

# 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	25APR2013 12:48:37
Data source version	GOMOS/6.01
Start time of products	18-01-2009 (18JAN2009 00:00:00)
Stop time of products	19-01-2009 (19JAN2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	391
Nb of prods with errors	1

## 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__2PRFIN20090118_000059_000000392075_00374_35999_7880.N1	18-JAN-2009 00:00:59	Bright	39.000	151	13Mu Gem	2.8900	3000.0	78	35999	No
2	GOM_NL__2PRFIN20090118_000509_000000362075_00374_35999_7881.N1	18-JAN-2009 00:05:09	Bright	36.000	107	37The Aur	2.6490	11000.	72	35999	No
3	GOM_NL__2PRFIN20090118_000719_000000372075_00374_35999_7882.N1	18-JAN-2009 00:07:19	Bright	36.500	42	34Bet Aur	1.9000	10200.	73	35999	No
4	GOM_NL__2PRFIN20090118_001953_000000362075_00374_35999_7883.N1	18-JAN-2009 00:19:53	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	35999	No
5	GOM_NL__2PRFIN20090118_002344_000000372075_00374_35999_7884.N1	18-JAN-2009 00:23:44	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	35999	No
6	GOM_NL__2PRFIN20090118_002807_000000392075_00374_35999_7885.N1	18-JAN-2009 00:28:07	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	35999	No
7	GOM_NL__2PRFIN20090118_003048_000000362075_00374_35999_7886.N1	18-JAN-2009 00:30:48	Bright	35.500	130	23Bet Dra	2.7990	5800.0	71	35999	No
8	GOM_NL__2PRFIN20090118_003707_000000552075_00374_35999_7887.N1	18-JAN-2009 00:37:07	Bright	55.000	133	40Zet Her	2.8070	6000.0	110	35999	No
9	GOM_NL__2PRFIN20090118_004017_000000562075_00374_35999_7888.N1	18-JAN-2009 00:40:17	Bright	56.000	127	27Bet Her	2.7810	4700.0	112	35999	No
10	GOM_NL__2PRFIN20090118_004157_000000402075_00374_35999_7889.N1	18-JAN-2009 00:41:57	Bright	40.000	59	55Alp Oph	2.0800	8900.0	80	35999	No
11	GOM_NL__2PRFIN20090118_004804_000000452075_00374_35999_7890.N1	18-JAN-2009 00:48:04	Bright	45.000	120	1Del Oph	2.7340	3200.0	90	35999	No
12	GOM_NL__2PRFIN20090118_004923_000000352075_00374_35999_7891.N1	18-JAN-2009 00:49:23	Bright	35.000	98	13Zet Oph	2.5710	30000.	70	35999	No
13	GOM_NL__2PRFIN20090118_005351_000000452075_00374_35999_7892.N1	18-JAN-2009 00:53:51	Twilight	45.000	16	21Alp Sco	1.0200	3000.0	90	35999	No
14	GOM_NL__2PRFIN20090118_005528_000000422075_00374_35999_7893.N1	18-JAN-2009 00:55:28	Twilight	41.500	75	26Eps Sco	2.2910	4250.0	83	35999	No
15	GOM_NL__2PRFIN20090118_010102_000000422075_00374_35999_7894.N1	18-JAN-2009 01:01:02	Dark	41.500	109	Bet Lup	2.6770	26000.	83	35999	No
16	GOM_NL__2PRFIN20090118_010459_000000422075_00375_36000_4904.N1	18-JAN-2009 01:04:59	Dark	42.000	4	Alp1Cen	-0.010000	5800.0	84	36000	No
17	GOM_NL__2PRFIN20090118_010926_000000412075_00375_36000_4905.N1	18-JAN-2009 01:09:26	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	36000	No
18	GOM_NL__2PRFIN20090118_011353_000000432075_00375_36000_4906.N1	18-JAN-2009 01:13:53	Dark	43.000	29	Bet Car	1.6720	10200.	86	36000	No
19	GOM_NL__2PRFIN20090118_011554_000000402075_00375_36000_4907.N1	18-JAN-2009 01:15:54	Dark	39.500	71	lot Car	2.2460	7700.0	79	36000	No
20	GOM_NL__2PRFIN20090118_011744_000000382075_00375_36000_4908.N1	18-JAN-2009 01:17:44	Dark	38.000	46	Del Vel	1.9540	10600.	76	36000	No
21	GOM_NL__2PRFIN20090118_012026_000000412075_00375_36000_4909.N1	18-JAN-2009 01:20:26	Dark	41.000	34	Gam2Vel	1.7930	23000.	82	36000	No
22	GOM_NL__2PRFIN20090118_012233_000000432075_00375_36000_4910.N1	18-JAN-2009 01:22:33	Dark	43.000	70	Zet Pup	2.2460	39000.	86	36000	No
23	GOM_NL__2PRFIN20090118_012410_000000452075_00375_36000_4911.N1	18-JAN-2009 01:24:10	Straylight	45.000	117	Pi Pup	2.7060	3800.0	90	36000	No
24	GOM_NL__2PRFIN20090118_012642_000000432075_00375_36000_4912.N1	18-JAN-2009 01:26:42	Straylight	43.000	23	21Eps CMa	1.5020	26000.	86	36000	No
25	GOM_NL__2PRFIN20090118_012806_000000402075_00375_36000_4913.N1	18-JAN-2009 01:28:06	Straylight	39.500	179	24Omi2CMa	3.0320	24000.	79	36000	No
26	GOM_NL__2PRFIN20090118_013018_000000452075_00375_36000_4914.N1	18-JAN-2009 01:30:18	Straylight	44.500	1	9Alp CMa	-1.4400	11000.	89	36000	No
27	GOM_NL__2PRFIN20090118_013727_000000522075_00375_36000_4915.N1	18-JAN-2009 01:37:27	Twilight	52.000	14	58Alp Ori	0.87000	3000.0	104	36000	No
28	GOM_NL__2PRFIN20090118_013951_000000532075_00375_36000_4916.N1	18-JAN-2009 01:39:51	Bright	53.000	44	24Gam Gem	1.9280	11000.	106	36000	No
29	GOM_NL__2PRFIN20090118_014134_000000422075_00375_36000_4917.N1	18-JAN-2009 01:41:34	Bright	41.500	151	13Mu Gem	2.8900	3000.0	83	36000	No
30	GOM_NL__2PRFIN20090118_014545_000000352075_00375_36000_4918.N1	18-JAN-2009 01:45:45	Bright	35.000	107	37The Aur	2.6490	11000.	70	36000	No
31	GOM_NL__2PRFIN20090118_014755_000000362075_00375_36000_4919.N1	18-JAN-2009 01:47:55	Bright	35.500	42	34Bet Aur	1.9000	10200.	71	36000	No
32	GOM_NL__2PRFIN20090118_020029_000000342075_00375_36000_4920.N1	18-JAN-2009 02:00:29	Bright	33.500	49	1Alp UMi	1.9900	6300.0	67	36000	No
33	GOM_NL__2PRFIN20090118_020420_000000352075_00375_36000_4921.N1	18-JAN-2009 02:04:20	Bright	35.000	60	7Bet UMi	2.0810	3950.0	70	36000	No
34	GOM_NL__2PRFIN20090118_020844_000000392075_00375_36000_4922.N1	18-JAN-2009 02:08:44	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	36000	No
35	GOM_NL__2PRFIN20090118_021124_000000392075_00375_36000_4923.N1	18-JAN-2009 02:11:24	Bright	38.500	130	23Bet Dra	2.7990	5800.0	77	36000	No
36	GOM_NL__2PRFIN20090118_021743_000000552075_00375_36000_4924.N1	18-JAN-2009 02:17:43	Bright	55.000	133	40Zet Her	2.8070	6000.0	110	36000	No
37	GOM_NL__2PRFIN20090118_022053_000000562075_00375_36000_4925.N1	18-JAN-2009 02:20:53	Bright	56.000	127	27Bet Her	2.7810	4700.0	112	36000	No
38	GOM_NL__2PRFIN20090118_022234_000000342075_00375_36000_4926.N1	18-JAN-2009 02:22:34	Bright	34.000	59	55Alp Oph	2.0800	8900.0	68	36000	No
39	GOM_NL__2PRFIN20090118_022841_000000532075_00375_36000_4927.N1	18-JAN-2009 02:28:41	Bright	53.000	120	1Del Oph	2.7340	3200.0	106	36000	No
40	GOM_NL__2PRFIN20090118_023043_000000352075_00375_36000_4928.N1	18-JAN-2009 02:30:43	Bright	35.000	86	35Eta Oph	2.4300	10200.	70	36000	No
41	GOM_NL__2PRFIN20090118_023428_000000522075_00375_36000_4929.N1	18-JAN-2009 02:34:28	Twilight	52.000	16	21Alp Sco	1.0200	3000.0	104	36000	No
42	GOM_NL__2PRFIN20090118_023605_000000392075_00375_36000_4930.N1	18-JAN-2009 02:36:05	Twilight	38.500	75	26Eps Sco	2.2910	4250.0	77	36000	No









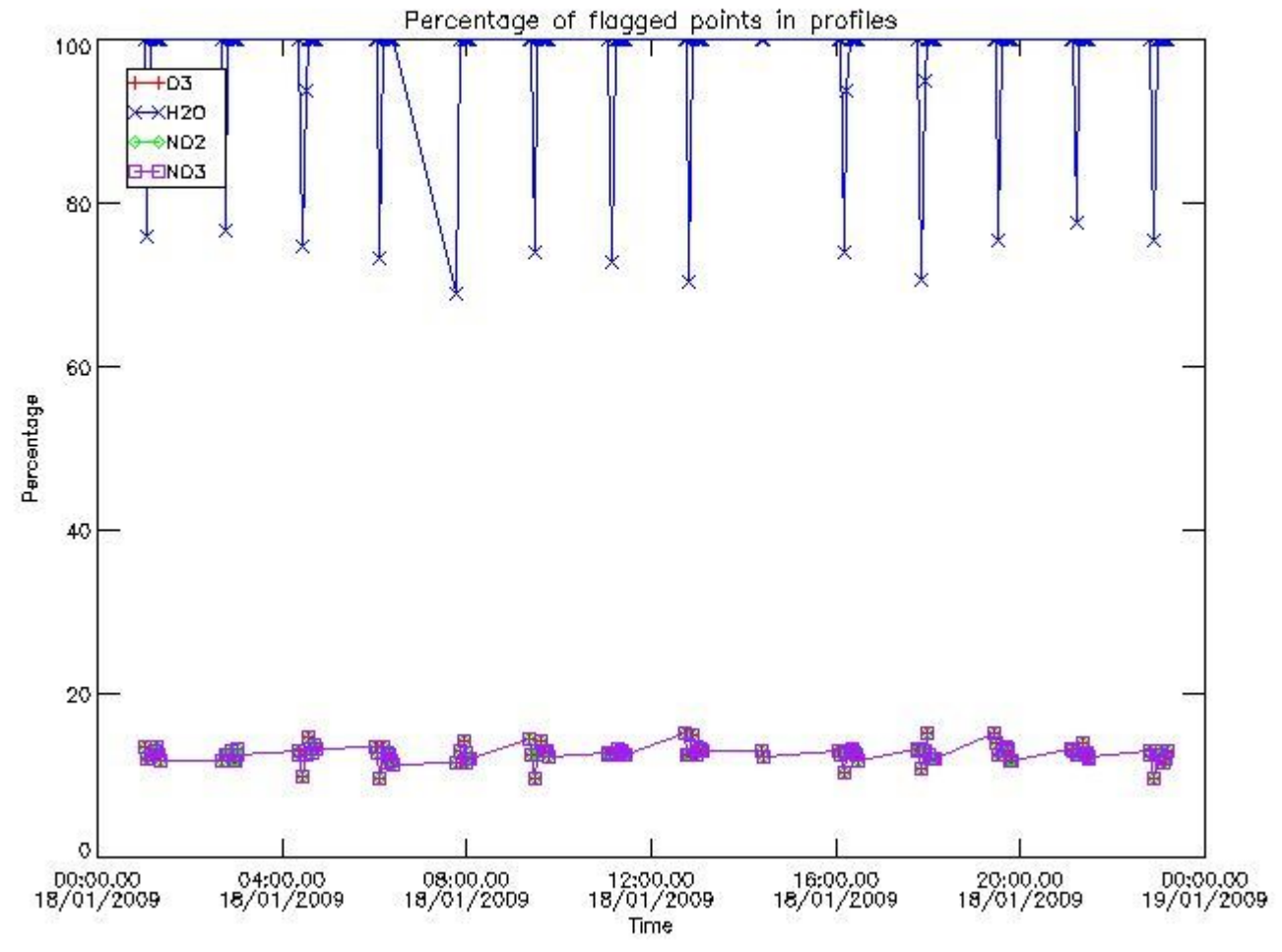






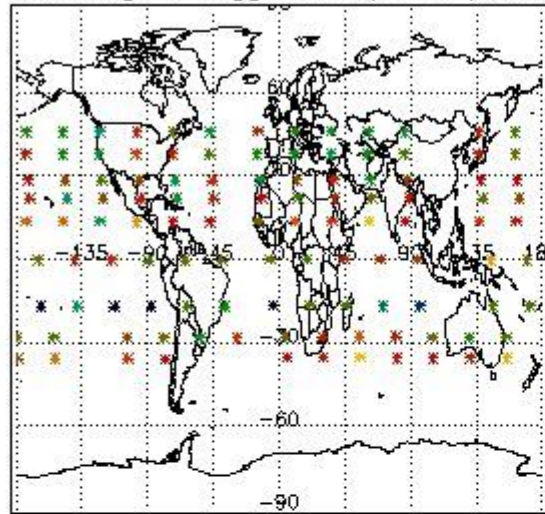
the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

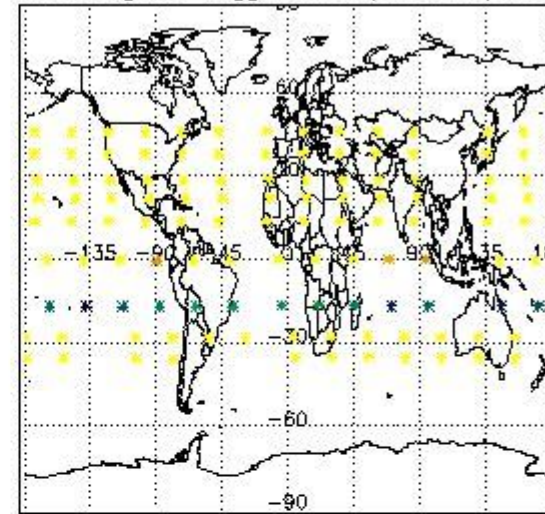


### 3.2 Plot quality information per product (world map)

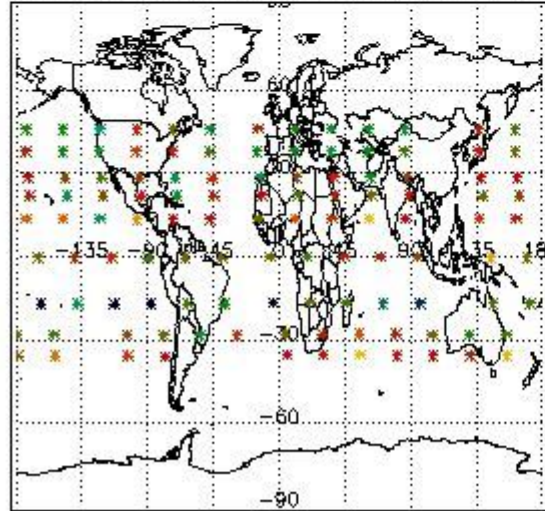
Percentage of flagged data per O3 profile



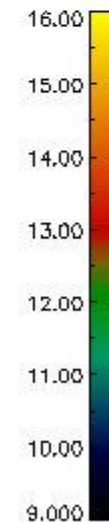
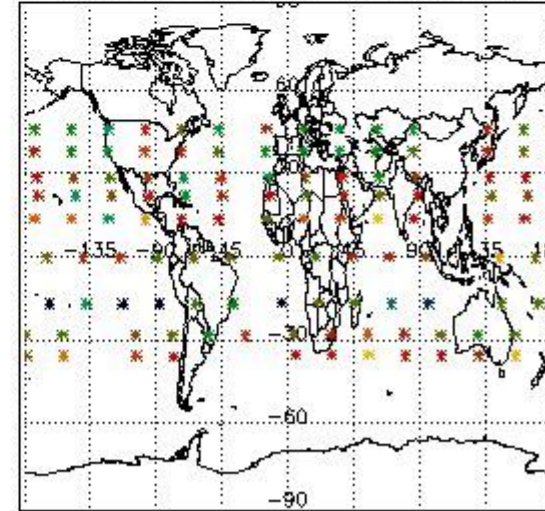
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

