

# 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	24APR2013 16:37:14
Data source version	GOMOS/6.01
Start time of products	07-08-2011 (07AUG2011 00:00:00)
Stop time of products	08-08-2011 (08AUG2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	306
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__2PRFIN20110807_000759_000000483105_00189_49341_7494.N1	07-AUG-2011 00:07:59	Dark	47.500	157	The1Eri	2.9060	9300.0	95	49341	No
2	GOM_NL__2PRFIN20110807_001257_000000443105_00189_49341_7495.N1	07-AUG-2011 00:12:57	Dark	43.500	9	Alp Eri	0.45300	24000.	87	49341	No
3	GOM_NL__2PRFIN20110807_001814_000000673105_00189_49341_7496.N1	07-AUG-2011 00:18:14	Straylight	67.000	84	Alp Phe	2.3970	4500.0	134	49341	No
4	GOM_NL__2PRFIN20110807_002247_000000473105_00189_49341_7497.N1	07-AUG-2011 00:22:47	Straylight	46.500	31	Alp Gru	1.7340	15200.	93	49341	No
5	GOM_NL__2PRFIN20110807_002550_000000453105_00189_49341_7498.N1	07-AUG-2011 00:25:50	Straylight	45.000	172	Gam Gru	3.0030	13100.	90	49341	No
6	GOM_NL__2PRFIN20110807_003257_000000483105_00189_49341_7499.N1	07-AUG-2011 00:32:57	Bright	47.500	142	49Del Cap	2.8500	8900.0	95	49341	No
7	GOM_NL__2PRFIN20110807_003644_000000483105_00189_49341_7500.N1	07-AUG-2011 00:36:44	Bright	48.000	154	22Bet Aqr	2.8990	5700.0	96	49341	No
8	GOM_NL__2PRFIN20110807_004850_000000423105_00189_49341_7501.N1	07-AUG-2011 00:48:50	Bright	42.000	92	53Eps Cyg	2.5000	4500.0	84	49341	No
9	GOM_NL__2PRFIN20110807_005013_000000403105_00189_49341_7502.N1	07-AUG-2011 00:50:13	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	49341	No
10	GOM_NL__2PRFIN20110807_005200_000000413105_00189_49341_7503.N1	07-AUG-2011 00:52:00	Bright	41.000	19	50Alp Cyg	1.2460	10500.	82	49341	No
11	GOM_NL__2PRFIN20110807_005724_000000403105_00189_49341_7504.N1	07-AUG-2011 00:57:24	Bright	40.000	89	5Alp Cep	2.4510	8000.0	80	49341	No
12	GOM_NL__2PRFIN20110807_011502_000000363105_00189_49341_7505.N1	07-AUG-2011 01:15:02	Bright	36.000	175	39Del Per	3.0100	19400.	72	49341	No
13	GOM_NL__2PRFIN20110807_011627_000000453105_00189_49341_7506.N1	07-AUG-2011 01:16:27	Bright	44.500	6	13Alp Aur	0.080000	3400.0	89	49341	No
14	GOM_NL__2PRFIN20110807_011904_000000373105_00189_49341_7507.N1	07-AUG-2011 01:19:04	Bright	37.000	107	37The Aur	2.6490	11000.	74	49341	No
15	GOM_NL__2PRFIN20110807_012158_000000493105_00189_49341_7508.N1	07-AUG-2011 01:21:58	Bright	49.000	28	12Bet Tau	1.6500	15200.	98	49341	No
16	GOM_NL__2PRFIN20110807_012408_000000433105_00189_49341_7509.N1	07-AUG-2011 01:24:08	Twilight_stray	43.000	176	23Zet Tau	3.0200	22000.	86	49341	No
17	GOM_NL__2PRFIN20110807_012657_000000593105_00189_49341_7510.N1	07-AUG-2011 01:26:57	Dark	58.500	13	87Alp Tau	0.86700	3800.0	117	49341	No
18	GOM_NL__2PRFIN20110807_012852_000000473105_00189_49341_7511.N1	07-AUG-2011 01:28:52	Dark	47.000	27	24Gam Ori	1.6360	26000.	94	49341	No
19	GOM_NL__2PRFIN20110807_013048_000000463105_00189_49341_7512.N1	07-AUG-2011 01:30:48	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	49341	No
20	GOM_NL__2PRFIN20110807_013209_000000443105_00189_49341_7513.N1	07-AUG-2011 01:32:09	Dark	43.500	125	44Iot Ori	2.7700	30000.	87	49341	No
21	GOM_NL__2PRFIN20110807_013327_000000513105_00189_49341_7514.N1	07-AUG-2011 01:33:27	Dark	50.500	7	19Bet Ori	0.10000	14000.	101	49341	No
22	GOM_NL__2PRFIN20110807_013531_000000453105_00189_49341_7515.N1	07-AUG-2011 01:35:31	Dark	44.500	101	11Alp Lep	2.5820	7000.0	89	49341	No
23	GOM_NL__2PRFIN20110807_014814_000000503105_00190_49342_7538.N1	07-AUG-2011 01:48:14	Dark	49.500	157	The1Eri	2.9060	9300.0	99	49342	No
24	GOM_NL__2PRFIN20110807_015312_000000543105_00190_49342_7539.N1	07-AUG-2011 01:53:12	Dark	54.000	9	Alp Eri	0.45300	24000.	108	49342	No
25	GOM_NL__2PRFIN20110807_015829_000000643105_00190_49342_7540.N1	07-AUG-2011 01:58:29	Straylight	64.000	84	Alp Phe	2.3970	4500.0	128	49342	No
26	GOM_NL__2PRFIN20110807_020301_000000443105_00190_49342_7541.N1	07-AUG-2011 02:03:01	Straylight	43.500	31	Alp Gru	1.7340	15200.	87	49342	No
27	GOM_NL__2PRFIN20110807_020647_000000263105_00190_49342_7542.N1	07-AUG-2011 02:06:47	Twilight_stray	26.000	18	24Alp PsA	1.1660	9700.0	52	49342	No
28	GOM_NL__2PRFIN20110807_021311_000000493105_00190_49342_7543.N1	07-AUG-2011 02:13:11	Bright	48.500	142	49Del Cap	2.8500	8900.0	97	49342	No
29	GOM_NL__2PRFIN20110807_021658_000000473105_00190_49342_7544.N1	07-AUG-2011 02:16:58	Bright	47.000	154	22Bet Aqr	2.8990	5700.0	94	49342	No
30	GOM_NL__2PRFIN20110807_022903_000000413105_00190_49342_7545.N1	07-AUG-2011 02:29:03	Bright	40.500	92	53Eps Cyg	2.5000	4500.0	81	49342	No
31	GOM_NL__2PRFIN20110807_023027_000000403105_00190_49342_7546.N1	07-AUG-2011 02:30:27	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	49342	No
32	GOM_NL__2PRFIN20110807_023213_000000413105_00190_49342_7547.N1	07-AUG-2011 02:32:13	Bright	41.000	19	50Alp Cyg	1.2460	10500.	82	49342	No
33	GOM_NL__2PRFIN20110807_023738_000000383105_00190_49342_7548.N1	07-AUG-2011 02:37:38	Bright	38.000	89	5Alp Cep	2.4510	8000.0	76	49342	No
34	GOM_NL__2PRFIN20110807_025516_000000313105_00190_49342_7549.N1	07-AUG-2011 02:55:16	Twilight_stray	31.000	175	39Del Per	3.0100	19400.	62	49342	No
35	GOM_NL__2PRFIN20110807_025641_000000453105_00190_49342_7550.N1	07-AUG-2011 02:56:41	Bright	45.000	6	13Alp Aur	0.080000	3400.0	90	49342	No
36	GOM_NL__2PRFIN20110807_025918_000000383105_00190_49342_7551.N1	07-AUG-2011 02:59:18	Bright	37.500	107	37The Aur	2.6490	11000.	75	49342	No
37	GOM_NL__2PRFIN20110807_030212_000000463105_00190_49342_7552.N1	07-AUG-2011 03:02:12	Bright	45.500	28	12Bet Tau	1.6500	15200.	91	49342	No
38	GOM_NL__2PRFIN20110807_030422_000000433105_00190_49342_7553.N1	07-AUG-2011 03:04:22	Twilight_stray	42.500	176	23Zet Tau	3.0200	22000.	85	49342	No
39	GOM_NL__2PRFIN20110807_030711_000000653105_00190_49342_7554.N1	07-AUG-2011 03:07:11	Dark	65.000	13	87Alp Tau	0.86700	3800.0	130	49342	No
40	GOM_NL__2PRFIN20110807_030907_000000483105_00190_49342_7555.N1	07-AUG-2011 03:09:07	Dark	47.500	27	24Gam Ori	1.6360	26000.	95	49342	No
41	GOM_NL__2PRFIN20110807_031102_000000473105_00190_49342_7556.N1	07-AUG-2011 03:11:02	Dark	46.500	30	46Eps Ori	1.6940	30000.	93	49342	No
42	GOM_NL__2PRFIN20110807_031224_000000413105_00190_49342_7557.N1	07-AUG-2011 03:12:24	Dark	40.500	125	44Iot Ori	2.7700	30000.	81	49342	No







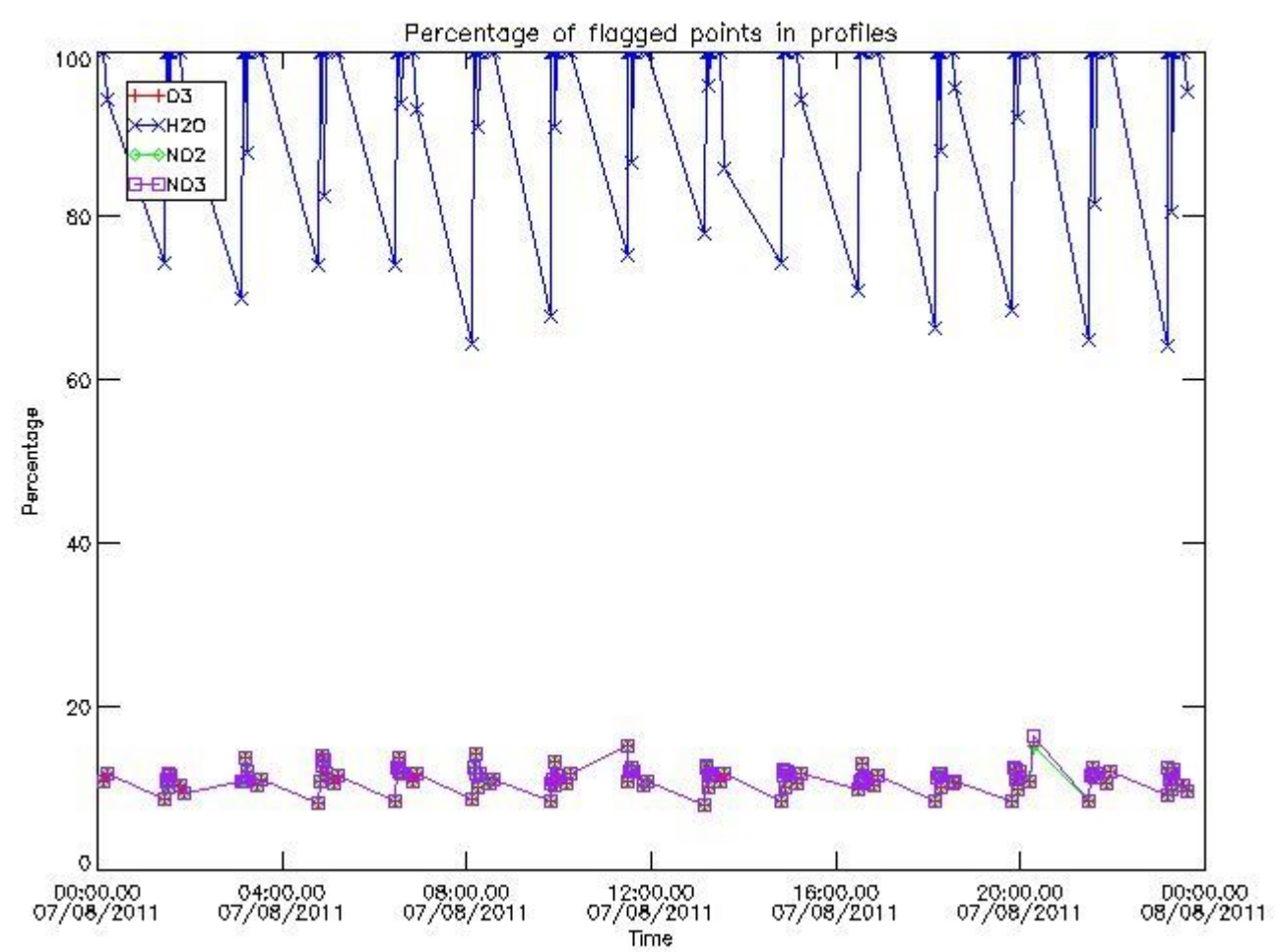


279	GOM_NL__2PRFIN20110807_215115_000000483105_00202_49354_8050.N1	07-AUG-2011 21:51:15	Dark	48.000	157	The1Eri	2.9060	9300.0	96	49354	No
280	GOM_NL__2PRFIN20110807_215608_000000473105_00202_49354_8051.N1	07-AUG-2011 21:56:08	Dark	46.500	9	Alp Eri	0.45300	24000.	93	49354	No
281	GOM_NL__2PRFIN20110807_220128_000000543105_00202_49354_8052.N1	07-AUG-2011 22:01:28	Straylight	53.500	84	Alp Phe	2.3970	4500.0	107	49354	No
282	GOM_NL__2PRFIN20110807_220555_000000443105_00202_49354_8053.N1	07-AUG-2011 22:05:55	Straylight	44.000	31	Alp Gru	1.7340	15200.	88	49354	No
283	GOM_NL__2PRFIN20110807_220942_000000493105_00202_49354_8054.N1	07-AUG-2011 22:09:42	Tw_i_and_stray	49.000	18	24Alp PsA	1.1660	9700.0	98	49354	No
284	GOM_NL__2PRFIN20110807_221600_000000473105_00202_49354_8055.N1	07-AUG-2011 22:16:00	Bright	47.000	142	49Del Cap	2.8500	8900.0	94	49354	No
285	GOM_NL__2PRFIN20110807_221945_000000463105_00202_49354_8056.N1	07-AUG-2011 22:19:45	Bright	45.500	154	22Bet Aqr	2.8990	5700.0	91	49354	No
286	GOM_NL__2PRFIN20110807_223147_000000423105_00202_49354_8057.N1	07-AUG-2011 22:31:47	Bright	41.500	92	53Eps Cyg	2.5000	4500.0	83	49354	No
287	GOM_NL__2PRFIN20110807_223312_000000403105_00202_49354_8058.N1	07-AUG-2011 22:33:12	Bright	39.500	66	37Gam Cyg	2.2080	5900.0	79	49354	No
288	GOM_NL__2PRFIN20110807_223457_000000403105_00202_49354_8059.N1	07-AUG-2011 22:34:57	Bright	40.000	19	50Alp Cyg	1.2460	10500.	80	49354	No
289	GOM_NL__2PRFIN20110807_224022_000000413105_00202_49354_8060.N1	07-AUG-2011 22:40:22	Bright	40.500	89	5Alp Cep	2.4510	8000.0	81	49354	No
290	GOM_NL__2PRFIN20110807_225929_000000463105_00202_49354_8061.N1	07-AUG-2011 22:59:29	Bright	45.500	6	13Alp Aur	0.080000	3400.0	91	49354	No
291	GOM_NL__2PRFIN20110807_230207_000000373105_00202_49354_8062.N1	07-AUG-2011 23:02:07	Bright	36.500	107	37The Aur	2.6490	11000.	73	49354	No
292	GOM_NL__2PRFIN20110807_230502_000000503105_00202_49354_8063.N1	07-AUG-2011 23:05:02	Bright	49.500	28	12Bet Tau	1.6500	15200.	99	49354	No
293	GOM_NL__2PRFIN20110807_230713_000000453105_00202_49354_8064.N1	07-AUG-2011 23:07:13	Tw_i_and_stray	44.500	176	23Zet Tau	3.0200	22000.	89	49354	No
294	GOM_NL__2PRFIN20110807_231005_000000613105_00202_49354_8065.N1	07-AUG-2011 23:10:05	Dark	60.500	13	87Alp Tau	0.86700	3800.0	121	49354	No
295	GOM_NL__2PRFIN20110807_231200_000000453105_00202_49354_8066.N1	07-AUG-2011 23:12:00	Dark	45.000	27	24Gam Ori	1.6360	26000.	90	49354	No
296	GOM_NL__2PRFIN20110807_231355_000000463105_00202_49354_8067.N1	07-AUG-2011 23:13:55	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	49354	No
297	GOM_NL__2PRFIN20110807_231517_000000443105_00202_49354_8068.N1	07-AUG-2011 23:15:17	Dark	43.500	125	44Iot Ori	2.7700	30000.	87	49354	No
298	GOM_NL__2PRFIN20110807_231636_000000513105_00202_49354_8069.N1	07-AUG-2011 23:16:36	Dark	51.000	7	19Bet Ori	0.10000	14000.	102	49354	No
299	GOM_NL__2PRFIN20110807_231839_000000423105_00202_49354_8070.N1	07-AUG-2011 23:18:39	Dark	41.500	101	11Alp Lep	2.5820	7000.0	83	49354	No
300	GOM_NL__2PRFIN20110807_233130_000000503105_00203_49355_8053.N1	07-AUG-2011 23:31:30	Dark	49.500	157	The1Eri	2.9060	9300.0	99	49355	No
301	GOM_NL__2PRFIN20110807_233622_000000543105_00203_49355_8054.N1	07-AUG-2011 23:36:22	Dark	53.500	9	Alp Eri	0.45300	24000.	107	49355	No
302	GOM_NL__2PRFIN20110807_234143_000000543105_00203_49355_8055.N1	07-AUG-2011 23:41:43	Straylight	54.000	84	Alp Phe	2.3970	4500.0	108	49355	No
303	GOM_NL__2PRFIN20110807_234609_000000473105_00203_49355_8056.N1	07-AUG-2011 23:46:09	Straylight	46.500	31	Alp Gru	1.7340	15200.	93	49355	No
304	GOM_NL__2PRFIN20110807_234956_000000493105_00203_49355_8057.N1	07-AUG-2011 23:49:56	Tw_i_and_stray	49.000	18	24Alp PsA	1.1660	9700.0	98	49355	No
305	GOM_NL__2PRFIN20110807_235614_000000493105_00203_49355_8058.N1	07-AUG-2011 23:56:14	Bright	48.500	142	49Del Cap	2.8500	8900.0	97	49355	No
306	GOM_NL__2PRFIN20110807_235958_000000463105_00203_49355_8059.N1	07-AUG-2011 23:59:58	Bright	46.000	154	22Bet Aqr	2.8990	5700.0	92	49355	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.

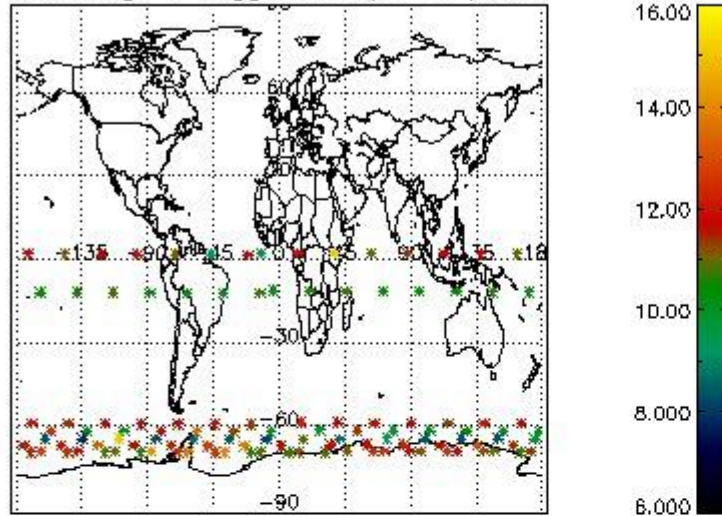
#### 3.1 Plot quality information per product (time dependant)



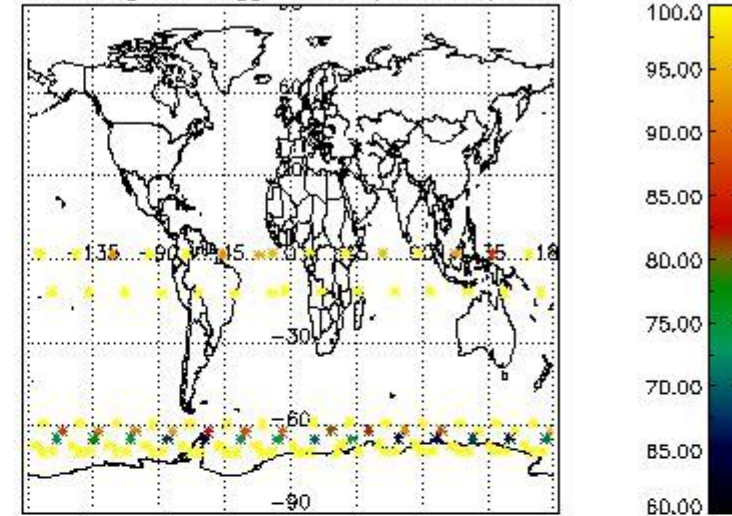
3.2 Plot quality information per product (world map)



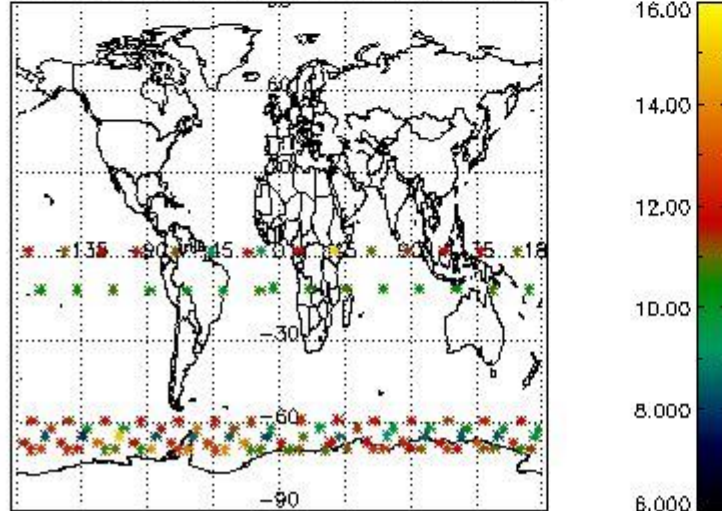
Percentage of flagged data per O3 profile



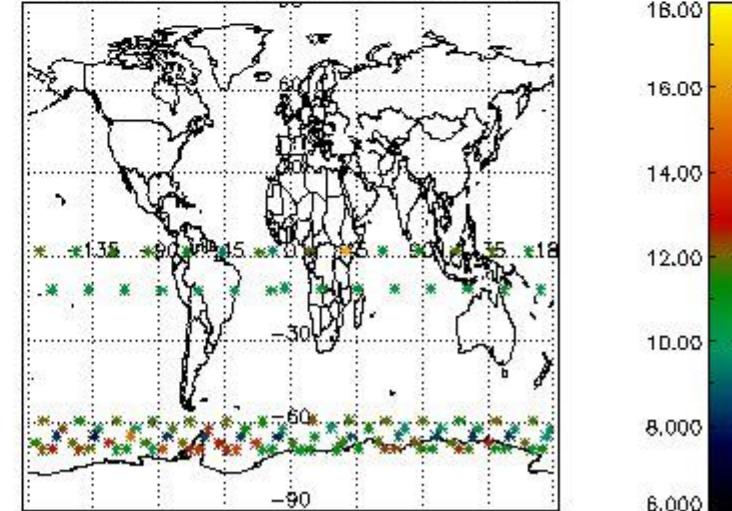
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

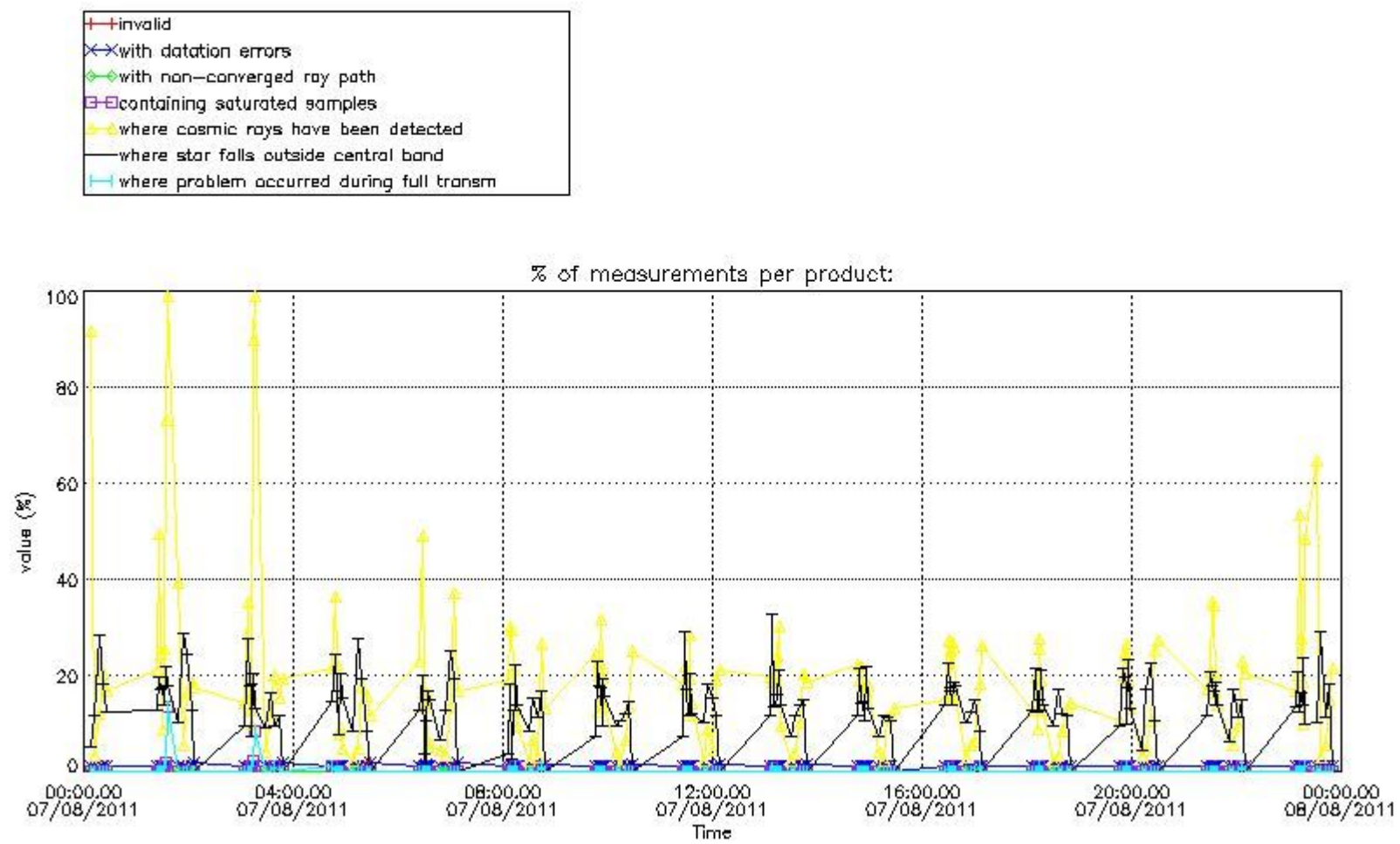


#### 4. Level 1 quality information per product

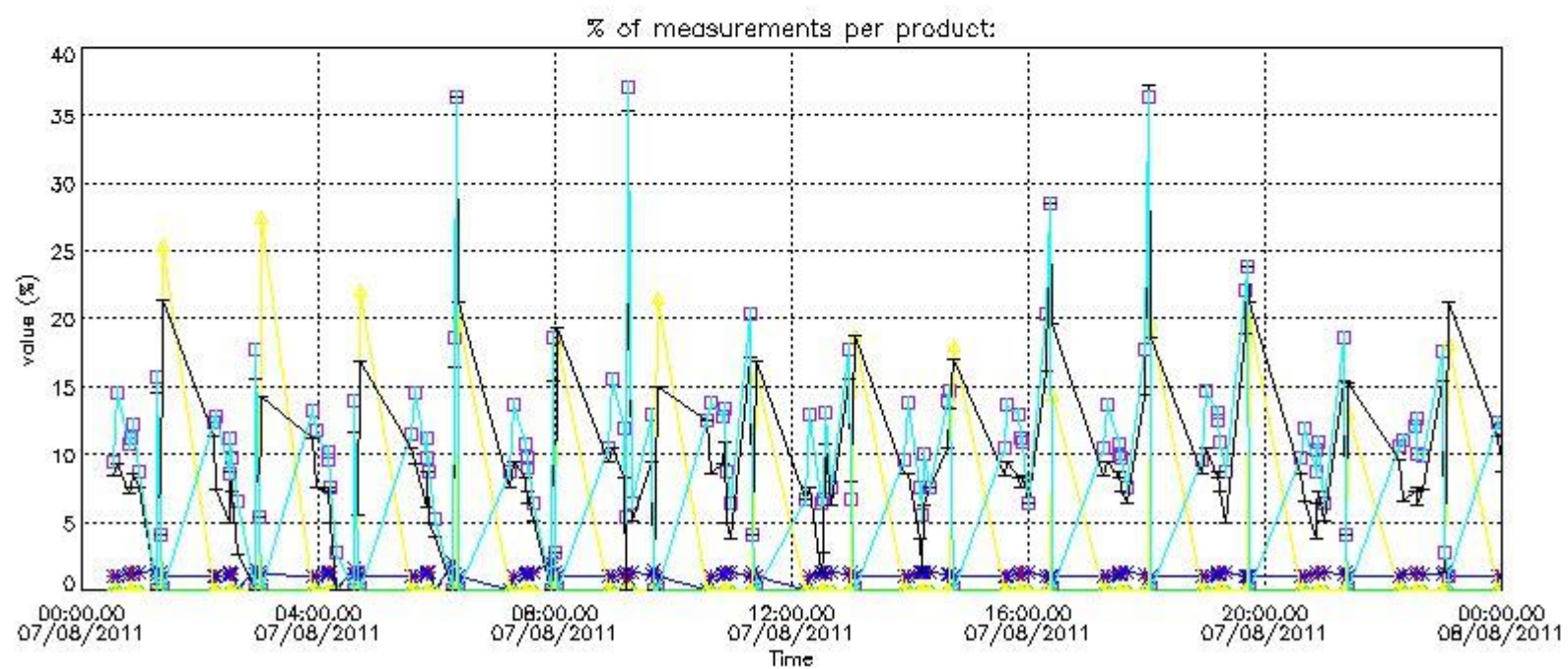
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



