

# GOMOS Level 2 Daily Report

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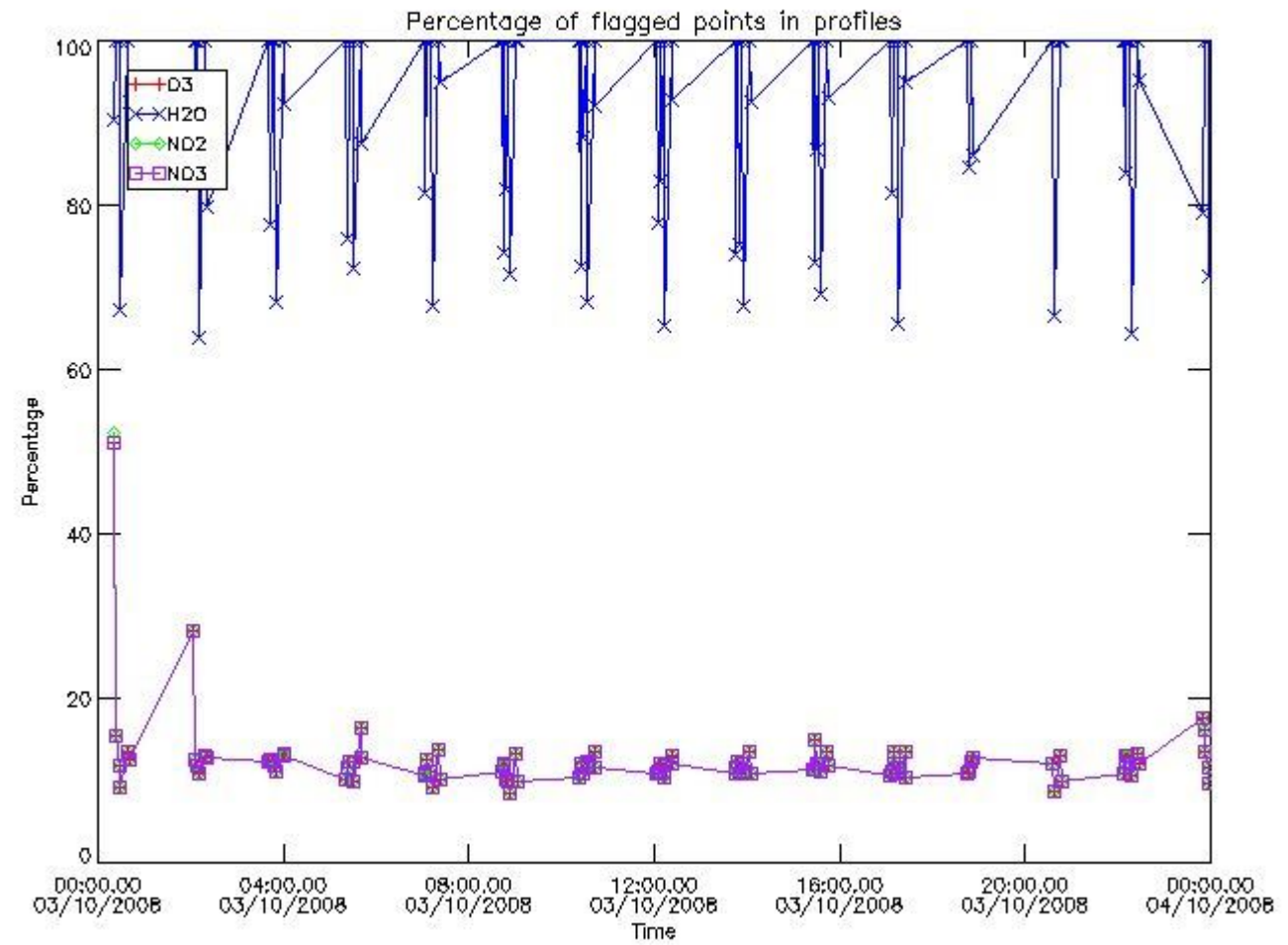


220	GOM_NL_2PRFIN20081003_203641_000000592072_00358_34480_1387.N1	03-OCT-2008 20:36:41	Dark	58.500	2	Alp Car	-0.73600	7000.0	117	34480	No
221	GOM_NL_2PRFIN20081003_204545_000000392072_00358_34480_1388.N1	03-OCT-2008 20:45:45	Dark	39.000	143	Alp Hyi	2.8570	7200.0	78	34480	No
222	GOM_NL_2PRFIN20081003_204713_000000512072_00358_34480_1389.N1	03-OCT-2008 20:47:13	Dark	50.500	9	Alp Eri	0.45300	24000.	101	34480	No
223	GOM_NL_2PRFIN20081003_205230_000000402072_00358_34480_1390.N1	03-OCT-2008 20:52:30	Straylight	40.000	84	Alp Phe	2.3970	4500.0	80	34480	No
224	GOM_NL_2PRFIN20081003_205920_000000482072_00358_34480_1391.N1	03-OCT-2008 20:59:20	Straylight	47.500	52	16Bet Cet	2.0370	4500.0	95	34480	No
225	GOM_NL_2PRFIN20081003_210927_000000362072_00358_34480_1392.N1	03-OCT-2008 21:09:27	Bright	36.000	90	54Alp Peg	2.4870	11000.	72	34480	No
226	GOM_NL_2PRFIN20081003_211303_000000382072_00358_34480_1393.N1	03-OCT-2008 21:13:03	Bright	37.500	93	53Bet Peg	2.5200	3100.0	75	34480	No
227	GOM_NL_2PRFIN20081003_212217_000000382072_00358_34480_1394.N1	03-OCT-2008 21:22:17	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34480	No
228	GOM_NL_2PRFIN20081003_212331_000000402072_00358_34480_1395.N1	03-OCT-2008 21:23:31	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34480	No
229	GOM_NL_2PRFIN20081003_213024_000000372072_00358_34480_1396.N1	03-OCT-2008 21:30:24	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	34480	No
230	GOM_NL_2PRFIN20081003_213826_000000362072_00358_34480_1397.N1	03-OCT-2008 21:38:26	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	34480	No
231	GOM_NL_2PRFIN20081003_213957_000000362072_00358_34480_1398.N1	03-OCT-2008 21:39:57	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	34480	No
232	GOM_NL_2PRFIN20081003_214953_000000372072_00358_34480_1399.N1	03-OCT-2008 21:49:53	Bright	36.500	166	17Eps Leo	2.9800	6000.0	73	34480	No
233	GOM_NL_2PRFIN20081003_215258_000000352072_00358_34480_1400.N1	03-OCT-2008 21:52:58	Bright	34.500	22	32Alp Leo	1.3600	15200.	69	34480	No
234	GOM_NL_2PRFIN20081003_215936_000000462072_00358_34480_1401.N1	03-OCT-2008 21:59:36	Twilight	46.000	48	30Alp Hya	1.9770	4100.0	92	34480	No
235	GOM_NL_2PRFIN20081003_220702_000000472072_00358_34480_1402.N1	03-OCT-2008 22:07:02	Dark	46.500	132	15Rho Pup	2.8030	6900.0	93	34480	No
236	GOM_NL_2PRFIN20081003_220916_000000442072_00358_34480_1403.N1	03-OCT-2008 22:09:16	Dark	44.000	65	Lam Vel	2.2040	4400.0	88	34480	No
237	GOM_NL_2PRFIN20081003_221043_000000402072_00358_34480_1404.N1	03-OCT-2008 22:10:43	Dark	39.500	70	Zet Pup	2.2460	39000.	79	34480	No
238	GOM_NL_2PRFIN20081003_221233_000000392072_00358_34480_1405.N1	03-OCT-2008 22:12:33	Dark	39.000	46	Del Vel	1.9540	10600.	78	34480	No
239	GOM_NL_2PRFIN20081003_221553_000000432072_00359_34481_1403.N1	03-OCT-2008 22:15:53	Dark	42.500	161	Tau Pup	2.9310	4500.0	85	34481	No
240	GOM_NL_2PRFIN20081003_221718_000000482072_00359_34481_1404.N1	03-OCT-2008 22:17:18	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	34481	No
241	GOM_NL_2PRFIN20081003_222621_000000392072_00359_34481_1405.N1	03-OCT-2008 22:26:21	Dark	38.500	143	Alp Hyi	2.8570	7200.0	77	34481	No
242	GOM_NL_2PRFIN20081003_222749_000000432072_00359_34481_1406.N1	03-OCT-2008 22:27:49	Dark	42.500	9	Alp Eri	0.45300	24000.	85	34481	No
243	GOM_NL_2PRFIN20081003_223306_000000422072_00359_34481_1407.N1	03-OCT-2008 22:33:06	Straylight	42.000	84	Alp Phe	2.3970	4500.0	84	34481	No
244	GOM_NL_2PRFIN20081003_223956_000000482072_00359_34481_1408.N1	03-OCT-2008 22:39:56	Straylight	47.500	52	16Bet Cet	2.0370	4500.0	95	34481	No
245	GOM_NL_2PRFIN20081003_225003_000000372072_00359_34481_1409.N1	03-OCT-2008 22:50:03	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	34481	No
246	GOM_NL_2PRFIN20081003_225339_000000382072_00359_34481_1410.N1	03-OCT-2008 22:53:39	Bright	37.500	93	53Bet Peg	2.5200	3100.0	75	34481	No
247	GOM_NL_2PRFIN20081003_230252_000000382072_00359_34481_1411.N1	03-OCT-2008 23:02:52	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34481	No
248	GOM_NL_2PRFIN20081003_230407_000000402072_00359_34481_1412.N1	03-OCT-2008 23:04:07	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34481	No
249	GOM_NL_2PRFIN20081003_231100_000000352072_00359_34481_1413.N1	03-OCT-2008 23:11:00	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	34481	No
250	GOM_NL_2PRFIN20081003_231902_000000372072_00359_34481_1414.N1	03-OCT-2008 23:19:02	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	34481	No
251	GOM_NL_2PRFIN20081003_232033_000000342072_00359_34481_1415.N1	03-OCT-2008 23:20:33	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	34481	No
252	GOM_NL_2PRFIN20081003_233029_000000382072_00359_34481_1416.N1	03-OCT-2008 23:30:29	Bright	37.500	166	17Eps Leo	2.9800	6000.0	75	34481	No
253	GOM_NL_2PRFIN20081003_233334_000000352072_00359_34481_1417.N1	03-OCT-2008 23:33:34	Bright	34.500	22	32Alp Leo	1.3600	15200.	69	34481	No
254	GOM_NL_2PRFIN20081003_234013_000000462072_00359_34481_1418.N1	03-OCT-2008 23:40:13	Twilight	46.000	48	30Alp Hya	1.9770	4100.0	92	34481	No
255	GOM_NL_2PRFIN20081003_234953_000000442072_00359_34481_1419.N1	03-OCT-2008 23:49:53	Dark	43.500	65	Lam Vel	2.2040	4400.0	87	34481	No
256	GOM_NL_2PRFIN20081003_235120_000000412072_00359_34481_1420.N1	03-OCT-2008 23:51:20	Dark	41.000	70	Zet Pup	2.2460	39000.	82	34481	No
257	GOM_NL_2PRFIN20081003_235309_000000382072_00359_34481_1421.N1	03-OCT-2008 23:53:09	Dark	37.500	46	Del Vel	1.9540	10600.	75	34481	No
258	GOM_NL_2PRFIN20081003_235630_000000452072_00360_34482_1415.N1	03-OCT-2008 23:56:30	Dark	44.500	161	Tau Pup	2.9310	4500.0	89	34482	No
259	GOM_NL_2PRFIN20081003_235754_000000582072_00360_34482_1416.N1	03-OCT-2008 23:57:54	Dark	58.000	2	Alp Car	-0.73600	7000.0	116	34482	No

### 3. Quality information per product

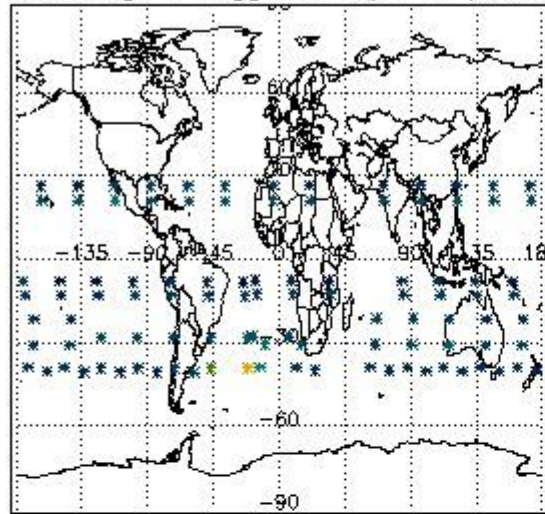
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

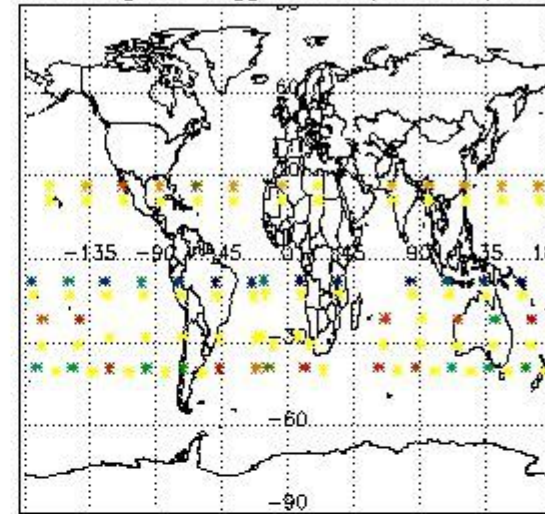


3.2 Plot quality information per product (world map)

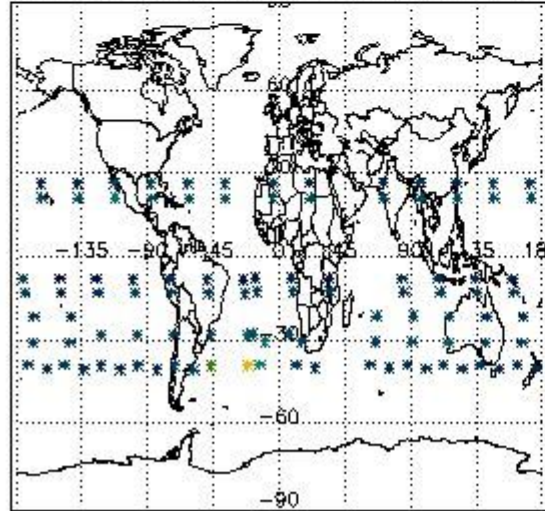
Percentage of flagged data per O3 profile



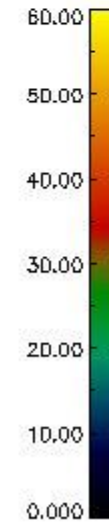
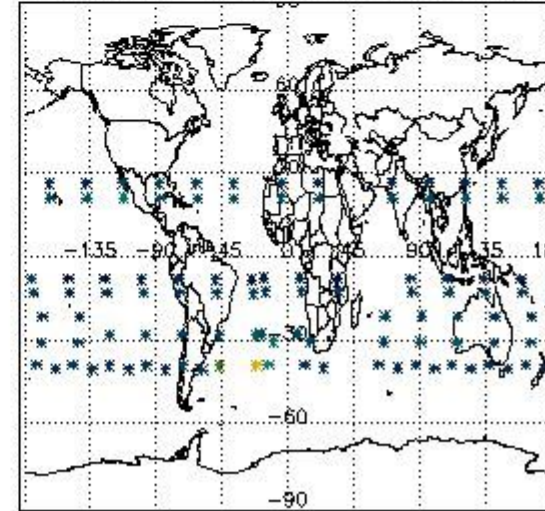
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



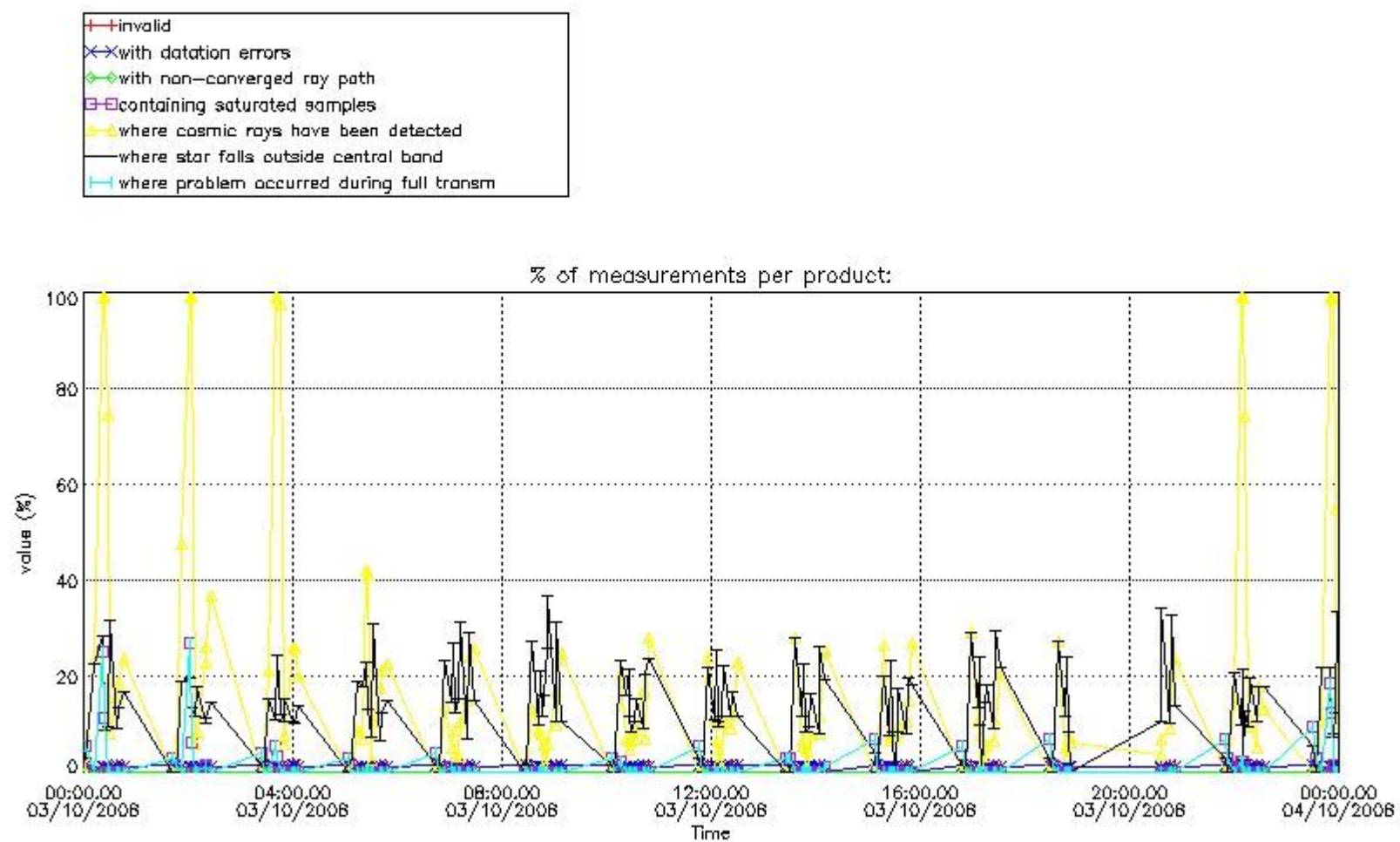
#### 4. Level 1 quality information per product

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.

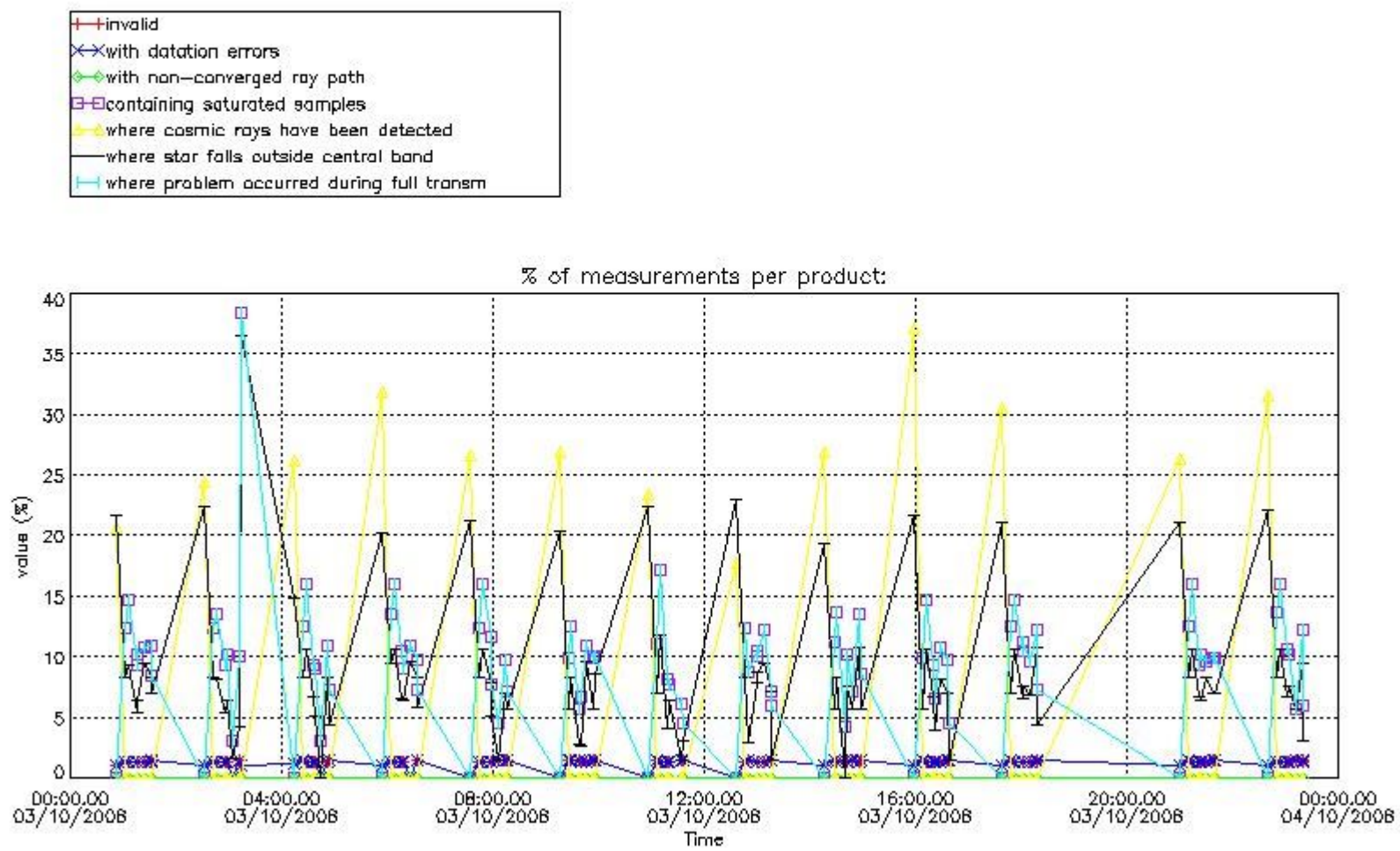
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





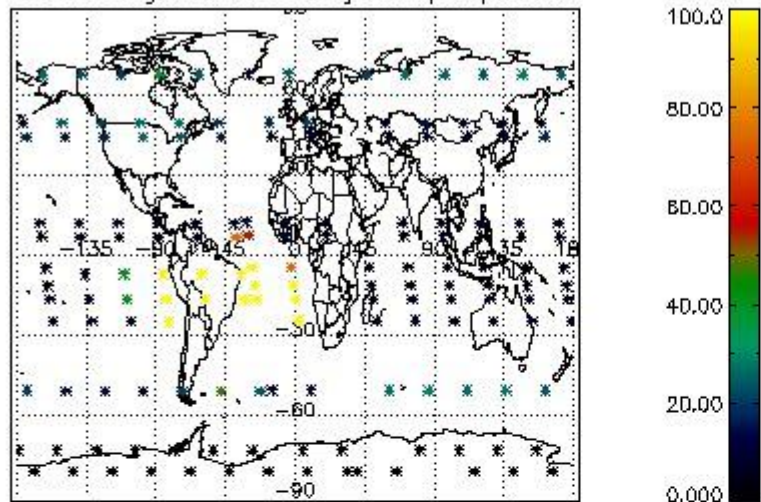
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



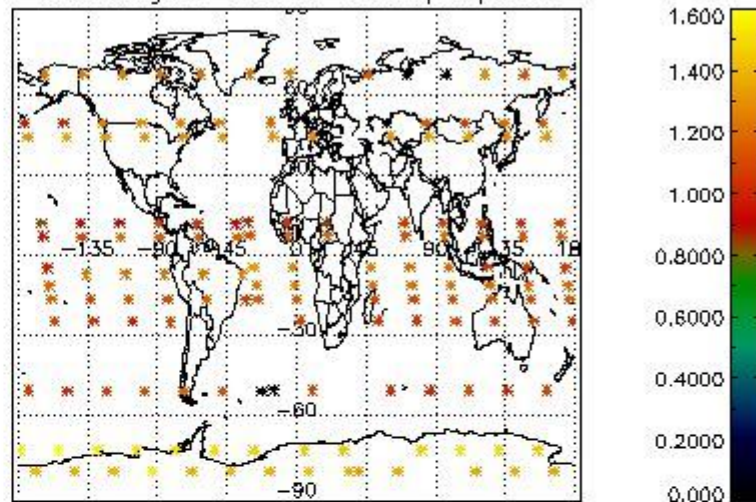
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

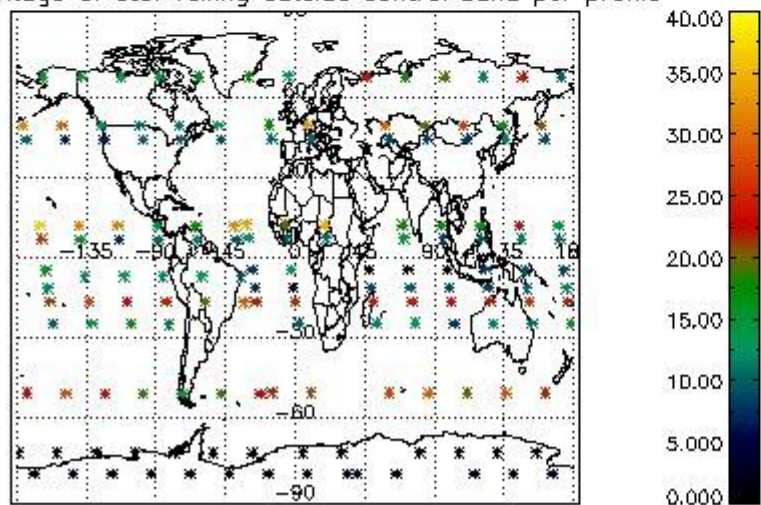
Percentage of cosmic ray hits per profile



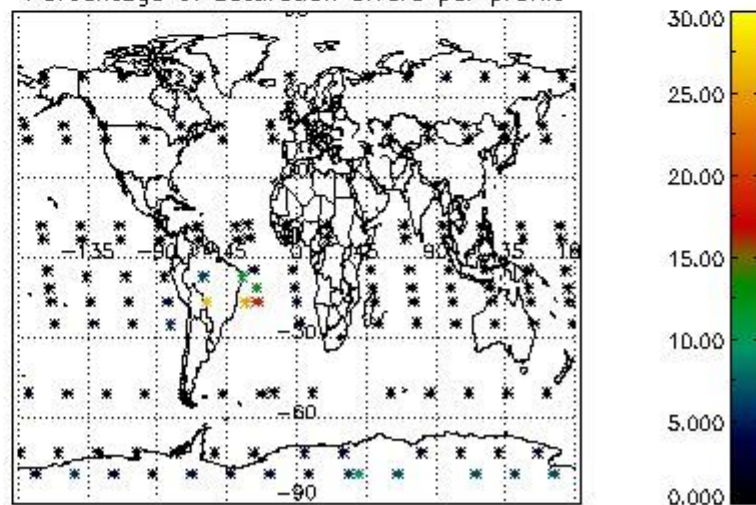
Percentage of datation errors per profile



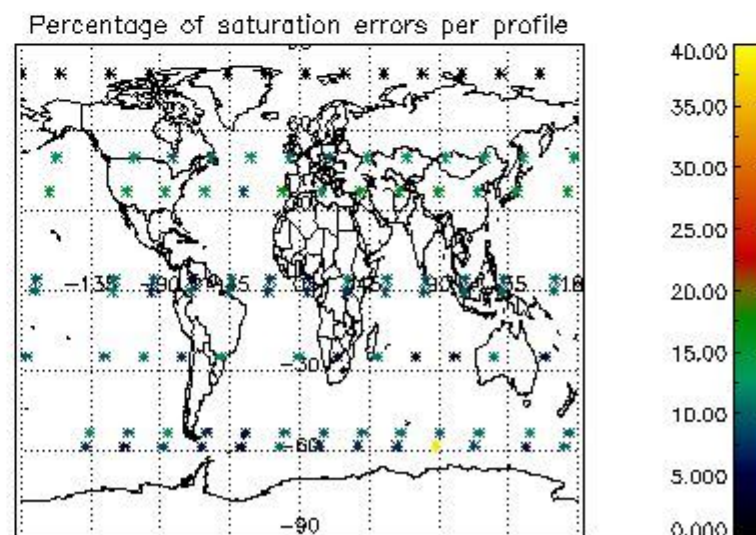
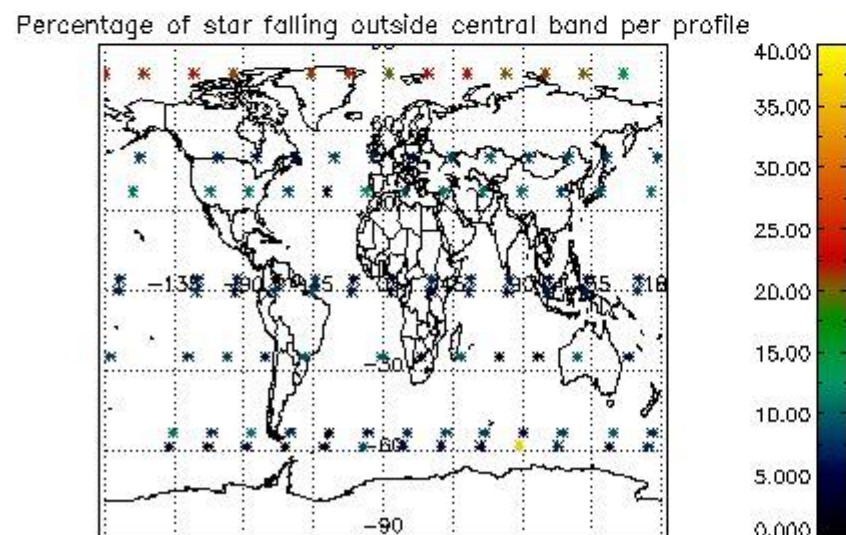
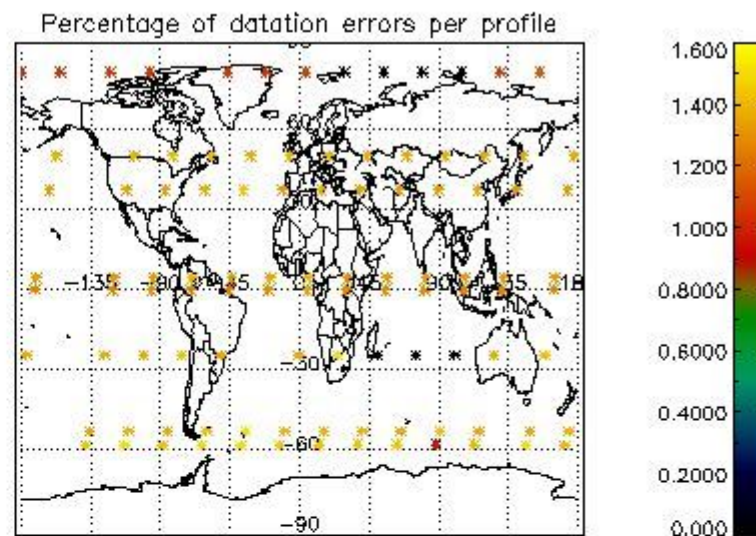
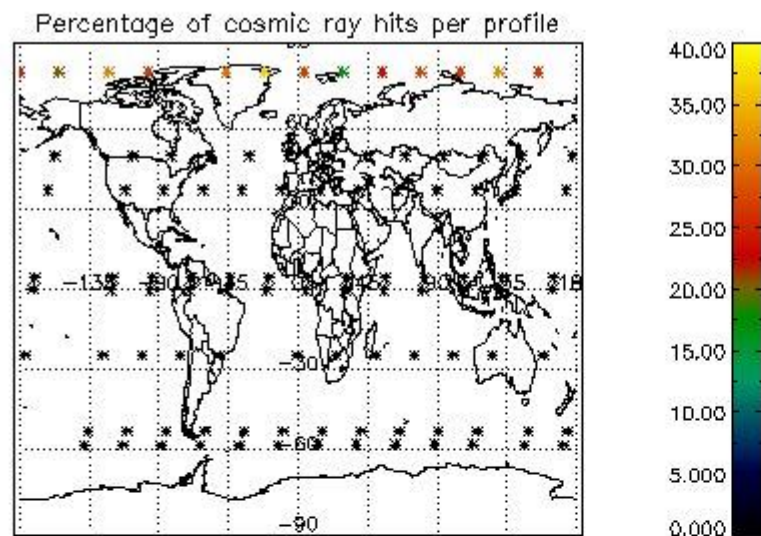
Percentage of star falling outside central band per profile



