot quality information per product coming from level 1b processing (world map)

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

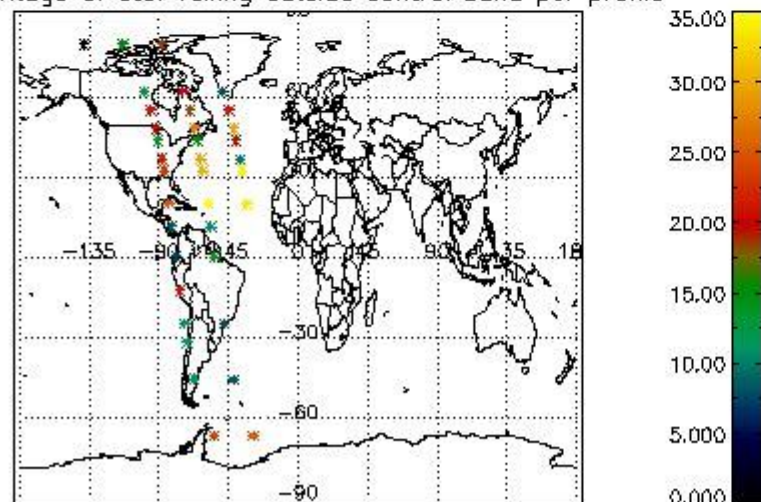
Percentage of cosmic ray hits per profile



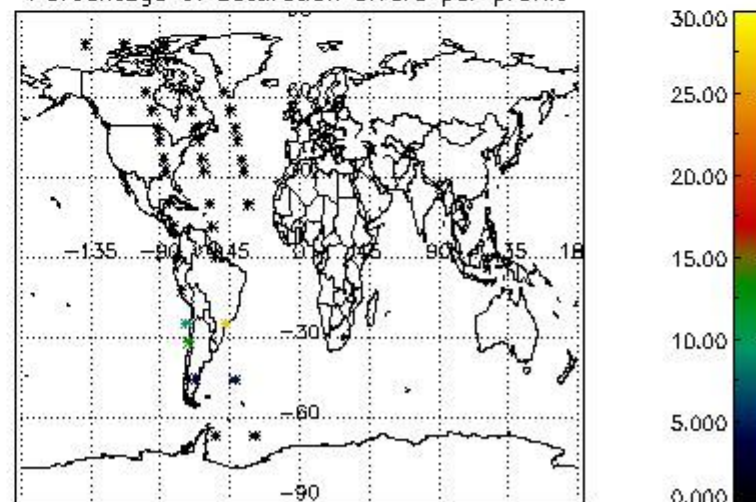
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

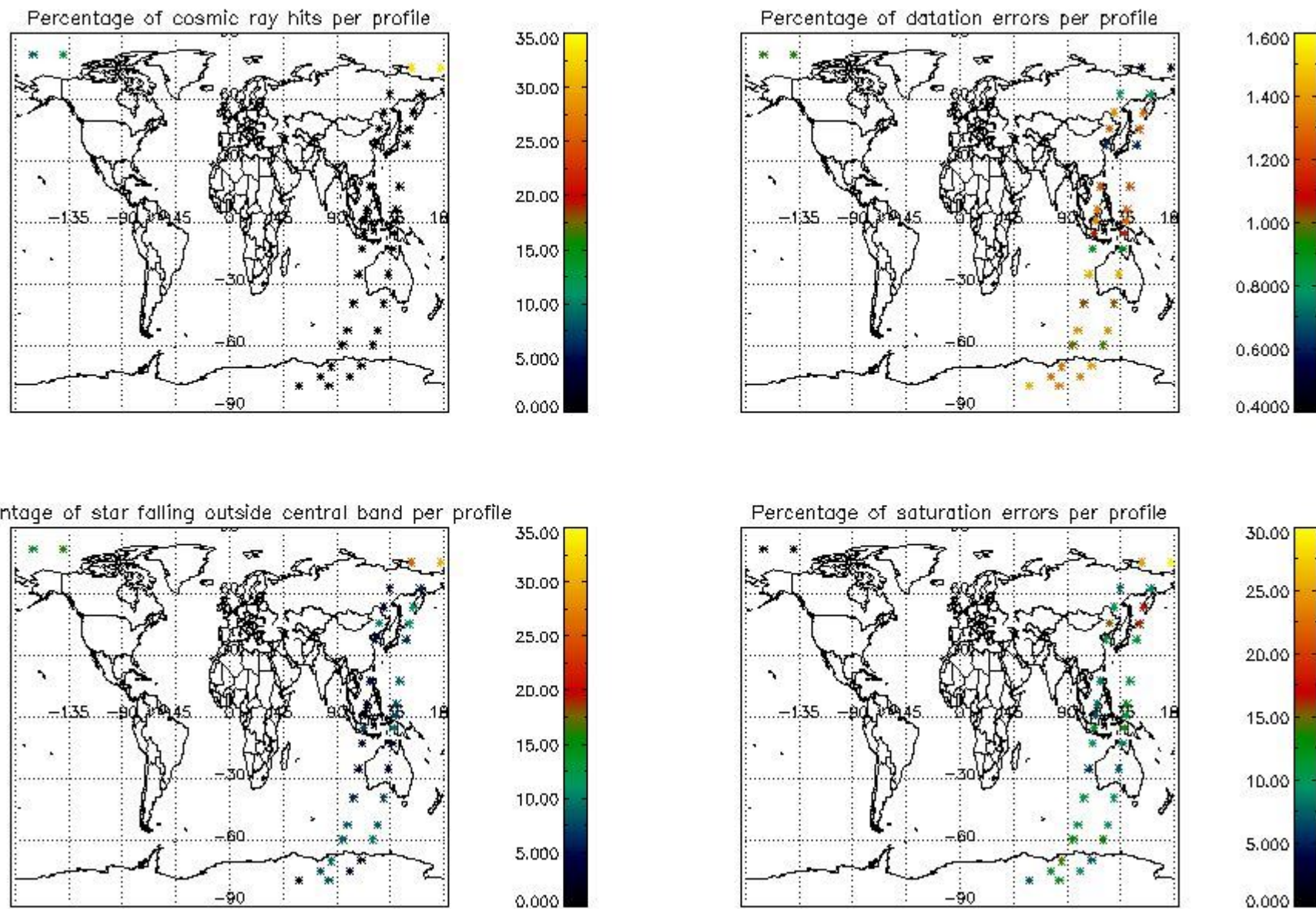


Percentage of saturation errors per profile



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





## 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

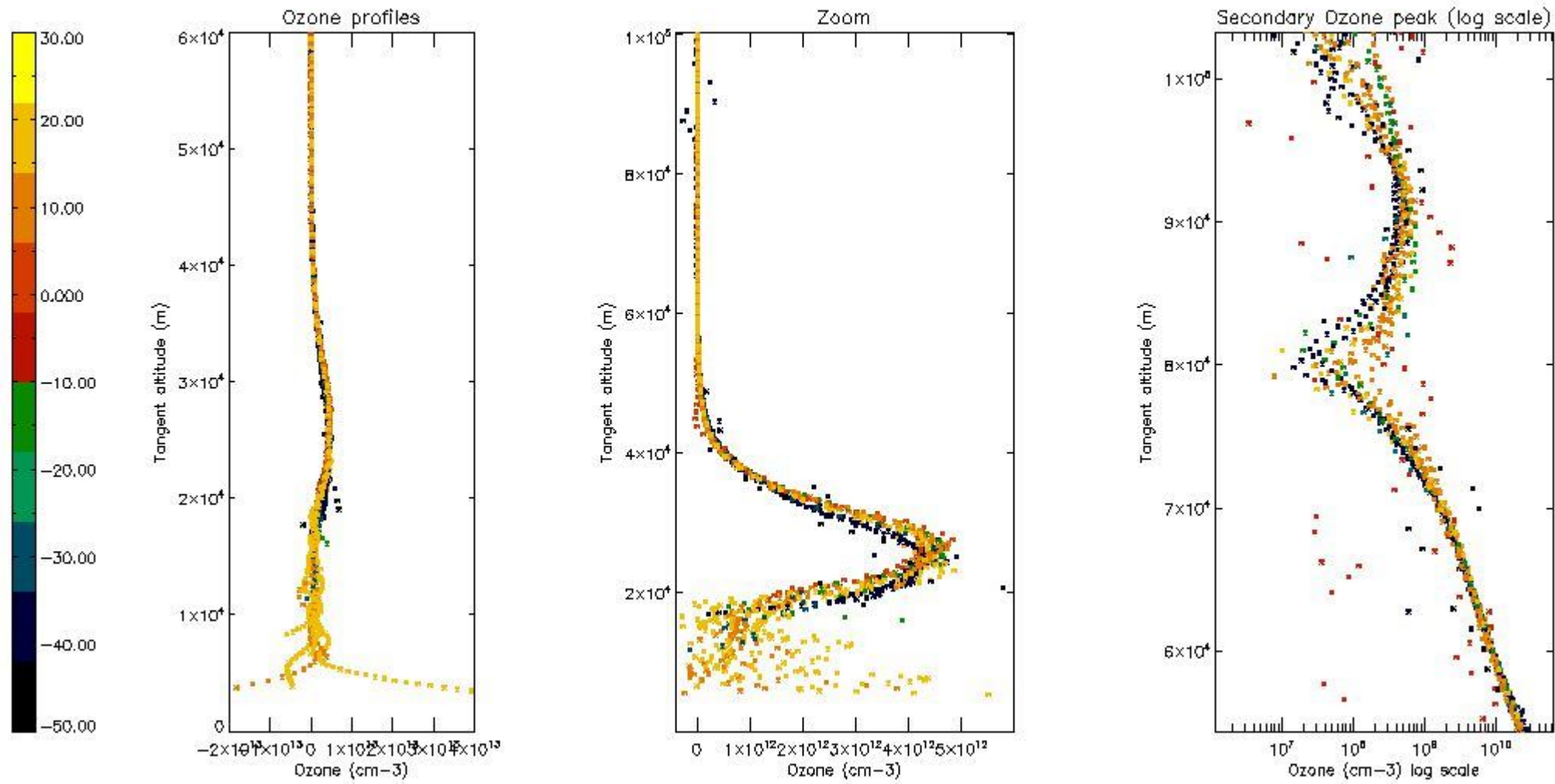
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	24

STD < 10	20
STD < 5	16

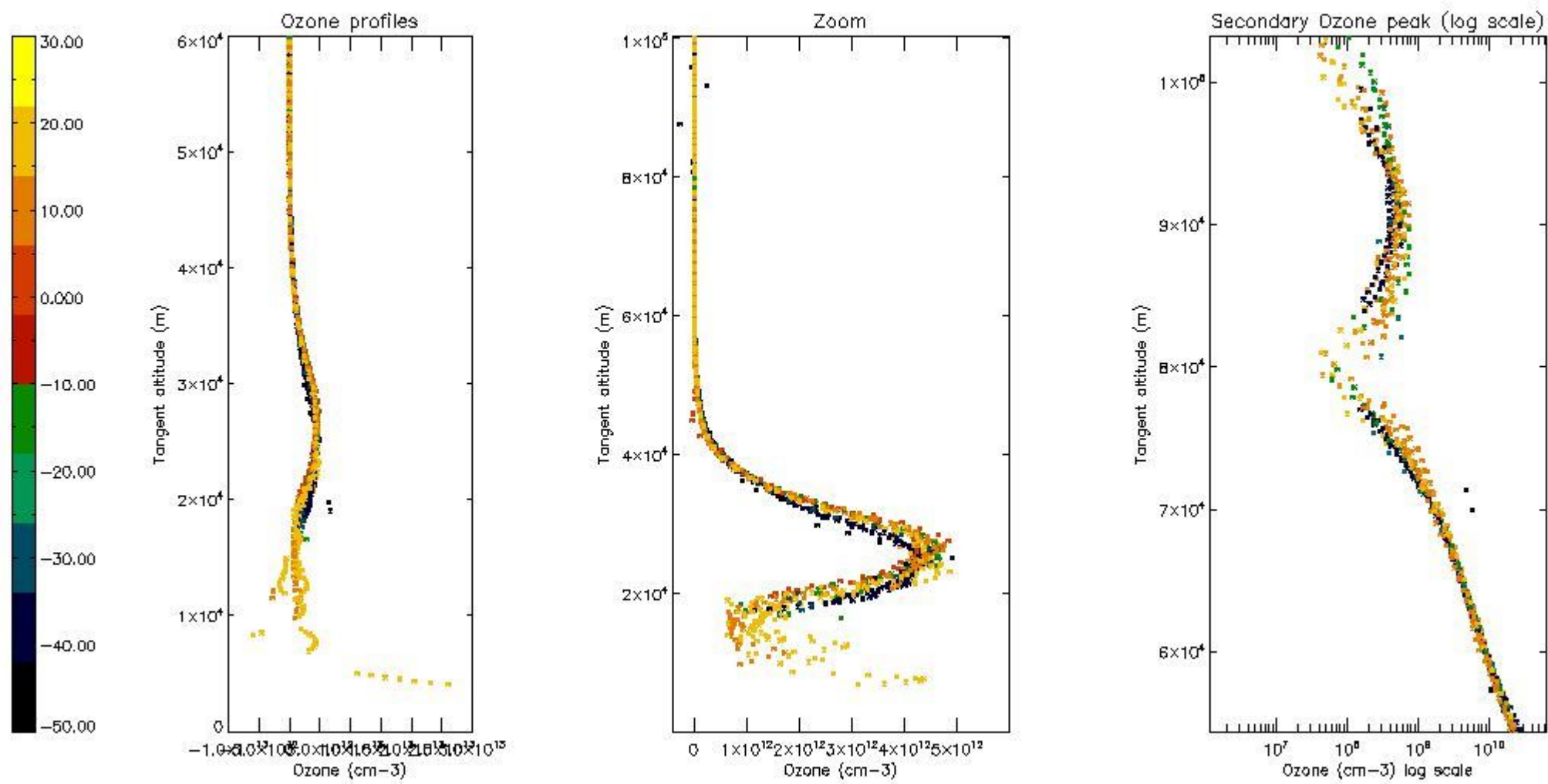
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



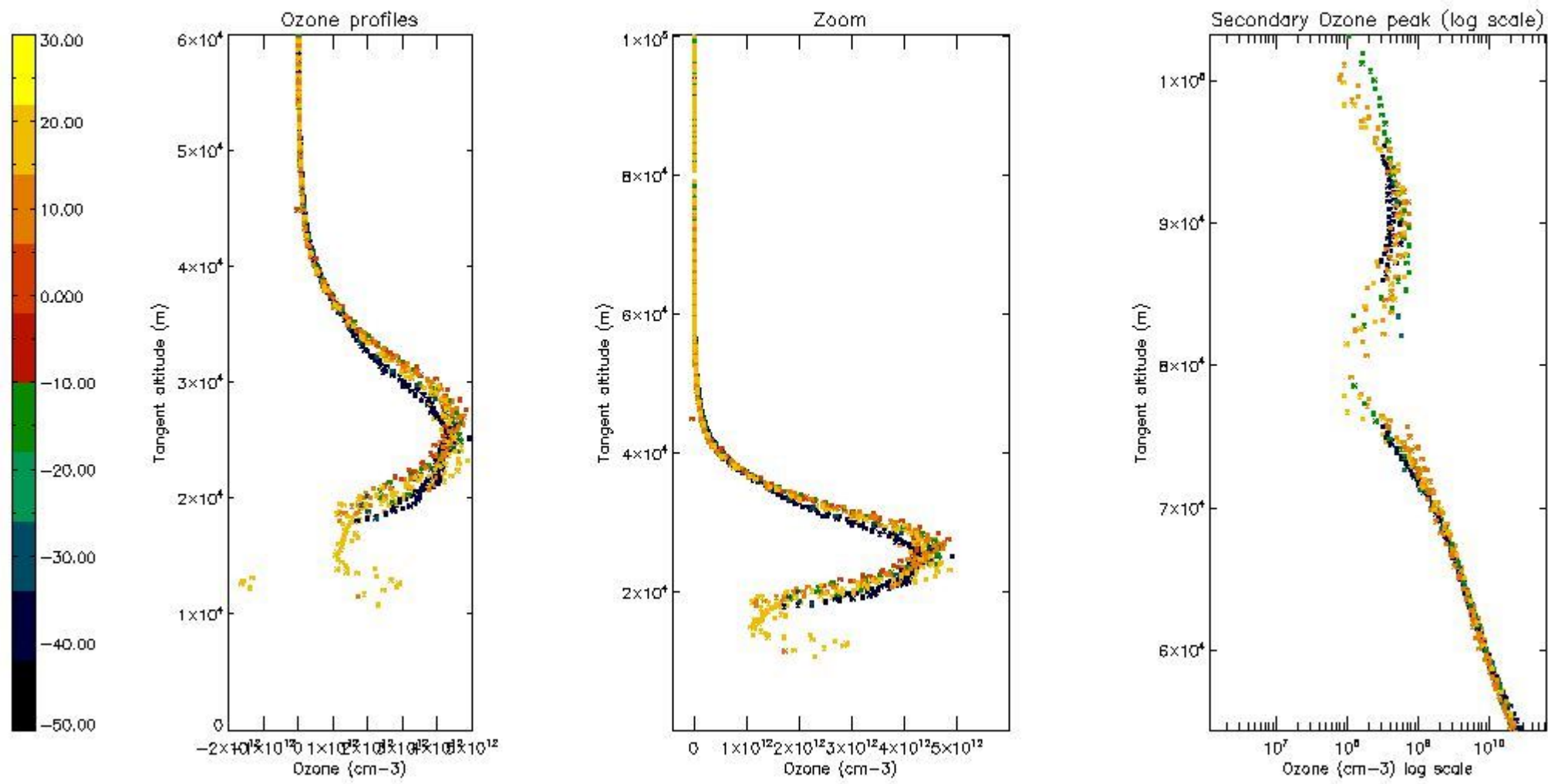
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



