

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [3.2 Plot of level 2 quality information per product \(world map\)](#)

### [4. Level 1 Quality information per product \(stored on level 2 products\)](#)

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

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

##### [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](#)

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

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

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

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

#### [5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

#### [5.4. Plot ozone profiles where STD < 10% \(dark without errors\)](#)

#### [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 19:39:02
Data source version	GOMOS/6.01
Start time of products	23-10-2002 (23OCT2002 00:00:00)
Stop time of products	24-10-2002 (24OCT2002 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	123
Nb of prods with errors	29

## 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__2PRFIN20021023_002705_000000502010_00317_03377_2741.N1	23-OCT-2002 00:27:05	Bright	50.000	105	6Bet Ari	2.6450	8900.0	100	3377	No
2	GOM_NL__2PRFIN20021023_002847_000000452010_00317_03377_2742.N1	23-OCT-2002 00:28:47	Bright	44.500	58	21Alp And	2.0730	11000.	89	3377	No
3	GOM_NL__2PRFIN20021023_003049_000000472010_00317_03377_2743.N1	23-OCT-2002 00:30:49	Bright	47.000	53	43Bet And	2.0480	3300.0	94	3377	No
4	GOM_NL__2PRFIN20021023_003349_000000502010_00317_03377_2744.N1	23-OCT-2002 00:33:49	Bright	50.000	73	57Gam1And	2.2600	13100.	100	3377	No
5	GOM_NL__2PRFIN20021023_003632_000000452010_00317_03377_2745.N1	23-OCT-2002 00:36:32	Bright	45.000	68	18Alp Cas	2.2250	4500.0	90	3377	No
6	GOM_NL__2PRFIN20021023_003750_000000462010_00317_03377_2746.N1	23-OCT-2002 00:37:50	Bright	45.500	76	27Gam Cas	2.3000	30000.	91	3377	No
7	GOM_NL__2PRFIN20021023_004013_000000452010_00317_03377_2747.N1	23-OCT-2002 00:40:13	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	3377	No
8	GOM_NL__2PRFIN20021023_004545_000000442010_00317_03377_2748.N1	23-OCT-2002 00:45:45	Bright	44.000	49	1Alp UMi	1.9900	6300.0	88	3377	No
9	GOM_NL__2PRFIN20021023_005359_000000472010_00317_03377_2749.N1	23-OCT-2002 00:53:59	Bright	46.500	36	50Alp UMa	1.8000	6300.0	93	3377	No
10	GOM_NL__2PRFIN20021023_005533_000000472010_00317_03377_2750.N1	23-OCT-2002 00:55:33	Bright	47.000	82	48Bet UMa	2.3650	10600.	94	3377	No
11	GOM_NL__2PRFIN20021023_005904_000000452010_00317_03377_2751.N1	23-OCT-2002 00:59:04	Bright	44.500	174	52Psi UMa	3.0040	4400.0	89	3377	No
12	GOM_NL__2PRFIN20021023_010741_000001912010_00317_03377_2752.N1	23-OCT-2002 01:07:41	Twilight	191.00	17	78Bet Gem	1.1610	4500.0	382	3377	No
13	GOM_NL__2PRFIN20021023_011753_000000702010_00317_03377_2753.N1	23-OCT-2002 01:17:53	Dark	70.000	48	30Alp Hya	1.9770	4100.0	140	3377	No
14	GOM_NL__2PRFIN20021023_012539_000000472010_00317_03377_2754.N1	23-OCT-2002 01:25:39	Dark	46.500	113	Mu Vel	2.6920	5000.0	93	3377	No
15	GOM_NL__2PRFIN20021023_012712_000000572010_00317_03377_2755.N1	23-OCT-2002 01:27:12	Dark	56.500	65	Lam Vel	2.2040	4400.0	113	3377	No
16	GOM_NL__2PRFIN20021023_013205_000000472010_00318_03378_2739.N1	23-OCT-2002 01:32:05	Dark	47.000	29	Bet Car	1.6720	10200.	94	3378	No
17	GOM_NL__2PRFIN20021023_013615_000000582010_00318_03378_2740.N1	23-OCT-2002 01:36:15	Dark	57.500	2	Alp Car	-0.73600	7000.0	115	3378	No
18	GOM_NL__2PRFIN20021023_014125_000002232010_00318_03378_2741.N1	23-OCT-2002 01:41:25	Dark	223.00	1	9Alp CMa	-1.4400	11000.	446	3378	No
19	GOM_NL__2PRFIN20021023_014727_000000522010_00318_03378_2742.N1	23-OCT-2002 01:47:27	Straylight	52.000	157	The1Eri	2.9060	9300.0	104	3378	No
20	GOM_NL__2PRFIN20021023_014916_000001612010_00318_03378_2743.N1	23-OCT-2002 01:49:16	Straylight	161.00	139	9Bet Lep	2.8330	5600.0	322	3378	No
21	GOM_NL__2PRFIN20021023_015559_000000522010_00318_03378_2744.N1	23-OCT-2002 01:55:59	Straylight	52.000	52	16Bet Cet	2.0370	4500.0	104	3378	No
22	GOM_NL__2PRFIN20021023_020529_000000432010_00318_03378_2745.N1	23-OCT-2002 02:05:29	Bright	43.000	140	88Gam Peg	2.8340	26000.	86	3378	No
23	GOM_NL__2PRFIN20021023_020741_000000502010_00318_03378_2746.N1	23-OCT-2002 02:07:41	Bright	50.000	105	6Bet Ari	2.6450	8900.0	100	3378	No
24	GOM_NL__2PRFIN20021023_020923_000000442010_00318_03378_2747.N1	23-OCT-2002 02:09:23	Bright	43.500	58	21Alp And	2.0730	11000.	87	3378	No
25	GOM_NL__2PRFIN20021023_021125_000000492010_00318_03378_2748.N1	23-OCT-2002 02:11:25	Bright	49.000	53	43Bet And	2.0480	3300.0	98	3378	No
26	GOM_NL__2PRFIN20021023_021425_000000522010_00318_03378_2749.N1	23-OCT-2002 02:14:25	Bright	52.000	73	57Gam1And	2.2600	13100.	104	3378	No
27	GOM_NL__2PRFIN20021023_021708_000000462010_00318_03378_2750.N1	23-OCT-2002 02:17:08	Bright	45.500	68	18Alp Cas	2.2250	4500.0	91	3378	No
28	GOM_NL__2PRFIN20021023_021826_000000452010_00318_03378_2751.N1	23-OCT-2002 02:18:26	Bright	45.000	76	27Gam Cas	2.3000	30000.	90	3378	No
29	GOM_NL__2PRFIN20021023_022049_000000452010_00318_03378_2752.N1	23-OCT-2002 02:20:49	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	3378	No
30	GOM_NL__2PRFIN20021023_022620_000000452010_00318_03378_2753.N1	23-OCT-2002 02:26:20	Bright	45.000	49	1Alp UMi	1.9900	6300.0	90	3378	No
31	GOM_NL__2PRFIN20021023_023434_000000462010_00318_03378_2754.N1	23-OCT-2002 02:34:34	Bright	45.500	36	50Alp UMa	1.8000	6300.0	91	3378	No
32	GOM_NL__2PRFIN20021023_023609_000000472010_00318_03378_2755.N1	23-OCT-2002 02:36:09	Bright	46.500	82	48Bet UMa	2.3650	10600.	93	3378	No
33	GOM_NL__2PRFIN20021023_023939_000000472010_00318_03378_2756.N1	23-OCT-2002 02:39:39	Bright	46.500	174	52Psi UMa	3.0040	4400.0	93	3378	No
34	GOM_NL__2PRFIN20021023_024817_000001792010_00318_03378_2757.N1	23-OCT-2002 02:48:17	Twilight	178.50	17	78Bet Gem	1.1610	4500.0	357	3378	No
35	GOM_NL__2PRFIN20021023_025828_000000712010_00318_03378_2758.N1	23-OCT-2002 02:58:28	Dark	70.500	48	30Alp Hya	1.9770	4100.0	141	3378	No
36	GOM_NL__2PRFIN20021023_030615_000000492010_00318_03378_2759.N1	23-OCT-2002 03:06:15	Dark	48.500	113	Mu Vel	2.6920	5000.0	97	3378	No
37	GOM_NL__2PRFIN20021023_030748_000000562010_00318_03378_2760.N1	23-OCT-2002 03:07:48	Dark	55.500	65	Lam Vel	2.2040	4400.0	111	3378	No
38	GOM_NL__2PRFIN20021023_045353_000000782010_00320_03380_2737.N1	23-OCT-2002 04:53:53	Dark	78.000	88	31Eta CMa	2.4480	20000.	156	3380	No
39	GOM_NL__2PRFIN20021023_045728_000000582010_00320_03380_2738.N1	23-OCT-2002 04:57:28	Dark	57.500	2	Alp Car	-0.73600	7000.0	115	3380	No
40	GOM_NL__2PRFIN20021023_050245_000002222010_00320_03380_2739.N1	23-OCT-2002 05:02:45	Dark	222.00	1	9Alp CMa	-1.4400	11000.	444	3380	No
41	GOM_NL__2PRFIN20021023_050840_000000552010_00320_03380_2740.N1	23-OCT-2002 05:08:40	Straylight	54.500	157	The1Eri	2.9060	9300.0	109	3380	No
42	GOM_NL__2PRFIN20021023_051039_000000562010_00320_03380_2741.N1	23-OCT-2002 05:10:39	Straylight	55.500	84	Alp Phe	2.3970	4500.0	111	3380	No

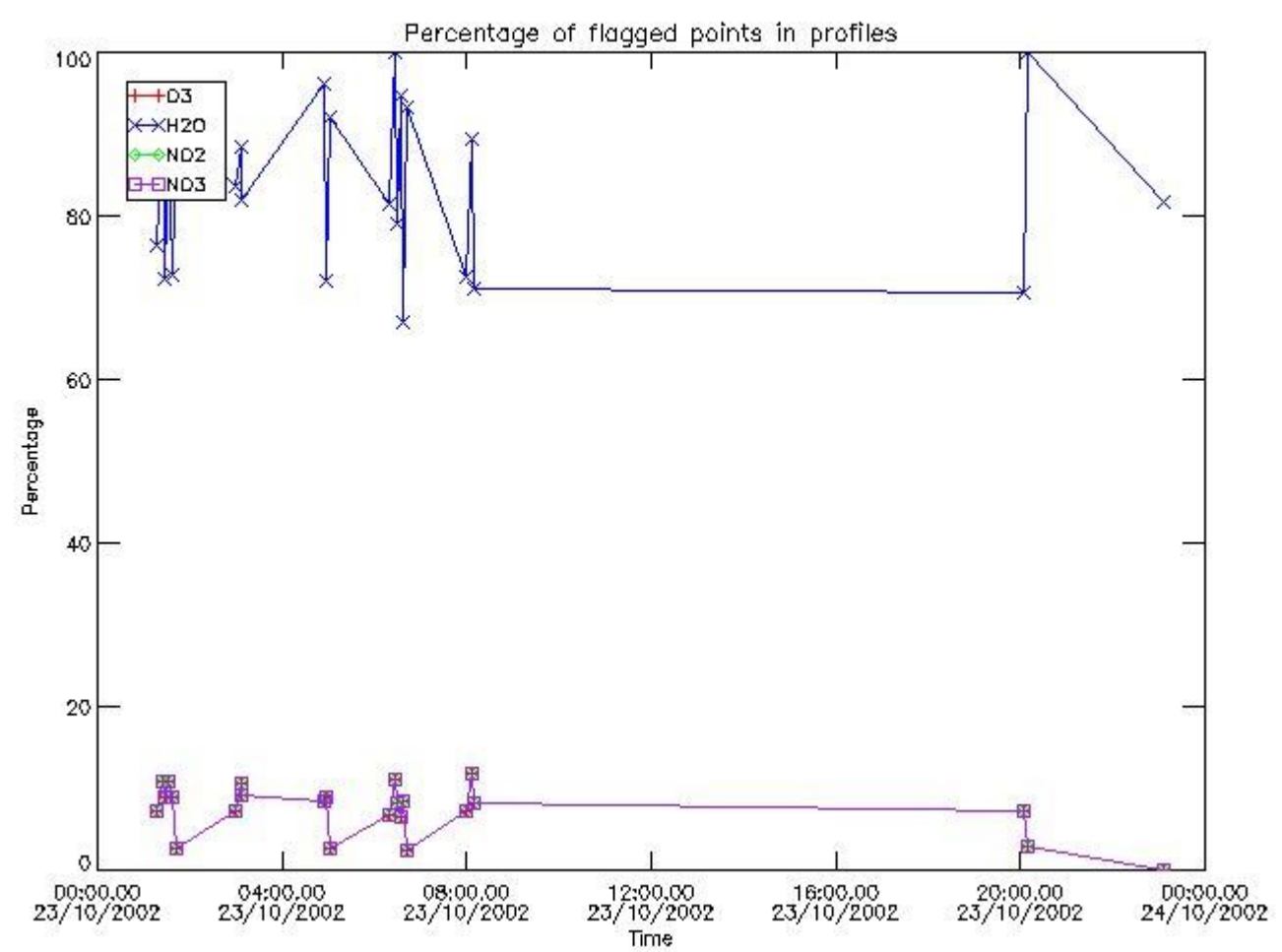


102	GOM_NL__2PRFIN20021023_224216_000000162010_00330_03390_2771.N1	23-OCT-2002 22:42:16	Dark	16.000	36	50Alp UMa	1.8000	6300.0	32	3390	Yes
103	GOM_NL__2PRFIN20021023_224327_000000122010_00330_03390_2772.N1	23-OCT-2002 22:43:27	Dark	12.000	32	77Eps UMa	1.7630	11000.	24	3390	Yes
104	GOM_NL__2PRFIN20021023_224431_000000152010_00330_03390_2773.N1	23-OCT-2002 22:44:31	Bright	15.000	87	64Gam UMa	2.4330	11000.	30	3390	No
105	GOM_NL__2PRFIN20021023_224723_000000302010_00330_03390_2774.N1	23-OCT-2002 22:47:23	Dark	30.000	174	52Psi UMa	3.0040	4400.0	60	3390	Yes
106	GOM_NL__2PRFIN20021023_225415_000000742010_00330_03390_2775.N1	23-OCT-2002 22:54:15	Dark	73.500	24	66Alp Gem	1.5800	10200.	147	3390	Yes
107	GOM_NL__2PRFIN20021023_225719_000000882010_00330_03390_2776.N1	23-OCT-2002 22:57:19	Dark	88.000	17	78Bet Gem	1.1610	4500.0	176	3390	Yes
108	GOM_NL__2PRFIN20021023_230630_000000312010_00330_03390_2777.N1	23-OCT-2002 23:06:30	Dark	30.500	48	30Alp Hya	1.9770	4100.0	61	3390	No
109	GOM_NL__2PRFIN20021023_231358_000000182010_00330_03390_2778.N1	23-OCT-2002 23:13:58	Dark	17.500	113	Mu Vel	2.6920	5000.0	35	3390	Yes
110	GOM_NL__2PRFIN20021023_231541_000000272010_00330_03390_2779.N1	23-OCT-2002 23:15:41	Dark	27.000	65	Lam Vel	2.2040	4400.0	54	3390	Yes
111	GOM_NL__2PRFIN20021023_232025_000000172010_00331_03391_2117.N1	23-OCT-2002 23:20:25	Dark	16.500	29	Bet Car	1.6720	10200.	33	3391	Yes
112	GOM_NL__2PRFIN20021023_232333_000000222010_00331_03391_2118.N1	23-OCT-2002 23:23:33	Dark	21.500	161	Tau Pup	2.9310	4500.0	43	3391	Yes
113	GOM_NL__2PRFIN20021023_232447_000000232010_00331_03391_2119.N1	23-OCT-2002 23:24:47	Dark	22.500	2	Alp Car	-0.73600	7000.0	45	3391	Yes
114	GOM_NL__2PRFIN20021023_232827_000000322010_00331_03391_2120.N1	23-OCT-2002 23:28:27	Dark	31.500	177	1Zet CMa	3.0220	26000.	63	3391	Yes
115	GOM_NL__2PRFIN20021023_233045_000000302010_00331_03391_2121.N1	23-OCT-2002 23:30:45	Dark	29.500	108	Alp Col	2.6520	15200.	59	3391	Yes
116	GOM_NL__2PRFIN20021023_233311_0000002082010_00331_03391_2122.N1	23-OCT-2002 23:33:11	Straylight	208.00	1	9Alp CMa	-1.4400	11000.	416	3391	No
117	GOM_NL__2PRFIN20021023_233851_000000622010_00331_03391_2123.N1	23-OCT-2002 23:38:51	Dark	61.500	139	9Bet Lep	2.8330	5600.0	123	3391	Yes
118	GOM_NL__2PRFIN20021023_234417_000000192010_00331_03391_2124.N1	23-OCT-2002 23:44:17	Dark	18.500	52	16Bet Cet	2.0370	4500.0	37	3391	Yes
119	GOM_NL__2PRFIN20021023_235204_000000262010_00331_03391_2125.N1	23-OCT-2002 23:52:04	Dark	25.500	94	92Alp Cet	2.5260	3100.0	51	3391	Yes
120	GOM_NL__2PRFIN20021023_235347_000000142010_00331_03391_2126.N1	23-OCT-2002 23:53:47	Dark	14.000	140	88Gam Peg	2.8340	26000.	28	3391	Yes
121	GOM_NL__2PRFIN20021023_235558_000000182010_00331_03391_2127.N1	23-OCT-2002 23:55:58	Bright	17.500	105	6Bet Ari	2.6450	8900.0	35	3391	No
122	GOM_NL__2PRFIN20021023_235740_000000162010_00331_03391_2128.N1	23-OCT-2002 23:57:40	Dark	15.500	58	21Alp And	2.0730	11000.	31	3391	Yes
123	GOM_NL__2PRFIN20021023_235940_000000182010_00331_03391_2129.N1	23-OCT-2002 23:59:40	Dark	18.000	53	43Bet And	2.0480	3300.0	36	3391	Yes

### 3. Quality information per product

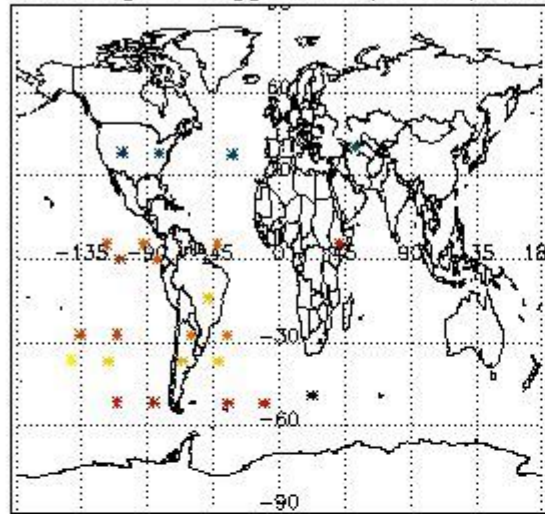
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

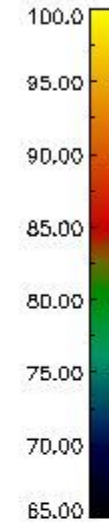
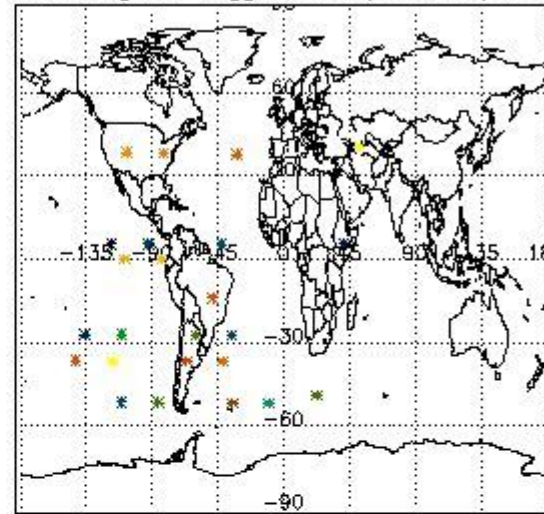


3.2 Plot quality information per product (world map)

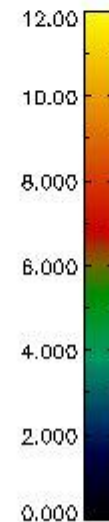
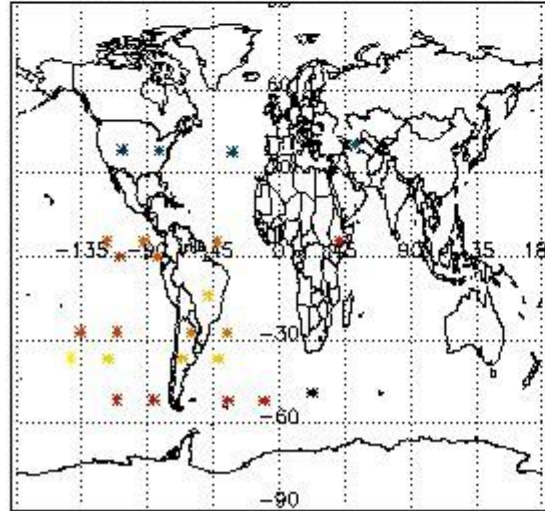
Percentage of flagged data per O3 profile



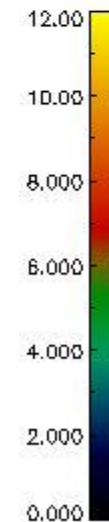
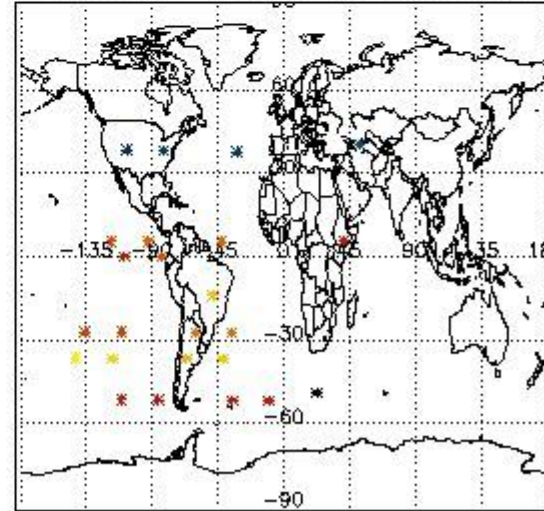
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

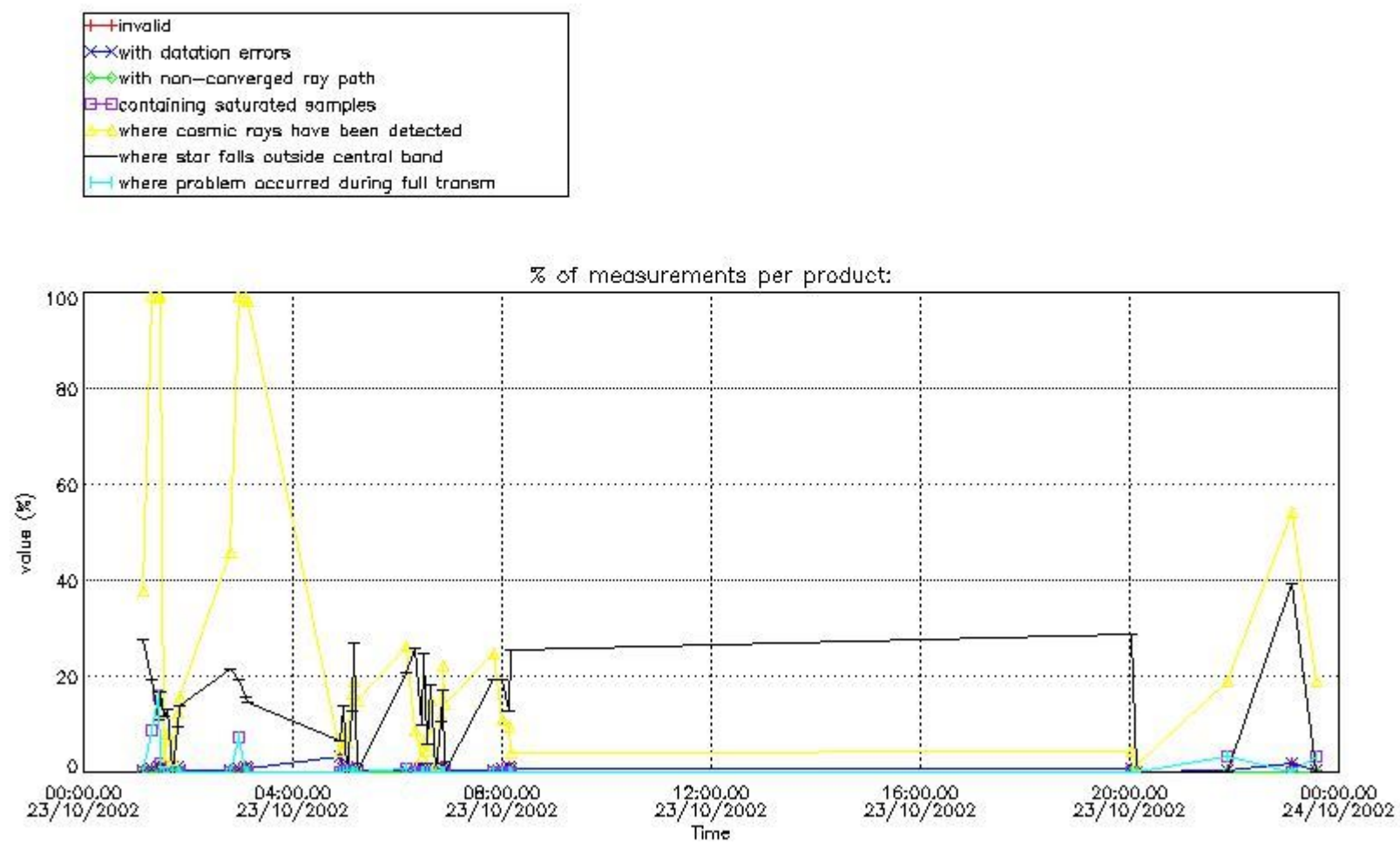


#### 4. Level 1 quality information per product

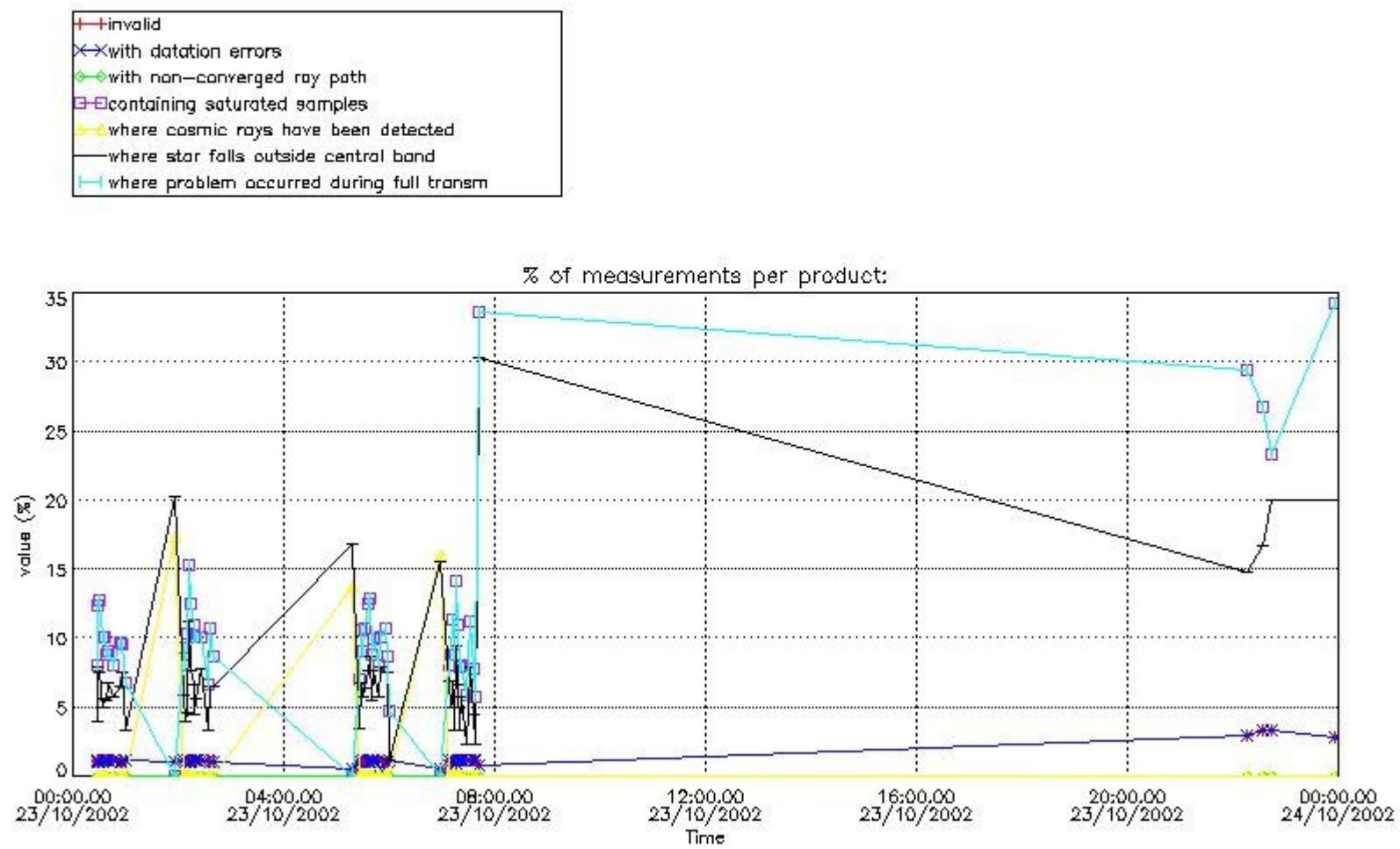
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

