

# 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	17APR2013 19:16:25
Data source version	GOMOS/6.01
Start time of products	08-10-2002 (08OCT2002 00:00:00)
Stop time of products	09-10-2002 (09OCT2002 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	188
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__2PRFIN20021008_000317_000000522010_00102_03162_2329.N1	08-OCT-2002 00:03:17	Bright	52.000	53	43Bet And	2.0480	3300.0	104	3162	No
2	GOM_NL__2PRFIN20021008_000545_000000602010_00102_03162_2330.N1	08-OCT-2002 00:05:45	Bright	60.000	173	4Bet Tri	3.0040	8900.0	120	3162	No
3	GOM_NL__2PRFIN20021008_000829_000000492010_00102_03162_2331.N1	08-OCT-2002 00:08:29	Bright	49.000	68	18Alp Cas	2.2250	4500.0	98	3162	No
4	GOM_NL__2PRFIN20021008_000953_000000492010_00102_03162_2332.N1	08-OCT-2002 00:09:53	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	3162	No
5	GOM_NL__2PRFIN20021008_001253_000000602010_00102_03162_2333.N1	08-OCT-2002 00:12:53	Bright	59.500	160	23Gam Per	2.9300	4700.0	119	3162	No
6	GOM_NL__2PRFIN20021008_001703_000000452010_00102_03162_2334.N1	08-OCT-2002 00:17:03	Bright	44.500	49	1Alp UMi	1.9900	6300.0	89	3162	No
7	GOM_NL__2PRFIN20021008_001934_000000412010_00102_03162_2335.N1	08-OCT-2002 00:19:34	Bright	40.500	60	7Bet UMi	2.0810	3950.0	81	3162	No
8	GOM_NL__2PRFIN20021008_002511_000000452010_00102_03162_2336.N1	08-OCT-2002 00:25:11	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	3162	No
9	GOM_NL__2PRFIN20021008_002642_000000442010_00102_03162_2337.N1	08-OCT-2002 00:26:42	Bright	43.500	82	48Bet UMa	2.3650	10600.	87	3162	No
10	GOM_NL__2PRFIN20021008_003000_000000432010_00102_03162_2338.N1	08-OCT-2002 00:30:00	Bright	43.000	174	52Psi UMa	3.0040	4400.0	86	3162	No
11	GOM_NL__2PRFIN20021008_003521_000000762010_00102_03162_2339.N1	08-OCT-2002 00:35:21	Bright	76.000	24	66Alp Gem	1.5800	10200.	152	3162	No
12	GOM_NL__2PRFIN20021008_004141_000000202010_00102_03162_2340.N1	08-OCT-2002 00:41:41	Straylight	201.50	170	27Eps Gem	3.0000	9700.0	403	3162	No
13	GOM_NL__2PRFIN20021008_004759_000001062010_00102_03162_2341.N1	08-OCT-2002 00:47:59	Dark	106.00	8	10Alp CMi	0.40000	6500.0	212	3162	No
14	GOM_NL__2PRFIN20021008_005431_000000582010_00102_03162_2342.N1	08-OCT-2002 00:54:31	Dark	57.500	132	15Rho Pup	2.8030	6900.0	115	3162	No
15	GOM_NL__2PRFIN20021008_005620_000000552010_00102_03162_2343.N1	08-OCT-2002 00:56:20	Dark	54.500	65	Lam Vel	2.2040	4400.0	109	3162	No
16	GOM_NL__2PRFIN20021008_005912_000000502010_00102_03162_2344.N1	08-OCT-2002 00:59:12	Dark	49.500	34	Gam2Vel	1.7930	23000.	99	3162	No
17	GOM_NL__2PRFIN20021008_010100_000001362010_00103_03163_8929.N1	08-OCT-2002 01:01:00	Dark	135.50	1	9Alp CMa	-1.4400	11000.	271	3163	No
18	GOM_NL__2PRFIN20021008_010438_000000682010_00103_03163_8930.N1	08-OCT-2002 01:04:38	Dark	68.000	2	Alp Car	-0.73600	7000.0	136	3163	No
19	GOM_NL__2PRFIN20021008_010802_000000772010_00103_03163_8931.N1	08-OCT-2002 01:08:02	Dark	76.500	108	Alp Col	2.6520	15200.	153	3163	No
20	GOM_NL__2PRFIN20021008_011048_000000462010_00103_03163_8932.N1	08-OCT-2002 01:10:48	Dark	45.500	135	Bet Hyi	2.8200	5800.0	91	3163	No
21	GOM_NL__2PRFIN20021008_011319_000001832010_00103_03163_8933.N1	08-OCT-2002 01:13:19	Dark	182.50	139	9Bet Lep	2.8330	5600.0	365	3163	No
22	GOM_NL__2PRFIN20021008_011959_000000512010_00103_03163_8934.N1	08-OCT-2002 01:19:59	Straylight	51.000	84	Alp Phe	2.3970	4500.0	102	3163	No
23	GOM_NL__2PRFIN20021008_012430_000000512010_00103_03163_8935.N1	08-OCT-2002 01:24:30	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	3163	No
24	GOM_NL__2PRFIN20021008_012643_000000532010_00103_03163_8936.N1	08-OCT-2002 01:26:43	Straylight	53.000	52	16Bet Cet	2.0370	4500.0	106	3163	No
25	GOM_NL__2PRFIN20021008_012843_000002172010_00103_03163_8937.N1	08-OCT-2002 01:28:43	Bright	217.00	165	34Gam Eri	2.9500	3200.0	434	3163	No
26	GOM_NL__2PRFIN20021008_013643_000000462010_00103_03163_8938.N1	08-OCT-2002 01:36:43	Bright	46.000	140	88Gam Peg	2.8340	26000.	92	3163	No
27	GOM_NL__2PRFIN20021008_014024_000000472010_00103_03163_8939.N1	08-OCT-2002 01:40:24	Bright	46.500	93	53Bet Peg	2.5200	3100.0	93	3163	No
28	GOM_NL__2PRFIN20021008_014353_000000502010_00103_03163_8940.N1	08-OCT-2002 01:43:53	Bright	50.000	53	43Bet And	2.0480	3300.0	100	3163	No
29	GOM_NL__2PRFIN20021008_014620_000000642010_00103_03163_8941.N1	08-OCT-2002 01:46:20	Bright	64.000	173	4Bet Tri	3.0040	8900.0	128	3163	No
30	GOM_NL__2PRFIN20021008_014905_000000472010_00103_03163_8942.N1	08-OCT-2002 01:49:05	Bright	47.000	68	18Alp Cas	2.2250	4500.0	94	3163	No
31	GOM_NL__2PRFIN20021008_015029_000000472010_00103_03163_8943.N1	08-OCT-2002 01:50:29	Bright	47.000	76	27Gam Cas	2.3000	30000.	94	3163	No
32	GOM_NL__2PRFIN20021008_015328_000000602010_00103_03163_8944.N1	08-OCT-2002 01:53:28	Bright	60.000	160	23Gam Per	2.9300	4700.0	120	3163	No
33	GOM_NL__2PRFIN20021008_015740_000000442010_00103_03163_8945.N1	08-OCT-2002 01:57:40	Bright	43.500	49	1Alp UMi	1.9900	6300.0	87	3163	No
34	GOM_NL__2PRFIN20021008_020010_000000452010_00103_03163_8946.N1	08-OCT-2002 02:00:10	Bright	45.000	60	7Bet UMi	2.0810	3950.0	90	3163	No
35	GOM_NL__2PRFIN20021008_020546_000000452010_00103_03163_8947.N1	08-OCT-2002 02:05:46	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	3163	No
36	GOM_NL__2PRFIN20021008_020718_000000582010_00103_03163_2340.N1	08-OCT-2002 02:07:18	Bright	58.000	82	48Bet UMa	2.3650	10600.	116	3163	No
37	GOM_NL__2PRFIN20021008_021035_000000582010_00103_03163_2341.N1	08-OCT-2002 02:10:35	Bright	58.000	174	52Psi UMa	3.0040	4400.0	116	3163	No
38	GOM_NL__2PRFIN20021008_021557_000000832010_00103_03163_2342.N1	08-OCT-2002 02:15:57	Bright	82.500	24	66Alp Gem	1.5800	10200.	165	3163	No
39	GOM_NL__2PRFIN20021008_022219_000002142010_00103_03163_2343.N1	08-OCT-2002 02:22:19	Straylight	213.50	170	27Eps Gem	3.0000	9700.0	427	3163	No
40	GOM_NL__2PRFIN20021008_022835_000001022010_00103_03163_2344.N1	08-OCT-2002 02:28:35	Dark	102.00	8	10Alp CMi	0.40000	6500.0	204	3163	No
41	GOM_NL__2PRFIN20021008_023507_000000582010_00103_03163_2345.N1	08-OCT-2002 02:35:07	Dark	58.000	132	15Rho Pup	2.8030	6900.0	116	3163	No
42	GOM_NL__2PRFIN20021008_023656_000000612010_00103_03163_2346.N1	08-OCT-2002 02:36:56	Dark	60.500	65	Lam Vel	2.2040	4400.0	121	3163	No



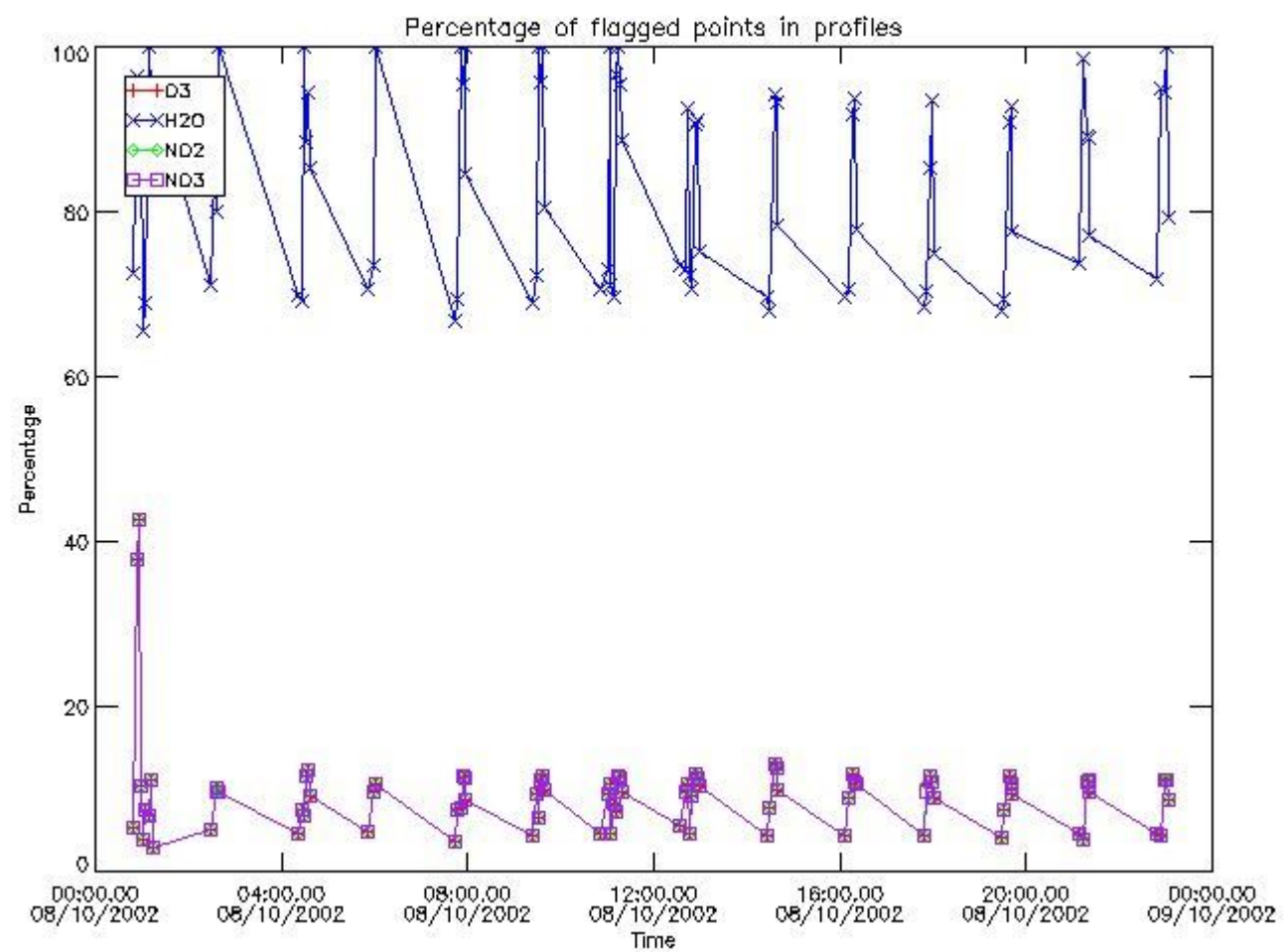


161	GOM_NL__2PRFIN20021008_162955_000000512010_00112_03172_8956.N1	08-OCT-2002 16:29:55	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	3172	No
162	GOM_NL__2PRFIN20021008_174724_000001182010_00113_03173_8949.N1	08-OCT-2002 17:47:24	Dark	117.50	1	9Alp CMa	-1.4400	11000.	235	3173	No
163	GOM_NL__2PRFIN20021008_175045_000000582010_00113_03173_8950.N1	08-OCT-2002 17:50:45	Dark	58.000	2	Alp Car	-0.73600	7000.0	116	3173	No
164	GOM_NL__2PRFIN20021008_175648_000000452010_00113_03173_8951.N1	08-OCT-2002 17:56:48	Dark	44.500	135	Bet Hyi	2.8200	5800.0	89	3173	No
165	GOM_NL__2PRFIN20021008_175923_000000472010_00113_03173_8952.N1	08-OCT-2002 17:59:23	Dark	46.500	143	Alp Hyi	2.8570	7200.0	93	3173	No
166	GOM_NL__2PRFIN20021008_180050_000000572010_00113_03173_8953.N1	08-OCT-2002 18:00:50	Dark	56.500	9	Alp Eri	0.45300	24000.	113	3173	No
167	GOM_NL__2PRFIN20021008_180257_000000592010_00113_03173_8954.N1	08-OCT-2002 18:02:57	Straylight	58.500	157	The1Eri	2.9060	9300.0	117	3173	No
168	GOM_NL__2PRFIN20021008_180601_000000522010_00113_03173_8955.N1	08-OCT-2002 18:06:01	Straylight	51.500	84	Alp Phe	2.3970	4500.0	103	3173	No
169	GOM_NL__2PRFIN20021008_192803_000001222010_00114_03174_8949.N1	08-OCT-2002 19:28:03	Dark	122.00	1	9Alp CMa	-1.4400	11000.	244	3174	No
170	GOM_NL__2PRFIN20021008_193121_000000692010_00114_03174_8950.N1	08-OCT-2002 19:31:21	Dark	69.000	2	Alp Car	-0.73600	7000.0	138	3174	No
171	GOM_NL__2PRFIN20021008_193724_000000452010_00114_03174_8951.N1	08-OCT-2002 19:37:24	Dark	44.500	135	Bet Hyi	2.8200	5800.0	89	3174	No
172	GOM_NL__2PRFIN20021008_193959_000000492010_00114_03174_8952.N1	08-OCT-2002 19:39:59	Dark	48.500	143	Alp Hyi	2.8570	7200.0	97	3174	No
173	GOM_NL__2PRFIN20021008_194126_000000542010_00114_03174_8953.N1	08-OCT-2002 19:41:26	Dark	54.000	9	Alp Eri	0.45300	24000.	108	3174	No
174	GOM_NL__2PRFIN20021008_194333_000000572010_00114_03174_8954.N1	08-OCT-2002 19:43:33	Straylight	57.000	157	The1Eri	2.9060	9300.0	114	3174	No
175	GOM_NL__2PRFIN20021008_194637_000000492010_00114_03174_8955.N1	08-OCT-2002 19:46:37	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	3174	No
176	GOM_NL__2PRFIN20021008_210841_000001112010_00115_03175_8949.N1	08-OCT-2002 21:08:41	Dark	111.00	1	9Alp CMa	-1.4400	11000.	222	3175	No
177	GOM_NL__2PRFIN20021008_211221_000001342010_00115_03175_8950.N1	08-OCT-2002 21:12:21	Dark	133.50	47	2Bet CMa	1.9760	28000.	267	3175	No
178	GOM_NL__2PRFIN20021008_211800_000000472010_00115_03175_8951.N1	08-OCT-2002 21:18:00	Dark	46.500	135	Bet Hyi	2.8200	5800.0	93	3175	No
179	GOM_NL__2PRFIN20021008_212035_000000462010_00115_03175_8952.N1	08-OCT-2002 21:20:35	Dark	46.000	143	Alp Hyi	2.8570	7200.0	92	3175	No
180	GOM_NL__2PRFIN20021008_212202_000000532010_00115_03175_8953.N1	08-OCT-2002 21:22:02	Dark	53.000	9	Alp Eri	0.45300	24000.	106	3175	No
181	GOM_NL__2PRFIN20021008_212410_000000592010_00115_03175_8954.N1	08-OCT-2002 21:24:10	Straylight	58.500	157	The1Eri	2.9060	9300.0	117	3175	No
182	GOM_NL__2PRFIN20021008_212713_000000532010_00115_03175_8955.N1	08-OCT-2002 21:27:13	Straylight	52.500	84	Alp Phe	2.3970	4500.0	105	3175	No
183	GOM_NL__2PRFIN20021008_224920_000001142010_00116_03176_8969.N1	08-OCT-2002 22:49:20	Dark	114.00	1	9Alp CMa	-1.4400	11000.	228	3176	No
184	GOM_NL__2PRFIN20021008_225300_000001302010_00116_03176_8970.N1	08-OCT-2002 22:53:00	Dark	129.50	47	2Bet CMa	1.9760	28000.	259	3176	No
185	GOM_NL__2PRFIN20021008_225836_000000462010_00116_03176_8971.N1	08-OCT-2002 22:58:36	Dark	46.000	135	Bet Hyi	2.8200	5800.0	92	3176	No
186	GOM_NL__2PRFIN20021008_230112_000000462010_00116_03176_8972.N1	08-OCT-2002 23:01:12	Dark	45.500	143	Alp Hyi	2.8570	7200.0	91	3176	No
187	GOM_NL__2PRFIN20021008_230239_000000592010_00116_03176_8973.N1	08-OCT-2002 23:02:39	Dark	58.500	9	Alp Eri	0.45300	24000.	117	3176	No
188	GOM_NL__2PRFIN20021008_230447_000000582010_00116_03176_8974.N1	08-OCT-2002 23:04:47	Straylight	58.000	157	The1Eri	2.9060	9300.0	116	3176	No

### 3. Quality information per product

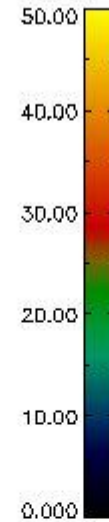
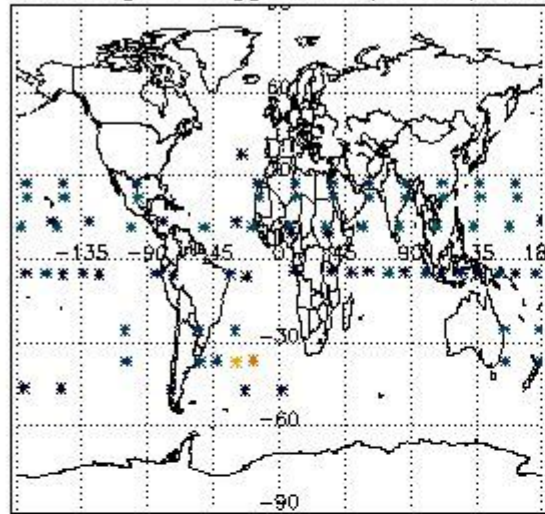
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

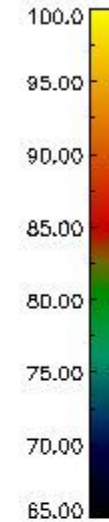
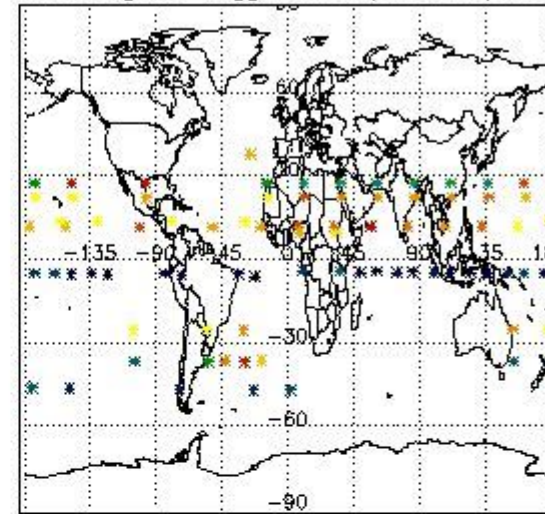


3.2 Plot quality information per product (world map)

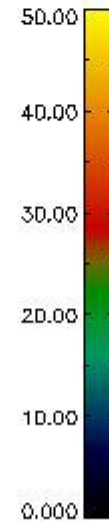
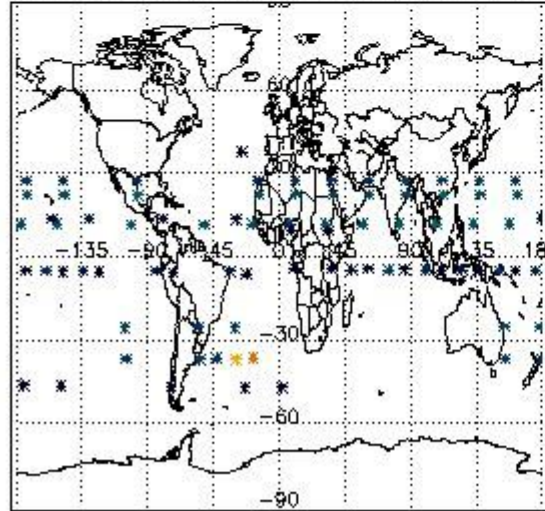
Percentage of flagged data per O3 profile



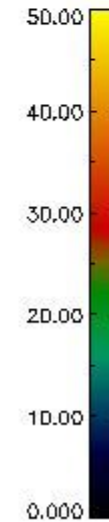
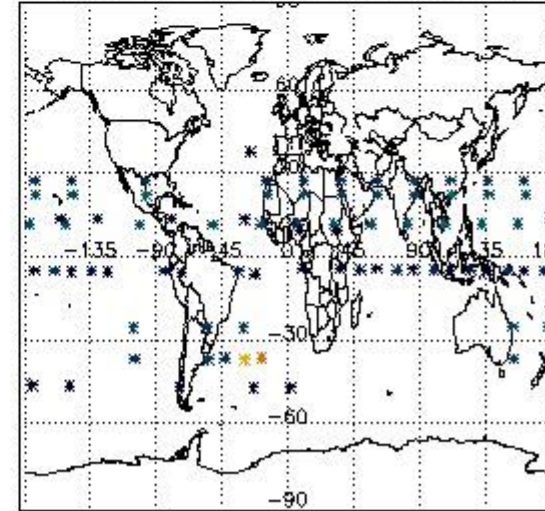
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

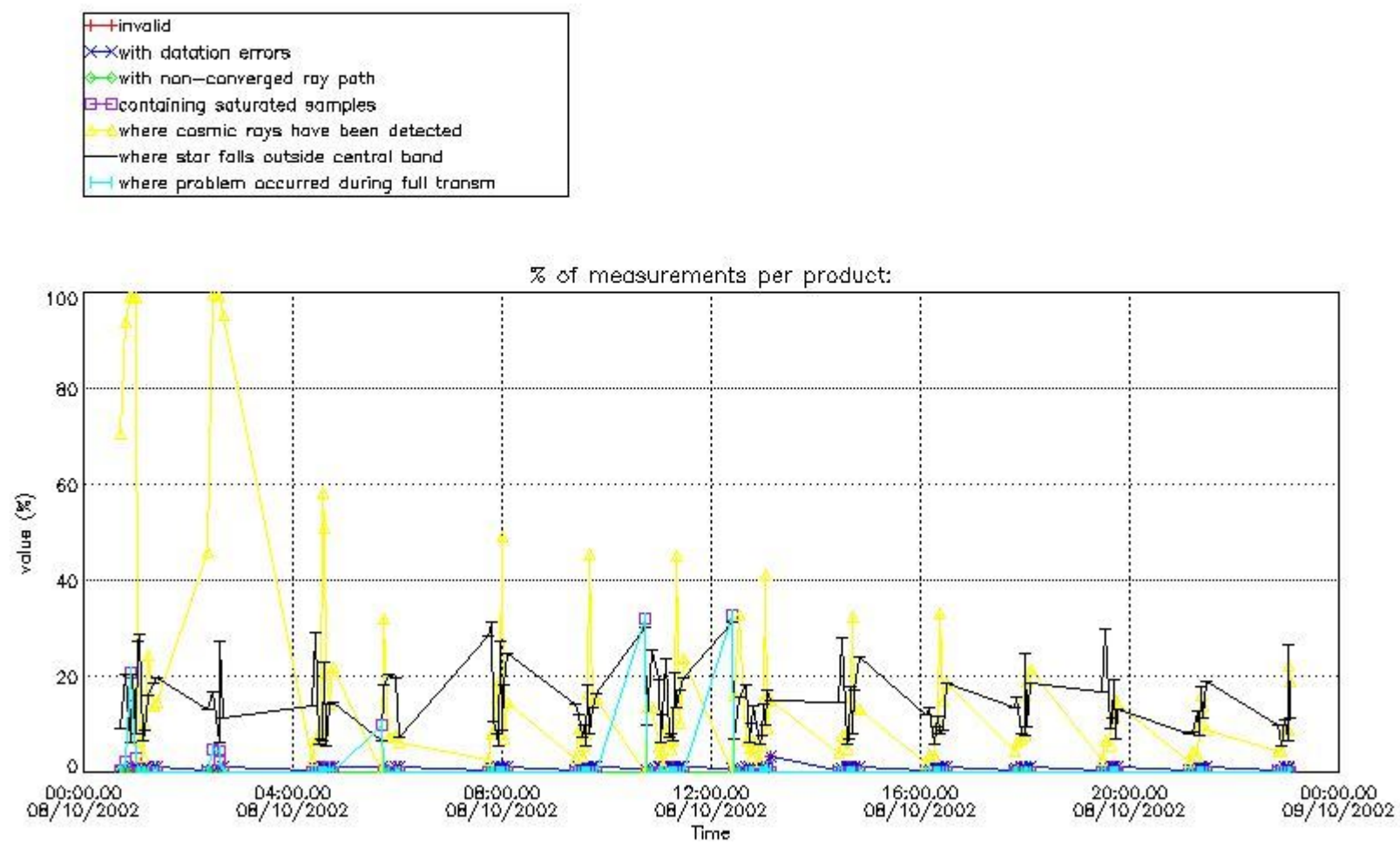


#### 4. Level 1 quality information per product

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.

