

# GOMOS Level 2 Daily Report

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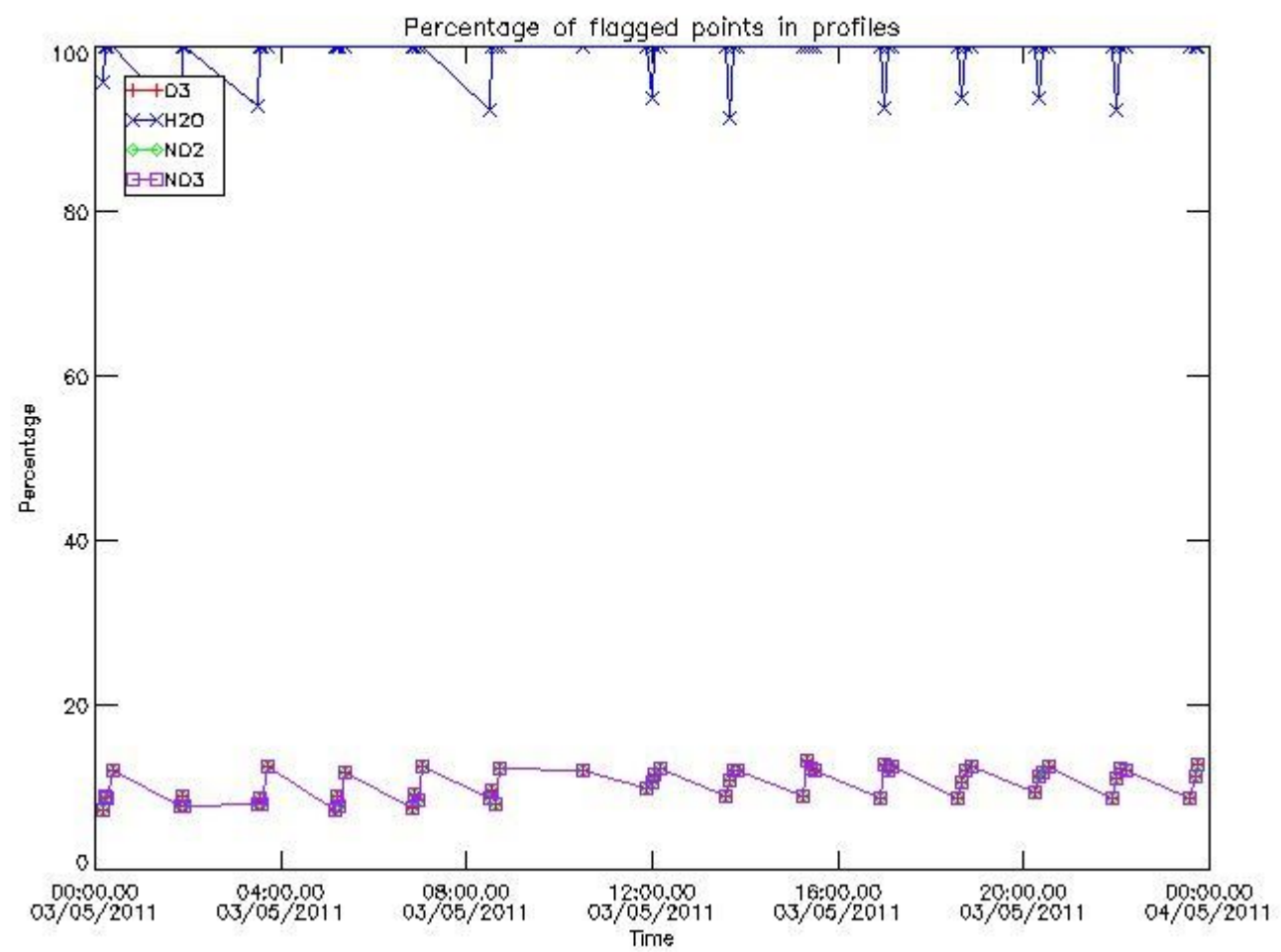


220	GOM_NL__2PRFIN20110503_205135_000000593102_00115_47974_7948.N1	03-MAY-2011 20:51:35	Twilight	58.500	80	7Del Sco	2.3160	30000.	117	47974	No
221	GOM_NL__2PRFIN20110503_205437_000000433102_00115_47974_7949.N1	03-MAY-2011 20:54:37	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	47974	No
222	GOM_NL__2PRFIN20110503_205646_000000463102_00115_47974_7950.N1	03-MAY-2011 20:56:46	Bright	45.500	104	27Bet Lib	2.6140	13100.	91	47974	No
223	GOM_NL__2PRFIN20110503_210505_000000383102_00115_47974_7951.N1	03-MAY-2011 21:05:05	Bright	37.500	111	8Eta Boo	2.6800	6000.0	75	47974	No
224	GOM_NL__2PRFIN20110503_210830_000000423102_00115_47974_7952.N1	03-MAY-2011 21:08:30	Bright	42.000	83		2.3780	11000.	84	47974	No
225	GOM_NL__2PRFIN20110503_211132_000000403102_00115_47974_7953.N1	03-MAY-2011 21:11:32	Bright	39.500	180	27Gam Boo	3.0400	8000.0	79	47974	No
226	GOM_NL__2PRFIN20110503_211357_000000363102_00115_47974_7954.N1	03-MAY-2011 21:13:57	Bright	36.000	39	85Eta UMa	1.8540	24000.	72	47974	No
227	GOM_NL__2PRFIN20110503_212124_000000553102_00115_47974_7955.N1	03-MAY-2011 21:21:24	Bright	55.000	60	7Bet UMi	2.0810	3950.0	110	47974	No
228	GOM_NL__2PRFIN20110503_213125_000000423102_00115_47974_7956.N1	03-MAY-2011 21:31:25	Bright	42.000	89	5Alp Cep	2.4510	8000.0	84	47974	No
229	GOM_NL__2PRFIN20110503_214335_000000603102_00115_47974_7957.N1	03-MAY-2011 21:43:35	Bright	60.000	93	53Bet Peg	2.5200	3100.0	120	47974	No
230	GOM_NL__2PRFIN20110503_214739_000000473102_00115_47974_7958.N1	03-MAY-2011 21:47:39	Twilight	46.500	90	54Alp Peg	2.4870	11000.	93	47974	No
231	GOM_NL__2PRFIN20110503_215447_000000583102_00115_47974_7959.N1	03-MAY-2011 21:54:47	Dark	58.000	162	34Alp Aqr	2.9440	5350.0	116	47974	No
232	GOM_NL__2PRFIN20110503_220035_000000463102_00115_47974_7960.N1	03-MAY-2011 22:00:35	Dark	46.000	18	24Alp PsA	1.1660	9700.0	92	47974	No
233	GOM_NL__2PRFIN20110503_220501_000000423102_00115_47974_7961.N1	03-MAY-2011 22:05:01	Dark	41.500	172	Gam Gru	3.0030	13100.	83	47974	No
234	GOM_NL__2PRFIN20110503_221154_000000433102_00116_47975_2181.N1	03-MAY-2011 22:11:54	Dark	42.500	45	Alp Pav	1.9400	26000.	85	47975	No
235	GOM_NL__2PRFIN20110503_221925_000000513102_00116_47975_2182.N1	03-MAY-2011 22:19:25	Straylight	50.500	141	Bet Ara	2.8400	4600.0	101	47975	No
236	GOM_NL__2PRFIN20110503_222128_000000623102_00116_47975_2183.N1	03-MAY-2011 22:21:28	Straylight	61.500	40	The Sco	1.8590	7100.0	123	47975	No
237	GOM_NL__2PRFIN20110503_222315_000000603102_00116_47975_2184.N1	03-MAY-2011 22:23:15	Straylight	60.000	25	35Lam Sco	1.6200	28000.	120	47975	No
238	GOM_NL__2PRFIN20110503_222610_000000603102_00116_47975_2185.N1	03-MAY-2011 22:26:10	Straylight	60.000	75	26Eps Sco	2.2910	4250.0	120	47975	No
239	GOM_NL__2PRFIN20110503_222944_000000363102_00116_47975_2186.N1	03-MAY-2011 22:29:44	Twilight	36.000	16	21Alp Sco	1.0200	3000.0	72	47975	No
240	GOM_NL__2PRFIN20110503_223150_000000573102_00116_47975_2187.N1	03-MAY-2011 22:31:50	Twilight	56.500	80	7Del Sco	2.3160	30000.	113	47975	No
241	GOM_NL__2PRFIN20110503_223451_000000423102_00116_47975_2188.N1	03-MAY-2011 22:34:51	Bright	41.500	122	9Alp2Lib	2.7470	9700.0	83	47975	No
242	GOM_NL__2PRFIN20110503_223700_000000473102_00116_47975_2189.N1	03-MAY-2011 22:37:00	Bright	46.500	104	27Bet Lib	2.6140	13100.	93	47975	No
243	GOM_NL__2PRFIN20110503_224519_000000373102_00116_47975_2190.N1	03-MAY-2011 22:45:19	Bright	37.000	111	8Eta Boo	2.6800	6000.0	74	47975	No
244	GOM_NL__2PRFIN20110503_224843_000000443102_00116_47975_2191.N1	03-MAY-2011 22:48:43	Bright	43.500	83		2.3780	11000.	87	47975	No
245	GOM_NL__2PRFIN20110503_225146_000000403102_00116_47975_2192.N1	03-MAY-2011 22:51:46	Bright	40.000	180	27Gam Boo	3.0400	8000.0	80	47975	No
246	GOM_NL__2PRFIN20110503_225411_000000553102_00116_47975_2193.N1	03-MAY-2011 22:54:11	Bright	55.000	39	85Eta UMa	1.8540	24000.	110	47975	No
247	GOM_NL__2PRFIN20110503_230138_000000393102_00116_47975_2194.N1	03-MAY-2011 23:01:38	Bright	38.500	60	7Bet UMi	2.0810	3950.0	77	47975	No
248	GOM_NL__2PRFIN20110503_231138_000000453102_00116_47975_2195.N1	03-MAY-2011 23:11:38	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	47975	No
249	GOM_NL__2PRFIN20110503_232349_000000583102_00116_47975_2196.N1	03-MAY-2011 23:23:49	Bright	58.000	93	53Bet Peg	2.5200	3100.0	116	47975	No
250	GOM_NL__2PRFIN20110503_232753_000000473102_00116_47975_2197.N1	03-MAY-2011 23:27:53	Twilight	46.500	90	54Alp Peg	2.4870	11000.	93	47975	No
251	GOM_NL__2PRFIN20110503_233502_000000583102_00116_47975_2198.N1	03-MAY-2011 23:35:02	Dark	58.000	162	34Alp Aqr	2.9440	5350.0	116	47975	No
252	GOM_NL__2PRFIN20110503_234049_000000453102_00116_47975_2199.N1	03-MAY-2011 23:40:49	Dark	45.000	18	24Alp PsA	1.1660	9700.0	90	47975	No
253	GOM_NL__2PRFIN20110503_234515_000000443102_00116_47975_2200.N1	03-MAY-2011 23:45:15	Dark	44.000	172	Gam Gru	3.0030	13100.	88	47975	No

### 3. Quality information per product

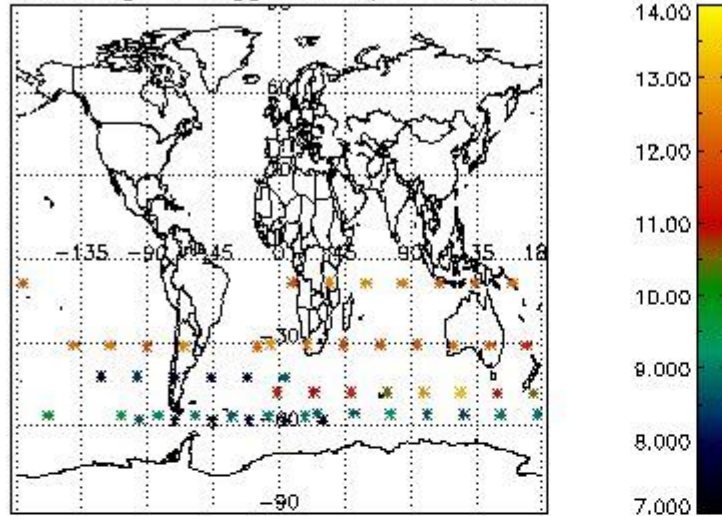
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

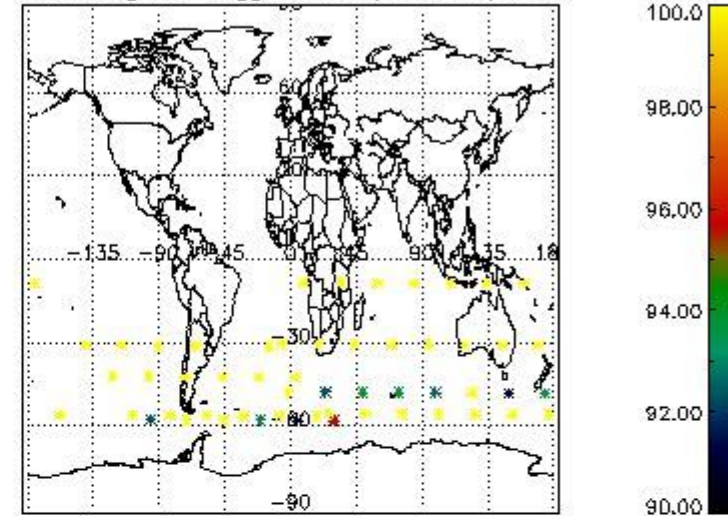


*3.2 Plot quality information per product (world map)*

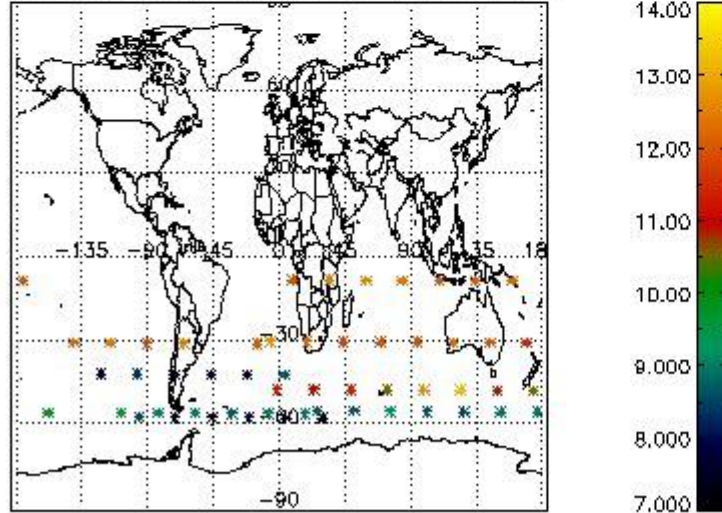
Percentage of flagged data per O3 profile



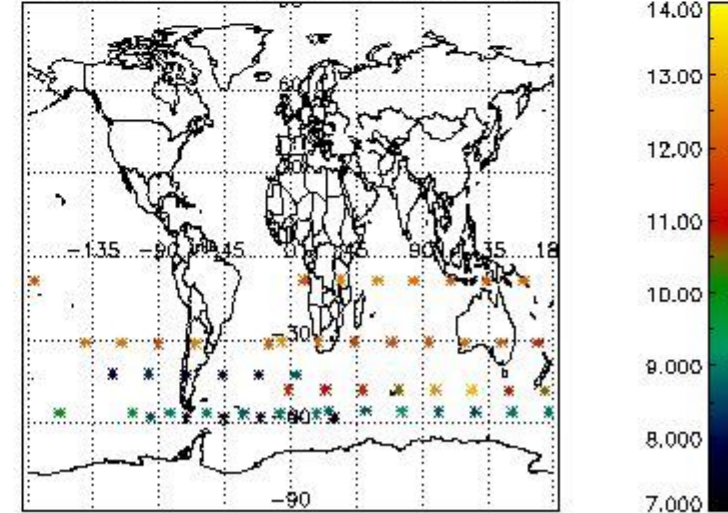
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



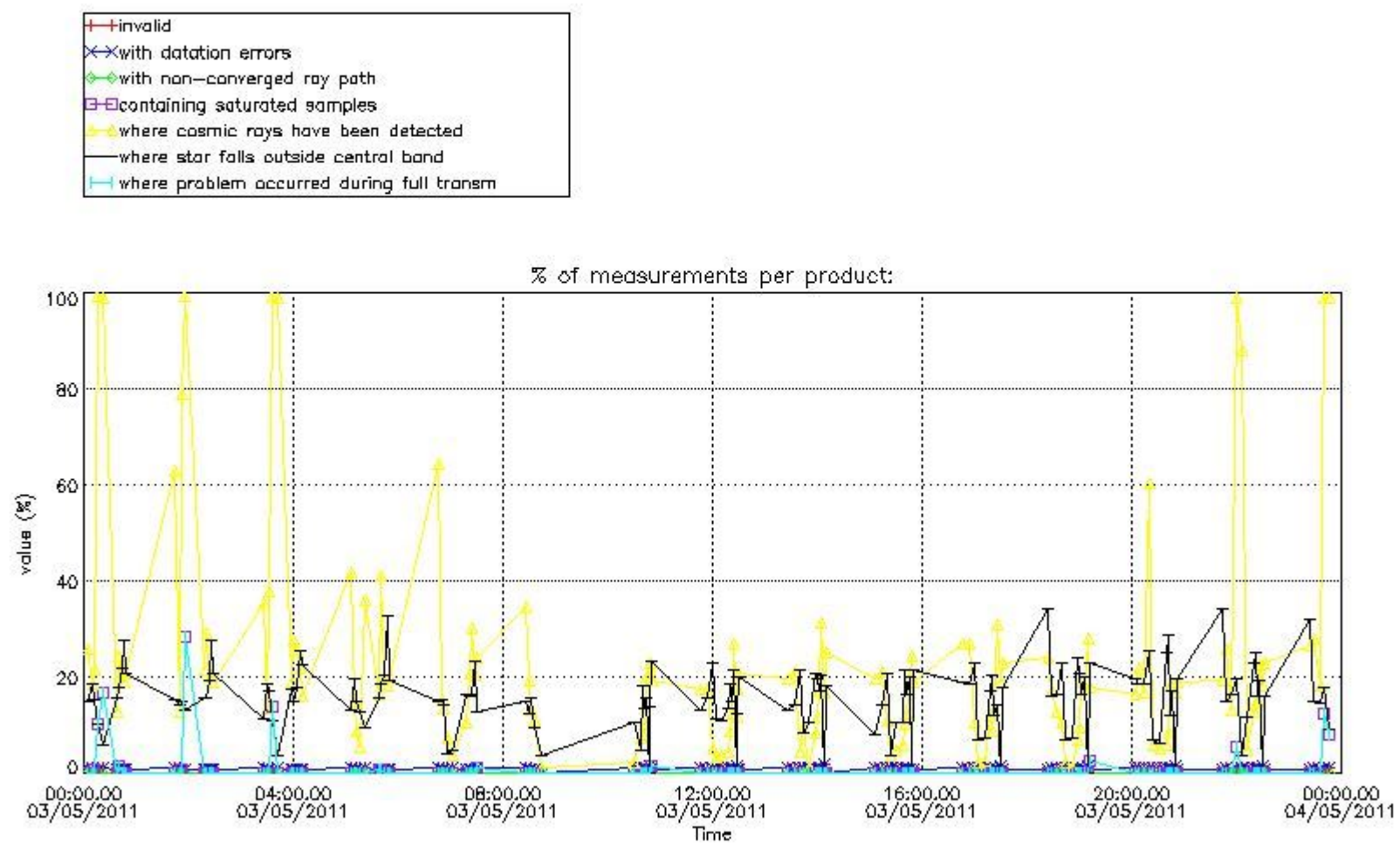
#### 4. Level 1 quality information per product

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

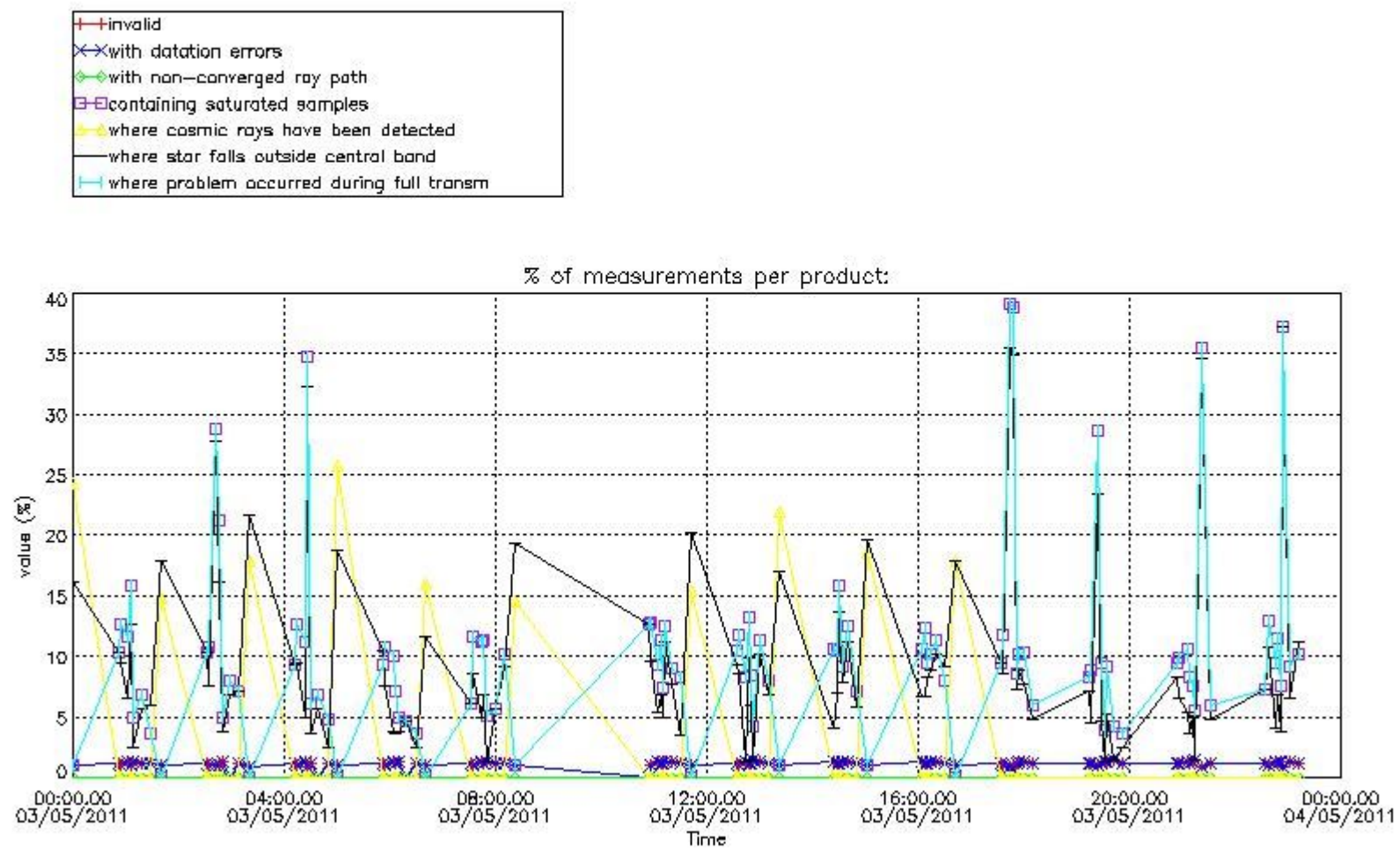
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



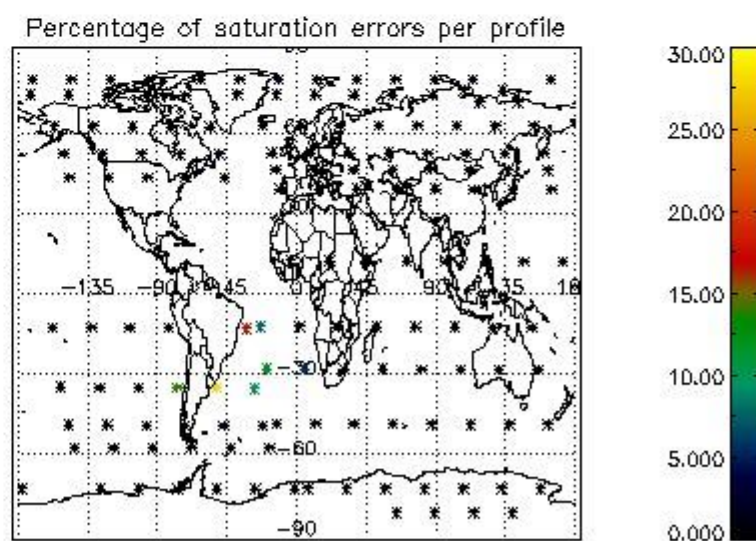
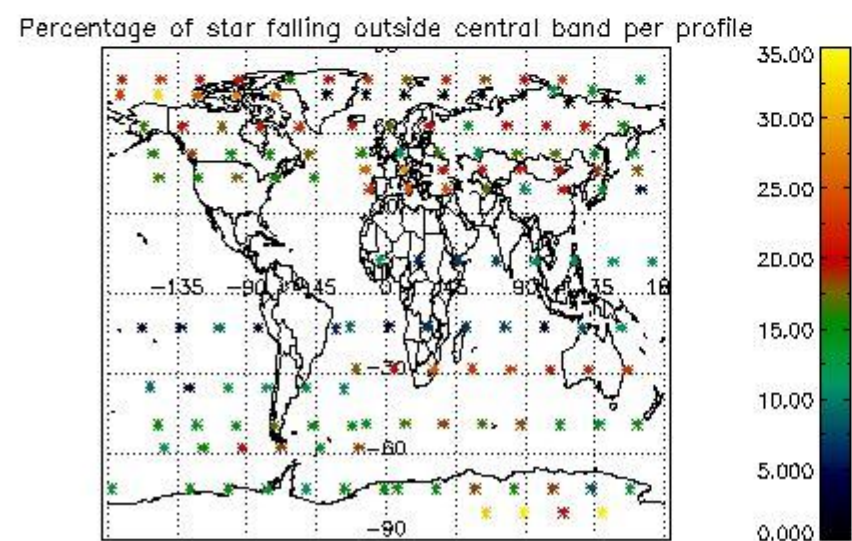
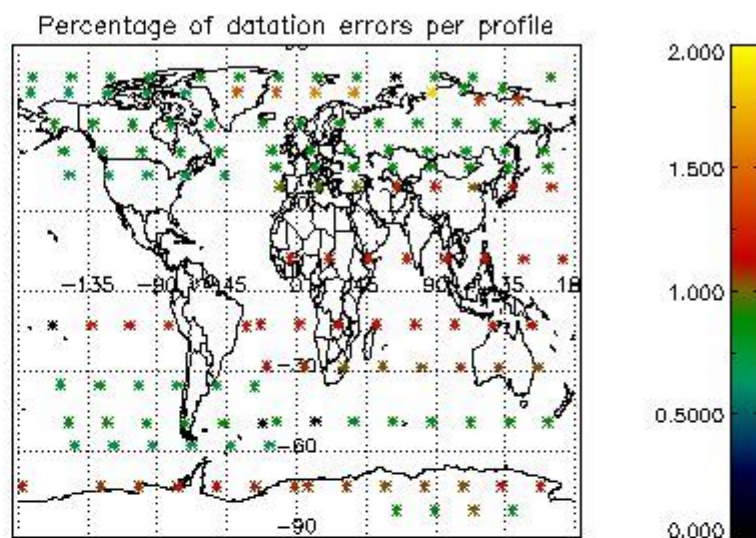
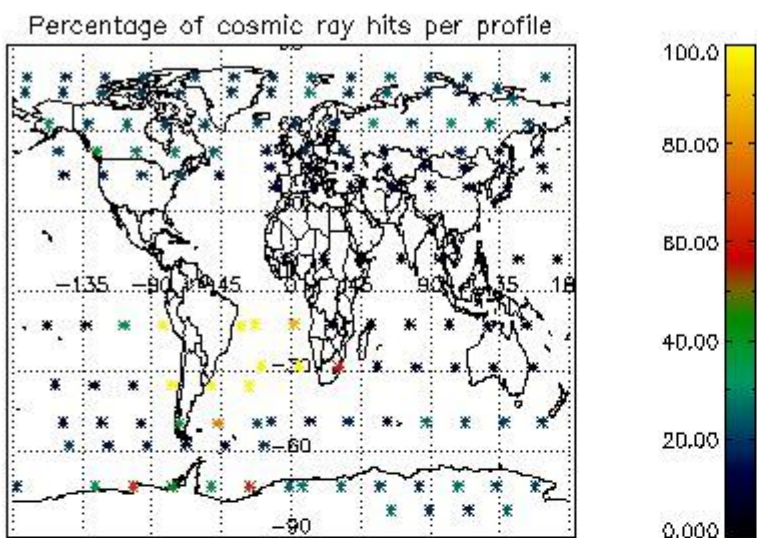


