

# 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	22APR2013 20:03:25
Data source version	GOMOS/6.01
Start time of products	27-05-2007 (27MAY2007 00:00:00)
Stop time of products	28-05-2007 (28MAY2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	303
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__2PRFIN20070527_000133_000000462058_00274_27382_3796.N1	27-MAY-2007 00:01:33	Straylight	46.000	25	35Lam Sco	1.6200	28000.	92	27382	No
2	GOM_NL__2PRFIN20070527_000330_000000462058_00274_27382_3797.N1	27-MAY-2007 00:03:30	Twi_and_stray	46.000	75	26Eps Sco	2.2910	4250.0	92	27382	No
3	GOM_NL__2PRFIN20070527_000537_000000442058_00274_27382_3798.N1	27-MAY-2007 00:05:37	Twi_and_stray	44.000	136	23Tau Sco	2.8220	30000.	88	27382	No
4	GOM_NL__2PRFIN20070527_000836_000000392058_00274_27382_3799.N1	27-MAY-2007 00:08:36	Bright	39.000	97	8Bet1Sco	2.5610	30000.	78	27382	No
5	GOM_NL__2PRFIN20070527_001203_000000372058_00274_27382_3800.N1	27-MAY-2007 00:12:03	Bright	36.500	104	27Bet Lib	2.6140	13100.	73	27382	No
6	GOM_NL__2PRFIN20070527_001341_000000422058_00274_27382_3801.N1	27-MAY-2007 00:13:41	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	27382	No
7	GOM_NL__2PRFIN20070527_001644_000000382058_00274_27382_3802.N1	27-MAY-2007 00:16:44	Bright	38.000	102	24Alp Ser	2.6000	4250.0	76	27382	No
8	GOM_NL__2PRFIN20070527_002233_000000372058_00274_27382_3803.N1	27-MAY-2007 00:22:33	Bright	36.500	83		2.3780	11000.	73	27382	No
9	GOM_NL__2PRFIN20070527_002544_000000352058_00274_27382_3804.N1	27-MAY-2007 00:25:44	Bright	35.000	180	27Gam Boo	3.0400	8000.0	70	27382	No
10	GOM_NL__2PRFIN20070527_003334_000000392058_00274_27382_3805.N1	27-MAY-2007 00:33:34	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	27382	No
11	GOM_NL__2PRFIN20070527_003554_000000342058_00274_27382_3806.N1	27-MAY-2007 00:35:54	Bright	34.000	60	7Bet UMi	2.0810	3950.0	68	27382	No
12	GOM_NL__2PRFIN20070527_004031_000000332058_00274_27382_3807.N1	27-MAY-2007 00:40:31	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	27382	No
13	GOM_NL__2PRFIN20070527_004839_000000372058_00274_27382_3808.N1	27-MAY-2007 00:48:39	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	27382	No
14	GOM_NL__2PRFIN20070527_005610_000000382058_00274_27382_3809.N1	27-MAY-2007 00:56:10	Bright	37.500	53	43Bet And	2.0480	3300.0	75	27382	No
15	GOM_NL__2PRFIN20070527_011213_000000502058_00274_27382_3810.N1	27-MAY-2007 01:12:13	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	27382	No
16	GOM_NL__2PRFIN20070527_011859_000000432058_00274_27382_3811.N1	27-MAY-2007 01:18:59	Dark	43.000	84	Alp Phe	2.3970	4500.0	86	27382	No
17	GOM_NL__2PRFIN20070527_012354_000000592058_00275_27383_3815.N1	27-MAY-2007 01:23:54	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	27383	No
18	GOM_NL__2PRFIN20070527_012539_000000452058_00275_27383_3816.N1	27-MAY-2007 01:25:39	Dark	45.000	31	Alp Gru	1.7340	15200.	90	27383	No
19	GOM_NL__2PRFIN20070527_013055_000000422058_00275_27383_3817.N1	27-MAY-2007 01:30:55	Dark	42.000	45	Alp Pav	1.9400	26000.	84	27383	No
20	GOM_NL__2PRFIN20070527_013729_000000412058_00275_27383_3818.N1	27-MAY-2007 01:37:29	Straylight	41.000	141	Bet Ara	2.8400	4600.0	82	27383	No
21	GOM_NL__2PRFIN20070527_014020_000000452058_00275_27383_3819.N1	27-MAY-2007 01:40:20	Straylight	45.000	40	The Sco	1.8590	7100.0	90	27383	No
22	GOM_NL__2PRFIN20070527_014210_000000492058_00275_27383_3820.N1	27-MAY-2007 01:42:10	Straylight	49.000	25	35Lam Sco	1.6200	28000.	98	27383	No
23	GOM_NL__2PRFIN20070527_014406_000000472058_00275_27383_3821.N1	27-MAY-2007 01:44:06	Twi_and_stray	46.500	75	26Eps Sco	2.2910	4250.0	93	27383	No
24	GOM_NL__2PRFIN20070527_014613_000000412058_00275_27383_3822.N1	27-MAY-2007 01:46:13	Twi_and_stray	41.000	136	23Tau Sco	2.8220	30000.	82	27383	No
25	GOM_NL__2PRFIN20070527_014912_000000392058_00275_27383_3823.N1	27-MAY-2007 01:49:12	Bright	39.000	97	8Bet1Sco	2.5610	30000.	78	27383	No
26	GOM_NL__2PRFIN20070527_015239_000000382058_00275_27383_3824.N1	27-MAY-2007 01:52:39	Bright	37.500	104	27Bet Lib	2.6140	13100.	75	27383	No
27	GOM_NL__2PRFIN20070527_015417_000000422058_00275_27383_3825.N1	27-MAY-2007 01:54:17	Bright	42.000	120	1Del Oph	2.7340	3200.0	84	27383	No
28	GOM_NL__2PRFIN20070527_015720_000000392058_00275_27383_3826.N1	27-MAY-2007 01:57:20	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	27383	No
29	GOM_NL__2PRFIN20070527_020309_000000372058_00275_27383_3827.N1	27-MAY-2007 02:03:09	Bright	36.500	83		2.3780	11000.	73	27383	No
30	GOM_NL__2PRFIN20070527_020620_000000352058_00275_27383_3828.N1	27-MAY-2007 02:06:20	Bright	34.500	180	27Gam Boo	3.0400	8000.0	69	27383	No
31	GOM_NL__2PRFIN20070527_021410_000000382058_00275_27383_3829.N1	27-MAY-2007 02:14:10	Bright	38.000	119	14Eta Dra	2.7270	4700.0	76	27383	No
32	GOM_NL__2PRFIN20070527_021629_000000352058_00275_27383_3830.N1	27-MAY-2007 02:16:29	Bright	34.500	60	7Bet UMi	2.0810	3950.0	69	27383	No
33	GOM_NL__2PRFIN20070527_022107_000000342058_00275_27383_3831.N1	27-MAY-2007 02:21:07	Bright	33.500	49	1Alp UMi	1.9900	6300.0	67	27383	No
34	GOM_NL__2PRFIN20070527_022915_000000382058_00275_27383_3832.N1	27-MAY-2007 02:29:15	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	27383	No
35	GOM_NL__2PRFIN20070527_023646_000000402058_00275_27383_3833.N1	27-MAY-2007 02:36:46	Bright	39.500	53	43Bet And	2.0480	3300.0	79	27383	No
36	GOM_NL__2PRFIN20070527_025250_000000482058_00275_27383_3834.N1	27-MAY-2007 02:52:50	Dark	48.000	52	16Bet Cet	2.0370	4500.0	96	27383	No
37	GOM_NL__2PRFIN20070527_025935_000000452058_00275_27383_3835.N1	27-MAY-2007 02:59:35	Dark	45.000	84	Alp Phe	2.3970	4500.0	90	27383	No
38	GOM_NL__2PRFIN20070527_030431_000000462058_00276_27384_3831.N1	27-MAY-2007 03:04:31	Dark	46.000	63	Bet Gru	2.1500	2800.0	92	27384	No
39	GOM_NL__2PRFIN20070527_030616_000000462058_00276_27384_3832.N1	27-MAY-2007 03:06:16	Dark	46.000	31	Alp Gru	1.7340	15200.	92	27384	No
40	GOM_NL__2PRFIN20070527_031131_000000432058_00276_27384_3833.N1	27-MAY-2007 03:11:31	Dark	42.500	45	Alp Pav	1.9400	26000.	85	27384	No
41	GOM_NL__2PRFIN20070527_031806_000000442058_00276_27384_3834.N1	27-MAY-2007 03:18:06	Straylight	43.500	141	Bet Ara	2.8400	4600.0	87	27384	No
42	GOM_NL__2PRFIN20070527_032056_000000452058_00276_27384_3835.N1	27-MAY-2007 03:20:56	Straylight	45.000	40	The Sco	1.8590	7100.0	90	27384	No







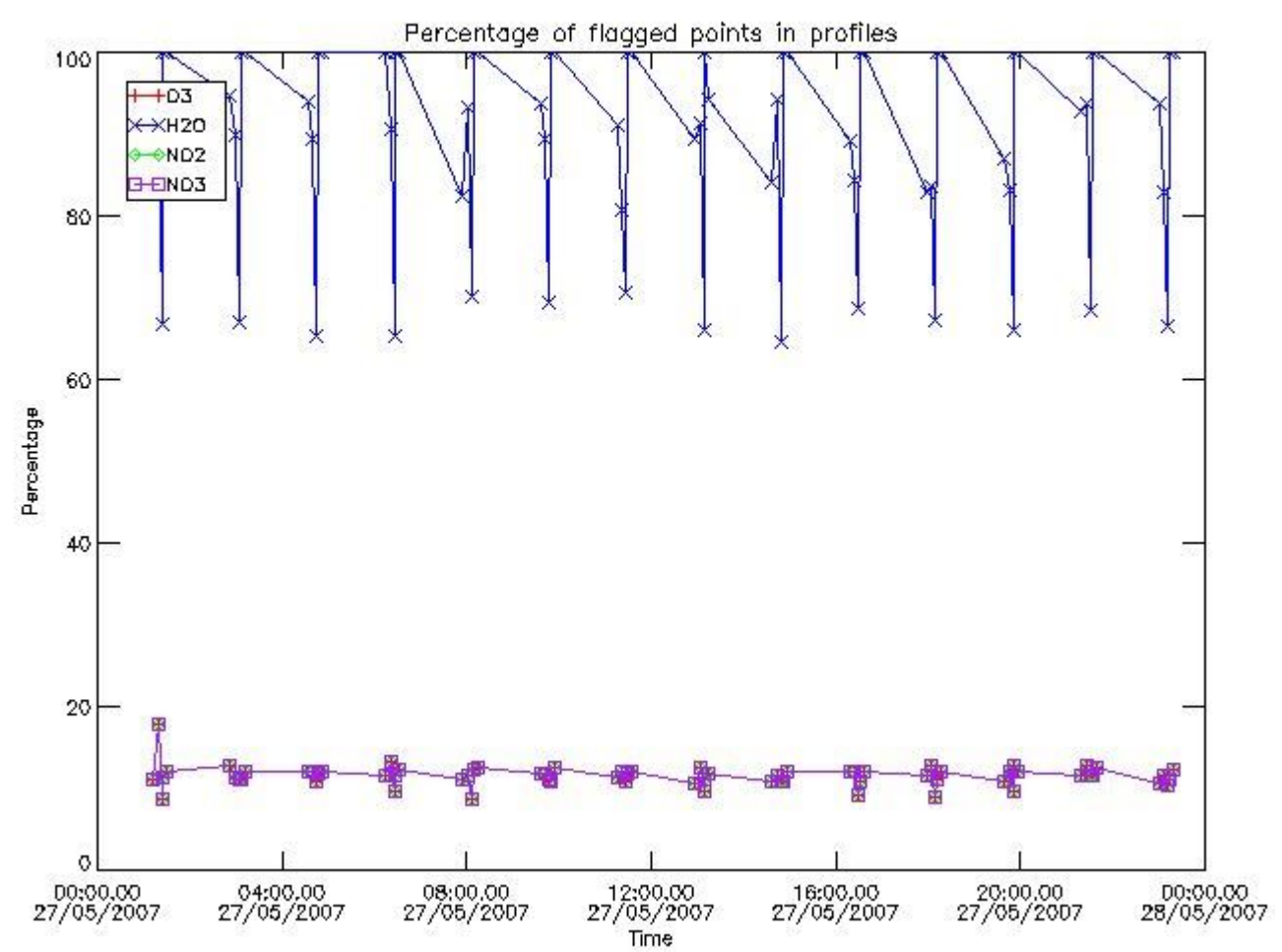


279	GOM_NL__2PRFIN20070527_220128_000000412058_00287_27395_4017.N1	27-MAY-2007 22:01:28	Bright	41.000	120	1Del Oph	2.7340	3200.0	82	27395	No
280	GOM_NL__2PRFIN20070527_220430_000000382058_00287_27395_4018.N1	27-MAY-2007 22:04:30	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	27395	No
281	GOM_NL__2PRFIN20070527_221020_000000522058_00287_27395_4019.N1	27-MAY-2007 22:10:20	Bright	52.000	83		2.3780	11000.	104	27395	No
282	GOM_NL__2PRFIN20070527_221331_000000342058_00287_27395_4020.N1	27-MAY-2007 22:13:31	Bright	34.000	180	27Gam Boo	3.0400	8000.0	68	27395	No
283	GOM_NL__2PRFIN20070527_222117_000000402058_00287_27395_4021.N1	27-MAY-2007 22:21:17	Bright	39.500	119	14Eta Dra	2.7270	4700.0	79	27395	No
284	GOM_NL__2PRFIN20070527_222340_000000362058_00287_27395_4022.N1	27-MAY-2007 22:23:40	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	27395	No
285	GOM_NL__2PRFIN20070527_222818_000000352058_00287_27395_4023.N1	27-MAY-2007 22:28:18	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	27395	No
286	GOM_NL__2PRFIN20070527_223626_000000372058_00287_27395_4024.N1	27-MAY-2007 22:36:26	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	27395	No
287	GOM_NL__2PRFIN20070527_224359_000000392058_00287_27395_4025.N1	27-MAY-2007 22:43:59	Bright	39.000	53	43Bet And	2.0480	3300.0	78	27395	No
288	GOM_NL__2PRFIN20070527_230007_000000492058_00287_27395_4026.N1	27-MAY-2007 23:00:07	Dark	48.500	52	16Bet Cet	2.0370	4500.0	97	27395	No
289	GOM_NL__2PRFIN20070527_230652_000000452058_00287_27395_4027.N1	27-MAY-2007 23:06:52	Dark	44.500	84	Alp Phe	2.3970	4500.0	89	27395	No
290	GOM_NL__2PRFIN20070527_231151_000000592058_00288_27396_4021.N1	27-MAY-2007 23:11:51	Dark	58.500	63	Bet Gru	2.1500	2800.0	117	27396	No
291	GOM_NL__2PRFIN20070527_231338_000000462058_00288_27396_4022.N1	27-MAY-2007 23:13:38	Dark	45.500	31	Alp Gru	1.7340	15200.	91	27396	No
292	GOM_NL__2PRFIN20070527_231851_000000422058_00288_27396_4023.N1	27-MAY-2007 23:18:51	Dark	41.500	45	Alp Pav	1.9400	26000.	83	27396	No
293	GOM_NL__2PRFIN20070527_232522_000000442058_00288_27396_4024.N1	27-MAY-2007 23:25:22	Straylight	43.500	141	Bet Ara	2.8400	4600.0	87	27396	No
294	GOM_NL__2PRFIN20070527_232813_000000472058_00288_27396_4025.N1	27-MAY-2007 23:28:13	Straylight	47.000	40	The Sco	1.8590	7100.0	94	27396	No
295	GOM_NL__2PRFIN20070527_233003_000000482058_00288_27396_4026.N1	27-MAY-2007 23:30:03	Straylight	48.000	25	35Lam Sco	1.6200	28000.	96	27396	No
296	GOM_NL__2PRFIN20070527_233157_000000452058_00288_27396_4027.N1	27-MAY-2007 23:31:57	Tw_i_and_stray	45.000	75	26Eps Sco	2.2910	4250.0	90	27396	No
297	GOM_NL__2PRFIN20070527_233404_000000412058_00288_27396_4028.N1	27-MAY-2007 23:34:04	Tw_i_and_stray	40.500	136	23Tau Sco	2.8220	30000.	81	27396	No
298	GOM_NL__2PRFIN20070527_233701_000000402058_00288_27396_4029.N1	27-MAY-2007 23:37:01	Bright	39.500	97	8Bet1Sco	2.5610	30000.	79	27396	No
299	GOM_NL__2PRFIN20070527_234027_000000362058_00288_27396_4030.N1	27-MAY-2007 23:40:27	Bright	36.000	104	27Bet Lib	2.6140	13100.	72	27396	No
300	GOM_NL__2PRFIN20070527_234203_000000412058_00288_27396_4031.N1	27-MAY-2007 23:42:03	Bright	41.000	120	1Del Oph	2.7340	3200.0	82	27396	No
301	GOM_NL__2PRFIN20070527_234506_000000382058_00288_27396_4032.N1	27-MAY-2007 23:45:06	Bright	38.000	102	24Alp Ser	2.6000	4250.0	76	27396	No
302	GOM_NL__2PRFIN20070527_235056_000000522058_00288_27396_4033.N1	27-MAY-2007 23:50:56	Bright	52.000	83		2.3780	11000.	104	27396	No
303	GOM_NL__2PRFIN20070527_235407_000000362058_00288_27396_4034.N1	27-MAY-2007 23:54:07	Bright	35.500	180	27Gam Boo	3.0400	8000.0	71	27396	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.

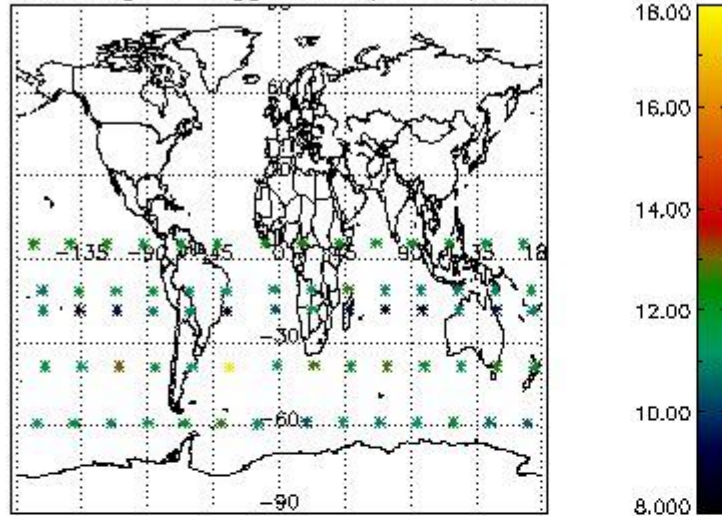
#### 3.1 Plot quality information per product (time dependant)



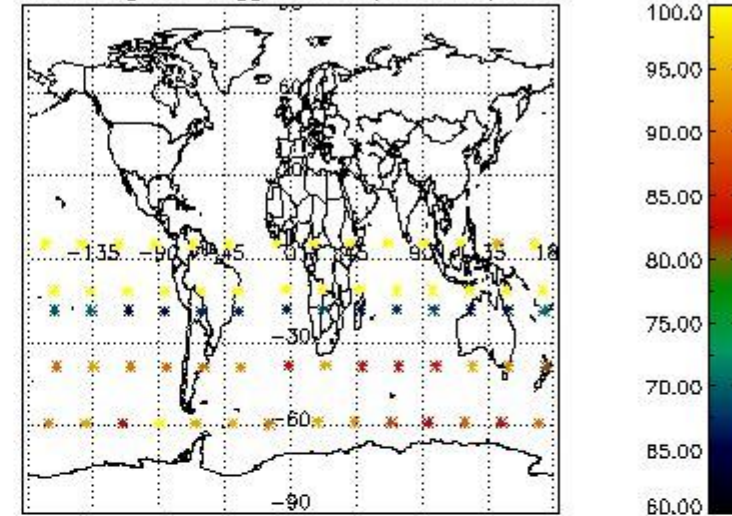
3.2 Plot quality information per product (world map)



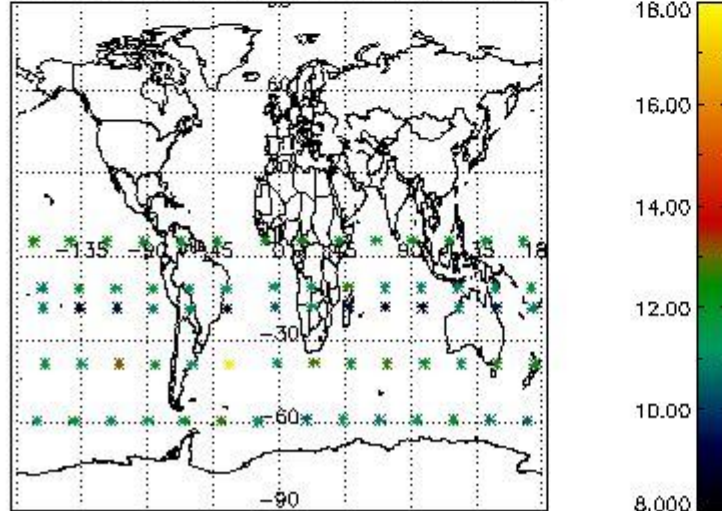
Percentage of flagged data per O3 profile



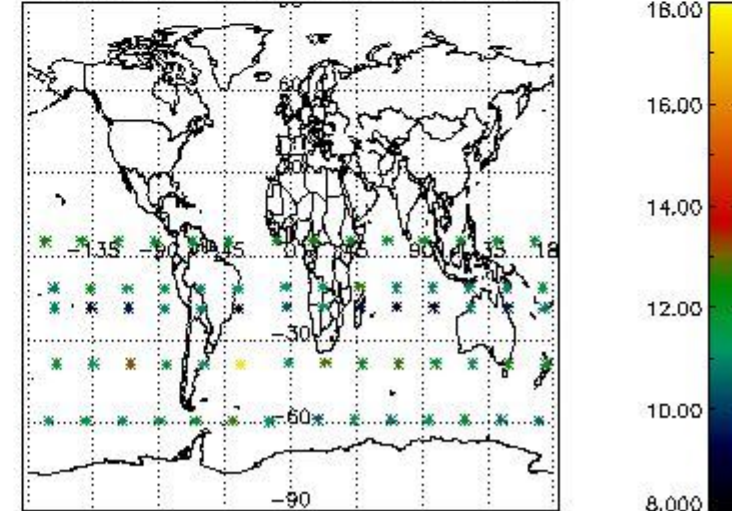
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

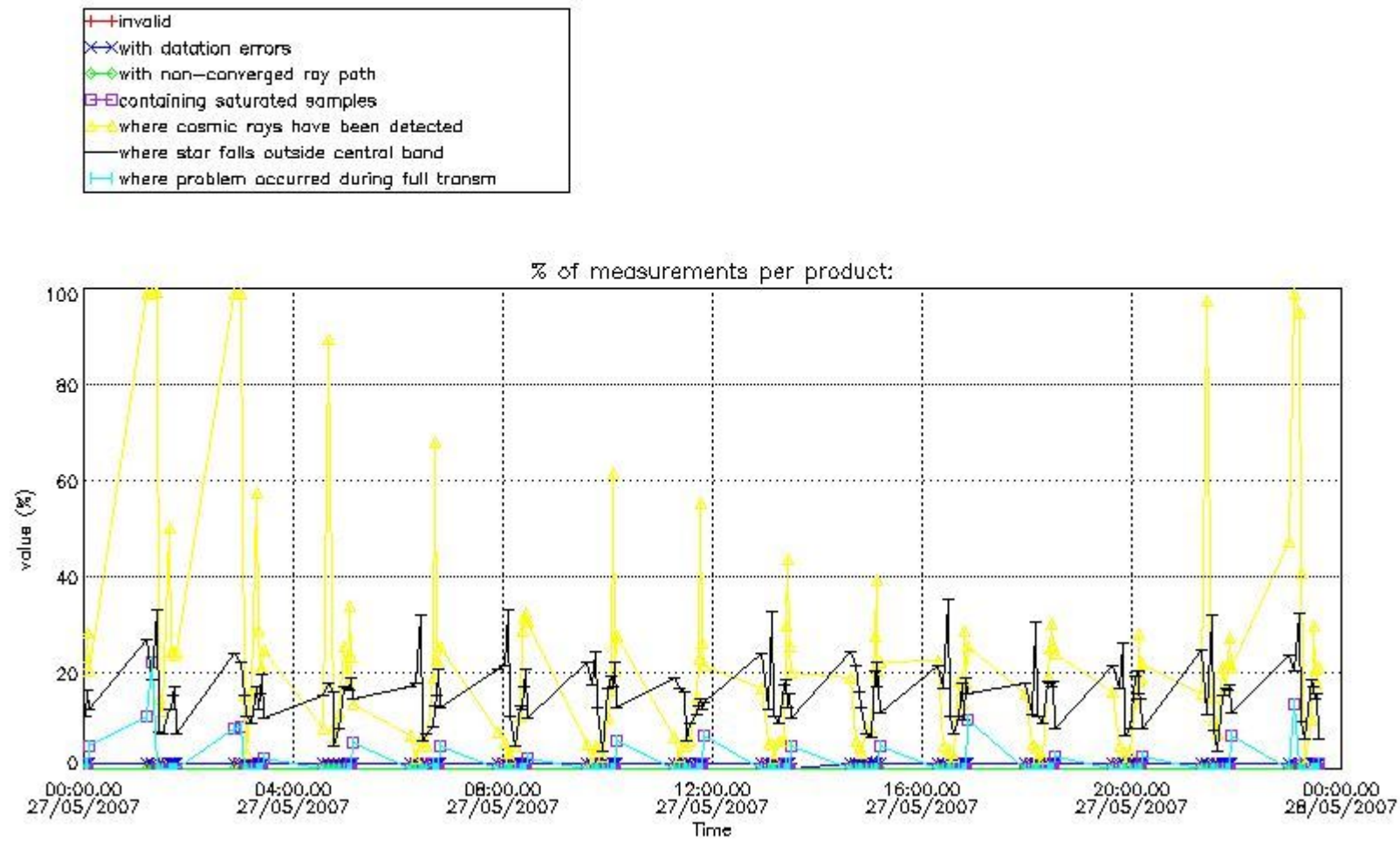


#### 4. Level 1 quality information per product

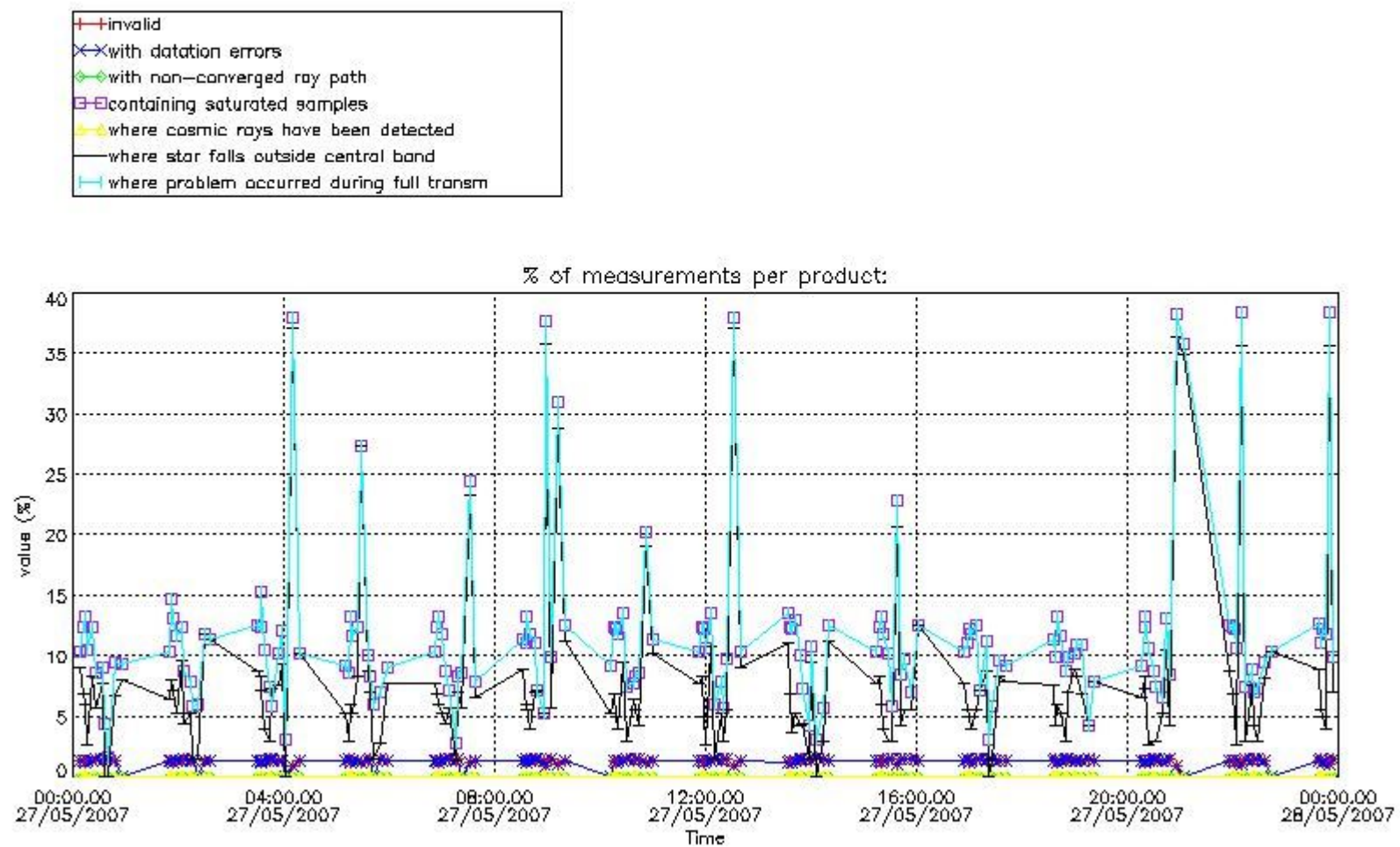
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



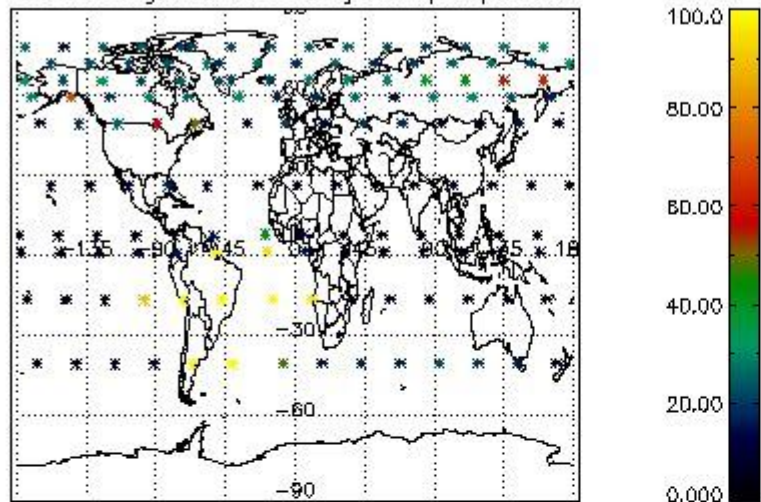
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



