

# 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	24APR2013 11:51:00
Data source version	GOMOS/6.01
Start time of products	27-03-2011 (27MAR2011 00:00:00)
Stop time of products	28-03-2011 (28MAR2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	287
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__2PRFIN20110327_012115_000000523101_00002_47430_2932.N1	27-MAR-2011 01:21:15	Dark	52.000	38	20Eps Sgr	1.8360	11000.	104	47430	No
2	GOM_NL__2PRFIN20110327_012520_000000563101_00003_47431_2960.N1	27-MAR-2011 01:25:20	Dark	56.000	25	35Lam Sco	1.6200	28000.	112	47431	No
3	GOM_NL__2PRFIN20110327_012931_000000403101_00003_47431_2961.N1	27-MAR-2011 01:29:31	Dark	40.000	134	Bet TrA	2.8100	6600.0	80	47431	No
4	GOM_NL__2PRFIN20110327_013211_000000563101_00003_47431_2962.N1	27-MAR-2011 01:32:11	Dark	56.000	4	Alp1Cen	-0.010000	5800.0	112	47431	No
5	GOM_NL__2PRFIN20110327_013444_000000463101_00003_47431_2963.N1	27-MAR-2011 01:34:44	Straylight	46.000	78	Alp Lup	2.3040	28000.	92	47431	No
6	GOM_NL__2PRFIN20110327_013618_000000493101_00003_47431_2964.N1	27-MAR-2011 01:36:18	Straylight	48.500	81	Eta Cen	2.3560	28000.	97	47431	No
7	GOM_NL__2PRFIN20110327_013909_000000543101_00003_47431_2965.N1	27-MAR-2011 01:39:09	Straylight	53.500	54	5The Cen	2.0550	4500.0	107	47431	No
8	GOM_NL__2PRFIN20110327_014531_000000463101_00003_47431_2966.N1	27-MAR-2011 01:45:31	Straylight	45.500	106	9Bet Crv	2.6480	5600.0	91	47431	No
9	GOM_NL__2PRFIN20110327_014733_000000473101_00003_47431_2967.N1	27-MAR-2011 01:47:33	Tw_i_and_stray	46.500	100	4Gam Crv	2.5800	13100.	93	47431	No
10	GOM_NL__2PRFIN20110327_015255_000000493101_00003_47431_2968.N1	27-MAR-2011 01:52:55	Bright	48.500	121	29Gam Vir	2.7400	7200.0	97	47431	No
11	GOM_NL__2PRFIN20110327_015732_000000393101_00003_47431_2969.N1	27-MAR-2011 01:57:32	Bright	38.500	62	94Bet Leo	2.1360	9700.0	77	47431	No
12	GOM_NL__2PRFIN20110327_015902_000000383101_00003_47431_2970.N1	27-MAR-2011 01:59:02	Bright	38.000	96	68Del Leo	2.5600	9300.0	76	47431	No
13	GOM_NL__2PRFIN20110327_020554_000000383101_00003_47431_2971.N1	27-MAR-2011 02:05:54	Bright	38.000	174	52Psi UMa	3.0040	4400.0	76	47431	No
14	GOM_NL__2PRFIN20110327_020912_000000373101_00003_47431_2972.N1	27-MAR-2011 02:09:12	Bright	37.000	82	48Bet UMa	2.3650	10600.	74	47431	No
15	GOM_NL__2PRFIN20110327_021043_000000363101_00003_47431_2973.N1	27-MAR-2011 02:10:43	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	47431	No
16	GOM_NL__2PRFIN20110327_021717_000000423101_00003_47431_2974.N1	27-MAR-2011 02:17:17	Bright	41.500	60	7Bet UMi	2.0810	3950.0	83	47431	No
17	GOM_NL__2PRFIN20110327_022621_000000373101_00003_47431_2975.N1	27-MAR-2011 02:26:21	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	47431	No
18	GOM_NL__2PRFIN20110327_023121_000000653101_00003_47431_2976.N1	27-MAR-2011 02:31:21	Bright	64.500	144	18Del Cyg	2.8600	11000.	129	47431	No
19	GOM_NL__2PRFIN20110327_023306_000000453101_00003_47431_2977.N1	27-MAR-2011 02:33:06	Bright	44.500	66	37Gam Cyg	2.2080	5900.0	89	47431	No
20	GOM_NL__2PRFIN20110327_023501_000000423101_00003_47431_2978.N1	27-MAR-2011 02:35:01	Bright	41.500	92	53Eps Cyg	2.5000	4500.0	83	47431	No
21	GOM_NL__2PRFIN20110327_024424_000000623101_00003_47431_2979.N1	27-MAR-2011 02:44:24	Dark	62.000	11	53Alp Aql	0.76500	8000.0	124	47431	No
22	GOM_NL__2PRFIN20110327_025754_000000553101_00003_47431_2980.N1	27-MAR-2011 02:57:54	Dark	54.500	57	34Sig Sgr	2.0660	26000.	109	47431	No
23	GOM_NL__2PRFIN20110327_030130_000000523101_00003_47431_2981.N1	27-MAR-2011 03:01:30	Dark	51.500	38	20Eps Sgr	1.8360	11000.	103	47431	No
24	GOM_NL__2PRFIN20110327_030535_000000573101_00004_47432_2970.N1	27-MAR-2011 03:05:35	Dark	57.000	25	35Lam Sco	1.6200	28000.	114	47432	No
25	GOM_NL__2PRFIN20110327_030945_000000413101_00004_47432_2971.N1	27-MAR-2011 03:09:45	Dark	41.000	134	Bet TrA	2.8100	6600.0	82	47432	No
26	GOM_NL__2PRFIN20110327_031226_000000473101_00004_47432_2972.N1	27-MAR-2011 03:12:26	Dark	47.000	4	Alp1Cen	-0.010000	5800.0	94	47432	No
27	GOM_NL__2PRFIN20110327_031459_000000473101_00004_47432_2973.N1	27-MAR-2011 03:14:59	Straylight	47.000	78	Alp Lup	2.3040	28000.	94	47432	No
28	GOM_NL__2PRFIN20110327_031633_000000503101_00004_47432_2974.N1	27-MAR-2011 03:16:33	Straylight	50.000	81	Eta Cen	2.3560	28000.	100	47432	No
29	GOM_NL__2PRFIN20110327_031923_000000593101_00004_47432_2975.N1	27-MAR-2011 03:19:23	Straylight	59.000	54	5The Cen	2.0550	4500.0	118	47432	No
30	GOM_NL__2PRFIN20110327_032545_000000473101_00004_47432_2976.N1	27-MAR-2011 03:25:45	Straylight	47.000	106	9Bet Crv	2.6480	5600.0	94	47432	No
31	GOM_NL__2PRFIN20110327_032748_000000453101_00004_47432_2977.N1	27-MAR-2011 03:27:48	Tw_i_and_stray	44.500	100	4Gam Crv	2.5800	13100.	89	47432	No
32	GOM_NL__2PRFIN20110327_033309_000000473101_00004_47432_2978.N1	27-MAR-2011 03:33:09	Bright	47.000	121	29Gam Vir	2.7400	7200.0	94	47432	No
33	GOM_NL__2PRFIN20110327_033746_000000423101_00004_47432_2979.N1	27-MAR-2011 03:37:46	Bright	41.500	62	94Bet Leo	2.1360	9700.0	83	47432	No
34	GOM_NL__2PRFIN20110327_033916_000000363101_00004_47432_2980.N1	27-MAR-2011 03:39:16	Bright	36.000	96	68Del Leo	2.5600	9300.0	72	47432	No
35	GOM_NL__2PRFIN20110327_034608_000000383101_00004_47432_2981.N1	27-MAR-2011 03:46:08	Bright	37.500	174	52Psi UMa	3.0040	4400.0	75	47432	No
36	GOM_NL__2PRFIN20110327_034925_000000373101_00004_47432_2982.N1	27-MAR-2011 03:49:25	Bright	37.000	82	48Bet UMa	2.3650	10600.	74	47432	No
37	GOM_NL__2PRFIN20110327_035057_000000363101_00004_47432_2983.N1	27-MAR-2011 03:50:57	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	47432	No
38	GOM_NL__2PRFIN20110327_035730_000000423101_00004_47432_2984.N1	27-MAR-2011 03:57:30	Bright	41.500	60	7Bet UMi	2.0810	3950.0	83	47432	No
39	GOM_NL__2PRFIN20110327_040634_000000373101_00004_47432_2985.N1	27-MAR-2011 04:06:34	Bright	37.000	89	5Alp Cep	2.4510	8000.0	74	47432	No
40	GOM_NL__2PRFIN20110327_041135_000000433101_00004_47432_2986.N1	27-MAR-2011 04:11:35	Bright	42.500	144	18Del Cyg	2.8600	11000.	85	47432	No
41	GOM_NL__2PRFIN20110327_041320_000000433101_00004_47432_2987.N1	27-MAR-2011 04:13:20	Bright	42.500	66	37Gam Cyg	2.2080	5900.0	85	47432	No
42	GOM_NL__2PRFIN20110327_041515_000000403101_00004_47432_2988.N1	27-MAR-2011 04:15:15	Bright	39.500	92	53Eps Cyg	2.5000	4500.0	79	47432	No







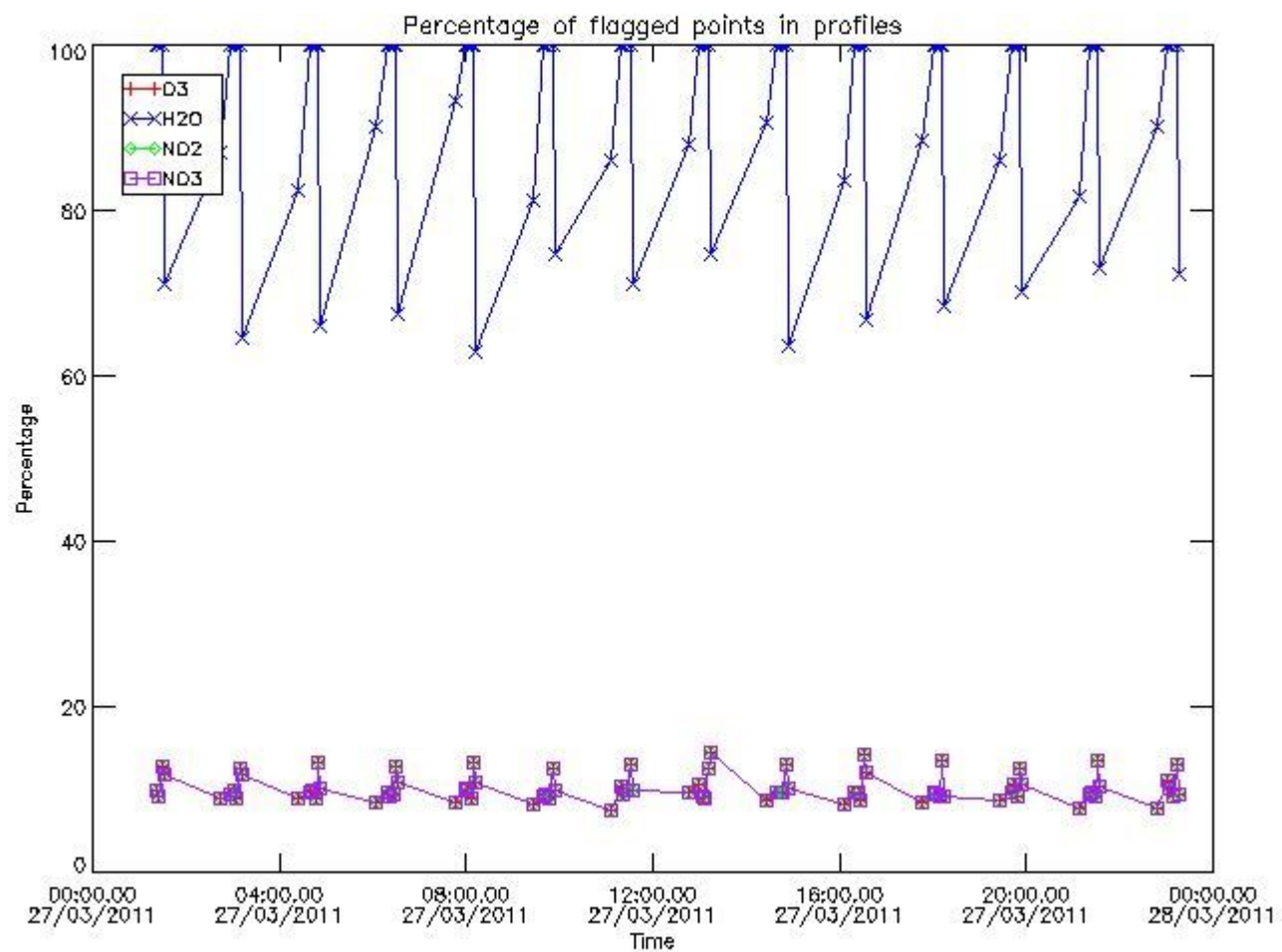


279	GOM_NL__2PRFIN20110327_232218_000000563101_00016_47444_3251.N1	27-MAR-2011 23:22:18	Straylight	55.500	54	5The Cen	2.0550	4500.0	111	47444	No
280	GOM_NL__2PRFIN20110327_232836_000000493101_00016_47444_3252.N1	27-MAR-2011 23:28:36	Straylight	48.500	106	9Bet Crv	2.6480	5600.0	97	47444	No
281	GOM_NL__2PRFIN20110327_233037_000000483101_00016_47444_3253.N1	27-MAR-2011 23:30:37	Twilight_stray	47.500	100	4Gam Crv	2.5800	13100.	95	47444	No
282	GOM_NL__2PRFIN20110327_233555_000000473101_00016_47444_3254.N1	27-MAR-2011 23:35:55	Bright	47.000	121	29Gam Vir	2.7400	7200.0	94	47444	No
283	GOM_NL__2PRFIN20110327_234032_000000393101_00016_47444_3255.N1	27-MAR-2011 23:40:32	Bright	39.000	62	94Bet Leo	2.1360	9700.0	78	47444	No
284	GOM_NL__2PRFIN20110327_234203_000000393101_00016_47444_3256.N1	27-MAR-2011 23:42:03	Bright	39.000	96	68Del Leo	2.5600	9300.0	78	47444	No
285	GOM_NL__2PRFIN20110327_234854_000000383101_00016_47444_3257.N1	27-MAR-2011 23:48:54	Bright	38.000	174	52Psi UMa	3.0040	4400.0	76	47444	No
286	GOM_NL__2PRFIN20110327_235212_000000363101_00016_47444_3258.N1	27-MAR-2011 23:52:12	Bright	36.000	82	48Bet UMa	2.3650	10600.	72	47444	No
287	GOM_NL__2PRFIN20110327_235344_000000383101_00016_47444_3259.N1	27-MAR-2011 23:53:44	Bright	38.000	36	50Alp UMa	1.8000	6300.0	76	47444	No

### 3. Quality information per product

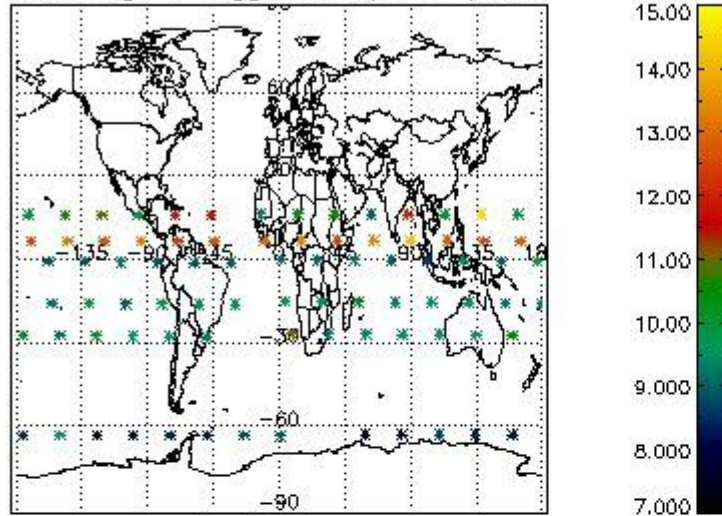
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

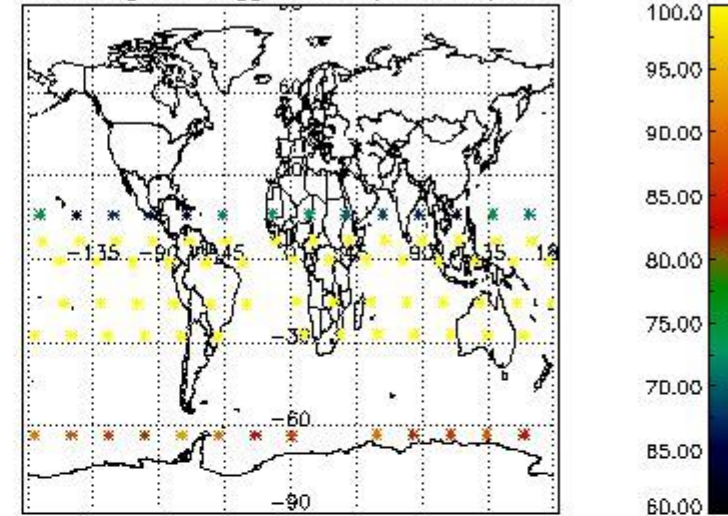


#### 3.2 Plot quality information per product (world map)

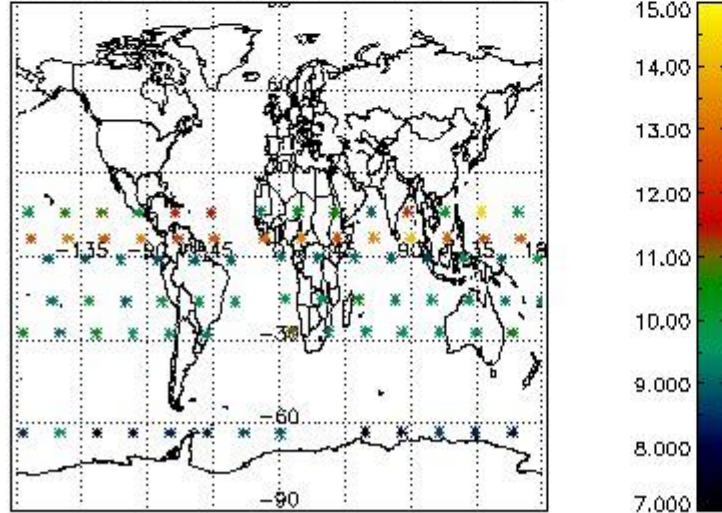
Percentage of flagged data per O3 profile



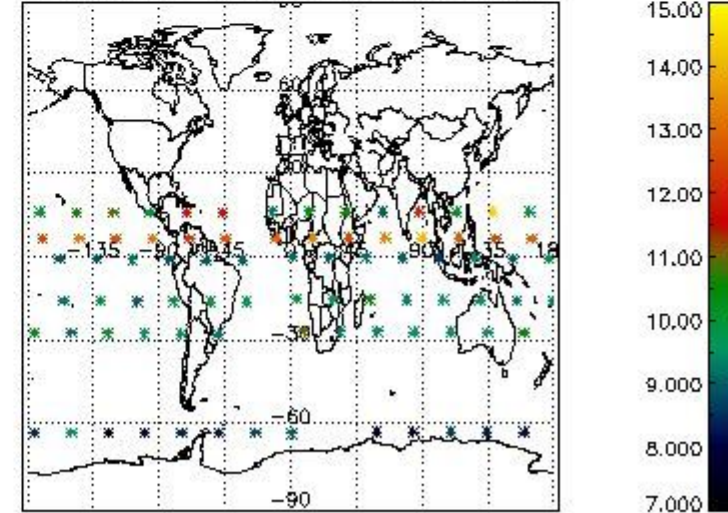
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



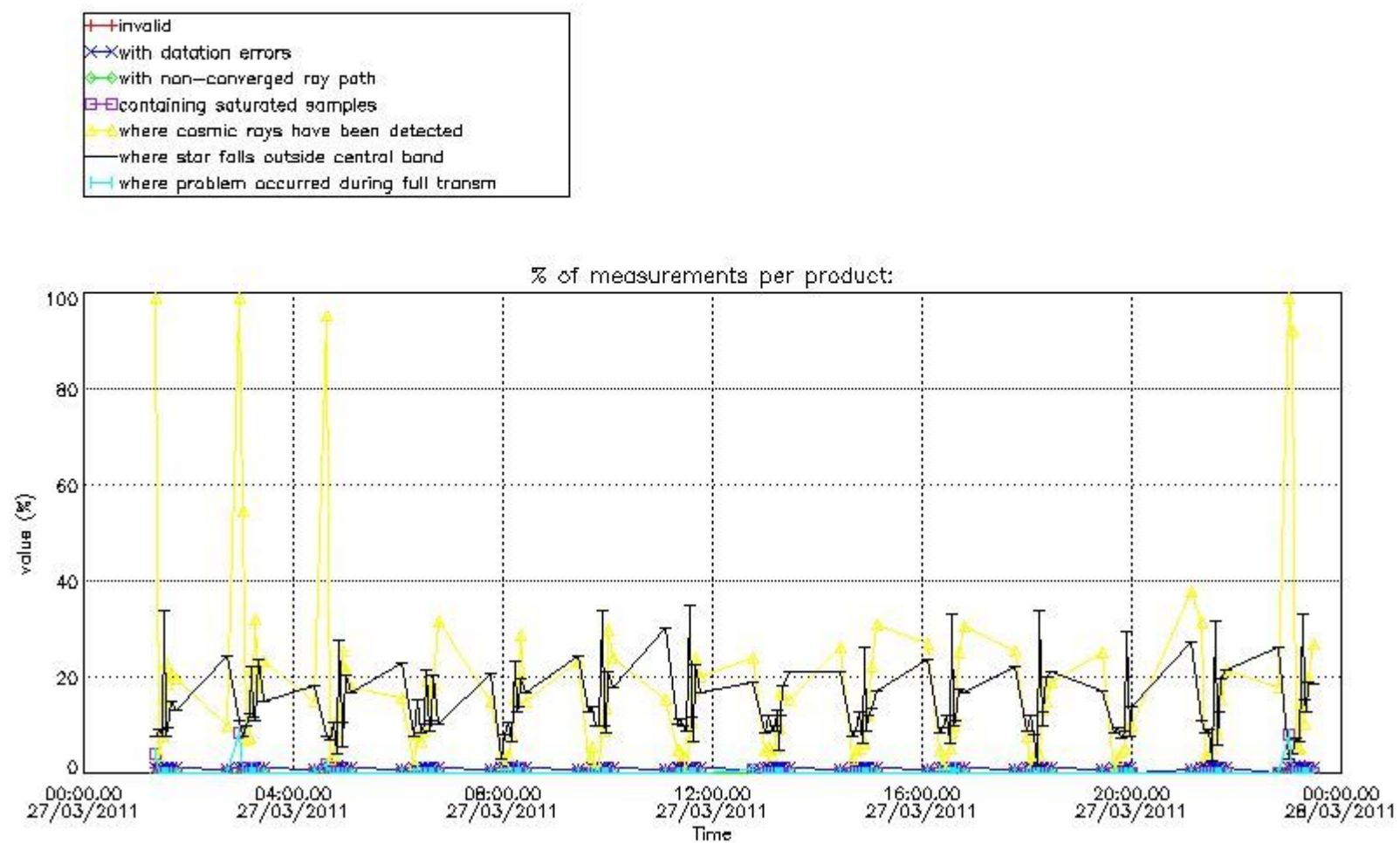
#### 4. Level 1 quality information per product

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.

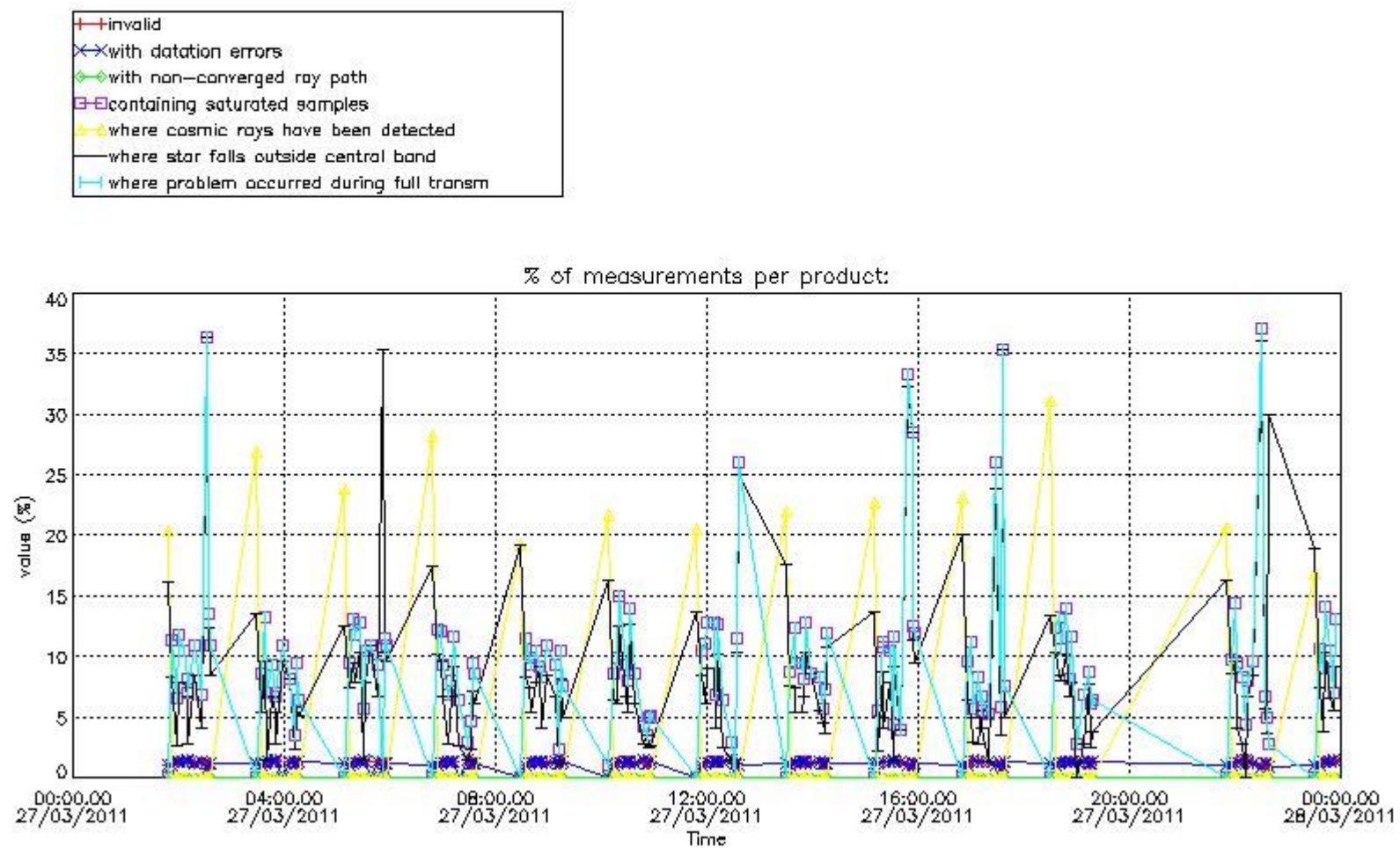
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





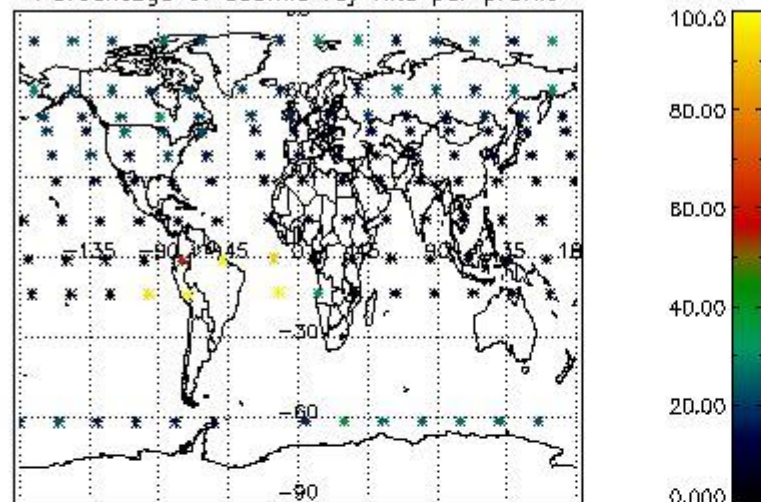
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



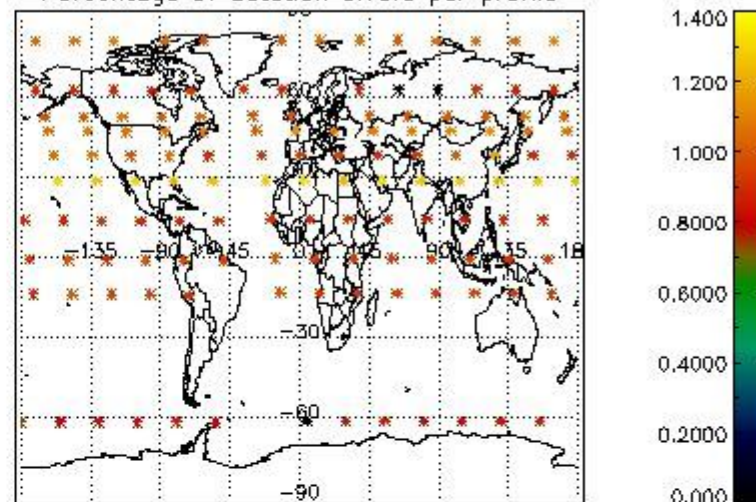
4.2 Plot quality information per product coming from level 1b processing (world map)