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

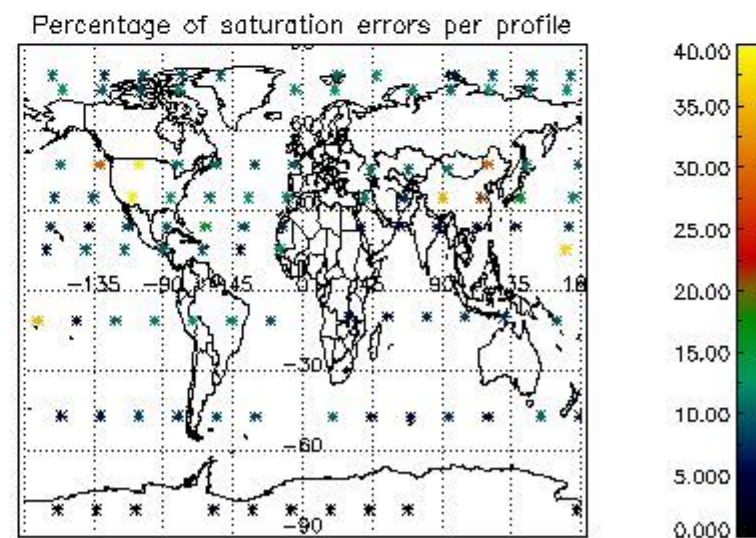
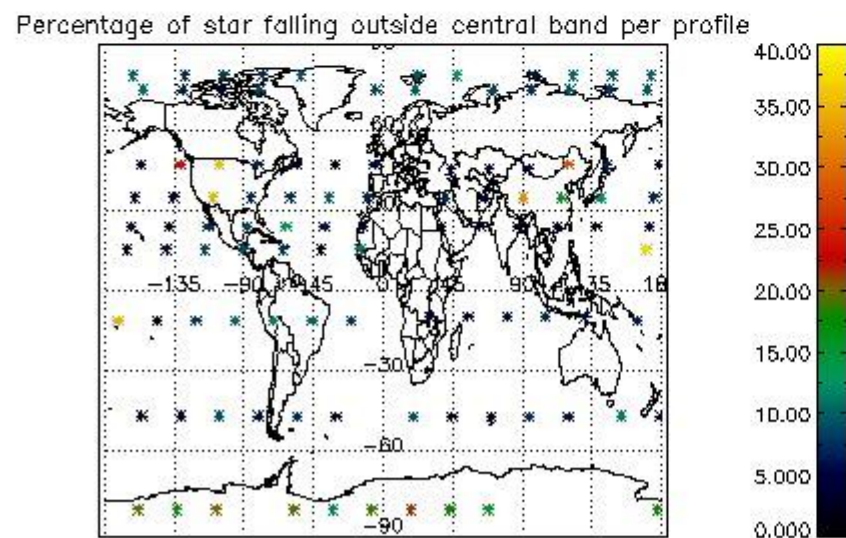
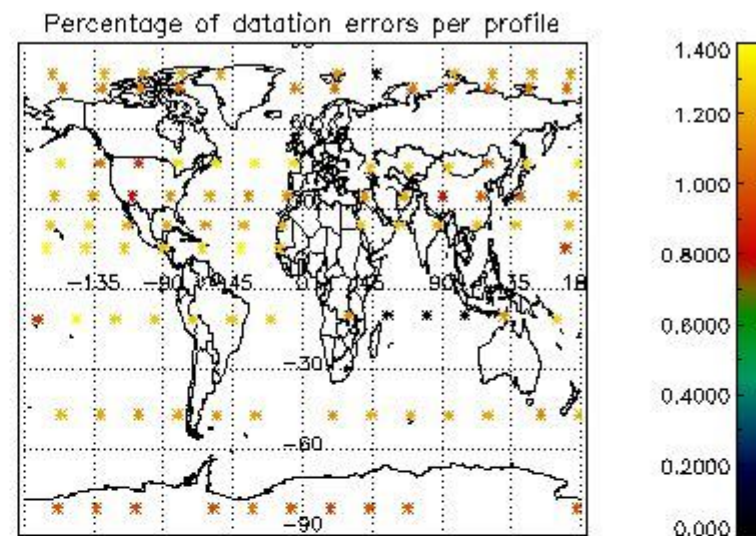
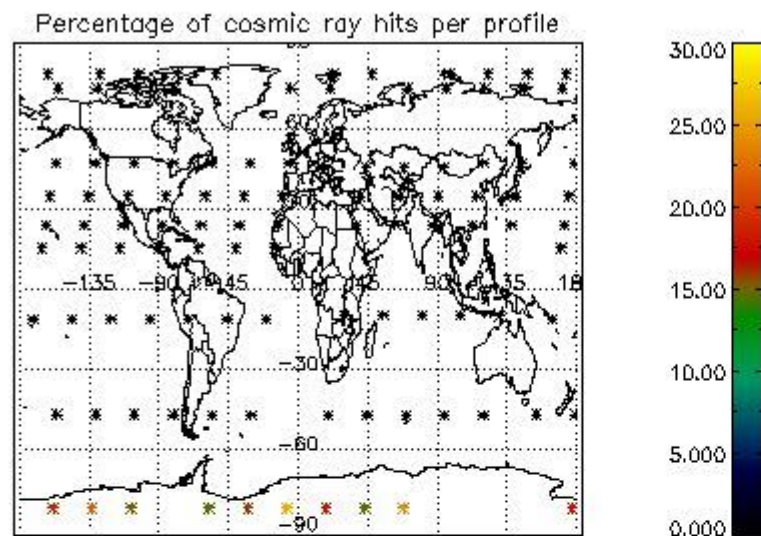


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

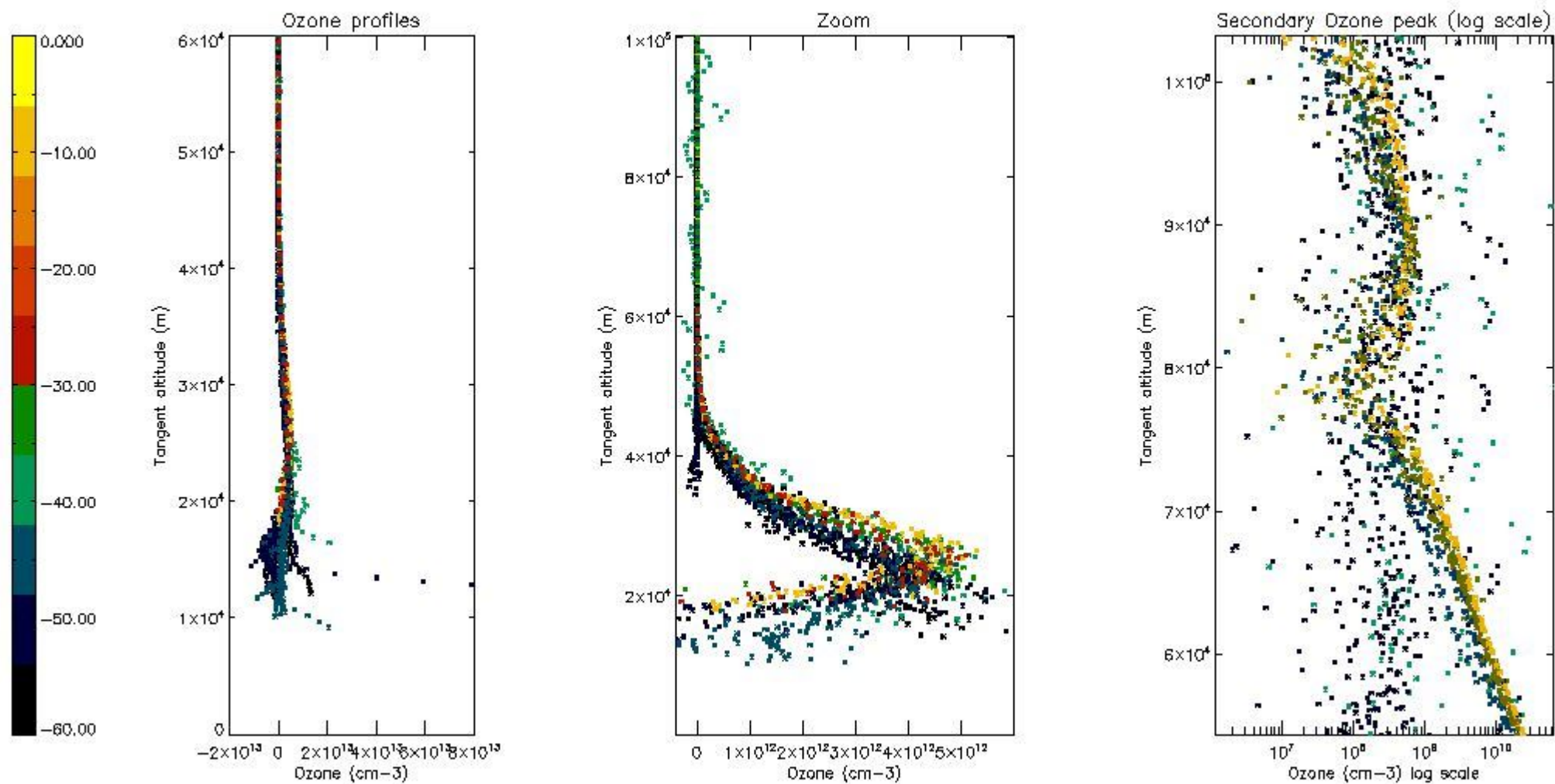
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	23
STD < 20	9

STD < 10	6
STD < 5	2

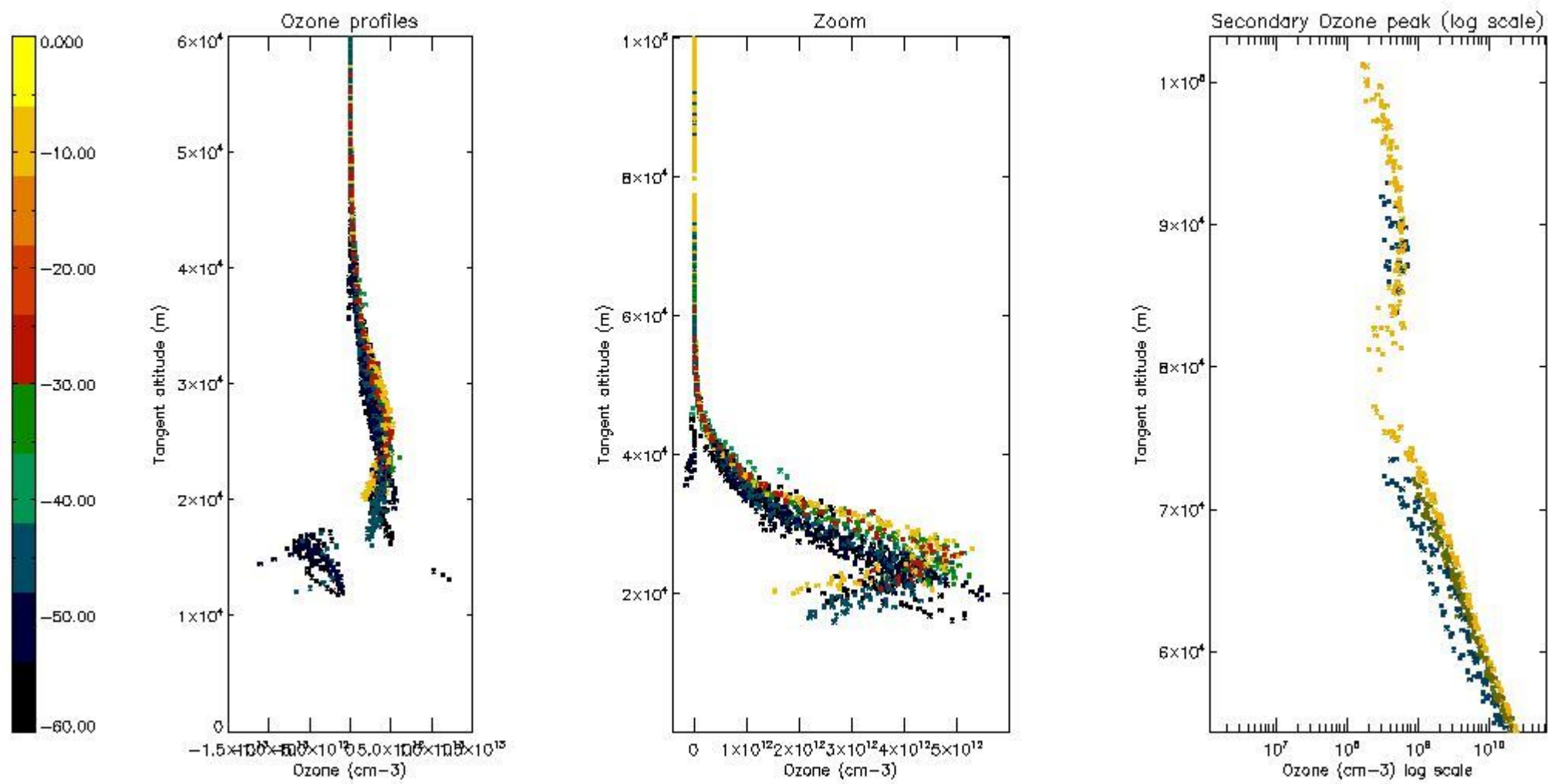
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



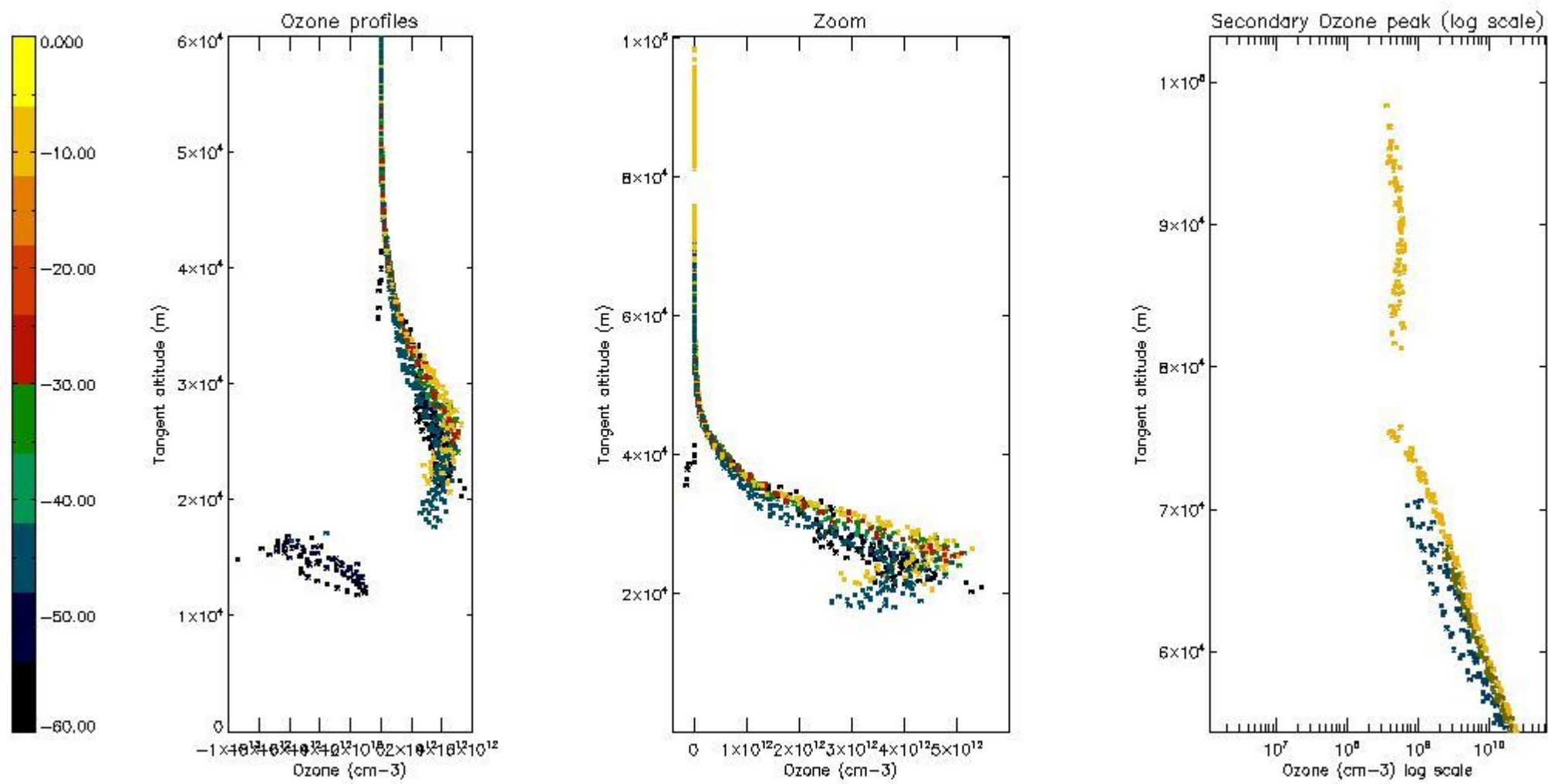
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



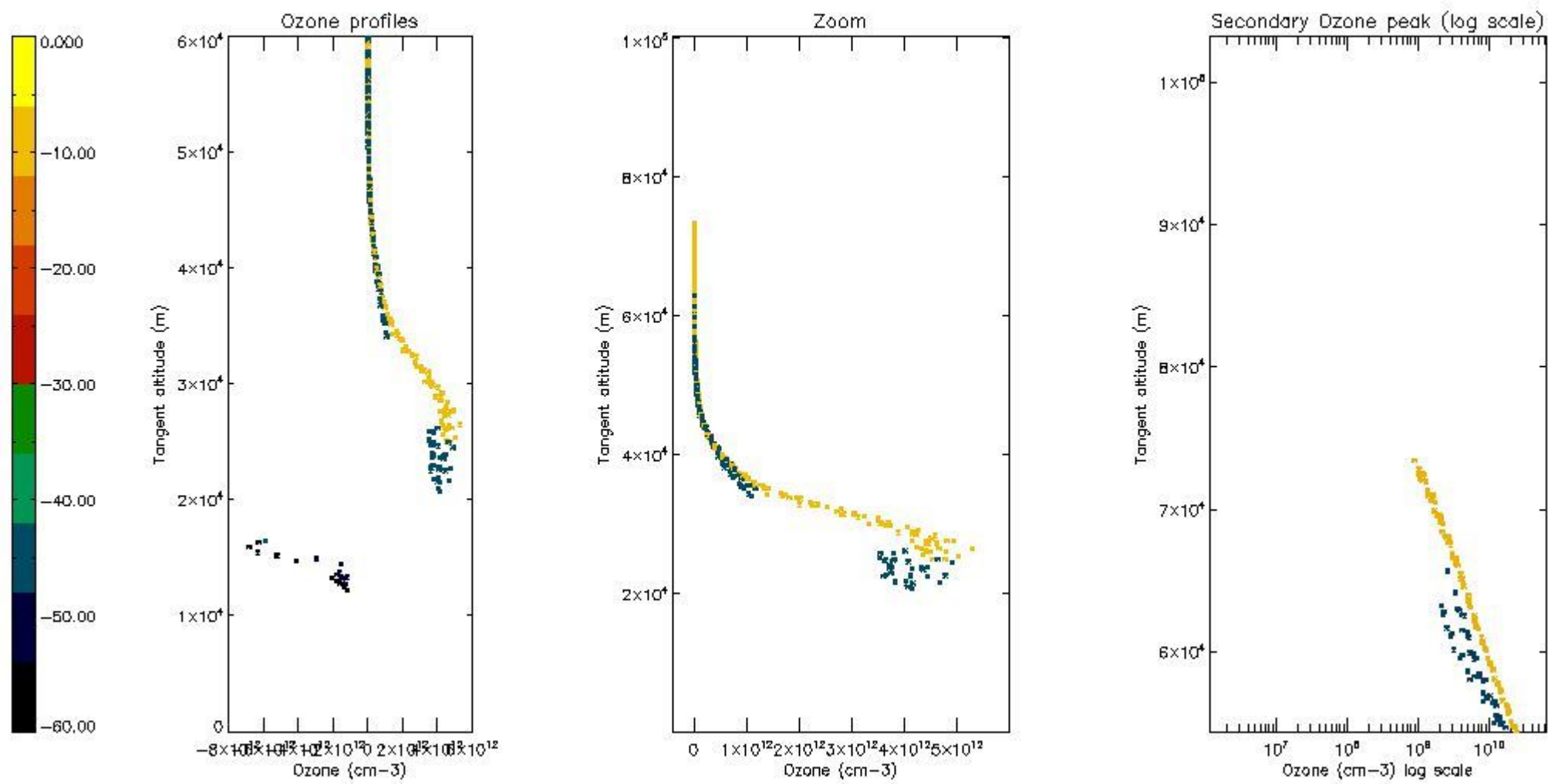
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

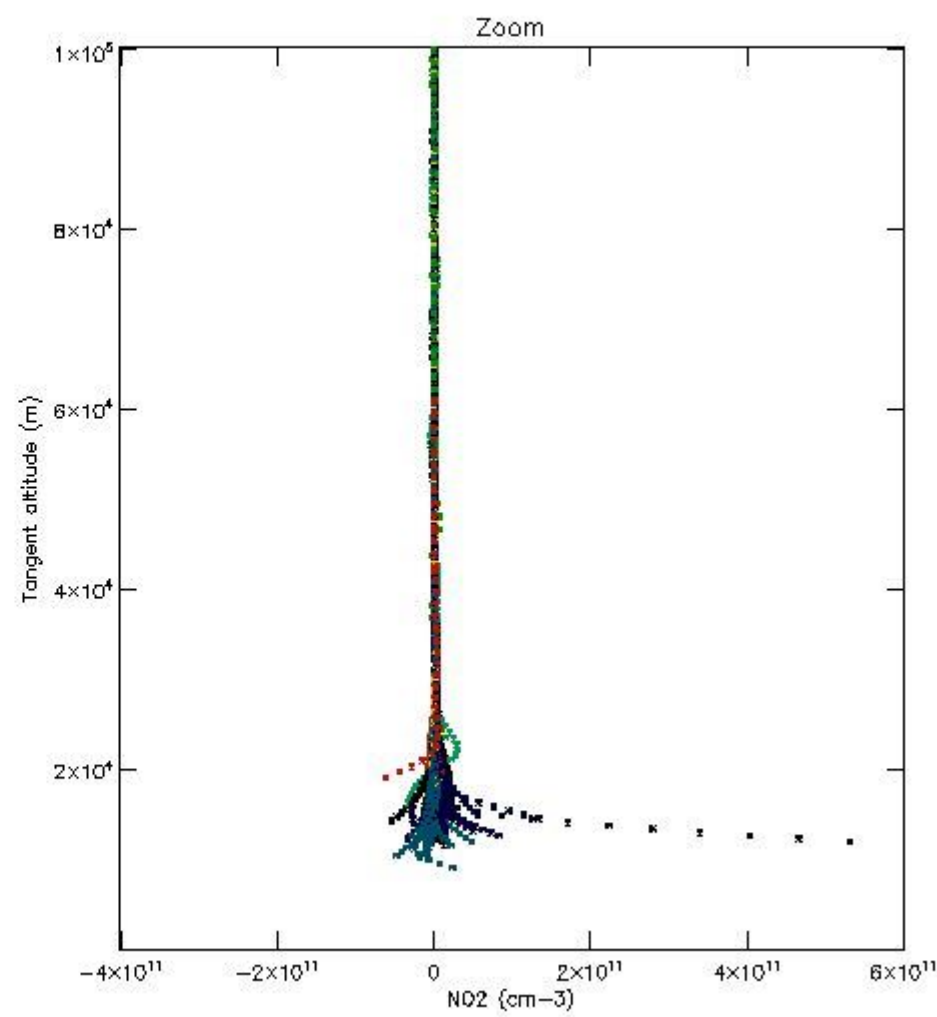
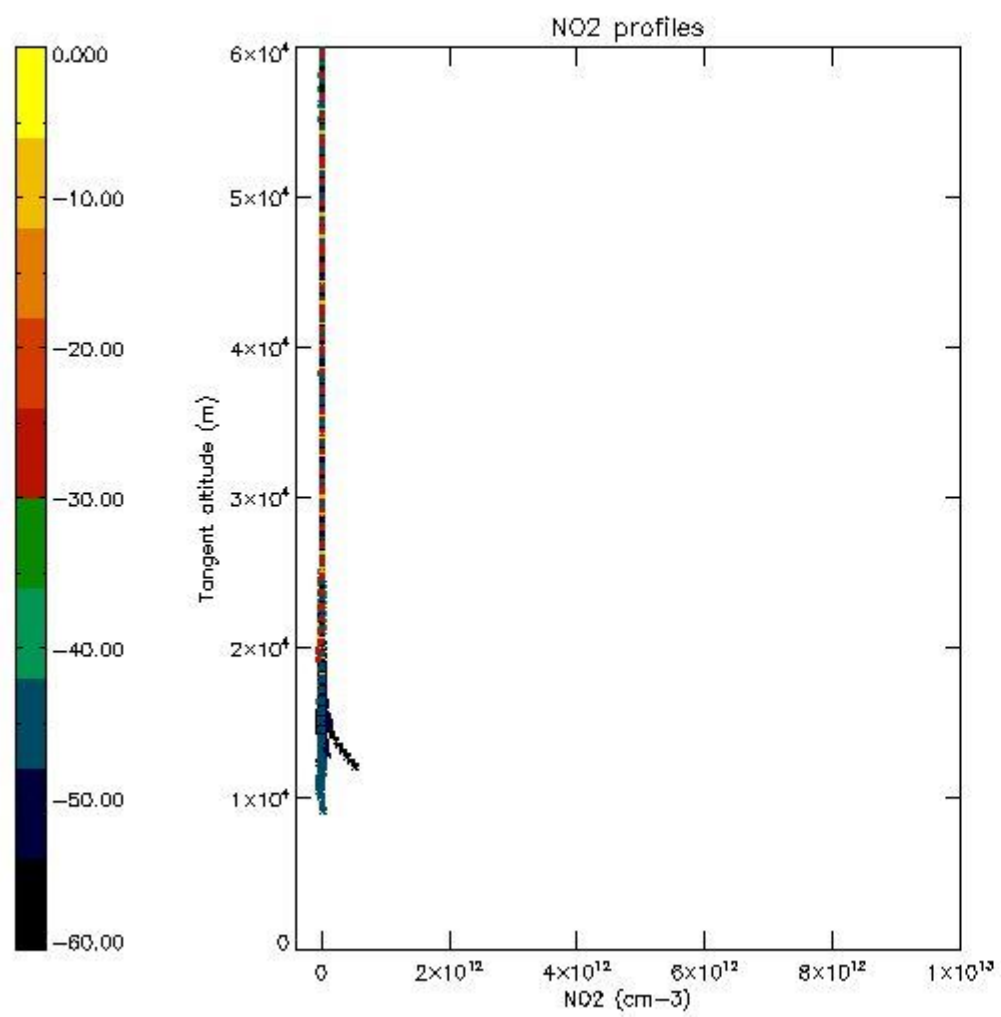
The colorbar represents the latitude.