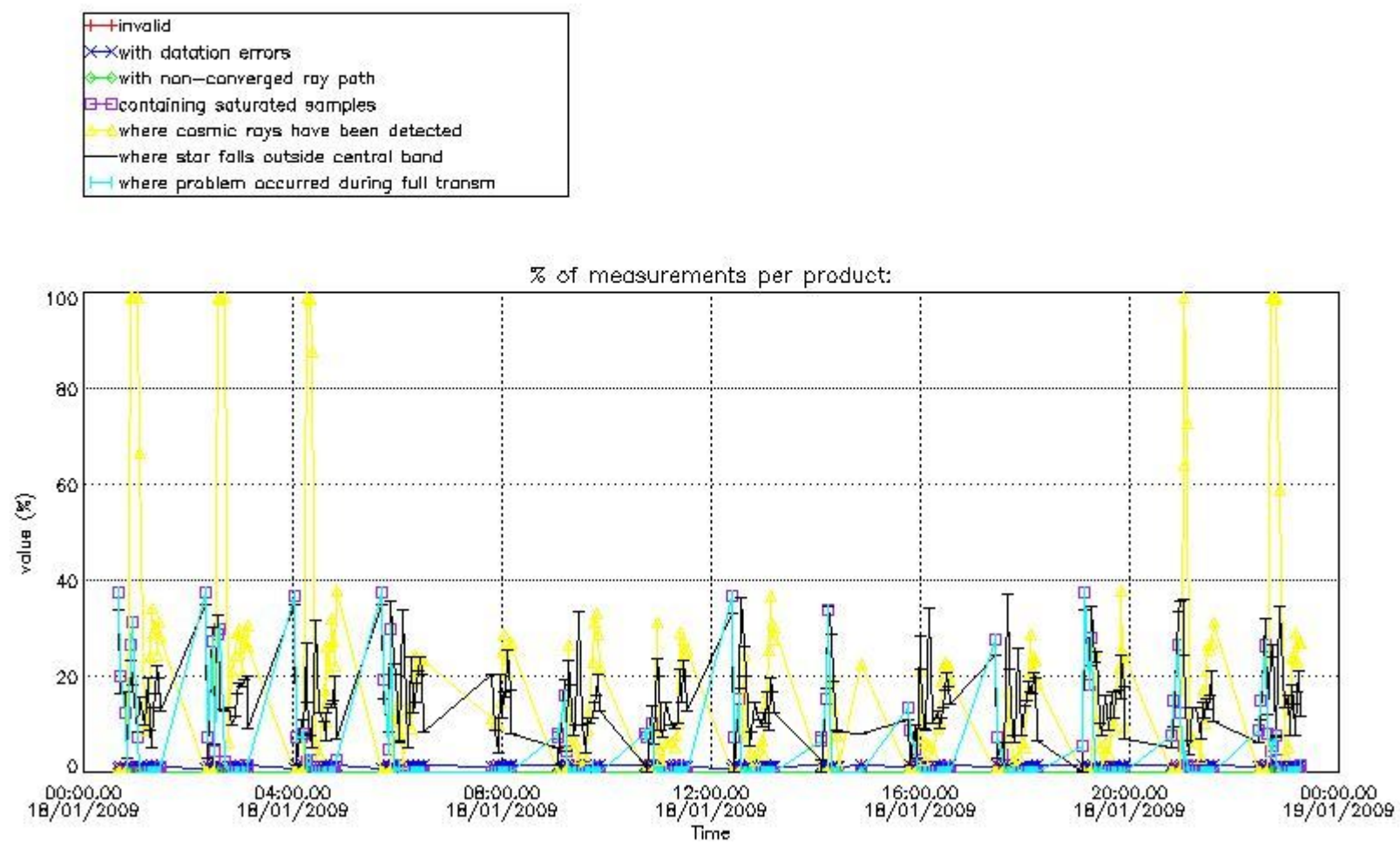


#### 4. Level 1 quality information per product

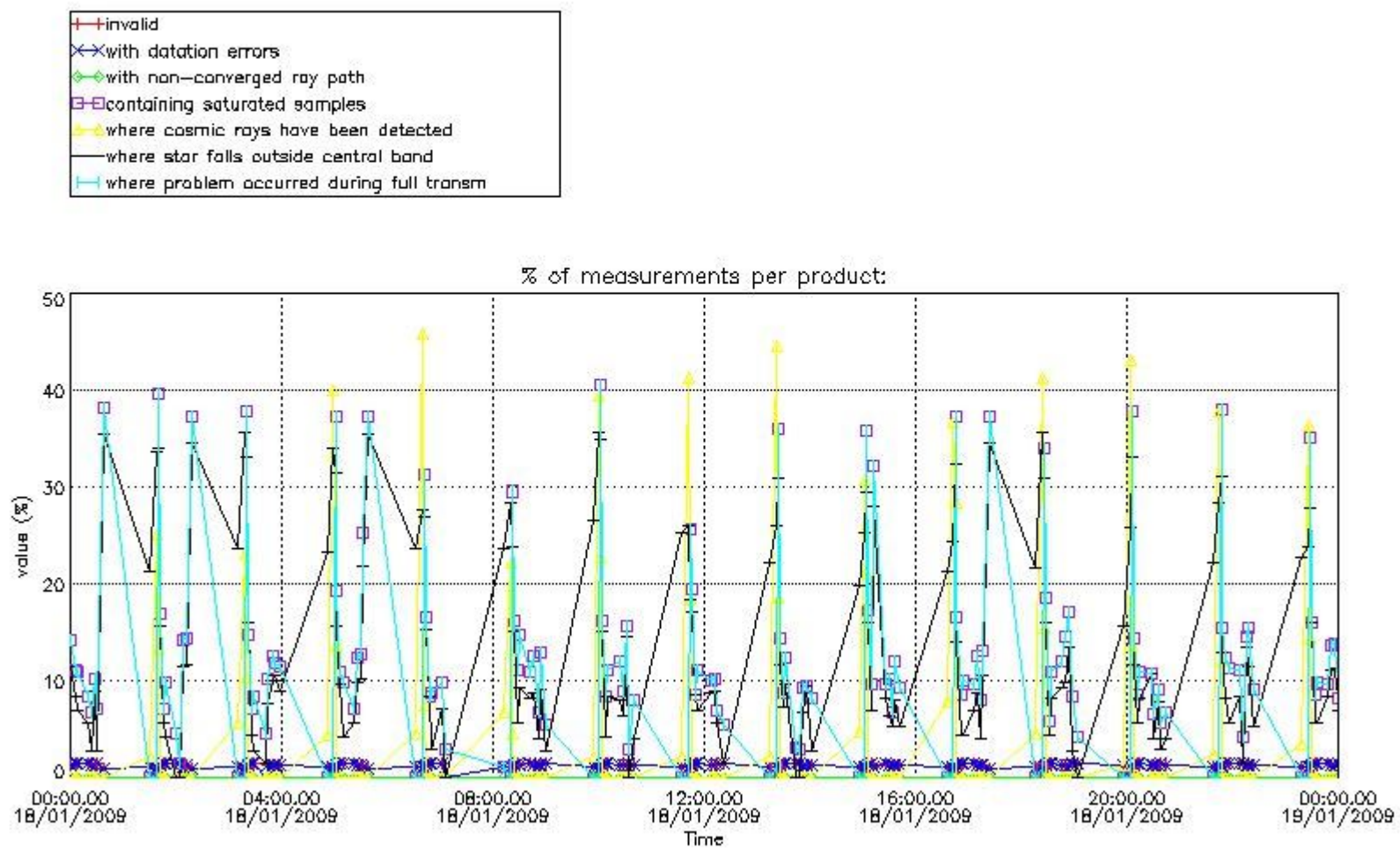
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



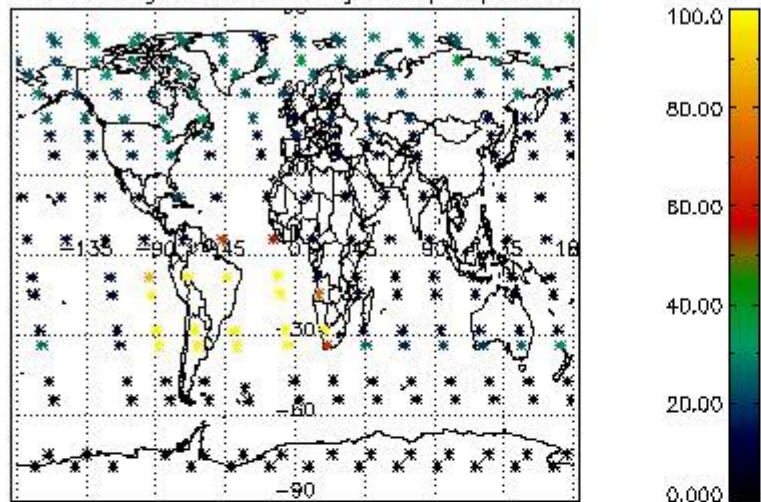
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



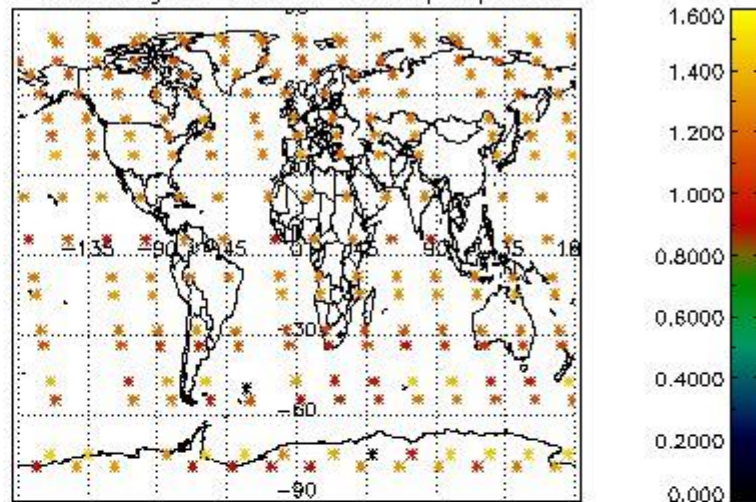
4.2 Plot quality information per product coming from level 1b processing (world map)

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

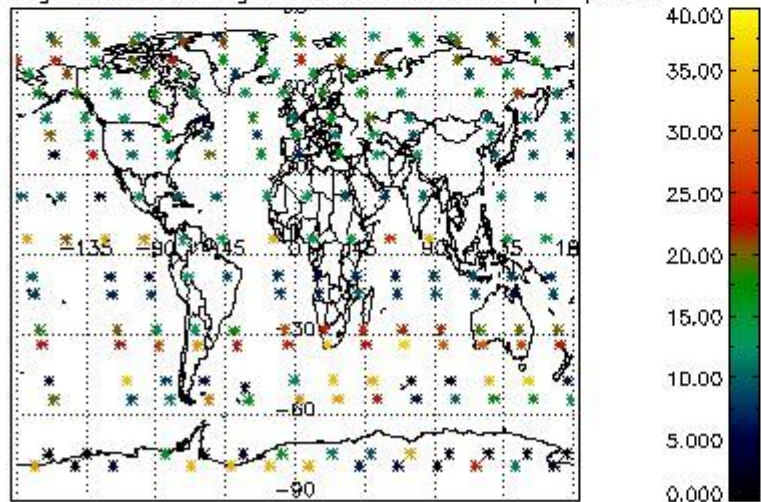
Percentage of cosmic ray hits per profile



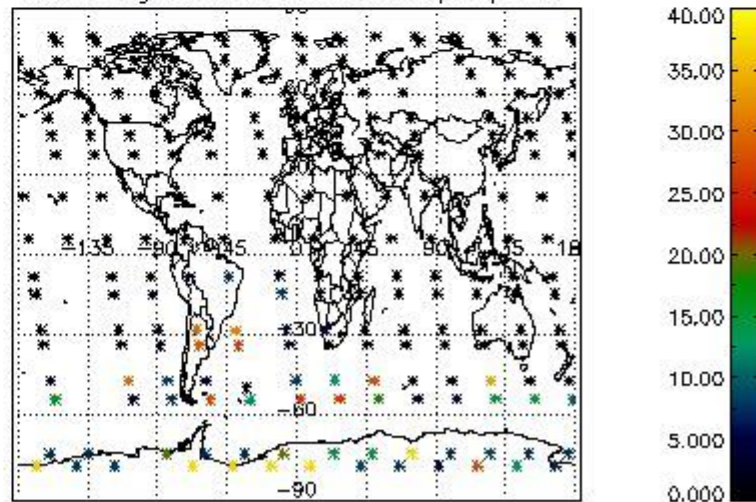
Percentage of datation errors per profile



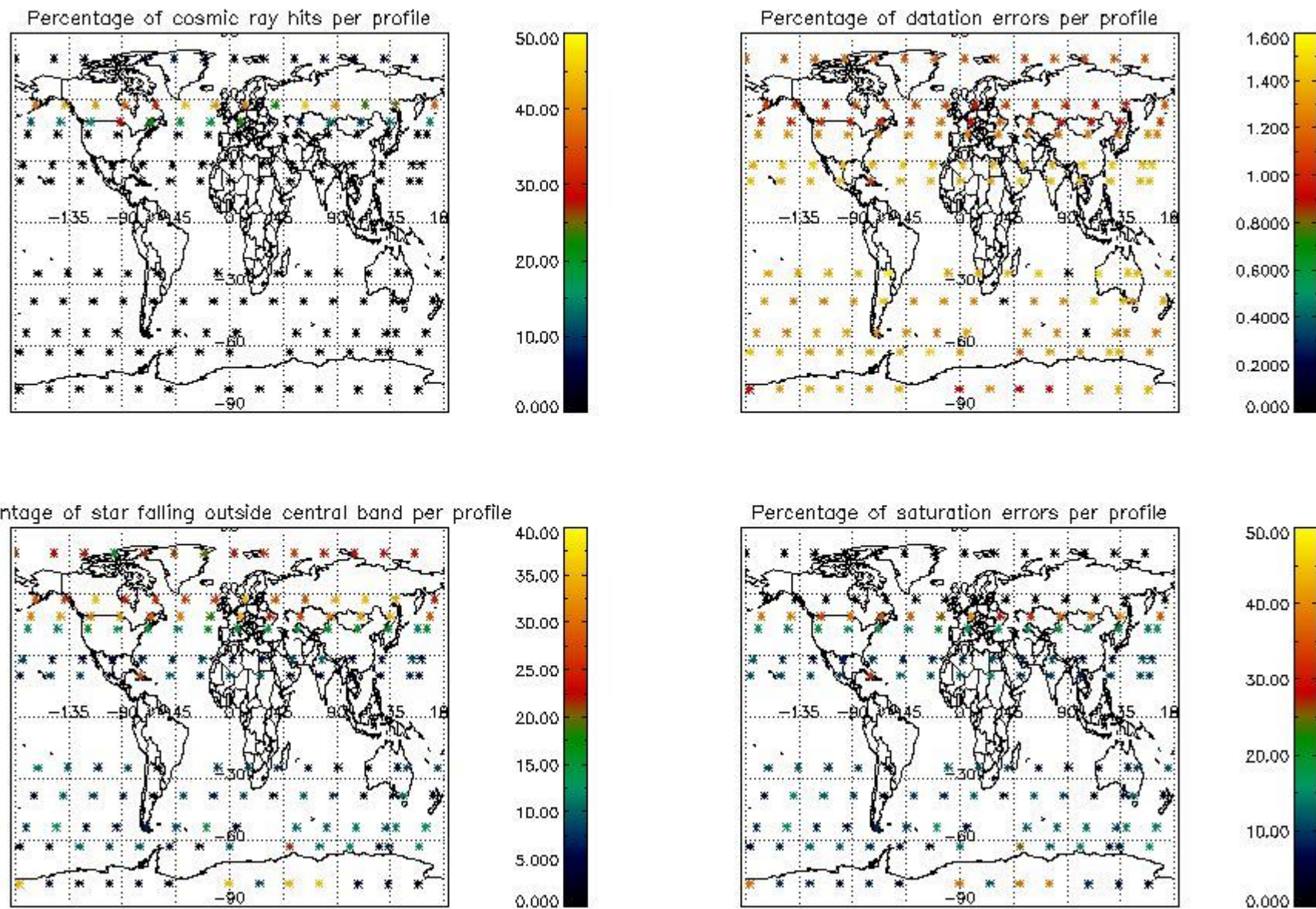
Percentage of star falling outside central band per profile



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

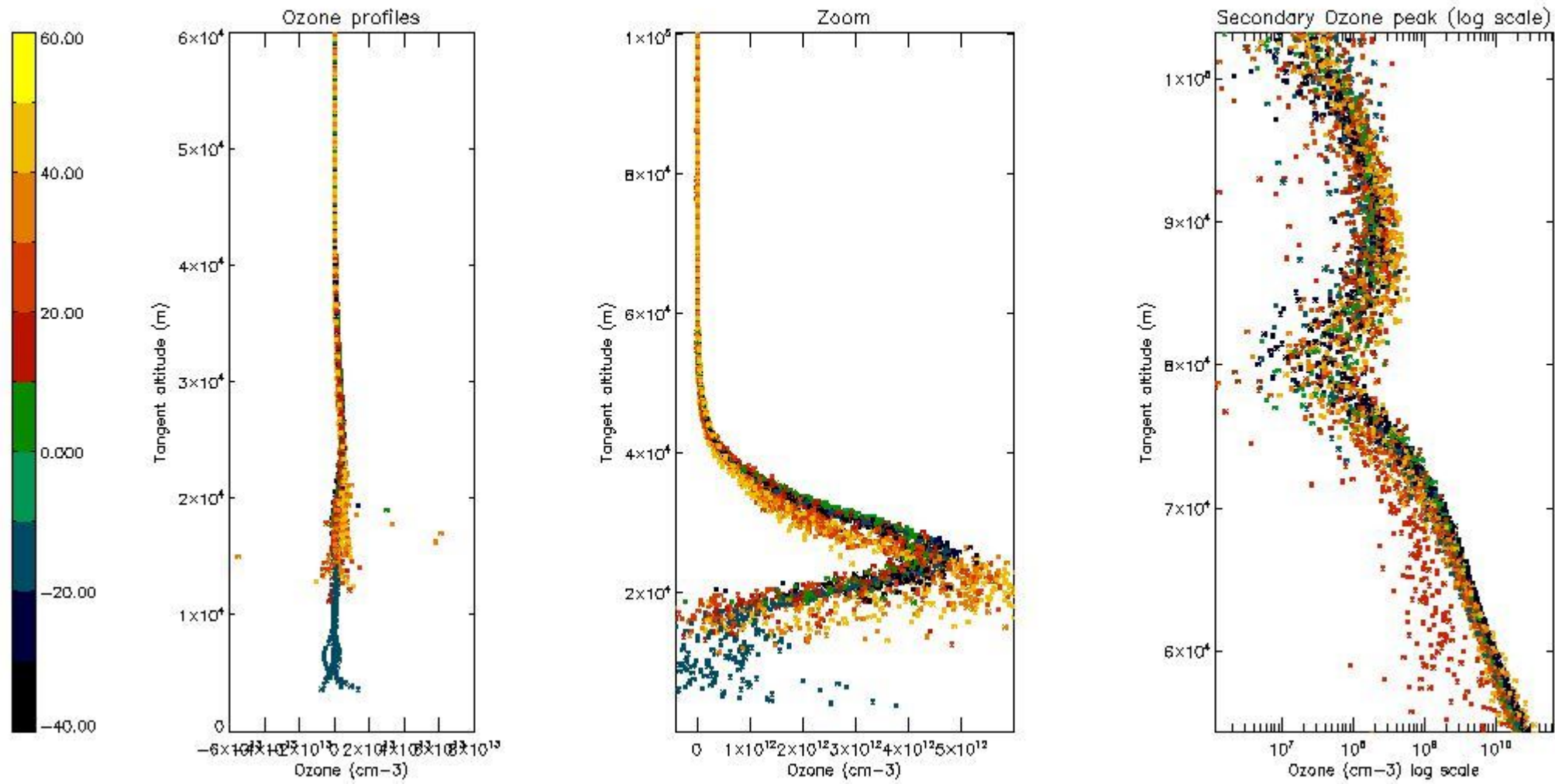
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	18

STD < 10	16
STD < 5	11

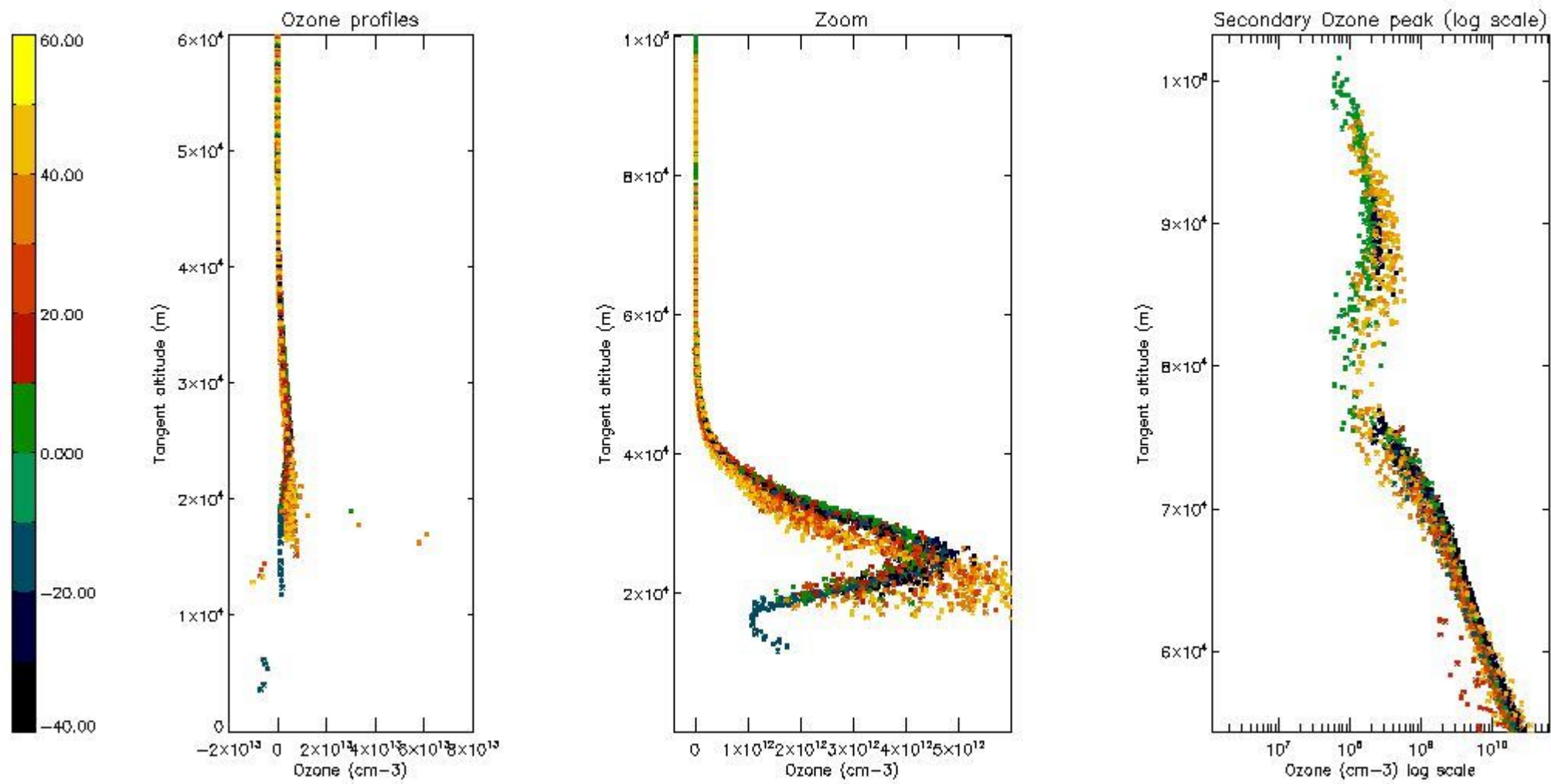
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

