

# 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 08:22:35
Data source version	GOMOS/6.01
Start time of products	07-01-2008 (07JAN2008 00:00:00)
Stop time of products	08-01-2008 (08JAN2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	400
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__2PRFIN20080107_000045_000000392064_00488_30602_6324.N1	07-JAN-2008 00:00:45	Twilight	39.000	80	7Del Sco	2.3160	30000.	78	30602	No
2	GOM_NL__2PRFIN20080107_000611_000000382064_00488_30602_6325.N1	07-JAN-2008 00:06:11	Dark	37.500	131	Gam Lup	2.8000	26000.	75	30602	No
3	GOM_NL__2PRFIN20080107_000740_000000382064_00488_30602_6326.N1	07-JAN-2008 00:07:40	Dark	38.000	109	Bet Lup	2.6770	26000.	76	30602	No
4	GOM_NL__2PRFIN20080107_000910_000000402064_00488_30602_6327.N1	07-JAN-2008 00:09:10	Dark	39.500	78	Alp Lup	2.3040	28000.	79	30602	No
5	GOM_NL__2PRFIN20080107_001209_000000522064_00489_30603_6368.N1	07-JAN-2008 00:12:09	Dark	51.500	4	Alp1Cen	-0.010000	5800.0	103	30603	No
6	GOM_NL__2PRFIN20080107_001614_000000412064_00489_30603_6369.N1	07-JAN-2008 00:16:14	Dark	41.000	12	Alp1Cru	0.77500	30000.	82	30603	No
7	GOM_NL__2PRFIN20080107_002118_000000382064_00489_30603_6370.N1	07-JAN-2008 00:21:18	Dark	37.500	29	Bet Car	1.6720	10200.	75	30603	No
8	GOM_NL__2PRFIN20080107_002255_000000452064_00489_30603_6371.N1	07-JAN-2008 00:22:55	Dark	45.000	71	lot Car	2.2460	7700.0	90	30603	No
9	GOM_NL__2PRFIN20080107_002423_000000502064_00489_30603_6372.N1	07-JAN-2008 00:24:23	Dark	49.500	41	Eps Car	1.8600	4100.0	99	30603	No
10	GOM_NL__2PRFIN20080107_002822_000000522064_00489_30603_6373.N1	07-JAN-2008 00:28:22	Dark	52.000	2	Alp Car	-0.73600	7000.0	104	30603	No
11	GOM_NL__2PRFIN20080107_003143_000000462064_00489_30603_6374.N1	07-JAN-2008 00:31:43	Dark	45.500	117	Pi Pup	2.7060	3800.0	91	30603	No
12	GOM_NL__2PRFIN20080107_003424_000000452064_00489_30603_6375.N1	07-JAN-2008 00:34:24	Straylight	45.000	23	21Eps CMa	1.5020	26000.	90	30603	No
13	GOM_NL__2PRFIN20080107_003804_000000422064_00489_30603_6376.N1	07-JAN-2008 00:38:04	Straylight	41.500	47	2Bet CMa	1.9760	28000.	83	30603	No
14	GOM_NL__2PRFIN20080107_004125_000000452064_00489_30603_6377.N1	07-JAN-2008 00:41:25	Straylight	45.000	7	19Bet Ori	0.10000	14000.	90	30603	No
15	GOM_NL__2PRFIN20080107_004311_000000422064_00489_30603_6378.N1	07-JAN-2008 00:43:11	Straylight	41.500	30	46Eps Ori	1.6940	30000.	83	30603	No
16	GOM_NL__2PRFIN20080107_004534_000000532064_00489_30603_6379.N1	07-JAN-2008 00:45:34	Twilight	53.000	14	58Alp Ori	0.87000	3000.0	106	30603	No
17	GOM_NL__2PRFIN20080107_004931_000000352064_00489_30603_6380.N1	07-JAN-2008 00:49:31	Bright	35.000	176	23Zet Tau	3.0200	22000.	70	30603	No
18	GOM_NL__2PRFIN20080107_005138_000000362064_00489_30603_6381.N1	07-JAN-2008 00:51:38	Bright	36.000	28	12Bet Tau	1.6500	15200.	72	30603	No
19	GOM_NL__2PRFIN20080107_005301_000000352064_00489_30603_6382.N1	07-JAN-2008 00:53:01	Bright	35.000	114	3lot Aur	2.6930	4600.0	70	30603	No
20	GOM_NL__2PRFIN20080107_005633_000000392064_00489_30603_6383.N1	07-JAN-2008 00:56:33	Bright	39.000	6	13Alp Aur	0.080000	3400.0	78	30603	No
21	GOM_NL__2PRFIN20080107_010847_000000362064_00489_30603_6384.N1	07-JAN-2008 01:08:47	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	30603	No
22	GOM_NL__2PRFIN20080107_011305_000000402064_00489_30603_6385.N1	07-JAN-2008 01:13:05	Bright	39.500	60	7Bet UMi	2.0810	3950.0	79	30603	No
23	GOM_NL__2PRFIN20080107_011708_000000362064_00489_30603_6386.N1	07-JAN-2008 01:17:08	Bright	36.000	119	14Eta Dra	2.7270	4700.0	72	30603	No
24	GOM_NL__2PRFIN20080107_011925_000000522064_00489_30603_6387.N1	07-JAN-2008 01:19:25	Bright	52.000	130	23Bet Dra	2.7990	5800.0	104	30603	No
25	GOM_NL__2PRFIN20080107_012538_000000522064_00489_30603_6388.N1	07-JAN-2008 01:25:38	Bright	52.000	133	40Zet Her	2.8070	6000.0	104	30603	No
26	GOM_NL__2PRFIN20080107_012836_000000522064_00489_30603_6389.N1	07-JAN-2008 01:28:36	Bright	52.000	127	27Bet Her	2.7810	4700.0	104	30603	No
27	GOM_NL__2PRFIN20080107_013340_000000372064_00489_30603_6390.N1	07-JAN-2008 01:33:40	Bright	37.000	102	24Alp Ser	2.6000	4250.0	74	30603	No
28	GOM_NL__2PRFIN20080107_013555_000000532064_00489_30603_6391.N1	07-JAN-2008 01:35:55	Bright	52.500	120	1Del Oph	2.7340	3200.0	105	30603	No
29	GOM_NL__2PRFIN20080107_014122_000000432064_00489_30603_6392.N1	07-JAN-2008 01:41:22	Twilight	42.500	80	7Del Sco	2.3160	30000.	85	30603	No
30	GOM_NL__2PRFIN20080107_014816_000000382064_00489_30603_6393.N1	07-JAN-2008 01:48:16	Dark	38.000	109	Bet Lup	2.6770	26000.	76	30603	No
31	GOM_NL__2PRFIN20080107_014946_000000392064_00489_30603_6394.N1	07-JAN-2008 01:49:46	Dark	38.500	78	Alp Lup	2.3040	28000.	77	30603	No
32	GOM_NL__2PRFIN20080107_015246_000000432064_00490_30604_6384.N1	07-JAN-2008 01:52:46	Dark	43.000	4	Alp1Cen	-0.010000	5800.0	86	30604	No
33	GOM_NL__2PRFIN20080107_015650_000000412064_00490_30604_6385.N1	07-JAN-2008 01:56:50	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	30604	No
34	GOM_NL__2PRFIN20080107_020155_000000392064_00490_30604_6386.N1	07-JAN-2008 02:01:55	Dark	39.000	29	Bet Car	1.6720	10200.	78	30604	No
35	GOM_NL__2PRFIN20080107_020332_000000402064_00490_30604_6387.N1	07-JAN-2008 02:03:32	Dark	39.500	71	lot Car	2.2460	7700.0	79	30604	No
36	GOM_NL__2PRFIN20080107_020459_000000402064_00490_30604_6388.N1	07-JAN-2008 02:04:59	Dark	40.000	41	Eps Car	1.8600	4100.0	80	30604	No
37	GOM_NL__2PRFIN20080107_020858_000000442064_00490_30604_6389.N1	07-JAN-2008 02:08:58	Dark	44.000	2	Alp Car	-0.73600	7000.0	88	30604	No
38	GOM_NL__2PRFIN20080107_021219_000000432064_00490_30604_6390.N1	07-JAN-2008 02:12:19	Dark	43.000	117	Pi Pup	2.7060	3800.0	86	30604	No
39	GOM_NL__2PRFIN20080107_021501_000000452064_00490_30604_6391.N1	07-JAN-2008 02:15:01	Straylight	44.500	23	21Eps CMa	1.5020	26000.	89	30604	No
40	GOM_NL__2PRFIN20080107_021840_000000422064_00490_30604_6392.N1	07-JAN-2008 02:18:40	Straylight	42.000	47	2Bet CMa	1.9760	28000.	84	30604	No
41	GOM_NL__2PRFIN20080107_022201_000000502064_00490_30604_6393.N1	07-JAN-2008 02:22:01	Straylight	49.500	7	19Bet Ori	0.10000	14000.	99	30604	No
42	GOM_NL__2PRFIN20080107_022347_000000422064_00490_30604_6394.N1	07-JAN-2008 02:23:47	Straylight	41.500	30	46Eps Ori	1.6940	30000.	83	30604	No













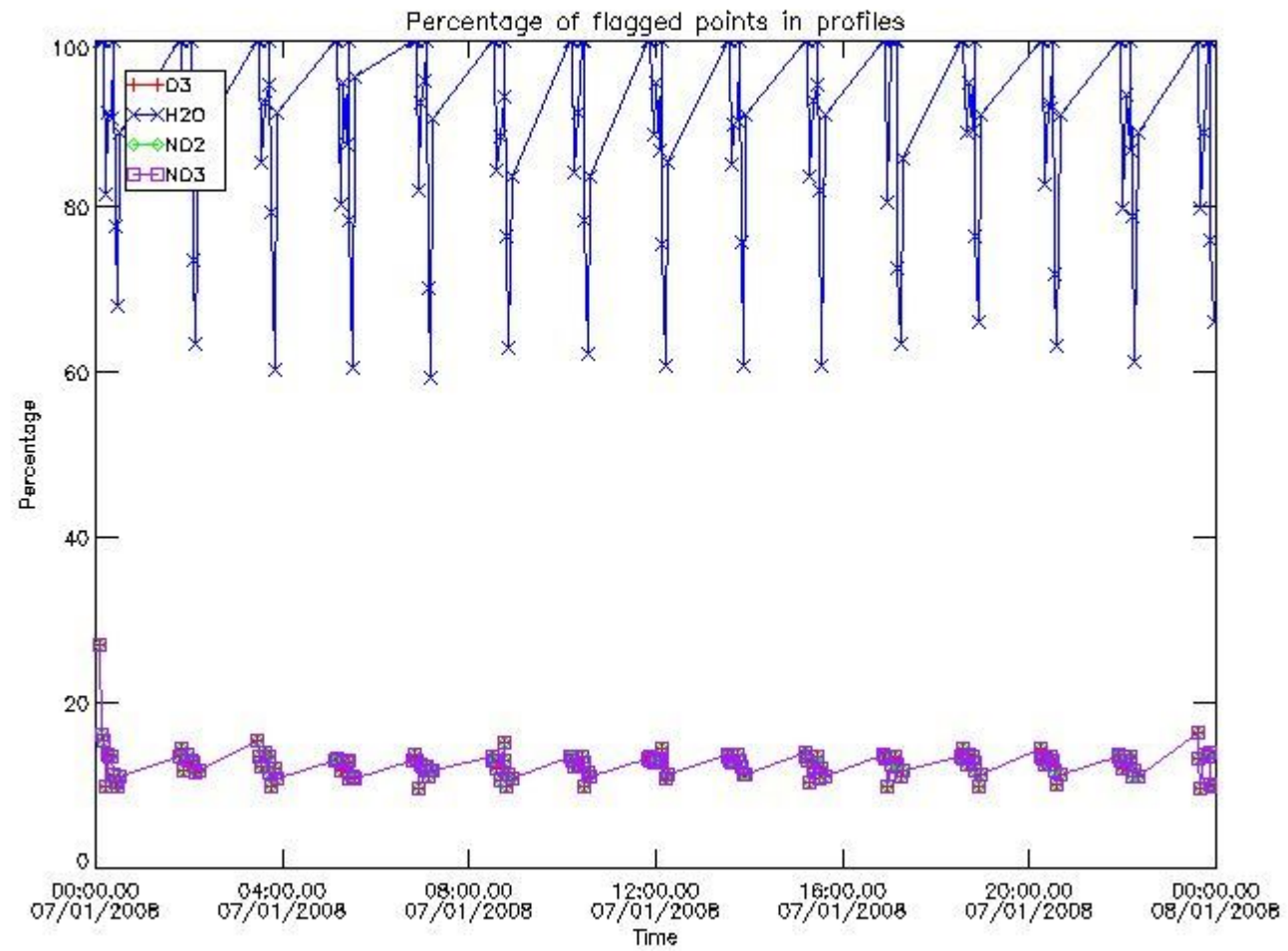


397	GOM_NL__2PRFIN20080107_234946_000000382065_00002_30617_6600.N1	07-JAN-2008 23:49:46	Dark	37.500	29	Bet Car	1.6720	10200.	75	30617	No
398	GOM_NL__2PRFIN20080107_235125_000000402065_00002_30617_6601.N1	07-JAN-2008 23:51:25	Dark	40.000	71	lot Car	2.2460	7700.0	80	30617	No
399	GOM_NL__2PRFIN20080107_235251_000000512065_00002_30617_6602.N1	07-JAN-2008 23:52:51	Dark	50.500	41	Eps Car	1.8600	4100.0	101	30617	No
400	GOM_NL__2PRFIN20080107_235648_000000522065_00002_30617_6603.N1	07-JAN-2008 23:56:48	Dark	52.000	2	Alp Car	-0.73600	7000.0	104	30617	No

### 3. Quality information per product

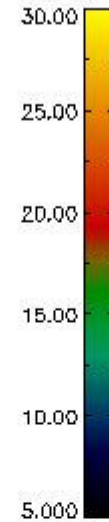
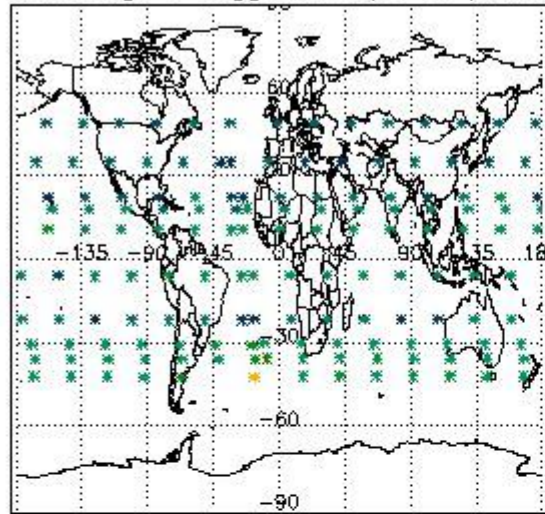
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

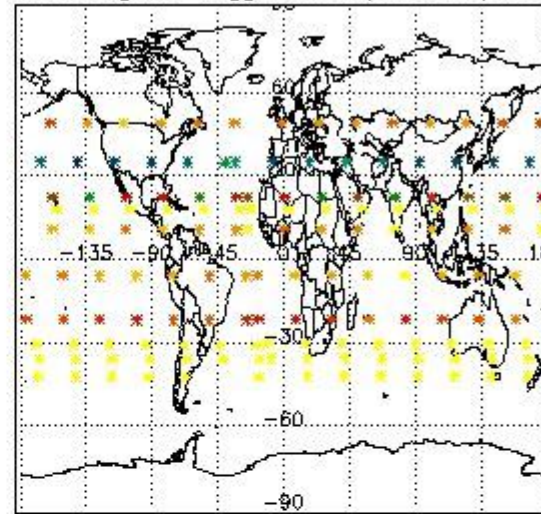


#### 3.2 Plot quality information per product (world map)

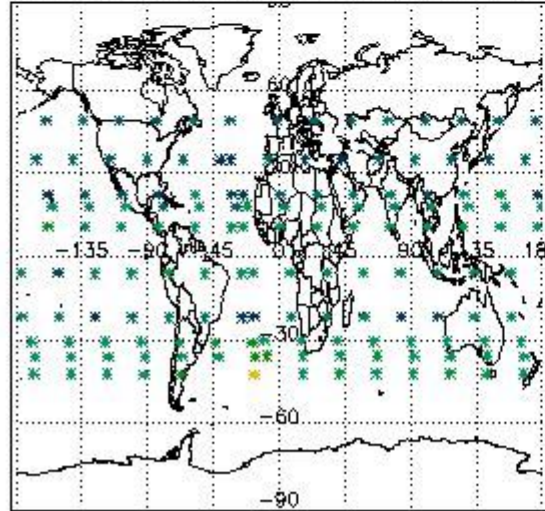
Percentage of flagged data per O3 profile



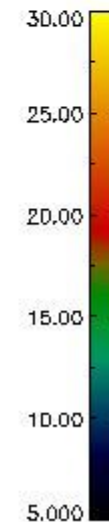
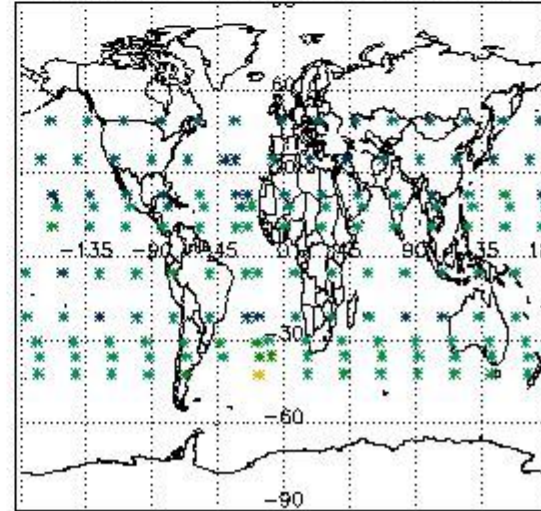
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

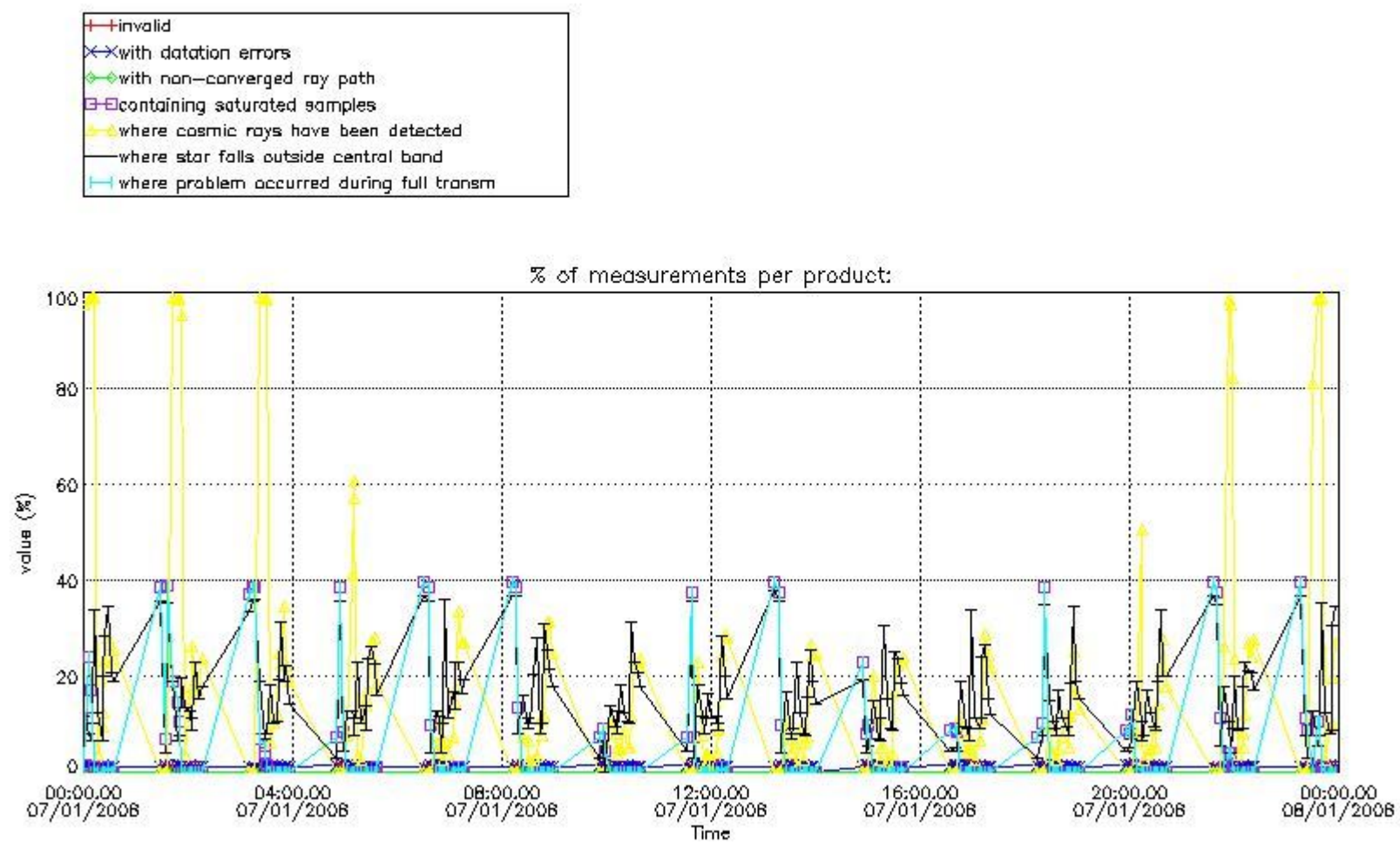


#### 4. Level 1 quality information per product

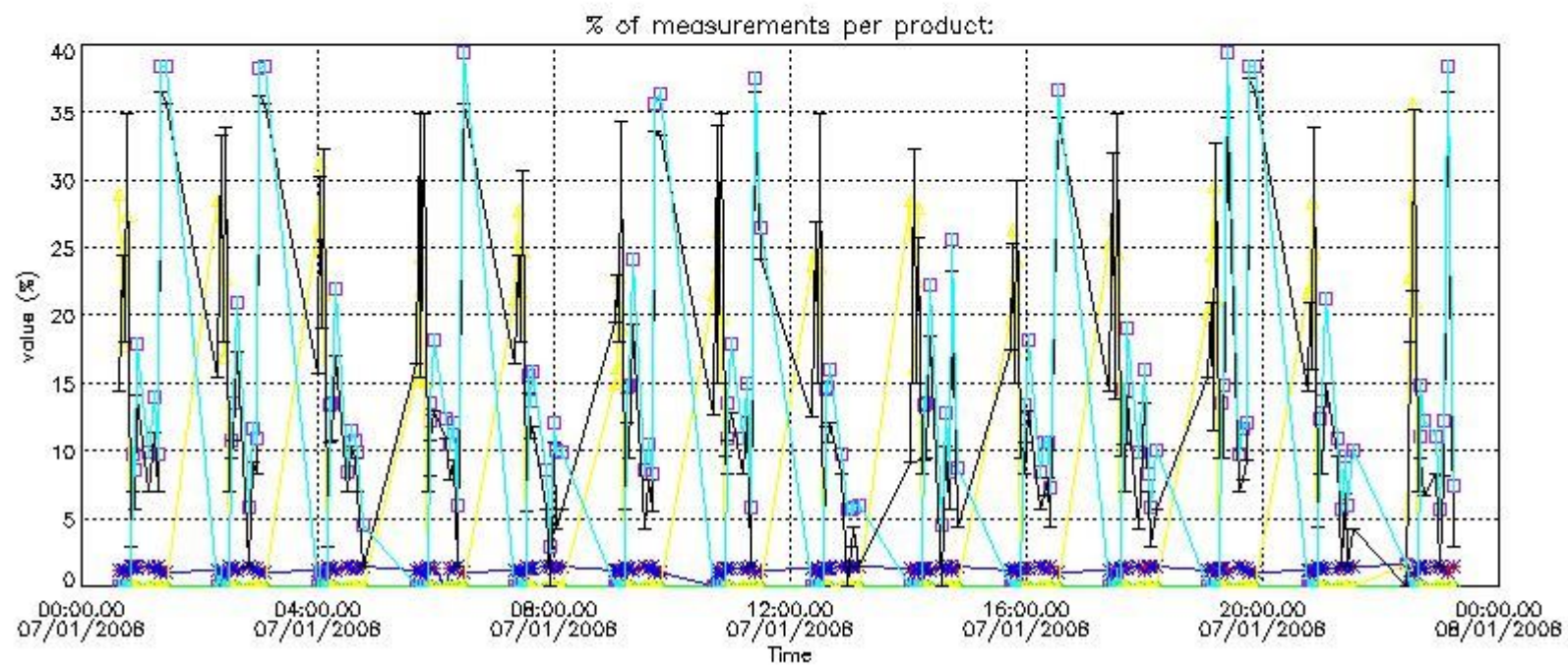
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

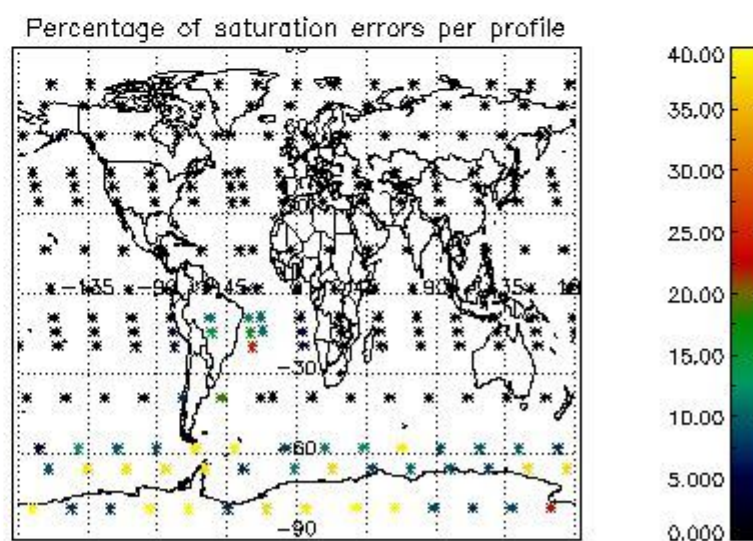
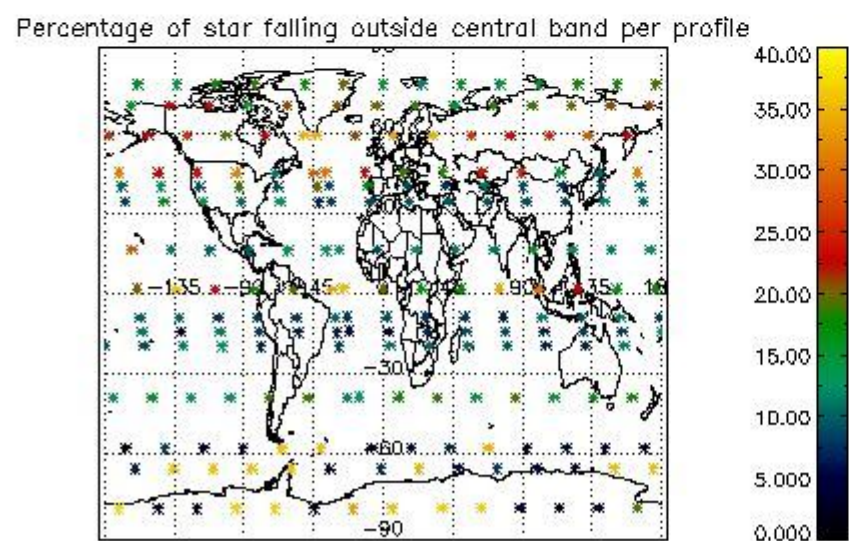
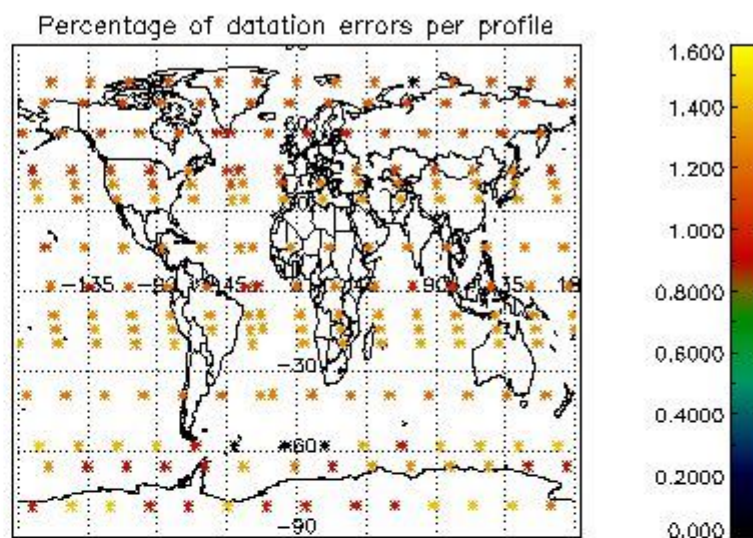
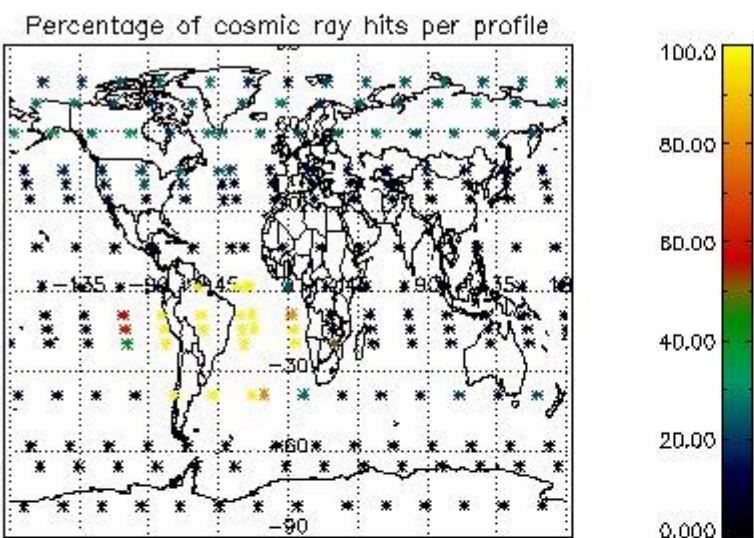