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

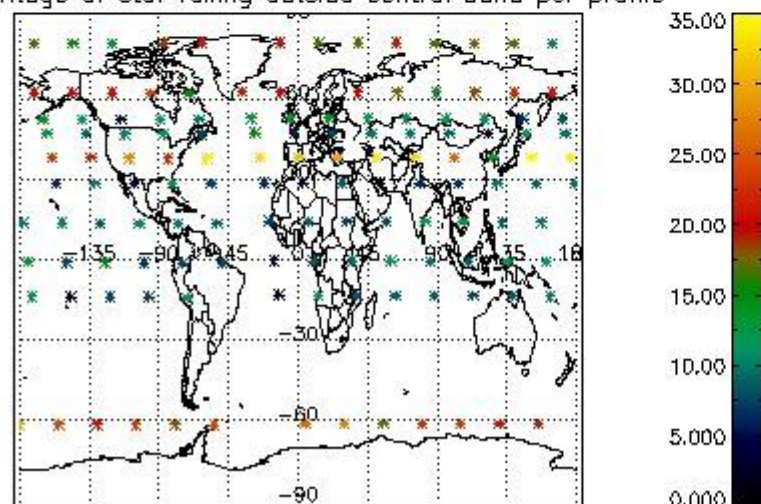
Percentage of cosmic ray hits per profile



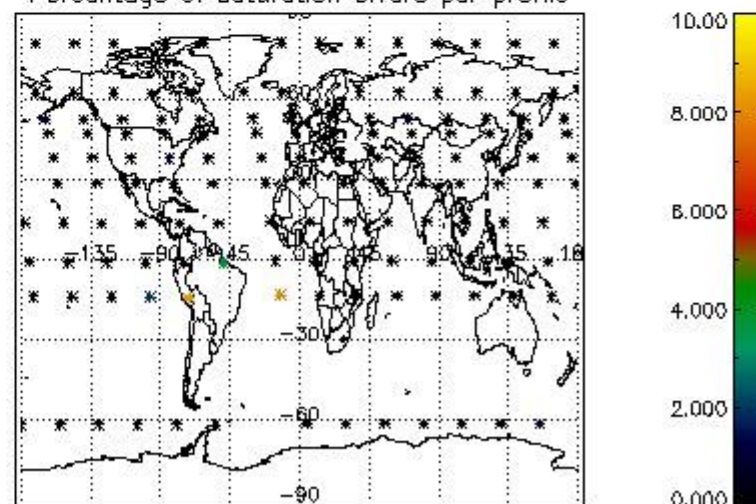
Percentage of datation errors per profile



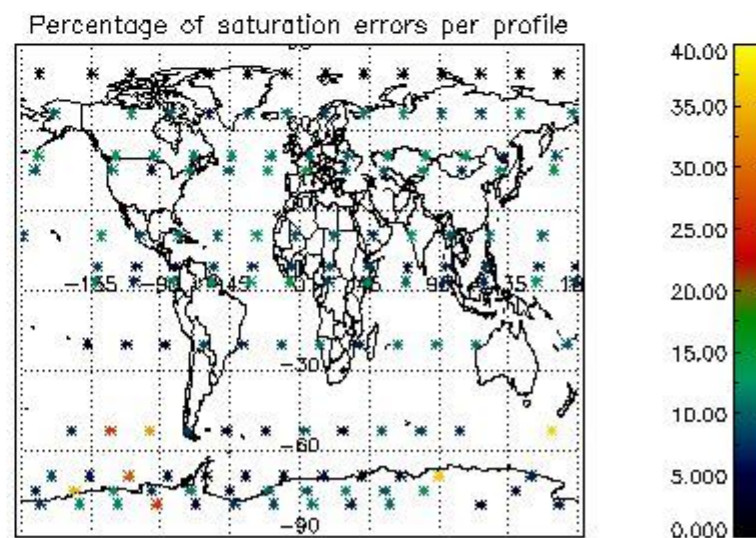
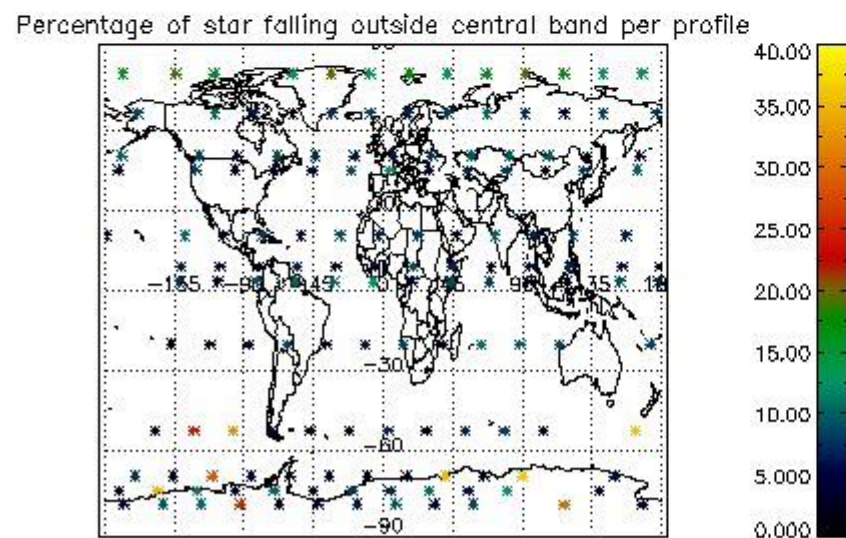
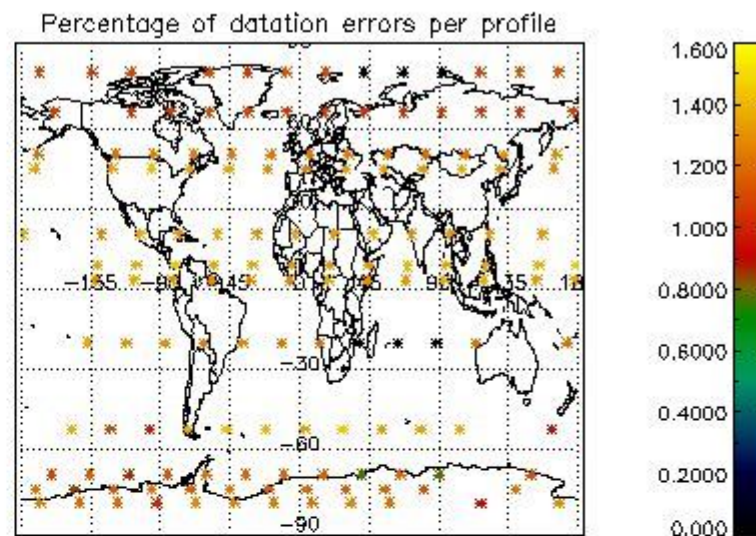
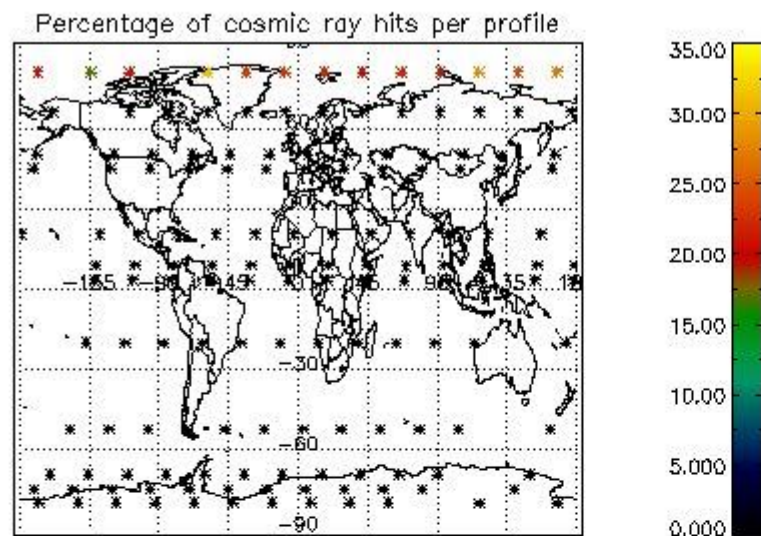
Percentage of star falling outside central band per profile



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

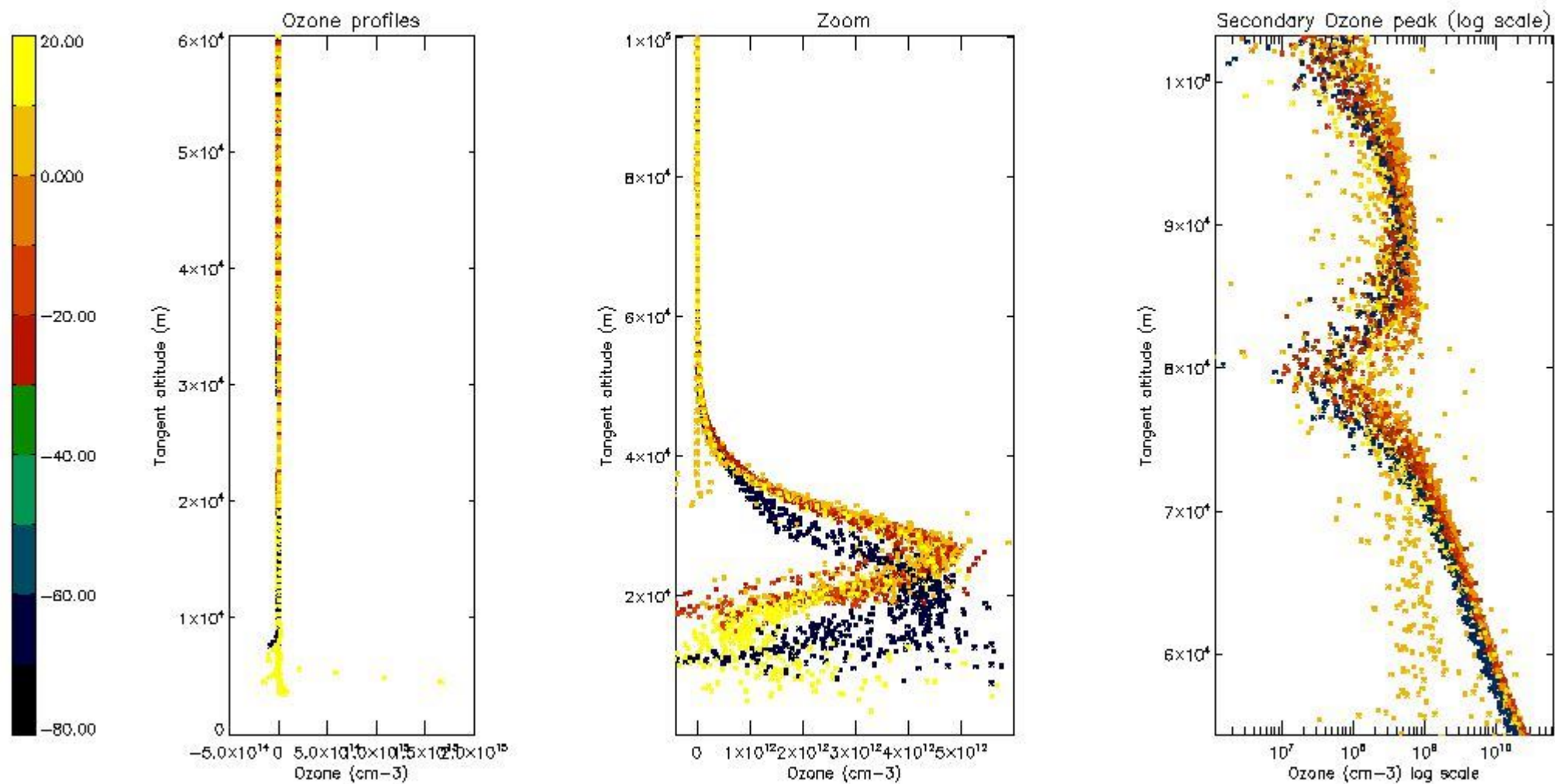
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	16
STD < 5	13

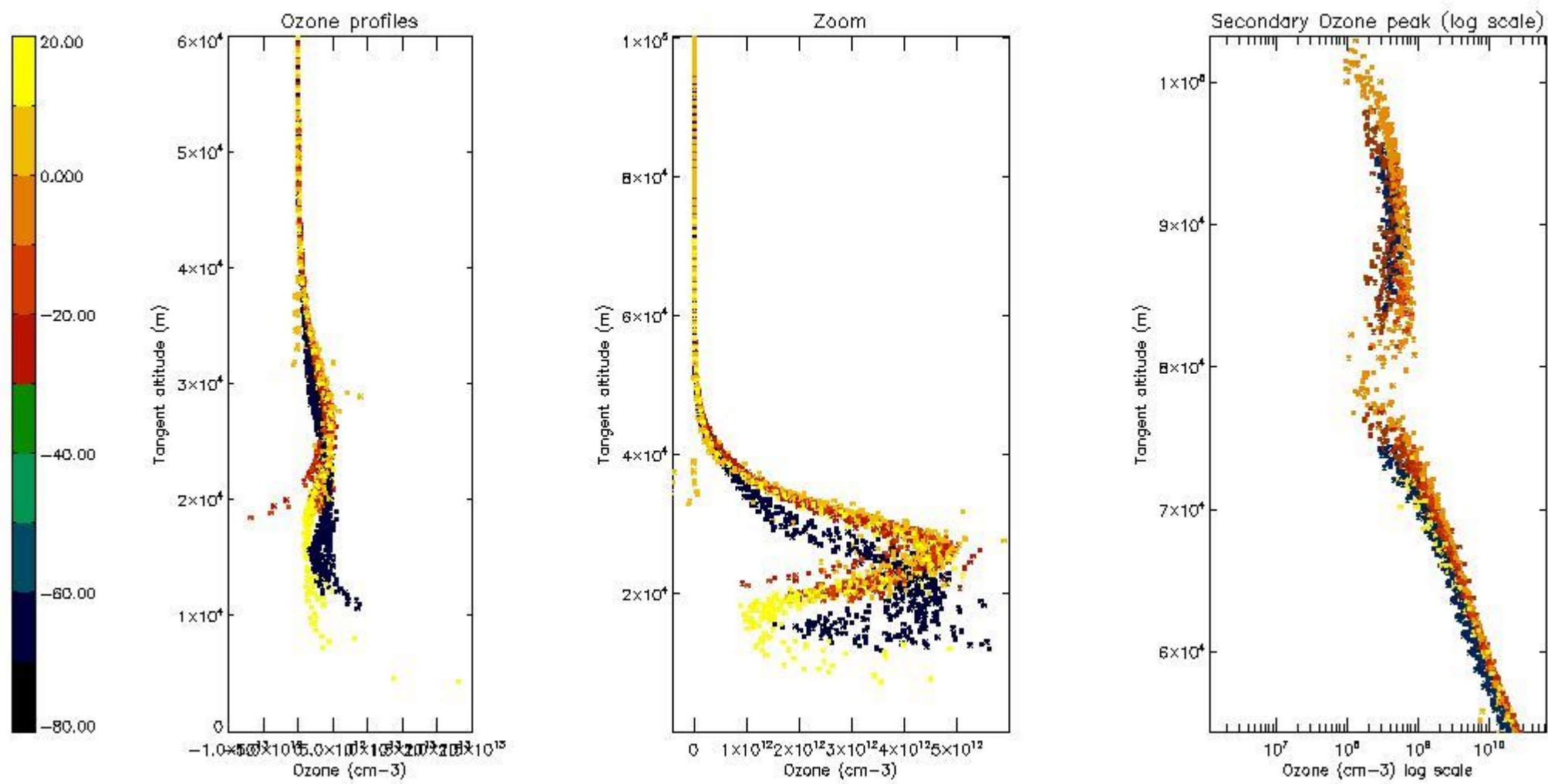
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



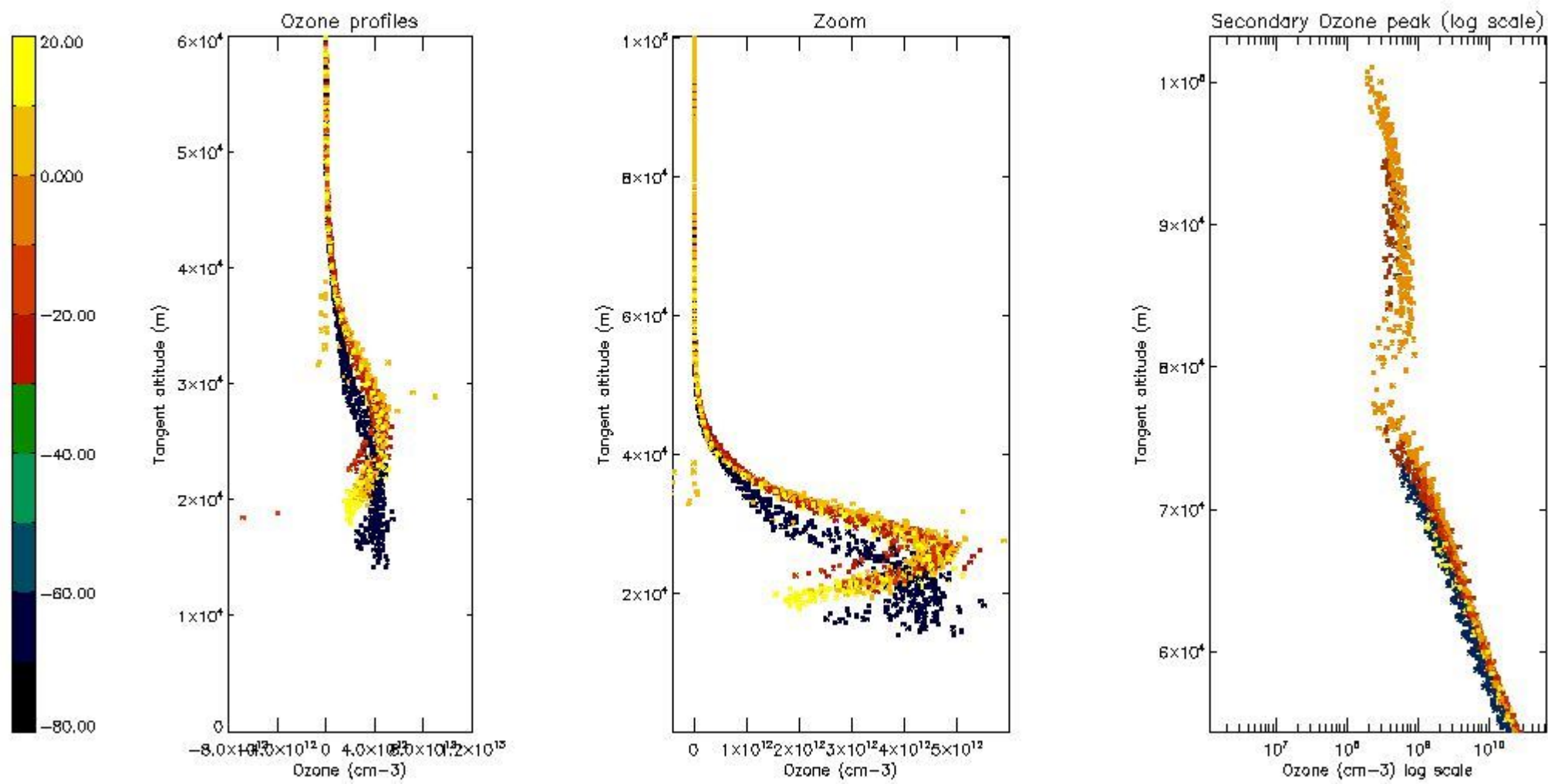
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



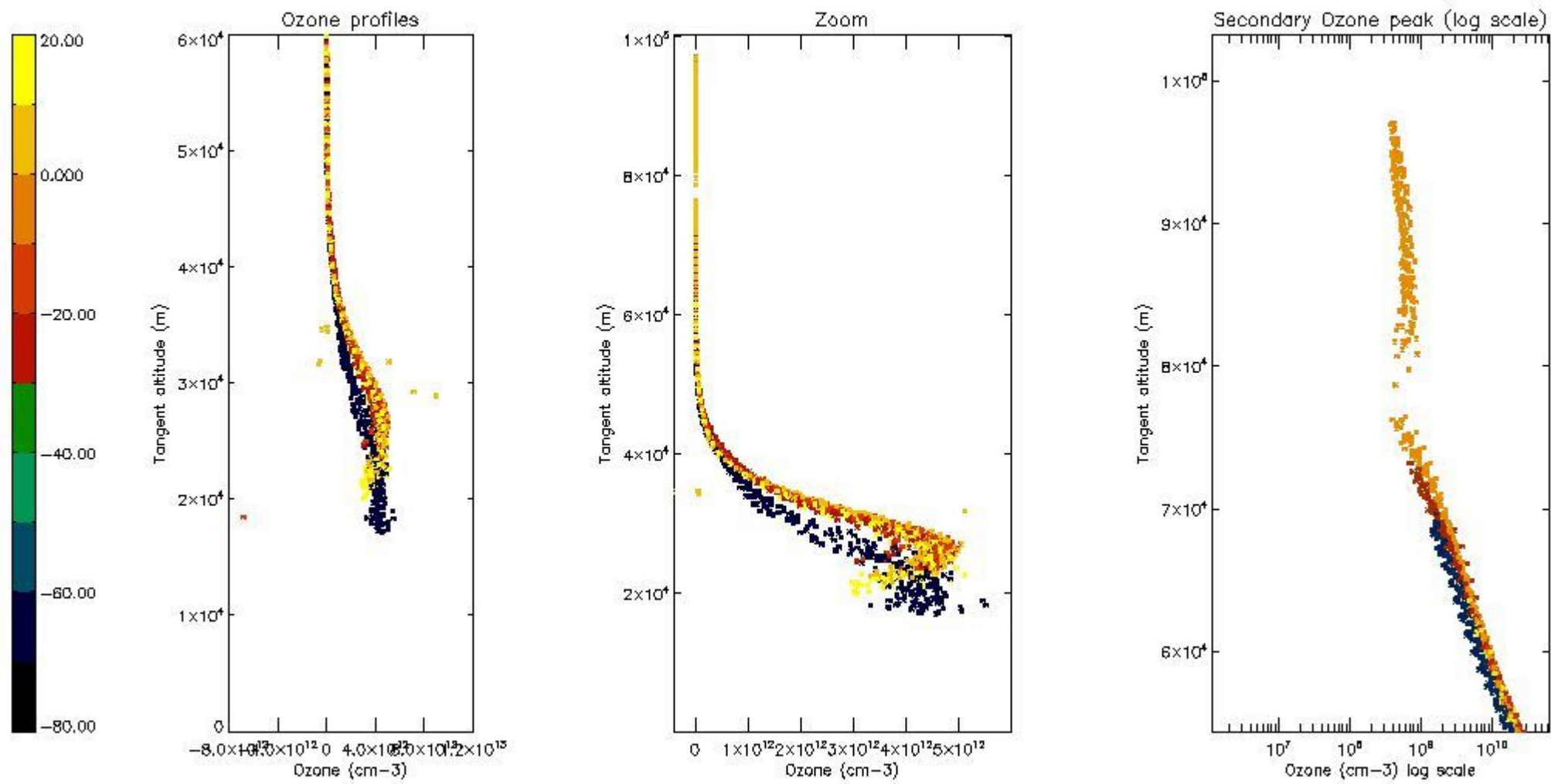
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



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

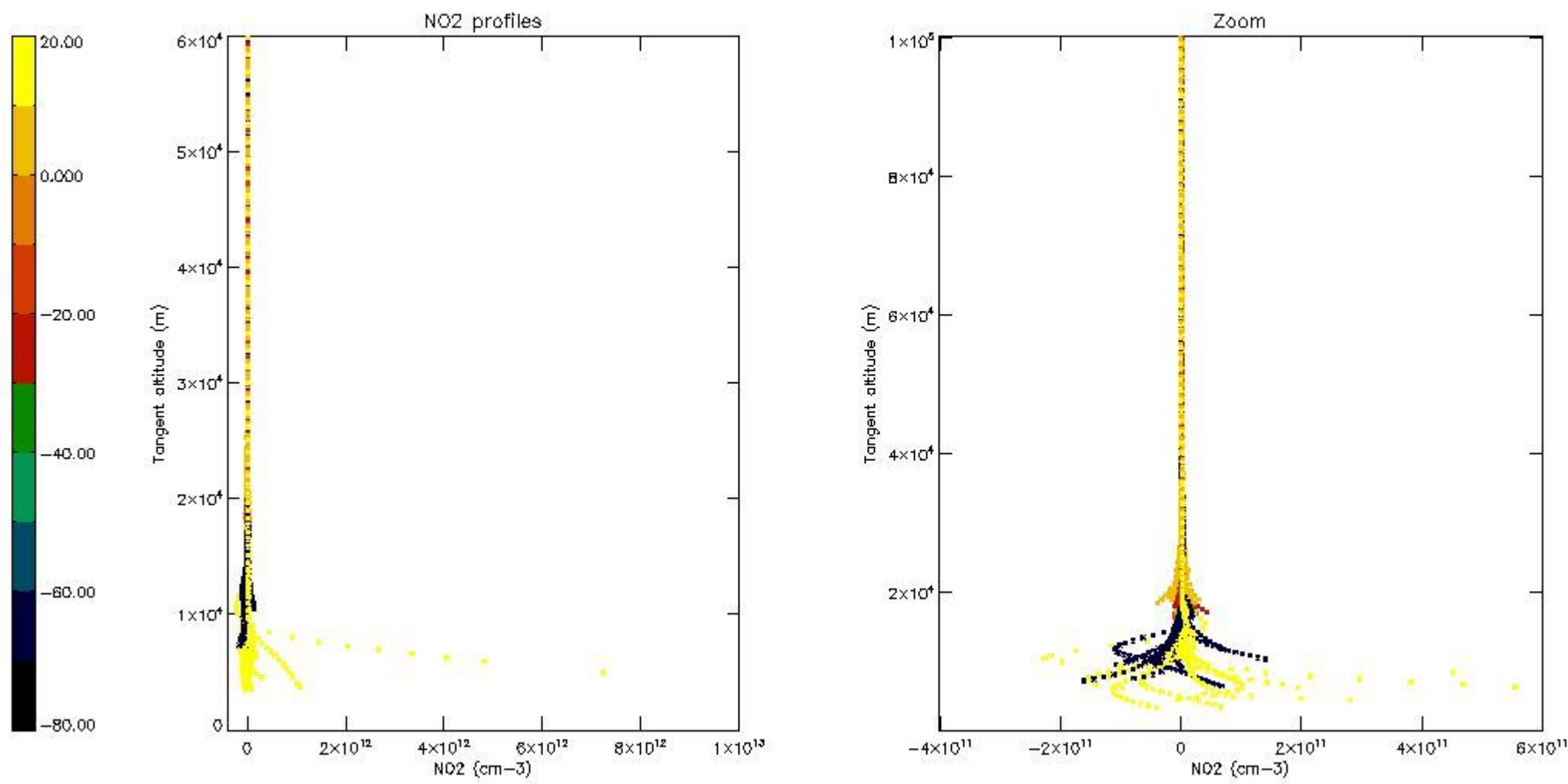
The colorbar represents the latitude.



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

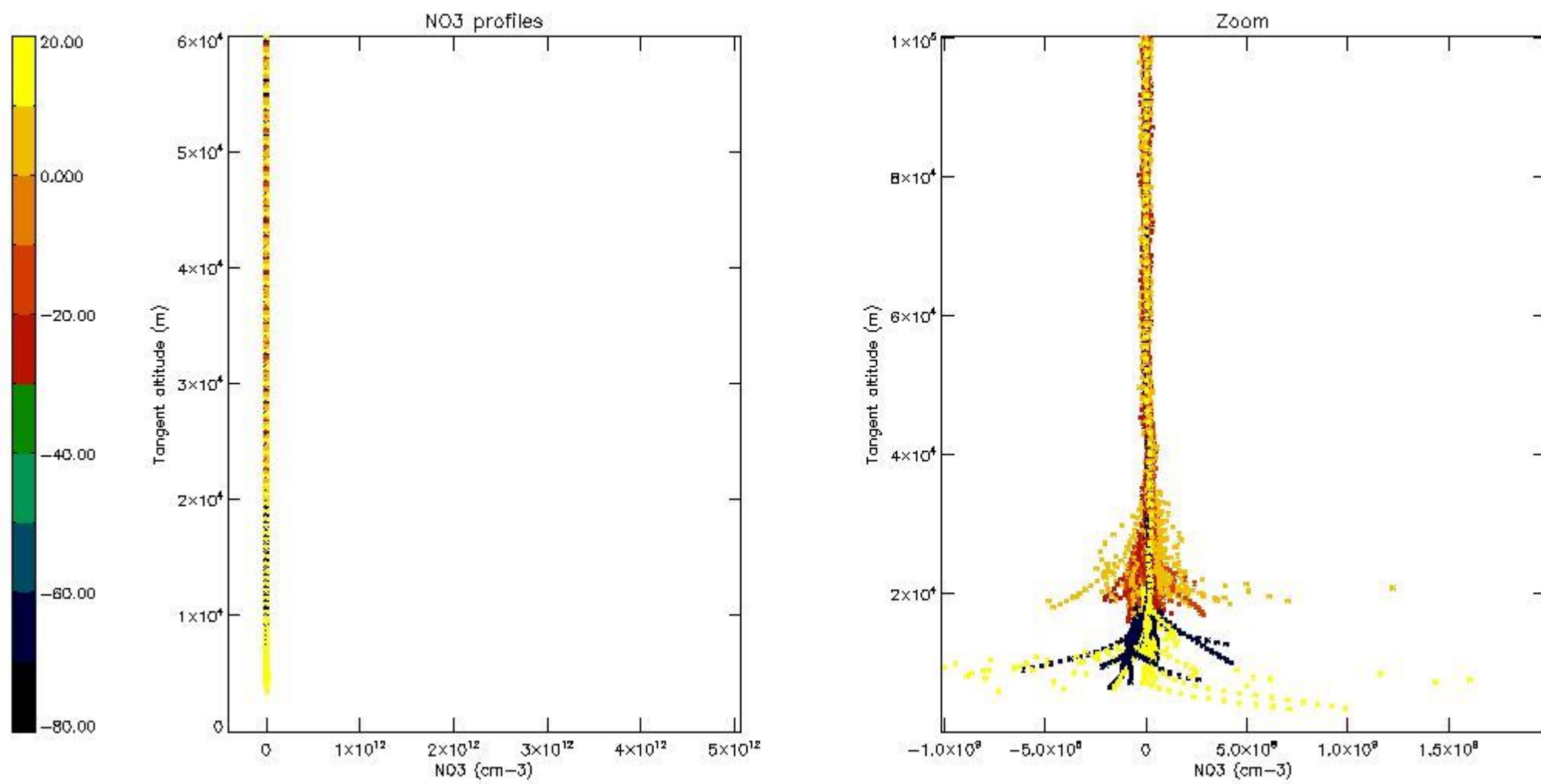
The colorbar represents the latitude.





