

# 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 13:09:25
Data source version	GOMOS/6.01
Start time of products	09-10-2009 (09OCT2009 00:00:00)
Stop time of products	10-10-2009 (10OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	130
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__2PRFIN20091009_000851_000000382083_00145_39778_1986.N1	09-OCT-2009 00:08:51	Bright	38.000	53	43Bet And	2.0480	3300.0	76	39778	No
2	GOM_NL__2PRFIN20091009_001406_000000332083_00145_39778_1987.N1	09-OCT-2009 00:14:06	Bright	33.000	68	18Alp Cas	2.2250	4500.0	66	39778	No
3	GOM_NL__2PRFIN20091009_001530_000000342083_00145_39778_1988.N1	09-OCT-2009 00:15:30	Bright	33.500	76	27Gam Cas	2.3000	30000.	67	39778	No
4	GOM_NL__2PRFIN20091009_001822_000000422083_00145_39778_1989.N1	09-OCT-2009 00:18:22	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39778	No
5	GOM_NL__2PRFIN20091009_010032_000000402083_00145_39778_1990.N1	09-OCT-2009 01:00:32	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39778	No
6	GOM_NL__2PRFIN20091009_010359_000000362083_00145_39778_1991.N1	09-OCT-2009 01:03:59	Dark	35.500	70	Zet Pup	2.2460	39000.	71	39778	No
7	GOM_NL__2PRFIN20091009_010647_000000512083_00146_39779_1992.N1	09-OCT-2009 01:06:47	Dark	51.000	23	21Eps CMa	1.5020	26000.	102	39779	No
8	GOM_NL__2PRFIN20091009_024947_000000372083_00147_39780_2001.N1	09-OCT-2009 02:49:47	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39780	No
9	GOM_NL__2PRFIN20091009_025111_000000372083_00147_39780_2002.N1	09-OCT-2009 02:51:11	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39780	No
10	GOM_NL__2PRFIN20091009_030322_000000382083_00147_39780_2003.N1	09-OCT-2009 03:03:22	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39780	No
11	GOM_NL__2PRFIN20091009_033002_000000382083_00147_39780_2004.N1	09-OCT-2009 03:30:02	Bright	38.000	53	43Bet And	2.0480	3300.0	76	39780	No
12	GOM_NL__2PRFIN20091009_033403_000000432083_00147_39780_2005.N1	09-OCT-2009 03:34:03	Bright	42.500	73	57Gam1And	2.2600	13100.	85	39780	No
13	GOM_NL__2PRFIN20091009_033642_000000332083_00147_39780_2006.N1	09-OCT-2009 03:36:42	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39780	No
14	GOM_NL__2PRFIN20091009_033932_000000422083_00147_39780_2007.N1	09-OCT-2009 03:39:32	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39780	No
15	GOM_NL__2PRFIN20091009_042146_000000402083_00147_39780_2008.N1	09-OCT-2009 04:21:46	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39780	No
16	GOM_NL__2PRFIN20091009_042513_000000362083_00147_39780_2009.N1	09-OCT-2009 04:25:13	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39780	No
17	GOM_NL__2PRFIN20091009_043024_000000372083_00148_39781_2010.N1	09-OCT-2009 04:30:24	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39781	No
18	GOM_NL__2PRFIN20091009_043147_000000372083_00148_39781_2011.N1	09-OCT-2009 04:31:47	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39781	No
19	GOM_NL__2PRFIN20091009_044359_000000382083_00148_39781_2012.N1	09-OCT-2009 04:43:59	Straylight	38.000	157	The1Eri	2.9060	9300.0	76	39781	No
20	GOM_NL__2PRFIN20091009_051038_000000382083_00148_39781_2013.N1	09-OCT-2009 05:10:38	Bright	37.500	53	43Bet And	2.0480	3300.0	75	39781	No
21	GOM_NL__2PRFIN20091009_051438_000000432083_00148_39781_2014.N1	09-OCT-2009 05:14:38	Bright	43.000	73	57Gam1And	2.2600	13100.	86	39781	No
22	GOM_NL__2PRFIN20091009_051718_000000332083_00148_39781_2015.N1	09-OCT-2009 05:17:18	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39781	No
23	GOM_NL__2PRFIN20091009_052007_000000422083_00148_39781_2016.N1	09-OCT-2009 05:20:07	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39781	No
24	GOM_NL__2PRFIN20091009_060223_000000402083_00148_39781_2017.N1	09-OCT-2009 06:02:23	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39781	No
25	GOM_NL__2PRFIN20091009_060550_000000362083_00148_39781_2018.N1	09-OCT-2009 06:05:50	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39781	No
26	GOM_NL__2PRFIN20091009_061101_000000372083_00149_39782_2019.N1	09-OCT-2009 06:11:01	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39782	No
27	GOM_NL__2PRFIN20091009_061224_000000372083_00149_39782_2020.N1	09-OCT-2009 06:12:24	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39782	No
28	GOM_NL__2PRFIN20091009_062435_000000382083_00149_39782_2021.N1	09-OCT-2009 06:24:35	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39782	No
29	GOM_NL__2PRFIN20091009_065113_000000372083_00149_39782_2022.N1	09-OCT-2009 06:51:13	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39782	No
30	GOM_NL__2PRFIN20091009_065513_000000422083_00149_39782_2023.N1	09-OCT-2009 06:55:13	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39782	No
31	GOM_NL__2PRFIN20091009_065753_000000342083_00149_39782_2024.N1	09-OCT-2009 06:57:53	Bright	33.500	76	27Gam Cas	2.3000	30000.	67	39782	No
32	GOM_NL__2PRFIN20091009_070042_000000422083_00149_39782_2025.N1	09-OCT-2009 07:00:42	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39782	No
33	GOM_NL__2PRFIN20091009_074300_000000402083_00149_39782_2026.N1	09-OCT-2009 07:43:00	Dark	39.500	132	15Rho Pup	2.8030	6900.0	79	39782	No
34	GOM_NL__2PRFIN20091009_074626_000000362083_00149_39782_2027.N1	09-OCT-2009 07:46:26	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39782	No
35	GOM_NL__2PRFIN20091009_075138_000000372083_00150_39783_2029.N1	09-OCT-2009 07:51:38	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39783	No
36	GOM_NL__2PRFIN20091009_075301_000000372083_00150_39783_2030.N1	09-OCT-2009 07:53:01	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39783	No
37	GOM_NL__2PRFIN20091009_080512_000000372083_00150_39783_2031.N1	09-OCT-2009 08:05:12	Straylight	37.000	157	The1Eri	2.9060	9300.0	74	39783	No
38	GOM_NL__2PRFIN20091009_083149_000000382083_00150_39783_2032.N1	09-OCT-2009 08:31:49	Bright	37.500	53	43Bet And	2.0480	3300.0	75	39783	No
39	GOM_NL__2PRFIN20091009_083548_000000432083_00150_39783_2033.N1	09-OCT-2009 08:35:48	Bright	42.500	73	57Gam1And	2.2600	13100.	85	39783	No
40	GOM_NL__2PRFIN20091009_083829_000000332083_00150_39783_2034.N1	09-OCT-2009 08:38:29	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39783	No
41	GOM_NL__2PRFIN20091009_084117_000000422083_00150_39783_2035.N1	09-OCT-2009 08:41:17	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39783	No
42	GOM_NL__2PRFIN20091009_092337_000000402083_00150_39783_2036.N1	09-OCT-2009 09:23:37	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39783	No

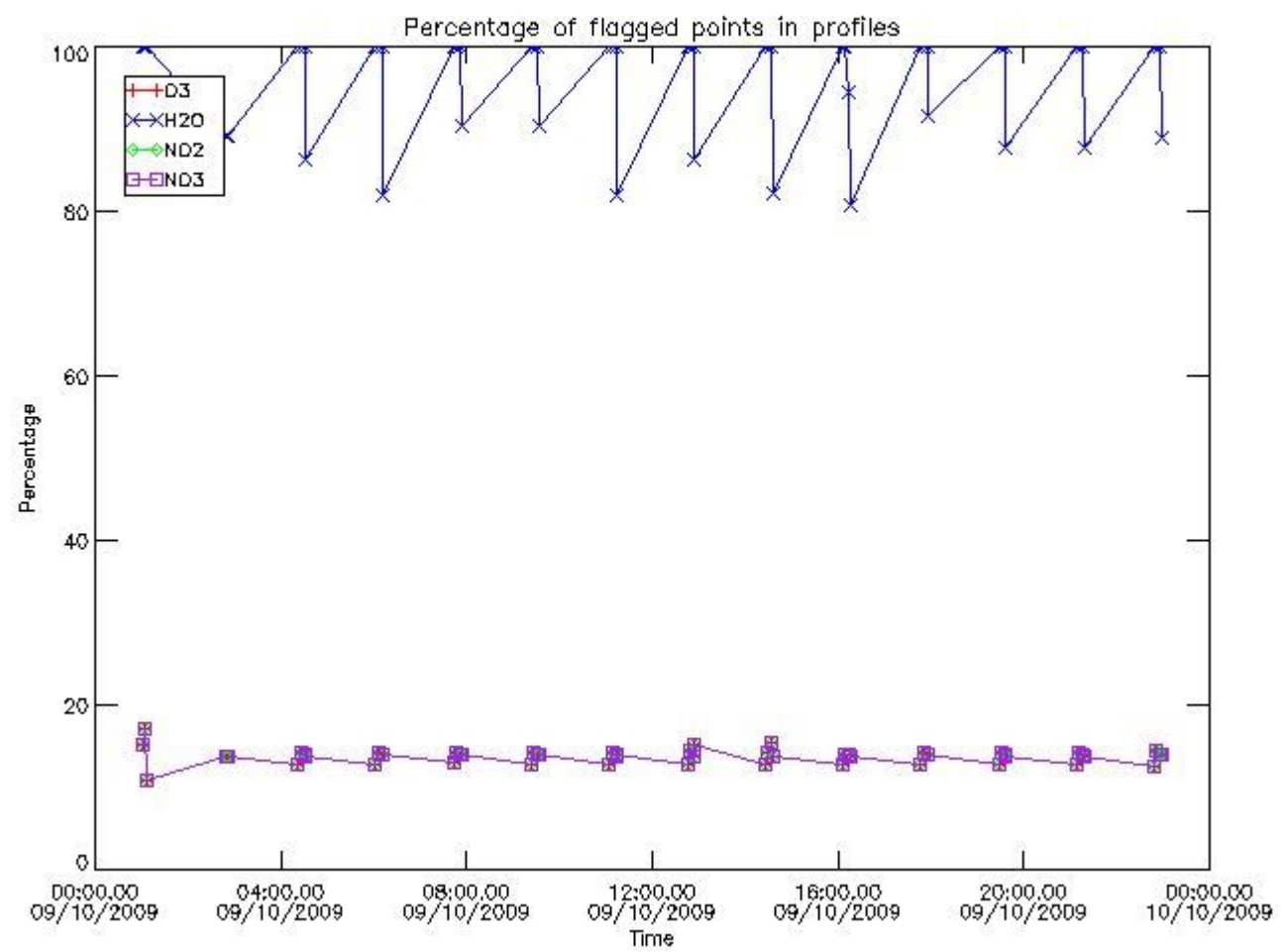


102	GOM_NL__2PRFIN20091009_193718_000000372083_00157_39790_2113.N1	09-OCT-2009 19:37:18	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39790	No
103	GOM_NL__2PRFIN20091009_194927_000000382083_00157_39790_2114.N1	09-OCT-2009 19:49:27	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39790	No
104	GOM_NL__2PRFIN20091009_201255_000000312083_00157_39790_2115.N1	09-OCT-2009 20:12:55	Tw_i_and_stray	31.000	105	6Bet Ari	2.6450	8900.0	62	39790	No
105	GOM_NL__2PRFIN20091009_201557_000000372083_00157_39790_2116.N1	09-OCT-2009 20:15:57	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39790	No
106	GOM_NL__2PRFIN20091009_201954_000000422083_00157_39790_2117.N1	09-OCT-2009 20:19:54	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39790	No
107	GOM_NL__2PRFIN20091009_202238_000000332083_00157_39790_2118.N1	09-OCT-2009 20:22:38	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39790	No
108	GOM_NL__2PRFIN20091009_202522_000000422083_00157_39790_2119.N1	09-OCT-2009 20:25:22	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39790	No
109	GOM_NL__2PRFIN20091009_204943_000000272083_00157_39790_2120.N1	09-OCT-2009 20:49:43	Tw_i_and_stray	27.000	166	17Eps Leo	2.9800	6000.0	54	39790	No
110	GOM_NL__2PRFIN20091009_210756_000000402083_00157_39790_2121.N1	09-OCT-2009 21:07:56	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39790	No
111	GOM_NL__2PRFIN20091009_211120_000000362083_00157_39790_2122.N1	09-OCT-2009 21:11:20	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39790	No
112	GOM_NL__2PRFIN20091009_211631_000000372083_00158_39791_2120.N1	09-OCT-2009 21:16:31	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39791	No
113	GOM_NL__2PRFIN20091009_211754_000000372083_00158_39791_2121.N1	09-OCT-2009 21:17:54	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39791	No
114	GOM_NL__2PRFIN20091009_213004_000000382083_00158_39791_2122.N1	09-OCT-2009 21:30:04	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39791	No
115	GOM_NL__2PRFIN20091009_215330_000000312083_00158_39791_2123.N1	09-OCT-2009 21:53:30	Tw_i_and_stray	31.000	105	6Bet Ari	2.6450	8900.0	62	39791	No
116	GOM_NL__2PRFIN20091009_215632_000000372083_00158_39791_2124.N1	09-OCT-2009 21:56:32	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39791	No
117	GOM_NL__2PRFIN20091009_220030_000000422083_00158_39791_2125.N1	09-OCT-2009 22:00:30	Bright	41.500	73	57Gam1And	2.2600	13100.	83	39791	No
118	GOM_NL__2PRFIN20091009_220314_000000332083_00158_39791_2126.N1	09-OCT-2009 22:03:14	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39791	No
119	GOM_NL__2PRFIN20091009_220557_000000422083_00158_39791_2127.N1	09-OCT-2009 22:05:57	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39791	No
120	GOM_NL__2PRFIN20091009_223019_000000272083_00158_39791_2128.N1	09-OCT-2009 22:30:19	Tw_i_and_stray	27.000	166	17Eps Leo	2.9800	6000.0	54	39791	No
121	GOM_NL__2PRFIN20091009_224833_000000412083_00158_39791_2129.N1	09-OCT-2009 22:48:33	Dark	40.500	132	15Rho Pup	2.8030	6900.0	81	39791	No
122	GOM_NL__2PRFIN20091009_225157_000000362083_00158_39791_2130.N1	09-OCT-2009 22:51:57	Dark	35.500	70	Zet Pup	2.2460	39000.	71	39791	No
123	GOM_NL__2PRFIN20091009_225708_000000372083_00159_39792_2130.N1	09-OCT-2009 22:57:08	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39792	No
124	GOM_NL__2PRFIN20091009_225831_000000372083_00159_39792_2131.N1	09-OCT-2009 22:58:31	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39792	No
125	GOM_NL__2PRFIN20091009_231040_000000372083_00159_39792_2132.N1	09-OCT-2009 23:10:40	Straylight	37.000	157	The1Eri	2.9060	9300.0	74	39792	No
126	GOM_NL__2PRFIN20091009_233404_000000382083_00159_39792_2133.N1	09-OCT-2009 23:34:04	Bright	38.000	105	6Bet Ari	2.6450	8900.0	76	39792	No
127	GOM_NL__2PRFIN20091009_233708_000000372083_00159_39792_2134.N1	09-OCT-2009 23:37:08	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39792	No
128	GOM_NL__2PRFIN20091009_234104_000000422083_00159_39792_2135.N1	09-OCT-2009 23:41:04	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39792	No
129	GOM_NL__2PRFIN20091009_234349_000000332083_00159_39792_2136.N1	09-OCT-2009 23:43:49	Bright	32.500	76	27Gam Cas	2.3000	30000.	65	39792	No
130	GOM_NL__2PRFIN20091009_234632_000000422083_00159_39792_2137.N1	09-OCT-2009 23:46:32	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39792	No

### 3. Quality information per product

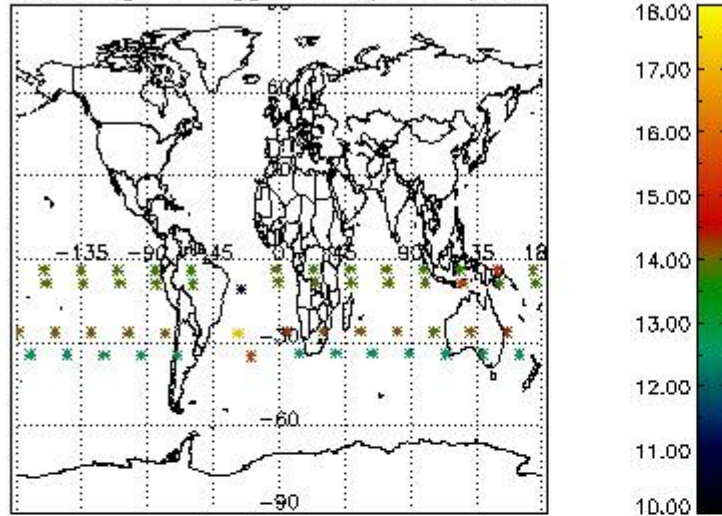
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

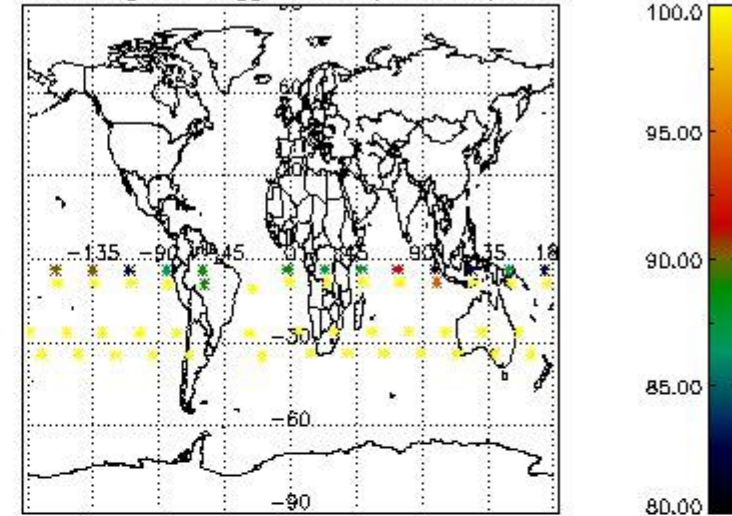


*3.2 Plot quality information per product (world map)*

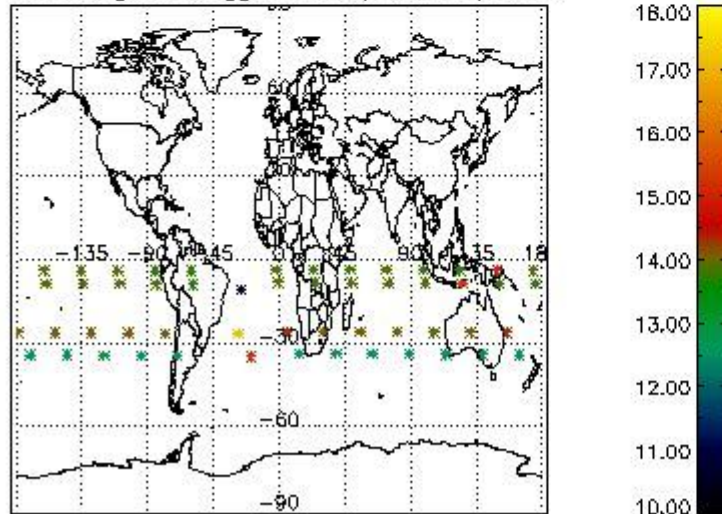
Percentage of flagged data per O3 profile



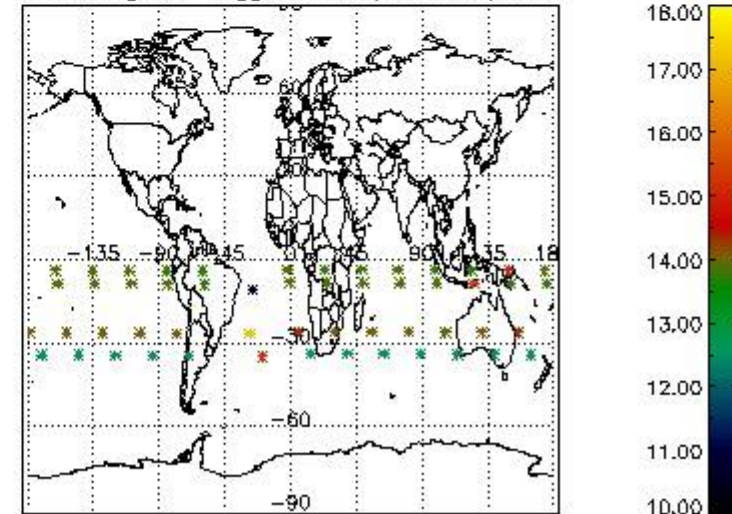
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

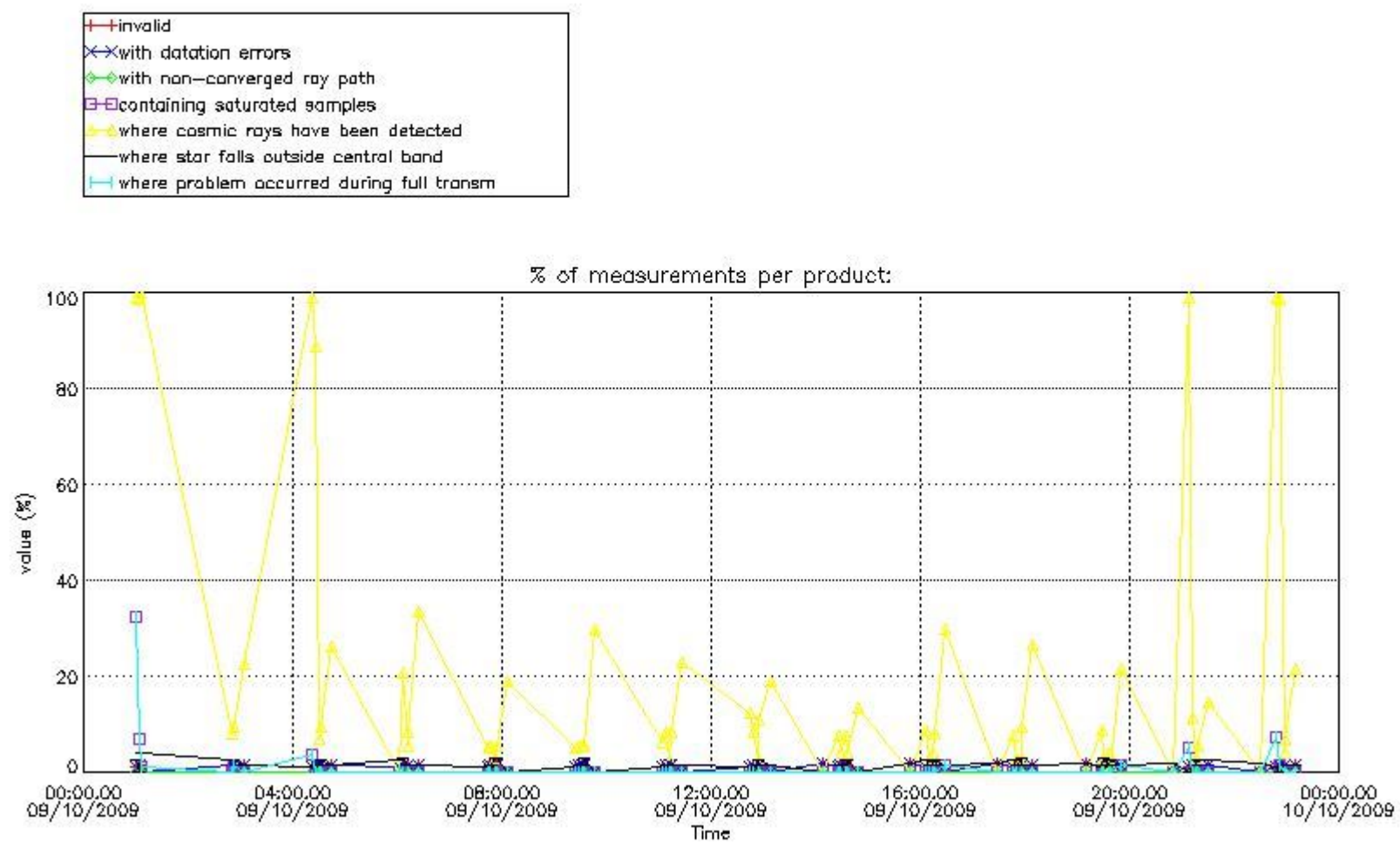


#### 4. Level 1 quality information per product

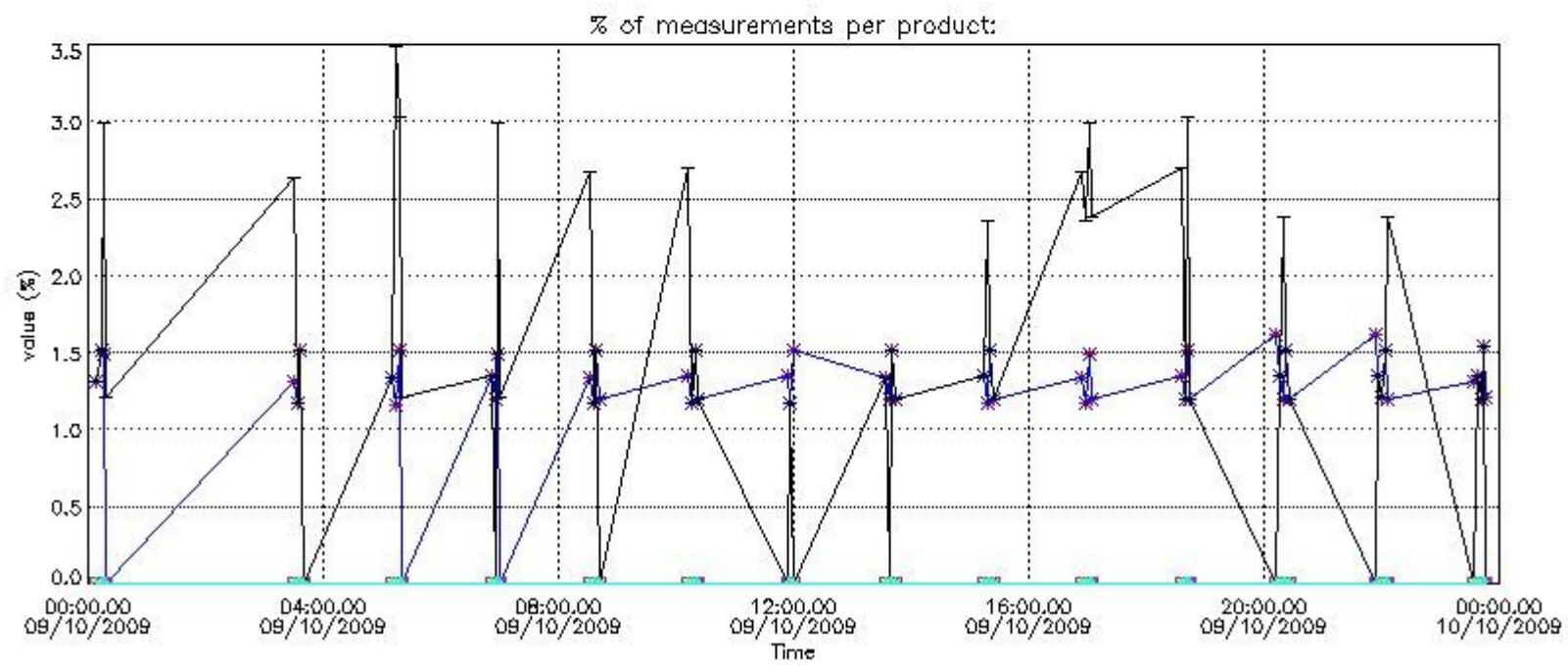
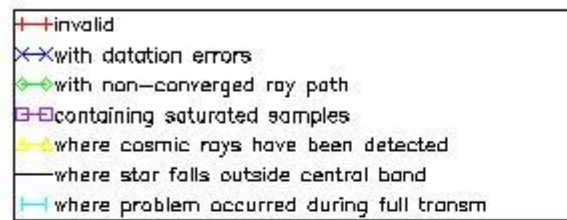
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

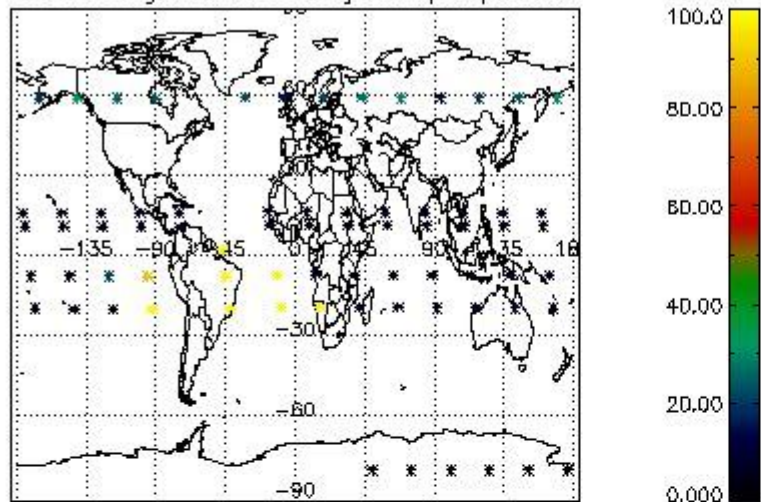


4.2 Plot quality information per product coming from level 1b processing (world map)

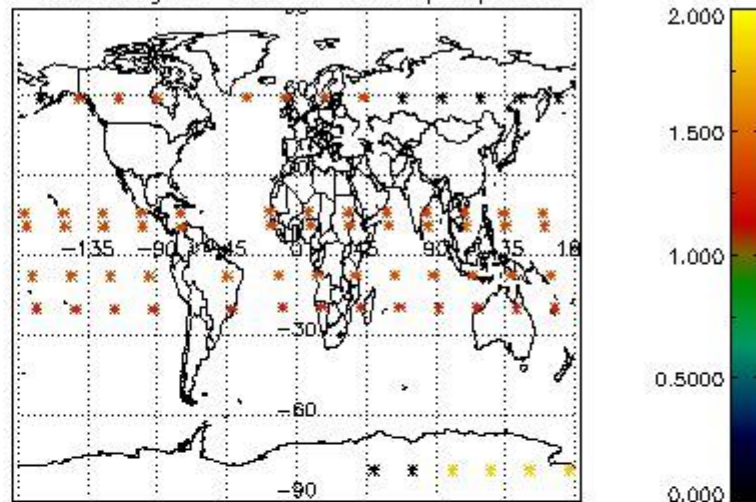
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