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

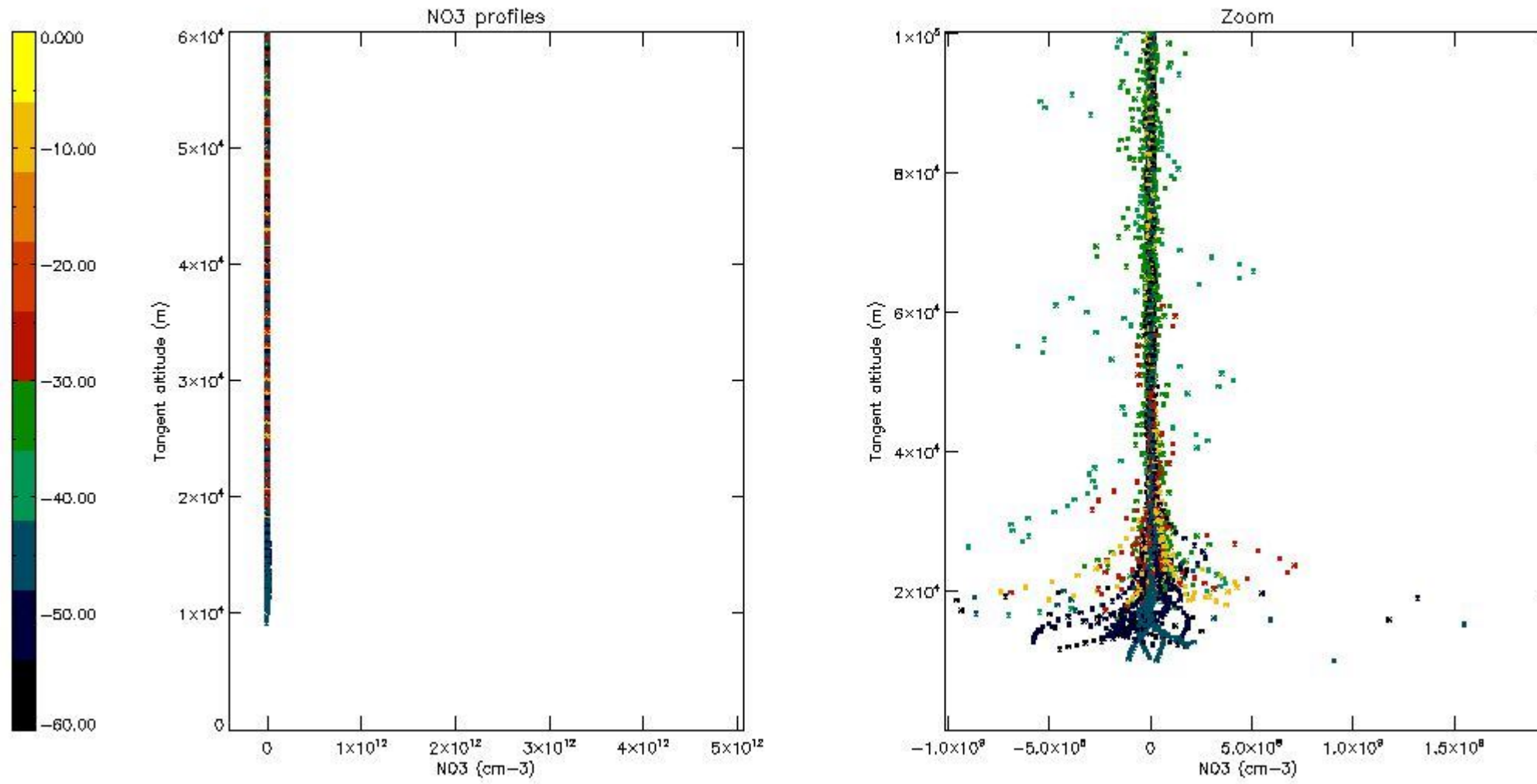
The colorbar represents the latitude.





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

The colorbar represents the latitude.



## 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-MAY-2011 00:00:02
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-MAY-2011 00:00:02
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-MAY-2011 00:00:02

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#### [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	24APR2013 13:11:57
Data source version	GOMOS/6.01
Start time of products	03-05-2011 (03MAY2011 00:00:00)
Stop time of products	04-05-2011 (04MAY2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	253
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__2PRFIN20110503_000002_00000503102_00102_47961_1853.N1	03-MAY-2011 00:00:02	Bright	49.500	164	44Eta Peg	2.9480	5400.0	99	47961	No
2	GOM_NL__2PRFIN20110503_000433_00000473102_00102_47961_1854.N1	03-MAY-2011 00:04:33	Twilight	46.500	90	54Alp Peg	2.4870	11000.	93	47961	No
3	GOM_NL__2PRFIN20110503_000908_00000703102_00102_47961_1855.N1	03-MAY-2011 00:09:08	Dark	69.500	61	8Eps Peg	2.1000	3900.0	139	47961	No
4	GOM_NL__2PRFIN20110503_001133_00000563102_00102_47961_1856.N1	03-MAY-2011 00:11:33	Dark	56.000	162	34Alp Aqr	2.9440	5350.0	112	47961	No
5	GOM_NL__2PRFIN20110503_001531_00000643102_00102_47961_1857.N1	03-MAY-2011 00:15:31	Dark	64.000	154	22Bet Aqr	2.8990	5700.0	128	47961	No
6	GOM_NL__2PRFIN20110503_002149_00000423102_00102_47961_1858.N1	03-MAY-2011 00:21:49	Dark	42.000	172	Gam Gru	3.0030	13100.	84	47961	No
7	GOM_NL__2PRFIN20110503_003731_00000713102_00103_47962_1841.N1	03-MAY-2011 00:37:31	Straylight	70.500	38	20Eps Sgr	1.8360	11000.	141	47962	No
8	GOM_NL__2PRFIN20110503_004002_00000623102_00103_47962_1842.N1	03-MAY-2011 00:40:02	Straylight	61.500	25	35Lam Sco	1.6200	28000.	123	47962	No
9	GOM_NL__2PRFIN20110503_004300_00000623102_00103_47962_1843.N1	03-MAY-2011 00:43:00	Straylight	61.500	75	26Eps Sco	2.2910	4250.0	123	47962	No
10	GOM_NL__2PRFIN20110503_004637_00000713102_00103_47962_1844.N1	03-MAY-2011 00:46:37	Tw_i_and_stray	71.000	16	21Alp Sco	1.0200	3000.0	142	47962	No
11	GOM_NL__2PRFIN20110503_004844_00000613102_00103_47962_1845.N1	03-MAY-2011 00:48:44	Tw_i_and_stray	60.500	80	7Del Sco	2.3160	30000.	121	47962	No
12	GOM_NL__2PRFIN20110503_005148_00000443102_00103_47962_1846.N1	03-MAY-2011 00:51:48	Bright	43.500	122	9Alp2Lib	2.7470	9700.0	87	47962	No
13	GOM_NL__2PRFIN20110503_005358_00000483102_00103_47962_1847.N1	03-MAY-2011 00:53:58	Bright	47.500	104	27Bet Lib	2.6140	13100.	95	47962	No
14	GOM_NL__2PRFIN20110503_010219_00000393102_00103_47962_1848.N1	03-MAY-2011 01:02:19	Bright	38.500	111	8Eta Boo	2.6800	6000.0	77	47962	No
15	GOM_NL__2PRFIN20110503_010547_00000483102_00103_47962_1849.N1	03-MAY-2011 01:05:47	Bright	47.500	83		2.3780	11000.	95	47962	No
16	GOM_NL__2PRFIN20110503_010849_00000403102_00103_47962_1850.N1	03-MAY-2011 01:08:49	Bright	40.000	180	27Gam Boo	3.0400	8000.0	80	47962	No
17	GOM_NL__2PRFIN20110503_011814_00000443102_00103_47962_1851.N1	03-MAY-2011 01:18:14	Bright	44.000	119	14Eta Dra	2.7270	4700.0	88	47962	No
18	GOM_NL__2PRFIN20110503_012840_00000423102_00103_47962_1852.N1	03-MAY-2011 01:28:40	Bright	41.500	89	5Alp Cep	2.4510	8000.0	83	47962	No
19	GOM_NL__2PRFIN20110503_014016_00000513102_00103_47962_1853.N1	03-MAY-2011 01:40:16	Bright	50.500	164	44Eta Peg	2.9480	5400.0	101	47962	No
20	GOM_NL__2PRFIN20110503_014447_00000463102_00103_47962_1854.N1	03-MAY-2011 01:44:47	Twilight	46.000	90	54Alp Peg	2.4870	11000.	92	47962	No
21	GOM_NL__2PRFIN20110503_014923_00000673102_00103_47962_1855.N1	03-MAY-2011 01:49:23	Dark	66.500	61	8Eps Peg	2.1000	3900.0	133	47962	No
22	GOM_NL__2PRFIN20110503_015148_00000573102_00103_47962_1856.N1	03-MAY-2011 01:51:48	Dark	56.500	162	34Alp Aqr	2.9440	5350.0	113	47962	No
23	GOM_NL__2PRFIN20110503_015547_00000663102_00103_47962_1857.N1	03-MAY-2011 01:55:47	Dark	65.500	154	22Bet Aqr	2.8990	5700.0	131	47962	No
24	GOM_NL__2PRFIN20110503_021747_00000703102_00104_47963_1855.N1	03-MAY-2011 02:17:47	Straylight	70.000	38	20Eps Sgr	1.8360	11000.	140	47963	No
25	GOM_NL__2PRFIN20110503_022017_00000613102_00104_47963_1856.N1	03-MAY-2011 02:20:17	Straylight	60.500	25	35Lam Sco	1.6200	28000.	121	47963	No
26	GOM_NL__2PRFIN20110503_022315_00000603102_00104_47963_1857.N1	03-MAY-2011 02:23:15	Straylight	60.000	75	26Eps Sco	2.2910	4250.0	120	47963	No
27	GOM_NL__2PRFIN20110503_022651_00000713102_00104_47963_1858.N1	03-MAY-2011 02:26:51	Tw_i_and_stray	71.000	16	21Alp Sco	1.0200	3000.0	142	47963	No
28	GOM_NL__2PRFIN20110503_022858_00000613102_00104_47963_1859.N1	03-MAY-2011 02:28:58	Tw_i_and_stray	60.500	80	7Del Sco	2.3160	30000.	121	47963	No
29	GOM_NL__2PRFIN20110503_023201_00000443102_00104_47963_1860.N1	03-MAY-2011 02:32:01	Bright	43.500	122	9Alp2Lib	2.7470	9700.0	87	47963	No
30	GOM_NL__2PRFIN20110503_023412_00000473102_00104_47963_1861.N1	03-MAY-2011 02:34:12	Bright	46.500	104	27Bet Lib	2.6140	13100.	93	47963	No
31	GOM_NL__2PRFIN20110503_024232_00000493102_00104_47963_1862.N1	03-MAY-2011 02:42:32	Bright	48.500	111	8Eta Boo	2.6800	6000.0	97	47963	No
32	GOM_NL__2PRFIN20110503_024600_00000503102_00104_47963_1863.N1	03-MAY-2011 02:46:00	Bright	49.500	83		2.3780	11000.	99	47963	No
33	GOM_NL__2PRFIN20110503_024902_00000403102_00104_47963_1864.N1	03-MAY-2011 02:49:02	Bright	40.000	180	27Gam Boo	3.0400	8000.0	80	47963	No
34	GOM_NL__2PRFIN20110503_025827_00000443102_00104_47963_1865.N1	03-MAY-2011 02:58:27	Bright	44.000	119	14Eta Dra	2.7270	4700.0	88	47963	No
35	GOM_NL__2PRFIN20110503_030854_00000433102_00104_47963_1866.N1	03-MAY-2011 03:08:54	Bright	42.500	89	5Alp Cep	2.4510	8000.0	85	47963	No
36	GOM_NL__2PRFIN20110503_032030_00000533102_00104_47963_1867.N1	03-MAY-2011 03:20:30	Bright	53.000	164	44Eta Peg	2.9480	5400.0	106	47963	No
37	GOM_NL__2PRFIN20110503_032502_00000443102_00104_47963_1868.N1	03-MAY-2011 03:25:02	Twilight	44.000	90	54Alp Peg	2.4870	11000.	88	47963	No
38	GOM_NL__2PRFIN20110503_032938_00000713102_00104_47963_1869.N1	03-MAY-2011 03:29:38	Dark	70.500	61	8Eps Peg	2.1000	3900.0	141	47963	No
39	GOM_NL__2PRFIN20110503_033203_00000583102_00104_47963_1870.N1	03-MAY-2011 03:32:03	Dark	58.000	162	34Alp Aqr	2.9440	5350.0	116	47963	No
40	GOM_NL__2PRFIN20110503_033602_00000653102_00104_47963_1871.N1	03-MAY-2011 03:36:02	Dark	65.000	154	22Bet Aqr	2.8990	5700.0	130	47963	No
41	GOM_NL__2PRFIN20110503_034218_00000413102_00104_47963_1872.N1	03-MAY-2011 03:42:18	Dark	40.500	172	Gam Gru	3.0030	13100.	81	47963	No
42	GOM_NL__2PRFIN20110503_035802_00000713102_00105_47964_1873.N1	03-MAY-2011 03:58:02	Straylight	71.000	38	20Eps Sgr	1.8360	11000.	142	47964	No







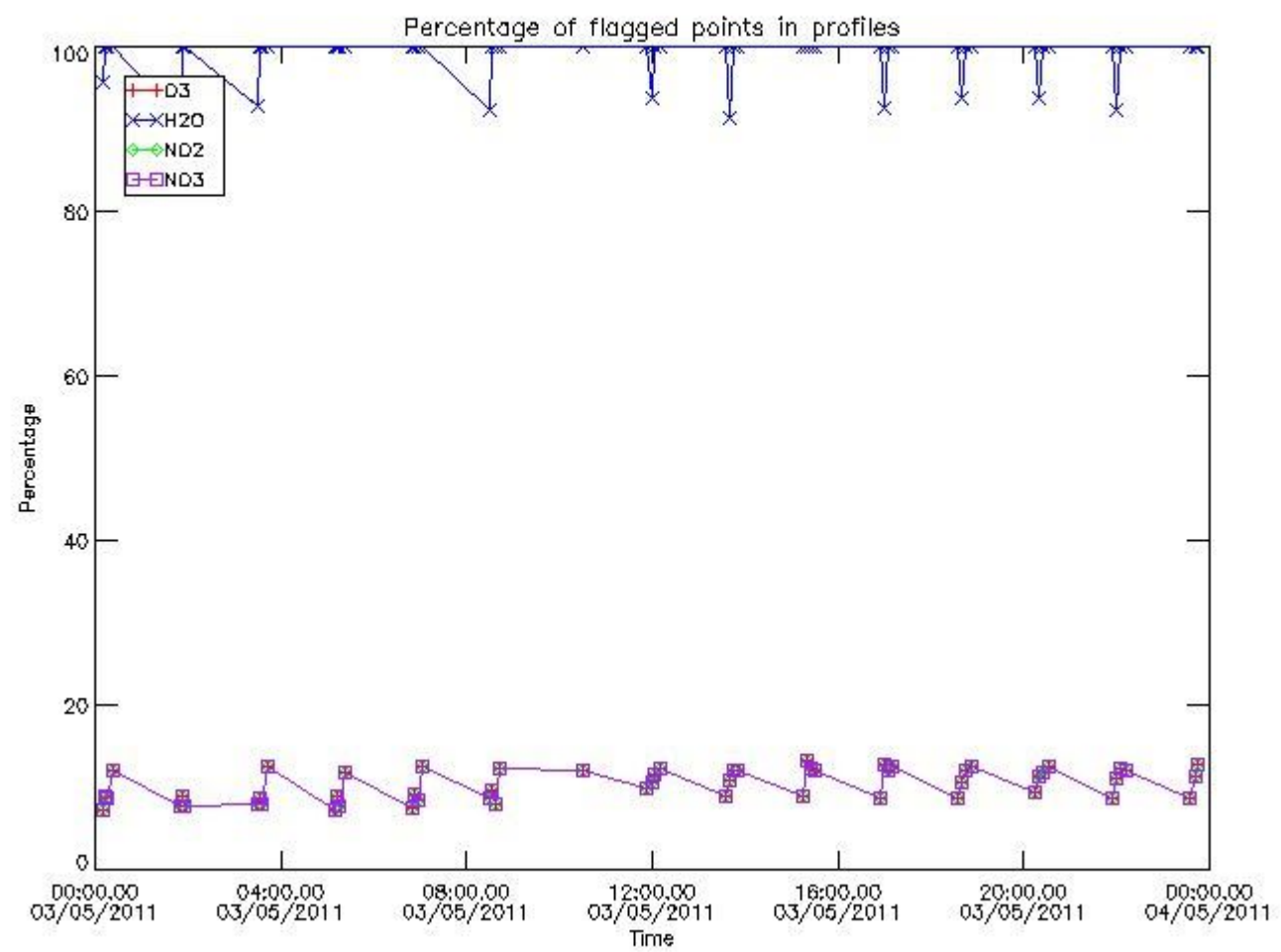
220	GOM_NL__2PRFIN20110503_205135_000000593102_00115_47974_7948.N1	03-MAY-2011 20:51:35	Twilight	58.500	80	7Del Sco	2.3160	30000.	117	47974	No
221	GOM_NL__2PRFIN20110503_205437_000000433102_00115_47974_7949.N1	03-MAY-2011 20:54:37	Bright	42.500	122	9Alp2Lib	2.7470	9700.0	85	47974	No
222	GOM_NL__2PRFIN20110503_205646_000000463102_00115_47974_7950.N1	03-MAY-2011 20:56:46	Bright	45.500	104	27Bet Lib	2.6140	13100.	91	47974	No
223	GOM_NL__2PRFIN20110503_210505_000000383102_00115_47974_7951.N1	03-MAY-2011 21:05:05	Bright	37.500	111	8Eta Boo	2.6800	6000.0	75	47974	No
224	GOM_NL__2PRFIN20110503_210830_000000423102_00115_47974_7952.N1	03-MAY-2011 21:08:30	Bright	42.000	83		2.3780	11000.	84	47974	No
225	GOM_NL__2PRFIN20110503_211132_000000403102_00115_47974_7953.N1	03-MAY-2011 21:11:32	Bright	39.500	180	27Gam Boo	3.0400	8000.0	79	47974	No
226	GOM_NL__2PRFIN20110503_211357_000000363102_00115_47974_7954.N1	03-MAY-2011 21:13:57	Bright	36.000	39	85Eta UMa	1.8540	24000.	72	47974	No
227	GOM_NL__2PRFIN20110503_212124_000000553102_00115_47974_7955.N1	03-MAY-2011 21:21:24	Bright	55.000	60	7Bet UMi	2.0810	3950.0	110	47974	No
228	GOM_NL__2PRFIN20110503_213125_000000423102_00115_47974_7956.N1	03-MAY-2011 21:31:25	Bright	42.000	89	5Alp Cep	2.4510	8000.0	84	47974	No
229	GOM_NL__2PRFIN20110503_214335_000000603102_00115_47974_7957.N1	03-MAY-2011 21:43:35	Bright	60.000	93	53Bet Peg	2.5200	3100.0	120	47974	No
230	GOM_NL__2PRFIN20110503_214739_000000473102_00115_47974_7958.N1	03-MAY-2011 21:47:39	Twilight	46.500	90	54Alp Peg	2.4870	11000.	93	47974	No
231	GOM_NL__2PRFIN20110503_215447_000000583102_00115_47974_7959.N1	03-MAY-2011 21:54:47	Dark	58.000	162	34Alp Aqr	2.9440	5350.0	116	47974	No
232	GOM_NL__2PRFIN20110503_220035_000000463102_00115_47974_7960.N1	03-MAY-2011 22:00:35	Dark	46.000	18	24Alp PsA	1.1660	9700.0	92	47974	No
233	GOM_NL__2PRFIN20110503_220501_000000423102_00115_47974_7961.N1	03-MAY-2011 22:05:01	Dark	41.500	172	Gam Gru	3.0030	13100.	83	47974	No
234	GOM_NL__2PRFIN20110503_221154_000000433102_00116_47975_2181.N1	03-MAY-2011 22:11:54	Dark	42.500	45	Alp Pav	1.9400	26000.	85	47975	No
235	GOM_NL__2PRFIN20110503_221925_000000513102_00116_47975_2182.N1	03-MAY-2011 22:19:25	Straylight	50.500	141	Bet Ara	2.8400	4600.0	101	47975	No
236	GOM_NL__2PRFIN20110503_222128_000000623102_00116_47975_2183.N1	03-MAY-2011 22:21:28	Straylight	61.500	40	The Sco	1.8590	7100.0	123	47975	No
237	GOM_NL__2PRFIN20110503_222315_000000603102_00116_47975_2184.N1	03-MAY-2011 22:23:15	Straylight	60.000	25	35Lam Sco	1.6200	28000.	120	47975	No
238	GOM_NL__2PRFIN20110503_222610_000000603102_00116_47975_2185.N1	03-MAY-2011 22:26:10	Straylight	60.000	75	26Eps Sco	2.2910	4250.0	120	47975	No
239	GOM_NL__2PRFIN20110503_222944_000000363102_00116_47975_2186.N1	03-MAY-2011 22:29:44	Twilight	36.000	16	21Alp Sco	1.0200	3000.0	72	47975	No
240	GOM_NL__2PRFIN20110503_223150_000000573102_00116_47975_2187.N1	03-MAY-2011 22:31:50	Twilight	56.500	80	7Del Sco	2.3160	30000.	113	47975	No
241	GOM_NL__2PRFIN20110503_223451_000000423102_00116_47975_2188.N1	03-MAY-2011 22:34:51	Bright	41.500	122	9Alp2Lib	2.7470	9700.0	83	47975	No
242	GOM_NL__2PRFIN20110503_223700_000000473102_00116_47975_2189.N1	03-MAY-2011 22:37:00	Bright	46.500	104	27Bet Lib	2.6140	13100.	93	47975	No
243	GOM_NL__2PRFIN20110503_224519_000000373102_00116_47975_2190.N1	03-MAY-2011 22:45:19	Bright	37.000	111	8Eta Boo	2.6800	6000.0	74	47975	No
244	GOM_NL__2PRFIN20110503_224843_000000443102_00116_47975_2191.N1	03-MAY-2011 22:48:43	Bright	43.500	83		2.3780	11000.	87	47975	No
245	GOM_NL__2PRFIN20110503_225146_000000403102_00116_47975_2192.N1	03-MAY-2011 22:51:46	Bright	40.000	180	27Gam Boo	3.0400	8000.0	80	47975	No
246	GOM_NL__2PRFIN20110503_225411_000000553102_00116_47975_2193.N1	03-MAY-2011 22:54:11	Bright	55.000	39	85Eta UMa	1.8540	24000.	110	47975	No
247	GOM_NL__2PRFIN20110503_230138_000000393102_00116_47975_2194.N1	03-MAY-2011 23:01:38	Bright	38.500	60	7Bet UMi	2.0810	3950.0	77	47975	No
248	GOM_NL__2PRFIN20110503_231138_000000453102_00116_47975_2195.N1	03-MAY-2011 23:11:38	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	47975	No
249	GOM_NL__2PRFIN20110503_232349_000000583102_00116_47975_2196.N1	03-MAY-2011 23:23:49	Bright	58.000	93	53Bet Peg	2.5200	3100.0	116	47975	No
250	GOM_NL__2PRFIN20110503_232753_000000473102_00116_47975_2197.N1	03-MAY-2011 23:27:53	Twilight	46.500	90	54Alp Peg	2.4870	11000.	93	47975	No
251	GOM_NL__2PRFIN20110503_233502_000000583102_00116_47975_2198.N1	03-MAY-2011 23:35:02	Dark	58.000	162	34Alp Aqr	2.9440	5350.0	116	47975	No
252	GOM_NL__2PRFIN20110503_234049_000000453102_00116_47975_2199.N1	03-MAY-2011 23:40:49	Dark	45.000	18	24Alp PsA	1.1660	9700.0	90	47975	No
253	GOM_NL__2PRFIN20110503_234515_000000443102_00116_47975_2200.N1	03-MAY-2011 23:45:15	Dark	44.000	172	Gam Gru	3.0030	13100.	88	47975	No

### 3. Quality information per product

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

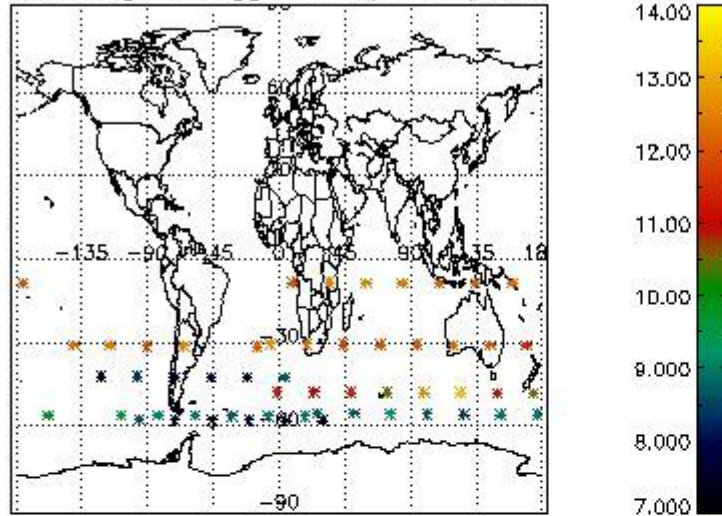
#### 3.1 Plot quality information per product (time dependant)



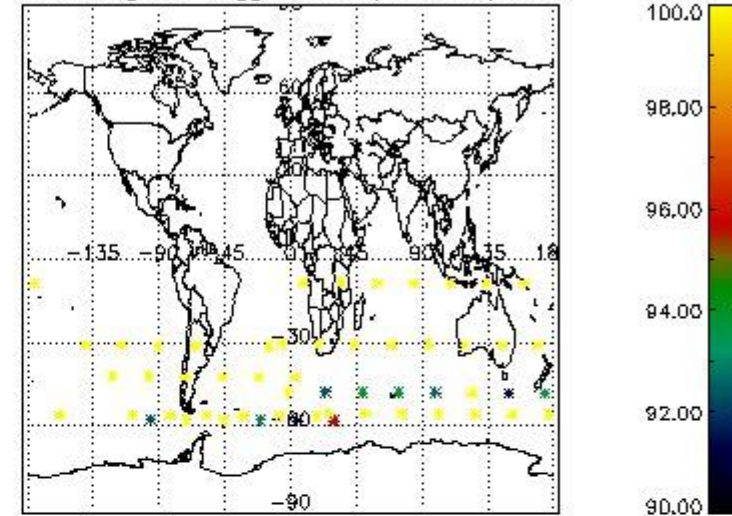


*3.2 Plot quality information per product (world map)*

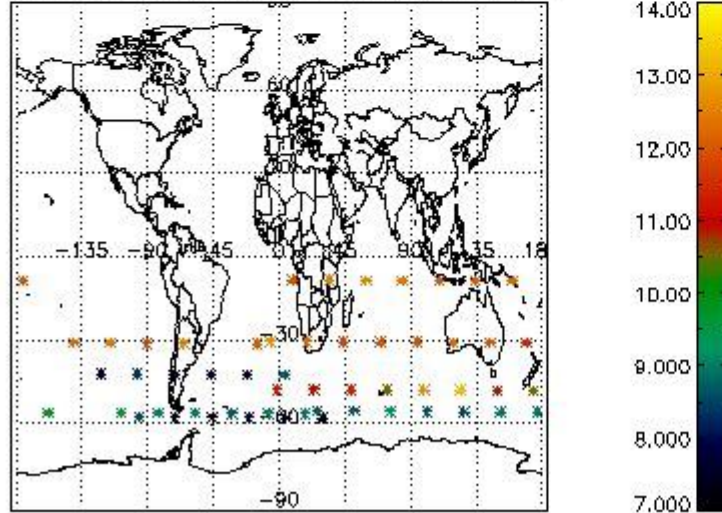
Percentage of flagged data per O3 profile



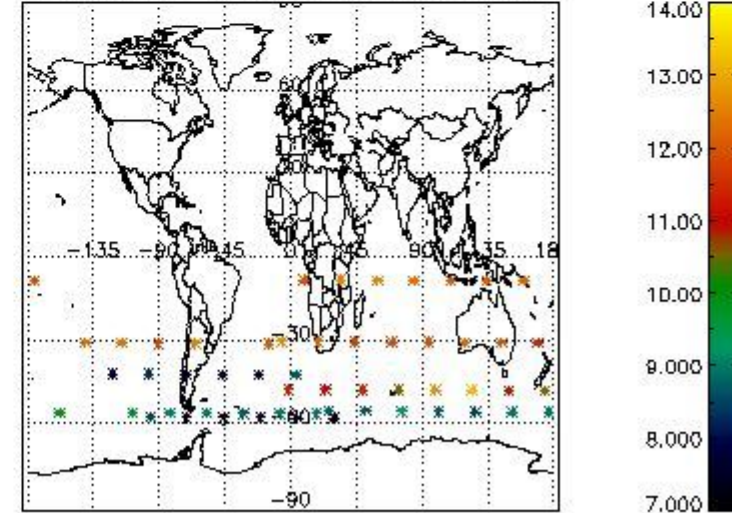
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