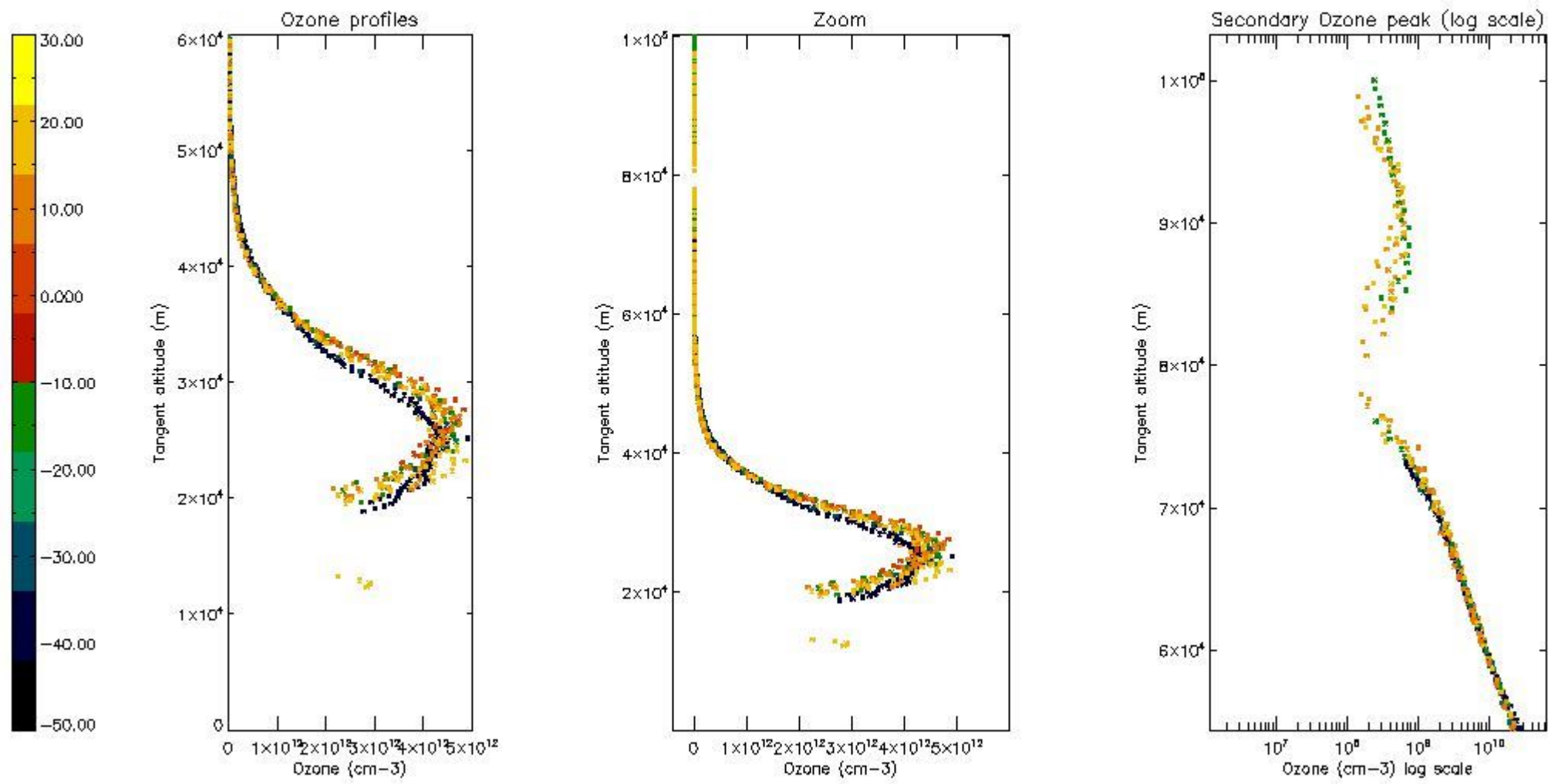
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



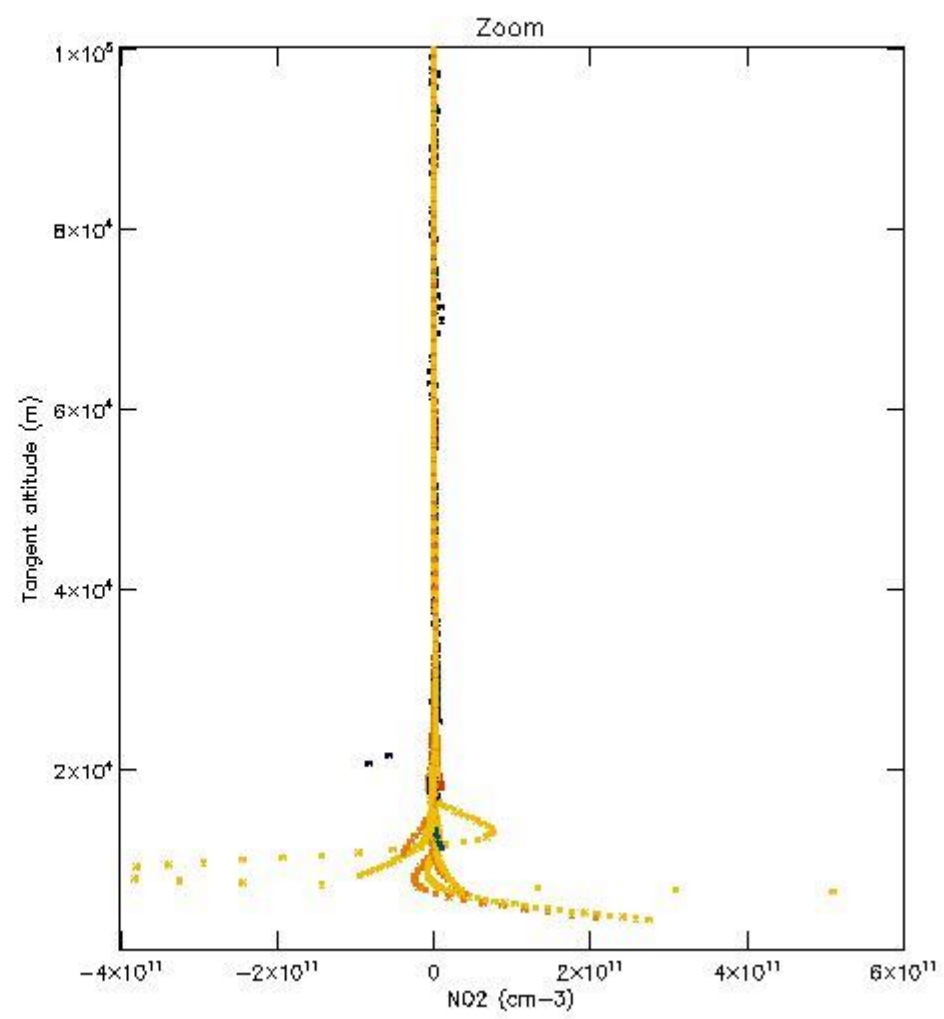
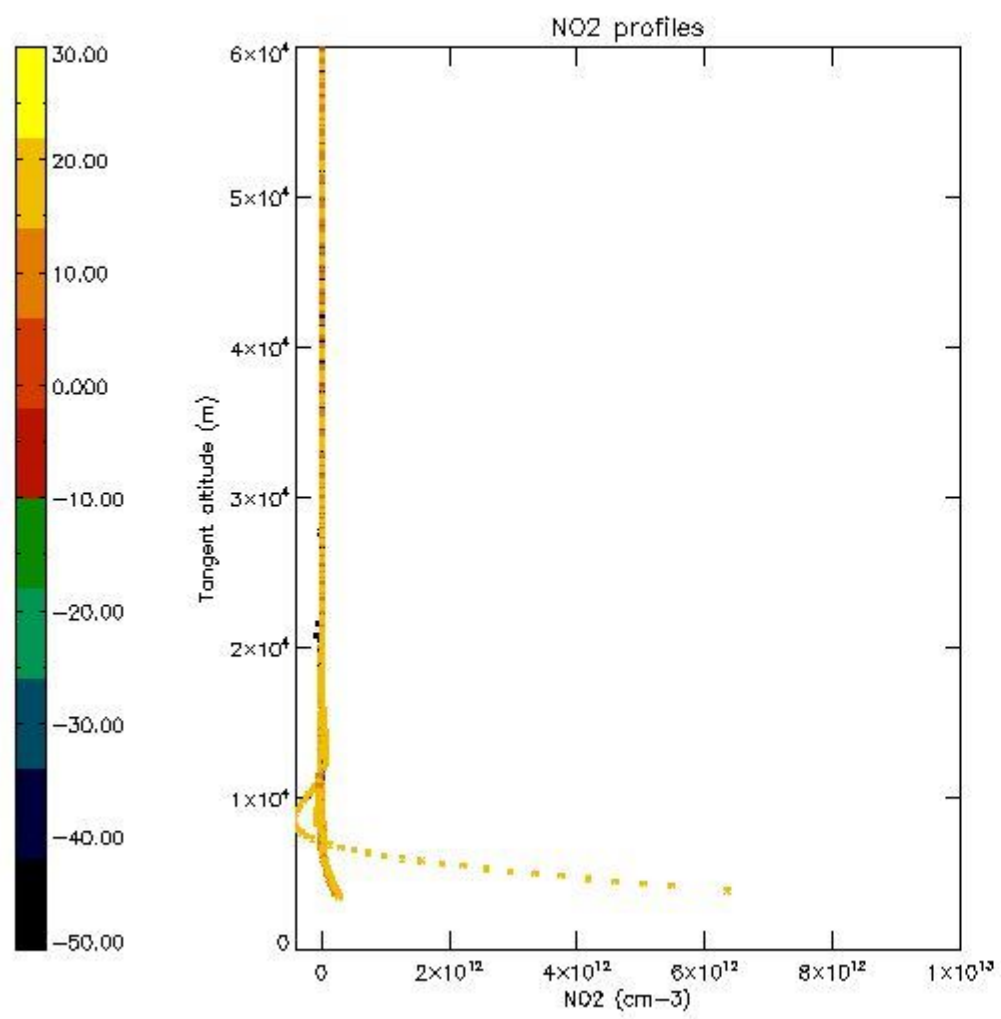
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



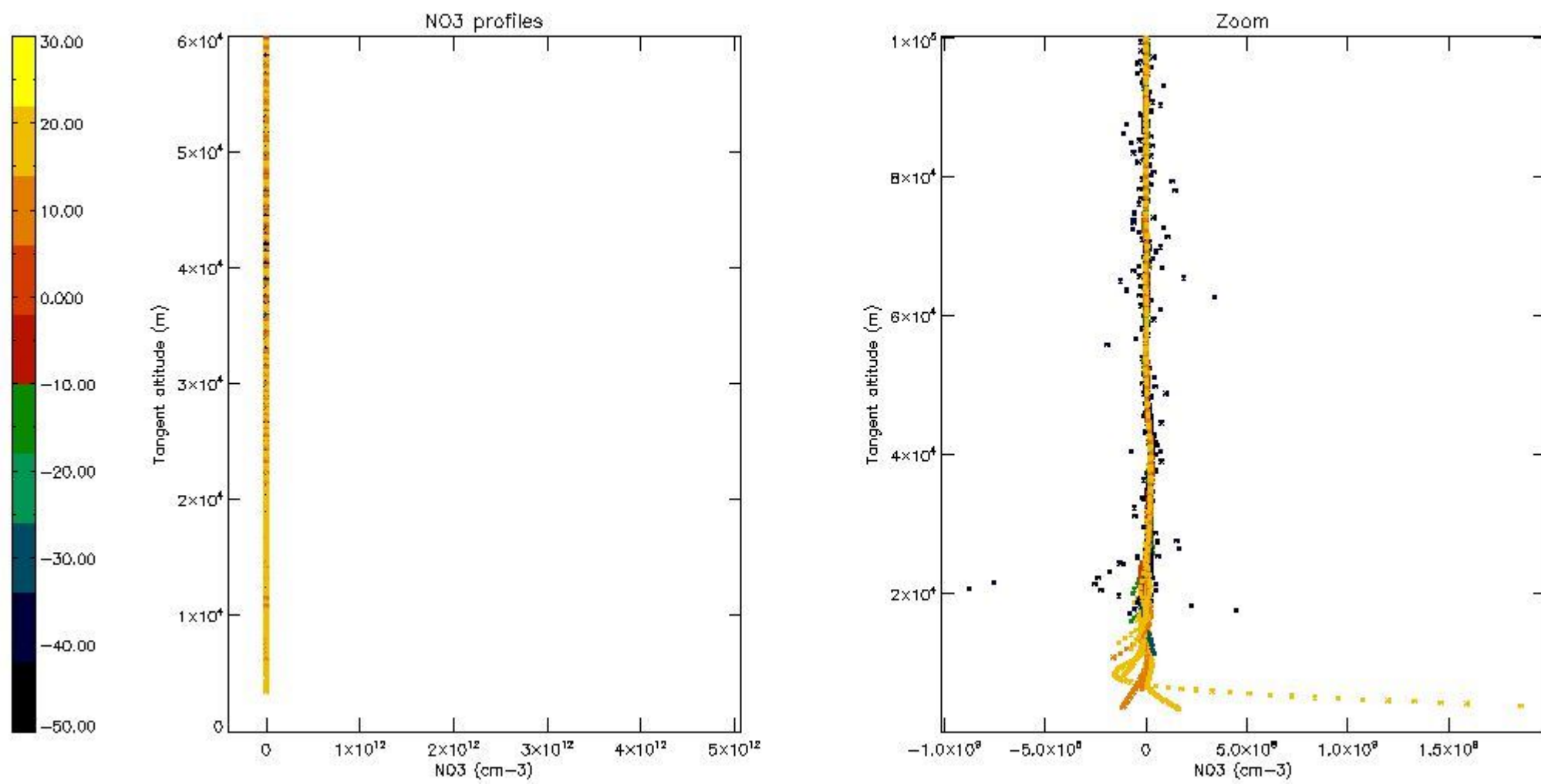
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



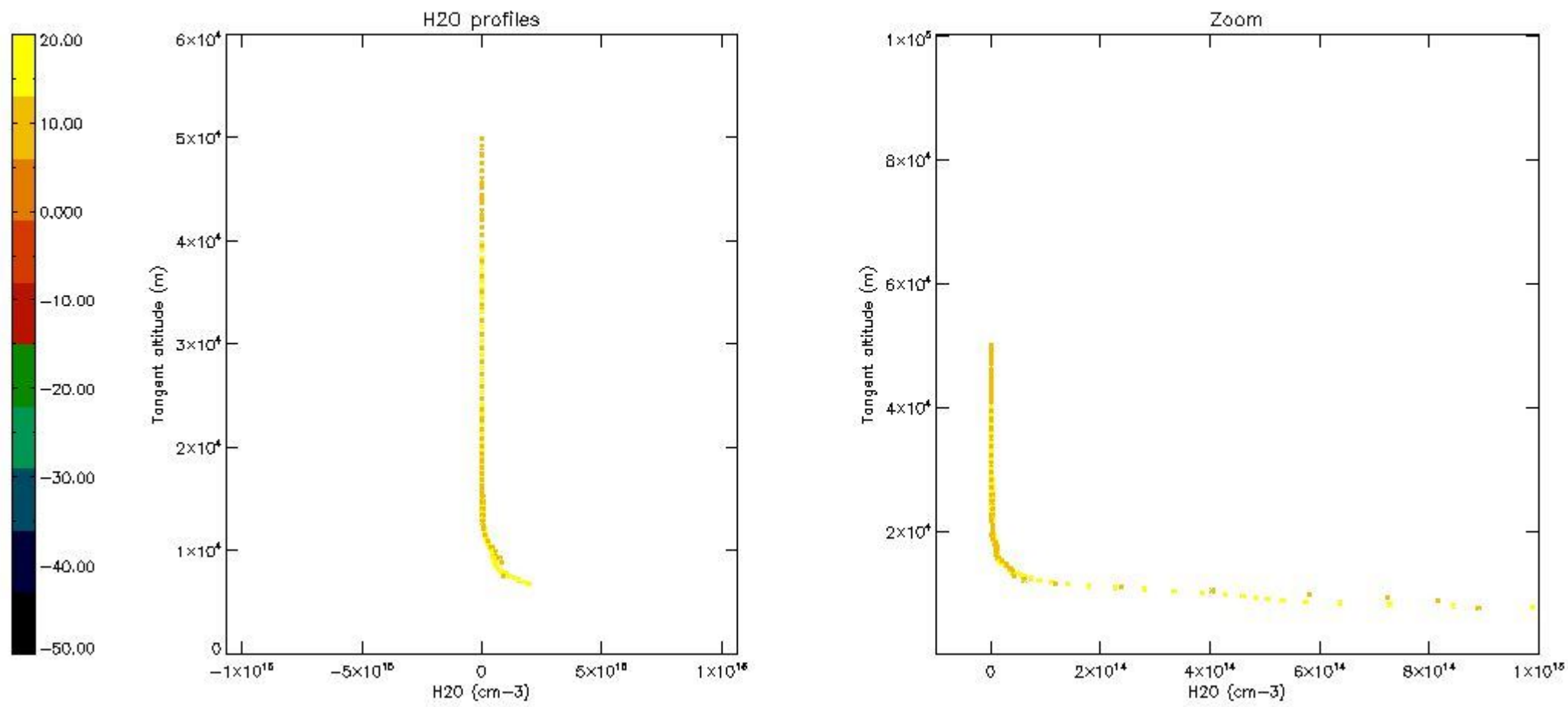
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

