

# 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	19APR2013 11:29:02
Data source version	GOMOS/6.01
Start time of products	09-03-2003 (09MAR2003 00:00:00)
Stop time of products	10-03-2003 (10MAR2003 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	467
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__2PRFIN20030309_000259_000000442014_00274_05338_5368.N1	09-MAR-2003 00:02:59	Straylight	43.500	65	Lam Vel	2.2040	4400.0	87	5338	No
2	GOM_NL__2PRFIN20030309_000554_000000622014_00274_05338_5369.N1	09-MAR-2003 00:05:54	Straylight	61.500	106	9Bet Crv	2.6480	5600.0	123	5338	No
3	GOM_NL__2PRFIN20030309_000832_000000582014_00274_05338_5370.N1	09-MAR-2003 00:08:32	Straylight	57.500	100	4Gam Crv	2.5800	13100.	115	5338	No
4	GOM_NL__2PRFIN20030309_001226_000000472014_00274_05338_5371.N1	09-MAR-2003 00:12:26	Twilight_stray	47.000	48	30Alp Hya	1.9770	4100.0	94	5338	No
5	GOM_NL__2PRFIN20030309_001811_000000422014_00274_05338_5372.N1	09-MAR-2003 00:18:11	Bright	41.500	22	32Alp Leo	1.3600	15200.	83	5338	No
6	GOM_NL__2PRFIN20030309_002036_000000402014_00274_05338_5373.N1	09-MAR-2003 00:20:36	Bright	40.000	51	41Gam1Leo	2.0100	4500.0	80	5338	No
7	GOM_NL__2PRFIN20030309_002855_000000422014_00274_05338_5374.N1	09-MAR-2003 00:28:55	Bright	42.000	174	52Psi UMa	3.0040	4400.0	84	5338	No
8	GOM_NL__2PRFIN20030309_003156_000000402014_00274_05338_5375.N1	09-MAR-2003 00:31:56	Bright	39.500	82	48Bet UMa	2.3650	10600.	79	5338	No
9	GOM_NL__2PRFIN20030309_003322_000000422014_00274_05338_5376.N1	09-MAR-2003 00:33:22	Bright	41.500	36	50Alp UMa	1.8000	6300.0	83	5338	No
10	GOM_NL__2PRFIN20030309_003546_000000472014_00274_05338_5377.N1	09-MAR-2003 00:35:46	Bright	47.000	32	77Eps UMa	1.7630	11000.	94	5338	No
11	GOM_NL__2PRFIN20030309_004014_000000352014_00274_05338_5378.N1	09-MAR-2003 00:40:14	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	5338	No
12	GOM_NL__2PRFIN20030309_004500_000000482014_00274_05338_5379.N1	09-MAR-2003 00:45:00	Bright	48.000	119	14Eta Dra	2.7270	4700.0	96	5338	No
13	GOM_NL__2PRFIN20030309_004755_000000362014_00274_05338_5380.N1	09-MAR-2003 00:47:55	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	5338	No
14	GOM_NL__2PRFIN20030309_004943_000000502014_00274_05338_5381.N1	09-MAR-2003 00:49:43	Bright	50.000	130	23Bet Dra	2.7990	5800.0	100	5338	No
15	GOM_NL__2PRFIN20030309_005301_000000342014_00274_05338_5382.N1	09-MAR-2003 00:53:01	Bright	34.000	19	50Alp Cyg	1.2460	10500.	68	5338	No
16	GOM_NL__2PRFIN20030309_005434_000000352014_00274_05338_5383.N1	09-MAR-2003 00:54:34	Bright	35.000	66	37Gam Cyg	2.2080	5900.0	70	5338	No
17	GOM_NL__2PRFIN20030309_005612_000000362014_00274_05338_5384.N1	09-MAR-2003 00:56:12	Bright	36.000	92	53Eps Cyg	2.5000	4500.0	72	5338	No
18	GOM_NL__2PRFIN20030309_005925_000001202014_00274_05338_5385.N1	09-MAR-2003 00:59:25	Twilight_stray	119.50	133	40Zet Her	2.8070	6000.0	239	5338	No
19	GOM_NL__2PRFIN20030309_010337_000000482014_00274_05338_5386.N1	09-MAR-2003 01:03:37	Bright	48.000	168	17Zet Aql	2.9860	11000.	96	5338	No
20	GOM_NL__2PRFIN20030309_010813_000000882014_00274_05338_5387.N1	09-MAR-2003 01:08:13	Straylight	88.000	59	55Alp Oph	2.0800	8900.0	176	5338	No
21	GOM_NL__2PRFIN20030309_011056_000000822014_00274_05338_5388.N1	09-MAR-2003 01:10:56	Dark	81.500	126	60Bet Oph	2.7700	4250.0	163	5338	No
22	GOM_NL__2PRFIN20030309_011342_000000442014_00274_05338_5389.N1	09-MAR-2003 01:13:42	Dark	43.500	155	41Pi Sgr	2.9000	6600.0	87	5338	No
23	GOM_NL__2PRFIN20030309_011538_000000442014_00274_05338_5390.N1	09-MAR-2003 01:15:38	Dark	44.000	57	34Sig Sgr	2.0660	26000.	88	5338	No
24	GOM_NL__2PRFIN20030309_012123_000000392014_00274_05338_5391.N1	09-MAR-2003 01:21:23	Dark	38.500	45	Alp Pav	1.9400	26000.	77	5338	No
25	GOM_NL__2PRFIN20030309_012625_000001012014_00275_05339_5360.N1	09-MAR-2003 01:26:25	Dark	100.50	16	21Alp Sco	1.0200	3000.0	201	5339	No
26	GOM_NL__2PRFIN20030309_012912_000000402014_00275_05339_5361.N1	09-MAR-2003 01:29:12	Dark	40.000	134	Bet TrA	2.8100	6600.0	80	5339	No
27	GOM_NL__2PRFIN20030309_013153_000000462014_00275_05339_5362.N1	09-MAR-2003 01:31:53	Dark	46.000	4	Alp1Cen	-0.010000	5800.0	92	5339	No
28	GOM_NL__2PRFIN20030309_013310_000000432014_00275_05339_5363.N1	09-MAR-2003 01:33:10	Dark	43.000	10	Bet Cen	0.61000	28000.	86	5339	No
29	GOM_NL__2PRFIN20030309_013525_000000472014_00275_05339_5364.N1	09-MAR-2003 01:35:25	Dark	46.500	12	Alp1Cru	0.77500	30000.	93	5339	No
30	GOM_NL__2PRFIN20030309_013638_000000392014_00275_05339_5365.N1	09-MAR-2003 01:36:38	Dark	39.000	129	Del Cru	2.7930	26000.	78	5339	No
31	GOM_NL__2PRFIN20030309_013811_000000442014_00275_05339_5366.N1	09-MAR-2003 01:38:11	Straylight	44.000	64	Gam Cen	2.2000	10600.	88	5339	No
32	GOM_NL__2PRFIN20030309_014016_000000392014_00275_05339_5367.N1	09-MAR-2003 01:40:16	Straylight	39.000	91	Kap Vel	2.4900	26000.	78	5339	No
33	GOM_NL__2PRFIN20030309_014335_000000422014_00275_05339_5368.N1	09-MAR-2003 01:43:35	Straylight	42.000	65	Lam Vel	2.2040	4400.0	84	5339	No
34	GOM_NL__2PRFIN20030309_014630_000000612014_00275_05339_5369.N1	09-MAR-2003 01:46:30	Straylight	61.000	106	9Bet Crv	2.6480	5600.0	122	5339	No
35	GOM_NL__2PRFIN20030309_014908_000000612014_00275_05339_5370.N1	09-MAR-2003 01:49:08	Straylight	60.500	100	4Gam Crv	2.5800	13100.	121	5339	No
36	GOM_NL__2PRFIN20030309_015302_000000462014_00275_05339_5371.N1	09-MAR-2003 01:53:02	Twilight_stray	46.000	48	30Alp Hya	1.9770	4100.0	92	5339	No
37	GOM_NL__2PRFIN20030309_015846_000000422014_00275_05339_5372.N1	09-MAR-2003 01:58:46	Bright	41.500	22	32Alp Leo	1.3600	15200.	83	5339	No
38	GOM_NL__2PRFIN20030309_020111_000000422014_00275_05339_5373.N1	09-MAR-2003 02:01:11	Bright	41.500	51	41Gam1Leo	2.0100	4500.0	83	5339	No
39	GOM_NL__2PRFIN20030309_020930_000000432014_00275_05339_5374.N1	09-MAR-2003 02:09:30	Bright	42.500	174	52Psi UMa	3.0040	4400.0	85	5339	No
40	GOM_NL__2PRFIN20030309_021231_000000402014_00275_05339_5375.N1	09-MAR-2003 02:12:31	Bright	40.000	82	48Bet UMa	2.3650	10600.	80	5339	No
41	GOM_NL__2PRFIN20030309_021357_000000392014_00275_05339_5376.N1	09-MAR-2003 02:13:57	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	5339	No
42	GOM_NL__2PRFIN20030309_021621_000000492014_00275_05339_5377.N1	09-MAR-2003 02:16:21	Bright	48.500	32	77Eps UMa	1.7630	11000.	97	5339	No















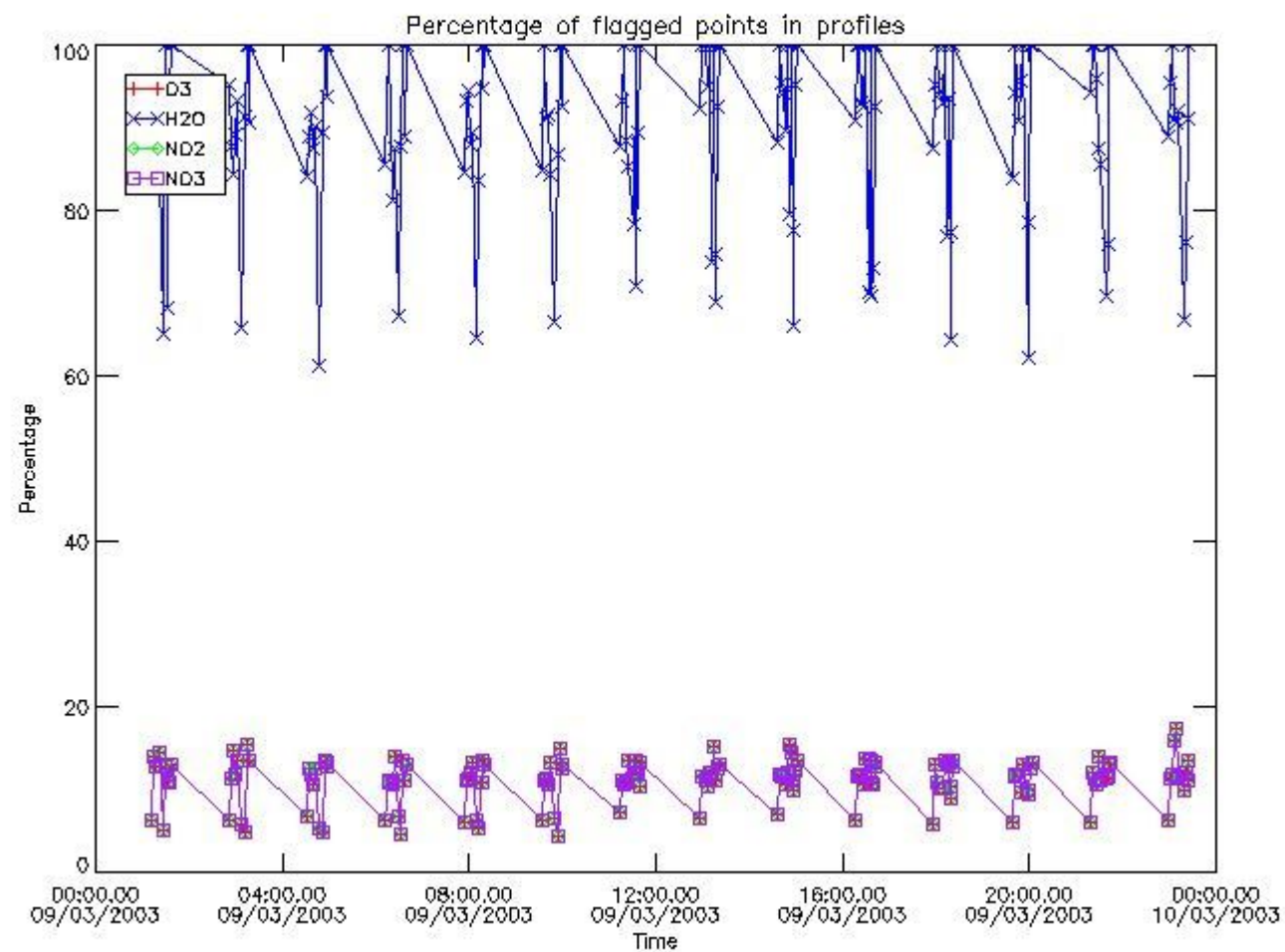


456	GOM_NL__2PRFIN20030309_232318_000000462014_00288_05352_5361.N1	09-MAR-2003 23:23:18	Dark	45.500	12	Alp1Cru	0.77500	30000.	91	5352	No
457	GOM_NL__2PRFIN20030309_232430_000000382014_00288_05352_5362.N1	09-MAR-2003 23:24:30	Dark	38.000	129	Del Cru	2.7930	26000.	76	5352	No
458	GOM_NL__2PRFIN20030309_232605_000000462014_00288_05352_5363.N1	09-MAR-2003 23:26:05	Straylight	46.000	64	Gam Cen	2.2000	10600.	92	5352	No
459	GOM_NL__2PRFIN20030309_232805_000000392014_00288_05352_5364.N1	09-MAR-2003 23:28:05	Straylight	38.500	91	Kap Vel	2.4900	26000.	77	5352	No
460	GOM_NL__2PRFIN20030309_233124_000000452014_00288_05352_5365.N1	09-MAR-2003 23:31:24	Straylight	45.000	65	Lam Vel	2.2040	4400.0	90	5352	No
461	GOM_NL__2PRFIN20030309_233422_000000572014_00288_05352_5366.N1	09-MAR-2003 23:34:22	Straylight	57.000	106	9Bet Crv	2.6480	5600.0	114	5352	No
462	GOM_NL__2PRFIN20030309_233657_000000572014_00288_05352_5367.N1	09-MAR-2003 23:36:57	Straylight	56.500	100	4Gam Crv	2.5800	13100.	113	5352	No
463	GOM_NL__2PRFIN20030309_234052_000000472014_00288_05352_5368.N1	09-MAR-2003 23:40:52	Twl_and_stray	46.500	48	30Alp Hya	1.9770	4100.0	93	5352	No
464	GOM_NL__2PRFIN20030309_234634_000000402014_00288_05352_5369.N1	09-MAR-2003 23:46:34	Bright	39.500	22	32Alp Leo	1.3600	15200.	79	5352	No
465	GOM_NL__2PRFIN20030309_234857_000000412014_00288_05352_5370.N1	09-MAR-2003 23:48:57	Bright	40.500	51	41Gam1Leo	2.0100	4500.0	81	5352	No
466	GOM_NL__2PRFIN20030309_235324_000001122014_00288_05352_5371.N1	09-MAR-2003 23:53:24	Bright	111.50	138	47Eps Vir	2.8280	4700.0	223	5352	No
467	GOM_NL__2PRFIN20030309_235712_000000422014_00288_05352_5372.N1	09-MAR-2003 23:57:12	Bright	41.500	174	52Psi UMa	3.0040	4400.0	83	5352	No

### 3. Quality information per product

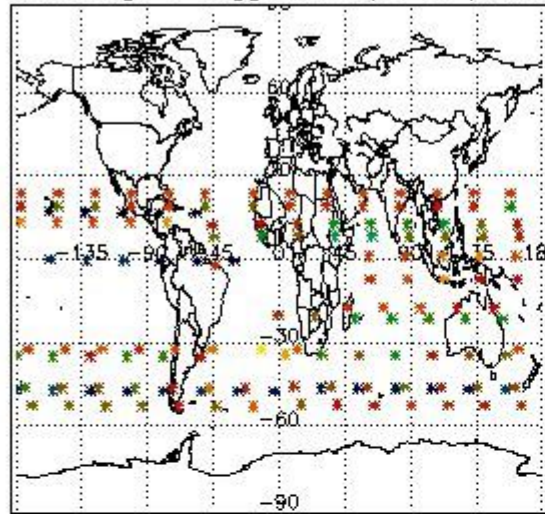
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

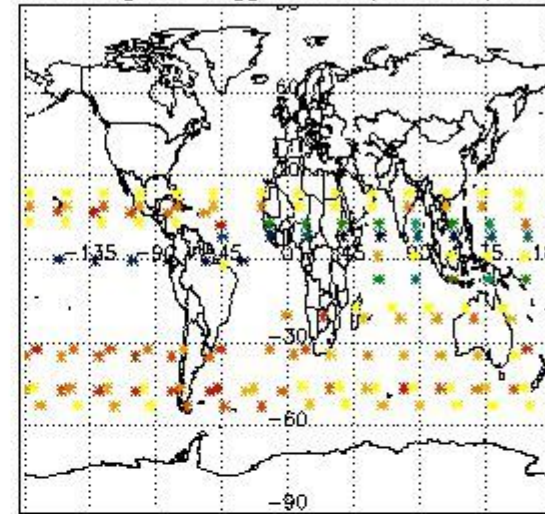


#### 3.2 Plot quality information per product (world map)

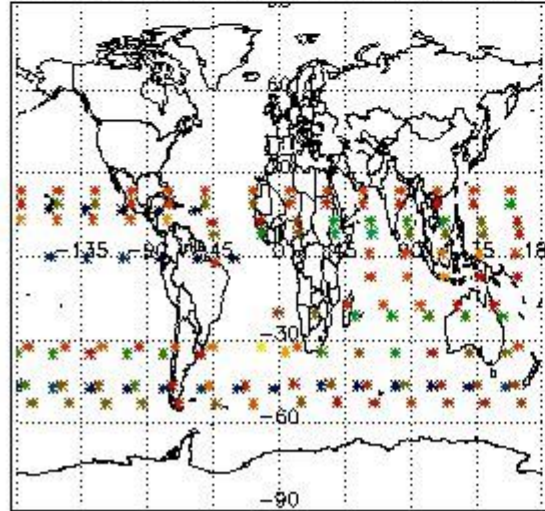
Percentage of flagged data per O3 profile



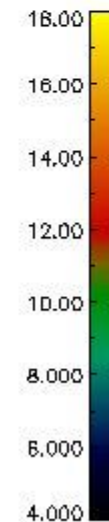
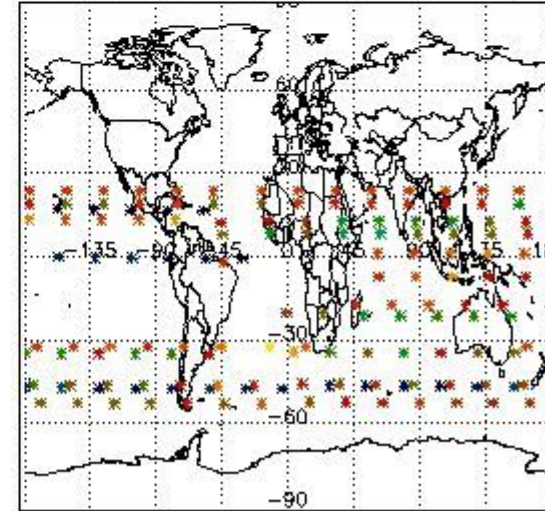
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

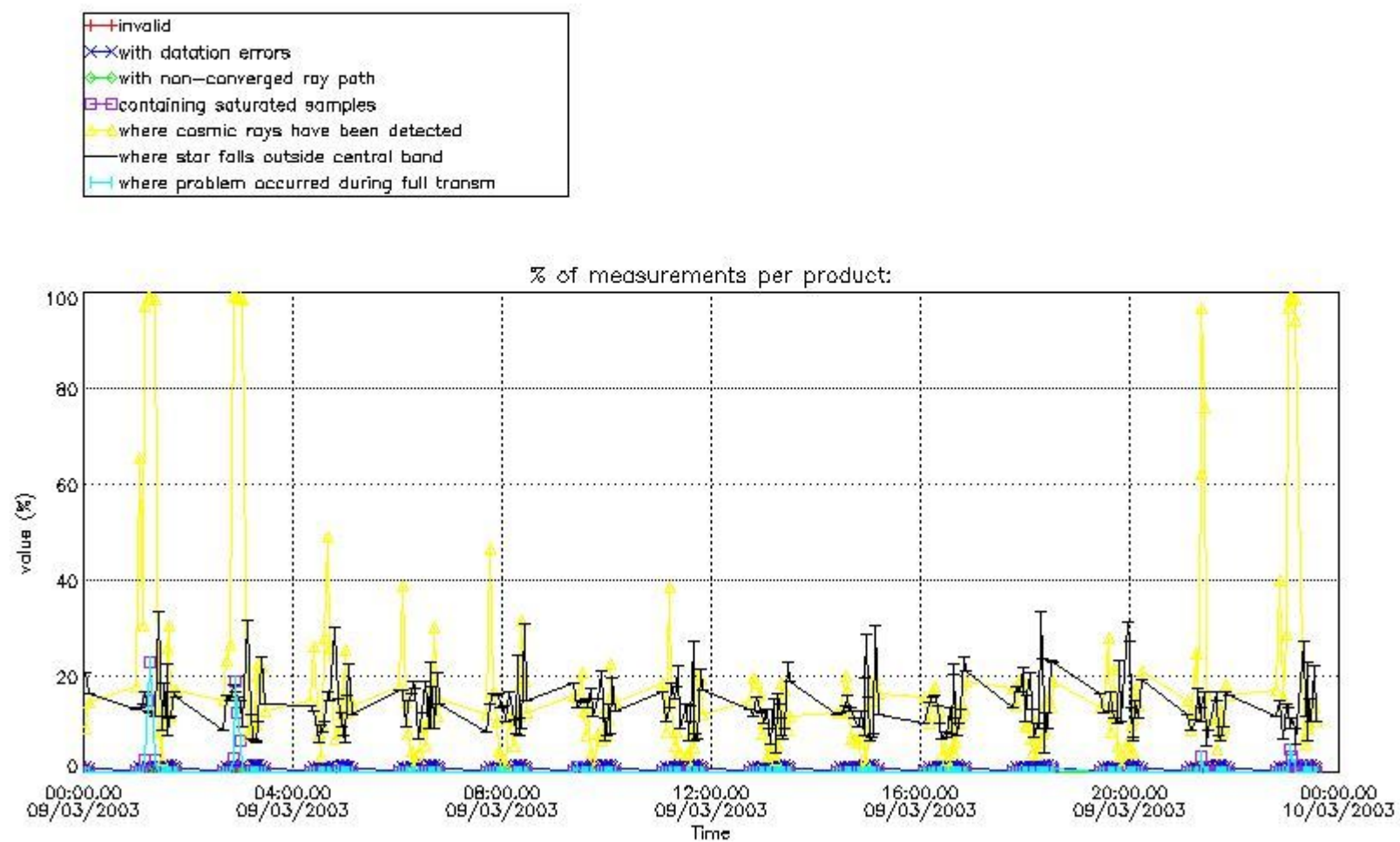


#### 4. Level 1 quality information per product

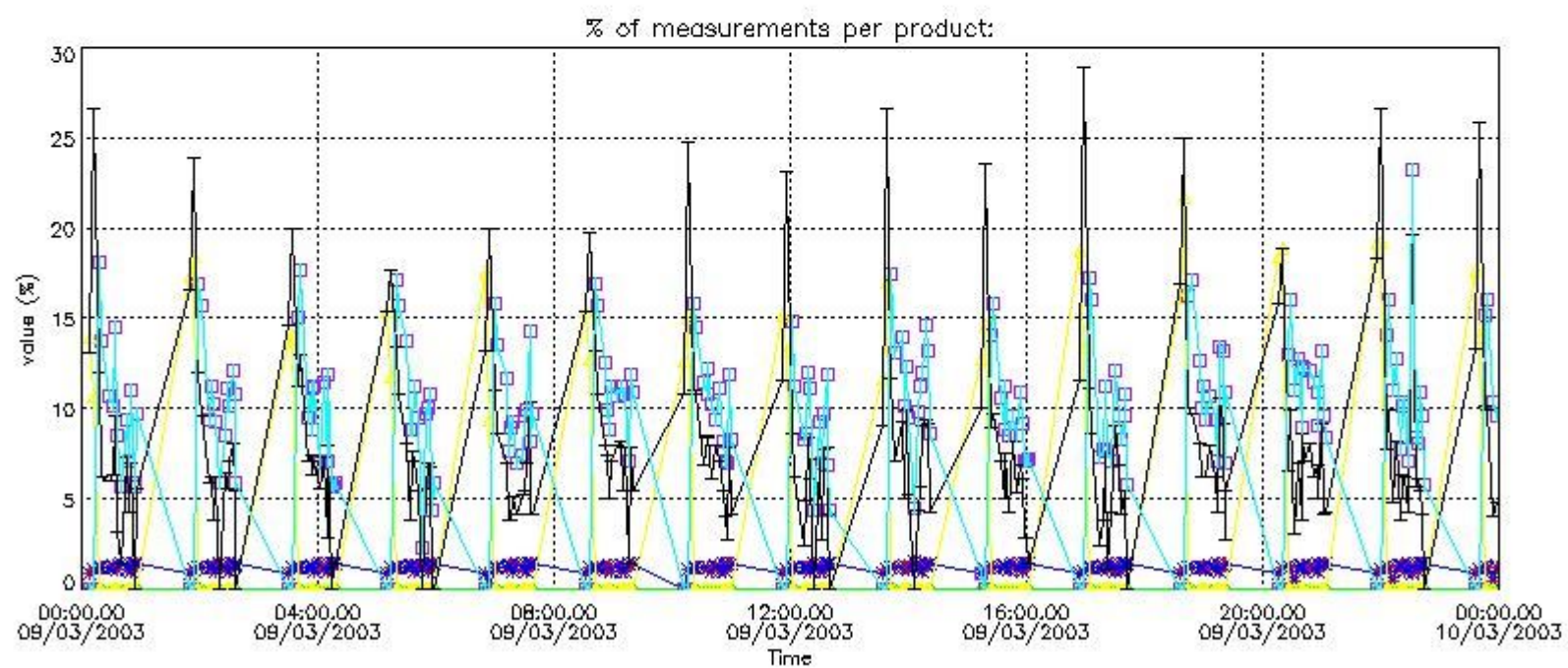
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



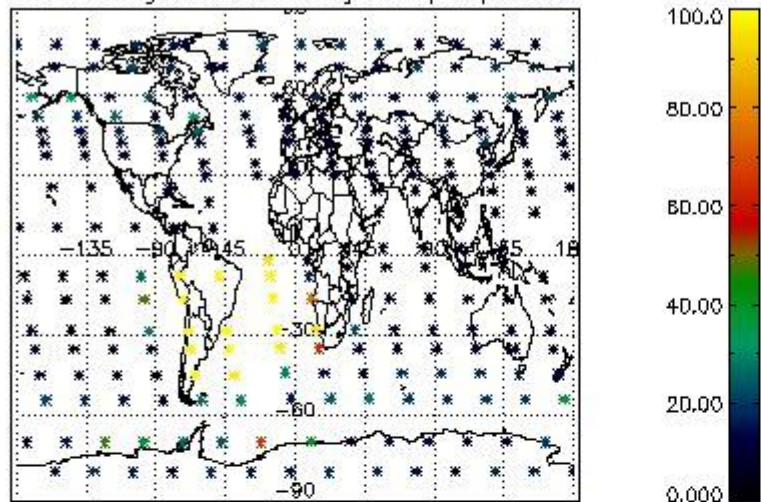
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



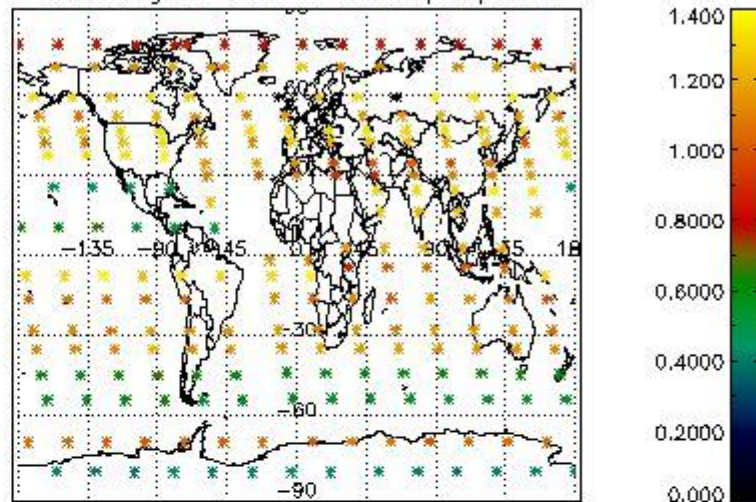
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

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

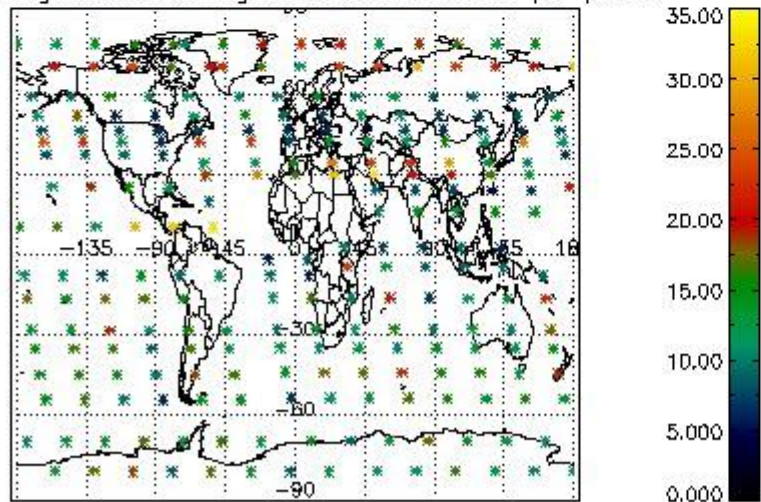
Percentage of cosmic ray hits per profile



