

# 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	25APR2013 21:40:21
Data source version	GOMOS/6.01
Start time of products	03-11-2008 (03NOV2008 00:00:00)
Stop time of products	04-11-2008 (04NOV2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	219
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__2PRFIN20081103_000018_000000372073_00288_34911_8891.N1	03-NOV-2008 00:00:18	Bright	36.500	76	27Gam Cas	2.3000	30000.	73	34911	No
2	GOM_NL__2PRFIN20081103_000823_000000362073_00288_34911_8892.N1	03-NOV-2008 00:08:23	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	34911	No
3	GOM_NL__2PRFIN20081103_001219_000000372073_00288_34911_8893.N1	03-NOV-2008 00:12:19	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	34911	No
4	GOM_NL__2PRFIN20081103_001629_000000402073_00288_34911_8894.N1	03-NOV-2008 00:16:29	Bright	39.500	36	50Alp UMa	1.8000	6300.0	79	34911	No
5	GOM_NL__2PRFIN20081103_001805_000000562073_00288_34911_8895.N1	03-NOV-2008 00:18:05	Bright	56.000	82	48Bet UMa	2.3650	10600.	112	34911	No
6	GOM_NL__2PRFIN20081103_002149_000000392073_00288_34911_8896.N1	03-NOV-2008 00:21:49	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34911	No
7	GOM_NL__2PRFIN20081103_002921_000000382073_00288_34911_8897.N1	03-NOV-2008 00:29:21	Bright	37.500	96	68Del Leo	2.5600	9300.0	75	34911	No
8	GOM_NL__2PRFIN20081103_004918_000000422073_00288_34911_8898.N1	03-NOV-2008 00:49:18	Dark	42.000	113	Mu Vel	2.6920	5000.0	84	34911	No
9	GOM_NL__2PRFIN20081103_005433_000000402073_00289_34912_8907.N1	03-NOV-2008 00:54:33	Dark	40.000	46	Del Vel	1.9540	10600.	80	34912	No
10	GOM_NL__2PRFIN20081103_005552_000000442073_00289_34912_8908.N1	03-NOV-2008 00:55:52	Dark	44.000	41	Eps Car	1.8600	4100.0	88	34912	No
11	GOM_NL__2PRFIN20081103_010105_000000502073_00289_34912_8909.N1	03-NOV-2008 01:01:05	Dark	50.000	2	Alp Car	-0.73600	7000.0	100	34912	No
12	GOM_NL__2PRFIN20081103_011108_000000402073_00289_34912_8910.N1	03-NOV-2008 01:11:08	Straylight	39.500	157	The1Eri	2.9060	9300.0	79	34912	No
13	GOM_NL__2PRFIN20081103_012944_000000392073_00289_34912_8911.N1	03-NOV-2008 01:29:44	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34912	No
14	GOM_NL__2PRFIN20081103_013349_000000382073_00289_34912_8912.N1	03-NOV-2008 01:33:49	Bright	37.500	53	43Bet And	2.0480	3300.0	75	34912	No
15	GOM_NL__2PRFIN20081103_013608_000000402073_00289_34912_8913.N1	03-NOV-2008 01:36:08	Bright	40.000	73	57Gam1And	2.2600	13100.	80	34912	No
16	GOM_NL__2PRFIN20081103_013944_000000342073_00289_34912_8914.N1	03-NOV-2008 01:39:44	Bright	33.500	68	18Alp Cas	2.2250	4500.0	67	34912	No
17	GOM_NL__2PRFIN20081103_014054_000000332073_00289_34912_8915.N1	03-NOV-2008 01:40:54	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	34912	No
18	GOM_NL__2PRFIN20081103_014859_000000332073_00289_34912_8916.N1	03-NOV-2008 01:48:59	Bright	33.000	49	1Alp UMi	1.9900	6300.0	66	34912	No
19	GOM_NL__2PRFIN20081103_015255_000000372073_00289_34912_8917.N1	03-NOV-2008 01:52:55	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	34912	No
20	GOM_NL__2PRFIN20081103_015704_000000412073_00289_34912_8918.N1	03-NOV-2008 01:57:04	Bright	40.500	36	50Alp UMa	1.8000	6300.0	81	34912	No
21	GOM_NL__2PRFIN20081103_015841_000000382073_00289_34912_8919.N1	03-NOV-2008 01:58:41	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	34912	No
22	GOM_NL__2PRFIN20081103_020225_000000392073_00289_34912_8920.N1	03-NOV-2008 02:02:25	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34912	No
23	GOM_NL__2PRFIN20081103_020958_000000392073_00289_34912_8921.N1	03-NOV-2008 02:09:58	Bright	39.000	96	68Del Leo	2.5600	9300.0	78	34912	No
24	GOM_NL__2PRFIN20081103_022954_000000382073_00289_34912_8922.N1	03-NOV-2008 02:29:54	Dark	38.000	113	Mu Vel	2.6920	5000.0	76	34912	No
25	GOM_NL__2PRFIN20081103_023510_000000422073_00290_34913_8921.N1	03-NOV-2008 02:35:10	Dark	41.500	46	Del Vel	1.9540	10600.	83	34913	No
26	GOM_NL__2PRFIN20081103_023628_000000432073_00290_34913_8922.N1	03-NOV-2008 02:36:28	Dark	42.500	41	Eps Car	1.8600	4100.0	85	34913	No
27	GOM_NL__2PRFIN20081103_024142_000000542073_00290_34913_8923.N1	03-NOV-2008 02:41:42	Dark	54.000	2	Alp Car	-0.73600	7000.0	108	34913	No
28	GOM_NL__2PRFIN20081103_025144_000000422073_00290_34913_8924.N1	03-NOV-2008 02:51:44	Straylight	41.500	157	The1Eri	2.9060	9300.0	83	34913	No
29	GOM_NL__2PRFIN20081103_031020_000000392073_00290_34913_8925.N1	03-NOV-2008 03:10:20	Bright	39.000	105	6Bet Ari	2.6450	8900.0	78	34913	No
30	GOM_NL__2PRFIN20081103_031425_000000372073_00290_34913_8926.N1	03-NOV-2008 03:14:25	Bright	36.500	53	43Bet And	2.0480	3300.0	73	34913	No
31	GOM_NL__2PRFIN20081103_031644_000000412073_00290_34913_8927.N1	03-NOV-2008 03:16:44	Bright	40.500	73	57Gam1And	2.2600	13100.	81	34913	No
32	GOM_NL__2PRFIN20081103_032020_000000362073_00290_34913_8928.N1	03-NOV-2008 03:20:20	Bright	35.500	68	18Alp Cas	2.2250	4500.0	71	34913	No
33	GOM_NL__2PRFIN20081103_032129_000000352073_00290_34913_8929.N1	03-NOV-2008 03:21:29	Bright	35.000	76	27Gam Cas	2.3000	30000.	70	34913	No
34	GOM_NL__2PRFIN20081103_032935_000000342073_00290_34913_8930.N1	03-NOV-2008 03:29:35	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	34913	No
35	GOM_NL__2PRFIN20081103_033331_000000342073_00290_34913_8931.N1	03-NOV-2008 03:33:31	Bright	33.500	60	7Bet UMi	2.0810	3950.0	67	34913	No
36	GOM_NL__2PRFIN20081103_033740_000000412073_00290_34913_8932.N1	03-NOV-2008 03:37:40	Bright	40.500	36	50Alp UMa	1.8000	6300.0	81	34913	No
37	GOM_NL__2PRFIN20081103_033917_000000382073_00290_34913_8933.N1	03-NOV-2008 03:39:17	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	34913	No
38	GOM_NL__2PRFIN20081103_034301_000000572073_00290_34913_8934.N1	03-NOV-2008 03:43:01	Bright	57.000	174	52Psi UMa	3.0040	4400.0	114	34913	No
39	GOM_NL__2PRFIN20081103_035034_000000412073_00290_34913_8935.N1	03-NOV-2008 03:50:34	Bright	40.500	96	68Del Leo	2.5600	9300.0	81	34913	No
40	GOM_NL__2PRFIN20081103_041030_000000452073_00290_34913_8936.N1	03-NOV-2008 04:10:30	Dark	44.500	113	Mu Vel	2.6920	5000.0	89	34913	No
41	GOM_NL__2PRFIN20081103_041547_000000412073_00291_34914_8934.N1	03-NOV-2008 04:15:47	Dark	41.000	46	Del Vel	1.9540	10600.	82	34914	No
42	GOM_NL__2PRFIN20081103_041705_000000402073_00291_34914_8935.N1	03-NOV-2008 04:17:05	Dark	40.000	41	Eps Car	1.8600	4100.0	80	34914	No





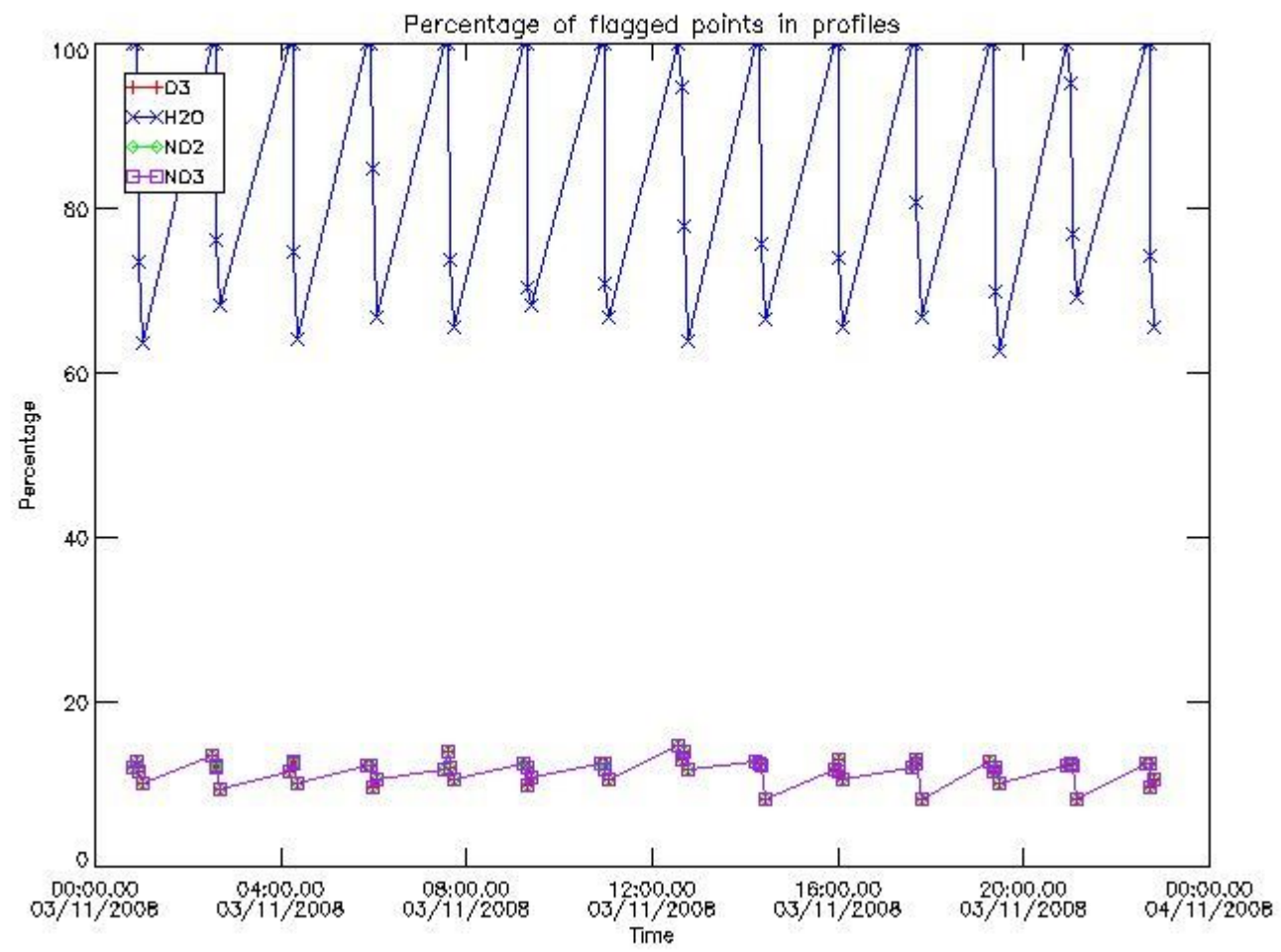




### 3. Quality information per product

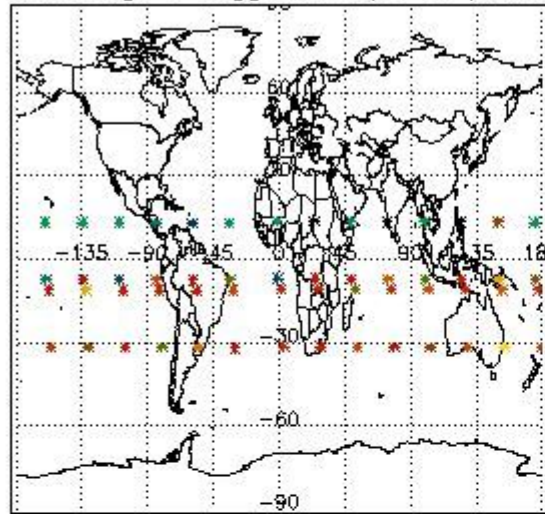
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

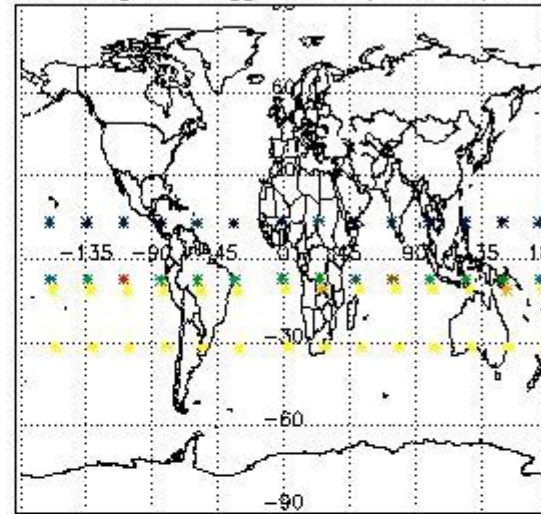


#### 3.2 Plot quality information per product (world map)

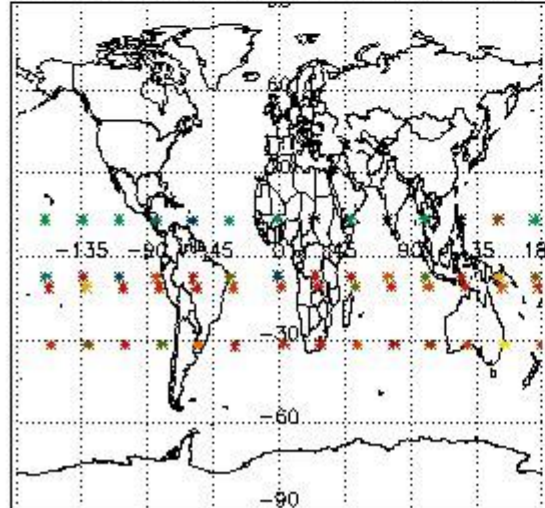
Percentage of flagged data per O3 profile



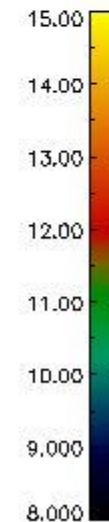
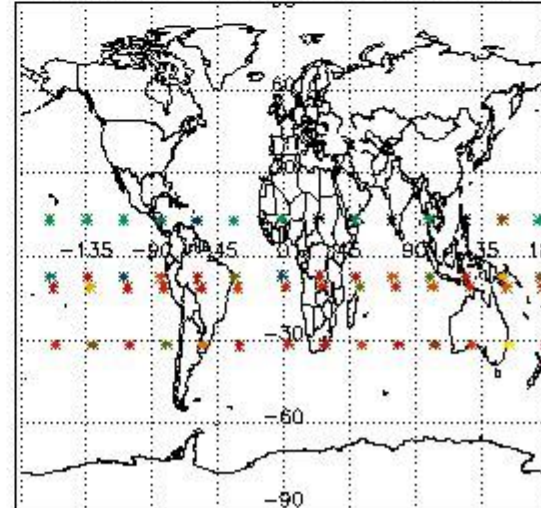
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



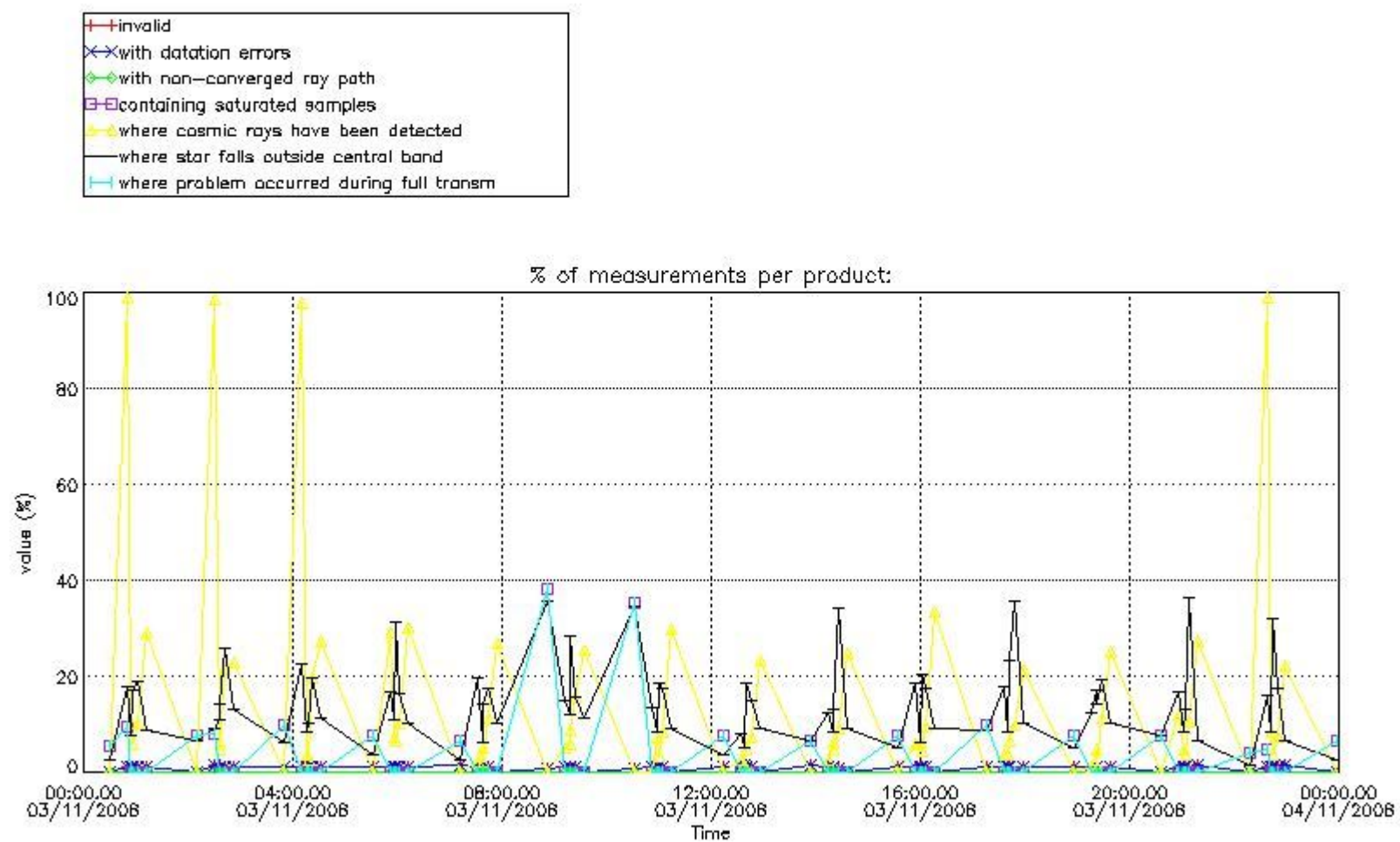
#### 4. Level 1 quality information per product

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

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

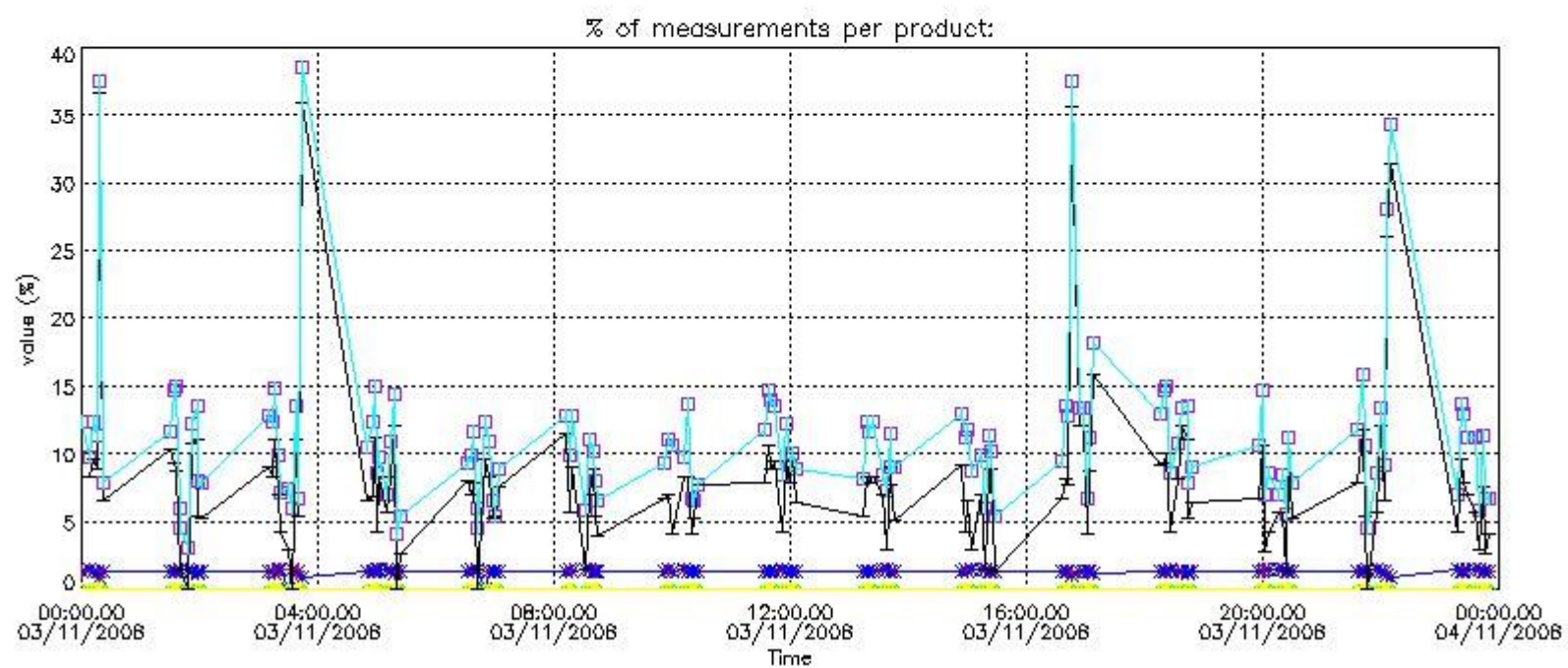
##### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes





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

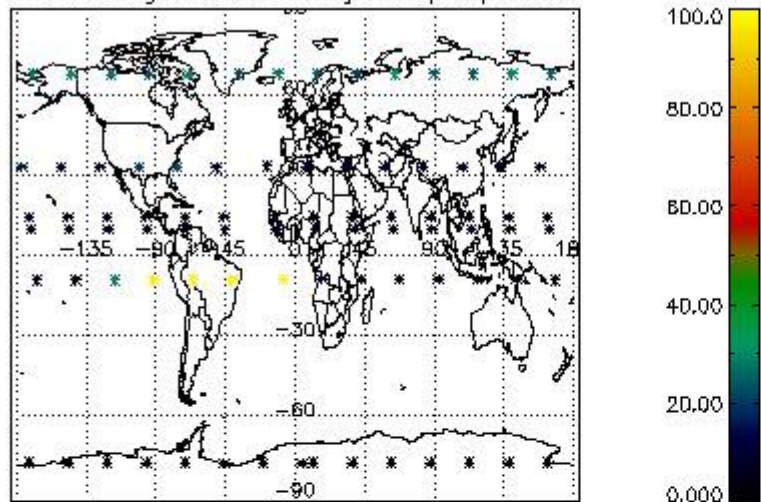




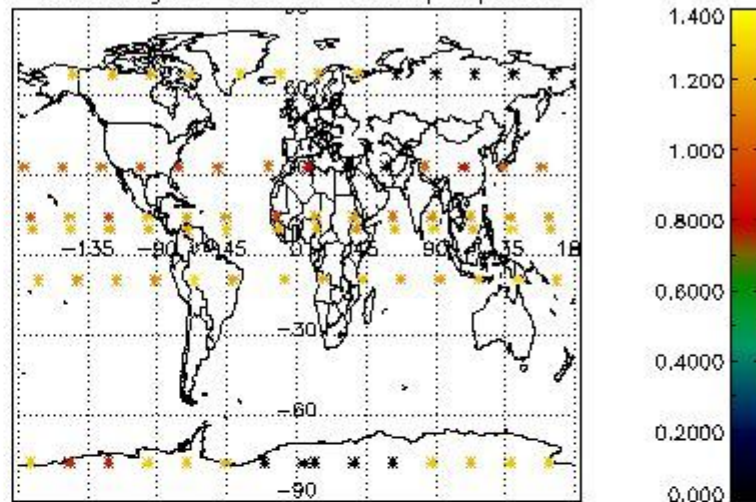
4.2 Plot quality information per product coming from level 1b processing (world map)

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

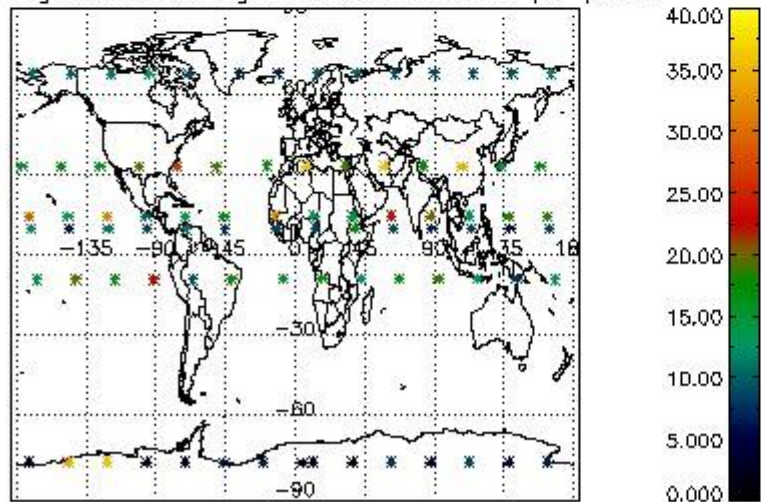
Percentage of cosmic ray hits per profile



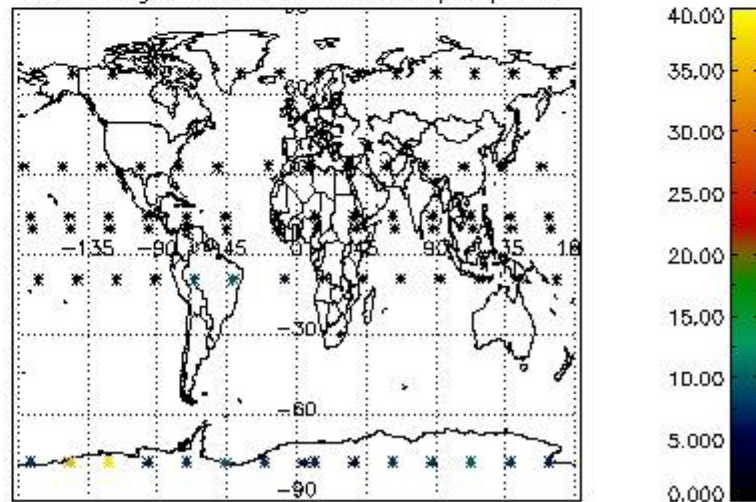
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