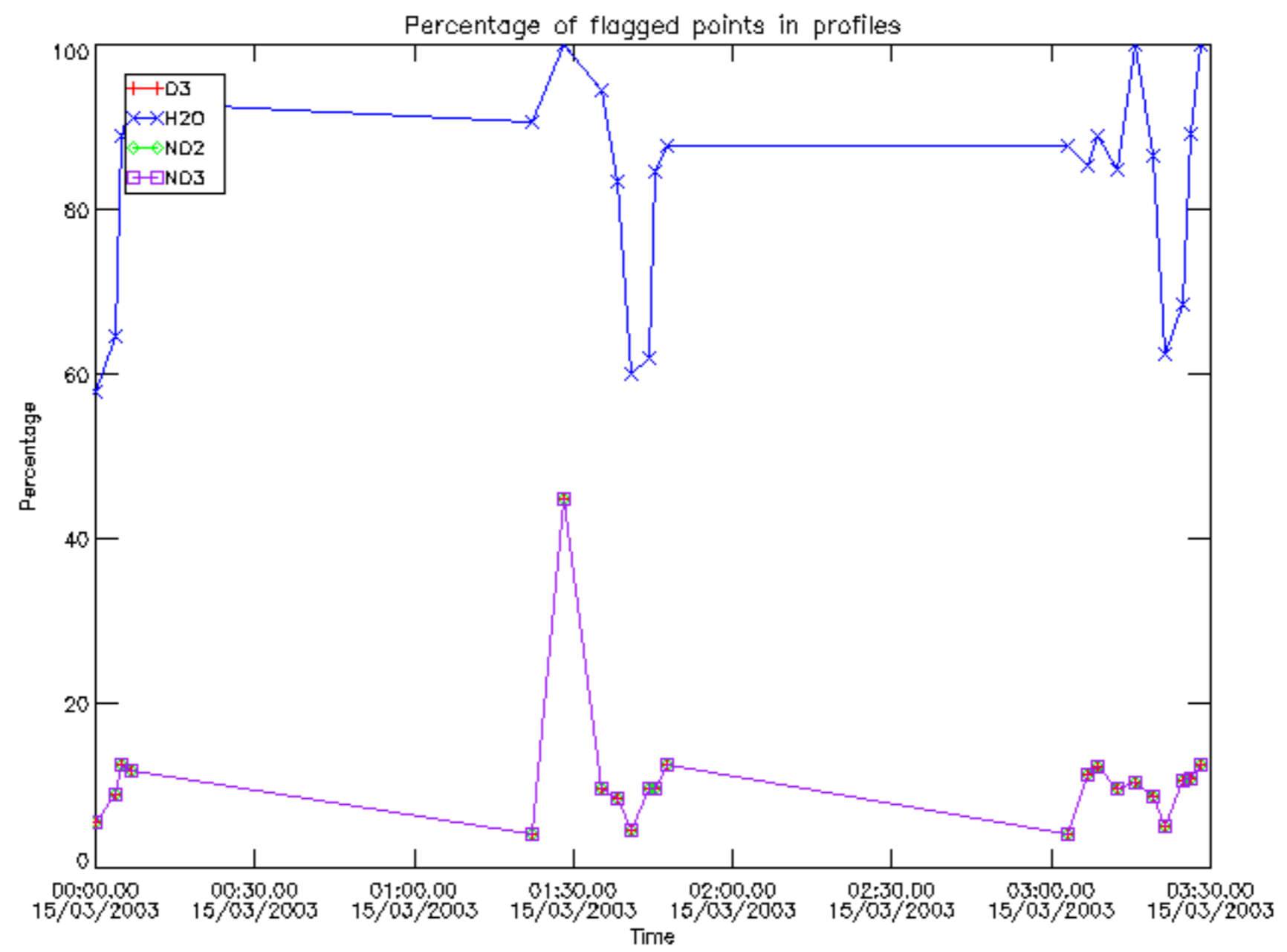


## 6. Auxiliary Data Files used for the production reported in section 2

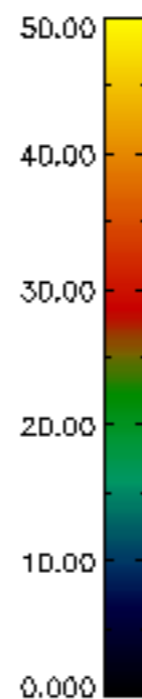
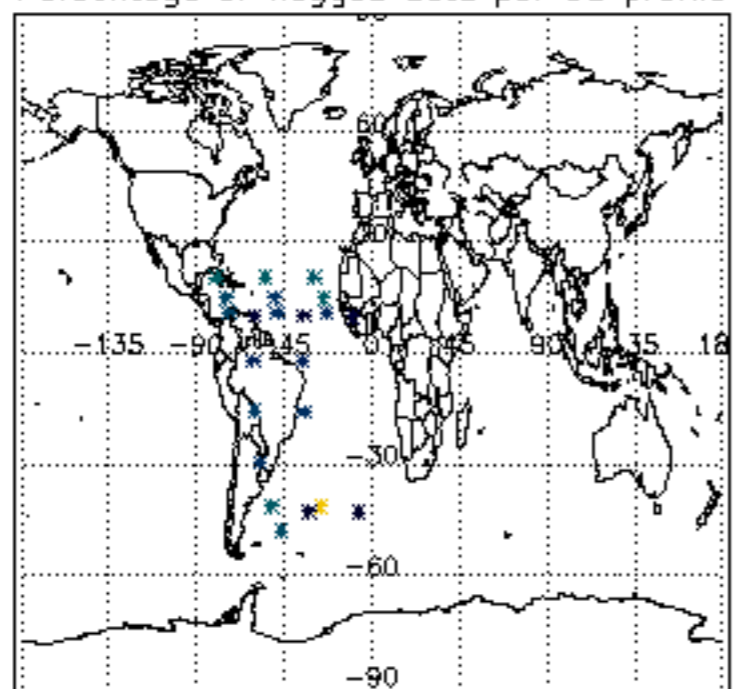
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	15-MAR-2003 00:00:07
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-MAR-2003 00:00:07
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-MAR-2003 00:00:07

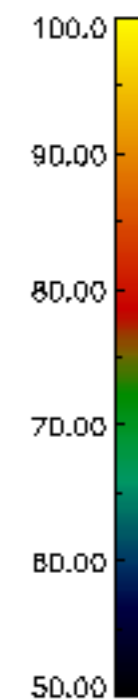
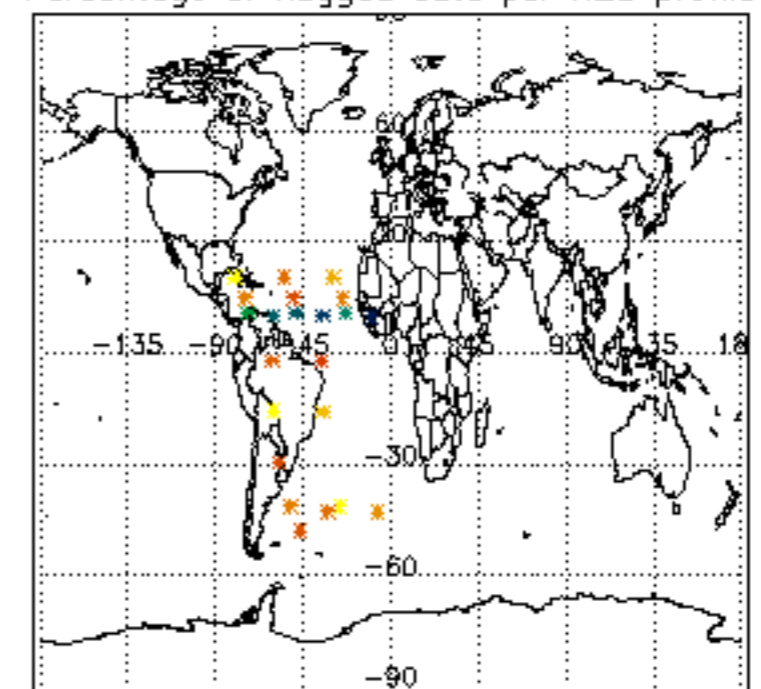




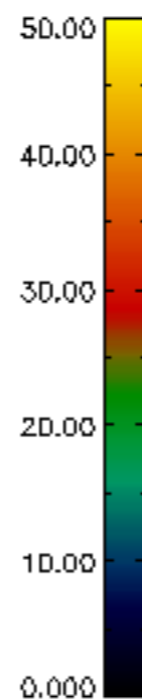
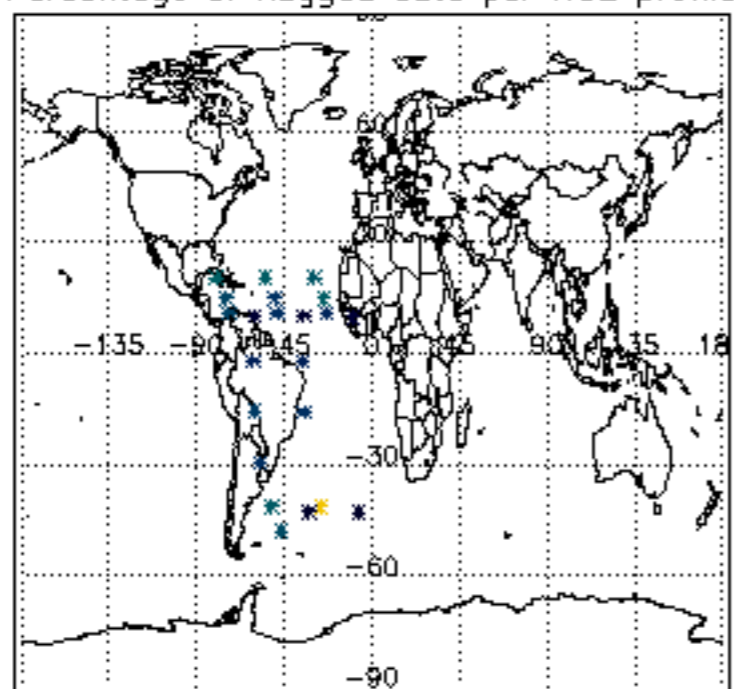
Percentage of flagged data per D3 profile



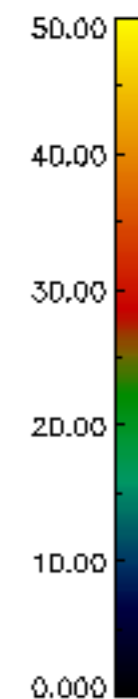
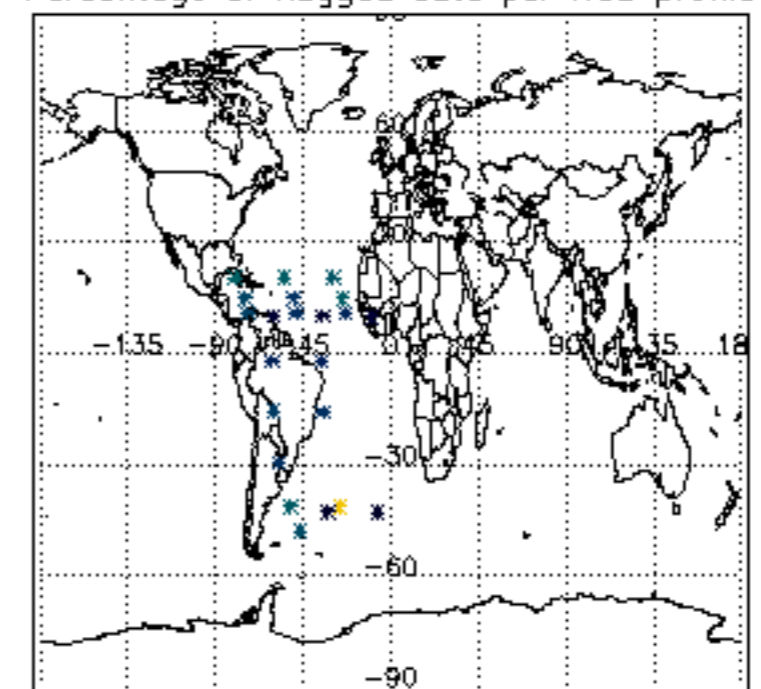
Percentage of flagged data per H2O profile

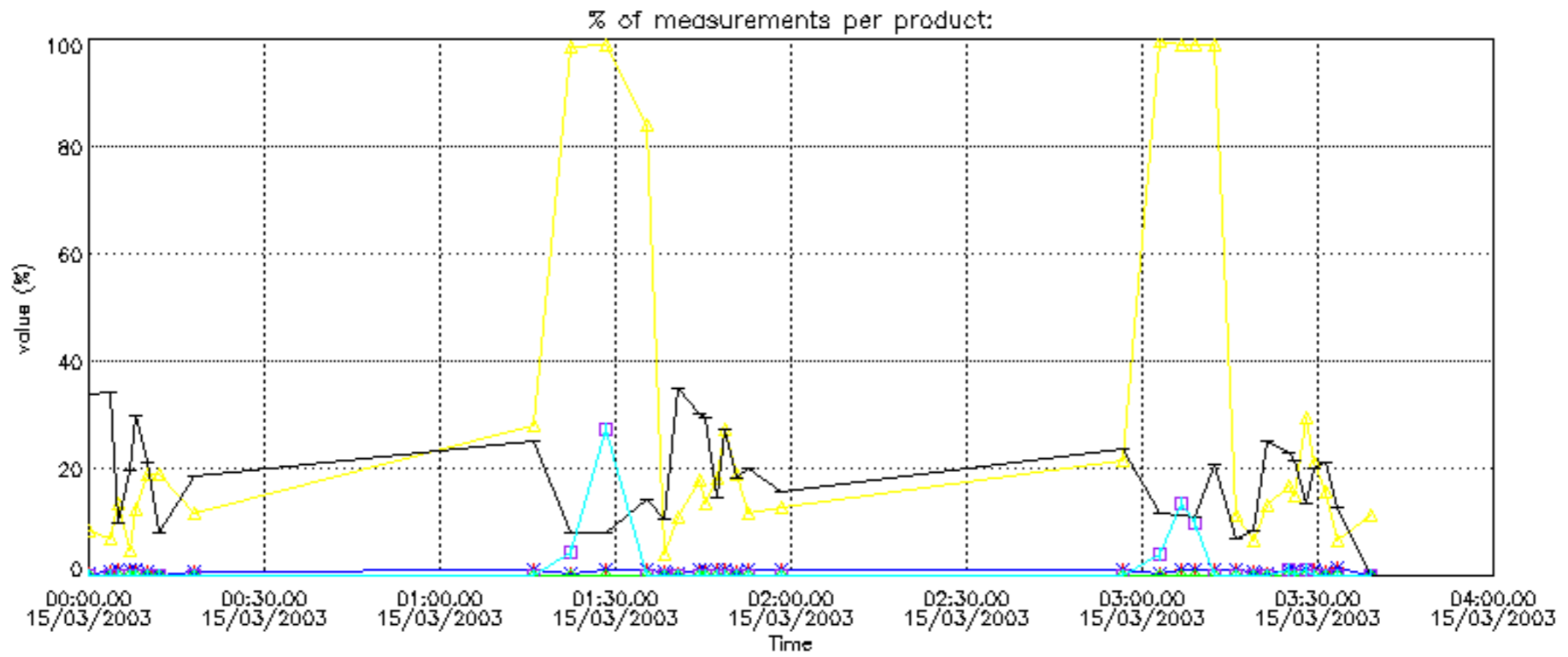


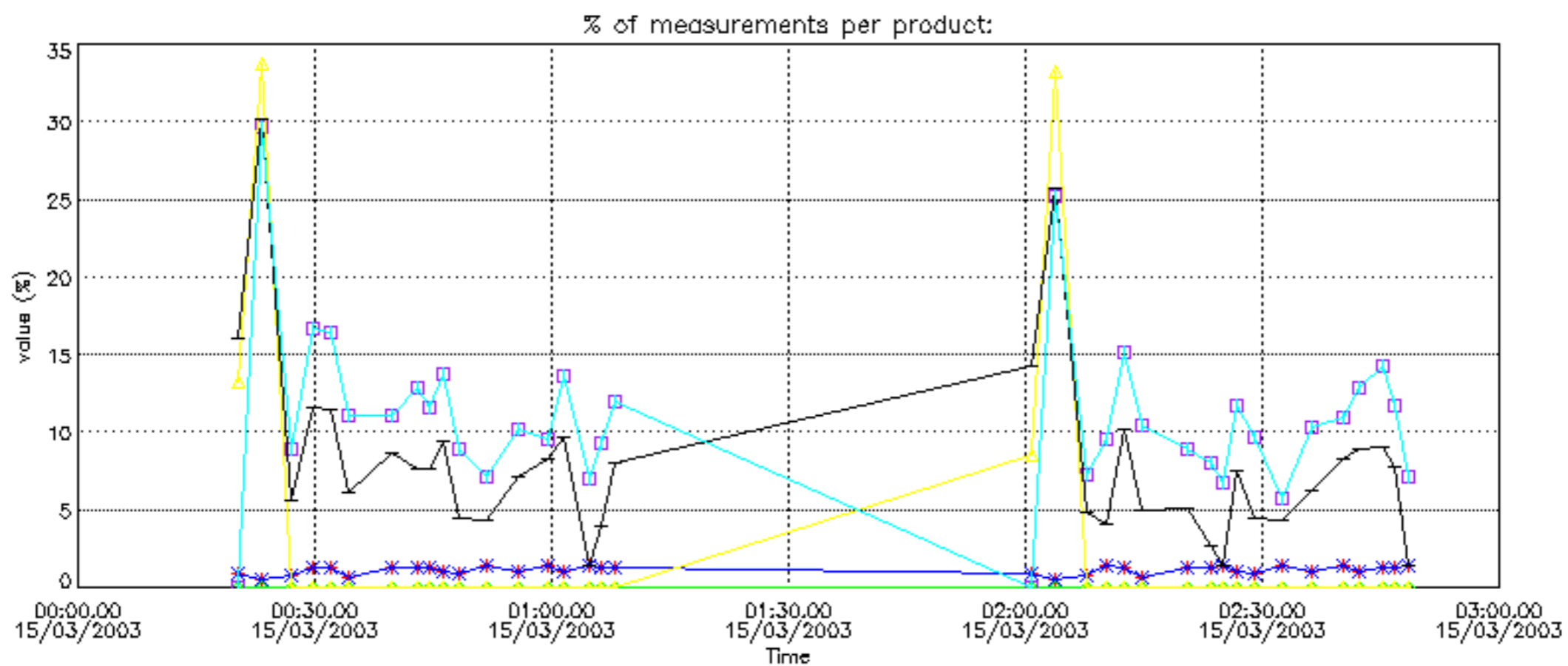
Percentage of flagged data per NO2 profile