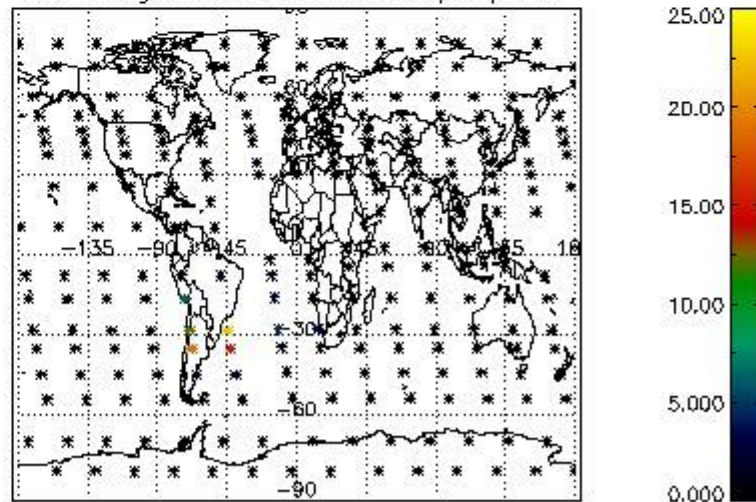
Percentage of datation errors per profile



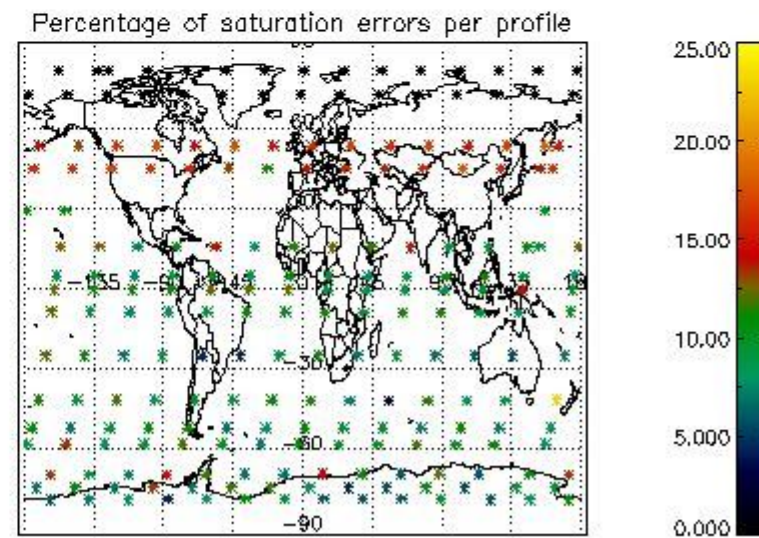
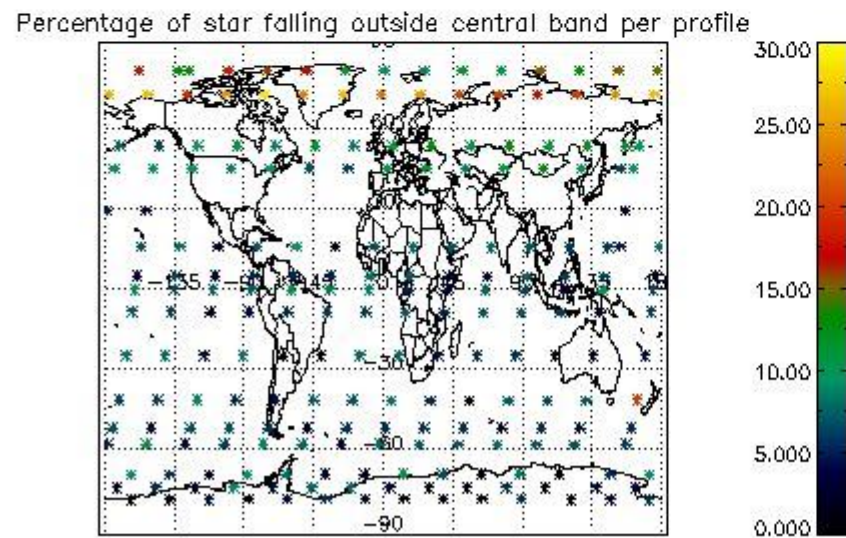
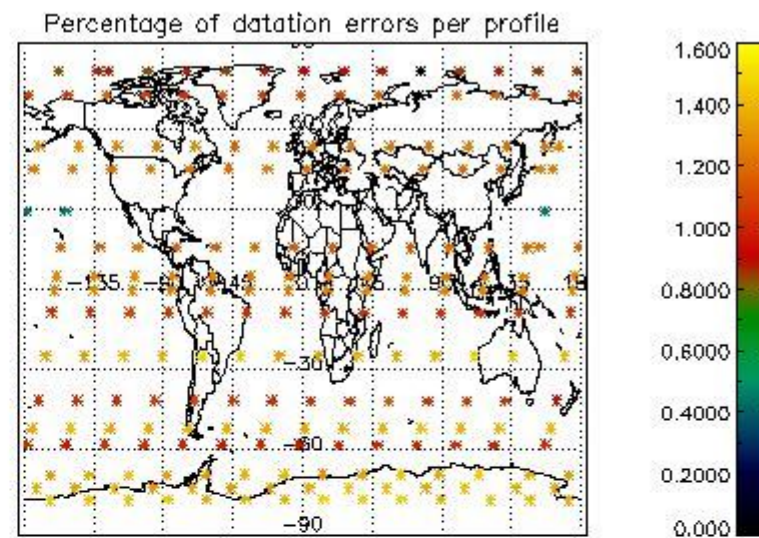
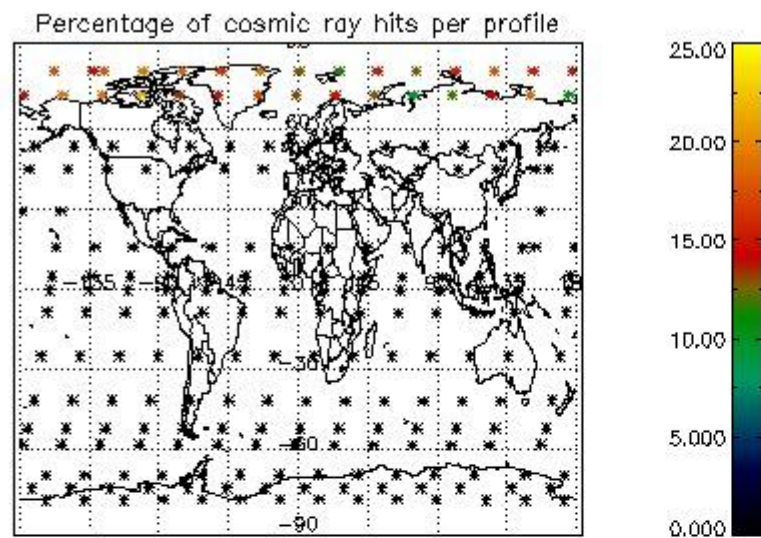
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

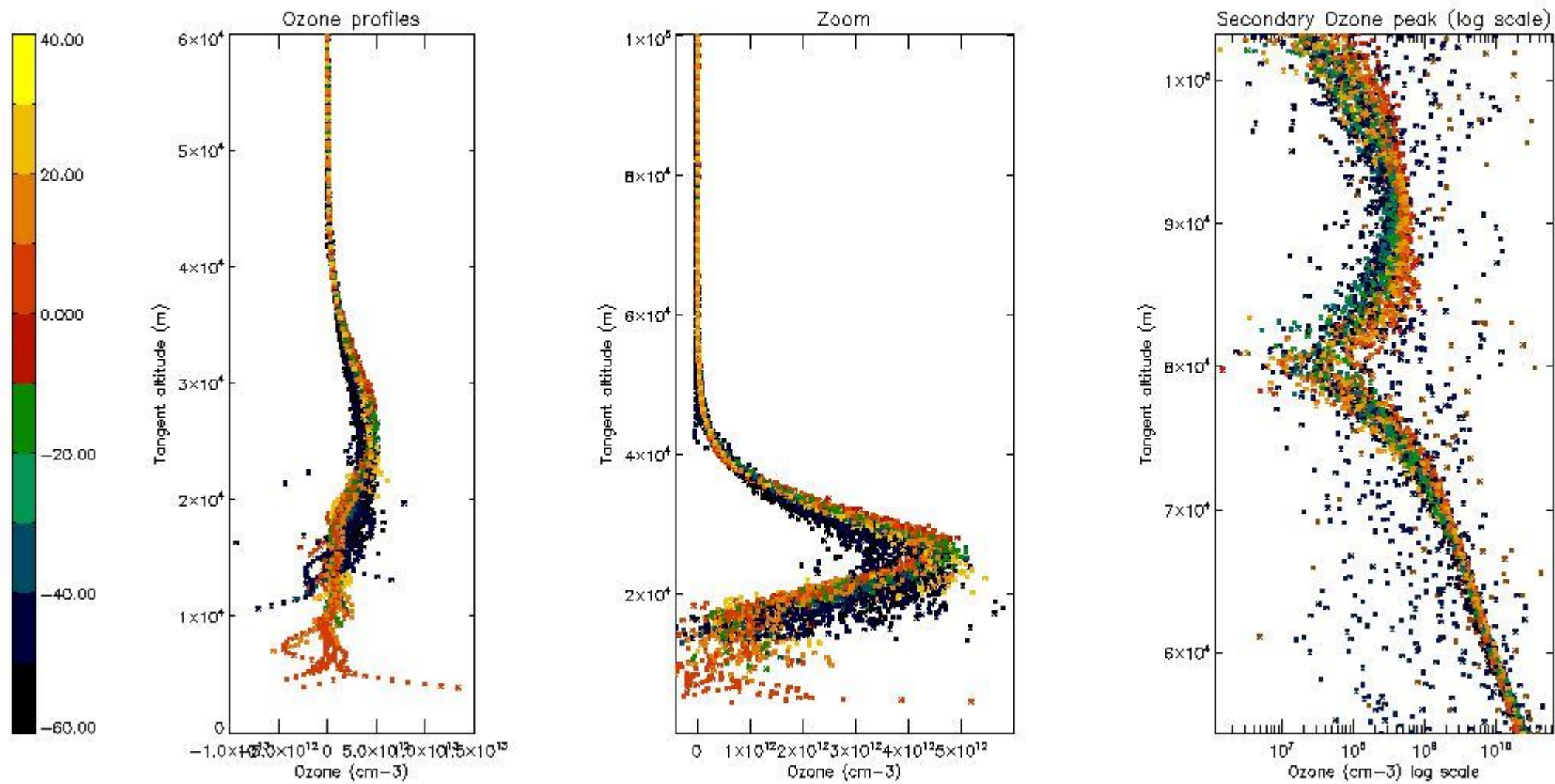
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	17
STD < 5	13

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

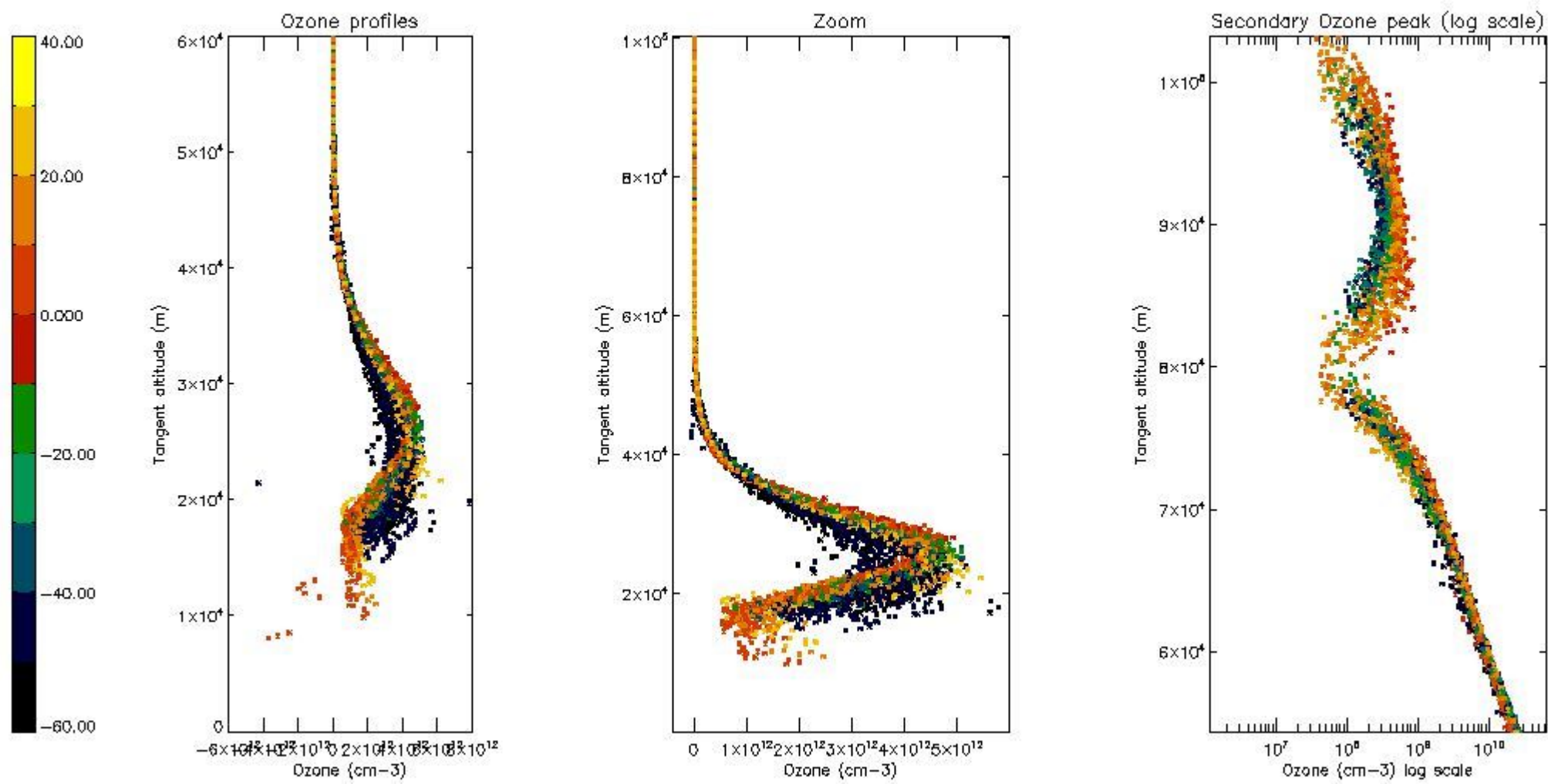
The colorbar represents the latitude.



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

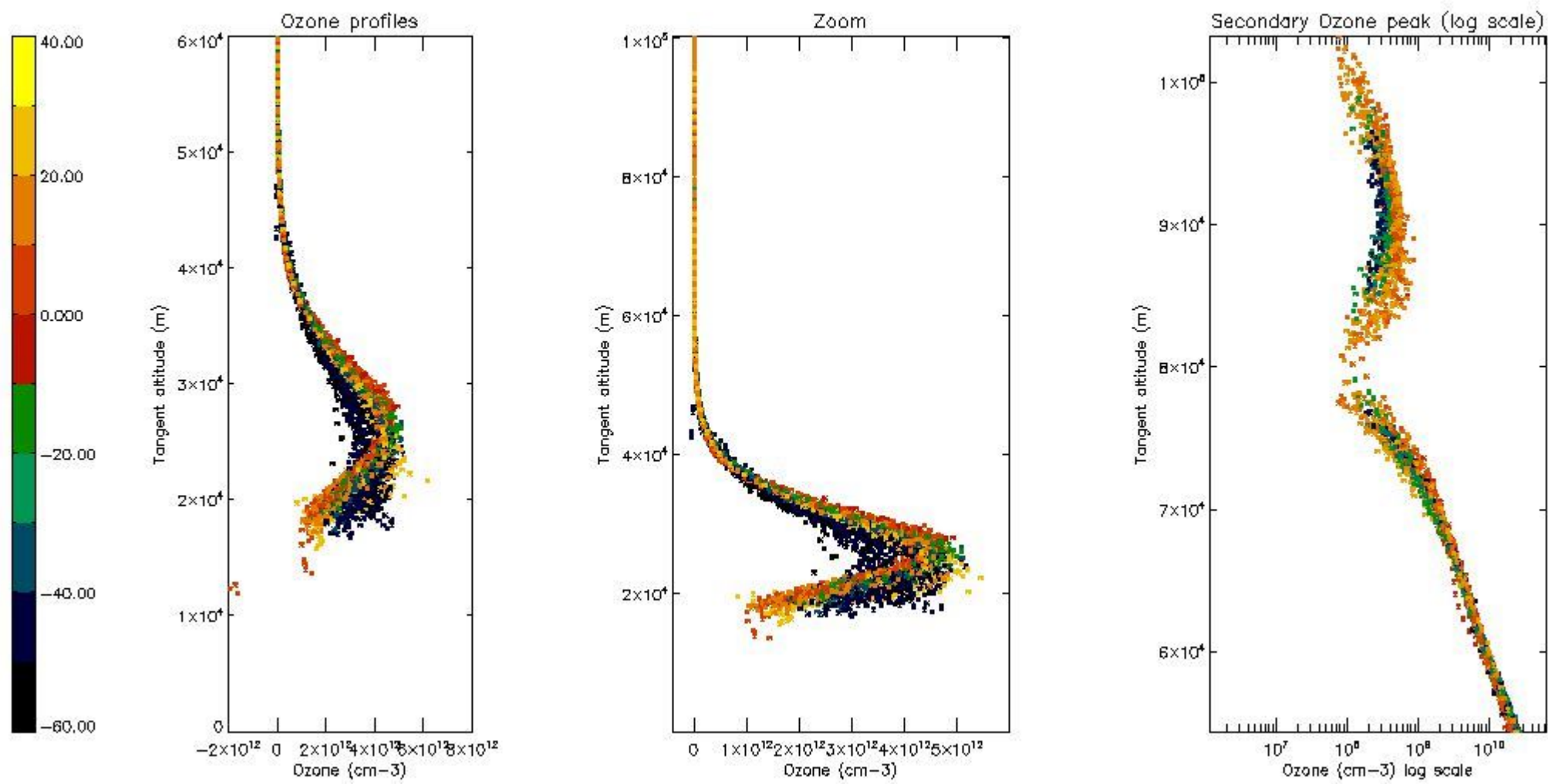
The colorbar represents the latitude.





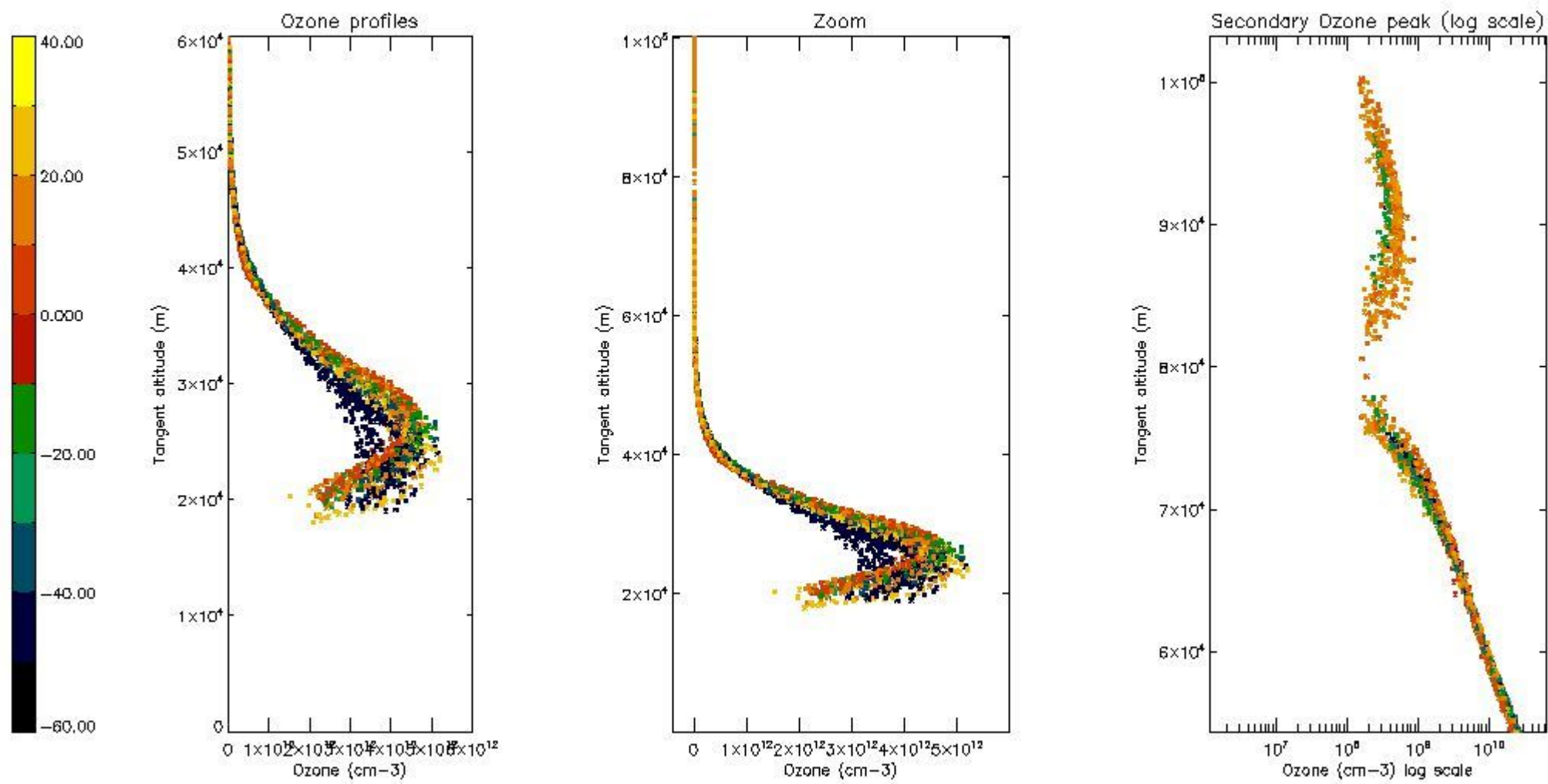
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



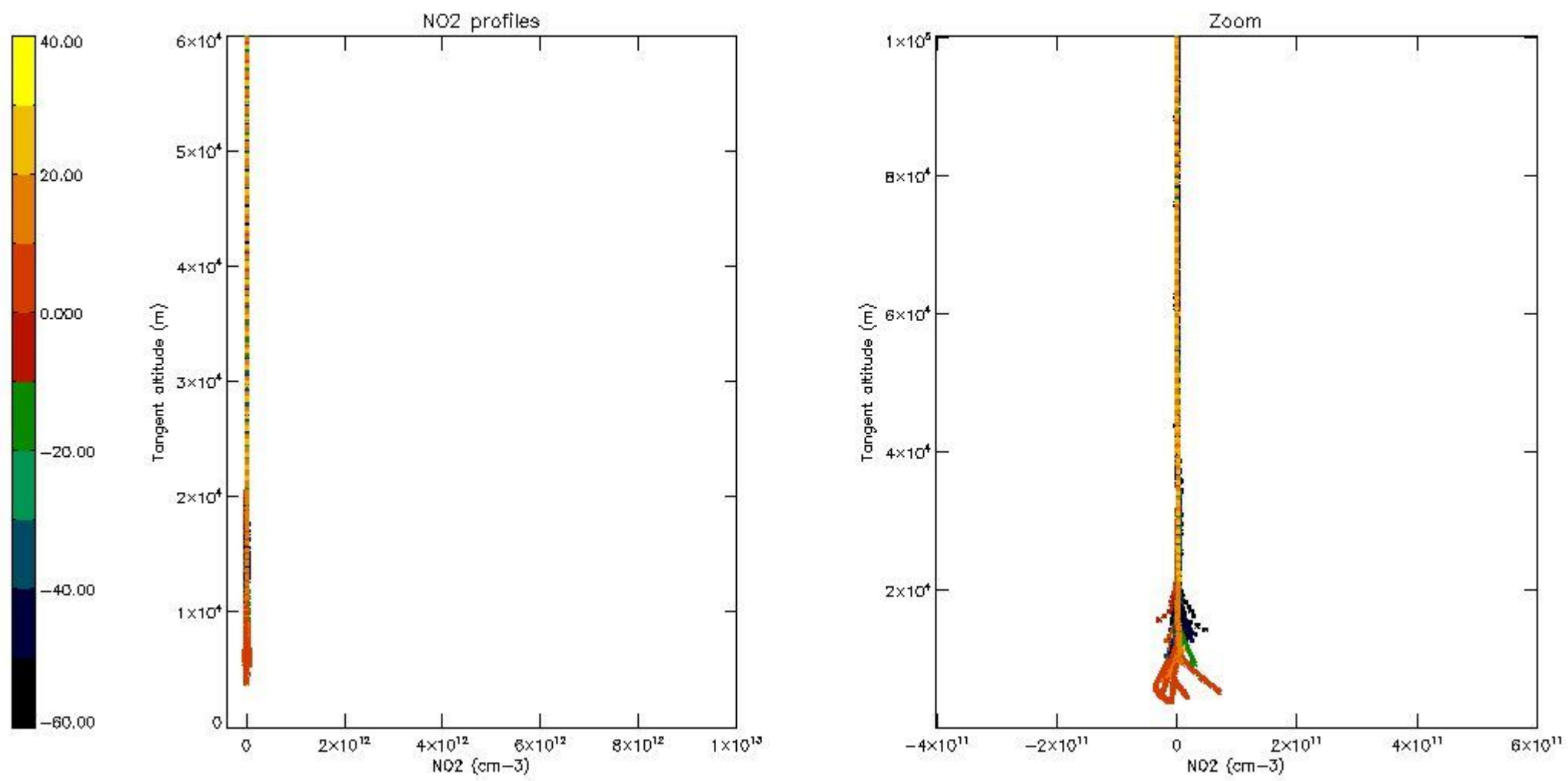
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



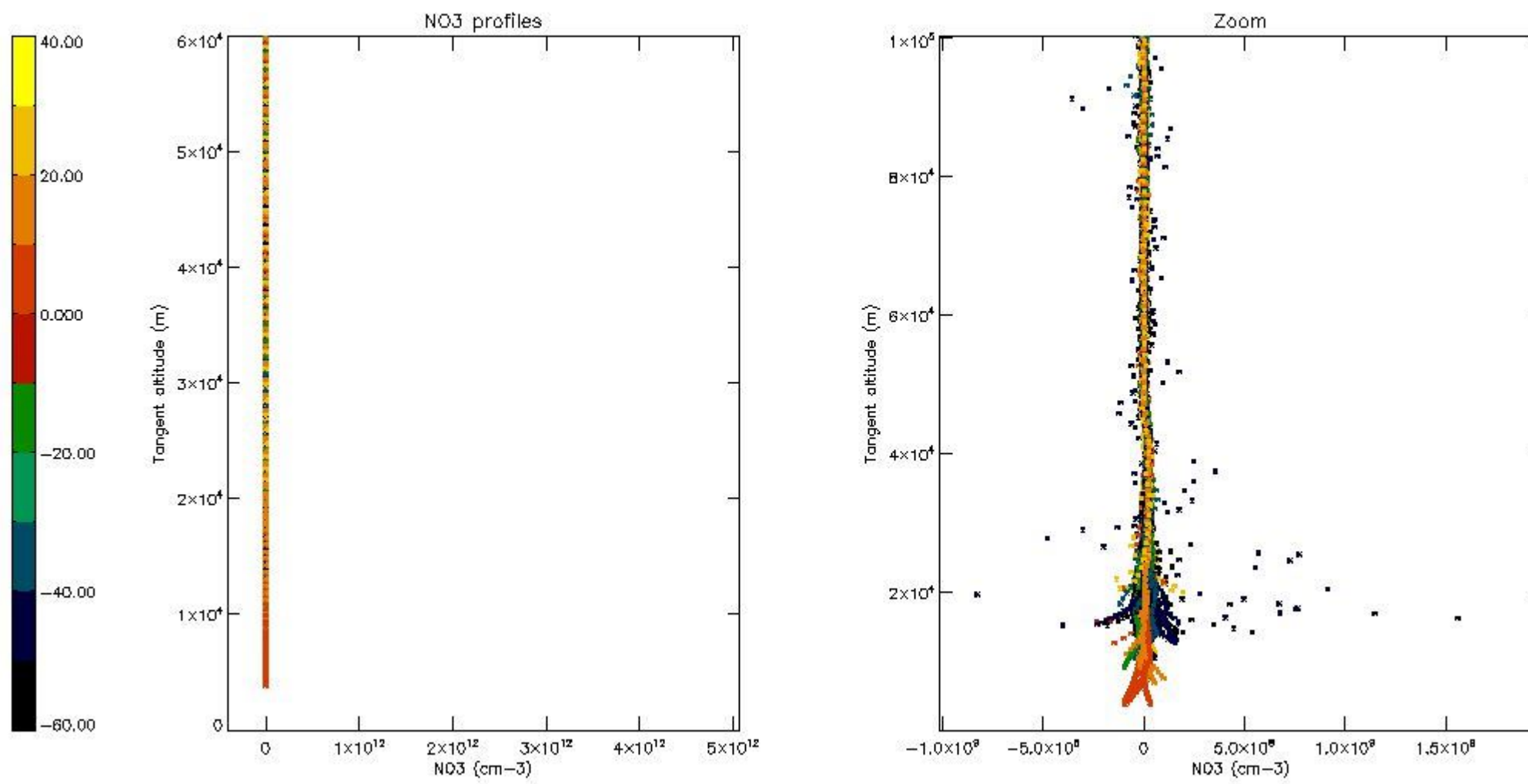
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