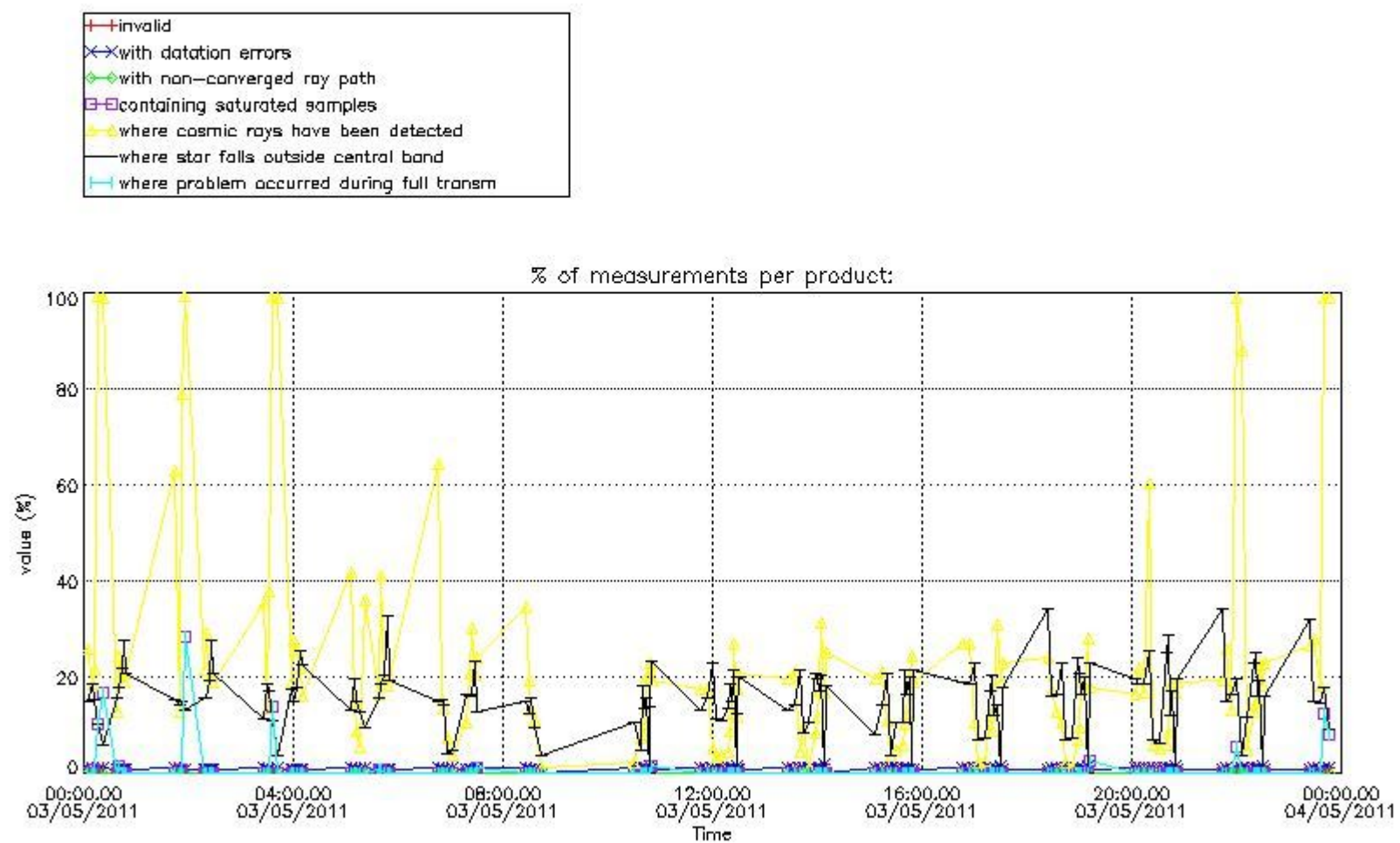


#### 4. Level 1 quality information per product

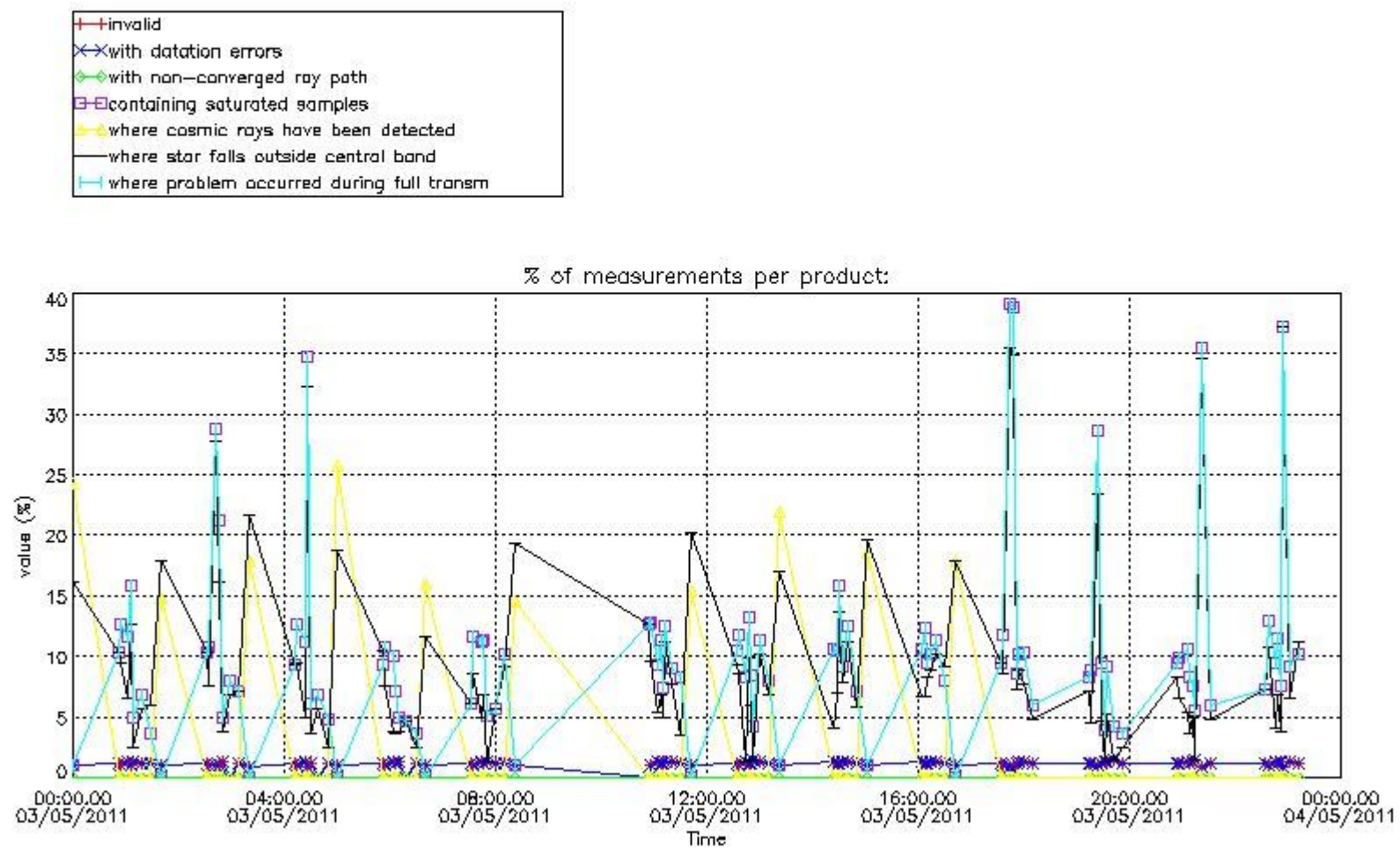
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

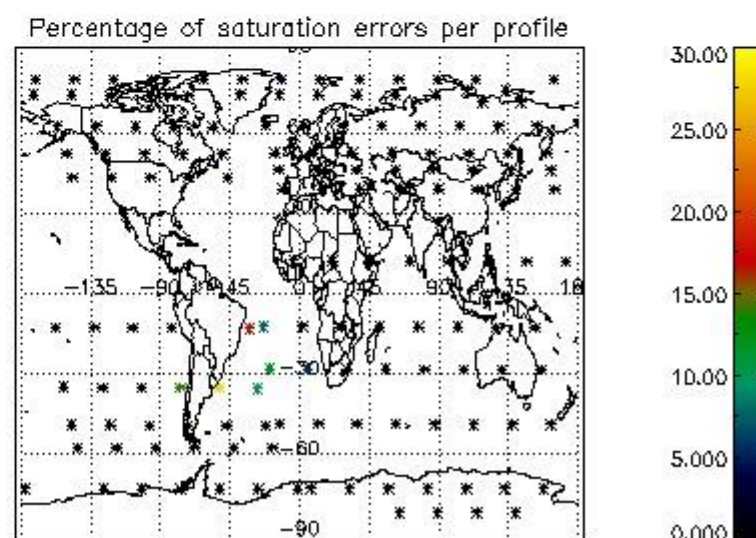
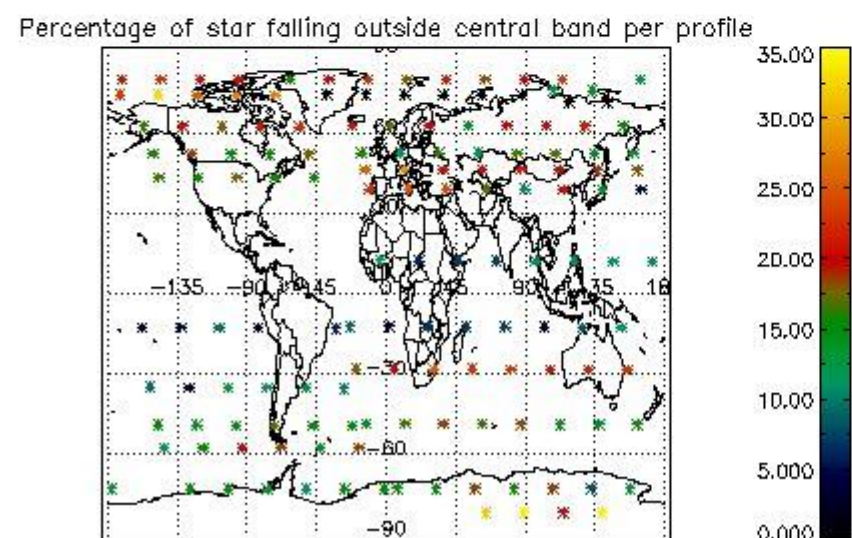
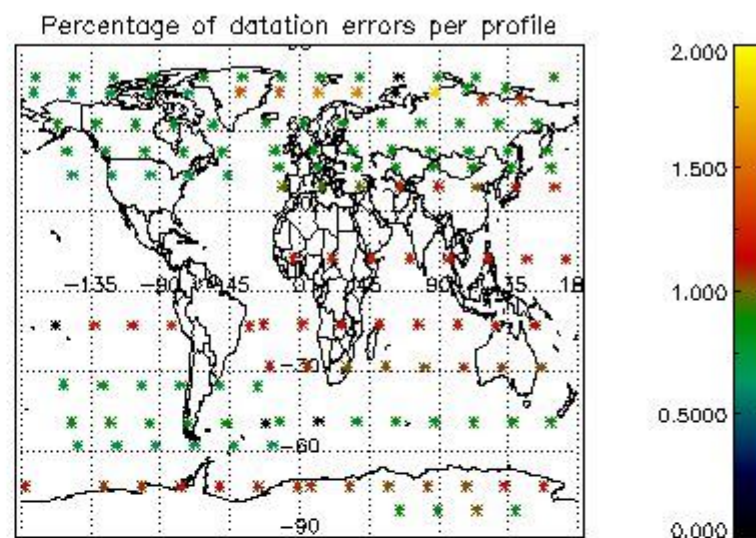
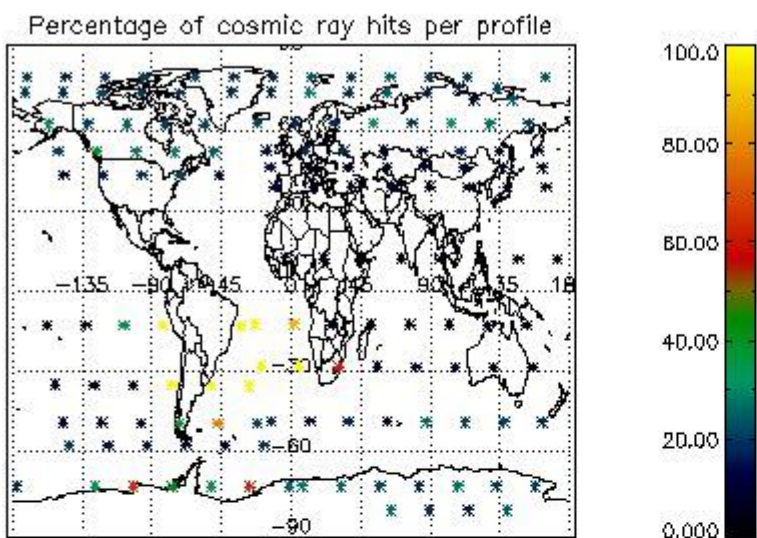


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

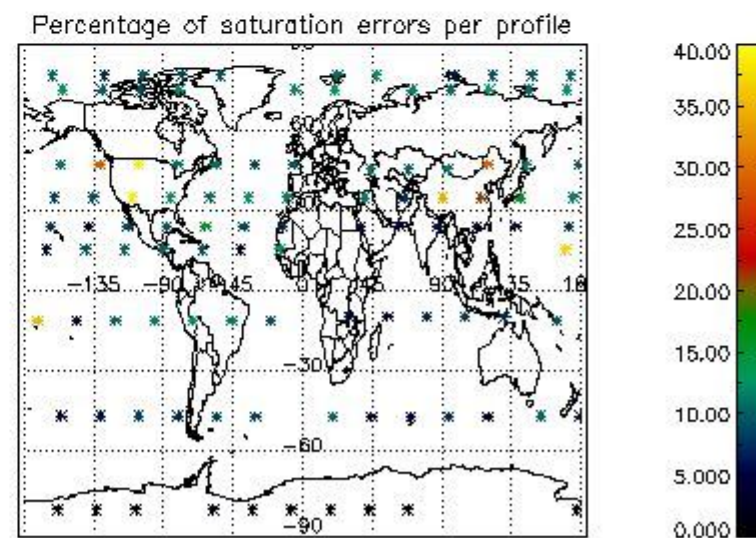
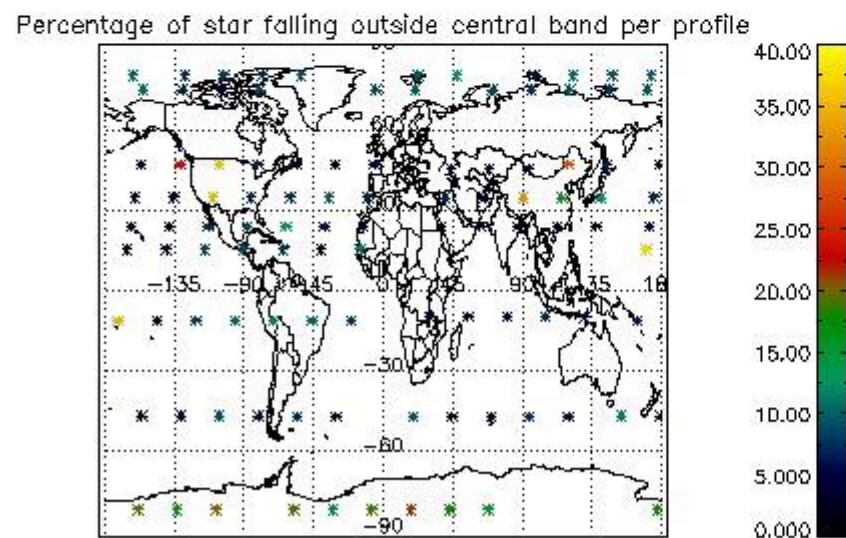
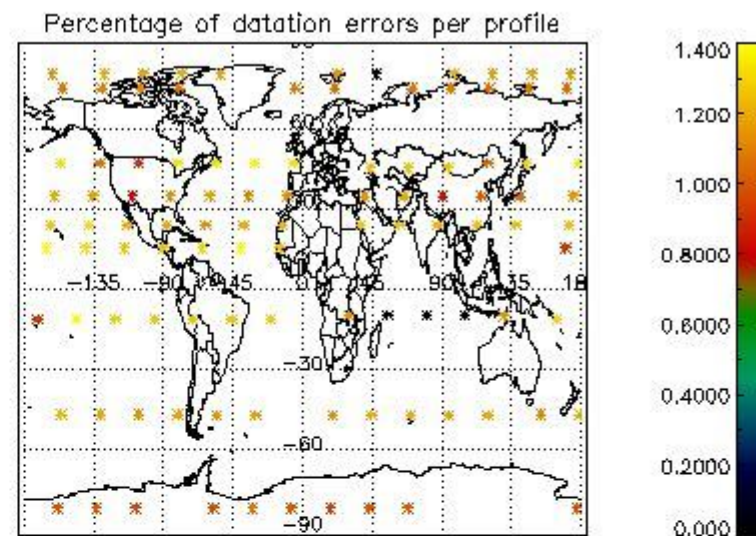
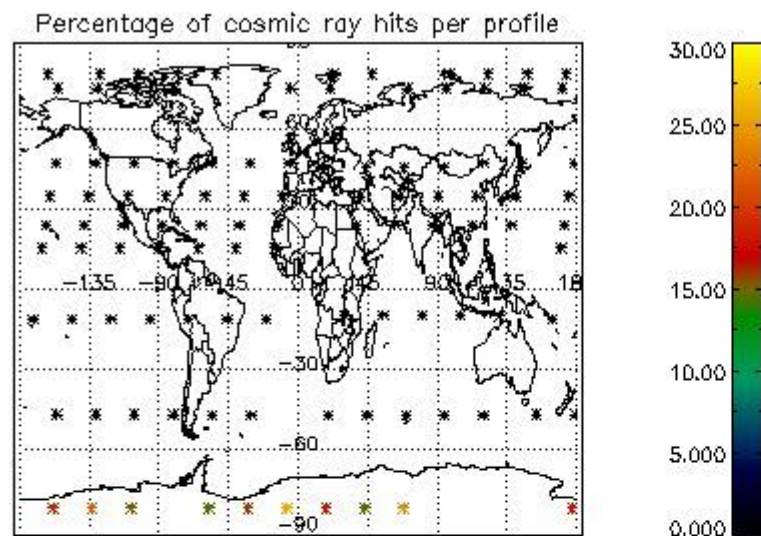


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

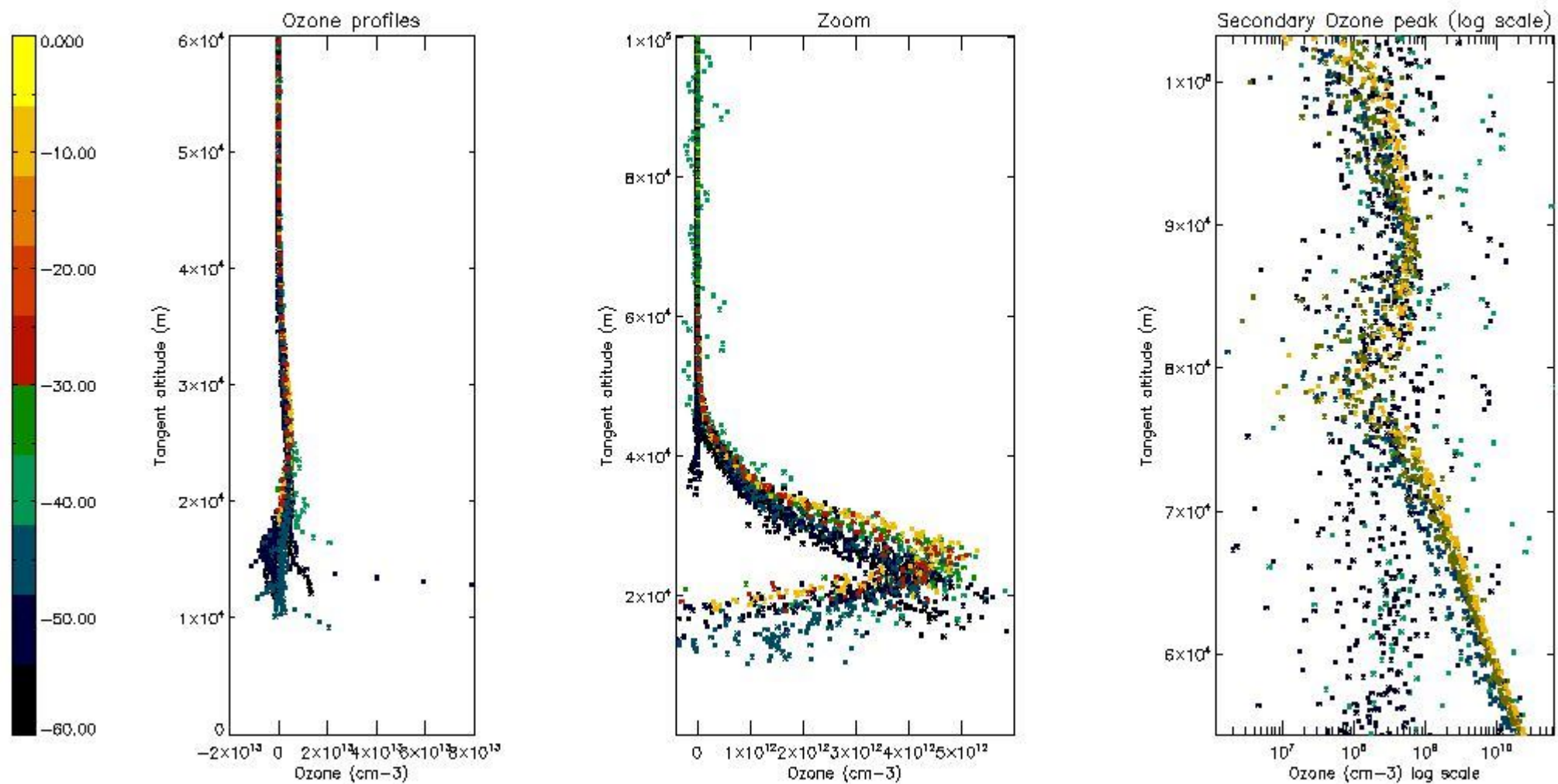
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	23
STD < 20	9

STD < 10	6
STD < 5	2

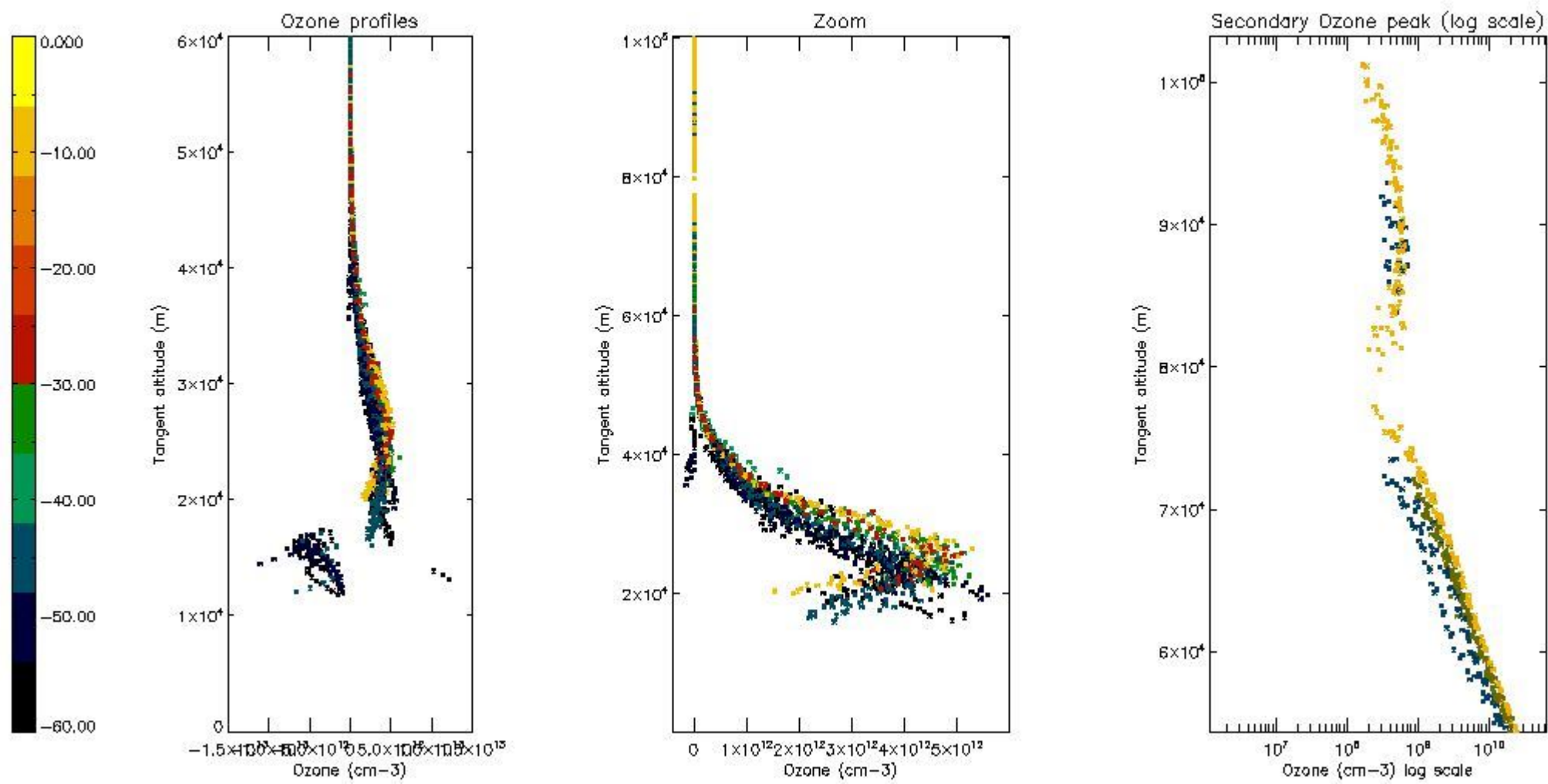
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

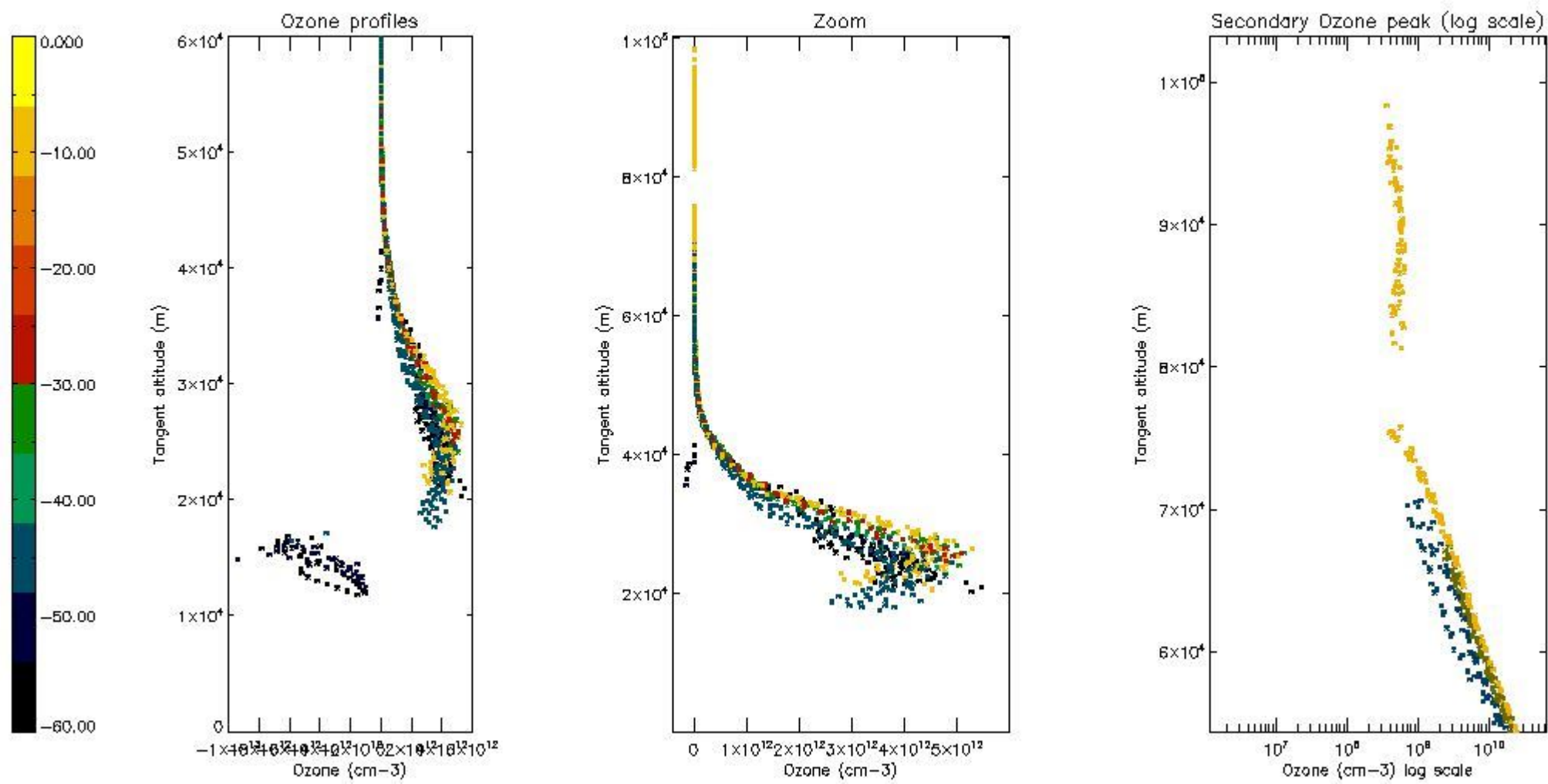
The colorbar represents the latitude.