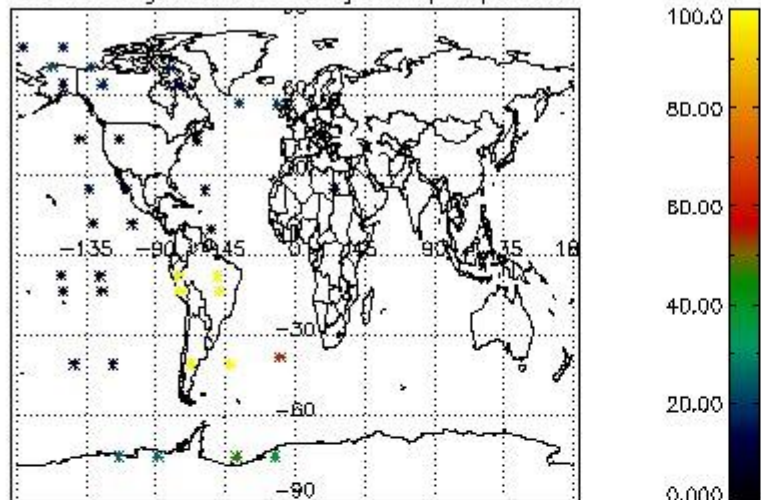


#### 4.2 Plot quality information per product coming from level 1b processing (world map)

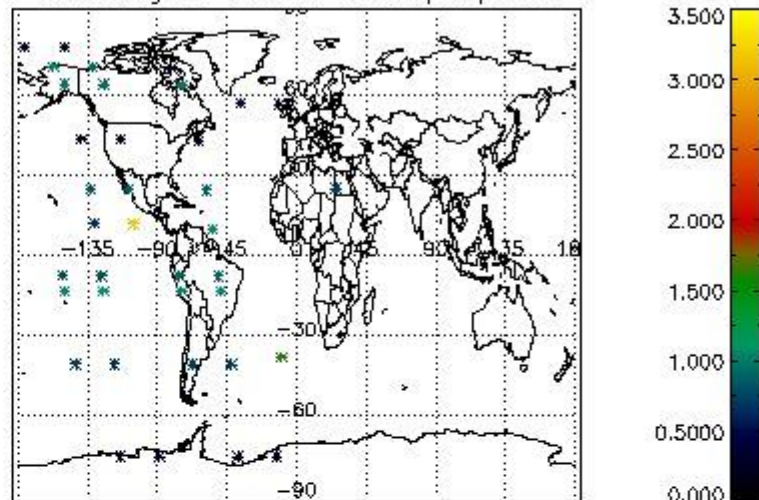
##### 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



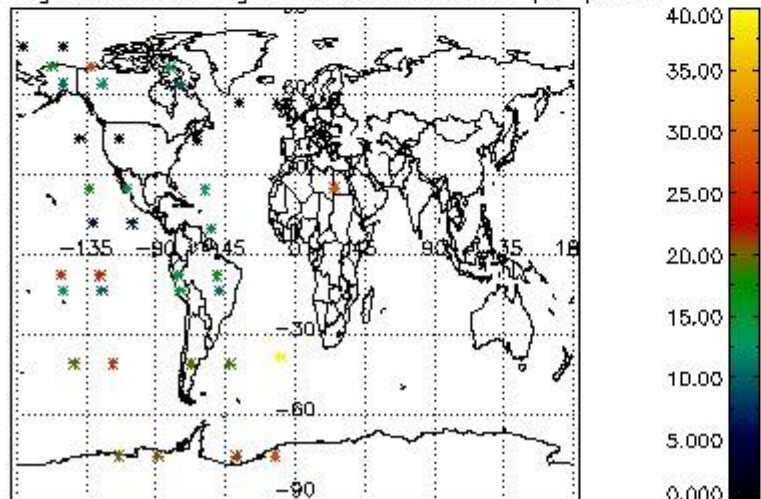
Percentage of cosmic ray hits per profile



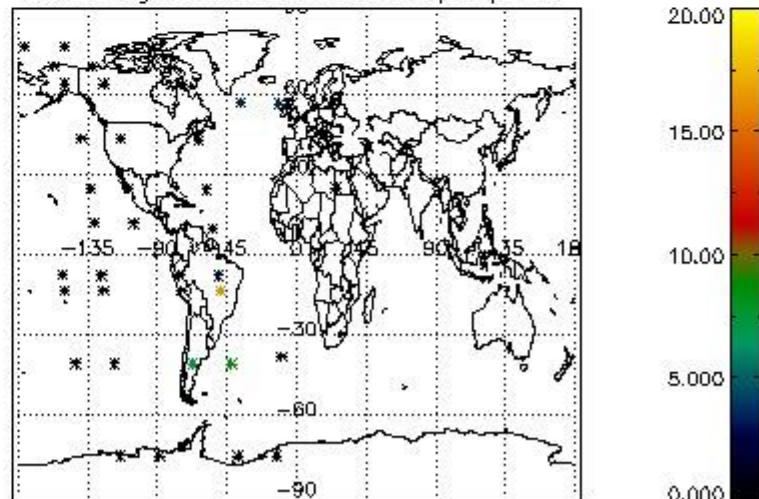
Percentage of datation errors per profile



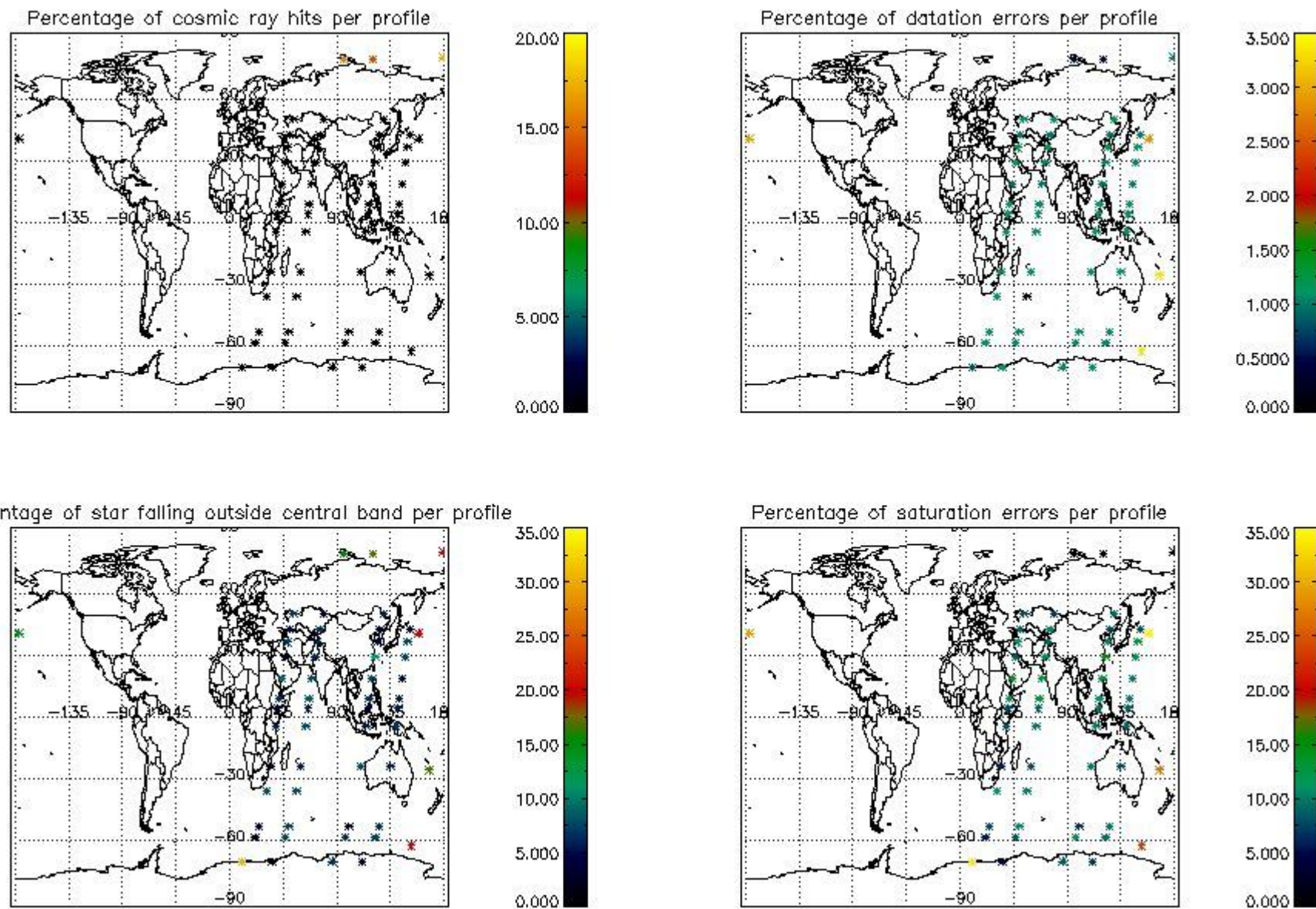
Percentage of star falling outside central band per profile



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

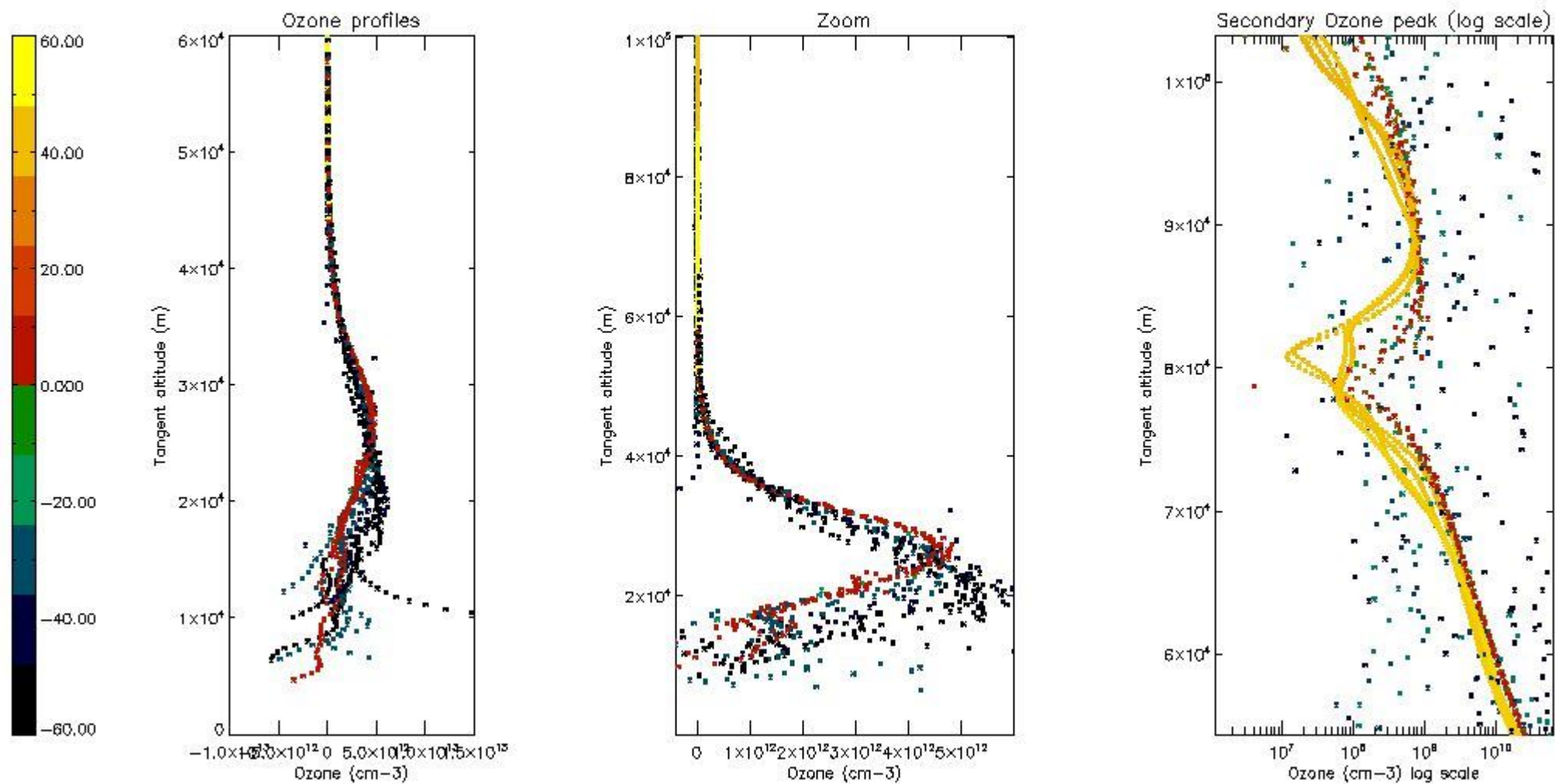
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	33
STD < 20	17

STD < 10	15
STD < 5	13

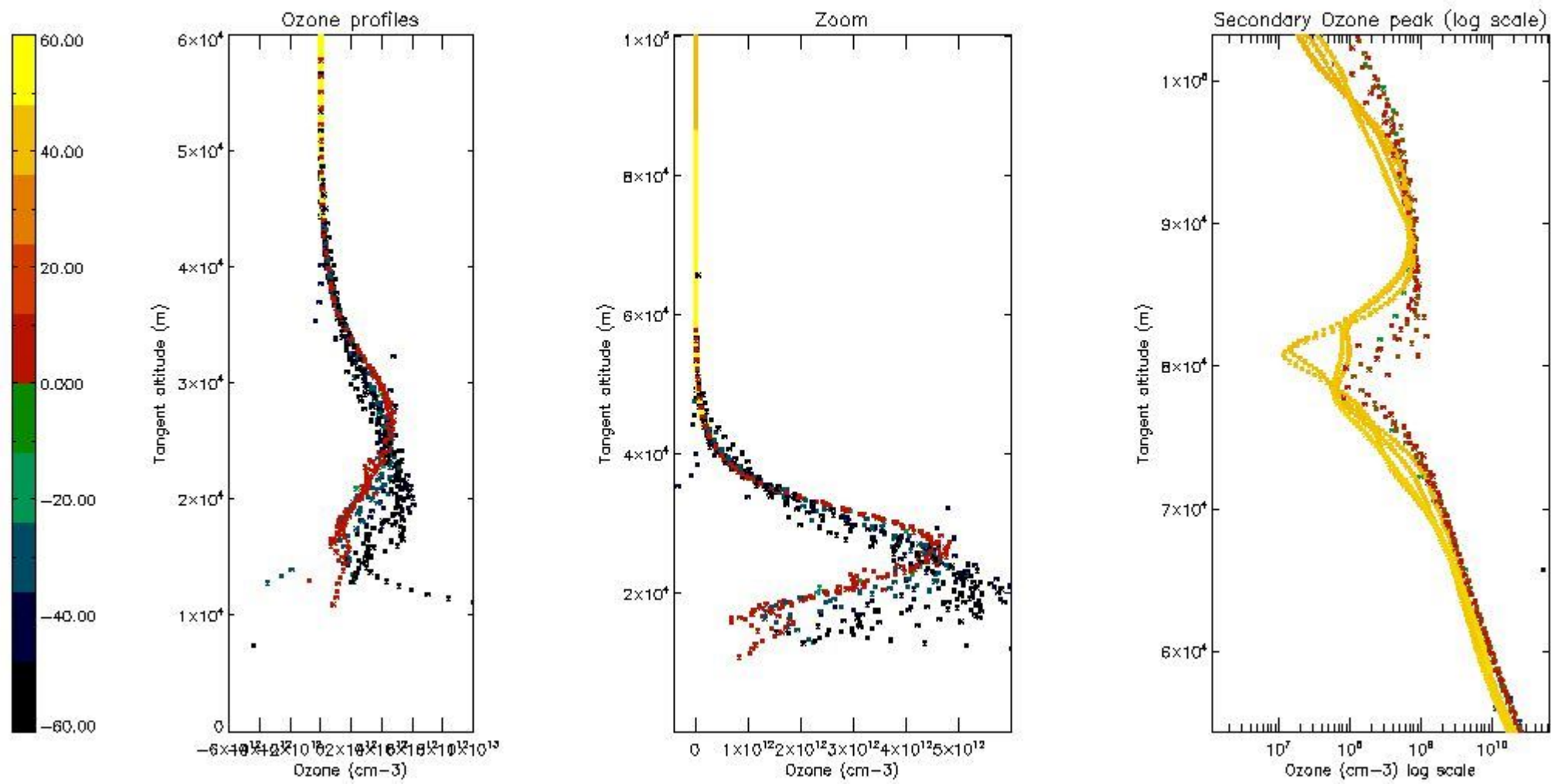
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



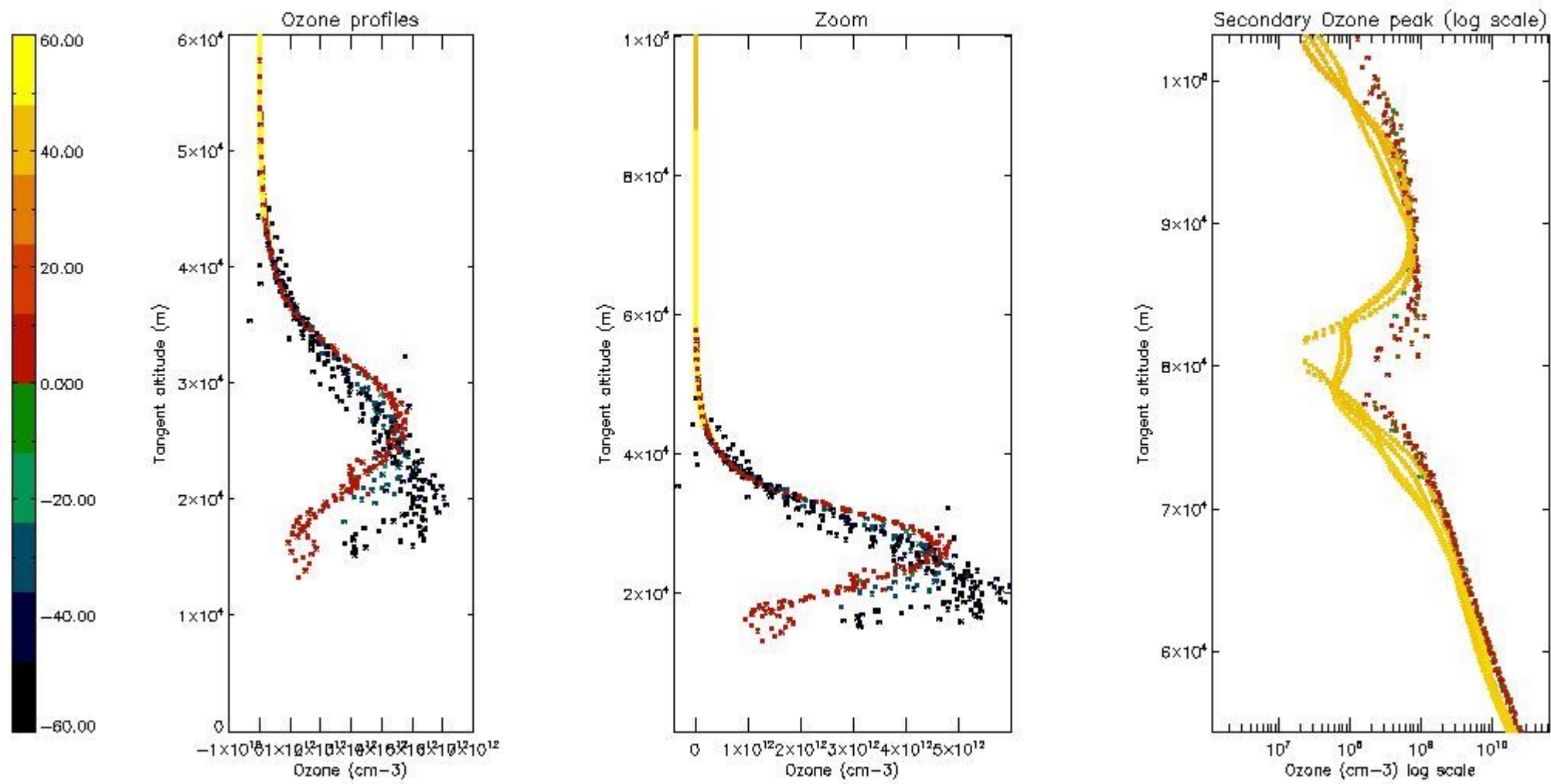
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



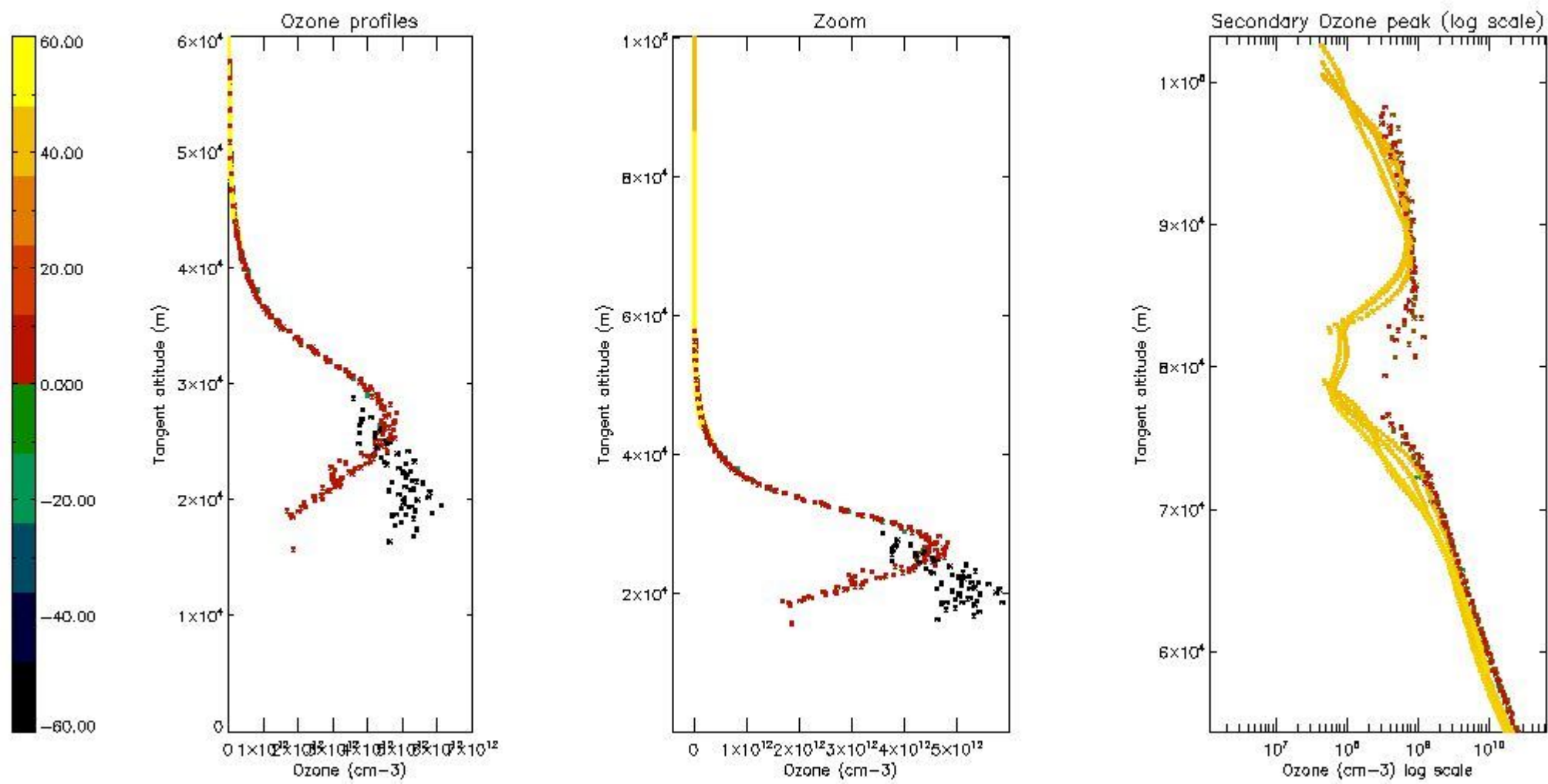
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



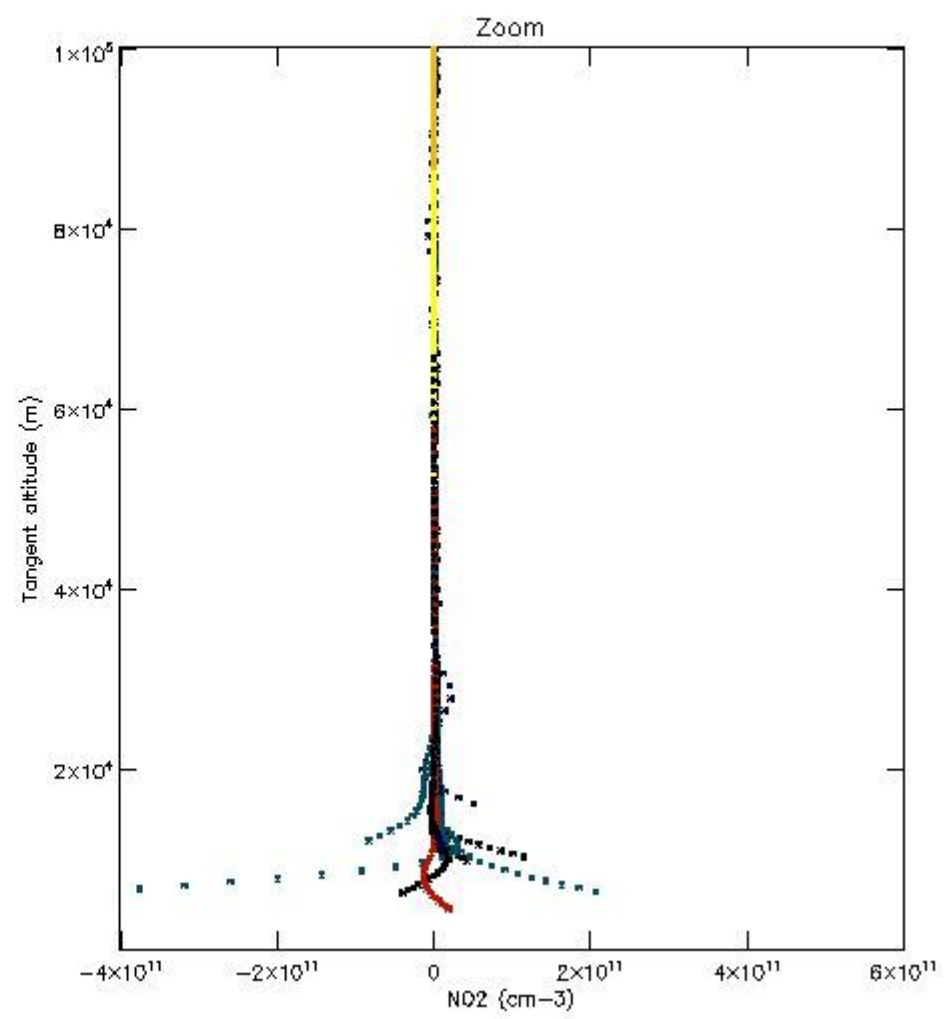
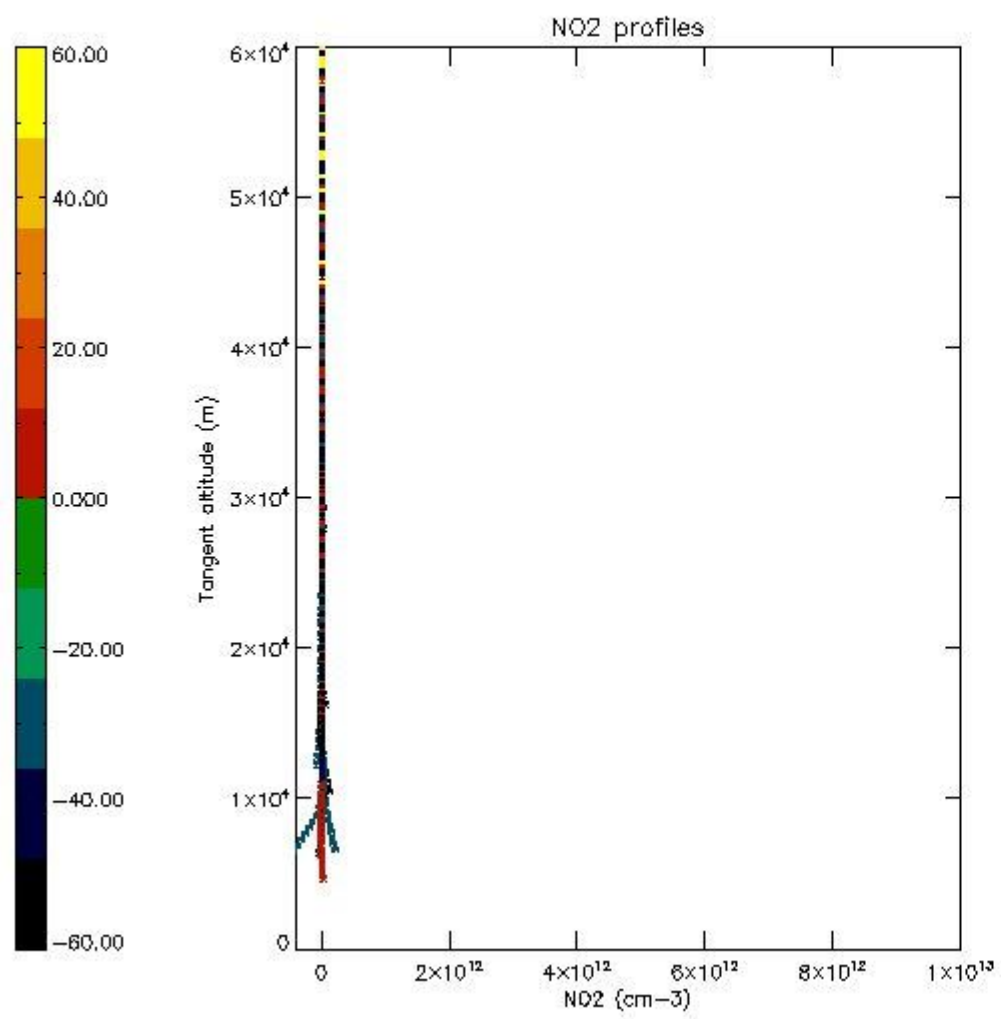
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