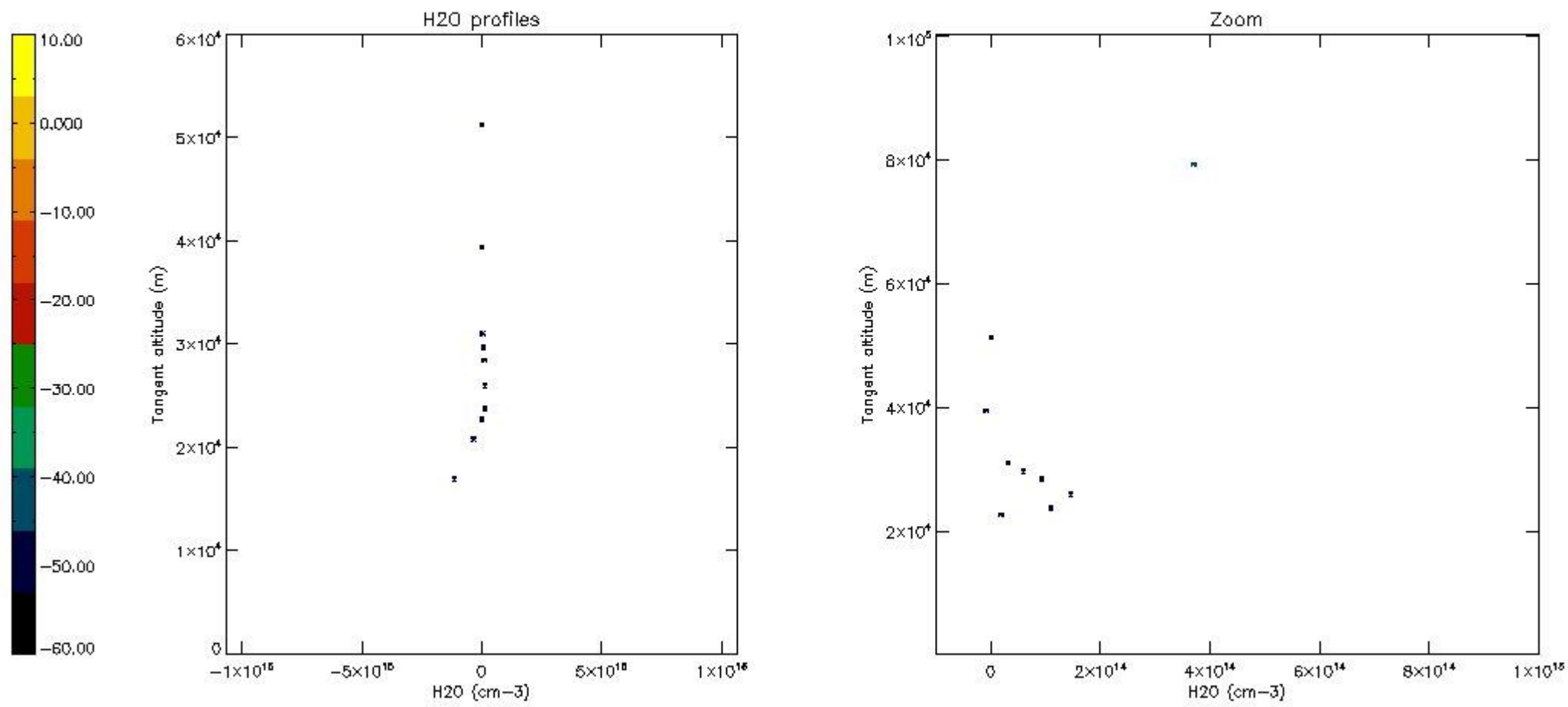
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*5.8 Plot 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	09-MAR-2003 00:02:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	09-MAR-2003 00:02:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	09-MAR-2003 00:02:59

# GOMOS Level 2 Daily Report

## SUMMARY

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### [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	19APR2013 11:29:02
Data source version	GOMOS/6.01
Start time of products	09-03-2003 (09MAR2003 00:00:00)
Stop time of products	10-03-2003 (10MAR2003 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	467
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__2PRFIN20030309_000259_000000442014_00274_05338_5368.N1	09-MAR-2003 00:02:59	Straylight	43.500	65	Lam Vel	2.2040	4400.0	87	5338	No
2	GOM_NL__2PRFIN20030309_000554_000000622014_00274_05338_5369.N1	09-MAR-2003 00:05:54	Straylight	61.500	106	9Bet Crv	2.6480	5600.0	123	5338	No
3	GOM_NL__2PRFIN20030309_000832_000000582014_00274_05338_5370.N1	09-MAR-2003 00:08:32	Straylight	57.500	100	4Gam Crv	2.5800	13100.	115	5338	No
4	GOM_NL__2PRFIN20030309_001226_000000472014_00274_05338_5371.N1	09-MAR-2003 00:12:26	Twilight_stray	47.000	48	30Alp Hya	1.9770	4100.0	94	5338	No
5	GOM_NL__2PRFIN20030309_001811_000000422014_00274_05338_5372.N1	09-MAR-2003 00:18:11	Bright	41.500	22	32Alp Leo	1.3600	15200.	83	5338	No
6	GOM_NL__2PRFIN20030309_002036_000000402014_00274_05338_5373.N1	09-MAR-2003 00:20:36	Bright	40.000	51	41Gam1Leo	2.0100	4500.0	80	5338	No
7	GOM_NL__2PRFIN20030309_002855_000000422014_00274_05338_5374.N1	09-MAR-2003 00:28:55	Bright	42.000	174	52Psi UMa	3.0040	4400.0	84	5338	No
8	GOM_NL__2PRFIN20030309_003156_000000402014_00274_05338_5375.N1	09-MAR-2003 00:31:56	Bright	39.500	82	48Bet UMa	2.3650	10600.	79	5338	No
9	GOM_NL__2PRFIN20030309_003322_000000422014_00274_05338_5376.N1	09-MAR-2003 00:33:22	Bright	41.500	36	50Alp UMa	1.8000	6300.0	83	5338	No
10	GOM_NL__2PRFIN20030309_003546_000000472014_00274_05338_5377.N1	09-MAR-2003 00:35:46	Bright	47.000	32	77Eps UMa	1.7630	11000.	94	5338	No
11	GOM_NL__2PRFIN20030309_004014_000000352014_00274_05338_5378.N1	09-MAR-2003 00:40:14	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	5338	No
12	GOM_NL__2PRFIN20030309_004500_000000482014_00274_05338_5379.N1	09-MAR-2003 00:45:00	Bright	48.000	119	14Eta Dra	2.7270	4700.0	96	5338	No
13	GOM_NL__2PRFIN20030309_004755_000000362014_00274_05338_5380.N1	09-MAR-2003 00:47:55	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	5338	No
14	GOM_NL__2PRFIN20030309_004943_000000502014_00274_05338_5381.N1	09-MAR-2003 00:49:43	Bright	50.000	130	23Bet Dra	2.7990	5800.0	100	5338	No
15	GOM_NL__2PRFIN20030309_005301_000000342014_00274_05338_5382.N1	09-MAR-2003 00:53:01	Bright	34.000	19	50Alp Cyg	1.2460	10500.	68	5338	No
16	GOM_NL__2PRFIN20030309_005434_000000352014_00274_05338_5383.N1	09-MAR-2003 00:54:34	Bright	35.000	66	37Gam Cyg	2.2080	5900.0	70	5338	No
17	GOM_NL__2PRFIN20030309_005612_000000362014_00274_05338_5384.N1	09-MAR-2003 00:56:12	Bright	36.000	92	53Eps Cyg	2.5000	4500.0	72	5338	No
18	GOM_NL__2PRFIN20030309_005925_000001202014_00274_05338_5385.N1	09-MAR-2003 00:59:25	Twilight_stray	119.50	133	40Zet Her	2.8070	6000.0	239	5338	No
19	GOM_NL__2PRFIN20030309_010337_000000482014_00274_05338_5386.N1	09-MAR-2003 01:03:37	Bright	48.000	168	17Zet Aql	2.9860	11000.	96	5338	No
20	GOM_NL__2PRFIN20030309_010813_000000882014_00274_05338_5387.N1	09-MAR-2003 01:08:13	Straylight	88.000	59	55Alp Oph	2.0800	8900.0	176	5338	No
21	GOM_NL__2PRFIN20030309_011056_000000822014_00274_05338_5388.N1	09-MAR-2003 01:10:56	Dark	81.500	126	60Bet Oph	2.7700	4250.0	163	5338	No
22	GOM_NL__2PRFIN20030309_011342_000000442014_00274_05338_5389.N1	09-MAR-2003 01:13:42	Dark	43.500	155	41Pi Sgr	2.9000	6600.0	87	5338	No
23	GOM_NL__2PRFIN20030309_011538_000000442014_00274_05338_5390.N1	09-MAR-2003 01:15:38	Dark	44.000	57	34Sig Sgr	2.0660	26000.	88	5338	No
24	GOM_NL__2PRFIN20030309_012123_000000392014_00274_05338_5391.N1	09-MAR-2003 01:21:23	Dark	38.500	45	Alp Pav	1.9400	26000.	77	5338	No
25	GOM_NL__2PRFIN20030309_012625_000001012014_00275_05339_5360.N1	09-MAR-2003 01:26:25	Dark	100.50	16	21Alp Sco	1.0200	3000.0	201	5339	No
26	GOM_NL__2PRFIN20030309_012912_000000402014_00275_05339_5361.N1	09-MAR-2003 01:29:12	Dark	40.000	134	Bet TrA	2.8100	6600.0	80	5339	No
27	GOM_NL__2PRFIN20030309_013153_000000462014_00275_05339_5362.N1	09-MAR-2003 01:31:53	Dark	46.000	4	Alp1Cen	-0.010000	5800.0	92	5339	No
28	GOM_NL__2PRFIN20030309_013310_000000432014_00275_05339_5363.N1	09-MAR-2003 01:33:10	Dark	43.000	10	Bet Cen	0.61000	28000.	86	5339	No
29	GOM_NL__2PRFIN20030309_013525_000000472014_00275_05339_5364.N1	09-MAR-2003 01:35:25	Dark	46.500	12	Alp1Cru	0.77500	30000.	93	5339	No
30	GOM_NL__2PRFIN20030309_013638_000000392014_00275_05339_5365.N1	09-MAR-2003 01:36:38	Dark	39.000	129	Del Cru	2.7930	26000.	78	5339	No
31	GOM_NL__2PRFIN20030309_013811_000000442014_00275_05339_5366.N1	09-MAR-2003 01:38:11	Straylight	44.000	64	Gam Cen	2.2000	10600.	88	5339	No
32	GOM_NL__2PRFIN20030309_014016_000000392014_00275_05339_5367.N1	09-MAR-2003 01:40:16	Straylight	39.000	91	Kap Vel	2.4900	26000.	78	5339	No
33	GOM_NL__2PRFIN20030309_014335_000000422014_00275_05339_5368.N1	09-MAR-2003 01:43:35	Straylight	42.000	65	Lam Vel	2.2040	4400.0	84	5339	No
34	GOM_NL__2PRFIN20030309_014630_000000612014_00275_05339_5369.N1	09-MAR-2003 01:46:30	Straylight	61.000	106	9Bet Crv	2.6480	5600.0	122	5339	No
35	GOM_NL__2PRFIN20030309_014908_000000612014_00275_05339_5370.N1	09-MAR-2003 01:49:08	Straylight	60.500	100	4Gam Crv	2.5800	13100.	121	5339	No
36	GOM_NL__2PRFIN20030309_015302_000000462014_00275_05339_5371.N1	09-MAR-2003 01:53:02	Twilight_stray	46.000	48	30Alp Hya	1.9770	4100.0	92	5339	No
37	GOM_NL__2PRFIN20030309_015846_000000422014_00275_05339_5372.N1	09-MAR-2003 01:58:46	Bright	41.500	22	32Alp Leo	1.3600	15200.	83	5339	No
38	GOM_NL__2PRFIN20030309_020111_000000422014_00275_05339_5373.N1	09-MAR-2003 02:01:11	Bright	41.500	51	41Gam1Leo	2.0100	4500.0	83	5339	No
39	GOM_NL__2PRFIN20030309_020930_000000432014_00275_05339_5374.N1	09-MAR-2003 02:09:30	Bright	42.500	174	52Psi UMa	3.0040	4400.0	85	5339	No
40	GOM_NL__2PRFIN20030309_021231_000000402014_00275_05339_5375.N1	09-MAR-2003 02:12:31	Bright	40.000	82	48Bet UMa	2.3650	10600.	80	5339	No
41	GOM_NL__2PRFIN20030309_021357_000000392014_00275_05339_5376.N1	09-MAR-2003 02:13:57	Bright	39.000	36	50Alp UMa	1.8000	6300.0	78	5339	No
42	GOM_NL__2PRFIN20030309_021621_000000492014_00275_05339_5377.N1	09-MAR-2003 02:16:21	Bright	48.500	32	77Eps UMa	1.7630	11000.	97	5339	No















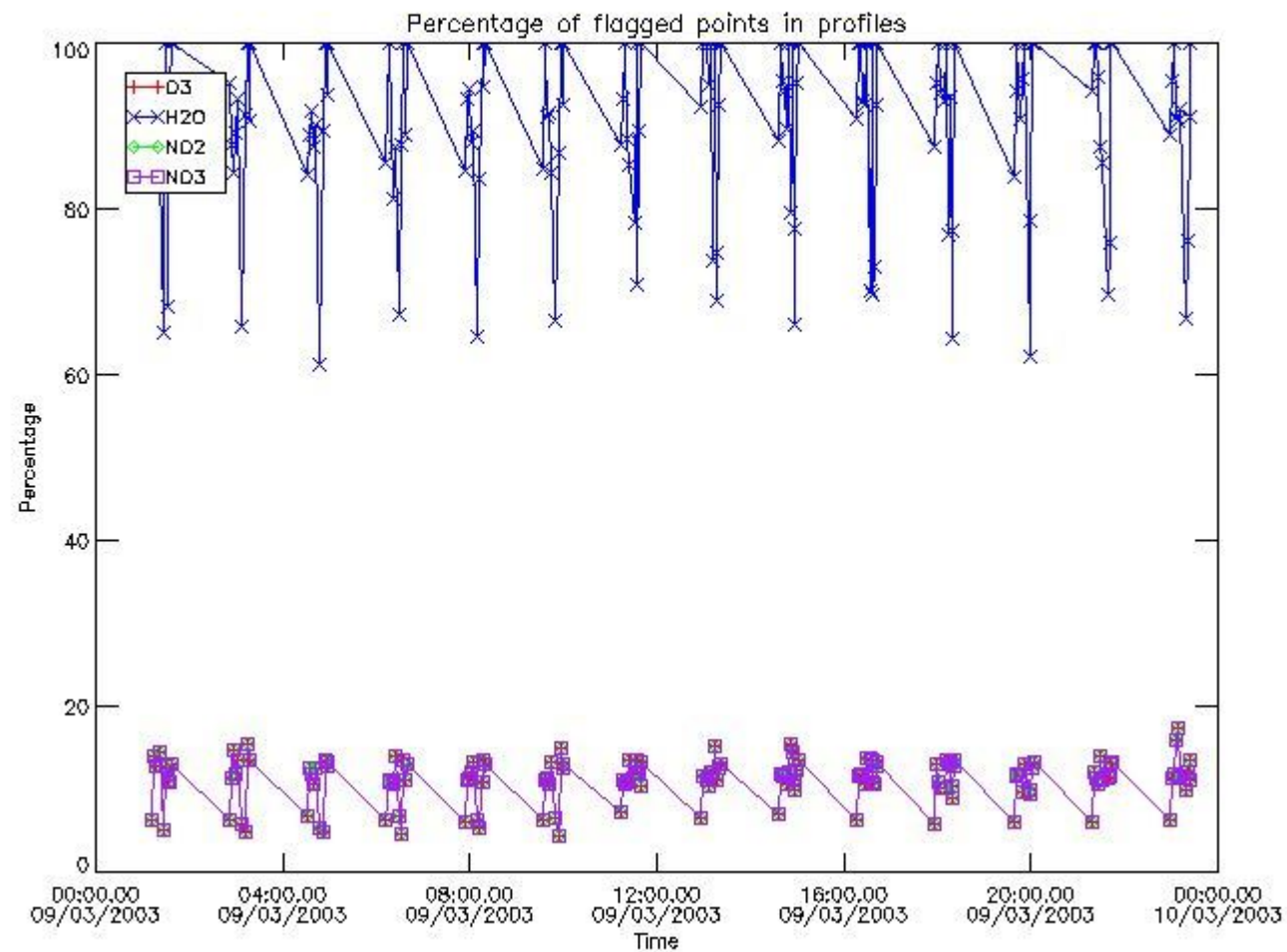


456	GOM_NL__2PRFIN20030309_232318_000000462014_00288_05352_5361.N1	09-MAR-2003 23:23:18	Dark	45.500	12	Alp1Cru	0.77500	30000.	91	5352	No
457	GOM_NL__2PRFIN20030309_232430_000000382014_00288_05352_5362.N1	09-MAR-2003 23:24:30	Dark	38.000	129	Del Cru	2.7930	26000.	76	5352	No
458	GOM_NL__2PRFIN20030309_232605_000000462014_00288_05352_5363.N1	09-MAR-2003 23:26:05	Straylight	46.000	64	Gam Cen	2.2000	10600.	92	5352	No
459	GOM_NL__2PRFIN20030309_232805_000000392014_00288_05352_5364.N1	09-MAR-2003 23:28:05	Straylight	38.500	91	Kap Vel	2.4900	26000.	77	5352	No
460	GOM_NL__2PRFIN20030309_233124_000000452014_00288_05352_5365.N1	09-MAR-2003 23:31:24	Straylight	45.000	65	Lam Vel	2.2040	4400.0	90	5352	No
461	GOM_NL__2PRFIN20030309_233422_000000572014_00288_05352_5366.N1	09-MAR-2003 23:34:22	Straylight	57.000	106	9Bet Crv	2.6480	5600.0	114	5352	No
462	GOM_NL__2PRFIN20030309_233657_000000572014_00288_05352_5367.N1	09-MAR-2003 23:36:57	Straylight	56.500	100	4Gam Crv	2.5800	13100.	113	5352	No
463	GOM_NL__2PRFIN20030309_234052_000000472014_00288_05352_5368.N1	09-MAR-2003 23:40:52	Twilight_stray	46.500	48	30Alp Hya	1.9770	4100.0	93	5352	No
464	GOM_NL__2PRFIN20030309_234634_000000402014_00288_05352_5369.N1	09-MAR-2003 23:46:34	Bright	39.500	22	32Alp Leo	1.3600	15200.	79	5352	No
465	GOM_NL__2PRFIN20030309_234857_000000412014_00288_05352_5370.N1	09-MAR-2003 23:48:57	Bright	40.500	51	41Gam1Leo	2.0100	4500.0	81	5352	No
466	GOM_NL__2PRFIN20030309_235324_000001122014_00288_05352_5371.N1	09-MAR-2003 23:53:24	Bright	111.50	138	47Eps Vir	2.8280	4700.0	223	5352	No
467	GOM_NL__2PRFIN20030309_235712_000000422014_00288_05352_5372.N1	09-MAR-2003 23:57:12	Bright	41.500	174	52Psi UMa	3.0040	4400.0	83	5352	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.

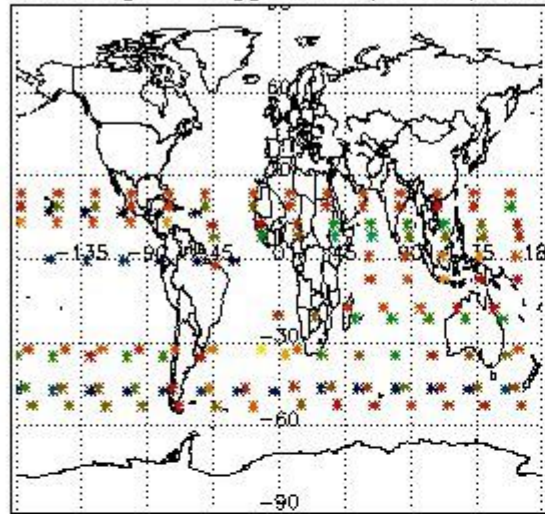
#### 3.1 Plot quality information per product (time dependant)



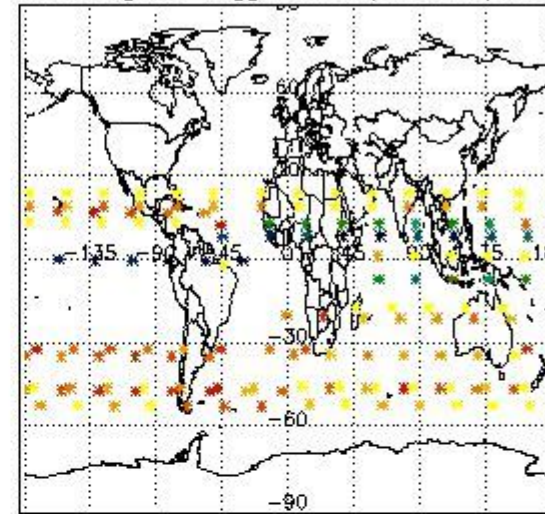
#### 3.2 Plot quality information per product (world map)



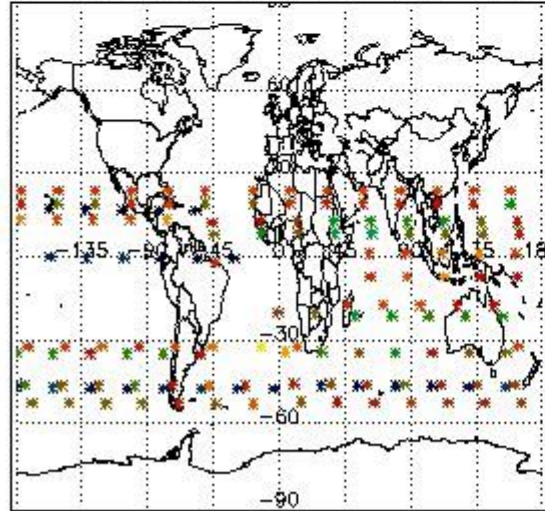
Percentage of flagged data per O3 profile



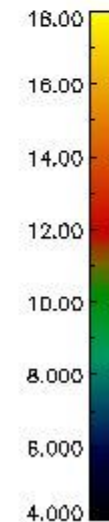
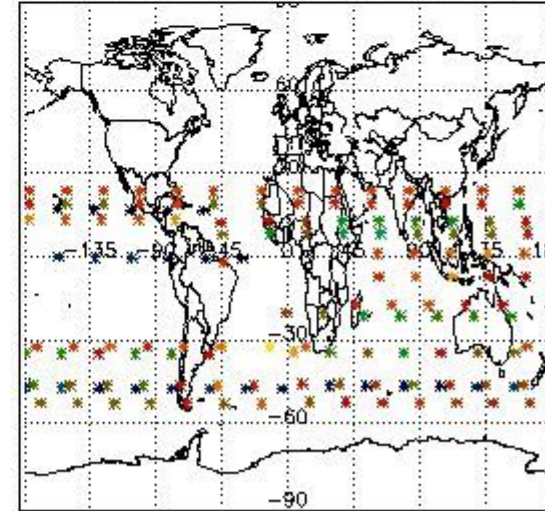
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

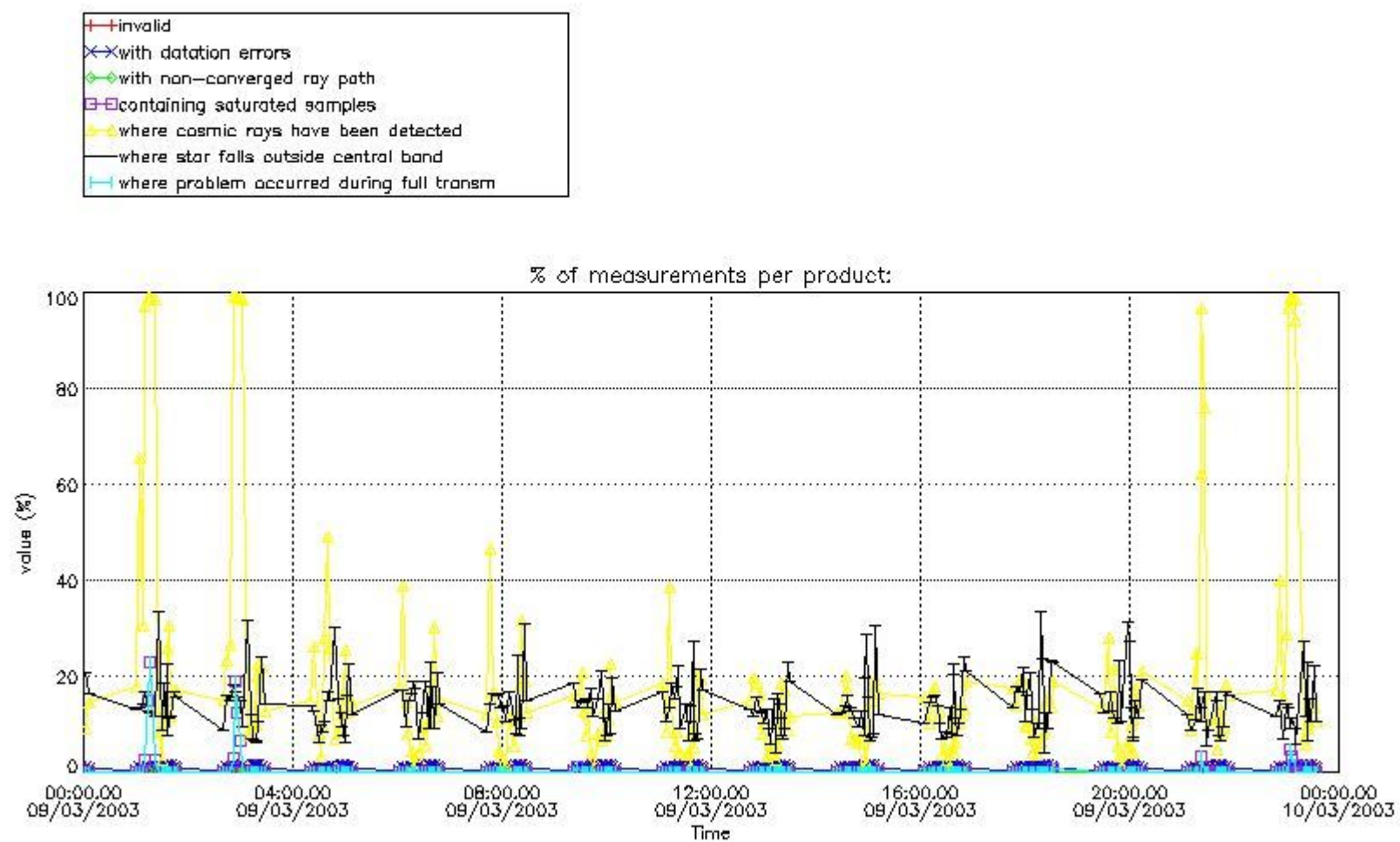


#### 4. Level 1 quality information per product

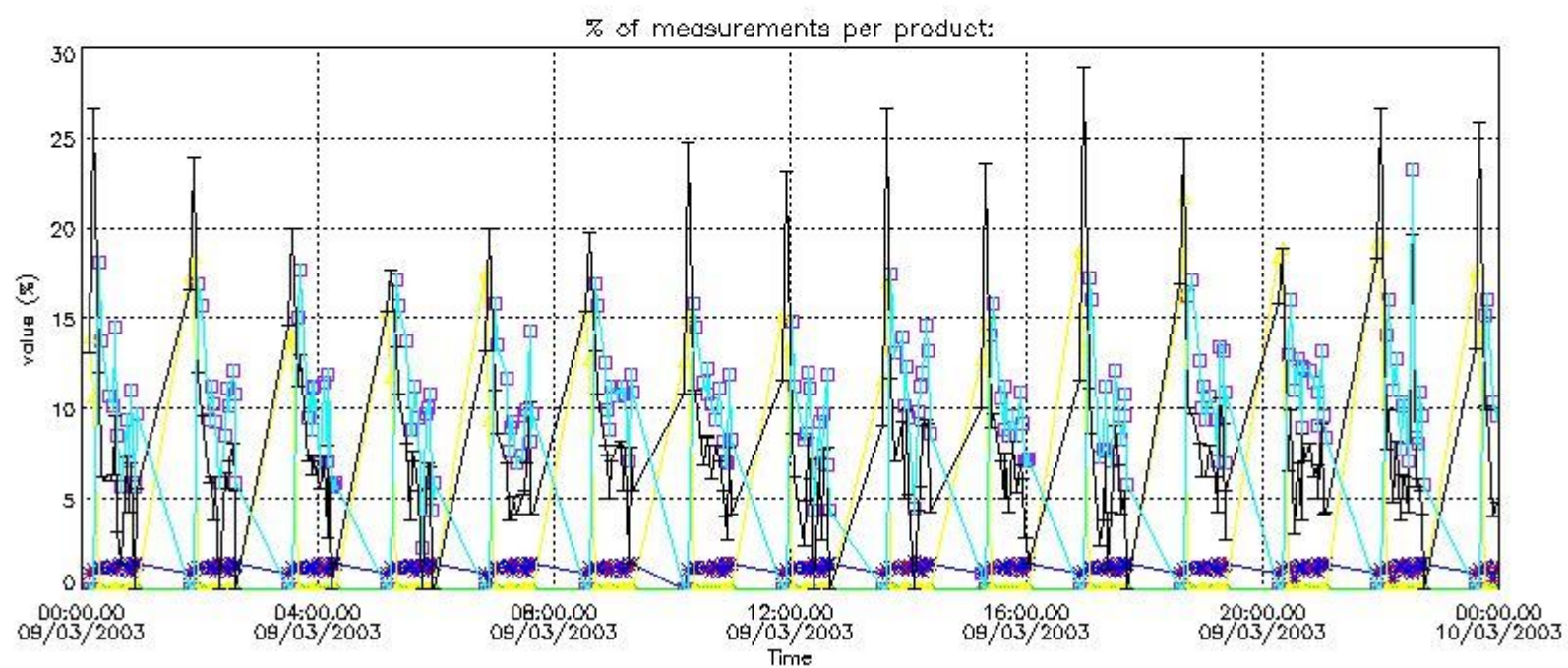
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