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

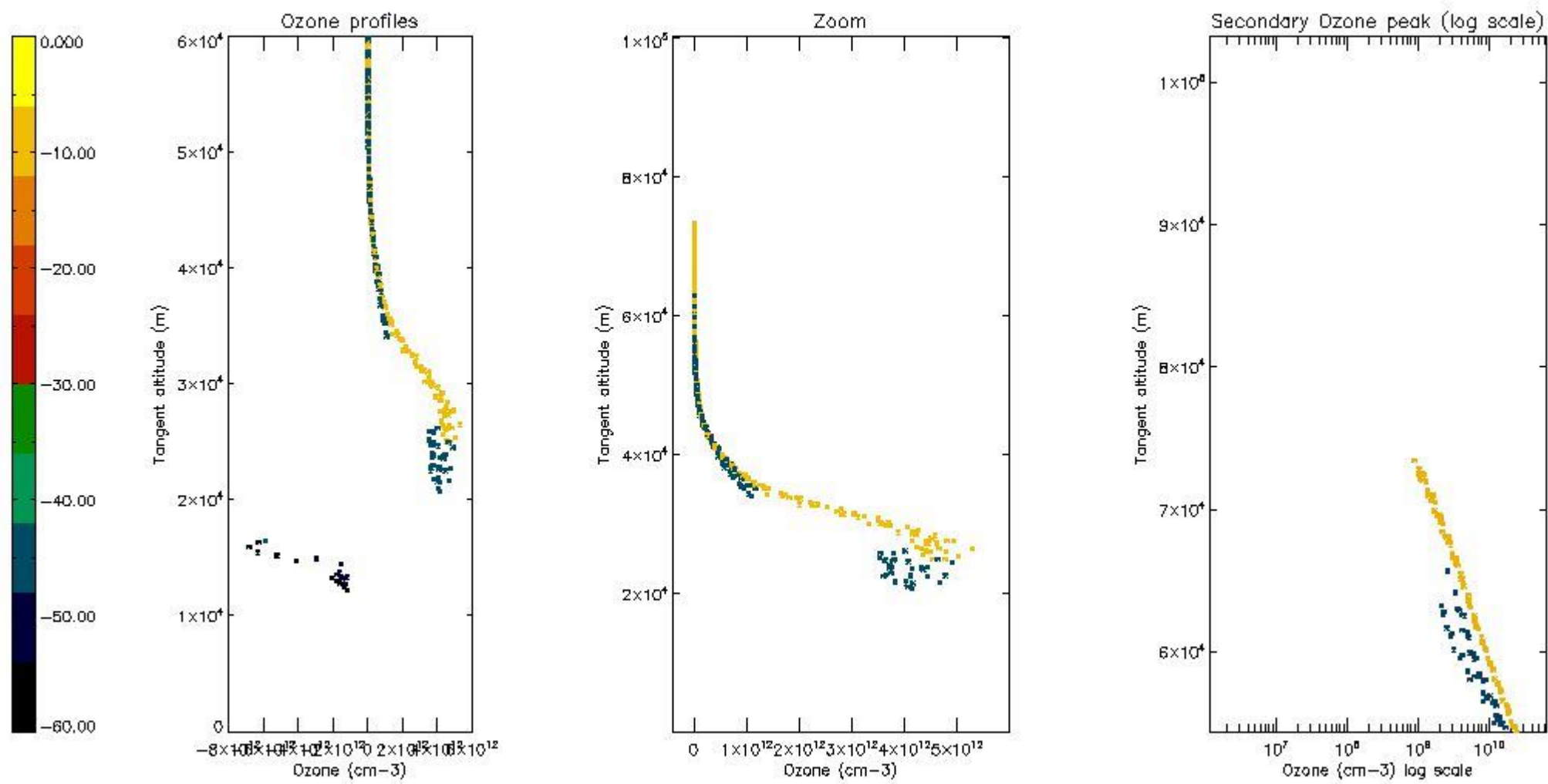
The colorbar represents the latitude.





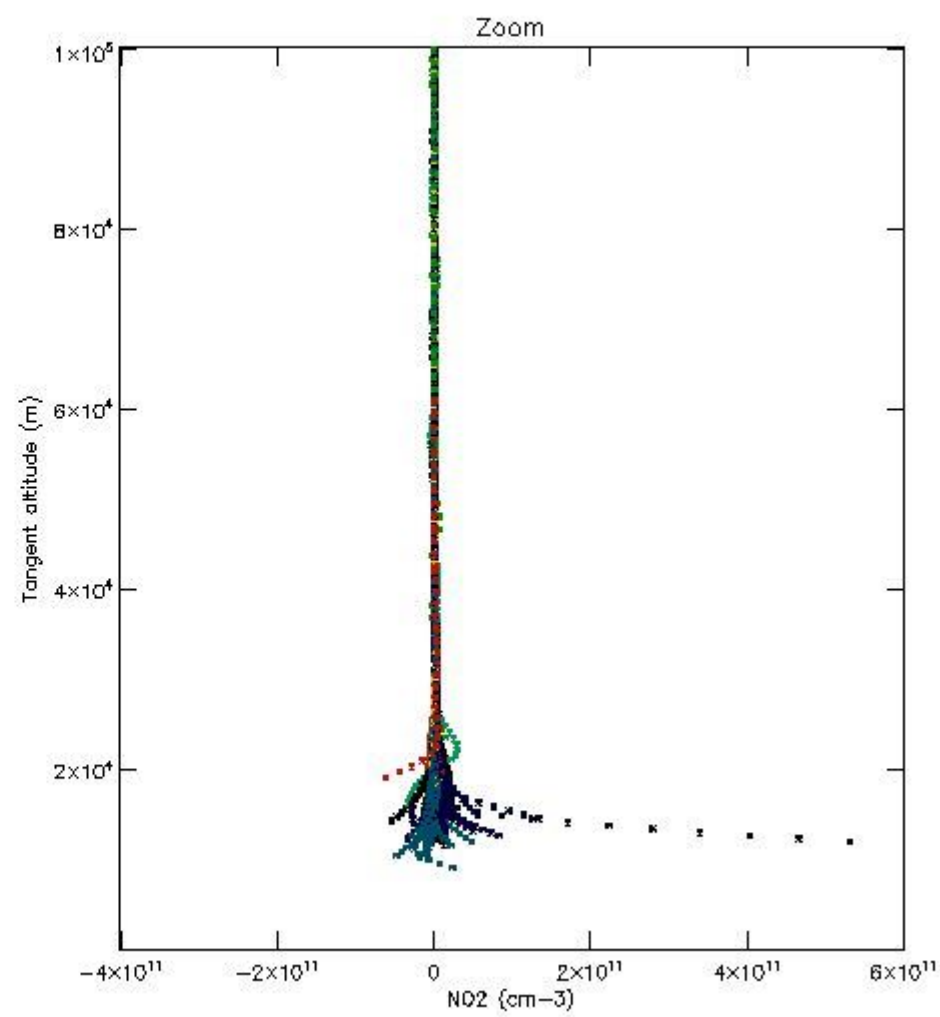
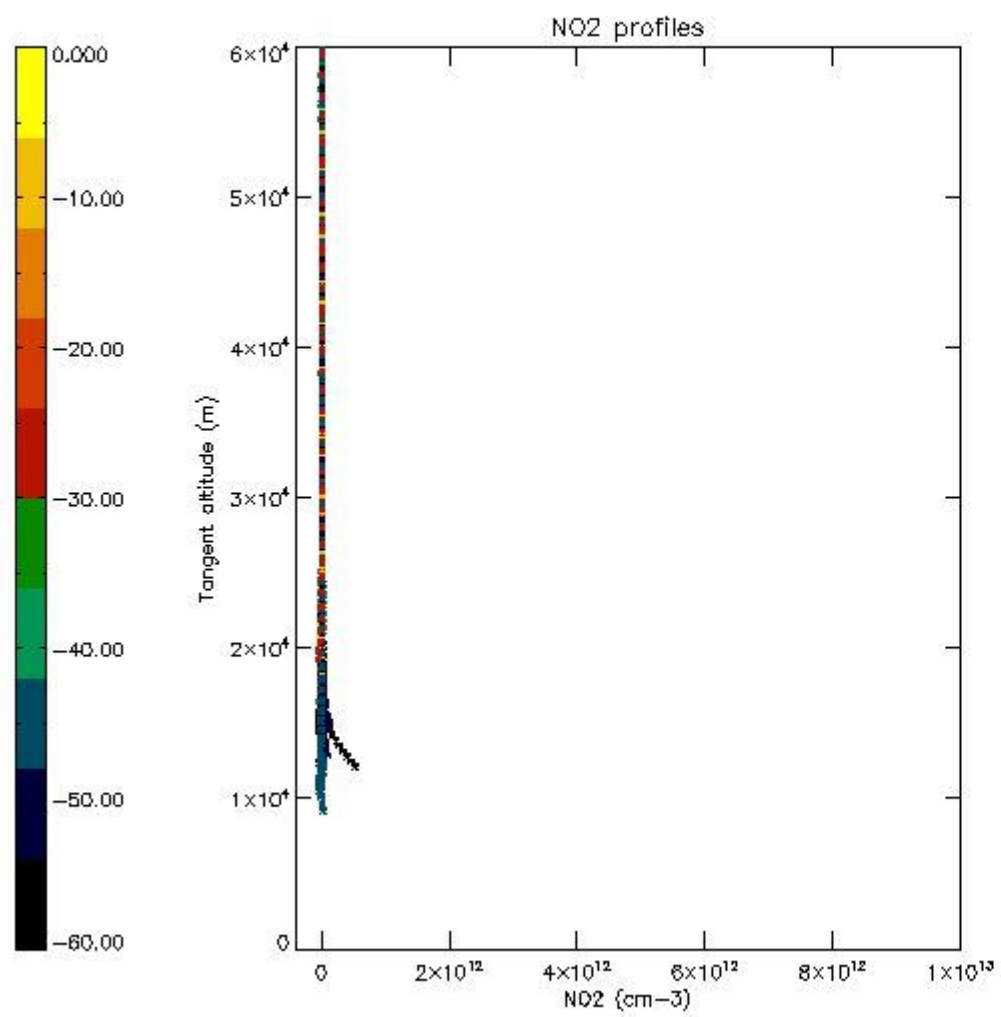
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



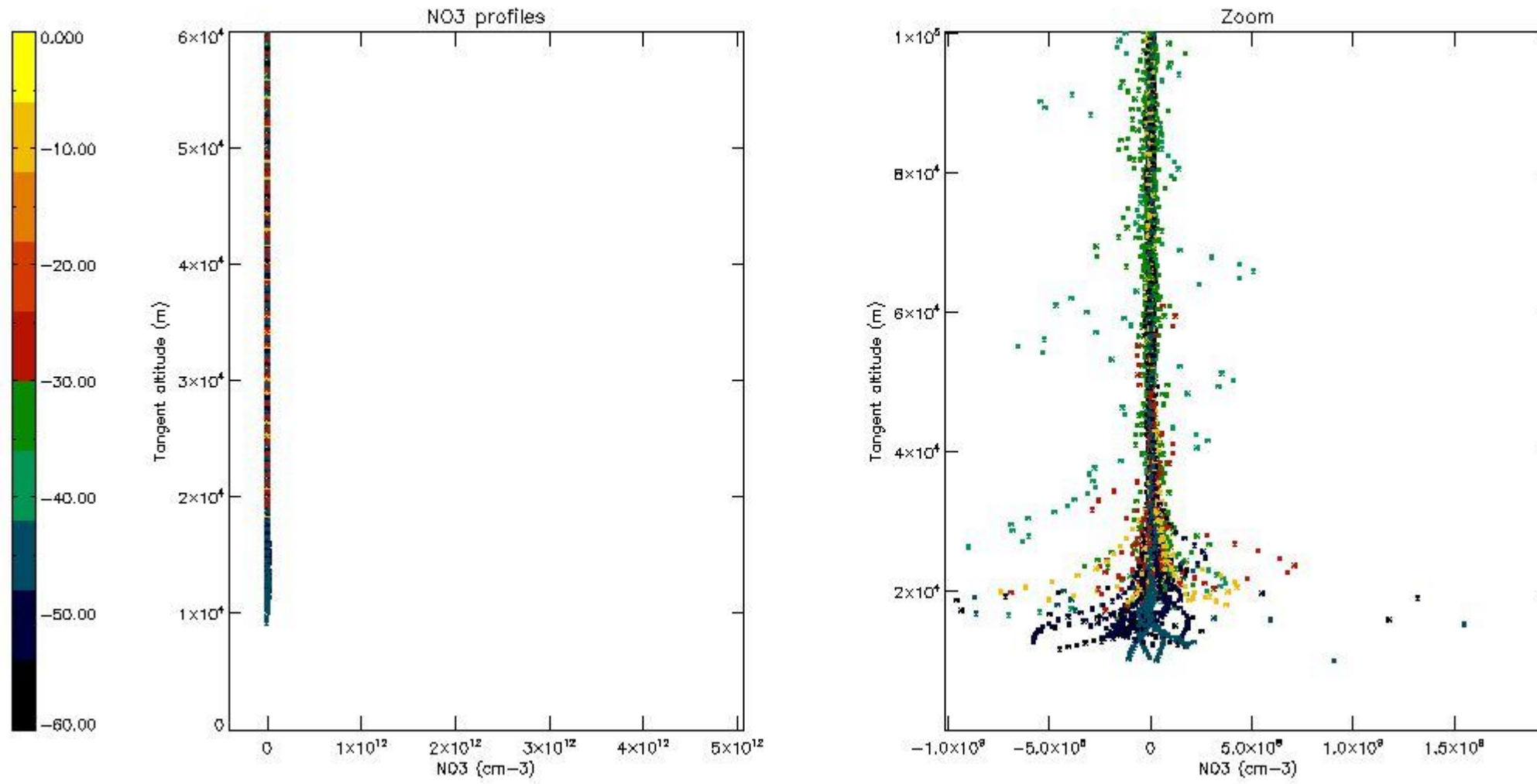
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

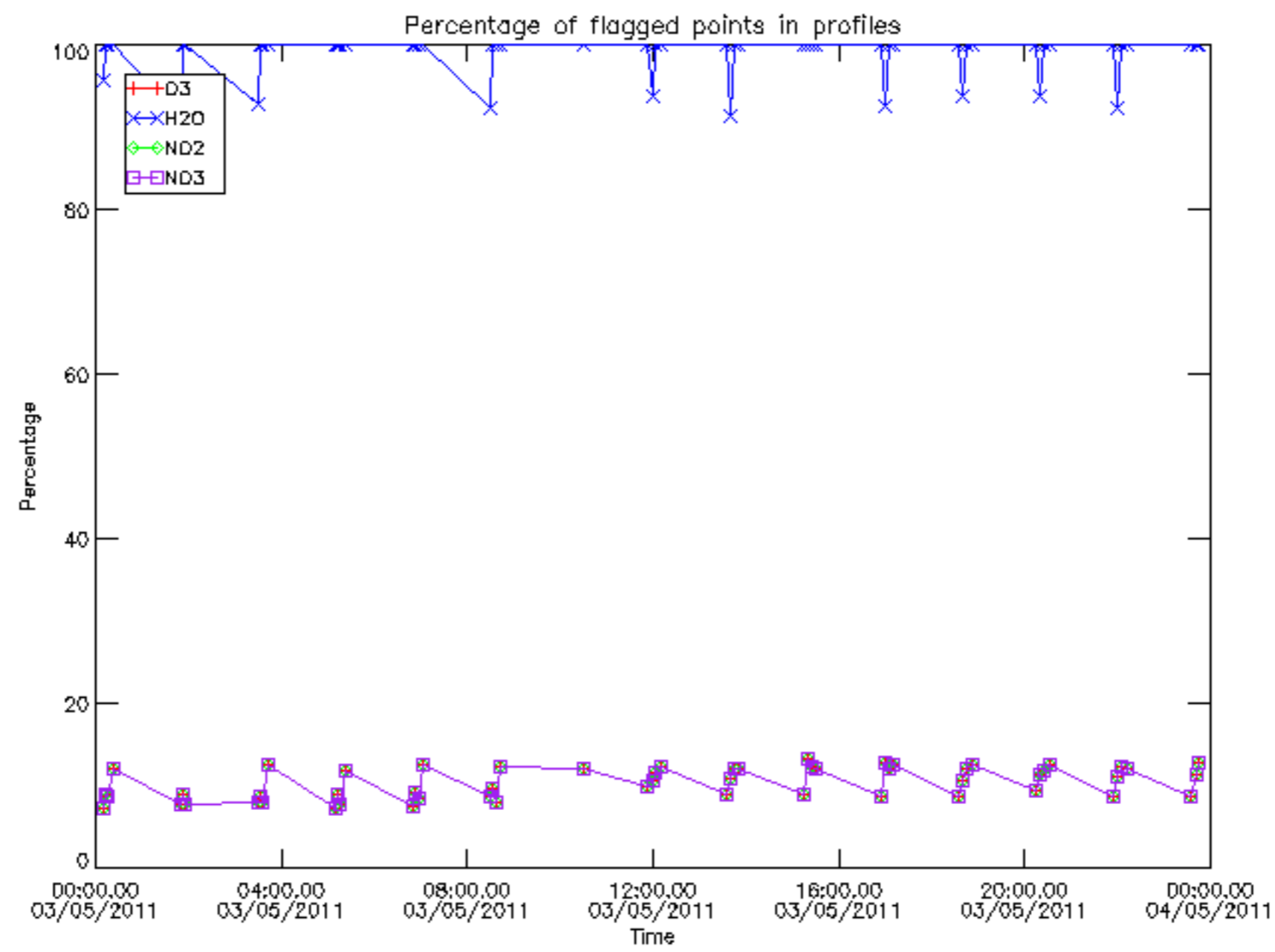
The colorbar represents the latitude.



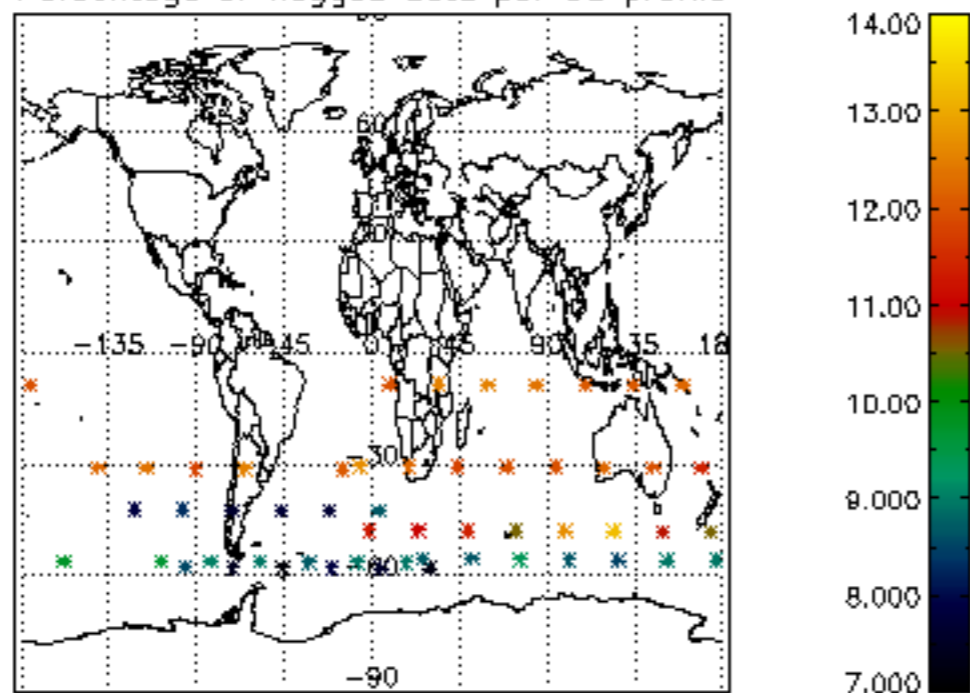
## 6. Auxiliary Data Files used for the production reported in section 2

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.

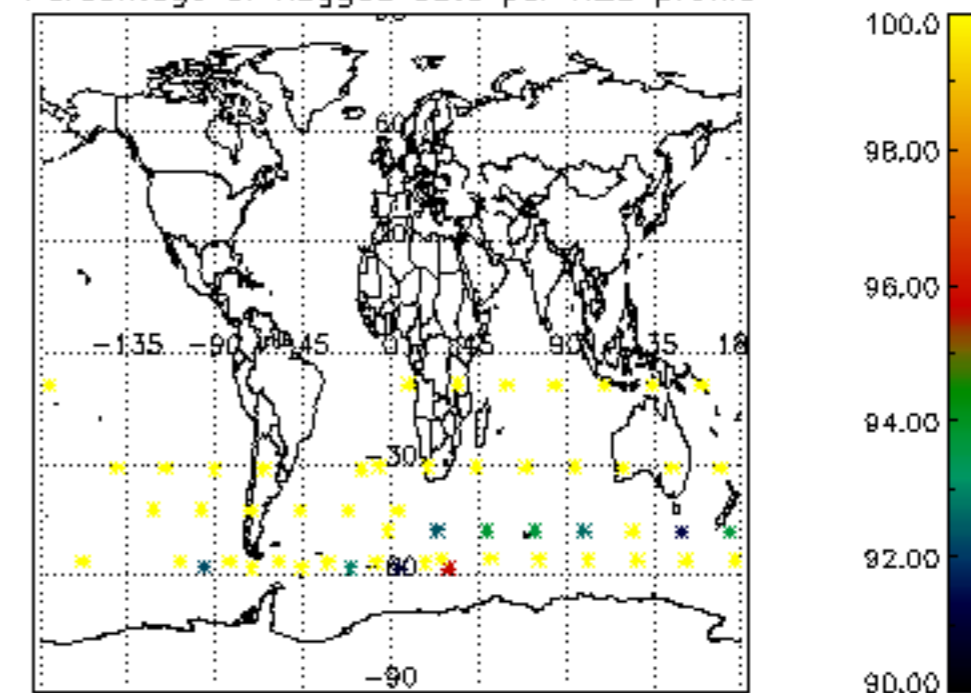
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	03-MAY-2011 00:00:02
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-MAY-2011 00:00:02
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-MAY-2011 00:00:02



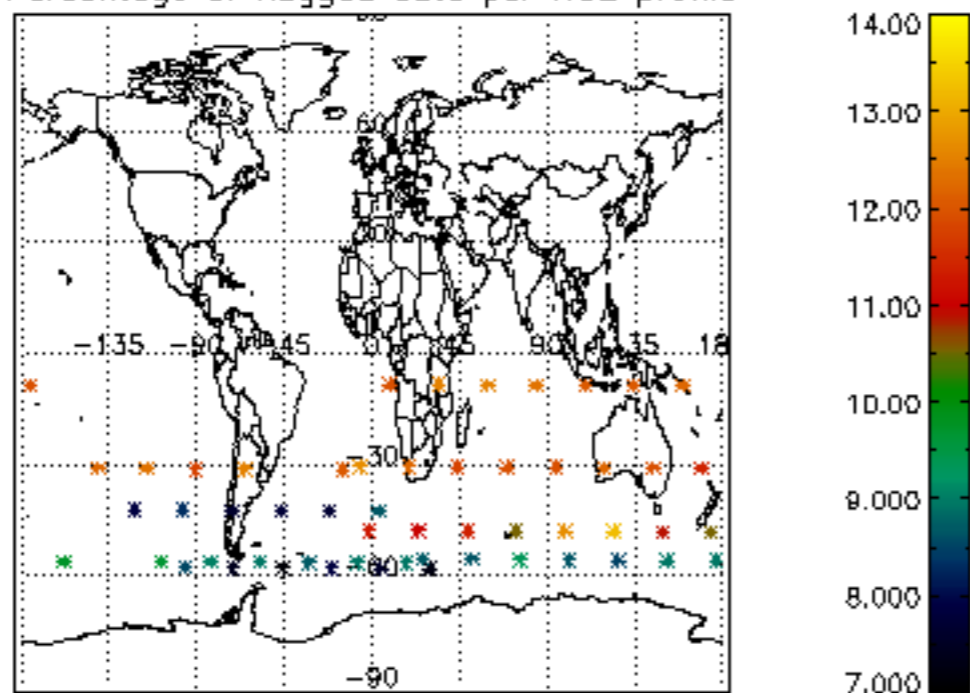
Percentage of flagged data per D3 profile



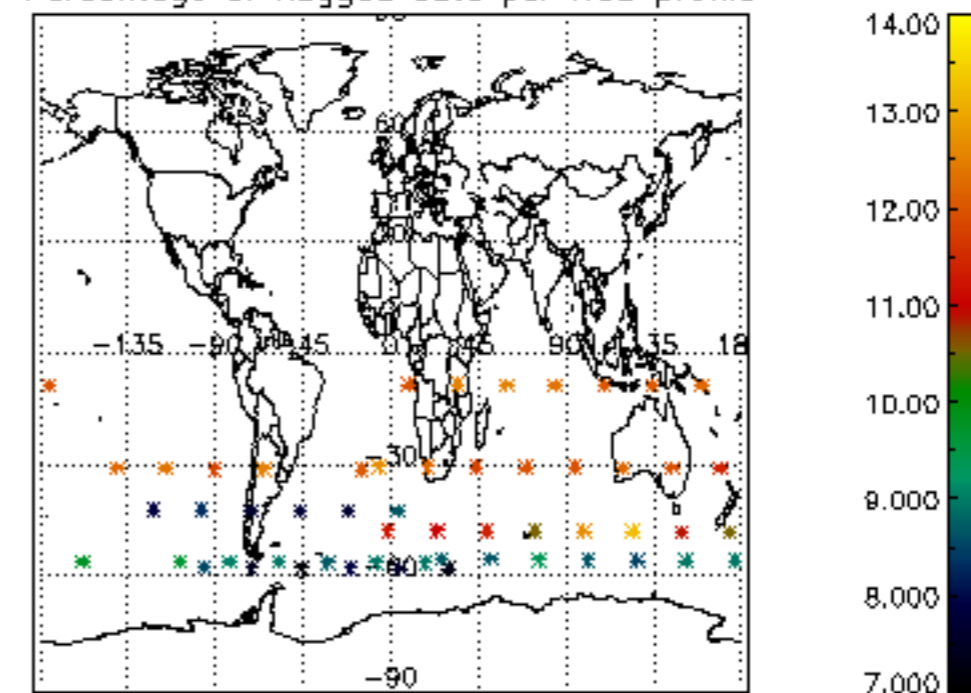
Percentage of flagged data per H2O profile