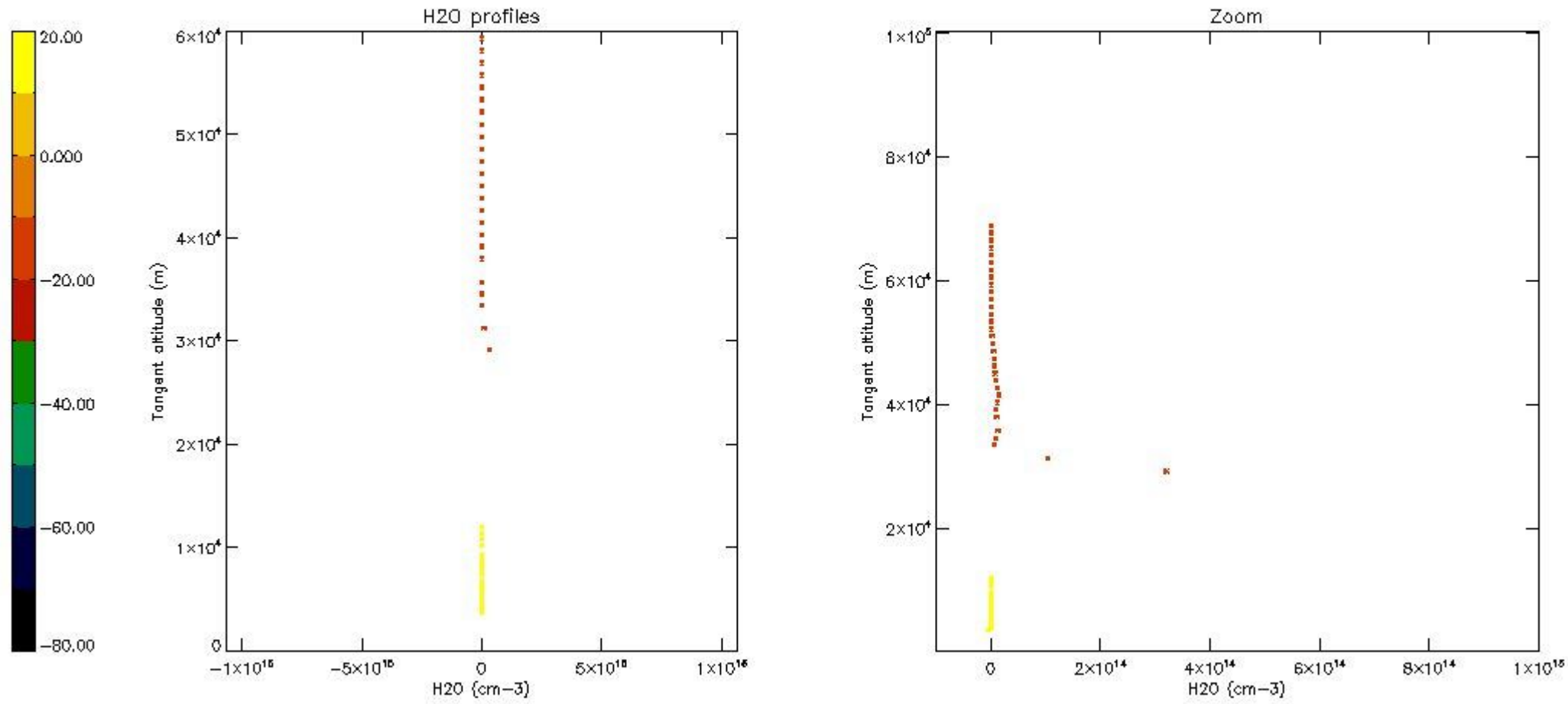
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-MAR-2011 01:21:15
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-MAR-2011 01:21:15
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-MAR-2011 01:21:15

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### [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	24APR2013 11:51:00
Data source version	GOMOS/6.01
Start time of products	27-03-2011 (27MAR2011 00:00:00)
Stop time of products	28-03-2011 (28MAR2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	287
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__2PRFIN20110327_012115_000000523101_00002_47430_2932.N1	27-MAR-2011 01:21:15	Dark	52.000	38	20Eps Sgr	1.8360	11000.	104	47430	No
2	GOM_NL__2PRFIN20110327_012520_000000563101_00003_47431_2960.N1	27-MAR-2011 01:25:20	Dark	56.000	25	35Lam Sco	1.6200	28000.	112	47431	No
3	GOM_NL__2PRFIN20110327_012931_000000403101_00003_47431_2961.N1	27-MAR-2011 01:29:31	Dark	40.000	134	Bet TrA	2.8100	6600.0	80	47431	No
4	GOM_NL__2PRFIN20110327_013211_000000563101_00003_47431_2962.N1	27-MAR-2011 01:32:11	Dark	56.000	4	Alp1Cen	-0.010000	5800.0	112	47431	No
5	GOM_NL__2PRFIN20110327_013444_000000463101_00003_47431_2963.N1	27-MAR-2011 01:34:44	Straylight	46.000	78	Alp Lup	2.3040	28000.	92	47431	No
6	GOM_NL__2PRFIN20110327_013618_000000493101_00003_47431_2964.N1	27-MAR-2011 01:36:18	Straylight	48.500	81	Eta Cen	2.3560	28000.	97	47431	No
7	GOM_NL__2PRFIN20110327_013909_000000543101_00003_47431_2965.N1	27-MAR-2011 01:39:09	Straylight	53.500	54	5The Cen	2.0550	4500.0	107	47431	No
8	GOM_NL__2PRFIN20110327_014531_000000463101_00003_47431_2966.N1	27-MAR-2011 01:45:31	Straylight	45.500	106	9Bet Crv	2.6480	5600.0	91	47431	No
9	GOM_NL__2PRFIN20110327_014733_000000473101_00003_47431_2967.N1	27-MAR-2011 01:47:33	Tw_i_and_stray	46.500	100	4Gam Crv	2.5800	13100.	93	47431	No
10	GOM_NL__2PRFIN20110327_015255_000000493101_00003_47431_2968.N1	27-MAR-2011 01:52:55	Bright	48.500	121	29Gam Vir	2.7400	7200.0	97	47431	No
11	GOM_NL__2PRFIN20110327_015732_000000393101_00003_47431_2969.N1	27-MAR-2011 01:57:32	Bright	38.500	62	94Bet Leo	2.1360	9700.0	77	47431	No
12	GOM_NL__2PRFIN20110327_015902_000000383101_00003_47431_2970.N1	27-MAR-2011 01:59:02	Bright	38.000	96	68Del Leo	2.5600	9300.0	76	47431	No
13	GOM_NL__2PRFIN20110327_020554_000000383101_00003_47431_2971.N1	27-MAR-2011 02:05:54	Bright	38.000	174	52Psi UMa	3.0040	4400.0	76	47431	No
14	GOM_NL__2PRFIN20110327_020912_000000373101_00003_47431_2972.N1	27-MAR-2011 02:09:12	Bright	37.000	82	48Bet UMa	2.3650	10600.	74	47431	No
15	GOM_NL__2PRFIN20110327_021043_000000363101_00003_47431_2973.N1	27-MAR-2011 02:10:43	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	47431	No
16	GOM_NL__2PRFIN20110327_021717_000000423101_00003_47431_2974.N1	27-MAR-2011 02:17:17	Bright	41.500	60	7Bet UMi	2.0810	3950.0	83	47431	No
17	GOM_NL__2PRFIN20110327_022621_000000373101_00003_47431_2975.N1	27-MAR-2011 02:26:21	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	47431	No
18	GOM_NL__2PRFIN20110327_023121_000000653101_00003_47431_2976.N1	27-MAR-2011 02:31:21	Bright	64.500	144	18Del Cyg	2.8600	11000.	129	47431	No
19	GOM_NL__2PRFIN20110327_023306_000000453101_00003_47431_2977.N1	27-MAR-2011 02:33:06	Bright	44.500	66	37Gam Cyg	2.2080	5900.0	89	47431	No
20	GOM_NL__2PRFIN20110327_023501_000000423101_00003_47431_2978.N1	27-MAR-2011 02:35:01	Bright	41.500	92	53Eps Cyg	2.5000	4500.0	83	47431	No
21	GOM_NL__2PRFIN20110327_024424_000000623101_00003_47431_2979.N1	27-MAR-2011 02:44:24	Dark	62.000	11	53Alp Aql	0.76500	8000.0	124	47431	No
22	GOM_NL__2PRFIN20110327_025754_000000553101_00003_47431_2980.N1	27-MAR-2011 02:57:54	Dark	54.500	57	34Sig Sgr	2.0660	26000.	109	47431	No
23	GOM_NL__2PRFIN20110327_030130_000000523101_00003_47431_2981.N1	27-MAR-2011 03:01:30	Dark	51.500	38	20Eps Sgr	1.8360	11000.	103	47431	No
24	GOM_NL__2PRFIN20110327_030535_000000573101_00004_47432_2970.N1	27-MAR-2011 03:05:35	Dark	57.000	25	35Lam Sco	1.6200	28000.	114	47432	No
25	GOM_NL__2PRFIN20110327_030945_000000413101_00004_47432_2971.N1	27-MAR-2011 03:09:45	Dark	41.000	134	Bet TrA	2.8100	6600.0	82	47432	No
26	GOM_NL__2PRFIN20110327_031226_000000473101_00004_47432_2972.N1	27-MAR-2011 03:12:26	Dark	47.000	4	Alp1Cen	-0.010000	5800.0	94	47432	No
27	GOM_NL__2PRFIN20110327_031459_000000473101_00004_47432_2973.N1	27-MAR-2011 03:14:59	Straylight	47.000	78	Alp Lup	2.3040	28000.	94	47432	No
28	GOM_NL__2PRFIN20110327_031633_000000503101_00004_47432_2974.N1	27-MAR-2011 03:16:33	Straylight	50.000	81	Eta Cen	2.3560	28000.	100	47432	No
29	GOM_NL__2PRFIN20110327_031923_000000593101_00004_47432_2975.N1	27-MAR-2011 03:19:23	Straylight	59.000	54	5The Cen	2.0550	4500.0	118	47432	No
30	GOM_NL__2PRFIN20110327_032545_000000473101_00004_47432_2976.N1	27-MAR-2011 03:25:45	Straylight	47.000	106	9Bet Crv	2.6480	5600.0	94	47432	No
31	GOM_NL__2PRFIN20110327_032748_000000453101_00004_47432_2977.N1	27-MAR-2011 03:27:48	Tw_i_and_stray	44.500	100	4Gam Crv	2.5800	13100.	89	47432	No
32	GOM_NL__2PRFIN20110327_033309_000000473101_00004_47432_2978.N1	27-MAR-2011 03:33:09	Bright	47.000	121	29Gam Vir	2.7400	7200.0	94	47432	No
33	GOM_NL__2PRFIN20110327_033746_000000423101_00004_47432_2979.N1	27-MAR-2011 03:37:46	Bright	41.500	62	94Bet Leo	2.1360	9700.0	83	47432	No
34	GOM_NL__2PRFIN20110327_033916_000000363101_00004_47432_2980.N1	27-MAR-2011 03:39:16	Bright	36.000	96	68Del Leo	2.5600	9300.0	72	47432	No
35	GOM_NL__2PRFIN20110327_034608_000000383101_00004_47432_2981.N1	27-MAR-2011 03:46:08	Bright	37.500	174	52Psi UMa	3.0040	4400.0	75	47432	No
36	GOM_NL__2PRFIN20110327_034925_000000373101_00004_47432_2982.N1	27-MAR-2011 03:49:25	Bright	37.000	82	48Bet UMa	2.3650	10600.	74	47432	No
37	GOM_NL__2PRFIN20110327_035057_000000363101_00004_47432_2983.N1	27-MAR-2011 03:50:57	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	47432	No
38	GOM_NL__2PRFIN20110327_035730_000000423101_00004_47432_2984.N1	27-MAR-2011 03:57:30	Bright	41.500	60	7Bet UMi	2.0810	3950.0	83	47432	No
39	GOM_NL__2PRFIN20110327_040634_000000373101_00004_47432_2985.N1	27-MAR-2011 04:06:34	Bright	37.000	89	5Alp Cep	2.4510	8000.0	74	47432	No
40	GOM_NL__2PRFIN20110327_041135_000000433101_00004_47432_2986.N1	27-MAR-2011 04:11:35	Bright	42.500	144	18Del Cyg	2.8600	11000.	85	47432	No
41	GOM_NL__2PRFIN20110327_041320_000000433101_00004_47432_2987.N1	27-MAR-2011 04:13:20	Bright	42.500	66	37Gam Cyg	2.2080	5900.0	85	47432	No
42	GOM_NL__2PRFIN20110327_041515_000000403101_00004_47432_2988.N1	27-MAR-2011 04:15:15	Bright	39.500	92	53Eps Cyg	2.5000	4500.0	79	47432	No









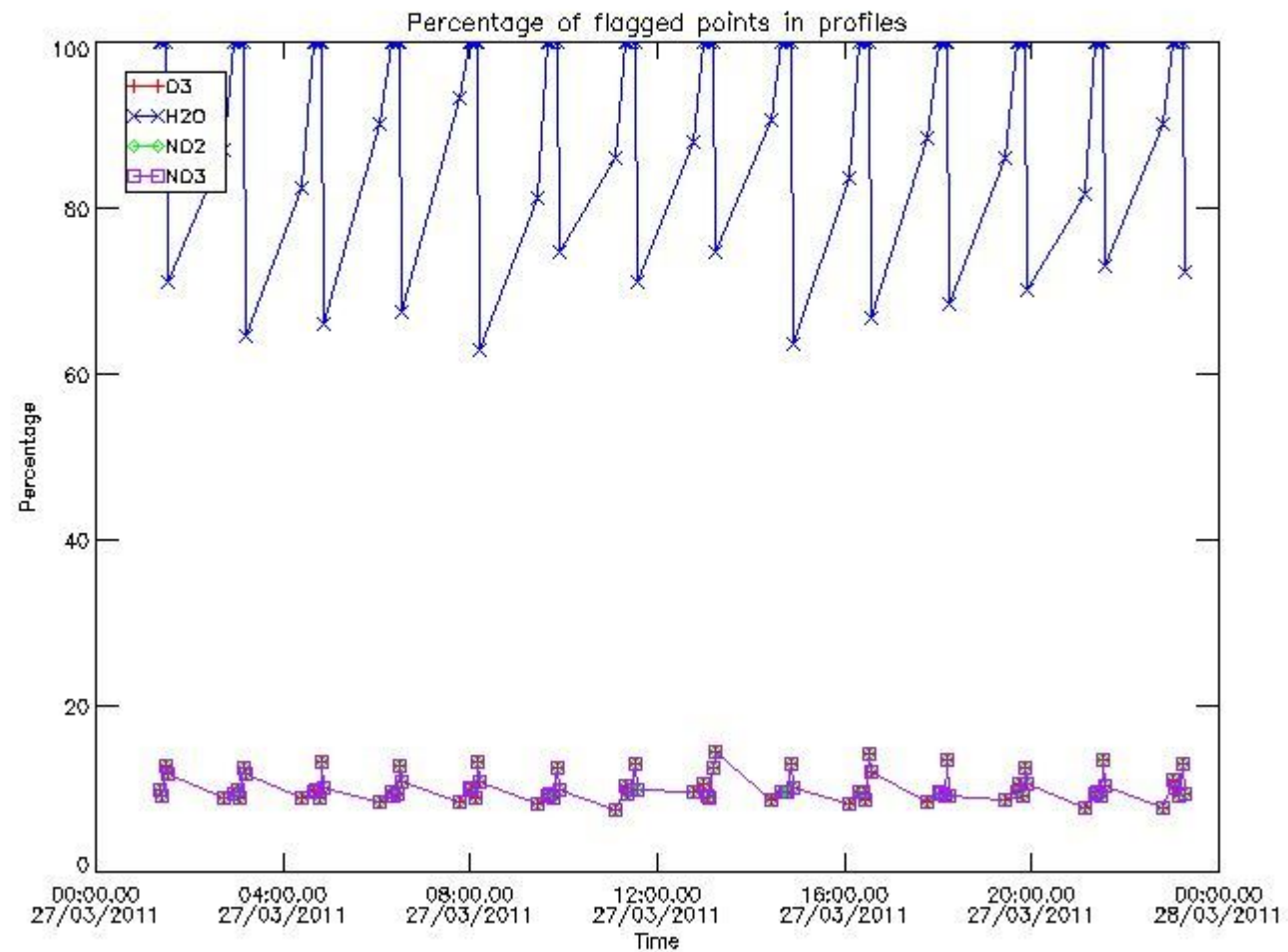


279	GOM_NL__2PRFIN20110327_232218_000000563101_00016_47444_3251.N1	27-MAR-2011 23:22:18	Straylight	55.500	54	5The Cen	2.0550	4500.0	111	47444	No
280	GOM_NL__2PRFIN20110327_232836_000000493101_00016_47444_3252.N1	27-MAR-2011 23:28:36	Straylight	48.500	106	9Bet Crv	2.6480	5600.0	97	47444	No
281	GOM_NL__2PRFIN20110327_233037_000000483101_00016_47444_3253.N1	27-MAR-2011 23:30:37	Twilight_stray	47.500	100	4Gam Crv	2.5800	13100.	95	47444	No
282	GOM_NL__2PRFIN20110327_233555_000000473101_00016_47444_3254.N1	27-MAR-2011 23:35:55	Bright	47.000	121	29Gam Vir	2.7400	7200.0	94	47444	No
283	GOM_NL__2PRFIN20110327_234032_000000393101_00016_47444_3255.N1	27-MAR-2011 23:40:32	Bright	39.000	62	94Bet Leo	2.1360	9700.0	78	47444	No
284	GOM_NL__2PRFIN20110327_234203_000000393101_00016_47444_3256.N1	27-MAR-2011 23:42:03	Bright	39.000	96	68Del Leo	2.5600	9300.0	78	47444	No
285	GOM_NL__2PRFIN20110327_234854_000000383101_00016_47444_3257.N1	27-MAR-2011 23:48:54	Bright	38.000	174	52Psi UMa	3.0040	4400.0	76	47444	No
286	GOM_NL__2PRFIN20110327_235212_000000363101_00016_47444_3258.N1	27-MAR-2011 23:52:12	Bright	36.000	82	48Bet UMa	2.3650	10600.	72	47444	No
287	GOM_NL__2PRFIN20110327_235344_000000383101_00016_47444_3259.N1	27-MAR-2011 23:53:44	Bright	38.000	36	50Alp UMa	1.8000	6300.0	76	47444	No

### 3. Quality information per product

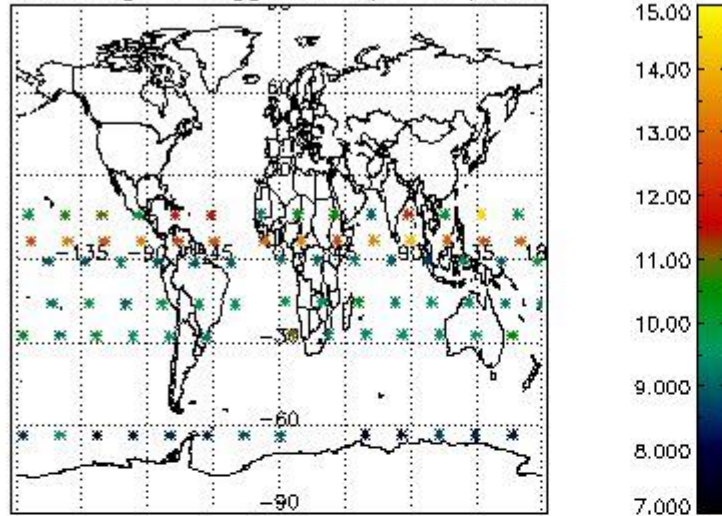
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

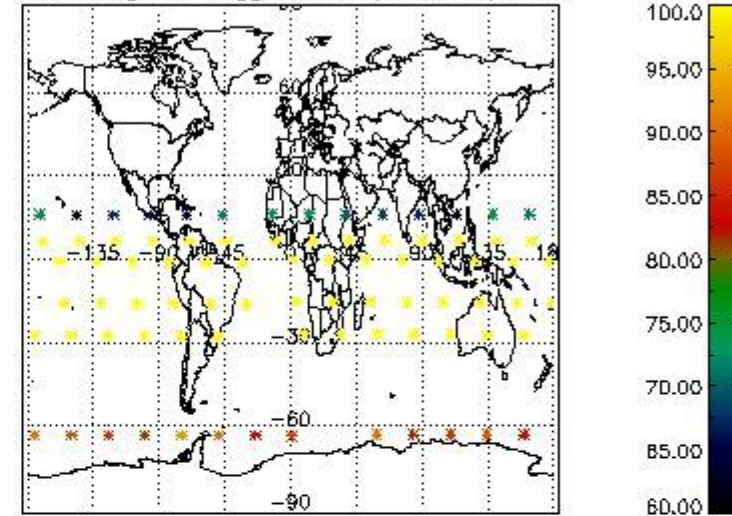


#### 3.2 Plot quality information per product (world map)

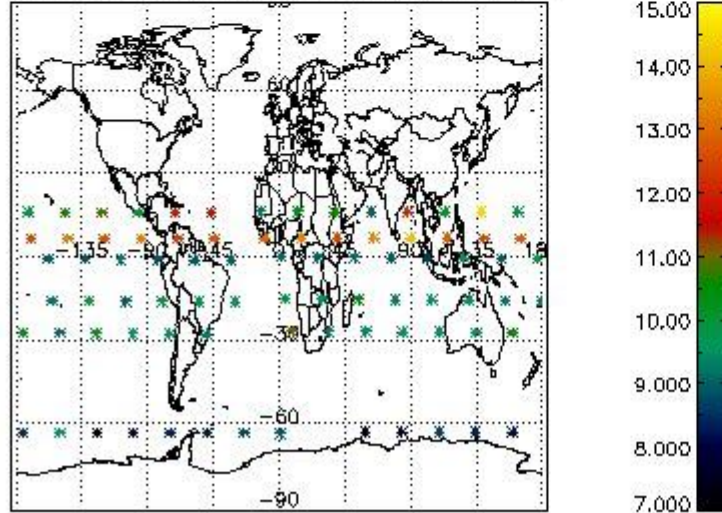
Percentage of flagged data per O3 profile



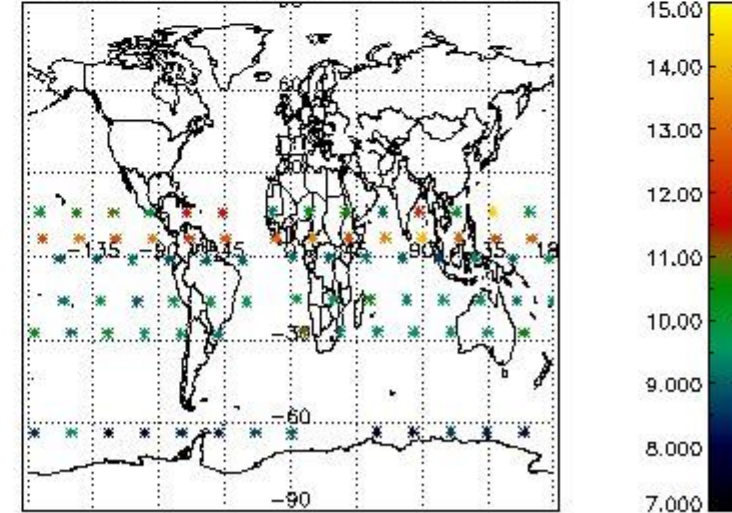
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

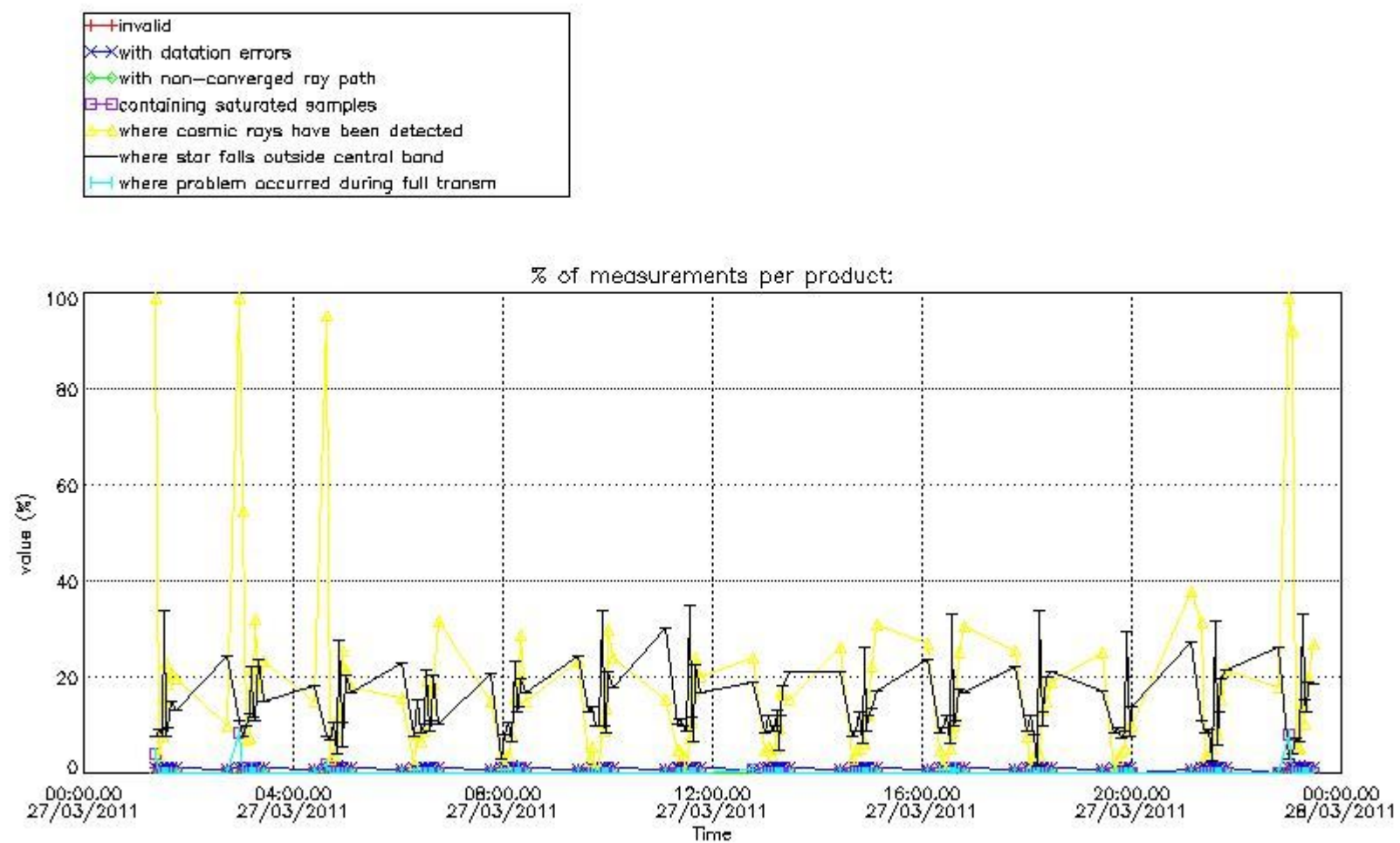


#### 4. Level 1 quality information per product

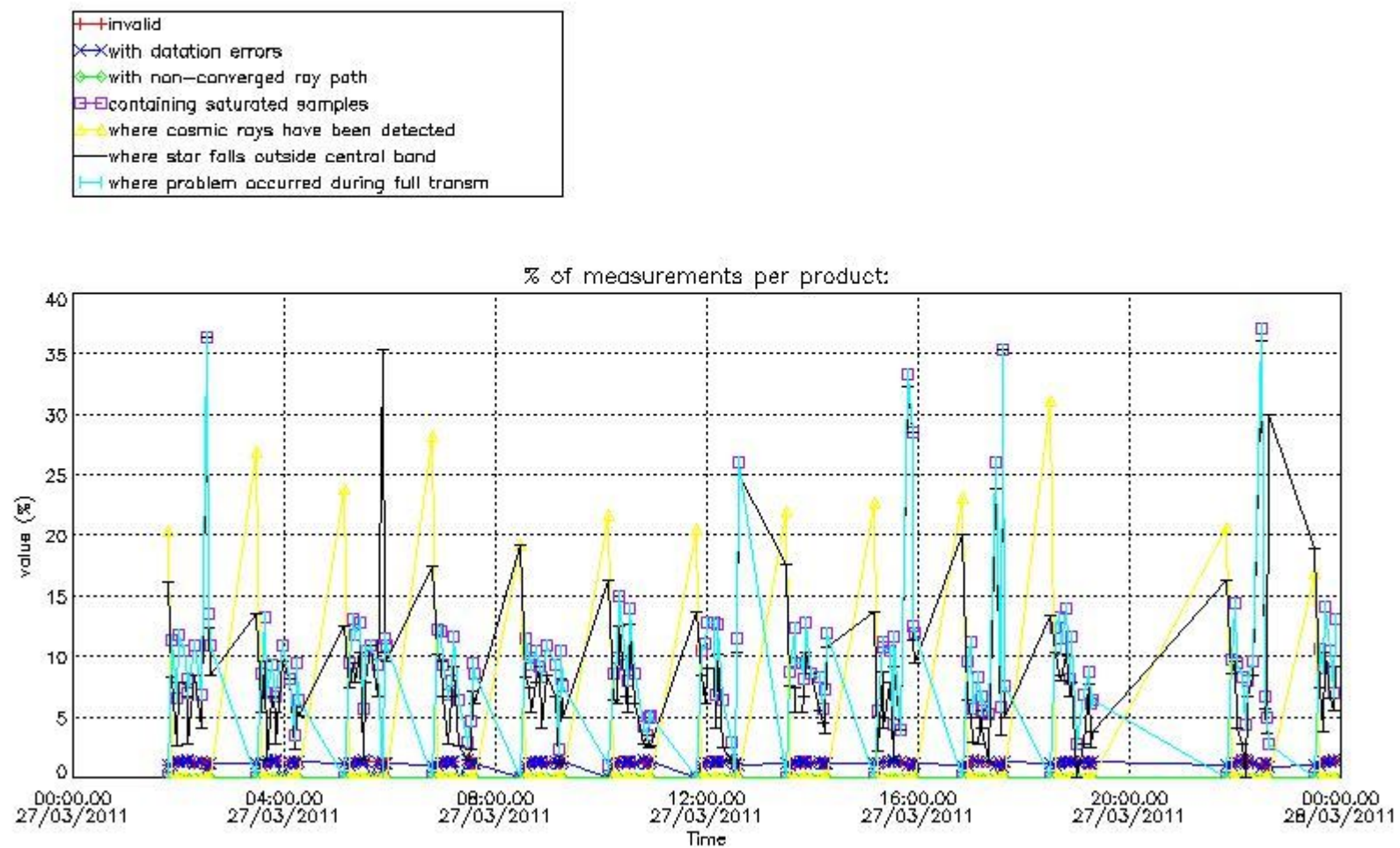
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