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

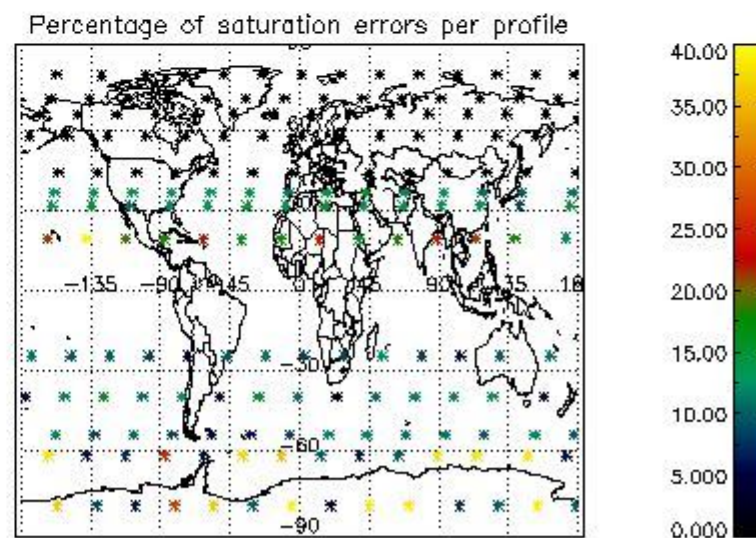
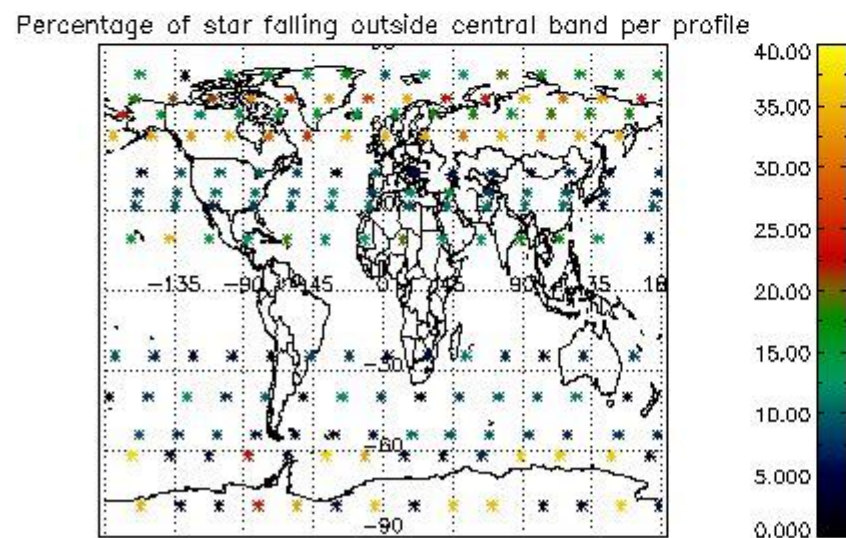
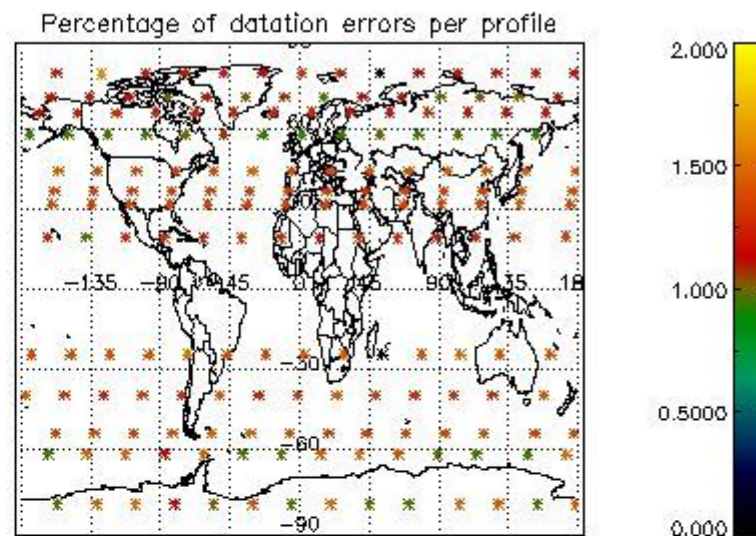
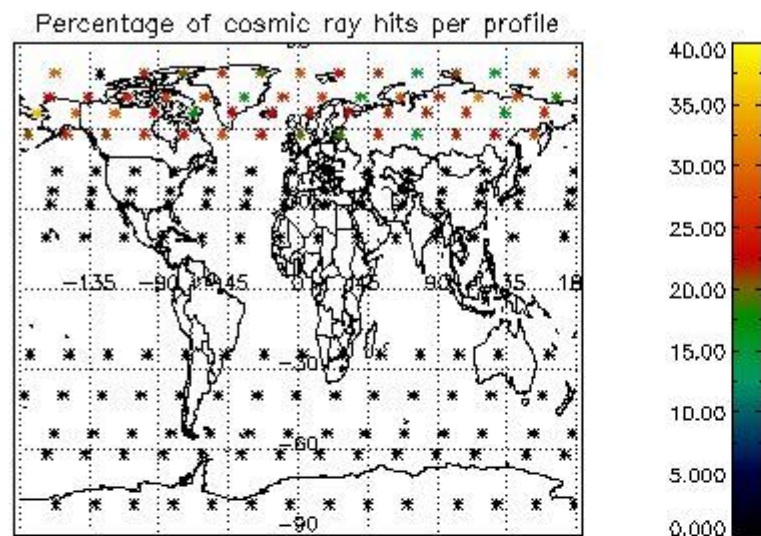


4.2 Plot quality information per product coming from level 1b processing (world map)

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

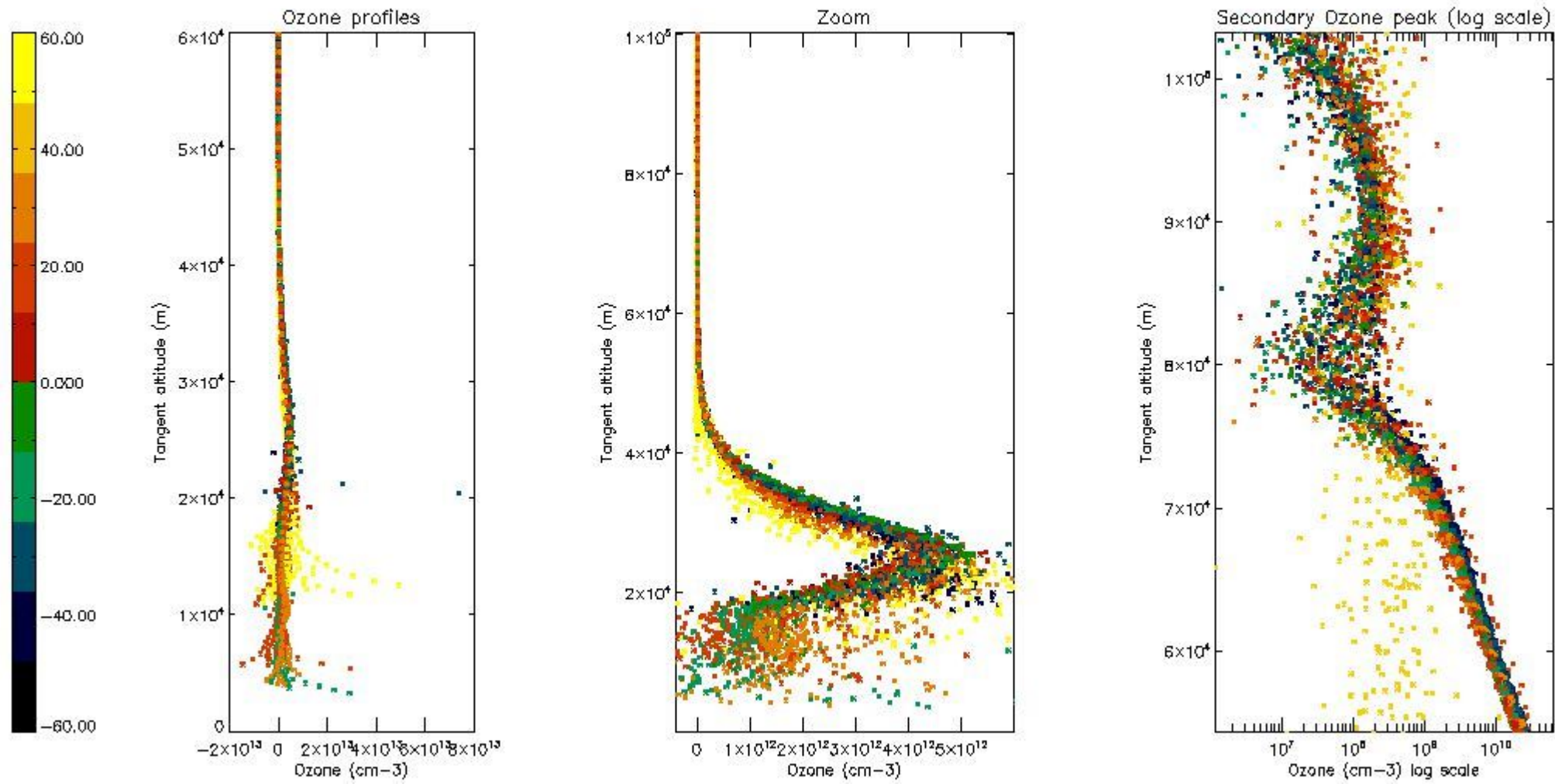
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	22

STD < 10	17
STD < 5	11

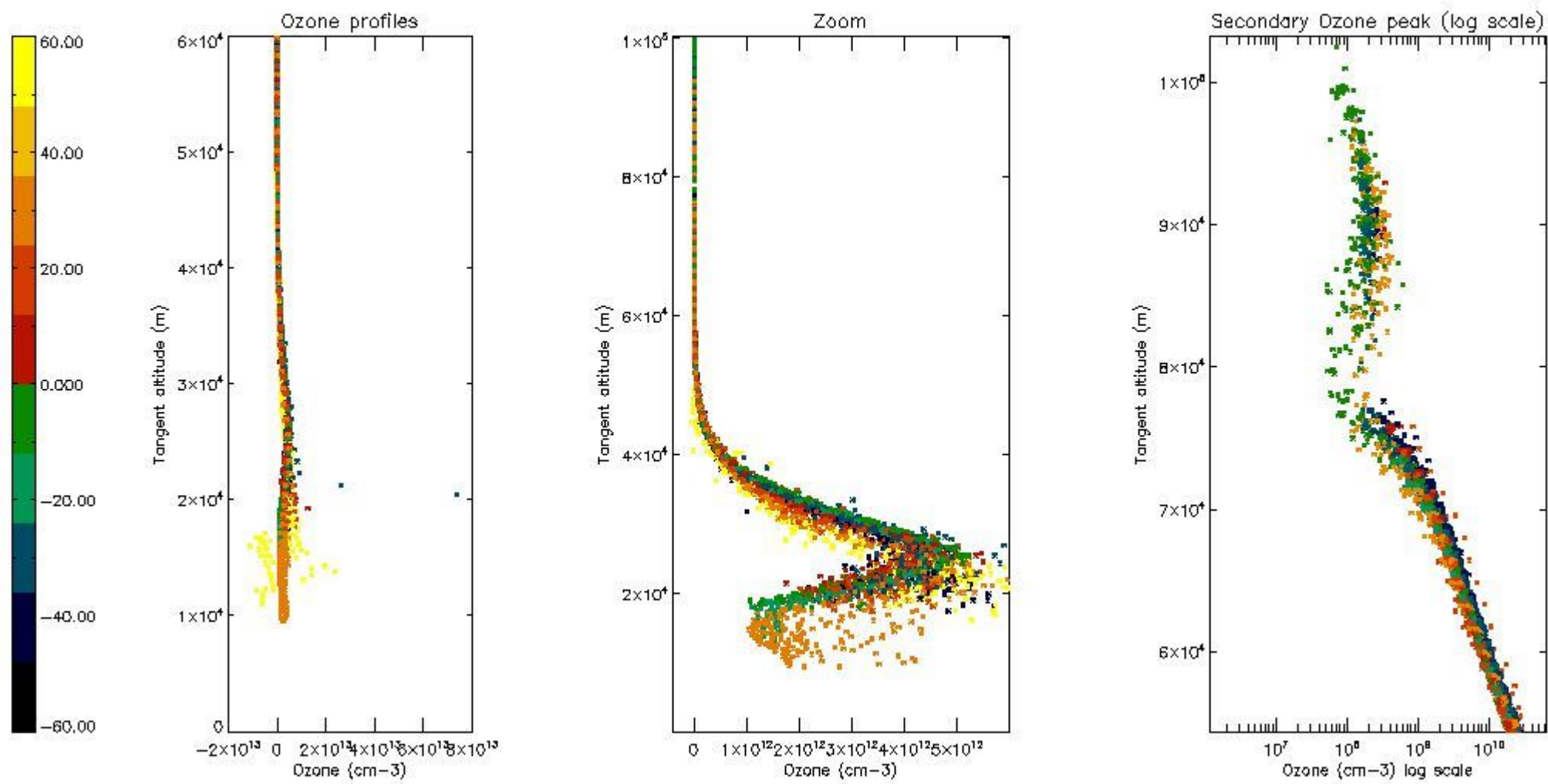
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

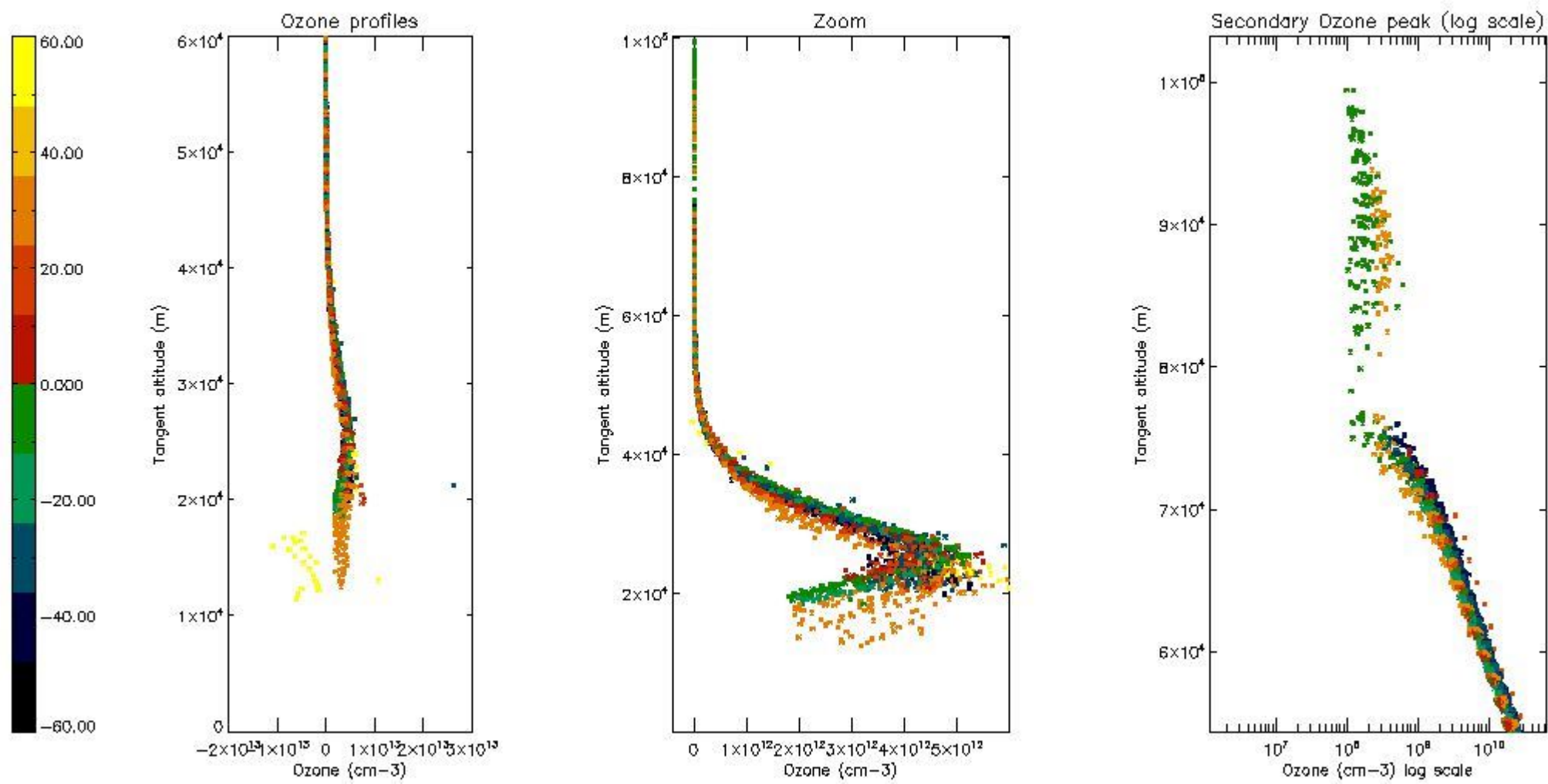
The colorbar represents the latitude.



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

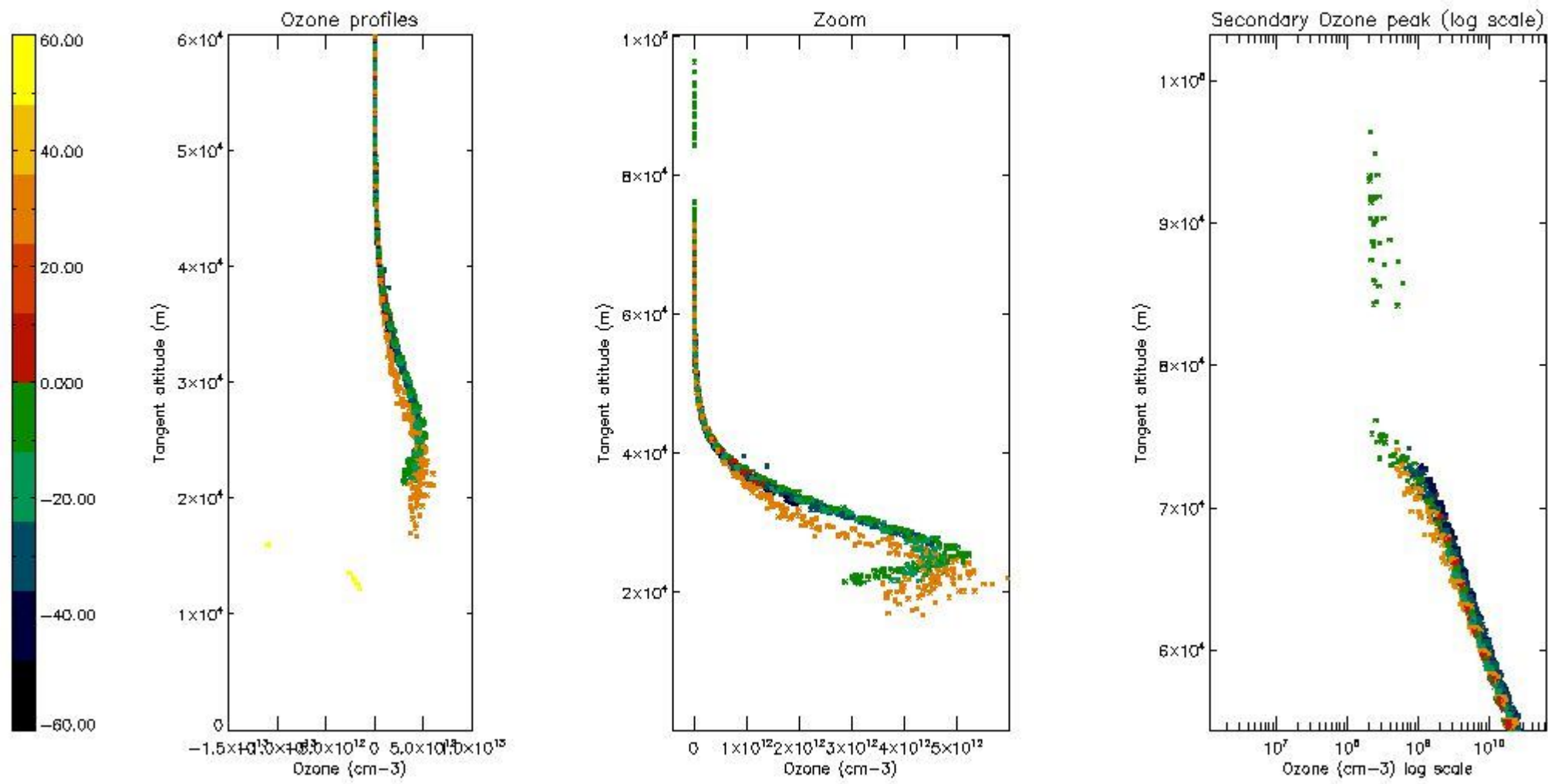
The colorbar represents the latitude.





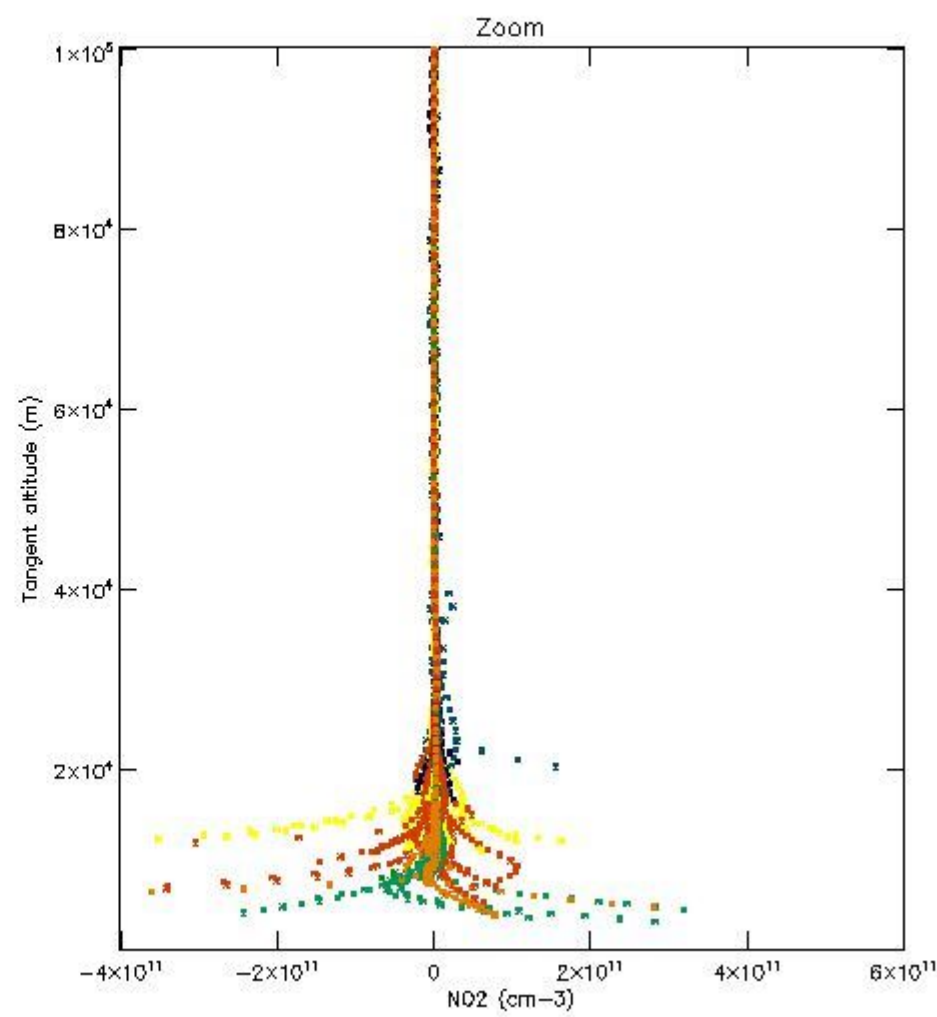
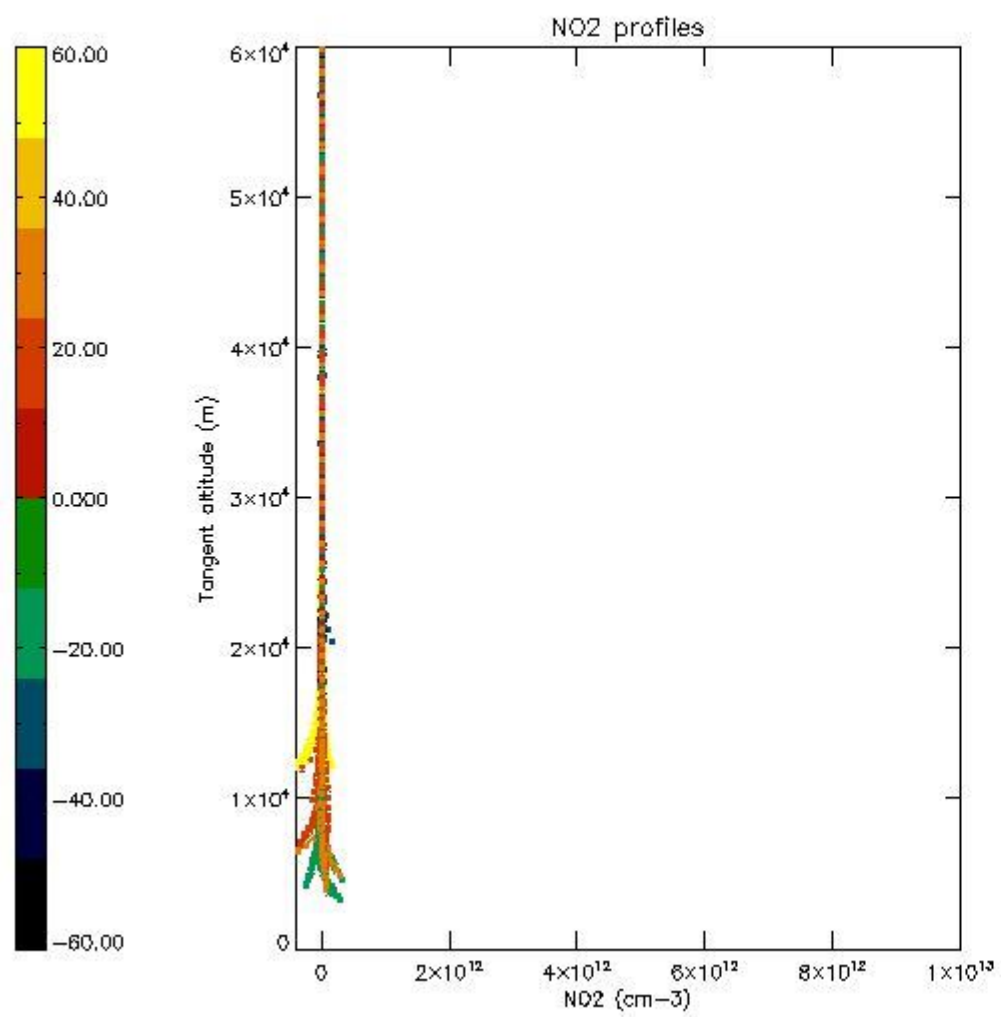
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