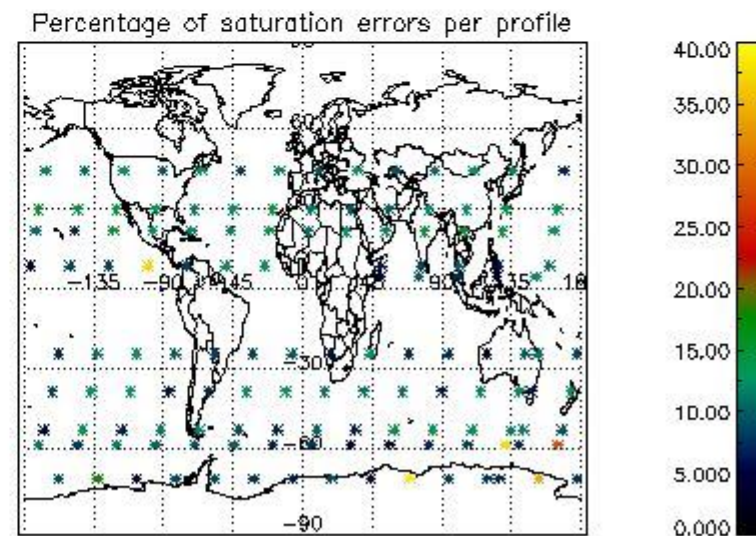
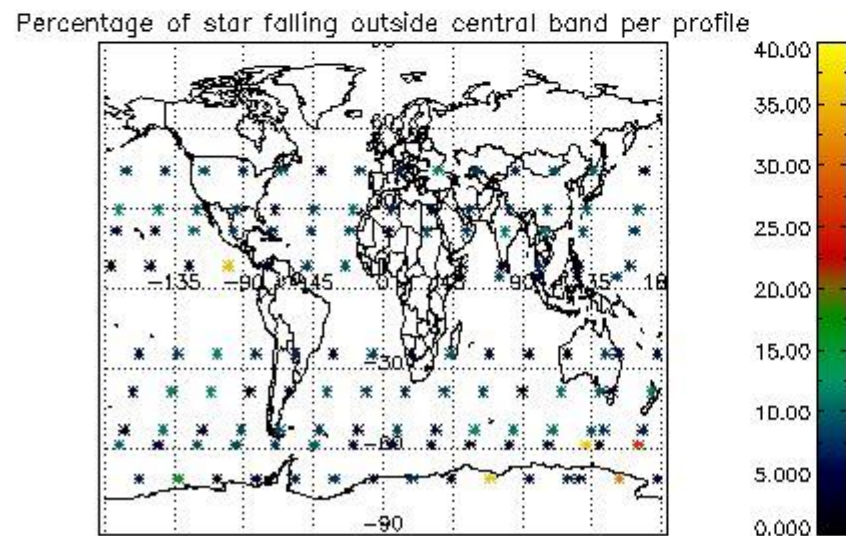
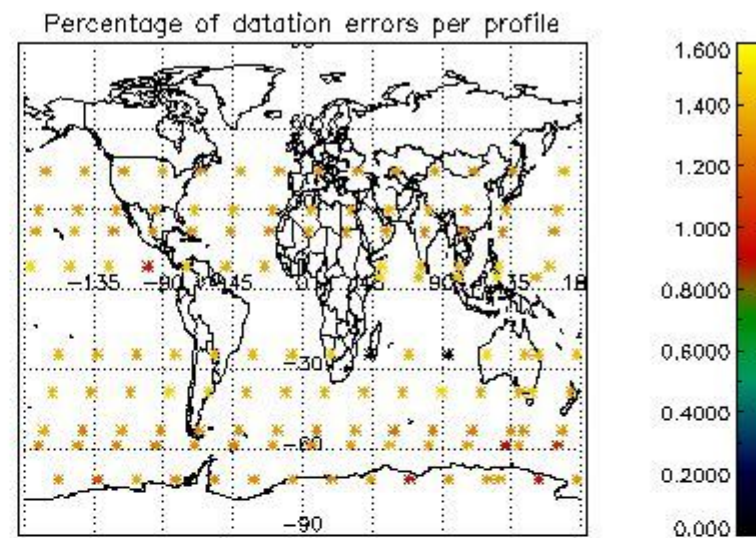
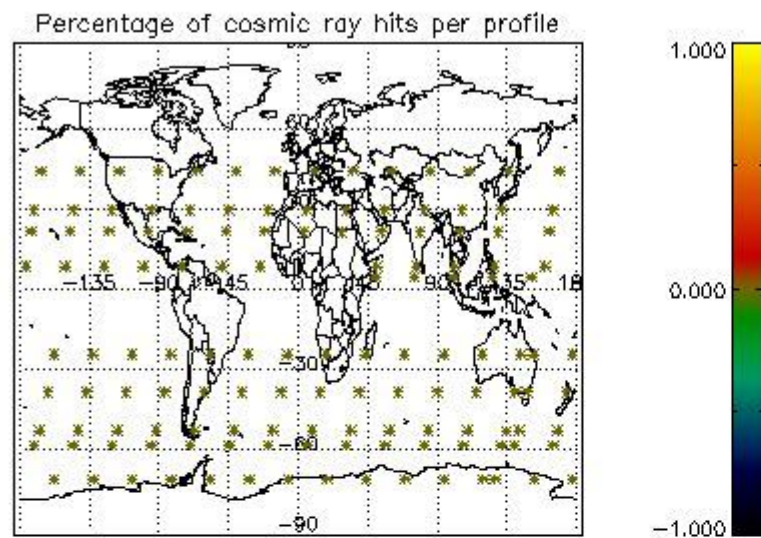


Percentage of saturation errors per profile



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





## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

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

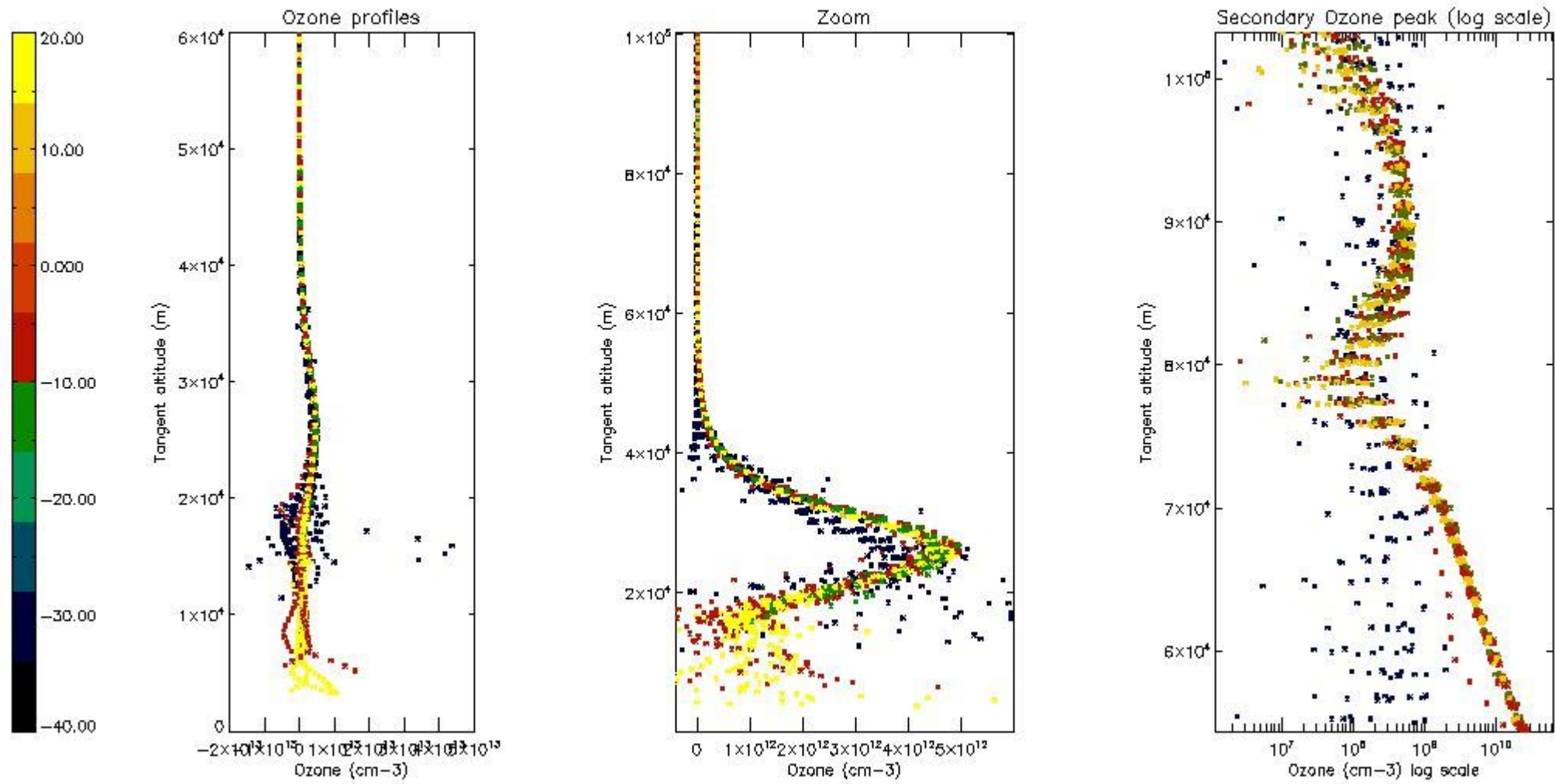
Criteria	% of total production
All STD	30
STD < 20	16



STD < 10	12
STD < 5	6

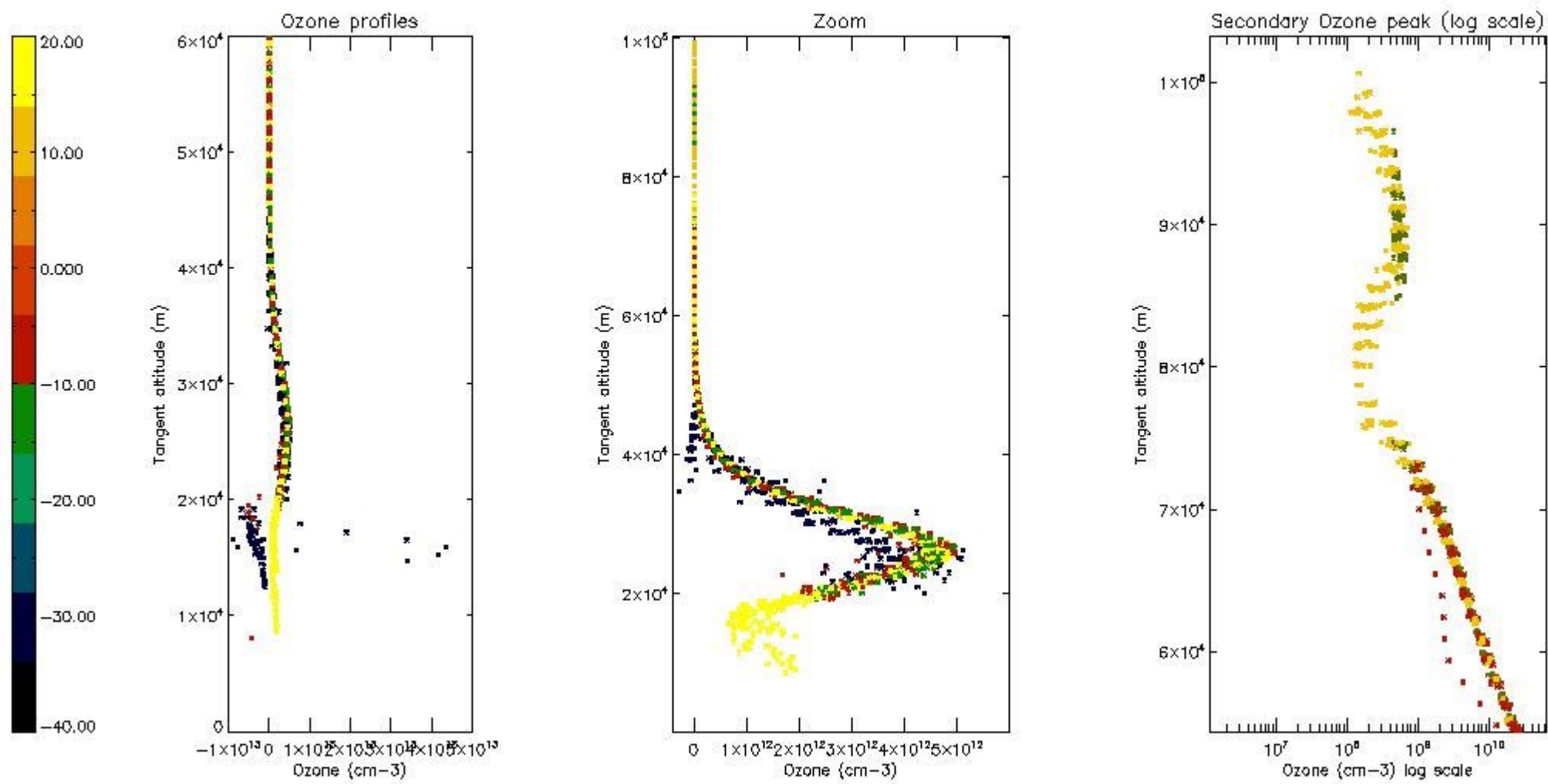
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



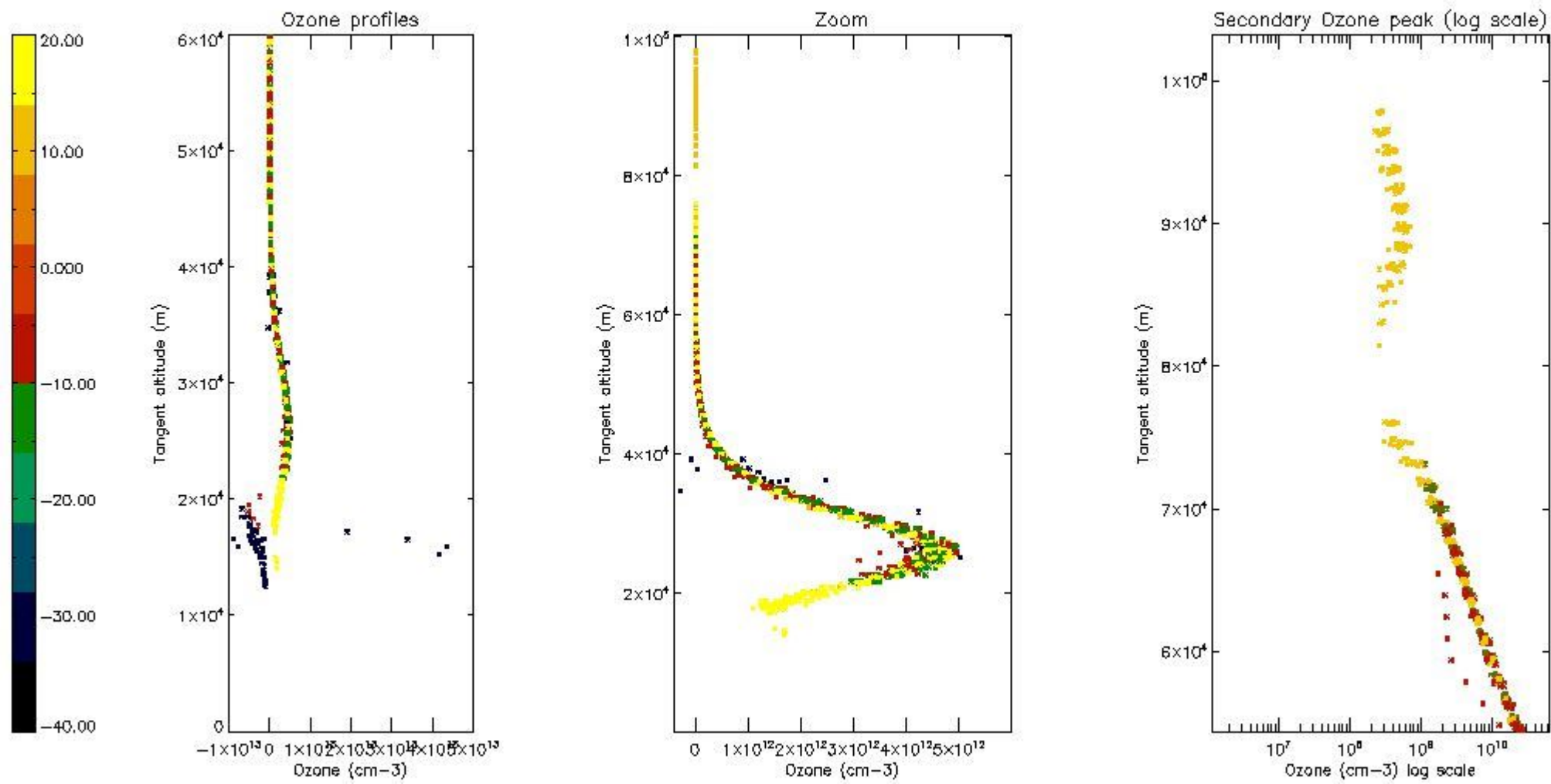
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

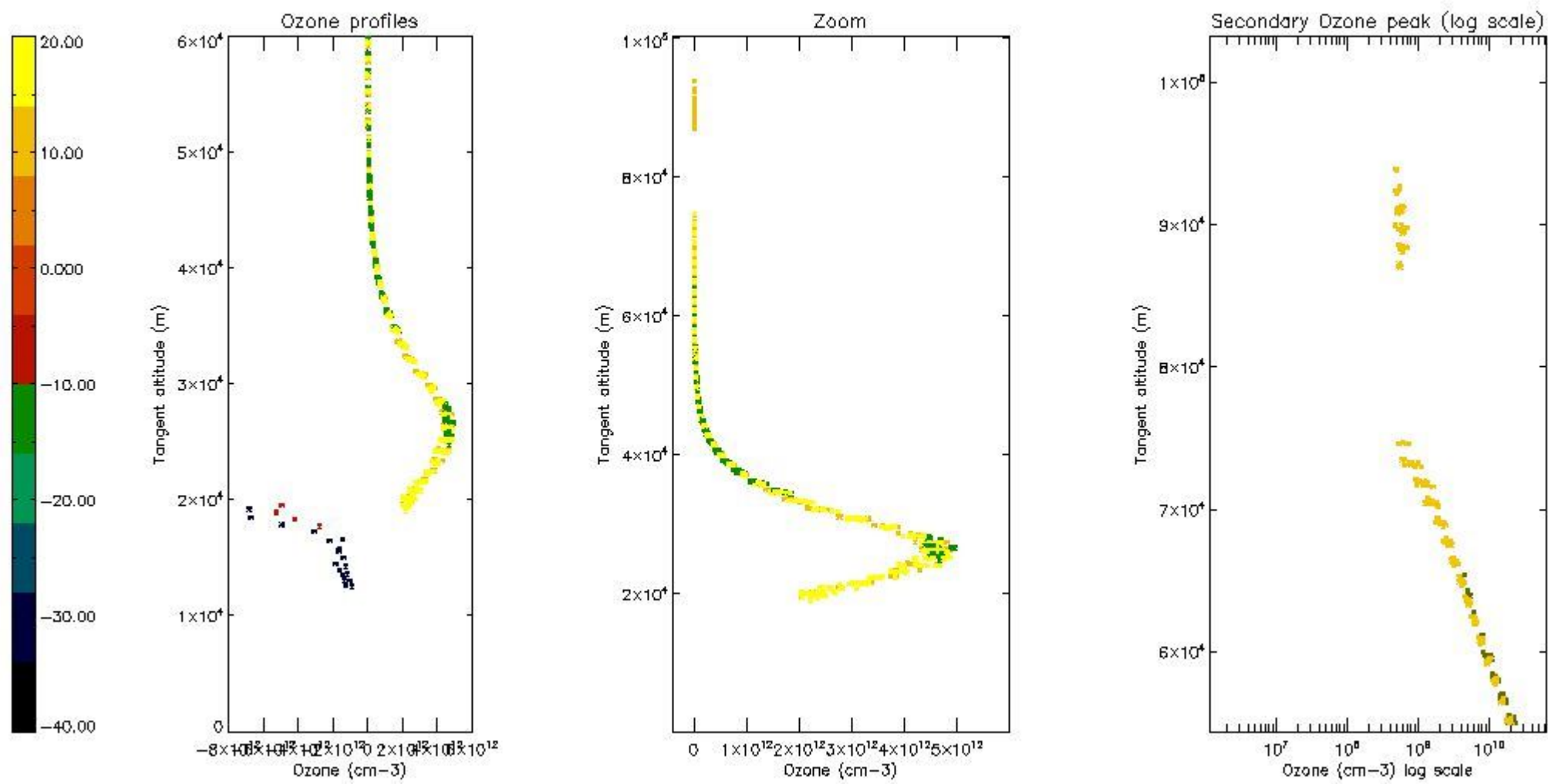
The colorbar represents the latitude.



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

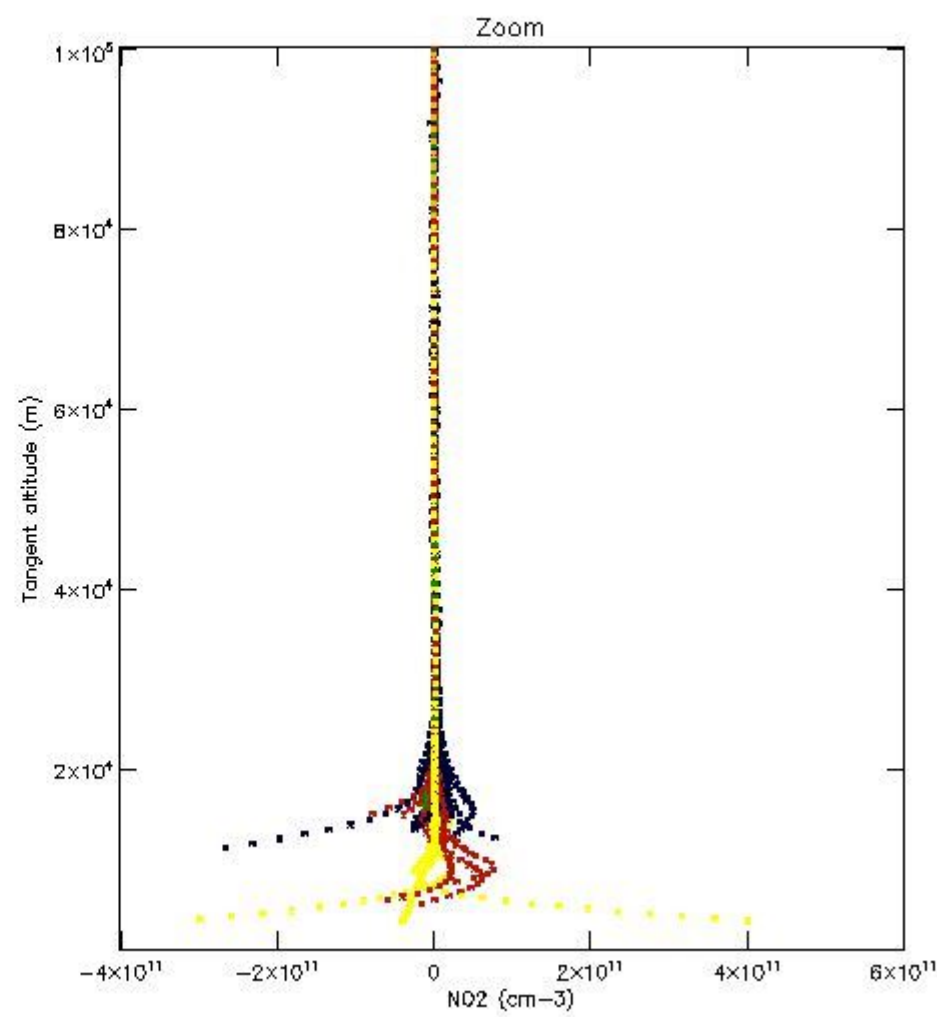
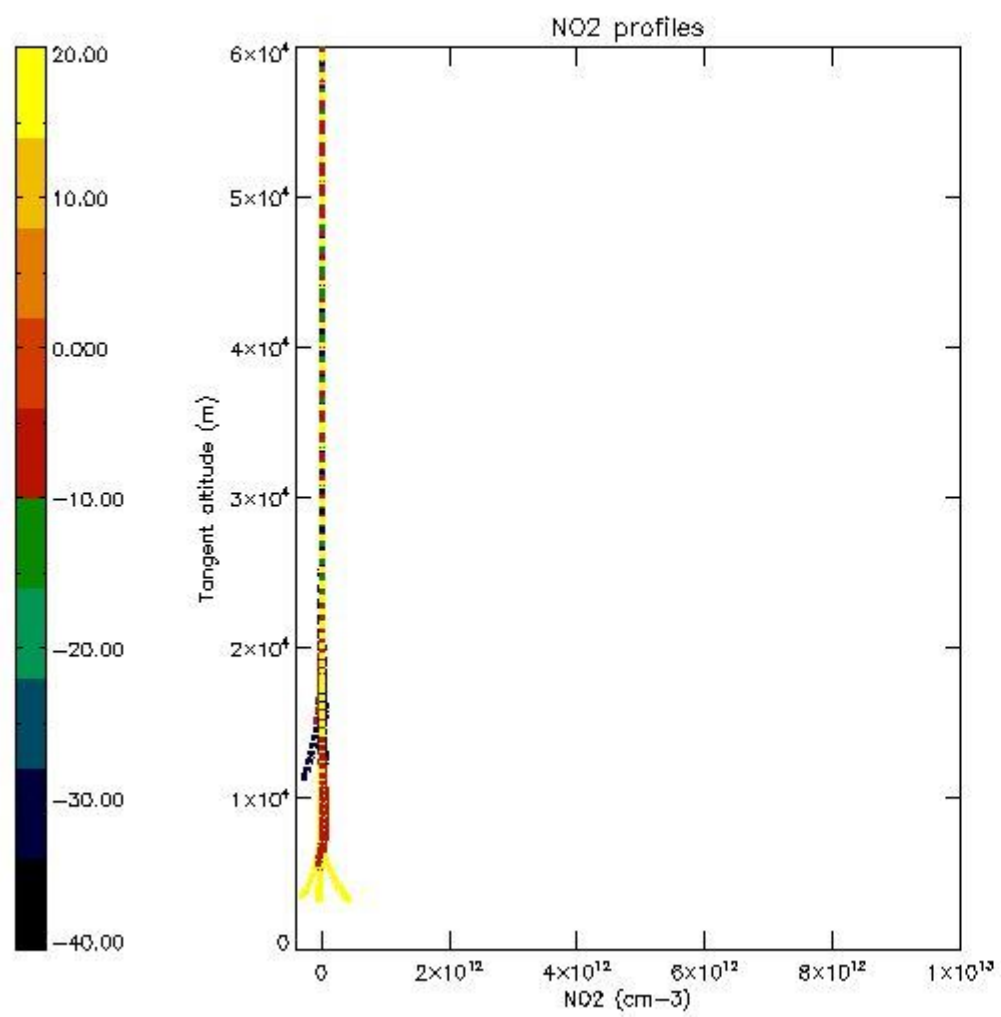
The colorbar represents the latitude.