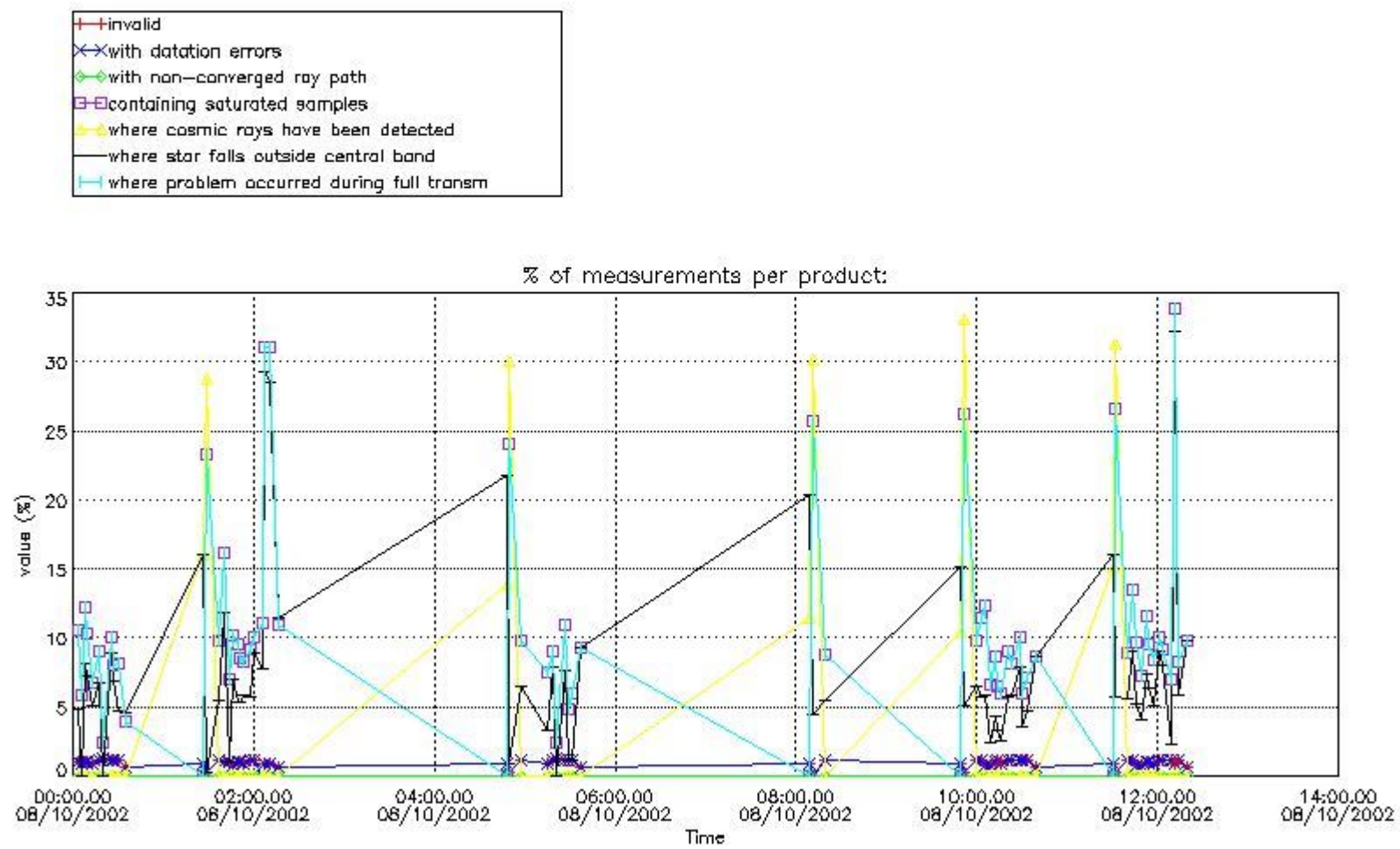
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



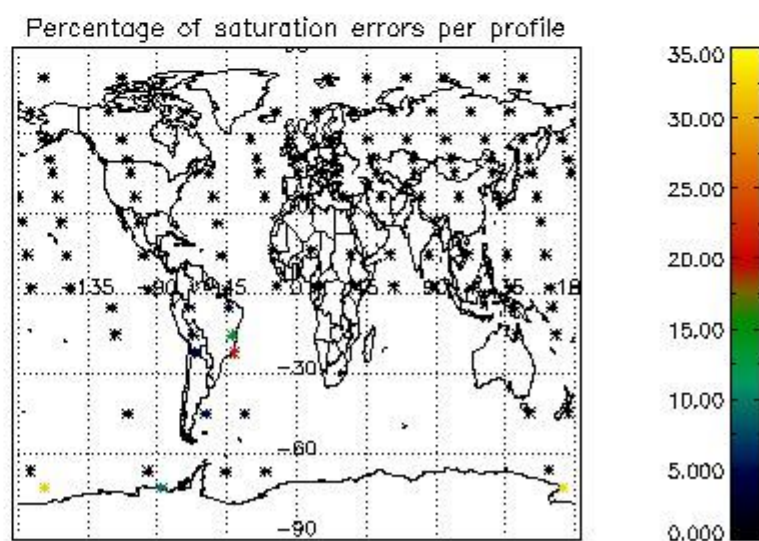
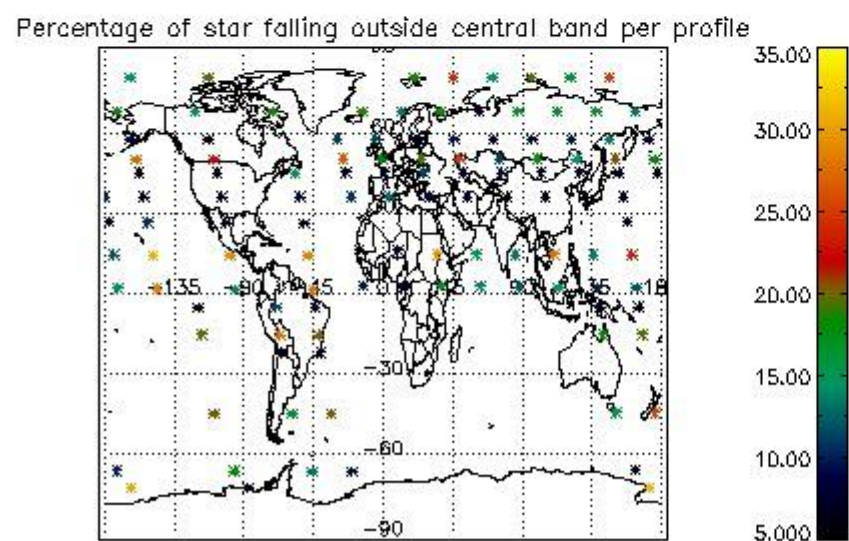
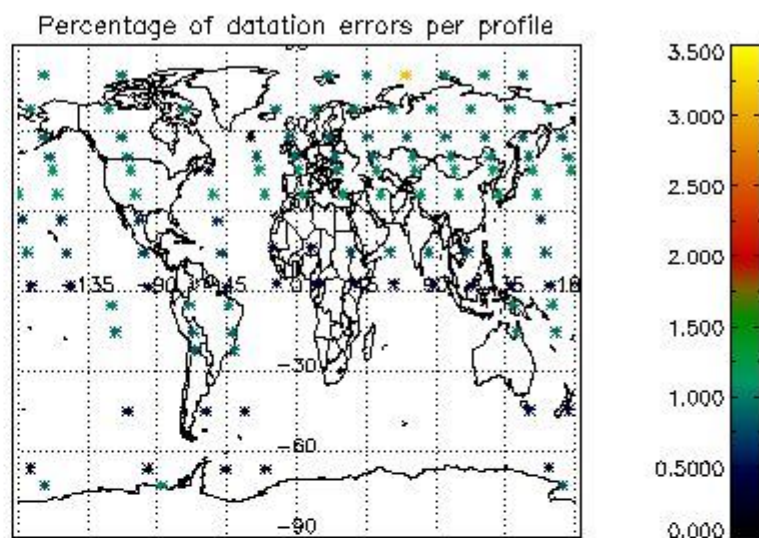
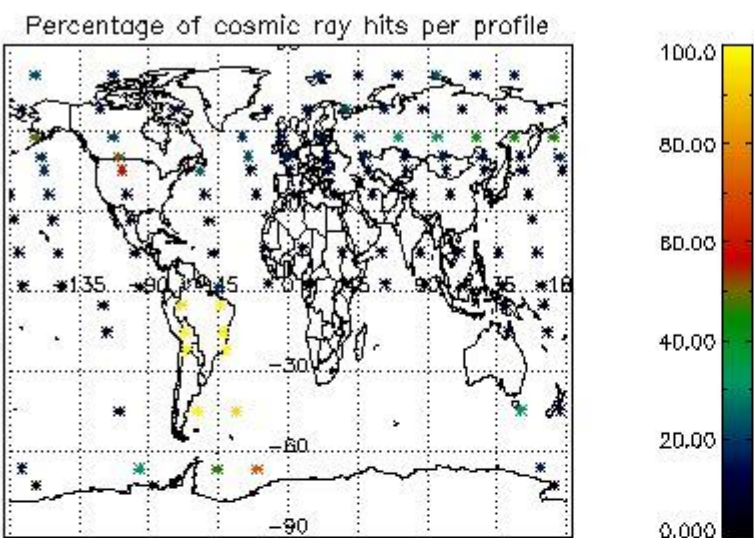
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



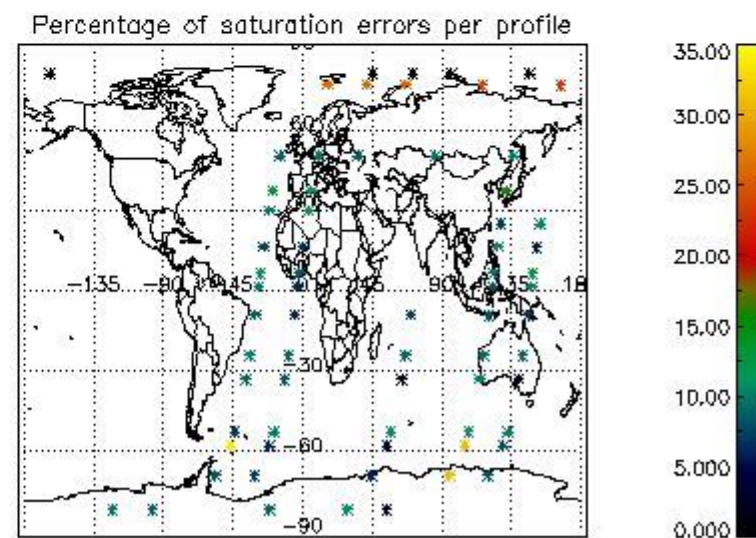
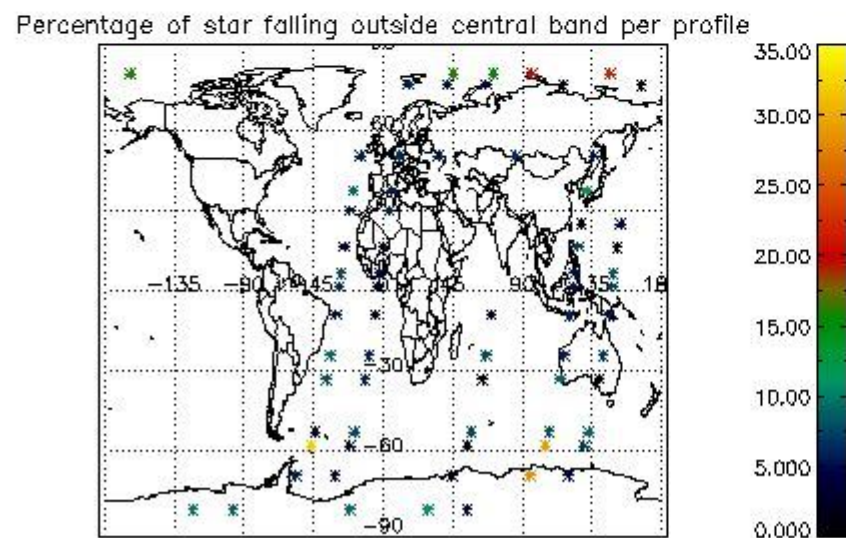
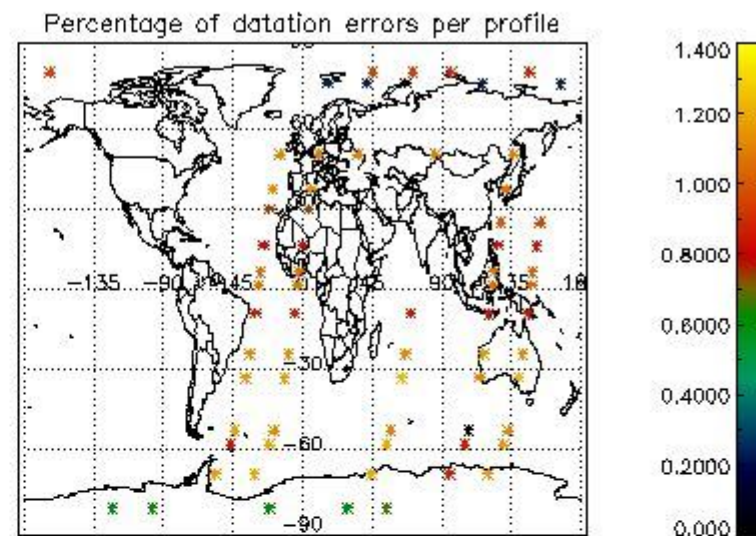
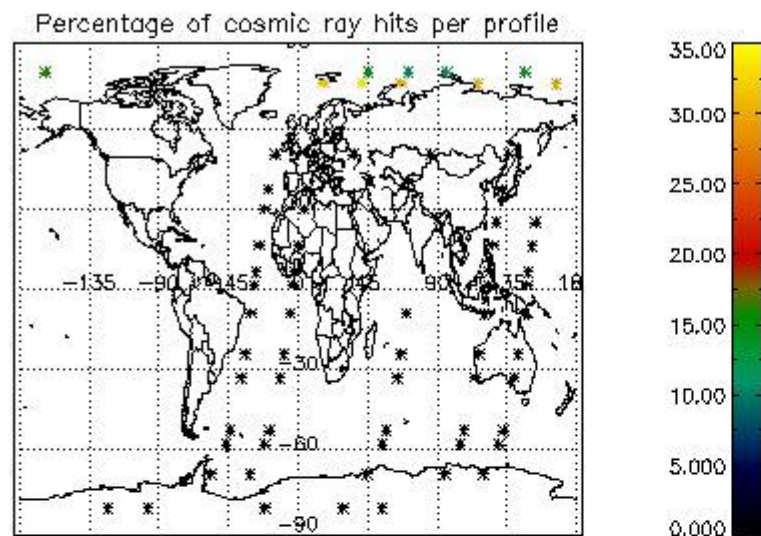


4.2 Plot quality information per product coming from level 1b processing (world map)

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

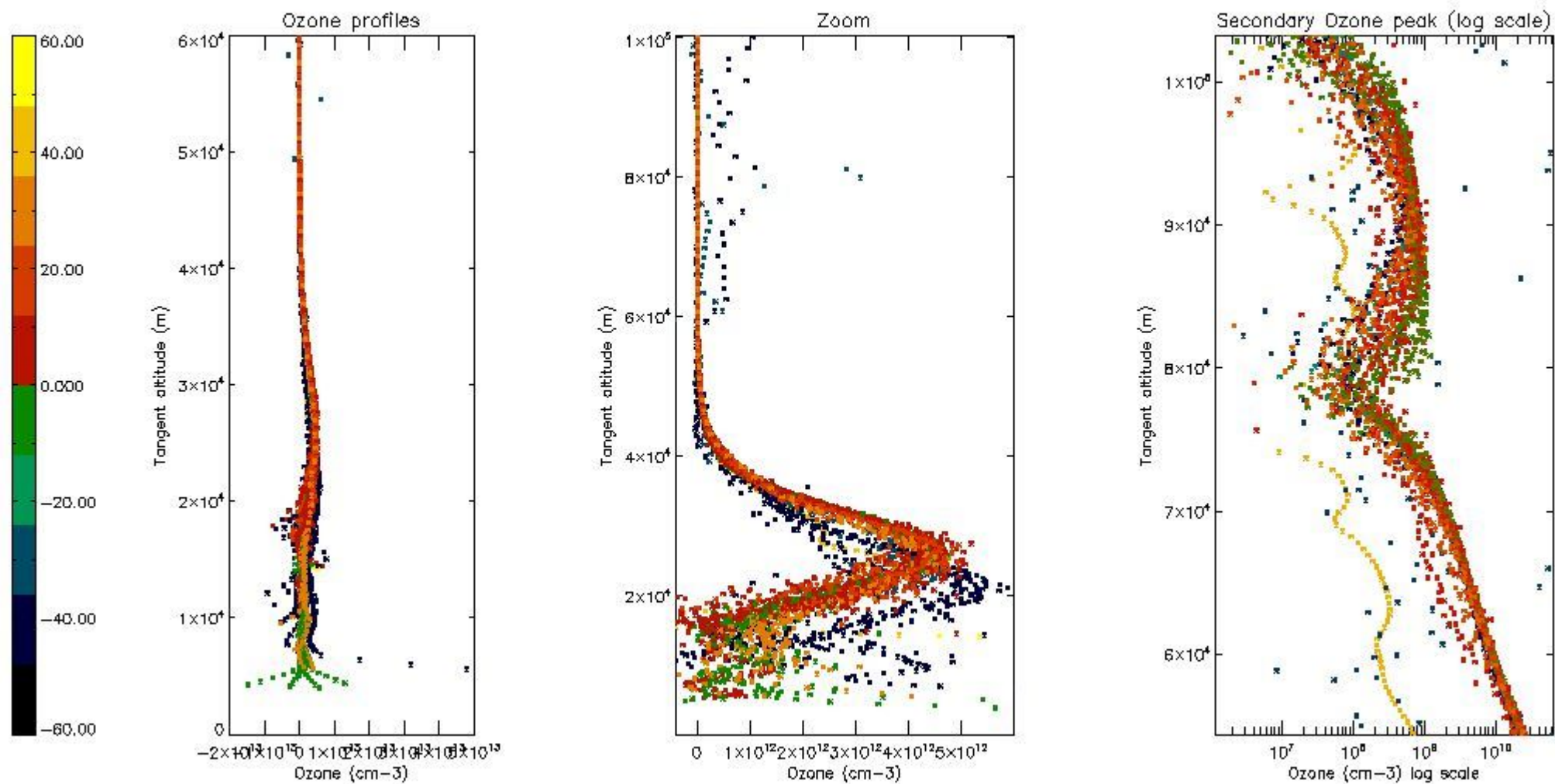
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	45
STD < 20	26

STD < 10	23
STD < 5	19

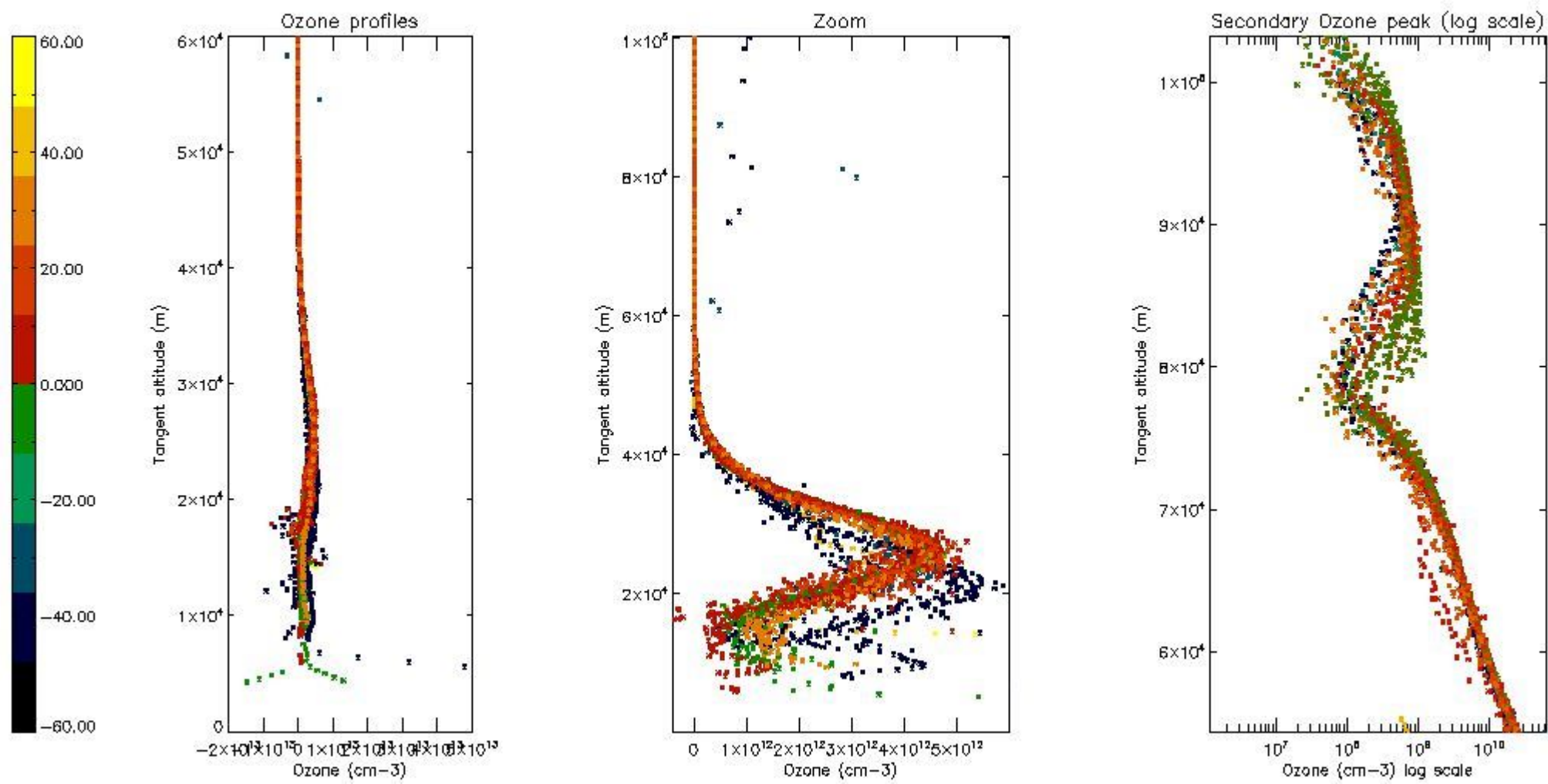
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



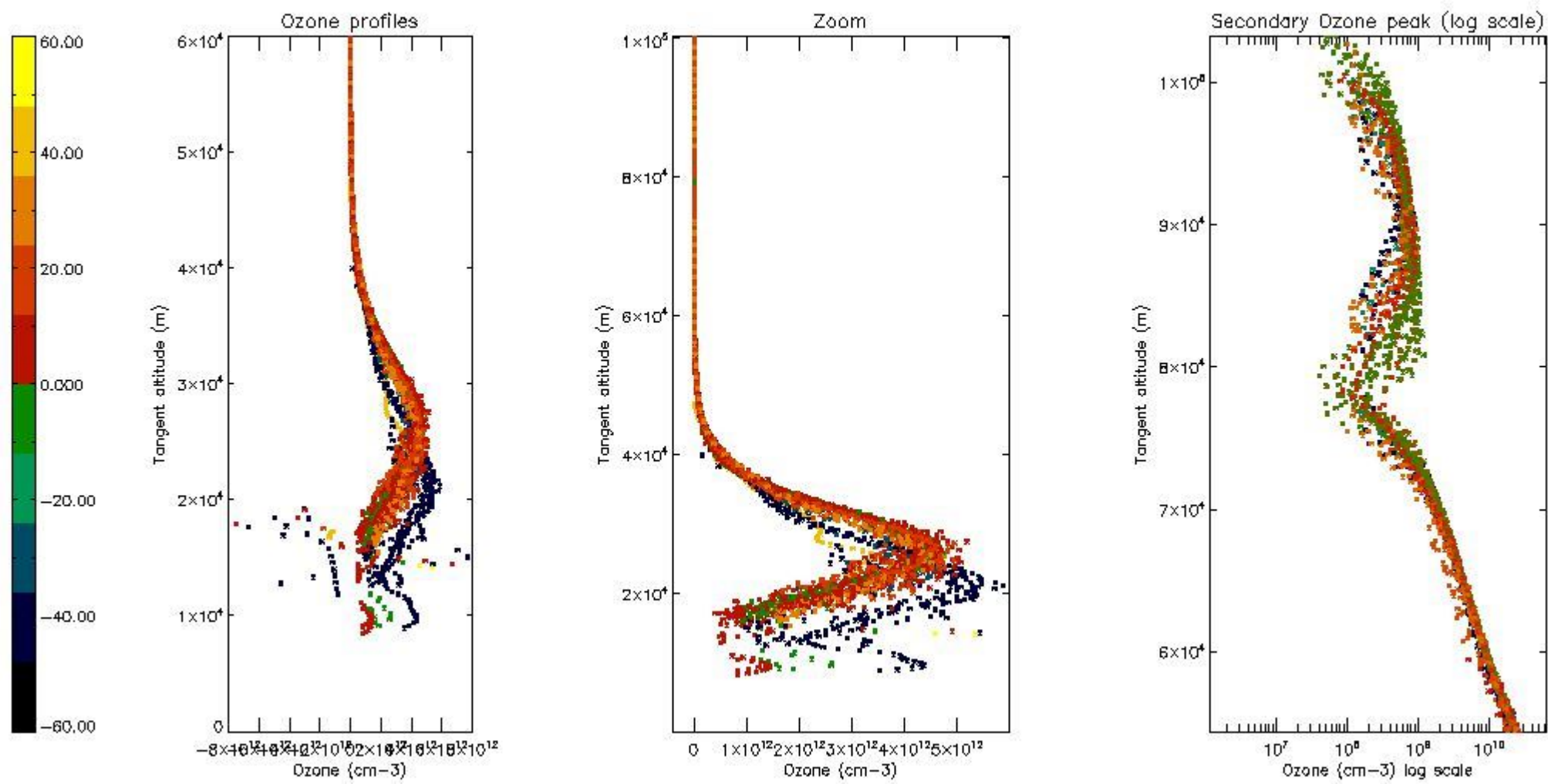
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



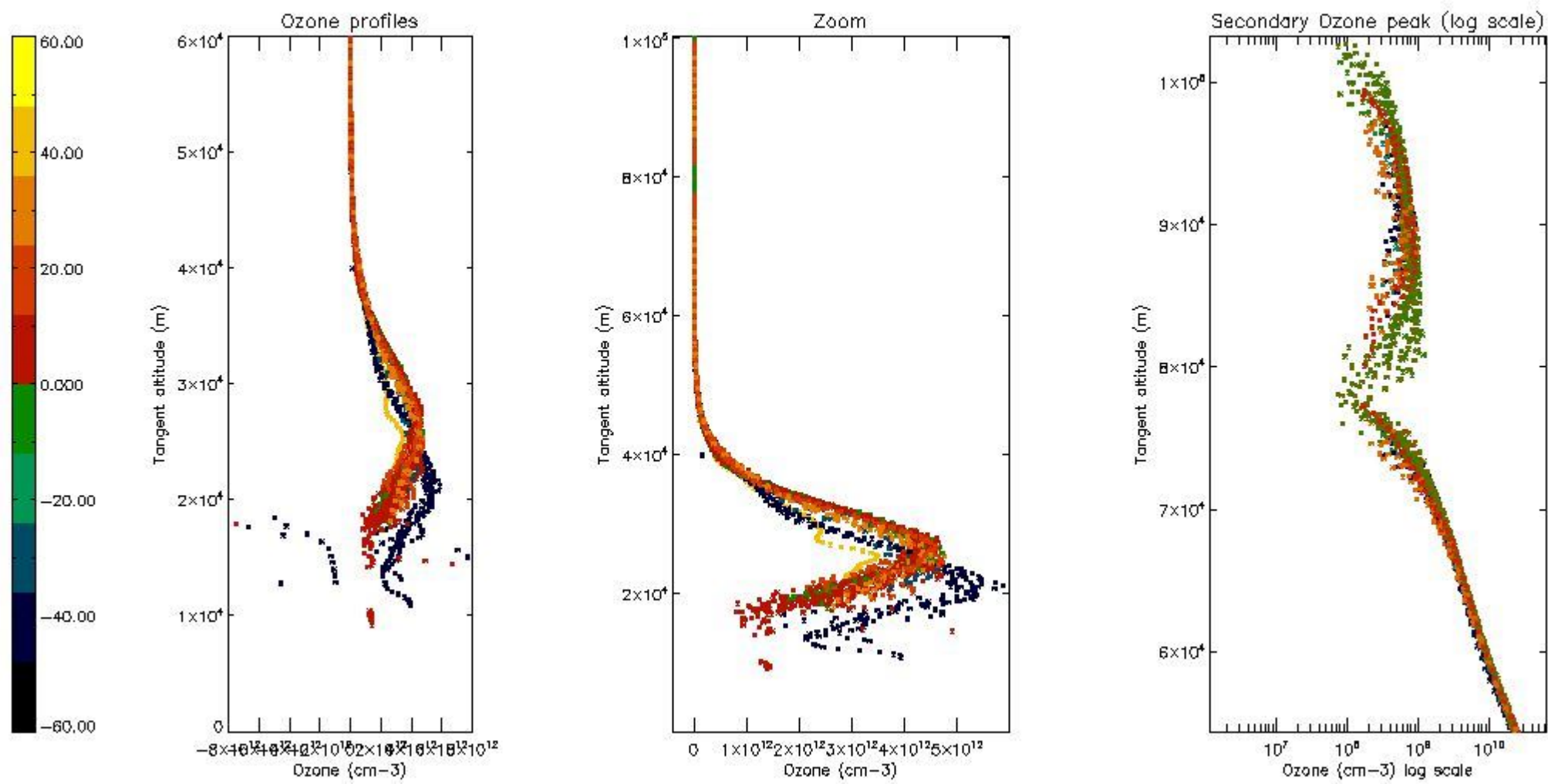
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



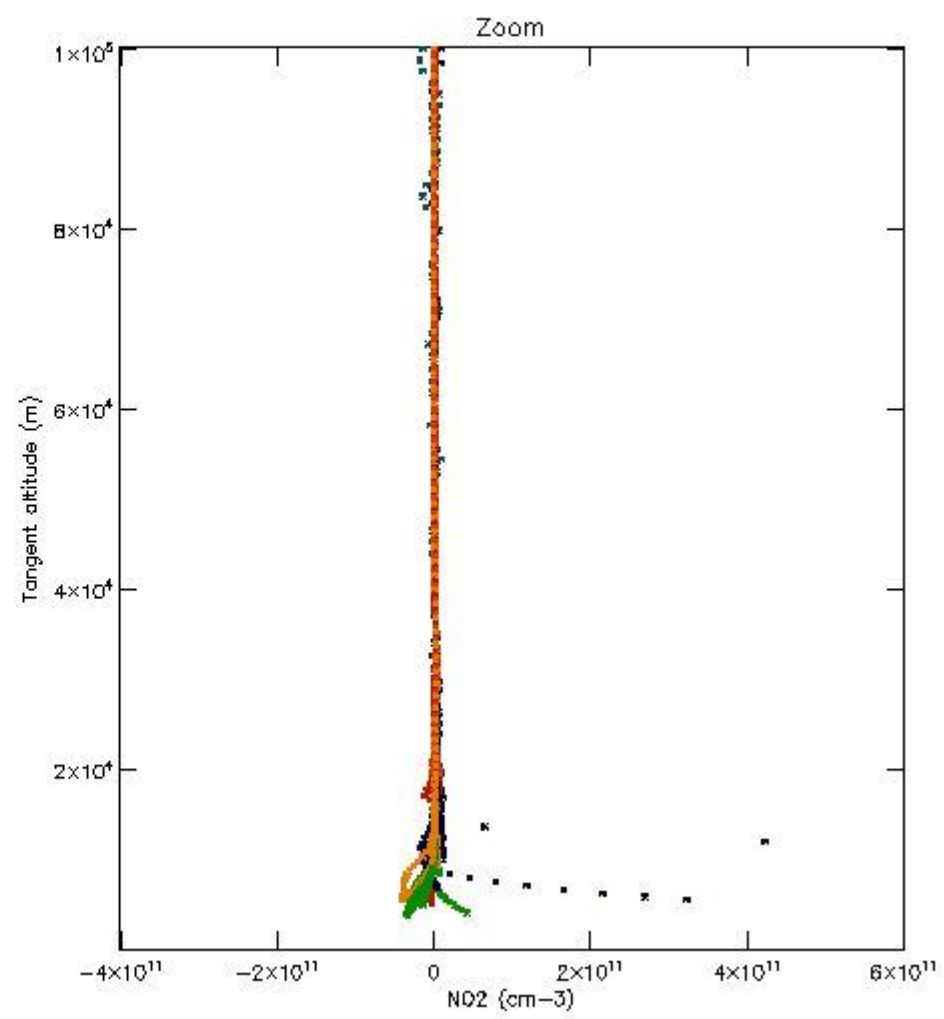
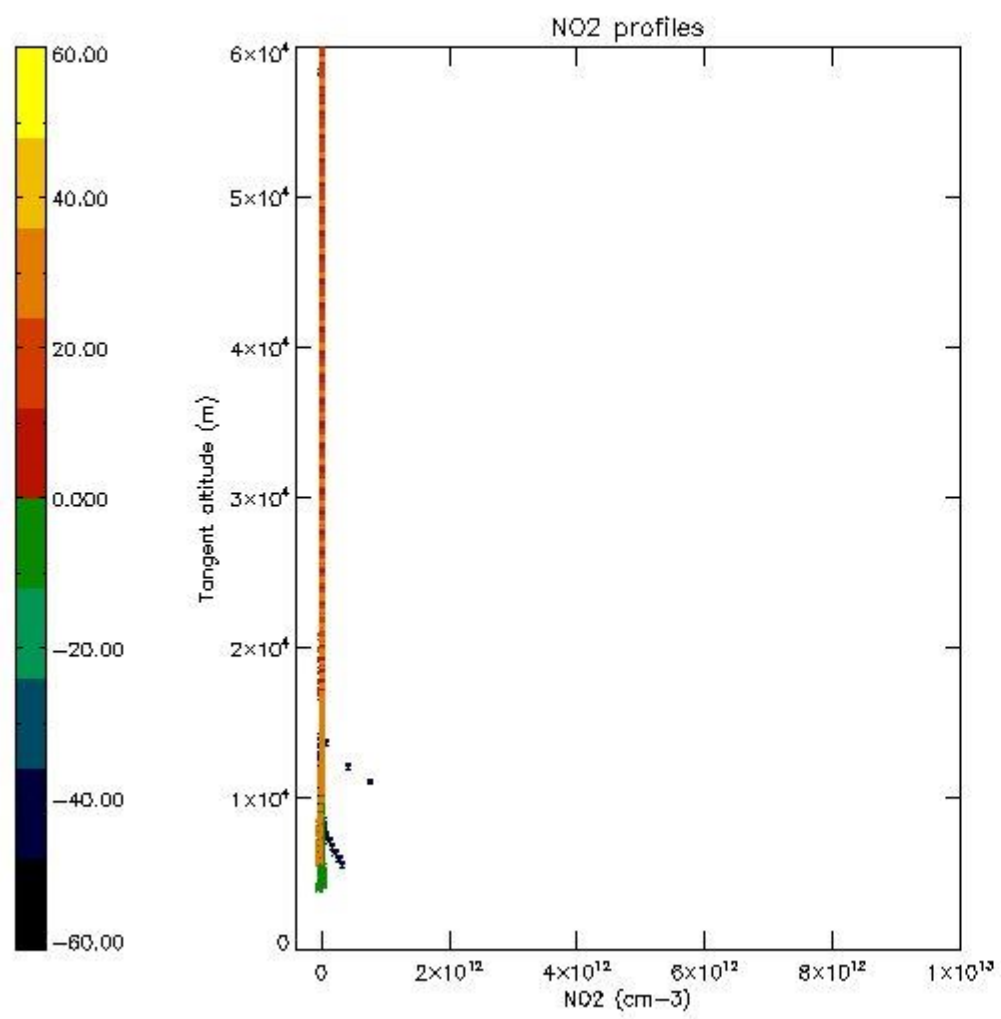
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

