

# 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 16:35:31
Data source version	GOMOS/6.01
Start time of products	11-03-2006 (11MAR2006 00:00:00)
Stop time of products	12-03-2006 (12MAR2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	242
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__2PRFIN20060311_000353_000000472045_00460_21055_7956.N1	11-MAR-2006 00:03:53	Twilight	46.500	48	30Alp Hya	1.9770	4100.0	93	21055	No
2	GOM_NL__2PRFIN20060311_000931_000000382045_00460_21055_7957.N1	11-MAR-2006 00:09:31	Bright	38.000	22	32Alp Leo	1.3600	15200.	76	21055	No
3	GOM_NL__2PRFIN20060311_001253_000000372045_00460_21055_7958.N1	11-MAR-2006 00:12:53	Bright	36.500	166	17Eps Leo	2.9800	6000.0	73	21055	No
4	GOM_NL__2PRFIN20060311_003136_000000332045_00460_21055_7959.N1	11-MAR-2006 00:31:36	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	21055	No
5	GOM_NL__2PRFIN20060311_003919_000000342045_00460_21055_7960.N1	11-MAR-2006 00:39:19	Bright	33.500	89	5Alp Cep	2.4510	8000.0	67	21055	No
6	GOM_NL__2PRFIN20060311_004425_000000352045_00460_21055_7961.N1	11-MAR-2006 00:44:25	Bright	35.000	19	50Alp Cyg	1.2460	10500.	70	21055	No
7	GOM_NL__2PRFIN20060311_004559_000000362045_00460_21055_7962.N1	11-MAR-2006 00:45:59	Bright	36.000	66	37Gam Cyg	2.2080	5900.0	72	21055	No
8	GOM_NL__2PRFIN20060311_004737_000000342045_00460_21055_7963.N1	11-MAR-2006 00:47:37	Bright	33.500	92	53Eps Cyg	2.5000	4500.0	67	21055	No
9	GOM_NL__2PRFIN20060311_011249_000000372045_00460_21055_7964.N1	11-MAR-2006 01:12:49	Dark	36.500	45	Alp Pav	1.9400	26000.	73	21055	No
10	GOM_NL__2PRFIN20060311_011937_000000392045_00461_21056_8101.N1	11-MAR-2006 01:19:37	Dark	39.000	43	Alp TrA	1.9100	4250.0	78	21056	No
11	GOM_NL__2PRFIN20060311_012051_000000402045_00461_21056_8102.N1	11-MAR-2006 01:20:51	Dark	39.500	134	Bet TrA	2.8100	6600.0	79	21056	No
12	GOM_NL__2PRFIN20060311_012333_000000412045_00461_21056_8103.N1	11-MAR-2006 01:23:33	Dark	41.000	4	Alp1Cen	-0.010000	5800.0	82	21056	No
13	GOM_NL__2PRFIN20060311_012449_000000482045_00461_21056_8104.N1	11-MAR-2006 01:24:49	Dark	47.500	10	Bet Cen	0.61000	28000.	95	21056	No
14	GOM_NL__2PRFIN20060311_012659_000000422045_00461_21056_8105.N1	11-MAR-2006 01:26:59	Dark	41.500	12	Alp1Cru	0.77500	30000.	83	21056	No
15	GOM_NL__2PRFIN20060311_012824_000000362045_00461_21056_8106.N1	11-MAR-2006 01:28:24	Dark	35.500	124	The Car	2.7640	30000.	71	21056	No
16	GOM_NL__2PRFIN20060311_013018_000000392045_00461_21056_8107.N1	11-MAR-2006 01:30:18	Straylight	39.000	99	Del Cen	2.5750	26000.	78	21056	No
17	GOM_NL__2PRFIN20060311_013217_000000382045_00461_21056_8108.N1	11-MAR-2006 01:32:17	Straylight	38.000	113	Mu Vel	2.6920	5000.0	76	21056	No
18	GOM_NL__2PRFIN20060311_014429_000000442045_00461_21056_8109.N1	11-MAR-2006 01:44:29	Twilight	44.000	48	30Alp Hya	1.9770	4100.0	88	21056	No
19	GOM_NL__2PRFIN20060311_015007_000000382045_00461_21056_8110.N1	11-MAR-2006 01:50:07	Bright	38.000	22	32Alp Leo	1.3600	15200.	76	21056	No
20	GOM_NL__2PRFIN20060311_015329_000000372045_00461_21056_8111.N1	11-MAR-2006 01:53:29	Bright	36.500	166	17Eps Leo	2.9800	6000.0	73	21056	No
21	GOM_NL__2PRFIN20060311_021212_000000342045_00461_21056_8112.N1	11-MAR-2006 02:12:12	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	21056	No
22	GOM_NL__2PRFIN20060311_021955_000000352045_00461_21056_8113.N1	11-MAR-2006 02:19:55	Bright	34.500	89	5Alp Cep	2.4510	8000.0	69	21056	No
23	GOM_NL__2PRFIN20060311_022501_000000372045_00461_21056_8114.N1	11-MAR-2006 02:25:01	Bright	37.000	19	50Alp Cyg	1.2460	10500.	74	21056	No
24	GOM_NL__2PRFIN20060311_022635_000000352045_00461_21056_8115.N1	11-MAR-2006 02:26:35	Bright	35.000	66	37Gam Cyg	2.2080	5900.0	70	21056	No
25	GOM_NL__2PRFIN20060311_022813_000000362045_00461_21056_8116.N1	11-MAR-2006 02:28:13	Bright	36.000	92	53Eps Cyg	2.5000	4500.0	72	21056	No
26	GOM_NL__2PRFIN20060311_025325_000000442045_00461_21056_8117.N1	11-MAR-2006 02:53:25	Dark	44.000	45	Alp Pav	1.9400	26000.	88	21056	No
27	GOM_NL__2PRFIN20060311_030013_000000382045_00462_21057_8101.N1	11-MAR-2006 03:00:13	Dark	37.500	43	Alp TrA	1.9100	4250.0	75	21057	No
28	GOM_NL__2PRFIN20060311_030127_000000382045_00462_21057_8102.N1	11-MAR-2006 03:01:27	Dark	37.500	134	Bet TrA	2.8100	6600.0	75	21057	No
29	GOM_NL__2PRFIN20060311_030409_000000412045_00462_21057_8103.N1	11-MAR-2006 03:04:09	Dark	41.000	4	Alp1Cen	-0.010000	5800.0	82	21057	No
30	GOM_NL__2PRFIN20060311_030525_000000402045_00462_21057_8104.N1	11-MAR-2006 03:05:25	Dark	39.500	10	Bet Cen	0.61000	28000.	79	21057	No
31	GOM_NL__2PRFIN20060311_030735_000000492045_00462_21057_8105.N1	11-MAR-2006 03:07:35	Dark	48.500	12	Alp1Cru	0.77500	30000.	97	21057	No
32	GOM_NL__2PRFIN20060311_030900_000000362045_00462_21057_8106.N1	11-MAR-2006 03:09:00	Dark	35.500	124	The Car	2.7640	30000.	71	21057	No
33	GOM_NL__2PRFIN20060311_031054_000000392045_00462_21057_8107.N1	11-MAR-2006 03:10:54	Straylight	39.000	99	Del Cen	2.5750	26000.	78	21057	No
34	GOM_NL__2PRFIN20060311_031253_000000392045_00462_21057_8108.N1	11-MAR-2006 03:12:53	Straylight	39.000	113	Mu Vel	2.6920	5000.0	78	21057	No
35	GOM_NL__2PRFIN20060311_032505_000000452045_00462_21057_8109.N1	11-MAR-2006 03:25:05	Twilight	44.500	48	30Alp Hya	1.9770	4100.0	89	21057	No
36	GOM_NL__2PRFIN20060311_033043_000000392045_00462_21057_8110.N1	11-MAR-2006 03:30:43	Bright	39.000	22	32Alp Leo	1.3600	15200.	78	21057	No
37	GOM_NL__2PRFIN20060311_033405_000000362045_00462_21057_8111.N1	11-MAR-2006 03:34:05	Bright	36.000	166	17Eps Leo	2.9800	6000.0	72	21057	No
38	GOM_NL__2PRFIN20060311_035248_000000342045_00462_21057_8112.N1	11-MAR-2006 03:52:48	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	21057	No
39	GOM_NL__2PRFIN20060311_040031_000000362045_00462_21057_8113.N1	11-MAR-2006 04:00:31	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	21057	No
40	GOM_NL__2PRFIN20060311_040537_000000382045_00462_21057_8114.N1	11-MAR-2006 04:05:37	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	21057	No
41	GOM_NL__2PRFIN20060311_040711_000000382045_00462_21057_8115.N1	11-MAR-2006 04:07:11	Bright	38.000	66	37Gam Cyg	2.2080	5900.0	76	21057	No
42	GOM_NL__2PRFIN20060311_040850_000000362045_00462_21057_8116.N1	11-MAR-2006 04:08:50	Bright	36.000	92	53Eps Cyg	2.5000	4500.0	72	21057	No





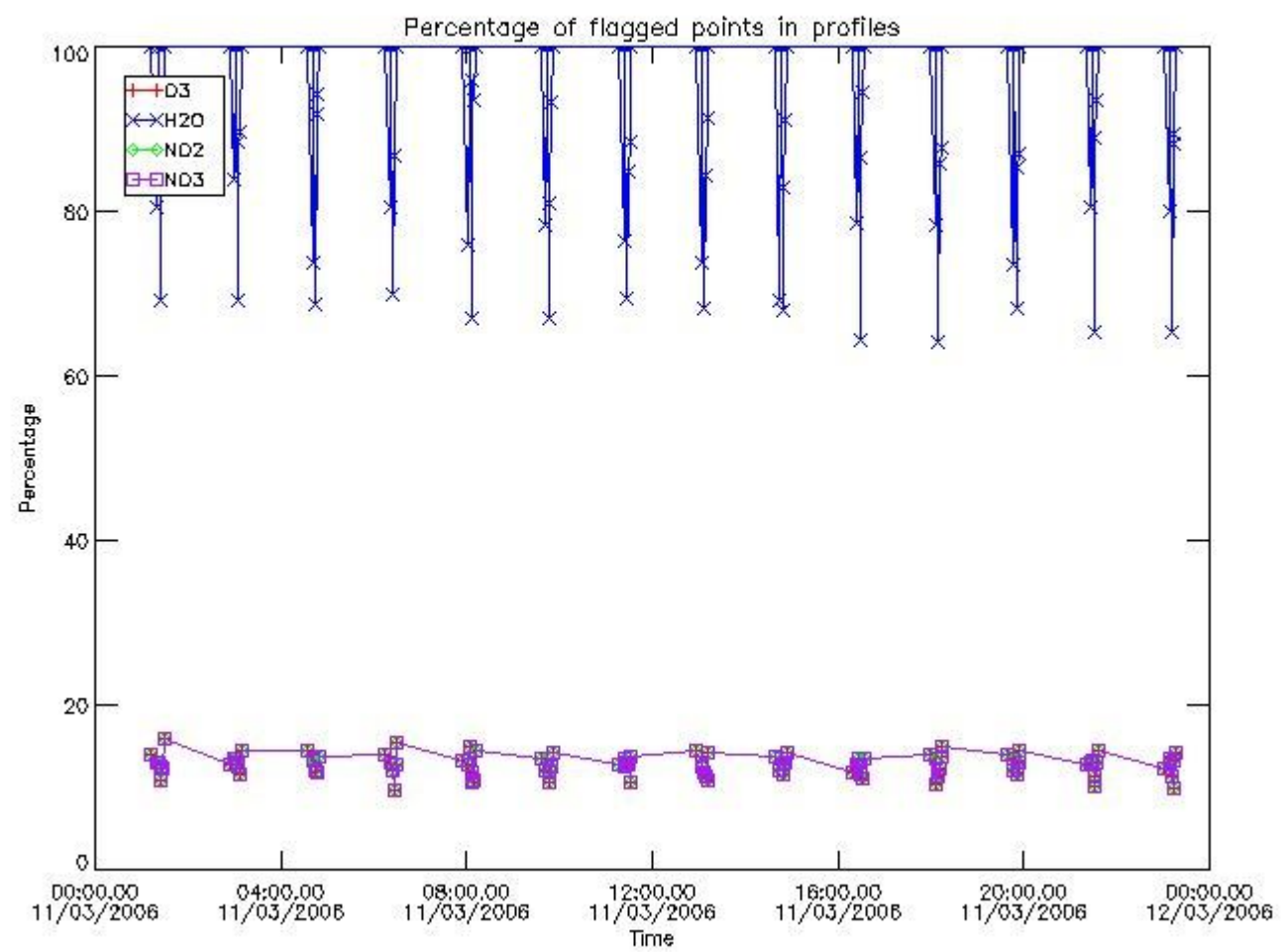


220	GOM_NL__2PRFIN20060311_213734_000000382045_00473_21068_8137.N1	11-MAR-2006 21:37:34	Straylight	38.000	99	Del Cen	2.5750	26000.	76	21068	No
221	GOM_NL__2PRFIN20060311_213931_000000392045_00473_21068_8138.N1	11-MAR-2006 21:39:31	Straylight	38.500	113	Mu Vel	2.6920	5000.0	77	21068	No
222	GOM_NL__2PRFIN20060311_215142_000000472045_00473_21068_8139.N1	11-MAR-2006 21:51:42	Bright	47.000	48	30Alp Hya	1.9770	4100.0	94	21068	No
223	GOM_NL__2PRFIN20060311_215718_000000392045_00473_21068_8140.N1	11-MAR-2006 21:57:18	Bright	38.500	22	32Alp Leo	1.3600	15200.	77	21068	No
224	GOM_NL__2PRFIN20060311_220040_000000342045_00473_21068_8141.N1	11-MAR-2006 22:00:40	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	21068	No
225	GOM_NL__2PRFIN20060311_221923_000000362045_00473_21068_8142.N1	11-MAR-2006 22:19:23	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	21068	No
226	GOM_NL__2PRFIN20060311_222707_000000372045_00473_21068_8143.N1	11-MAR-2006 22:27:07	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	21068	No
227	GOM_NL__2PRFIN20060311_223213_000000352045_00473_21068_8144.N1	11-MAR-2006 22:32:13	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	21068	No
228	GOM_NL__2PRFIN20060311_223347_000000352045_00473_21068_8145.N1	11-MAR-2006 22:33:47	Bright	34.500	66	37Gam Cyg	2.2080	5900.0	69	21068	No
229	GOM_NL__2PRFIN20060311_223526_000000342045_00473_21068_8146.N1	11-MAR-2006 22:35:26	Bright	33.500	92	53Eps Cyg	2.5000	4500.0	67	21068	No
230	GOM_NL__2PRFIN20060311_230038_000000422045_00473_21068_8147.N1	11-MAR-2006 23:00:38	Dark	41.500	45	Alp Pav	1.9400	26000.	83	21068	No
231	GOM_NL__2PRFIN20060311_230729_000000382045_00474_21069_8131.N1	11-MAR-2006 23:07:29	Dark	38.000	43	Alp TrA	1.9100	4250.0	76	21069	No
232	GOM_NL__2PRFIN20060311_230844_000000402045_00474_21069_8132.N1	11-MAR-2006 23:08:44	Dark	39.500	134	Bet TrA	2.8100	6600.0	79	21069	No
233	GOM_NL__2PRFIN20060311_231127_000000452045_00474_21069_8133.N1	11-MAR-2006 23:11:27	Dark	45.000	4	Alp1Cen	-0.010000	5800.0	90	21069	No
234	GOM_NL__2PRFIN20060311_231243_000000512045_00474_21069_8134.N1	11-MAR-2006 23:12:43	Dark	51.000	10	Bet Cen	0.61000	28000.	102	21069	No
235	GOM_NL__2PRFIN20060311_231450_000000392045_00474_21069_8135.N1	11-MAR-2006 23:14:50	Dark	38.500	12	Alp1Cru	0.77500	30000.	77	21069	No
236	GOM_NL__2PRFIN20060311_231614_000000362045_00474_21069_8136.N1	11-MAR-2006 23:16:14	Dark	36.000	124	The Car	2.7640	30000.	72	21069	No
237	GOM_NL__2PRFIN20060311_231810_000000402045_00474_21069_8137.N1	11-MAR-2006 23:18:10	Straylight	39.500	99	Del Cen	2.5750	26000.	79	21069	No
238	GOM_NL__2PRFIN20060311_232007_000000382045_00474_21069_8138.N1	11-MAR-2006 23:20:07	Straylight	38.000	113	Mu Vel	2.6920	5000.0	76	21069	No
239	GOM_NL__2PRFIN20060311_233218_000000452045_00474_21069_8139.N1	11-MAR-2006 23:32:18	Bright	44.500	48	30Alp Hya	1.9770	4100.0	89	21069	No
240	GOM_NL__2PRFIN20060311_233754_000000392045_00474_21069_8140.N1	11-MAR-2006 23:37:54	Bright	39.000	22	32Alp Leo	1.3600	15200.	78	21069	No
241	GOM_NL__2PRFIN20060311_234116_000000362045_00474_21069_8141.N1	11-MAR-2006 23:41:16	Bright	36.000	166	17Eps Leo	2.9800	6000.0	72	21069	No
242	GOM_NL__2PRFIN20060311_235959_000000362045_00474_21069_8142.N1	11-MAR-2006 23:59:59	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	21069	No

### 3. Quality information per product

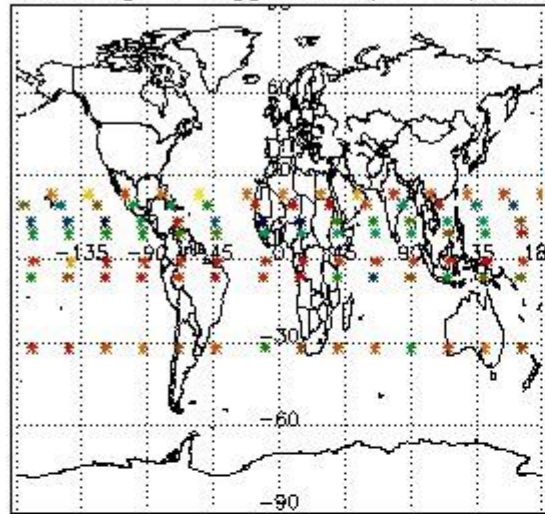
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

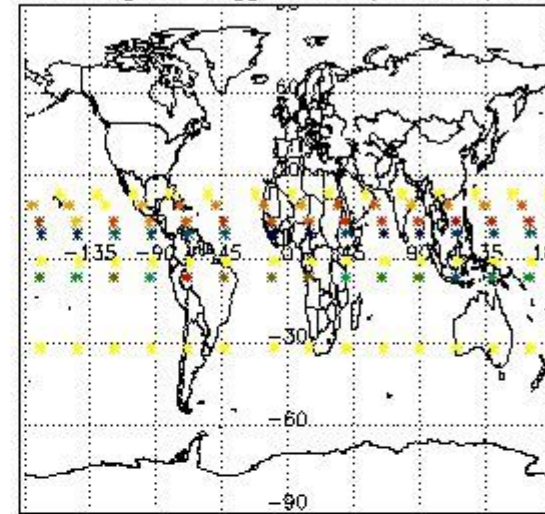


3.2 Plot quality information per product (world map)

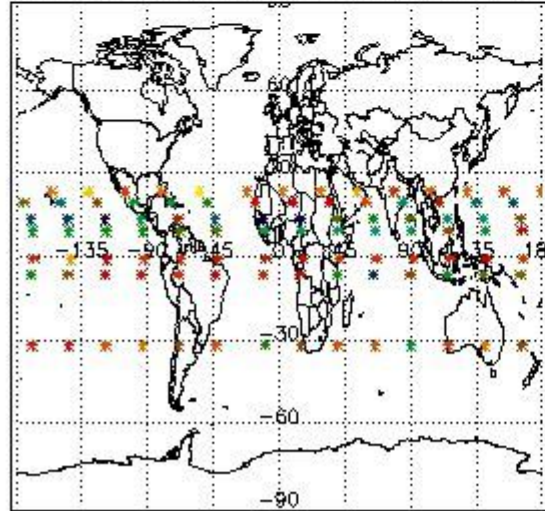
Percentage of flagged data per O3 profile



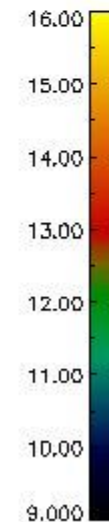
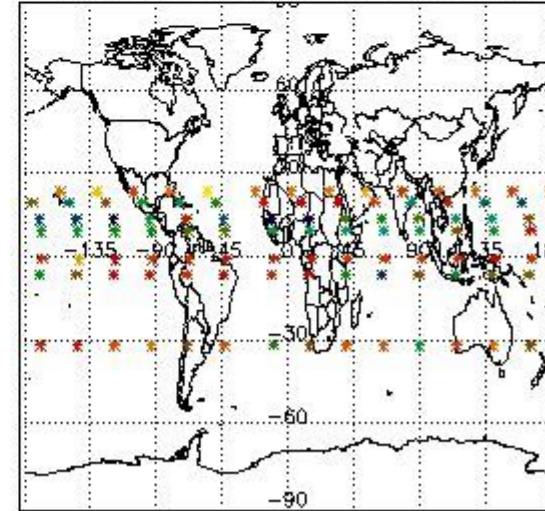
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



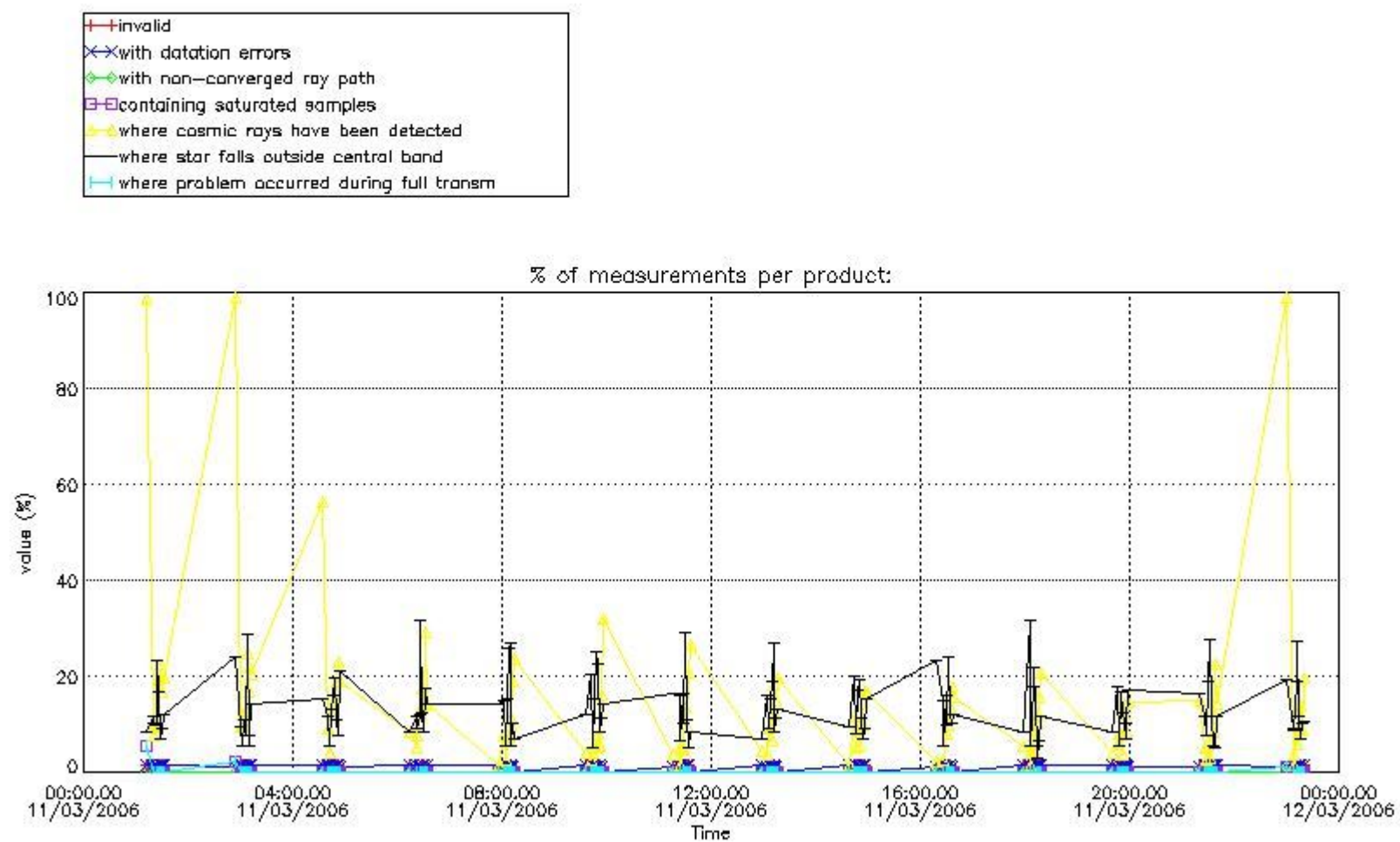
#### 4. Level 1 quality information per product

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.

