

# 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	23APR2013 13:06:01
Data source version	GOMOS/6.01
Start time of products	05-12-2007 (05DEC2007 00:00:00)
Stop time of products	06-12-2007 (06DEC2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	310
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__2PRFIN20071205_001150_000000462064_00016_30130_6400.N1	05-DEC-2007 00:11:50	Bright	45.500	36	50Alp UMa	1.8000	6300.0	91	30130	No
2	GOM_NL__2PRFIN20071205_001517_000000402064_00016_30130_6401.N1	05-DEC-2007 00:15:17	Bright	40.000	32	77Eps UMa	1.7630	11000.	80	30130	No
3	GOM_NL__2PRFIN20071205_001728_000000372064_00016_30130_6402.N1	05-DEC-2007 00:17:28	Bright	36.500	39	85Eta UMa	1.8540	24000.	73	30130	No
4	GOM_NL__2PRFIN20071205_002058_000000402064_00016_30130_6403.N1	05-DEC-2007 00:20:58	Bright	39.500	152	12Alp2CVn	2.8900	11000.	79	30130	No
5	GOM_NL__2PRFIN20071205_002633_000000352064_00016_30130_6404.N1	05-DEC-2007 00:26:33	Bright	35.000	111	8Eta Boo	2.6800	6000.0	70	30130	No
6	GOM_NL__2PRFIN20071205_002948_000000422064_00016_30130_6405.N1	05-DEC-2007 00:29:48	Bright	41.500	138	47Eps Vir	2.8280	4700.0	83	30130	No
7	GOM_NL__2PRFIN20071205_003419_000000472064_00016_30130_6406.N1	05-DEC-2007 00:34:19	Bright	46.500	121	29Gam Vir	2.7400	7200.0	93	30130	No
8	GOM_NL__2PRFIN20071205_004010_000000452064_00016_30130_6407.N1	05-DEC-2007 00:40:10	Dark	45.000	100	4Gam Crv	2.5800	13100.	90	30130	No
9	GOM_NL__2PRFIN20071205_004147_000000502064_00016_30130_6408.N1	05-DEC-2007 00:41:47	Dark	49.500	171	2Eps Crv	3.0010	4250.0	99	30130	No
10	GOM_NL__2PRFIN20071205_005112_000000522064_00017_30131_6404.N1	05-DEC-2007 00:51:12	Dark	52.000	113	Mu Vel	2.6920	5000.0	104	30131	No
11	GOM_NL__2PRFIN20071205_005952_000000502064_00017_30131_6405.N1	05-DEC-2007 00:59:52	Dark	49.500	34	Gam2Vel	1.7930	23000.	99	30131	No
12	GOM_NL__2PRFIN20071205_010256_000000572064_00017_30131_6406.N1	05-DEC-2007 01:02:56	Dark	57.000	2	Alp Car	-0.73600	7000.0	114	30131	No
13	GOM_NL__2PRFIN20071205_010916_000000442064_00017_30131_6407.N1	05-DEC-2007 01:09:16	Dark	44.000	108	Alp Col	2.6520	15200.	88	30131	No
14	GOM_NL__2PRFIN20071205_011446_000000482064_00017_30131_6408.N1	05-DEC-2007 01:14:46	Straylight	48.000	101	11Alp Lep	2.5820	7000.0	96	30131	No
15	GOM_NL__2PRFIN20071205_011648_000000442064_00017_30131_6409.N1	05-DEC-2007 01:16:48	Straylight	44.000	165	34Gam Eri	2.9500	3200.0	88	30131	No
16	GOM_NL__2PRFIN20071205_011813_000000592064_00017_30131_6410.N1	05-DEC-2007 01:18:13	Straylight	58.500	7	19Bet Ori	0.10000	14000.	117	30131	No
17	GOM_NL__2PRFIN20071205_012600_000000602064_00017_30131_6411.N1	05-DEC-2007 01:26:00	Bright	60.000	13	87Alp Tau	0.86700	3800.0	120	30131	No
18	GOM_NL__2PRFIN20071205_012746_000000372064_00017_30131_6412.N1	05-DEC-2007 01:27:46	Bright	37.000	146	25Eta Tau	2.8730	15200.	74	30131	No
19	GOM_NL__2PRFIN20071205_013004_000000382064_00017_30131_6413.N1	05-DEC-2007 01:30:04	Bright	38.000	150	44Zet Per	2.8900	28000.	76	30131	No
20	GOM_NL__2PRFIN20071205_013228_000000372064_00017_30131_6414.N1	05-DEC-2007 01:32:28	Bright	36.500	149	45Eps Per	2.8880	30000.	73	30131	No
21	GOM_NL__2PRFIN20071205_013433_000000352064_00017_30131_6415.N1	05-DEC-2007 01:34:33	Bright	35.000	175	39Del Per	3.0100	19400.	70	30131	No
22	GOM_NL__2PRFIN20071205_013600_000000482064_00017_30131_6416.N1	05-DEC-2007 01:36:00	Bright	47.500	6	13Alp Aur	0.080000	3400.0	95	30131	No
23	GOM_NL__2PRFIN20071205_015226_000000462064_00017_30131_6417.N1	05-DEC-2007 01:52:26	Bright	45.500	36	50Alp UMa	1.8000	6300.0	91	30131	No
24	GOM_NL__2PRFIN20071205_015553_000000412064_00017_30131_6418.N1	05-DEC-2007 01:55:53	Bright	40.500	32	77Eps UMa	1.7630	11000.	81	30131	No
25	GOM_NL__2PRFIN20071205_015804_000000372064_00017_30131_6419.N1	05-DEC-2007 01:58:04	Bright	36.500	39	85Eta UMa	1.8540	24000.	73	30131	No
26	GOM_NL__2PRFIN20071205_020134_000000392064_00017_30131_6420.N1	05-DEC-2007 02:01:34	Bright	38.500	152	12Alp2CVn	2.8900	11000.	77	30131	No
27	GOM_NL__2PRFIN20071205_020709_000000352064_00017_30131_6421.N1	05-DEC-2007 02:07:09	Bright	34.500	111	8Eta Boo	2.6800	6000.0	69	30131	No
28	GOM_NL__2PRFIN20071205_021024_000000612064_00017_30131_6422.N1	05-DEC-2007 02:10:24	Bright	61.000	138	47Eps Vir	2.8280	4700.0	122	30131	No
29	GOM_NL__2PRFIN20071205_021456_000000472064_00017_30131_6423.N1	05-DEC-2007 02:14:56	Bright	46.500	121	29Gam Vir	2.7400	7200.0	93	30131	No
30	GOM_NL__2PRFIN20071205_022047_000000492064_00017_30131_6424.N1	05-DEC-2007 02:20:47	Dark	49.000	100	4Gam Crv	2.5800	13100.	98	30131	No
31	GOM_NL__2PRFIN20071205_023148_000000452064_00018_30132_6412.N1	05-DEC-2007 02:31:48	Dark	44.500	113	Mu Vel	2.6920	5000.0	89	30132	No
32	GOM_NL__2PRFIN20071205_024029_000000492064_00018_30132_6413.N1	05-DEC-2007 02:40:29	Dark	49.000	34	Gam2Vel	1.7930	23000.	98	30132	No
33	GOM_NL__2PRFIN20071205_024332_000000532064_00018_30132_6414.N1	05-DEC-2007 02:43:32	Dark	52.500	2	Alp Car	-0.73600	7000.0	105	30132	No
34	GOM_NL__2PRFIN20071205_024952_000000452064_00018_30132_6415.N1	05-DEC-2007 02:49:52	Dark	45.000	108	Alp Col	2.6520	15200.	90	30132	No
35	GOM_NL__2PRFIN20071205_025522_000000522064_00018_30132_6416.N1	05-DEC-2007 02:55:22	Straylight	51.500	101	11Alp Lep	2.5820	7000.0	103	30132	No
36	GOM_NL__2PRFIN20071205_025724_000000432064_00018_30132_6417.N1	05-DEC-2007 02:57:24	Straylight	42.500	165	34Gam Eri	2.9500	3200.0	85	30132	No
37	GOM_NL__2PRFIN20071205_025848_000000562064_00018_30132_6418.N1	05-DEC-2007 02:58:48	Straylight	55.500	7	19Bet Ori	0.10000	14000.	111	30132	No
38	GOM_NL__2PRFIN20071205_030636_000000602064_00018_30132_6419.N1	05-DEC-2007 03:06:36	Bright	60.000	13	87Alp Tau	0.86700	3800.0	120	30132	No
39	GOM_NL__2PRFIN20071205_030821_000000392064_00018_30132_6420.N1	05-DEC-2007 03:08:21	Bright	38.500	146	25Eta Tau	2.8730	15200.	77	30132	No
40	GOM_NL__2PRFIN20071205_031040_000000372064_00018_30132_6421.N1	05-DEC-2007 03:10:40	Bright	36.500	150	44Zet Per	2.8900	28000.	73	30132	No
41	GOM_NL__2PRFIN20071205_031304_000000382064_00018_30132_6422.N1	05-DEC-2007 03:13:04	Bright	37.500	149	45Eps Per	2.8880	30000.	75	30132	No
42	GOM_NL__2PRFIN20071205_031508_000000352064_00018_30132_6423.N1	05-DEC-2007 03:15:08	Bright	35.000	175	39Del Per	3.0100	19400.	70	30132	No







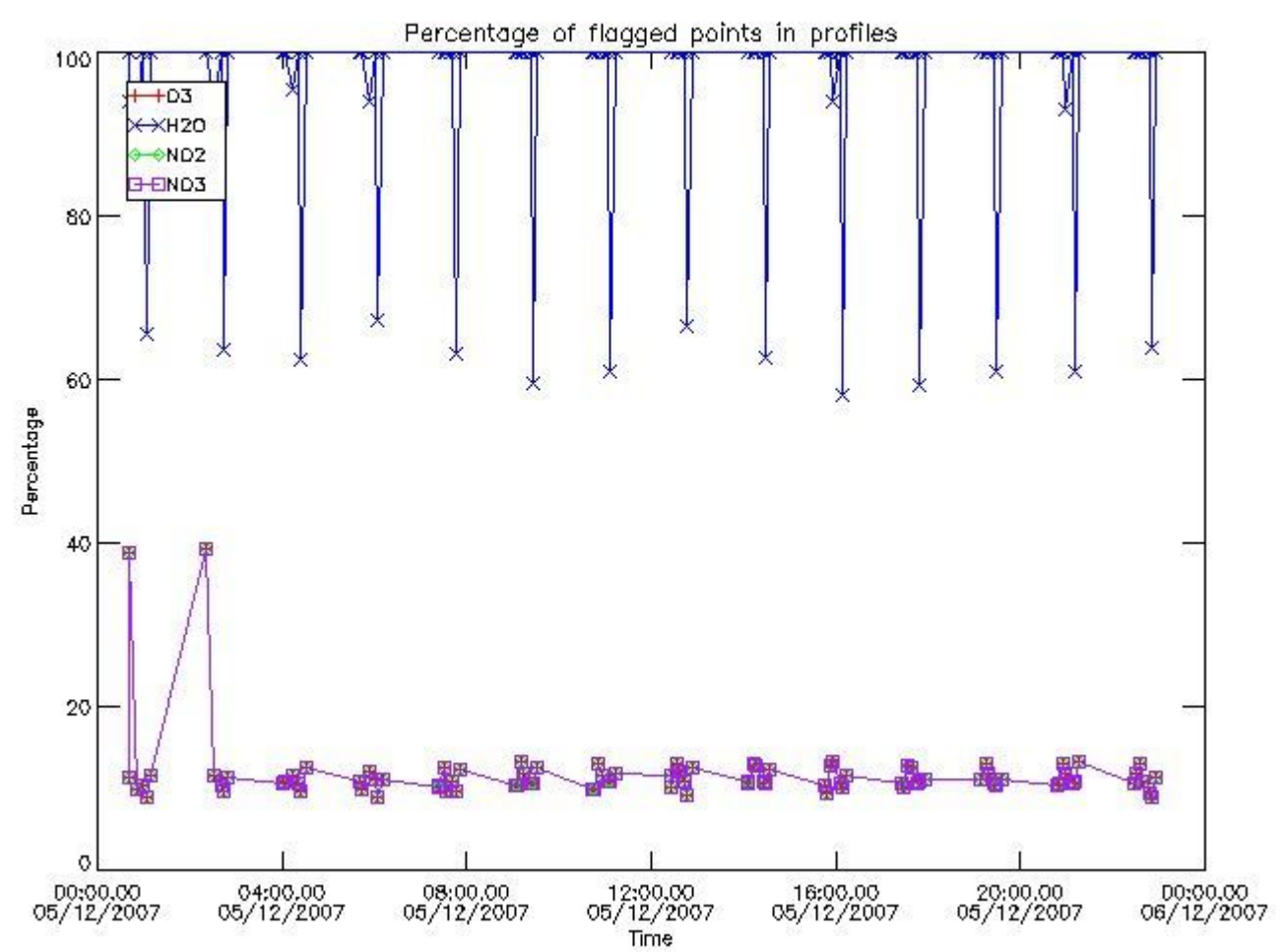


279	GOM_NL__2PRFIN20071205_213714_000000382064_00029_30143_6610.N1	05-DEC-2007 21:37:14	Bright	38.000	150	44Zet Per	2.8900	28000.	76	30143	No
280	GOM_NL__2PRFIN20071205_213845_000000432064_00029_30143_6611.N1	05-DEC-2007 21:38:45	Bright	43.000	114	31ot Aur	2.6930	4600.0	86	30143	No
281	GOM_NL__2PRFIN20071205_214142_000000352064_00029_30143_6612.N1	05-DEC-2007 21:41:42	Bright	35.000	175	39Del Per	3.0100	19400.	70	30143	No
282	GOM_NL__2PRFIN20071205_214304_000000492064_00029_30143_6613.N1	05-DEC-2007 21:43:04	Bright	48.500	6	13Alp Aur	0.080000	3400.0	97	30143	No
283	GOM_NL__2PRFIN20071205_215932_000000472064_00029_30143_6614.N1	05-DEC-2007 21:59:32	Bright	46.500	36	50Alp UMa	1.8000	6300.0	93	30143	No
284	GOM_NL__2PRFIN20071205_220303_000000422064_00029_30143_6615.N1	05-DEC-2007 22:03:03	Bright	41.500	32	77Eps UMa	1.7630	11000.	83	30143	No
285	GOM_NL__2PRFIN20071205_220515_000000392064_00029_30143_6616.N1	05-DEC-2007 22:05:15	Bright	38.500	39	85Eta UMa	1.8540	24000.	77	30143	No
286	GOM_NL__2PRFIN20071205_220846_000000402064_00029_30143_6617.N1	05-DEC-2007 22:08:46	Bright	40.000	152	12Alp2CVn	2.8900	11000.	80	30143	No
287	GOM_NL__2PRFIN20071205_221423_000000362064_00029_30143_6618.N1	05-DEC-2007 22:14:23	Bright	35.500	111	8Eta Boo	2.6800	6000.0	71	30143	No
288	GOM_NL__2PRFIN20071205_221740_000000442064_00029_30143_6619.N1	05-DEC-2007 22:17:40	Bright	44.000	138	47Eps Vir	2.8280	4700.0	88	30143	No
289	GOM_NL__2PRFIN20071205_222215_000000522064_00029_30143_6620.N1	05-DEC-2007 22:22:15	Bright	52.000	121	29Gam Vir	2.7400	7200.0	104	30143	No
290	GOM_NL__2PRFIN20071205_222809_000000482064_00029_30143_6621.N1	05-DEC-2007 22:28:09	Dark	48.000	100	4Gam Crv	2.5800	13100.	96	30143	No
291	GOM_NL__2PRFIN20071205_222946_000000482064_00029_30143_6622.N1	05-DEC-2007 22:29:46	Dark	47.500	171	2Eps Crv	3.0010	4250.0	95	30143	No
292	GOM_NL__2PRFIN20071205_223553_000000392064_00029_30143_6623.N1	05-DEC-2007 22:35:53	Dark	39.000	99	Del Cen	2.5750	26000.	78	30143	No
293	GOM_NL__2PRFIN20071205_223909_000000482064_00030_30144_6620.N1	05-DEC-2007 22:39:09	Dark	47.500	113	Mu Vel	2.6920	5000.0	95	30144	No
294	GOM_NL__2PRFIN20071205_224750_000000552064_00030_30144_6621.N1	05-DEC-2007 22:47:50	Dark	54.500	34	Gam2Vel	1.7930	23000.	109	30144	No
295	GOM_NL__2PRFIN20071205_225049_000000572064_00030_30144_6622.N1	05-DEC-2007 22:50:49	Dark	57.000	2	Alp Car	-0.73600	7000.0	114	30144	No
296	GOM_NL__2PRFIN20071205_225708_000000452064_00030_30144_6623.N1	05-DEC-2007 22:57:08	Dark	45.000	108	Alp Col	2.6520	15200.	90	30144	No
297	GOM_NL__2PRFIN20071205_230235_000000492064_00030_30144_6624.N1	05-DEC-2007 23:02:35	Straylight	49.000	101	11Alp Lep	2.5820	7000.0	98	30144	No
298	GOM_NL__2PRFIN20071205_230559_000000562064_00030_30144_6625.N1	05-DEC-2007 23:05:59	Straylight	56.000	7	19Bet Ori	0.10000	14000.	112	30144	No
299	GOM_NL__2PRFIN20071205_231344_000000592064_00030_30144_6626.N1	05-DEC-2007 23:13:44	Bright	59.000	13	87Alp Tau	0.86700	3800.0	118	30144	No
300	GOM_NL__2PRFIN20071205_231531_000000392064_00030_30144_6627.N1	05-DEC-2007 23:15:31	Bright	38.500	146	25Eta Tau	2.8730	15200.	77	30144	No
301	GOM_NL__2PRFIN20071205_231749_000000372064_00030_30144_6628.N1	05-DEC-2007 23:17:49	Bright	36.500	150	44Zet Per	2.8900	28000.	73	30144	No
302	GOM_NL__2PRFIN20071205_231921_000000432064_00030_30144_6629.N1	05-DEC-2007 23:19:21	Bright	43.000	114	31ot Aur	2.6930	4600.0	86	30144	No
303	GOM_NL__2PRFIN20071205_232218_000000362064_00030_30144_6630.N1	05-DEC-2007 23:22:18	Bright	35.500	175	39Del Per	3.0100	19400.	71	30144	No
304	GOM_NL__2PRFIN20071205_232340_000000472064_00030_30144_6631.N1	05-DEC-2007 23:23:40	Bright	46.500	6	13Alp Aur	0.080000	3400.0	93	30144	No
305	GOM_NL__2PRFIN20071205_234008_000000452064_00030_30144_6632.N1	05-DEC-2007 23:40:08	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	30144	No
306	GOM_NL__2PRFIN20071205_234338_000000392064_00030_30144_6633.N1	05-DEC-2007 23:43:38	Bright	39.000	32	77Eps UMa	1.7630	11000.	78	30144	No
307	GOM_NL__2PRFIN20071205_234551_000000352064_00030_30144_6634.N1	05-DEC-2007 23:45:51	Bright	34.500	39	85Eta UMa	1.8540	24000.	69	30144	No
308	GOM_NL__2PRFIN20071205_234922_000000412064_00030_30144_6635.N1	05-DEC-2007 23:49:22	Bright	40.500	152	12Alp2CVn	2.8900	11000.	81	30144	No
309	GOM_NL__2PRFIN20071205_235459_000000352064_00030_30144_6636.N1	05-DEC-2007 23:54:59	Bright	35.000	111	8Eta Boo	2.6800	6000.0	70	30144	No
310	GOM_NL__2PRFIN20071205_235817_000000622064_00030_30144_6637.N1	05-DEC-2007 23:58:17	Bright	62.000	138	47Eps Vir	2.8280	4700.0	124	30144	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.

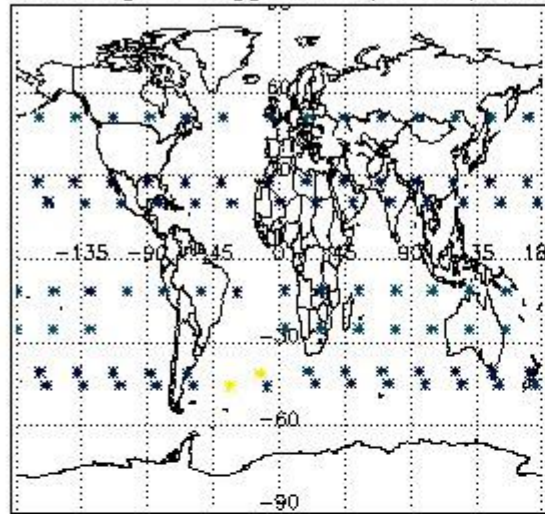
#### 3.1 Plot quality information per product (time dependant)



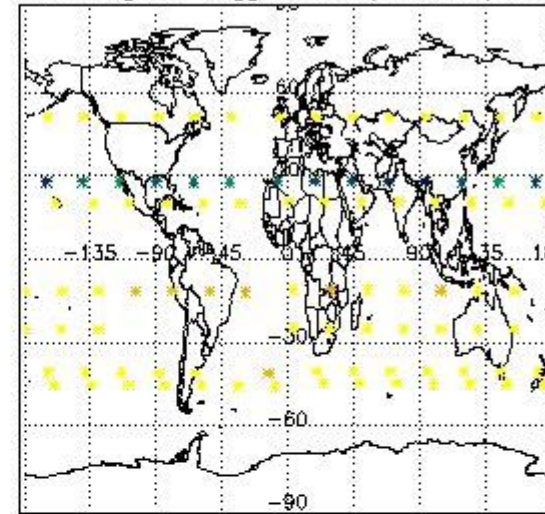
3.2 Plot quality information per product (world map)



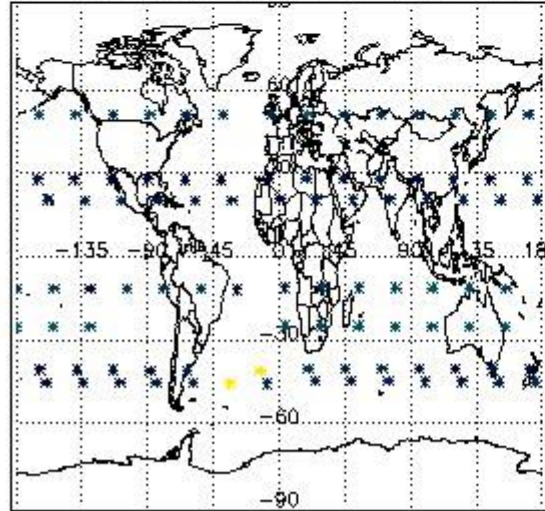
Percentage of flagged data per O3 profile



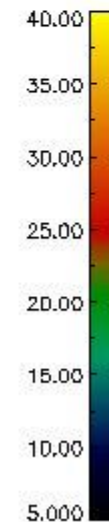
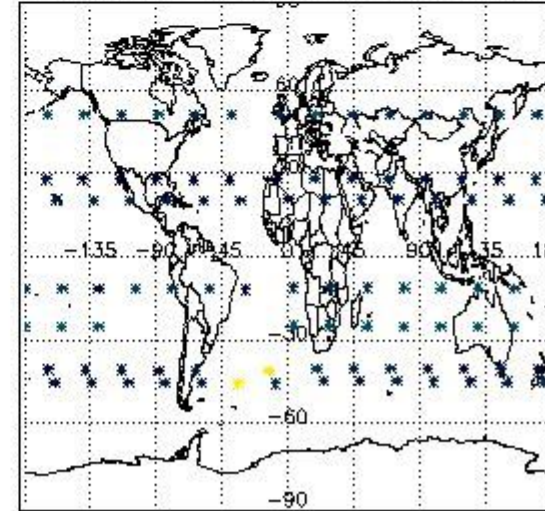
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

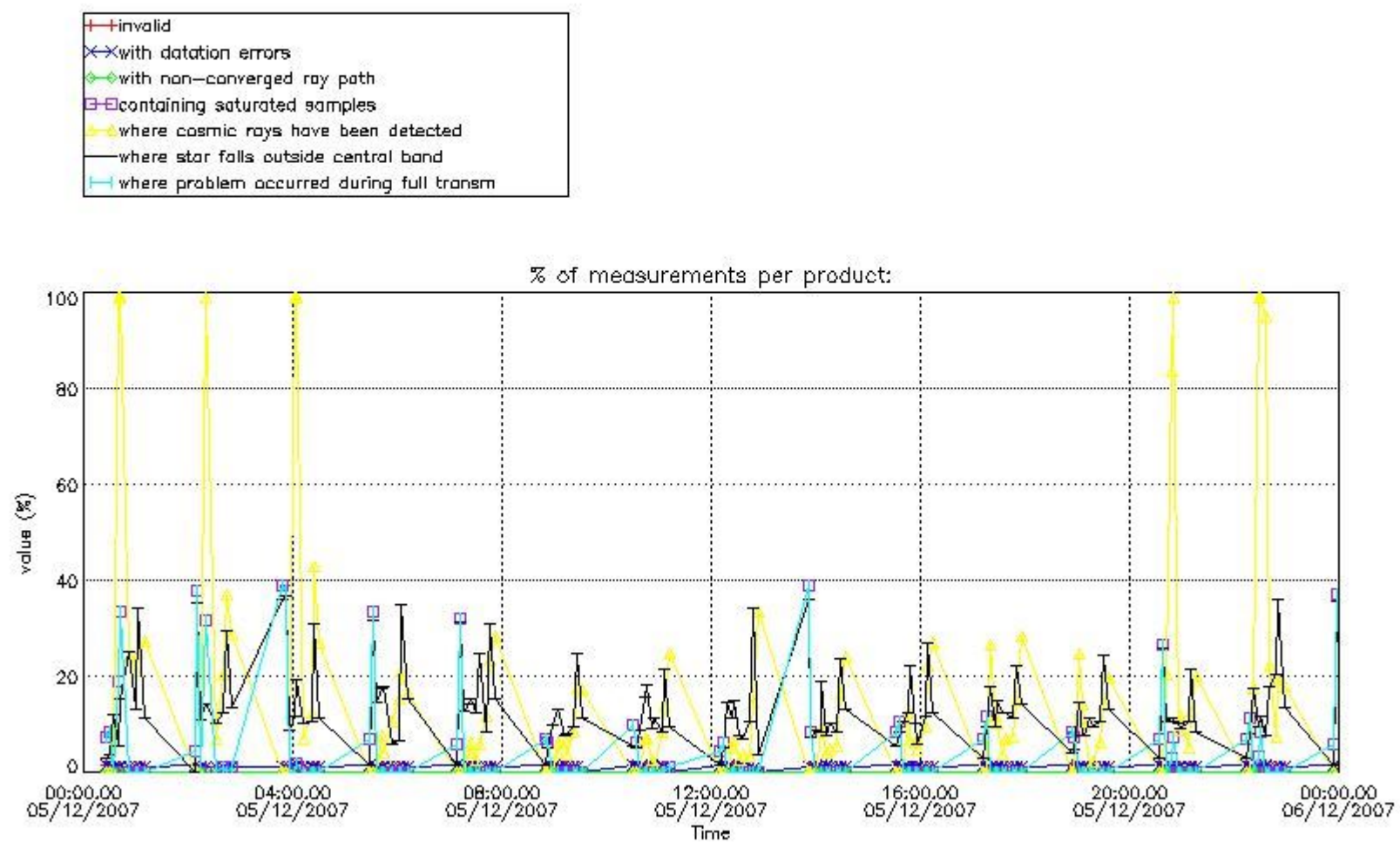


#### 4. Level 1 quality information per product

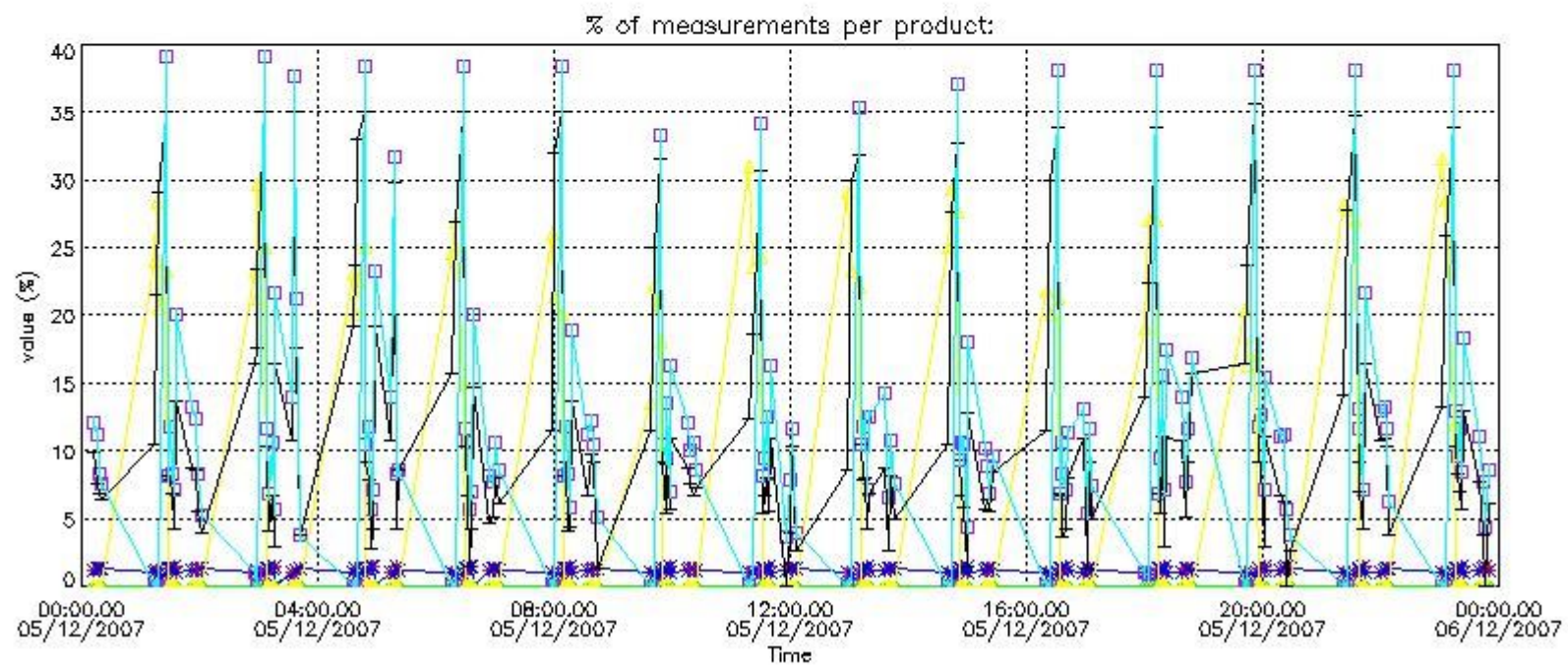
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