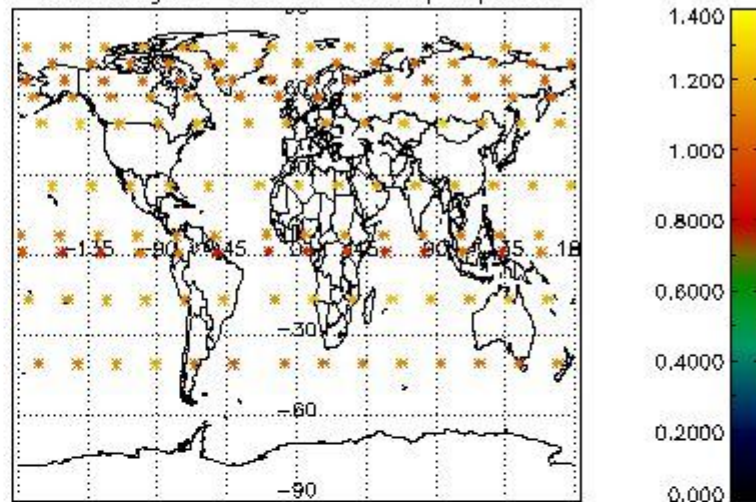
4.2 Plot quality information per product coming from level 1b processing (world map)

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

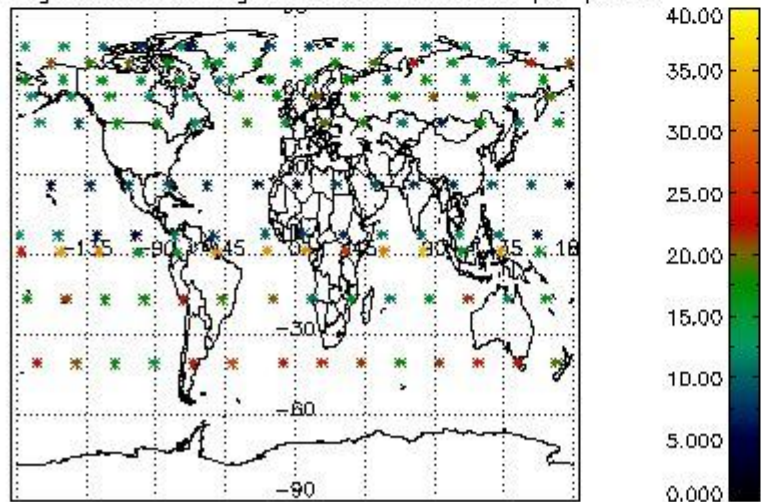
Percentage of cosmic ray hits per profile



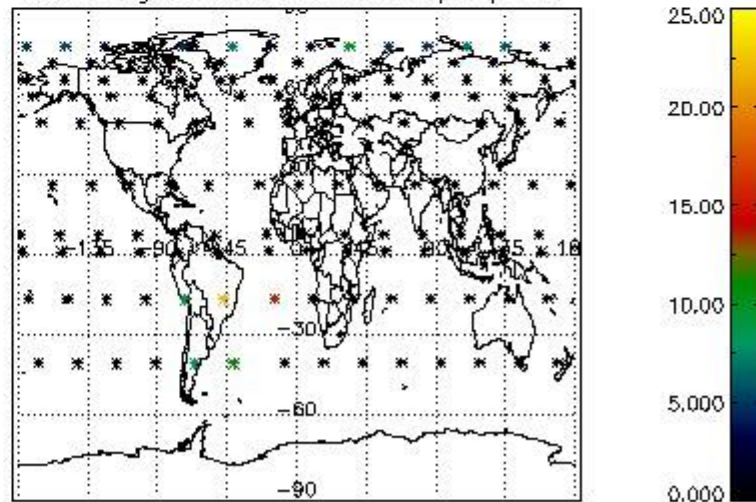
Percentage of datation errors per profile



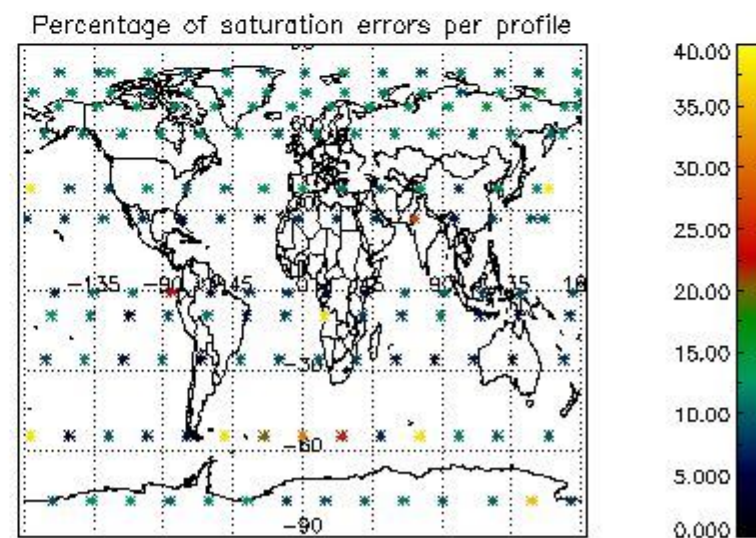
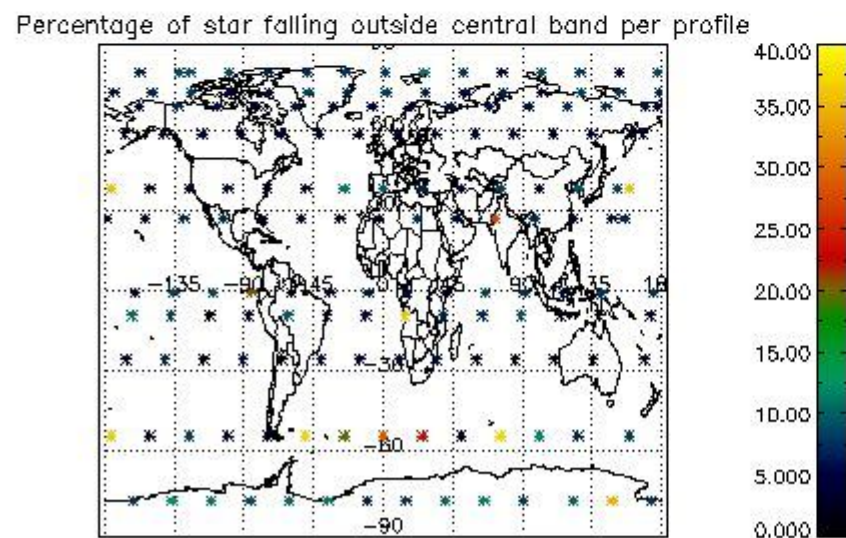
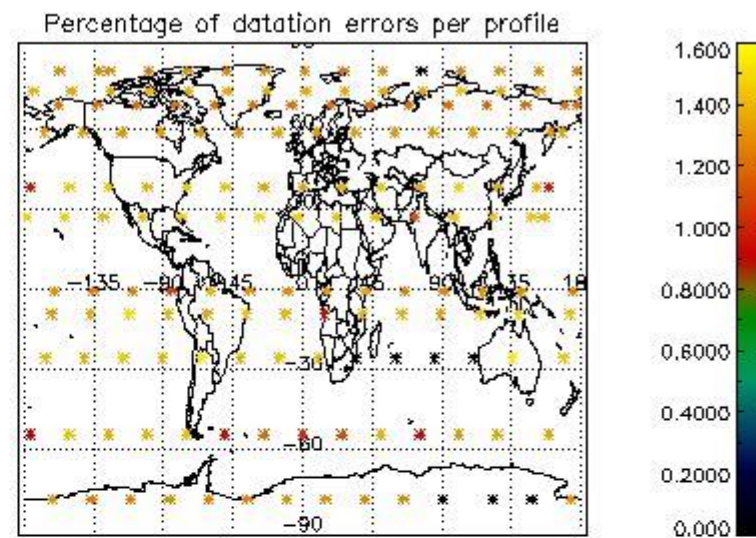
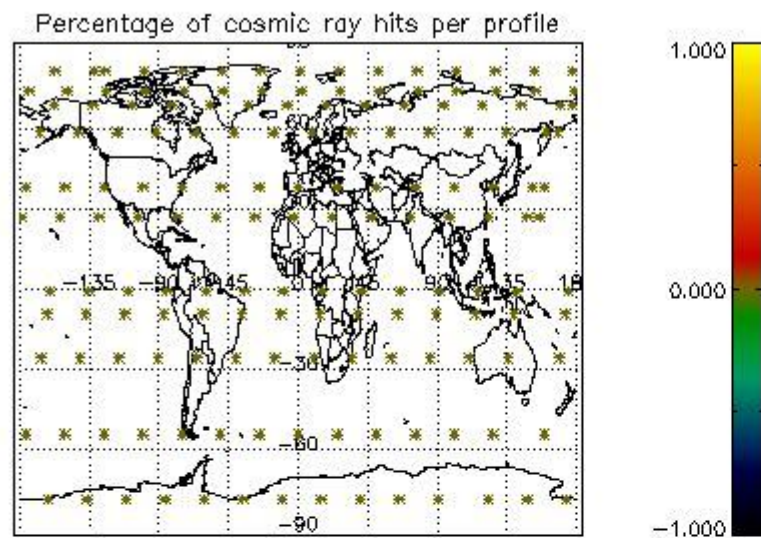
Percentage of star falling outside central band per profile



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

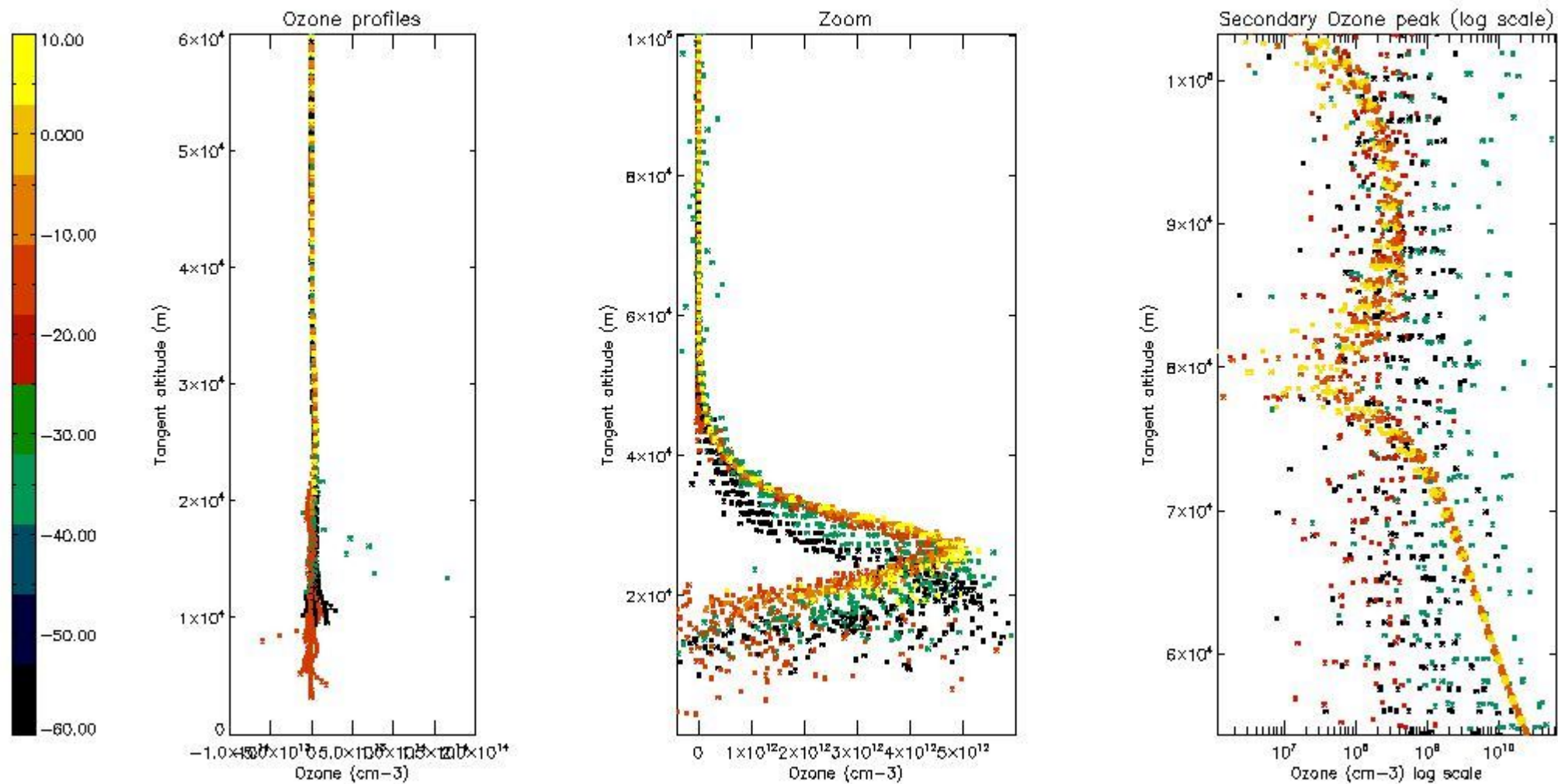
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	26
STD < 20	11

STD < 10	7
STD < 5	5

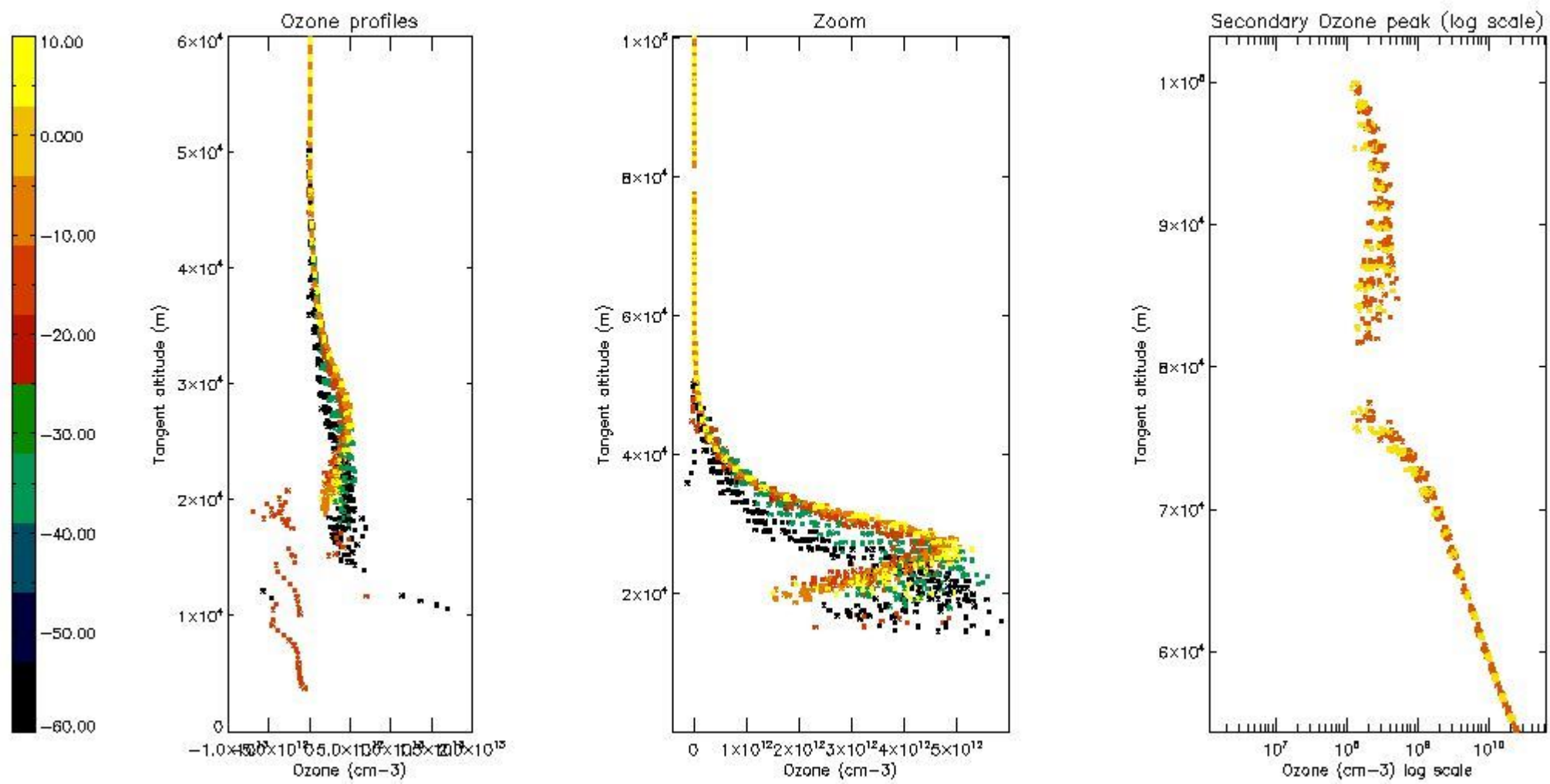
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



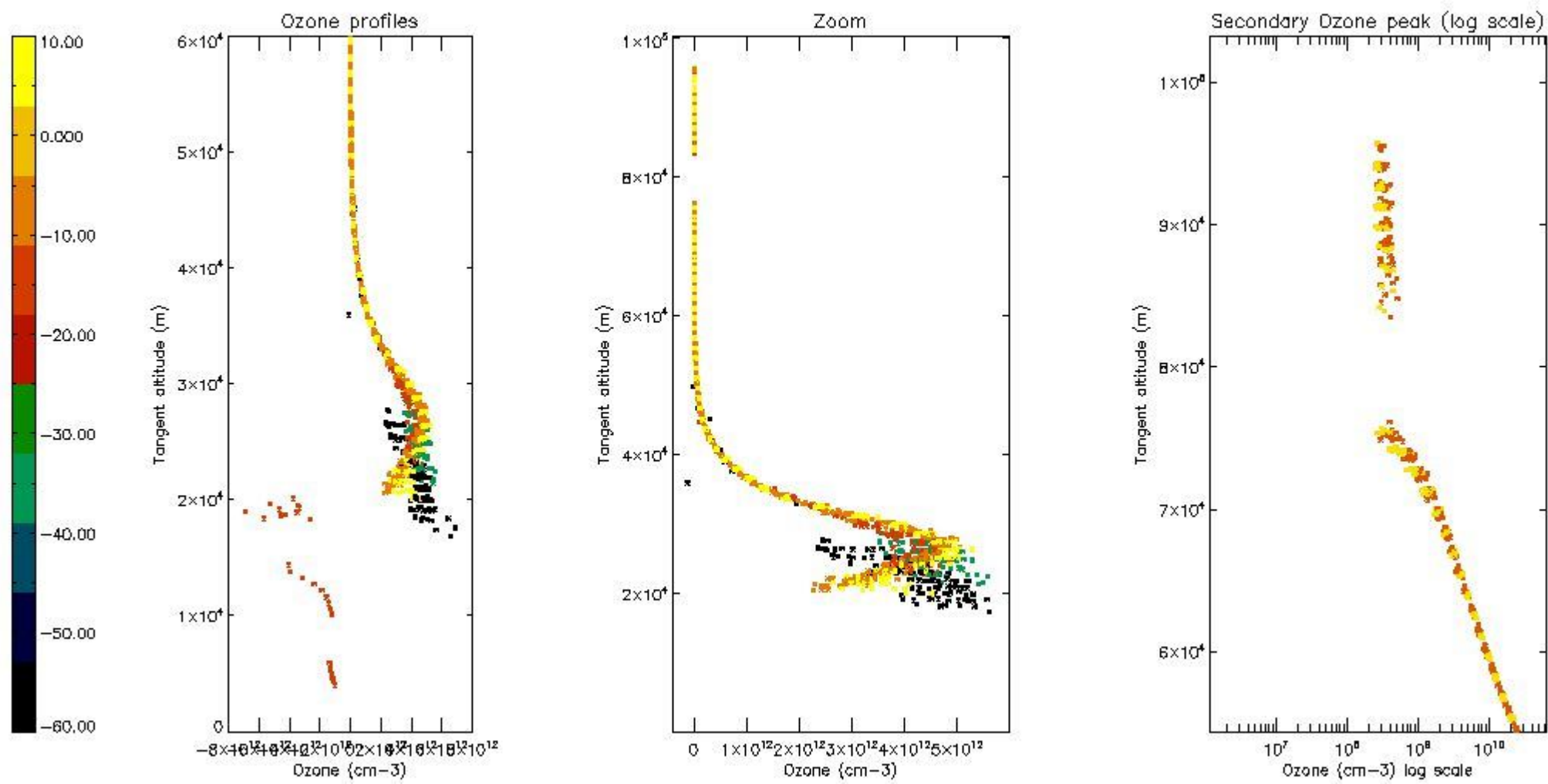
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

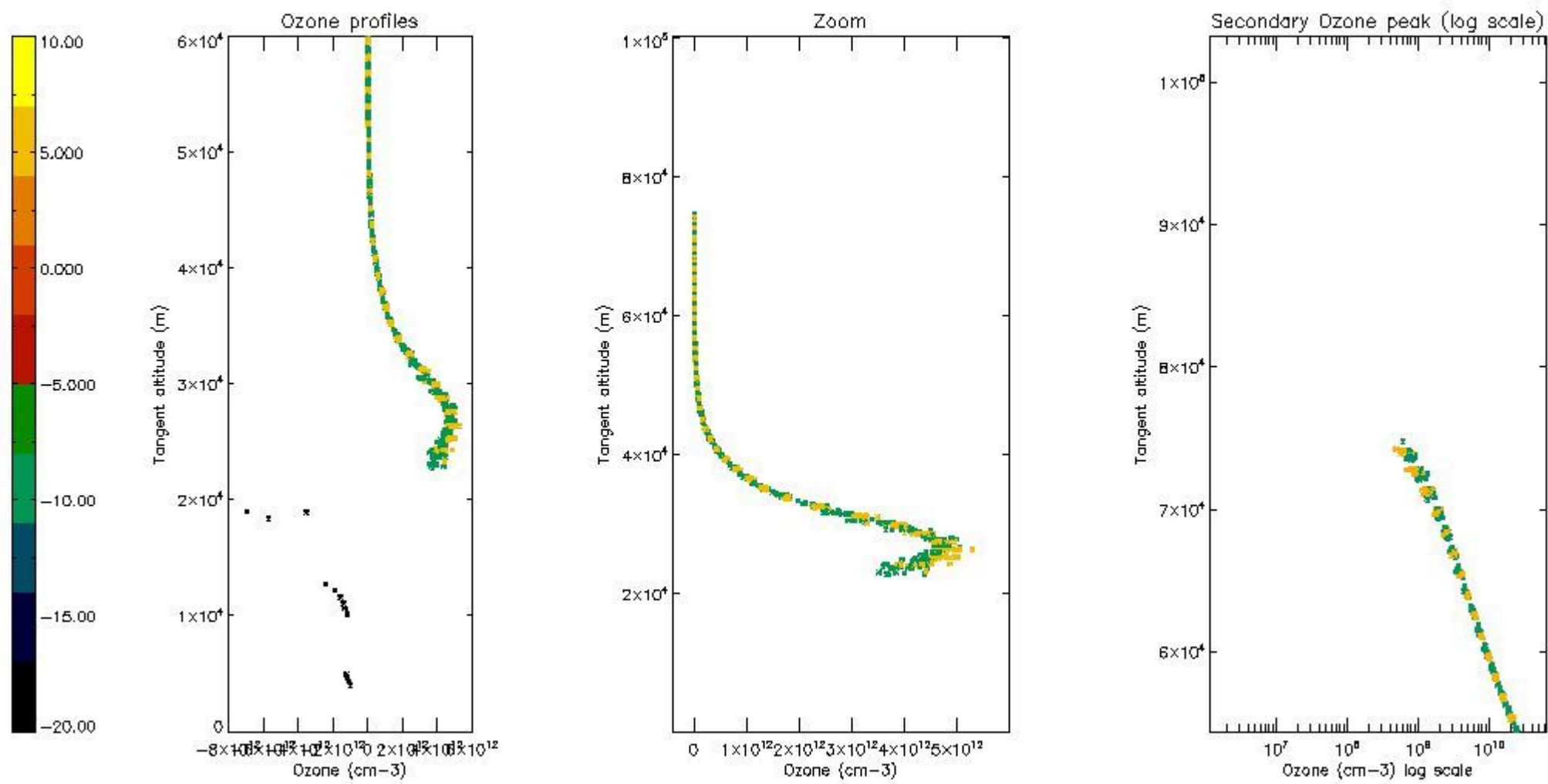
The colorbar represents the latitude.



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

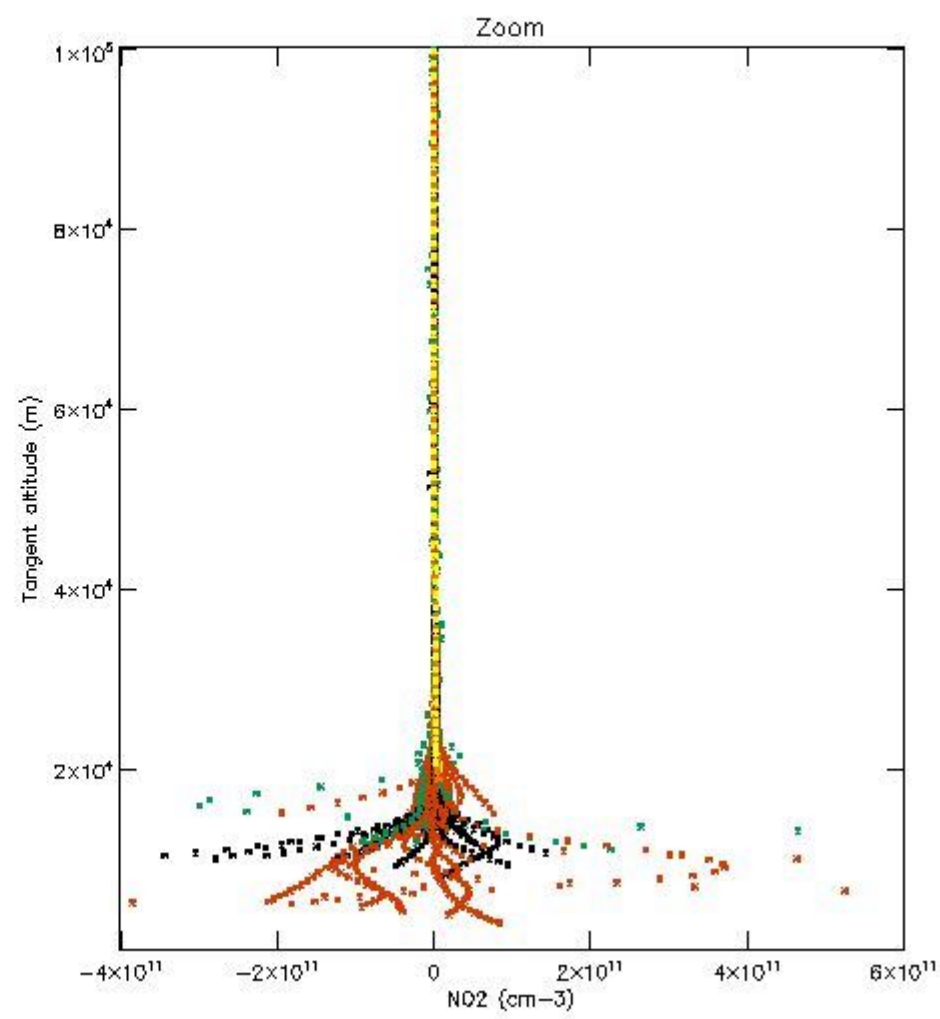
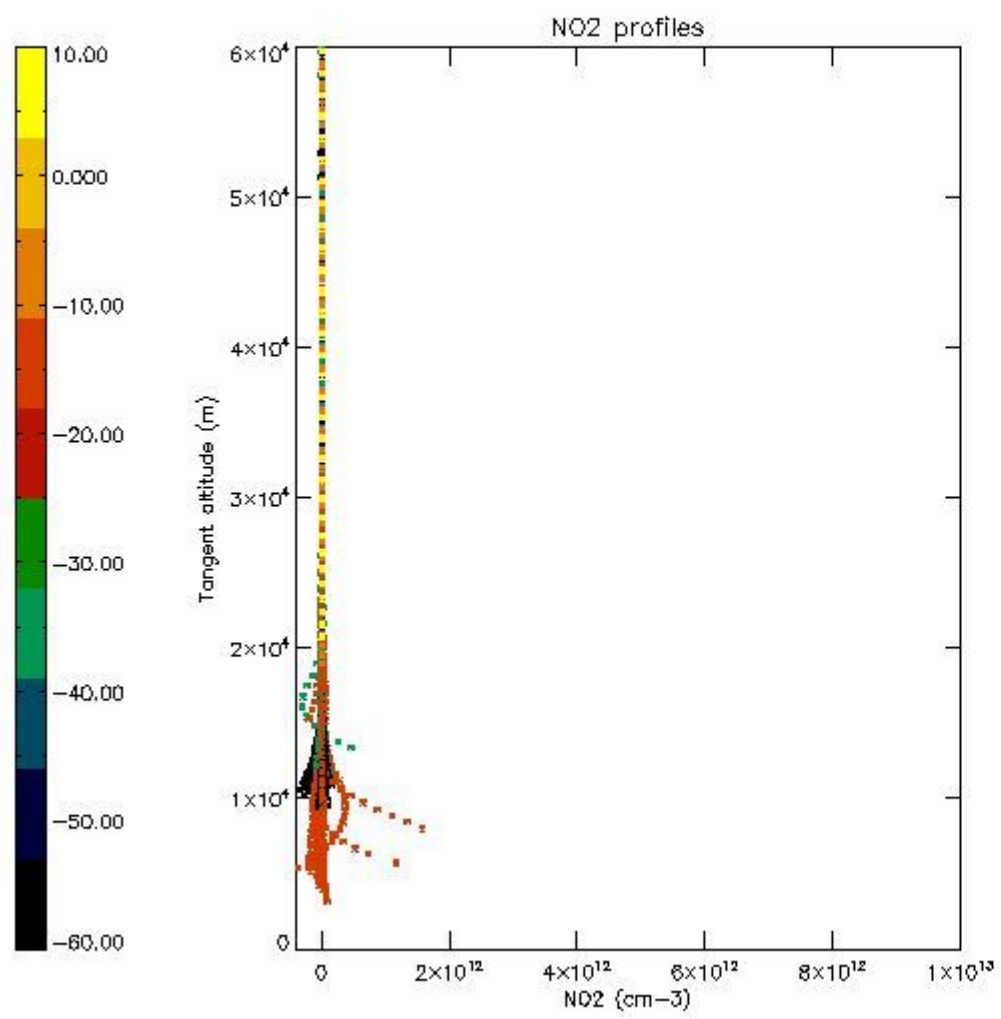
The colorbar represents the latitude.