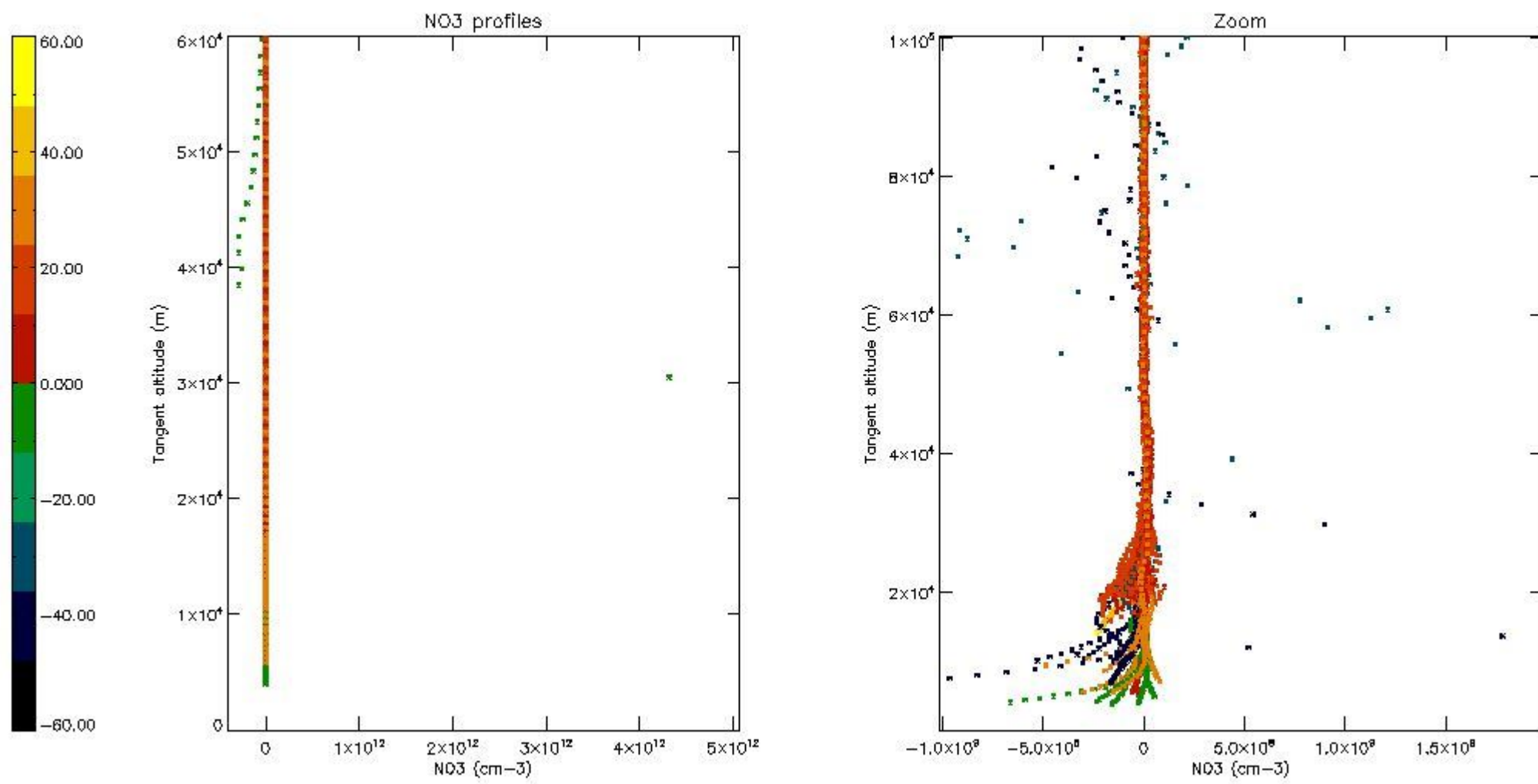
The colorbar represents the latitude.



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

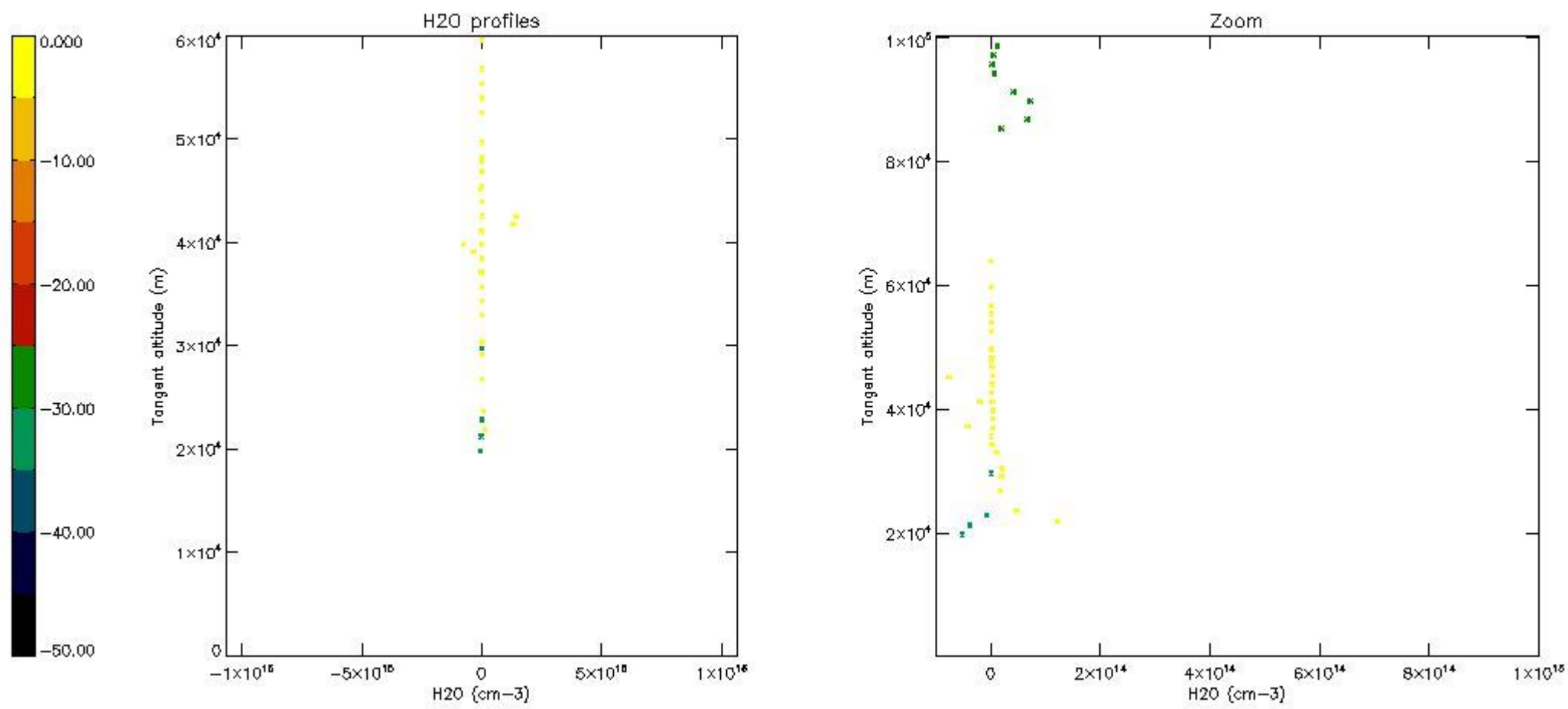
The colorbar represents the latitude.





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_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	08-OCT-2002 00:03:17
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	08-OCT-2002 00:03:17
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	08-OCT-2002 00:03:17

# GOMOS Level 2 Daily Report

## SUMMARY

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#### [5.1 Ozone statistics based on quality of products](#)

#### [5.2 Plot ozone profiles for all STD \(dark without errors\)](#)

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#### [5.5. Plot ozone profiles where STD < 5% \(dark without errors\)](#)

#### [5.6 Plot NO2 profiles for all STD \(dark without errors\)](#)

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

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

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

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

Item	Value
Time of report generation	17APR2013 19:16:25
Data source version	GOMOS/6.01
Start time of products	08-10-2002 (08OCT2002 00:00:00)
Stop time of products	09-10-2002 (09OCT2002 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	188
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__2PRFIN20021008_000317_000000522010_00102_03162_2329.N1	08-OCT-2002 00:03:17	Bright	52.000	53	43Bet And	2.0480	3300.0	104	3162	No
2	GOM_NL__2PRFIN20021008_000545_000000602010_00102_03162_2330.N1	08-OCT-2002 00:05:45	Bright	60.000	173	4Bet Tri	3.0040	8900.0	120	3162	No
3	GOM_NL__2PRFIN20021008_000829_000000492010_00102_03162_2331.N1	08-OCT-2002 00:08:29	Bright	49.000	68	18Alp Cas	2.2250	4500.0	98	3162	No
4	GOM_NL__2PRFIN20021008_000953_000000492010_00102_03162_2332.N1	08-OCT-2002 00:09:53	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	3162	No
5	GOM_NL__2PRFIN20021008_001253_000000602010_00102_03162_2333.N1	08-OCT-2002 00:12:53	Bright	59.500	160	23Gam Per	2.9300	4700.0	119	3162	No
6	GOM_NL__2PRFIN20021008_001703_000000452010_00102_03162_2334.N1	08-OCT-2002 00:17:03	Bright	44.500	49	1Alp UMi	1.9900	6300.0	89	3162	No
7	GOM_NL__2PRFIN20021008_001934_000000412010_00102_03162_2335.N1	08-OCT-2002 00:19:34	Bright	40.500	60	7Bet UMi	2.0810	3950.0	81	3162	No
8	GOM_NL__2PRFIN20021008_002511_000000452010_00102_03162_2336.N1	08-OCT-2002 00:25:11	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	3162	No
9	GOM_NL__2PRFIN20021008_002642_000000442010_00102_03162_2337.N1	08-OCT-2002 00:26:42	Bright	43.500	82	48Bet UMa	2.3650	10600.	87	3162	No
10	GOM_NL__2PRFIN20021008_003000_000000432010_00102_03162_2338.N1	08-OCT-2002 00:30:00	Bright	43.000	174	52Psi UMa	3.0040	4400.0	86	3162	No
11	GOM_NL__2PRFIN20021008_003521_000000762010_00102_03162_2339.N1	08-OCT-2002 00:35:21	Bright	76.000	24	66Alp Gem	1.5800	10200.	152	3162	No
12	GOM_NL__2PRFIN20021008_004141_000002022010_00102_03162_2340.N1	08-OCT-2002 00:41:41	Straylight	201.50	170	27Eps Gem	3.0000	9700.0	403	3162	No
13	GOM_NL__2PRFIN20021008_004759_000001062010_00102_03162_2341.N1	08-OCT-2002 00:47:59	Dark	106.00	8	10Alp CMi	0.40000	6500.0	212	3162	No
14	GOM_NL__2PRFIN20021008_005431_000000582010_00102_03162_2342.N1	08-OCT-2002 00:54:31	Dark	57.500	132	15Rho Pup	2.8030	6900.0	115	3162	No
15	GOM_NL__2PRFIN20021008_005620_000000552010_00102_03162_2343.N1	08-OCT-2002 00:56:20	Dark	54.500	65	Lam Vel	2.2040	4400.0	109	3162	No
16	GOM_NL__2PRFIN20021008_005912_000000502010_00102_03162_2344.N1	08-OCT-2002 00:59:12	Dark	49.500	34	Gam2Vel	1.7930	23000.	99	3162	No
17	GOM_NL__2PRFIN20021008_010100_000001362010_00103_03163_8929.N1	08-OCT-2002 01:01:00	Dark	135.50	1	9Alp CMa	-1.4400	11000.	271	3163	No
18	GOM_NL__2PRFIN20021008_010438_000000682010_00103_03163_8930.N1	08-OCT-2002 01:04:38	Dark	68.000	2	Alp Car	-0.73600	7000.0	136	3163	No
19	GOM_NL__2PRFIN20021008_010802_000000772010_00103_03163_8931.N1	08-OCT-2002 01:08:02	Dark	76.500	108	Alp Col	2.6520	15200.	153	3163	No
20	GOM_NL__2PRFIN20021008_011048_000000462010_00103_03163_8932.N1	08-OCT-2002 01:10:48	Dark	45.500	135	Bet Hyi	2.8200	5800.0	91	3163	No
21	GOM_NL__2PRFIN20021008_011319_000001832010_00103_03163_8933.N1	08-OCT-2002 01:13:19	Dark	182.50	139	9Bet Lep	2.8330	5600.0	365	3163	No
22	GOM_NL__2PRFIN20021008_011959_000000512010_00103_03163_8934.N1	08-OCT-2002 01:19:59	Straylight	51.000	84	Alp Phe	2.3970	4500.0	102	3163	No
23	GOM_NL__2PRFIN20021008_012430_000000512010_00103_03163_8935.N1	08-OCT-2002 01:24:30	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	3163	No
24	GOM_NL__2PRFIN20021008_012643_000000532010_00103_03163_8936.N1	08-OCT-2002 01:26:43	Straylight	53.000	52	16Bet Cet	2.0370	4500.0	106	3163	No
25	GOM_NL__2PRFIN20021008_012843_000002172010_00103_03163_8937.N1	08-OCT-2002 01:28:43	Bright	217.00	165	34Gam Eri	2.9500	3200.0	434	3163	No
26	GOM_NL__2PRFIN20021008_013643_000000462010_00103_03163_8938.N1	08-OCT-2002 01:36:43	Bright	46.000	140	88Gam Peg	2.8340	26000.	92	3163	No
27	GOM_NL__2PRFIN20021008_014024_000000472010_00103_03163_8939.N1	08-OCT-2002 01:40:24	Bright	46.500	93	53Bet Peg	2.5200	3100.0	93	3163	No
28	GOM_NL__2PRFIN20021008_014353_000000502010_00103_03163_8940.N1	08-OCT-2002 01:43:53	Bright	50.000	53	43Bet And	2.0480	3300.0	100	3163	No
29	GOM_NL__2PRFIN20021008_014620_000000642010_00103_03163_8941.N1	08-OCT-2002 01:46:20	Bright	64.000	173	4Bet Tri	3.0040	8900.0	128	3163	No
30	GOM_NL__2PRFIN20021008_014905_000000472010_00103_03163_8942.N1	08-OCT-2002 01:49:05	Bright	47.000	68	18Alp Cas	2.2250	4500.0	94	3163	No
31	GOM_NL__2PRFIN20021008_015029_000000472010_00103_03163_8943.N1	08-OCT-2002 01:50:29	Bright	47.000	76	27Gam Cas	2.3000	30000.	94	3163	No
32	GOM_NL__2PRFIN20021008_015328_000000602010_00103_03163_8944.N1	08-OCT-2002 01:53:28	Bright	60.000	160	23Gam Per	2.9300	4700.0	120	3163	No
33	GOM_NL__2PRFIN20021008_015740_000000442010_00103_03163_8945.N1	08-OCT-2002 01:57:40	Bright	43.500	49	1Alp UMi	1.9900	6300.0	87	3163	No
34	GOM_NL__2PRFIN20021008_020010_000000452010_00103_03163_8946.N1	08-OCT-2002 02:00:10	Bright	45.000	60	7Bet UMi	2.0810	3950.0	90	3163	No
35	GOM_NL__2PRFIN20021008_020546_000000452010_00103_03163_8947.N1	08-OCT-2002 02:05:46	Bright	45.000	36	50Alp UMa	1.8000	6300.0	90	3163	No
36	GOM_NL__2PRFIN20021008_020718_000000582010_00103_03163_2340.N1	08-OCT-2002 02:07:18	Bright	58.000	82	48Bet UMa	2.3650	10600.	116	3163	No
37	GOM_NL__2PRFIN20021008_021035_000000582010_00103_03163_2341.N1	08-OCT-2002 02:10:35	Bright	58.000	174	52Psi UMa	3.0040	4400.0	116	3163	No
38	GOM_NL__2PRFIN20021008_021557_000000832010_00103_03163_2342.N1	08-OCT-2002 02:15:57	Bright	82.500	24	66Alp Gem	1.5800	10200.	165	3163	No
39	GOM_NL__2PRFIN20021008_022219_000002142010_00103_03163_2343.N1	08-OCT-2002 02:22:19	Straylight	213.50	170	27Eps Gem	3.0000	9700.0	427	3163	No
40	GOM_NL__2PRFIN20021008_022835_000001022010_00103_03163_2344.N1	08-OCT-2002 02:28:35	Dark	102.00	8	10Alp CMi	0.40000	6500.0	204	3163	No
41	GOM_NL__2PRFIN20021008_023507_000000582010_00103_03163_2345.N1	08-OCT-2002 02:35:07	Dark	58.000	132	15Rho Pup	2.8030	6900.0	116	3163	No
42	GOM_NL__2PRFIN20021008_023656_000000612010_00103_03163_2346.N1	08-OCT-2002 02:36:56	Dark	60.500	65	Lam Vel	2.2040	4400.0	121	3163	No



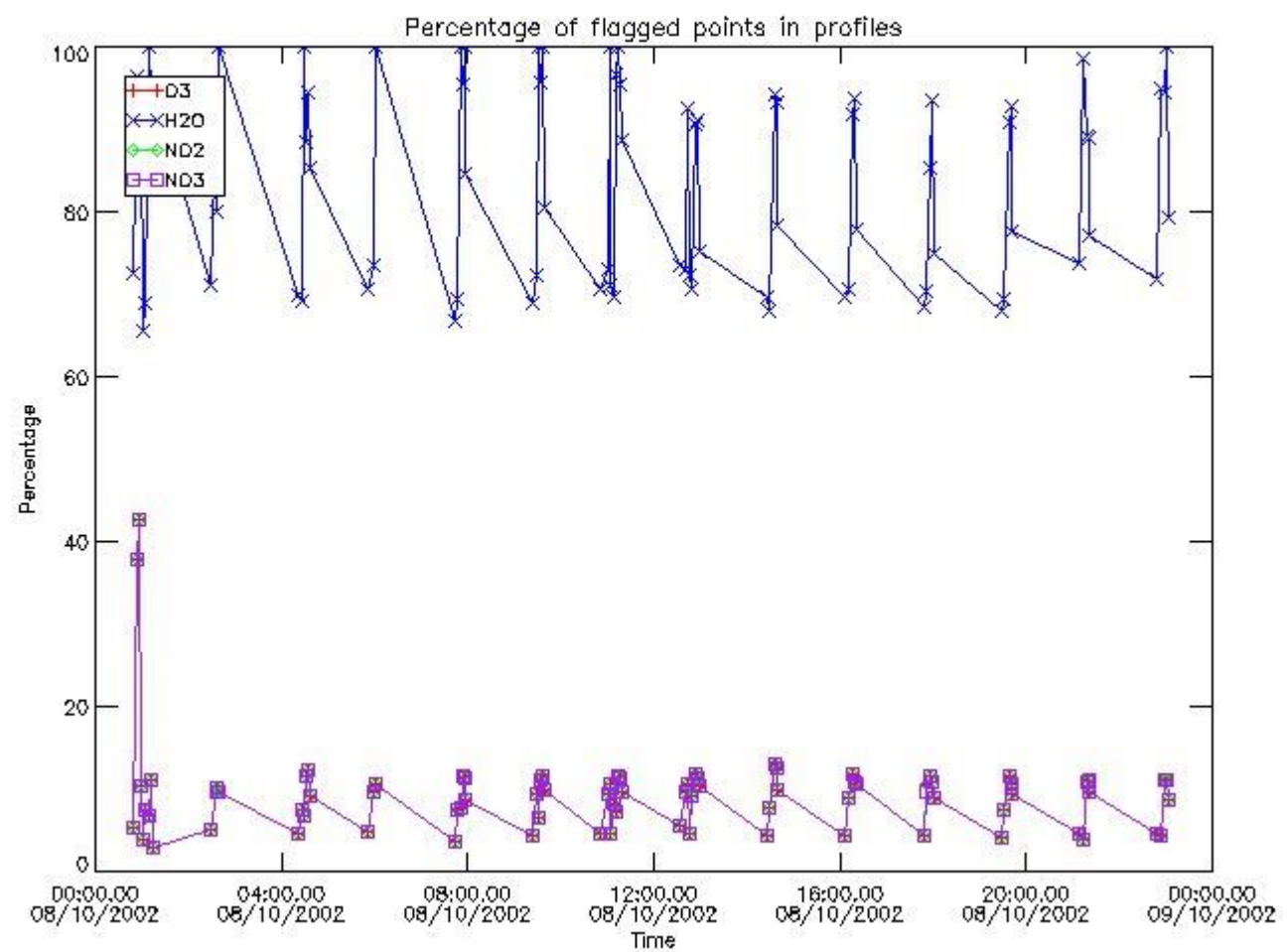


161	GOM_NL__2PRFIN20021008_162955_000000512010_00112_03172_8956.N1	08-OCT-2002 16:29:55	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	3172	No
162	GOM_NL__2PRFIN20021008_174724_000001182010_00113_03173_8949.N1	08-OCT-2002 17:47:24	Dark	117.50	1	9Alp CMa	-1.4400	11000.	235	3173	No
163	GOM_NL__2PRFIN20021008_175045_000000582010_00113_03173_8950.N1	08-OCT-2002 17:50:45	Dark	58.000	2	Alp Car	-0.73600	7000.0	116	3173	No
164	GOM_NL__2PRFIN20021008_175648_000000452010_00113_03173_8951.N1	08-OCT-2002 17:56:48	Dark	44.500	135	Bet Hyi	2.8200	5800.0	89	3173	No
165	GOM_NL__2PRFIN20021008_175923_000000472010_00113_03173_8952.N1	08-OCT-2002 17:59:23	Dark	46.500	143	Alp Hyi	2.8570	7200.0	93	3173	No
166	GOM_NL__2PRFIN20021008_180050_000000572010_00113_03173_8953.N1	08-OCT-2002 18:00:50	Dark	56.500	9	Alp Eri	0.45300	24000.	113	3173	No
167	GOM_NL__2PRFIN20021008_180257_000000592010_00113_03173_8954.N1	08-OCT-2002 18:02:57	Straylight	58.500	157	The1Eri	2.9060	9300.0	117	3173	No
168	GOM_NL__2PRFIN20021008_180601_000000522010_00113_03173_8955.N1	08-OCT-2002 18:06:01	Straylight	51.500	84	Alp Phe	2.3970	4500.0	103	3173	No
169	GOM_NL__2PRFIN20021008_192803_000001222010_00114_03174_8949.N1	08-OCT-2002 19:28:03	Dark	122.00	1	9Alp CMa	-1.4400	11000.	244	3174	No
170	GOM_NL__2PRFIN20021008_193121_000000692010_00114_03174_8950.N1	08-OCT-2002 19:31:21	Dark	69.000	2	Alp Car	-0.73600	7000.0	138	3174	No
171	GOM_NL__2PRFIN20021008_193724_000000452010_00114_03174_8951.N1	08-OCT-2002 19:37:24	Dark	44.500	135	Bet Hyi	2.8200	5800.0	89	3174	No
172	GOM_NL__2PRFIN20021008_193959_000000492010_00114_03174_8952.N1	08-OCT-2002 19:39:59	Dark	48.500	143	Alp Hyi	2.8570	7200.0	97	3174	No
173	GOM_NL__2PRFIN20021008_194126_000000542010_00114_03174_8953.N1	08-OCT-2002 19:41:26	Dark	54.000	9	Alp Eri	0.45300	24000.	108	3174	No
174	GOM_NL__2PRFIN20021008_194333_000000572010_00114_03174_8954.N1	08-OCT-2002 19:43:33	Straylight	57.000	157	The1Eri	2.9060	9300.0	114	3174	No
175	GOM_NL__2PRFIN20021008_194637_000000492010_00114_03174_8955.N1	08-OCT-2002 19:46:37	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	3174	No
176	GOM_NL__2PRFIN20021008_210841_000001112010_00115_03175_8949.N1	08-OCT-2002 21:08:41	Dark	111.00	1	9Alp CMa	-1.4400	11000.	222	3175	No
177	GOM_NL__2PRFIN20021008_211221_000001342010_00115_03175_8950.N1	08-OCT-2002 21:12:21	Dark	133.50	47	2Bet CMa	1.9760	28000.	267	3175	No
178	GOM_NL__2PRFIN20021008_211800_000000472010_00115_03175_8951.N1	08-OCT-2002 21:18:00	Dark	46.500	135	Bet Hyi	2.8200	5800.0	93	3175	No
179	GOM_NL__2PRFIN20021008_212035_000000462010_00115_03175_8952.N1	08-OCT-2002 21:20:35	Dark	46.000	143	Alp Hyi	2.8570	7200.0	92	3175	No
180	GOM_NL__2PRFIN20021008_212202_000000532010_00115_03175_8953.N1	08-OCT-2002 21:22:02	Dark	53.000	9	Alp Eri	0.45300	24000.	106	3175	No
181	GOM_NL__2PRFIN20021008_212410_000000592010_00115_03175_8954.N1	08-OCT-2002 21:24:10	Straylight	58.500	157	The1Eri	2.9060	9300.0	117	3175	No
182	GOM_NL__2PRFIN20021008_212713_000000532010_00115_03175_8955.N1	08-OCT-2002 21:27:13	Straylight	52.500	84	Alp Phe	2.3970	4500.0	105	3175	No
183	GOM_NL__2PRFIN20021008_224920_000001142010_00116_03176_8969.N1	08-OCT-2002 22:49:20	Dark	114.00	1	9Alp CMa	-1.4400	11000.	228	3176	No
184	GOM_NL__2PRFIN20021008_225300_000001302010_00116_03176_8970.N1	08-OCT-2002 22:53:00	Dark	129.50	47	2Bet CMa	1.9760	28000.	259	3176	No
185	GOM_NL__2PRFIN20021008_225836_000000462010_00116_03176_8971.N1	08-OCT-2002 22:58:36	Dark	46.000	135	Bet Hyi	2.8200	5800.0	92	3176	No
186	GOM_NL__2PRFIN20021008_230112_000000462010_00116_03176_8972.N1	08-OCT-2002 23:01:12	Dark	45.500	143	Alp Hyi	2.8570	7200.0	91	3176	No
187	GOM_NL__2PRFIN20021008_230239_000000592010_00116_03176_8973.N1	08-OCT-2002 23:02:39	Dark	58.500	9	Alp Eri	0.45300	24000.	117	3176	No
188	GOM_NL__2PRFIN20021008_230447_000000582010_00116_03176_8974.N1	08-OCT-2002 23:04:47	Straylight	58.000	157	The1Eri	2.9060	9300.0	116	3176	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.