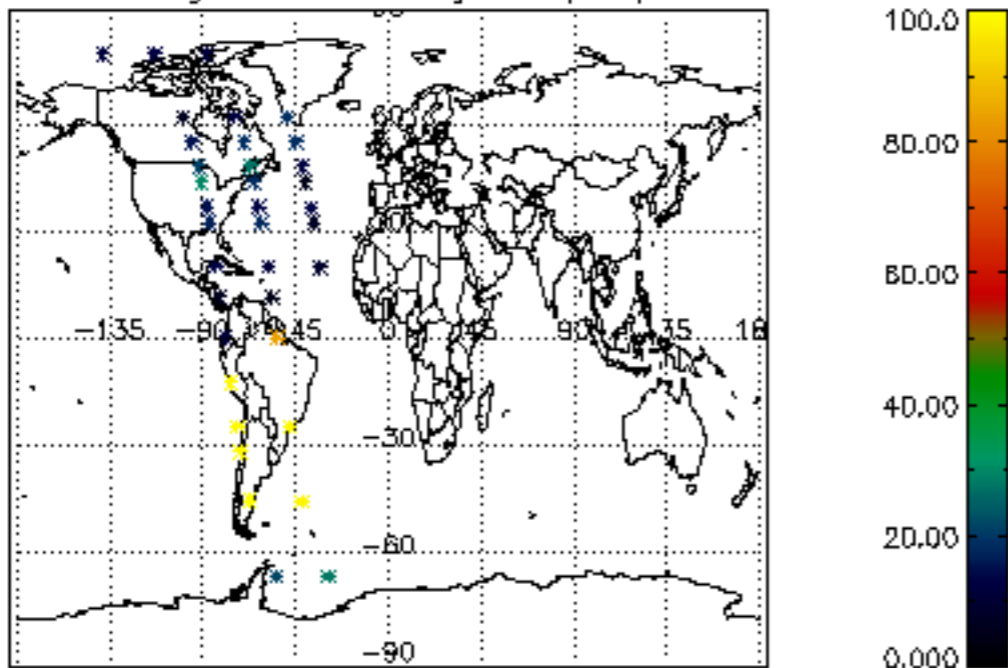
Percentage of flagged data per NO3 profile



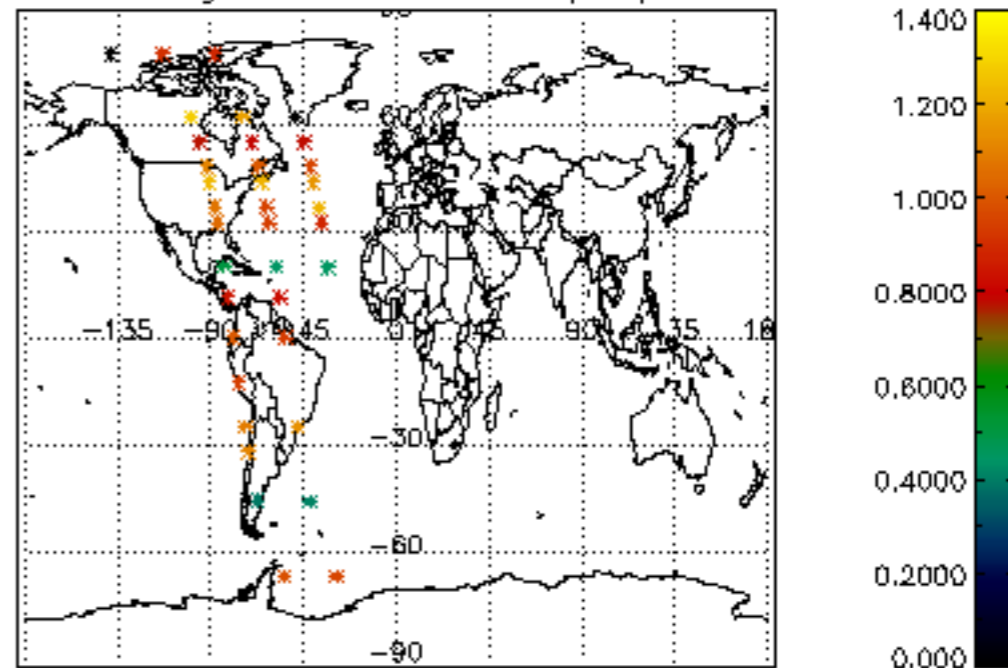




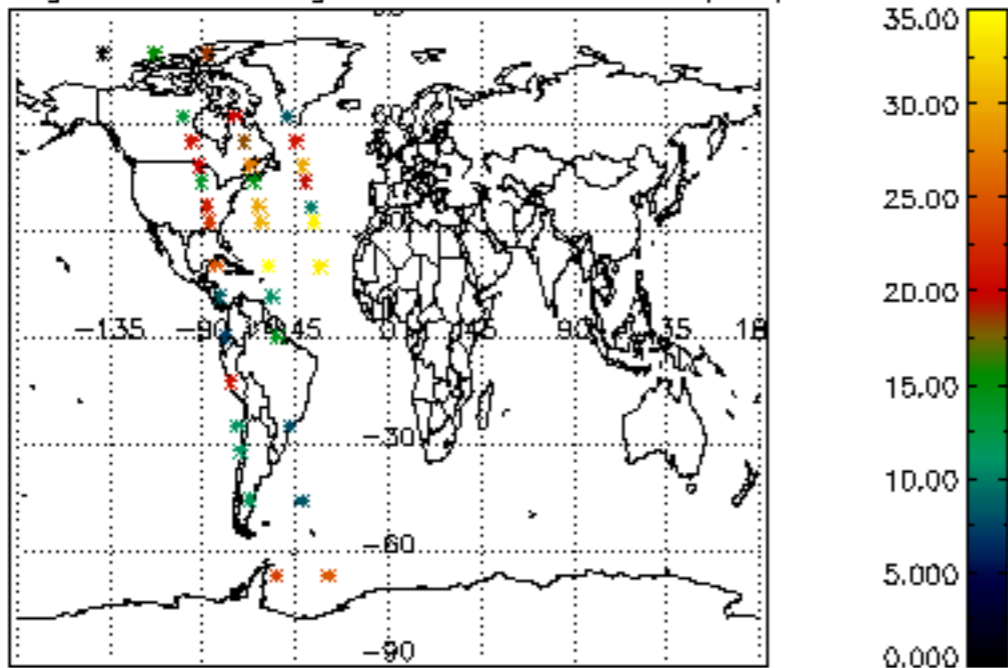
Percentage of cosmic ray hits per profile



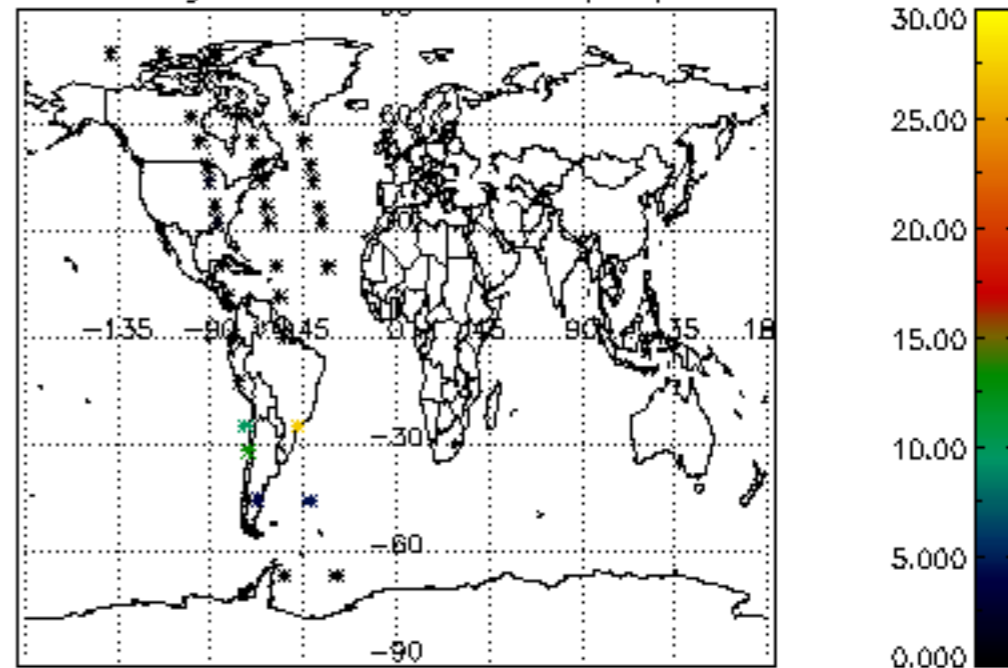
Percentage of datation errors per profile



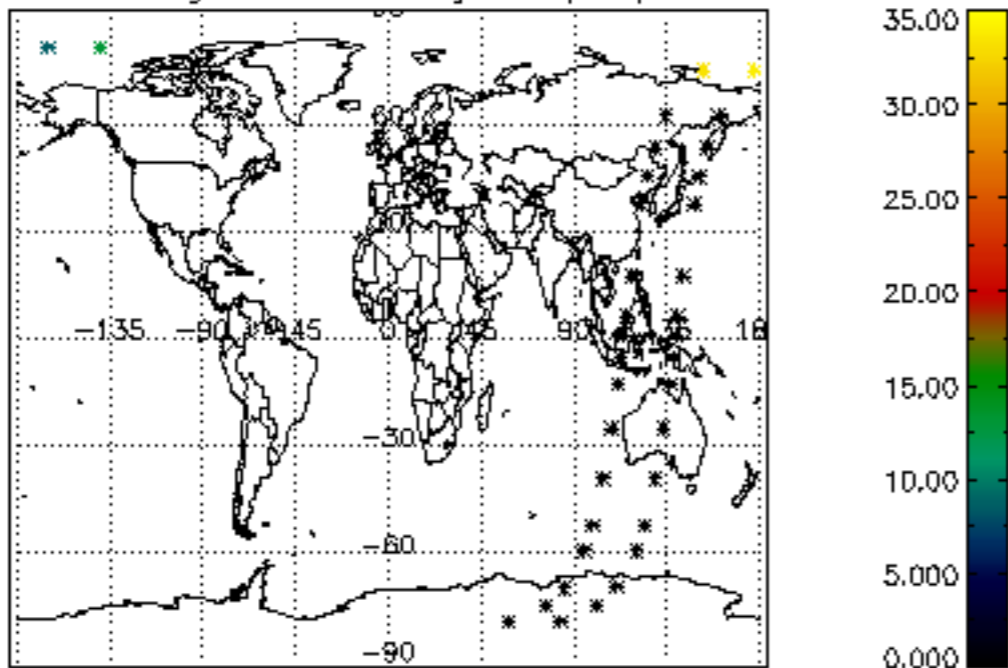
Percentage of star falling outside central band per profile



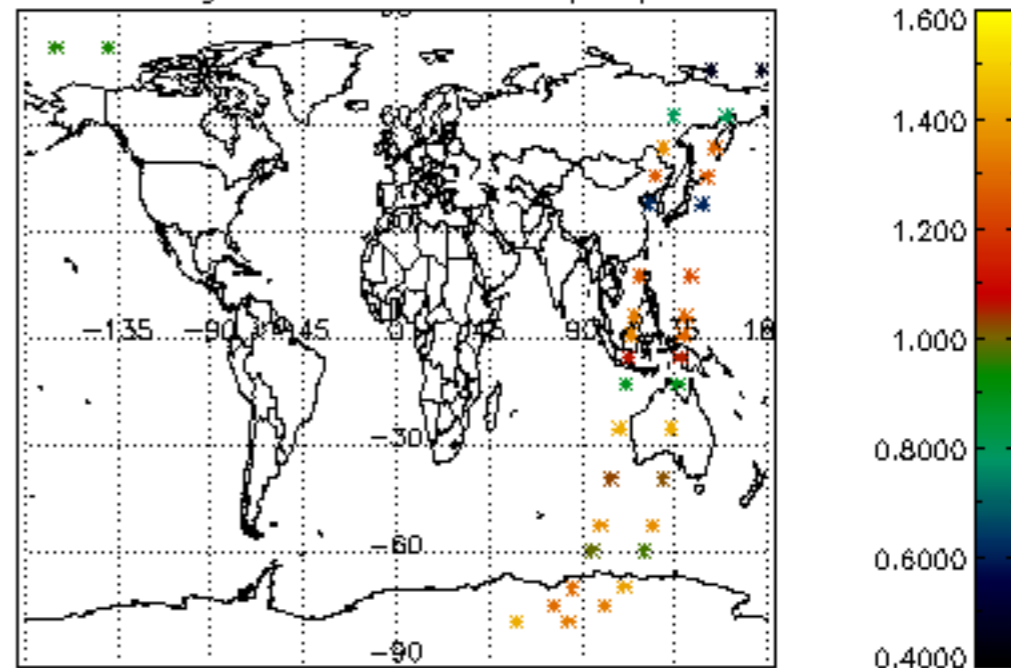
Percentage of saturation errors per profile



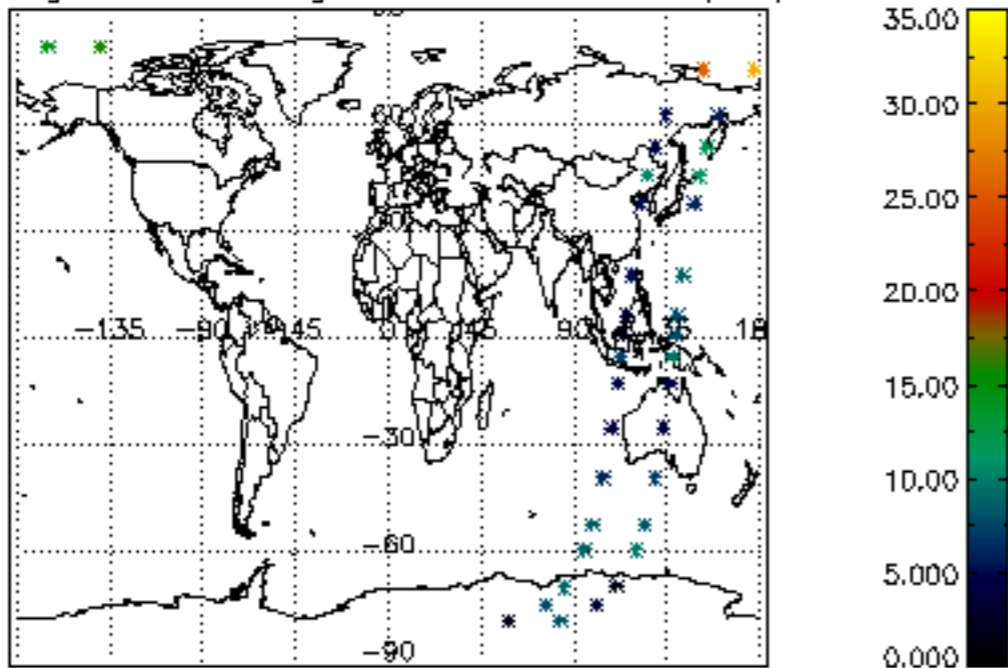
Percentage of cosmic ray hits per profile



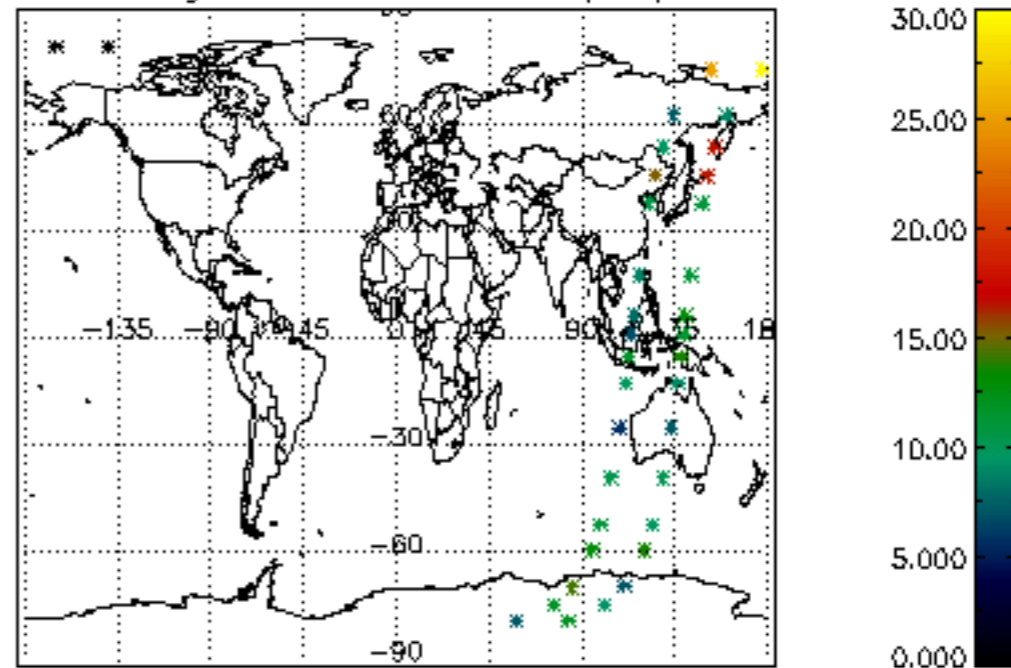
Percentage of datation errors per profile