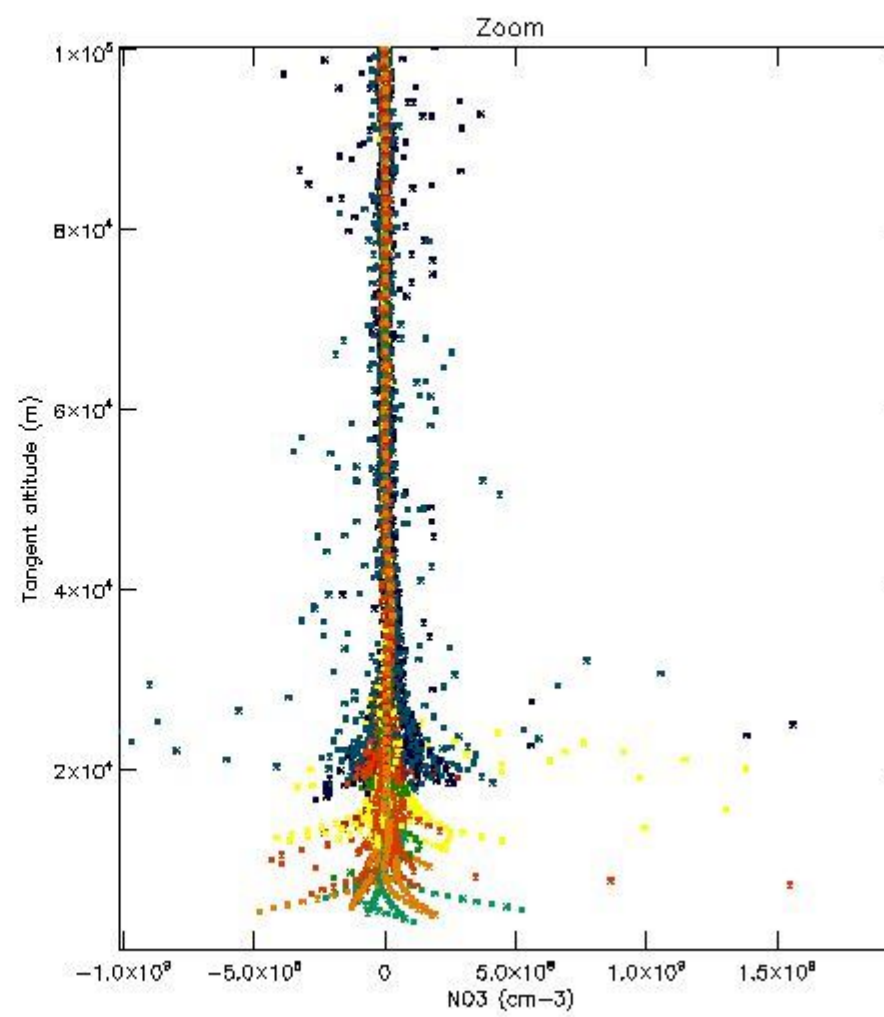
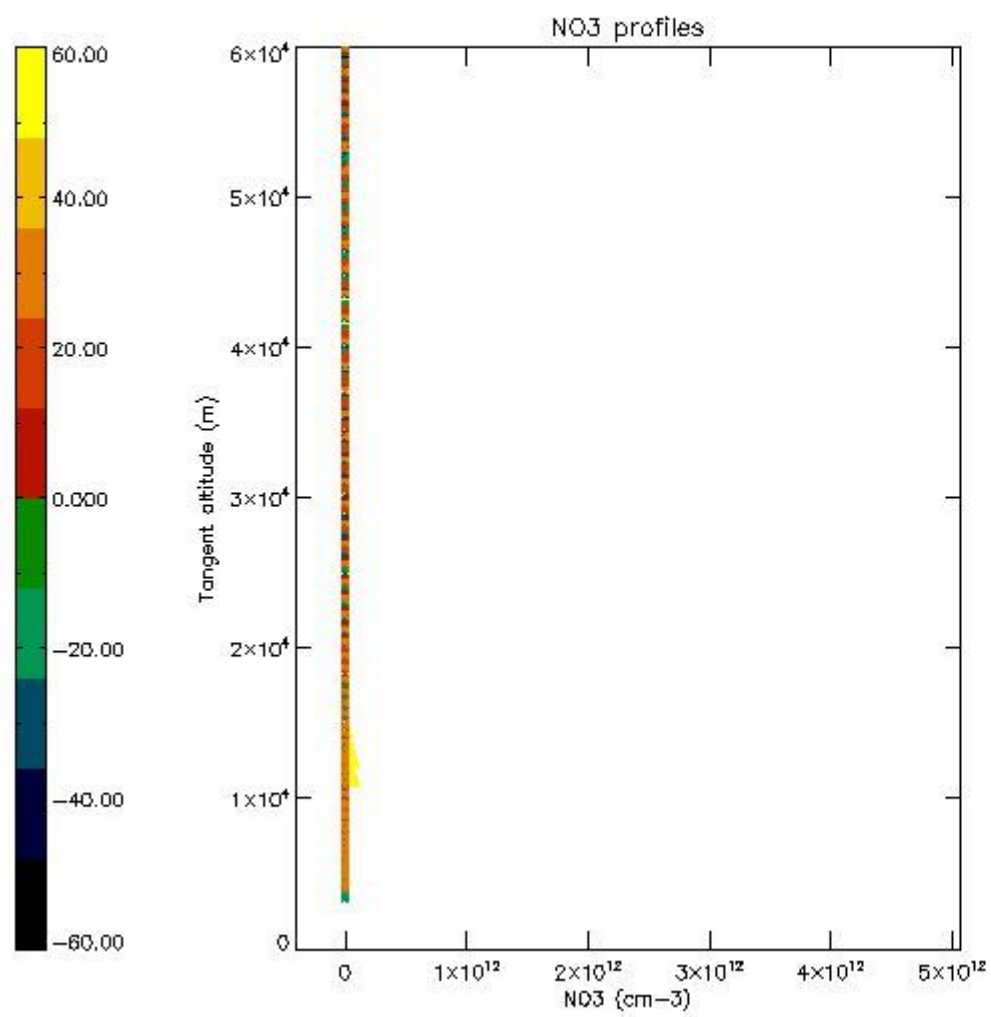
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



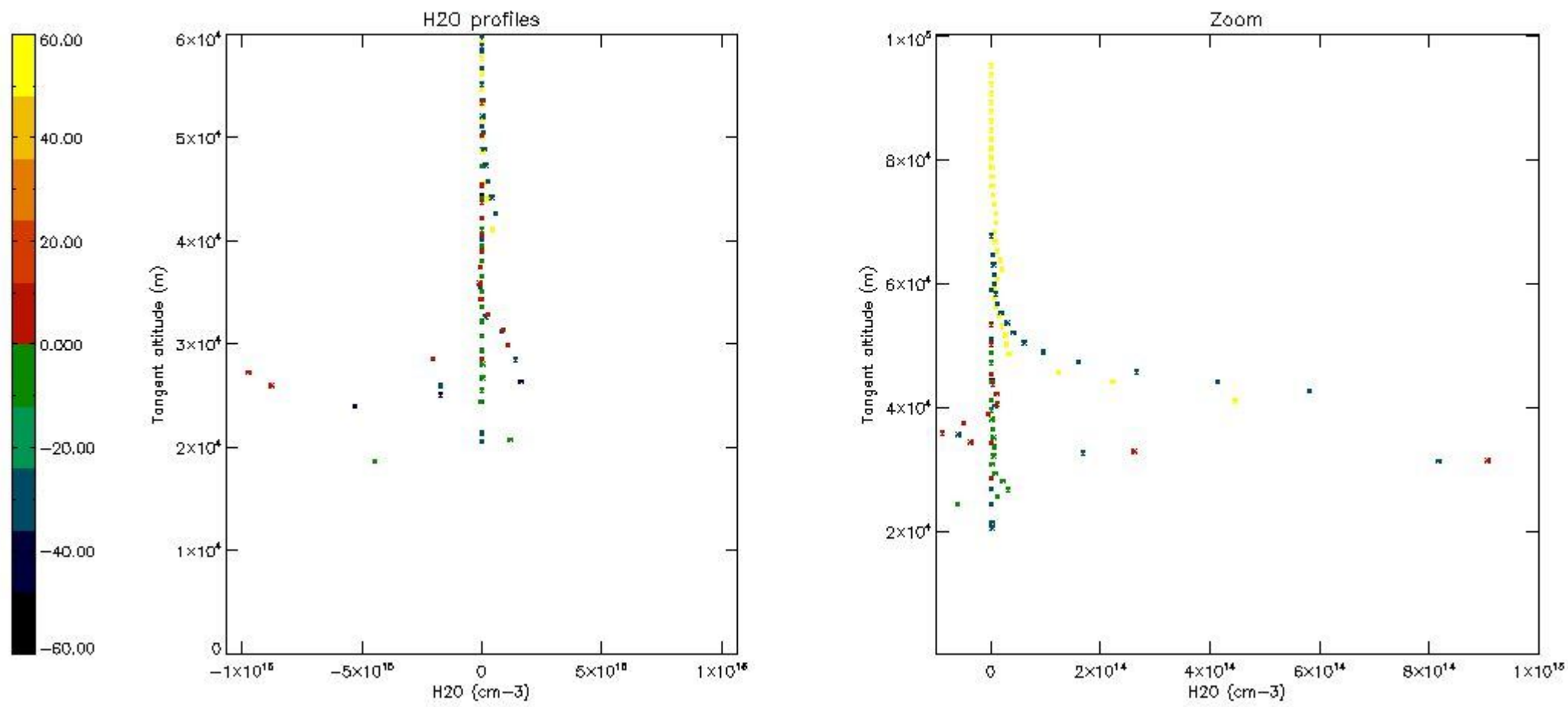
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*5.8 Plot 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-JAN-2008 00:00:45
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	07-JAN-2008 00:00:45
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	07-JAN-2008 00:00:45

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#### [5.7 Plot NO3 profiles for all STD \(dark without errors\)](#)

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

### [6. Auxiliary Data Files used for the production reported in section 2](#)

This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	25APR2013 08:22:35
Data source version	GOMOS/6.01
Start time of products	07-01-2008 (07JAN2008 00:00:00)
Stop time of products	08-01-2008 (08JAN2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	400
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__2PRFIN20080107_000045_000000392064_00488_30602_6324.N1	07-JAN-2008 00:00:45	Twilight	39.000	80	7Del Sco	2.3160	30000.	78	30602	No
2	GOM_NL__2PRFIN20080107_000611_000000382064_00488_30602_6325.N1	07-JAN-2008 00:06:11	Dark	37.500	131	Gam Lup	2.8000	26000.	75	30602	No
3	GOM_NL__2PRFIN20080107_000740_000000382064_00488_30602_6326.N1	07-JAN-2008 00:07:40	Dark	38.000	109	Bet Lup	2.6770	26000.	76	30602	No
4	GOM_NL__2PRFIN20080107_000910_000000402064_00488_30602_6327.N1	07-JAN-2008 00:09:10	Dark	39.500	78	Alp Lup	2.3040	28000.	79	30602	No
5	GOM_NL__2PRFIN20080107_001209_000000522064_00489_30603_6368.N1	07-JAN-2008 00:12:09	Dark	51.500	4	Alp1Cen	-0.010000	5800.0	103	30603	No
6	GOM_NL__2PRFIN20080107_001614_000000412064_00489_30603_6369.N1	07-JAN-2008 00:16:14	Dark	41.000	12	Alp1Cru	0.77500	30000.	82	30603	No
7	GOM_NL__2PRFIN20080107_002118_000000382064_00489_30603_6370.N1	07-JAN-2008 00:21:18	Dark	37.500	29	Bet Car	1.6720	10200.	75	30603	No
8	GOM_NL__2PRFIN20080107_002255_000000452064_00489_30603_6371.N1	07-JAN-2008 00:22:55	Dark	45.000	71	lot Car	2.2460	7700.0	90	30603	No
9	GOM_NL__2PRFIN20080107_002423_000000502064_00489_30603_6372.N1	07-JAN-2008 00:24:23	Dark	49.500	41	Eps Car	1.8600	4100.0	99	30603	No
10	GOM_NL__2PRFIN20080107_002822_000000522064_00489_30603_6373.N1	07-JAN-2008 00:28:22	Dark	52.000	2	Alp Car	-0.73600	7000.0	104	30603	No
11	GOM_NL__2PRFIN20080107_003143_000000462064_00489_30603_6374.N1	07-JAN-2008 00:31:43	Dark	45.500	117	Pi Pup	2.7060	3800.0	91	30603	No
12	GOM_NL__2PRFIN20080107_003424_000000452064_00489_30603_6375.N1	07-JAN-2008 00:34:24	Straylight	45.000	23	21Eps CMa	1.5020	26000.	90	30603	No
13	GOM_NL__2PRFIN20080107_003804_000000422064_00489_30603_6376.N1	07-JAN-2008 00:38:04	Straylight	41.500	47	2Bet CMa	1.9760	28000.	83	30603	No
14	GOM_NL__2PRFIN20080107_004125_000000452064_00489_30603_6377.N1	07-JAN-2008 00:41:25	Straylight	45.000	7	19Bet Ori	0.10000	14000.	90	30603	No
15	GOM_NL__2PRFIN20080107_004311_000000422064_00489_30603_6378.N1	07-JAN-2008 00:43:11	Straylight	41.500	30	46Eps Ori	1.6940	30000.	83	30603	No
16	GOM_NL__2PRFIN20080107_004534_000000532064_00489_30603_6379.N1	07-JAN-2008 00:45:34	Twilight	53.000	14	58Alp Ori	0.87000	3000.0	106	30603	No
17	GOM_NL__2PRFIN20080107_004931_000000352064_00489_30603_6380.N1	07-JAN-2008 00:49:31	Bright	35.000	176	23Zet Tau	3.0200	22000.	70	30603	No
18	GOM_NL__2PRFIN20080107_005138_000000362064_00489_30603_6381.N1	07-JAN-2008 00:51:38	Bright	36.000	28	12Bet Tau	1.6500	15200.	72	30603	No
19	GOM_NL__2PRFIN20080107_005301_000000352064_00489_30603_6382.N1	07-JAN-2008 00:53:01	Bright	35.000	114	3lot Aur	2.6930	4600.0	70	30603	No
20	GOM_NL__2PRFIN20080107_005633_000000392064_00489_30603_6383.N1	07-JAN-2008 00:56:33	Bright	39.000	6	13Alp Aur	0.080000	3400.0	78	30603	No
21	GOM_NL__2PRFIN20080107_010847_000000362064_00489_30603_6384.N1	07-JAN-2008 01:08:47	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	30603	No
22	GOM_NL__2PRFIN20080107_011305_000000402064_00489_30603_6385.N1	07-JAN-2008 01:13:05	Bright	39.500	60	7Bet UMi	2.0810	3950.0	79	30603	No
23	GOM_NL__2PRFIN20080107_011708_000000362064_00489_30603_6386.N1	07-JAN-2008 01:17:08	Bright	36.000	119	14Eta Dra	2.7270	4700.0	72	30603	No
24	GOM_NL__2PRFIN20080107_011925_000000522064_00489_30603_6387.N1	07-JAN-2008 01:19:25	Bright	52.000	130	23Bet Dra	2.7990	5800.0	104	30603	No
25	GOM_NL__2PRFIN20080107_012538_000000522064_00489_30603_6388.N1	07-JAN-2008 01:25:38	Bright	52.000	133	40Zet Her	2.8070	6000.0	104	30603	No
26	GOM_NL__2PRFIN20080107_012836_000000522064_00489_30603_6389.N1	07-JAN-2008 01:28:36	Bright	52.000	127	27Bet Her	2.7810	4700.0	104	30603	No
27	GOM_NL__2PRFIN20080107_013340_000000372064_00489_30603_6390.N1	07-JAN-2008 01:33:40	Bright	37.000	102	24Alp Ser	2.6000	4250.0	74	30603	No
28	GOM_NL__2PRFIN20080107_013555_000000532064_00489_30603_6391.N1	07-JAN-2008 01:35:55	Bright	52.500	120	1Del Oph	2.7340	3200.0	105	30603	No
29	GOM_NL__2PRFIN20080107_014122_000000432064_00489_30603_6392.N1	07-JAN-2008 01:41:22	Twilight	42.500	80	7Del Sco	2.3160	30000.	85	30603	No
30	GOM_NL__2PRFIN20080107_014816_000000382064_00489_30603_6393.N1	07-JAN-2008 01:48:16	Dark	38.000	109	Bet Lup	2.6770	26000.	76	30603	No
31	GOM_NL__2PRFIN20080107_014946_000000392064_00489_30603_6394.N1	07-JAN-2008 01:49:46	Dark	38.500	78	Alp Lup	2.3040	28000.	77	30603	No
32	GOM_NL__2PRFIN20080107_015246_000000432064_00490_30604_6384.N1	07-JAN-2008 01:52:46	Dark	43.000	4	Alp1Cen	-0.010000	5800.0	86	30604	No
33	GOM_NL__2PRFIN20080107_015650_000000412064_00490_30604_6385.N1	07-JAN-2008 01:56:50	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	30604	No
34	GOM_NL__2PRFIN20080107_020155_000000392064_00490_30604_6386.N1	07-JAN-2008 02:01:55	Dark	39.000	29	Bet Car	1.6720	10200.	78	30604	No
35	GOM_NL__2PRFIN20080107_020332_000000402064_00490_30604_6387.N1	07-JAN-2008 02:03:32	Dark	39.500	71	lot Car	2.2460	7700.0	79	30604	No
36	GOM_NL__2PRFIN20080107_020459_000000402064_00490_30604_6388.N1	07-JAN-2008 02:04:59	Dark	40.000	41	Eps Car	1.8600	4100.0	80	30604	No
37	GOM_NL__2PRFIN20080107_020858_000000442064_00490_30604_6389.N1	07-JAN-2008 02:08:58	Dark	44.000	2	Alp Car	-0.73600	7000.0	88	30604	No
38	GOM_NL__2PRFIN20080107_021219_000000432064_00490_30604_6390.N1	07-JAN-2008 02:12:19	Dark	43.000	117	Pi Pup	2.7060	3800.0	86	30604	No
39	GOM_NL__2PRFIN20080107_021501_000000452064_00490_30604_6391.N1	07-JAN-2008 02:15:01	Straylight	44.500	23	21Eps CMa	1.5020	26000.	89	30604	No
40	GOM_NL__2PRFIN20080107_021840_000000422064_00490_30604_6392.N1	07-JAN-2008 02:18:40	Straylight	42.000	47	2Bet CMa	1.9760	28000.	84	30604	No
41	GOM_NL__2PRFIN20080107_022201_000000502064_00490_30604_6393.N1	07-JAN-2008 02:22:01	Straylight	49.500	7	19Bet Ori	0.10000	14000.	99	30604	No
42	GOM_NL__2PRFIN20080107_022347_000000422064_00490_30604_6394.N1	07-JAN-2008 02:23:47	Straylight	41.500	30	46Eps Ori	1.6940	30000.	83	30604	No













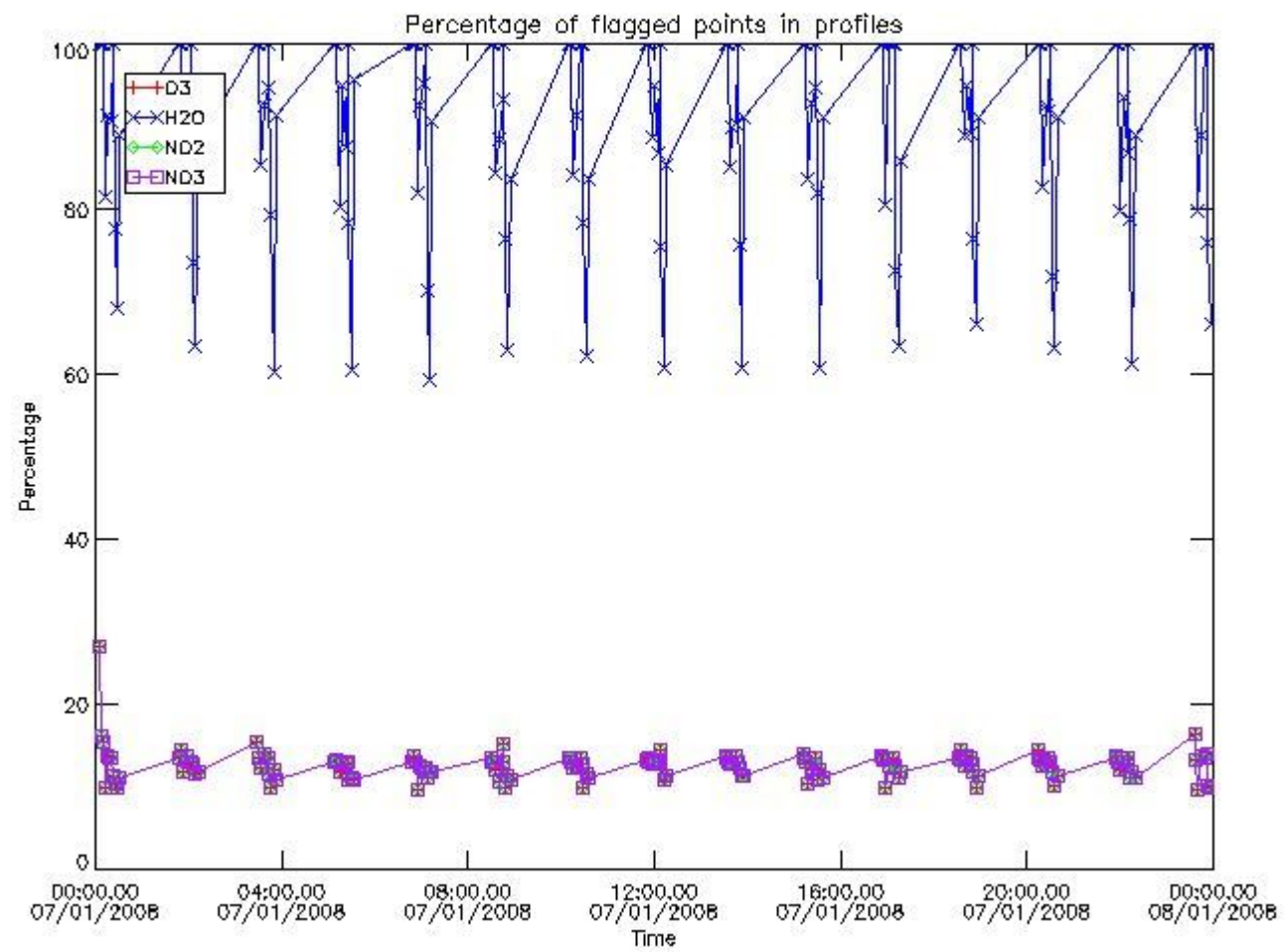


397	GOM_NL__2PRFIN20080107_234946_000000382065_00002_30617_6600.N1	07-JAN-2008 23:49:46	Dark	37.500	29	Bet Car	1.6720	10200.	75	30617	No
398	GOM_NL__2PRFIN20080107_235125_000000402065_00002_30617_6601.N1	07-JAN-2008 23:51:25	Dark	40.000	71	lot Car	2.2460	7700.0	80	30617	No
399	GOM_NL__2PRFIN20080107_235251_000000512065_00002_30617_6602.N1	07-JAN-2008 23:52:51	Dark	50.500	41	Eps Car	1.8600	4100.0	101	30617	No
400	GOM_NL__2PRFIN20080107_235648_000000522065_00002_30617_6603.N1	07-JAN-2008 23:56:48	Dark	52.000	2	Alp Car	-0.73600	7000.0	104	30617	No

### 3. Quality information per product

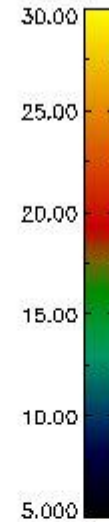
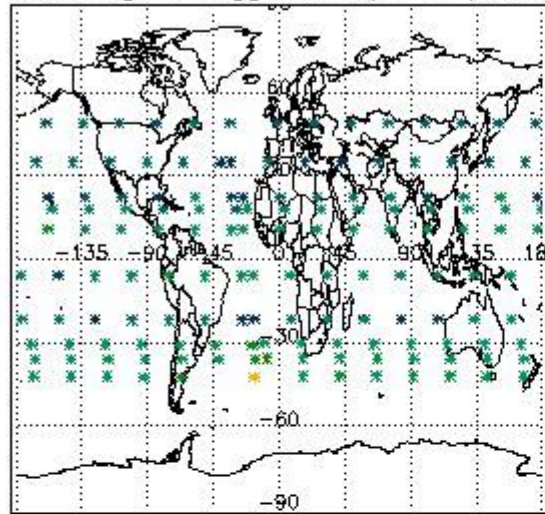
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

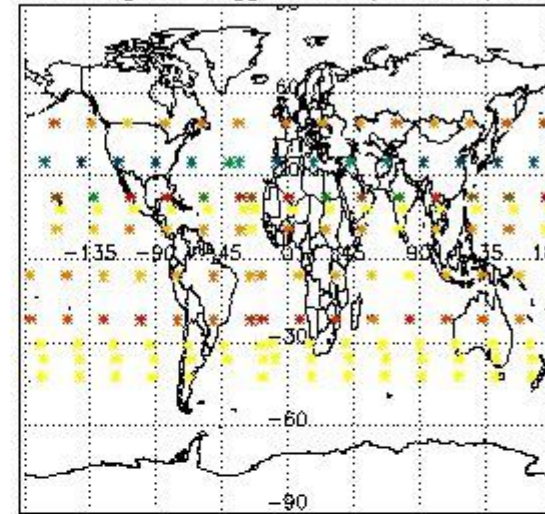


#### 3.2 Plot quality information per product (world map)

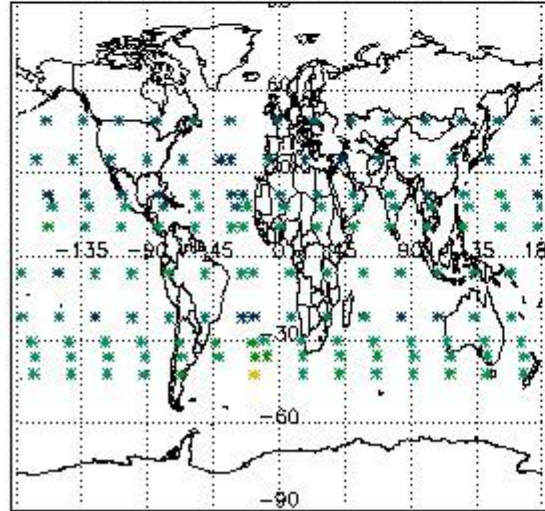
Percentage of flagged data per O3 profile



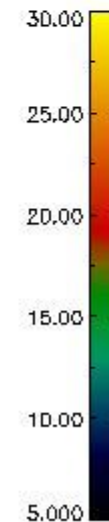
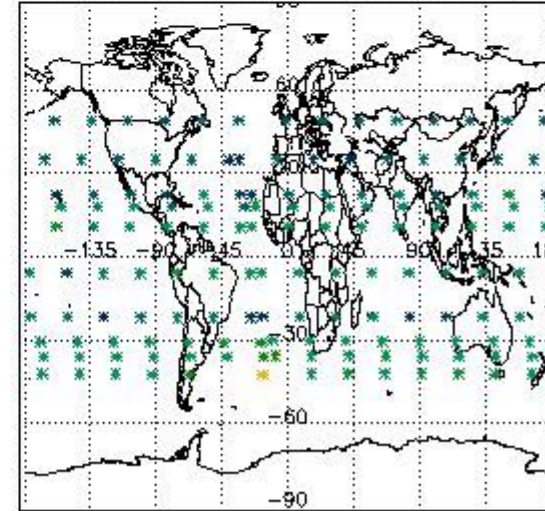
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

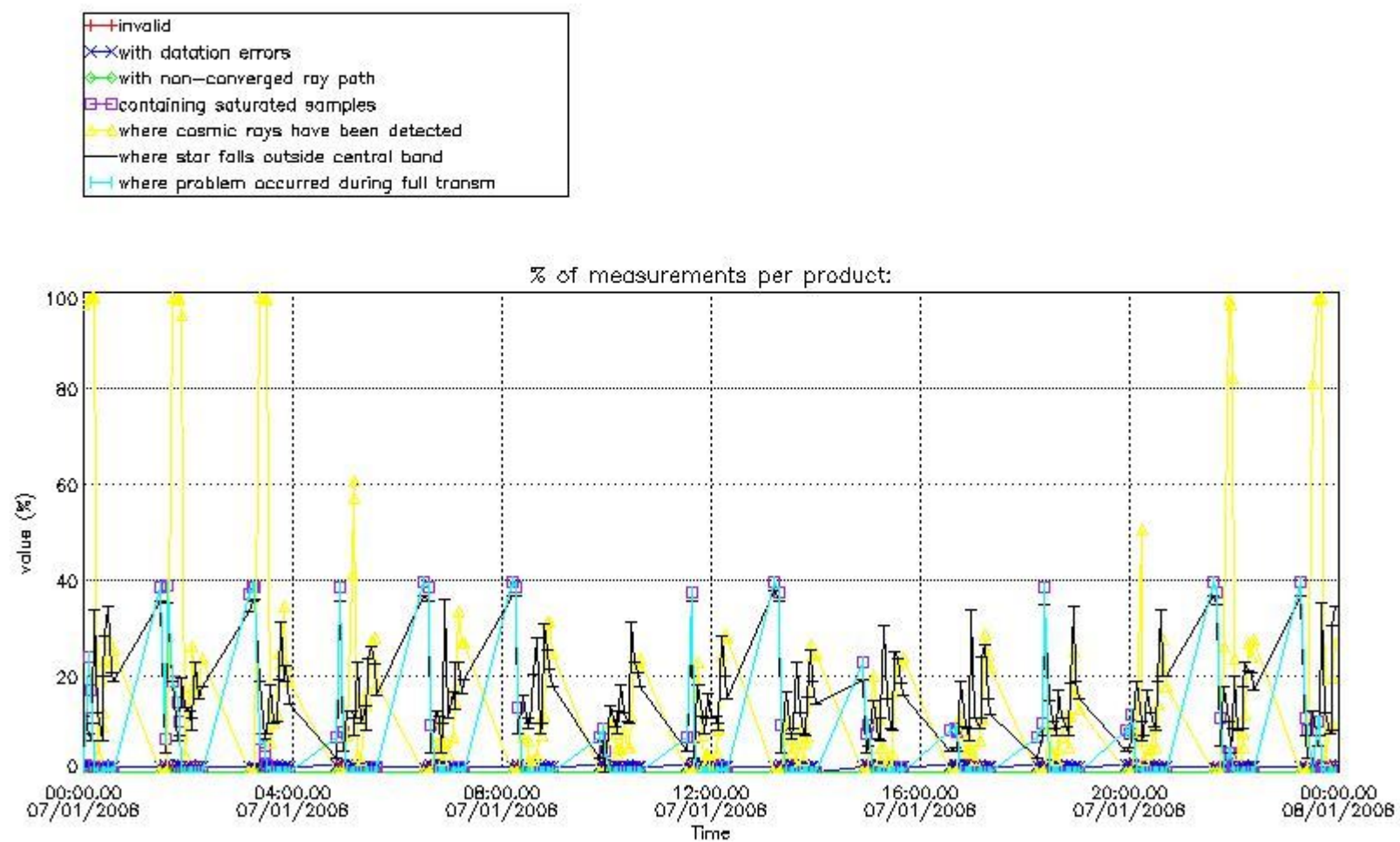


#### 4. Level 1 quality information per product

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.

