

# 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	26APR2013 13:57:40
Data source version	GOMOS/6.01
Start time of products	16-11-2009 (16NOV2009 00:00:00)
Stop time of products	17-11-2009 (17NOV2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	251
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__2PRFIN20091116_000418_000000482084_00188_40322_0756.N1	16-NOV-2009 00:04:18	Twilight	47.500	94	92Alp Cet	2.5260	3100.0	95	40322	No
2	GOM_NL__2PRFIN20091116_001118_000000452084_00188_40322_0757.N1	16-NOV-2009 00:11:18	Bright	45.000	146	25Eta Tau	2.8730	15200.	90	40322	No
3	GOM_NL__2PRFIN20091116_001357_000000452084_00188_40322_0758.N1	16-NOV-2009 00:13:57	Bright	44.500	150	44Zet Per	2.8900	28000.	89	40322	No
4	GOM_NL__2PRFIN20091116_001628_000000422084_00188_40322_0759.N1	16-NOV-2009 00:16:28	Bright	41.500	149	45Eps Per	2.8880	30000.	83	40322	No
5	GOM_NL__2PRFIN20091116_001817_000000402084_00188_40322_0760.N1	16-NOV-2009 00:18:17	Bright	40.000	35	33Alp Per	1.7950	6250.0	80	40322	No
6	GOM_NL__2PRFIN20091116_003604_000000392084_00188_40322_0761.N1	16-NOV-2009 00:36:04	Bright	38.500	36	50Alp UMa	1.8000	6300.0	77	40322	No
7	GOM_NL__2PRFIN20091116_003742_000000402084_00188_40322_0762.N1	16-NOV-2009 00:37:42	Bright	40.000	82	48Bet UMa	2.3650	10600.	80	40322	No
8	GOM_NL__2PRFIN20091116_004145_000000642084_00188_40322_0763.N1	16-NOV-2009 00:41:45	Bright	64.000	174	52Psi UMa	3.0040	4400.0	128	40322	No
9	GOM_NL__2PRFIN20091116_004332_000000412084_00188_40322_0764.N1	16-NOV-2009 00:43:32	Bright	41.000	152	12Alp2CVn	2.8900	11000.	82	40322	No
10	GOM_NL__2PRFIN20091116_005024_000000692084_00188_40322_0765.N1	16-NOV-2009 00:50:24	Bright	69.000	96	68Del Leo	2.5600	9300.0	138	40322	No
11	GOM_NL__2PRFIN20091116_010011_000000412084_00188_40322_0766.N1	16-NOV-2009 01:00:11	Twilight	40.500	100	4Gam Crv	2.5800	13100.	81	40322	No
12	GOM_NL__2PRFIN20091116_010142_000000422084_00188_40322_0767.N1	16-NOV-2009 01:01:42	Twilight	42.000	171	2Eps Crv	3.0010	4250.0	84	40322	No
13	GOM_NL__2PRFIN20091116_011057_000000432084_00188_40322_0768.N1	16-NOV-2009 01:10:57	Dark	42.500	113	Mu Vel	2.6920	5000.0	85	40322	No
14	GOM_NL__2PRFIN20091116_011749_000000422084_00189_40323_0760.N1	16-NOV-2009 01:17:49	Dark	42.000	41	Eps Car	1.8600	4100.0	84	40323	No
15	GOM_NL__2PRFIN20091116_011943_000000562084_00189_40323_0761.N1	16-NOV-2009 01:19:43	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40323	No
16	GOM_NL__2PRFIN20091116_012319_000000482084_00189_40323_0762.N1	16-NOV-2009 01:23:19	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	40323	No
17	GOM_NL__2PRFIN20091116_013001_000000542084_00189_40323_0763.N1	16-NOV-2009 01:30:01	Dark	53.500	108	Alp Col	2.6520	15200.	107	40323	No
18	GOM_NL__2PRFIN20091116_013919_000000512084_00189_40323_0764.N1	16-NOV-2009 01:39:19	Straylight	51.000	165	34Gam Eri	2.9500	3200.0	102	40323	No
19	GOM_NL__2PRFIN20091116_014453_000000472084_00189_40323_0765.N1	16-NOV-2009 01:44:53	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40323	No
20	GOM_NL__2PRFIN20091116_015153_000000442084_00189_40323_0766.N1	16-NOV-2009 01:51:53	Bright	44.000	146	25Eta Tau	2.8730	15200.	88	40323	No
21	GOM_NL__2PRFIN20091116_015432_000000442084_00189_40323_0767.N1	16-NOV-2009 01:54:32	Bright	43.500	150	44Zet Per	2.8900	28000.	87	40323	No
22	GOM_NL__2PRFIN20091116_015852_000000382084_00189_40323_0768.N1	16-NOV-2009 01:58:52	Bright	38.000	35	33Alp Per	1.7950	6250.0	76	40323	No
23	GOM_NL__2PRFIN20091116_021639_000000452084_00189_40323_0769.N1	16-NOV-2009 02:16:39	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	40323	No
24	GOM_NL__2PRFIN20091116_021818_000000452084_00189_40323_0770.N1	16-NOV-2009 02:18:18	Bright	45.000	82	48Bet UMa	2.3650	10600.	90	40323	No
25	GOM_NL__2PRFIN20091116_022221_000000432084_00189_40323_0771.N1	16-NOV-2009 02:22:21	Bright	42.500	174	52Psi UMa	3.0040	4400.0	85	40323	No
26	GOM_NL__2PRFIN20091116_022408_000000362084_00189_40323_0772.N1	16-NOV-2009 02:24:08	Bright	35.500	152	12Alp2CVn	2.8900	11000.	71	40323	No
27	GOM_NL__2PRFIN20091116_023100_000000472084_00189_40323_0773.N1	16-NOV-2009 02:31:00	Bright	46.500	96	68Del Leo	2.5600	9300.0	93	40323	No
28	GOM_NL__2PRFIN20091116_024047_000000432084_00189_40323_0774.N1	16-NOV-2009 02:40:47	Twilight	43.000	100	4Gam Crv	2.5800	13100.	86	40323	No
29	GOM_NL__2PRFIN20091116_024218_000000512084_00189_40323_0775.N1	16-NOV-2009 02:42:18	Twilight	50.500	171	2Eps Crv	3.0010	4250.0	101	40323	No
30	GOM_NL__2PRFIN20091116_025133_000000422084_00189_40323_0776.N1	16-NOV-2009 02:51:33	Dark	42.000	113	Mu Vel	2.6920	5000.0	84	40323	No
31	GOM_NL__2PRFIN20091116_025825_000000402084_00190_40324_0787.N1	16-NOV-2009 02:58:25	Dark	40.000	41	Eps Car	1.8600	4100.0	80	40324	No
32	GOM_NL__2PRFIN20091116_030020_000000562084_00190_40324_0788.N1	16-NOV-2009 03:00:20	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40324	No
33	GOM_NL__2PRFIN20091116_030355_000000472084_00190_40324_0789.N1	16-NOV-2009 03:03:55	Dark	47.000	2	Alp Car	-0.73600	7000.0	94	40324	No
34	GOM_NL__2PRFIN20091116_031038_000000542084_00190_40324_0790.N1	16-NOV-2009 03:10:38	Dark	54.000	108	Alp Col	2.6520	15200.	108	40324	No
35	GOM_NL__2PRFIN20091116_031955_000000502084_00190_40324_0791.N1	16-NOV-2009 03:19:55	Straylight	49.500	165	34Gam Eri	2.9500	3200.0	99	40324	No
36	GOM_NL__2PRFIN20091116_032529_000000472084_00190_40324_0792.N1	16-NOV-2009 03:25:29	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40324	No
37	GOM_NL__2PRFIN20091116_033229_000000442084_00190_40324_0793.N1	16-NOV-2009 03:32:29	Bright	43.500	146	25Eta Tau	2.8730	15200.	87	40324	No
38	GOM_NL__2PRFIN20091116_033507_000000462084_00190_40324_0794.N1	16-NOV-2009 03:35:07	Bright	45.500	150	44Zet Per	2.8900	28000.	91	40324	No
39	GOM_NL__2PRFIN20091116_033637_000000432084_00190_40324_0795.N1	16-NOV-2009 03:36:37	Bright	42.500	79	26Bet Per	2.3100	13100.	85	40324	No
40	GOM_NL__2PRFIN20091116_033928_000000392084_00190_40324_0796.N1	16-NOV-2009 03:39:28	Bright	39.000	35	33Alp Per	1.7950	6250.0	78	40324	No
41	GOM_NL__2PRFIN20091116_035715_000000442084_00190_40324_0797.N1	16-NOV-2009 03:57:15	Bright	44.000	36	50Alp UMa	1.8000	6300.0	88	40324	No
42	GOM_NL__2PRFIN20091116_035853_000000442084_00190_40324_0798.N1	16-NOV-2009 03:58:53	Bright	43.500	82	48Bet UMa	2.3650	10600.	87	40324	No





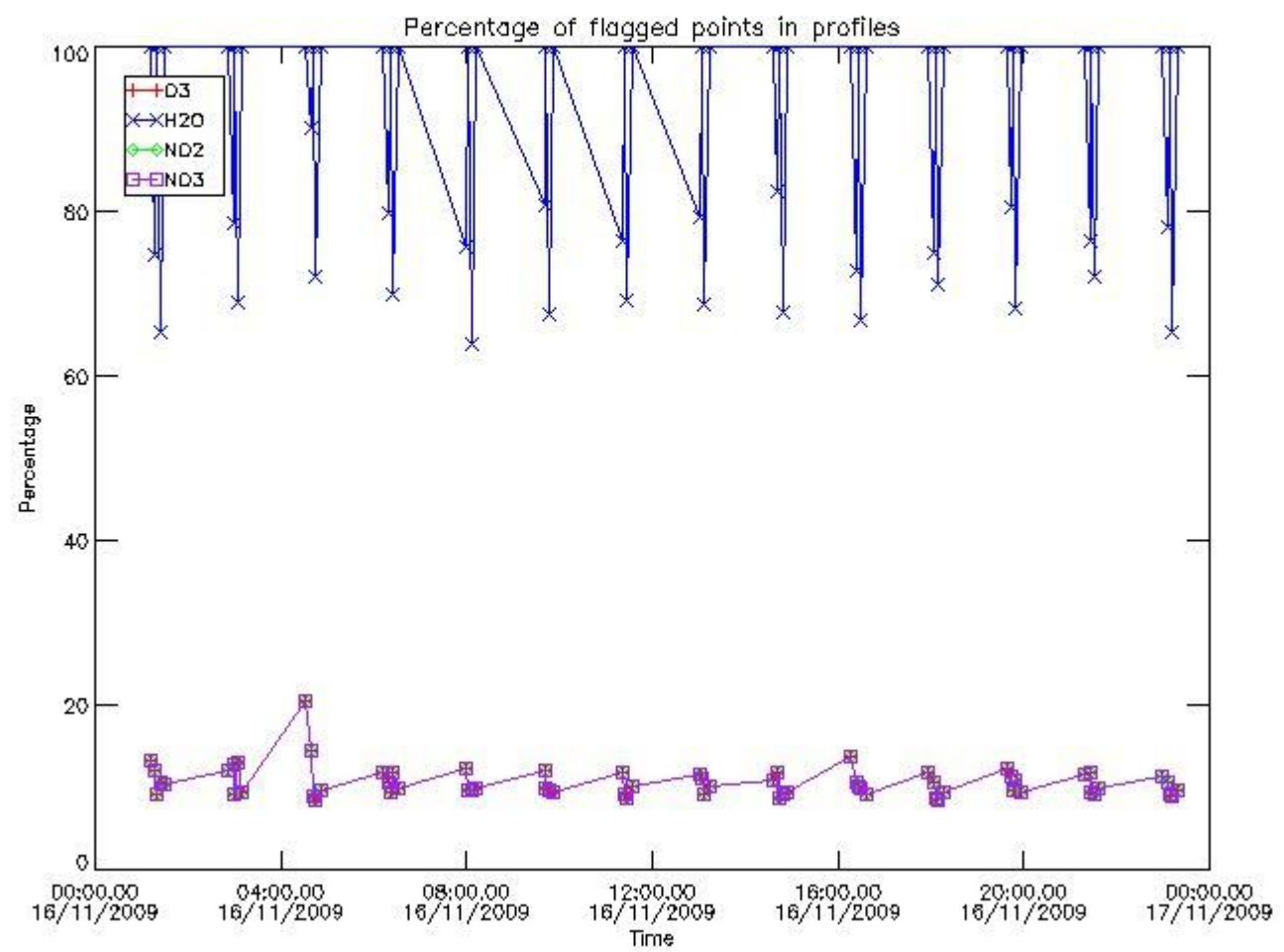


220	GOM_NL__2PRFIN20091116_205851_000000592084_00200_40334_0917.N1	16-NOV-2009 20:58:51	Bright	58.500	62	94Bet Leo	2.1360	9700.0	117	40334	No
221	GOM_NL__2PRFIN20091116_210727_000000432084_00200_40334_0918.N1	16-NOV-2009 21:07:27	Twilight	42.500	100	4Gam Crv	2.5800	13100.	85	40334	No
222	GOM_NL__2PRFIN20091116_210859_000000462084_00200_40334_0919.N1	16-NOV-2009 21:08:59	Twilight	46.000	171	2Eps Crv	3.0010	4250.0	92	40334	No
223	GOM_NL__2PRFIN20091116_211815_000000442084_00200_40334_0920.N1	16-NOV-2009 21:18:15	Dark	44.000	113	Mu Vel	2.6920	5000.0	88	40334	No
224	GOM_NL__2PRFIN20091116_212507_000000432084_00201_40335_0912.N1	16-NOV-2009 21:25:07	Dark	43.000	41	Eps Car	1.8600	4100.0	86	40335	No
225	GOM_NL__2PRFIN20091116_212709_000000542084_00201_40335_0913.N1	16-NOV-2009 21:27:09	Dark	54.000	70	Zet Pup	2.2460	39000.	108	40335	No
226	GOM_NL__2PRFIN20091116_213038_000000612084_00201_40335_0914.N1	16-NOV-2009 21:30:38	Dark	61.000	2	Alp Car	-0.73600	7000.0	122	40335	No
227	GOM_NL__2PRFIN20091116_213720_000000522084_00201_40335_0915.N1	16-NOV-2009 21:37:20	Dark	51.500	108	Alp Col	2.6520	15200.	103	40335	No
228	GOM_NL__2PRFIN20091116_214631_000000522084_00201_40335_0916.N1	16-NOV-2009 21:46:31	Straylight	51.500	165	34Gam Eri	2.9500	3200.0	103	40335	No
229	GOM_NL__2PRFIN20091116_215204_000000472084_00201_40335_0917.N1	16-NOV-2009 21:52:04	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40335	No
230	GOM_NL__2PRFIN20091116_215859_000000432084_00201_40335_0918.N1	16-NOV-2009 21:58:59	Bright	43.000	146	25Eta Tau	2.8730	15200.	86	40335	No
231	GOM_NL__2PRFIN20091116_220136_000000432084_00201_40335_0919.N1	16-NOV-2009 22:01:36	Bright	42.500	150	44Zet Per	2.8900	28000.	85	40335	No
232	GOM_NL__2PRFIN20091116_220309_000000392084_00201_40335_0920.N1	16-NOV-2009 22:03:09	Bright	38.500	79	26Bet Per	2.3100	13100.	77	40335	No
233	GOM_NL__2PRFIN20091116_220559_000000432084_00201_40335_0921.N1	16-NOV-2009 22:05:59	Bright	42.500	35	33Alp Per	1.7950	6250.0	85	40335	No
234	GOM_NL__2PRFIN20091116_222347_000000472084_00201_40335_0922.N1	16-NOV-2009 22:23:47	Bright	47.000	36	50Alp UMa	1.8000	6300.0	94	40335	No
235	GOM_NL__2PRFIN20091116_222526_000000452084_00201_40335_0923.N1	16-NOV-2009 22:25:26	Bright	45.000	82	48Bet UMa	2.3650	10600.	90	40335	No
236	GOM_NL__2PRFIN20091116_222931_000000642084_00201_40335_0924.N1	16-NOV-2009 22:29:31	Bright	63.500	174	52Psi UMa	3.0040	4400.0	127	40335	No
237	GOM_NL__2PRFIN20091116_223121_000000352084_00201_40335_0925.N1	16-NOV-2009 22:31:21	Bright	35.000	152	12Alp2CVn	2.8900	11000.	70	40335	No
238	GOM_NL__2PRFIN20091116_223927_000000622084_00201_40335_0926.N1	16-NOV-2009 22:39:27	Bright	62.000	62	94Bet Leo	2.1360	9700.0	124	40335	No
239	GOM_NL__2PRFIN20091116_224804_000000402084_00201_40335_0927.N1	16-NOV-2009 22:48:04	Twilight	40.000	100	4Gam Crv	2.5800	13100.	80	40335	No
240	GOM_NL__2PRFIN20091116_224935_000000512084_00201_40335_0928.N1	16-NOV-2009 22:49:35	Twilight	51.000	171	2Eps Crv	3.0010	4250.0	102	40335	No
241	GOM_NL__2PRFIN20091116_225852_000000452084_00201_40335_0929.N1	16-NOV-2009 22:58:52	Dark	45.000	113	Mu Vel	2.6920	5000.0	90	40335	No
242	GOM_NL__2PRFIN20091116_230544_000000492084_00202_40336_0921.N1	16-NOV-2009 23:05:44	Dark	48.500	41	Eps Car	1.8600	4100.0	97	40336	No
243	GOM_NL__2PRFIN20091116_230746_000000562084_00202_40336_0922.N1	16-NOV-2009 23:07:46	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40336	No
244	GOM_NL__2PRFIN20091116_231114_000000572084_00202_40336_0923.N1	16-NOV-2009 23:11:14	Dark	56.500	2	Alp Car	-0.73600	7000.0	113	40336	No
245	GOM_NL__2PRFIN20091116_231756_000000542084_00202_40336_0924.N1	16-NOV-2009 23:17:56	Dark	53.500	108	Alp Col	2.6520	15200.	107	40336	No
246	GOM_NL__2PRFIN20091116_232707_000000512084_00202_40336_0925.N1	16-NOV-2009 23:27:07	Straylight	50.500	165	34Gam Eri	2.9500	3200.0	101	40336	No
247	GOM_NL__2PRFIN20091116_233240_000000472084_00202_40336_0926.N1	16-NOV-2009 23:32:40	Twilight	47.000	94	92Alp Cet	2.5260	3100.0	94	40336	No
248	GOM_NL__2PRFIN20091116_233934_000000432084_00202_40336_0927.N1	16-NOV-2009 23:39:34	Bright	42.500	146	25Eta Tau	2.8730	15200.	85	40336	No
249	GOM_NL__2PRFIN20091116_234212_000000442084_00202_40336_0928.N1	16-NOV-2009 23:42:12	Bright	44.000	150	44Zet Per	2.8900	28000.	88	40336	No
250	GOM_NL__2PRFIN20091116_234344_000000392084_00202_40336_0929.N1	16-NOV-2009 23:43:44	Bright	38.500	79	26Bet Per	2.3100	13100.	77	40336	No
251	GOM_NL__2PRFIN20091116_234635_000000412084_00202_40336_0930.N1	16-NOV-2009 23:46:35	Bright	40.500	35	33Alp Per	1.7950	6250.0	81	40336	No

### 3. Quality information per product

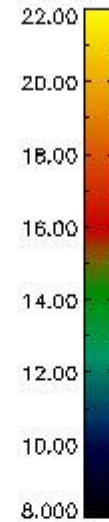
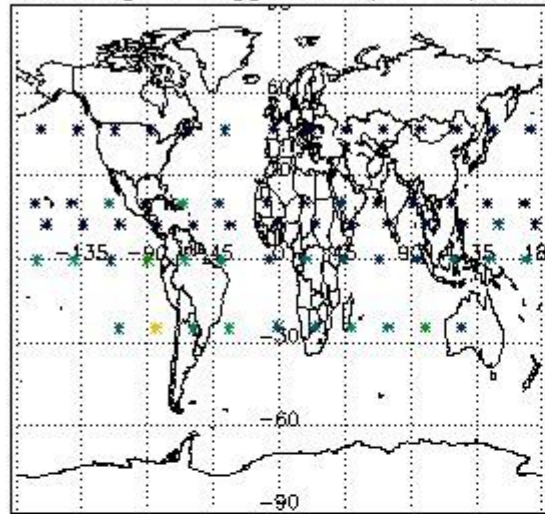
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

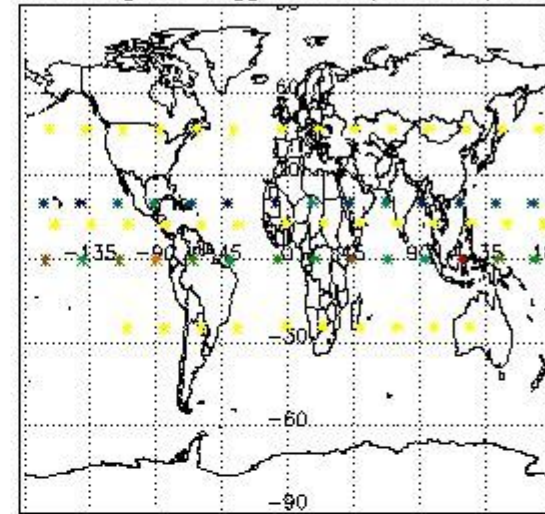


3.2 Plot quality information per product (world map)

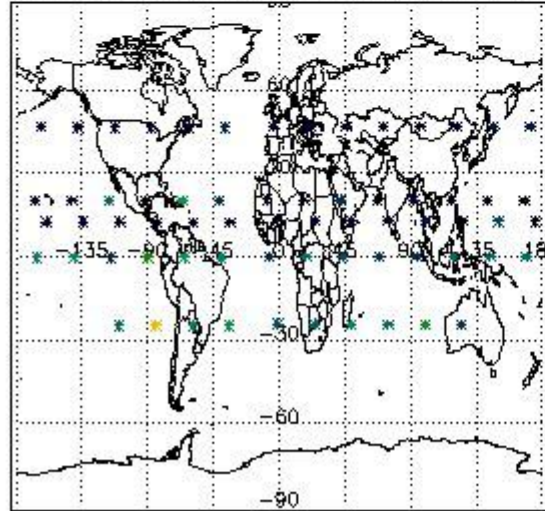
Percentage of flagged data per O3 profile



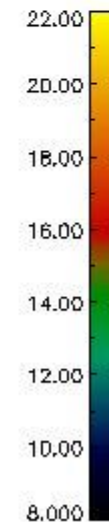
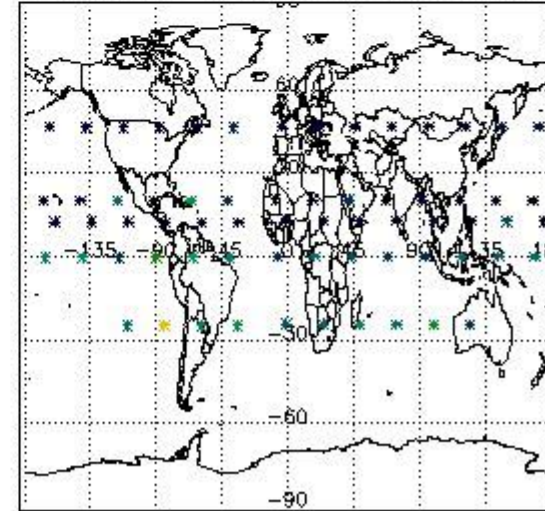
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



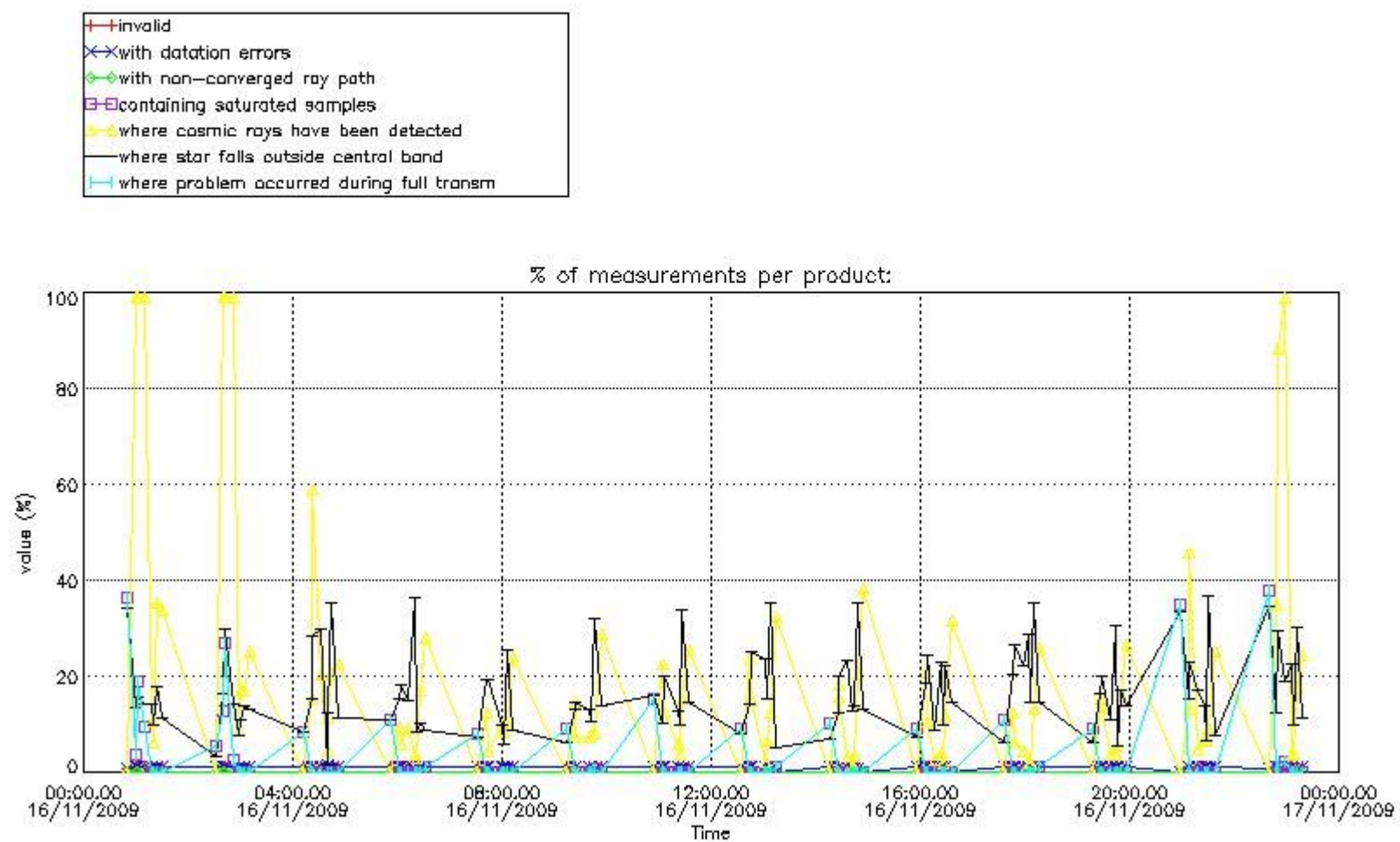
#### 4. Level 1 quality information per product

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.