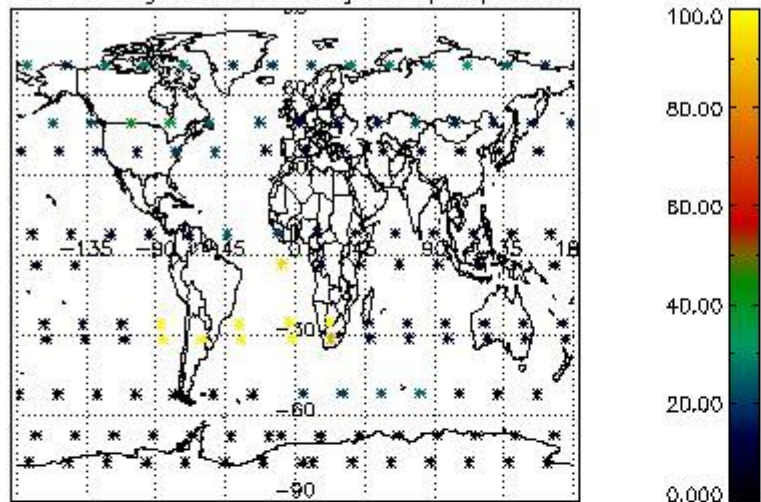
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



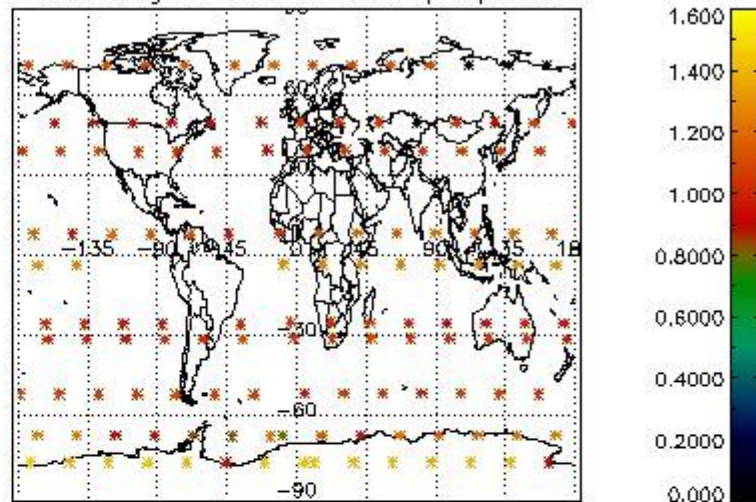
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

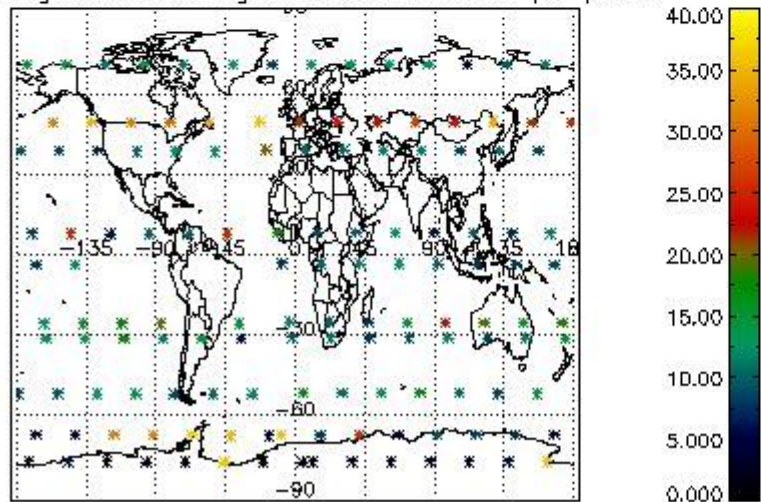
Percentage of cosmic ray hits per profile



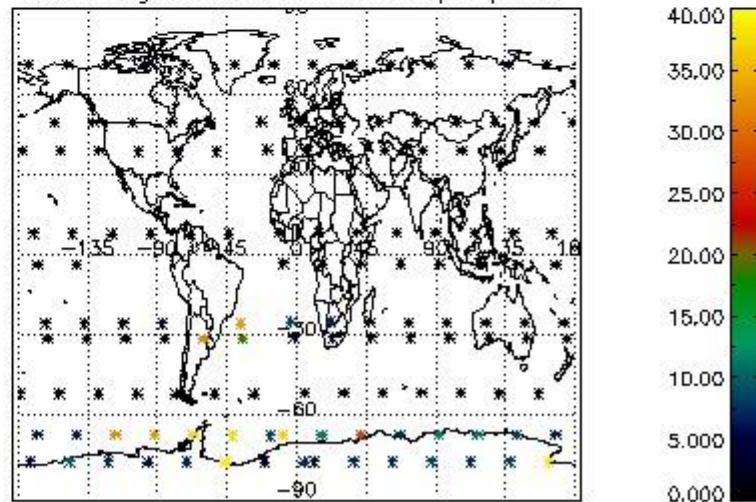
Percentage of datation errors per profile



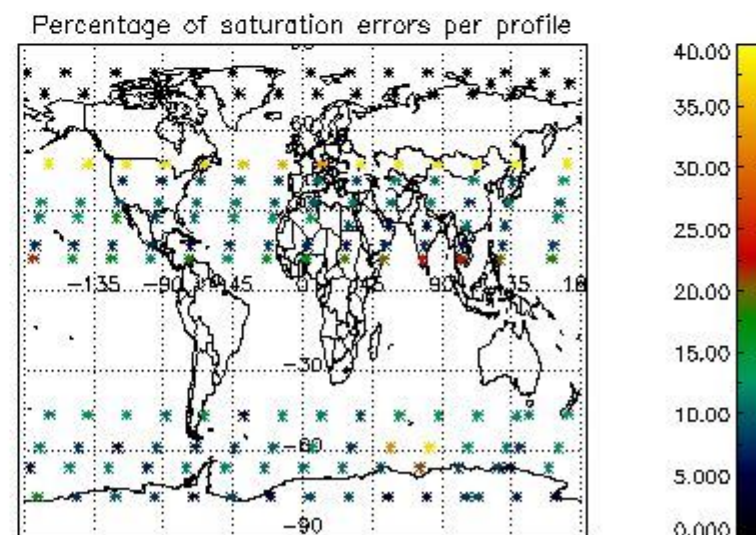
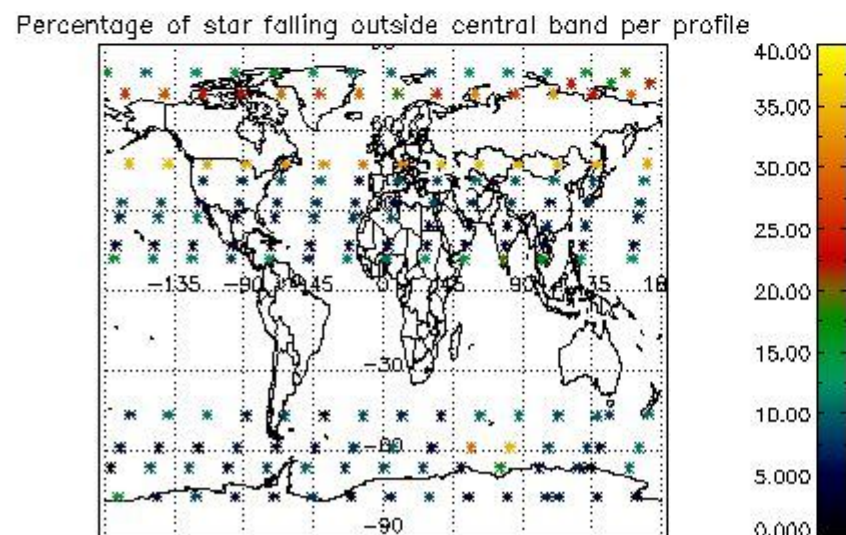
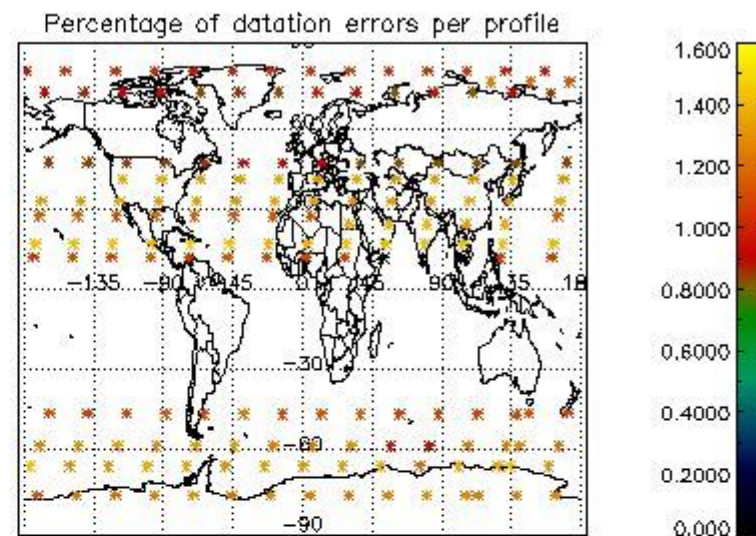
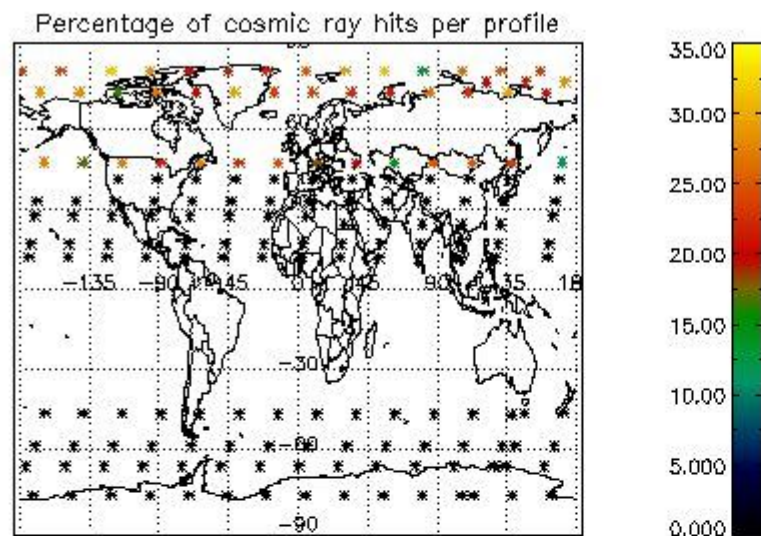
Percentage of star falling outside central band per profile



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

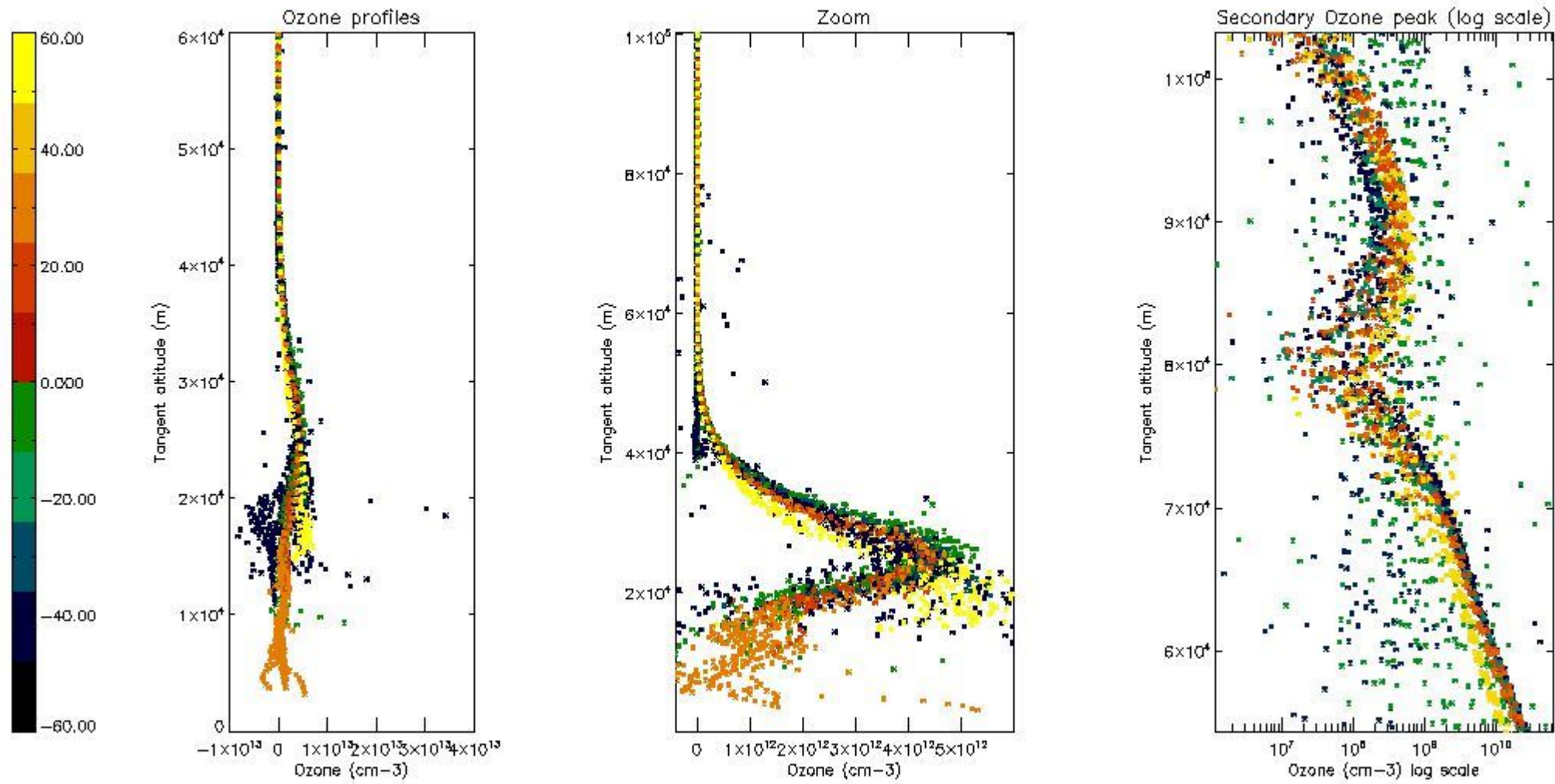
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	32
STD < 20	18

STD < 10	14
STD < 5	10

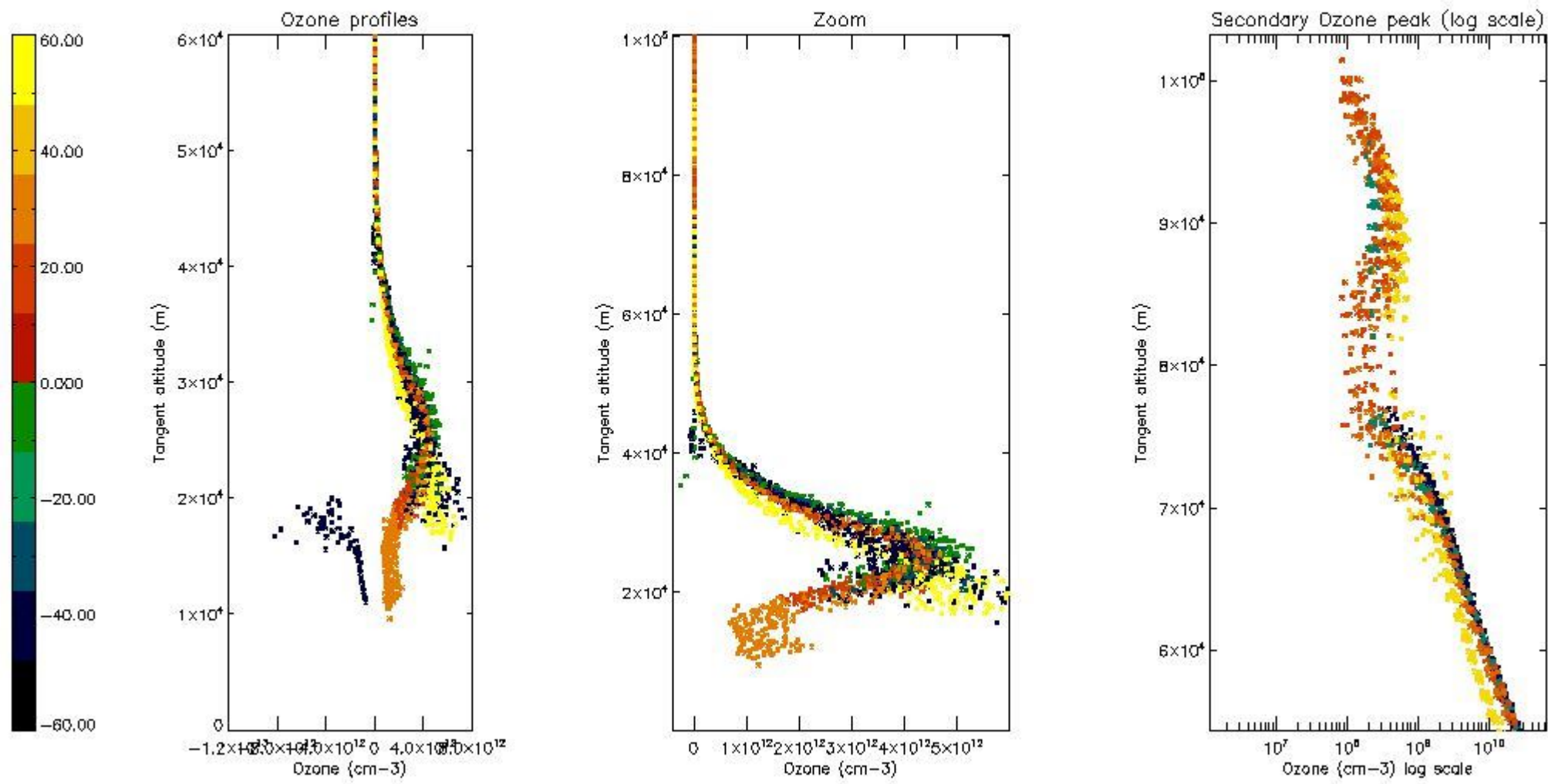
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



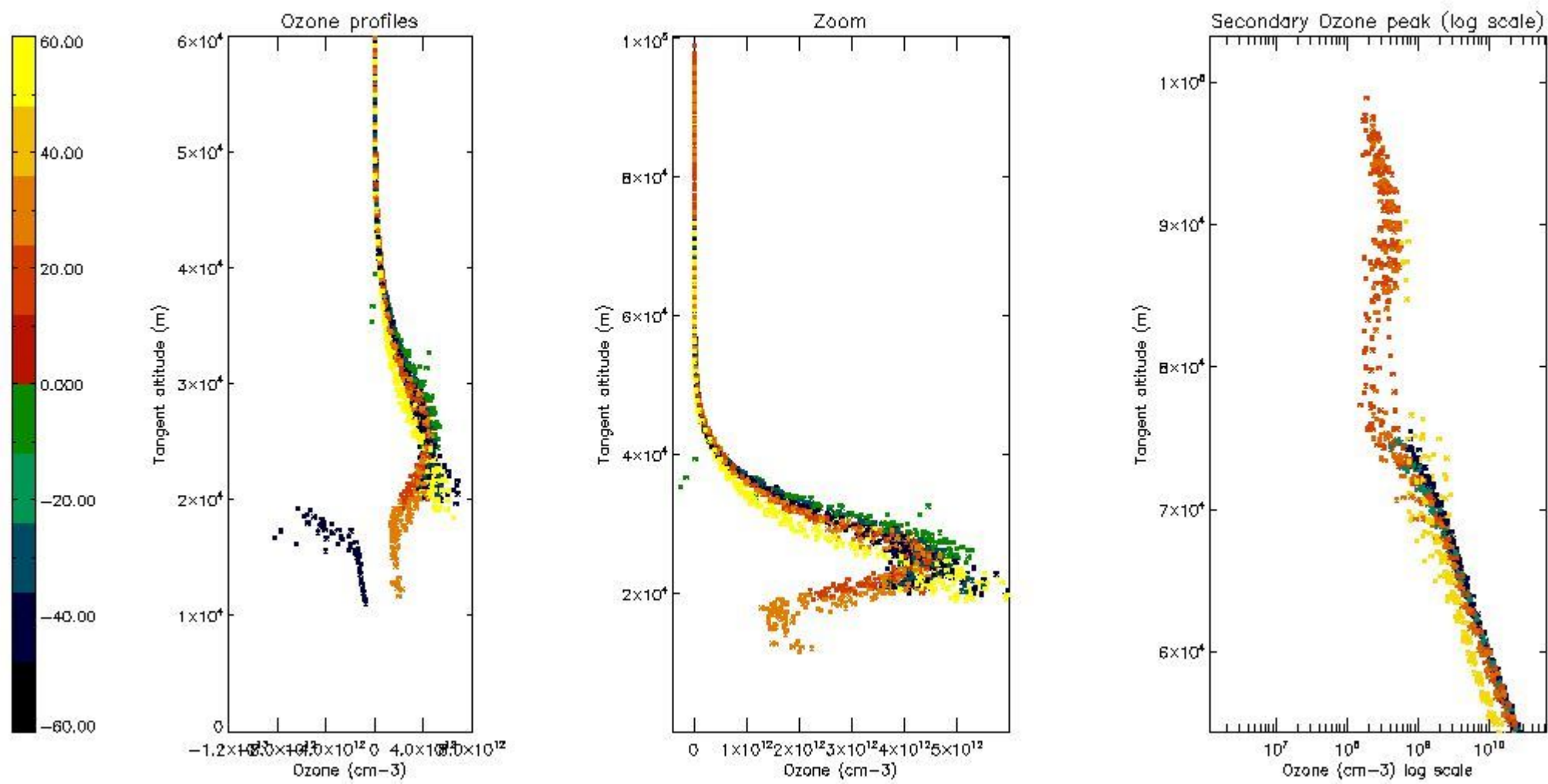
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

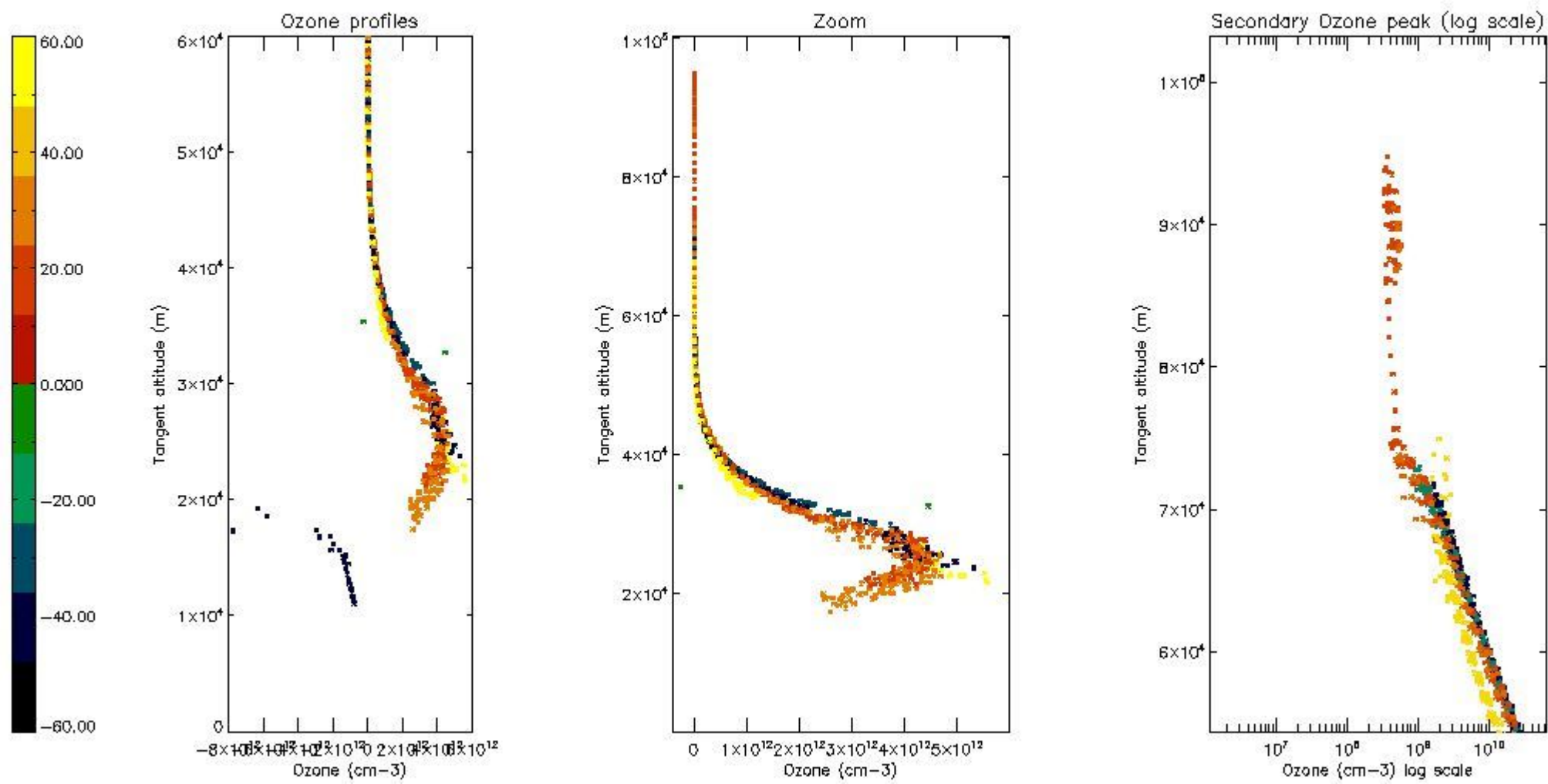
The colorbar represents the latitude.