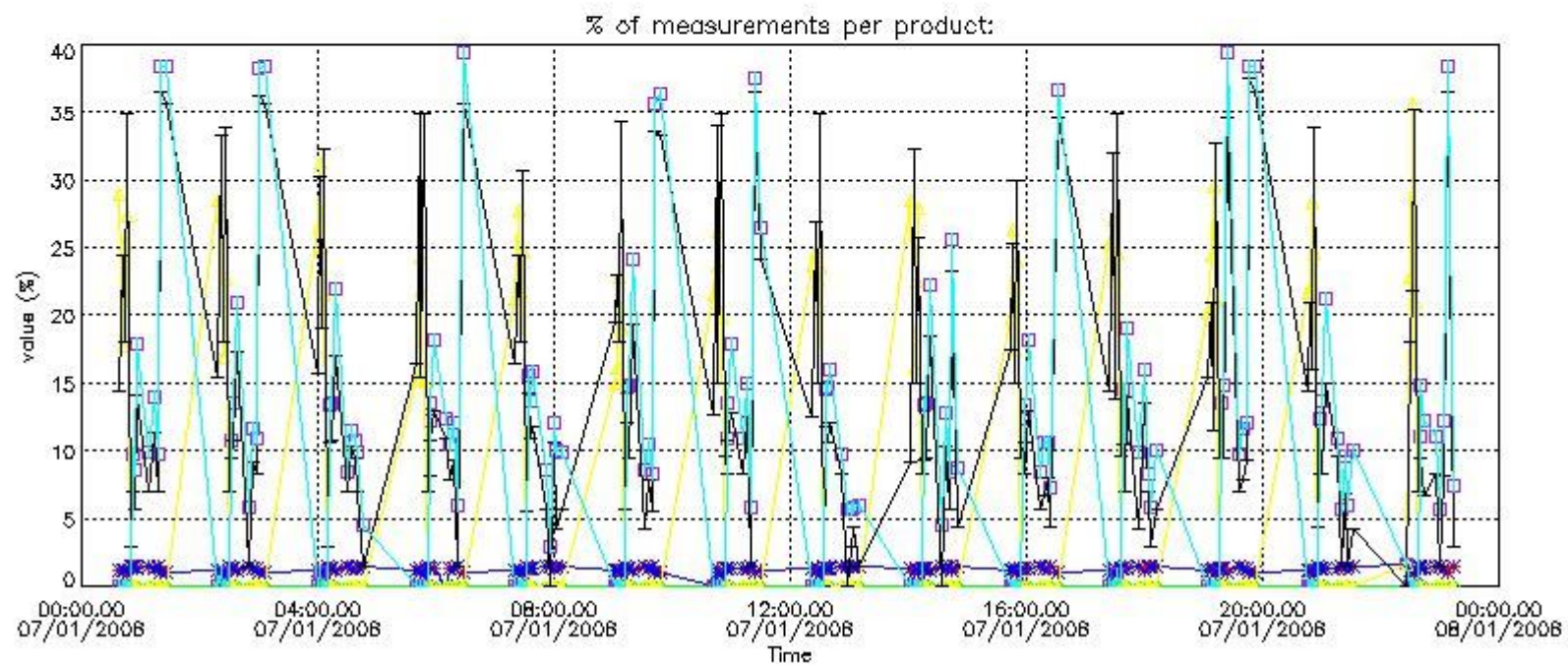
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



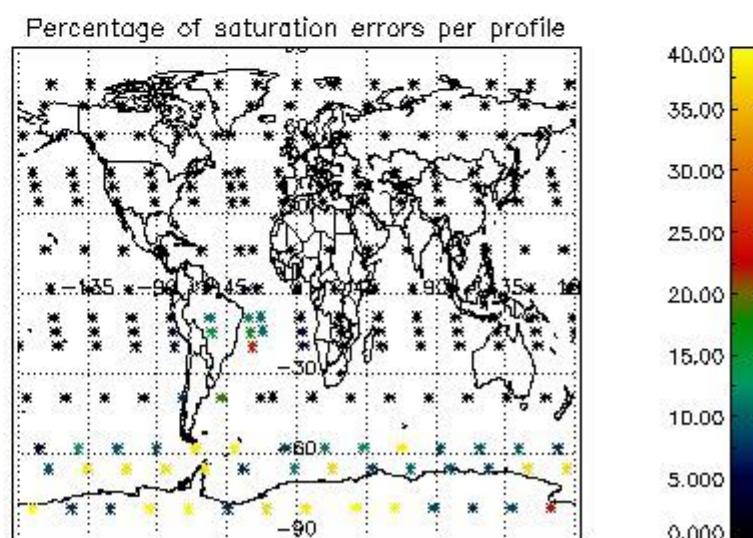
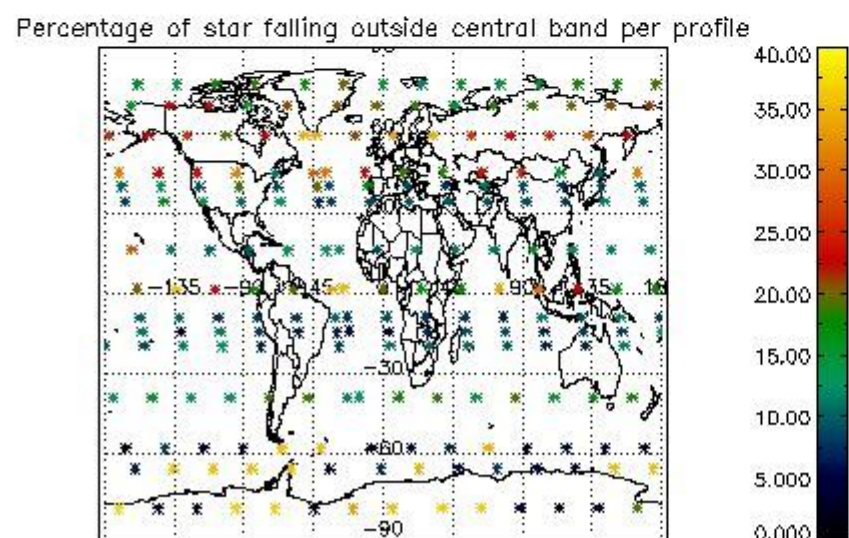
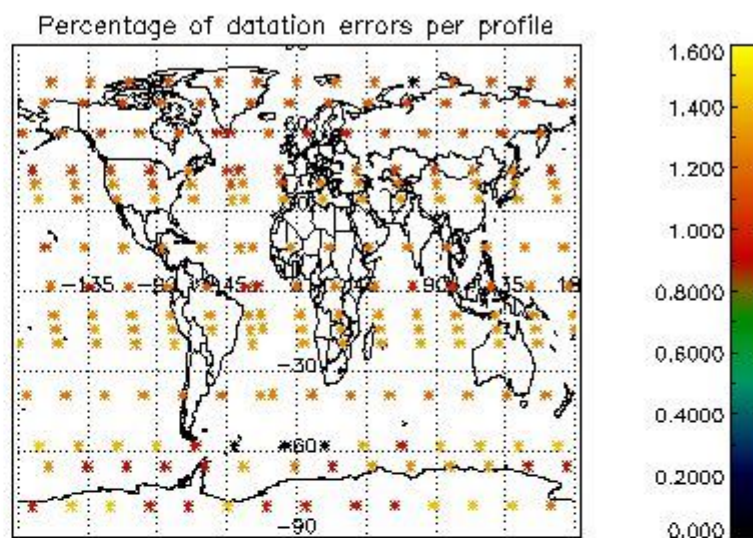
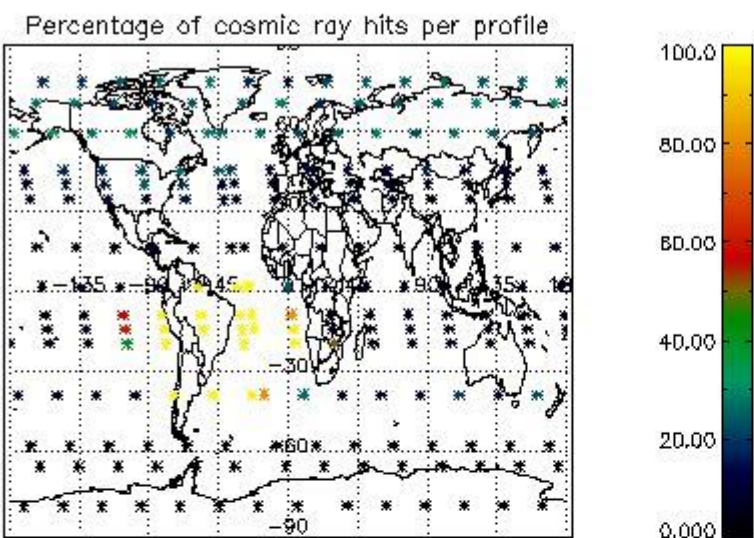
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



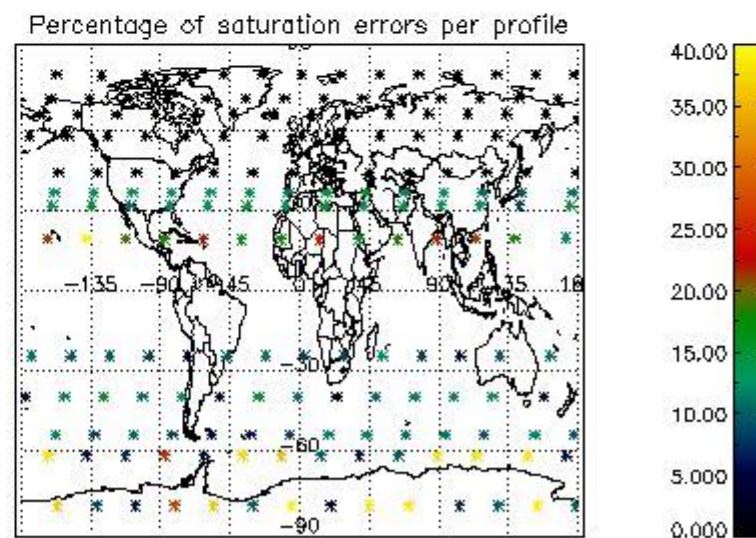
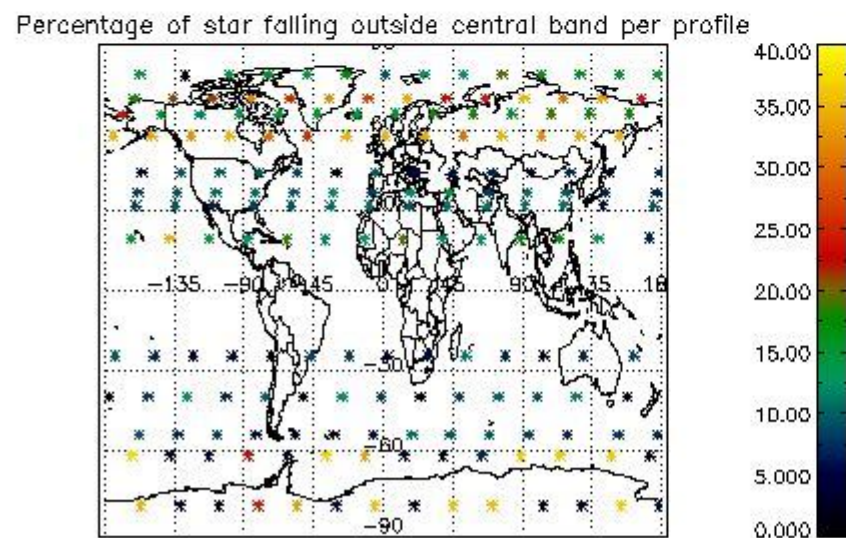
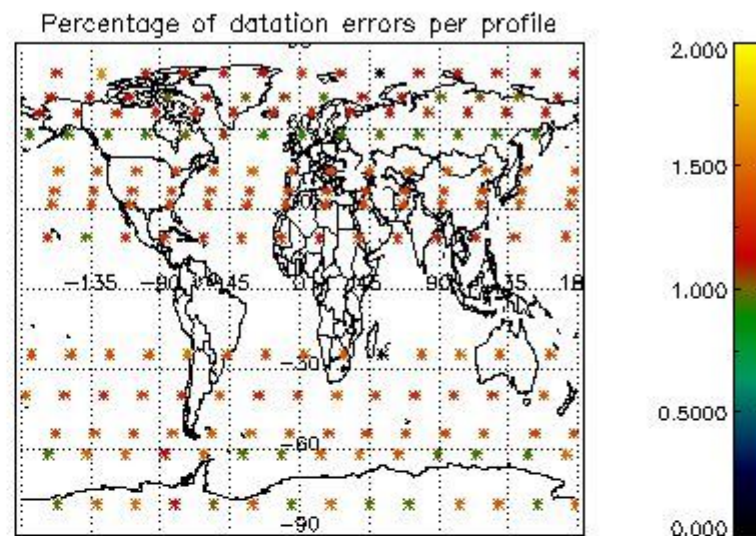
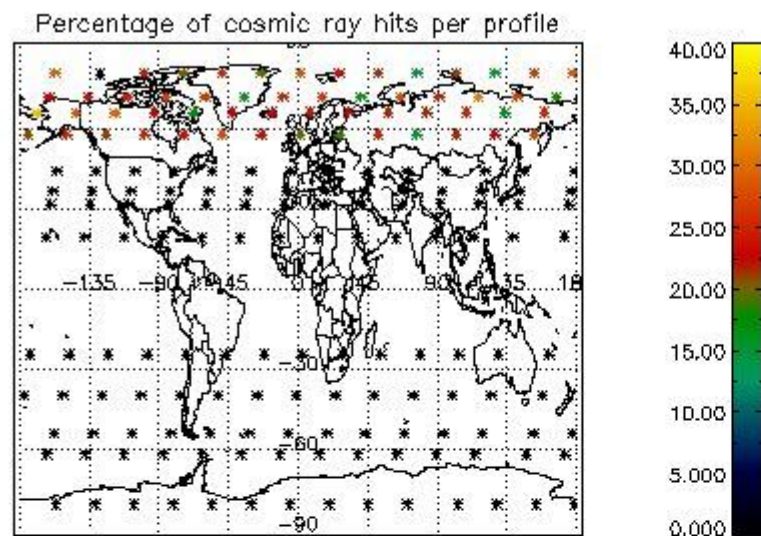


#### 4.2 Plot quality information per product coming from level 1b processing (world map)

##### 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

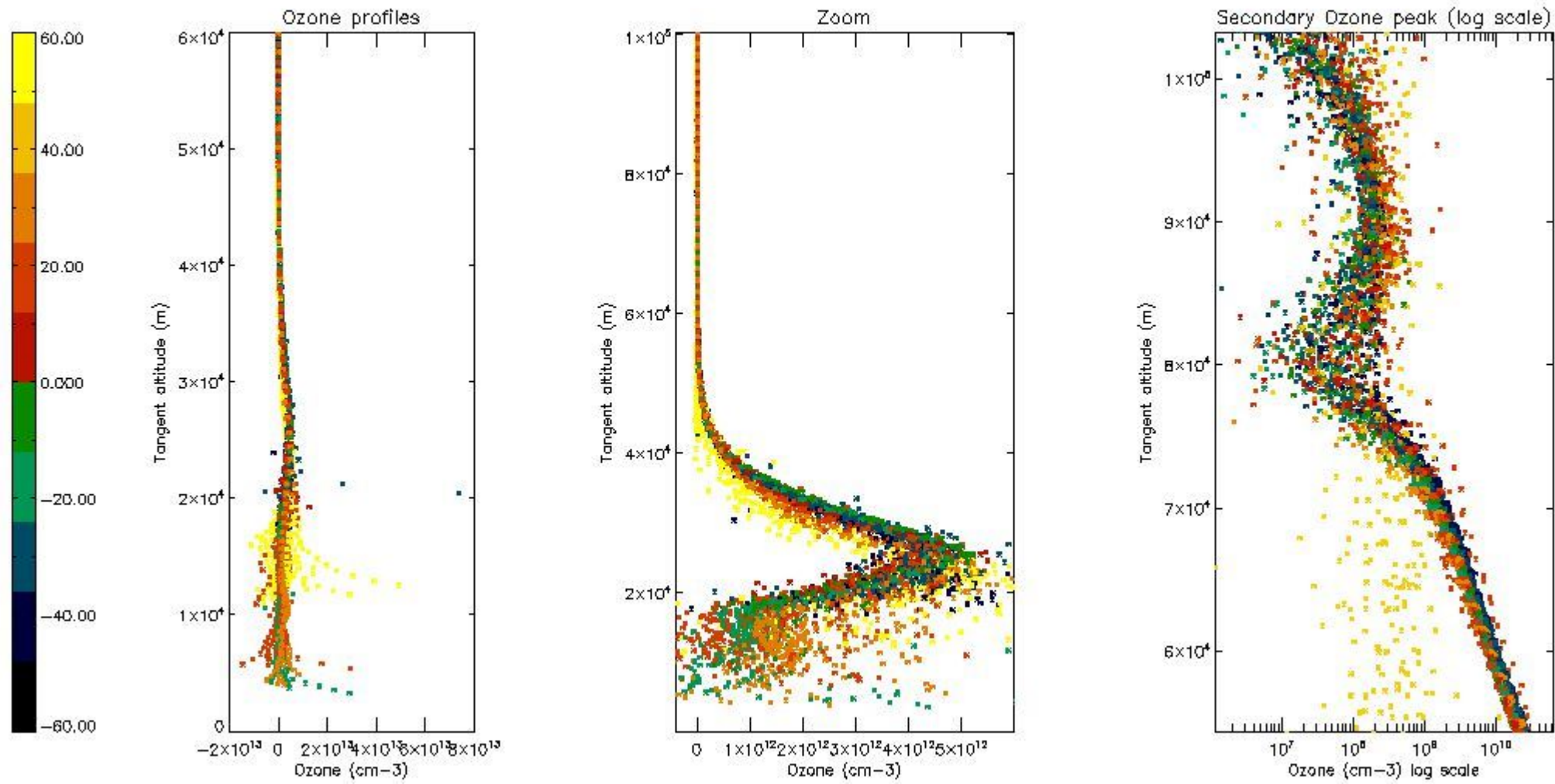
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	38
STD < 20	22

STD < 10	17
STD < 5	11

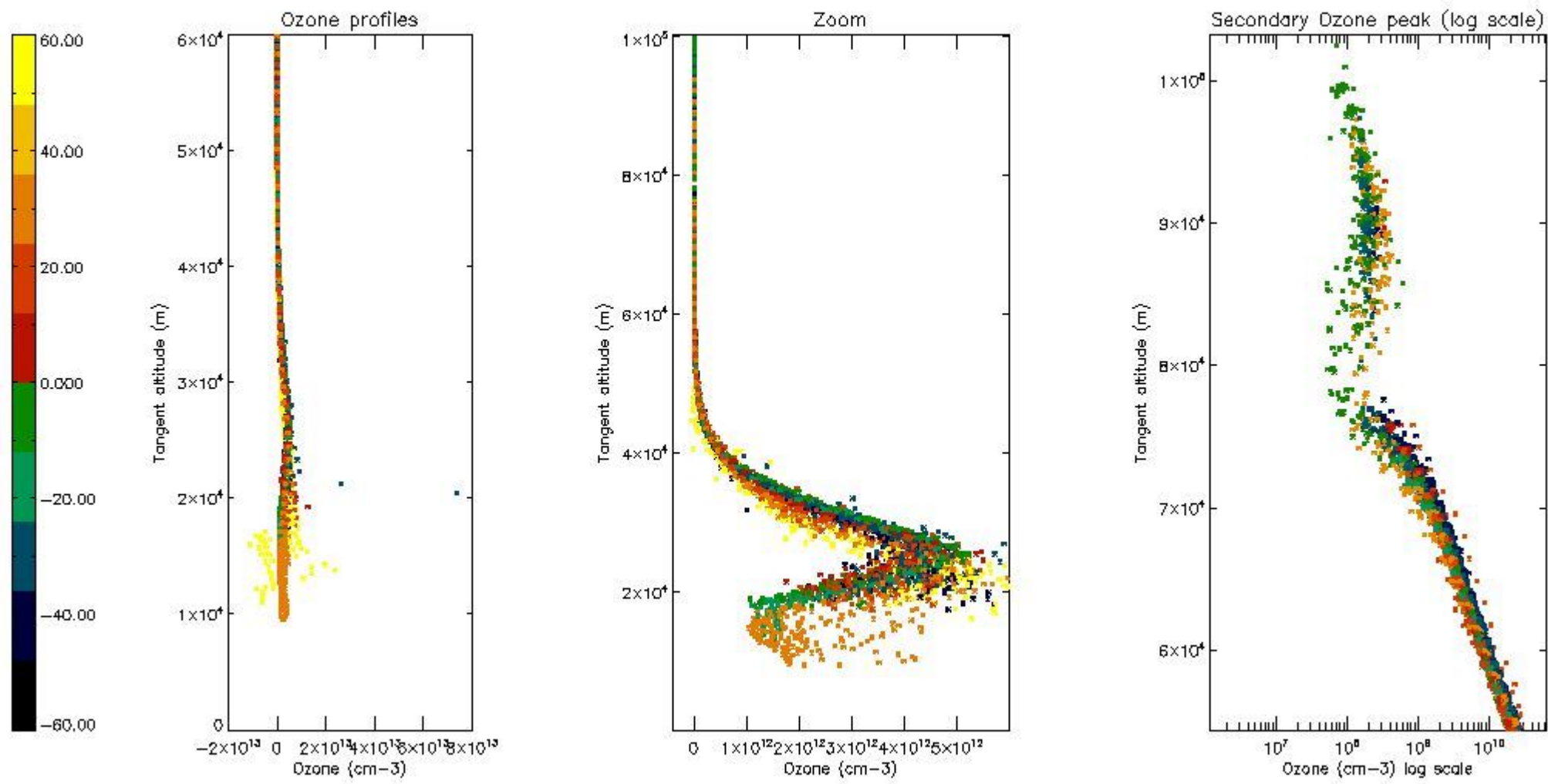
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



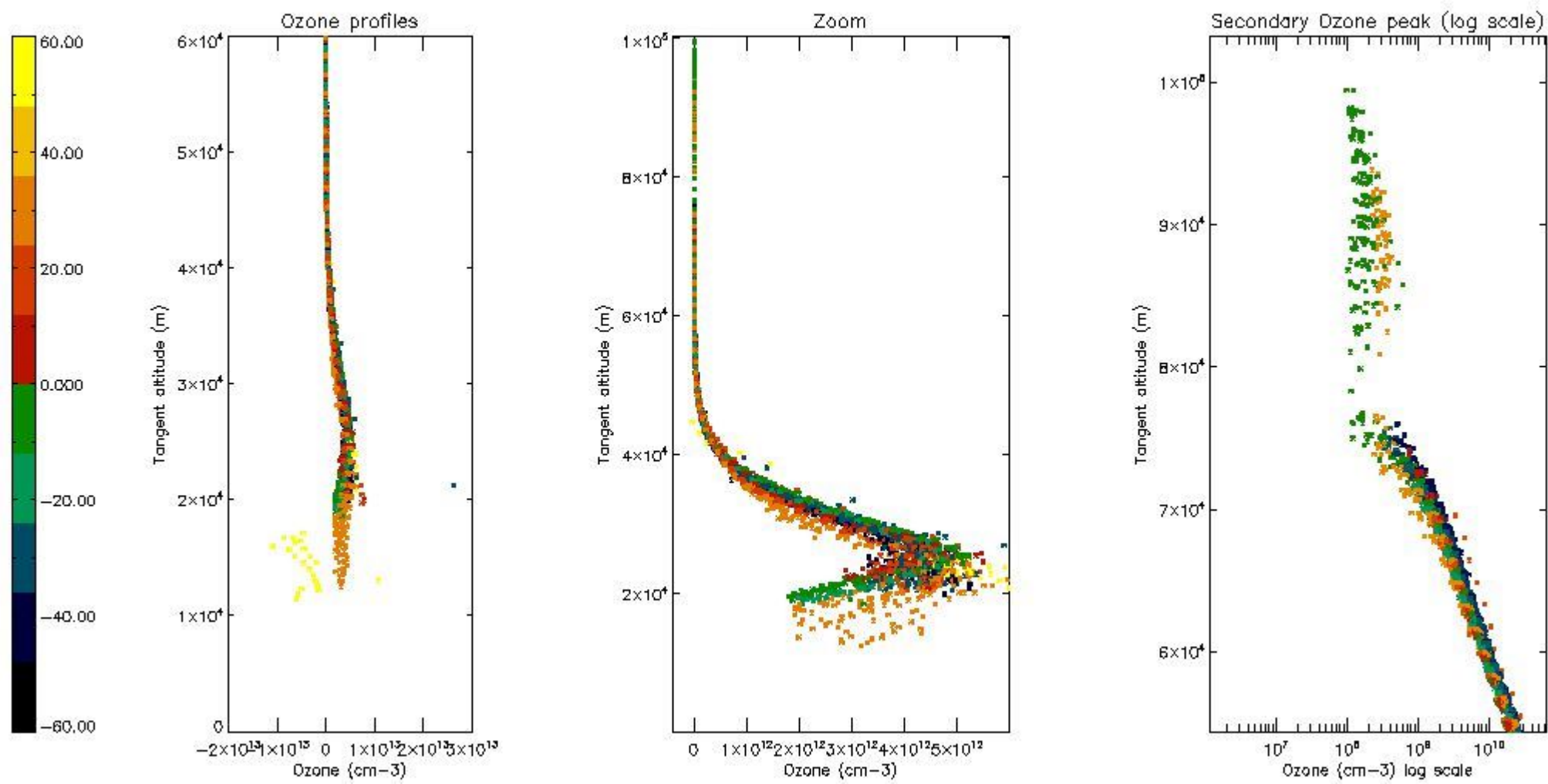
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



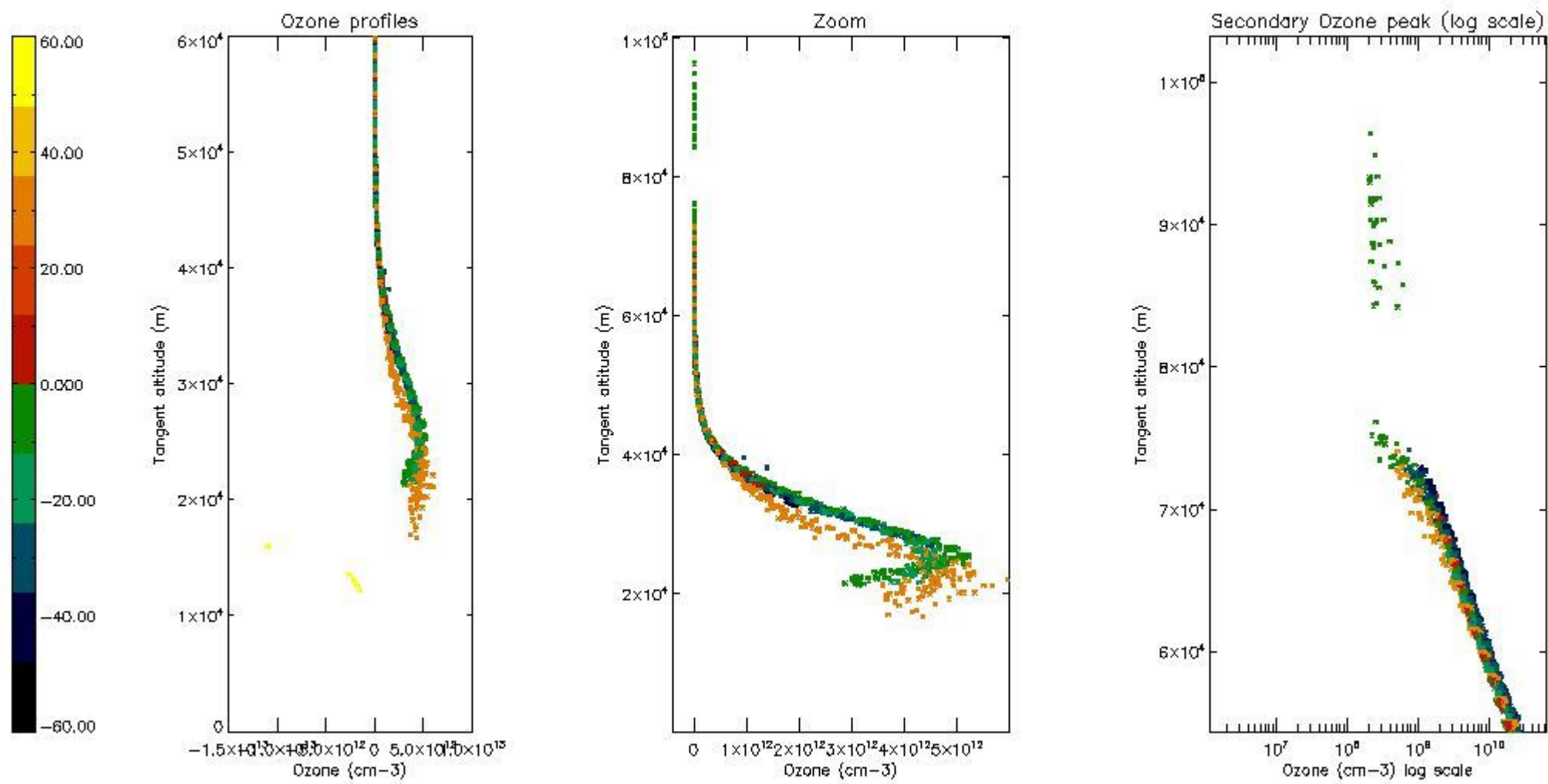
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