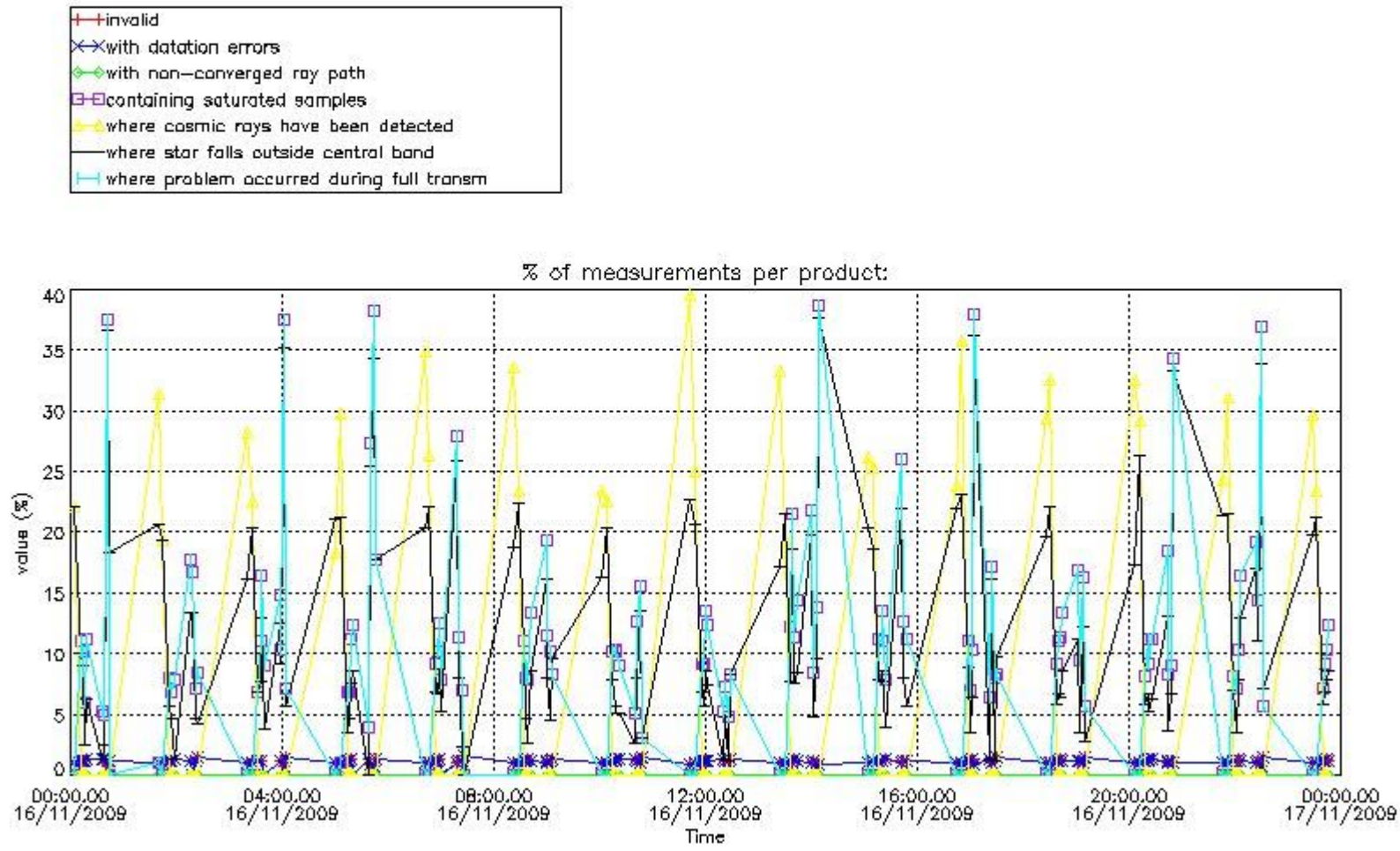
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





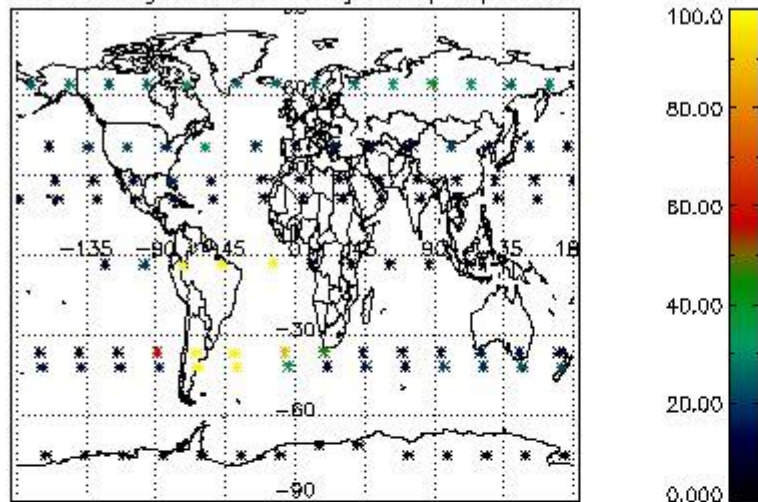
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



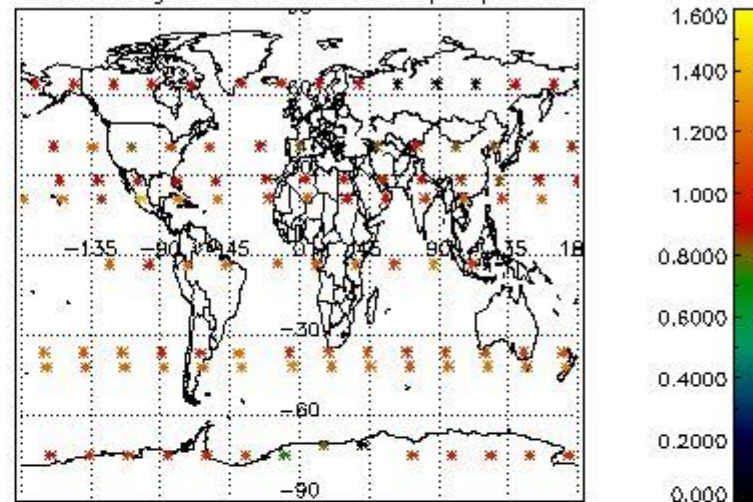
4.2 Plot quality information per product coming from level 1b processing (world map)

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

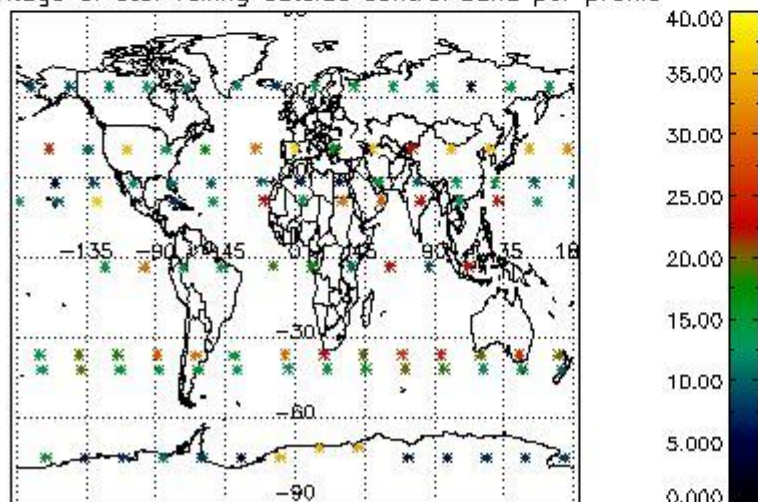
Percentage of cosmic ray hits per profile



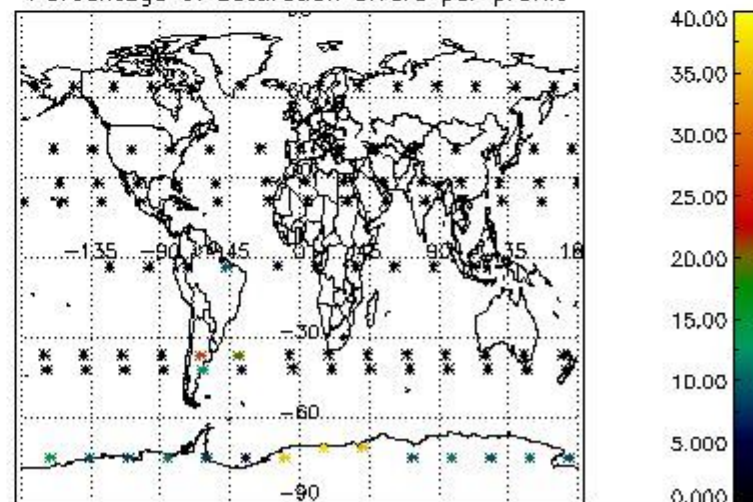
Percentage of datation errors per profile



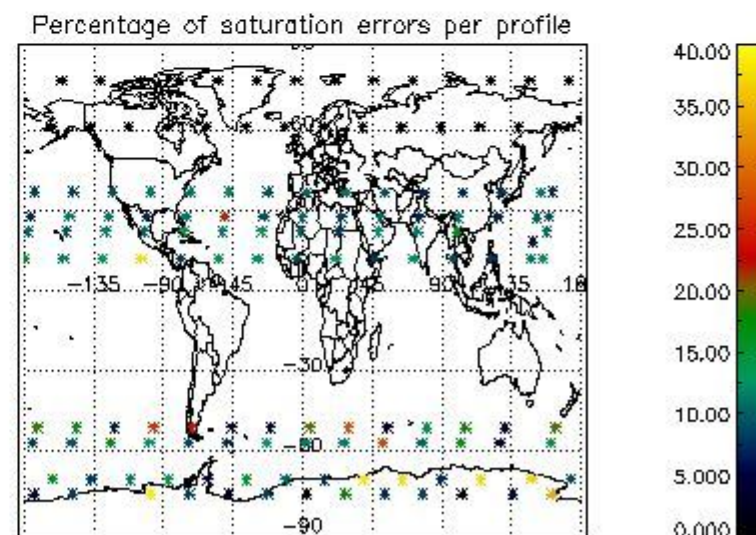
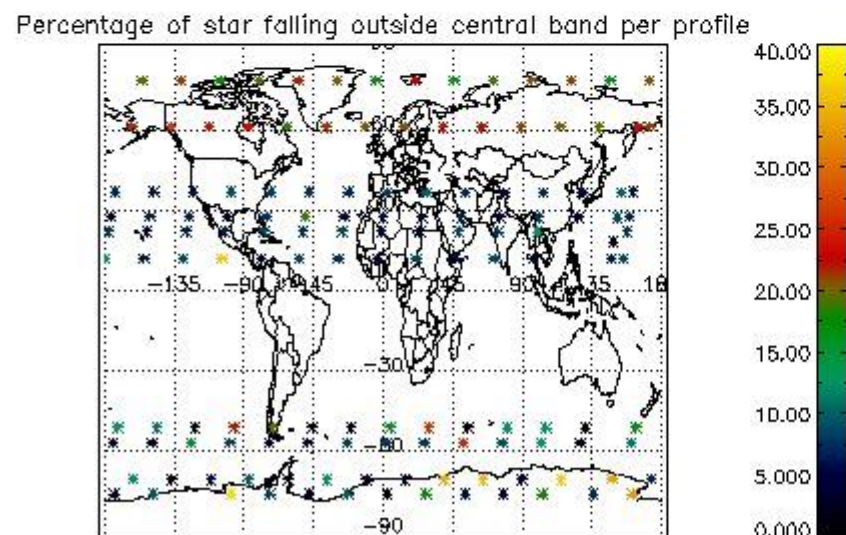
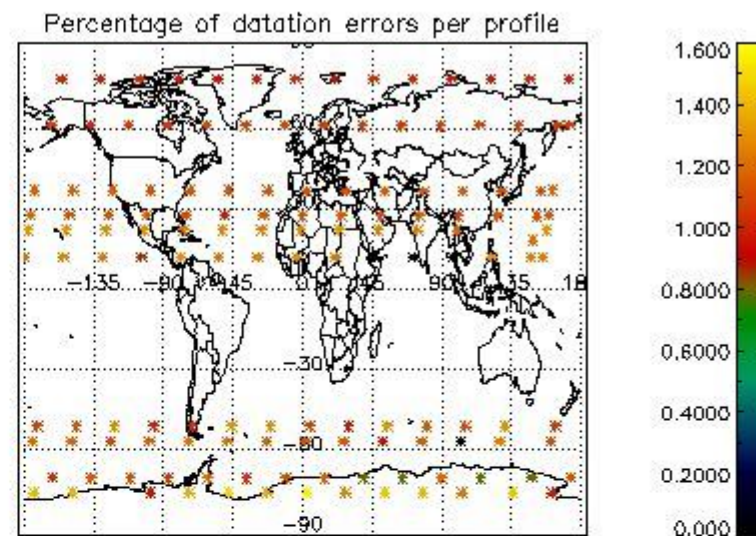
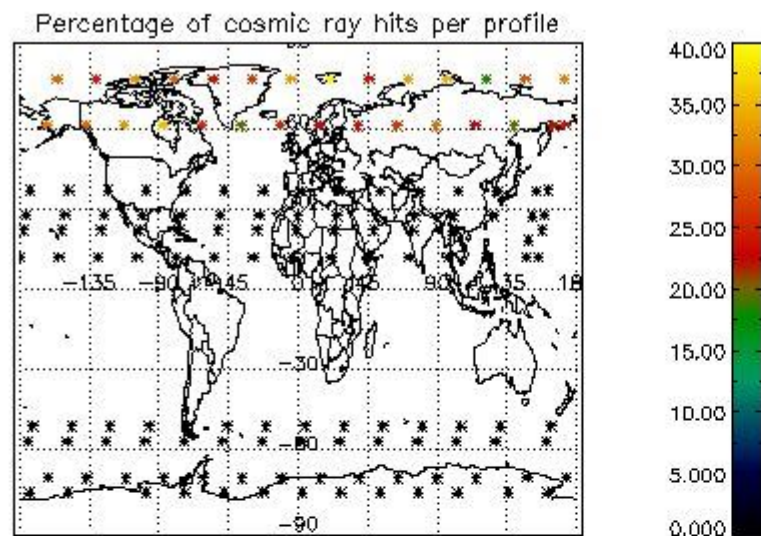
Percentage of star falling outside central band per profile



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

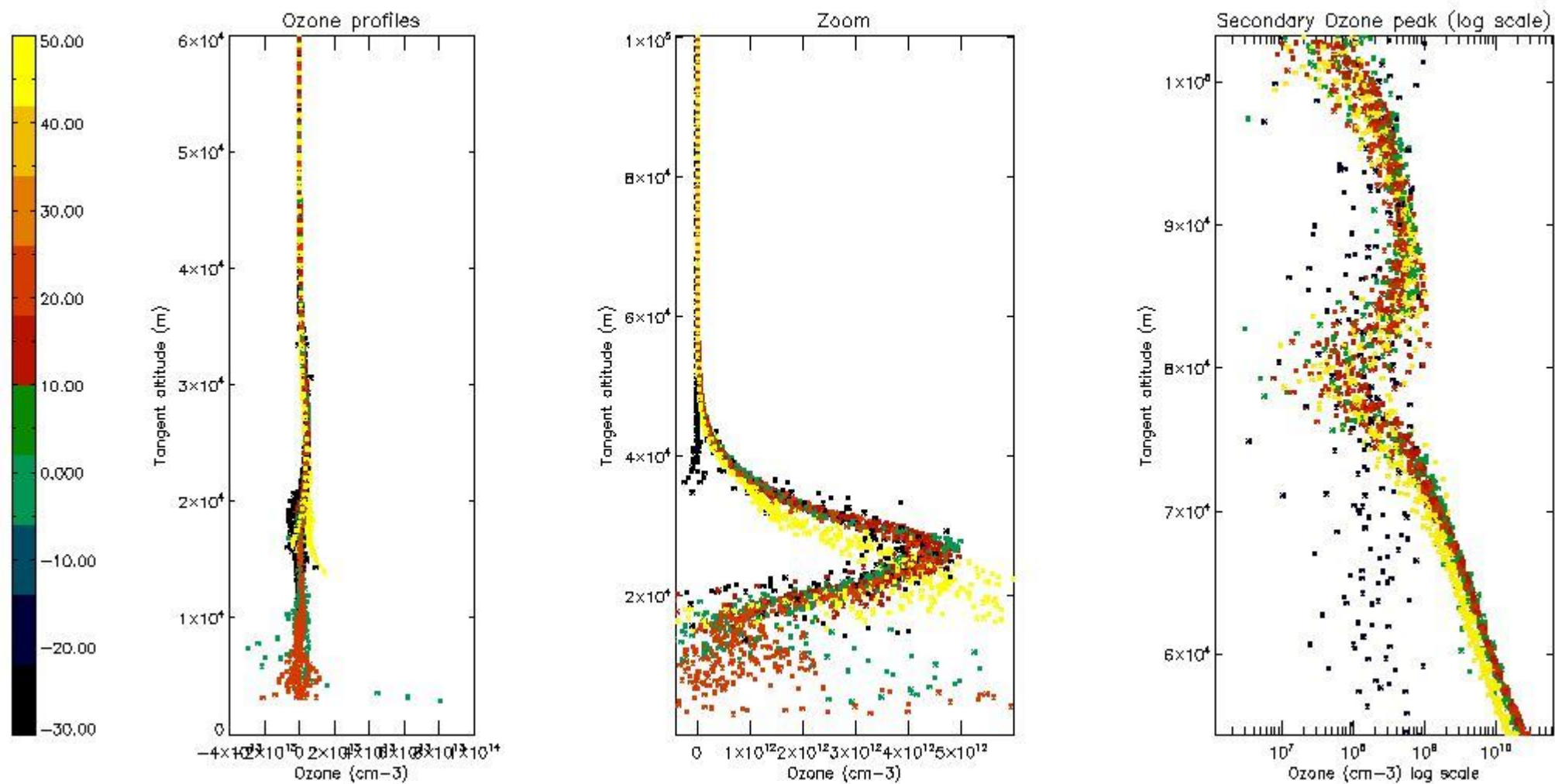
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	18

STD < 10	14
STD < 5	9

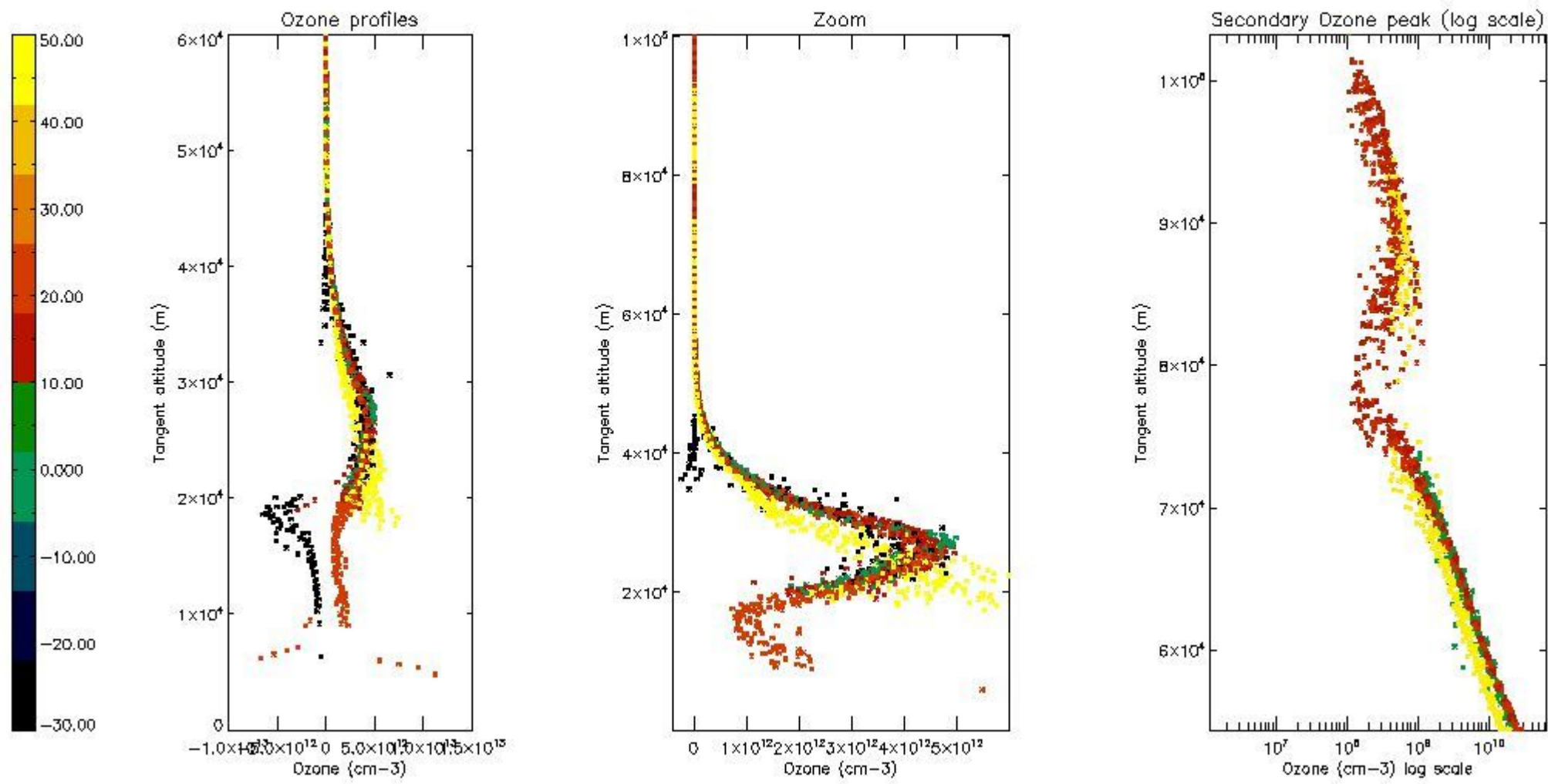
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



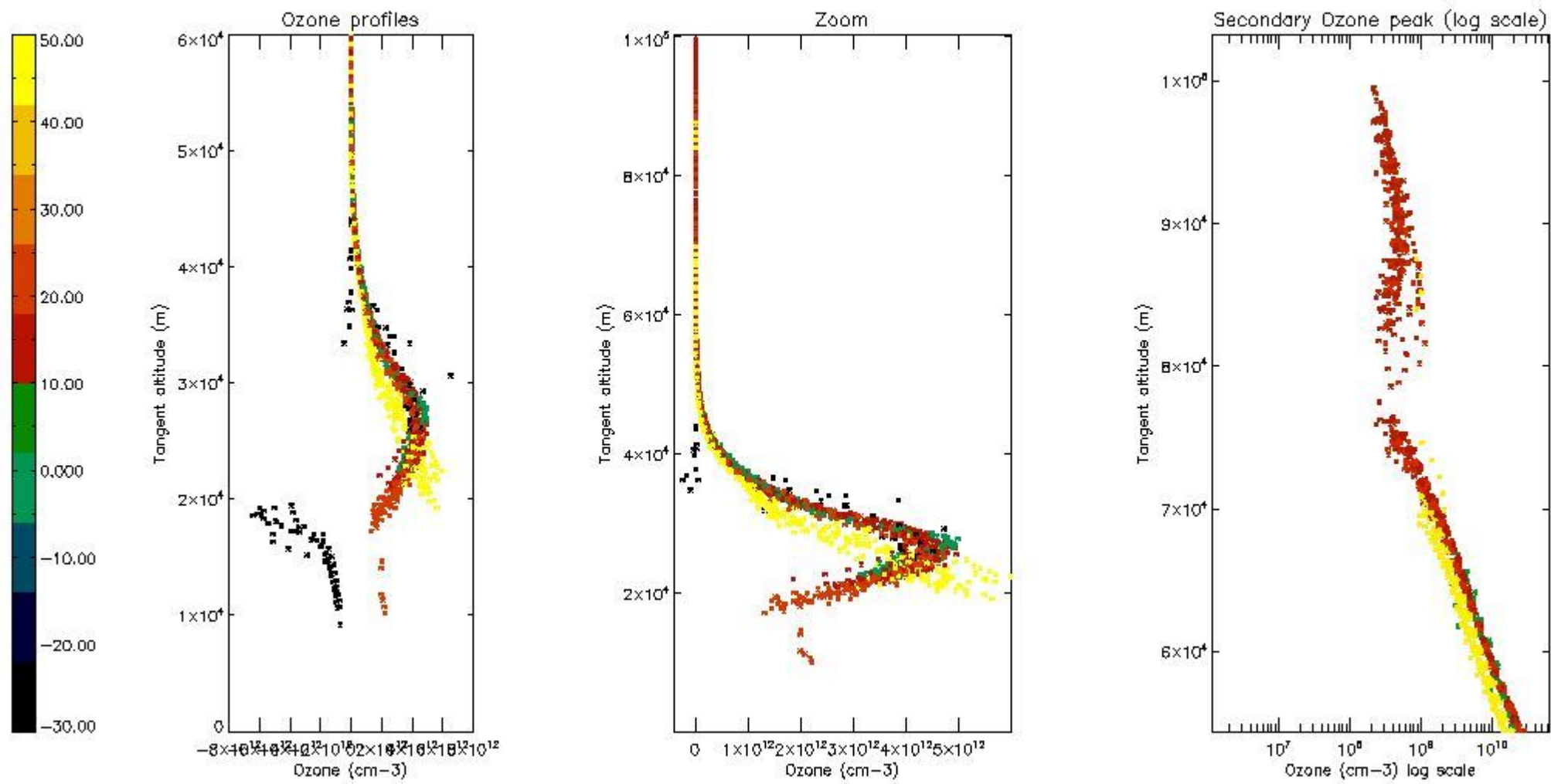
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



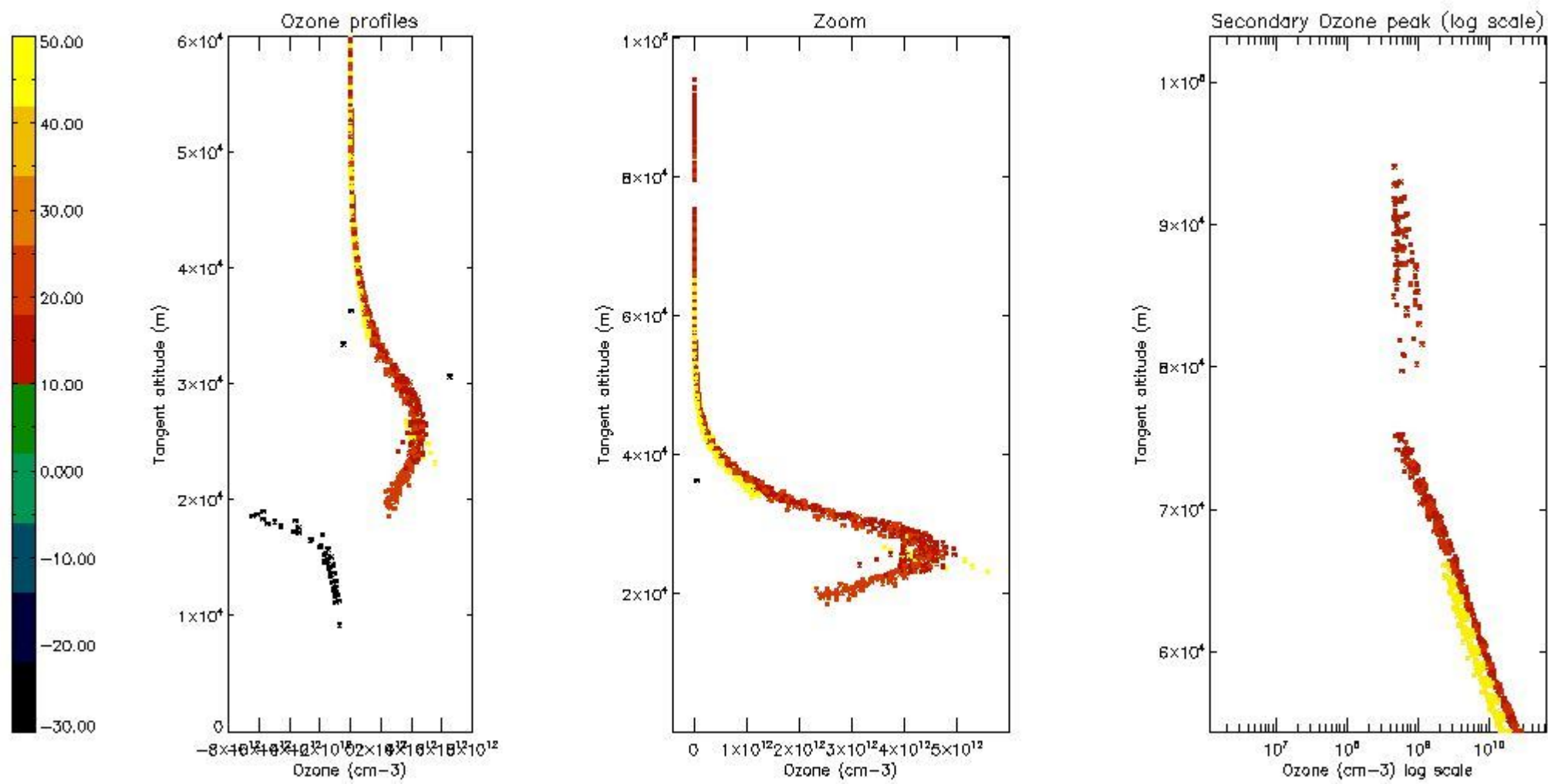
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

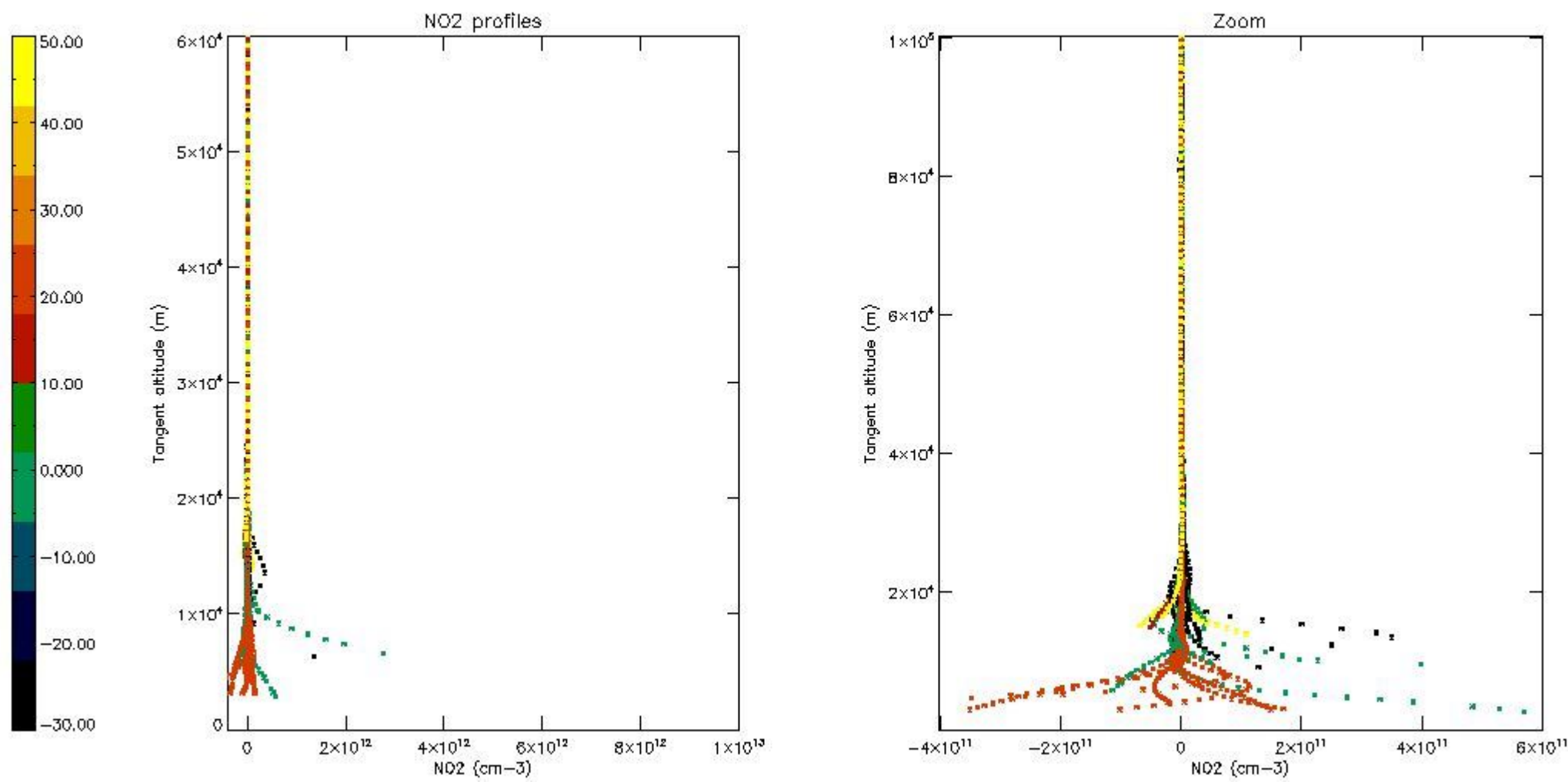
The colorbar represents the latitude.