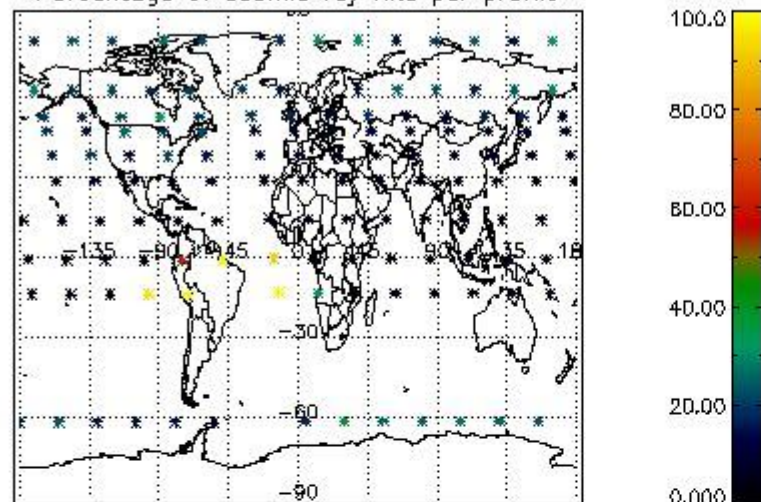
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



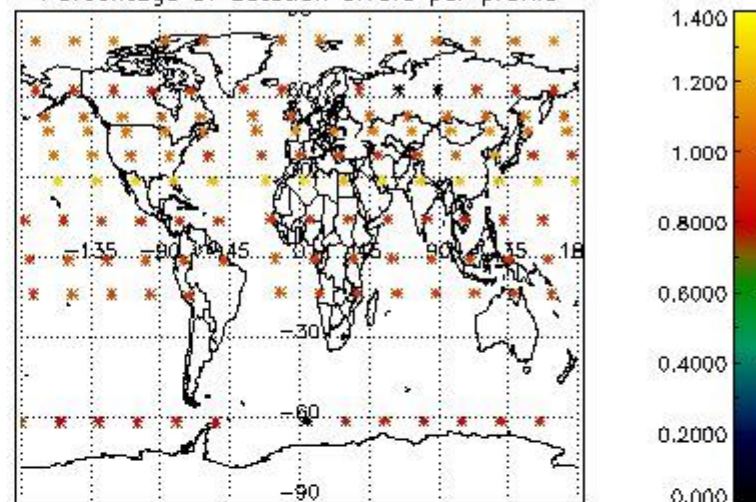
4.2 Plot quality information per product coming from level 1b processing (world map)

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

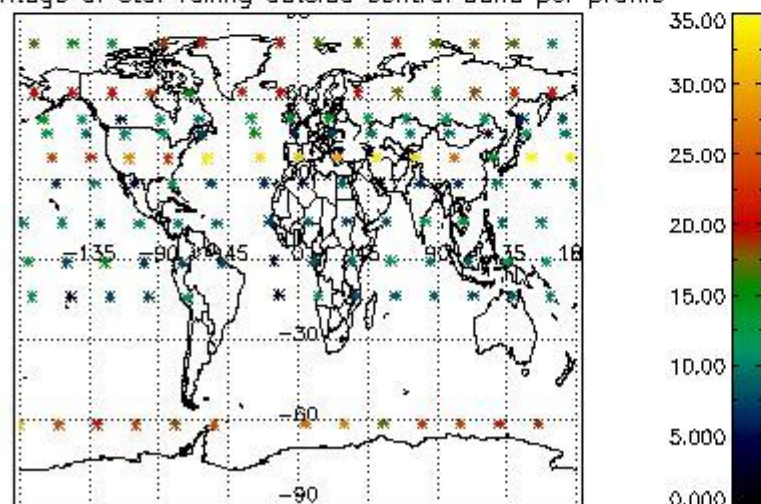
Percentage of cosmic ray hits per profile



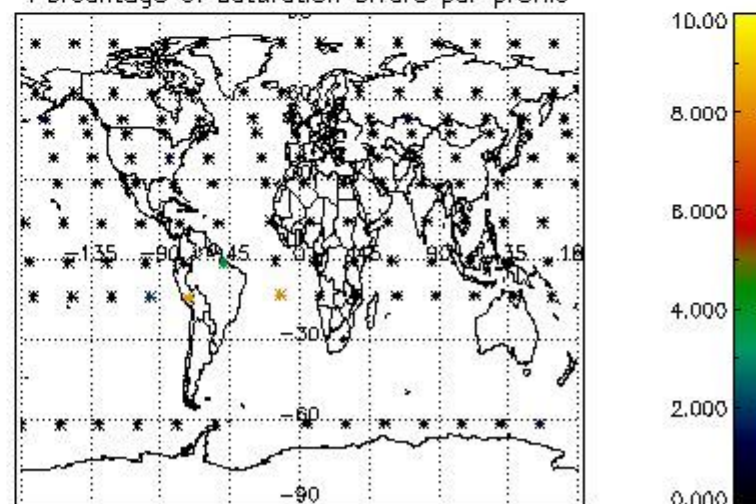
Percentage of datation errors per profile



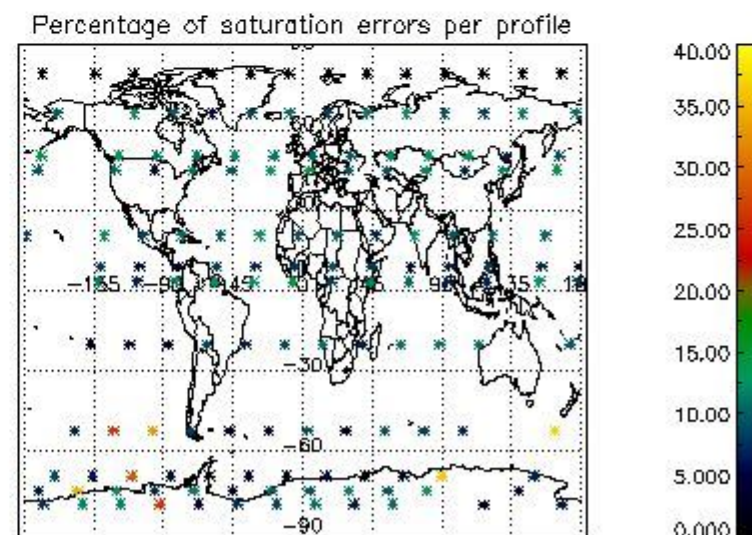
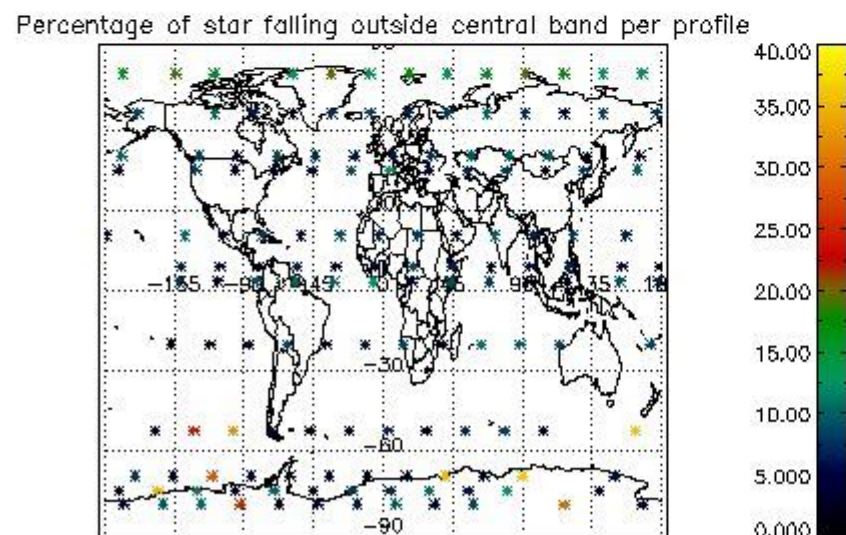
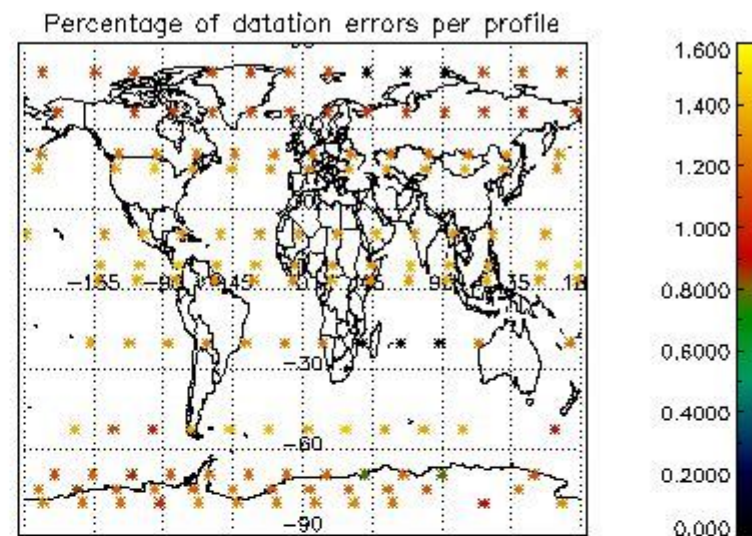
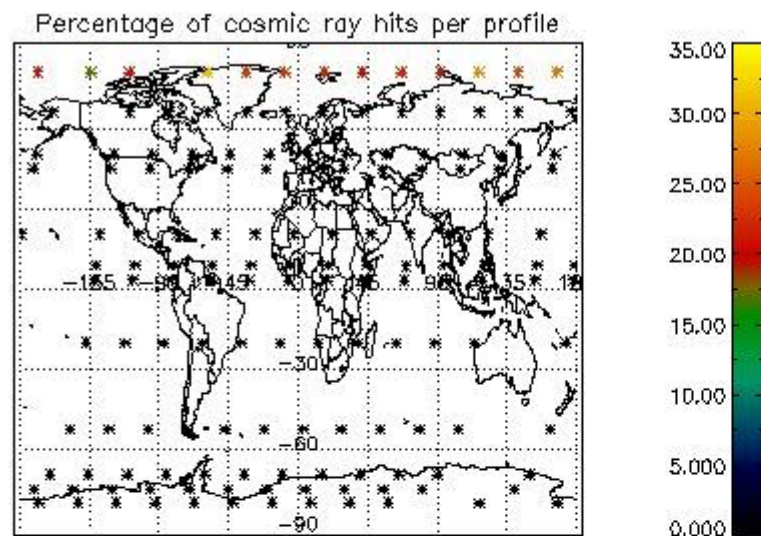
Percentage of star falling outside central band per profile



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

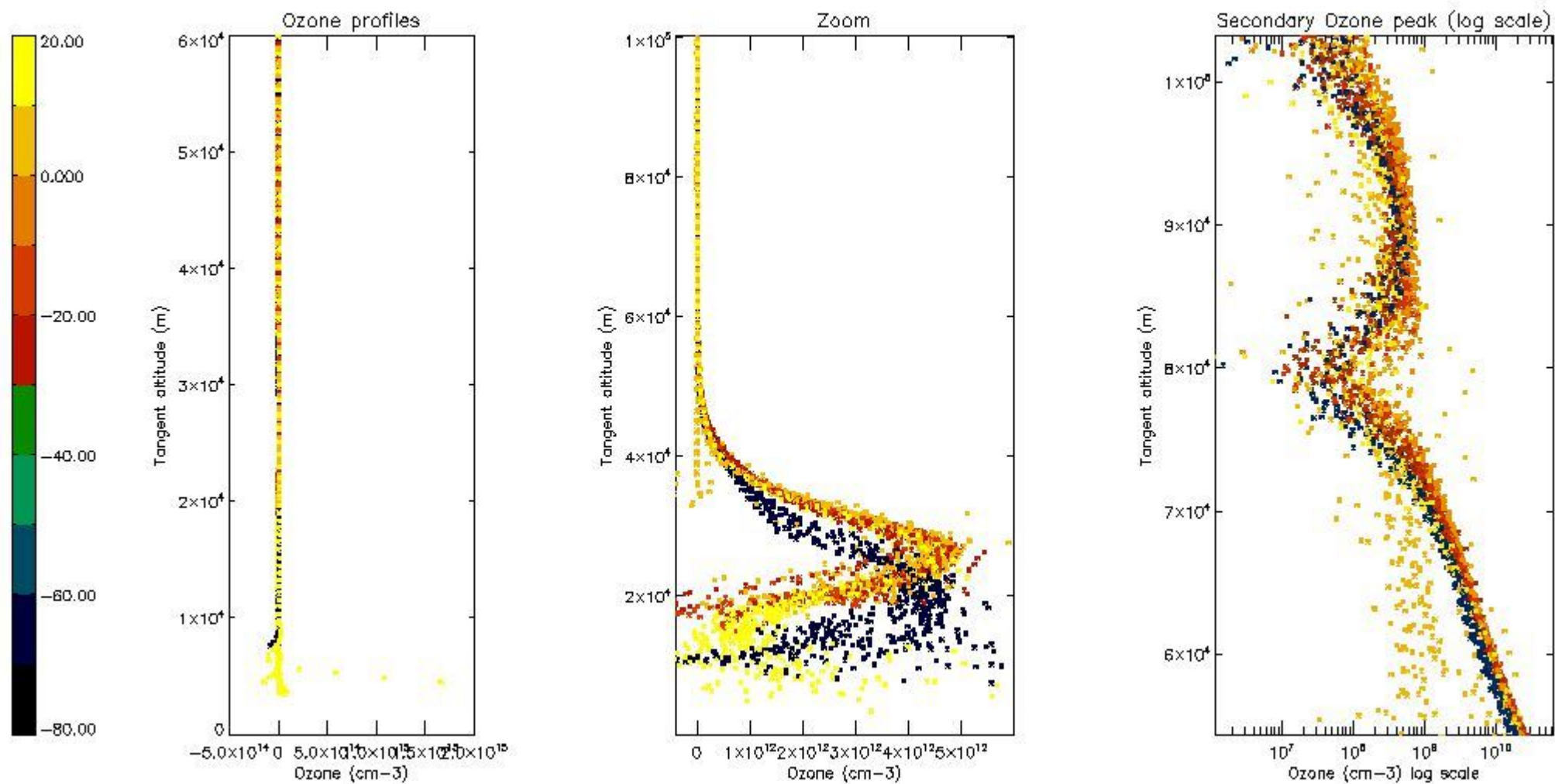
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

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

STD < 10	16
STD < 5	13

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

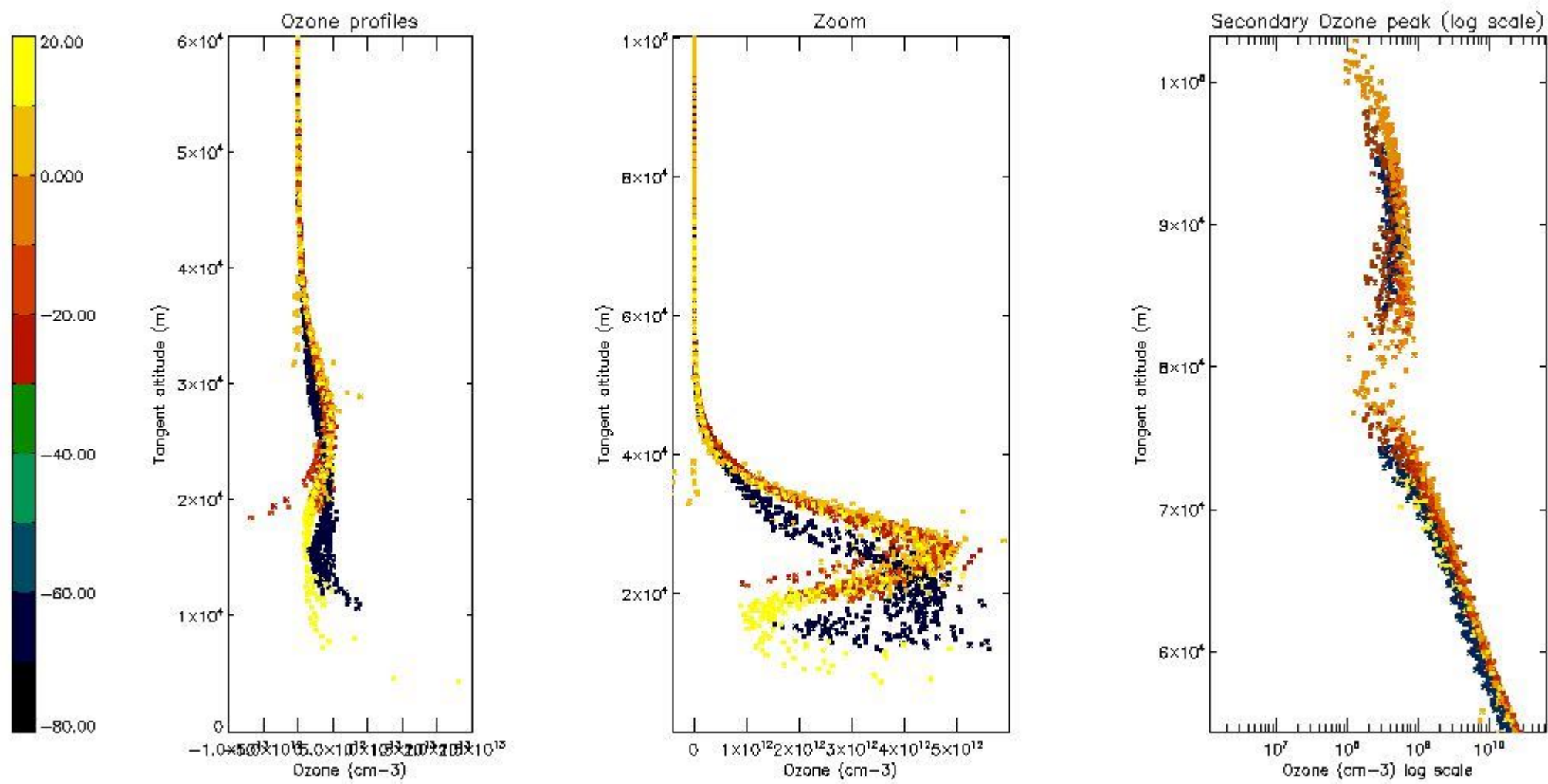
The colorbar represents the latitude.



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

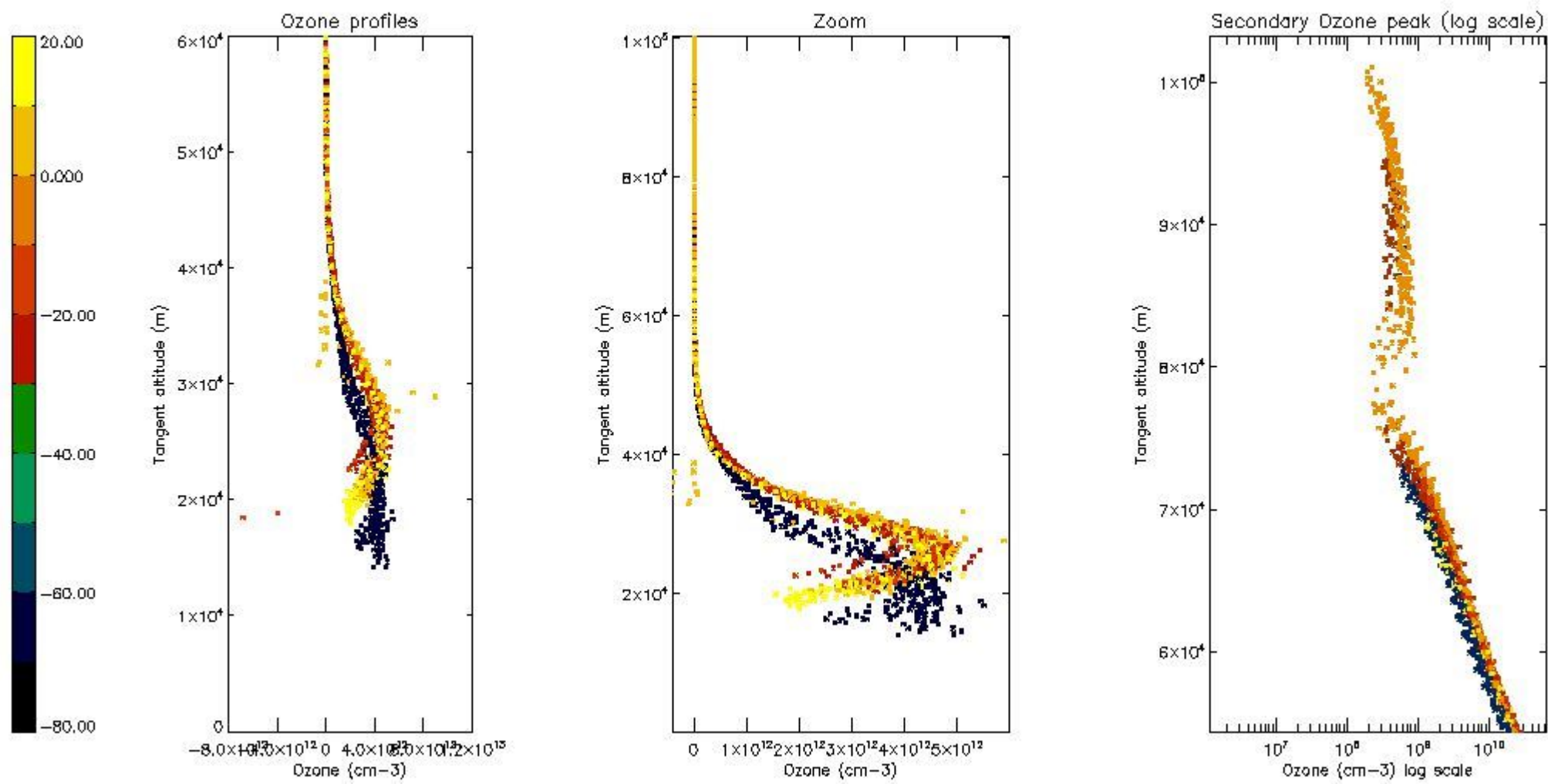
The colorbar represents the latitude.





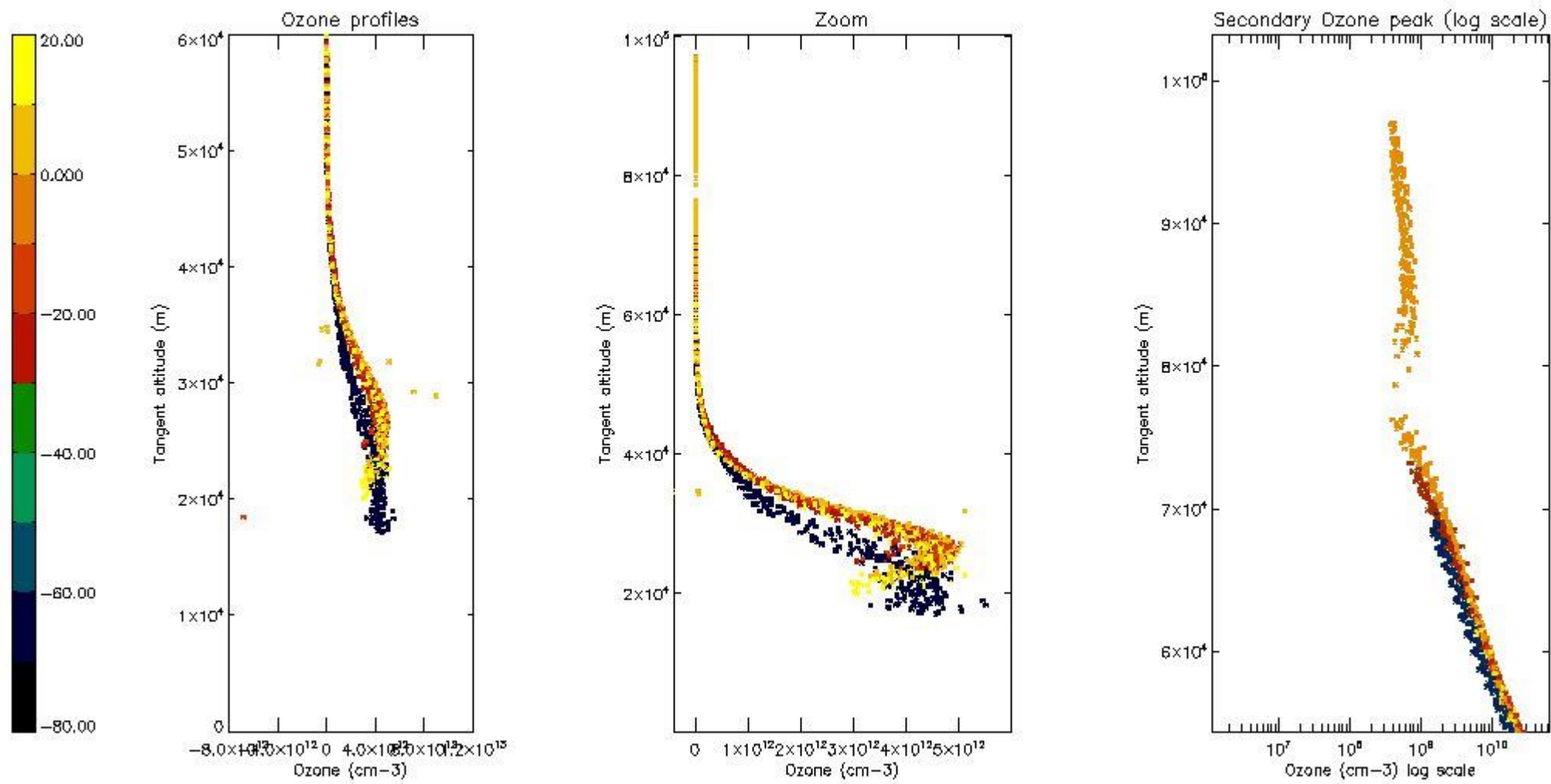
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