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

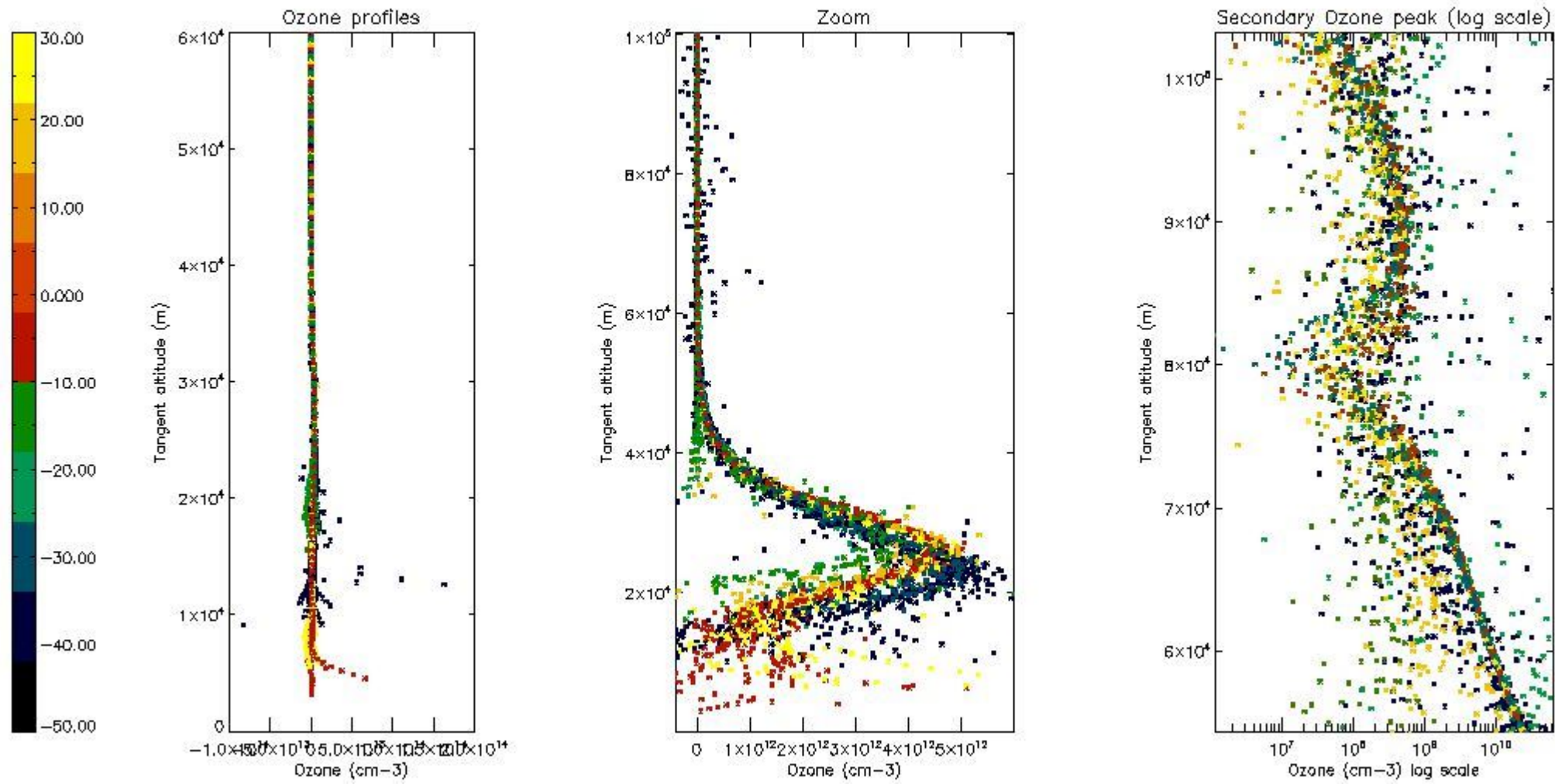
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	44
STD < 20	21

STD < 10	14
STD < 5	10

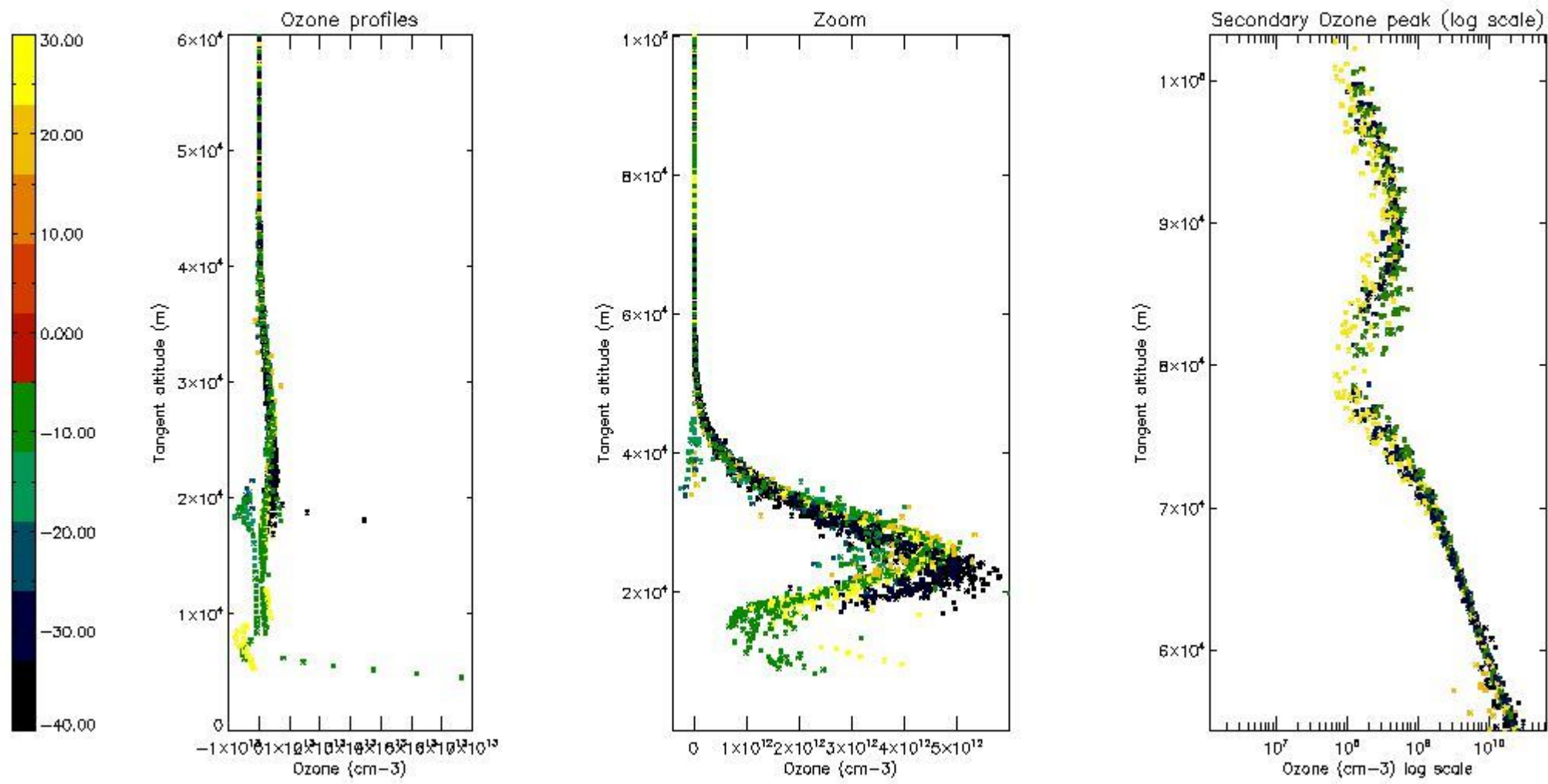
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



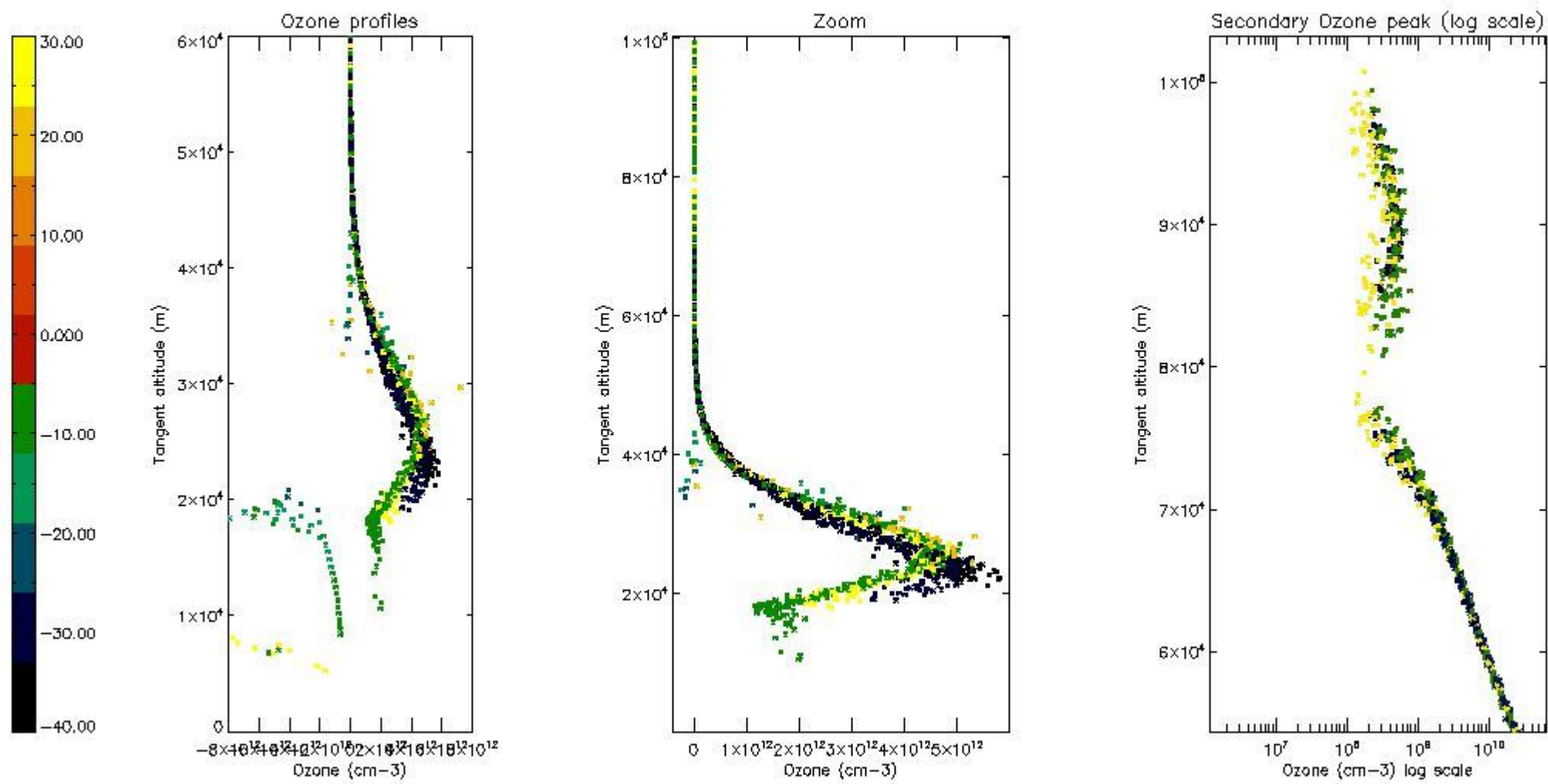
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



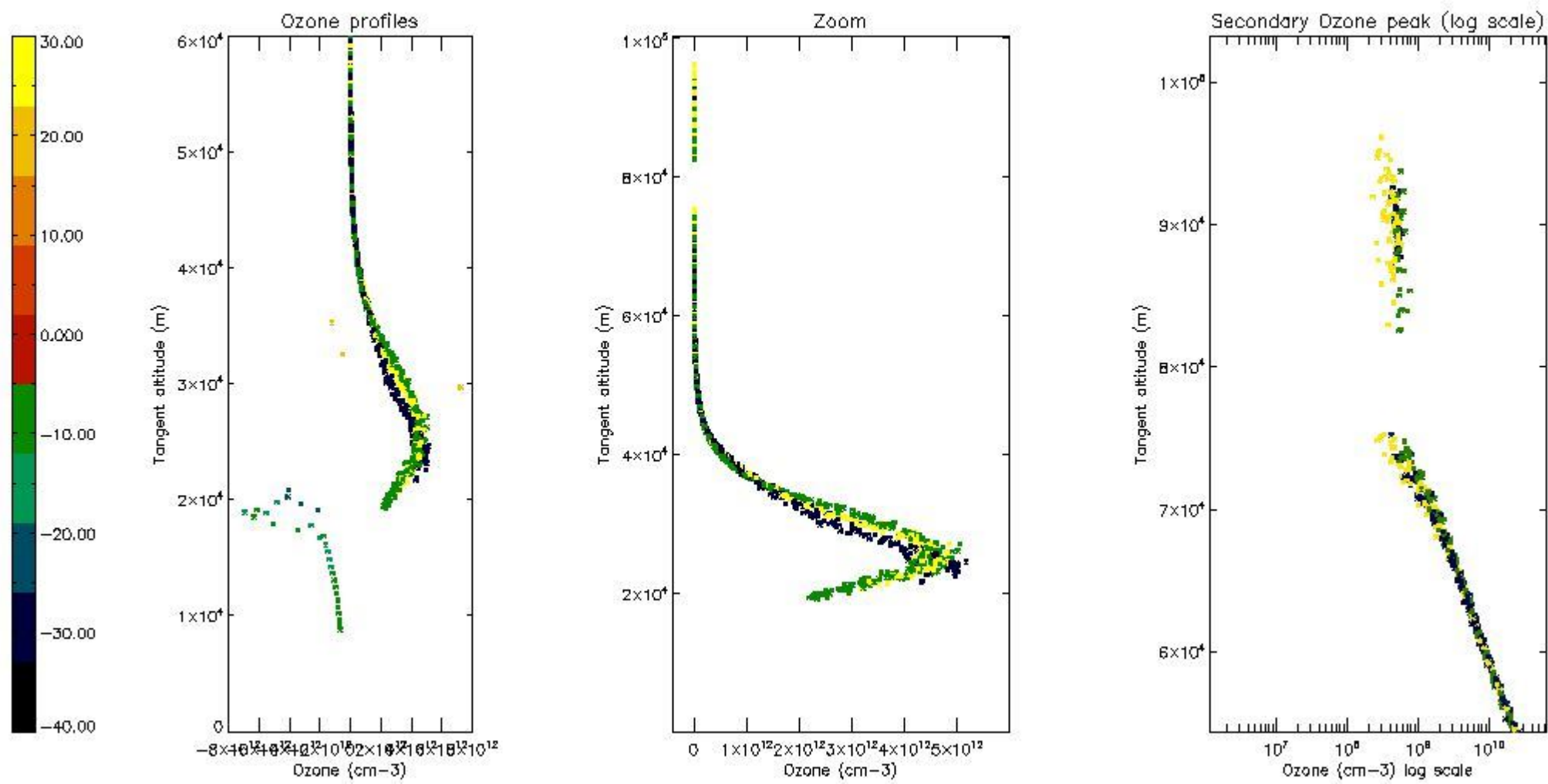
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



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

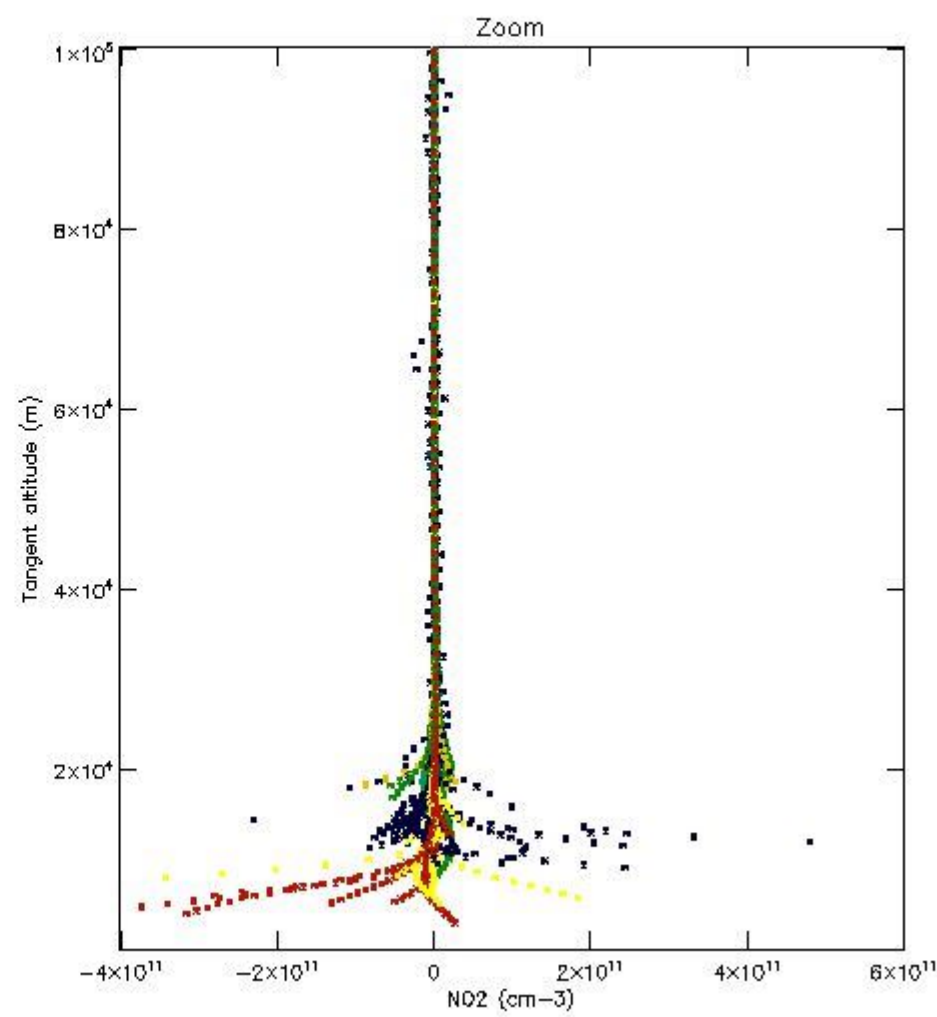
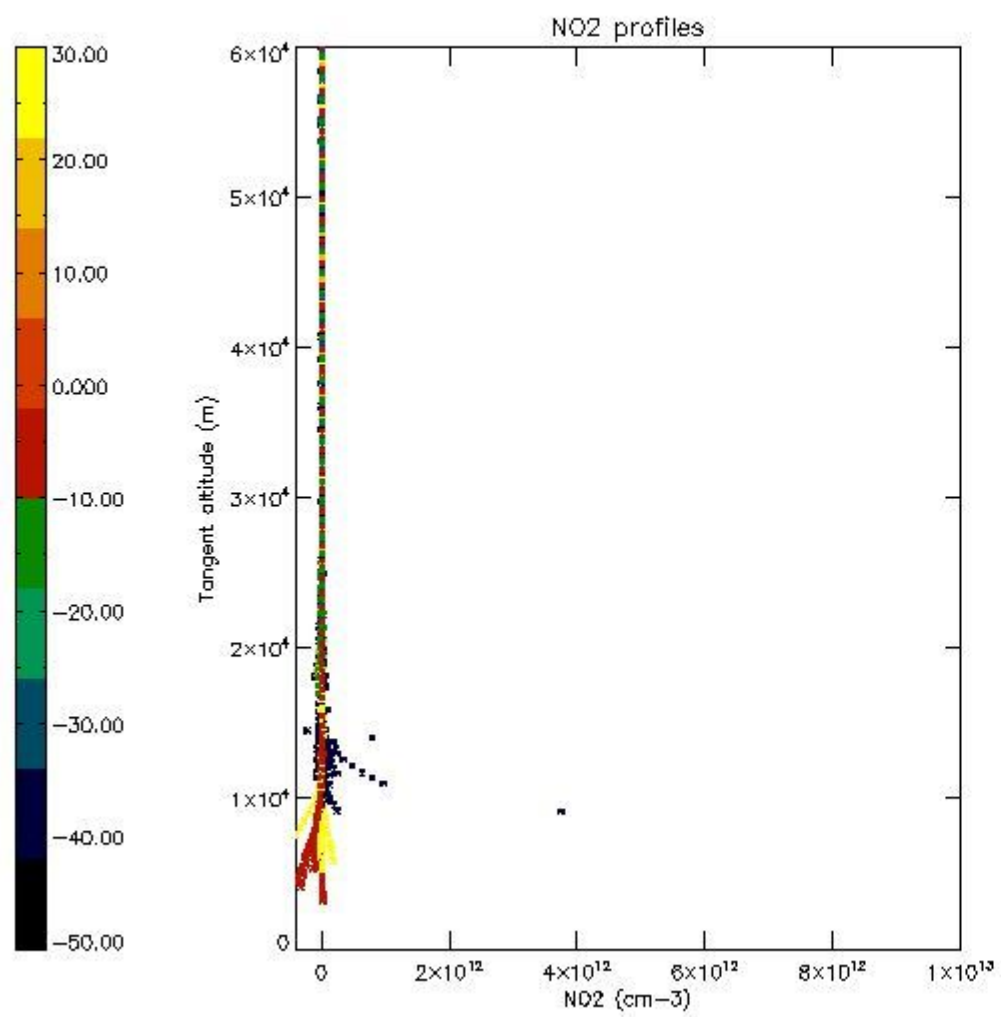
The colorbar represents the latitude.



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

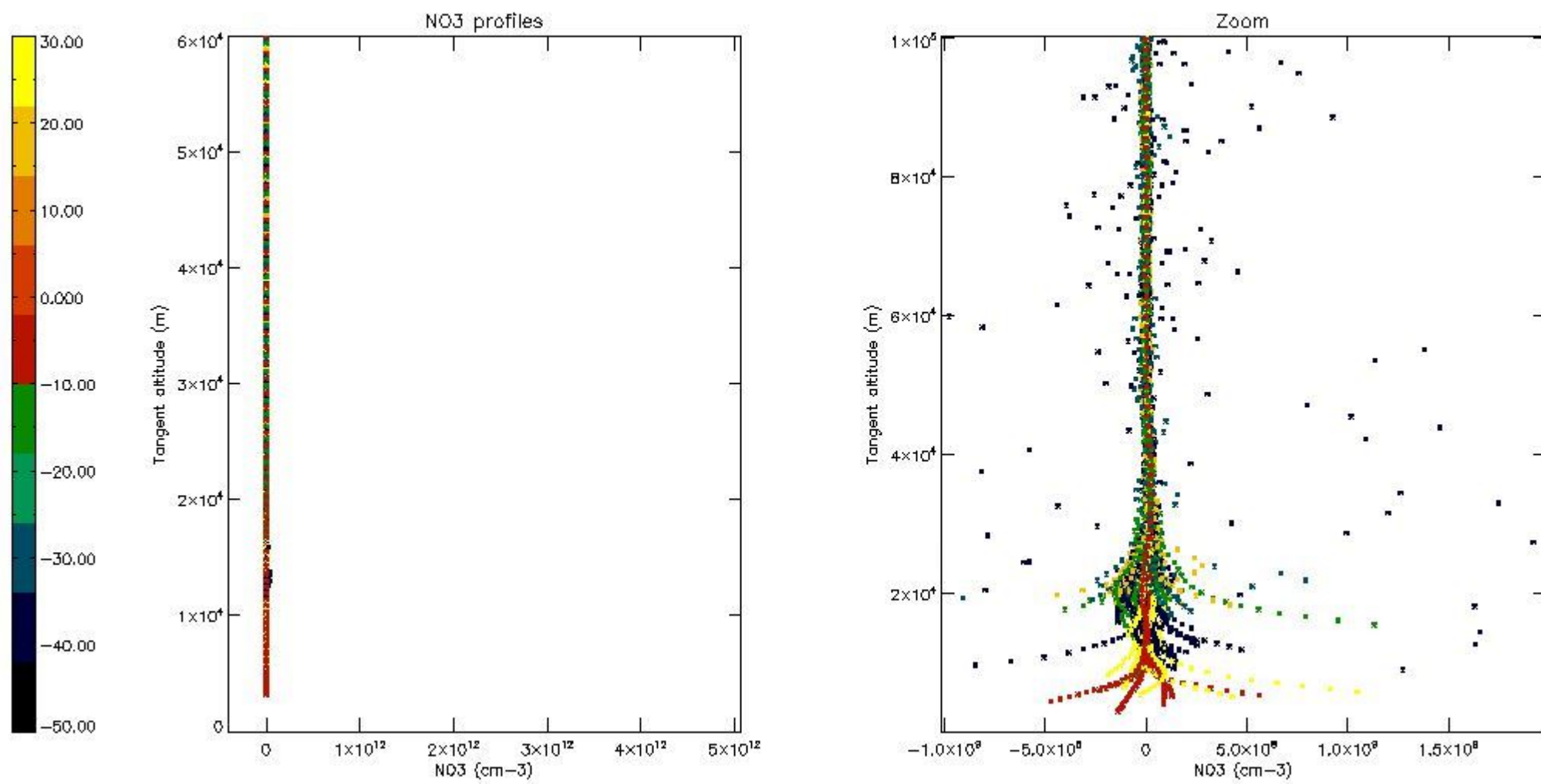
The colorbar represents the latitude.