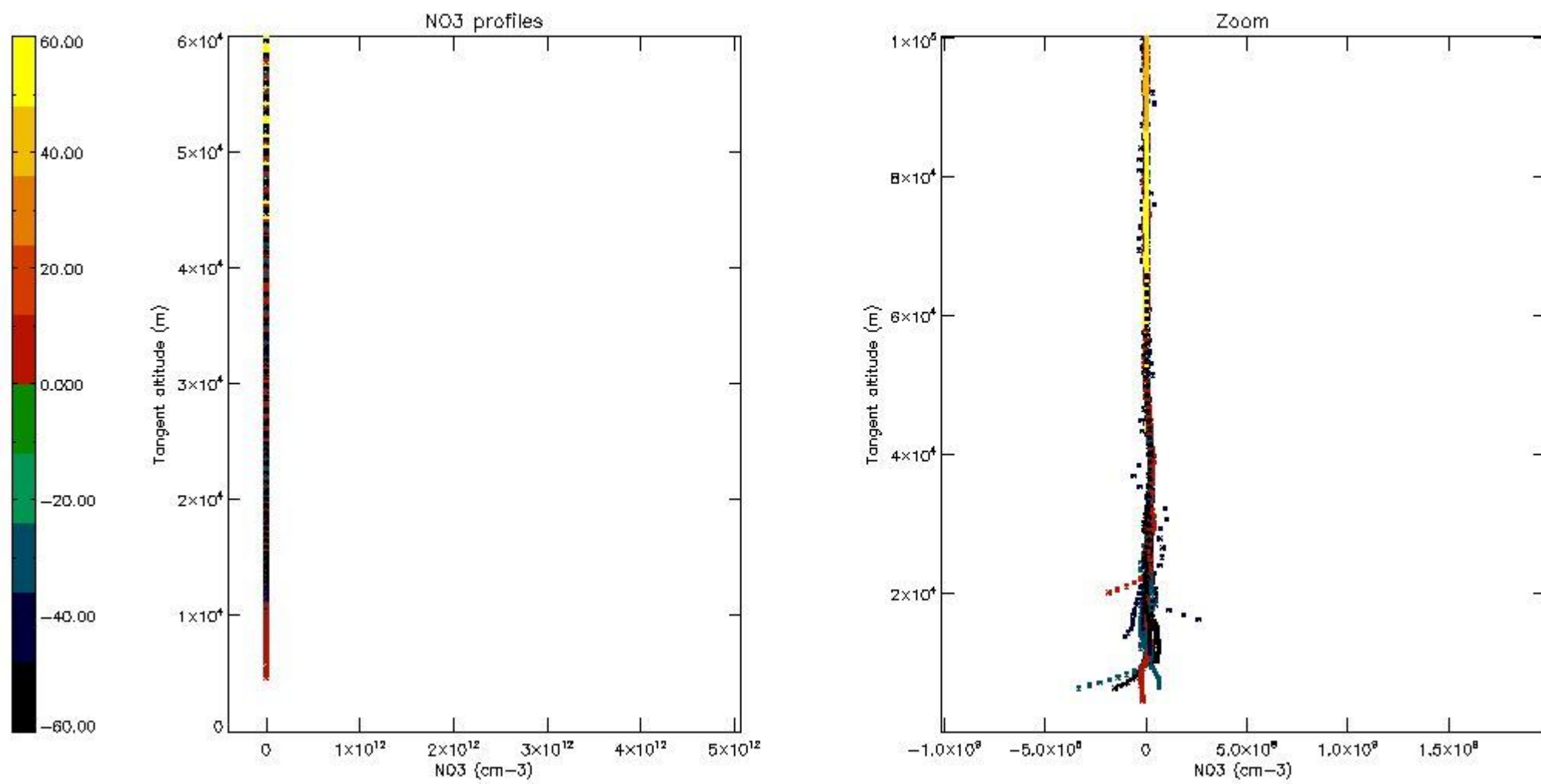
5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

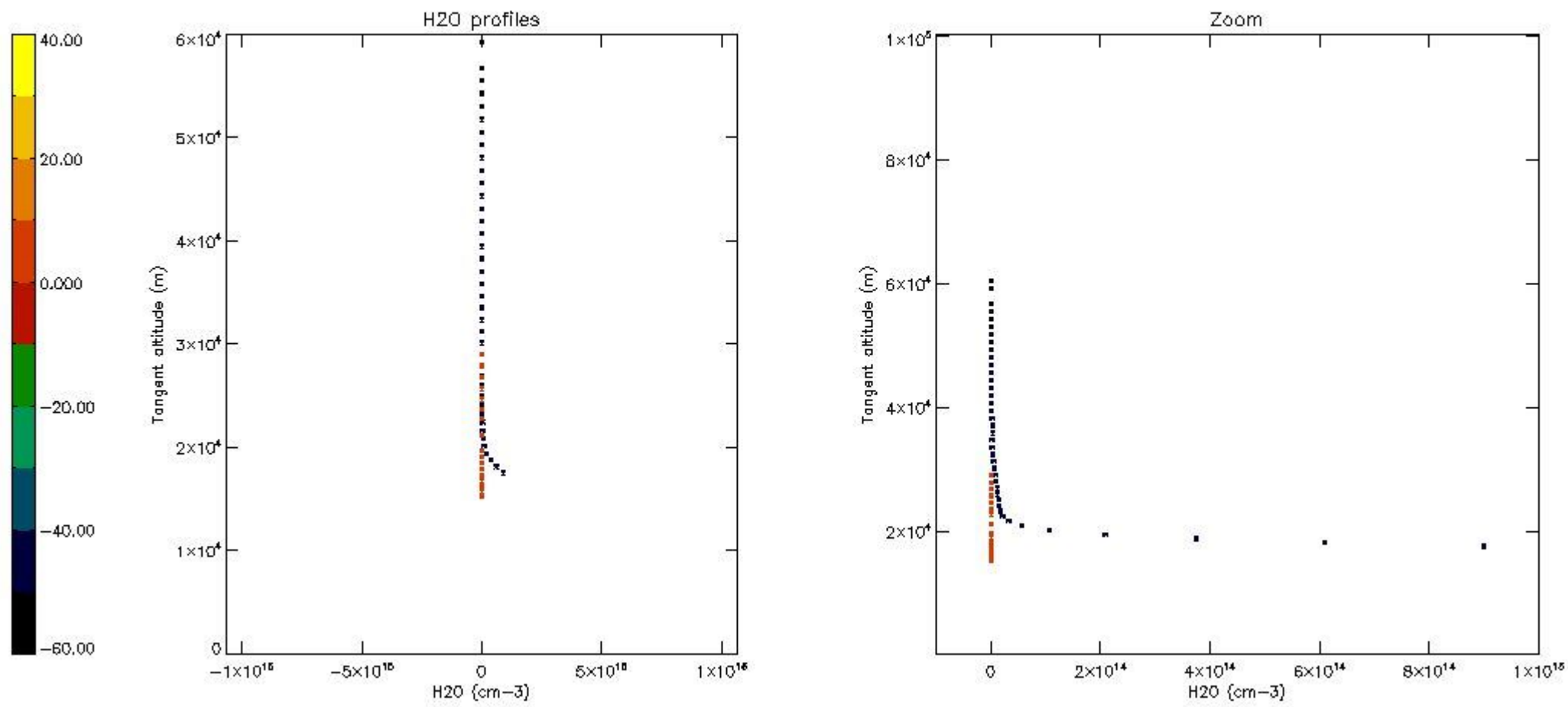
The colorbar represents the latitude.



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	23-OCT-2002 00:27:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-OCT-2002 00:27:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-OCT-2002 00:27:05

# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [3.2 Plot of level 2 quality information per product \(world map\)](#)

### [4. Level 1 Quality information per product \(stored on level 2 products\)](#)

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

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

##### [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](#)

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

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

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

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

#### [5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

#### [5.4. Plot ozone profiles where STD < 10% \(dark without errors\)](#)

#### [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 19:39:02
Data source version	GOMOS/6.01
Start time of products	23-10-2002 (23OCT2002 00:00:00)
Stop time of products	24-10-2002 (24OCT2002 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	123
Nb of prods with errors	29

## 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__2PRFIN20021023_002705_000000502010_00317_03377_2741.N1	23-OCT-2002 00:27:05	Bright	50.000	105	6Bet Ari	2.6450	8900.0	100	3377	No
2	GOM_NL__2PRFIN20021023_002847_000000452010_00317_03377_2742.N1	23-OCT-2002 00:28:47	Bright	44.500	58	21Alp And	2.0730	11000.	89	3377	No
3	GOM_NL__2PRFIN20021023_003049_000000472010_00317_03377_2743.N1	23-OCT-2002 00:30:49	Bright	47.000	53	43Bet And	2.0480	3300.0	94	3377	No
4	GOM_NL__2PRFIN20021023_003349_000000502010_00317_03377_2744.N1	23-OCT-2002 00:33:49	Bright	50.000	73	57Gam1And	2.2600	13100.	100	3377	No
5	GOM_NL__2PRFIN20021023_003632_000000452010_00317_03377_2745.N1	23-OCT-2002 00:36:32	Bright	45.000	68	18Alp Cas	2.2250	4500.0	90	3377	No
6	GOM_NL__2PRFIN20021023_003750_000000462010_00317_03377_2746.N1	23-OCT-2002 00:37:50	Bright	45.500	76	27Gam Cas	2.3000	30000.	91	3377	No
7	GOM_NL__2PRFIN20021023_004013_000000452010_00317_03377_2747.N1	23-OCT-2002 00:40:13	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	3377	No
8	GOM_NL__2PRFIN20021023_004545_000000442010_00317_03377_2748.N1	23-OCT-2002 00:45:45	Bright	44.000	49	1Alp UMi	1.9900	6300.0	88	3377	No
9	GOM_NL__2PRFIN20021023_005359_000000472010_00317_03377_2749.N1	23-OCT-2002 00:53:59	Bright	46.500	36	50Alp UMa	1.8000	6300.0	93	3377	No
10	GOM_NL__2PRFIN20021023_005533_000000472010_00317_03377_2750.N1	23-OCT-2002 00:55:33	Bright	47.000	82	48Bet UMa	2.3650	10600.	94	3377	No
11	GOM_NL__2PRFIN20021023_005904_000000452010_00317_03377_2751.N1	23-OCT-2002 00:59:04	Bright	44.500	174	52Psi UMa	3.0040	4400.0	89	3377	No
12	GOM_NL__2PRFIN20021023_010741_000001912010_00317_03377_2752.N1	23-OCT-2002 01:07:41	Twilight	191.00	17	78Bet Gem	1.1610	4500.0	382	3377	No
13	GOM_NL__2PRFIN20021023_011753_000000702010_00317_03377_2753.N1	23-OCT-2002 01:17:53	Dark	70.000	48	30Alp Hya	1.9770	4100.0	140	3377	No
14	GOM_NL__2PRFIN20021023_012539_000000472010_00317_03377_2754.N1	23-OCT-2002 01:25:39	Dark	46.500	113	Mu Vel	2.6920	5000.0	93	3377	No
15	GOM_NL__2PRFIN20021023_012712_000000572010_00317_03377_2755.N1	23-OCT-2002 01:27:12	Dark	56.500	65	Lam Vel	2.2040	4400.0	113	3377	No
16	GOM_NL__2PRFIN20021023_013205_000000472010_00318_03378_2739.N1	23-OCT-2002 01:32:05	Dark	47.000	29	Bet Car	1.6720	10200.	94	3378	No
17	GOM_NL__2PRFIN20021023_013615_000000582010_00318_03378_2740.N1	23-OCT-2002 01:36:15	Dark	57.500	2	Alp Car	-0.73600	7000.0	115	3378	No
18	GOM_NL__2PRFIN20021023_014125_000002232010_00318_03378_2741.N1	23-OCT-2002 01:41:25	Dark	223.00	1	9Alp CMa	-1.4400	11000.	446	3378	No
19	GOM_NL__2PRFIN20021023_014727_000000522010_00318_03378_2742.N1	23-OCT-2002 01:47:27	Straylight	52.000	157	The1Eri	2.9060	9300.0	104	3378	No
20	GOM_NL__2PRFIN20021023_014916_000001612010_00318_03378_2743.N1	23-OCT-2002 01:49:16	Straylight	161.00	139	9Bet Lep	2.8330	5600.0	322	3378	No
21	GOM_NL__2PRFIN20021023_015559_000000522010_00318_03378_2744.N1	23-OCT-2002 01:55:59	Straylight	52.000	52	16Bet Cet	2.0370	4500.0	104	3378	No
22	GOM_NL__2PRFIN20021023_020529_000000432010_00318_03378_2745.N1	23-OCT-2002 02:05:29	Bright	43.000	140	88Gam Peg	2.8340	26000.	86	3378	No
23	GOM_NL__2PRFIN20021023_020741_000000502010_00318_03378_2746.N1	23-OCT-2002 02:07:41	Bright	50.000	105	6Bet Ari	2.6450	8900.0	100	3378	No
24	GOM_NL__2PRFIN20021023_020923_000000442010_00318_03378_2747.N1	23-OCT-2002 02:09:23	Bright	43.500	58	21Alp And	2.0730	11000.	87	3378	No
25	GOM_NL__2PRFIN20021023_021125_000000492010_00318_03378_2748.N1	23-OCT-2002 02:11:25	Bright	49.000	53	43Bet And	2.0480	3300.0	98	3378	No
26	GOM_NL__2PRFIN20021023_021425_000000522010_00318_03378_2749.N1	23-OCT-2002 02:14:25	Bright	52.000	73	57Gam1And	2.2600	13100.	104	3378	No
27	GOM_NL__2PRFIN20021023_021708_000000462010_00318_03378_2750.N1	23-OCT-2002 02:17:08	Bright	45.500	68	18Alp Cas	2.2250	4500.0	91	3378	No
28	GOM_NL__2PRFIN20021023_021826_000000452010_00318_03378_2751.N1	23-OCT-2002 02:18:26	Bright	45.000	76	27Gam Cas	2.3000	30000.	90	3378	No
29	GOM_NL__2PRFIN20021023_022049_000000452010_00318_03378_2752.N1	23-OCT-2002 02:20:49	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	3378	No
30	GOM_NL__2PRFIN20021023_022620_000000452010_00318_03378_2753.N1	23-OCT-2002 02:26:20	Bright	45.000	49	1Alp UMi	1.9900	6300.0	90	3378	No
31	GOM_NL__2PRFIN20021023_023434_000000462010_00318_03378_2754.N1	23-OCT-2002 02:34:34	Bright	45.500	36	50Alp UMa	1.8000	6300.0	91	3378	No
32	GOM_NL__2PRFIN20021023_023609_000000472010_00318_03378_2755.N1	23-OCT-2002 02:36:09	Bright	46.500	82	48Bet UMa	2.3650	10600.	93	3378	No
33	GOM_NL__2PRFIN20021023_023939_000000472010_00318_03378_2756.N1	23-OCT-2002 02:39:39	Bright	46.500	174	52Psi UMa	3.0040	4400.0	93	3378	No
34	GOM_NL__2PRFIN20021023_024817_000001792010_00318_03378_2757.N1	23-OCT-2002 02:48:17	Twilight	178.50	17	78Bet Gem	1.1610	4500.0	357	3378	No
35	GOM_NL__2PRFIN20021023_025828_000000712010_00318_03378_2758.N1	23-OCT-2002 02:58:28	Dark	70.500	48	30Alp Hya	1.9770	4100.0	141	3378	No
36	GOM_NL__2PRFIN20021023_030615_000000492010_00318_03378_2759.N1	23-OCT-2002 03:06:15	Dark	48.500	113	Mu Vel	2.6920	5000.0	97	3378	No
37	GOM_NL__2PRFIN20021023_030748_000000562010_00318_03378_2760.N1	23-OCT-2002 03:07:48	Dark	55.500	65	Lam Vel	2.2040	4400.0	111	3378	No
38	GOM_NL__2PRFIN20021023_045353_000000782010_00320_03380_2737.N1	23-OCT-2002 04:53:53	Dark	78.000	88	31Eta CMa	2.4480	20000.	156	3380	No
39	GOM_NL__2PRFIN20021023_045728_000000582010_00320_03380_2738.N1	23-OCT-2002 04:57:28	Dark	57.500	2	Alp Car	-0.73600	7000.0	115	3380	No
40	GOM_NL__2PRFIN20021023_050245_000002222010_00320_03380_2739.N1	23-OCT-2002 05:02:45	Dark	222.00	1	9Alp CMa	-1.4400	11000.	444	3380	No
41	GOM_NL__2PRFIN20021023_050840_000000552010_00320_03380_2740.N1	23-OCT-2002 05:08:40	Straylight	54.500	157	The1Eri	2.9060	9300.0	109	3380	No
42	GOM_NL__2PRFIN20021023_051039_000000562010_00320_03380_2741.N1	23-OCT-2002 05:10:39	Straylight	55.500	84	Alp Phe	2.3970	4500.0	111	3380	No

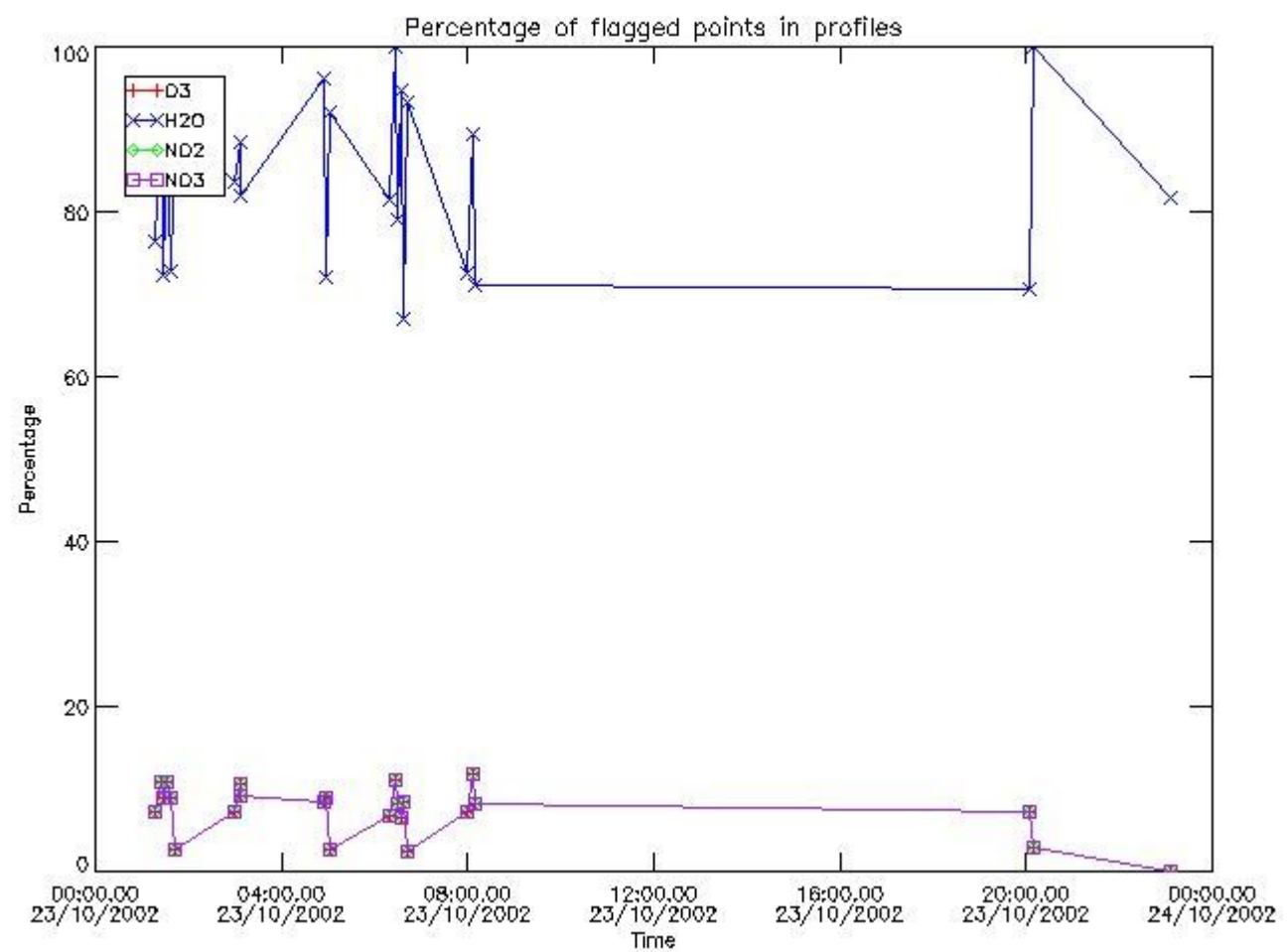


102	GOM_NL__2PRFIN20021023_224216_000000162010_00330_03390_2771.N1	23-OCT-2002 22:42:16	Dark	16.000	36	50Alp UMa	1.8000	6300.0	32	3390	Yes
103	GOM_NL__2PRFIN20021023_224327_000000122010_00330_03390_2772.N1	23-OCT-2002 22:43:27	Dark	12.000	32	77Eps UMa	1.7630	11000.	24	3390	Yes
104	GOM_NL__2PRFIN20021023_224431_000000152010_00330_03390_2773.N1	23-OCT-2002 22:44:31	Bright	15.000	87	64Gam UMa	2.4330	11000.	30	3390	No
105	GOM_NL__2PRFIN20021023_224723_000000302010_00330_03390_2774.N1	23-OCT-2002 22:47:23	Dark	30.000	174	52Psi UMa	3.0040	4400.0	60	3390	Yes
106	GOM_NL__2PRFIN20021023_225415_000000742010_00330_03390_2775.N1	23-OCT-2002 22:54:15	Dark	73.500	24	66Alp Gem	1.5800	10200.	147	3390	Yes
107	GOM_NL__2PRFIN20021023_225719_000000882010_00330_03390_2776.N1	23-OCT-2002 22:57:19	Dark	88.000	17	78Bet Gem	1.1610	4500.0	176	3390	Yes
108	GOM_NL__2PRFIN20021023_230630_000000312010_00330_03390_2777.N1	23-OCT-2002 23:06:30	Dark	30.500	48	30Alp Hya	1.9770	4100.0	61	3390	No
109	GOM_NL__2PRFIN20021023_231358_000000182010_00330_03390_2778.N1	23-OCT-2002 23:13:58	Dark	17.500	113	Mu Vel	2.6920	5000.0	35	3390	Yes
110	GOM_NL__2PRFIN20021023_231541_000000272010_00330_03390_2779.N1	23-OCT-2002 23:15:41	Dark	27.000	65	Lam Vel	2.2040	4400.0	54	3390	Yes
111	GOM_NL__2PRFIN20021023_232025_000000172010_00331_03391_2117.N1	23-OCT-2002 23:20:25	Dark	16.500	29	Bet Car	1.6720	10200.	33	3391	Yes
112	GOM_NL__2PRFIN20021023_232333_000000222010_00331_03391_2118.N1	23-OCT-2002 23:23:33	Dark	21.500	161	Tau Pup	2.9310	4500.0	43	3391	Yes
113	GOM_NL__2PRFIN20021023_232447_000000232010_00331_03391_2119.N1	23-OCT-2002 23:24:47	Dark	22.500	2	Alp Car	-0.73600	7000.0	45	3391	Yes
114	GOM_NL__2PRFIN20021023_232827_000000322010_00331_03391_2120.N1	23-OCT-2002 23:28:27	Dark	31.500	177	1Zet CMa	3.0220	26000.	63	3391	Yes
115	GOM_NL__2PRFIN20021023_233045_000000302010_00331_03391_2121.N1	23-OCT-2002 23:30:45	Dark	29.500	108	Alp Col	2.6520	15200.	59	3391	Yes
116	GOM_NL__2PRFIN20021023_233311_0000002082010_00331_03391_2122.N1	23-OCT-2002 23:33:11	Straylight	208.00	1	9Alp CMa	-1.4400	11000.	416	3391	No
117	GOM_NL__2PRFIN20021023_233851_000000622010_00331_03391_2123.N1	23-OCT-2002 23:38:51	Dark	61.500	139	9Bet Lep	2.8330	5600.0	123	3391	Yes
118	GOM_NL__2PRFIN20021023_234417_000000192010_00331_03391_2124.N1	23-OCT-2002 23:44:17	Dark	18.500	52	16Bet Cet	2.0370	4500.0	37	3391	Yes
119	GOM_NL__2PRFIN20021023_235204_000000262010_00331_03391_2125.N1	23-OCT-2002 23:52:04	Dark	25.500	94	92Alp Cet	2.5260	3100.0	51	3391	Yes
120	GOM_NL__2PRFIN20021023_235347_000000142010_00331_03391_2126.N1	23-OCT-2002 23:53:47	Dark	14.000	140	88Gam Peg	2.8340	26000.	28	3391	Yes
121	GOM_NL__2PRFIN20021023_235558_000000182010_00331_03391_2127.N1	23-OCT-2002 23:55:58	Bright	17.500	105	6Bet Ari	2.6450	8900.0	35	3391	No
122	GOM_NL__2PRFIN20021023_235740_000000162010_00331_03391_2128.N1	23-OCT-2002 23:57:40	Dark	15.500	58	21Alp And	2.0730	11000.	31	3391	Yes
123	GOM_NL__2PRFIN20021023_235940_000000182010_00331_03391_2129.N1	23-OCT-2002 23:59:40	Dark	18.000	53	43Bet And	2.0480	3300.0	36	3391	Yes

### 3. Quality information per product

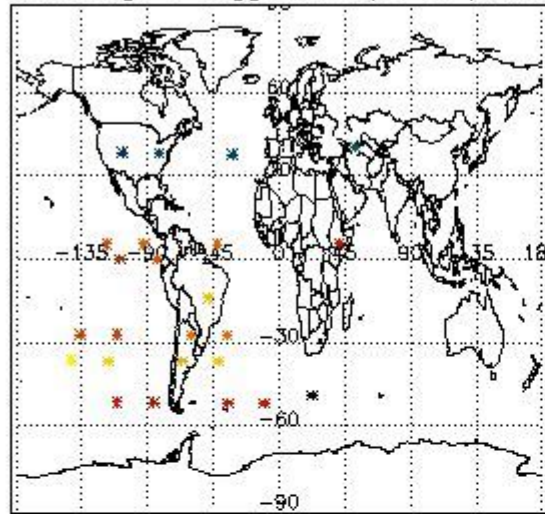
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

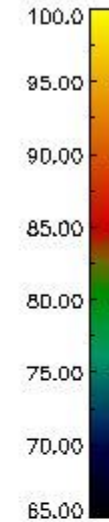
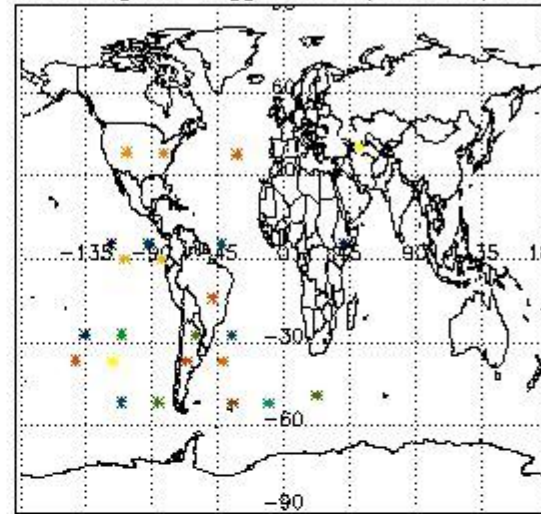


3.2 Plot quality information per product (world map)

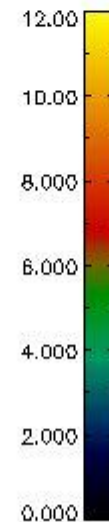
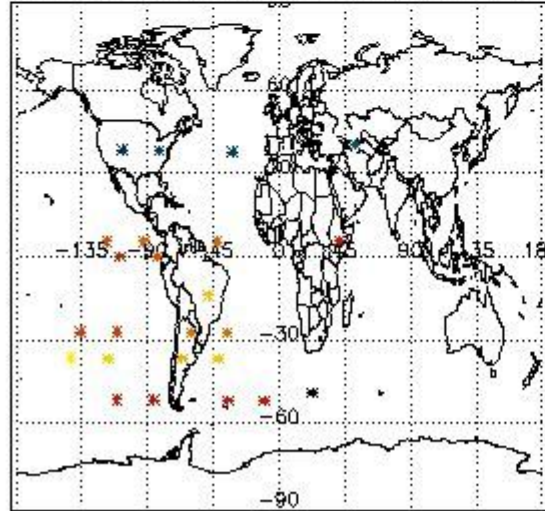
Percentage of flagged data per O3 profile



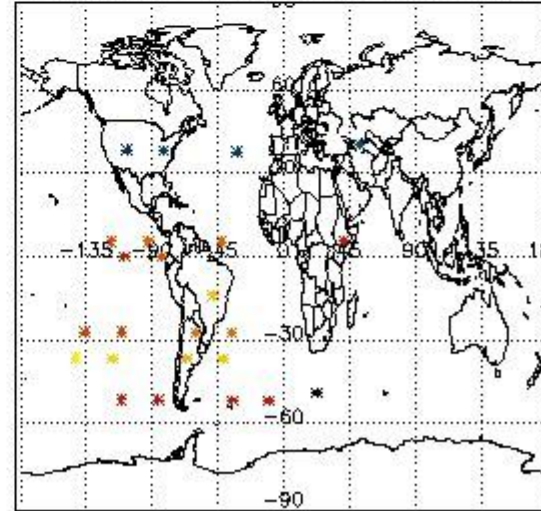
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

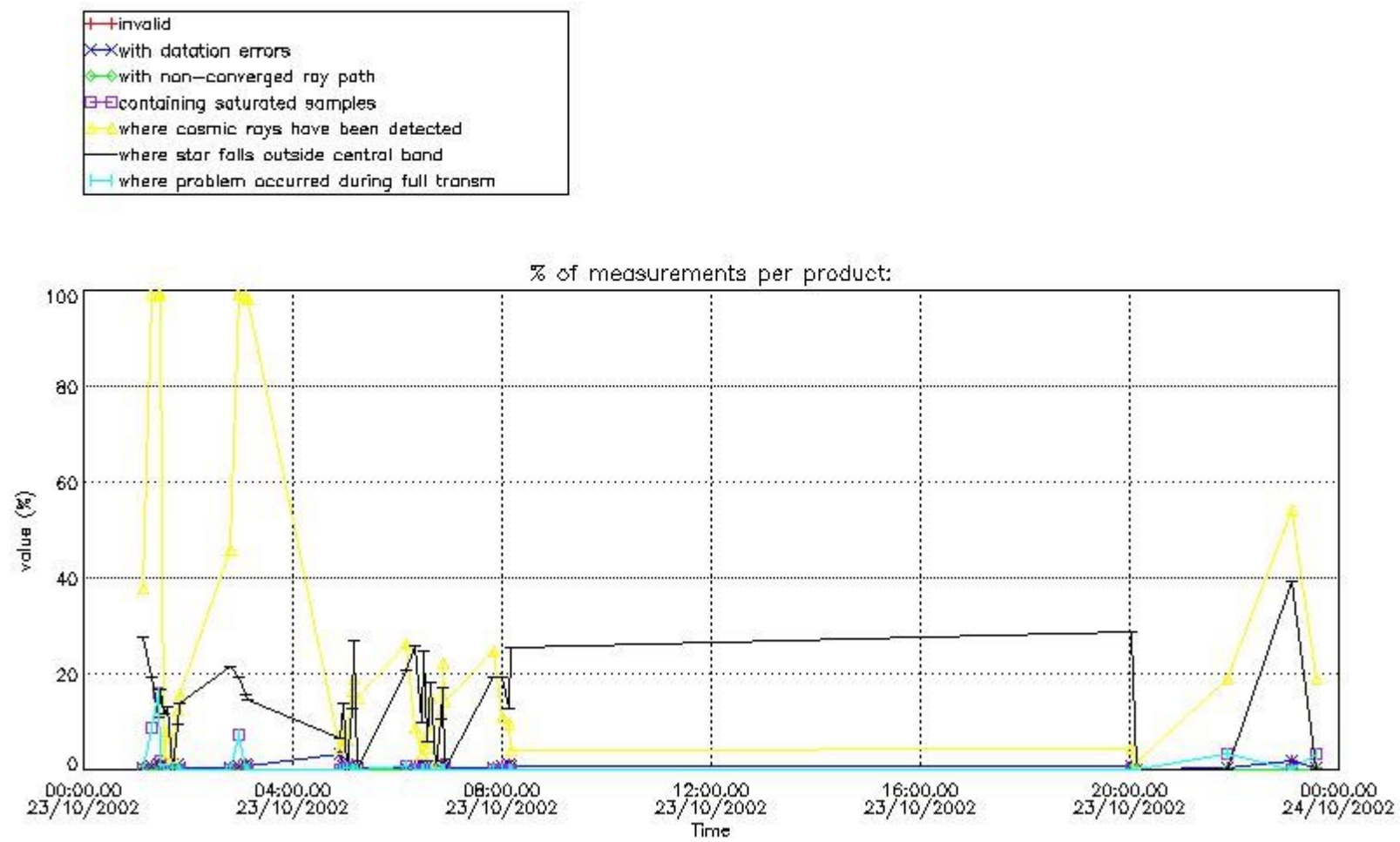


#### 4. Level 1 quality information per product

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.