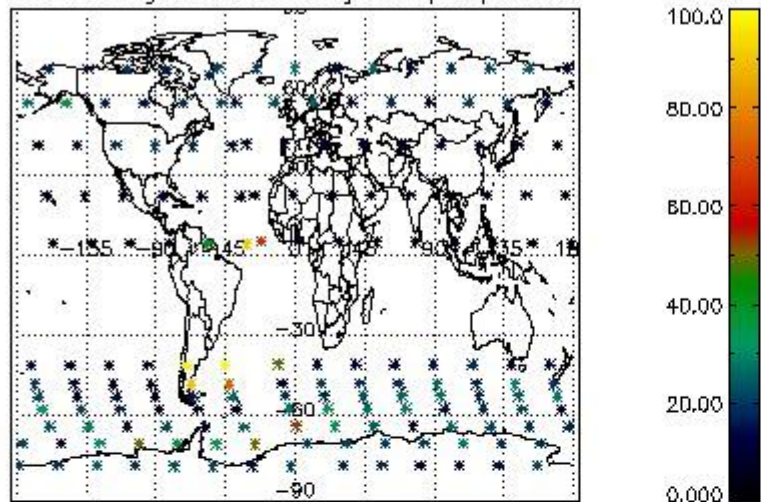
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



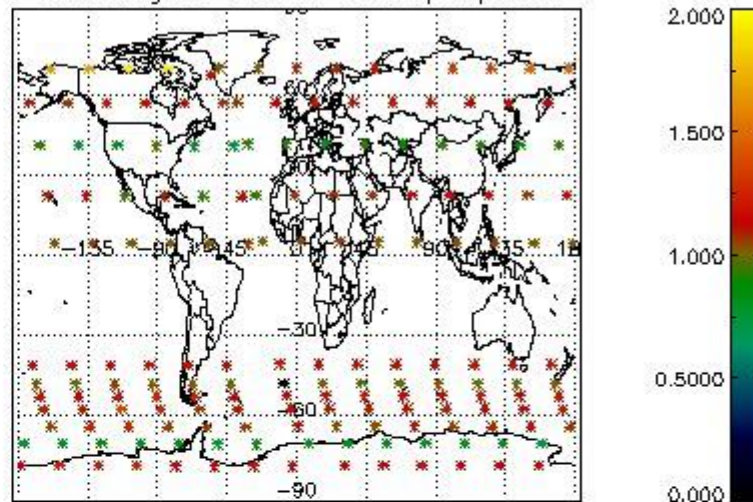
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

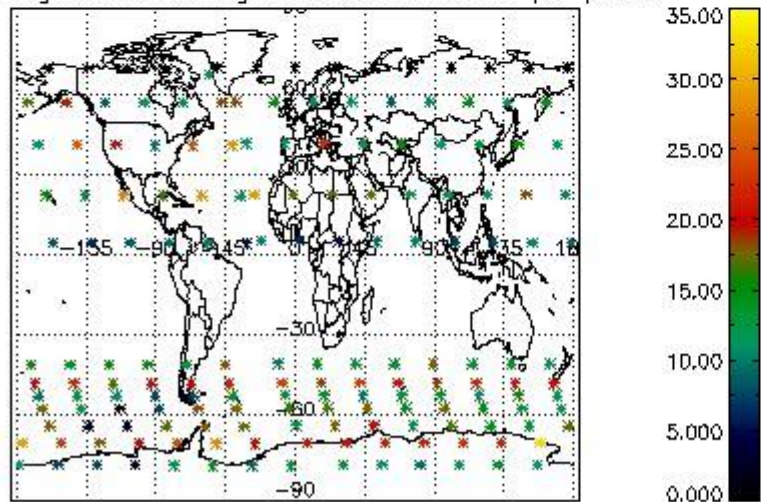
Percentage of cosmic ray hits per profile



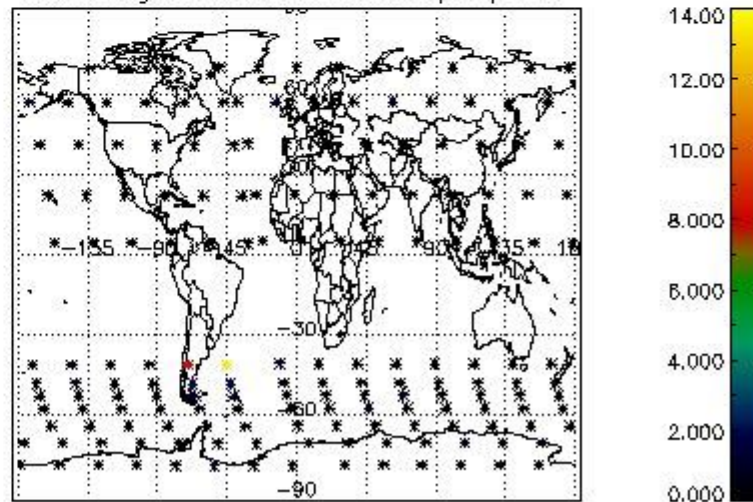
Percentage of datation errors per profile



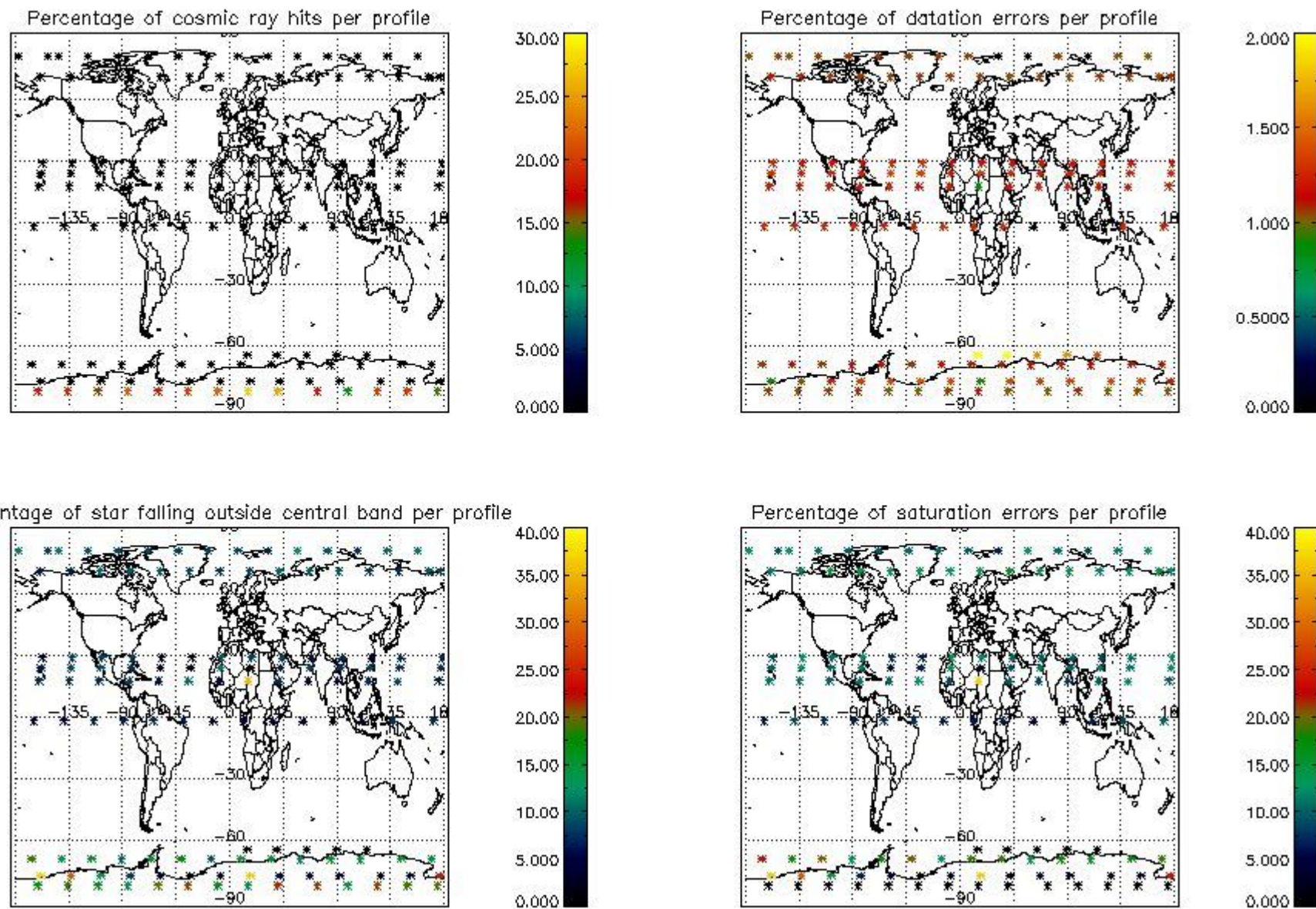
Percentage of star falling outside central band per profile



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

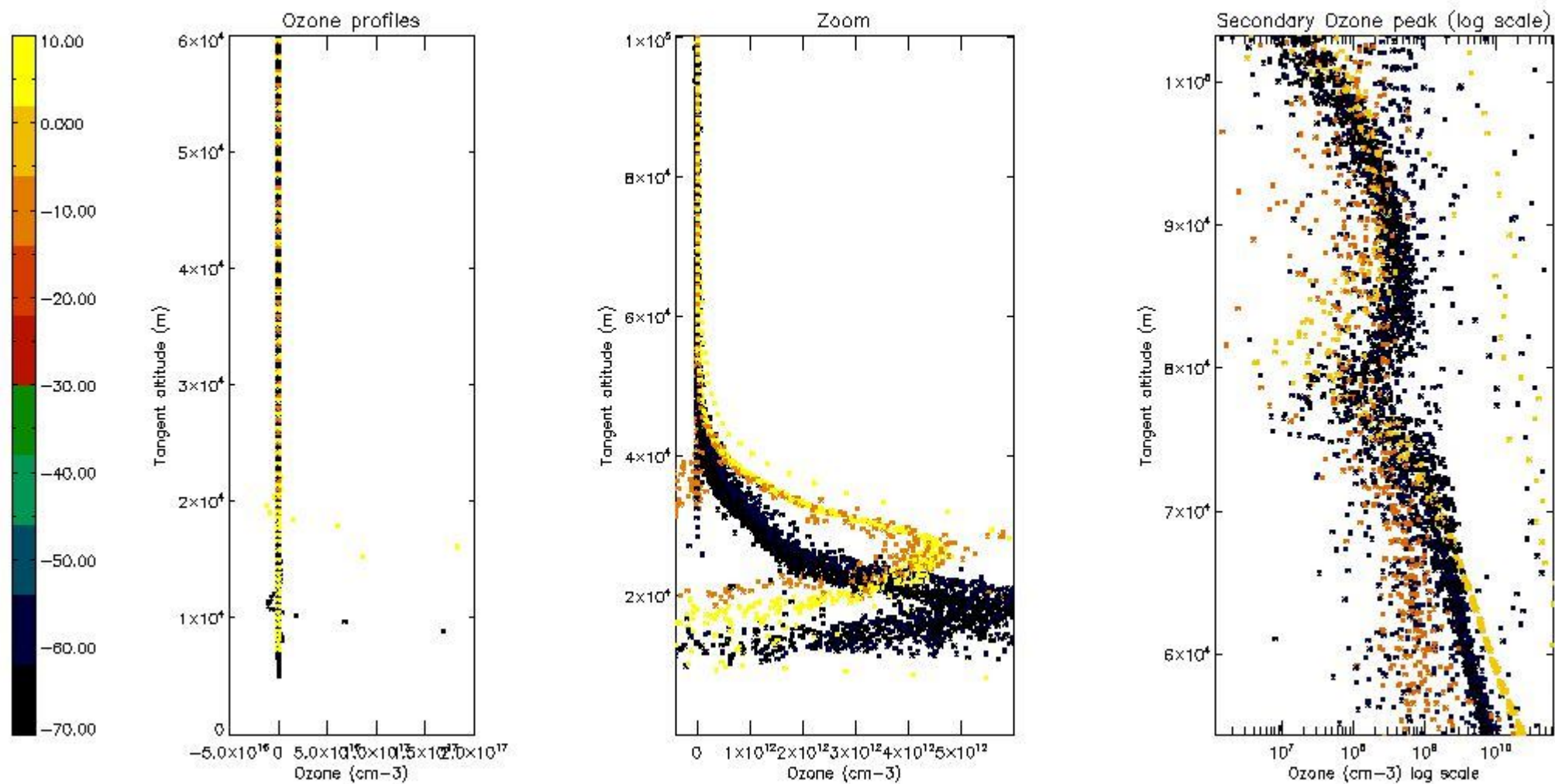
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	40
STD < 20	22

STD < 10	17
STD < 5	13

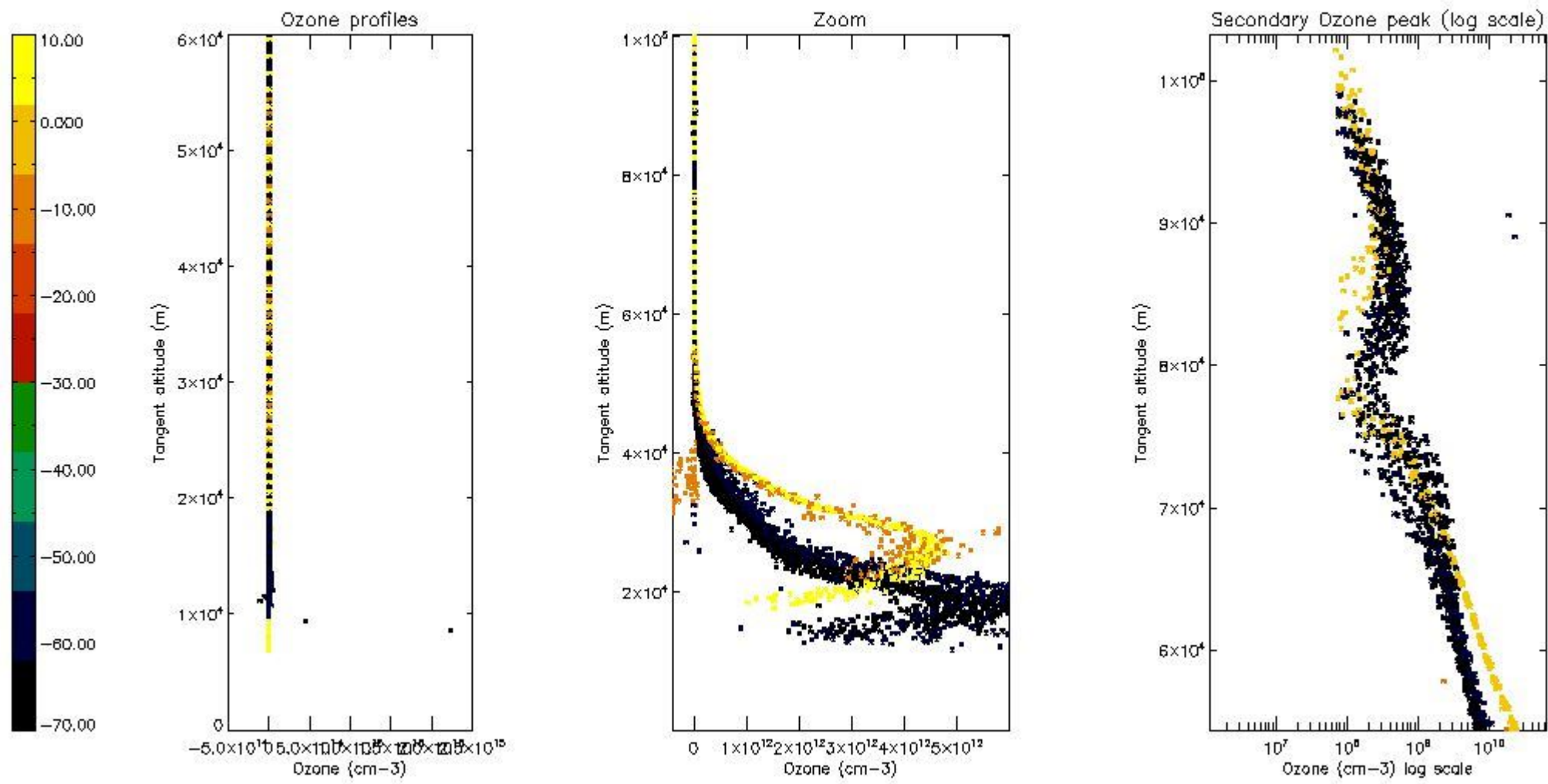
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



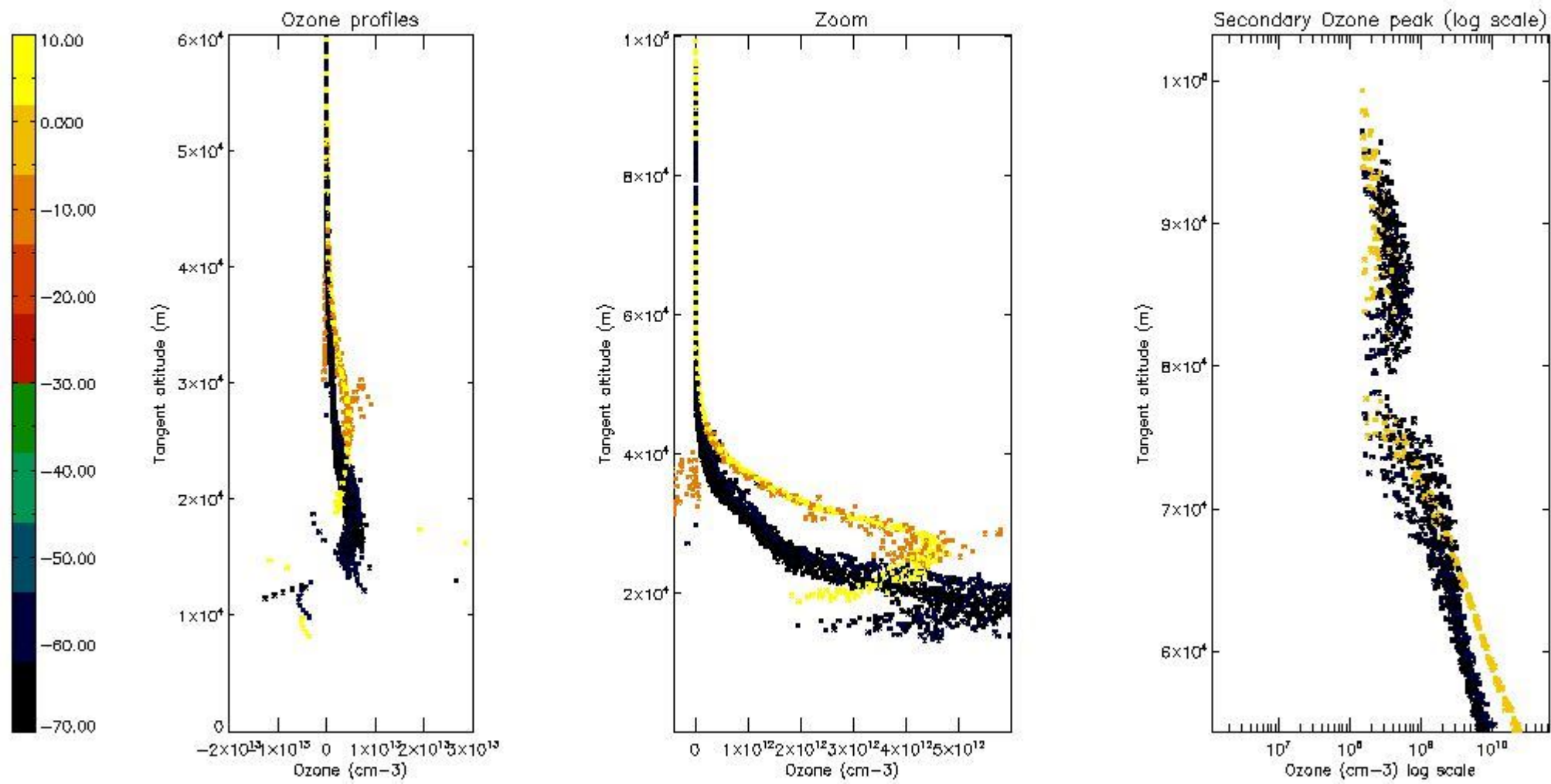
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

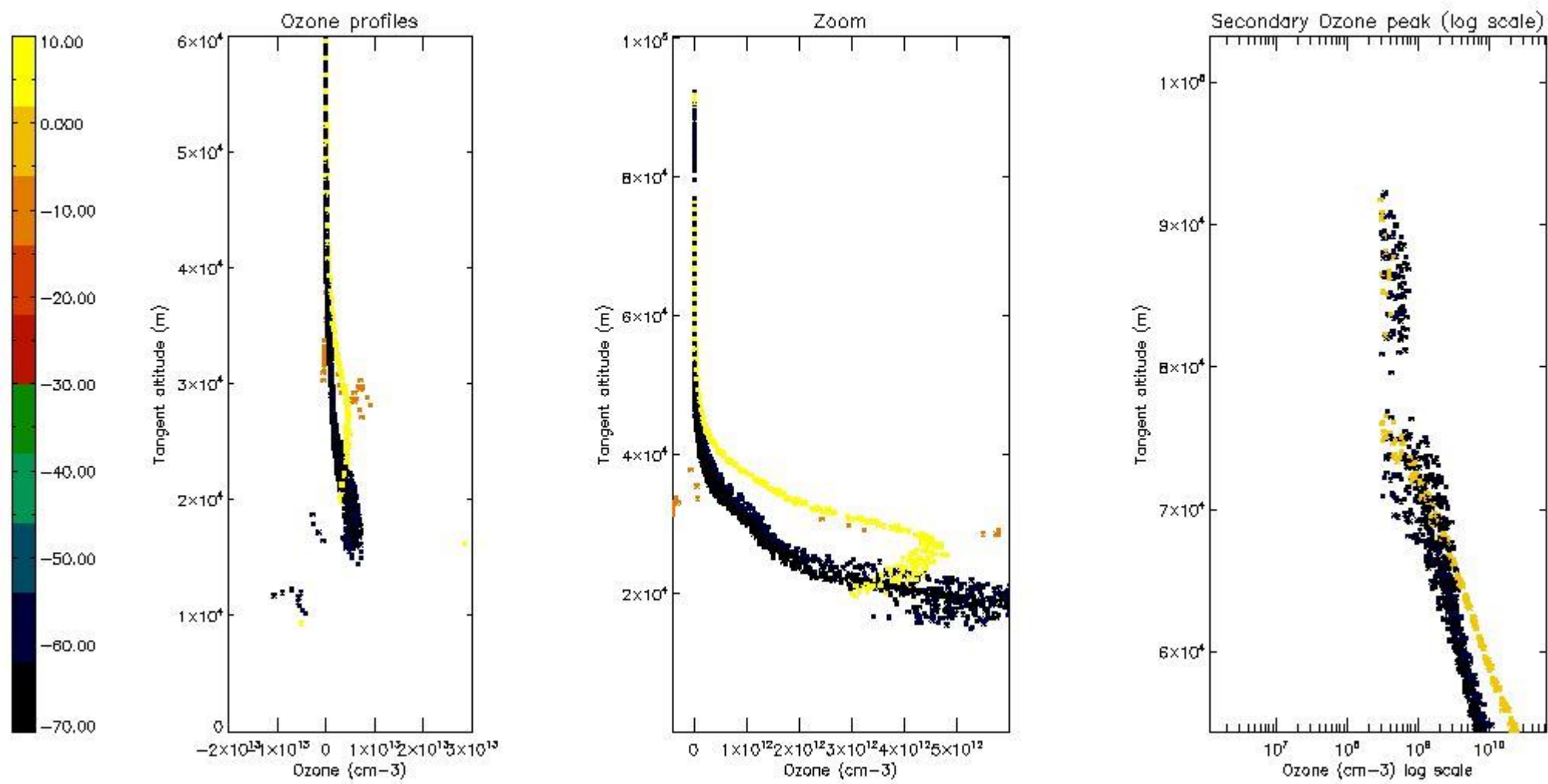
The colorbar represents the latitude.



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

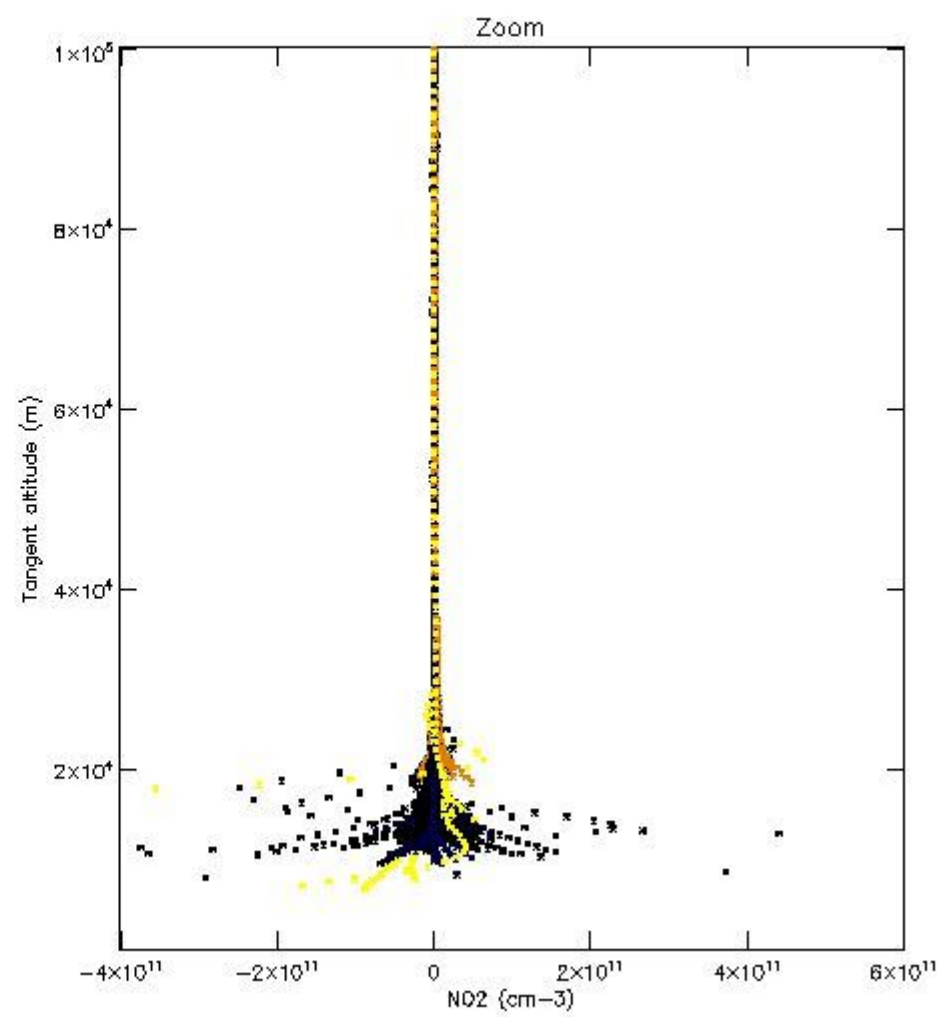
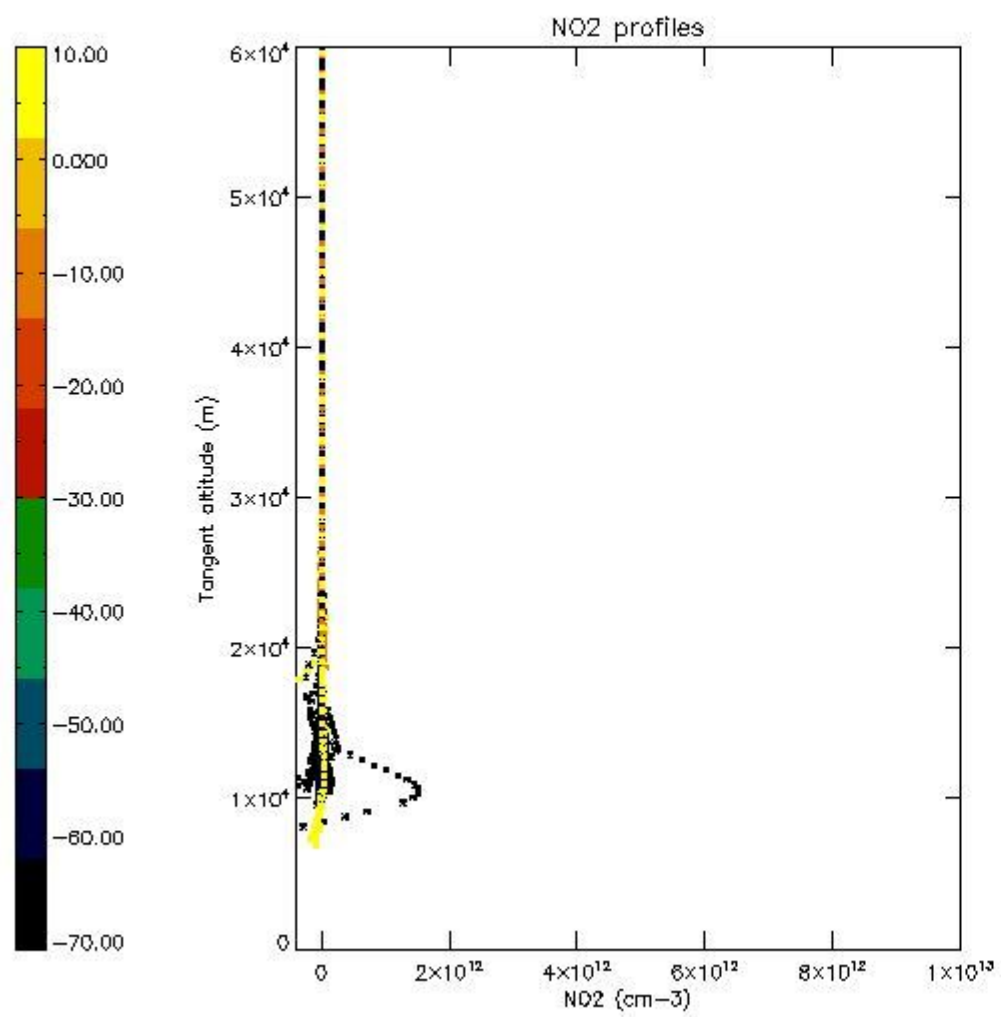
The colorbar represents the latitude.