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

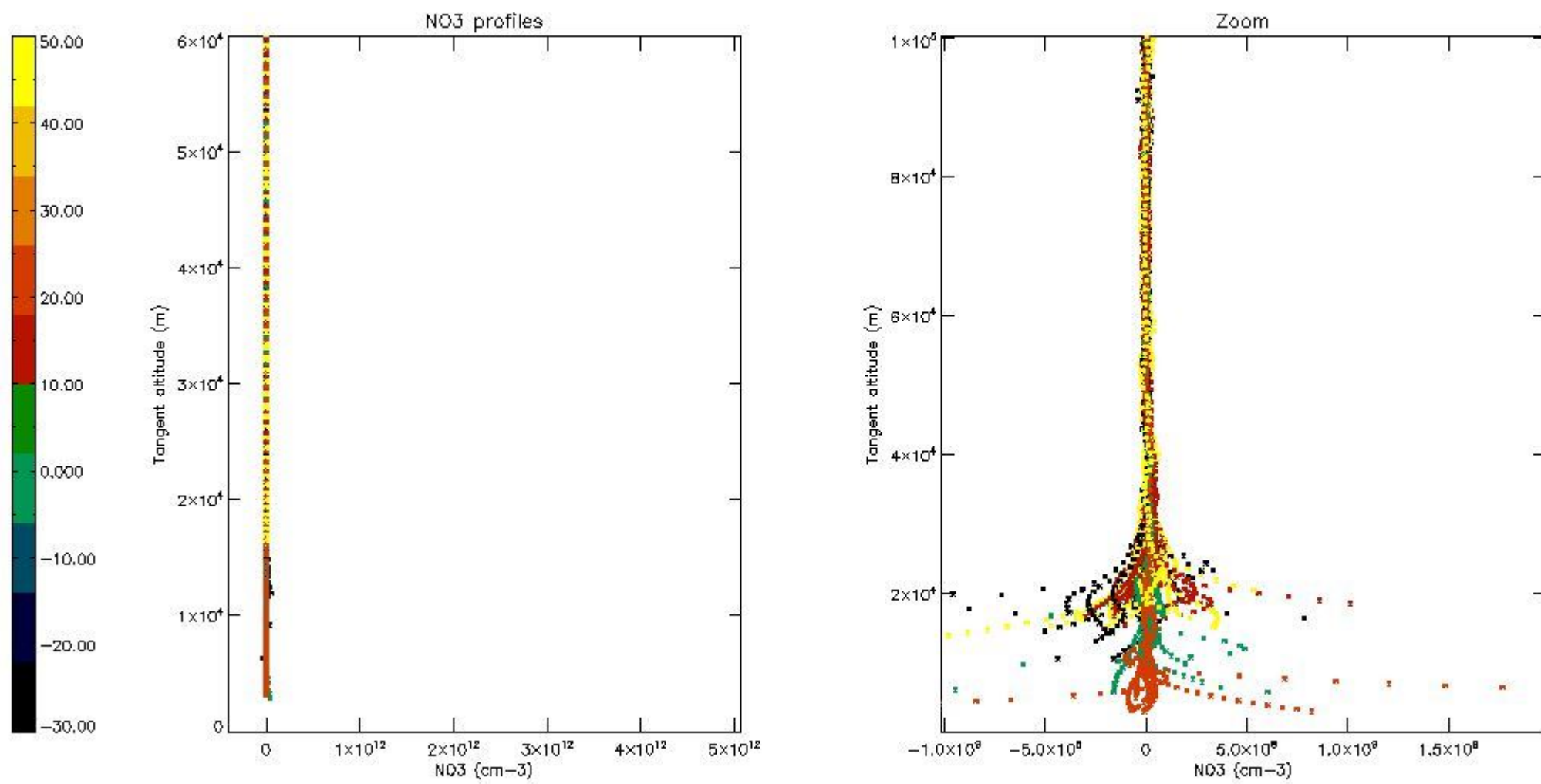
The colorbar represents the latitude.





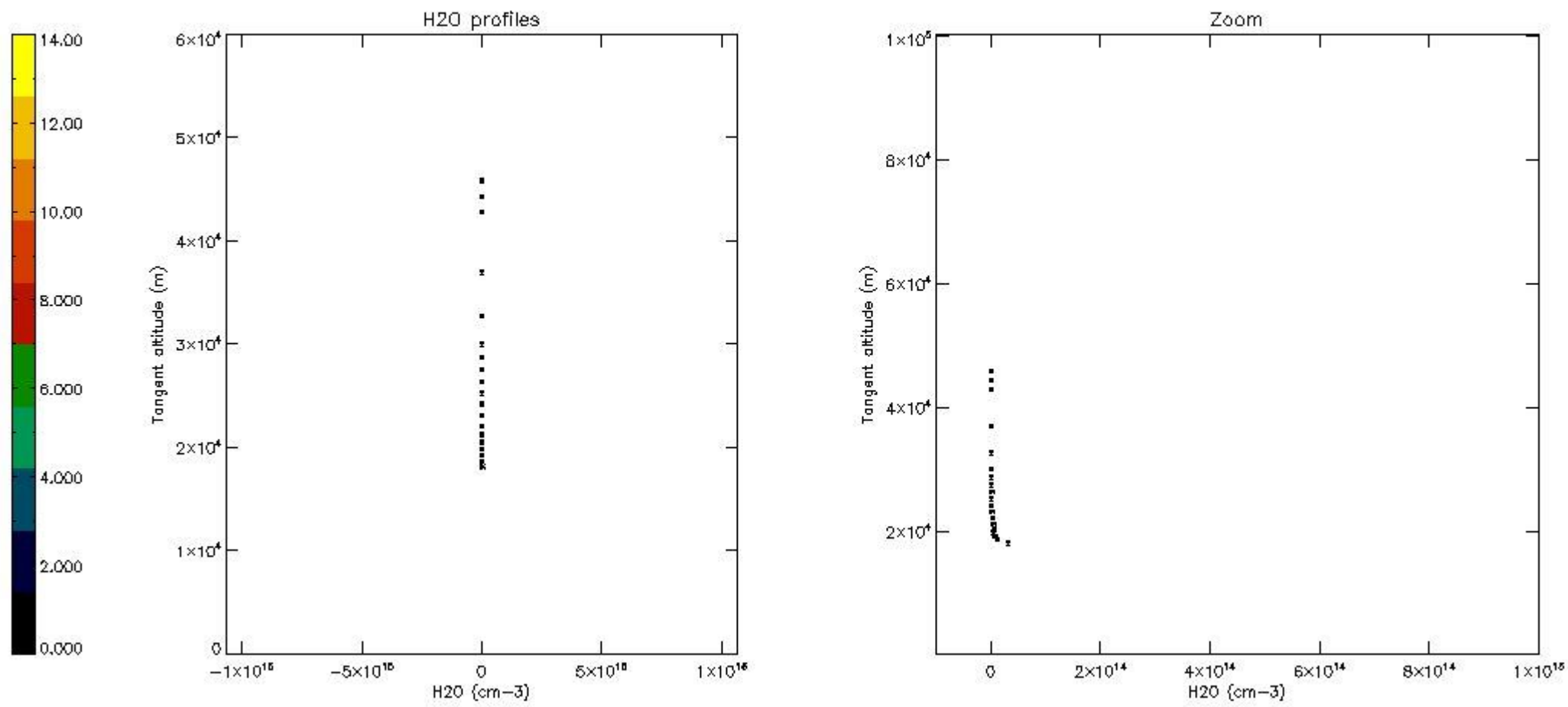
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot 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	16-NOV-2009 00:04:18
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-NOV-2009 00:04:18
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-NOV-2009 00:04:18

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

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#### [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](#)

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#### [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](#)

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### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

#### [5.1 Ozone statistics based on quality of products](#)

#### [5.2 Plot ozone profiles for all STD \(dark without errors\)](#)

#### [5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

#### [5.4. Plot ozone profiles where STD < 10% \(dark without errors\)](#)

#### [5.5. Plot ozone profiles where STD < 5% \(dark without errors\)](#)

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

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

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

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

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

Item	Value
Time of report generation	26APR2013 13:57:40
Data source version	GOMOS/6.01
Start time of products	16-11-2009 (16NOV2009 00:00:00)
Stop time of products	17-11-2009 (17NOV2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	251
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__2PRFIN20091116_000418_000000482084_00188_40322_0756.N1	16-NOV-2009 00:04:18	Twilight	47.500	94	92Alp Cet	2.5260	3100.0	95	40322	No
2	GOM_NL__2PRFIN20091116_001118_000000452084_00188_40322_0757.N1	16-NOV-2009 00:11:18	Bright	45.000	146	25Eta Tau	2.8730	15200.	90	40322	No
3	GOM_NL__2PRFIN20091116_001357_000000452084_00188_40322_0758.N1	16-NOV-2009 00:13:57	Bright	44.500	150	44Zet Per	2.8900	28000.	89	40322	No
4	GOM_NL__2PRFIN20091116_001628_000000422084_00188_40322_0759.N1	16-NOV-2009 00:16:28	Bright	41.500	149	45Eps Per	2.8880	30000.	83	40322	No
5	GOM_NL__2PRFIN20091116_001817_000000402084_00188_40322_0760.N1	16-NOV-2009 00:18:17	Bright	40.000	35	33Alp Per	1.7950	6250.0	80	40322	No
6	GOM_NL__2PRFIN20091116_003604_000000392084_00188_40322_0761.N1	16-NOV-2009 00:36:04	Bright	38.500	36	50Alp UMa	1.8000	6300.0	77	40322	No
7	GOM_NL__2PRFIN20091116_003742_000000402084_00188_40322_0762.N1	16-NOV-2009 00:37:42	Bright	40.000	82	48Bet UMa	2.3650	10600.	80	40322	No
8	GOM_NL__2PRFIN20091116_004145_000000642084_00188_40322_0763.N1	16-NOV-2009 00:41:45	Bright	64.000	174	52Psi UMa	3.0040	4400.0	128	40322	No
9	GOM_NL__2PRFIN20091116_004332_000000412084_00188_40322_0764.N1	16-NOV-2009 00:43:32	Bright	41.000	152	12Alp2CVn	2.8900	11000.	82	40322	No
10	GOM_NL__2PRFIN20091116_005024_000000692084_00188_40322_0765.N1	16-NOV-2009 00:50:24	Bright	69.000	96	68Del Leo	2.5600	9300.0	138	40322	No
11	GOM_NL__2PRFIN20091116_010011_000000412084_00188_40322_0766.N1	16-NOV-2009 01:00:11	Twilight	40.500	100	4Gam Crv	2.5800	13100.	81	40322	No
12	GOM_NL__2PRFIN20091116_010142_000000422084_00188_40322_0767.N1	16-NOV-2009 01:01:42	Twilight	42.000	171	2Eps Crv	3.0010	4250.0	84	40322	No
13	GOM_NL__2PRFIN20091116_011057_000000432084_00188_40322_0768.N1	16-NOV-2009 01:10:57	Dark	42.500	113	Mu Vel	2.6920	5000.0	85	40322	No
14	GOM_NL__2PRFIN20091116_011749_000000422084_00189_40323_0760.N1	16-NOV-2009 01:17:49	Dark	42.000	41	Eps Car	1.8600	4100.0	84	40323	No
15	GOM_NL__2PRFIN20091116_011943_000000562084_00189_40323_0761.N1	16-NOV-2009 01:19:43	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40323	No
16	GOM_NL__2PRFIN20091116_012319_000000482084_00189_40323_0762.N1	16-NOV-2009 01:23:19	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	40323	No
17	GOM_NL__2PRFIN20091116_013001_000000542084_00189_40323_0763.N1	16-NOV-2009 01:30:01	Dark	53.500	108	Alp Col	2.6520	15200.	107	40323	No
18	GOM_NL__2PRFIN20091116_013919_000000512084_00189_40323_0764.N1	16-NOV-2009 01:39:19	Straylight	51.000	165	34Gam Eri	2.9500	3200.0	102	40323	No
19	GOM_NL__2PRFIN20091116_014453_000000472084_00189_40323_0765.N1	16-NOV-2009 01:44:53	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40323	No
20	GOM_NL__2PRFIN20091116_015153_000000442084_00189_40323_0766.N1	16-NOV-2009 01:51:53	Bright	44.000	146	25Eta Tau	2.8730	15200.	88	40323	No
21	GOM_NL__2PRFIN20091116_015432_000000442084_00189_40323_0767.N1	16-NOV-2009 01:54:32	Bright	43.500	150	44Zet Per	2.8900	28000.	87	40323	No
22	GOM_NL__2PRFIN20091116_015852_000000382084_00189_40323_0768.N1	16-NOV-2009 01:58:52	Bright	38.000	35	33Alp Per	1.7950	6250.0	76	40323	No
23	GOM_NL__2PRFIN20091116_021639_000000452084_00189_40323_0769.N1	16-NOV-2009 02:16:39	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	40323	No
24	GOM_NL__2PRFIN20091116_021818_000000452084_00189_40323_0770.N1	16-NOV-2009 02:18:18	Bright	45.000	82	48Bet UMa	2.3650	10600.	90	40323	No
25	GOM_NL__2PRFIN20091116_022221_000000432084_00189_40323_0771.N1	16-NOV-2009 02:22:21	Bright	42.500	174	52Psi UMa	3.0040	4400.0	85	40323	No
26	GOM_NL__2PRFIN20091116_022408_000000362084_00189_40323_0772.N1	16-NOV-2009 02:24:08	Bright	35.500	152	12Alp2CVn	2.8900	11000.	71	40323	No
27	GOM_NL__2PRFIN20091116_023100_000000472084_00189_40323_0773.N1	16-NOV-2009 02:31:00	Bright	46.500	96	68Del Leo	2.5600	9300.0	93	40323	No
28	GOM_NL__2PRFIN20091116_024047_000000432084_00189_40323_0774.N1	16-NOV-2009 02:40:47	Twilight	43.000	100	4Gam Crv	2.5800	13100.	86	40323	No
29	GOM_NL__2PRFIN20091116_024218_000000512084_00189_40323_0775.N1	16-NOV-2009 02:42:18	Twilight	50.500	171	2Eps Crv	3.0010	4250.0	101	40323	No
30	GOM_NL__2PRFIN20091116_025133_000000422084_00189_40323_0776.N1	16-NOV-2009 02:51:33	Dark	42.000	113	Mu Vel	2.6920	5000.0	84	40323	No
31	GOM_NL__2PRFIN20091116_025825_000000402084_00190_40324_0787.N1	16-NOV-2009 02:58:25	Dark	40.000	41	Eps Car	1.8600	4100.0	80	40324	No
32	GOM_NL__2PRFIN20091116_030020_000000562084_00190_40324_0788.N1	16-NOV-2009 03:00:20	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40324	No
33	GOM_NL__2PRFIN20091116_030355_000000472084_00190_40324_0789.N1	16-NOV-2009 03:03:55	Dark	47.000	2	Alp Car	-0.73600	7000.0	94	40324	No
34	GOM_NL__2PRFIN20091116_031038_000000542084_00190_40324_0790.N1	16-NOV-2009 03:10:38	Dark	54.000	108	Alp Col	2.6520	15200.	108	40324	No
35	GOM_NL__2PRFIN20091116_031955_000000502084_00190_40324_0791.N1	16-NOV-2009 03:19:55	Straylight	49.500	165	34Gam Eri	2.9500	3200.0	99	40324	No
36	GOM_NL__2PRFIN20091116_032529_000000472084_00190_40324_0792.N1	16-NOV-2009 03:25:29	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40324	No
37	GOM_NL__2PRFIN20091116_033229_000000442084_00190_40324_0793.N1	16-NOV-2009 03:32:29	Bright	43.500	146	25Eta Tau	2.8730	15200.	87	40324	No
38	GOM_NL__2PRFIN20091116_033507_000000462084_00190_40324_0794.N1	16-NOV-2009 03:35:07	Bright	45.500	150	44Zet Per	2.8900	28000.	91	40324	No
39	GOM_NL__2PRFIN20091116_033637_000000432084_00190_40324_0795.N1	16-NOV-2009 03:36:37	Bright	42.500	79	26Bet Per	2.3100	13100.	85	40324	No
40	GOM_NL__2PRFIN20091116_033928_000000392084_00190_40324_0796.N1	16-NOV-2009 03:39:28	Bright	39.000	35	33Alp Per	1.7950	6250.0	78	40324	No
41	GOM_NL__2PRFIN20091116_035715_000000442084_00190_40324_0797.N1	16-NOV-2009 03:57:15	Bright	44.000	36	50Alp UMa	1.8000	6300.0	88	40324	No
42	GOM_NL__2PRFIN20091116_035853_000000442084_00190_40324_0798.N1	16-NOV-2009 03:58:53	Bright	43.500	82	48Bet UMa	2.3650	10600.	87	40324	No







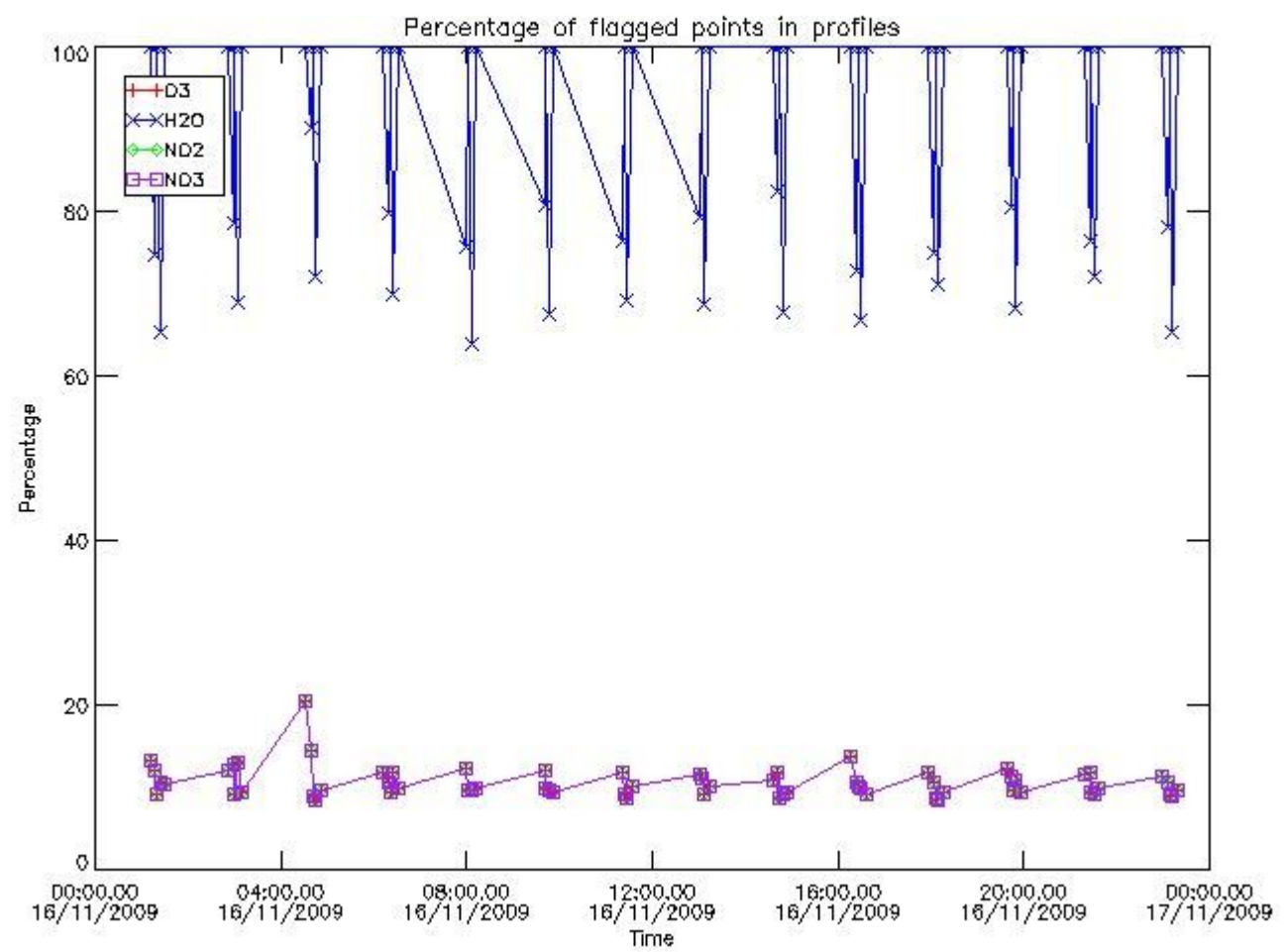


220	GOM_NL__2PRFIN20091116_205851_000000592084_00200_40334_0917.N1	16-NOV-2009 20:58:51	Bright	58.500	62	94Bet Leo	2.1360	9700.0	117	40334	No
221	GOM_NL__2PRFIN20091116_210727_000000432084_00200_40334_0918.N1	16-NOV-2009 21:07:27	Twilight	42.500	100	4Gam Crv	2.5800	13100.	85	40334	No
222	GOM_NL__2PRFIN20091116_210859_000000462084_00200_40334_0919.N1	16-NOV-2009 21:08:59	Twilight	46.000	171	2Eps Crv	3.0010	4250.0	92	40334	No
223	GOM_NL__2PRFIN20091116_211815_000000442084_00200_40334_0920.N1	16-NOV-2009 21:18:15	Dark	44.000	113	Mu Vel	2.6920	5000.0	88	40334	No
224	GOM_NL__2PRFIN20091116_212507_000000432084_00201_40335_0912.N1	16-NOV-2009 21:25:07	Dark	43.000	41	Eps Car	1.8600	4100.0	86	40335	No
225	GOM_NL__2PRFIN20091116_212709_000000542084_00201_40335_0913.N1	16-NOV-2009 21:27:09	Dark	54.000	70	Zet Pup	2.2460	39000.	108	40335	No
226	GOM_NL__2PRFIN20091116_213038_000000612084_00201_40335_0914.N1	16-NOV-2009 21:30:38	Dark	61.000	2	Alp Car	-0.73600	7000.0	122	40335	No
227	GOM_NL__2PRFIN20091116_213720_000000522084_00201_40335_0915.N1	16-NOV-2009 21:37:20	Dark	51.500	108	Alp Col	2.6520	15200.	103	40335	No
228	GOM_NL__2PRFIN20091116_214631_000000522084_00201_40335_0916.N1	16-NOV-2009 21:46:31	Straylight	51.500	165	34Gam Eri	2.9500	3200.0	103	40335	No
229	GOM_NL__2PRFIN20091116_215204_000000472084_00201_40335_0917.N1	16-NOV-2009 21:52:04	Twilight	46.500	94	92Alp Cet	2.5260	3100.0	93	40335	No
230	GOM_NL__2PRFIN20091116_215859_000000432084_00201_40335_0918.N1	16-NOV-2009 21:58:59	Bright	43.000	146	25Eta Tau	2.8730	15200.	86	40335	No
231	GOM_NL__2PRFIN20091116_220136_000000432084_00201_40335_0919.N1	16-NOV-2009 22:01:36	Bright	42.500	150	44Zet Per	2.8900	28000.	85	40335	No
232	GOM_NL__2PRFIN20091116_220309_000000392084_00201_40335_0920.N1	16-NOV-2009 22:03:09	Bright	38.500	79	26Bet Per	2.3100	13100.	77	40335	No
233	GOM_NL__2PRFIN20091116_220559_000000432084_00201_40335_0921.N1	16-NOV-2009 22:05:59	Bright	42.500	35	33Alp Per	1.7950	6250.0	85	40335	No
234	GOM_NL__2PRFIN20091116_222347_000000472084_00201_40335_0922.N1	16-NOV-2009 22:23:47	Bright	47.000	36	50Alp UMa	1.8000	6300.0	94	40335	No
235	GOM_NL__2PRFIN20091116_222526_000000452084_00201_40335_0923.N1	16-NOV-2009 22:25:26	Bright	45.000	82	48Bet UMa	2.3650	10600.	90	40335	No
236	GOM_NL__2PRFIN20091116_222931_000000642084_00201_40335_0924.N1	16-NOV-2009 22:29:31	Bright	63.500	174	52Psi UMa	3.0040	4400.0	127	40335	No
237	GOM_NL__2PRFIN20091116_223121_000000352084_00201_40335_0925.N1	16-NOV-2009 22:31:21	Bright	35.000	152	12Alp2CVn	2.8900	11000.	70	40335	No
238	GOM_NL__2PRFIN20091116_223927_000000622084_00201_40335_0926.N1	16-NOV-2009 22:39:27	Bright	62.000	62	94Bet Leo	2.1360	9700.0	124	40335	No
239	GOM_NL__2PRFIN20091116_224804_000000402084_00201_40335_0927.N1	16-NOV-2009 22:48:04	Twilight	40.000	100	4Gam Crv	2.5800	13100.	80	40335	No
240	GOM_NL__2PRFIN20091116_224935_000000512084_00201_40335_0928.N1	16-NOV-2009 22:49:35	Twilight	51.000	171	2Eps Crv	3.0010	4250.0	102	40335	No
241	GOM_NL__2PRFIN20091116_225852_000000452084_00201_40335_0929.N1	16-NOV-2009 22:58:52	Dark	45.000	113	Mu Vel	2.6920	5000.0	90	40335	No
242	GOM_NL__2PRFIN20091116_230544_000000492084_00202_40336_0921.N1	16-NOV-2009 23:05:44	Dark	48.500	41	Eps Car	1.8600	4100.0	97	40336	No
243	GOM_NL__2PRFIN20091116_230746_000000562084_00202_40336_0922.N1	16-NOV-2009 23:07:46	Dark	55.500	70	Zet Pup	2.2460	39000.	111	40336	No
244	GOM_NL__2PRFIN20091116_231114_000000572084_00202_40336_0923.N1	16-NOV-2009 23:11:14	Dark	56.500	2	Alp Car	-0.73600	7000.0	113	40336	No
245	GOM_NL__2PRFIN20091116_231756_000000542084_00202_40336_0924.N1	16-NOV-2009 23:17:56	Dark	53.500	108	Alp Col	2.6520	15200.	107	40336	No
246	GOM_NL__2PRFIN20091116_232707_000000512084_00202_40336_0925.N1	16-NOV-2009 23:27:07	Straylight	50.500	165	34Gam Eri	2.9500	3200.0	101	40336	No
247	GOM_NL__2PRFIN20091116_233240_000000472084_00202_40336_0926.N1	16-NOV-2009 23:32:40	Twilight	47.000	94	92Alp Cet	2.5260	3100.0	94	40336	No
248	GOM_NL__2PRFIN20091116_233934_000000432084_00202_40336_0927.N1	16-NOV-2009 23:39:34	Bright	42.500	146	25Eta Tau	2.8730	15200.	85	40336	No
249	GOM_NL__2PRFIN20091116_234212_000000442084_00202_40336_0928.N1	16-NOV-2009 23:42:12	Bright	44.000	150	44Zet Per	2.8900	28000.	88	40336	No
250	GOM_NL__2PRFIN20091116_234344_000000392084_00202_40336_0929.N1	16-NOV-2009 23:43:44	Bright	38.500	79	26Bet Per	2.3100	13100.	77	40336	No
251	GOM_NL__2PRFIN20091116_234635_000000412084_00202_40336_0930.N1	16-NOV-2009 23:46:35	Bright	40.500	35	33Alp Per	1.7950	6250.0	81	40336	No

### 3. Quality information per product

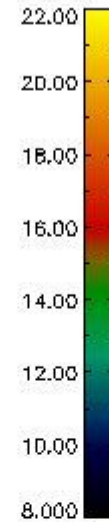
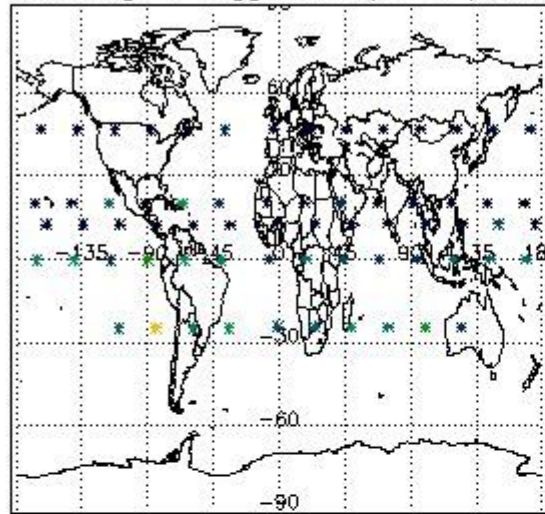
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

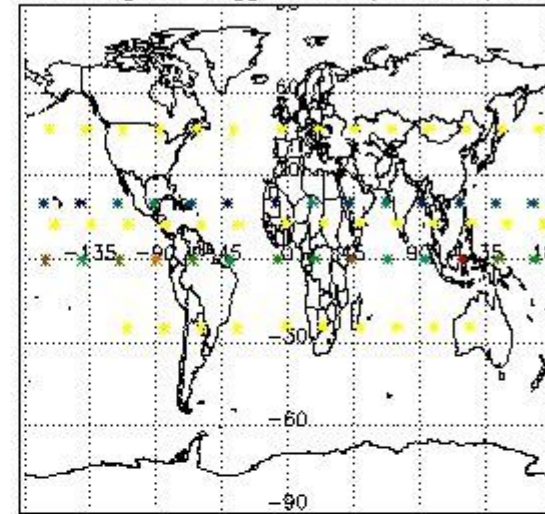


*3.2 Plot quality information per product (world map)*

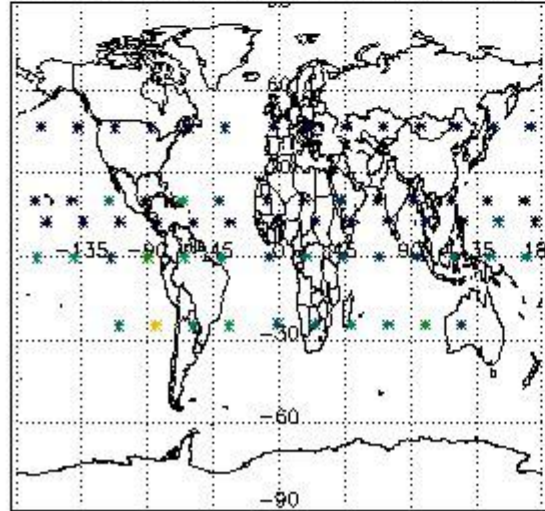
Percentage of flagged data per O3 profile



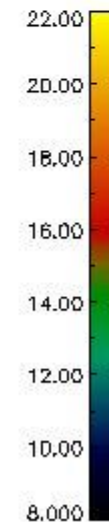
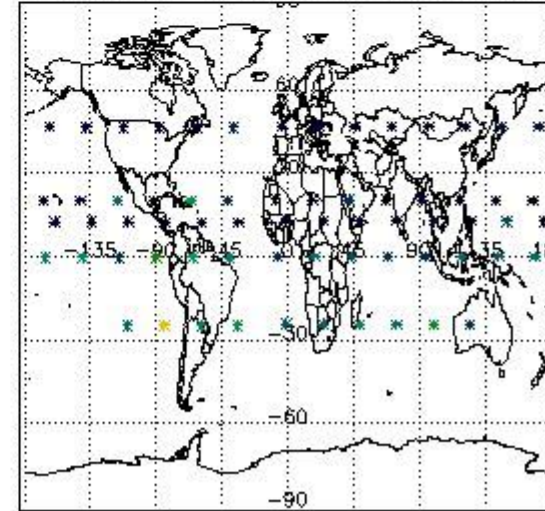
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