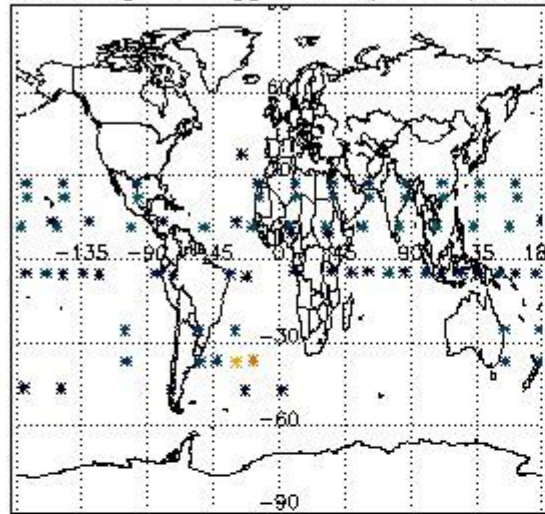
#### 3.1 Plot quality information per product (time dependant)



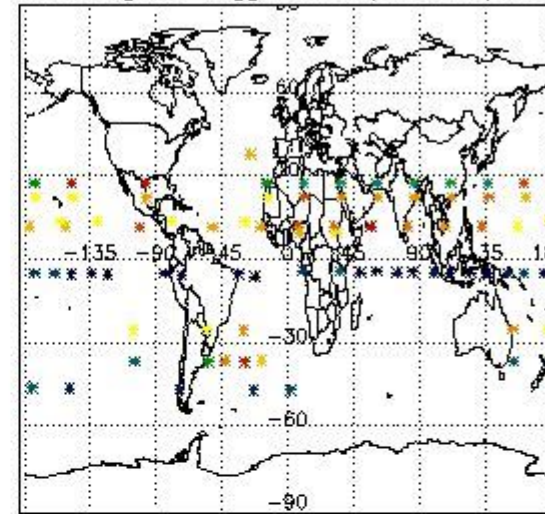
*3.2 Plot quality information per product (world map)*



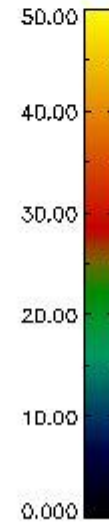
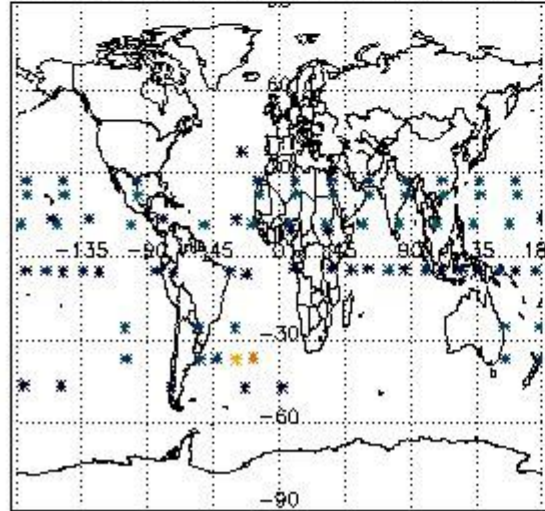
Percentage of flagged data per O3 profile



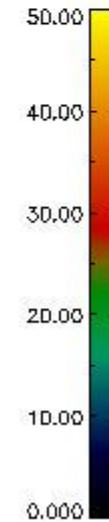
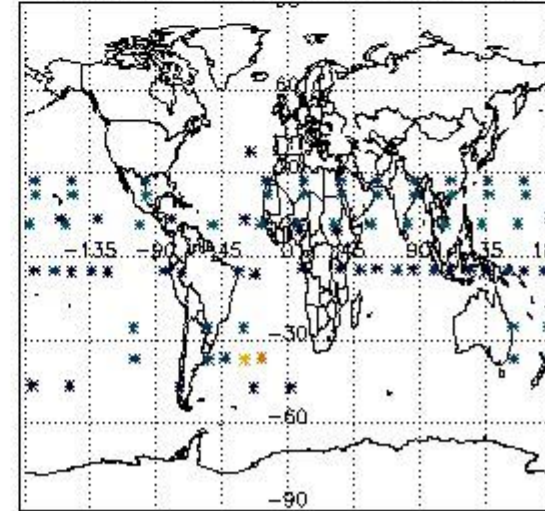
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

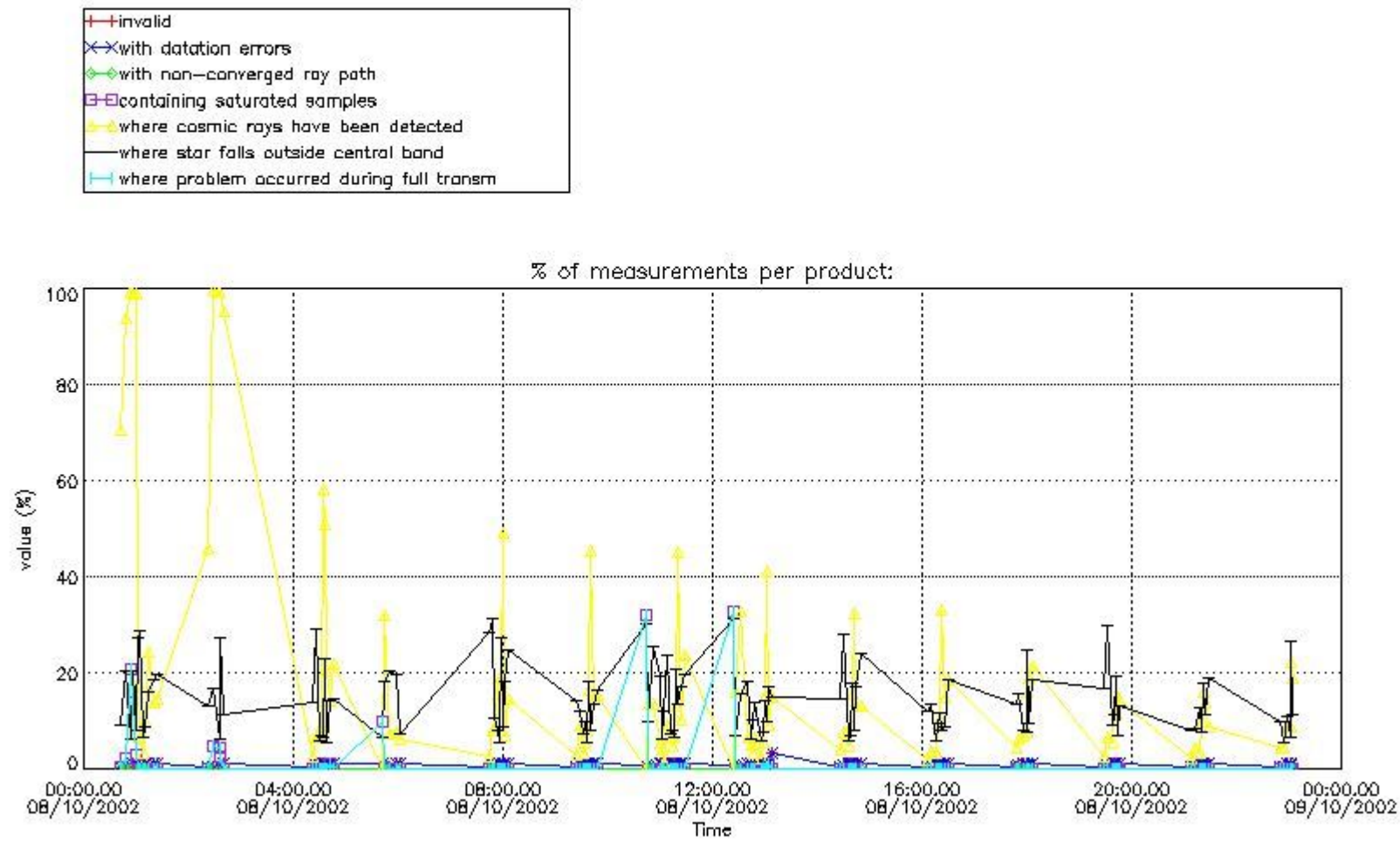


#### 4. Level 1 quality information per product

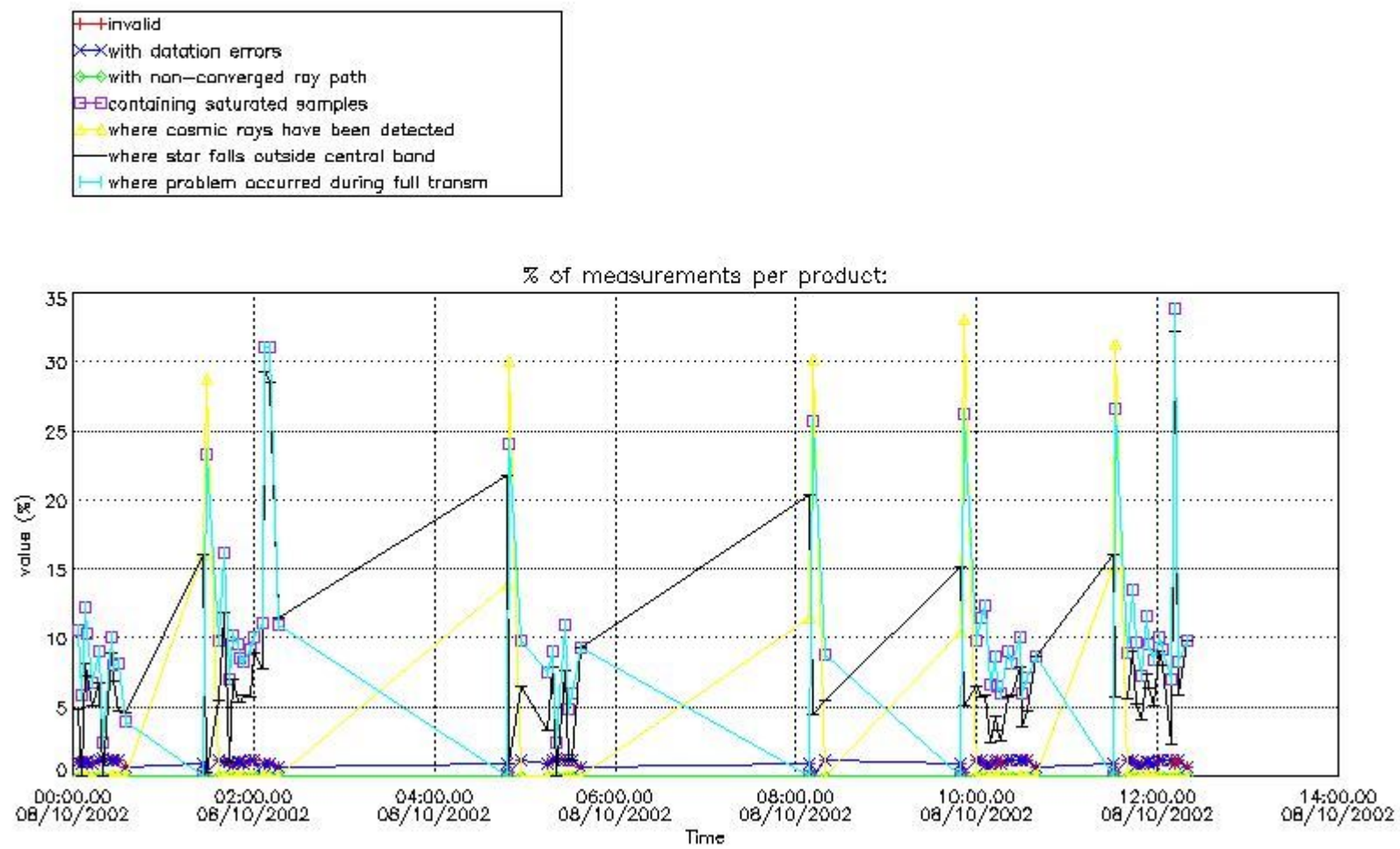
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



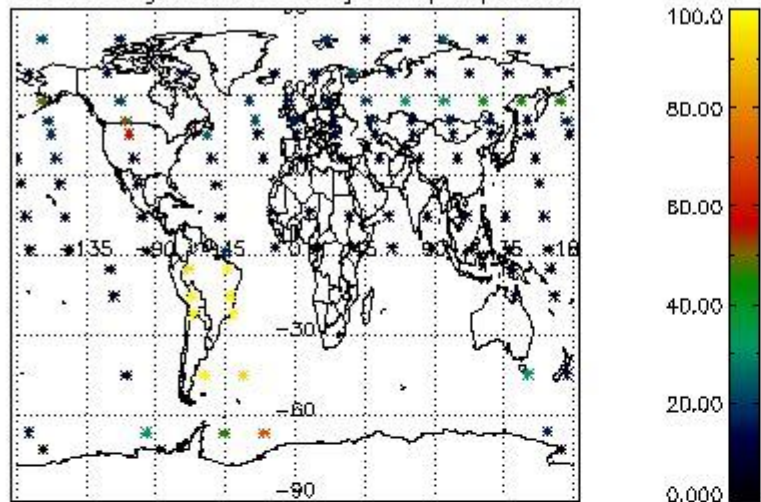
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



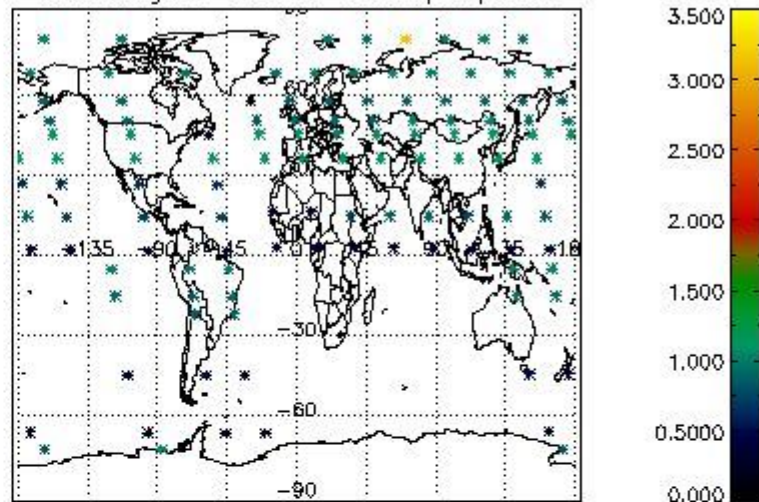
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

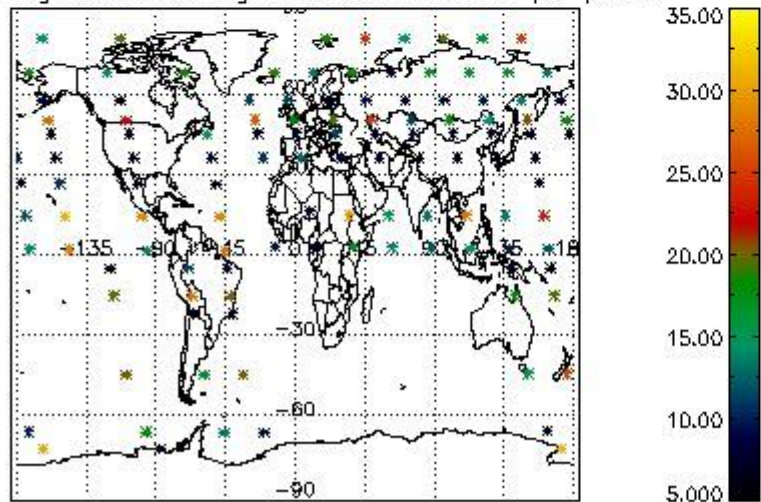
Percentage of cosmic ray hits per profile



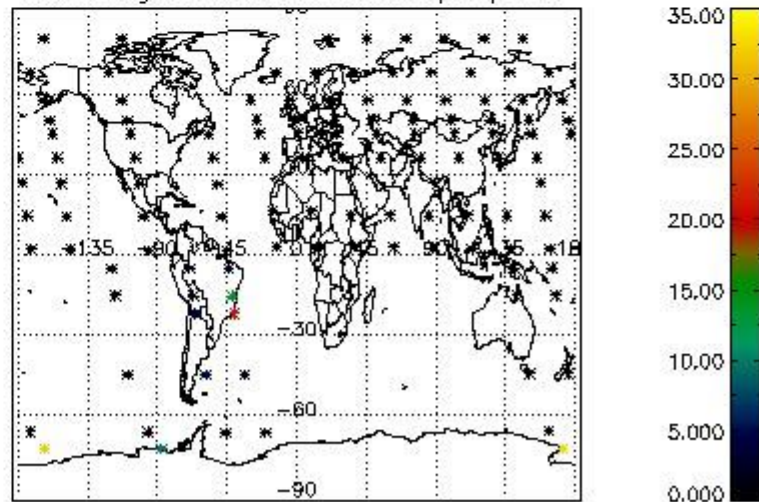
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

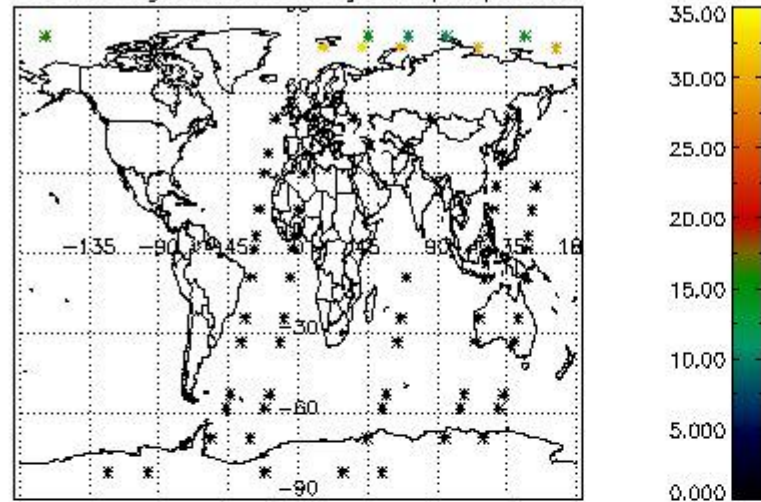


Percentage of saturation errors per profile

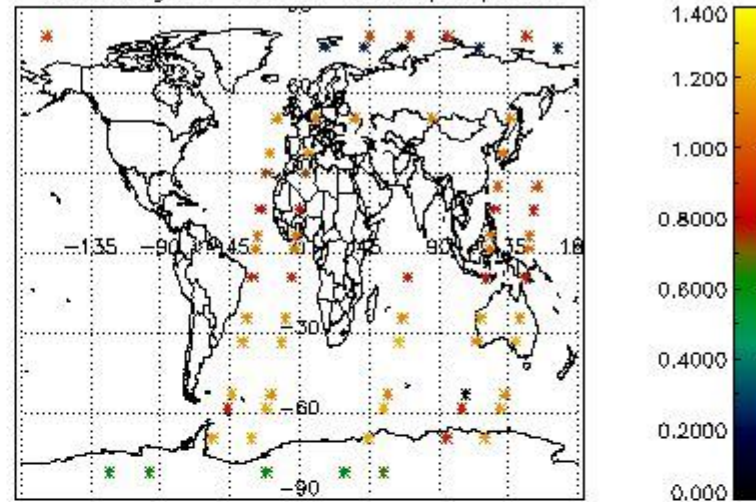


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

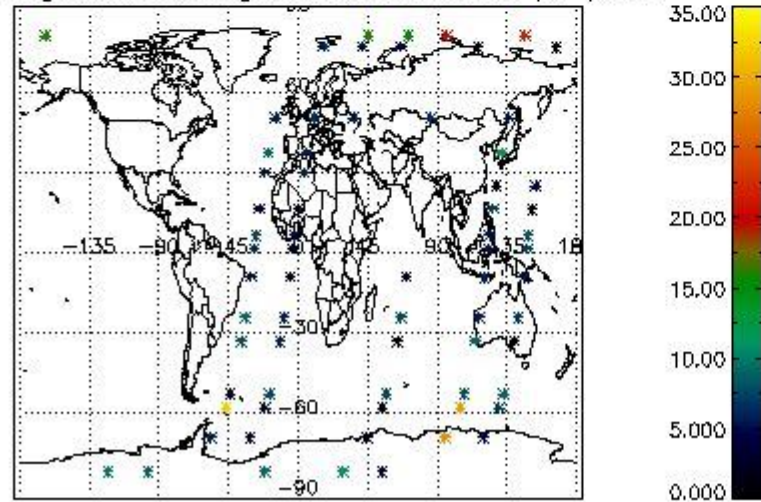
Percentage of cosmic ray hits per profile



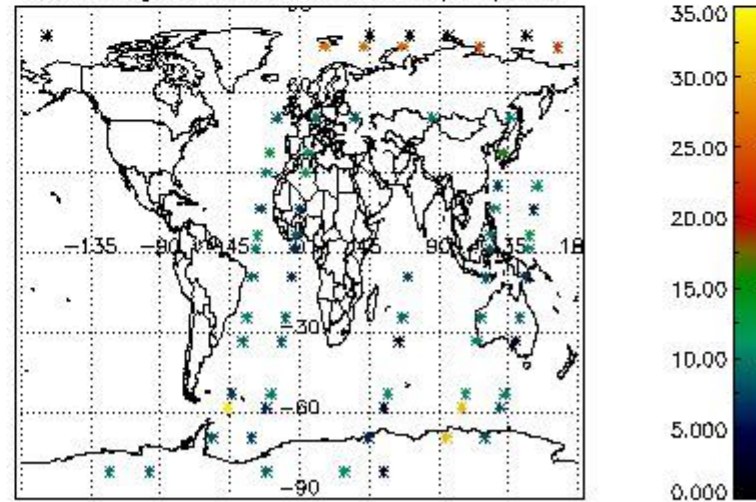
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 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

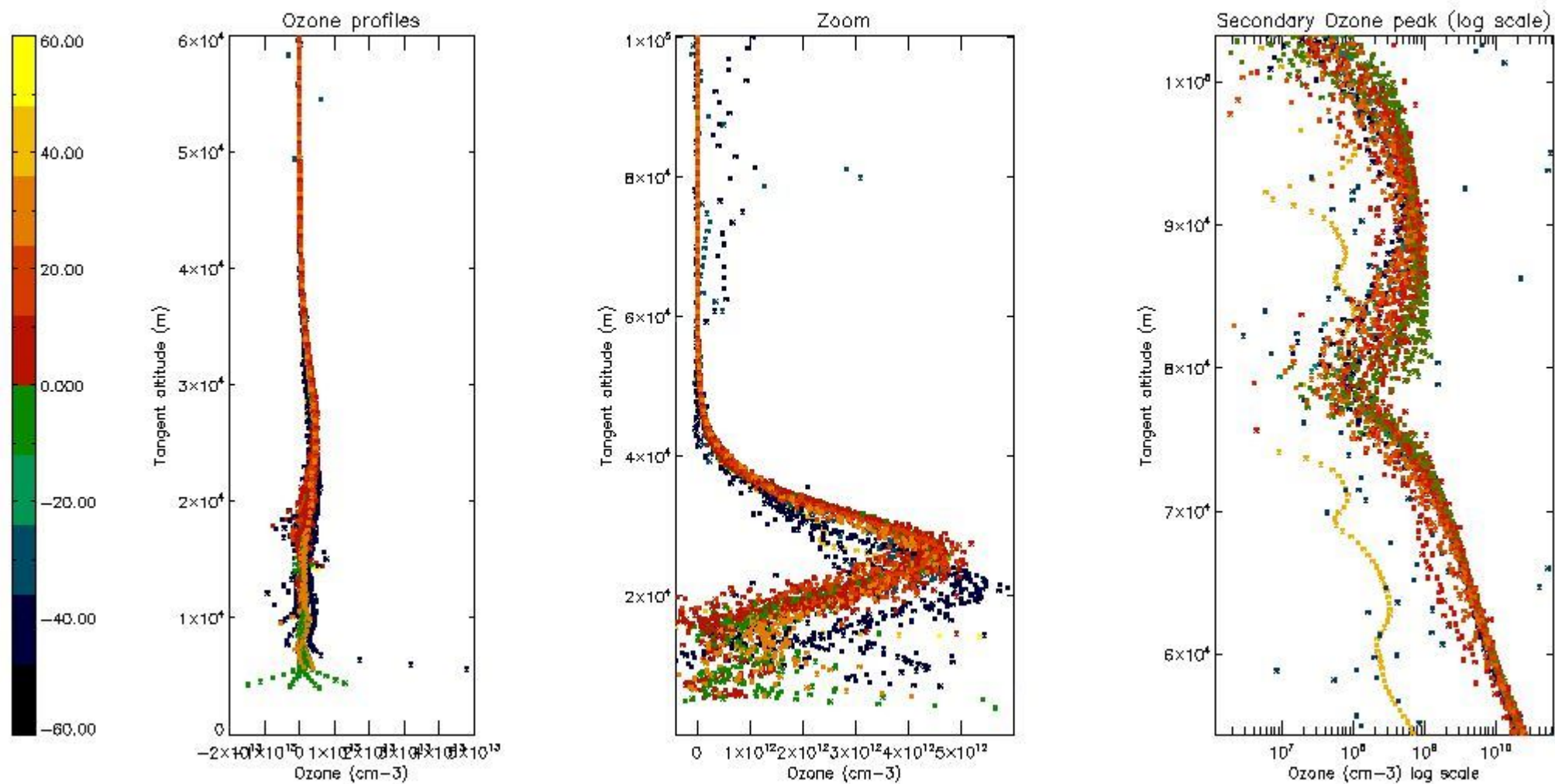
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	45
STD < 20	26

STD < 10	23
STD < 5	19

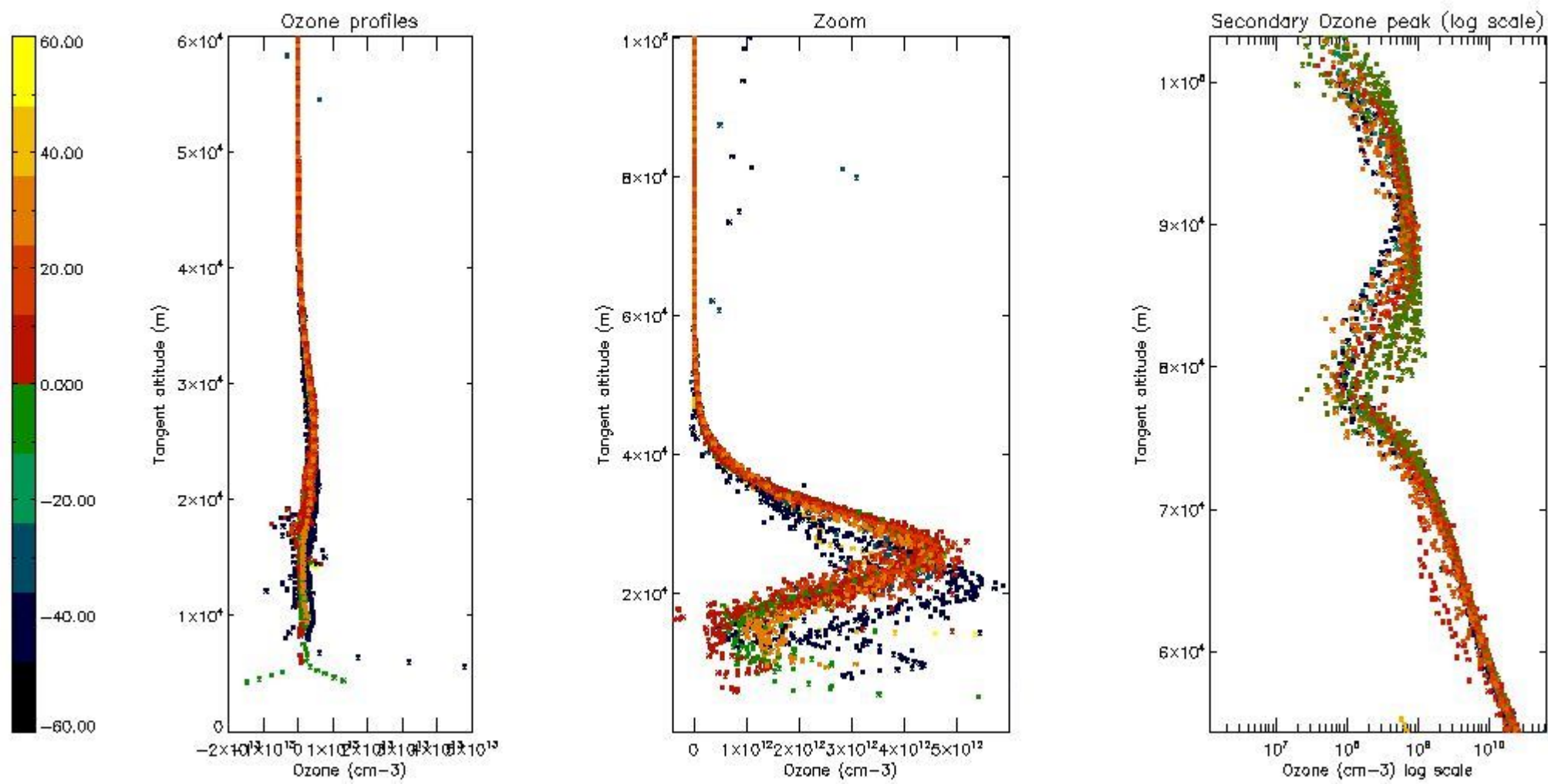
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



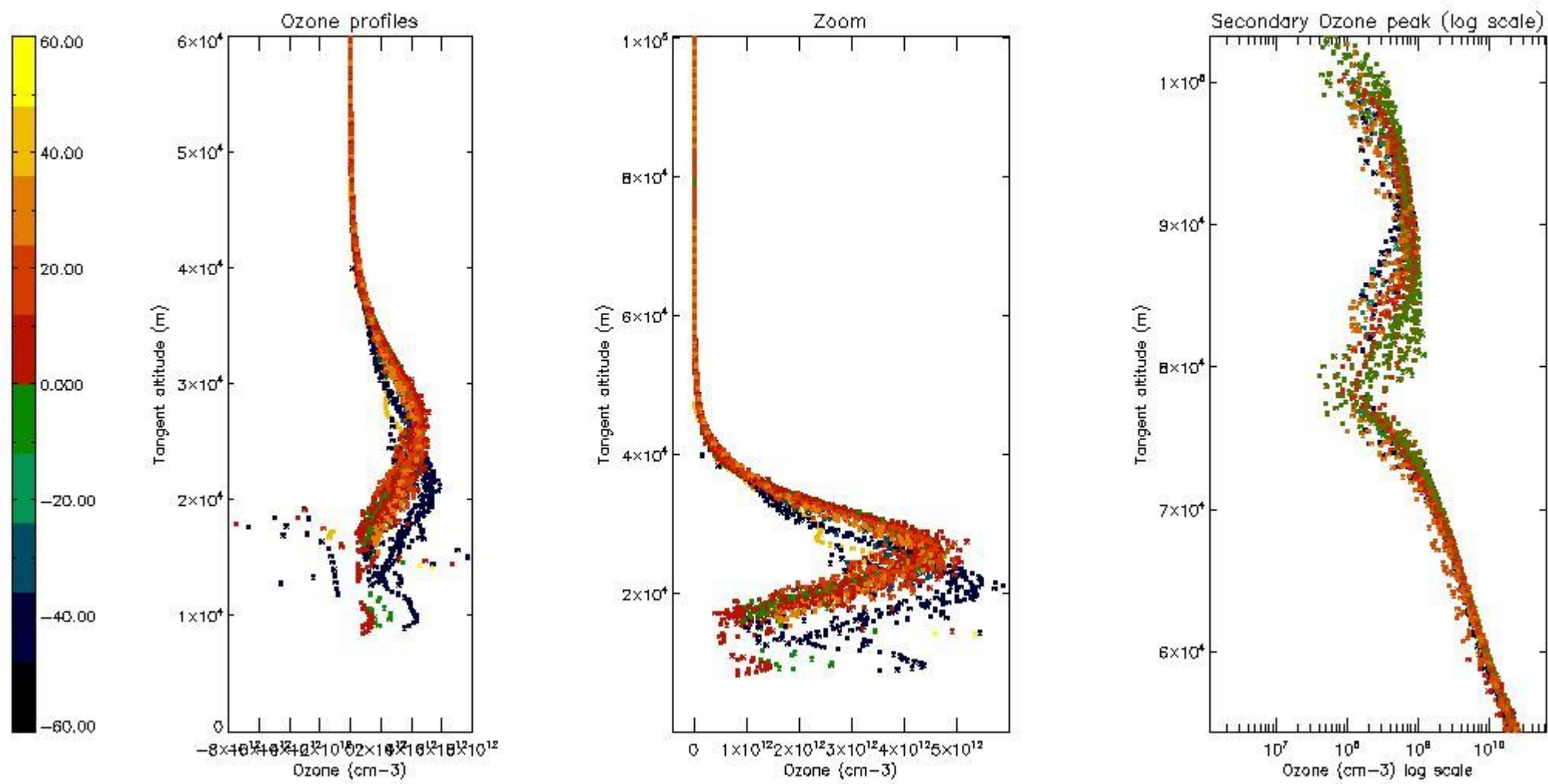
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

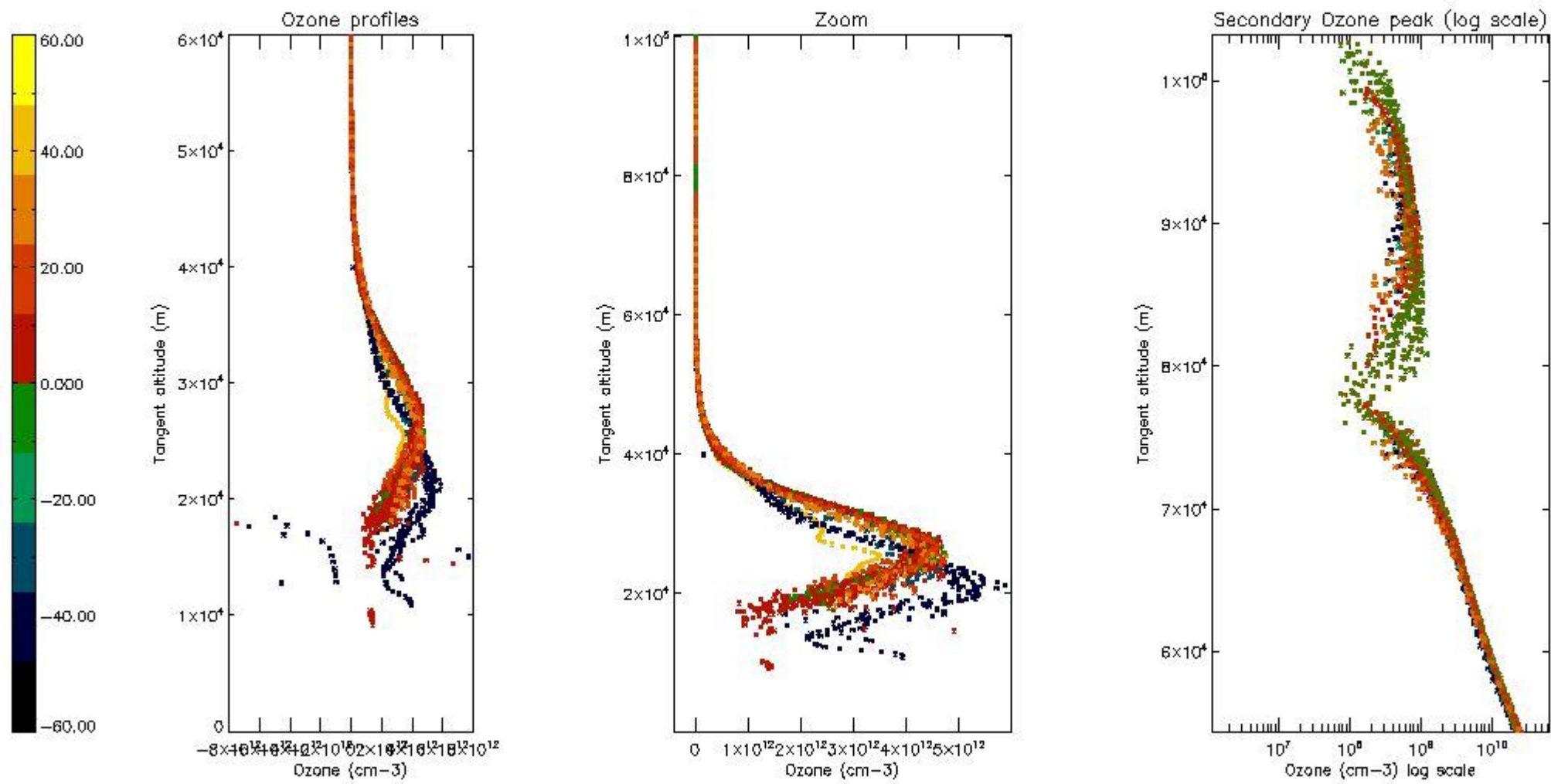
The colorbar represents the latitude.