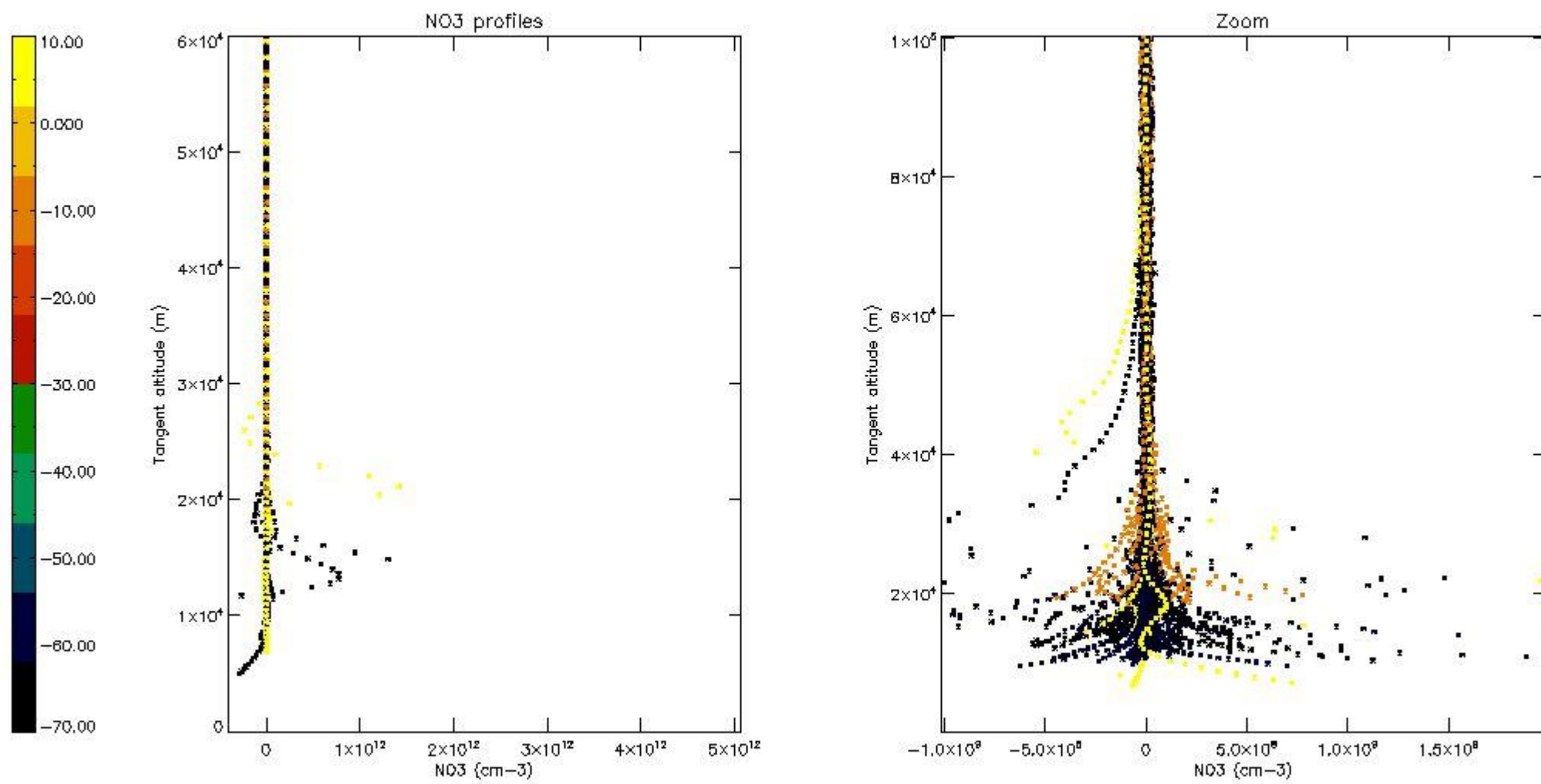
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



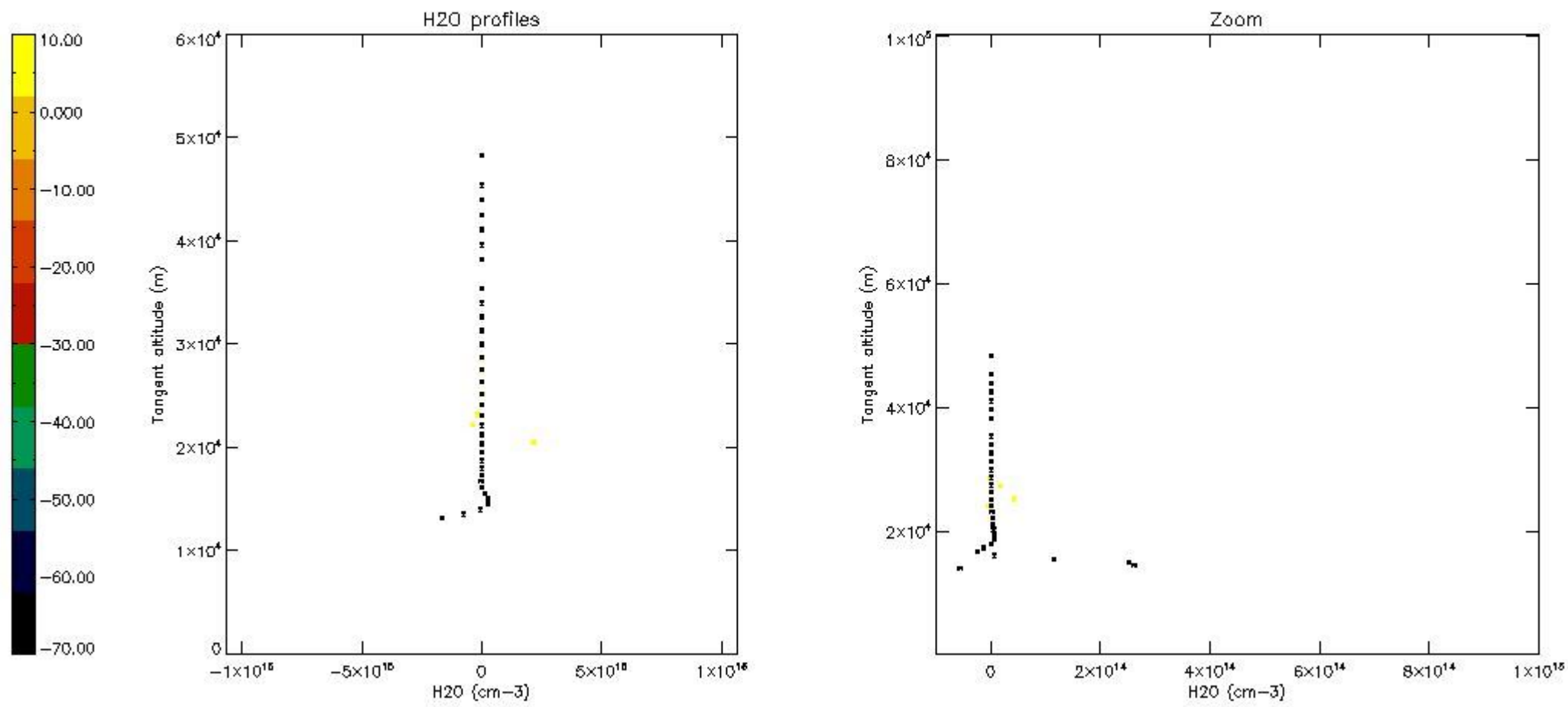
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	07-AUG-2011 00:07:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	07-AUG-2011 00:07:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	07-AUG-2011 00:07:59

# GOMOS Level 2 Daily Report

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### [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 16:37:14
Data source version	GOMOS/6.01
Start time of products	07-08-2011 (07AUG2011 00:00:00)
Stop time of products	08-08-2011 (08AUG2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	306
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__2PRFIN20110807_000759_000000483105_00189_49341_7494.N1	07-AUG-2011 00:07:59	Dark	47.500	157	The1Eri	2.9060	9300.0	95	49341	No
2	GOM_NL__2PRFIN20110807_001257_000000443105_00189_49341_7495.N1	07-AUG-2011 00:12:57	Dark	43.500	9	Alp Eri	0.45300	24000.	87	49341	No
3	GOM_NL__2PRFIN20110807_001814_000000673105_00189_49341_7496.N1	07-AUG-2011 00:18:14	Straylight	67.000	84	Alp Phe	2.3970	4500.0	134	49341	No
4	GOM_NL__2PRFIN20110807_002247_000000473105_00189_49341_7497.N1	07-AUG-2011 00:22:47	Straylight	46.500	31	Alp Gru	1.7340	15200.	93	49341	No
5	GOM_NL__2PRFIN20110807_002550_000000453105_00189_49341_7498.N1	07-AUG-2011 00:25:50	Straylight	45.000	172	Gam Gru	3.0030	13100.	90	49341	No
6	GOM_NL__2PRFIN20110807_003257_000000483105_00189_49341_7499.N1	07-AUG-2011 00:32:57	Bright	47.500	142	49Del Cap	2.8500	8900.0	95	49341	No
7	GOM_NL__2PRFIN20110807_003644_000000483105_00189_49341_7500.N1	07-AUG-2011 00:36:44	Bright	48.000	154	22Bet Aqr	2.8990	5700.0	96	49341	No
8	GOM_NL__2PRFIN20110807_004850_000000423105_00189_49341_7501.N1	07-AUG-2011 00:48:50	Bright	42.000	92	53Eps Cyg	2.5000	4500.0	84	49341	No
9	GOM_NL__2PRFIN20110807_005013_000000403105_00189_49341_7502.N1	07-AUG-2011 00:50:13	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	49341	No
10	GOM_NL__2PRFIN20110807_005200_000000413105_00189_49341_7503.N1	07-AUG-2011 00:52:00	Bright	41.000	19	50Alp Cyg	1.2460	10500.	82	49341	No
11	GOM_NL__2PRFIN20110807_005724_000000403105_00189_49341_7504.N1	07-AUG-2011 00:57:24	Bright	40.000	89	5Alp Cep	2.4510	8000.0	80	49341	No
12	GOM_NL__2PRFIN20110807_011502_000000363105_00189_49341_7505.N1	07-AUG-2011 01:15:02	Bright	36.000	175	39Del Per	3.0100	19400.	72	49341	No
13	GOM_NL__2PRFIN20110807_011627_000000453105_00189_49341_7506.N1	07-AUG-2011 01:16:27	Bright	44.500	6	13Alp Aur	0.080000	3400.0	89	49341	No
14	GOM_NL__2PRFIN20110807_011904_000000373105_00189_49341_7507.N1	07-AUG-2011 01:19:04	Bright	37.000	107	37The Aur	2.6490	11000.	74	49341	No
15	GOM_NL__2PRFIN20110807_012158_000000493105_00189_49341_7508.N1	07-AUG-2011 01:21:58	Bright	49.000	28	12Bet Tau	1.6500	15200.	98	49341	No
16	GOM_NL__2PRFIN20110807_012408_000000433105_00189_49341_7509.N1	07-AUG-2011 01:24:08	Tw_i_and_stray	43.000	176	23Zet Tau	3.0200	22000.	86	49341	No
17	GOM_NL__2PRFIN20110807_012657_000000593105_00189_49341_7510.N1	07-AUG-2011 01:26:57	Dark	58.500	13	87Alp Tau	0.86700	3800.0	117	49341	No
18	GOM_NL__2PRFIN20110807_012852_000000473105_00189_49341_7511.N1	07-AUG-2011 01:28:52	Dark	47.000	27	24Gam Ori	1.6360	26000.	94	49341	No
19	GOM_NL__2PRFIN20110807_013048_000000463105_00189_49341_7512.N1	07-AUG-2011 01:30:48	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	49341	No
20	GOM_NL__2PRFIN20110807_013209_000000443105_00189_49341_7513.N1	07-AUG-2011 01:32:09	Dark	43.500	125	44lot Ori	2.7700	30000.	87	49341	No
21	GOM_NL__2PRFIN20110807_013327_000000513105_00189_49341_7514.N1	07-AUG-2011 01:33:27	Dark	50.500	7	19Bet Ori	0.10000	14000.	101	49341	No
22	GOM_NL__2PRFIN20110807_013531_000000453105_00189_49341_7515.N1	07-AUG-2011 01:35:31	Dark	44.500	101	11Alp Lep	2.5820	7000.0	89	49341	No
23	GOM_NL__2PRFIN20110807_014814_000000503105_00190_49342_7538.N1	07-AUG-2011 01:48:14	Dark	49.500	157	The1Eri	2.9060	9300.0	99	49342	No
24	GOM_NL__2PRFIN20110807_015312_000000543105_00190_49342_7539.N1	07-AUG-2011 01:53:12	Dark	54.000	9	Alp Eri	0.45300	24000.	108	49342	No
25	GOM_NL__2PRFIN20110807_015829_000000643105_00190_49342_7540.N1	07-AUG-2011 01:58:29	Straylight	64.000	84	Alp Phe	2.3970	4500.0	128	49342	No
26	GOM_NL__2PRFIN20110807_020301_000000443105_00190_49342_7541.N1	07-AUG-2011 02:03:01	Straylight	43.500	31	Alp Gru	1.7340	15200.	87	49342	No
27	GOM_NL__2PRFIN20110807_020647_000000263105_00190_49342_7542.N1	07-AUG-2011 02:06:47	Tw_i_and_stray	26.000	18	24Alp PsA	1.1660	9700.0	52	49342	No
28	GOM_NL__2PRFIN20110807_021311_000000493105_00190_49342_7543.N1	07-AUG-2011 02:13:11	Bright	48.500	142	49Del Cap	2.8500	8900.0	97	49342	No
29	GOM_NL__2PRFIN20110807_021658_000000473105_00190_49342_7544.N1	07-AUG-2011 02:16:58	Bright	47.000	154	22Bet Aqr	2.8990	5700.0	94	49342	No
30	GOM_NL__2PRFIN20110807_022903_000000413105_00190_49342_7545.N1	07-AUG-2011 02:29:03	Bright	40.500	92	53Eps Cyg	2.5000	4500.0	81	49342	No
31	GOM_NL__2PRFIN20110807_023027_000000403105_00190_49342_7546.N1	07-AUG-2011 02:30:27	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	49342	No
32	GOM_NL__2PRFIN20110807_023213_000000413105_00190_49342_7547.N1	07-AUG-2011 02:32:13	Bright	41.000	19	50Alp Cyg	1.2460	10500.	82	49342	No
33	GOM_NL__2PRFIN20110807_023738_000000383105_00190_49342_7548.N1	07-AUG-2011 02:37:38	Bright	38.000	89	5Alp Cep	2.4510	8000.0	76	49342	No
34	GOM_NL__2PRFIN20110807_025516_000000313105_00190_49342_7549.N1	07-AUG-2011 02:55:16	Tw_i_and_stray	31.000	175	39Del Per	3.0100	19400.	62	49342	No
35	GOM_NL__2PRFIN20110807_025641_000000453105_00190_49342_7550.N1	07-AUG-2011 02:56:41	Bright	45.000	6	13Alp Aur	0.080000	3400.0	90	49342	No
36	GOM_NL__2PRFIN20110807_025918_000000383105_00190_49342_7551.N1	07-AUG-2011 02:59:18	Bright	37.500	107	37The Aur	2.6490	11000.	75	49342	No
37	GOM_NL__2PRFIN20110807_030212_000000463105_00190_49342_7552.N1	07-AUG-2011 03:02:12	Bright	45.500	28	12Bet Tau	1.6500	15200.	91	49342	No
38	GOM_NL__2PRFIN20110807_030422_000000433105_00190_49342_7553.N1	07-AUG-2011 03:04:22	Tw_i_and_stray	42.500	176	23Zet Tau	3.0200	22000.	85	49342	No
39	GOM_NL__2PRFIN20110807_030711_000000653105_00190_49342_7554.N1	07-AUG-2011 03:07:11	Dark	65.000	13	87Alp Tau	0.86700	3800.0	130	49342	No
40	GOM_NL__2PRFIN20110807_030907_000000483105_00190_49342_7555.N1	07-AUG-2011 03:09:07	Dark	47.500	27	24Gam Ori	1.6360	26000.	95	49342	No
41	GOM_NL__2PRFIN20110807_031102_000000473105_00190_49342_7556.N1	07-AUG-2011 03:11:02	Dark	46.500	30	46Eps Ori	1.6940	30000.	93	49342	No
42	GOM_NL__2PRFIN20110807_031224_000000413105_00190_49342_7557.N1	07-AUG-2011 03:12:24	Dark	40.500	125	44lot Ori	2.7700	30000.	81	49342	No









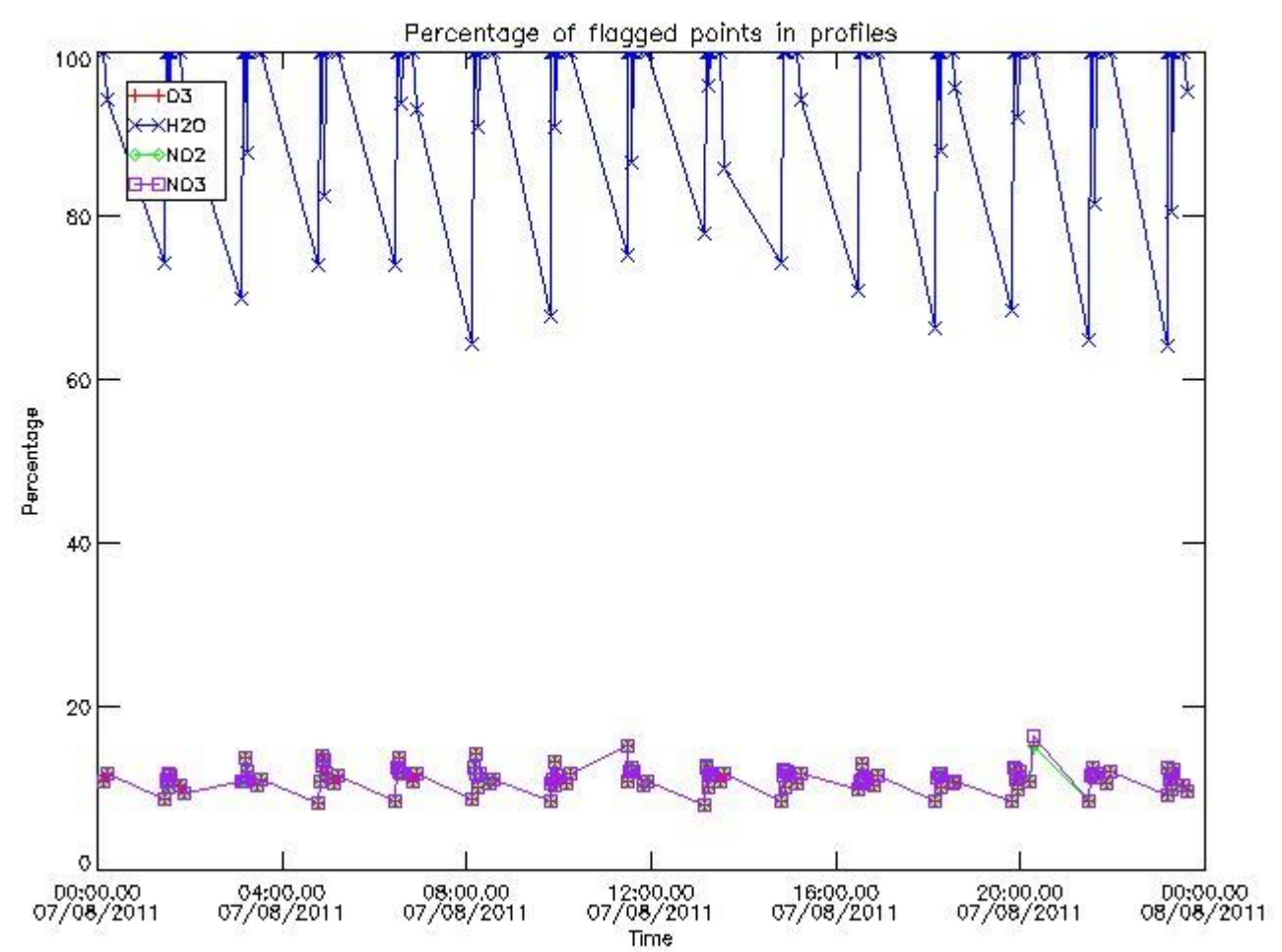


279	GOM_NL__2PRFIN20110807_215115_000000483105_00202_49354_8050.N1	07-AUG-2011 21:51:15	Dark	48.000	157	The1Eri	2.9060	9300.0	96	49354	No
280	GOM_NL__2PRFIN20110807_215608_000000473105_00202_49354_8051.N1	07-AUG-2011 21:56:08	Dark	46.500	9	Alp Eri	0.45300	24000.	93	49354	No
281	GOM_NL__2PRFIN20110807_220128_000000543105_00202_49354_8052.N1	07-AUG-2011 22:01:28	Straylight	53.500	84	Alp Phe	2.3970	4500.0	107	49354	No
282	GOM_NL__2PRFIN20110807_220555_000000443105_00202_49354_8053.N1	07-AUG-2011 22:05:55	Straylight	44.000	31	Alp Gru	1.7340	15200.	88	49354	No
283	GOM_NL__2PRFIN20110807_220942_000000493105_00202_49354_8054.N1	07-AUG-2011 22:09:42	Tw_i_and_stray	49.000	18	24Alp PsA	1.1660	9700.0	98	49354	No
284	GOM_NL__2PRFIN20110807_221600_000000473105_00202_49354_8055.N1	07-AUG-2011 22:16:00	Bright	47.000	142	49Del Cap	2.8500	8900.0	94	49354	No
285	GOM_NL__2PRFIN20110807_221945_000000463105_00202_49354_8056.N1	07-AUG-2011 22:19:45	Bright	45.500	154	22Bet Aqr	2.8990	5700.0	91	49354	No
286	GOM_NL__2PRFIN20110807_223147_000000423105_00202_49354_8057.N1	07-AUG-2011 22:31:47	Bright	41.500	92	53Eps Cyg	2.5000	4500.0	83	49354	No
287	GOM_NL__2PRFIN20110807_223312_000000403105_00202_49354_8058.N1	07-AUG-2011 22:33:12	Bright	39.500	66	37Gam Cyg	2.2080	5900.0	79	49354	No
288	GOM_NL__2PRFIN20110807_223457_000000403105_00202_49354_8059.N1	07-AUG-2011 22:34:57	Bright	40.000	19	50Alp Cyg	1.2460	10500.	80	49354	No
289	GOM_NL__2PRFIN20110807_224022_000000413105_00202_49354_8060.N1	07-AUG-2011 22:40:22	Bright	40.500	89	5Alp Cep	2.4510	8000.0	81	49354	No
290	GOM_NL__2PRFIN20110807_225929_000000463105_00202_49354_8061.N1	07-AUG-2011 22:59:29	Bright	45.500	6	13Alp Aur	0.080000	3400.0	91	49354	No
291	GOM_NL__2PRFIN20110807_230207_000000373105_00202_49354_8062.N1	07-AUG-2011 23:02:07	Bright	36.500	107	37The Aur	2.6490	11000.	73	49354	No
292	GOM_NL__2PRFIN20110807_230502_000000503105_00202_49354_8063.N1	07-AUG-2011 23:05:02	Bright	49.500	28	12Bet Tau	1.6500	15200.	99	49354	No
293	GOM_NL__2PRFIN20110807_230713_000000453105_00202_49354_8064.N1	07-AUG-2011 23:07:13	Tw_i_and_stray	44.500	176	23Zet Tau	3.0200	22000.	89	49354	No
294	GOM_NL__2PRFIN20110807_231005_000000613105_00202_49354_8065.N1	07-AUG-2011 23:10:05	Dark	60.500	13	87Alp Tau	0.86700	3800.0	121	49354	No
295	GOM_NL__2PRFIN20110807_231200_000000453105_00202_49354_8066.N1	07-AUG-2011 23:12:00	Dark	45.000	27	24Gam Ori	1.6360	26000.	90	49354	No
296	GOM_NL__2PRFIN20110807_231355_000000463105_00202_49354_8067.N1	07-AUG-2011 23:13:55	Dark	45.500	30	46Eps Ori	1.6940	30000.	91	49354	No
297	GOM_NL__2PRFIN20110807_231517_000000443105_00202_49354_8068.N1	07-AUG-2011 23:15:17	Dark	43.500	125	44Iot Ori	2.7700	30000.	87	49354	No
298	GOM_NL__2PRFIN20110807_231636_000000513105_00202_49354_8069.N1	07-AUG-2011 23:16:36	Dark	51.000	7	19Bet Ori	0.10000	14000.	102	49354	No
299	GOM_NL__2PRFIN20110807_231839_000000423105_00202_49354_8070.N1	07-AUG-2011 23:18:39	Dark	41.500	101	11Alp Lep	2.5820	7000.0	83	49354	No
300	GOM_NL__2PRFIN20110807_233130_000000503105_00203_49355_8053.N1	07-AUG-2011 23:31:30	Dark	49.500	157	The1Eri	2.9060	9300.0	99	49355	No
301	GOM_NL__2PRFIN20110807_233622_000000543105_00203_49355_8054.N1	07-AUG-2011 23:36:22	Dark	53.500	9	Alp Eri	0.45300	24000.	107	49355	No
302	GOM_NL__2PRFIN20110807_234143_000000543105_00203_49355_8055.N1	07-AUG-2011 23:41:43	Straylight	54.000	84	Alp Phe	2.3970	4500.0	108	49355	No
303	GOM_NL__2PRFIN20110807_234609_000000473105_00203_49355_8056.N1	07-AUG-2011 23:46:09	Straylight	46.500	31	Alp Gru	1.7340	15200.	93	49355	No
304	GOM_NL__2PRFIN20110807_234956_000000493105_00203_49355_8057.N1	07-AUG-2011 23:49:56	Tw_i_and_stray	49.000	18	24Alp PsA	1.1660	9700.0	98	49355	No
305	GOM_NL__2PRFIN20110807_235614_000000493105_00203_49355_8058.N1	07-AUG-2011 23:56:14	Bright	48.500	142	49Del Cap	2.8500	8900.0	97	49355	No
306	GOM_NL__2PRFIN20110807_235958_000000463105_00203_49355_8059.N1	07-AUG-2011 23:59:58	Bright	46.000	154	22Bet Aqr	2.8990	5700.0	92	49355	No

### 3. Quality information per product

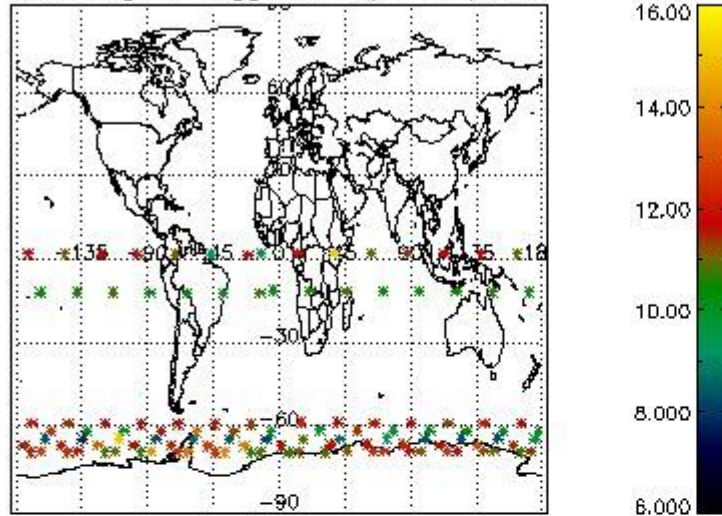
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

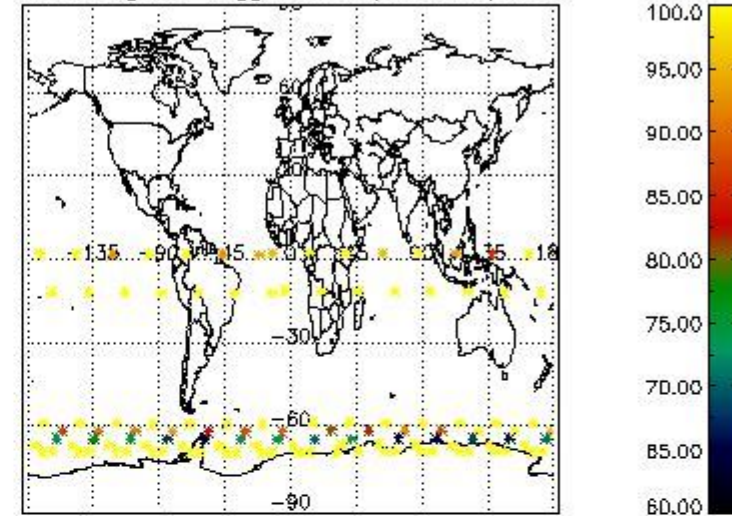


3.2 Plot quality information per product (world map)

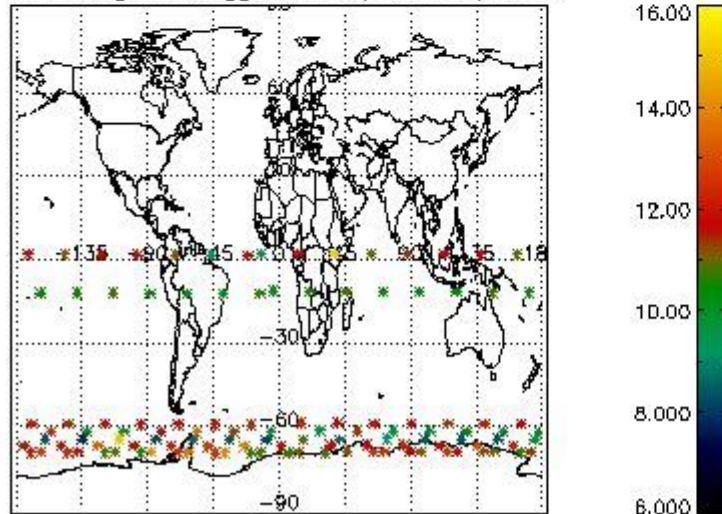
Percentage of flagged data per O3 profile



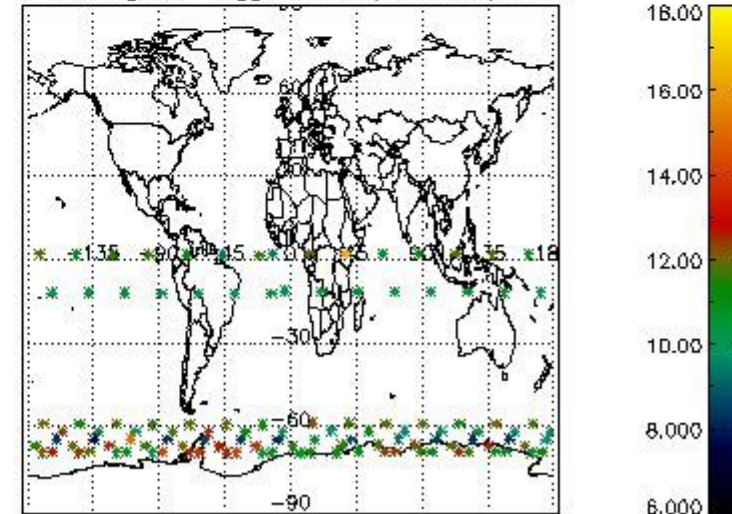
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