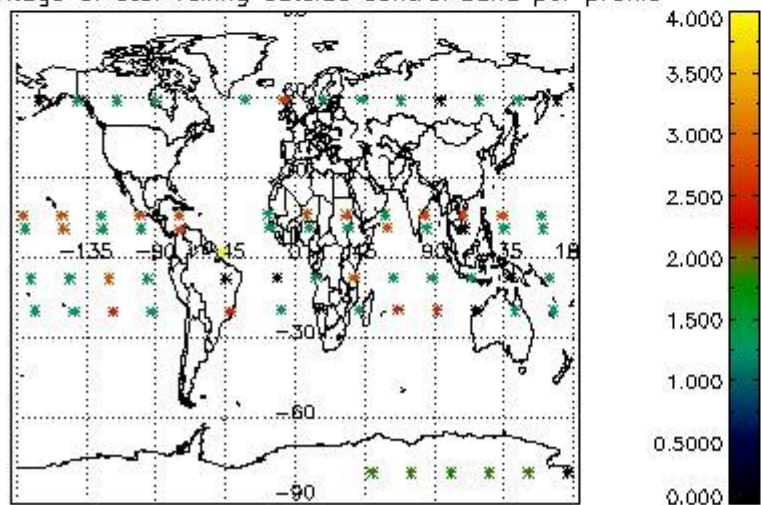
Percentage of cosmic ray hits per profile



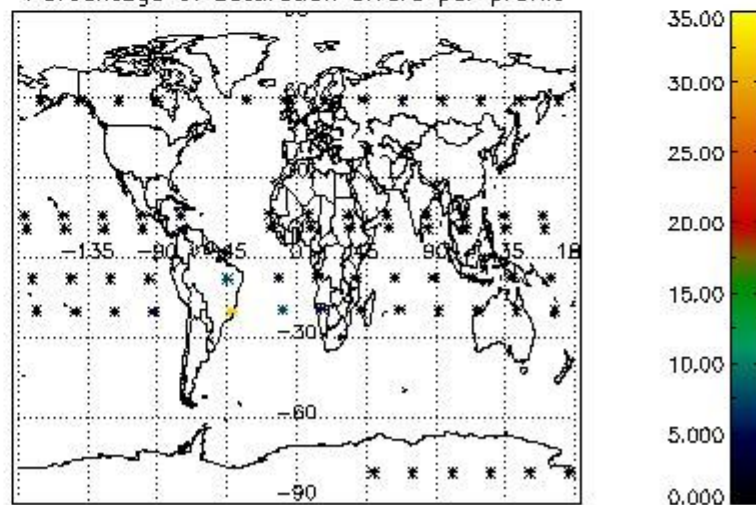
Percentage of datation errors per profile



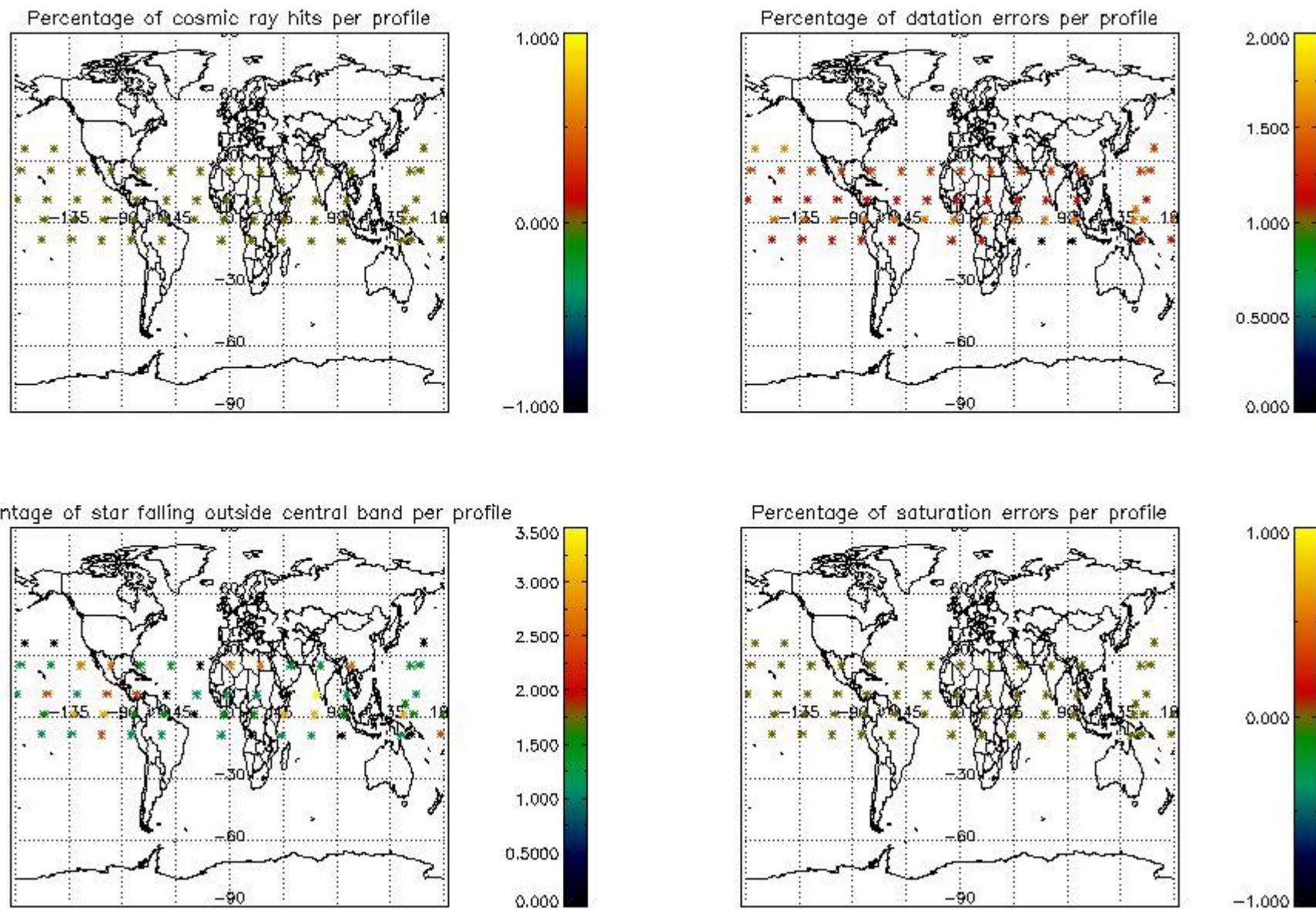
Percentage of star falling outside central band per profile



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

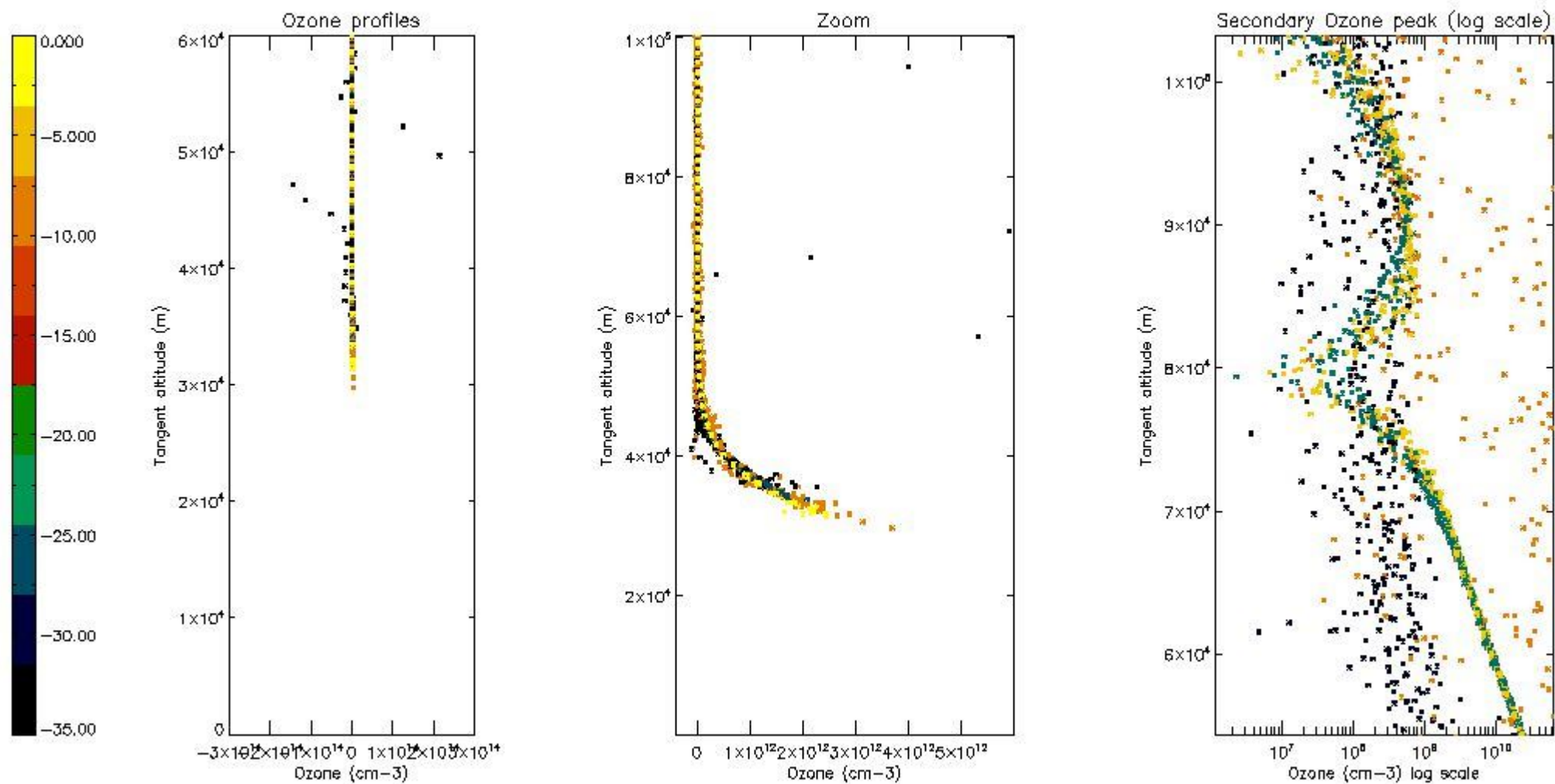
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	41
STD < 20	17

STD < 10	14
STD < 5	11

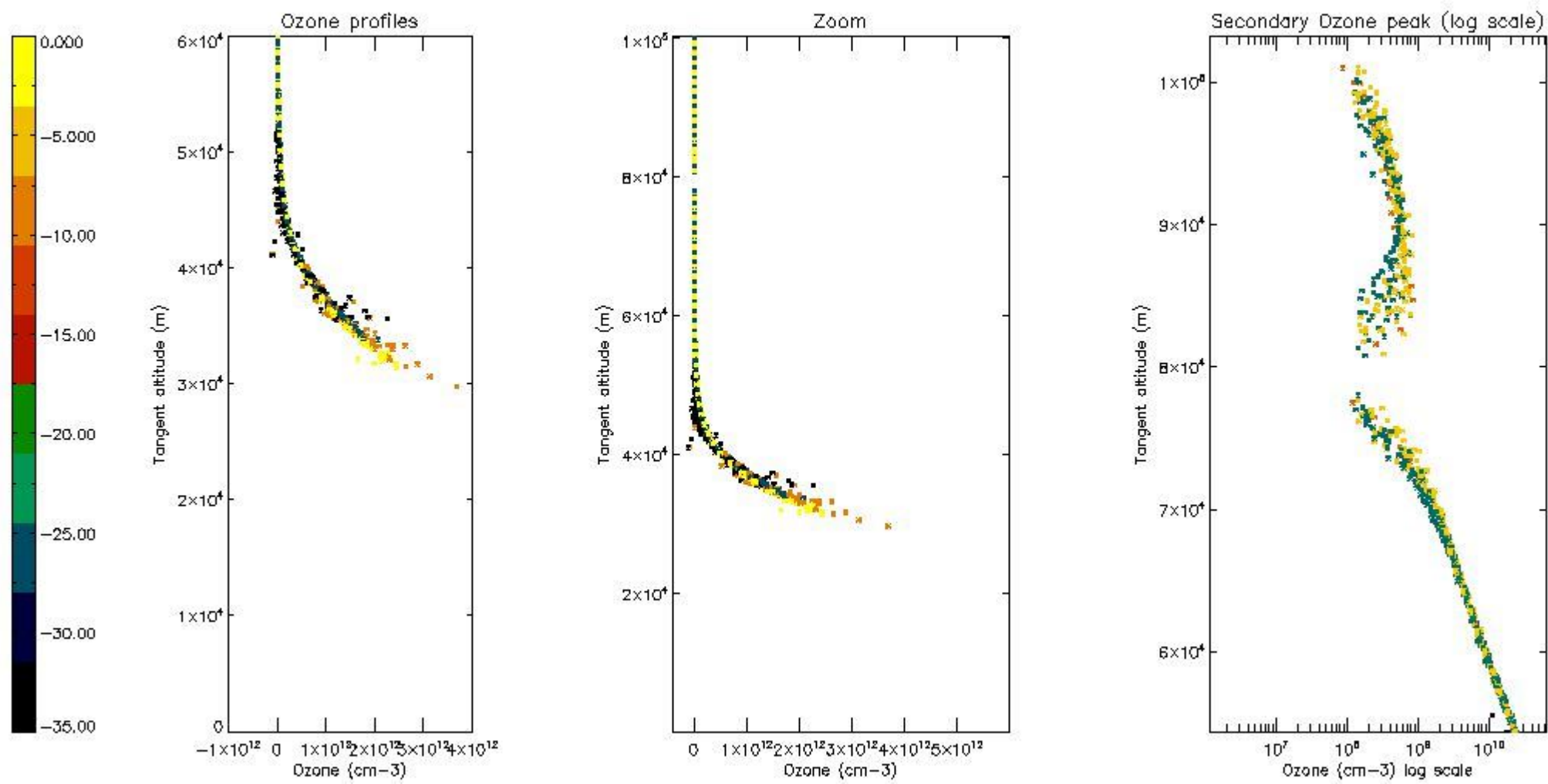
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



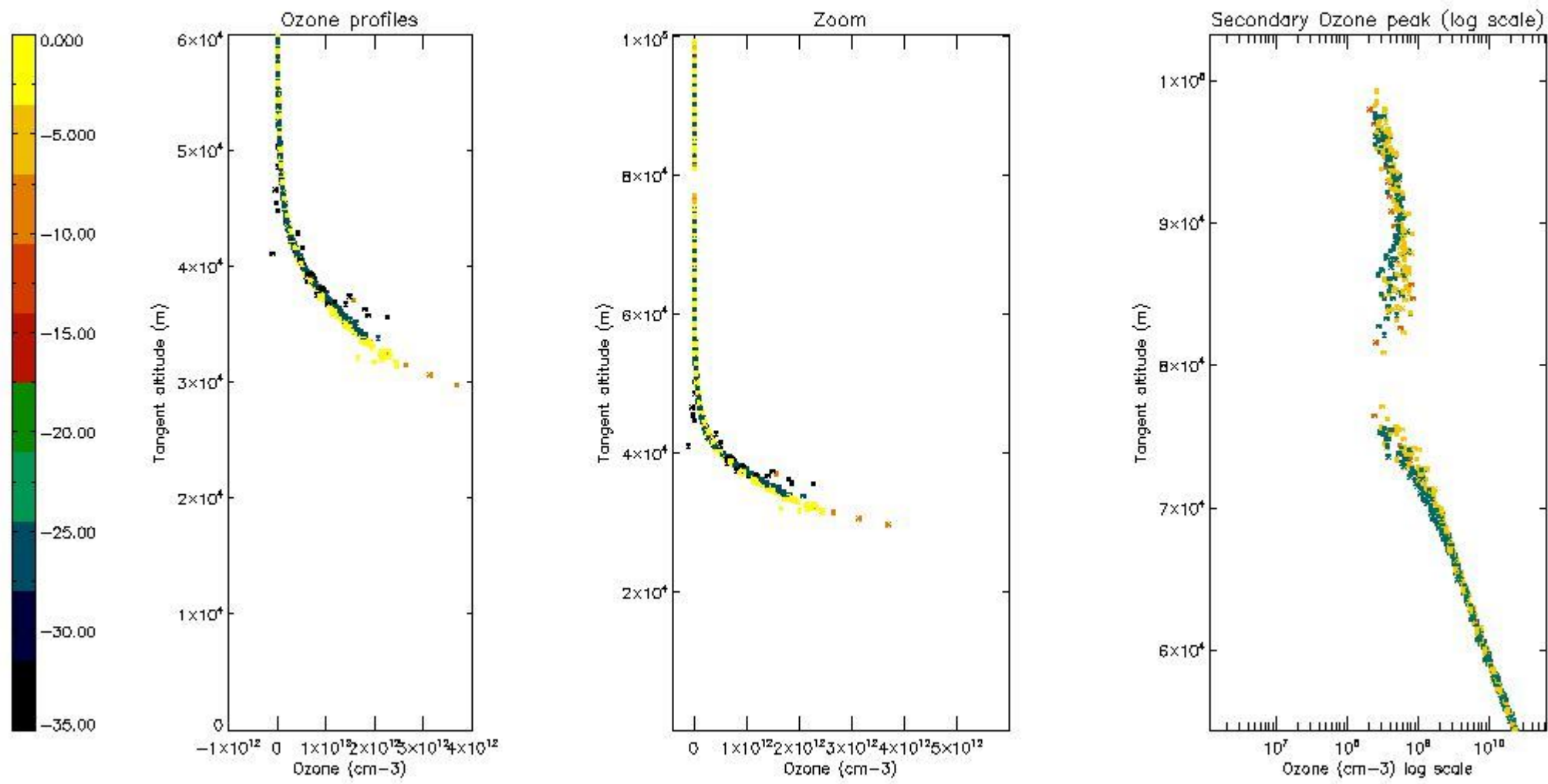
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



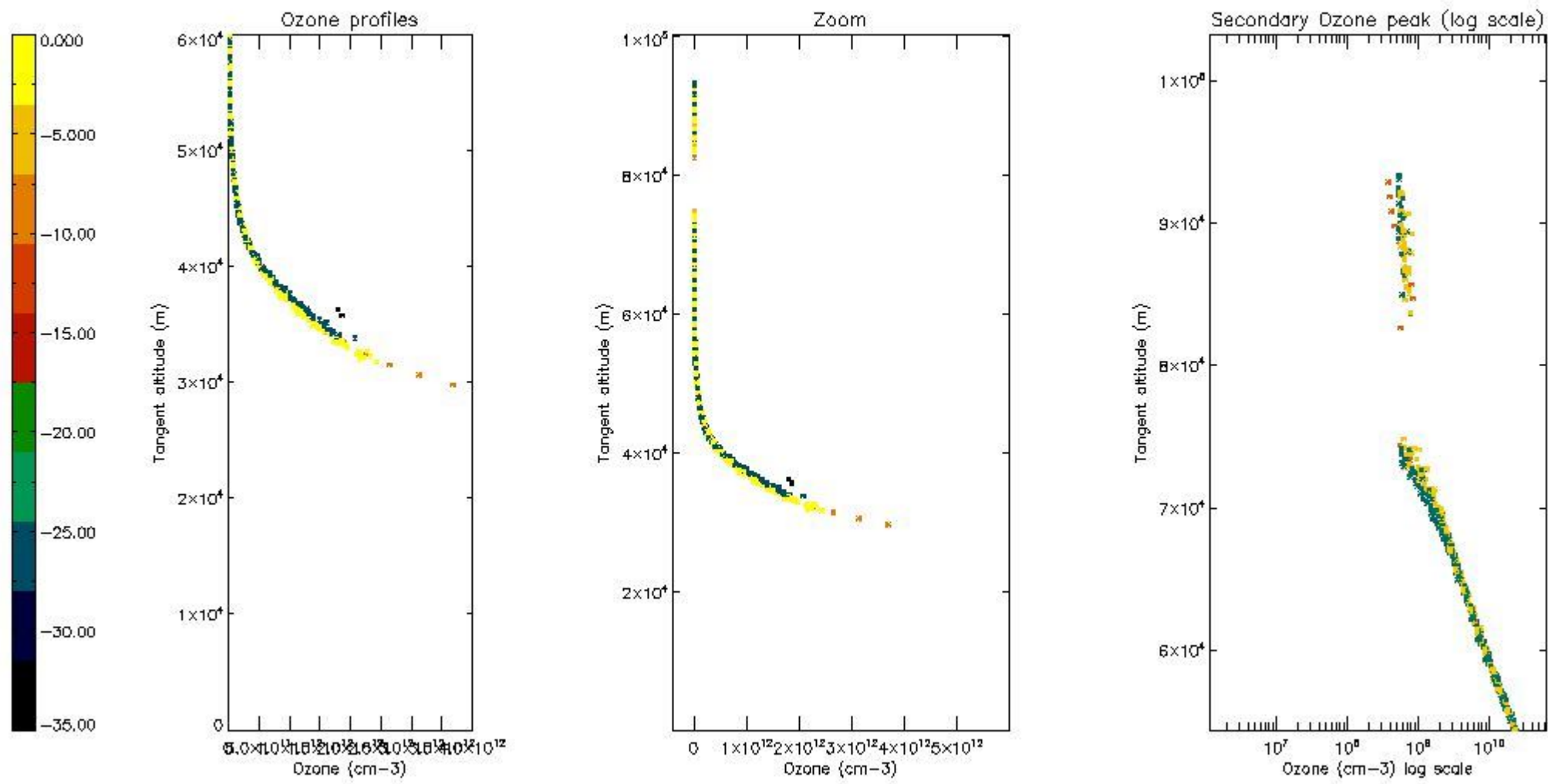
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



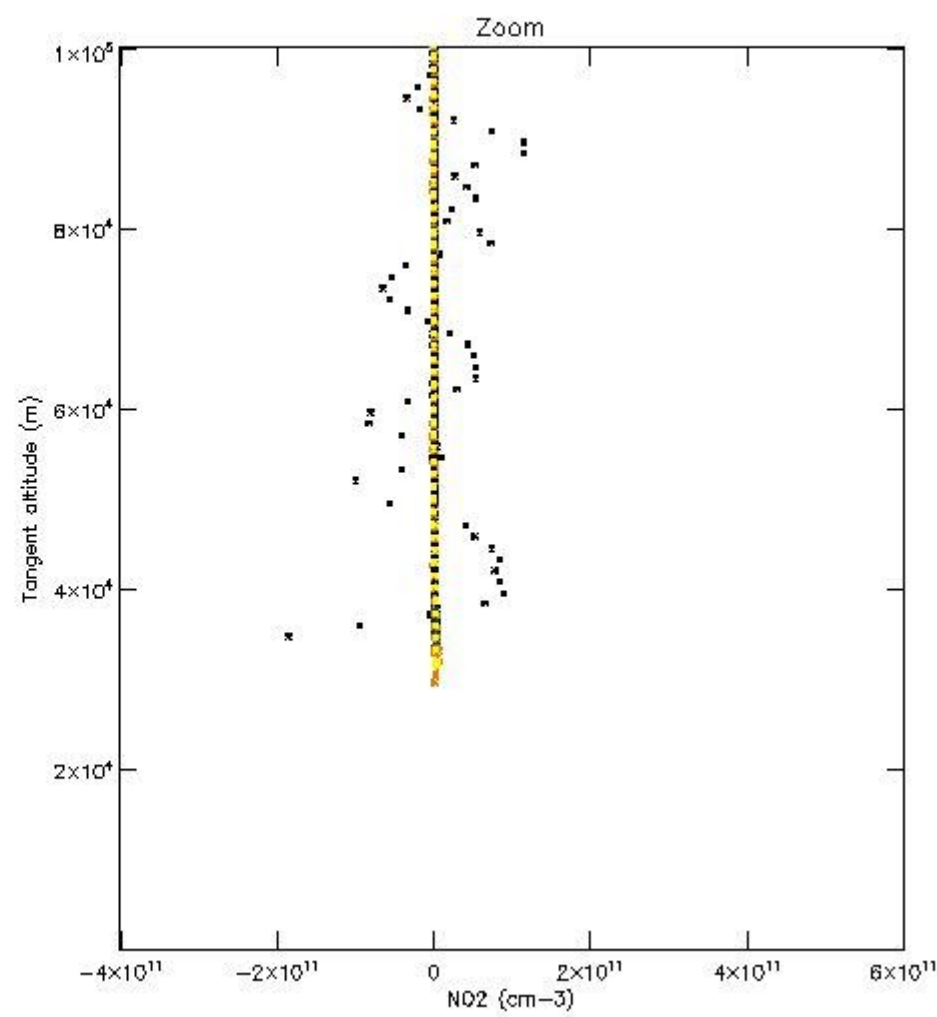
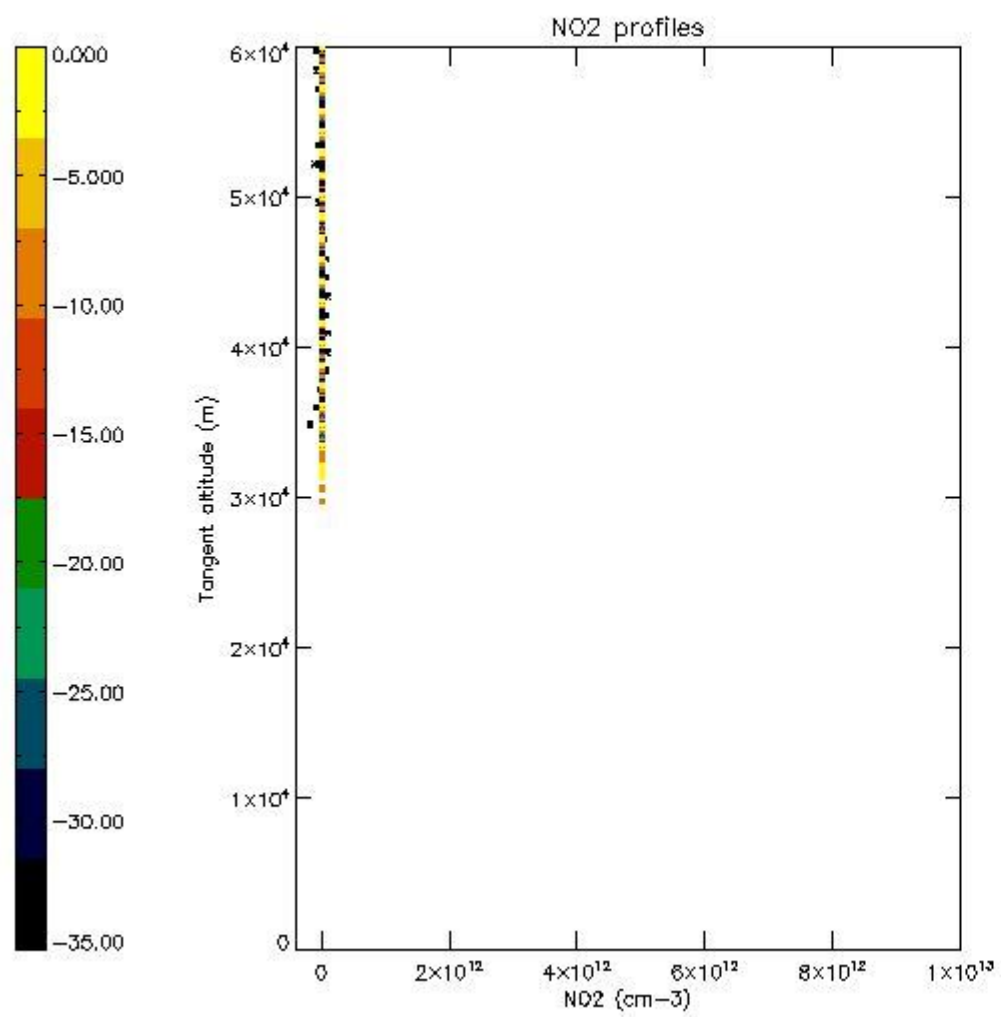
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