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

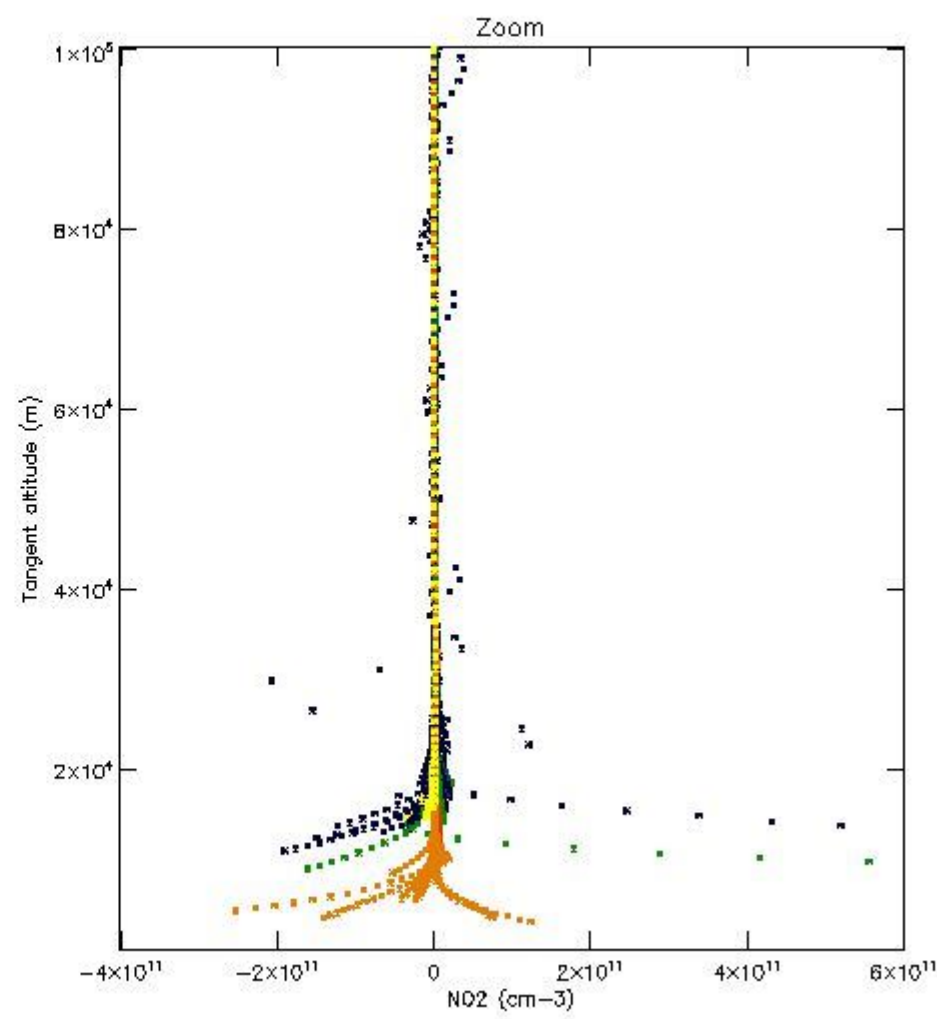
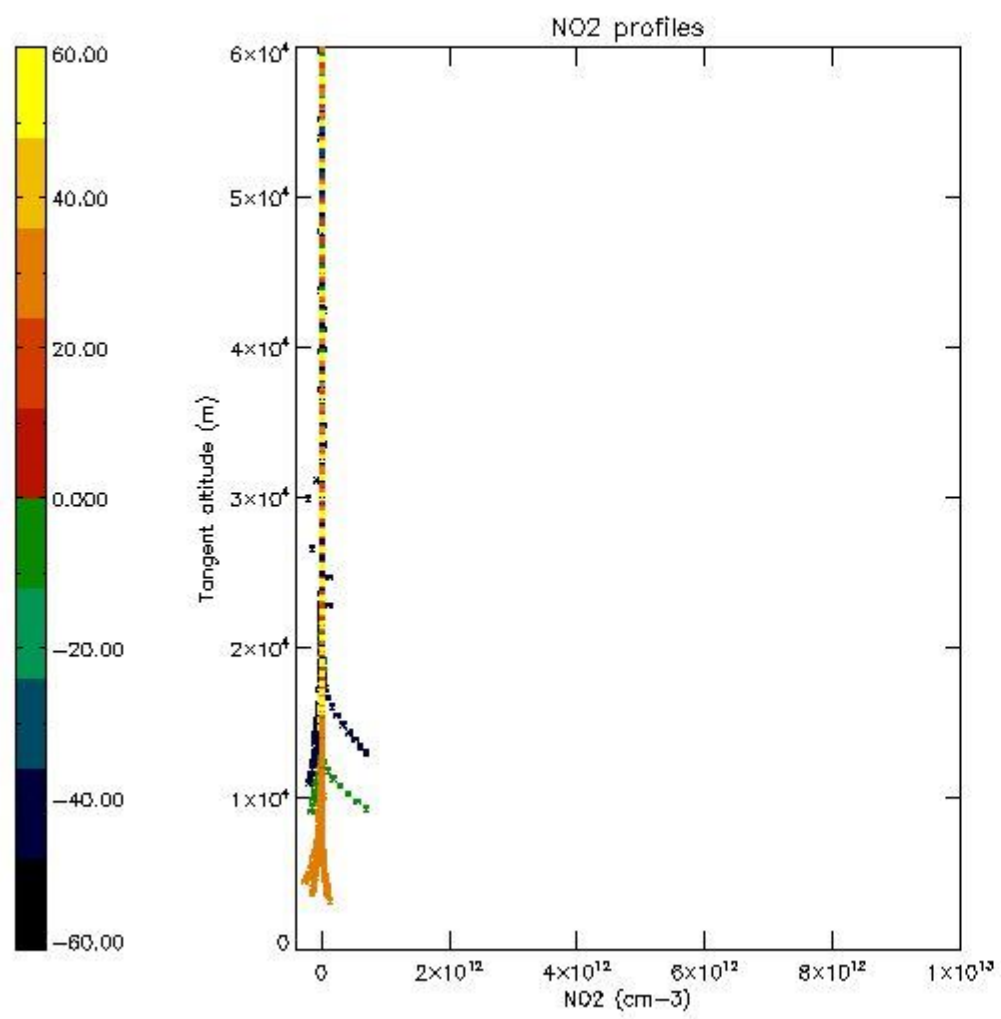
The colorbar represents the latitude.





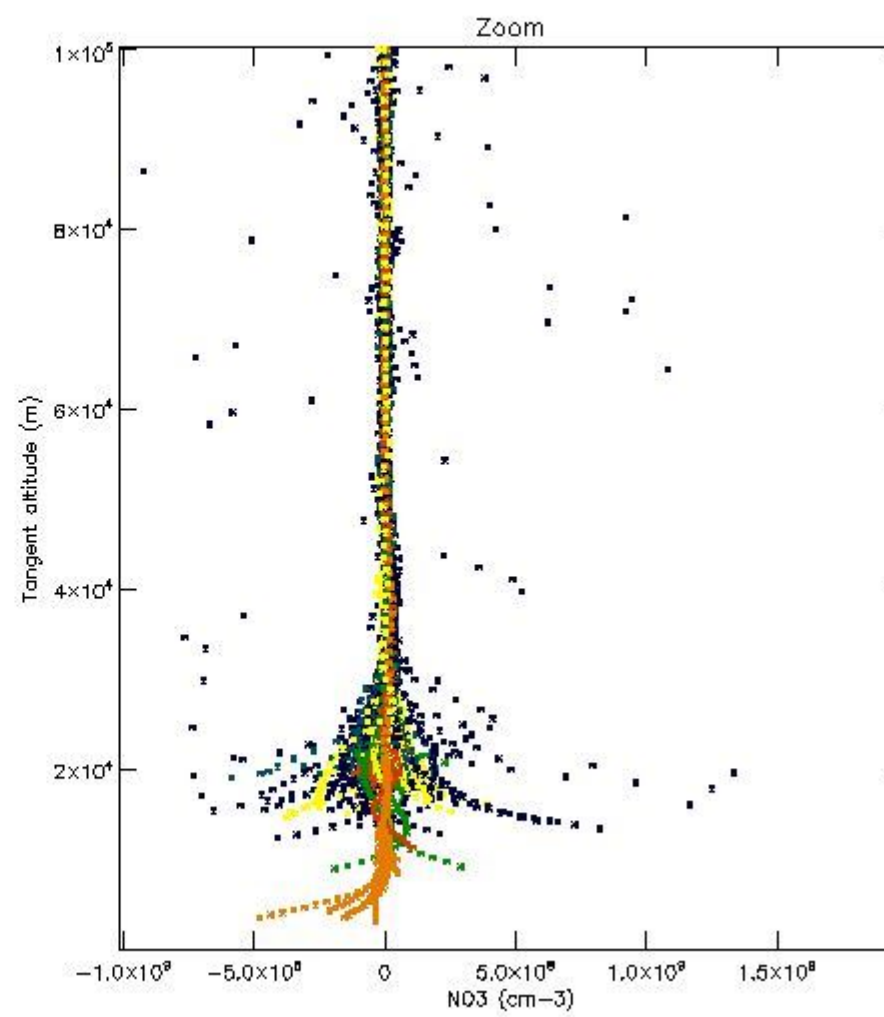
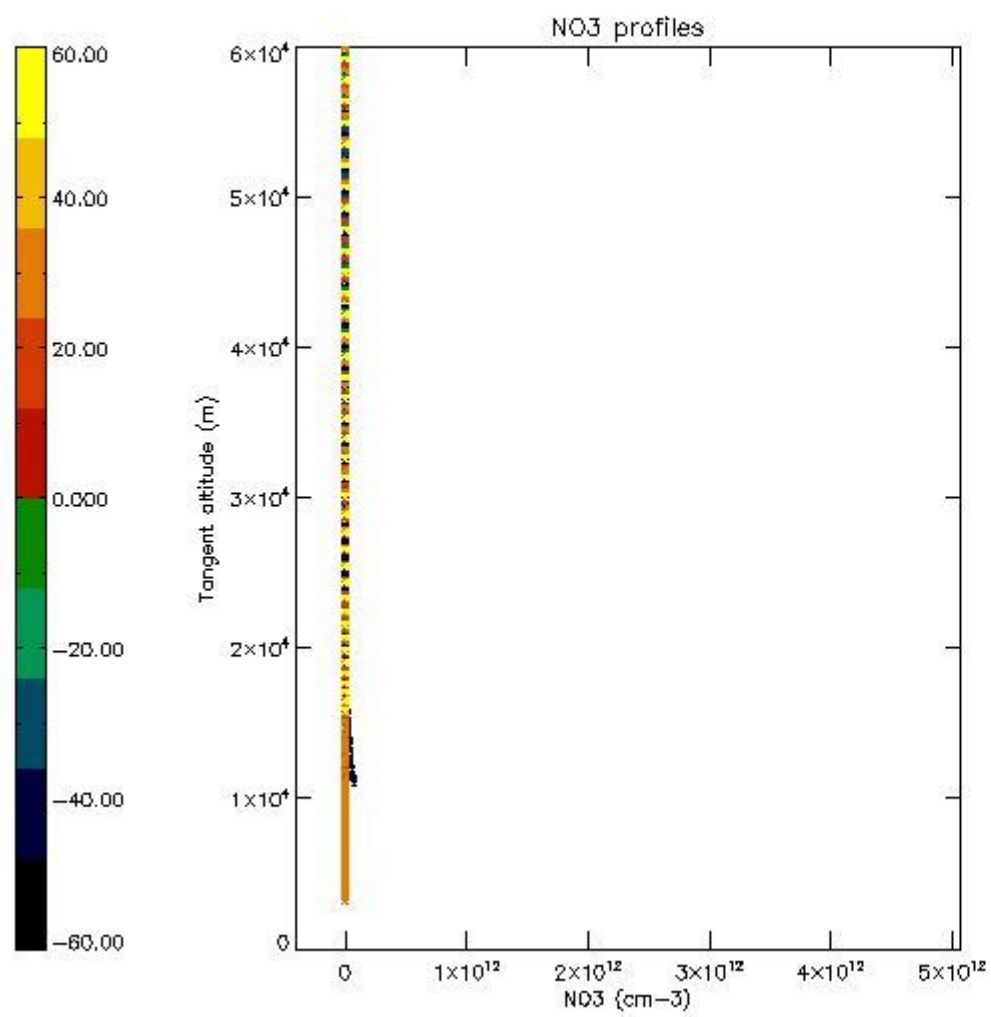
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



## 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	05-DEC-2007 00:11:50
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-DEC-2007 00:11:50
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-DEC-2007 00:11:50

# GOMOS Level 2 Daily Report

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#### [4.1 Plot of level 1 quality information per product \(time dependant\)](#)

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##### [4.1.2 Plot of level 1 quality information per product \(time dependant\): DESCENDING](#)

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

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

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### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

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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](#)











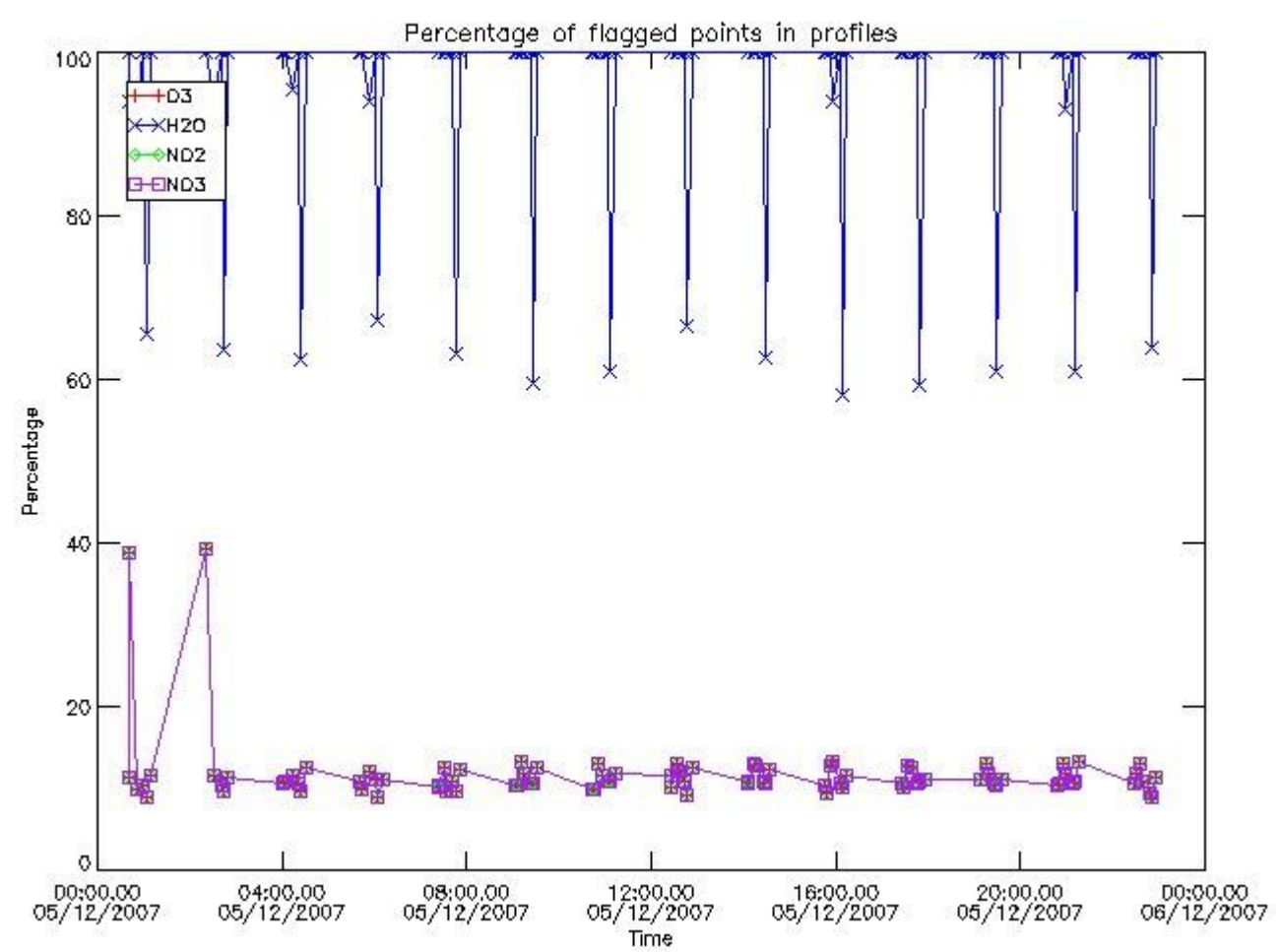


279	GOM_NL__2PRFIN20071205_213714_000000382064_00029_30143_6610.N1	05-DEC-2007 21:37:14	Bright	38.000	150	44Zet Per	2.8900	28000.	76	30143	No
280	GOM_NL__2PRFIN20071205_213845_000000432064_00029_30143_6611.N1	05-DEC-2007 21:38:45	Bright	43.000	114	31ot Aur	2.6930	4600.0	86	30143	No
281	GOM_NL__2PRFIN20071205_214142_000000352064_00029_30143_6612.N1	05-DEC-2007 21:41:42	Bright	35.000	175	39Del Per	3.0100	19400.	70	30143	No
282	GOM_NL__2PRFIN20071205_214304_000000492064_00029_30143_6613.N1	05-DEC-2007 21:43:04	Bright	48.500	6	13Alp Aur	0.080000	3400.0	97	30143	No
283	GOM_NL__2PRFIN20071205_215932_000000472064_00029_30143_6614.N1	05-DEC-2007 21:59:32	Bright	46.500	36	50Alp UMa	1.8000	6300.0	93	30143	No
284	GOM_NL__2PRFIN20071205_220303_000000422064_00029_30143_6615.N1	05-DEC-2007 22:03:03	Bright	41.500	32	77Eps UMa	1.7630	11000.	83	30143	No
285	GOM_NL__2PRFIN20071205_220515_000000392064_00029_30143_6616.N1	05-DEC-2007 22:05:15	Bright	38.500	39	85Eta UMa	1.8540	24000.	77	30143	No
286	GOM_NL__2PRFIN20071205_220846_000000402064_00029_30143_6617.N1	05-DEC-2007 22:08:46	Bright	40.000	152	12Alp2CVn	2.8900	11000.	80	30143	No
287	GOM_NL__2PRFIN20071205_221423_000000362064_00029_30143_6618.N1	05-DEC-2007 22:14:23	Bright	35.500	111	8Eta Boo	2.6800	6000.0	71	30143	No
288	GOM_NL__2PRFIN20071205_221740_000000442064_00029_30143_6619.N1	05-DEC-2007 22:17:40	Bright	44.000	138	47Eps Vir	2.8280	4700.0	88	30143	No
289	GOM_NL__2PRFIN20071205_222215_000000522064_00029_30143_6620.N1	05-DEC-2007 22:22:15	Bright	52.000	121	29Gam Vir	2.7400	7200.0	104	30143	No
290	GOM_NL__2PRFIN20071205_222809_000000482064_00029_30143_6621.N1	05-DEC-2007 22:28:09	Dark	48.000	100	4Gam Crv	2.5800	13100.	96	30143	No
291	GOM_NL__2PRFIN20071205_222946_000000482064_00029_30143_6622.N1	05-DEC-2007 22:29:46	Dark	47.500	171	2Eps Crv	3.0010	4250.0	95	30143	No
292	GOM_NL__2PRFIN20071205_223553_000000392064_00029_30143_6623.N1	05-DEC-2007 22:35:53	Dark	39.000	99	Del Cen	2.5750	26000.	78	30143	No
293	GOM_NL__2PRFIN20071205_223909_000000482064_00030_30144_6620.N1	05-DEC-2007 22:39:09	Dark	47.500	113	Mu Vel	2.6920	5000.0	95	30144	No
294	GOM_NL__2PRFIN20071205_224750_000000552064_00030_30144_6621.N1	05-DEC-2007 22:47:50	Dark	54.500	34	Gam2Vel	1.7930	23000.	109	30144	No
295	GOM_NL__2PRFIN20071205_225049_000000572064_00030_30144_6622.N1	05-DEC-2007 22:50:49	Dark	57.000	2	Alp Car	-0.73600	7000.0	114	30144	No
296	GOM_NL__2PRFIN20071205_225708_000000452064_00030_30144_6623.N1	05-DEC-2007 22:57:08	Dark	45.000	108	Alp Col	2.6520	15200.	90	30144	No
297	GOM_NL__2PRFIN20071205_230235_000000492064_00030_30144_6624.N1	05-DEC-2007 23:02:35	Straylight	49.000	101	11Alp Lep	2.5820	7000.0	98	30144	No
298	GOM_NL__2PRFIN20071205_230559_000000562064_00030_30144_6625.N1	05-DEC-2007 23:05:59	Straylight	56.000	7	19Bet Ori	0.10000	14000.	112	30144	No
299	GOM_NL__2PRFIN20071205_231344_000000592064_00030_30144_6626.N1	05-DEC-2007 23:13:44	Bright	59.000	13	87Alp Tau	0.86700	3800.0	118	30144	No
300	GOM_NL__2PRFIN20071205_231531_000000392064_00030_30144_6627.N1	05-DEC-2007 23:15:31	Bright	38.500	146	25Eta Tau	2.8730	15200.	77	30144	No
301	GOM_NL__2PRFIN20071205_231749_000000372064_00030_30144_6628.N1	05-DEC-2007 23:17:49	Bright	36.500	150	44Zet Per	2.8900	28000.	73	30144	No
302	GOM_NL__2PRFIN20071205_231921_000000432064_00030_30144_6629.N1	05-DEC-2007 23:19:21	Bright	43.000	114	31ot Aur	2.6930	4600.0	86	30144	No
303	GOM_NL__2PRFIN20071205_232218_000000362064_00030_30144_6630.N1	05-DEC-2007 23:22:18	Bright	35.500	175	39Del Per	3.0100	19400.	71	30144	No
304	GOM_NL__2PRFIN20071205_232340_000000472064_00030_30144_6631.N1	05-DEC-2007 23:23:40	Bright	46.500	6	13Alp Aur	0.080000	3400.0	93	30144	No
305	GOM_NL__2PRFIN20071205_234008_000000452064_00030_30144_6632.N1	05-DEC-2007 23:40:08	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	30144	No
306	GOM_NL__2PRFIN20071205_234338_000000392064_00030_30144_6633.N1	05-DEC-2007 23:43:38	Bright	39.000	32	77Eps UMa	1.7630	11000.	78	30144	No
307	GOM_NL__2PRFIN20071205_234551_000000352064_00030_30144_6634.N1	05-DEC-2007 23:45:51	Bright	34.500	39	85Eta UMa	1.8540	24000.	69	30144	No
308	GOM_NL__2PRFIN20071205_234922_000000412064_00030_30144_6635.N1	05-DEC-2007 23:49:22	Bright	40.500	152	12Alp2CVn	2.8900	11000.	81	30144	No
309	GOM_NL__2PRFIN20071205_235459_000000352064_00030_30144_6636.N1	05-DEC-2007 23:54:59	Bright	35.000	111	8Eta Boo	2.6800	6000.0	70	30144	No
310	GOM_NL__2PRFIN20071205_235817_000000622064_00030_30144_6637.N1	05-DEC-2007 23:58:17	Bright	62.000	138	47Eps Vir	2.8280	4700.0	124	30144	No

### 3. Quality information per product

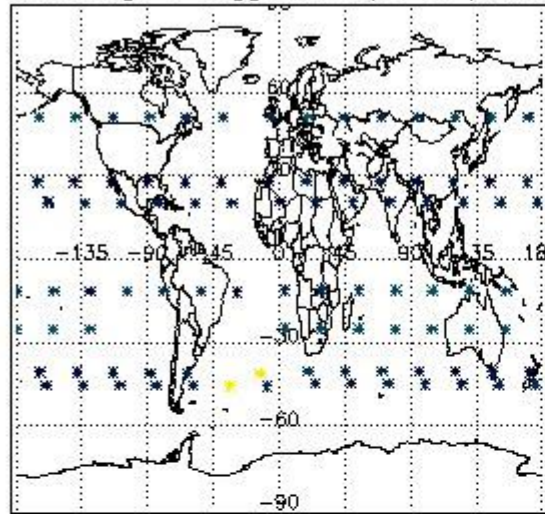
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

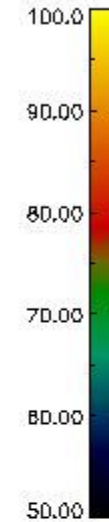
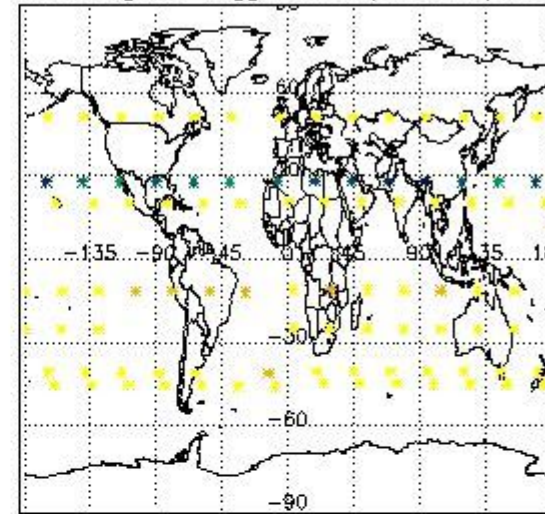


3.2 Plot quality information per product (world map)

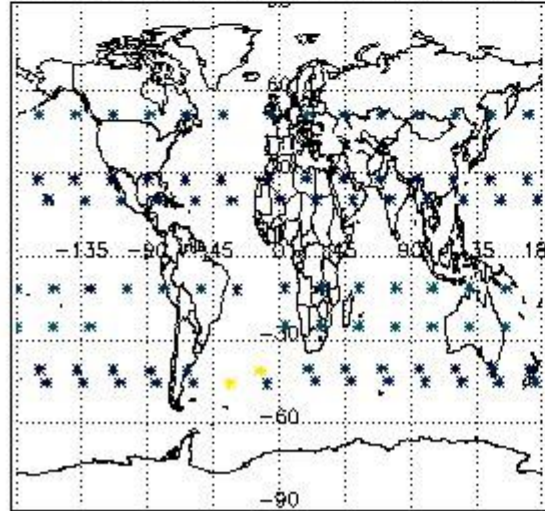
Percentage of flagged data per O3 profile



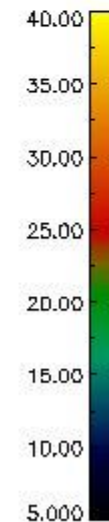
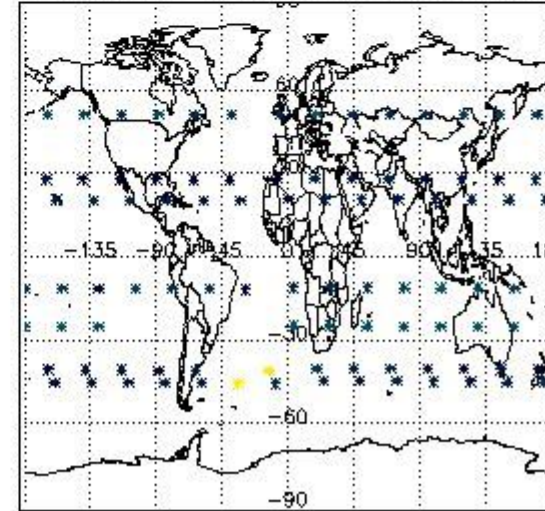
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