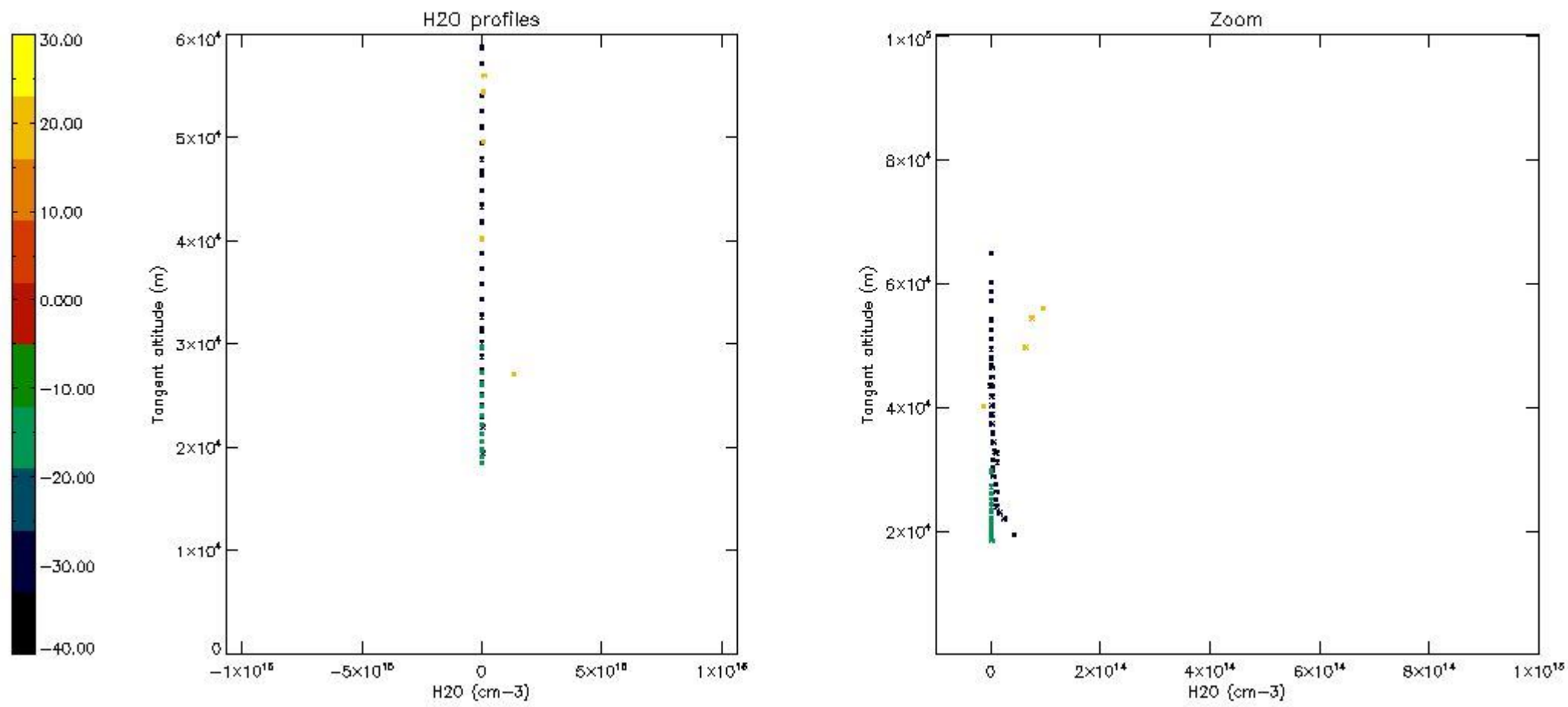
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot 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	03-OCT-2008 00:02:03
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-OCT-2008 00:02:03
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-OCT-2008 00:02:03

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#### [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	25APR2013 20:32:31
Data source version	GOMOS/6.01
Start time of products	03-10-2008 (03OCT2008 00:00:00)
Stop time of products	04-10-2008 (04OCT2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	259
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__2PRFIN20081003_000203_000000362072_00345_34467_0934.N1	03-OCT-2008 00:02:03	Bright	36.000	166	17Eps Leo	2.9800	6000.0	72	34467	No
2	GOM_NL__2PRFIN20081003_001144_000000472072_00345_34467_0935.N1	03-OCT-2008 00:11:44	Twilight	46.500	48	30Alp Hya	1.9770	4100.0	93	34467	No
3	GOM_NL__2PRFIN20081003_002124_000000482072_00345_34467_0936.N1	03-OCT-2008 00:21:24	Dark	47.500	65	Lam Vel	2.2040	4400.0	95	34467	No
4	GOM_NL__2PRFIN20081003_002405_000000402072_00345_34467_0937.N1	03-OCT-2008 00:24:05	Dark	39.500	34	Gam2Vel	1.7930	23000.	79	34467	No
5	GOM_NL__2PRFIN20081003_002756_000000432072_00346_34468_1122.N1	03-OCT-2008 00:27:56	Dark	43.000	161	Tau Pup	2.9310	4500.0	86	34468	No
6	GOM_NL__2PRFIN20081003_002920_000000562072_00346_34468_1123.N1	03-OCT-2008 00:29:20	Dark	55.500	2	Alp Car	-0.73600	7000.0	111	34468	No
7	GOM_NL__2PRFIN20081003_003829_000000382072_00346_34468_1124.N1	03-OCT-2008 00:38:29	Dark	38.000	143	Alp Hyi	2.8570	7200.0	76	34468	No
8	GOM_NL__2PRFIN20081003_003957_000000412072_00346_34468_1125.N1	03-OCT-2008 00:39:57	Dark	40.500	9	Alp Eri	0.45300	24000.	81	34468	No
9	GOM_NL__2PRFIN20081003_004515_000000422072_00346_34468_1126.N1	03-OCT-2008 00:45:15	Straylight	42.000	84	Alp Phe	2.3970	4500.0	84	34468	No
10	GOM_NL__2PRFIN20081003_005207_000000492072_00346_34468_1127.N1	03-OCT-2008 00:52:07	Straylight	48.500	52	16Bet Cet	2.0370	4500.0	97	34468	No
11	GOM_NL__2PRFIN20081003_010215_000000372072_00346_34468_1128.N1	03-OCT-2008 01:02:15	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	34468	No
12	GOM_NL__2PRFIN20081003_010551_000000382072_00346_34468_1129.N1	03-OCT-2008 01:05:51	Bright	37.500	93	53Bet Peg	2.5200	3100.0	75	34468	No
13	GOM_NL__2PRFIN20081003_011508_000000382072_00346_34468_1130.N1	03-OCT-2008 01:15:08	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34468	No
14	GOM_NL__2PRFIN20081003_011624_000000402072_00346_34468_1131.N1	03-OCT-2008 01:16:24	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34468	No
15	GOM_NL__2PRFIN20081003_012313_000000372072_00346_34468_1132.N1	03-OCT-2008 01:23:13	Bright	37.000	49	1Alp UMi	1.9900	6300.0	74	34468	No
16	GOM_NL__2PRFIN20081003_013114_000000372072_00346_34468_1133.N1	03-OCT-2008 01:31:14	Bright	36.500	36	50Alp UMa	1.8000	6300.0	73	34468	No
17	GOM_NL__2PRFIN20081003_013244_000000362072_00346_34468_1134.N1	03-OCT-2008 01:32:44	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	34468	No
18	GOM_NL__2PRFIN20081003_014239_000000352072_00346_34468_1135.N1	03-OCT-2008 01:42:39	Bright	35.000	166	17Eps Leo	2.9800	6000.0	70	34468	No
19	GOM_NL__2PRFIN20081003_014544_000000342072_00346_34468_1136.N1	03-OCT-2008 01:45:44	Bright	34.000	22	32Alp Leo	1.3600	15200.	68	34468	No
20	GOM_NL__2PRFIN20081003_015220_000000452072_00346_34468_1137.N1	03-OCT-2008 01:52:20	Twilight	45.000	48	30Alp Hya	1.9770	4100.0	90	34468	No
21	GOM_NL__2PRFIN20081003_020200_000000432072_00346_34468_1138.N1	03-OCT-2008 02:02:00	Dark	43.000	65	Lam Vel	2.2040	4400.0	86	34468	No
22	GOM_NL__2PRFIN20081003_020441_000000412072_00346_34468_1139.N1	03-OCT-2008 02:04:41	Dark	41.000	34	Gam2Vel	1.7930	23000.	82	34468	No
23	GOM_NL__2PRFIN20081003_020833_000000442072_00347_34469_1136.N1	03-OCT-2008 02:08:33	Dark	43.500	161	Tau Pup	2.9310	4500.0	87	34469	No
24	GOM_NL__2PRFIN20081003_020957_000000482072_00347_34469_1137.N1	03-OCT-2008 02:09:57	Dark	47.500	2	Alp Car	-0.73600	7000.0	95	34469	No
25	GOM_NL__2PRFIN20081003_021905_000000392072_00347_34469_1138.N1	03-OCT-2008 02:19:05	Dark	39.000	143	Alp Hyi	2.8570	7200.0	78	34469	No
26	GOM_NL__2PRFIN20081003_022033_000000402072_00347_34469_1139.N1	03-OCT-2008 02:20:33	Dark	40.000	9	Alp Eri	0.45300	24000.	80	34469	No
27	GOM_NL__2PRFIN20081003_022551_000000412072_00347_34469_1140.N1	03-OCT-2008 02:25:51	Straylight	41.000	84	Alp Phe	2.3970	4500.0	82	34469	No
28	GOM_NL__2PRFIN20081003_023243_000000492072_00347_34469_1141.N1	03-OCT-2008 02:32:43	Straylight	49.000	52	16Bet Cet	2.0370	4500.0	98	34469	No
29	GOM_NL__2PRFIN20081003_024251_000000372072_00347_34469_1142.N1	03-OCT-2008 02:42:51	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	34469	No
30	GOM_NL__2PRFIN20081003_024627_000000372072_00347_34469_1143.N1	03-OCT-2008 02:46:27	Bright	37.000	93	53Bet Peg	2.5200	3100.0	74	34469	No
31	GOM_NL__2PRFIN20081003_025544_000000382072_00347_34469_1144.N1	03-OCT-2008 02:55:44	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34469	No
32	GOM_NL__2PRFIN20081003_025700_000000402072_00347_34469_1145.N1	03-OCT-2008 02:57:00	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34469	No
33	GOM_NL__2PRFIN20081003_030349_000000332072_00347_34469_1146.N1	03-OCT-2008 03:03:49	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	34469	No
34	GOM_NL__2PRFIN20081003_031150_000000352072_00347_34469_1147.N1	03-OCT-2008 03:11:50	Bright	35.000	36	50Alp UMa	1.8000	6300.0	70	34469	No
35	GOM_NL__2PRFIN20081003_031320_000000522072_00347_34469_1148.N1	03-OCT-2008 03:13:20	Bright	52.000	82	48Bet UMa	2.3650	10600.	104	34469	No
36	GOM_NL__2PRFIN20081003_032315_000000362072_00347_34469_1149.N1	03-OCT-2008 03:23:15	Bright	36.000	166	17Eps Leo	2.9800	6000.0	72	34469	No
37	GOM_NL__2PRFIN20081003_032620_000000332072_00347_34469_1150.N1	03-OCT-2008 03:26:20	Bright	33.000	22	32Alp Leo	1.3600	15200.	66	34469	No
38	GOM_NL__2PRFIN20081003_033256_000000432072_00347_34469_1151.N1	03-OCT-2008 03:32:56	Twilight	42.500	48	30Alp Hya	1.9770	4100.0	85	34469	No
39	GOM_NL__2PRFIN20081003_034016_000000462072_00347_34469_1152.N1	03-OCT-2008 03:40:16	Dark	46.000	132	15Rho Pup	2.8030	6900.0	92	34469	No
40	GOM_NL__2PRFIN20081003_034236_000000452072_00347_34469_1153.N1	03-OCT-2008 03:42:36	Dark	45.000	65	Lam Vel	2.2040	4400.0	90	34469	No
41	GOM_NL__2PRFIN20081003_034518_000000422072_00347_34469_1154.N1	03-OCT-2008 03:45:18	Dark	41.500	34	Gam2Vel	1.7930	23000.	83	34469	No
42	GOM_NL__2PRFIN20081003_034909_000000432072_00348_34470_1149.N1	03-OCT-2008 03:49:09	Dark	43.000	161	Tau Pup	2.9310	4500.0	86	34470	No







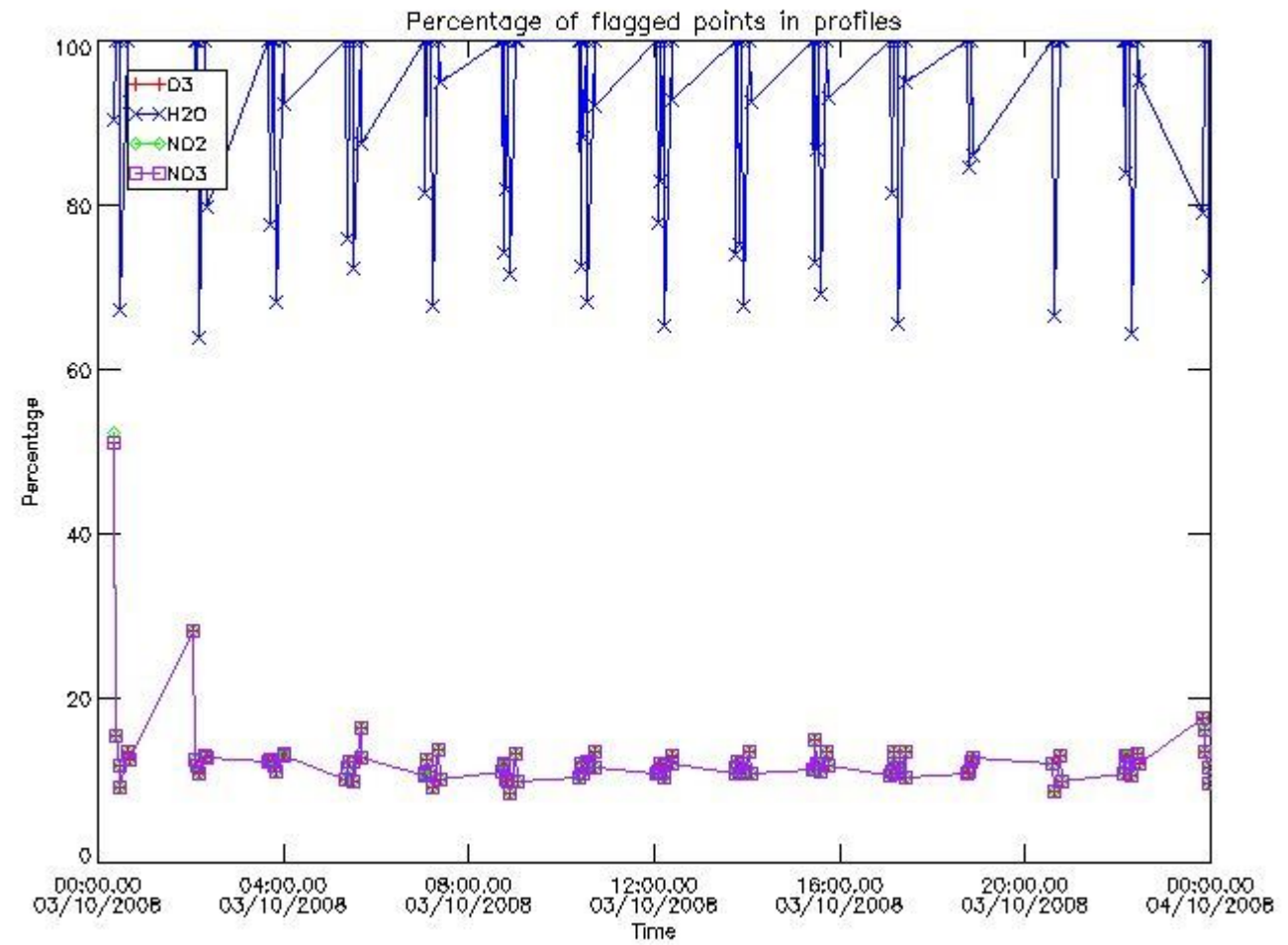


220	GOM_NL__2PRFIN20081003_203641_000000592072_00358_34480_1387.N1	03-OCT-2008 20:36:41	Dark	58.500	2	Alp Car	-0.73600	7000.0	117	34480	No
221	GOM_NL__2PRFIN20081003_204545_000000392072_00358_34480_1388.N1	03-OCT-2008 20:45:45	Dark	39.000	143	Alp Hyi	2.8570	7200.0	78	34480	No
222	GOM_NL__2PRFIN20081003_204713_000000512072_00358_34480_1389.N1	03-OCT-2008 20:47:13	Dark	50.500	9	Alp Eri	0.45300	24000.	101	34480	No
223	GOM_NL__2PRFIN20081003_205230_000000402072_00358_34480_1390.N1	03-OCT-2008 20:52:30	Straylight	40.000	84	Alp Phe	2.3970	4500.0	80	34480	No
224	GOM_NL__2PRFIN20081003_205920_000000482072_00358_34480_1391.N1	03-OCT-2008 20:59:20	Straylight	47.500	52	16Bet Cet	2.0370	4500.0	95	34480	No
225	GOM_NL__2PRFIN20081003_210927_000000362072_00358_34480_1392.N1	03-OCT-2008 21:09:27	Bright	36.000	90	54Alp Peg	2.4870	11000.	72	34480	No
226	GOM_NL__2PRFIN20081003_211303_000000382072_00358_34480_1393.N1	03-OCT-2008 21:13:03	Bright	37.500	93	53Bet Peg	2.5200	3100.0	75	34480	No
227	GOM_NL__2PRFIN20081003_212217_000000382072_00358_34480_1394.N1	03-OCT-2008 21:22:17	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34480	No
228	GOM_NL__2PRFIN20081003_212331_000000402072_00358_34480_1395.N1	03-OCT-2008 21:23:31	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34480	No
229	GOM_NL__2PRFIN20081003_213024_000000372072_00358_34480_1396.N1	03-OCT-2008 21:30:24	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	34480	No
230	GOM_NL__2PRFIN20081003_213826_000000362072_00358_34480_1397.N1	03-OCT-2008 21:38:26	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	34480	No
231	GOM_NL__2PRFIN20081003_213957_000000362072_00358_34480_1398.N1	03-OCT-2008 21:39:57	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	34480	No
232	GOM_NL__2PRFIN20081003_214953_000000372072_00358_34480_1399.N1	03-OCT-2008 21:49:53	Bright	36.500	166	17Eps Leo	2.9800	6000.0	73	34480	No
233	GOM_NL__2PRFIN20081003_215258_000000352072_00358_34480_1400.N1	03-OCT-2008 21:52:58	Bright	34.500	22	32Alp Leo	1.3600	15200.	69	34480	No
234	GOM_NL__2PRFIN20081003_215936_000000462072_00358_34480_1401.N1	03-OCT-2008 21:59:36	Twilight	46.000	48	30Alp Hya	1.9770	4100.0	92	34480	No
235	GOM_NL__2PRFIN20081003_220702_000000472072_00358_34480_1402.N1	03-OCT-2008 22:07:02	Dark	46.500	132	15Rho Pup	2.8030	6900.0	93	34480	No
236	GOM_NL__2PRFIN20081003_220916_000000442072_00358_34480_1403.N1	03-OCT-2008 22:09:16	Dark	44.000	65	Lam Vel	2.2040	4400.0	88	34480	No
237	GOM_NL__2PRFIN20081003_221043_000000402072_00358_34480_1404.N1	03-OCT-2008 22:10:43	Dark	39.500	70	Zet Pup	2.2460	39000.	79	34480	No
238	GOM_NL__2PRFIN20081003_221233_000000392072_00358_34480_1405.N1	03-OCT-2008 22:12:33	Dark	39.000	46	Del Vel	1.9540	10600.	78	34480	No
239	GOM_NL__2PRFIN20081003_221553_000000432072_00359_34481_1403.N1	03-OCT-2008 22:15:53	Dark	42.500	161	Tau Pup	2.9310	4500.0	85	34481	No
240	GOM_NL__2PRFIN20081003_221718_000000482072_00359_34481_1404.N1	03-OCT-2008 22:17:18	Dark	48.000	2	Alp Car	-0.73600	7000.0	96	34481	No
241	GOM_NL__2PRFIN20081003_222621_000000392072_00359_34481_1405.N1	03-OCT-2008 22:26:21	Dark	38.500	143	Alp Hyi	2.8570	7200.0	77	34481	No
242	GOM_NL__2PRFIN20081003_222749_000000432072_00359_34481_1406.N1	03-OCT-2008 22:27:49	Dark	42.500	9	Alp Eri	0.45300	24000.	85	34481	No
243	GOM_NL__2PRFIN20081003_223306_000000422072_00359_34481_1407.N1	03-OCT-2008 22:33:06	Straylight	42.000	84	Alp Phe	2.3970	4500.0	84	34481	No
244	GOM_NL__2PRFIN20081003_223956_000000482072_00359_34481_1408.N1	03-OCT-2008 22:39:56	Straylight	47.500	52	16Bet Cet	2.0370	4500.0	95	34481	No
245	GOM_NL__2PRFIN20081003_225003_000000372072_00359_34481_1409.N1	03-OCT-2008 22:50:03	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	34481	No
246	GOM_NL__2PRFIN20081003_225339_000000382072_00359_34481_1410.N1	03-OCT-2008 22:53:39	Bright	37.500	93	53Bet Peg	2.5200	3100.0	75	34481	No
247	GOM_NL__2PRFIN20081003_230252_000000382072_00359_34481_1411.N1	03-OCT-2008 23:02:52	Bright	37.500	74	11Bet Cas	2.2680	6600.0	75	34481	No
248	GOM_NL__2PRFIN20081003_230407_000000402072_00359_34481_1412.N1	03-OCT-2008 23:04:07	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	34481	No
249	GOM_NL__2PRFIN20081003_231100_000000352072_00359_34481_1413.N1	03-OCT-2008 23:11:00	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	34481	No
250	GOM_NL__2PRFIN20081003_231902_000000372072_00359_34481_1414.N1	03-OCT-2008 23:19:02	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	34481	No
251	GOM_NL__2PRFIN20081003_232033_000000342072_00359_34481_1415.N1	03-OCT-2008 23:20:33	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	34481	No
252	GOM_NL__2PRFIN20081003_233029_000000382072_00359_34481_1416.N1	03-OCT-2008 23:30:29	Bright	37.500	166	17Eps Leo	2.9800	6000.0	75	34481	No
253	GOM_NL__2PRFIN20081003_233334_000000352072_00359_34481_1417.N1	03-OCT-2008 23:33:34	Bright	34.500	22	32Alp Leo	1.3600	15200.	69	34481	No
254	GOM_NL__2PRFIN20081003_234013_000000462072_00359_34481_1418.N1	03-OCT-2008 23:40:13	Twilight	46.000	48	30Alp Hya	1.9770	4100.0	92	34481	No
255	GOM_NL__2PRFIN20081003_234953_000000442072_00359_34481_1419.N1	03-OCT-2008 23:49:53	Dark	43.500	65	Lam Vel	2.2040	4400.0	87	34481	No
256	GOM_NL__2PRFIN20081003_235120_000000412072_00359_34481_1420.N1	03-OCT-2008 23:51:20	Dark	41.000	70	Zet Pup	2.2460	39000.	82	34481	No
257	GOM_NL__2PRFIN20081003_235309_000000382072_00359_34481_1421.N1	03-OCT-2008 23:53:09	Dark	37.500	46	Del Vel	1.9540	10600.	75	34481	No
258	GOM_NL__2PRFIN20081003_235630_000000452072_00360_34482_1415.N1	03-OCT-2008 23:56:30	Dark	44.500	161	Tau Pup	2.9310	4500.0	89	34482	No
259	GOM_NL__2PRFIN20081003_235754_000000582072_00360_34482_1416.N1	03-OCT-2008 23:57:54	Dark	58.000	2	Alp Car	-0.73600	7000.0	116	34482	No

### 3. Quality information per product

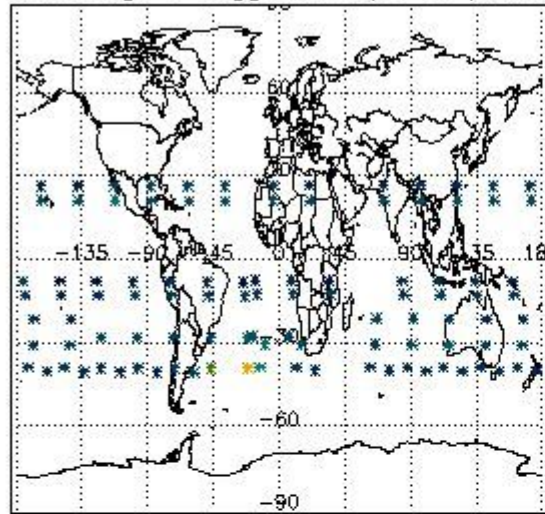
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

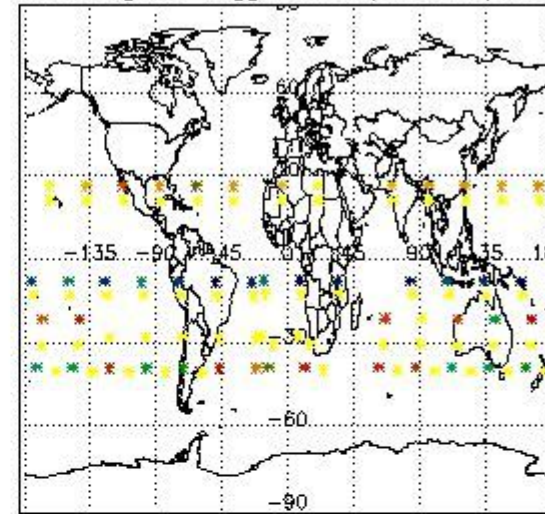


3.2 Plot quality information per product (world map)

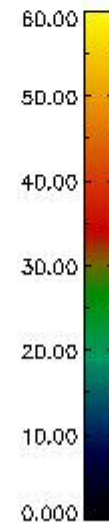
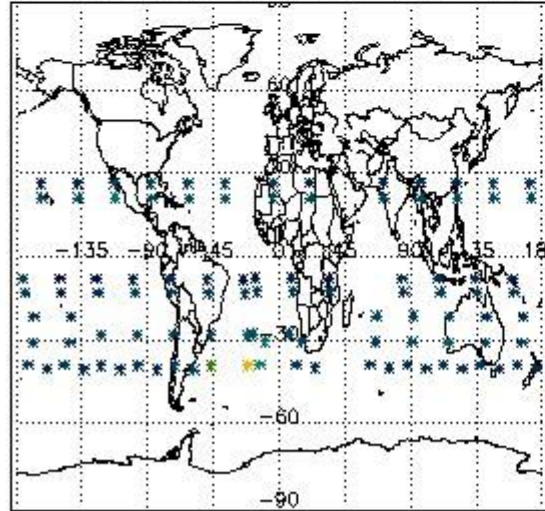
Percentage of flagged data per O3 profile



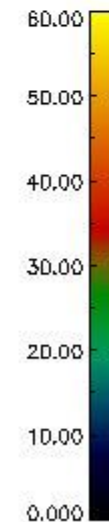
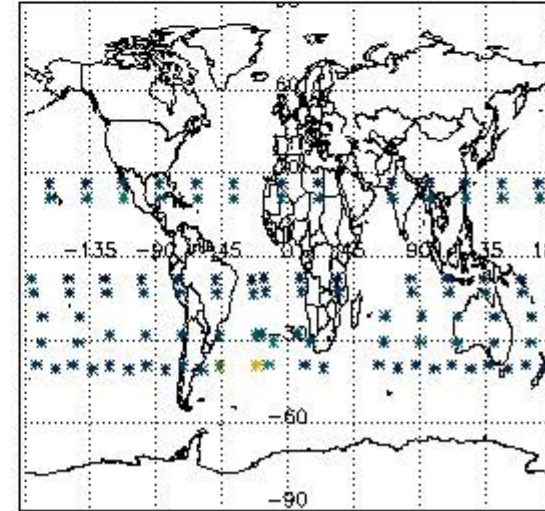
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

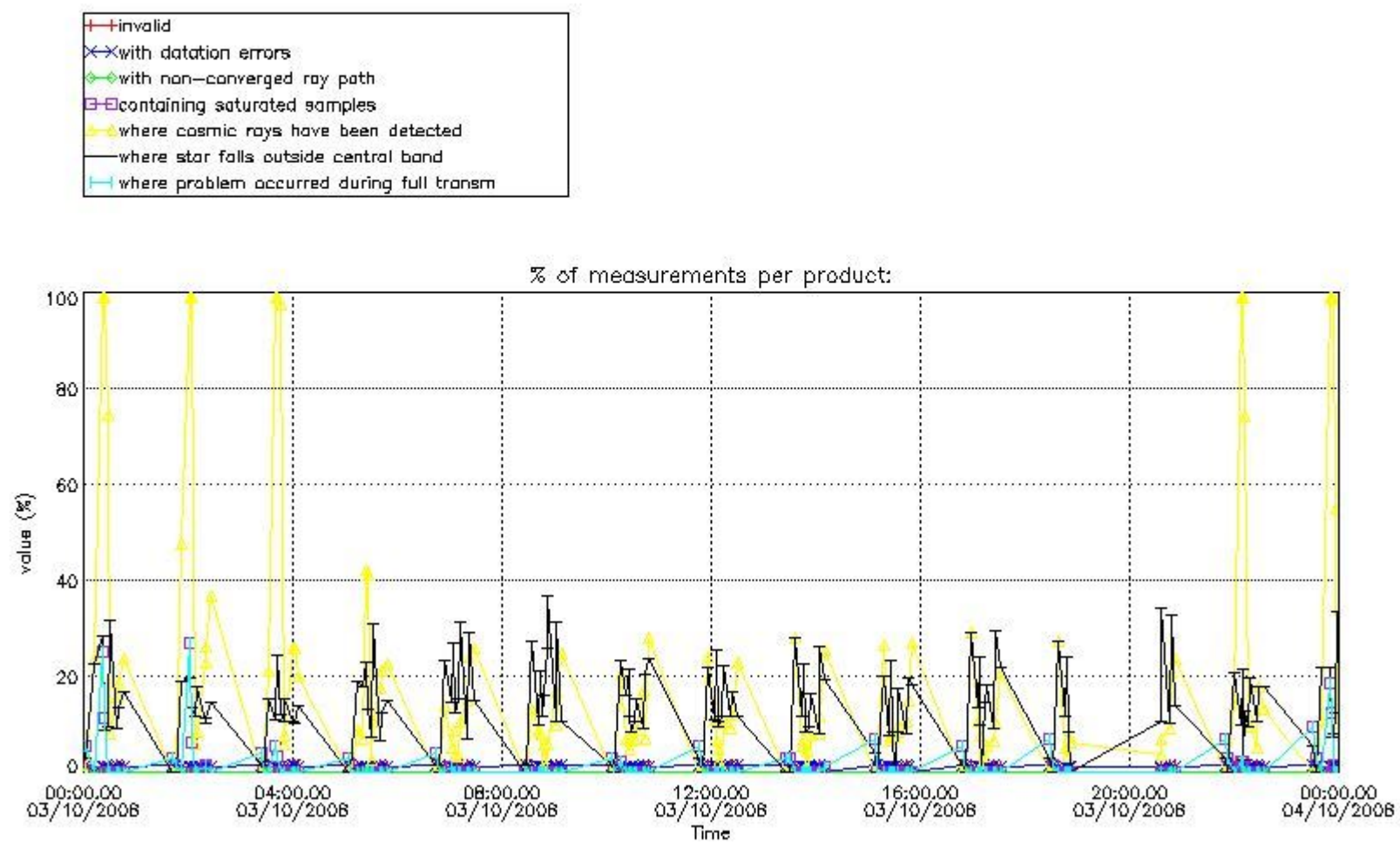


#### 4. Level 1 quality information per product

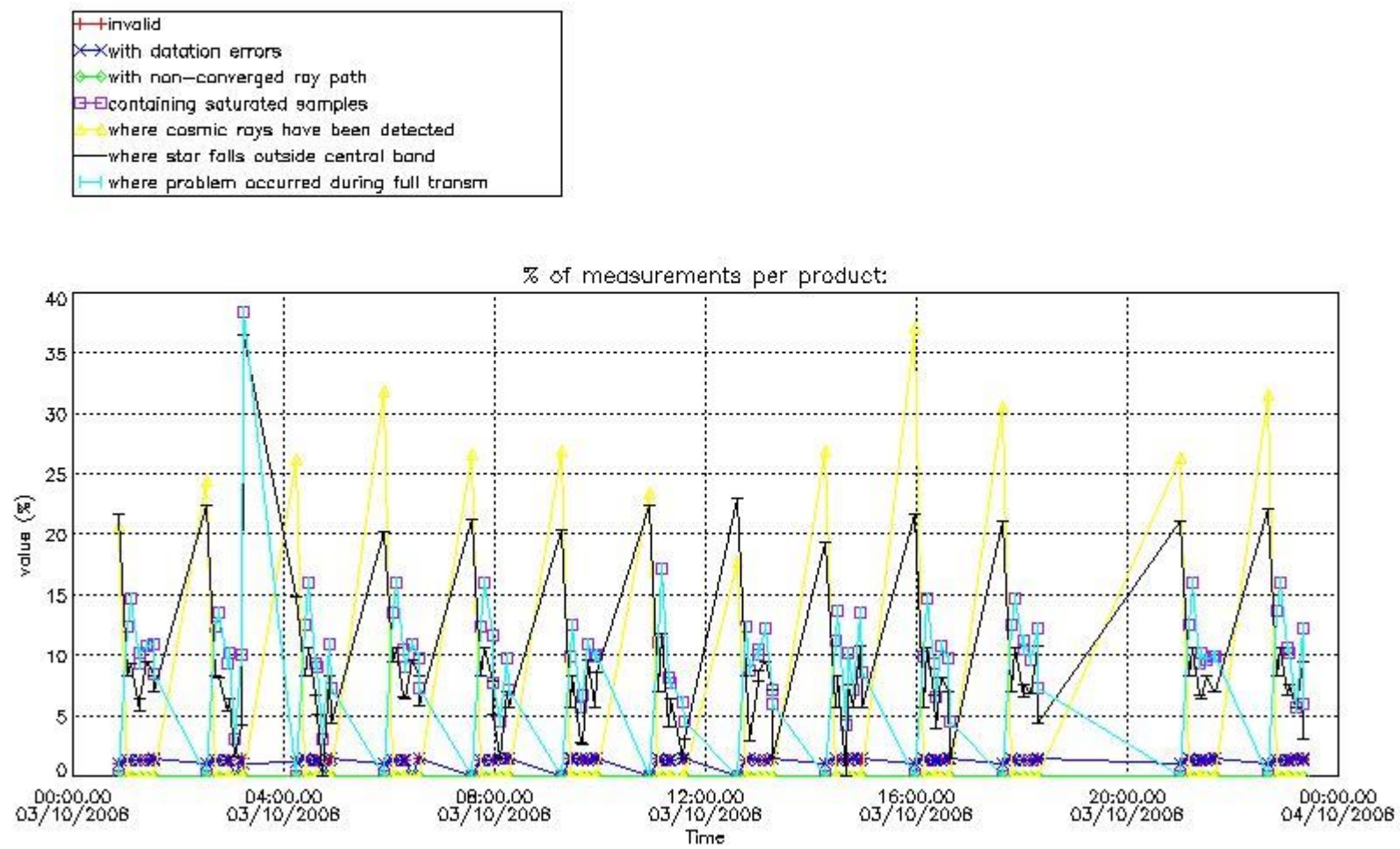
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