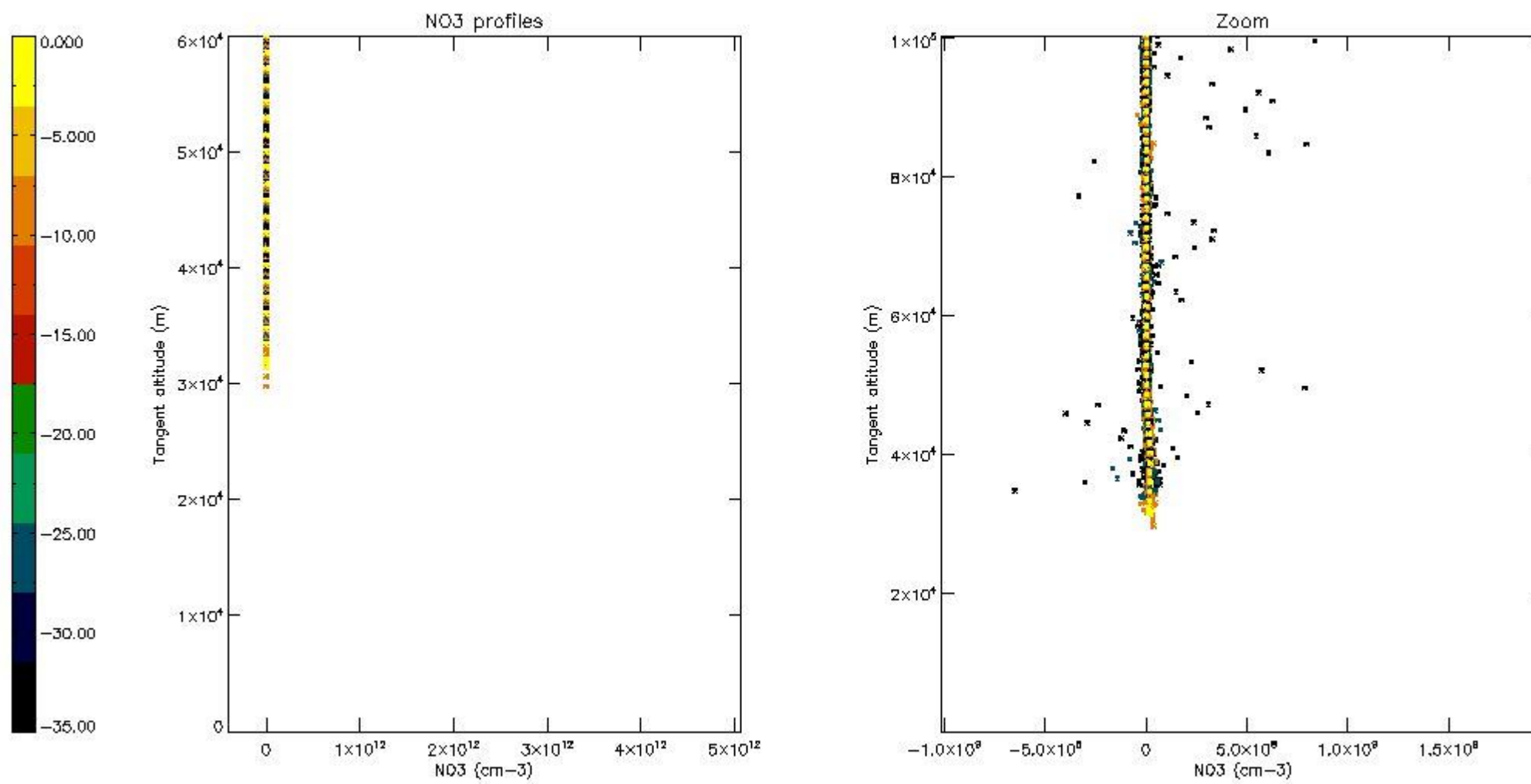
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

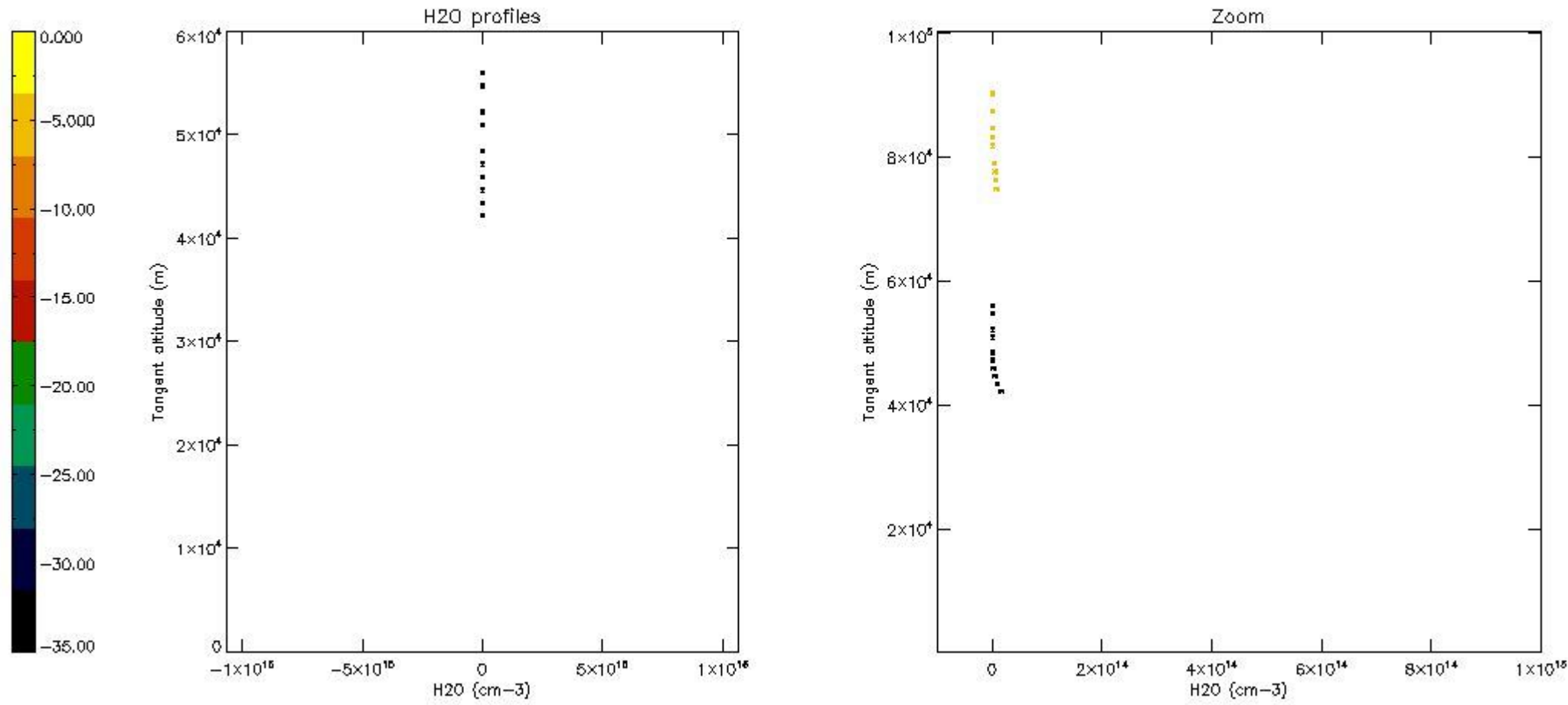
The colorbar represents the latitude.



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	09-OCT-2009 00:08:51
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	09-OCT-2009 00:08:51
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	09-OCT-2009 00:08:51

# GOMOS Level 2 Daily Report

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#### [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 13:09:25
Data source version	GOMOS/6.01
Start time of products	09-10-2009 (09OCT2009 00:00:00)
Stop time of products	10-10-2009 (10OCT2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	130
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__2PRFIN20091009_000851_000000382083_00145_39778_1986.N1	09-OCT-2009 00:08:51	Bright	38.000	53	43Bet And	2.0480	3300.0	76	39778	No
2	GOM_NL__2PRFIN20091009_001406_000000332083_00145_39778_1987.N1	09-OCT-2009 00:14:06	Bright	33.000	68	18Alp Cas	2.2250	4500.0	66	39778	No
3	GOM_NL__2PRFIN20091009_001530_000000342083_00145_39778_1988.N1	09-OCT-2009 00:15:30	Bright	33.500	76	27Gam Cas	2.3000	30000.	67	39778	No
4	GOM_NL__2PRFIN20091009_001822_000000422083_00145_39778_1989.N1	09-OCT-2009 00:18:22	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39778	No
5	GOM_NL__2PRFIN20091009_010032_000000402083_00145_39778_1990.N1	09-OCT-2009 01:00:32	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39778	No
6	GOM_NL__2PRFIN20091009_010359_000000362083_00145_39778_1991.N1	09-OCT-2009 01:03:59	Dark	35.500	70	Zet Pup	2.2460	39000.	71	39778	No
7	GOM_NL__2PRFIN20091009_010647_000000512083_00146_39779_1992.N1	09-OCT-2009 01:06:47	Dark	51.000	23	21Eps CMa	1.5020	26000.	102	39779	No
8	GOM_NL__2PRFIN20091009_024947_000000372083_00147_39780_2001.N1	09-OCT-2009 02:49:47	Dark	37.000	161	Tau Pup	2.9310	4500.0	74	39780	No
9	GOM_NL__2PRFIN20091009_025111_000000372083_00147_39780_2002.N1	09-OCT-2009 02:51:11	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39780	No
10	GOM_NL__2PRFIN20091009_030322_000000382083_00147_39780_2003.N1	09-OCT-2009 03:03:22	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39780	No
11	GOM_NL__2PRFIN20091009_033002_000000382083_00147_39780_2004.N1	09-OCT-2009 03:30:02	Bright	38.000	53	43Bet And	2.0480	3300.0	76	39780	No
12	GOM_NL__2PRFIN20091009_033403_000000432083_00147_39780_2005.N1	09-OCT-2009 03:34:03	Bright	42.500	73	57Gam1And	2.2600	13100.	85	39780	No
13	GOM_NL__2PRFIN20091009_033642_000000332083_00147_39780_2006.N1	09-OCT-2009 03:36:42	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39780	No
14	GOM_NL__2PRFIN20091009_033932_000000422083_00147_39780_2007.N1	09-OCT-2009 03:39:32	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39780	No
15	GOM_NL__2PRFIN20091009_042146_000000402083_00147_39780_2008.N1	09-OCT-2009 04:21:46	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39780	No
16	GOM_NL__2PRFIN20091009_042513_000000362083_00147_39780_2009.N1	09-OCT-2009 04:25:13	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39780	No
17	GOM_NL__2PRFIN20091009_043024_000000372083_00148_39781_2010.N1	09-OCT-2009 04:30:24	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39781	No
18	GOM_NL__2PRFIN20091009_043147_000000372083_00148_39781_2011.N1	09-OCT-2009 04:31:47	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39781	No
19	GOM_NL__2PRFIN20091009_044359_000000382083_00148_39781_2012.N1	09-OCT-2009 04:43:59	Straylight	38.000	157	The1Eri	2.9060	9300.0	76	39781	No
20	GOM_NL__2PRFIN20091009_051038_000000382083_00148_39781_2013.N1	09-OCT-2009 05:10:38	Bright	37.500	53	43Bet And	2.0480	3300.0	75	39781	No
21	GOM_NL__2PRFIN20091009_051438_000000432083_00148_39781_2014.N1	09-OCT-2009 05:14:38	Bright	43.000	73	57Gam1And	2.2600	13100.	86	39781	No
22	GOM_NL__2PRFIN20091009_051718_000000332083_00148_39781_2015.N1	09-OCT-2009 05:17:18	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39781	No
23	GOM_NL__2PRFIN20091009_052007_000000422083_00148_39781_2016.N1	09-OCT-2009 05:20:07	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39781	No
24	GOM_NL__2PRFIN20091009_060223_000000402083_00148_39781_2017.N1	09-OCT-2009 06:02:23	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39781	No
25	GOM_NL__2PRFIN20091009_060550_000000362083_00148_39781_2018.N1	09-OCT-2009 06:05:50	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39781	No
26	GOM_NL__2PRFIN20091009_061101_000000372083_00149_39782_2019.N1	09-OCT-2009 06:11:01	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39782	No
27	GOM_NL__2PRFIN20091009_061224_000000372083_00149_39782_2020.N1	09-OCT-2009 06:12:24	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39782	No
28	GOM_NL__2PRFIN20091009_062435_000000382083_00149_39782_2021.N1	09-OCT-2009 06:24:35	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39782	No
29	GOM_NL__2PRFIN20091009_065113_000000372083_00149_39782_2022.N1	09-OCT-2009 06:51:13	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39782	No
30	GOM_NL__2PRFIN20091009_065513_000000422083_00149_39782_2023.N1	09-OCT-2009 06:55:13	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39782	No
31	GOM_NL__2PRFIN20091009_065753_000000342083_00149_39782_2024.N1	09-OCT-2009 06:57:53	Bright	33.500	76	27Gam Cas	2.3000	30000.	67	39782	No
32	GOM_NL__2PRFIN20091009_070042_000000422083_00149_39782_2025.N1	09-OCT-2009 07:00:42	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39782	No
33	GOM_NL__2PRFIN20091009_074300_000000402083_00149_39782_2026.N1	09-OCT-2009 07:43:00	Dark	39.500	132	15Rho Pup	2.8030	6900.0	79	39782	No
34	GOM_NL__2PRFIN20091009_074626_000000362083_00149_39782_2027.N1	09-OCT-2009 07:46:26	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39782	No
35	GOM_NL__2PRFIN20091009_075138_000000372083_00150_39783_2029.N1	09-OCT-2009 07:51:38	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39783	No
36	GOM_NL__2PRFIN20091009_075301_000000372083_00150_39783_2030.N1	09-OCT-2009 07:53:01	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39783	No
37	GOM_NL__2PRFIN20091009_080512_000000372083_00150_39783_2031.N1	09-OCT-2009 08:05:12	Straylight	37.000	157	The1Eri	2.9060	9300.0	74	39783	No
38	GOM_NL__2PRFIN20091009_083149_000000382083_00150_39783_2032.N1	09-OCT-2009 08:31:49	Bright	37.500	53	43Bet And	2.0480	3300.0	75	39783	No
39	GOM_NL__2PRFIN20091009_083548_000000432083_00150_39783_2033.N1	09-OCT-2009 08:35:48	Bright	42.500	73	57Gam1And	2.2600	13100.	85	39783	No
40	GOM_NL__2PRFIN20091009_083829_000000332083_00150_39783_2034.N1	09-OCT-2009 08:38:29	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39783	No
41	GOM_NL__2PRFIN20091009_084117_000000422083_00150_39783_2035.N1	09-OCT-2009 08:41:17	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39783	No
42	GOM_NL__2PRFIN20091009_092337_000000402083_00150_39783_2036.N1	09-OCT-2009 09:23:37	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39783	No

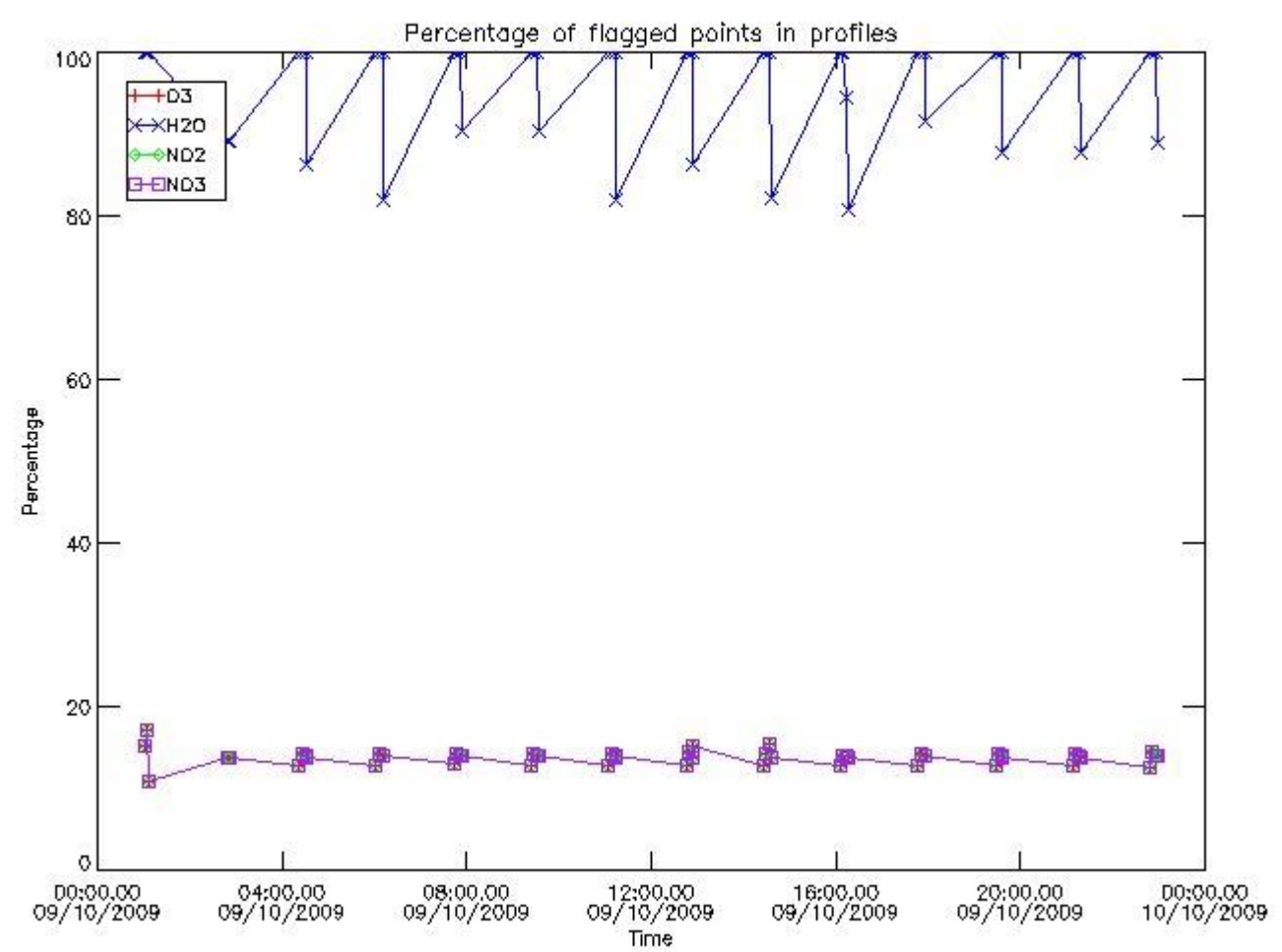


102	GOM_NL__2PRFIN20091009_193718_000000372083_00157_39790_2113.N1	09-OCT-2009 19:37:18	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39790	No
103	GOM_NL__2PRFIN20091009_194927_000000382083_00157_39790_2114.N1	09-OCT-2009 19:49:27	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39790	No
104	GOM_NL__2PRFIN20091009_201255_000000312083_00157_39790_2115.N1	09-OCT-2009 20:12:55	Tw_i_and_stray	31.000	105	6Bet Ari	2.6450	8900.0	62	39790	No
105	GOM_NL__2PRFIN20091009_201557_000000372083_00157_39790_2116.N1	09-OCT-2009 20:15:57	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39790	No
106	GOM_NL__2PRFIN20091009_201954_000000422083_00157_39790_2117.N1	09-OCT-2009 20:19:54	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39790	No
107	GOM_NL__2PRFIN20091009_202238_000000332083_00157_39790_2118.N1	09-OCT-2009 20:22:38	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39790	No
108	GOM_NL__2PRFIN20091009_202522_000000422083_00157_39790_2119.N1	09-OCT-2009 20:25:22	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39790	No
109	GOM_NL__2PRFIN20091009_204943_000000272083_00157_39790_2120.N1	09-OCT-2009 20:49:43	Tw_i_and_stray	27.000	166	17Eps Leo	2.9800	6000.0	54	39790	No
110	GOM_NL__2PRFIN20091009_210756_000000402083_00157_39790_2121.N1	09-OCT-2009 21:07:56	Dark	40.000	132	15Rho Pup	2.8030	6900.0	80	39790	No
111	GOM_NL__2PRFIN20091009_211120_000000362083_00157_39790_2122.N1	09-OCT-2009 21:11:20	Dark	36.000	70	Zet Pup	2.2460	39000.	72	39790	No
112	GOM_NL__2PRFIN20091009_211631_000000372083_00158_39791_2120.N1	09-OCT-2009 21:16:31	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39791	No
113	GOM_NL__2PRFIN20091009_211754_000000372083_00158_39791_2121.N1	09-OCT-2009 21:17:54	Dark	37.000	2	Alp Car	-0.73600	7000.0	74	39791	No
114	GOM_NL__2PRFIN20091009_213004_000000382083_00158_39791_2122.N1	09-OCT-2009 21:30:04	Straylight	37.500	157	The1Eri	2.9060	9300.0	75	39791	No
115	GOM_NL__2PRFIN20091009_215330_000000312083_00158_39791_2123.N1	09-OCT-2009 21:53:30	Tw_i_and_stray	31.000	105	6Bet Ari	2.6450	8900.0	62	39791	No
116	GOM_NL__2PRFIN20091009_215632_000000372083_00158_39791_2124.N1	09-OCT-2009 21:56:32	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39791	No
117	GOM_NL__2PRFIN20091009_220030_000000422083_00158_39791_2125.N1	09-OCT-2009 22:00:30	Bright	41.500	73	57Gam1And	2.2600	13100.	83	39791	No
118	GOM_NL__2PRFIN20091009_220314_000000332083_00158_39791_2126.N1	09-OCT-2009 22:03:14	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	39791	No
119	GOM_NL__2PRFIN20091009_220557_000000422083_00158_39791_2127.N1	09-OCT-2009 22:05:57	Bright	42.000	160	23Gam Per	2.9300	4700.0	84	39791	No
120	GOM_NL__2PRFIN20091009_223019_000000272083_00158_39791_2128.N1	09-OCT-2009 22:30:19	Tw_i_and_stray	27.000	166	17Eps Leo	2.9800	6000.0	54	39791	No
121	GOM_NL__2PRFIN20091009_224833_000000412083_00158_39791_2129.N1	09-OCT-2009 22:48:33	Dark	40.500	132	15Rho Pup	2.8030	6900.0	81	39791	No
122	GOM_NL__2PRFIN20091009_225157_000000362083_00158_39791_2130.N1	09-OCT-2009 22:51:57	Dark	35.500	70	Zet Pup	2.2460	39000.	71	39791	No
123	GOM_NL__2PRFIN20091009_225708_000000372083_00159_39792_2130.N1	09-OCT-2009 22:57:08	Dark	36.500	161	Tau Pup	2.9310	4500.0	73	39792	No
124	GOM_NL__2PRFIN20091009_225831_000000372083_00159_39792_2131.N1	09-OCT-2009 22:58:31	Dark	36.500	2	Alp Car	-0.73600	7000.0	73	39792	No
125	GOM_NL__2PRFIN20091009_231040_000000372083_00159_39792_2132.N1	09-OCT-2009 23:10:40	Straylight	37.000	157	The1Eri	2.9060	9300.0	74	39792	No
126	GOM_NL__2PRFIN20091009_233404_000000382083_00159_39792_2133.N1	09-OCT-2009 23:34:04	Bright	38.000	105	6Bet Ari	2.6450	8900.0	76	39792	No
127	GOM_NL__2PRFIN20091009_233708_000000372083_00159_39792_2134.N1	09-OCT-2009 23:37:08	Bright	37.000	53	43Bet And	2.0480	3300.0	74	39792	No
128	GOM_NL__2PRFIN20091009_234104_000000422083_00159_39792_2135.N1	09-OCT-2009 23:41:04	Bright	42.000	73	57Gam1And	2.2600	13100.	84	39792	No
129	GOM_NL__2PRFIN20091009_234349_000000332083_00159_39792_2136.N1	09-OCT-2009 23:43:49	Bright	32.500	76	27Gam Cas	2.3000	30000.	65	39792	No
130	GOM_NL__2PRFIN20091009_234632_000000422083_00159_39792_2137.N1	09-OCT-2009 23:46:32	Bright	41.500	160	23Gam Per	2.9300	4700.0	83	39792	No

### 3. Quality information per product

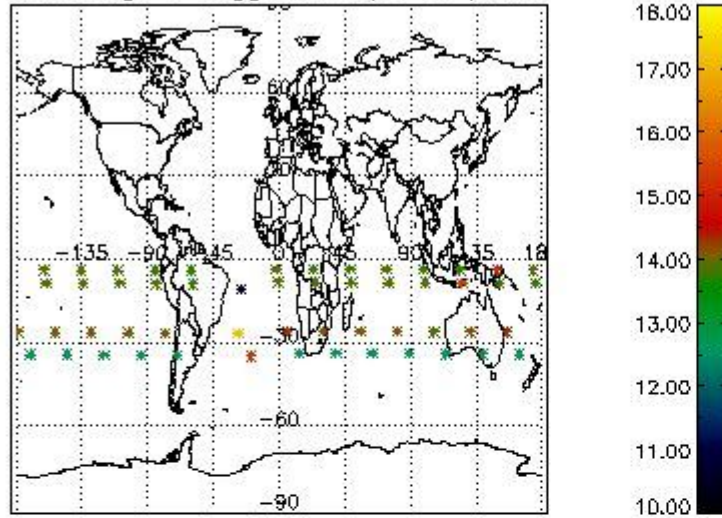
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

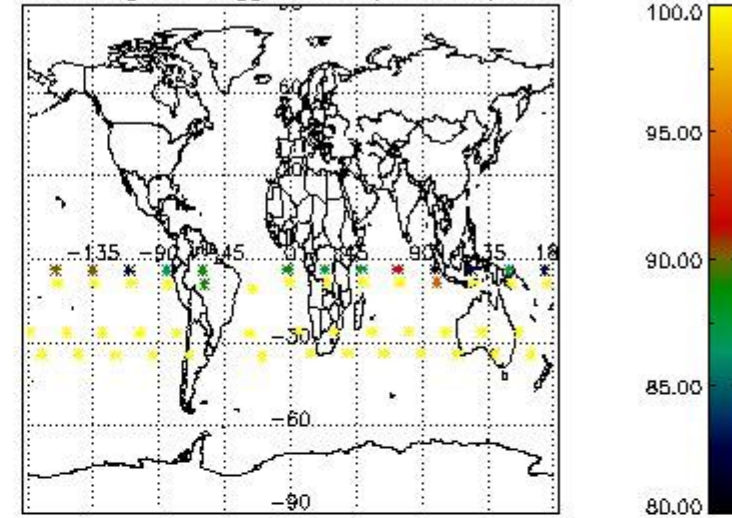


3.2 Plot quality information per product (world map)

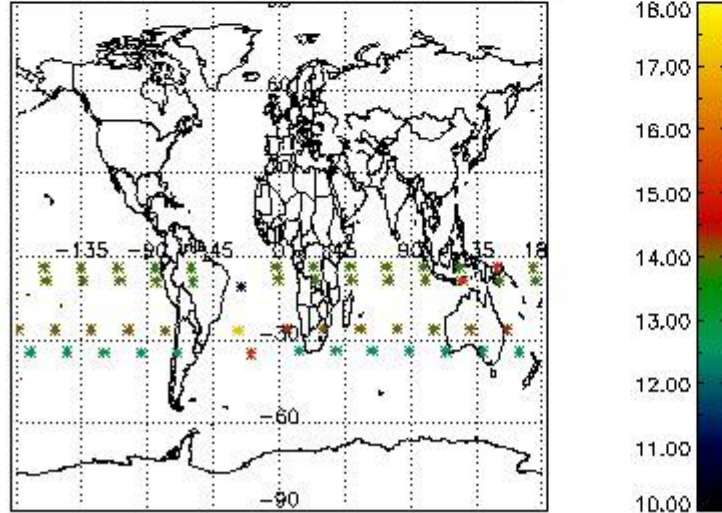
Percentage of flagged data per O3 profile



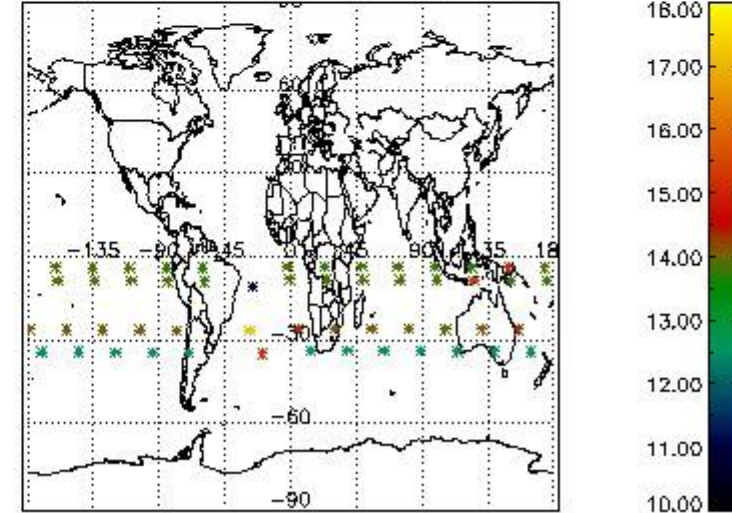
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

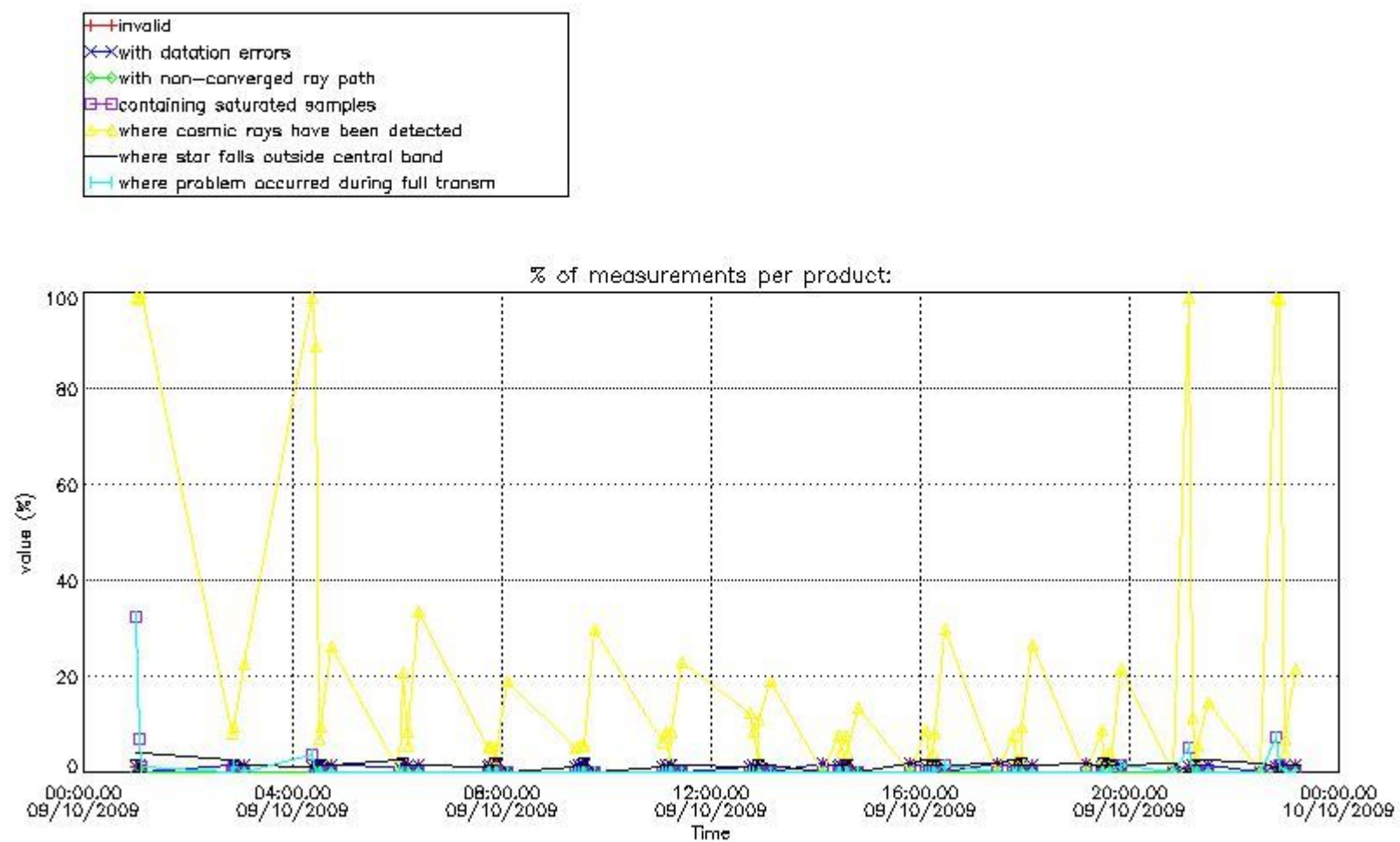


#### 4. Level 1 quality information per product

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.