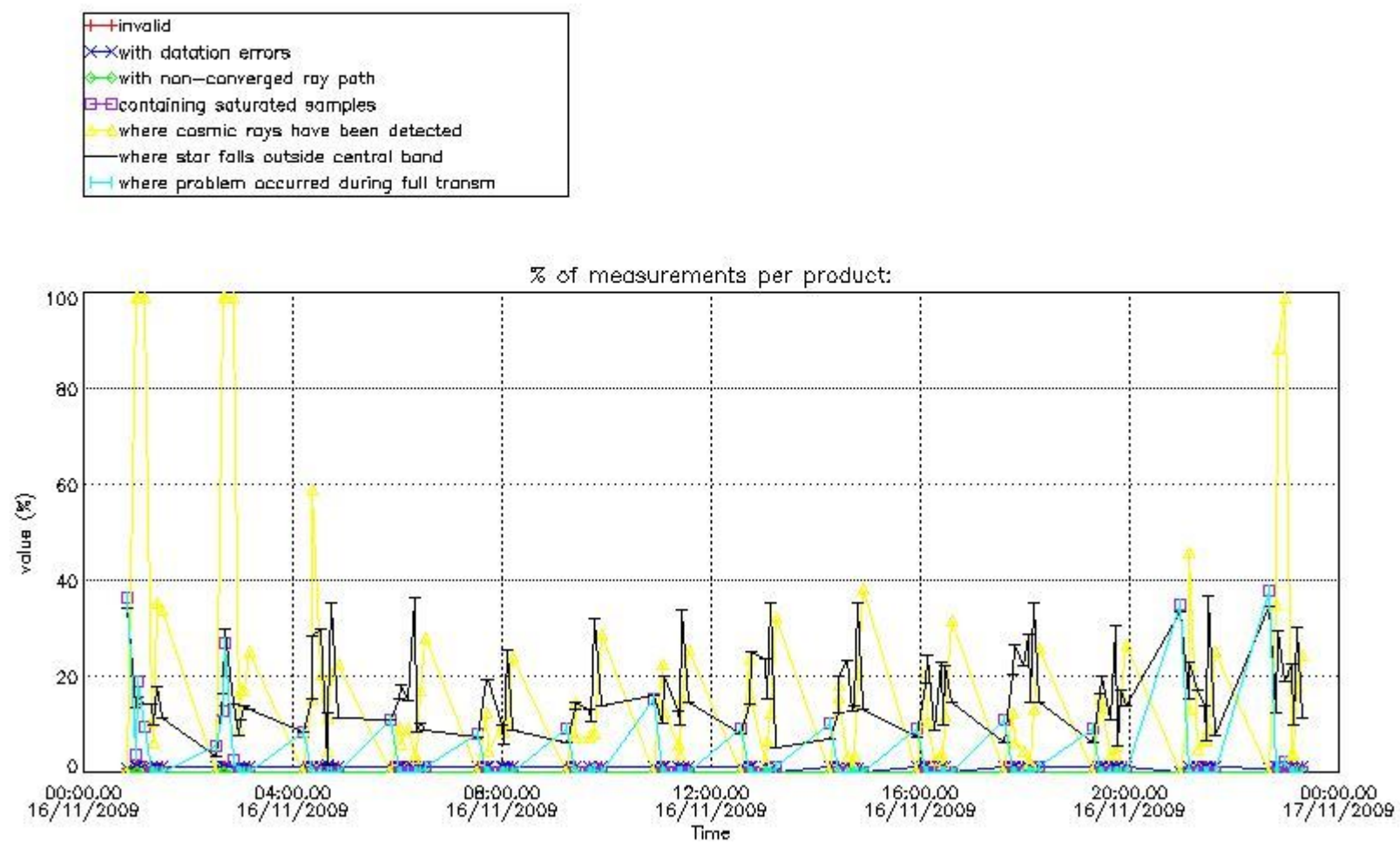


#### 4. Level 1 quality information per product

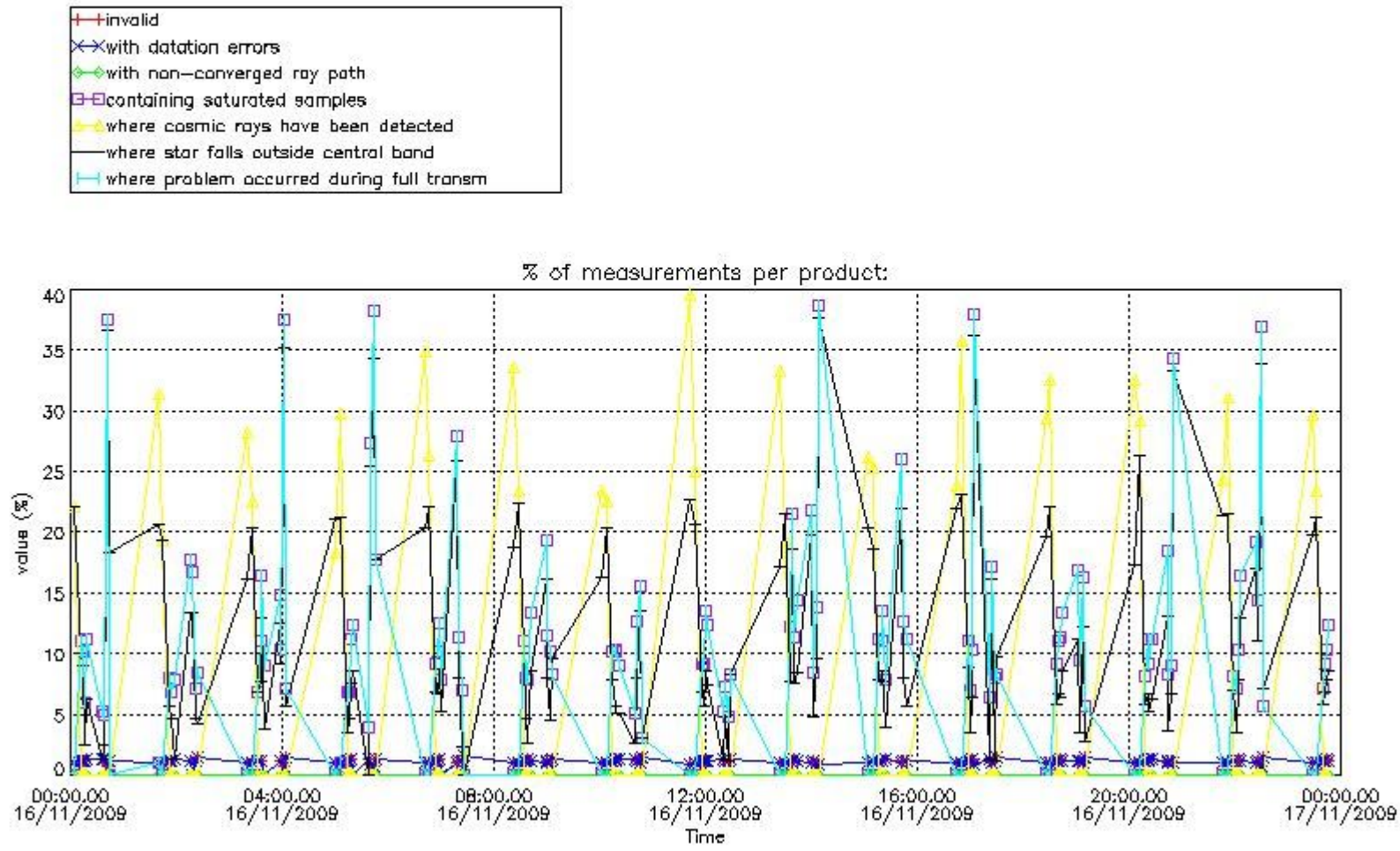
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



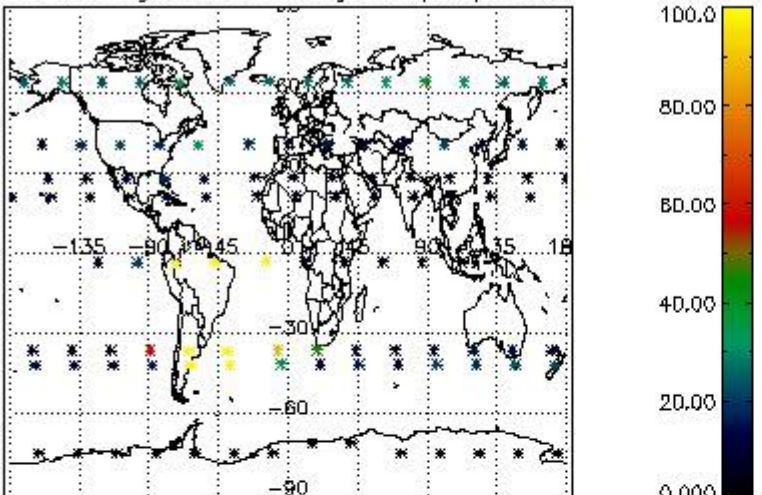
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



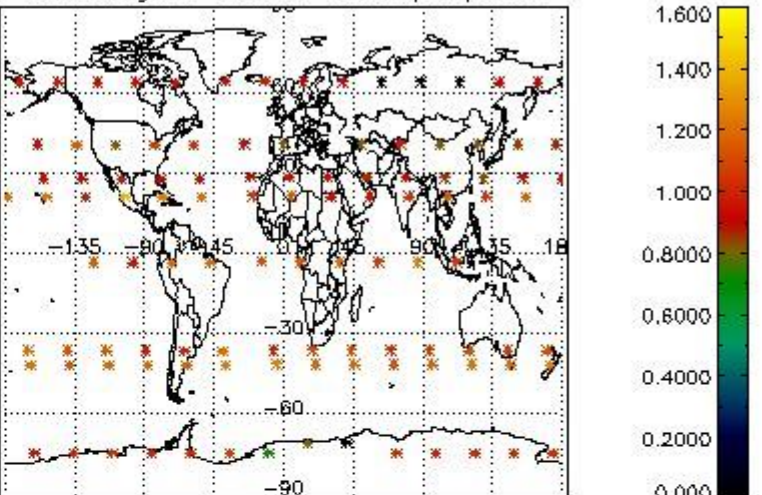
4.2 Plot quality information per product coming from level 1b processing (world map)

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

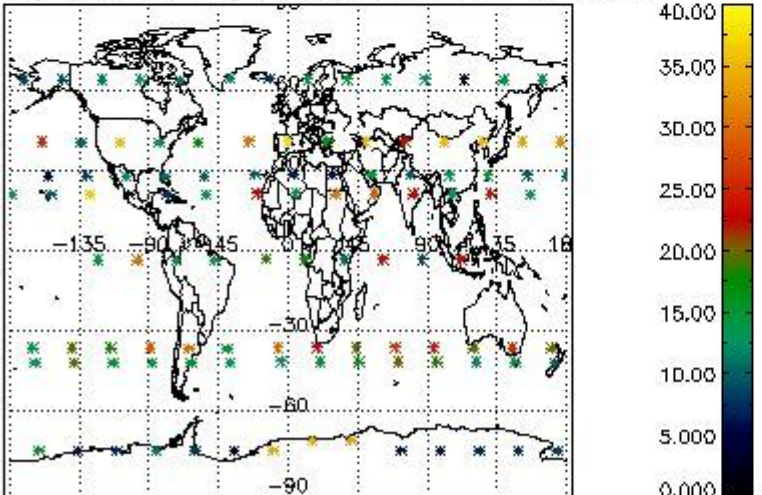
Percentage of cosmic ray hits per profile



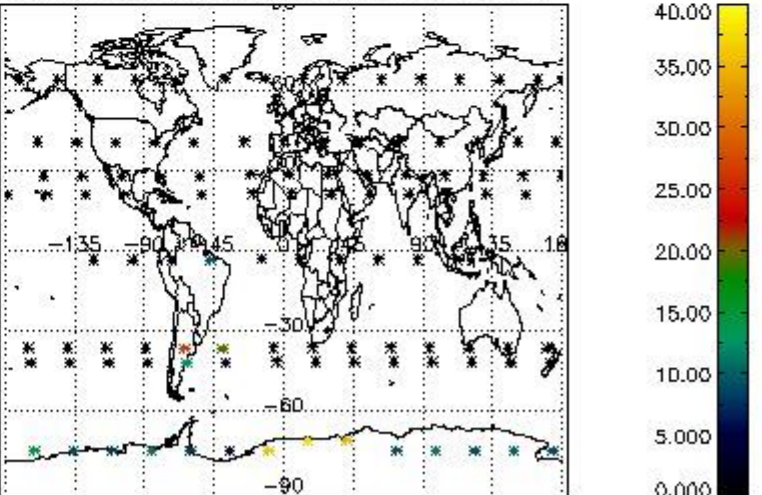
Percentage of datation errors per profile



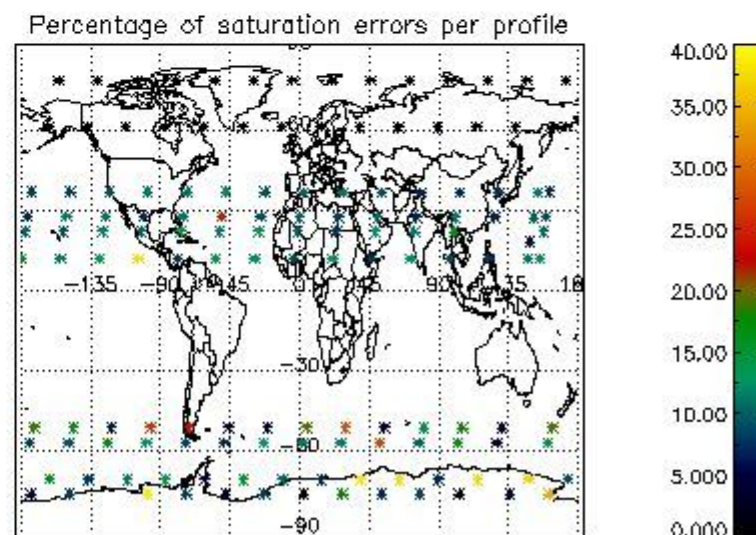
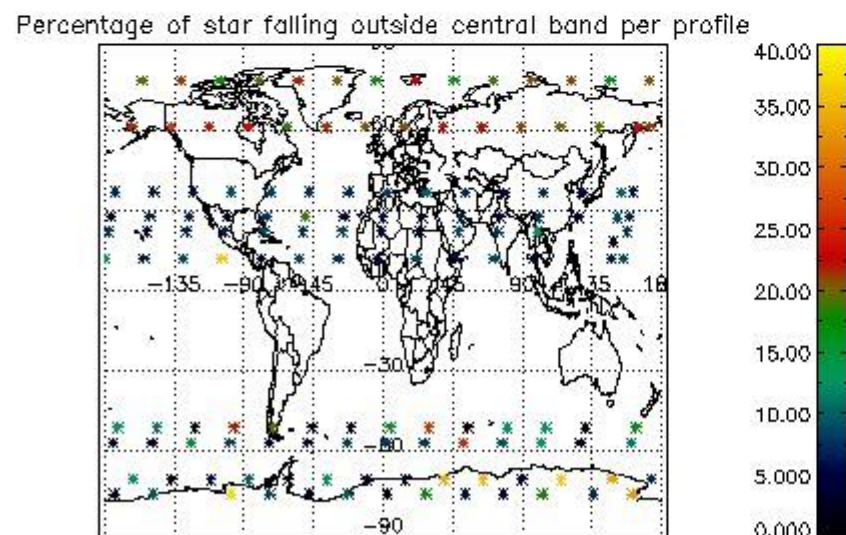
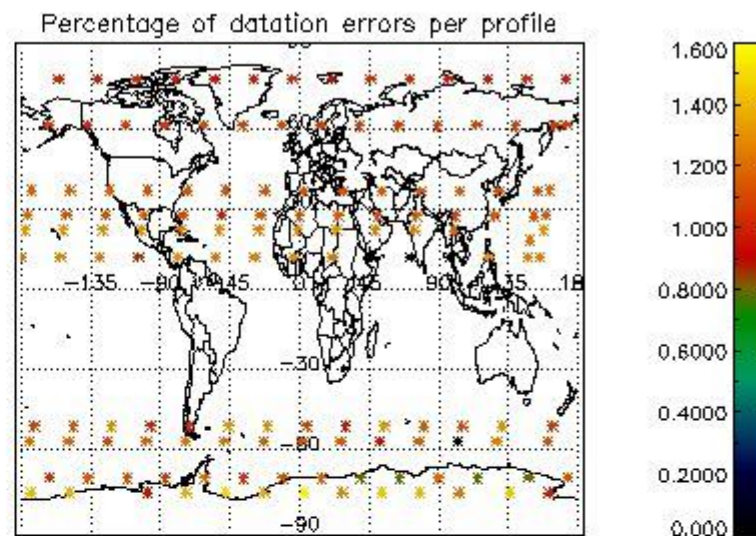
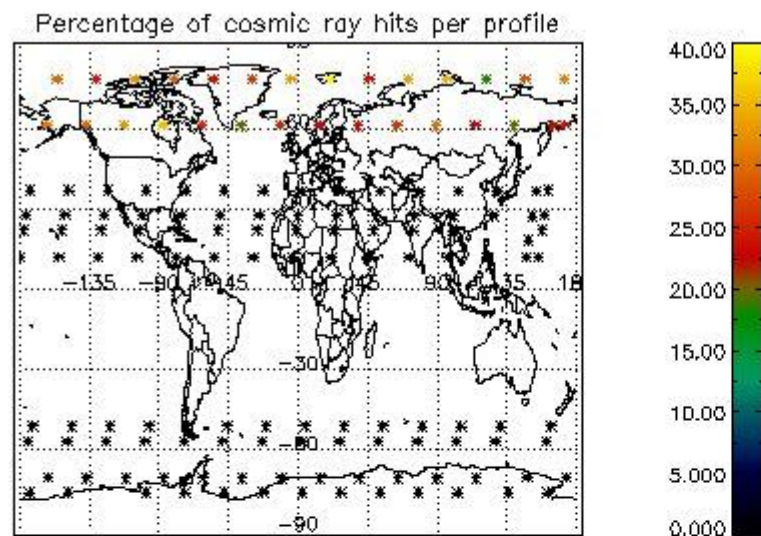
Percentage of star falling outside central band per profile



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

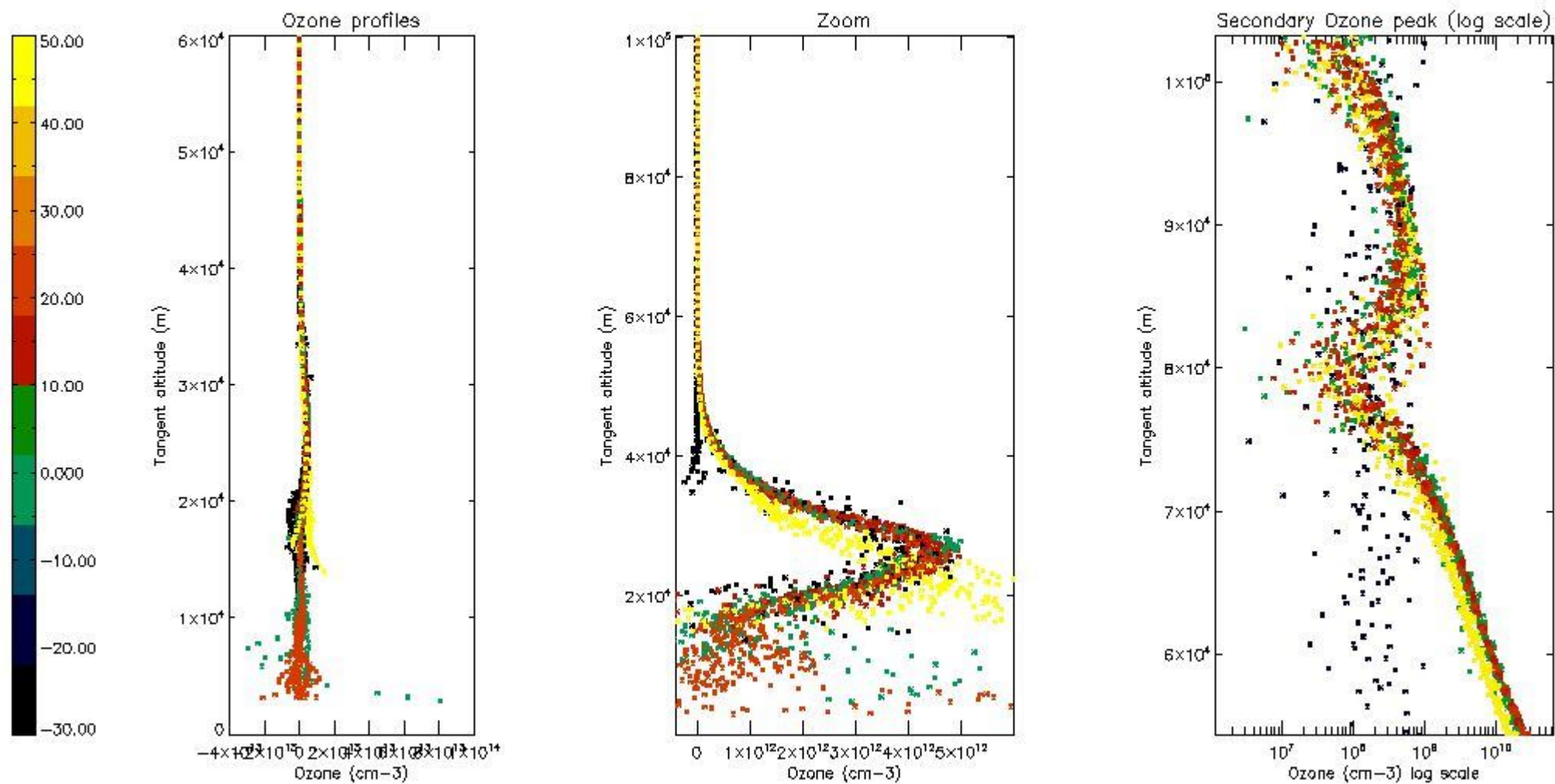
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	18

STD < 10	14
STD < 5	9

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

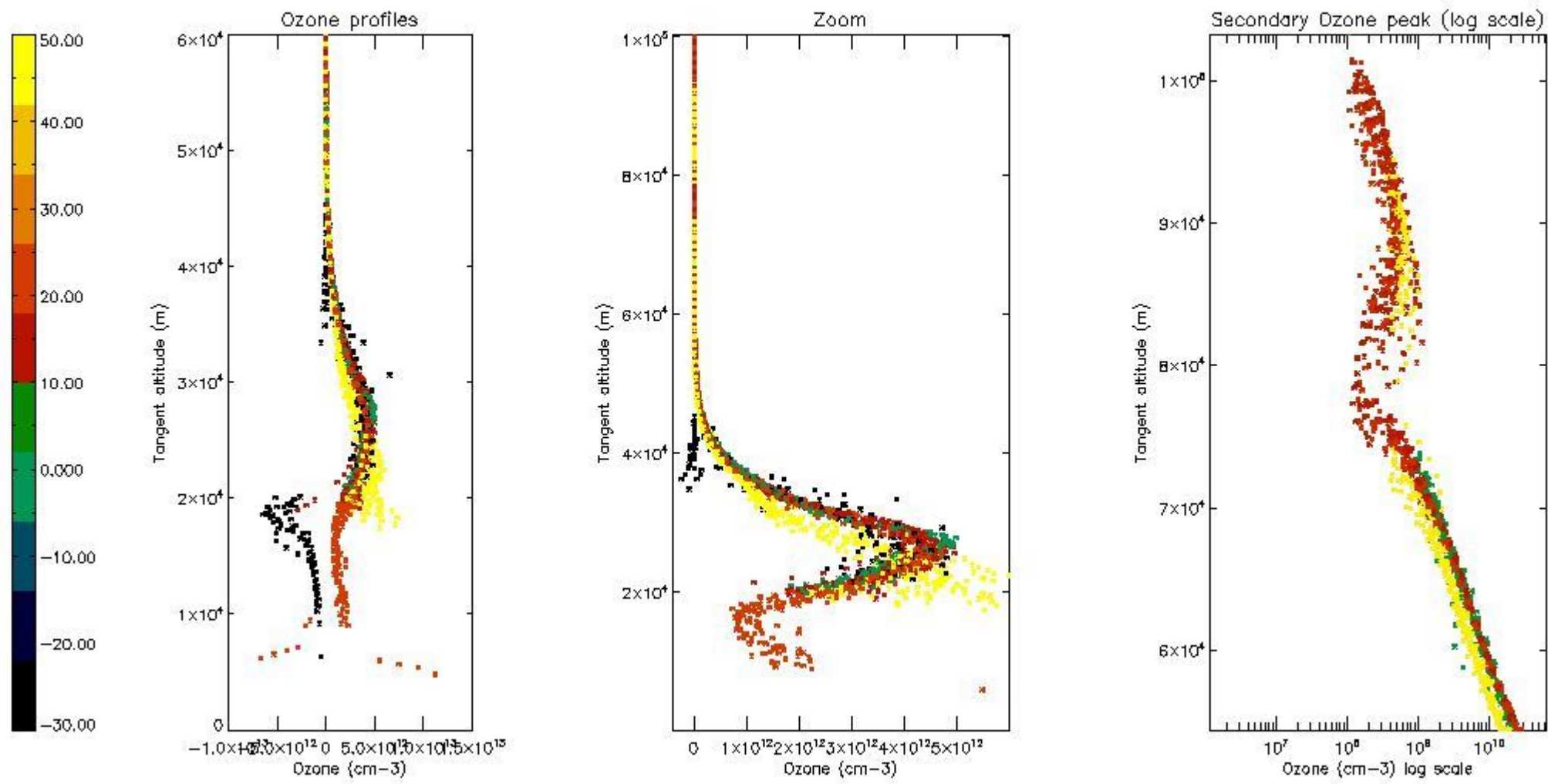
The colorbar represents the latitude.



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

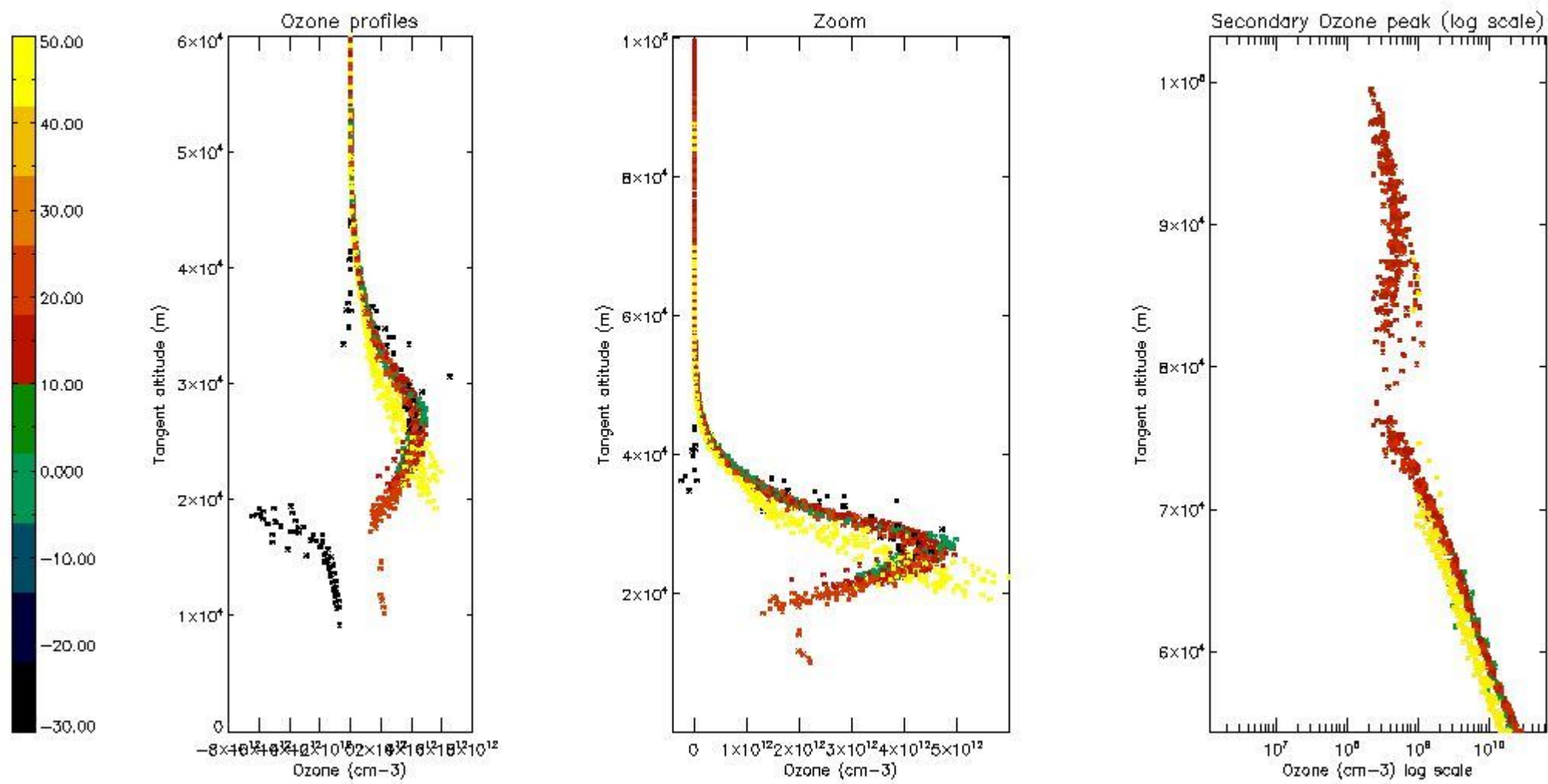
The colorbar represents the latitude.