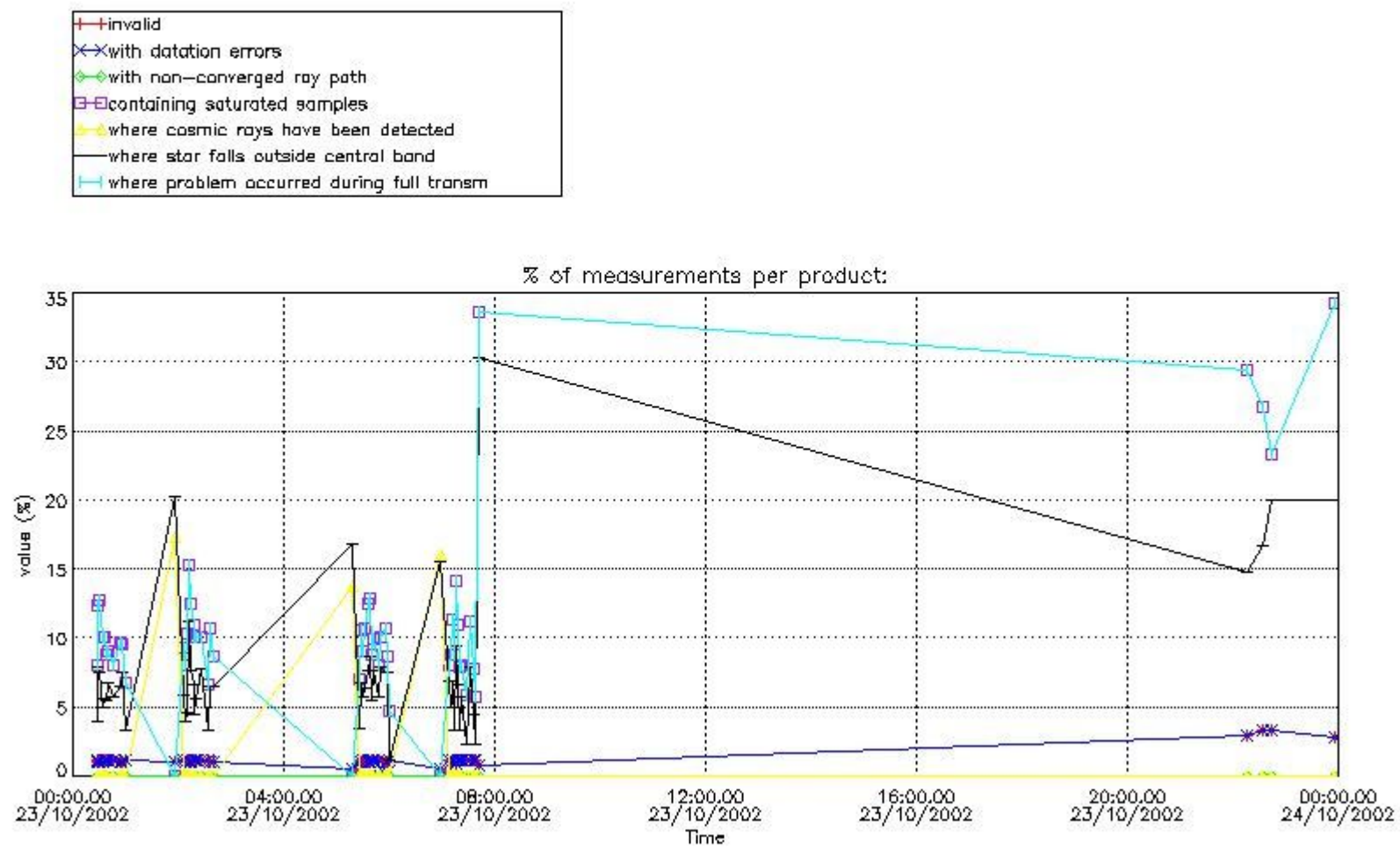
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

##### 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

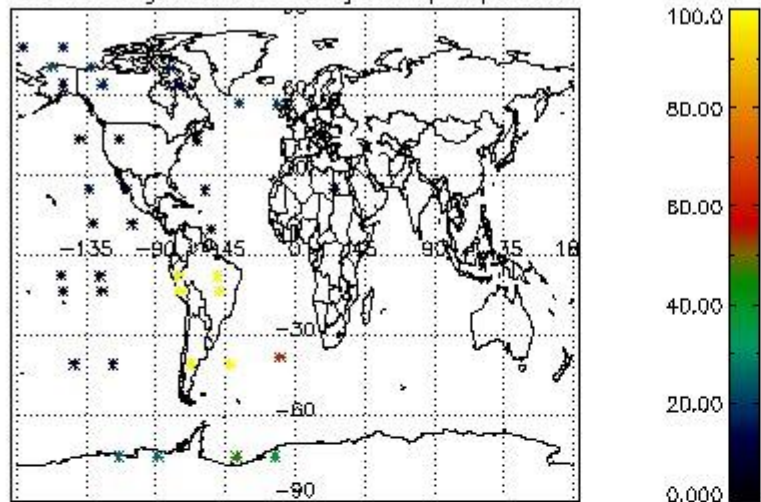




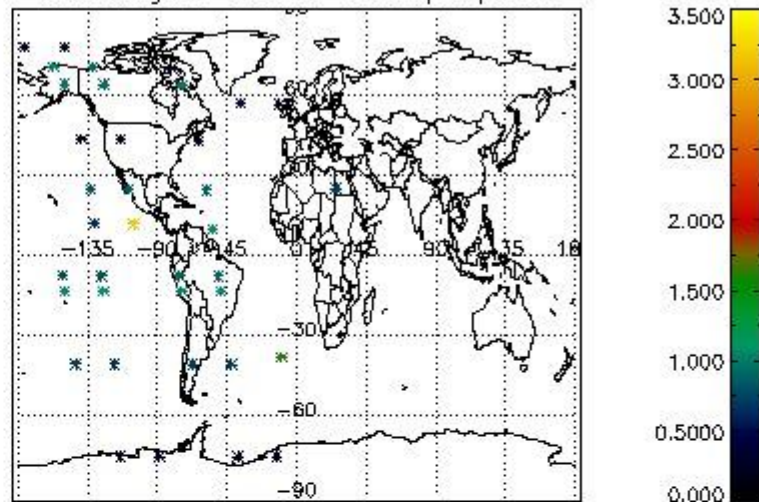
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

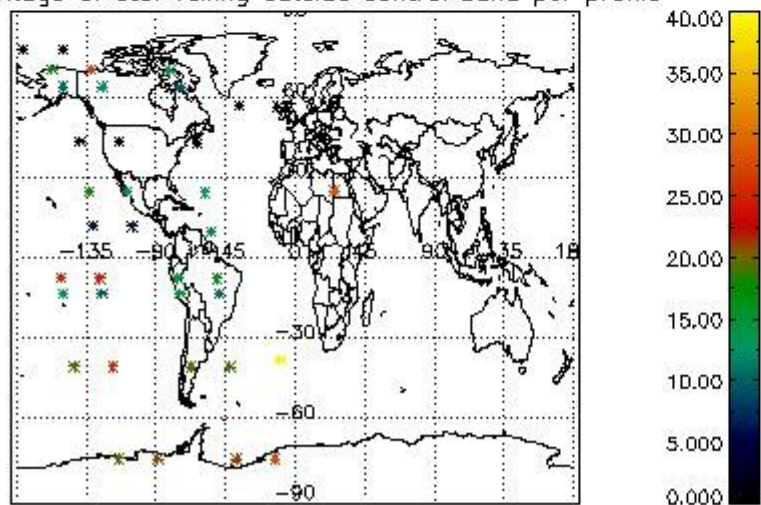
Percentage of cosmic ray hits per profile



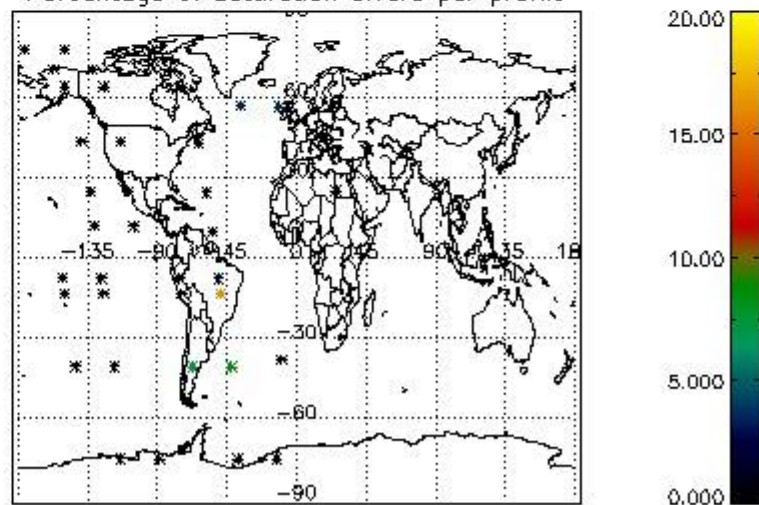
Percentage of datation errors per profile



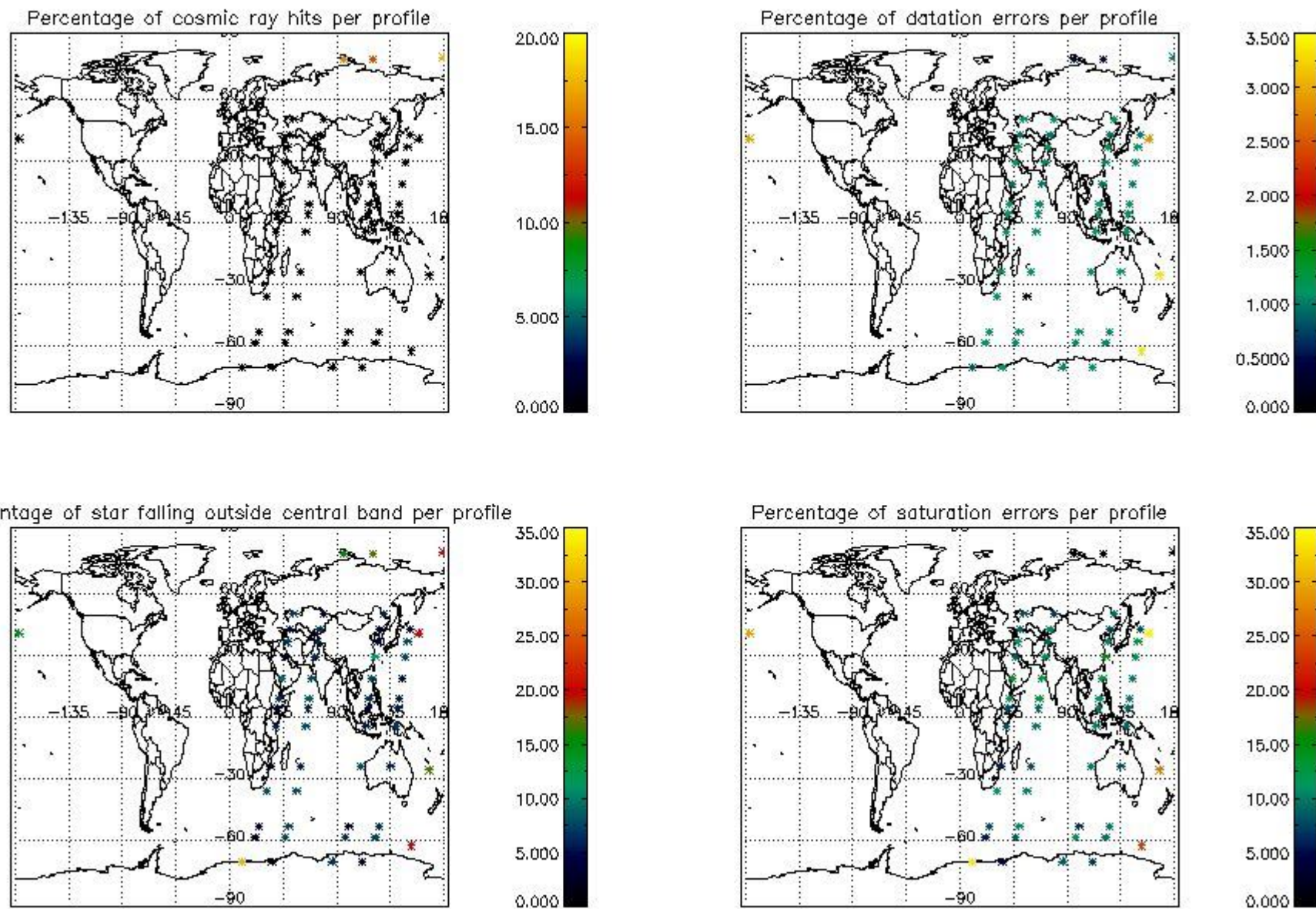
Percentage of star falling outside central band per profile



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

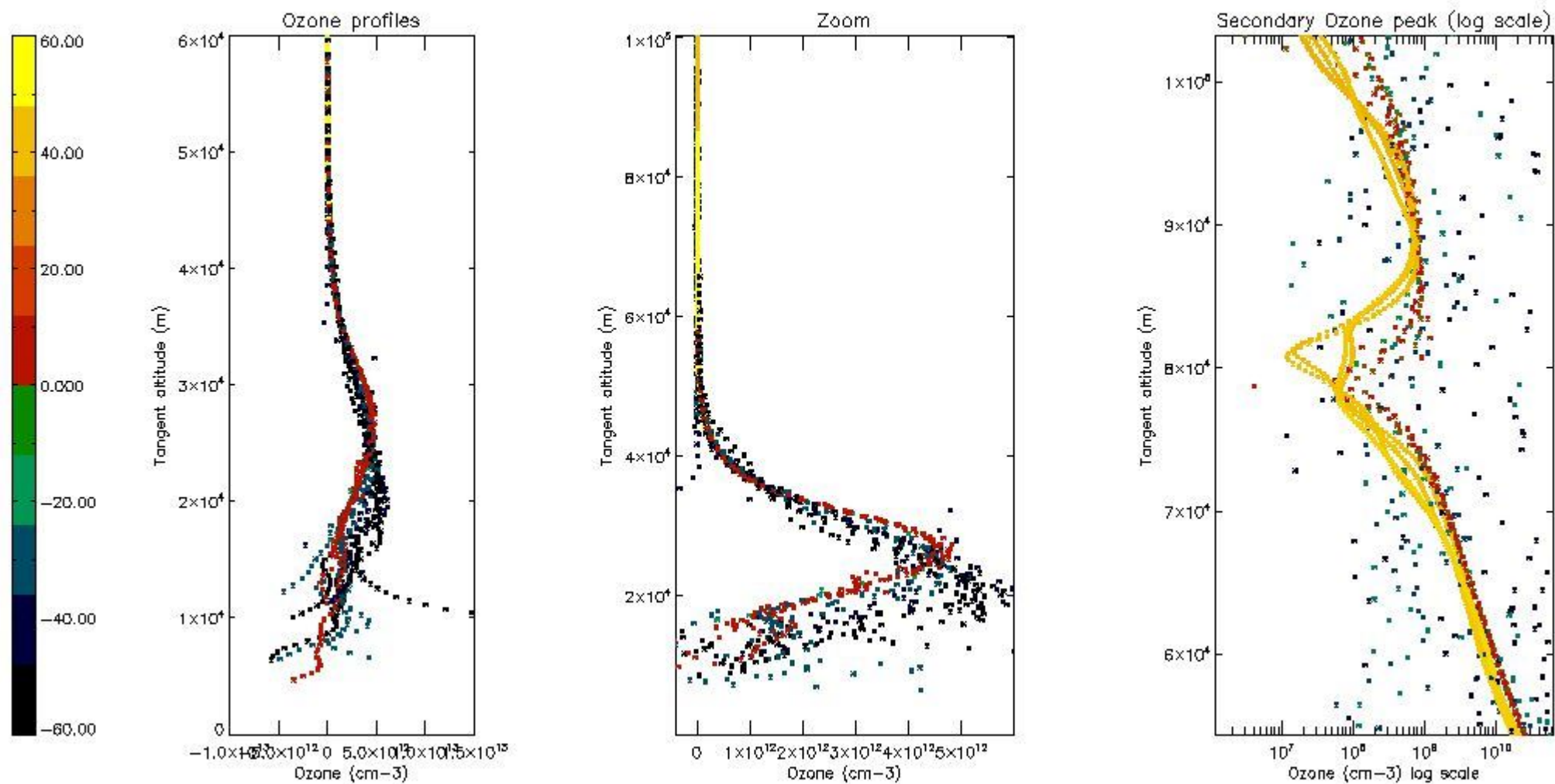
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	33
STD < 20	17

STD < 10	15
STD < 5	13

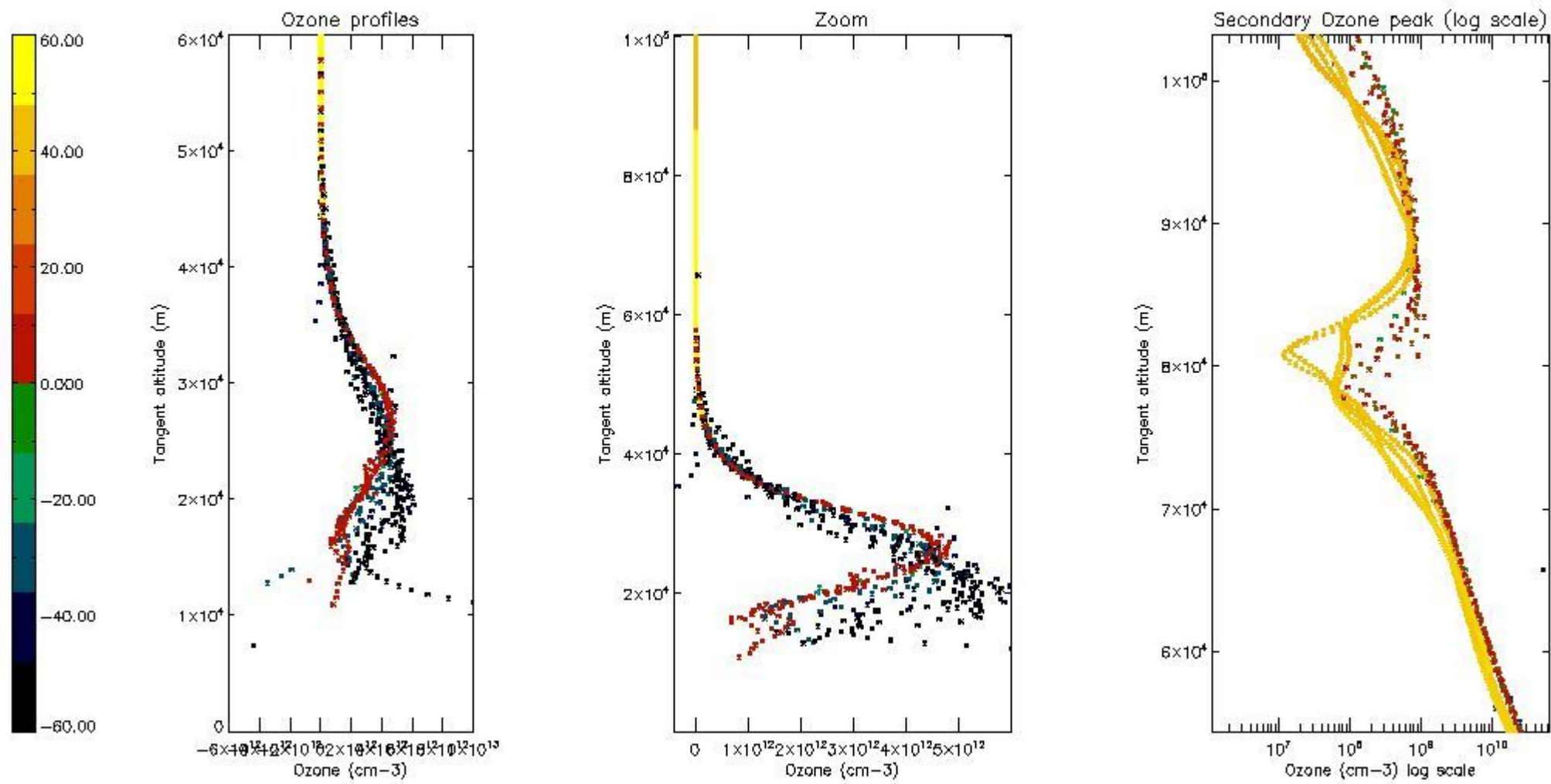
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



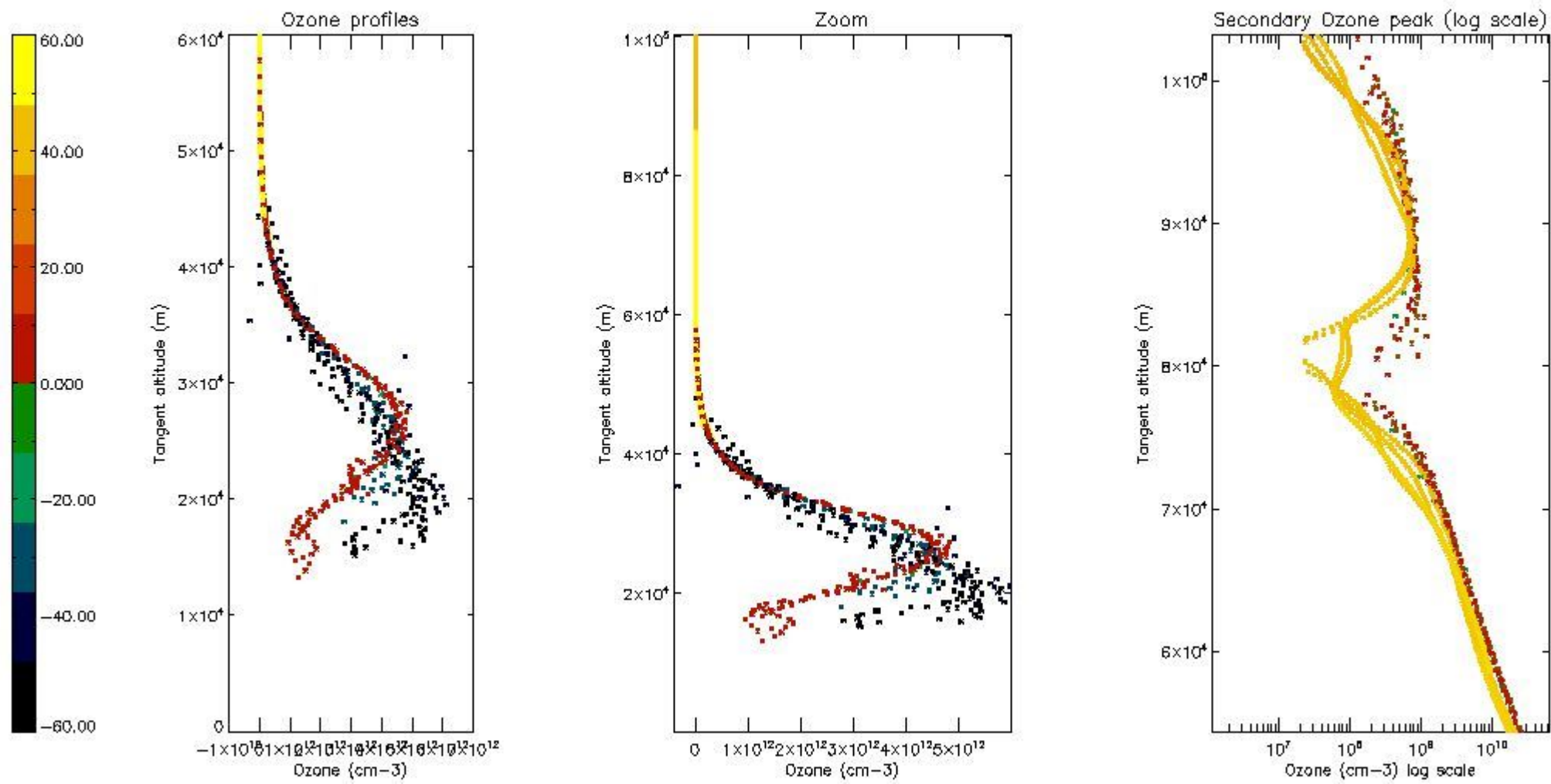
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



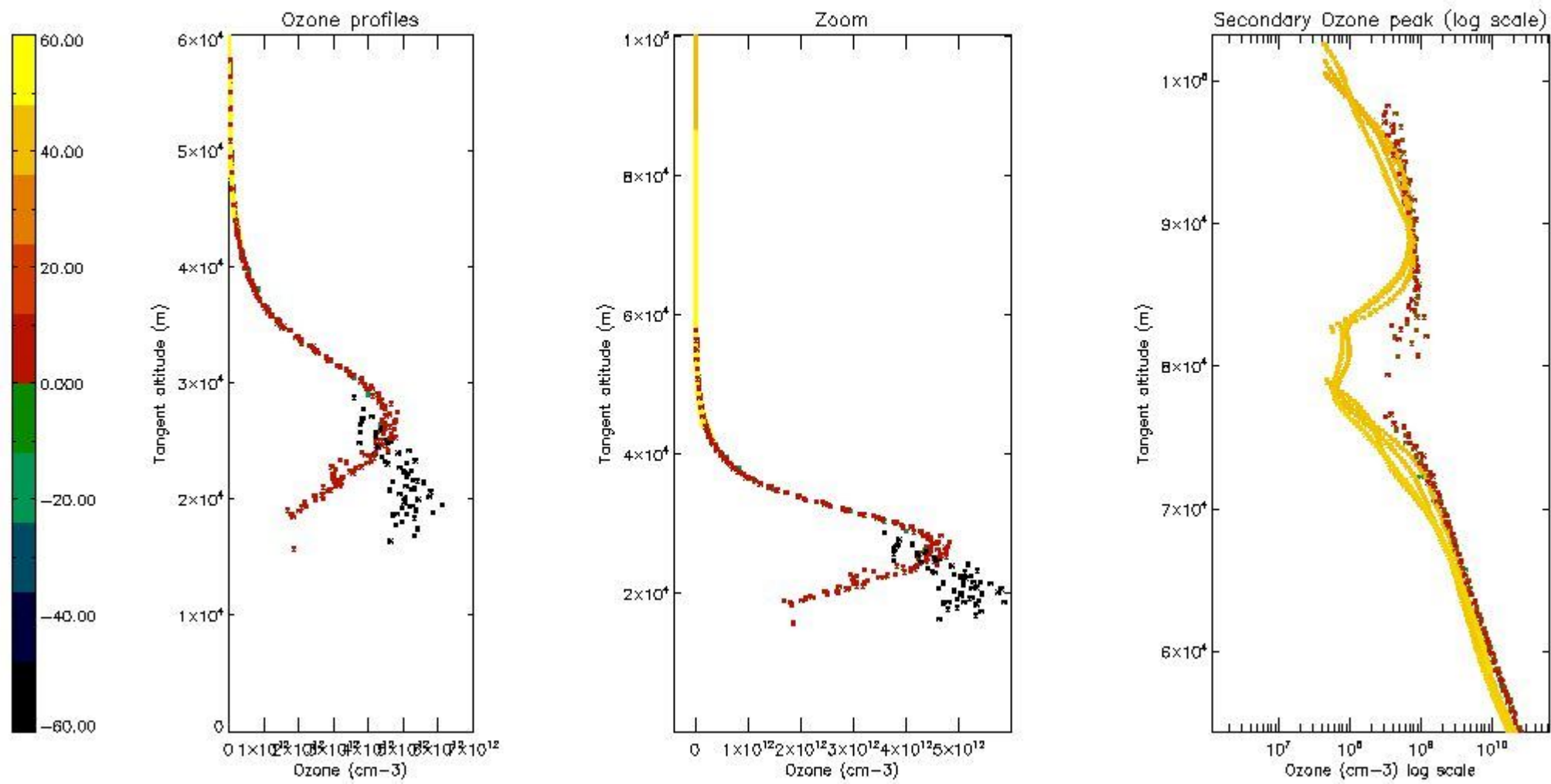
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