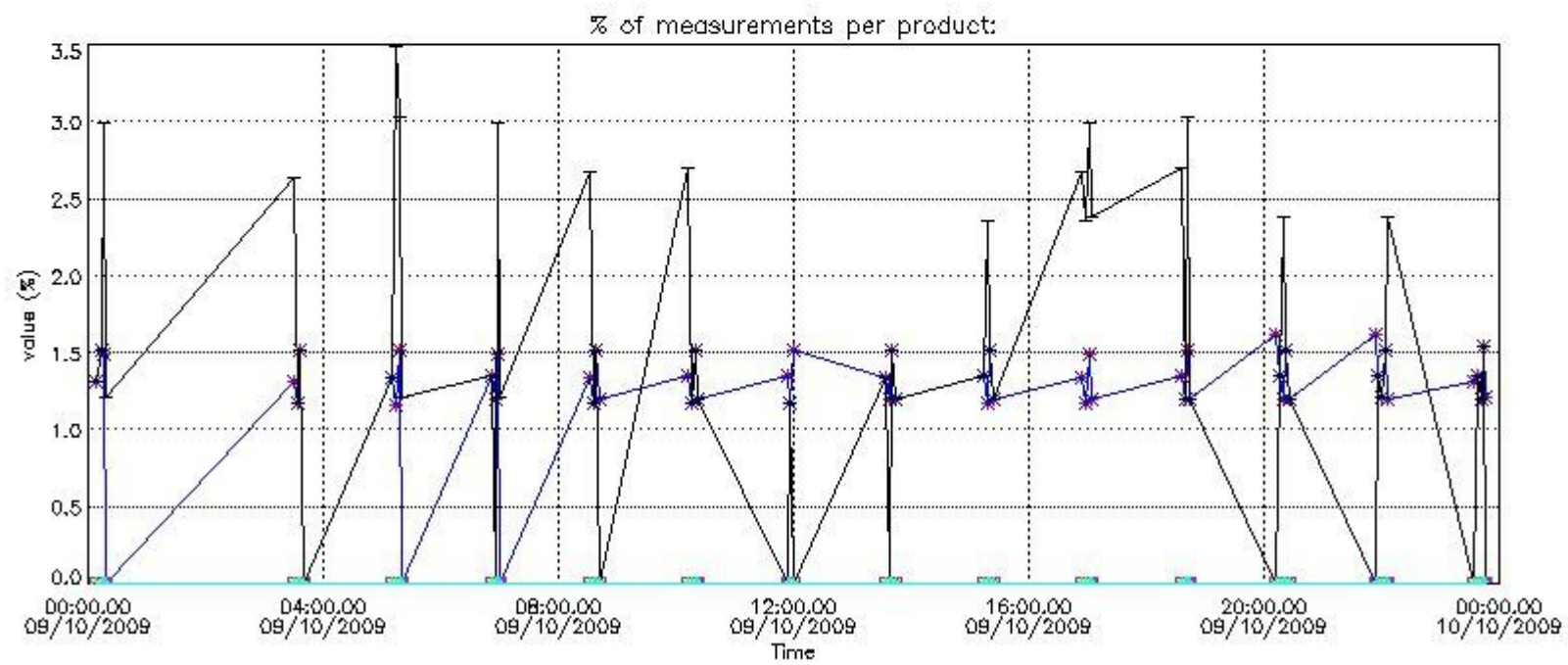
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

###### 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

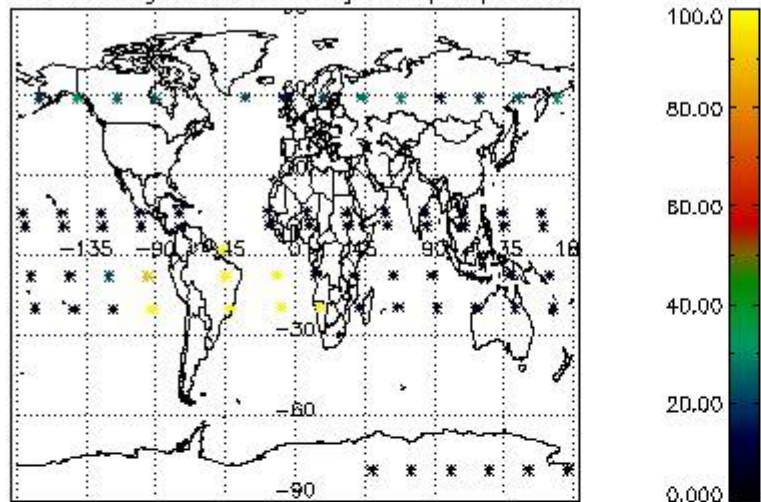




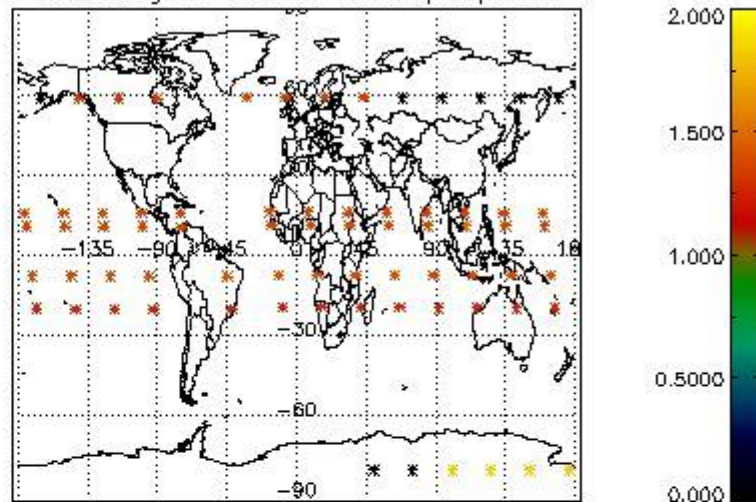
4.2 Plot quality information per product coming from level 1b processing (world map)

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

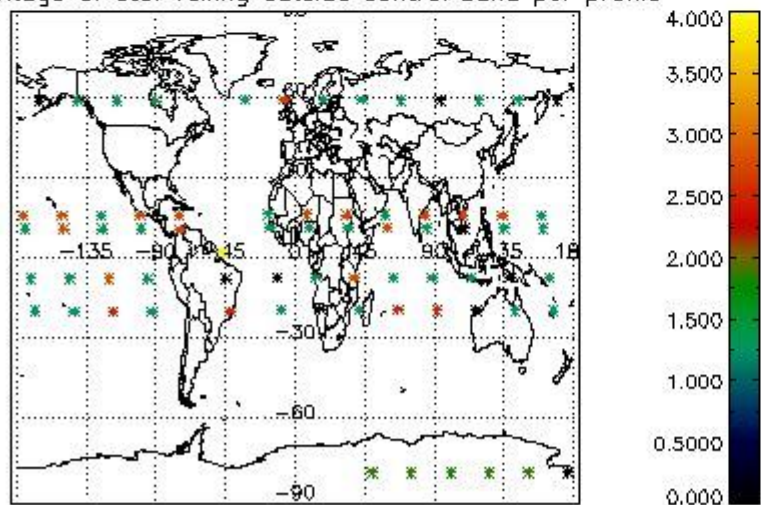
Percentage of cosmic ray hits per profile



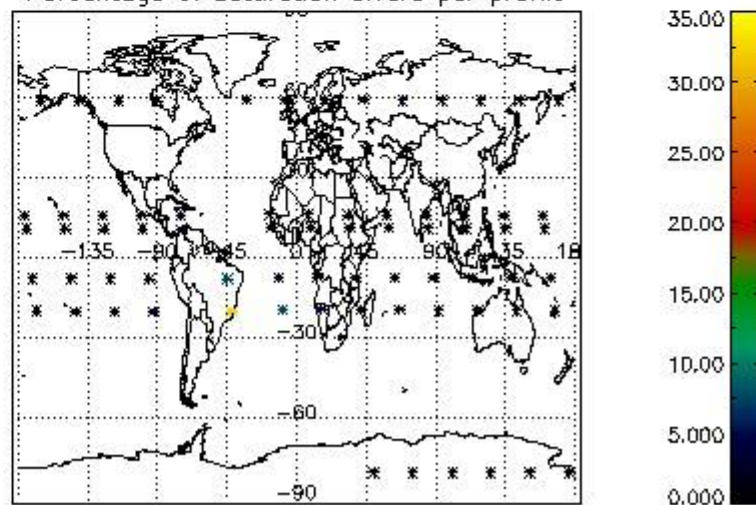
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

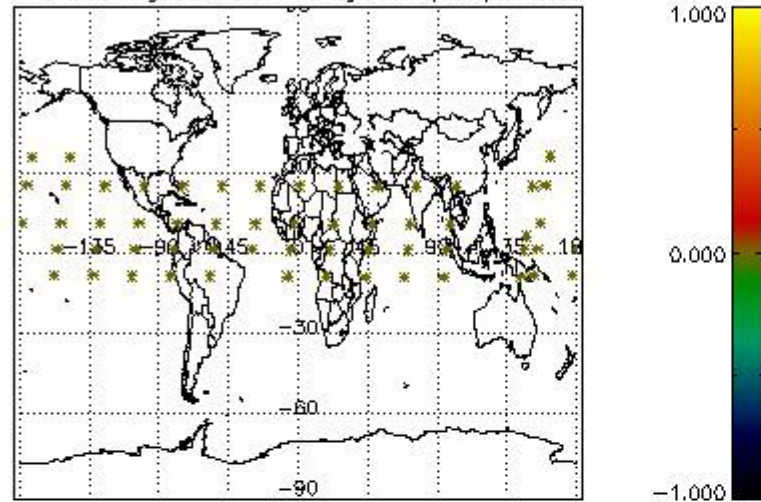


Percentage of saturation errors per profile

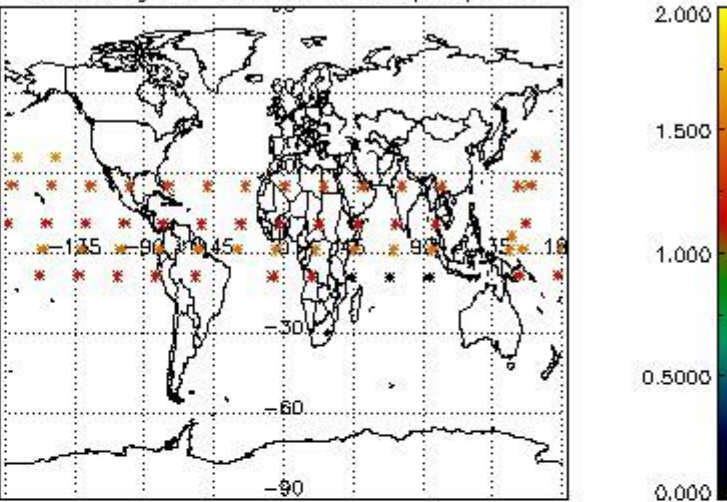


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

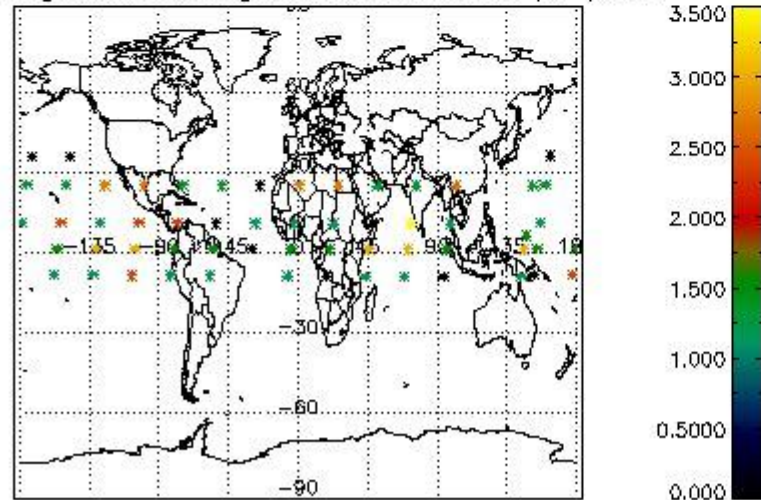
Percentage of cosmic ray hits per profile



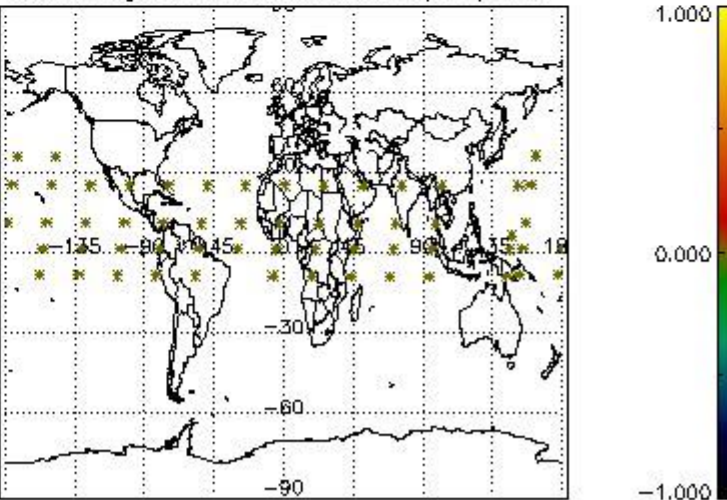
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

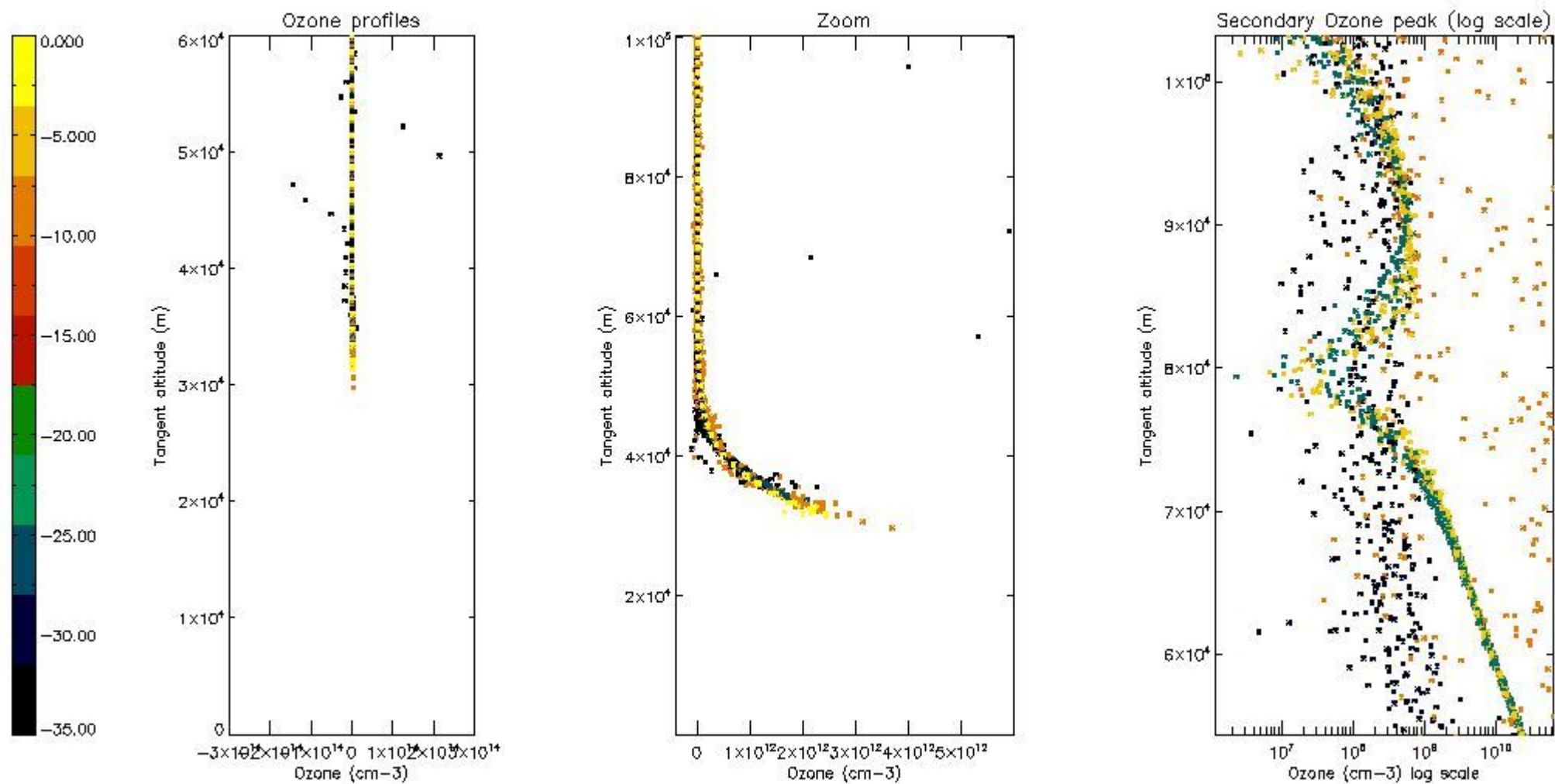
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	41
STD < 20	17

STD < 10	14
STD < 5	11

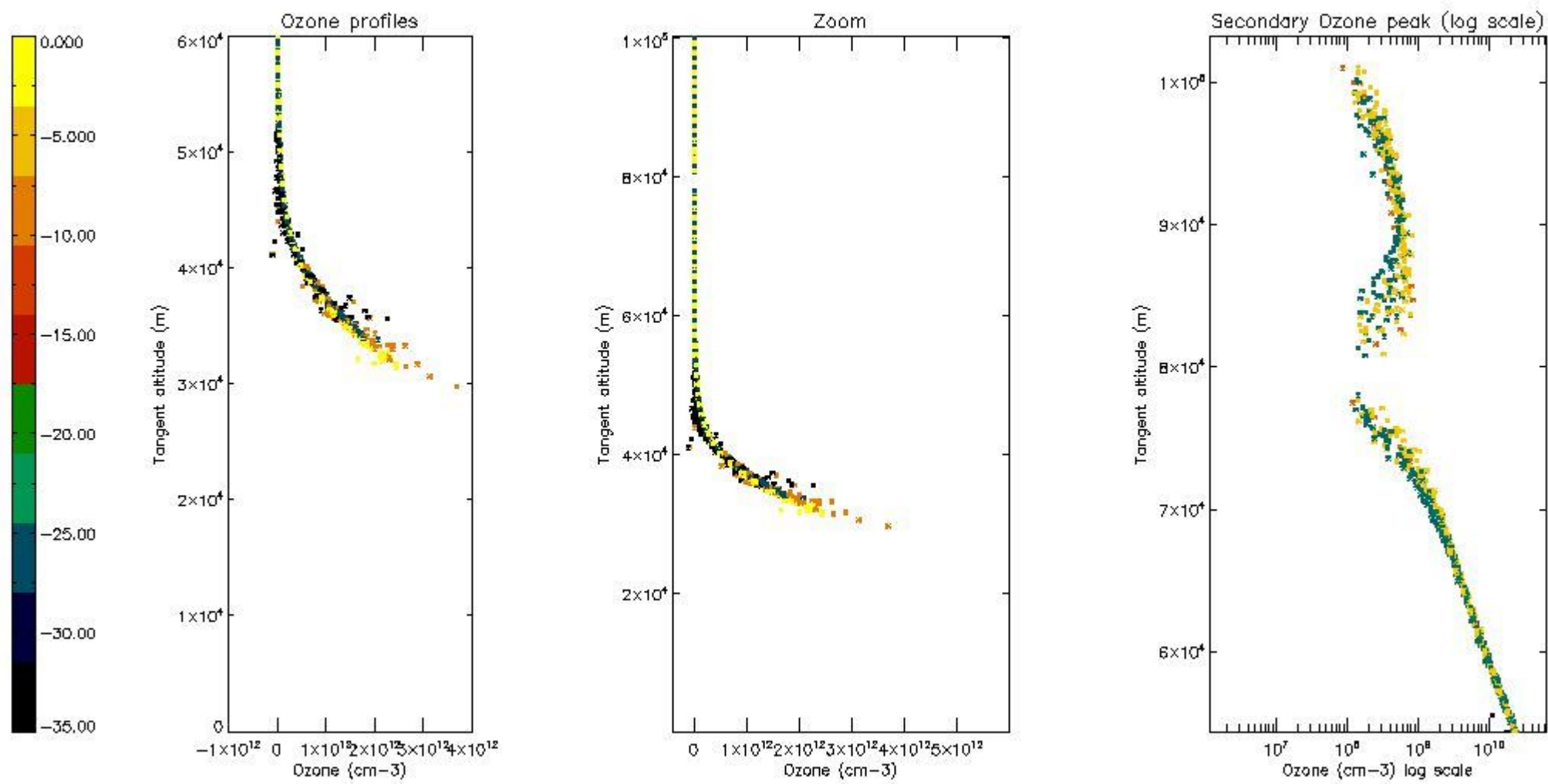
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



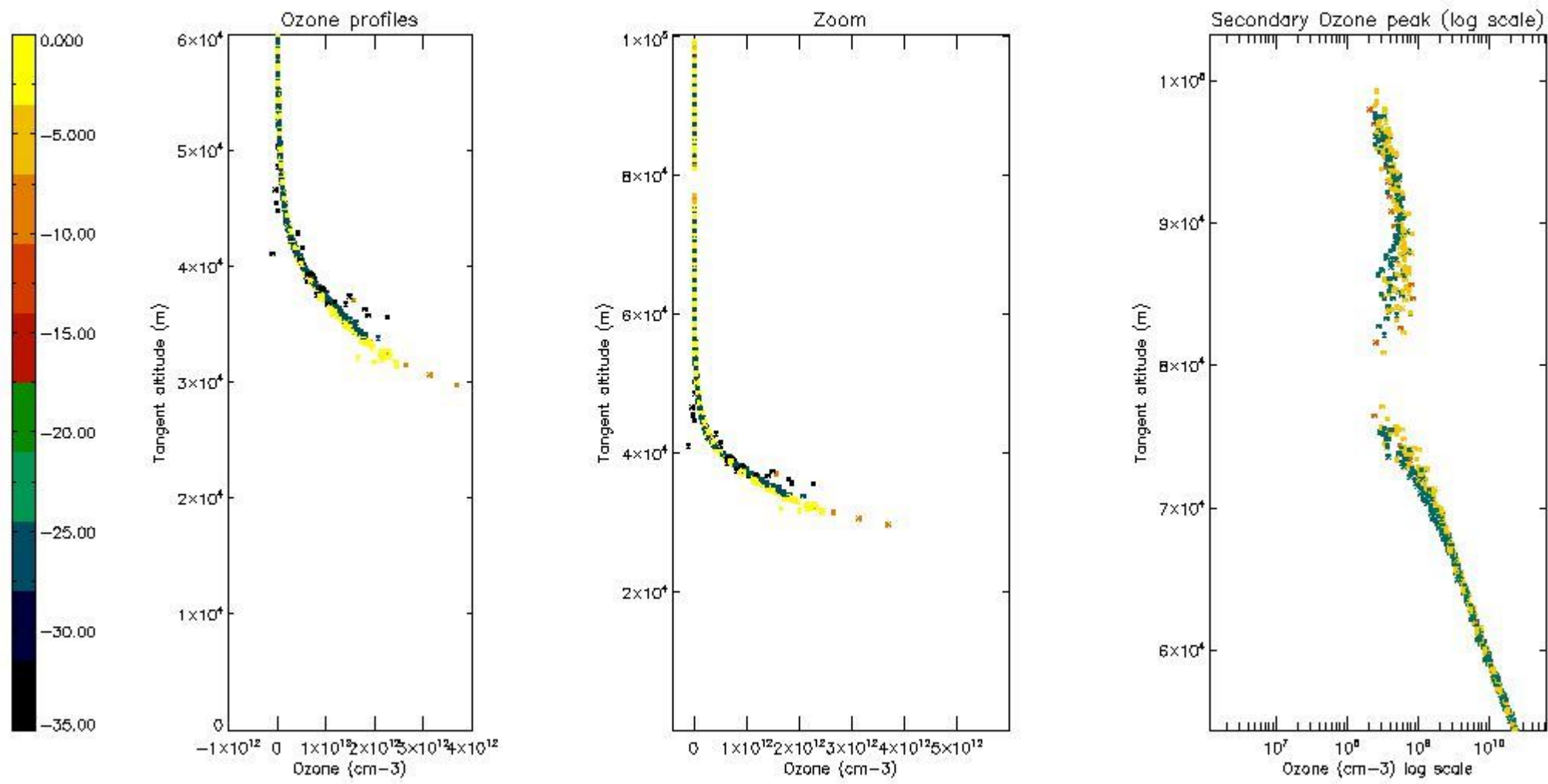
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



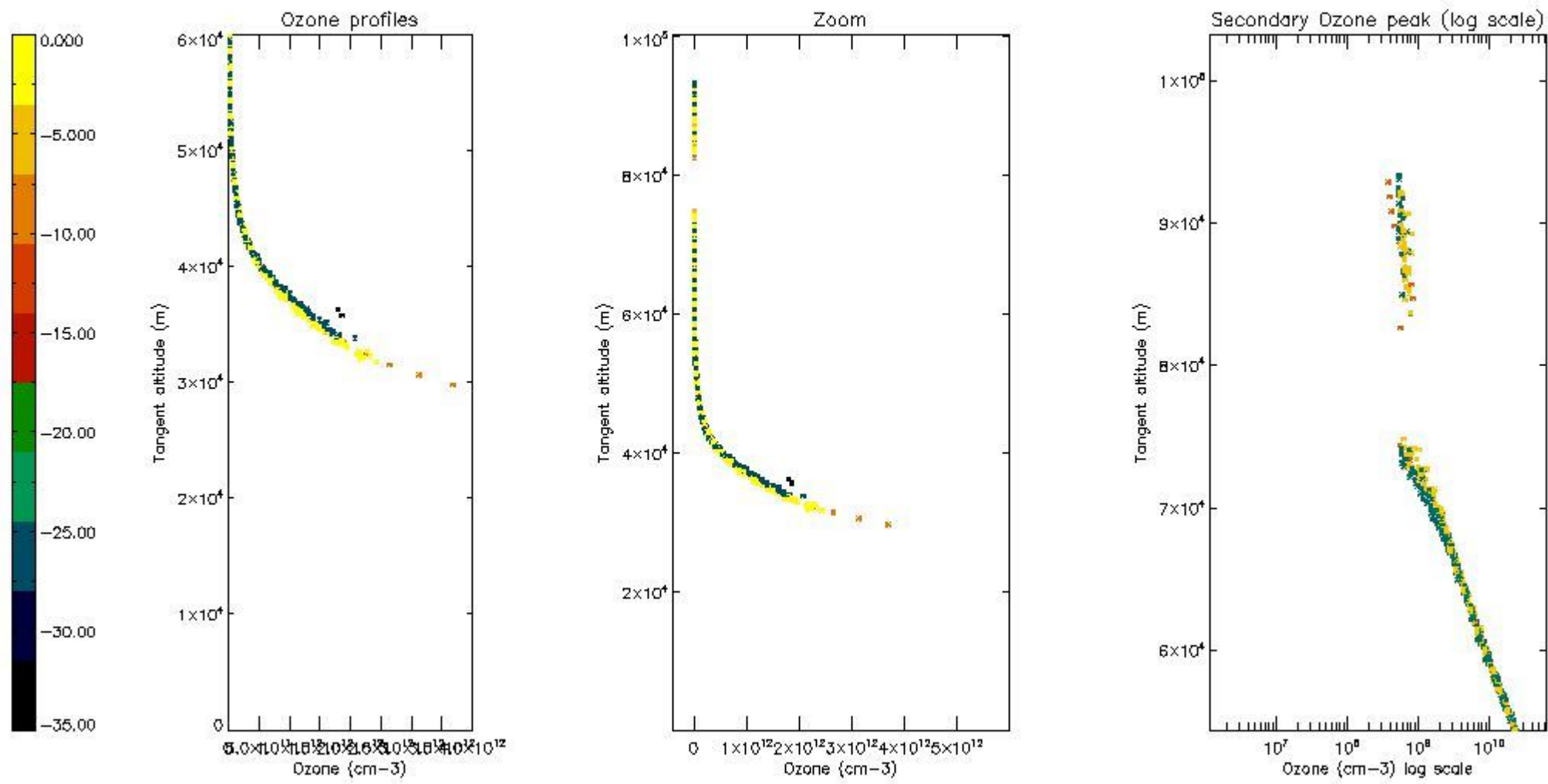
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