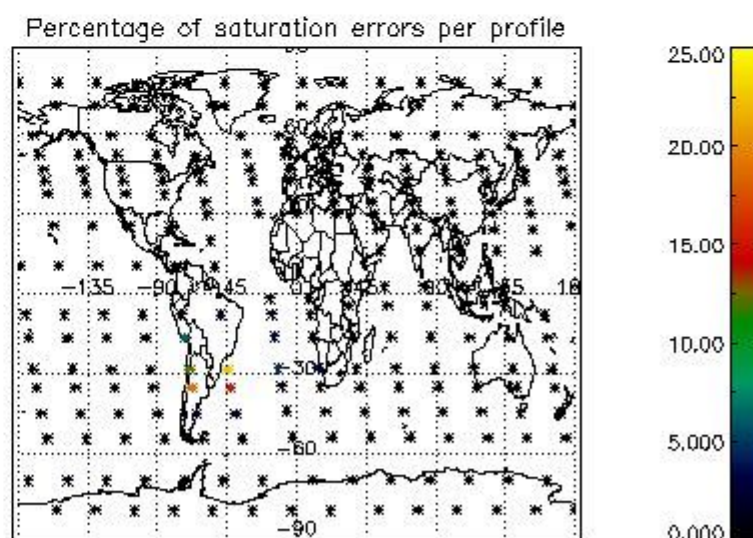
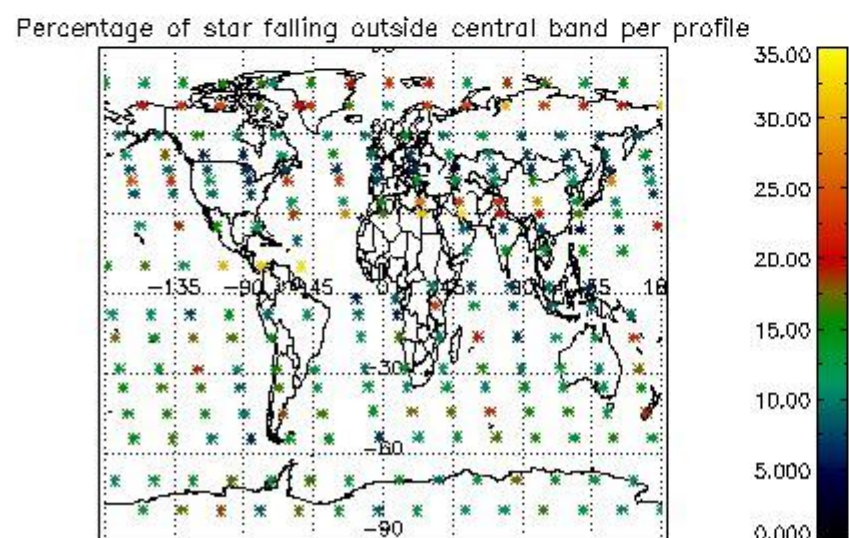
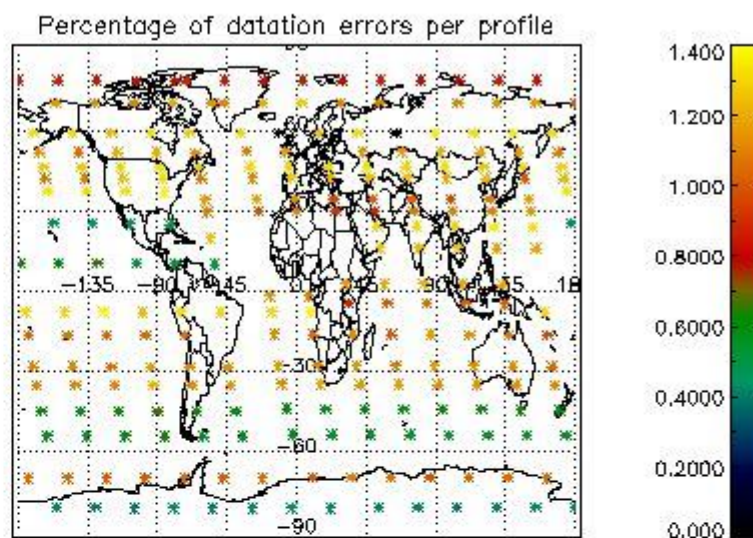
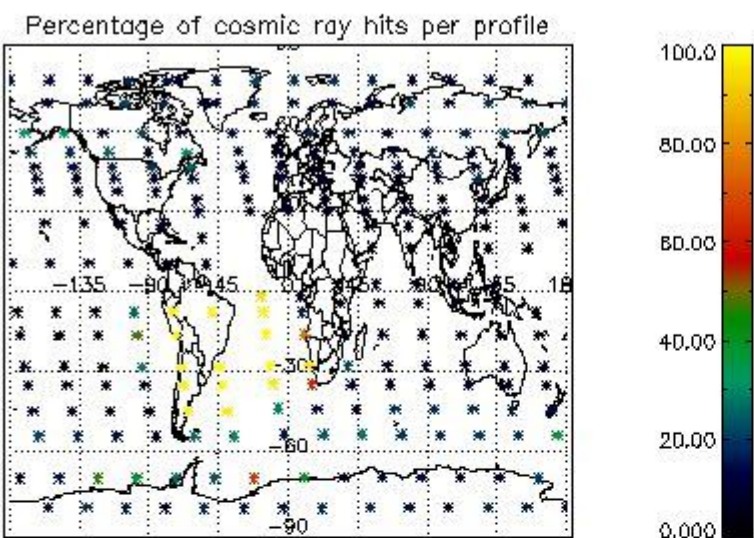


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

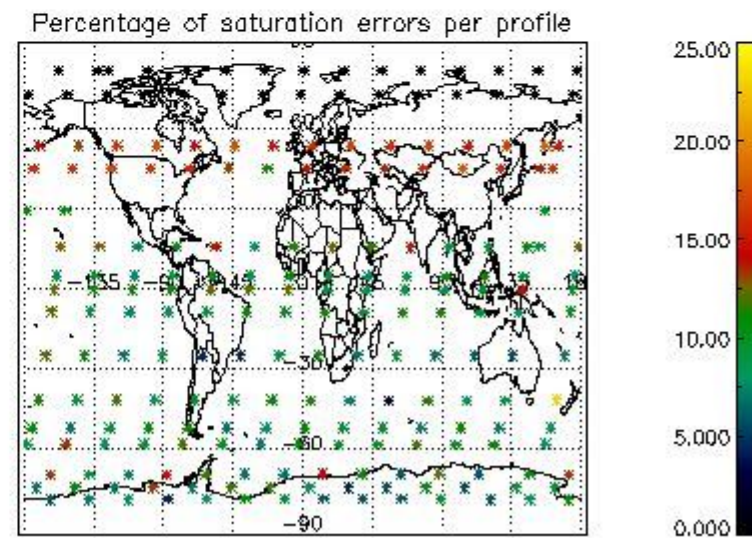
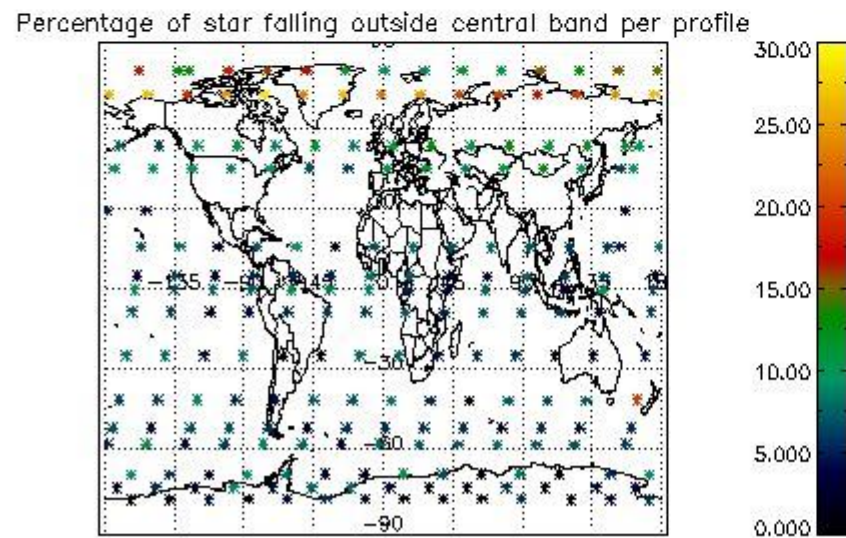
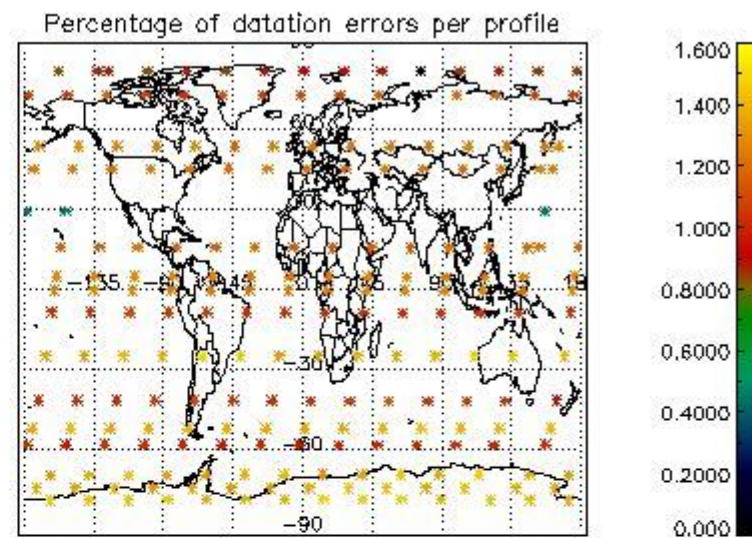
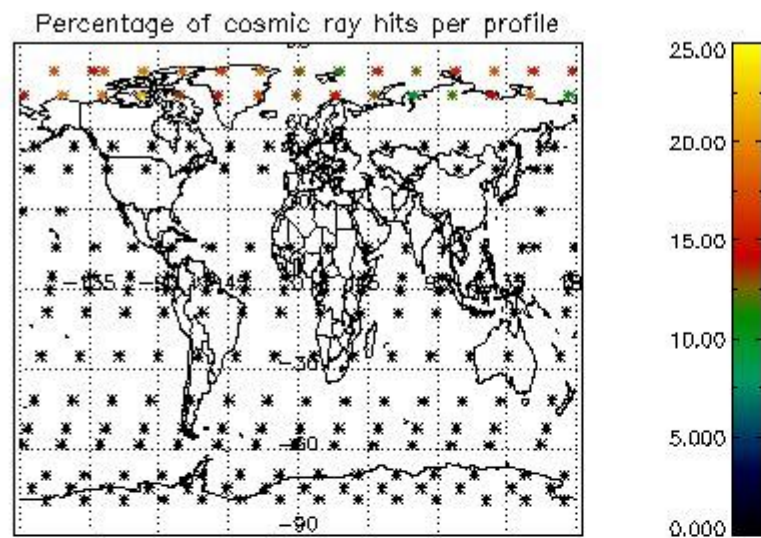


#### 4.2 Plot quality information per product coming from level 1b processing (world map)

##### 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

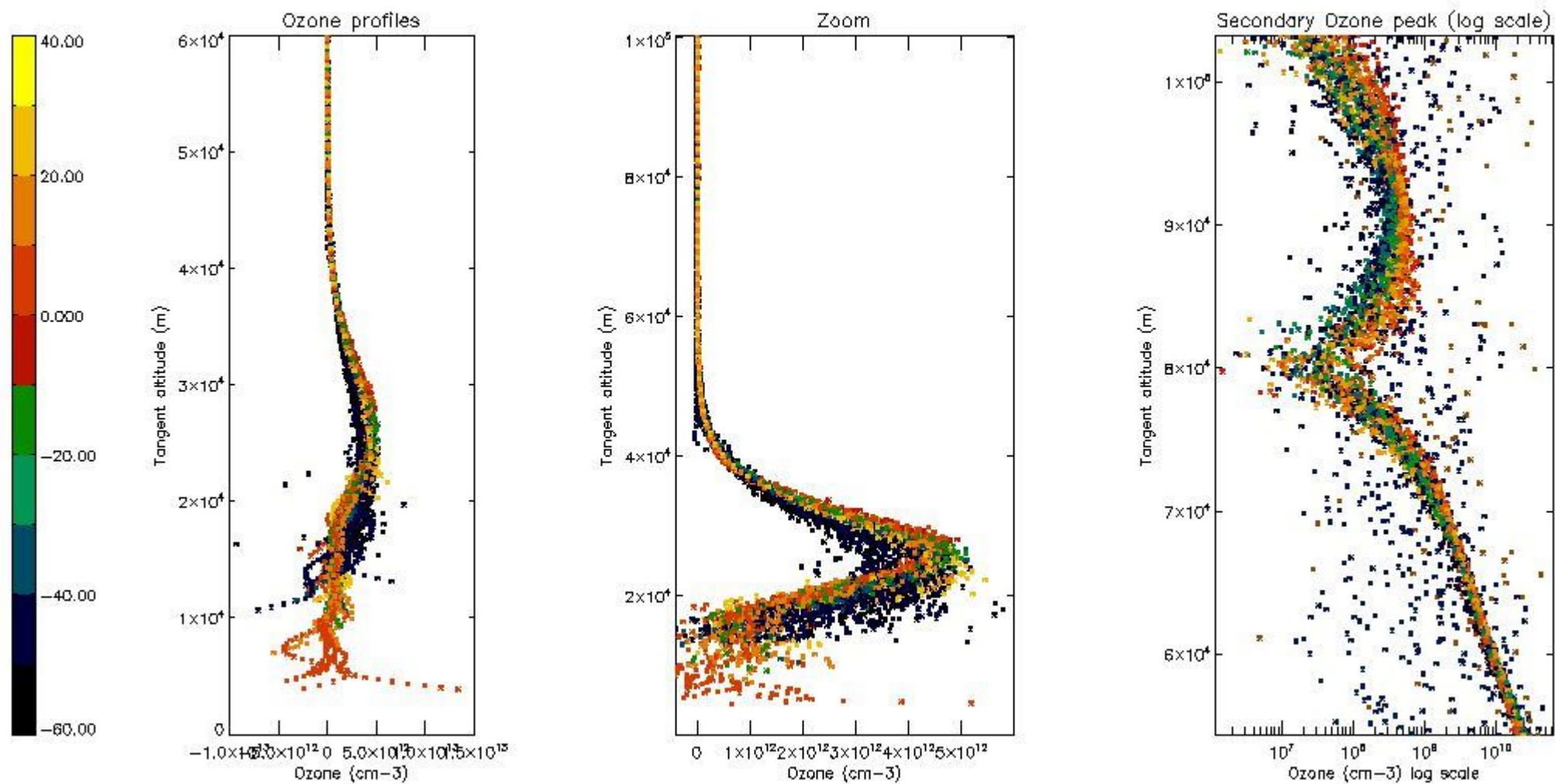
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	17
STD < 5	13

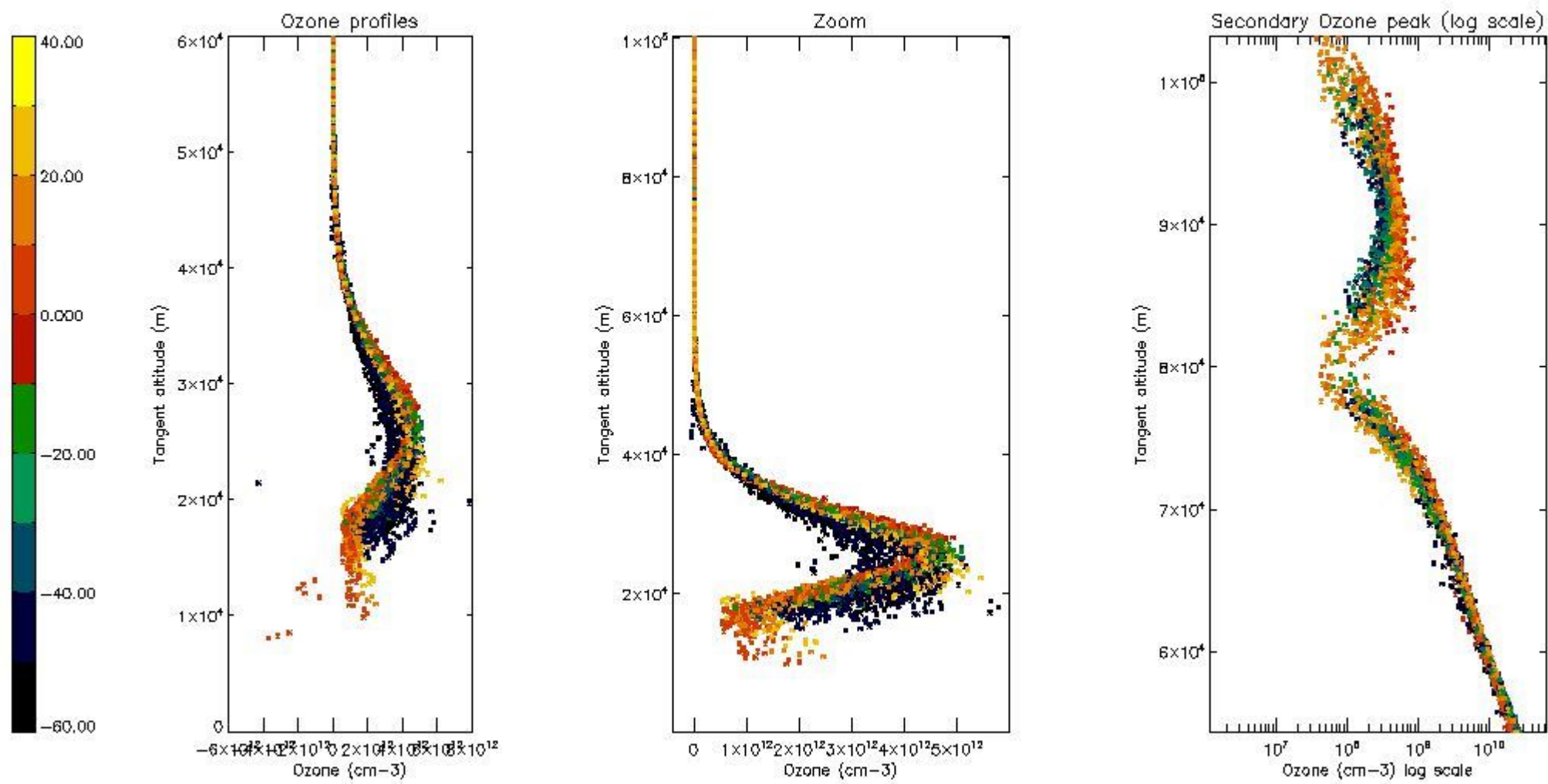
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



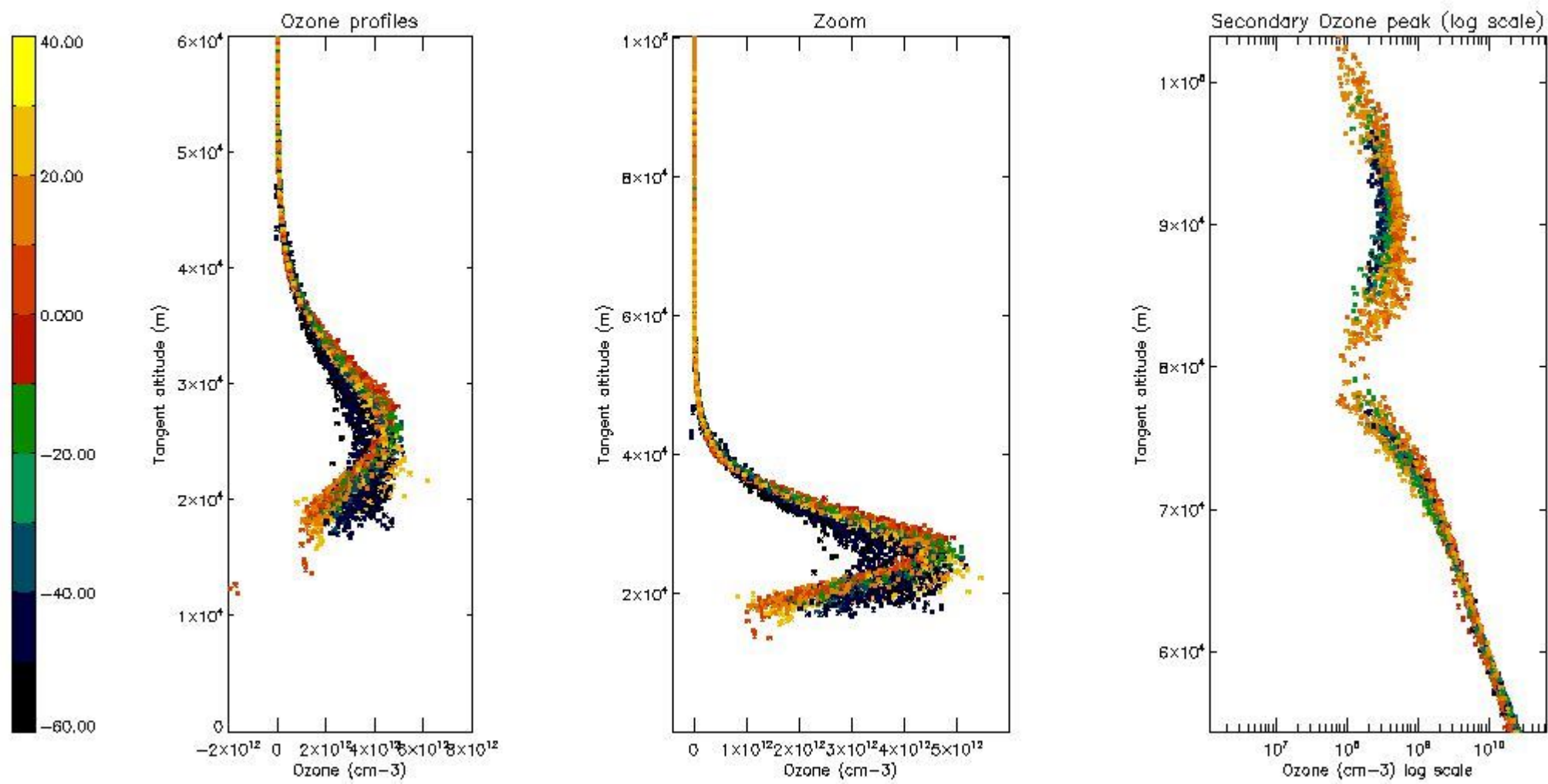
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

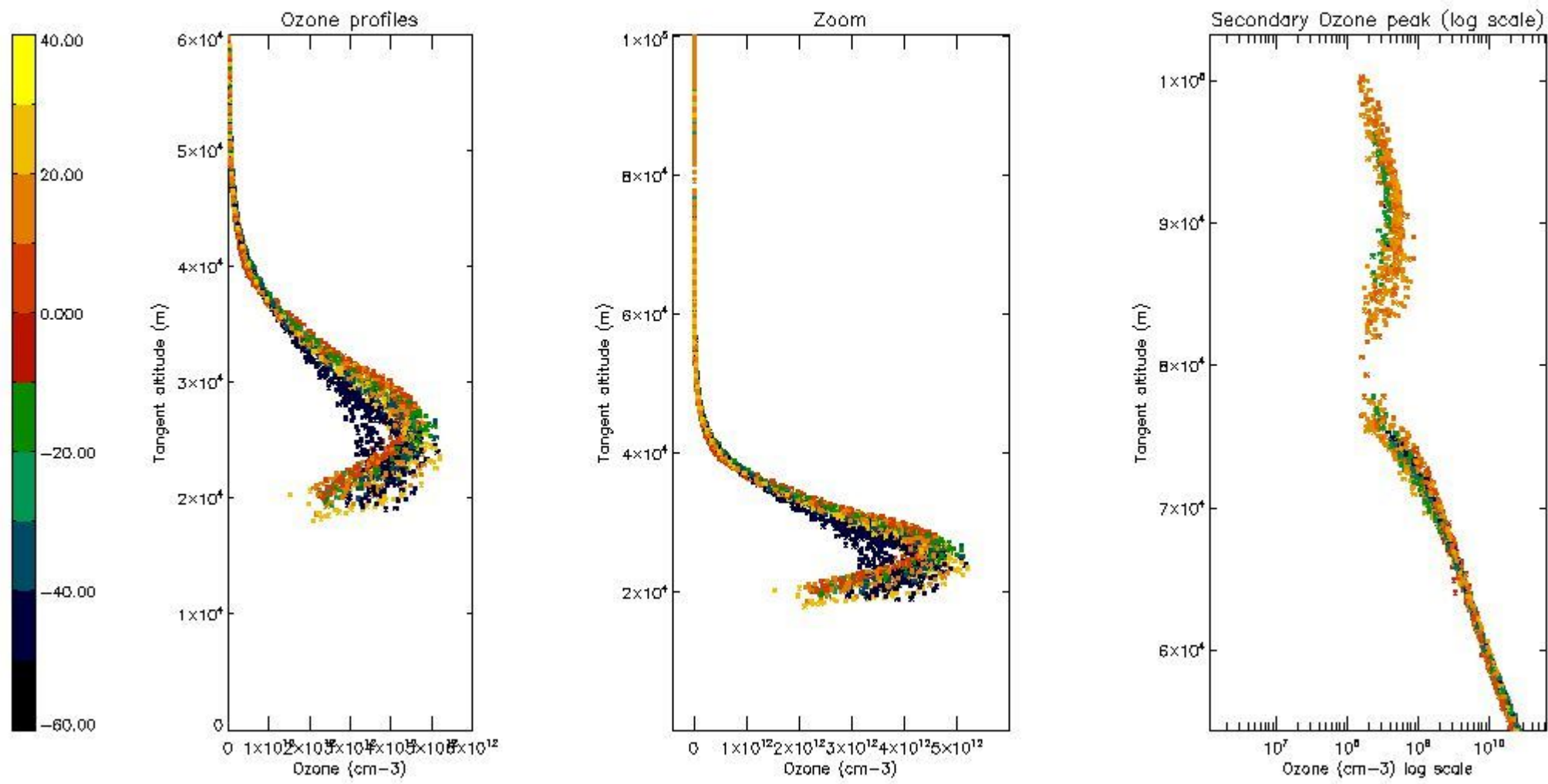
The colorbar represents the latitude.