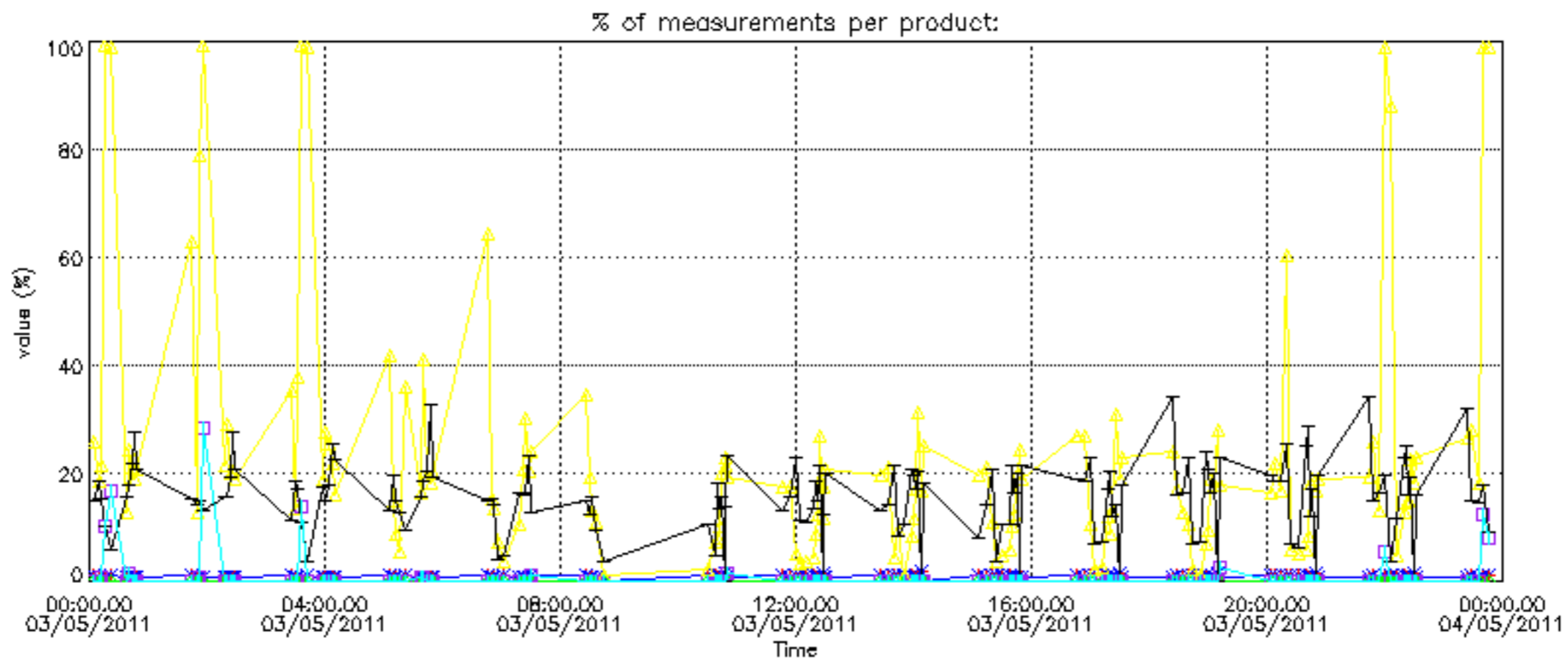


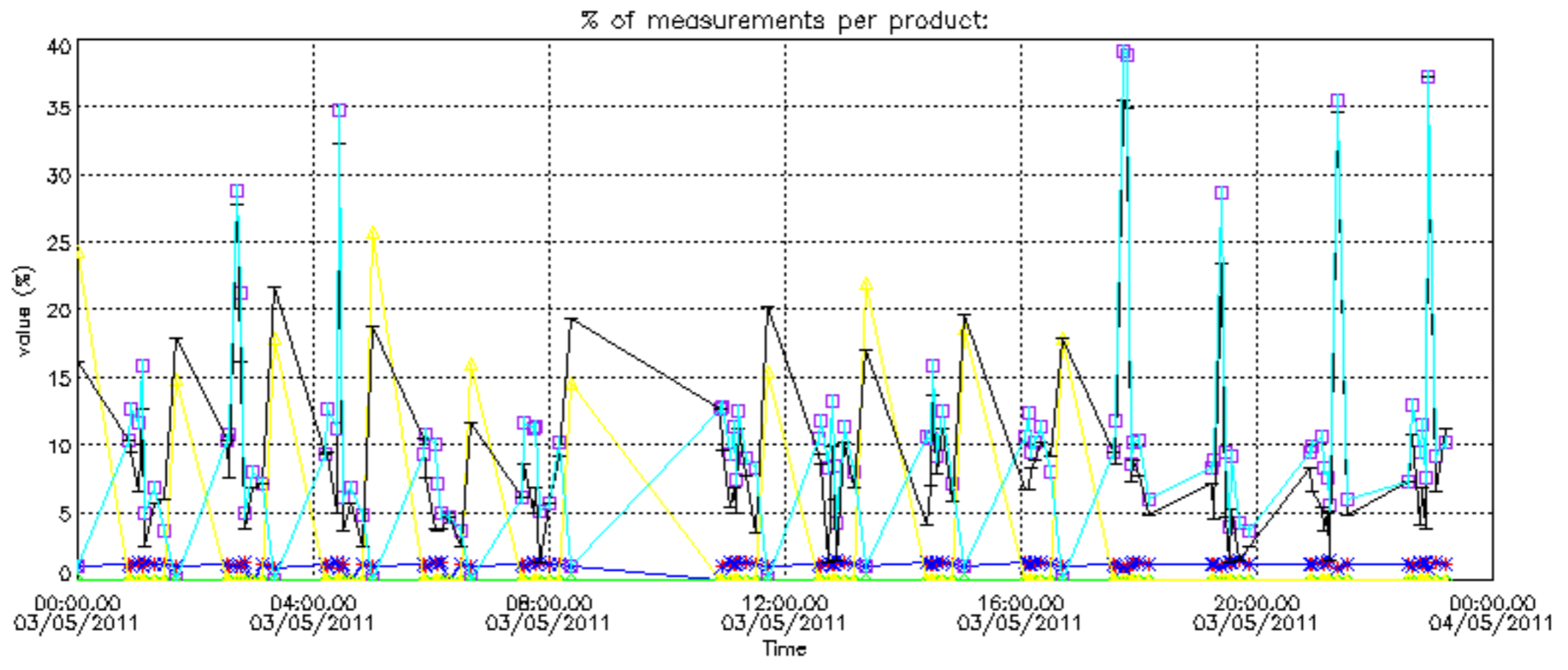
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

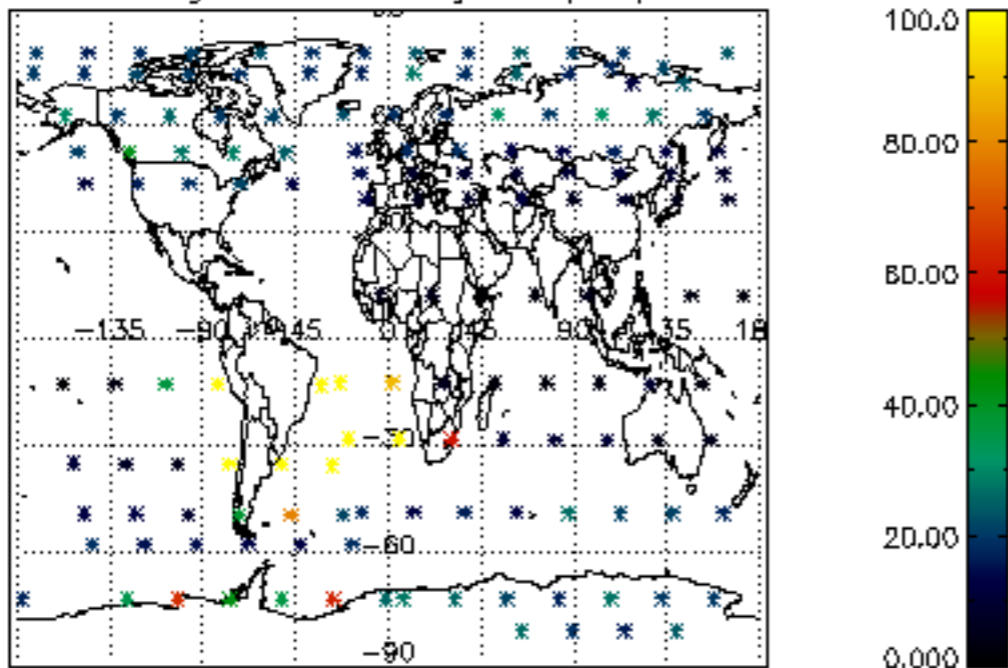




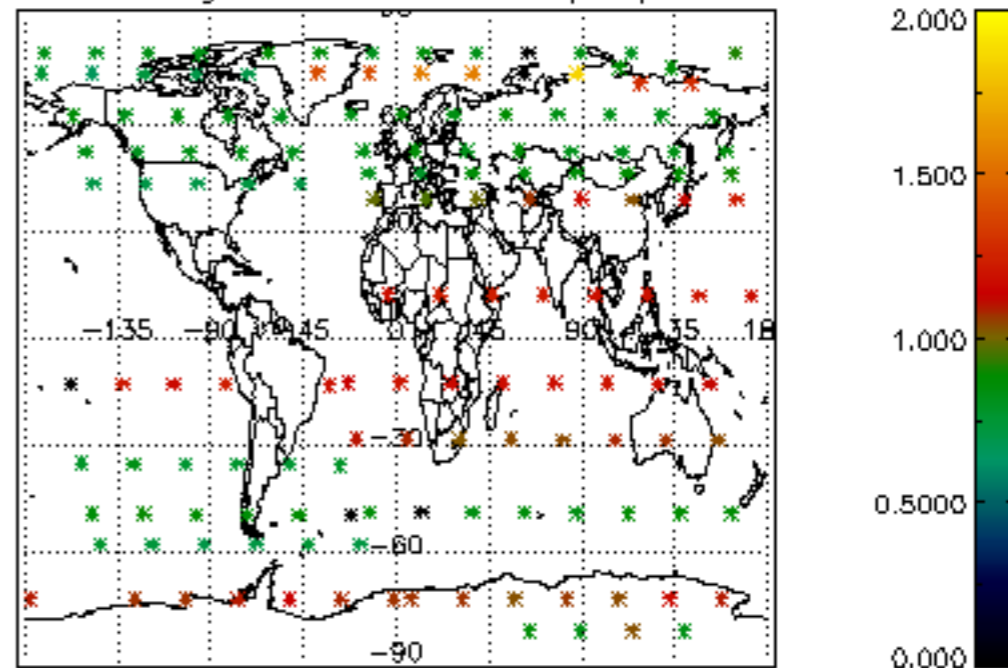




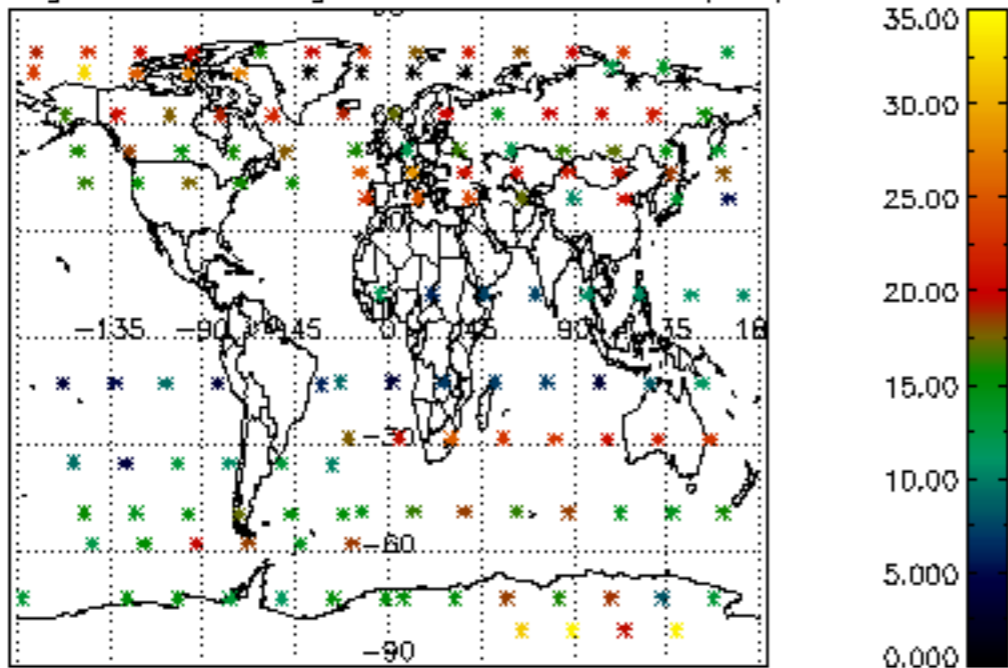
Percentage of cosmic ray hits per profile



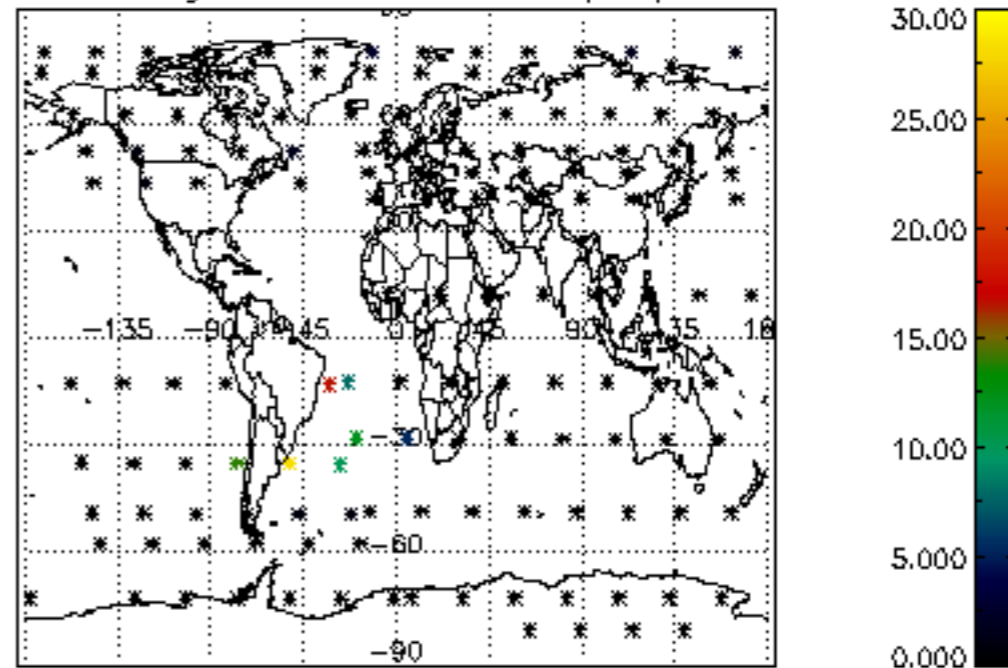
Percentage of datation errors per profile



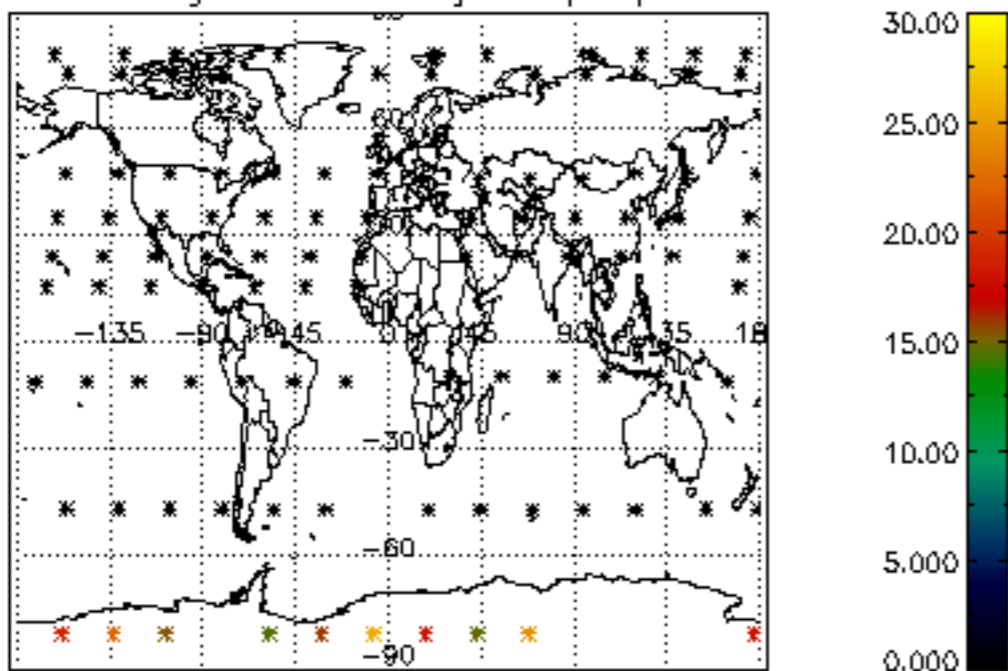
Percentage of star falling outside central band per profile



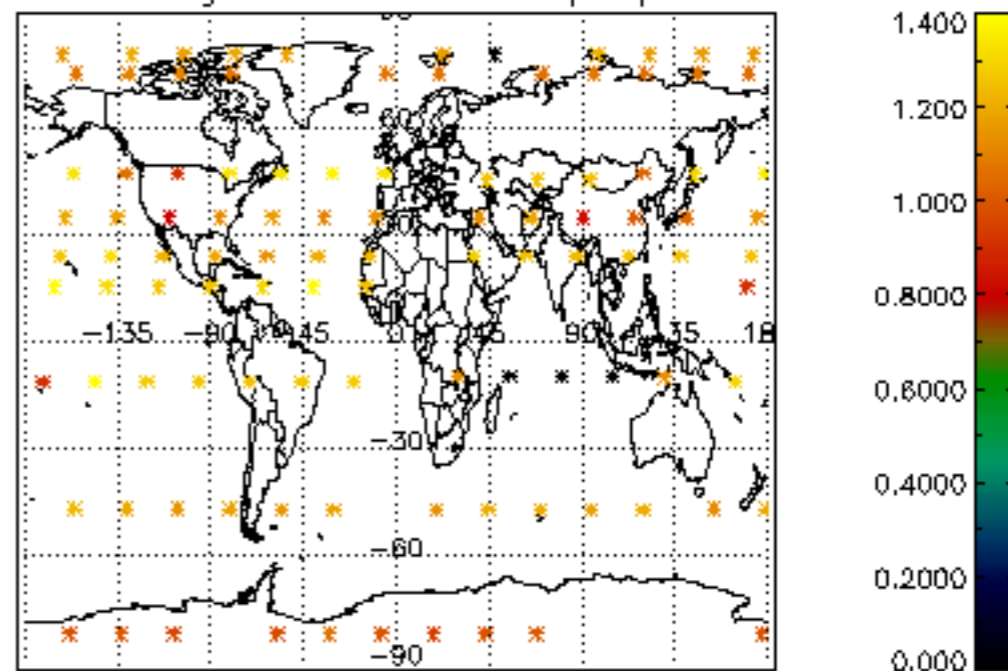
Percentage of saturation errors per profile



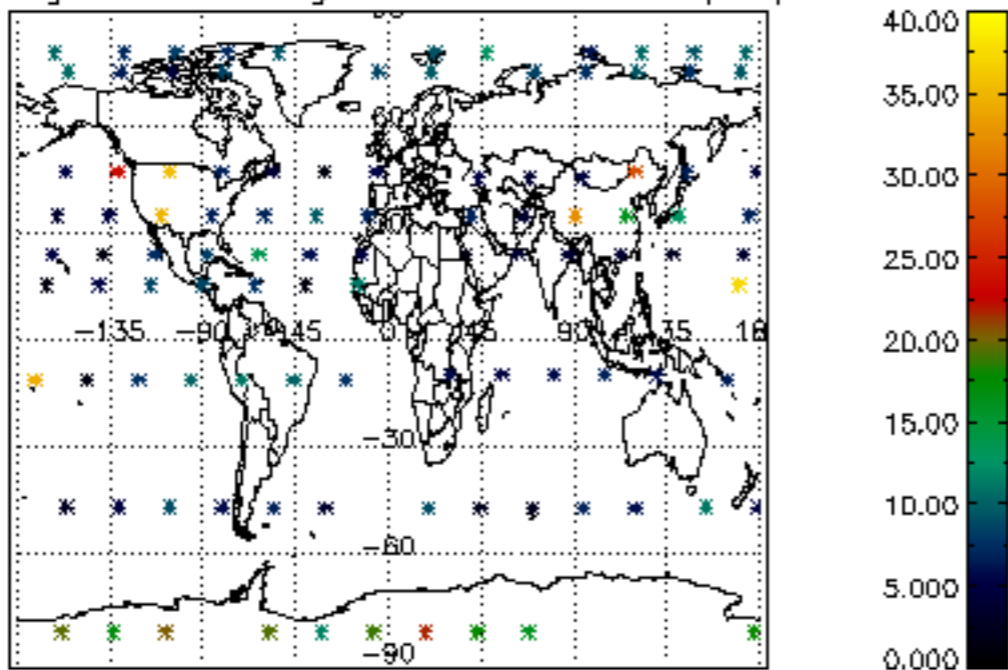
Percentage of cosmic ray hits per profile



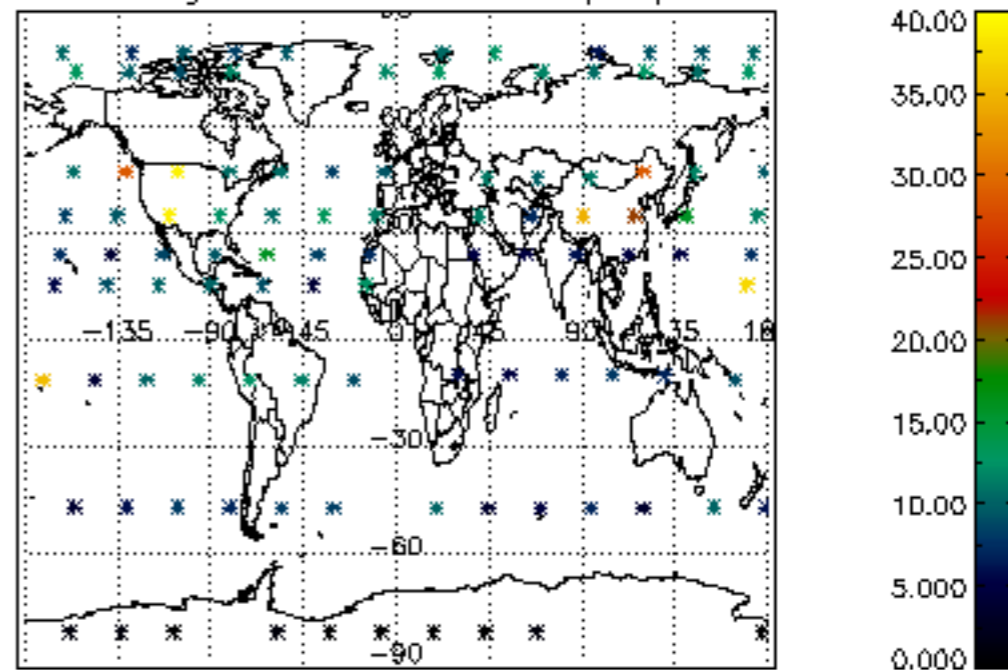
Percentage of datation errors per profile

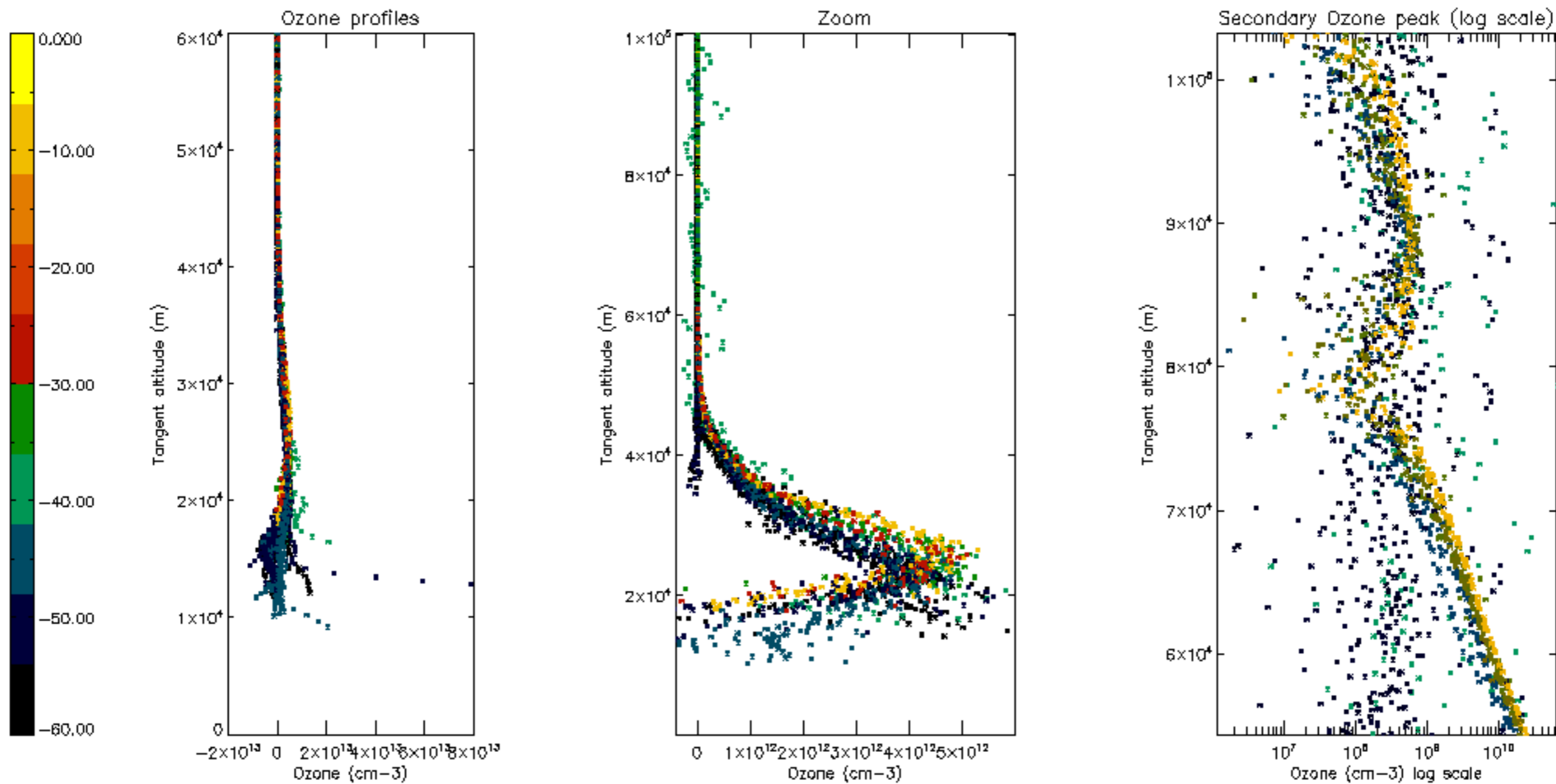


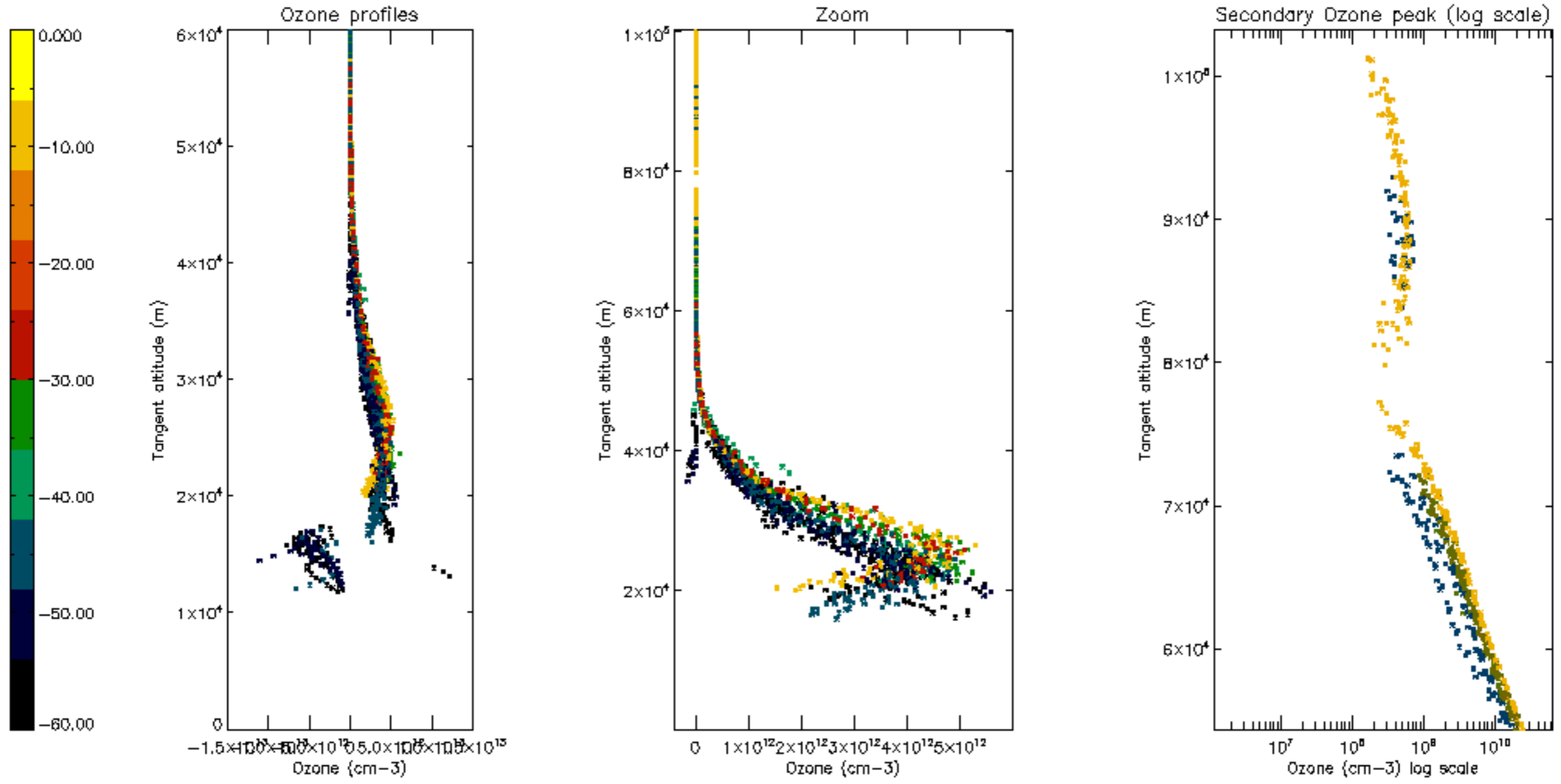
Percentage of star falling outside central band per profile