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

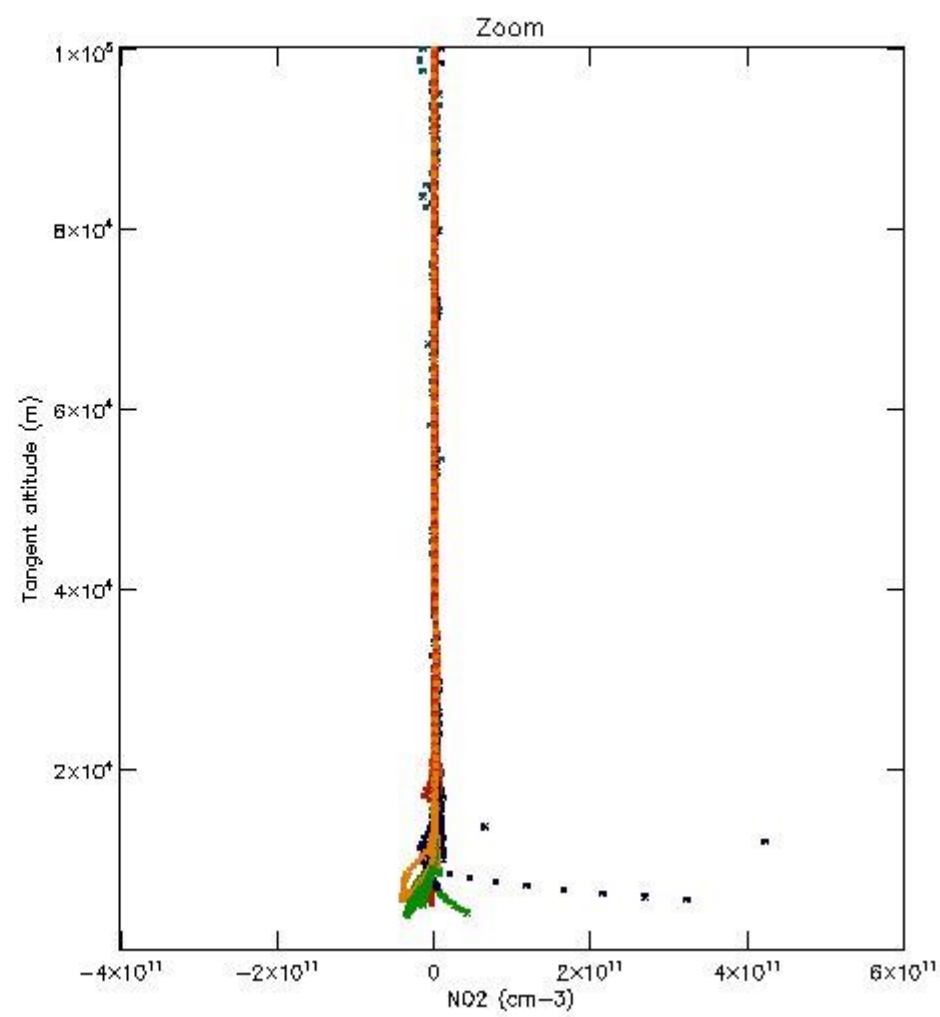
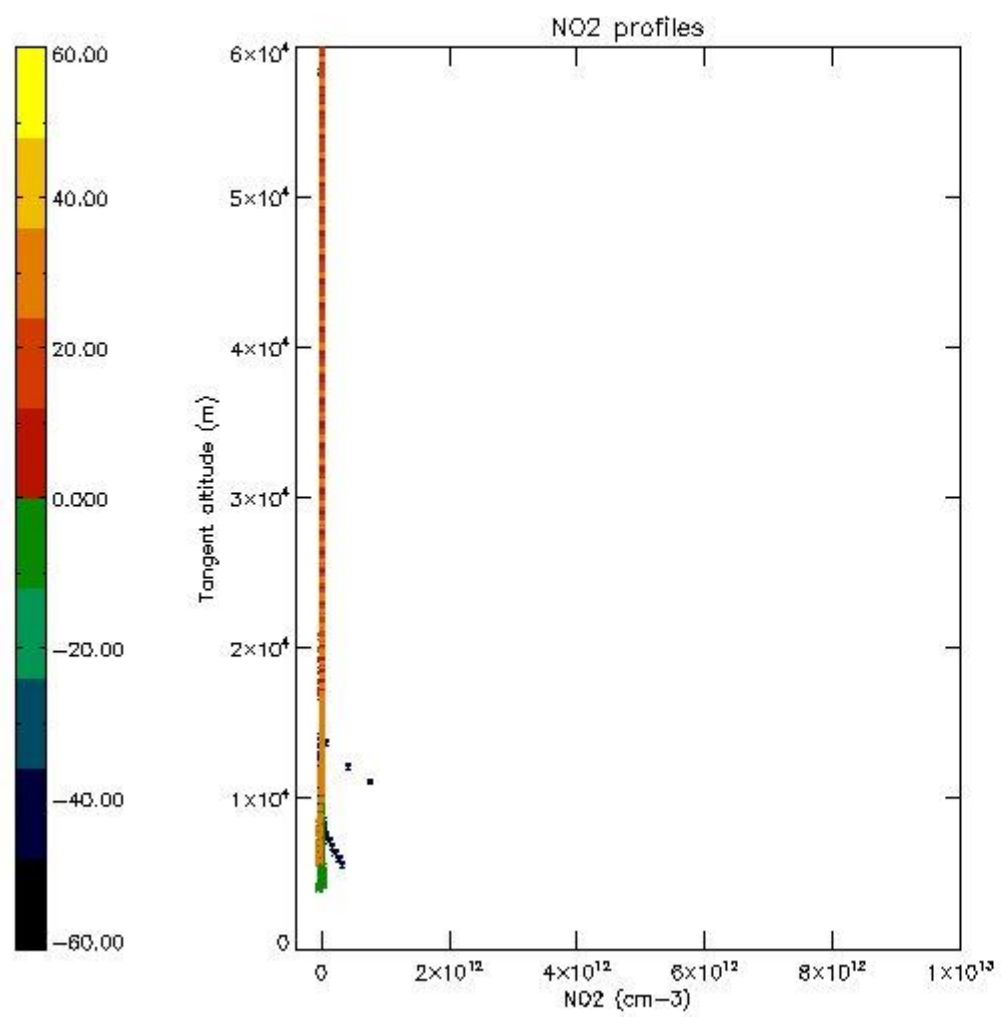
The colorbar represents the latitude.





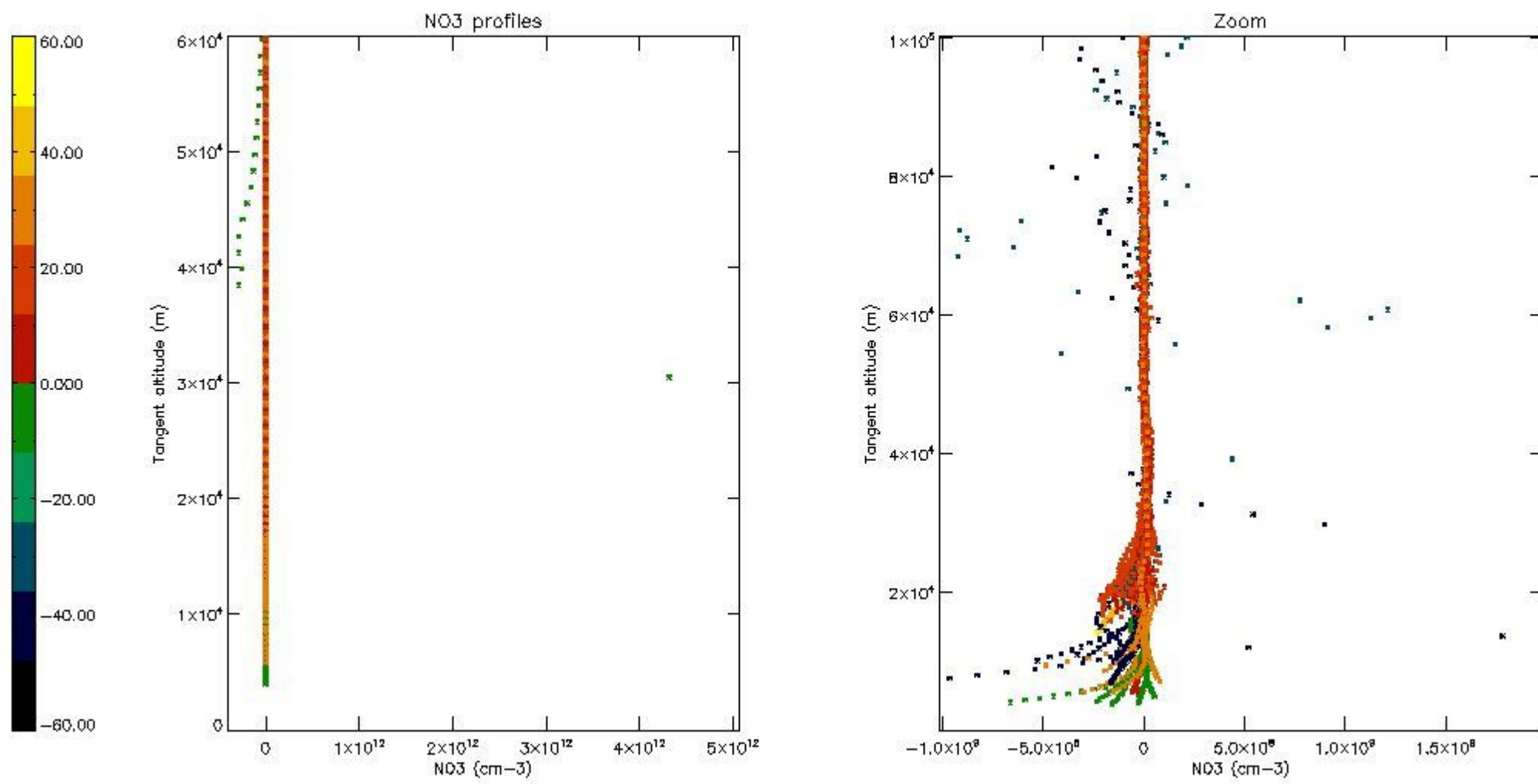
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



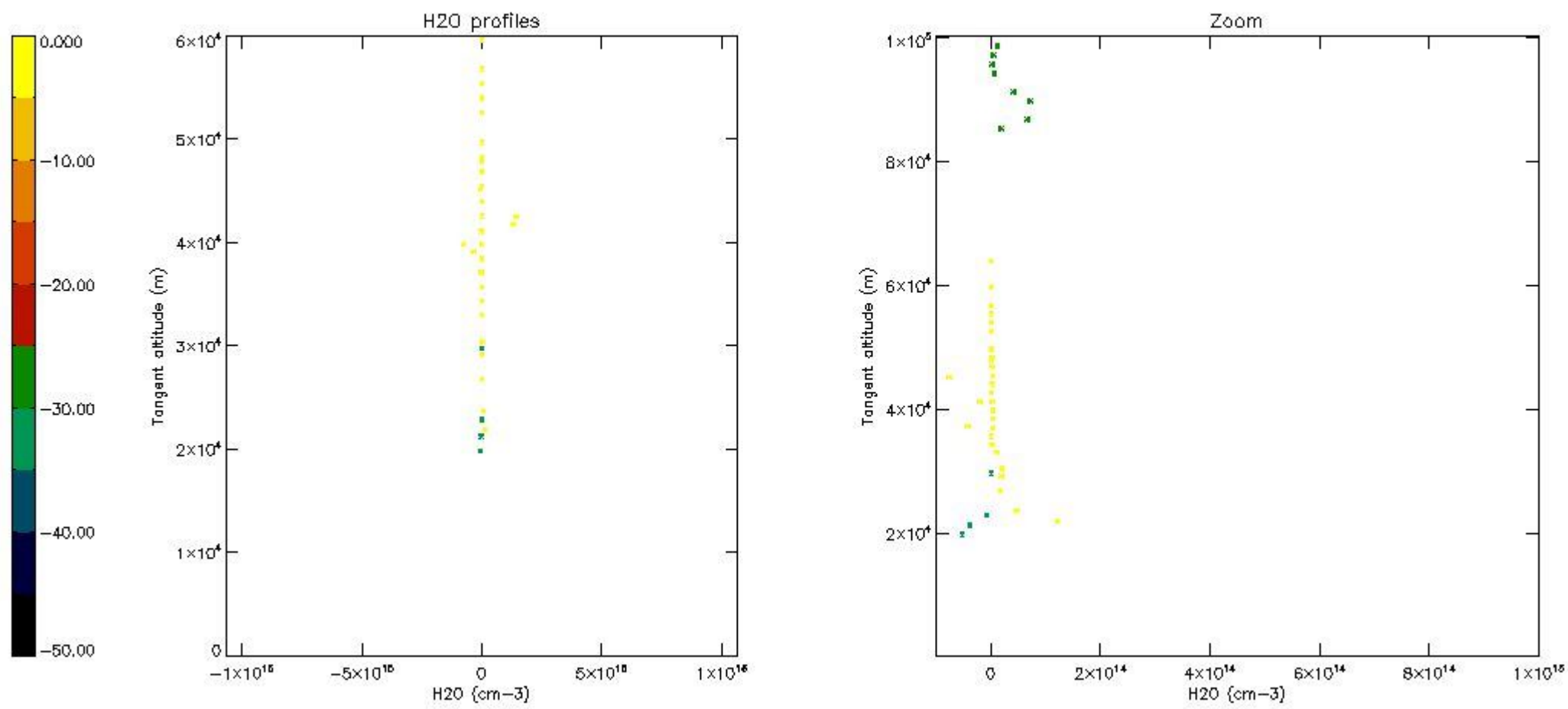
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)

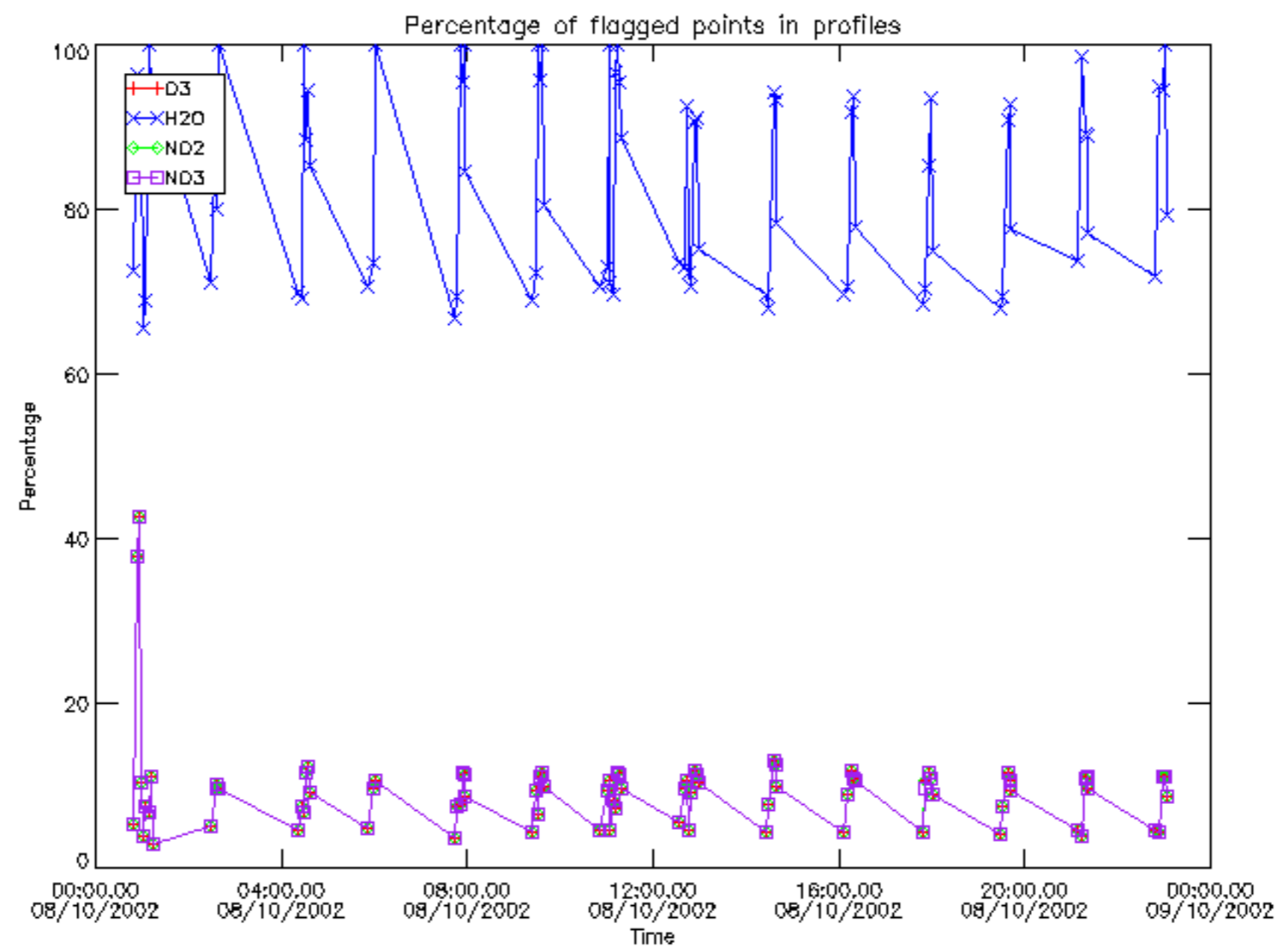
The colorbar represents the latitude.



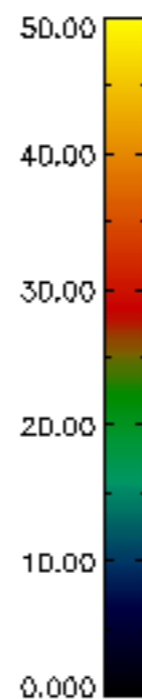
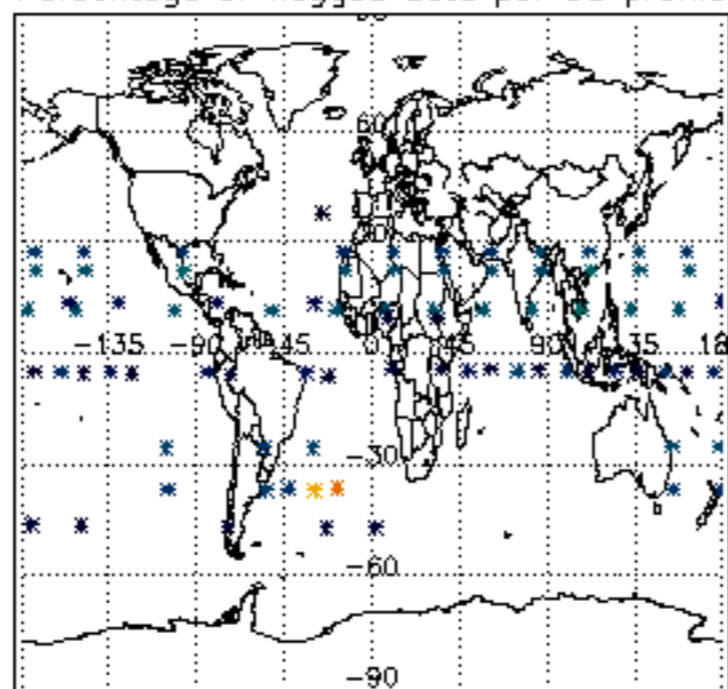
## 6. Auxiliary Data Files used for the production reported in section 2

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.

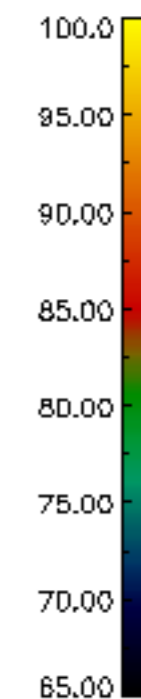
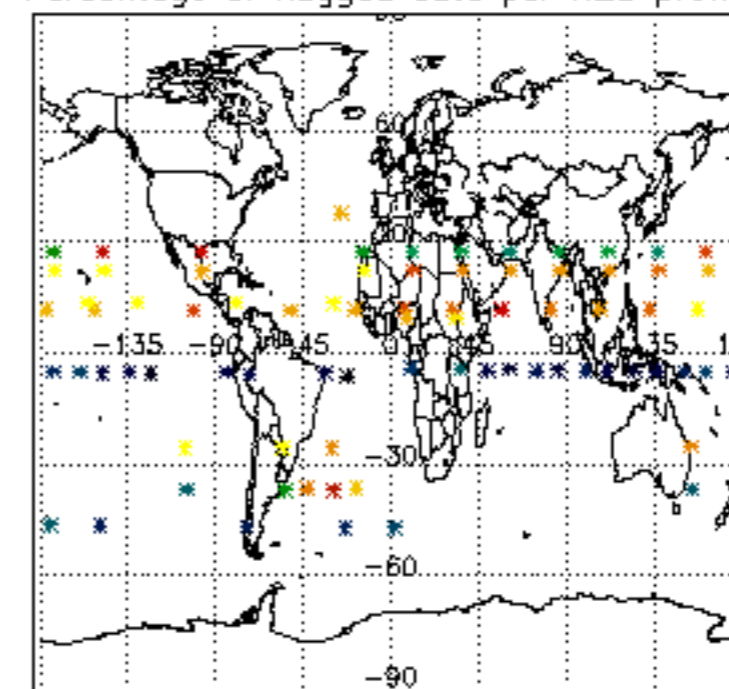
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	08-OCT-2002 00:03:17
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	08-OCT-2002 00:03:17
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	08-OCT-2002 00:03:17



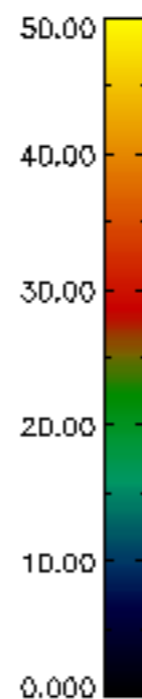
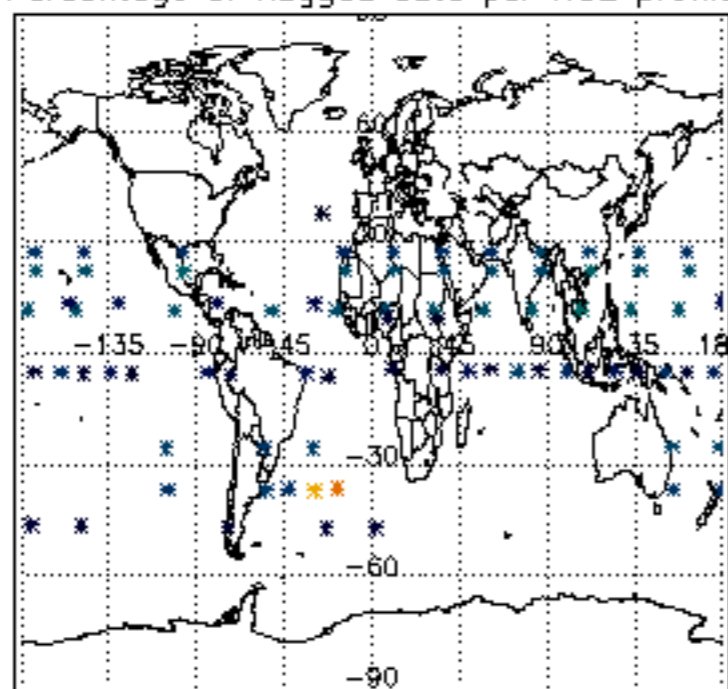
Percentage of flagged data per D3 profile



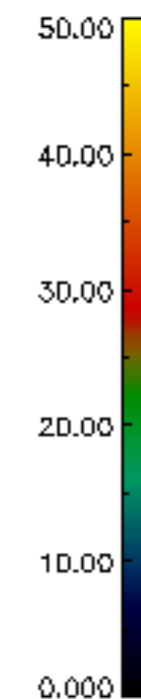
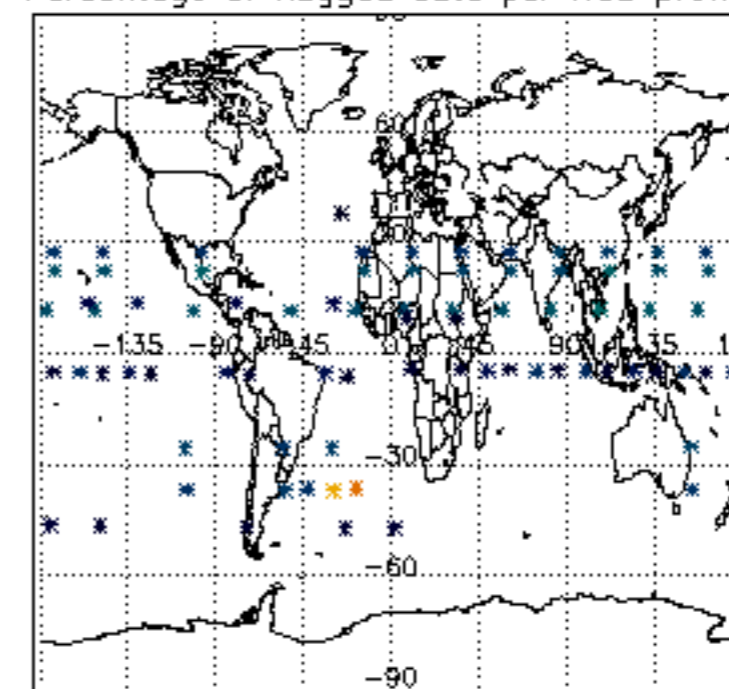
Percentage of flagged data per H2O profile