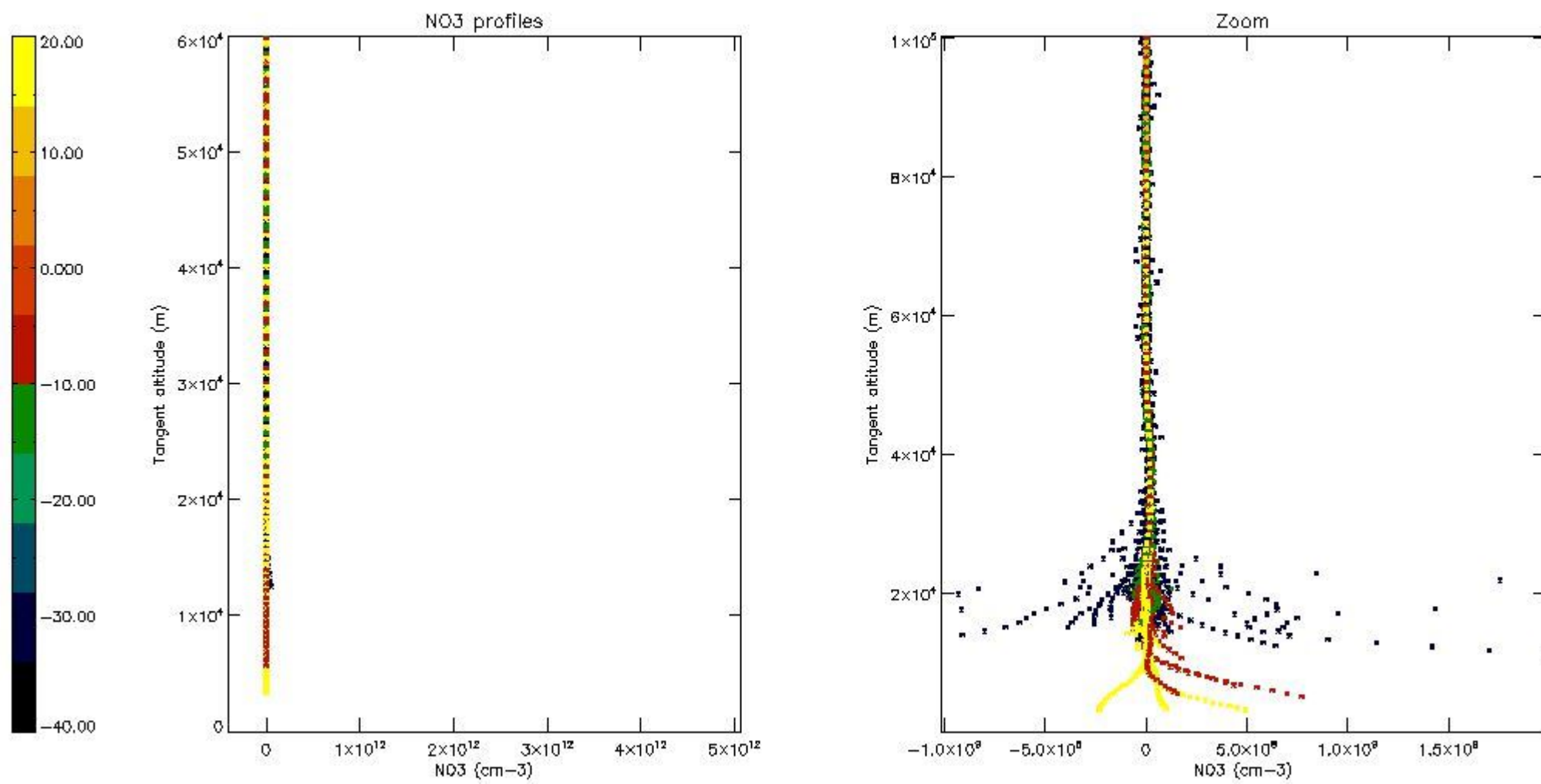
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

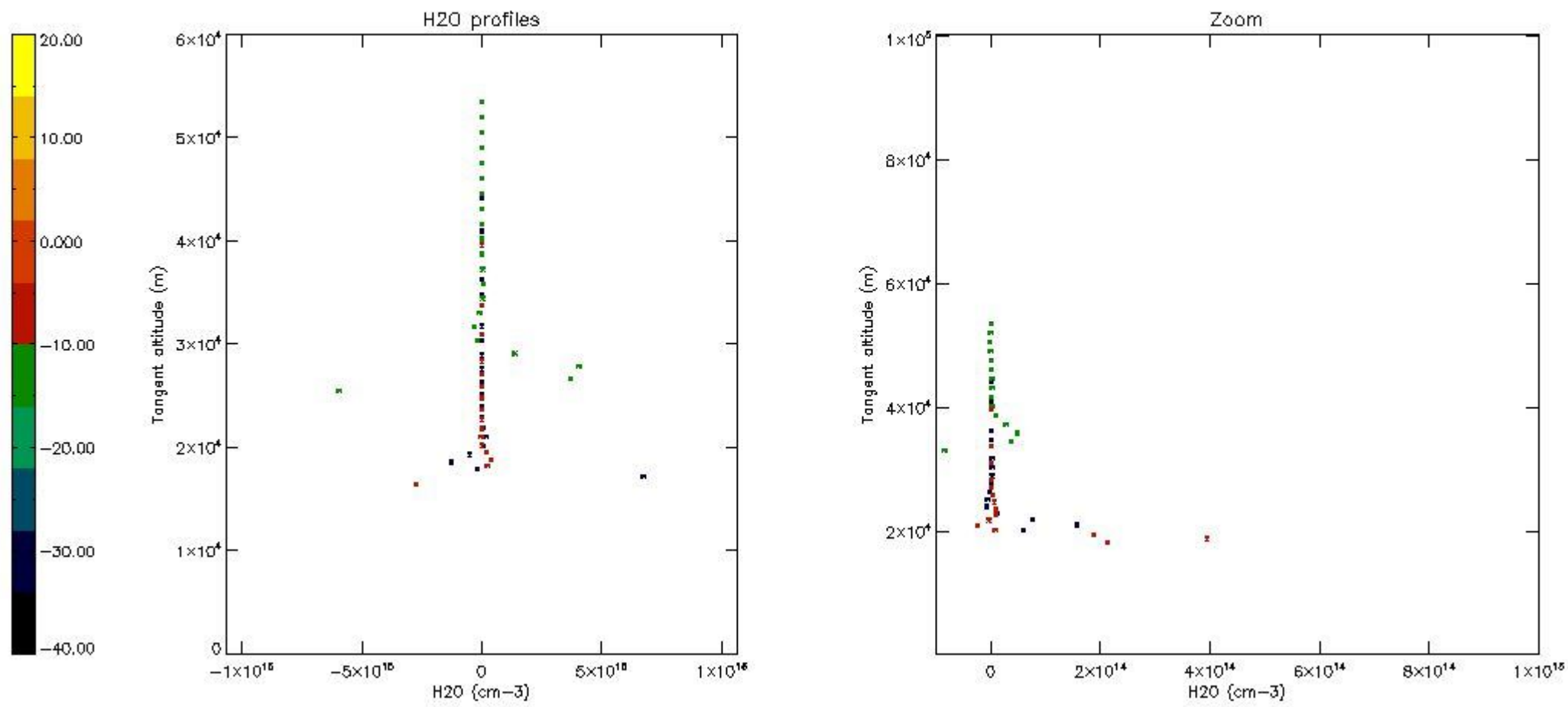
The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

The colorbar represents the latitude.





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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	03-NOV-2008 00:00:18
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-NOV-2008 00:00:18
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-NOV-2008 00:00:18

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##### [4.2.1 Plot of level 1 quality information per product \(world map\): ASCENDING](#)

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1	GOM_NL__2PRFIN20081103_000018_000000372073_00288_34911_8891.N1	03-NOV-2008 00:00:18	Bright	36.500	76	27Gam Cas	2.3000	30000.	73	34911	No
2	GOM_NL__2PRFIN20081103_000823_000000362073_00288_34911_8892.N1	03-NOV-2008 00:08:23	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	34911	No
3	GOM_NL__2PRFIN20081103_001219_000000372073_00288_34911_8893.N1	03-NOV-2008 00:12:19	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	34911	No
4	GOM_NL__2PRFIN20081103_001629_000000402073_00288_34911_8894.N1	03-NOV-2008 00:16:29	Bright	39.500	36	50Alp UMa	1.8000	6300.0	79	34911	No
5	GOM_NL__2PRFIN20081103_001805_000000562073_00288_34911_8895.N1	03-NOV-2008 00:18:05	Bright	56.000	82	48Bet UMa	2.3650	10600.	112	34911	No
6	GOM_NL__2PRFIN20081103_002149_000000392073_00288_34911_8896.N1	03-NOV-2008 00:21:49	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34911	No
7	GOM_NL__2PRFIN20081103_002921_000000382073_00288_34911_8897.N1	03-NOV-2008 00:29:21	Bright	37.500	96	68Del Leo	2.5600	9300.0	75	34911	No
8	GOM_NL__2PRFIN20081103_004918_000000422073_00288_34911_8898.N1	03-NOV-2008 00:49:18	Dark	42.000	113	Mu Vel	2.6920	5000.0	84	34911	No
9	GOM_NL__2PRFIN20081103_005433_000000402073_00289_34912_8907.N1	03-NOV-2008 00:54:33	Dark	40.000	46	Del Vel	1.9540	10600.	80	34912	No
10	GOM_NL__2PRFIN20081103_005552_000000442073_00289_34912_8908.N1	03-NOV-2008 00:55:52	Dark	44.000	41	Eps Car	1.8600	4100.0	88	34912	No
11	GOM_NL__2PRFIN20081103_010105_000000502073_00289_34912_8909.N1	03-NOV-2008 01:01:05	Dark	50.000	2	Alp Car	-0.73600	7000.0	100	34912	No
12	GOM_NL__2PRFIN20081103_011108_000000402073_00289_34912_8910.N1	03-NOV-2008 01:11:08	Straylight	39.500	157	The1Eri	2.9060	9300.0	79	34912	No
13	GOM_NL__2PRFIN20081103_012944_000000392073_00289_34912_8911.N1	03-NOV-2008 01:29:44	Bright	38.500	105	6Bet Ari	2.6450	8900.0	77	34912	No
14	GOM_NL__2PRFIN20081103_013349_000000382073_00289_34912_8912.N1	03-NOV-2008 01:33:49	Bright	37.500	53	43Bet And	2.0480	3300.0	75	34912	No
15	GOM_NL__2PRFIN20081103_013608_000000402073_00289_34912_8913.N1	03-NOV-2008 01:36:08	Bright	40.000	73	57Gam1And	2.2600	13100.	80	34912	No
16	GOM_NL__2PRFIN20081103_013944_000000342073_00289_34912_8914.N1	03-NOV-2008 01:39:44	Bright	33.500	68	18Alp Cas	2.2250	4500.0	67	34912	No
17	GOM_NL__2PRFIN20081103_014054_000000332073_00289_34912_8915.N1	03-NOV-2008 01:40:54	Bright	33.000	76	27Gam Cas	2.3000	30000.	66	34912	No
18	GOM_NL__2PRFIN20081103_014859_000000332073_00289_34912_8916.N1	03-NOV-2008 01:48:59	Bright	33.000	49	1Alp UMi	1.9900	6300.0	66	34912	No
19	GOM_NL__2PRFIN20081103_015255_000000372073_00289_34912_8917.N1	03-NOV-2008 01:52:55	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	34912	No
20	GOM_NL__2PRFIN20081103_015704_000000412073_00289_34912_8918.N1	03-NOV-2008 01:57:04	Bright	40.500	36	50Alp UMa	1.8000	6300.0	81	34912	No
21	GOM_NL__2PRFIN20081103_015841_000000382073_00289_34912_8919.N1	03-NOV-2008 01:58:41	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	34912	No
22	GOM_NL__2PRFIN20081103_020225_000000392073_00289_34912_8920.N1	03-NOV-2008 02:02:25	Bright	38.500	174	52Psi UMa	3.0040	4400.0	77	34912	No
23	GOM_NL__2PRFIN20081103_020958_000000392073_00289_34912_8921.N1	03-NOV-2008 02:09:58	Bright	39.000	96	68Del Leo	2.5600	9300.0	78	34912	No
24	GOM_NL__2PRFIN20081103_022954_000000382073_00289_34912_8922.N1	03-NOV-2008 02:29:54	Dark	38.000	113	Mu Vel	2.6920	5000.0	76	34912	No
25	GOM_NL__2PRFIN20081103_023510_000000422073_00290_34913_8921.N1	03-NOV-2008 02:35:10	Dark	41.500	46	Del Vel	1.9540	10600.	83	34913	No
26	GOM_NL__2PRFIN20081103_023628_000000432073_00290_34913_8922.N1	03-NOV-2008 02:36:28	Dark	42.500	41	Eps Car	1.8600	4100.0	85	34913	No
27	GOM_NL__2PRFIN20081103_024142_000000542073_00290_34913_8923.N1	03-NOV-2008 02:41:42	Dark	54.000	2	Alp Car	-0.73600	7000.0	108	34913	No
28	GOM_NL__2PRFIN20081103_025144_000000422073_00290_34913_8924.N1	03-NOV-2008 02:51:44	Straylight	41.500	157	The1Eri	2.9060	9300.0	83	34913	No
29	GOM_NL__2PRFIN20081103_031020_000000392073_00290_34913_8925.N1	03-NOV-2008 03:10:20	Bright	39.000	105	6Bet Ari	2.6450	8900.0	78	34913	No
30	GOM_NL__2PRFIN20081103_031425_000000372073_00290_34913_8926.N1	03-NOV-2008 03:14:25	Bright	36.500	53	43Bet And	2.0480	3300.0	73	34913	No
31	GOM_NL__2PRFIN20081103_031644_000000412073_00290_34913_8927.N1	03-NOV-2008 03:16:44	Bright	40.500	73	57Gam1And	2.2600	13100.	81	34913	No
32	GOM_NL__2PRFIN20081103_032020_000000362073_00290_34913_8928.N1	03-NOV-2008 03:20:20	Bright	35.500	68	18Alp Cas	2.2250	4500.0	71	34913	No
33	GOM_NL__2PRFIN20081103_032129_000000352073_00290_34913_8929.N1	03-NOV-2008 03:21:29	Bright	35.000	76	27Gam Cas	2.3000	30000.	70	34913	No
34	GOM_NL__2PRFIN20081103_032935_000000342073_00290_34913_8930.N1	03-NOV-2008 03:29:35	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	34913	No
35	GOM_NL__2PRFIN20081103_033331_000000342073_00290_34913_8931.N1	03-NOV-2008 03:33:31	Bright	33.500	60	7Bet UMi	2.0810	3950.0	67	34913	No
36	GOM_NL__2PRFIN20081103_033740_000000412073_00290_34913_8932.N1	03-NOV-2008 03:37:40	Bright	40.500	36	50Alp UMa	1.8000	6300.0	81	34913	No
37	GOM_NL__2PRFIN20081103_033917_000000382073_00290_34913_8933.N1	03-NOV-2008 03:39:17	Bright	37.500	82	48Bet UMa	2.3650	10600.	75	34913	No
38	GOM_NL__2PRFIN20081103_034301_000000572073_00290_34913_8934.N1	03-NOV-2008 03:43:01	Bright	57.000	174	52Psi UMa	3.0040	4400.0	114	34913	No
39	GOM_NL__2PRFIN20081103_035034_000000412073_00290_34913_8935.N1	03-NOV-2008 03:50:34	Bright	40.500	96	68Del Leo	2.5600	9300.0	81	34913	No
40	GOM_NL__2PRFIN20081103_041030_000000452073_00290_34913_8936.N1	03-NOV-2008 04:10:30	Dark	44.500	113	Mu Vel	2.6920	5000.0	89	34913	No
41	GOM_NL__2PRFIN20081103_041547_000000412073_00291_34914_8934.N1	03-NOV-2008 04:15:47	Dark	41.000	46	Del Vel	1.9540	10600.	82	34914	No
42	GOM_NL__2PRFIN20081103_041705_000000402073_00291_34914_8935.N1	03-NOV-2008 04:17:05	Dark	40.000	41	Eps Car	1.8600	4100.0	80	34914	No





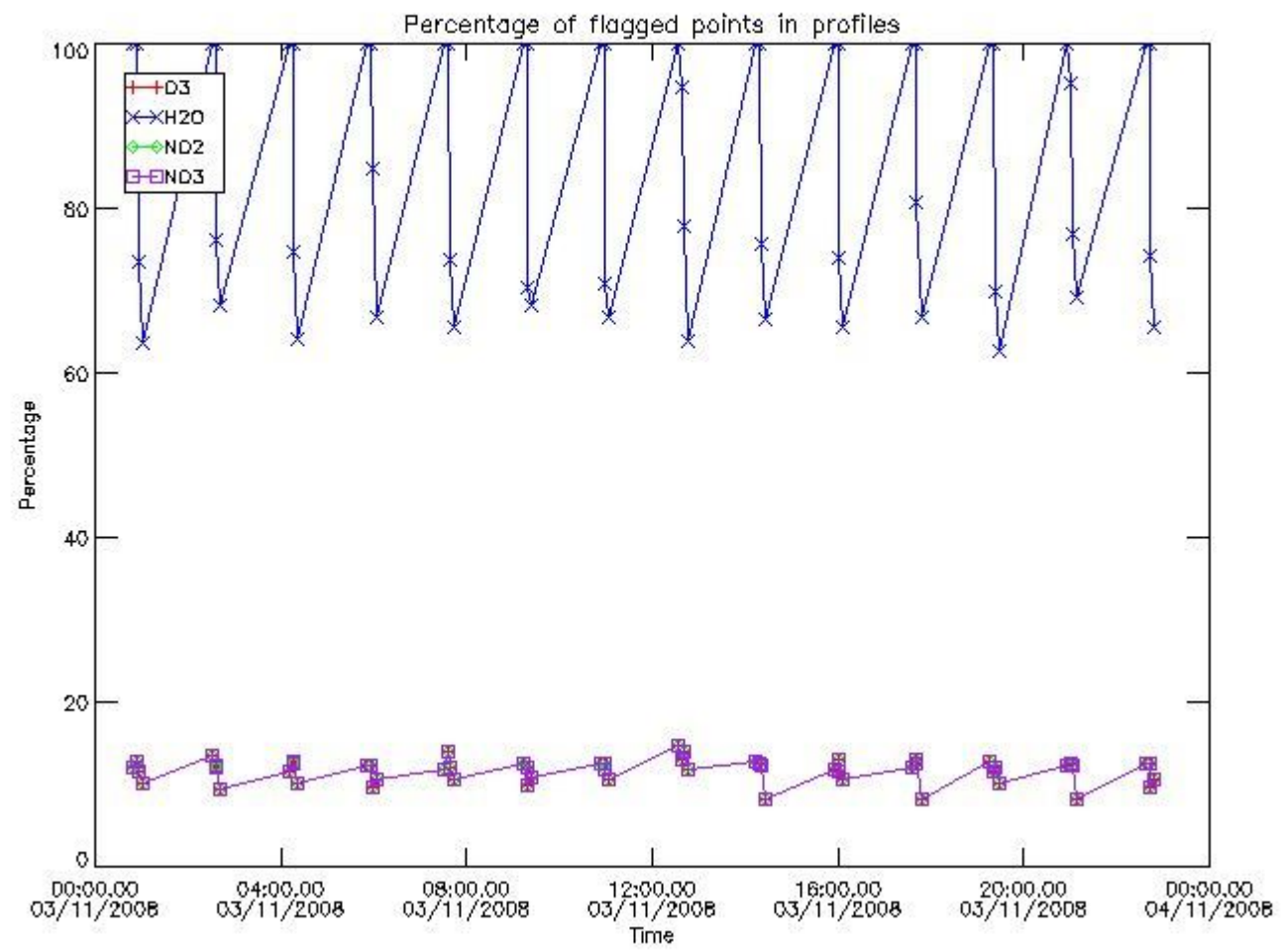




### 3. Quality information per product

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.

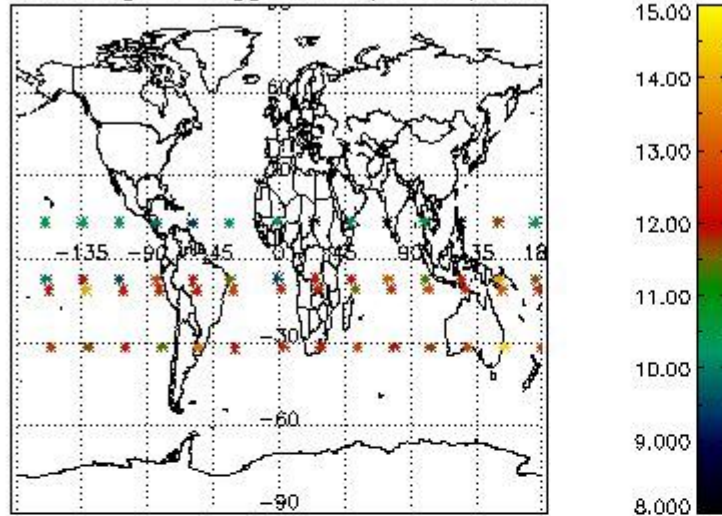
#### 3.1 Plot quality information per product (time dependant)



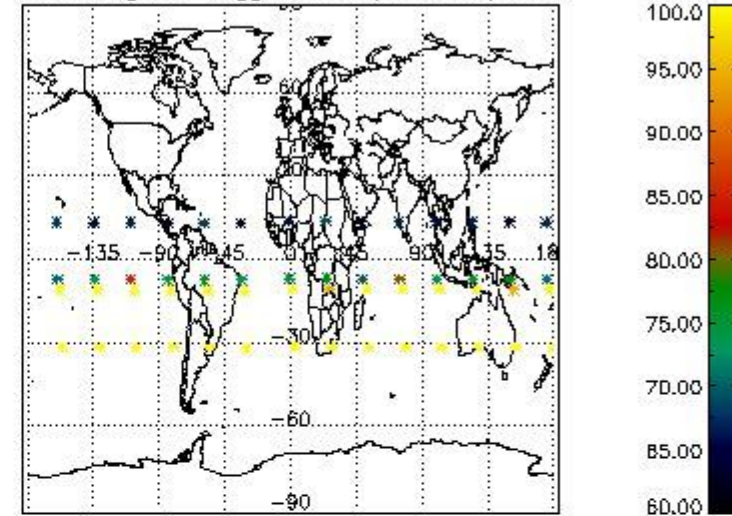
#### 3.2 Plot quality information per product (world map)



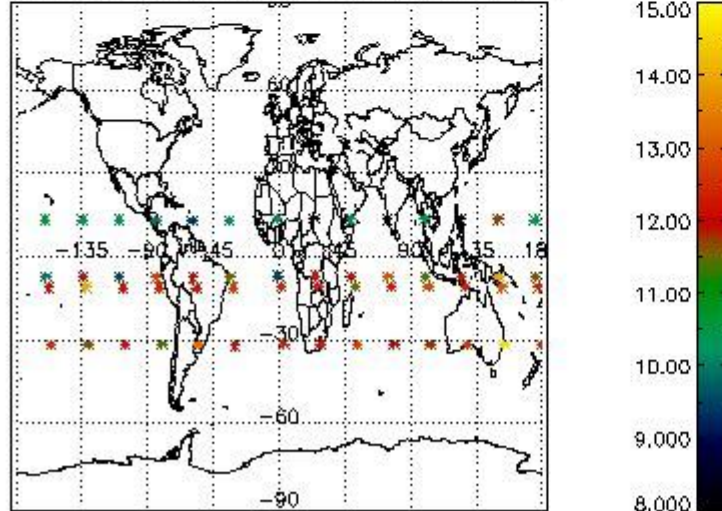
Percentage of flagged data per O3 profile



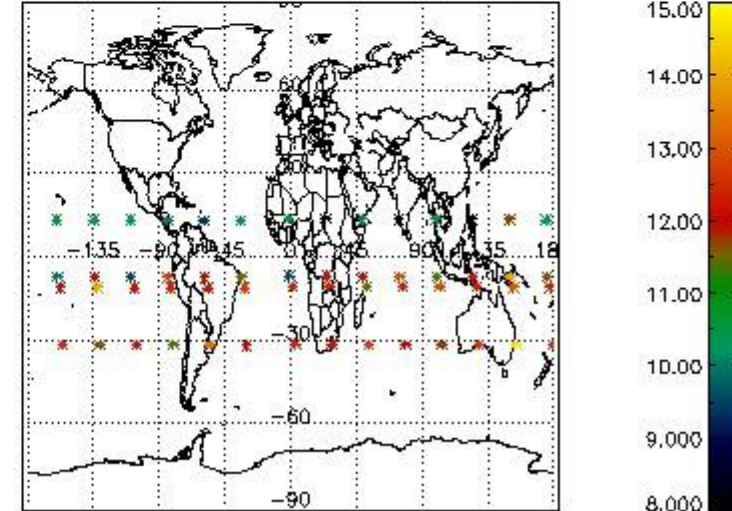
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



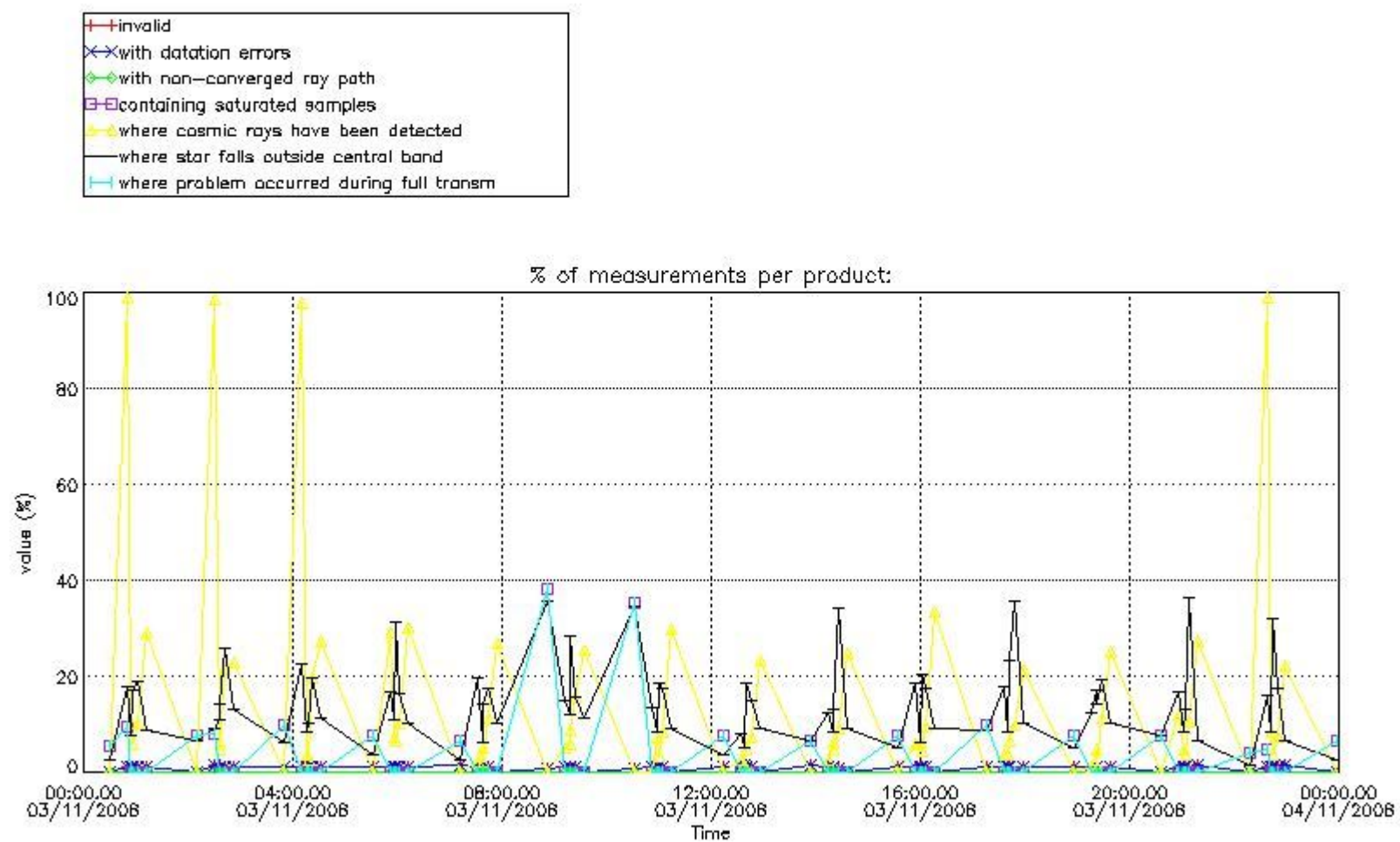
#### 4. Level 1 quality information per product

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.