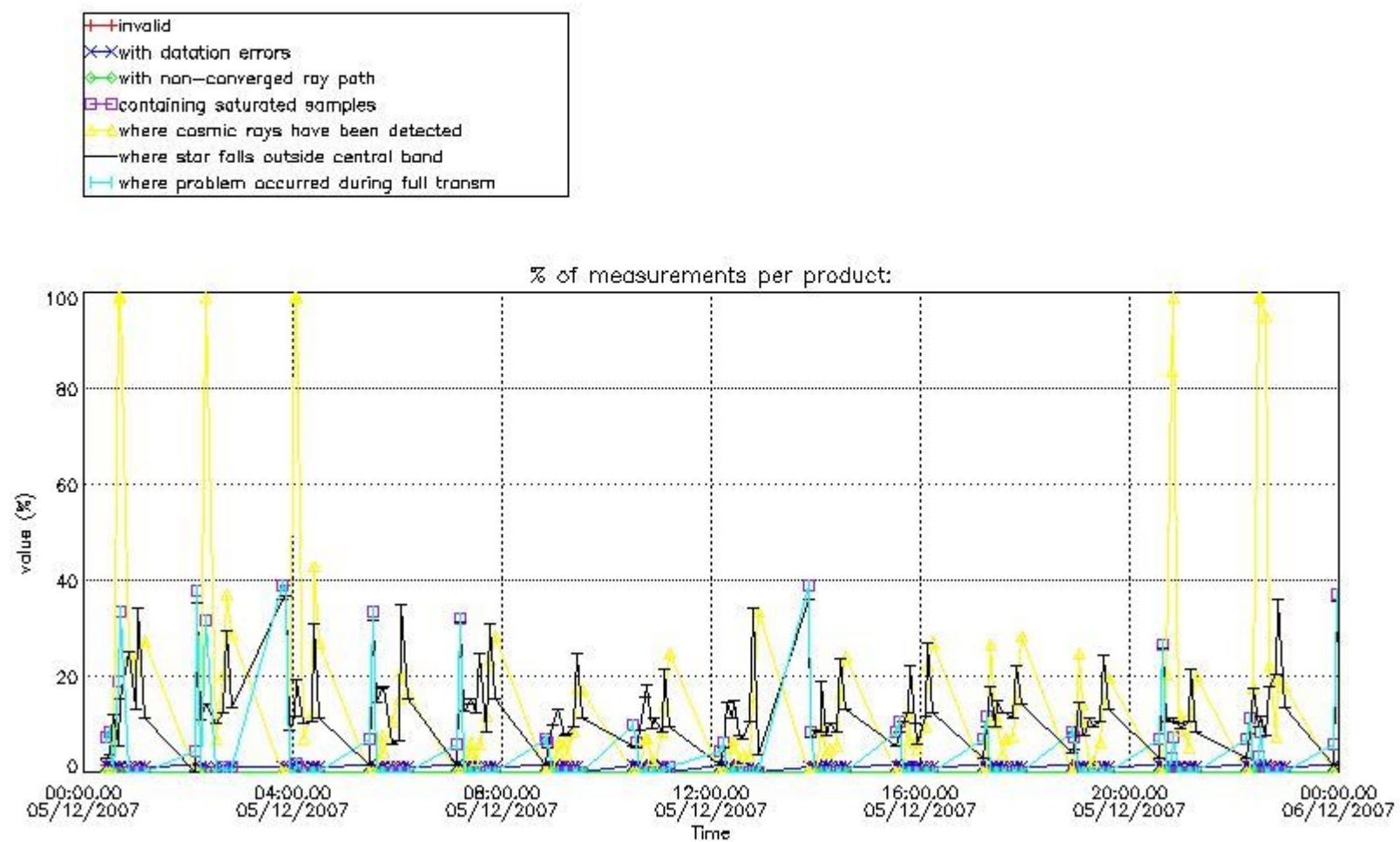


#### 4. Level 1 quality information per product

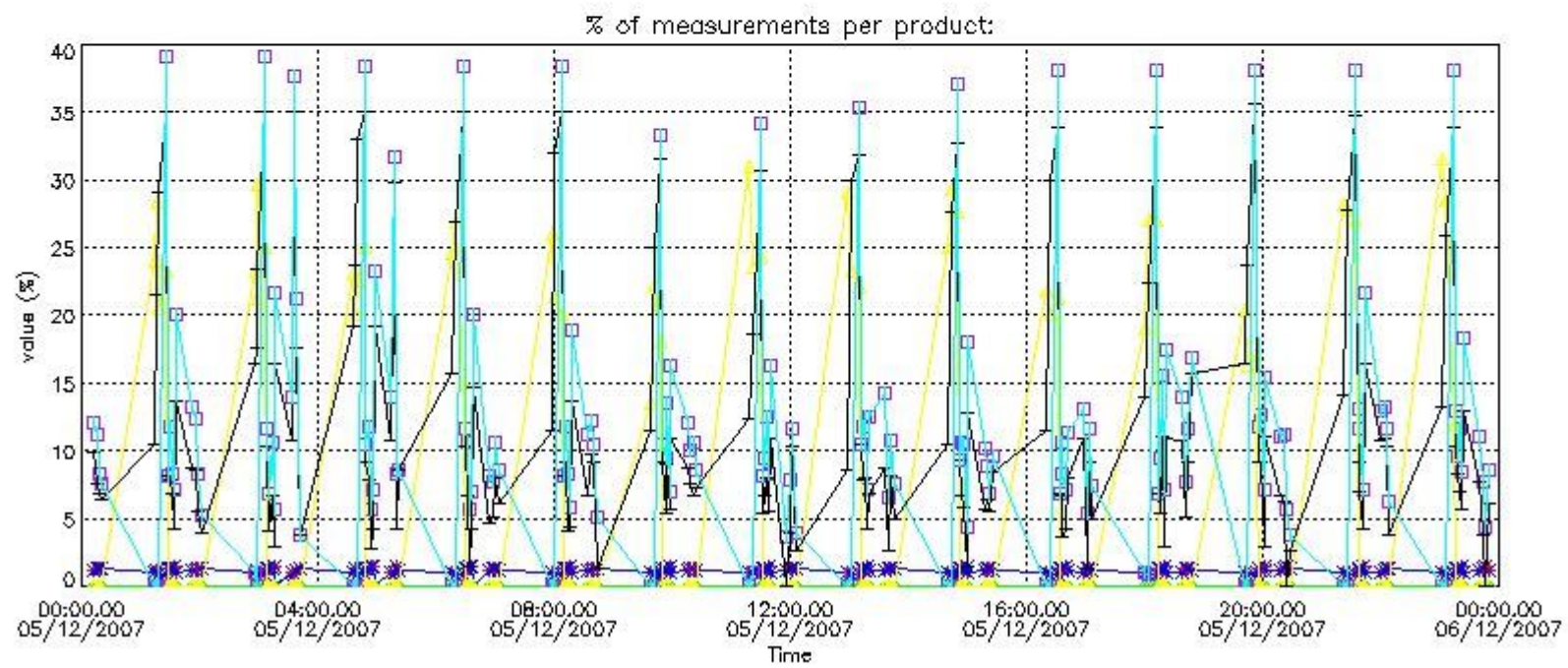
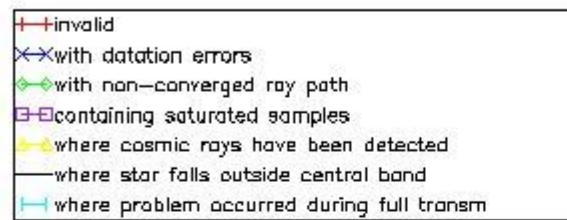
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



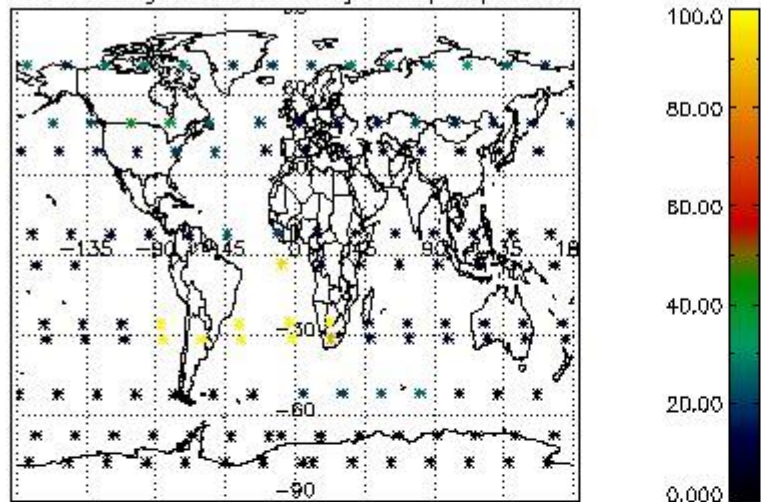
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



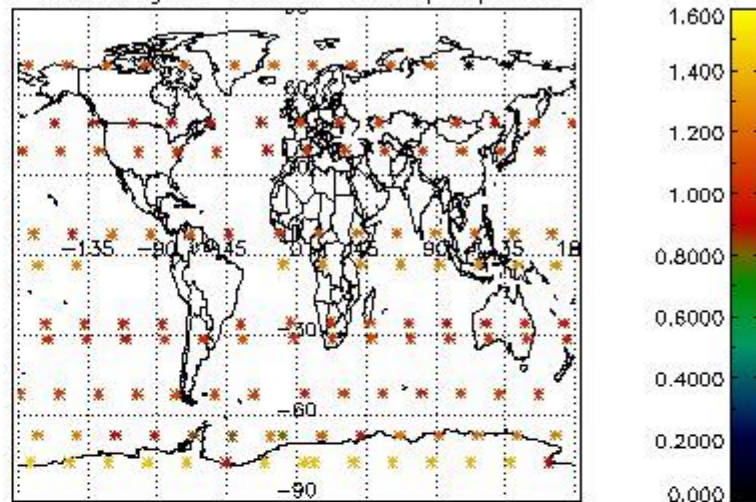
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

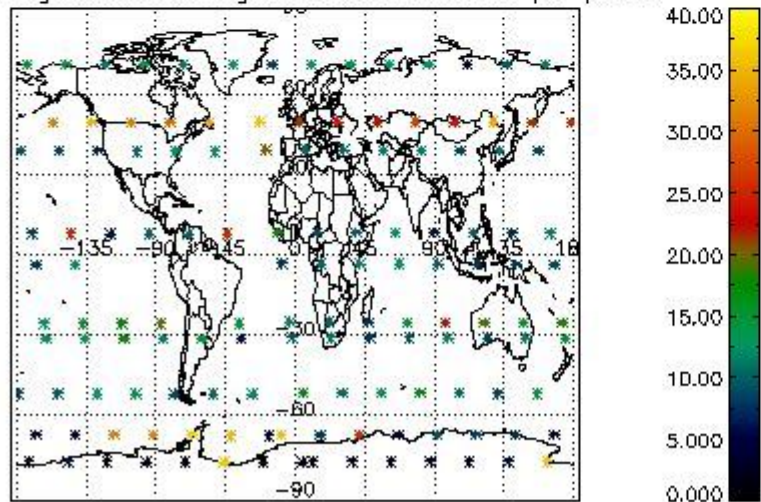
Percentage of cosmic ray hits per profile



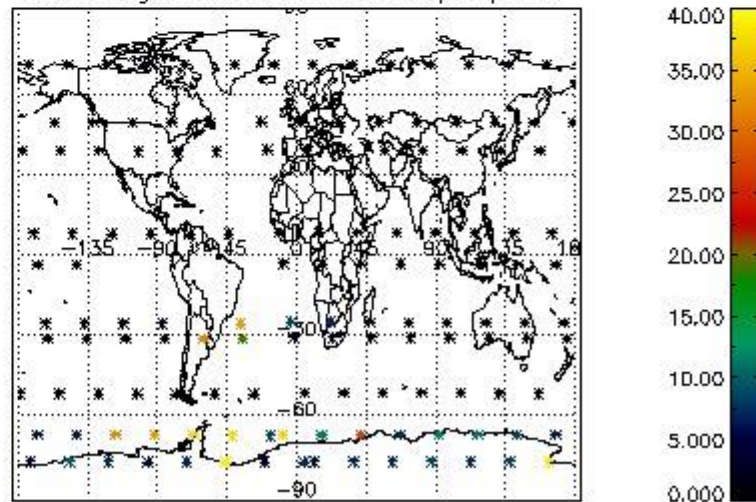
Percentage of datation errors per profile



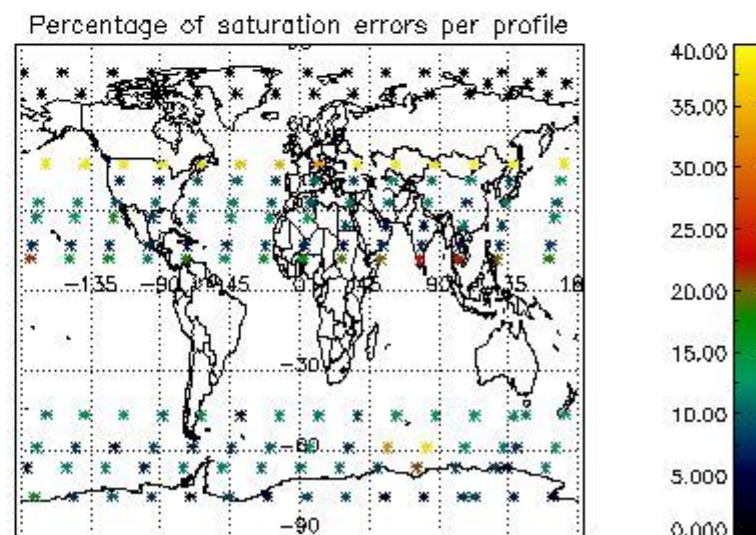
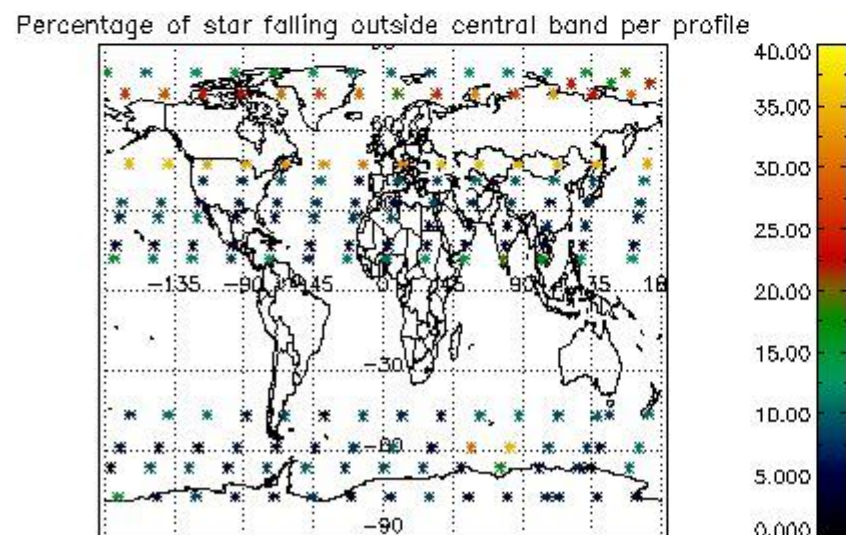
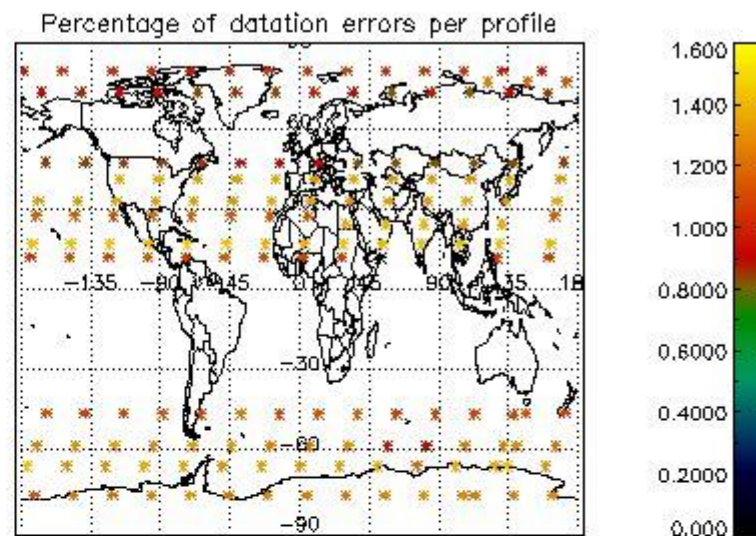
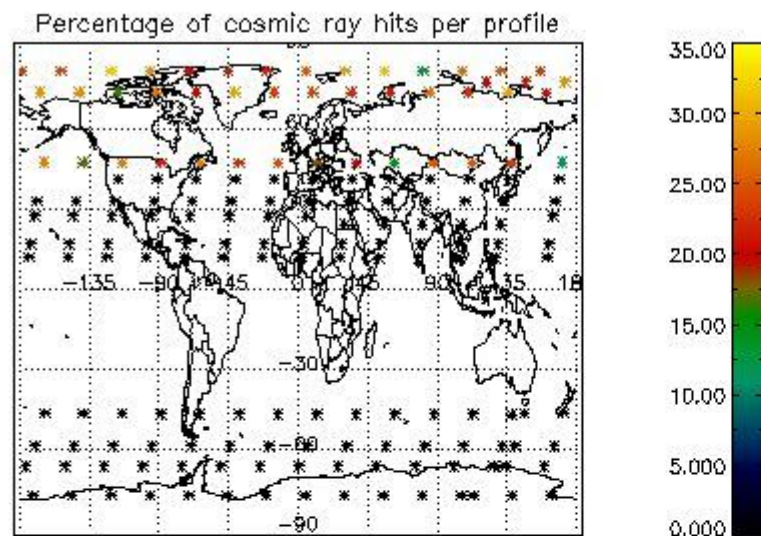
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

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

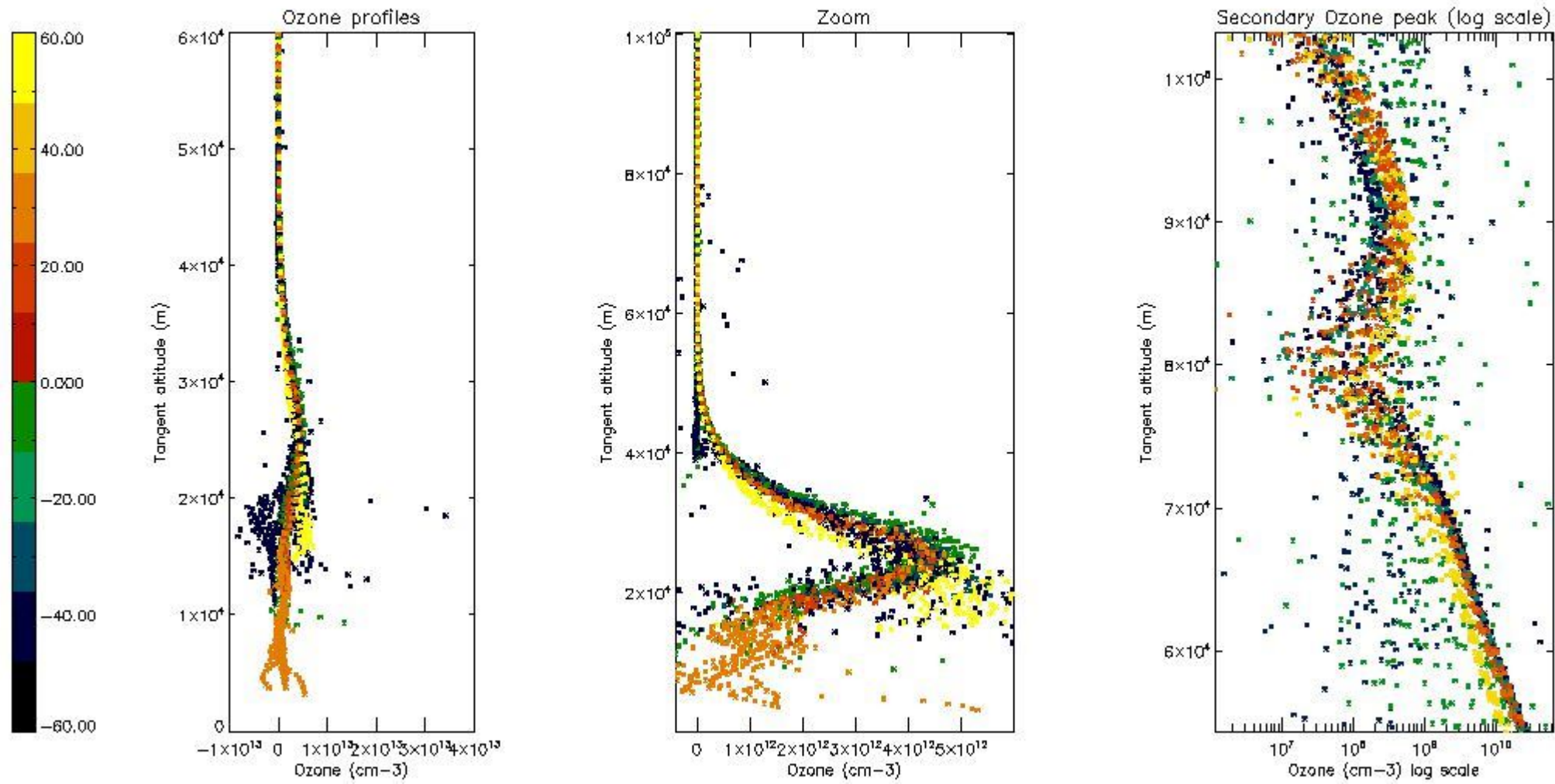
Criteria	% of total production
All STD	32
STD < 20	18



STD < 10	14
STD < 5	10

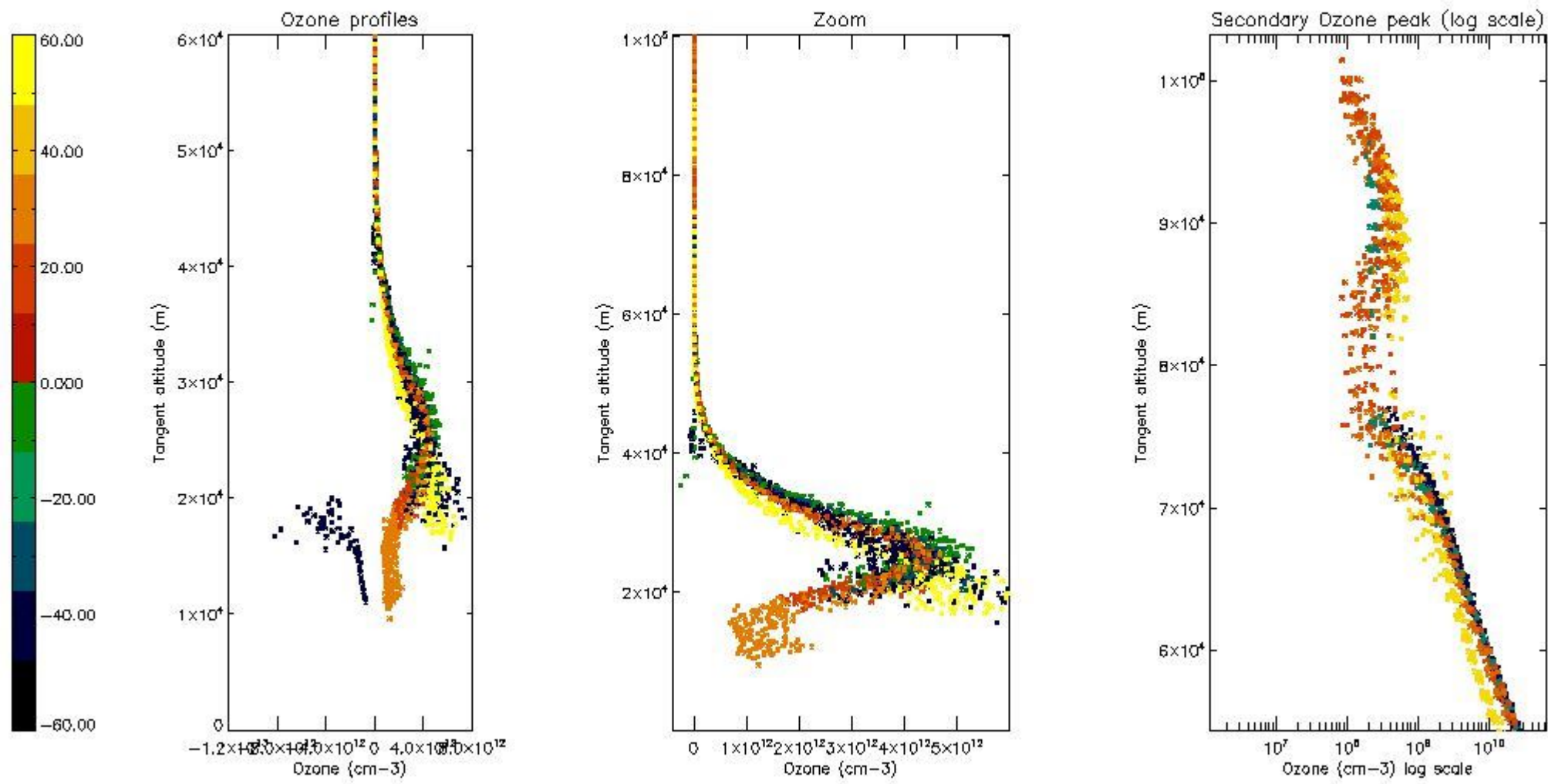
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



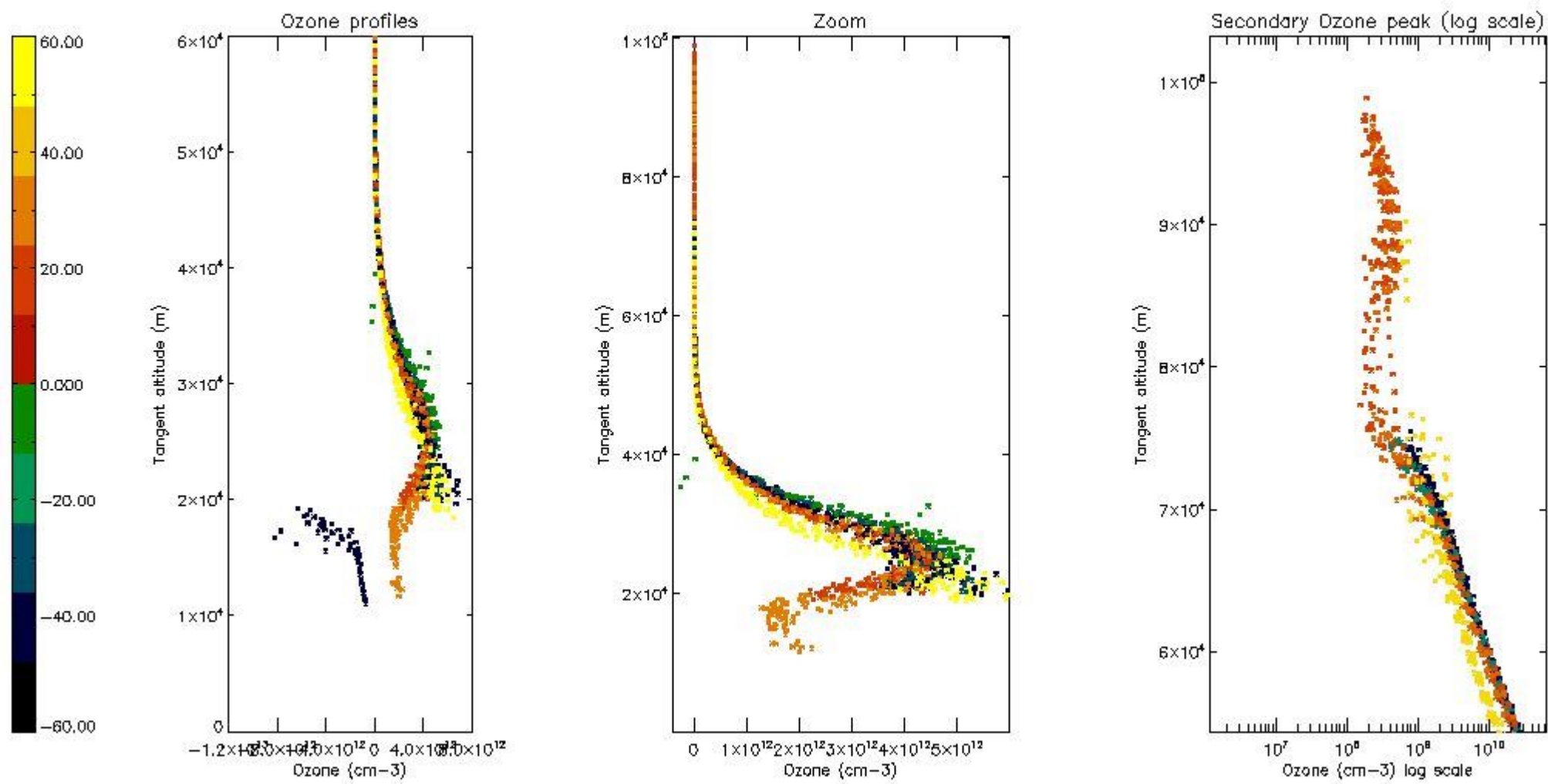
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