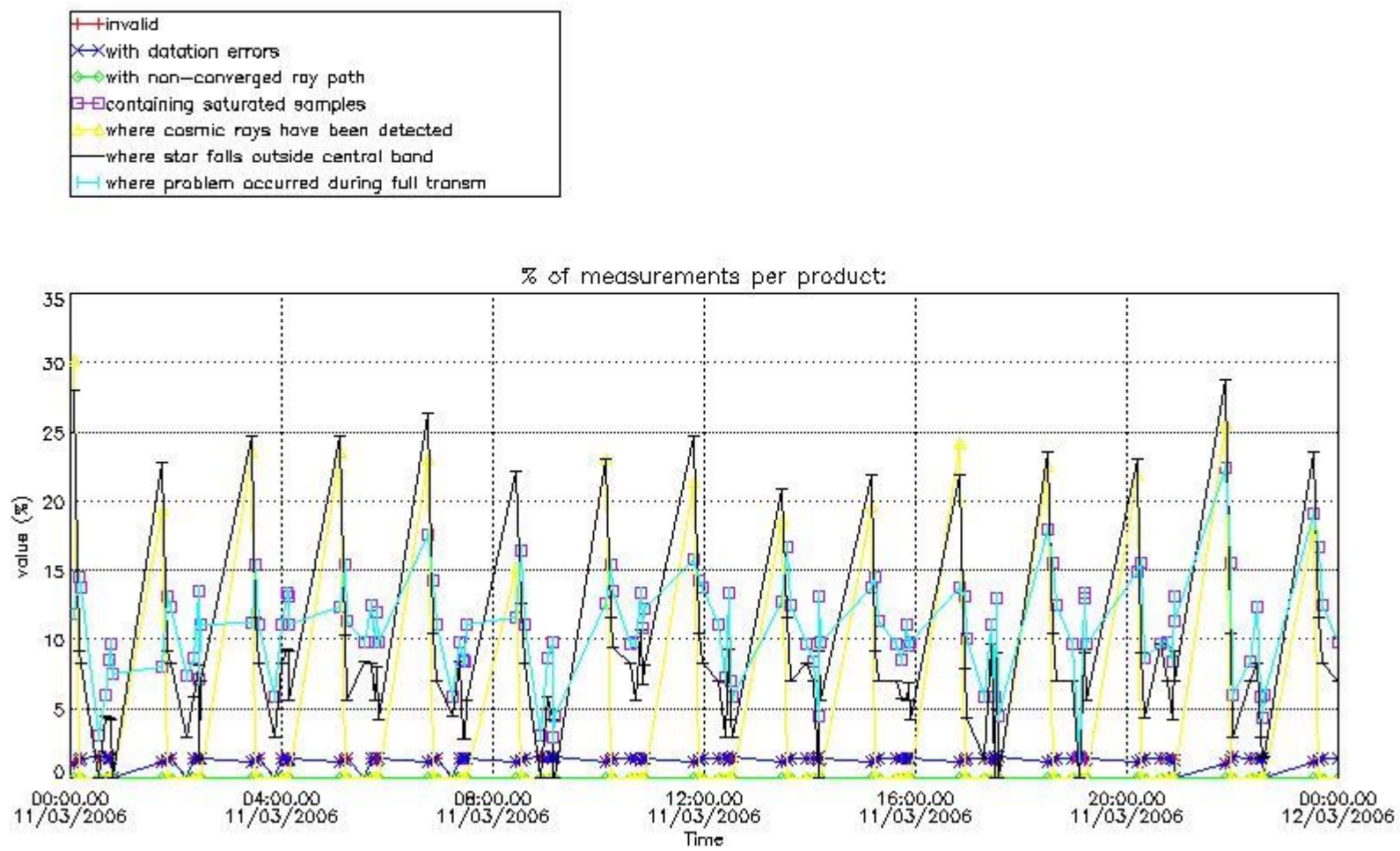
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





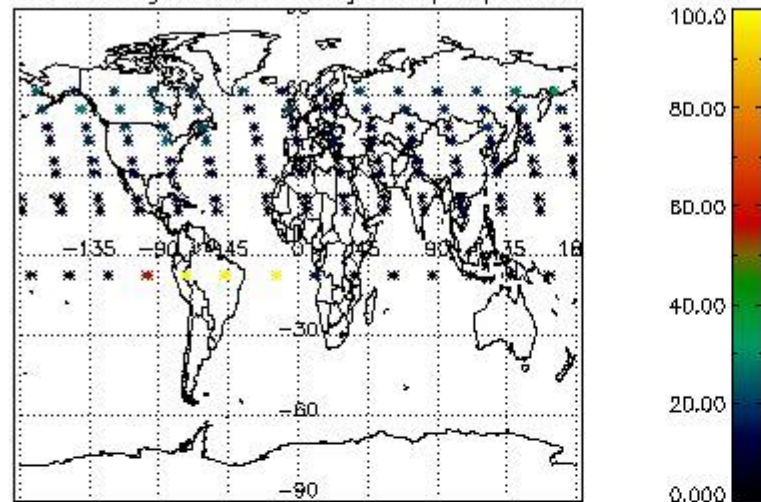
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



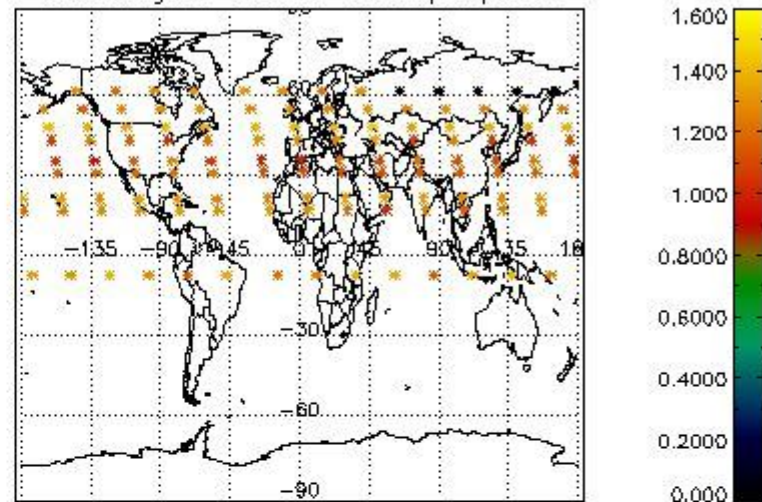
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

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

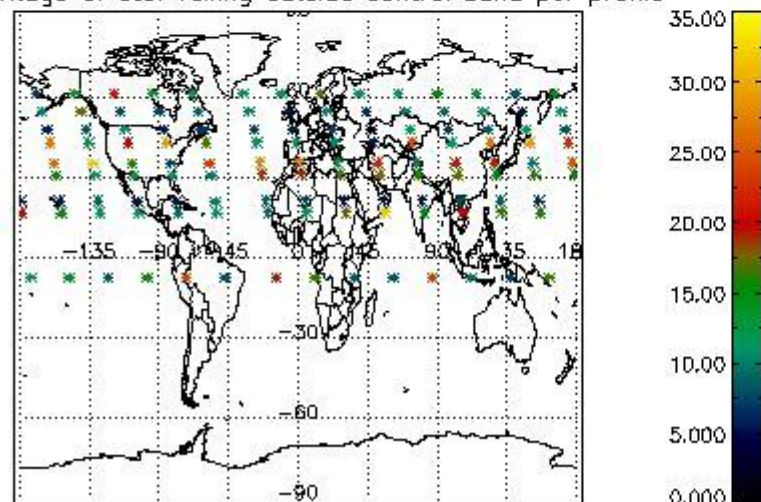
Percentage of cosmic ray hits per profile



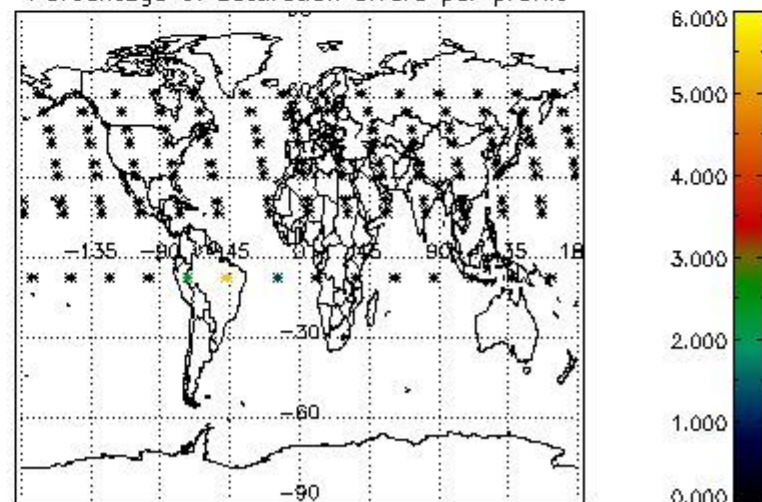
Percentage of datation errors per profile



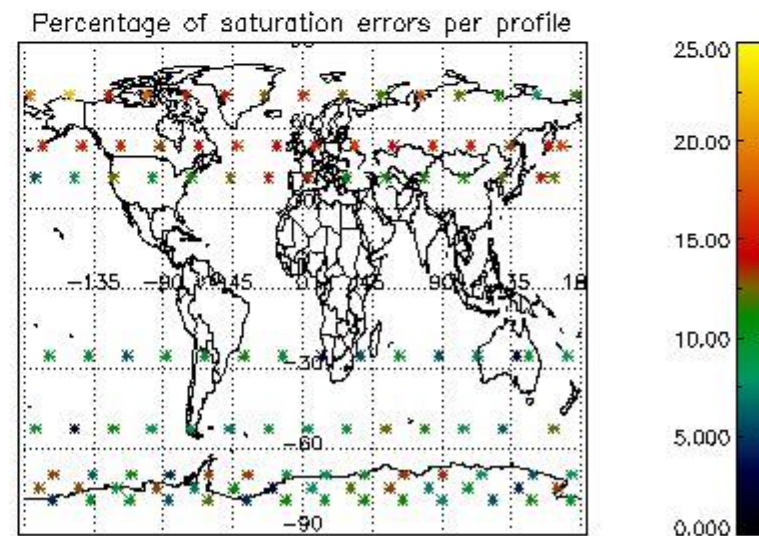
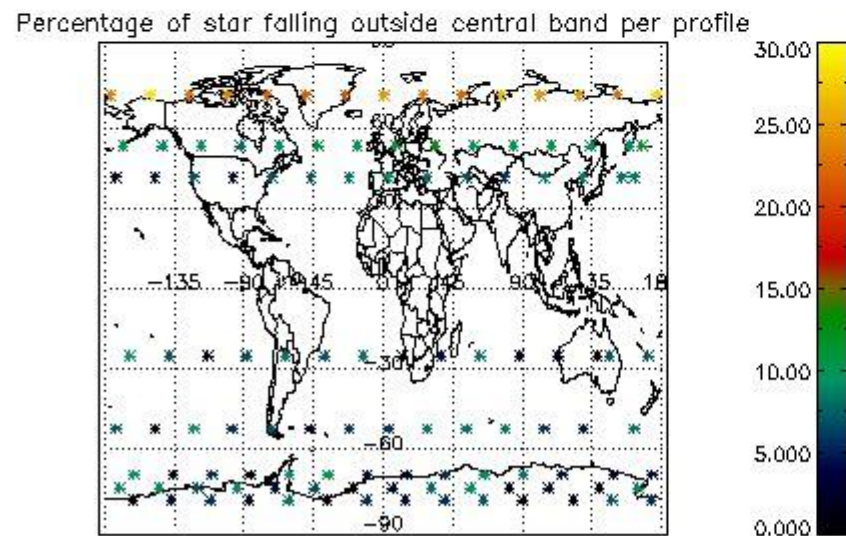
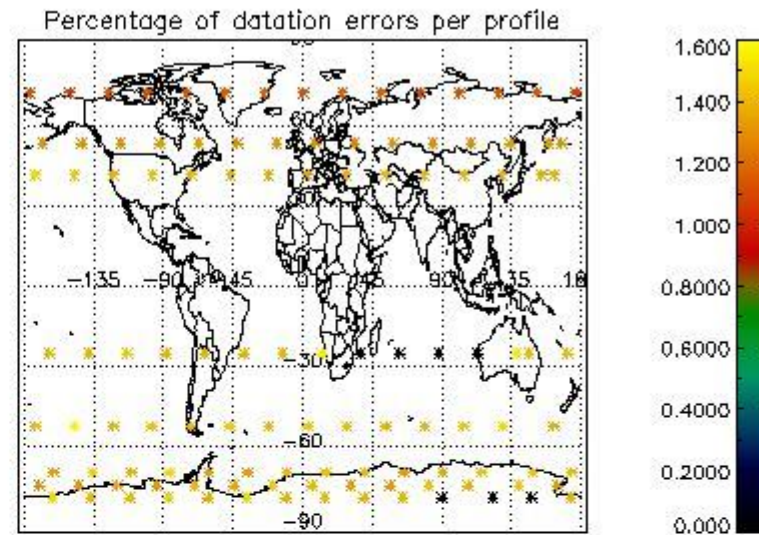
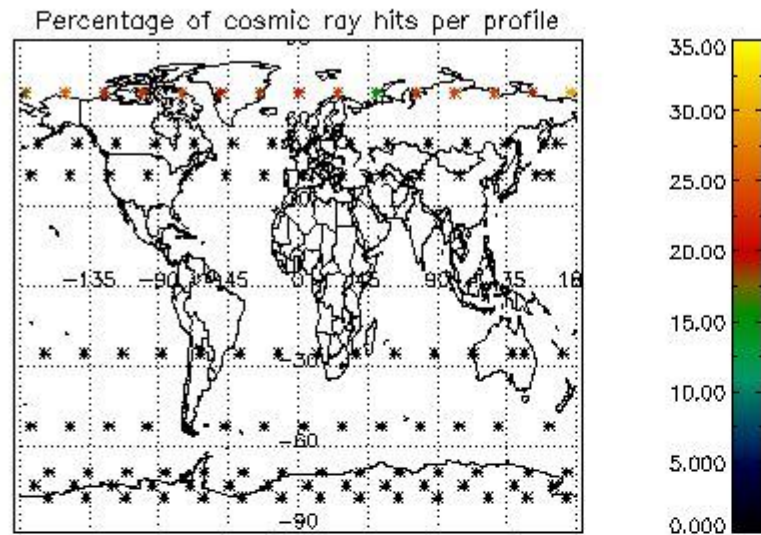
Percentage of star falling outside central band per profile



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

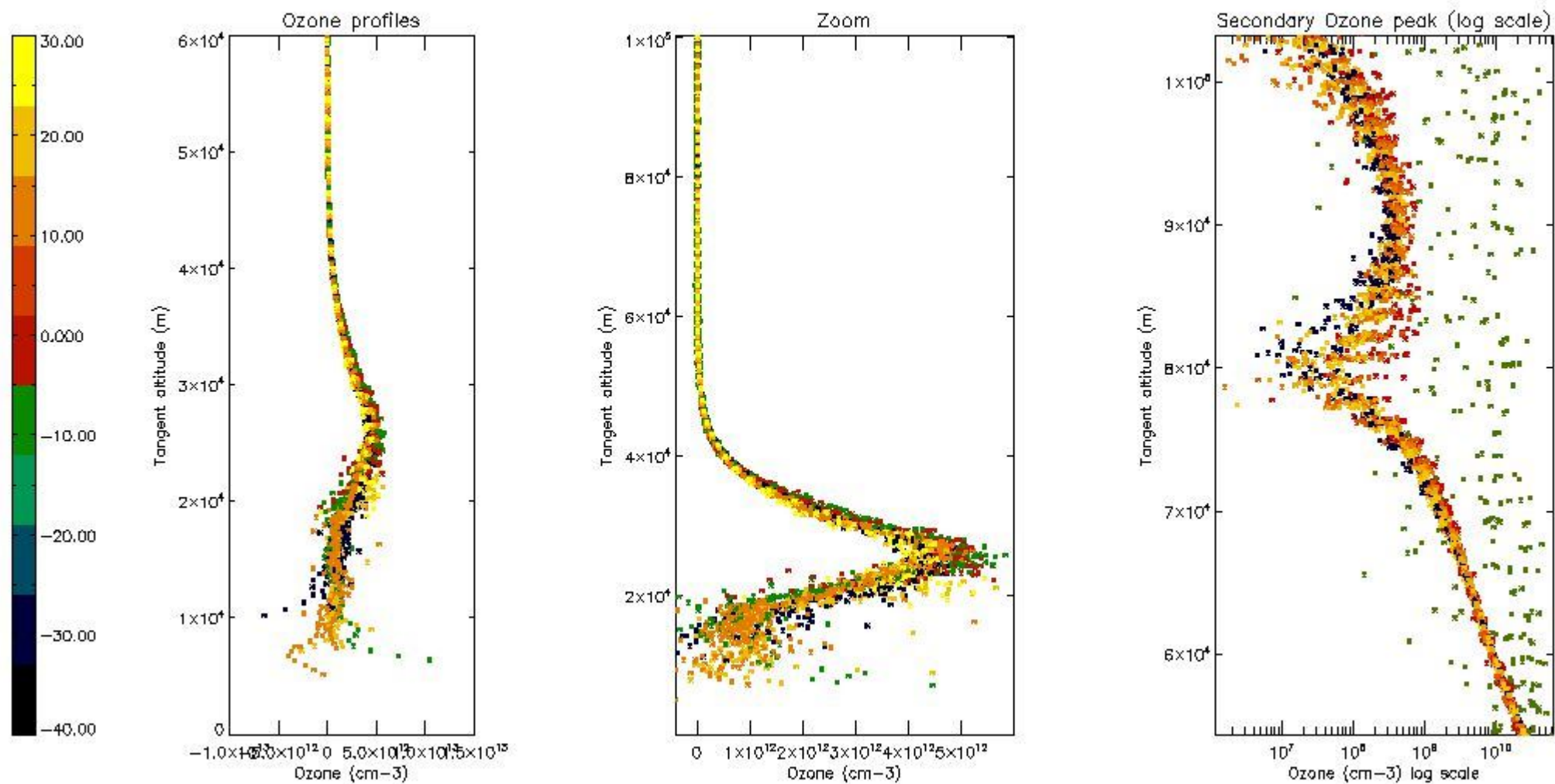
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	43
STD < 20	28

STD < 10	23
STD < 5	17

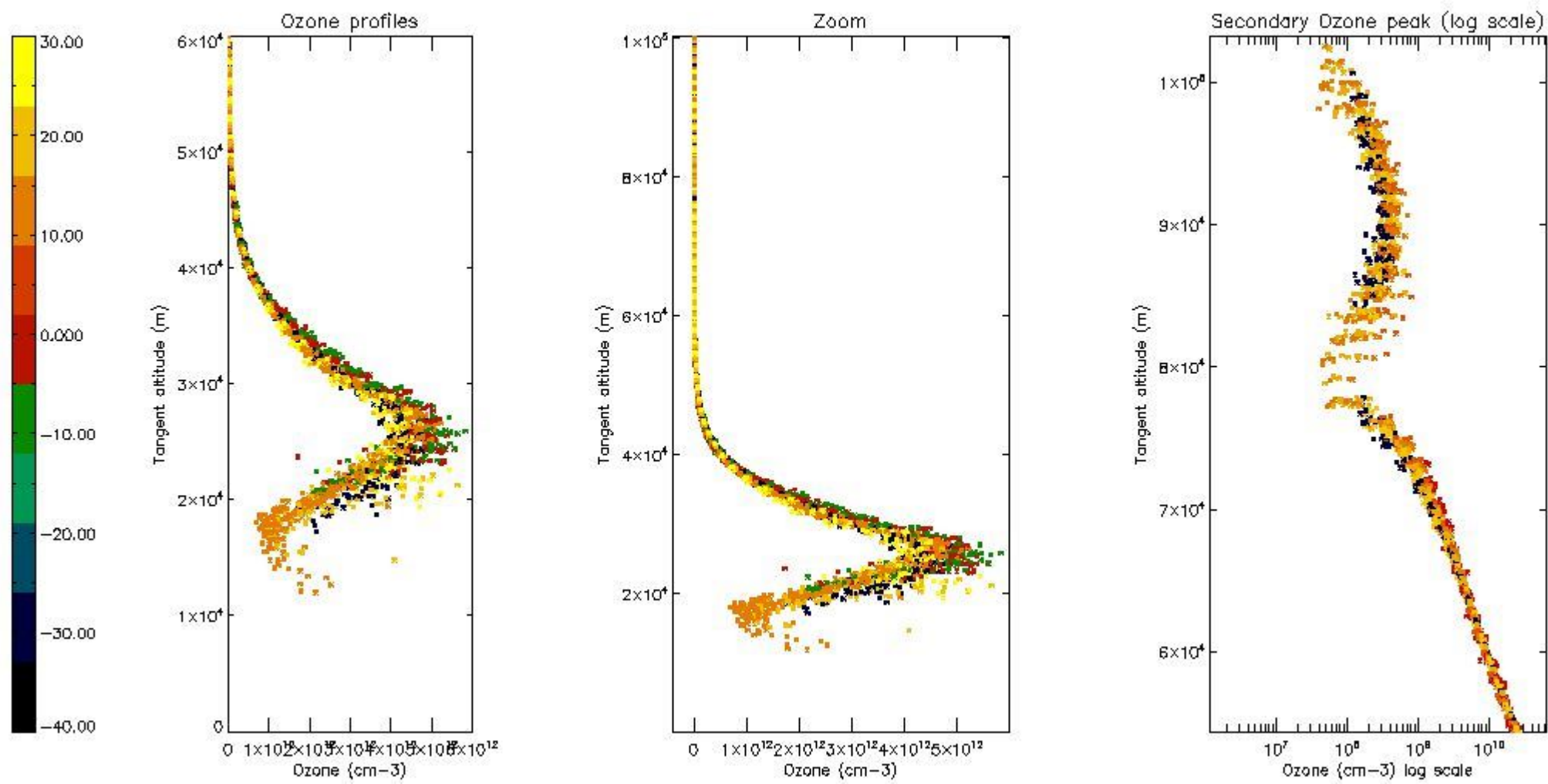
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



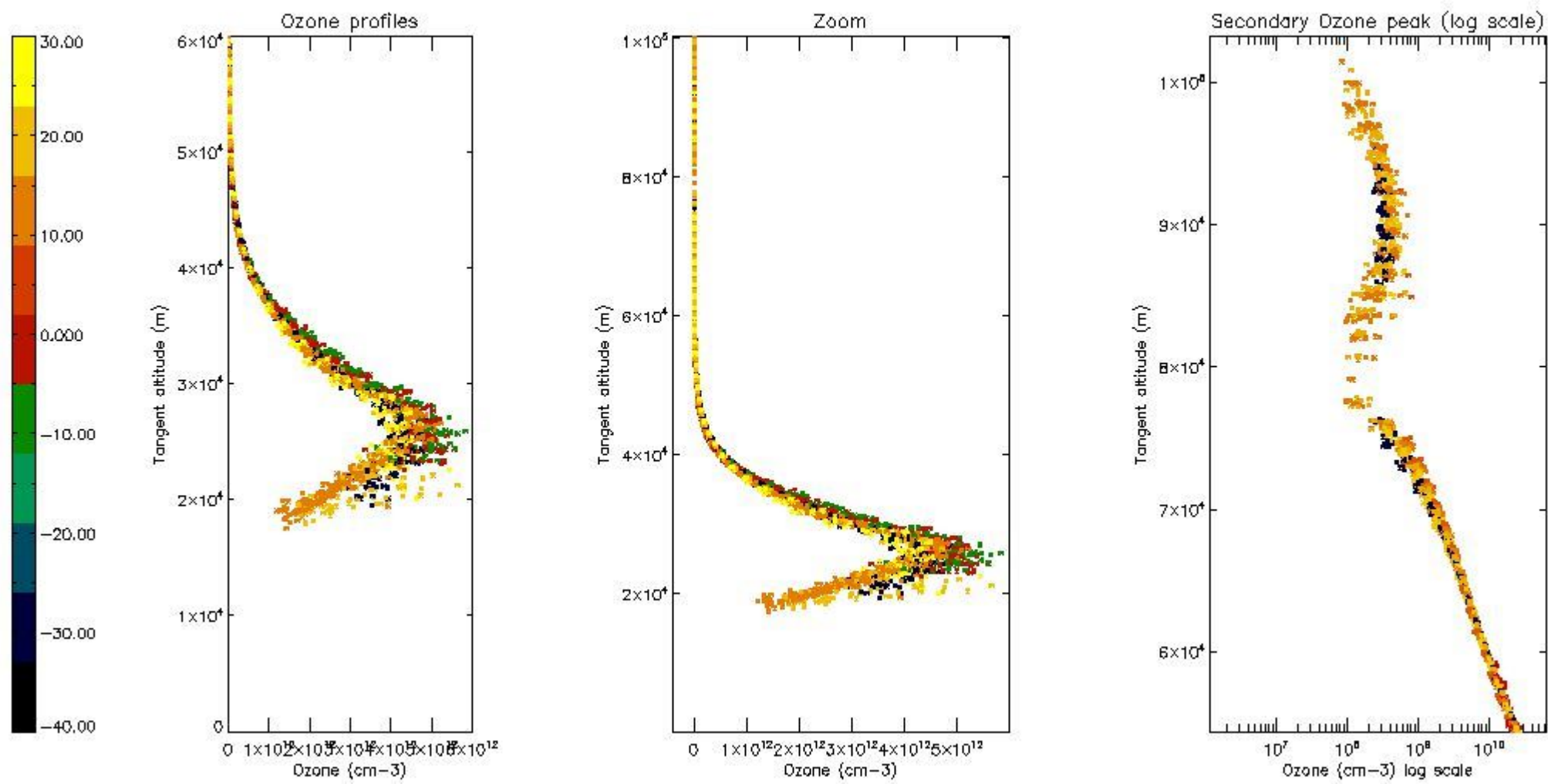
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



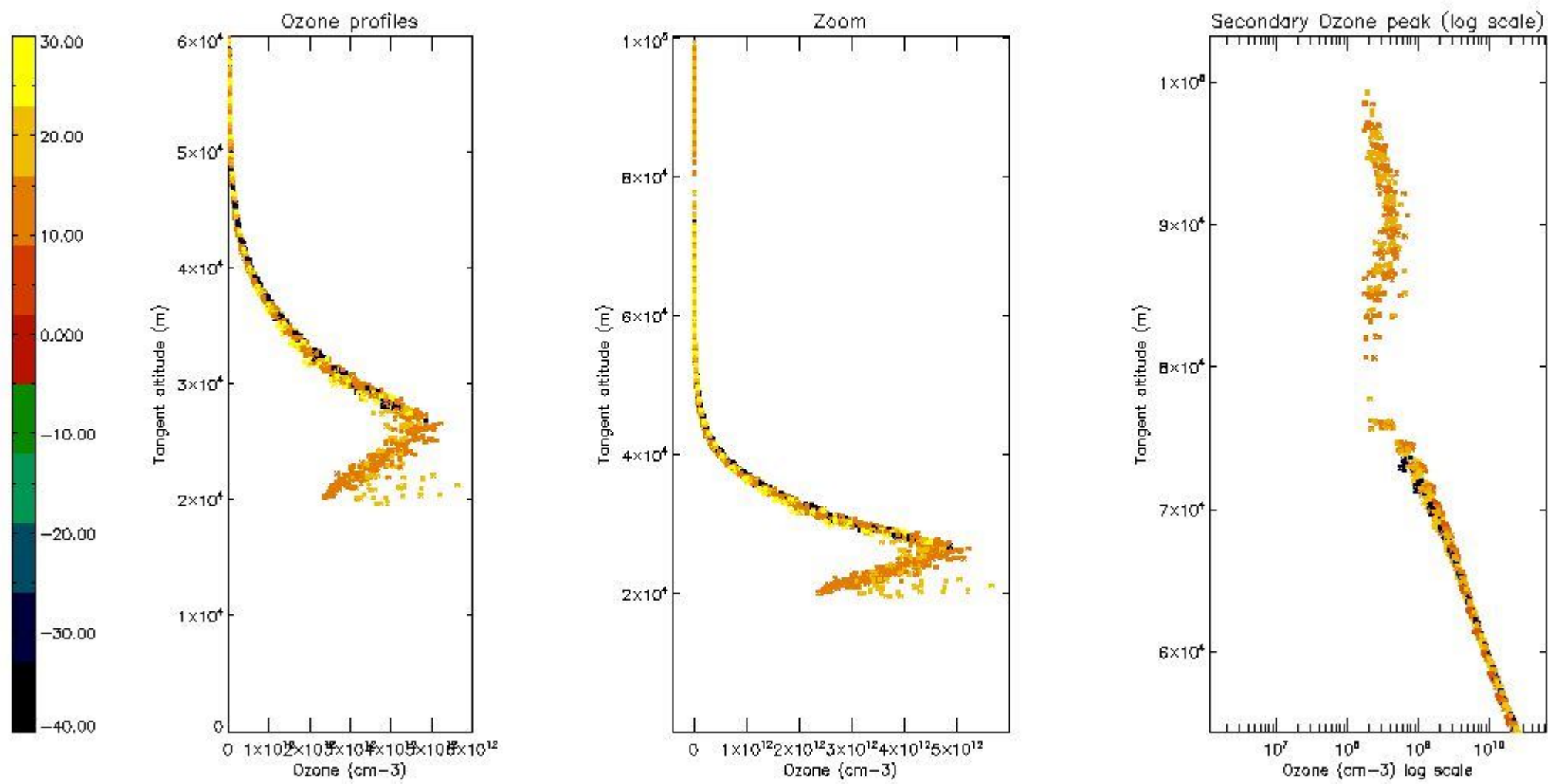
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

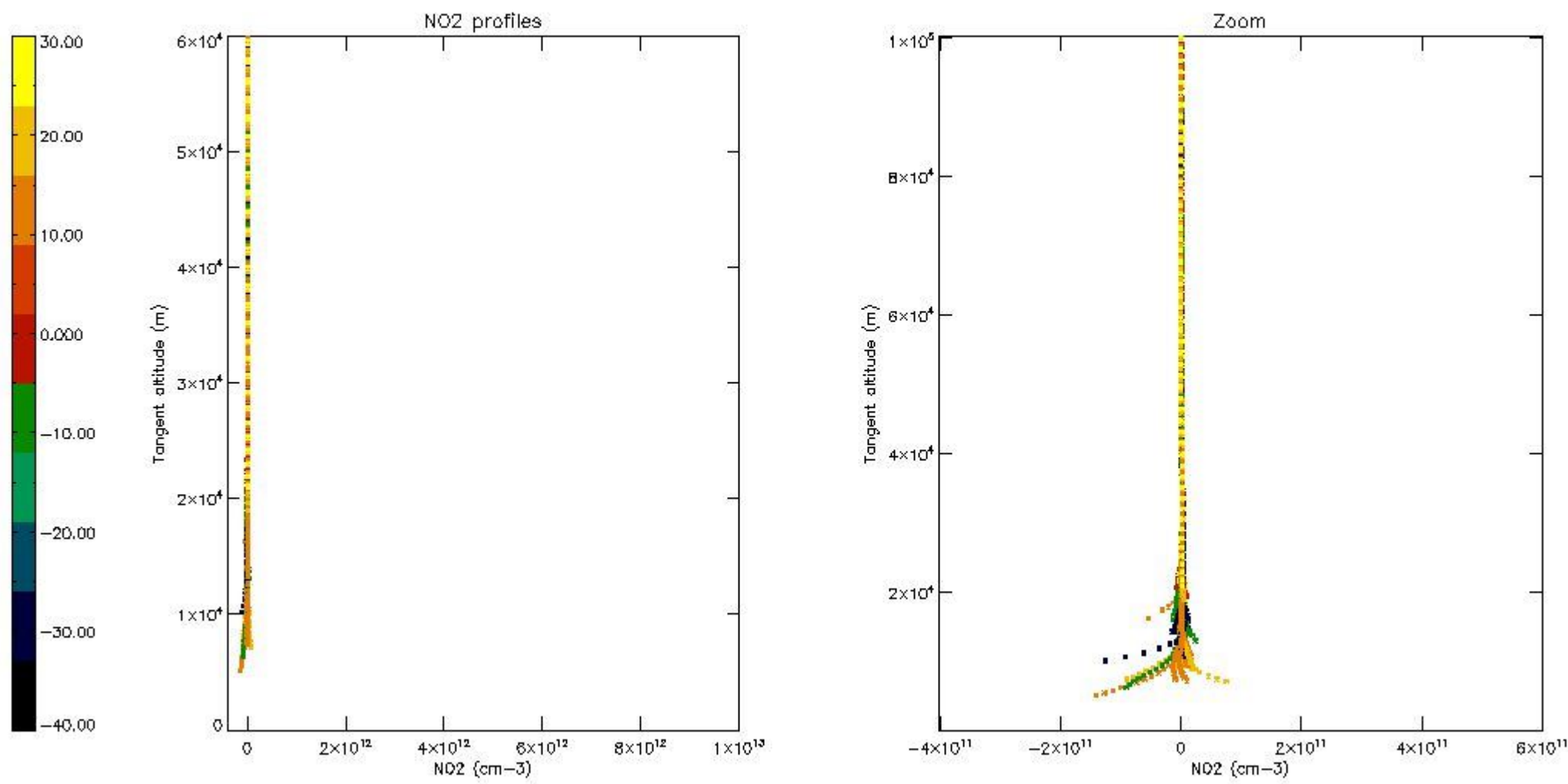
The colorbar represents the latitude.