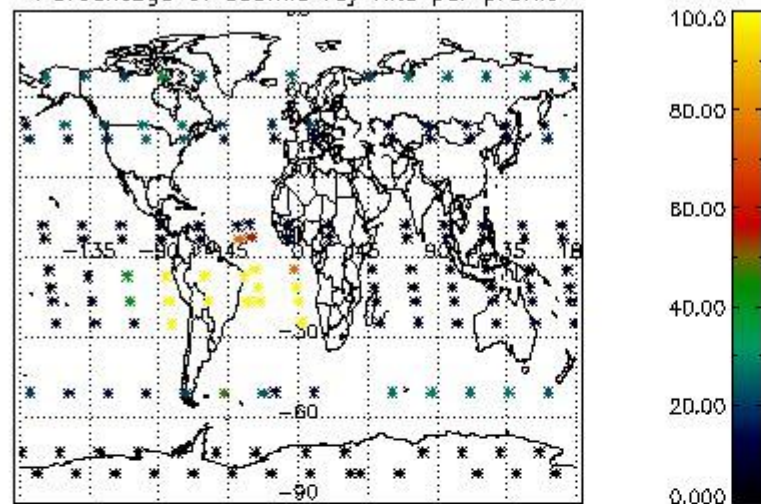
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



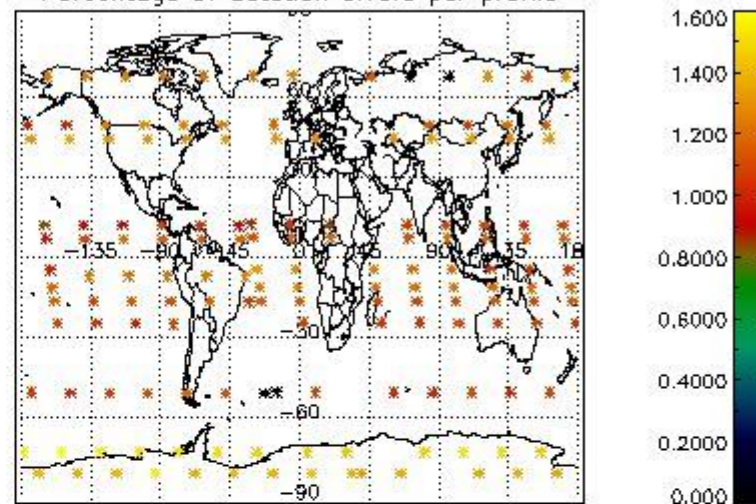
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

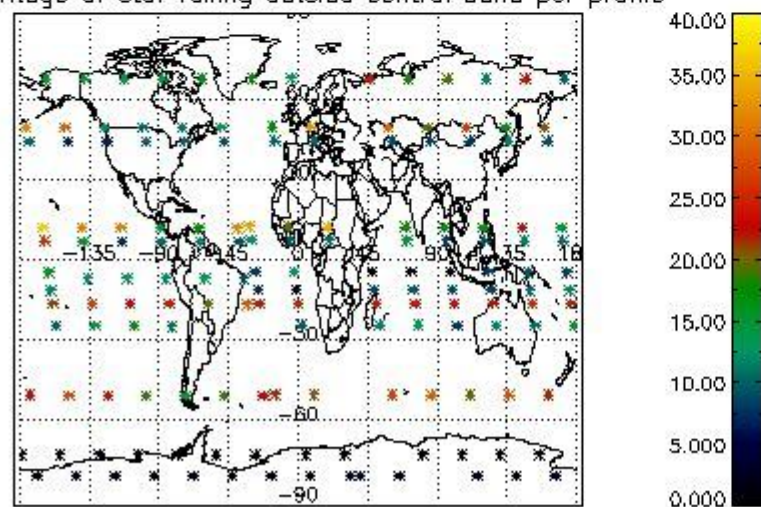
Percentage of cosmic ray hits per profile



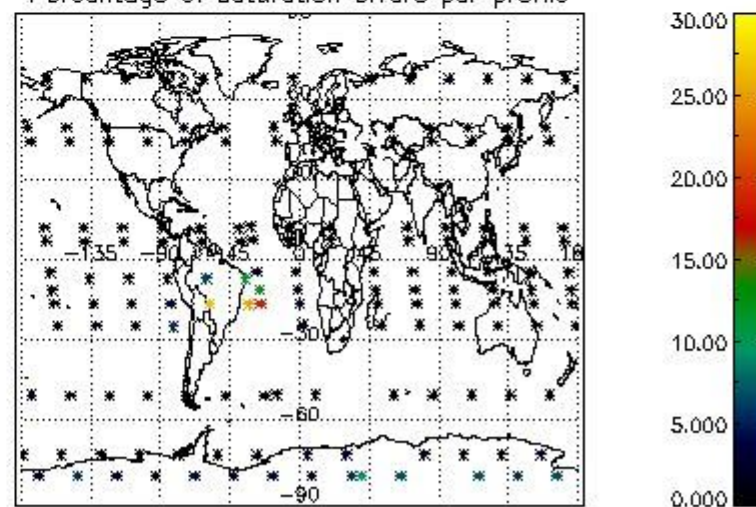
Percentage of datation errors per profile



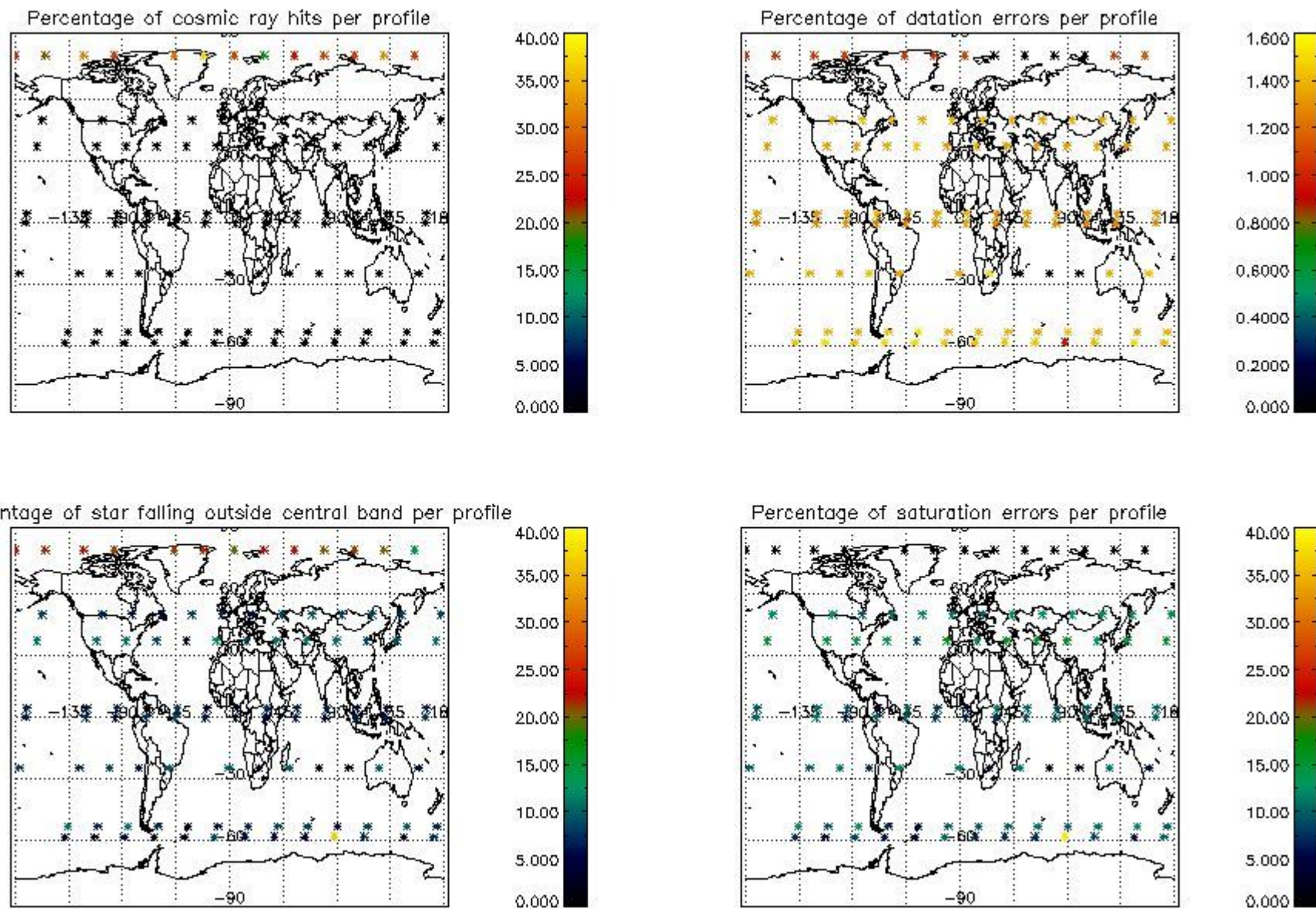
Percentage of star falling outside central band per profile



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

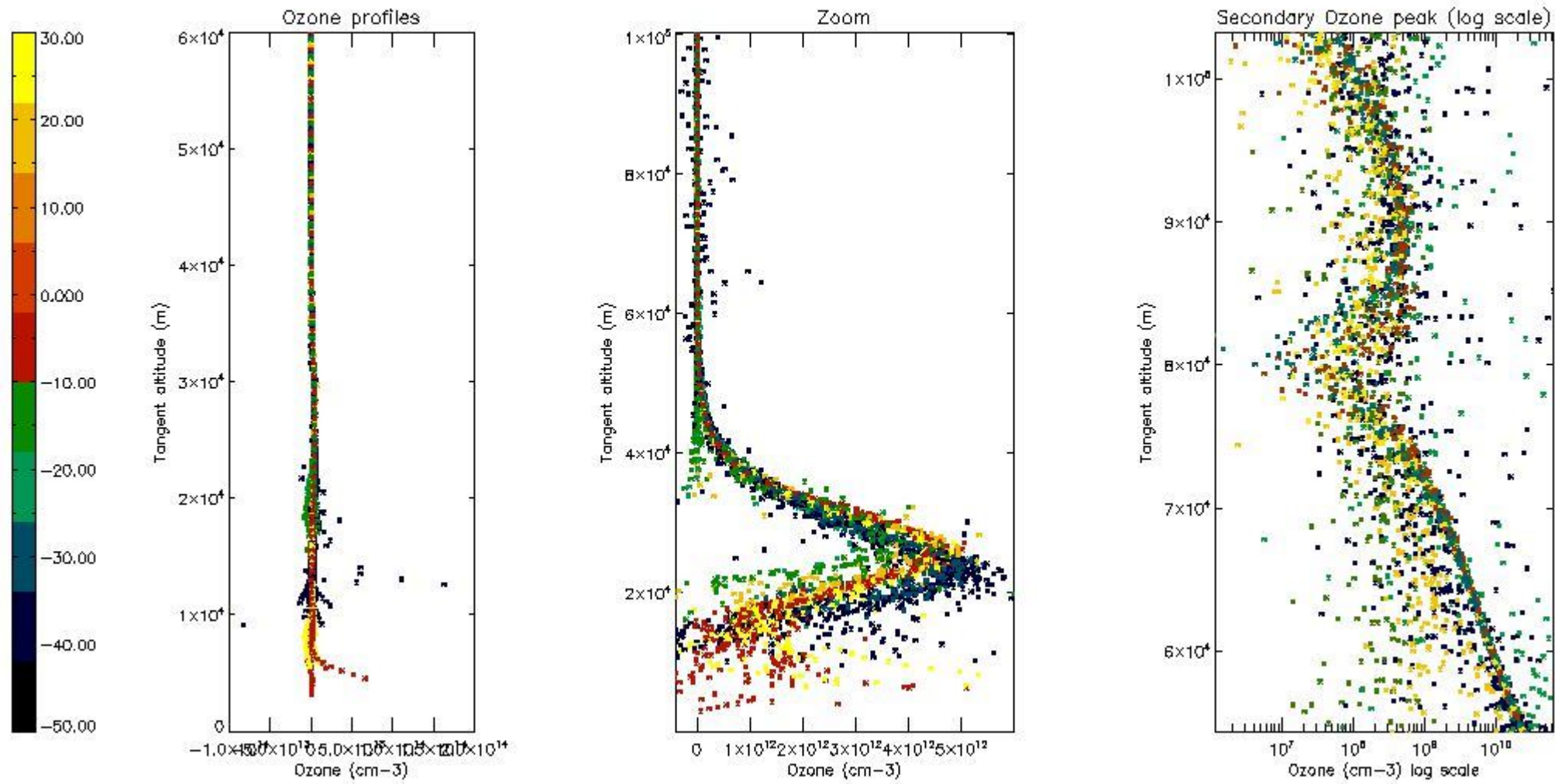
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	44
STD < 20	21

STD < 10	14
STD < 5	10

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

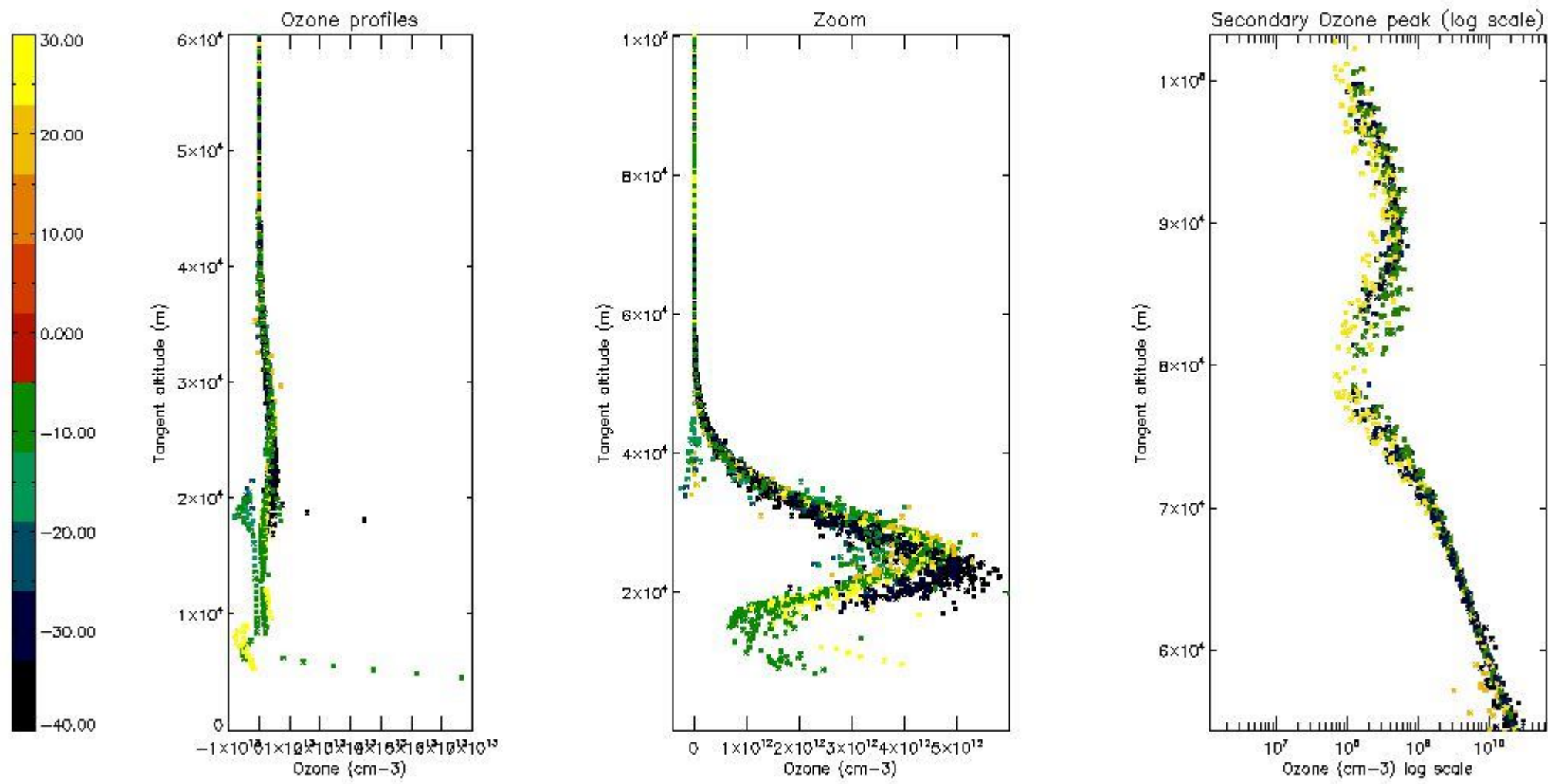
The colorbar represents the latitude.



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

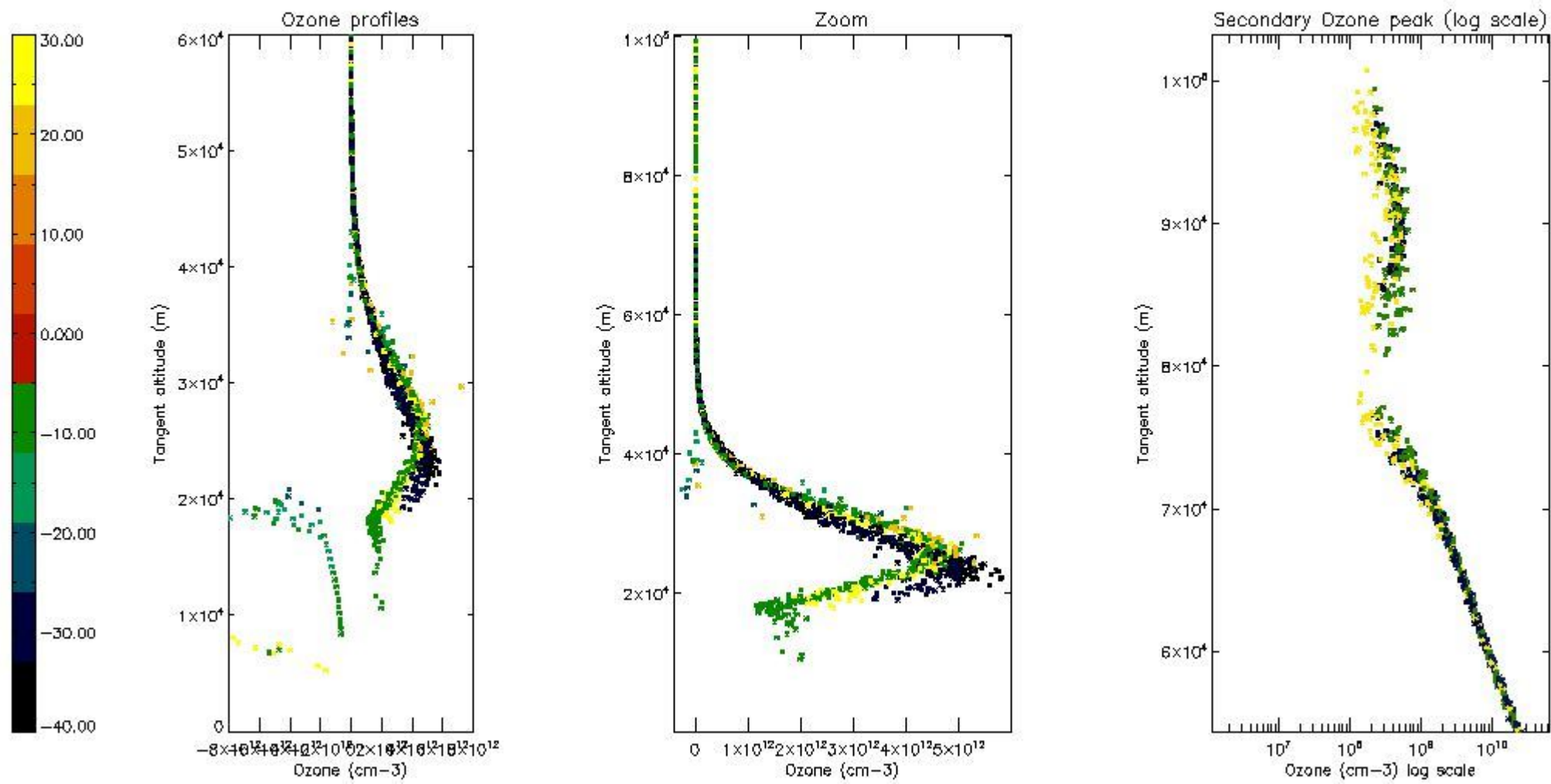
The colorbar represents the latitude.





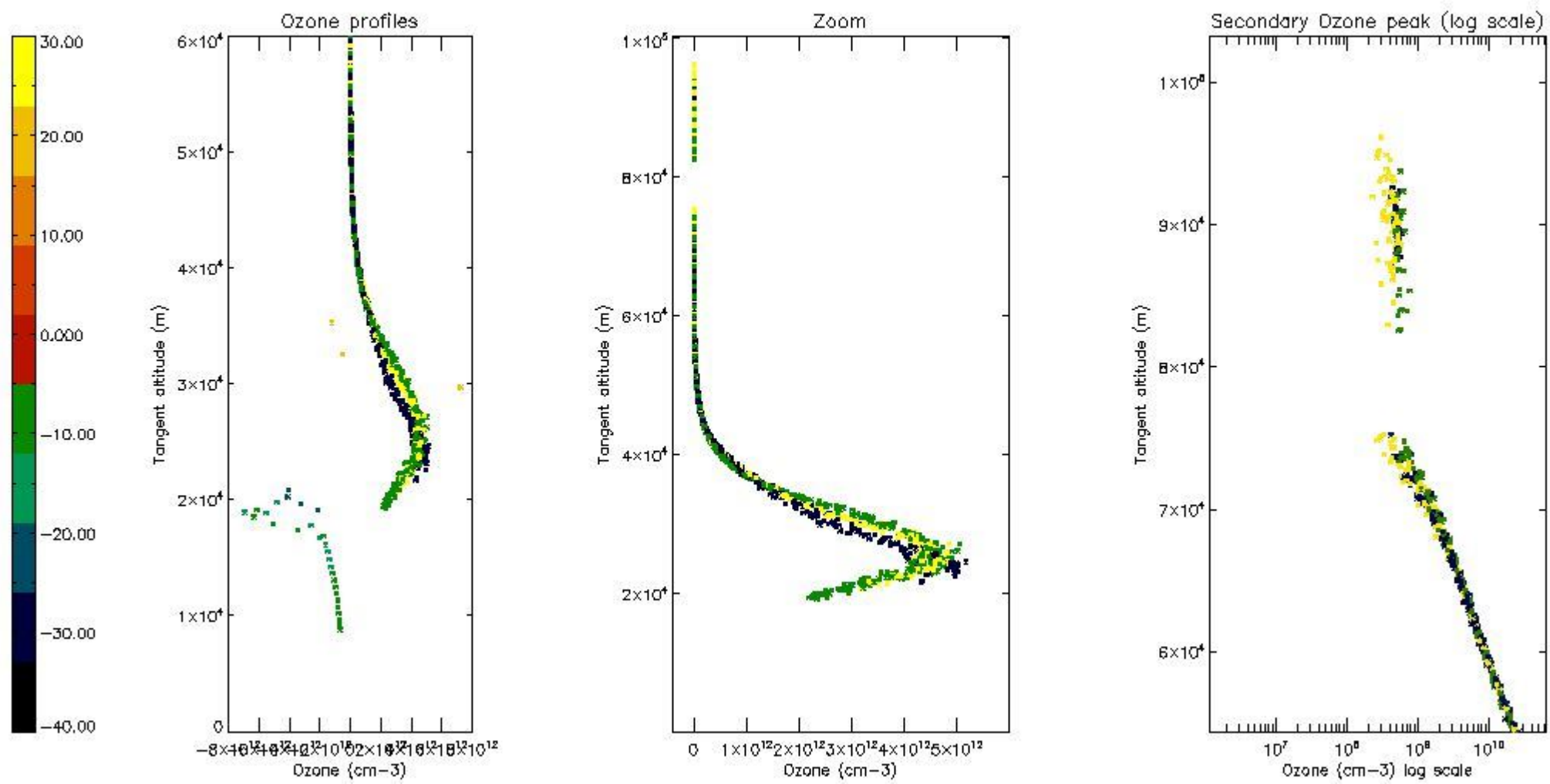
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



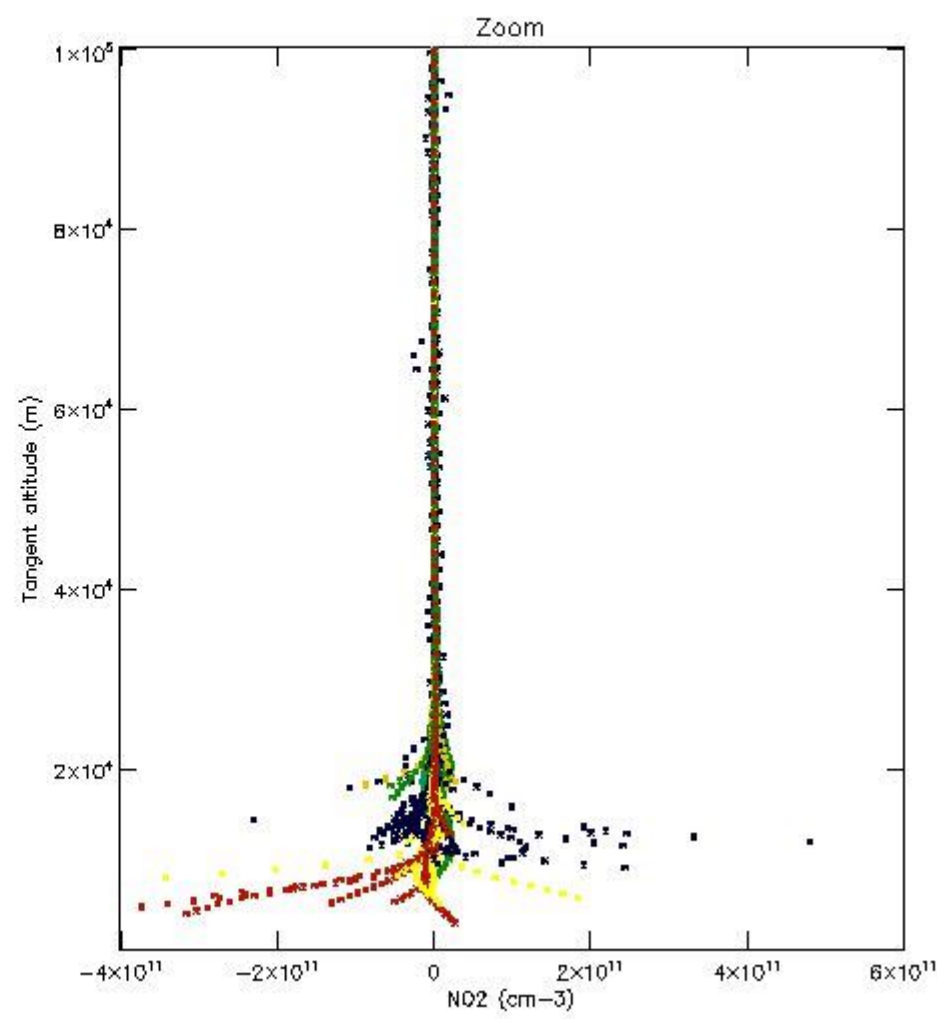
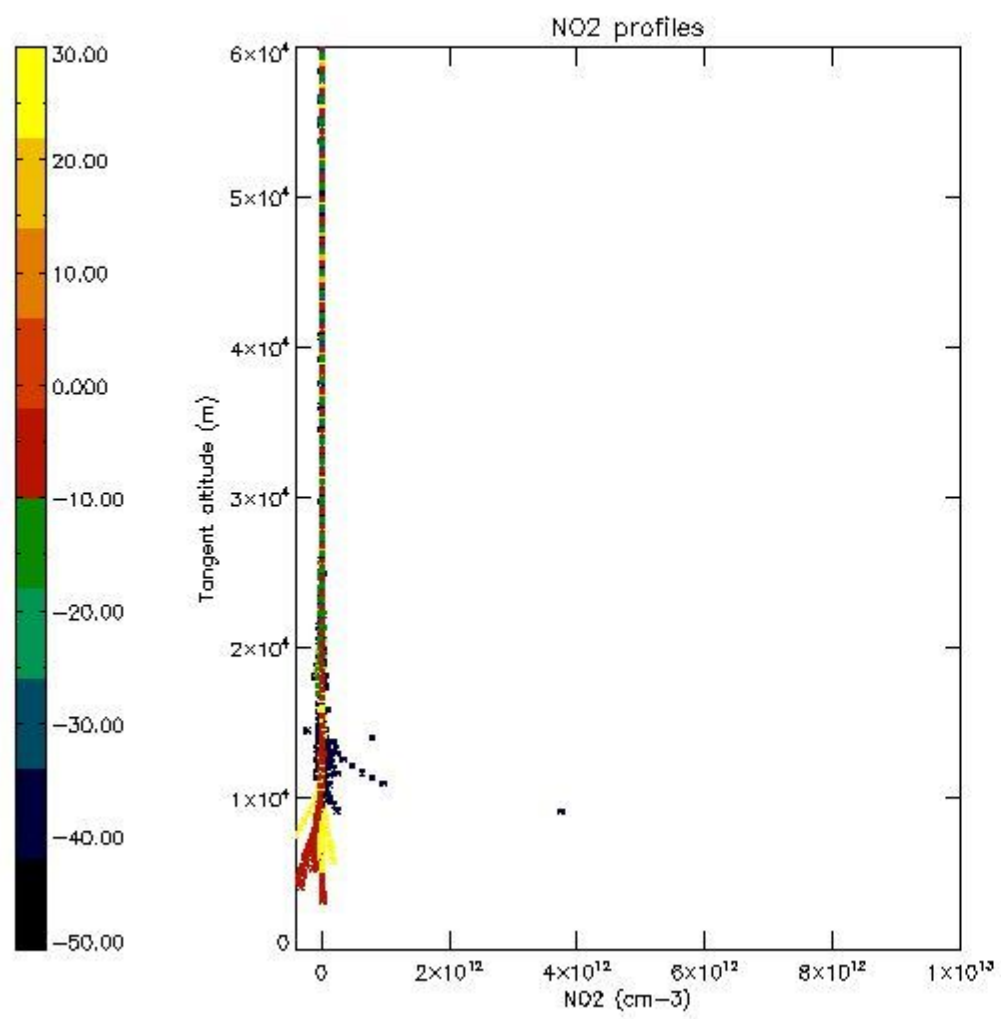
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