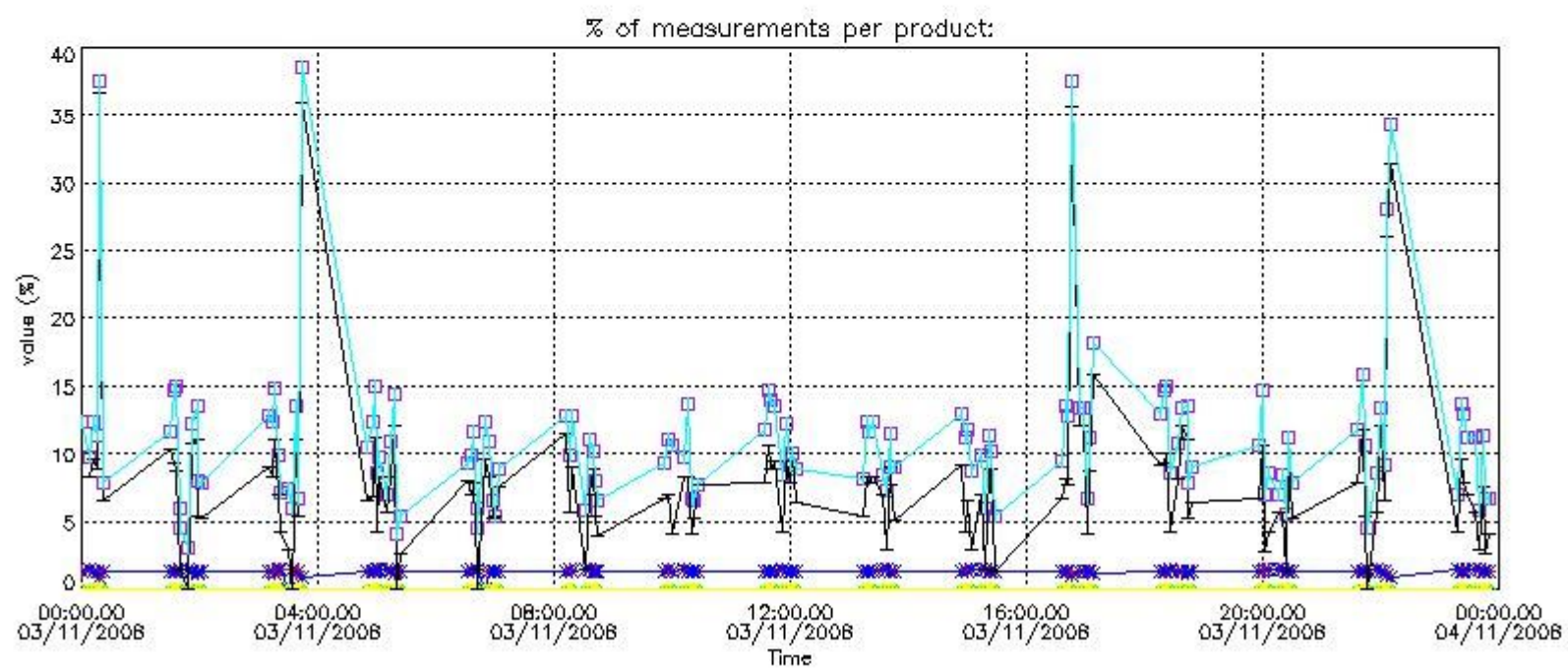
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





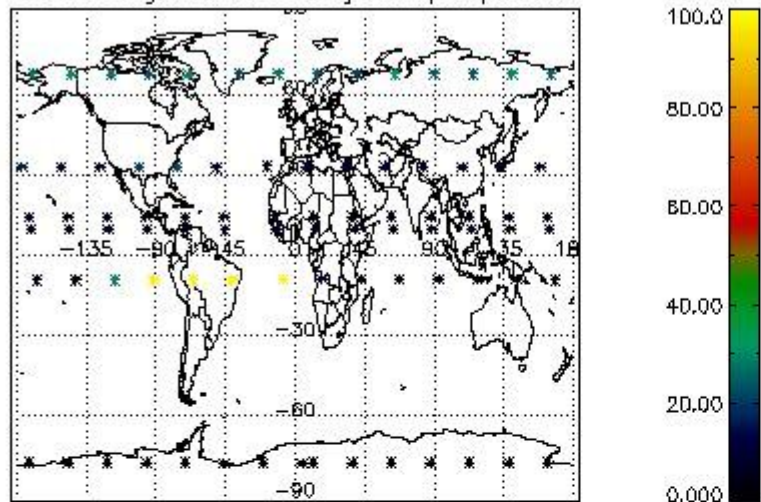
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



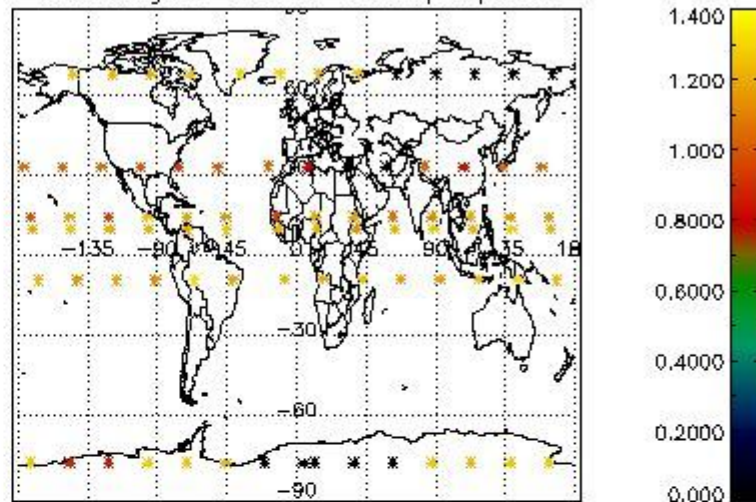
4.2 Plot quality information per product coming from level 1b processing (world map)

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

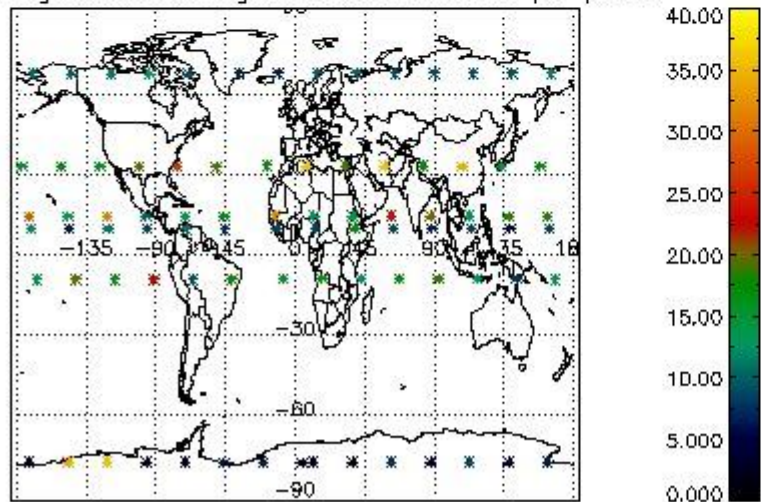
Percentage of cosmic ray hits per profile



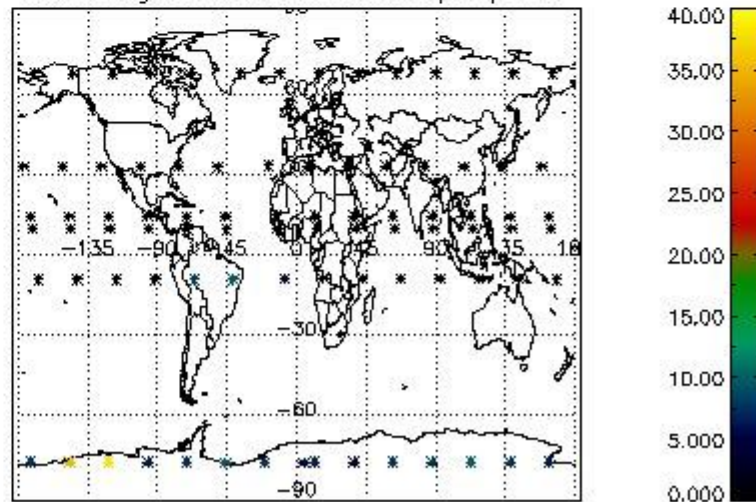
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

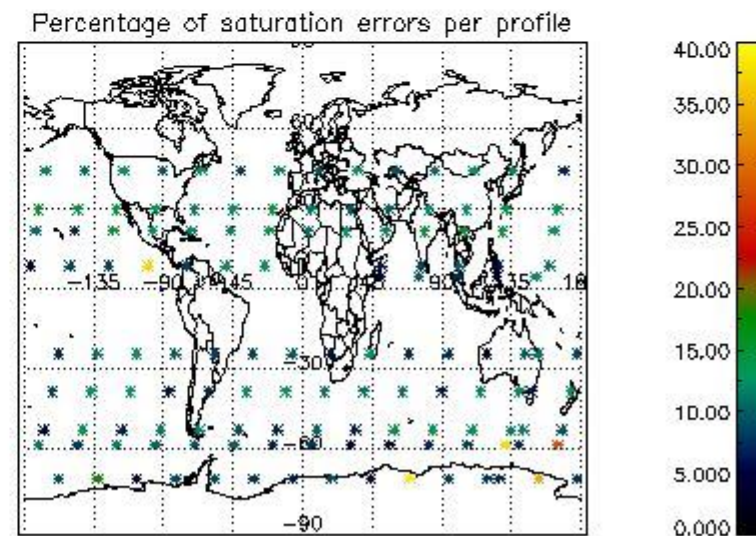
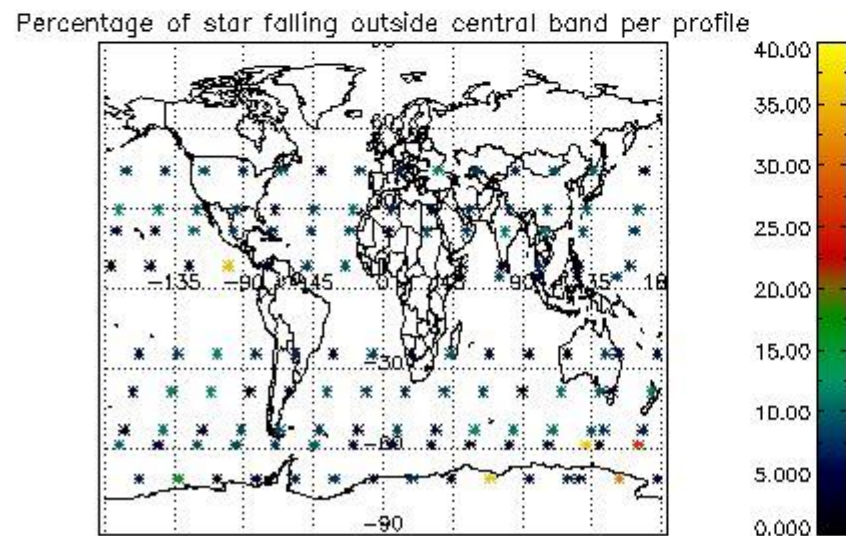
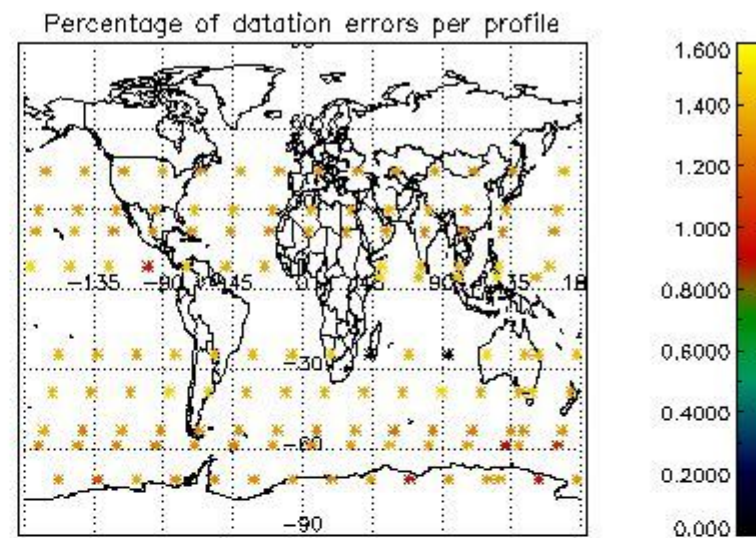
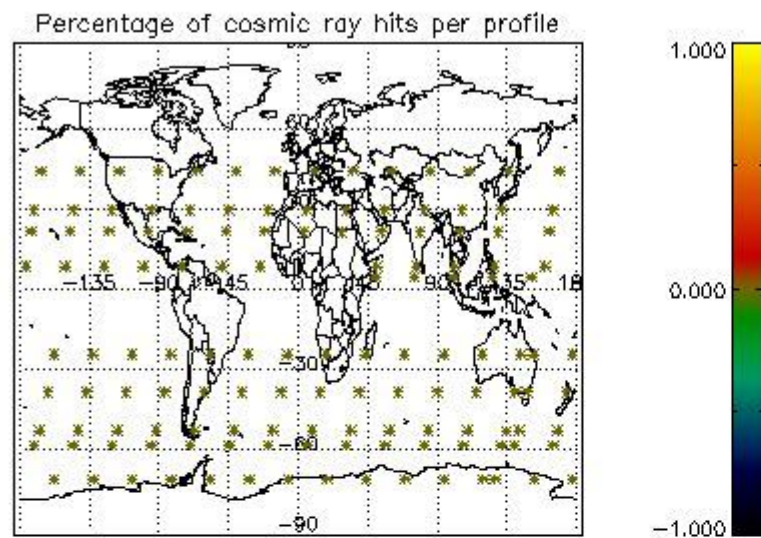


Percentage of saturation errors per profile



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





## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

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

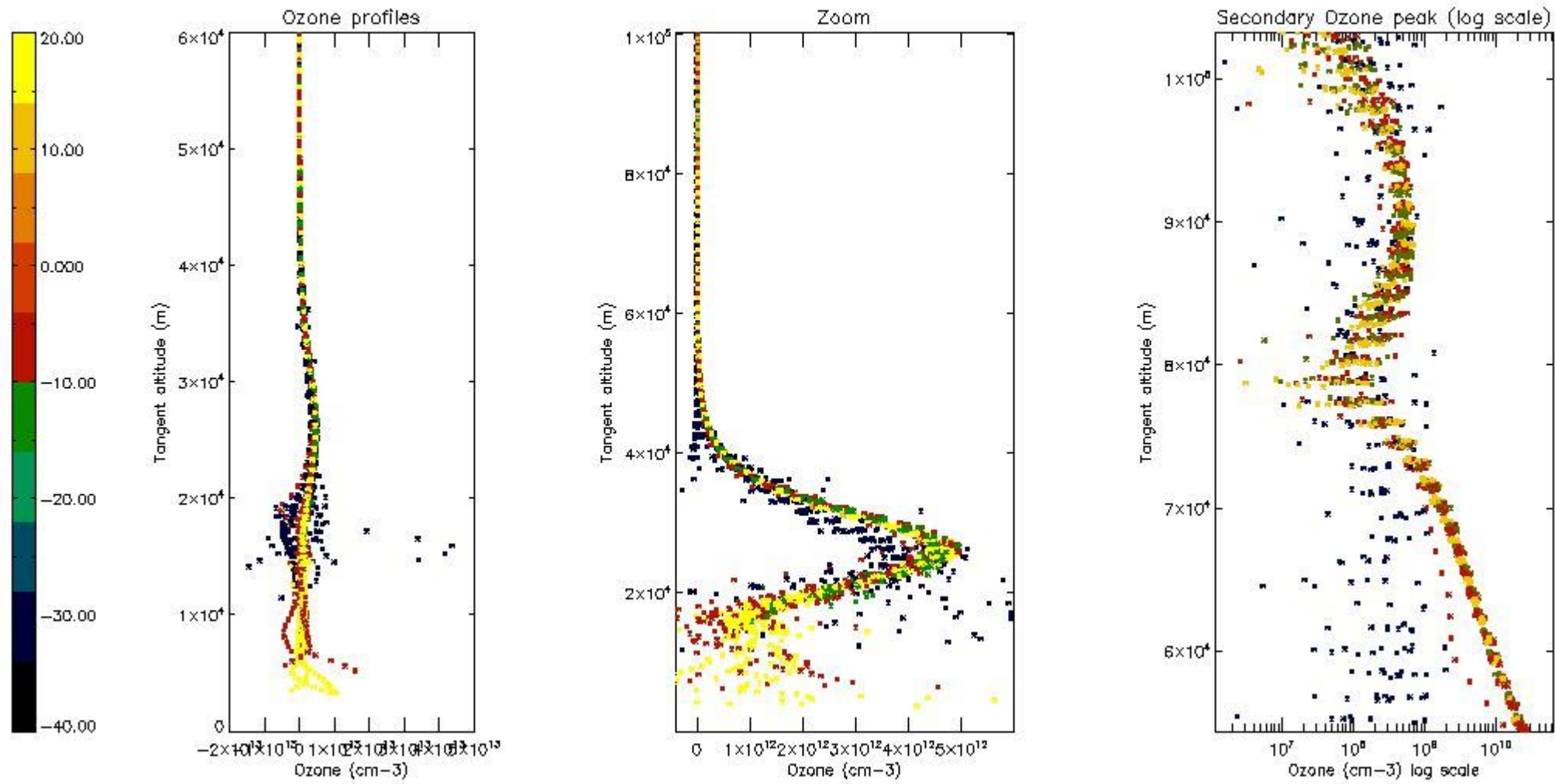
Criteria	% of total production
All STD	30
STD < 20	16



STD < 10	12
STD < 5	6

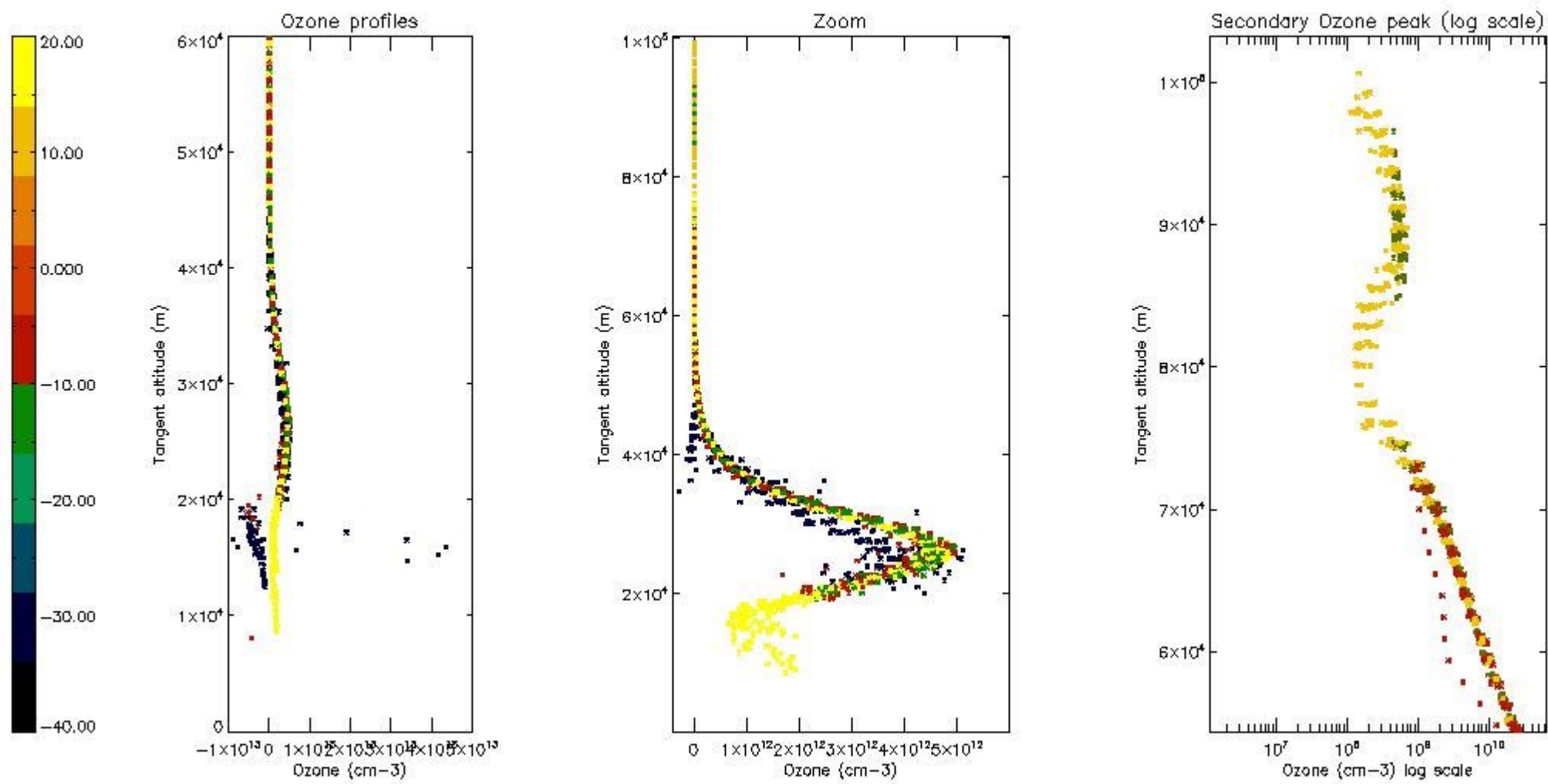
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



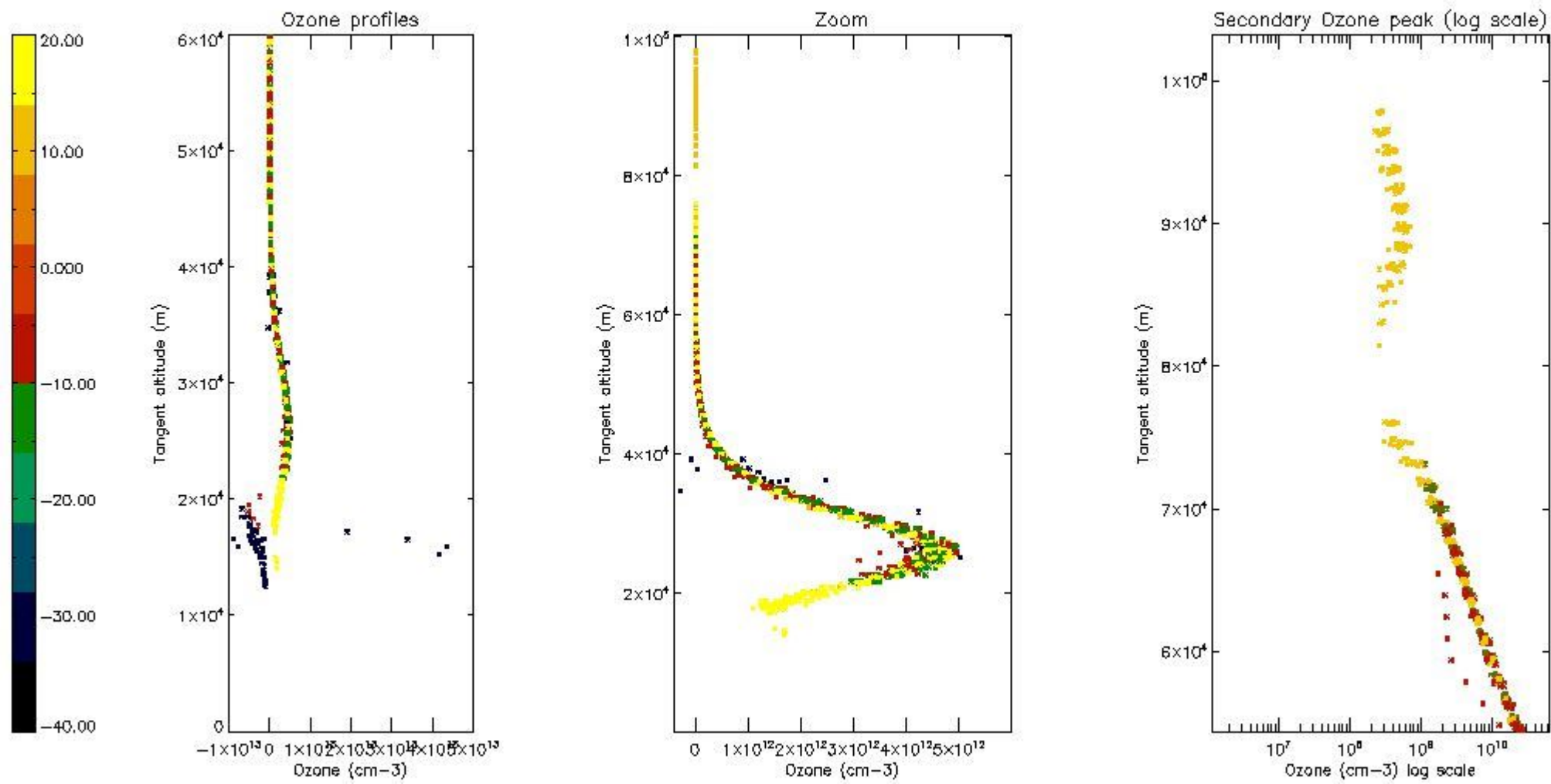
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



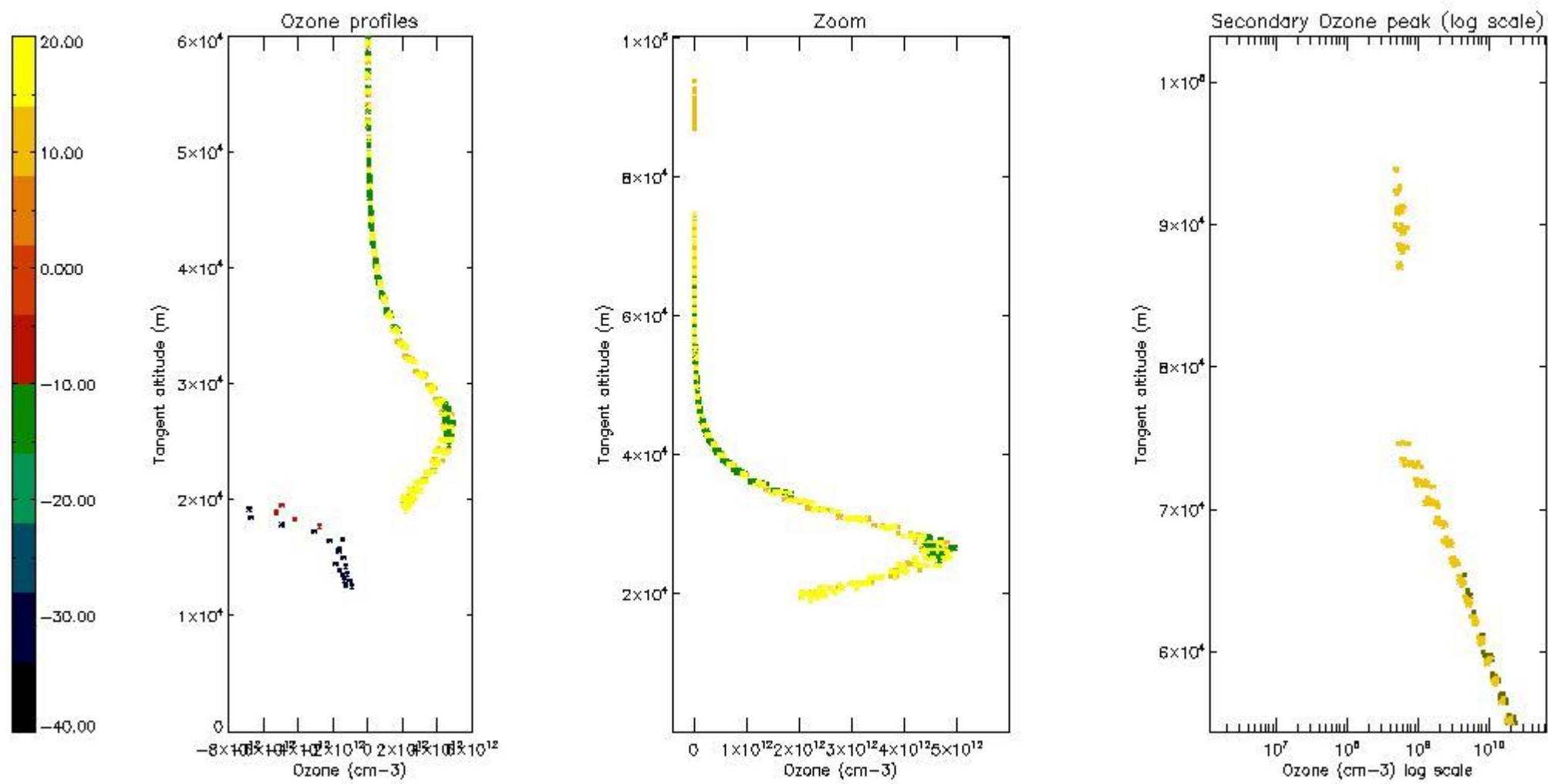
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



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

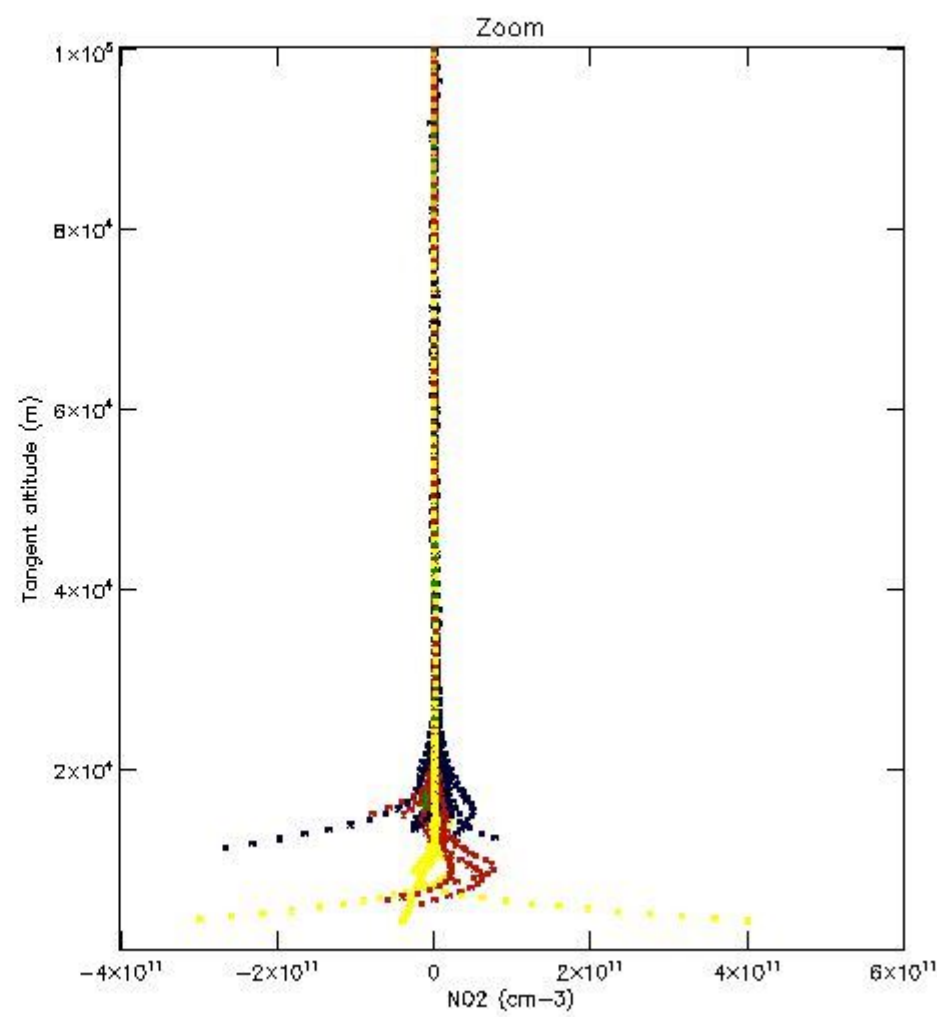
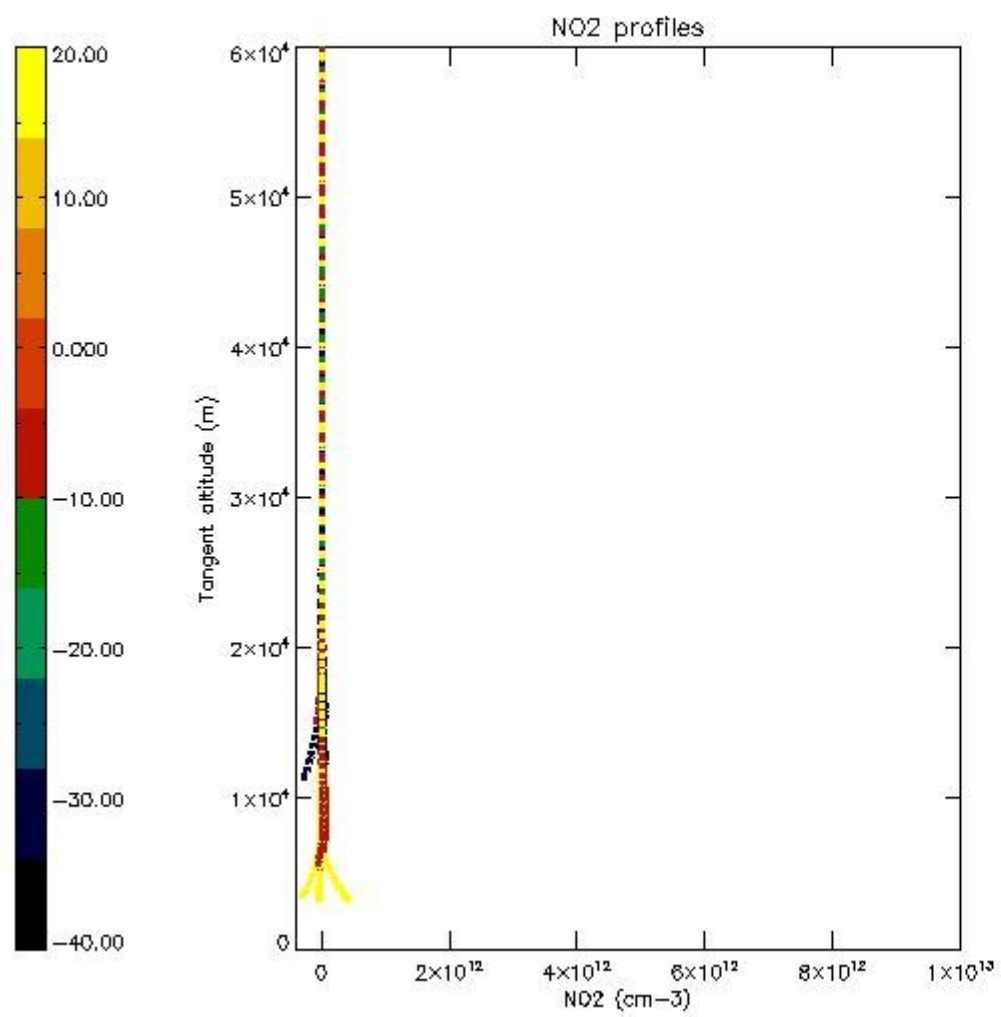
The colorbar represents the latitude.