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

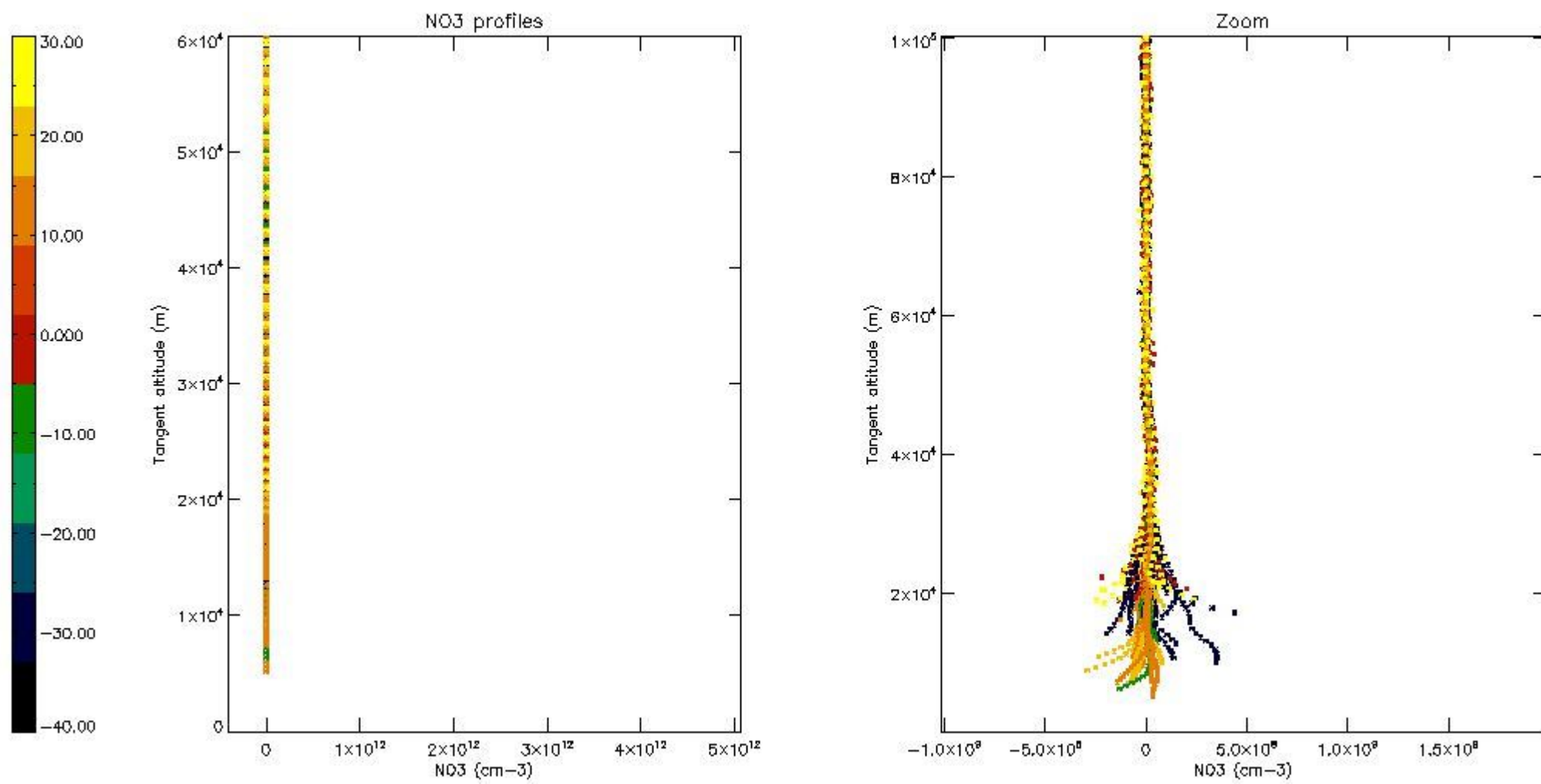
The colorbar represents the latitude.





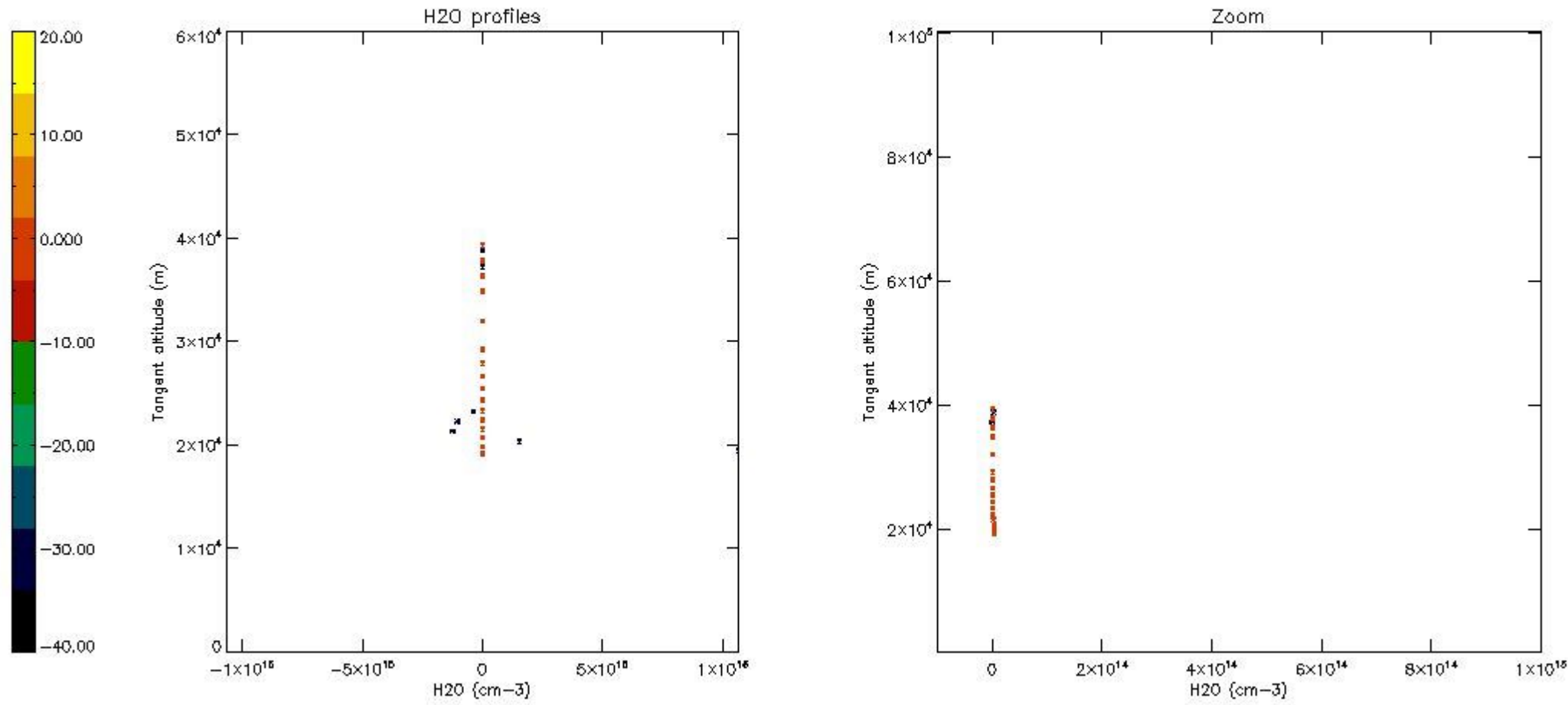
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	11-MAR-2006 00:03:53
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	11-MAR-2006 00:03:53
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	11-MAR-2006 00:03:53

# GOMOS Level 2 Daily Report

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









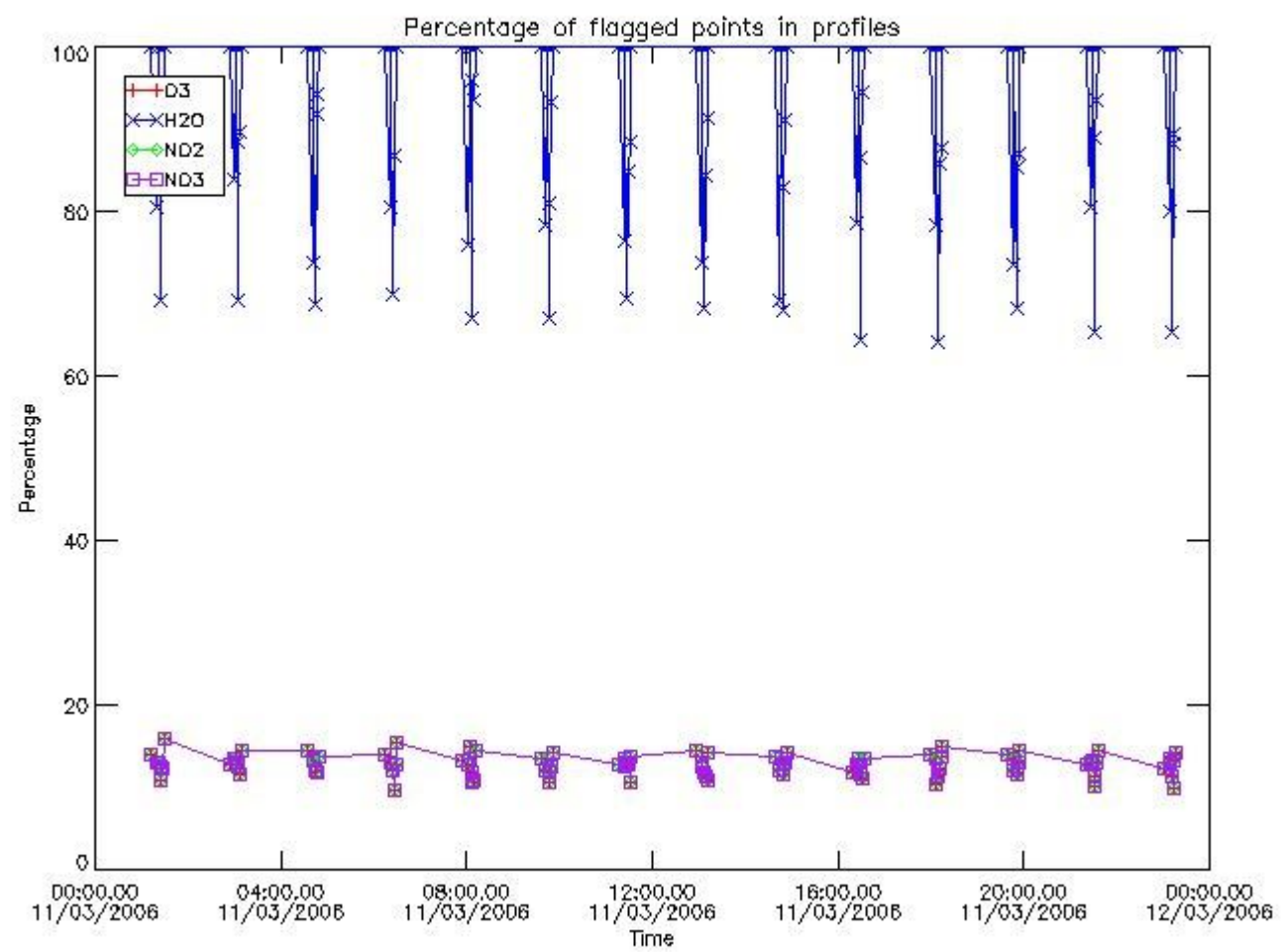


220	GOM_NL__2PRFIN20060311_213734_000000382045_00473_21068_8137.N1	11-MAR-2006 21:37:34	Straylight	38.000	99	Del Cen	2.5750	26000.	76	21068	No
221	GOM_NL__2PRFIN20060311_213931_000000392045_00473_21068_8138.N1	11-MAR-2006 21:39:31	Straylight	38.500	113	Mu Vel	2.6920	5000.0	77	21068	No
222	GOM_NL__2PRFIN20060311_215142_000000472045_00473_21068_8139.N1	11-MAR-2006 21:51:42	Bright	47.000	48	30Alp Hya	1.9770	4100.0	94	21068	No
223	GOM_NL__2PRFIN20060311_215718_000000392045_00473_21068_8140.N1	11-MAR-2006 21:57:18	Bright	38.500	22	32Alp Leo	1.3600	15200.	77	21068	No
224	GOM_NL__2PRFIN20060311_220040_000000342045_00473_21068_8141.N1	11-MAR-2006 22:00:40	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	21068	No
225	GOM_NL__2PRFIN20060311_221923_000000362045_00473_21068_8142.N1	11-MAR-2006 22:19:23	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	21068	No
226	GOM_NL__2PRFIN20060311_222707_000000372045_00473_21068_8143.N1	11-MAR-2006 22:27:07	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	21068	No
227	GOM_NL__2PRFIN20060311_223213_000000352045_00473_21068_8144.N1	11-MAR-2006 22:32:13	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	21068	No
228	GOM_NL__2PRFIN20060311_223347_000000352045_00473_21068_8145.N1	11-MAR-2006 22:33:47	Bright	34.500	66	37Gam Cyg	2.2080	5900.0	69	21068	No
229	GOM_NL__2PRFIN20060311_223526_000000342045_00473_21068_8146.N1	11-MAR-2006 22:35:26	Bright	33.500	92	53Eps Cyg	2.5000	4500.0	67	21068	No
230	GOM_NL__2PRFIN20060311_230038_000000422045_00473_21068_8147.N1	11-MAR-2006 23:00:38	Dark	41.500	45	Alp Pav	1.9400	26000.	83	21068	No
231	GOM_NL__2PRFIN20060311_230729_000000382045_00474_21069_8131.N1	11-MAR-2006 23:07:29	Dark	38.000	43	Alp TrA	1.9100	4250.0	76	21069	No
232	GOM_NL__2PRFIN20060311_230844_000000402045_00474_21069_8132.N1	11-MAR-2006 23:08:44	Dark	39.500	134	Bet TrA	2.8100	6600.0	79	21069	No
233	GOM_NL__2PRFIN20060311_231127_000000452045_00474_21069_8133.N1	11-MAR-2006 23:11:27	Dark	45.000	4	Alp1Cen	-0.010000	5800.0	90	21069	No
234	GOM_NL__2PRFIN20060311_231243_000000512045_00474_21069_8134.N1	11-MAR-2006 23:12:43	Dark	51.000	10	Bet Cen	0.61000	28000.	102	21069	No
235	GOM_NL__2PRFIN20060311_231450_000000392045_00474_21069_8135.N1	11-MAR-2006 23:14:50	Dark	38.500	12	Alp1Cru	0.77500	30000.	77	21069	No
236	GOM_NL__2PRFIN20060311_231614_000000362045_00474_21069_8136.N1	11-MAR-2006 23:16:14	Dark	36.000	124	The Car	2.7640	30000.	72	21069	No
237	GOM_NL__2PRFIN20060311_231810_000000402045_00474_21069_8137.N1	11-MAR-2006 23:18:10	Straylight	39.500	99	Del Cen	2.5750	26000.	79	21069	No
238	GOM_NL__2PRFIN20060311_232007_000000382045_00474_21069_8138.N1	11-MAR-2006 23:20:07	Straylight	38.000	113	Mu Vel	2.6920	5000.0	76	21069	No
239	GOM_NL__2PRFIN20060311_233218_000000452045_00474_21069_8139.N1	11-MAR-2006 23:32:18	Bright	44.500	48	30Alp Hya	1.9770	4100.0	89	21069	No
240	GOM_NL__2PRFIN20060311_233754_000000392045_00474_21069_8140.N1	11-MAR-2006 23:37:54	Bright	39.000	22	32Alp Leo	1.3600	15200.	78	21069	No
241	GOM_NL__2PRFIN20060311_234116_000000362045_00474_21069_8141.N1	11-MAR-2006 23:41:16	Bright	36.000	166	17Eps Leo	2.9800	6000.0	72	21069	No
242	GOM_NL__2PRFIN20060311_235959_000000362045_00474_21069_8142.N1	11-MAR-2006 23:59:59	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	21069	No

### 3. Quality information per product

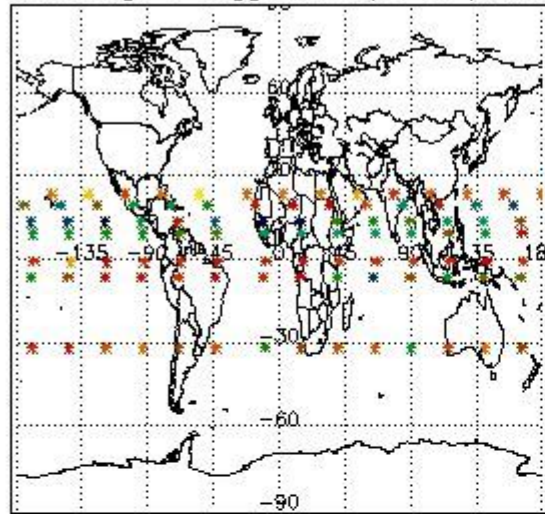
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

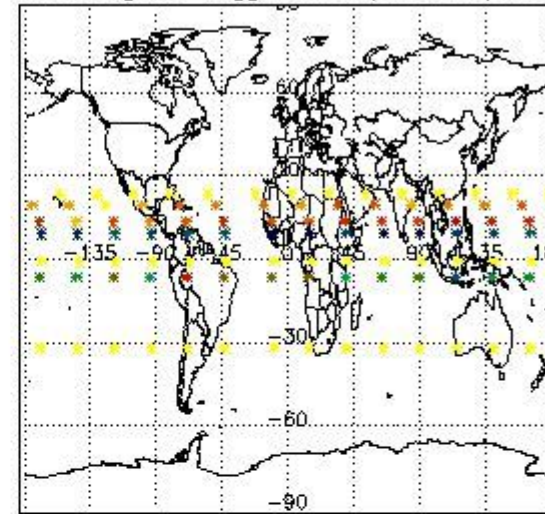


*3.2 Plot quality information per product (world map)*

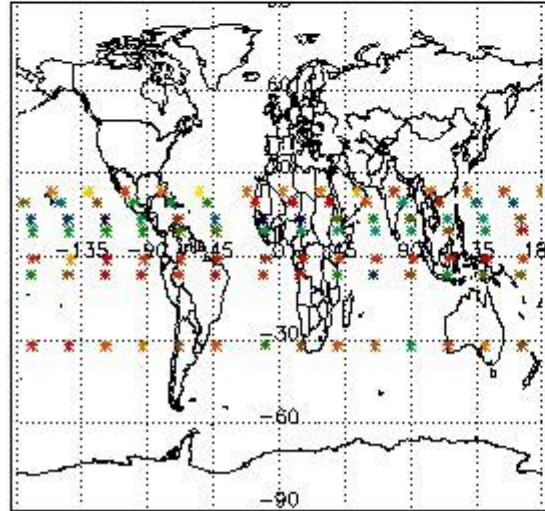
Percentage of flagged data per O3 profile



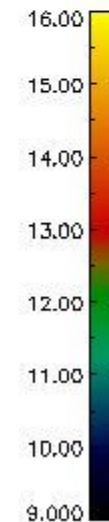
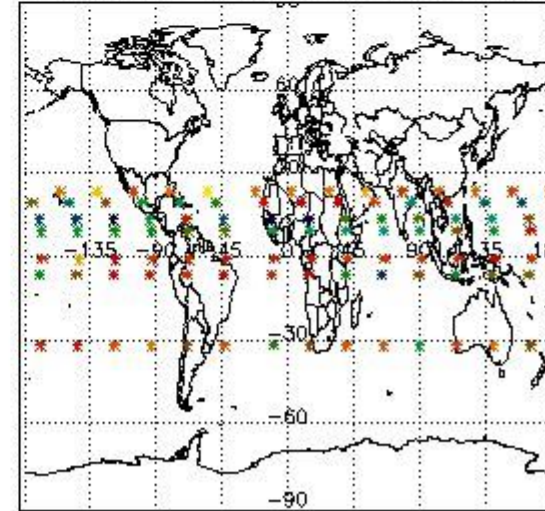
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

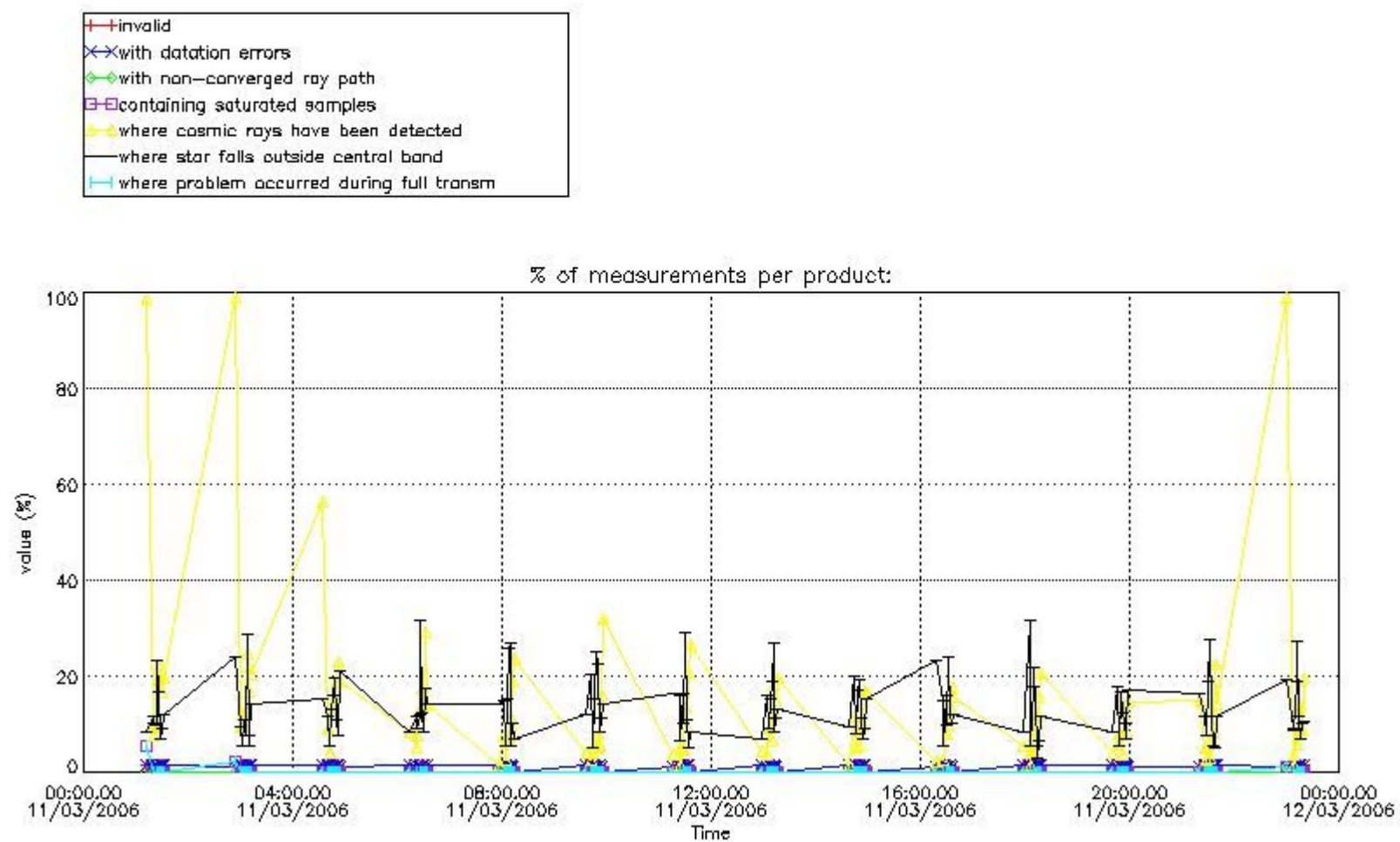


#### 4. Level 1 quality information per product

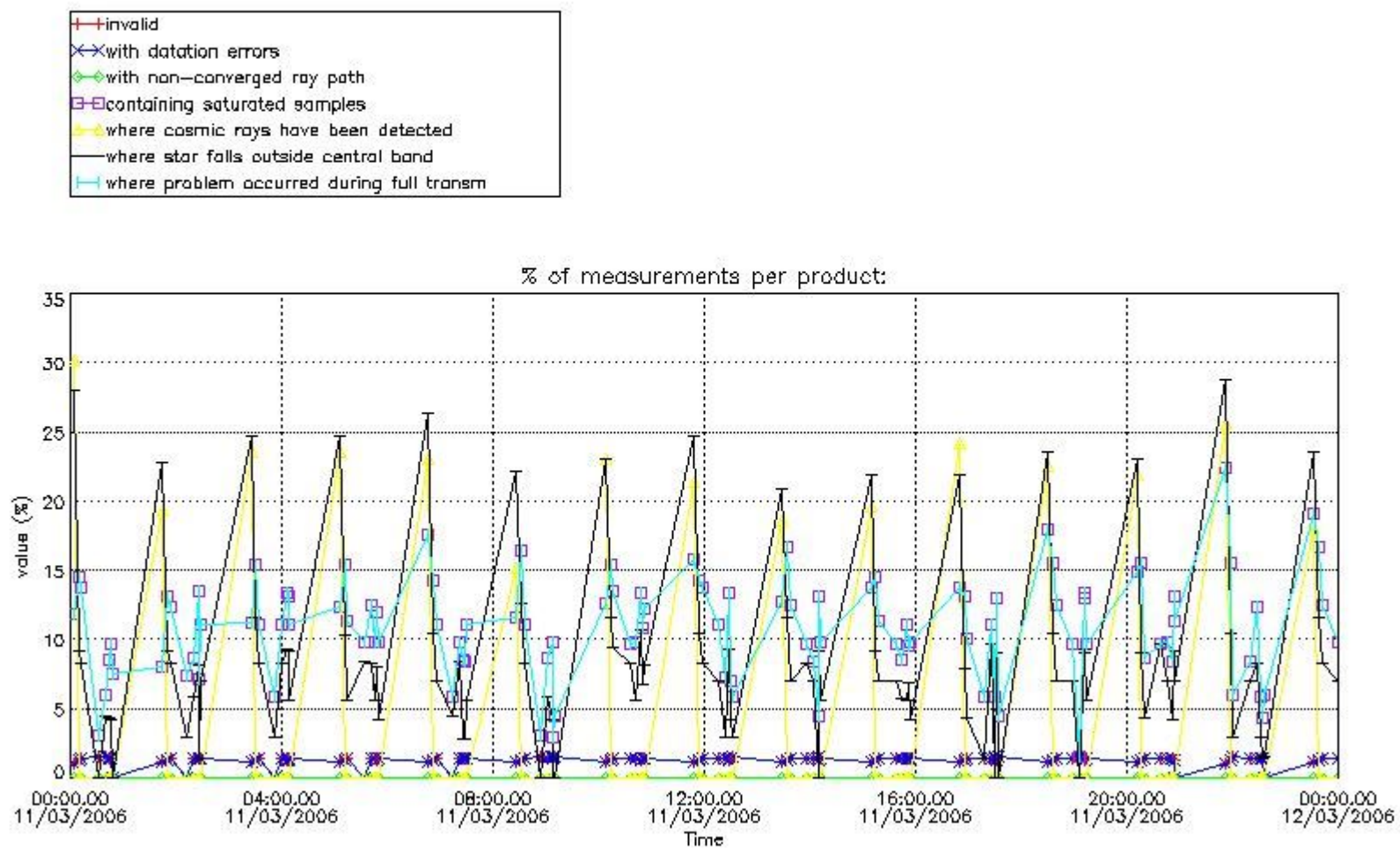
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