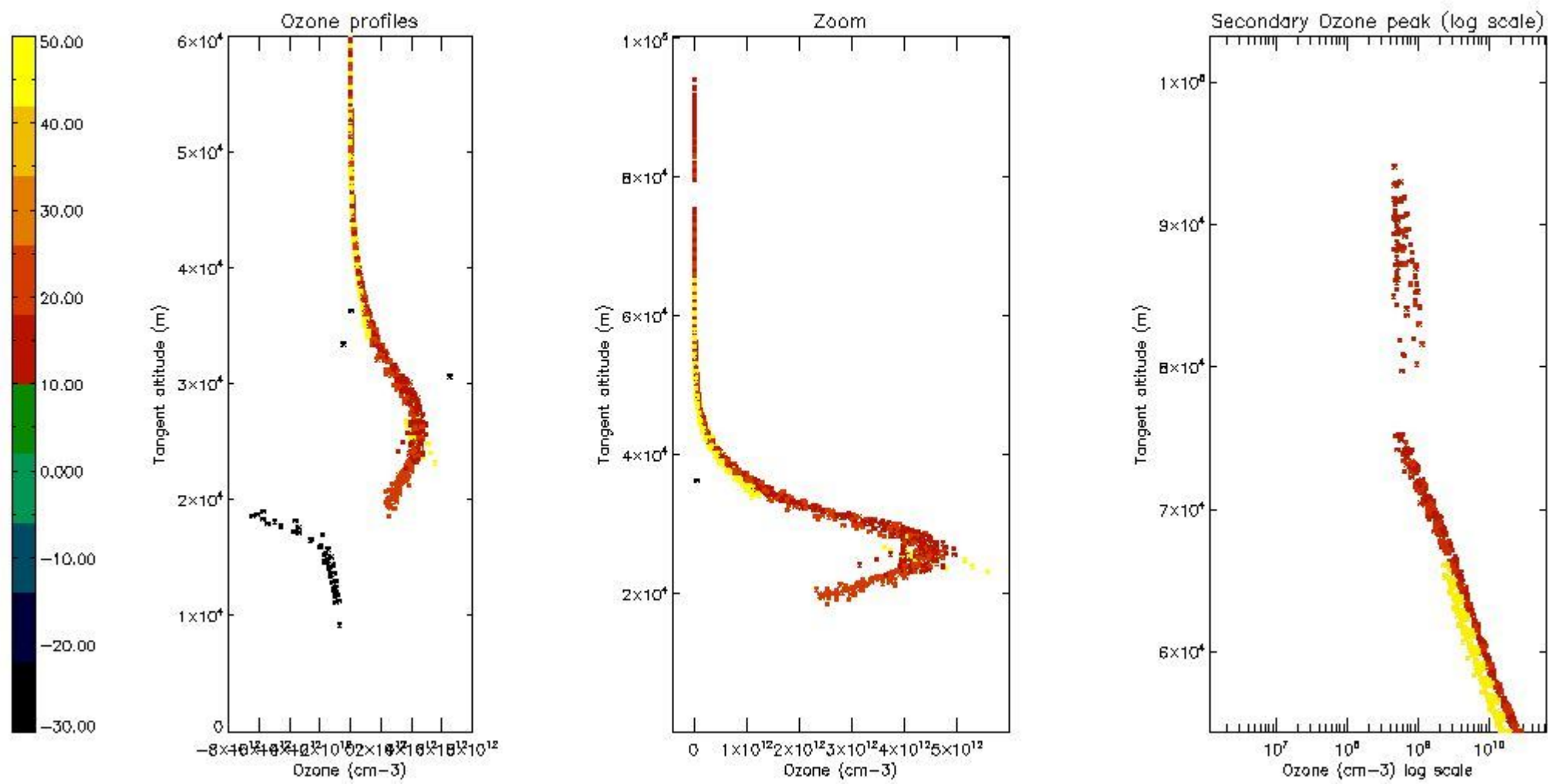
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



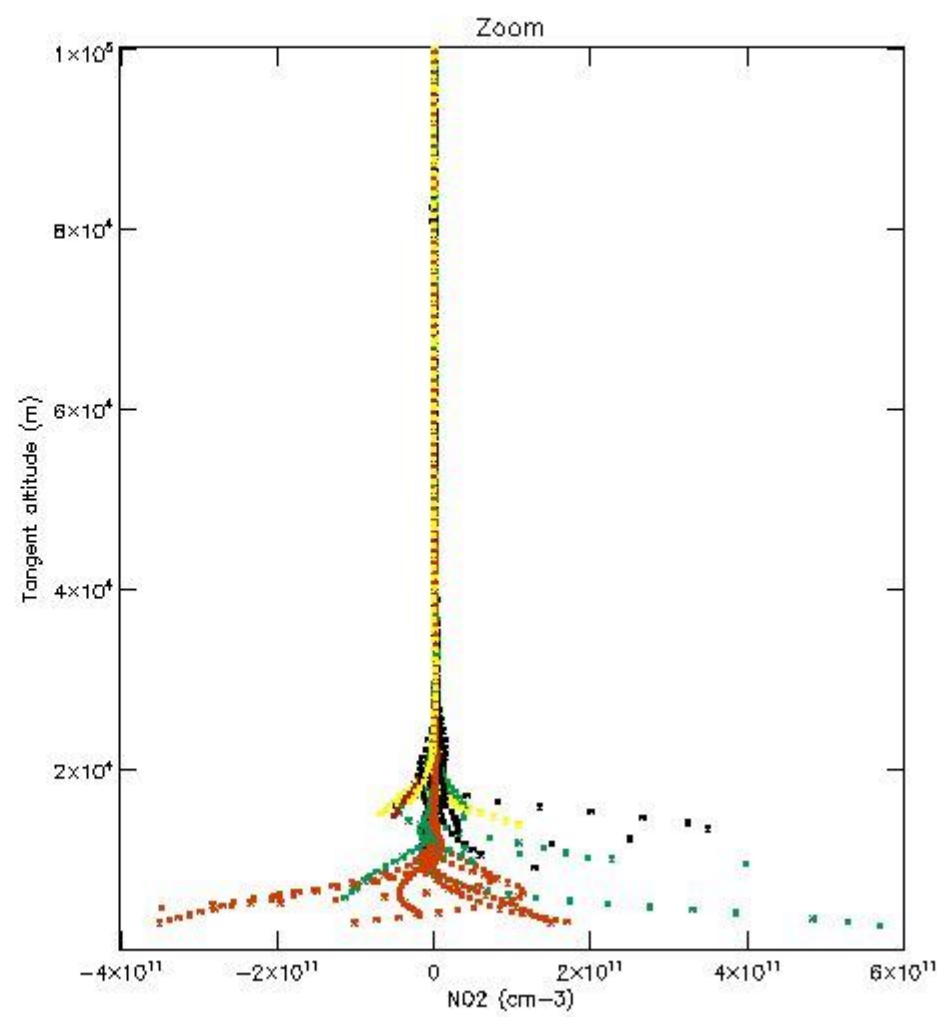
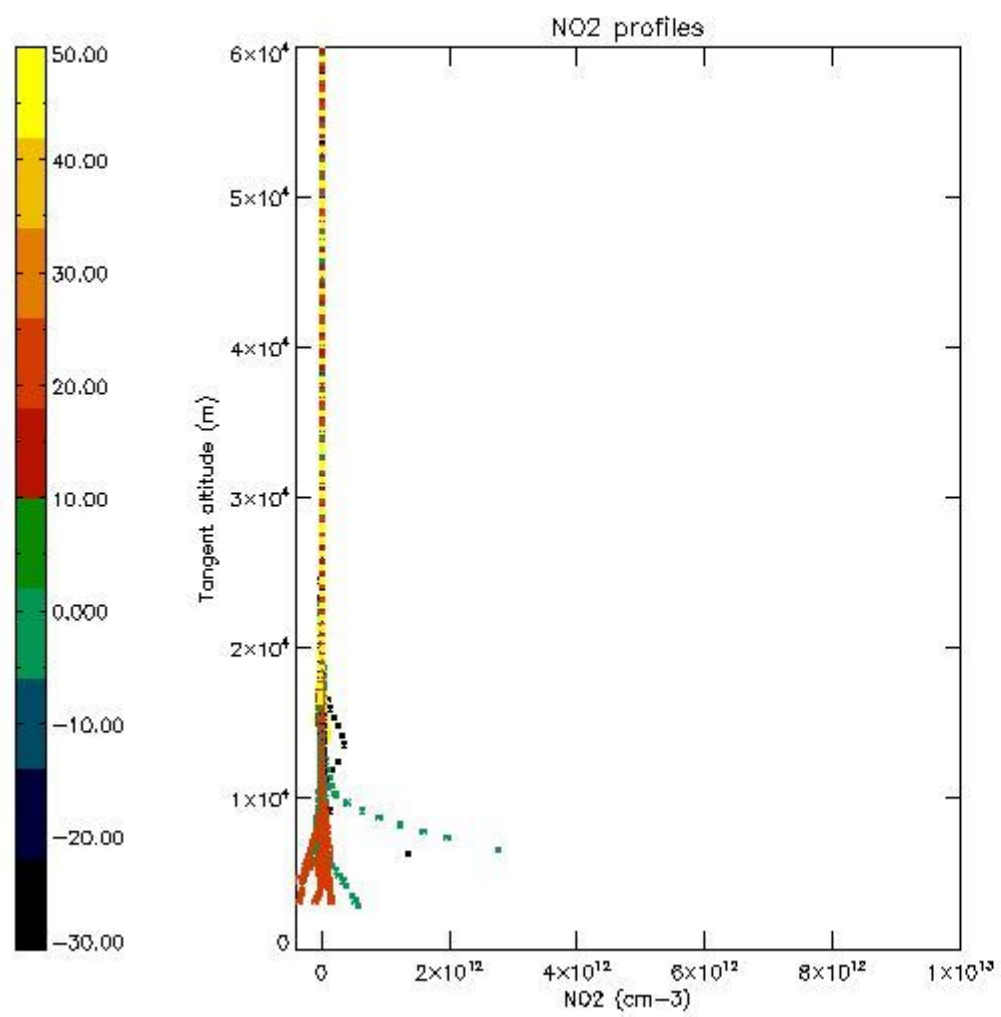
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



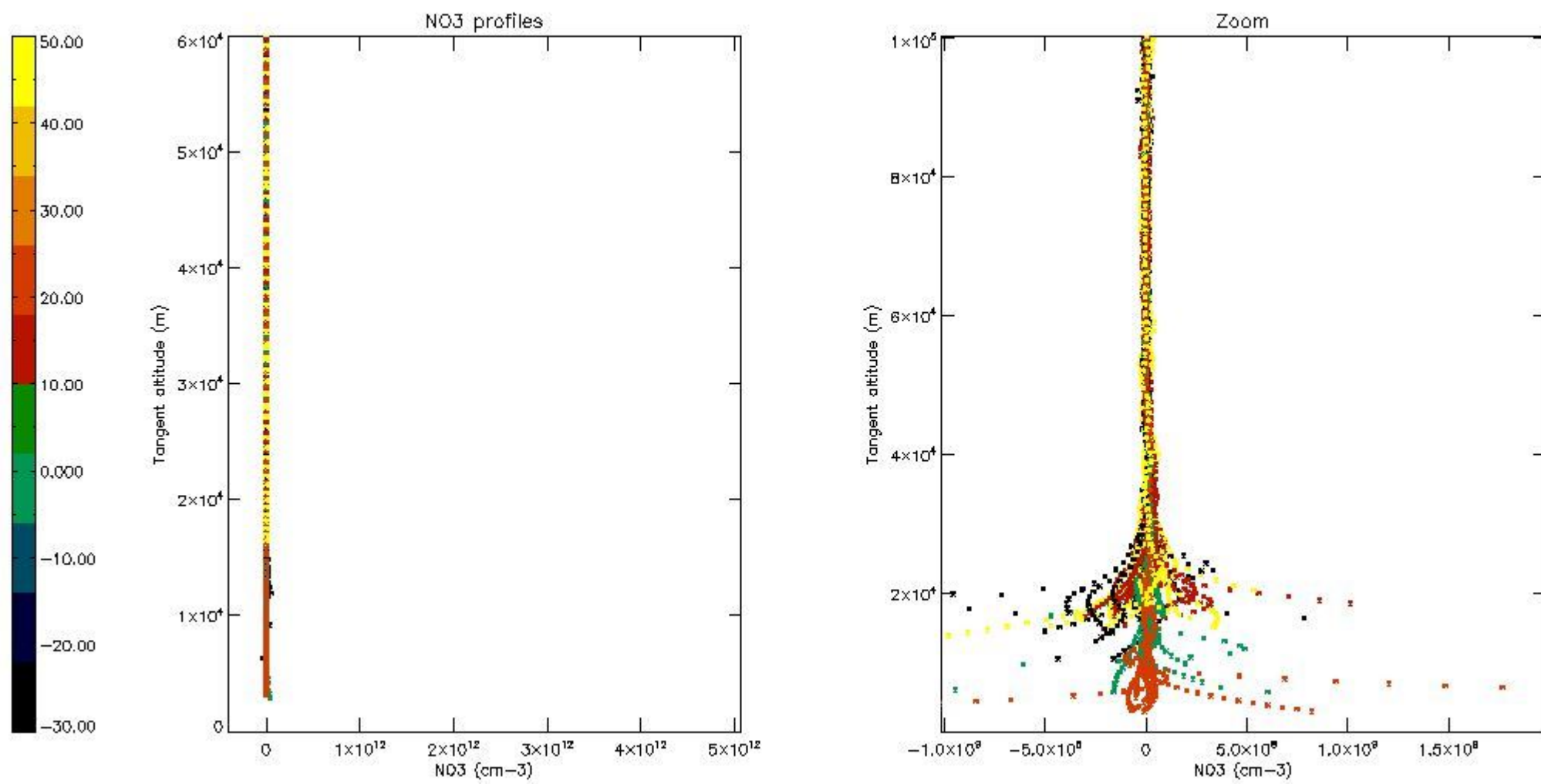
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



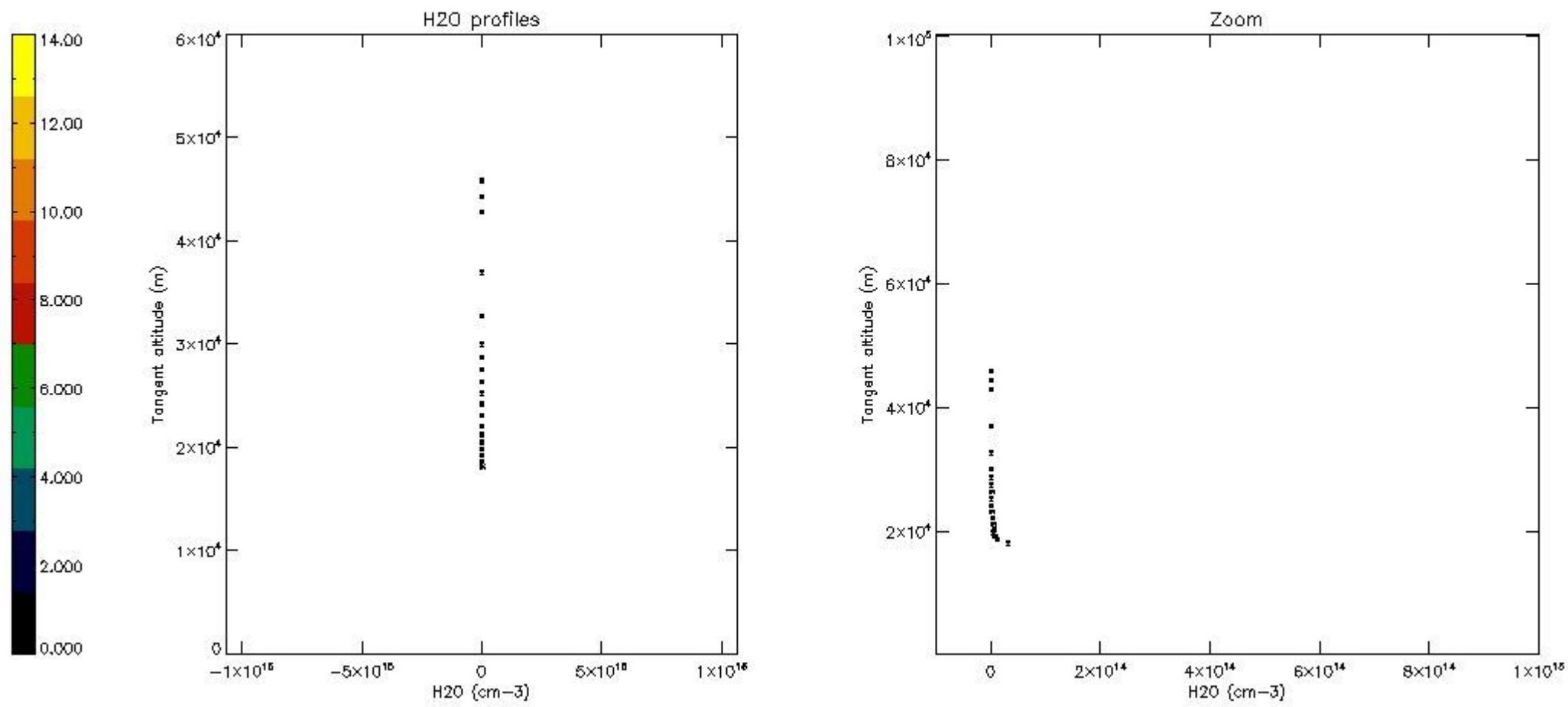
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

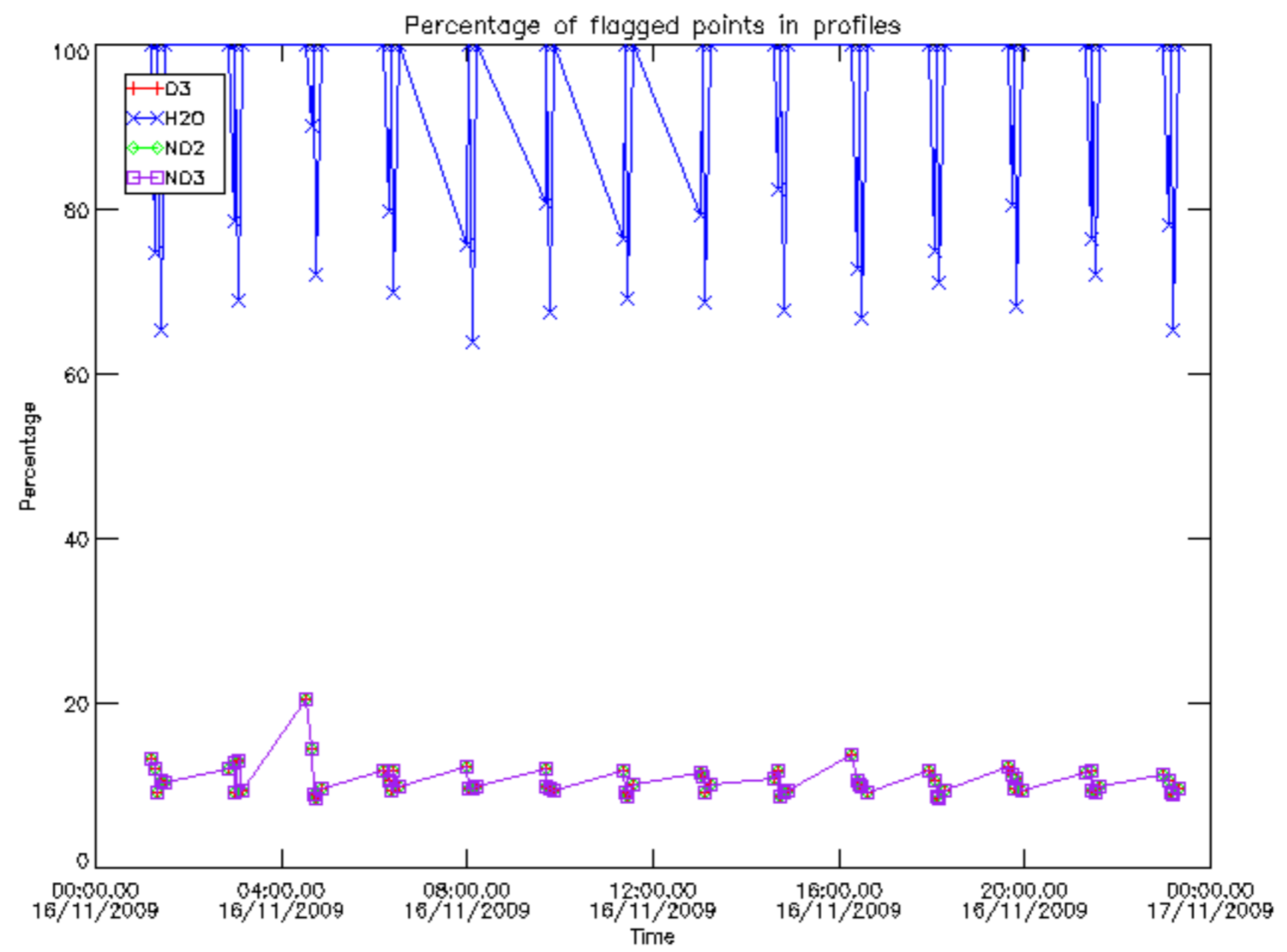
The colorbar represents the latitude.



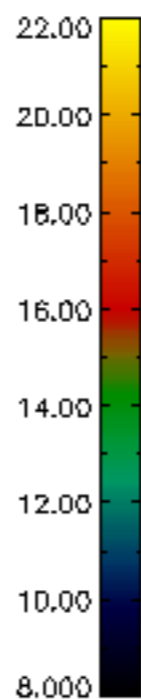
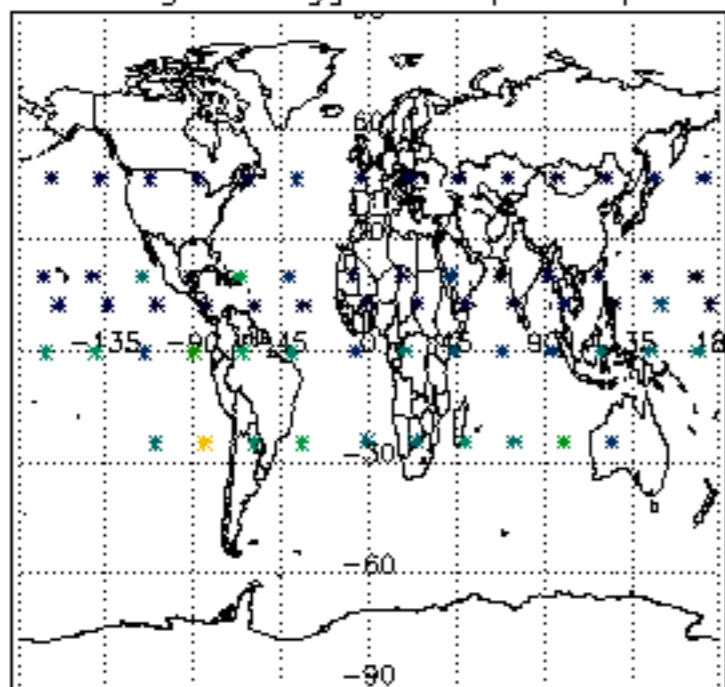
## 6. Auxiliary Data Files used for the production reported in section 2

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

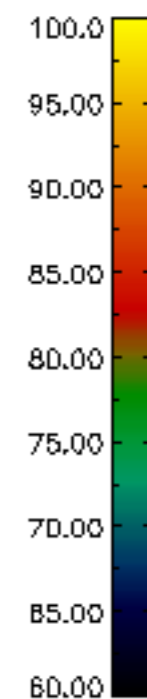
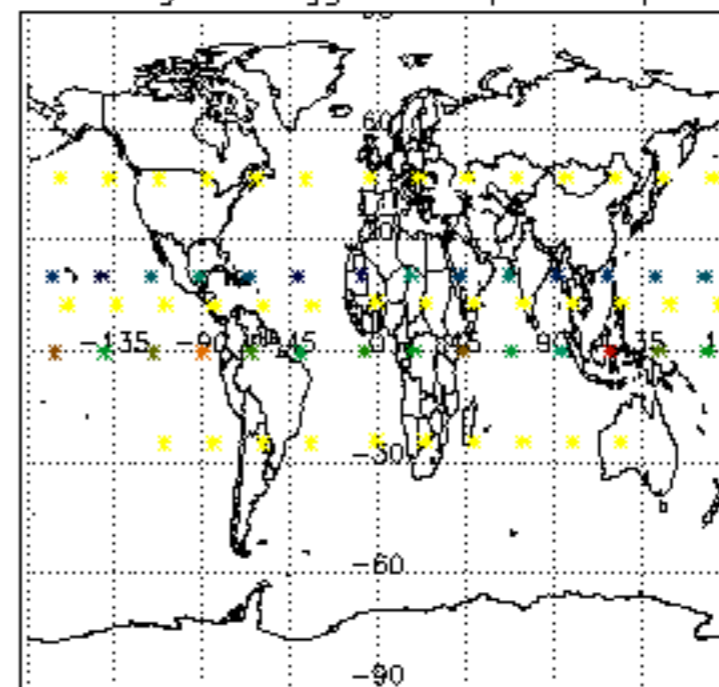
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	16-NOV-2009 00:04:18
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-NOV-2009 00:04:18
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-NOV-2009 00:04:18



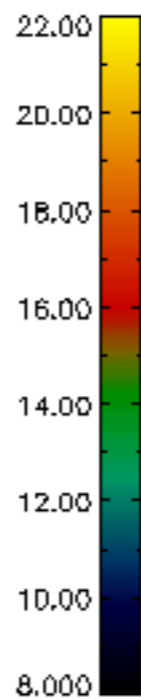
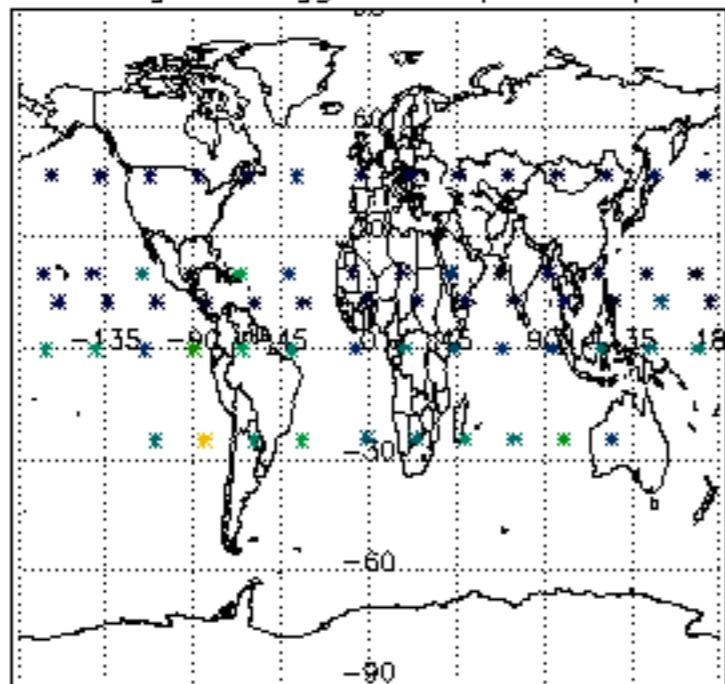
Percentage of flagged data per D3 profile



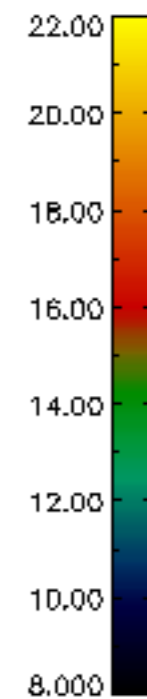
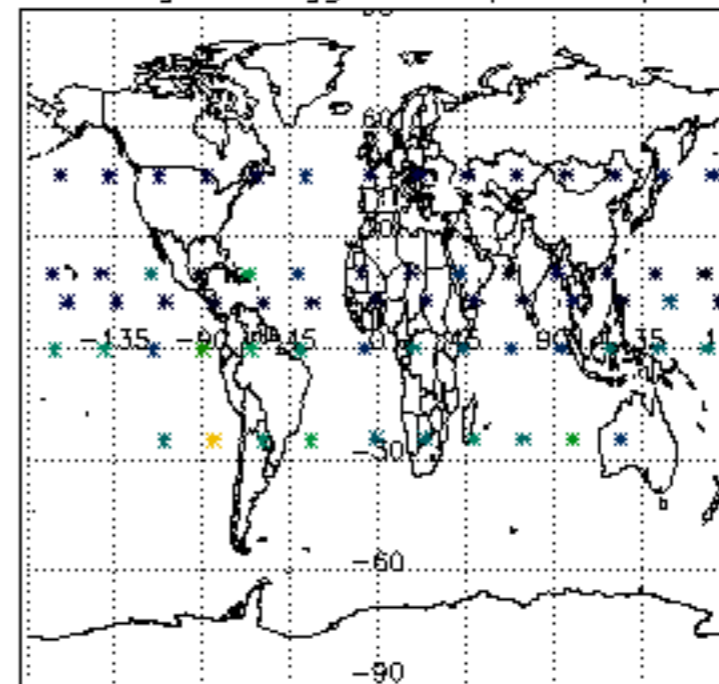
Percentage of flagged data per H2O profile



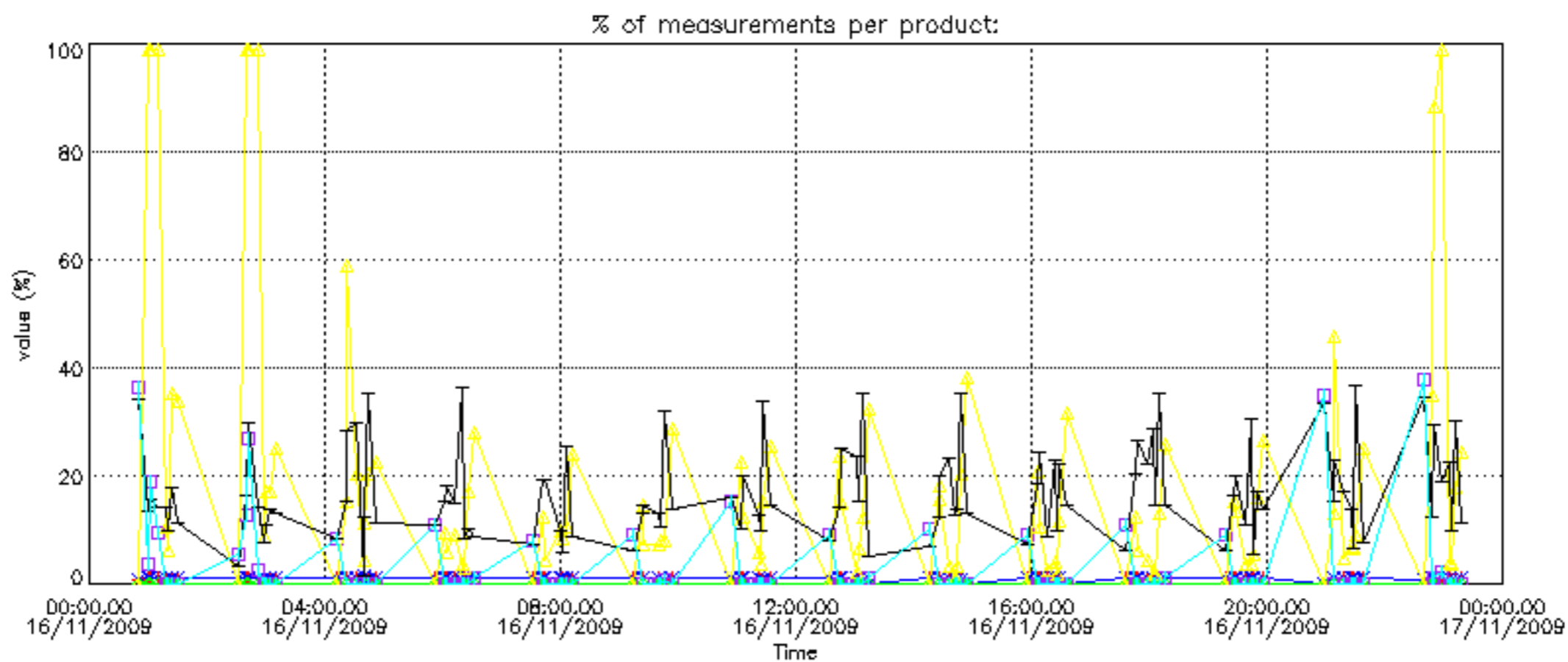
Percentage of flagged data per NO2 profile