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

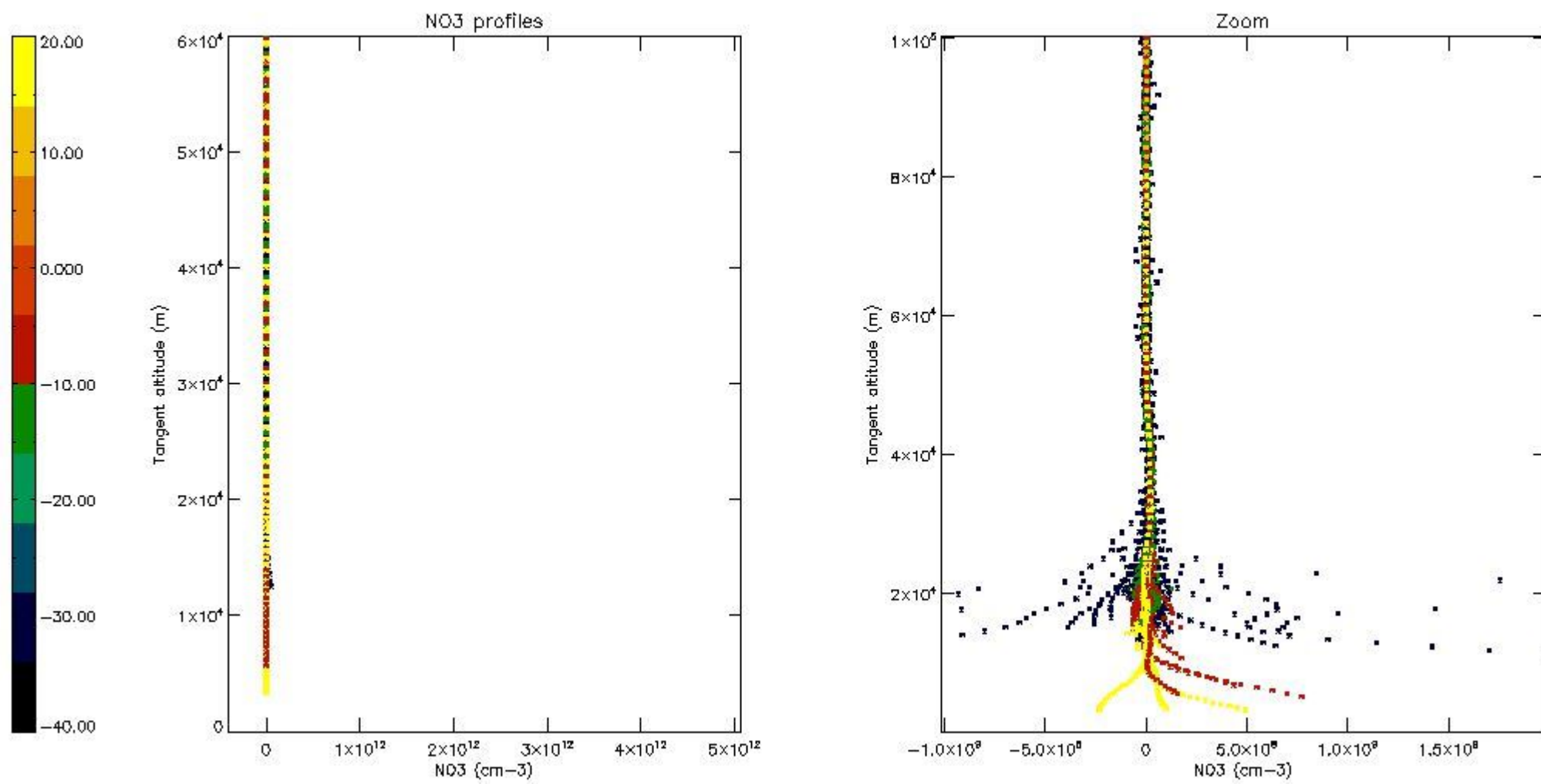
The colorbar represents the latitude.





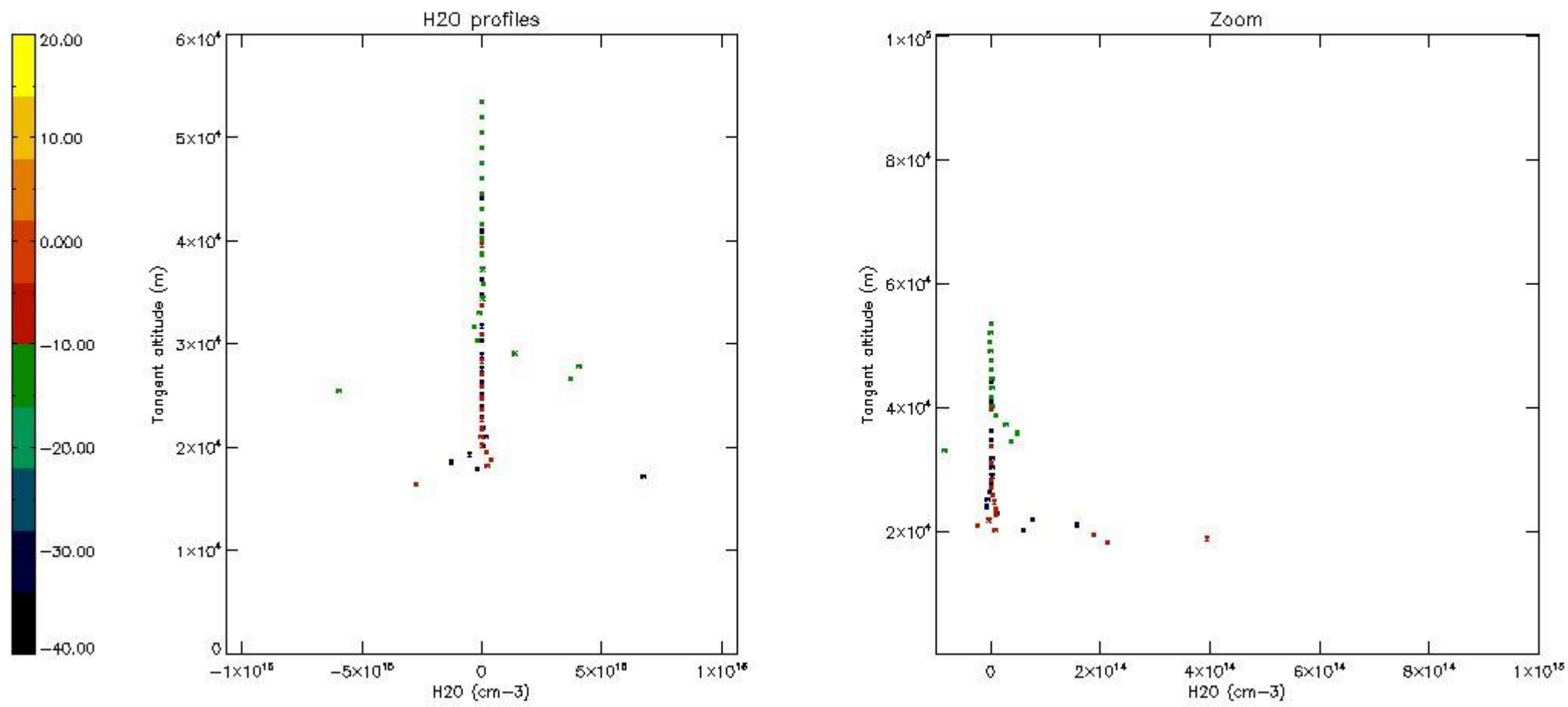
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

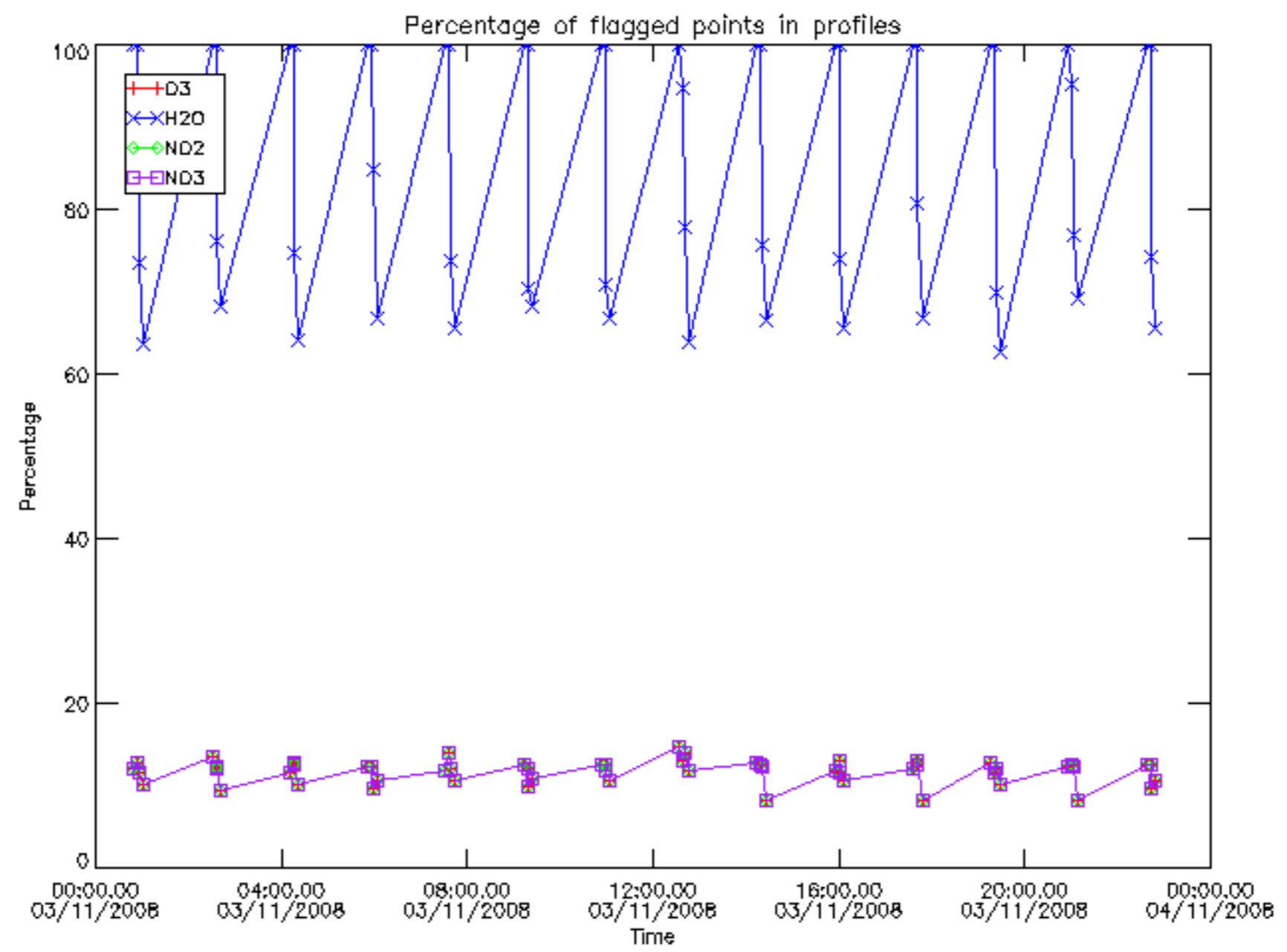
The colorbar represents the latitude.



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

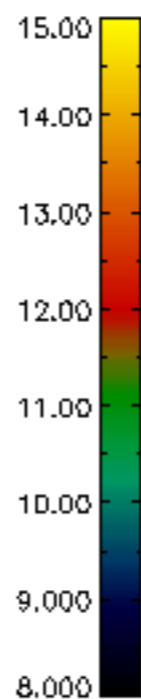
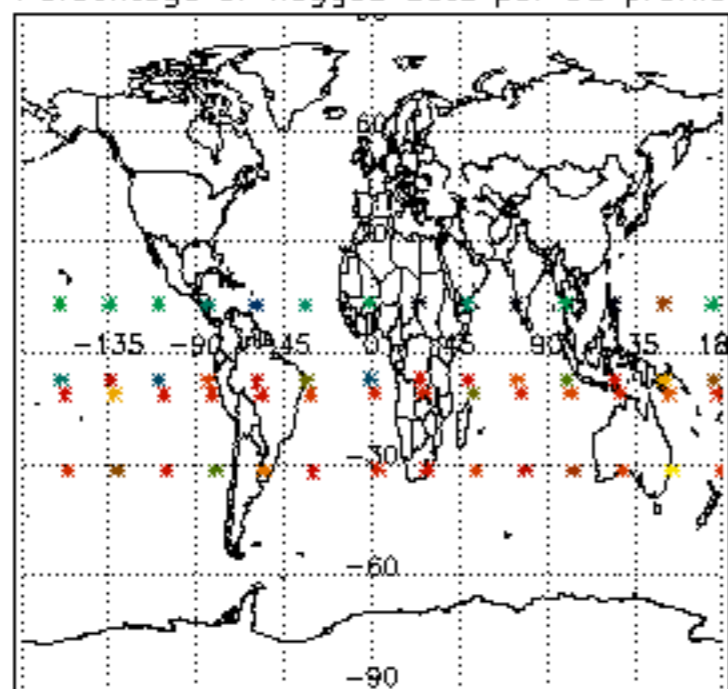
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	03-NOV-2008 00:00:18
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	03-NOV-2008 00:00:18
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	03-NOV-2008 00:00:18

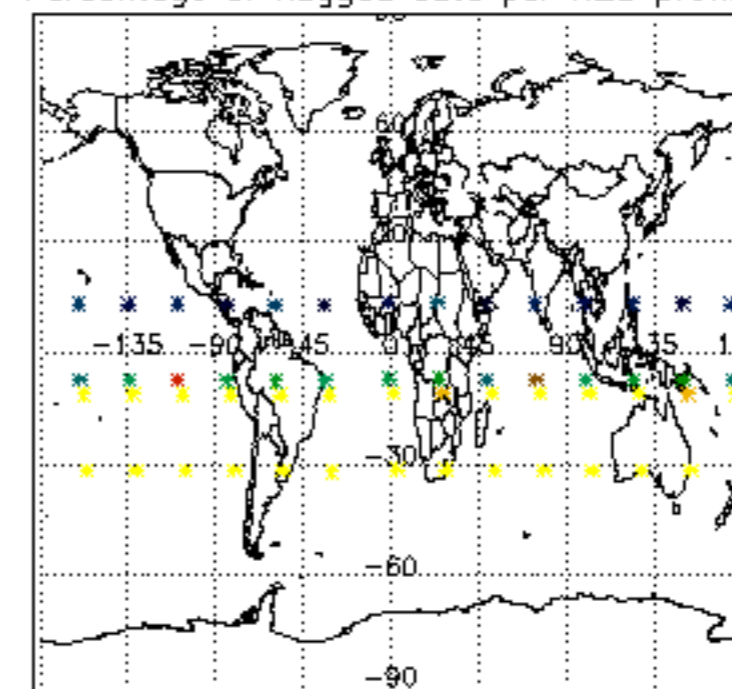




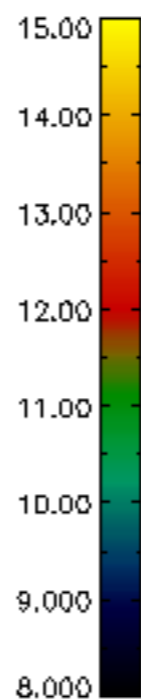
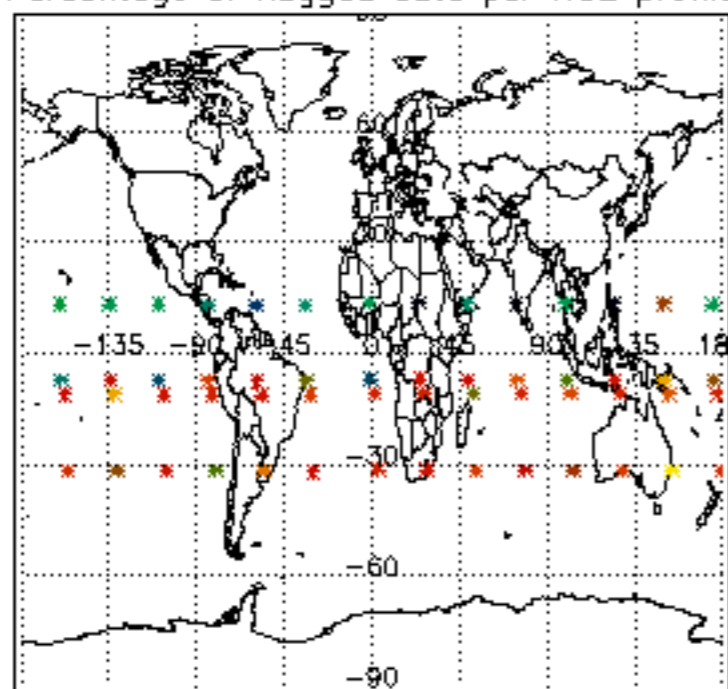
Percentage of flagged data per D3 profile



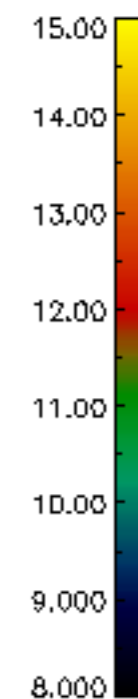
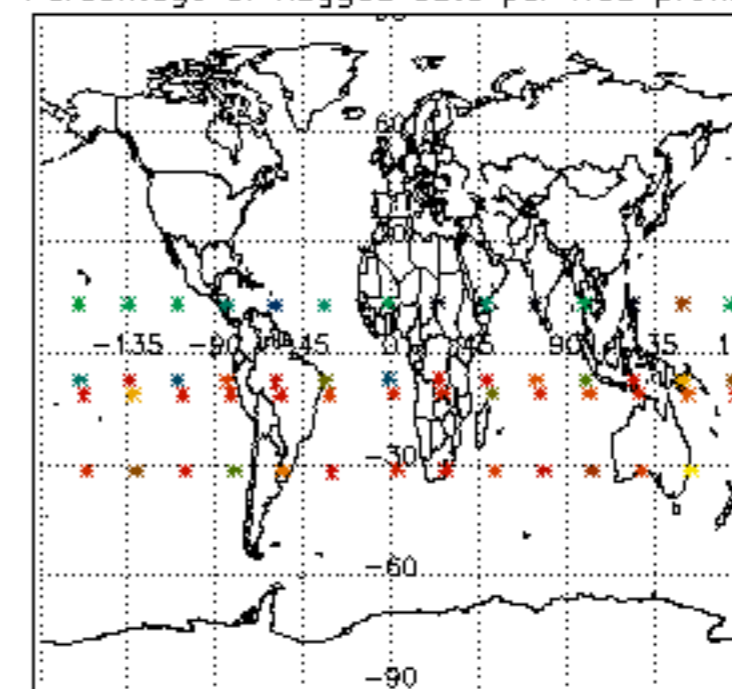
Percentage of flagged data per H2O profile

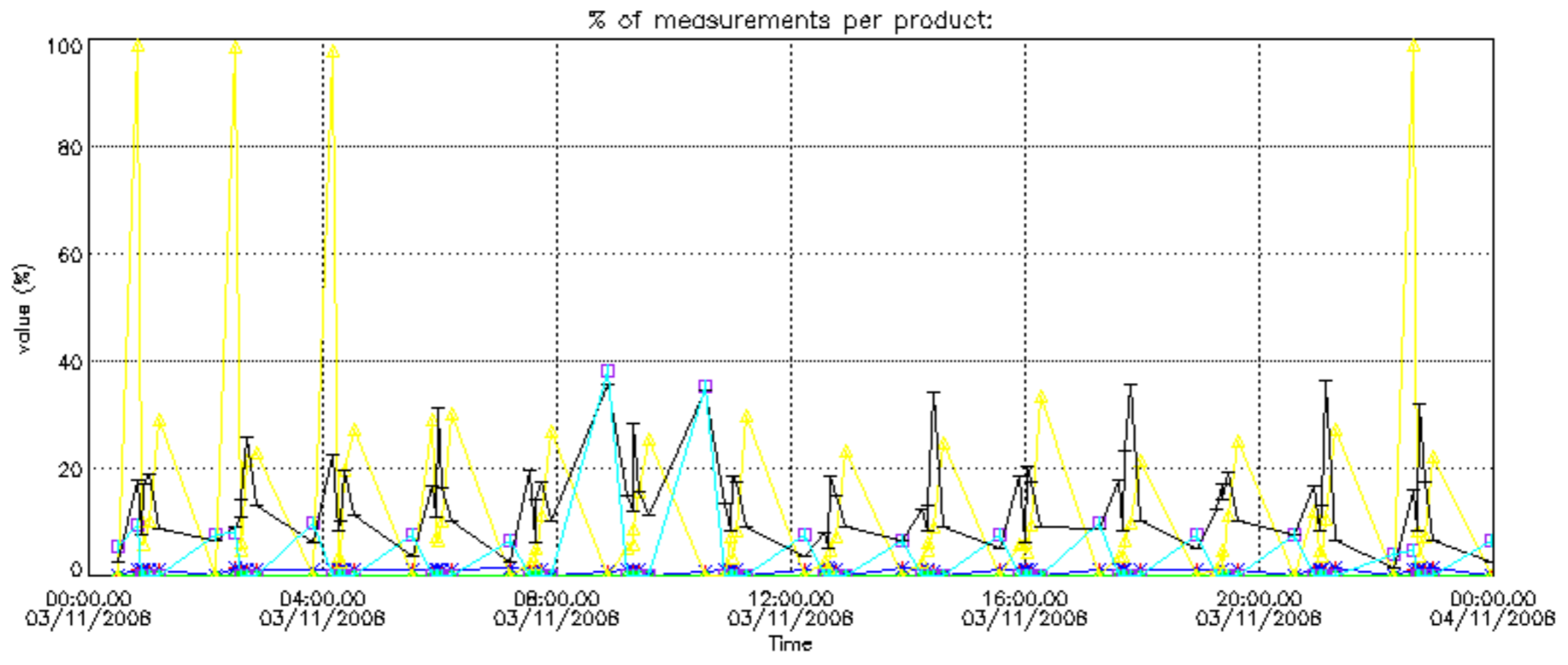


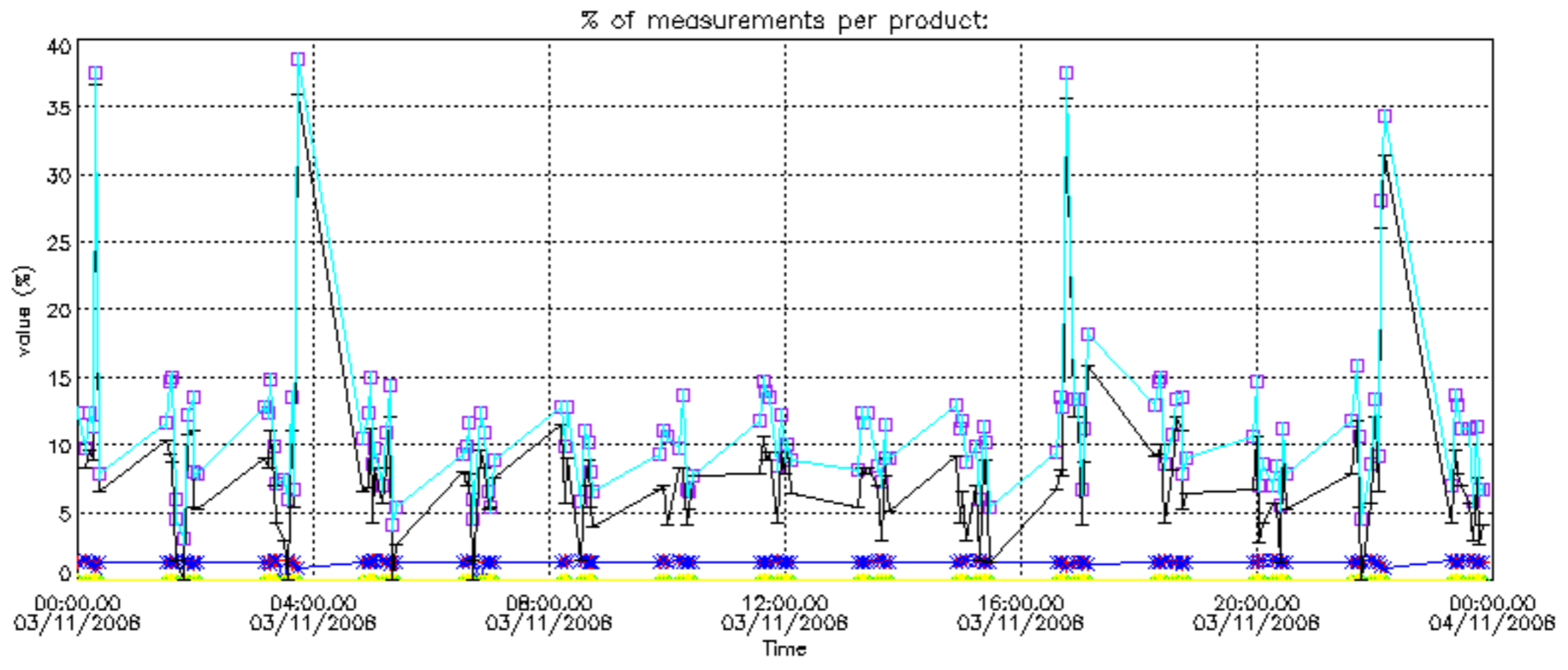
Percentage of flagged data per NO2 profile