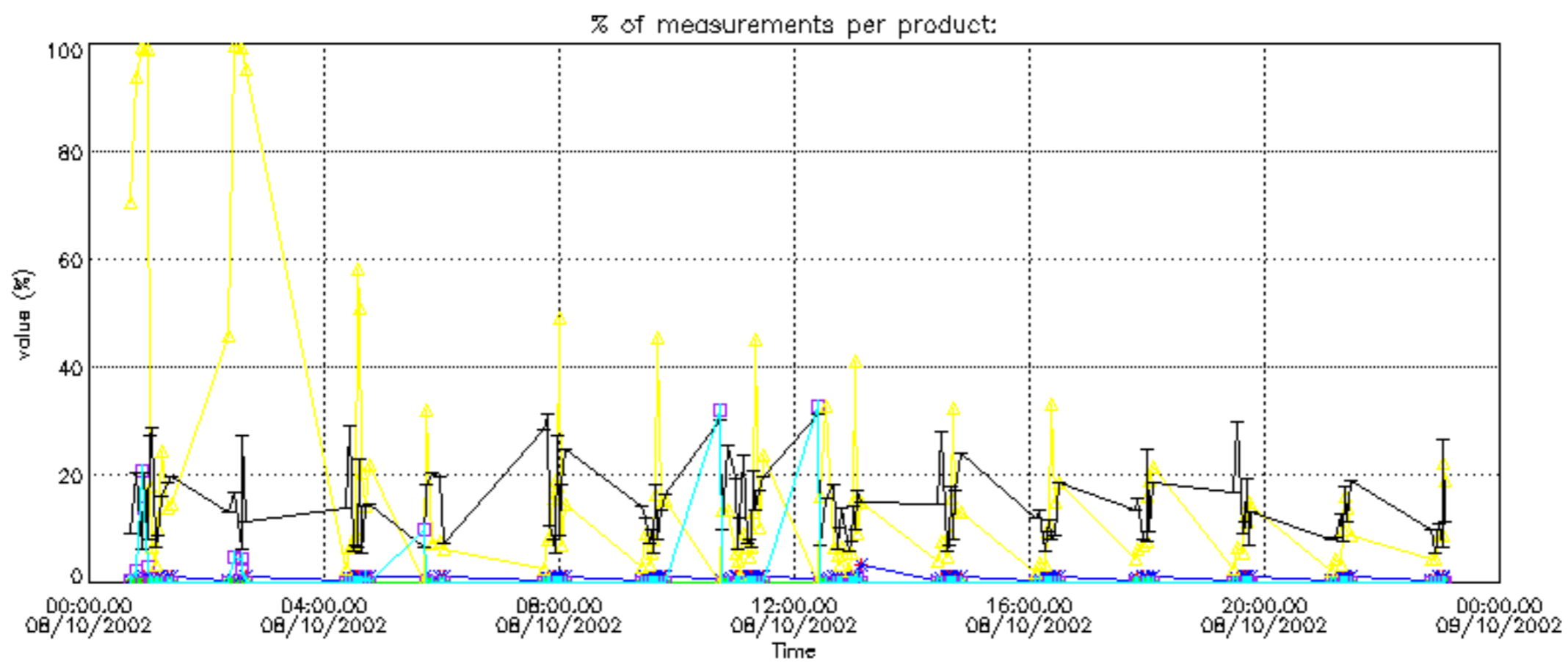


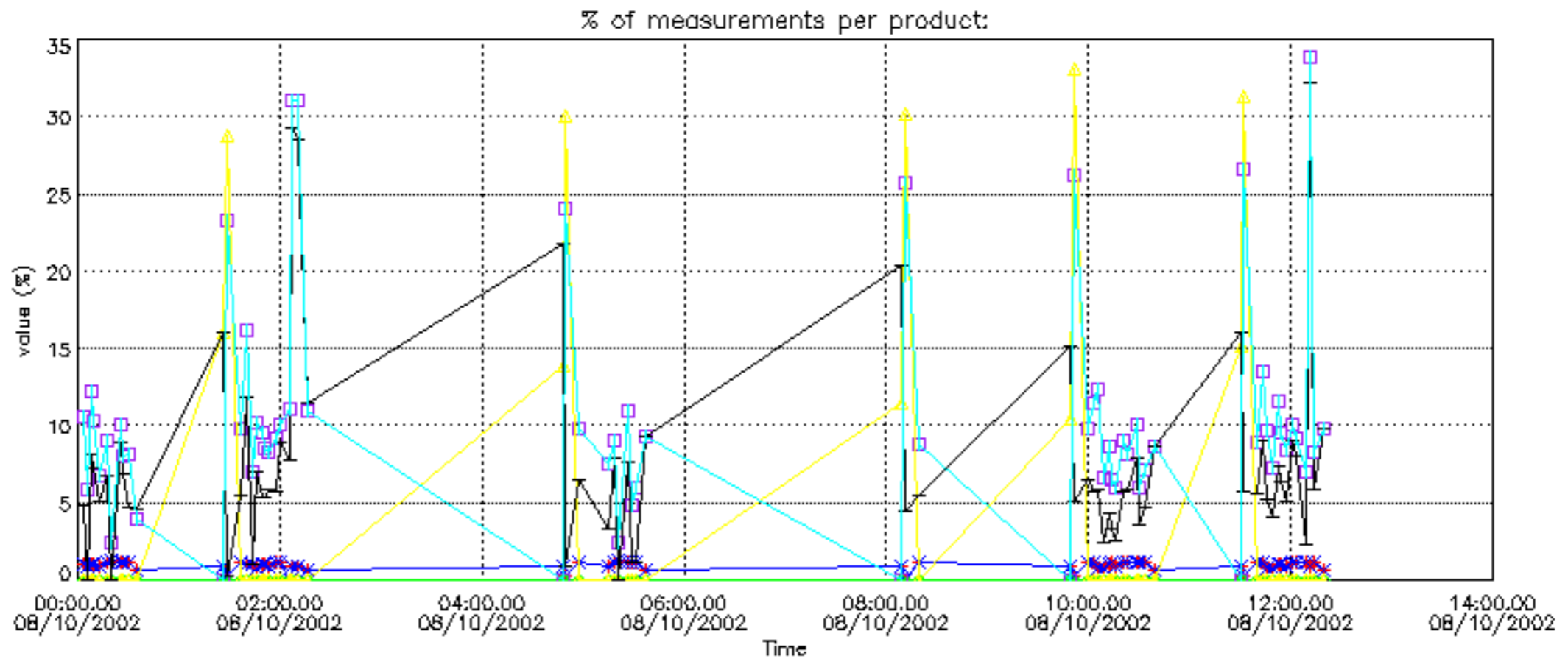
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

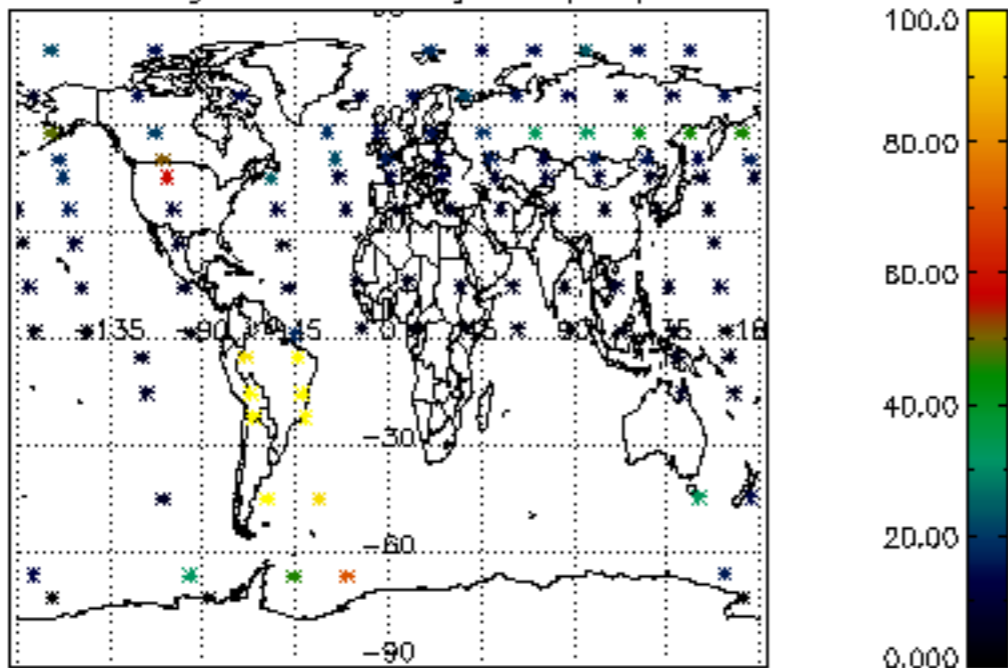




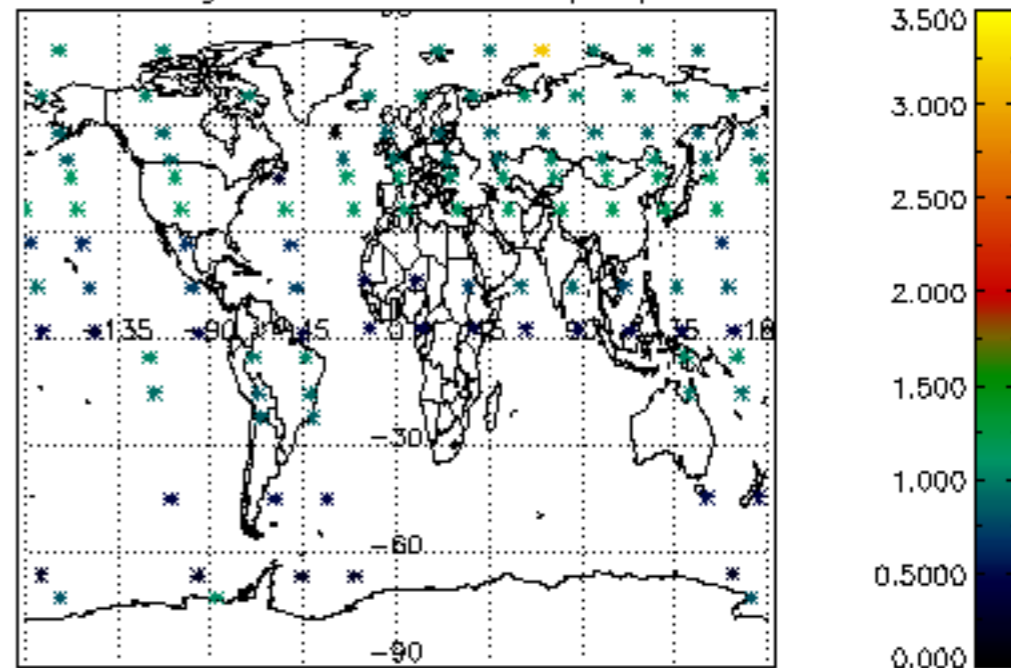




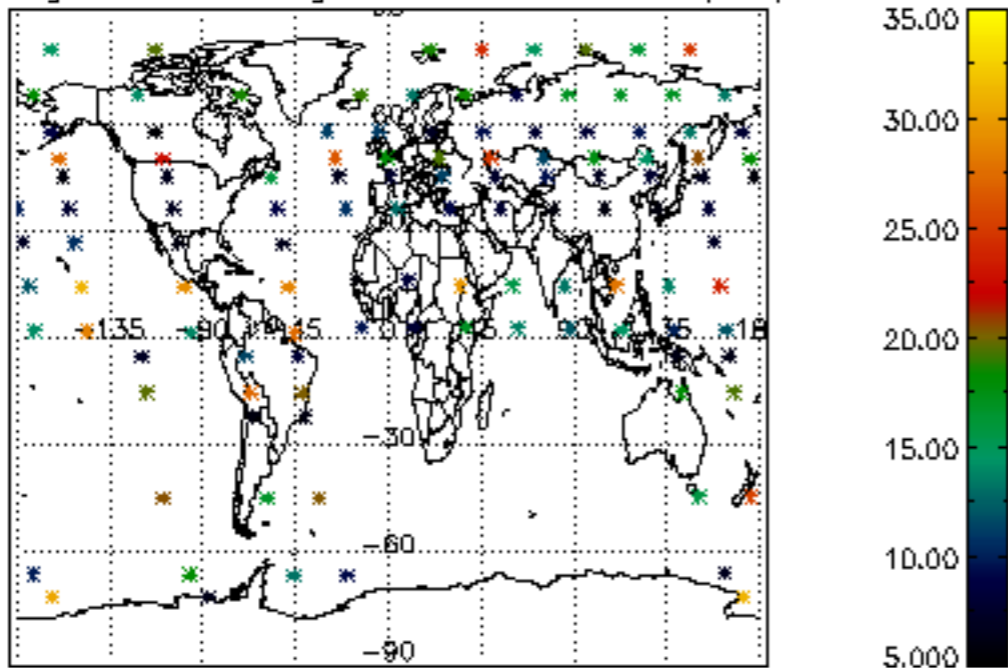
Percentage of cosmic ray hits per profile



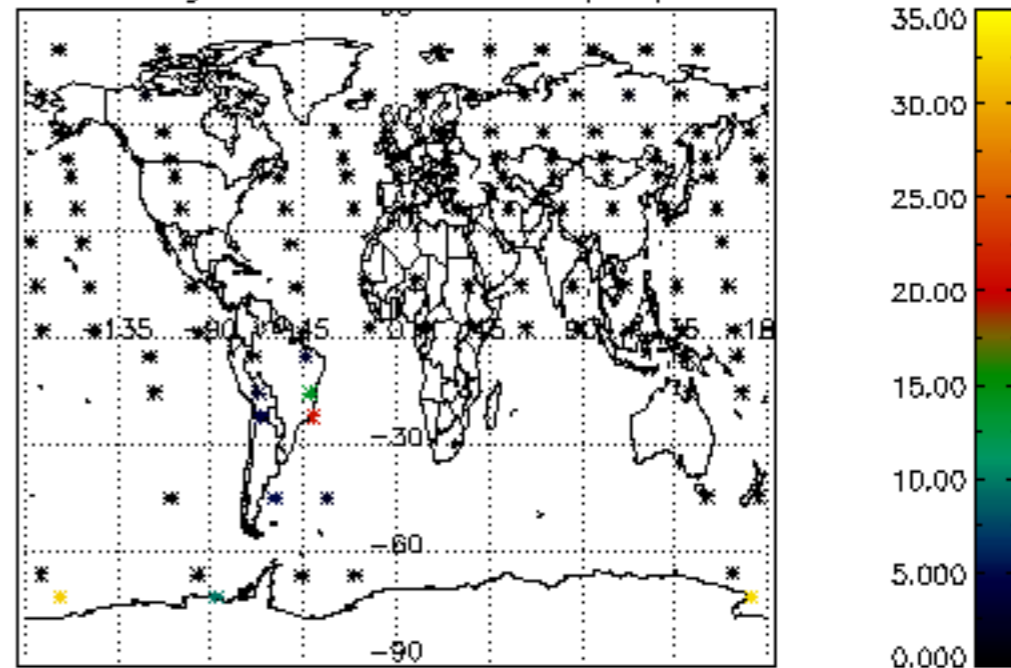
Percentage of datation errors per profile



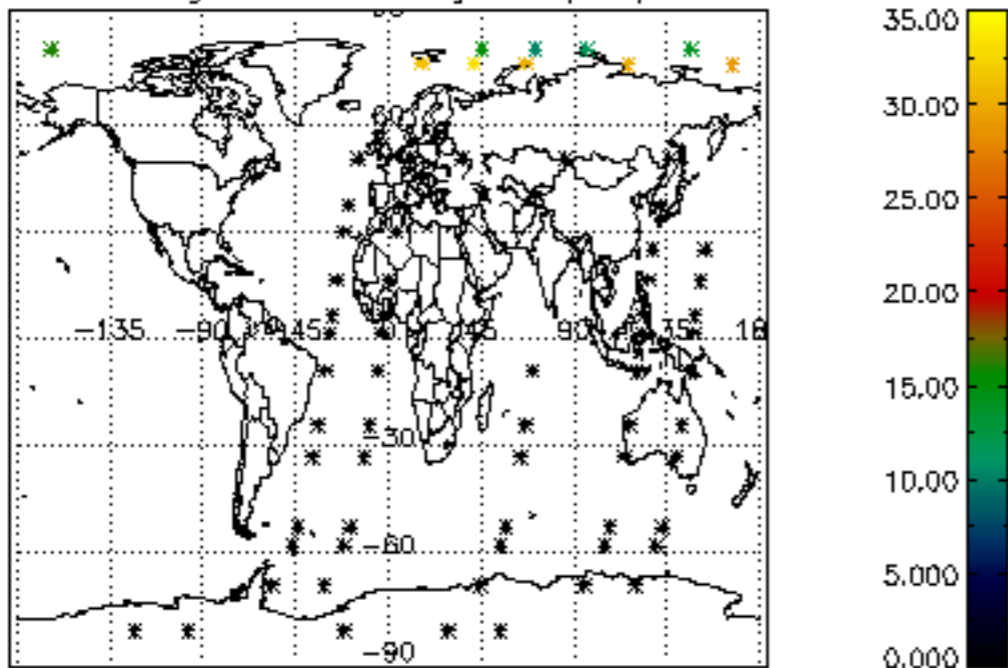
Percentage of star falling outside central band per profile



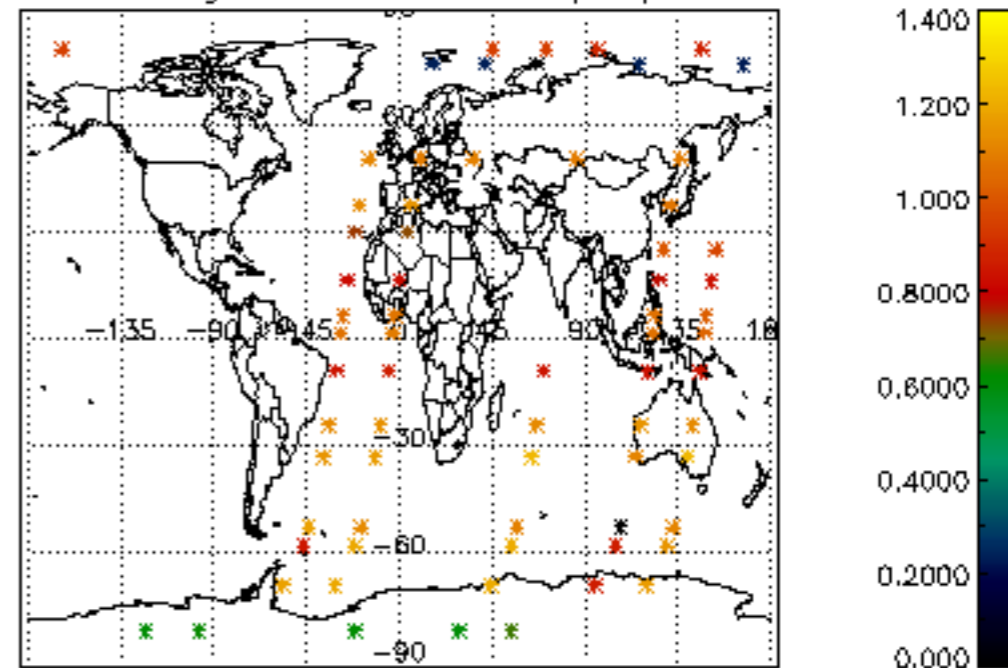
Percentage of saturation errors per profile



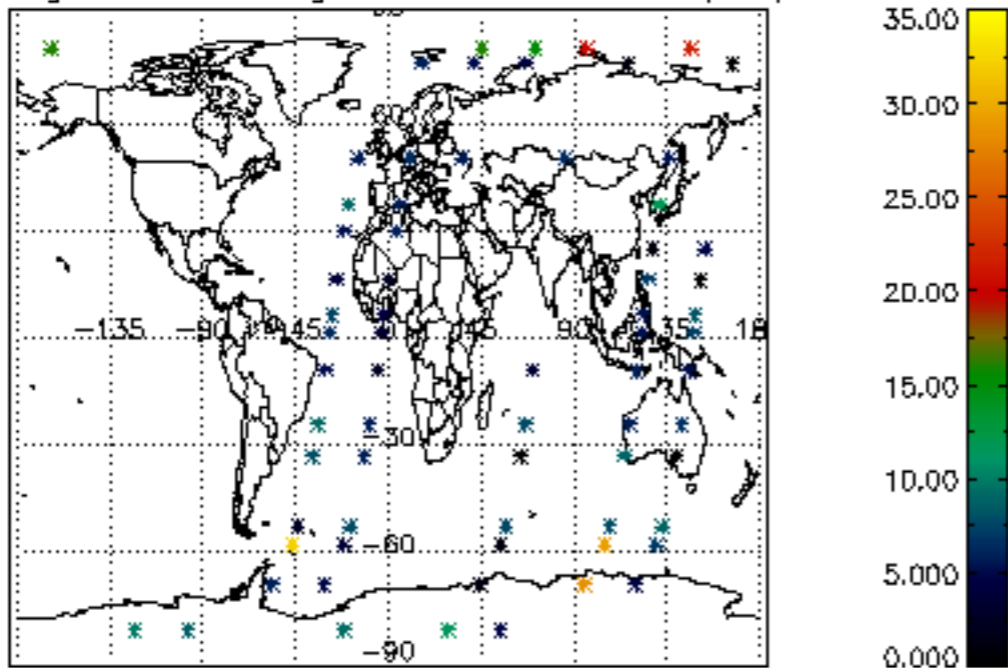
Percentage of cosmic ray hits per profile



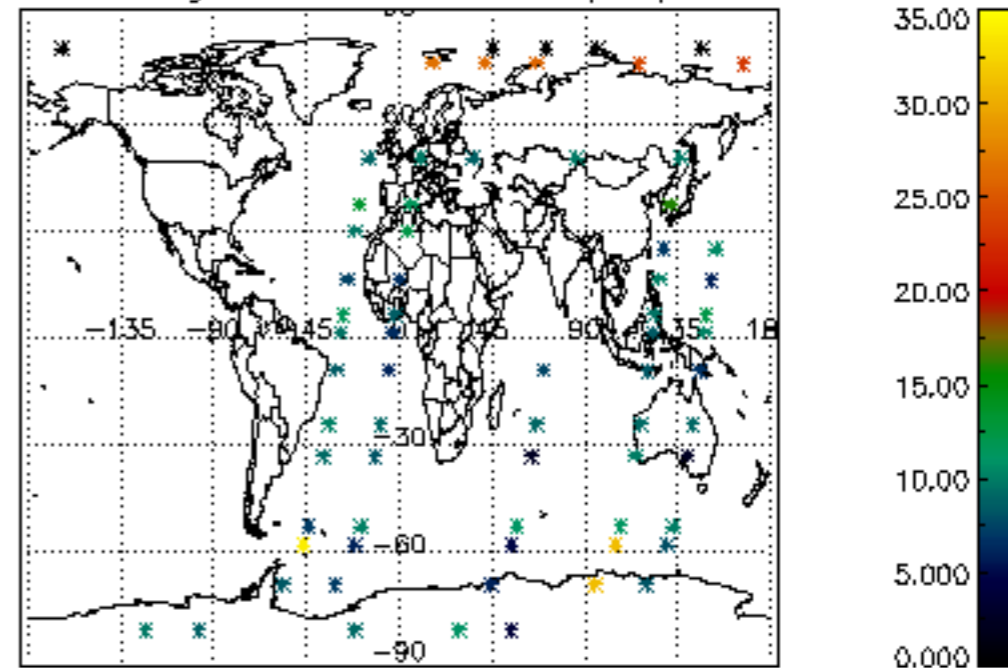
Percentage of datation errors per profile

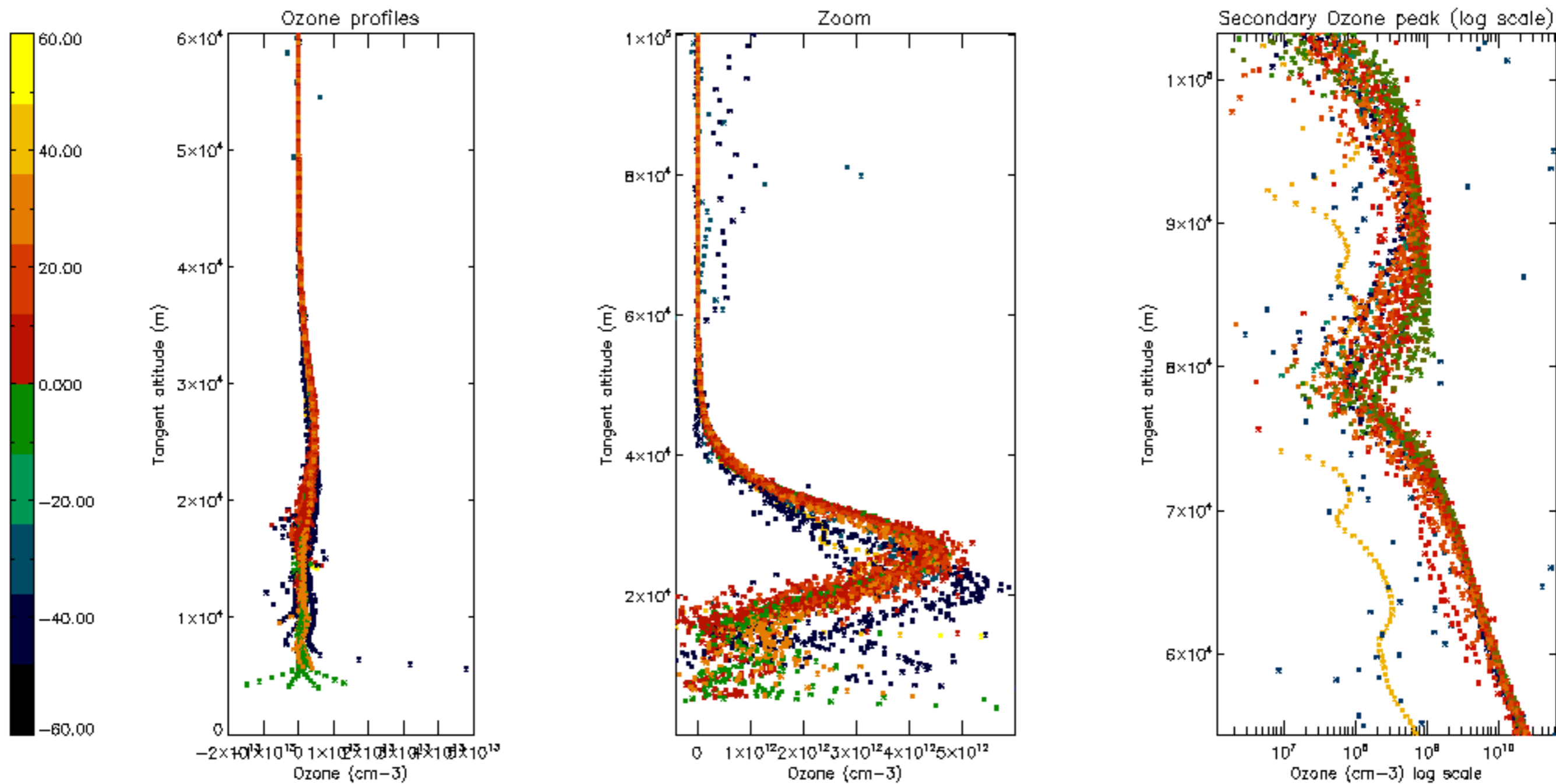


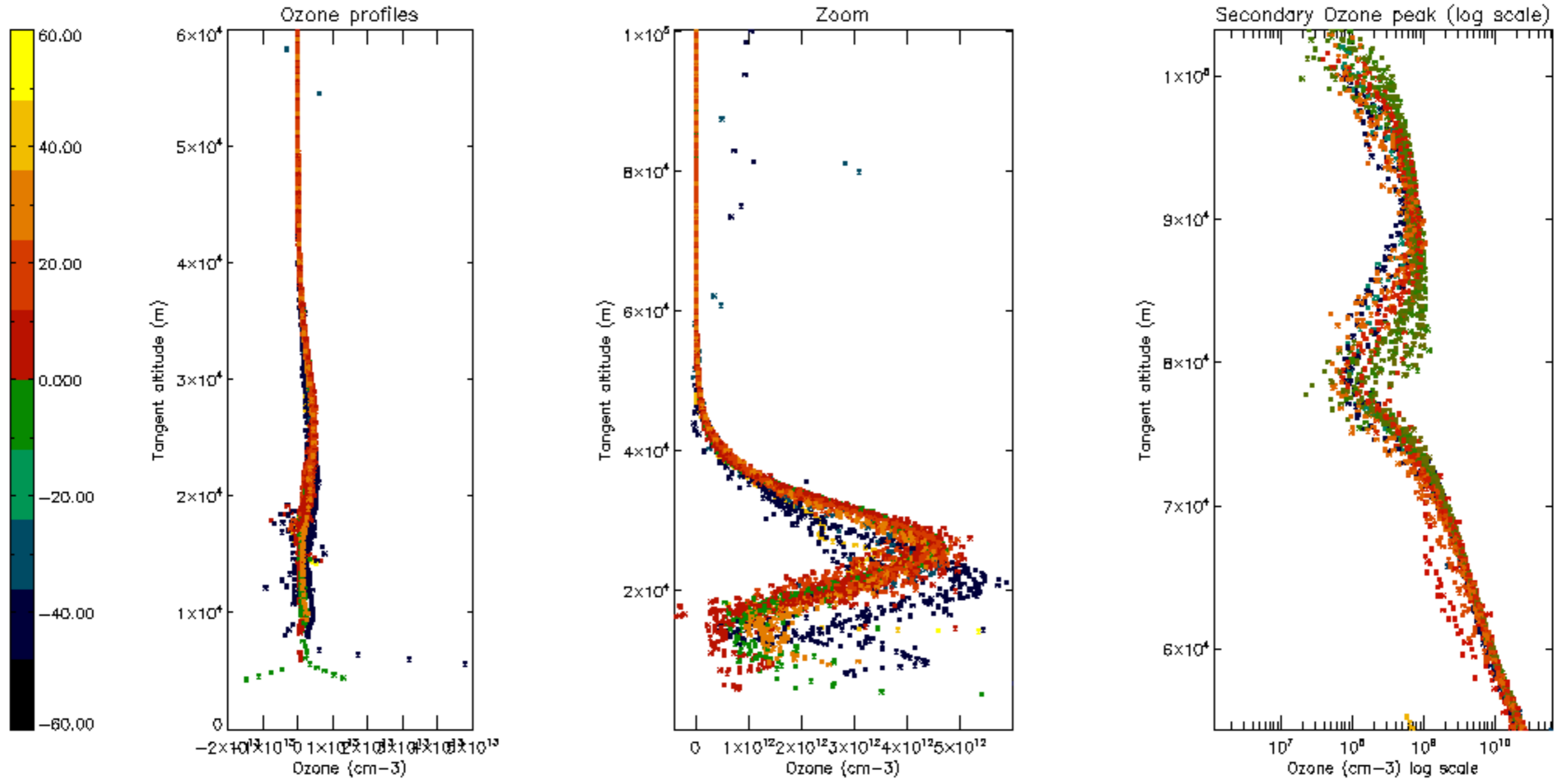
Percentage of star falling outside central band per profile