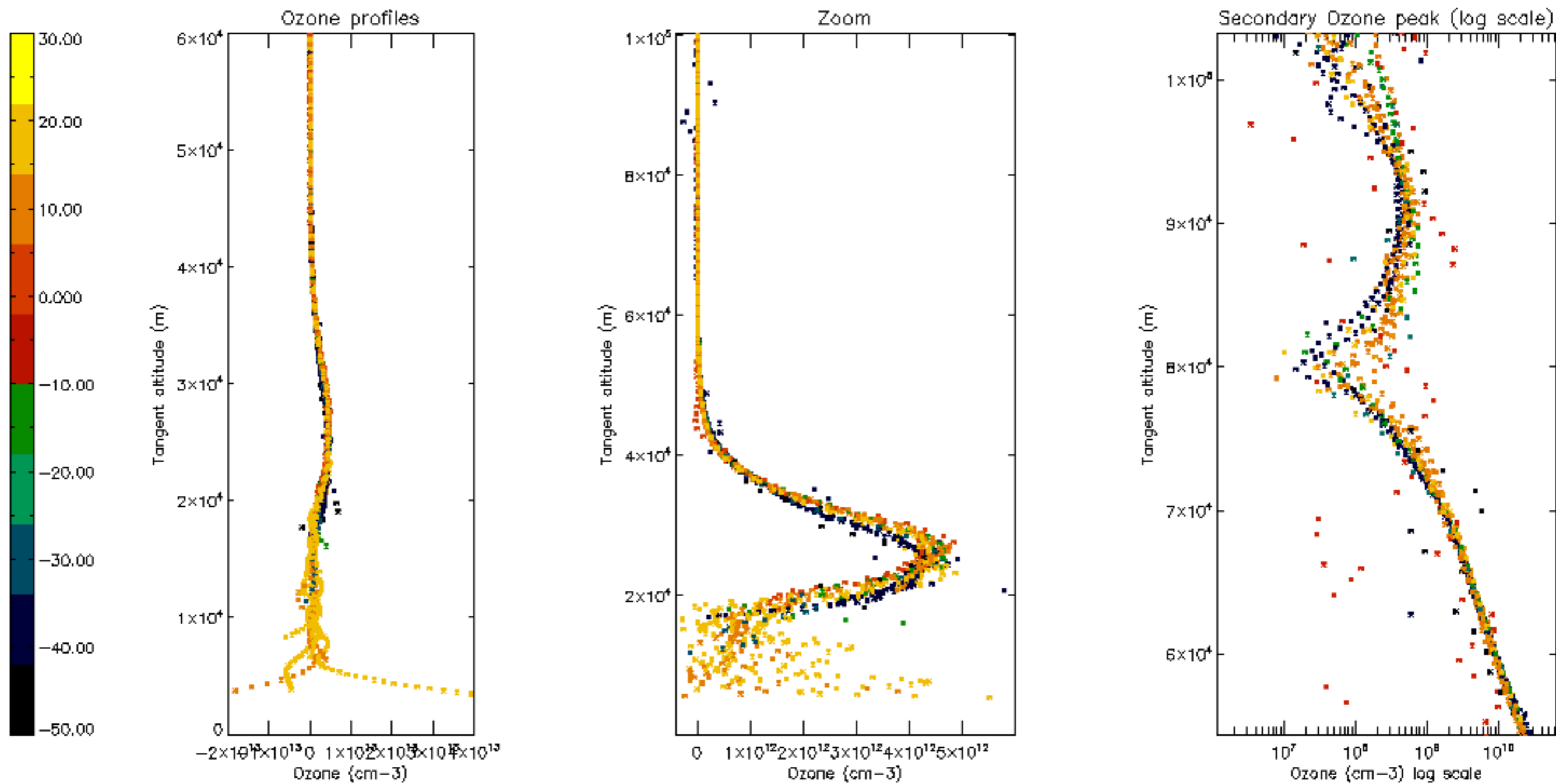


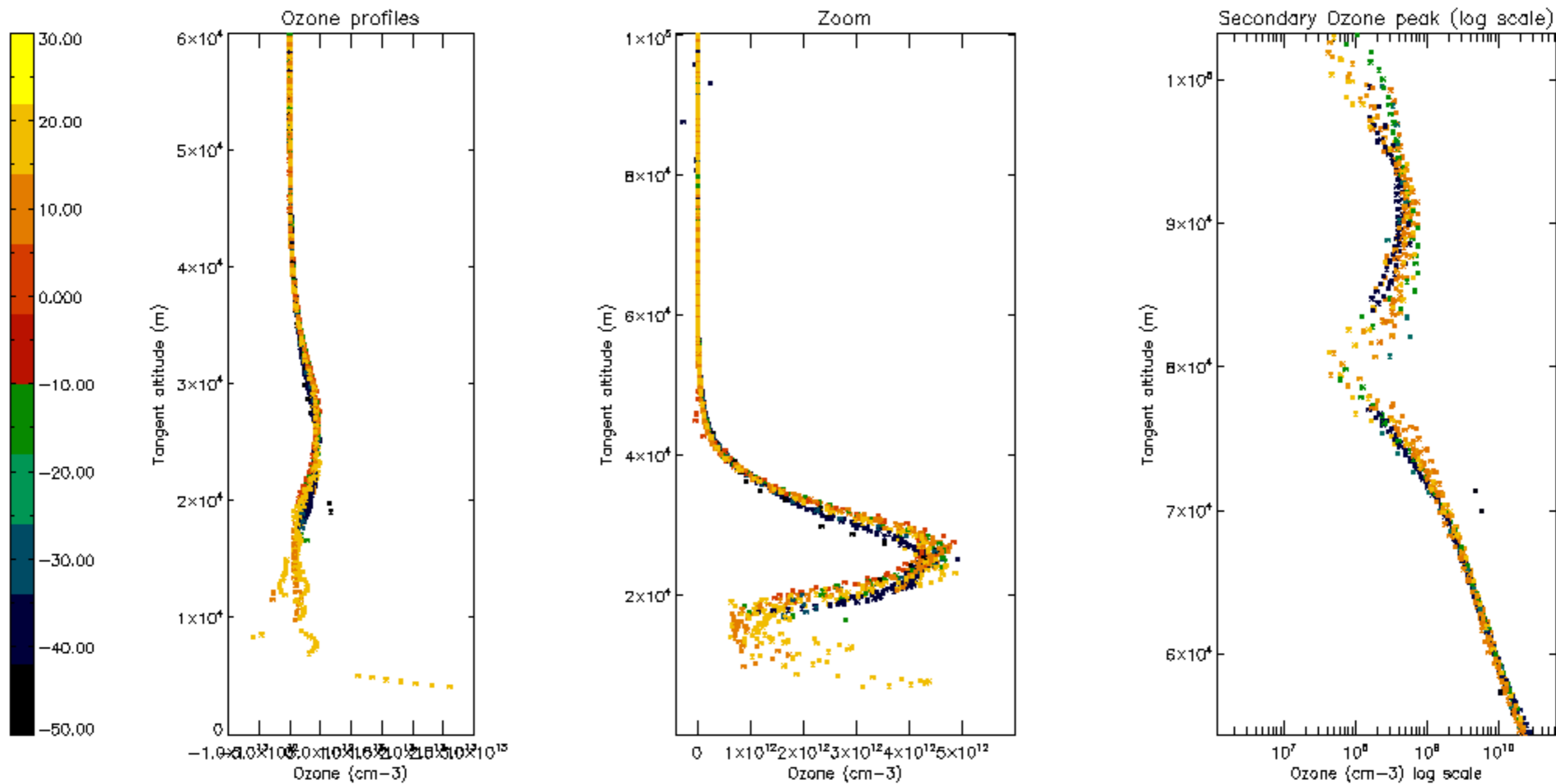
Percentage of star falling outside central band per profile



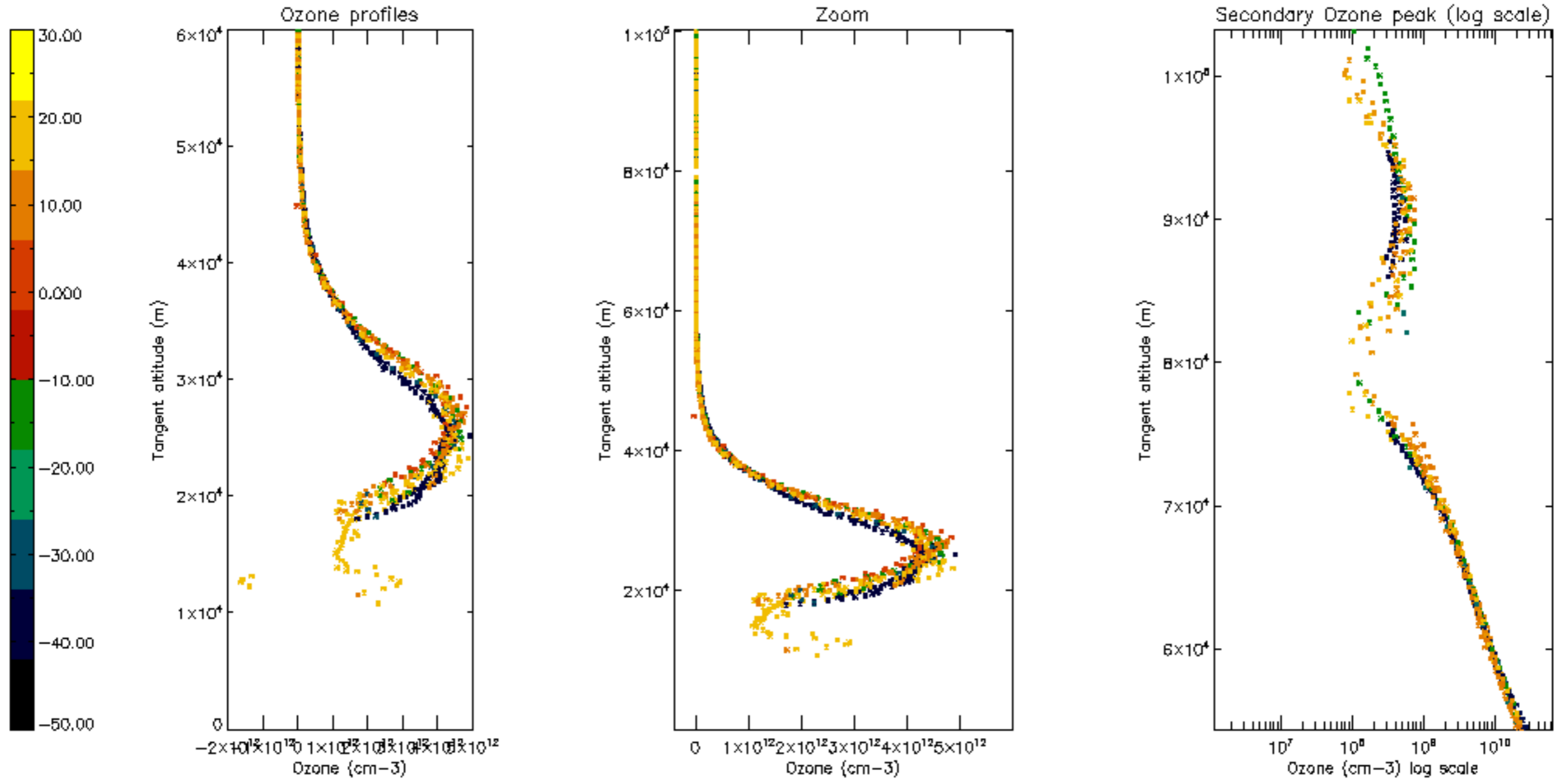
Percentage of saturation errors per profile