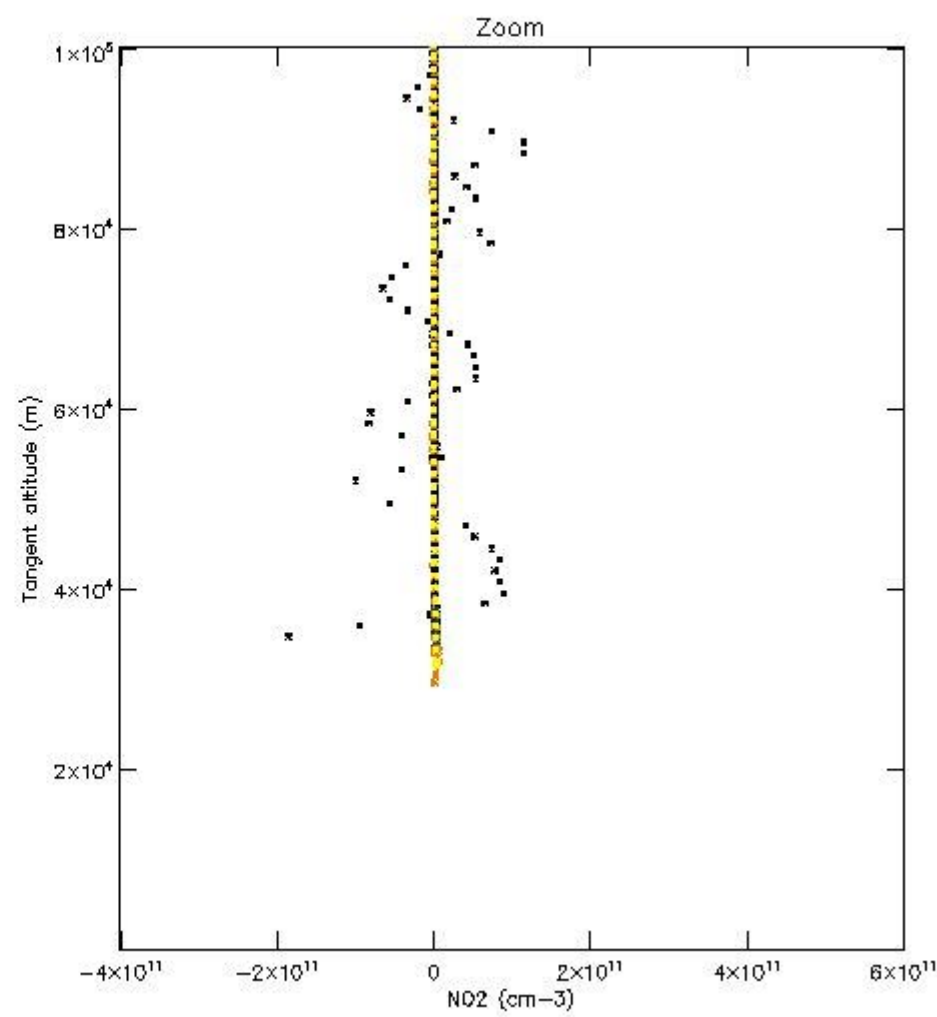
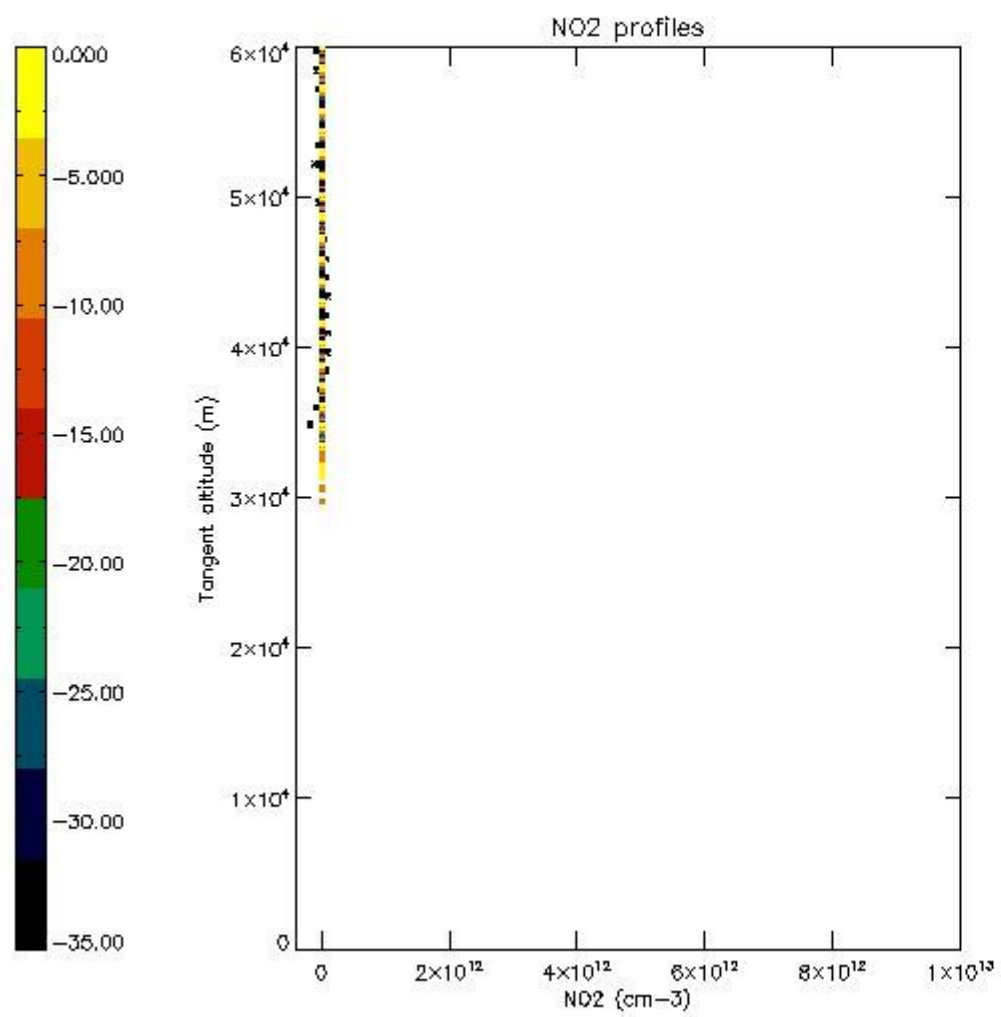
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

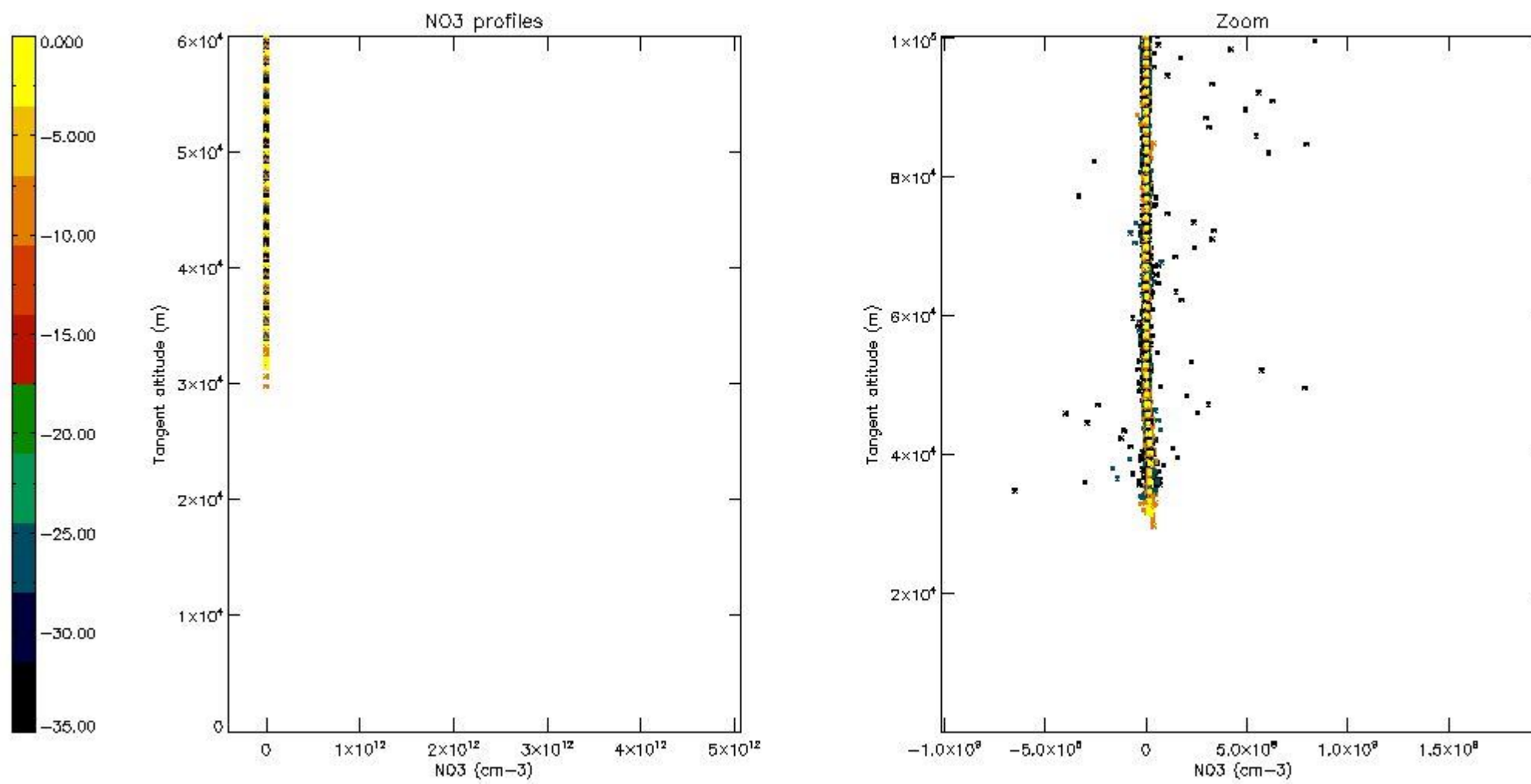
The colorbar represents the latitude.



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

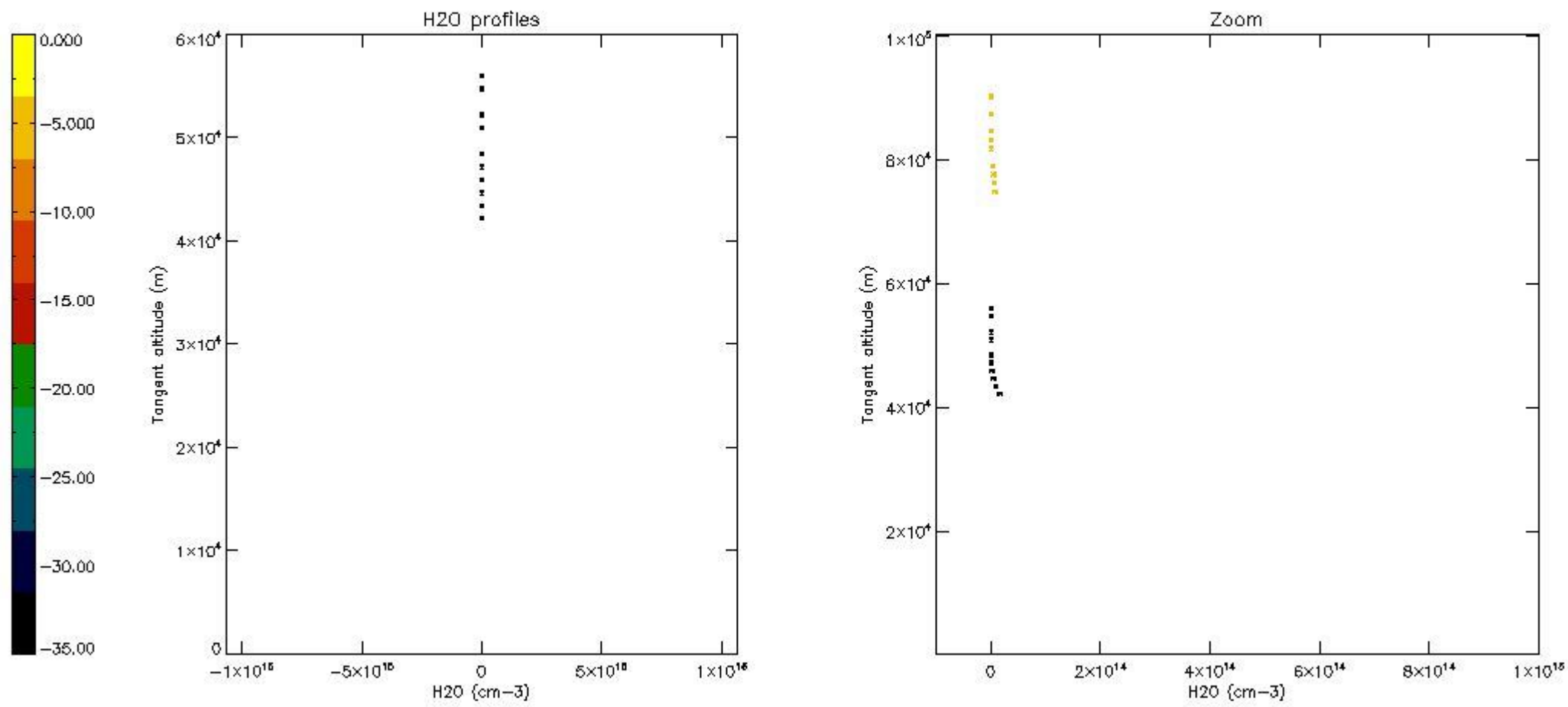
The colorbar represents the latitude.





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)

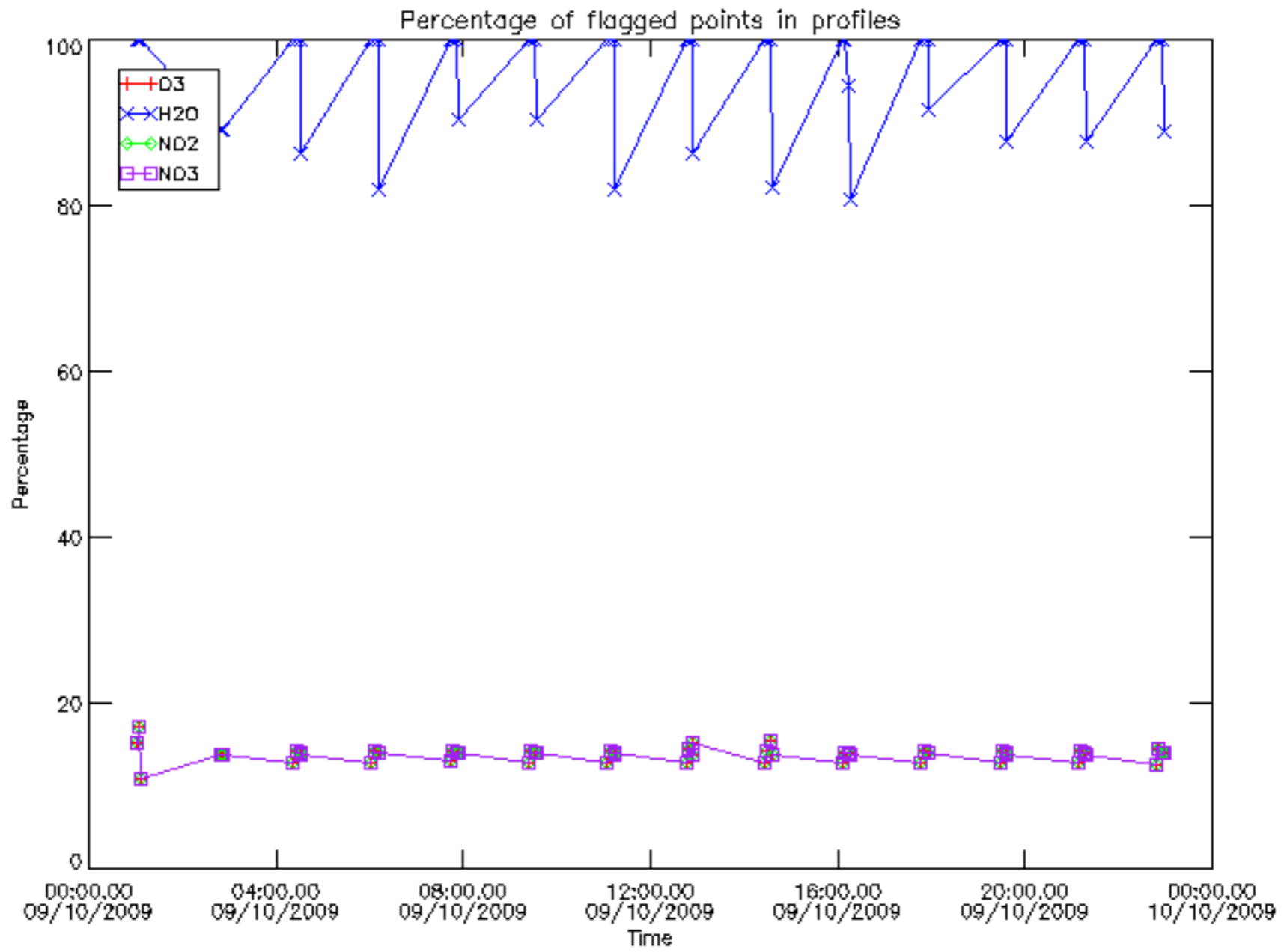
The colorbar represents the latitude.



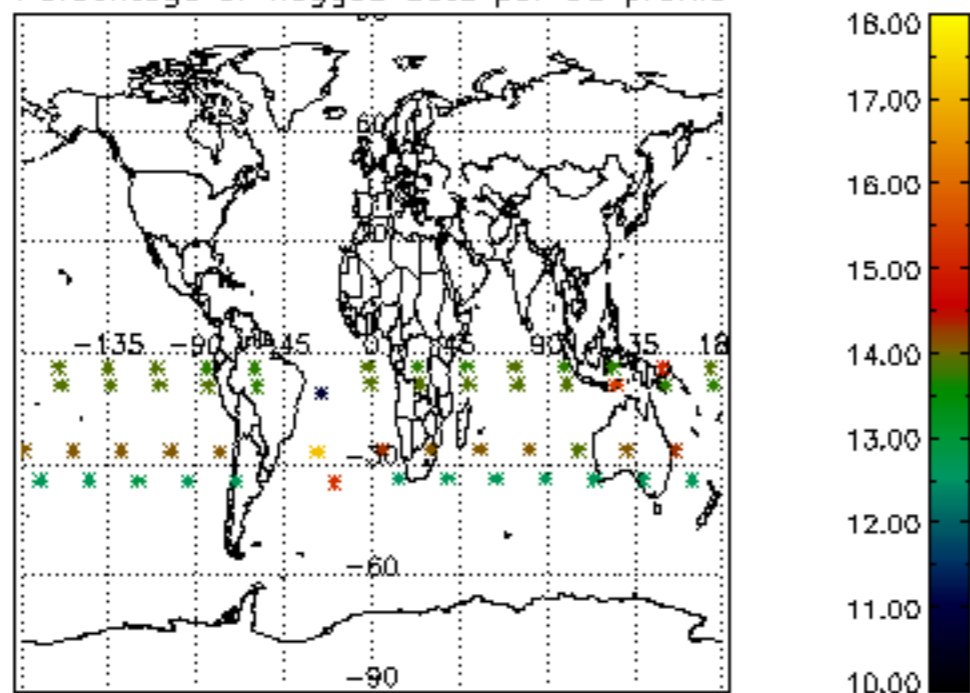
## 6. Auxiliary Data Files used for the production reported in section 2

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.

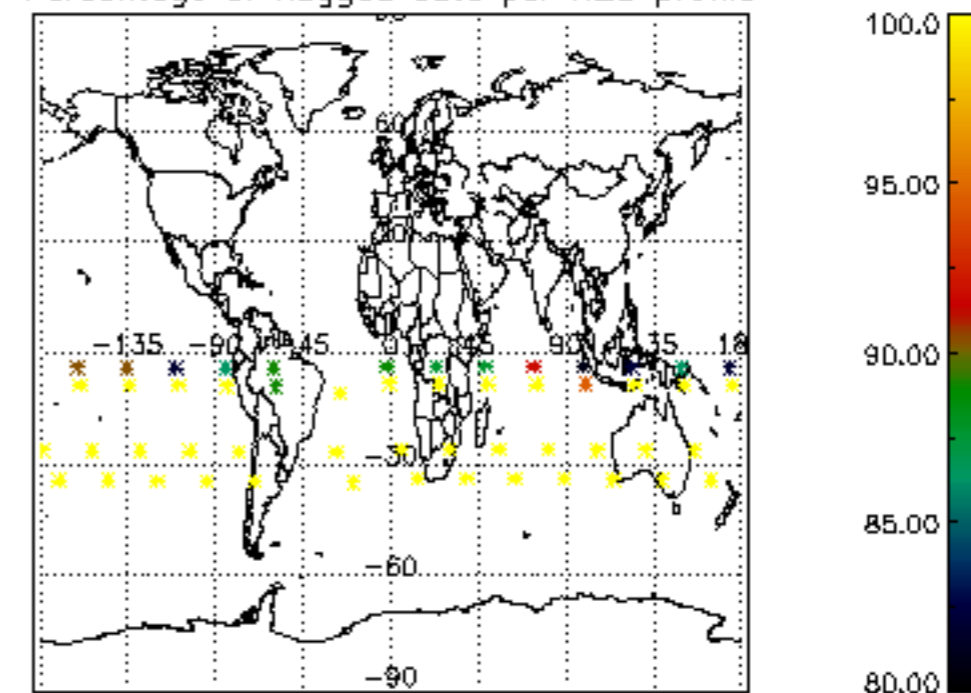
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	09-OCT-2009 00:08:51
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	09-OCT-2009 00:08:51
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	09-OCT-2009 00:08:51



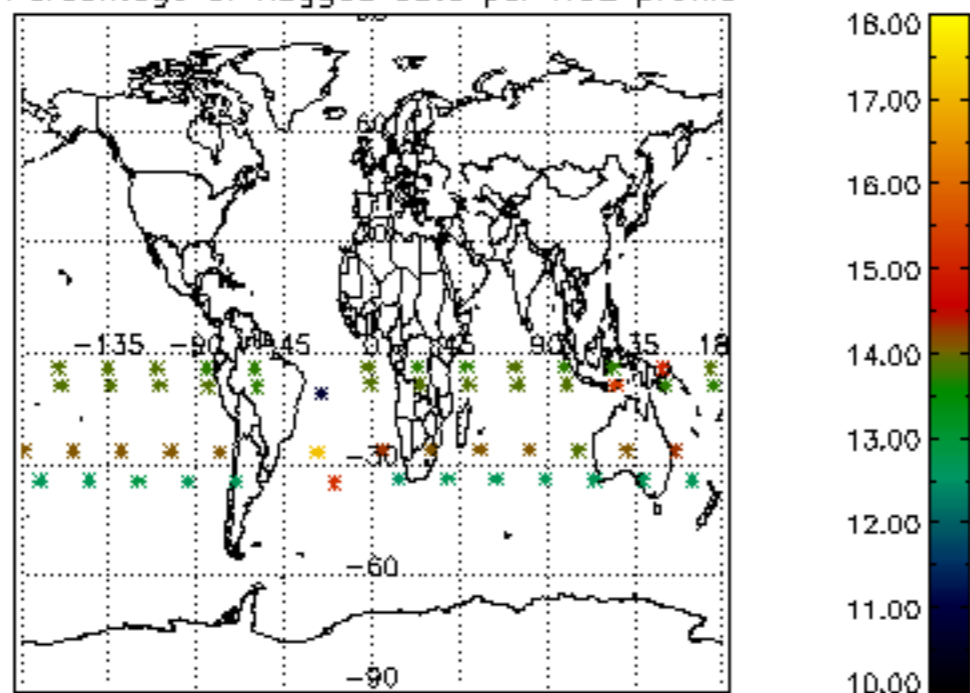
Percentage of flagged data per D3 profile



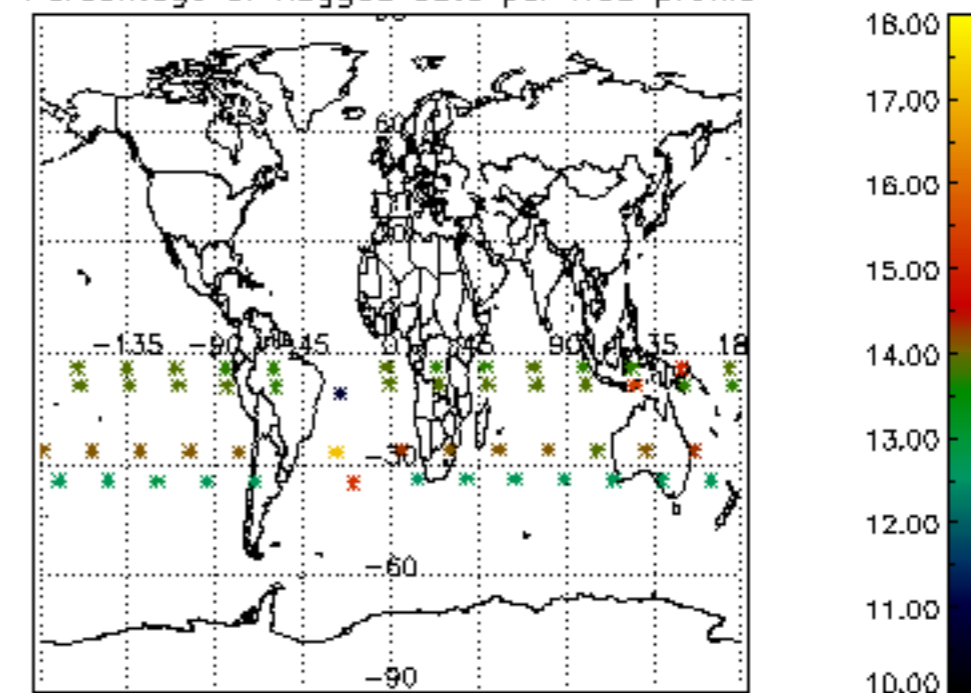
Percentage of flagged data per H2O profile

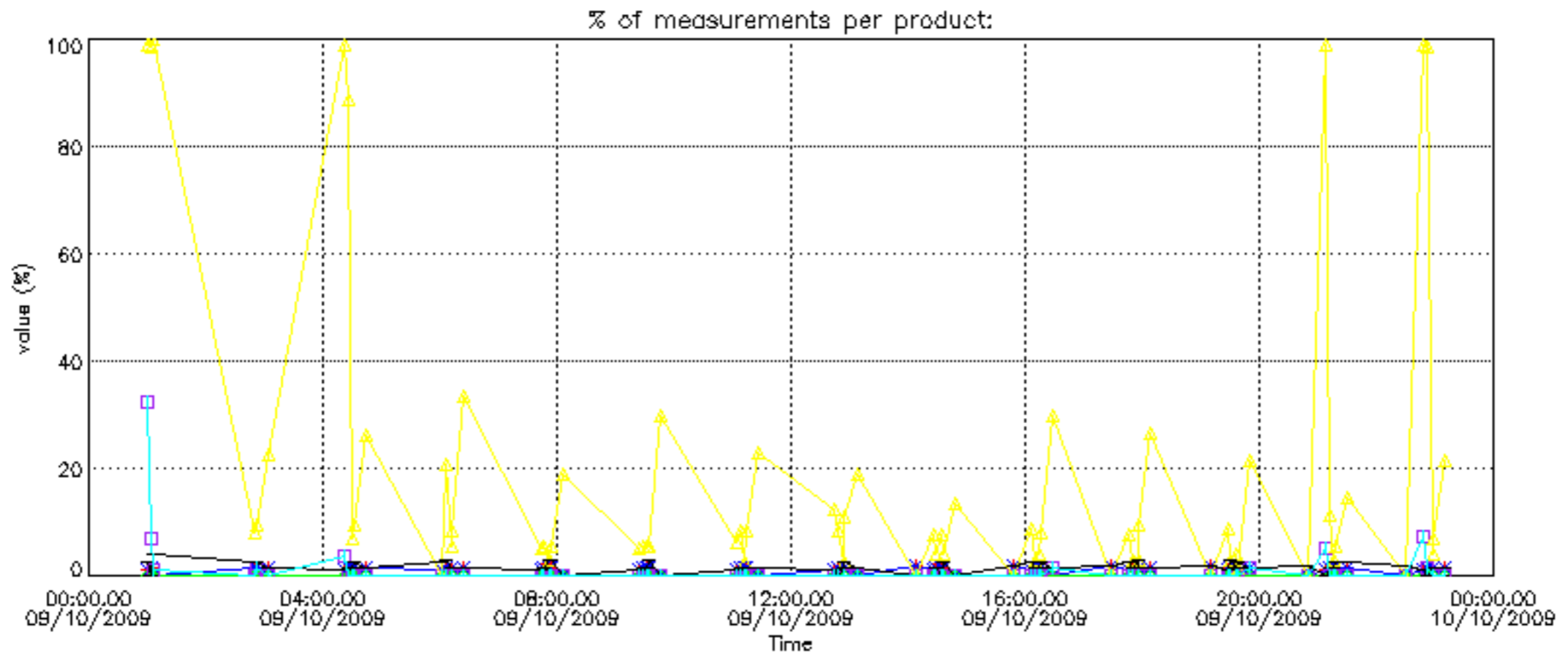


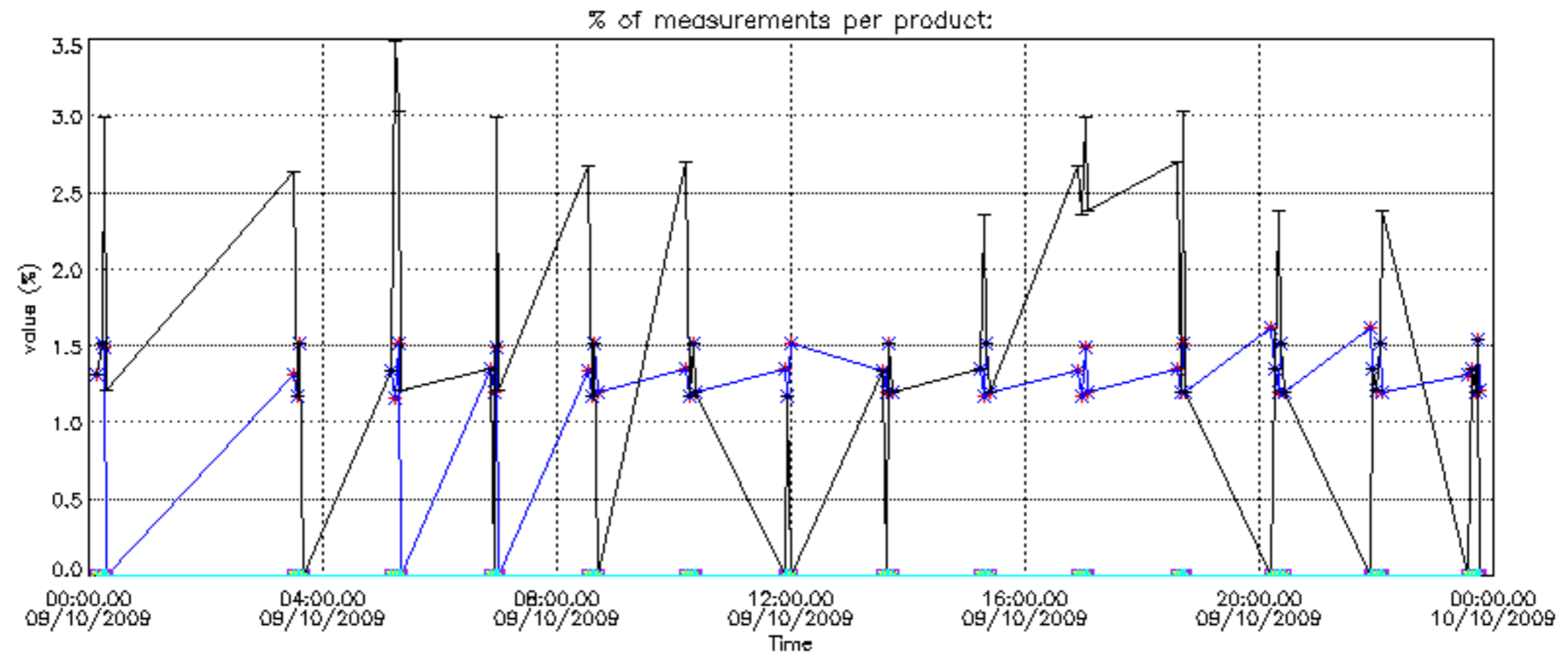
Percentage of flagged data per NO2 profile