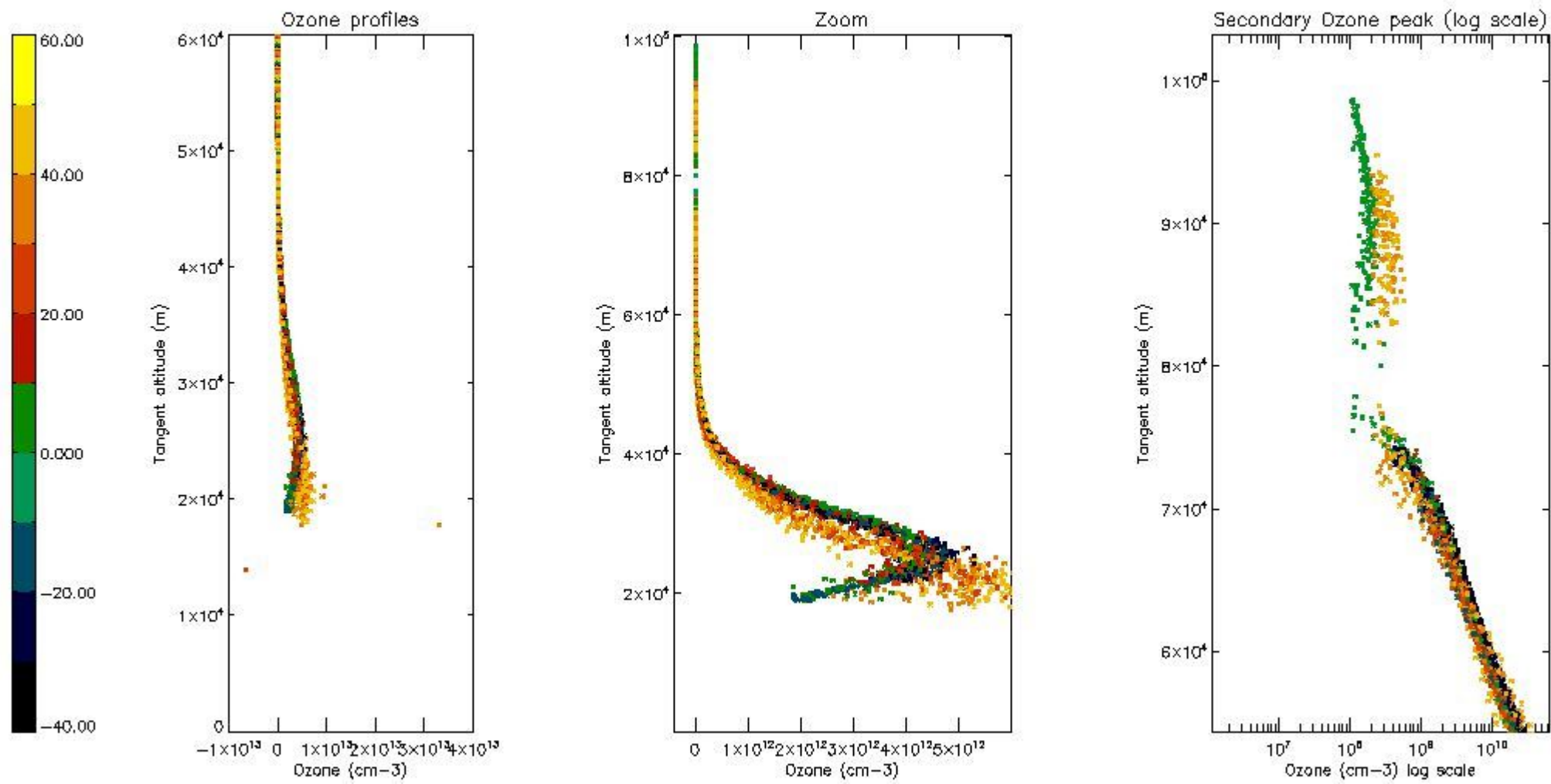
The colorbar represents the latitude.



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

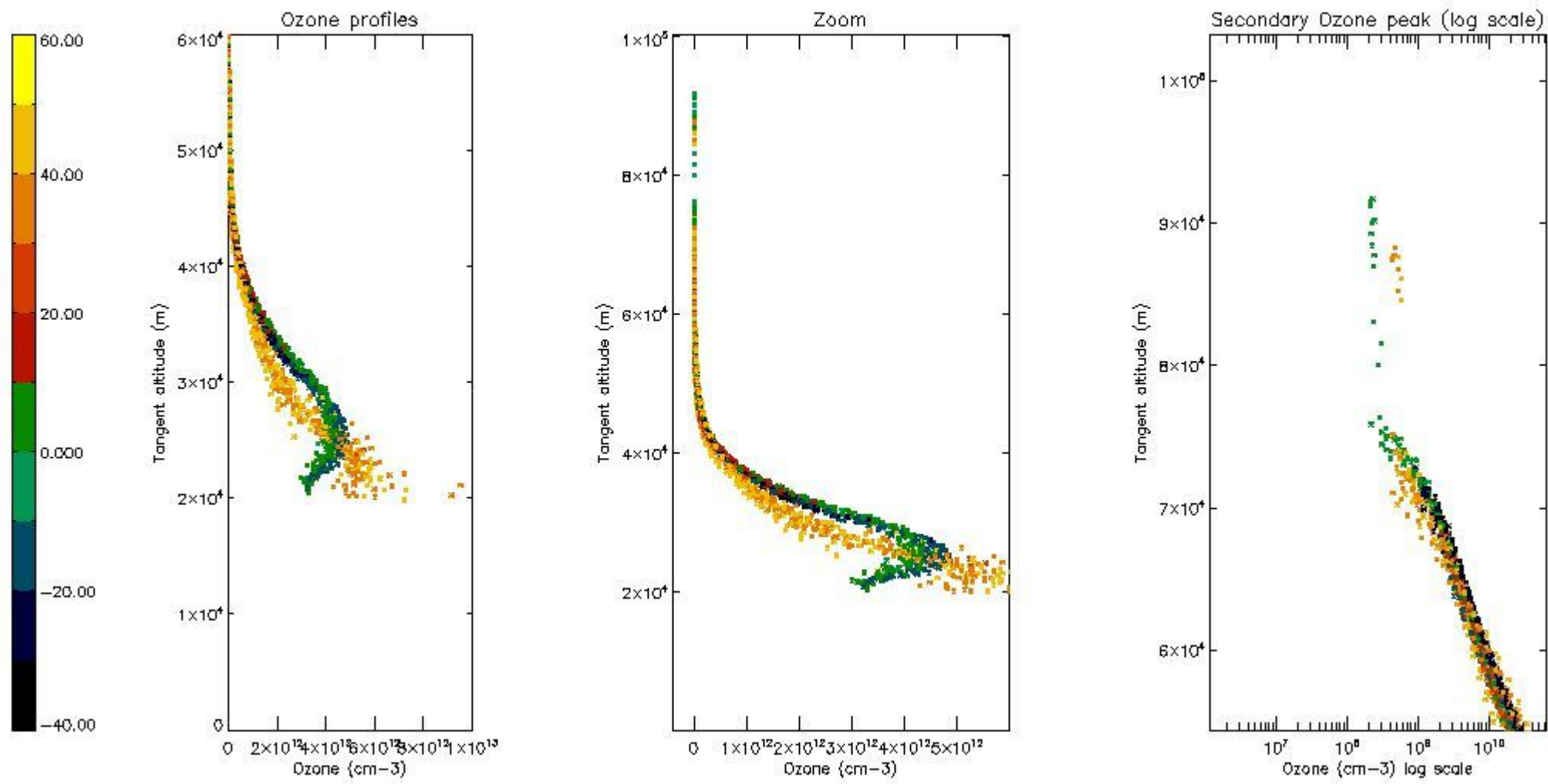
The colorbar represents the latitude.





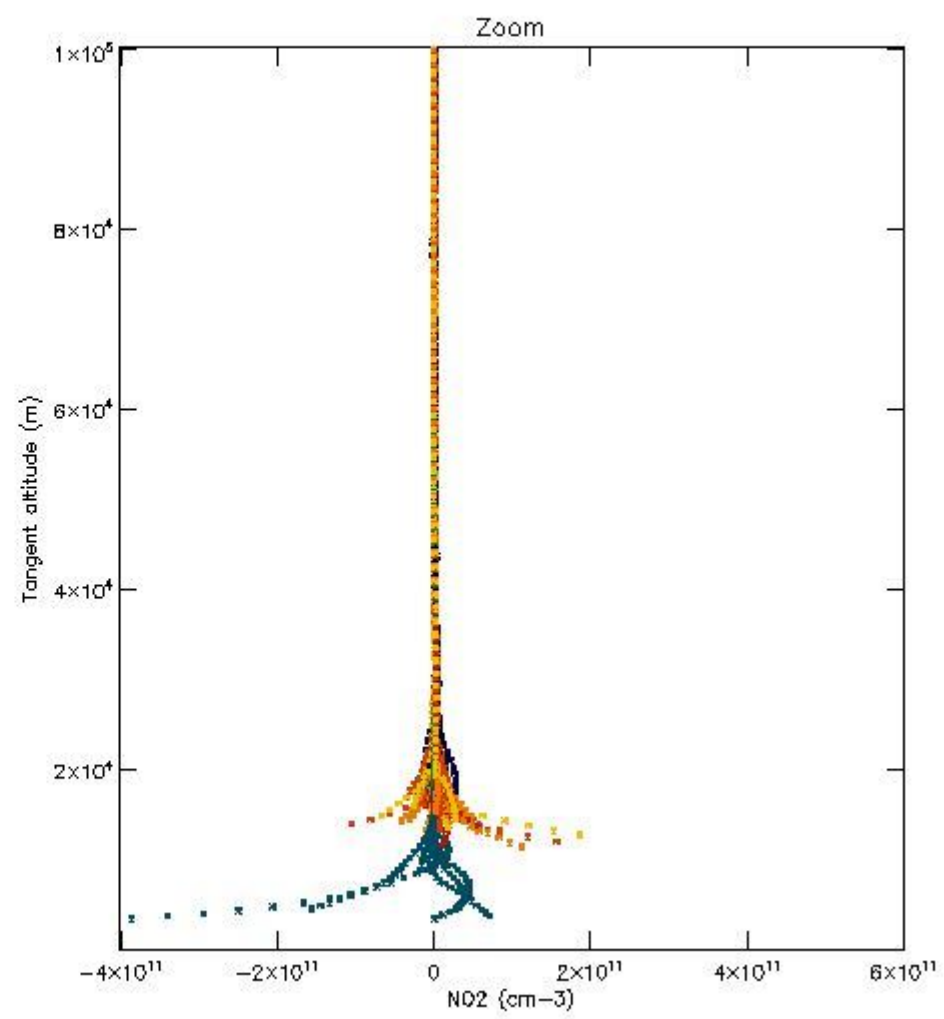
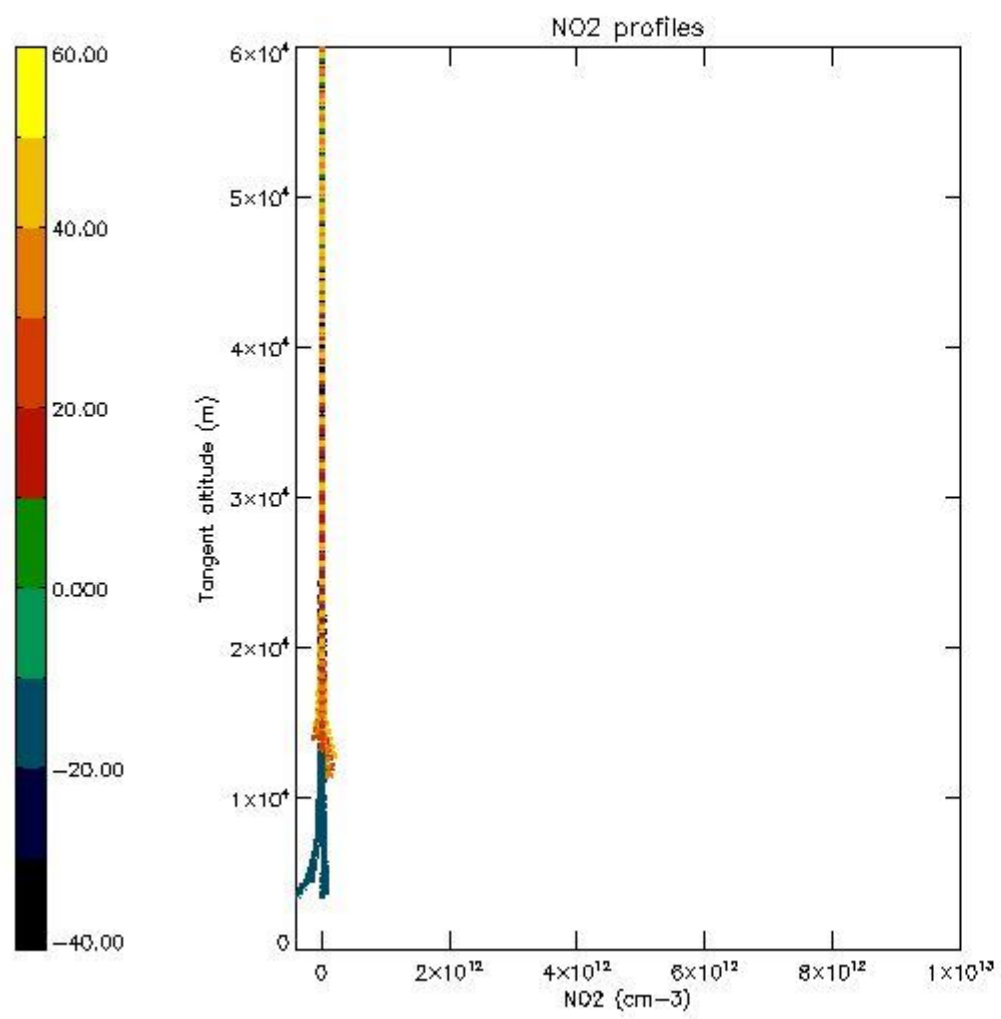
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



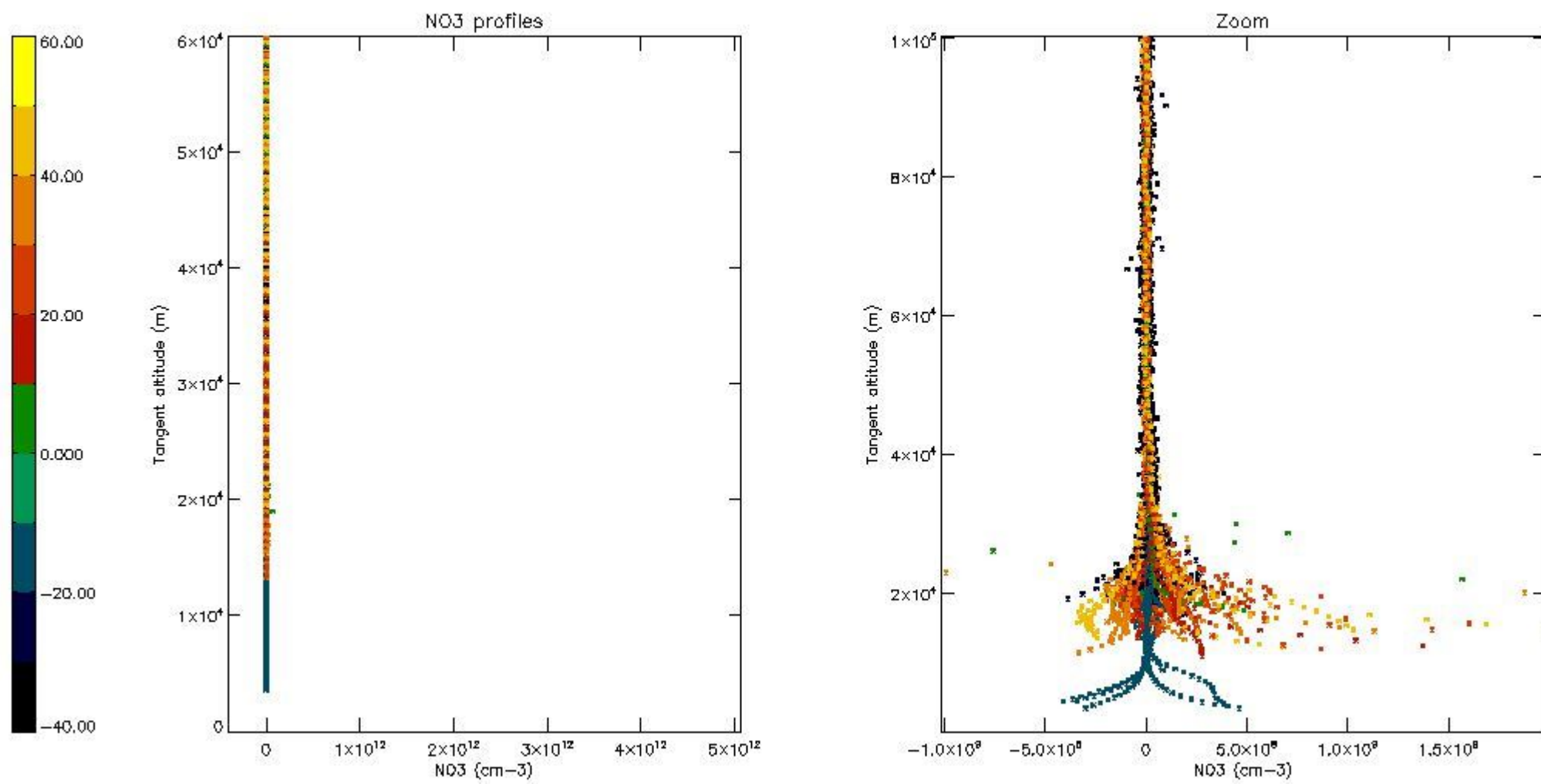
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