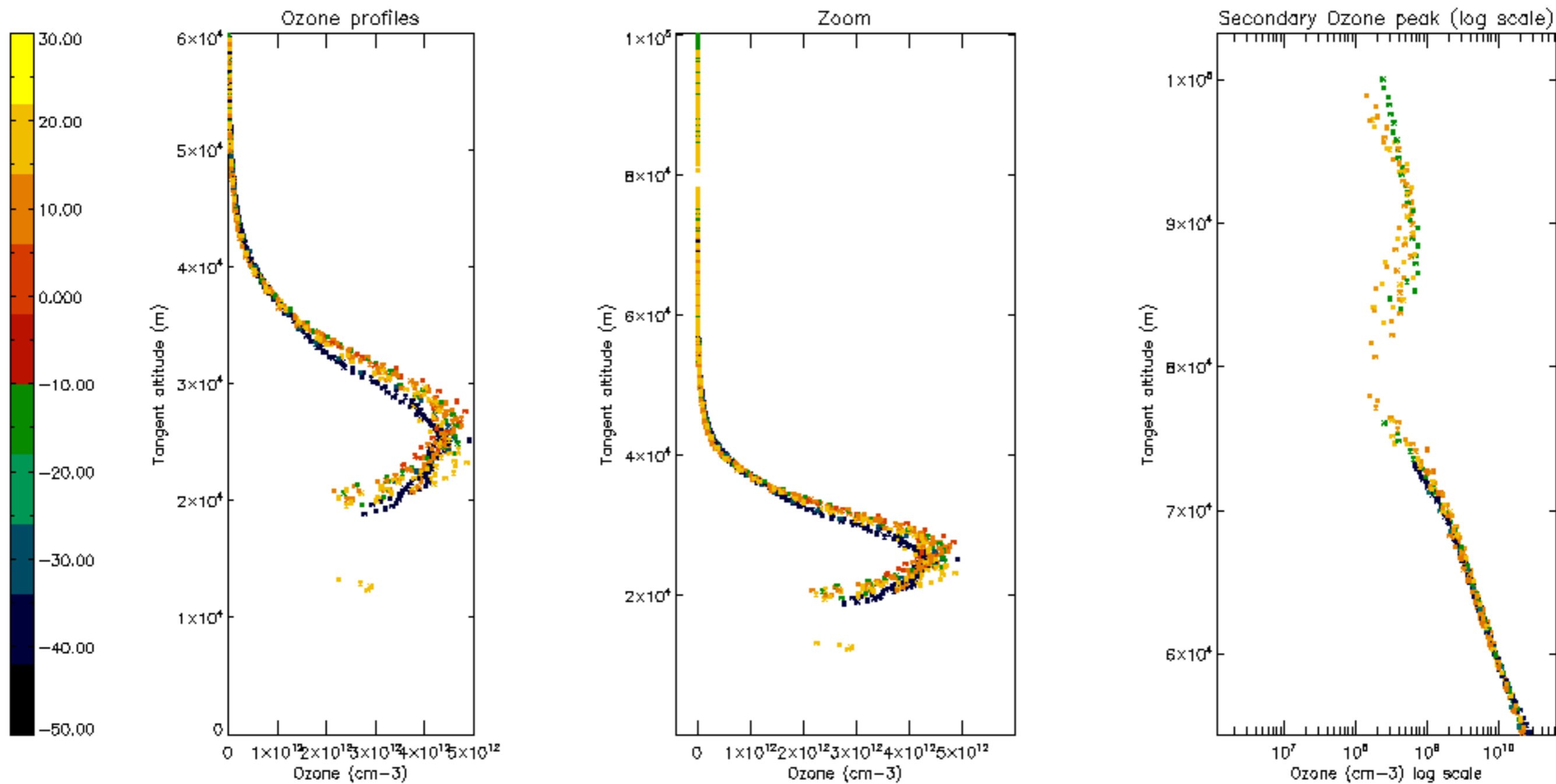


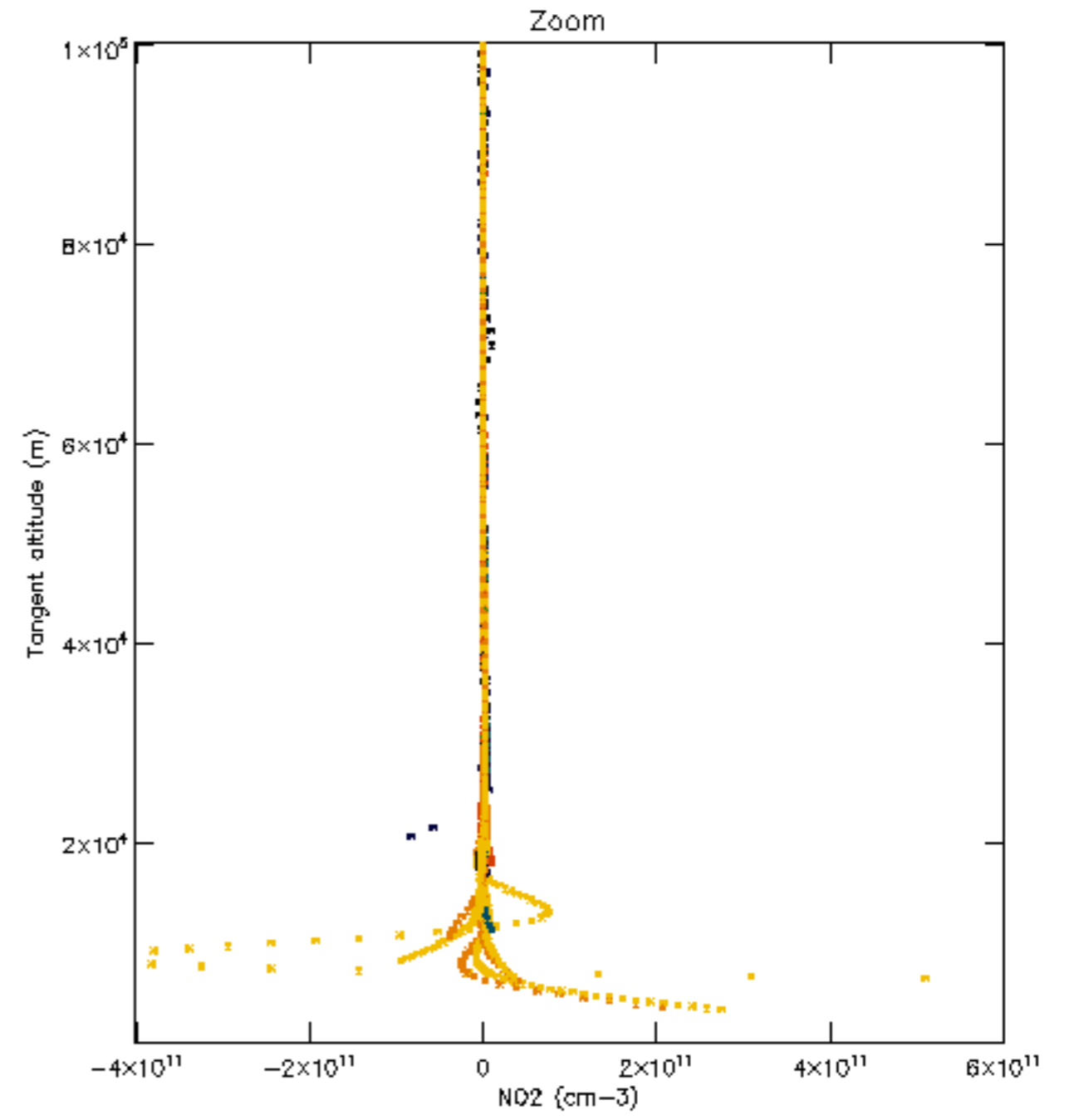
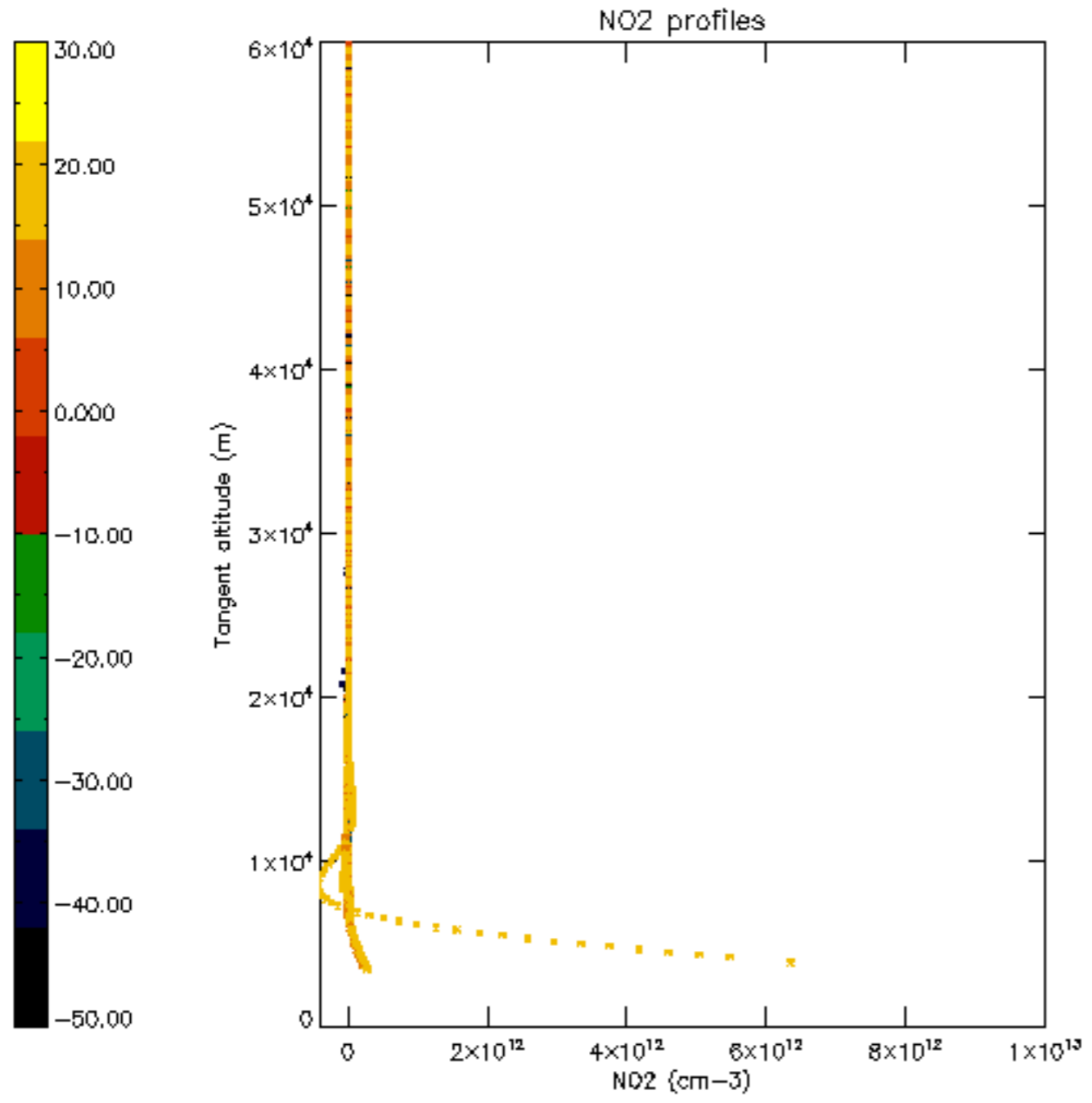


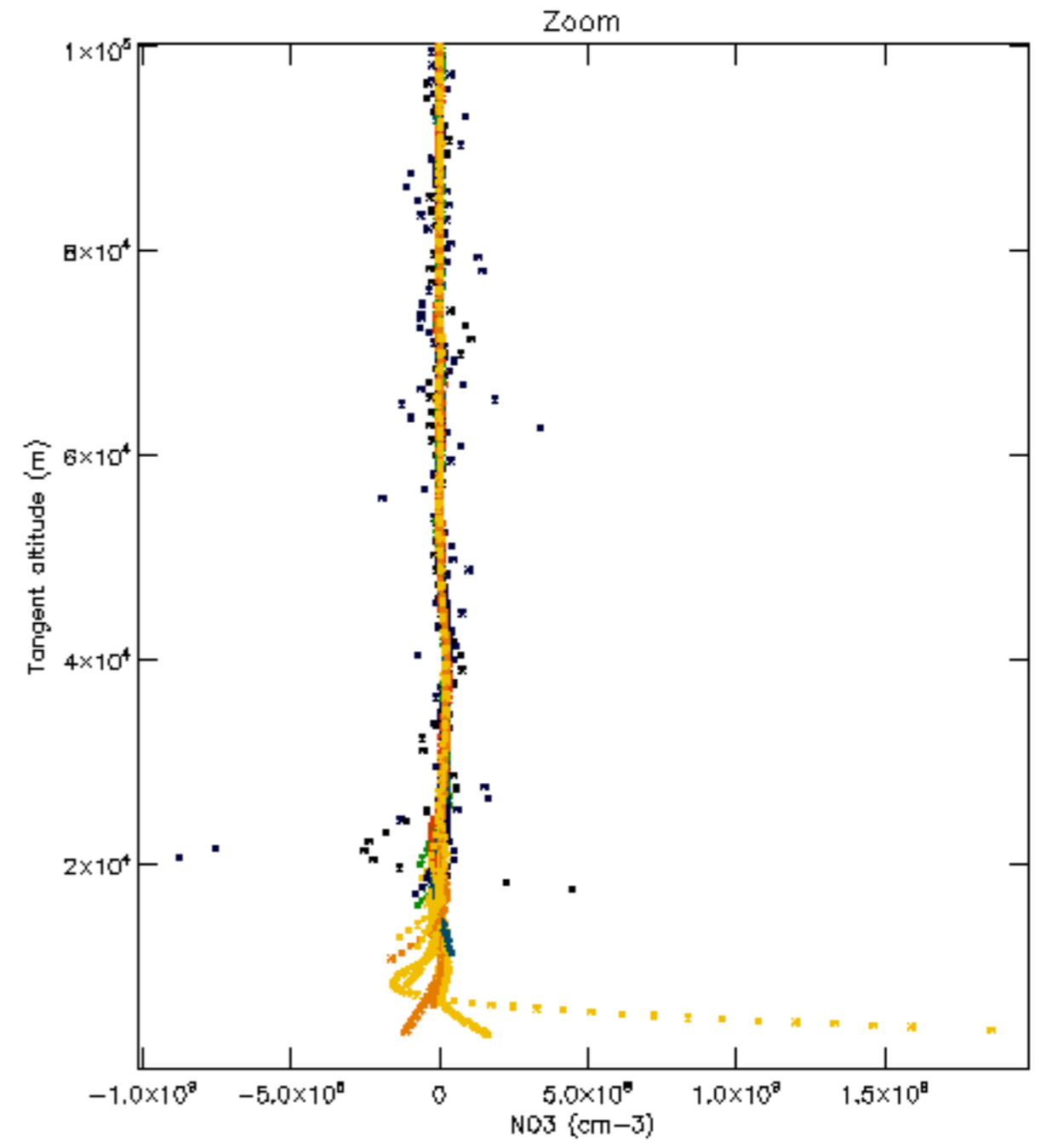
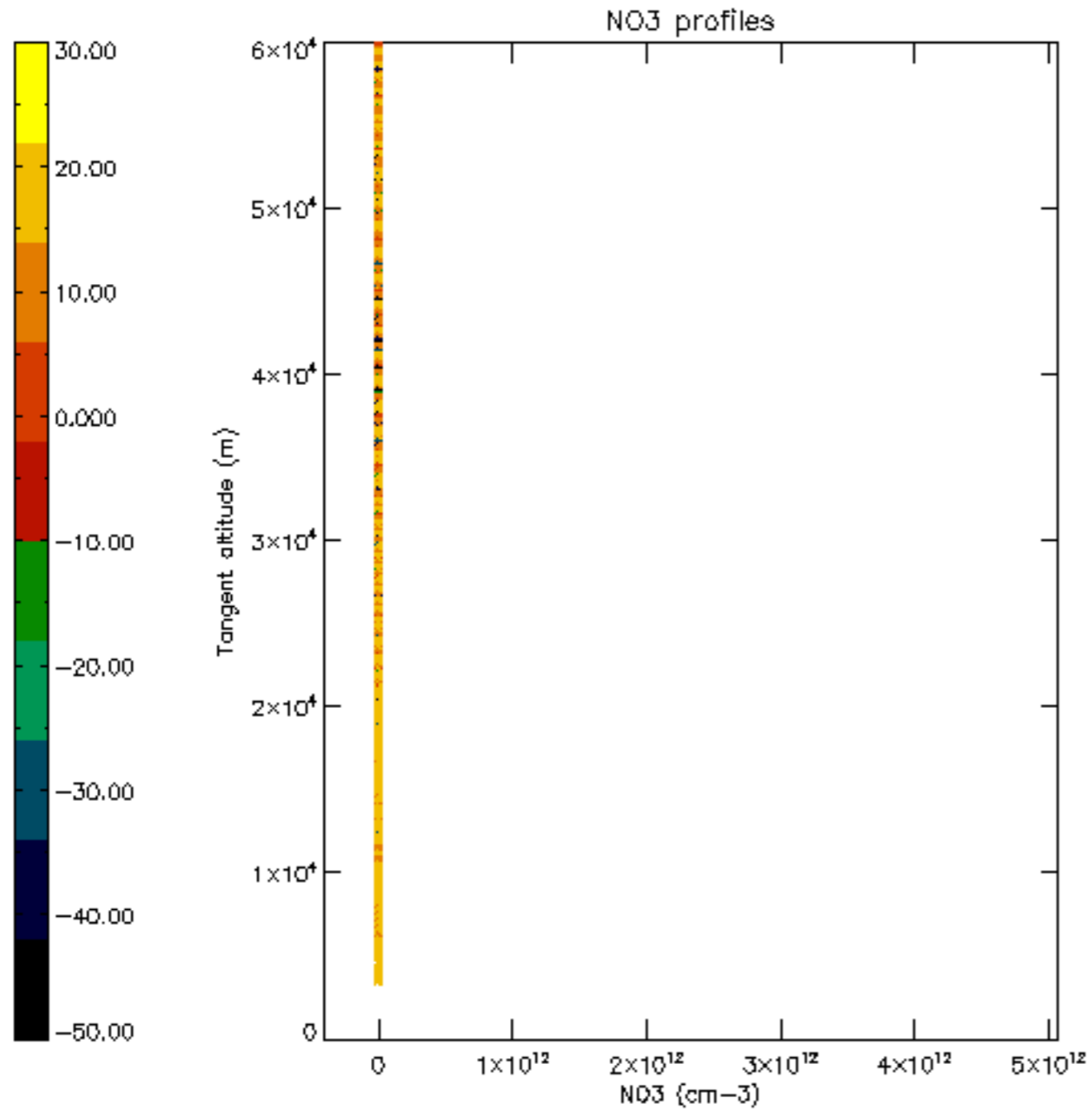


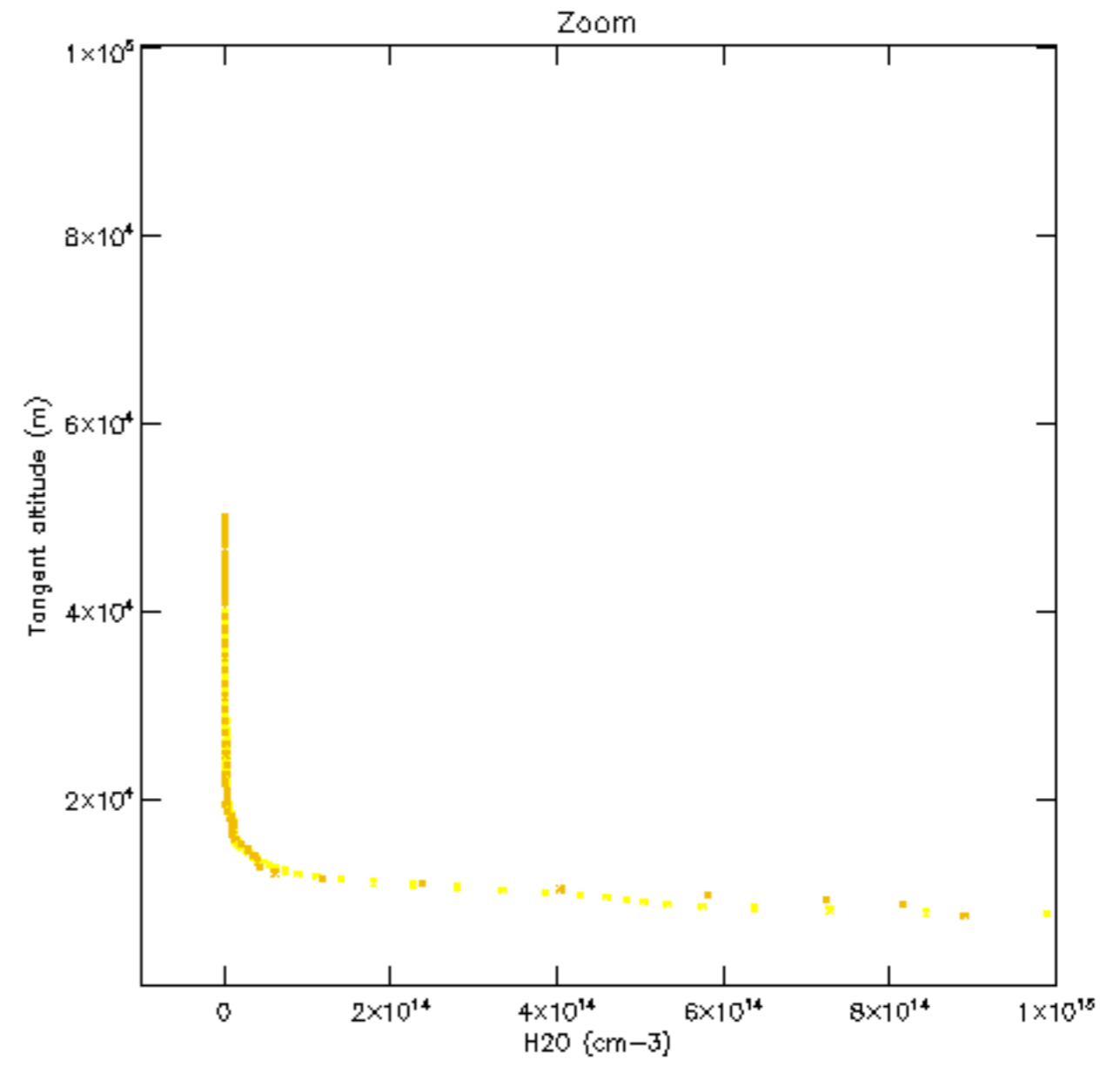
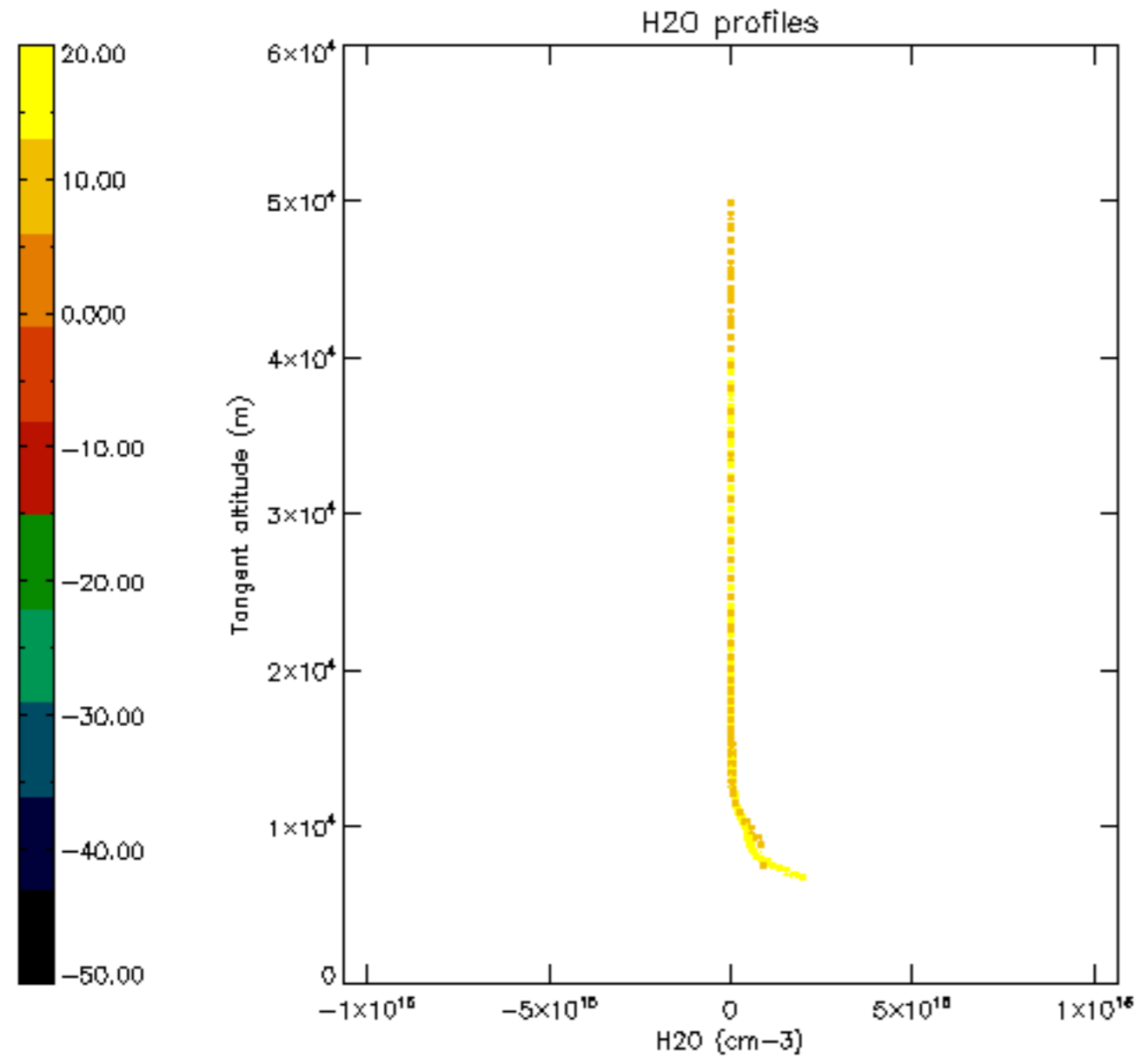