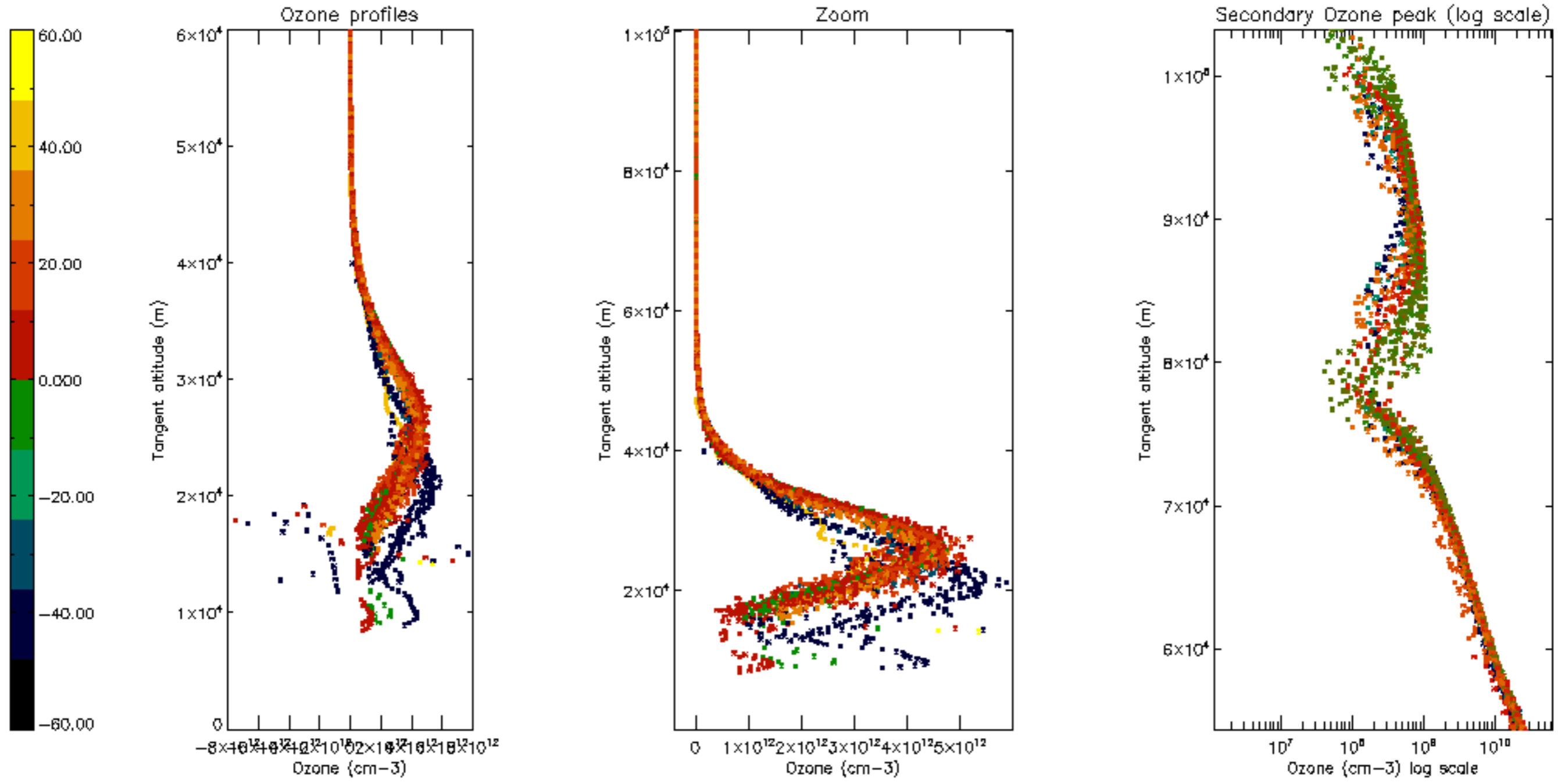


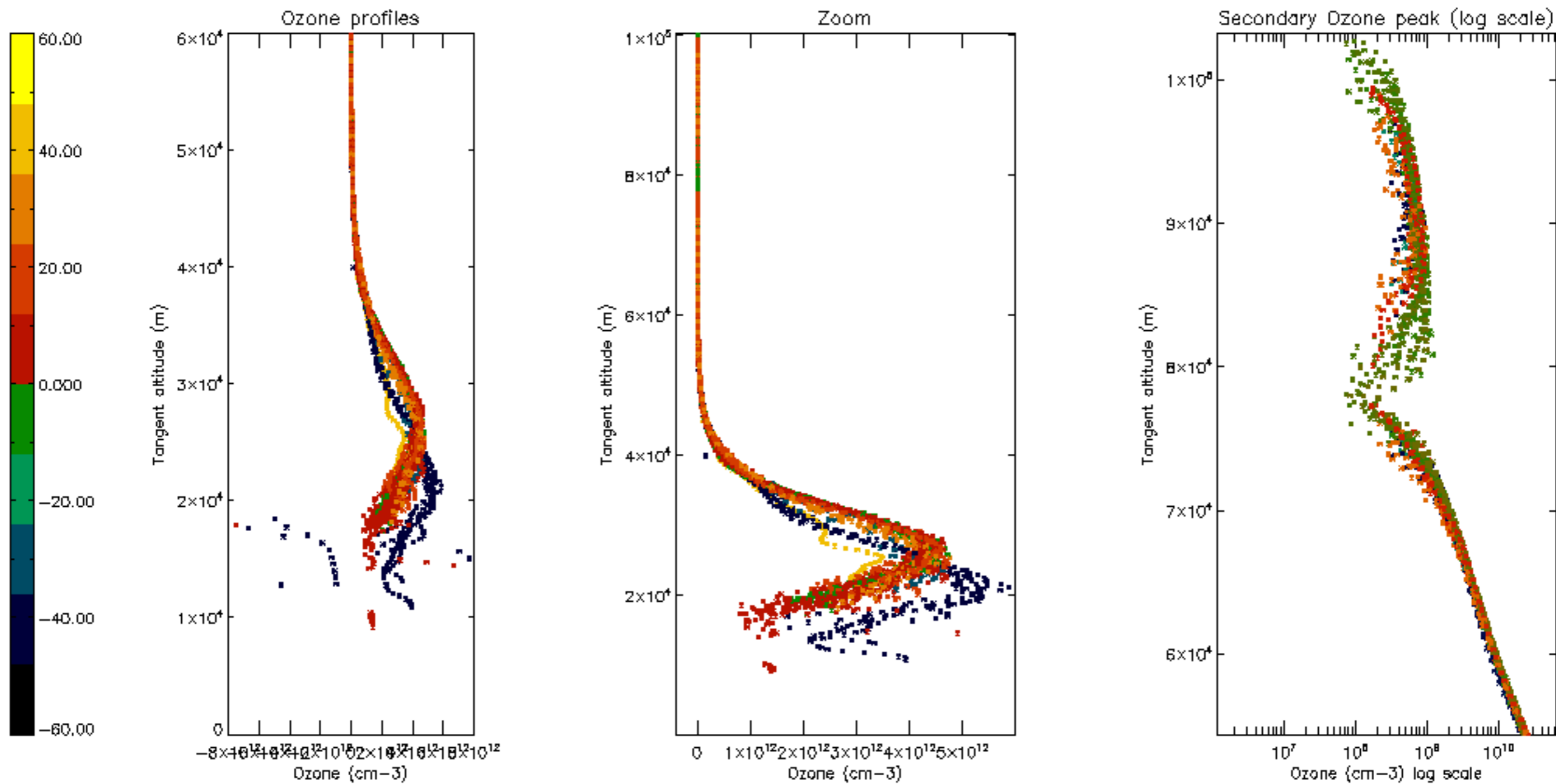
Percentage of saturation errors per profile

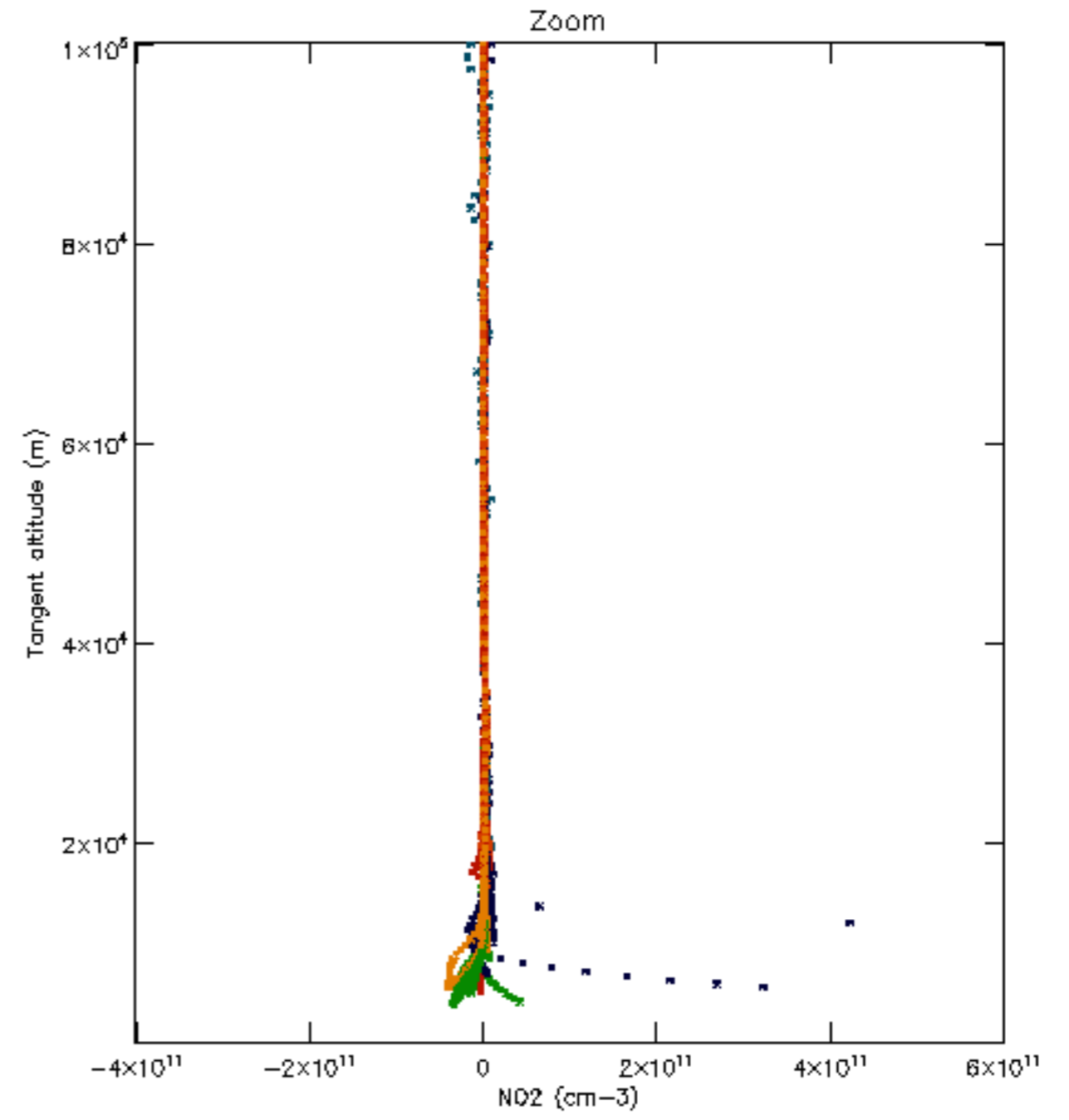
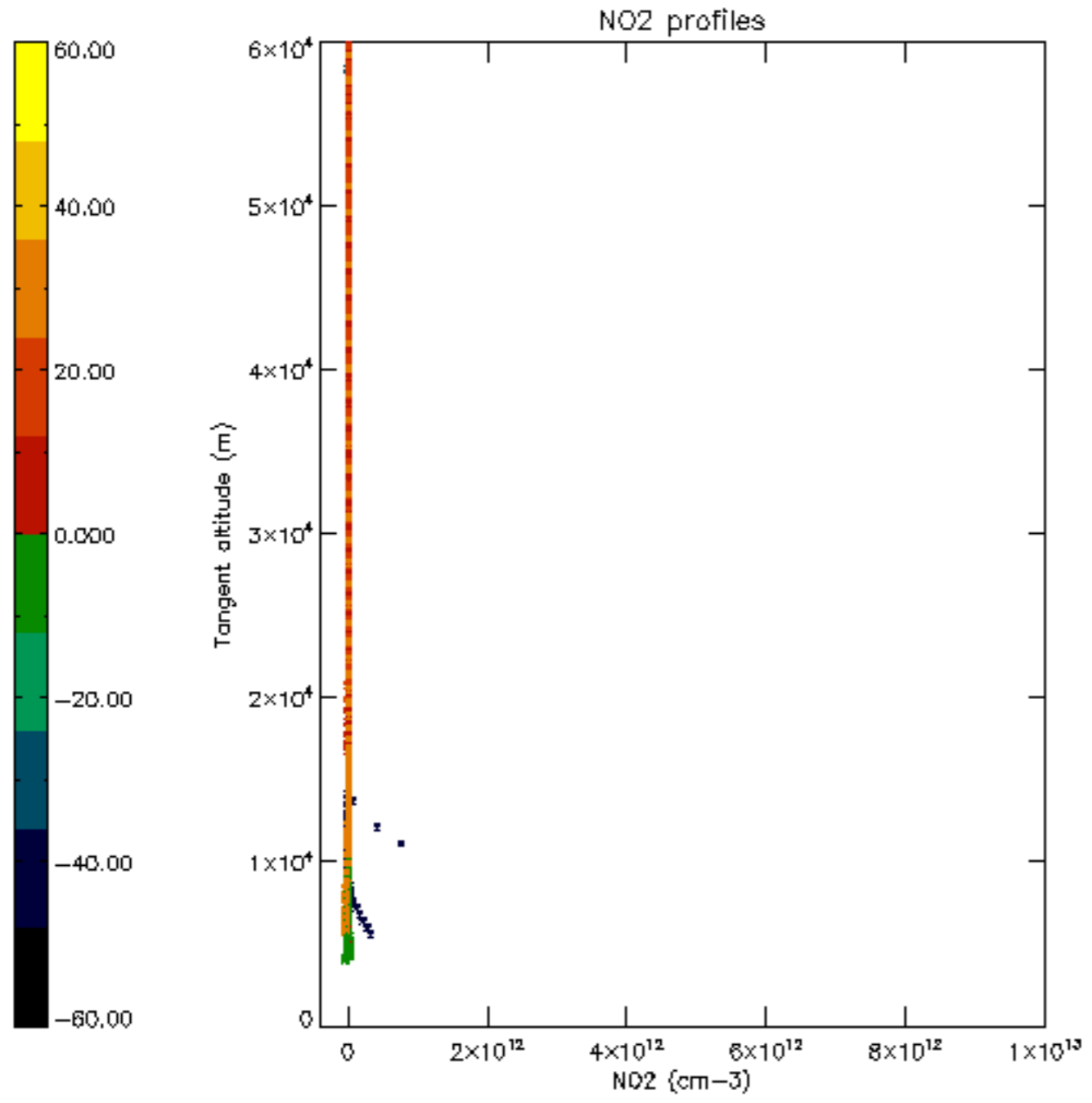


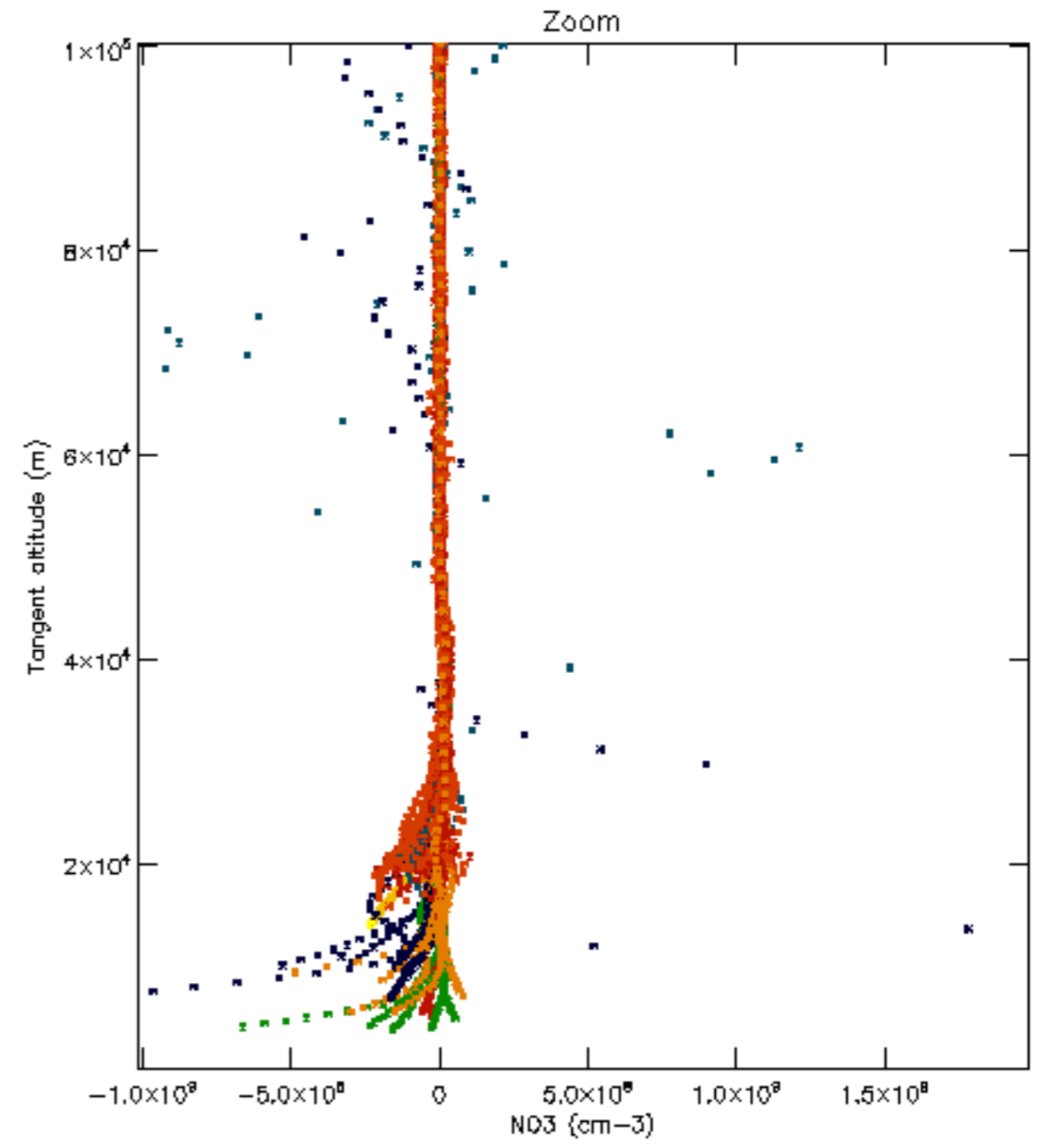
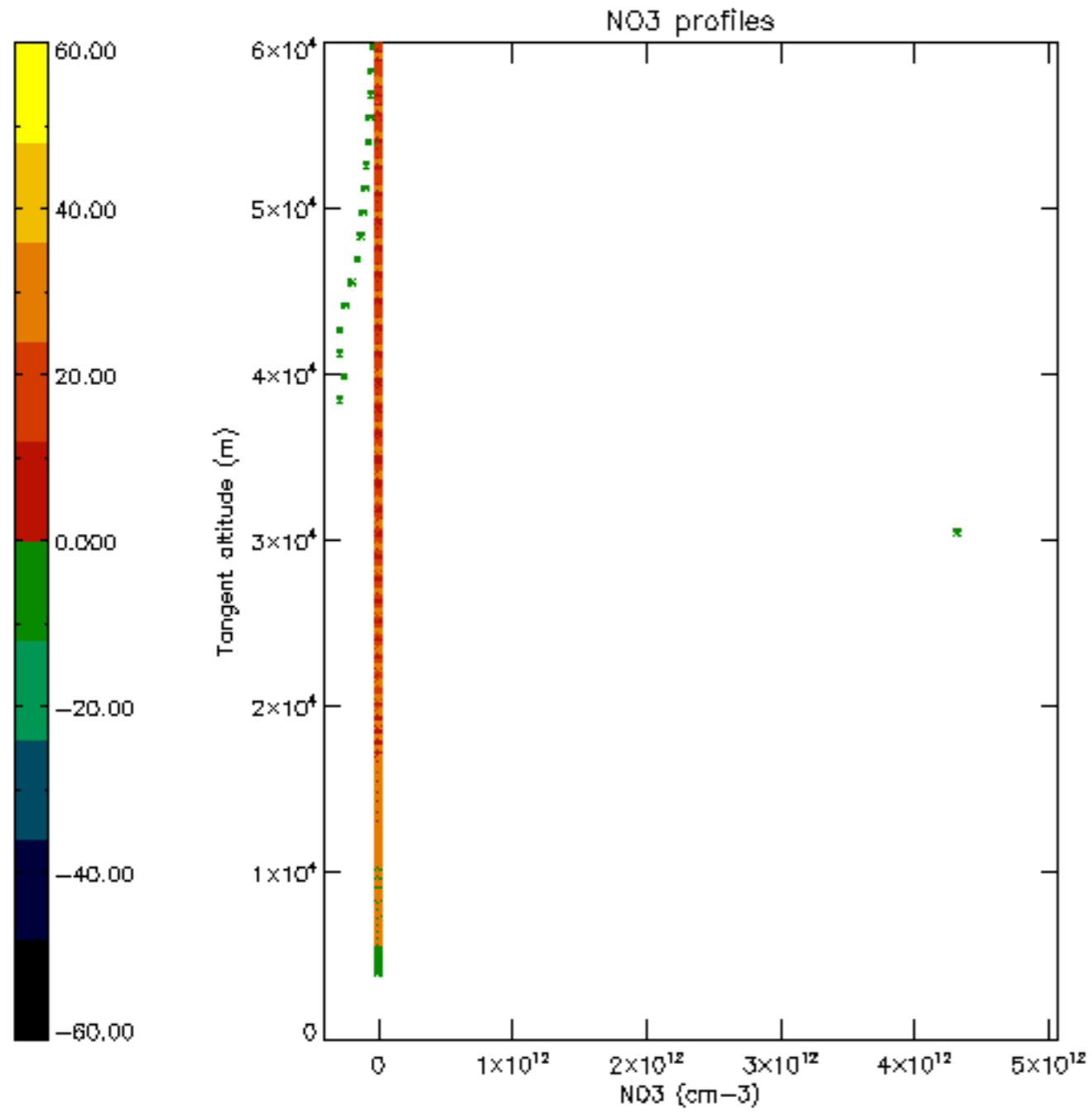




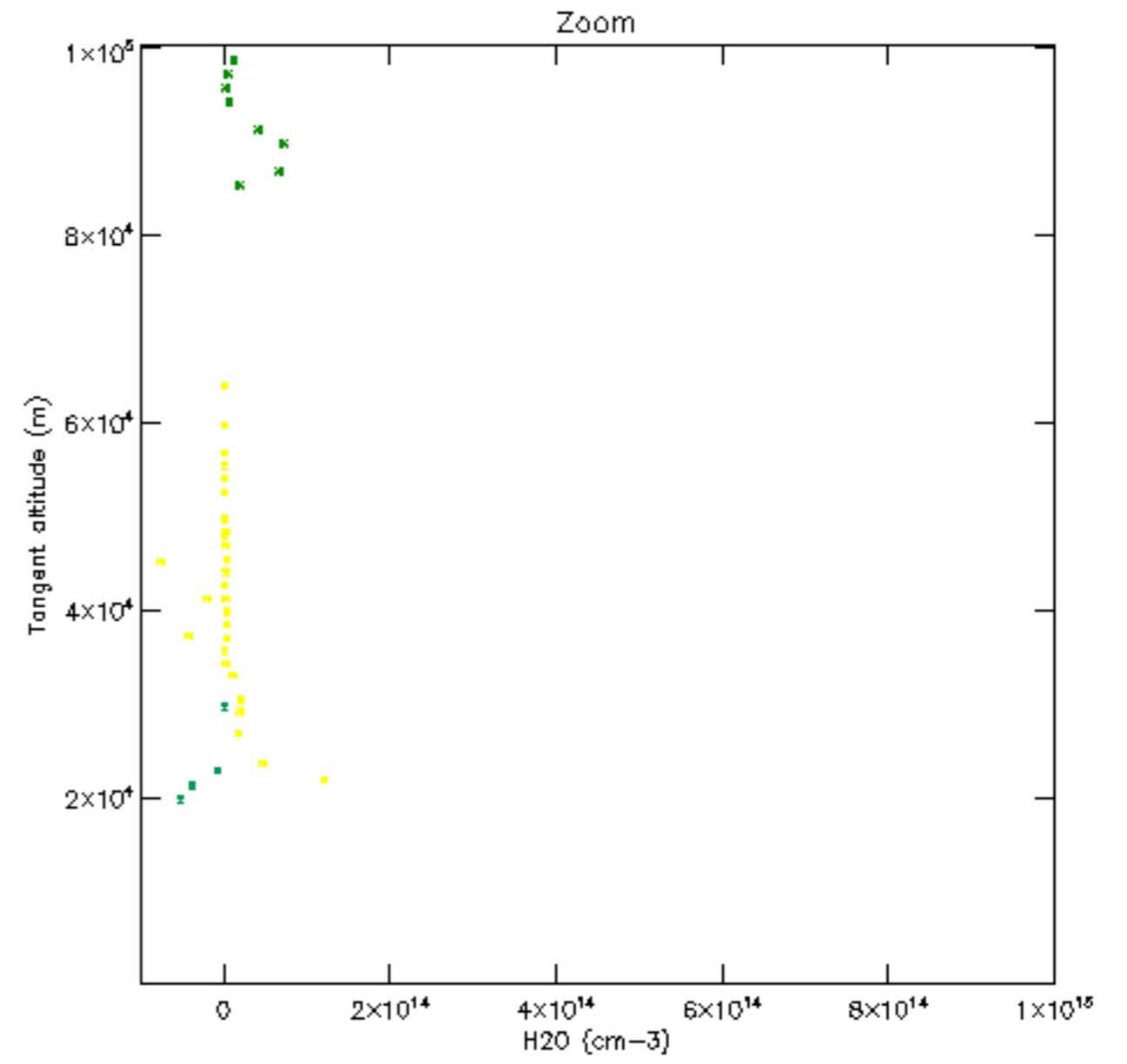
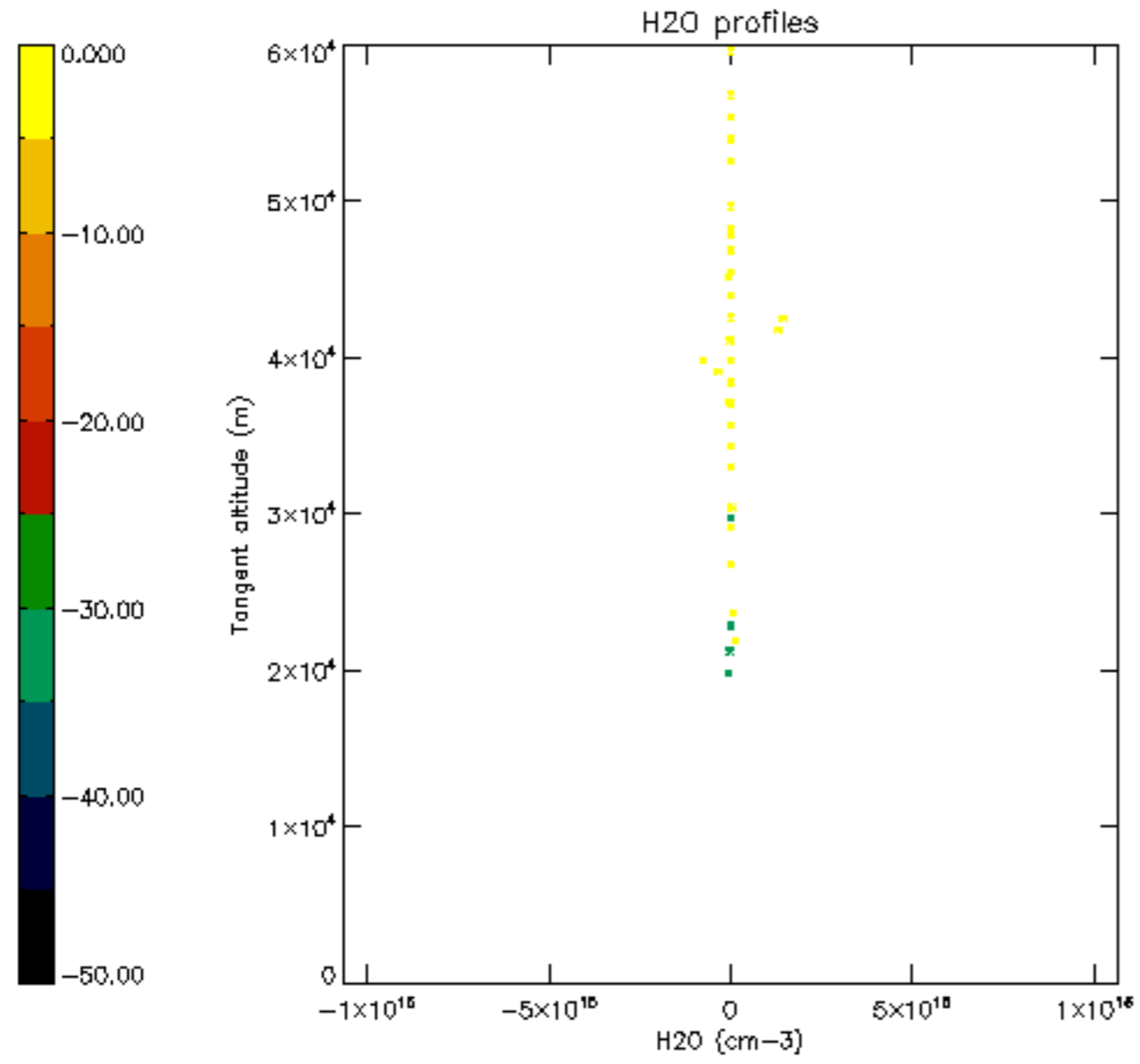