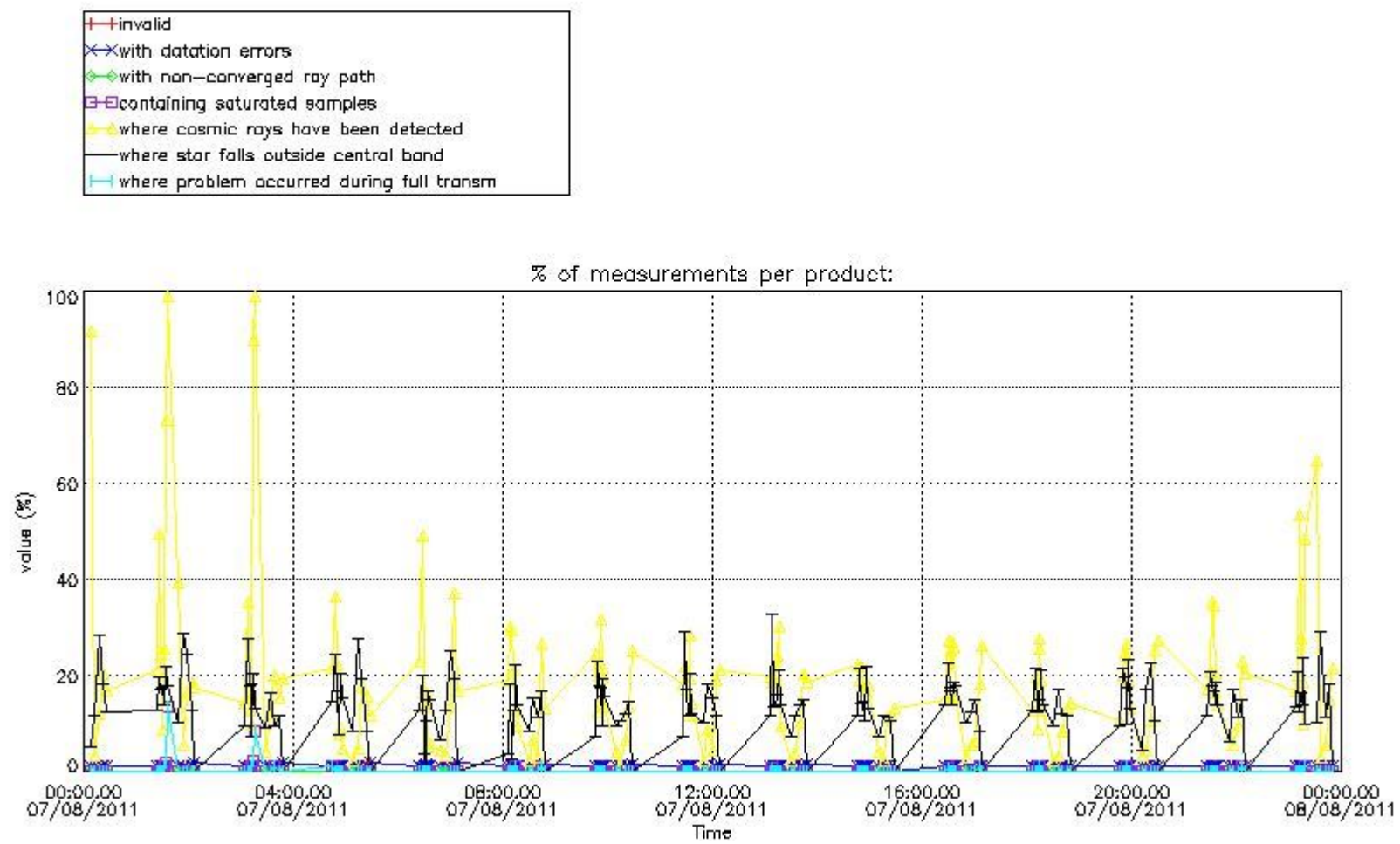


#### 4. Level 1 quality information per product

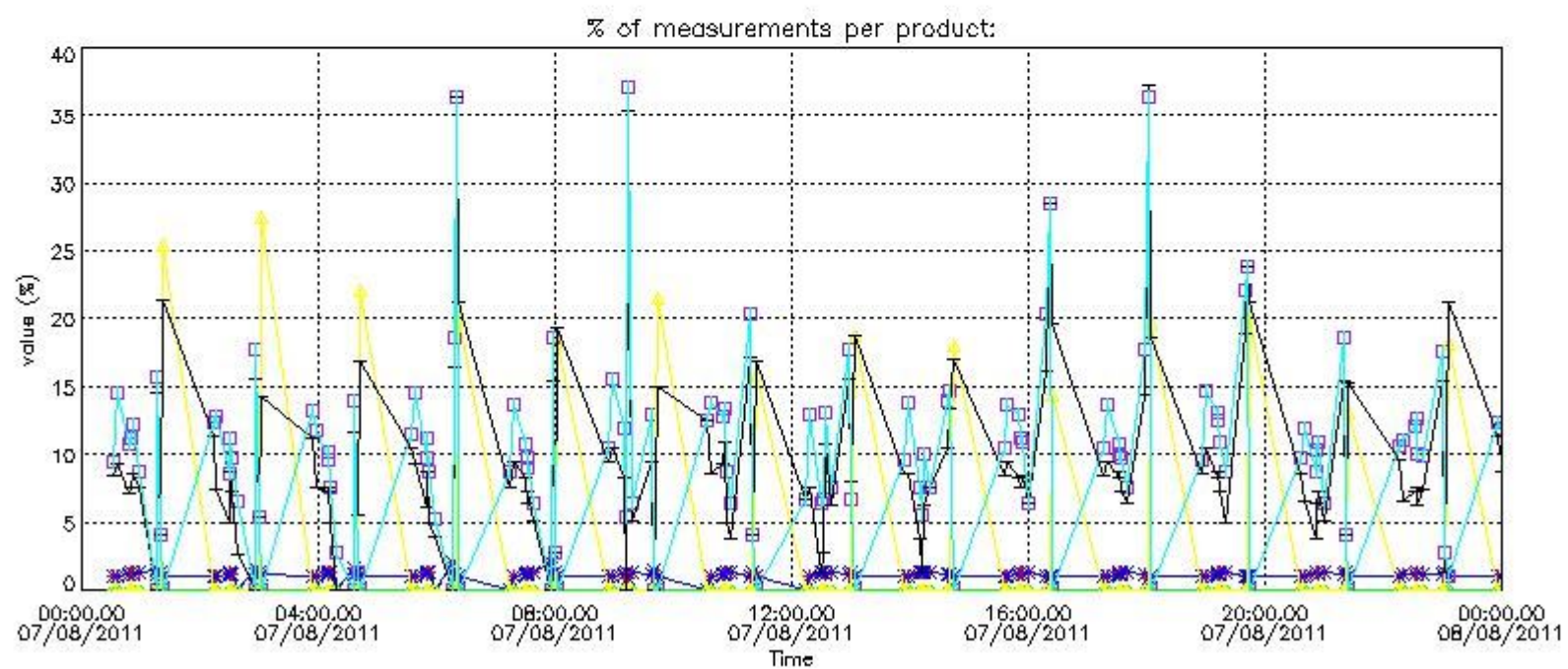
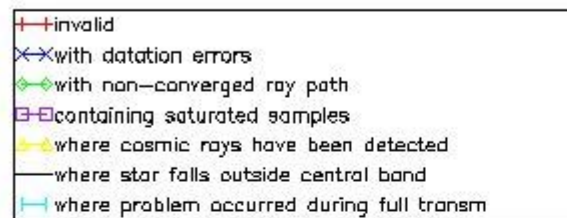
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



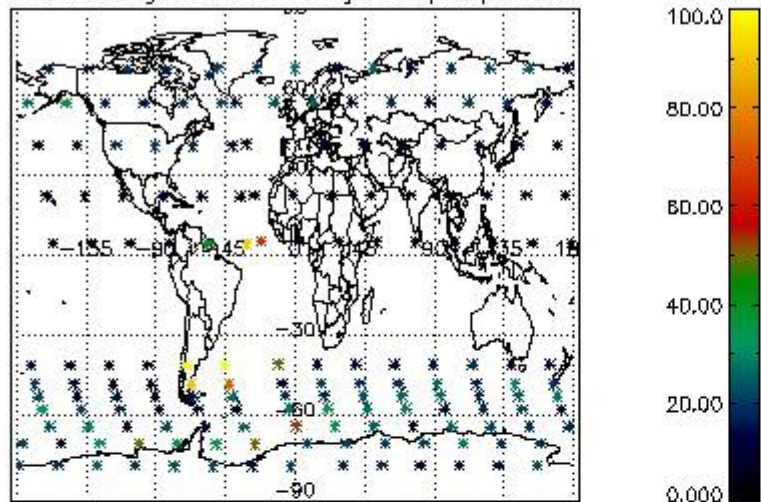
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



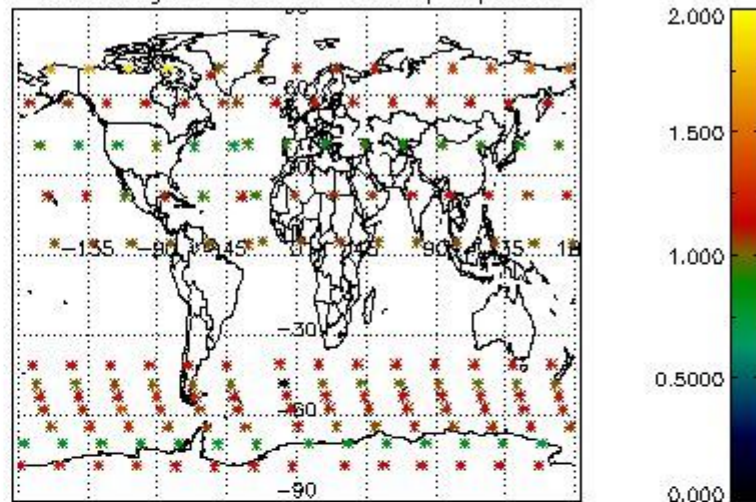
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

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

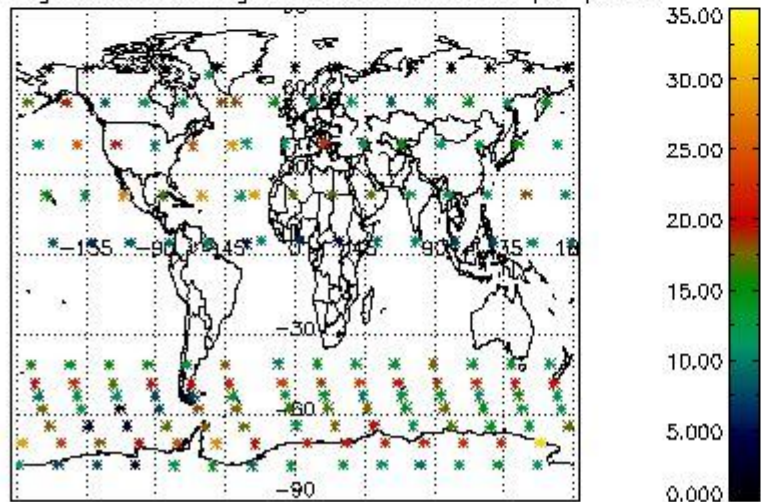
Percentage of cosmic ray hits per profile



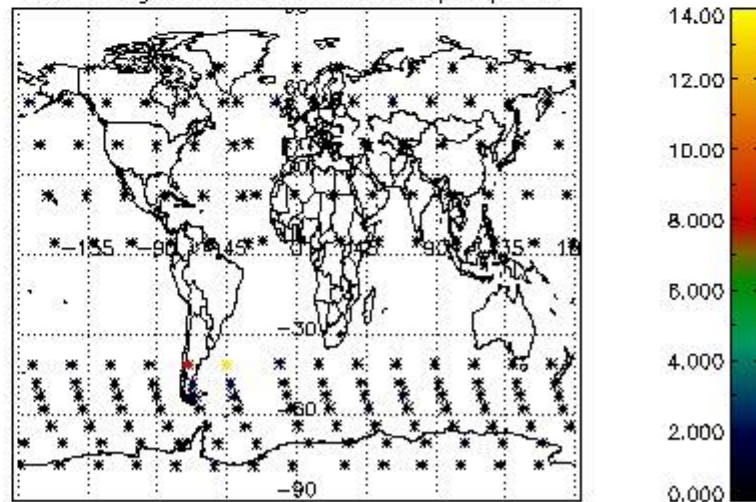
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

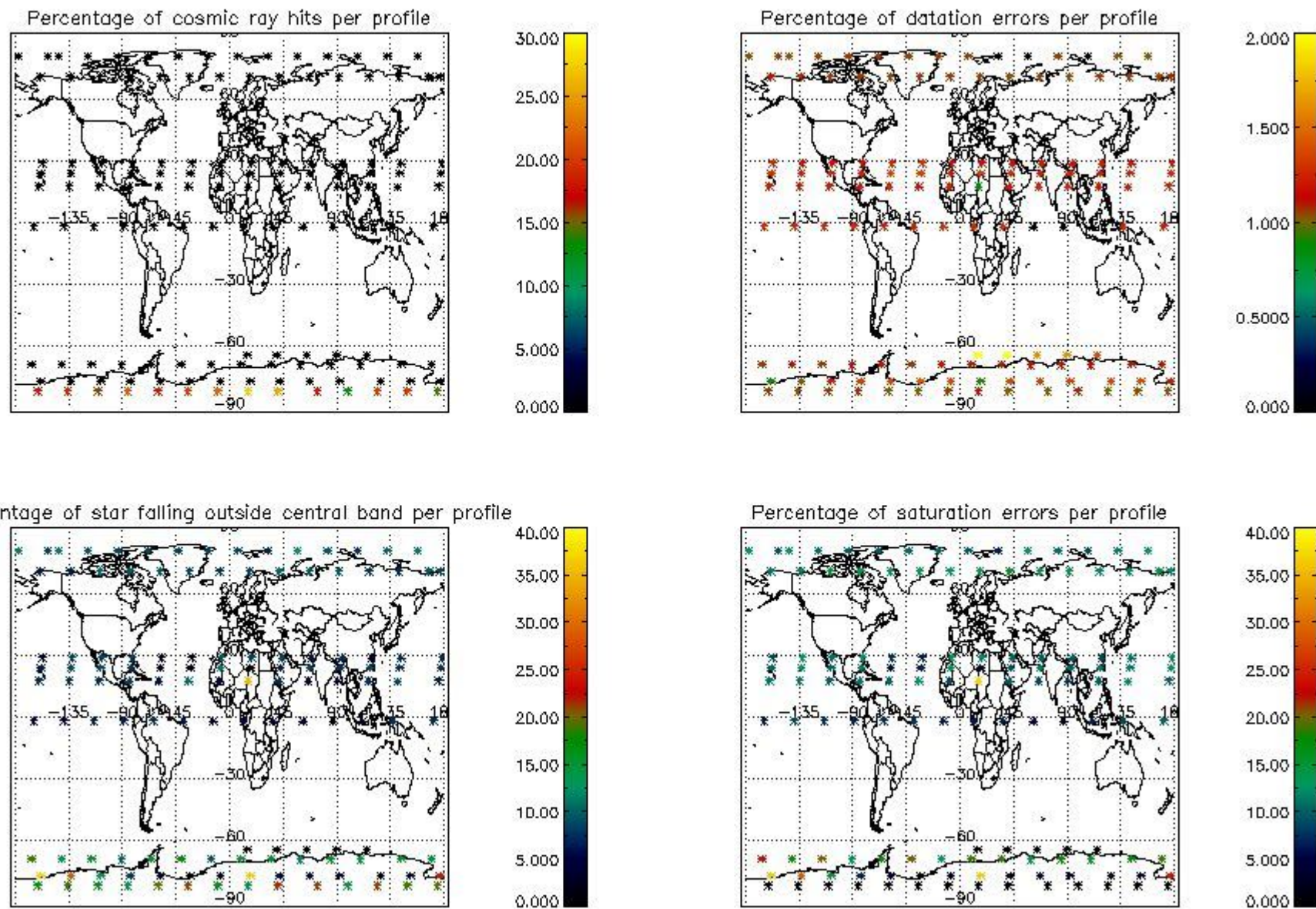


Percentage of saturation errors per profile



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

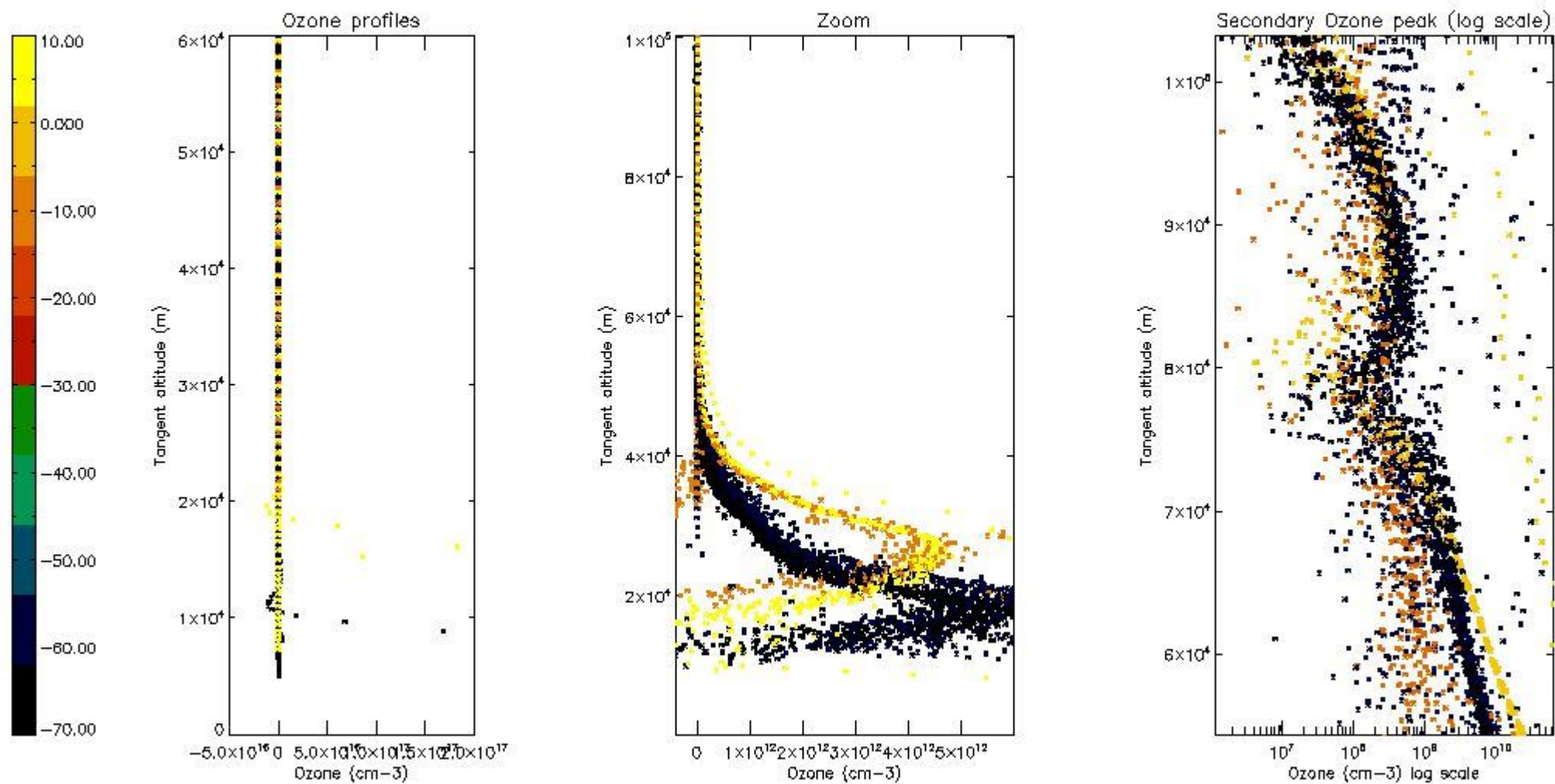
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	40
STD < 20	22

STD < 10	17
STD < 5	13

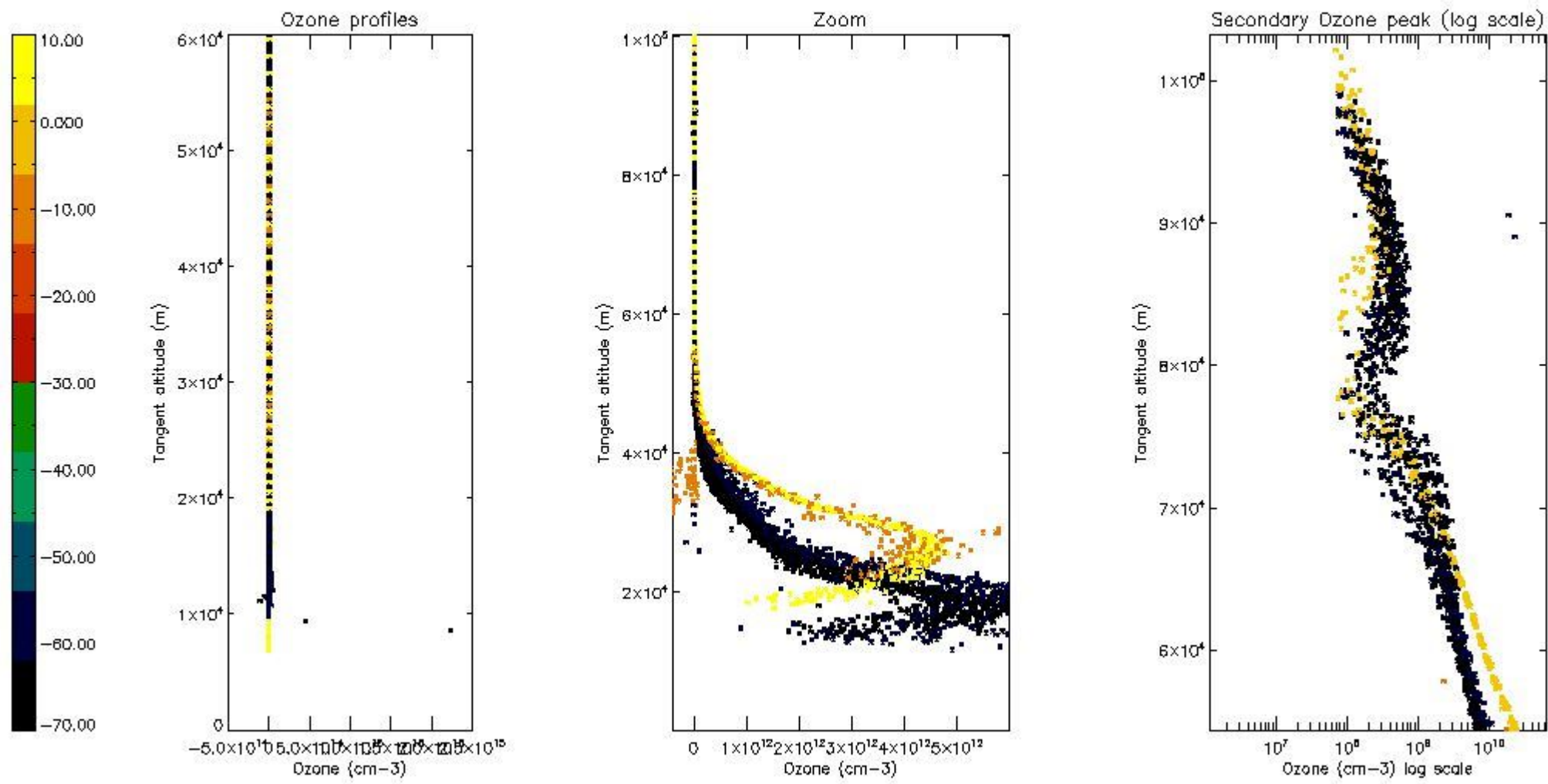
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



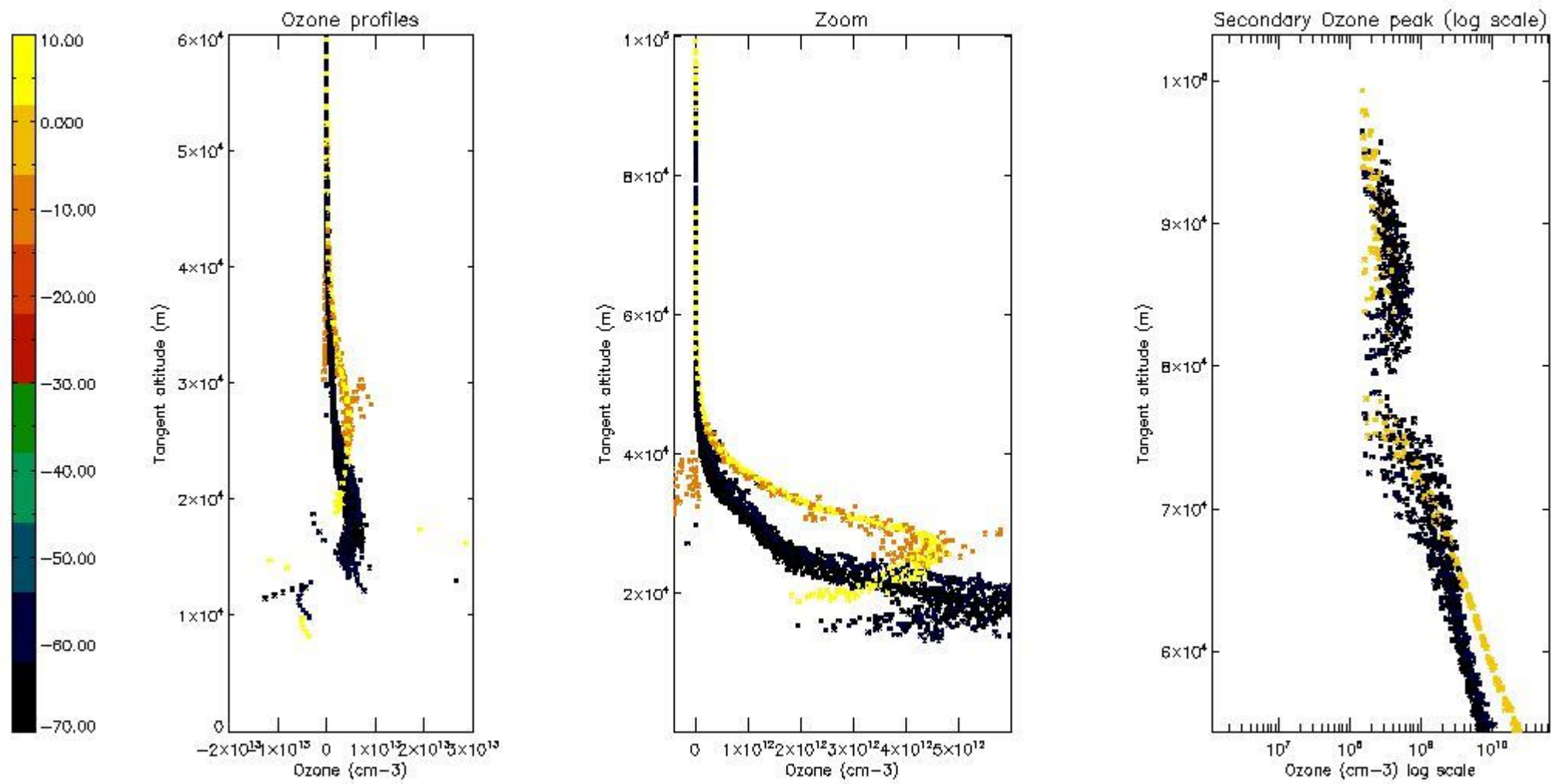
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



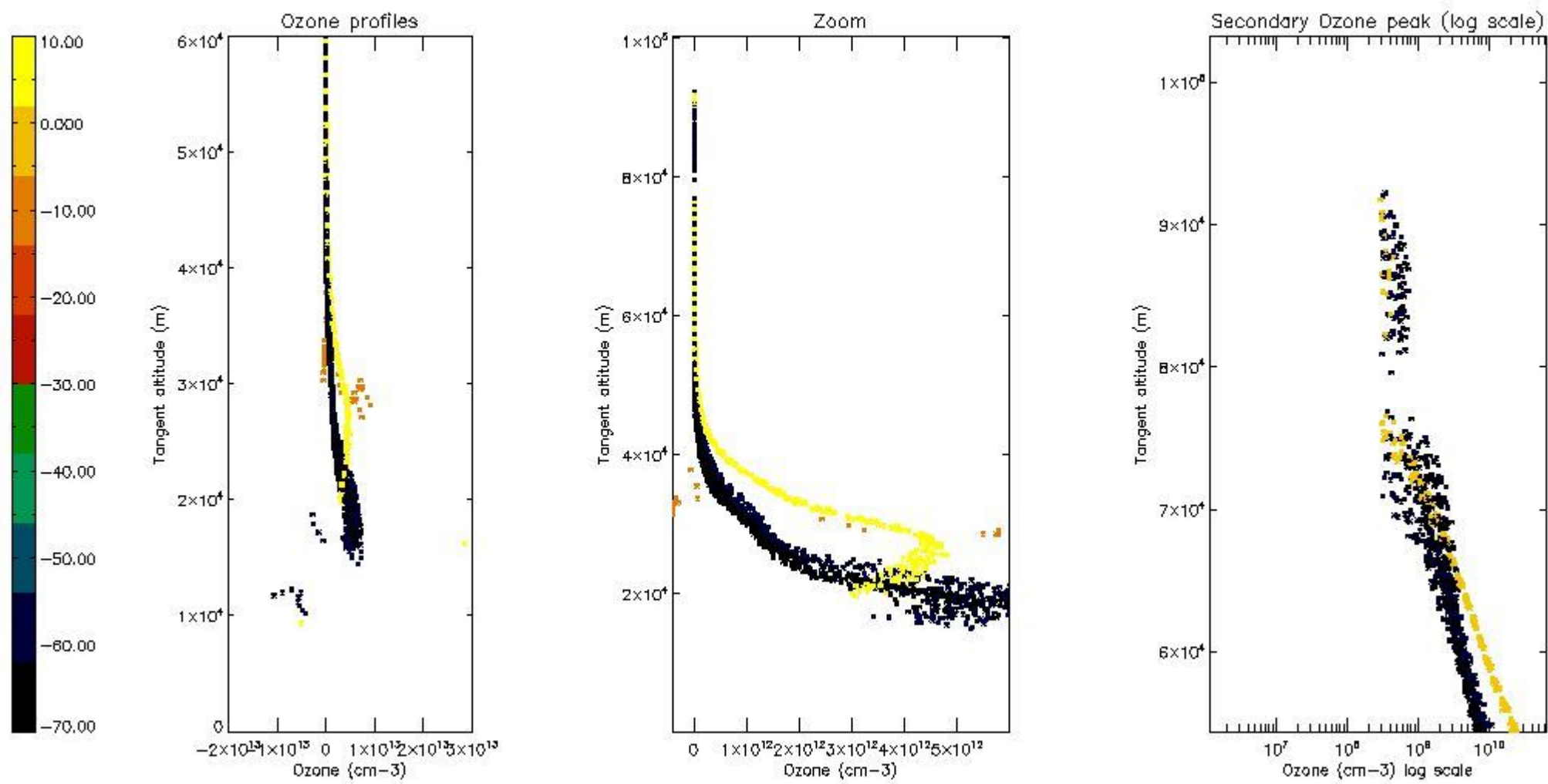
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