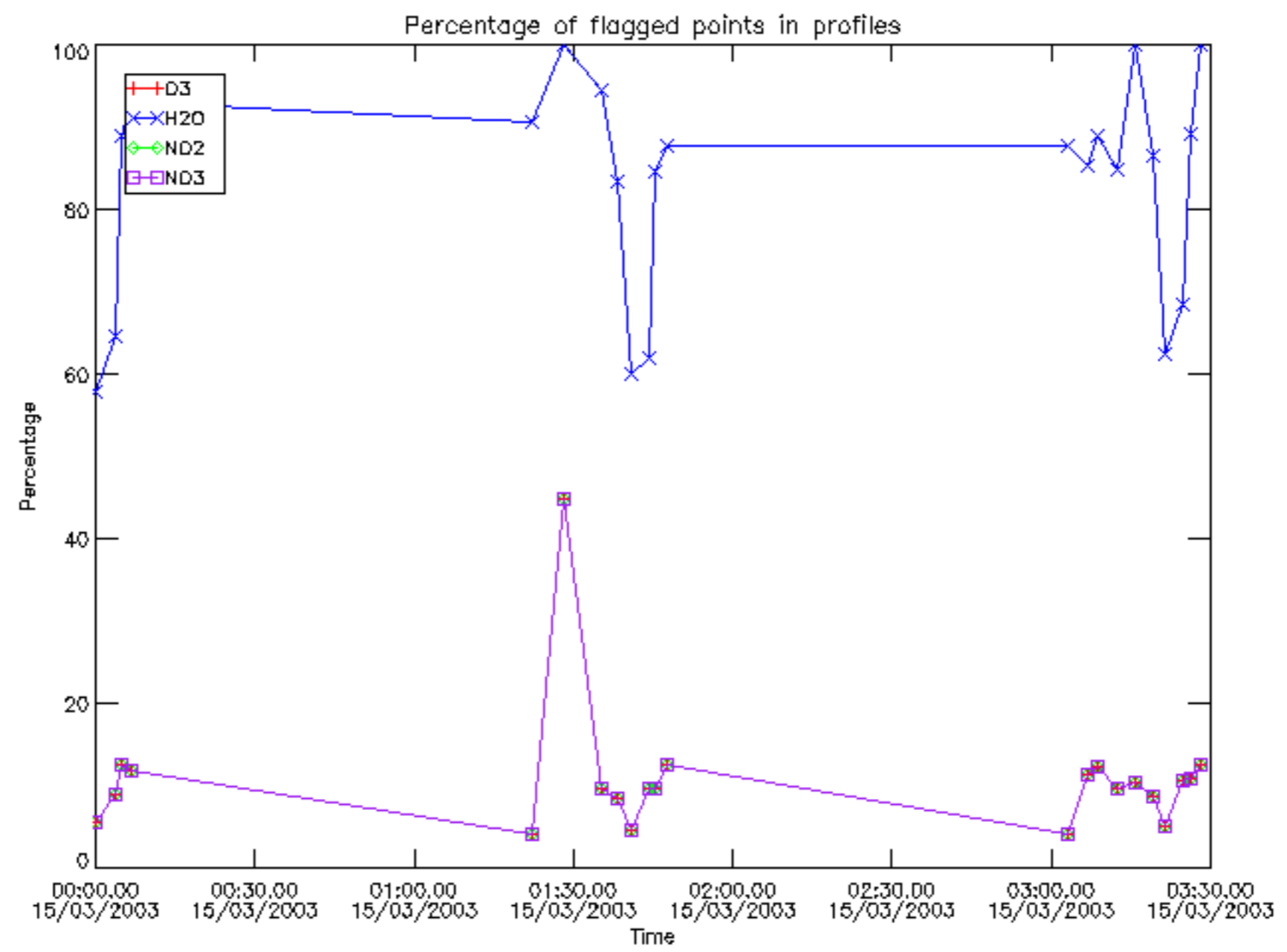




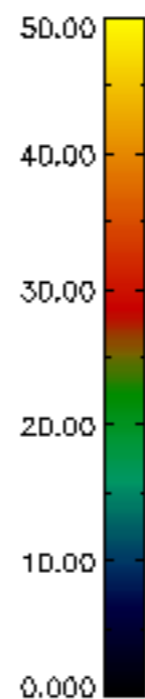
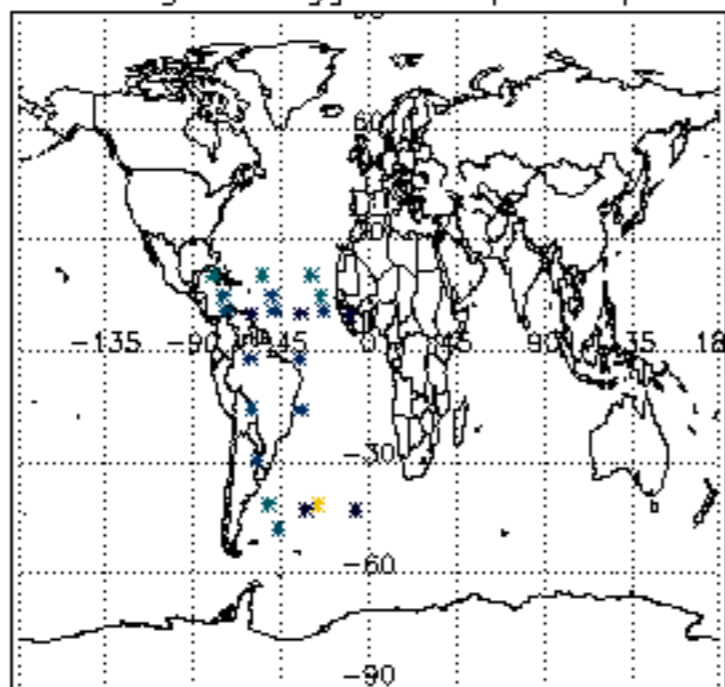




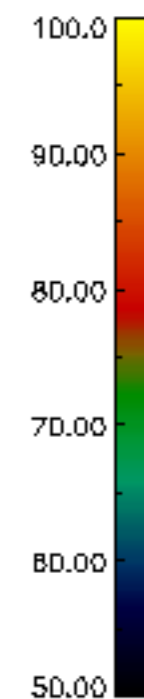
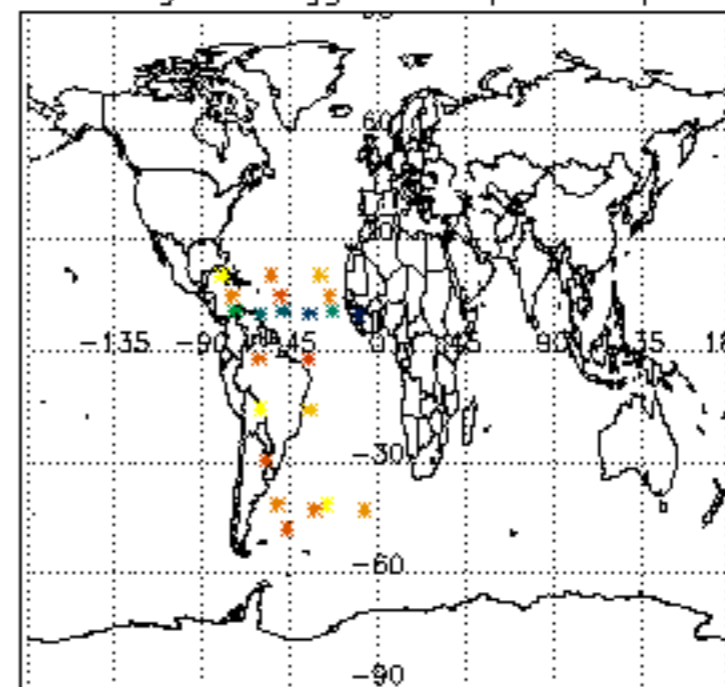




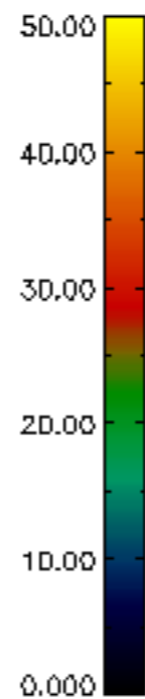
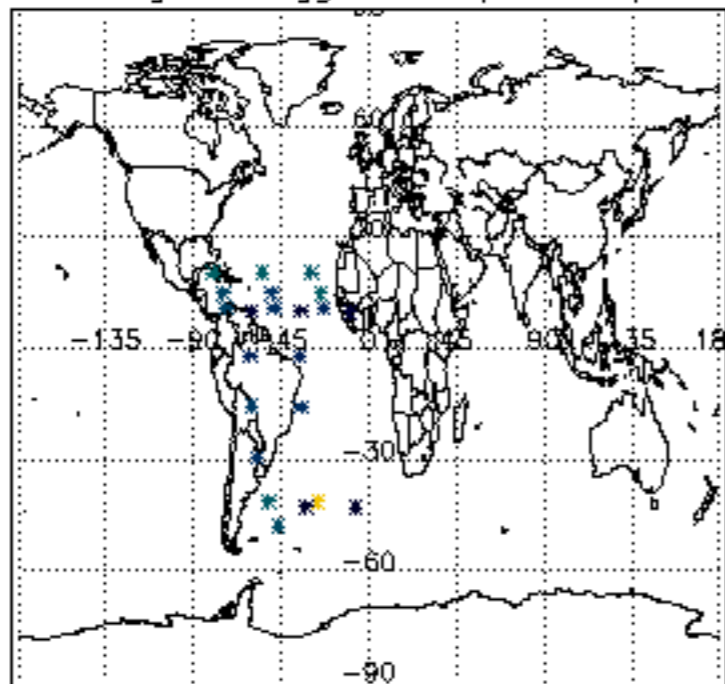
Percentage of flagged data per D3 profile



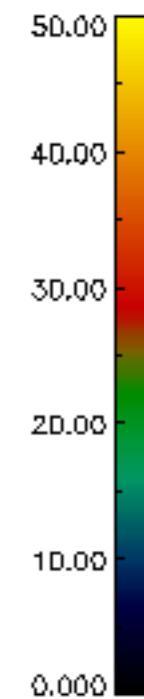
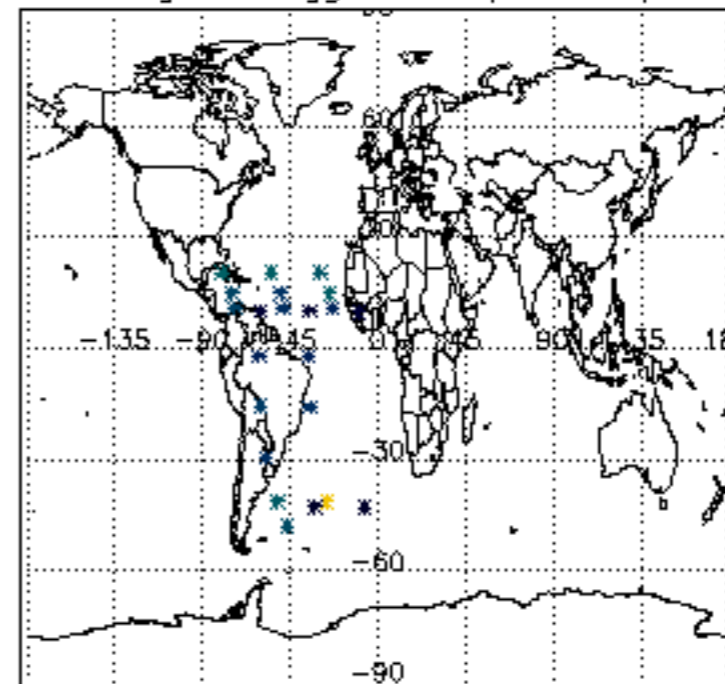
Percentage of flagged data per H2O profile