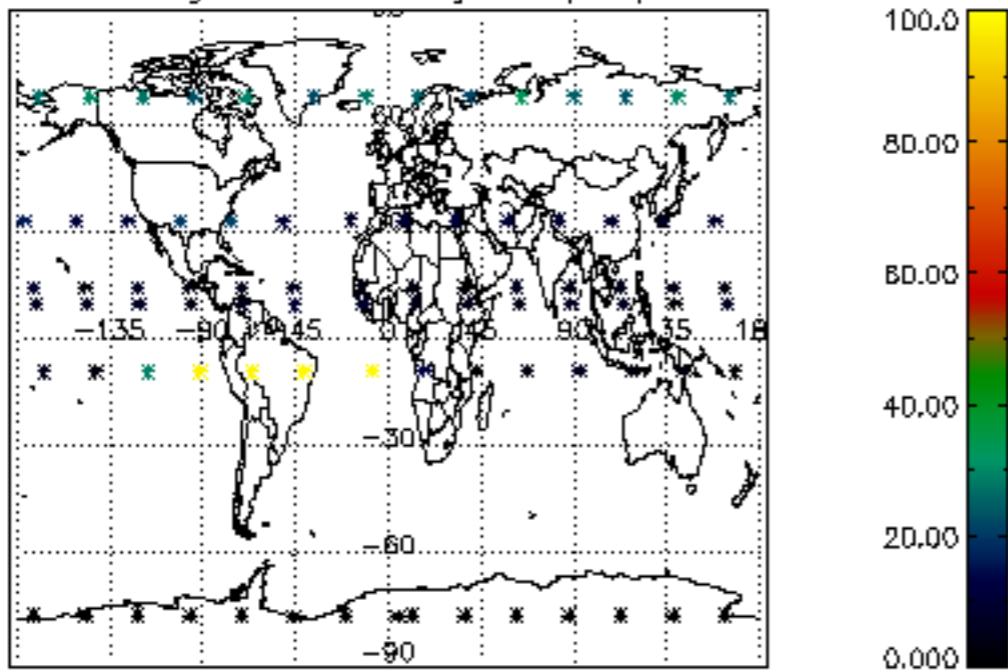
Percentage of flagged data per NO3 profile



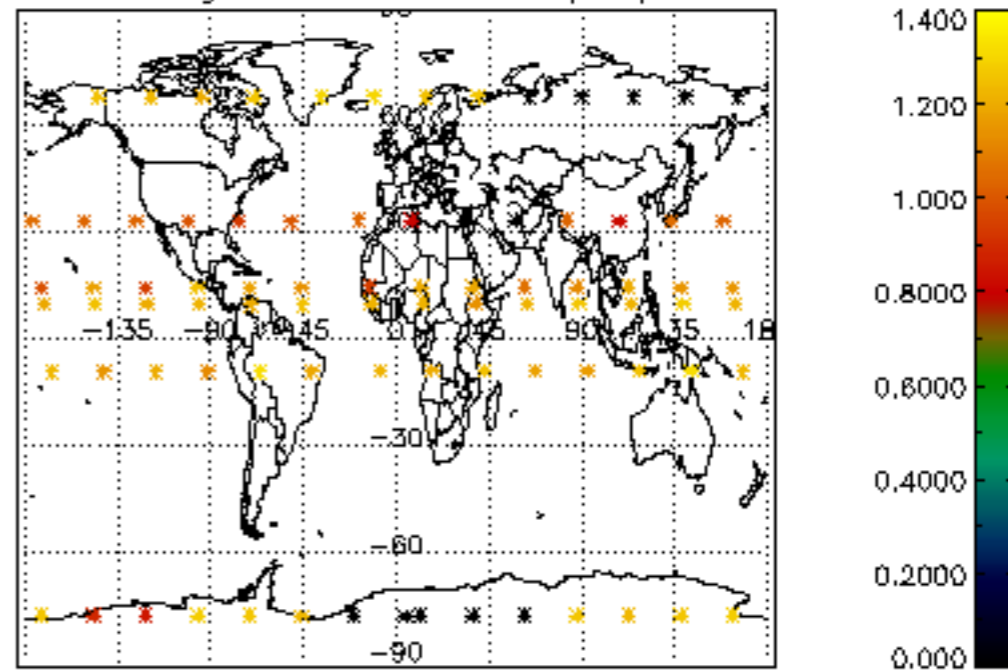




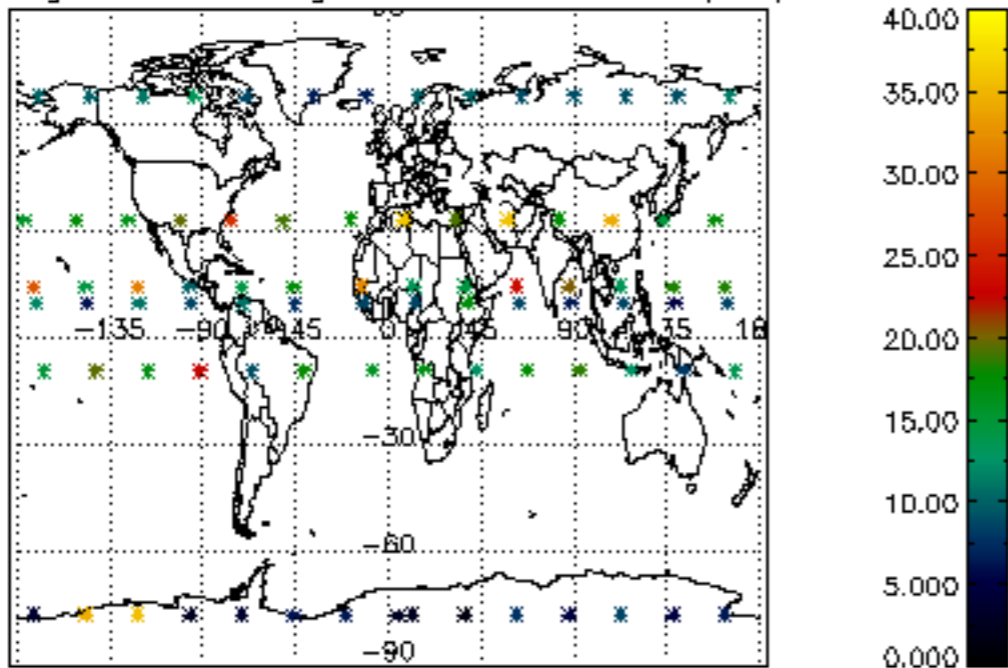
Percentage of cosmic ray hits per profile



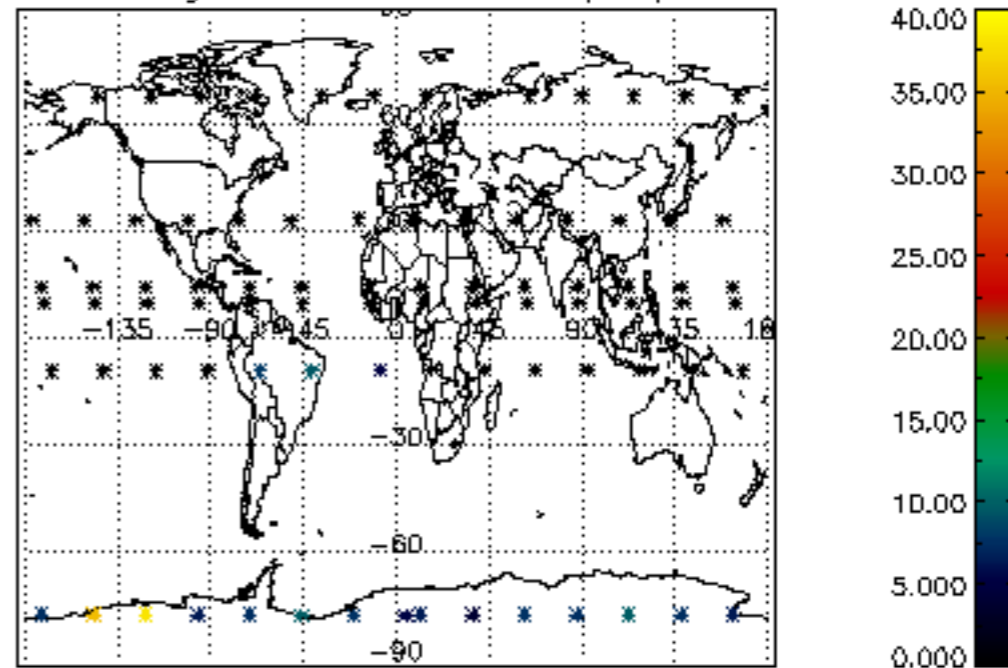
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

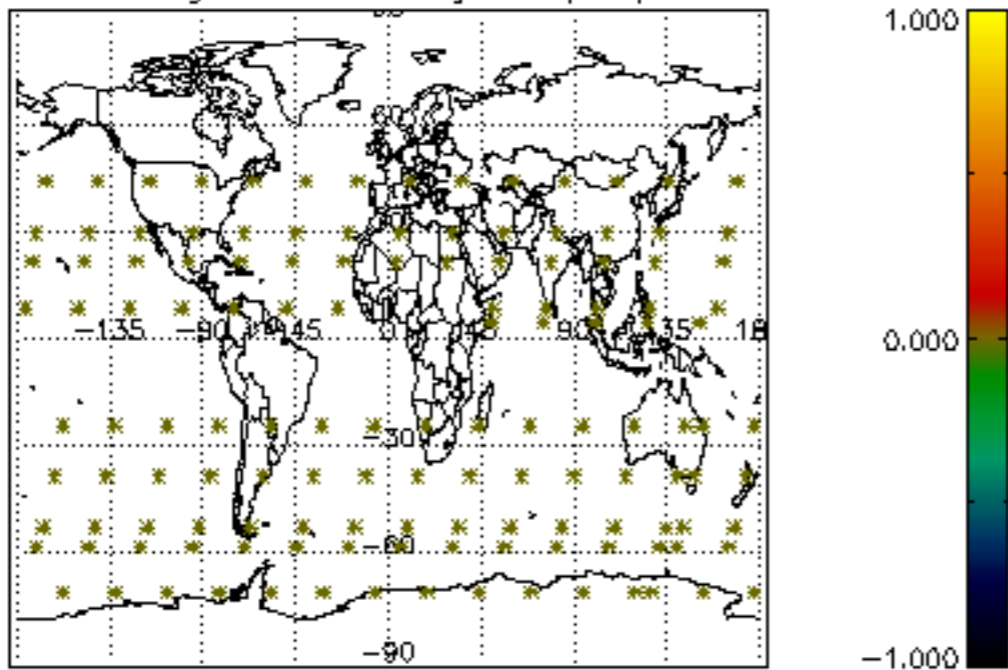


Percentage of saturation errors per profile

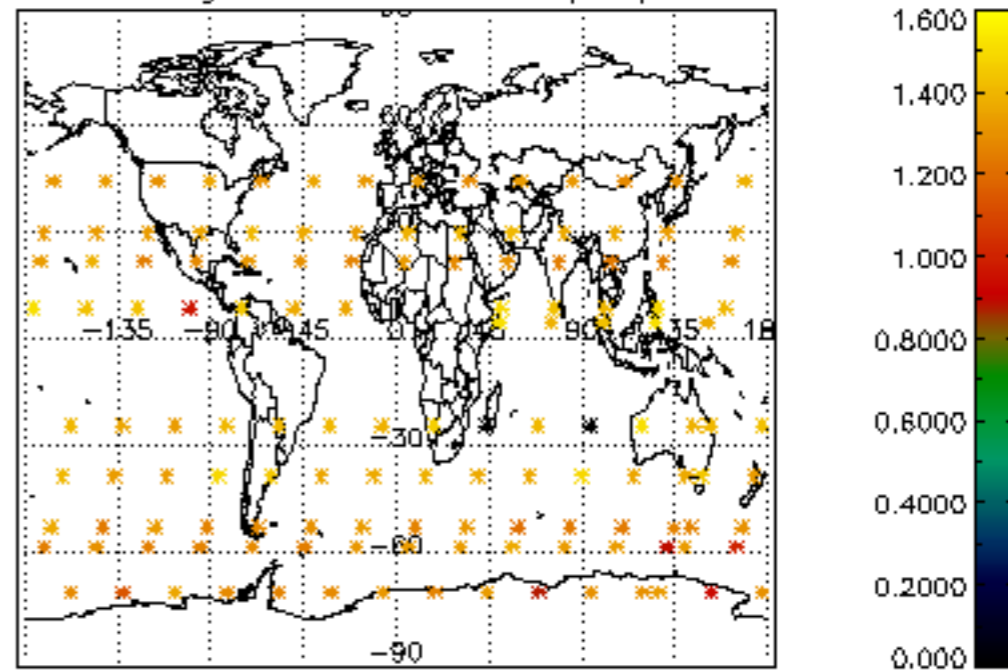




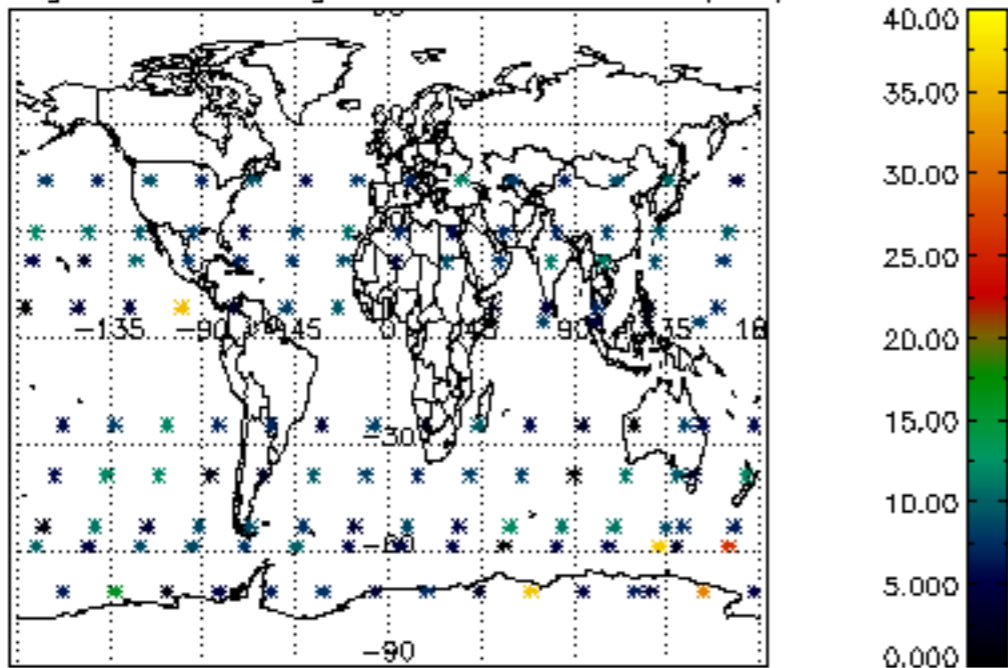
Percentage of cosmic ray hits per profile



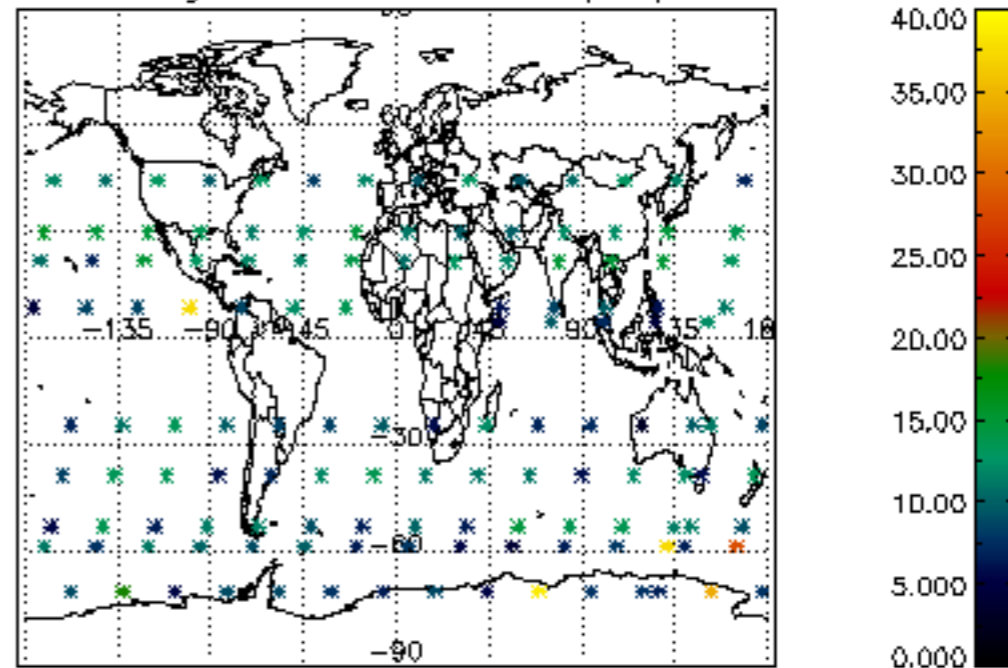
Percentage of datation errors per profile

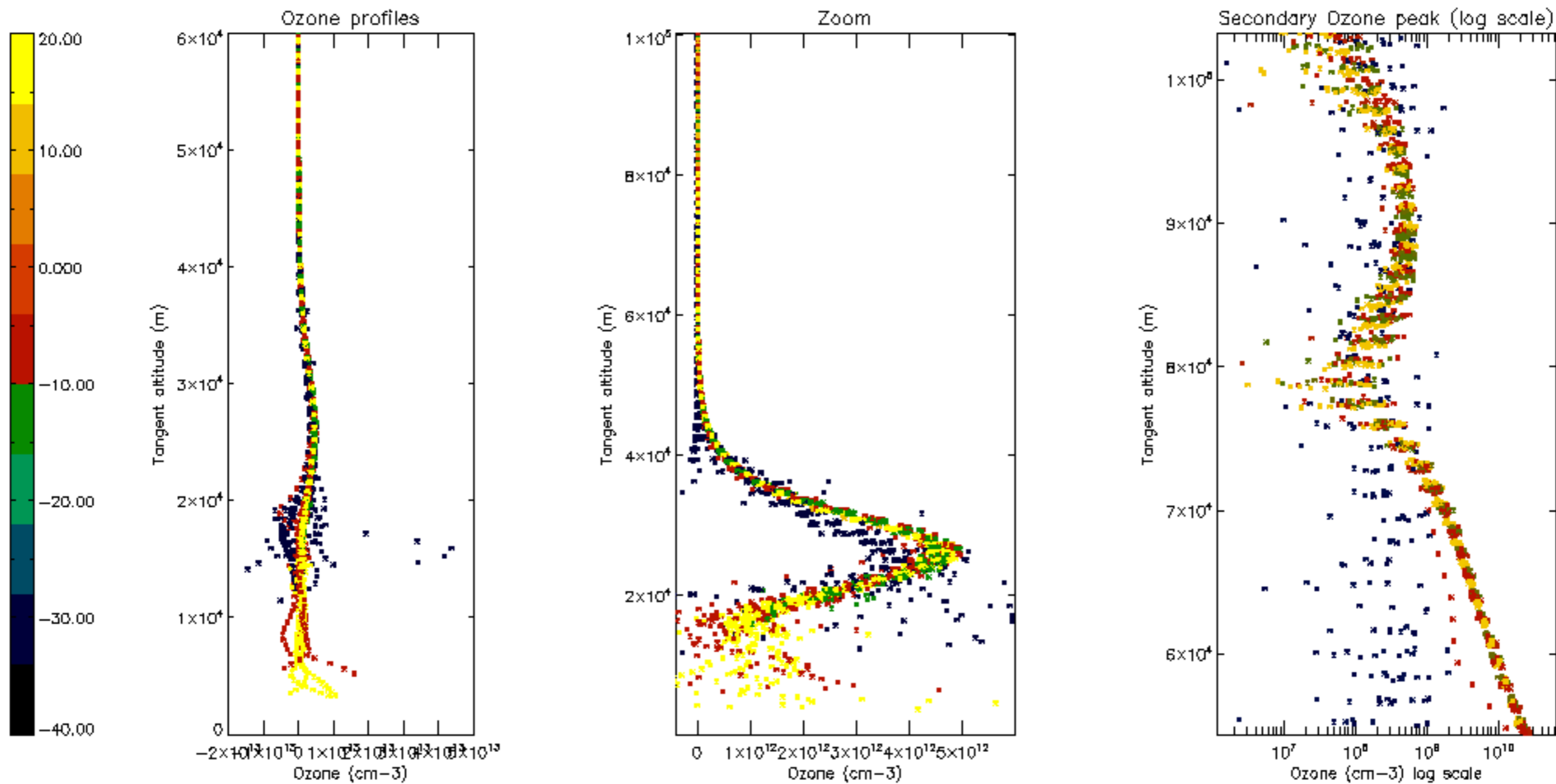


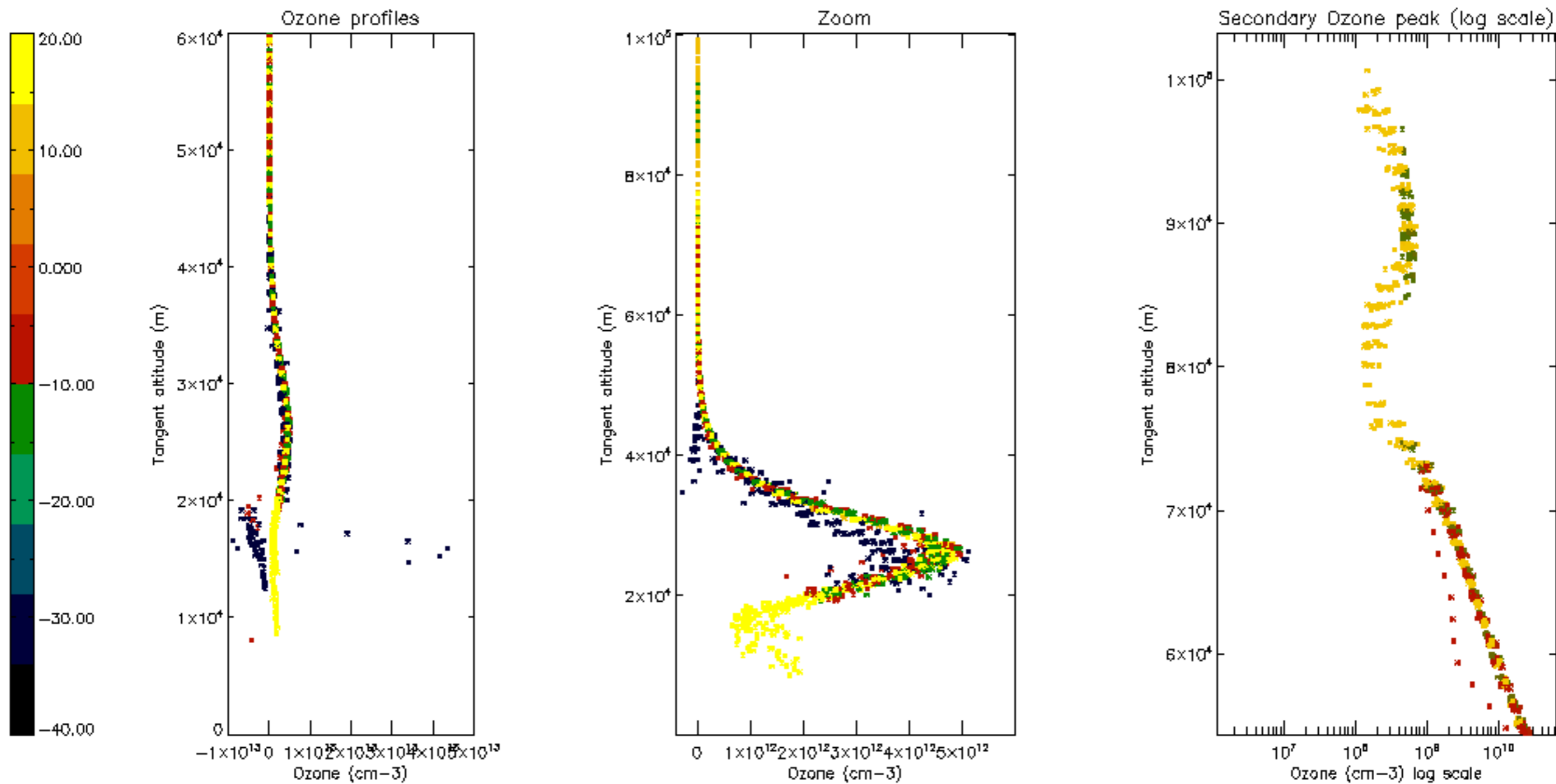
Percentage of star falling outside central band per profile