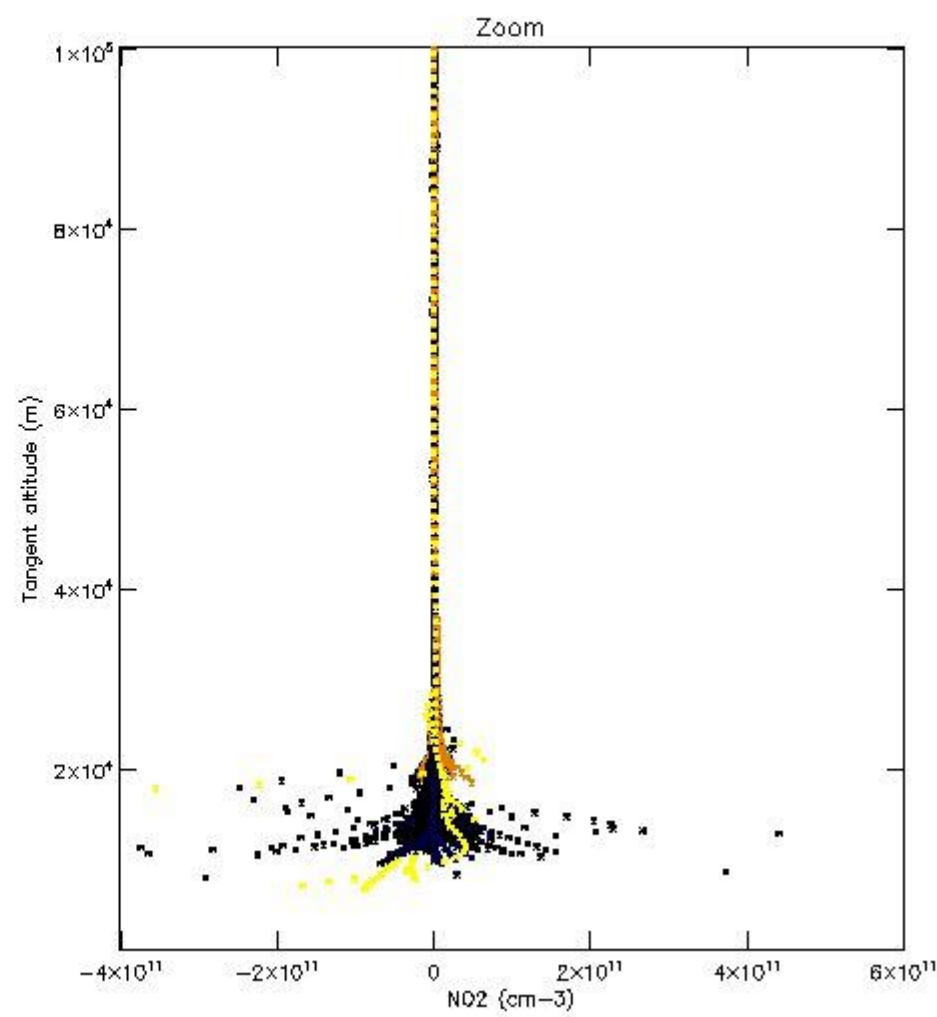
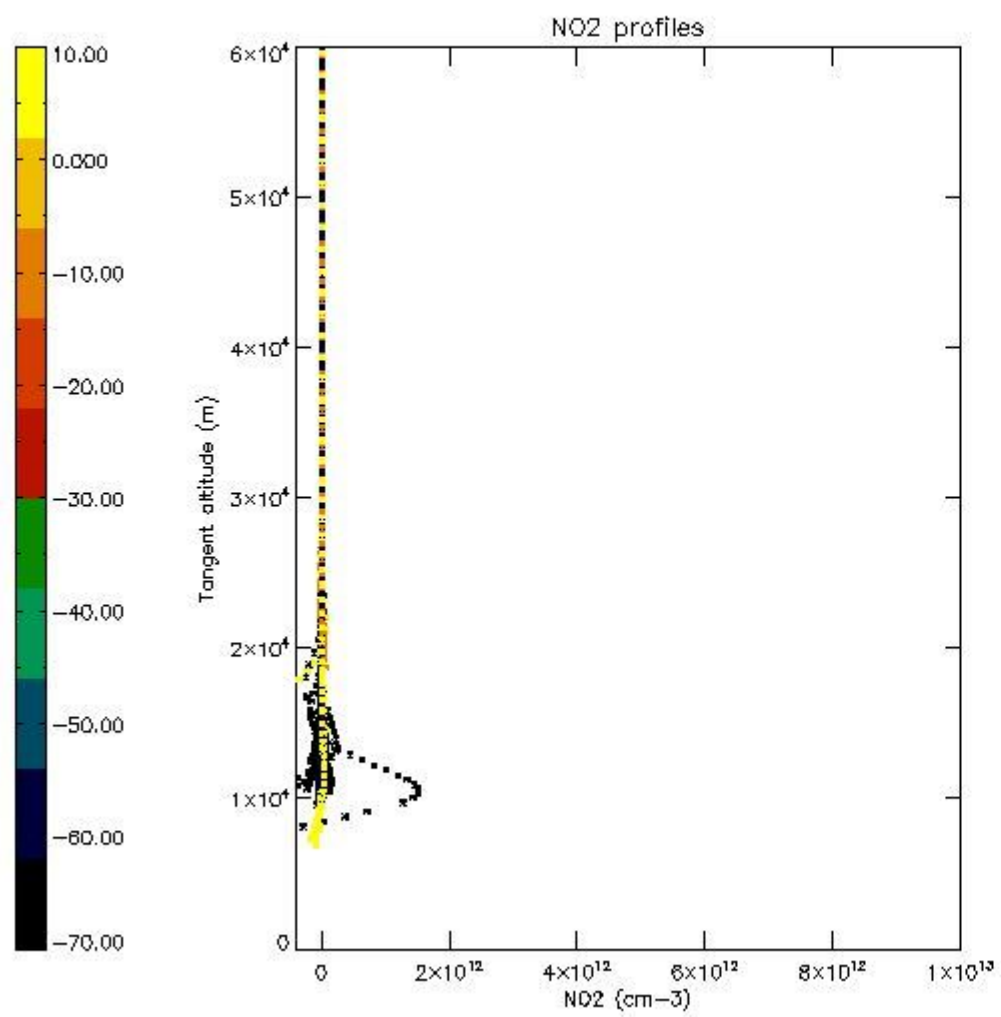
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



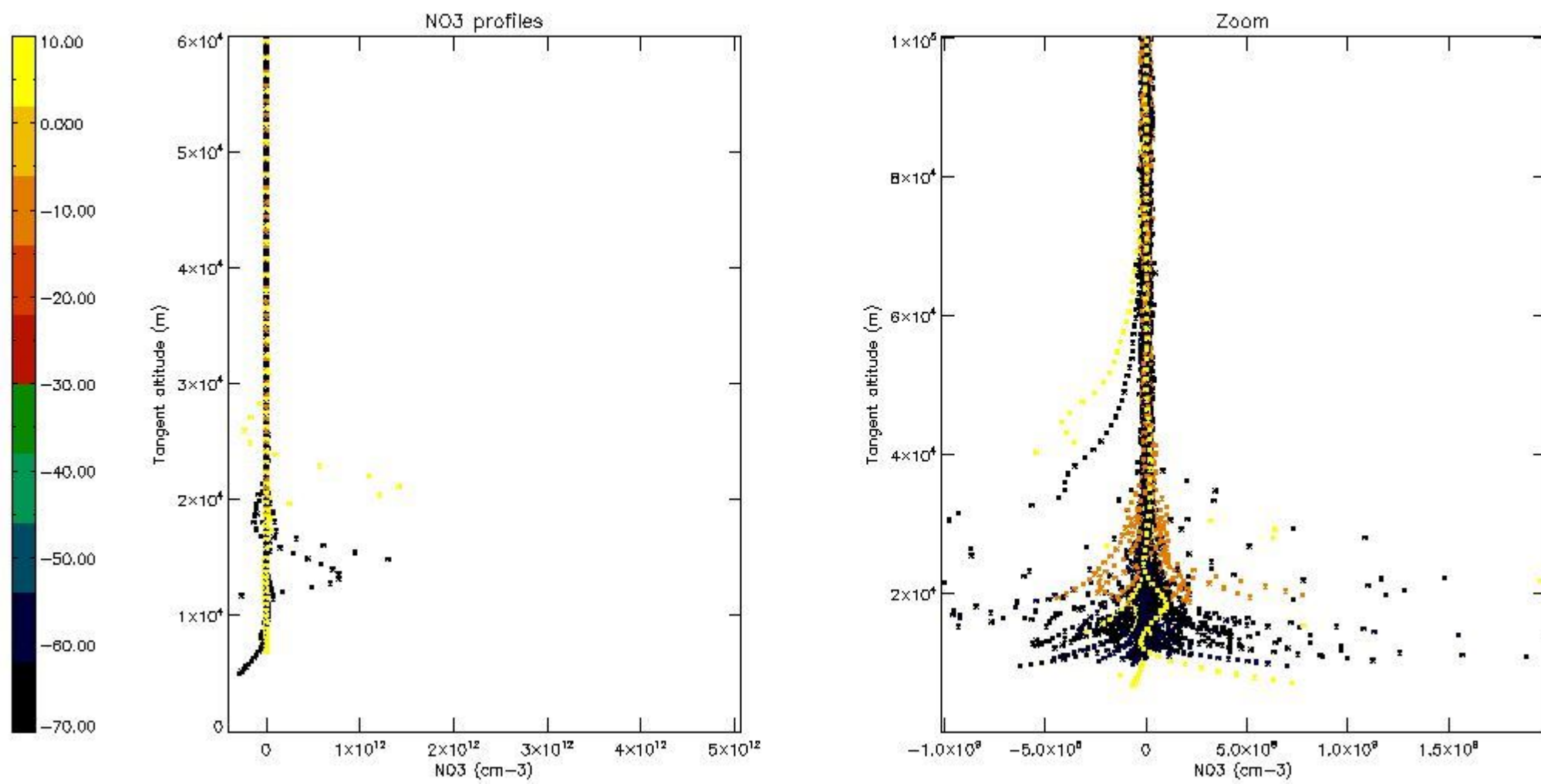
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



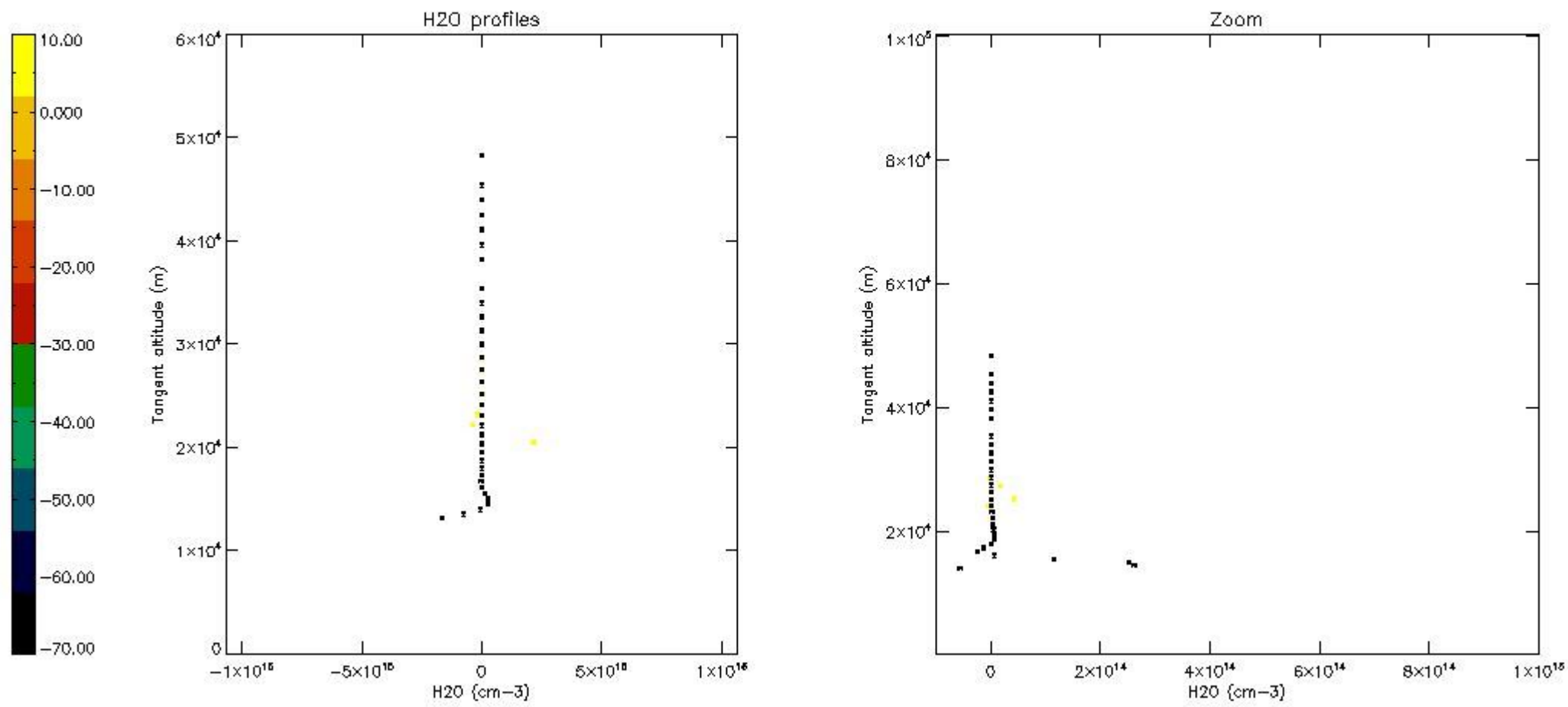
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.

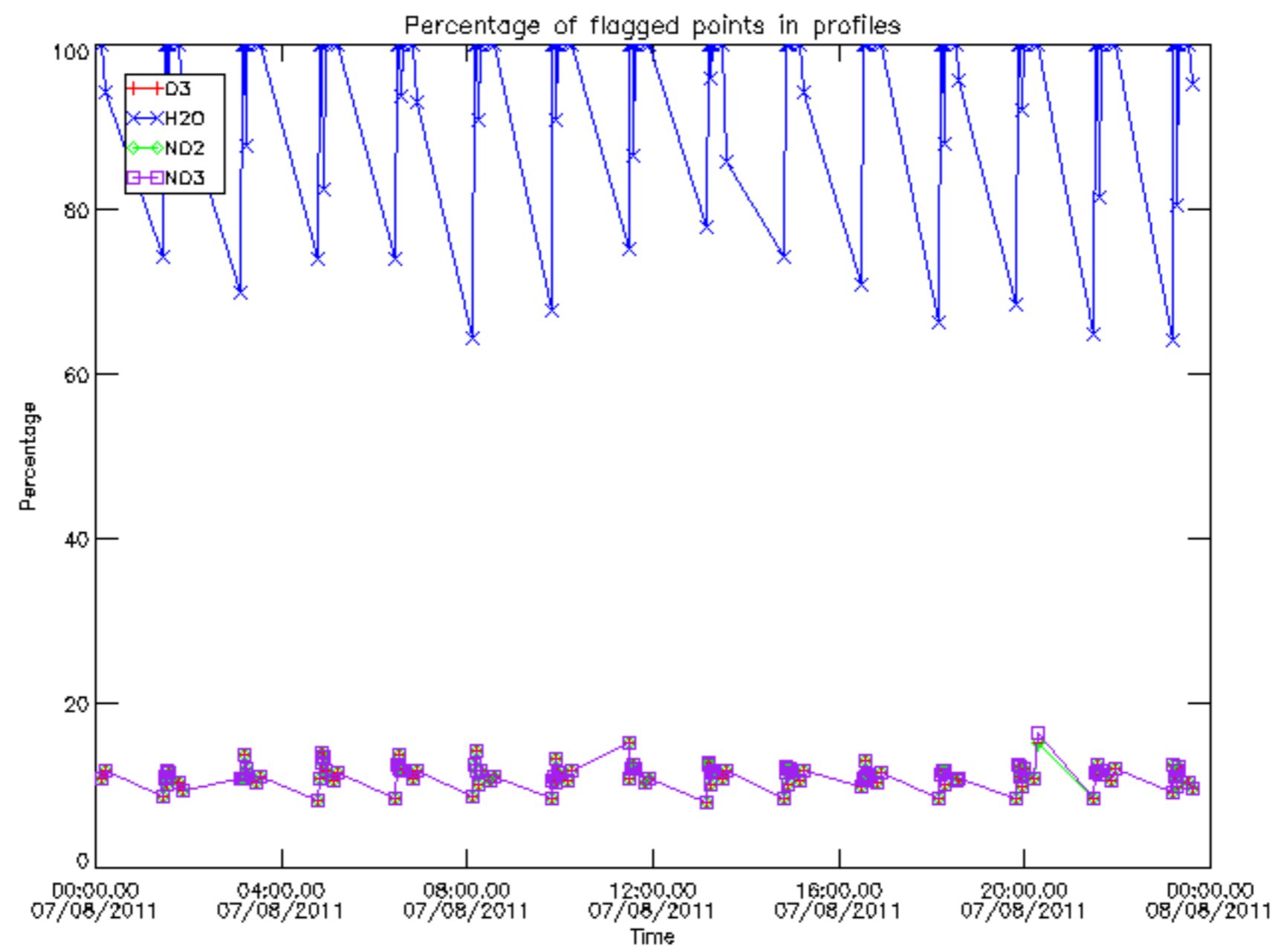


## 6. Auxiliary Data Files used for the production reported in section 2

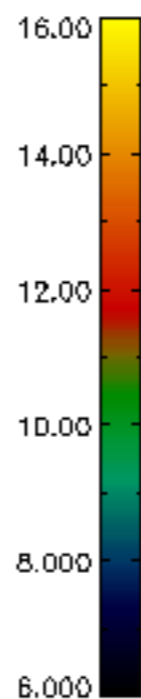
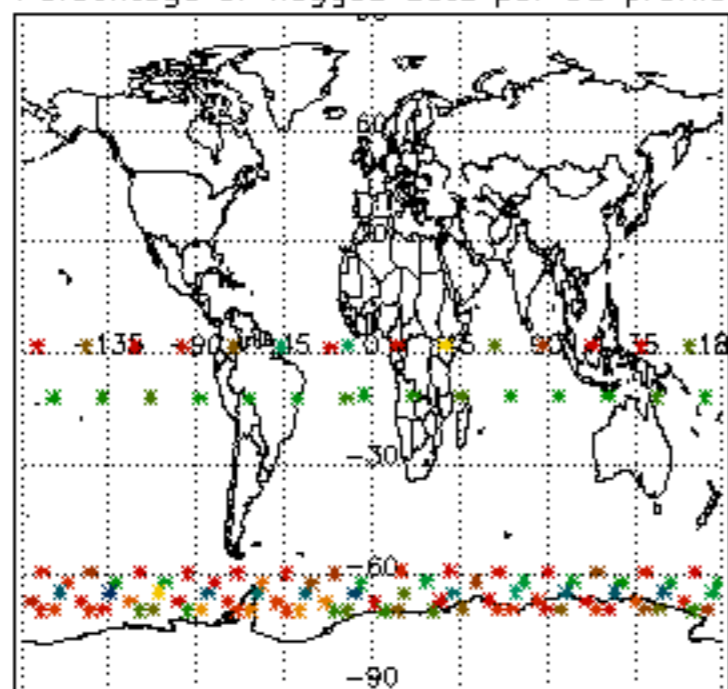
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	07-AUG-2011 00:07:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	07-AUG-2011 00:07:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	07-AUG-2011 00:07:59

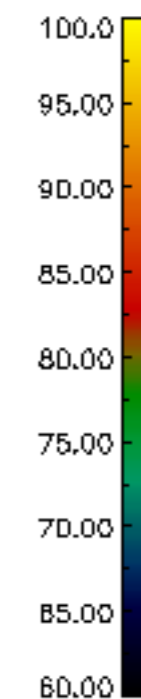
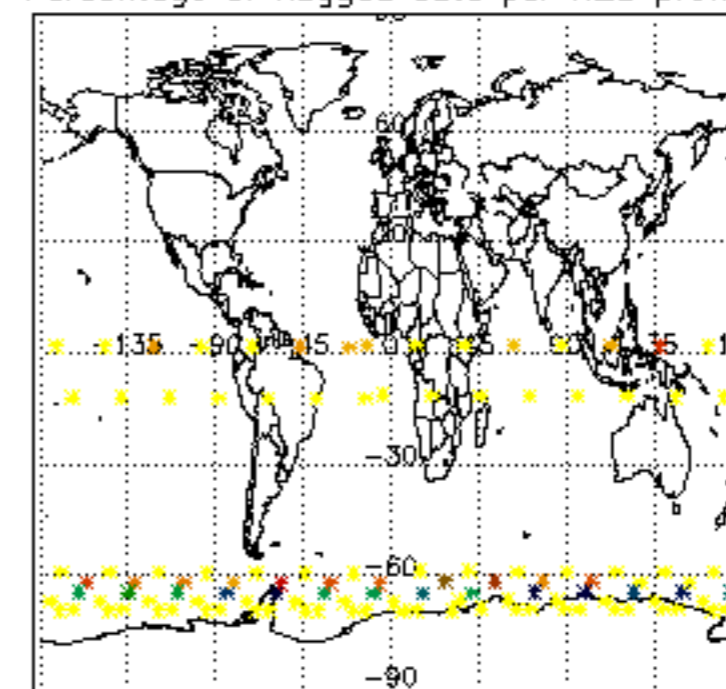




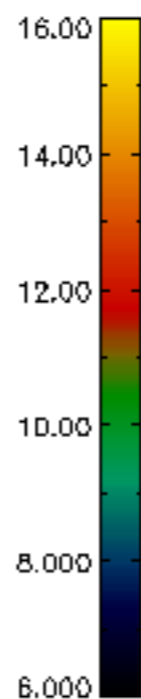
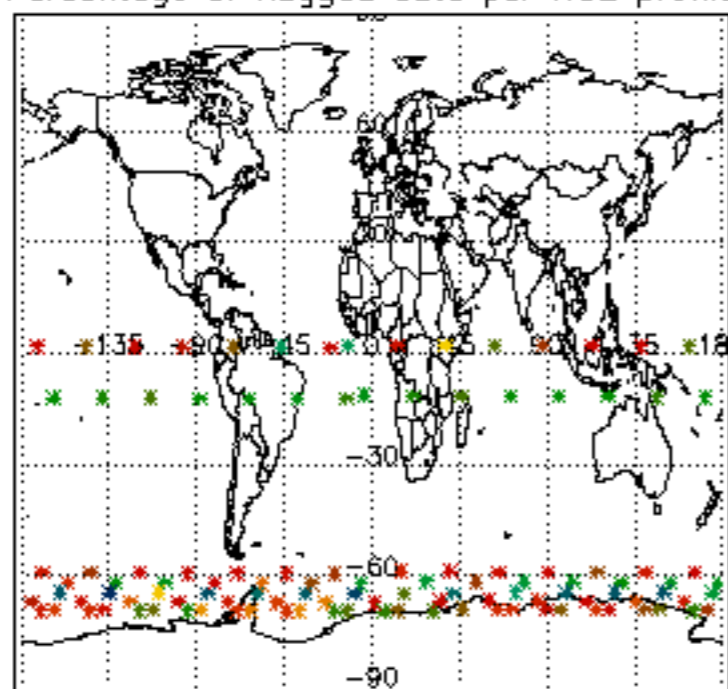
Percentage of flagged data per D3 profile



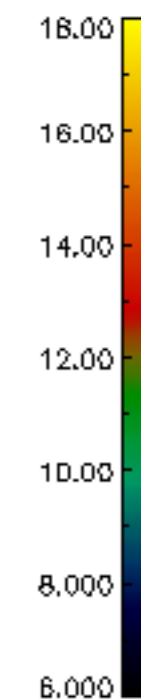
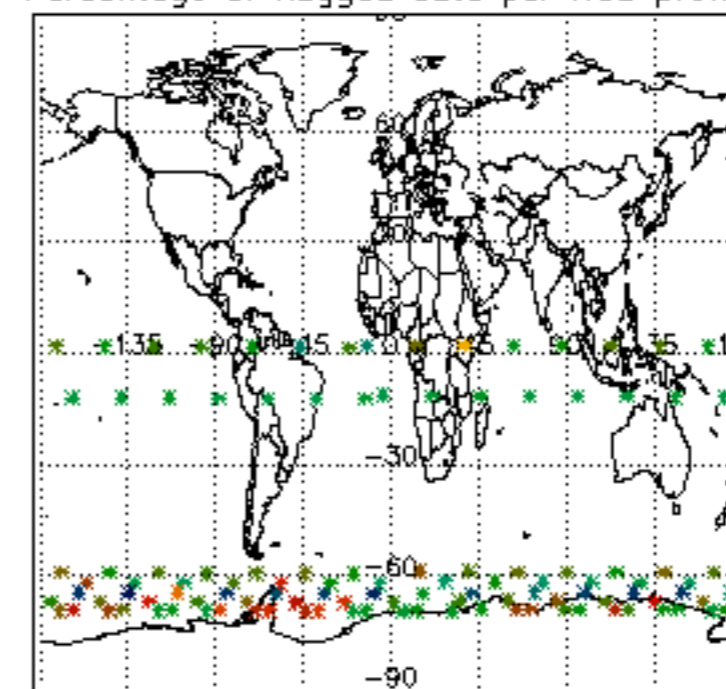
Percentage of flagged data per H2O profile

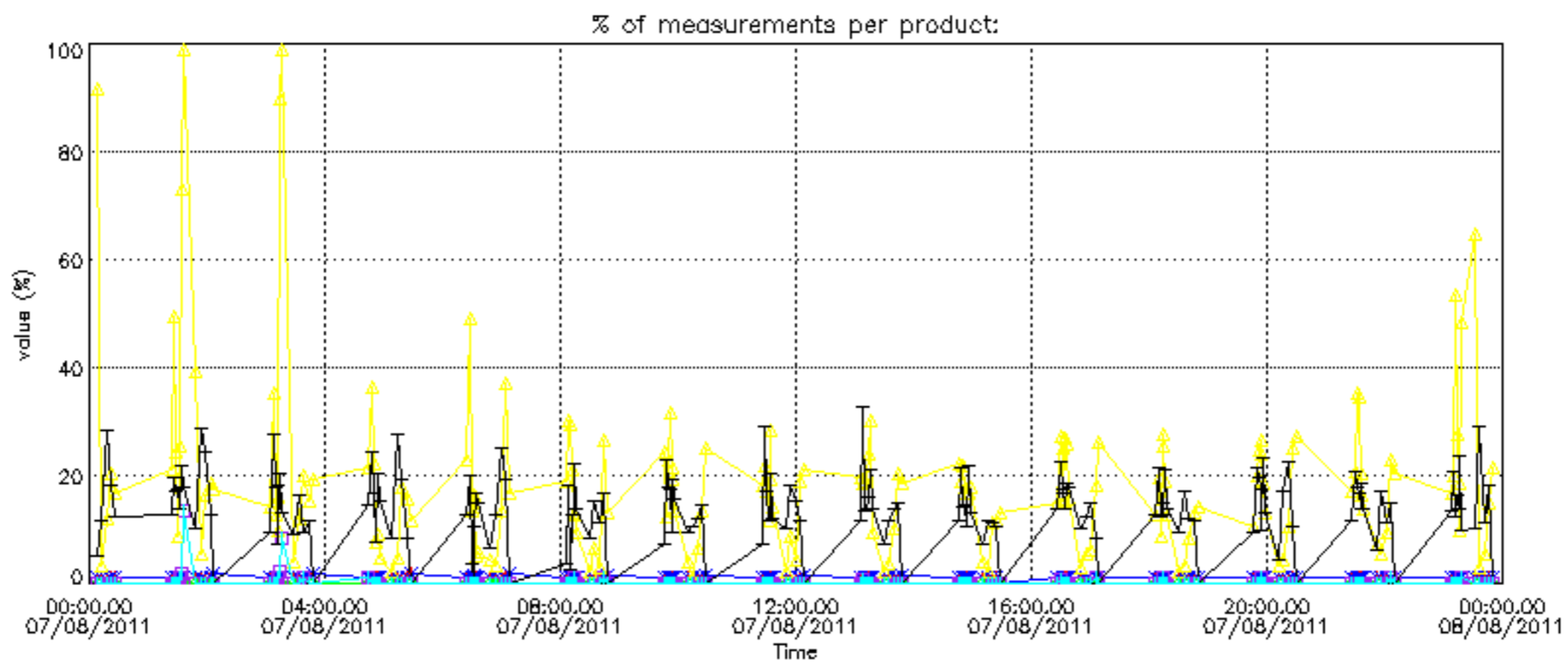


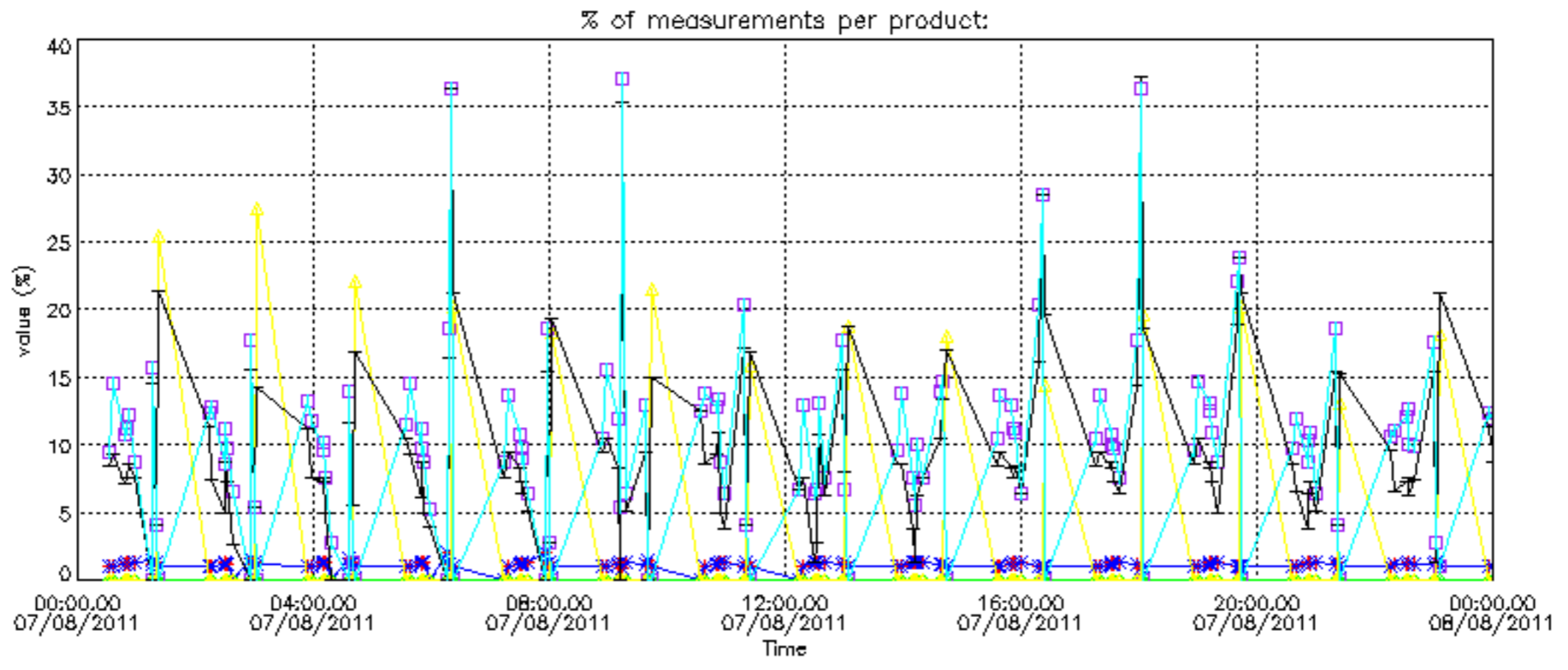
Percentage of flagged data per NO2 profile