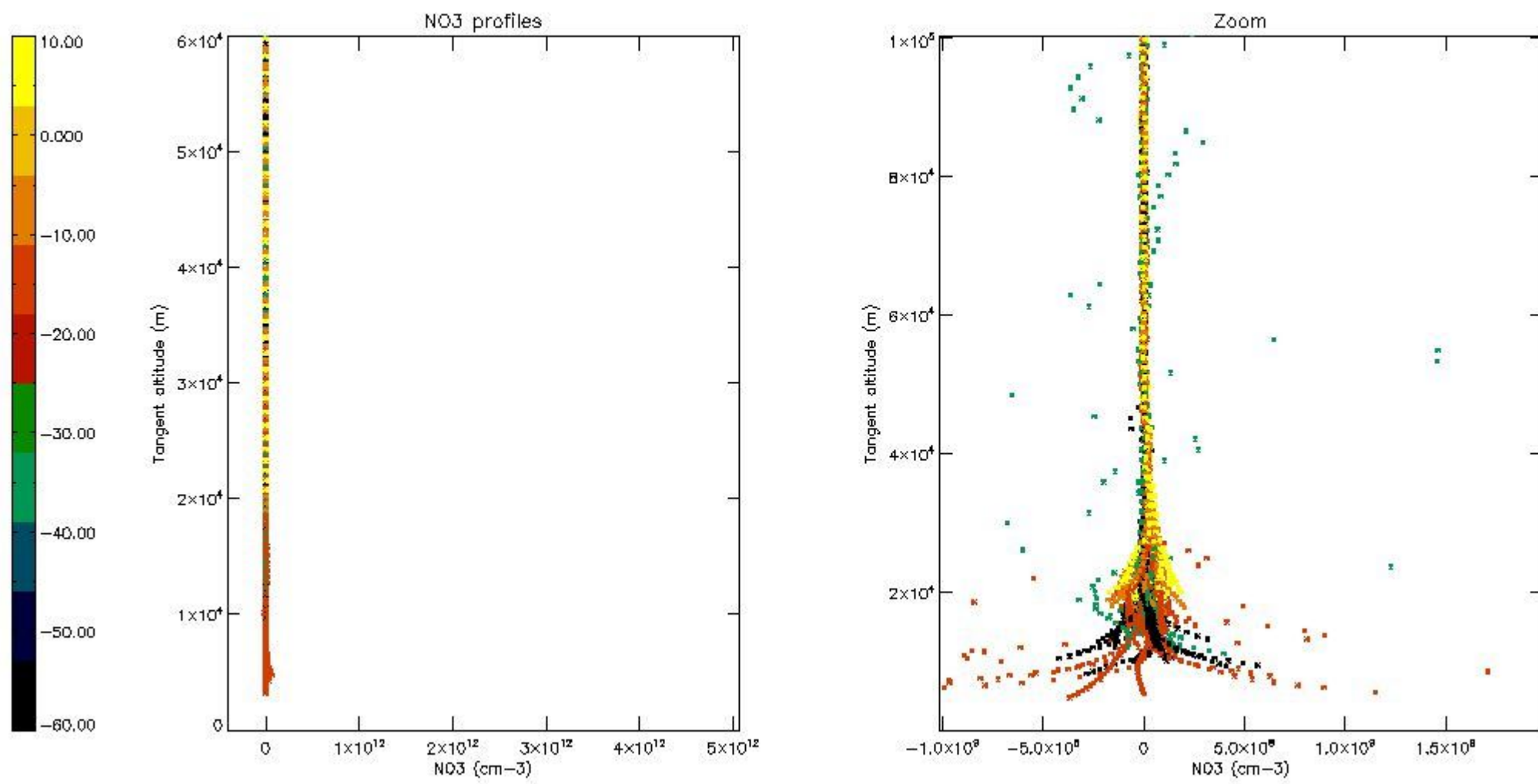
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



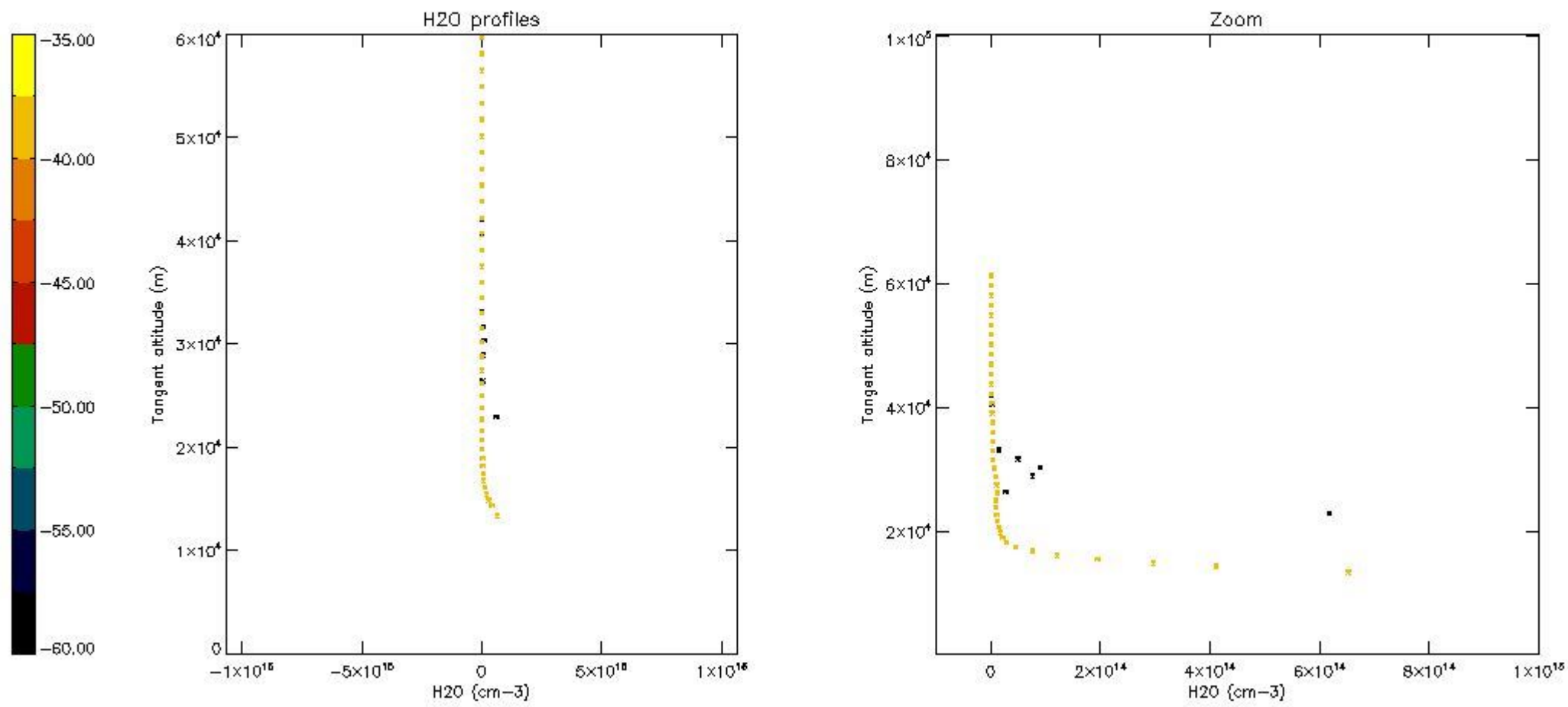
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	27-MAY-2007 00:01:33
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-MAY-2007 00:01:33
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-MAY-2007 00:01:33

# 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	22APR2013 20:03:25
Data source version	GOMOS/6.01
Start time of products	27-05-2007 (27MAY2007 00:00:00)
Stop time of products	28-05-2007 (28MAY2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	303
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__2PRFIN20070527_000133_000000462058_00274_27382_3796.N1	27-MAY-2007 00:01:33	Straylight	46.000	25	35Lam Sco	1.6200	28000.	92	27382	No
2	GOM_NL__2PRFIN20070527_000330_000000462058_00274_27382_3797.N1	27-MAY-2007 00:03:30	Twilight_stray	46.000	75	26Eps Sco	2.2910	4250.0	92	27382	No
3	GOM_NL__2PRFIN20070527_000537_000000442058_00274_27382_3798.N1	27-MAY-2007 00:05:37	Twilight_stray	44.000	136	23Tau Sco	2.8220	30000.	88	27382	No
4	GOM_NL__2PRFIN20070527_000836_000000392058_00274_27382_3799.N1	27-MAY-2007 00:08:36	Bright	39.000	97	8Bet1Sco	2.5610	30000.	78	27382	No
5	GOM_NL__2PRFIN20070527_001203_000000372058_00274_27382_3800.N1	27-MAY-2007 00:12:03	Bright	36.500	104	27Bet Lib	2.6140	13100.	73	27382	No
6	GOM_NL__2PRFIN20070527_001341_000000422058_00274_27382_3801.N1	27-MAY-2007 00:13:41	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	27382	No
7	GOM_NL__2PRFIN20070527_001644_000000382058_00274_27382_3802.N1	27-MAY-2007 00:16:44	Bright	38.000	102	24Alp Ser	2.6000	4250.0	76	27382	No
8	GOM_NL__2PRFIN20070527_002233_000000372058_00274_27382_3803.N1	27-MAY-2007 00:22:33	Bright	36.500	83		2.3780	11000.	73	27382	No
9	GOM_NL__2PRFIN20070527_002544_000000352058_00274_27382_3804.N1	27-MAY-2007 00:25:44	Bright	35.000	180	27Gam Boo	3.0400	8000.0	70	27382	No
10	GOM_NL__2PRFIN20070527_003334_000000392058_00274_27382_3805.N1	27-MAY-2007 00:33:34	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	27382	No
11	GOM_NL__2PRFIN20070527_003554_000000342058_00274_27382_3806.N1	27-MAY-2007 00:35:54	Bright	34.000	60	7Bet UMi	2.0810	3950.0	68	27382	No
12	GOM_NL__2PRFIN20070527_004031_000000332058_00274_27382_3807.N1	27-MAY-2007 00:40:31	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	27382	No
13	GOM_NL__2PRFIN20070527_004839_000000372058_00274_27382_3808.N1	27-MAY-2007 00:48:39	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	27382	No
14	GOM_NL__2PRFIN20070527_005610_000000382058_00274_27382_3809.N1	27-MAY-2007 00:56:10	Bright	37.500	53	43Bet And	2.0480	3300.0	75	27382	No
15	GOM_NL__2PRFIN20070527_011213_000000502058_00274_27382_3810.N1	27-MAY-2007 01:12:13	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	27382	No
16	GOM_NL__2PRFIN20070527_011859_000000432058_00274_27382_3811.N1	27-MAY-2007 01:18:59	Dark	43.000	84	Alp Phe	2.3970	4500.0	86	27382	No
17	GOM_NL__2PRFIN20070527_012354_000000592058_00275_27383_3815.N1	27-MAY-2007 01:23:54	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	27383	No
18	GOM_NL__2PRFIN20070527_012539_000000452058_00275_27383_3816.N1	27-MAY-2007 01:25:39	Dark	45.000	31	Alp Gru	1.7340	15200.	90	27383	No
19	GOM_NL__2PRFIN20070527_013055_000000422058_00275_27383_3817.N1	27-MAY-2007 01:30:55	Dark	42.000	45	Alp Pav	1.9400	26000.	84	27383	No
20	GOM_NL__2PRFIN20070527_013729_000000412058_00275_27383_3818.N1	27-MAY-2007 01:37:29	Straylight	41.000	141	Bet Ara	2.8400	4600.0	82	27383	No
21	GOM_NL__2PRFIN20070527_014020_000000452058_00275_27383_3819.N1	27-MAY-2007 01:40:20	Straylight	45.000	40	The Sco	1.8590	7100.0	90	27383	No
22	GOM_NL__2PRFIN20070527_014210_000000492058_00275_27383_3820.N1	27-MAY-2007 01:42:10	Straylight	49.000	25	35Lam Sco	1.6200	28000.	98	27383	No
23	GOM_NL__2PRFIN20070527_014406_000000472058_00275_27383_3821.N1	27-MAY-2007 01:44:06	Twilight_stray	46.500	75	26Eps Sco	2.2910	4250.0	93	27383	No
24	GOM_NL__2PRFIN20070527_014613_000000412058_00275_27383_3822.N1	27-MAY-2007 01:46:13	Twilight_stray	41.000	136	23Tau Sco	2.8220	30000.	82	27383	No
25	GOM_NL__2PRFIN20070527_014912_000000392058_00275_27383_3823.N1	27-MAY-2007 01:49:12	Bright	39.000	97	8Bet1Sco	2.5610	30000.	78	27383	No
26	GOM_NL__2PRFIN20070527_015239_000000382058_00275_27383_3824.N1	27-MAY-2007 01:52:39	Bright	37.500	104	27Bet Lib	2.6140	13100.	75	27383	No
27	GOM_NL__2PRFIN20070527_015417_000000422058_00275_27383_3825.N1	27-MAY-2007 01:54:17	Bright	42.000	120	1Del Oph	2.7340	3200.0	84	27383	No
28	GOM_NL__2PRFIN20070527_015720_000000392058_00275_27383_3826.N1	27-MAY-2007 01:57:20	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	27383	No
29	GOM_NL__2PRFIN20070527_020309_000000372058_00275_27383_3827.N1	27-MAY-2007 02:03:09	Bright	36.500	83		2.3780	11000.	73	27383	No
30	GOM_NL__2PRFIN20070527_020620_000000352058_00275_27383_3828.N1	27-MAY-2007 02:06:20	Bright	34.500	180	27Gam Boo	3.0400	8000.0	69	27383	No
31	GOM_NL__2PRFIN20070527_021410_000000382058_00275_27383_3829.N1	27-MAY-2007 02:14:10	Bright	38.000	119	14Eta Dra	2.7270	4700.0	76	27383	No
32	GOM_NL__2PRFIN20070527_021629_000000352058_00275_27383_3830.N1	27-MAY-2007 02:16:29	Bright	34.500	60	7Bet UMi	2.0810	3950.0	69	27383	No
33	GOM_NL__2PRFIN20070527_022107_000000342058_00275_27383_3831.N1	27-MAY-2007 02:21:07	Bright	33.500	49	1Alp UMi	1.9900	6300.0	67	27383	No
34	GOM_NL__2PRFIN20070527_022915_000000382058_00275_27383_3832.N1	27-MAY-2007 02:29:15	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	27383	No
35	GOM_NL__2PRFIN20070527_023646_000000402058_00275_27383_3833.N1	27-MAY-2007 02:36:46	Bright	39.500	53	43Bet And	2.0480	3300.0	79	27383	No
36	GOM_NL__2PRFIN20070527_025250_000000482058_00275_27383_3834.N1	27-MAY-2007 02:52:50	Dark	48.000	52	16Bet Cet	2.0370	4500.0	96	27383	No
37	GOM_NL__2PRFIN20070527_025935_000000452058_00275_27383_3835.N1	27-MAY-2007 02:59:35	Dark	45.000	84	Alp Phe	2.3970	4500.0	90	27383	No
38	GOM_NL__2PRFIN20070527_030431_000000462058_00276_27384_3831.N1	27-MAY-2007 03:04:31	Dark	46.000	63	Bet Gru	2.1500	2800.0	92	27384	No
39	GOM_NL__2PRFIN20070527_030616_000000462058_00276_27384_3832.N1	27-MAY-2007 03:06:16	Dark	46.000	31	Alp Gru	1.7340	15200.	92	27384	No
40	GOM_NL__2PRFIN20070527_031131_000000432058_00276_27384_3833.N1	27-MAY-2007 03:11:31	Dark	42.500	45	Alp Pav	1.9400	26000.	85	27384	No
41	GOM_NL__2PRFIN20070527_031806_000000442058_00276_27384_3834.N1	27-MAY-2007 03:18:06	Straylight	43.500	141	Bet Ara	2.8400	4600.0	87	27384	No
42	GOM_NL__2PRFIN20070527_032056_000000452058_00276_27384_3835.N1	27-MAY-2007 03:20:56	Straylight	45.000	40	The Sco	1.8590	7100.0	90	27384	No









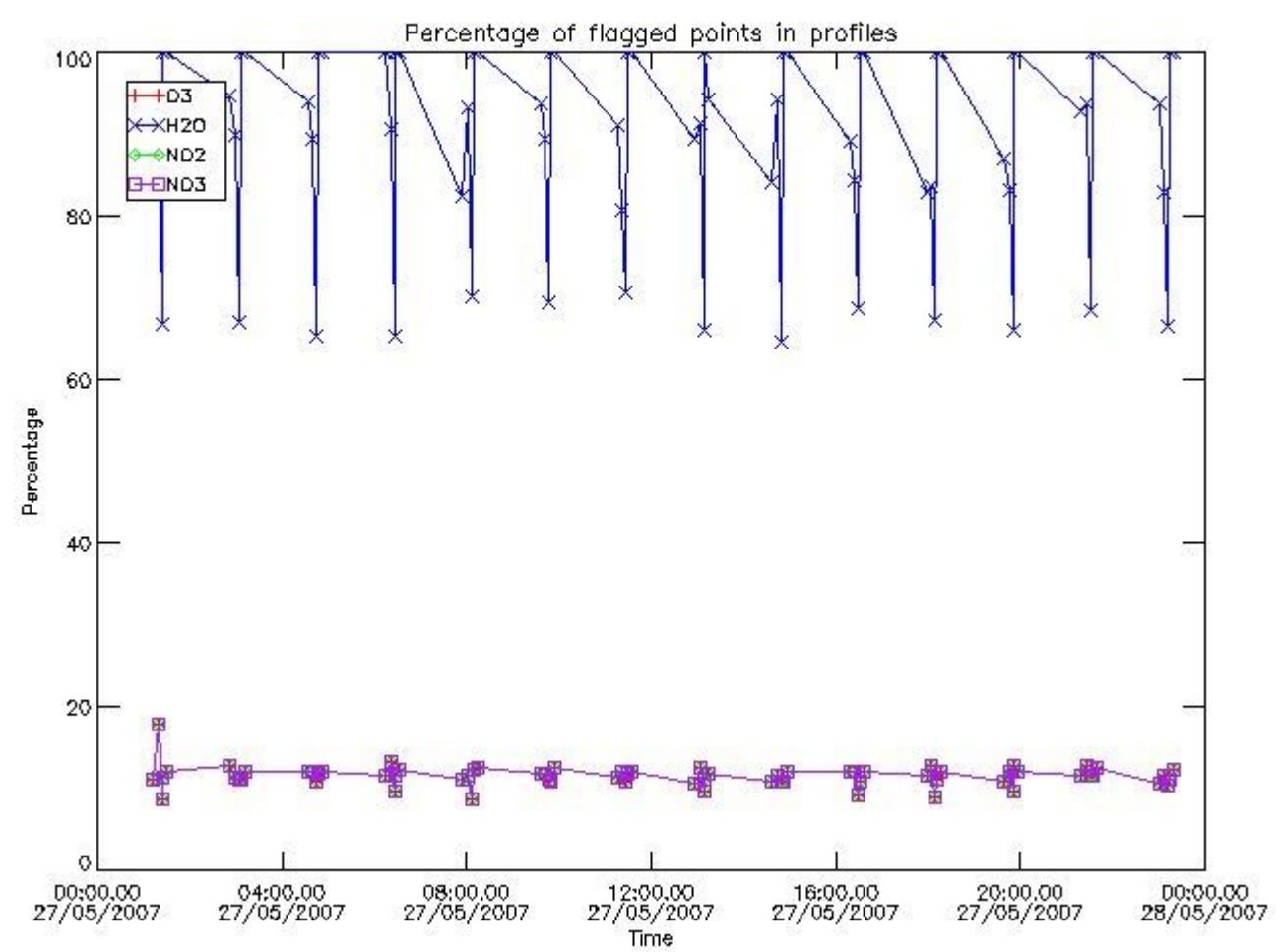


279	GOM_NL__2PRFIN20070527_220128_000000412058_00287_27395_4017.N1	27-MAY-2007 22:01:28	Bright	41.000	120	1Del Oph	2.7340	3200.0	82	27395	No
280	GOM_NL__2PRFIN20070527_220430_000000382058_00287_27395_4018.N1	27-MAY-2007 22:04:30	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	27395	No
281	GOM_NL__2PRFIN20070527_221020_000000522058_00287_27395_4019.N1	27-MAY-2007 22:10:20	Bright	52.000	83		2.3780	11000.	104	27395	No
282	GOM_NL__2PRFIN20070527_221331_000000342058_00287_27395_4020.N1	27-MAY-2007 22:13:31	Bright	34.000	180	27Gam Boo	3.0400	8000.0	68	27395	No
283	GOM_NL__2PRFIN20070527_222117_000000402058_00287_27395_4021.N1	27-MAY-2007 22:21:17	Bright	39.500	119	14Eta Dra	2.7270	4700.0	79	27395	No
284	GOM_NL__2PRFIN20070527_222340_000000362058_00287_27395_4022.N1	27-MAY-2007 22:23:40	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	27395	No
285	GOM_NL__2PRFIN20070527_222818_000000352058_00287_27395_4023.N1	27-MAY-2007 22:28:18	Bright	34.500	49	1Alp UMi	1.9900	6300.0	69	27395	No
286	GOM_NL__2PRFIN20070527_223626_000000372058_00287_27395_4024.N1	27-MAY-2007 22:36:26	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	27395	No
287	GOM_NL__2PRFIN20070527_224359_000000392058_00287_27395_4025.N1	27-MAY-2007 22:43:59	Bright	39.000	53	43Bet And	2.0480	3300.0	78	27395	No
288	GOM_NL__2PRFIN20070527_230007_000000492058_00287_27395_4026.N1	27-MAY-2007 23:00:07	Dark	48.500	52	16Bet Cet	2.0370	4500.0	97	27395	No
289	GOM_NL__2PRFIN20070527_230652_000000452058_00287_27395_4027.N1	27-MAY-2007 23:06:52	Dark	44.500	84	Alp Phe	2.3970	4500.0	89	27395	No
290	GOM_NL__2PRFIN20070527_231151_000000592058_00288_27396_4021.N1	27-MAY-2007 23:11:51	Dark	58.500	63	Bet Gru	2.1500	2800.0	117	27396	No
291	GOM_NL__2PRFIN20070527_231338_000000462058_00288_27396_4022.N1	27-MAY-2007 23:13:38	Dark	45.500	31	Alp Gru	1.7340	15200.	91	27396	No
292	GOM_NL__2PRFIN20070527_231851_000000422058_00288_27396_4023.N1	27-MAY-2007 23:18:51	Dark	41.500	45	Alp Pav	1.9400	26000.	83	27396	No
293	GOM_NL__2PRFIN20070527_232522_000000442058_00288_27396_4024.N1	27-MAY-2007 23:25:22	Straylight	43.500	141	Bet Ara	2.8400	4600.0	87	27396	No
294	GOM_NL__2PRFIN20070527_232813_000000472058_00288_27396_4025.N1	27-MAY-2007 23:28:13	Straylight	47.000	40	The Sco	1.8590	7100.0	94	27396	No
295	GOM_NL__2PRFIN20070527_233003_000000482058_00288_27396_4026.N1	27-MAY-2007 23:30:03	Straylight	48.000	25	35Lam Sco	1.6200	28000.	96	27396	No
296	GOM_NL__2PRFIN20070527_233157_000000452058_00288_27396_4027.N1	27-MAY-2007 23:31:57	Tw_i_and_stray	45.000	75	26Eps Sco	2.2910	4250.0	90	27396	No
297	GOM_NL__2PRFIN20070527_233404_000000412058_00288_27396_4028.N1	27-MAY-2007 23:34:04	Tw_i_and_stray	40.500	136	23Tau Sco	2.8220	30000.	81	27396	No
298	GOM_NL__2PRFIN20070527_233701_000000402058_00288_27396_4029.N1	27-MAY-2007 23:37:01	Bright	39.500	97	8Bet1Sco	2.5610	30000.	79	27396	No
299	GOM_NL__2PRFIN20070527_234027_000000362058_00288_27396_4030.N1	27-MAY-2007 23:40:27	Bright	36.000	104	27Bet Lib	2.6140	13100.	72	27396	No
300	GOM_NL__2PRFIN20070527_234203_000000412058_00288_27396_4031.N1	27-MAY-2007 23:42:03	Bright	41.000	120	1Del Oph	2.7340	3200.0	82	27396	No
301	GOM_NL__2PRFIN20070527_234506_000000382058_00288_27396_4032.N1	27-MAY-2007 23:45:06	Bright	38.000	102	24Alp Ser	2.6000	4250.0	76	27396	No
302	GOM_NL__2PRFIN20070527_235056_000000522058_00288_27396_4033.N1	27-MAY-2007 23:50:56	Bright	52.000	83		2.3780	11000.	104	27396	No
303	GOM_NL__2PRFIN20070527_235407_000000362058_00288_27396_4034.N1	27-MAY-2007 23:54:07	Bright	35.500	180	27Gam Boo	3.0400	8000.0	71	27396	No

### 3. Quality information per product

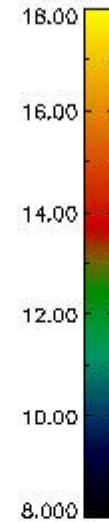
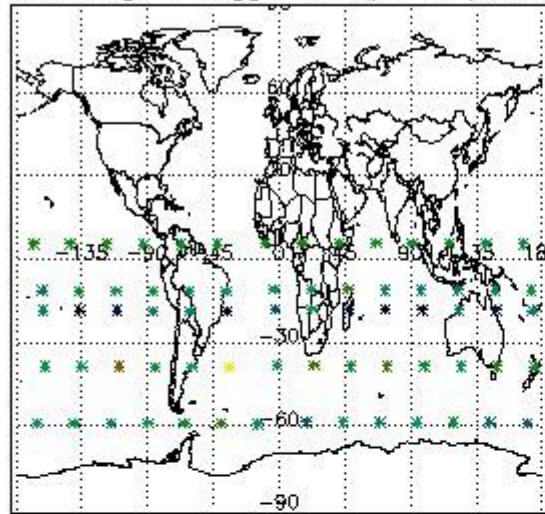
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

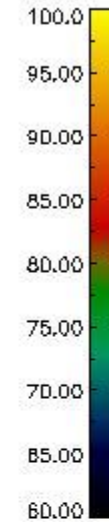
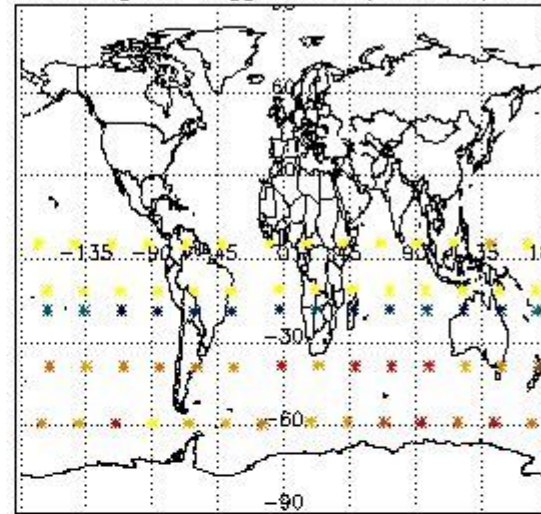


3.2 Plot quality information per product (world map)

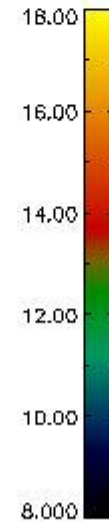
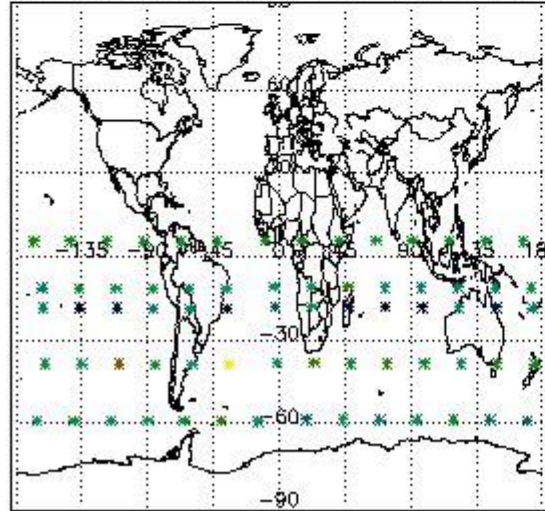
Percentage of flagged data per O3 profile



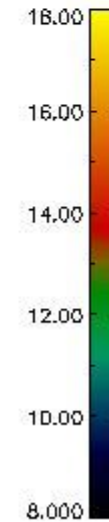
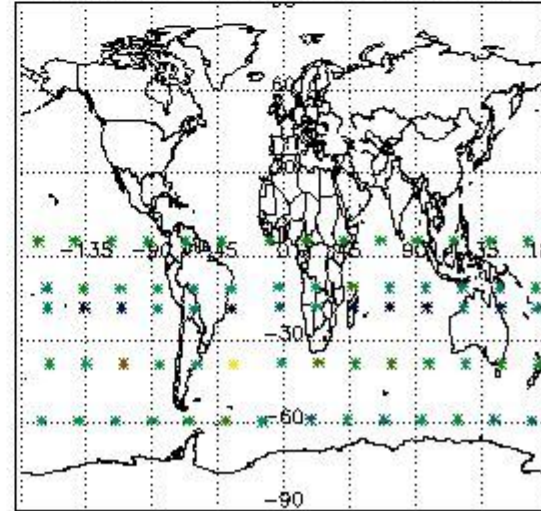
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