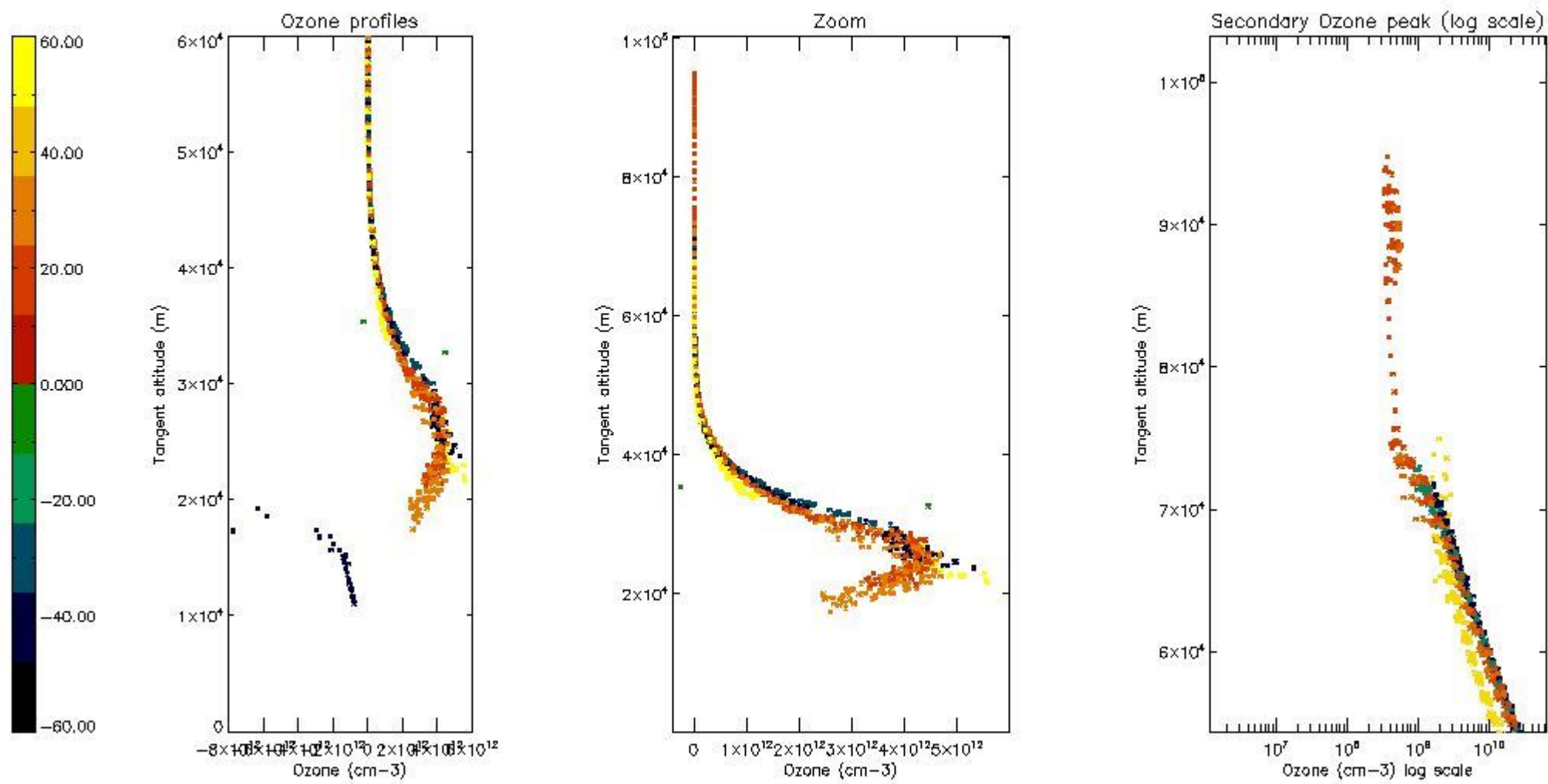
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



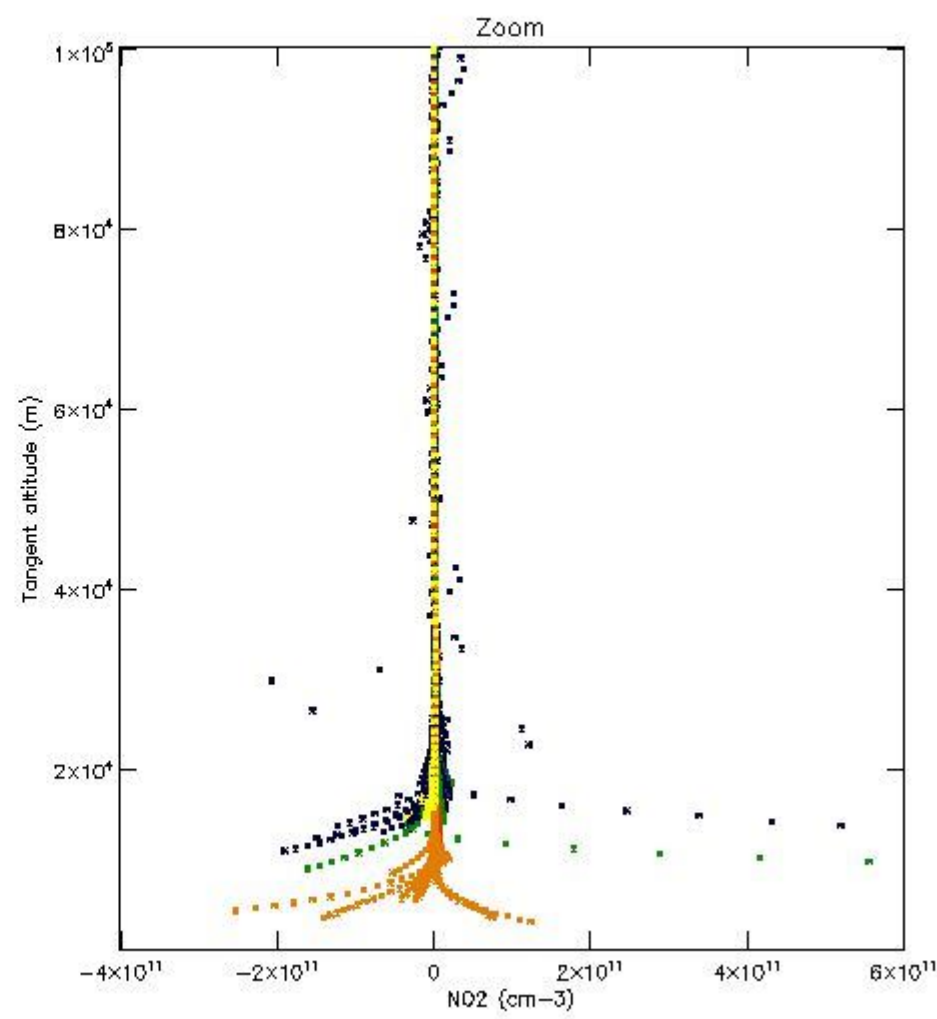
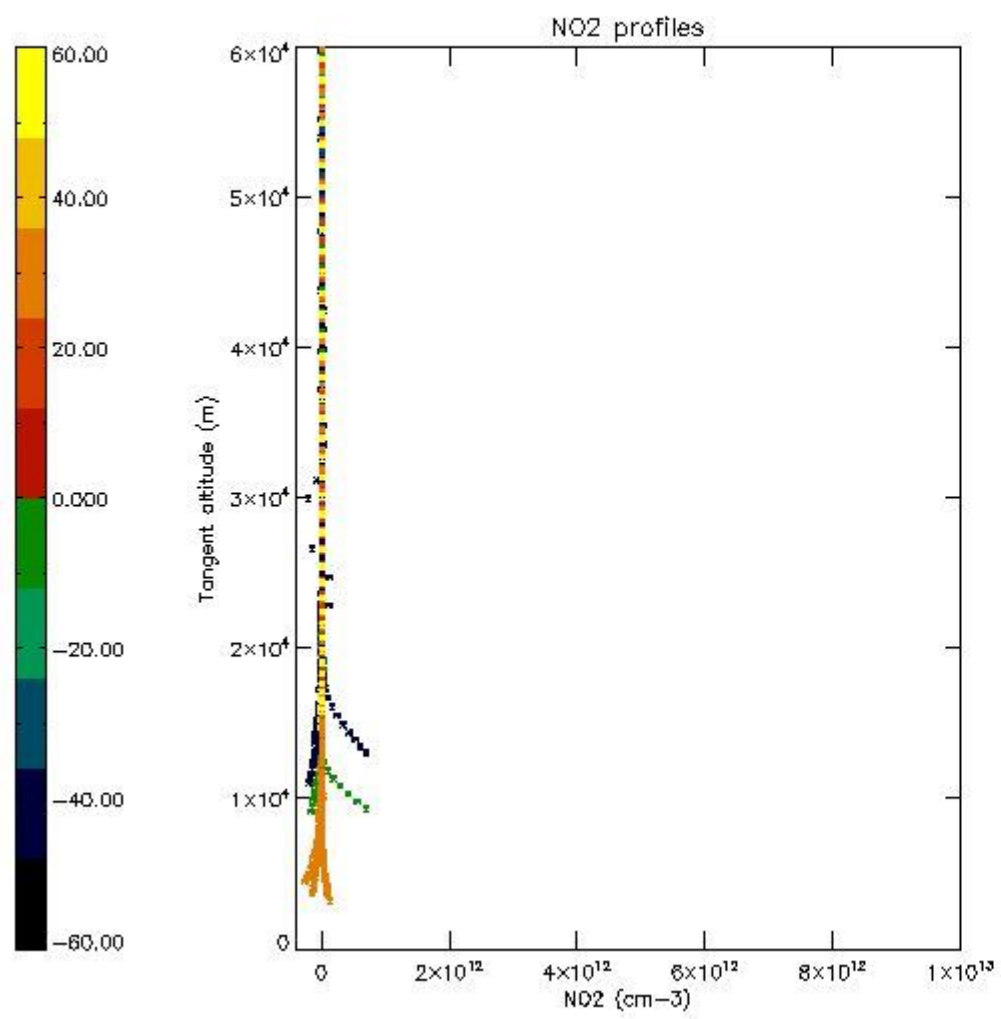
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



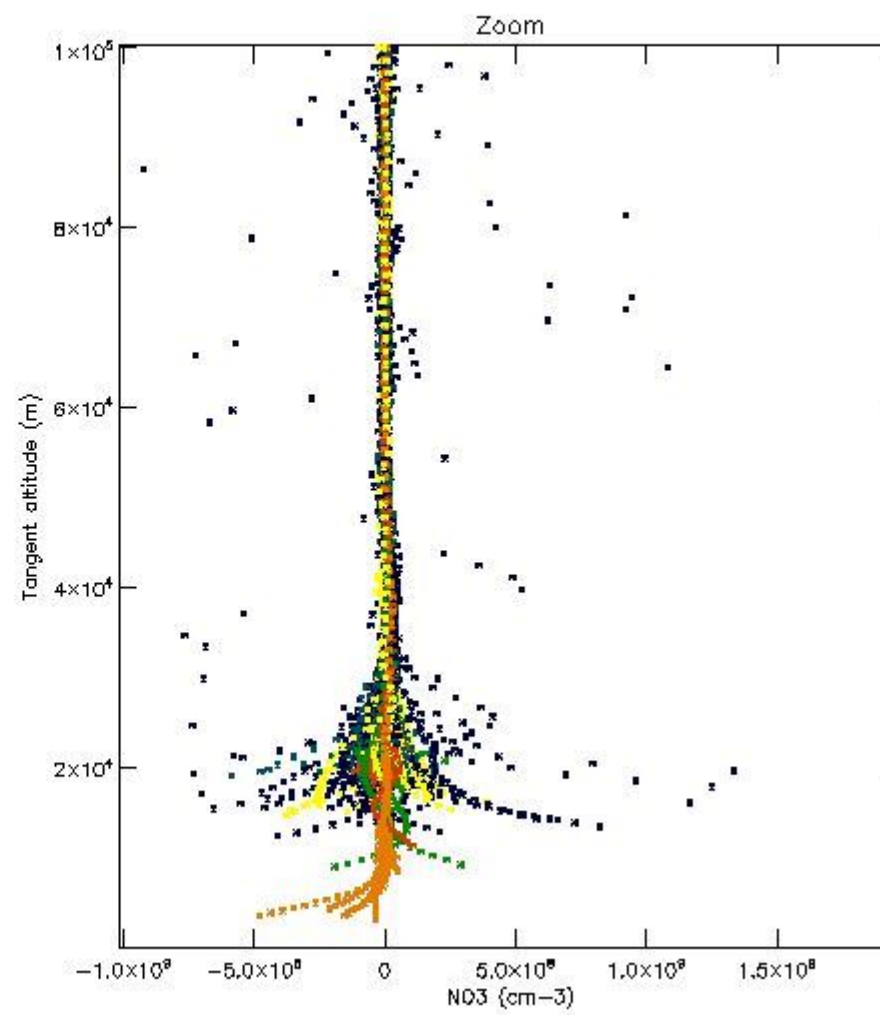
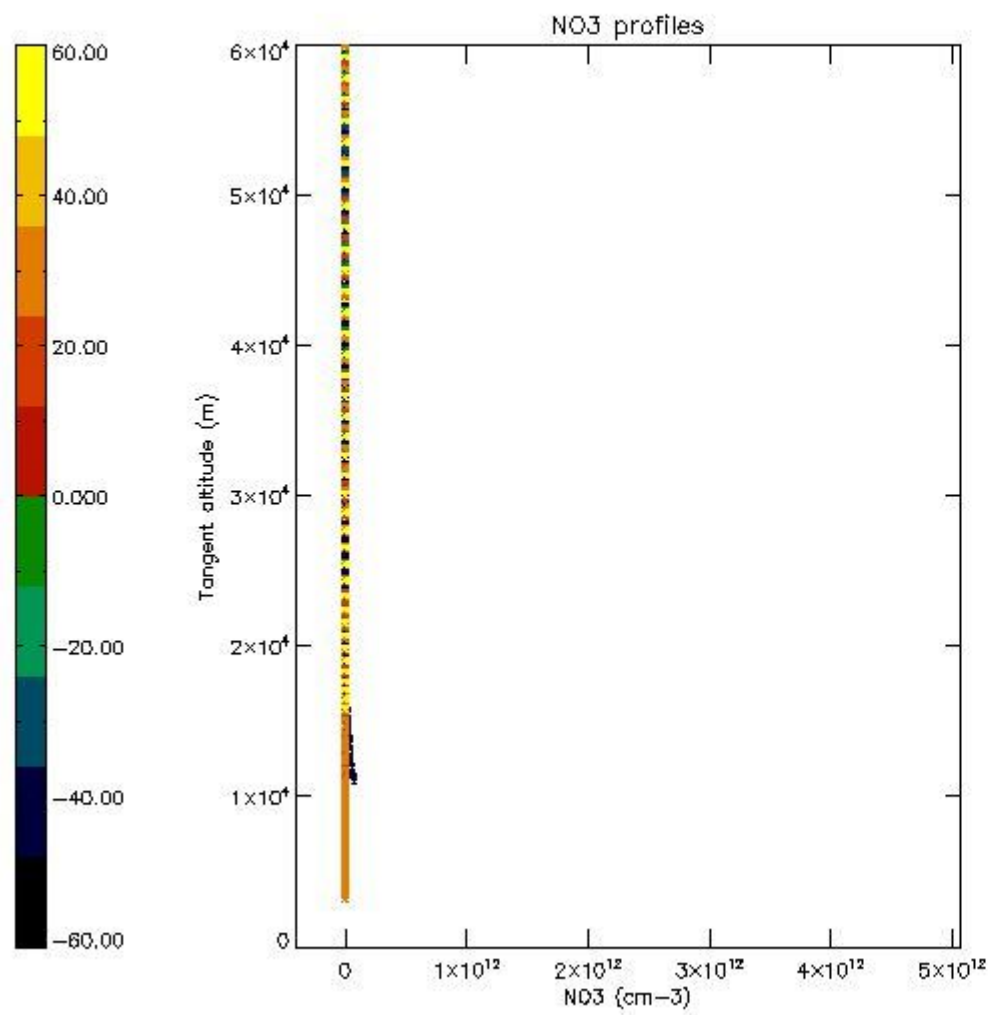
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

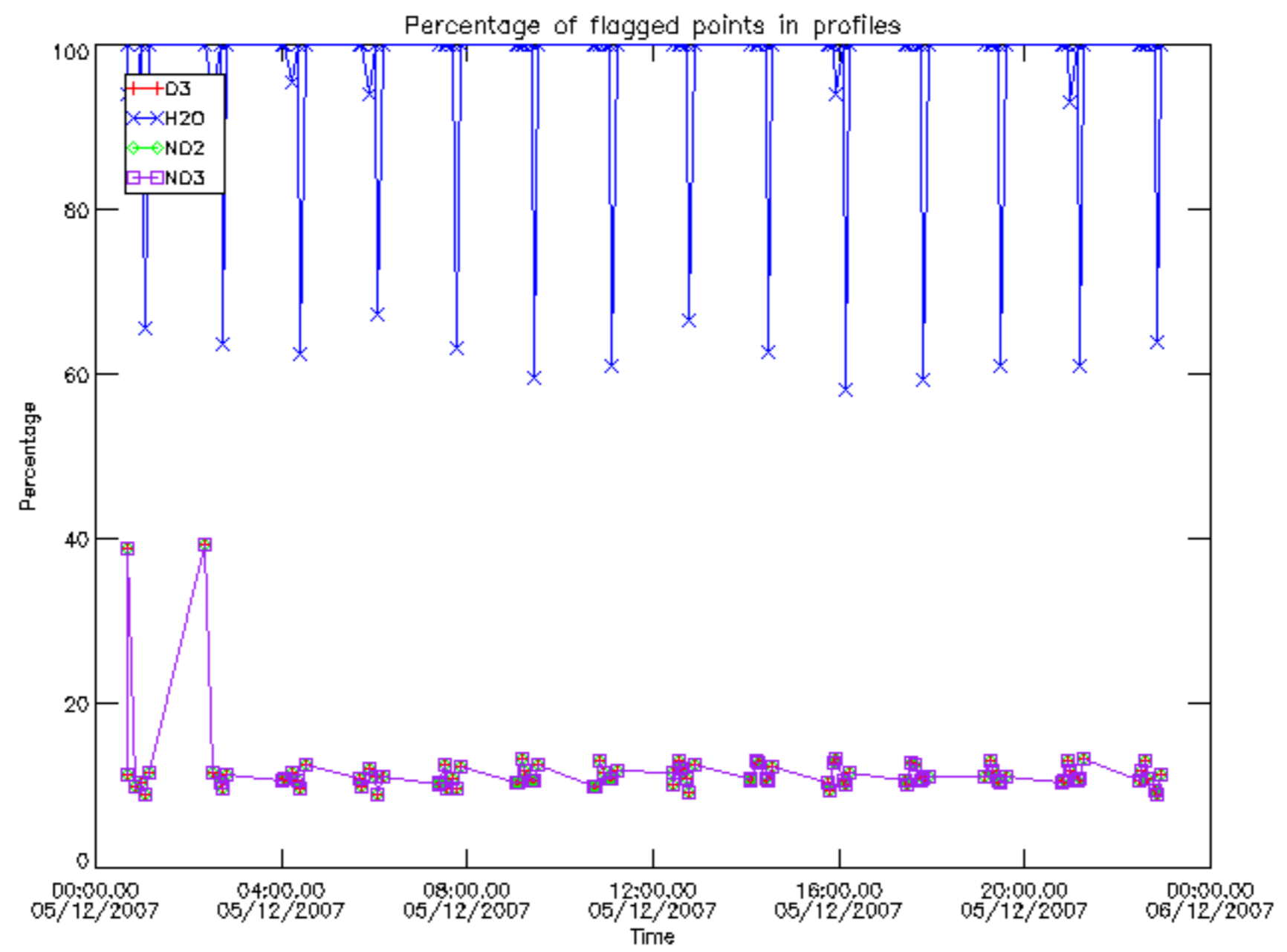
The colorbar represents the latitude.



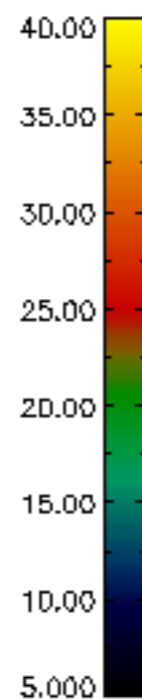
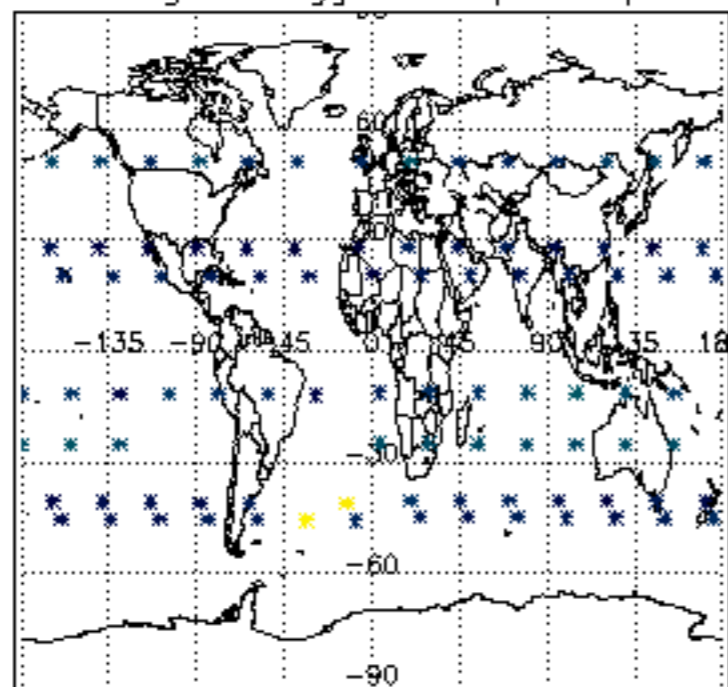
## 6. Auxiliary Data Files used for the production reported in section 2

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.

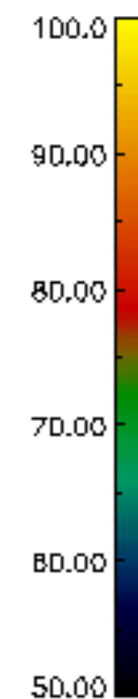
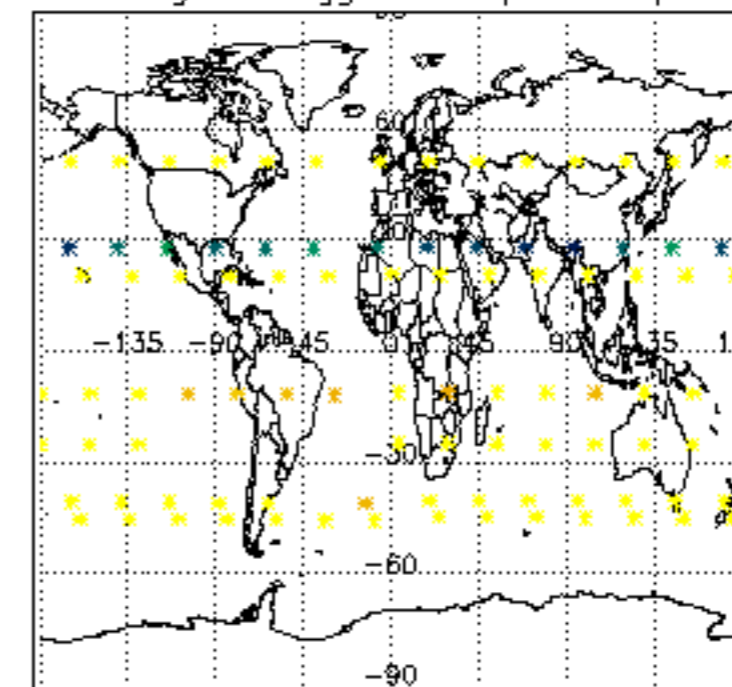
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	05-DEC-2007 00:11:50
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	05-DEC-2007 00:11:50
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	05-DEC-2007 00:11:50



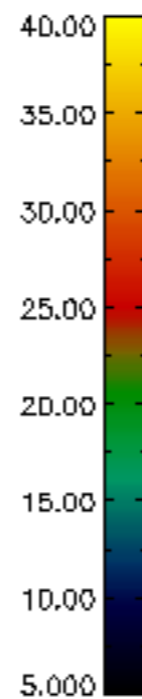
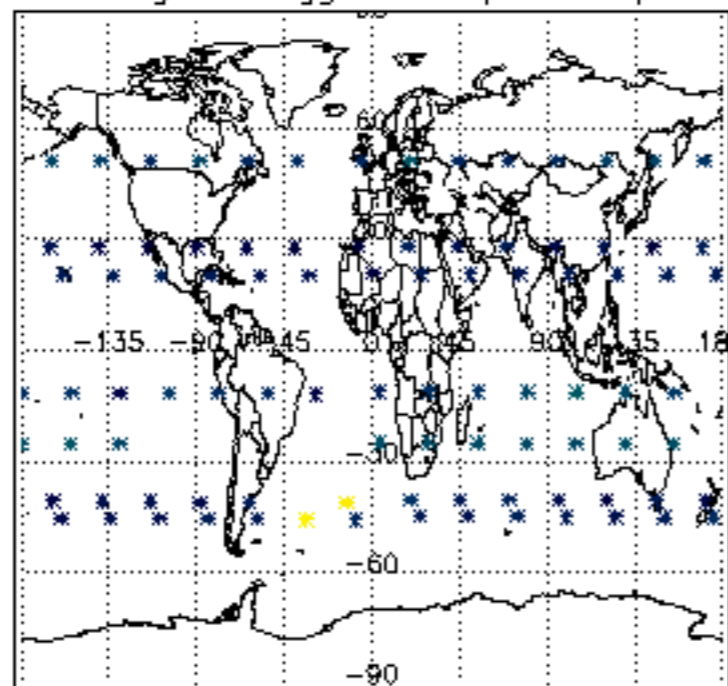
Percentage of flagged data per D3 profile



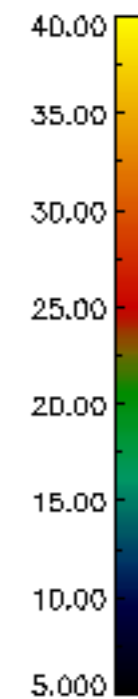
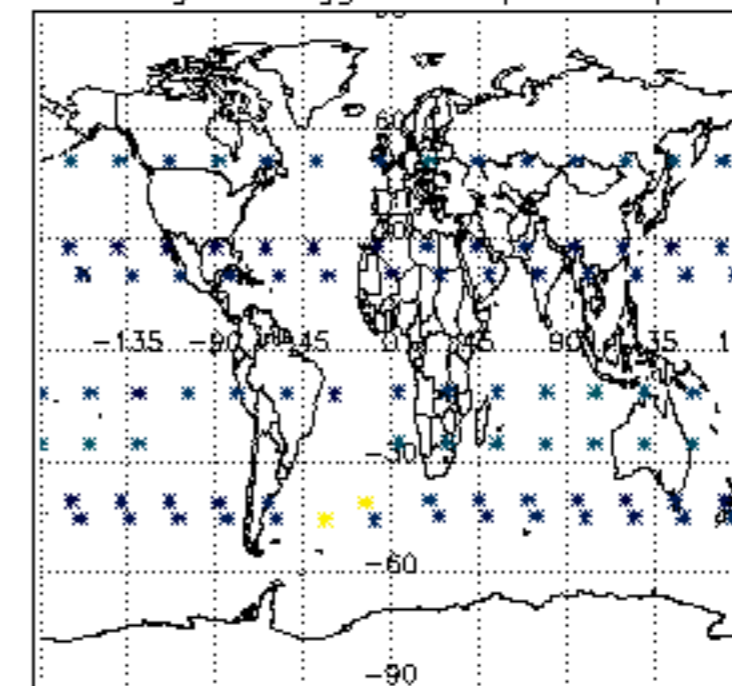
Percentage of flagged data per H2O profile