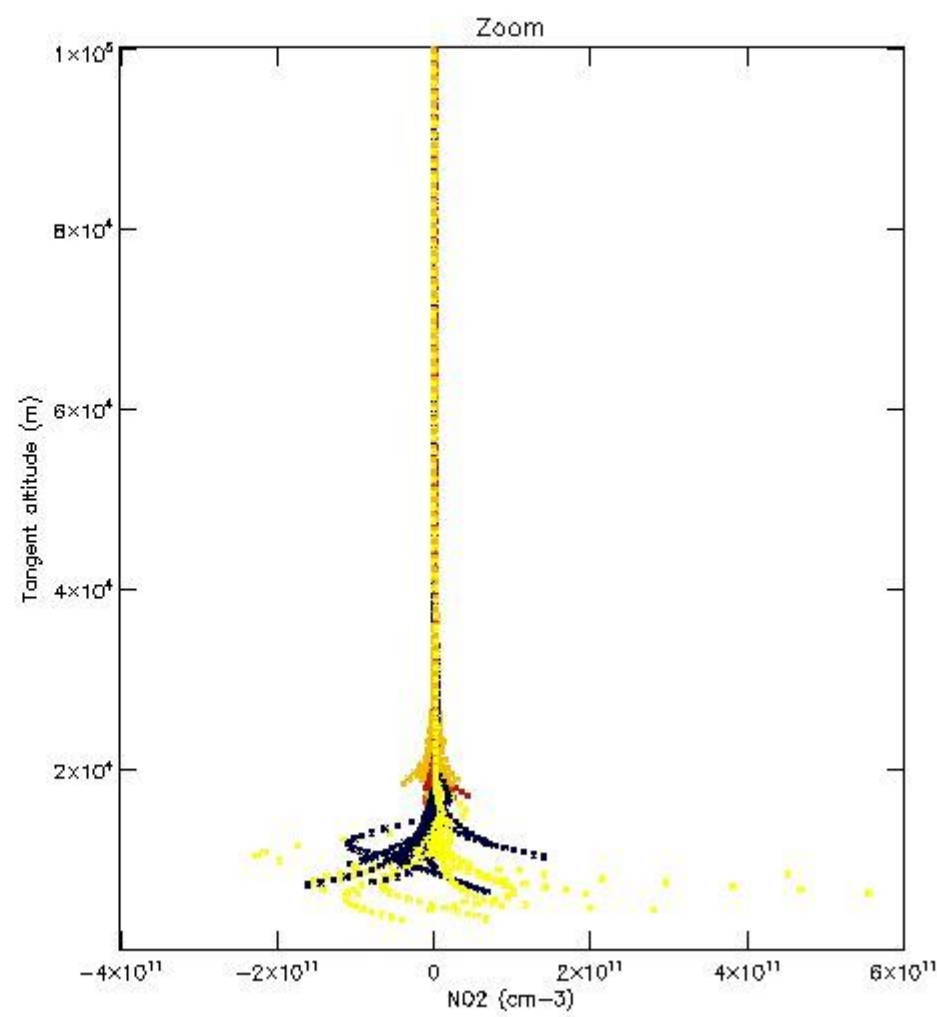
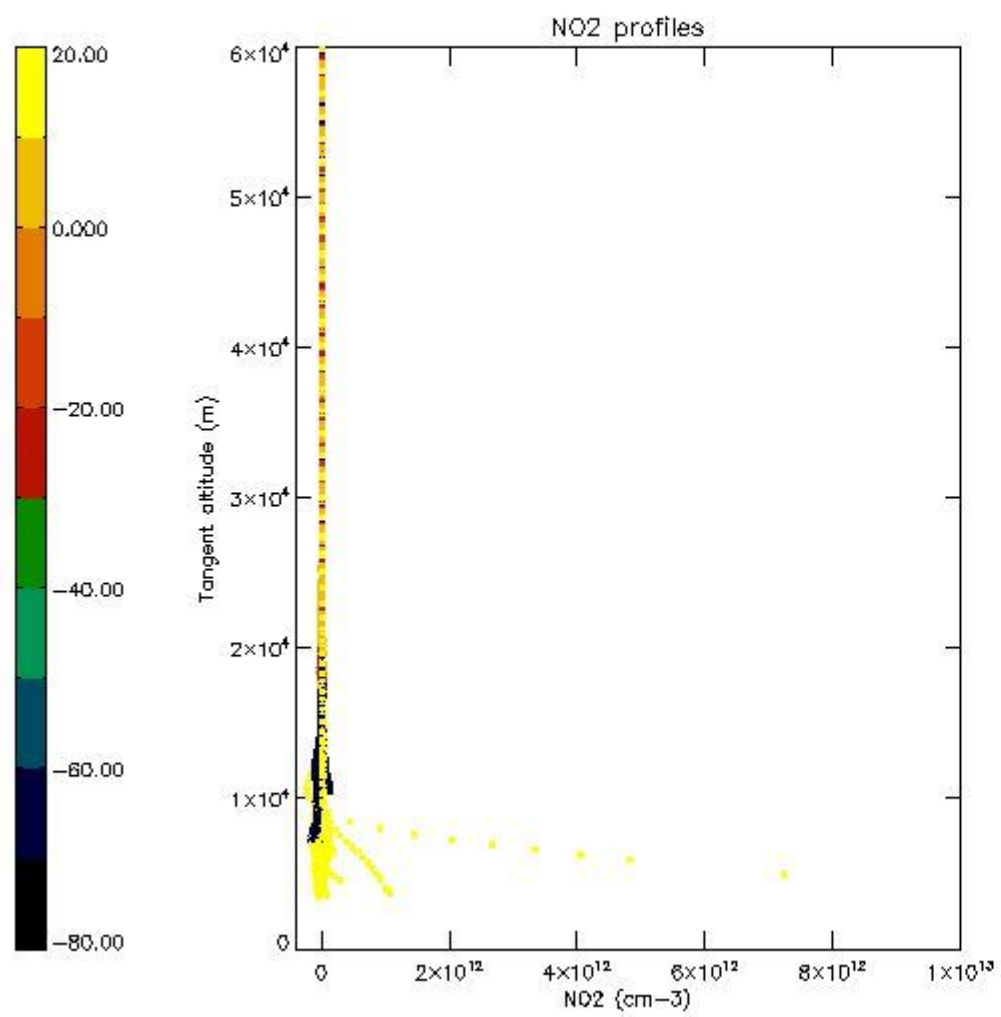
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



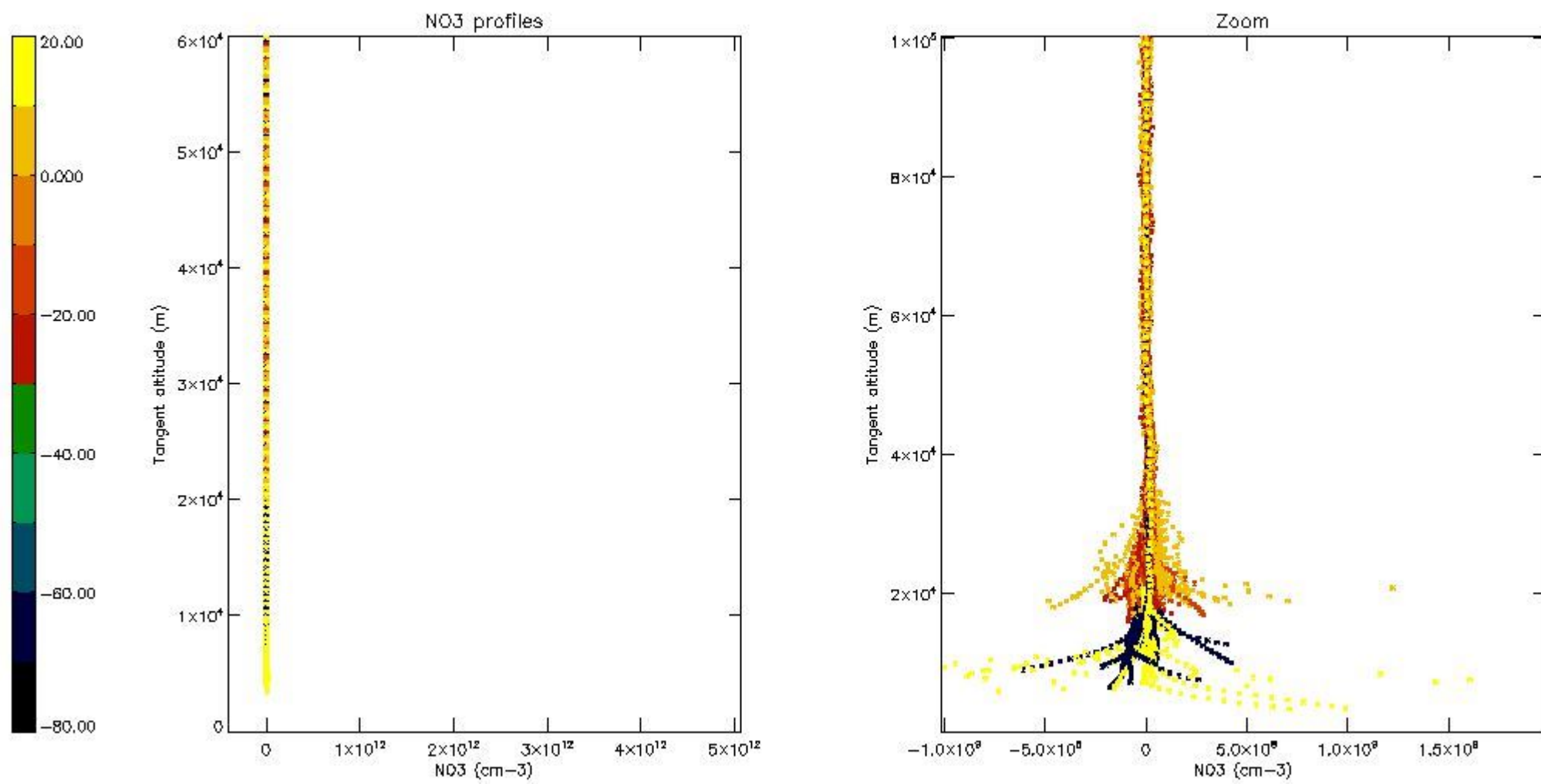
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



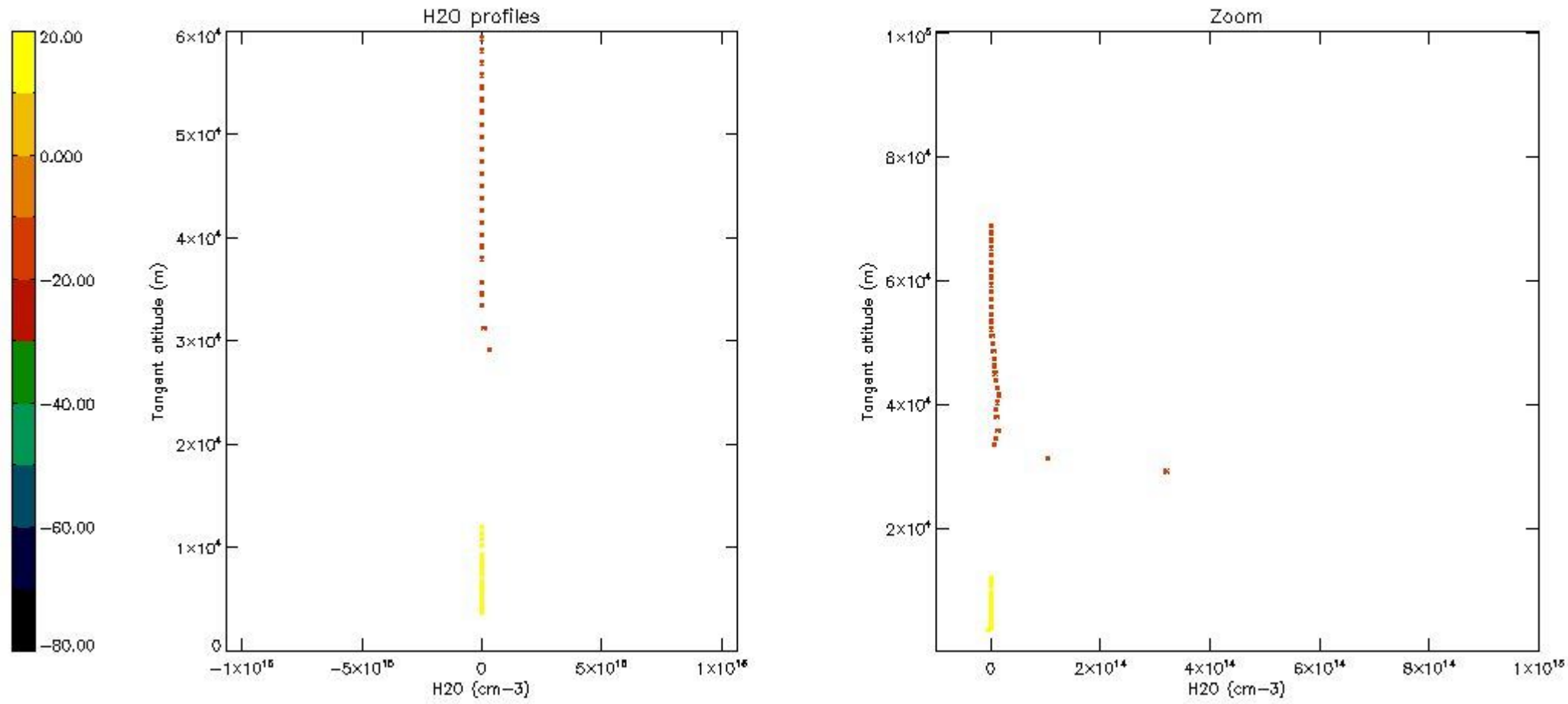
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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)

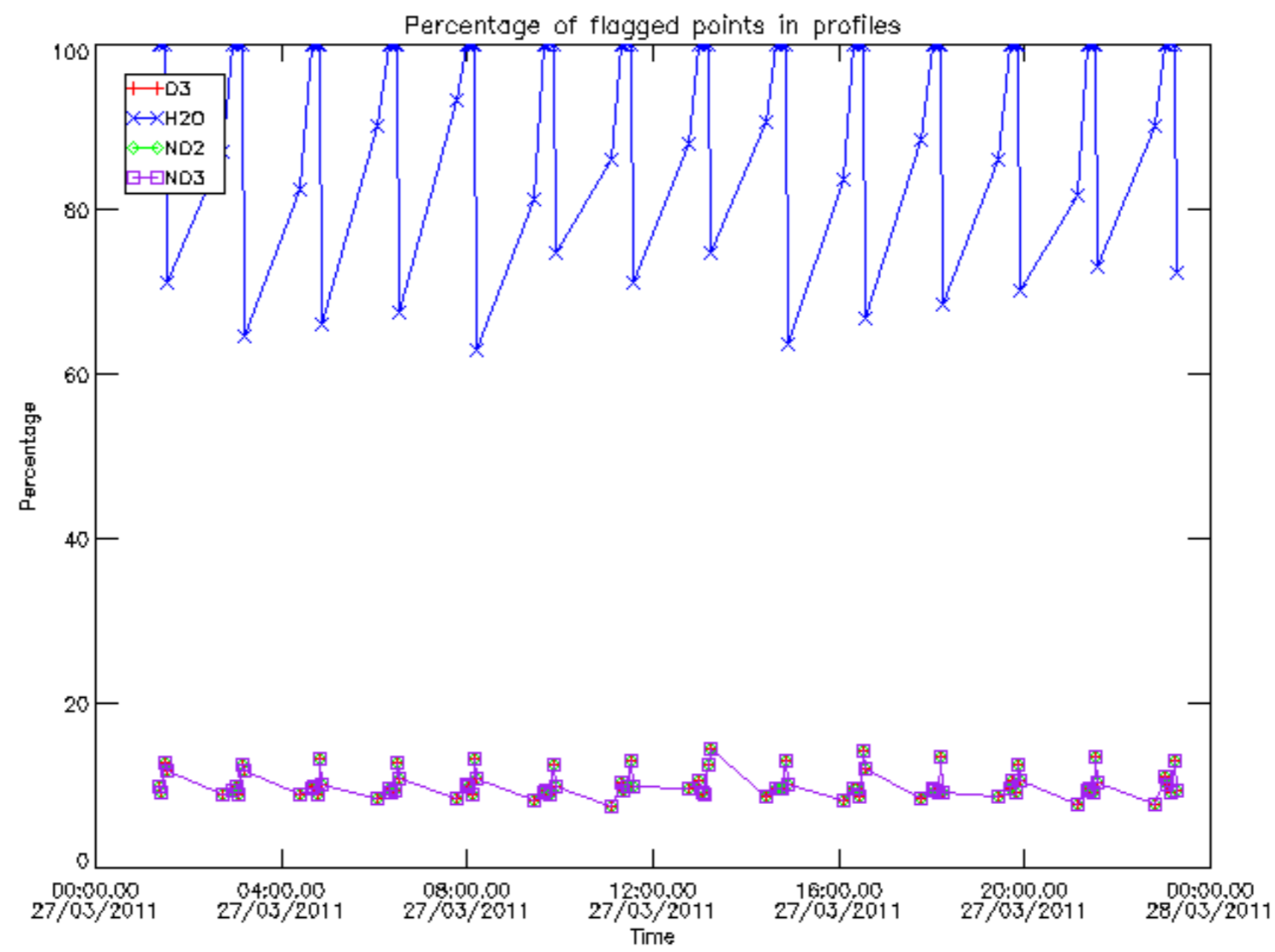
The colorbar represents the latitude.



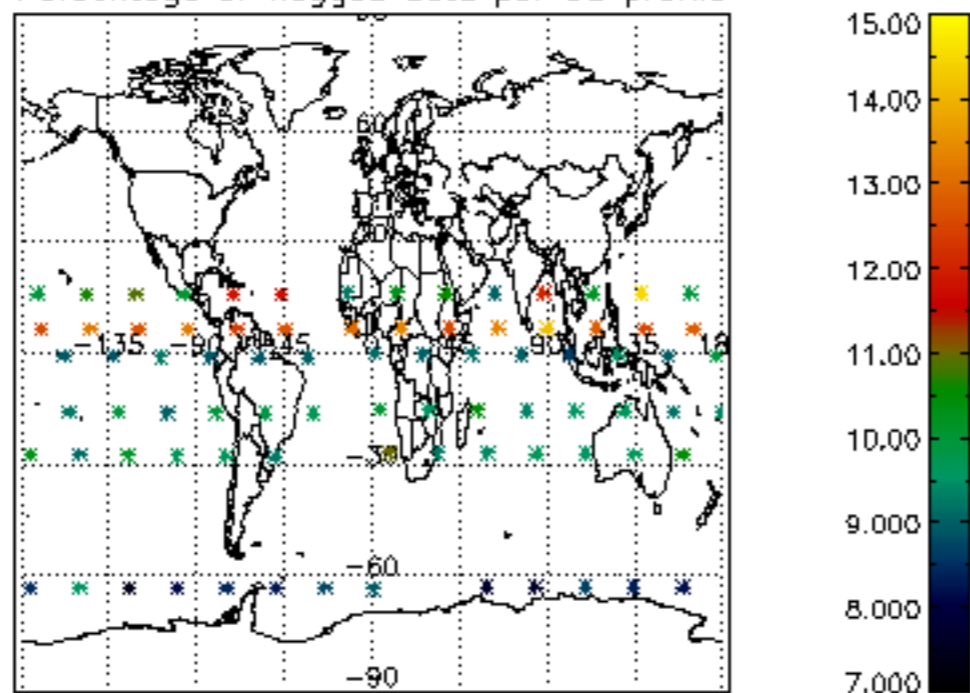
## 6. Auxiliary Data Files used for the production reported in section 2

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.

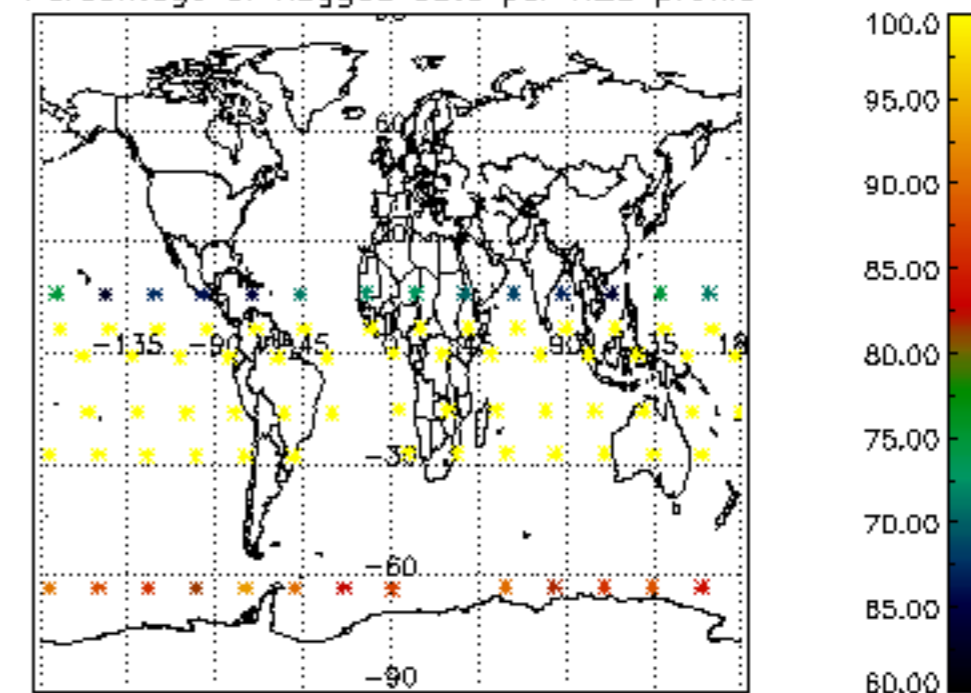
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	27-MAR-2011 01:21:15
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	27-MAR-2011 01:21:15
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	27-MAR-2011 01:21:15



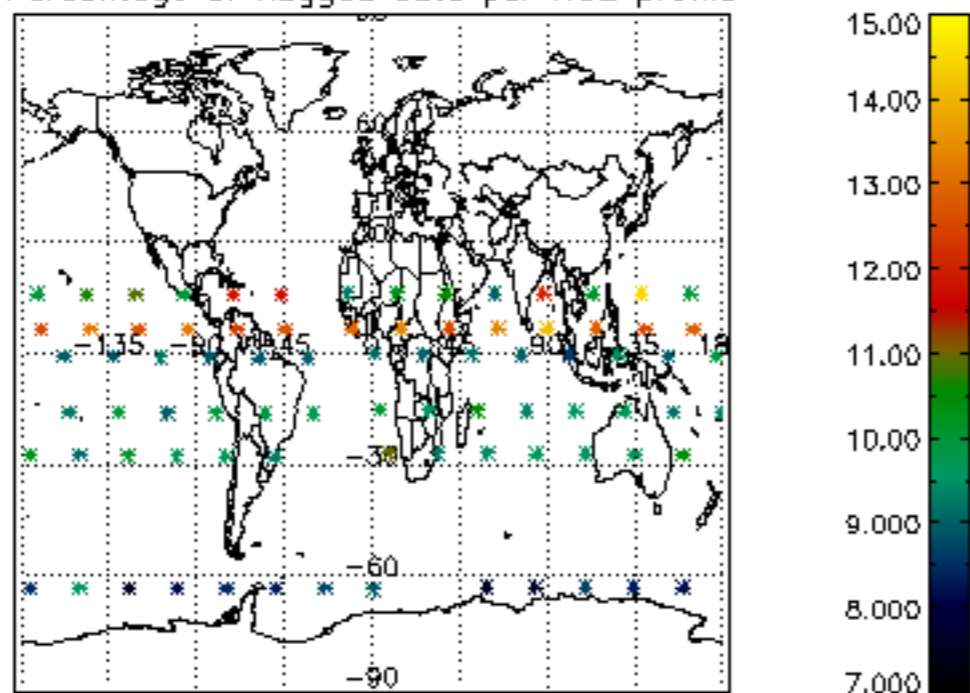
Percentage of flagged data per D3 profile



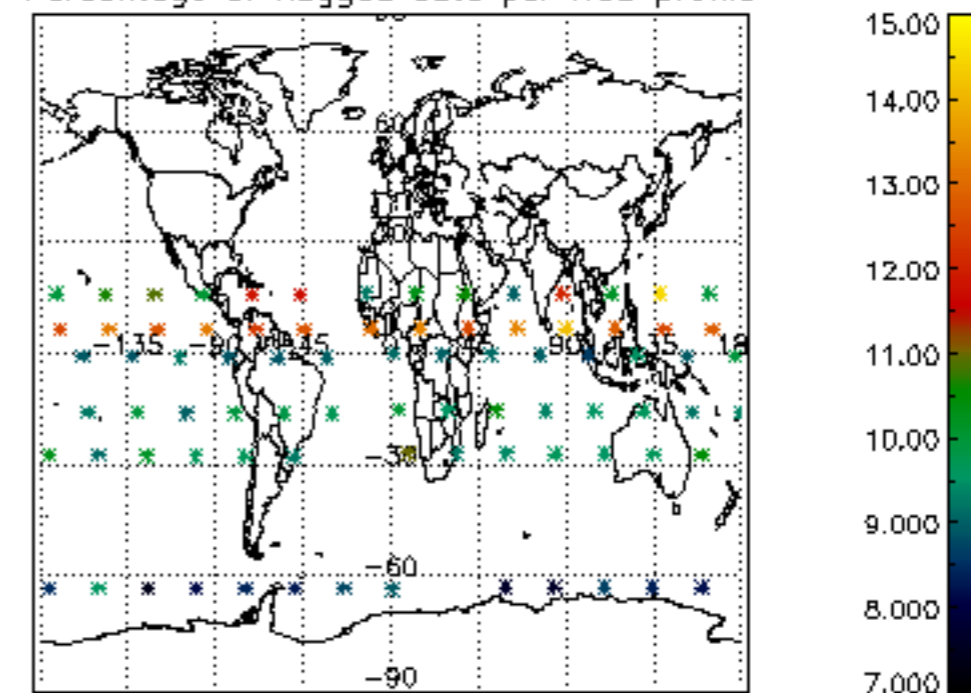
Percentage of flagged data per H2O profile



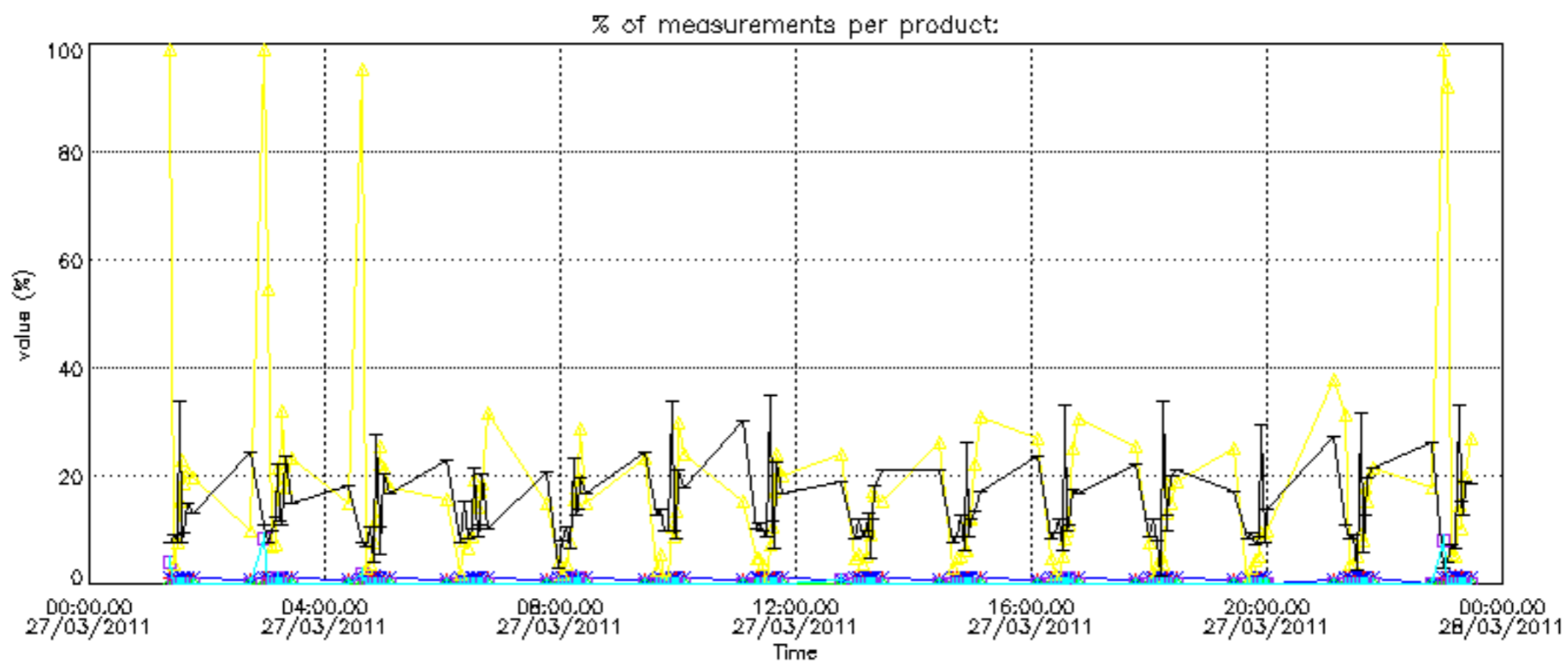
Percentage of flagged data per NO2 profile