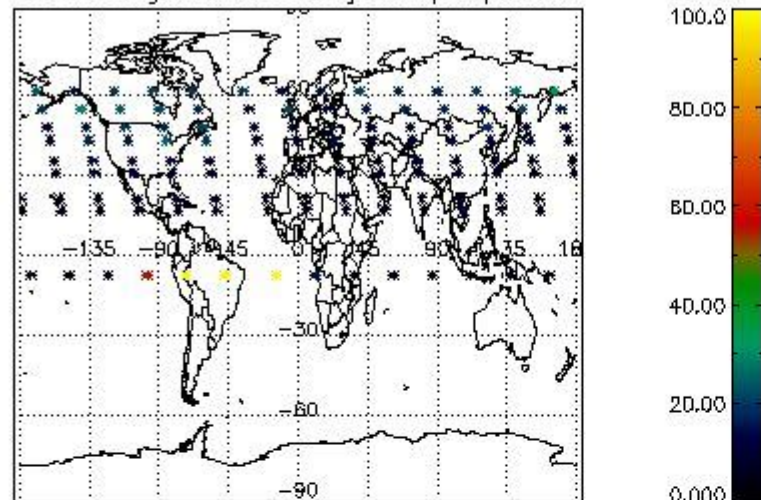
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



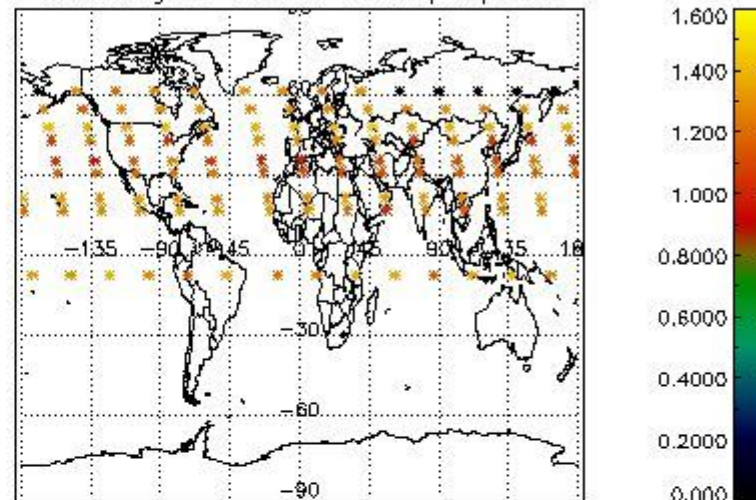
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

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

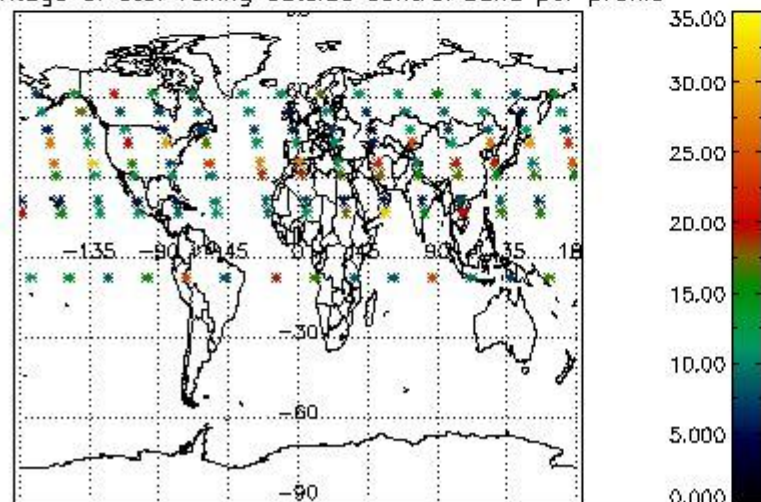
Percentage of cosmic ray hits per profile



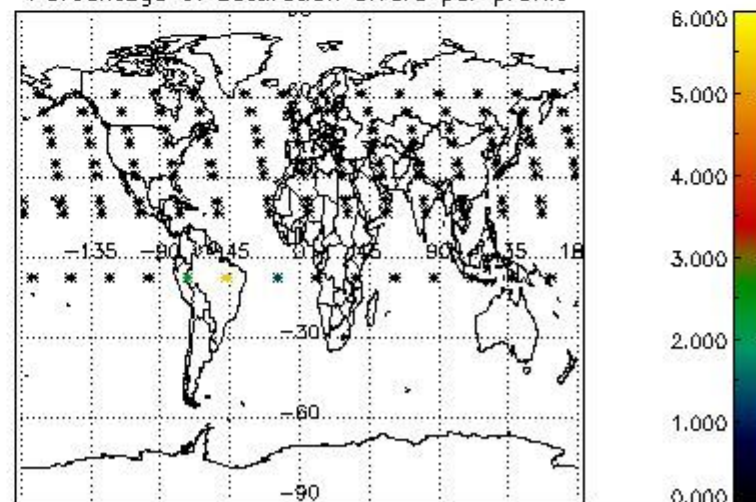
Percentage of datation errors per profile



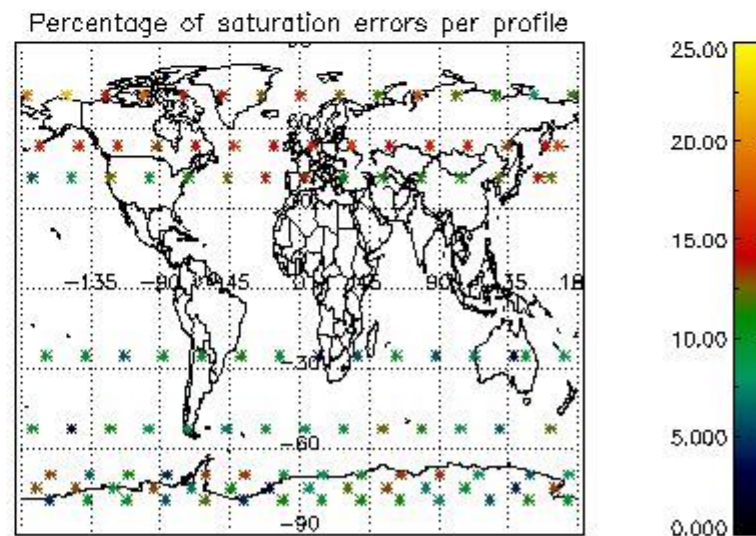
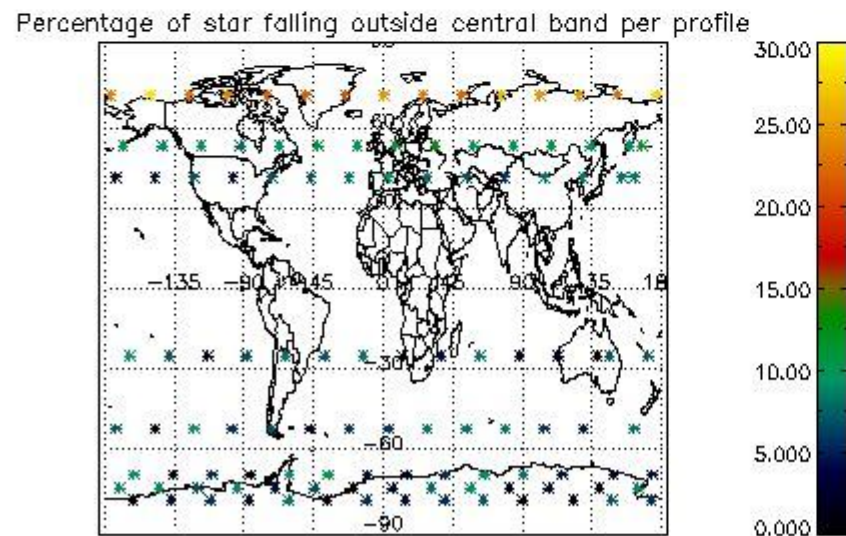
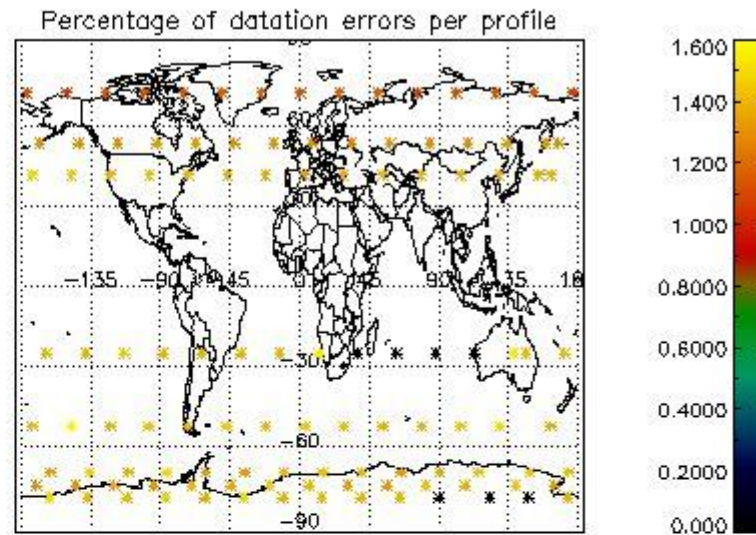
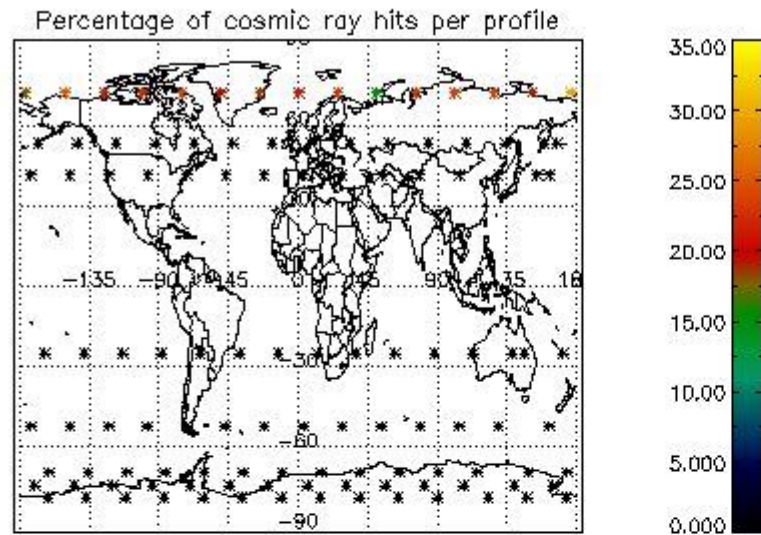
Percentage of star falling outside central band per profile



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

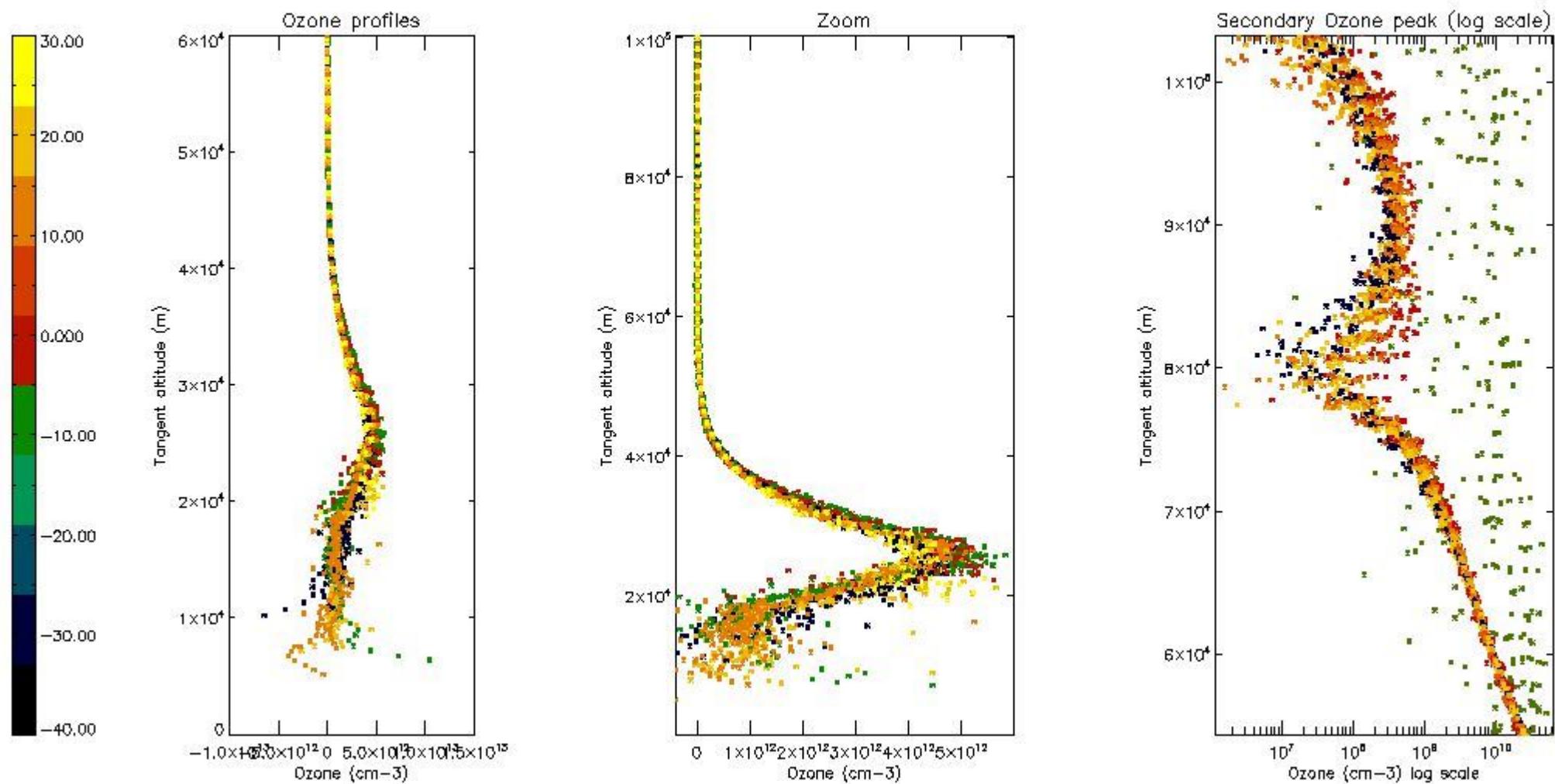
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	43
STD < 20	28

STD < 10	23
STD < 5	17

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

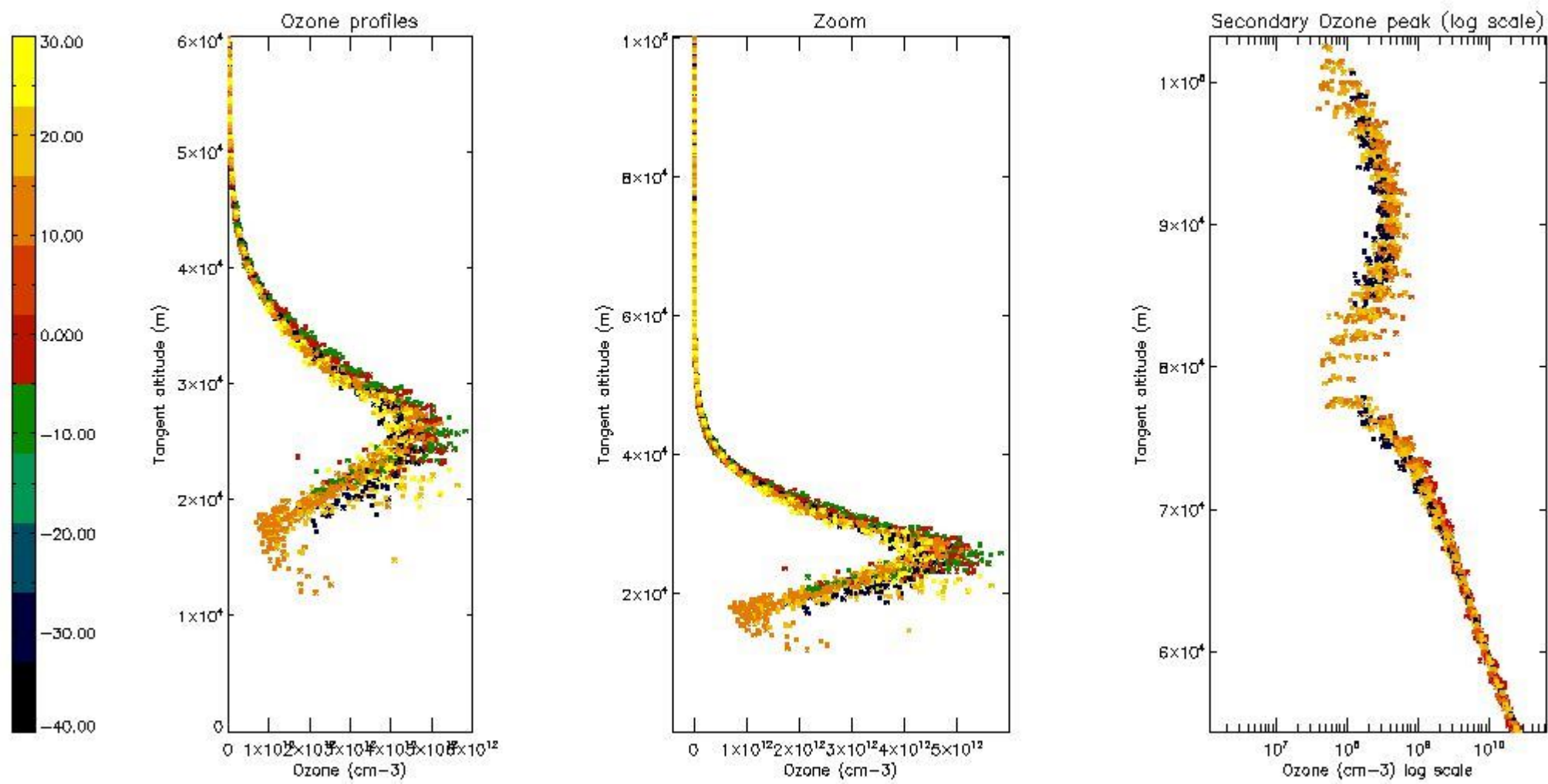
The colorbar represents the latitude.



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

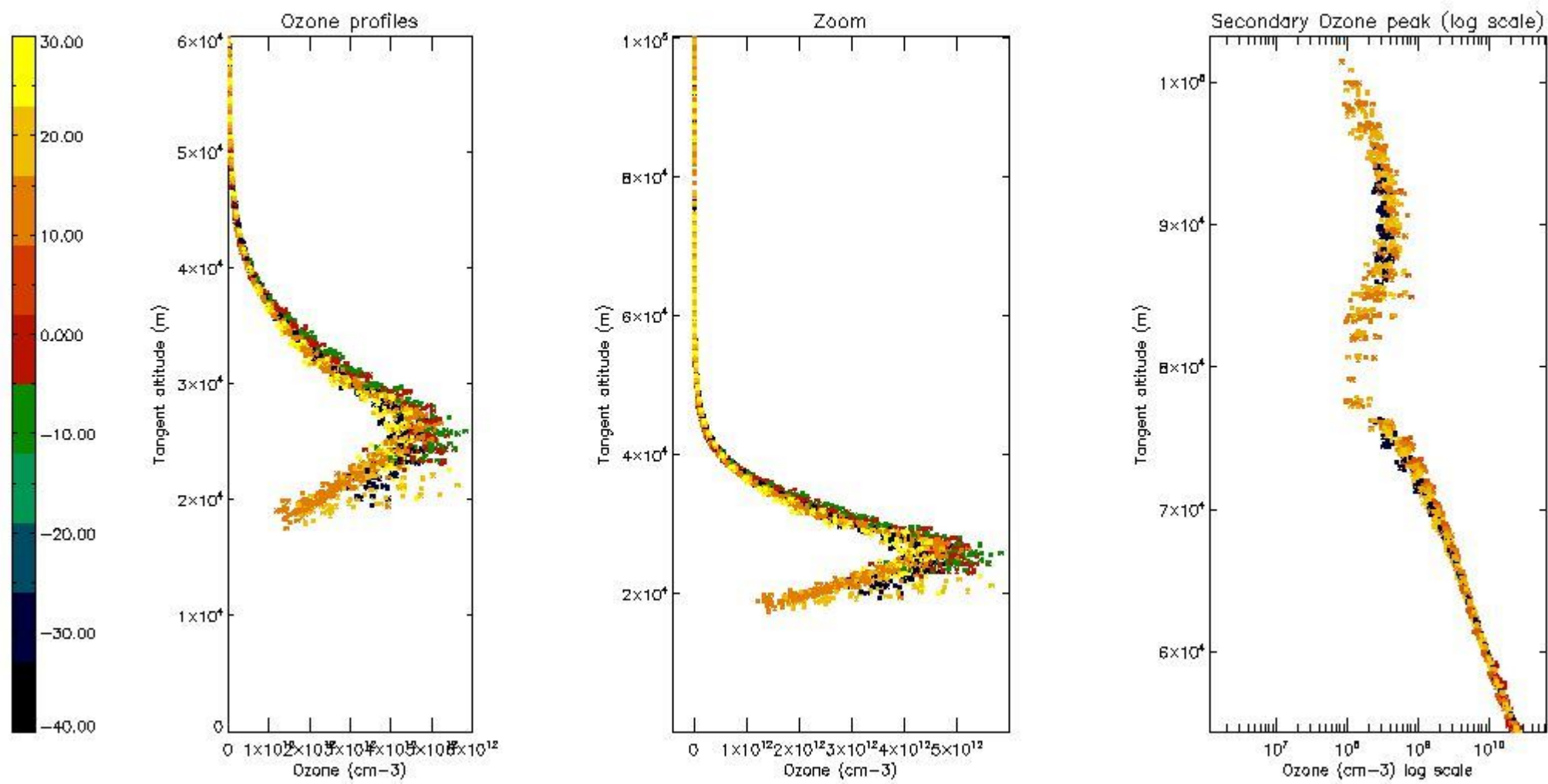
The colorbar represents the latitude.





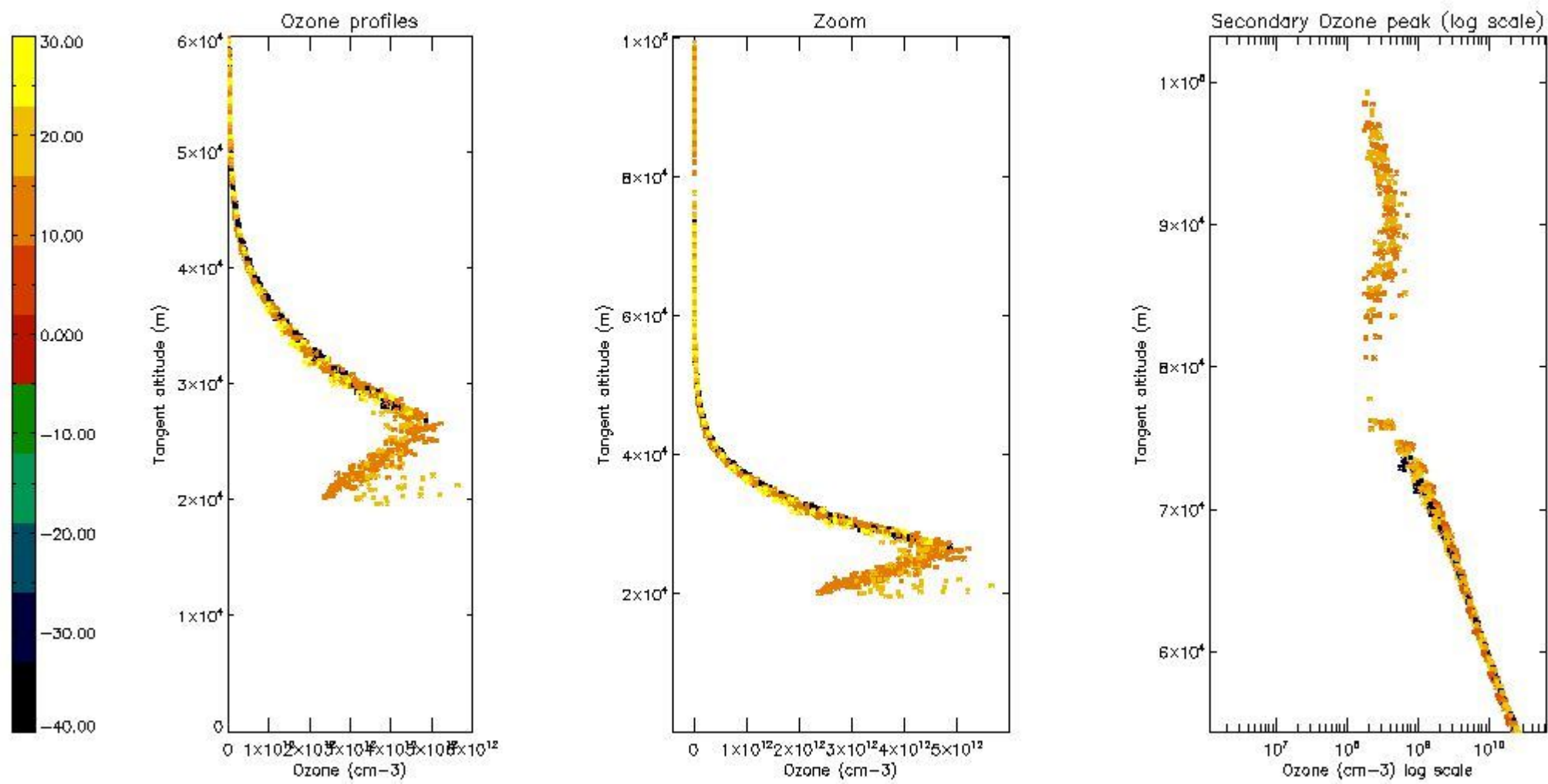
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



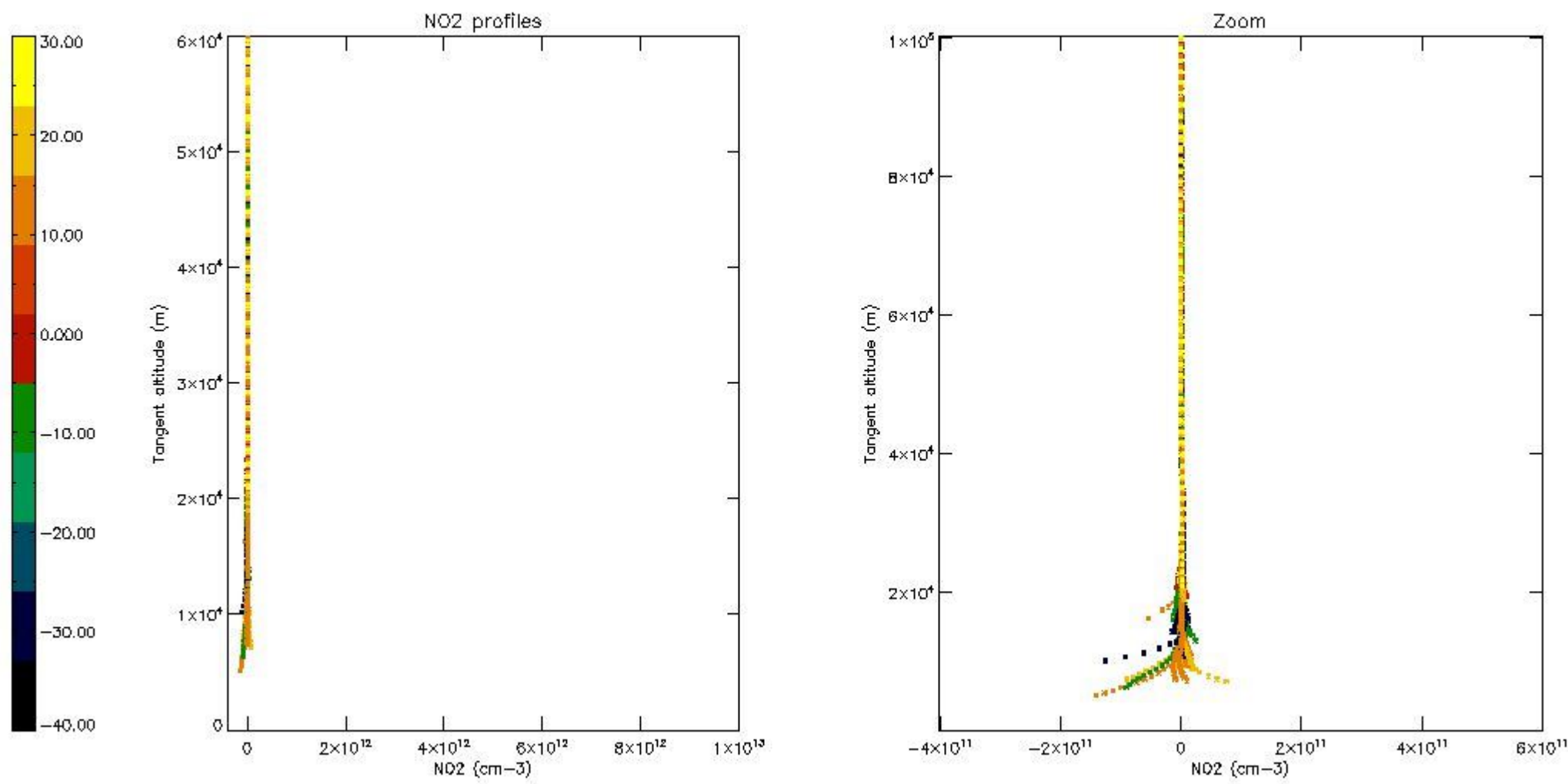
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