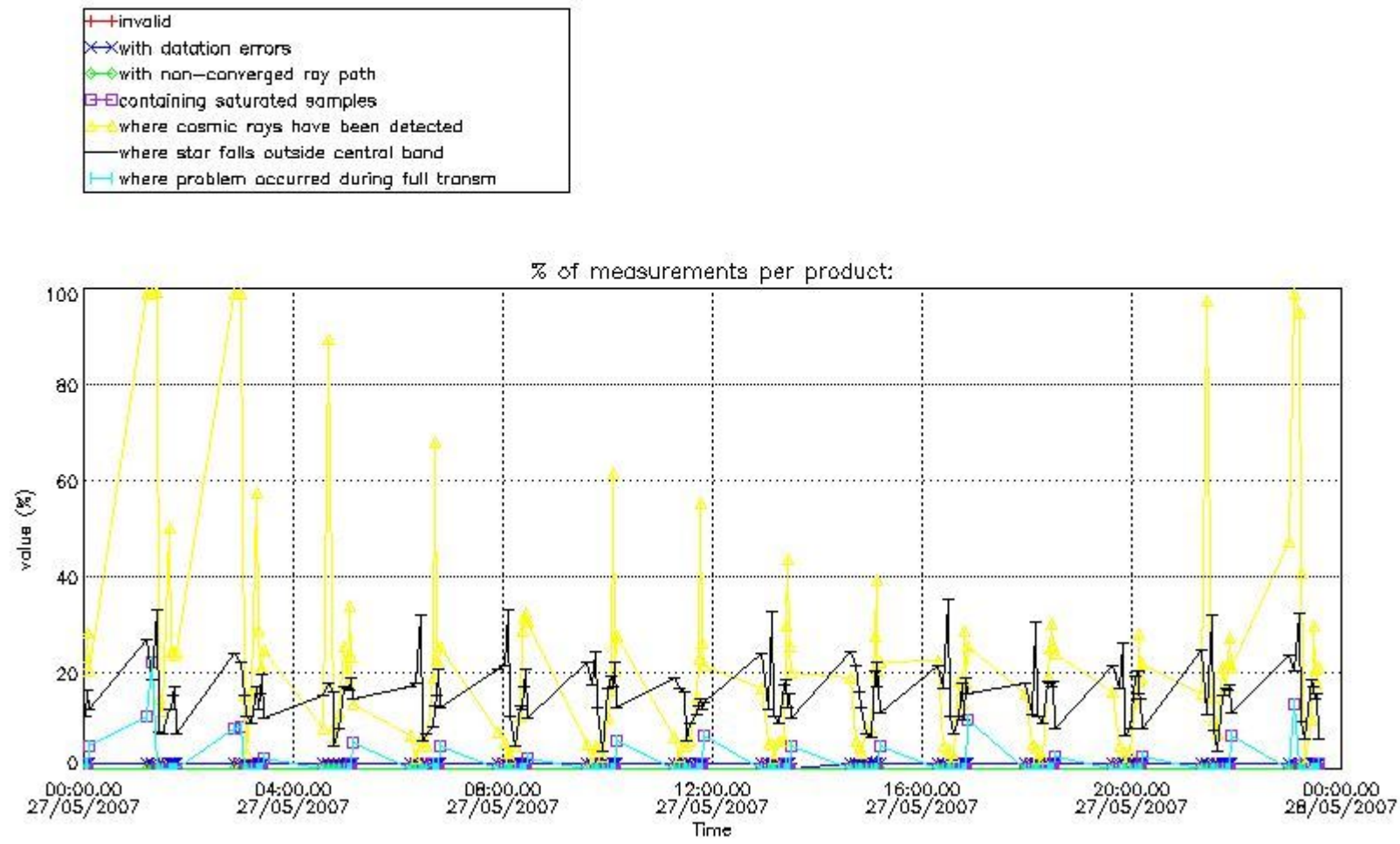


#### 4. Level 1 quality information per product

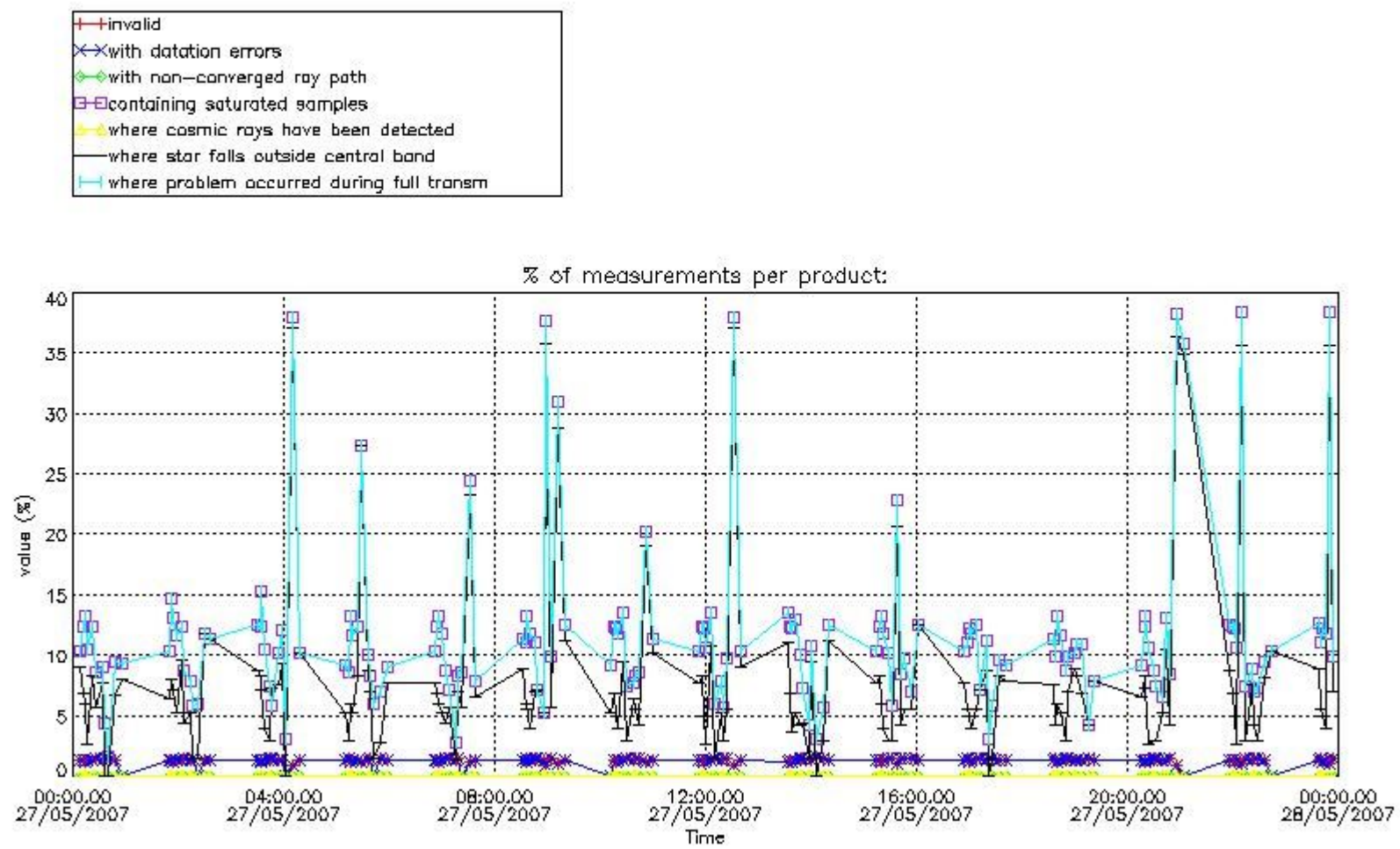
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

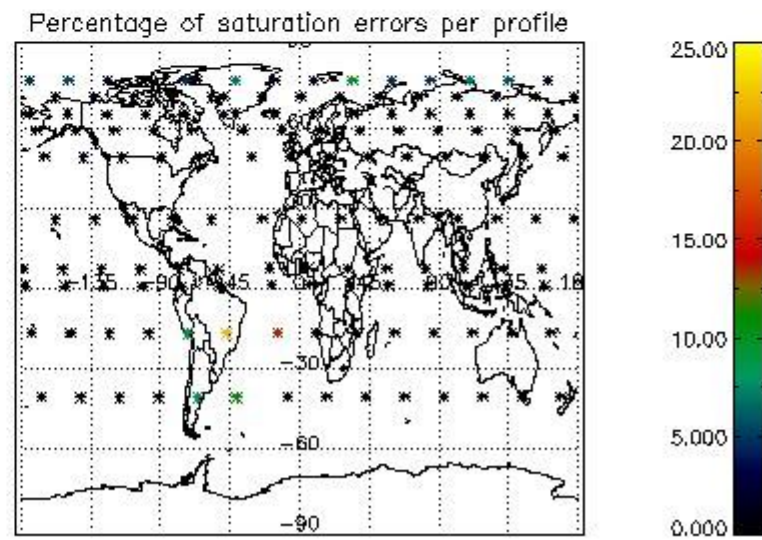
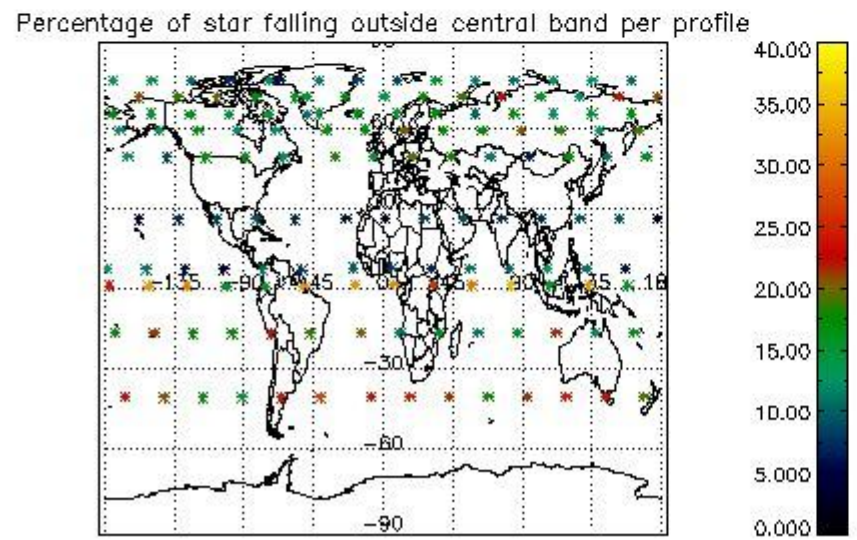
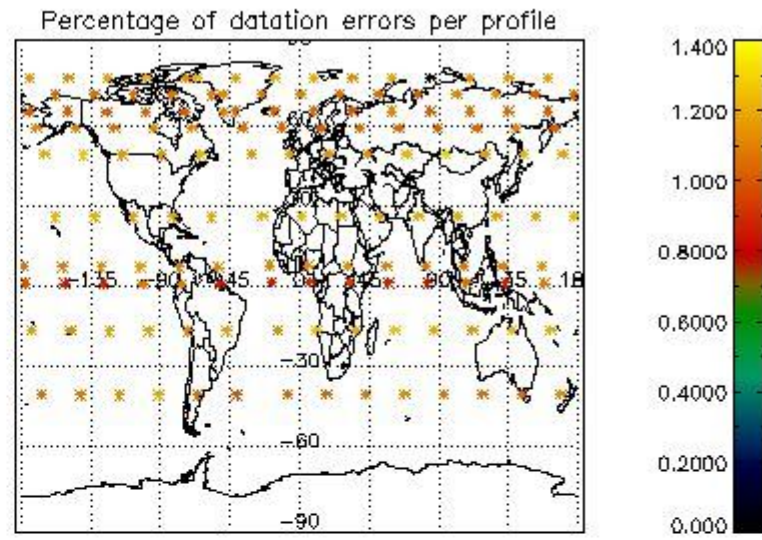
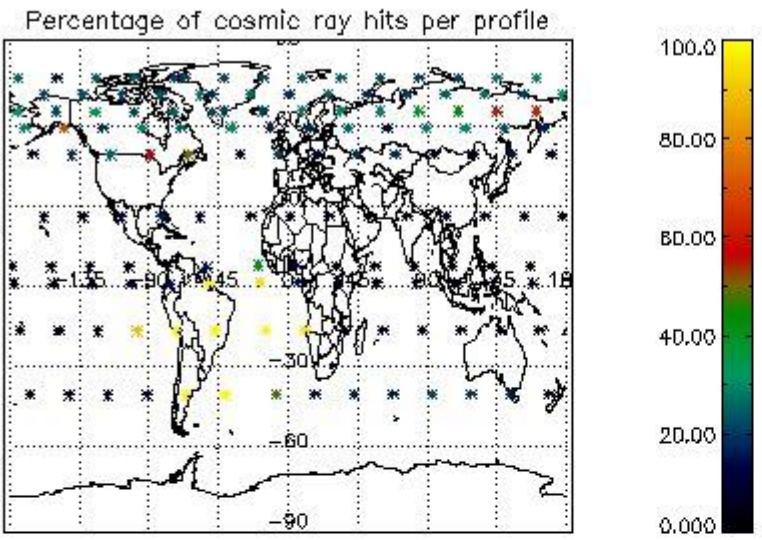


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



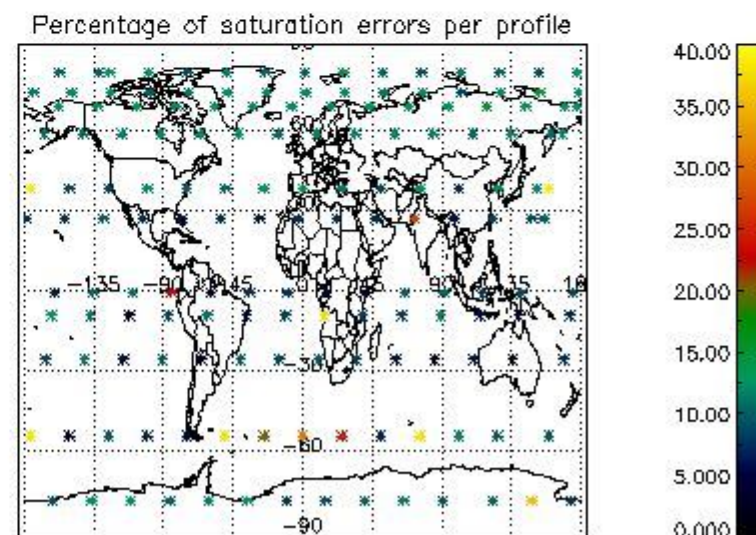
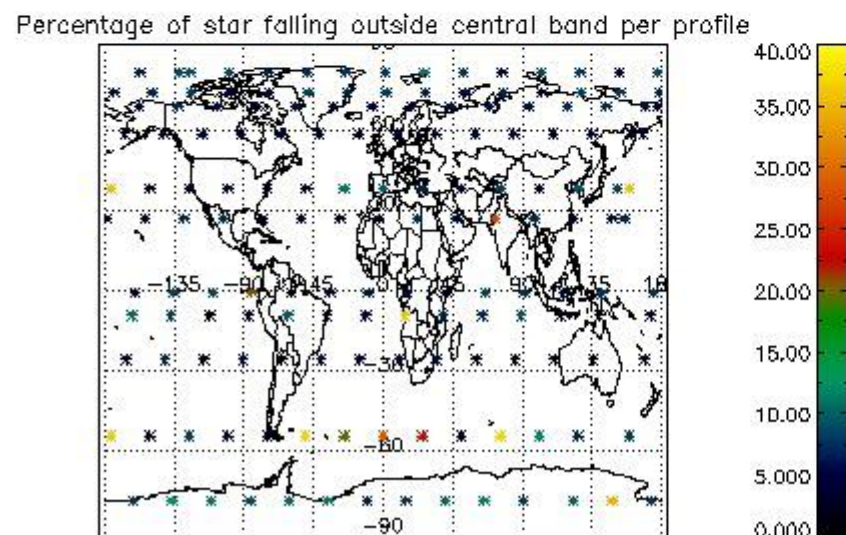
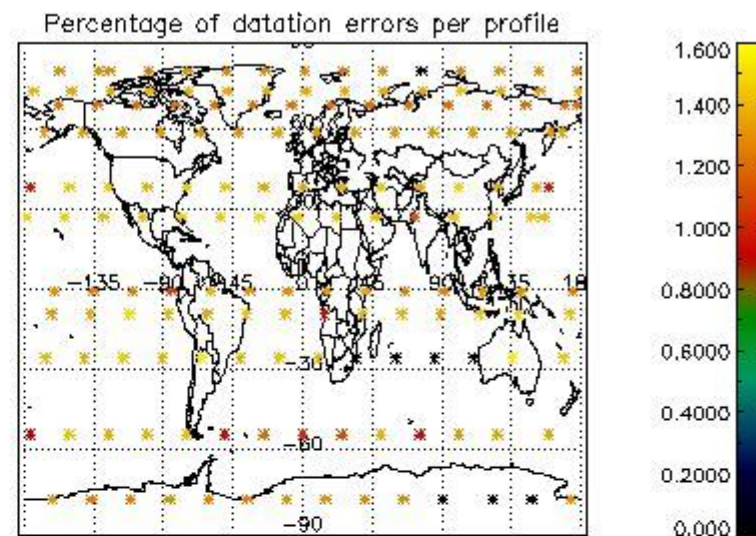
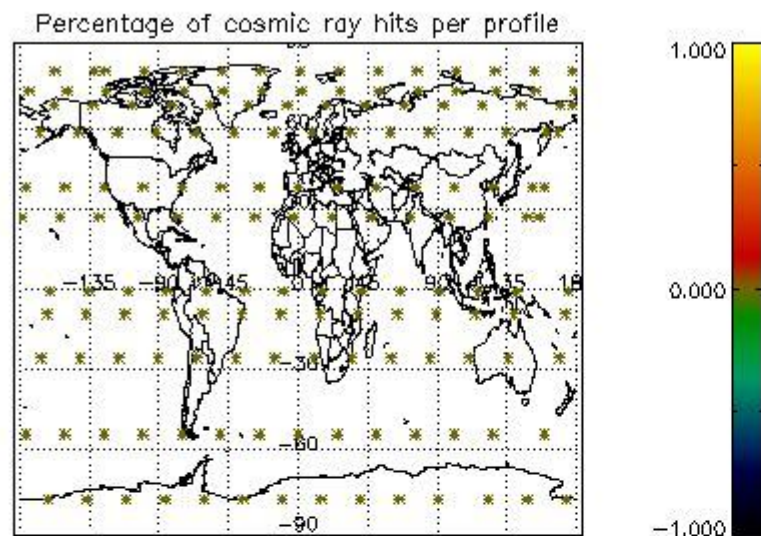
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

##### 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

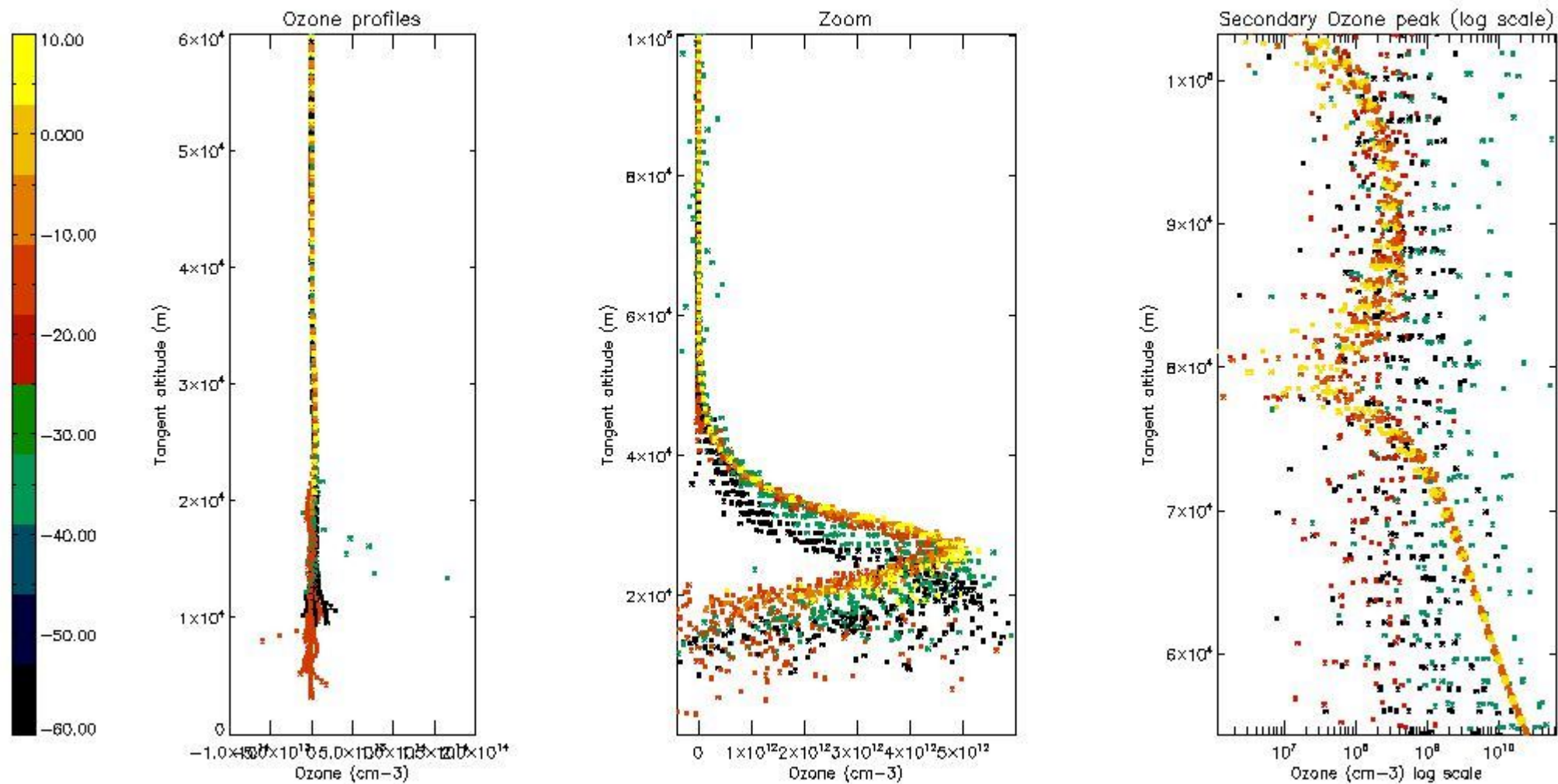
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	26
STD < 20	11

STD < 10	7
STD < 5	5

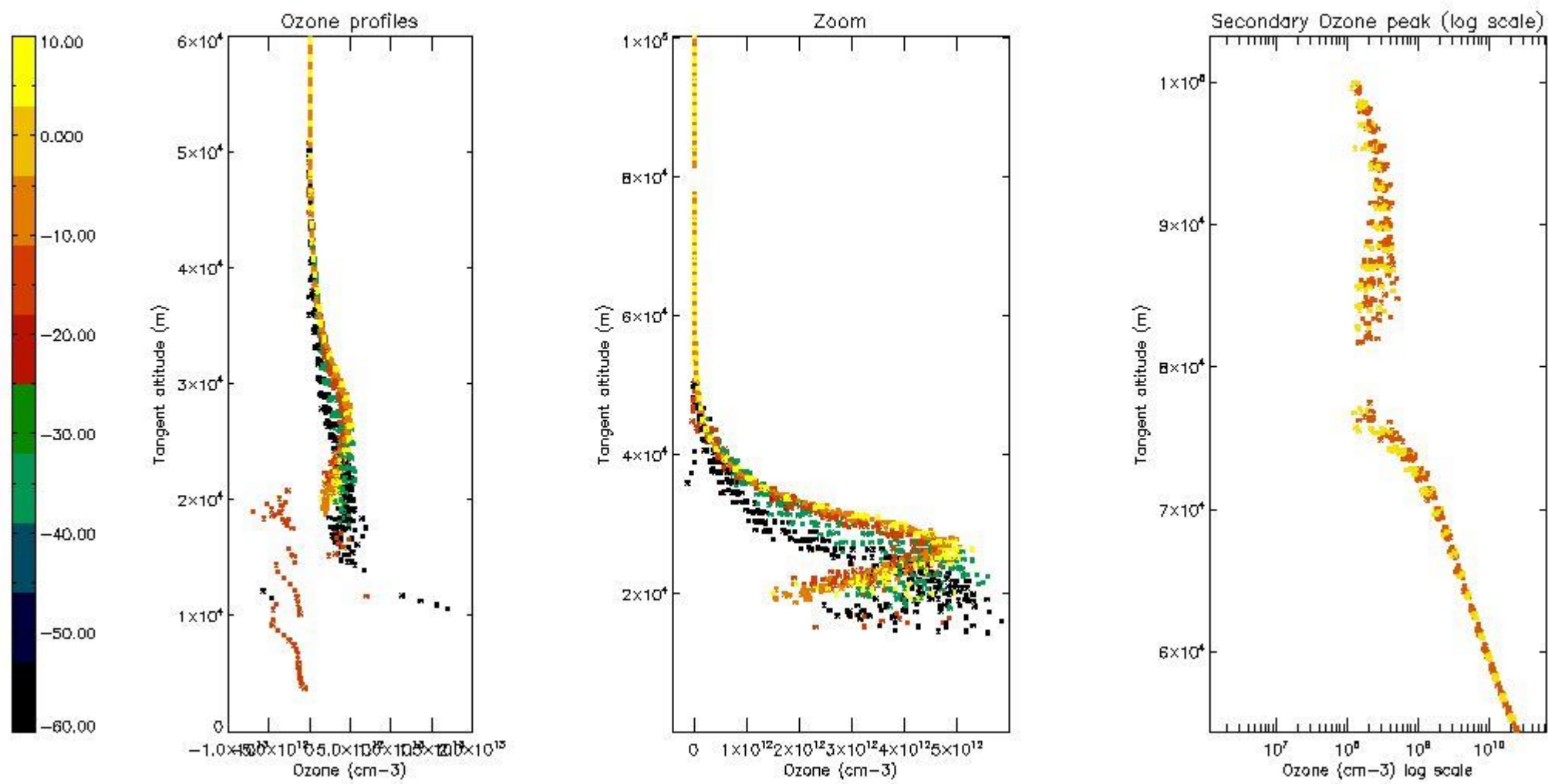
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



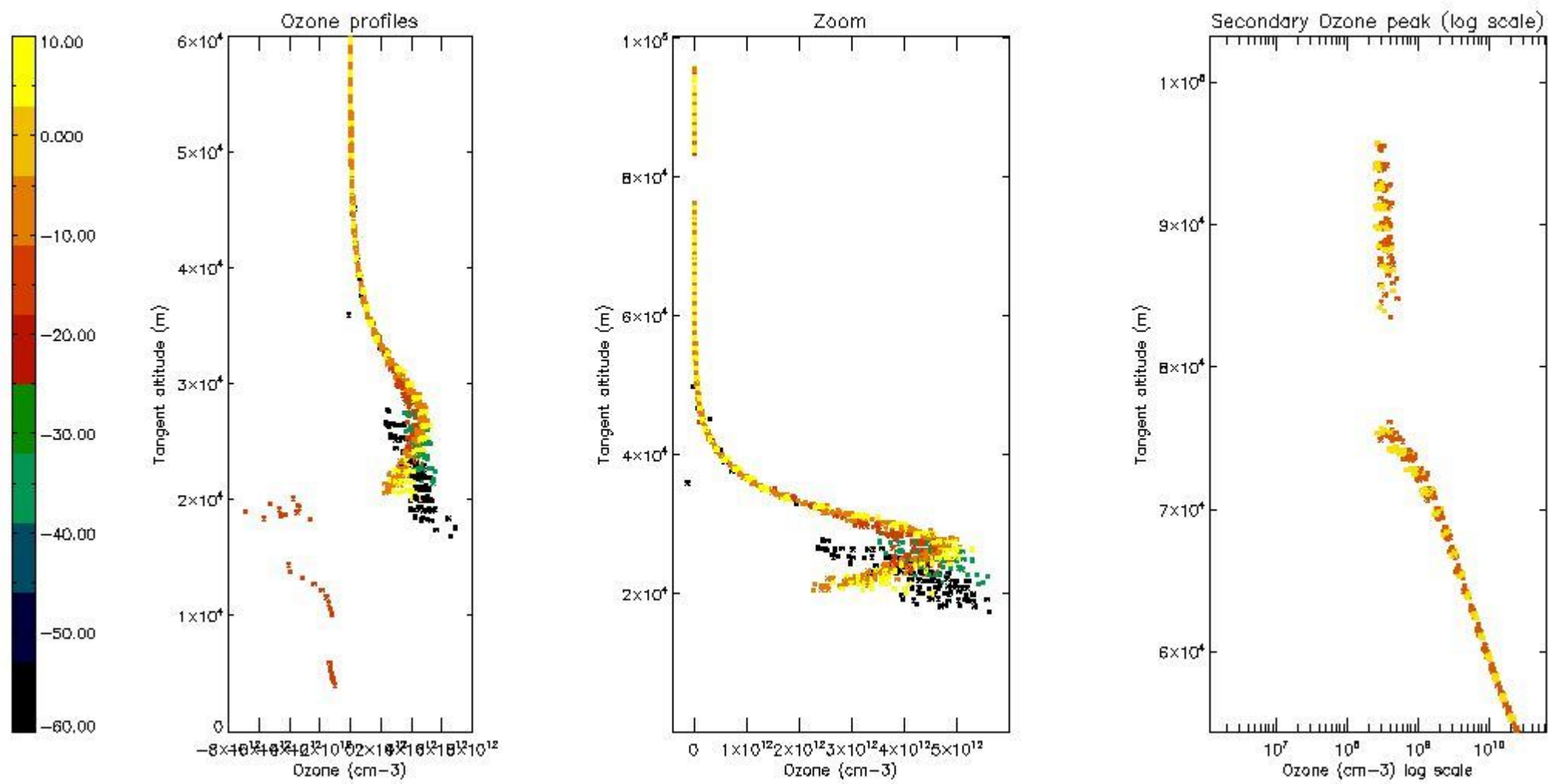
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