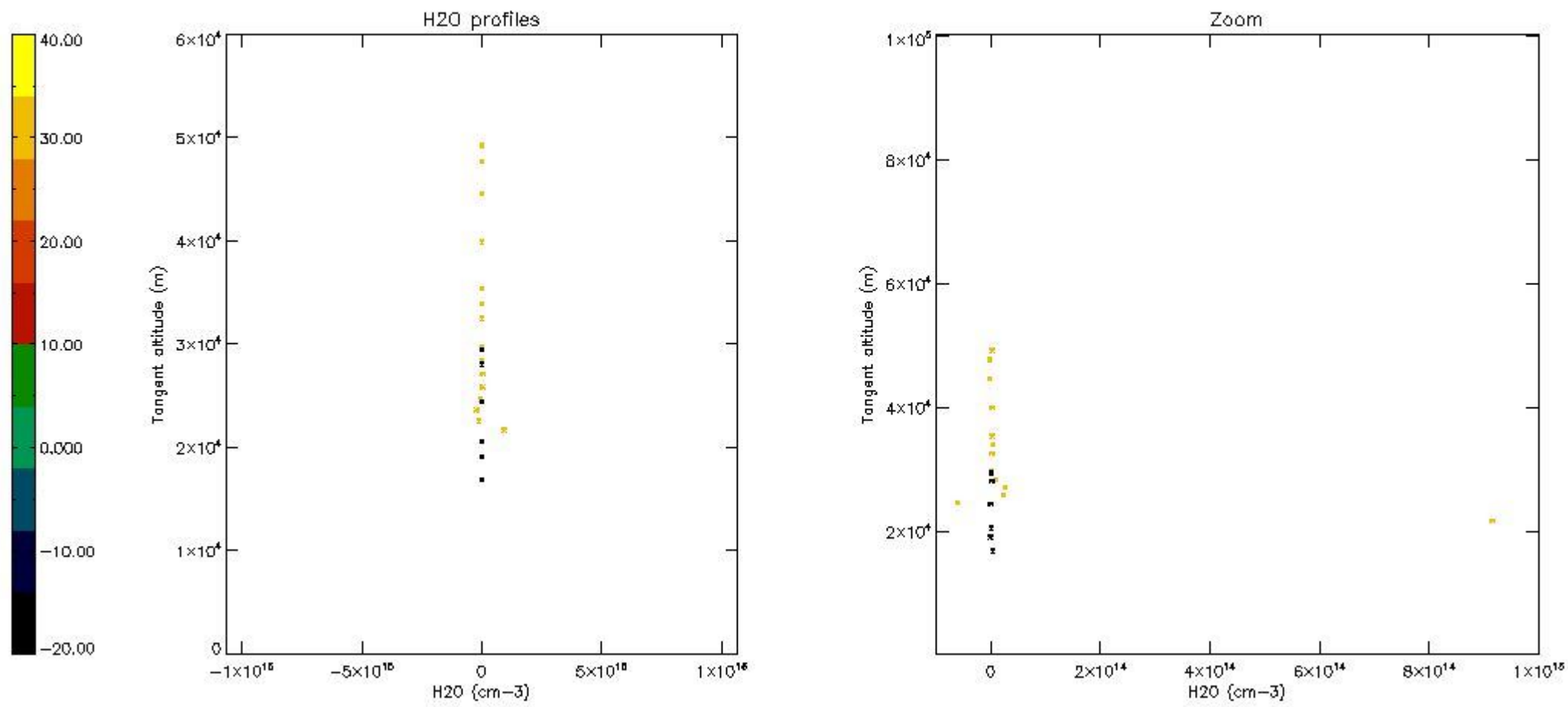
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	18-JAN-2009 00:00:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-JAN-2009 00:00:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-JAN-2009 00:00:59

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#### [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% \(dark without errors\)](#)

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

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

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

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

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

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

Item	Value
Time of report generation	25APR2013 12:48:37
Data source version	GOMOS/6.01
Start time of products	18-01-2009 (18JAN2009 00:00:00)
Stop time of products	19-01-2009 (19JAN2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	391
Nb of prods with errors	1

## 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__2PRFIN20090118_000059_000000392075_00374_35999_7880.N1	18-JAN-2009 00:00:59	Bright	39.000	151	13Mu Gem	2.8900	3000.0	78	35999	No
2	GOM_NL__2PRFIN20090118_000509_000000362075_00374_35999_7881.N1	18-JAN-2009 00:05:09	Bright	36.000	107	37The Aur	2.6490	11000.	72	35999	No
3	GOM_NL__2PRFIN20090118_000719_000000372075_00374_35999_7882.N1	18-JAN-2009 00:07:19	Bright	36.500	42	34Bet Aur	1.9000	10200.	73	35999	No
4	GOM_NL__2PRFIN20090118_001953_000000362075_00374_35999_7883.N1	18-JAN-2009 00:19:53	Bright	35.500	49	1Alp UMi	1.9900	6300.0	71	35999	No
5	GOM_NL__2PRFIN20090118_002344_000000372075_00374_35999_7884.N1	18-JAN-2009 00:23:44	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	35999	No
6	GOM_NL__2PRFIN20090118_002807_000000392075_00374_35999_7885.N1	18-JAN-2009 00:28:07	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	35999	No
7	GOM_NL__2PRFIN20090118_003048_000000362075_00374_35999_7886.N1	18-JAN-2009 00:30:48	Bright	35.500	130	23Bet Dra	2.7990	5800.0	71	35999	No
8	GOM_NL__2PRFIN20090118_003707_000000552075_00374_35999_7887.N1	18-JAN-2009 00:37:07	Bright	55.000	133	40Zet Her	2.8070	6000.0	110	35999	No
9	GOM_NL__2PRFIN20090118_004017_000000562075_00374_35999_7888.N1	18-JAN-2009 00:40:17	Bright	56.000	127	27Bet Her	2.7810	4700.0	112	35999	No
10	GOM_NL__2PRFIN20090118_004157_000000402075_00374_35999_7889.N1	18-JAN-2009 00:41:57	Bright	40.000	59	55Alp Oph	2.0800	8900.0	80	35999	No
11	GOM_NL__2PRFIN20090118_004804_000000452075_00374_35999_7890.N1	18-JAN-2009 00:48:04	Bright	45.000	120	1Del Oph	2.7340	3200.0	90	35999	No
12	GOM_NL__2PRFIN20090118_004923_000000352075_00374_35999_7891.N1	18-JAN-2009 00:49:23	Bright	35.000	98	13Zet Oph	2.5710	30000.	70	35999	No
13	GOM_NL__2PRFIN20090118_005351_000000452075_00374_35999_7892.N1	18-JAN-2009 00:53:51	Twilight	45.000	16	21Alp Sco	1.0200	3000.0	90	35999	No
14	GOM_NL__2PRFIN20090118_005528_000000422075_00374_35999_7893.N1	18-JAN-2009 00:55:28	Twilight	41.500	75	26Eps Sco	2.2910	4250.0	83	35999	No
15	GOM_NL__2PRFIN20090118_010102_000000422075_00374_35999_7894.N1	18-JAN-2009 01:01:02	Dark	41.500	109	Bet Lup	2.6770	26000.	83	35999	No
16	GOM_NL__2PRFIN20090118_010459_000000422075_00375_36000_4904.N1	18-JAN-2009 01:04:59	Dark	42.000	4	Alp1Cen	-0.010000	5800.0	84	36000	No
17	GOM_NL__2PRFIN20090118_010926_000000412075_00375_36000_4905.N1	18-JAN-2009 01:09:26	Dark	40.500	12	Alp1Cru	0.77500	30000.	81	36000	No
18	GOM_NL__2PRFIN20090118_011353_000000432075_00375_36000_4906.N1	18-JAN-2009 01:13:53	Dark	43.000	29	Bet Car	1.6720	10200.	86	36000	No
19	GOM_NL__2PRFIN20090118_011554_000000402075_00375_36000_4907.N1	18-JAN-2009 01:15:54	Dark	39.500	71	lot Car	2.2460	7700.0	79	36000	No
20	GOM_NL__2PRFIN20090118_011744_000000382075_00375_36000_4908.N1	18-JAN-2009 01:17:44	Dark	38.000	46	Del Vel	1.9540	10600.	76	36000	No
21	GOM_NL__2PRFIN20090118_012026_000000412075_00375_36000_4909.N1	18-JAN-2009 01:20:26	Dark	41.000	34	Gam2Vel	1.7930	23000.	82	36000	No
22	GOM_NL__2PRFIN20090118_012233_000000432075_00375_36000_4910.N1	18-JAN-2009 01:22:33	Dark	43.000	70	Zet Pup	2.2460	39000.	86	36000	No
23	GOM_NL__2PRFIN20090118_012410_000000452075_00375_36000_4911.N1	18-JAN-2009 01:24:10	Straylight	45.000	117	Pi Pup	2.7060	3800.0	90	36000	No
24	GOM_NL__2PRFIN20090118_012642_000000432075_00375_36000_4912.N1	18-JAN-2009 01:26:42	Straylight	43.000	23	21Eps CMa	1.5020	26000.	86	36000	No
25	GOM_NL__2PRFIN20090118_012806_000000402075_00375_36000_4913.N1	18-JAN-2009 01:28:06	Straylight	39.500	179	24Omi2CMa	3.0320	24000.	79	36000	No
26	GOM_NL__2PRFIN20090118_013018_000000452075_00375_36000_4914.N1	18-JAN-2009 01:30:18	Straylight	44.500	1	9Alp CMa	-1.4400	11000.	89	36000	No
27	GOM_NL__2PRFIN20090118_013727_000000522075_00375_36000_4915.N1	18-JAN-2009 01:37:27	Twilight	52.000	14	58Alp Ori	0.87000	3000.0	104	36000	No
28	GOM_NL__2PRFIN20090118_013951_000000532075_00375_36000_4916.N1	18-JAN-2009 01:39:51	Bright	53.000	44	24Gam Gem	1.9280	11000.	106	36000	No
29	GOM_NL__2PRFIN20090118_014134_000000422075_00375_36000_4917.N1	18-JAN-2009 01:41:34	Bright	41.500	151	13Mu Gem	2.8900	3000.0	83	36000	No
30	GOM_NL__2PRFIN20090118_014545_000000352075_00375_36000_4918.N1	18-JAN-2009 01:45:45	Bright	35.000	107	37The Aur	2.6490	11000.	70	36000	No
31	GOM_NL__2PRFIN20090118_014755_000000362075_00375_36000_4919.N1	18-JAN-2009 01:47:55	Bright	35.500	42	34Bet Aur	1.9000	10200.	71	36000	No
32	GOM_NL__2PRFIN20090118_020029_000000342075_00375_36000_4920.N1	18-JAN-2009 02:00:29	Bright	33.500	49	1Alp UMi	1.9900	6300.0	67	36000	No
33	GOM_NL__2PRFIN20090118_020420_000000352075_00375_36000_4921.N1	18-JAN-2009 02:04:20	Bright	35.000	60	7Bet UMi	2.0810	3950.0	70	36000	No
34	GOM_NL__2PRFIN20090118_020844_000000392075_00375_36000_4922.N1	18-JAN-2009 02:08:44	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	36000	No
35	GOM_NL__2PRFIN20090118_021124_000000392075_00375_36000_4923.N1	18-JAN-2009 02:11:24	Bright	38.500	130	23Bet Dra	2.7990	5800.0	77	36000	No
36	GOM_NL__2PRFIN20090118_021743_000000552075_00375_36000_4924.N1	18-JAN-2009 02:17:43	Bright	55.000	133	40Zet Her	2.8070	6000.0	110	36000	No
37	GOM_NL__2PRFIN20090118_022053_000000562075_00375_36000_4925.N1	18-JAN-2009 02:20:53	Bright	56.000	127	27Bet Her	2.7810	4700.0	112	36000	No
38	GOM_NL__2PRFIN20090118_022234_000000342075_00375_36000_4926.N1	18-JAN-2009 02:22:34	Bright	34.000	59	55Alp Oph	2.0800	8900.0	68	36000	No
39	GOM_NL__2PRFIN20090118_022841_000000532075_00375_36000_4927.N1	18-JAN-2009 02:28:41	Bright	53.000	120	1Del Oph	2.7340	3200.0	106	36000	No
40	GOM_NL__2PRFIN20090118_023043_000000352075_00375_36000_4928.N1	18-JAN-2009 02:30:43	Bright	35.000	86	35Eta Oph	2.4300	10200.	70	36000	No
41	GOM_NL__2PRFIN20090118_023428_000000522075_00375_36000_4929.N1	18-JAN-2009 02:34:28	Twilight	52.000	16	21Alp Sco	1.0200	3000.0	104	36000	No
42	GOM_NL__2PRFIN20090118_023605_000000392075_00375_36000_4930.N1	18-JAN-2009 02:36:05	Twilight	38.500	75	26Eps Sco	2.2910	4250.0	77	36000	No









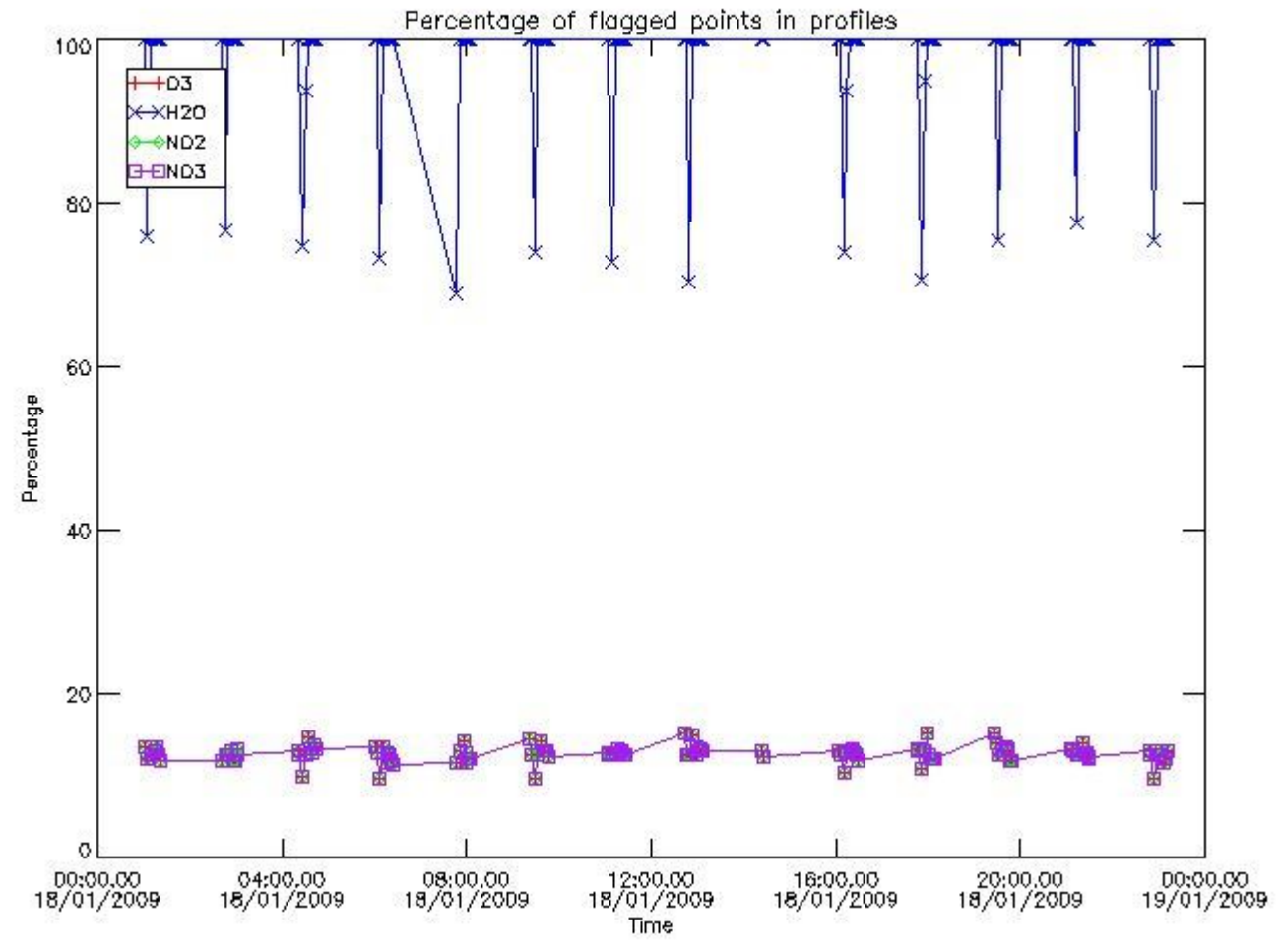






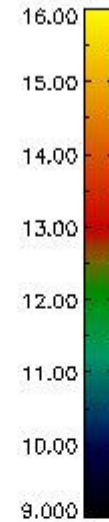
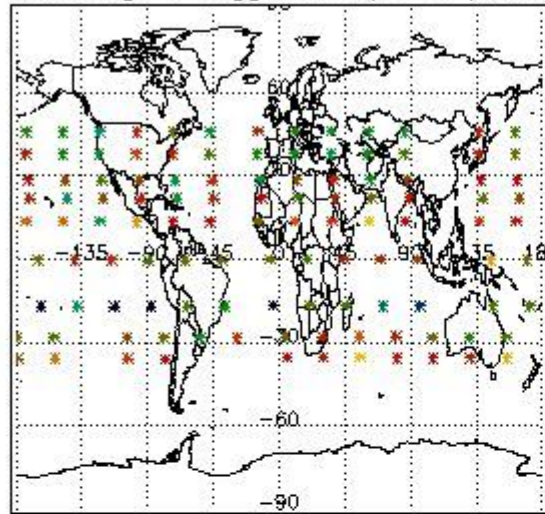
the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

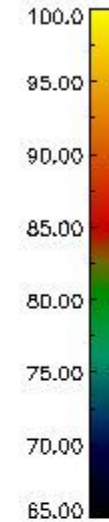
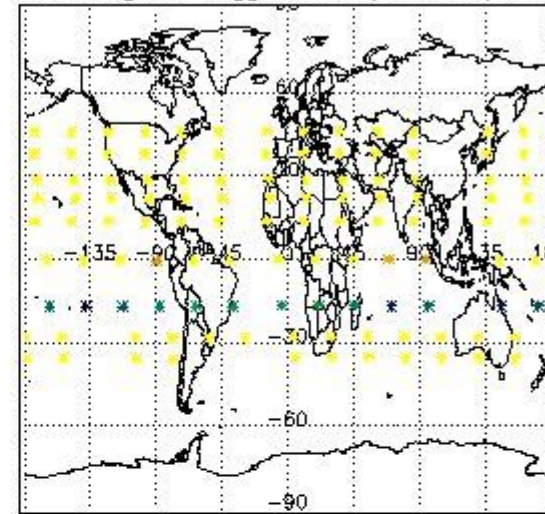


### 3.2 Plot quality information per product (world map)

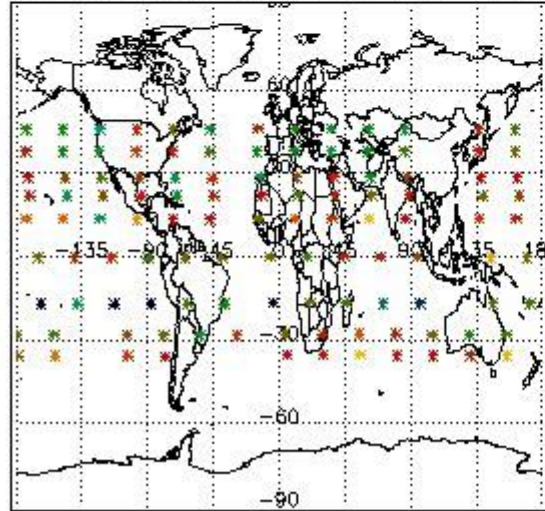
Percentage of flagged data per O3 profile