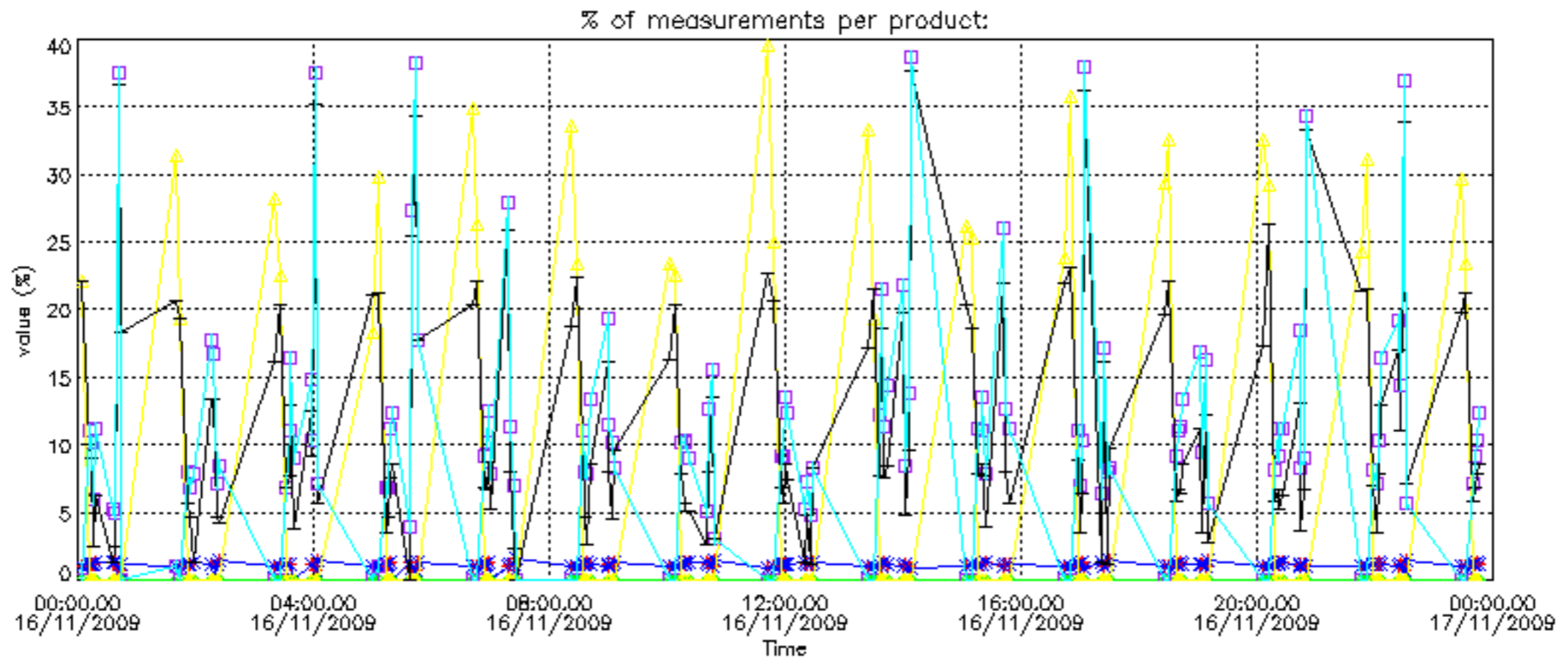


Percentage of flagged data per NO3 profile

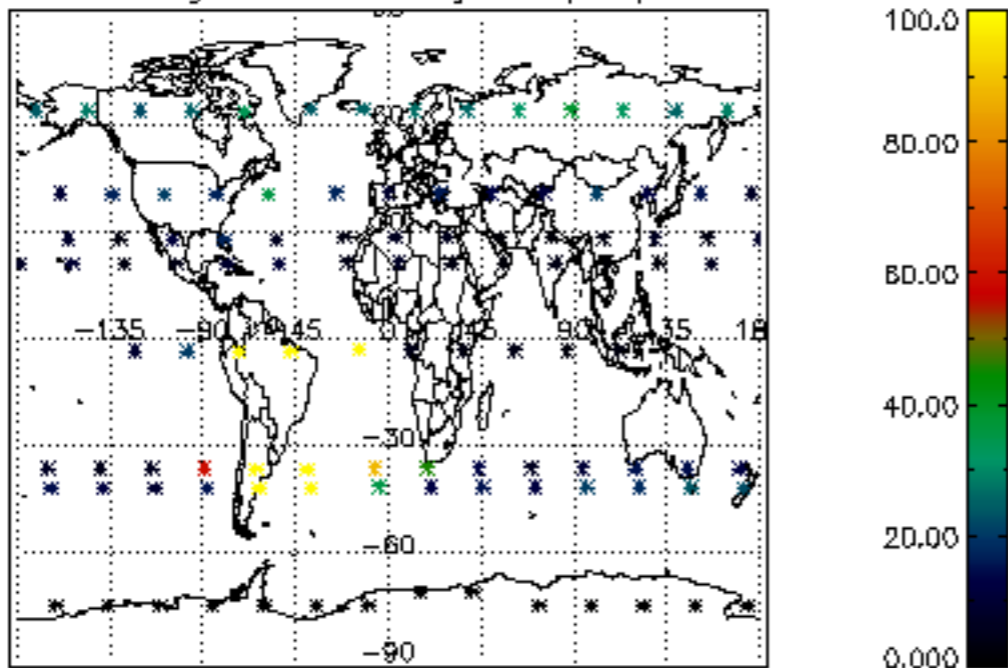




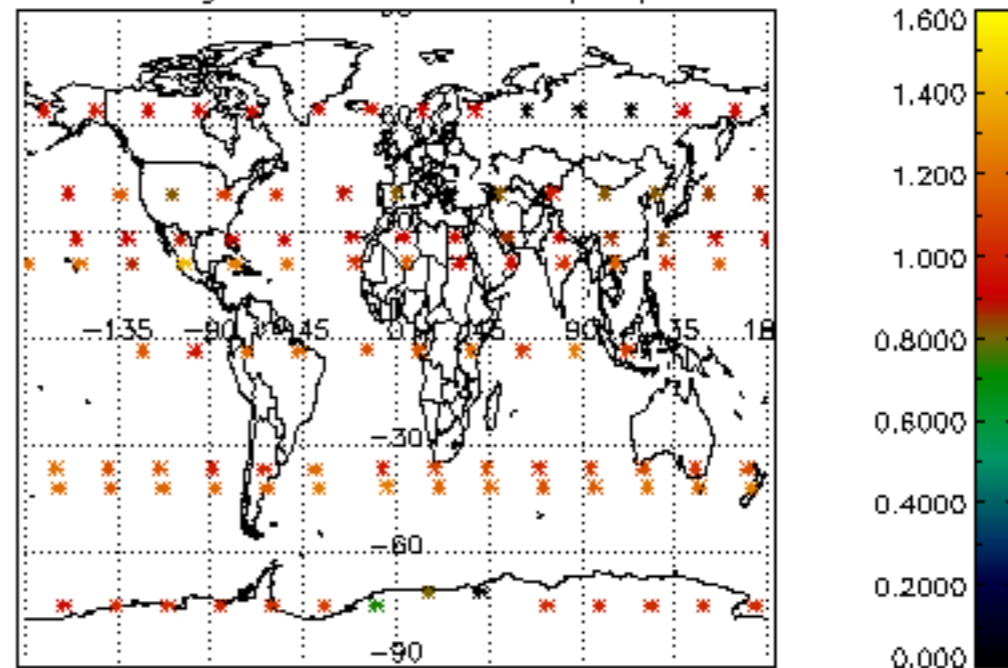




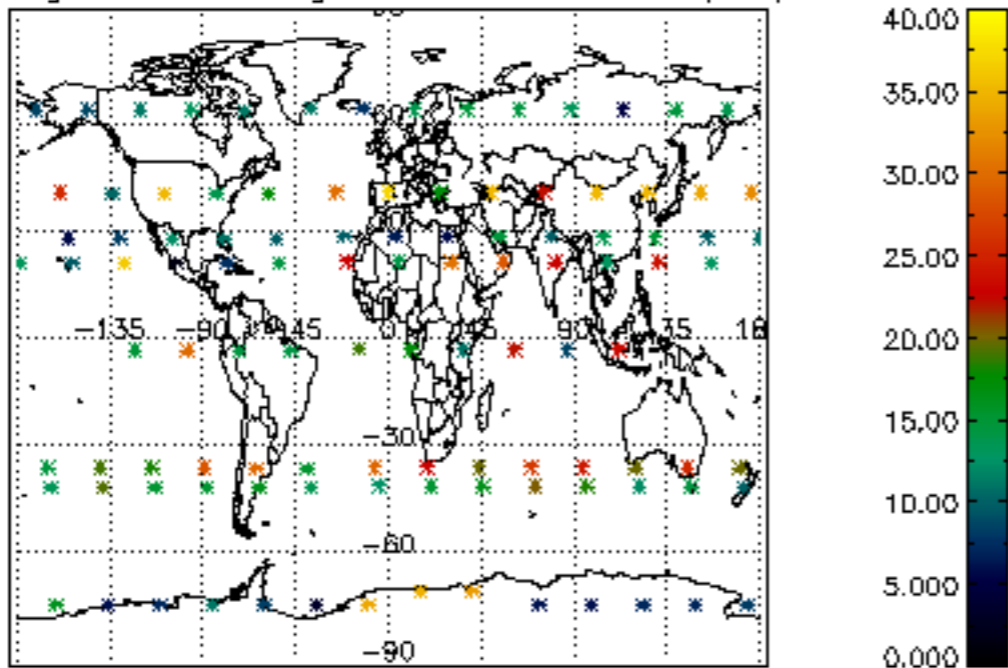
Percentage of cosmic ray hits per profile



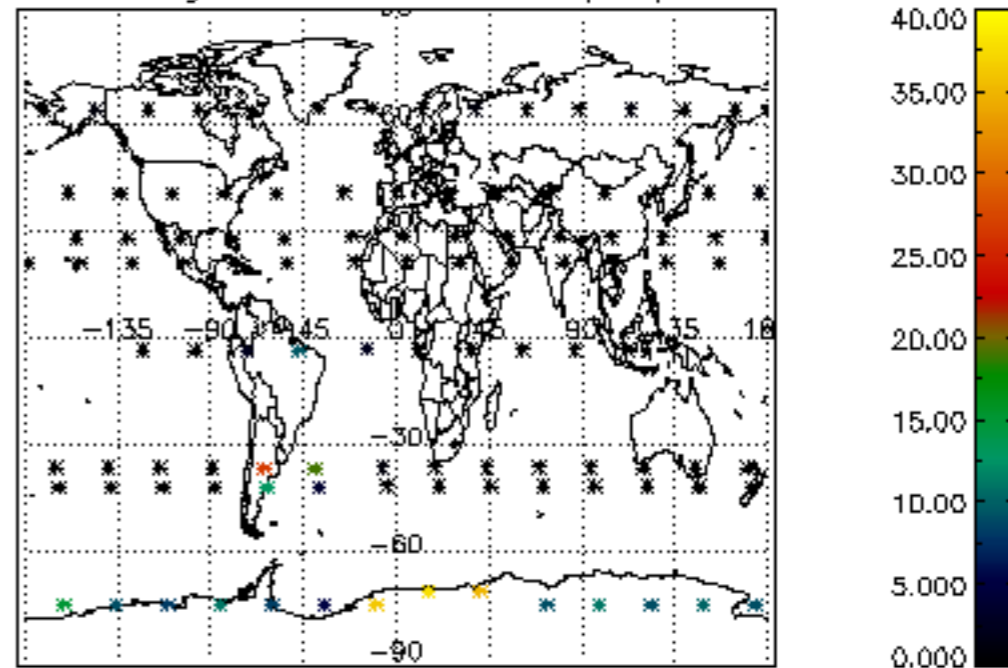
Percentage of datation errors per profile



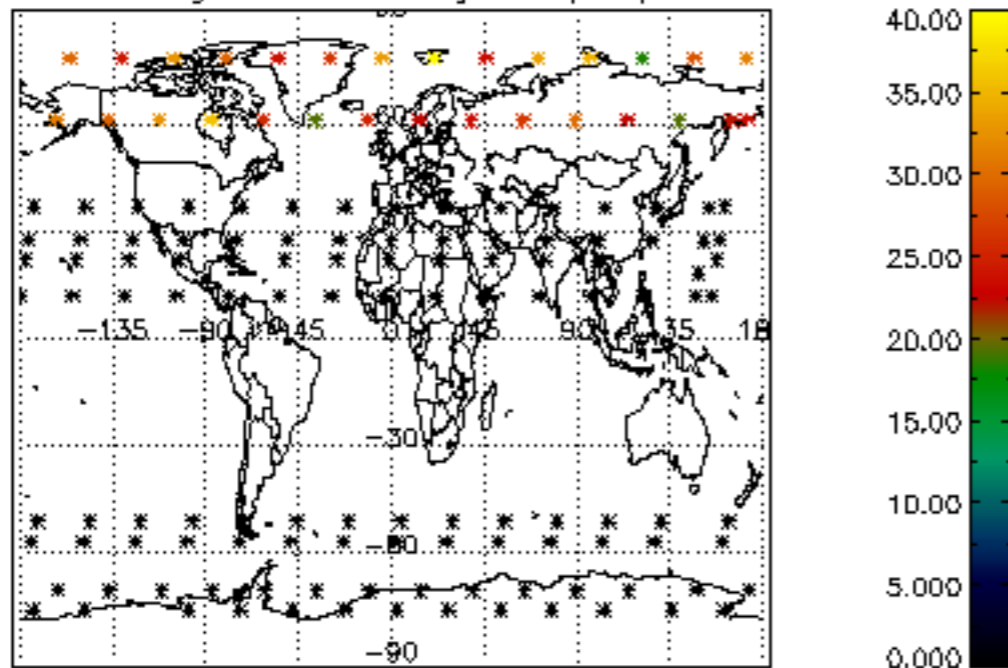
Percentage of star falling outside central band per profile



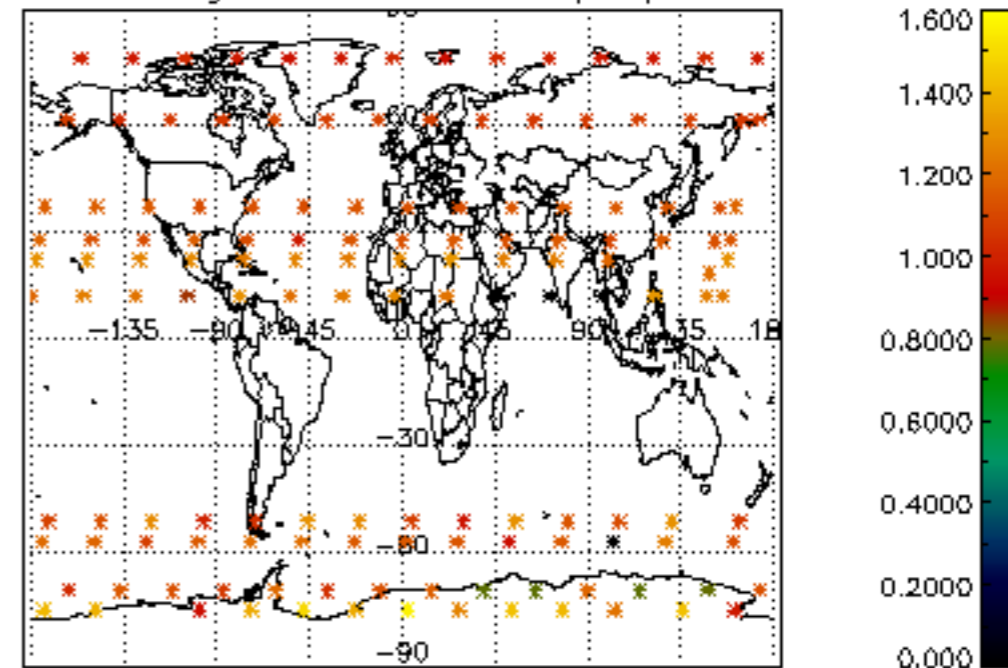
Percentage of saturation errors per profile



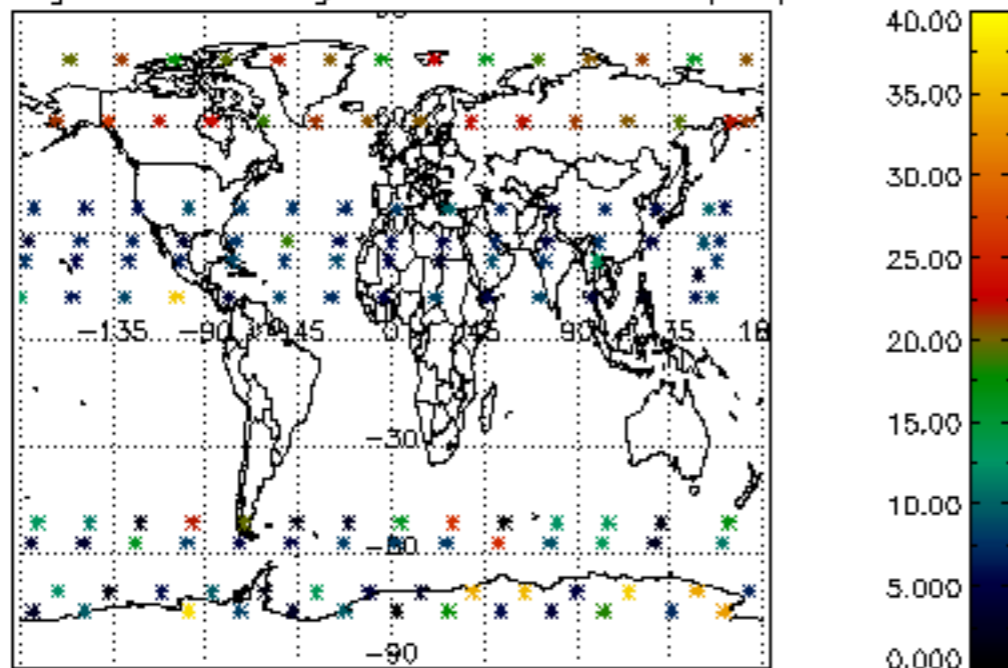
Percentage of cosmic ray hits per profile



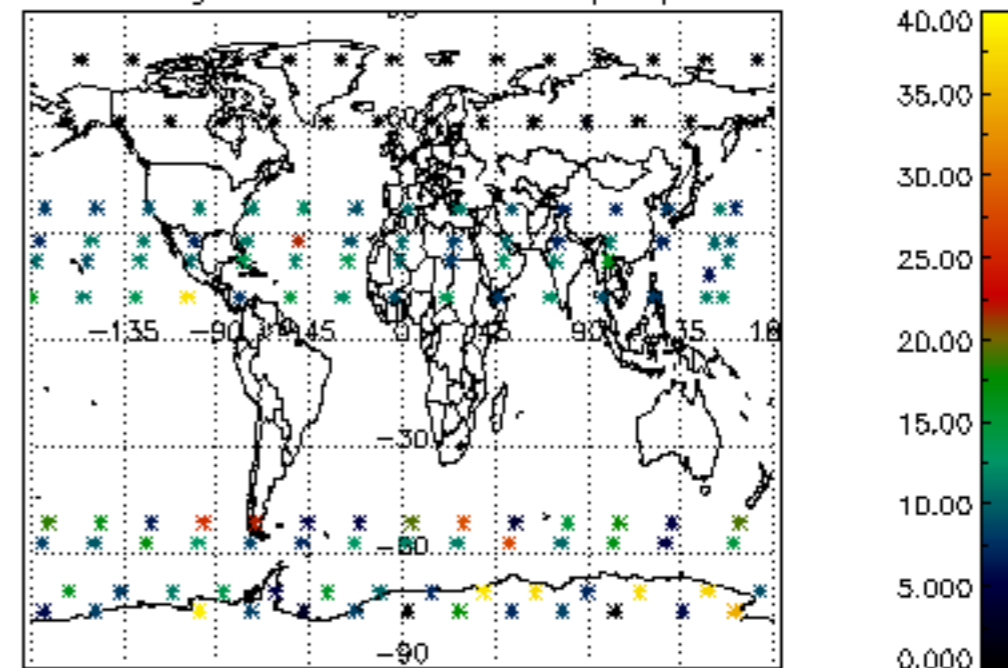
Percentage of datation errors per profile

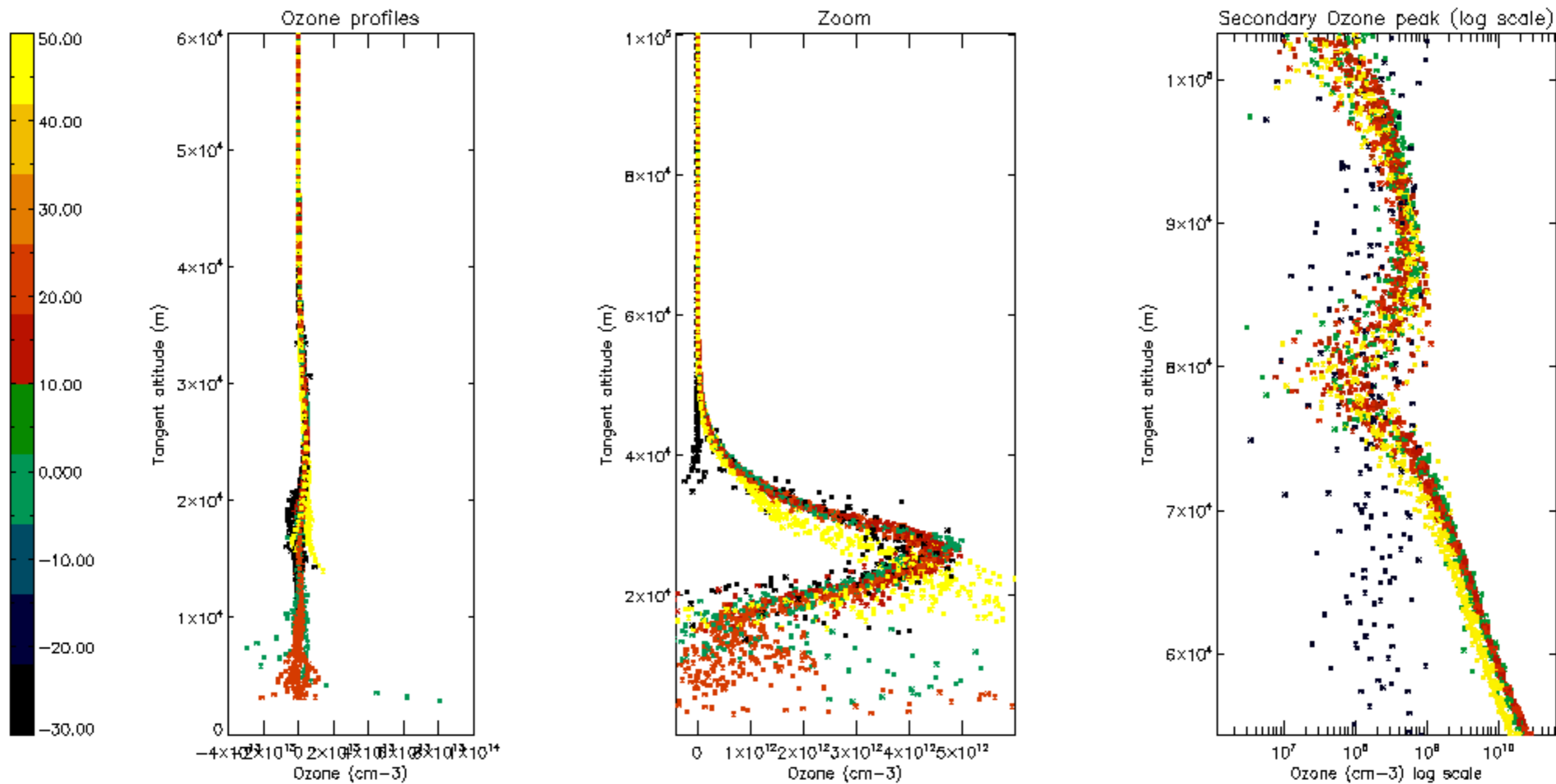


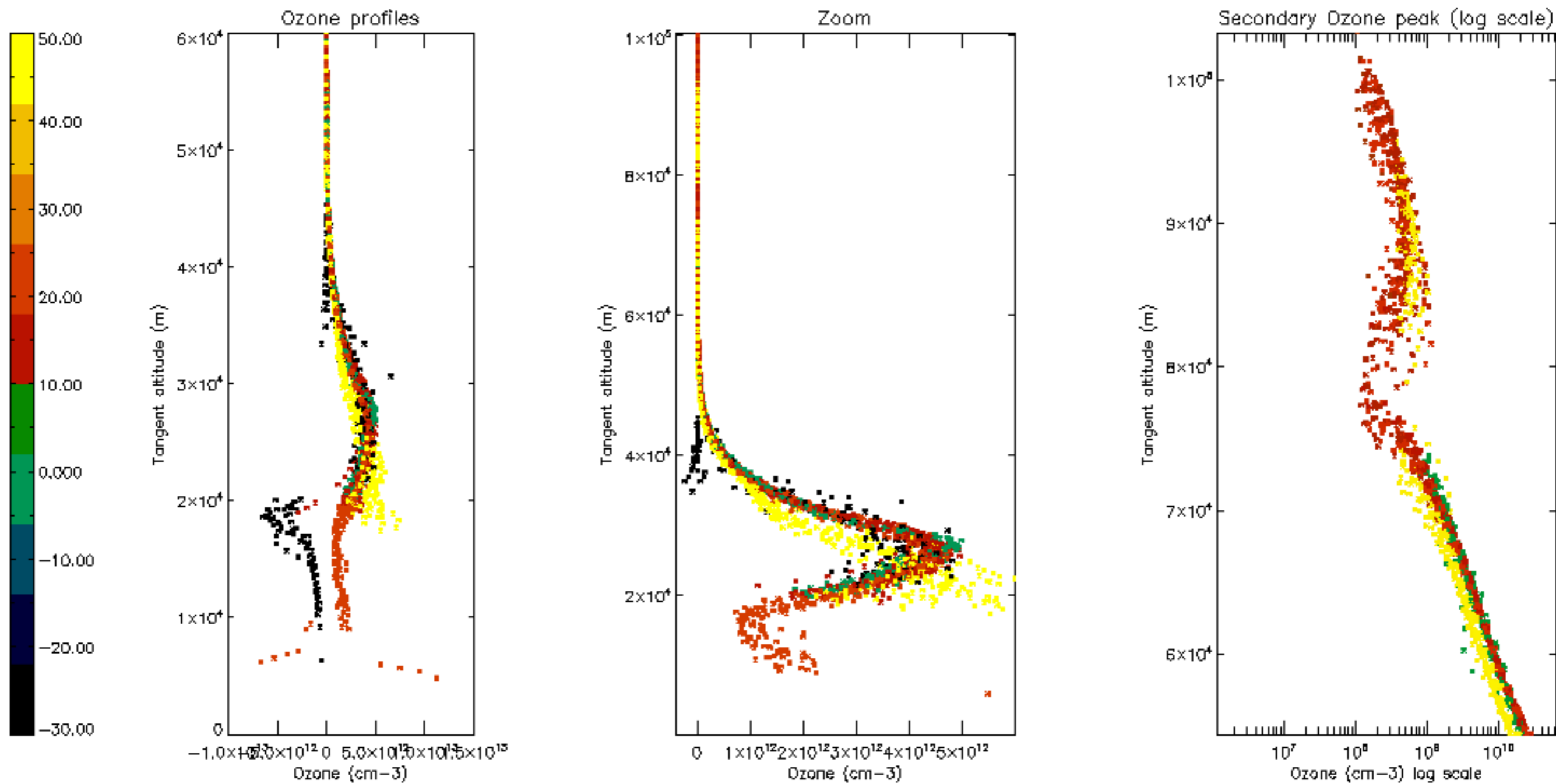
Percentage of star falling outside central band per profile