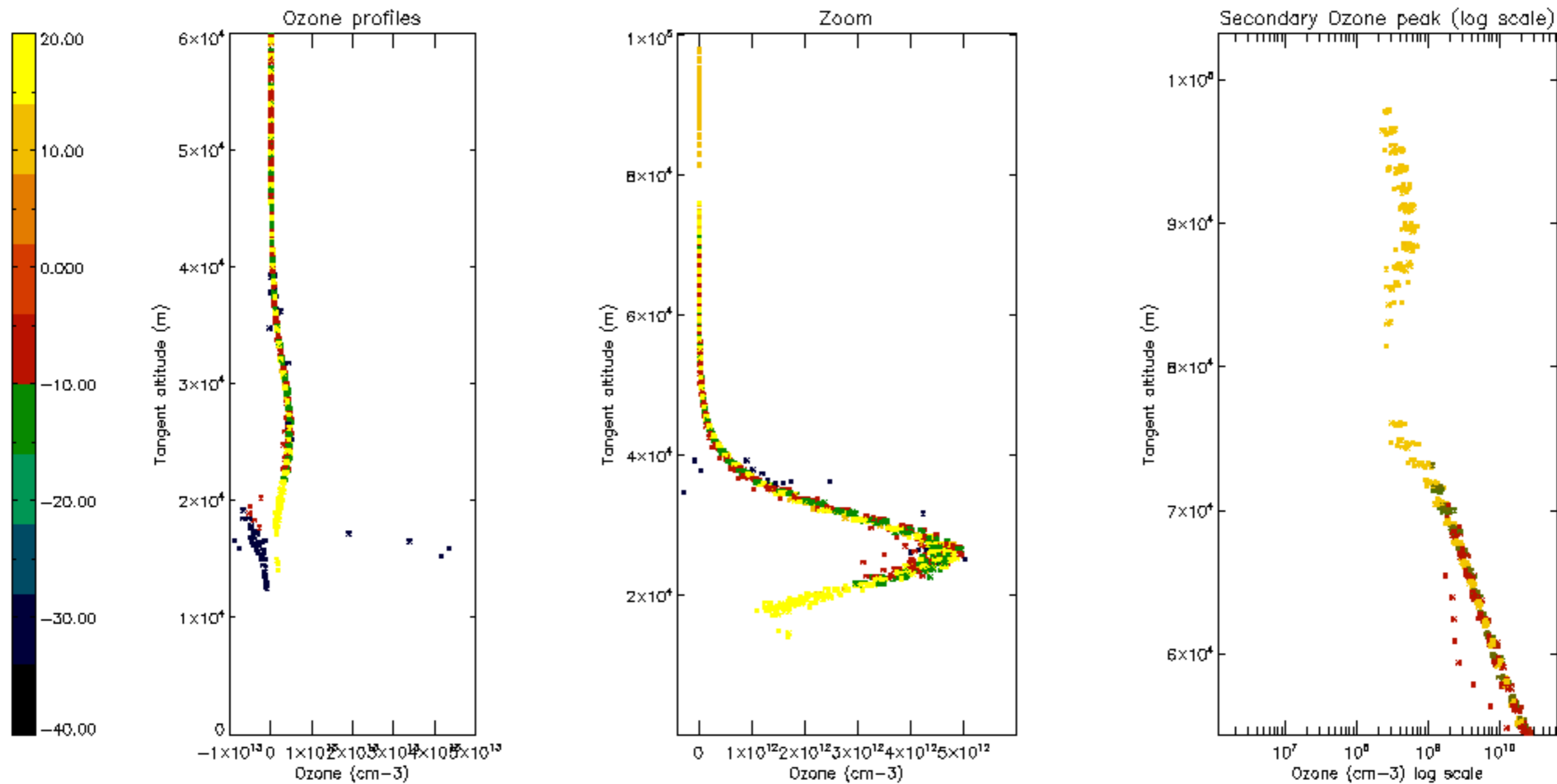


Percentage of saturation errors per profile

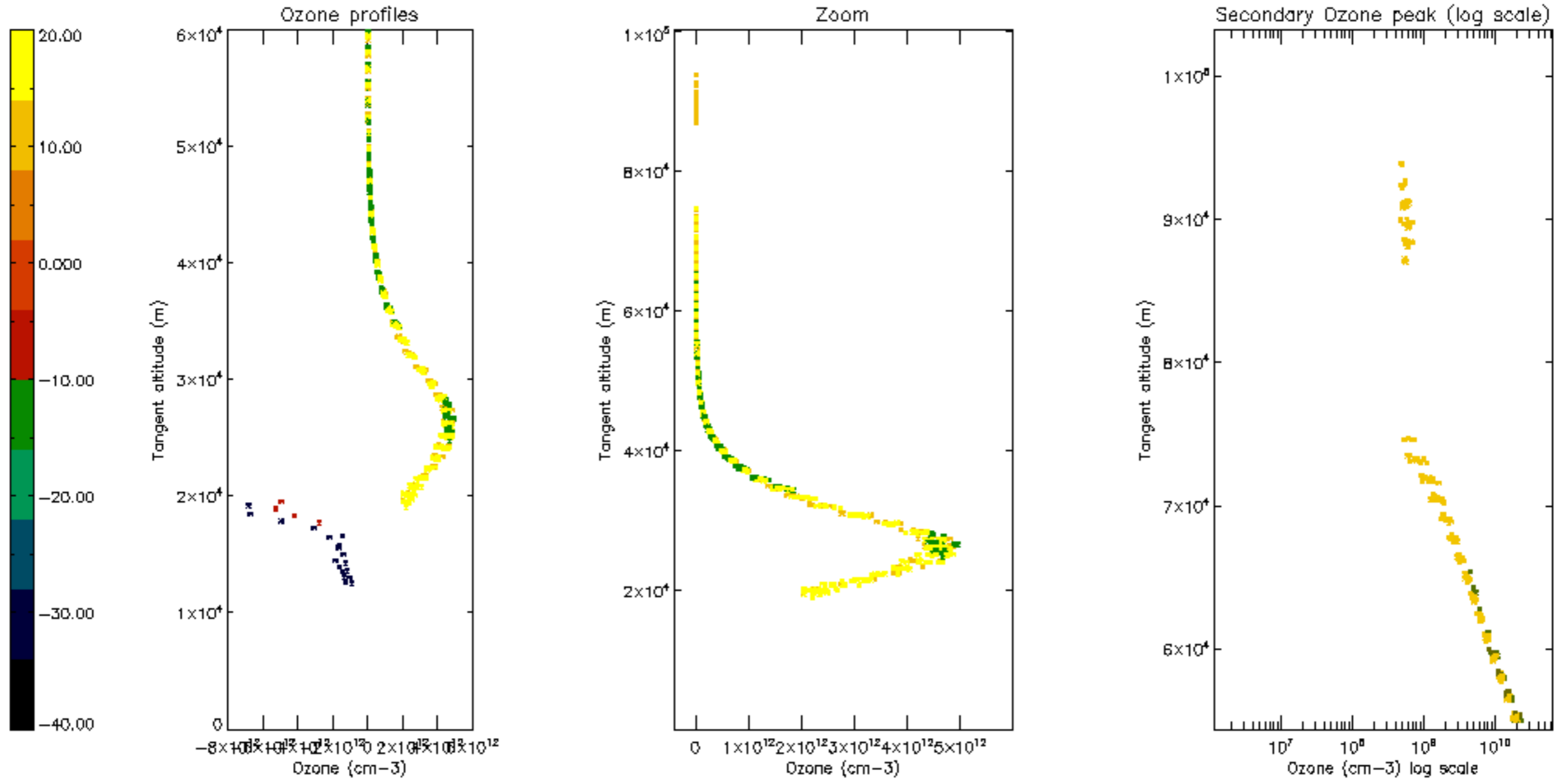


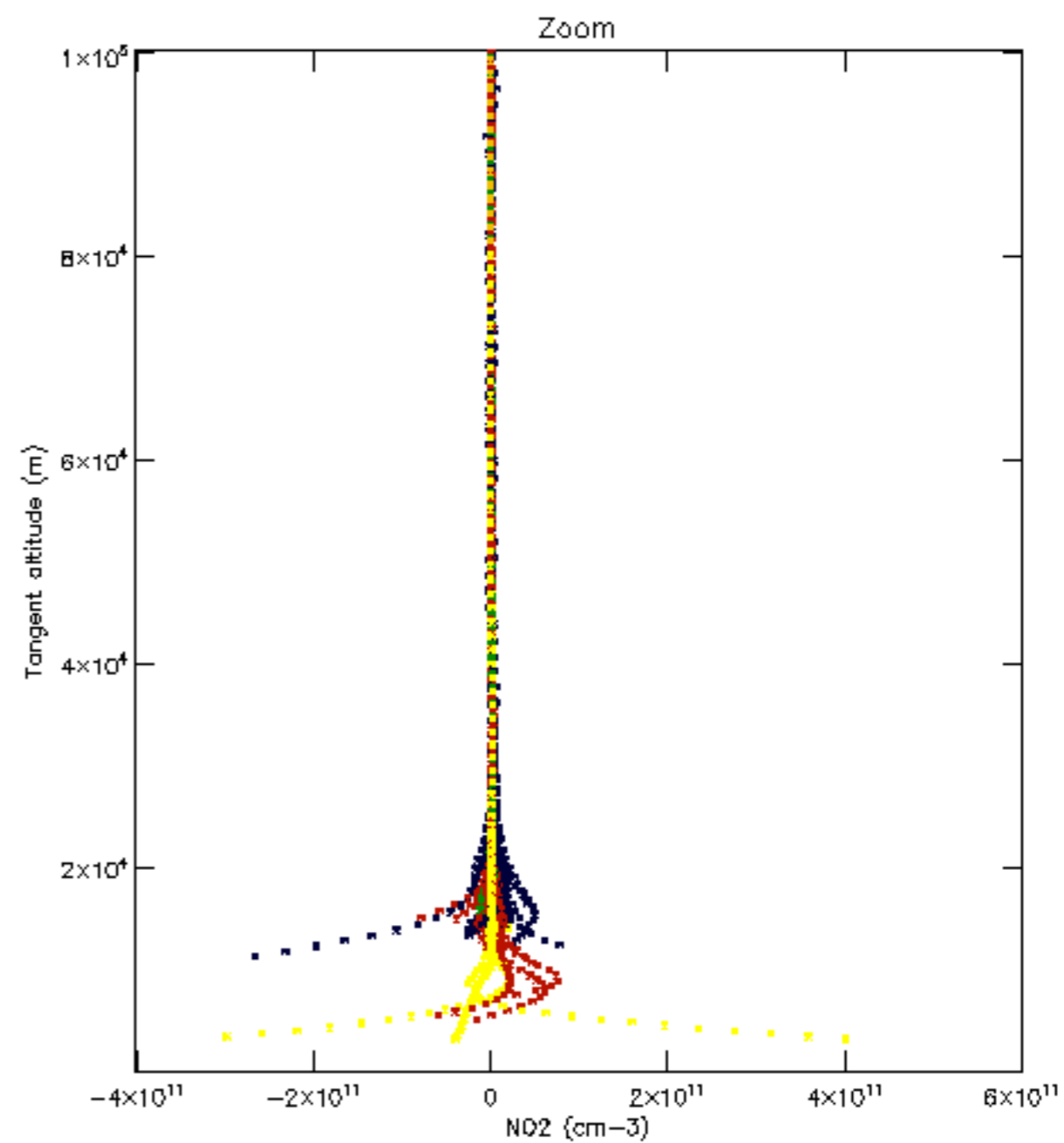
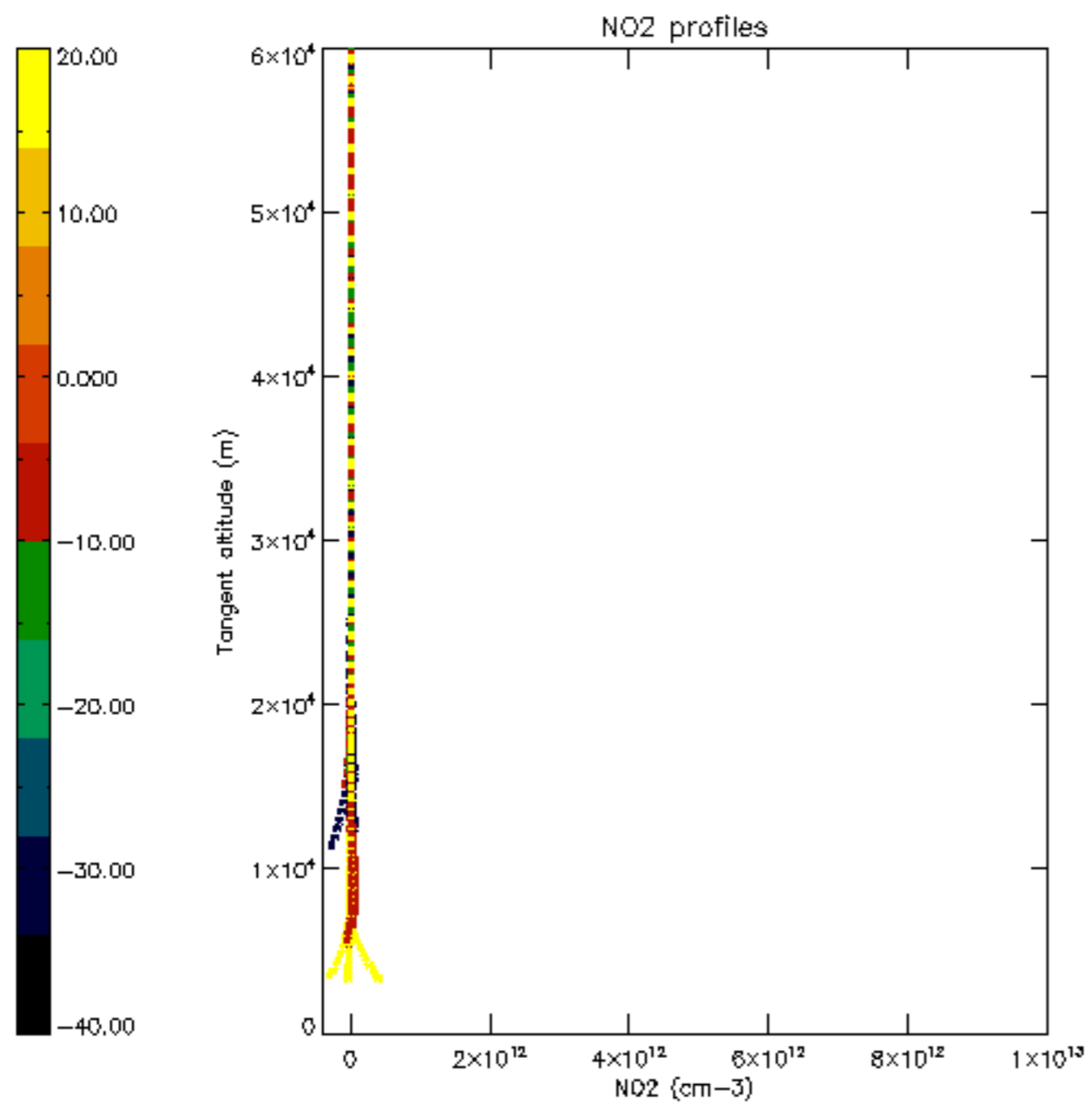


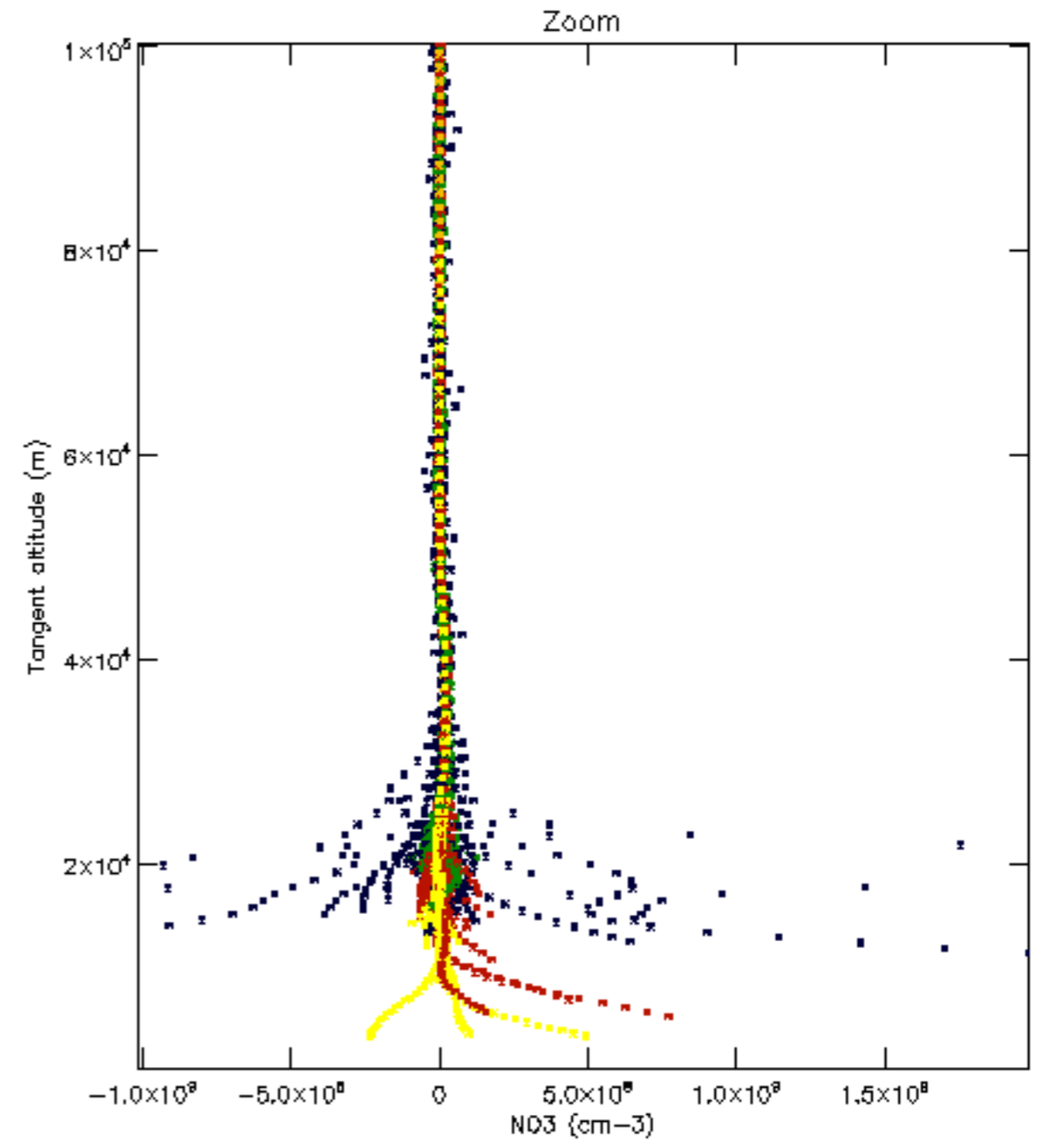
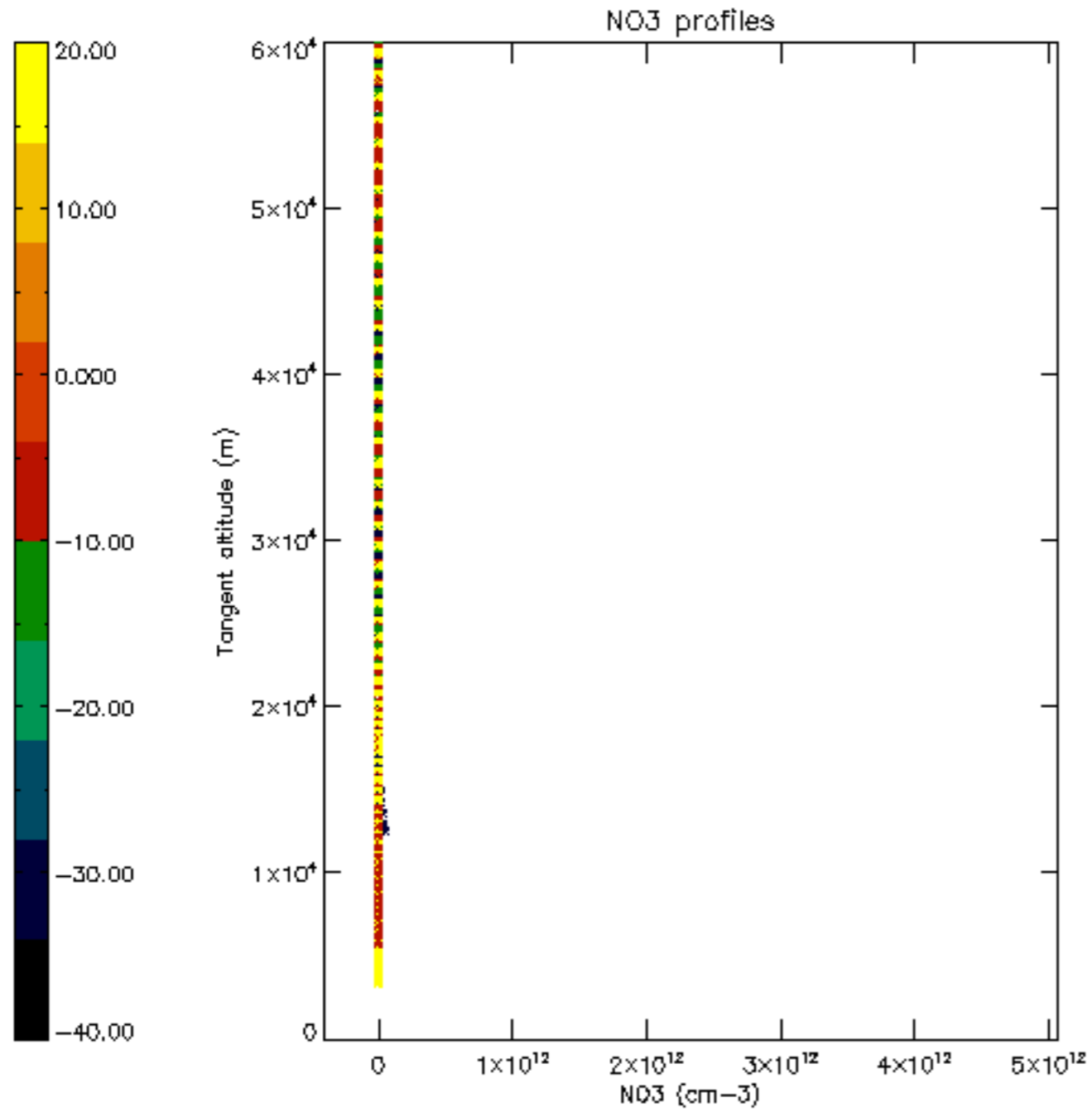


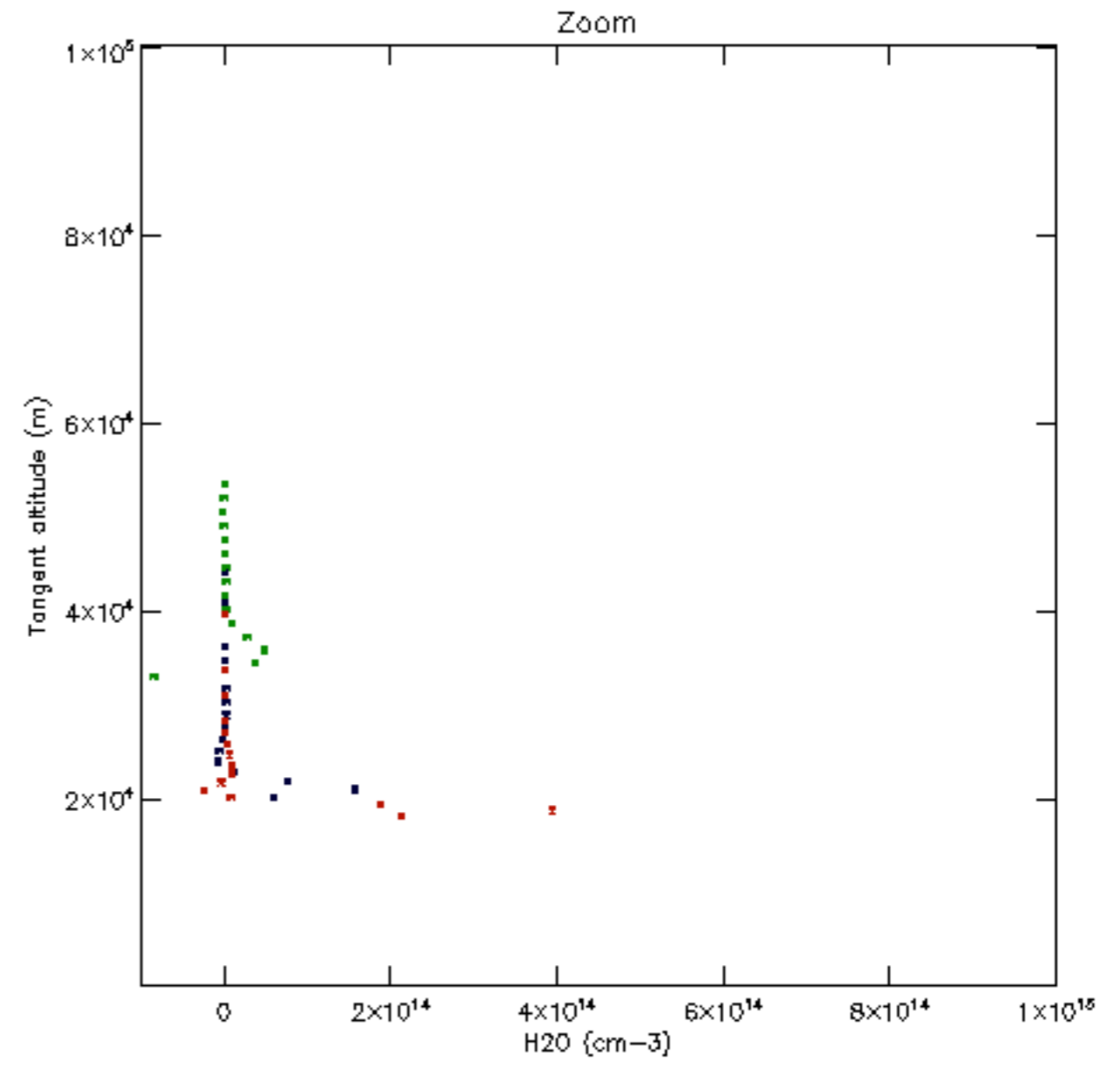
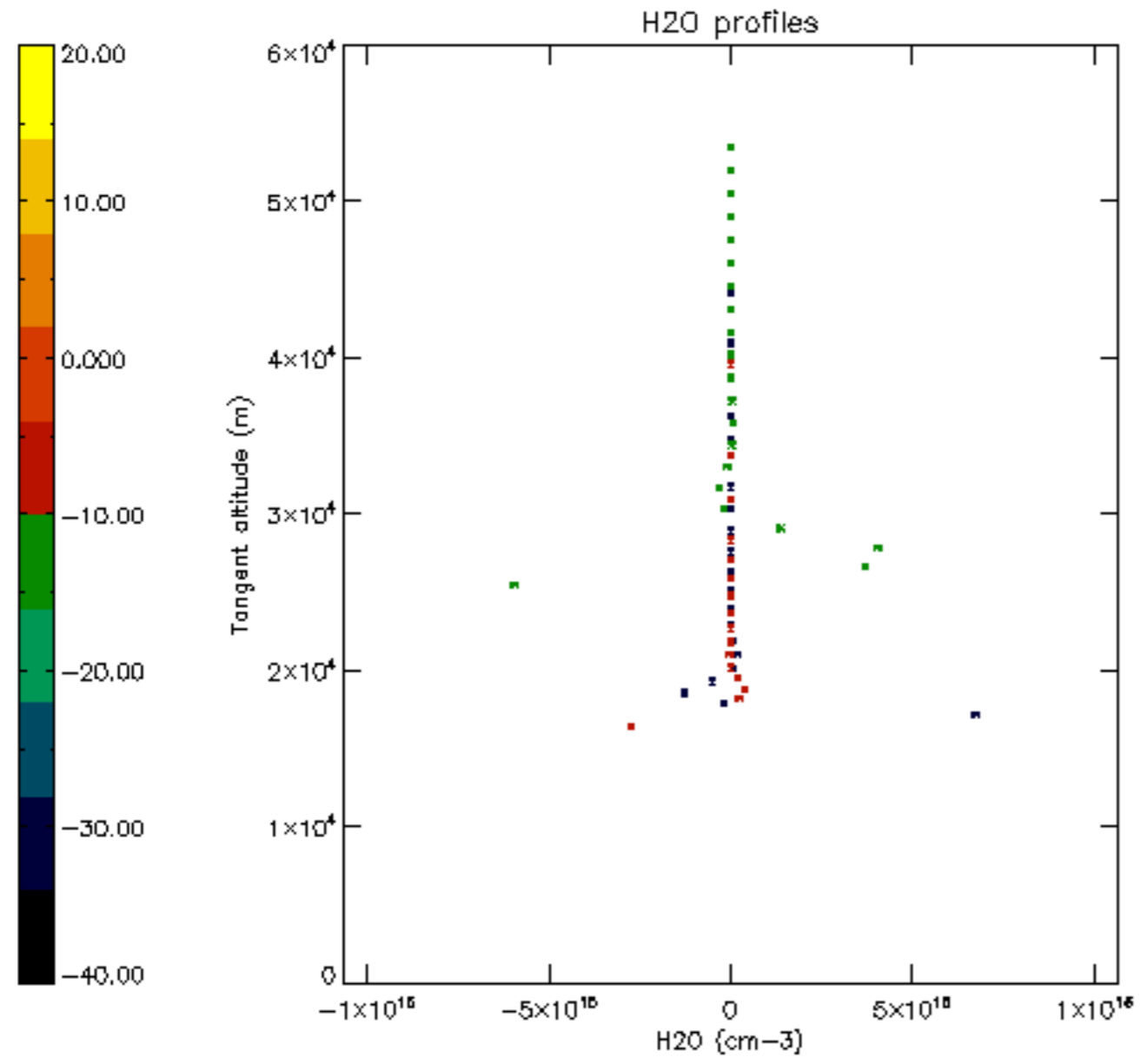