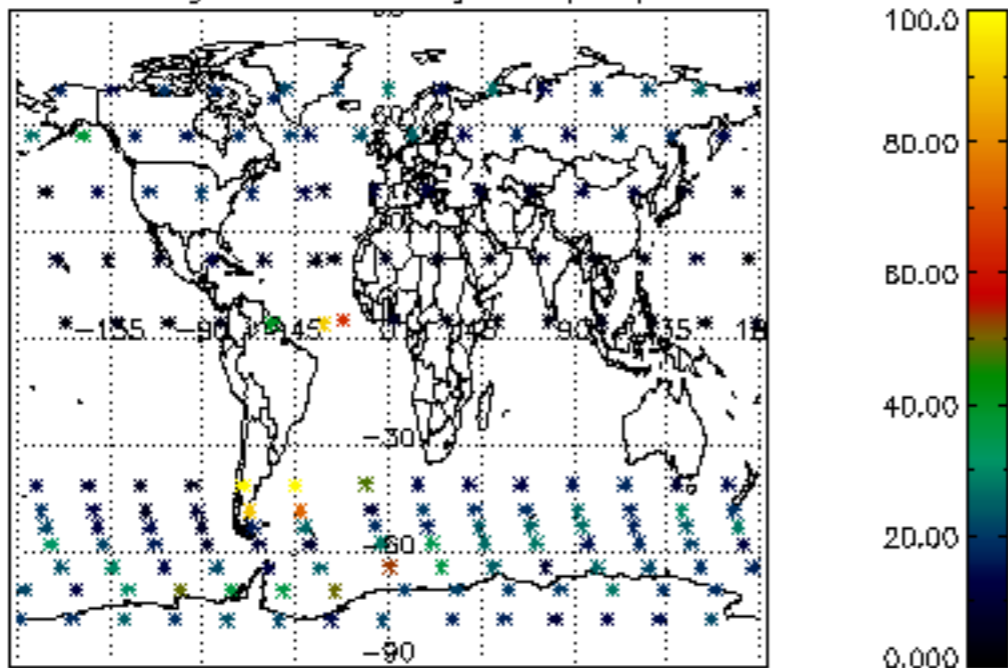
Percentage of flagged data per NO3 profile



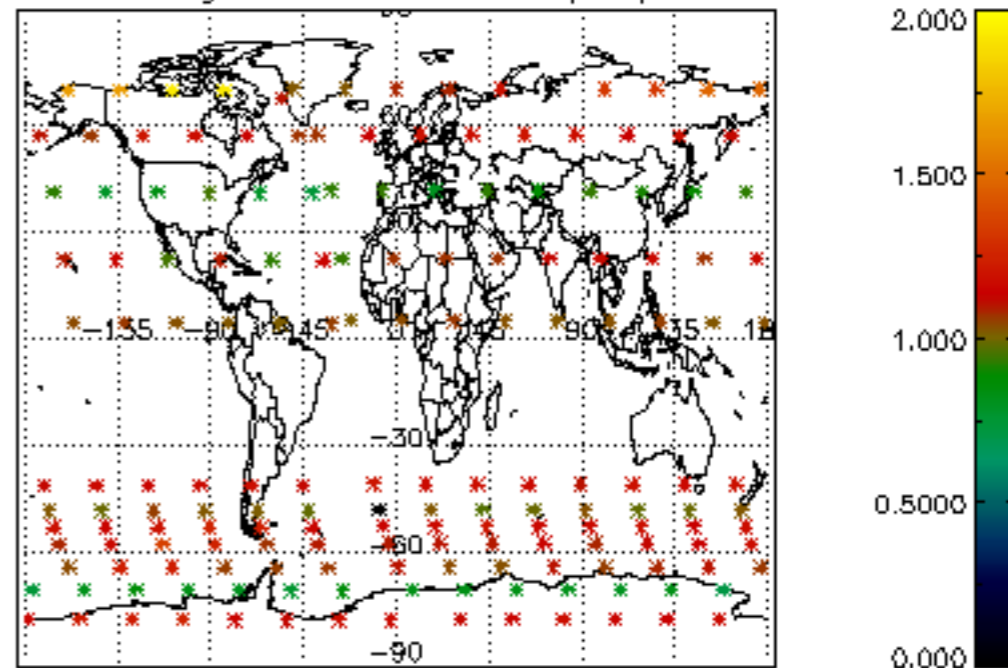




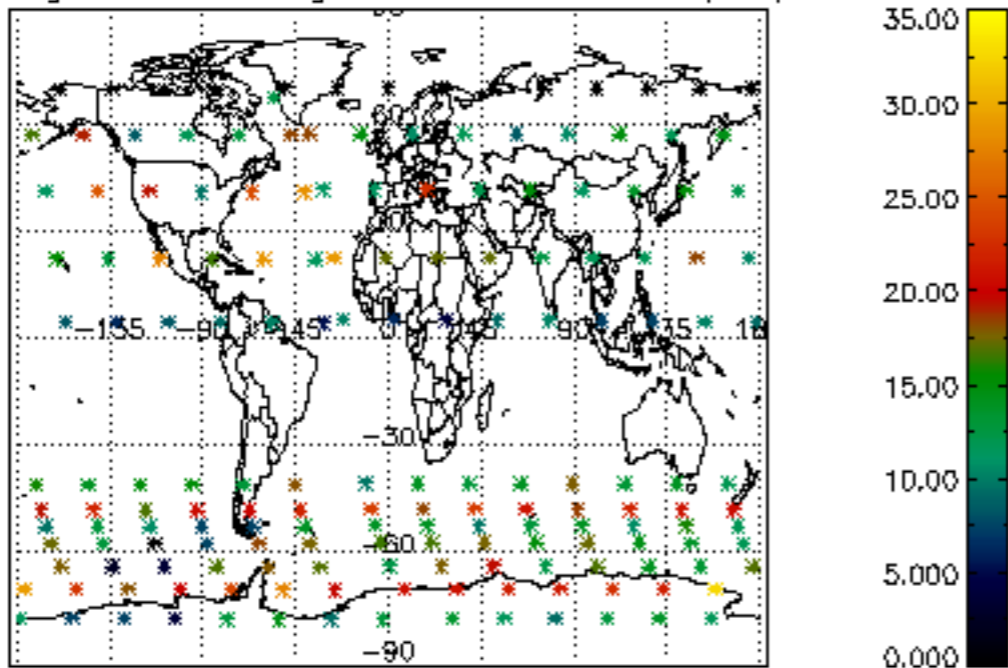
Percentage of cosmic ray hits per profile



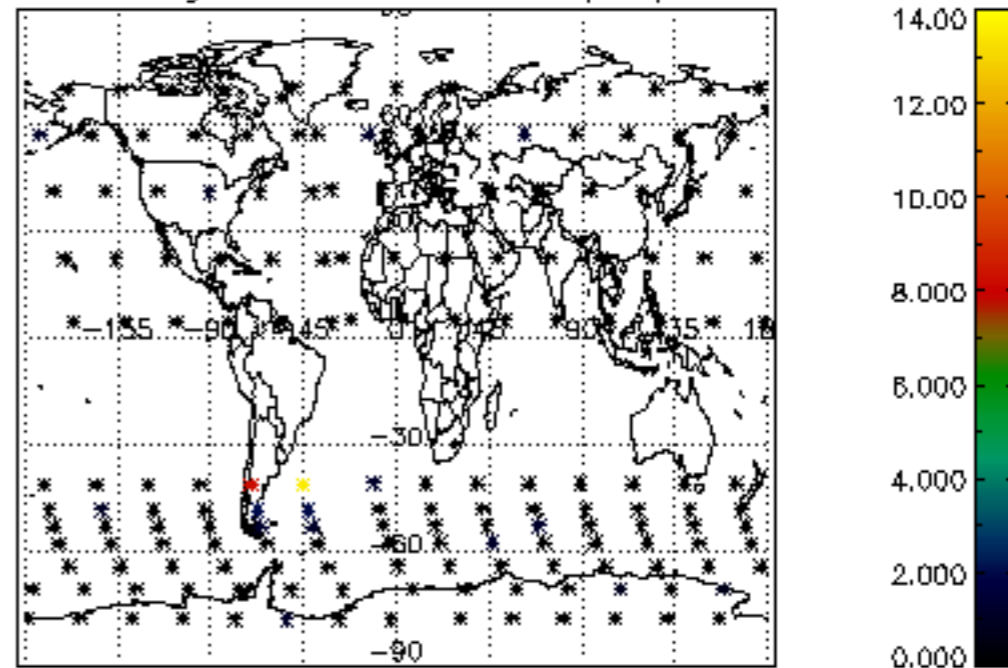
Percentage of datation errors per profile



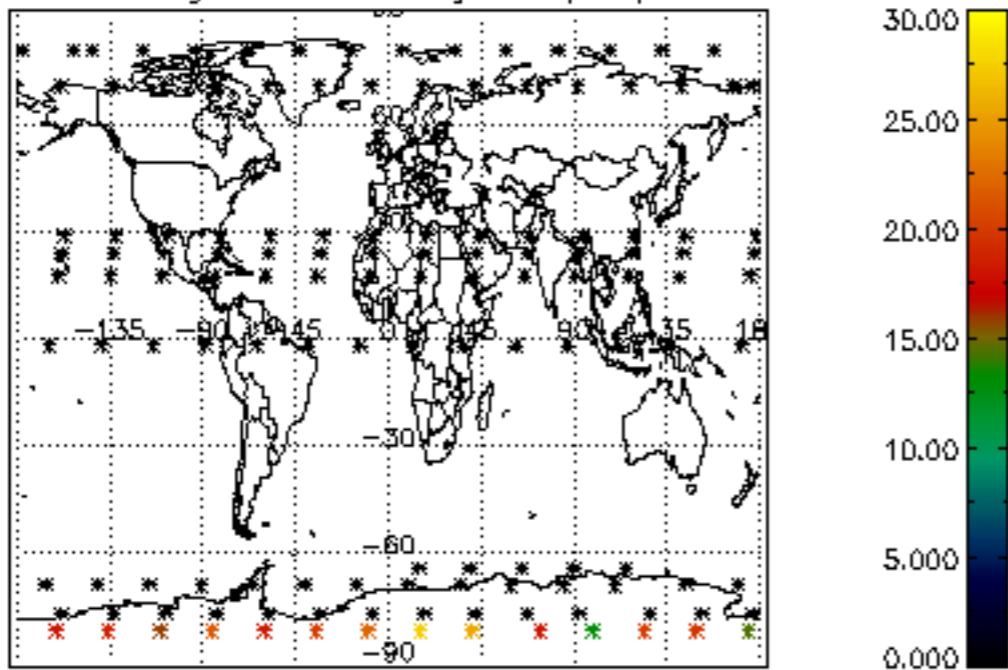
Percentage of star falling outside central band per profile



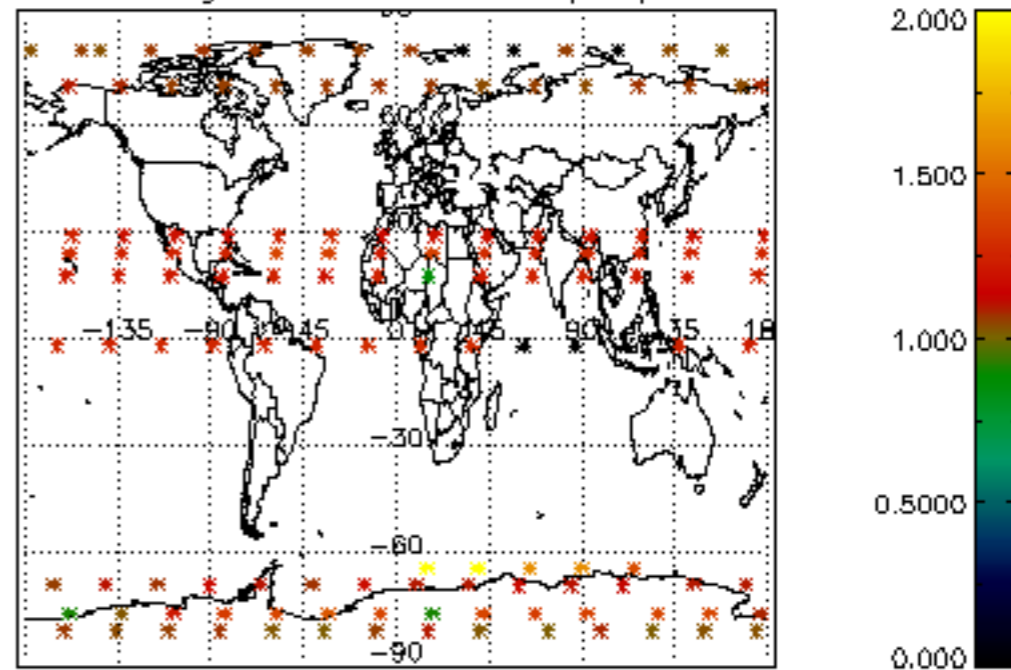
Percentage of saturation errors per profile



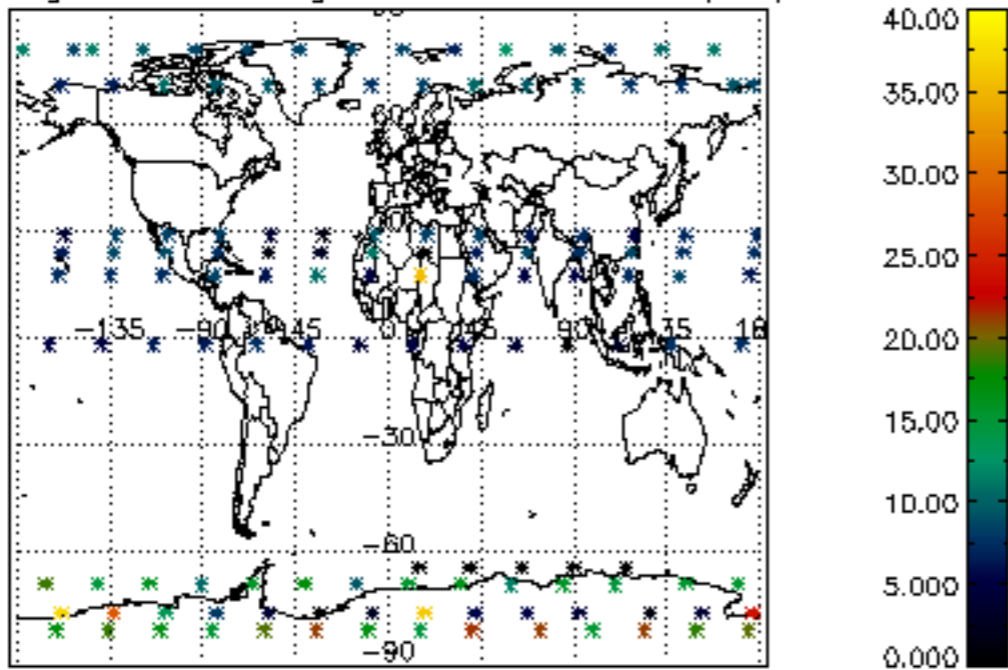
Percentage of cosmic ray hits per profile



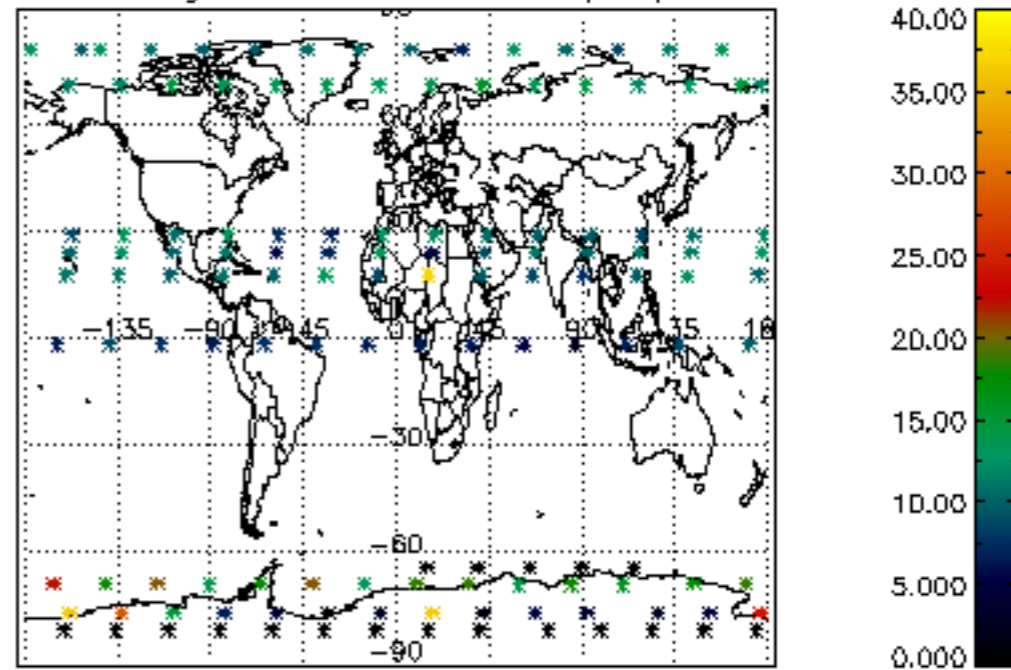
Percentage of datation errors per profile

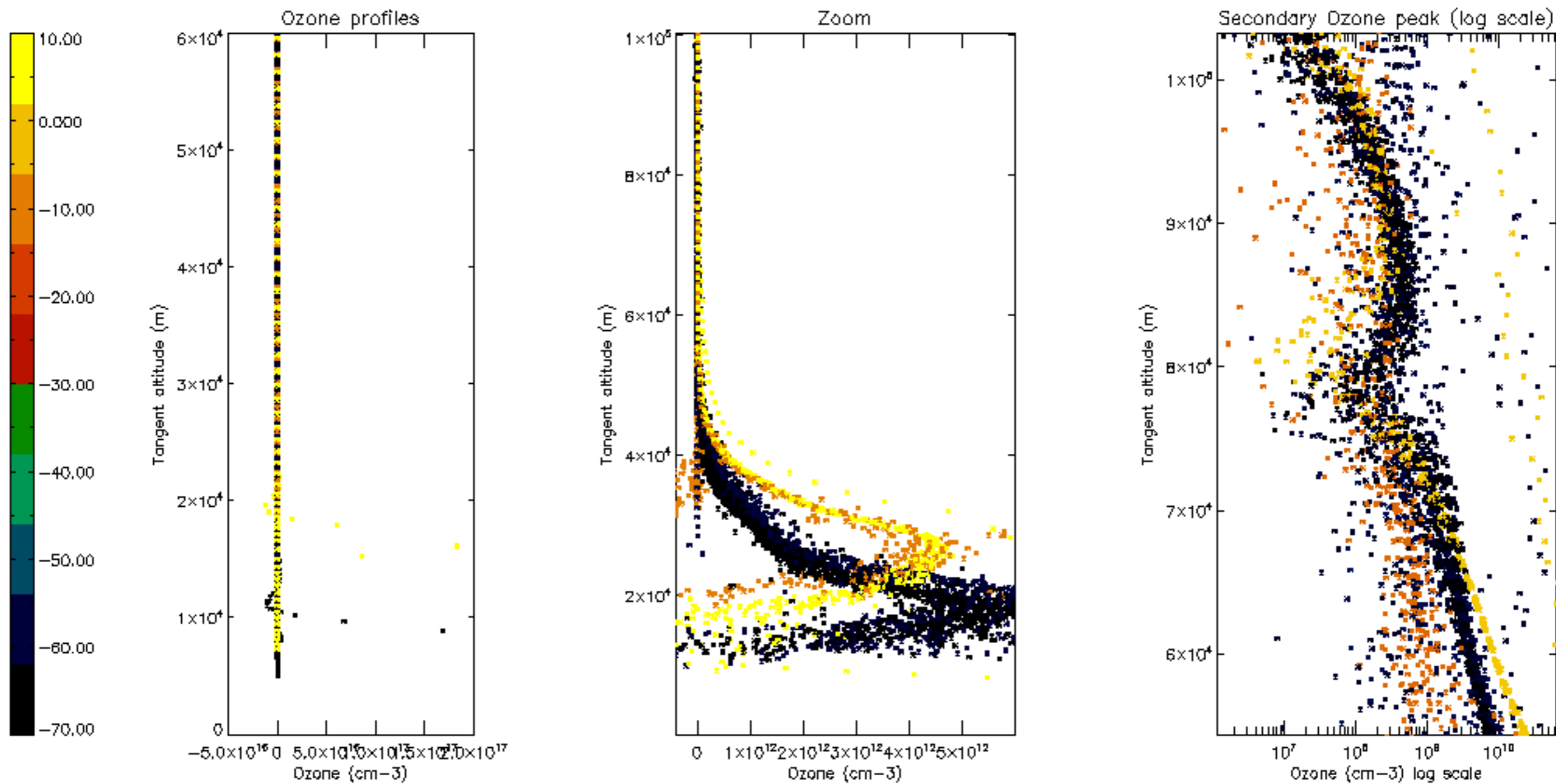


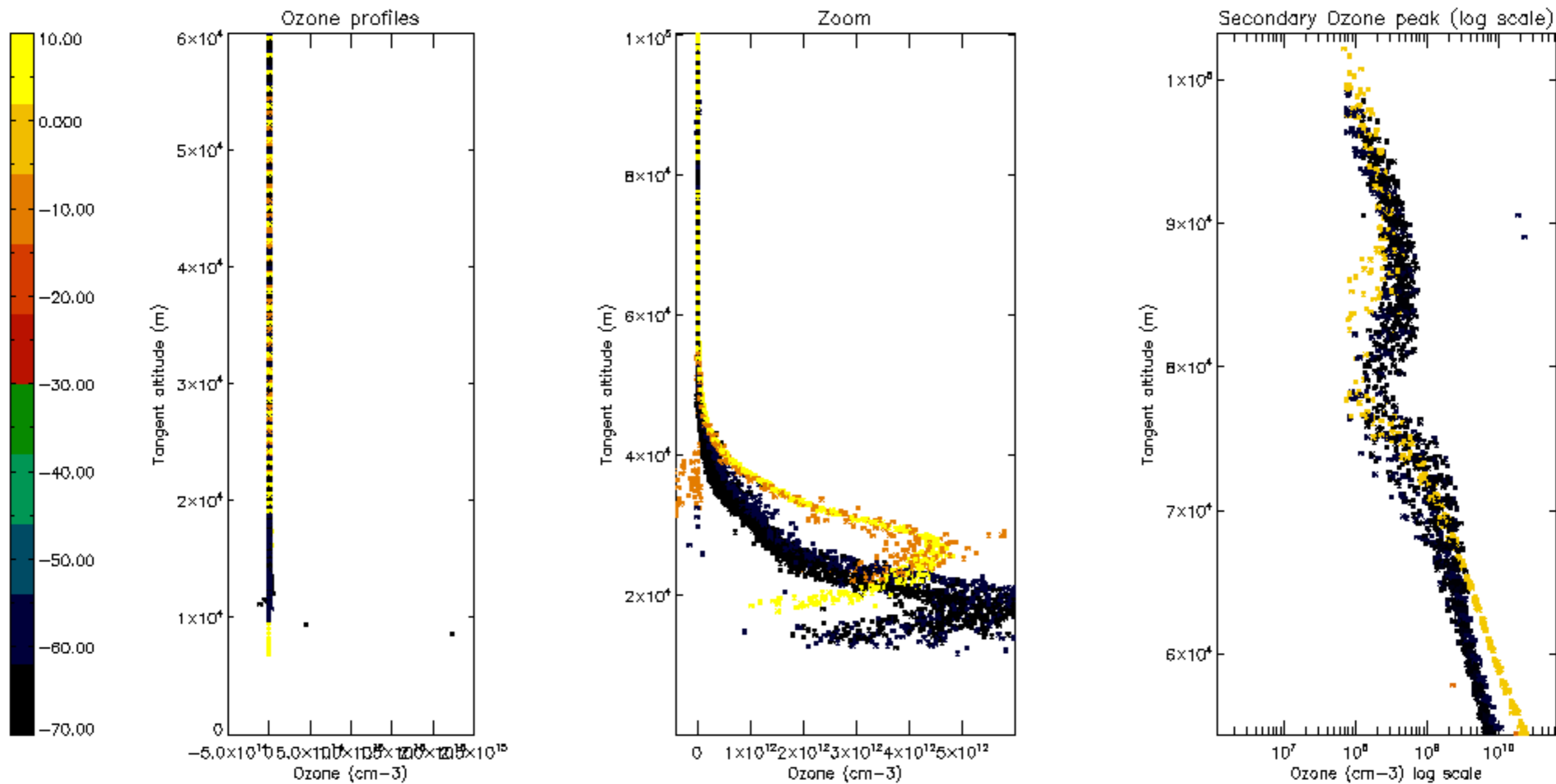
Percentage of star falling outside central band per profile



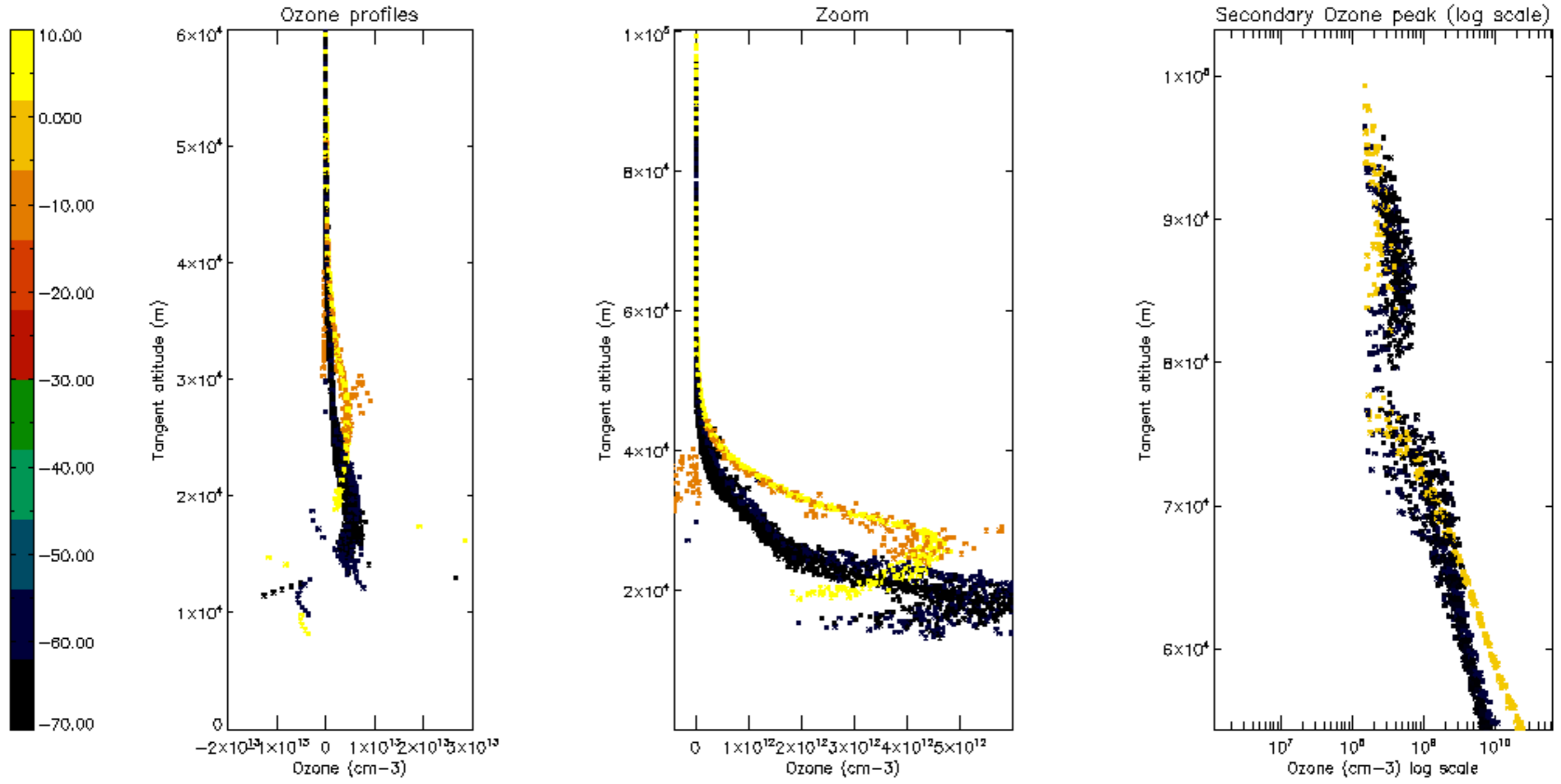
Percentage of saturation errors per profile