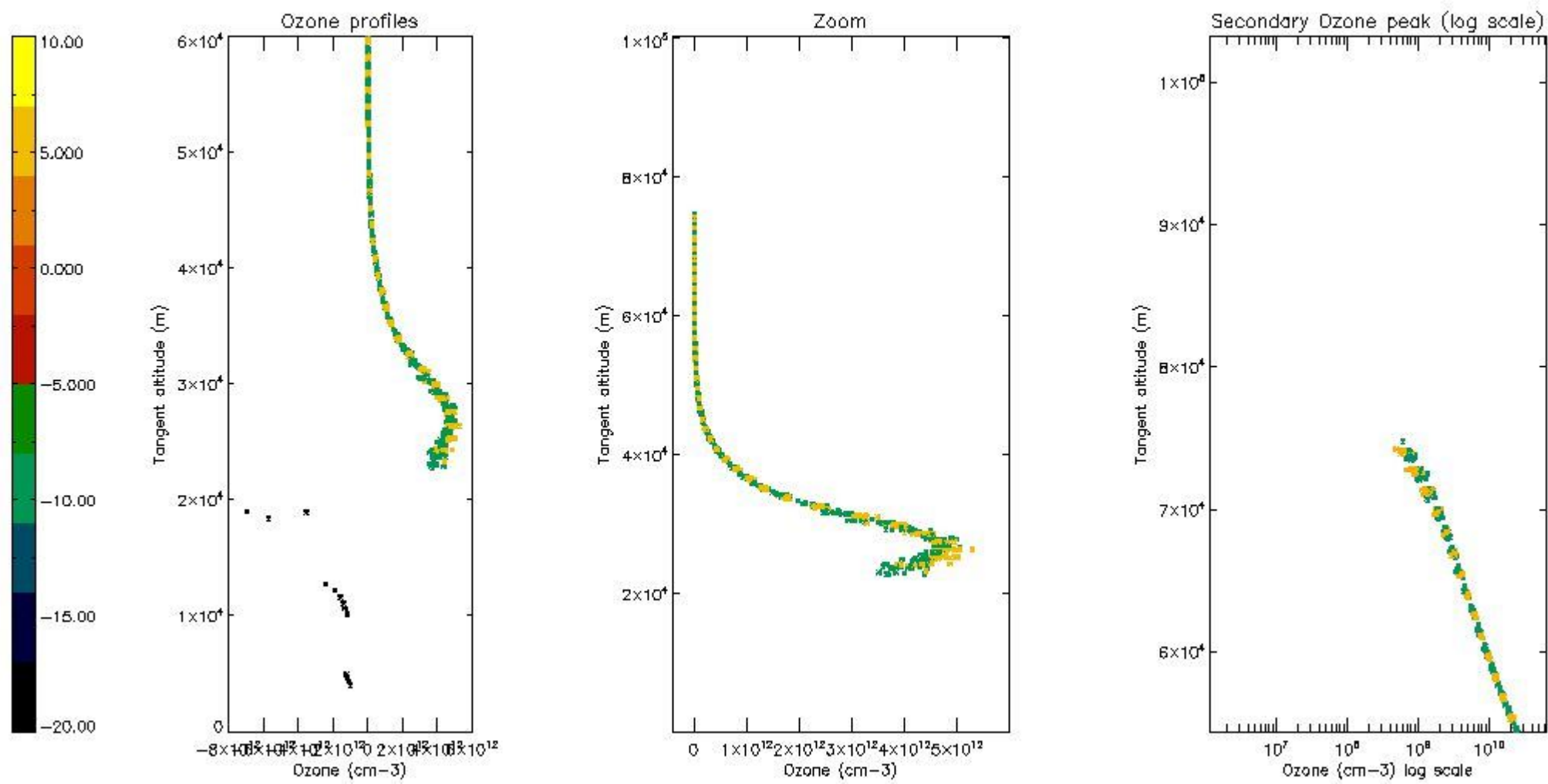
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



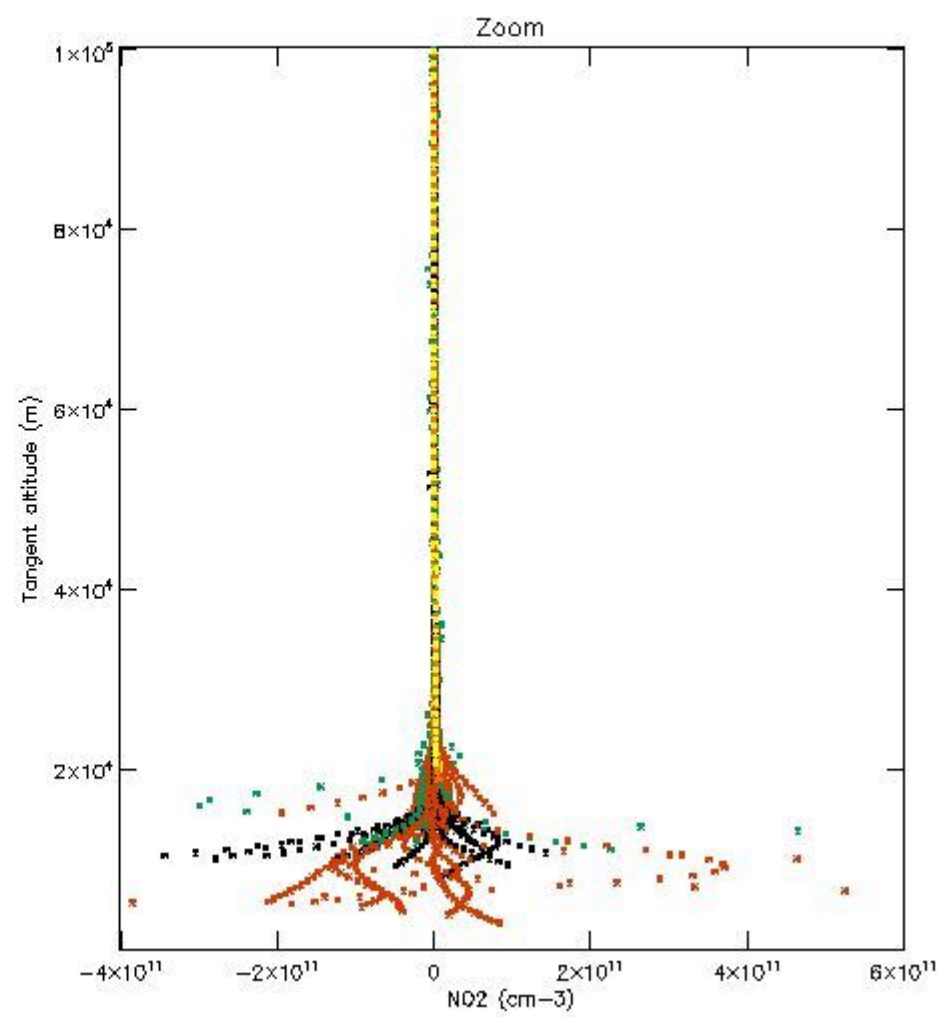
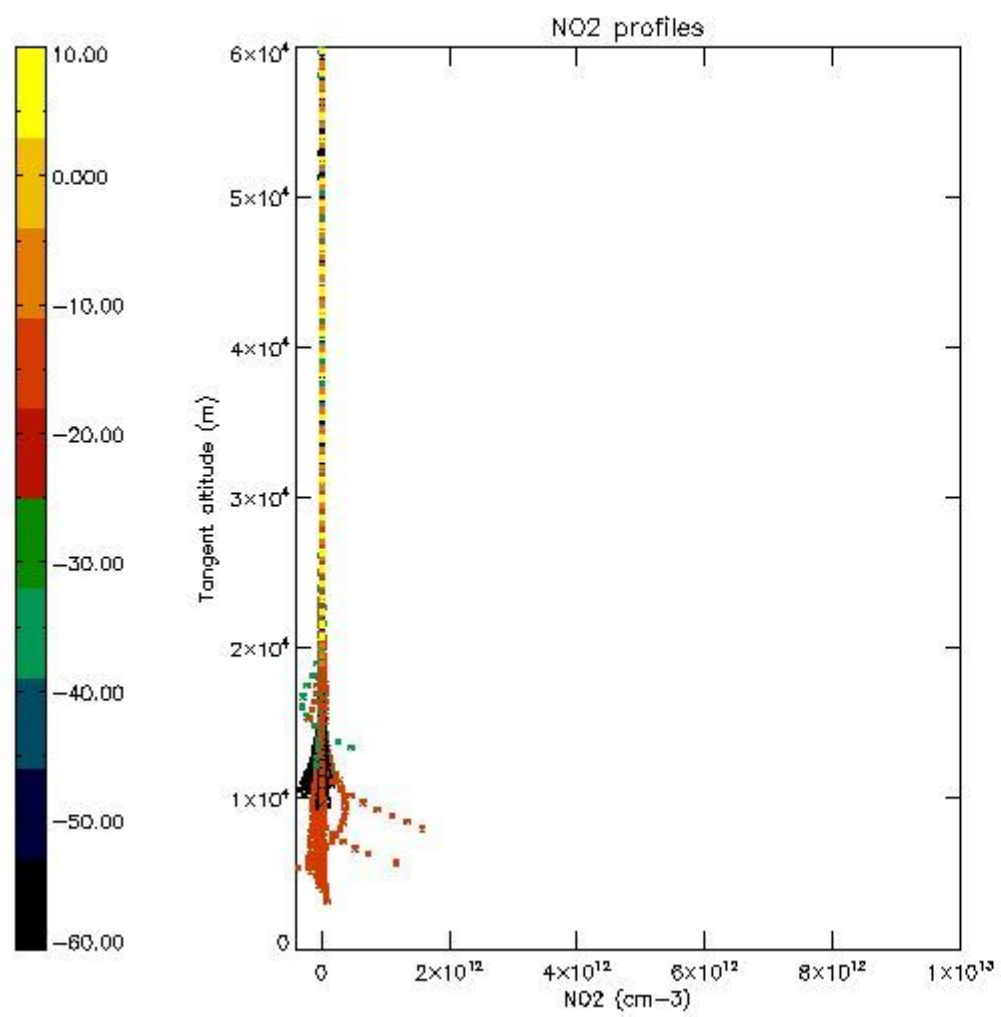
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



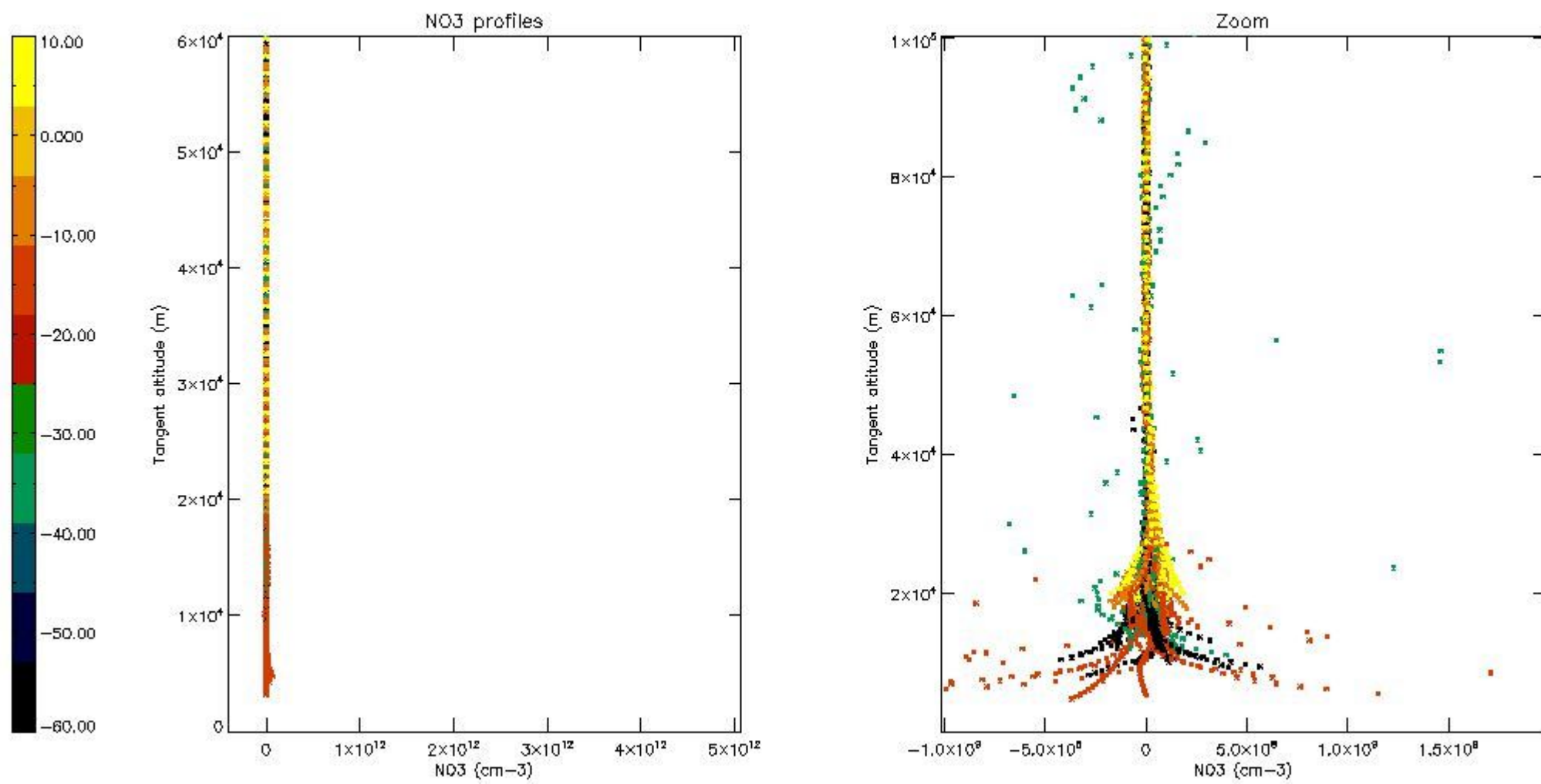
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



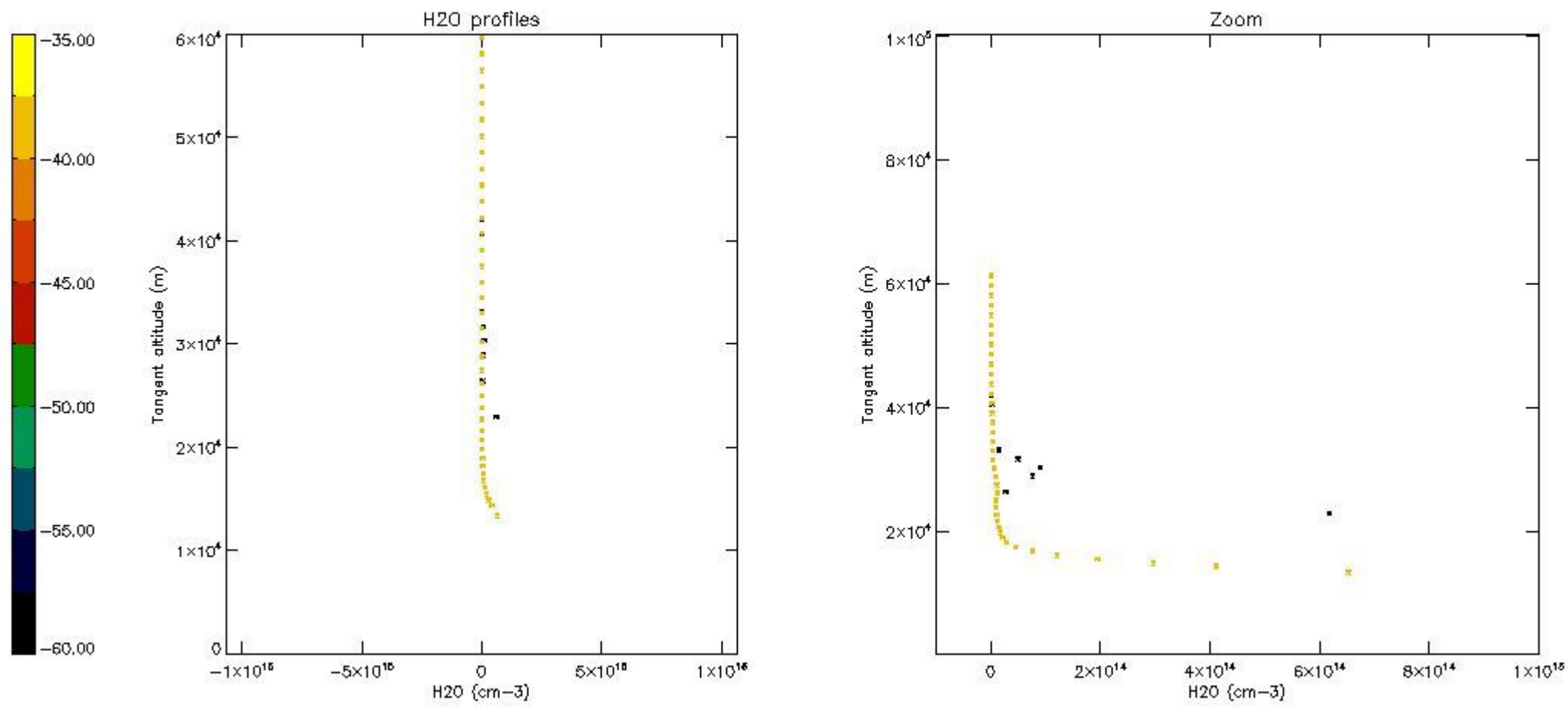
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

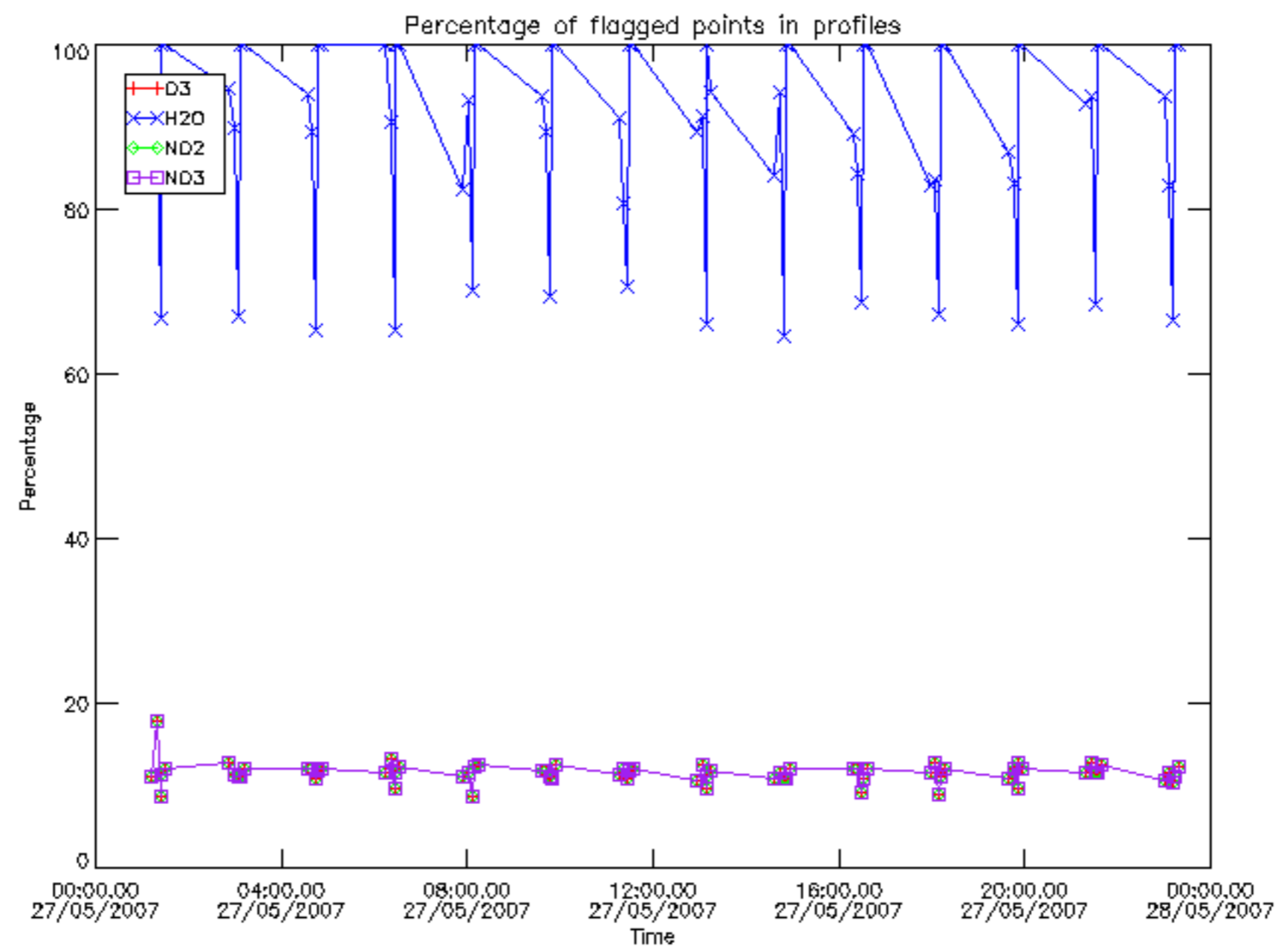


## 6. Auxiliary Data Files used for the production reported in section 2

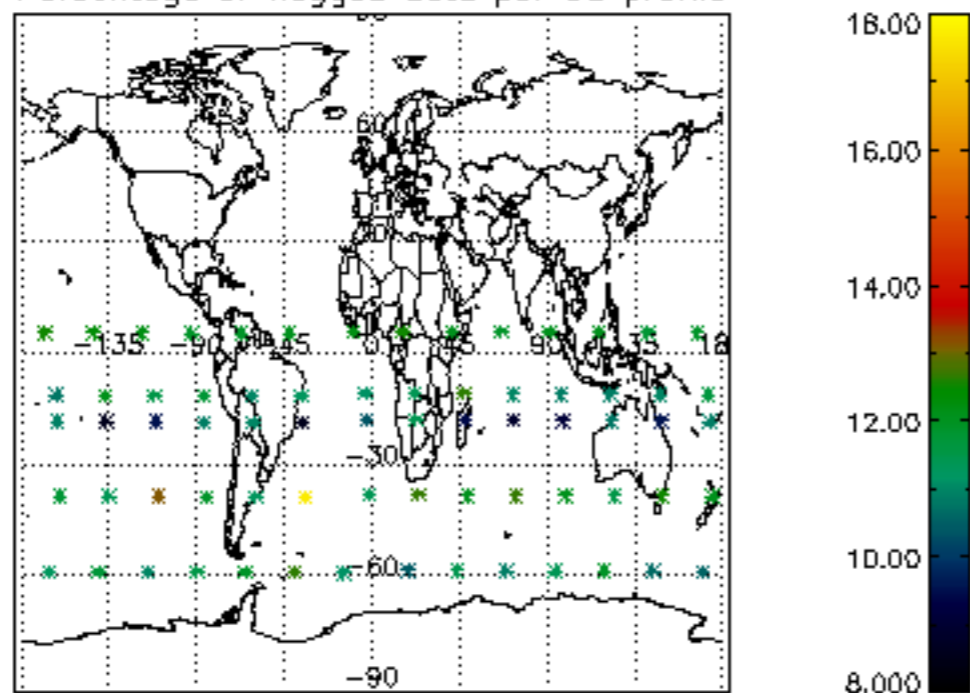
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-MAY-2007 00:01:33
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-MAY-2007 00:01:33
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-MAY-2007 00:01:33

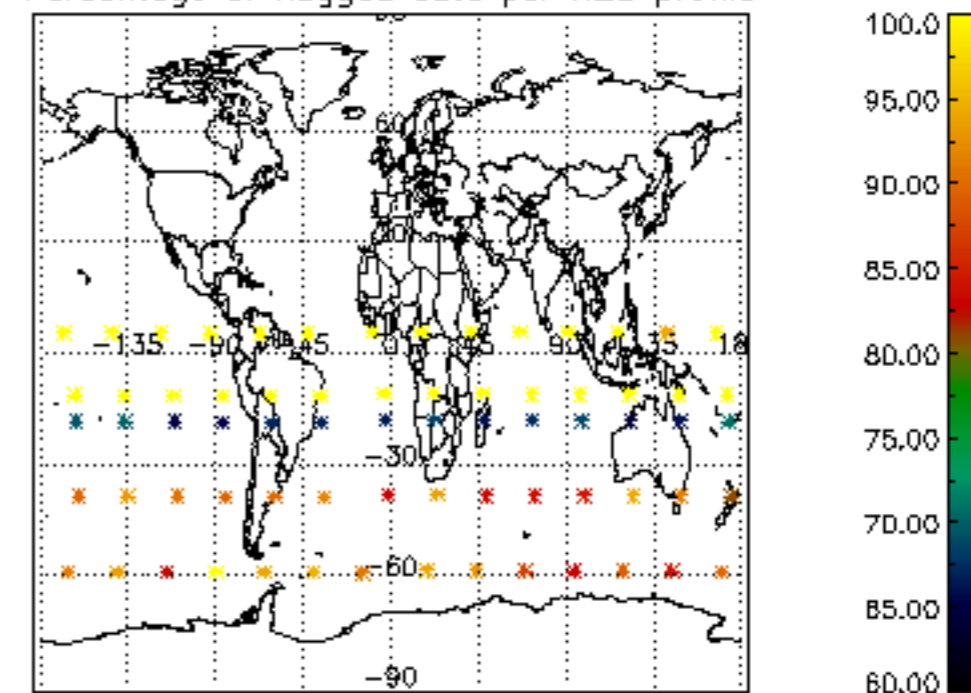




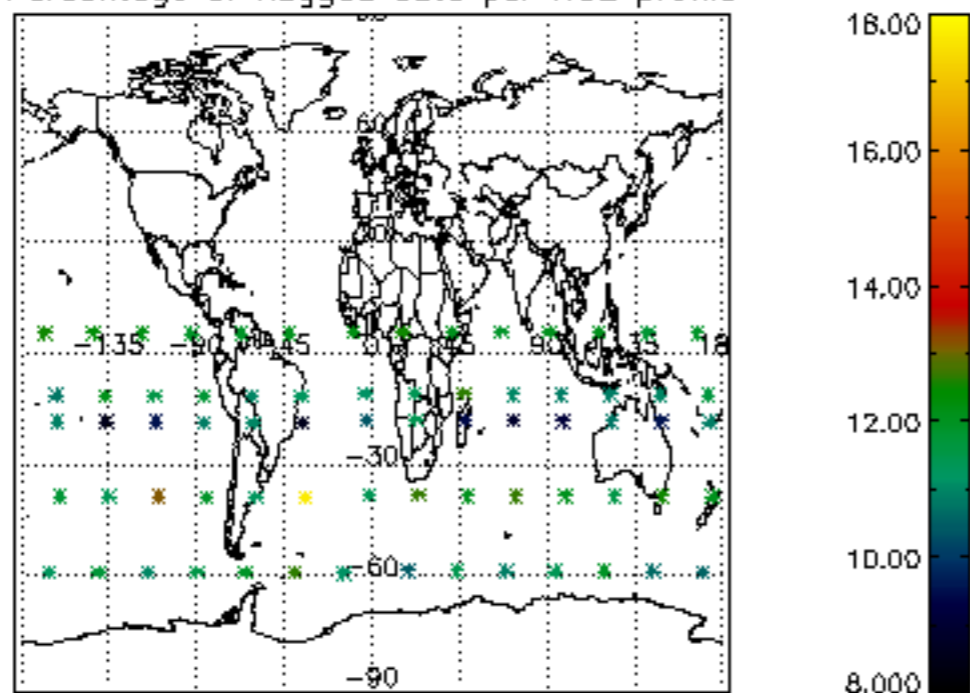
Percentage of flagged data per D3 profile



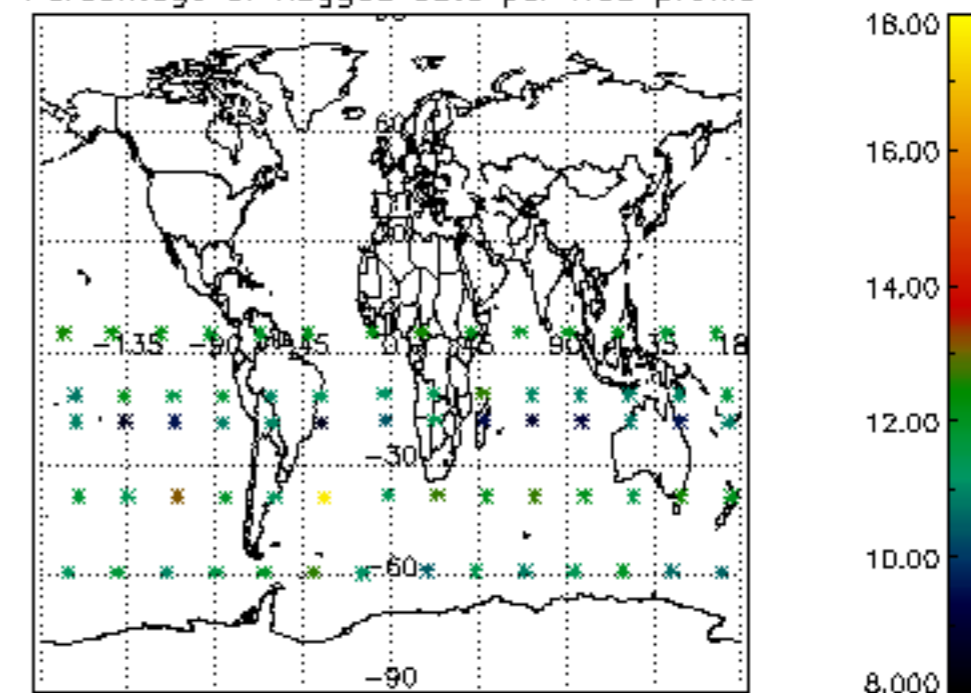
Percentage of flagged data per H2O profile