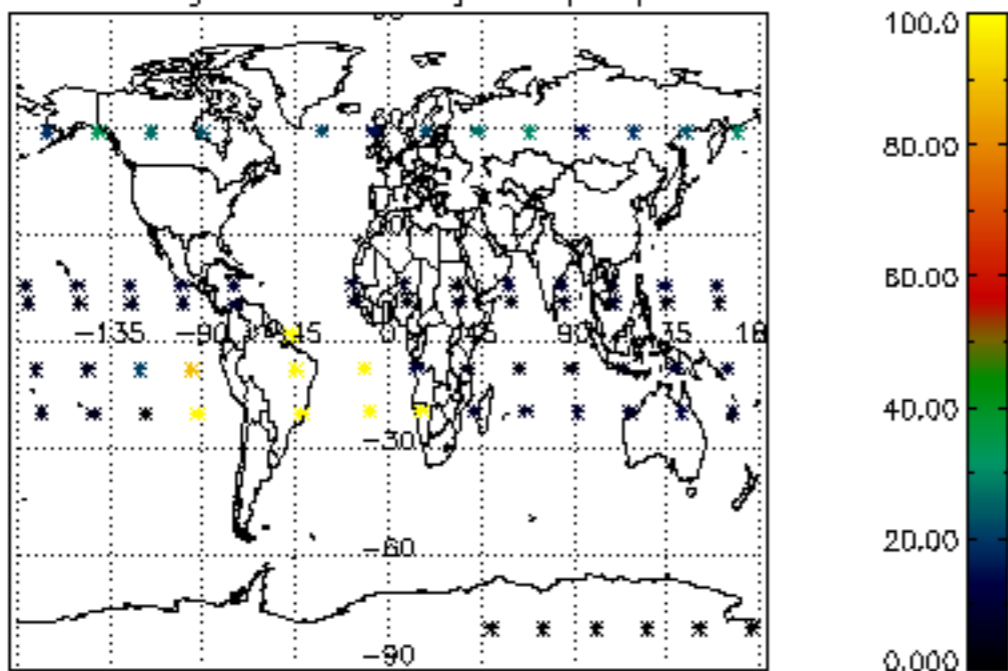
Percentage of flagged data per NO3 profile



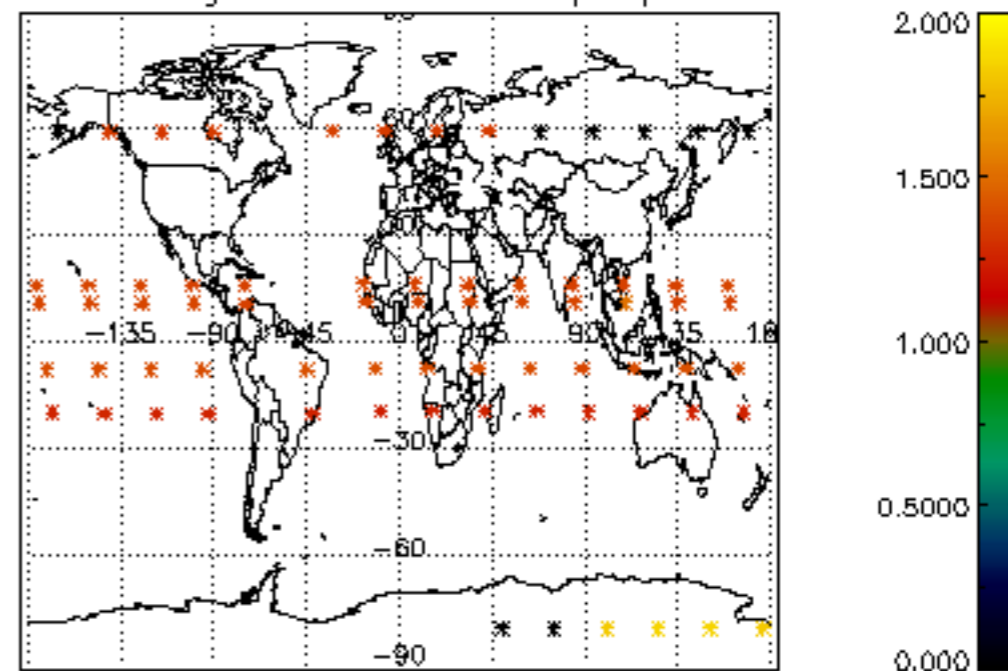




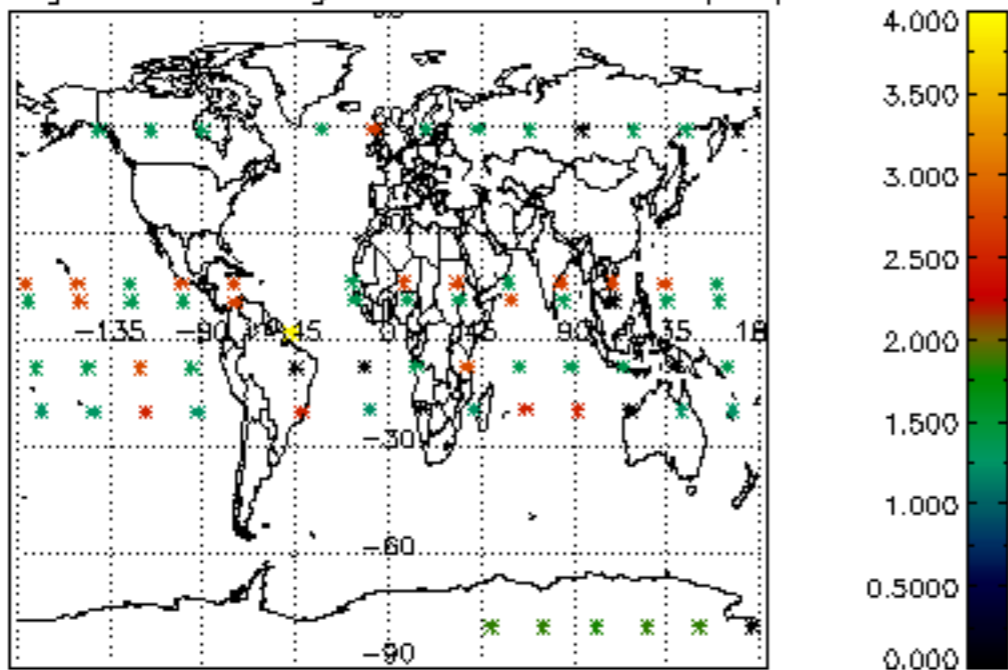
Percentage of cosmic ray hits per profile



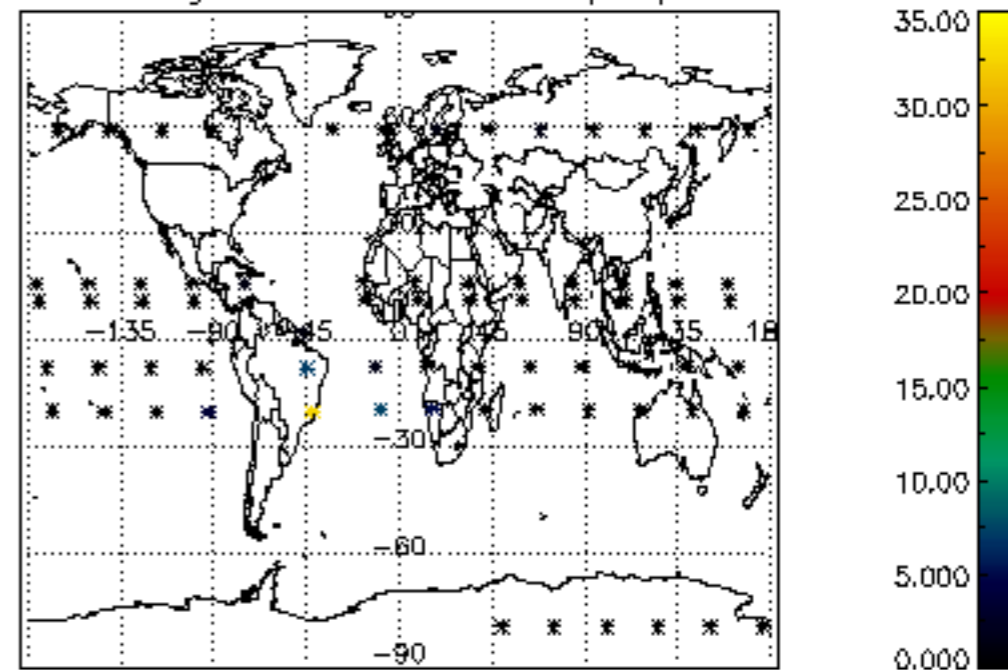
Percentage of datation errors per profile



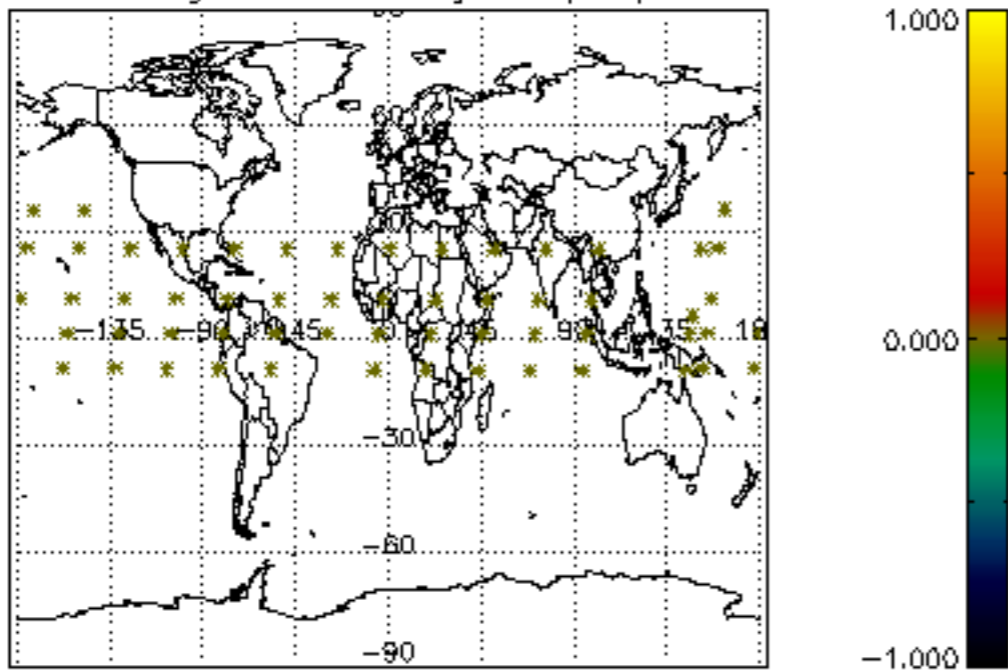
Percentage of star falling outside central band per profile



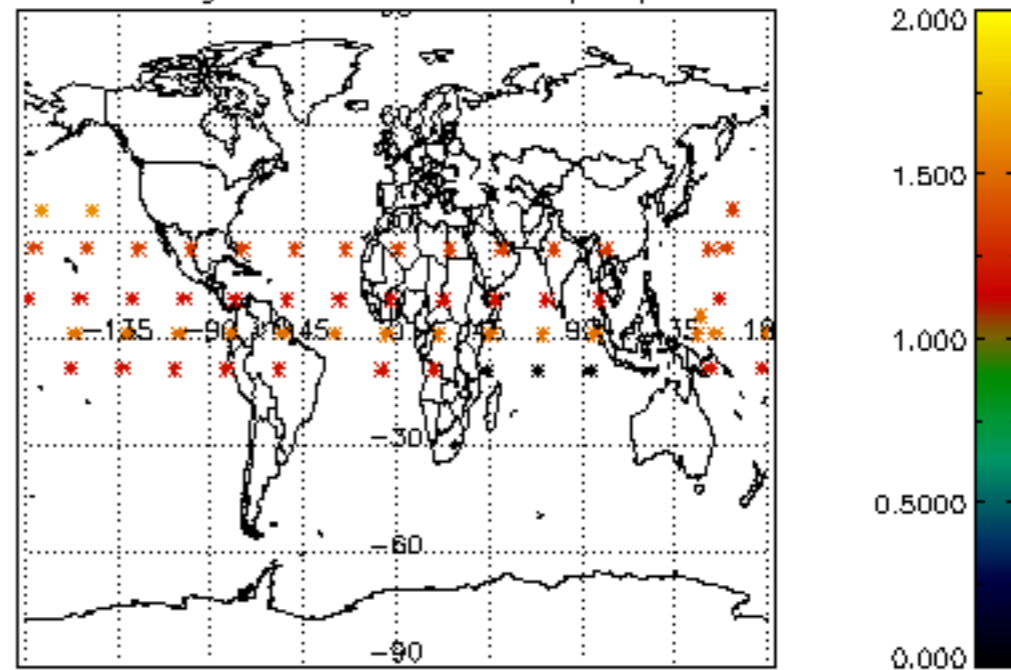
Percentage of saturation errors per profile



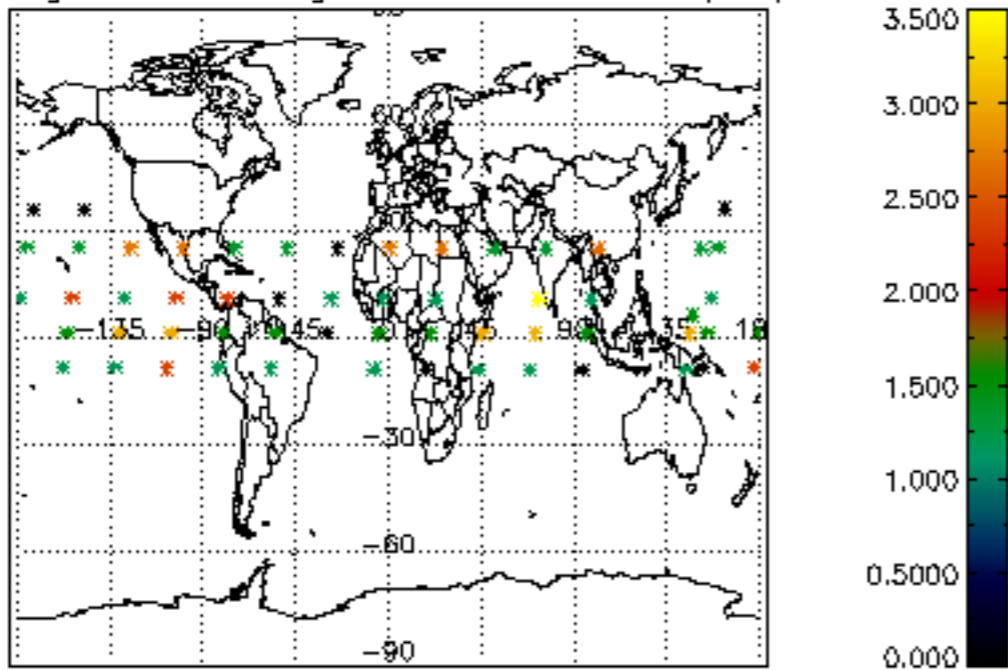
Percentage of cosmic ray hits per profile



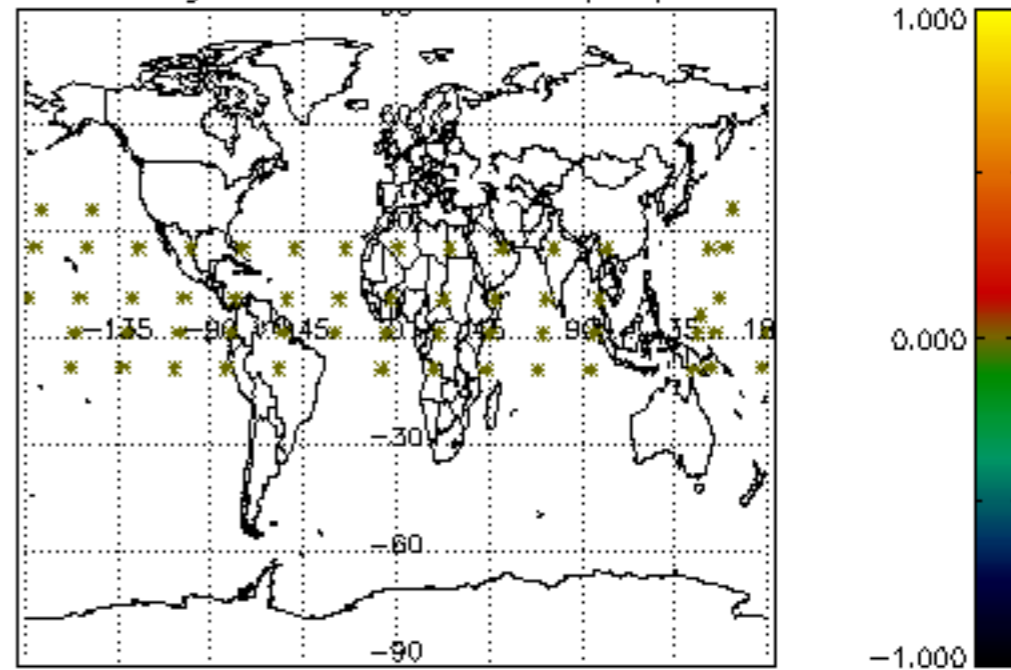
Percentage of datation errors per profile



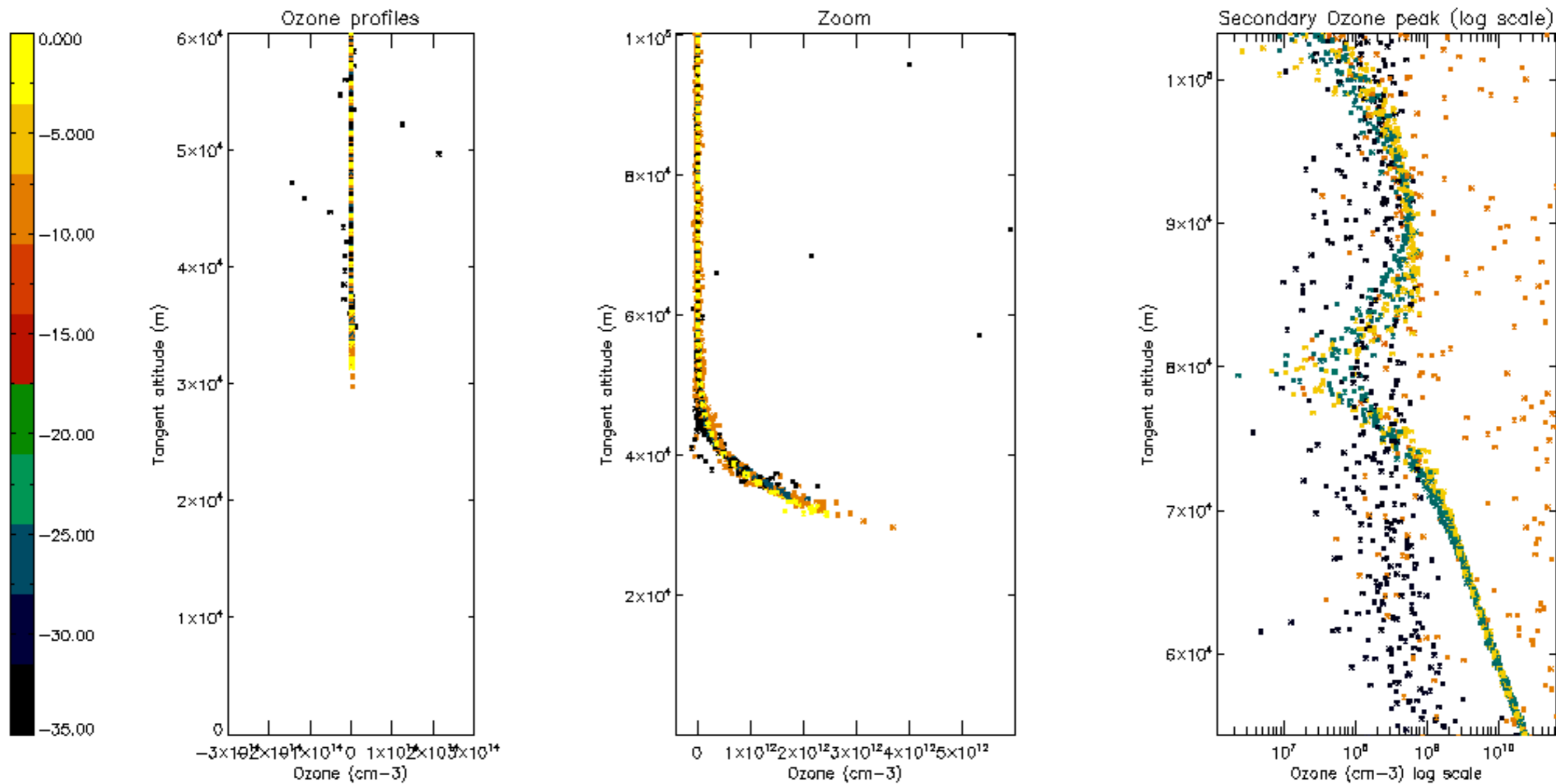
Percentage of star falling outside central band per profile

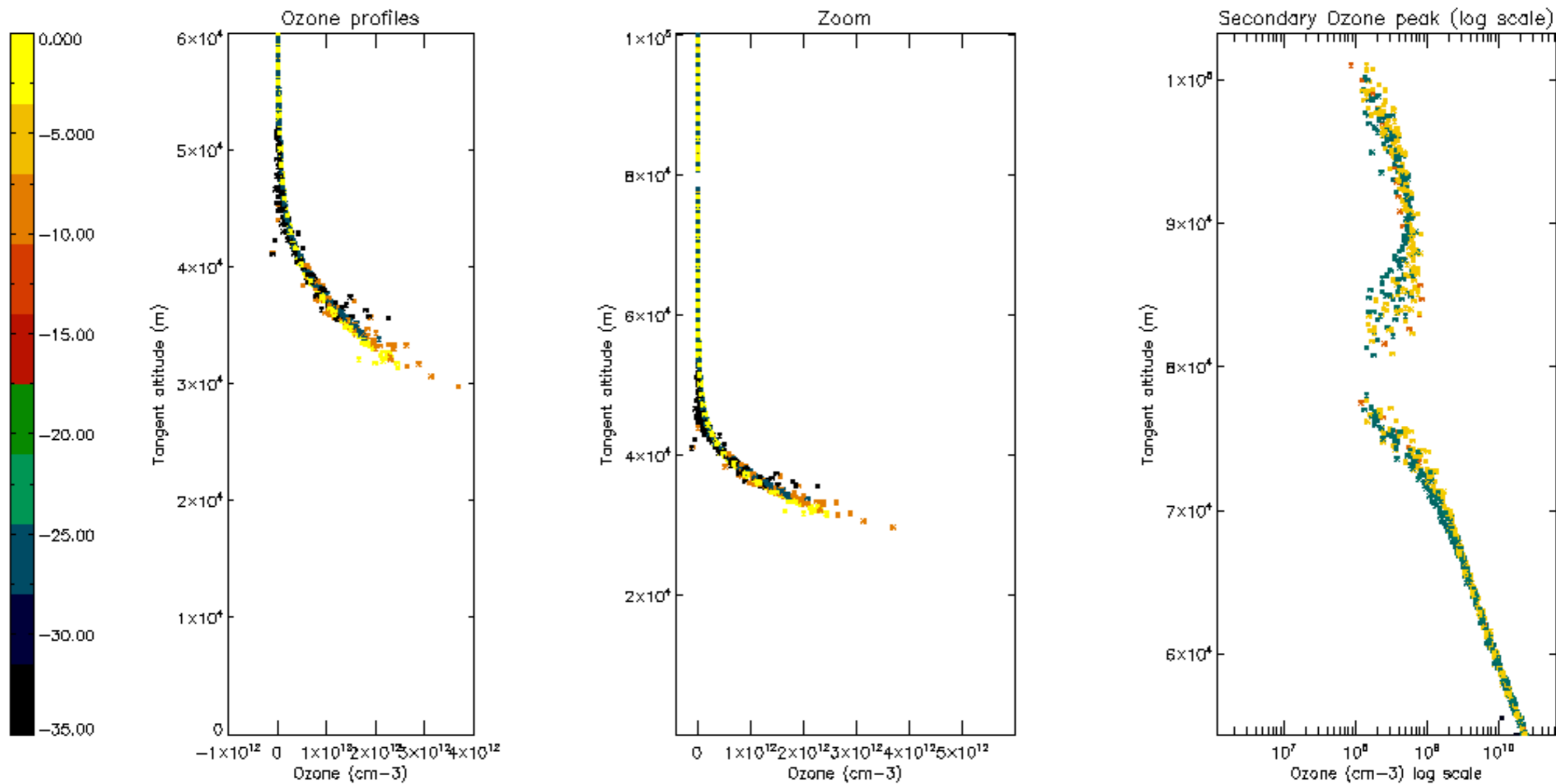


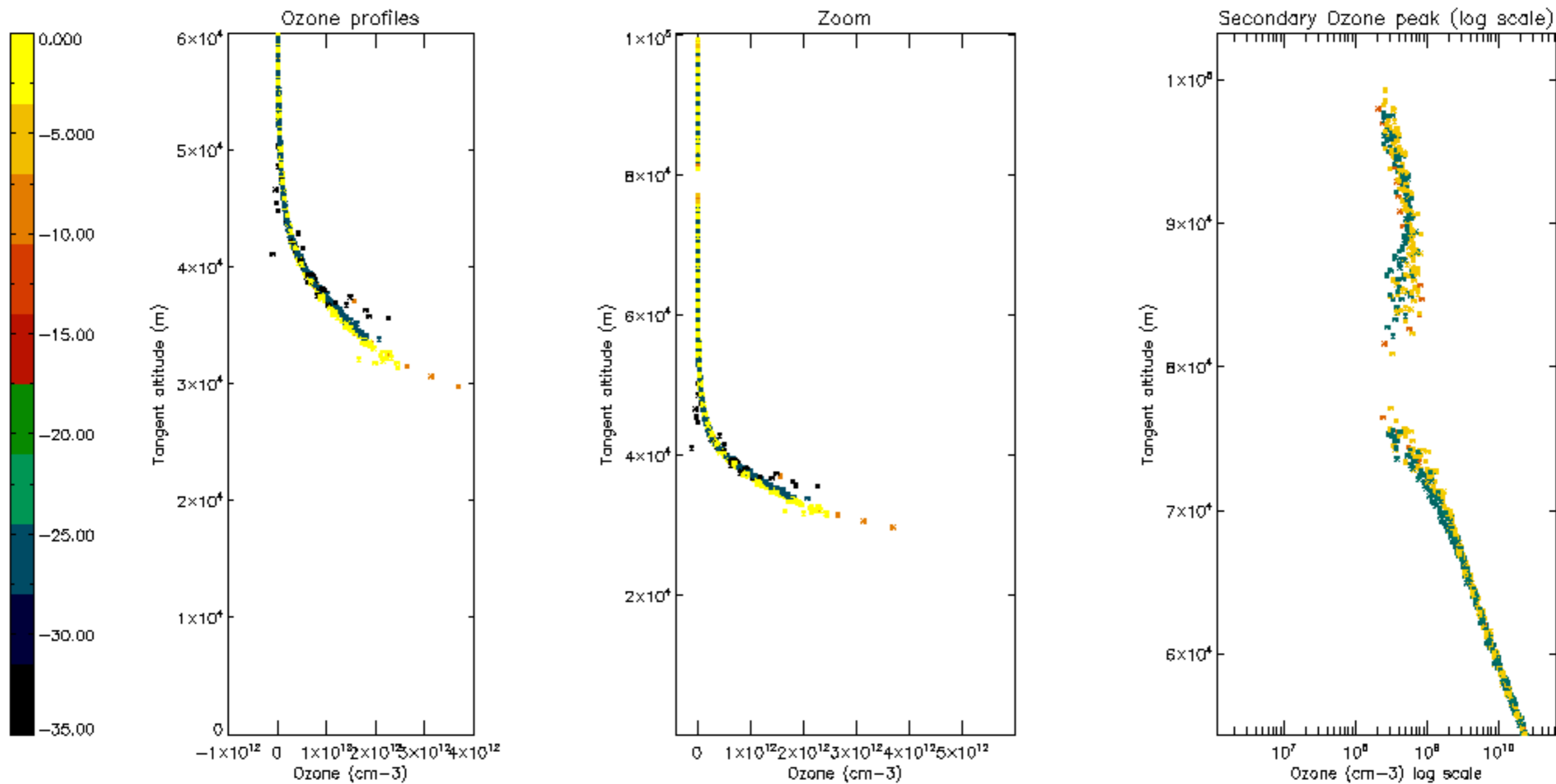
Percentage of saturation errors per profile