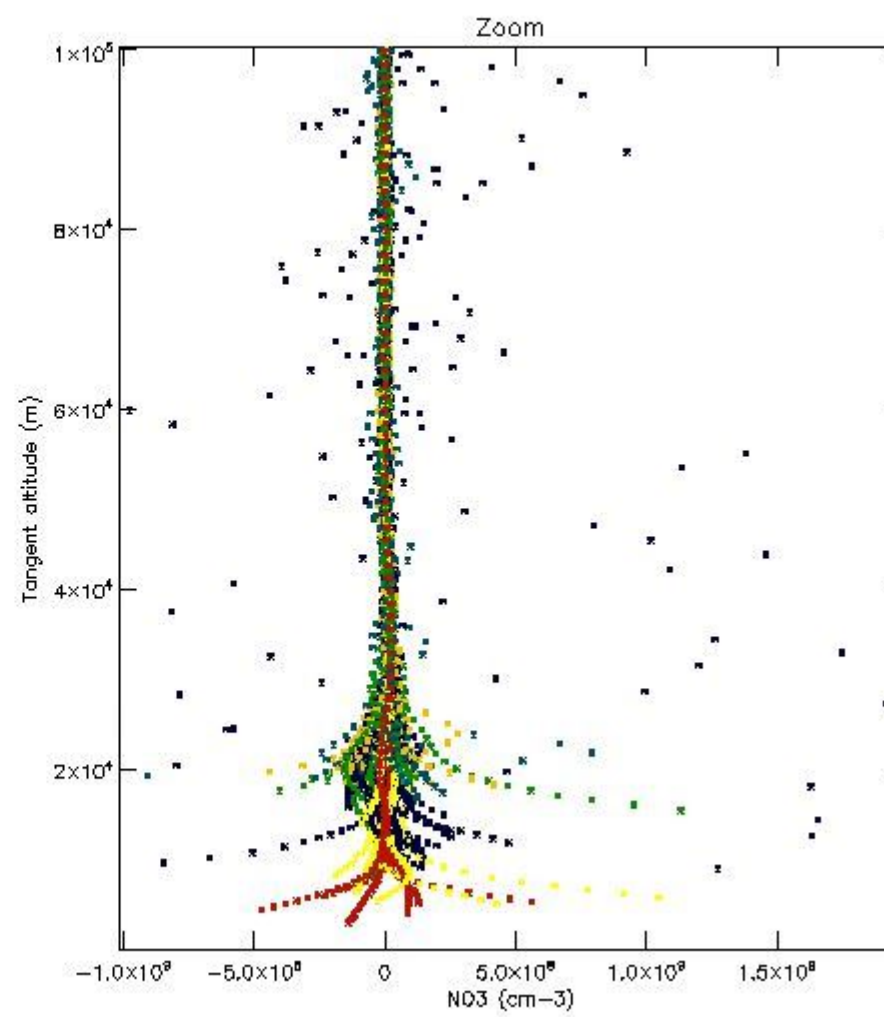
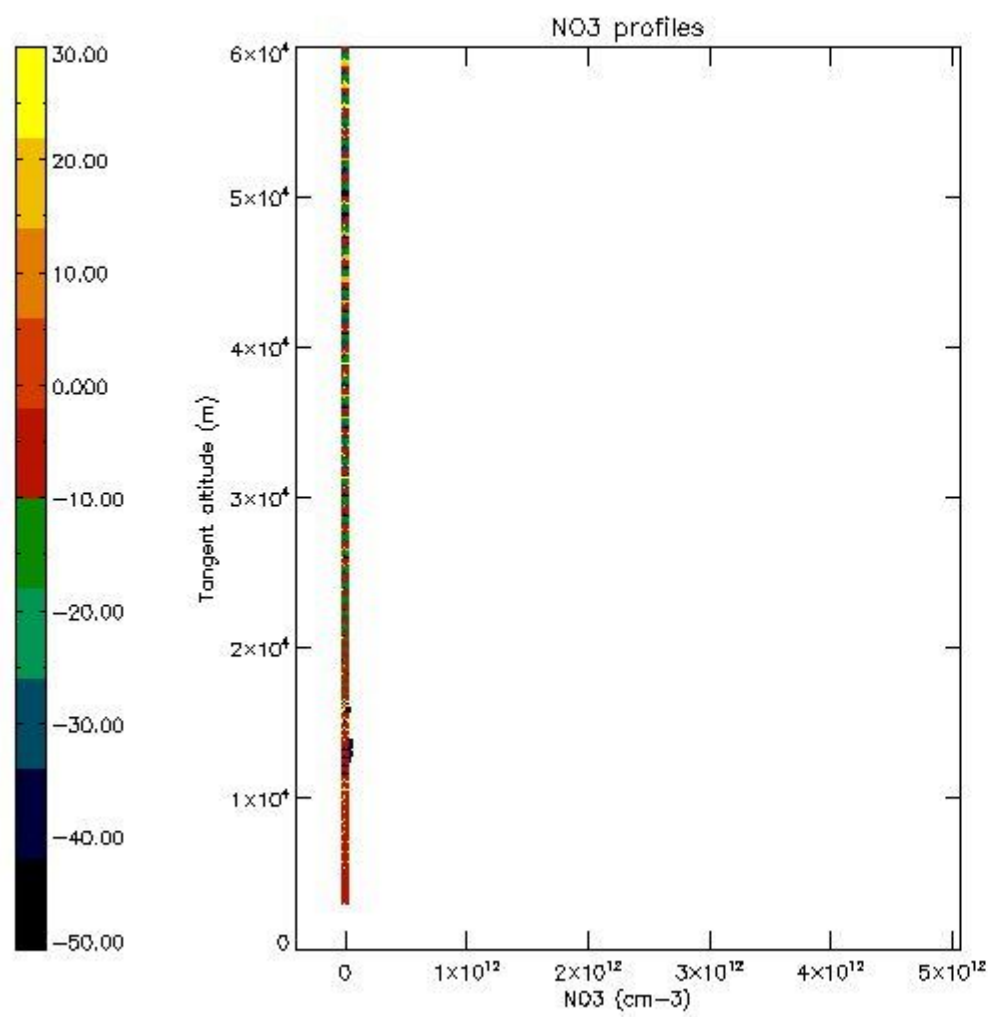
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



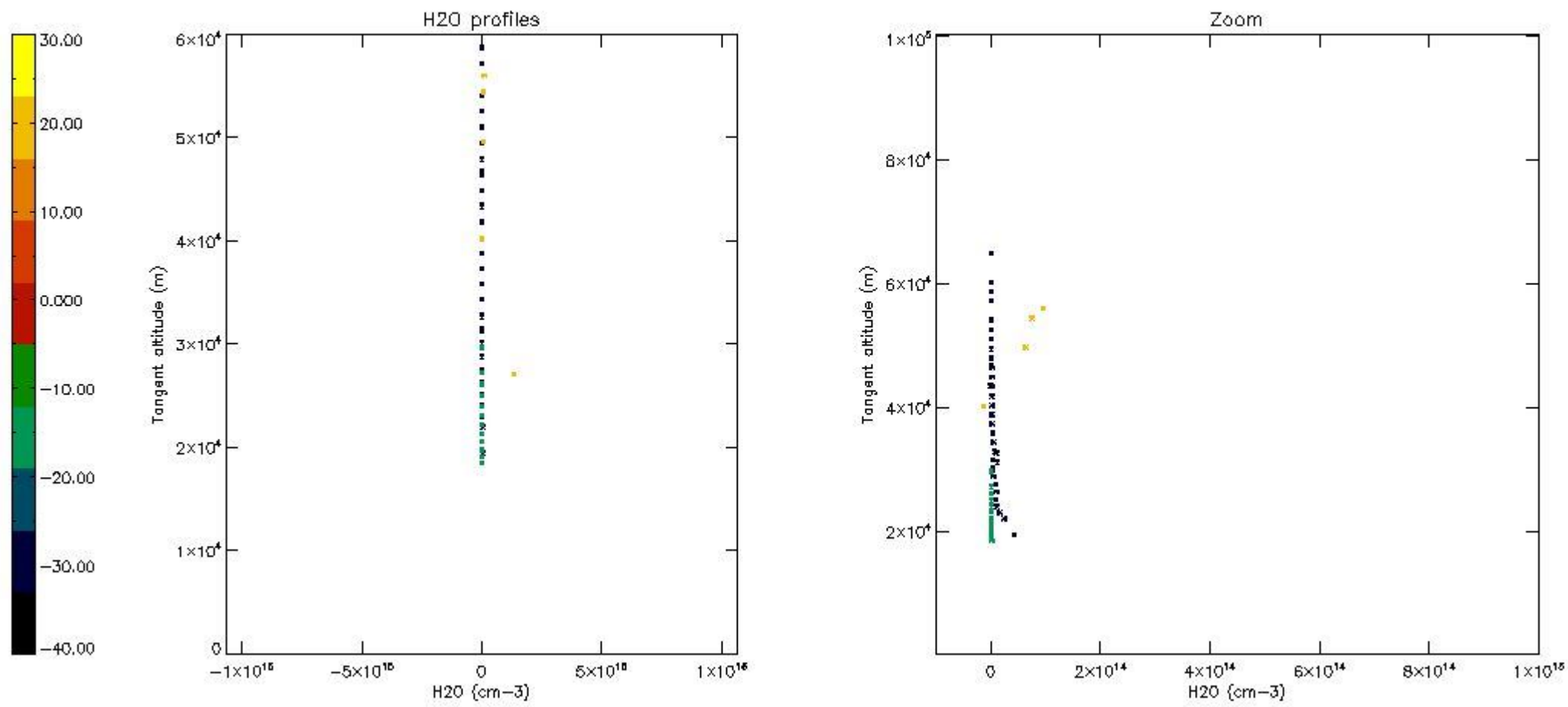
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

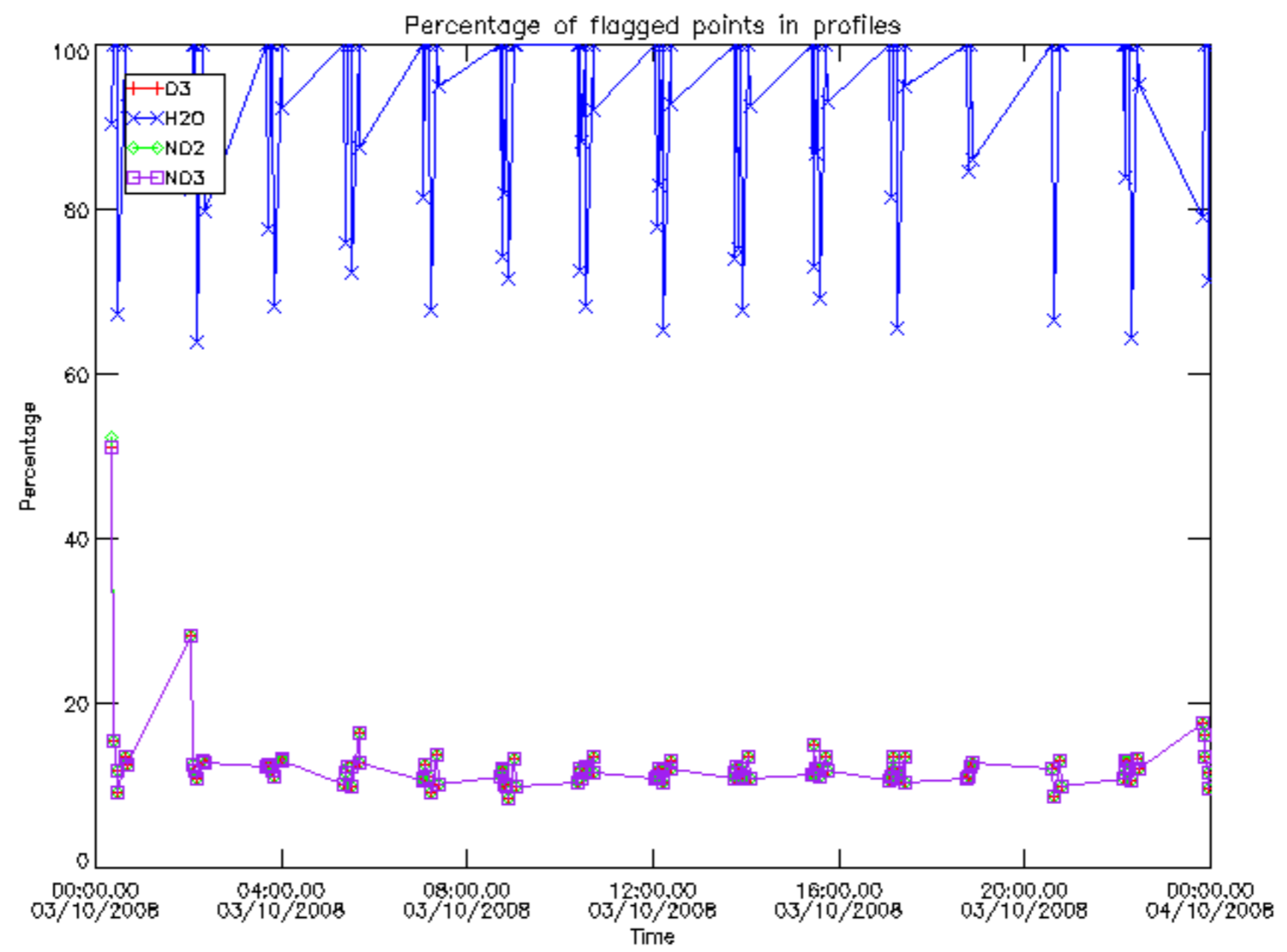
The colorbar represents the latitude.



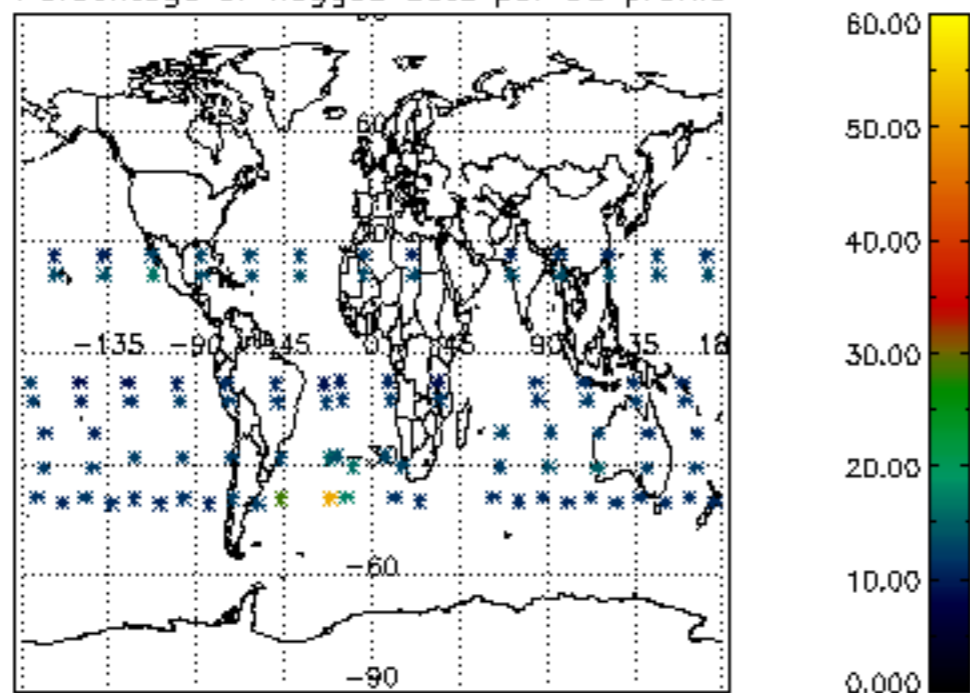
## 6. Auxiliary Data Files used for the production reported in section 2

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

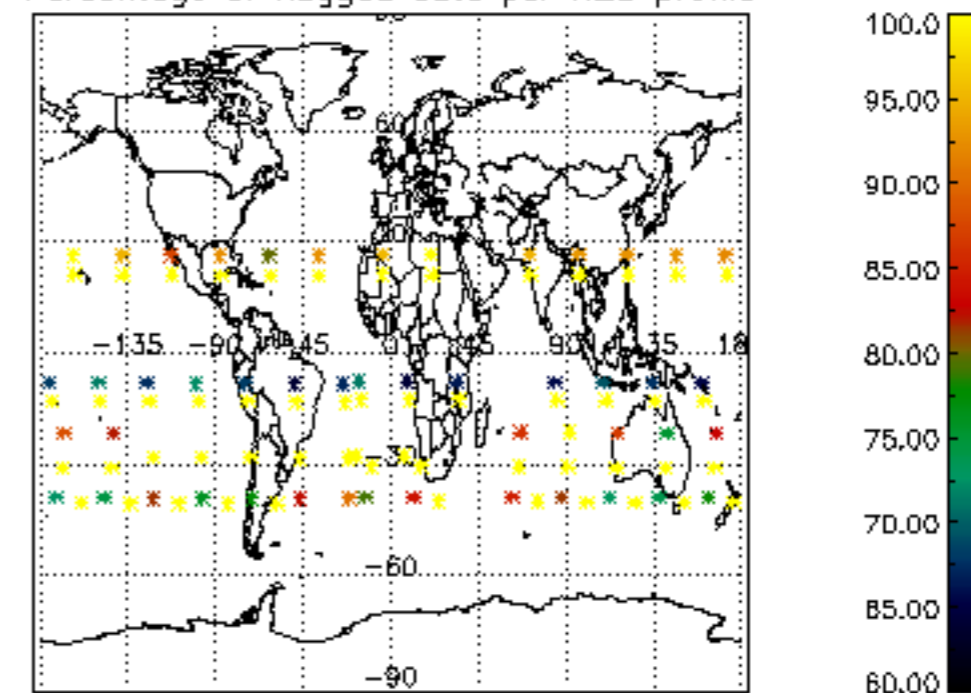
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	03-OCT-2008 00:02:03
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-OCT-2008 00:02:03
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-OCT-2008 00:02:03



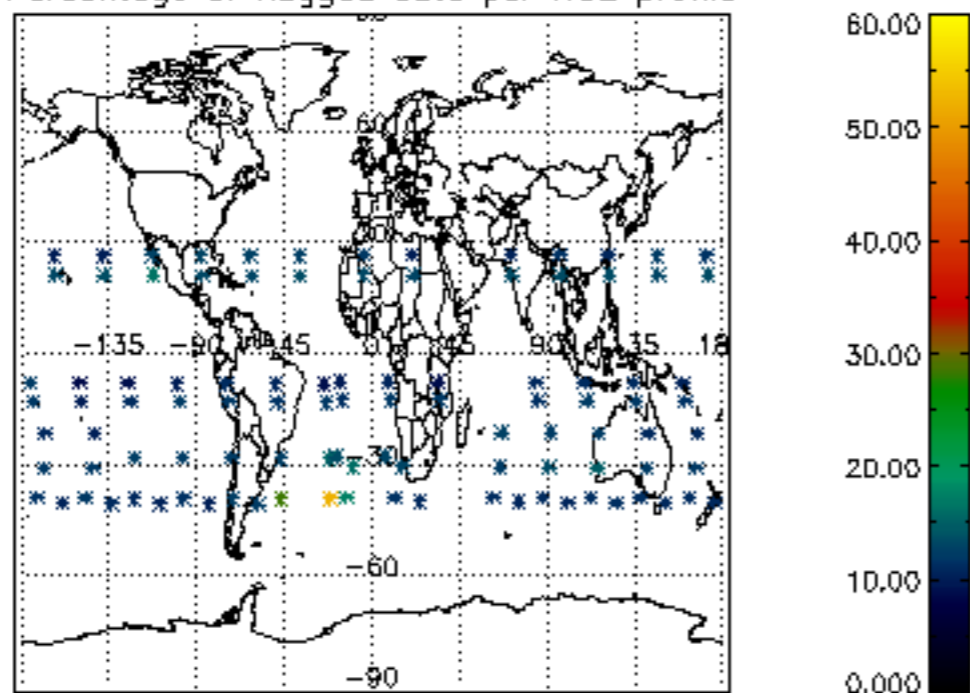
Percentage of flagged data per D3 profile



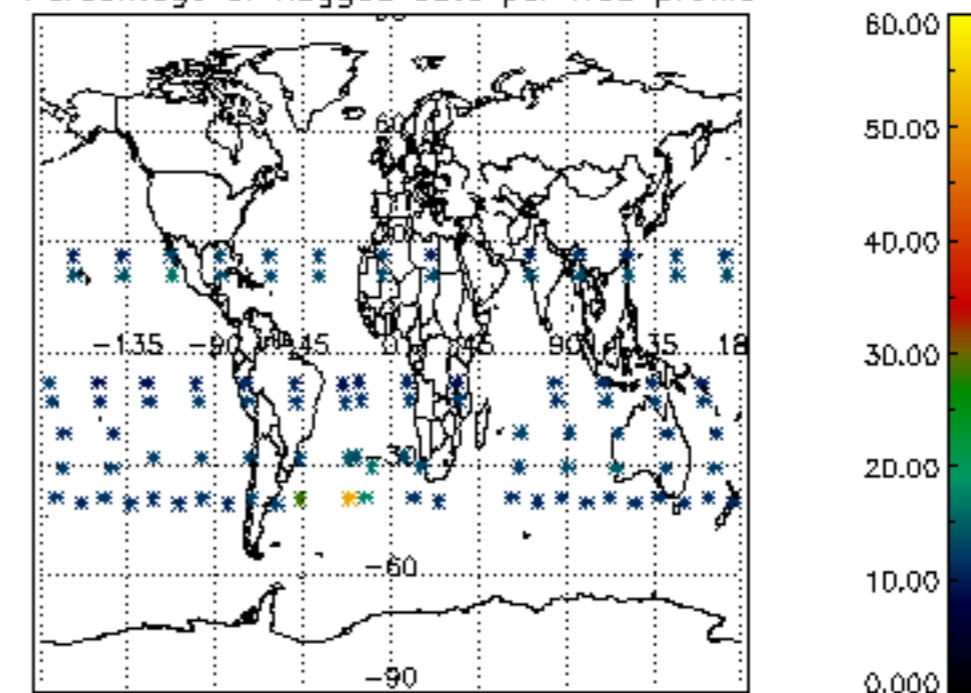
Percentage of flagged data per H2O profile



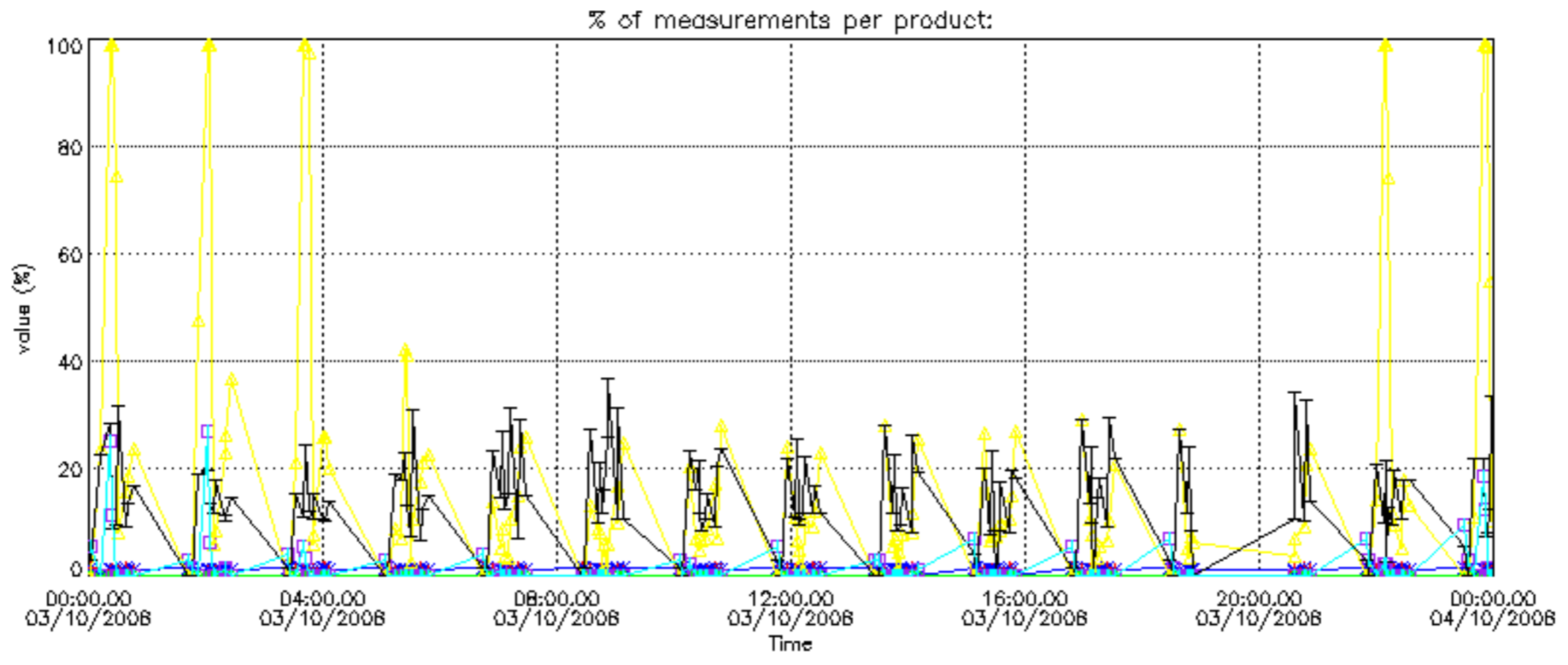
Percentage of flagged data per NO2 profile