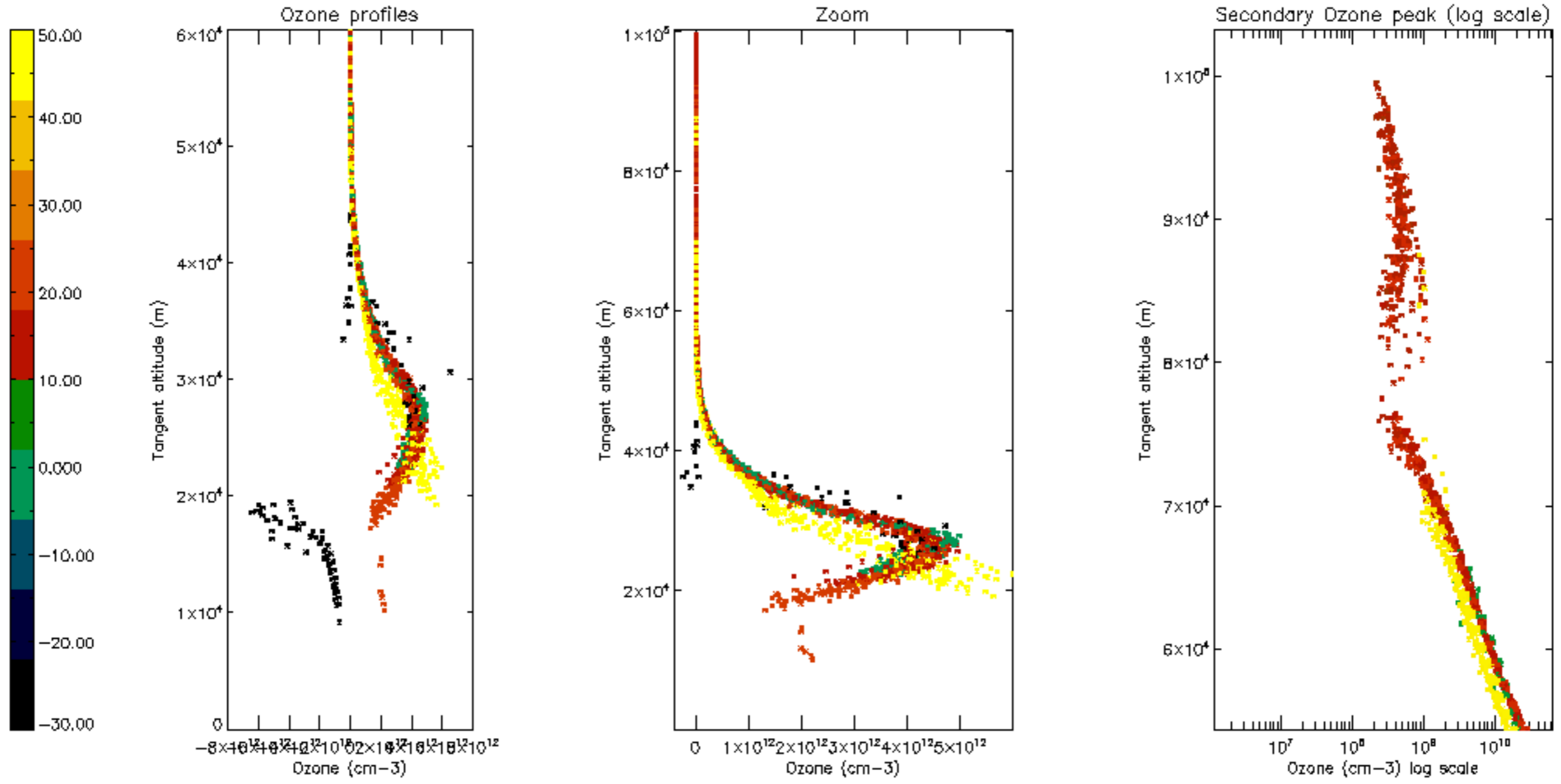


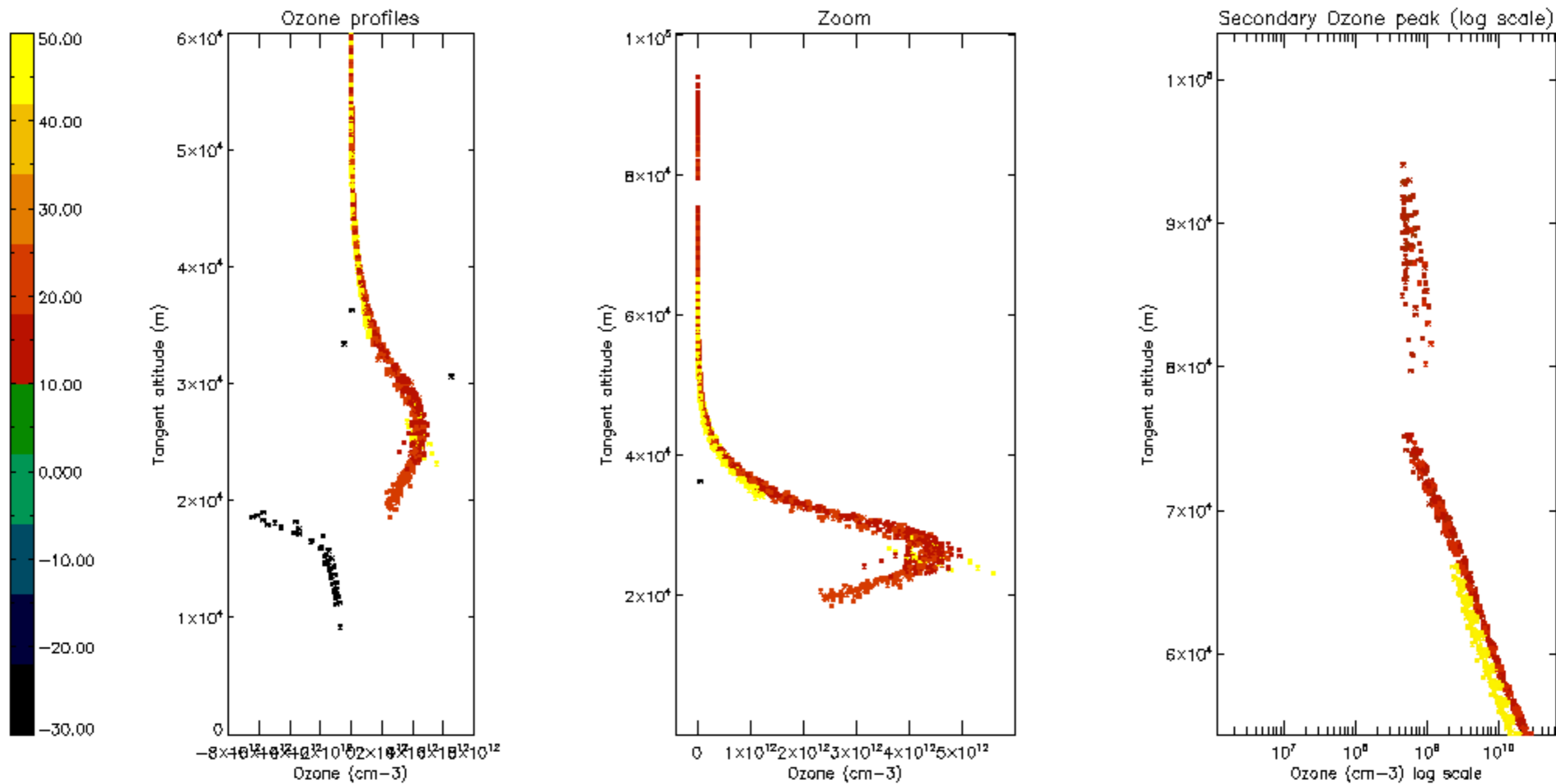
Percentage of saturation errors per profile



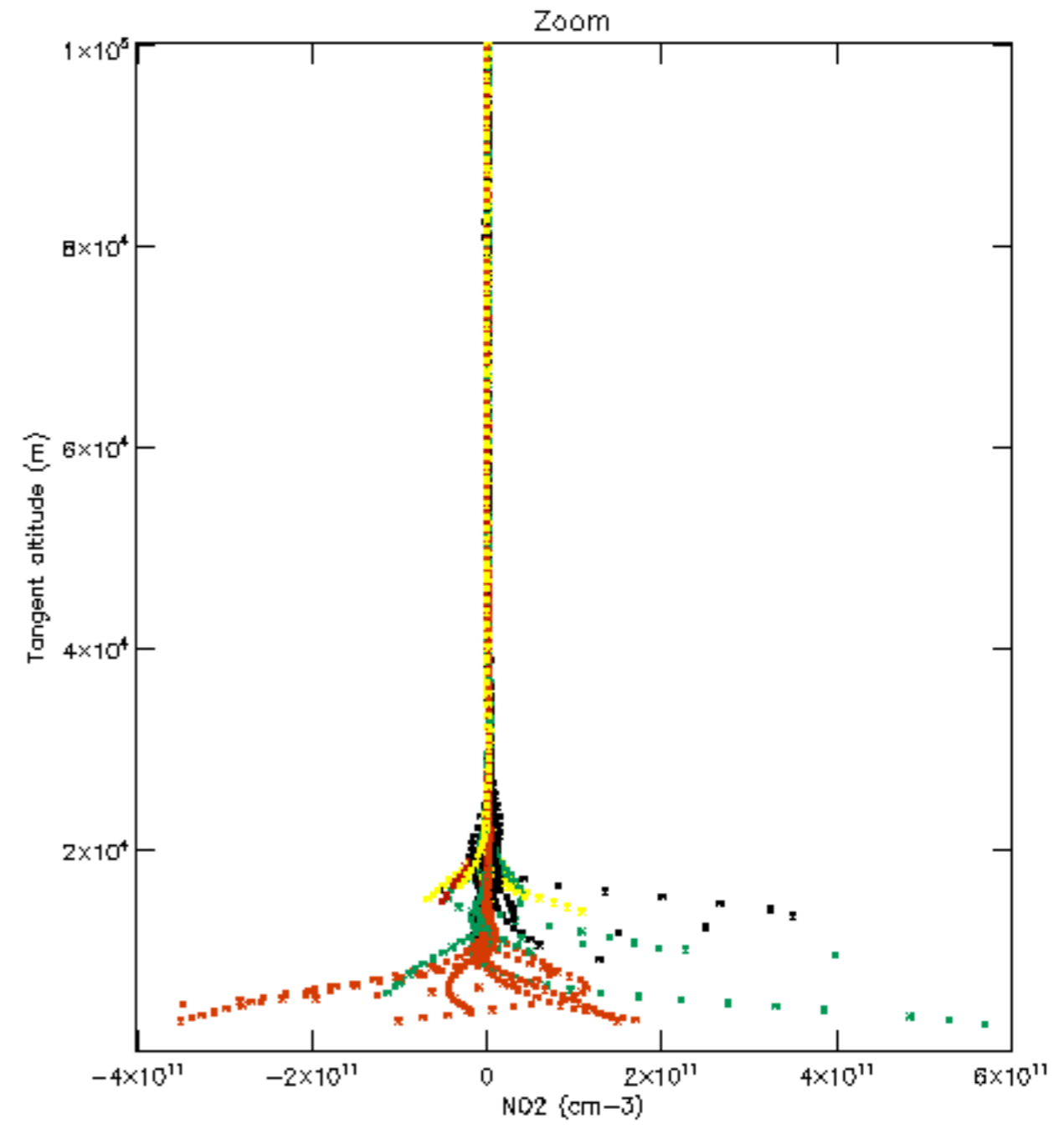
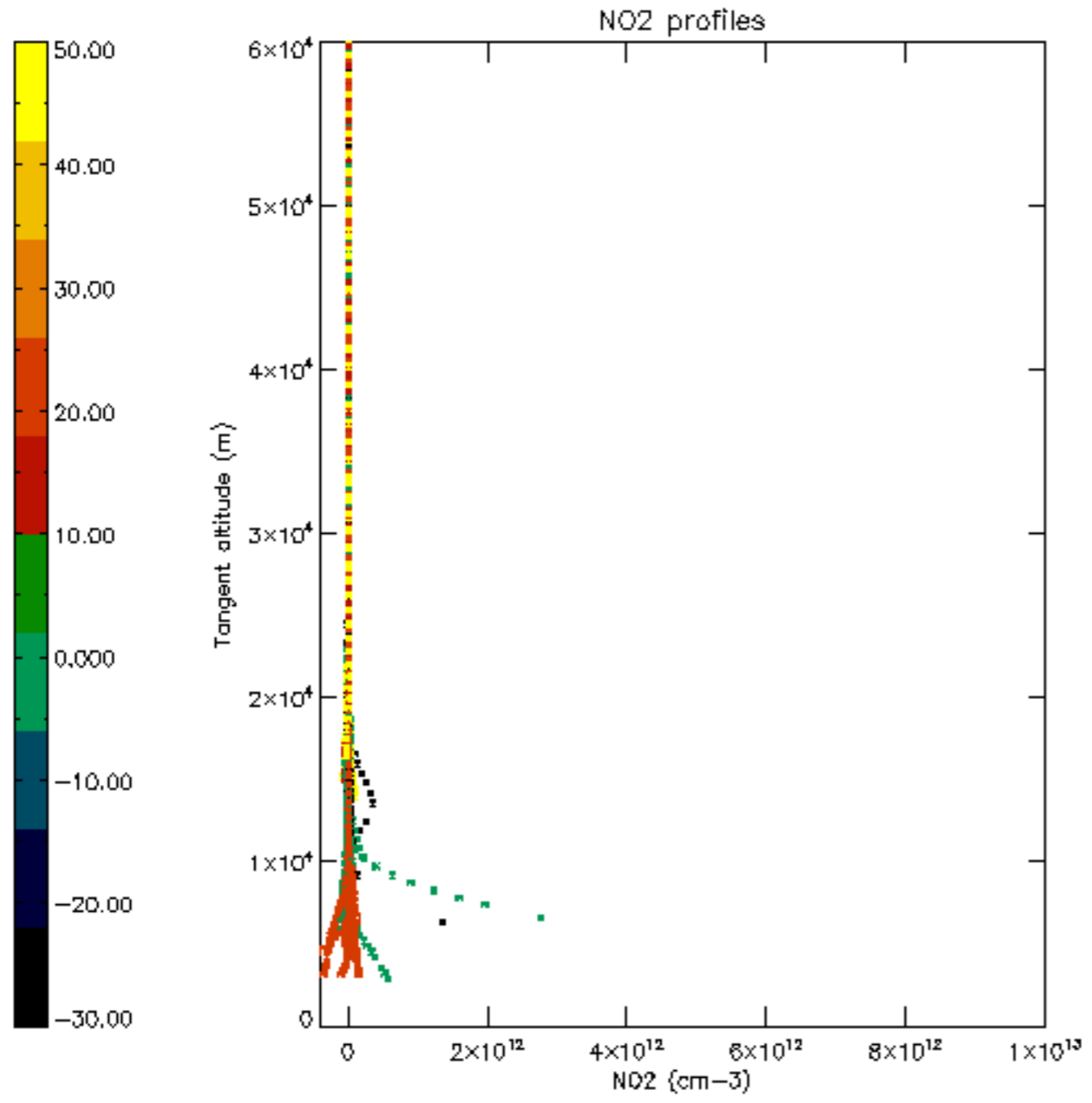


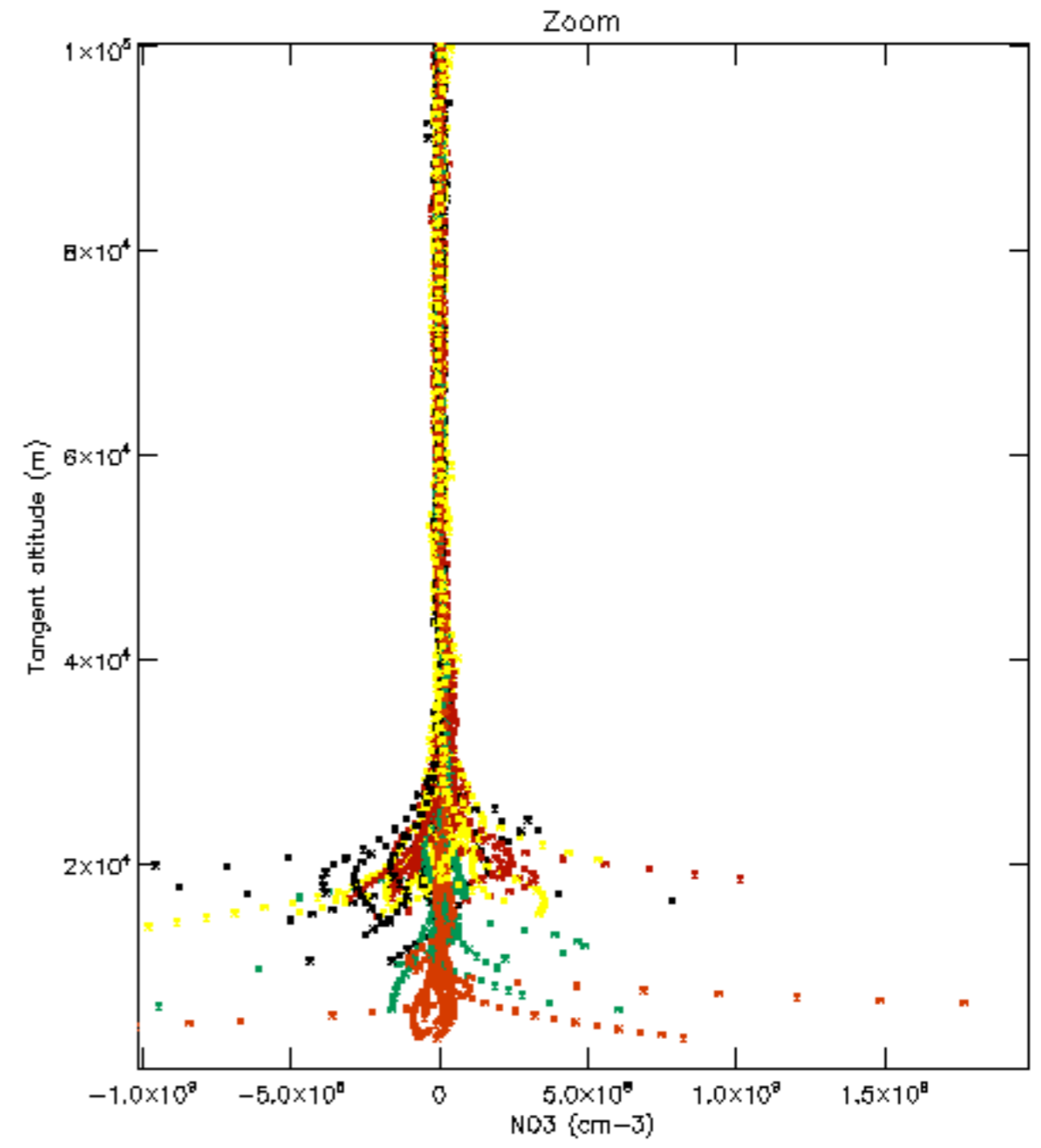
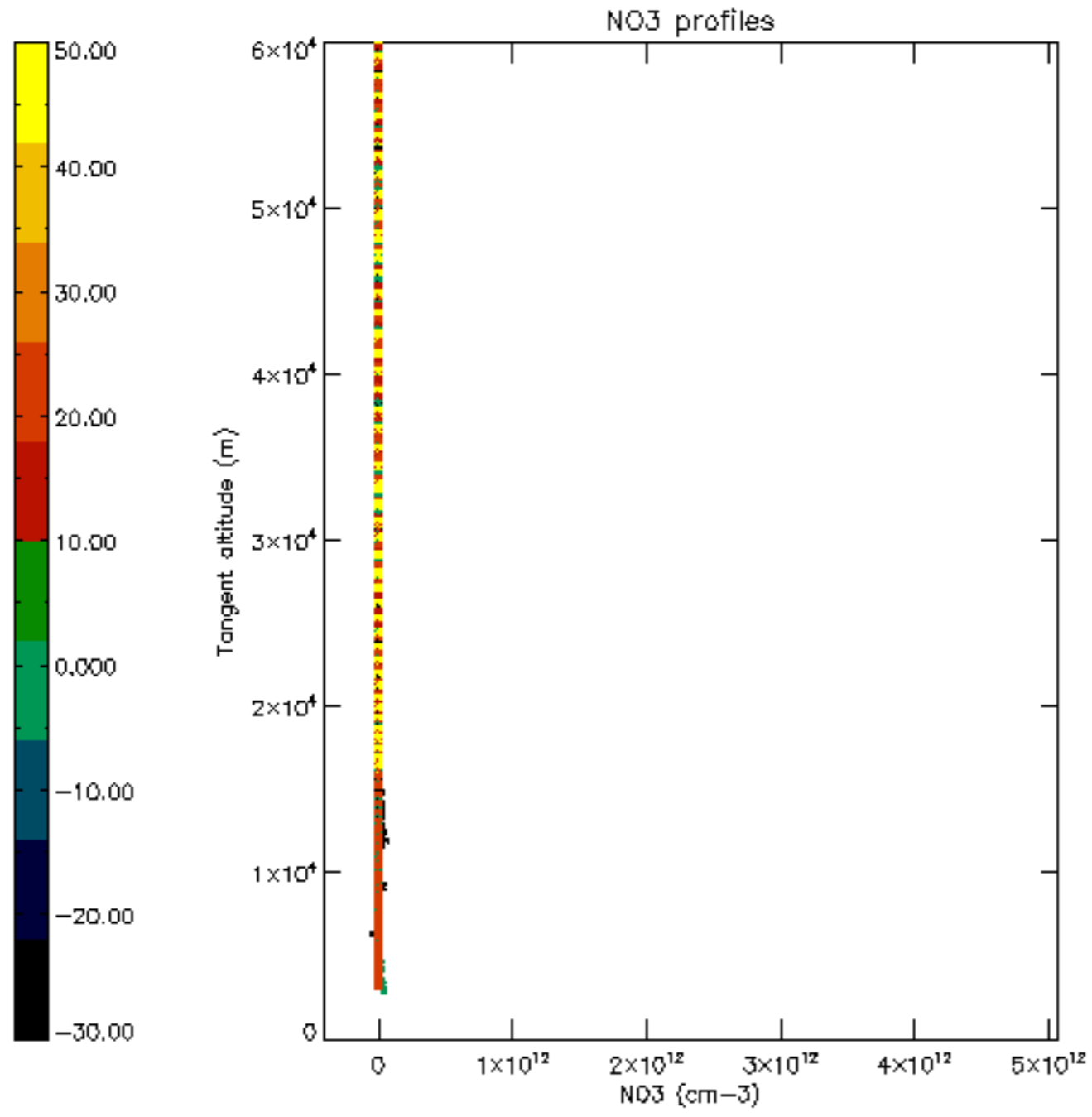


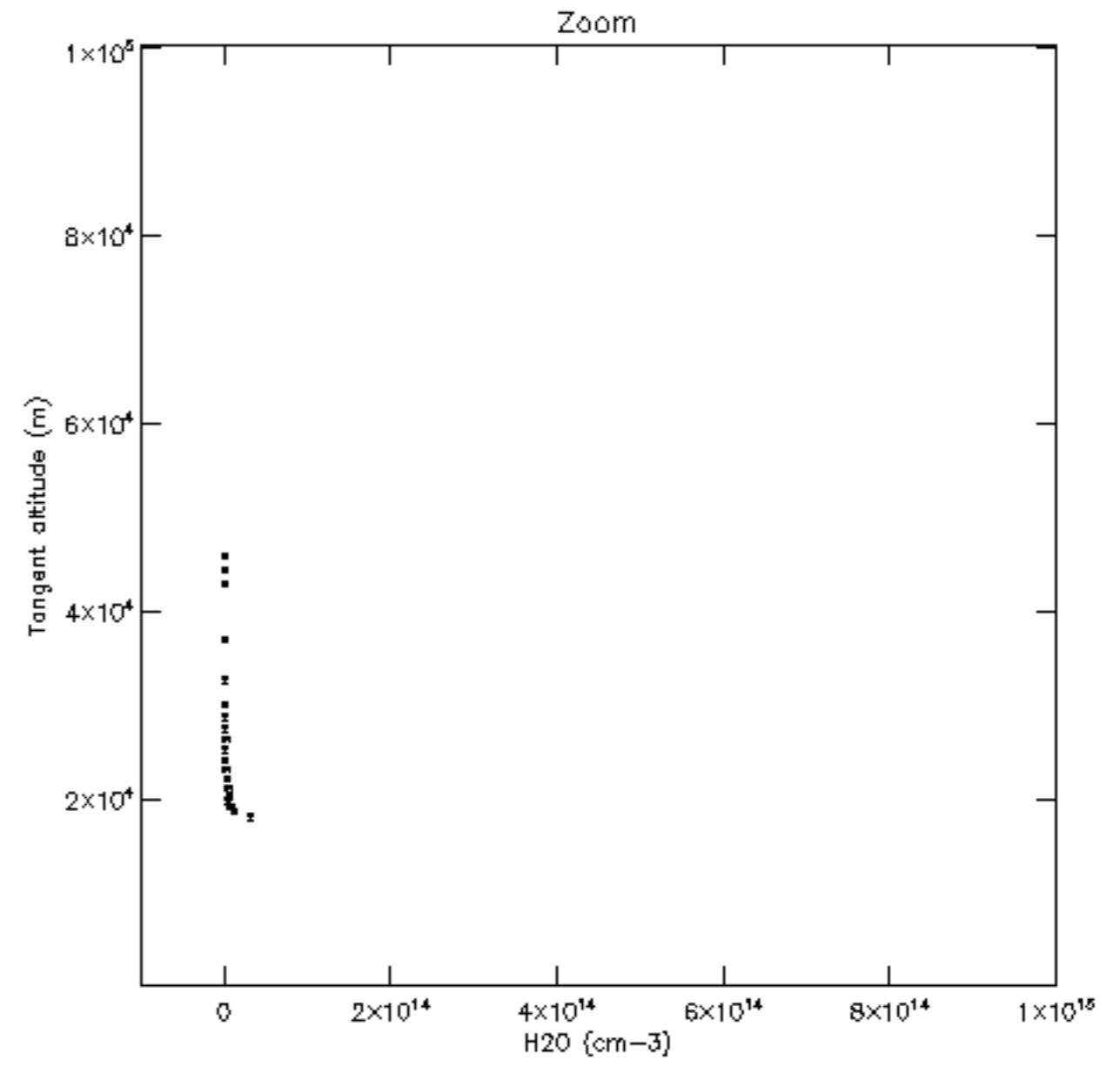
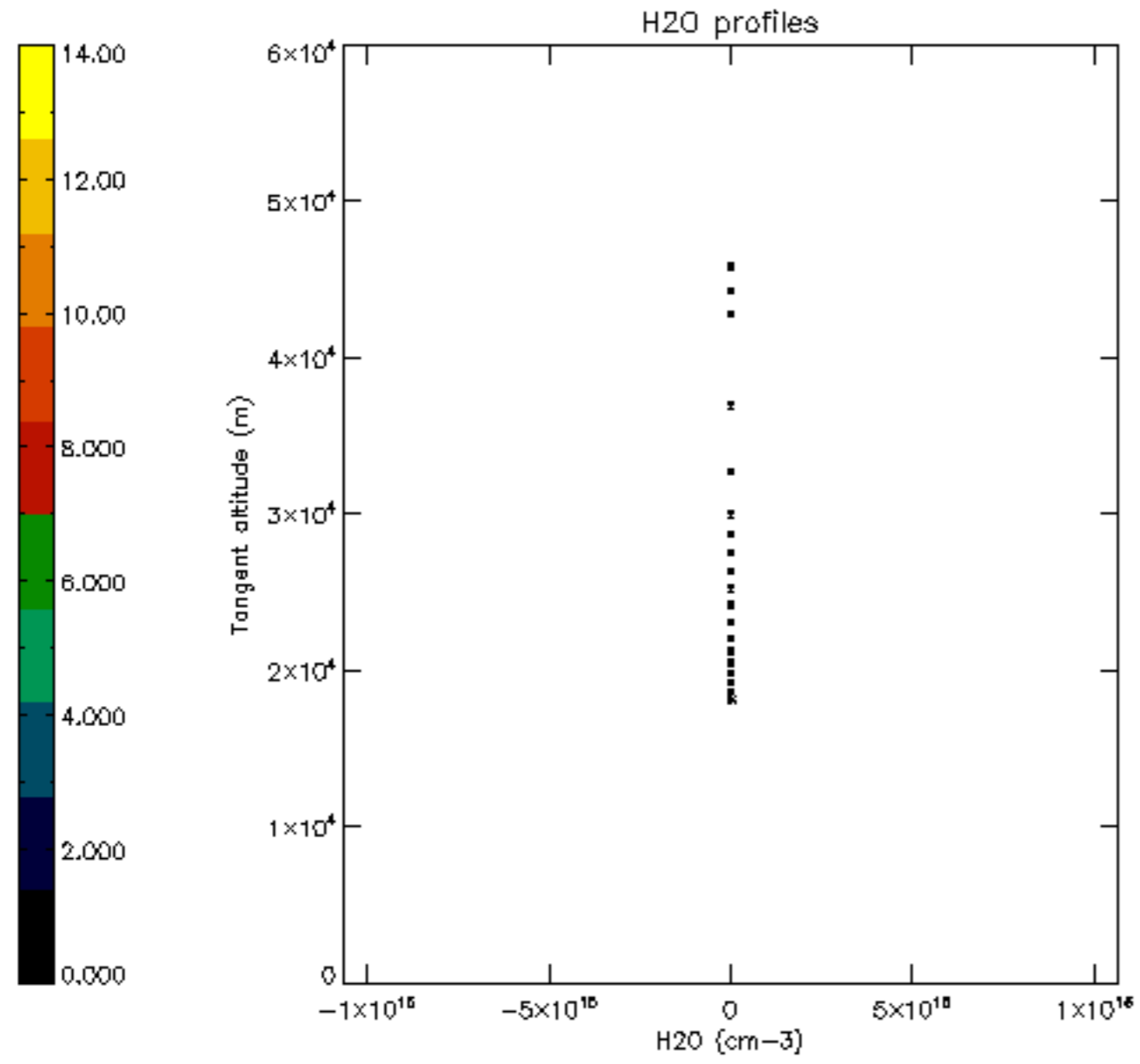