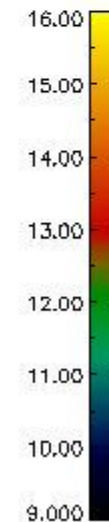
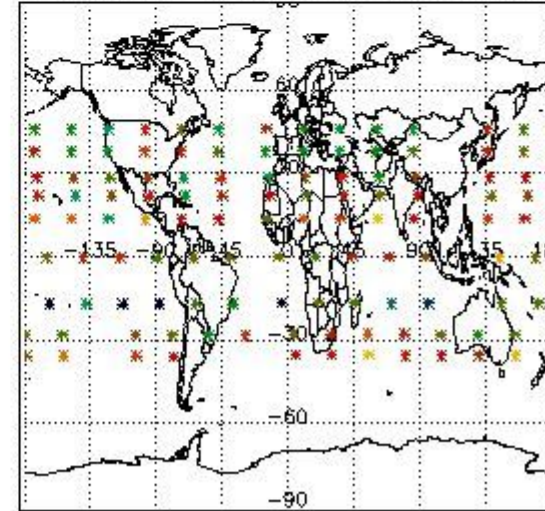
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

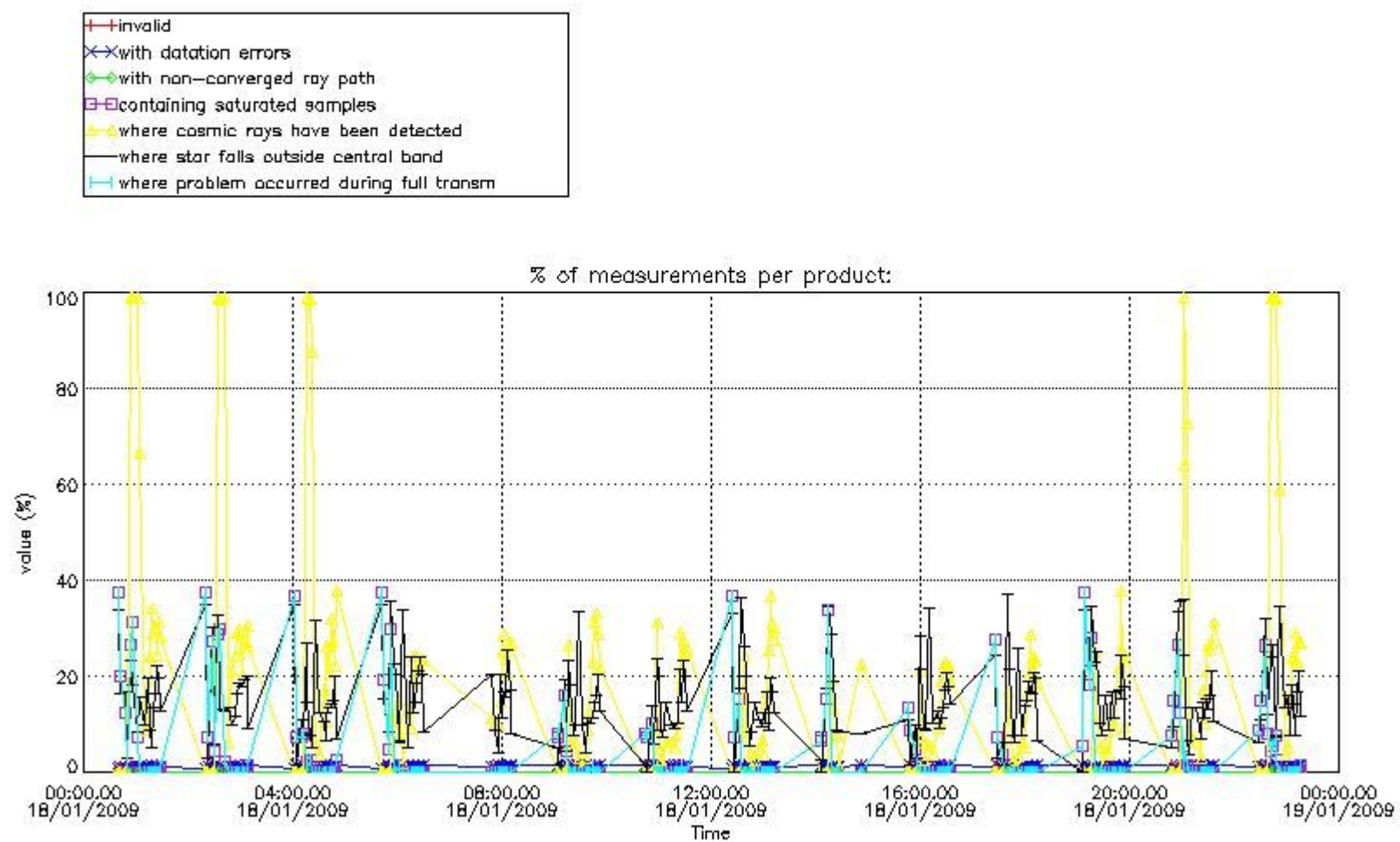


#### 4. Level 1 quality information per product

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

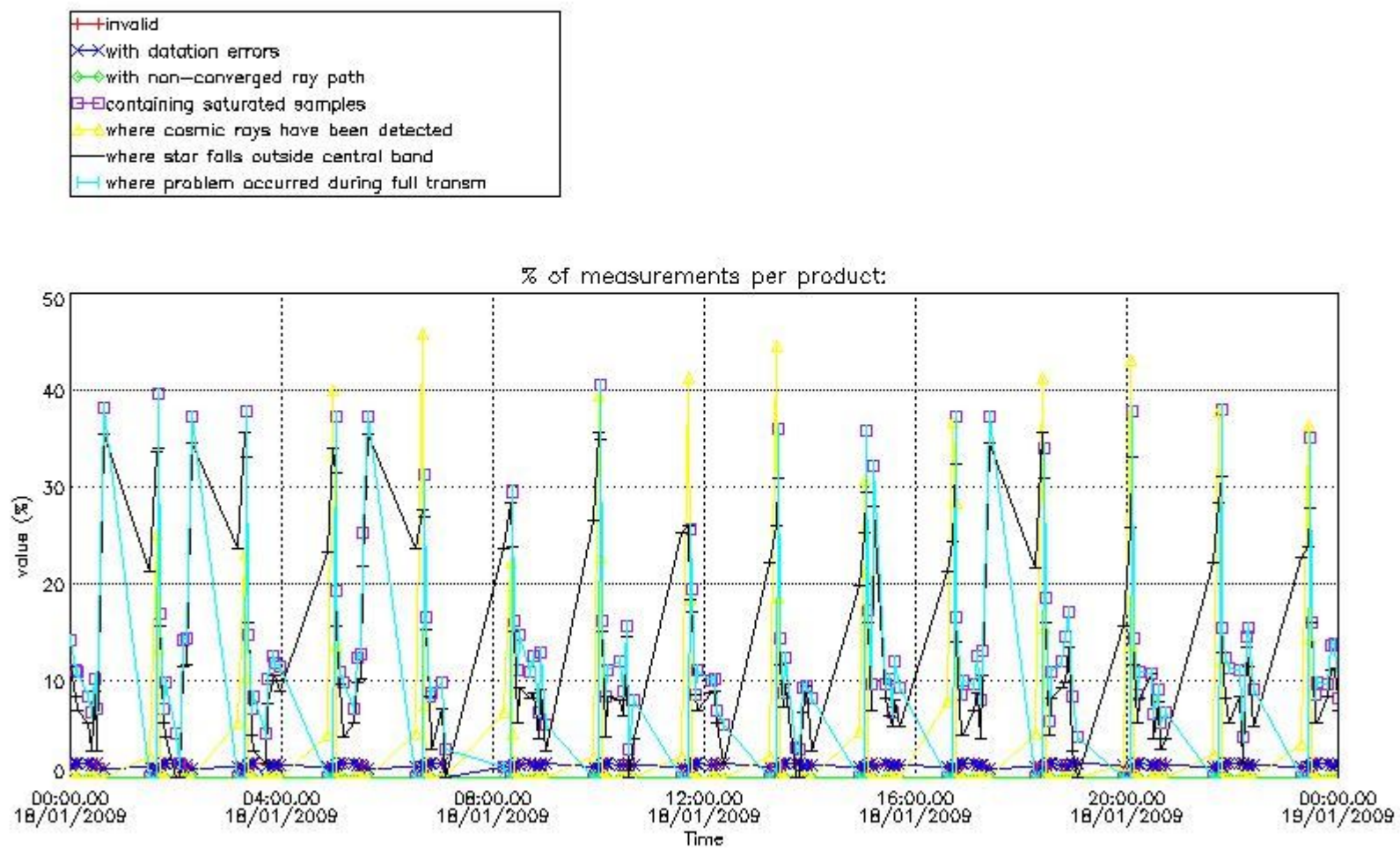
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



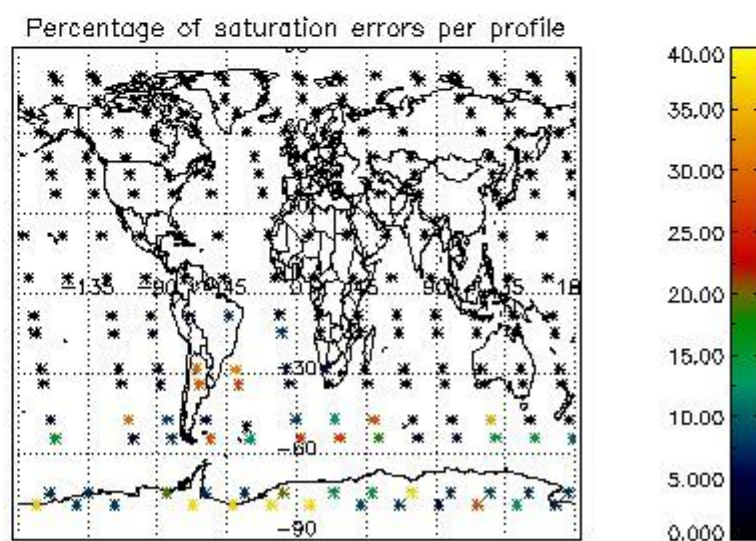
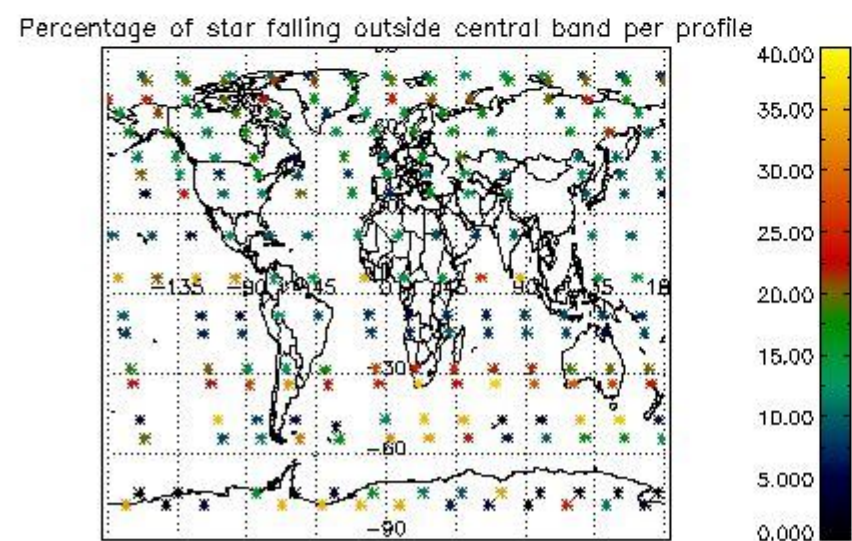
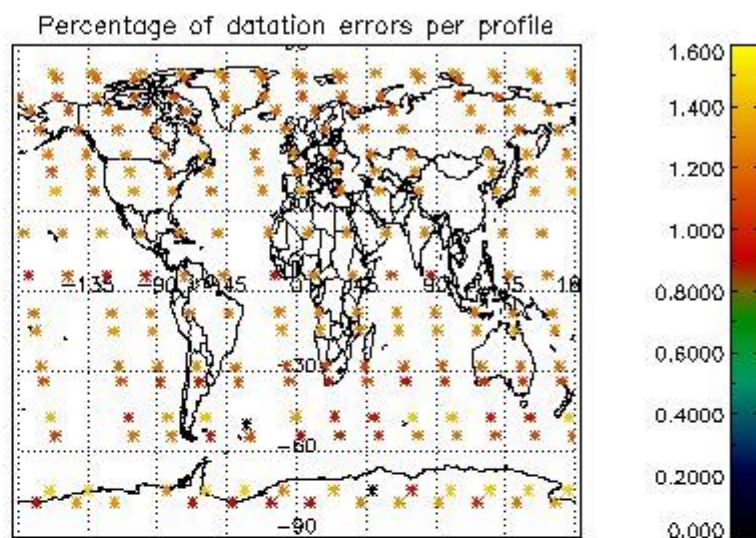
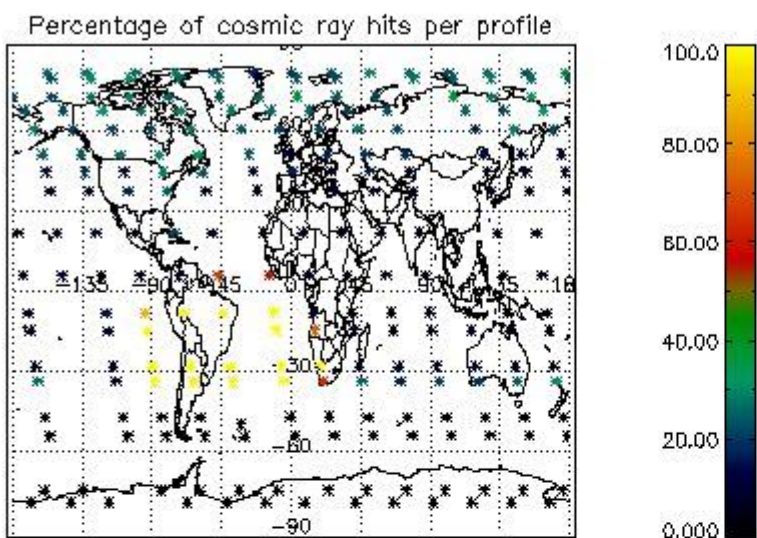
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



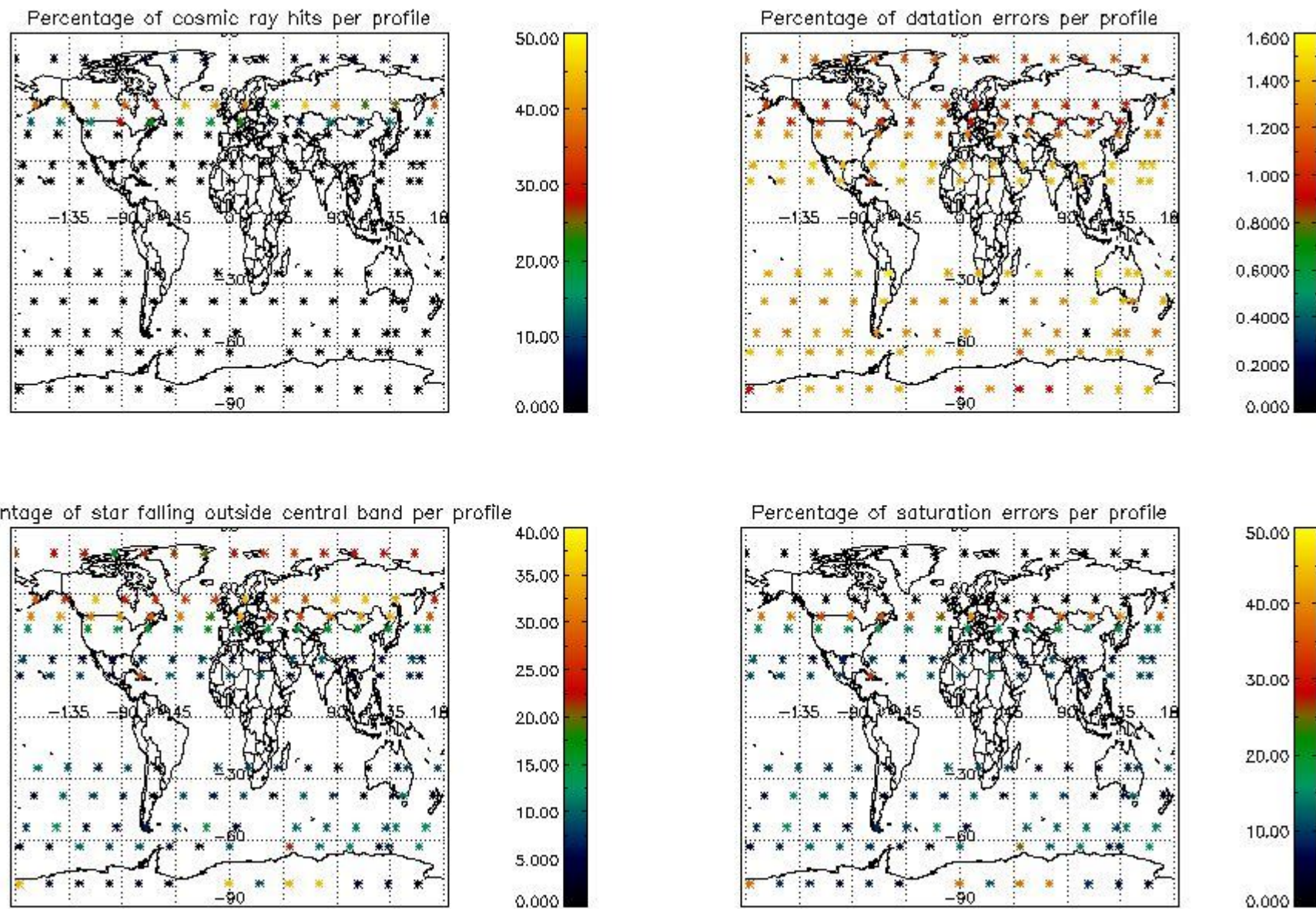


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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

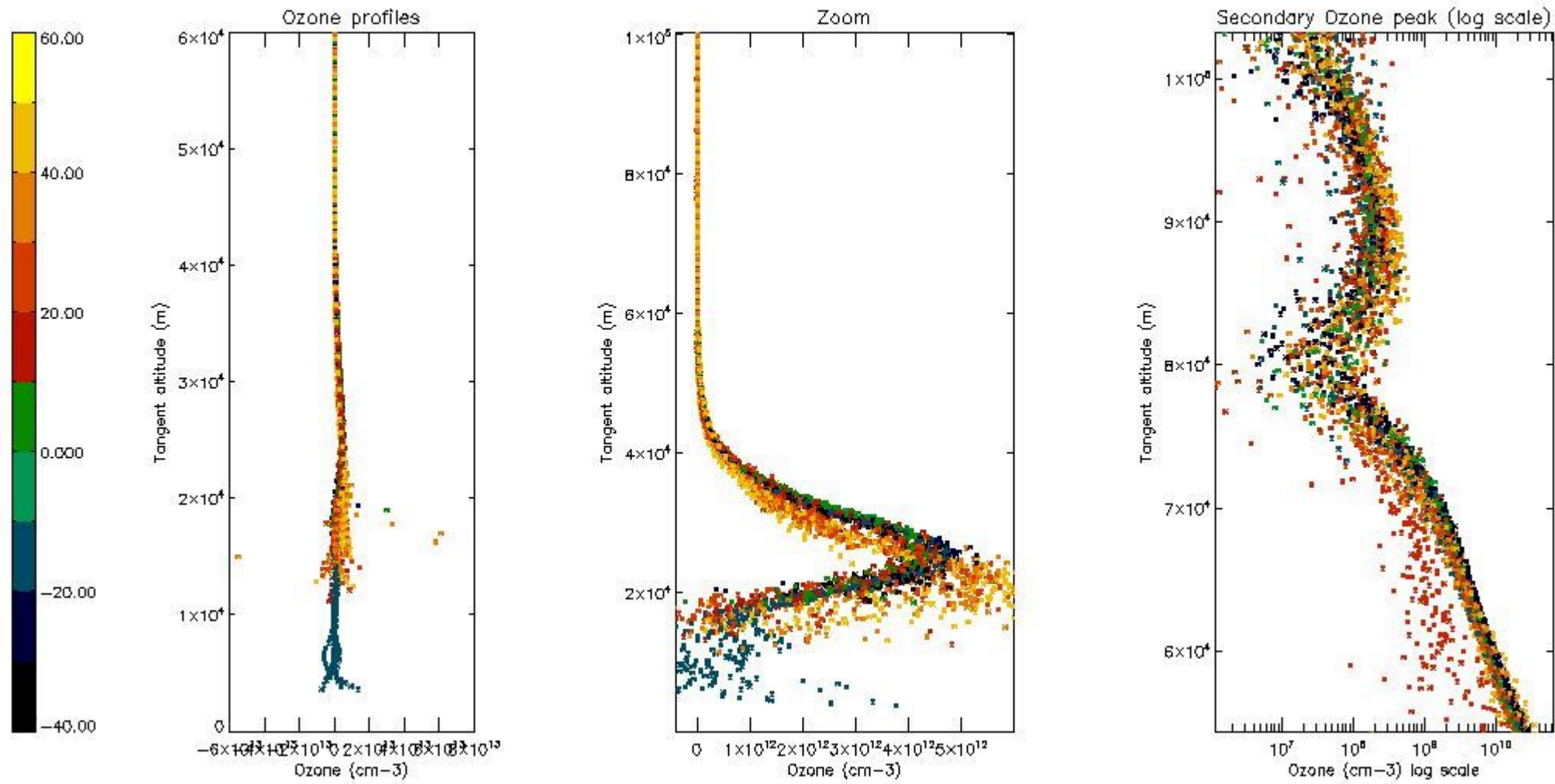
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	18