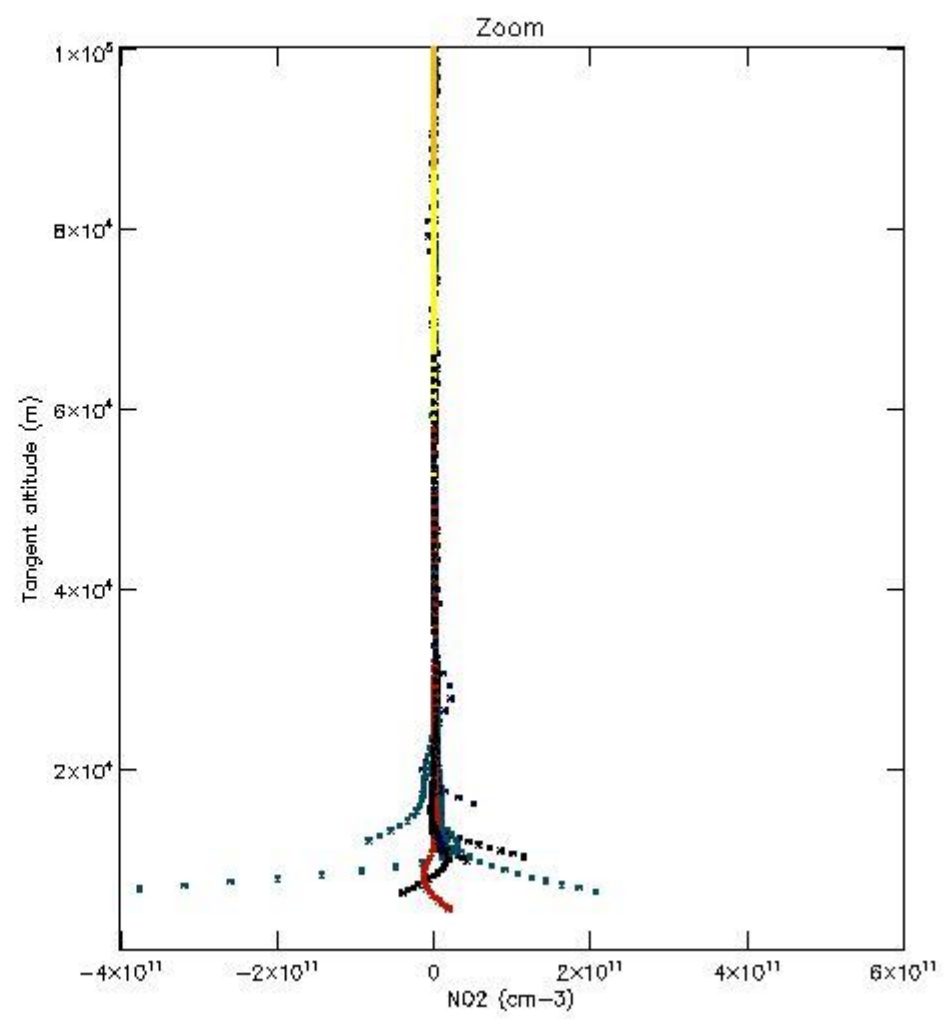
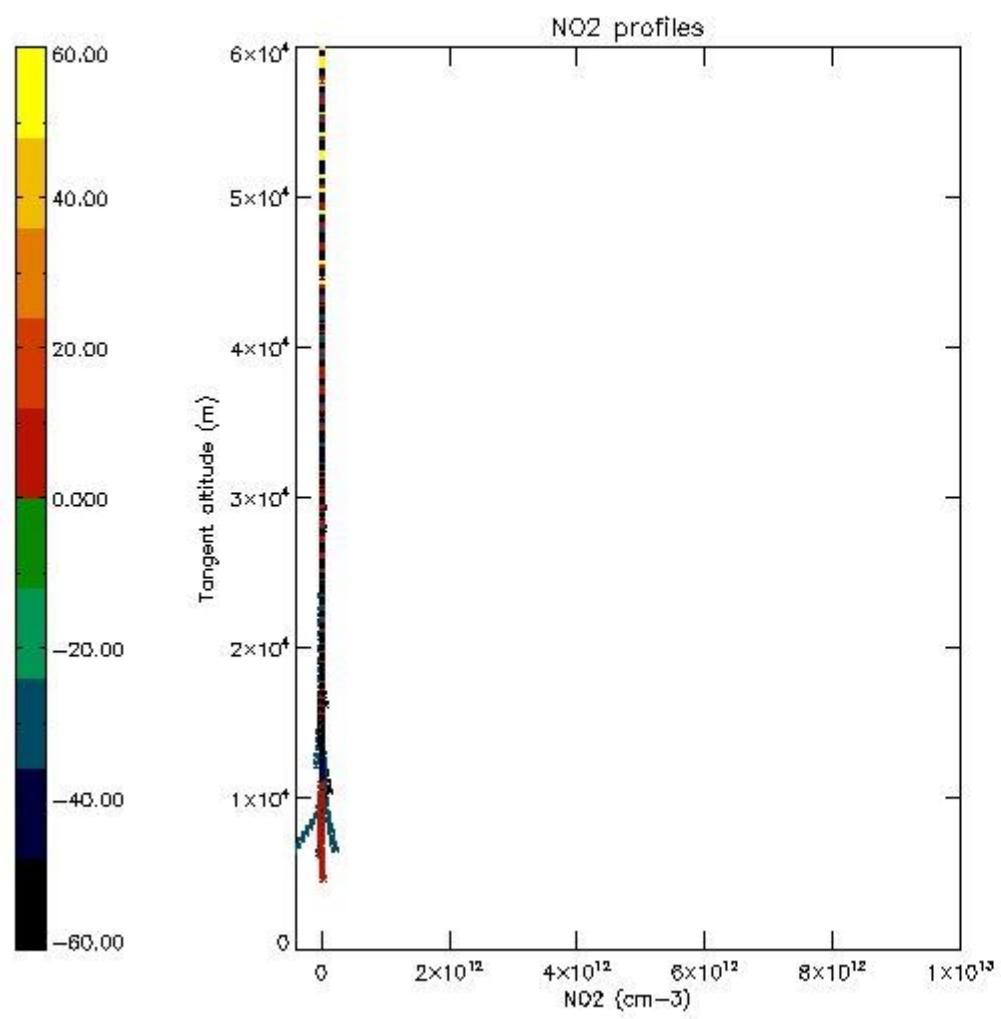
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

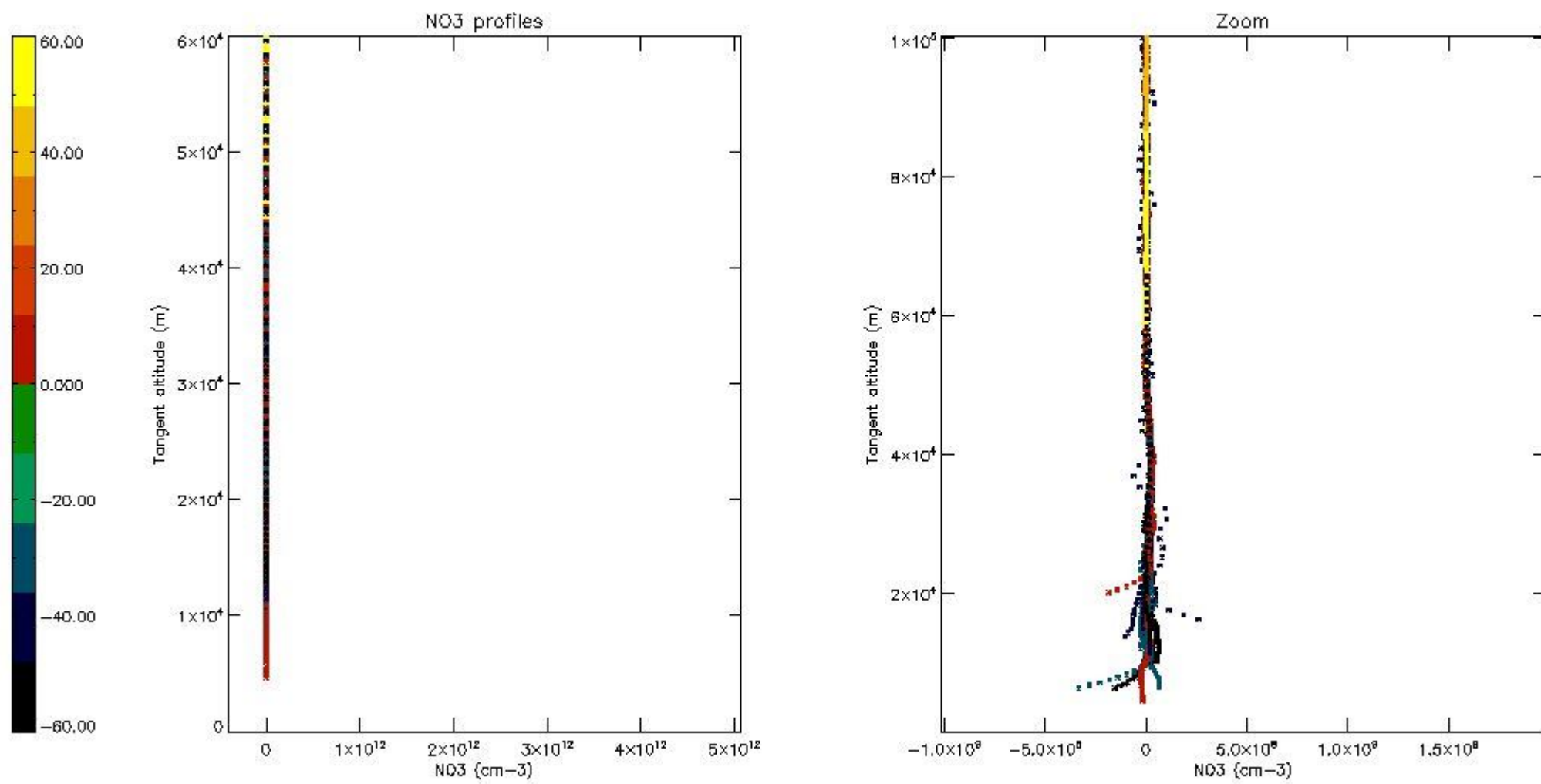
The colorbar represents the latitude.



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

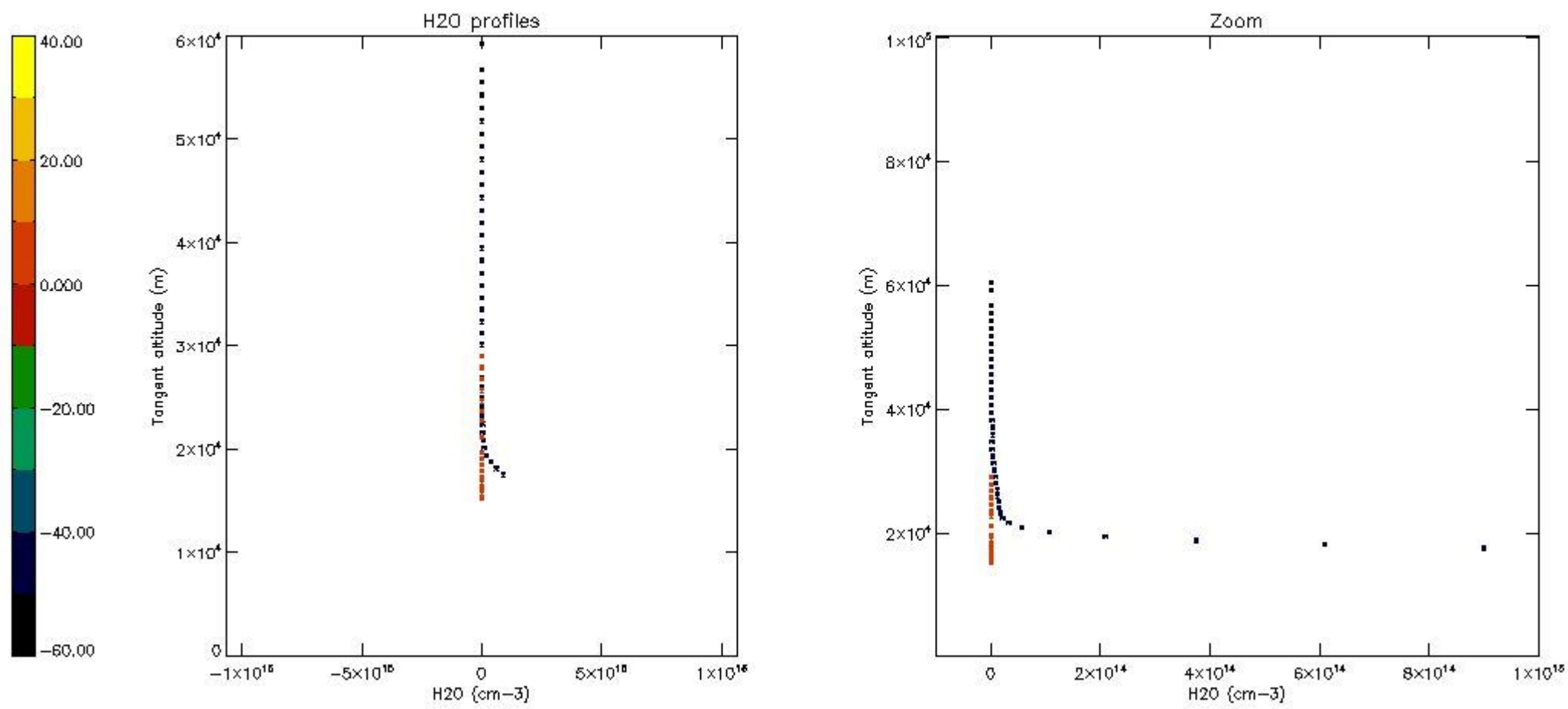
The colorbar represents the latitude.





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)

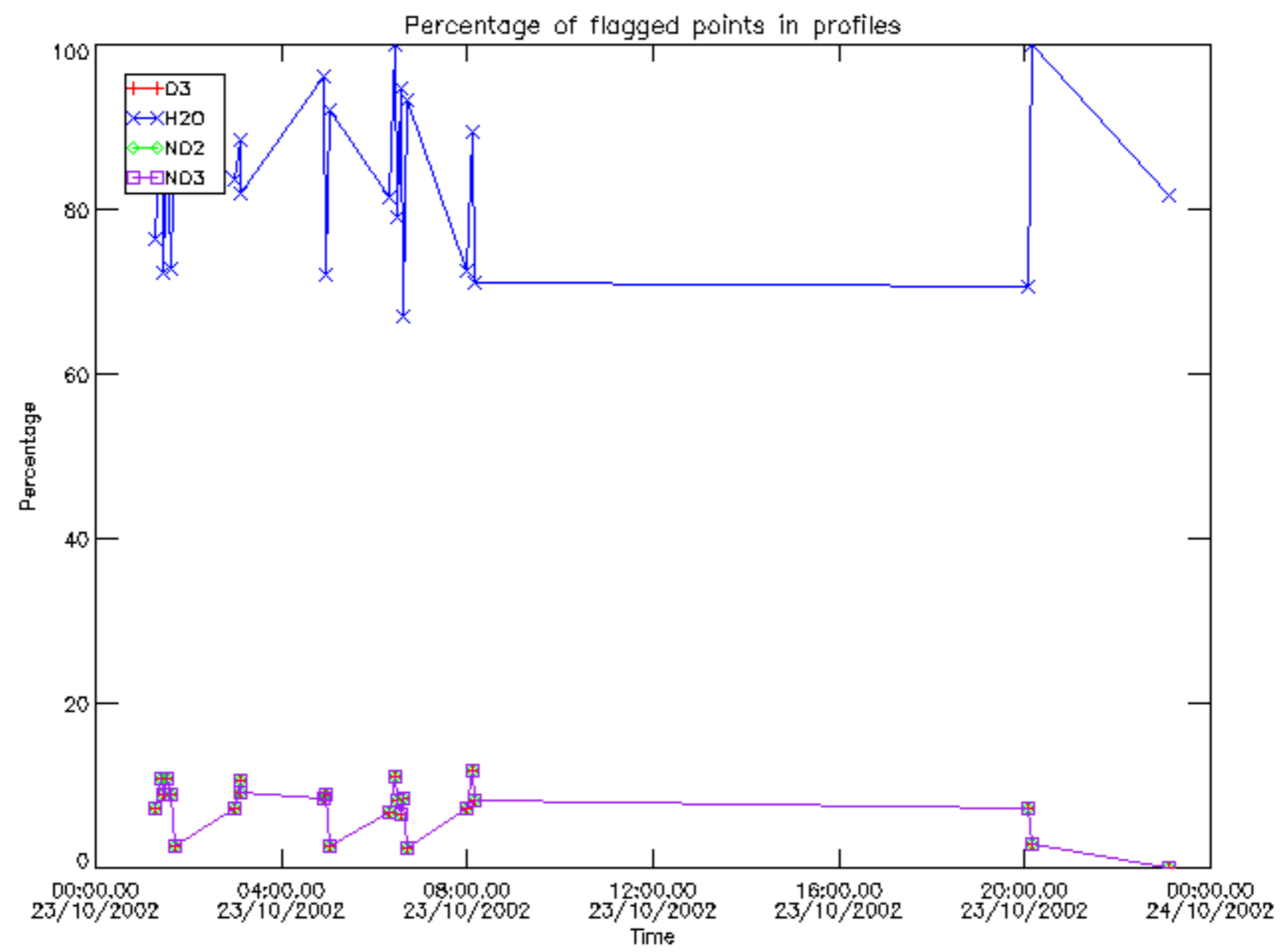
The colorbar represents the latitude.



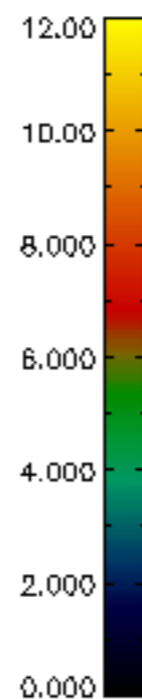
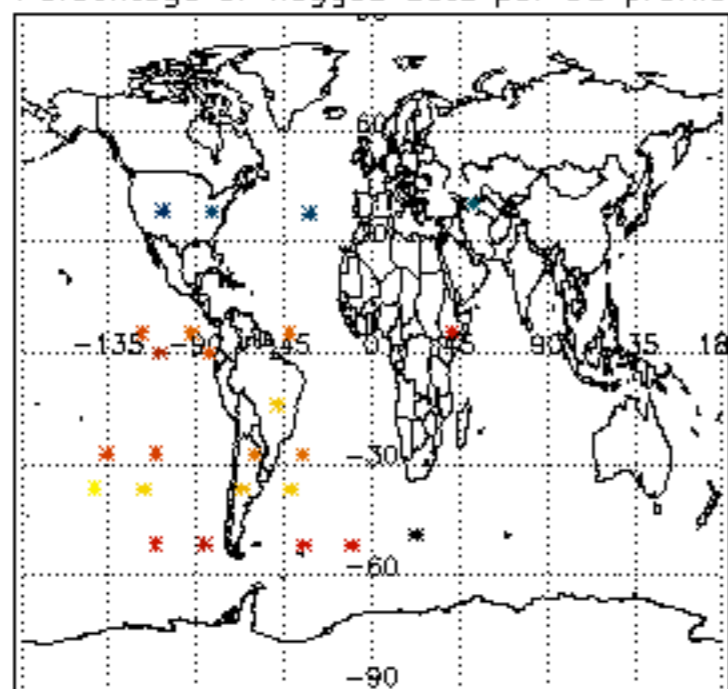
## 6. Auxiliary Data Files used for the production reported in section 2

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.

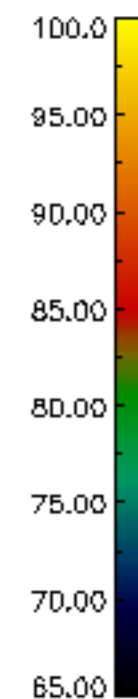
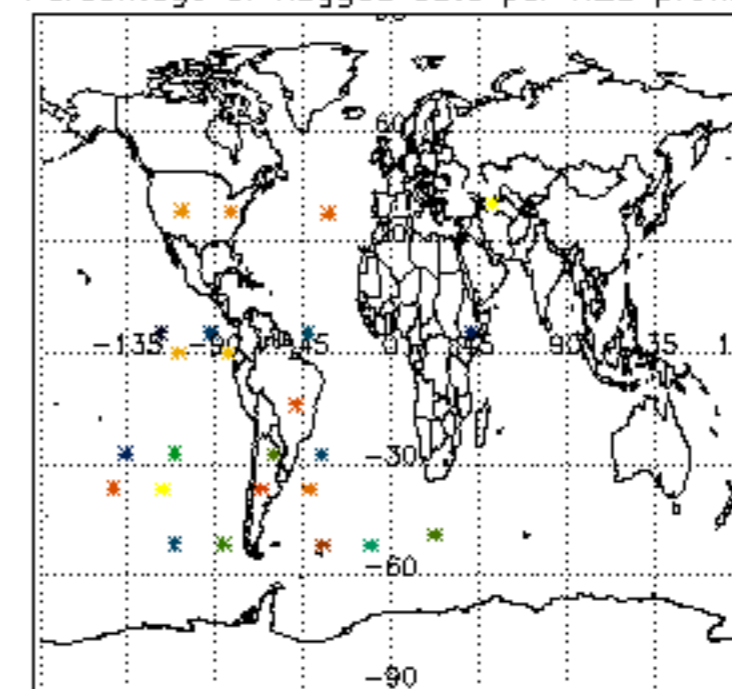
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	23-OCT-2002 00:27:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-OCT-2002 00:27:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-OCT-2002 00:27:05



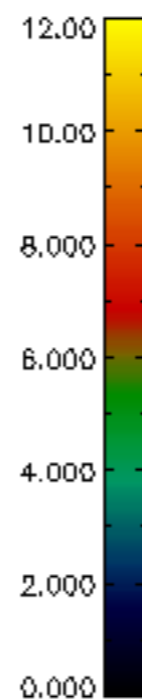
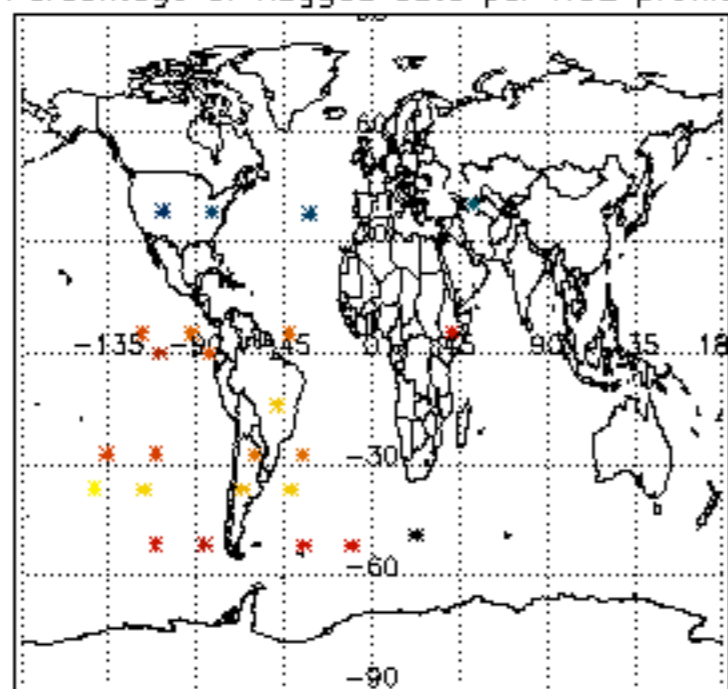
Percentage of flagged data per D3 profile



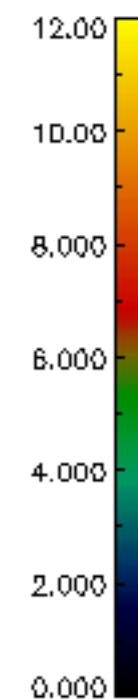
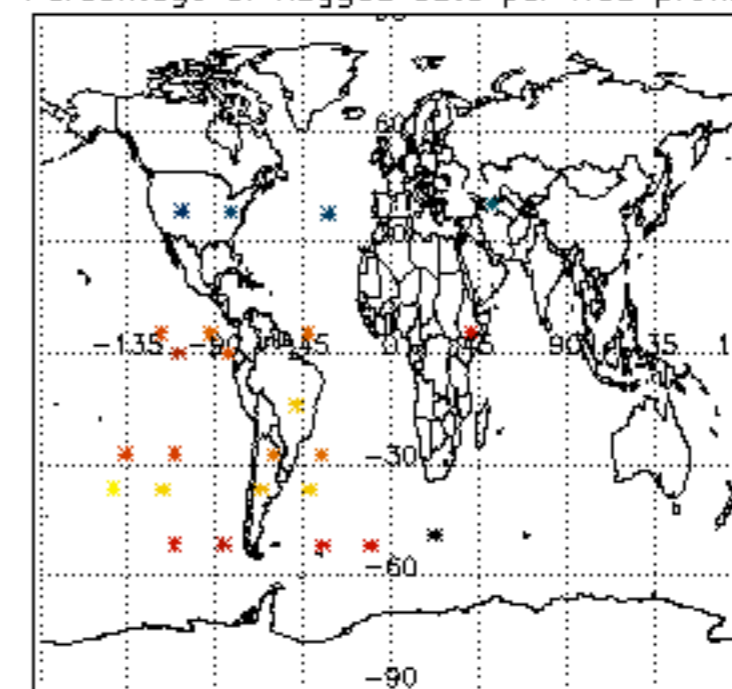
Percentage of flagged data per H2O profile

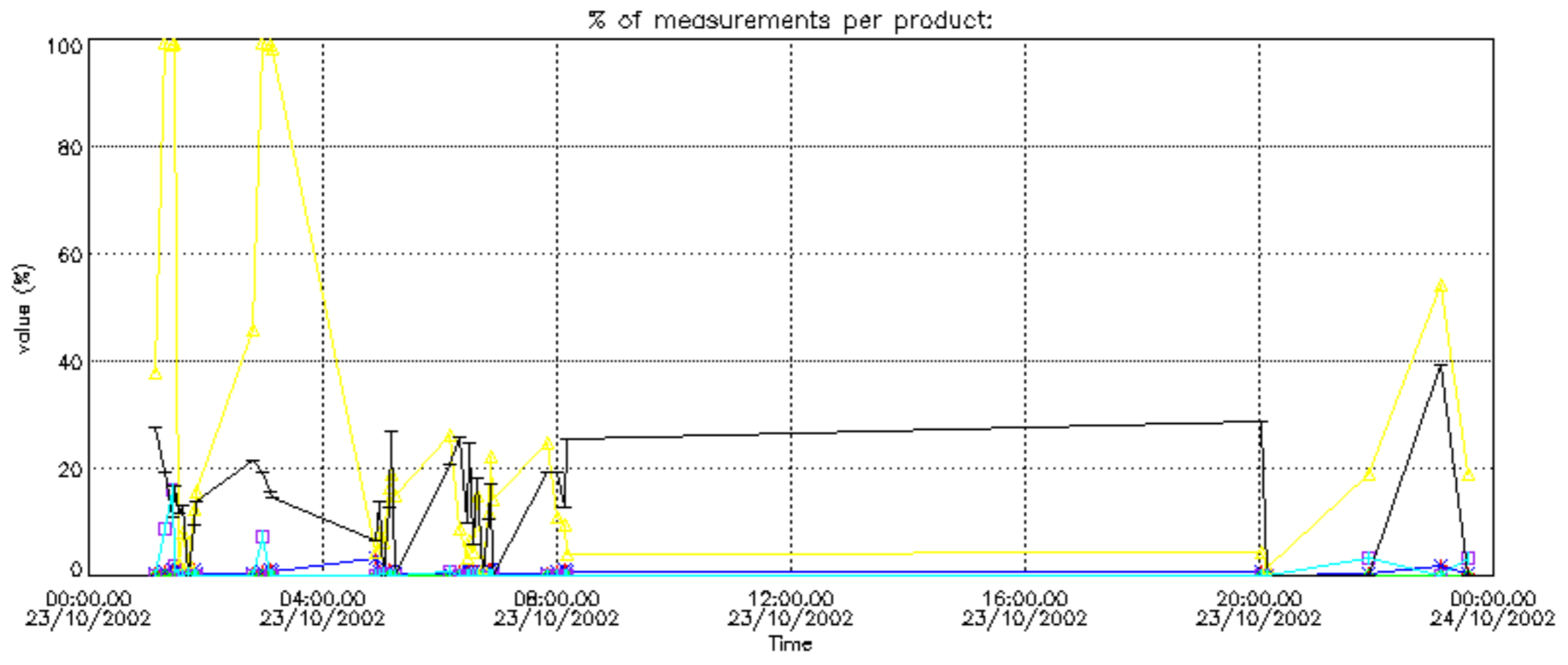
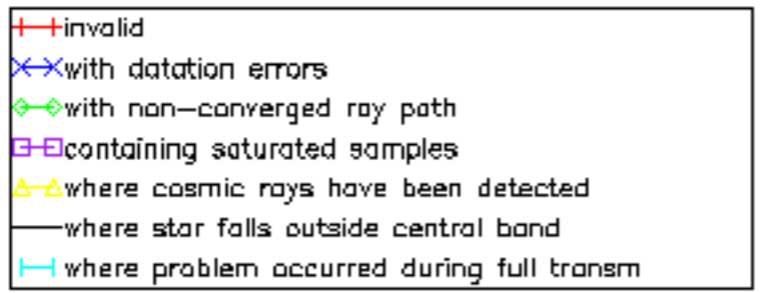