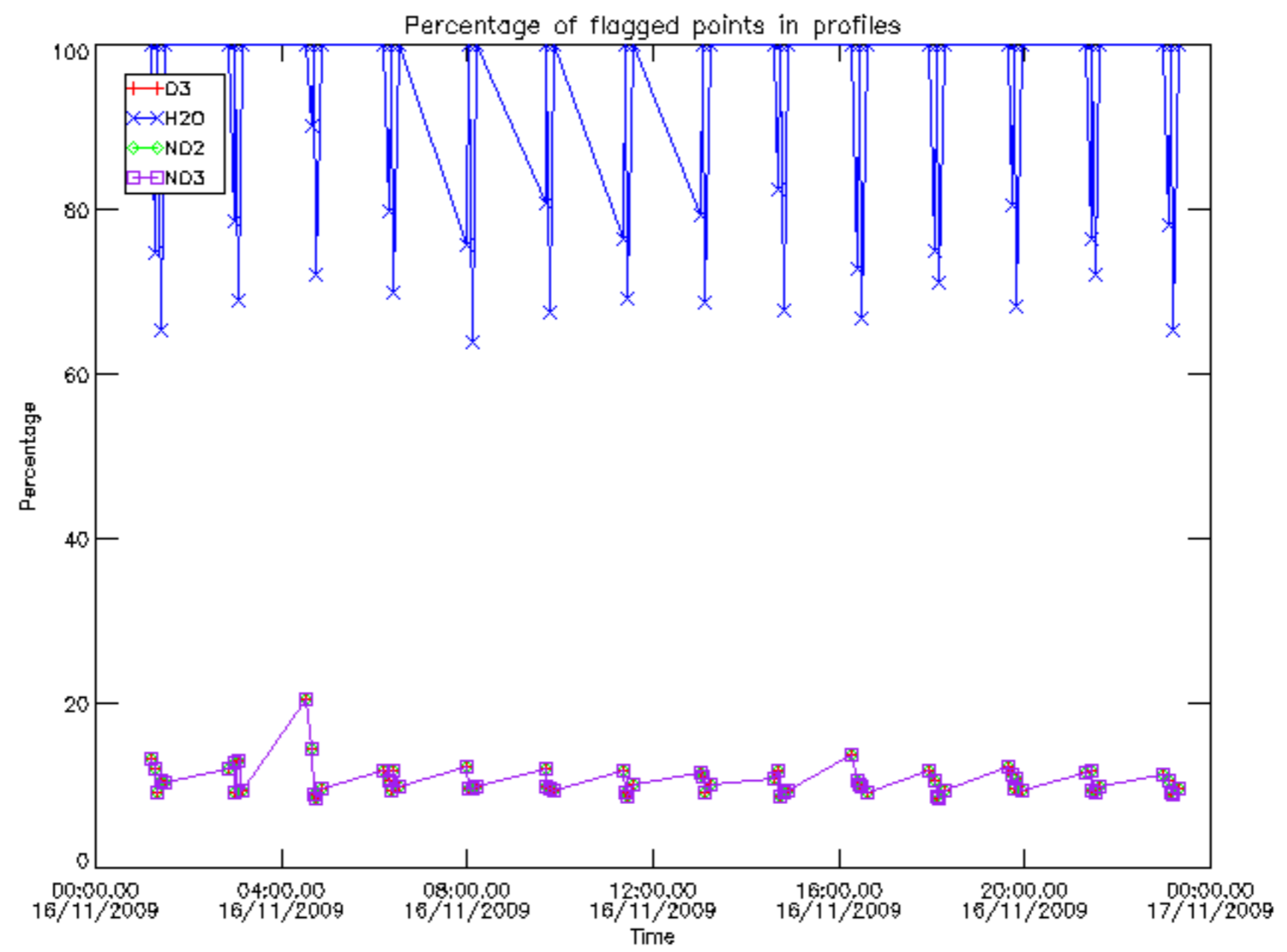




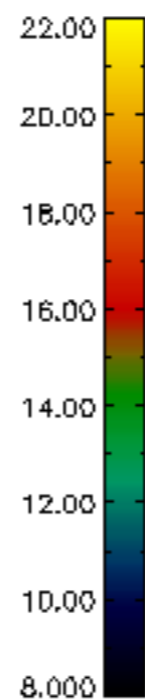
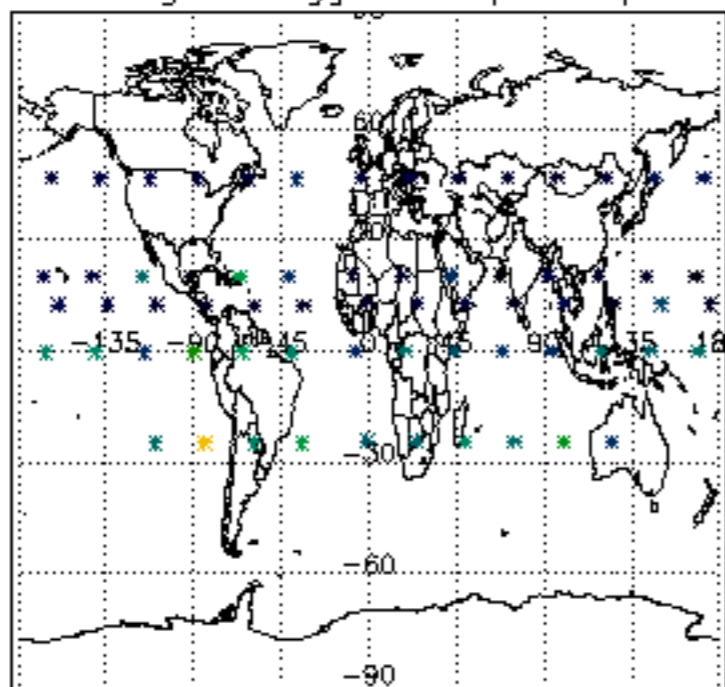




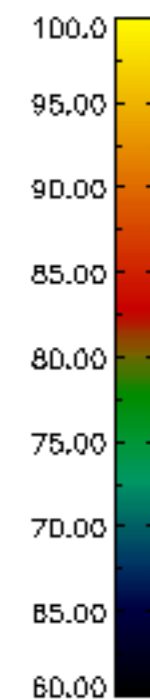
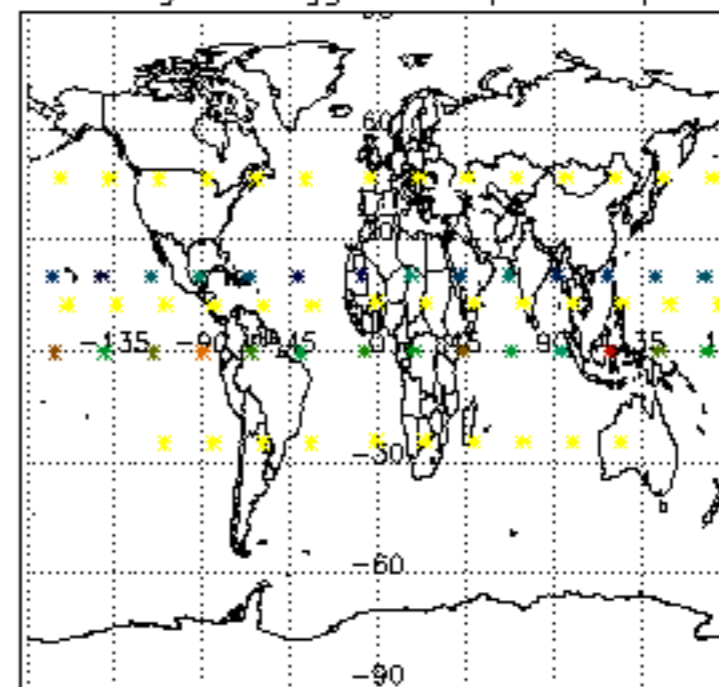




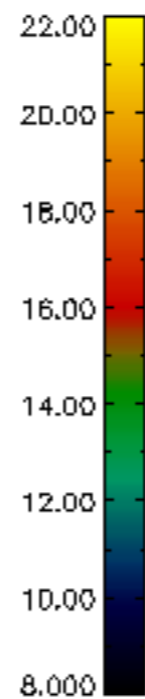
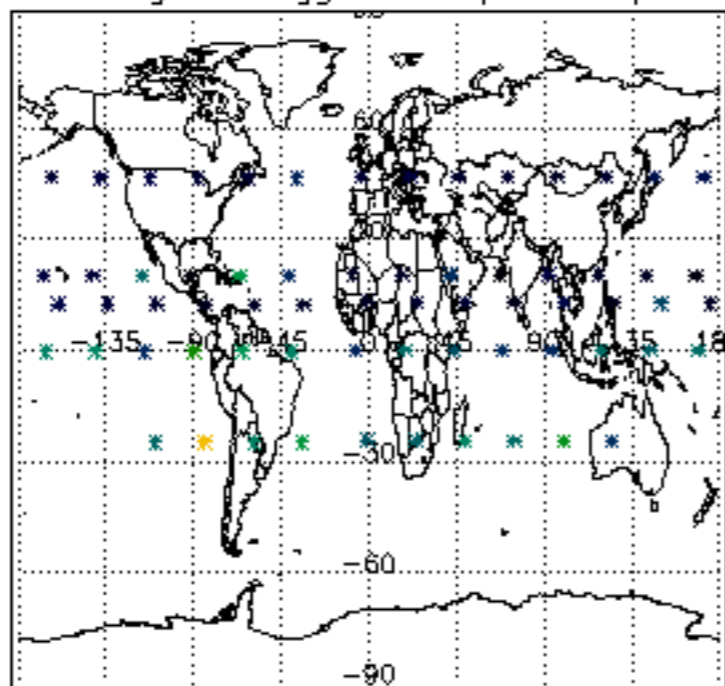
Percentage of flagged data per D3 profile



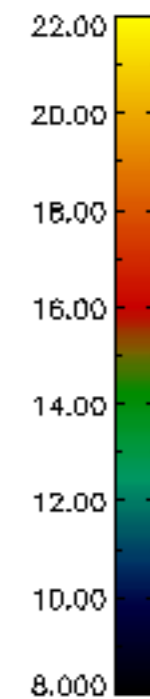
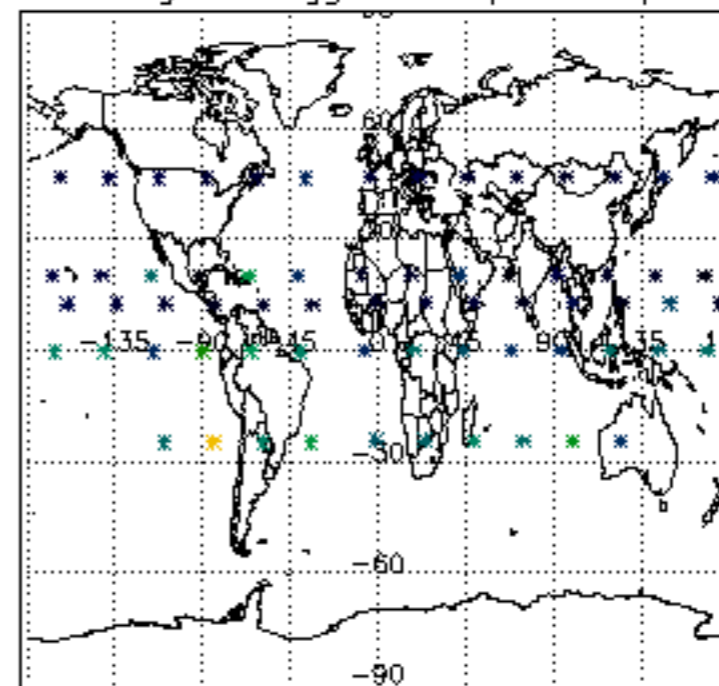
Percentage of flagged data per H2O profile

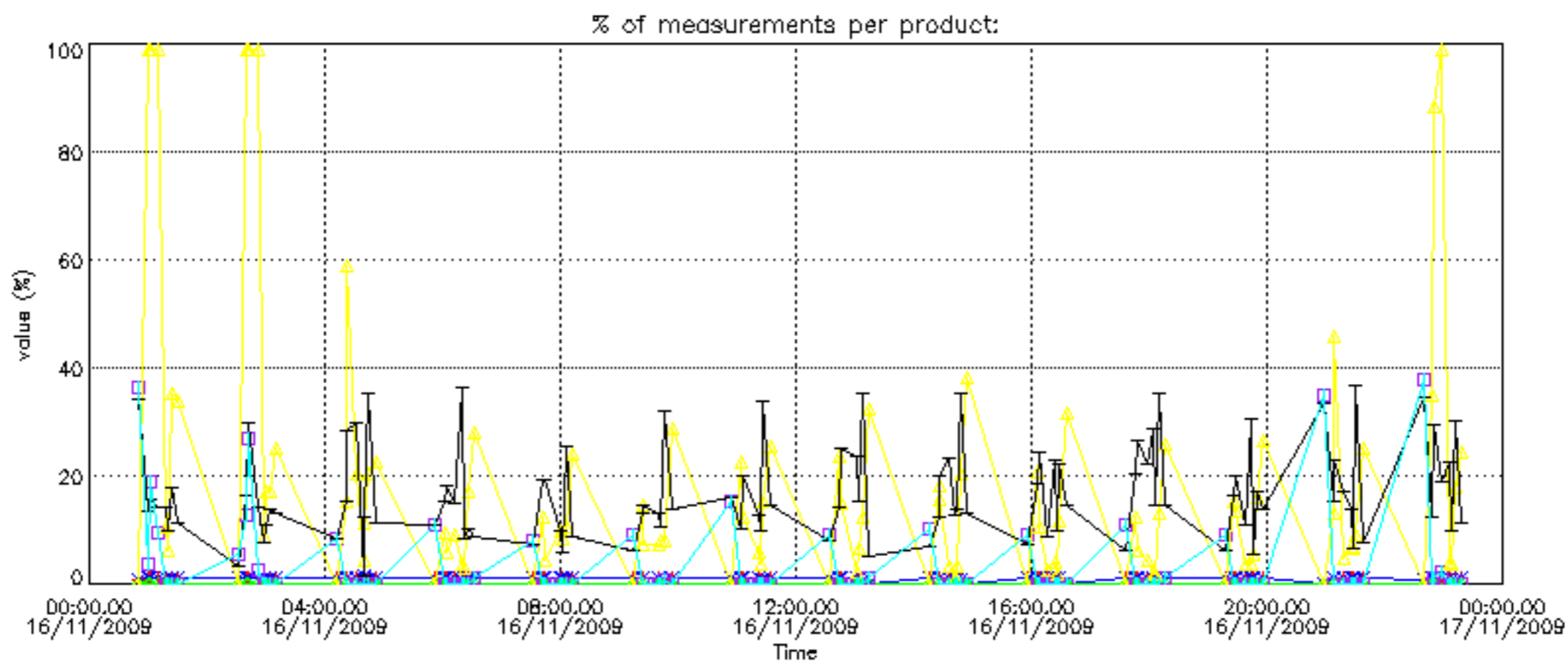


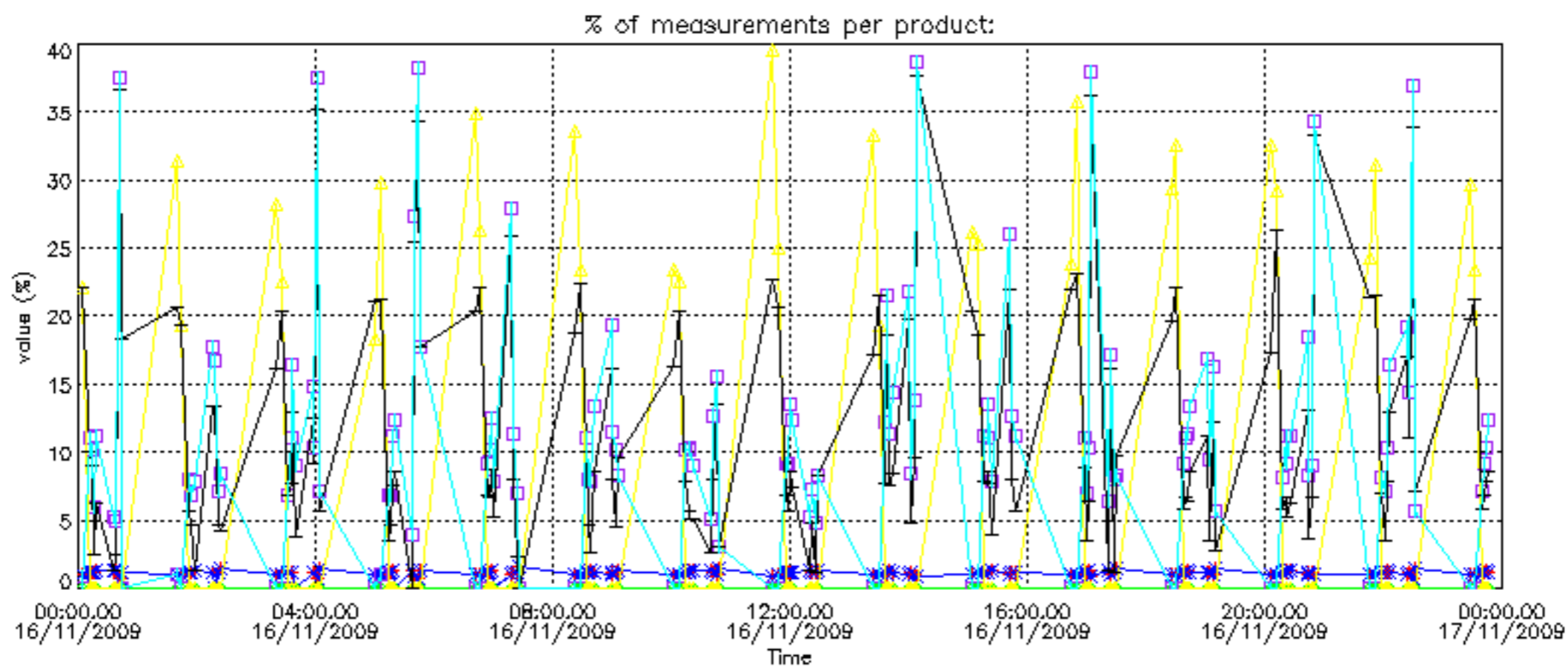
Percentage of flagged data per NO2 profile



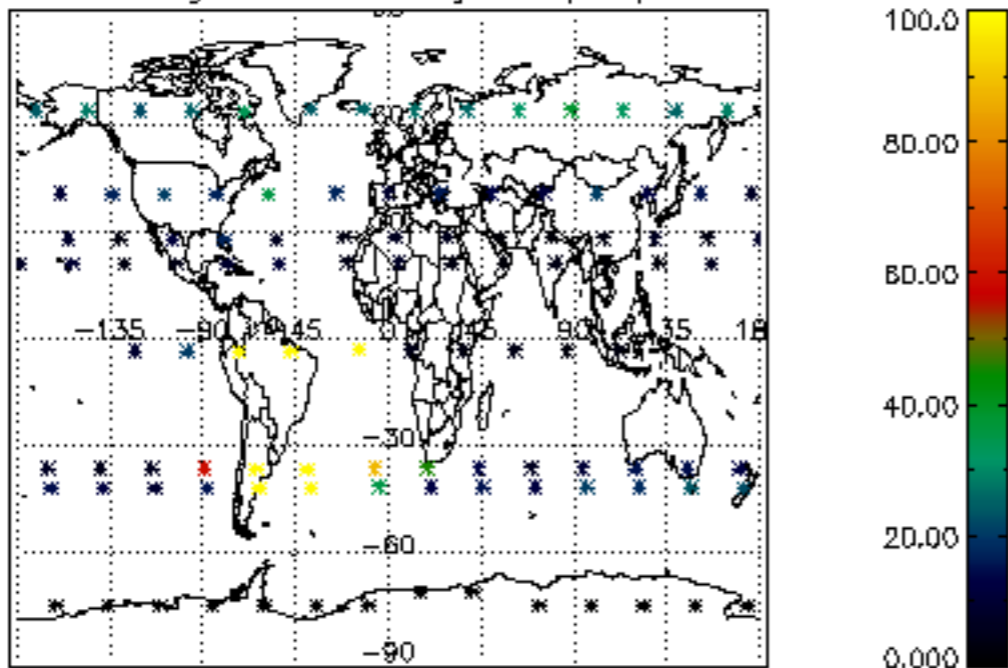
Percentage of flagged data per NO3 profile



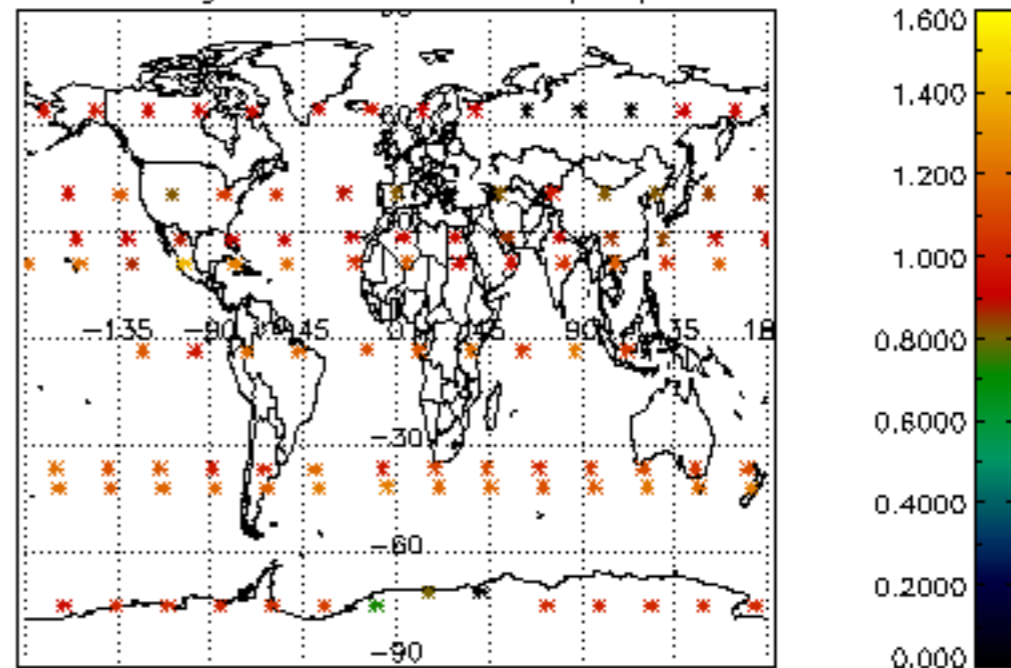




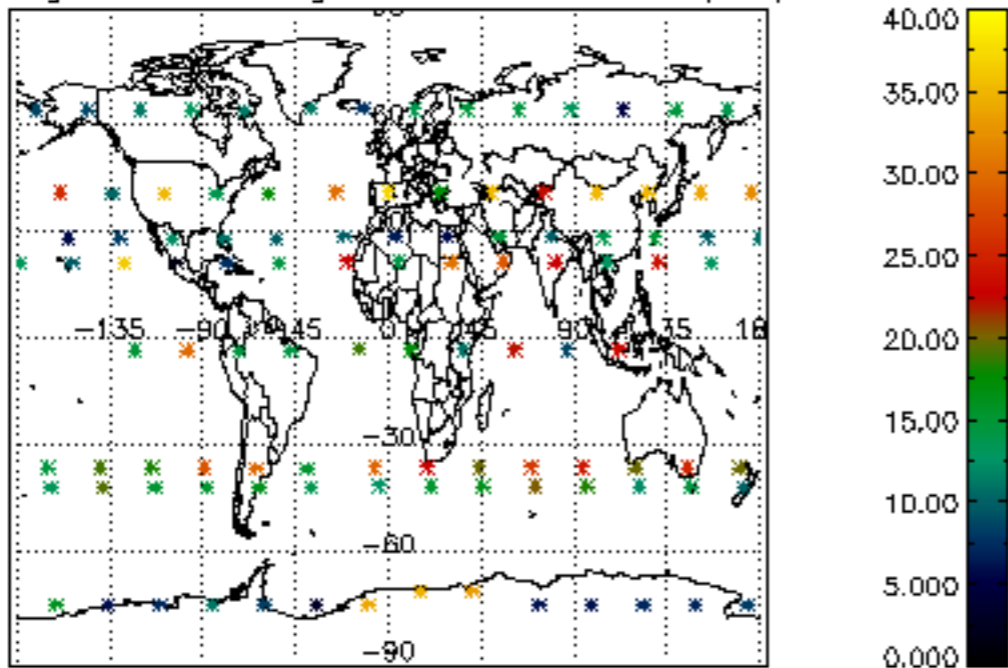
Percentage of cosmic ray hits per profile



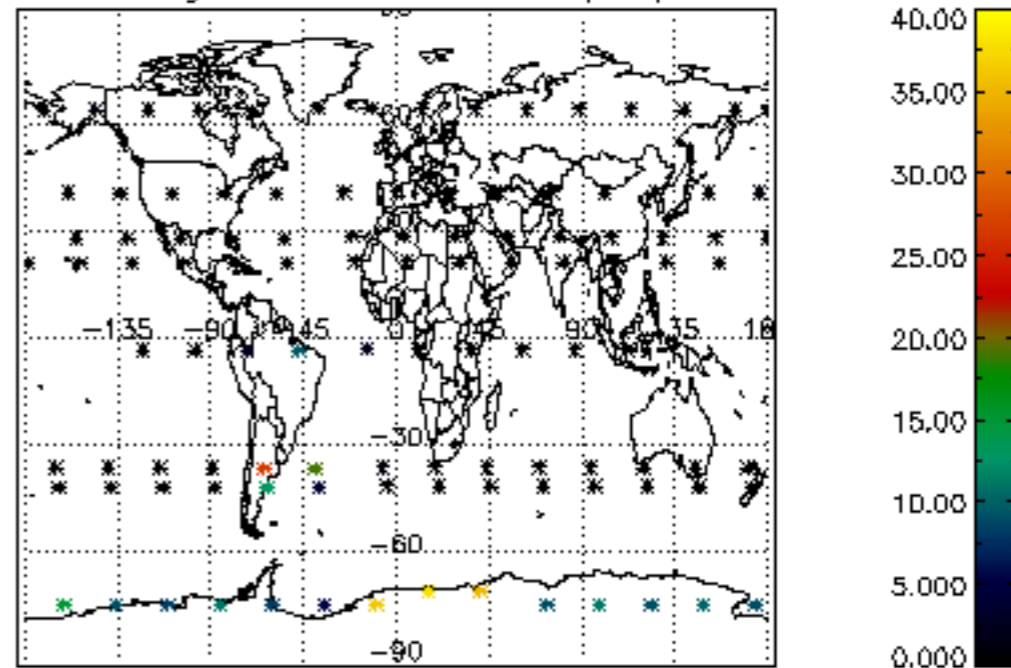
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

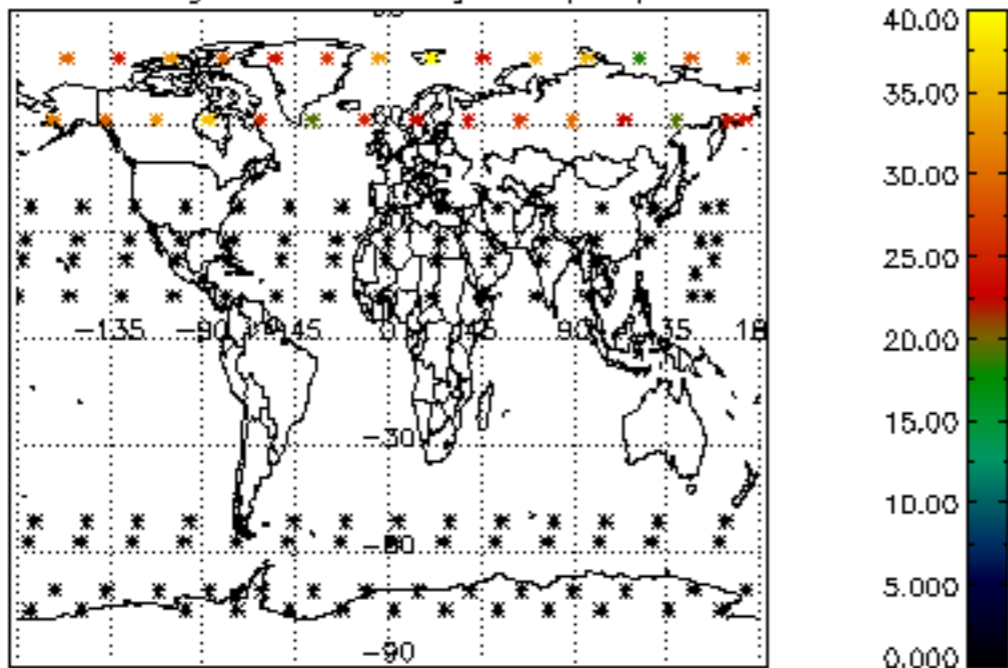


Percentage of saturation errors per profile

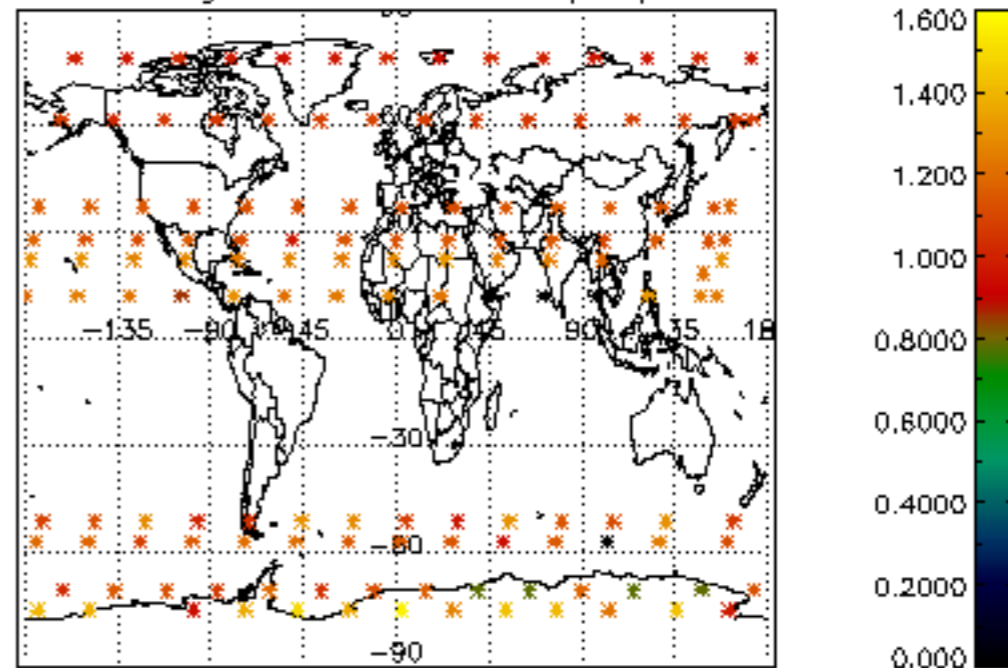




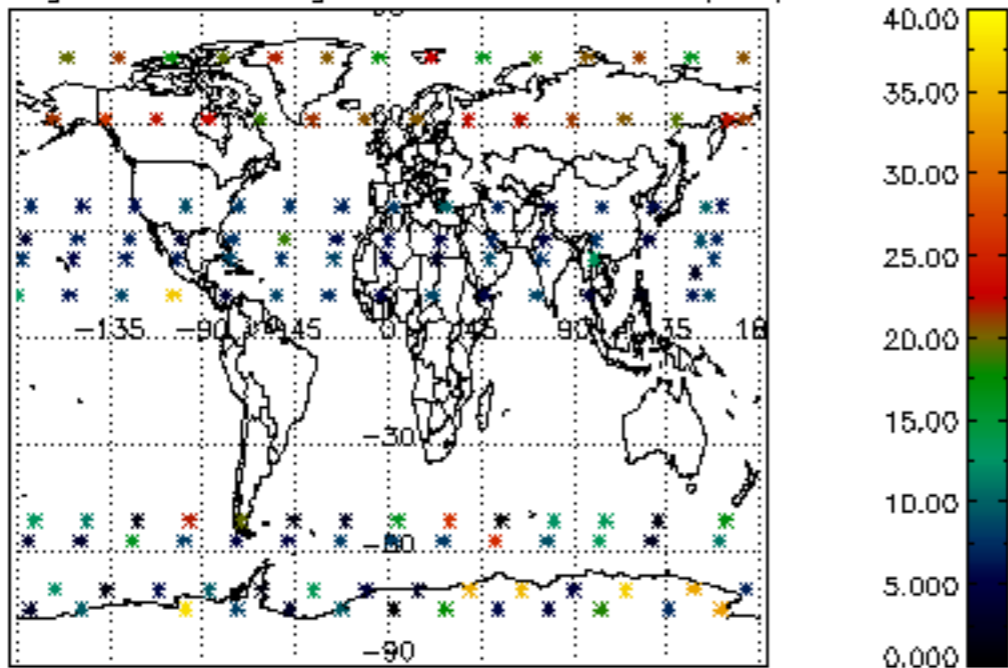
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