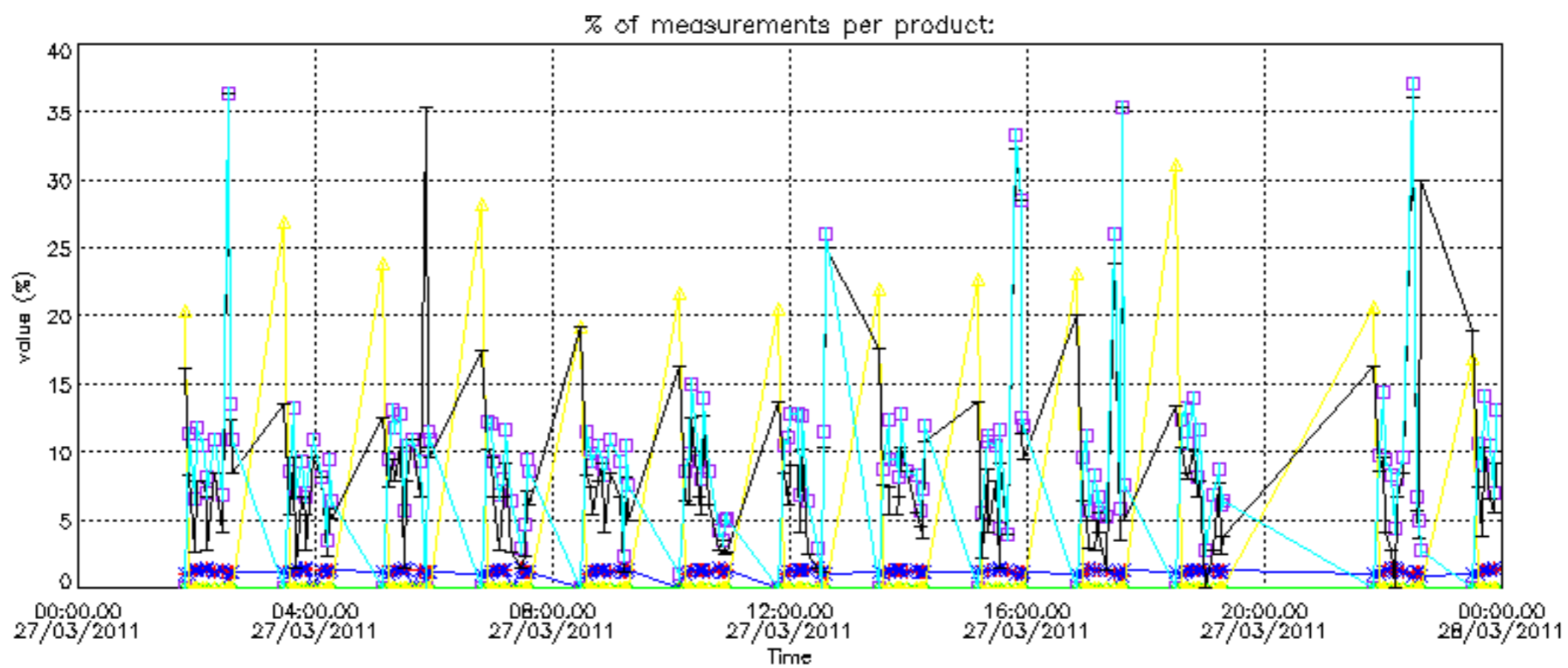


Percentage of flagged data per NO3 profile

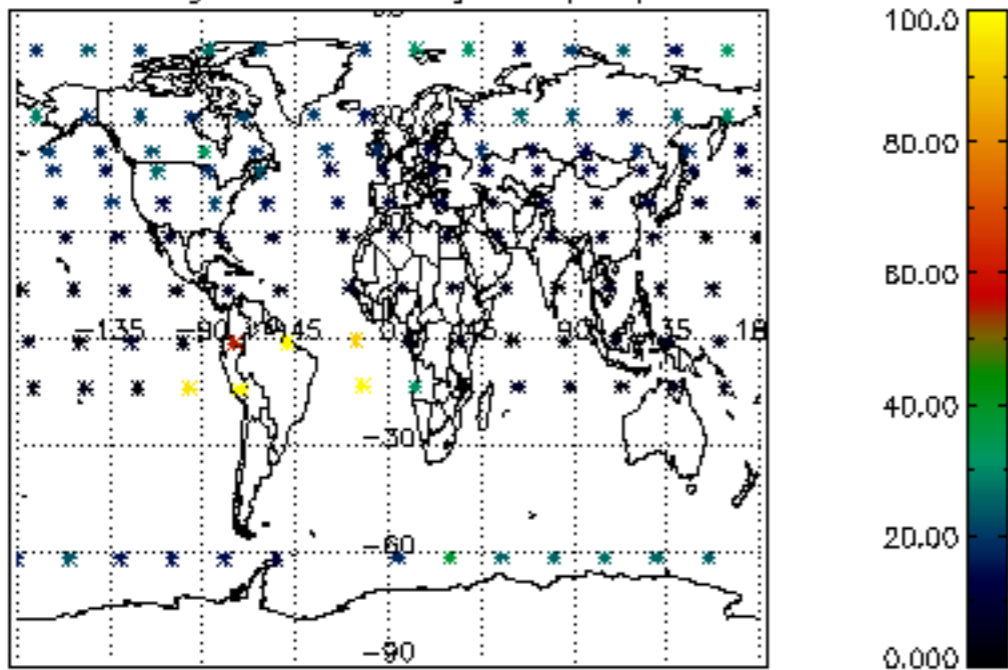




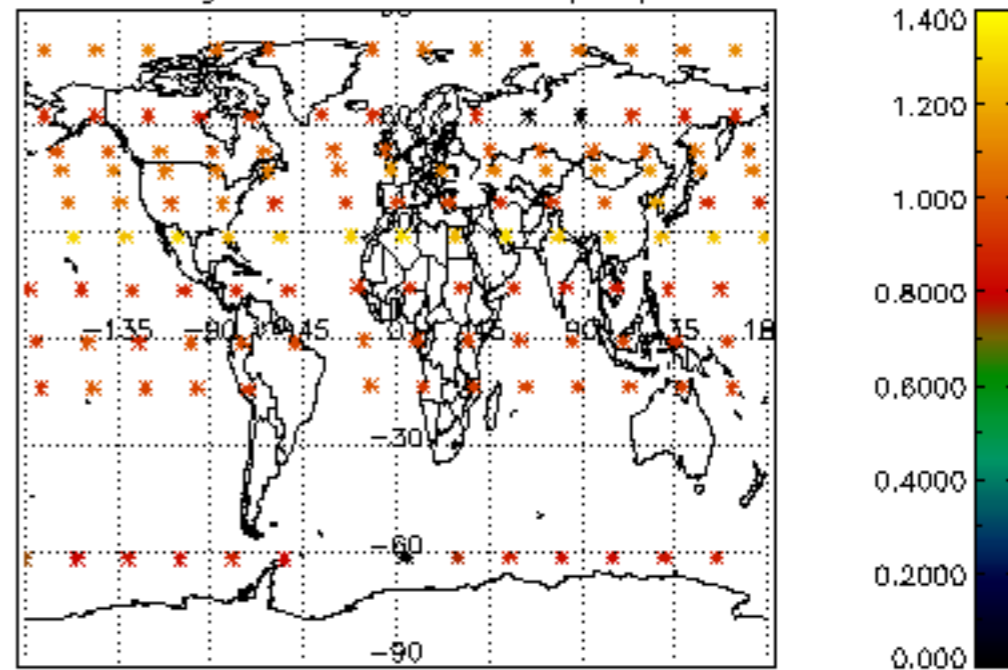




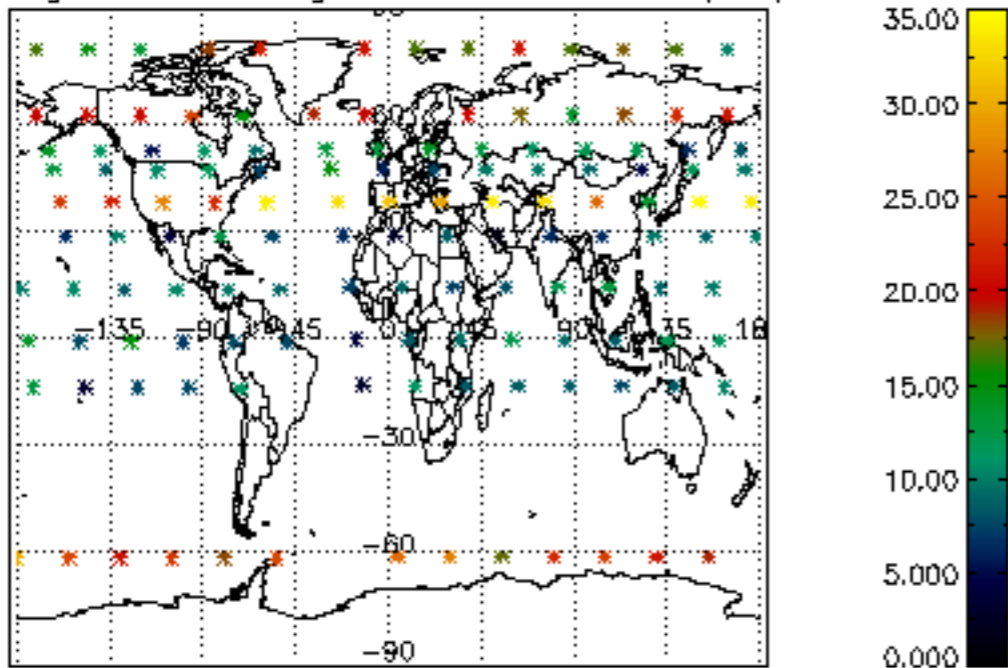
Percentage of cosmic ray hits per profile



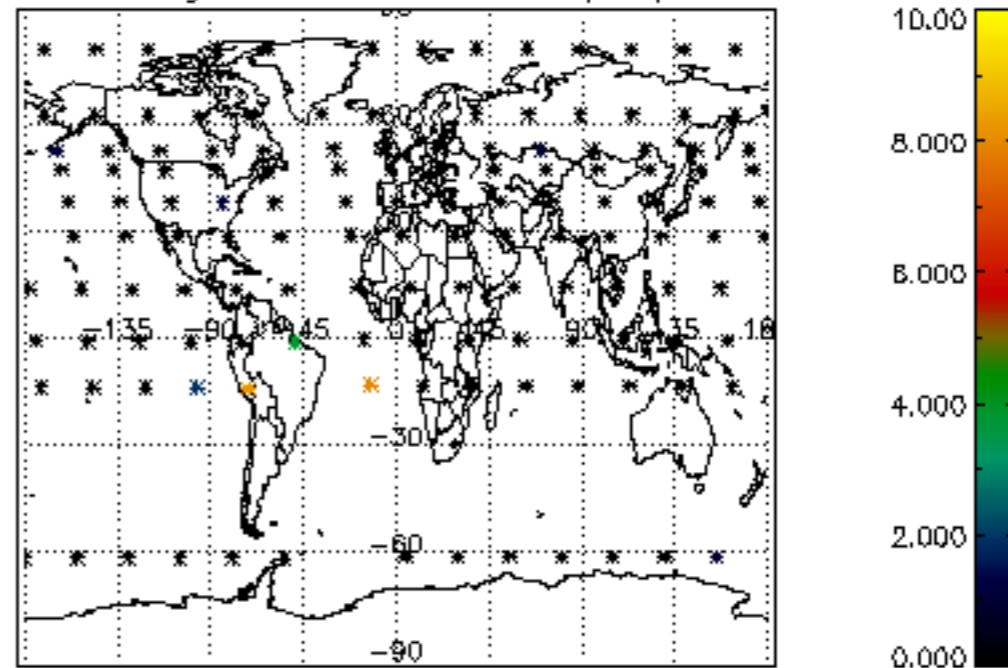
Percentage of datation errors per profile



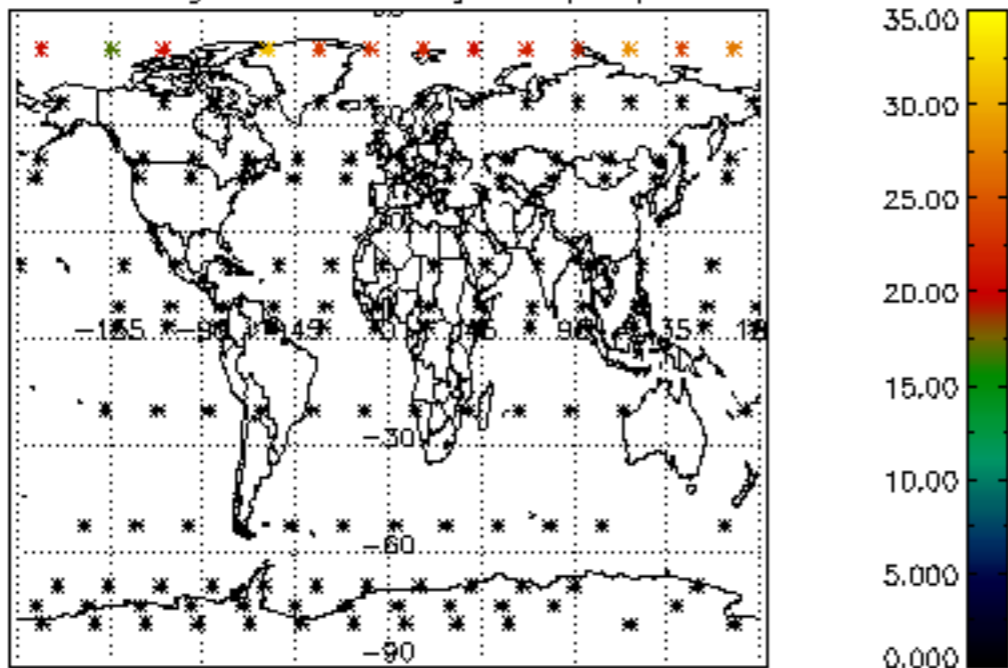
Percentage of star falling outside central band per profile



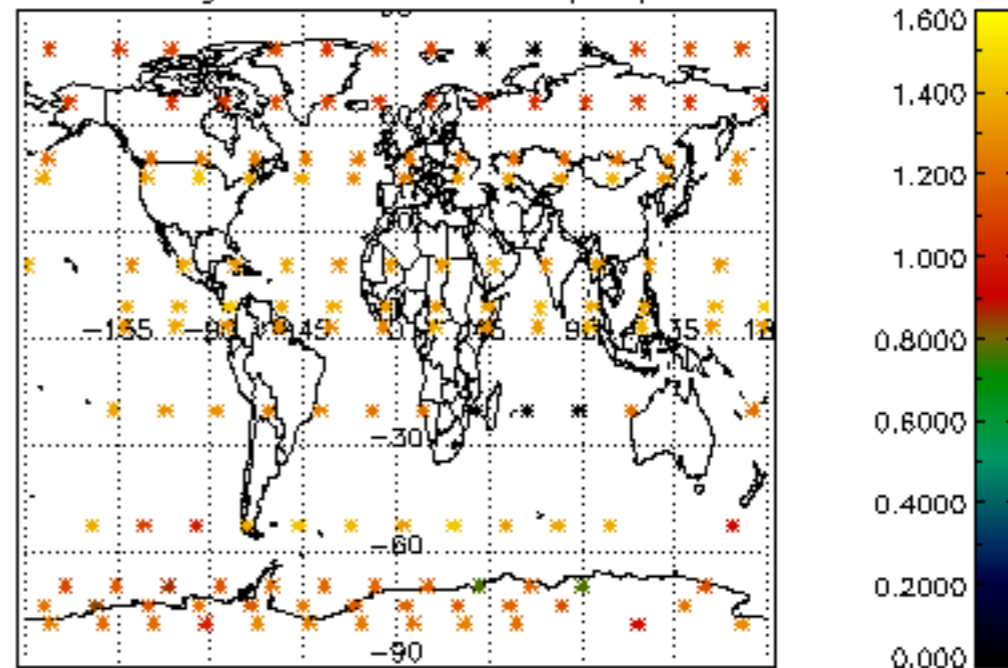
Percentage of saturation errors per profile



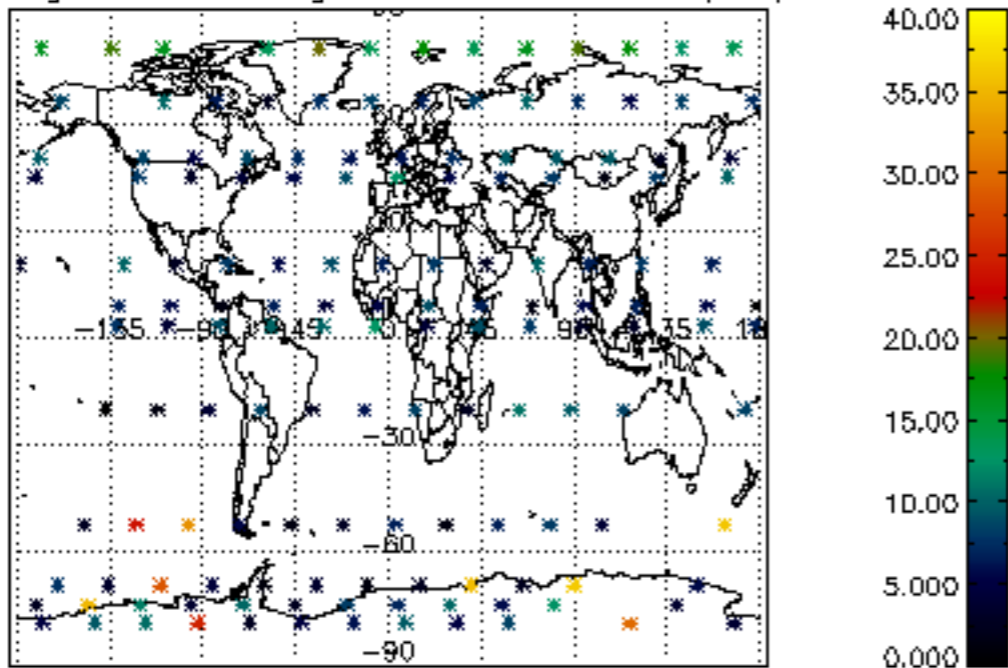
Percentage of cosmic ray hits per profile



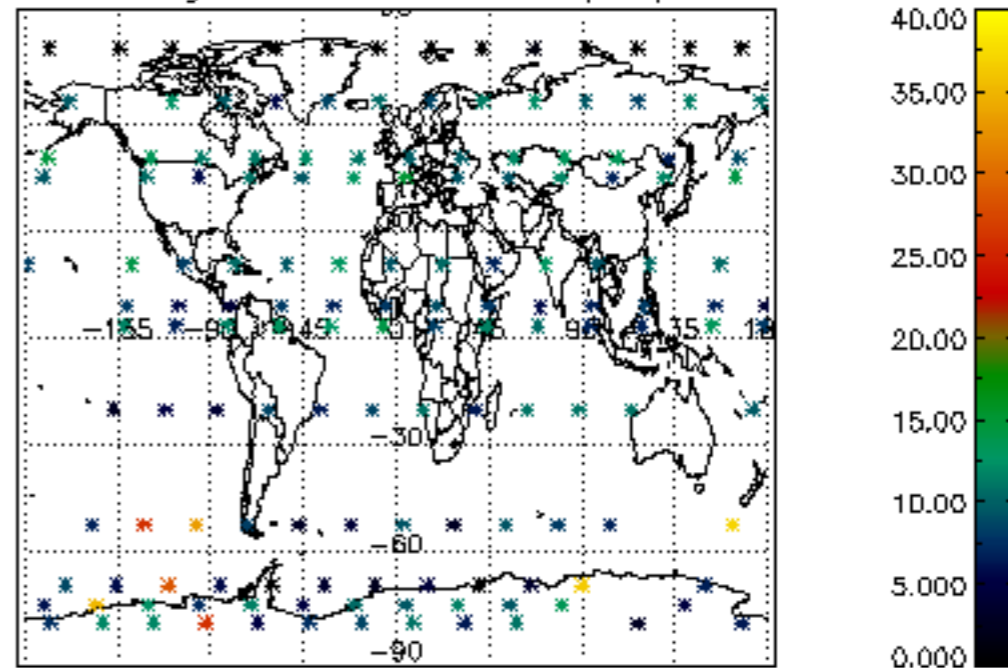
Percentage of datation errors per profile

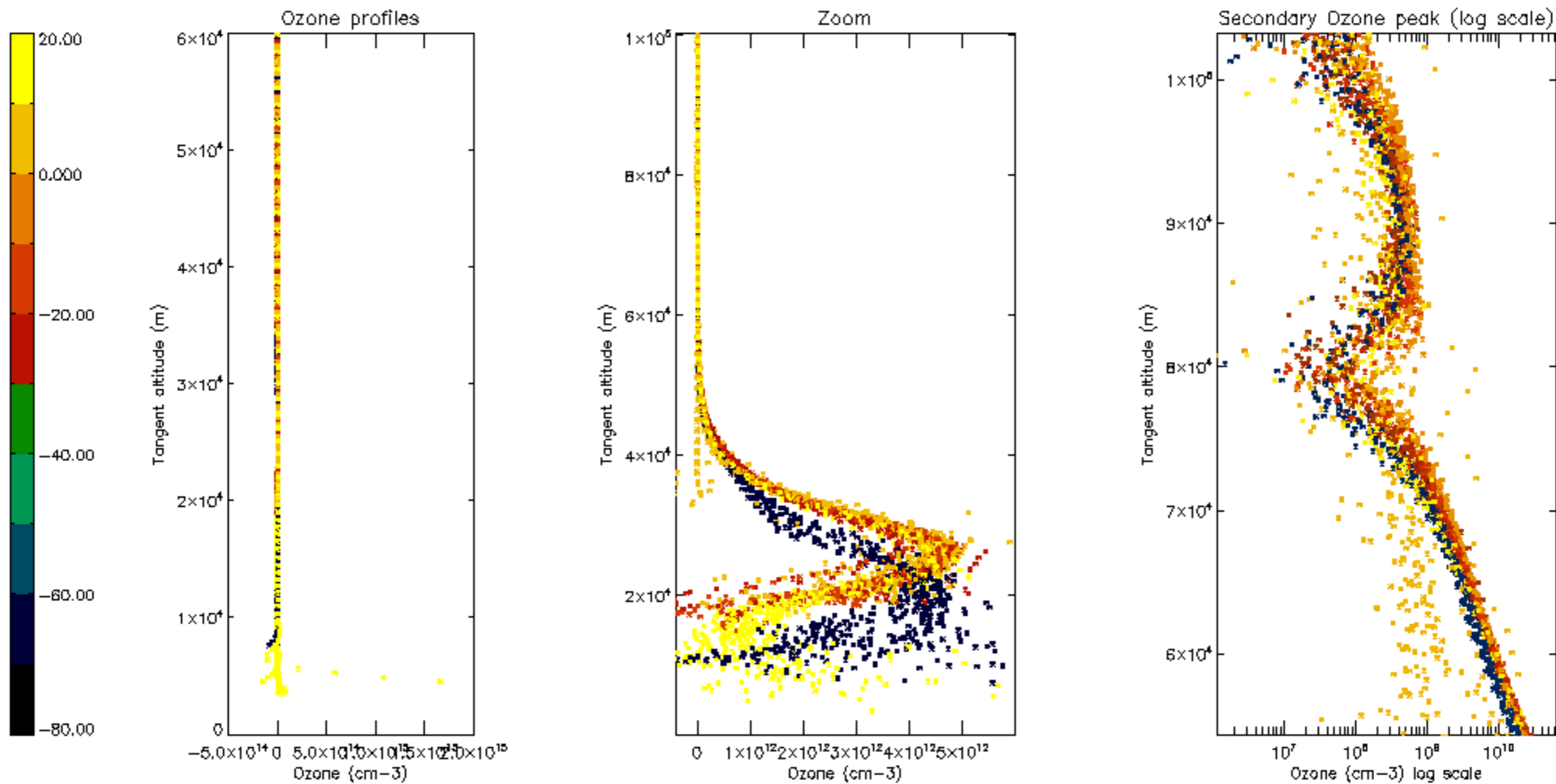


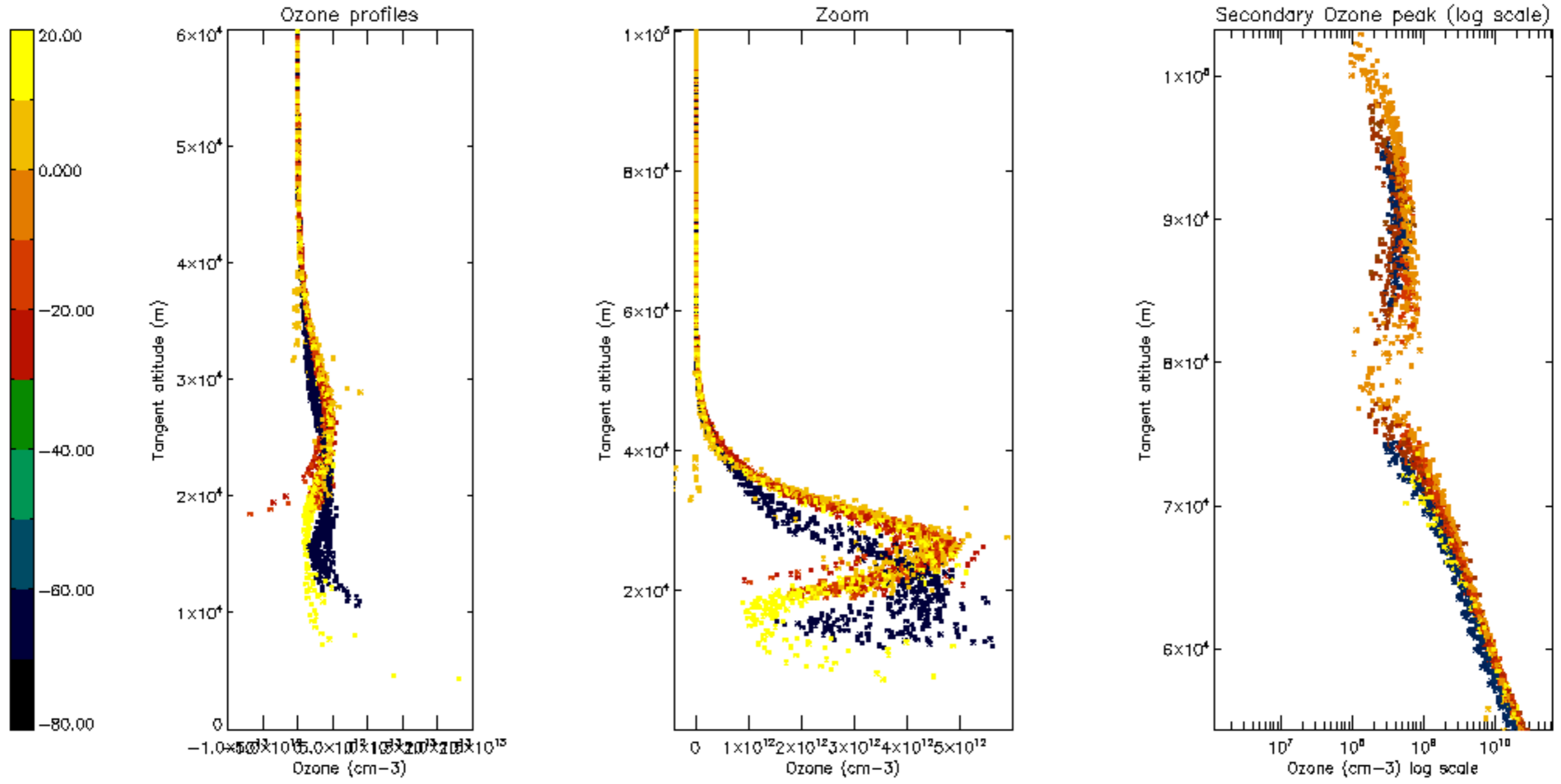
Percentage of star falling outside central band per profile

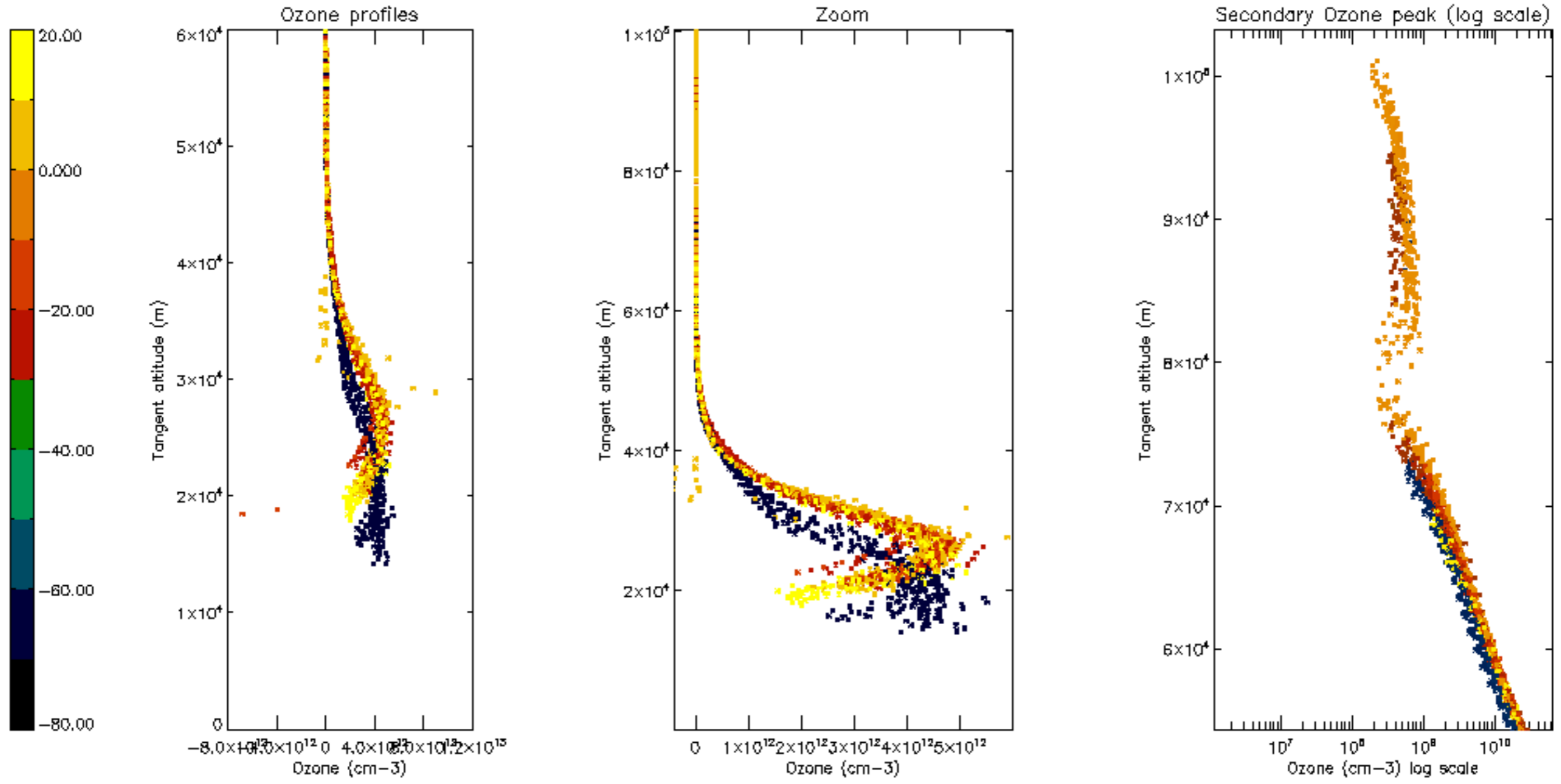


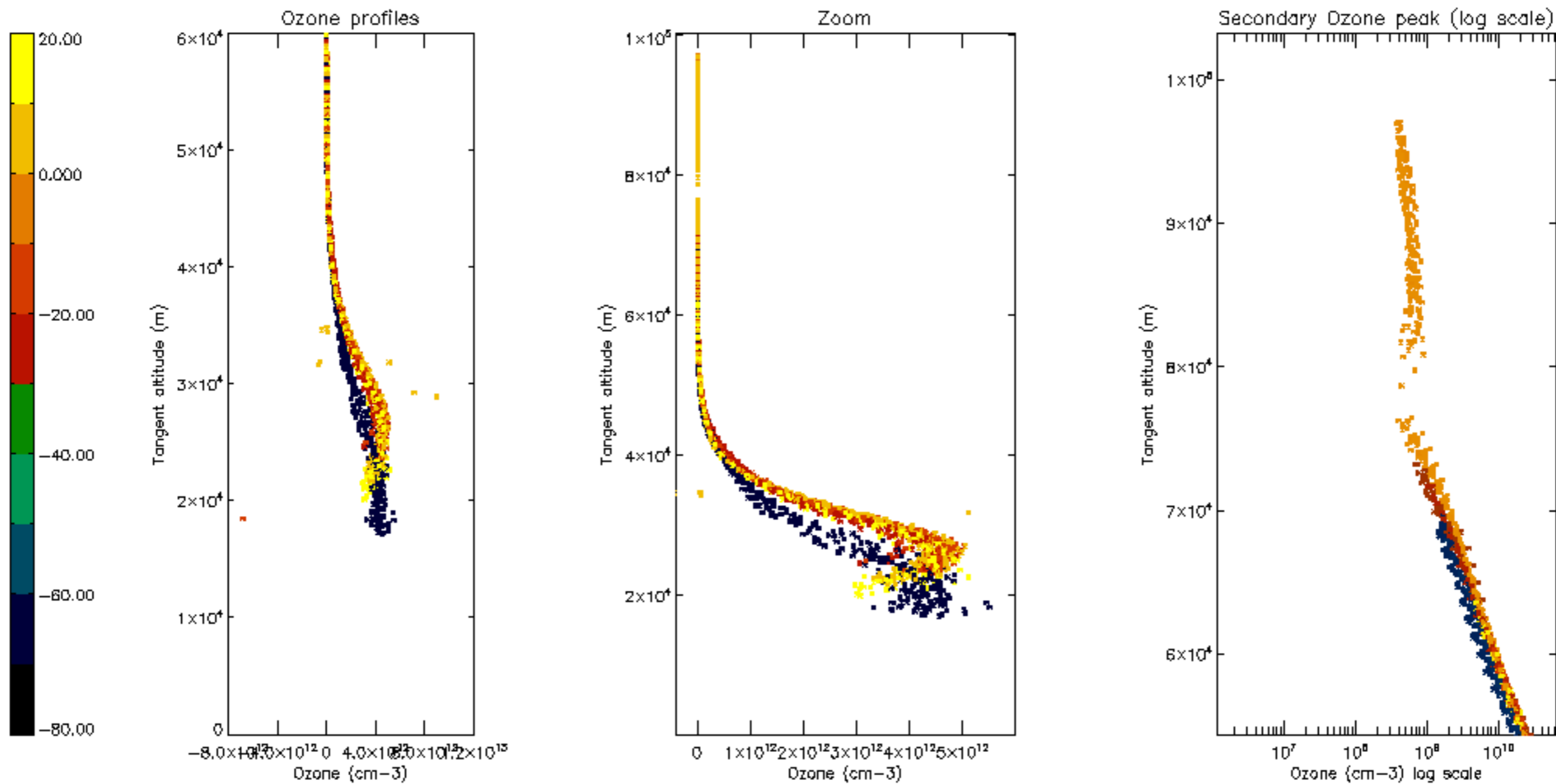
Percentage of saturation errors per profile