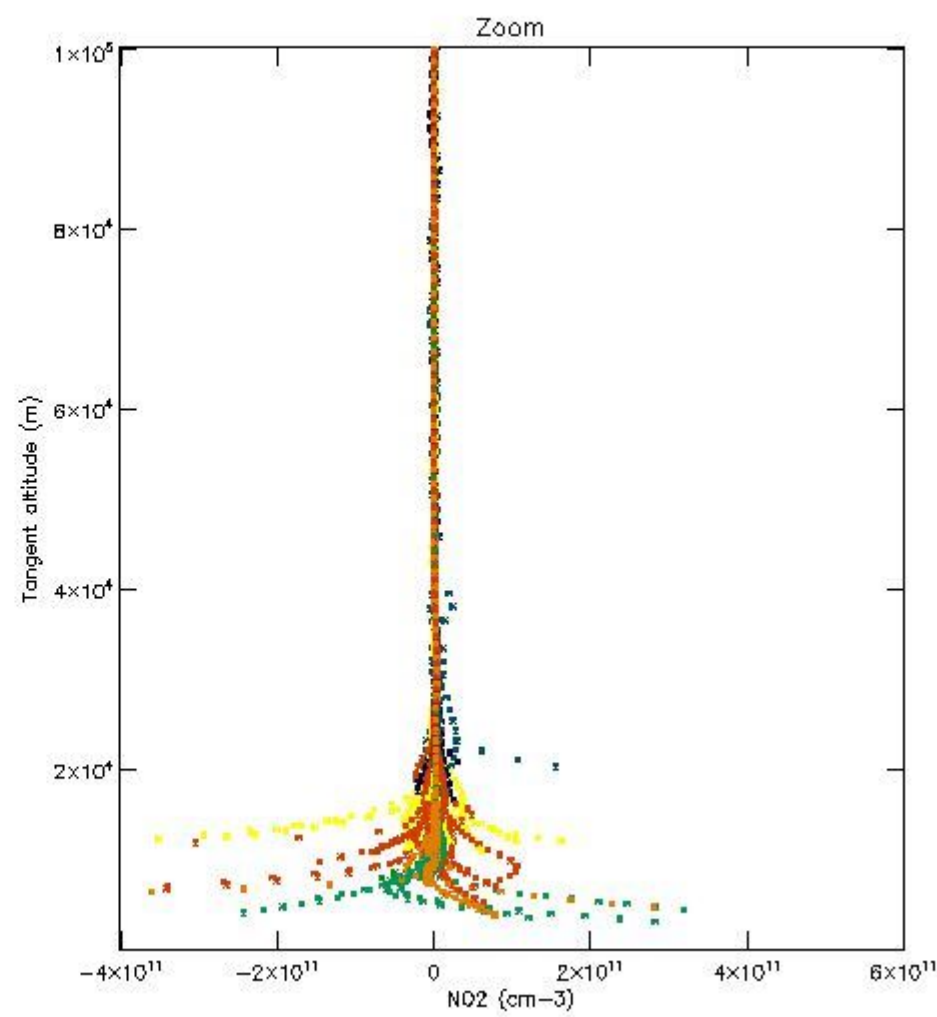
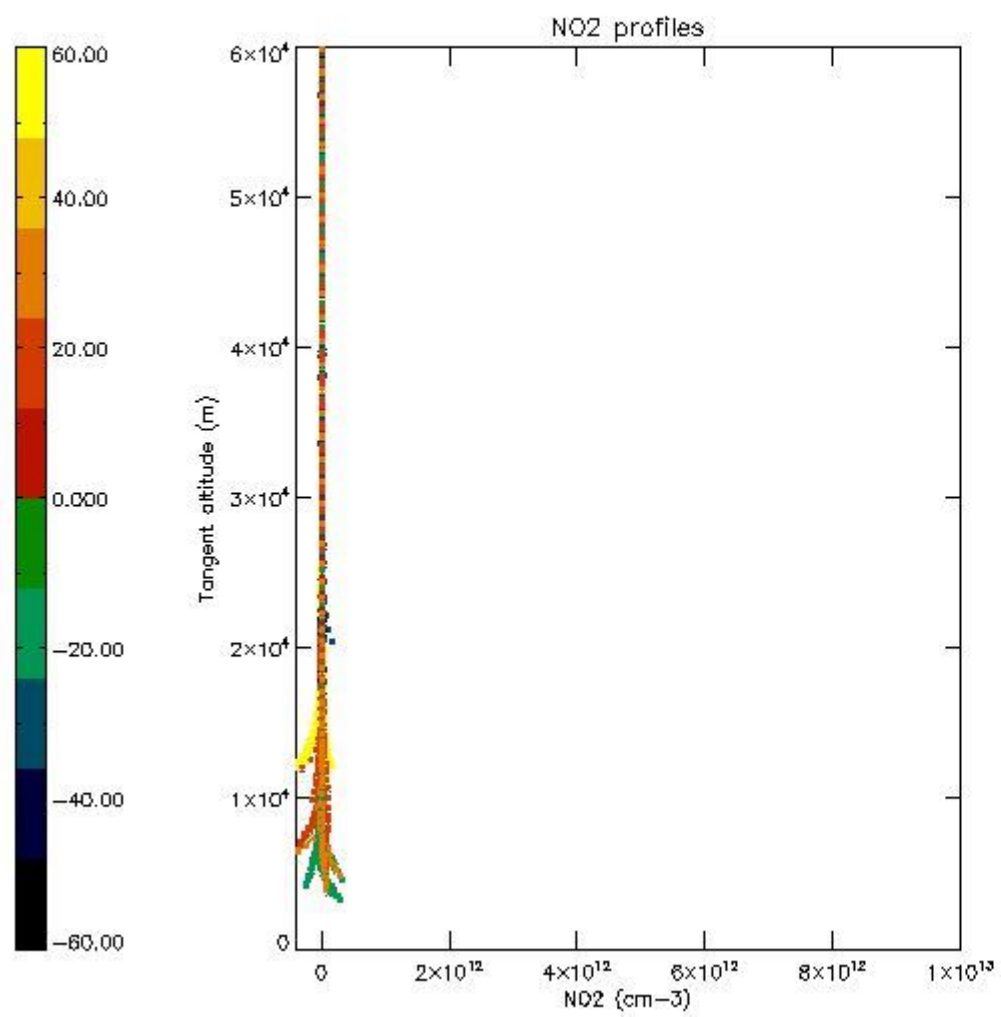
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

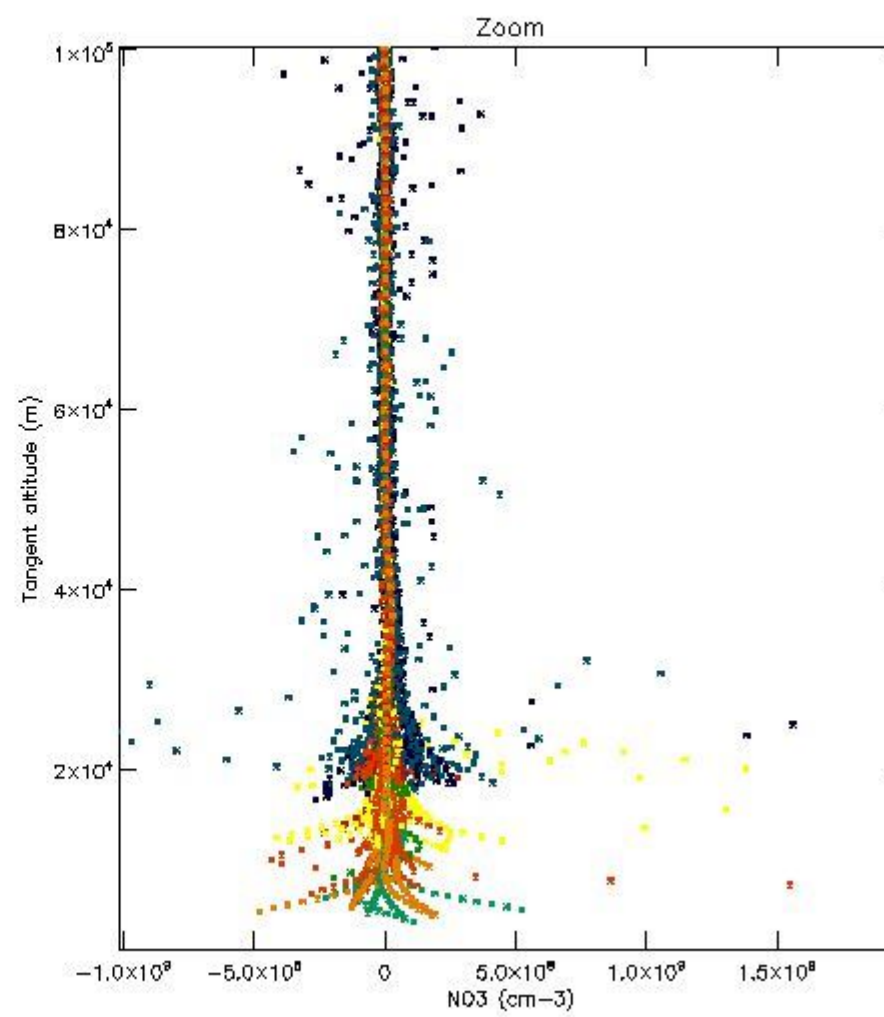
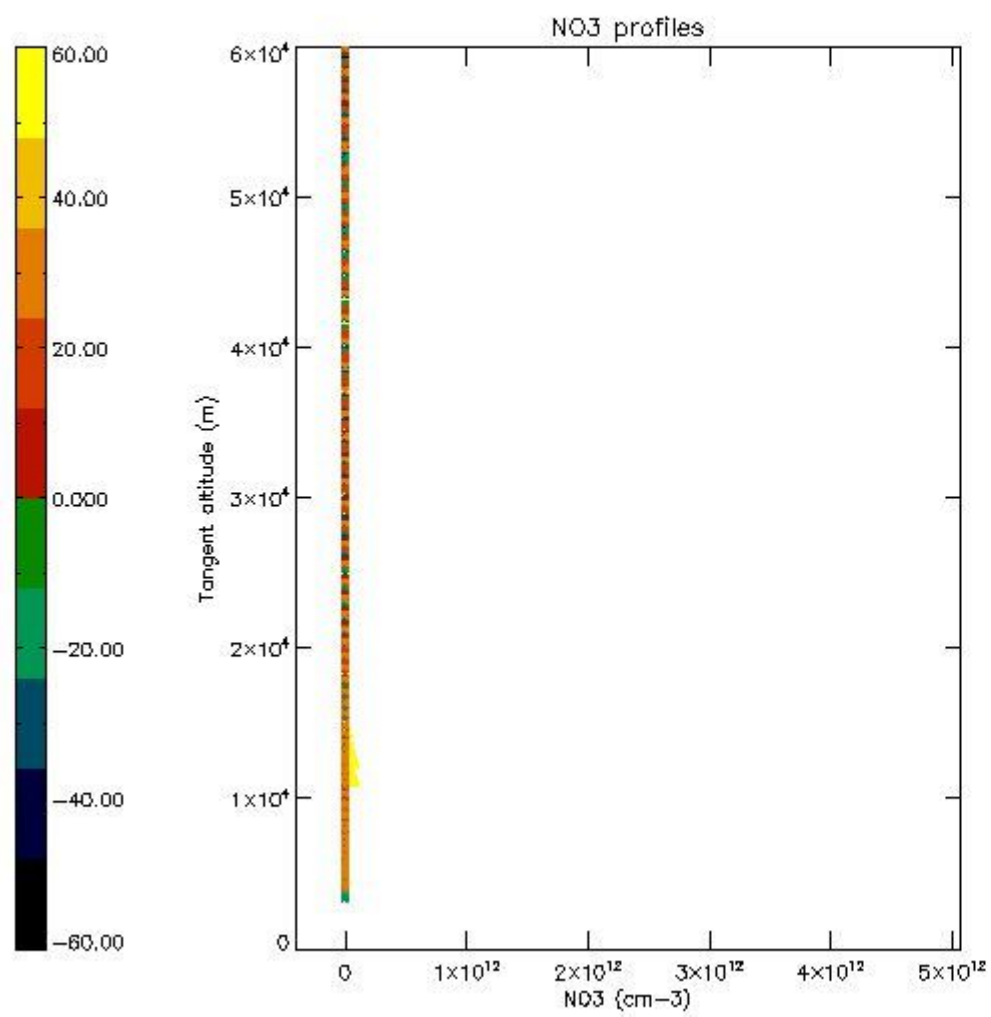
The colorbar represents the latitude.



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

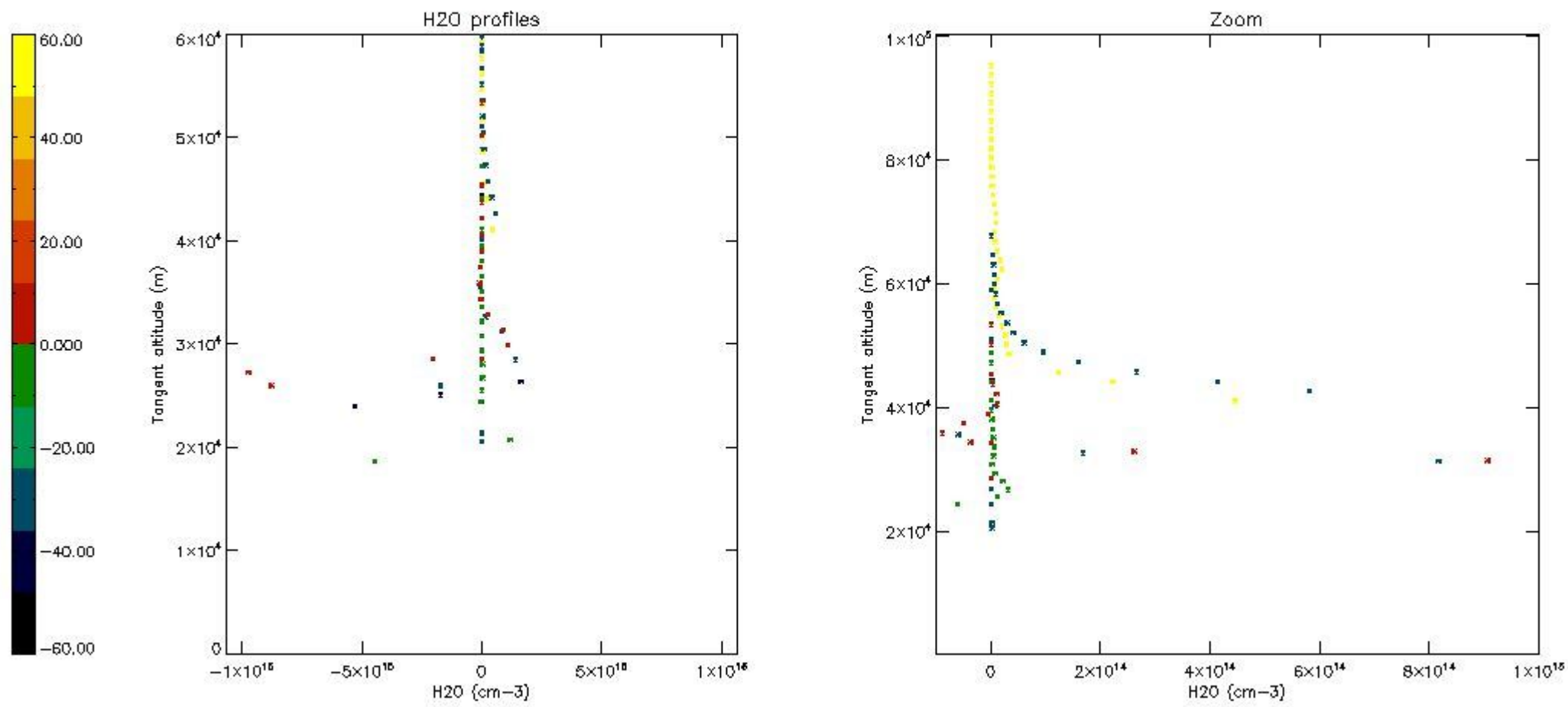
The colorbar represents the latitude.





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

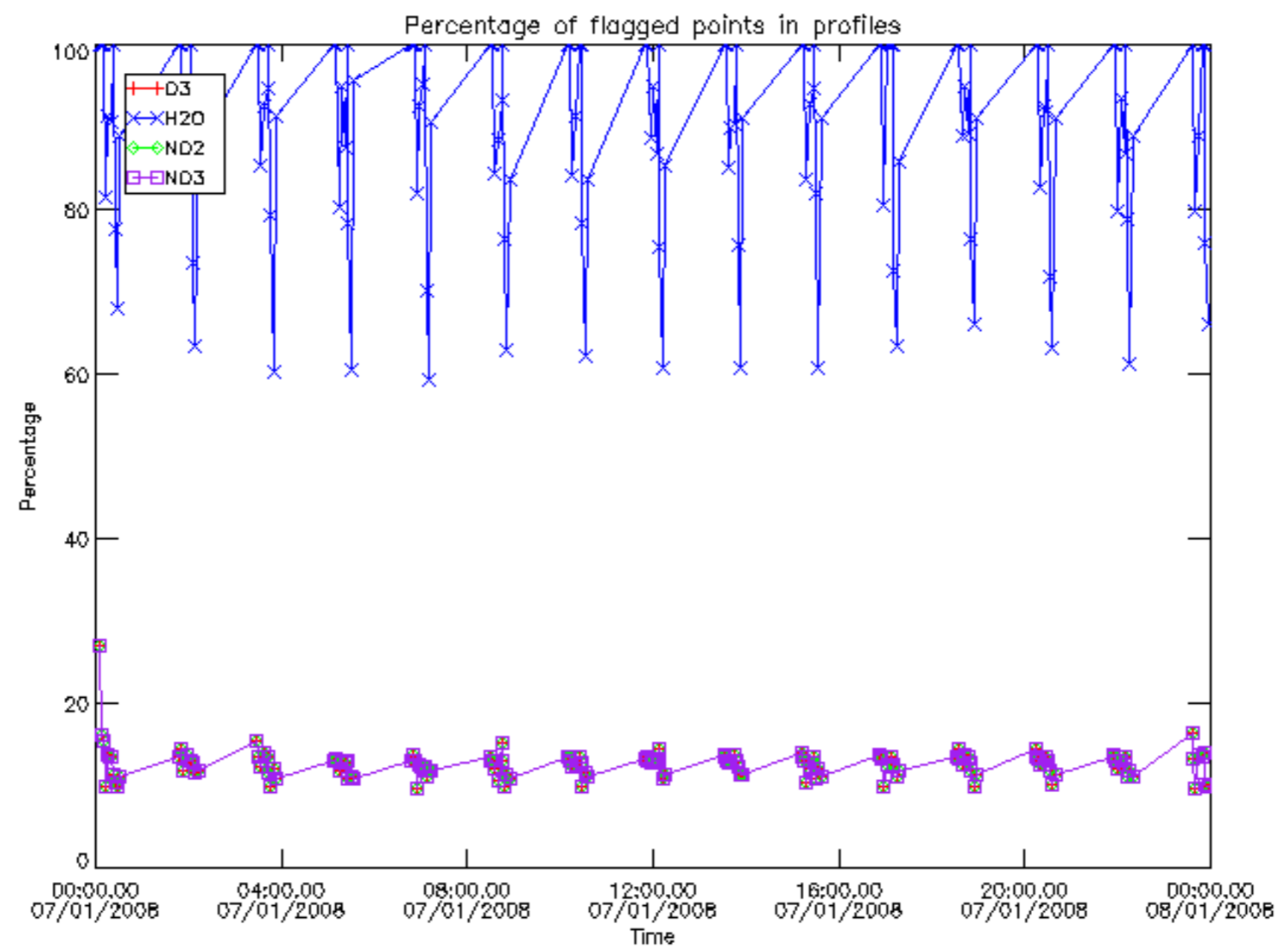
The colorbar represents the latitude.



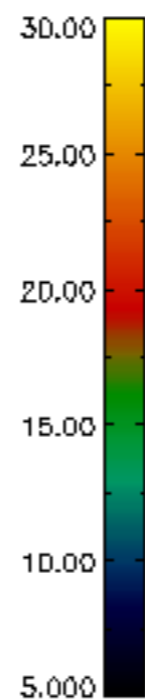
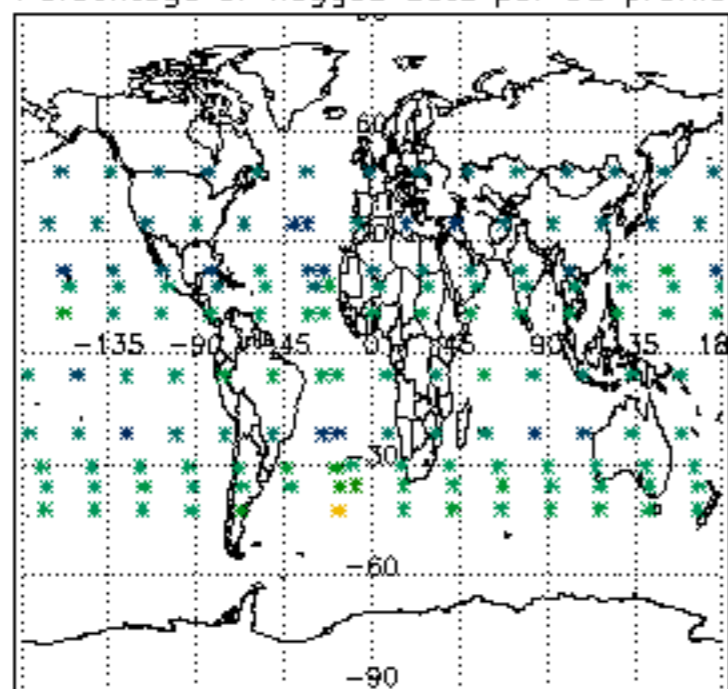
## 6. Auxiliary Data Files used for the production reported in section 2

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.

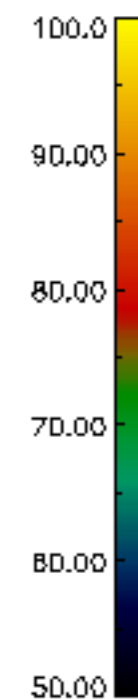
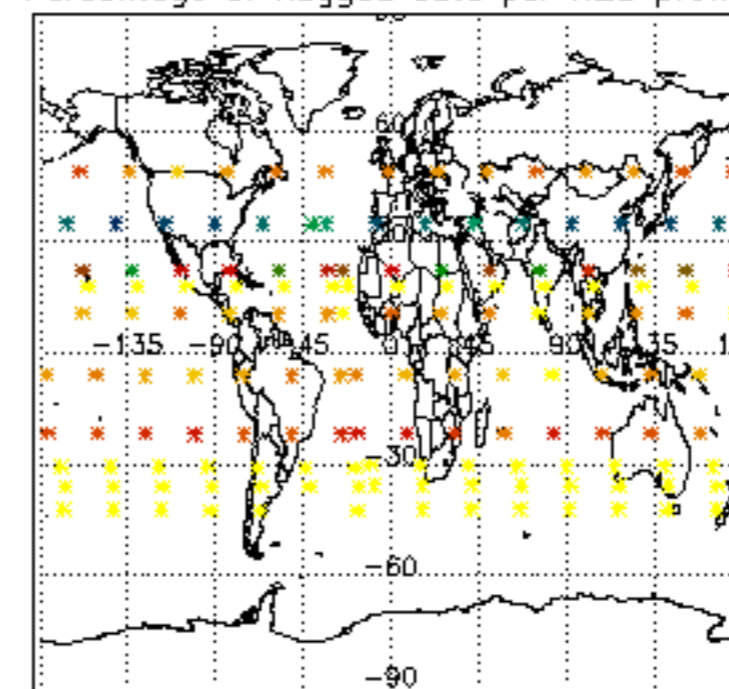
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	07-JAN-2008 00:00:45
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	07-JAN-2008 00:00:45
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	07-JAN-2008 00:00:45



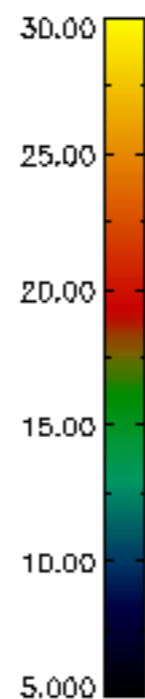
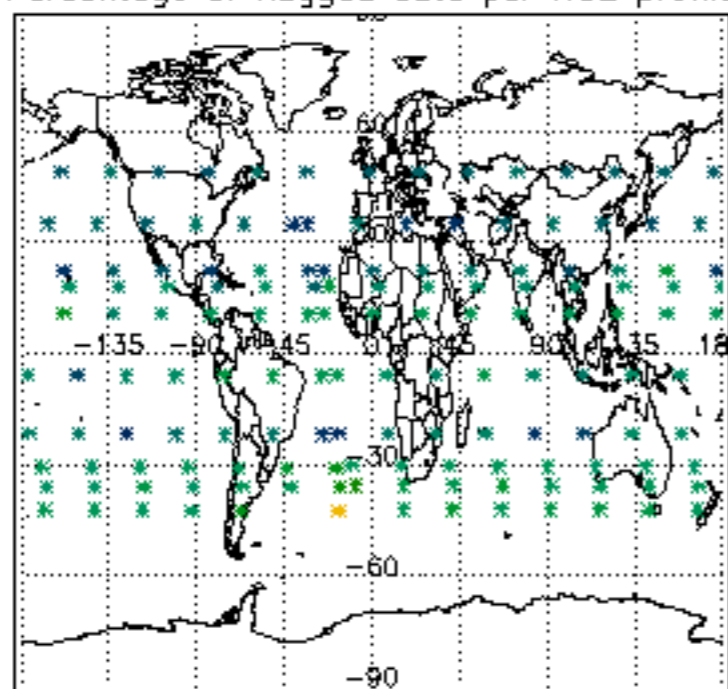
Percentage of flagged data per D3 profile



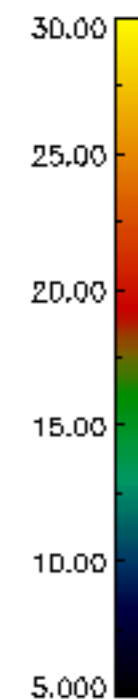
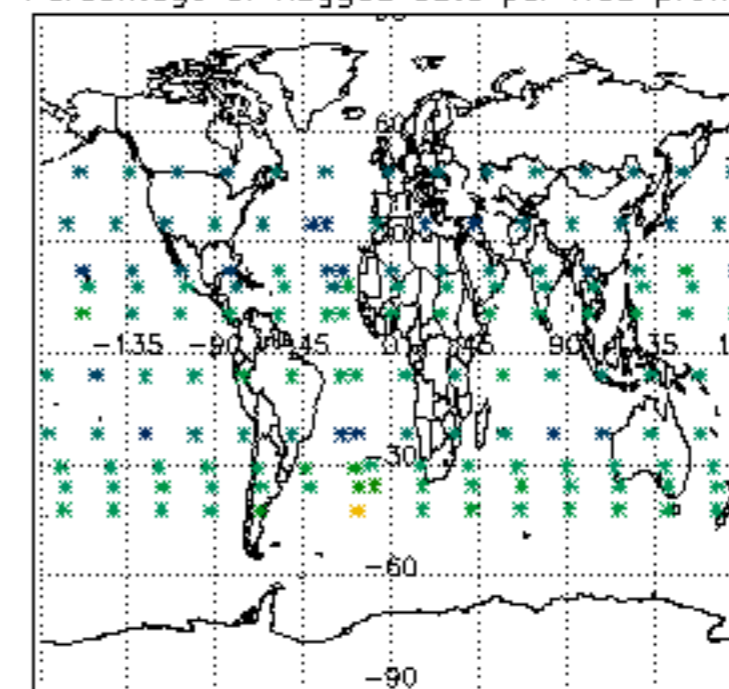
Percentage of flagged data per H2O profile

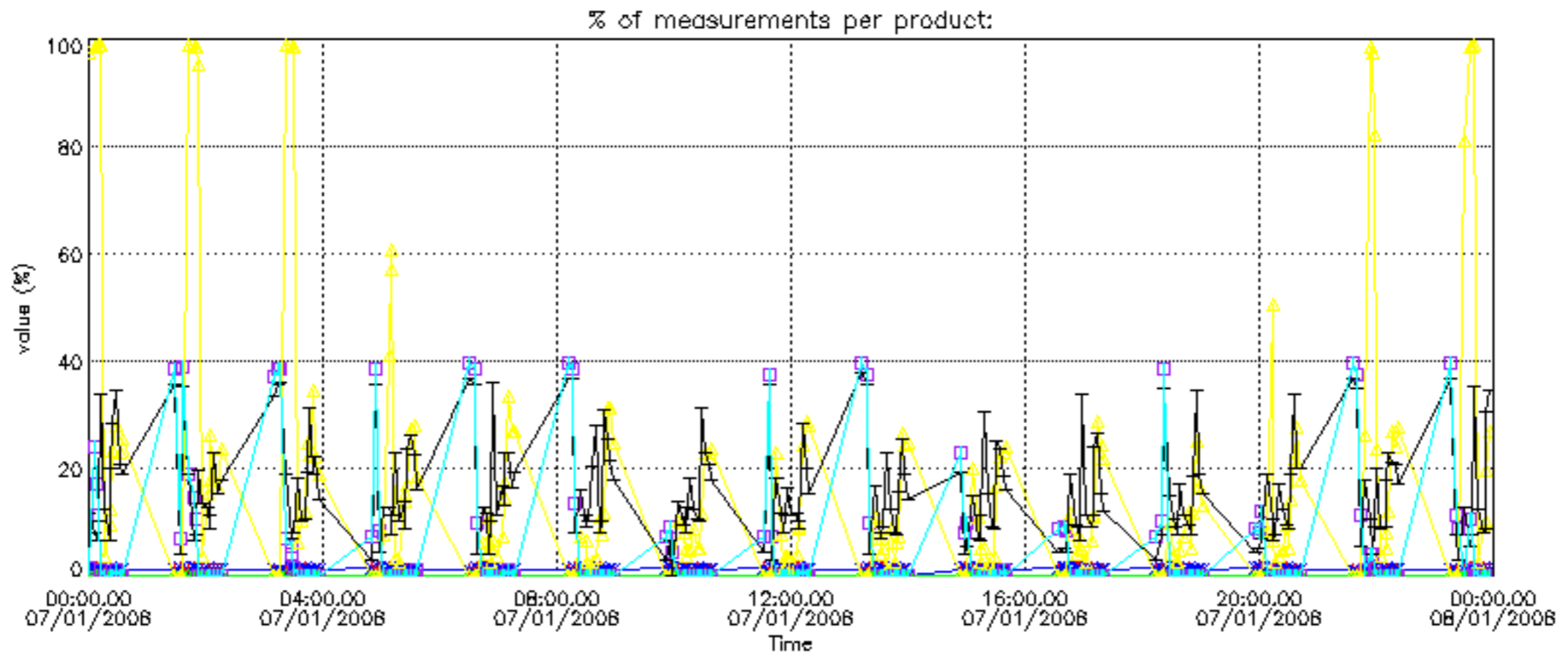


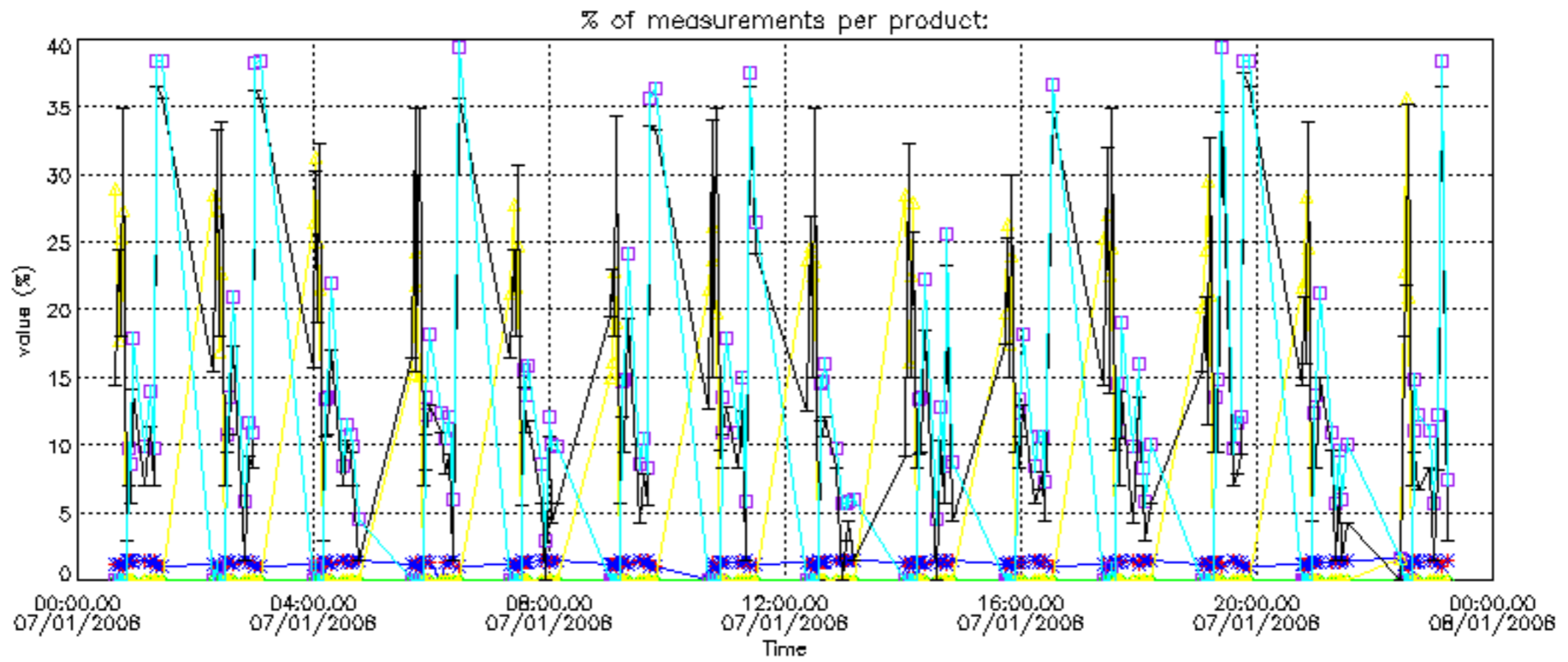
Percentage of flagged data per NO2 profile