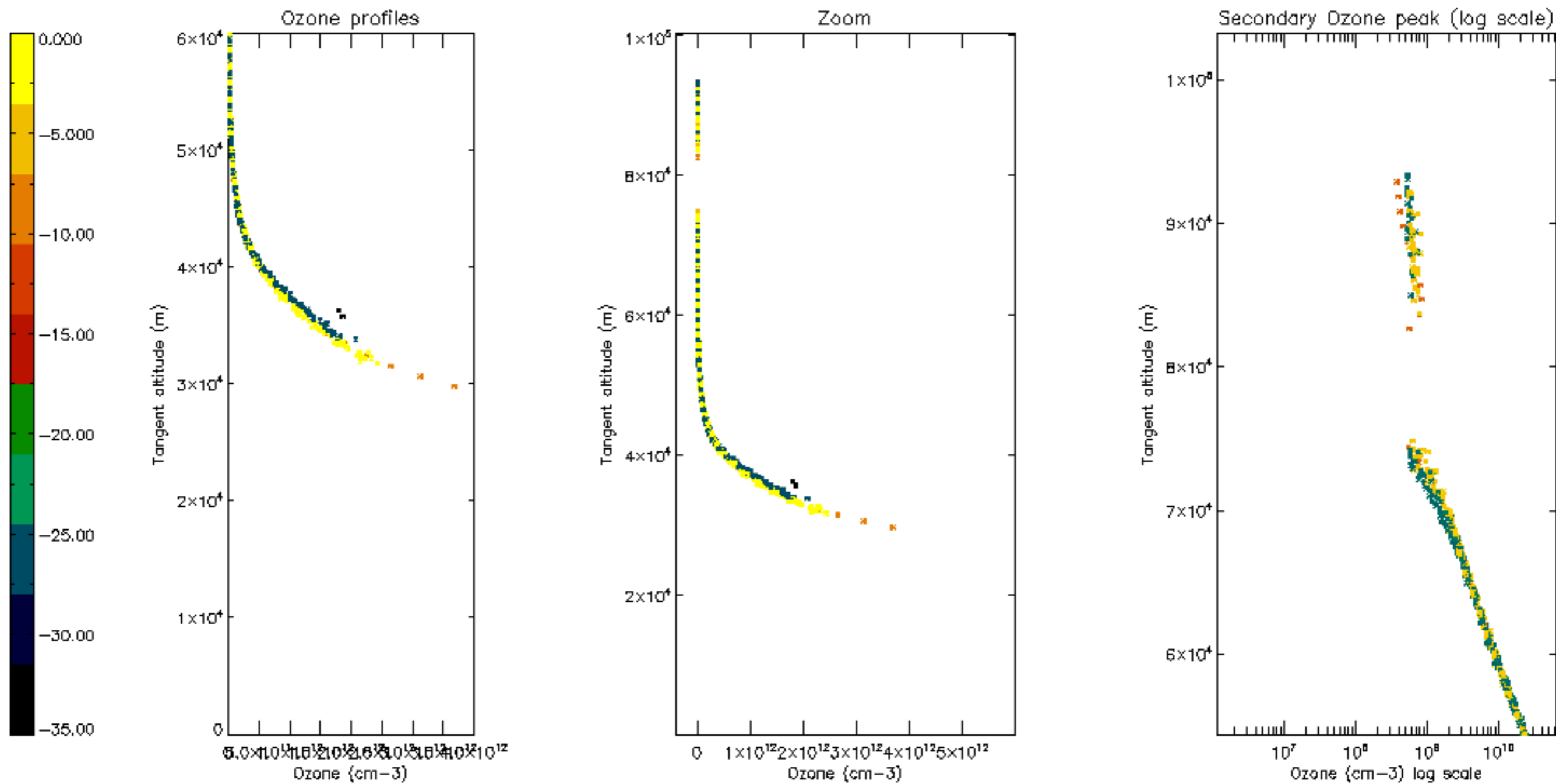


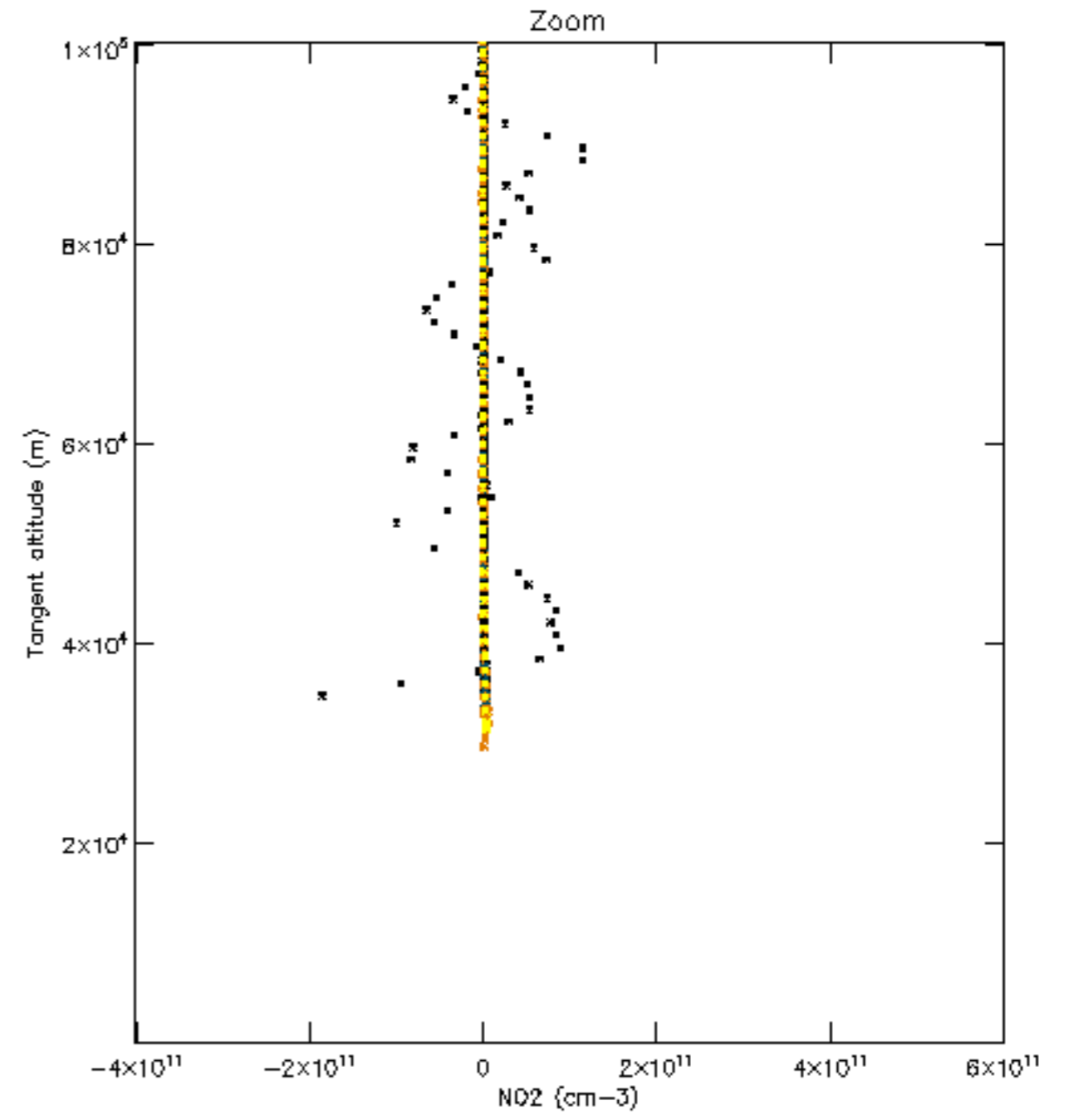
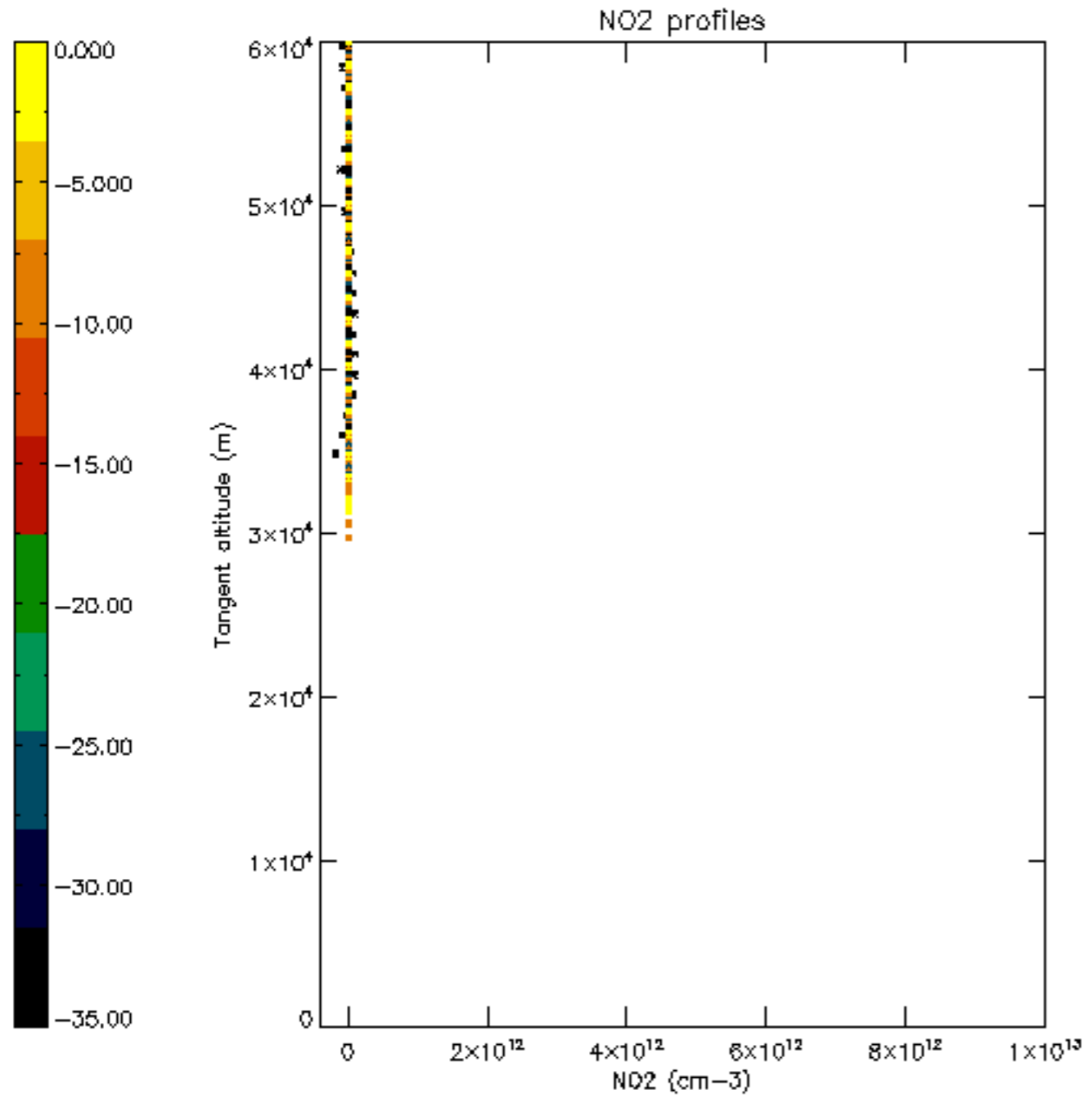


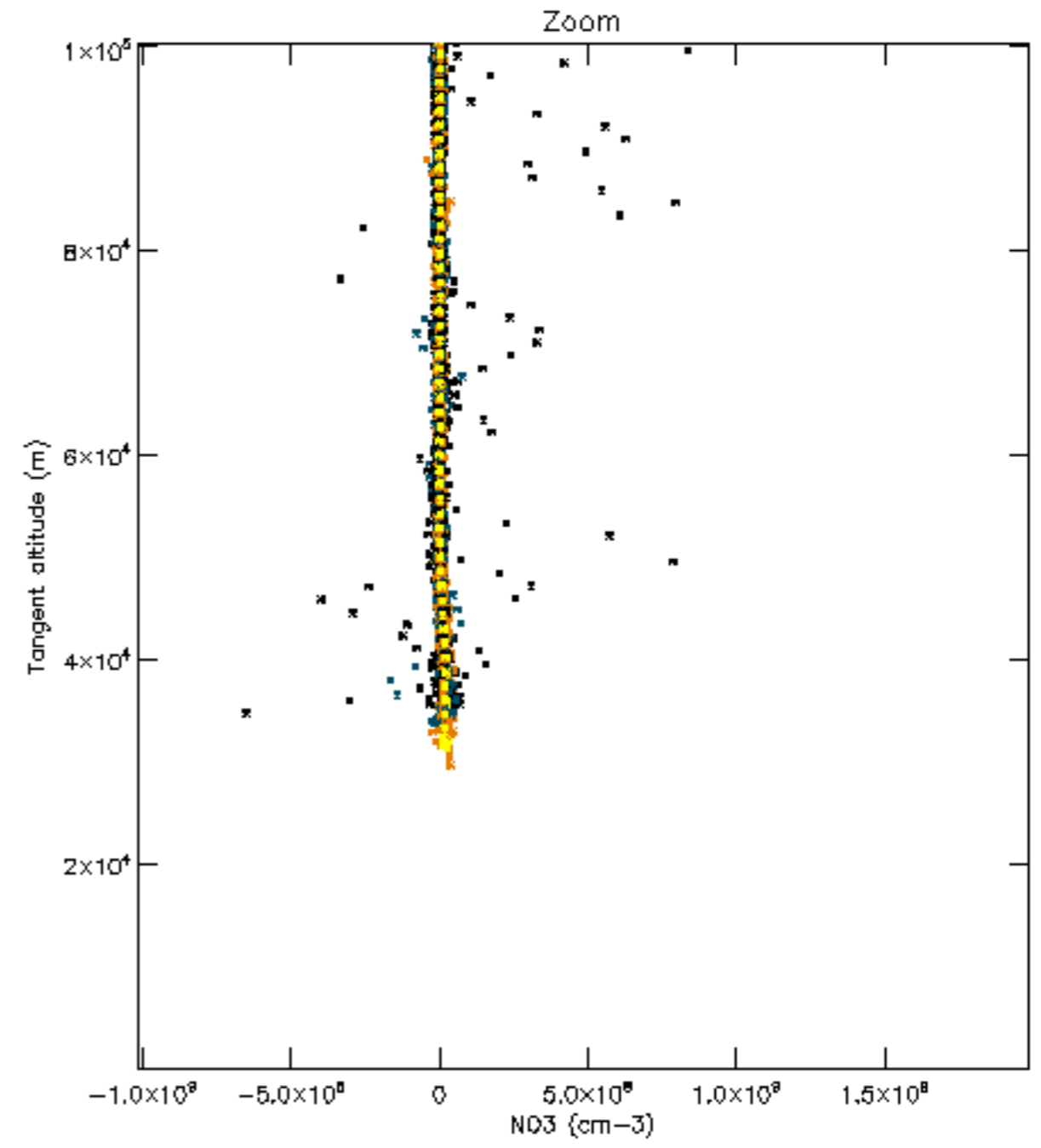
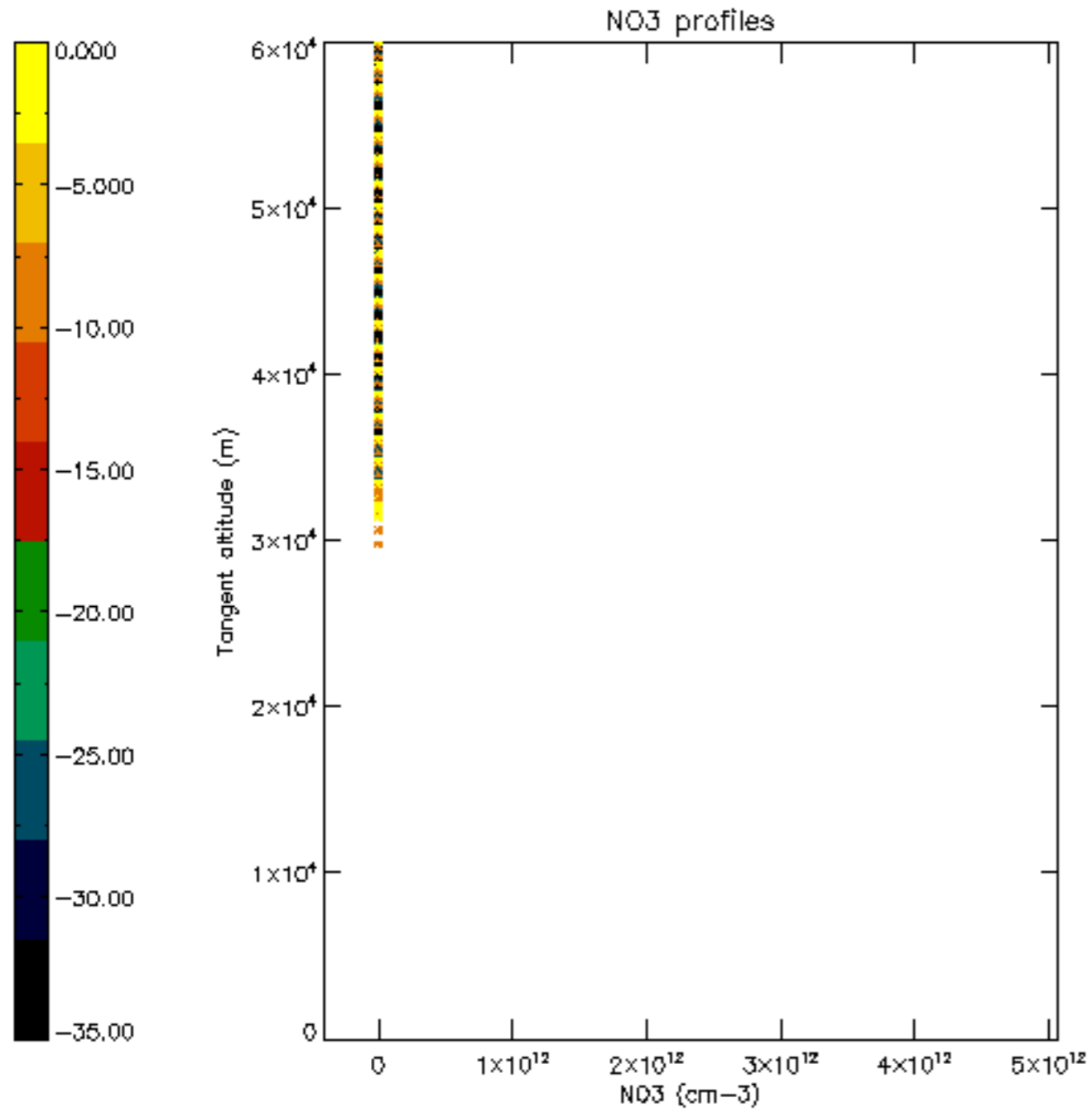


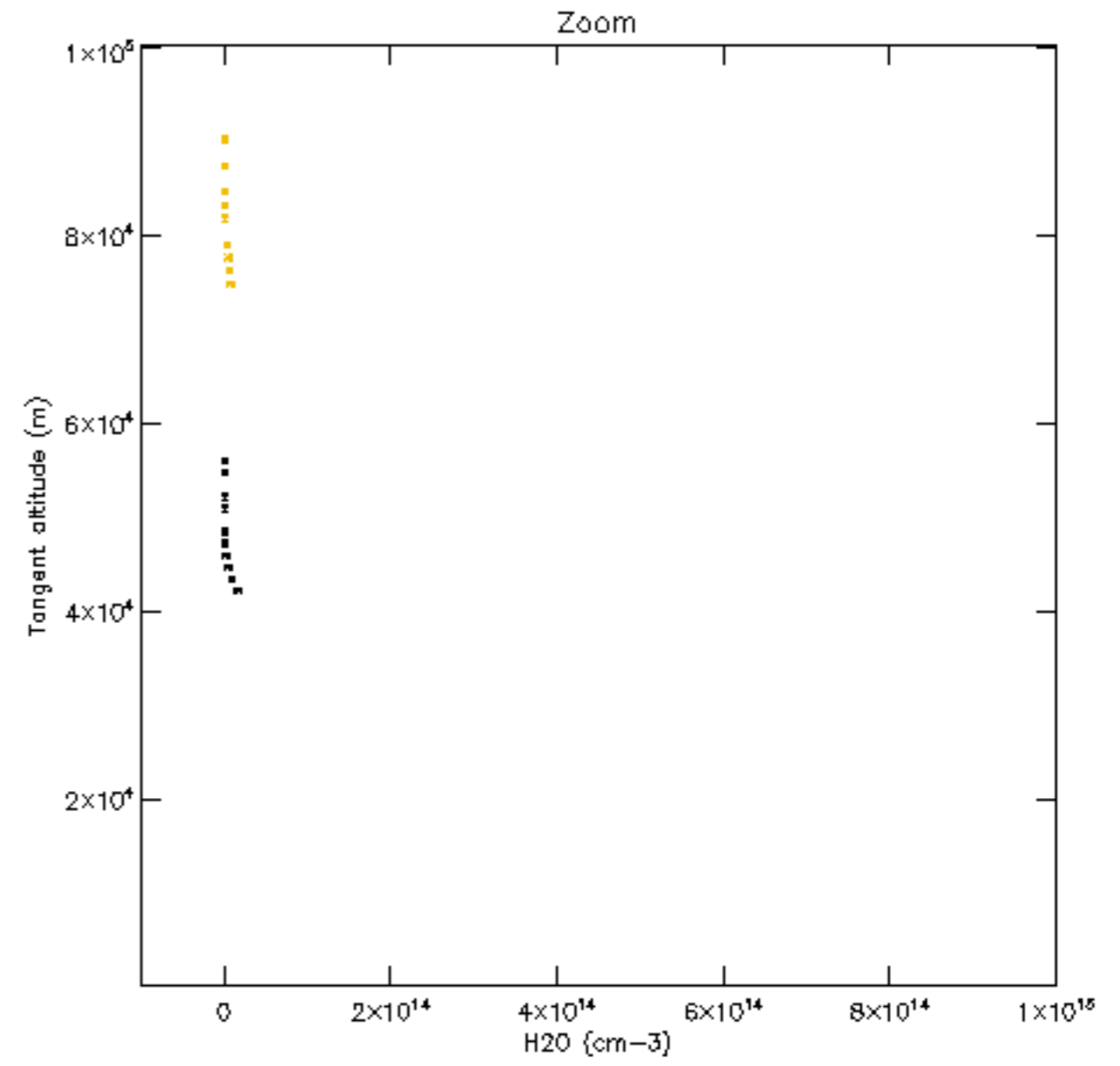
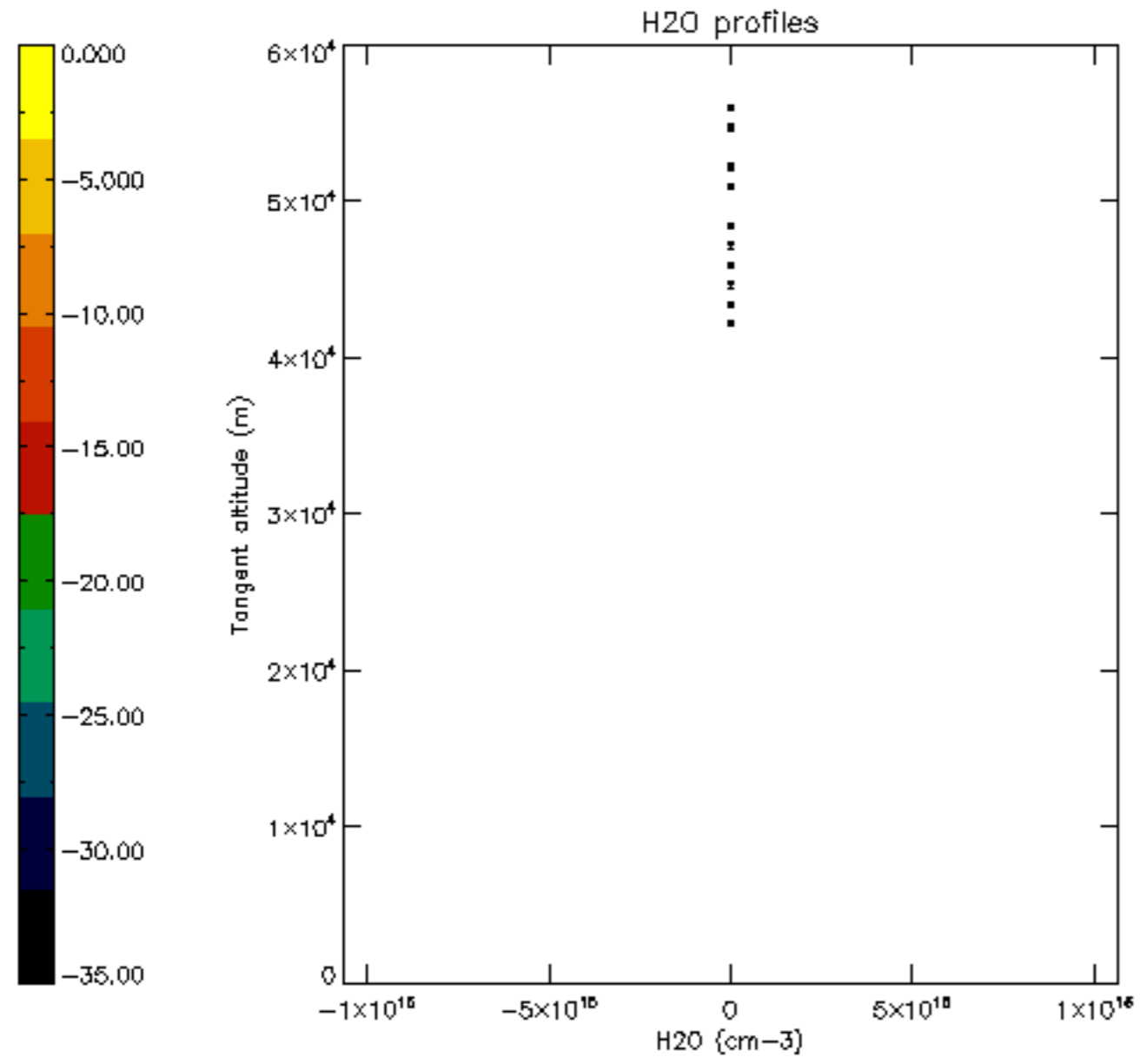