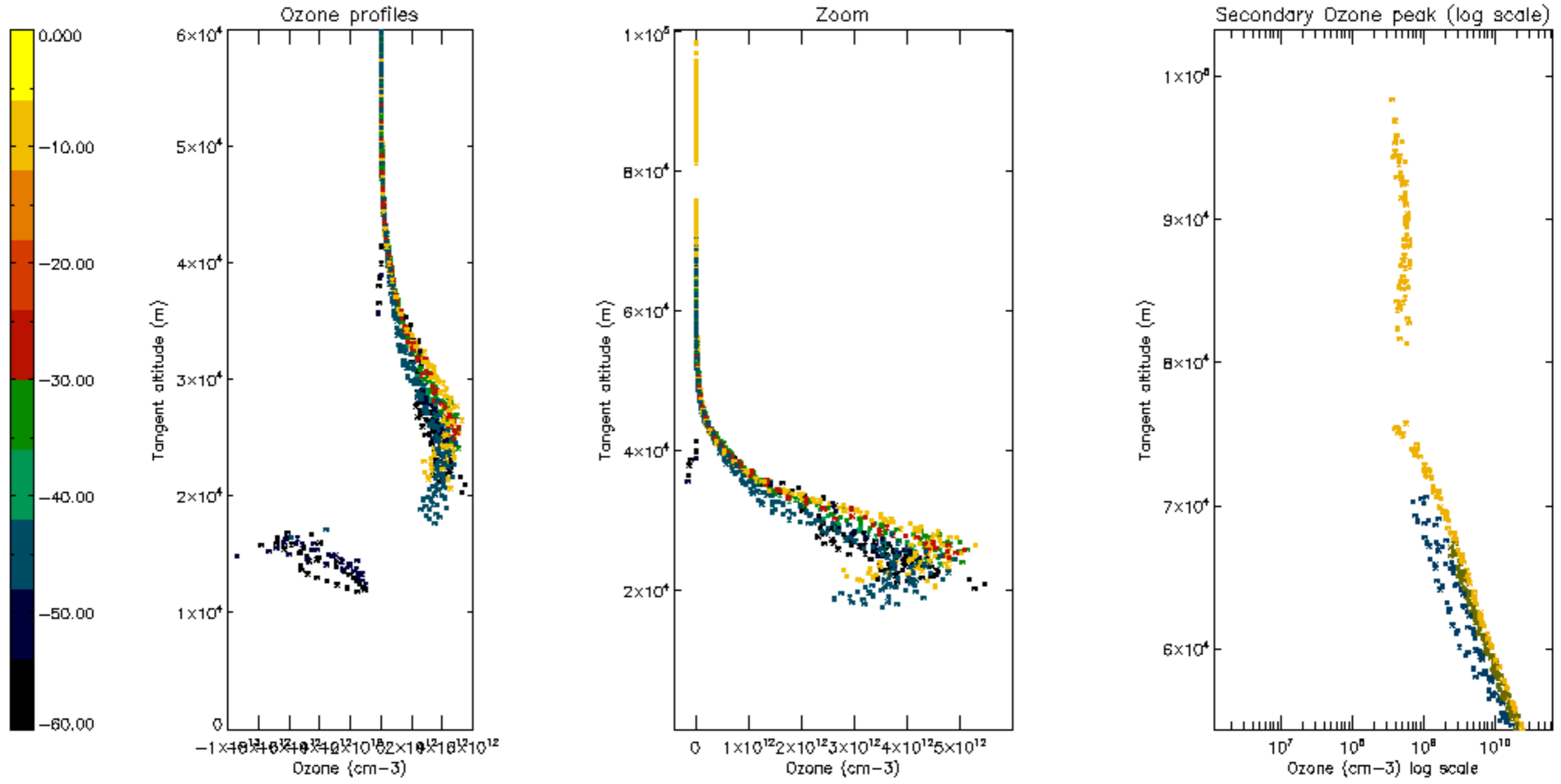


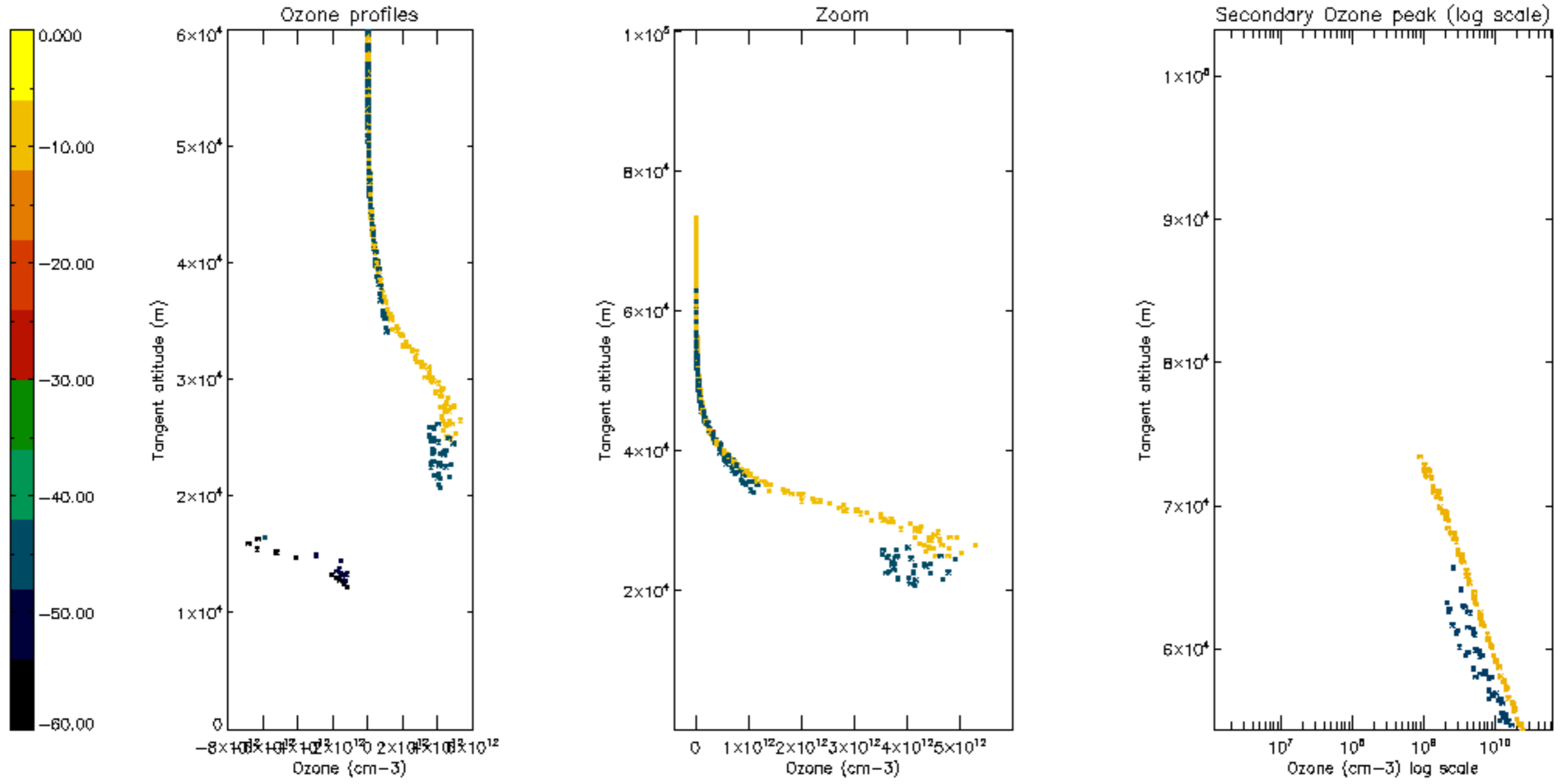
Percentage of saturation errors per profile

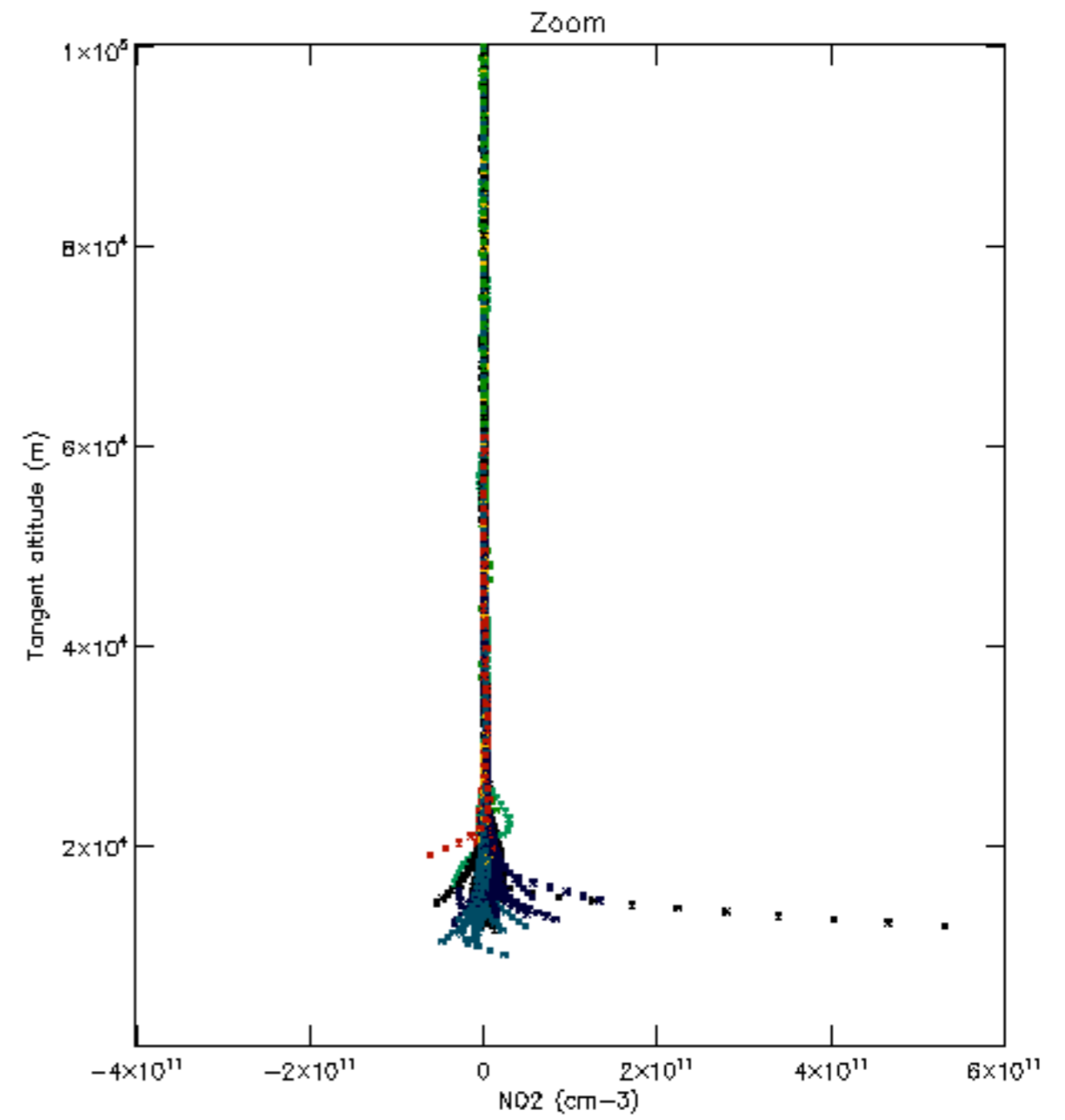
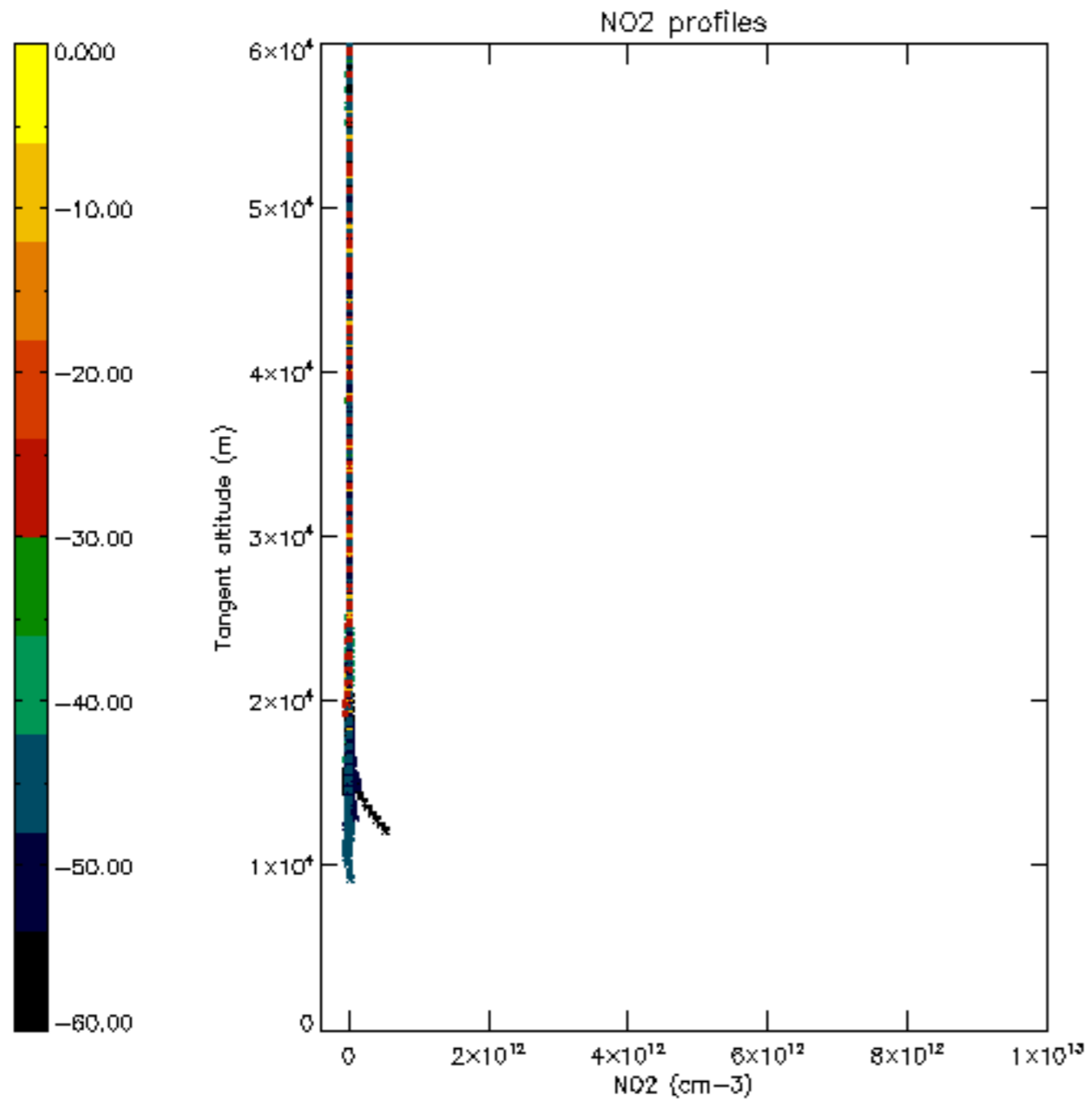


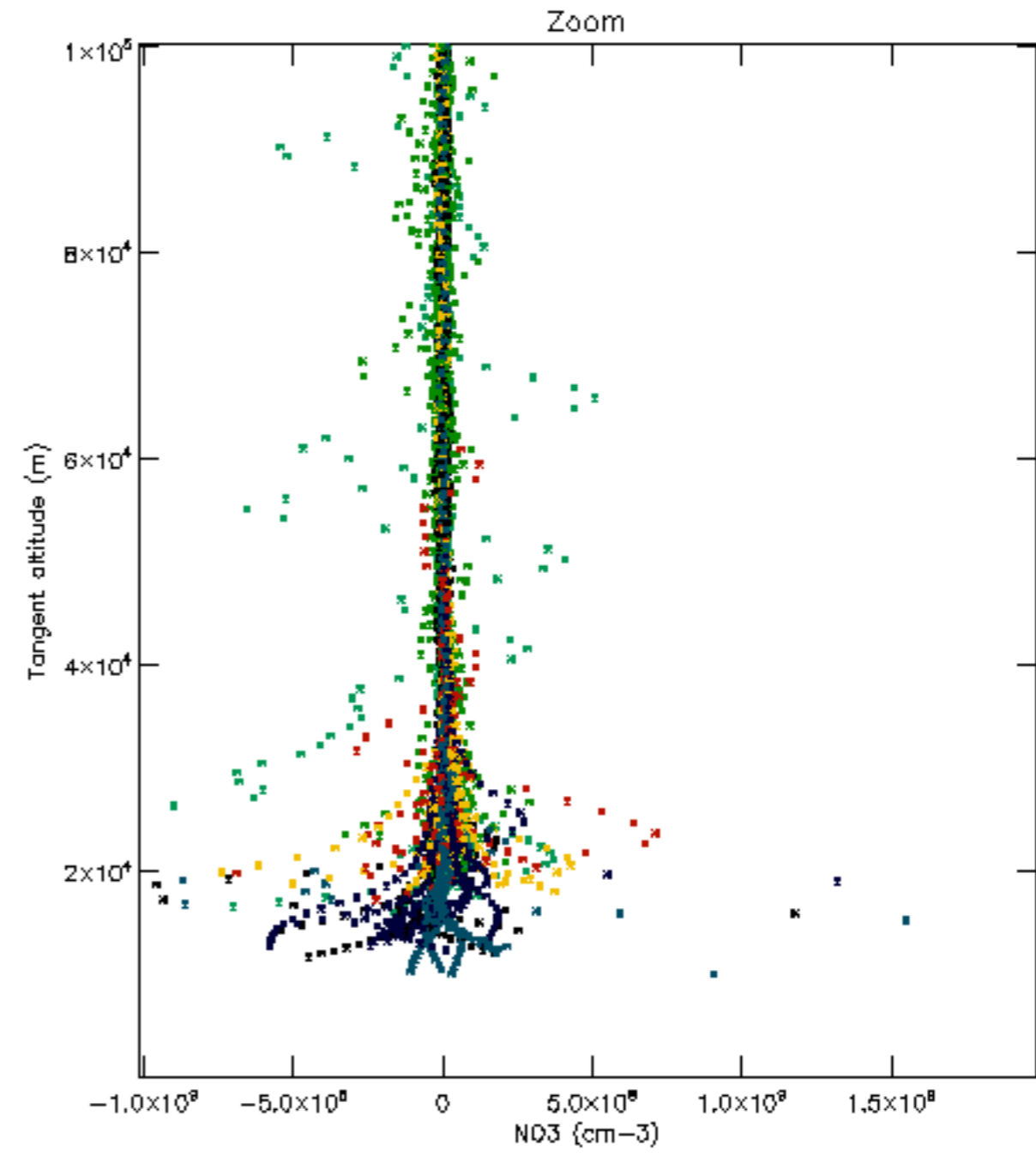
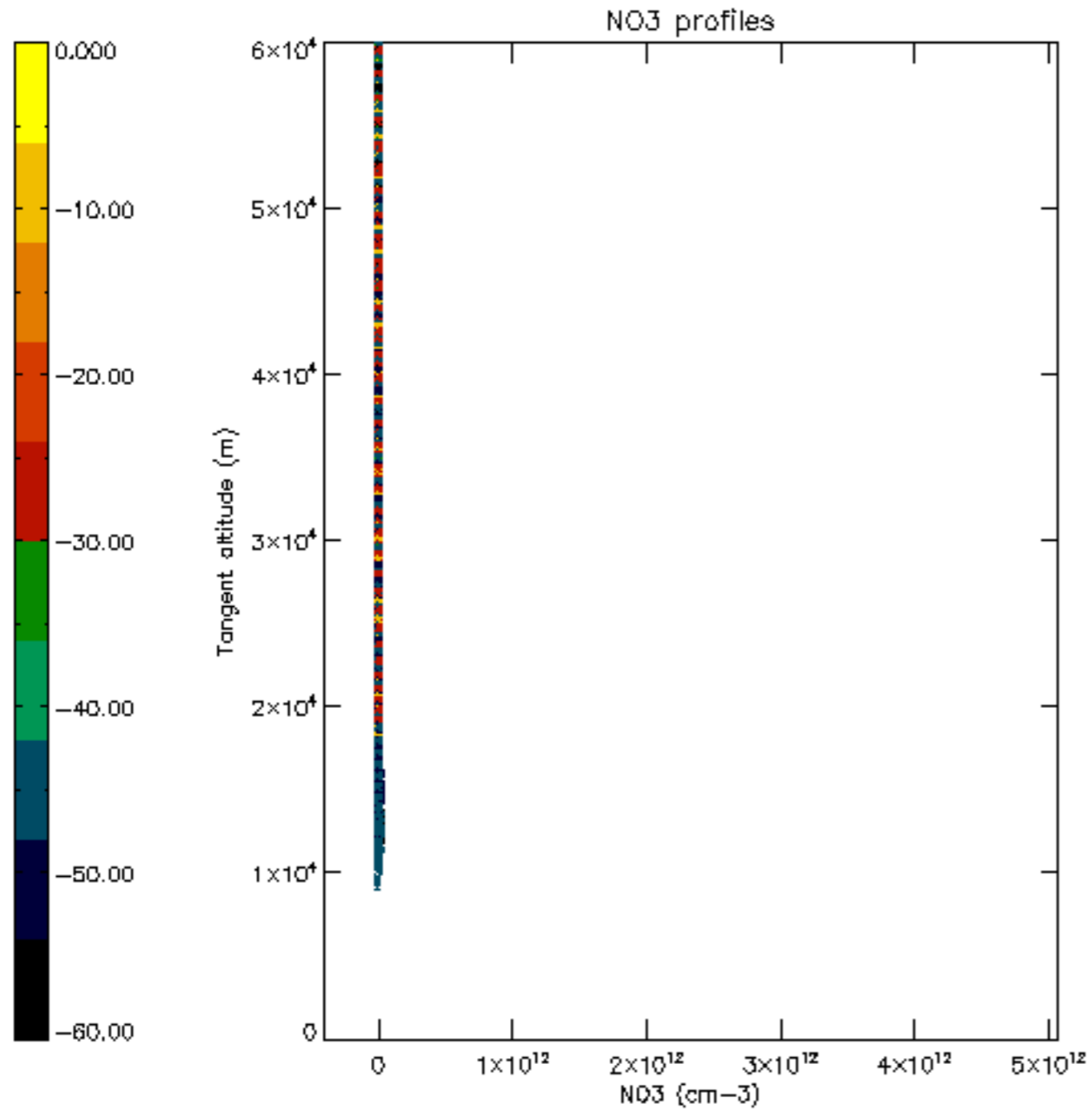