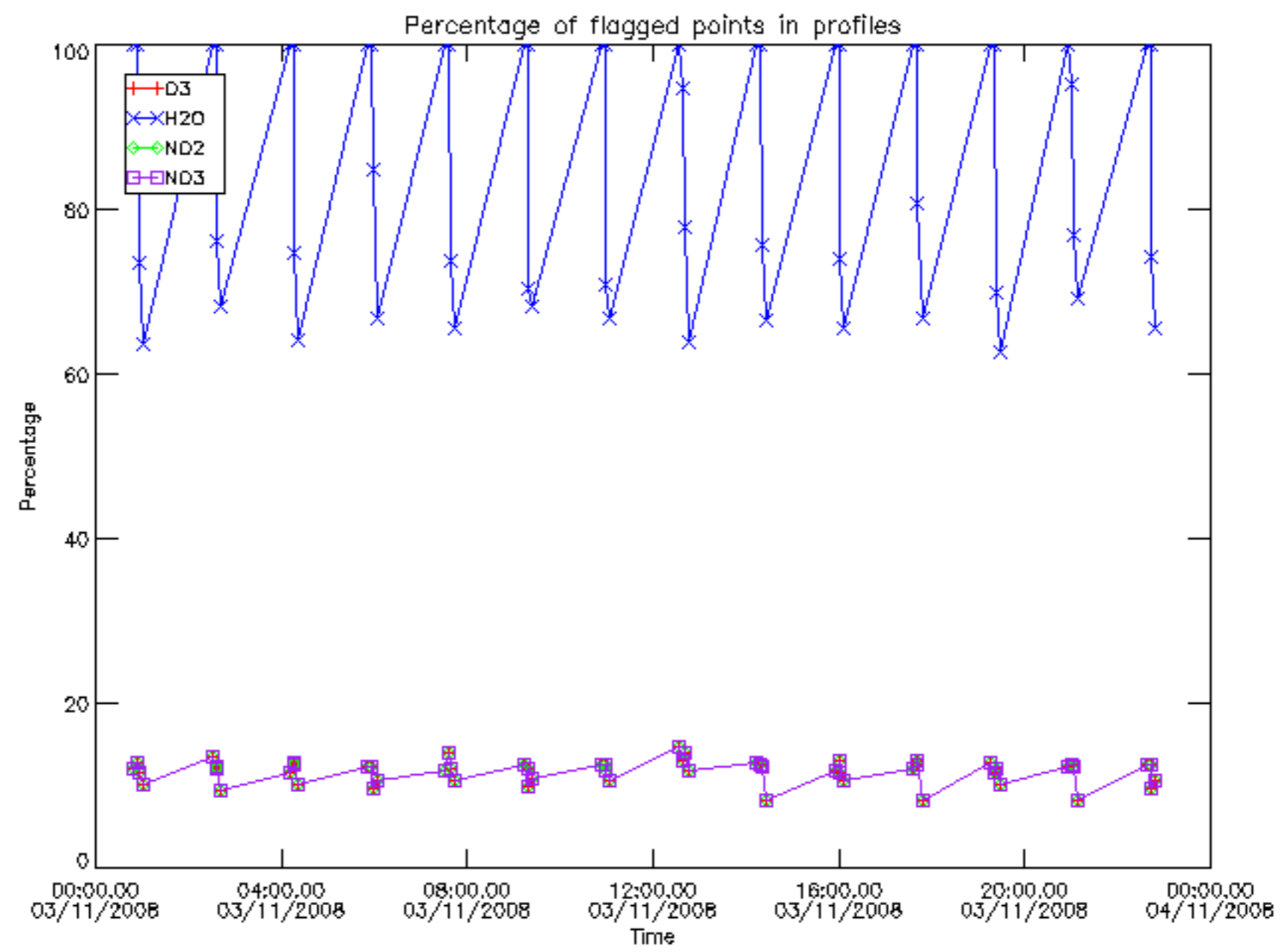




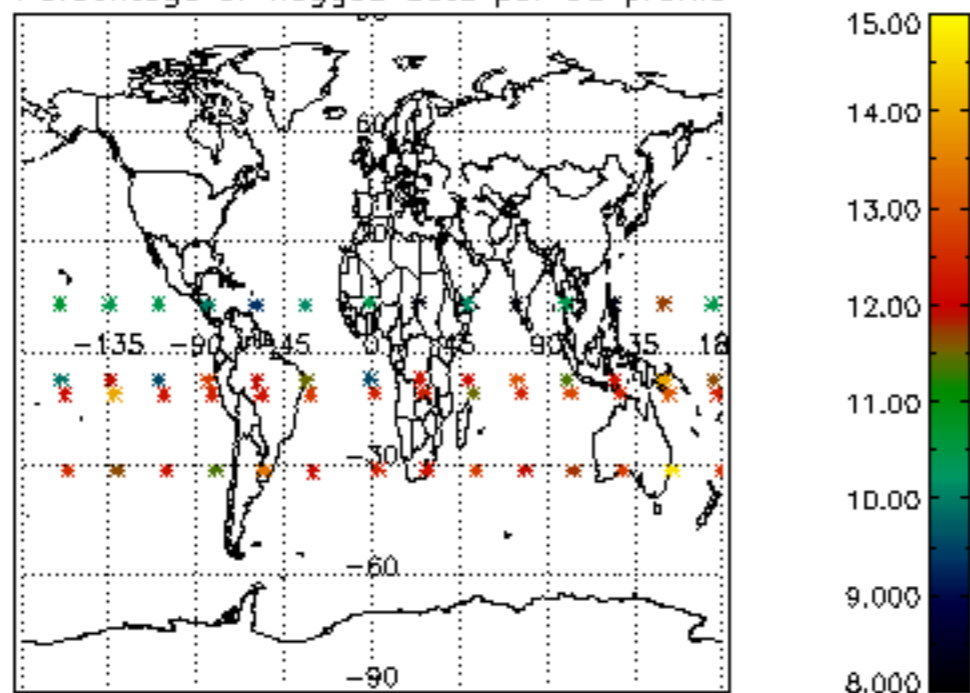




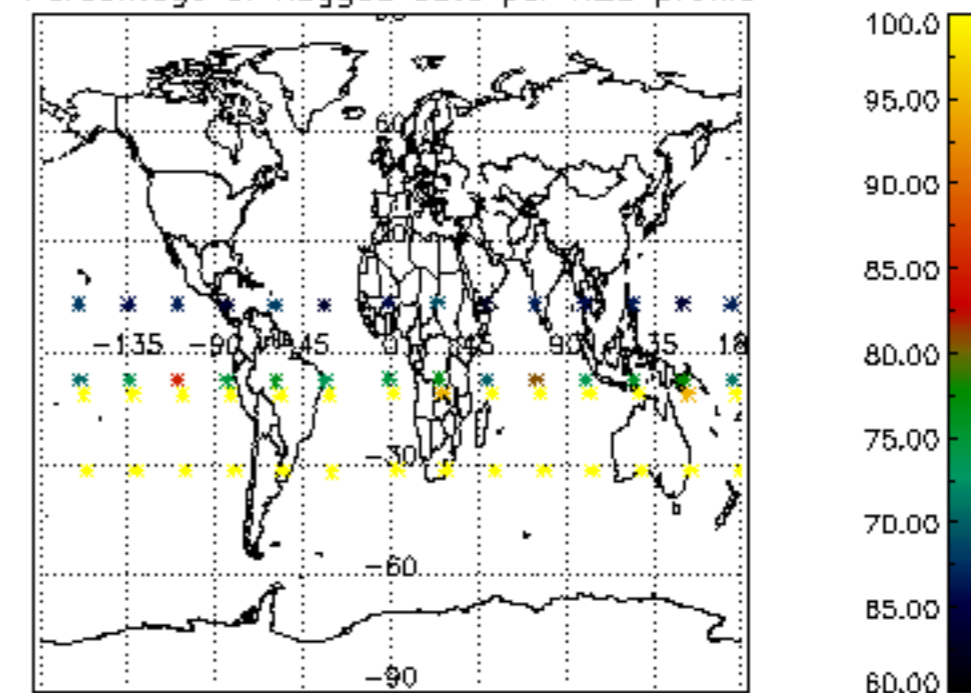




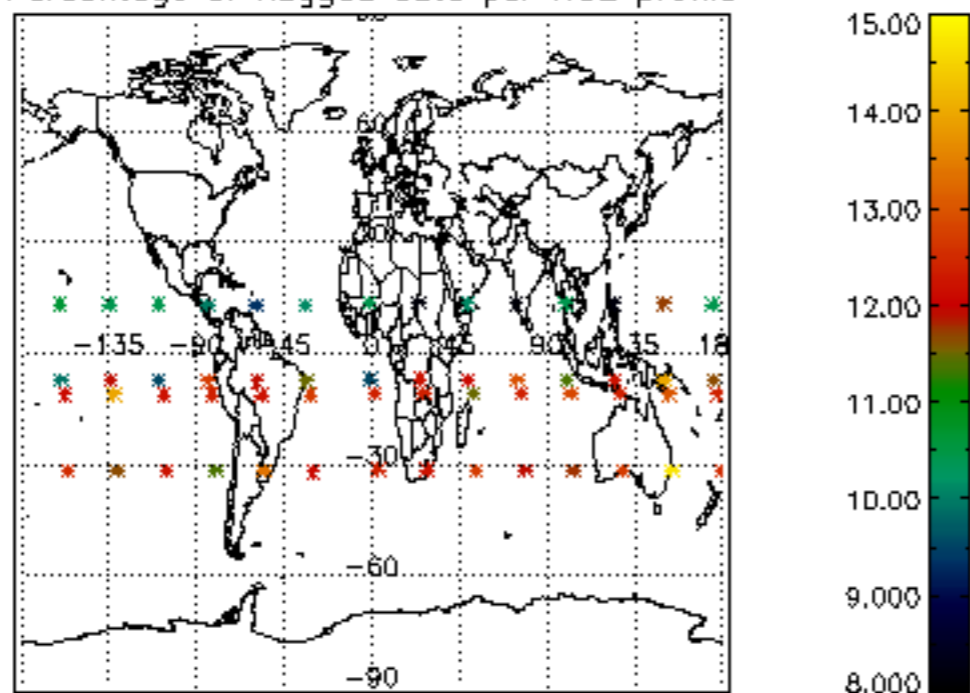
Percentage of flagged data per D3 profile



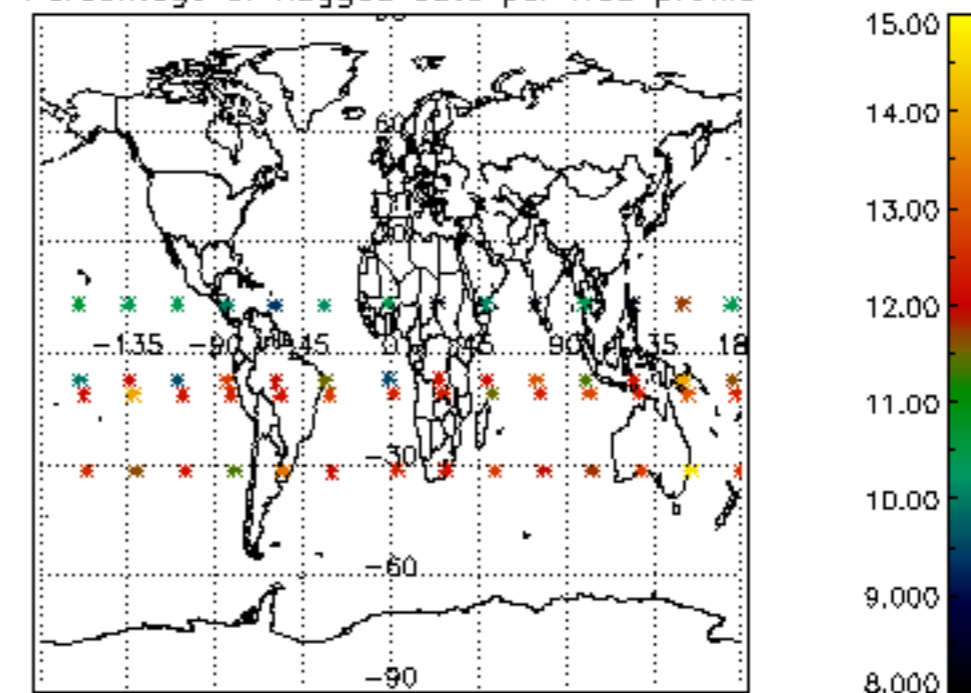
Percentage of flagged data per H2O profile

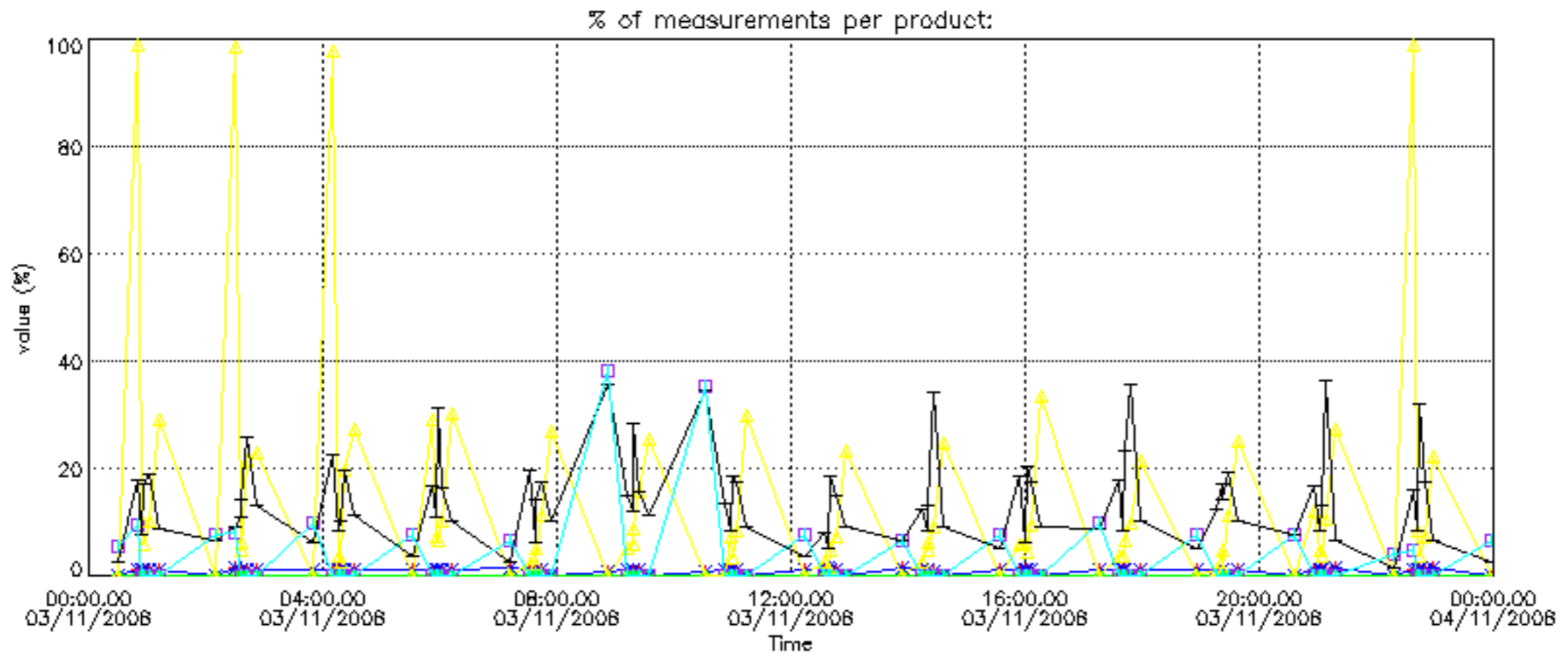


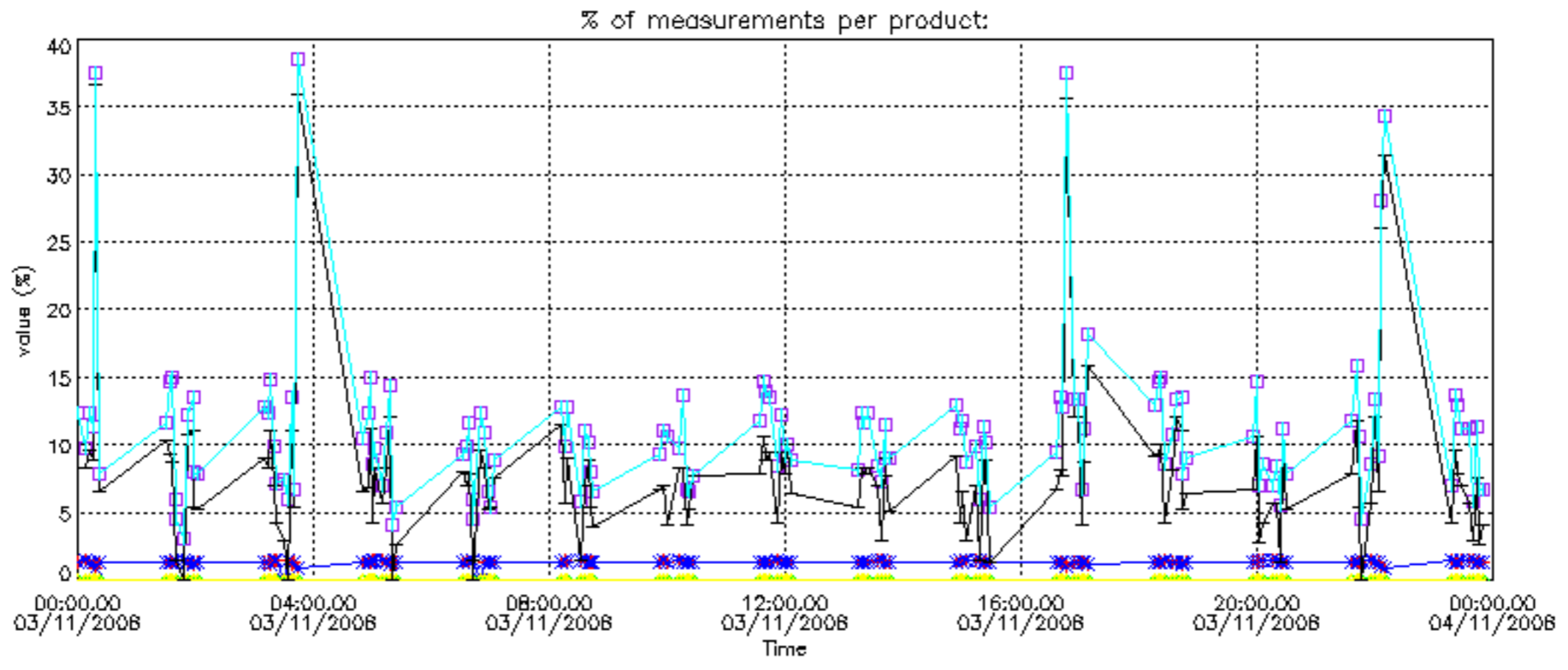
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

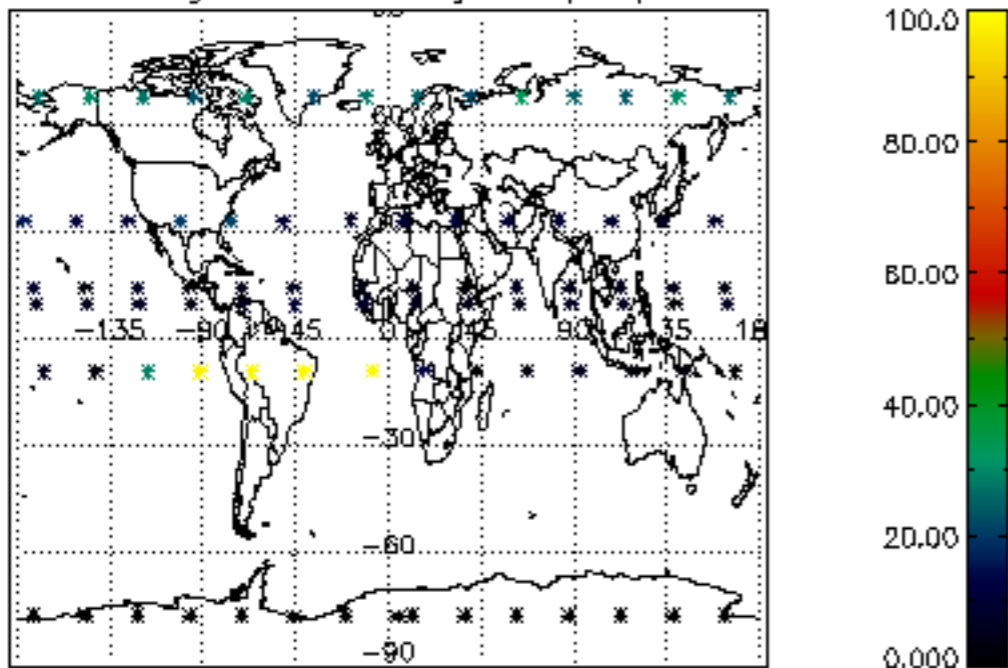




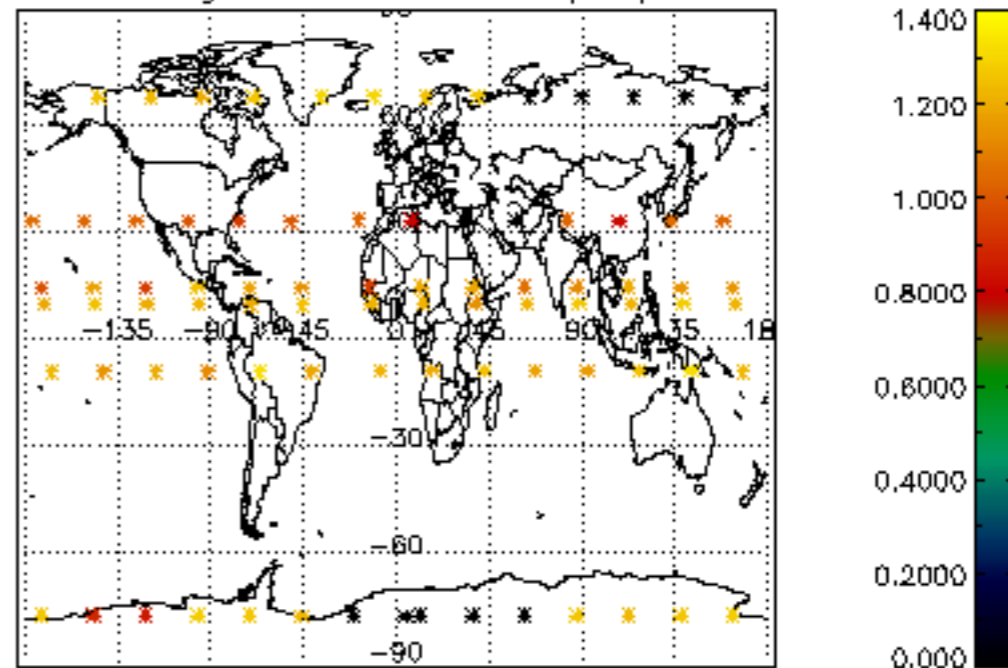




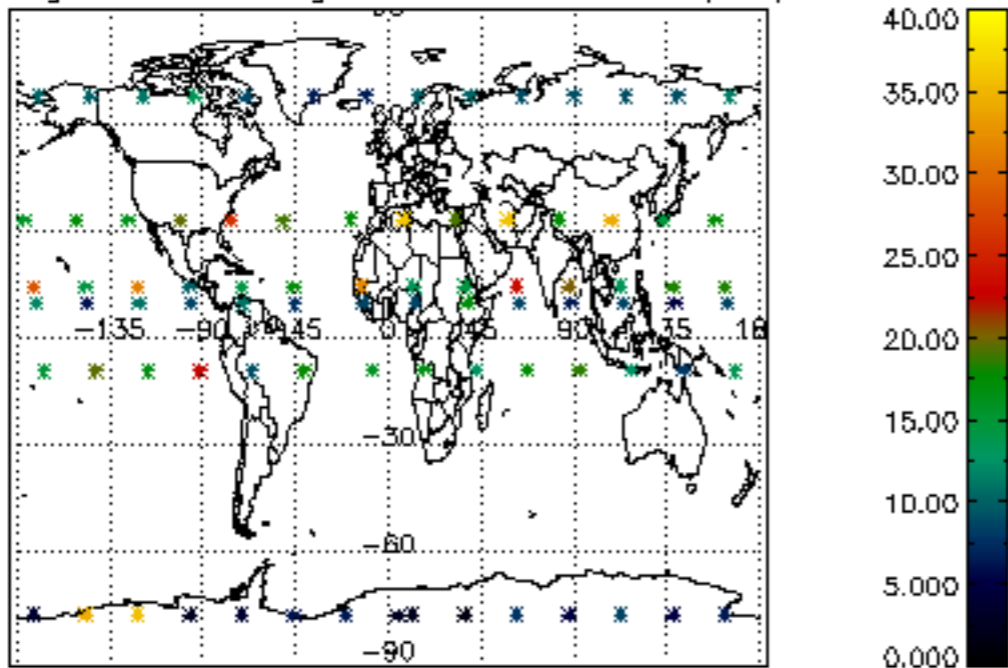
Percentage of cosmic ray hits per profile



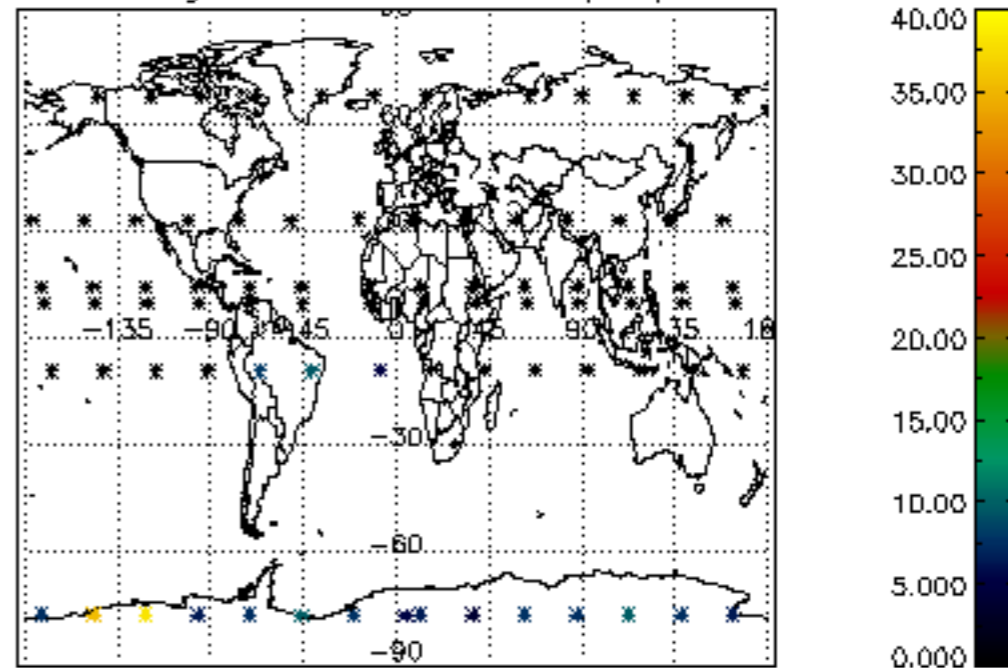
Percentage of datation errors per profile



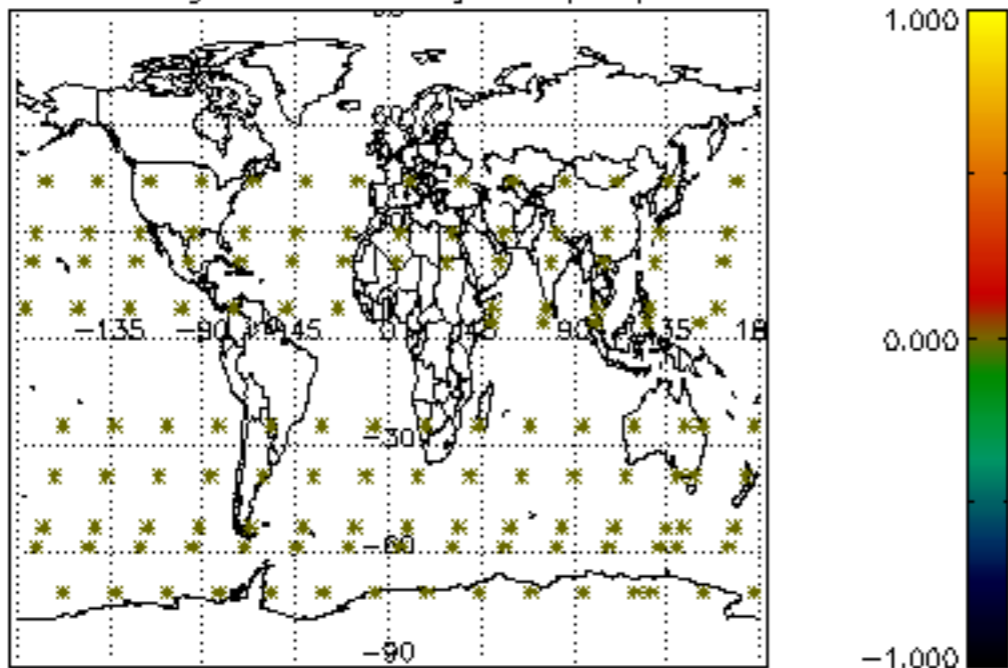
Percentage of star falling outside central band per profile



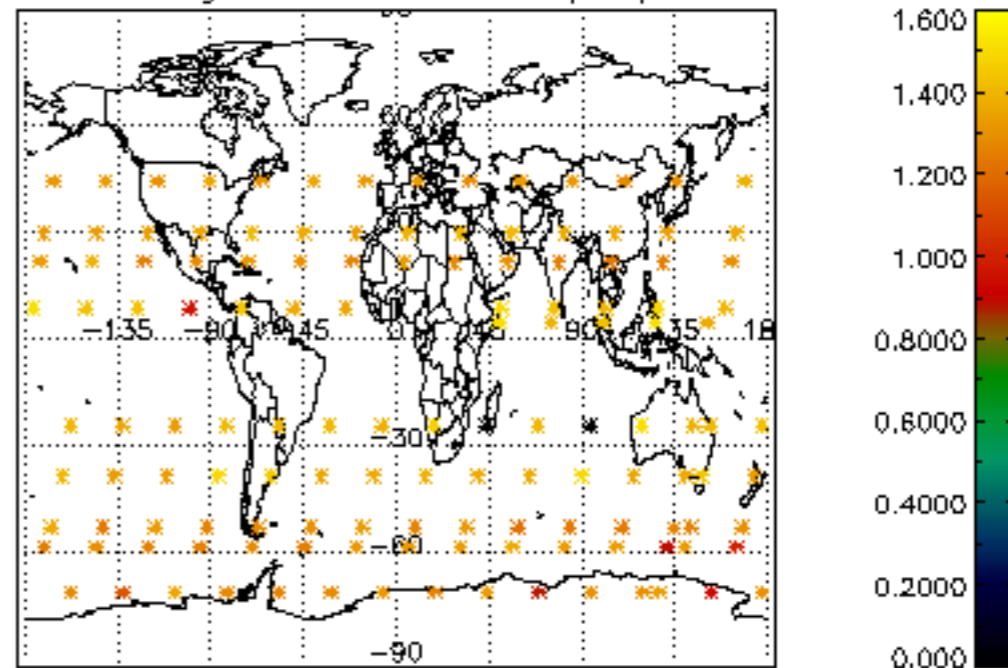
Percentage of saturation errors per profile



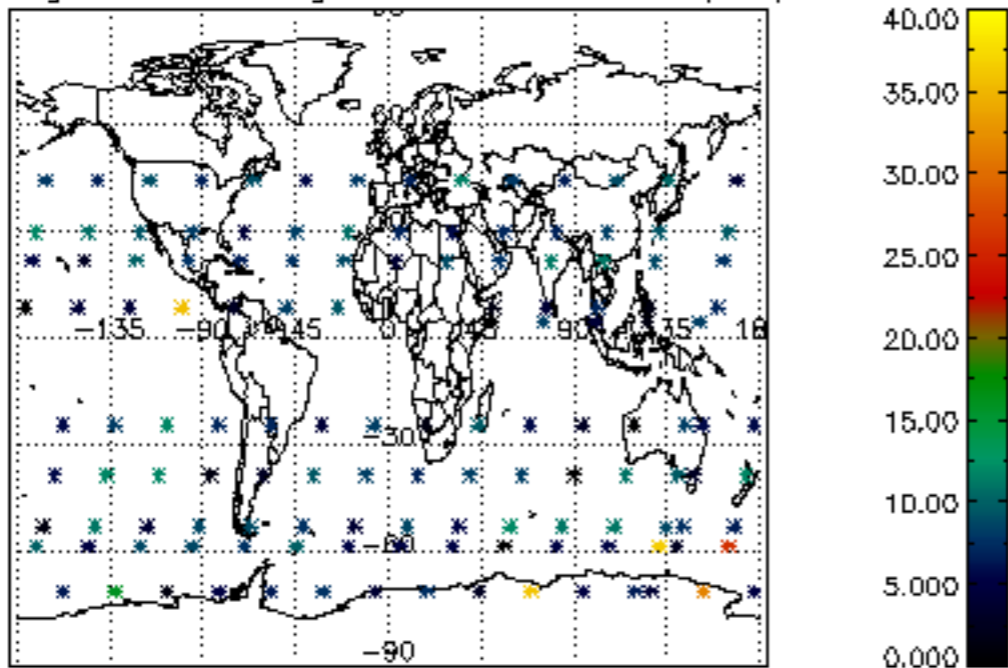
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