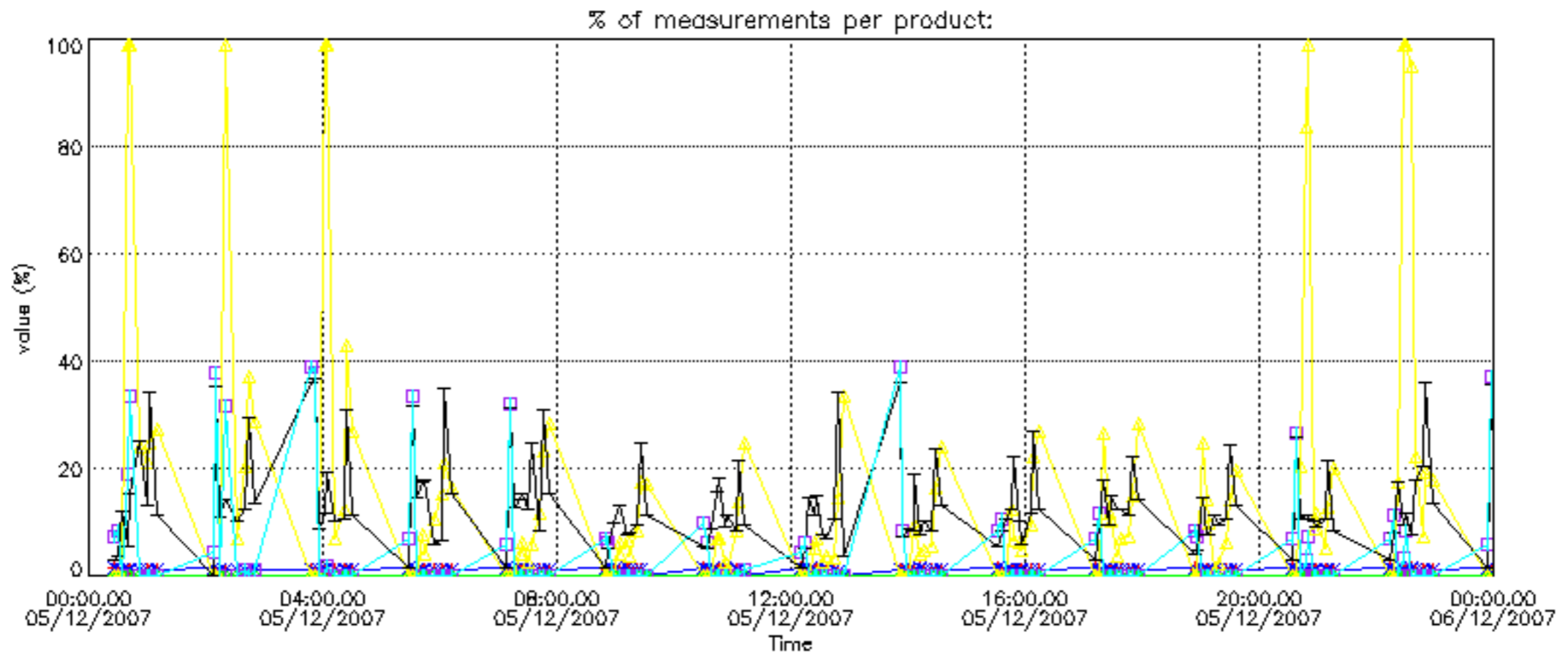
Percentage of flagged data per NO2 profile

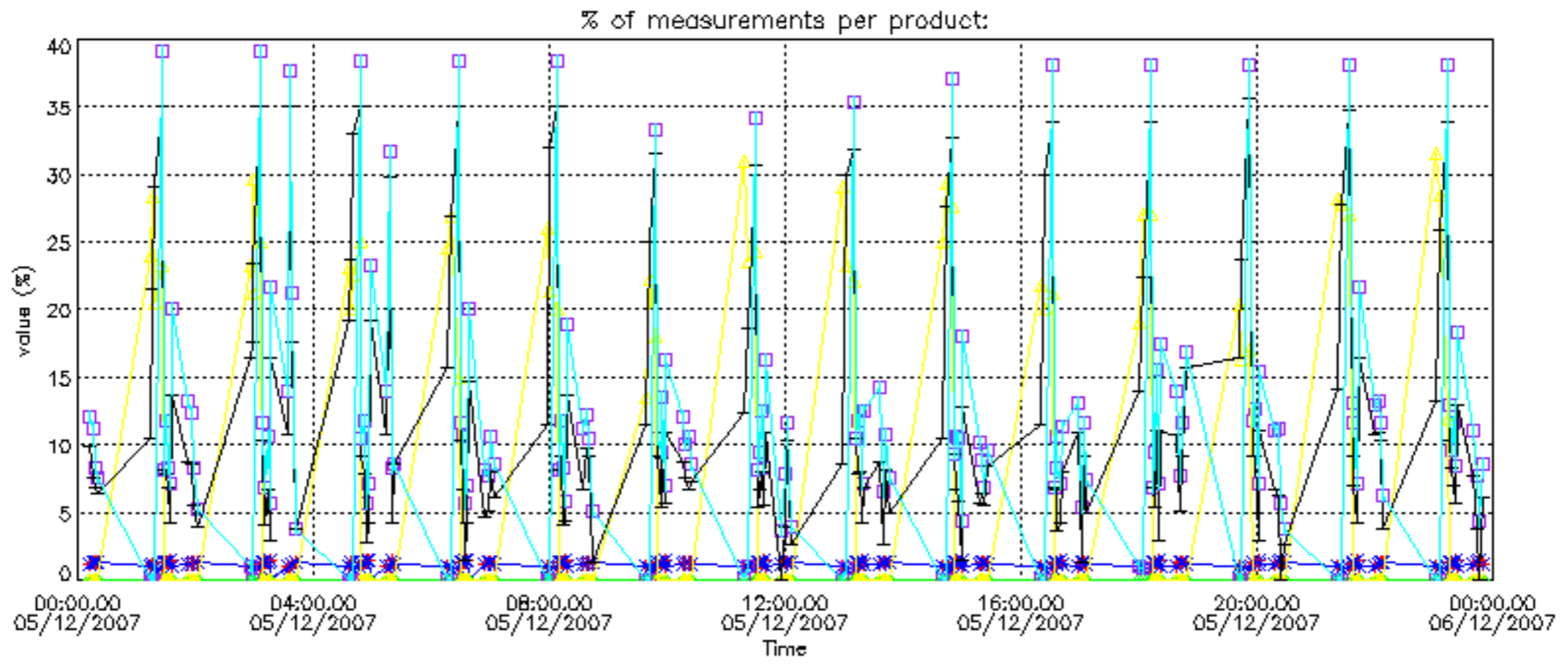


Percentage of flagged data per NO3 profile

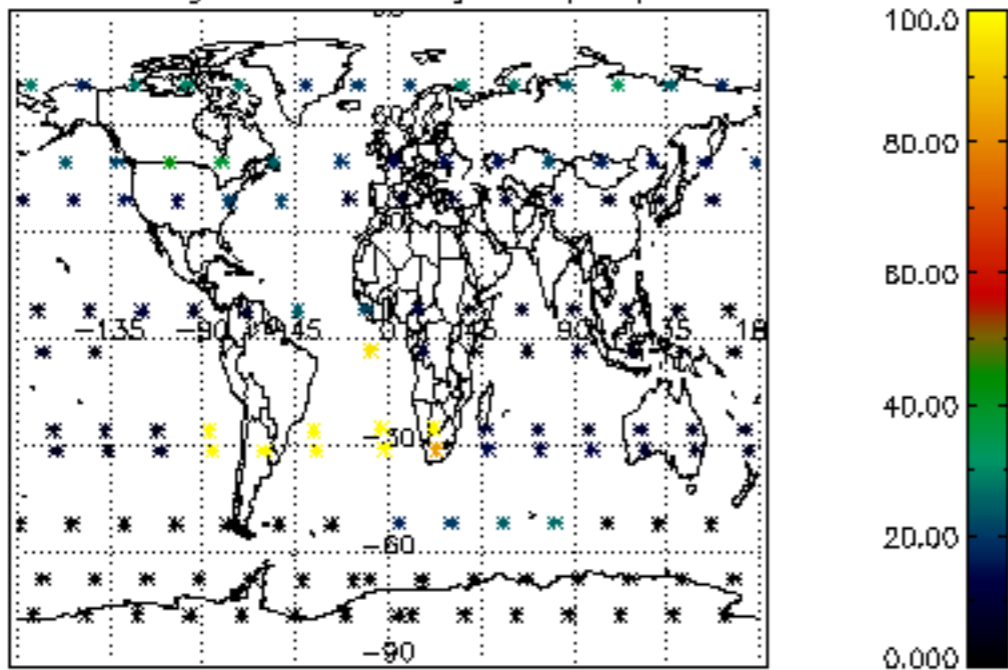




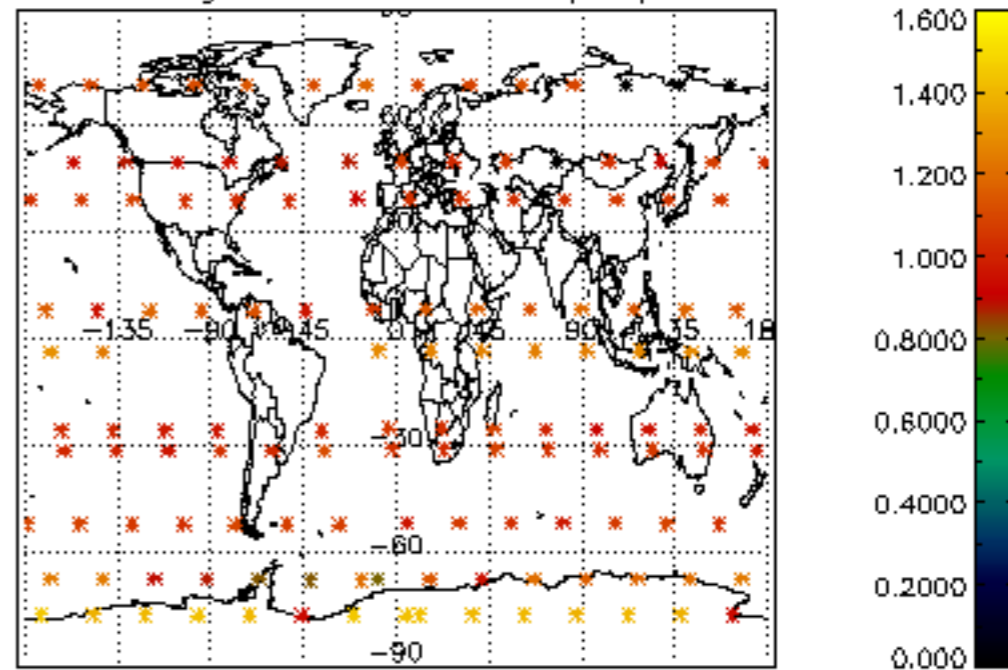




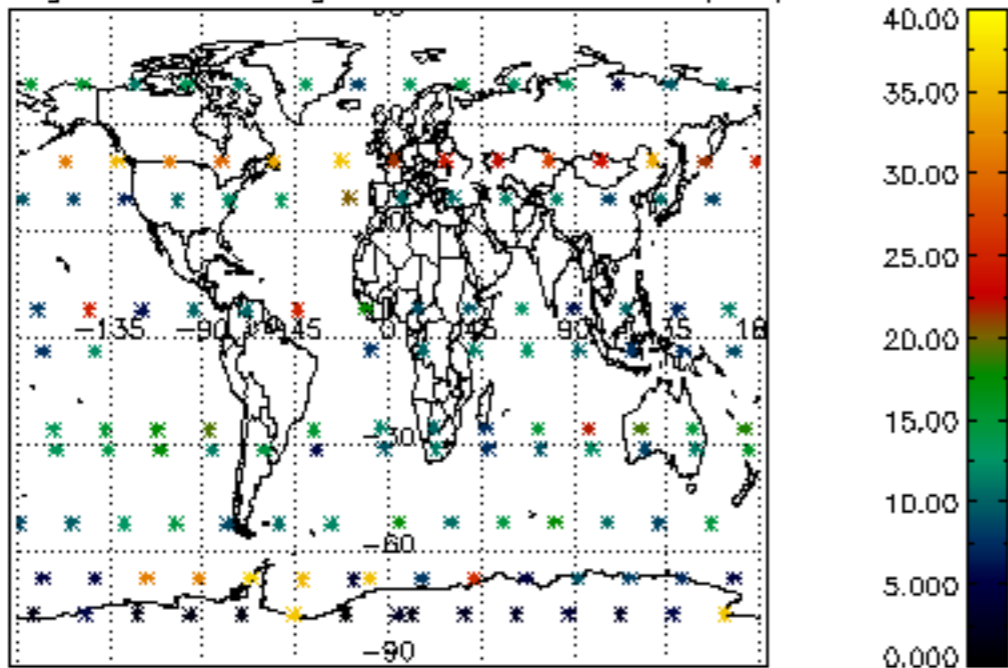
Percentage of cosmic ray hits per profile



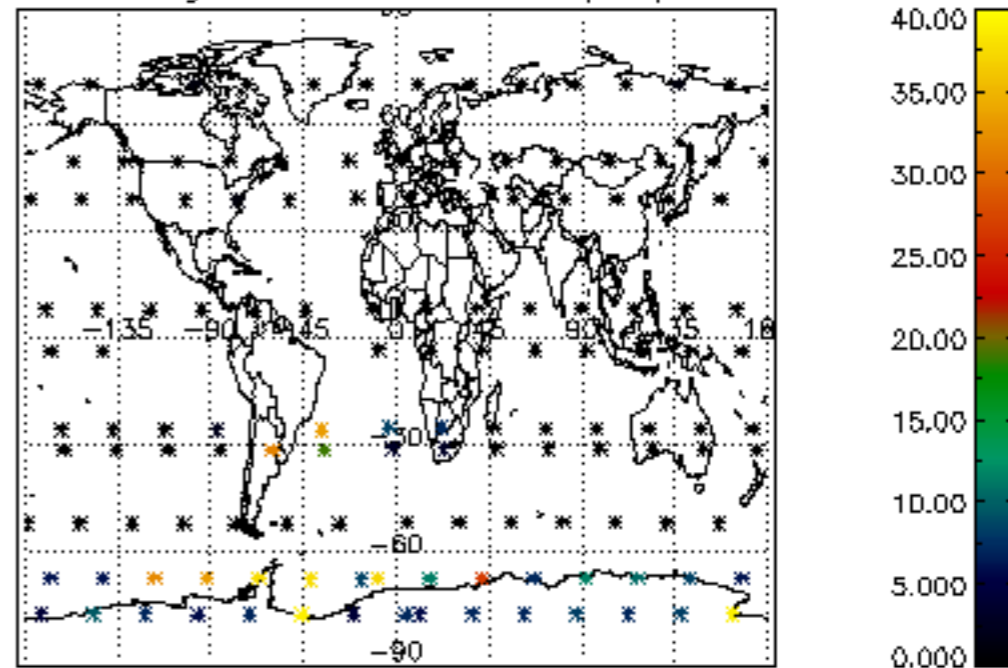
Percentage of datation errors per profile



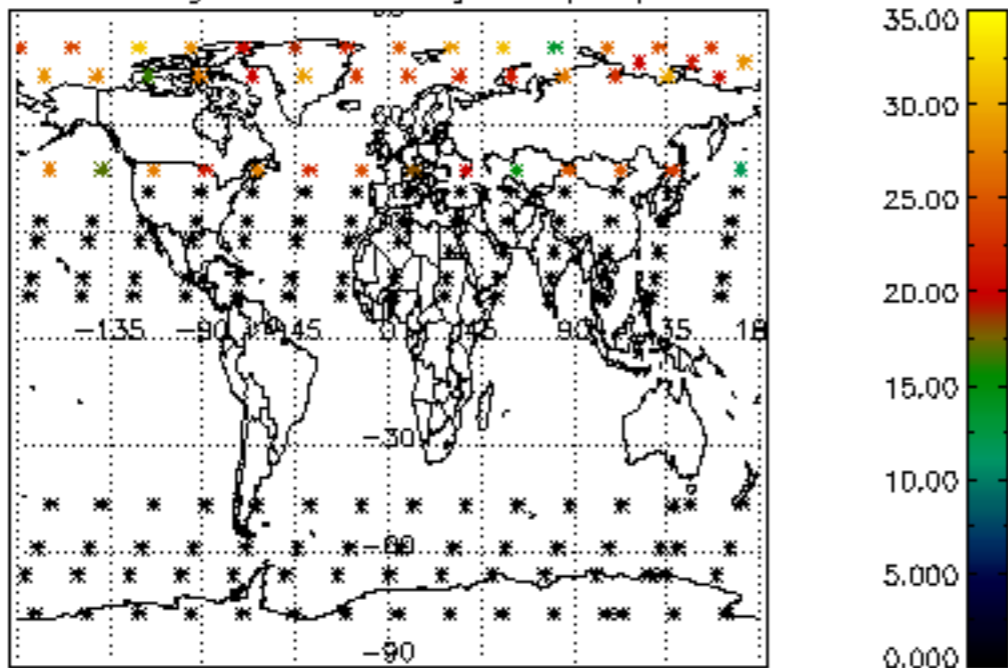
Percentage of star falling outside central band per profile



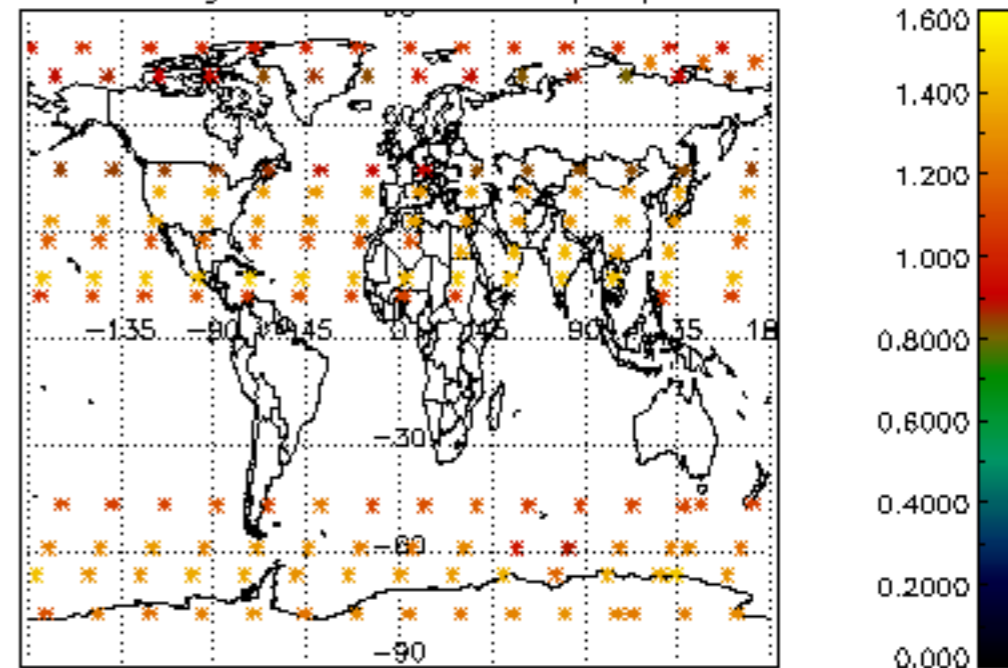
Percentage of saturation errors per profile



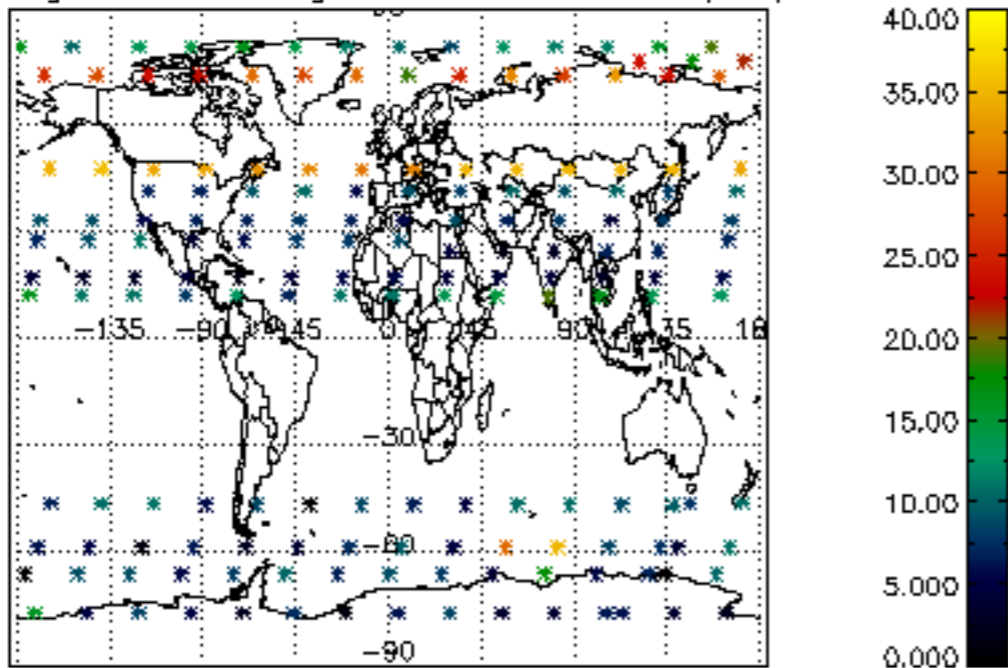
Percentage of cosmic ray hits per profile



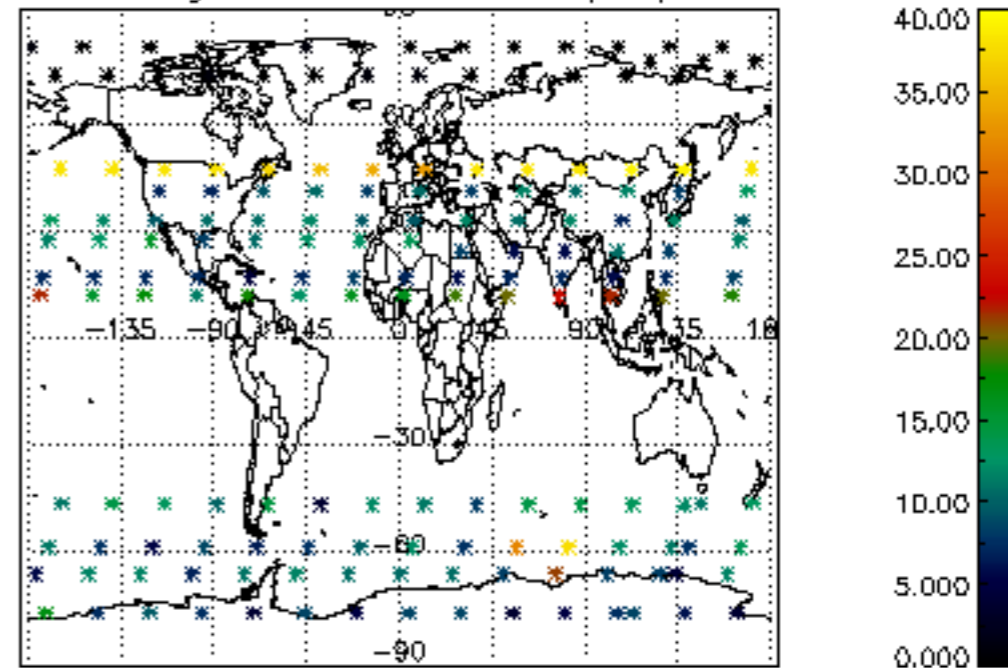
Percentage of datation errors per profile

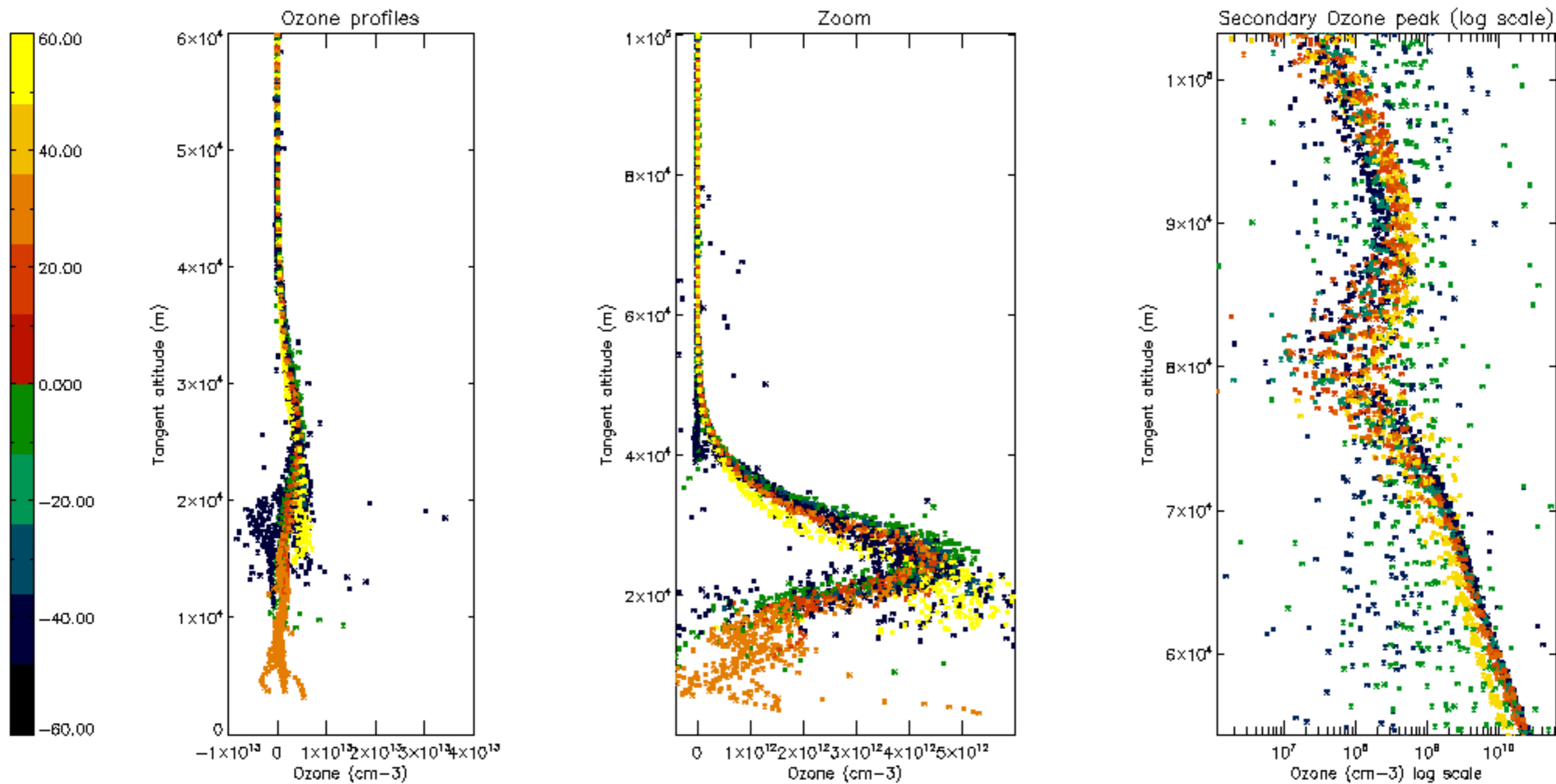


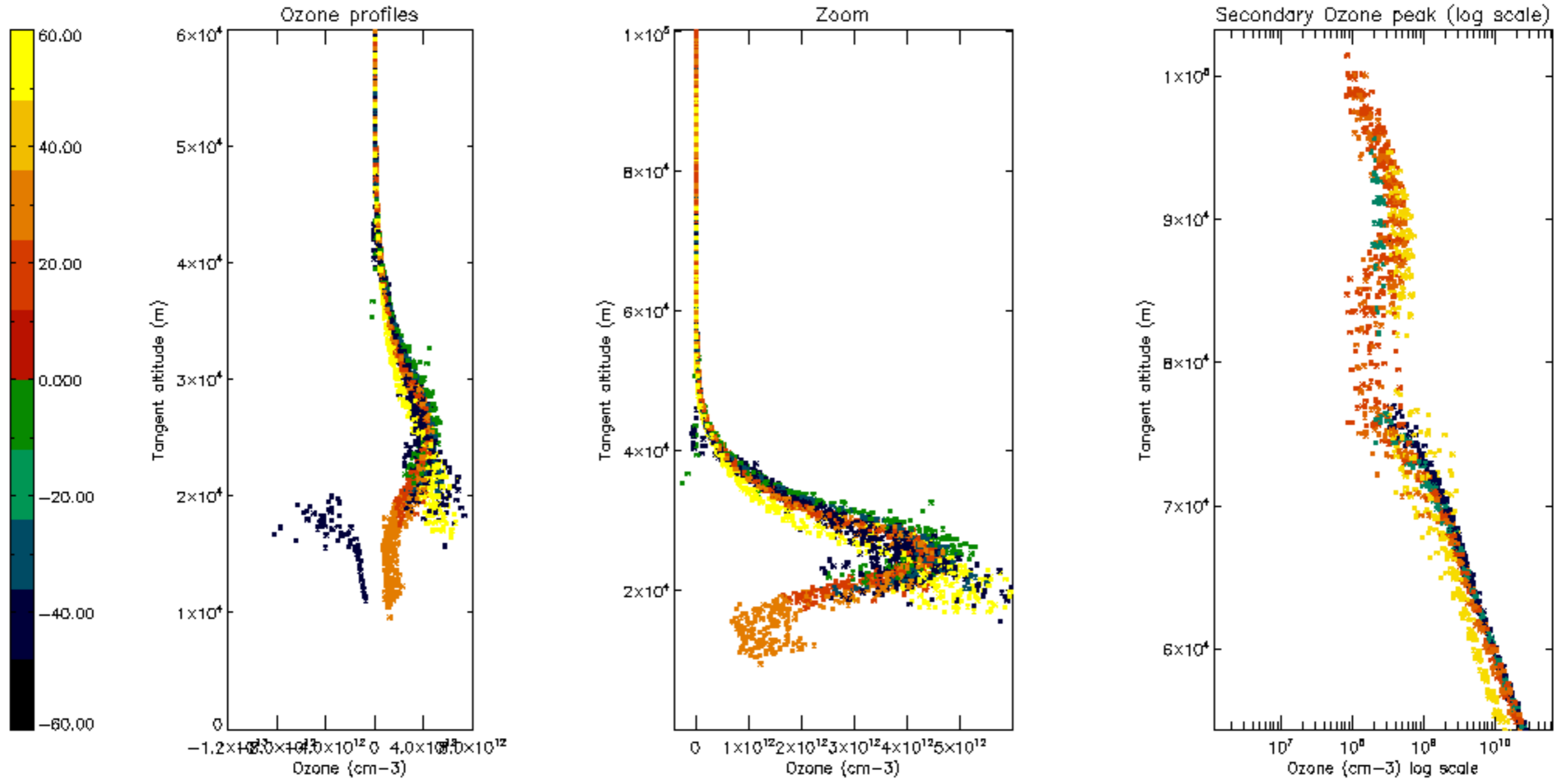
Percentage of star falling outside central band per profile