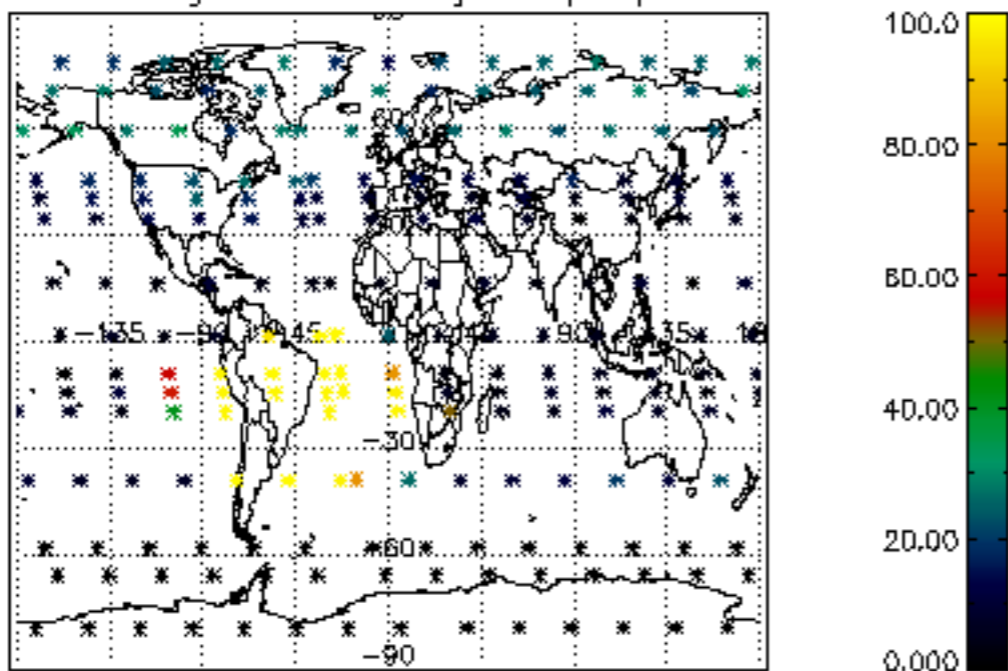
Percentage of flagged data per NO3 profile



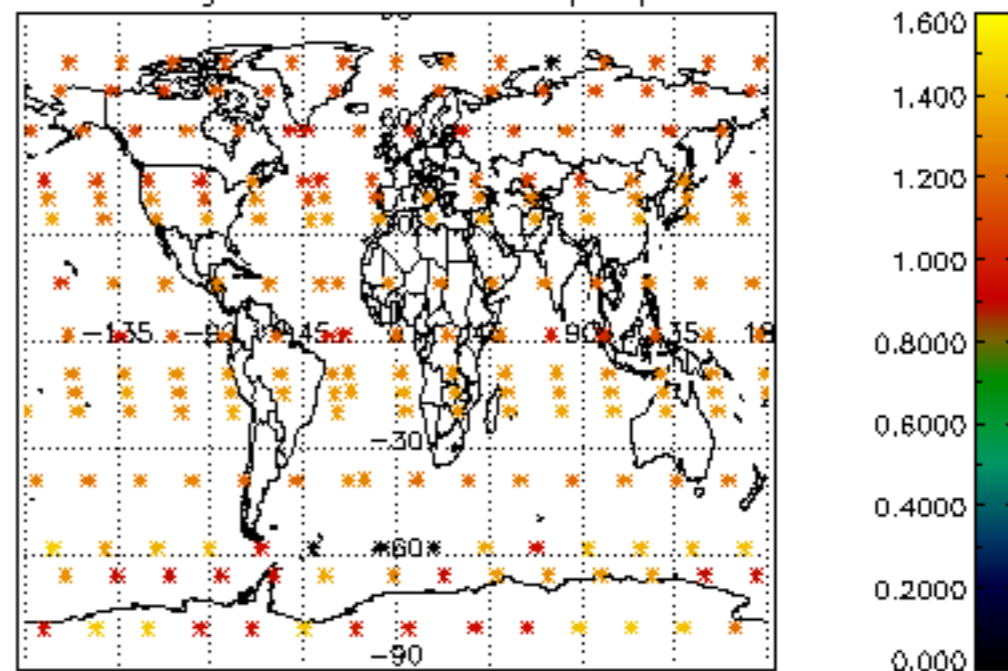




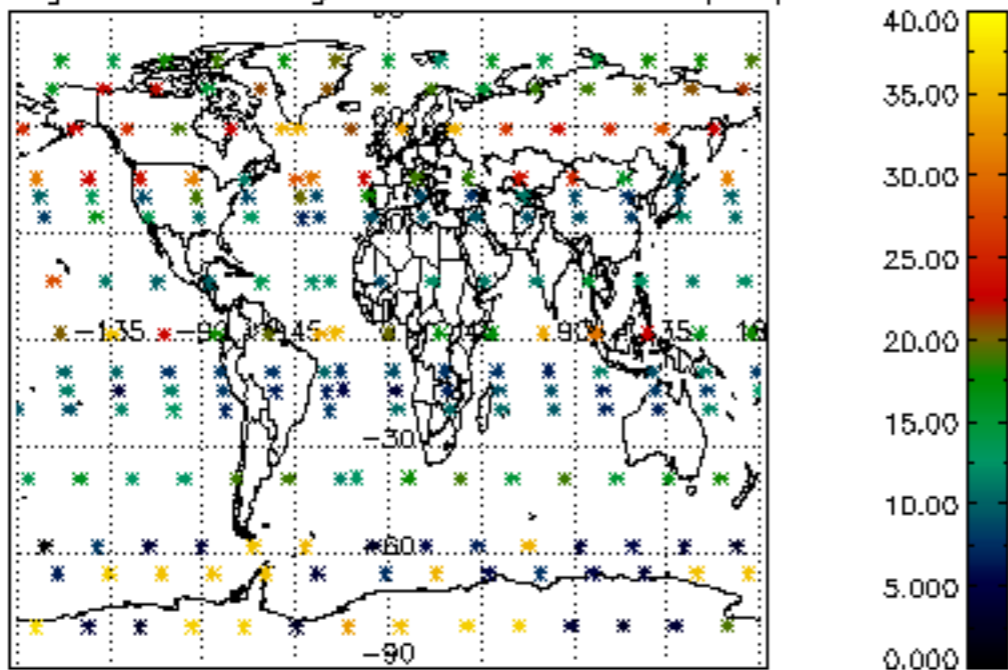
Percentage of cosmic ray hits per profile



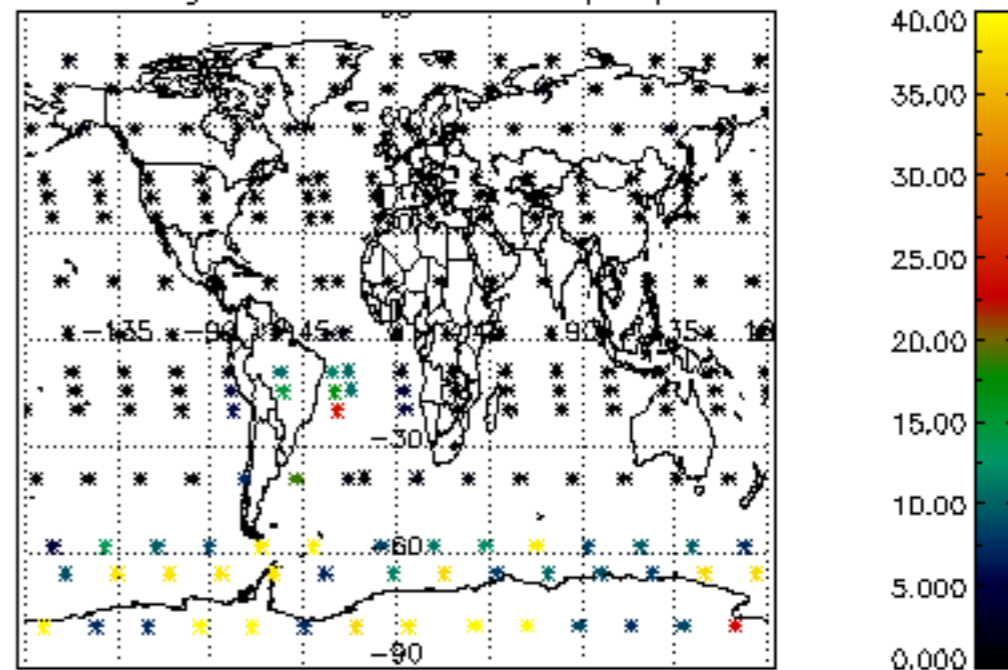
Percentage of datation errors per profile



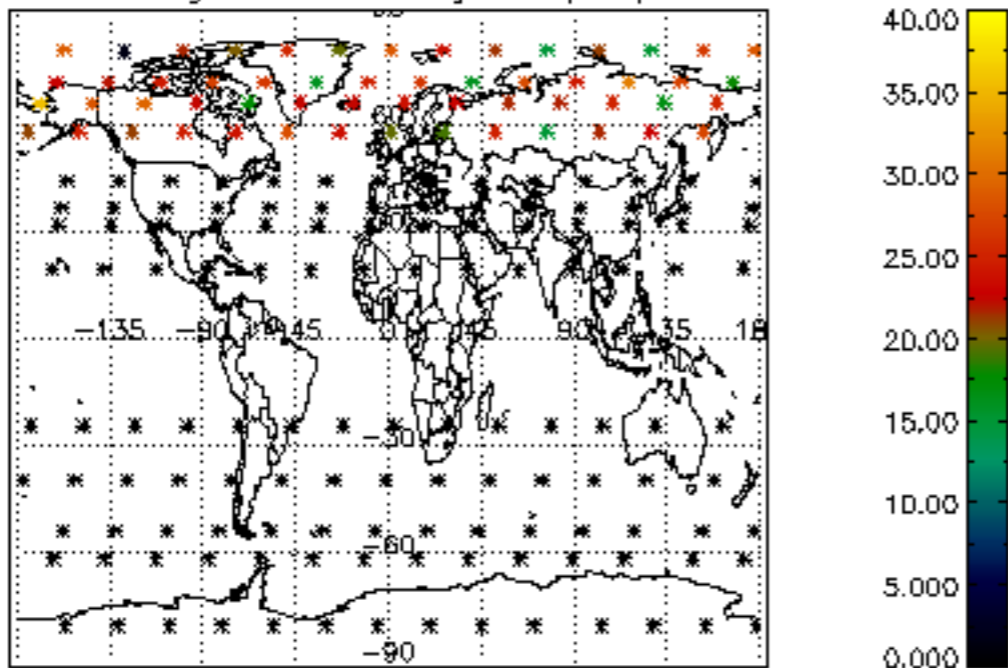
Percentage of star falling outside central band per profile



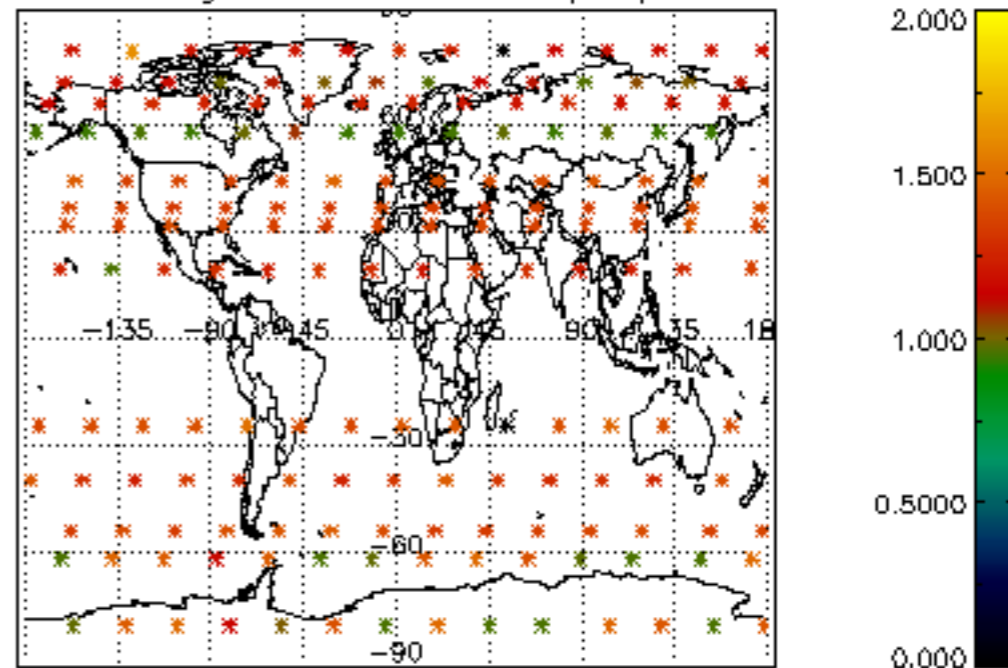
Percentage of saturation errors per profile



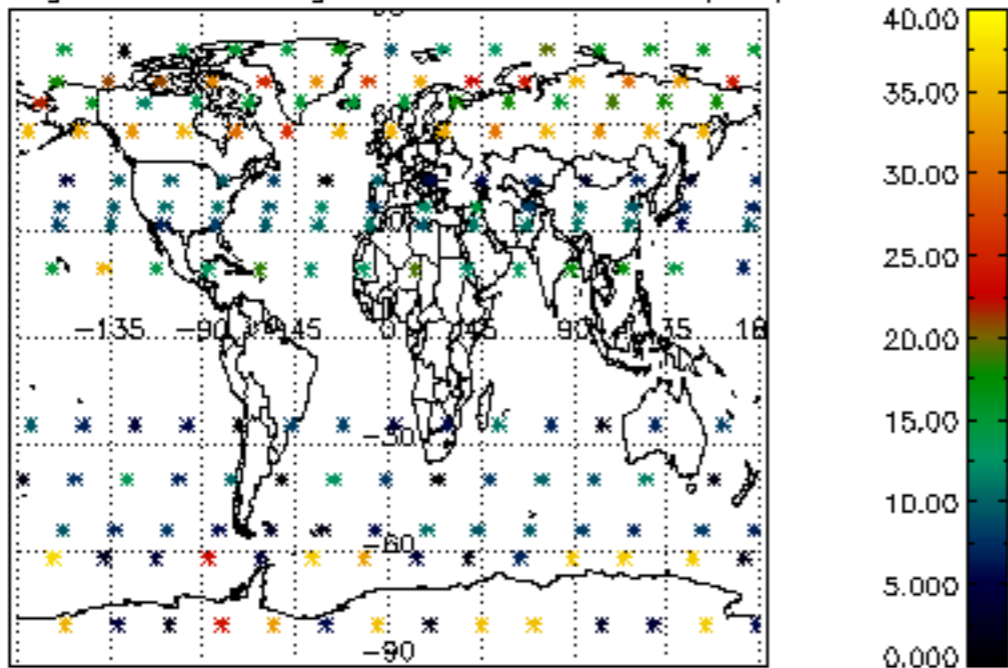
Percentage of cosmic ray hits per profile



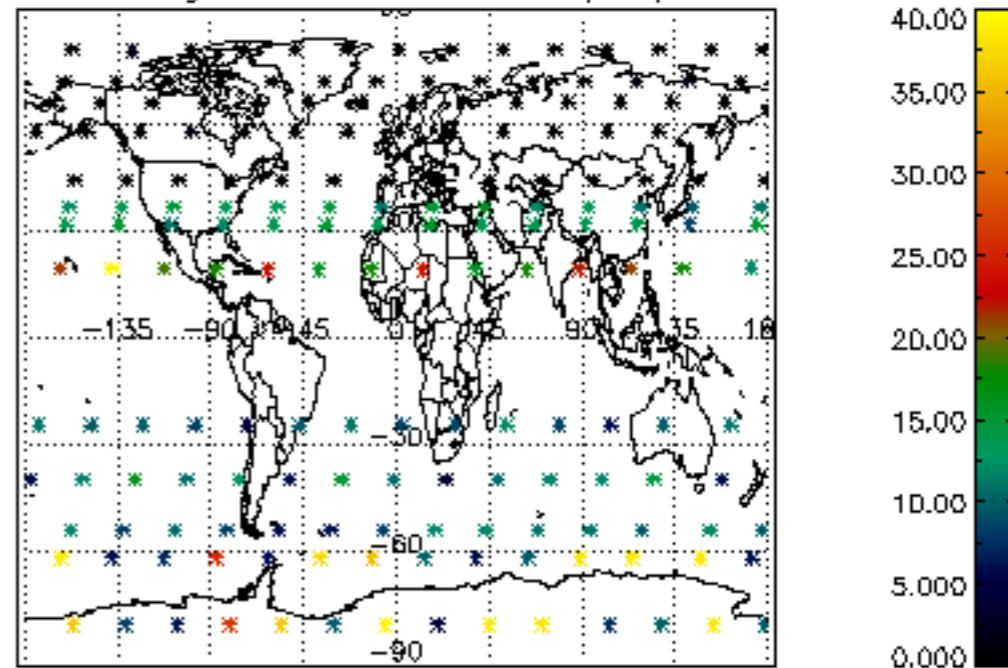
Percentage of datation errors per profile



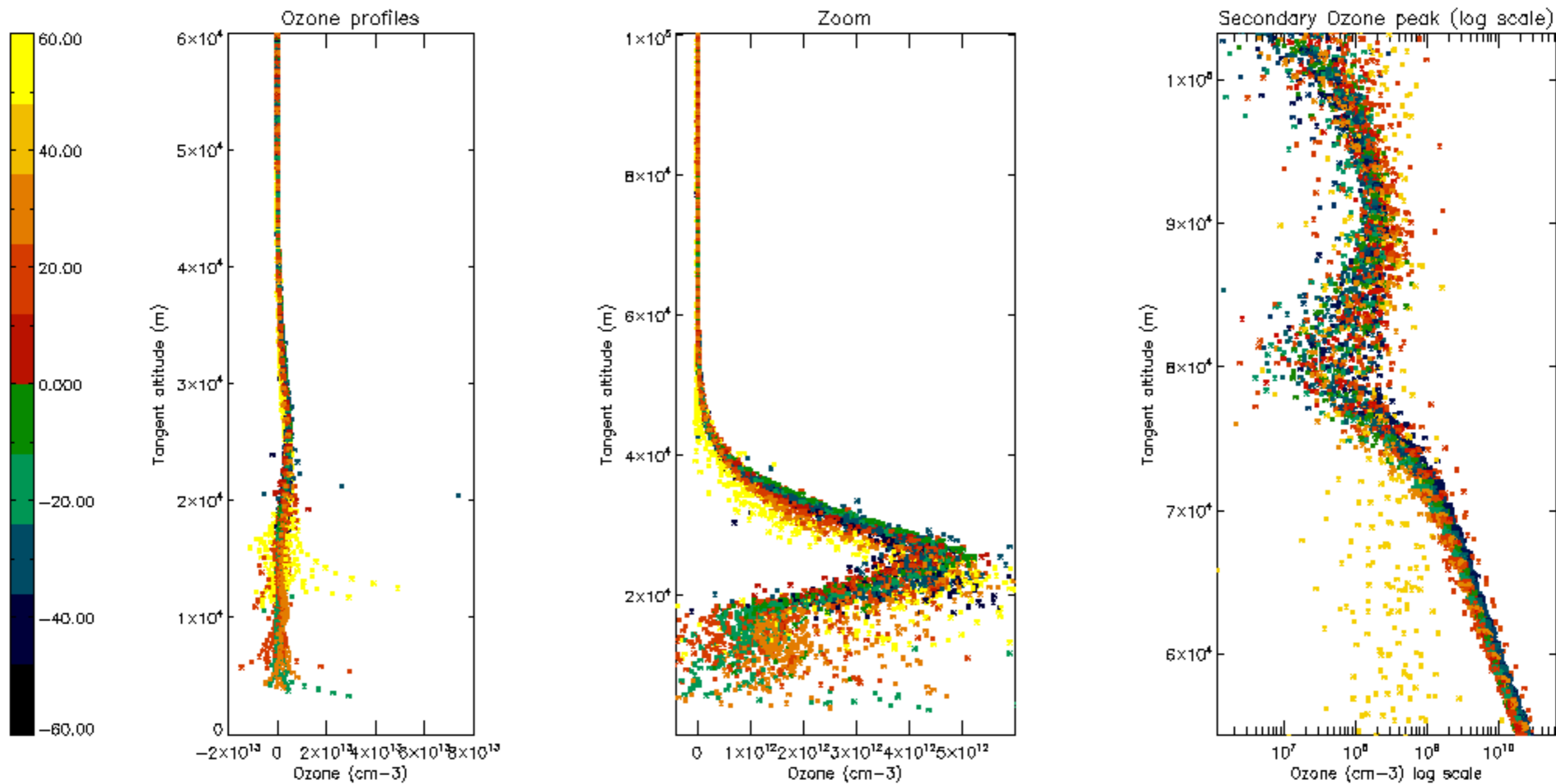
Percentage of star falling outside central band per profile

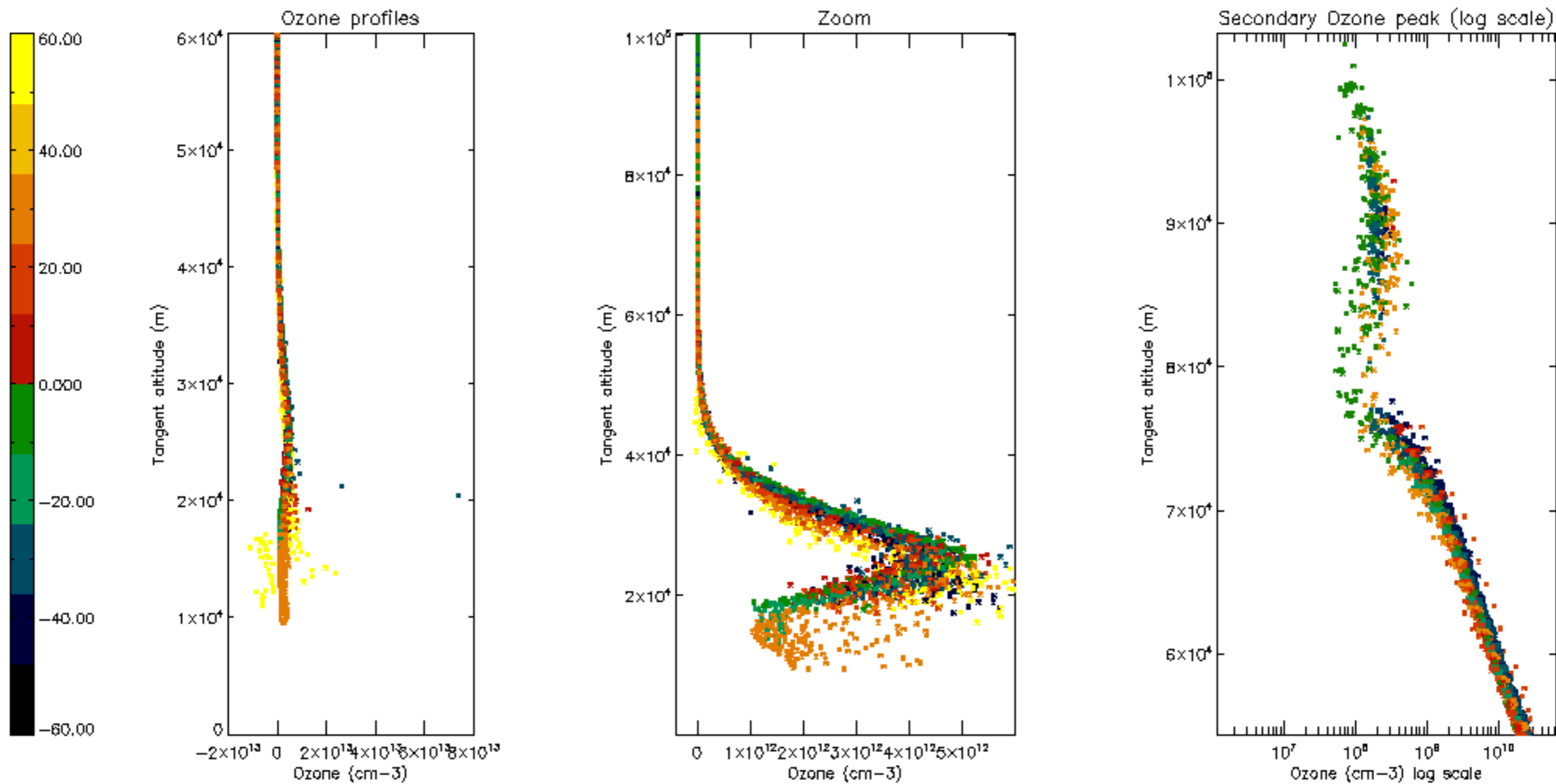


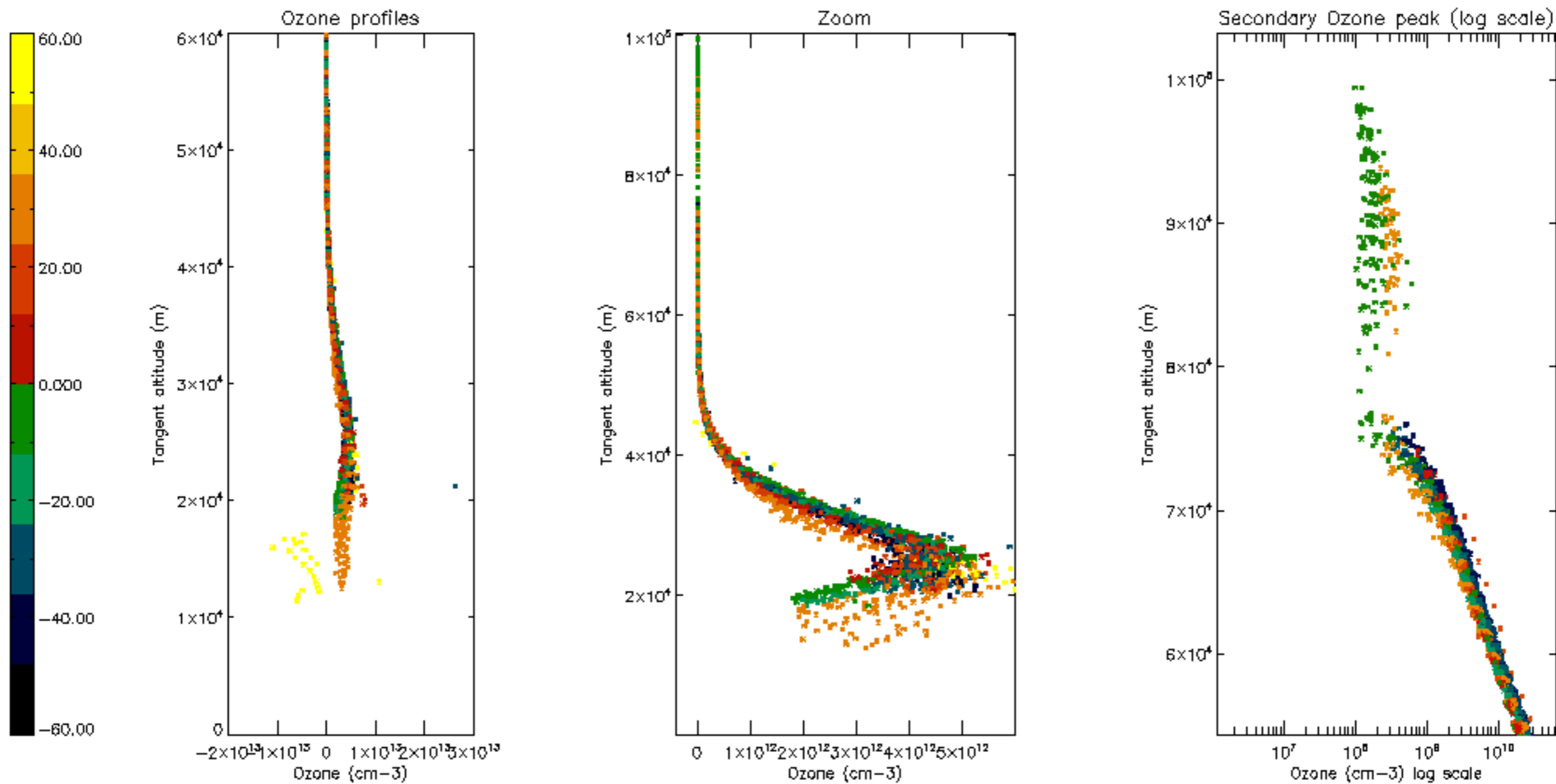
Percentage of saturation errors per profile