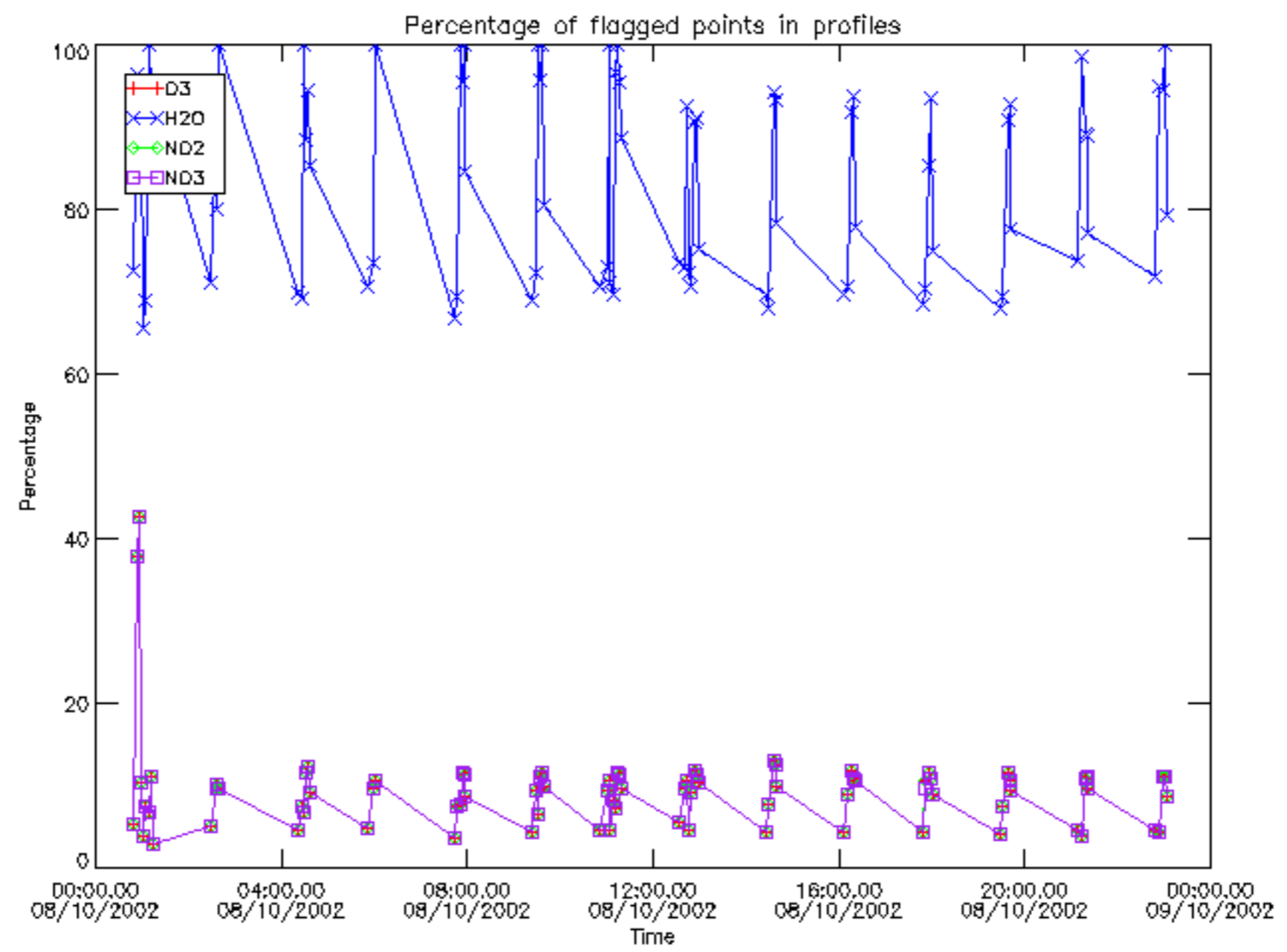




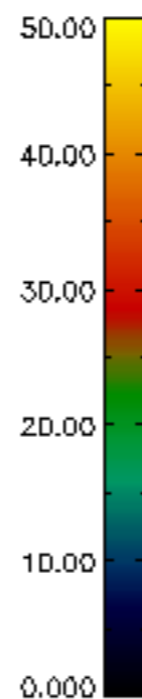
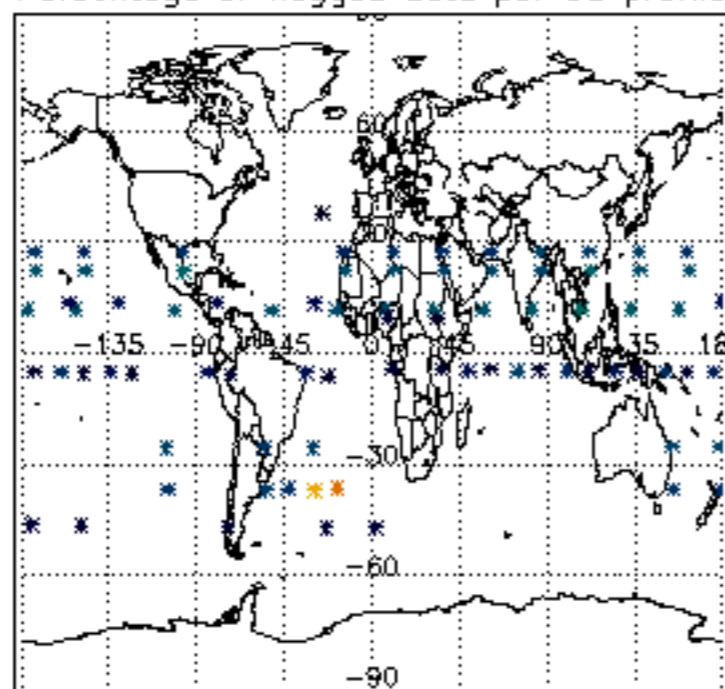




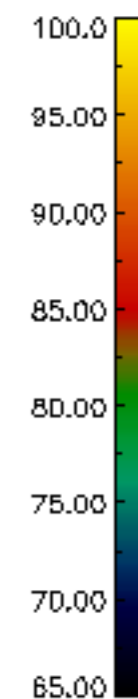
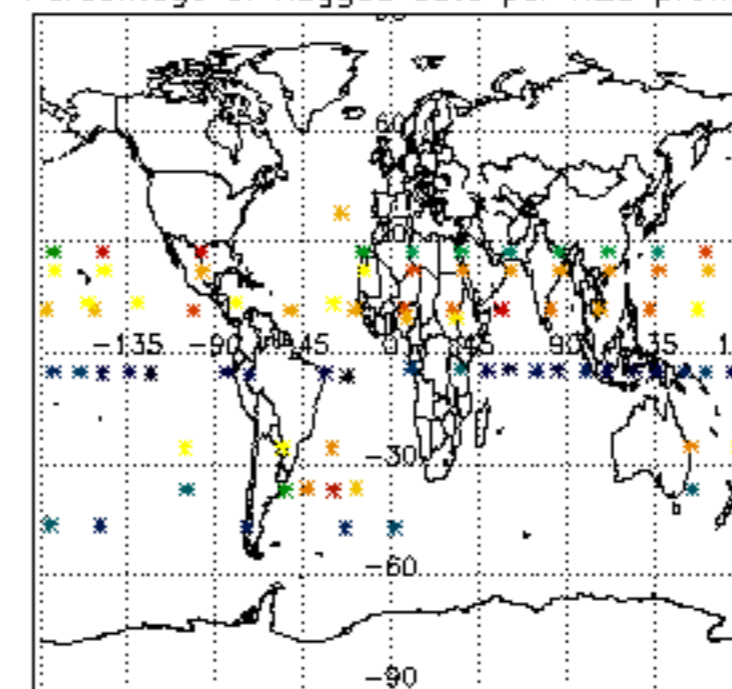




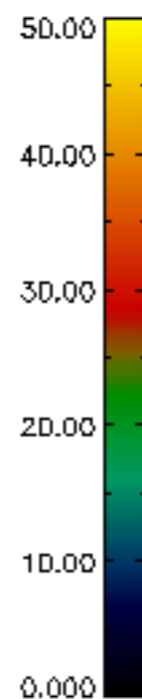
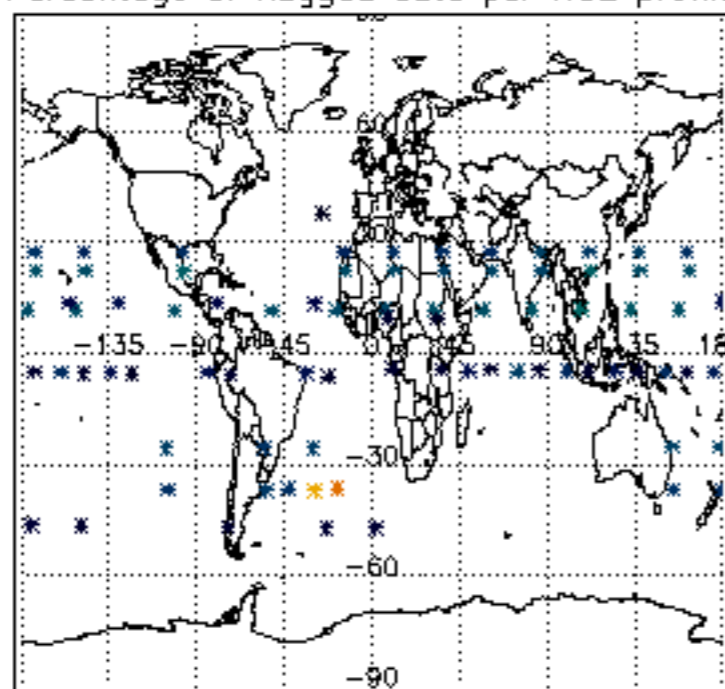
Percentage of flagged data per D3 profile



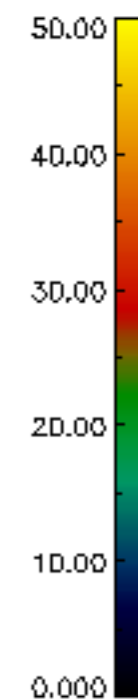
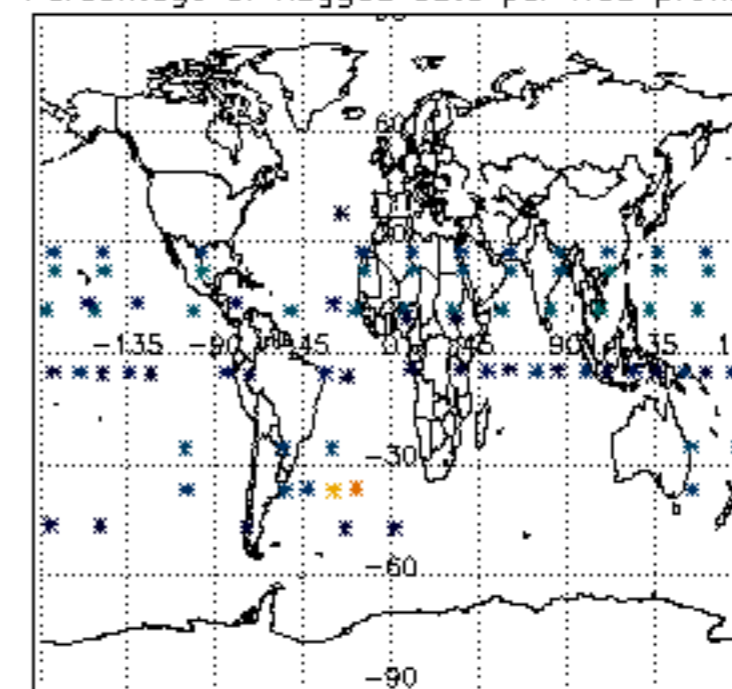
Percentage of flagged data per H2O profile

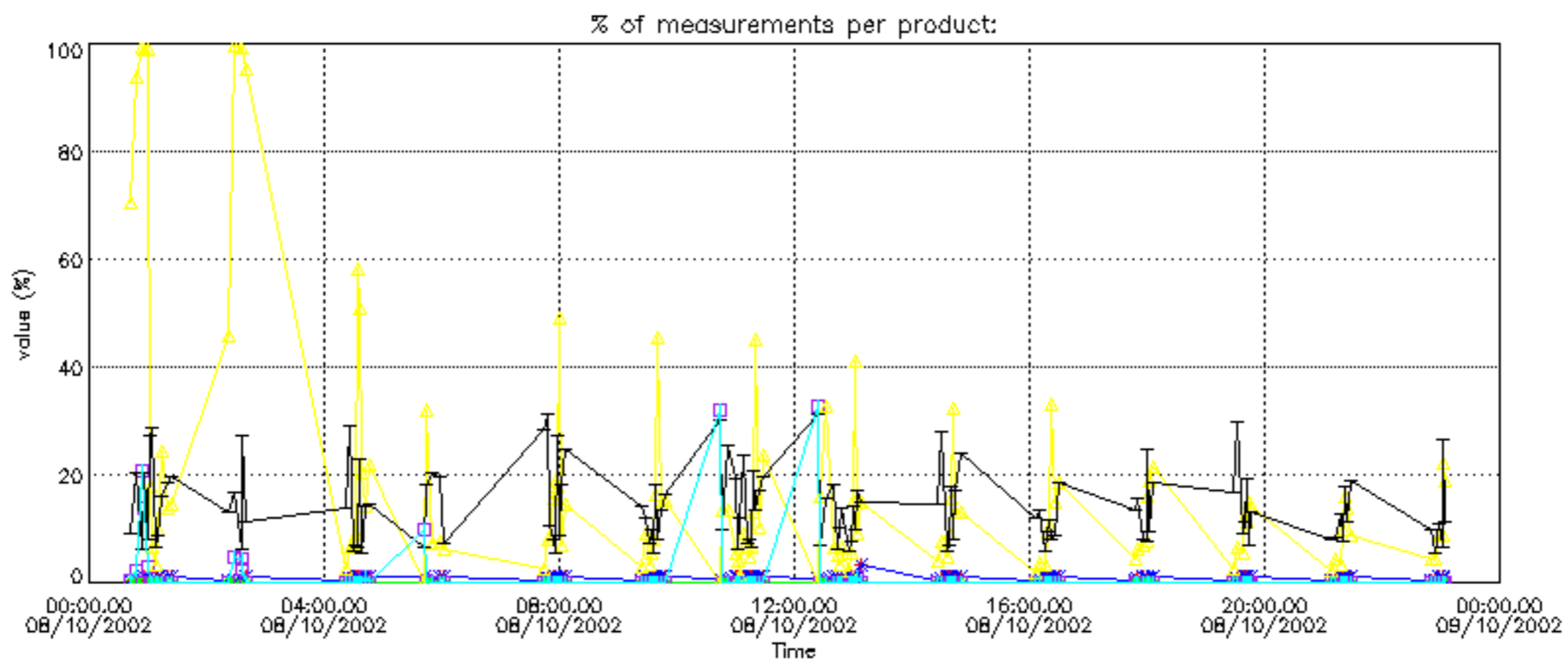


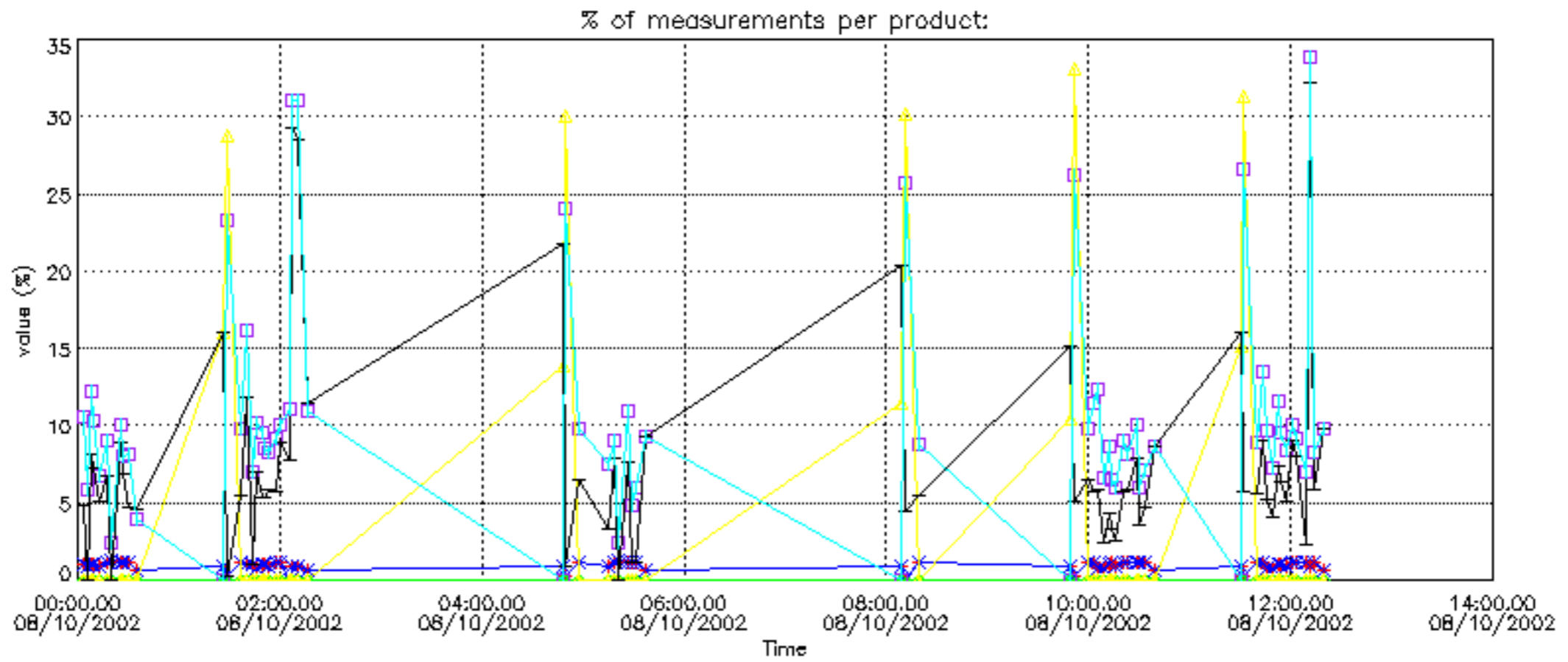
Percentage of flagged data per NO2 profile



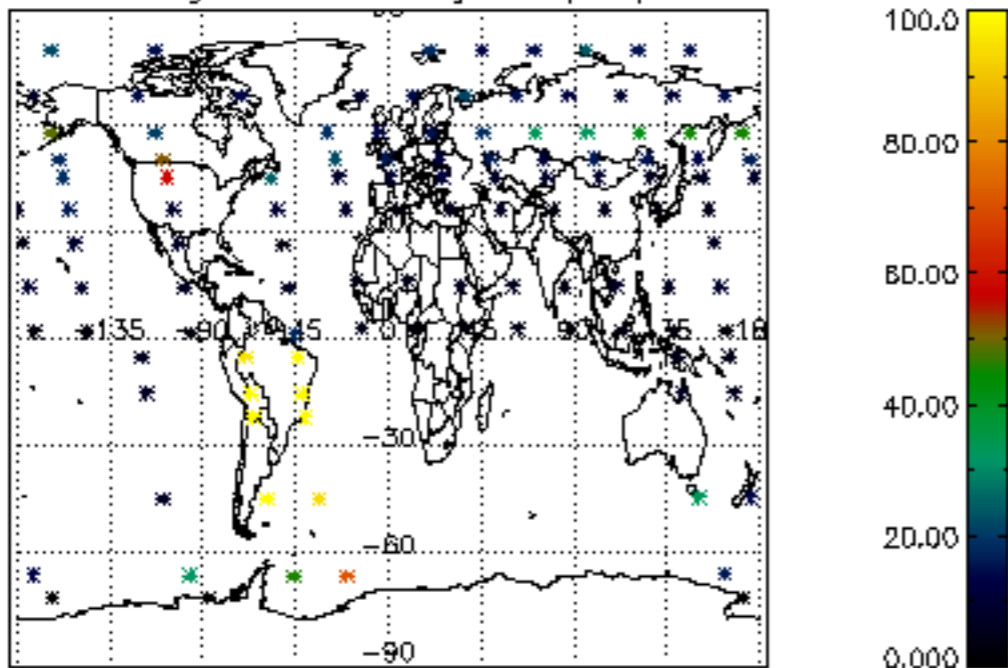
Percentage of flagged data per NO3 profile



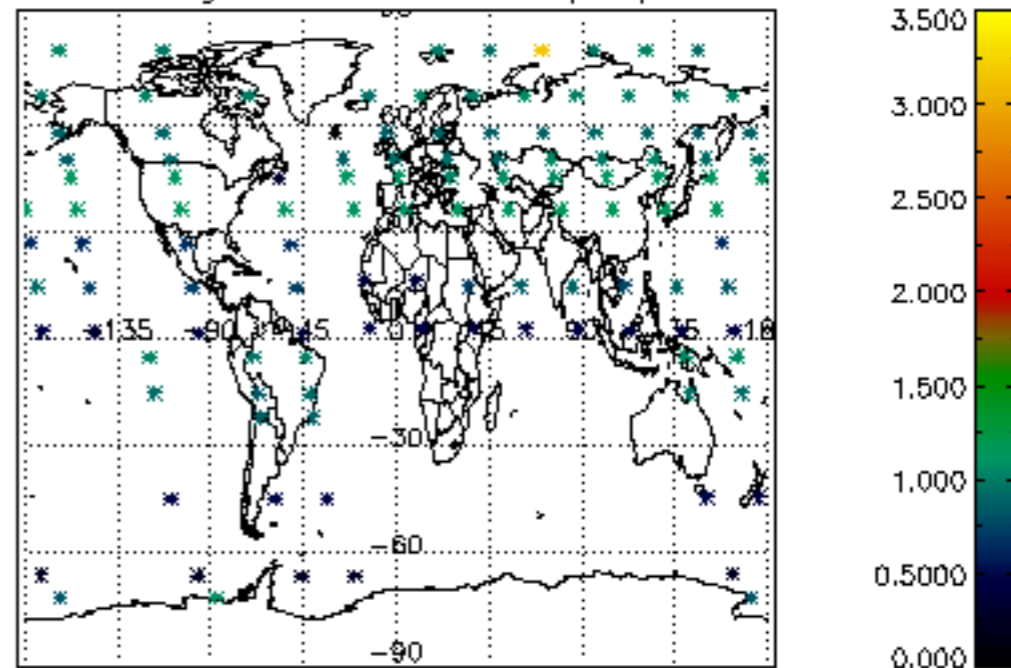




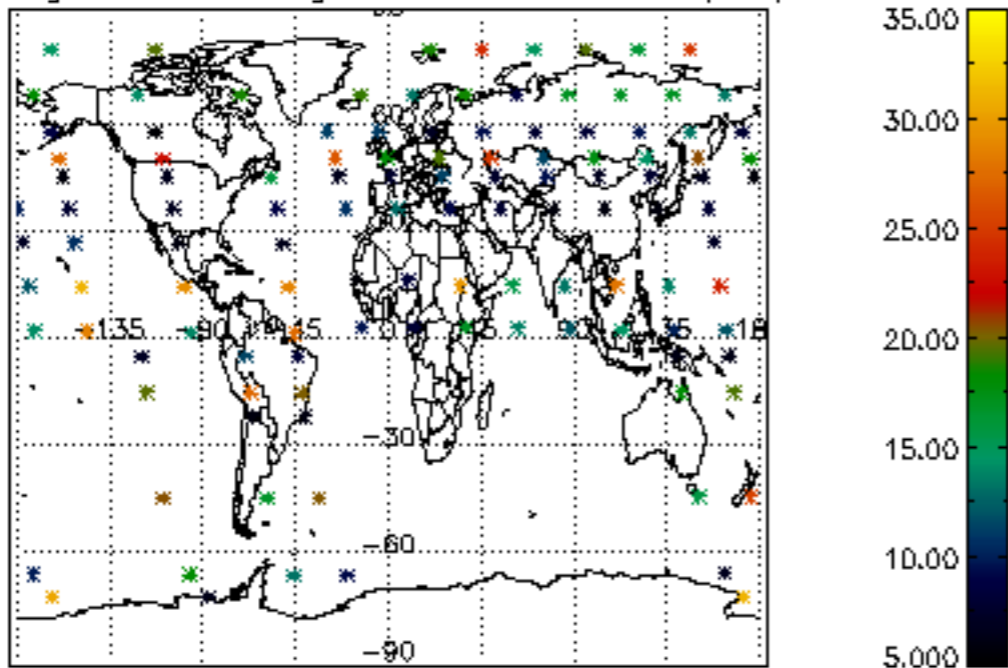
Percentage of cosmic ray hits per profile



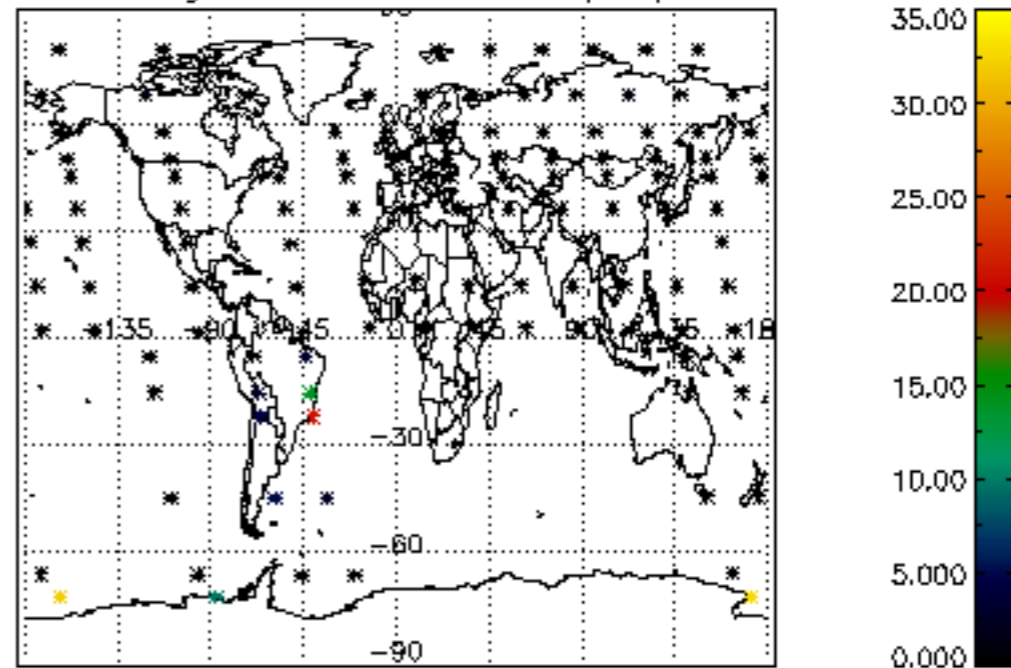
Percentage of datation errors per profile



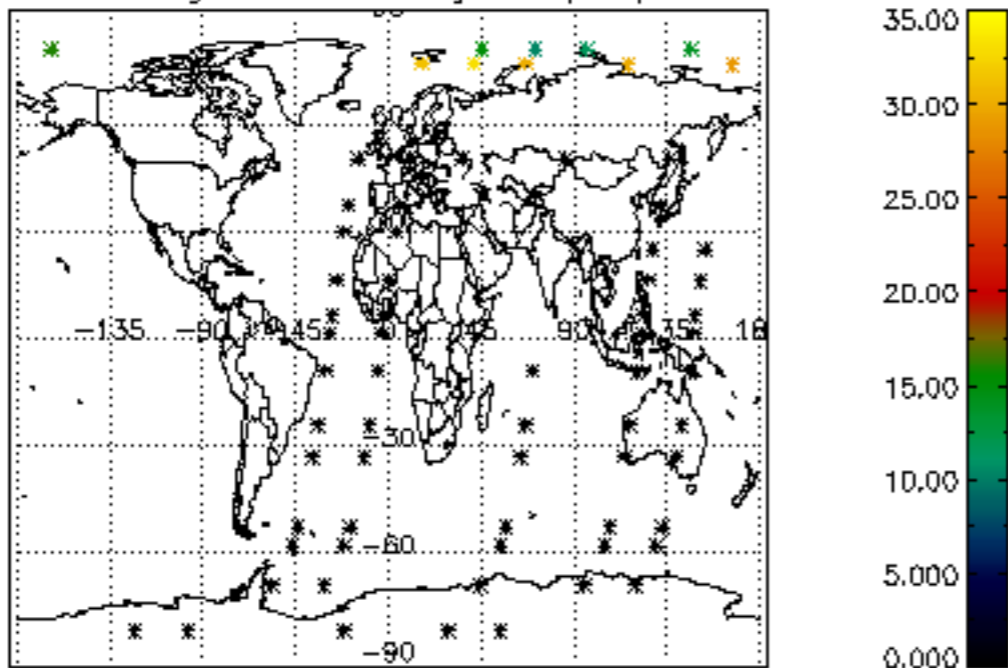
Percentage of star falling outside central band per profile



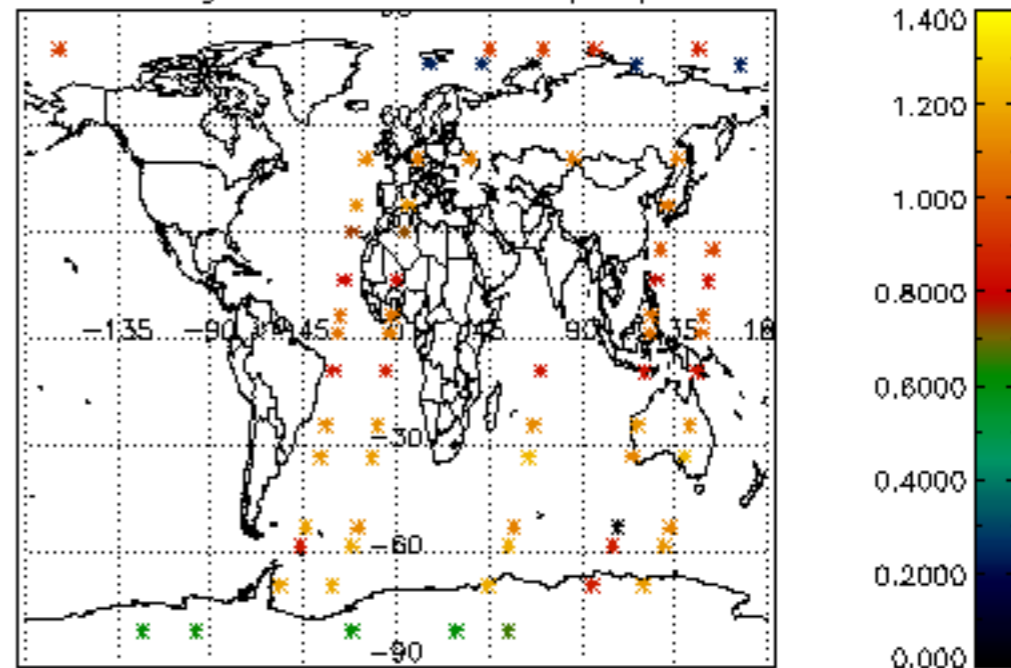
Percentage of saturation errors per profile



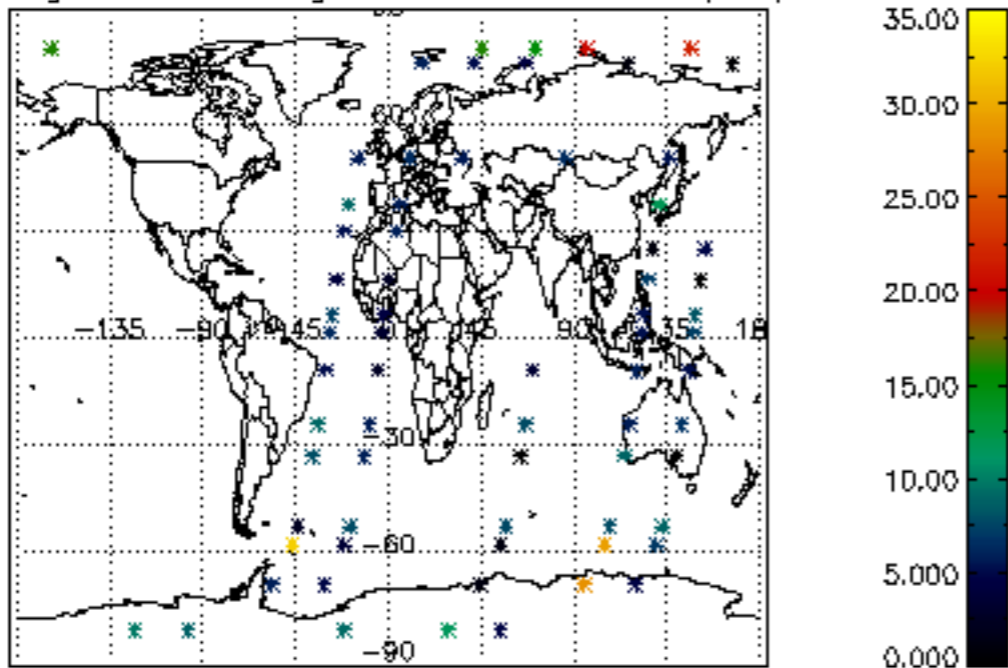
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