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

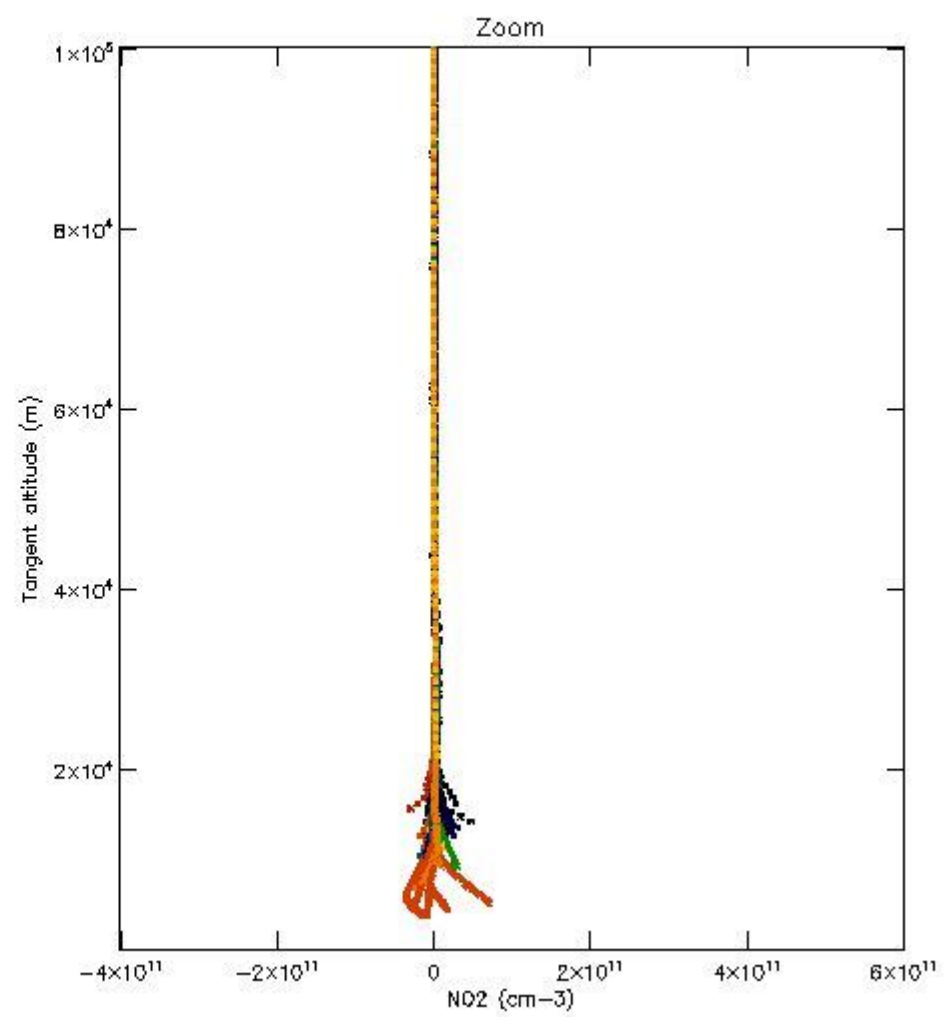
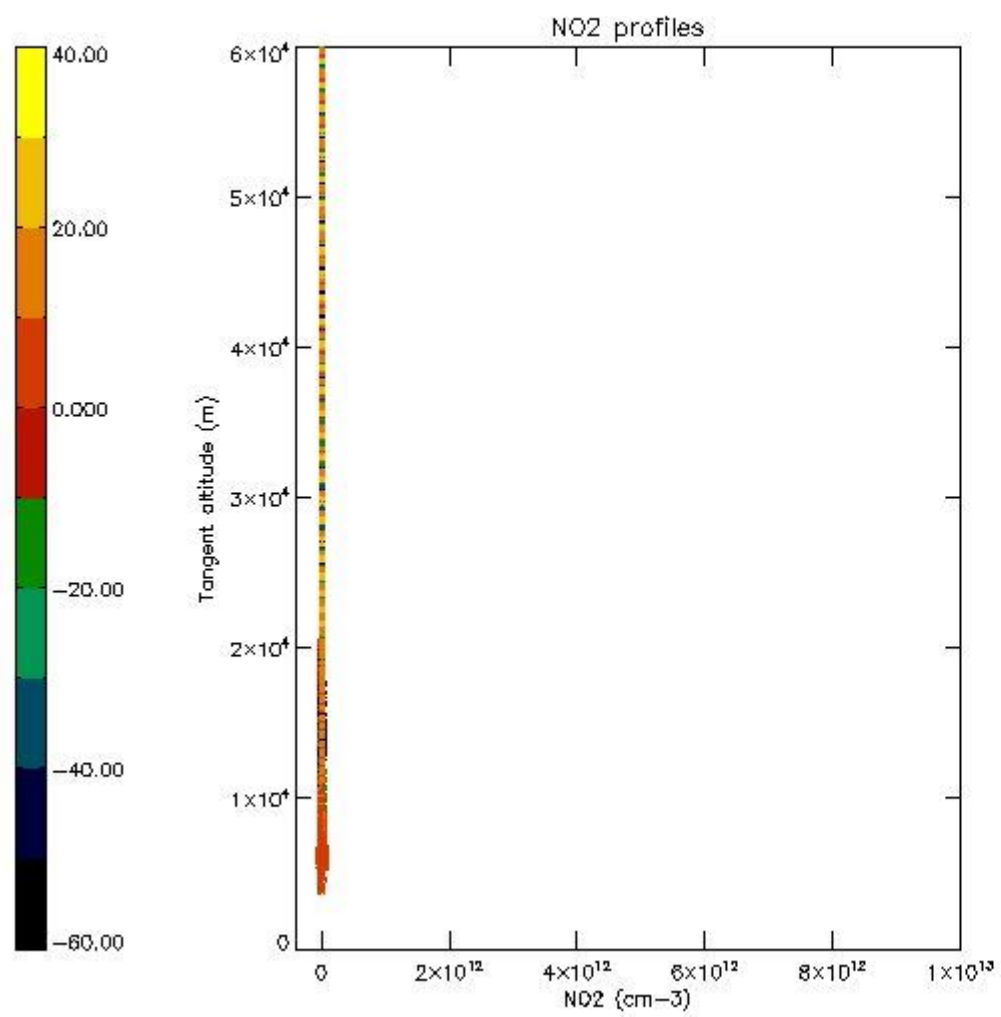
The colorbar represents the latitude.





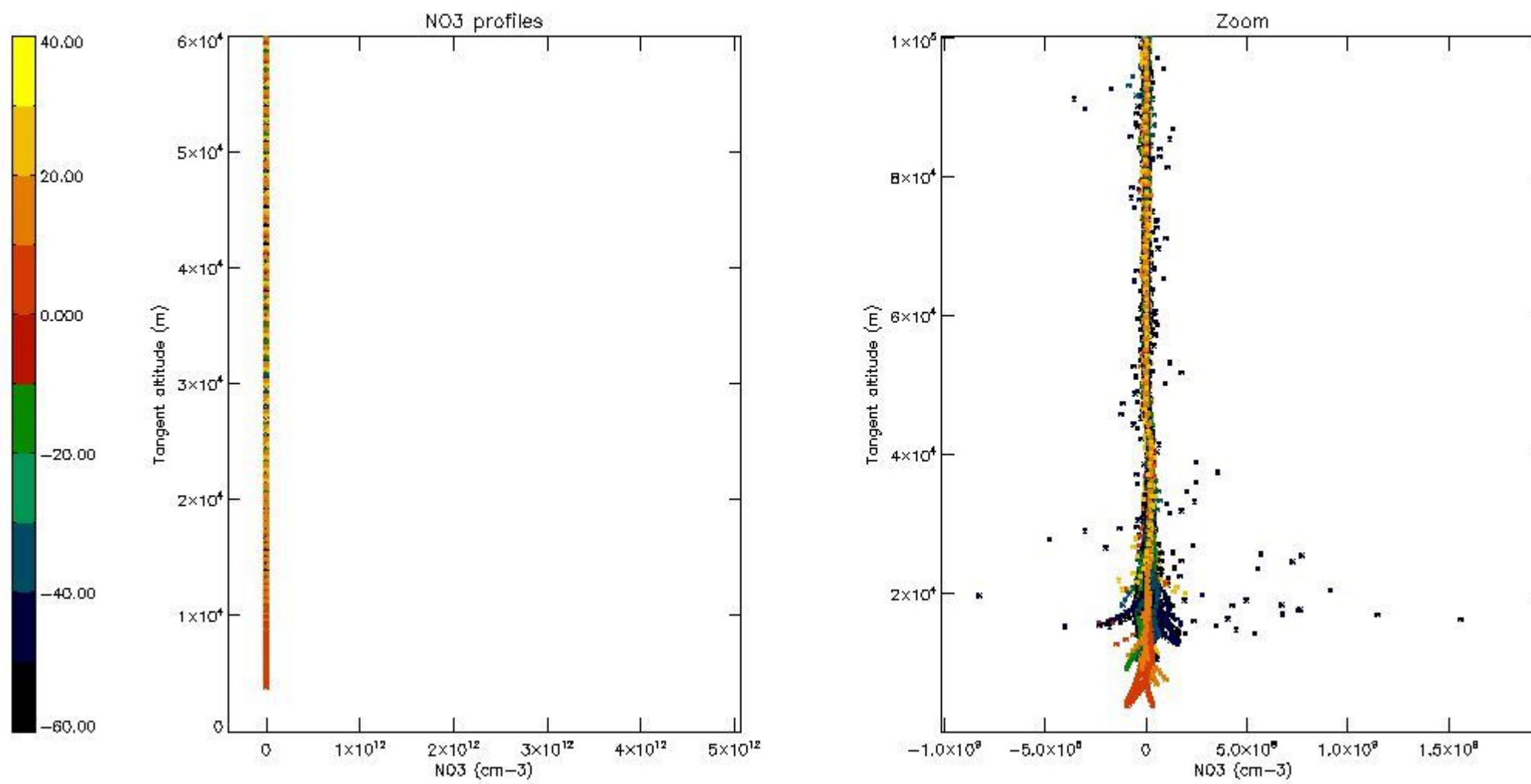
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



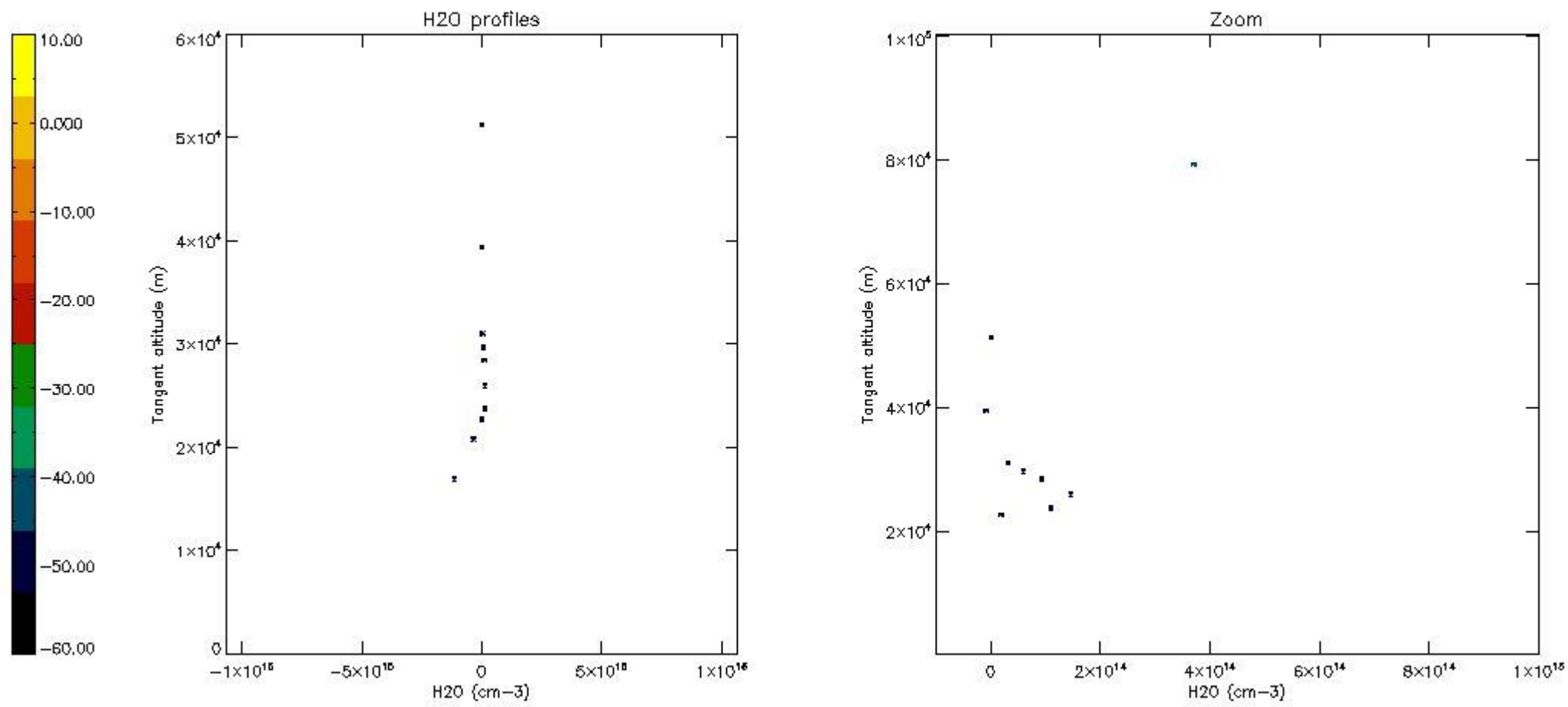
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

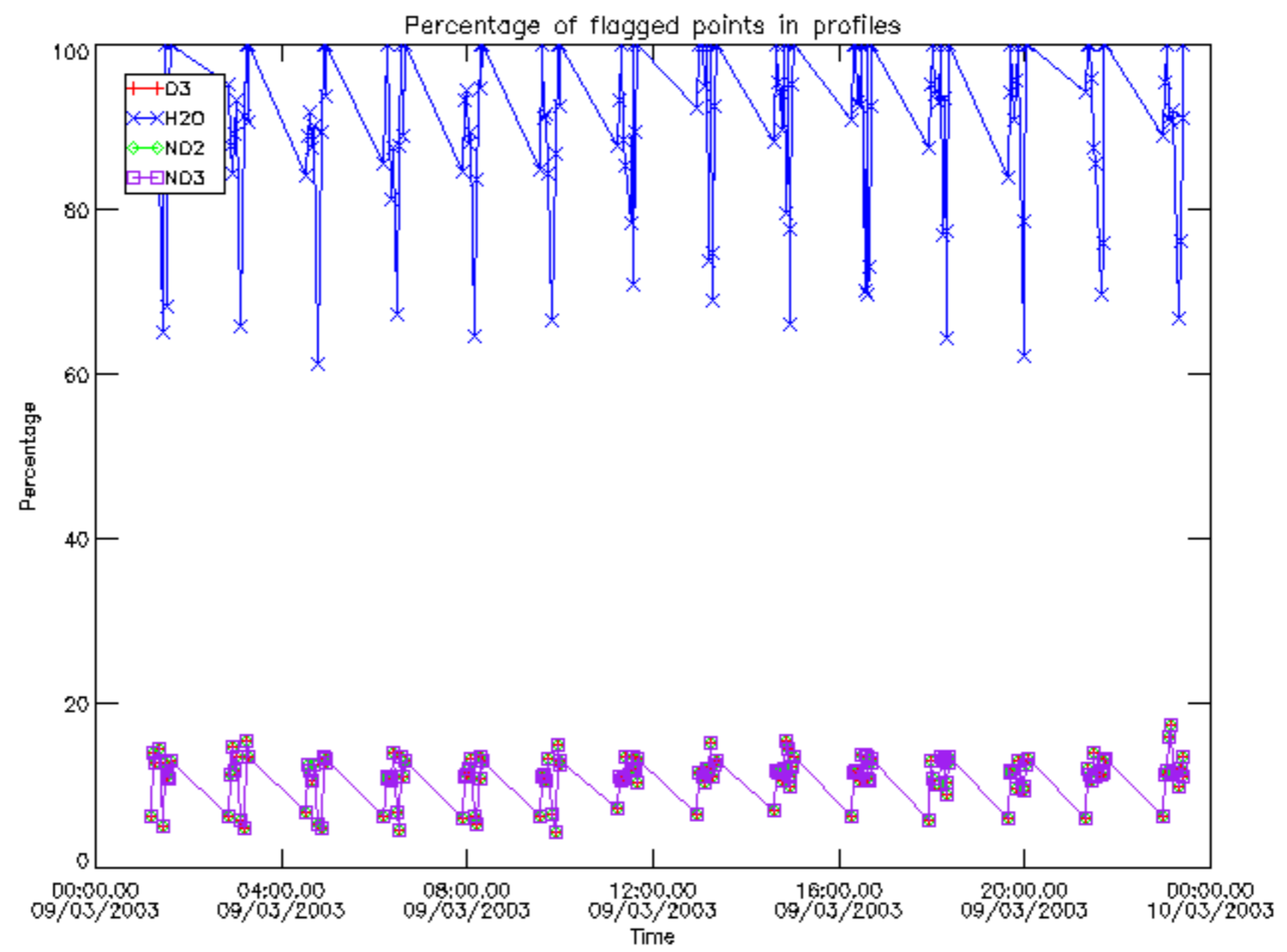
The colorbar represents the latitude.



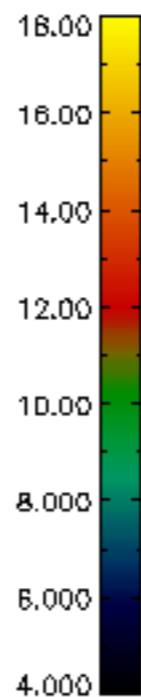
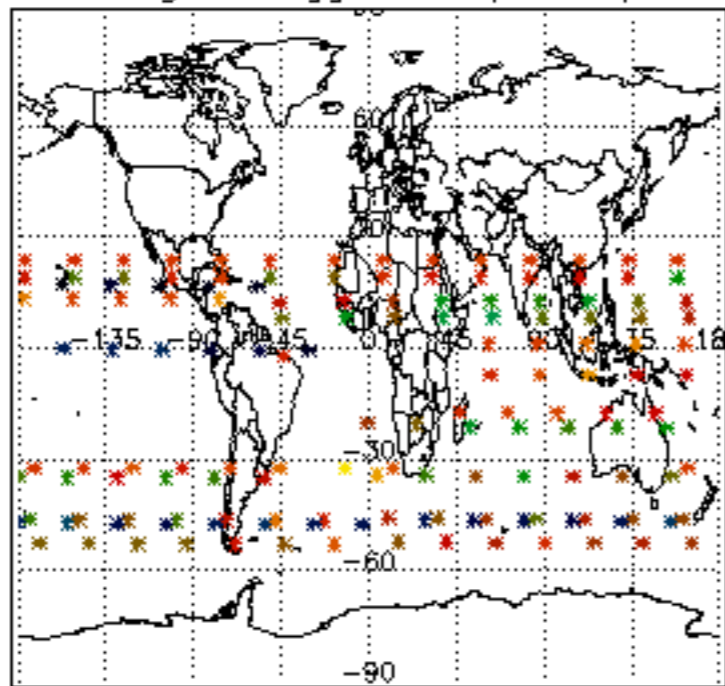
## 6. Auxiliary Data Files used for the production reported in section 2

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.

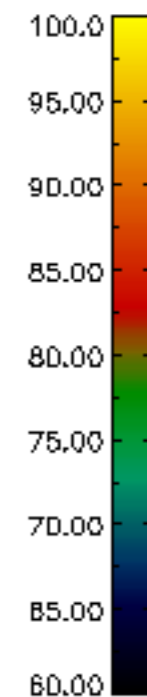
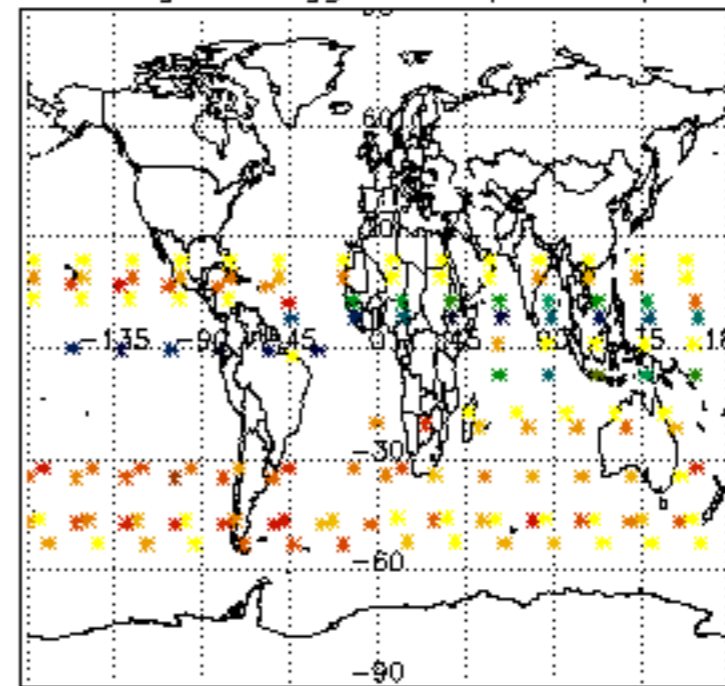
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXNIEC20050627_150440_20020301_000000_20100101_000000	1	09-MAR-2003 00:02:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	09-MAR-2003 00:02:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	09-MAR-2003 00:02:59



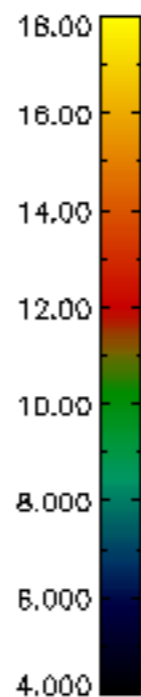
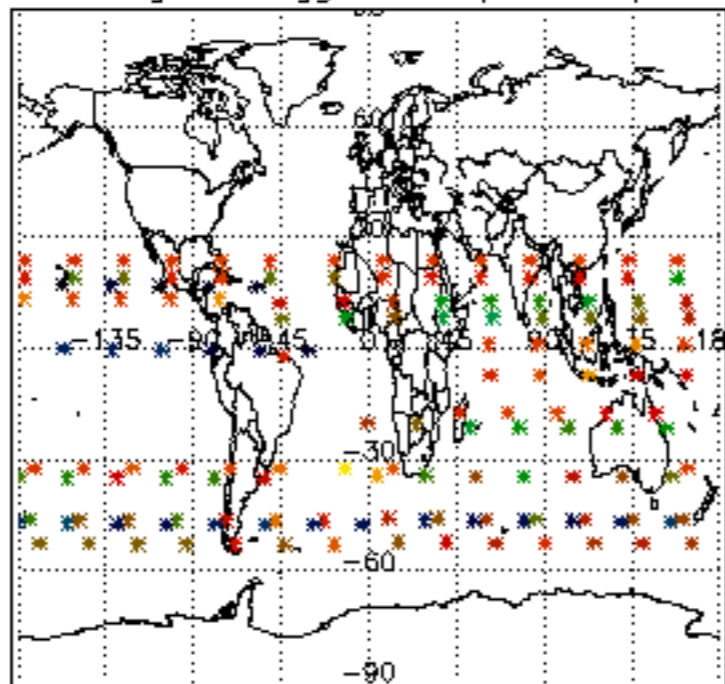
Percentage of flagged data per D3 profile



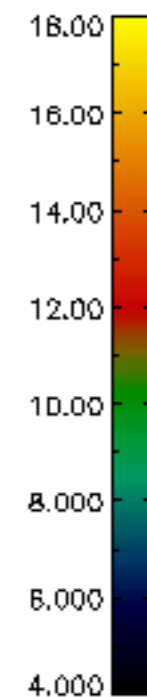
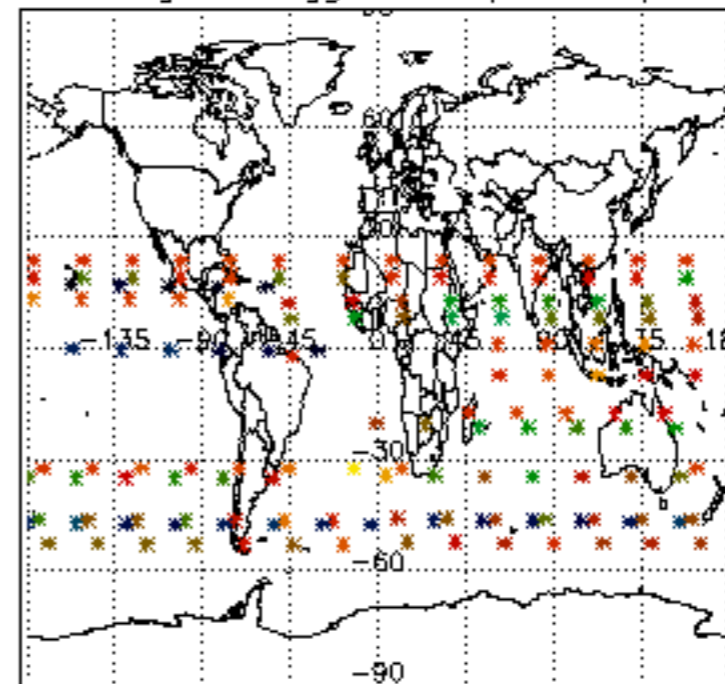
Percentage of flagged data per H2O profile

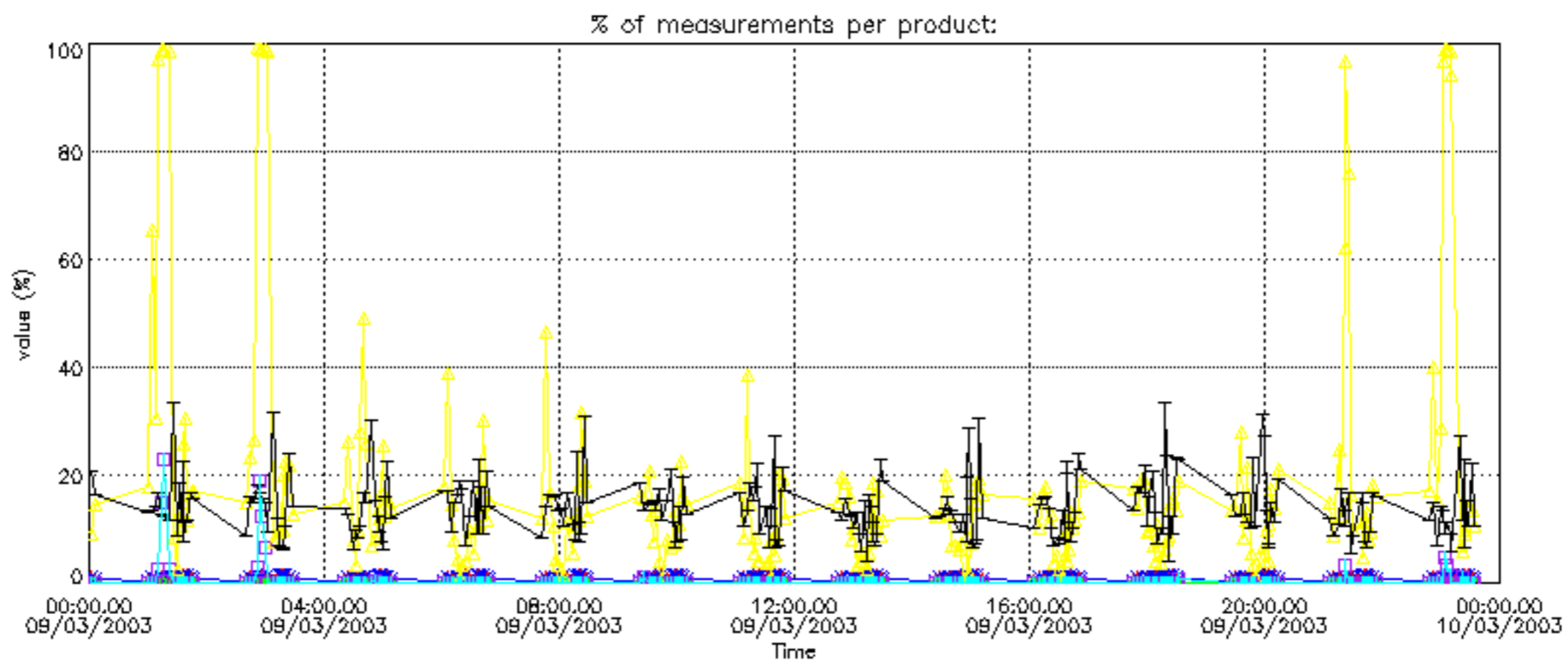


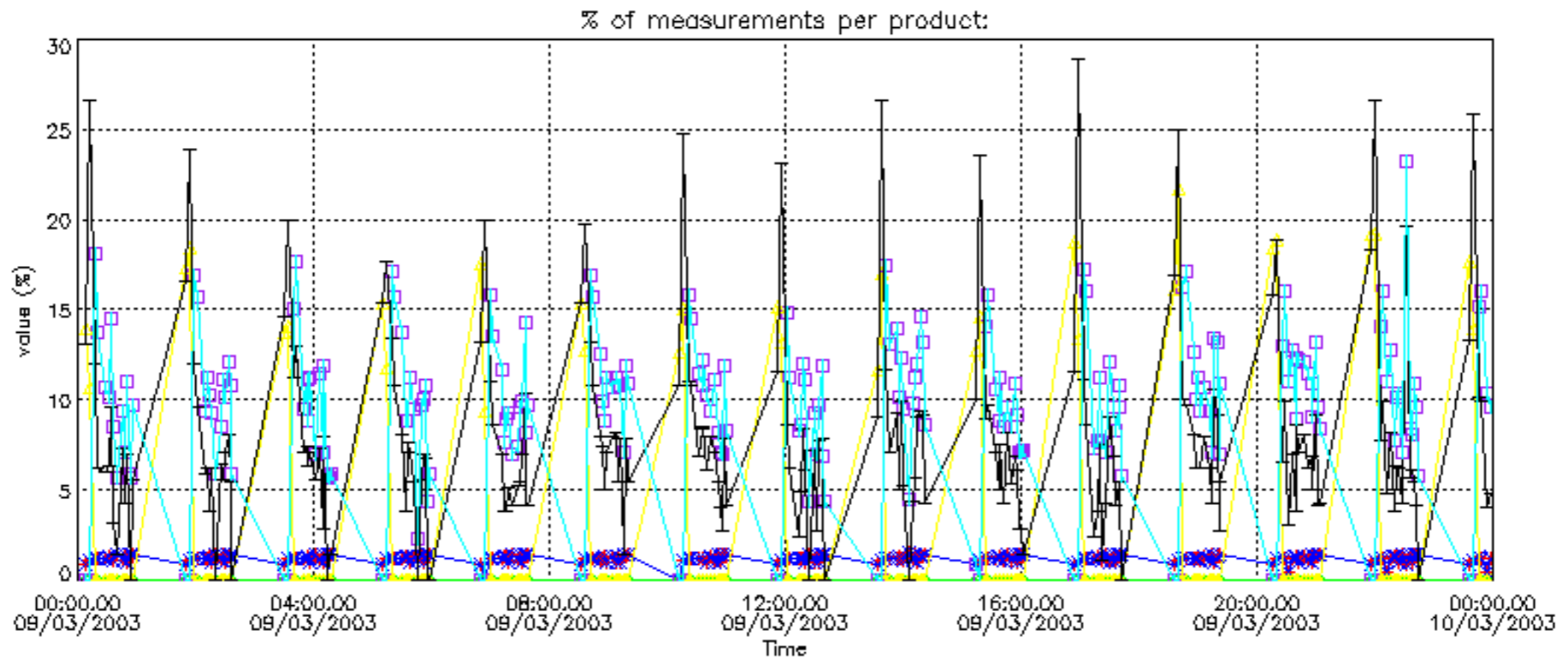
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