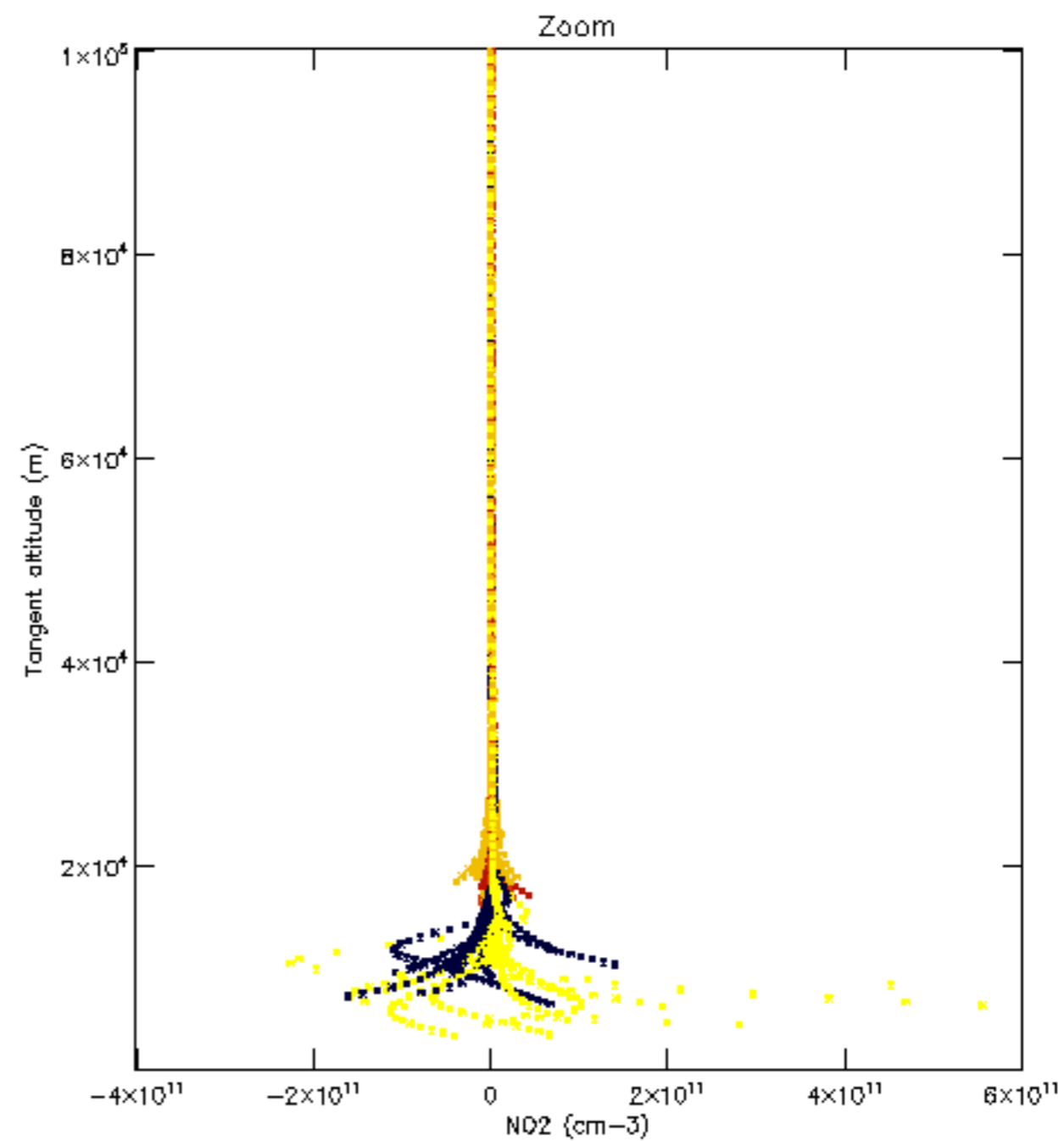
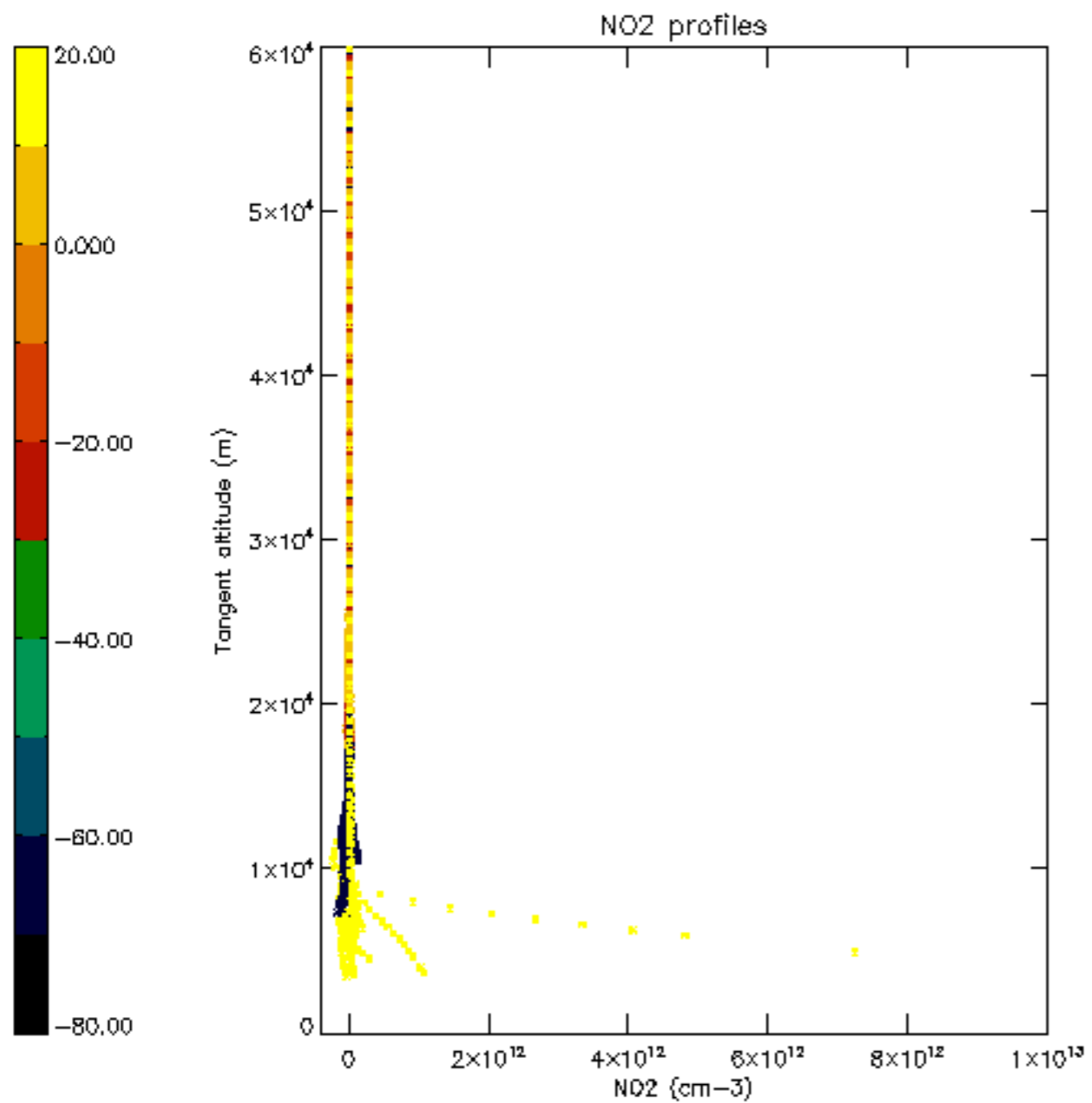


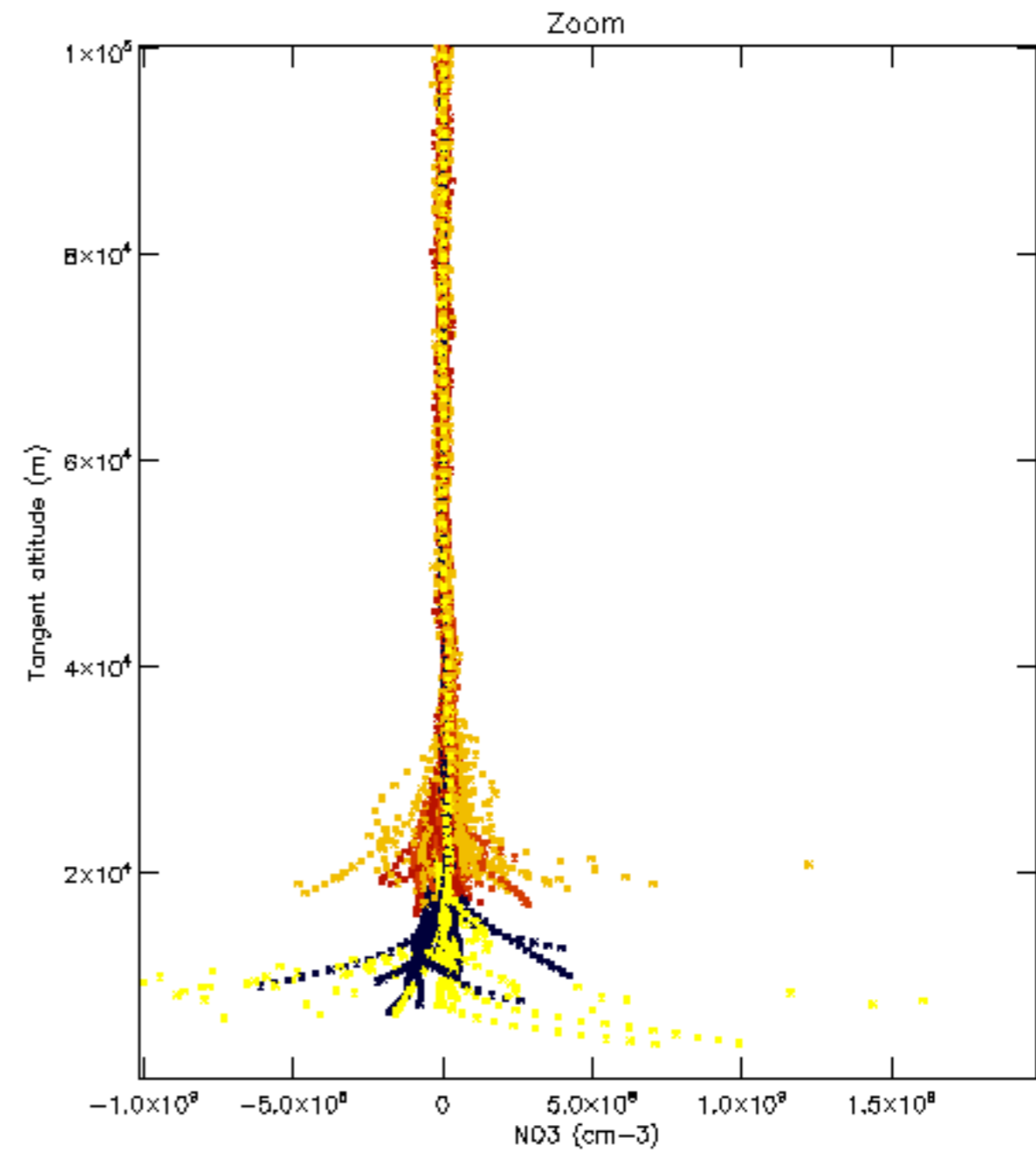
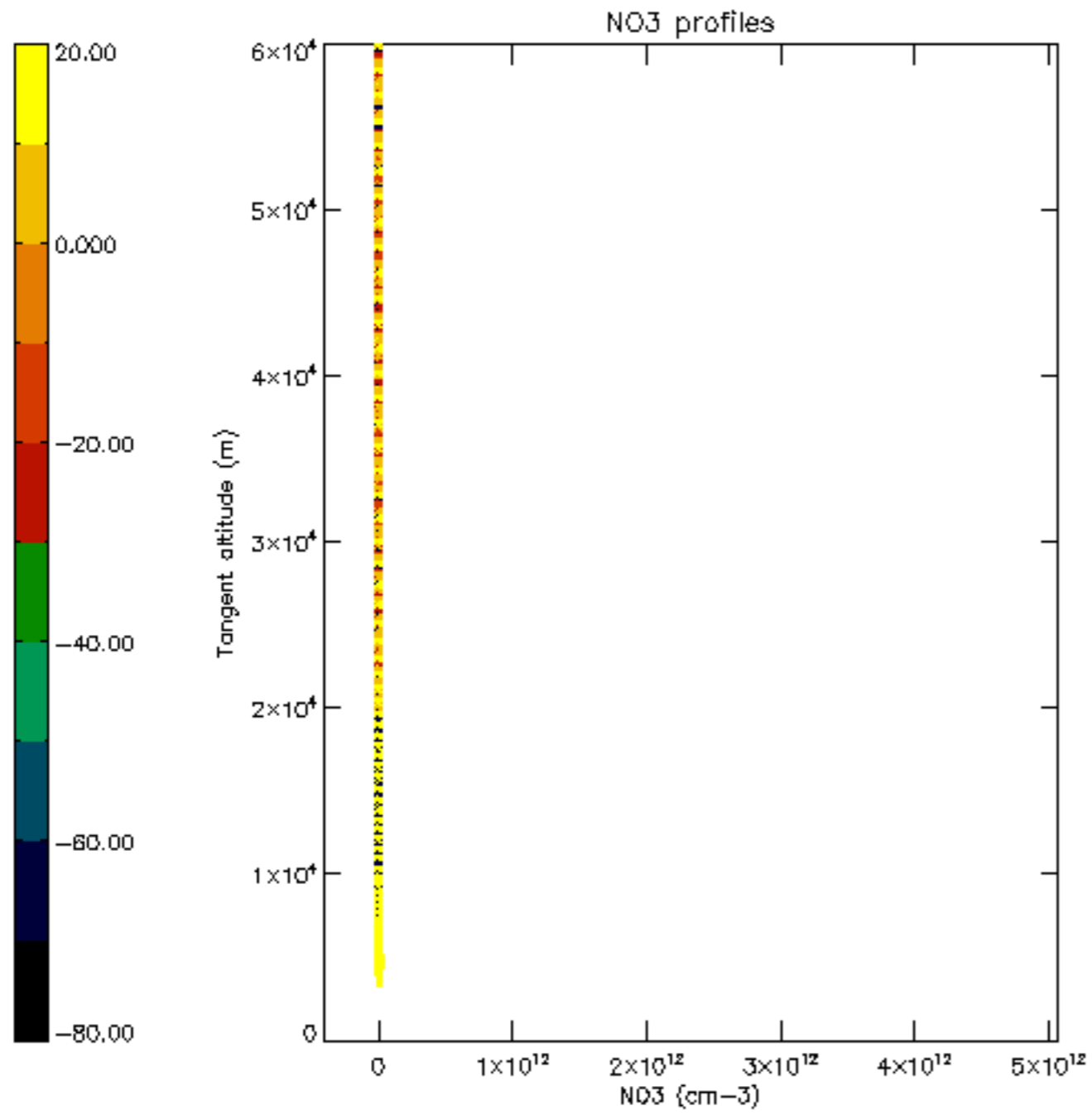


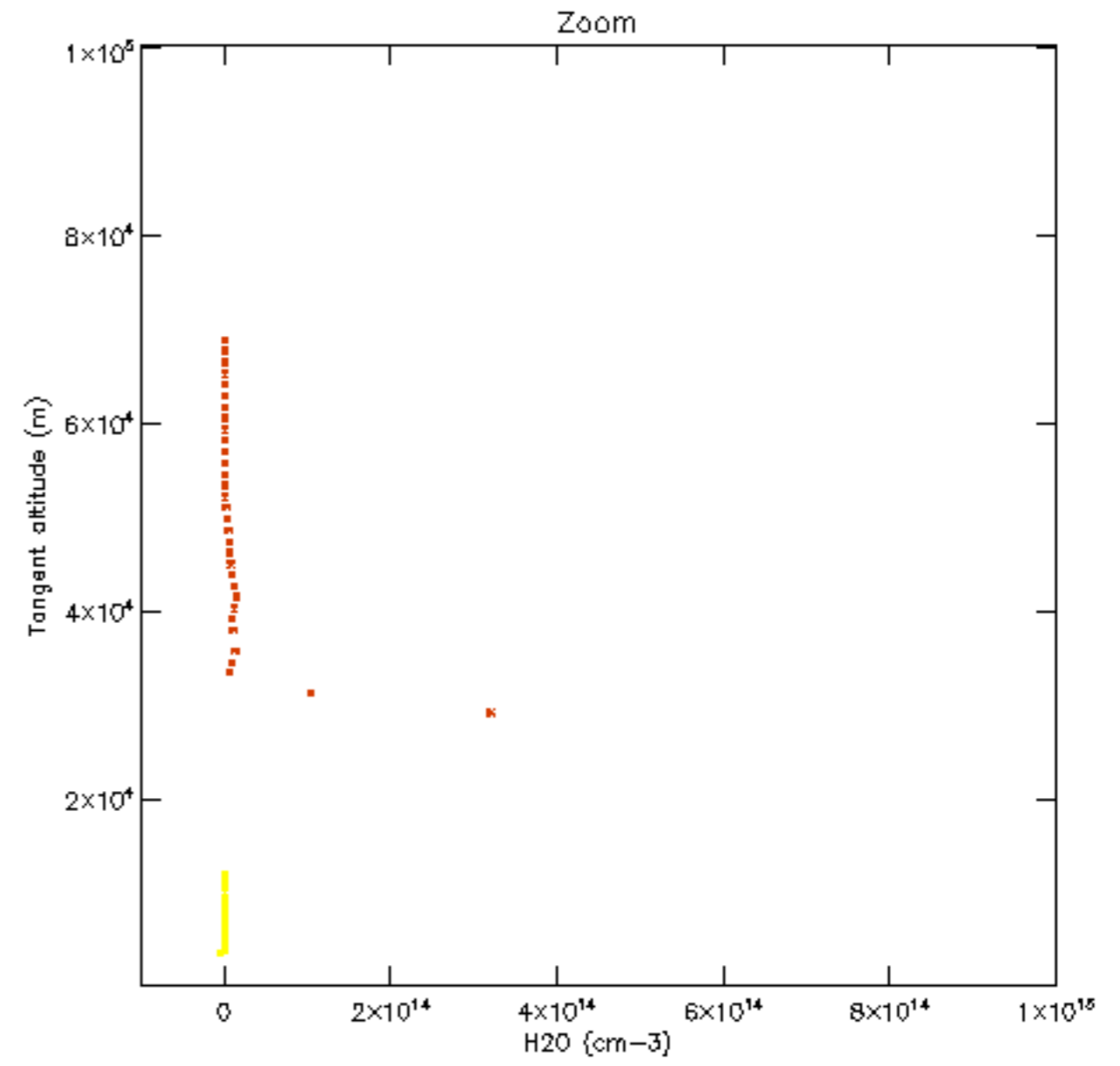
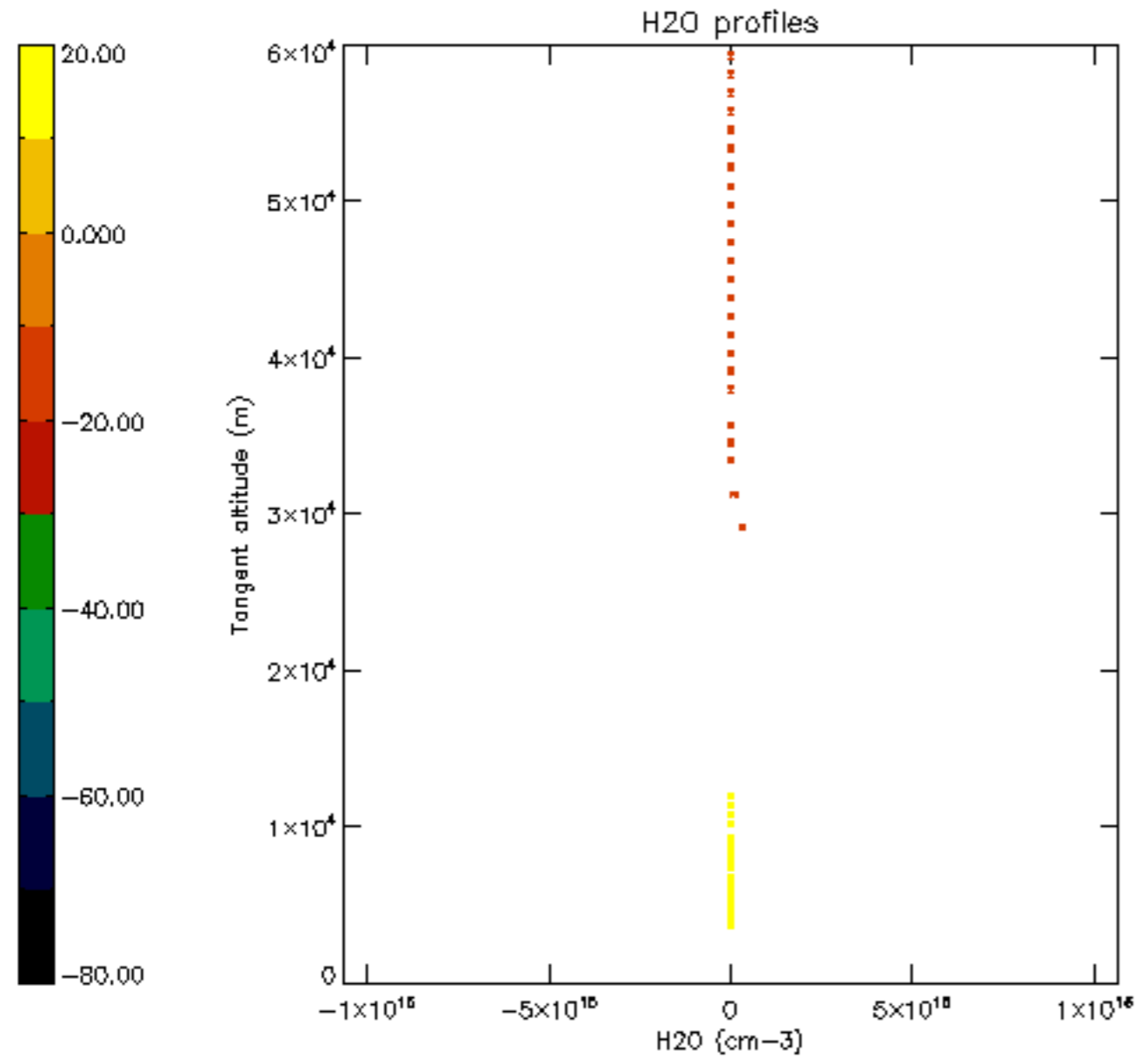