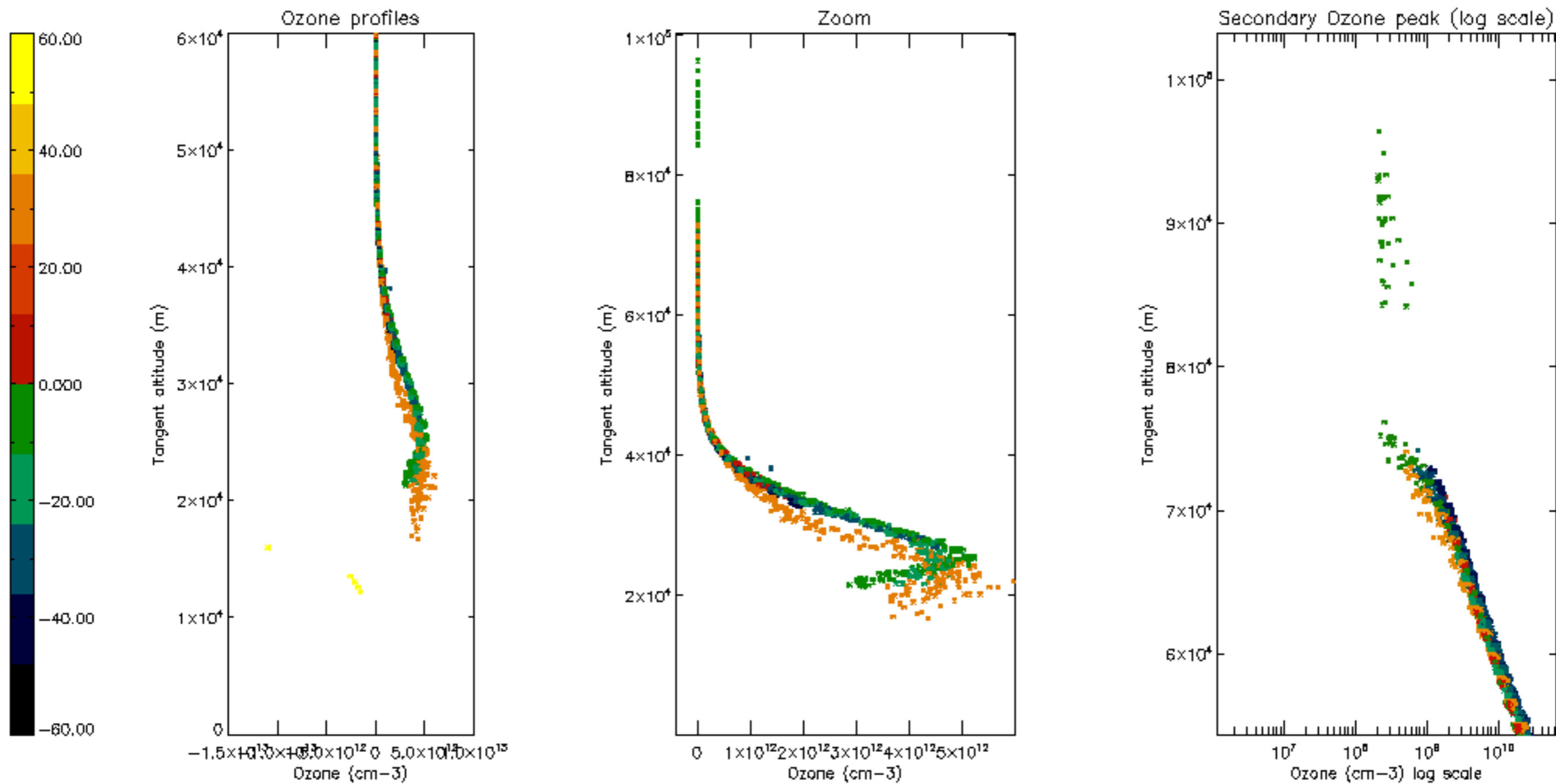


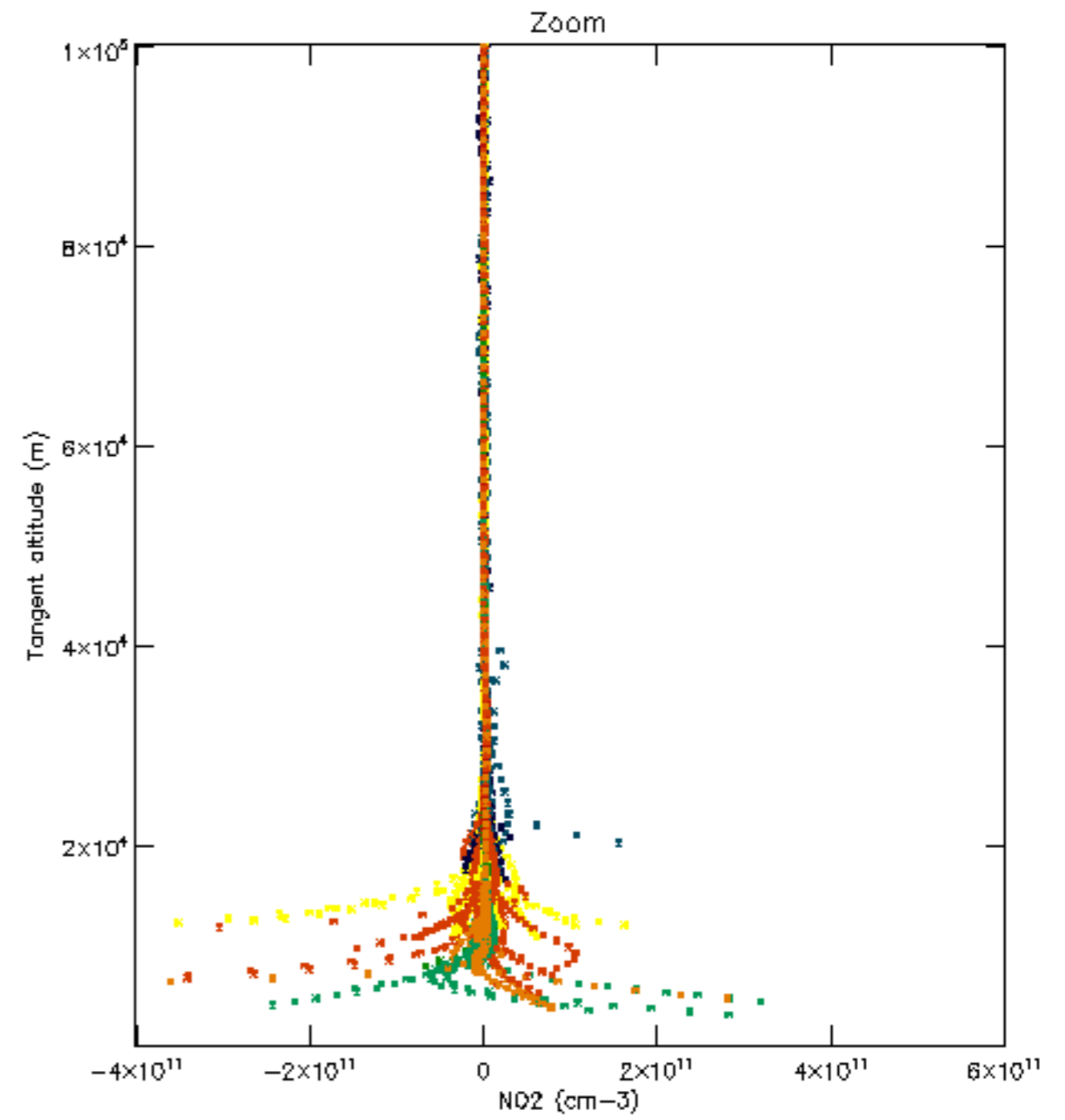
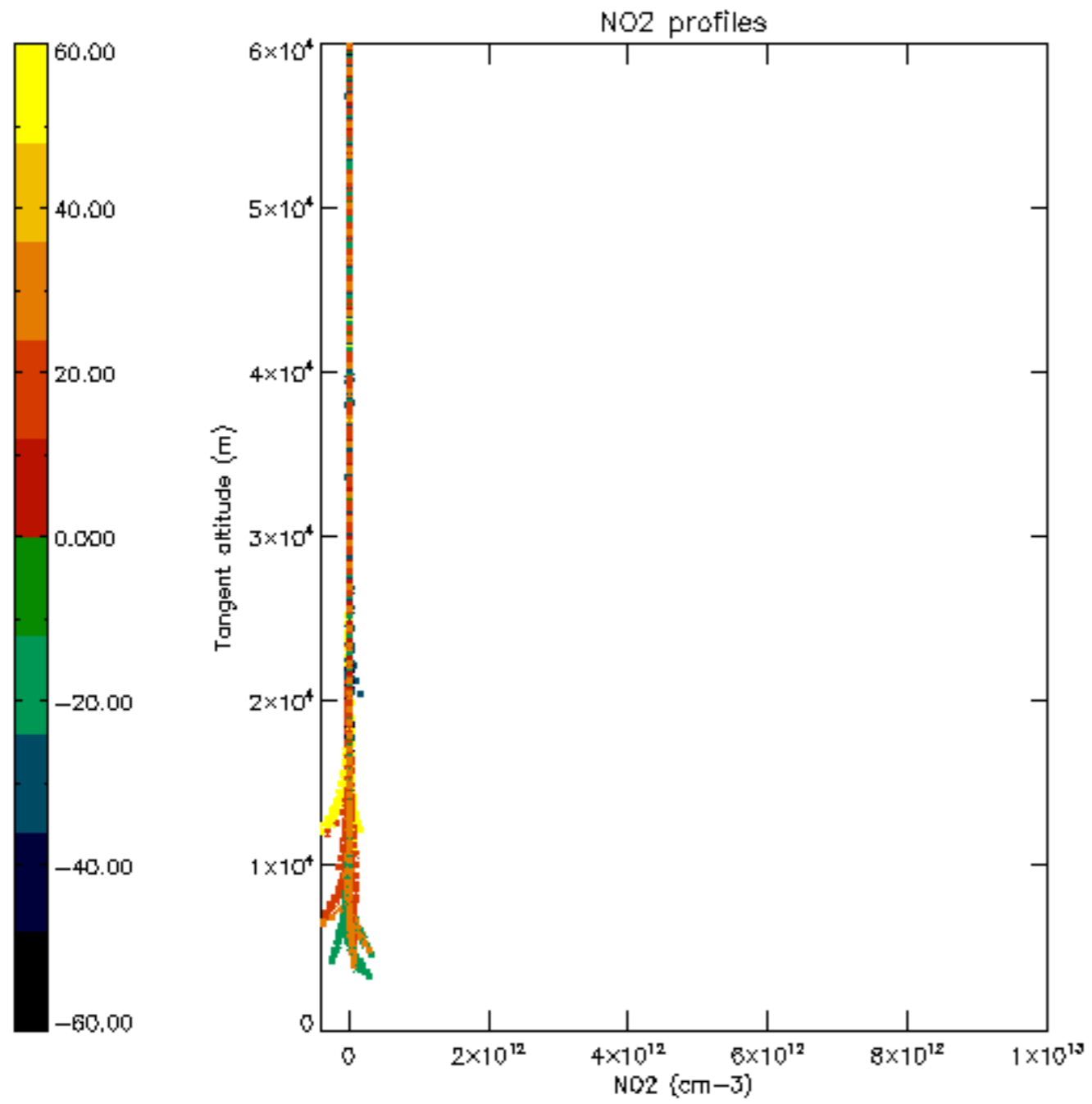


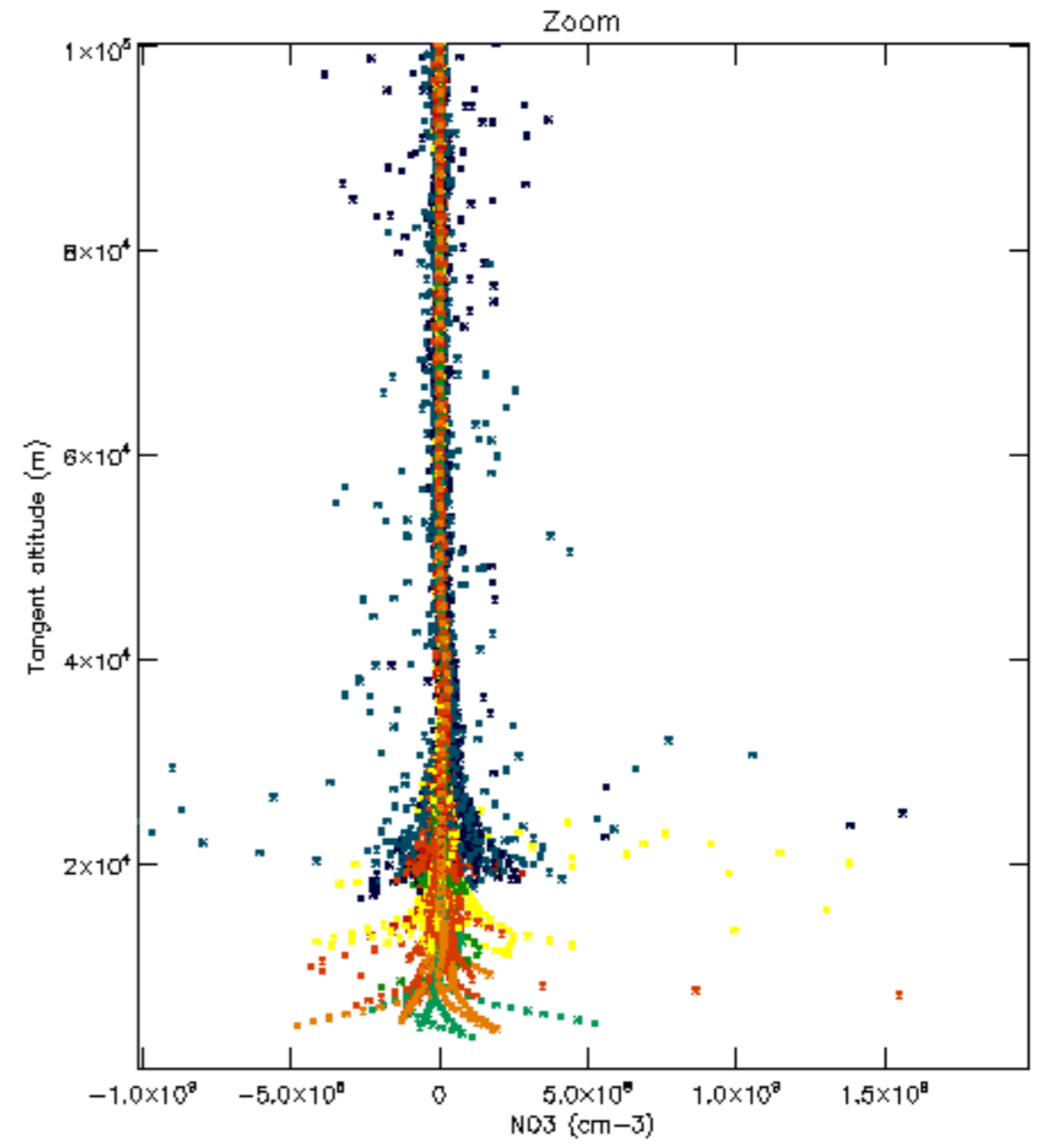
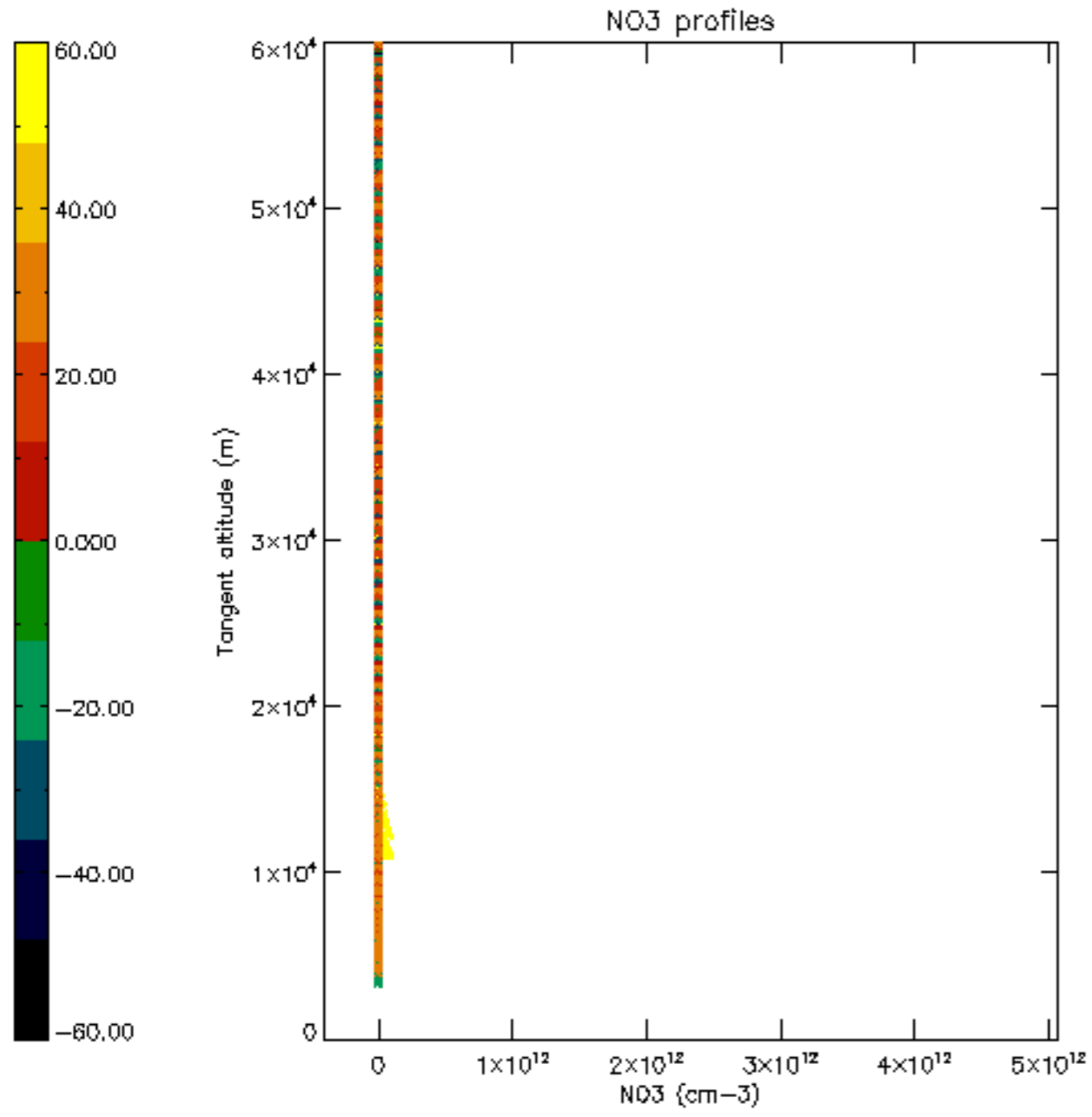


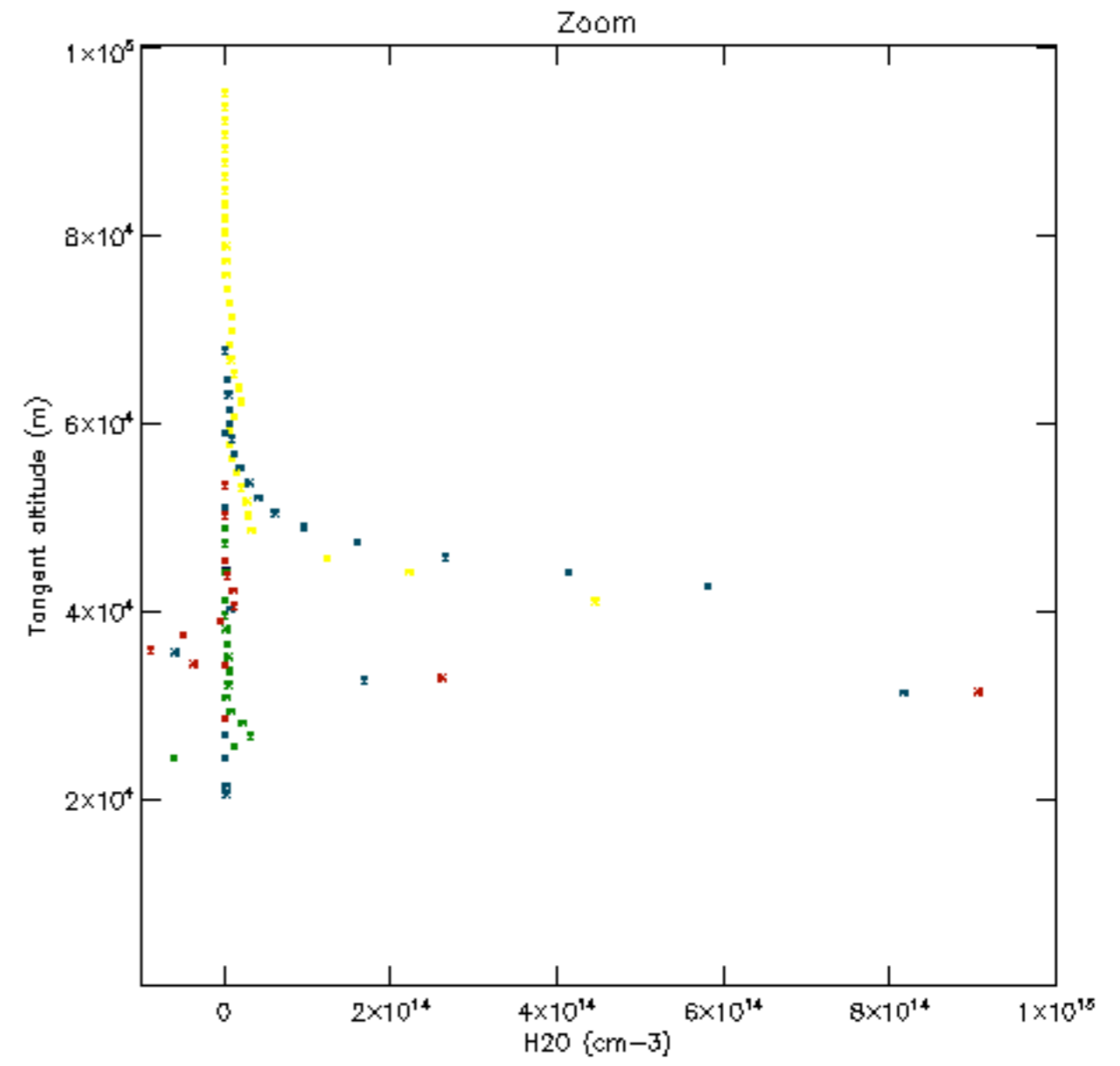
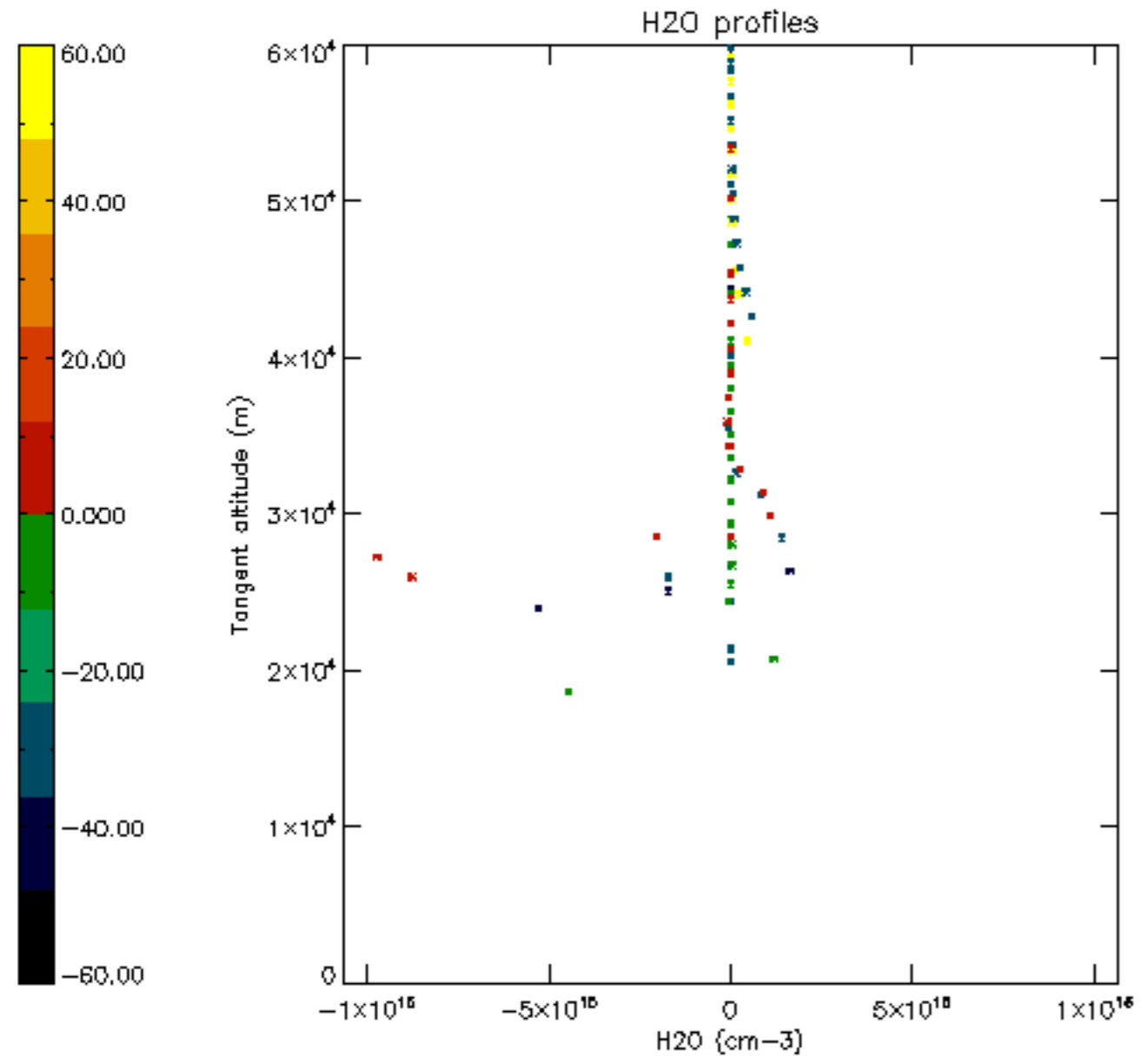