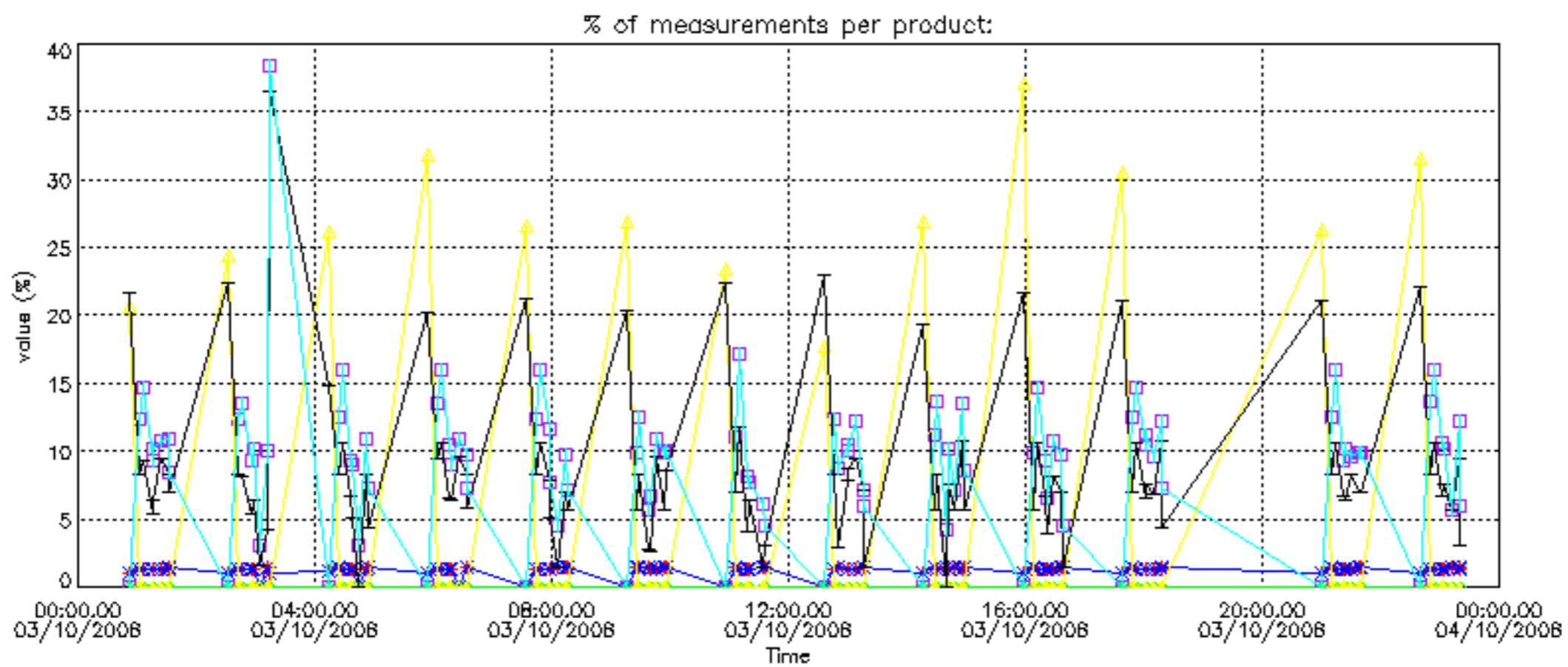


Percentage of flagged data per NO3 profile

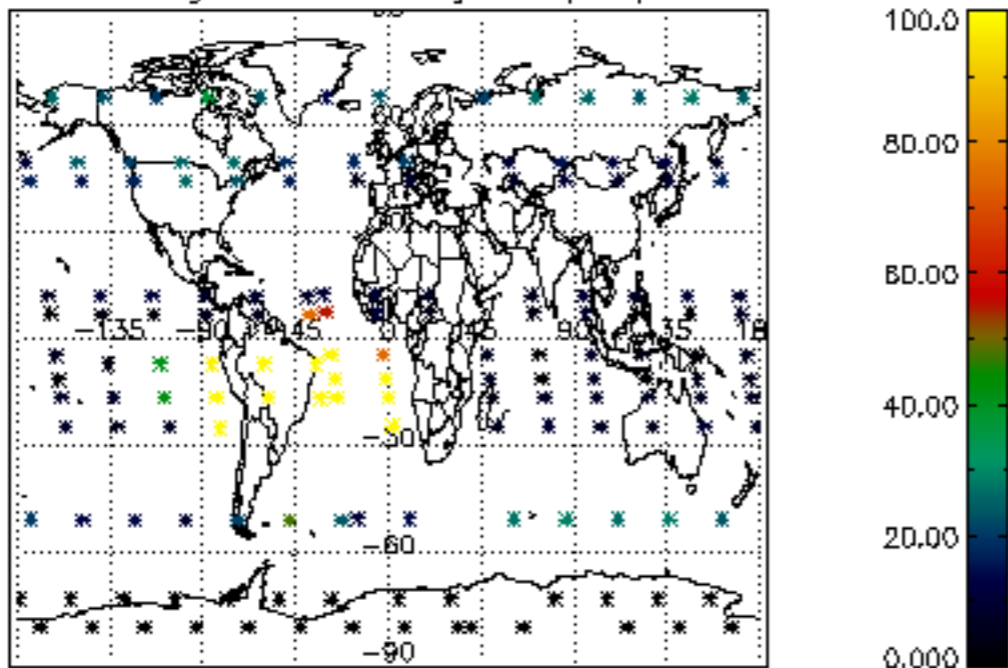




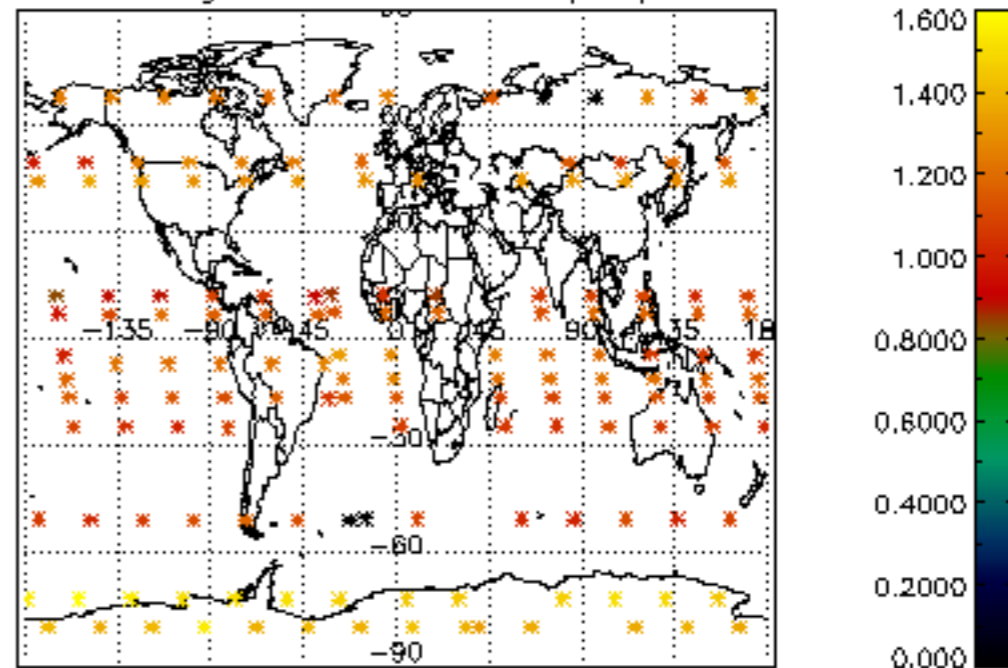




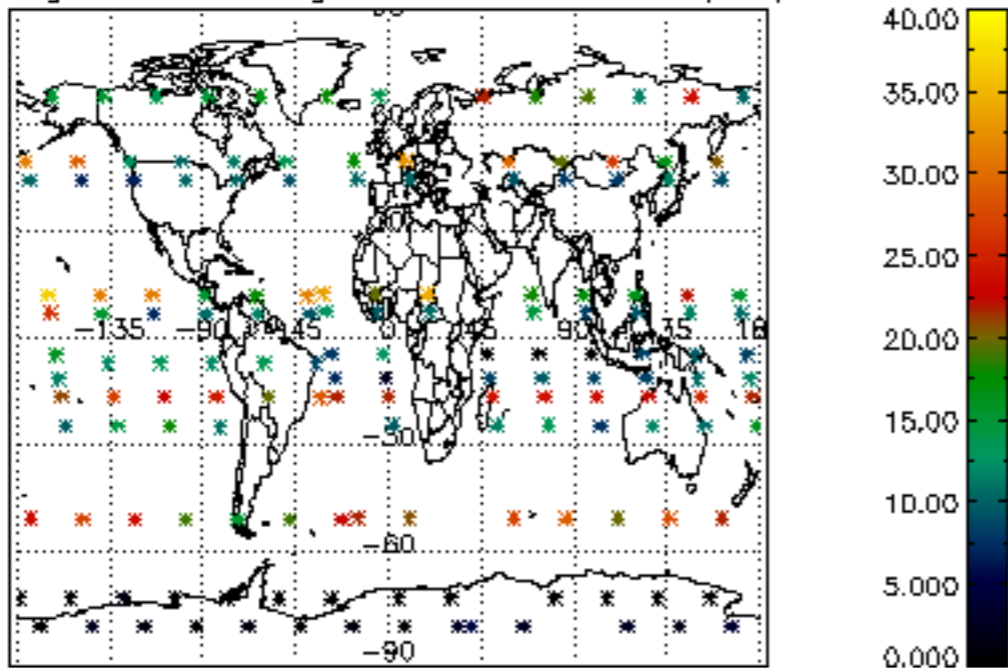
Percentage of cosmic ray hits per profile



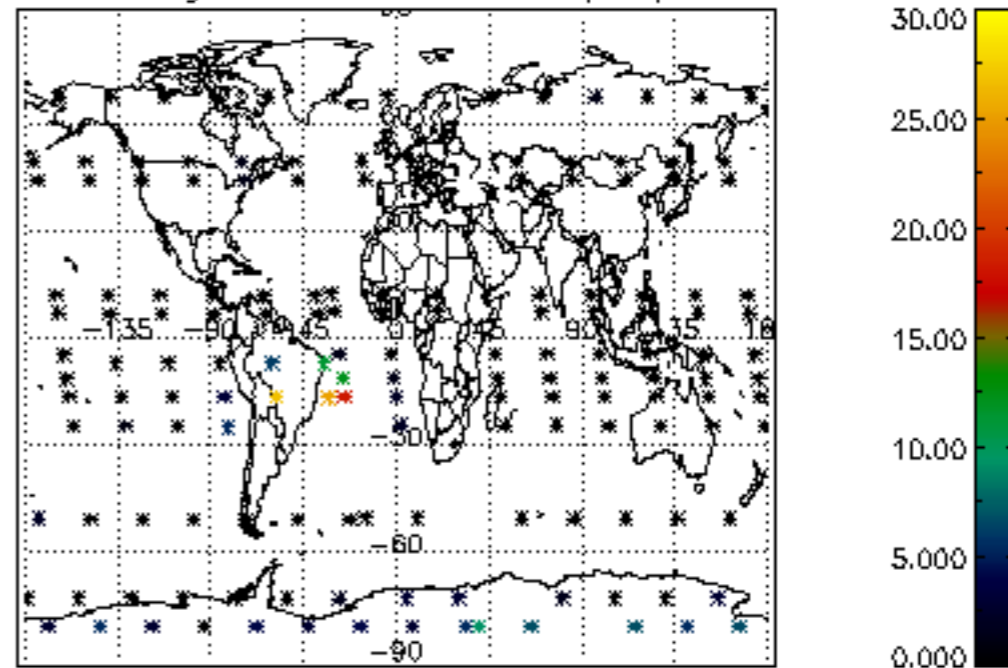
Percentage of datation errors per profile



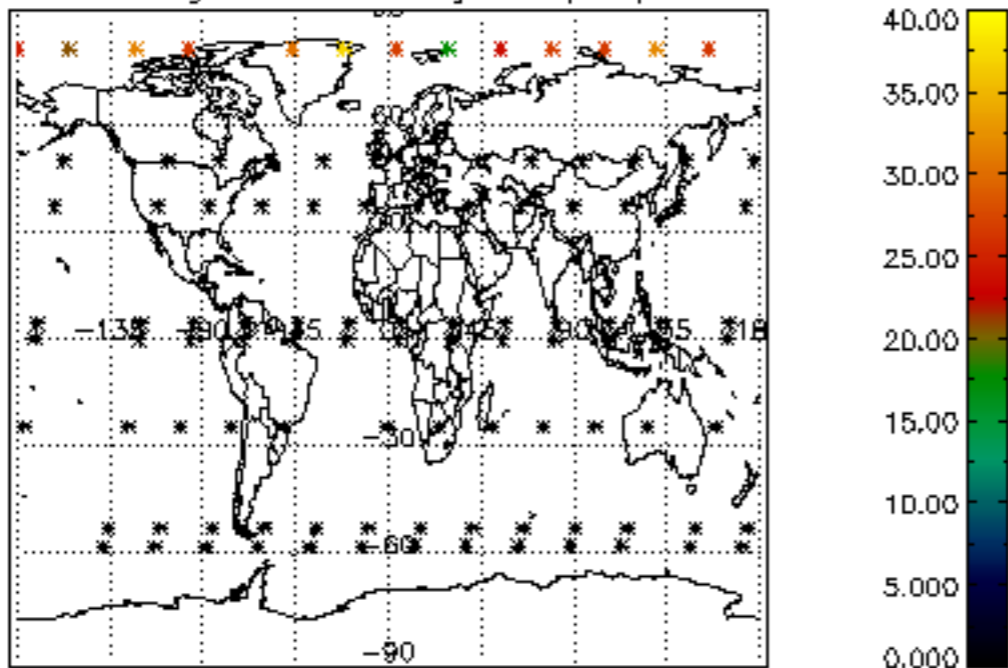
Percentage of star falling outside central band per profile



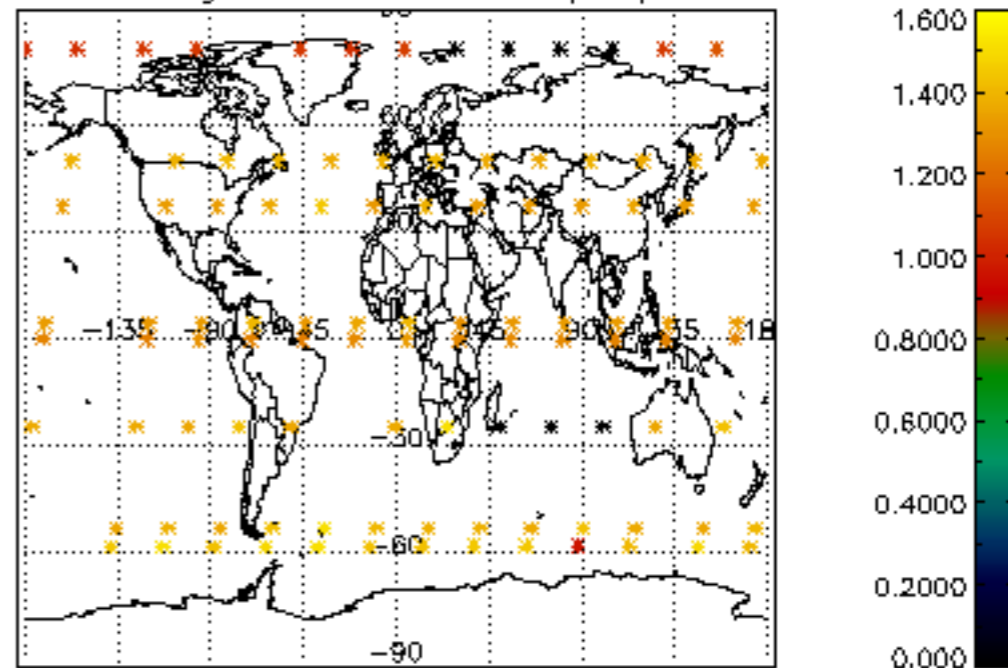
Percentage of saturation errors per profile



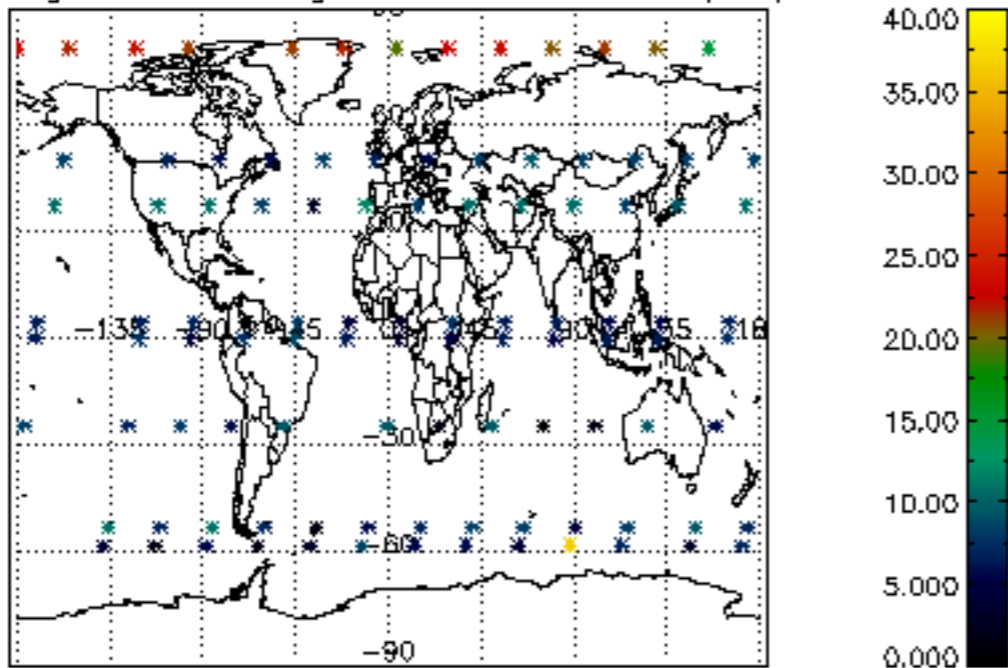
Percentage of cosmic ray hits per profile



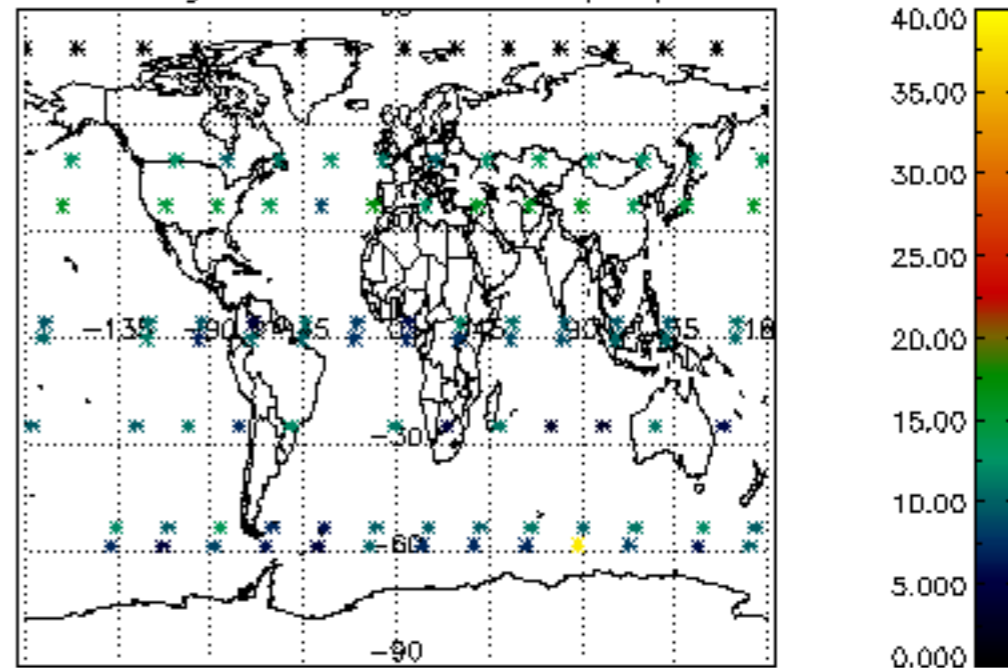
Percentage of datation errors per profile

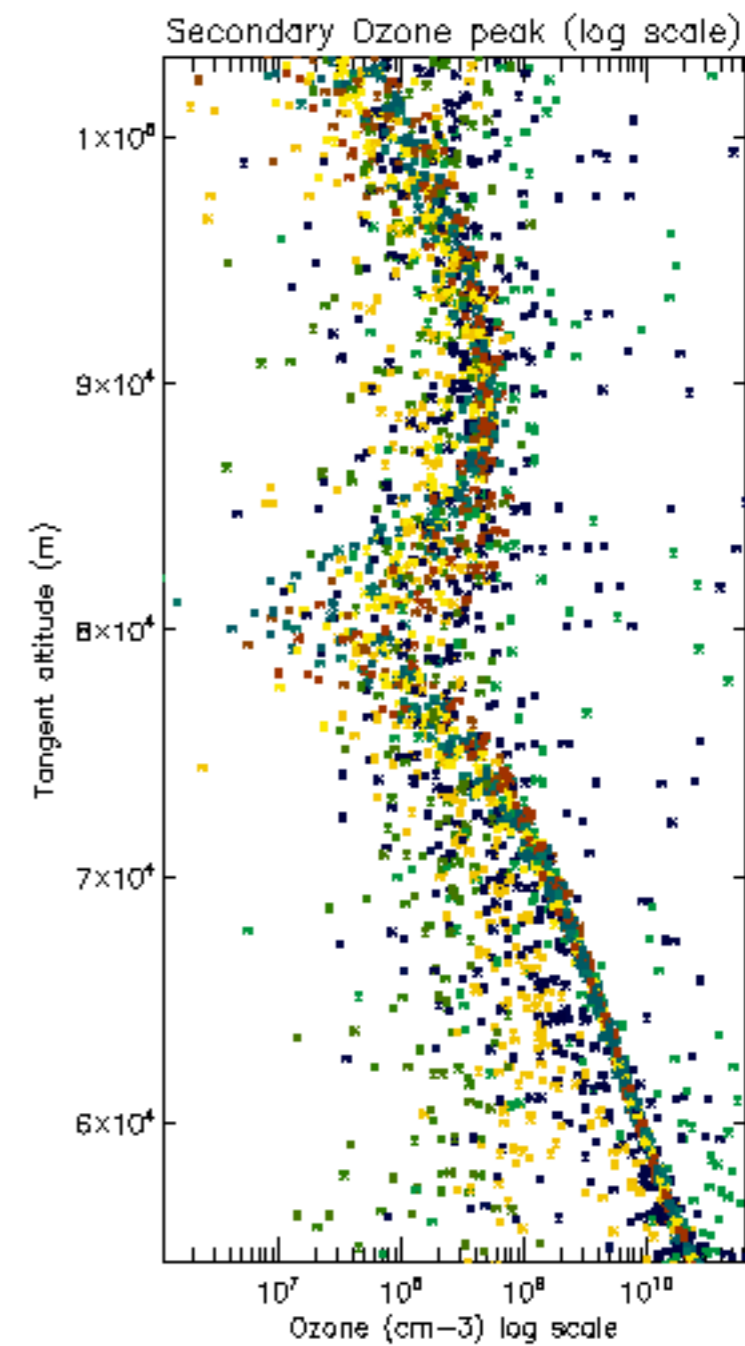
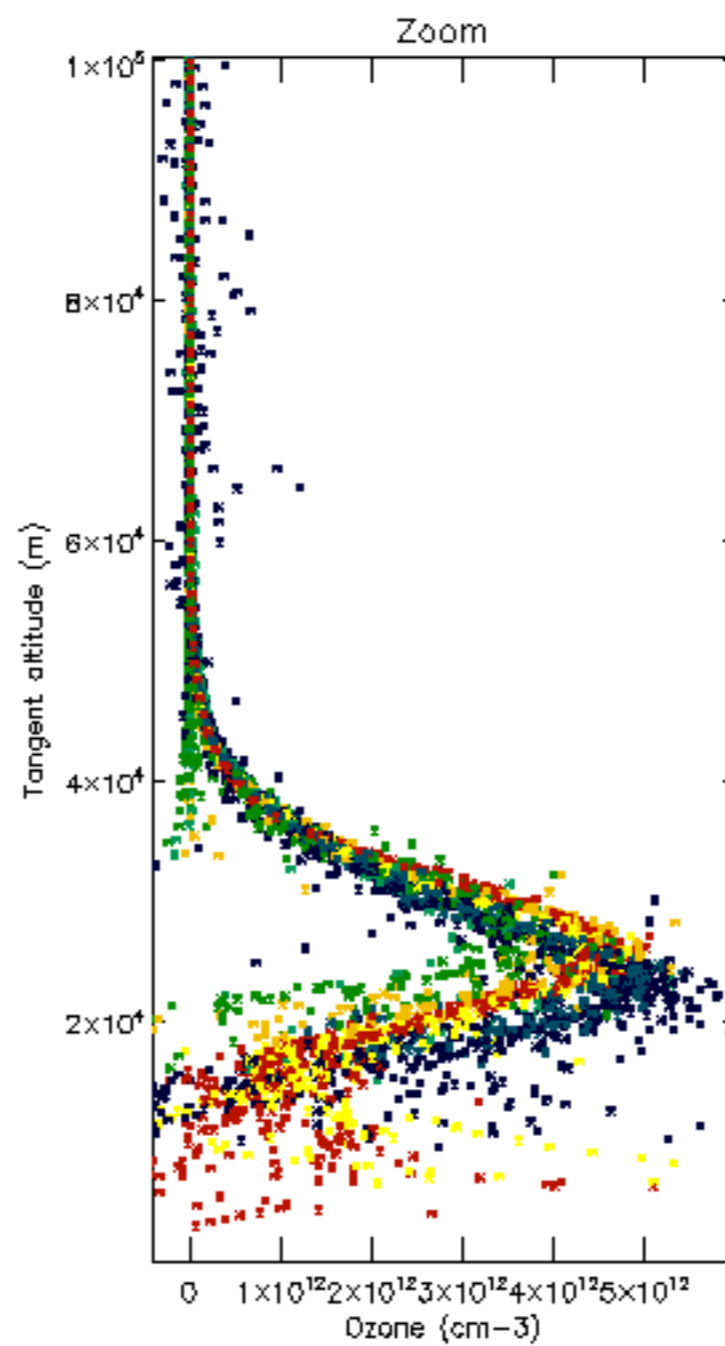
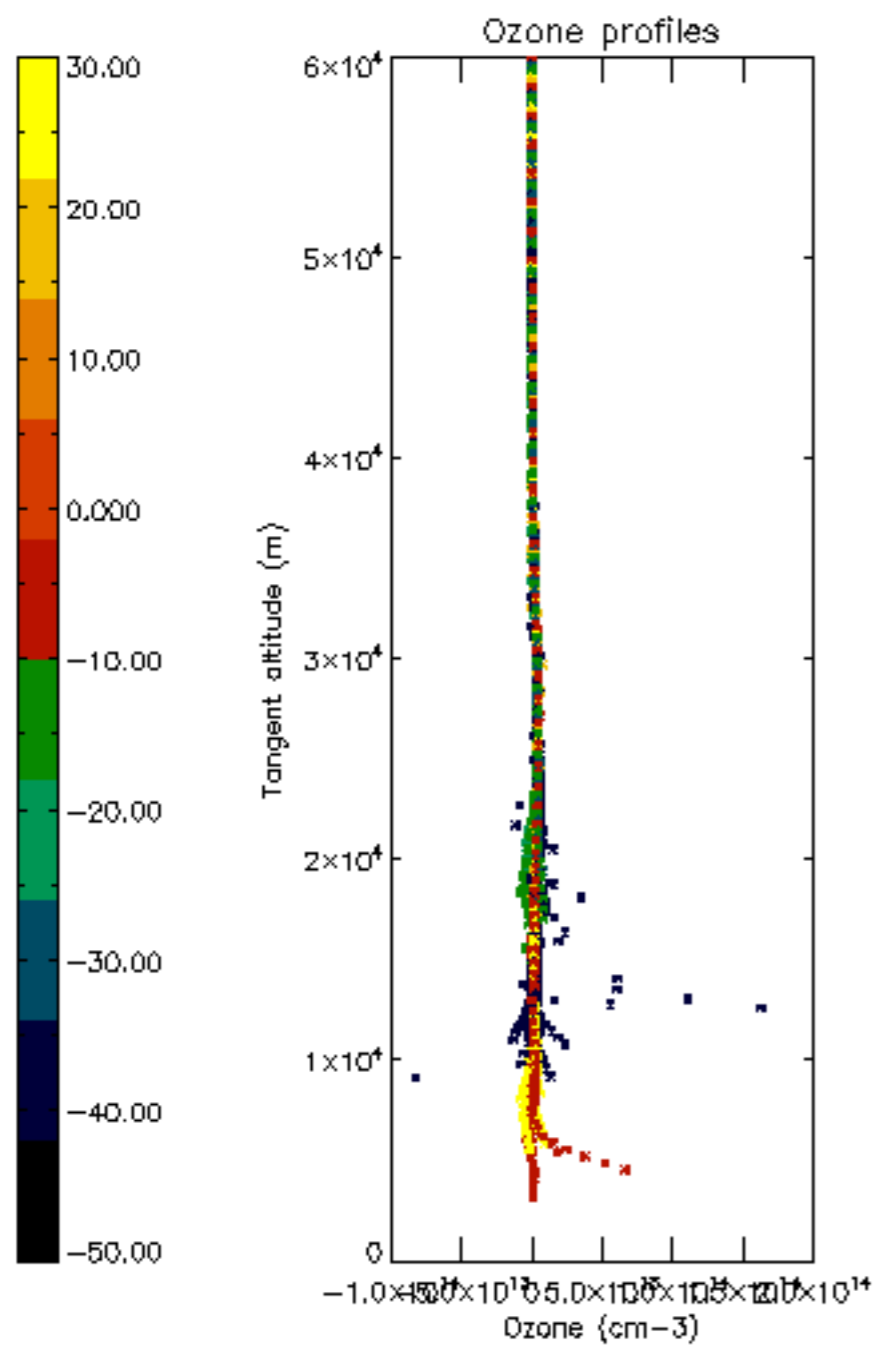


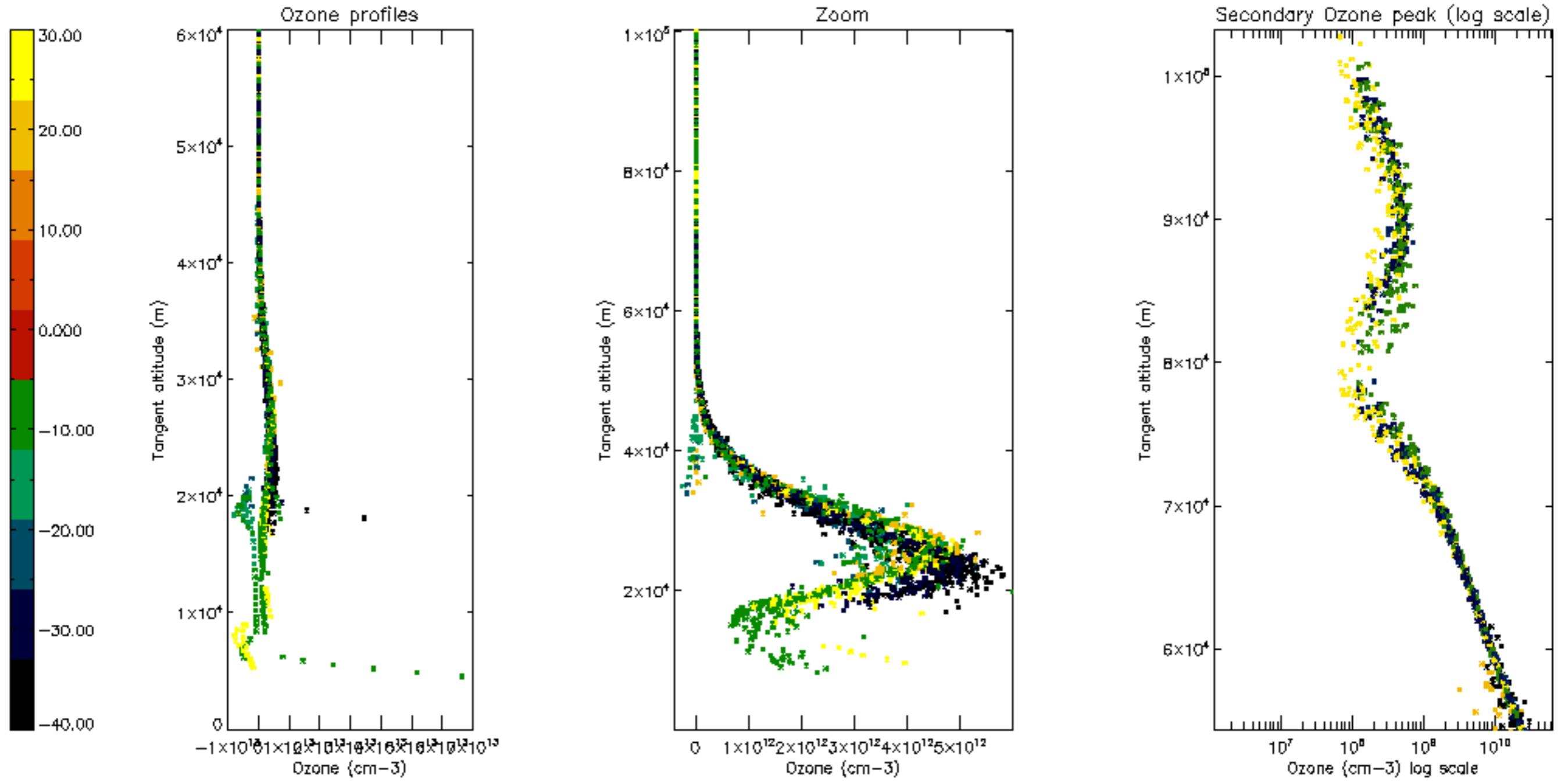
Percentage of star falling outside central band per profile