STD < 10	16
STD < 5	11

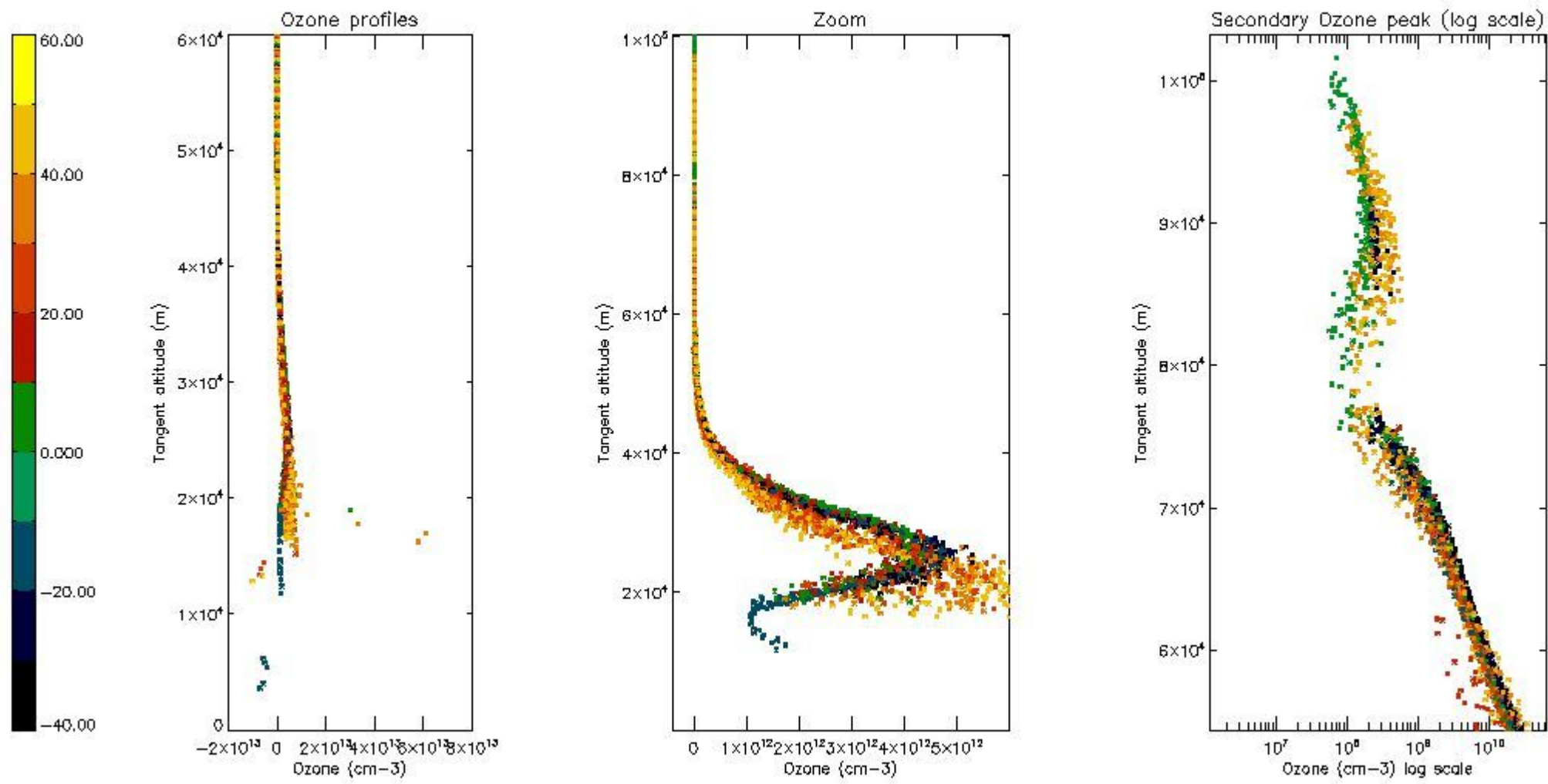
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



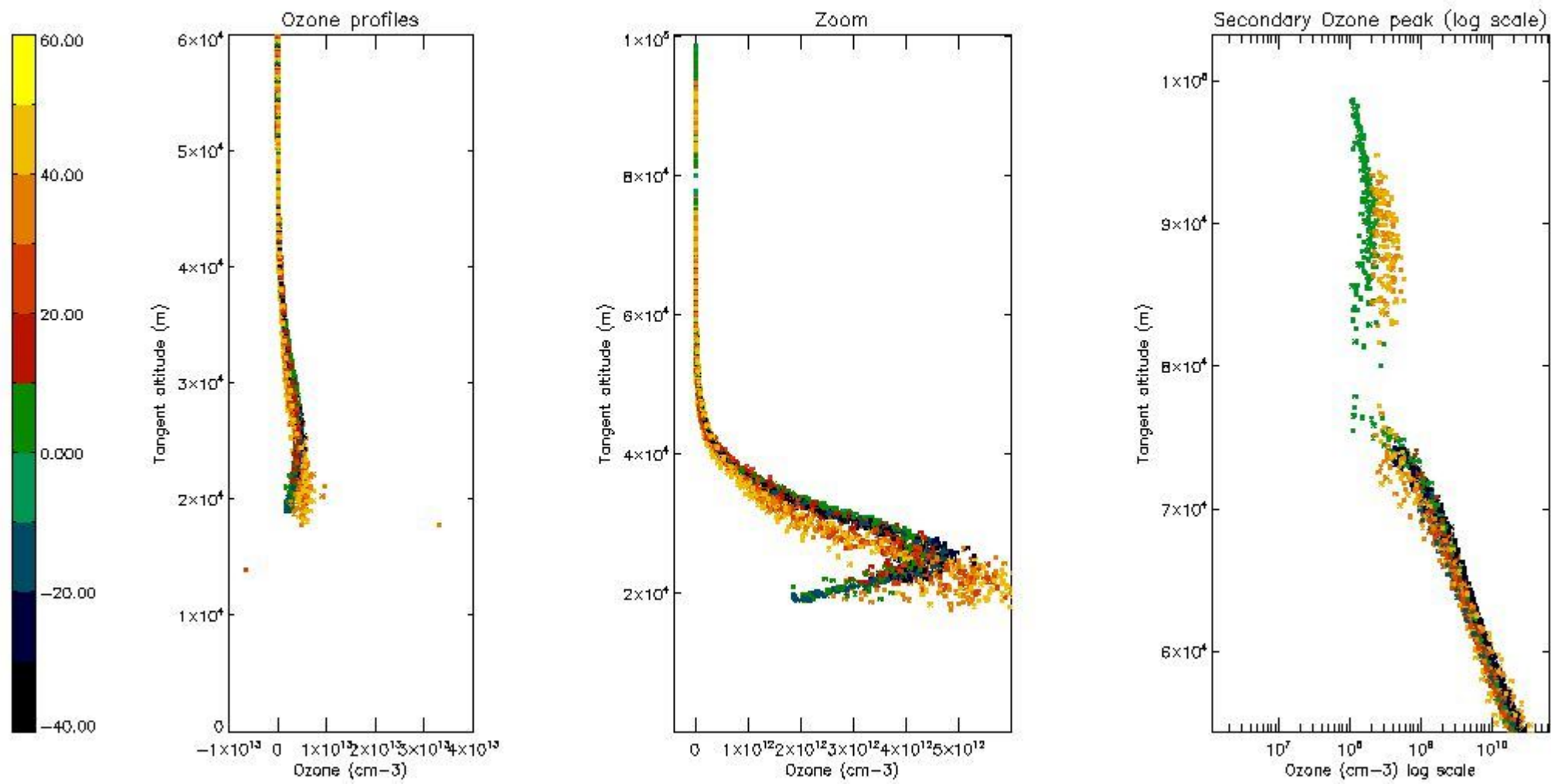
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



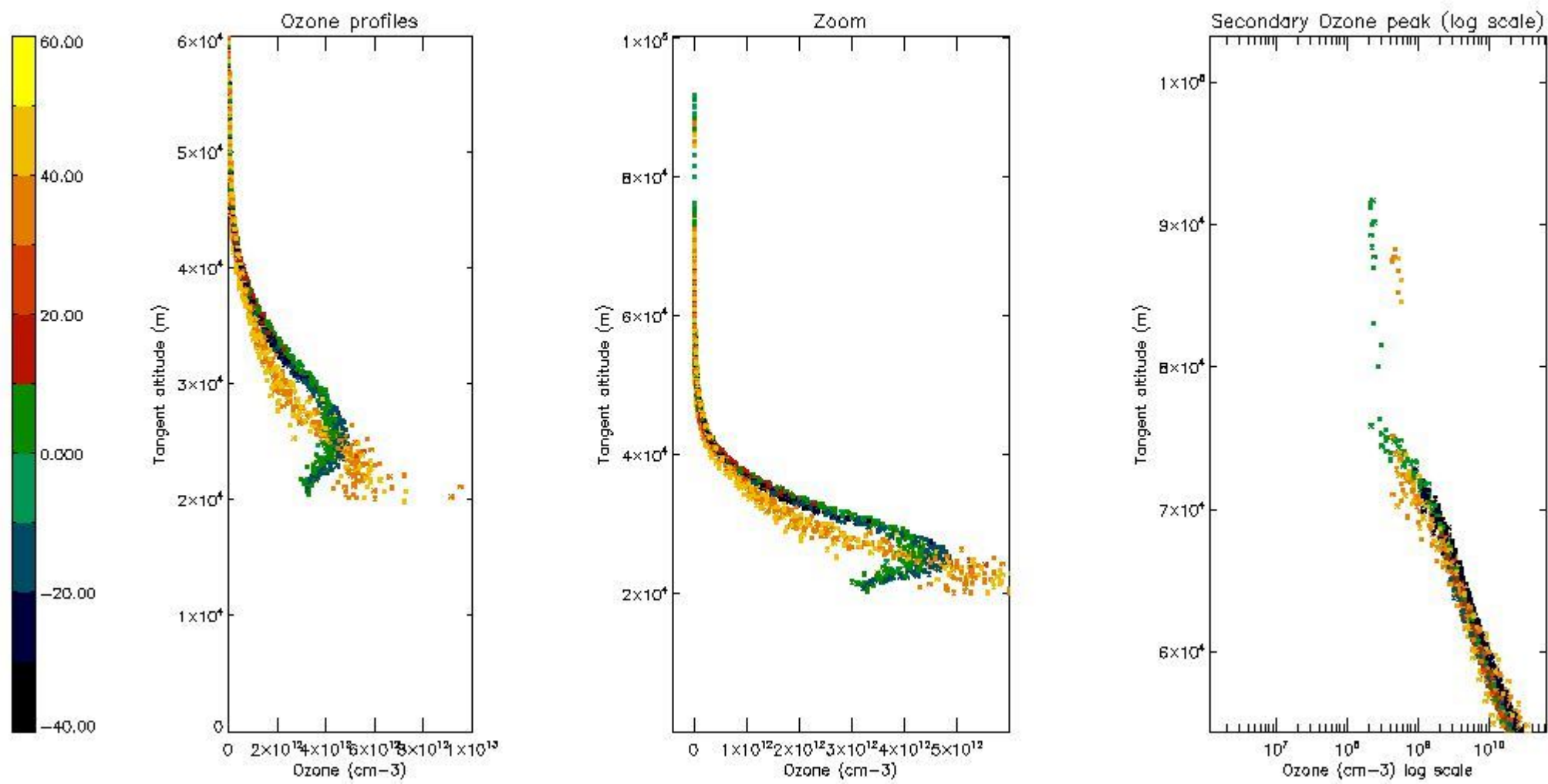
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



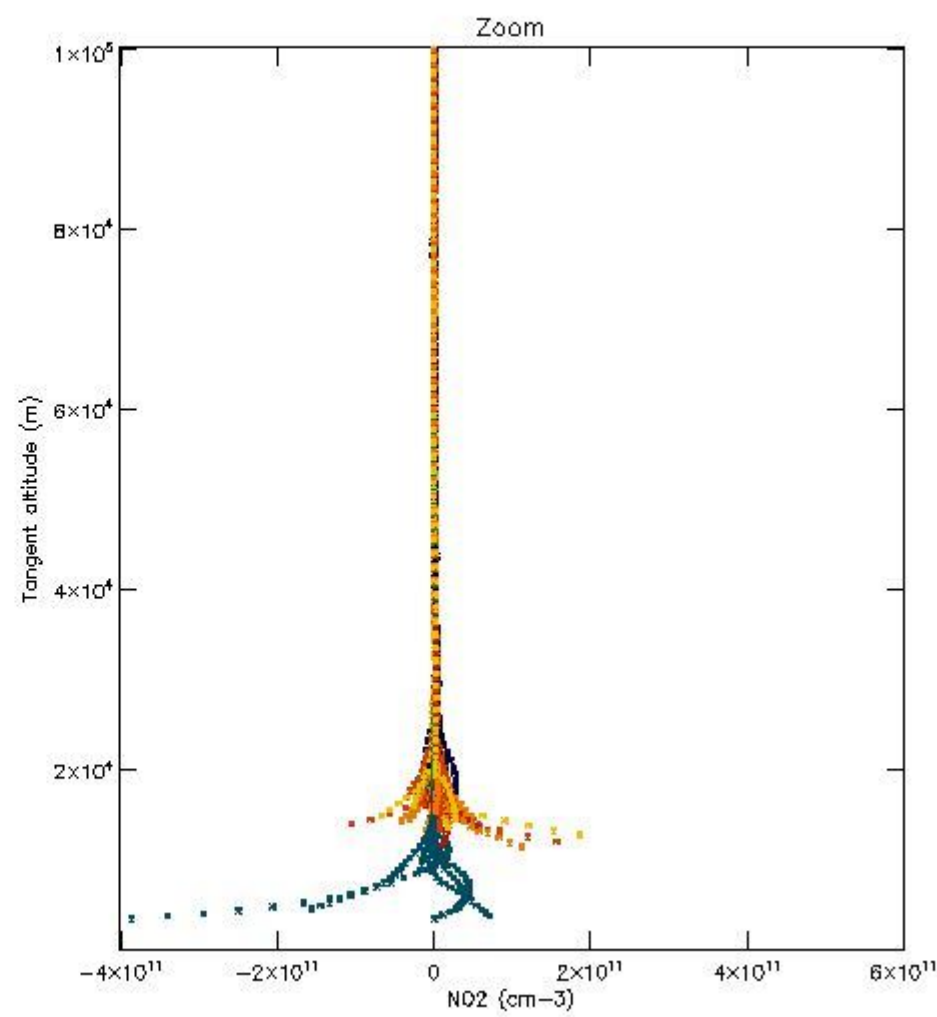
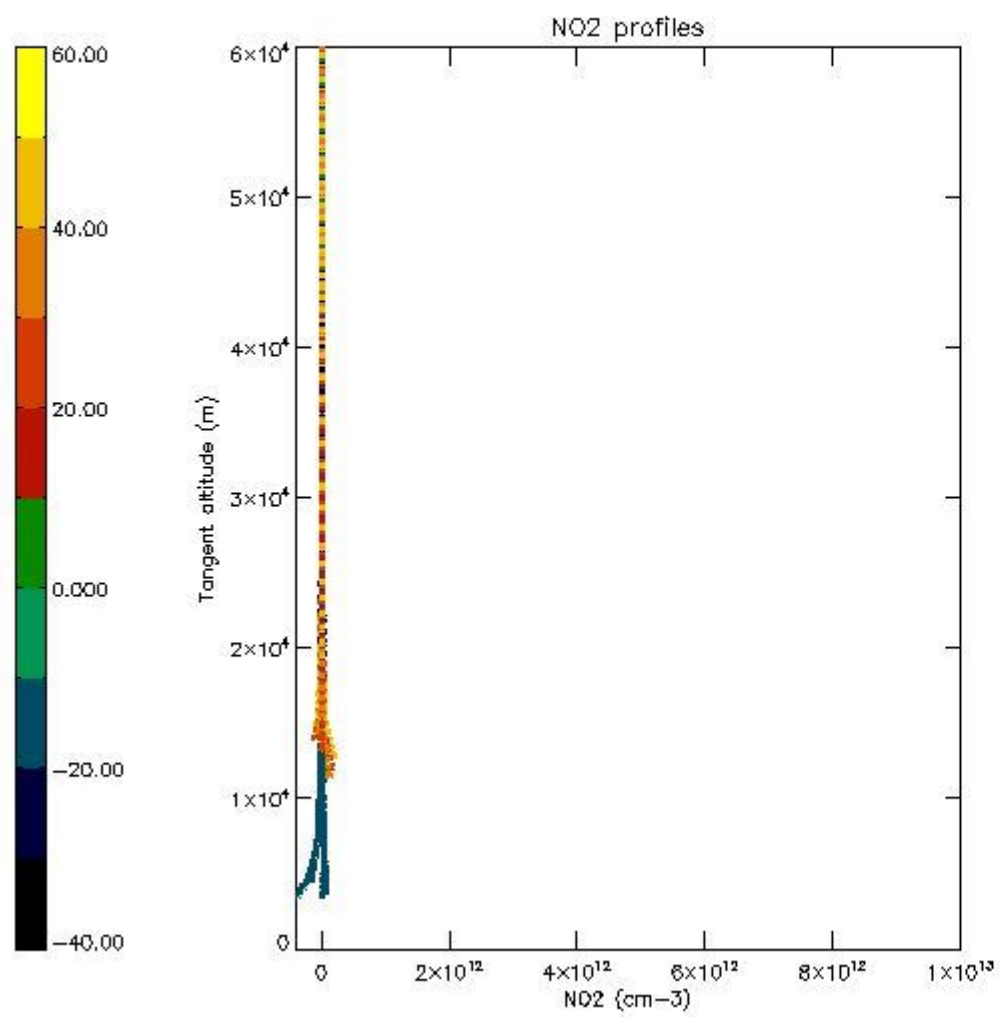
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