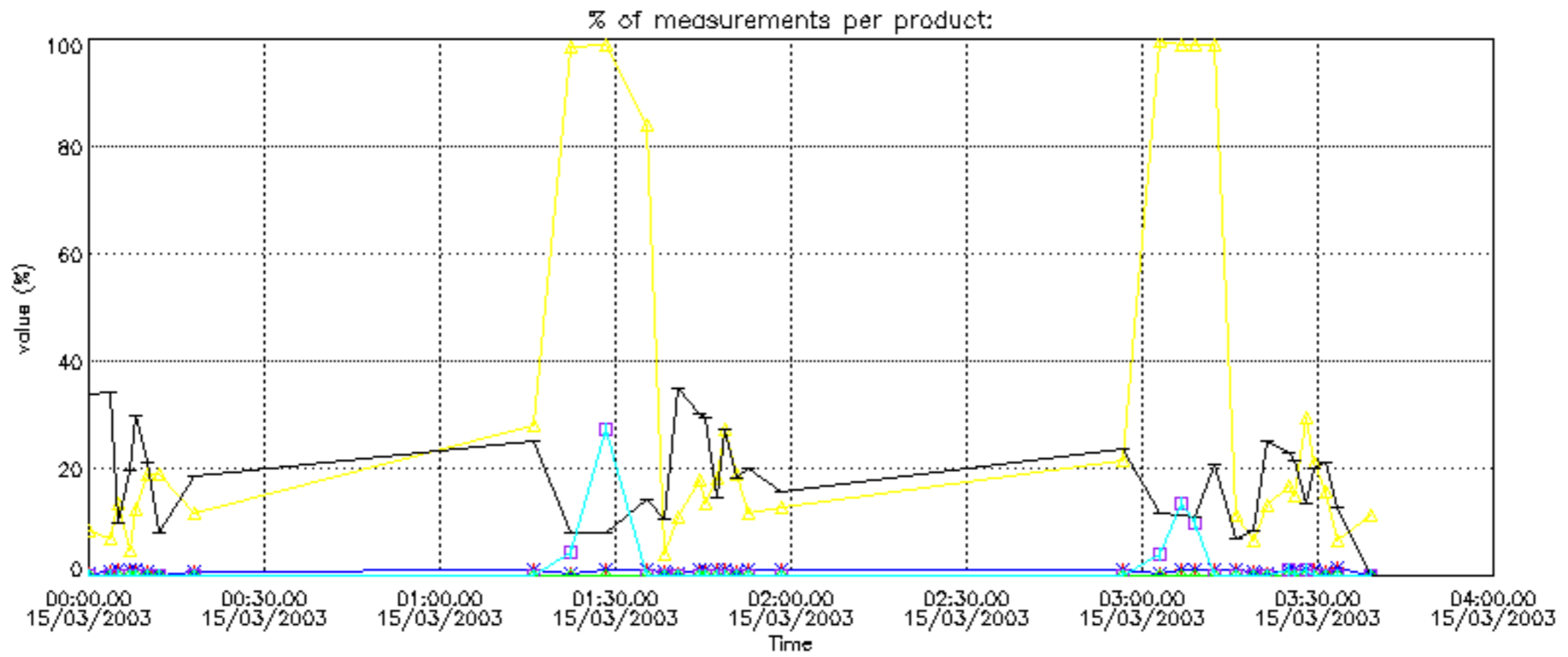


Percentage of flagged data per NO2 profile

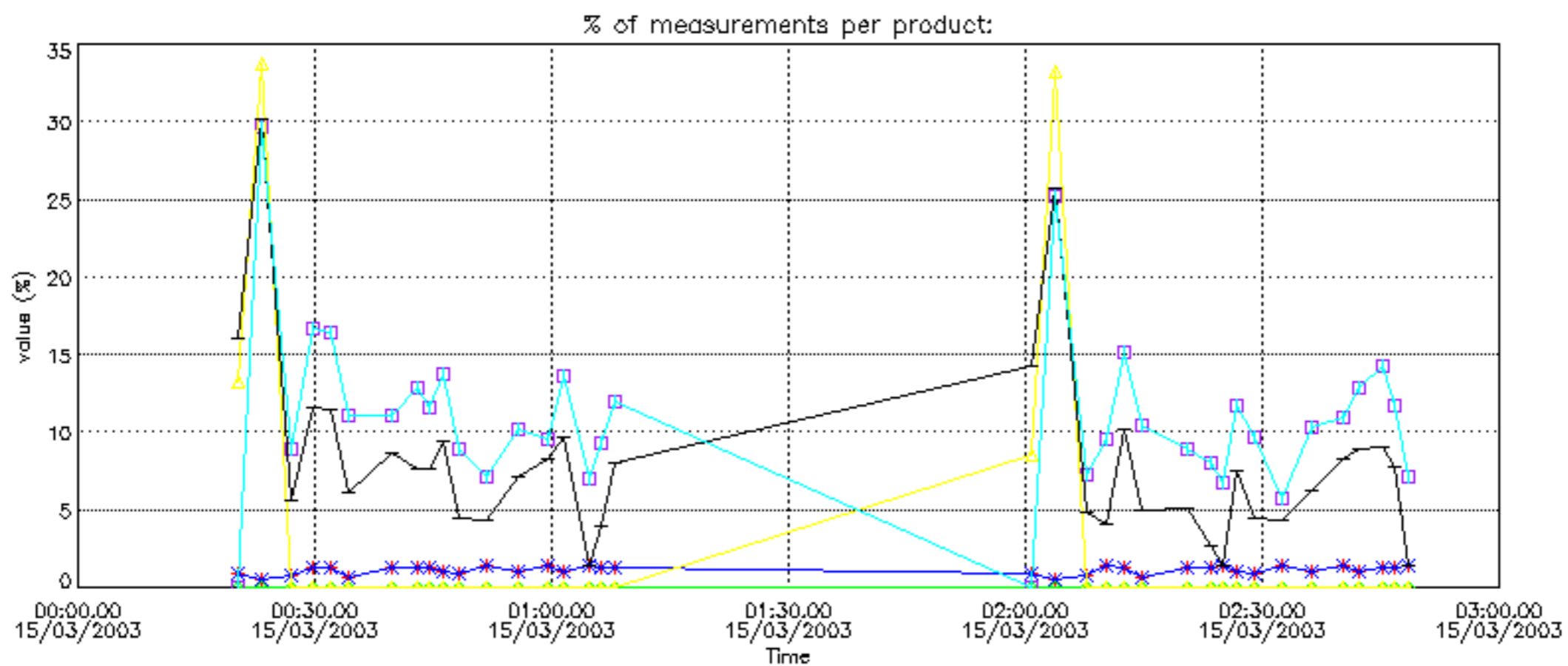


Percentage of flagged data per NO3 profile

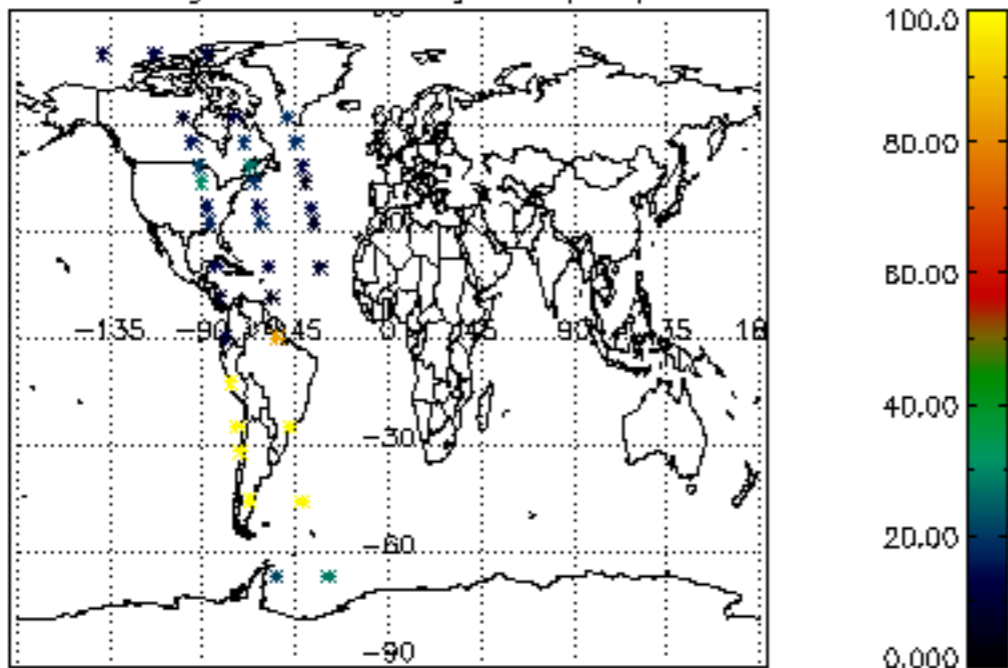




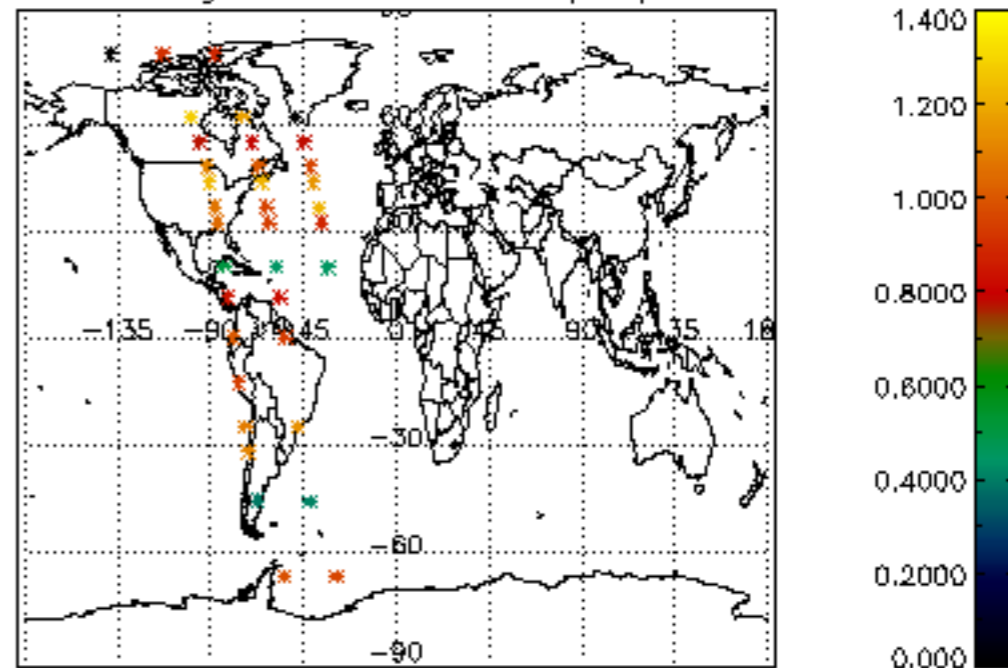




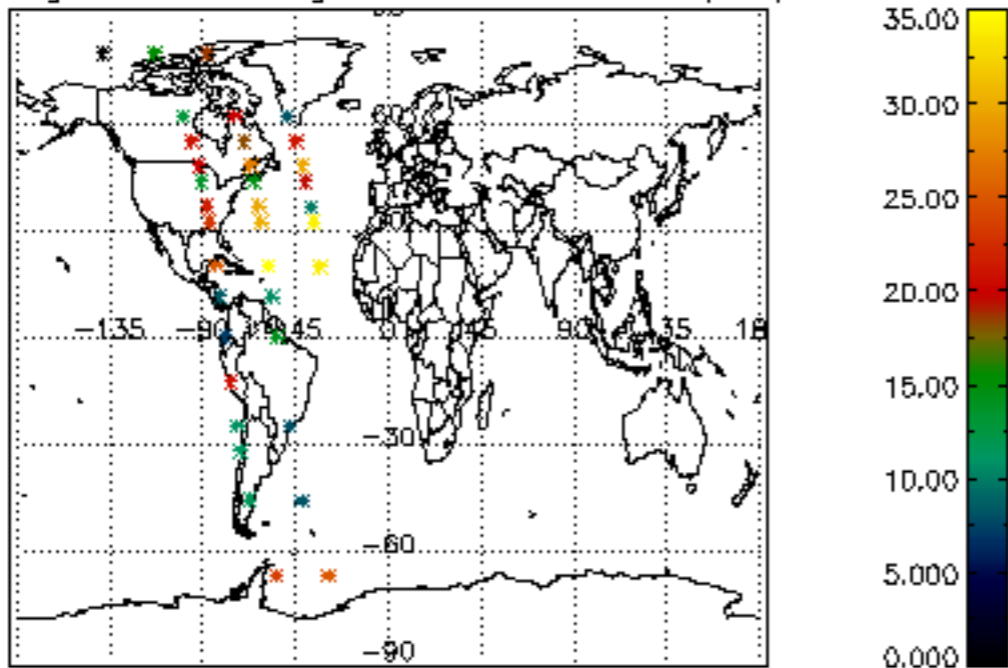
Percentage of cosmic ray hits per profile



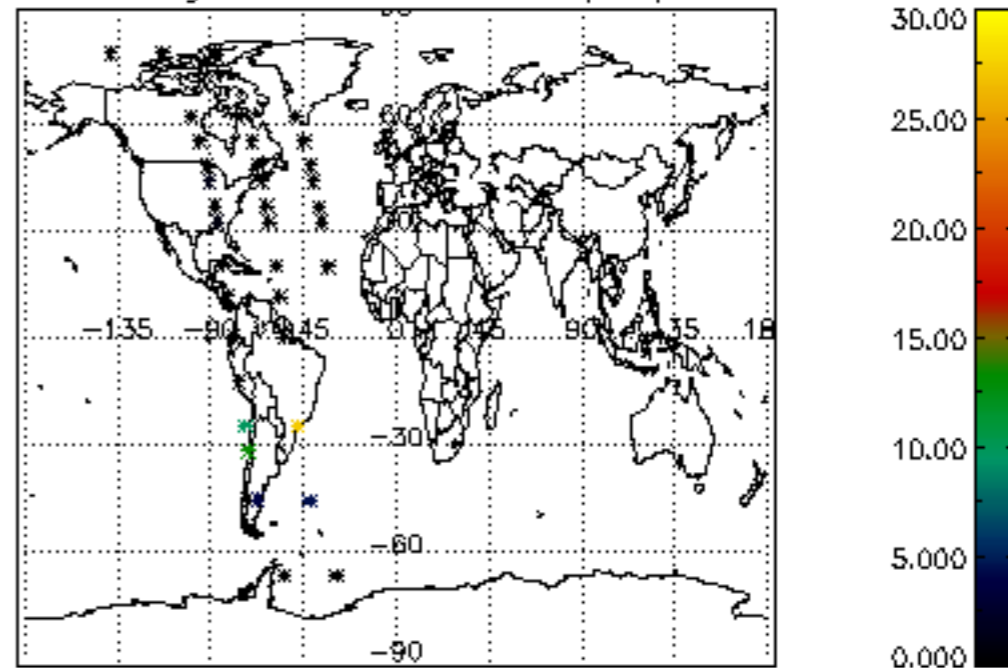
Percentage of datation errors per profile



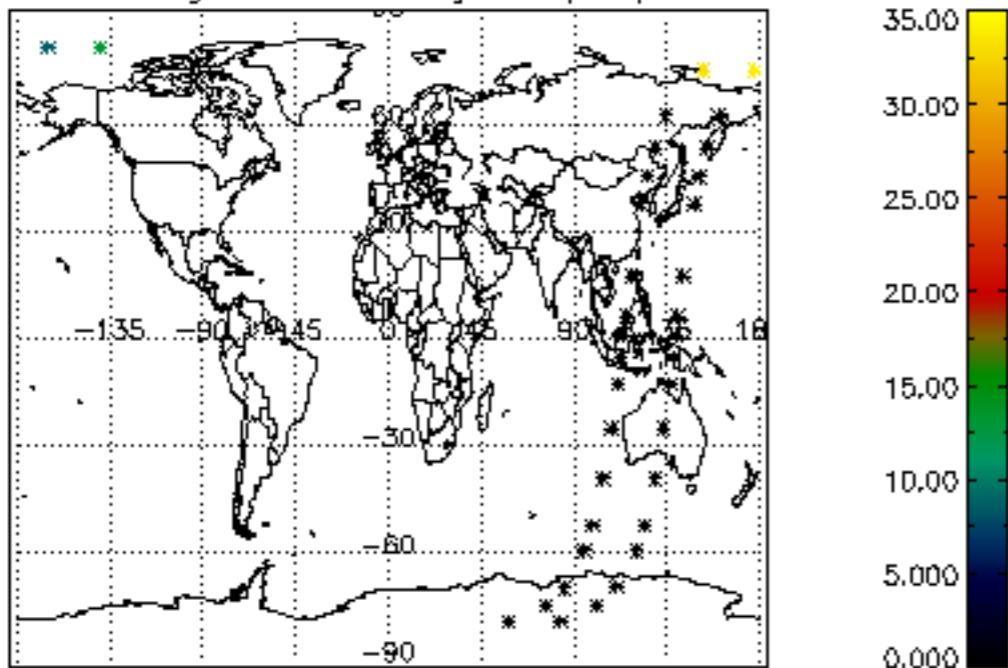
Percentage of star falling outside central band per profile



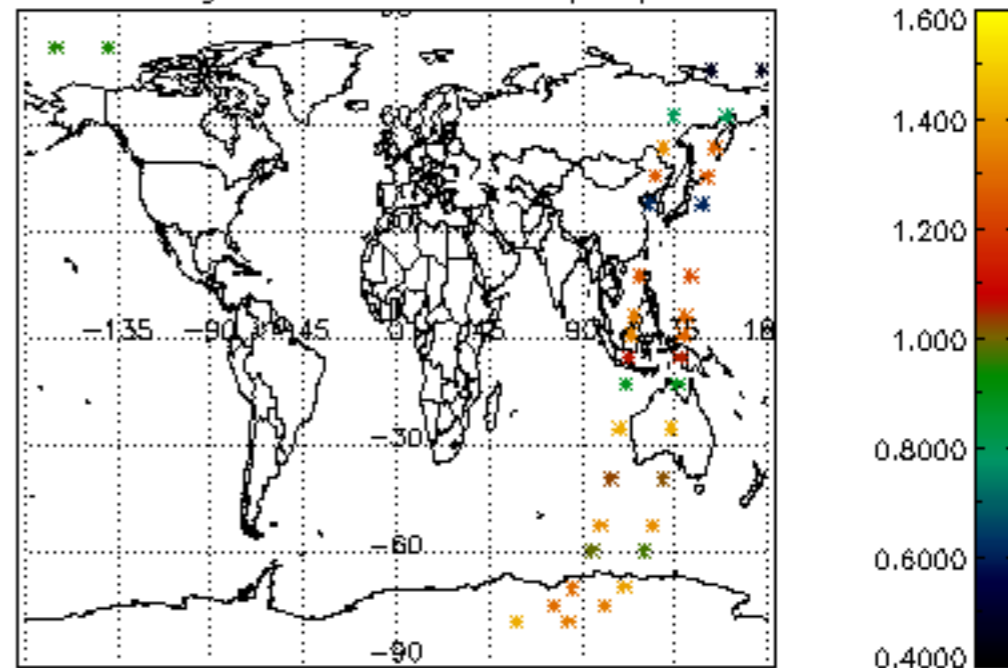
Percentage of saturation errors per profile



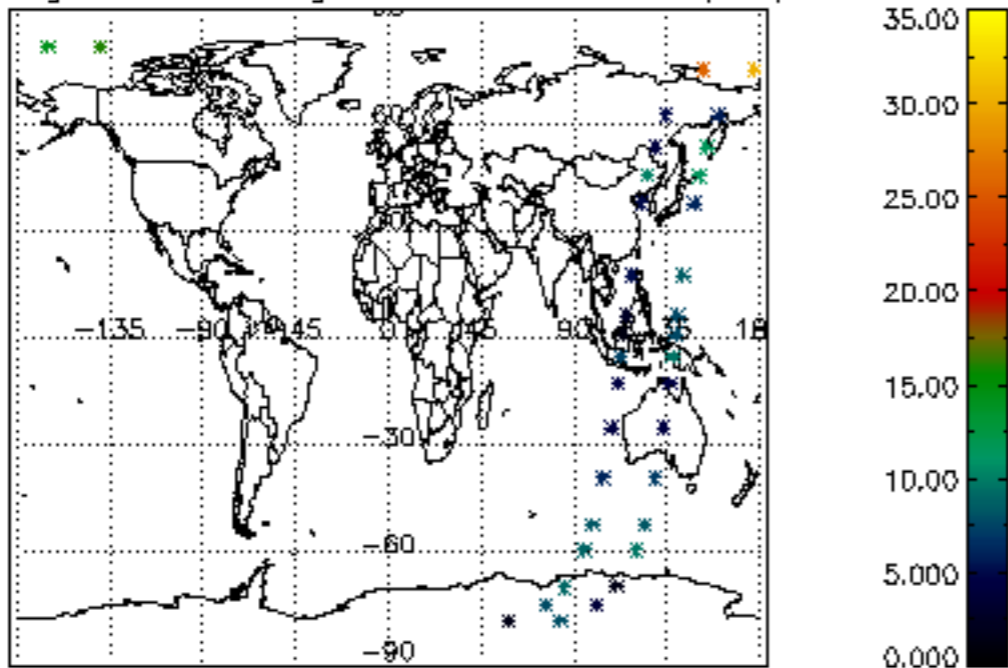
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