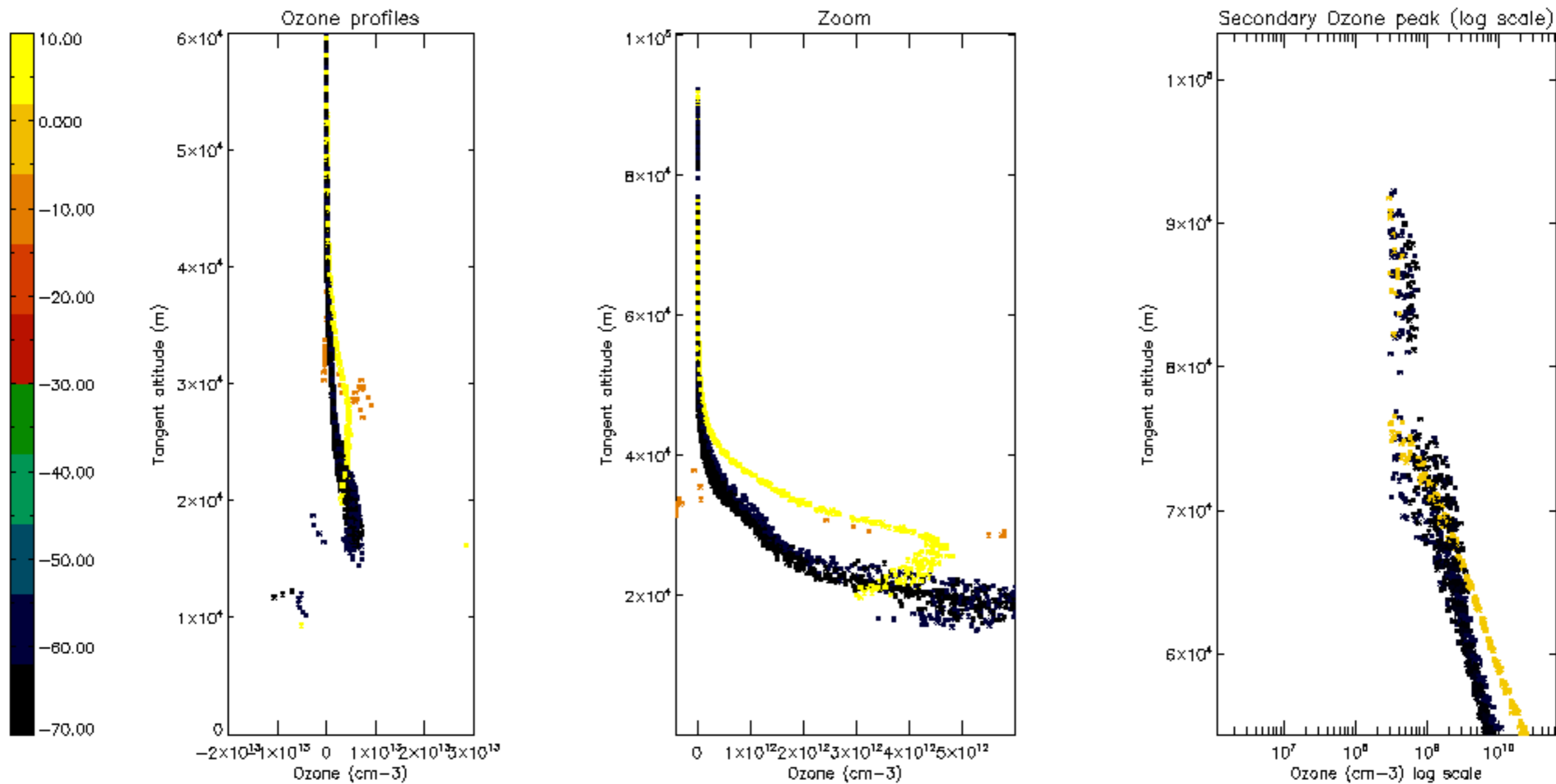


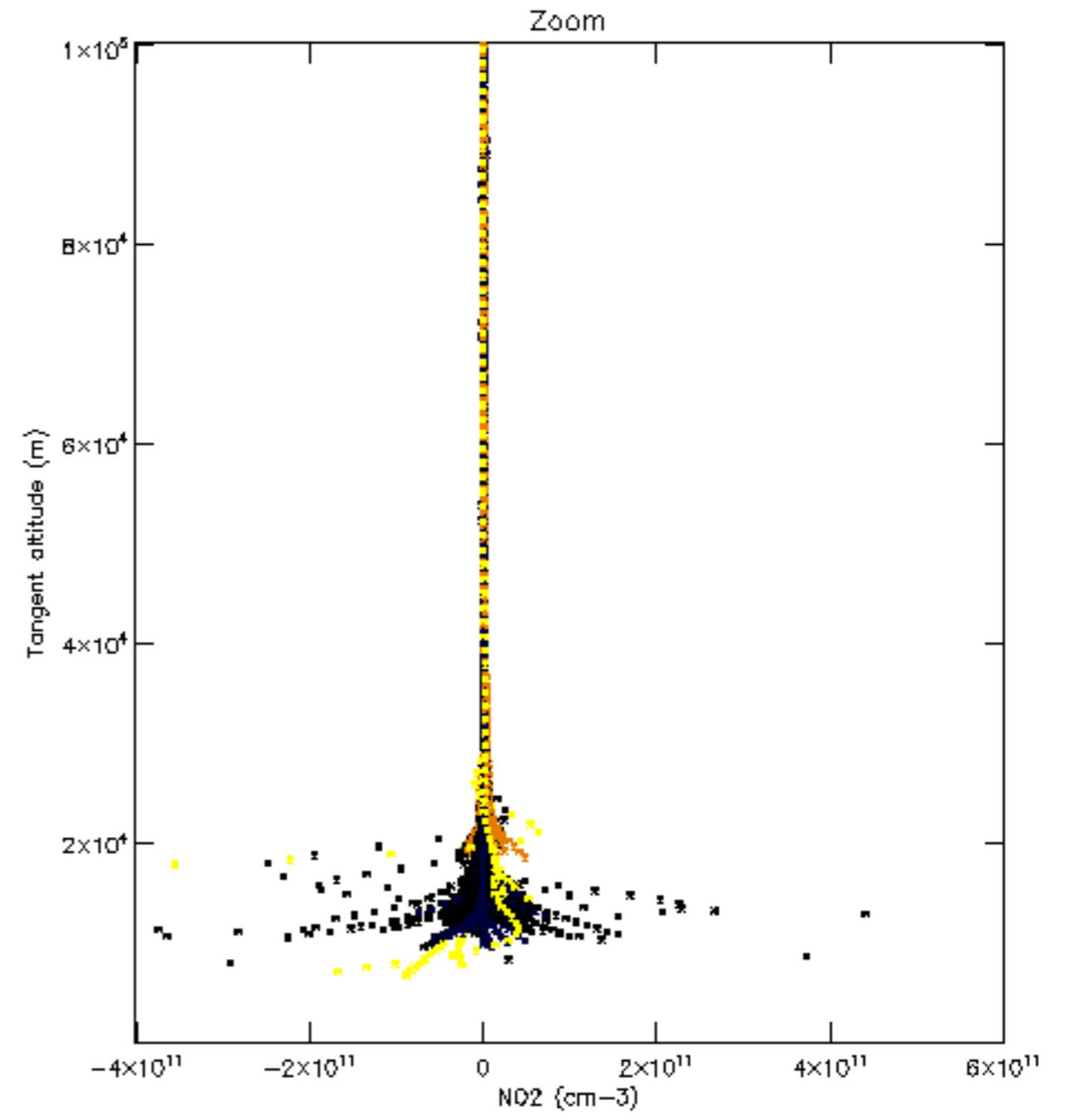
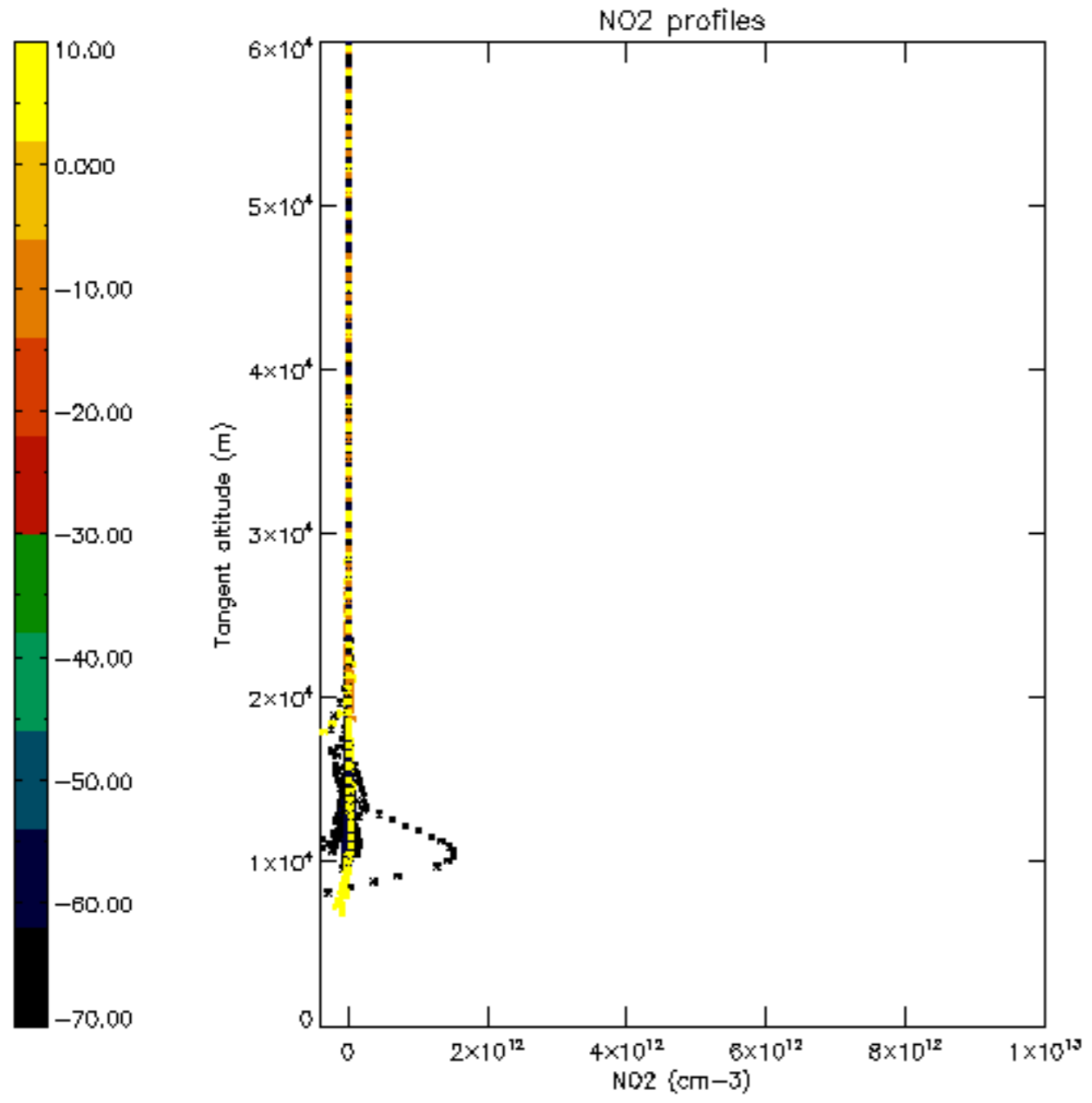


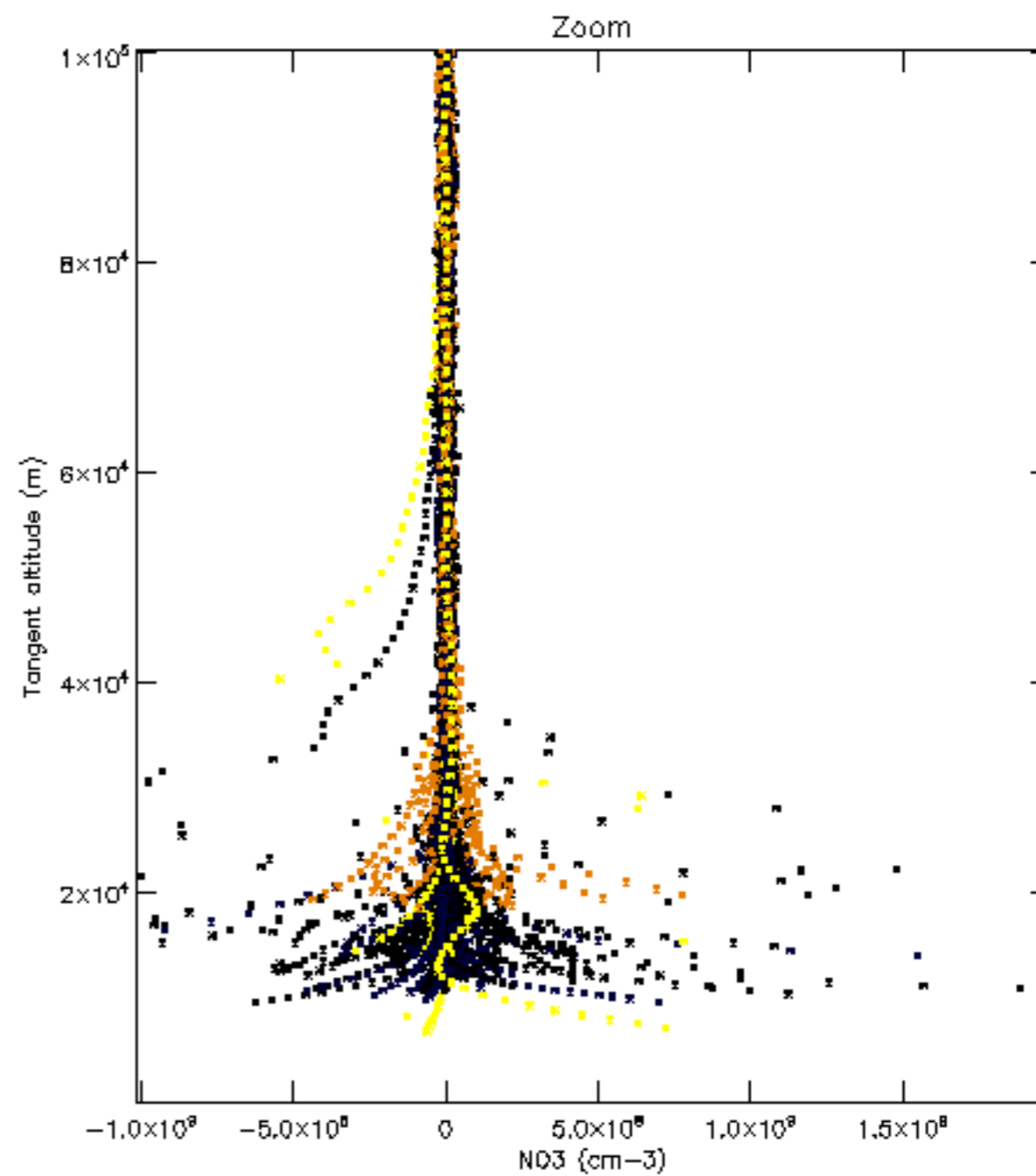
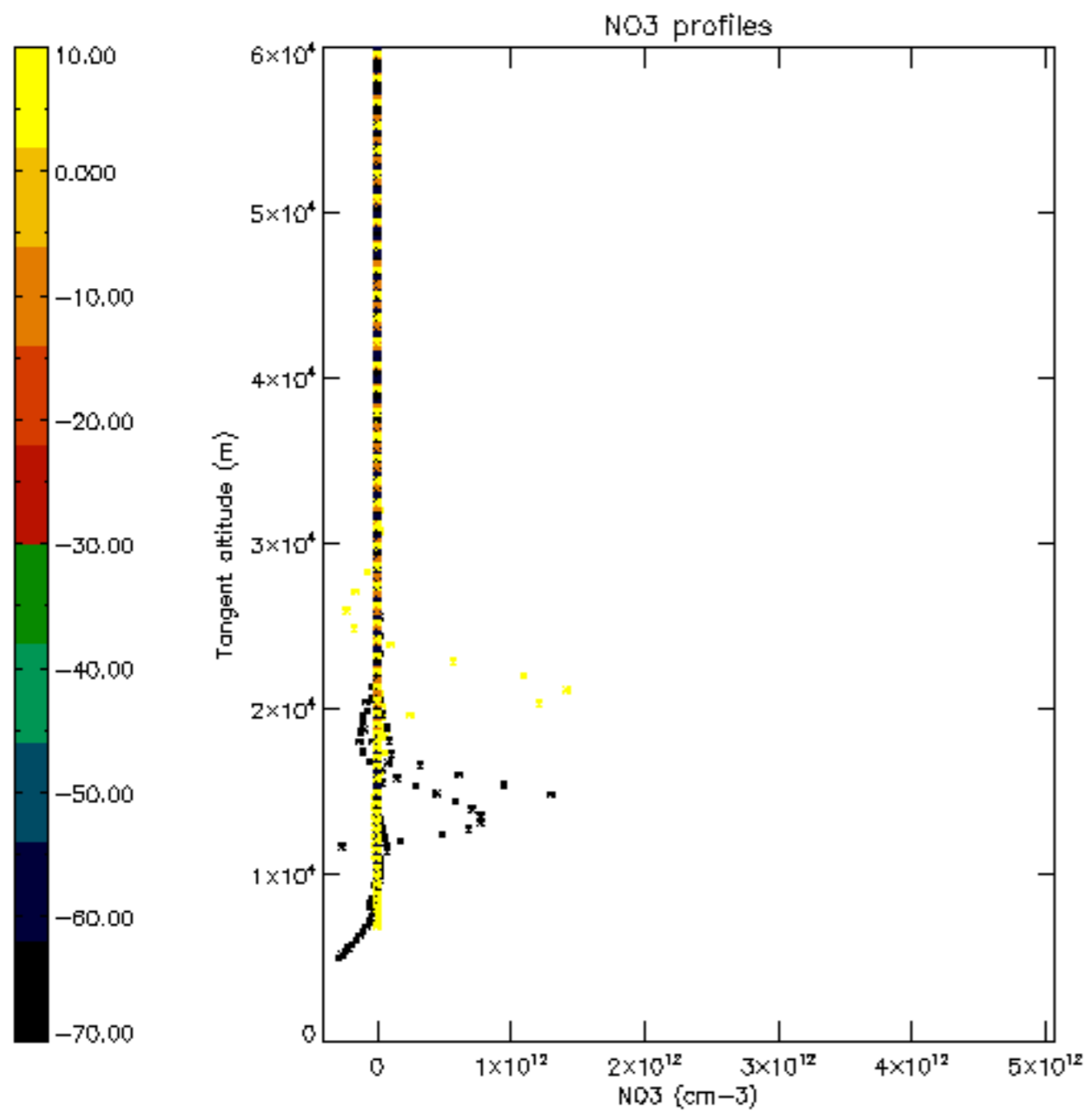


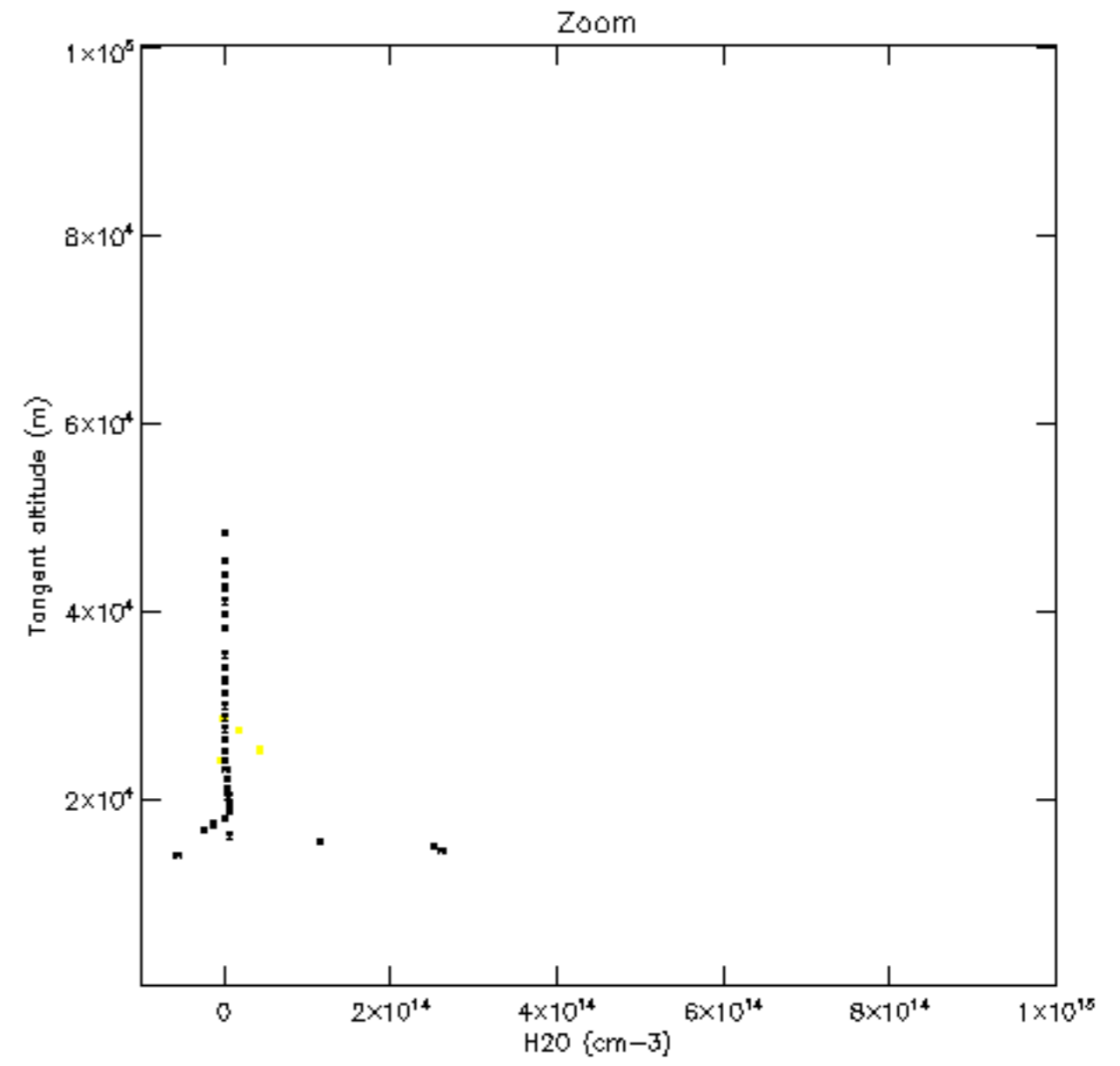
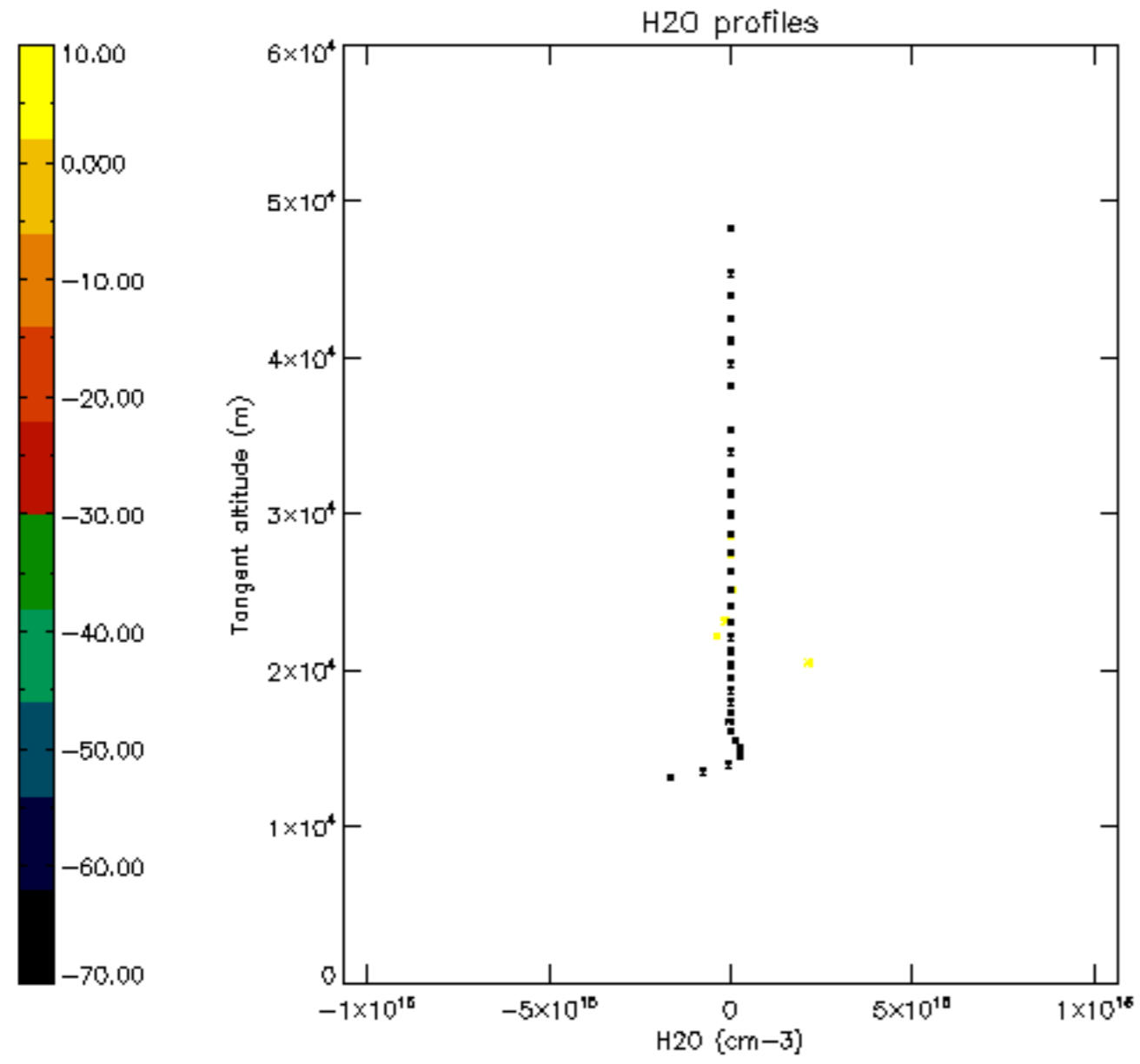