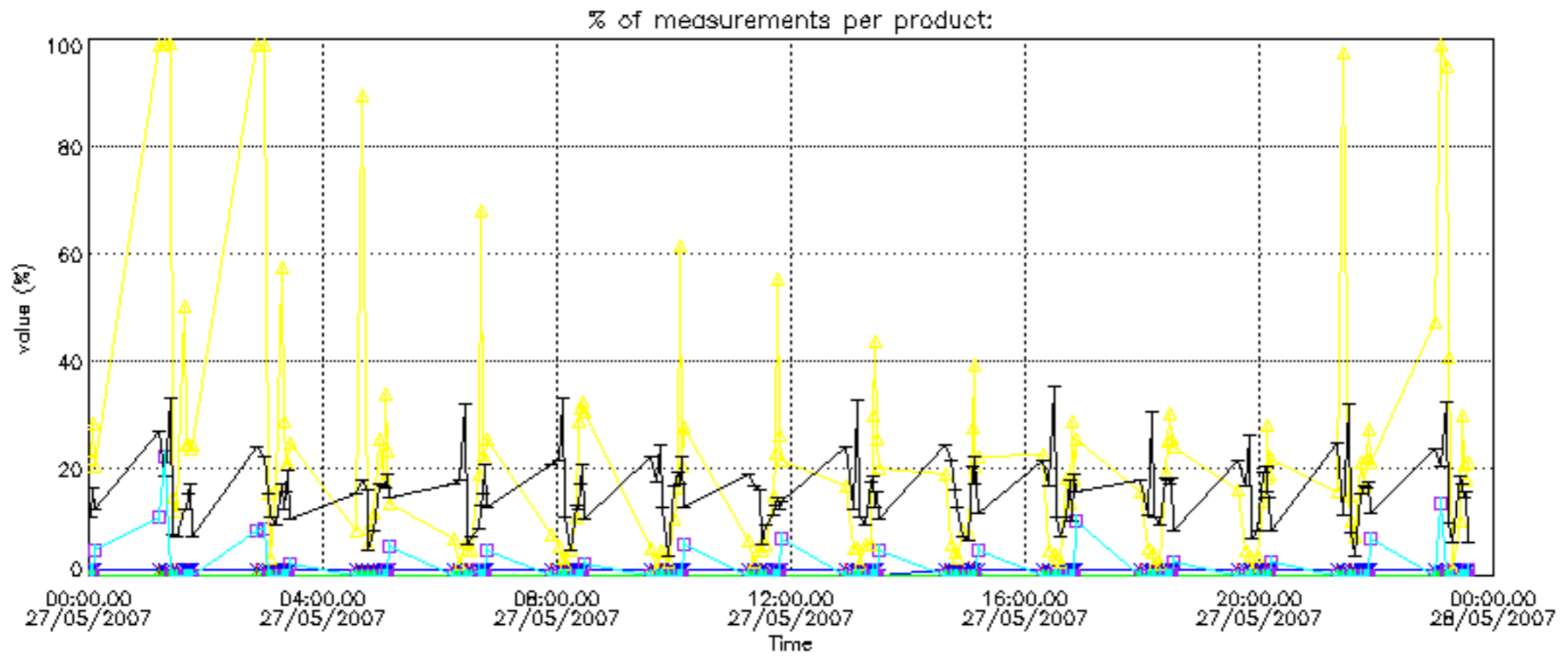


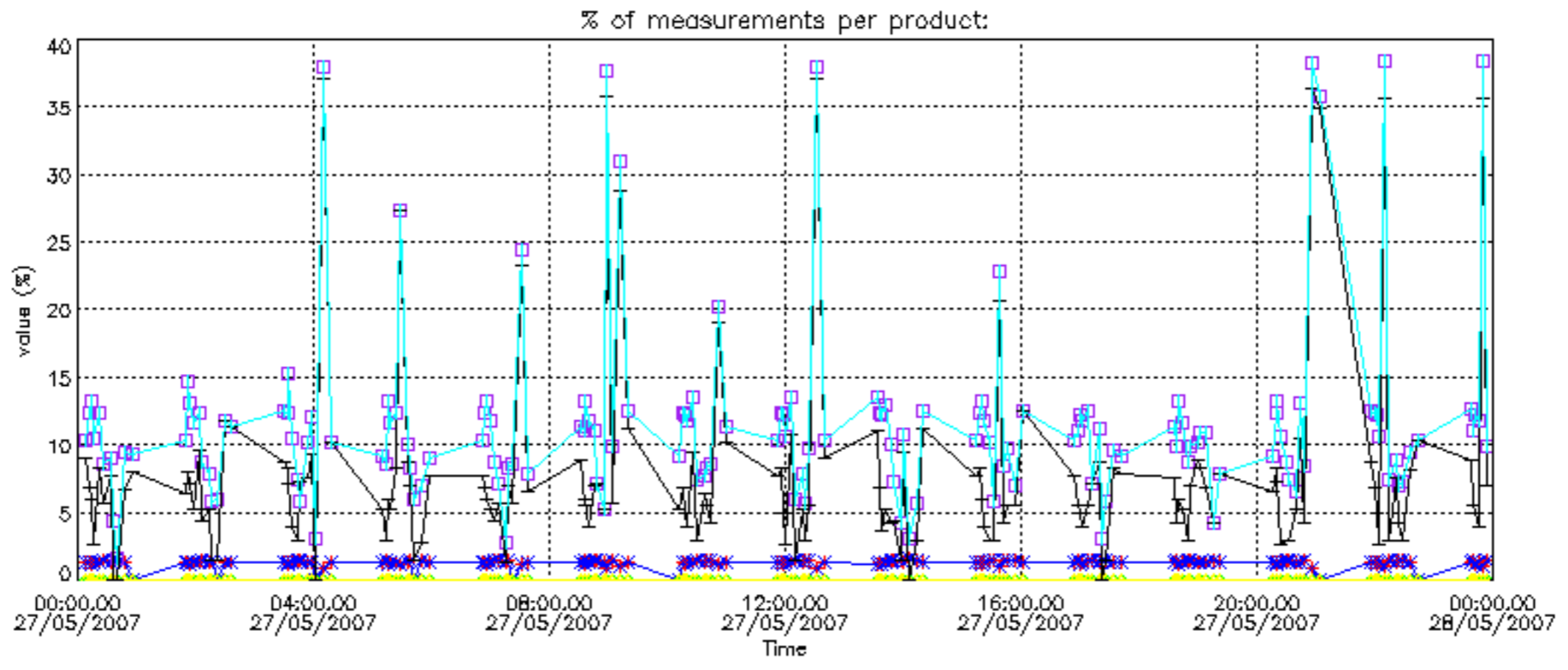
Percentage of flagged data per NO2 profile



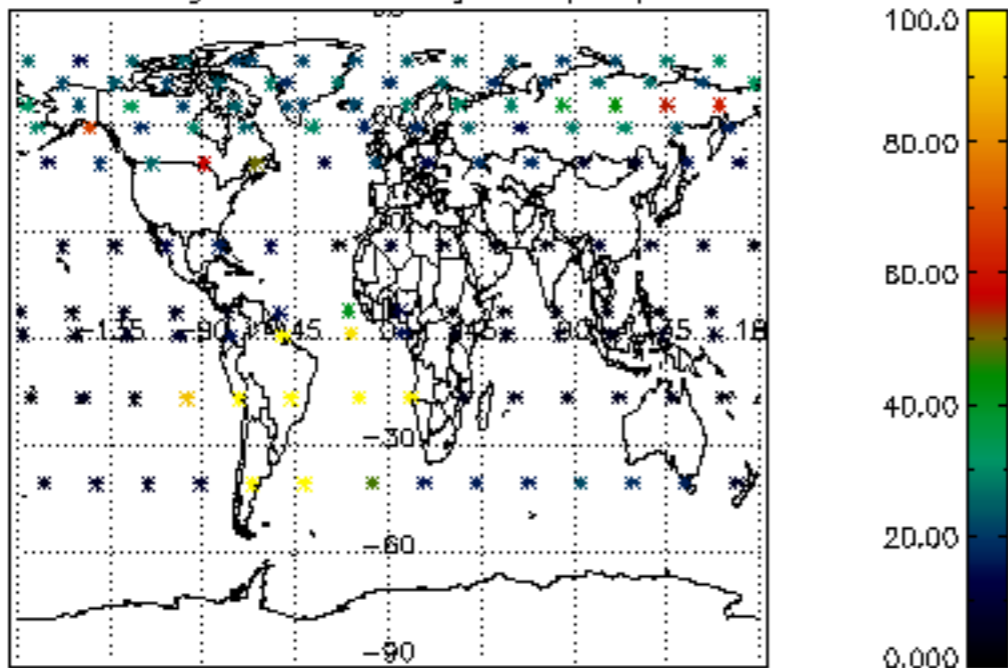
Percentage of flagged data per NO3 profile



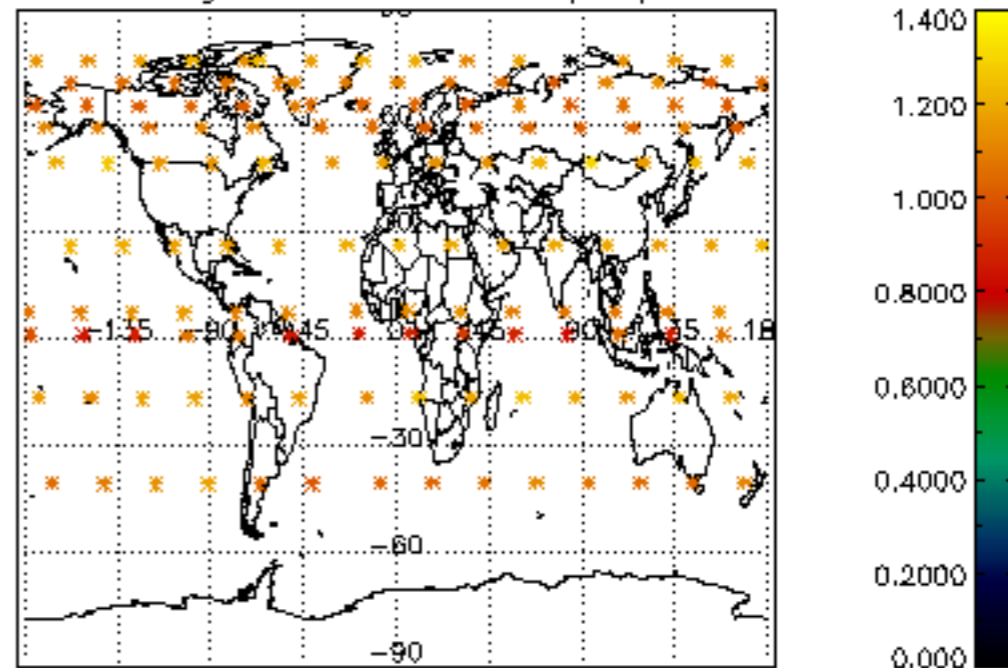




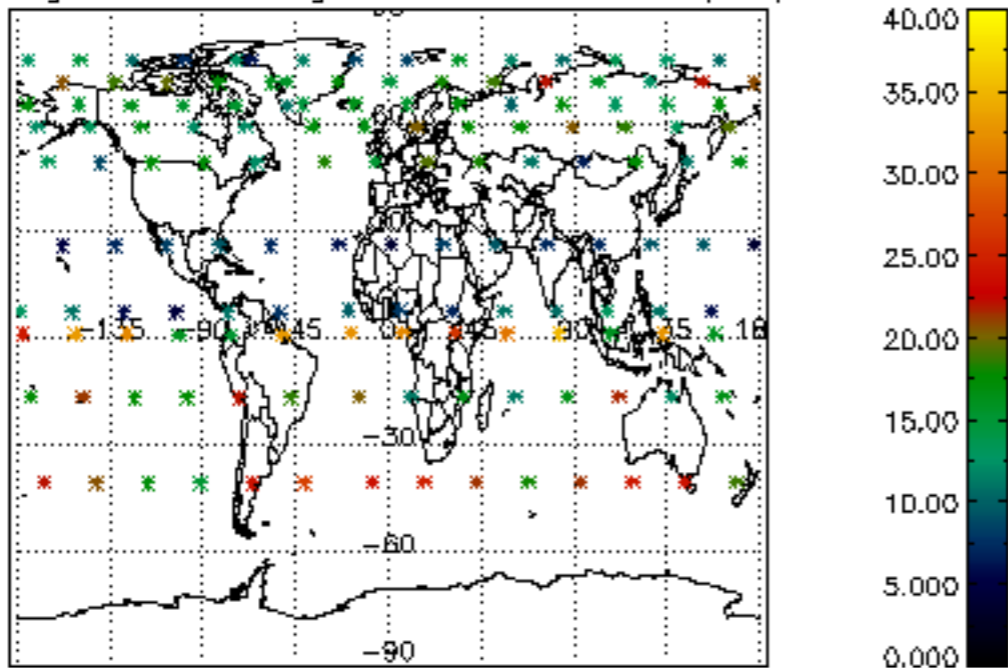
Percentage of cosmic ray hits per profile



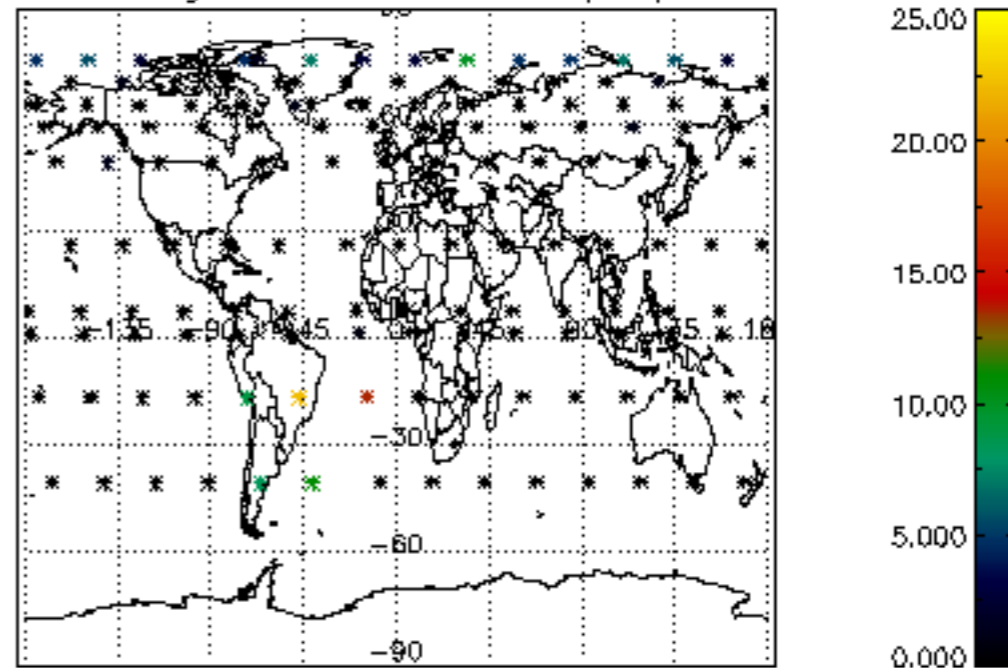
Percentage of datation errors per profile



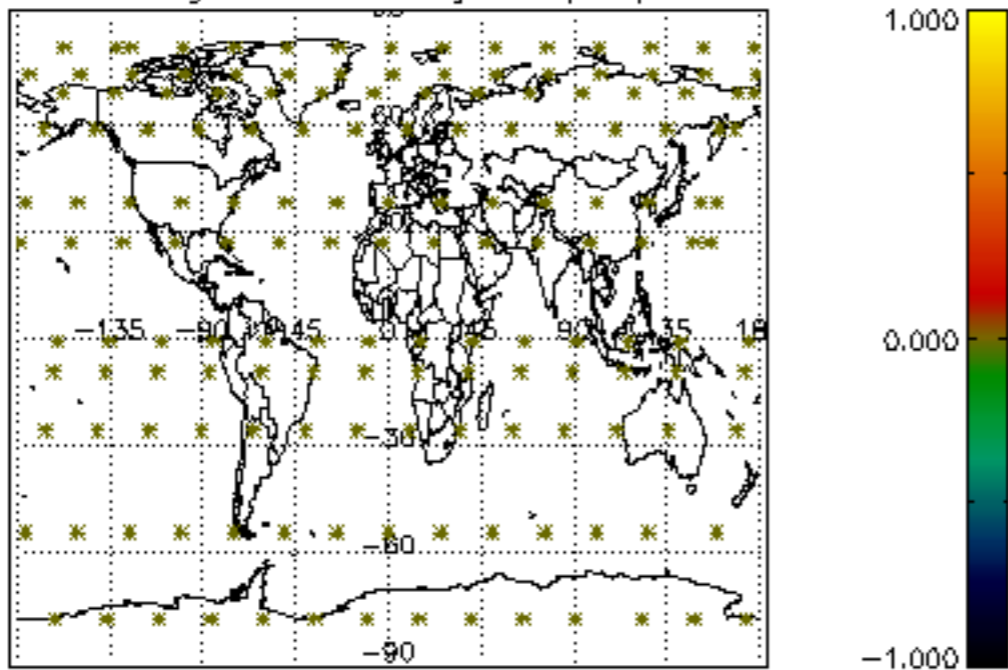
Percentage of star falling outside central band per profile



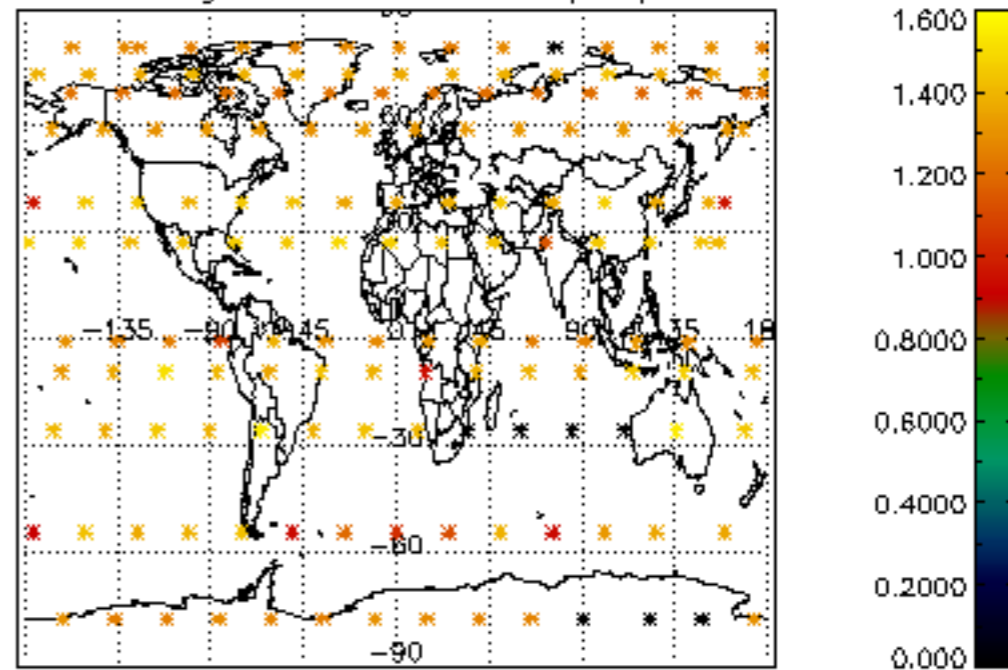
Percentage of saturation errors per profile



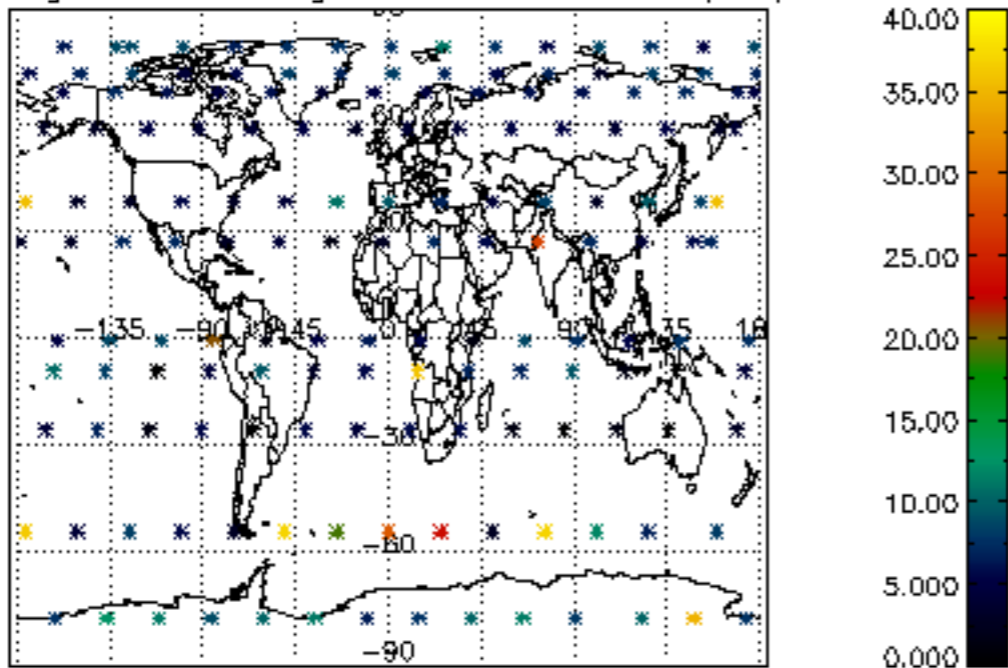
Percentage of cosmic ray hits per profile



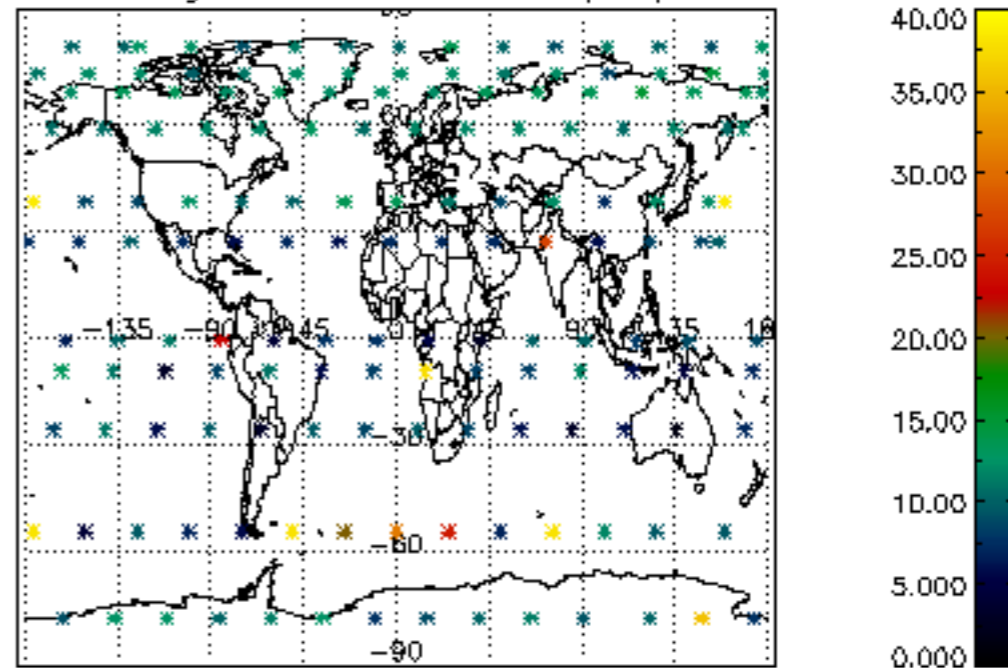
Percentage of datation errors per profile

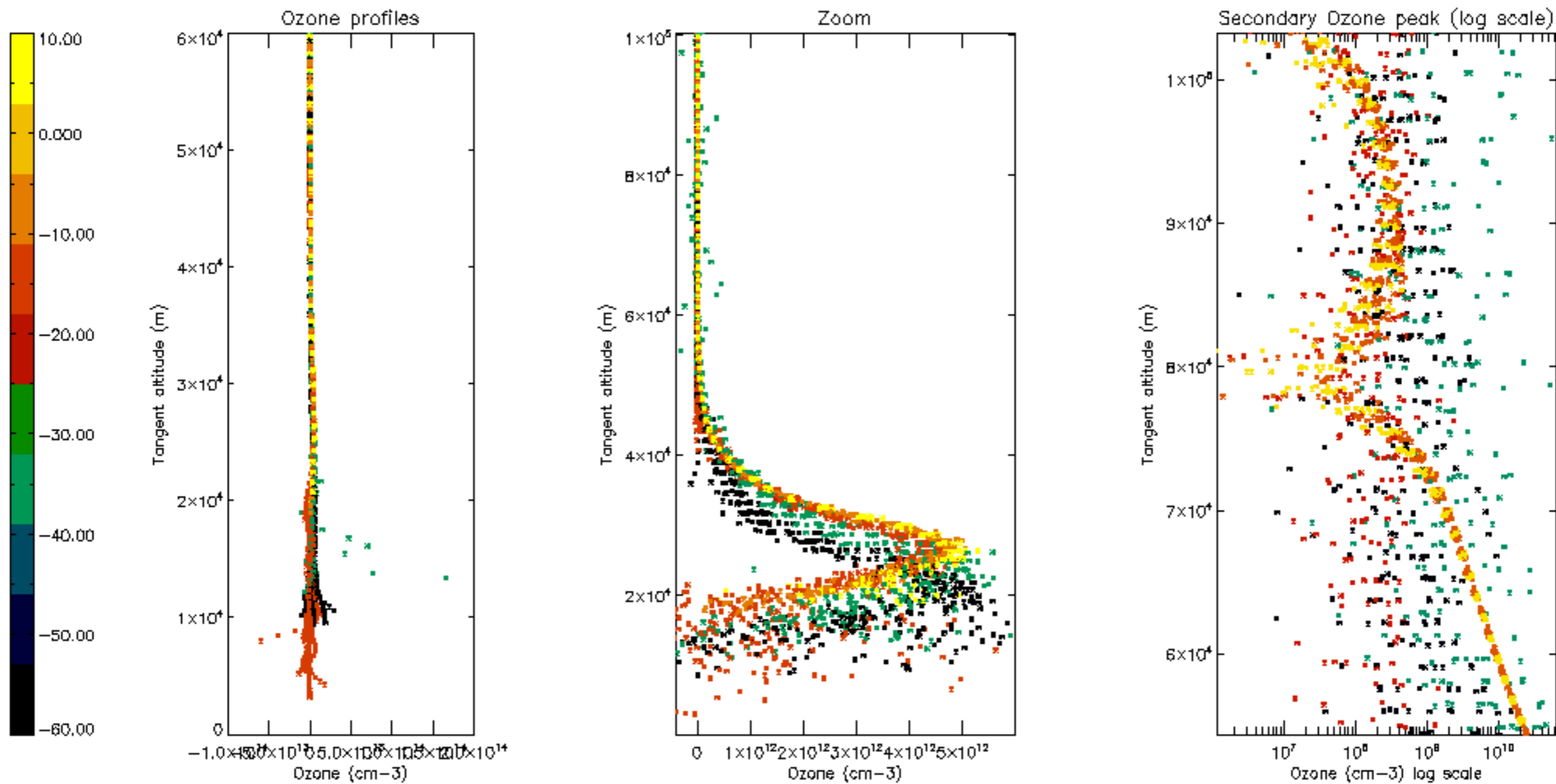


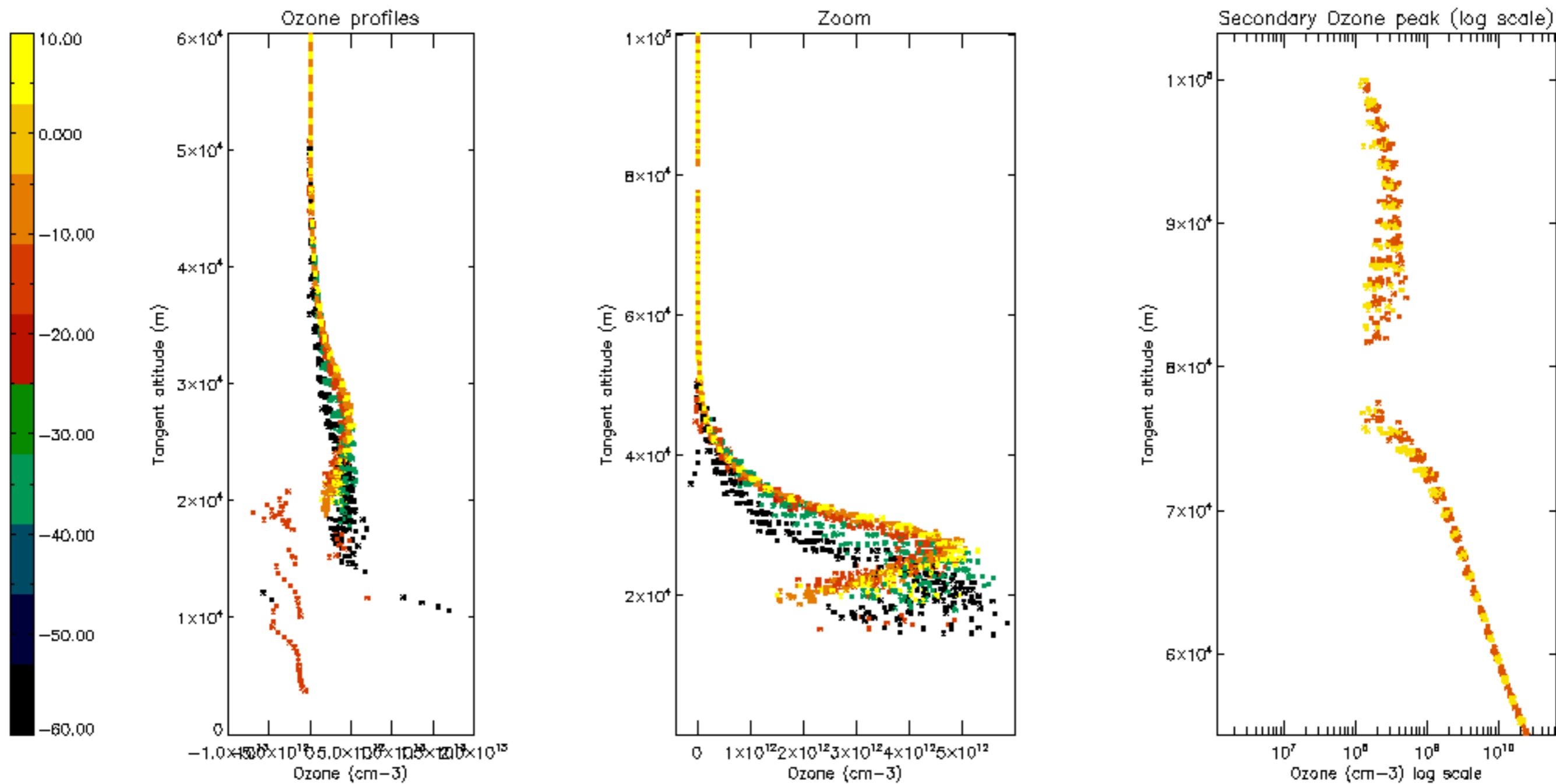
Percentage of star falling outside central band per profile



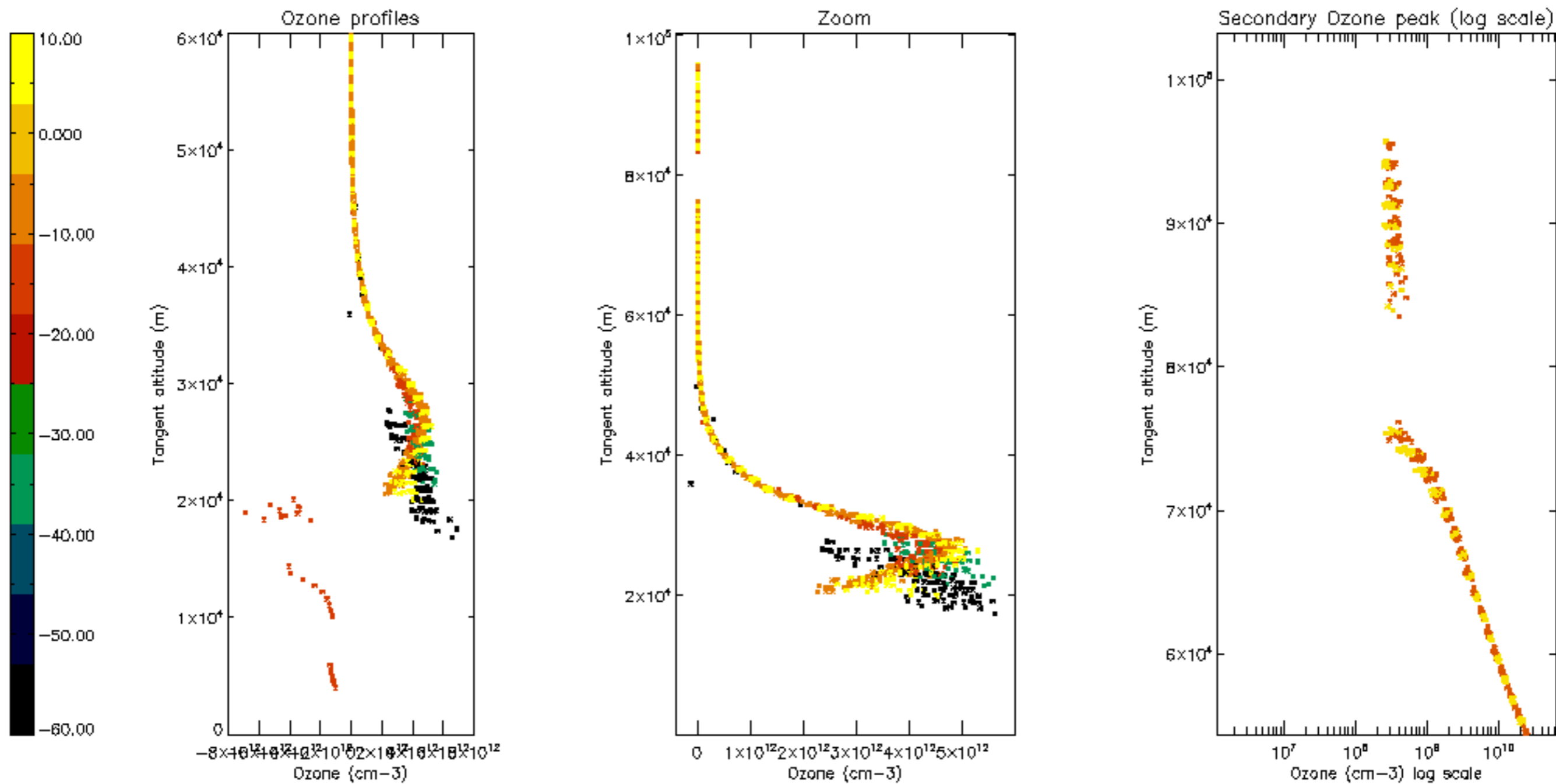
Percentage of saturation errors per profile