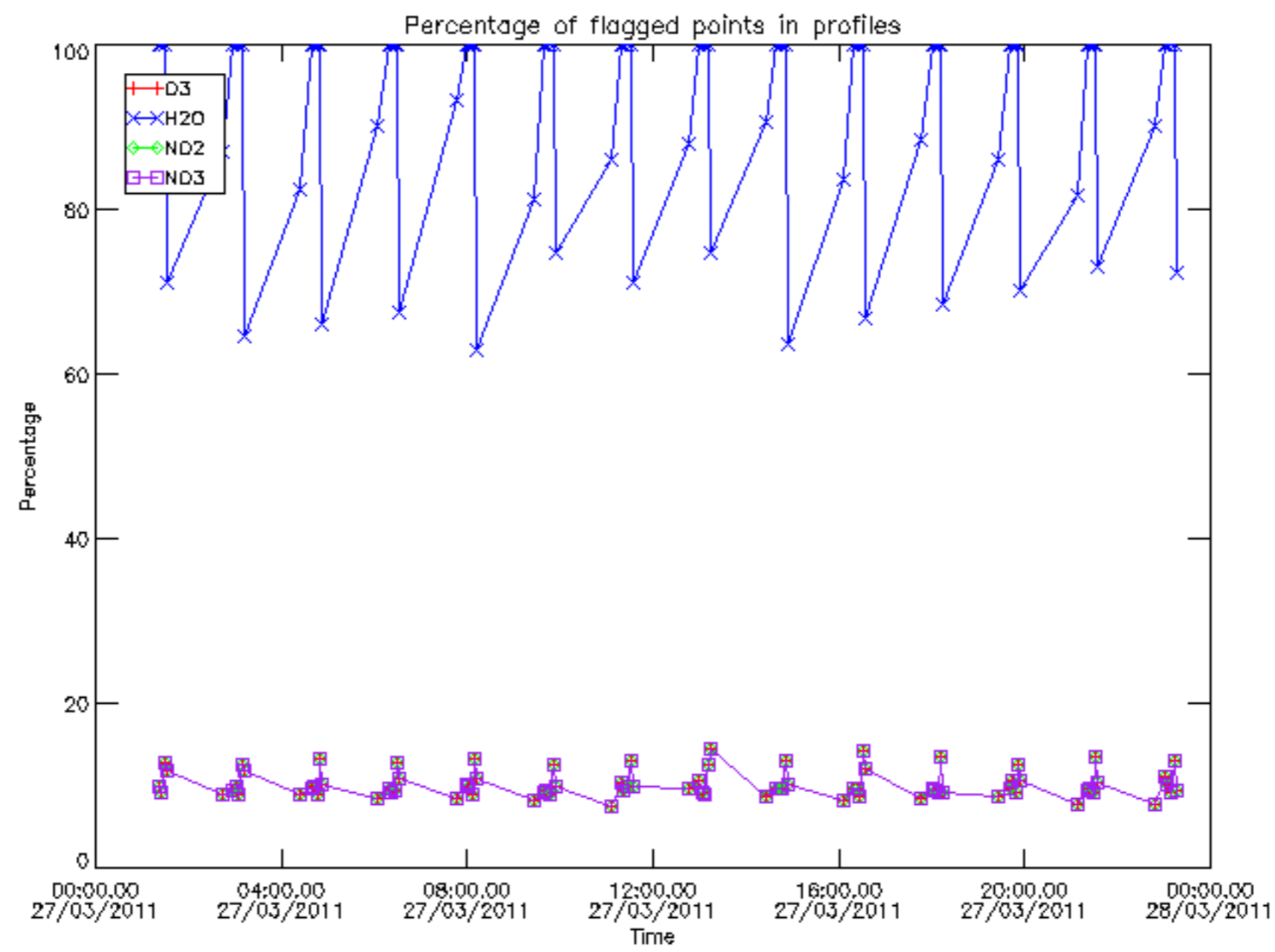




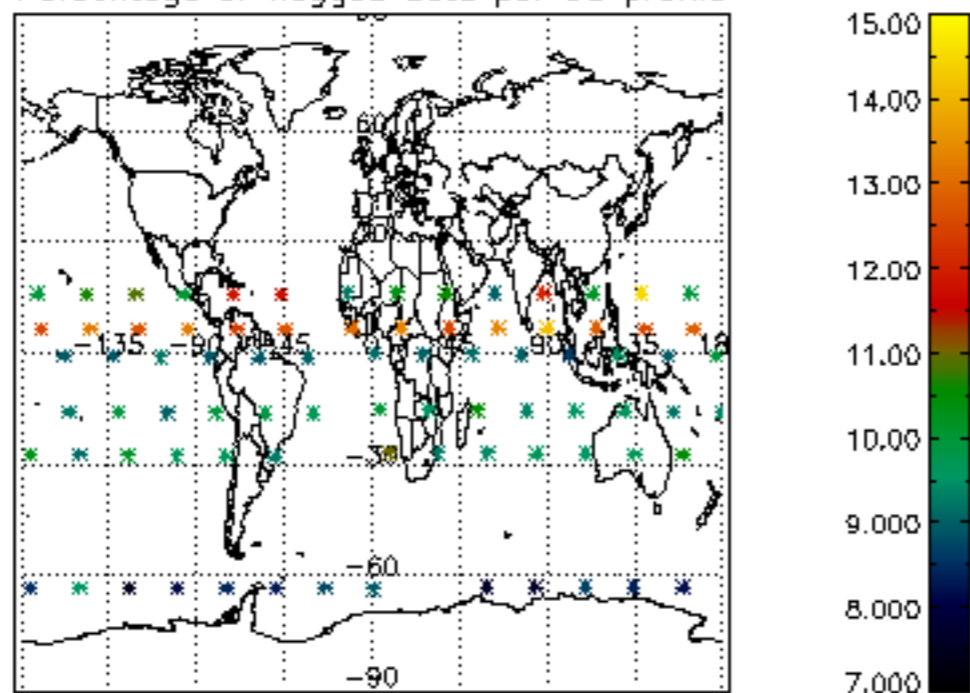




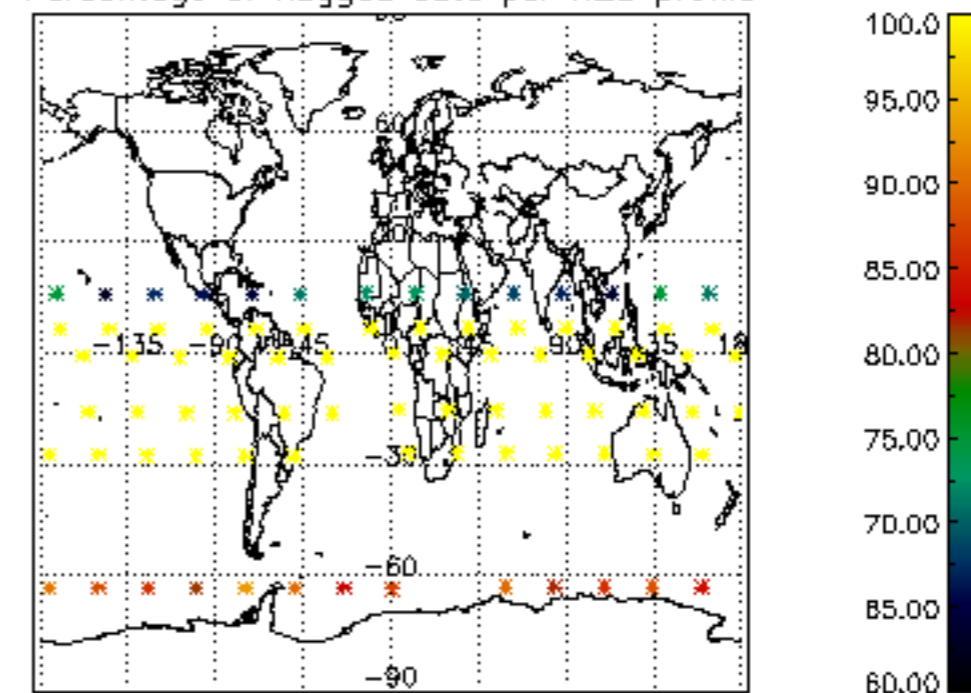




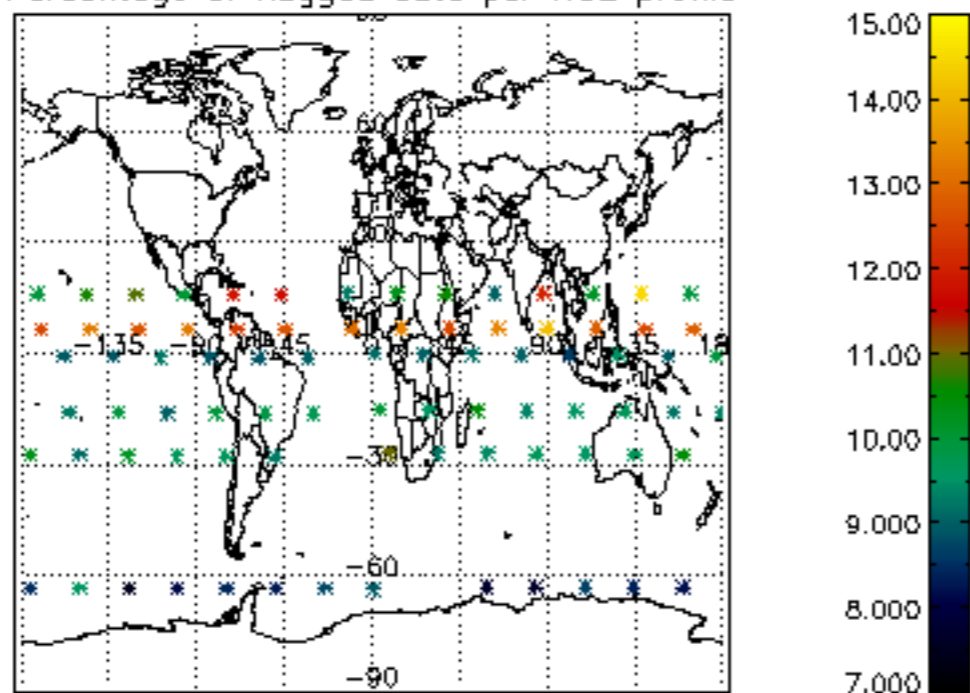
Percentage of flagged data per D3 profile



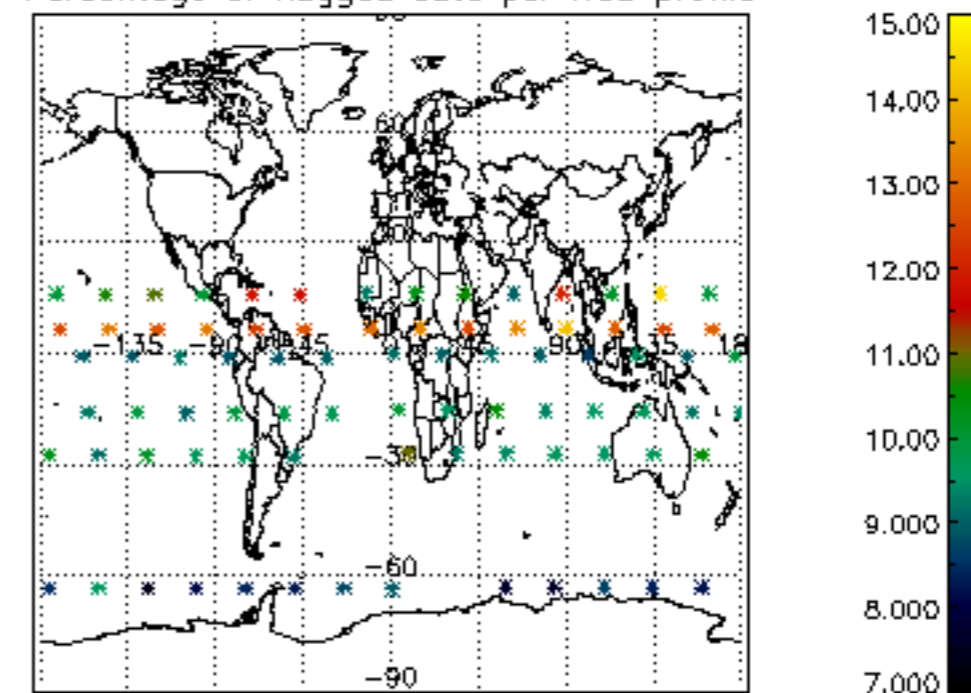
Percentage of flagged data per H2O profile

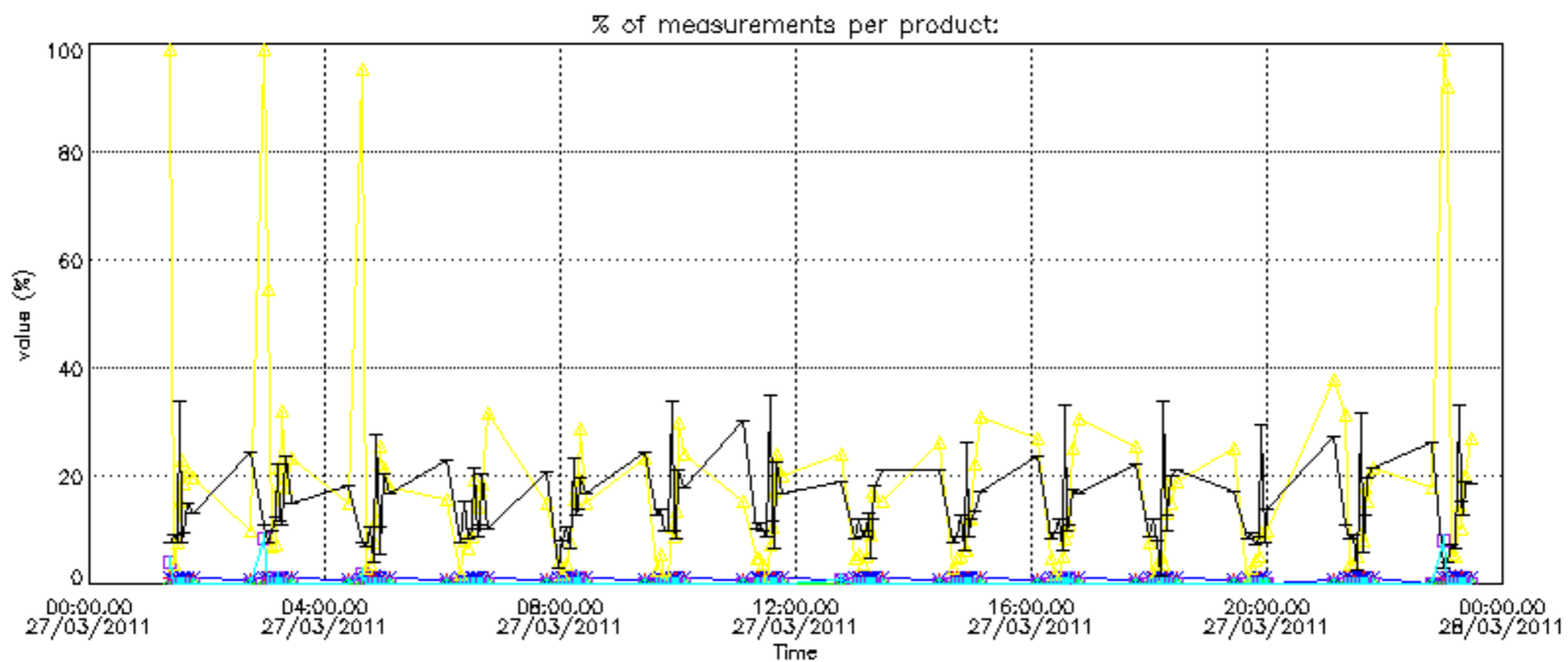


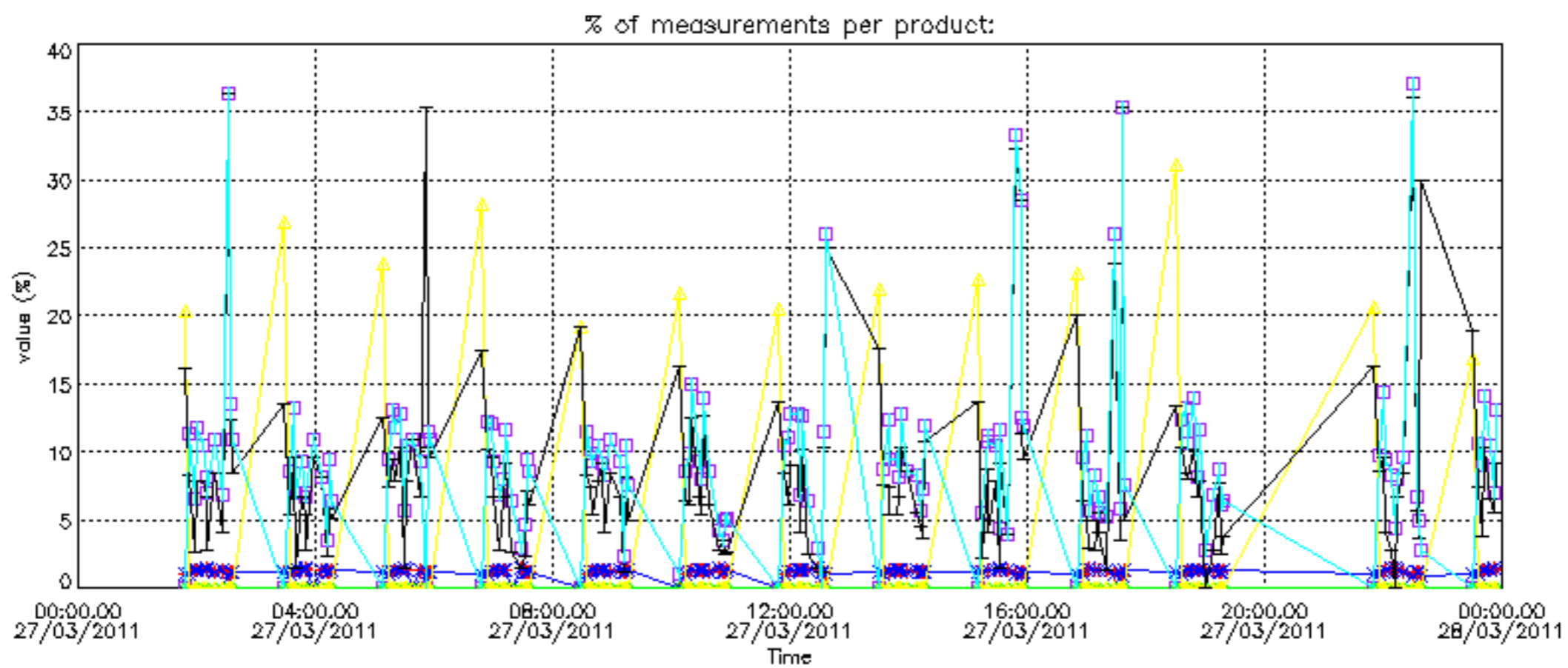
Percentage of flagged data per NO2 profile



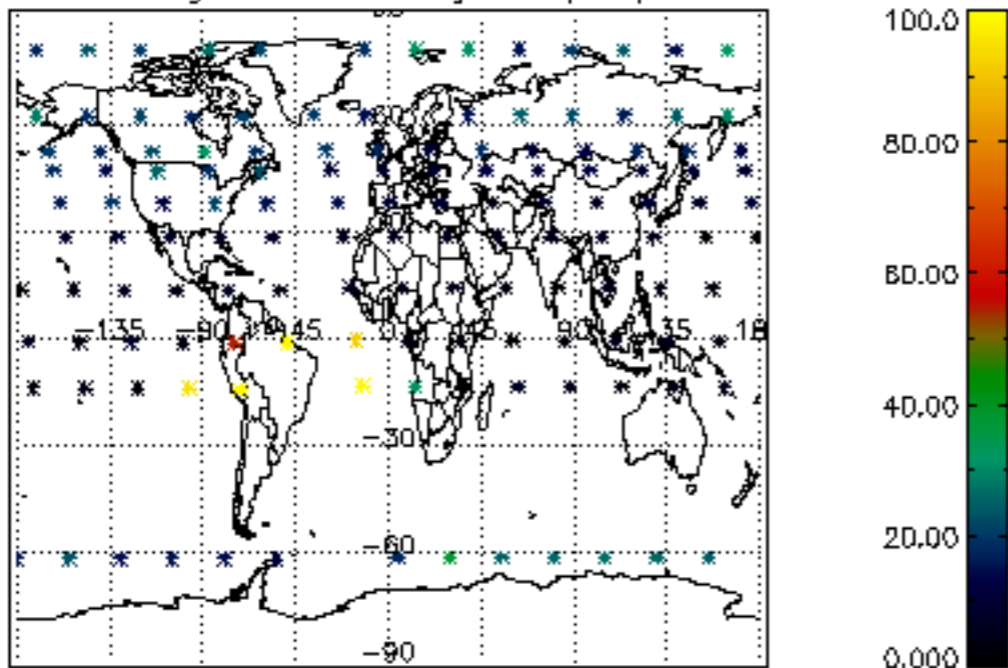
Percentage of flagged data per NO3 profile



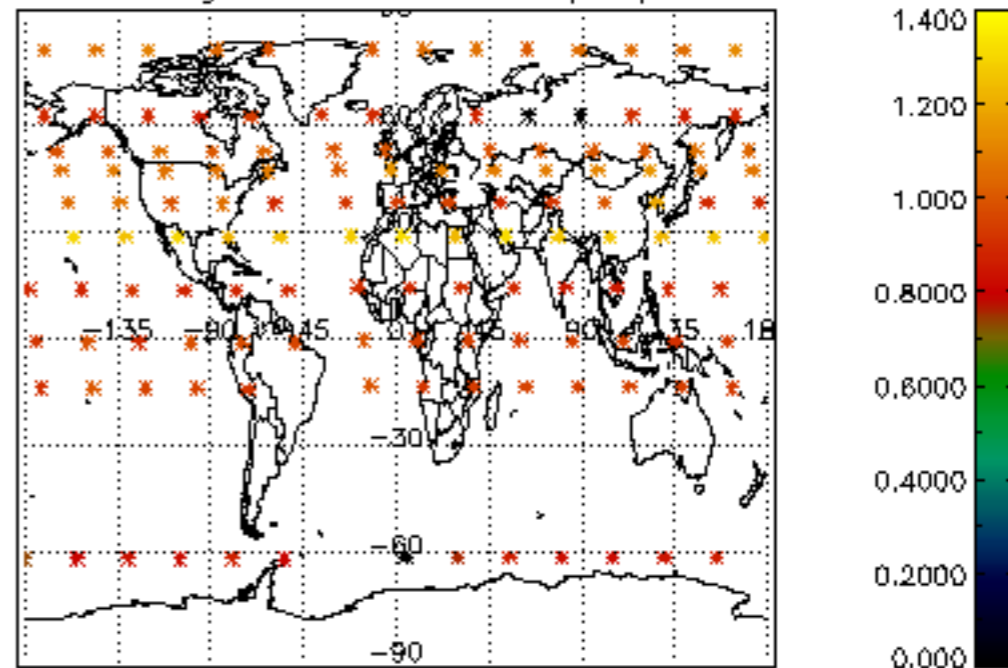




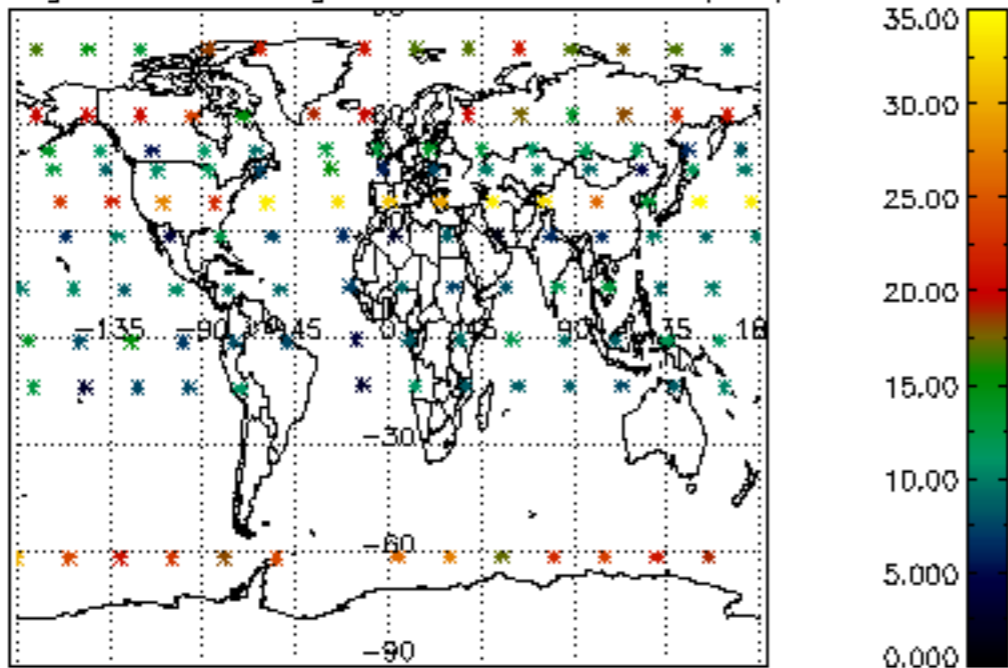
Percentage of cosmic ray hits per profile



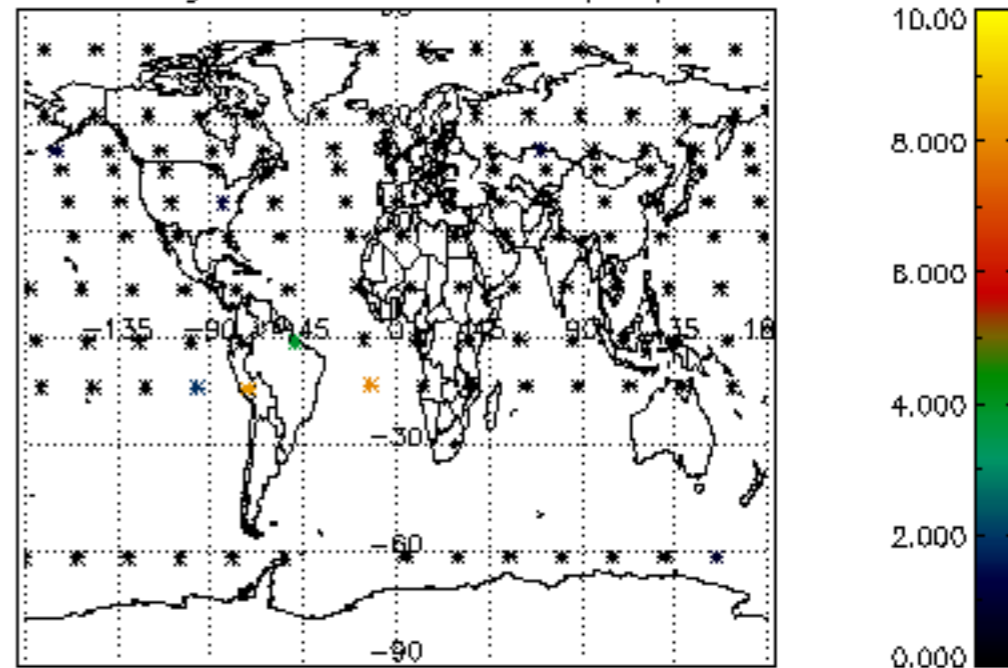
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

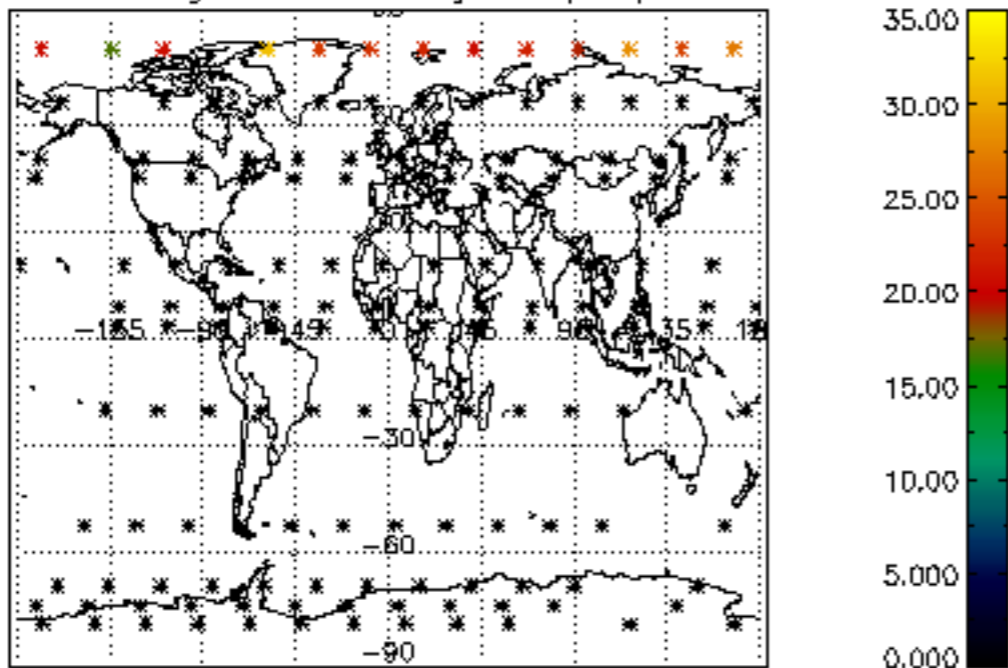


Percentage of saturation errors per profile

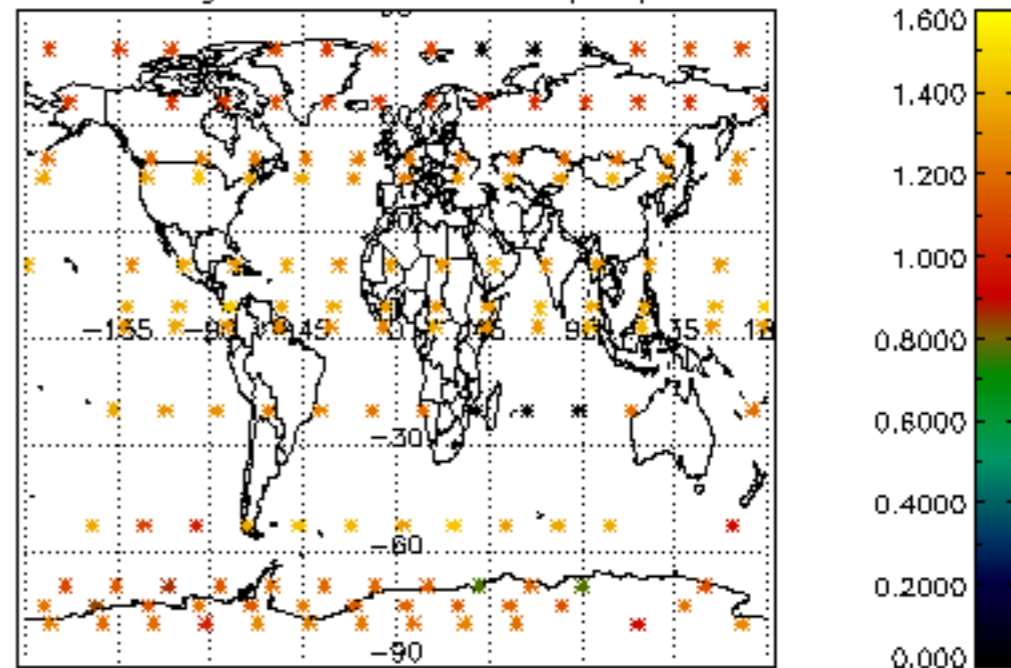




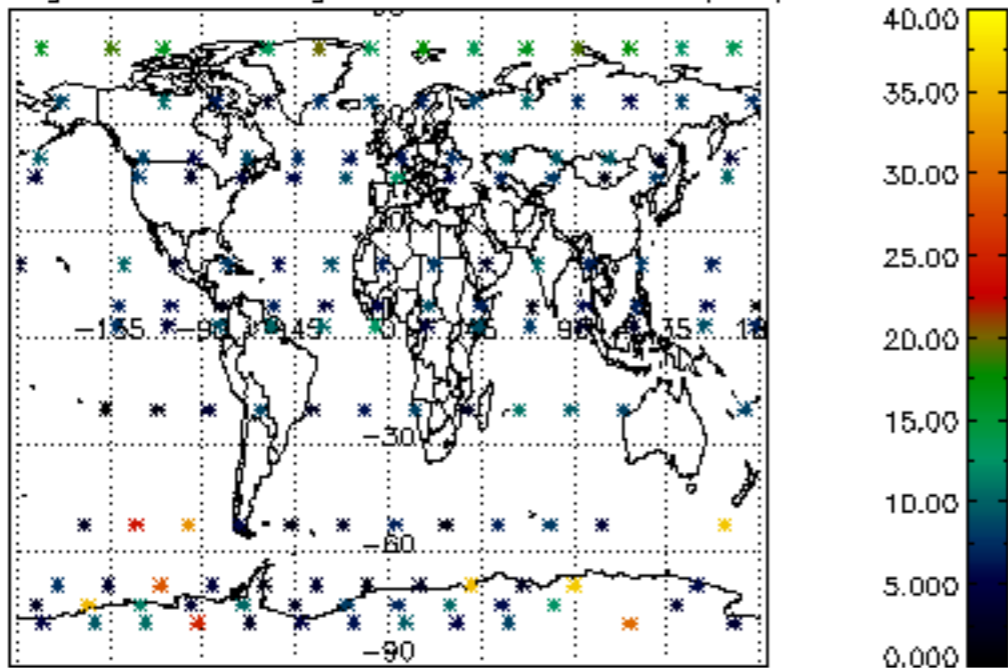
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