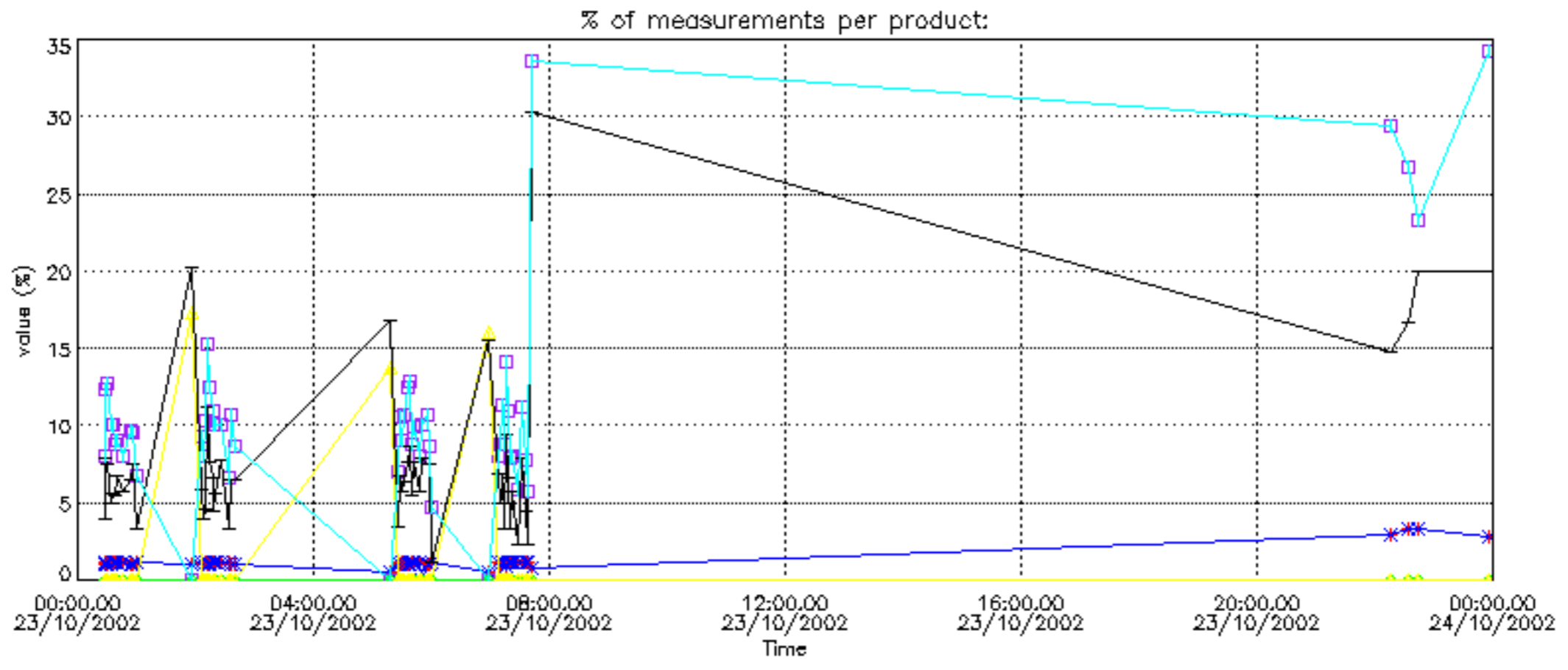
Percentage of flagged data per NO2 profile



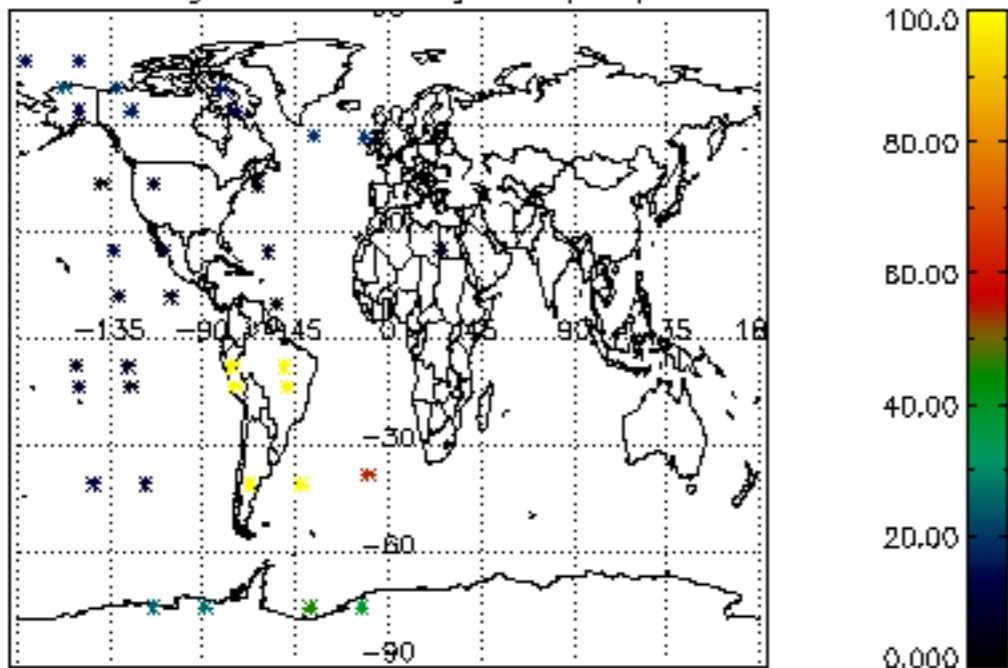
Percentage of flagged data per NO3 profile



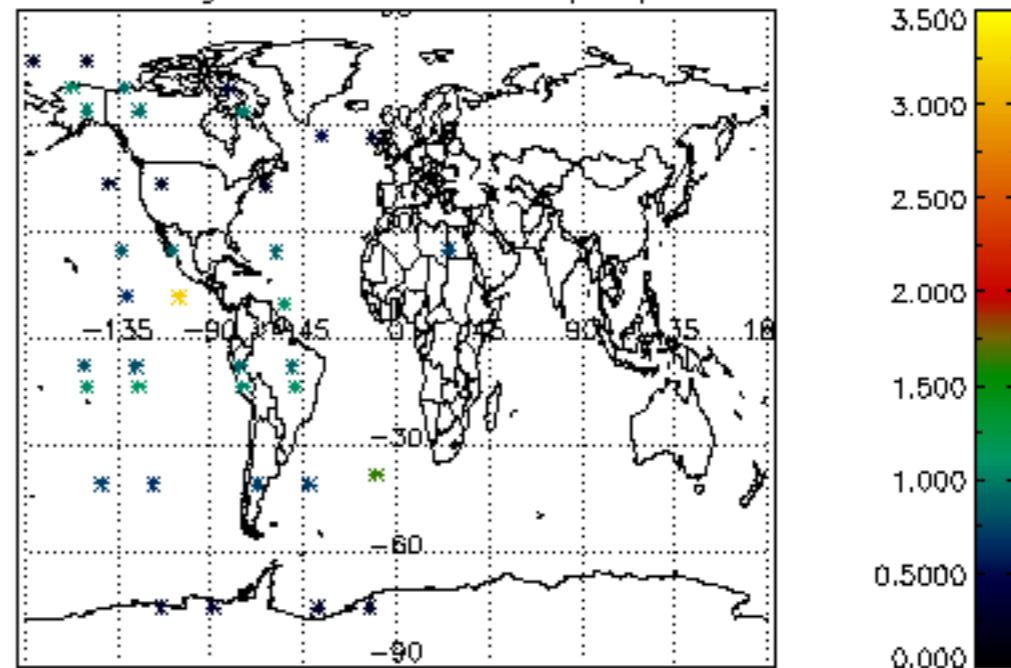




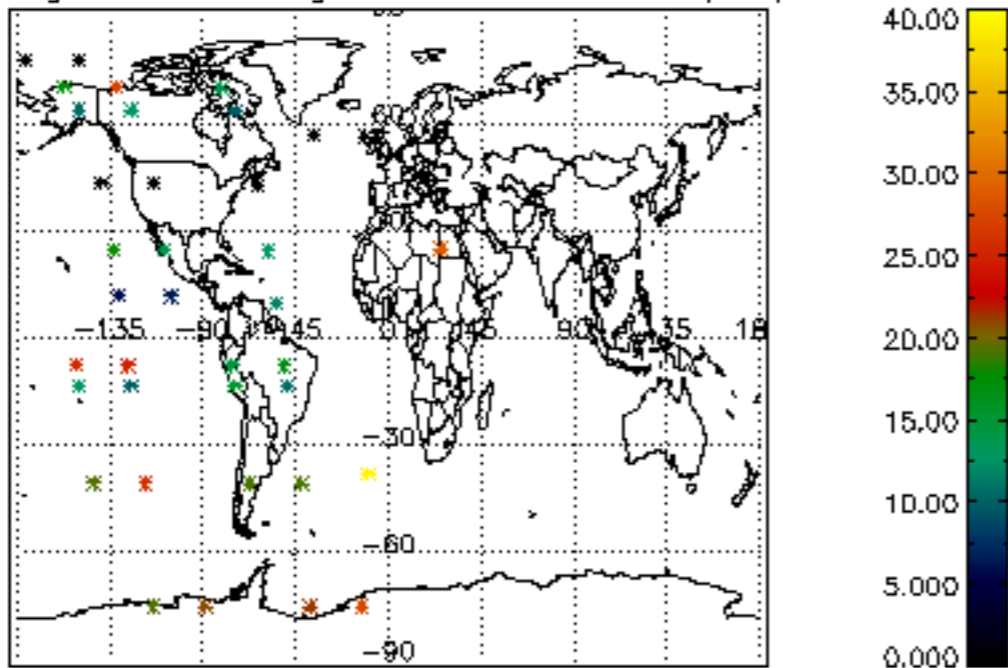
Percentage of cosmic ray hits per profile



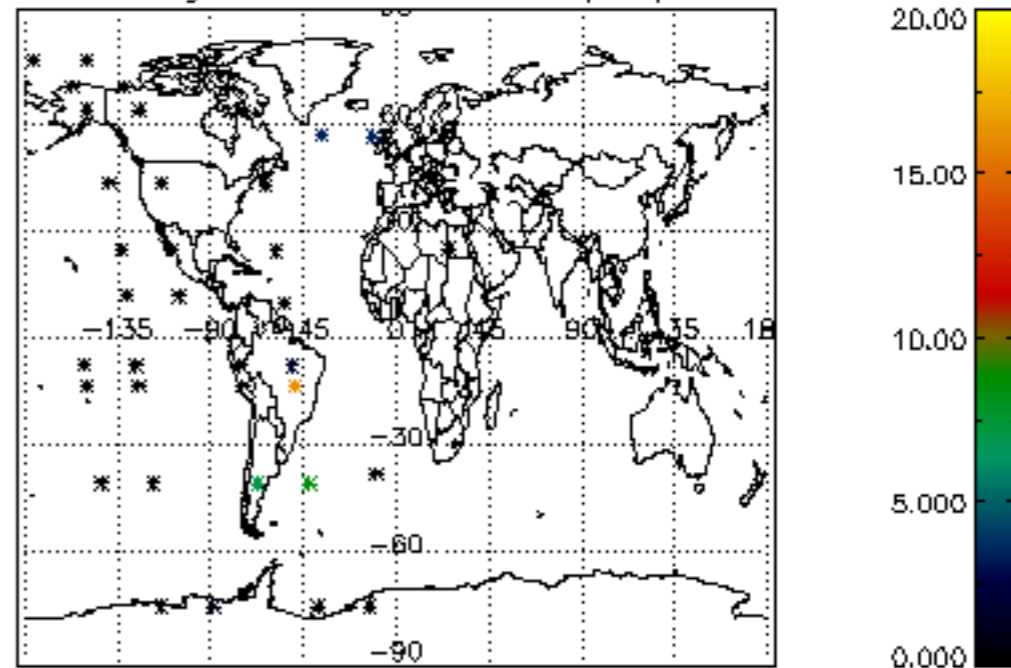
Percentage of datation errors per profile



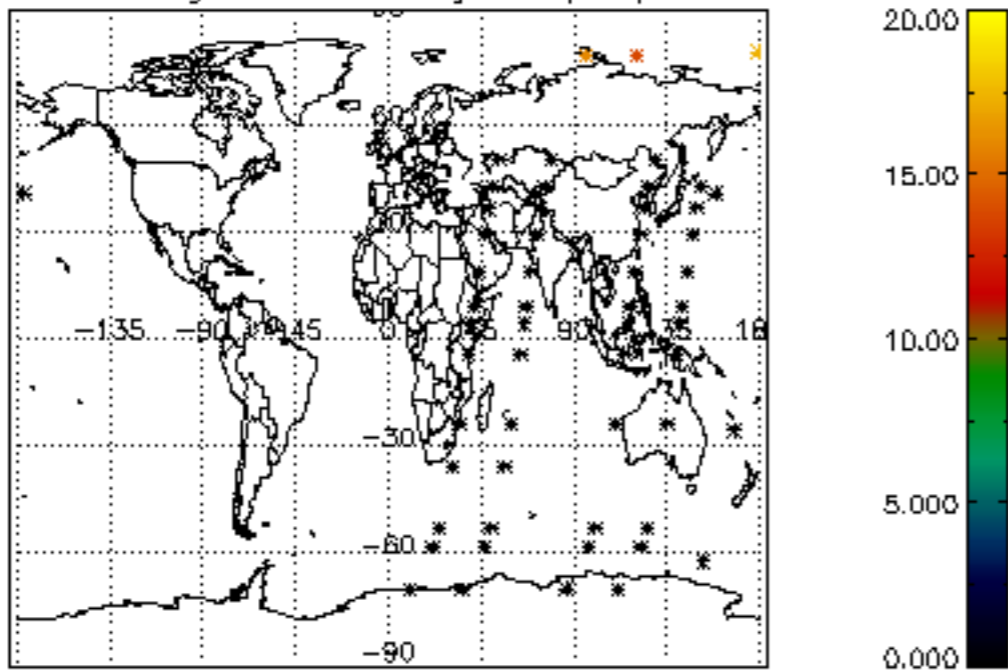
Percentage of star falling outside central band per profile



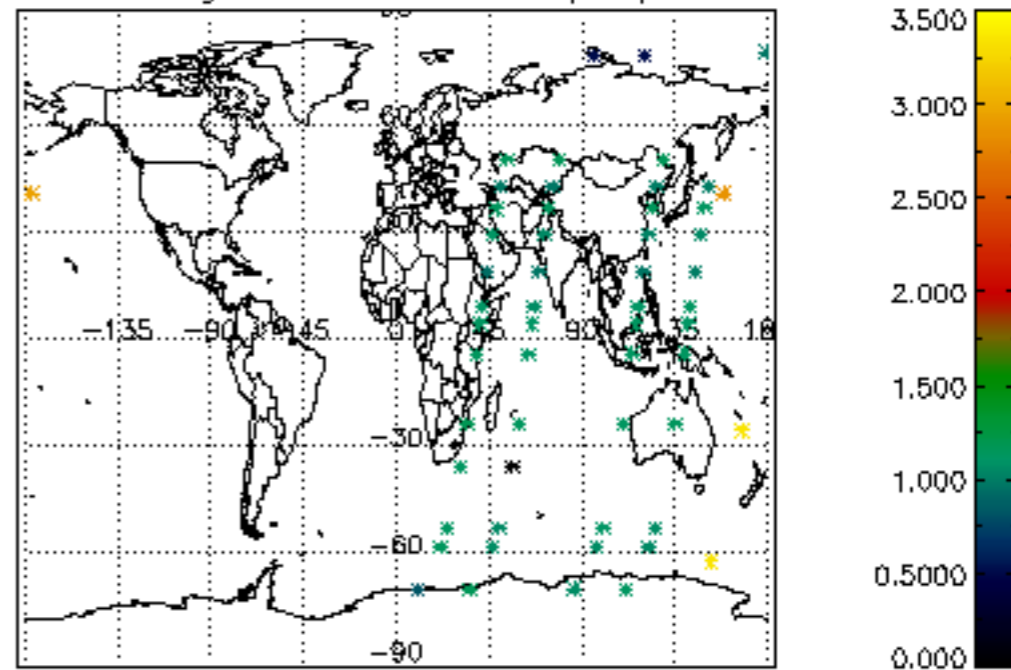
Percentage of saturation errors per profile



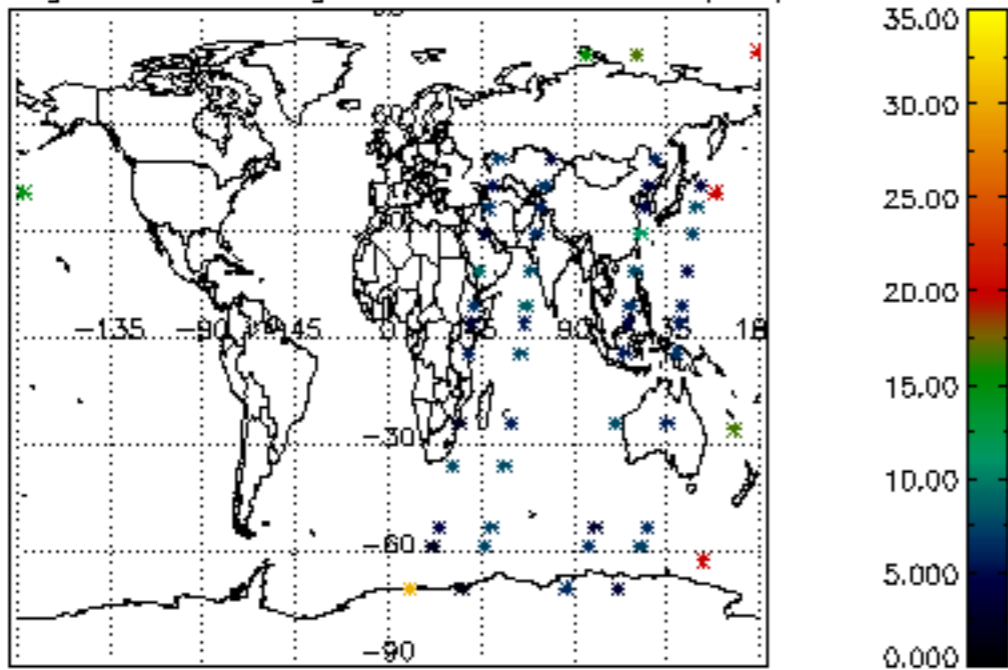
Percentage of cosmic ray hits per profile



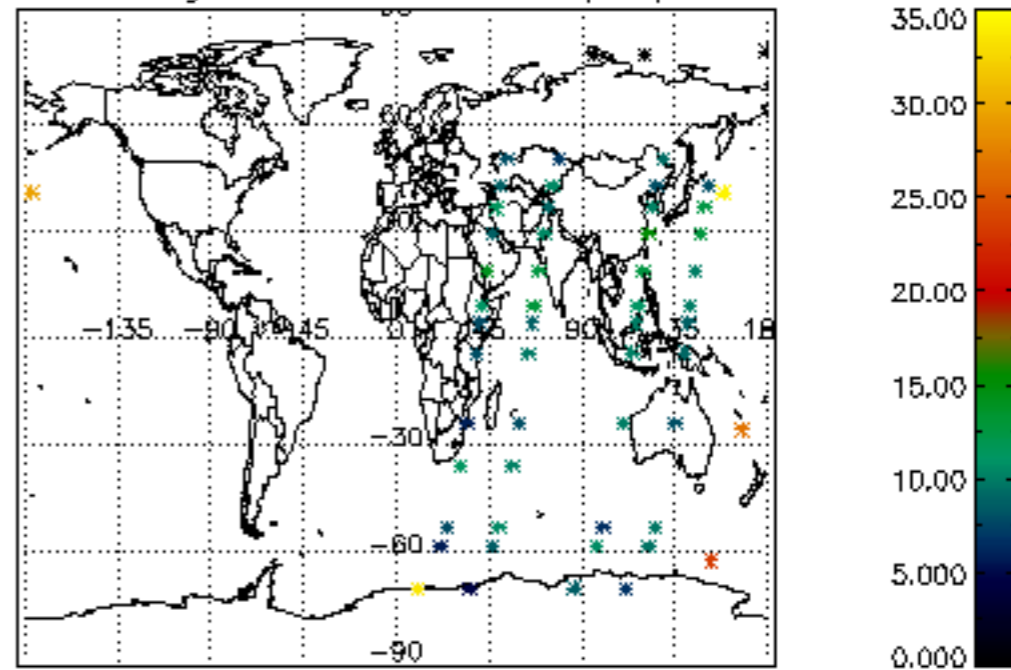
Percentage of datation errors per profile



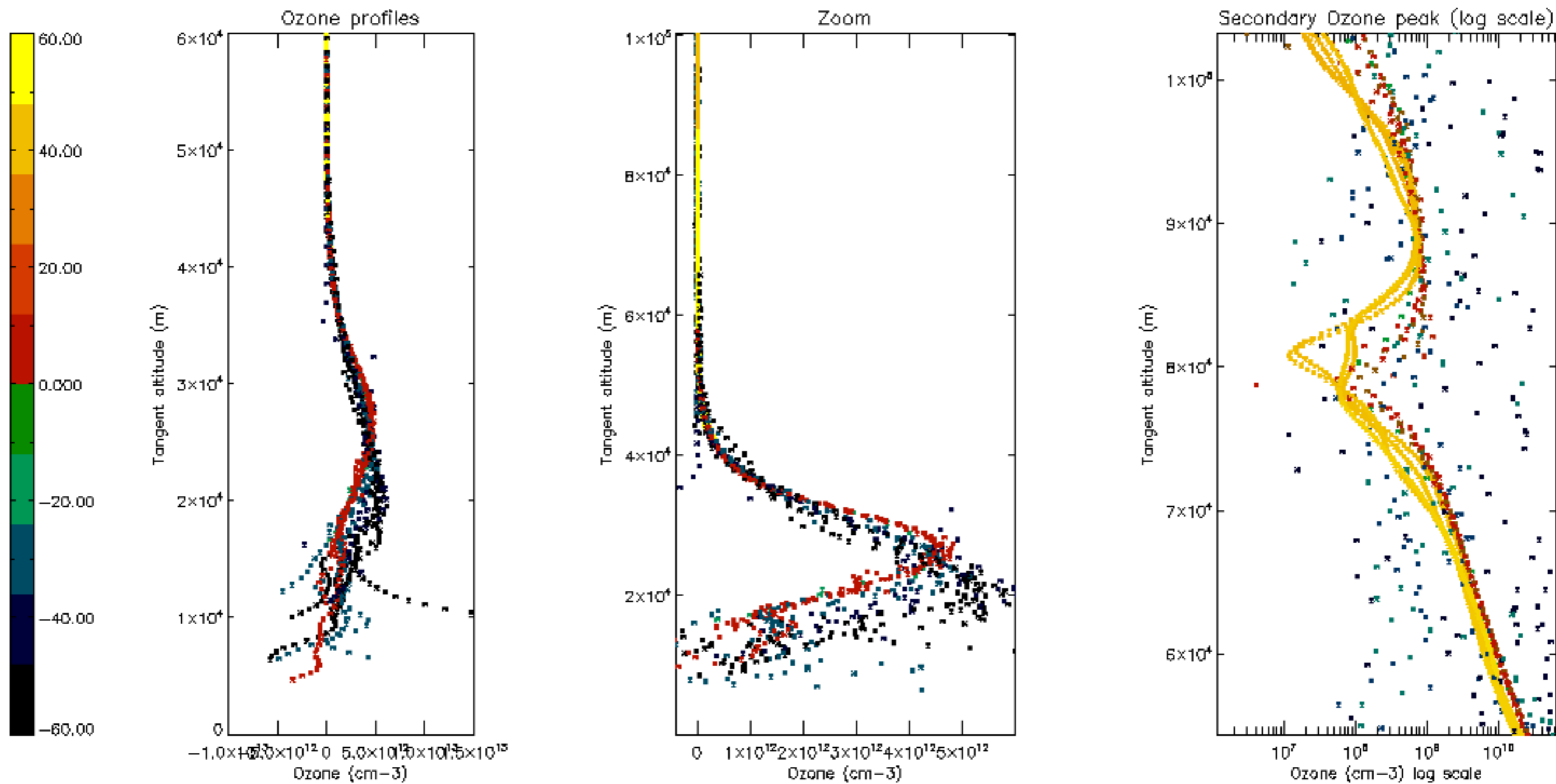
Percentage of star falling outside central band per profile

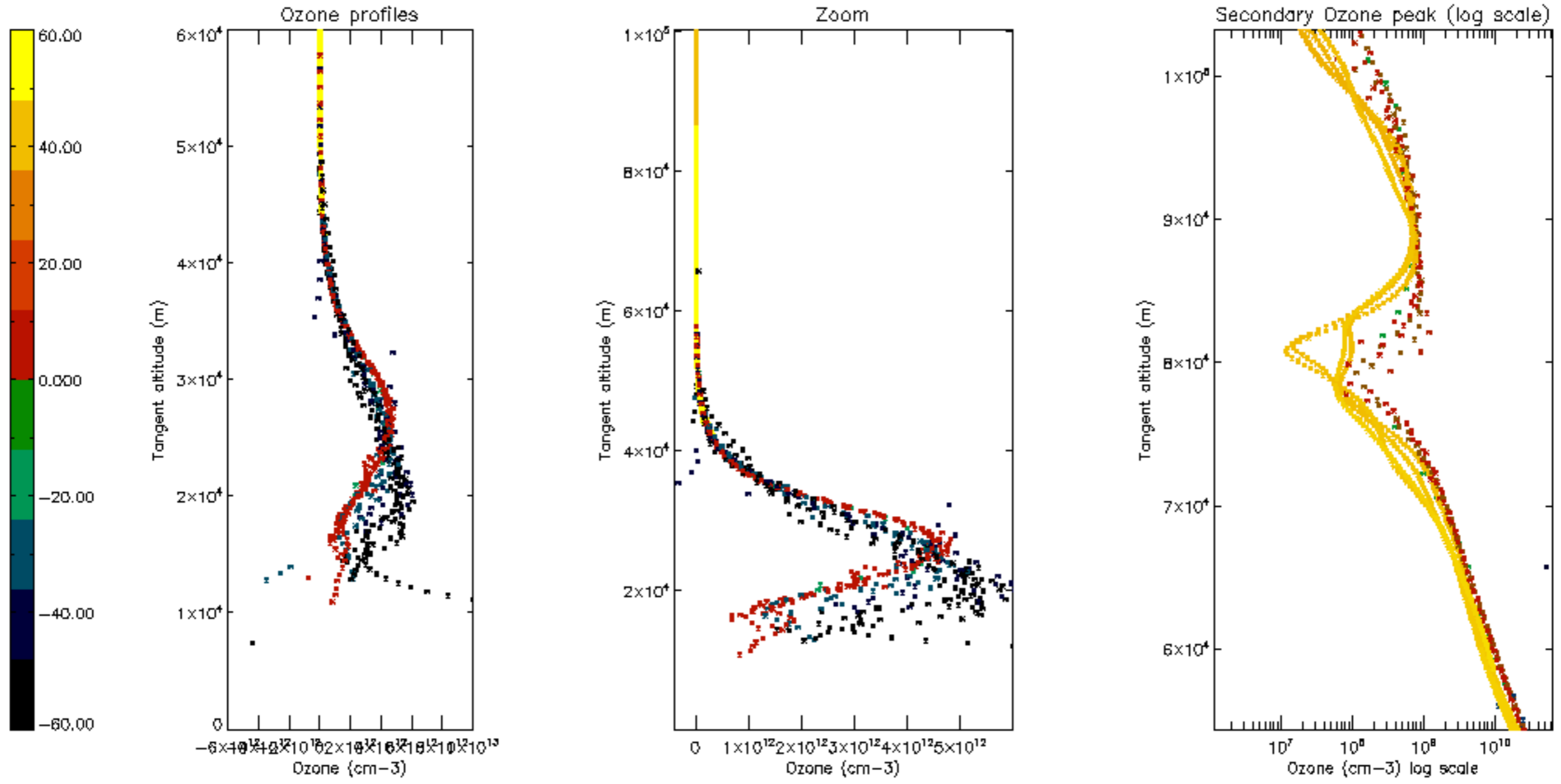


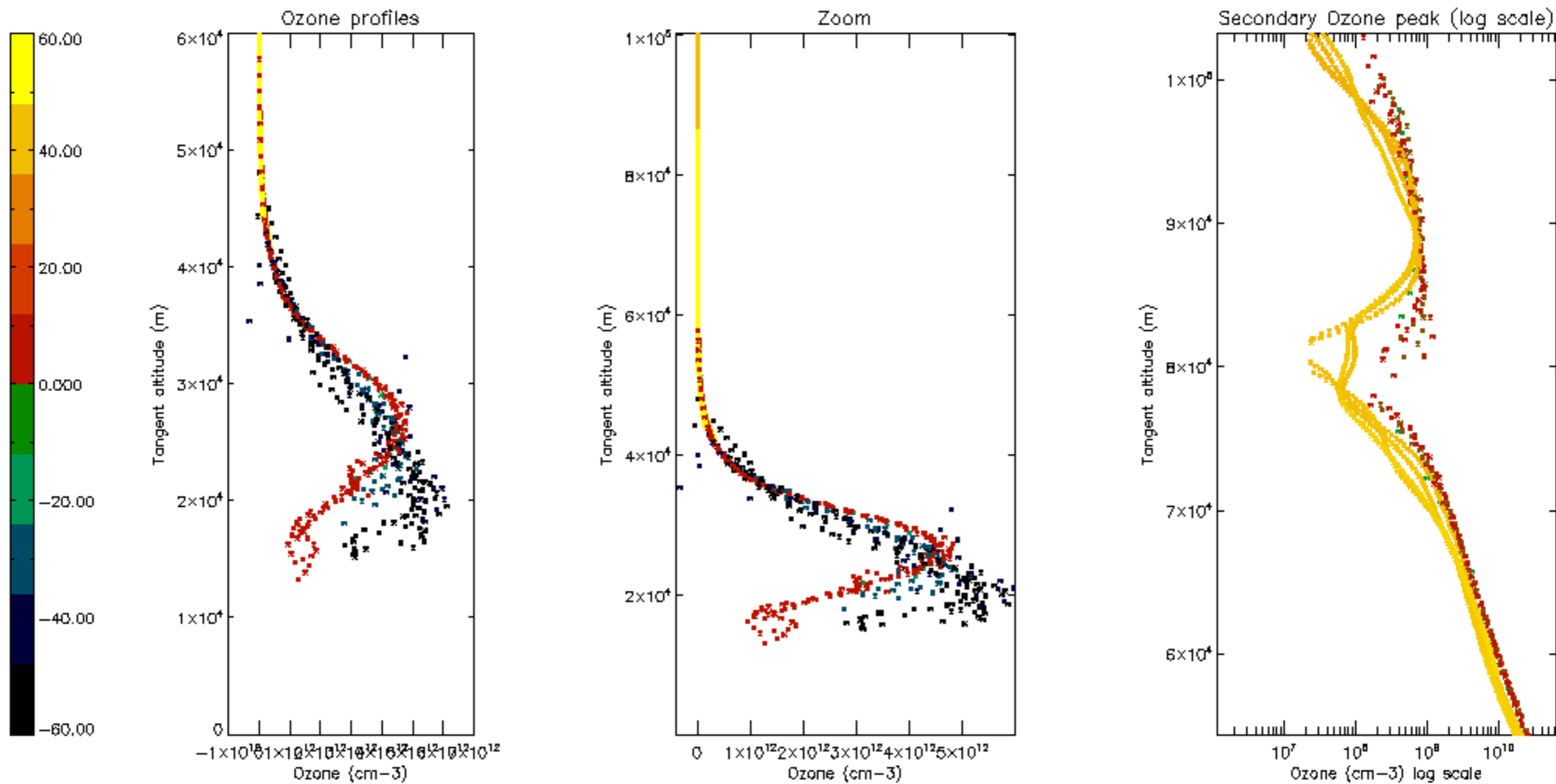
Percentage of saturation errors per profile