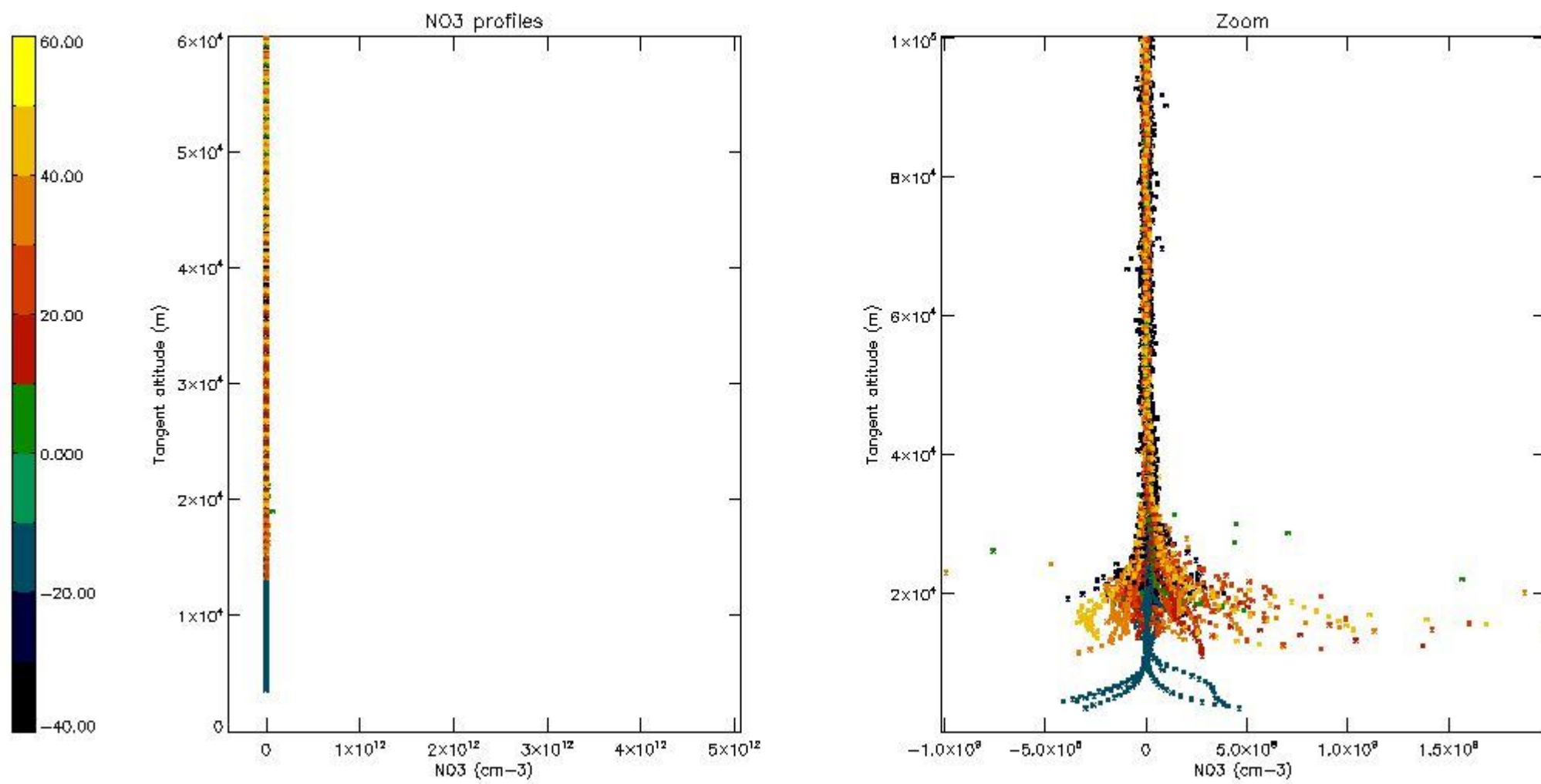
The colorbar represents the latitude.



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

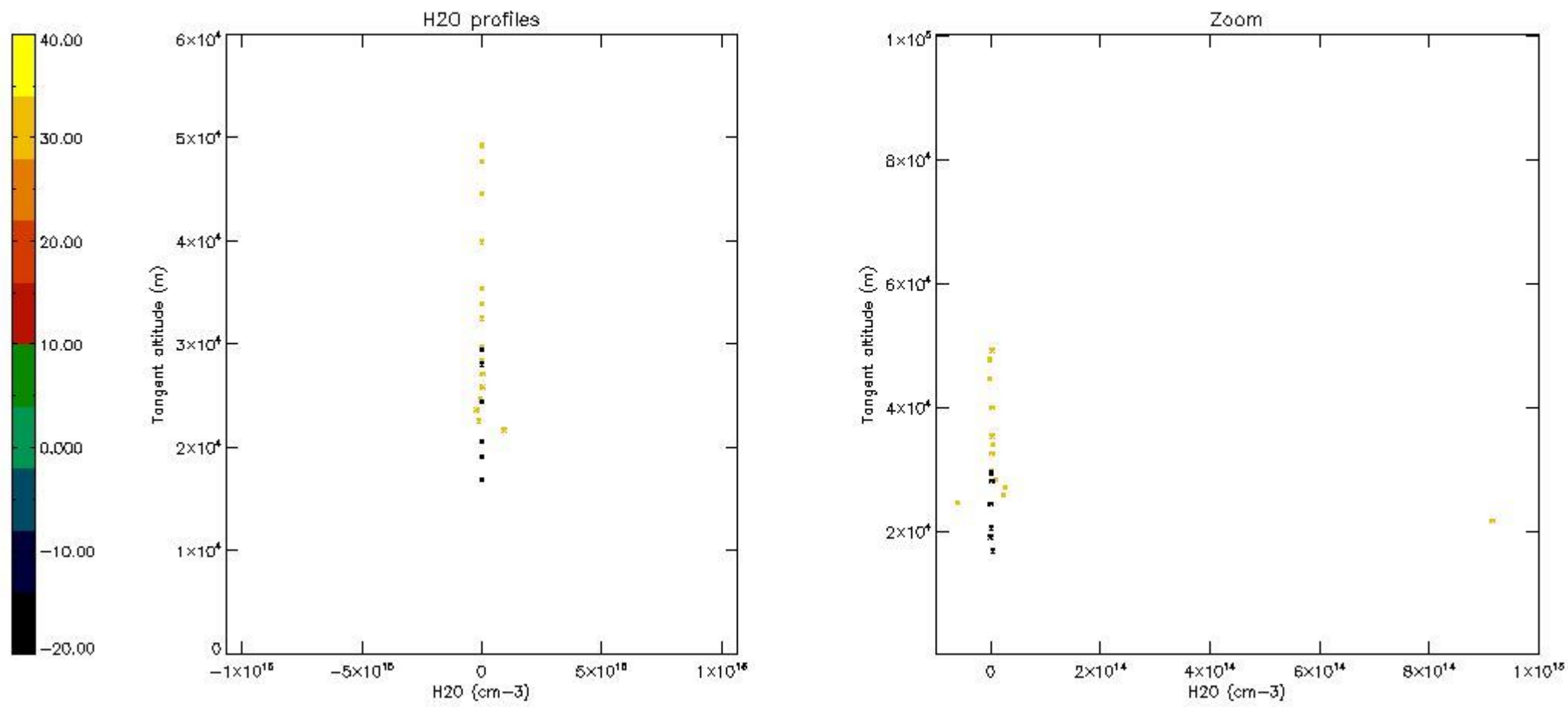
The colorbar represents the latitude.





*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)*

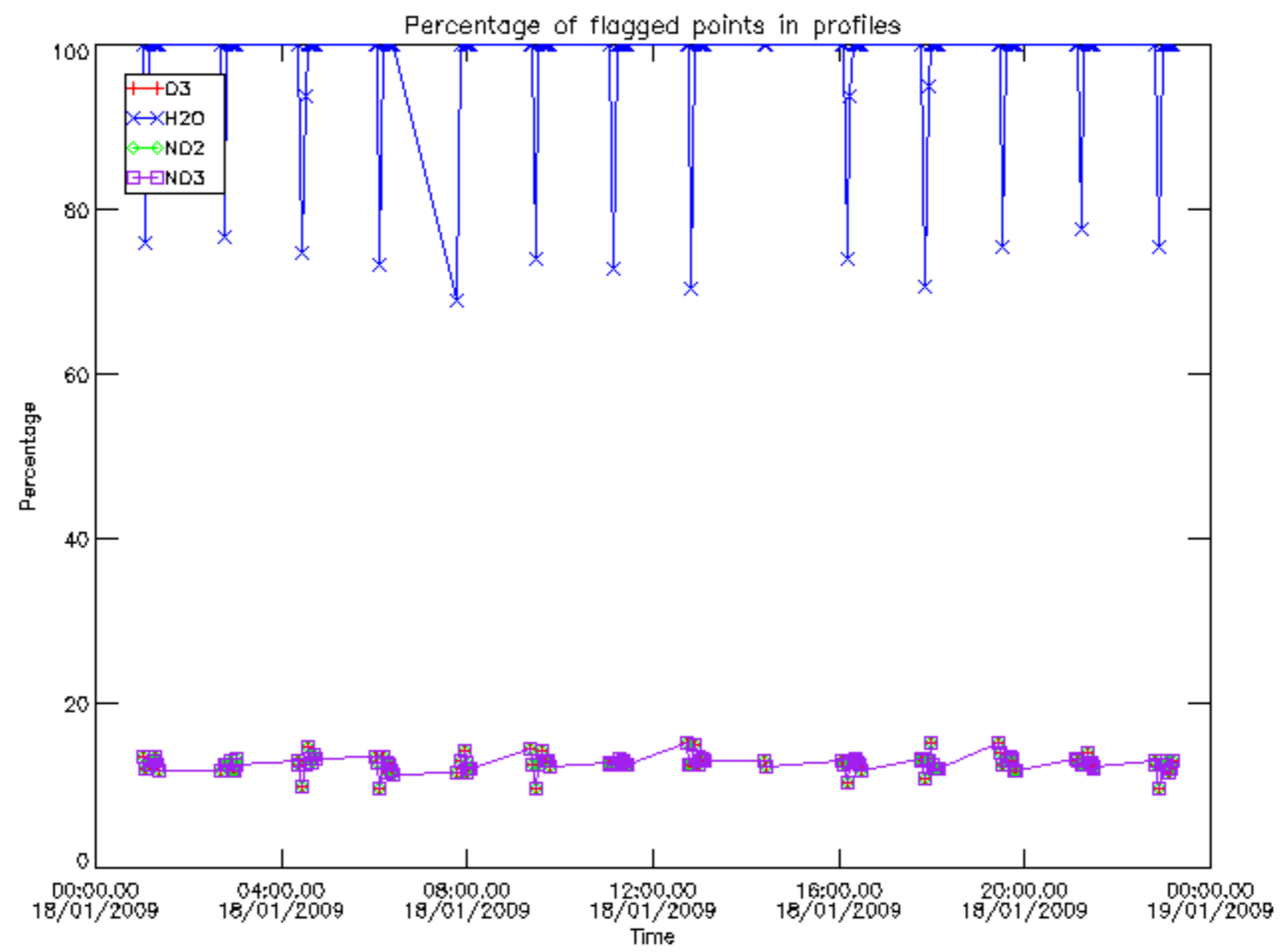
The colorbar represents the latitude.



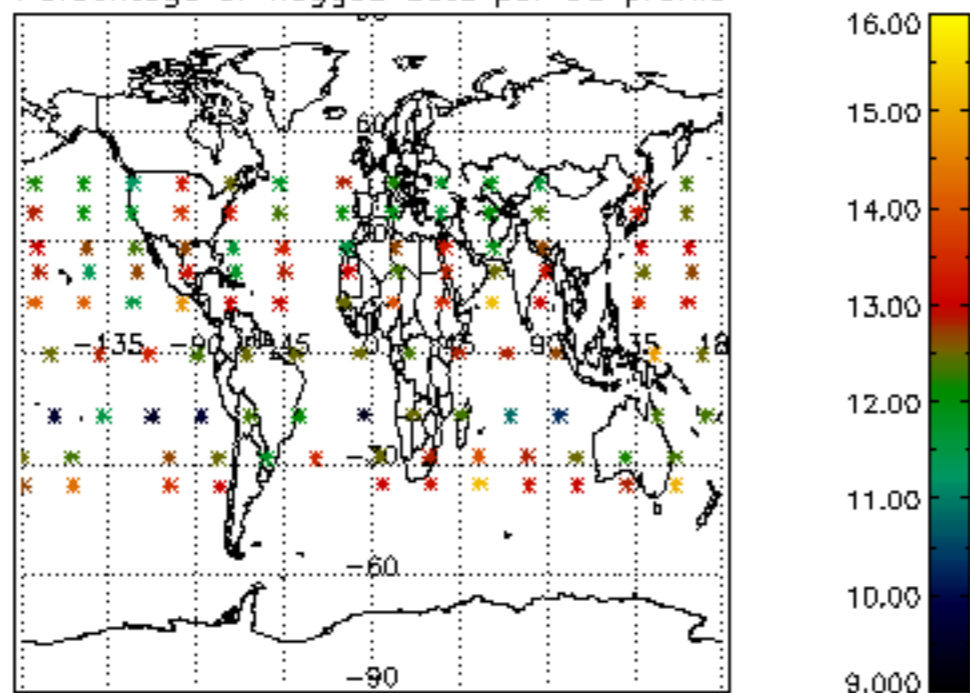
## 6. Auxiliary Data Files used for the production reported in section 2

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.

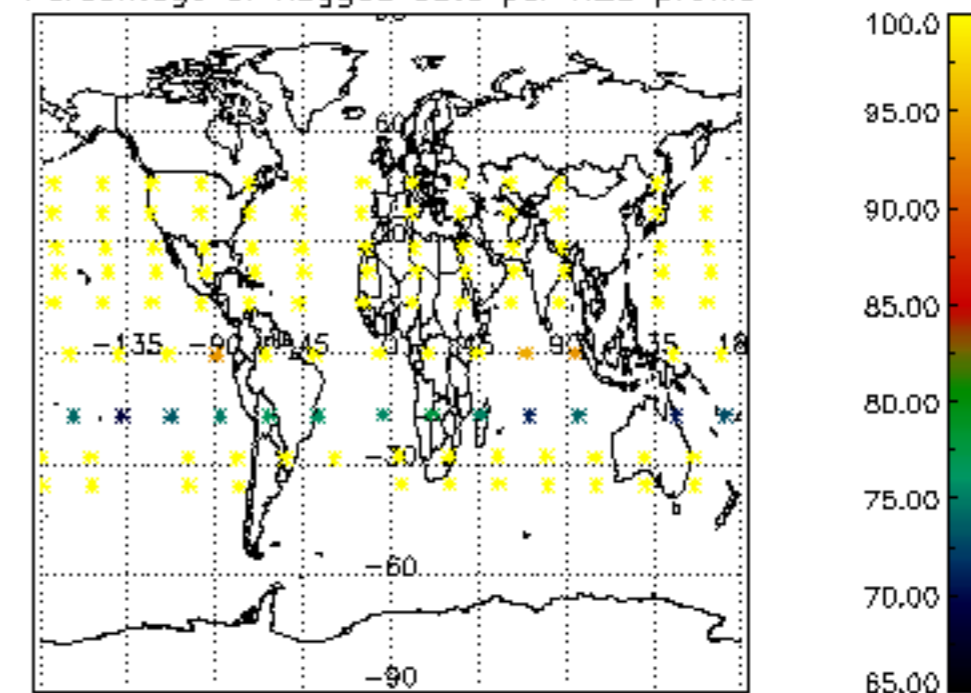
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	18-JAN-2009 00:00:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-JAN-2009 00:00:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-JAN-2009 00:00:59



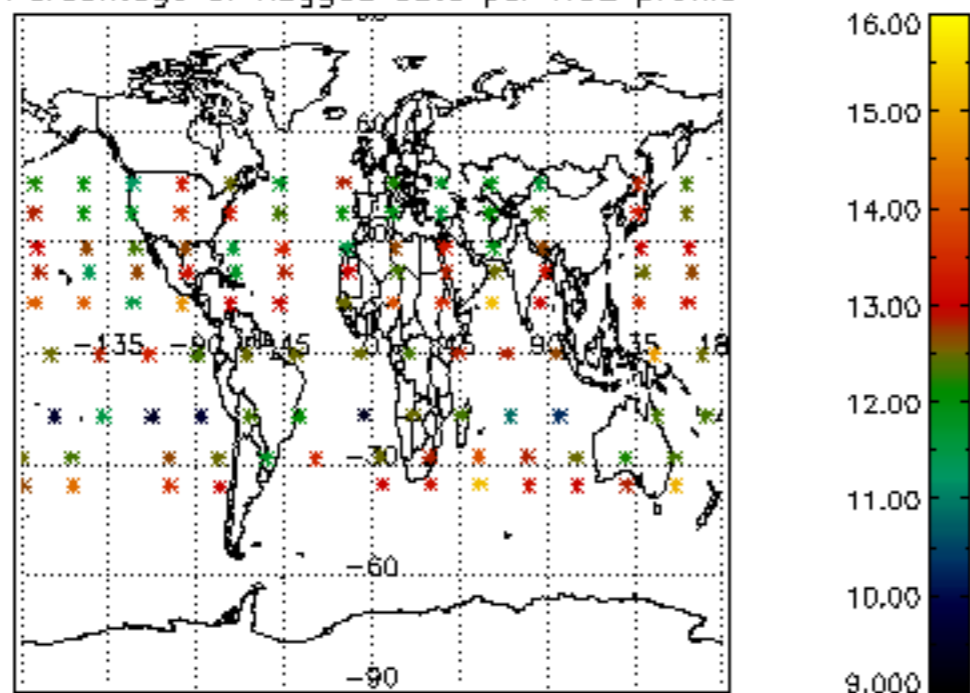
Percentage of flagged data per D3 profile



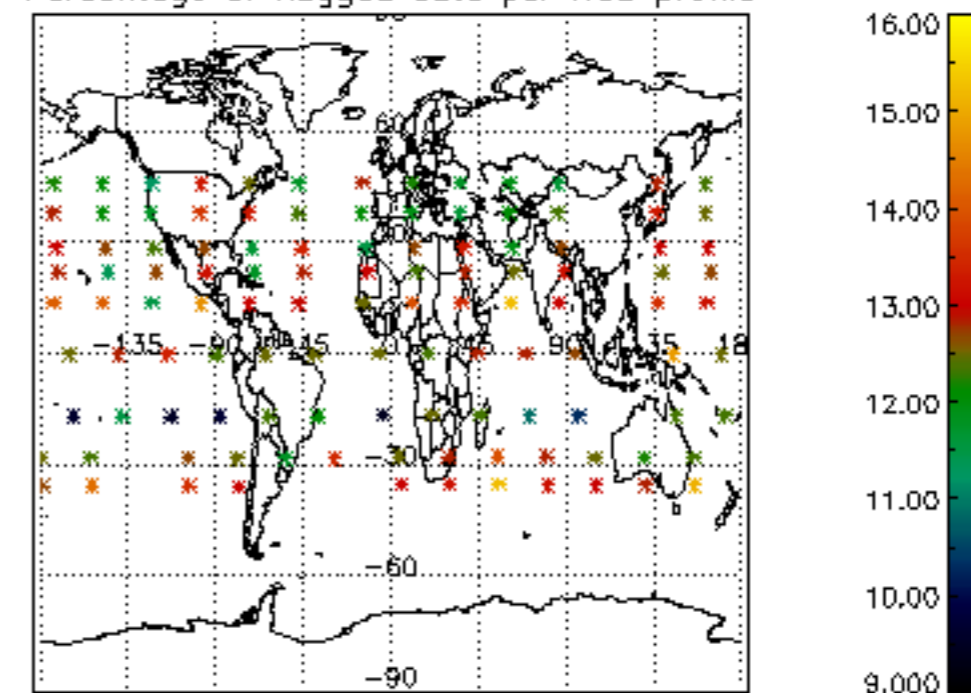
Percentage of flagged data per H2O profile