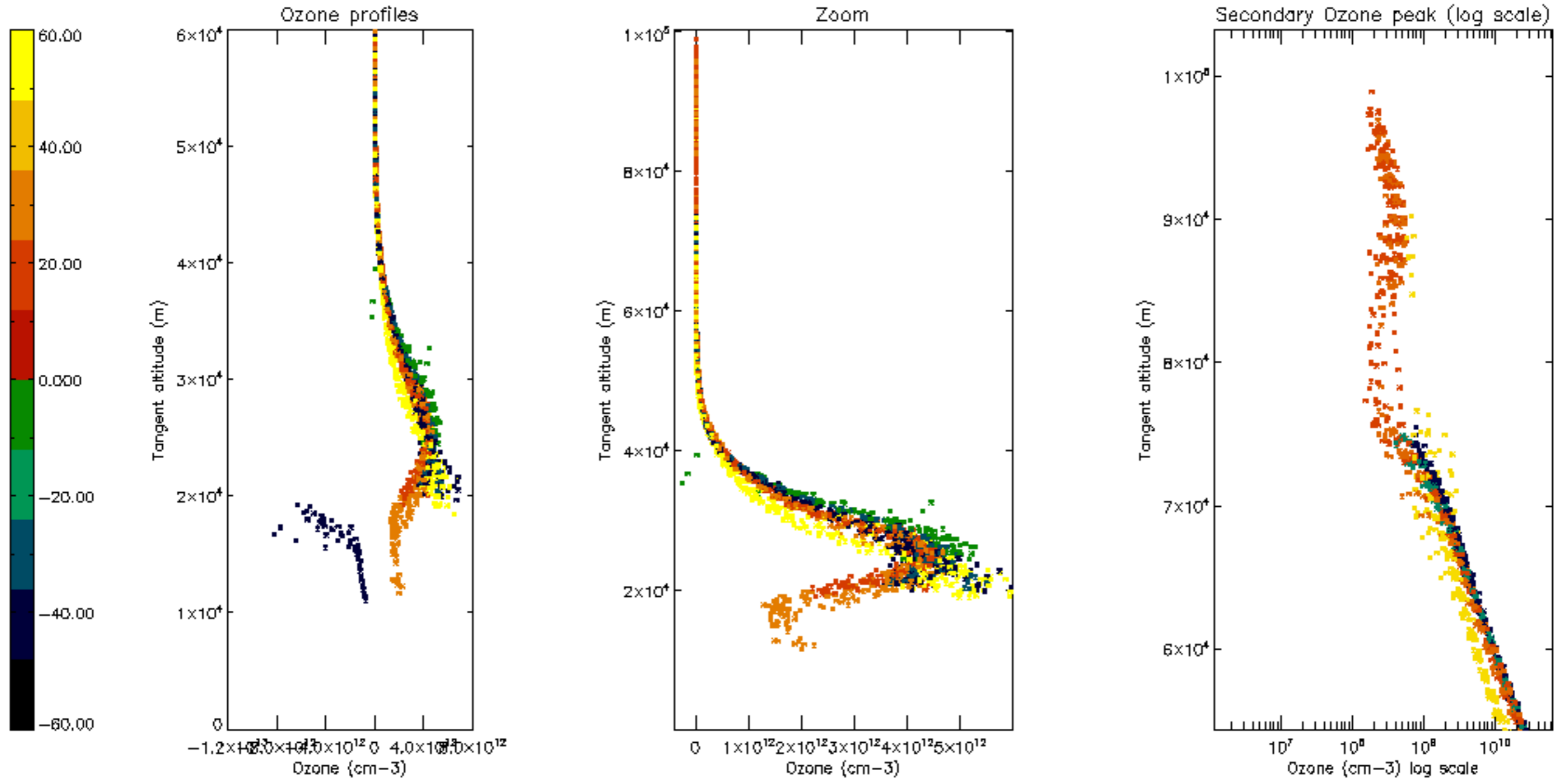


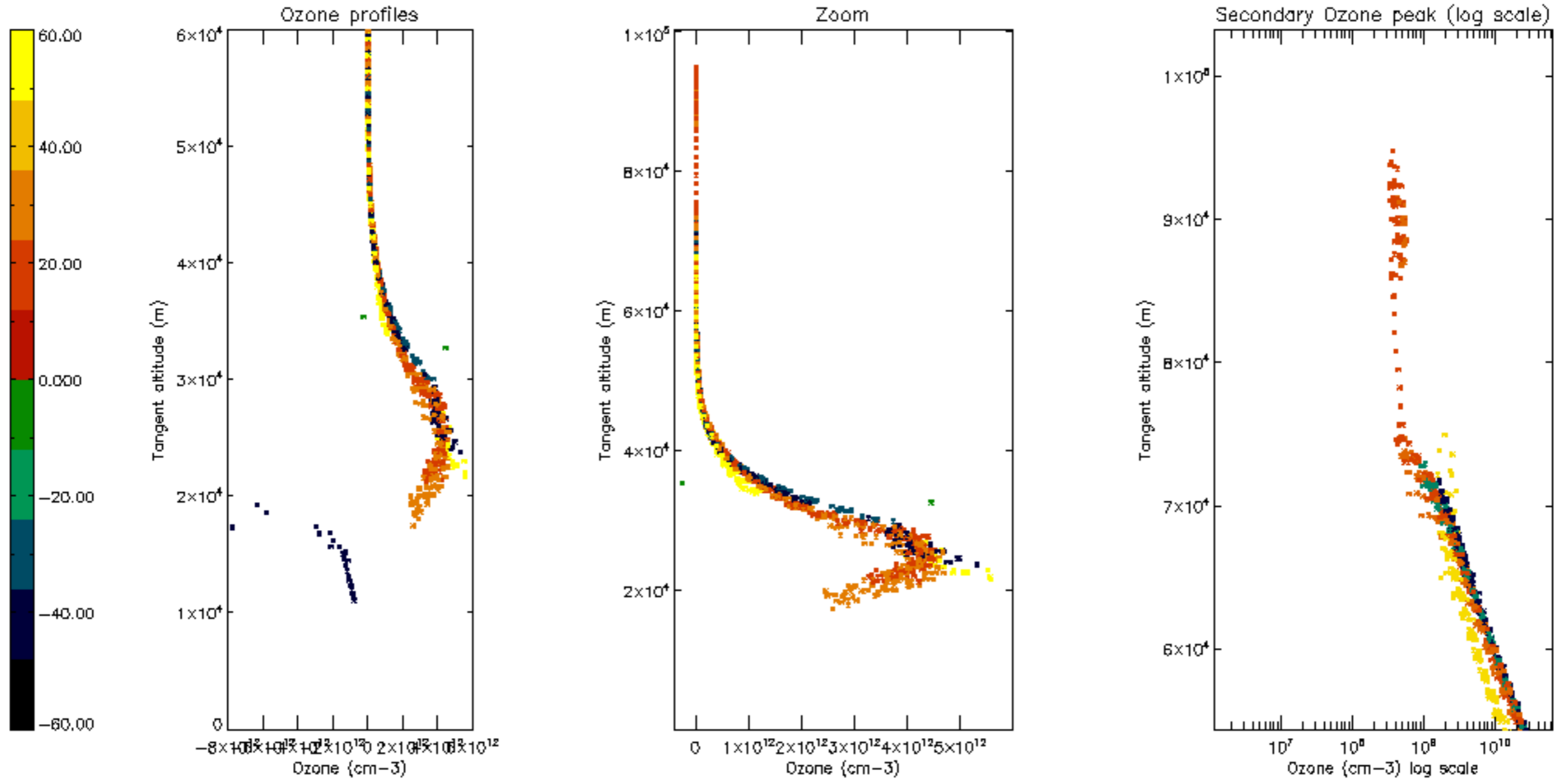
Percentage of saturation errors per profile



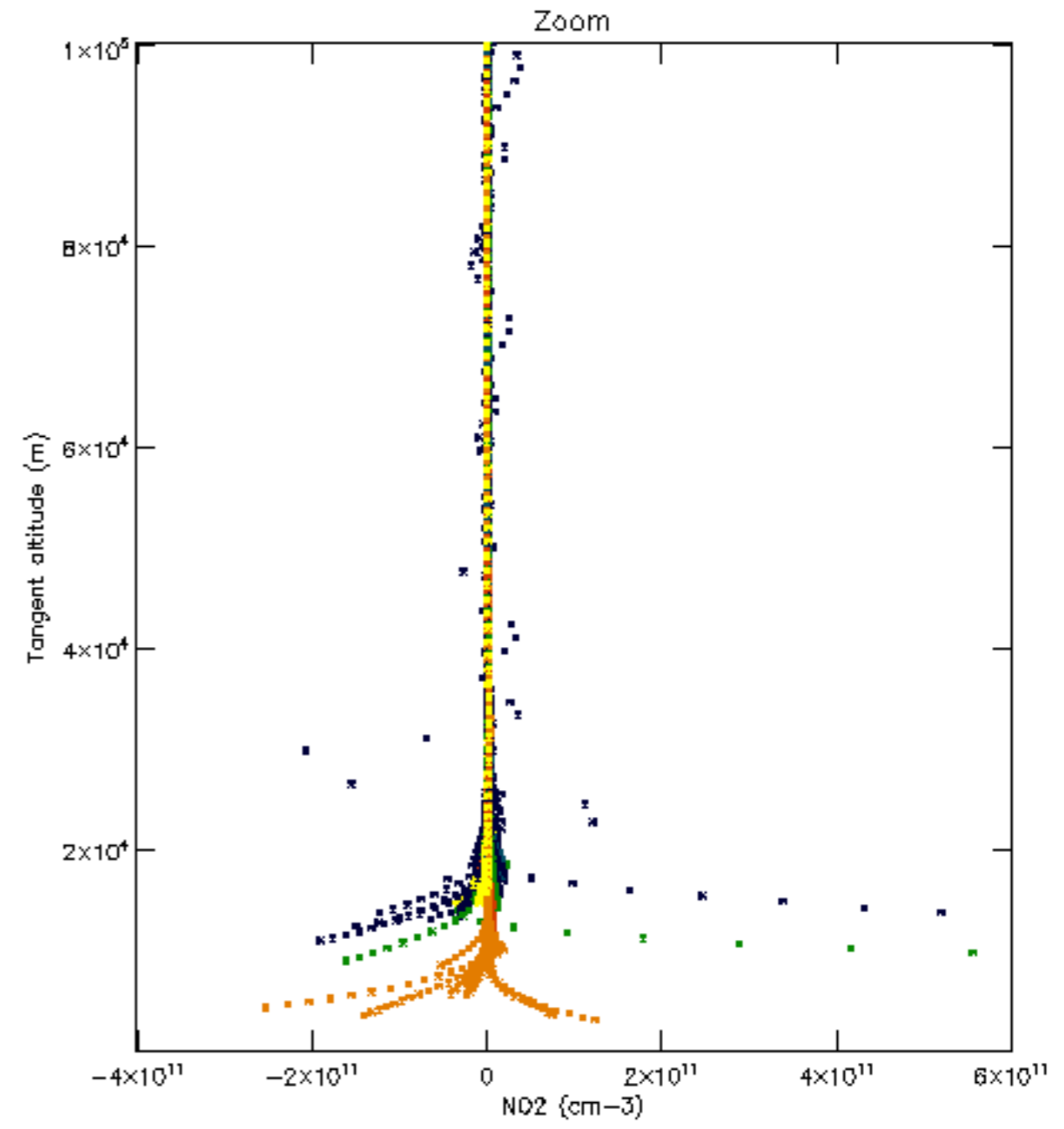
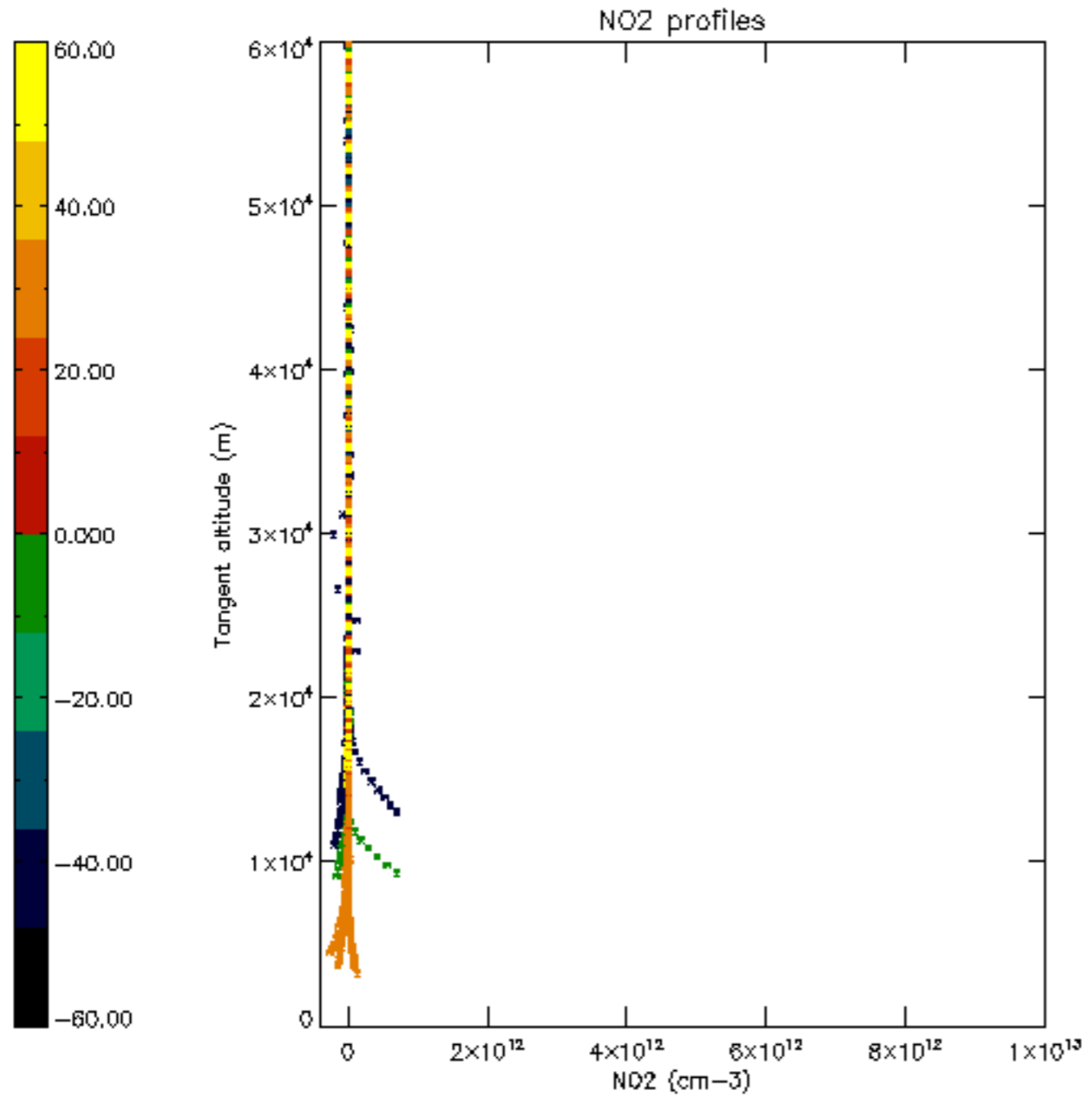


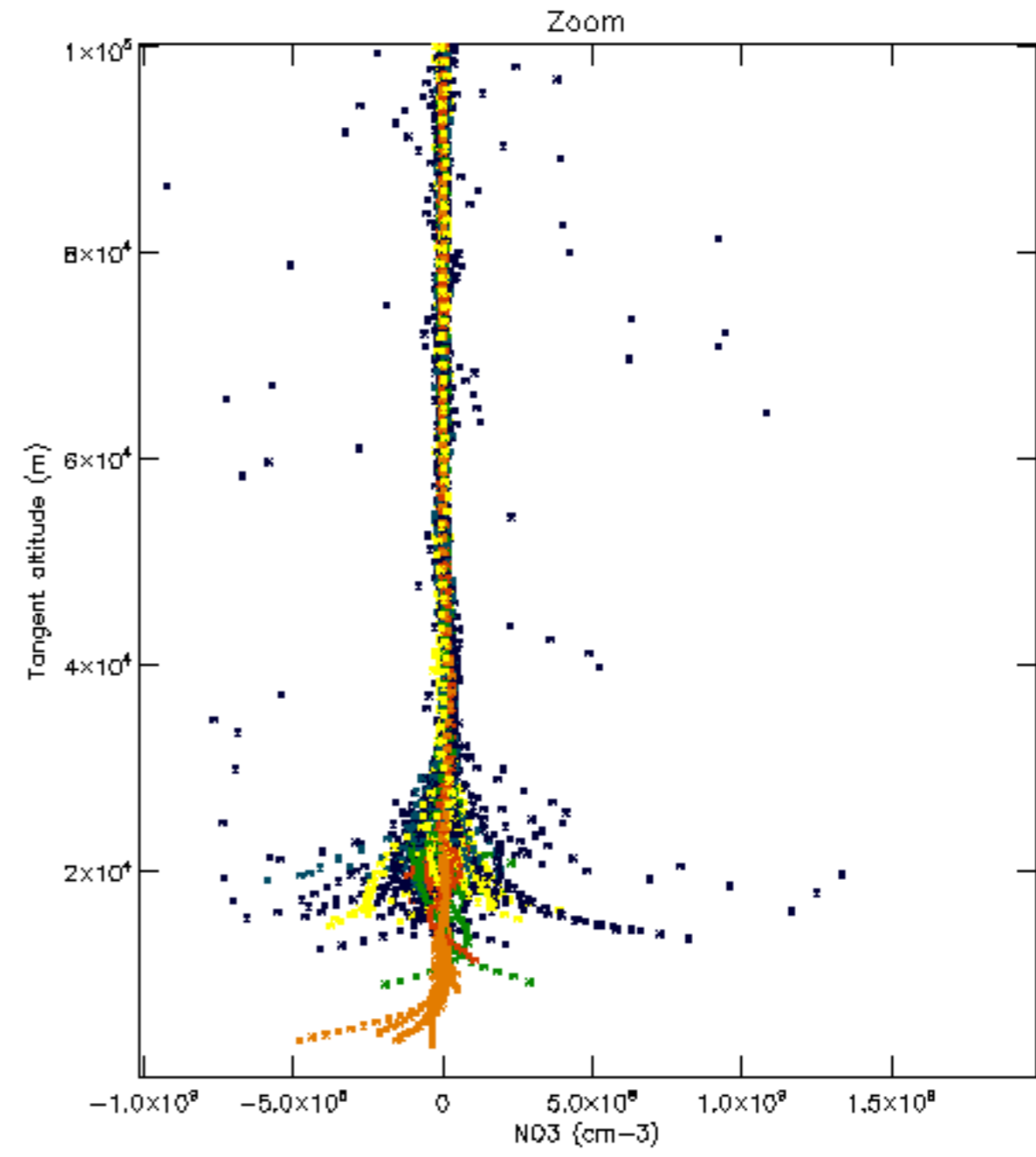
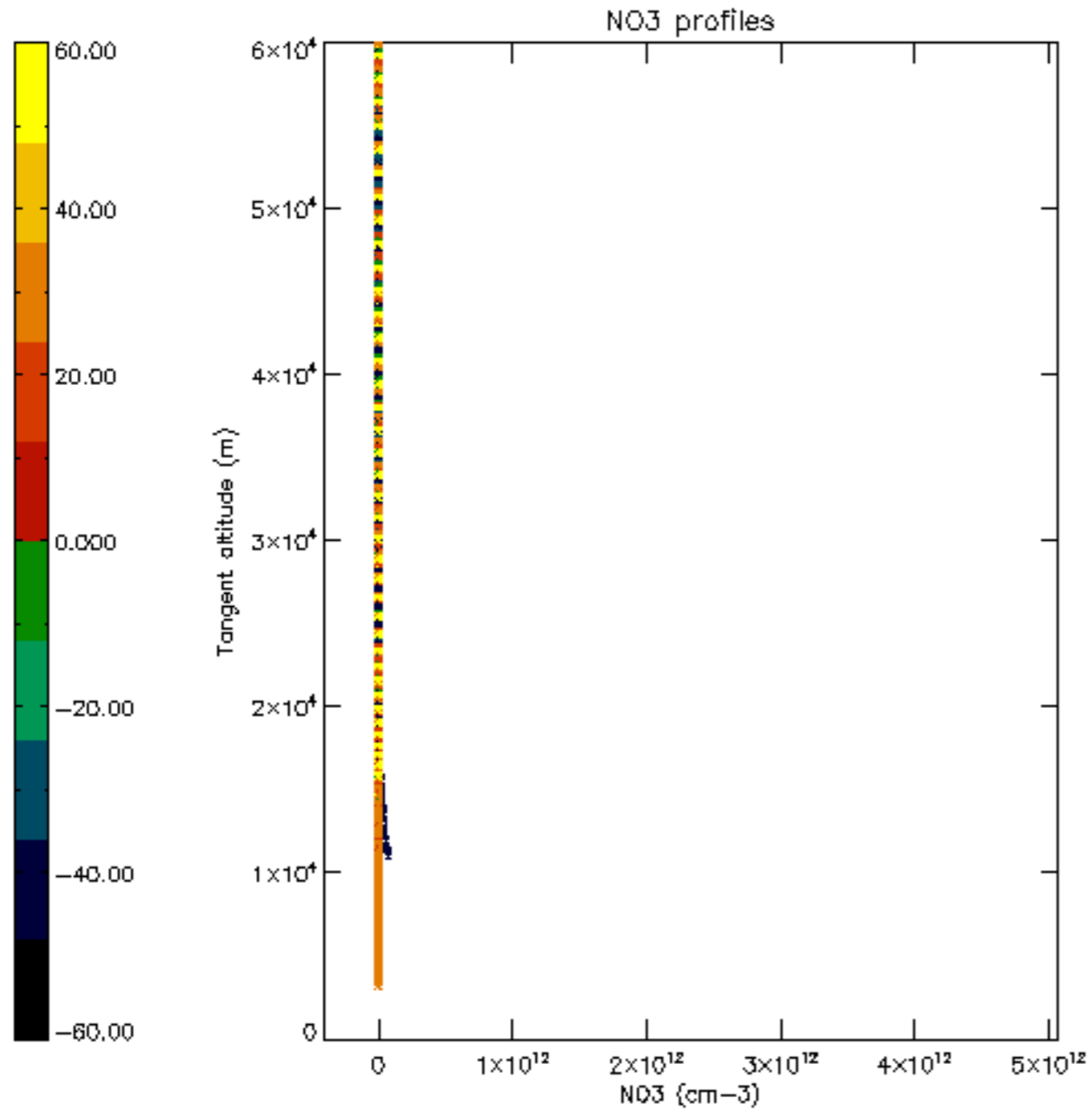


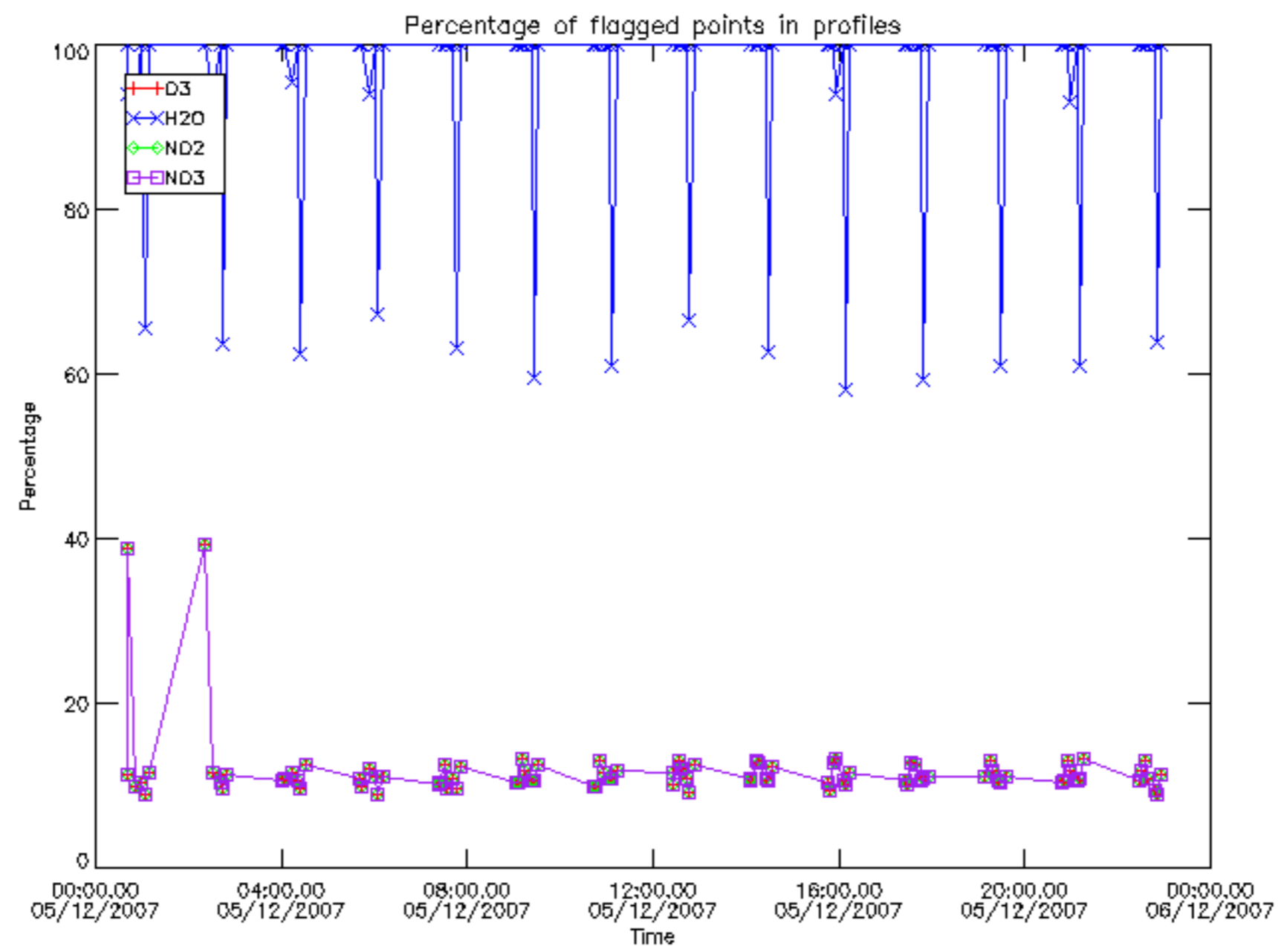




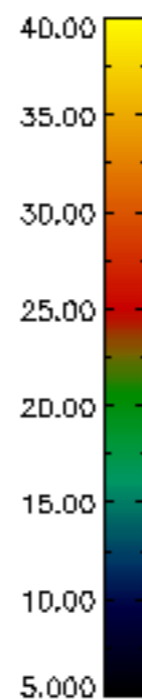
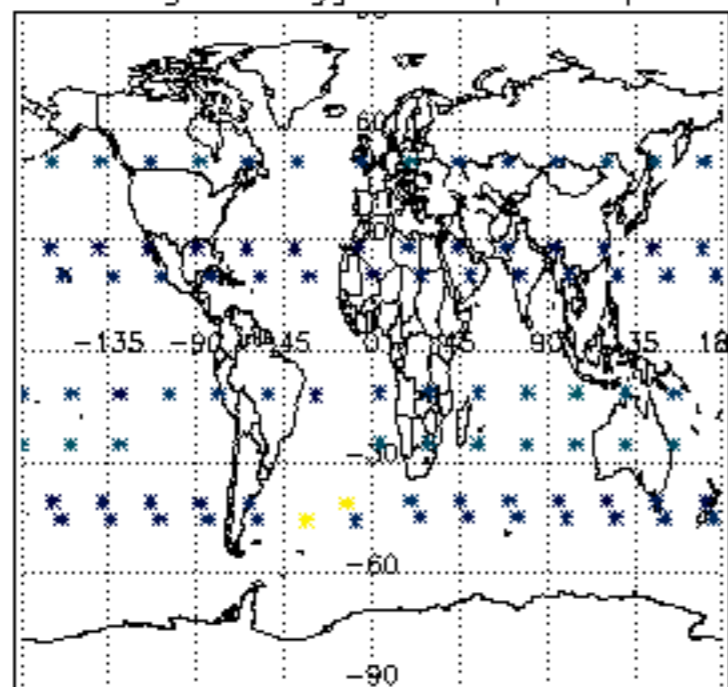