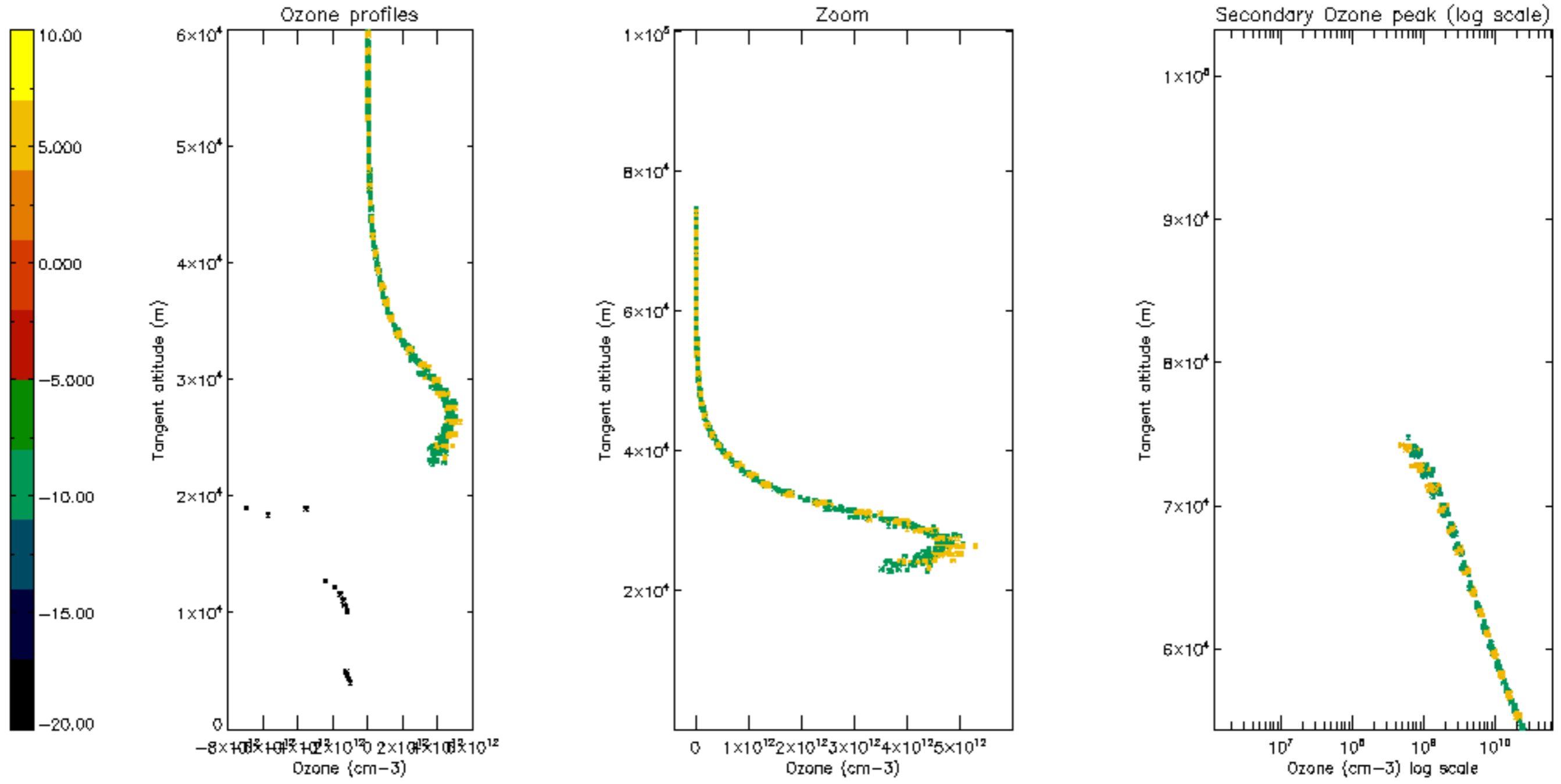


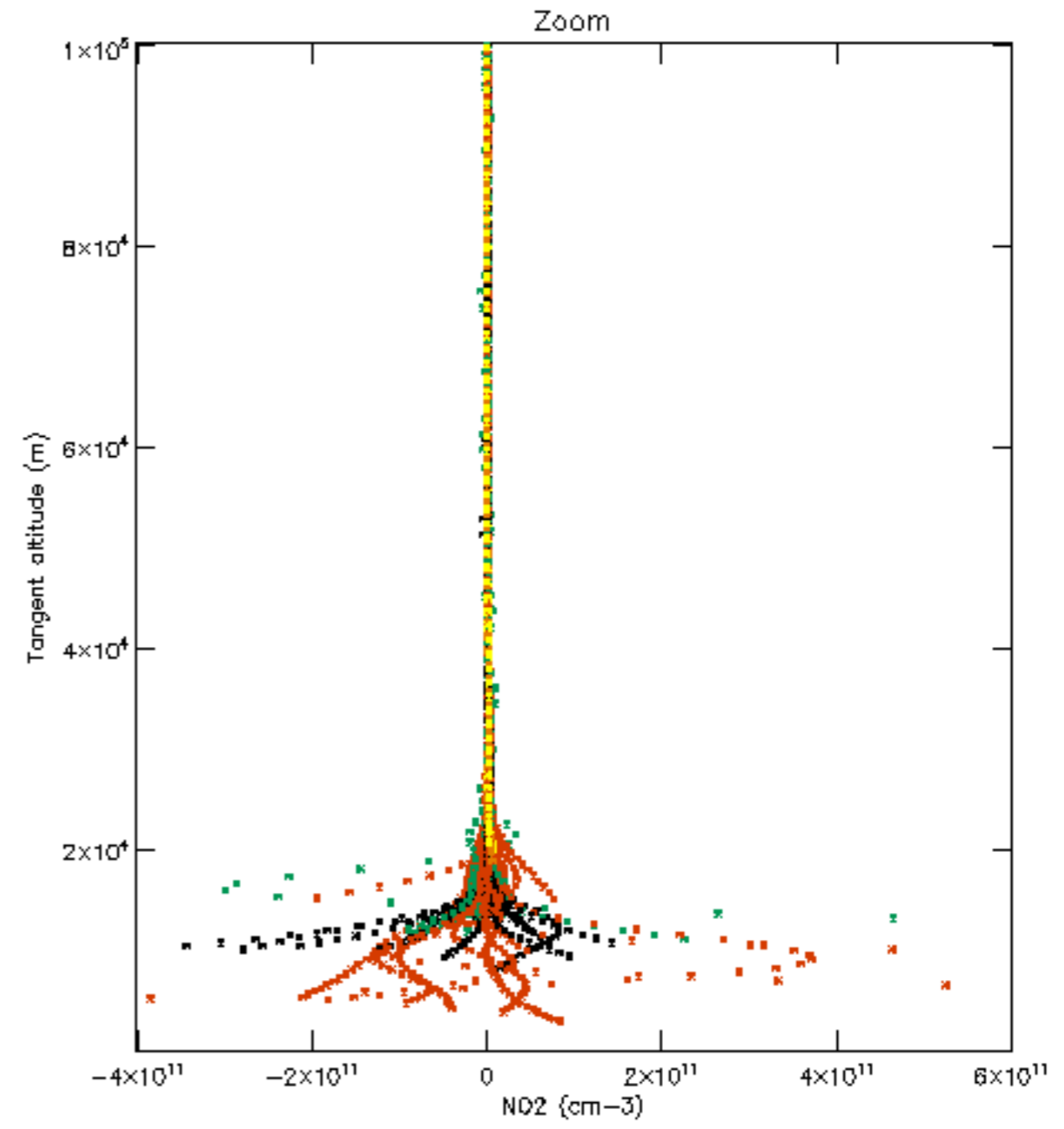
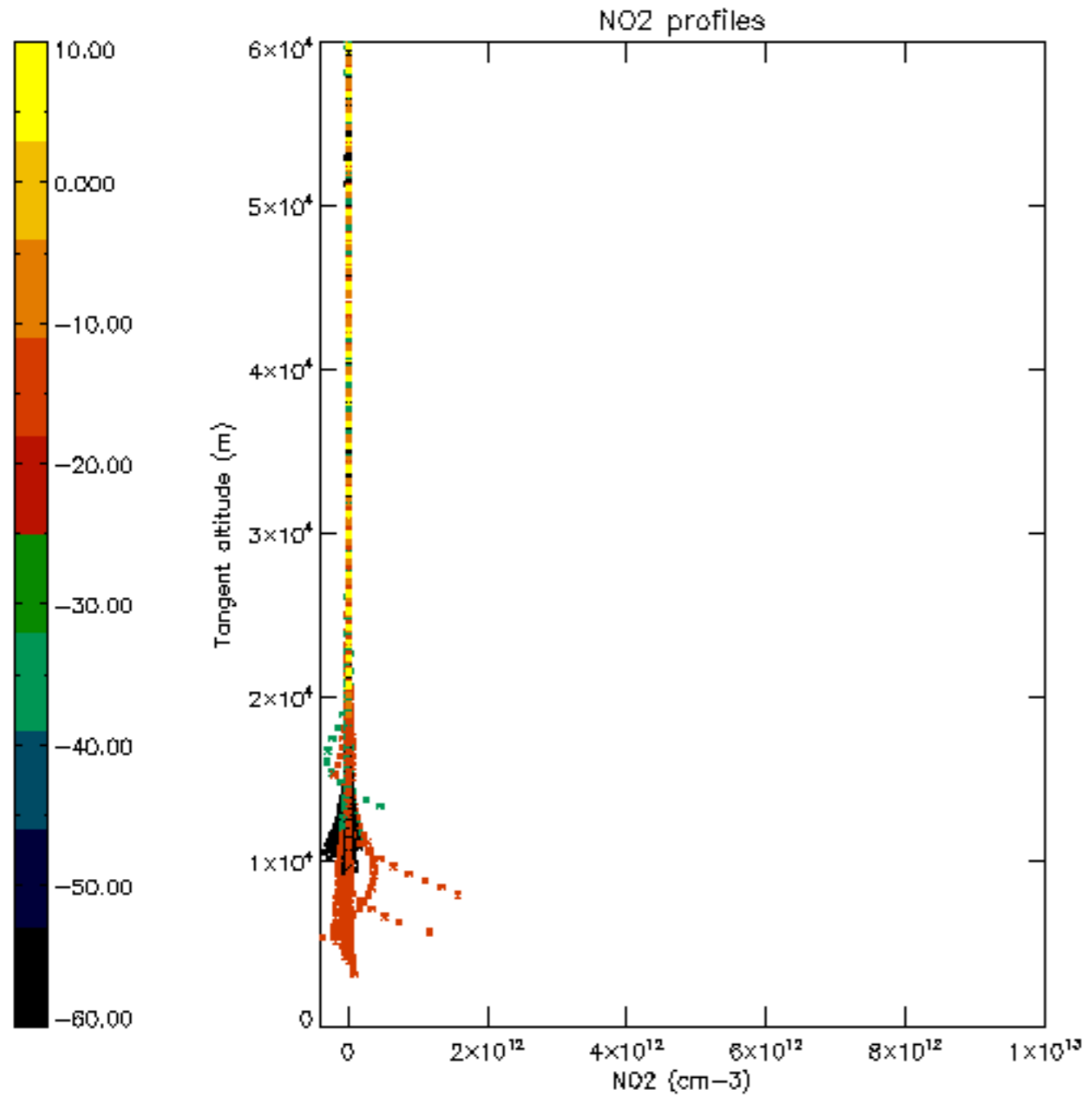


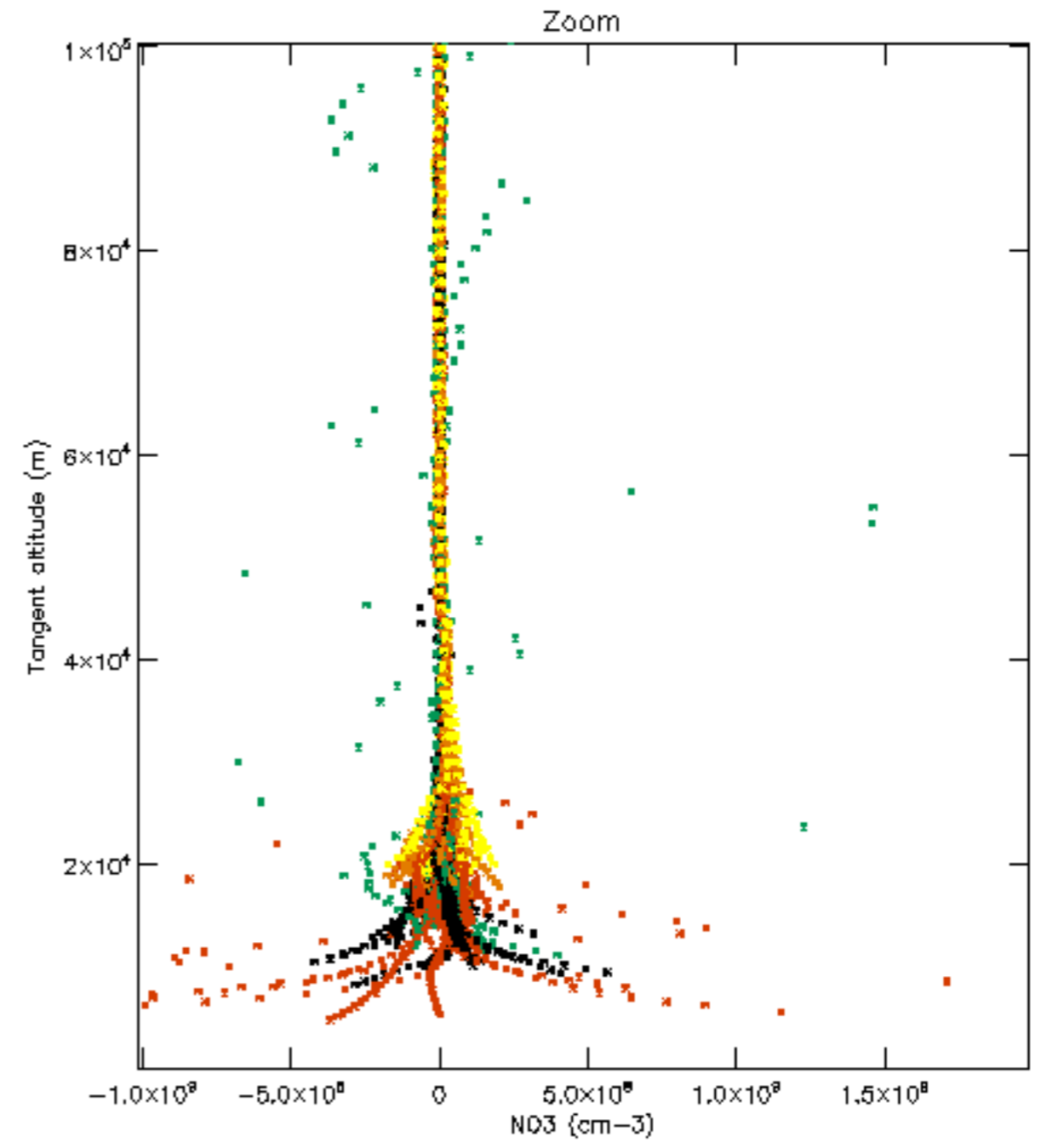
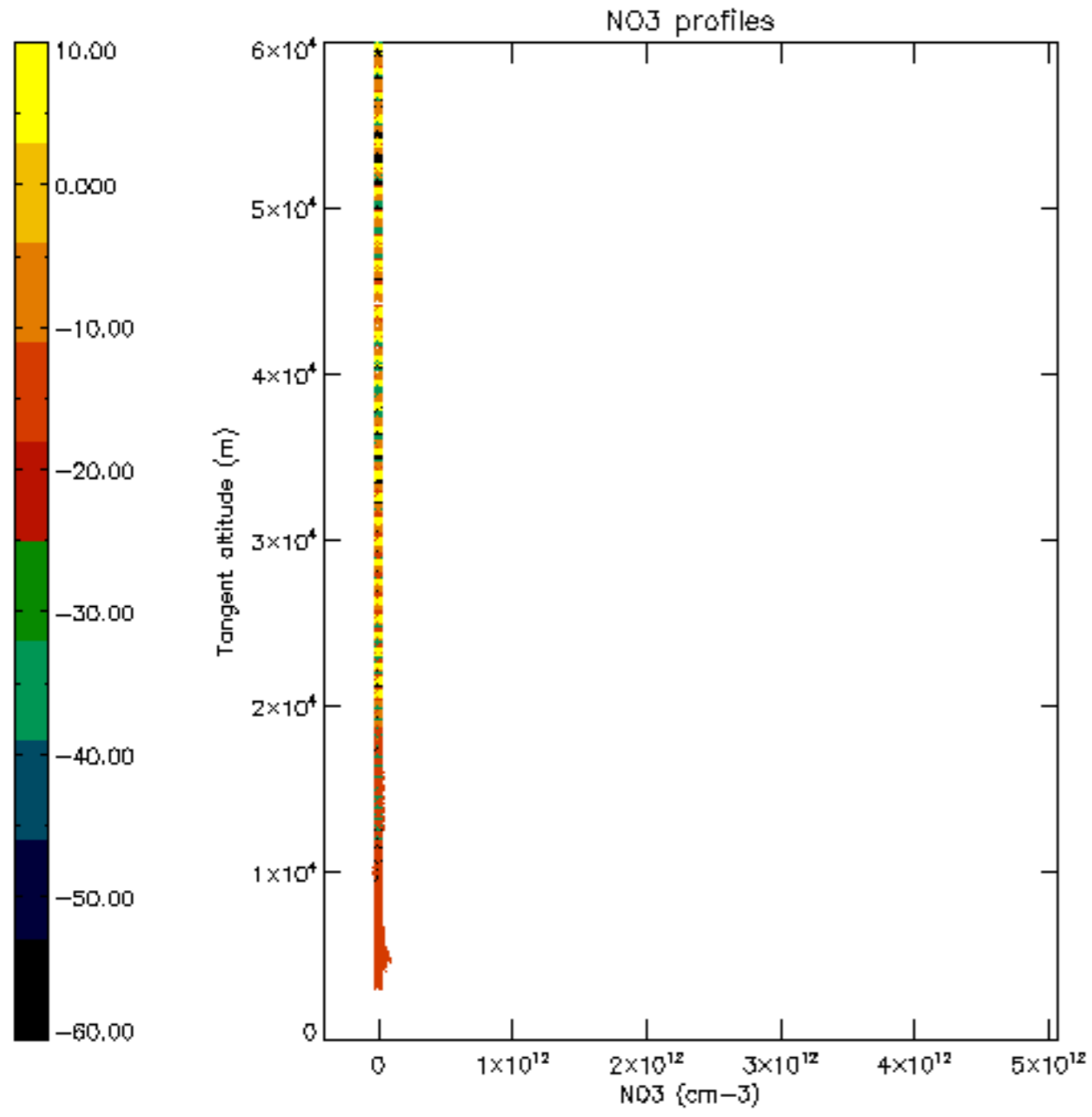


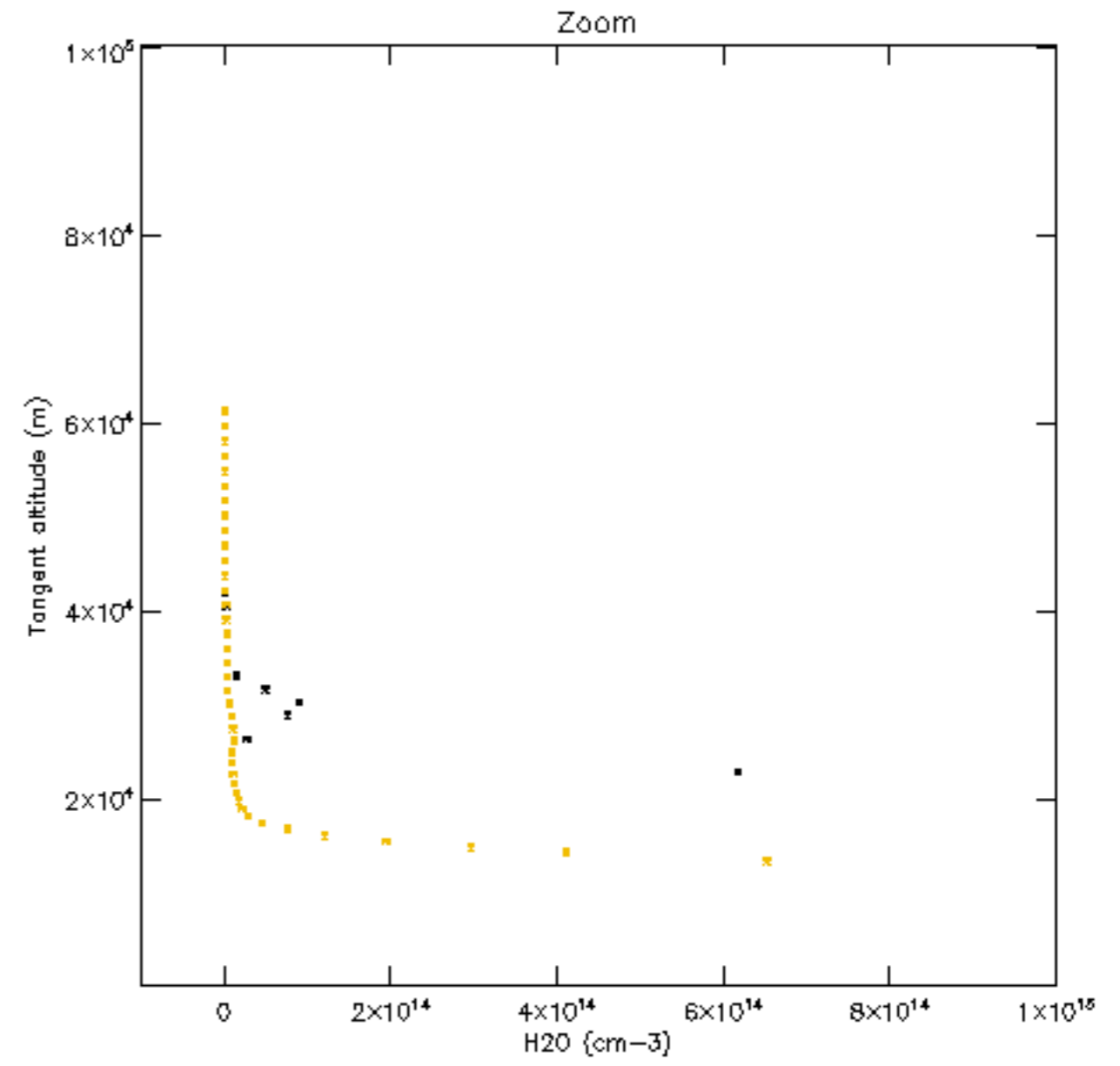
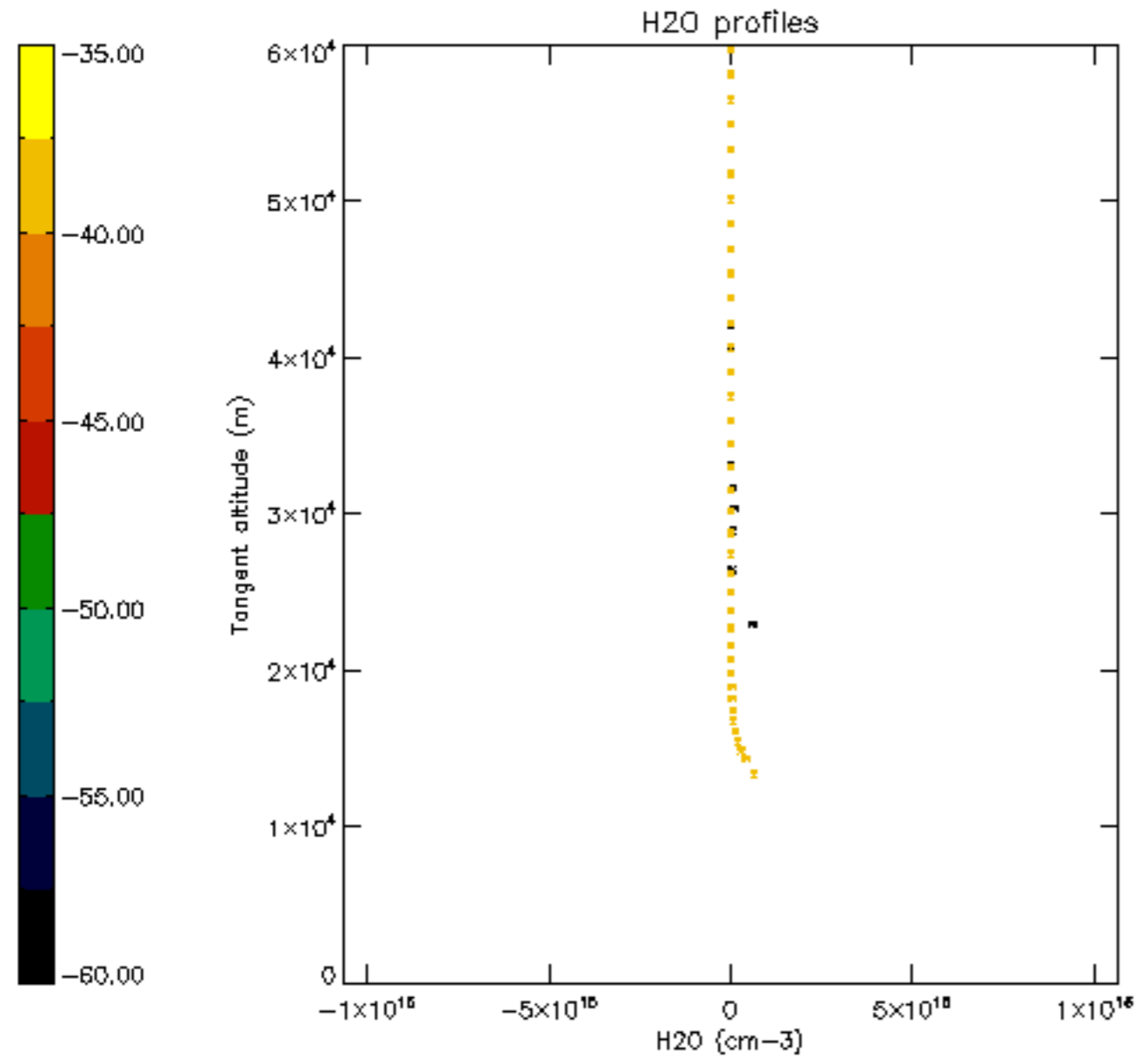