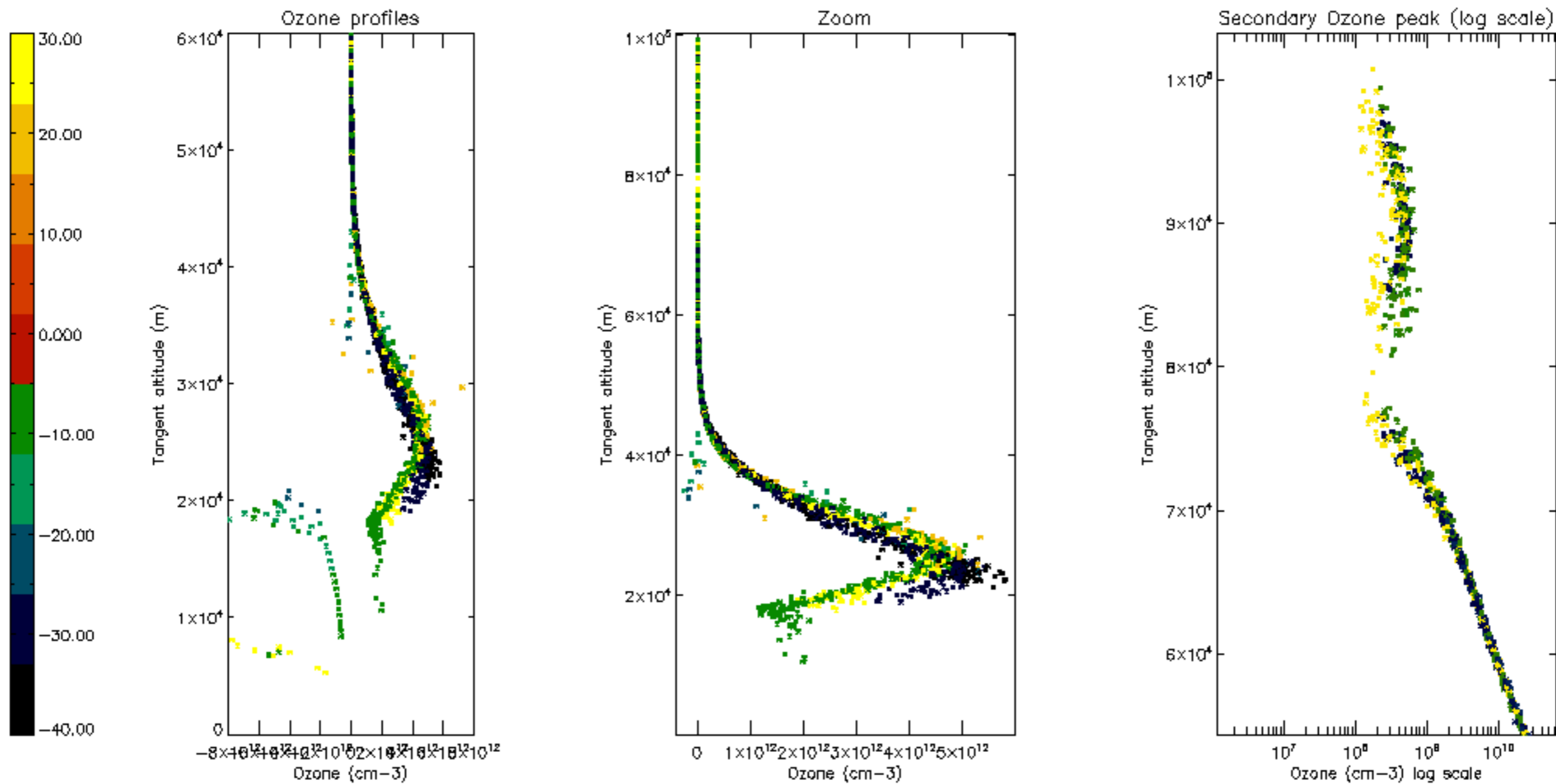


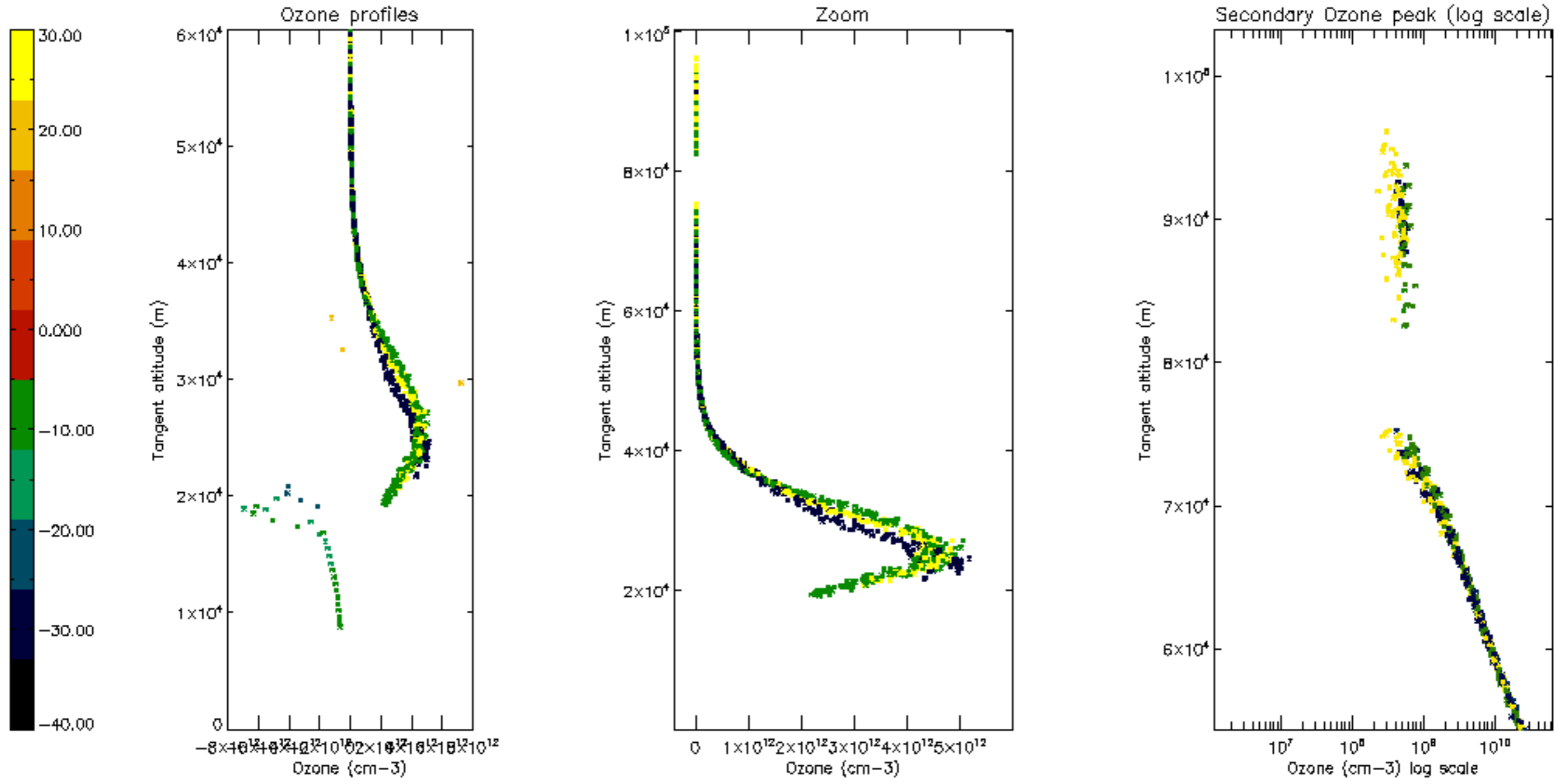
Percentage of saturation errors per profile



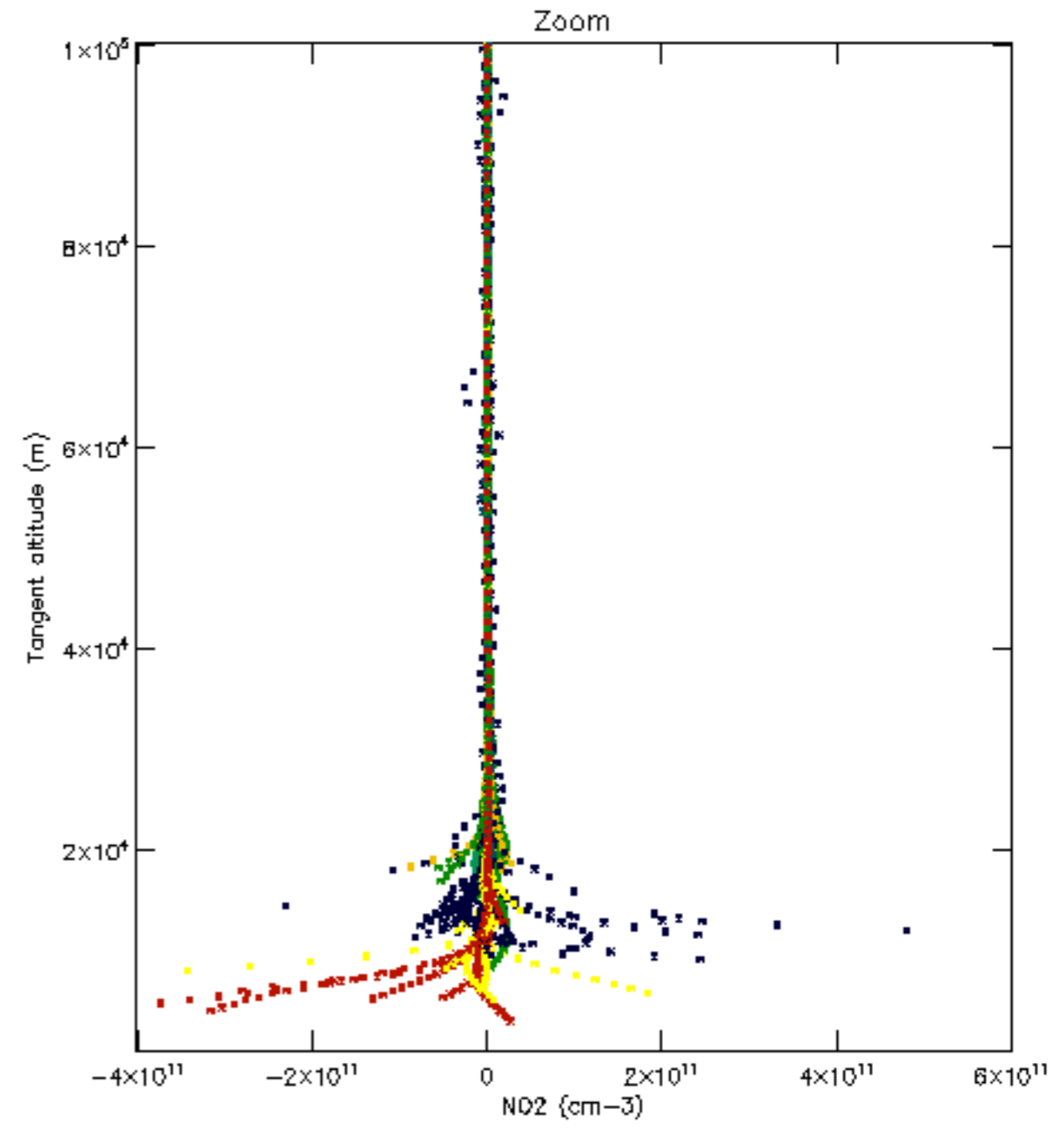
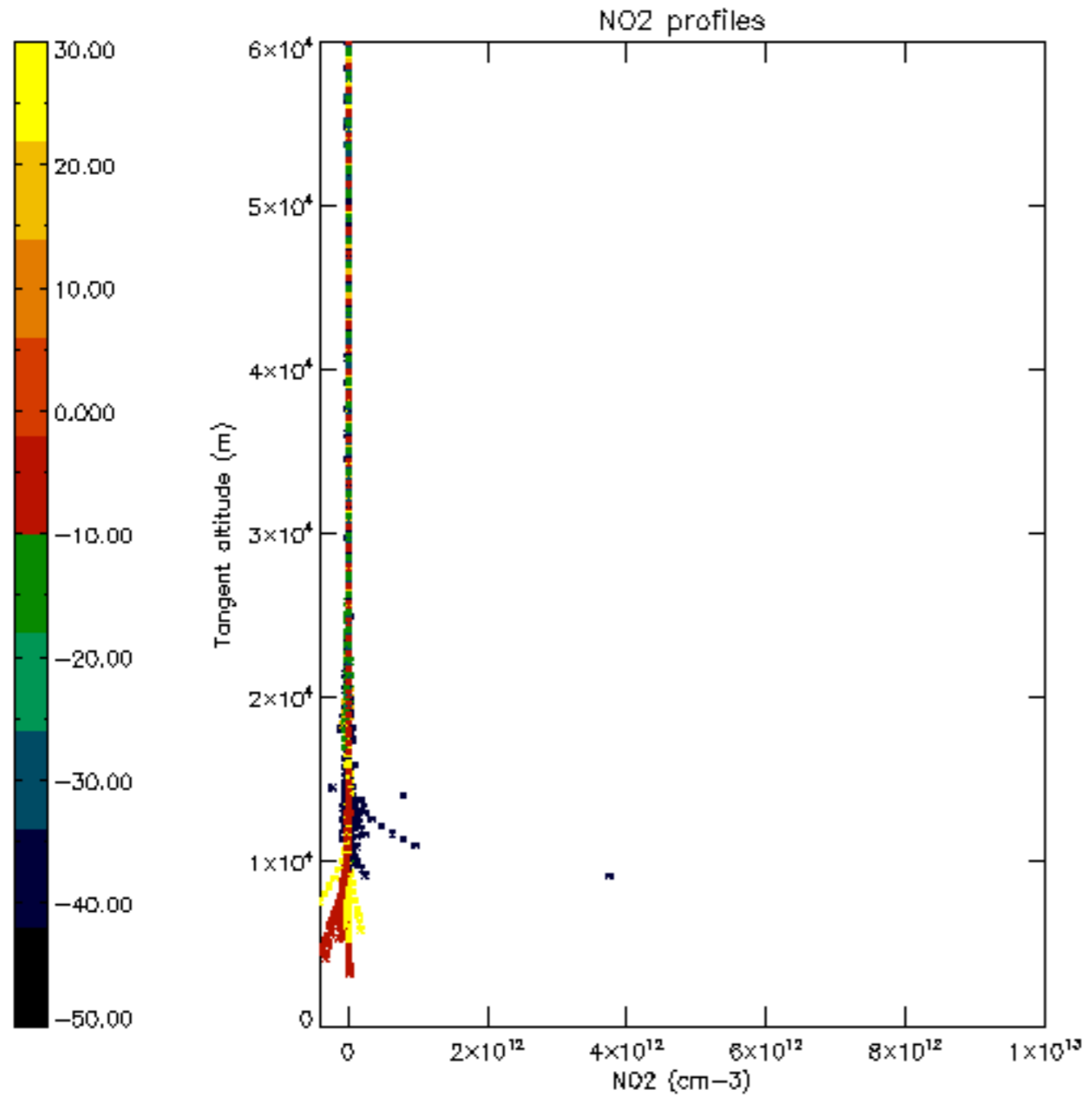


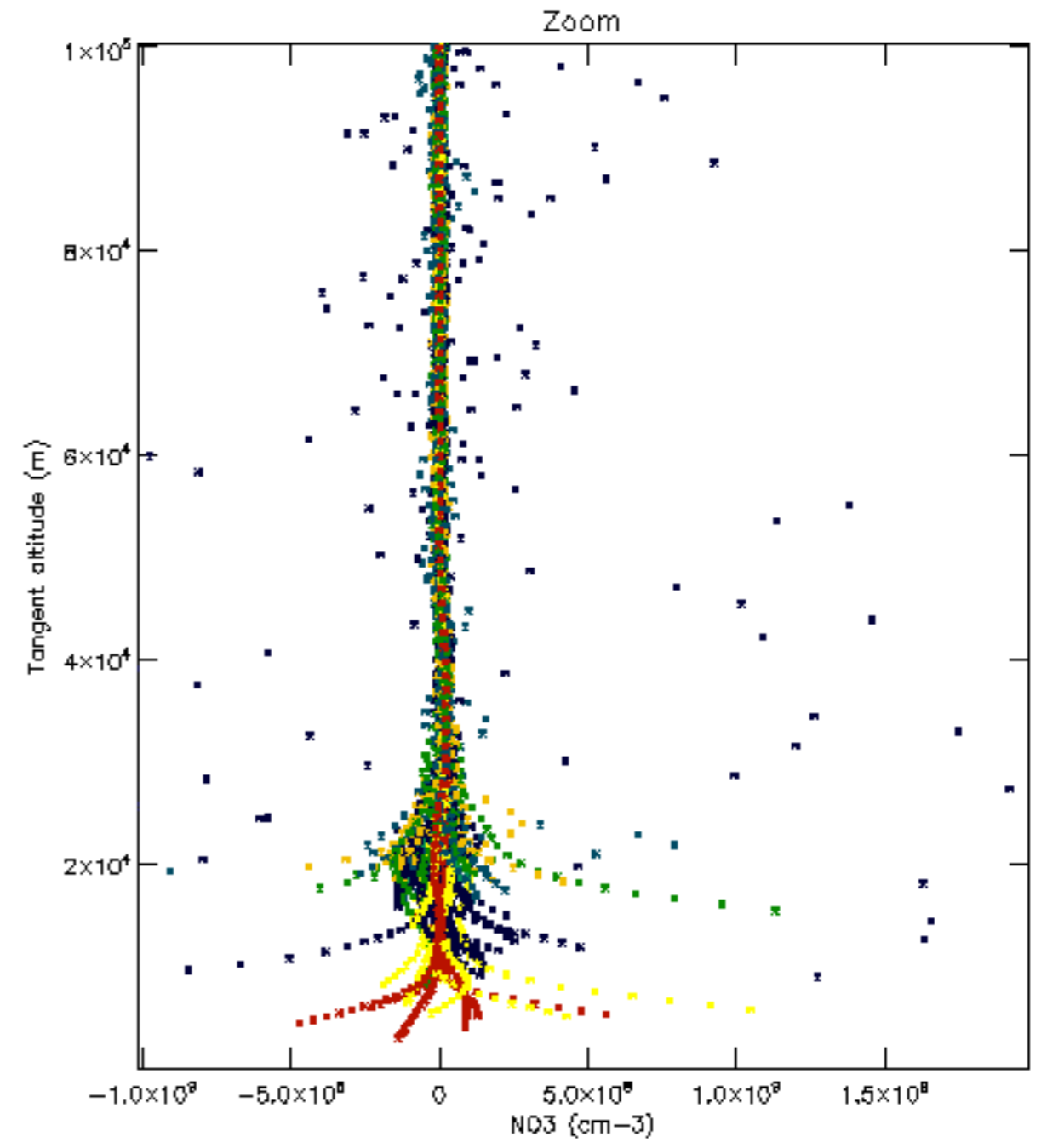
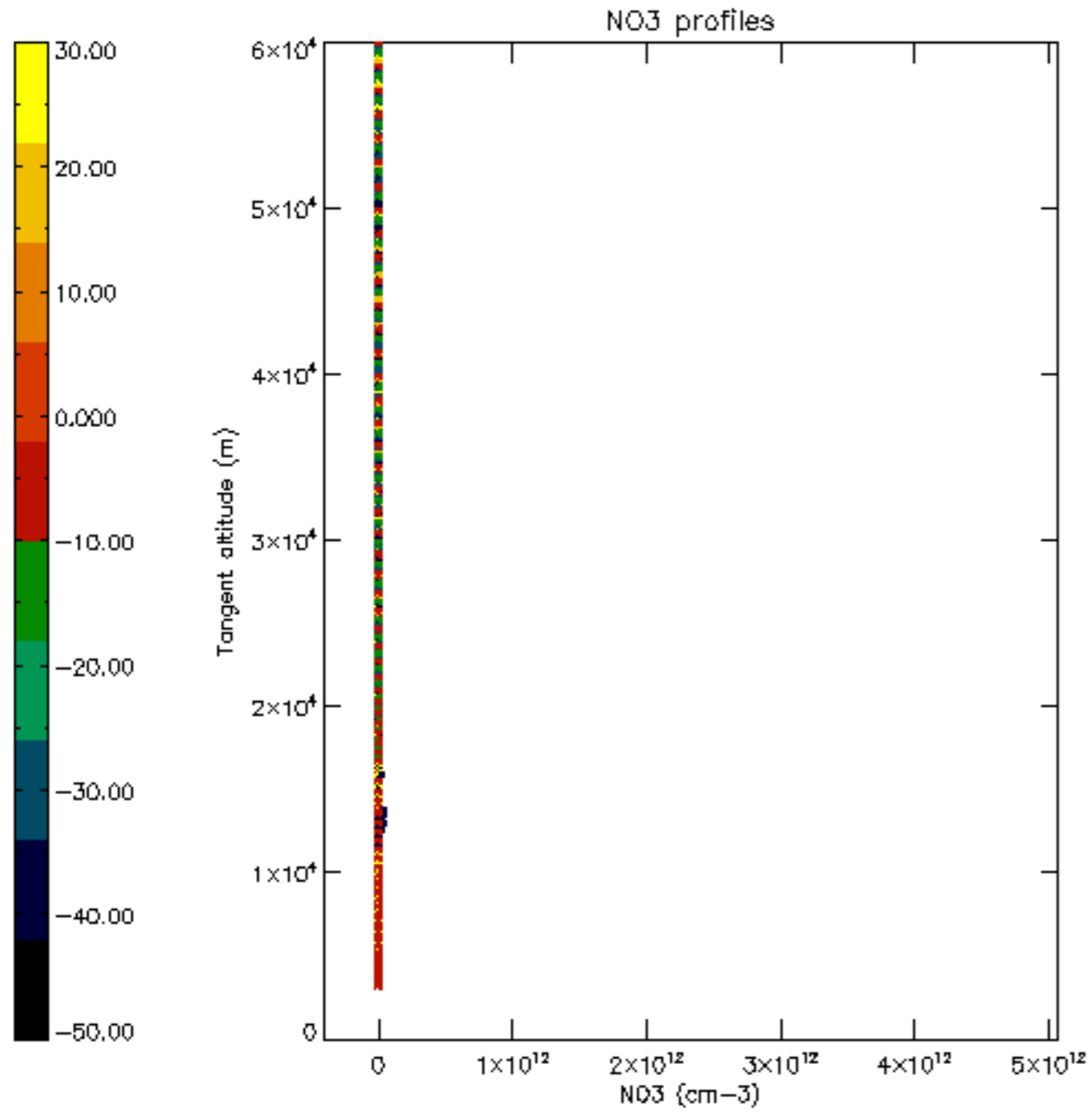


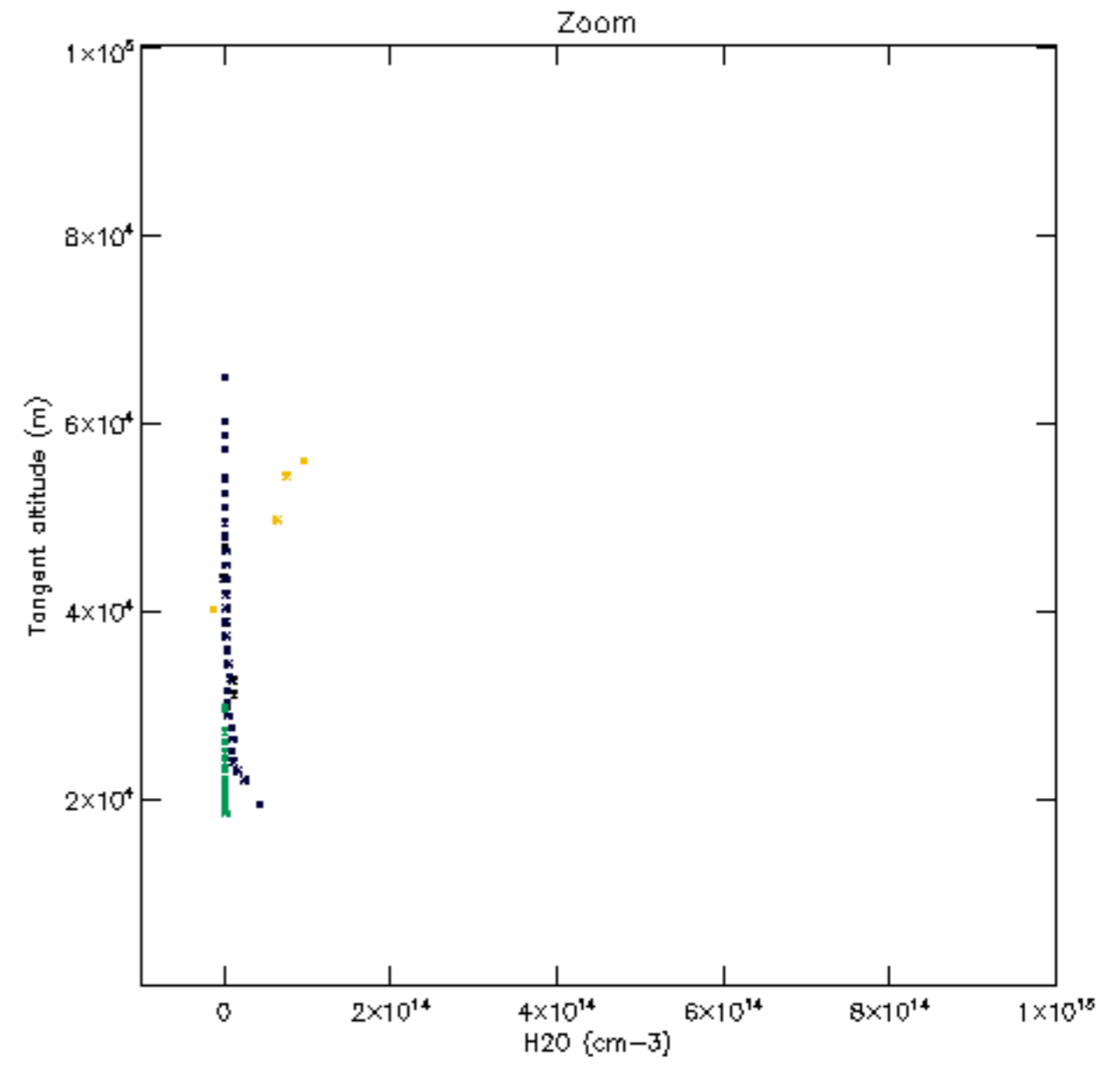
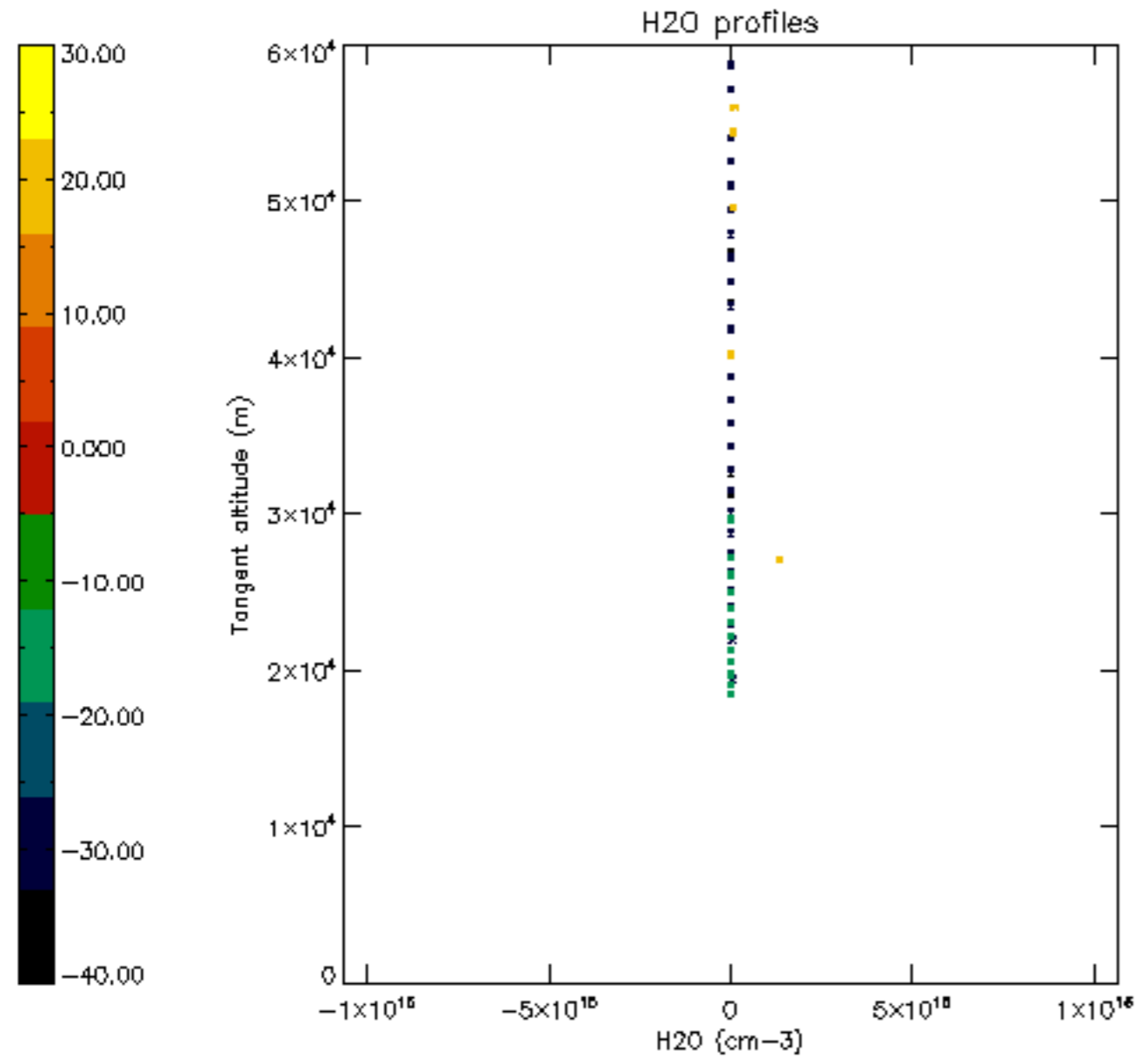