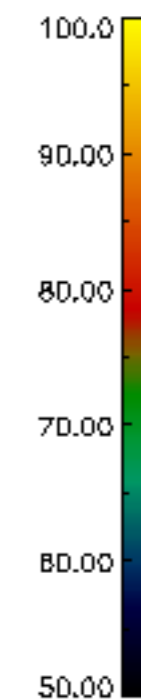
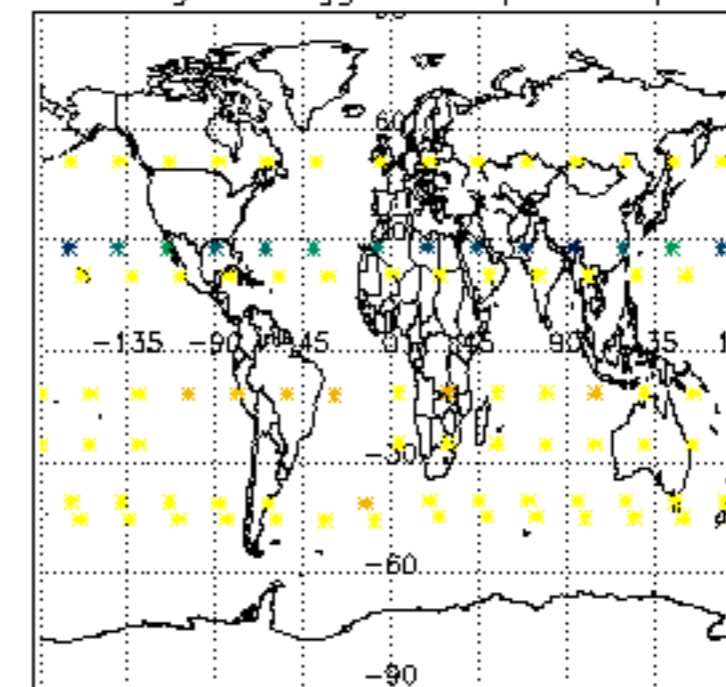




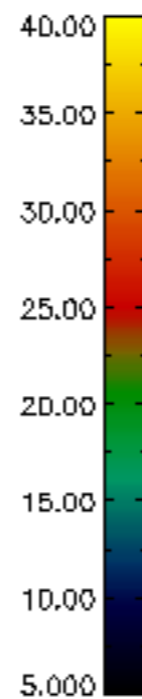
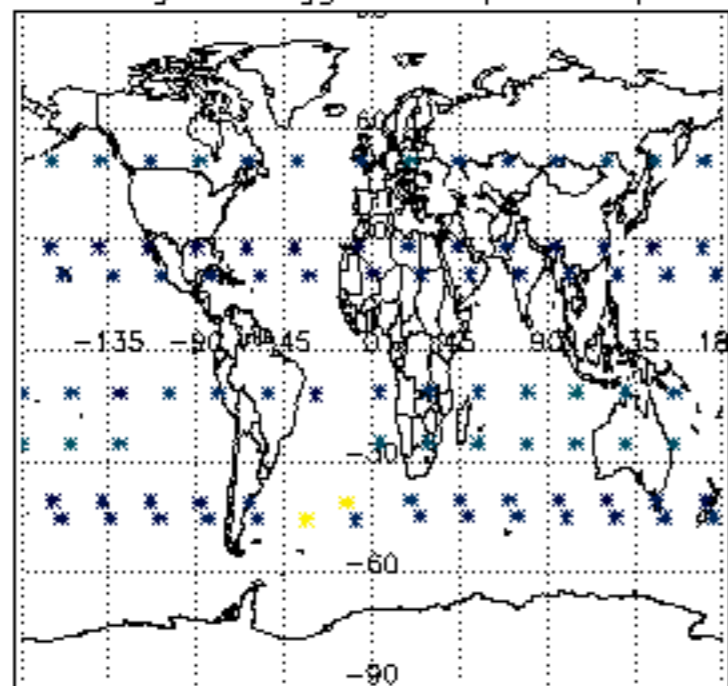
Percentage of flagged data per D3 profile



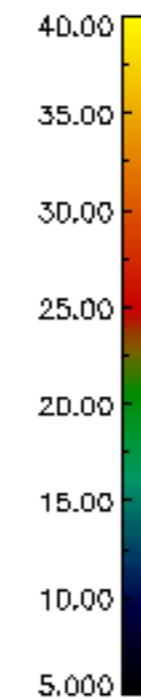
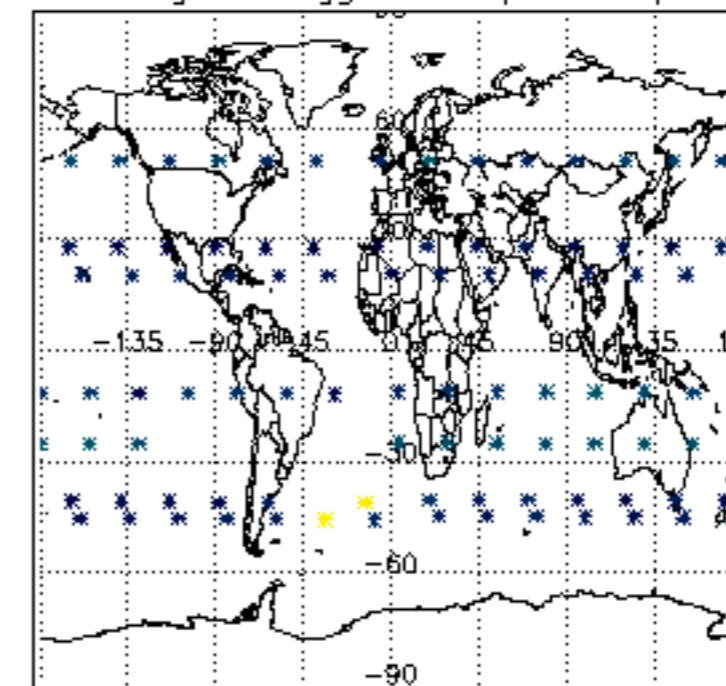
Percentage of flagged data per H2O profile

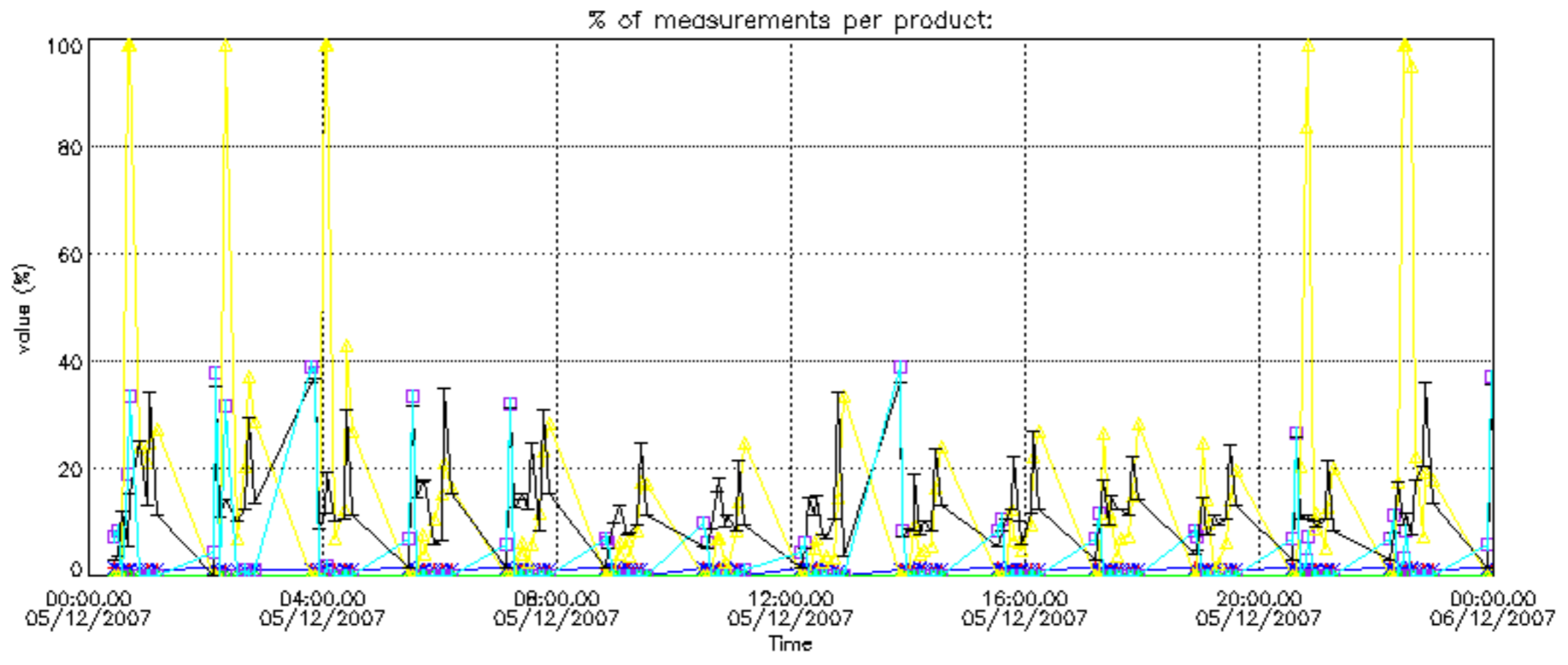


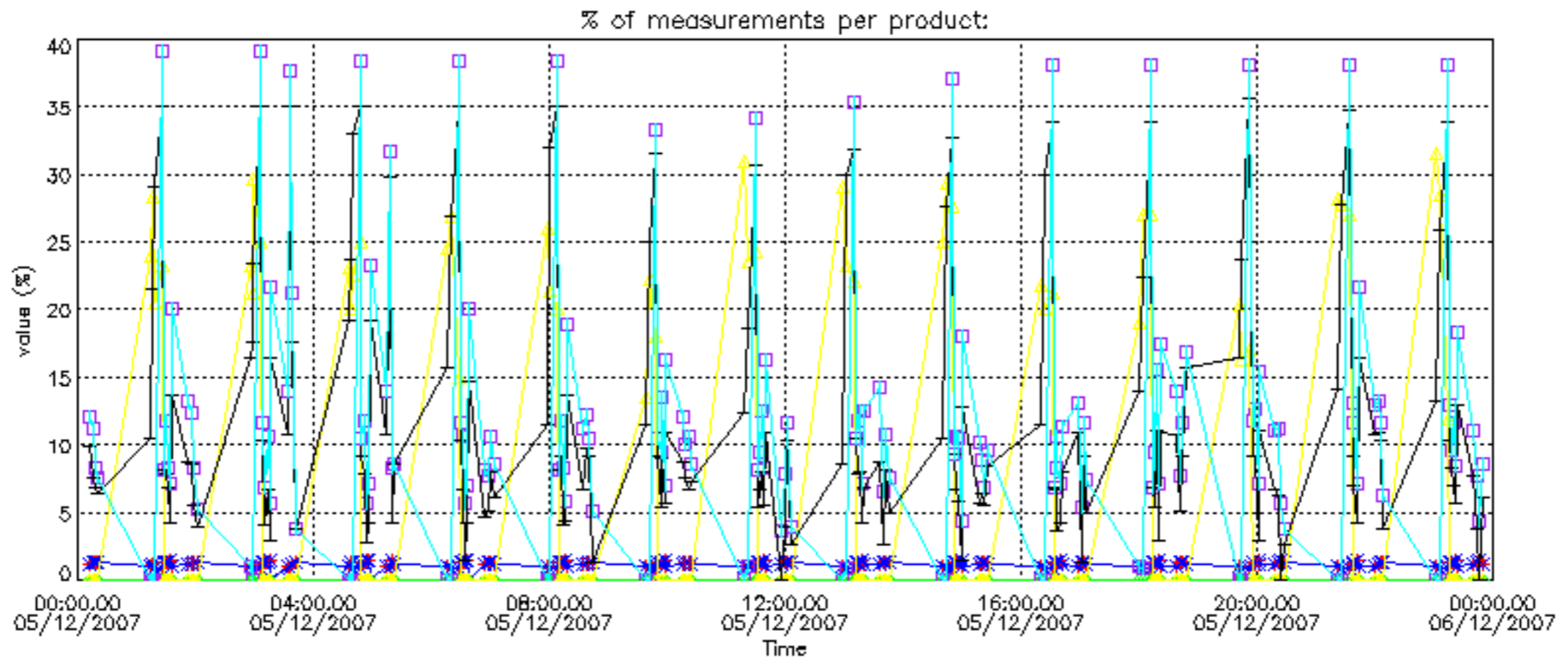
Percentage of flagged data per NO2 profile



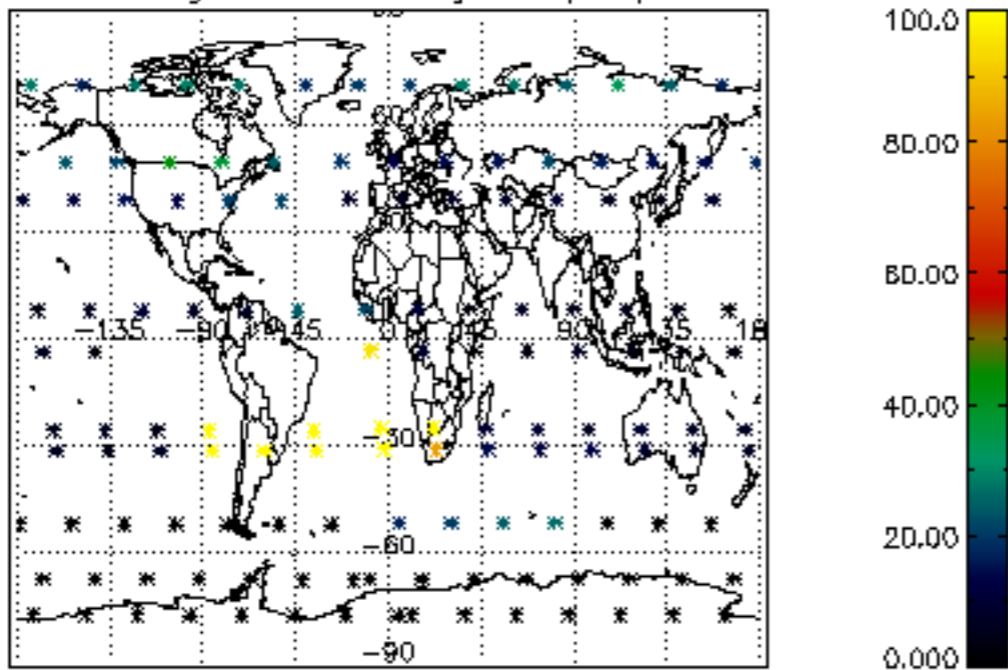
Percentage of flagged data per NO3 profile



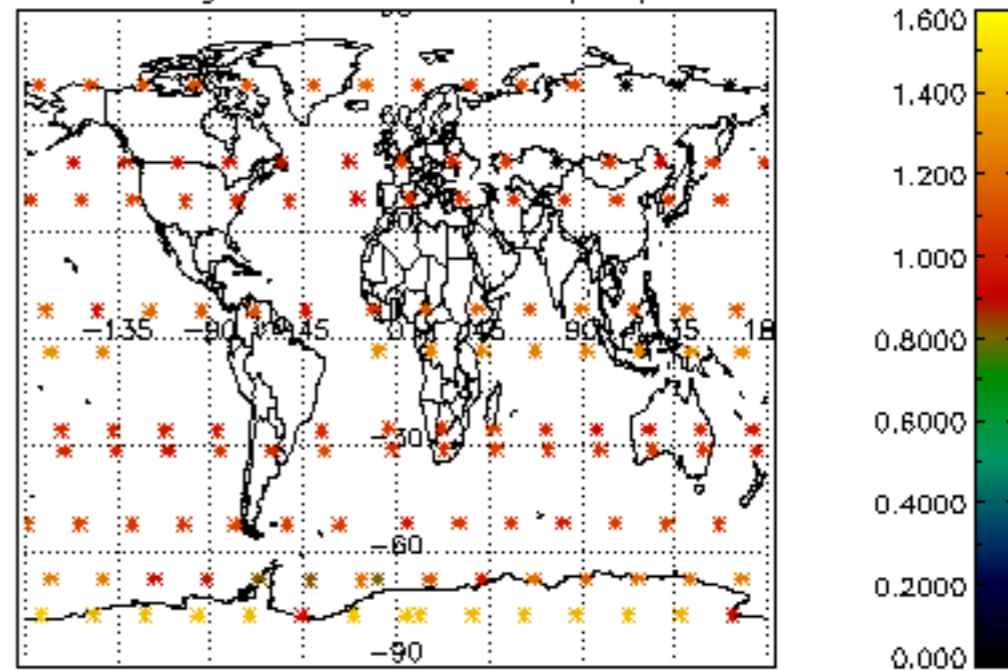




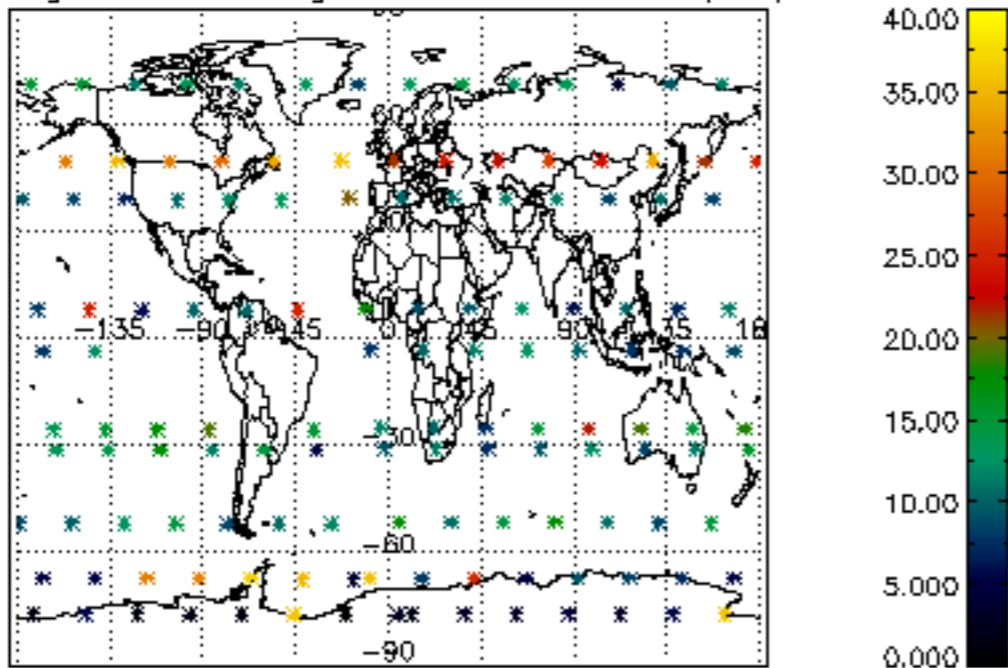
Percentage of cosmic ray hits per profile



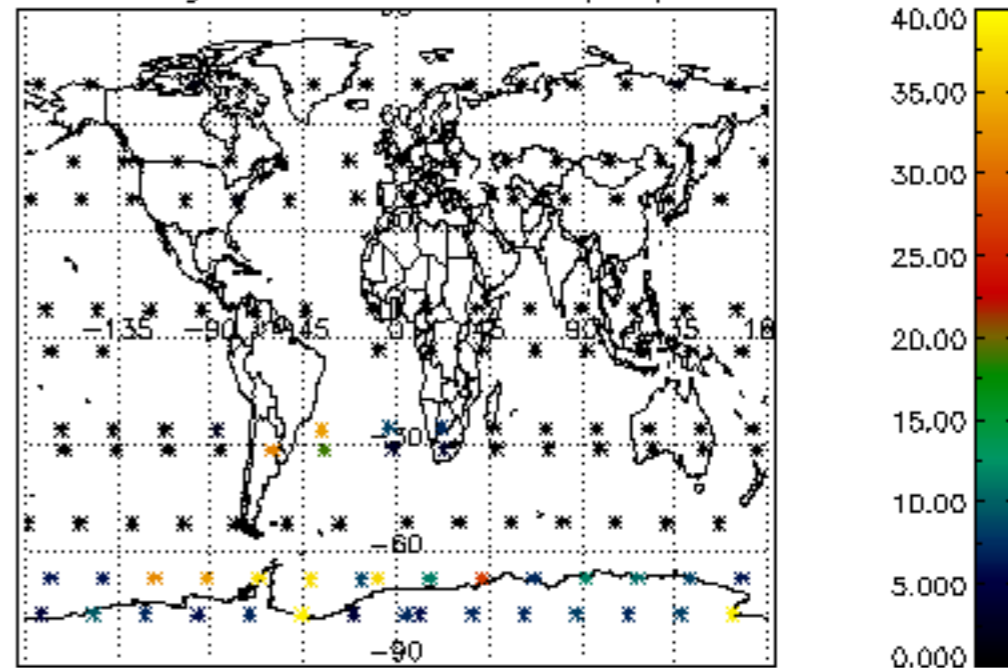
Percentage of datation errors per profile



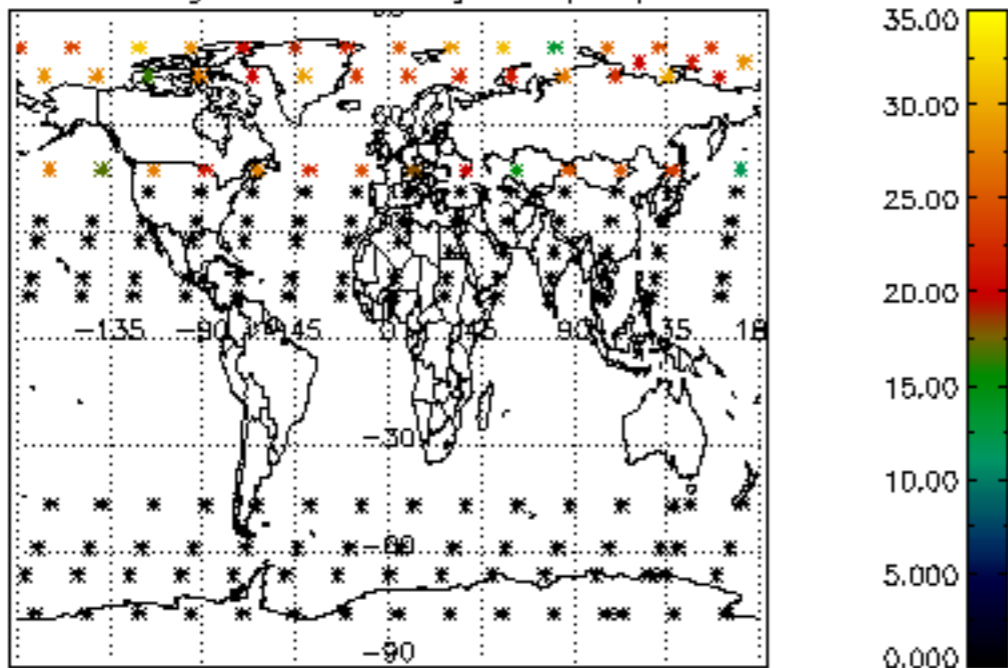
Percentage of star falling outside central band per profile



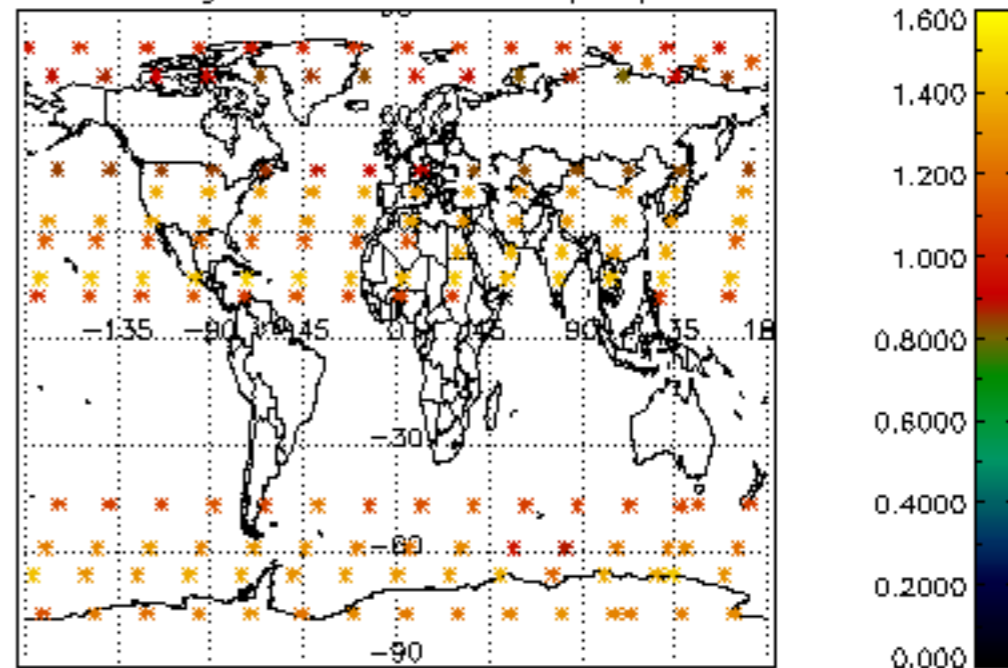
Percentage of saturation errors per profile



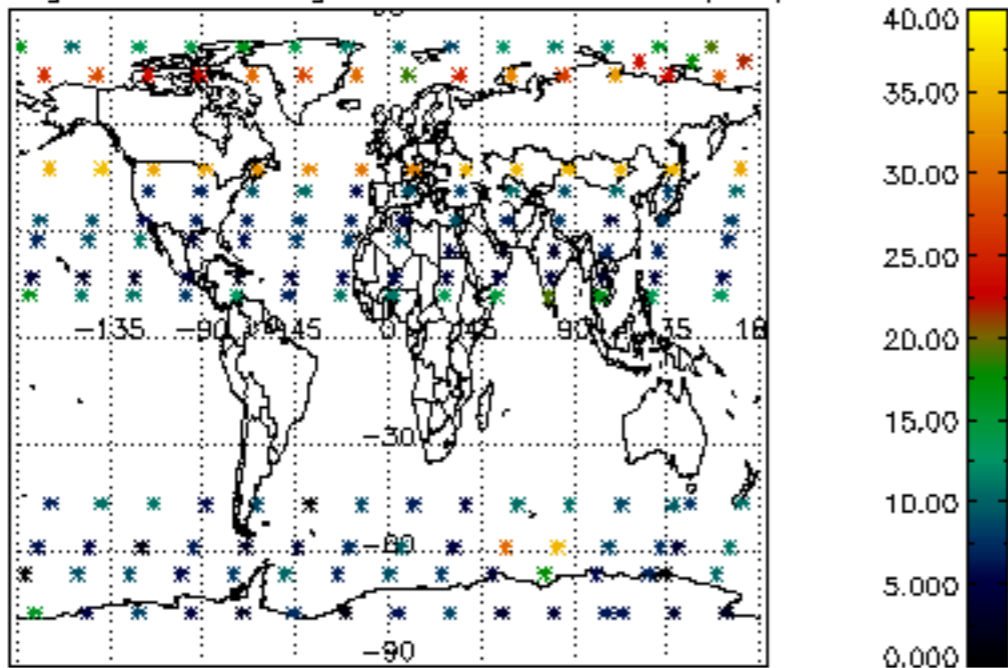
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