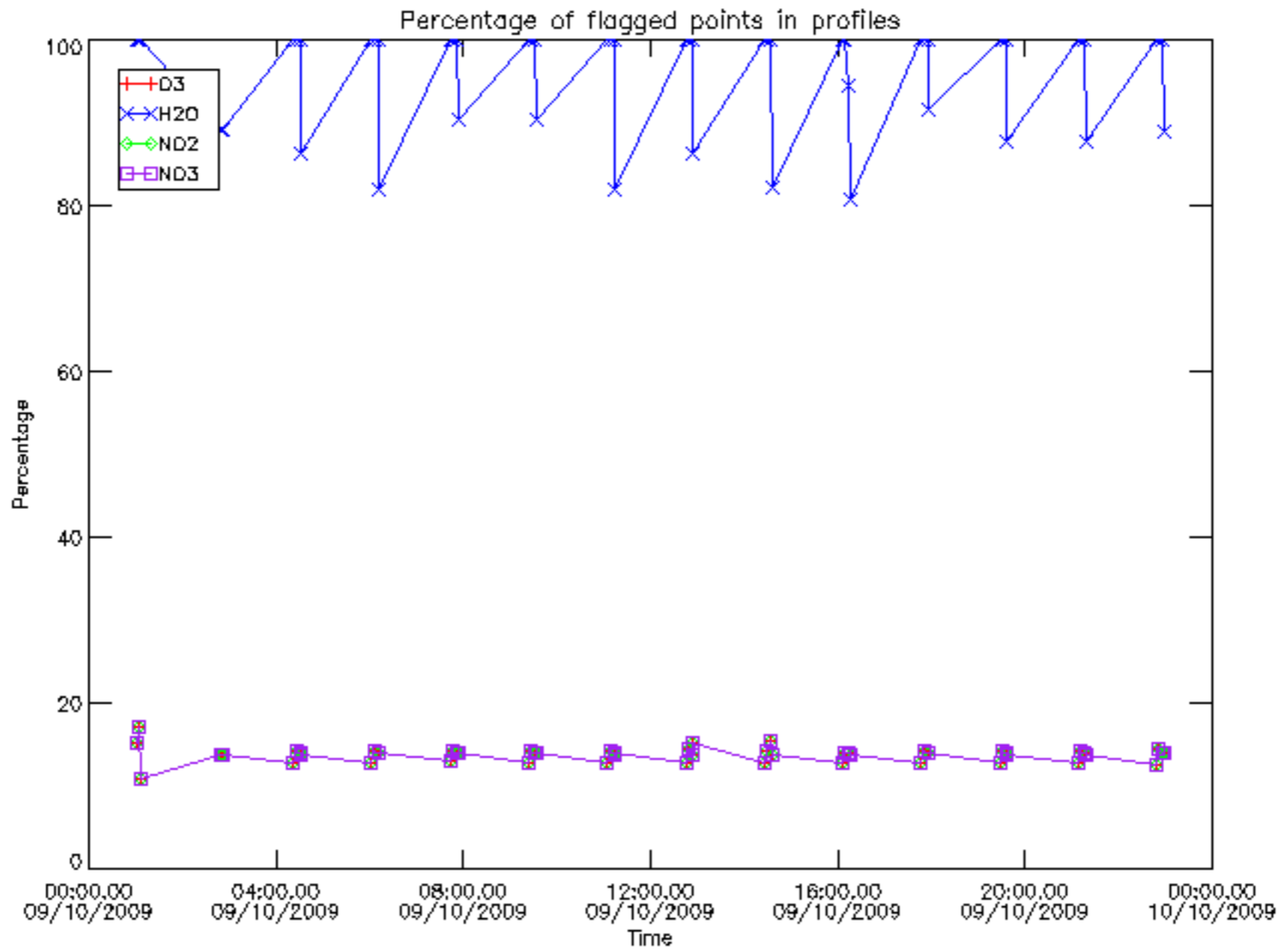






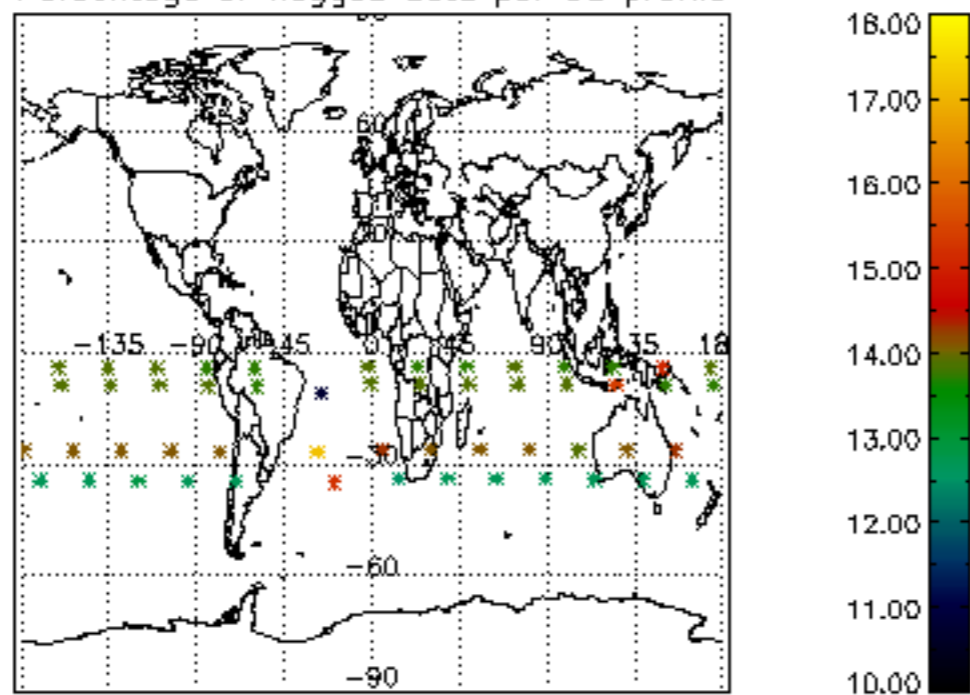




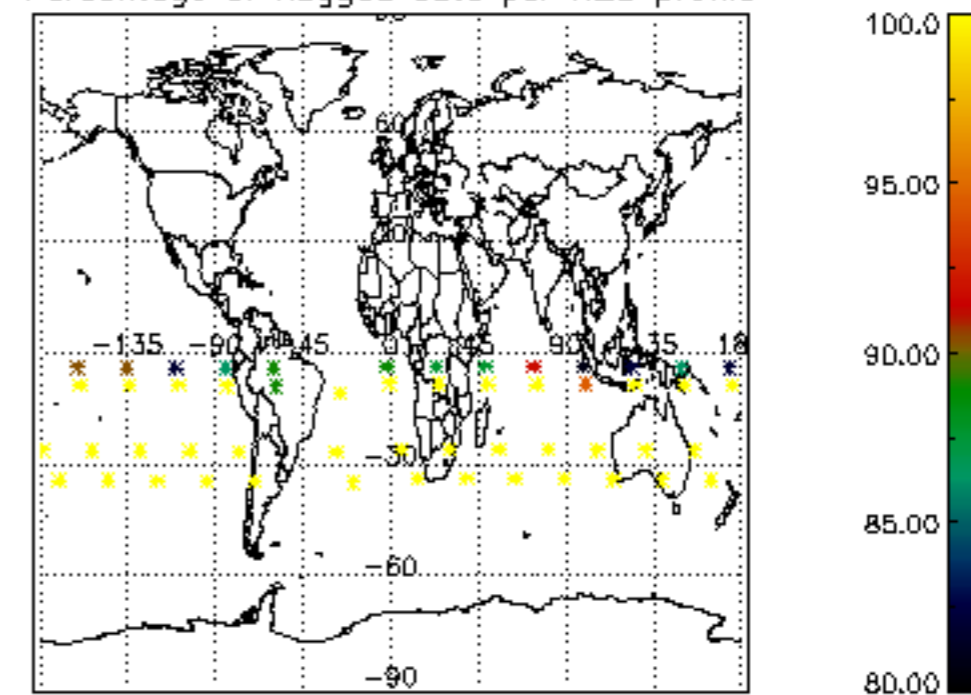




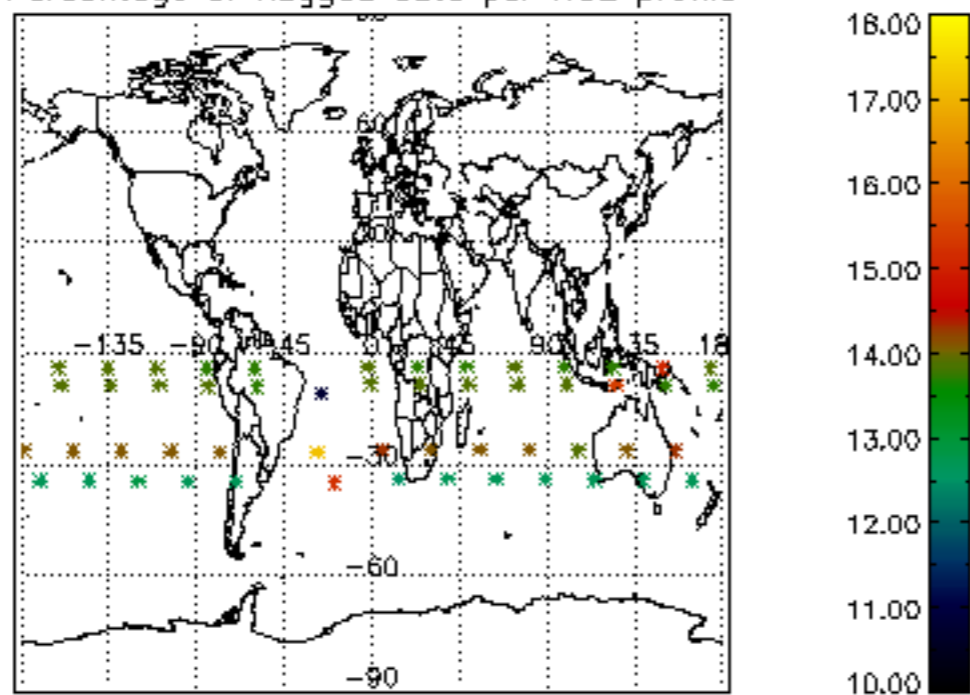
Percentage of flagged data per D3 profile



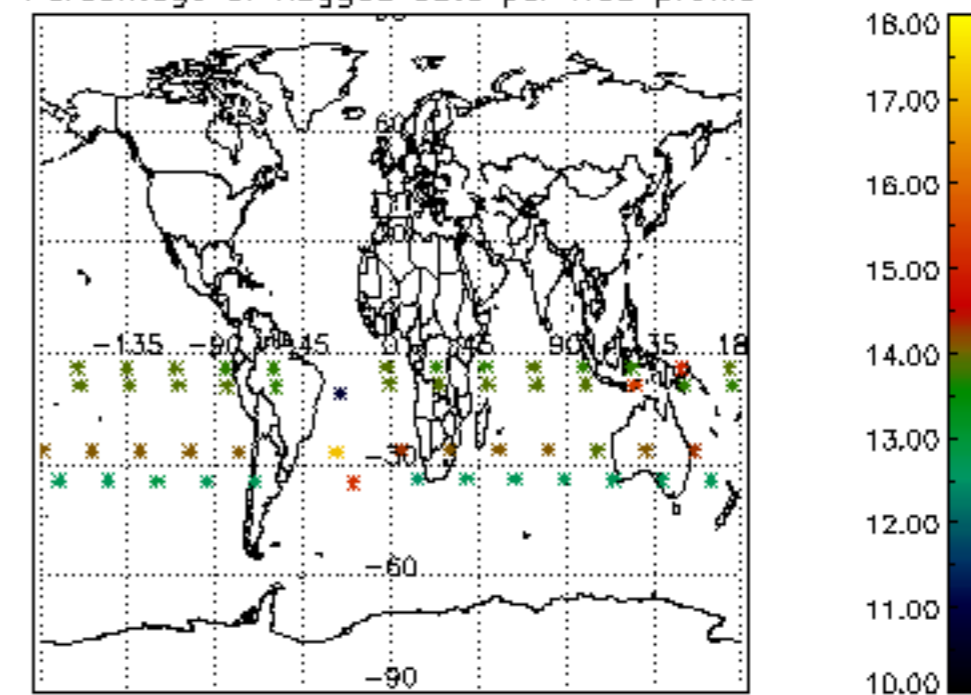
Percentage of flagged data per H2O profile

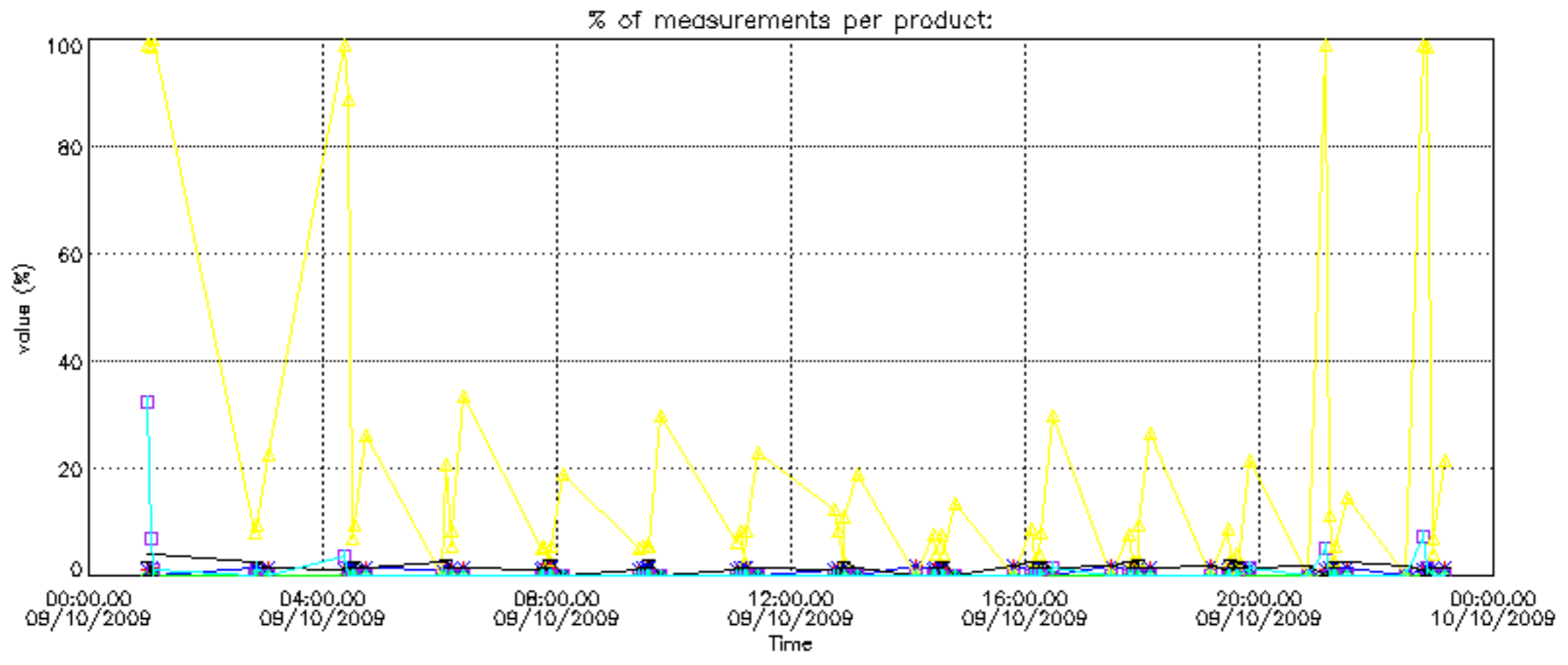


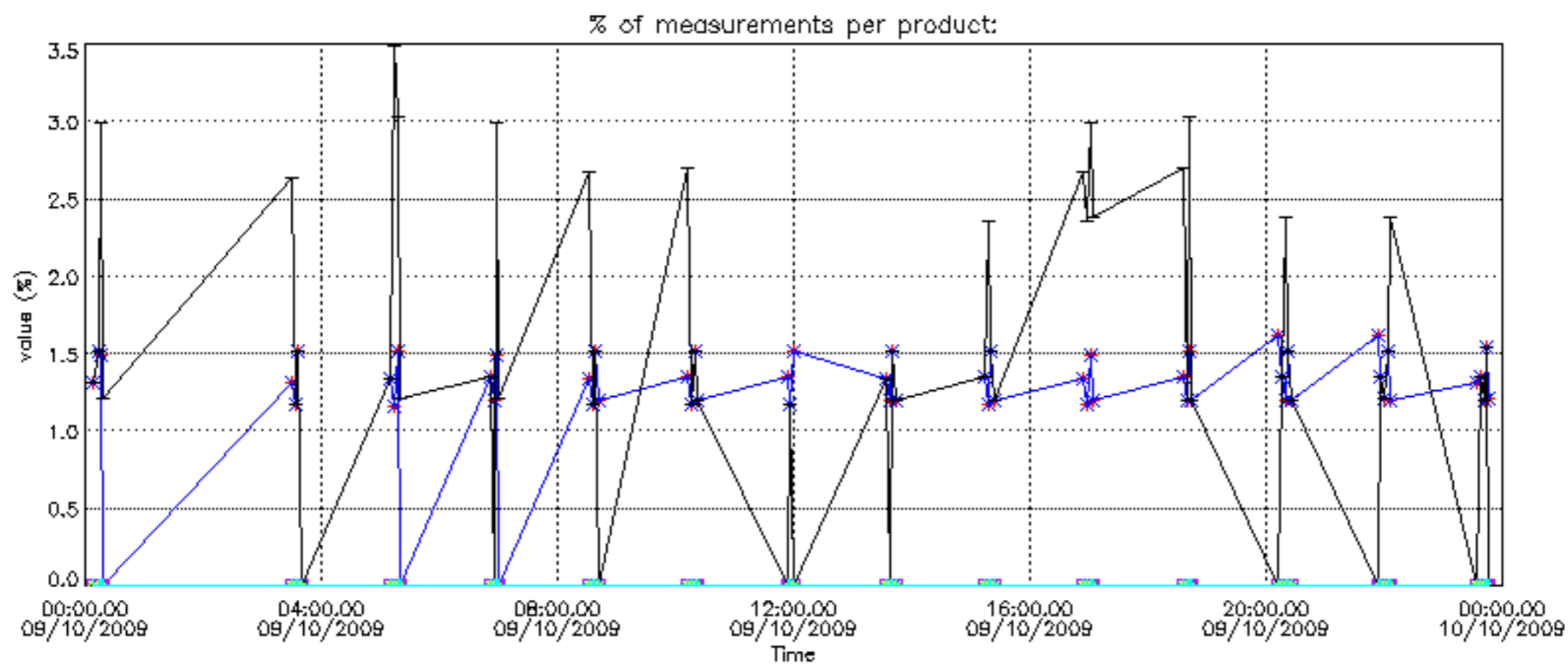
Percentage of flagged data per NO2 profile



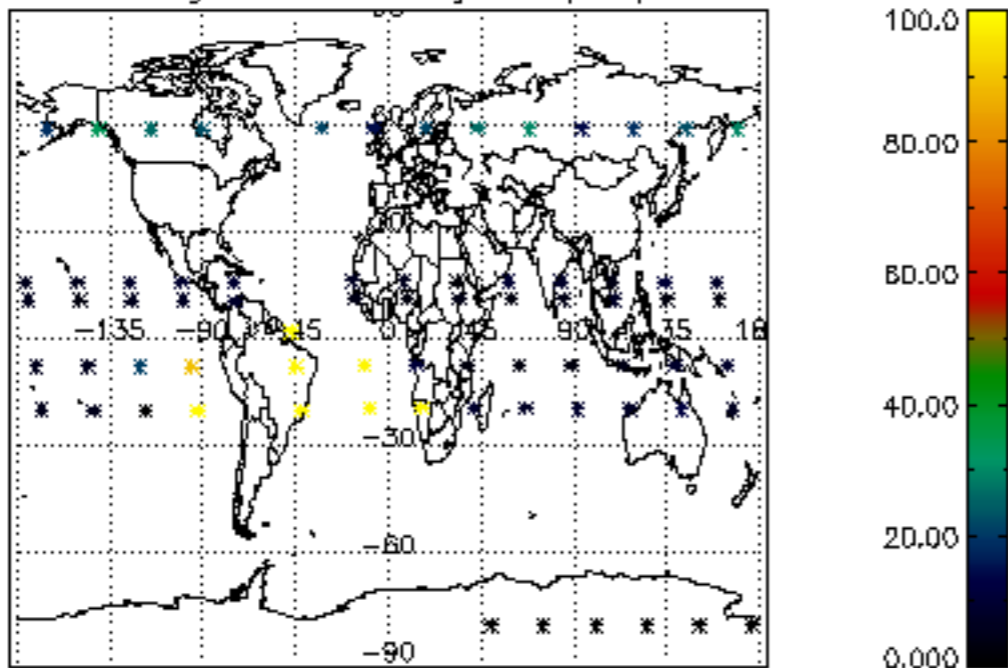
Percentage of flagged data per NO3 profile



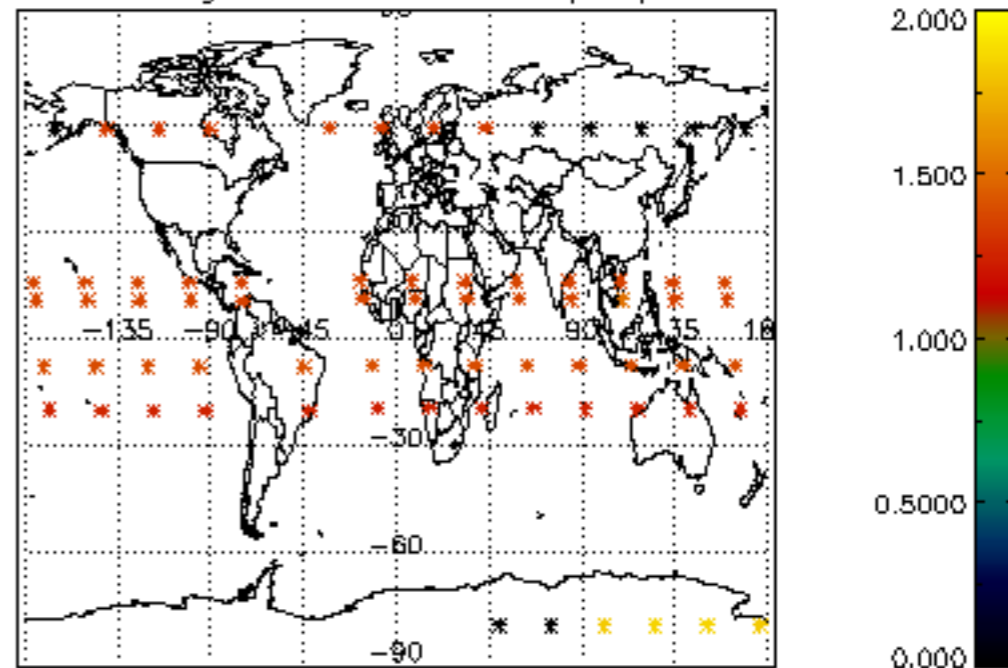




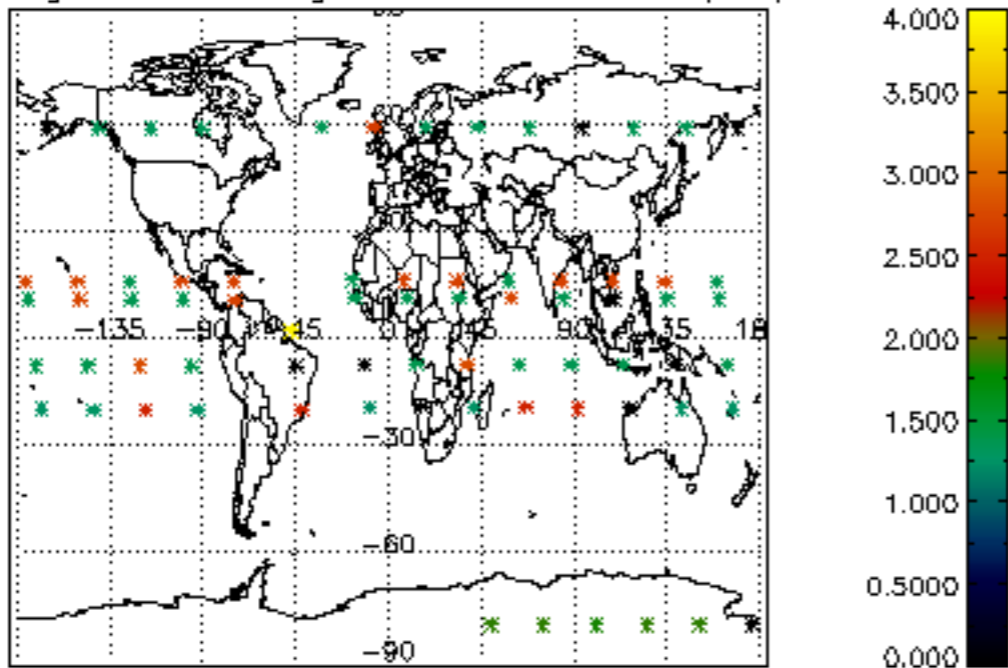
Percentage of cosmic ray hits per profile



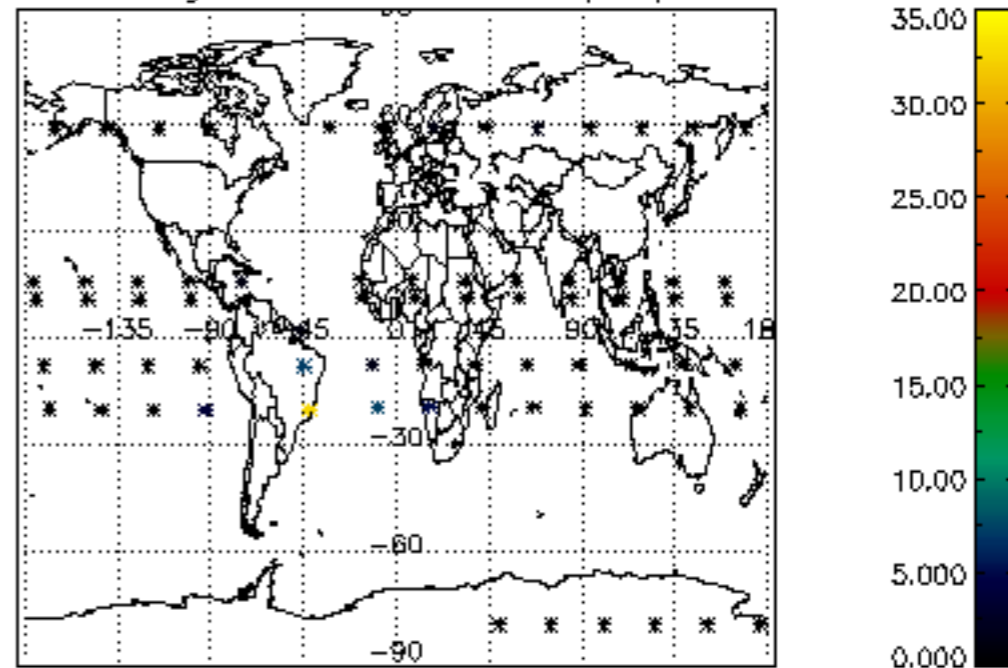
Percentage of datation errors per profile



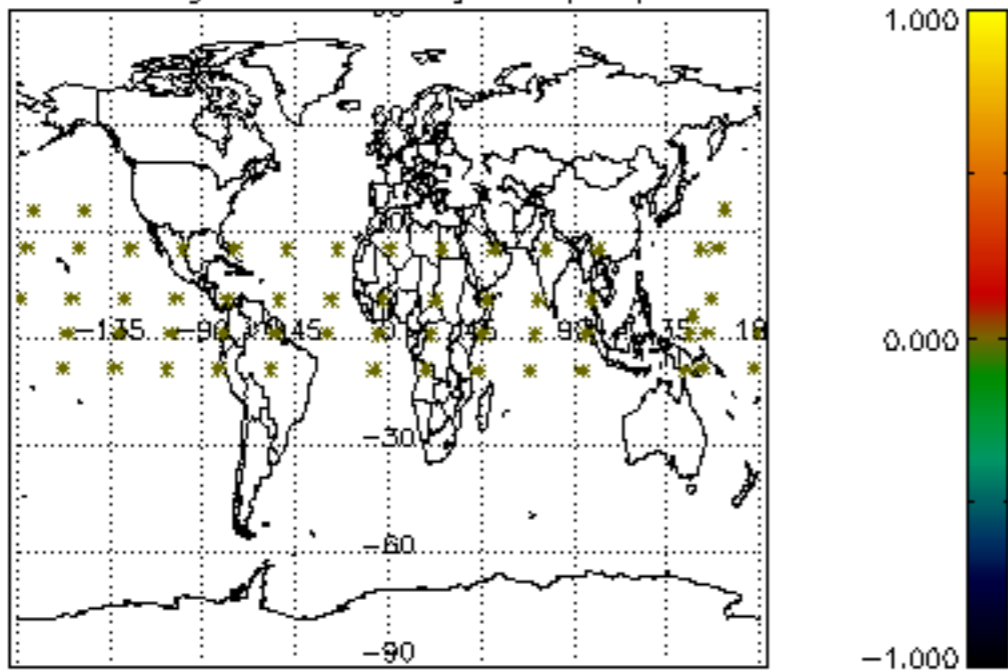
Percentage of star falling outside central band per profile



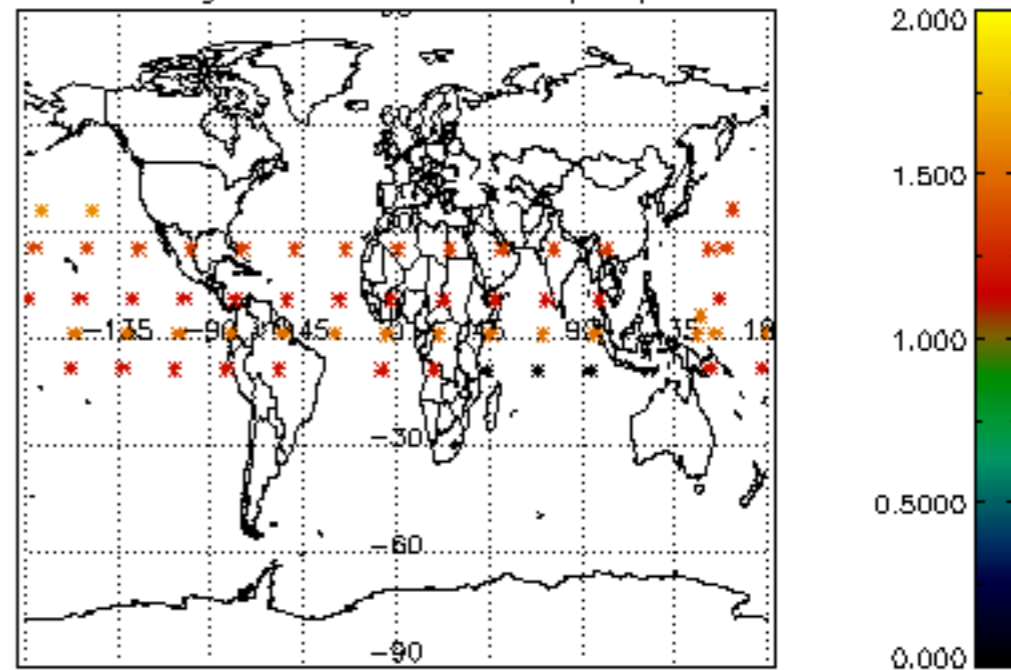
Percentage of saturation errors per profile



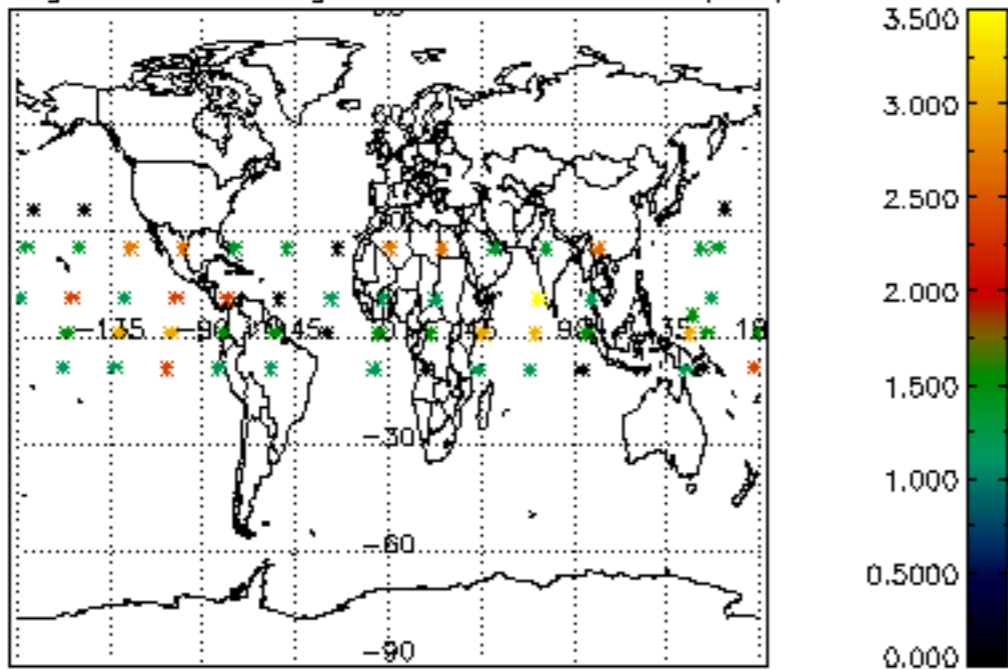
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