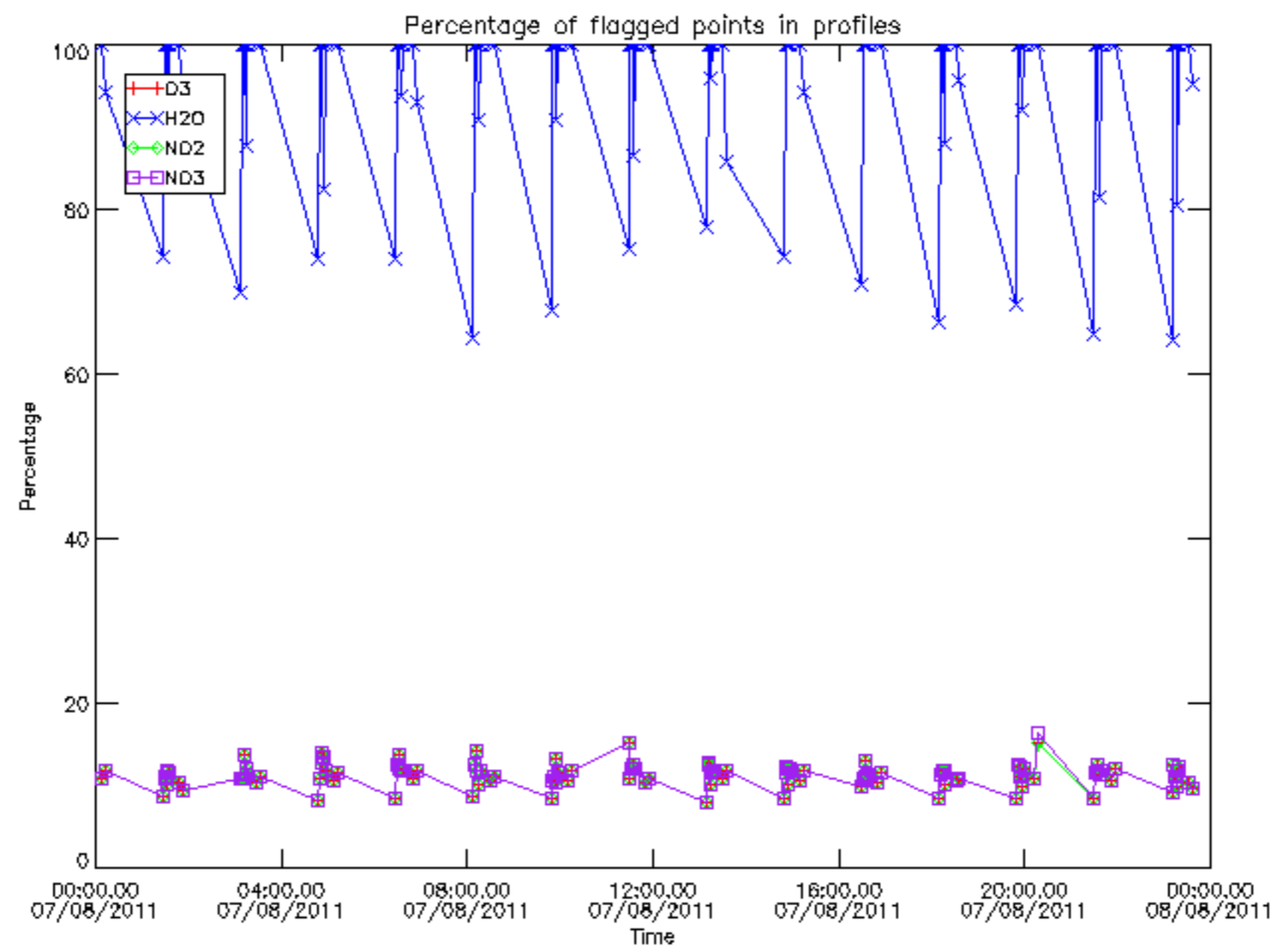




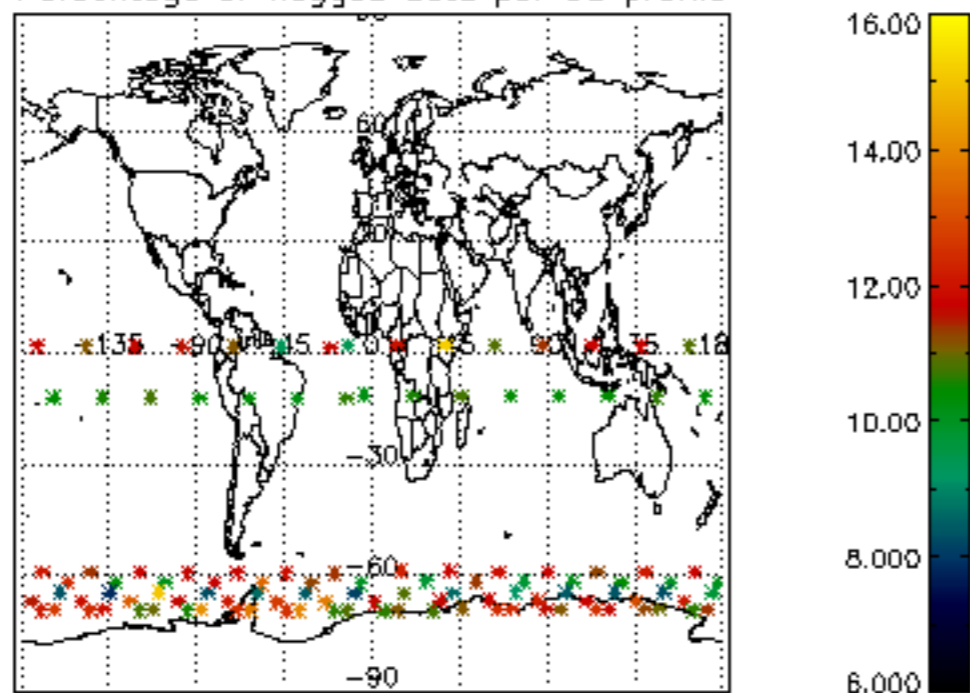




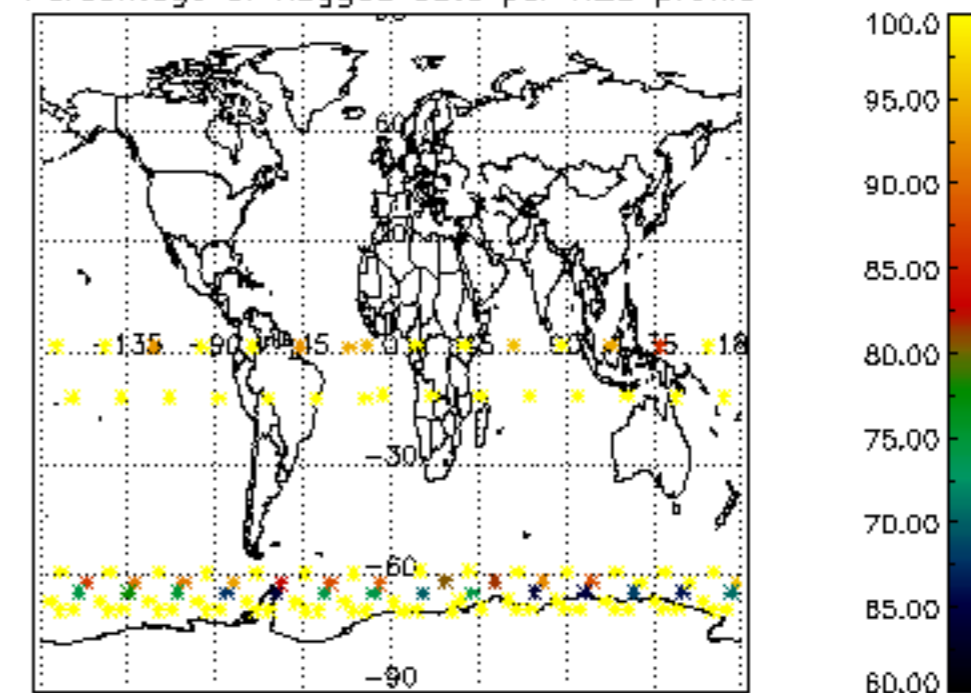




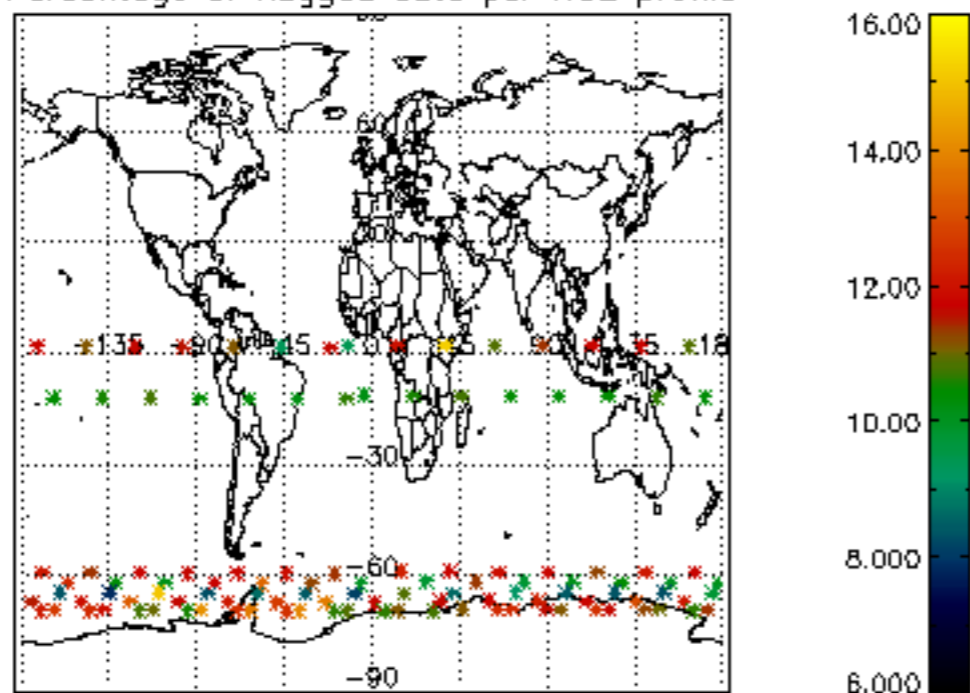
Percentage of flagged data per D3 profile



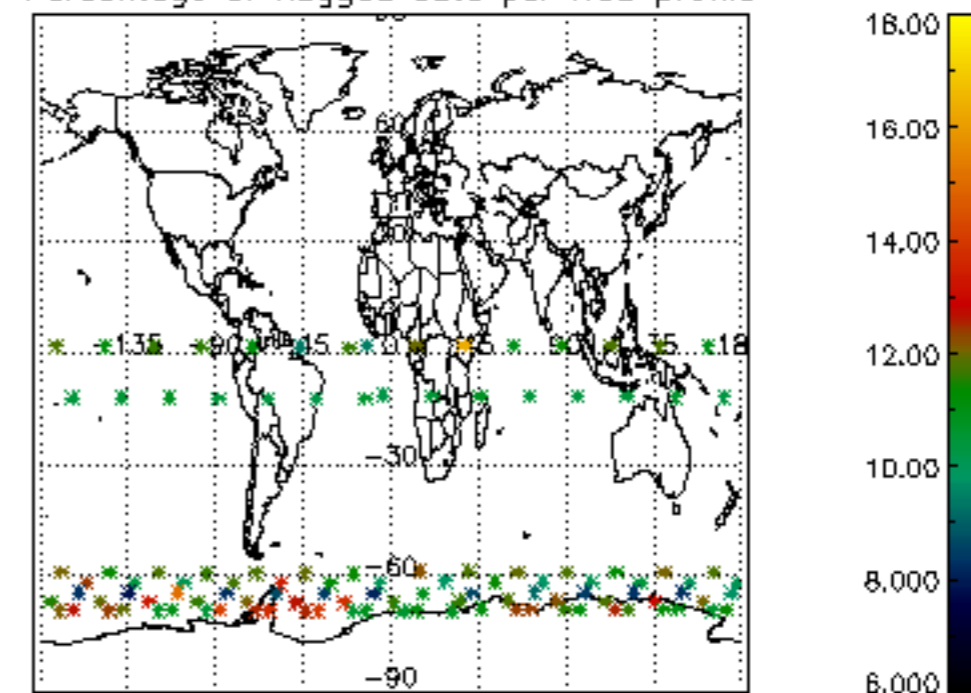
Percentage of flagged data per H2O profile

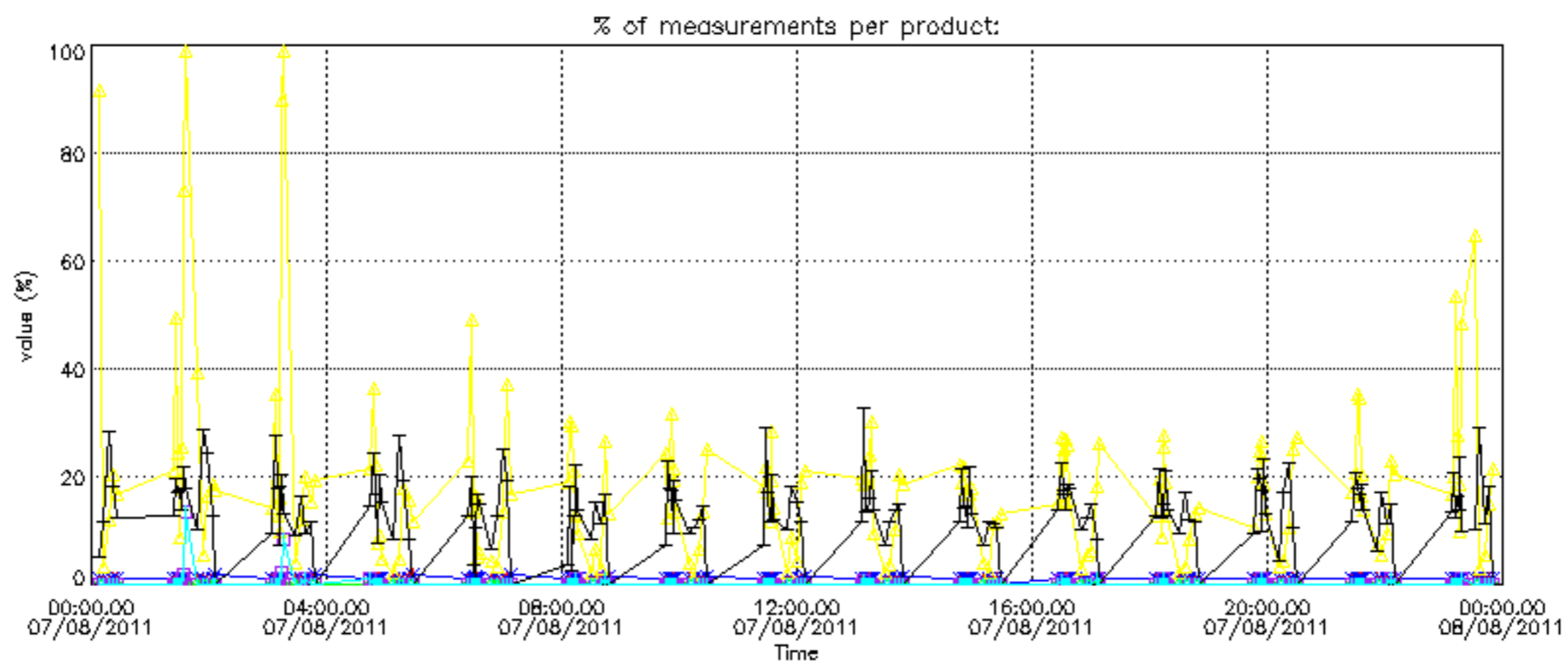
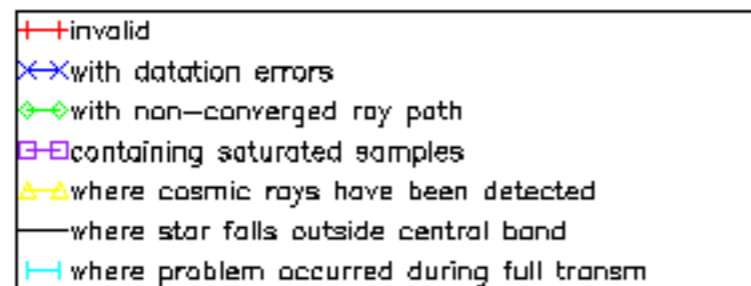


Percentage of flagged data per NO2 profile

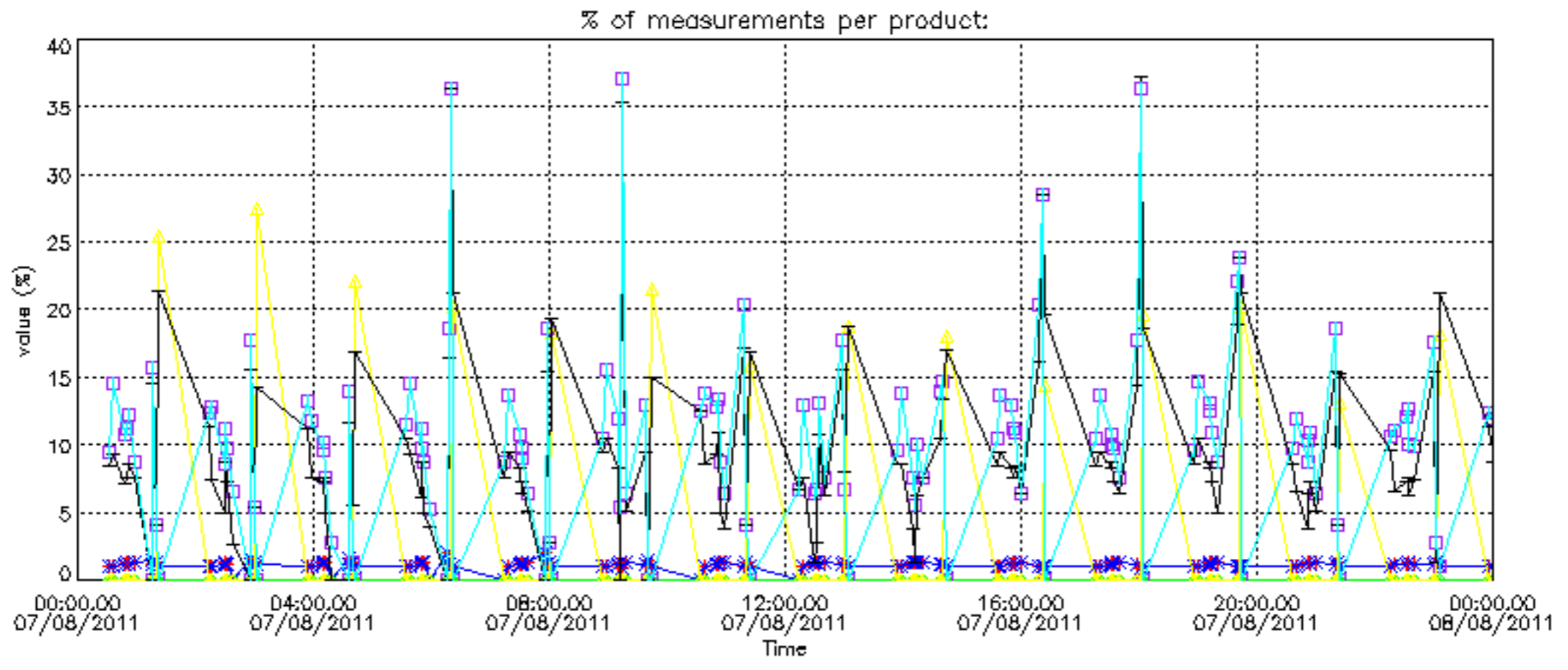


Percentage of flagged data per NO3 profile

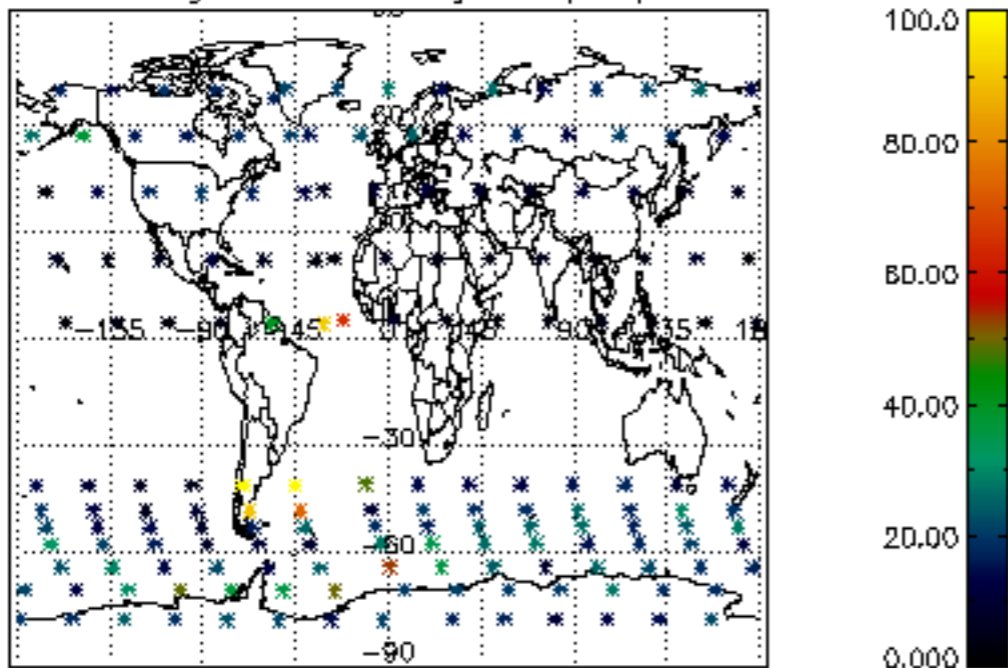




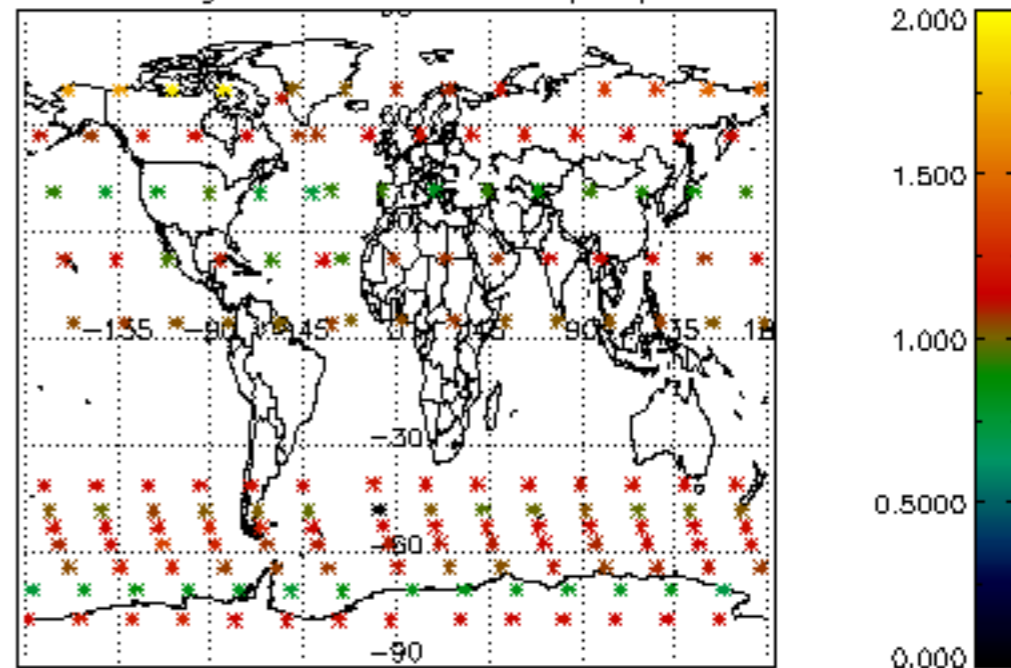




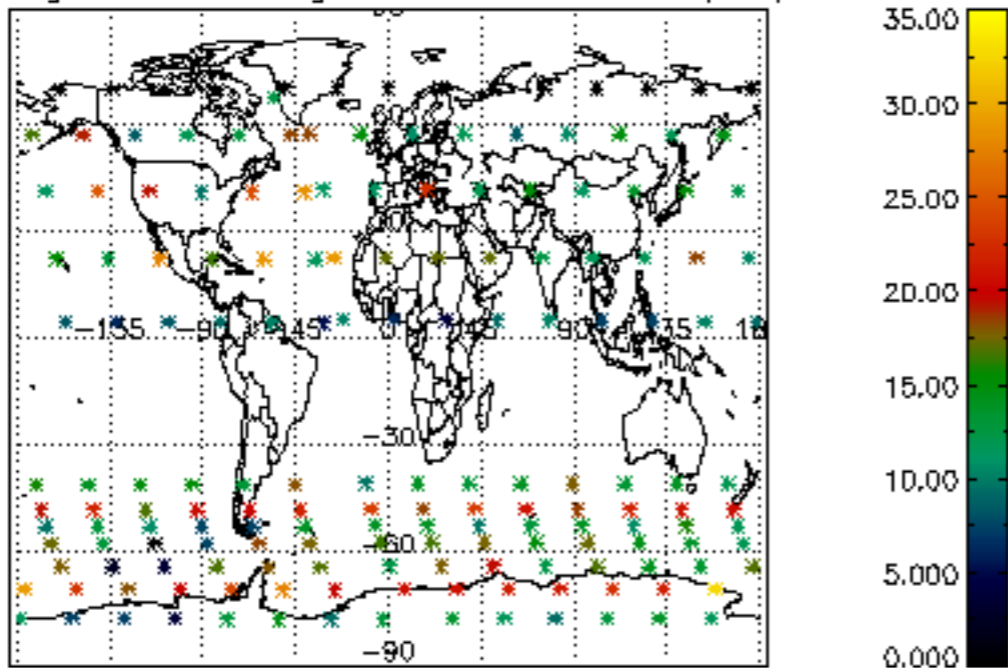
Percentage of cosmic ray hits per profile



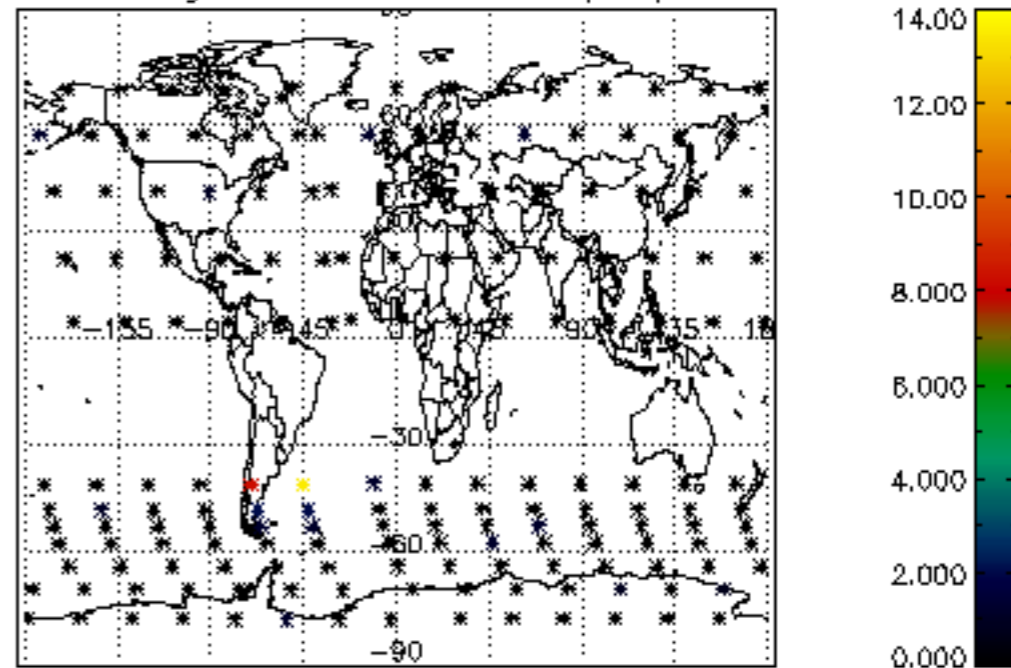
Percentage of datation errors per profile



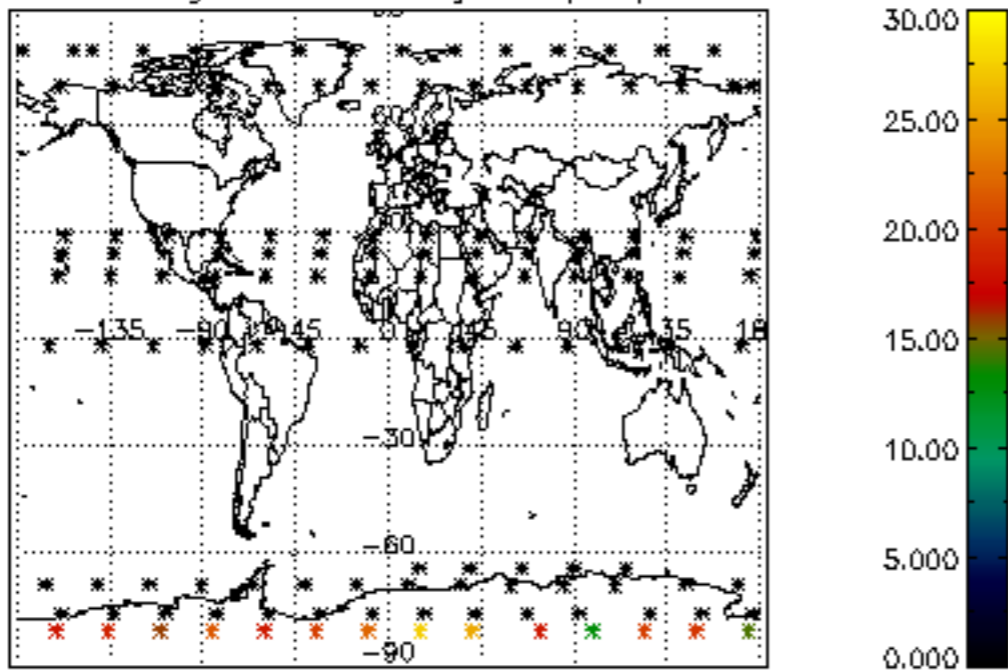
Percentage of star falling outside central band per profile



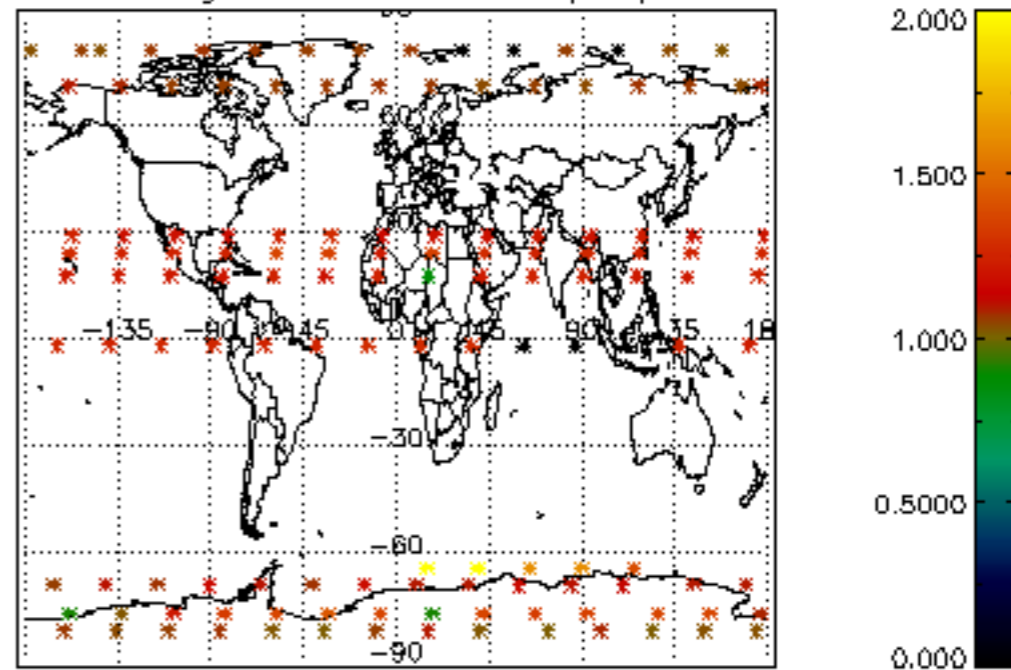
Percentage of saturation errors per profile



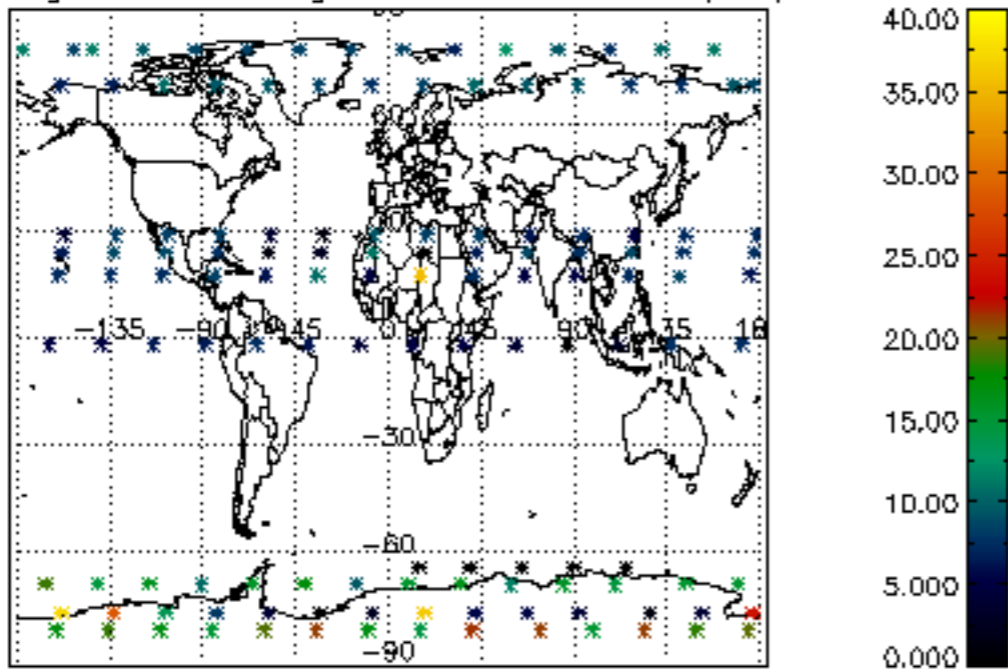
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