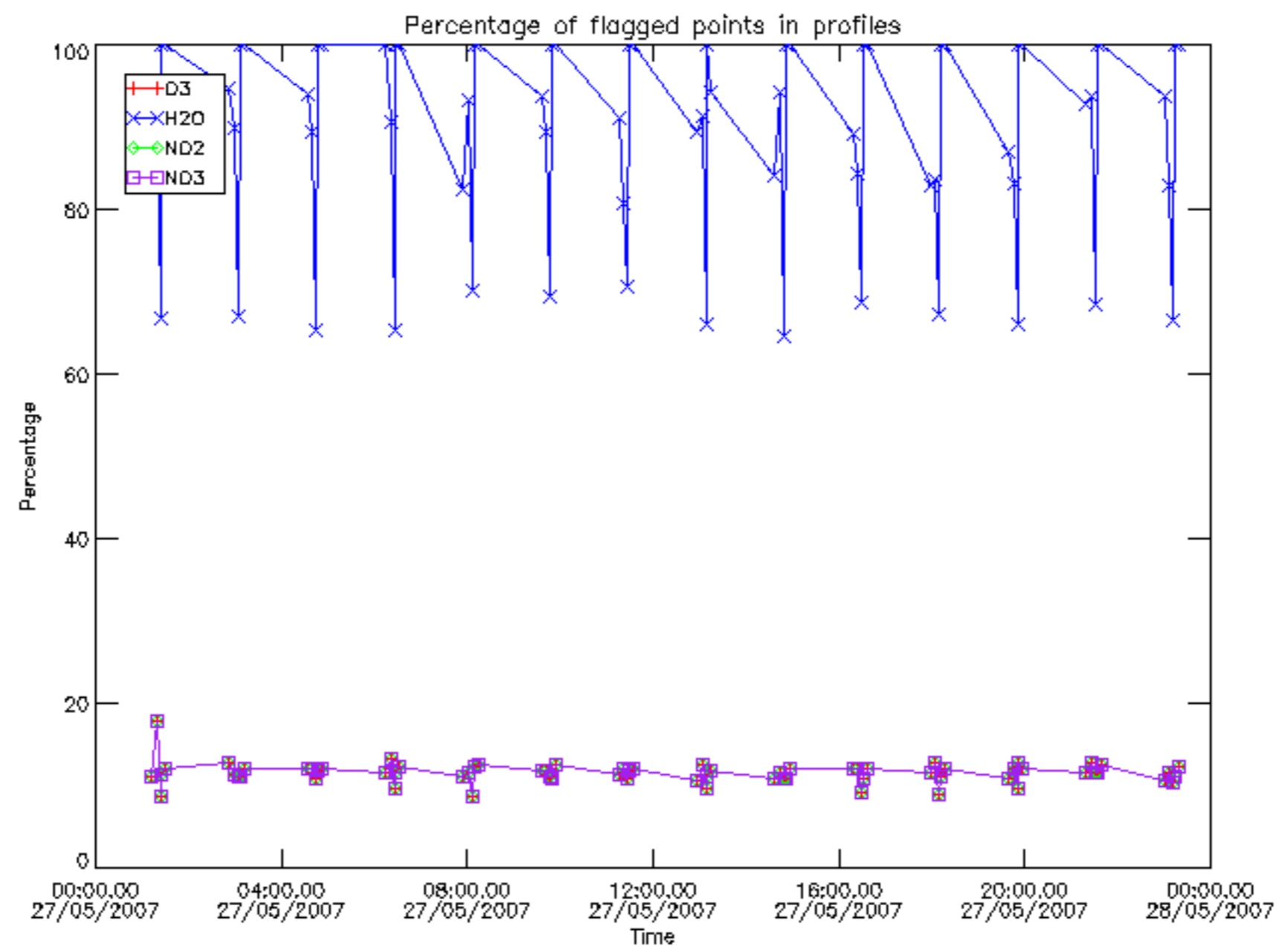




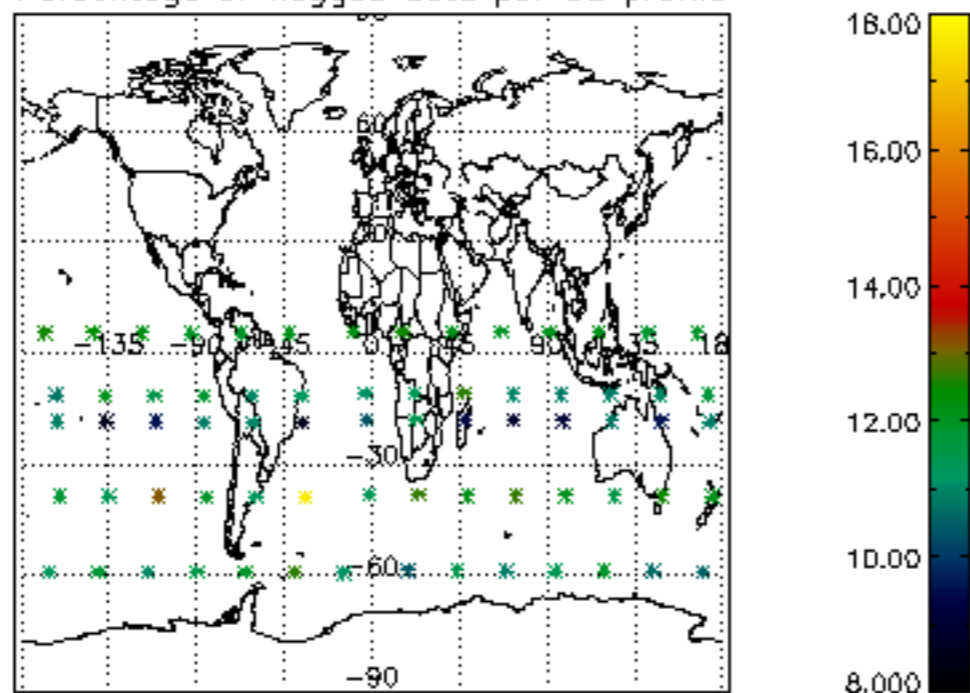




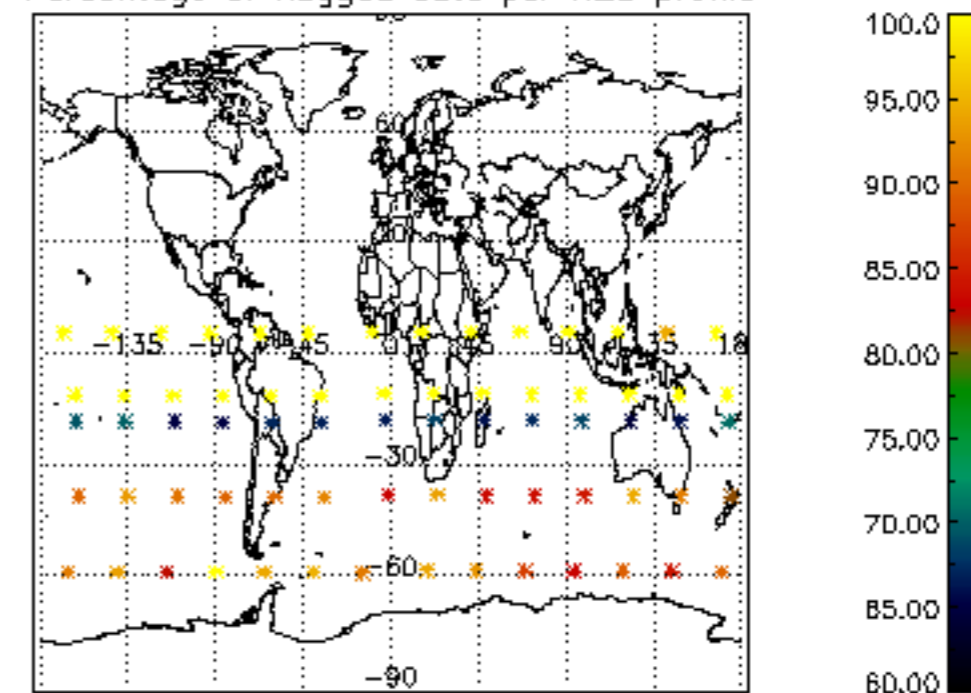




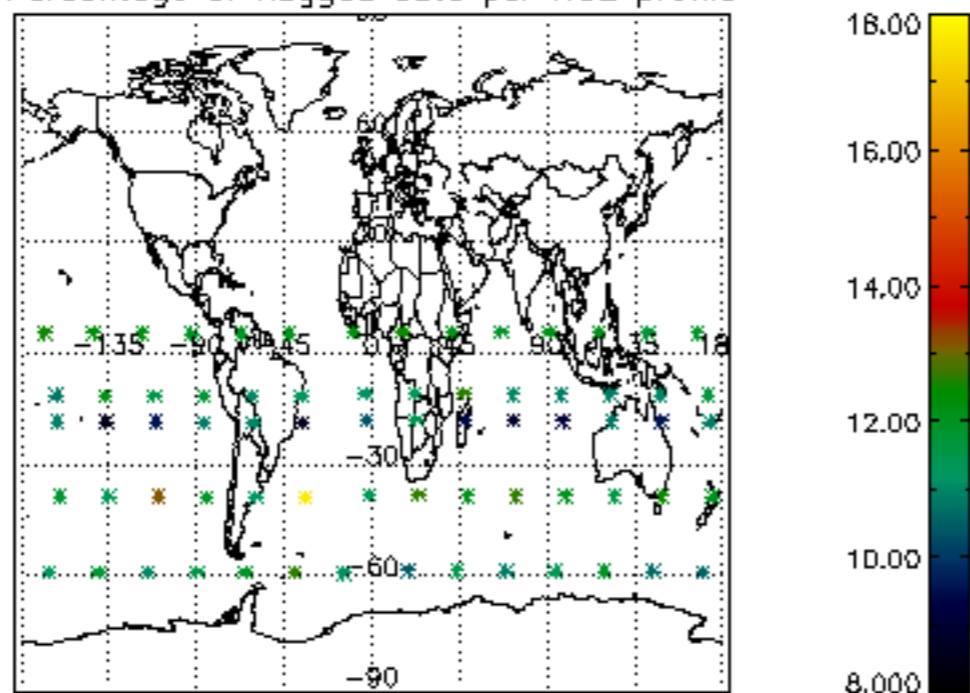
Percentage of flagged data per D3 profile



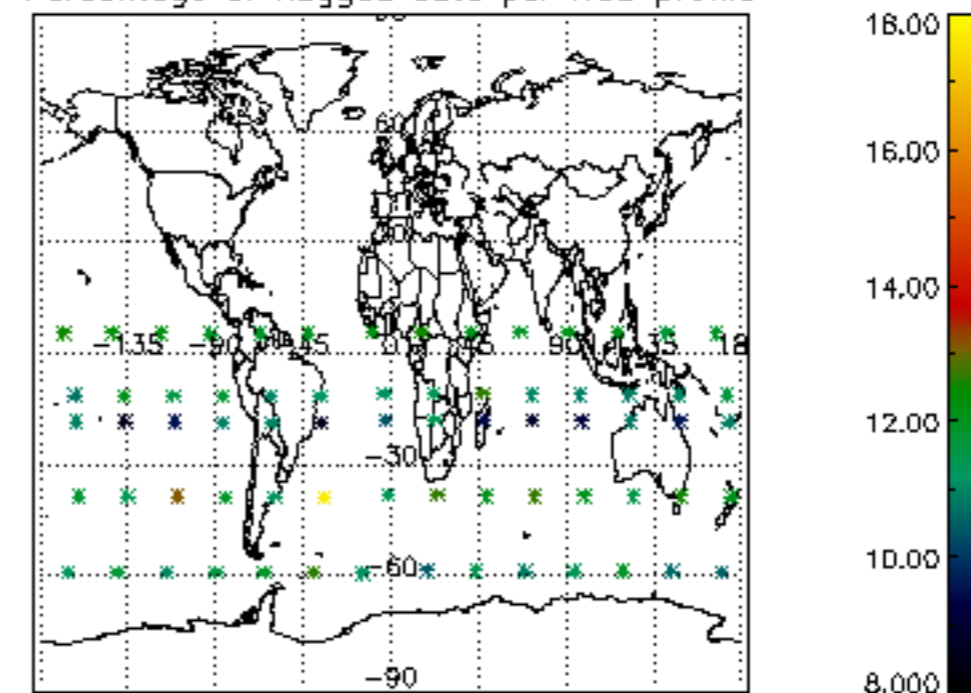
Percentage of flagged data per H2O profile

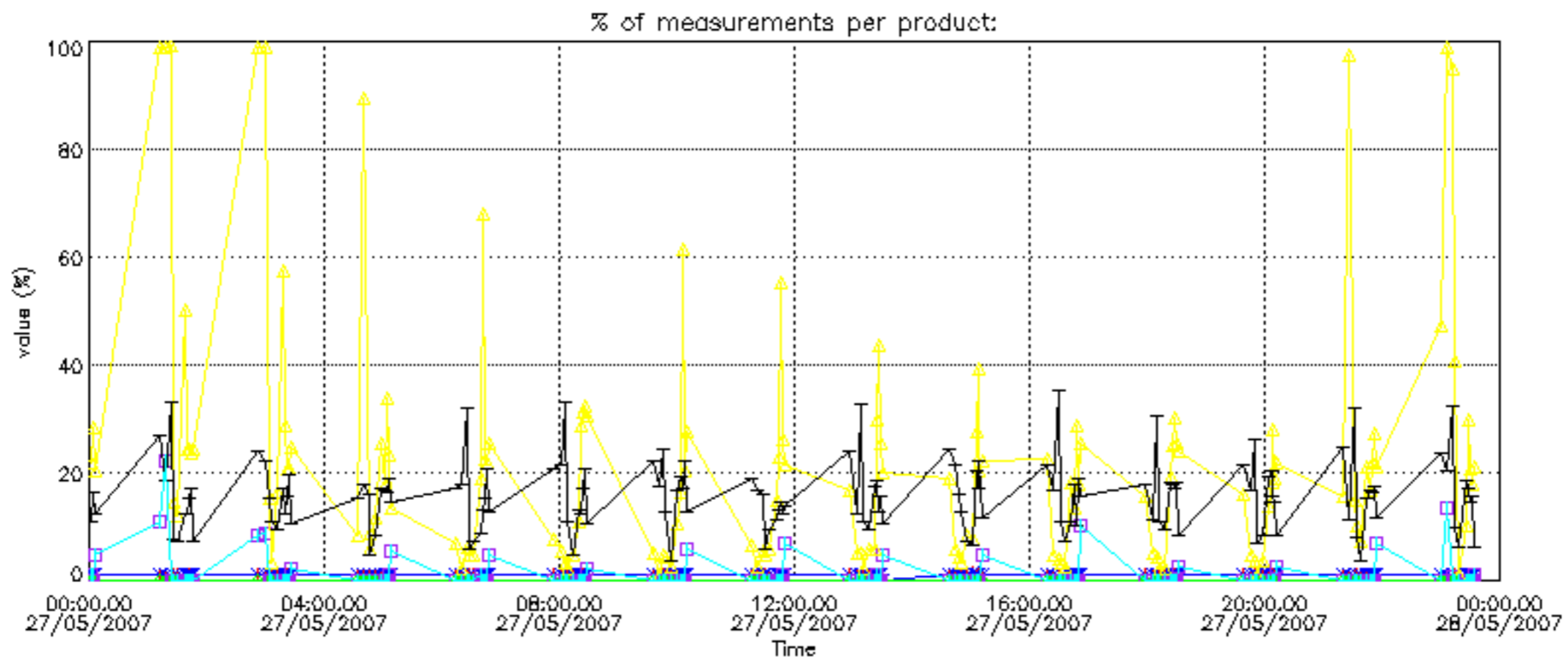


Percentage of flagged data per NO2 profile

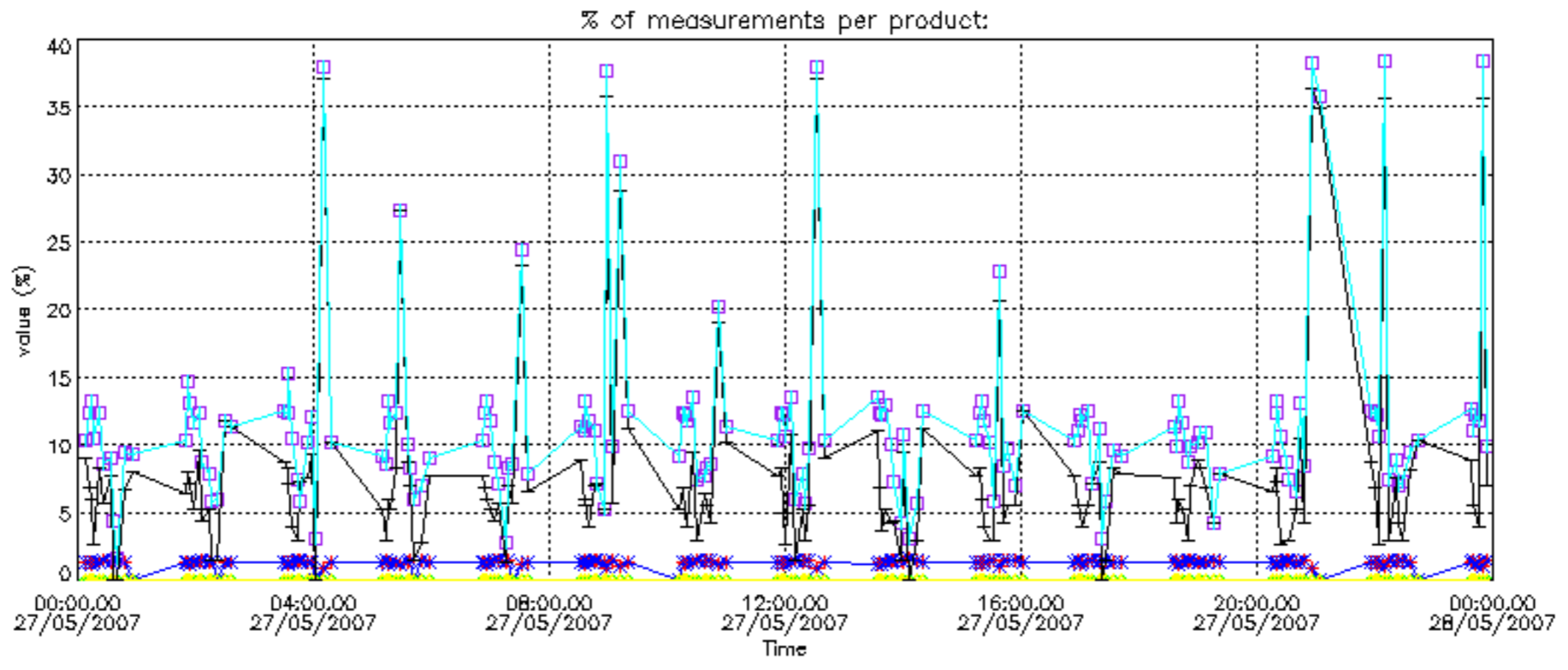


Percentage of flagged data per NO3 profile

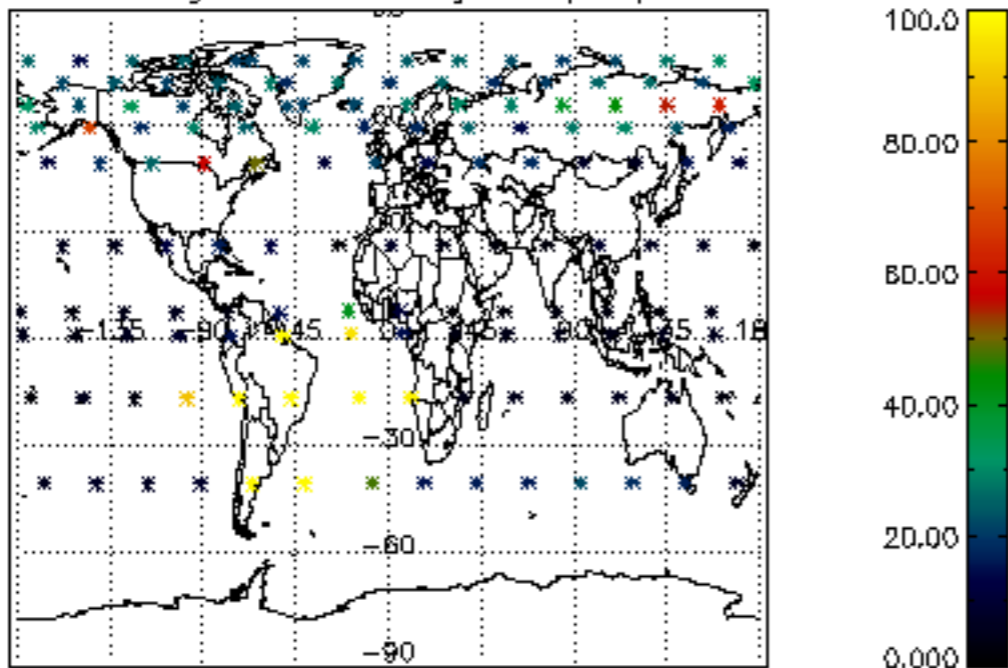




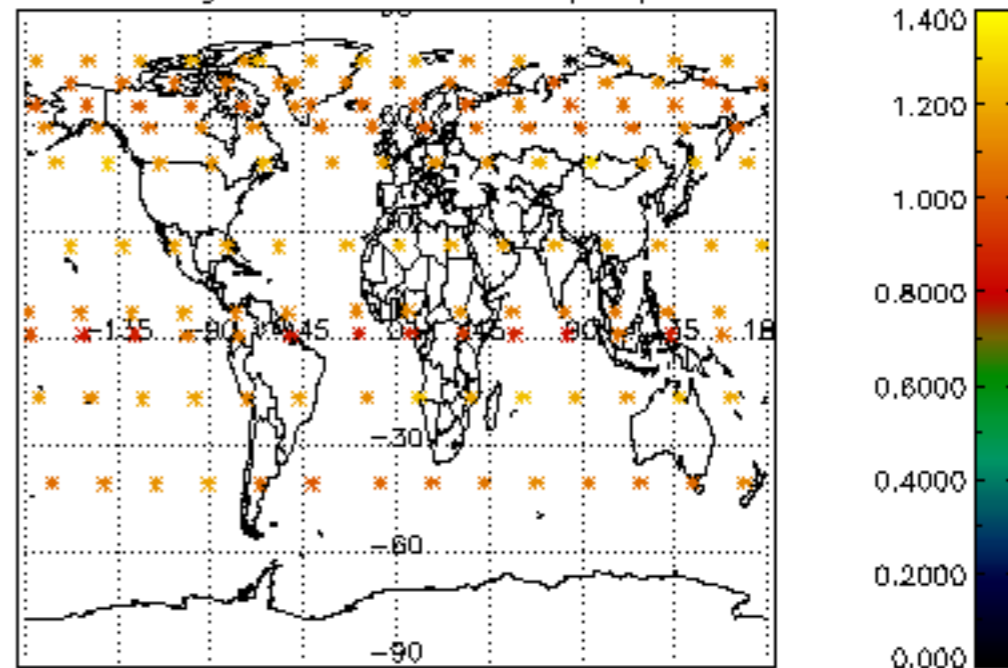




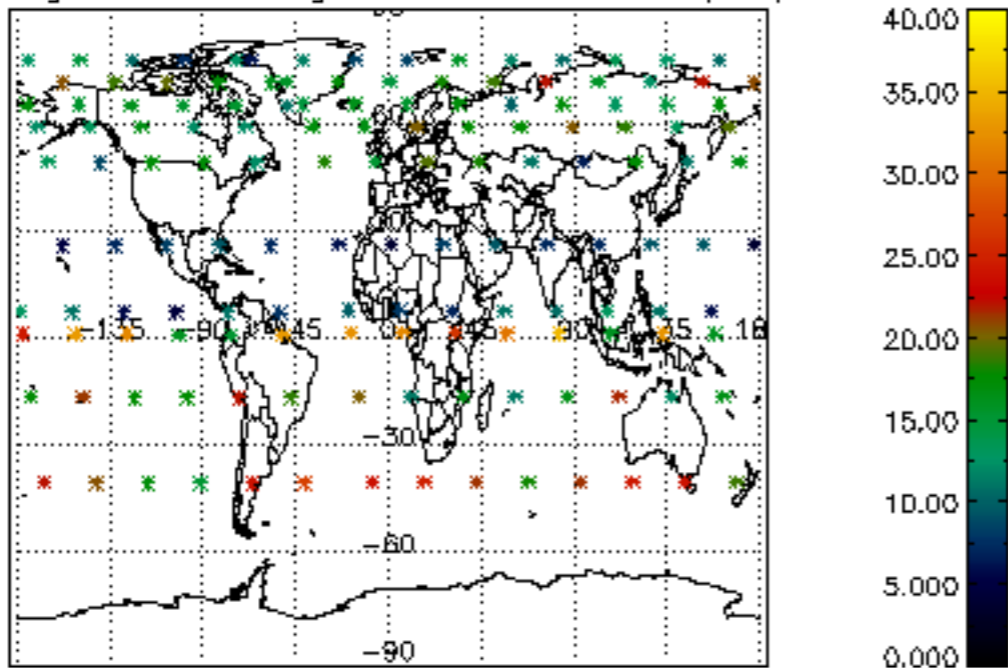
Percentage of cosmic ray hits per profile



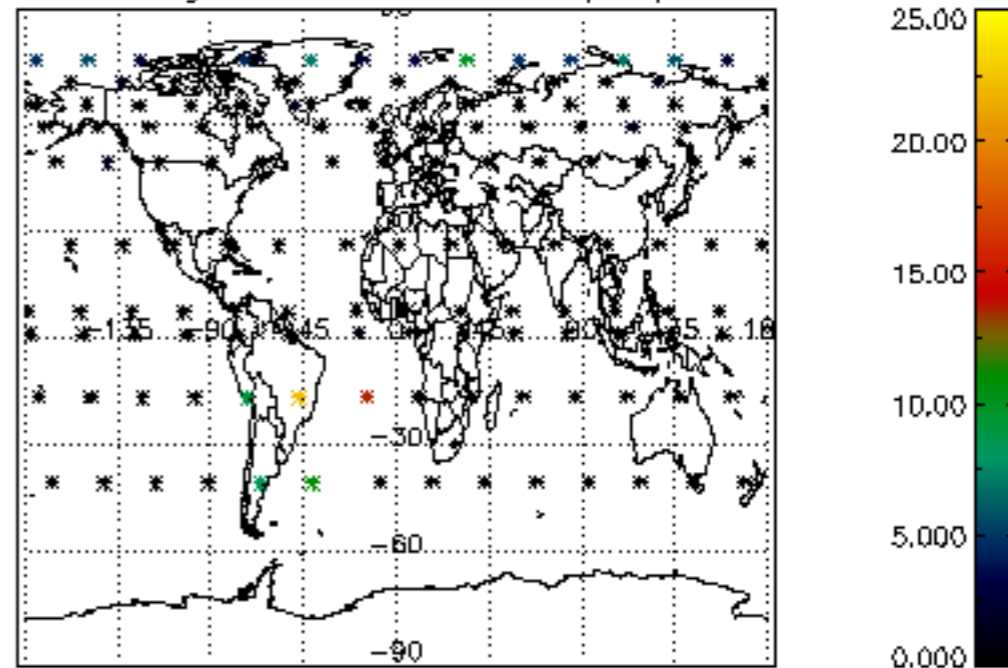
Percentage of datation errors per profile



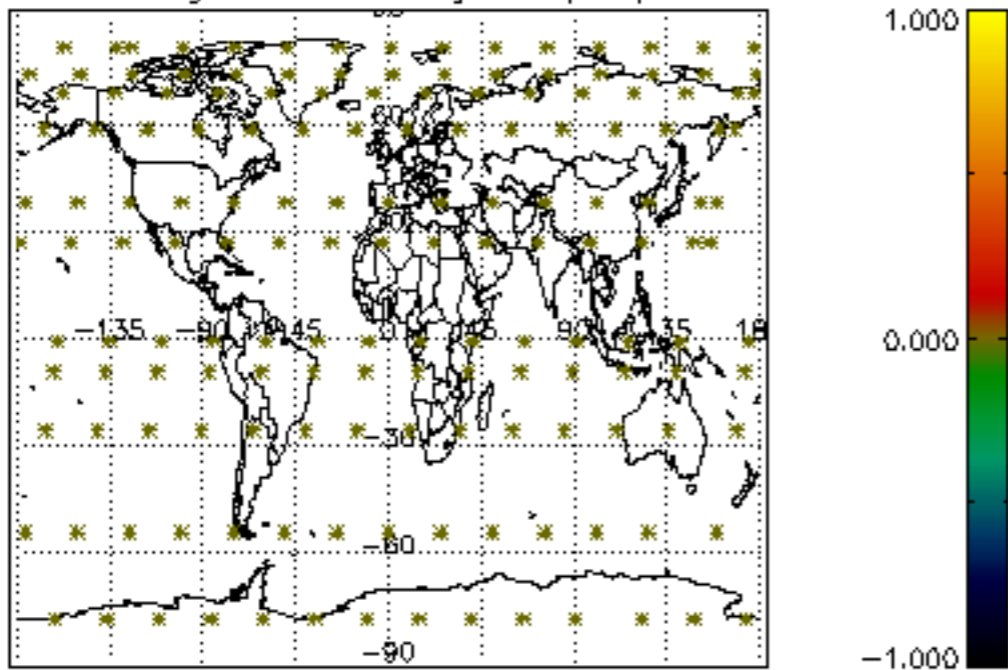
Percentage of star falling outside central band per profile



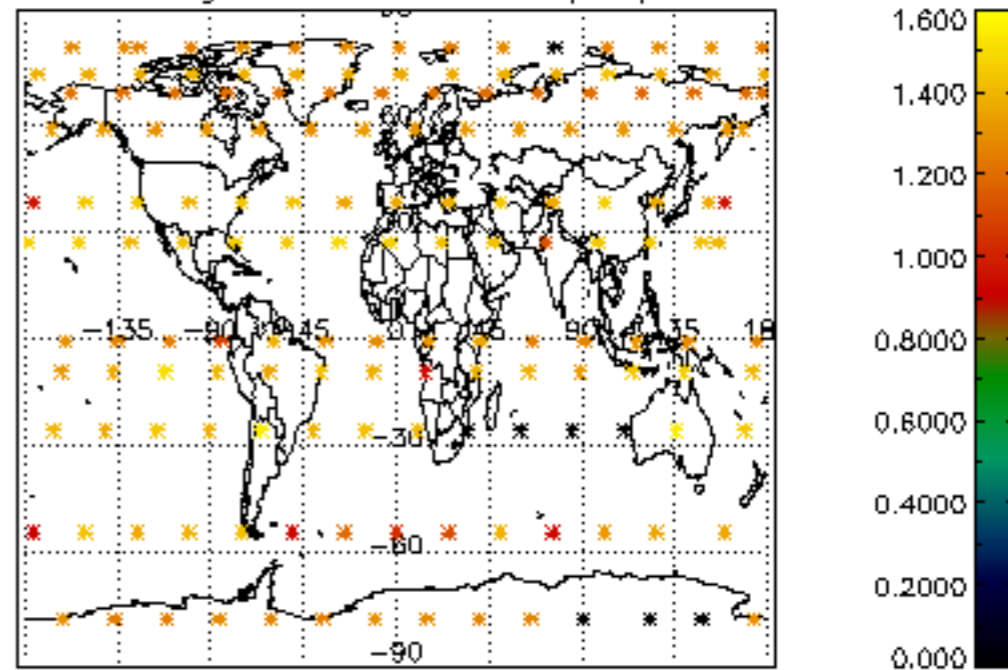
Percentage of saturation errors per profile



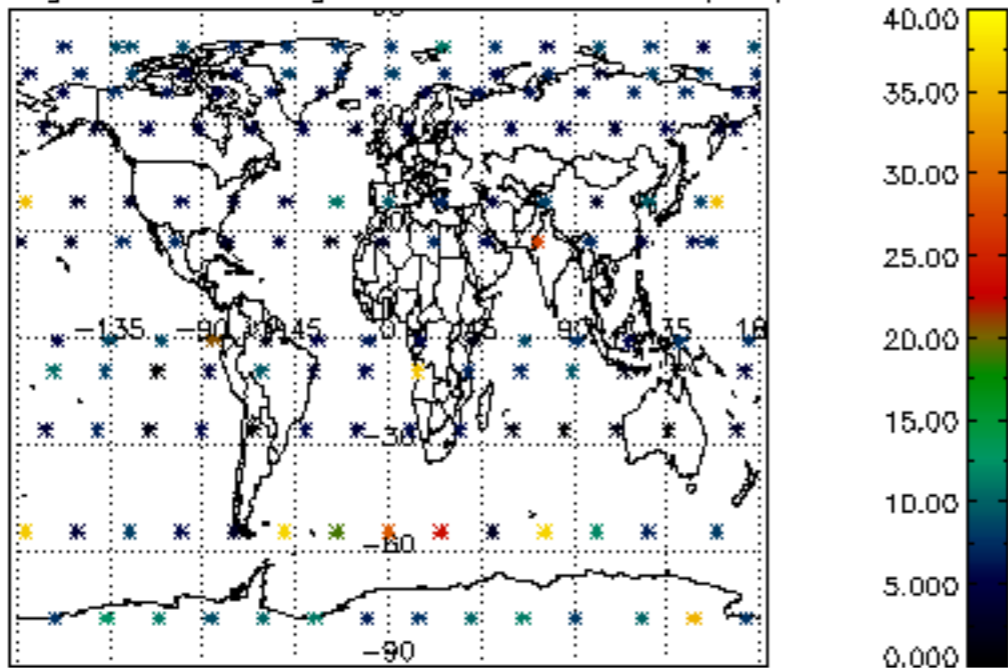
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