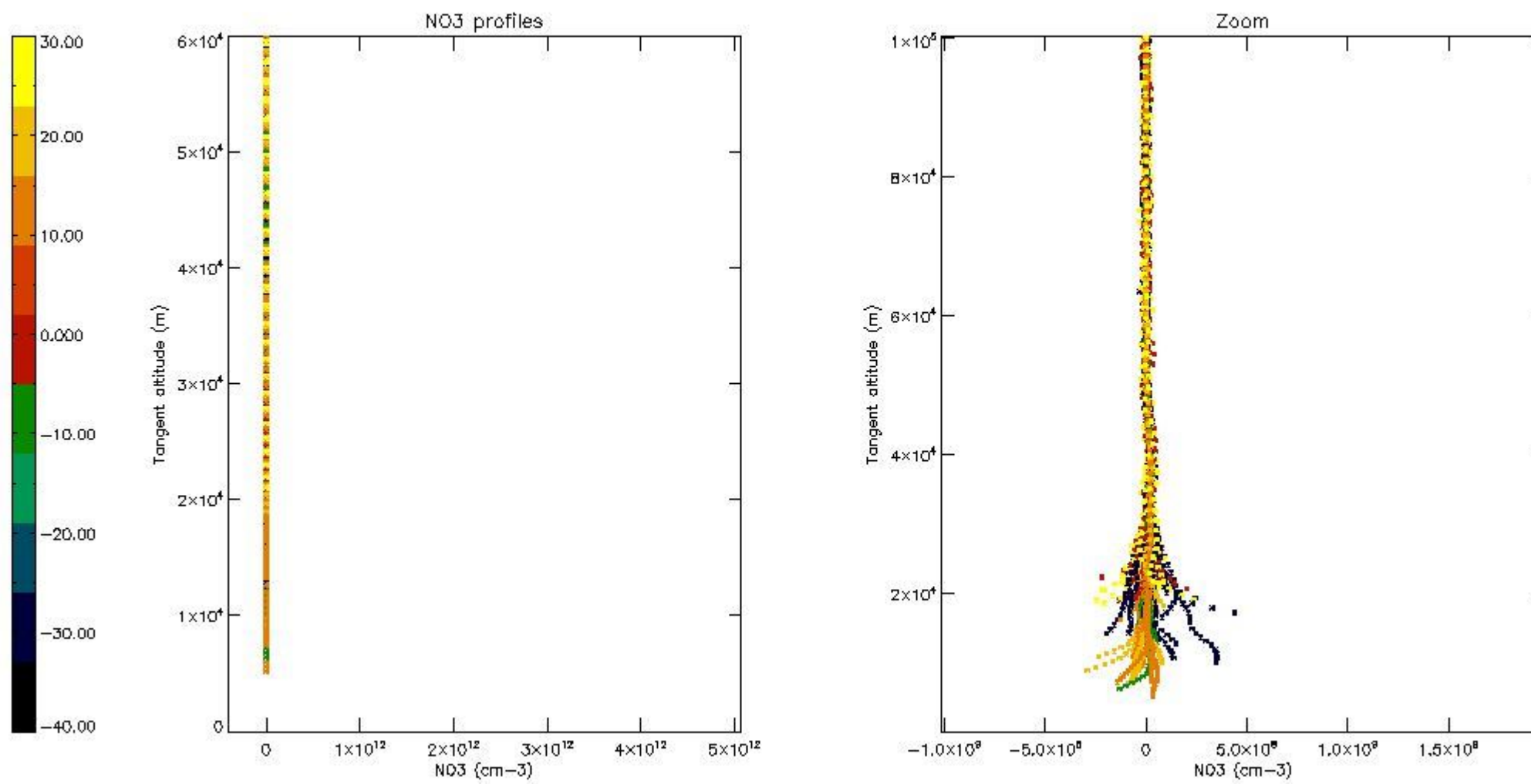
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



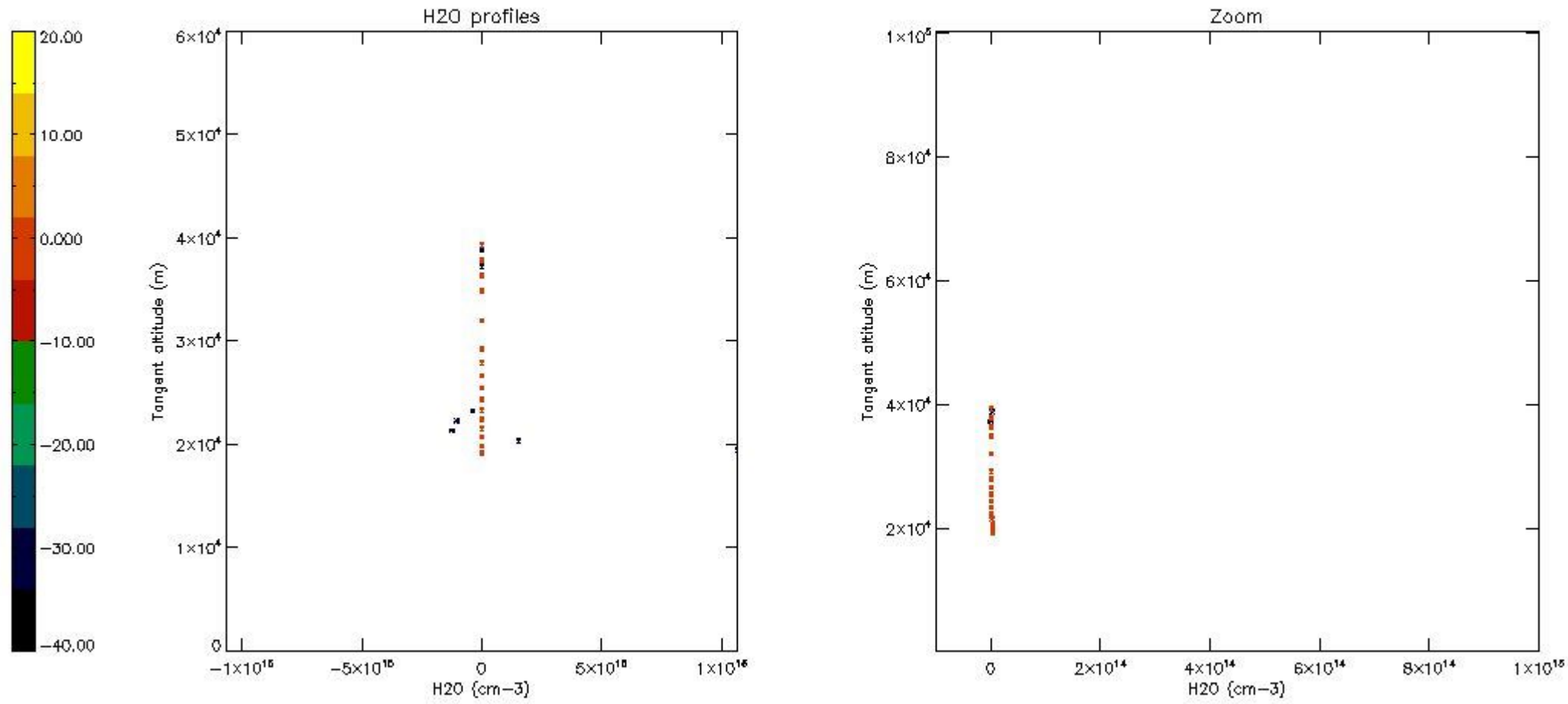
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)*

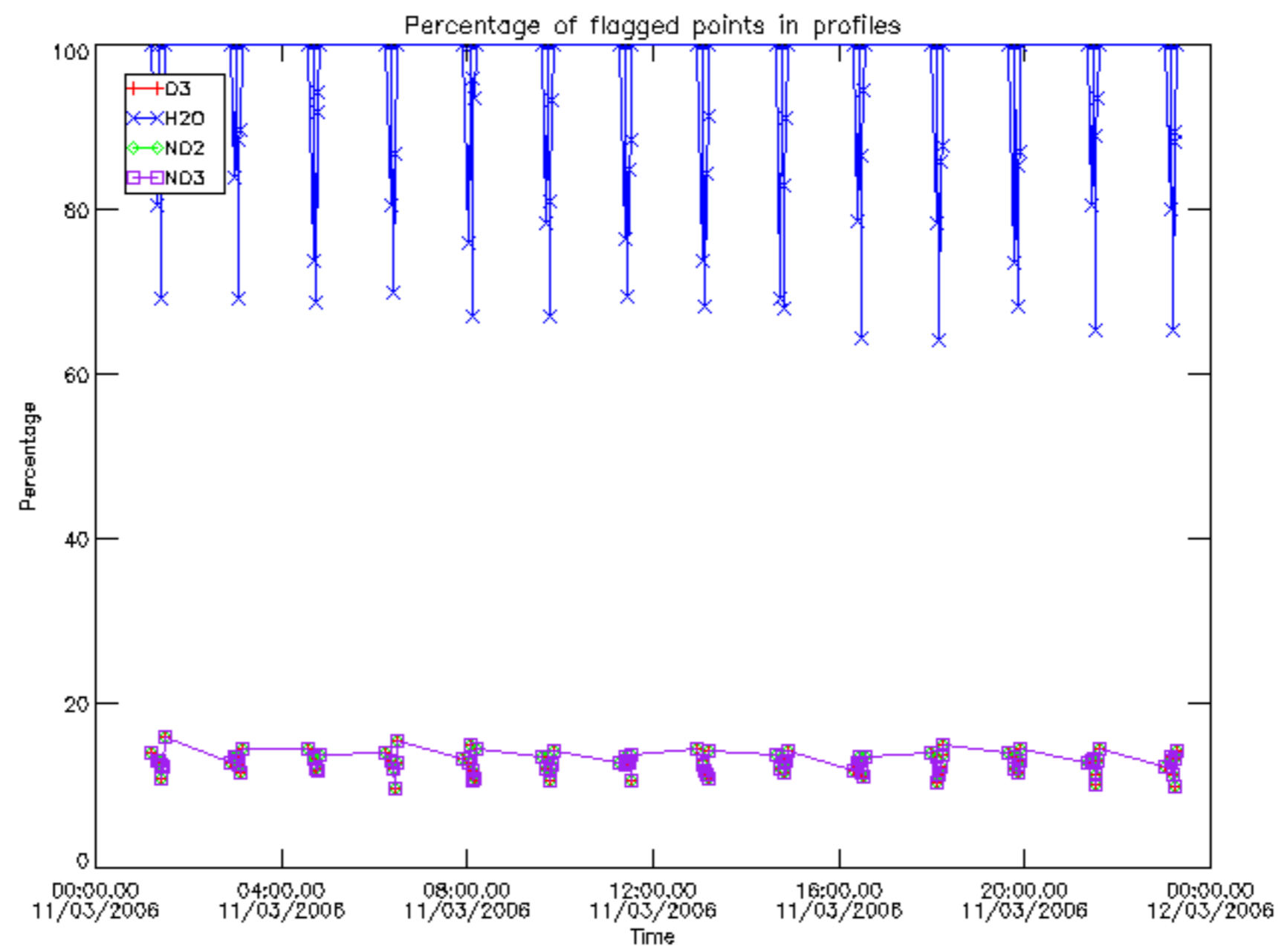
The colorbar represents the latitude.



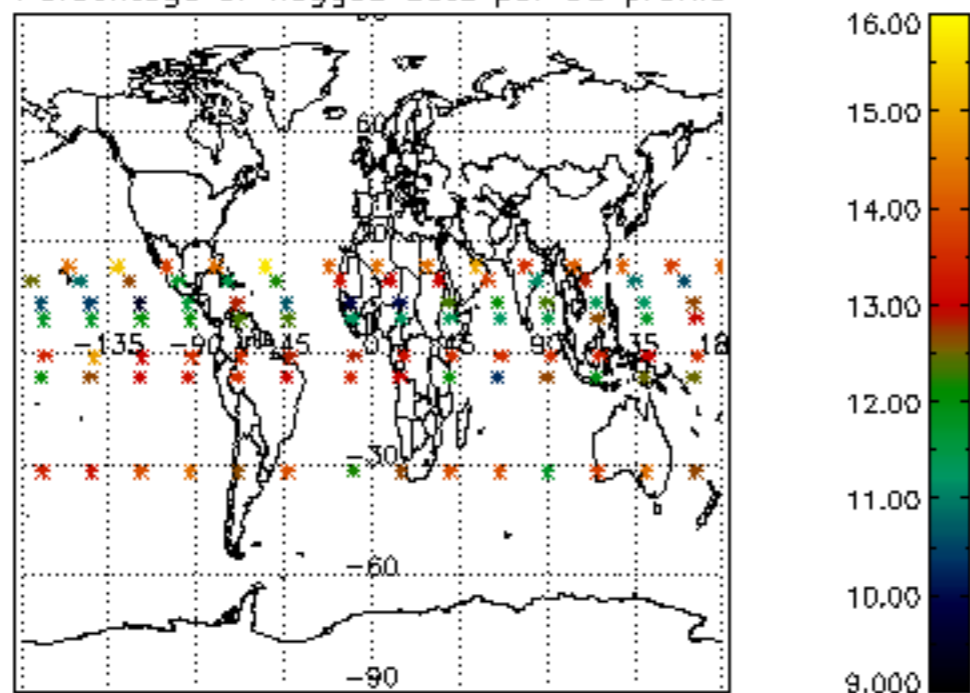
## 6. Auxiliary Data Files used for the production reported in section 2

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.

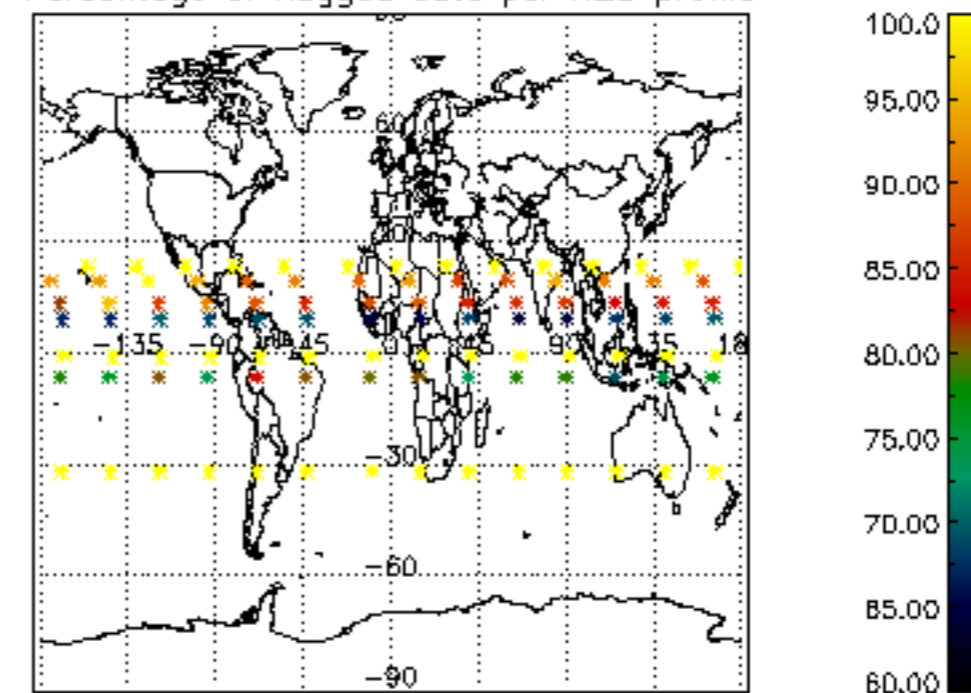
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	11-MAR-2006 00:03:53
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	11-MAR-2006 00:03:53
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	11-MAR-2006 00:03:53



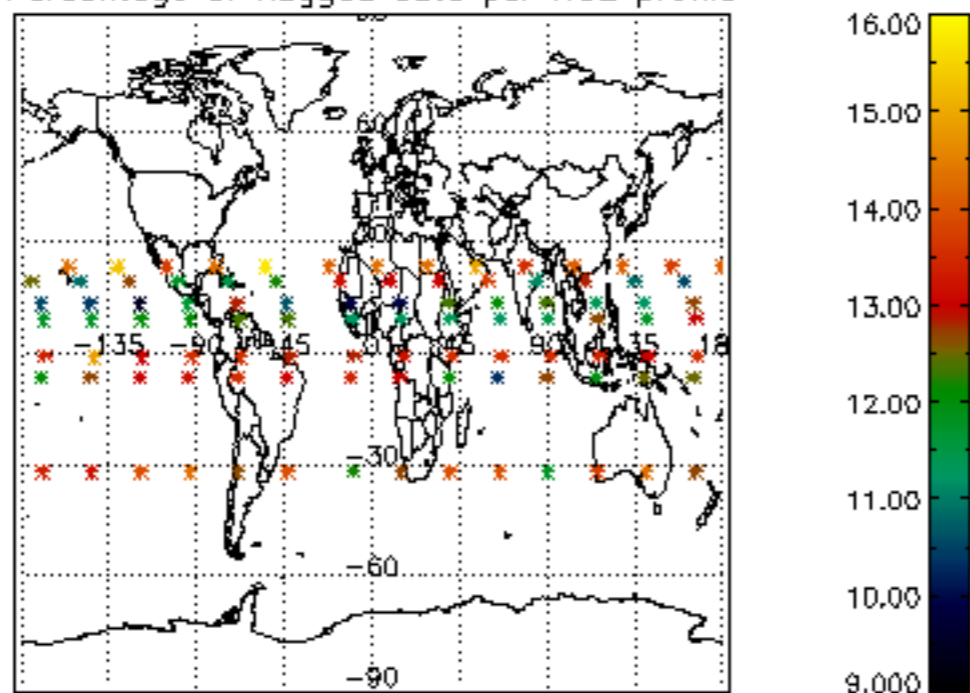
Percentage of flagged data per D3 profile



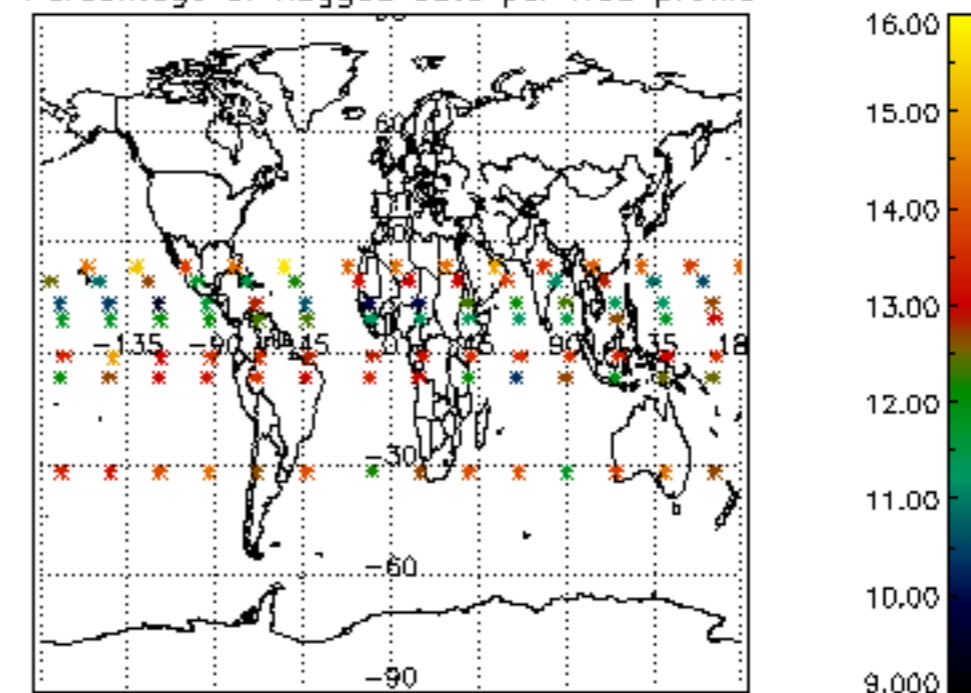
Percentage of flagged data per H2O profile



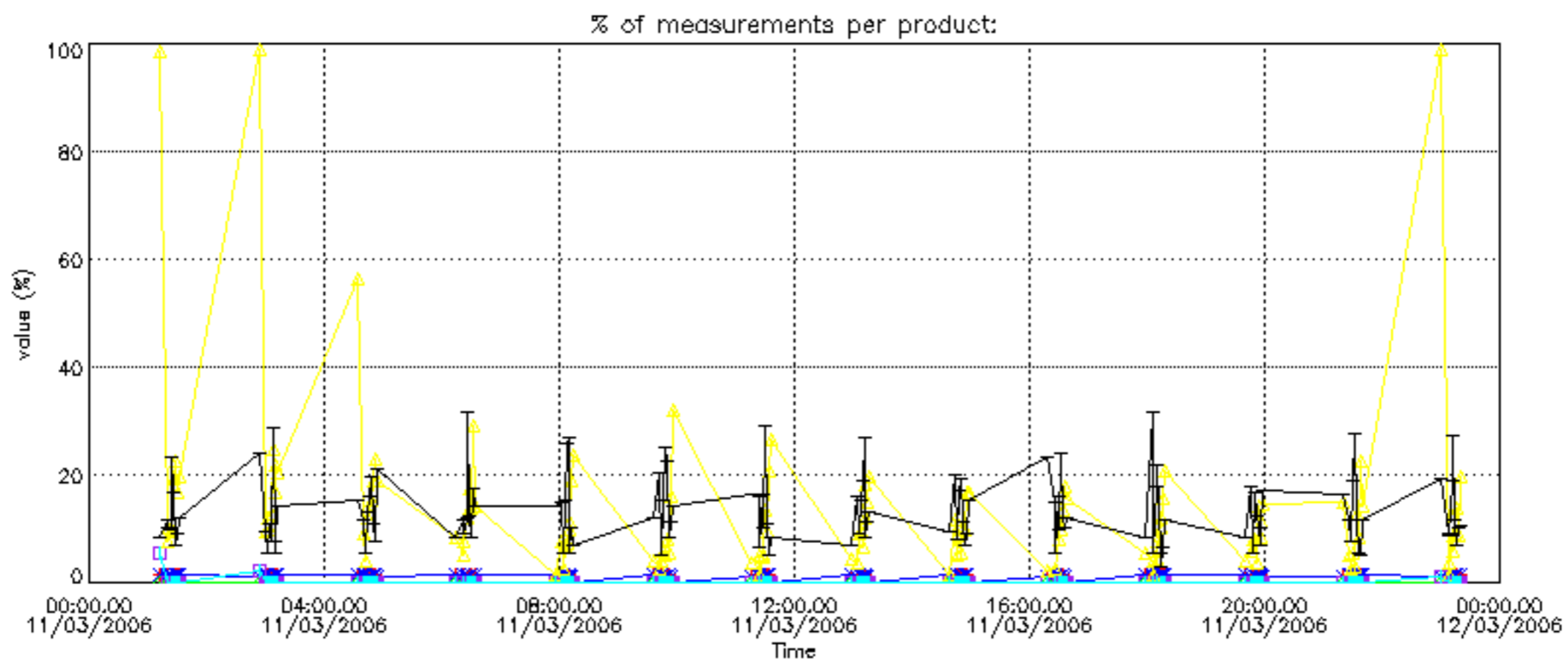
Percentage of flagged data per NO2 profile

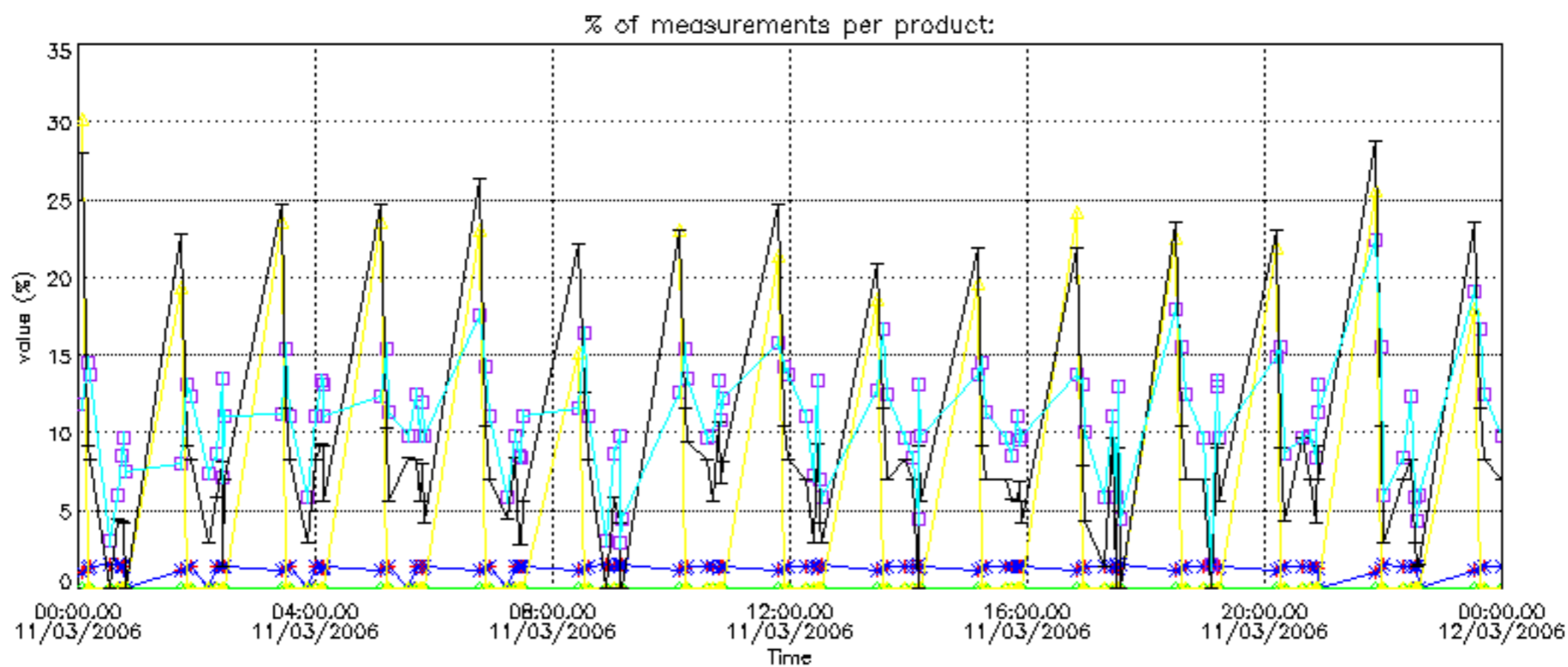


Percentage of flagged data per NO3 profile

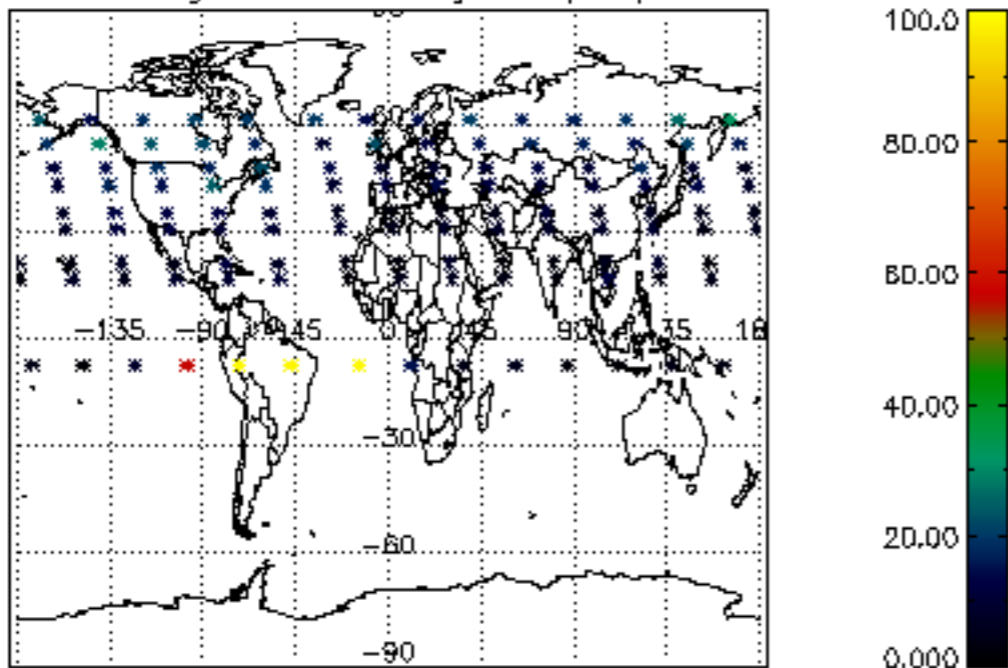




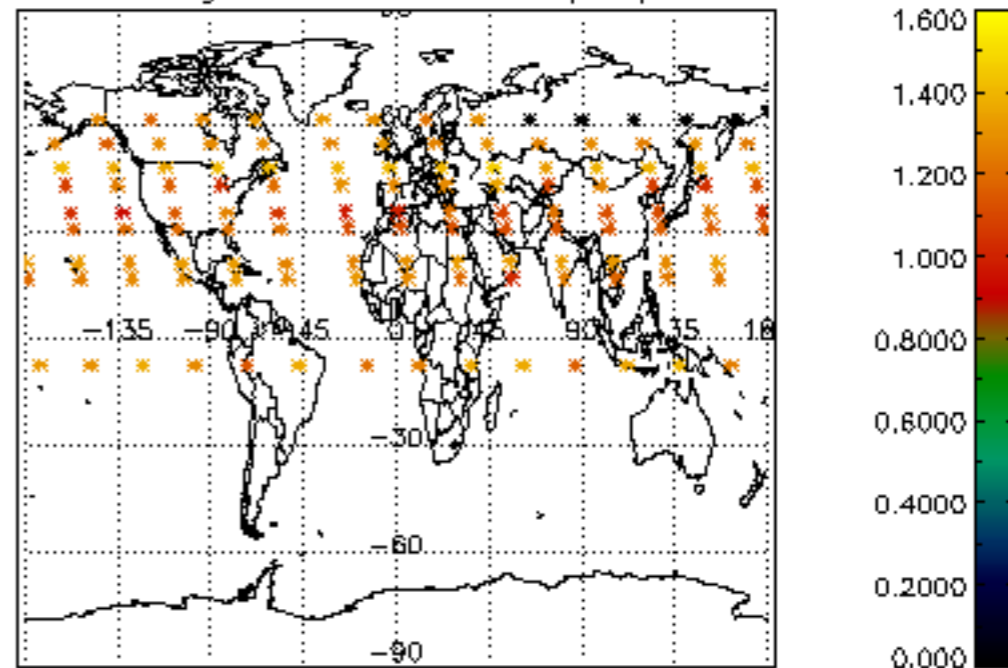




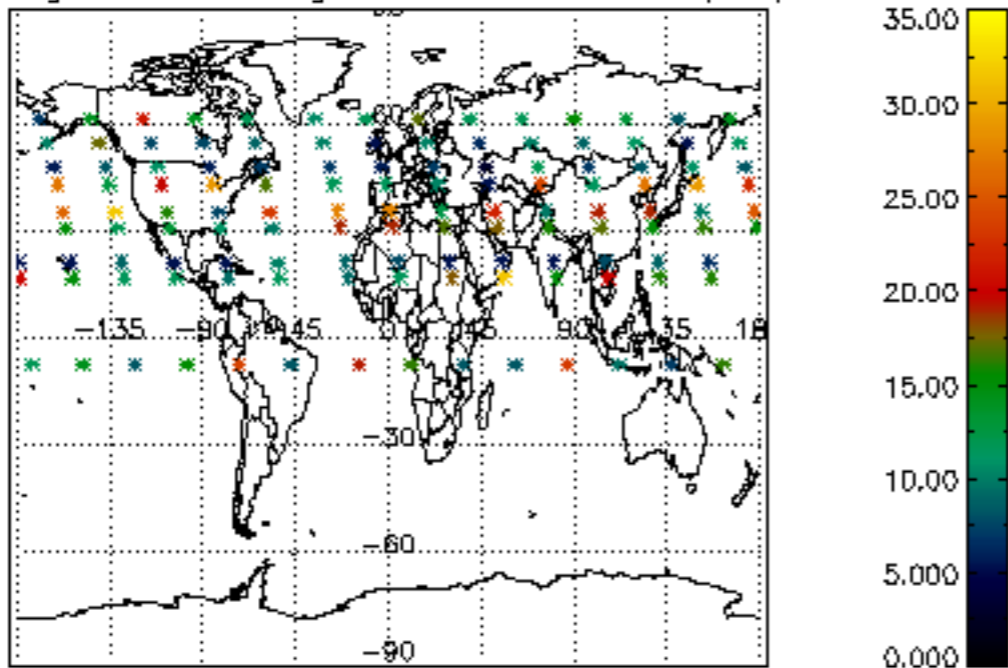
Percentage of cosmic ray hits per profile