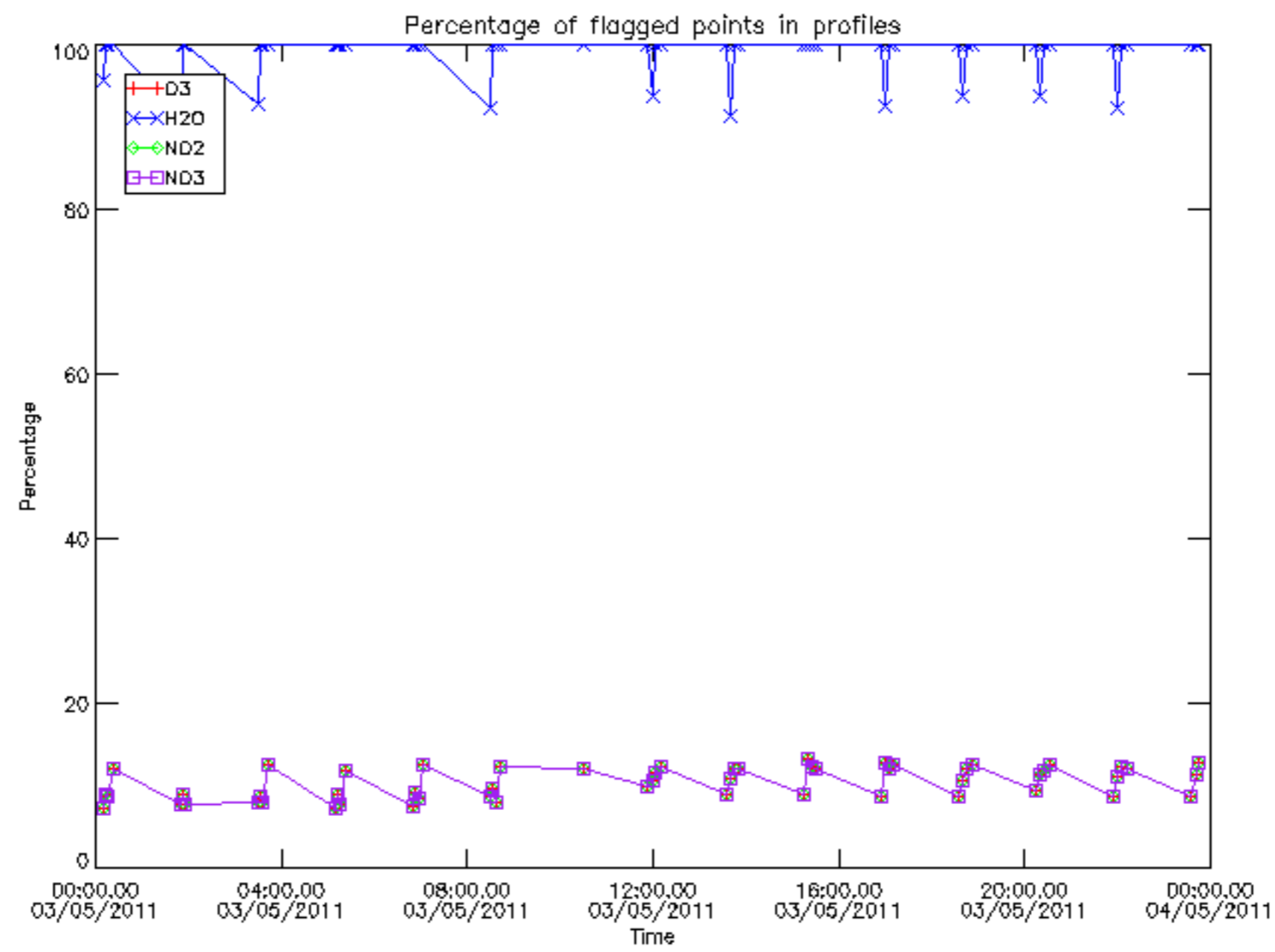




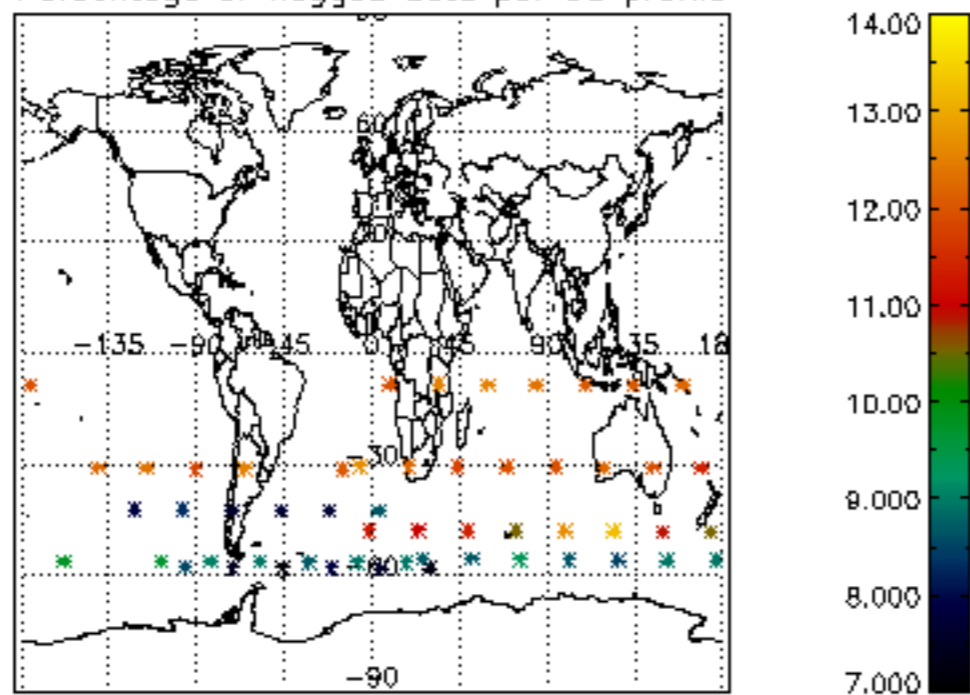




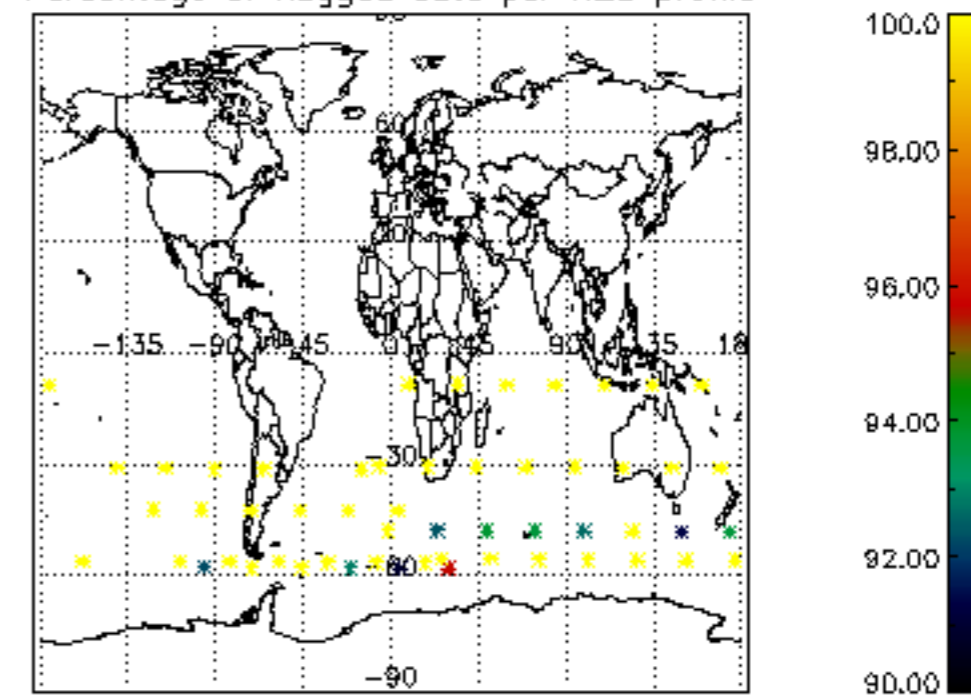




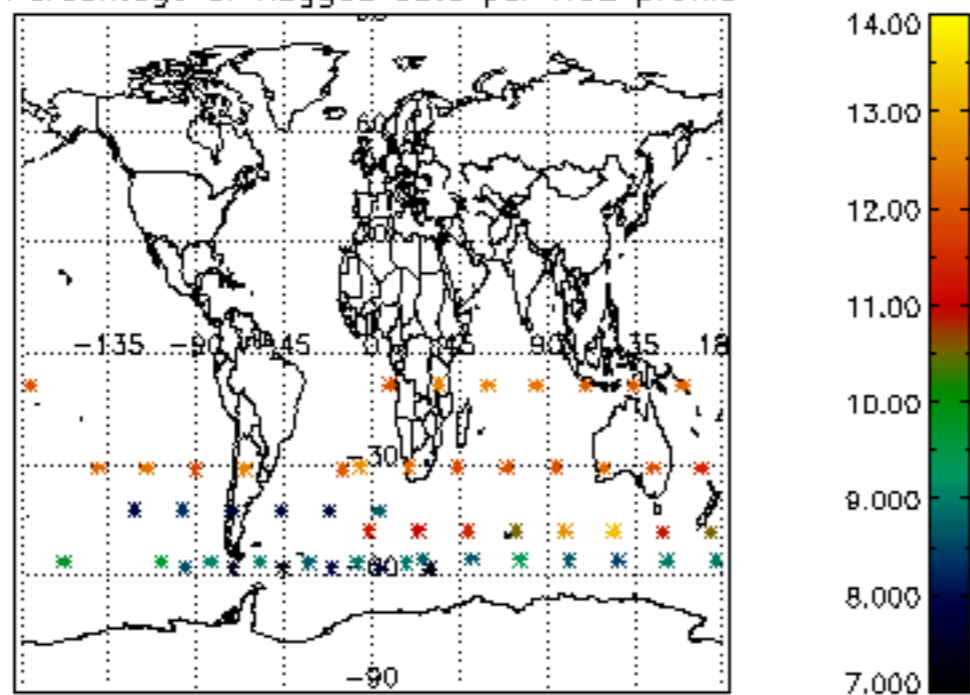
Percentage of flagged data per D3 profile



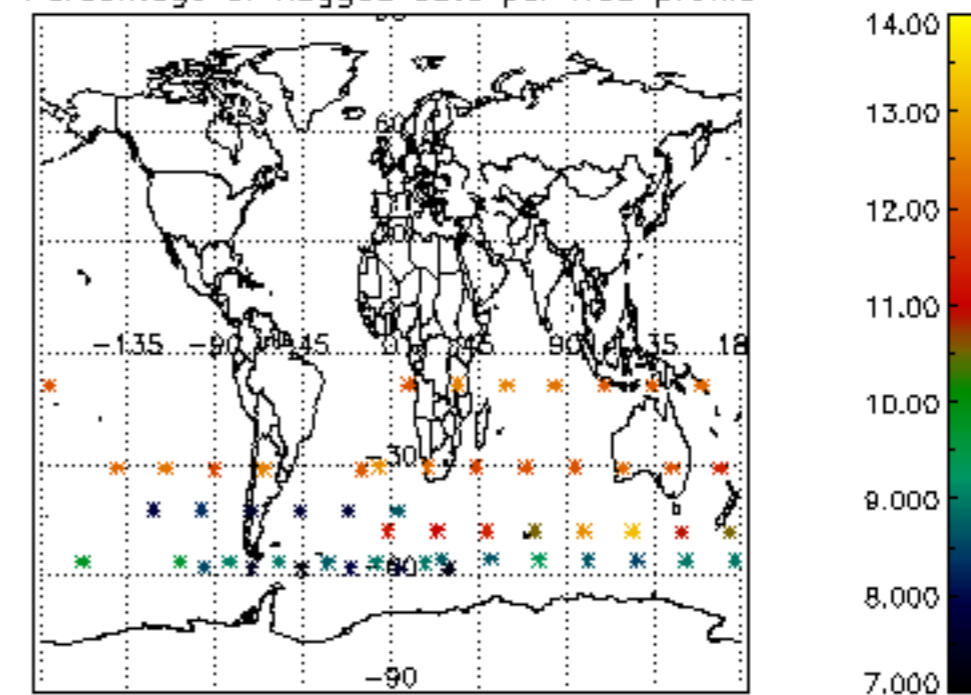
Percentage of flagged data per H2O profile

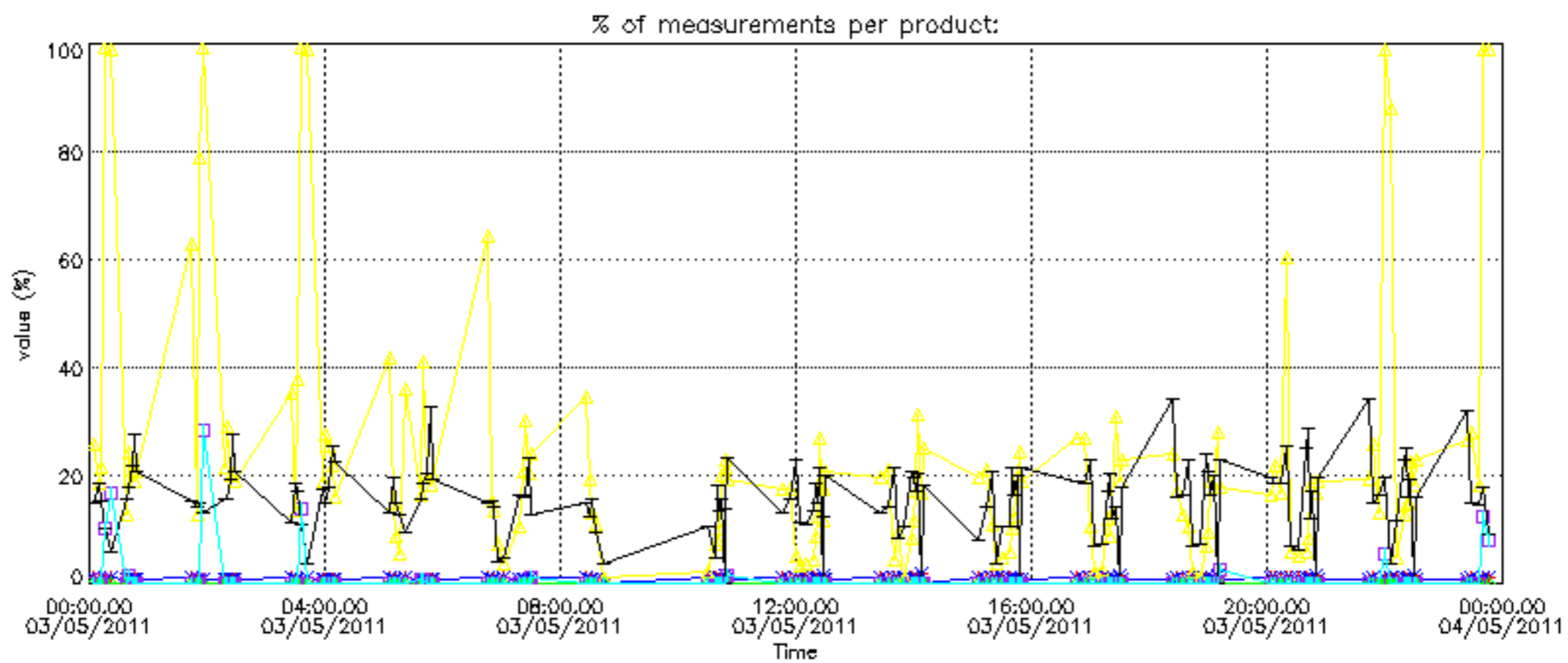


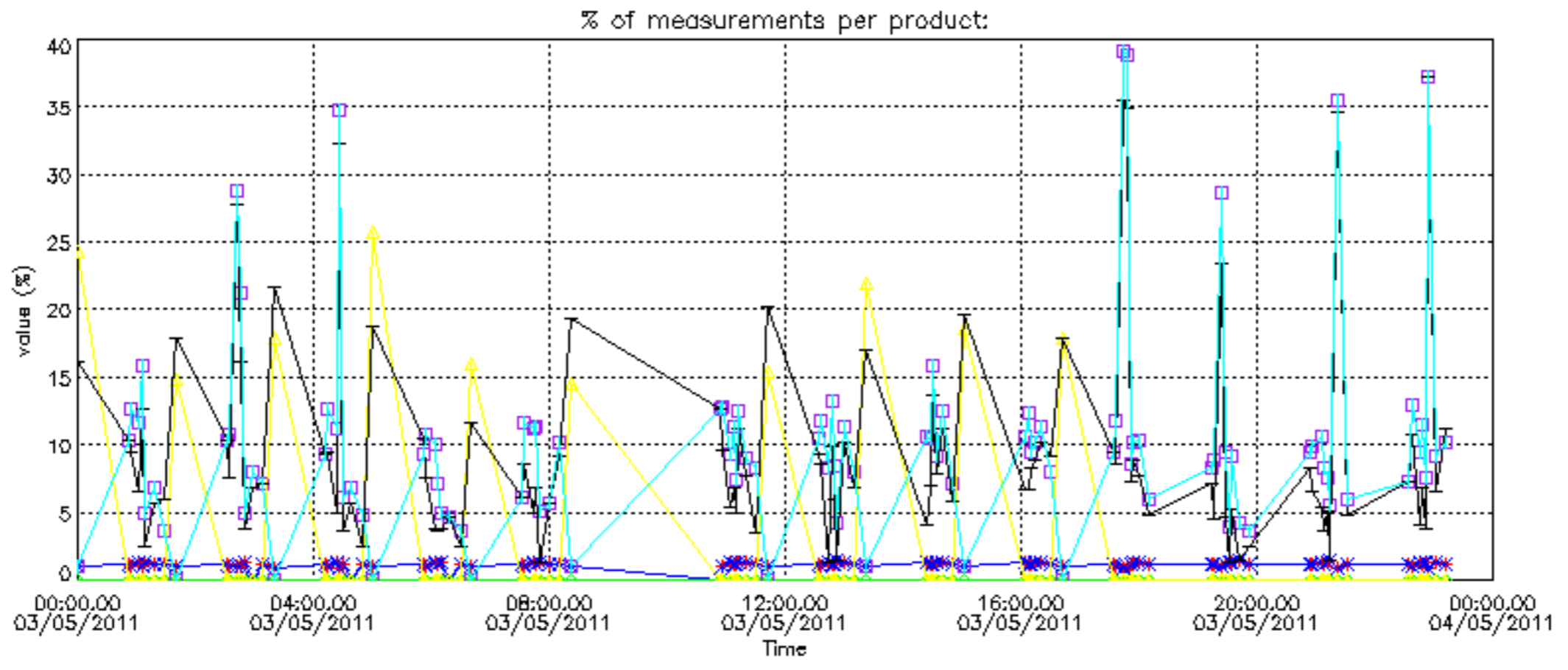
Percentage of flagged data per NO2 profile



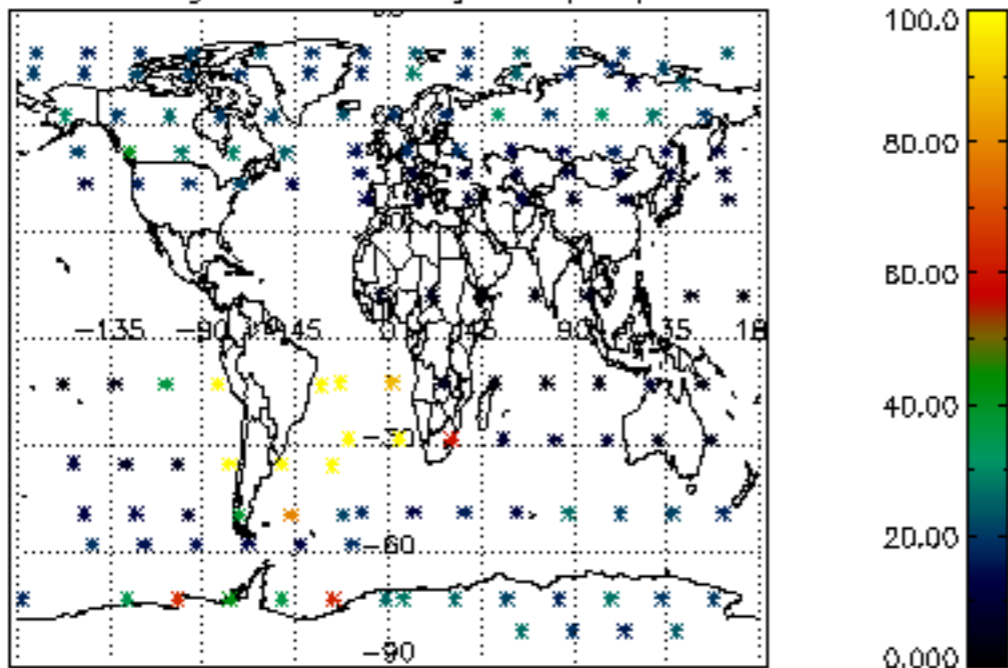
Percentage of flagged data per NO3 profile



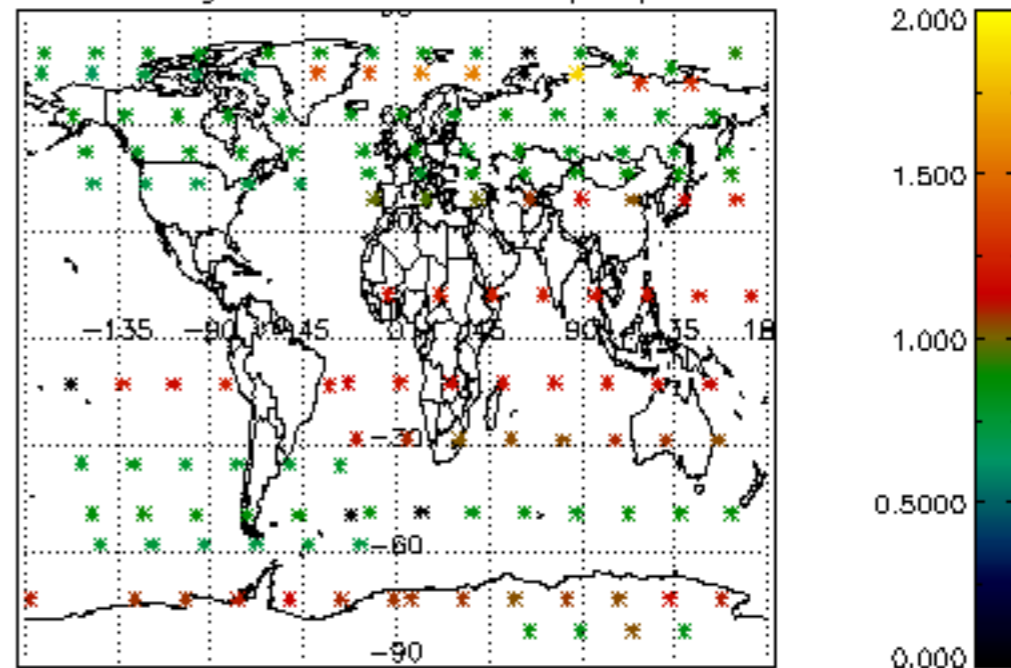




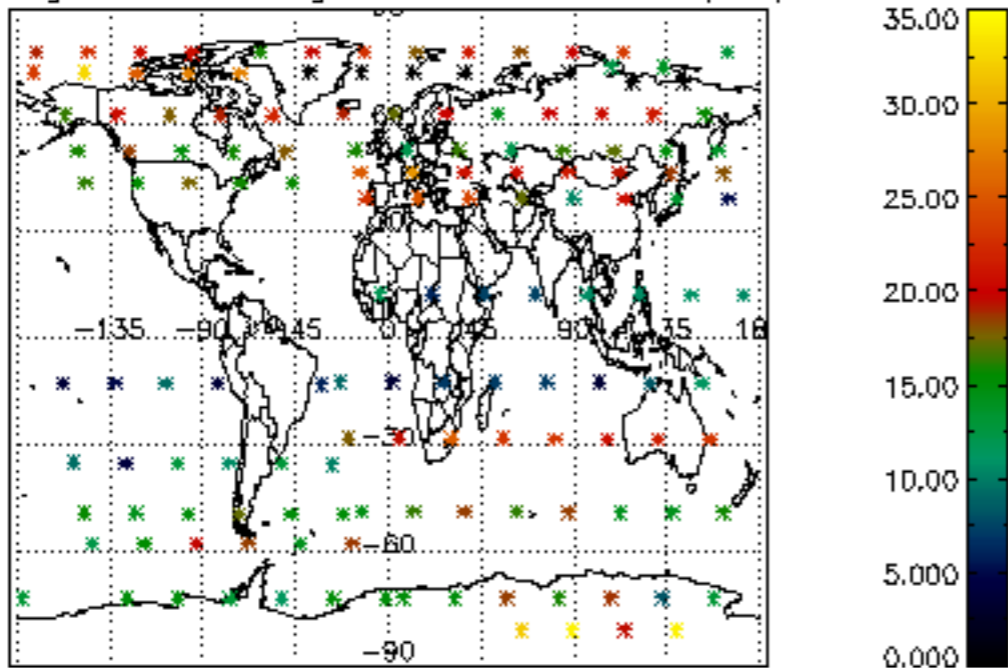
Percentage of cosmic ray hits per profile



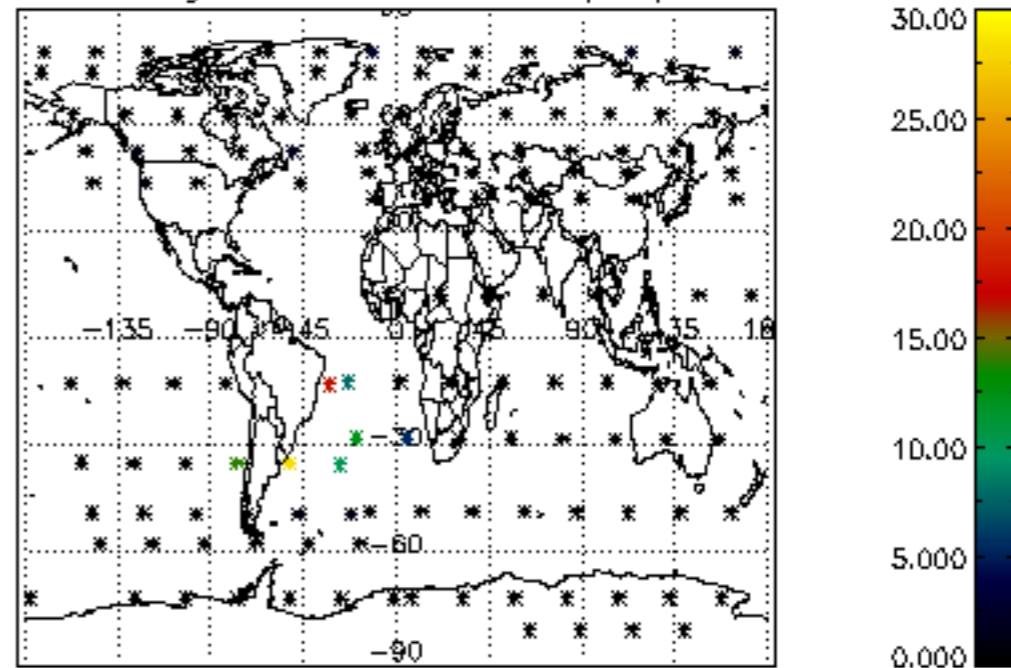
Percentage of datation errors per profile



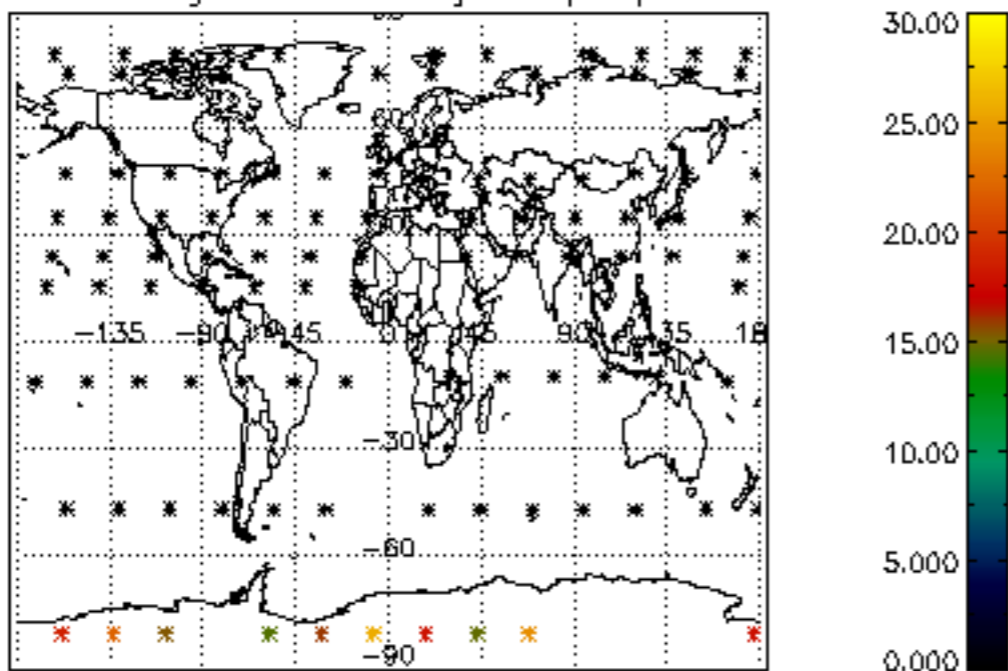
Percentage of star falling outside central band per profile



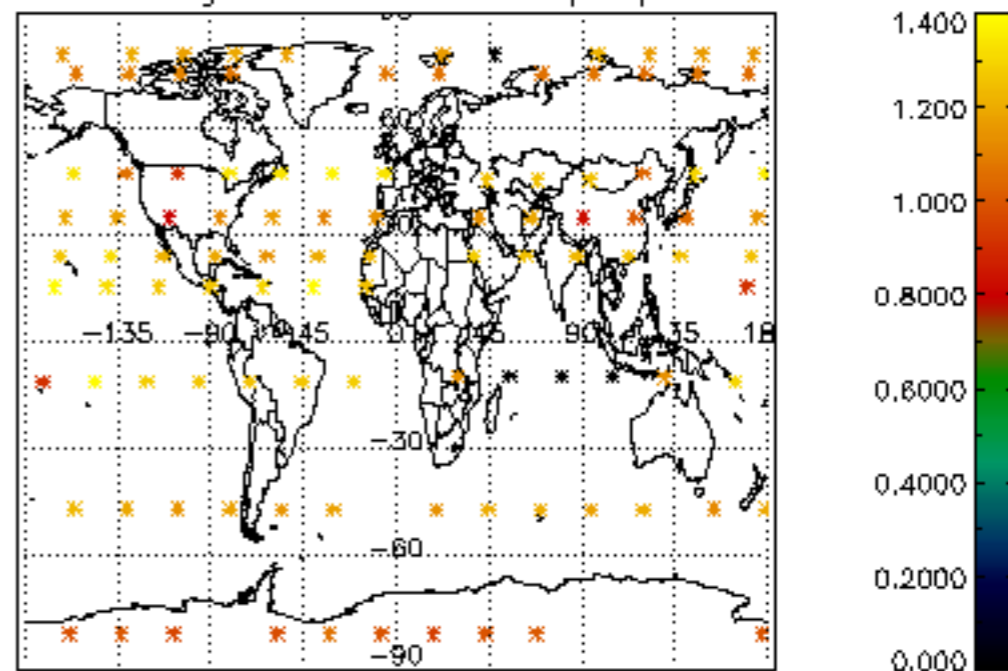
Percentage of saturation errors per profile



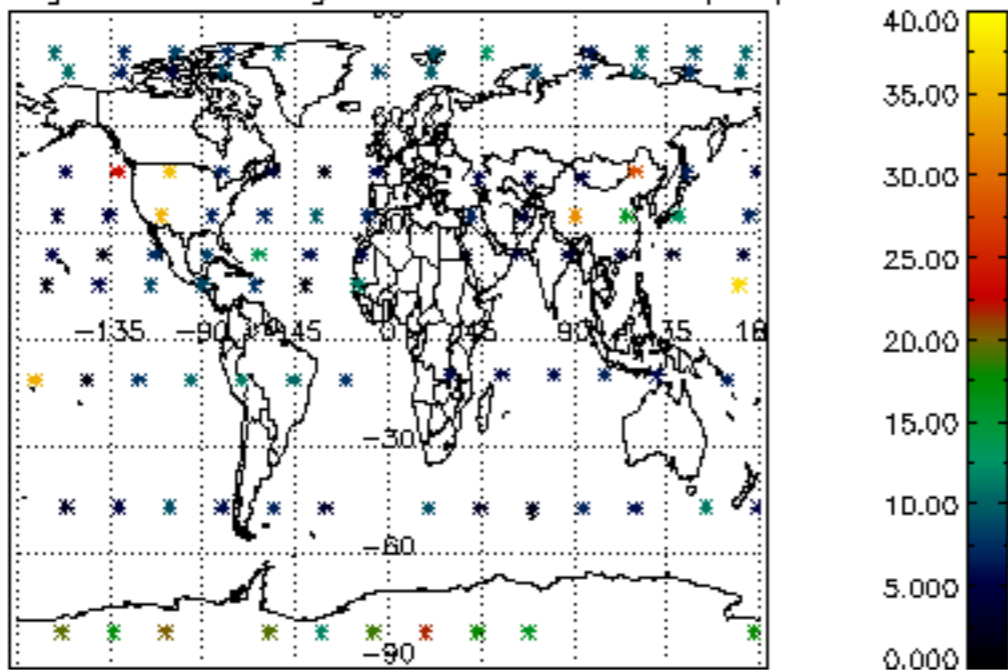
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