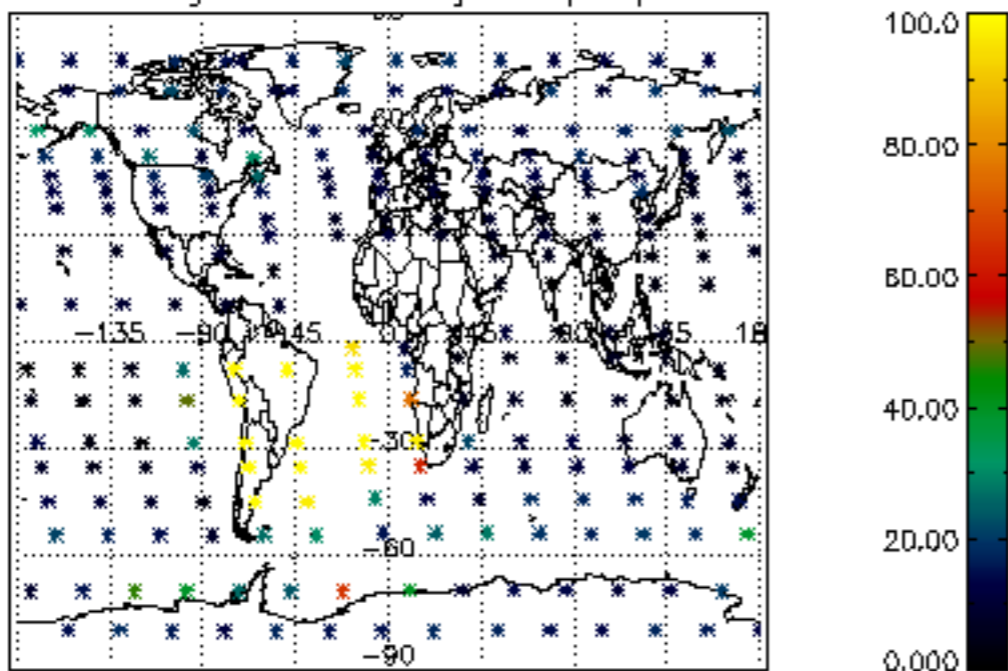




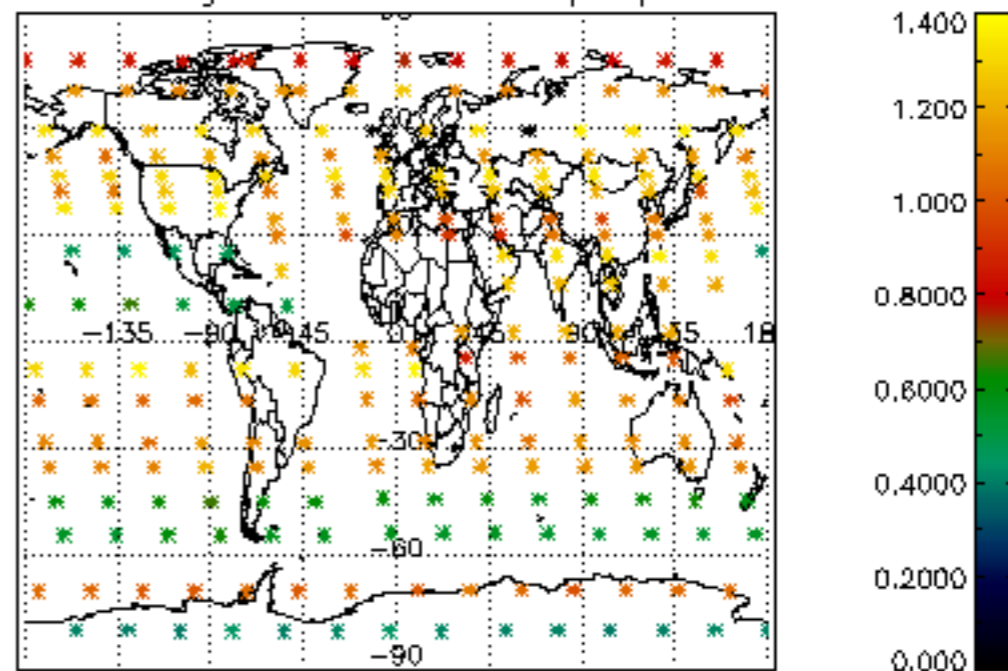




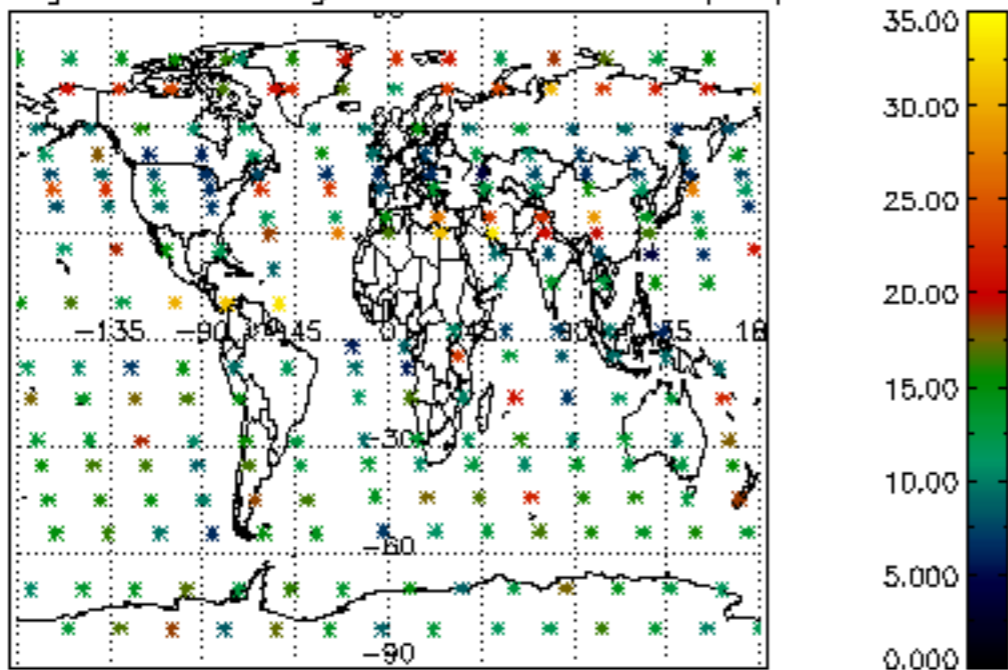
Percentage of cosmic ray hits per profile



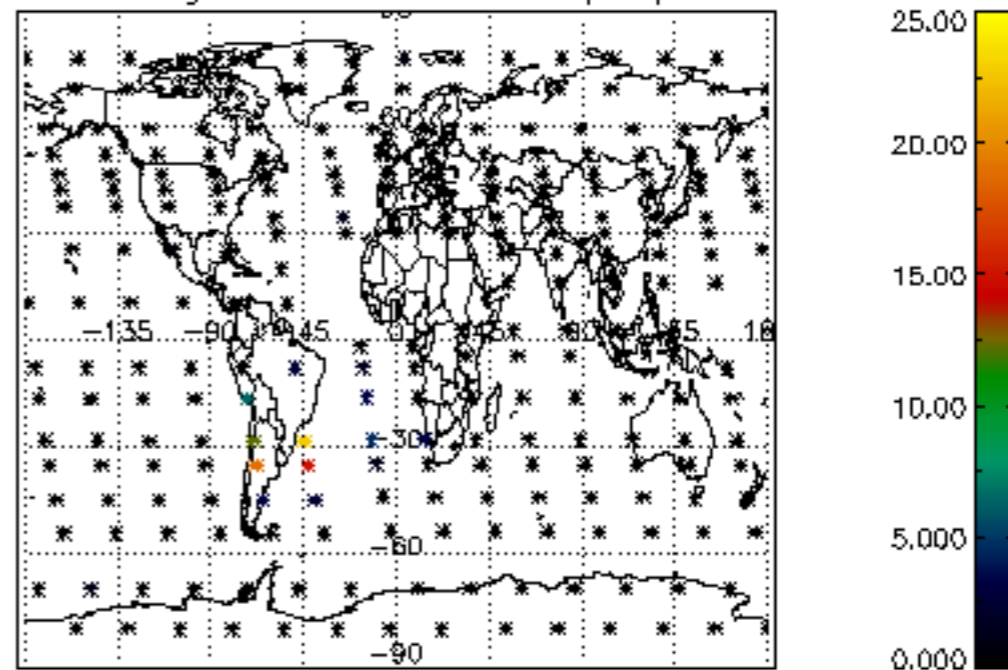
Percentage of datation errors per profile



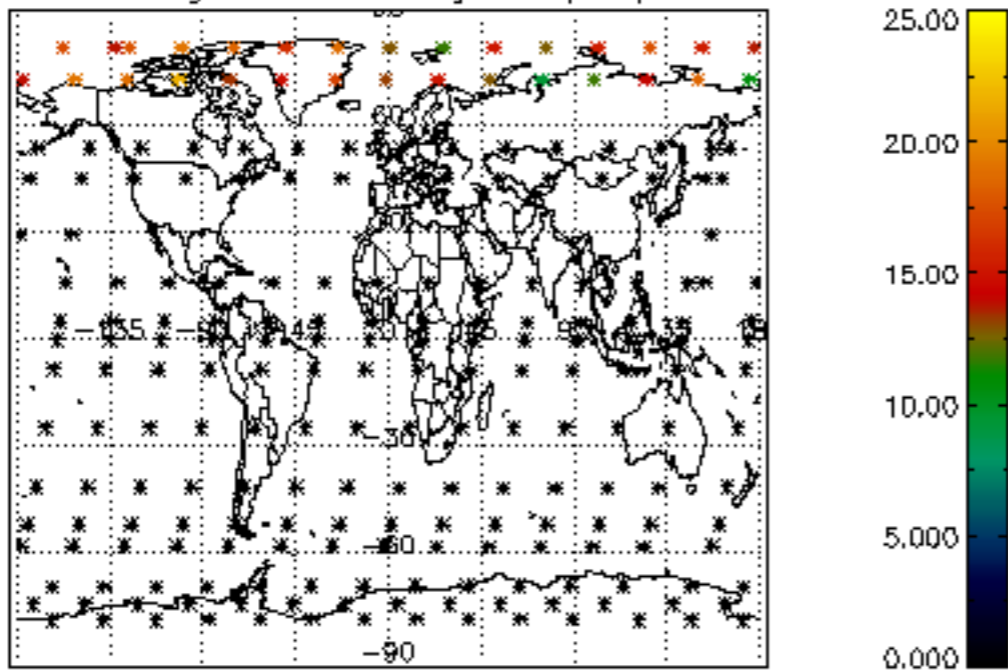
Percentage of star falling outside central band per profile



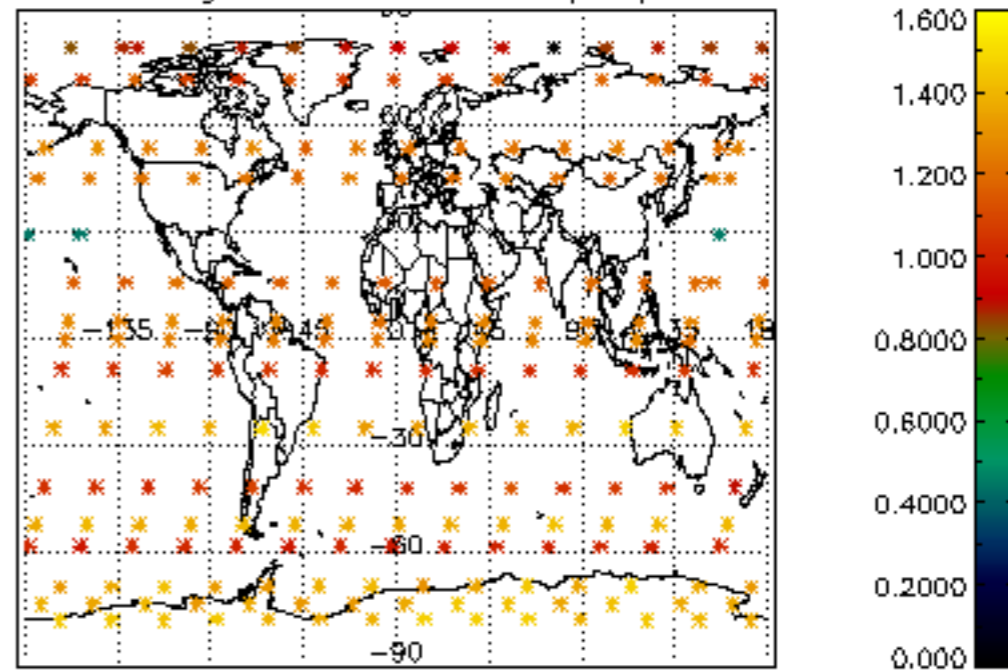
Percentage of saturation errors per profile



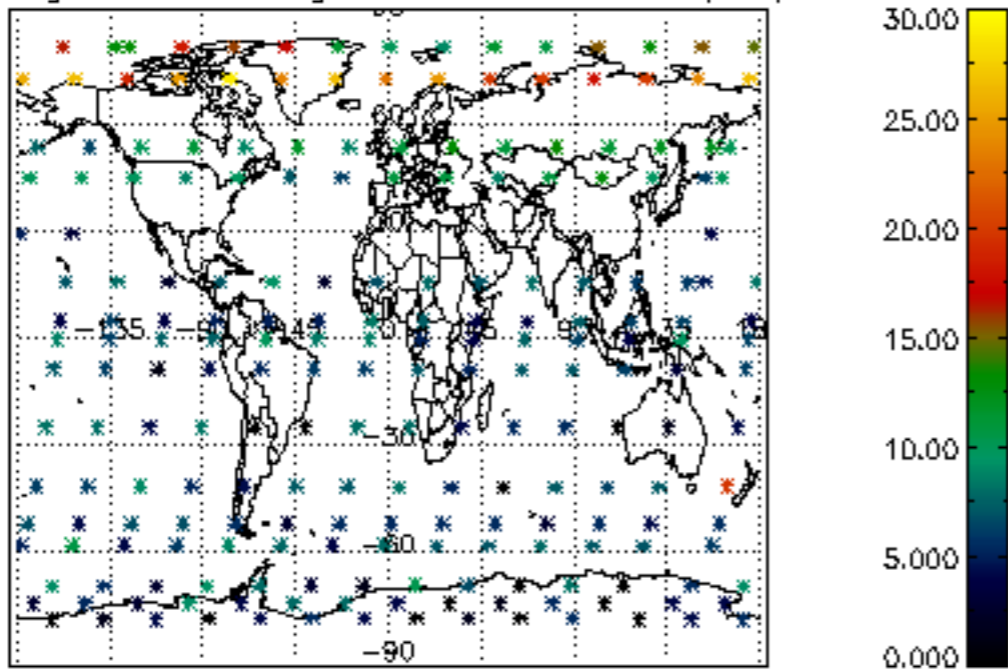
Percentage of cosmic ray hits per profile



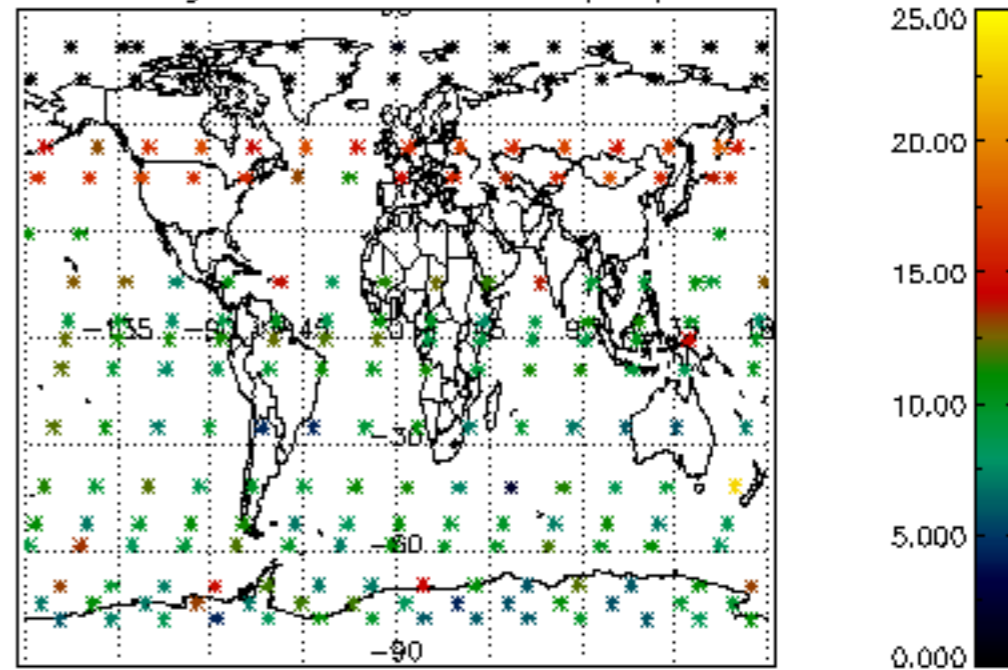
Percentage of datation errors per profile

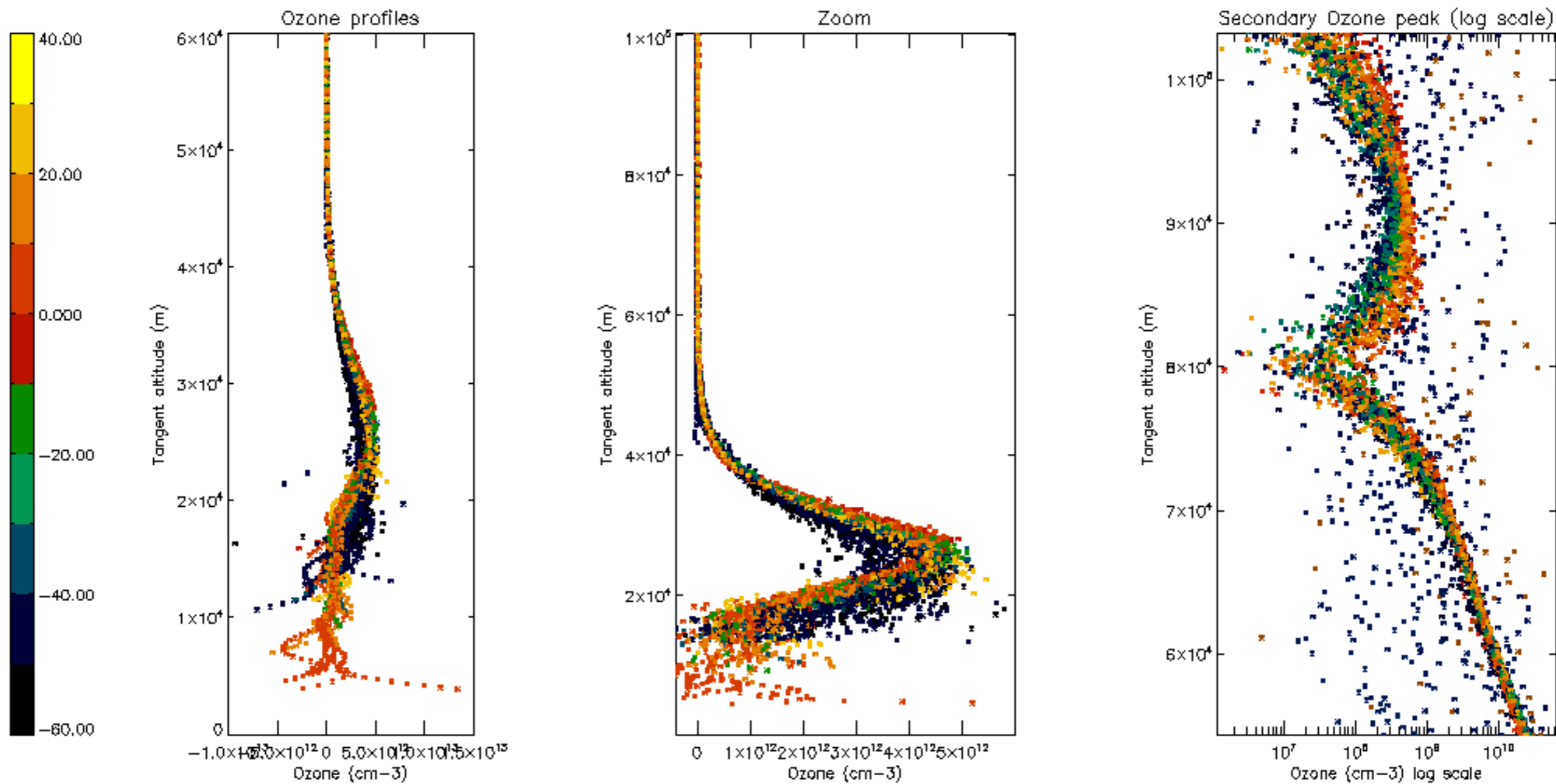


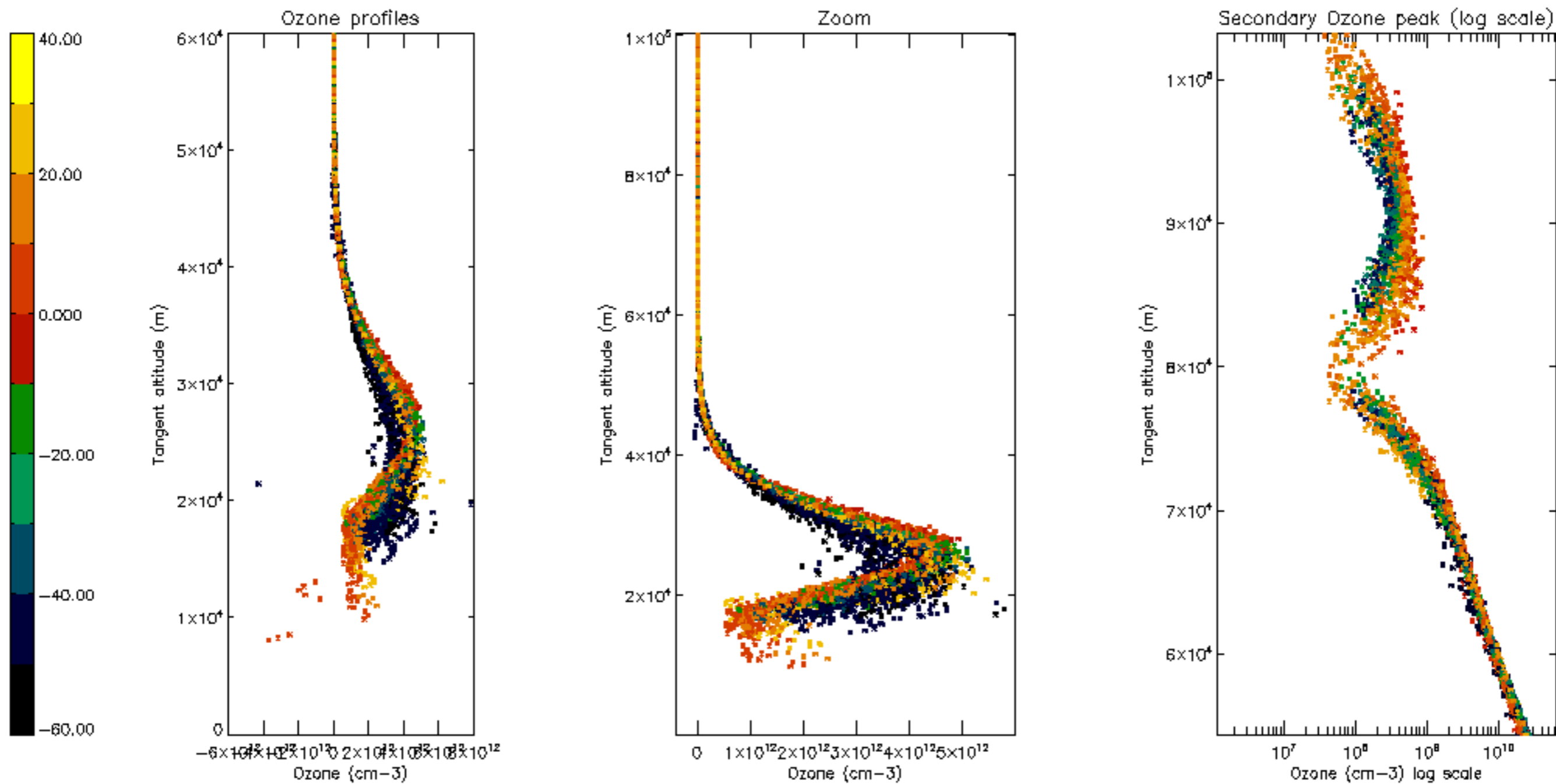
Percentage of star falling outside central band per profile

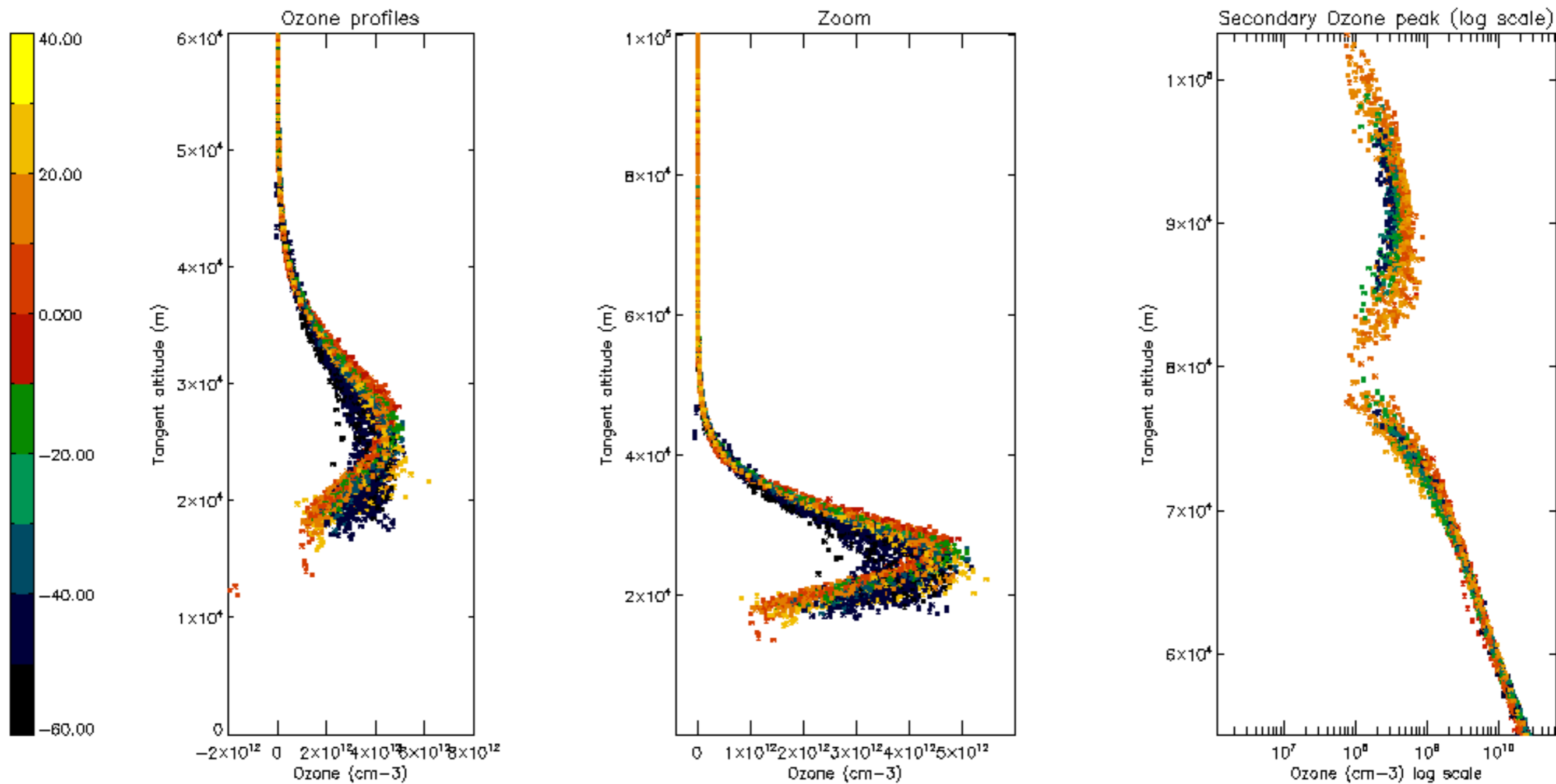


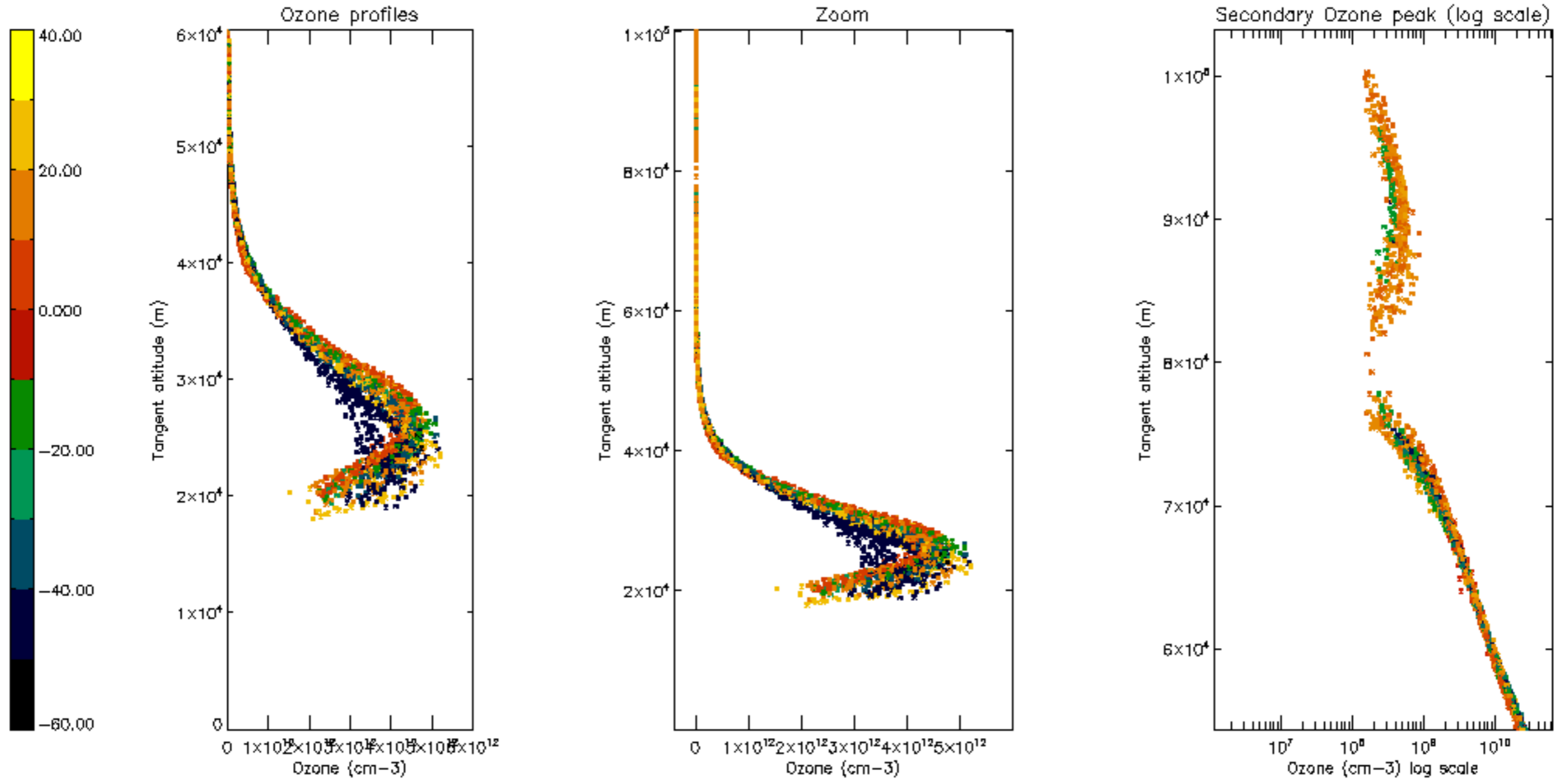
Percentage of saturation errors per profile