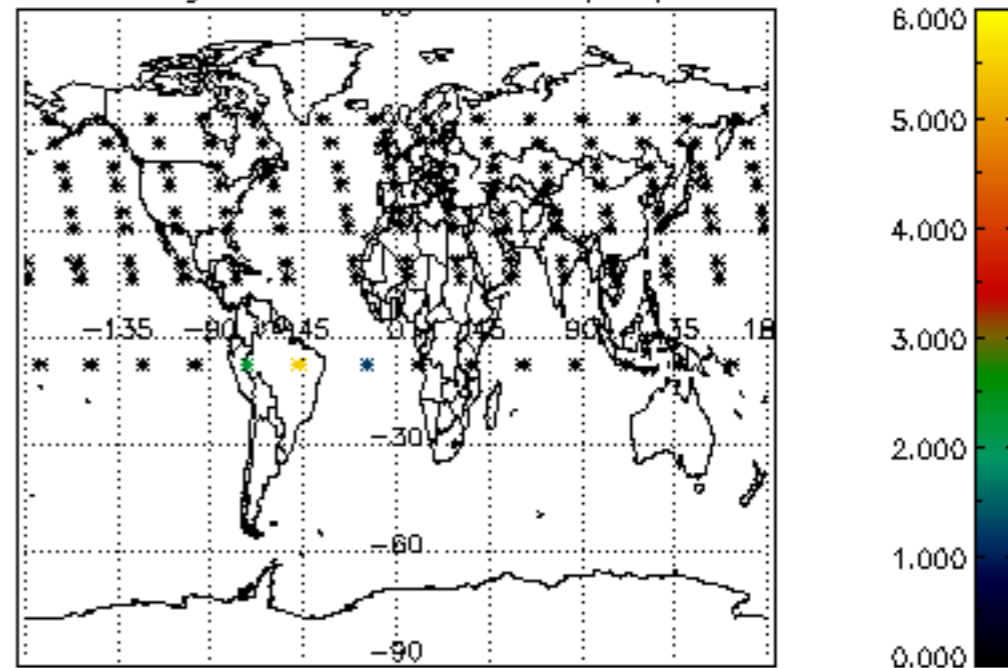
Percentage of datation errors per profile



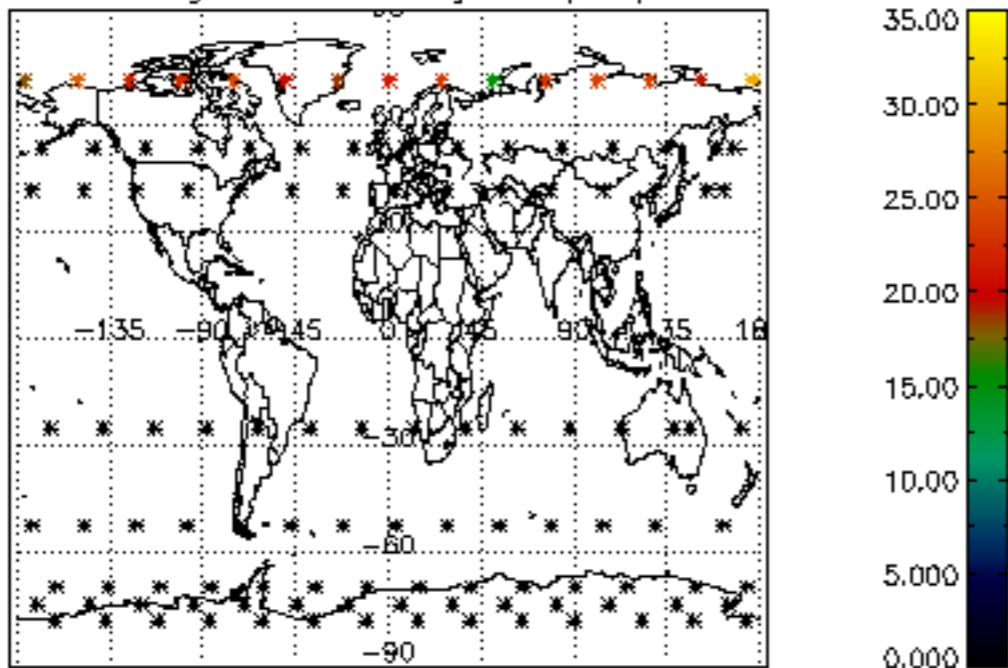
Percentage of star falling outside central band per profile



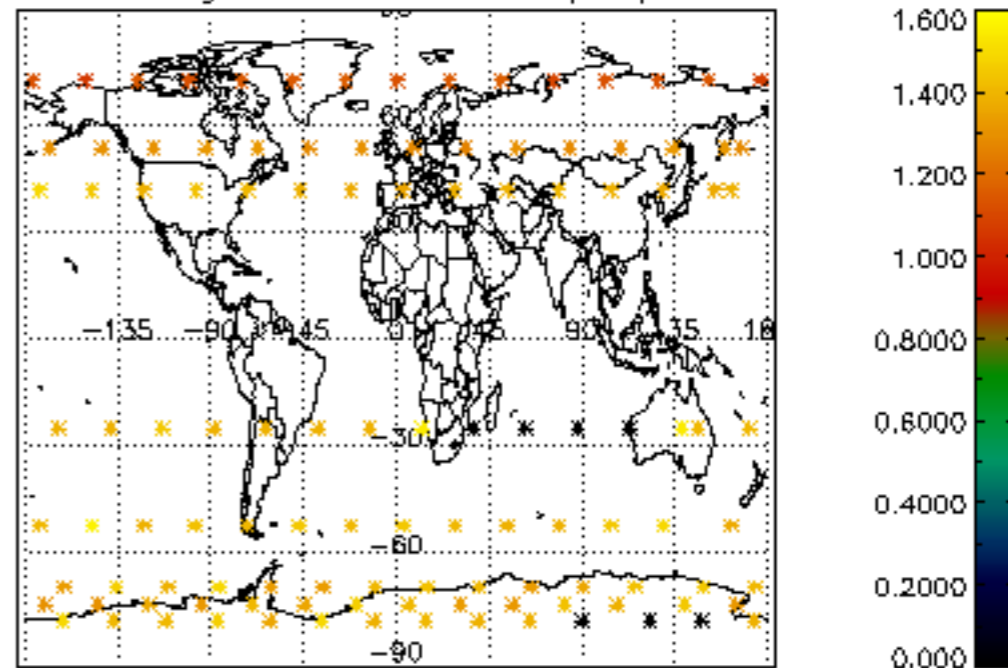
Percentage of saturation errors per profile



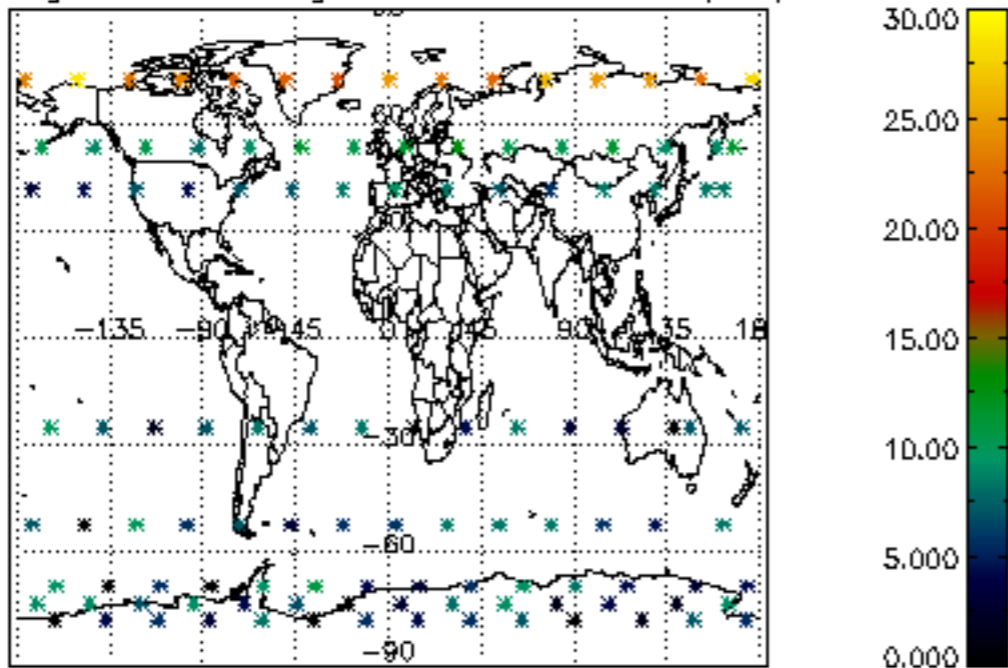
Percentage of cosmic ray hits per profile



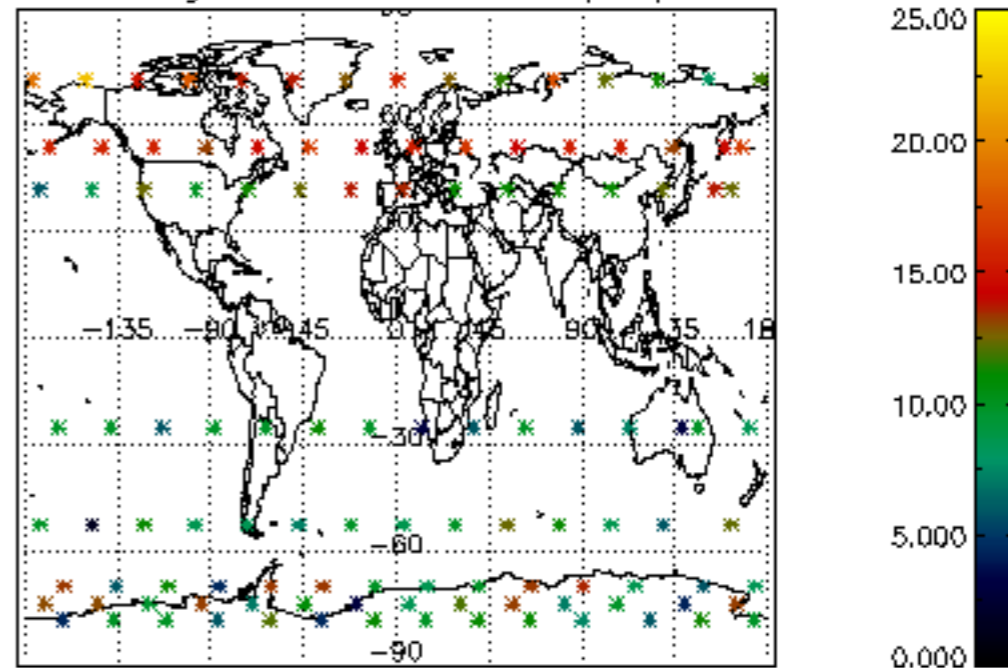
Percentage of datation errors per profile

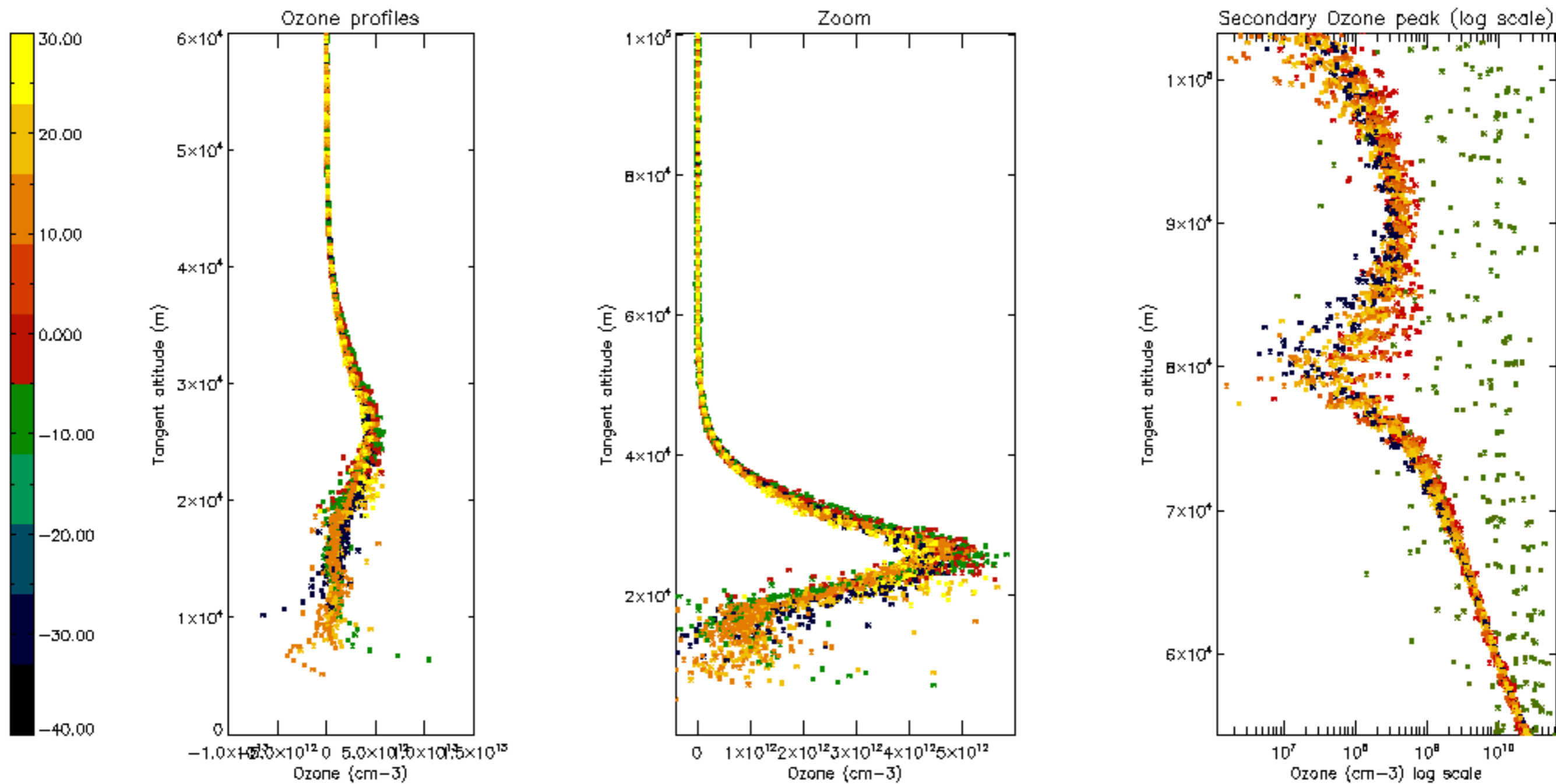


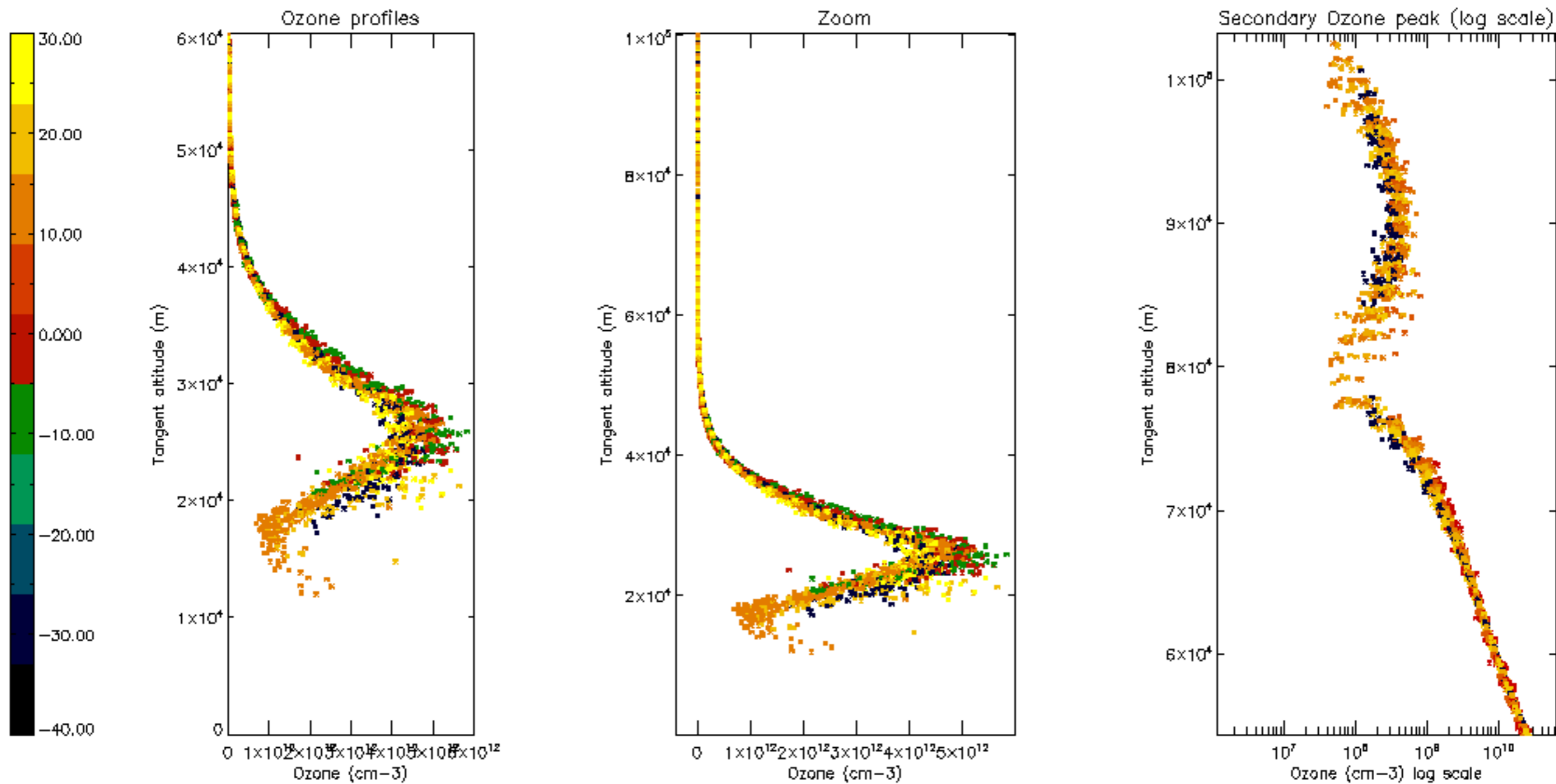
Percentage of star falling outside central band per profile

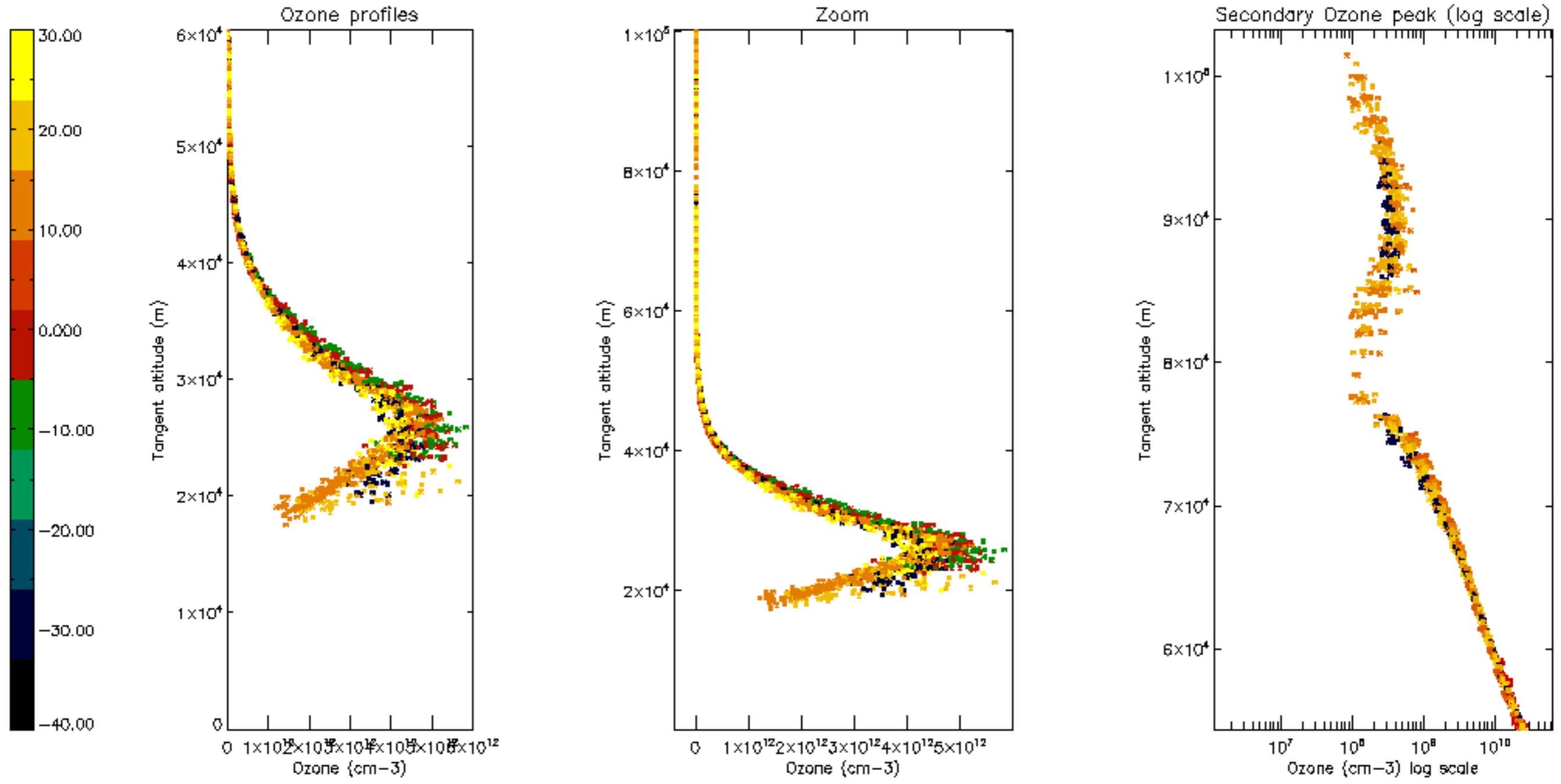


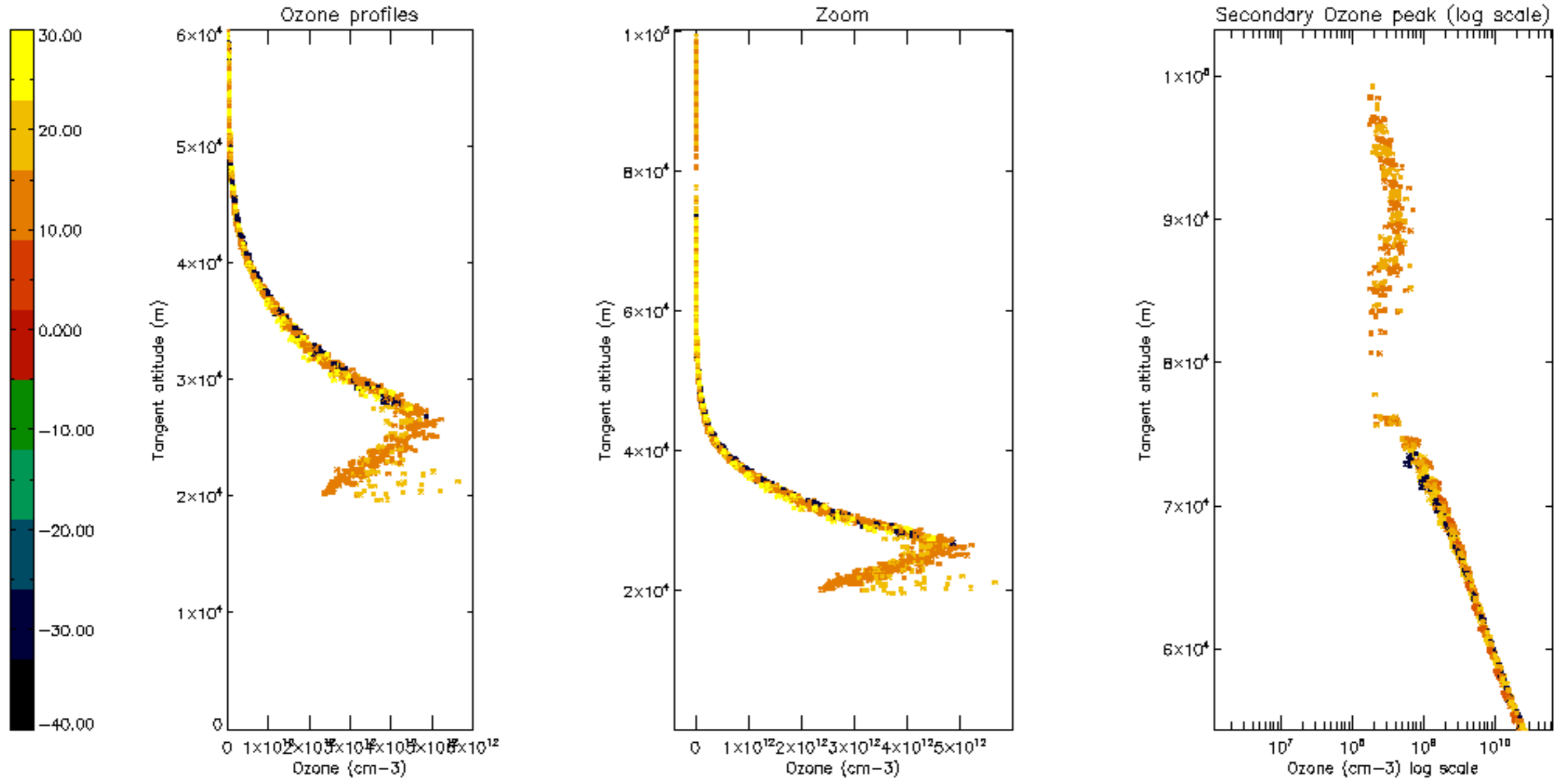
Percentage of saturation errors per profile