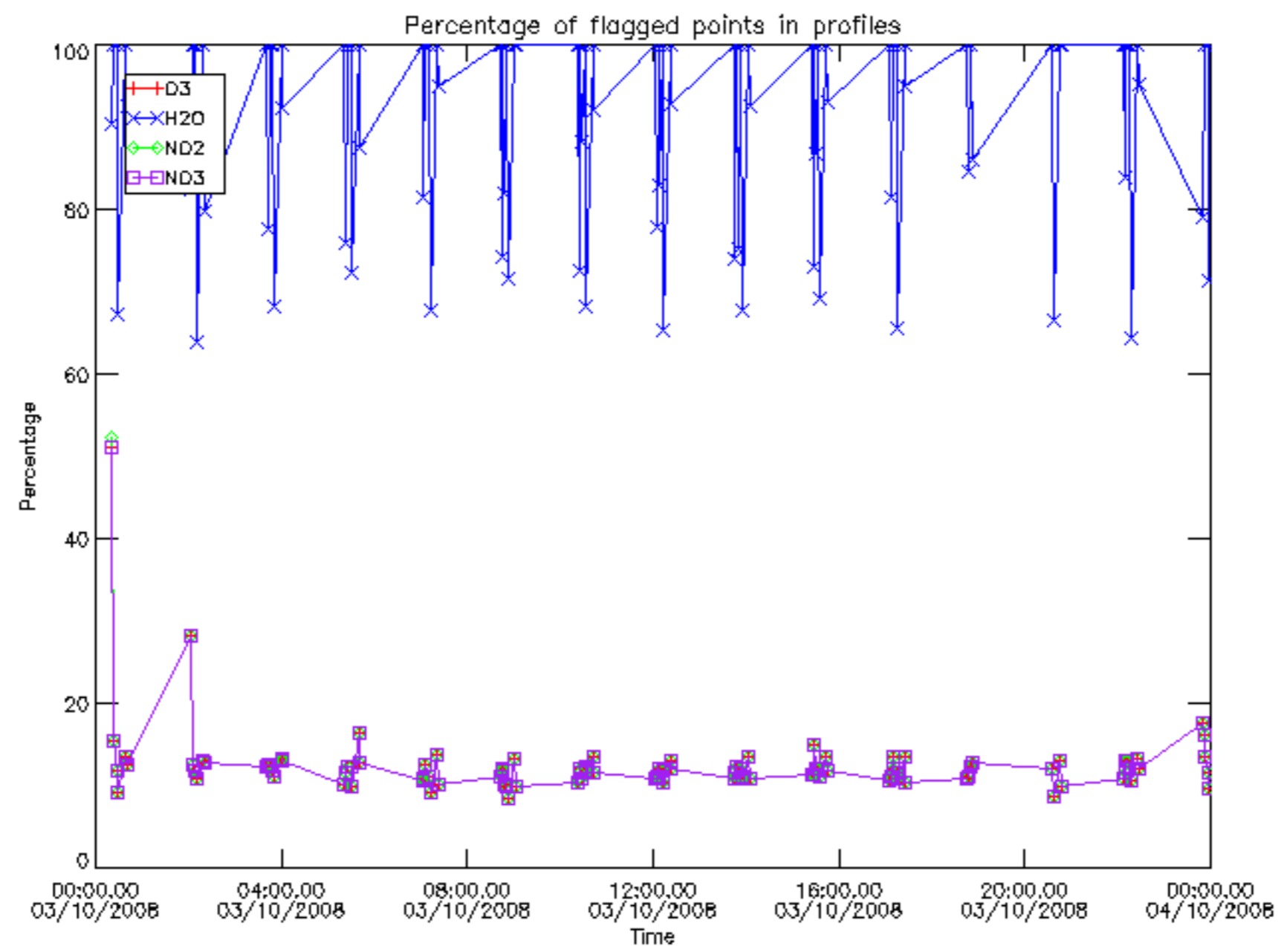




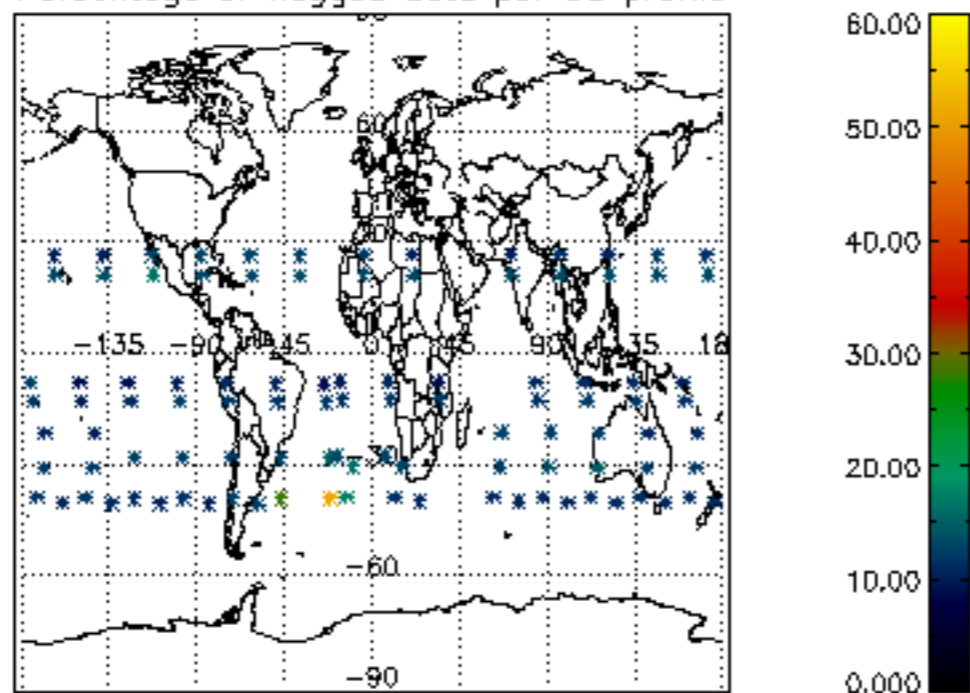




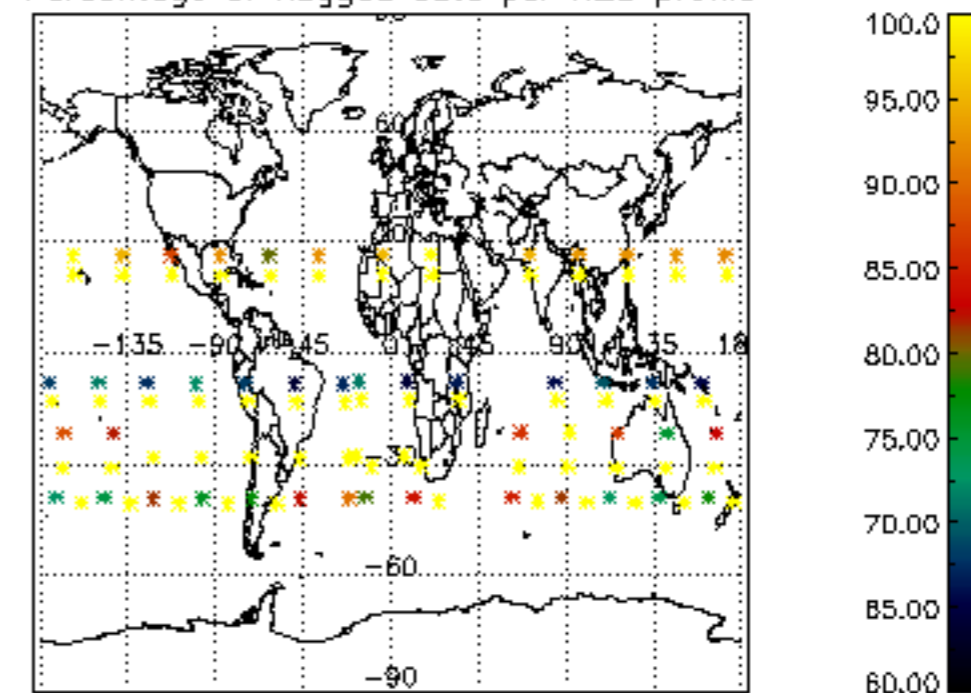




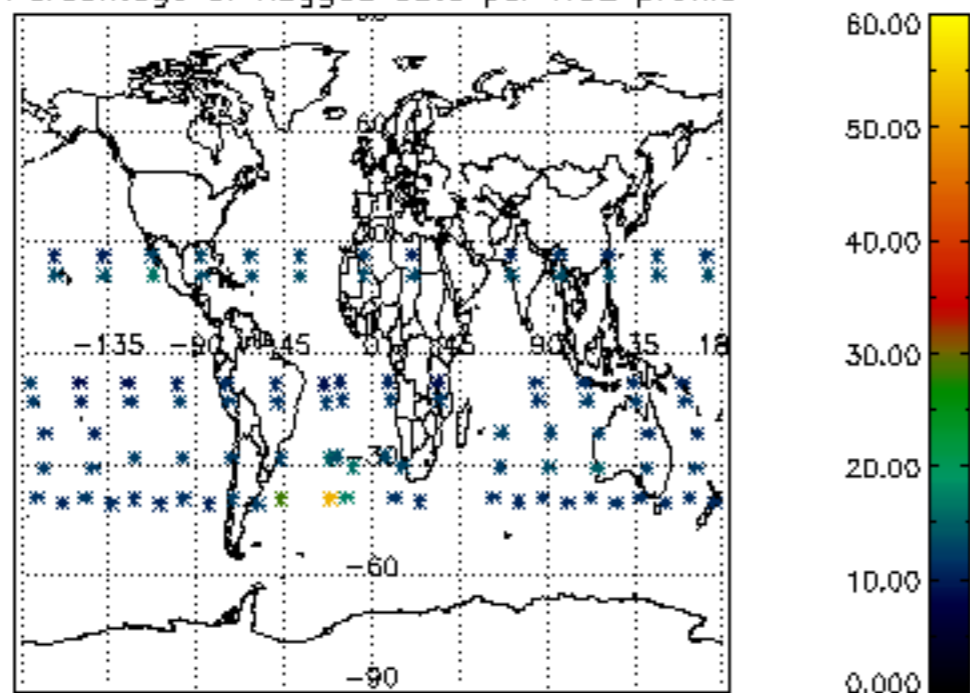
Percentage of flagged data per D3 profile



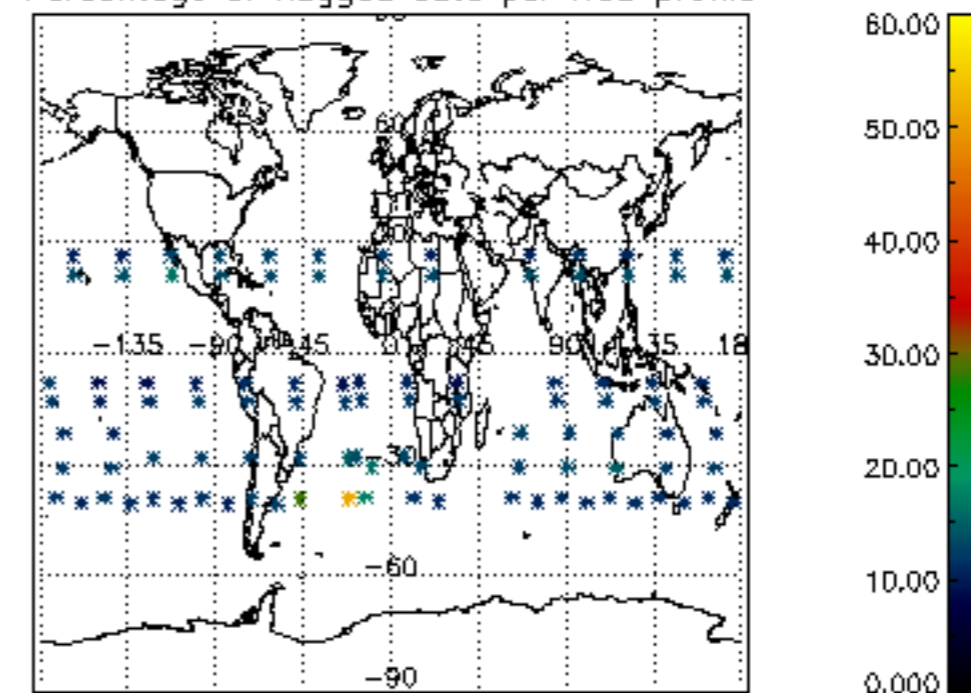
Percentage of flagged data per H2O profile

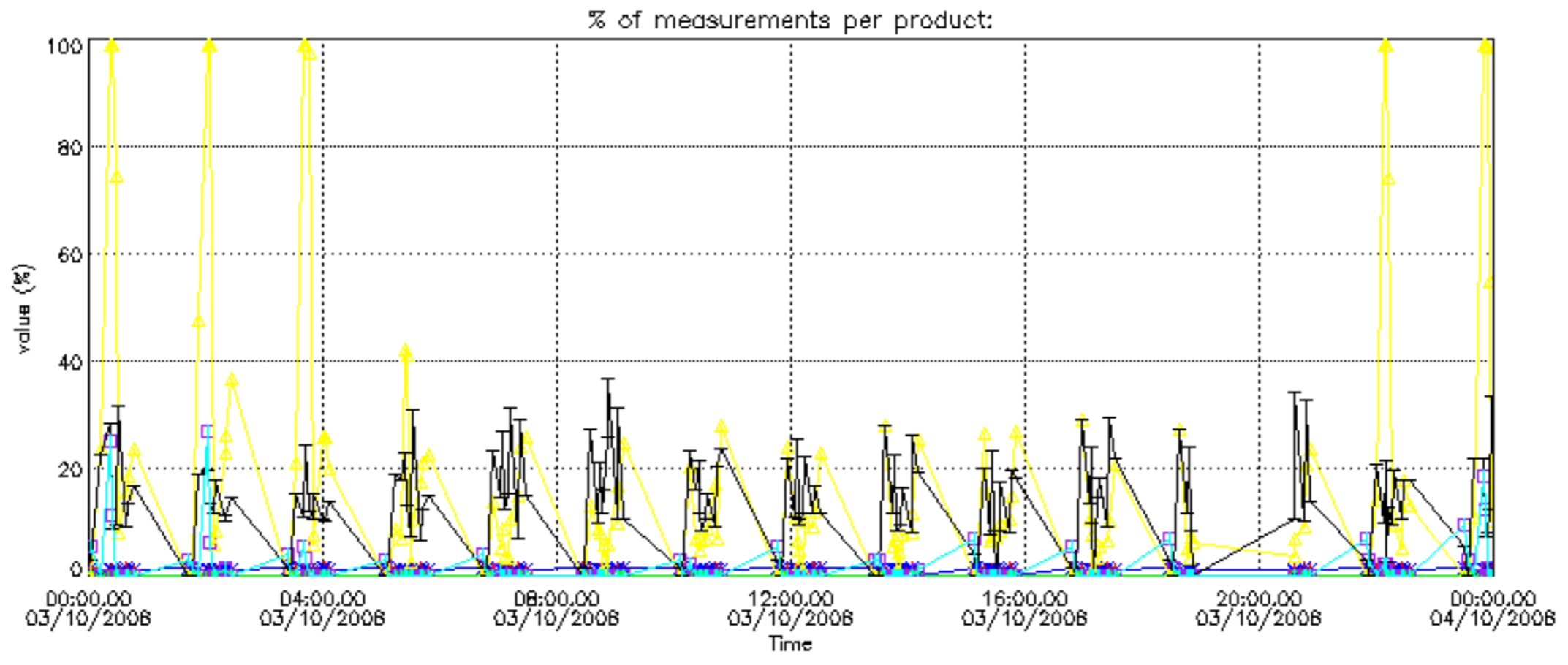


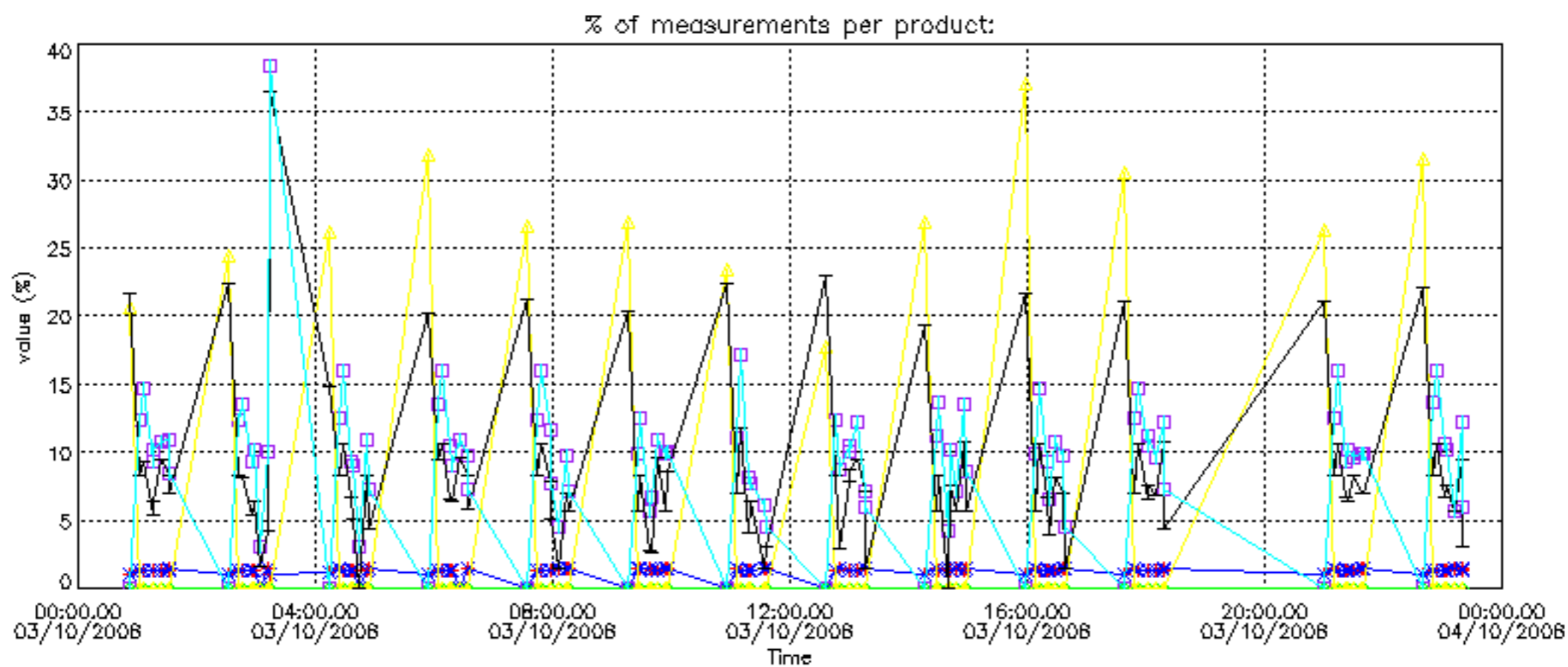
Percentage of flagged data per NO2 profile



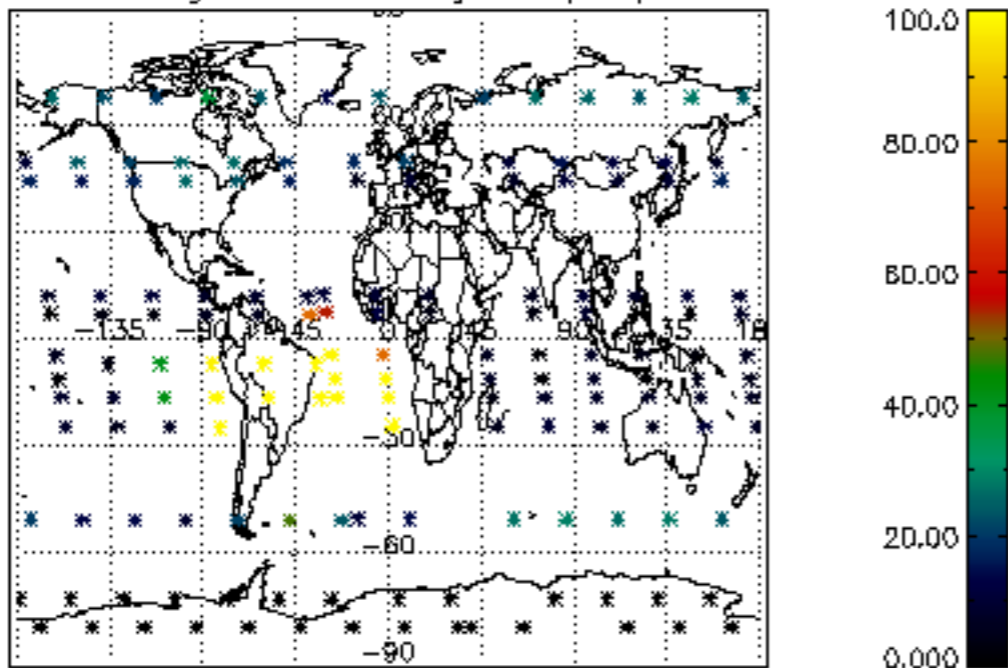
Percentage of flagged data per NO3 profile



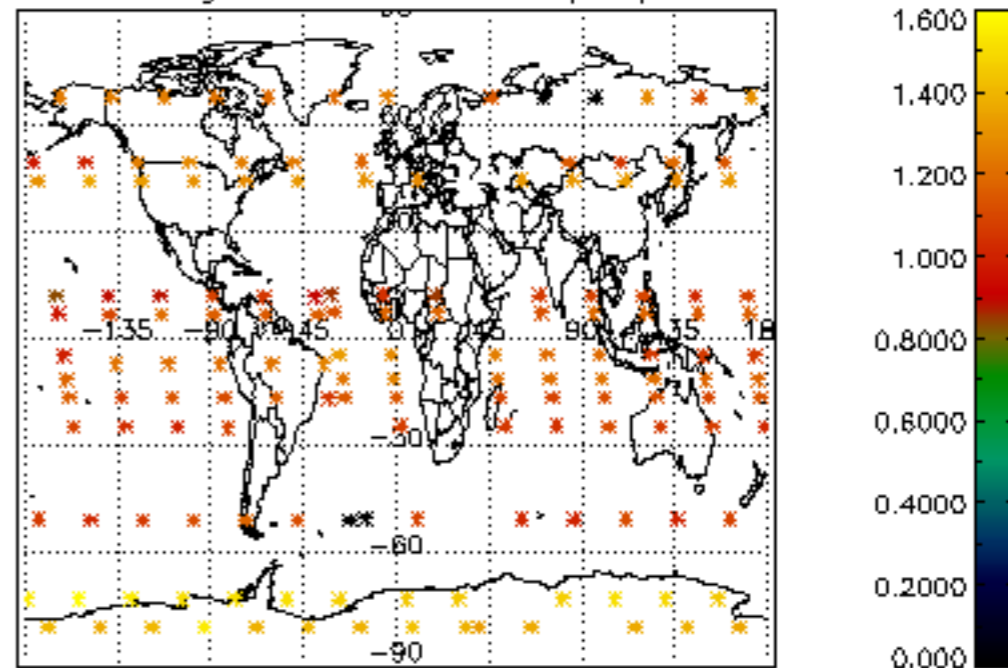




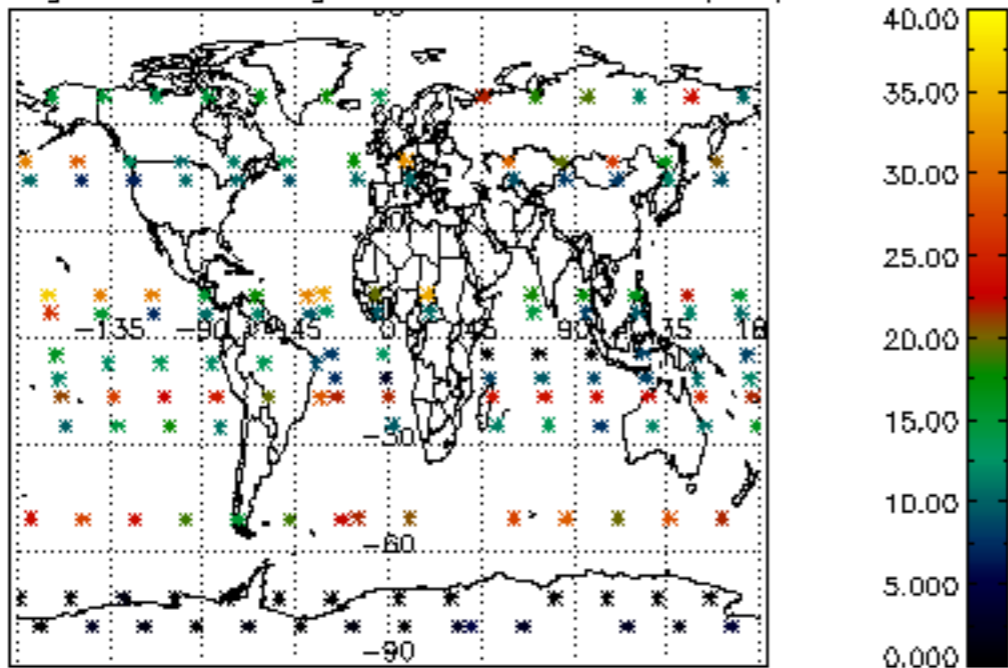
Percentage of cosmic ray hits per profile



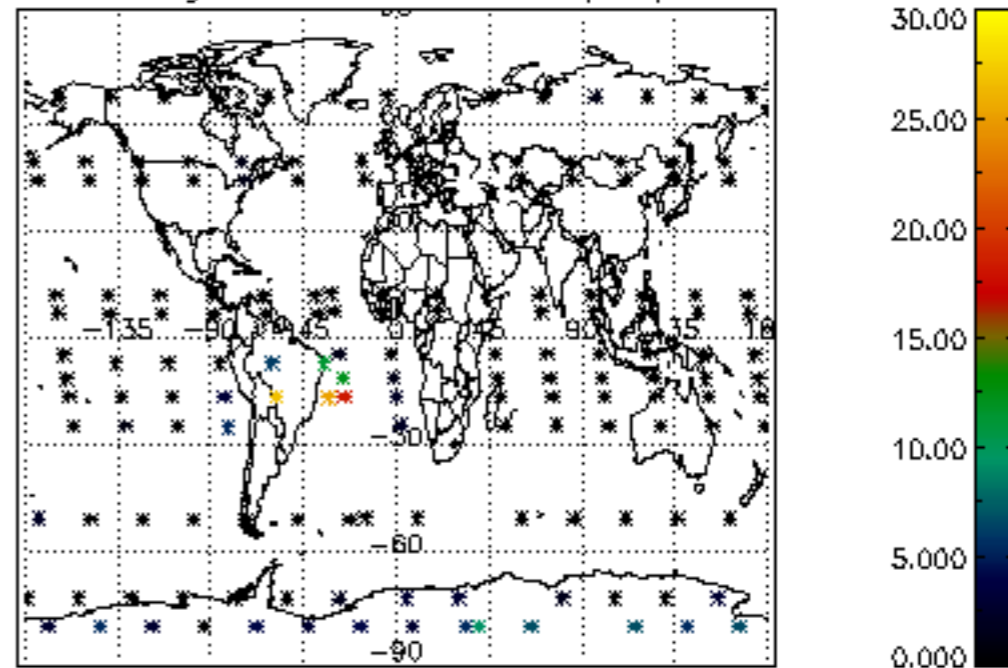
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

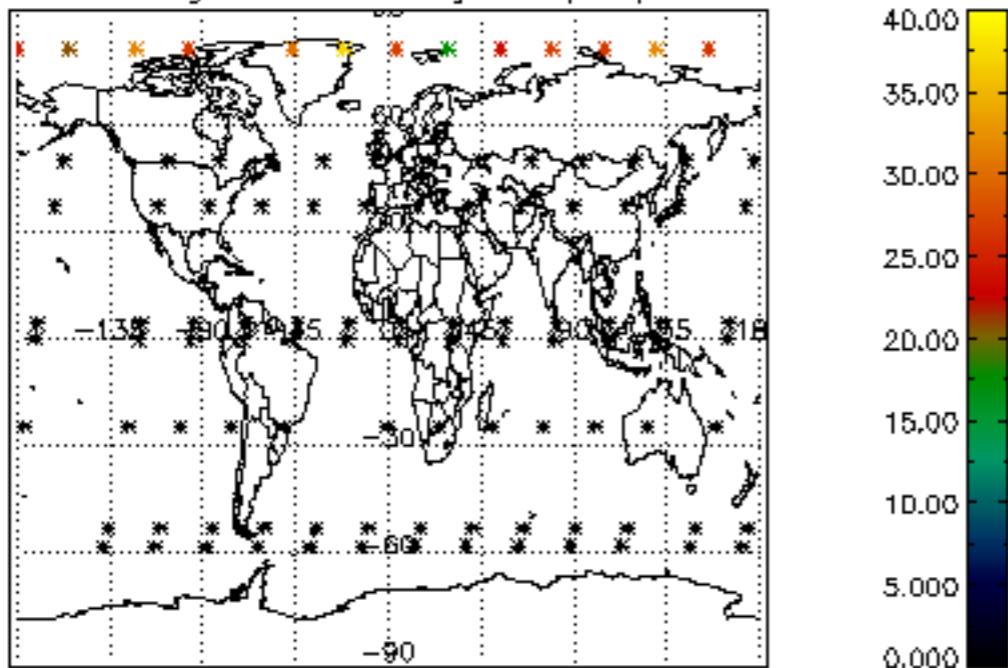


Percentage of saturation errors per profile

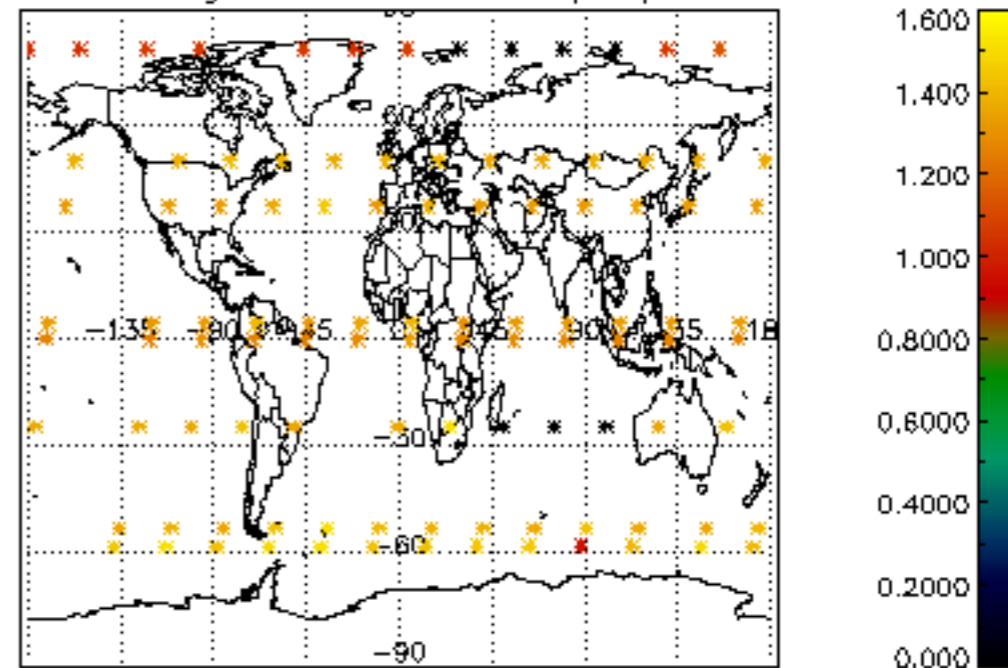




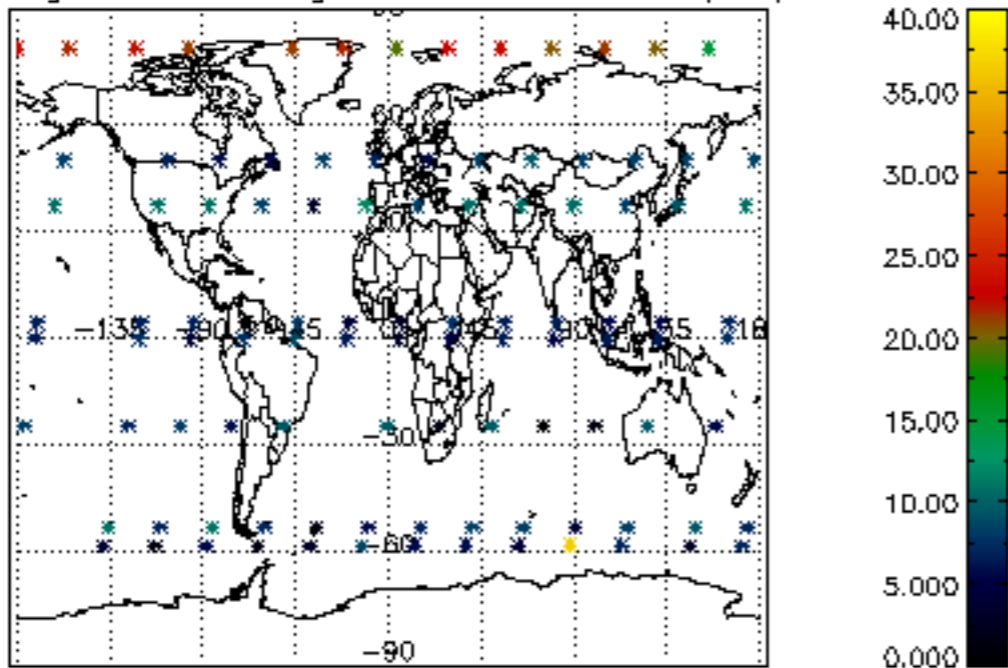
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