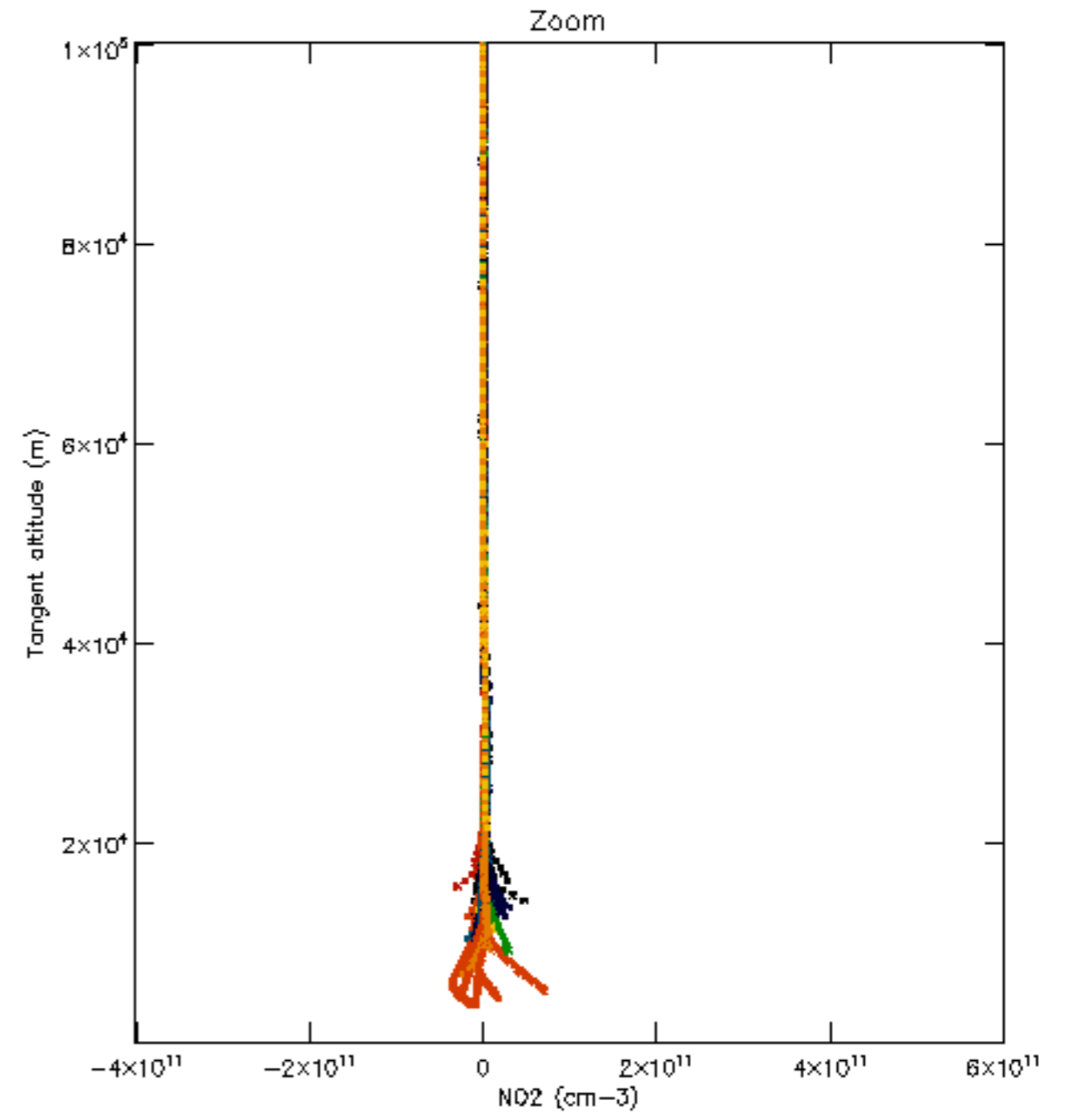
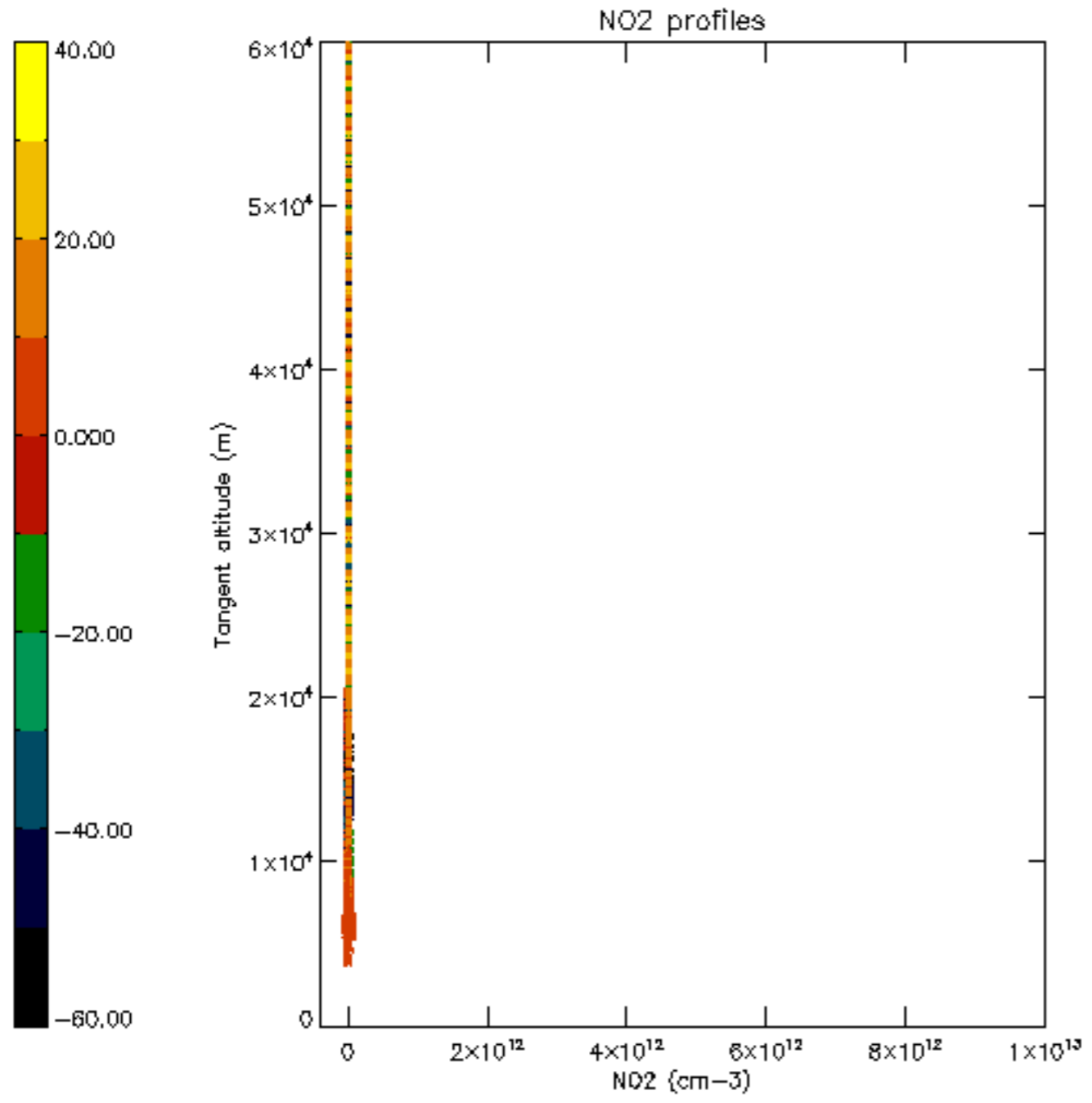


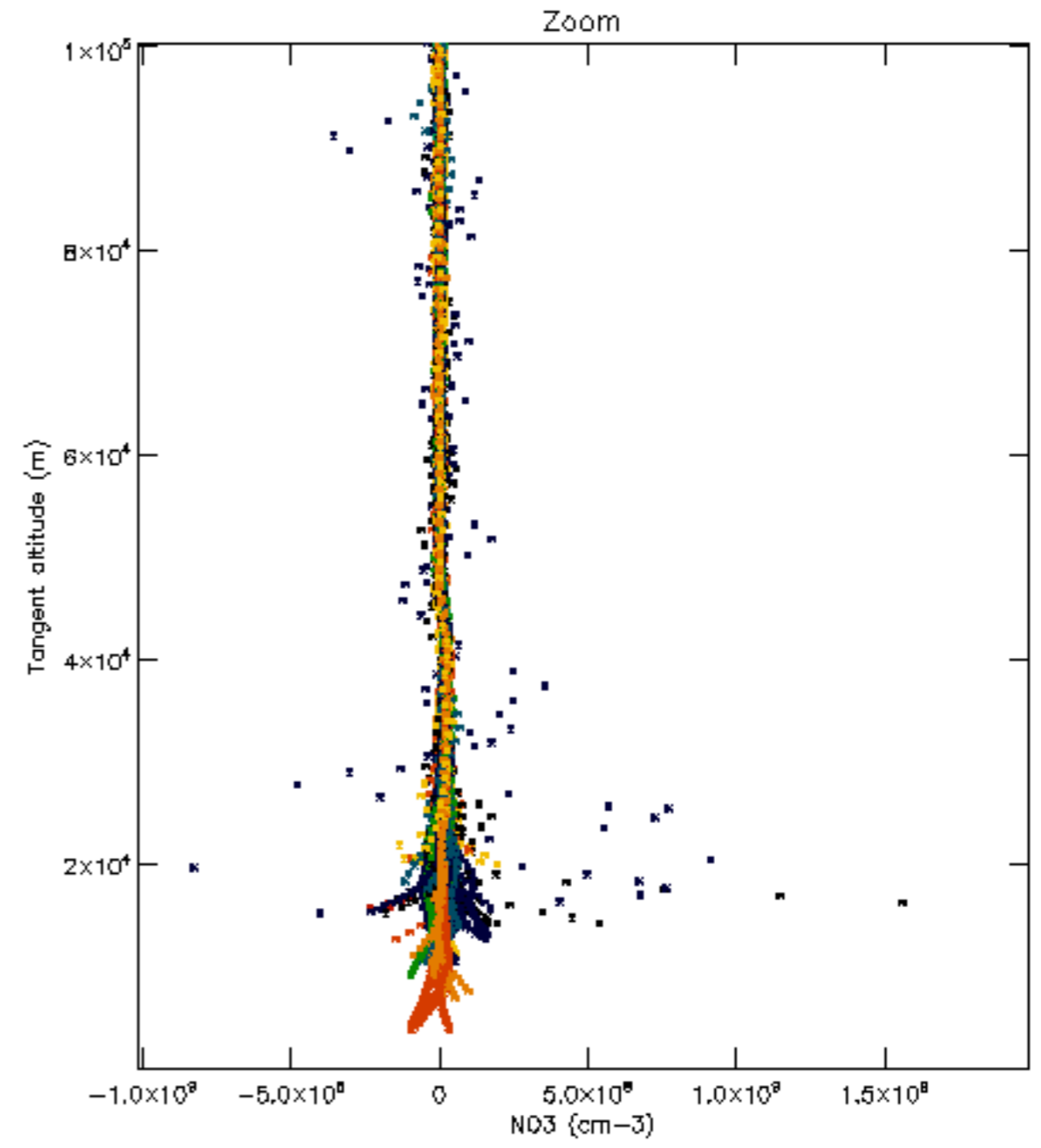
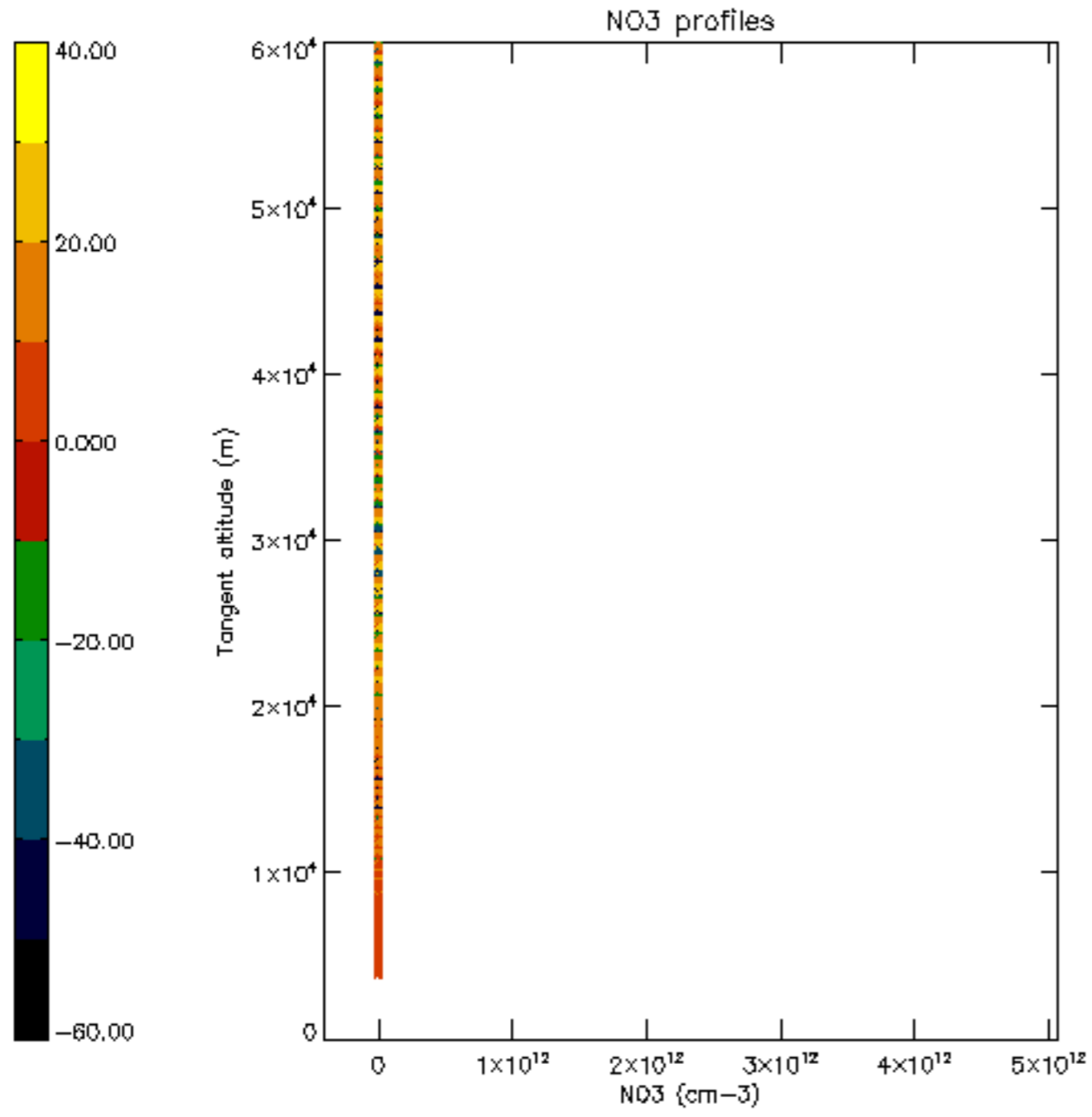




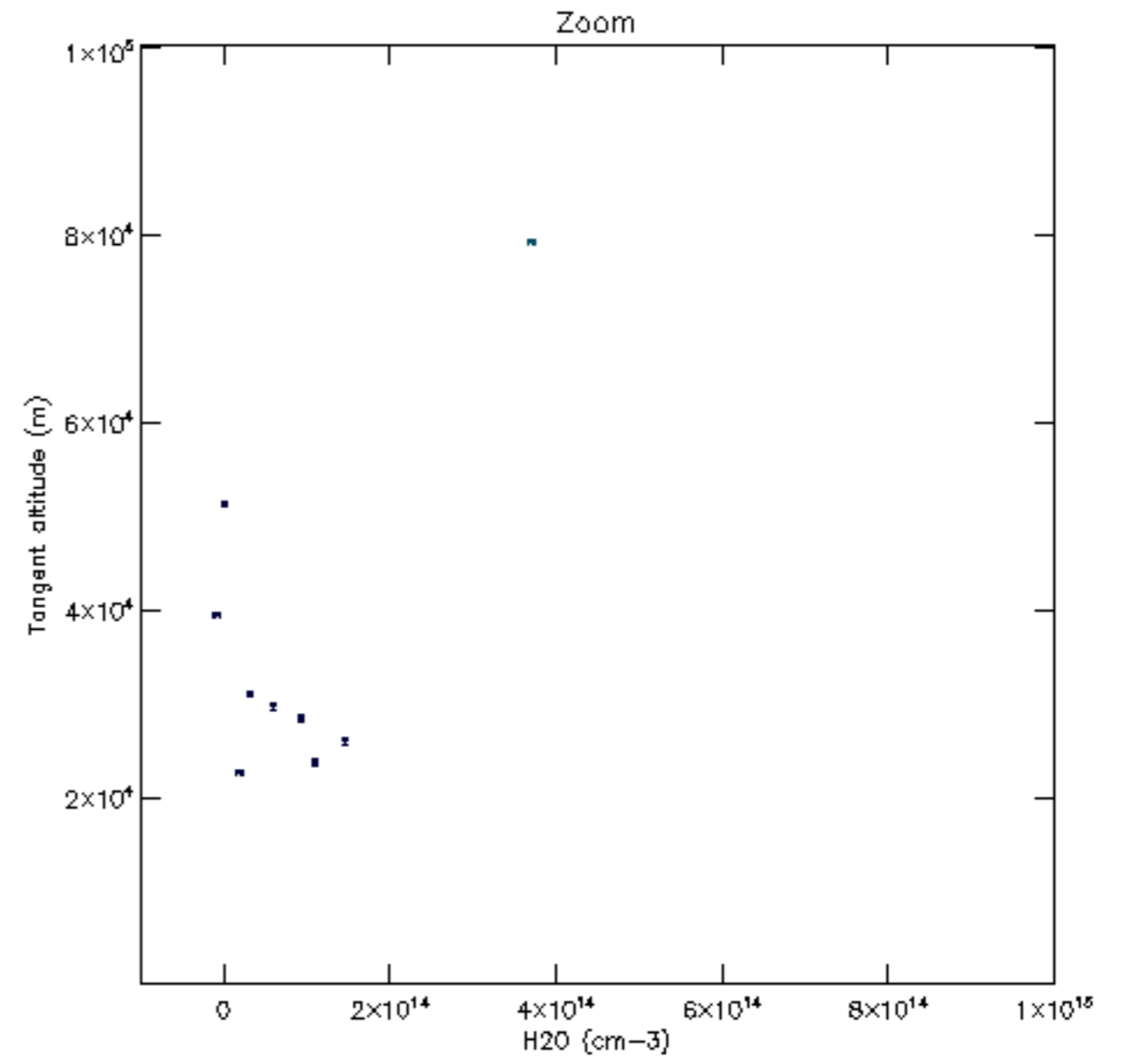
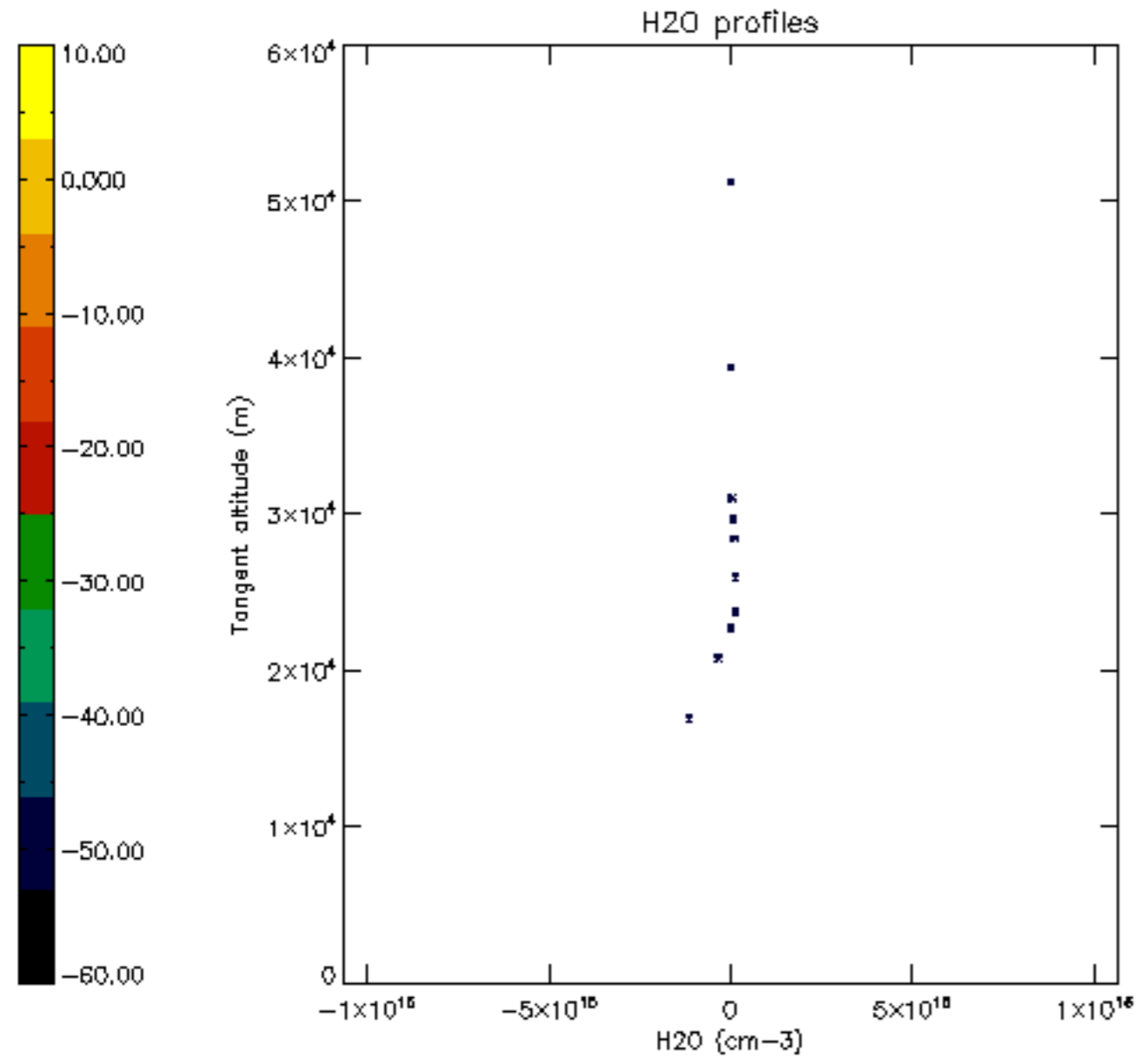


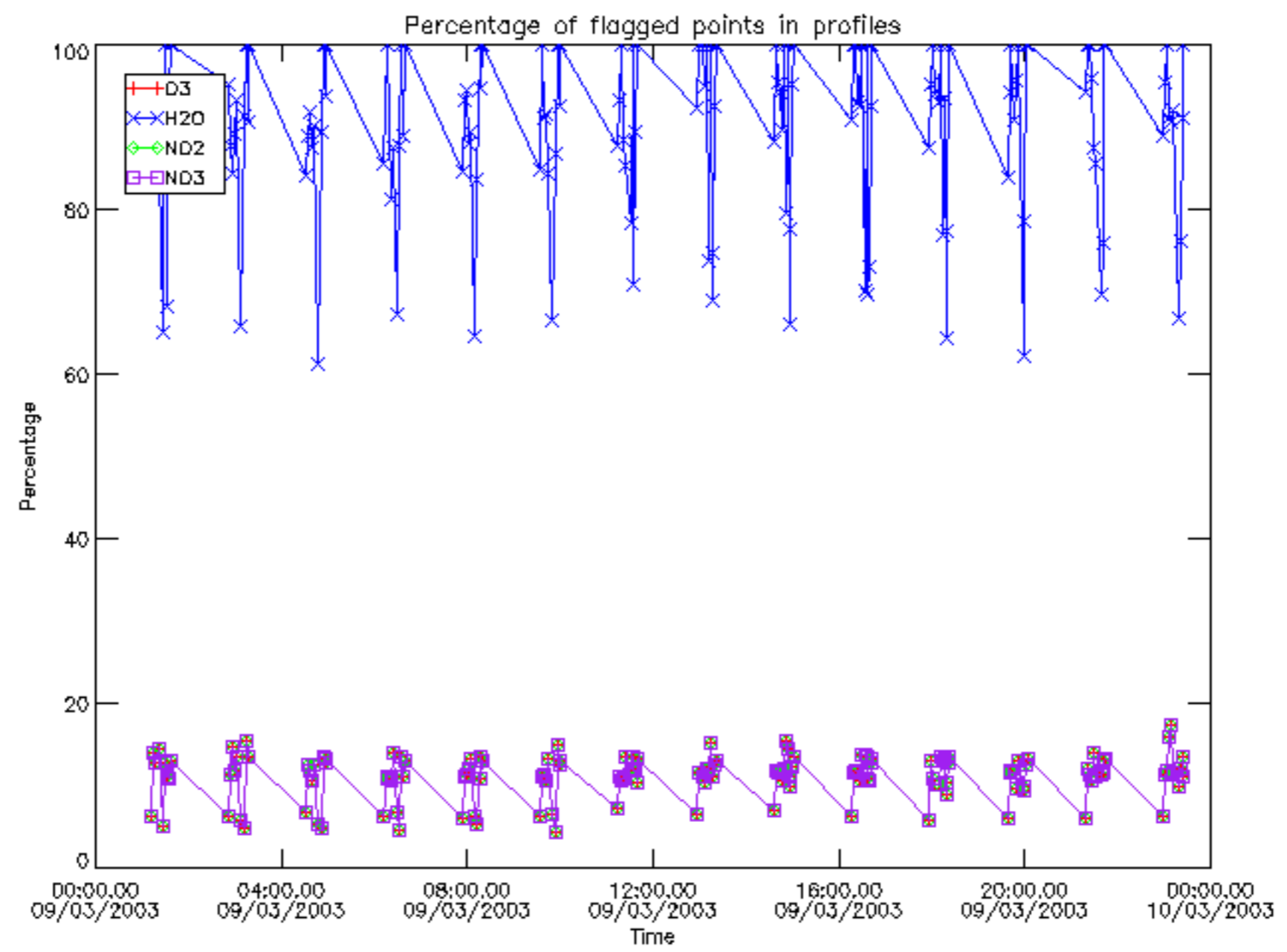




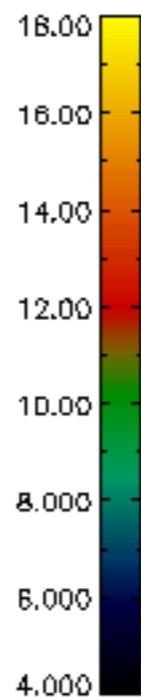
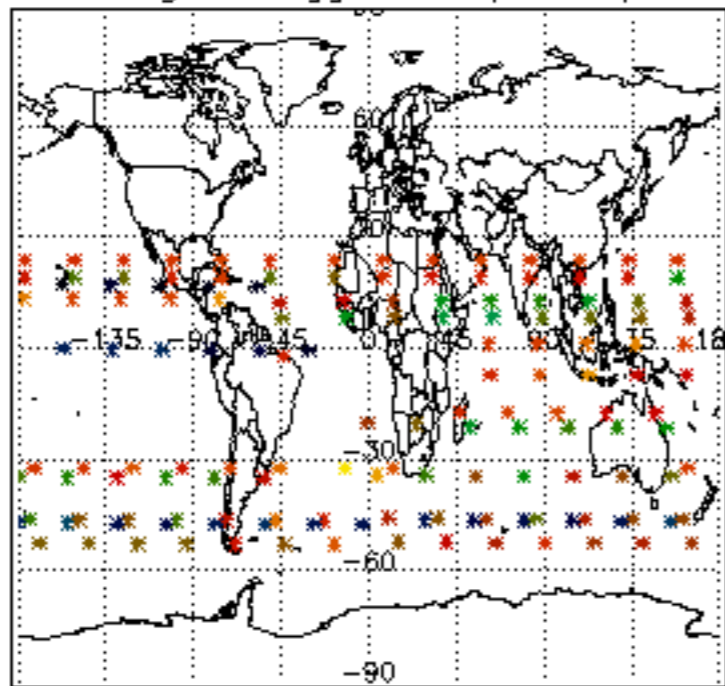