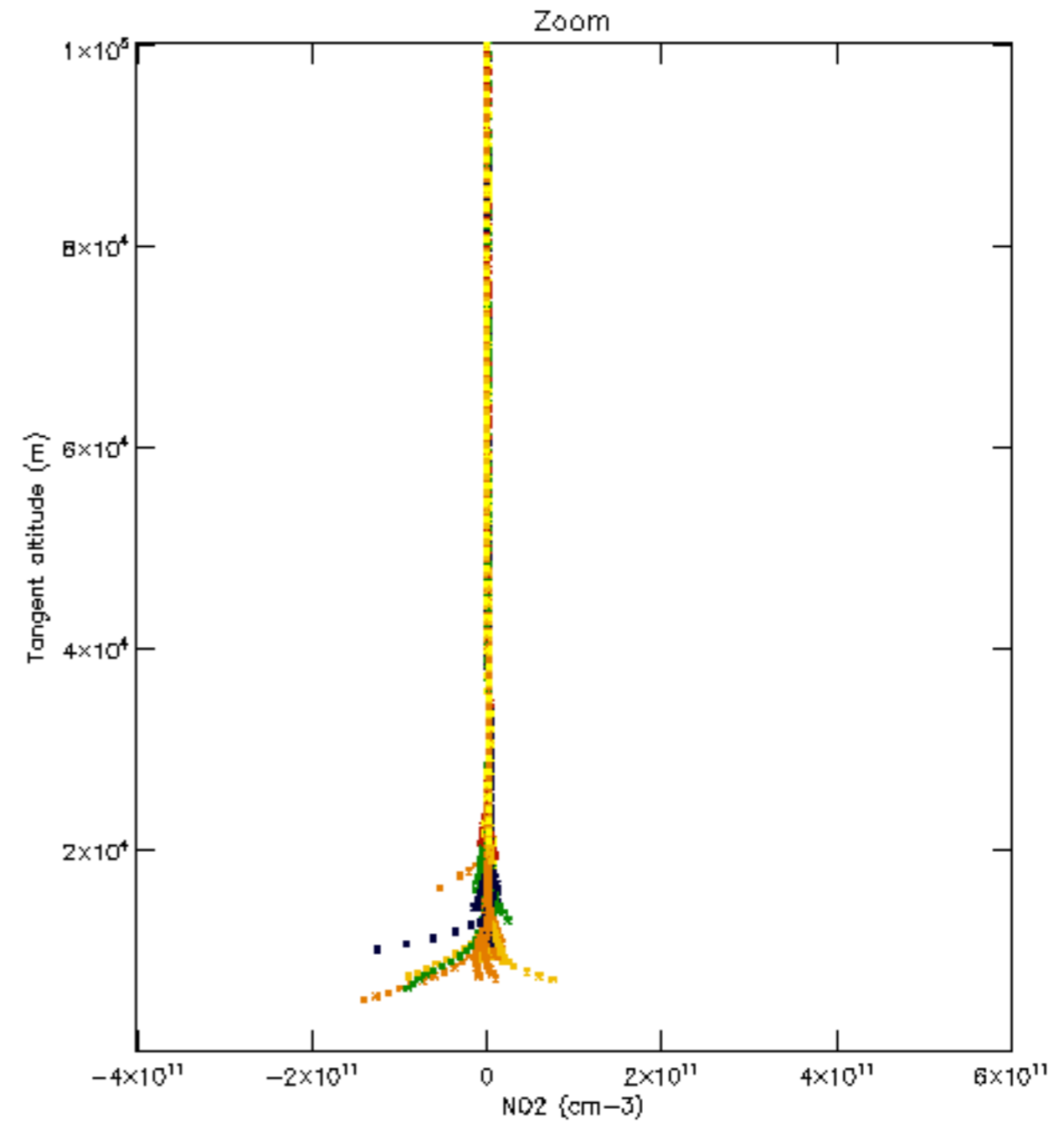
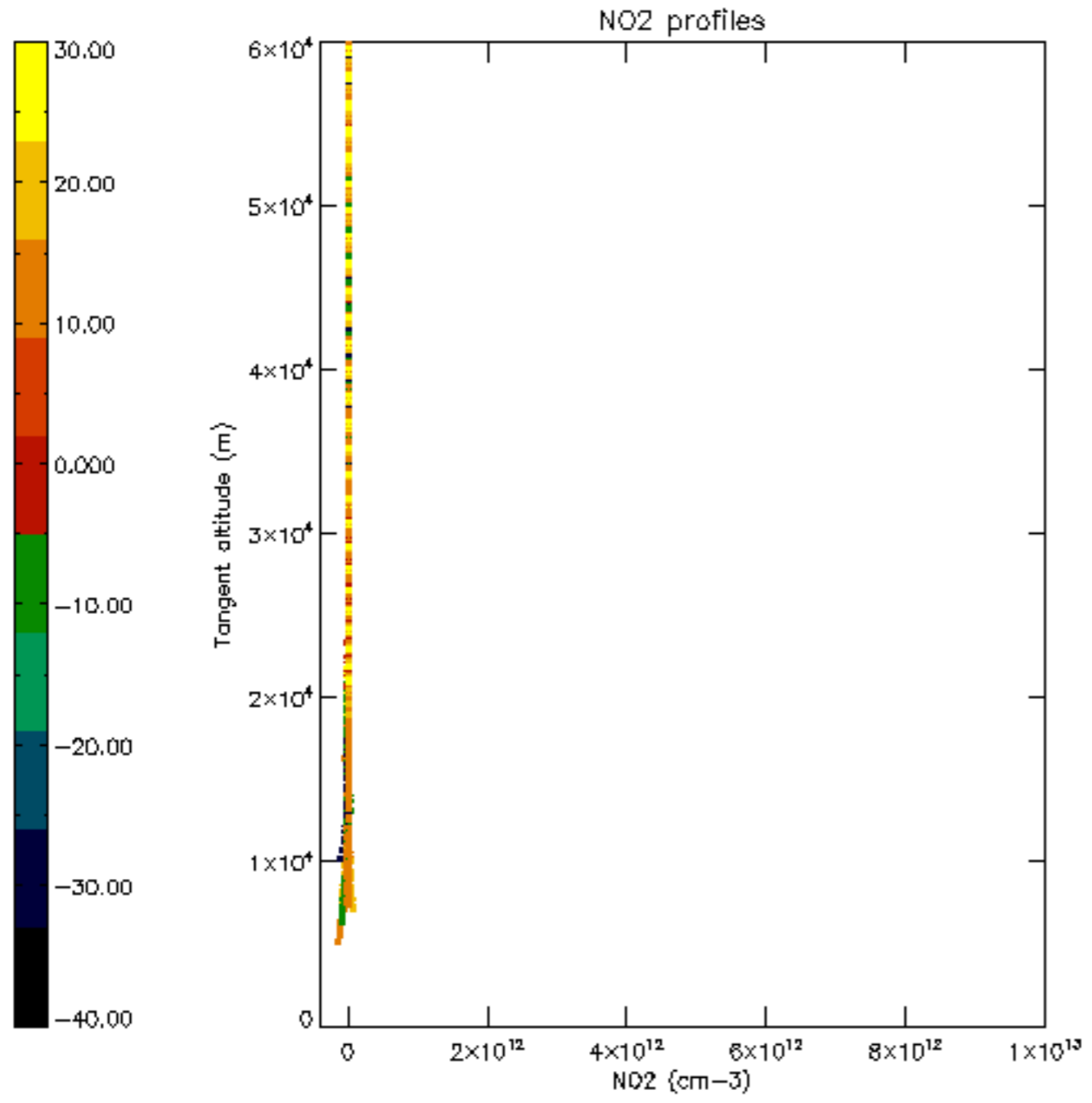


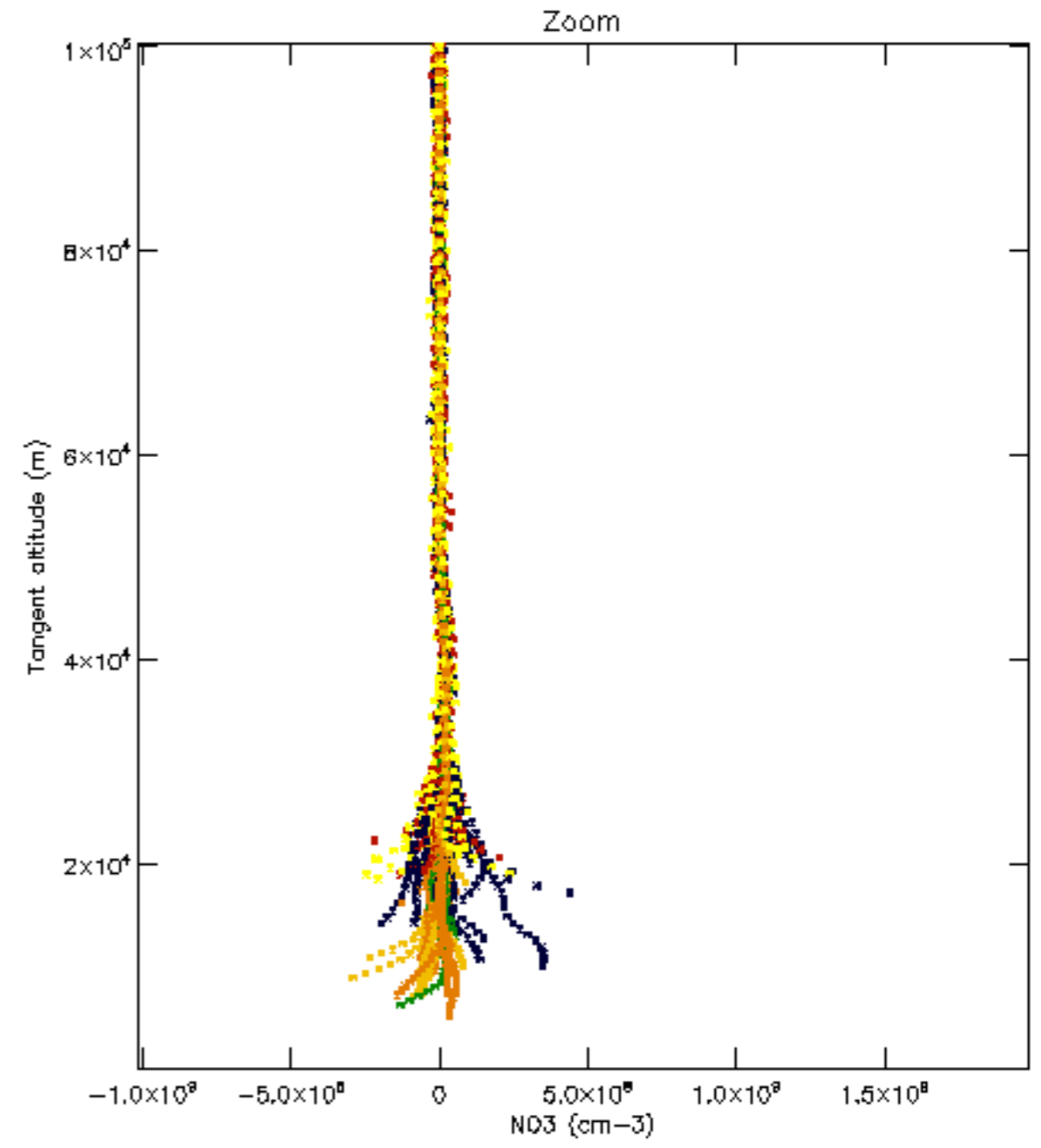
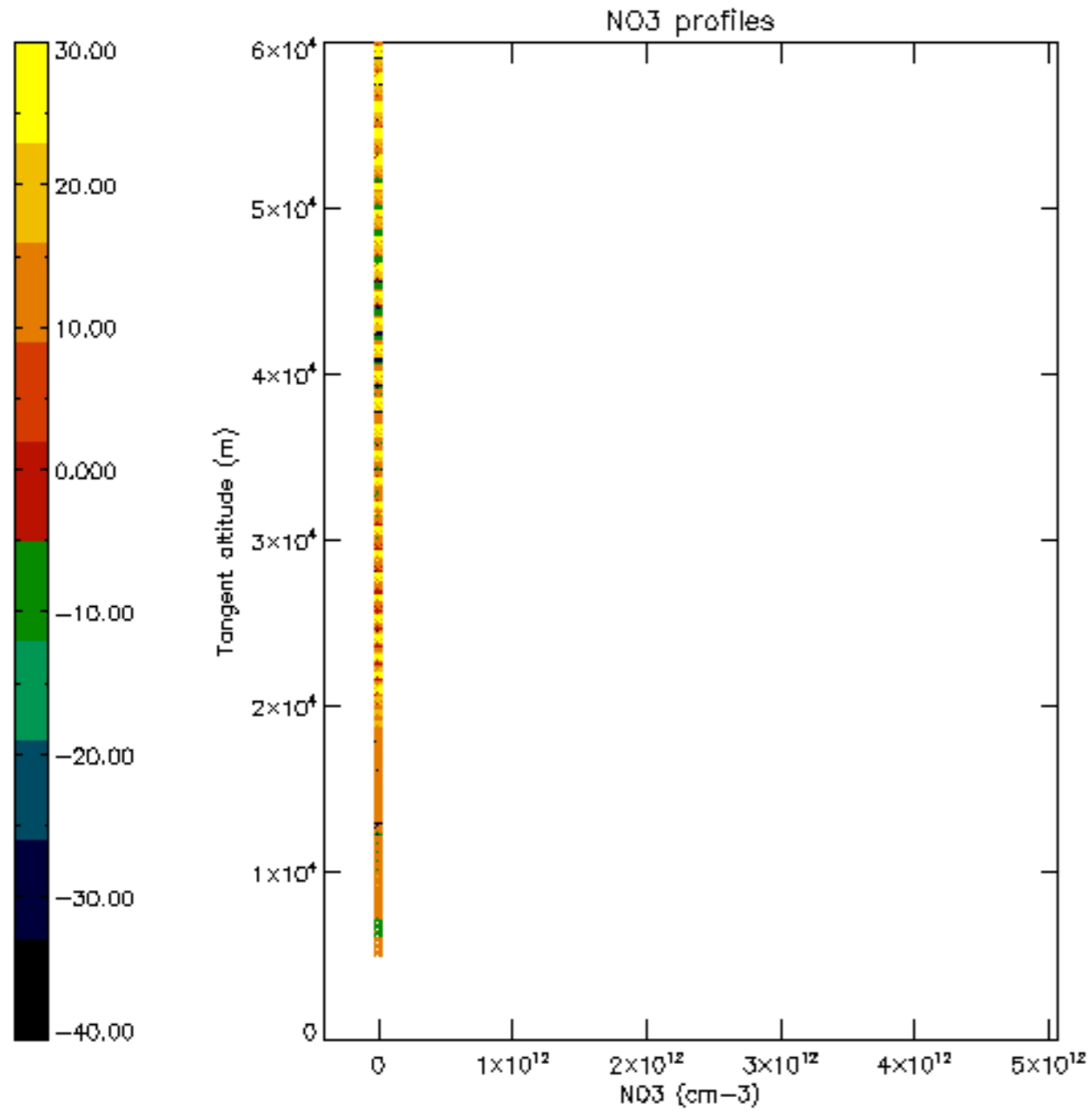


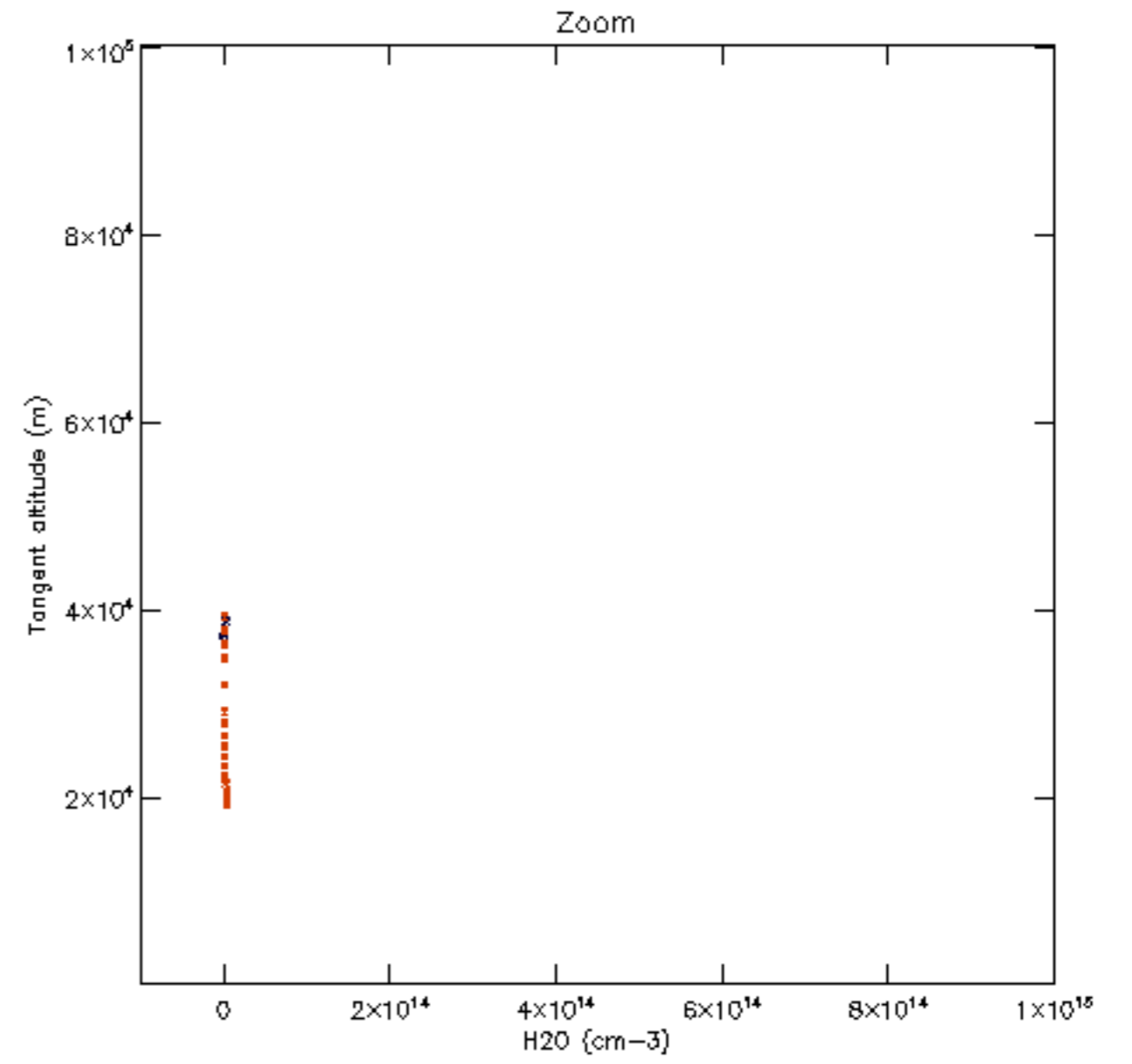
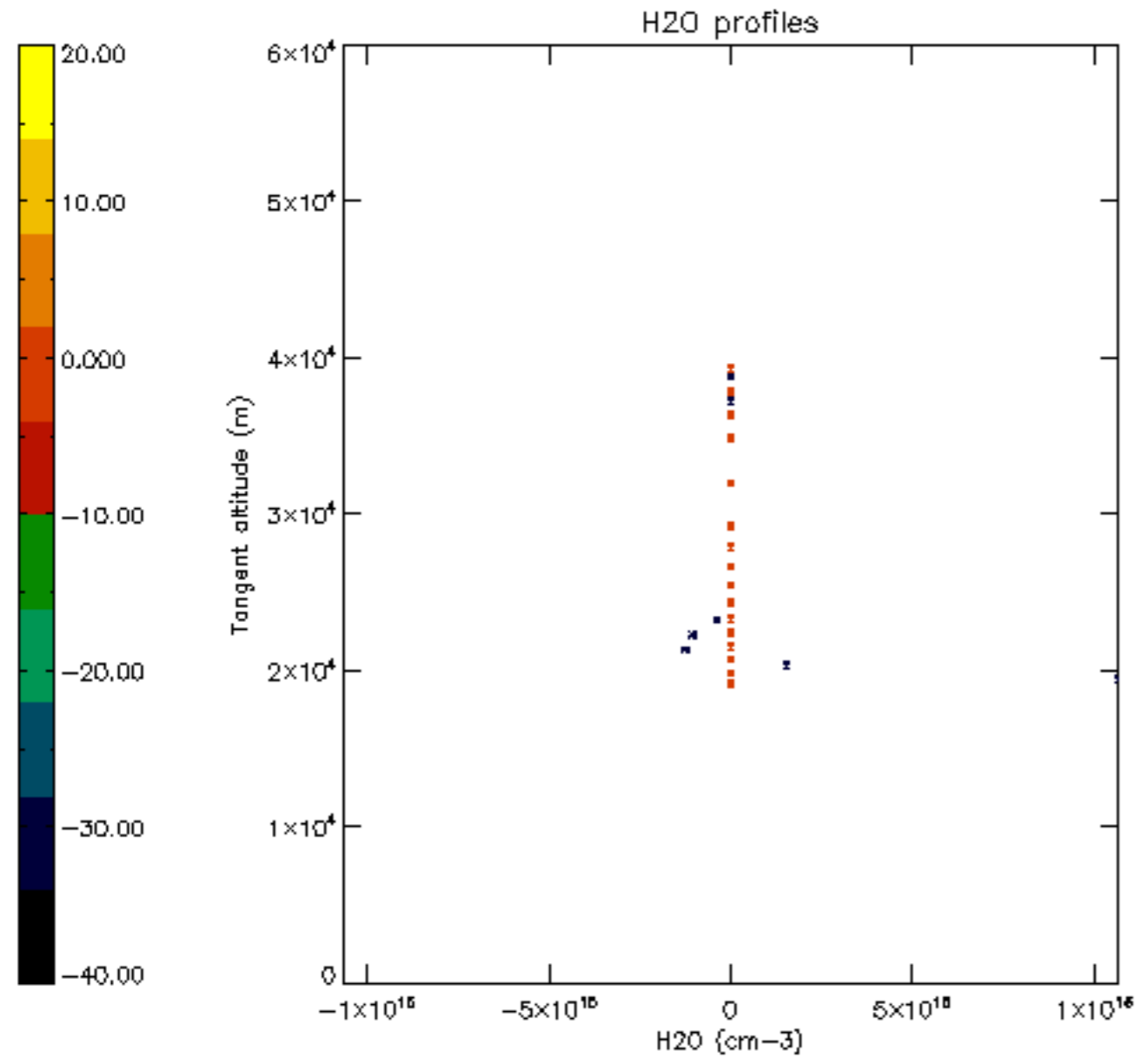