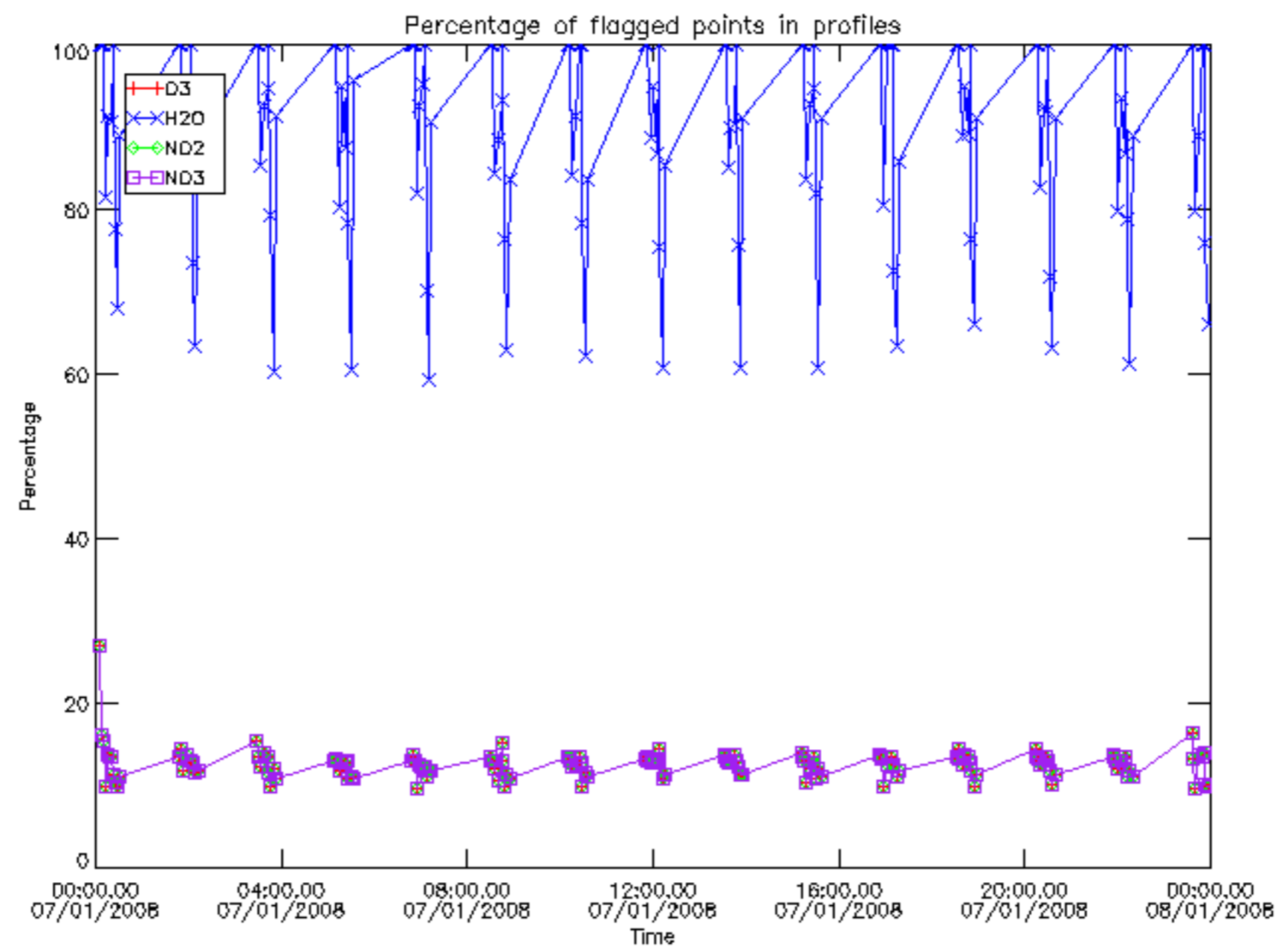






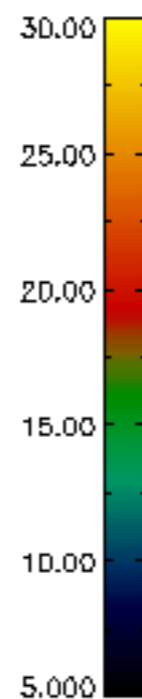
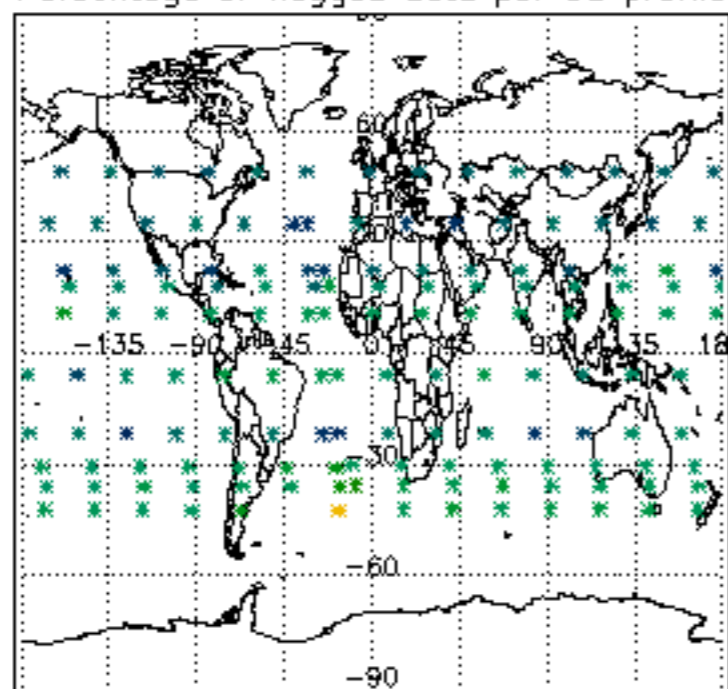




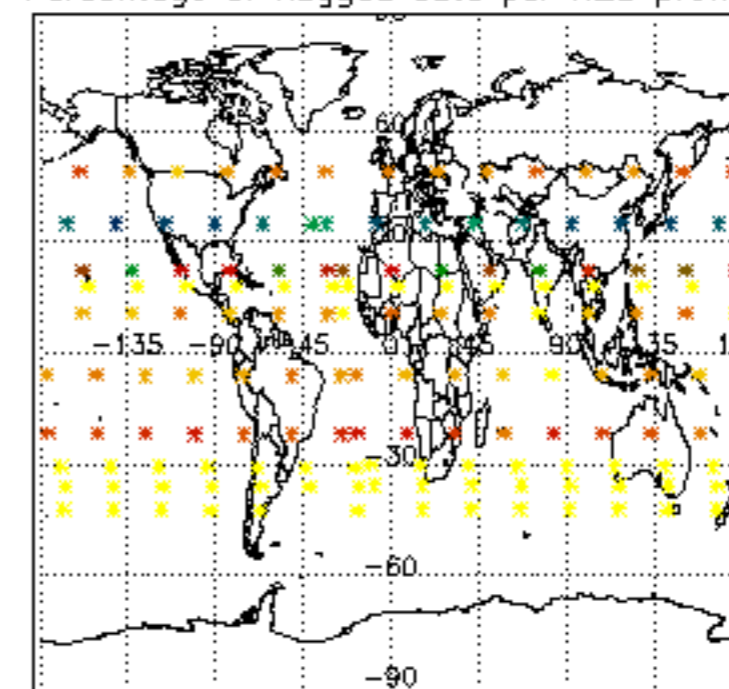




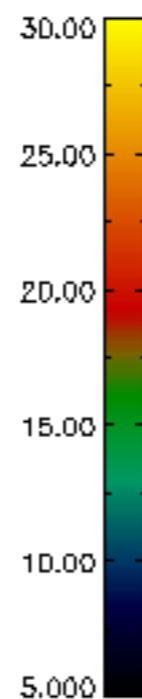
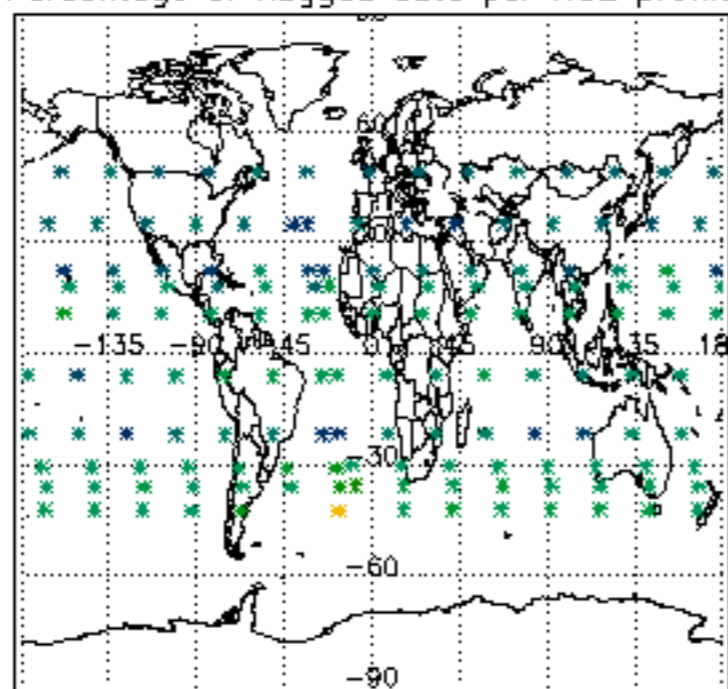
Percentage of flagged data per D3 profile



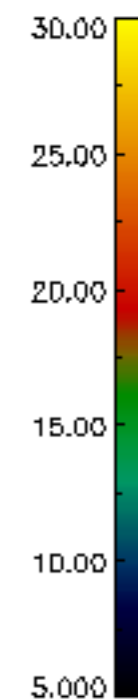
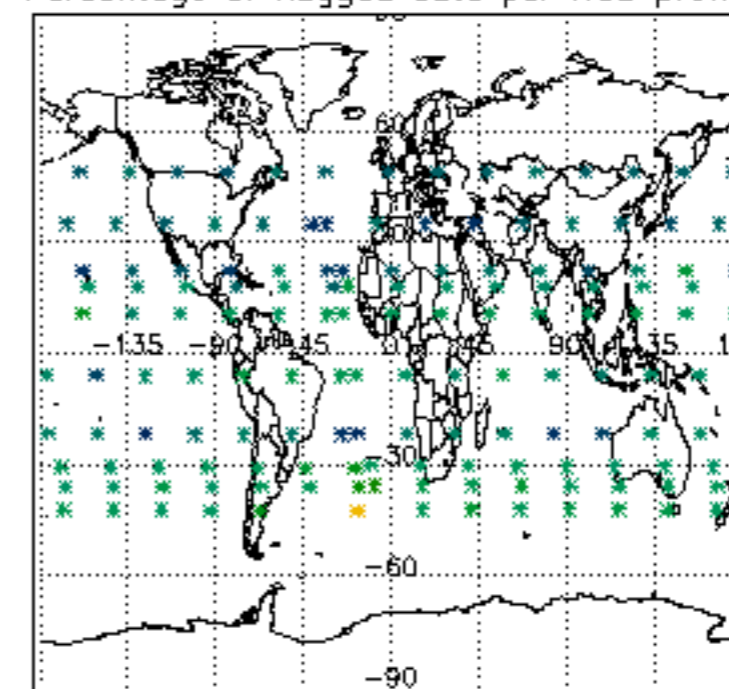
Percentage of flagged data per H2O profile

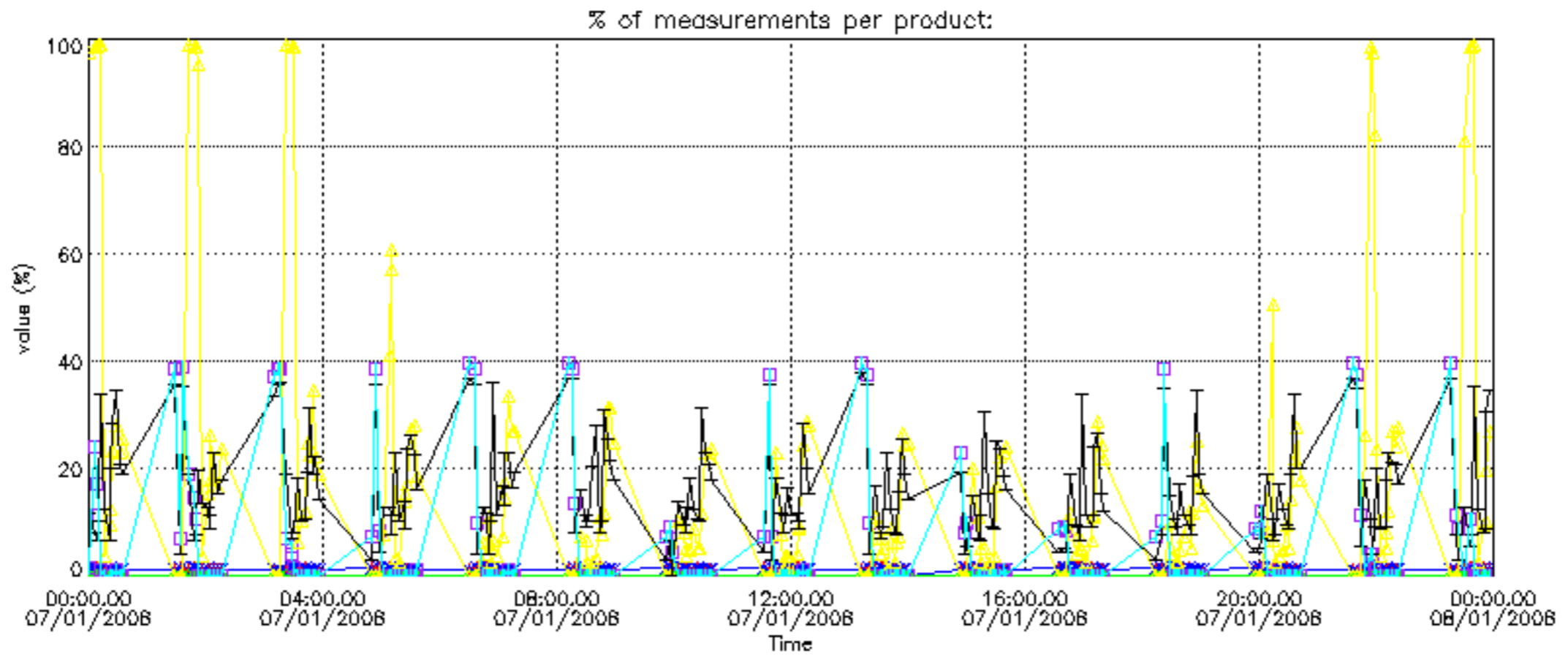


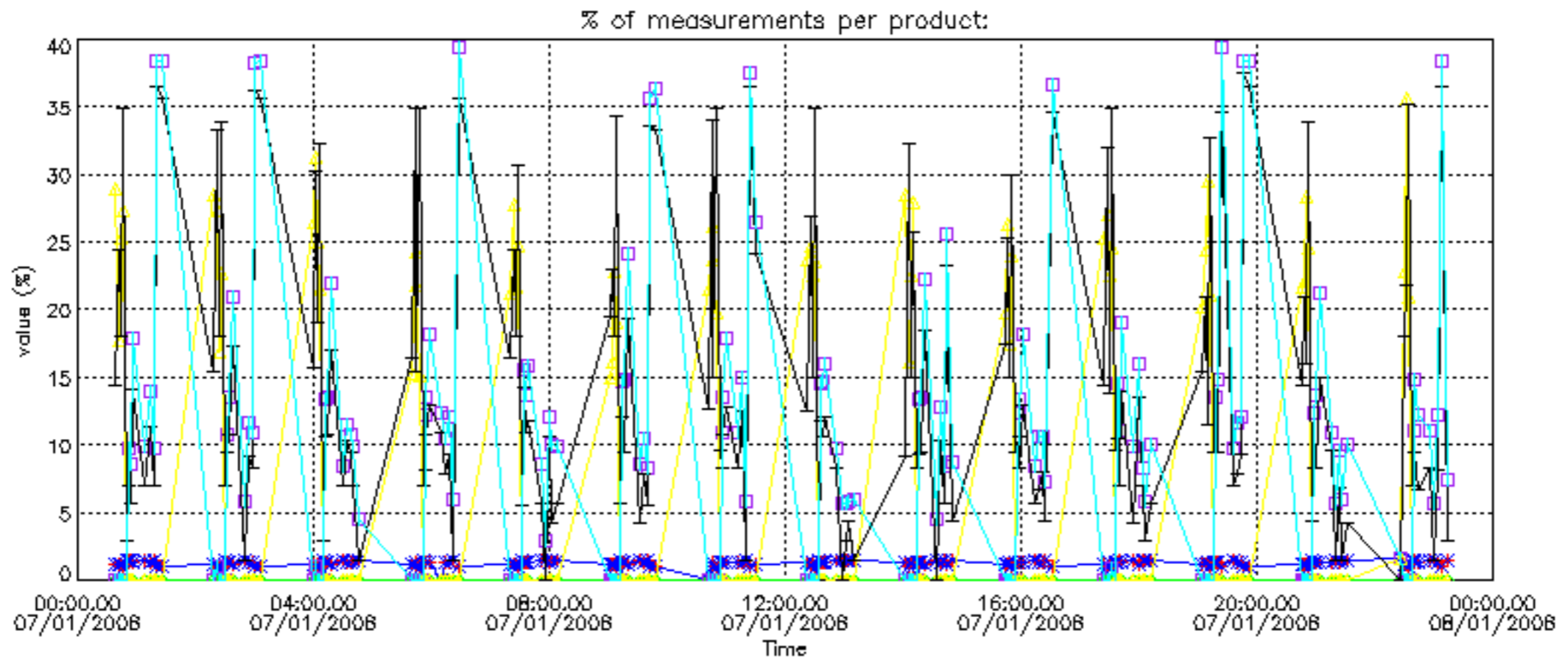
Percentage of flagged data per NO2 profile



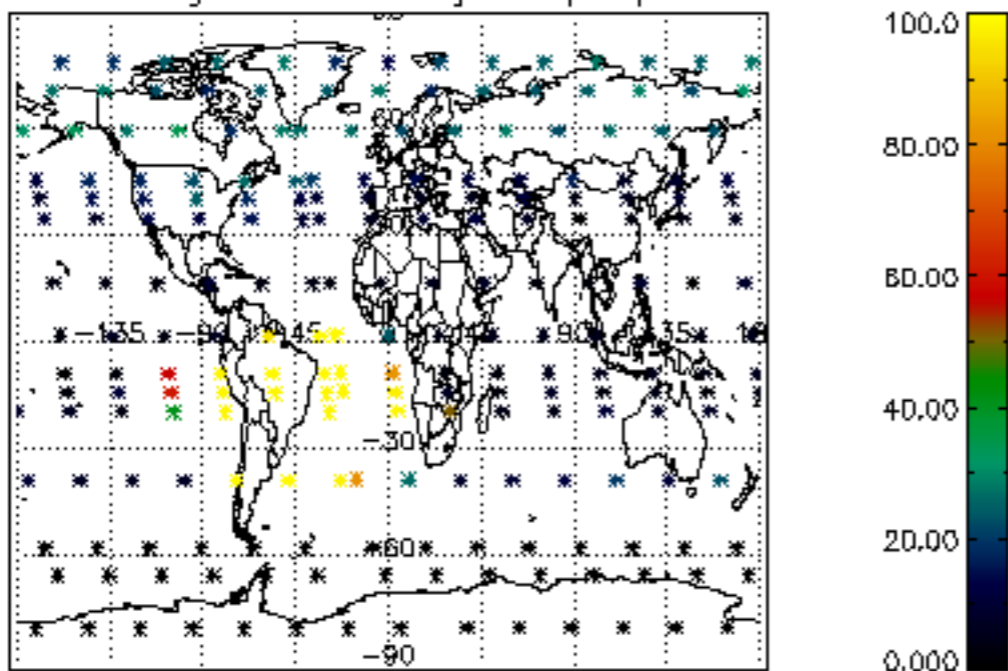
Percentage of flagged data per NO3 profile



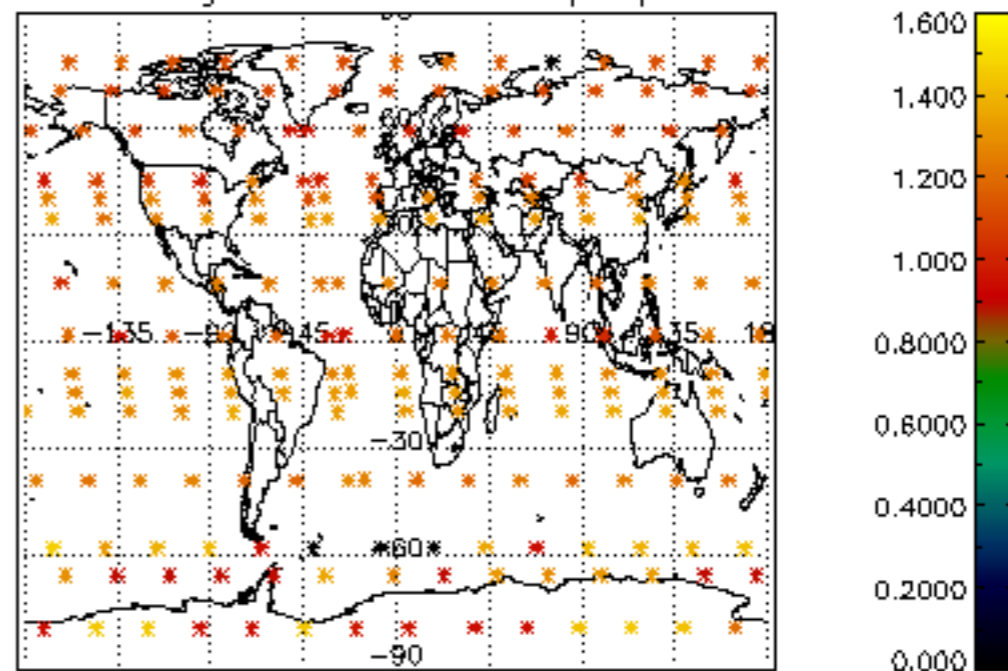




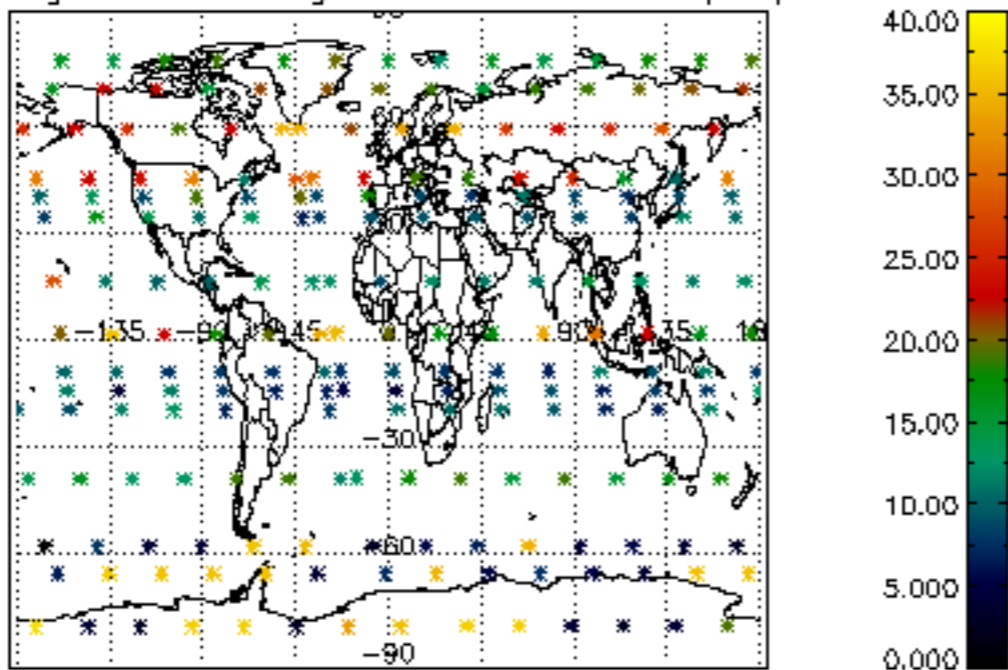
Percentage of cosmic ray hits per profile



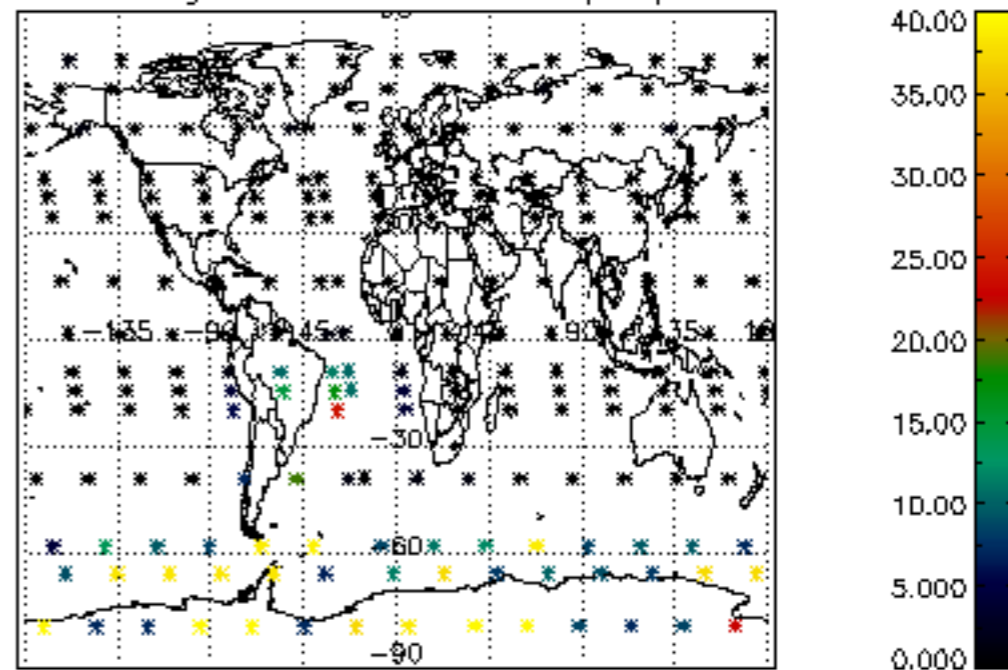
Percentage of datation errors per profile



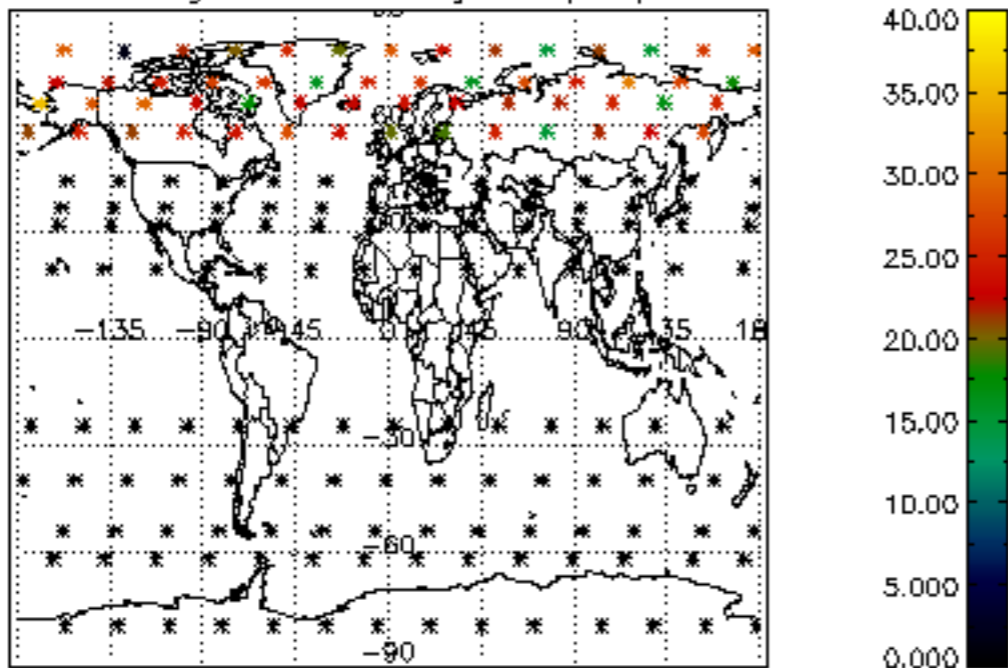
Percentage of star falling outside central band per profile



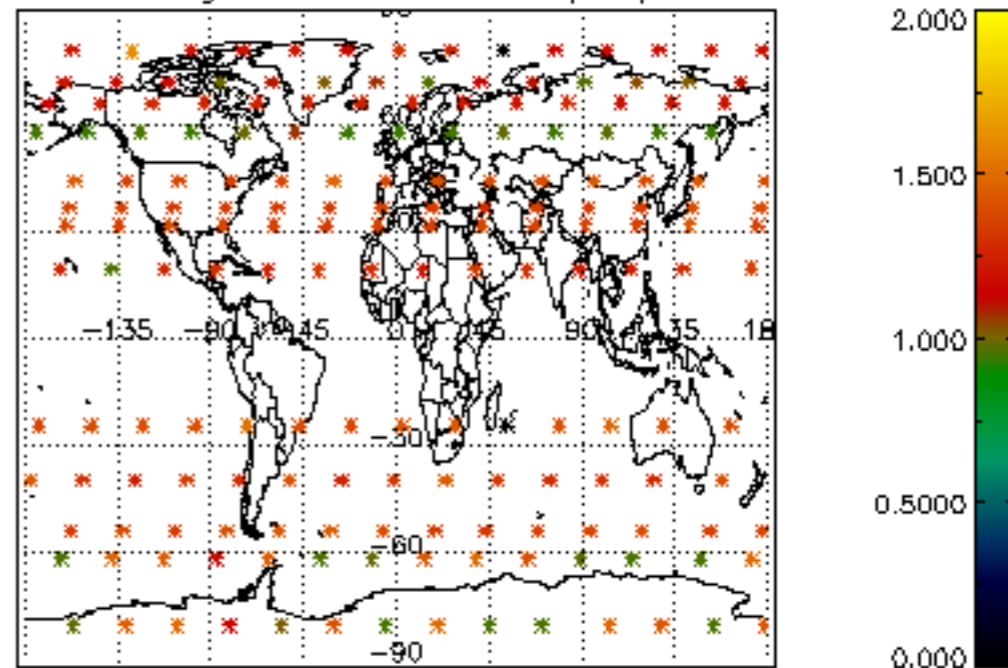
Percentage of saturation errors per profile



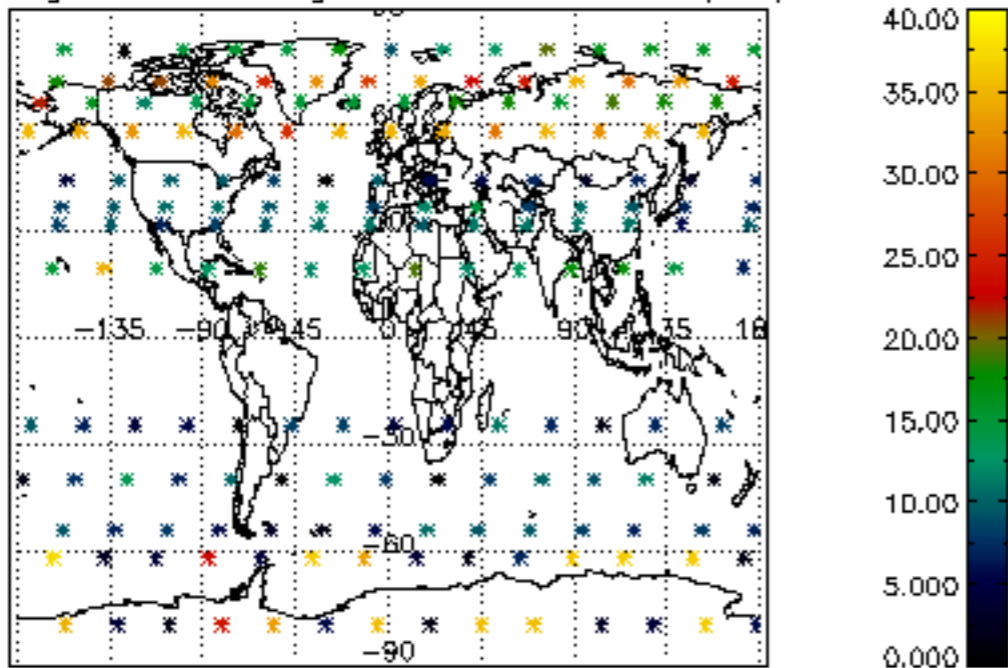
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