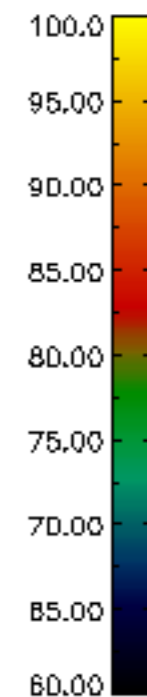
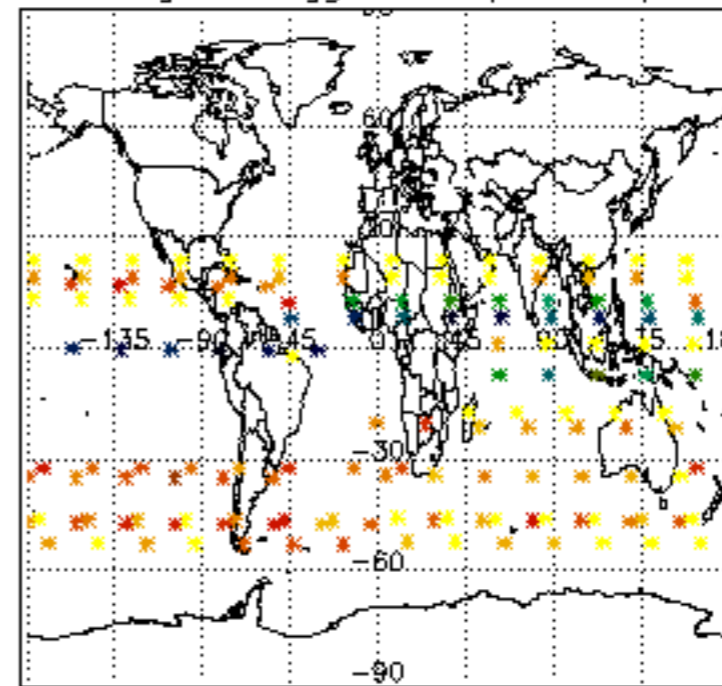




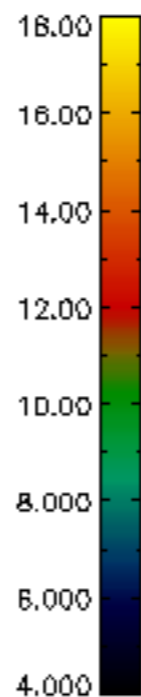
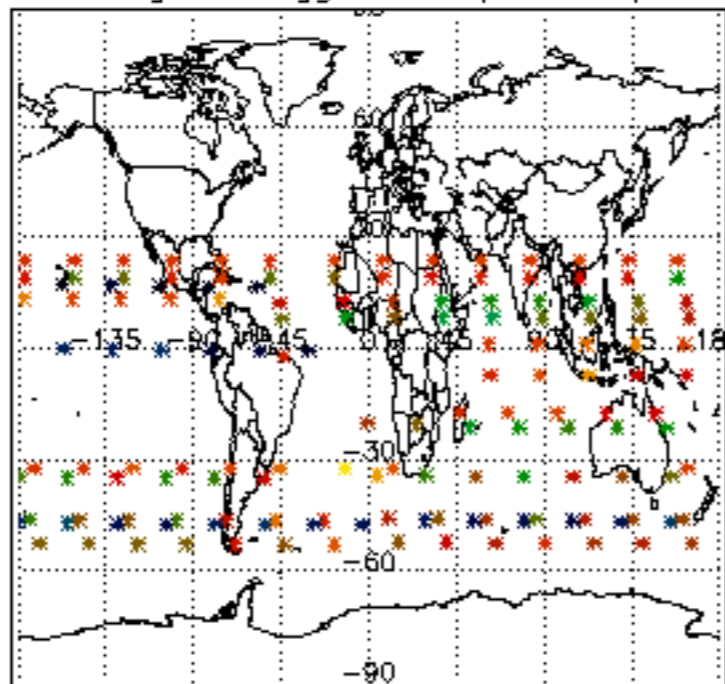
Percentage of flagged data per D3 profile



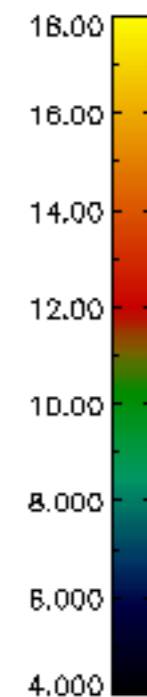
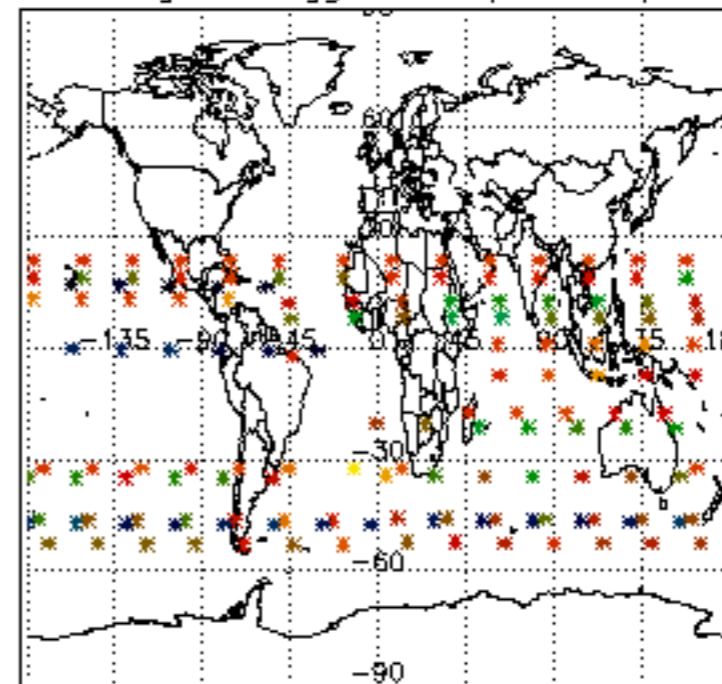
Percentage of flagged data per H2O profile

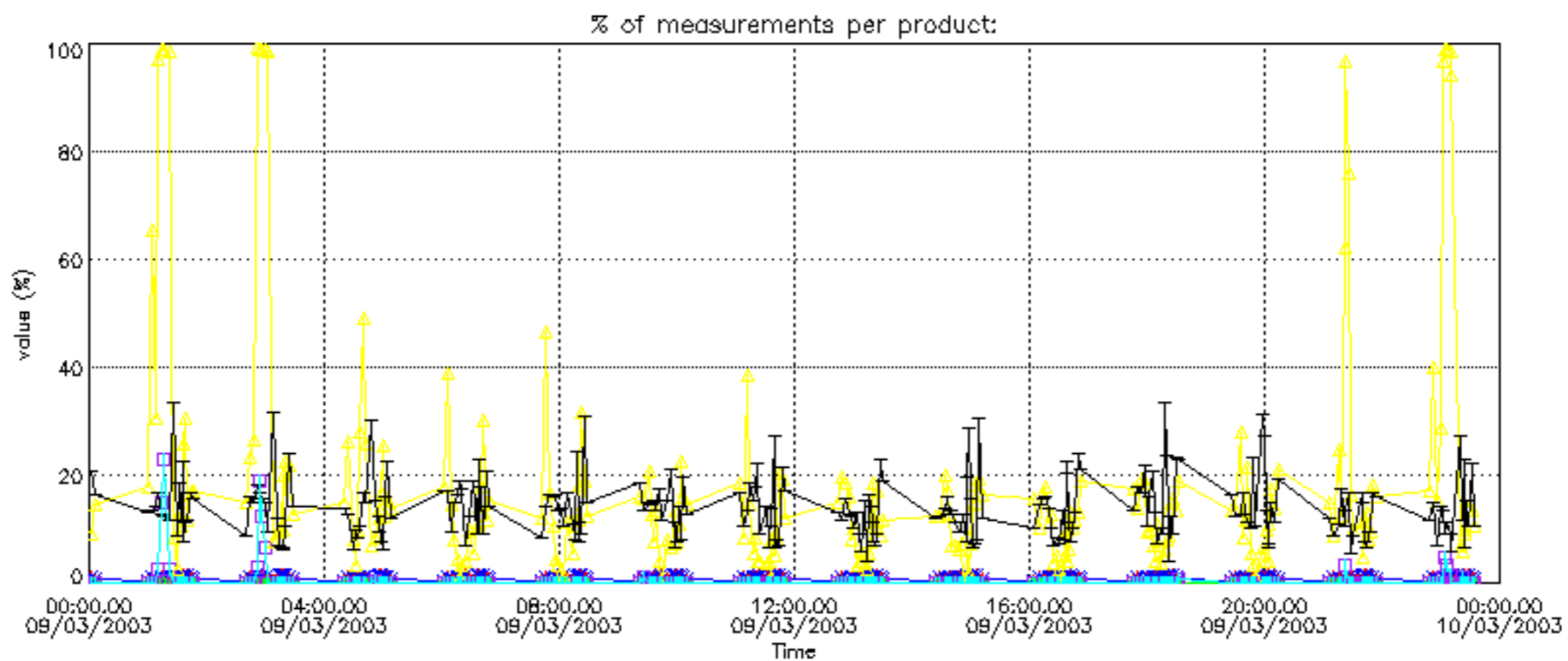


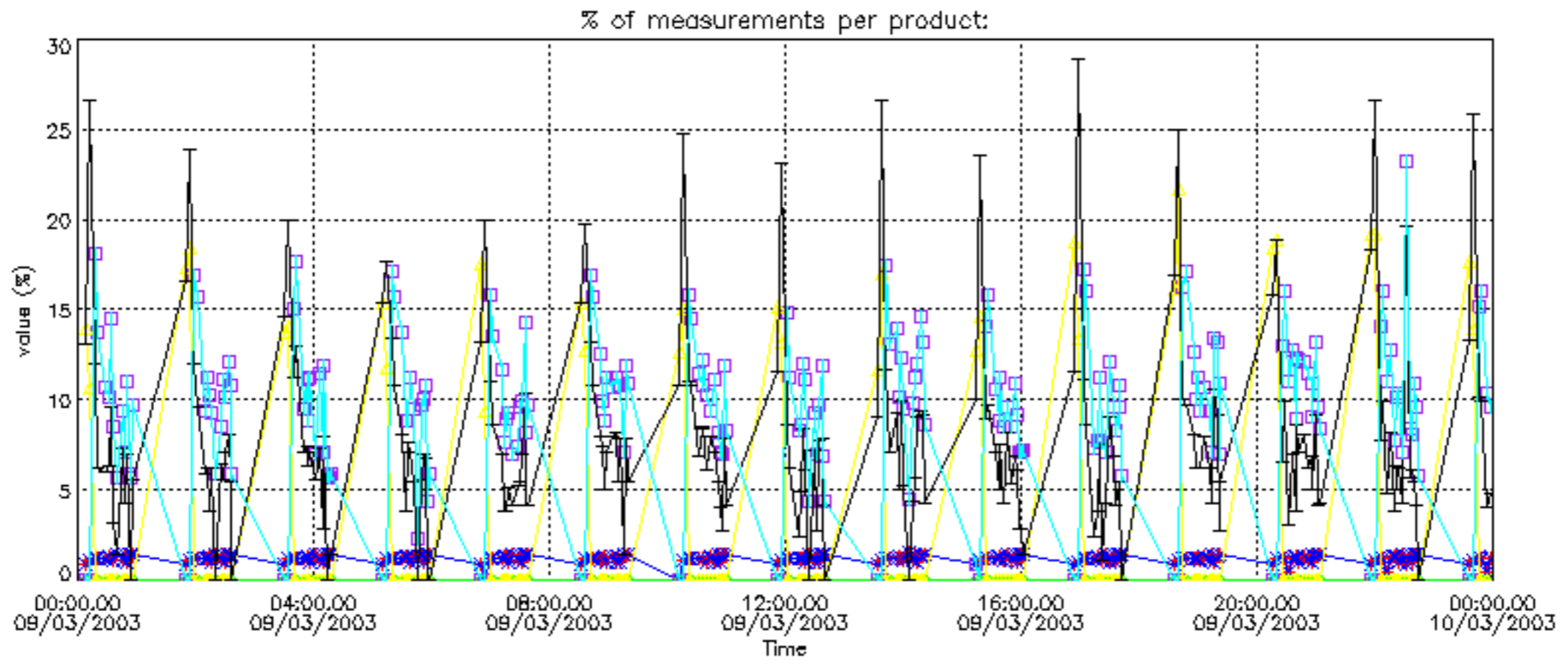
Percentage of flagged data per NO2 profile



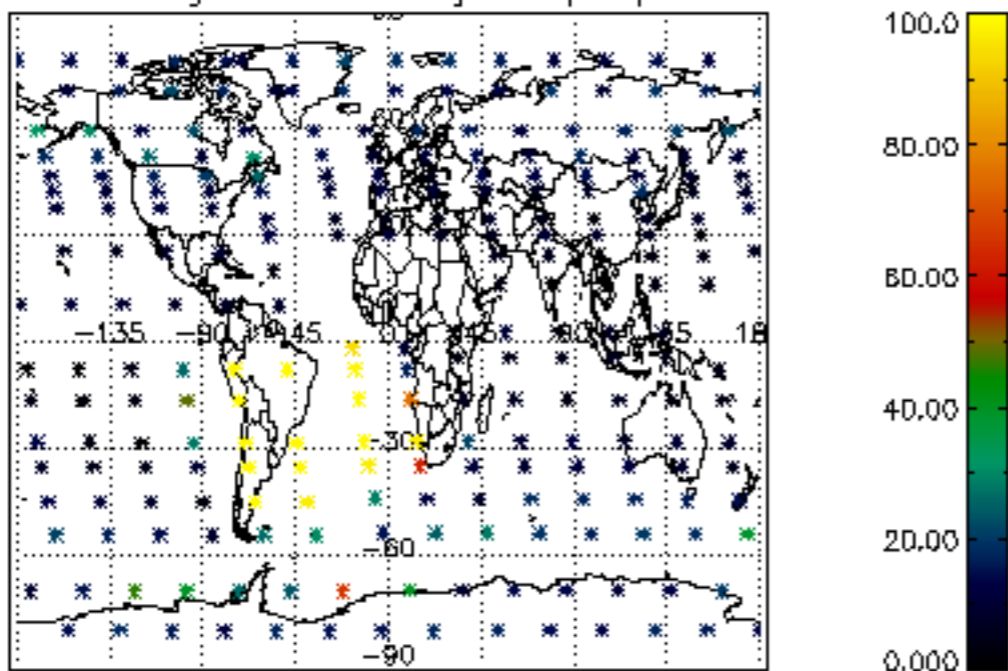
Percentage of flagged data per NO3 profile



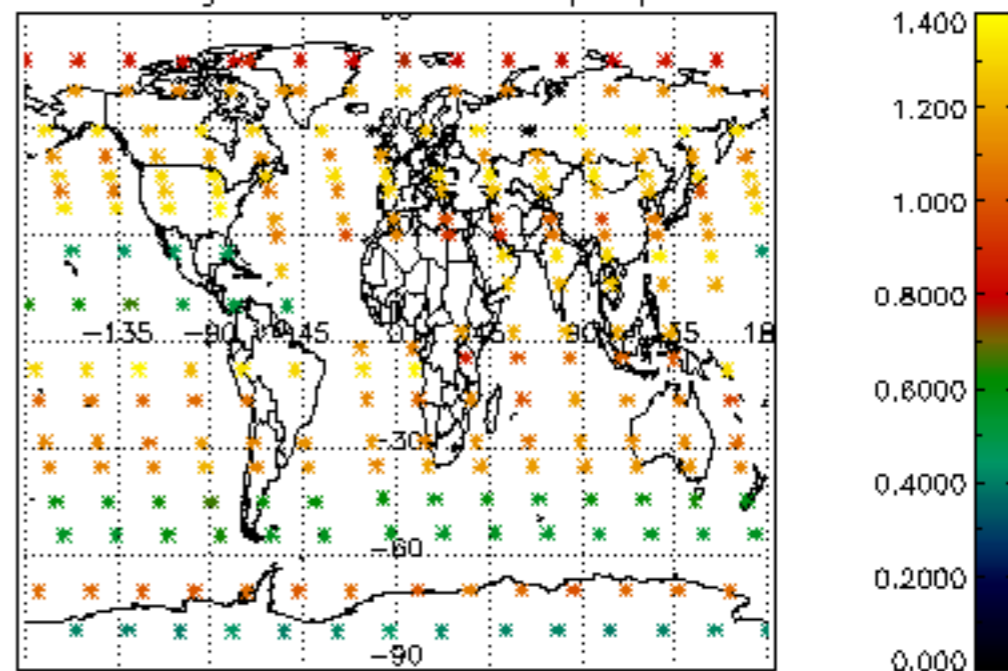




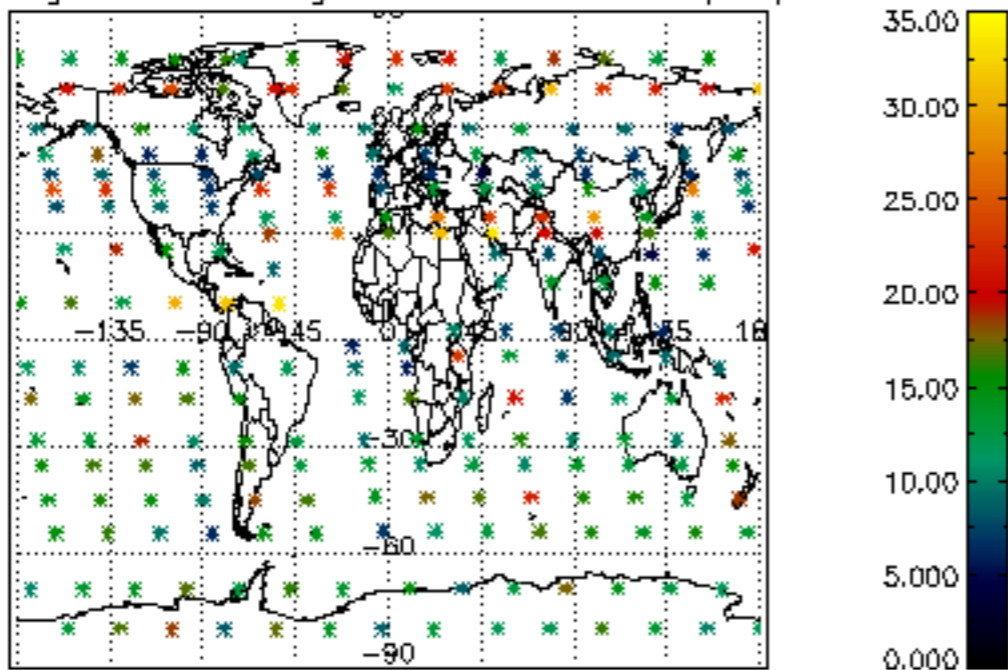
Percentage of cosmic ray hits per profile



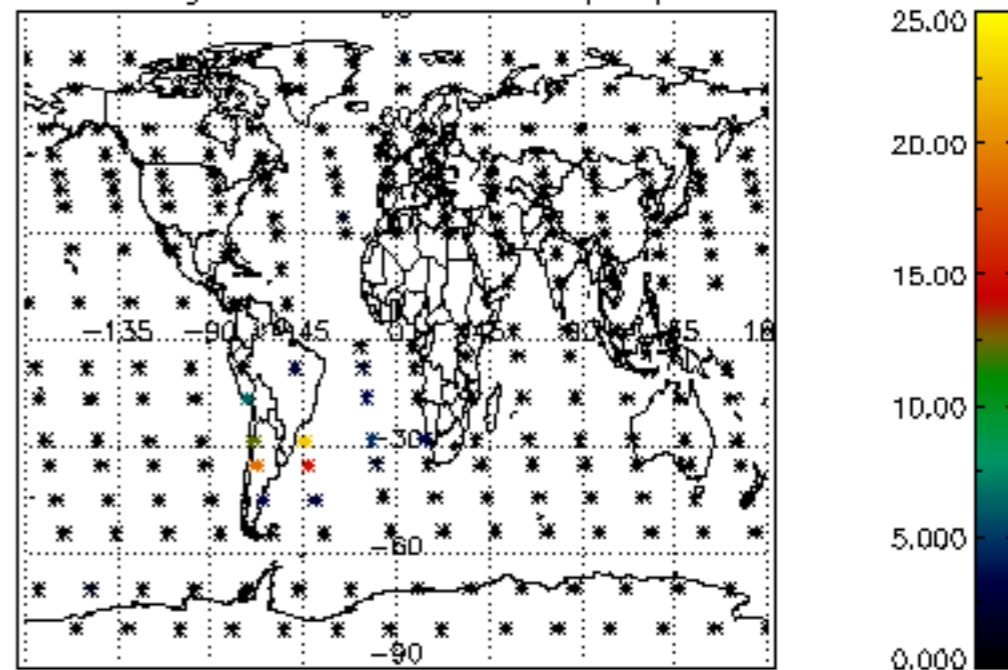
Percentage of datation errors per profile



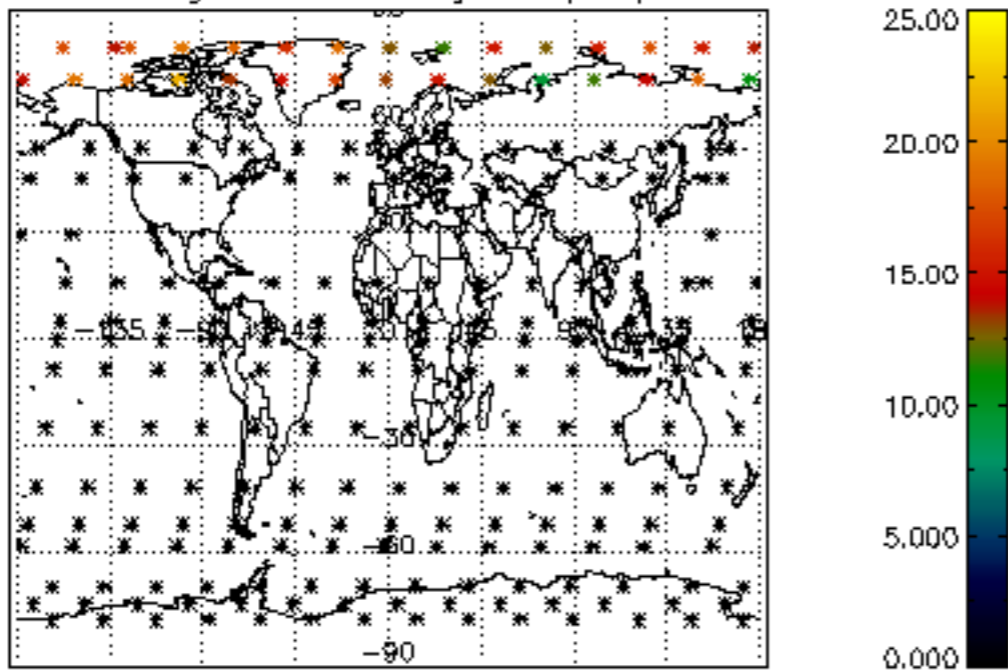
Percentage of star falling outside central band per profile



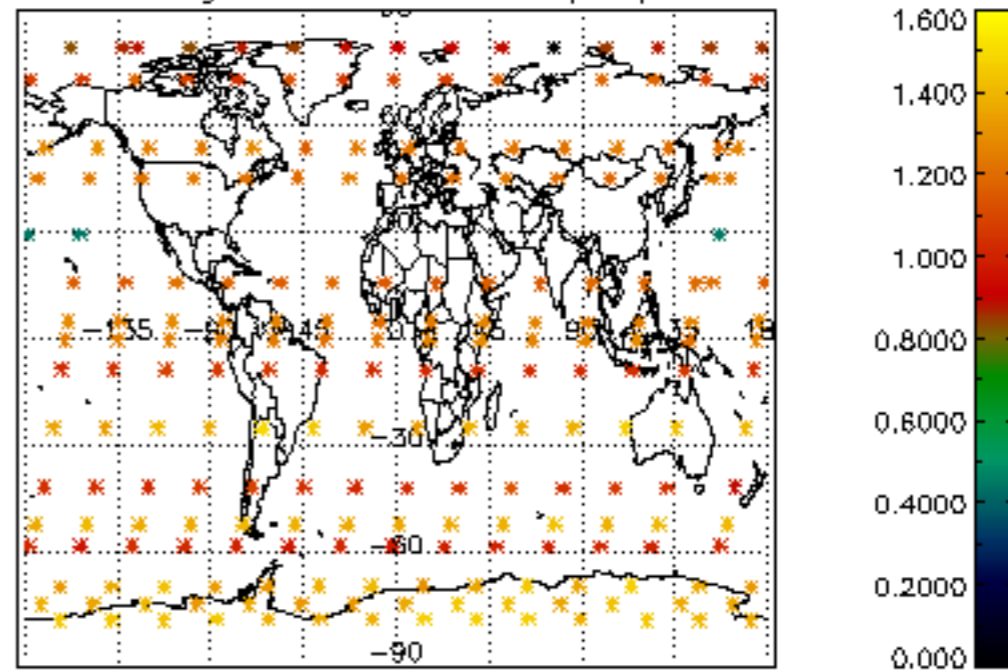
Percentage of saturation errors per profile



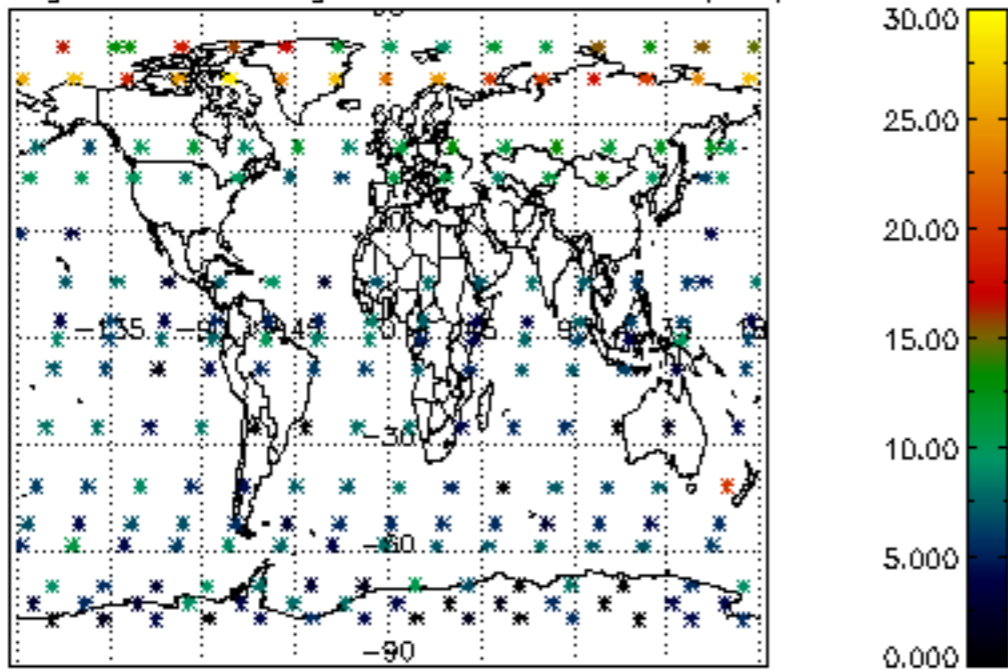
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