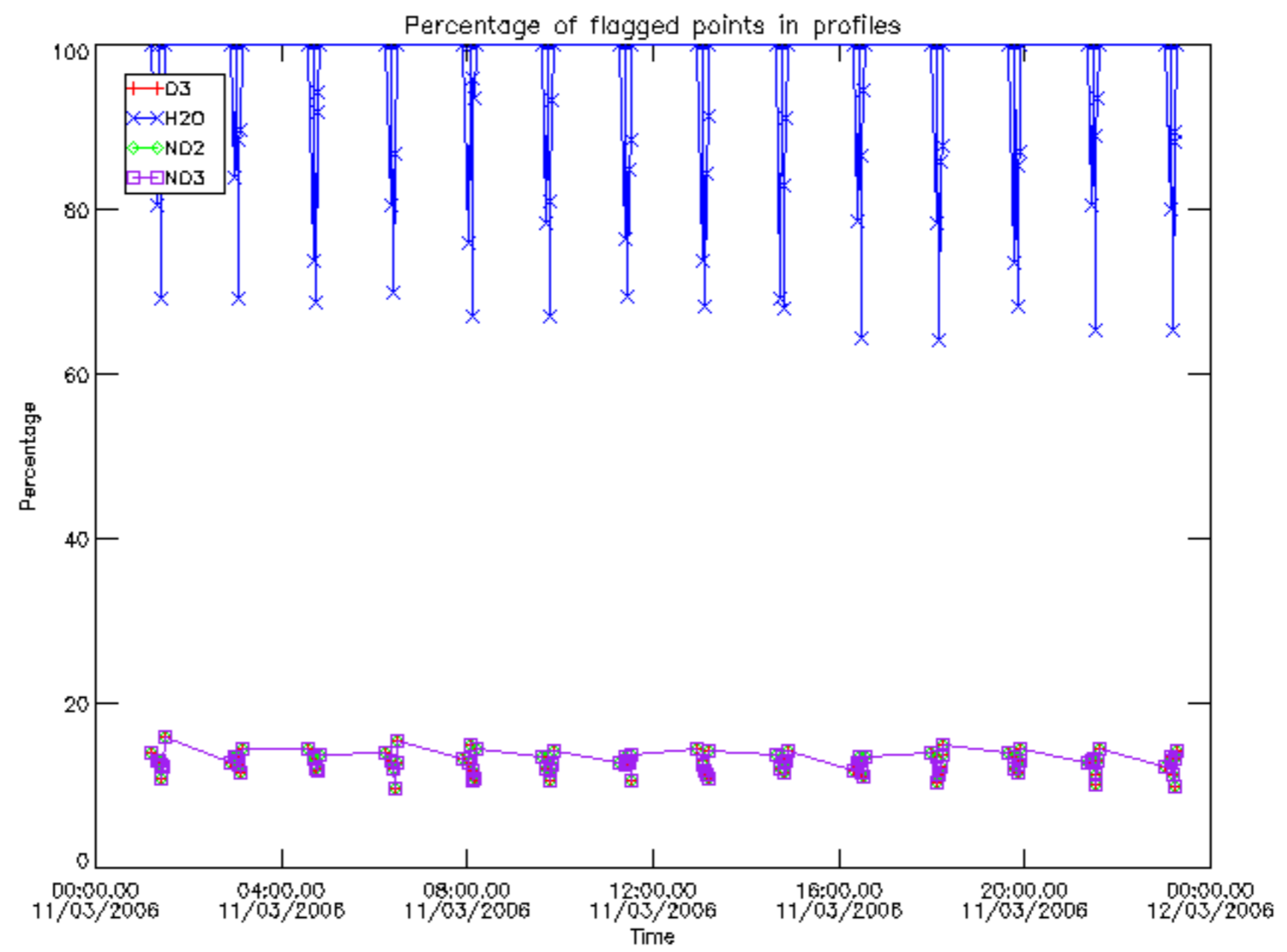




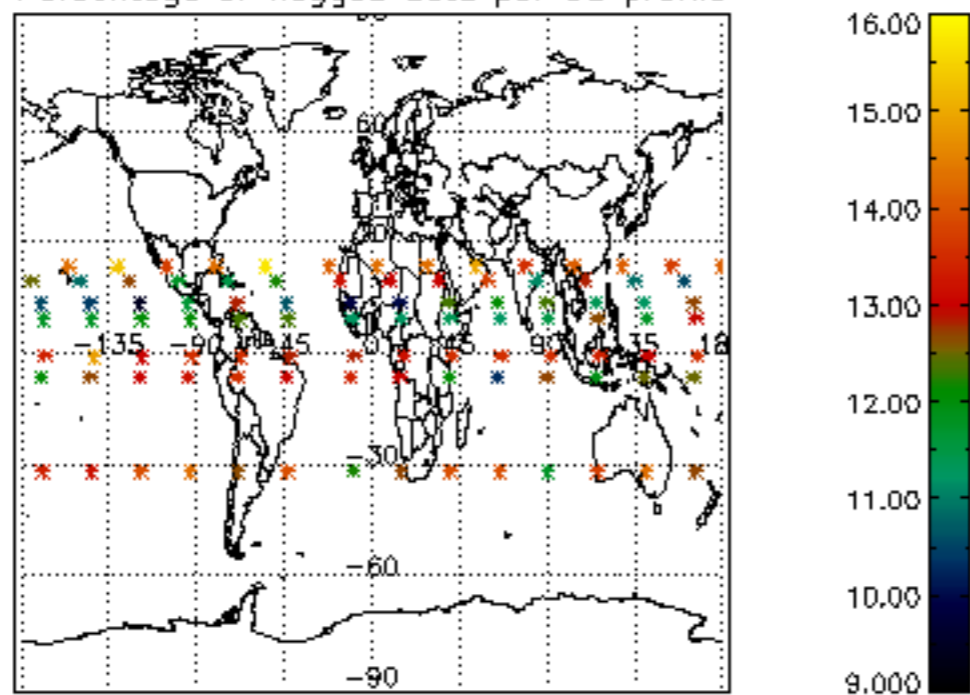




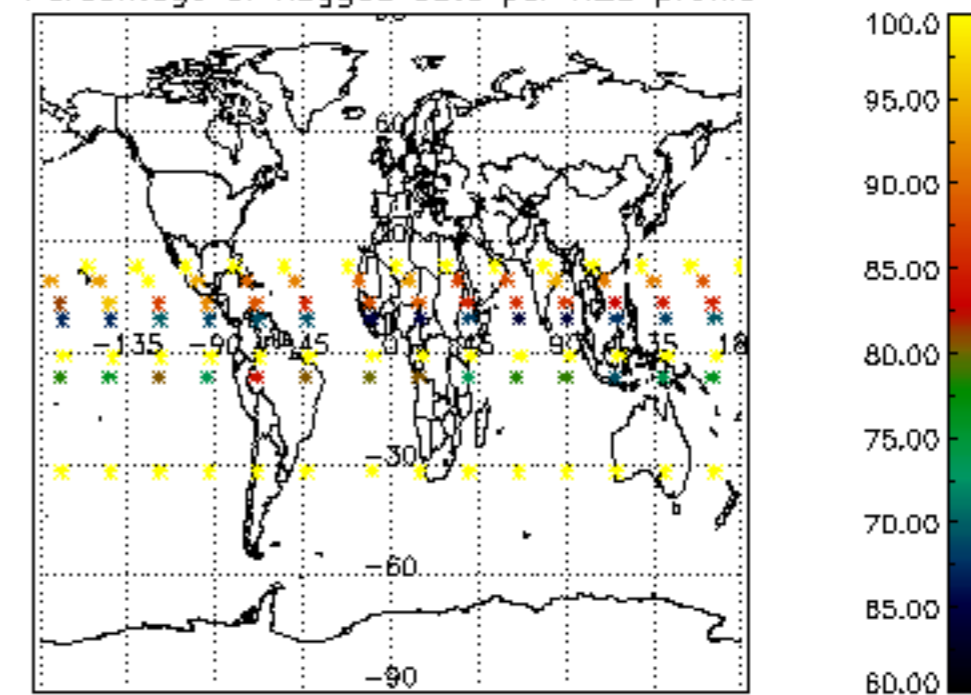




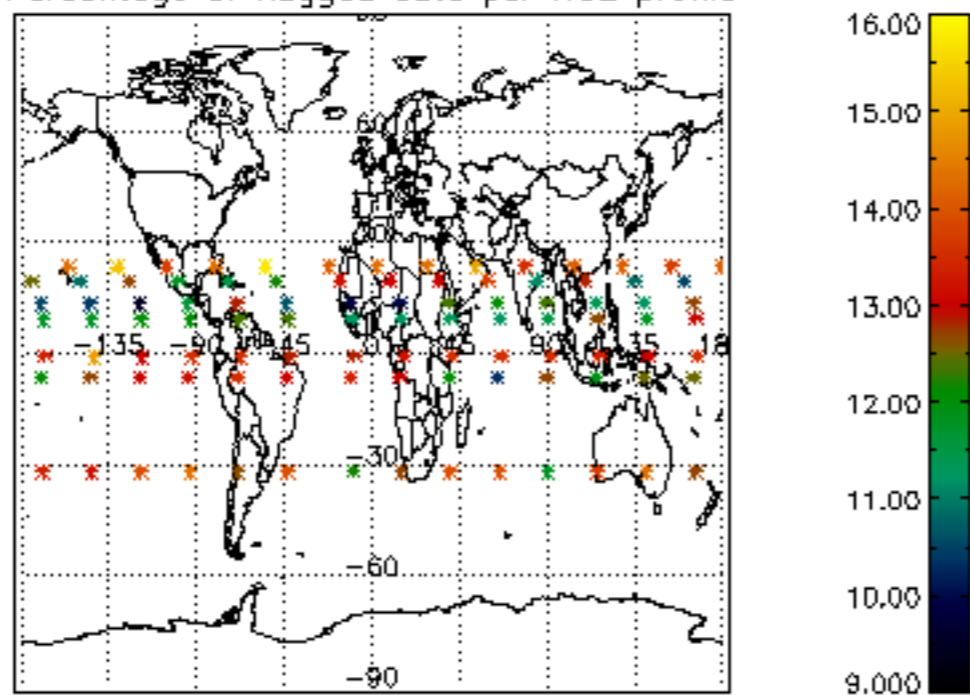
Percentage of flagged data per D3 profile



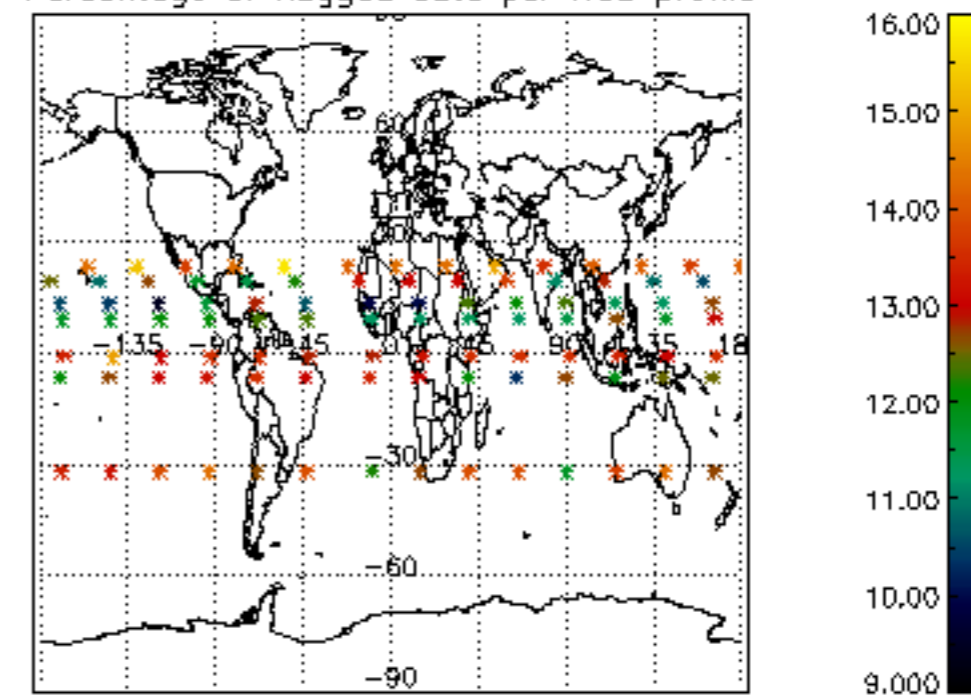
Percentage of flagged data per H2O profile

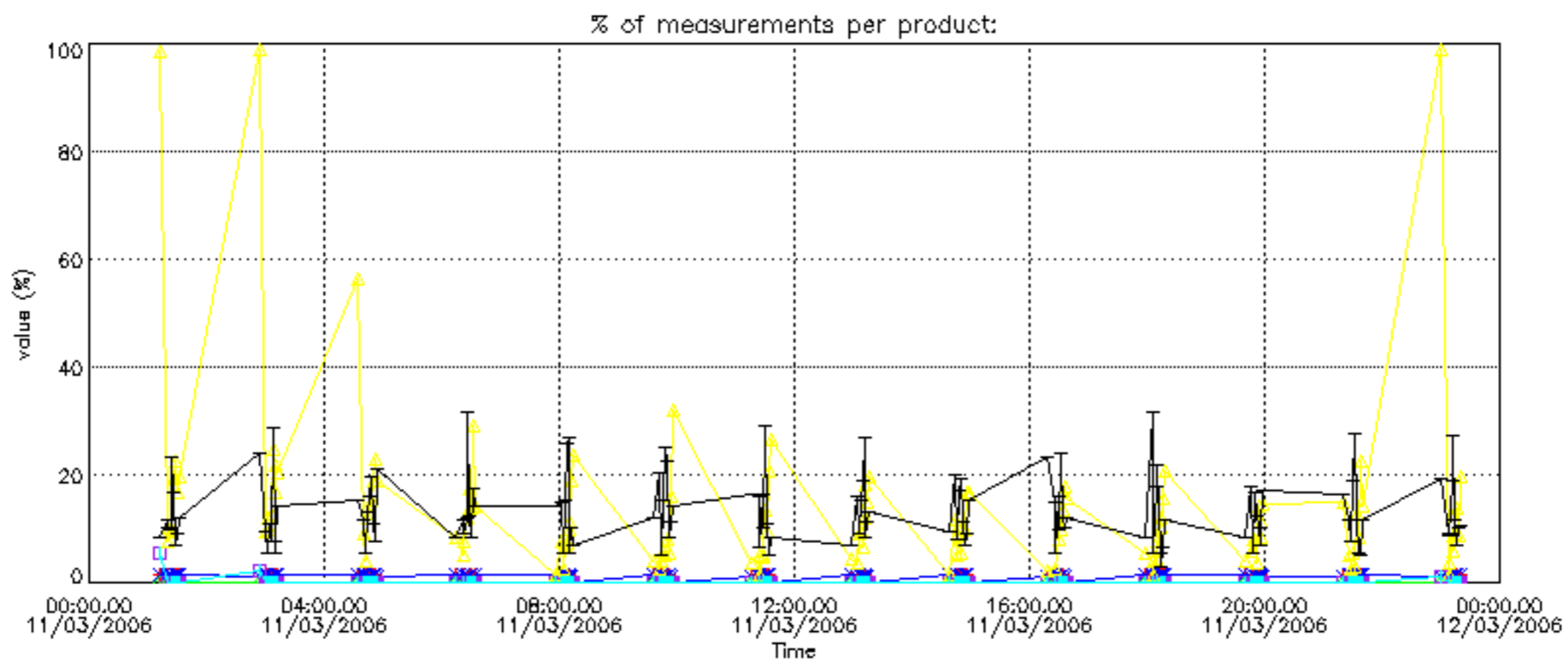


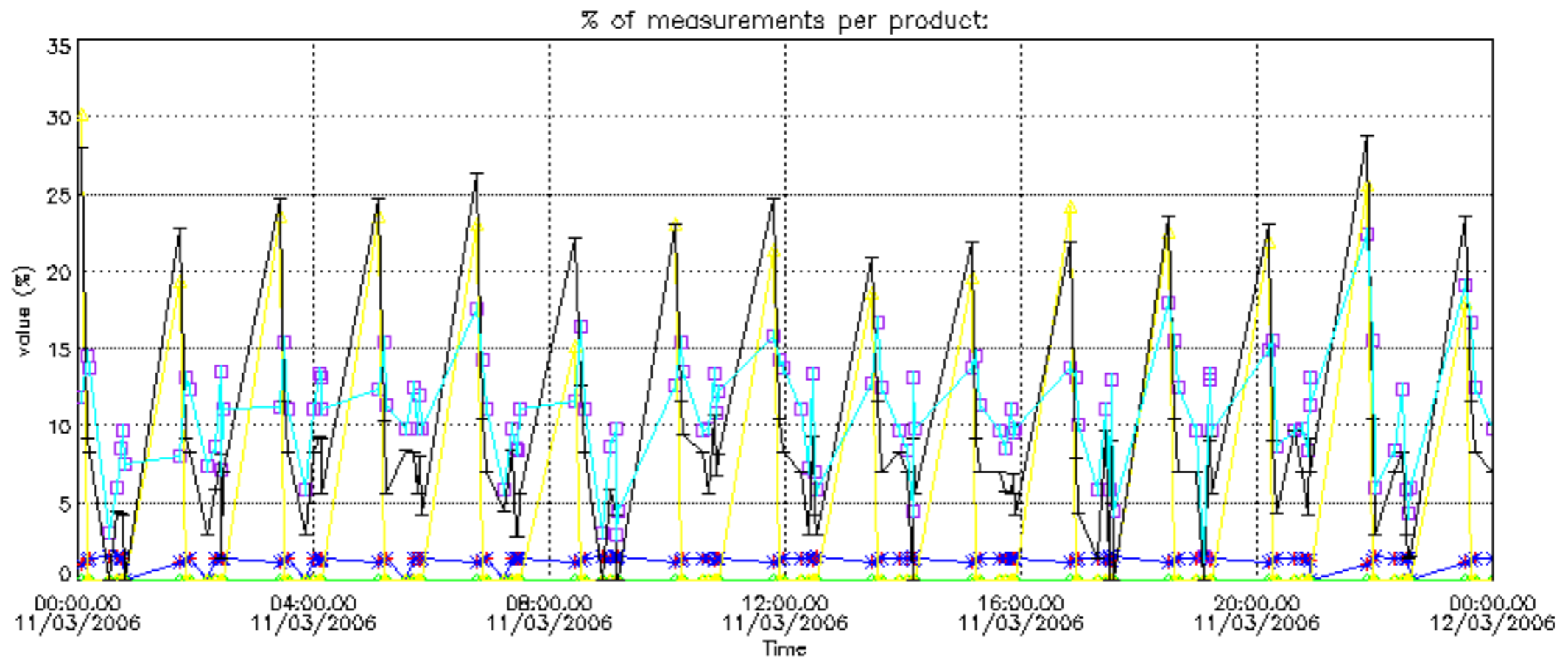
Percentage of flagged data per NO2 profile



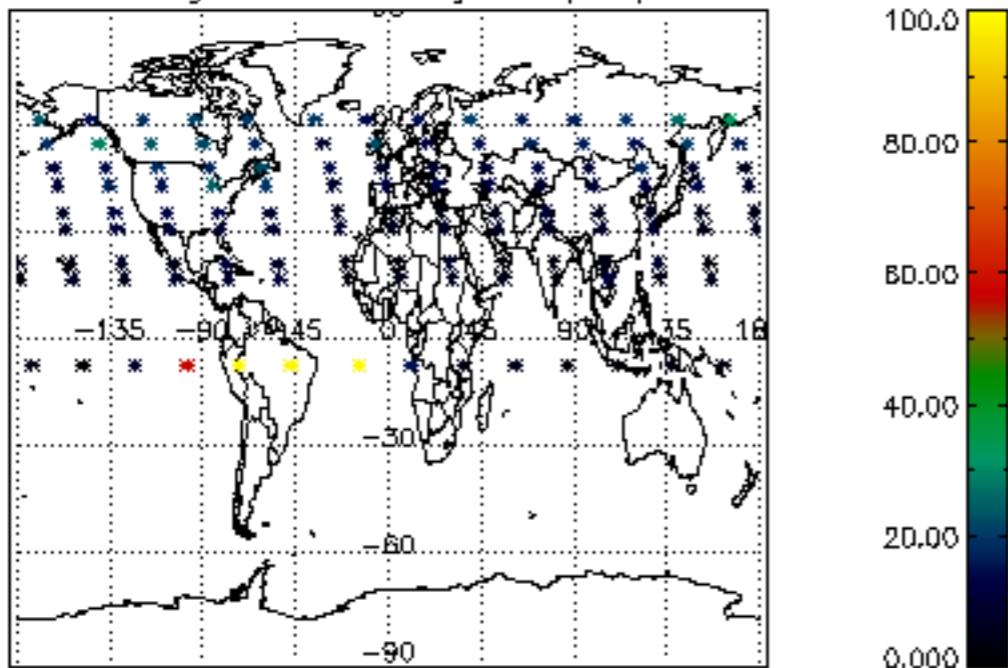
Percentage of flagged data per NO3 profile



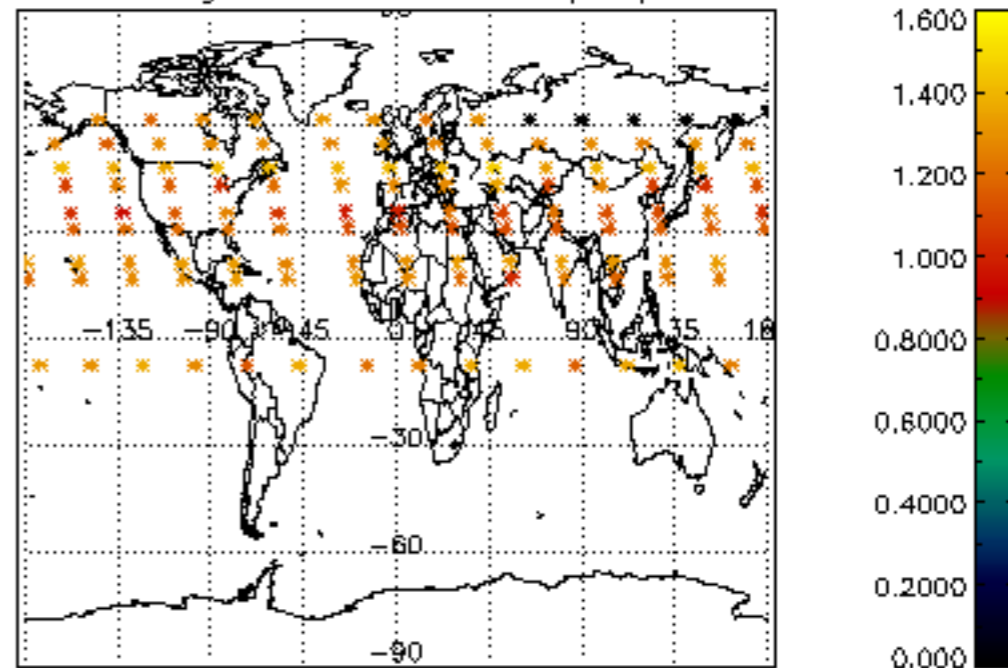




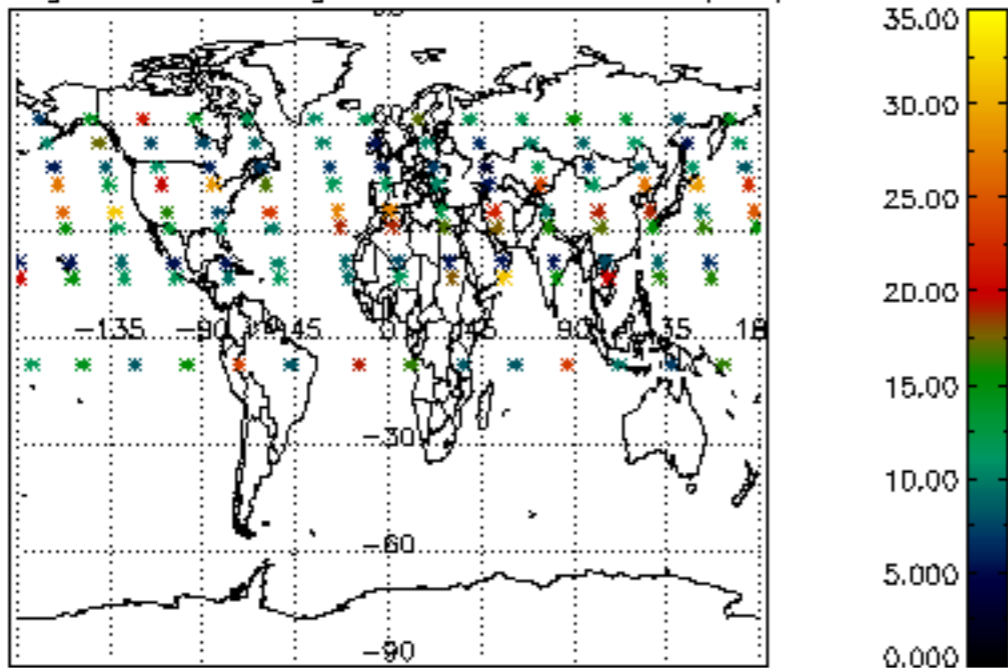
Percentage of cosmic ray hits per profile



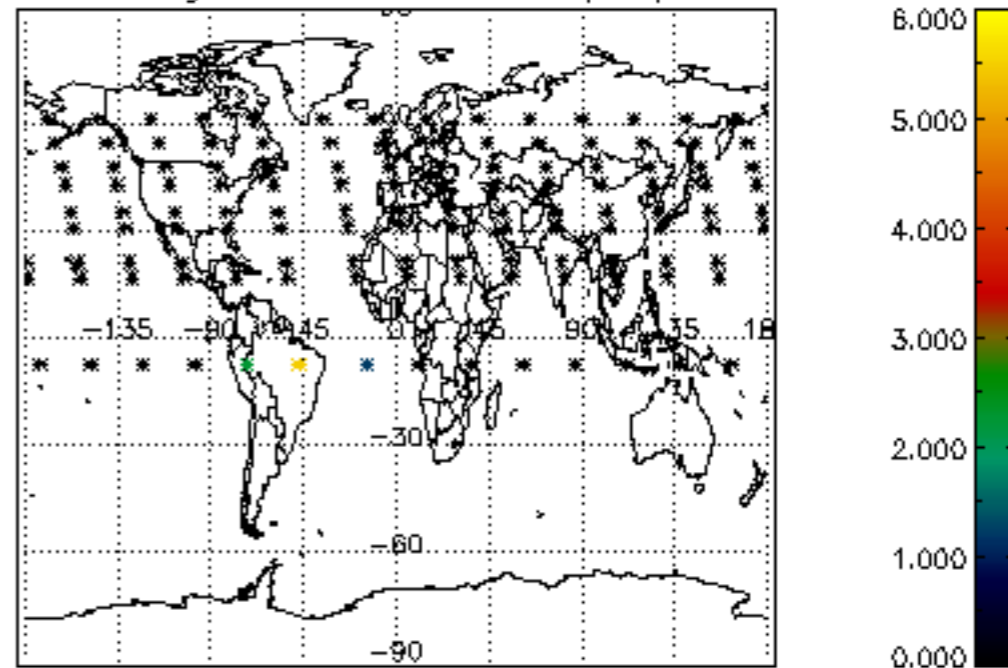
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

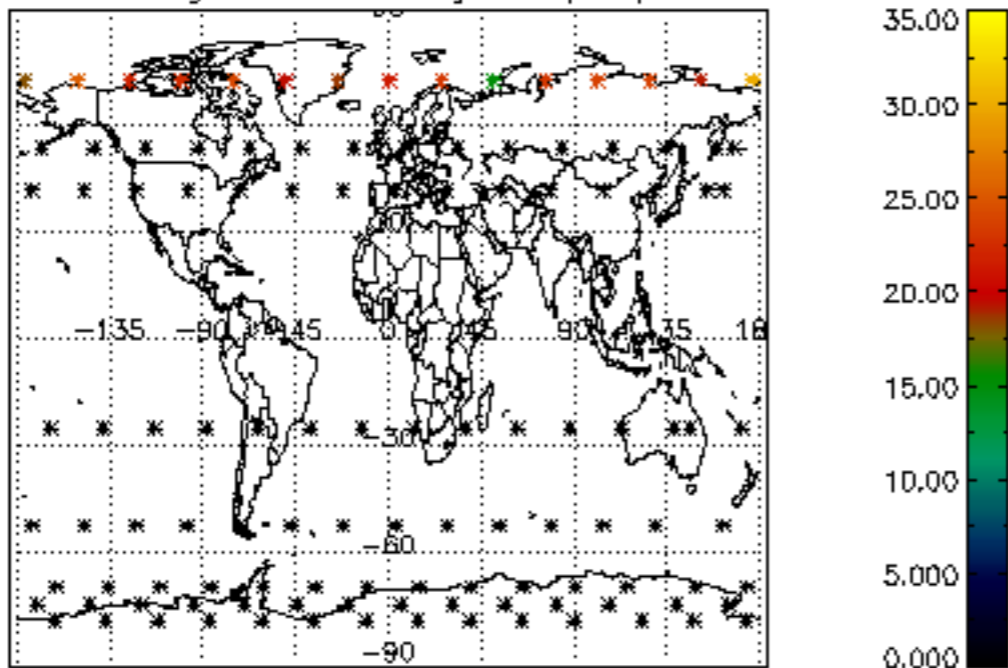


Percentage of saturation errors per profile

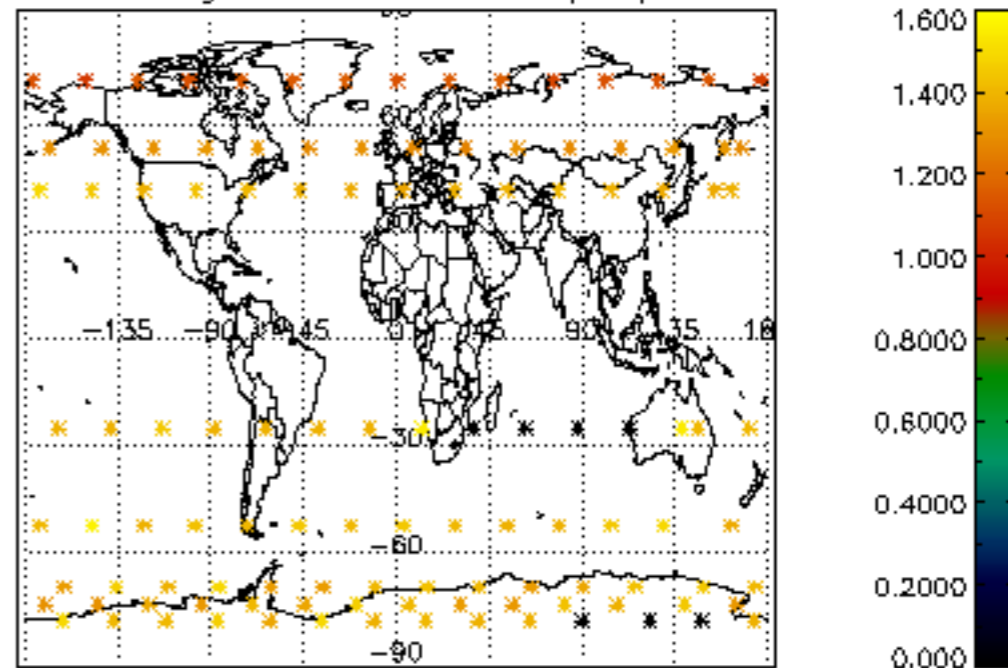




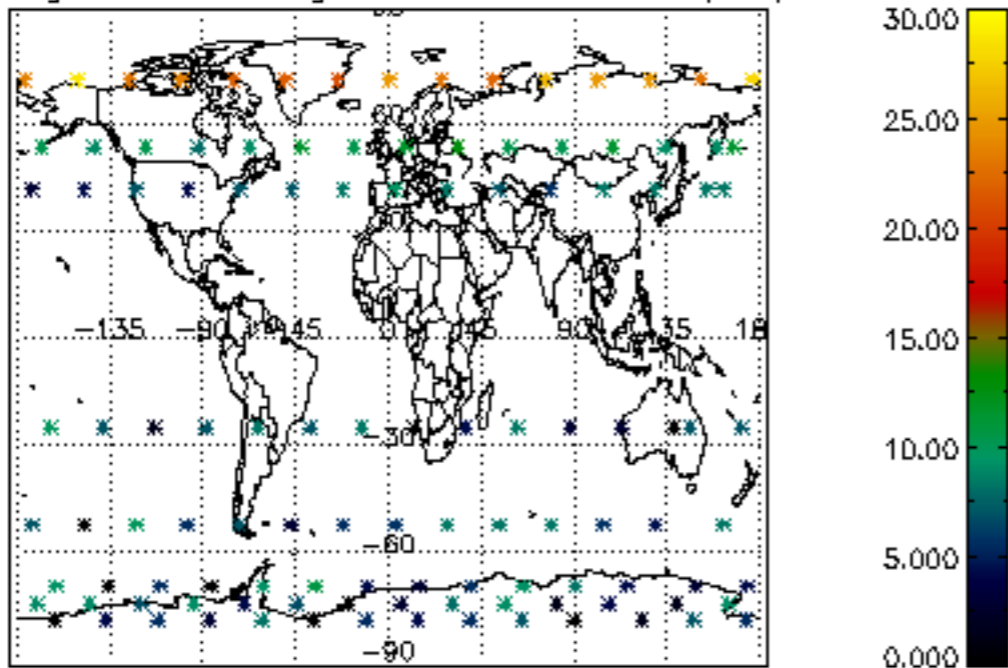
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