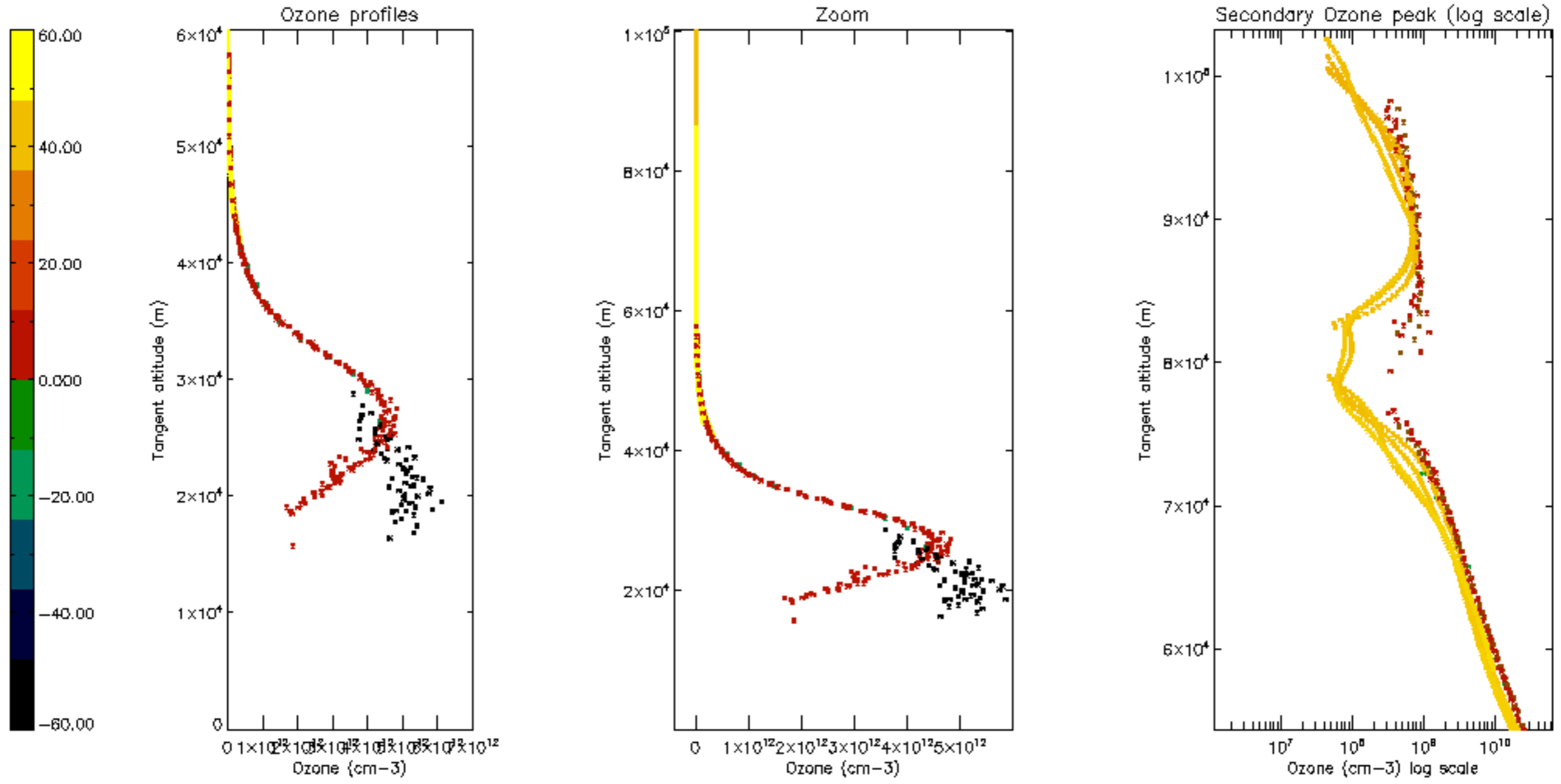


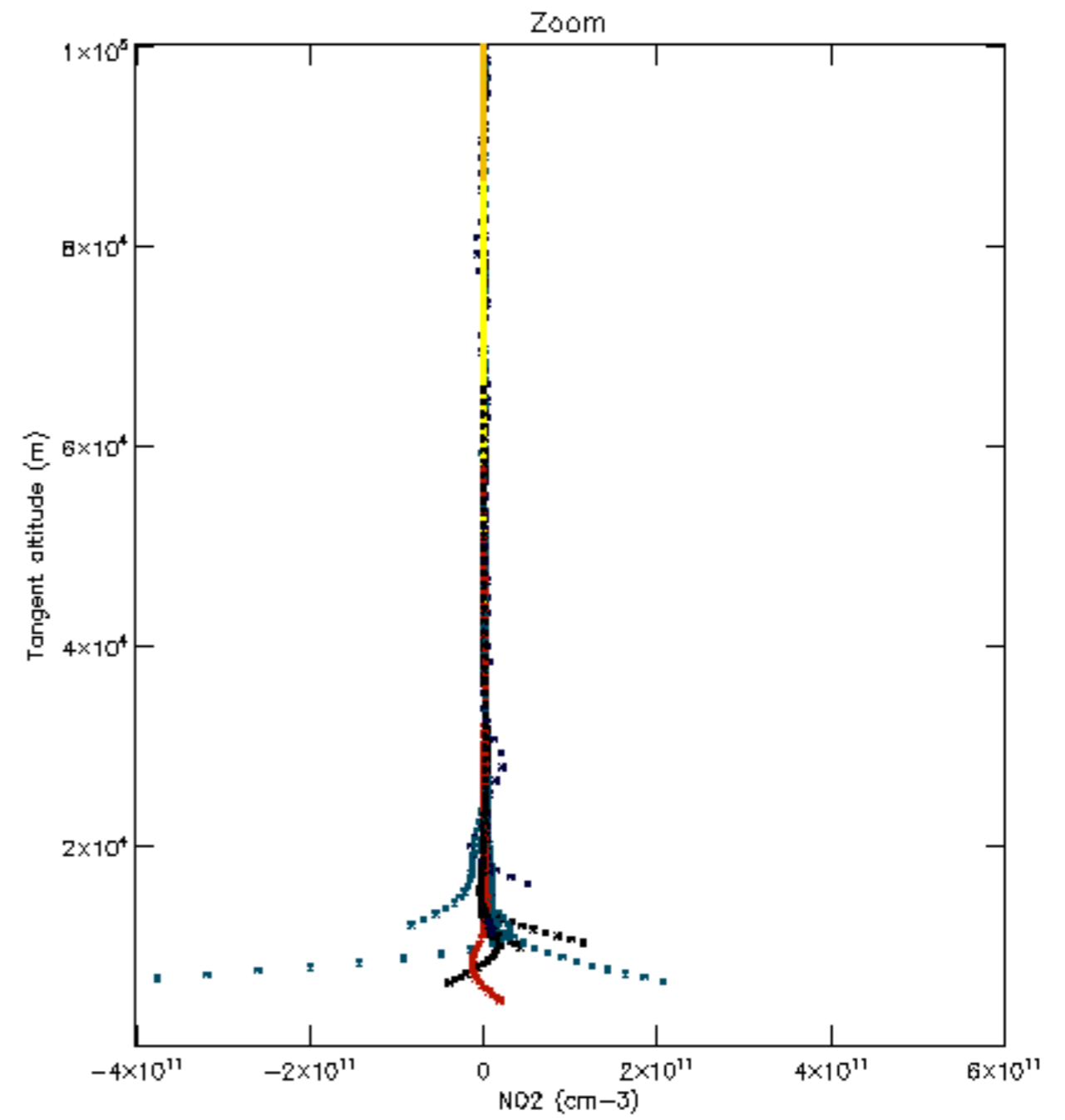
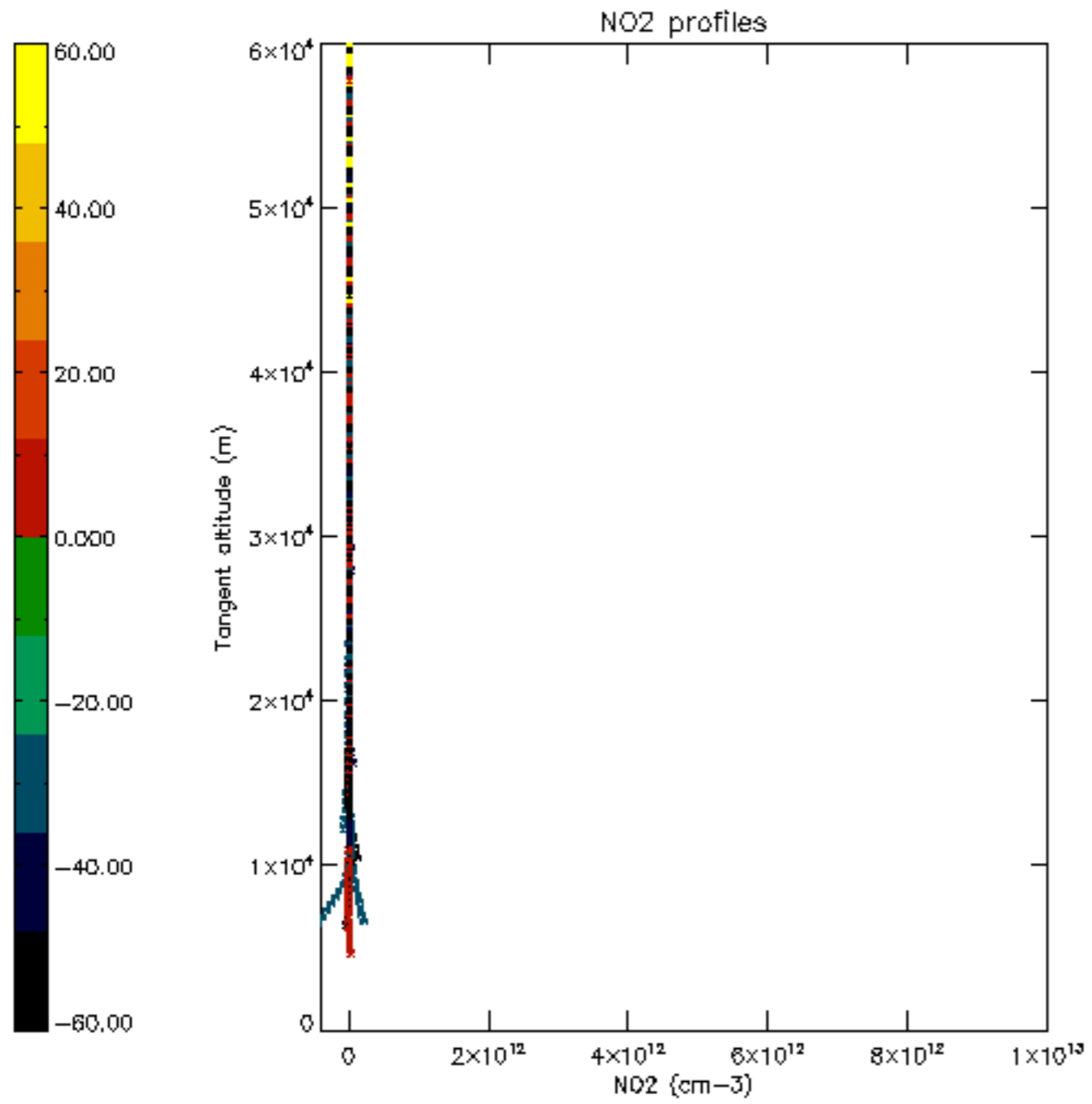


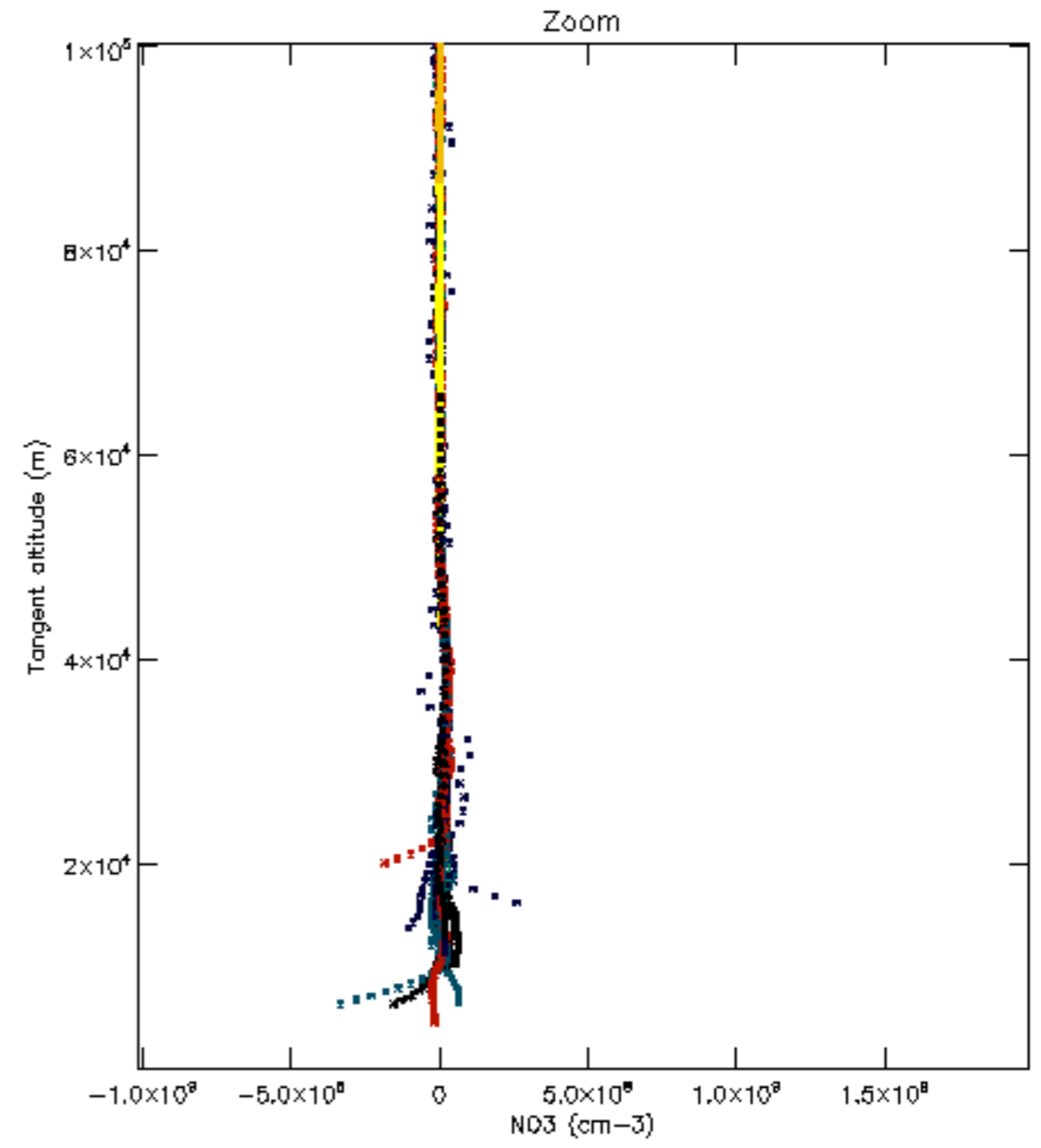
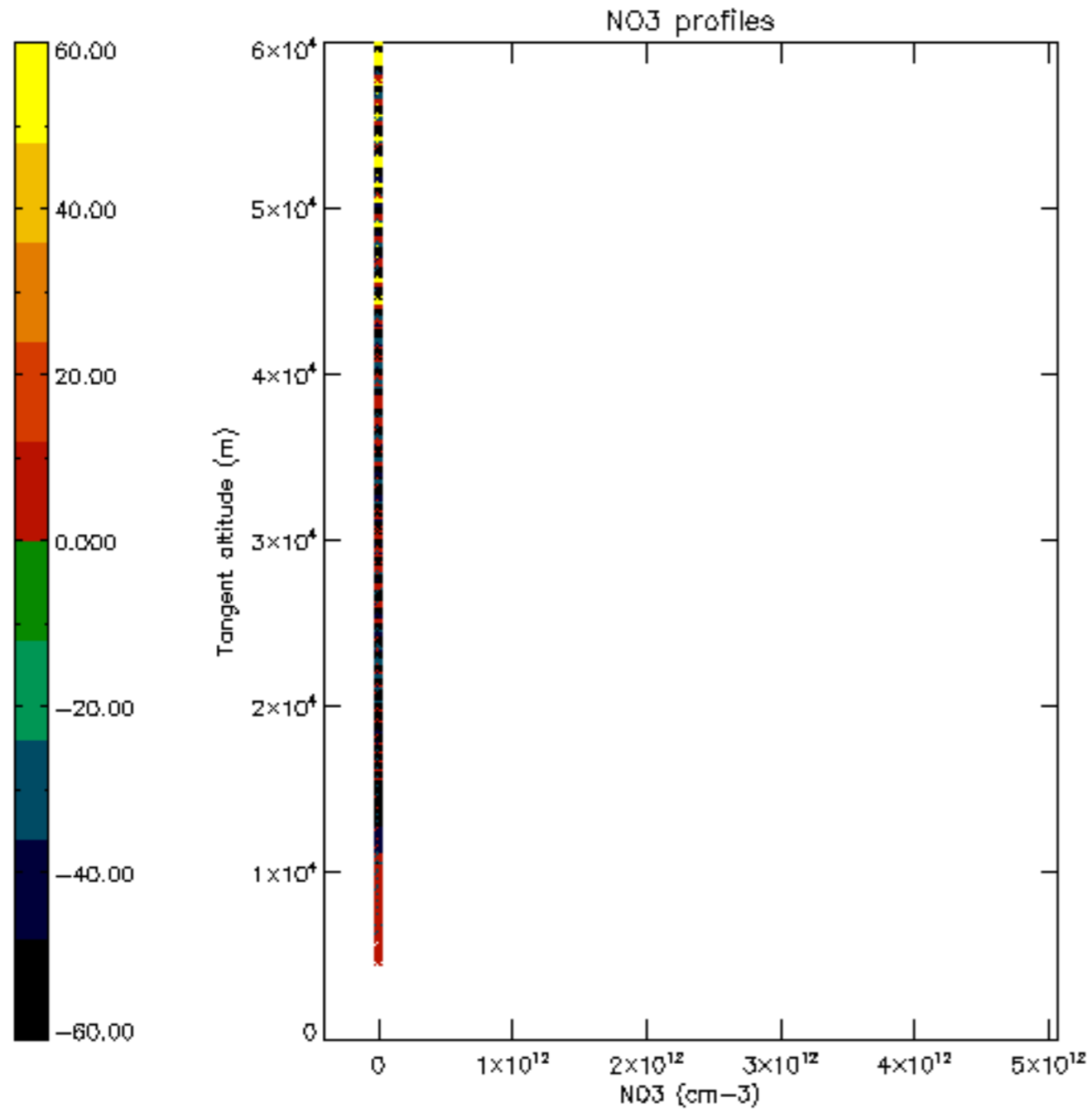


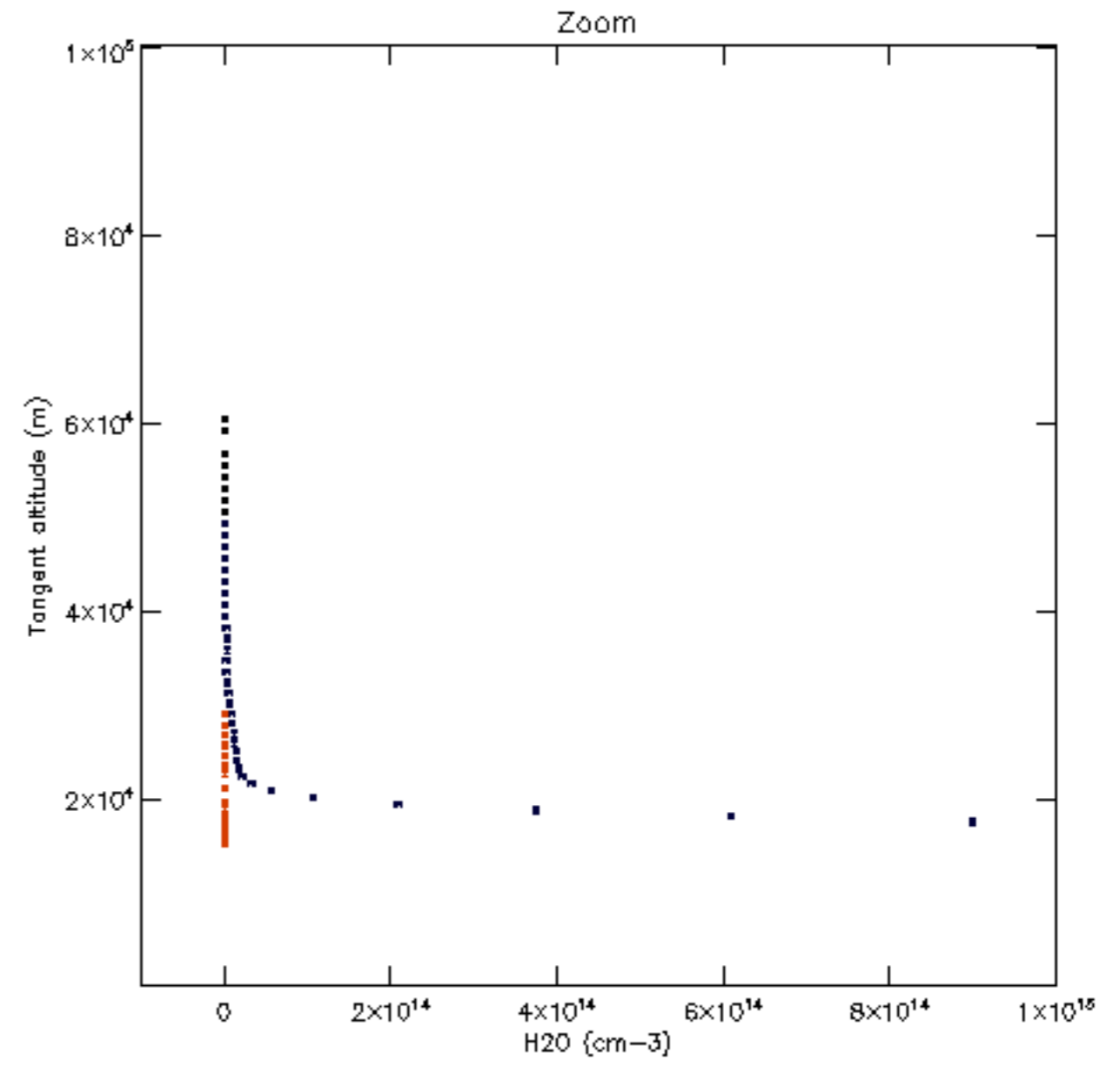
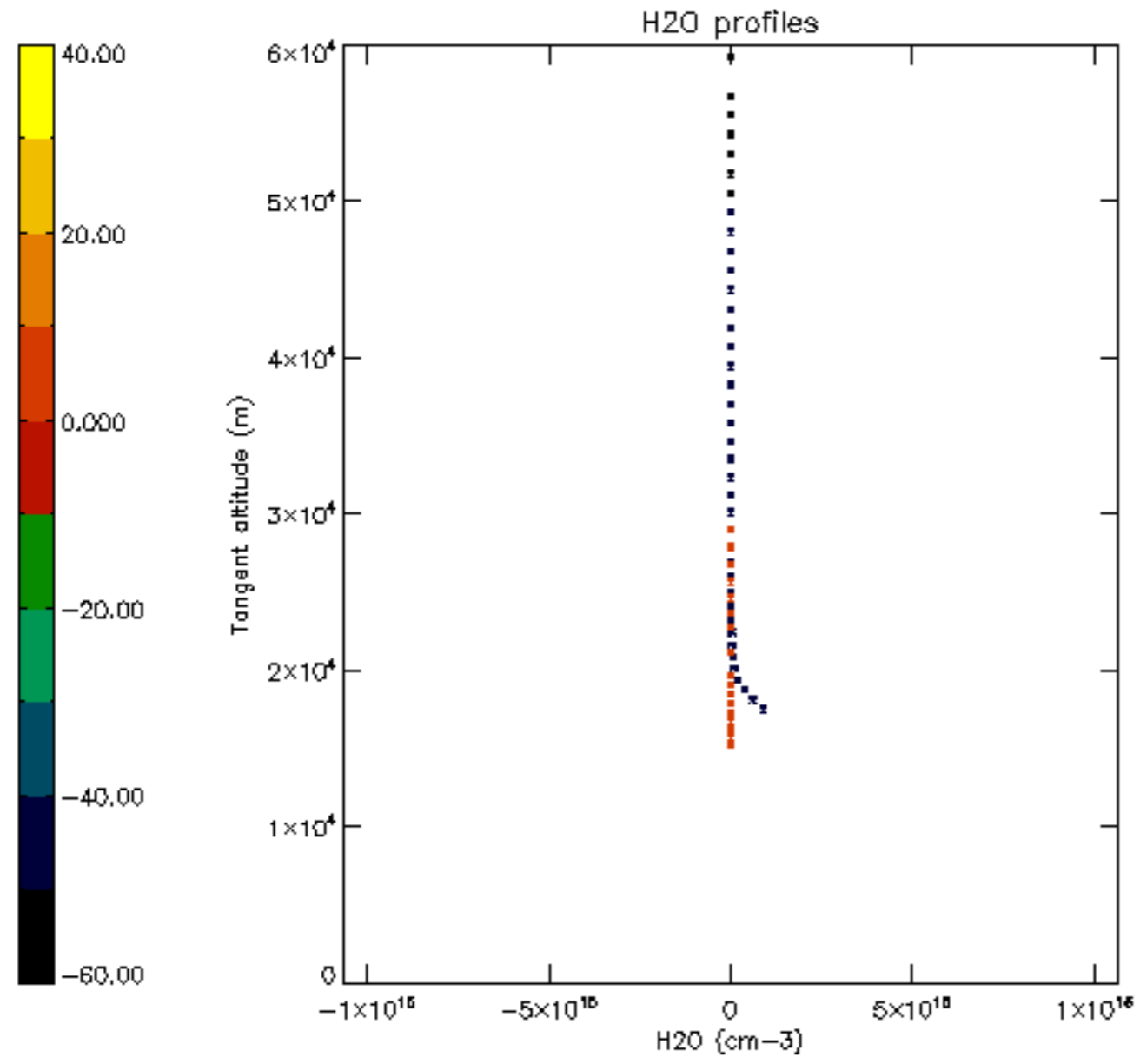


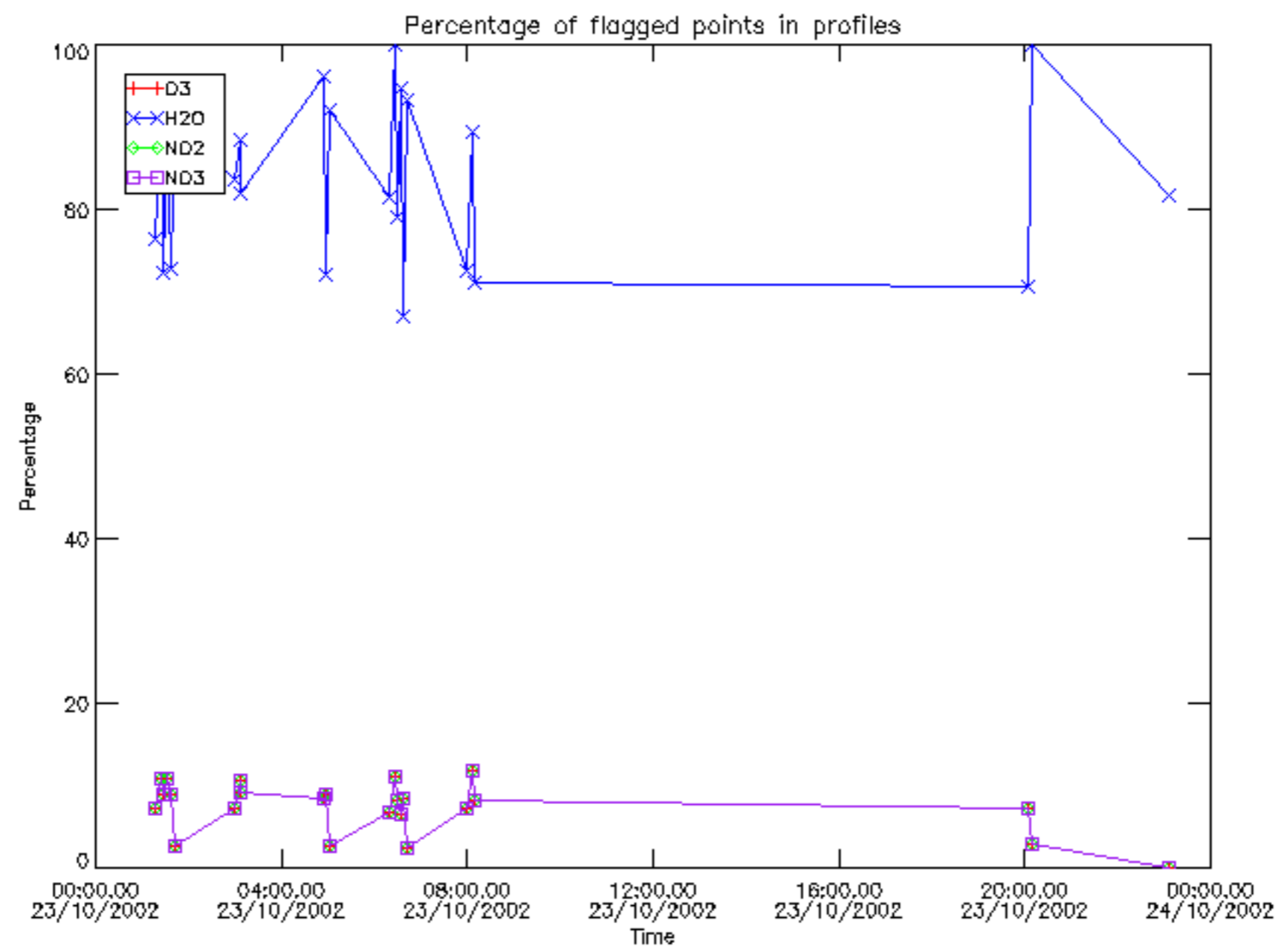






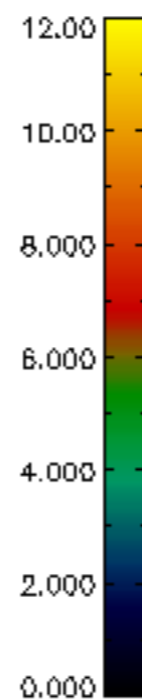
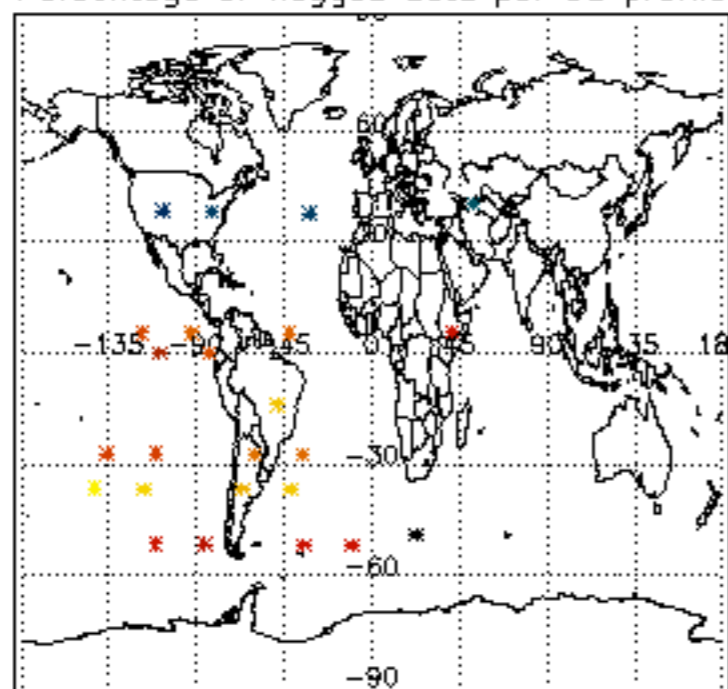




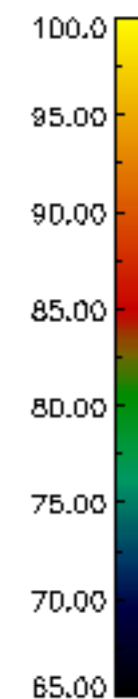
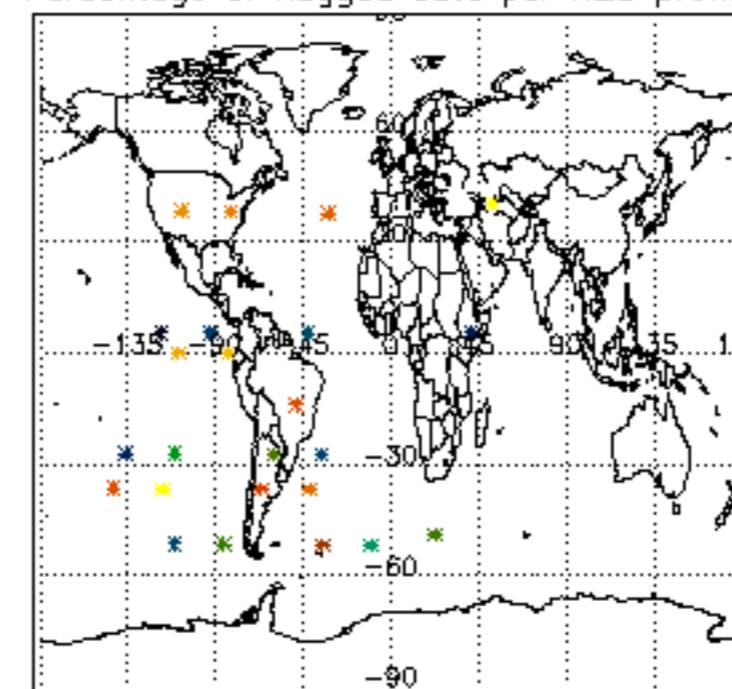




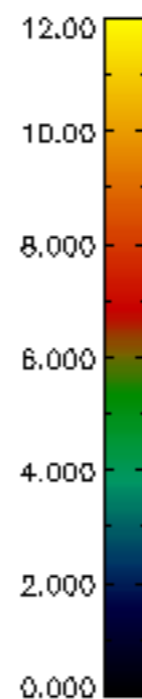
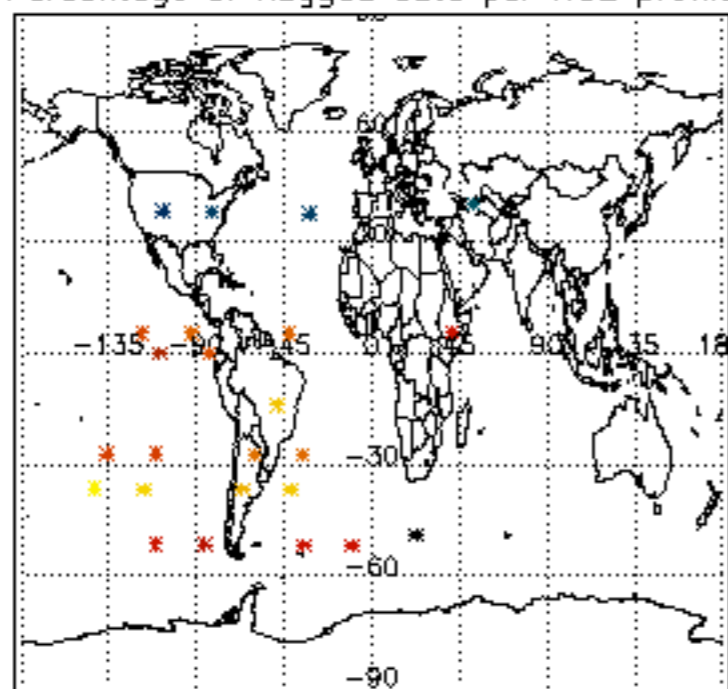
Percentage of flagged data per D3 profile



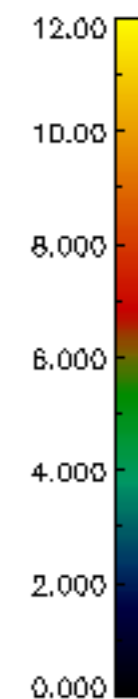
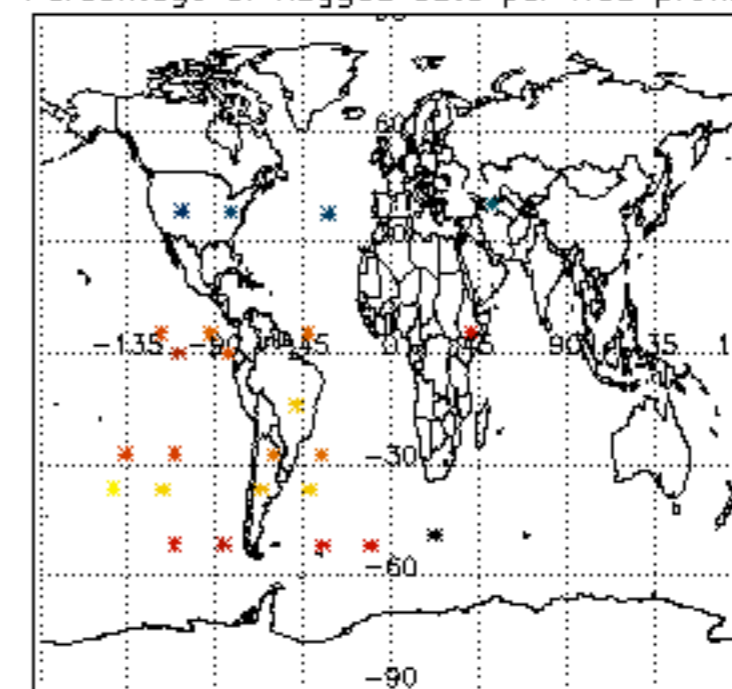
Percentage of flagged data per H2O profile

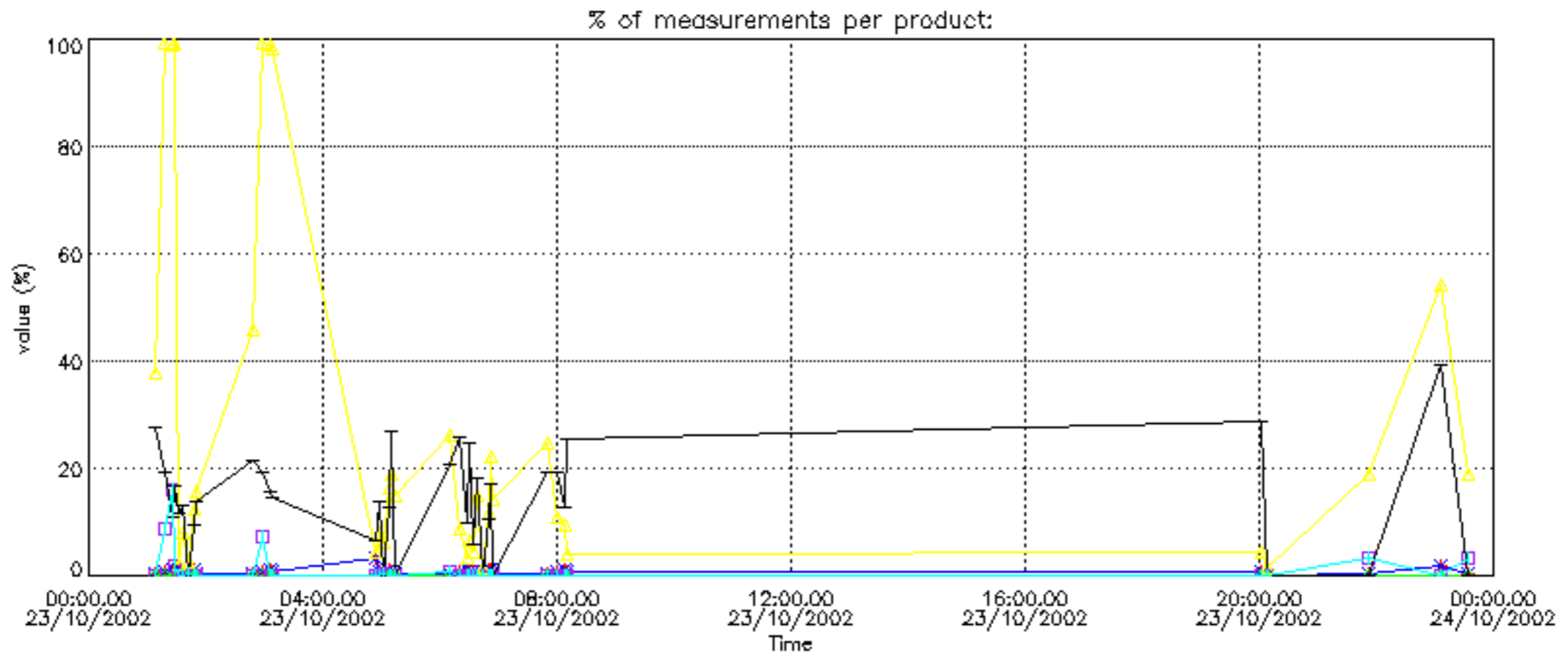


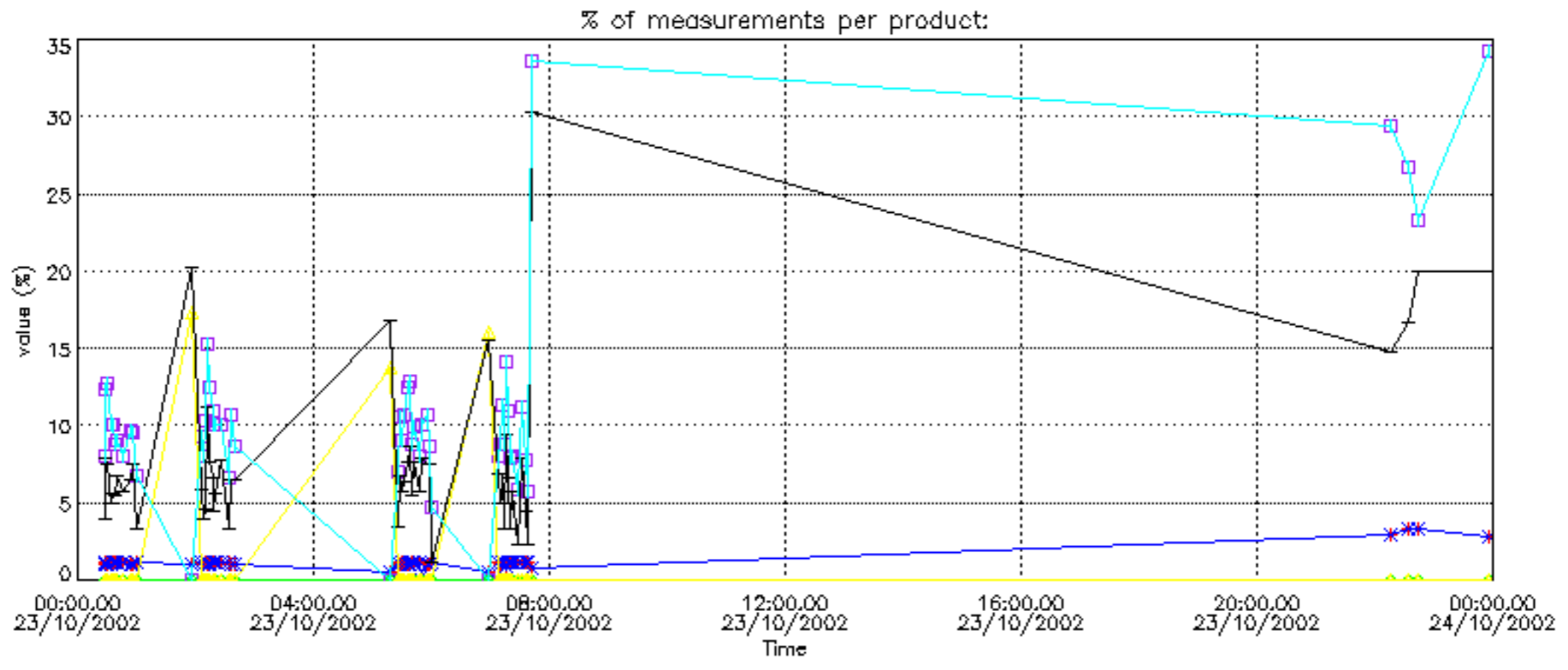
Percentage of flagged data per NO2 profile



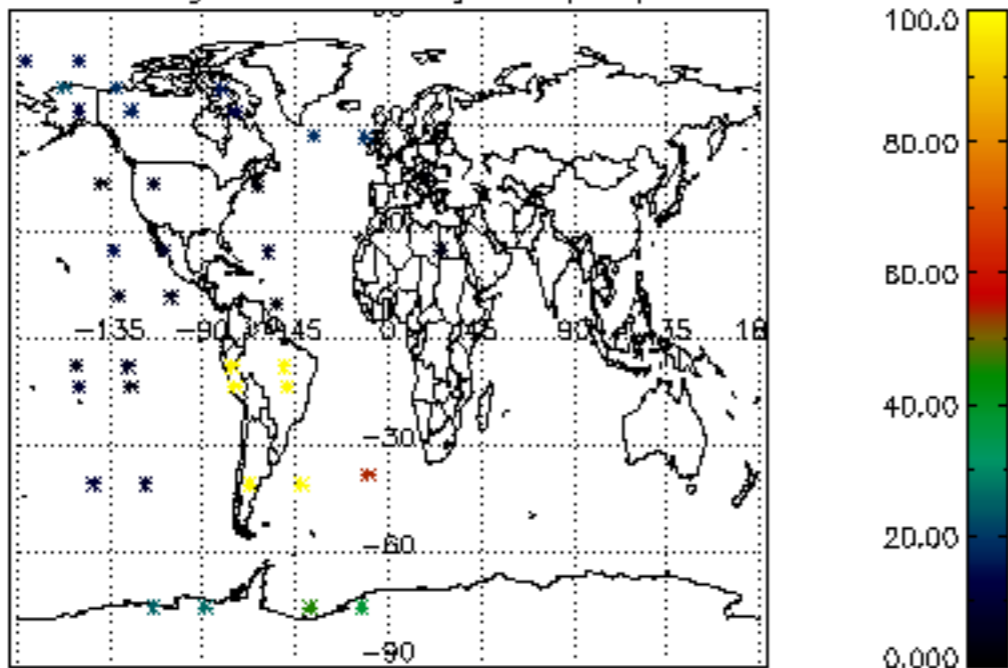
Percentage of flagged data per NO3 profile



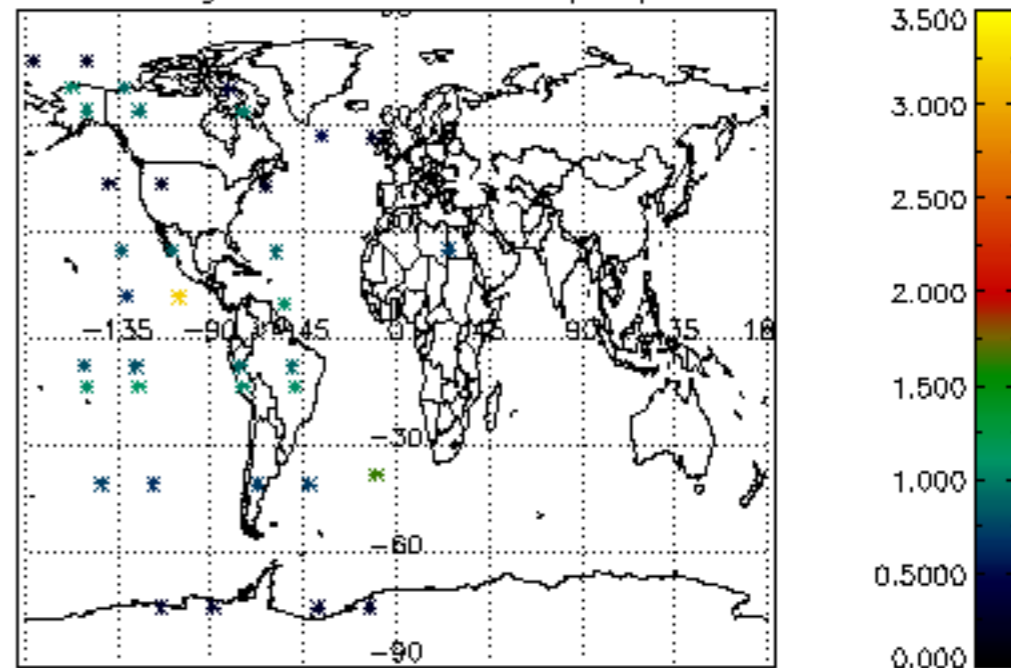




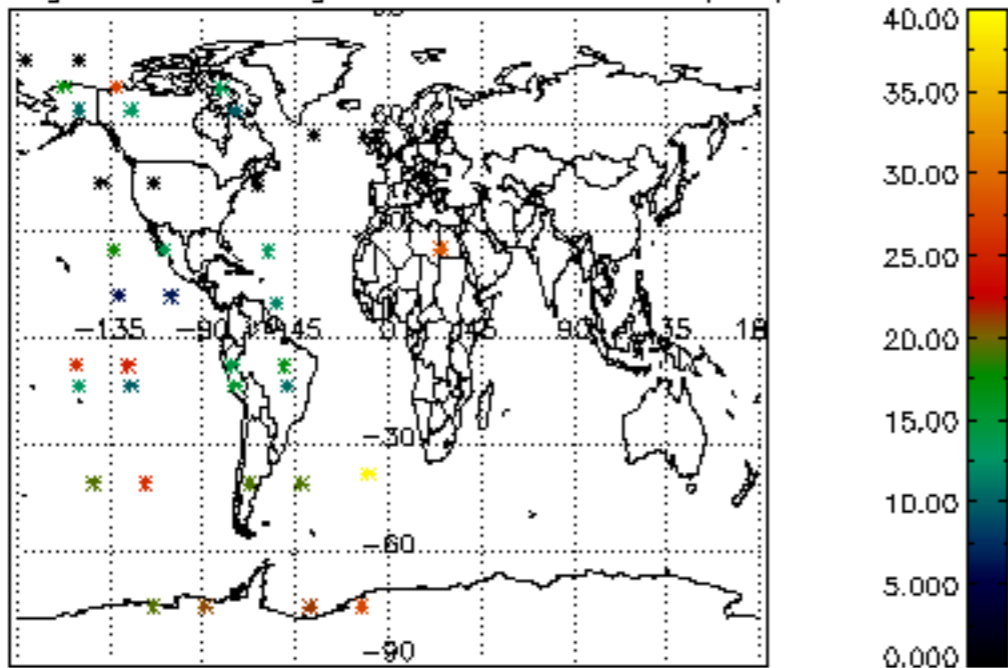
Percentage of cosmic ray hits per profile



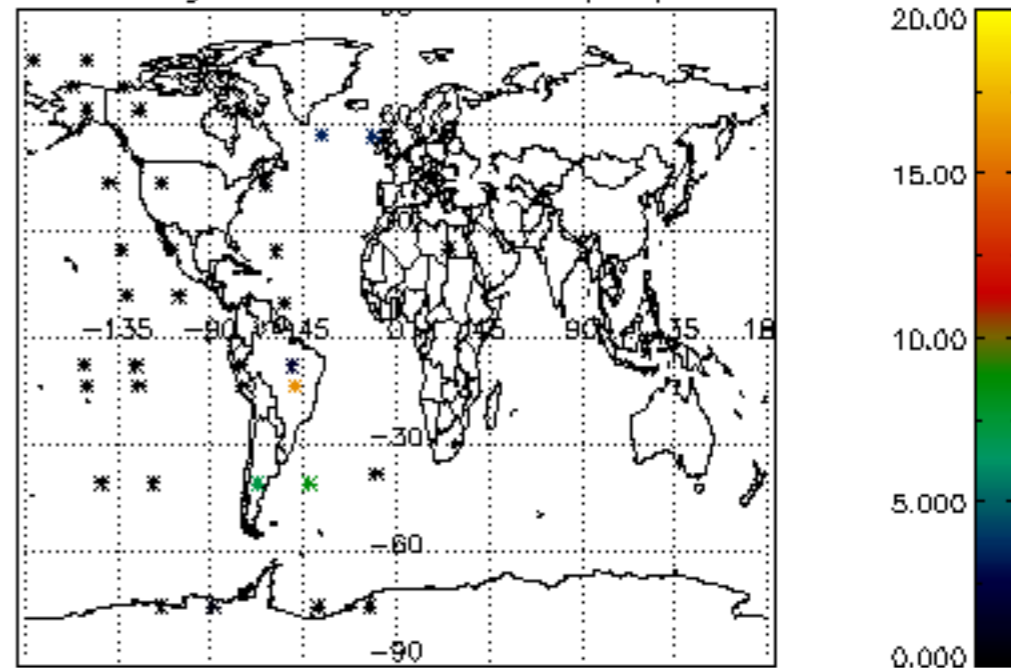
Percentage of datation errors per profile



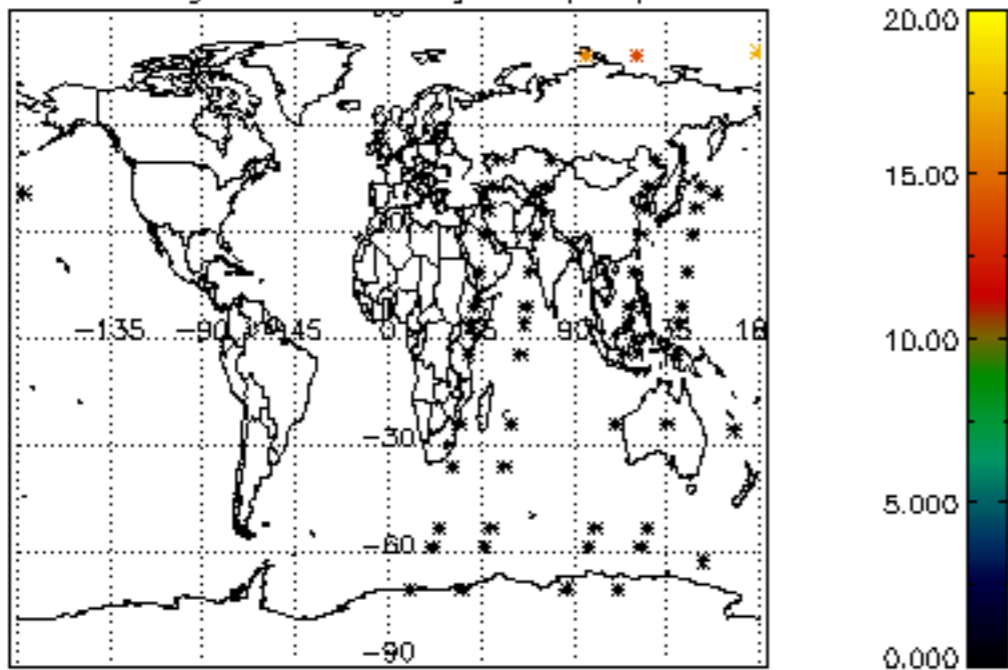
Percentage of star falling outside central band per profile



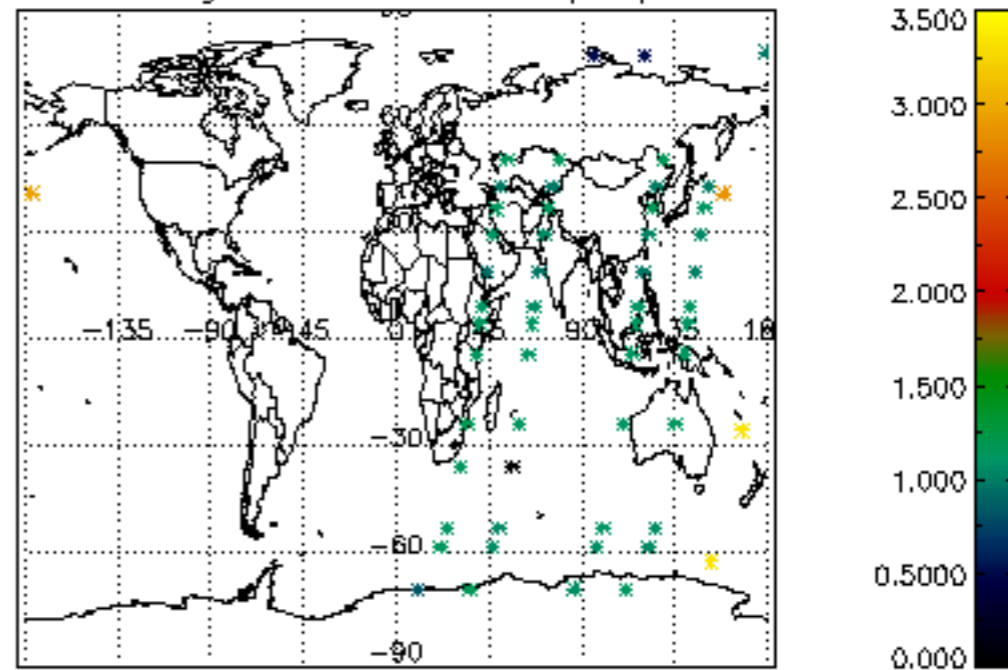
Percentage of saturation errors per profile



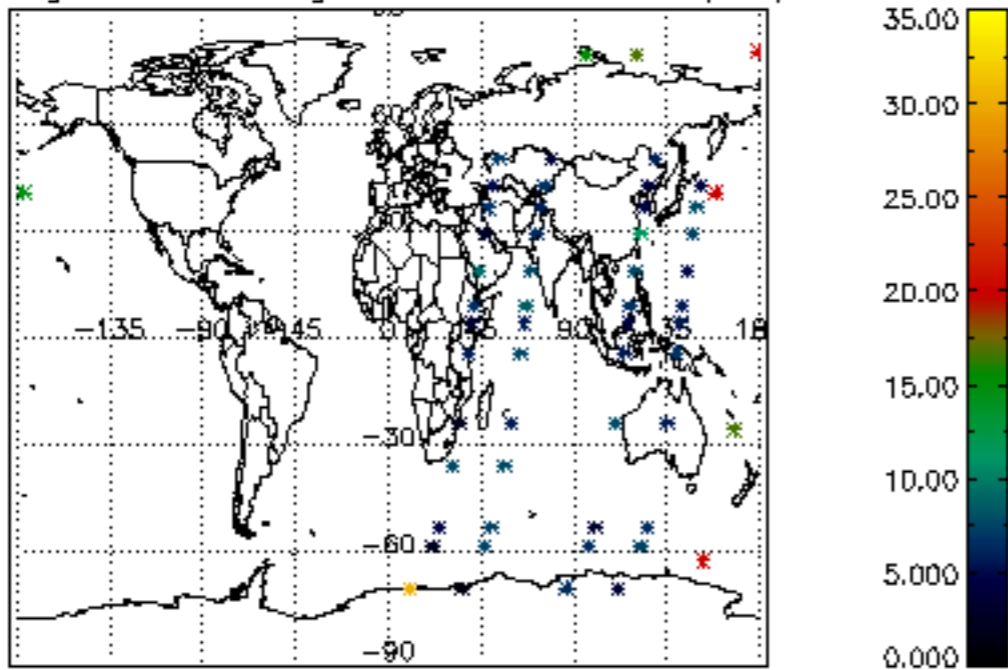
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