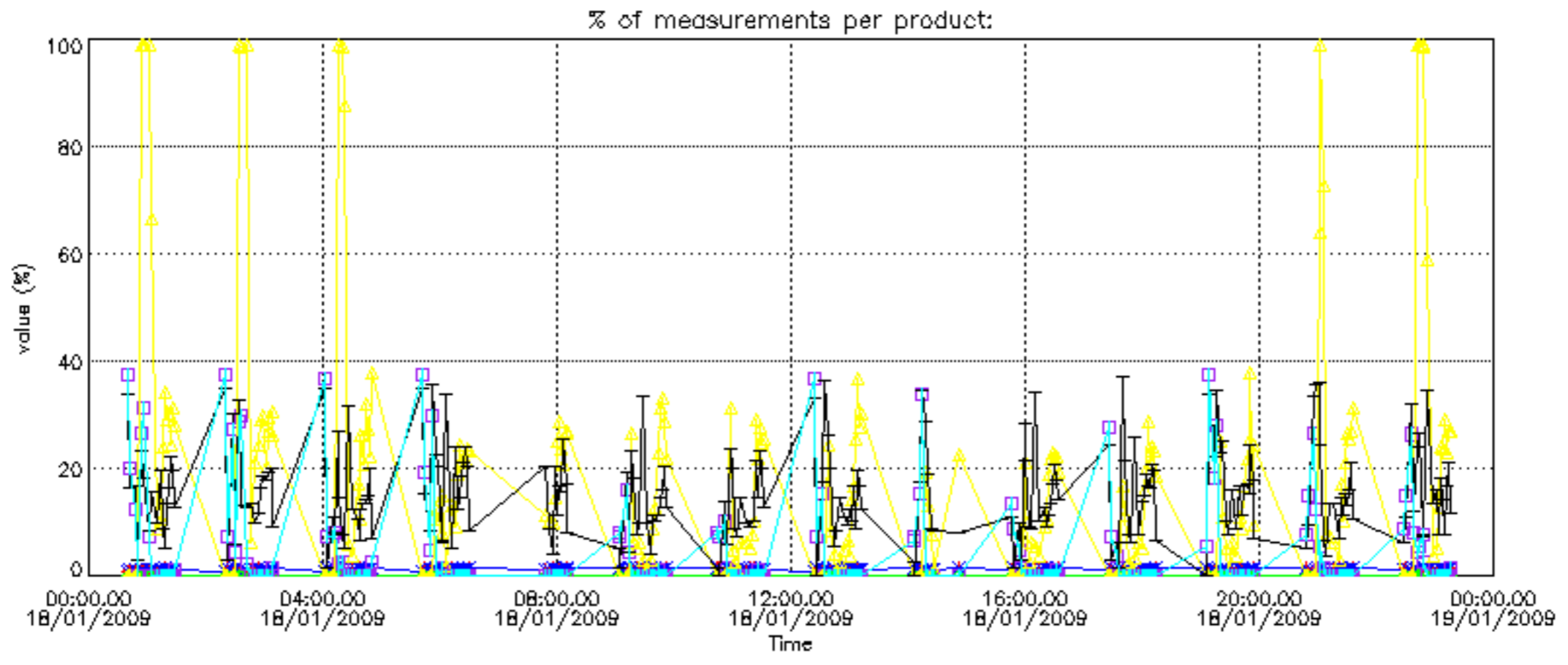


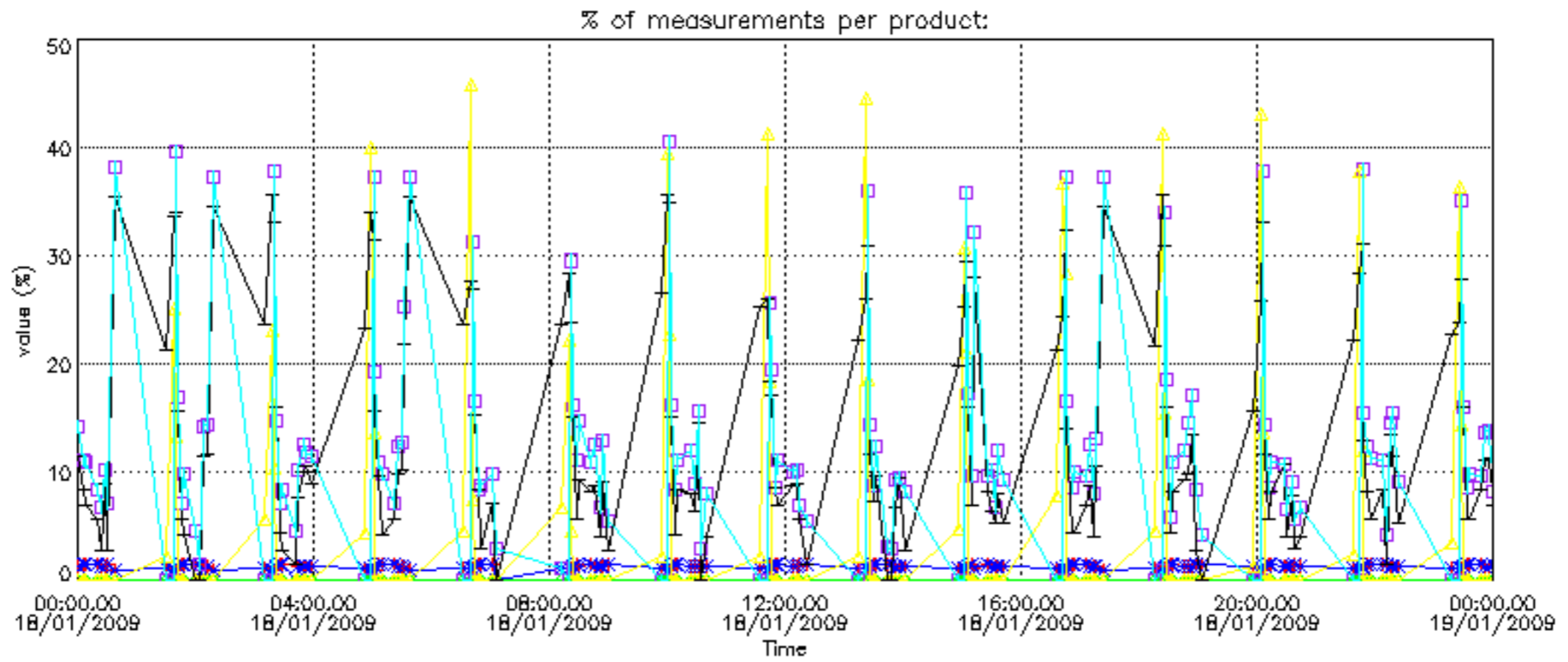
Percentage of flagged data per NO2 profile



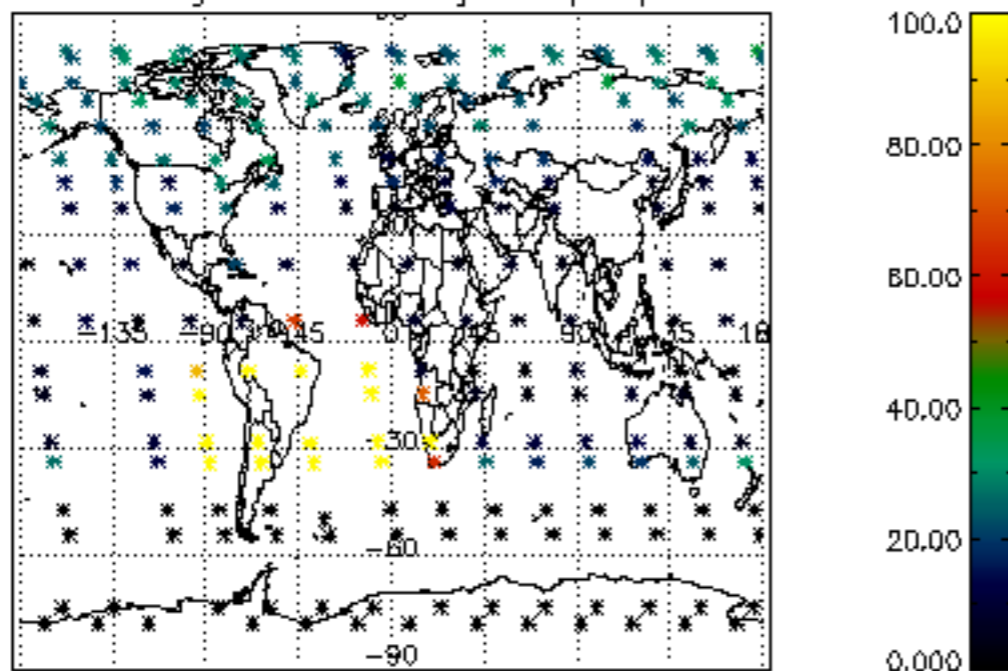
Percentage of flagged data per NO3 profile



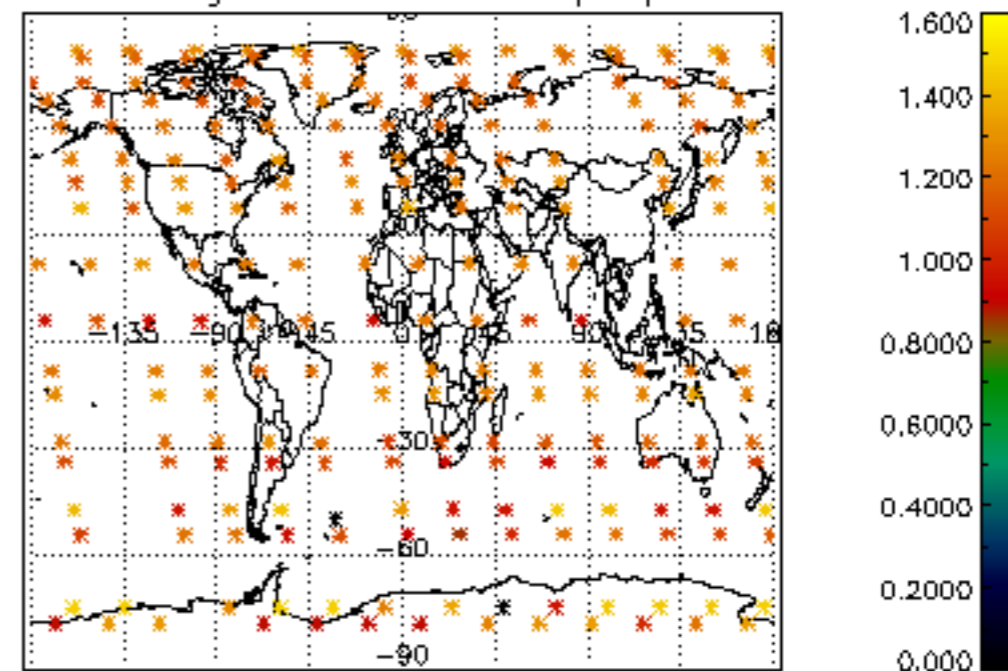




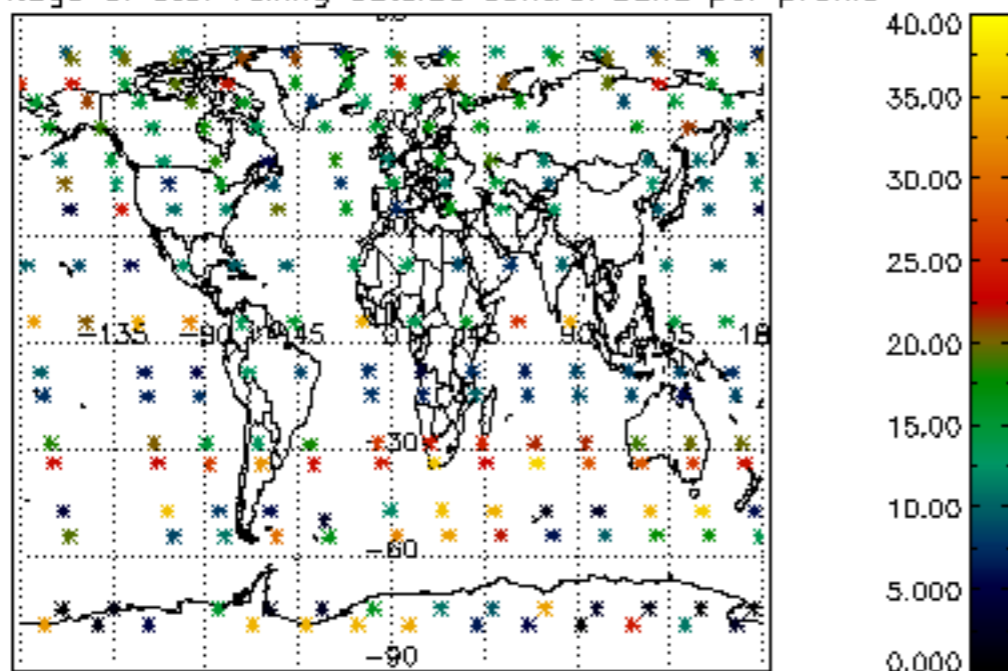
Percentage of cosmic ray hits per profile



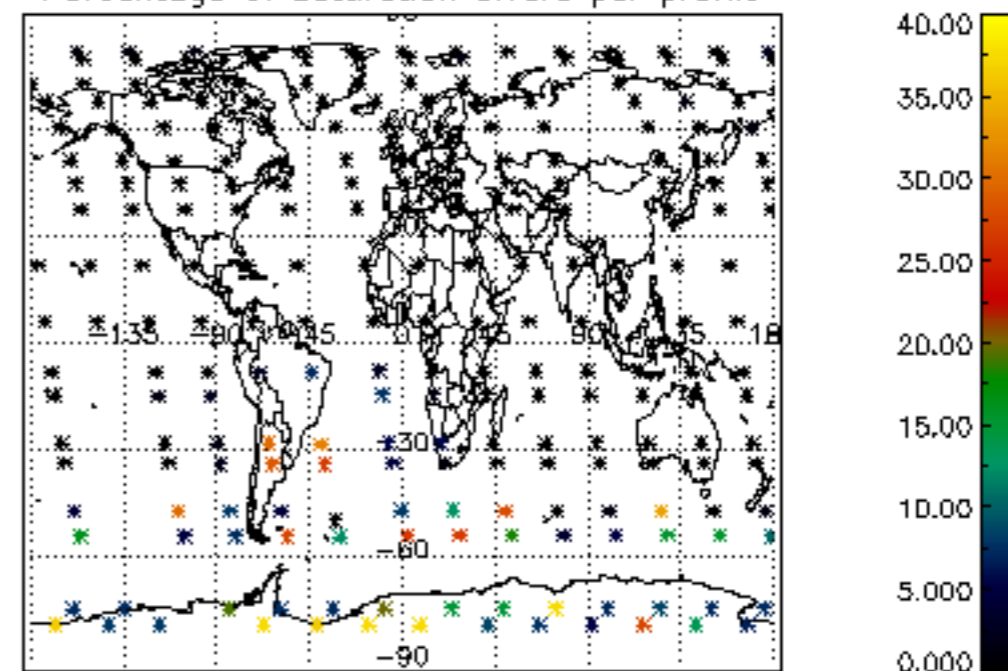
Percentage of datation errors per profile



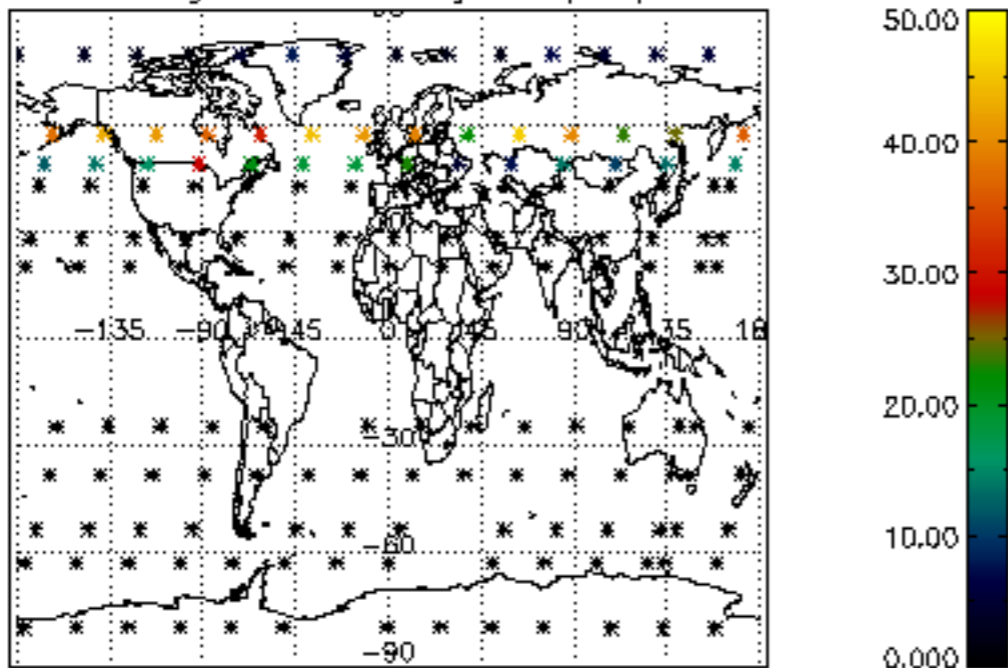
Percentage of star falling outside central band per profile



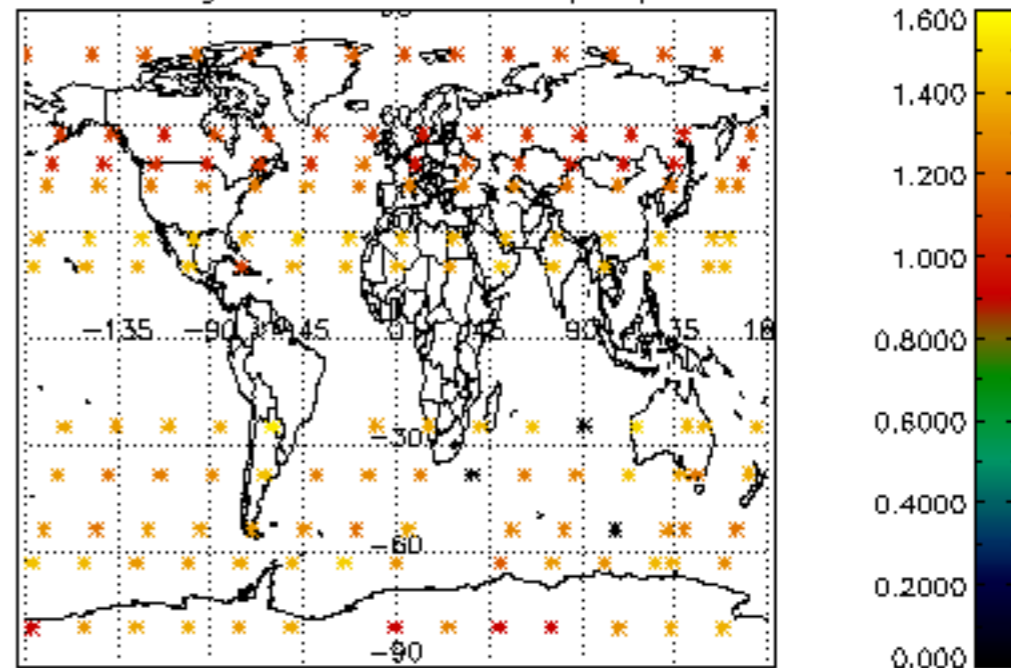
Percentage of saturation errors per profile



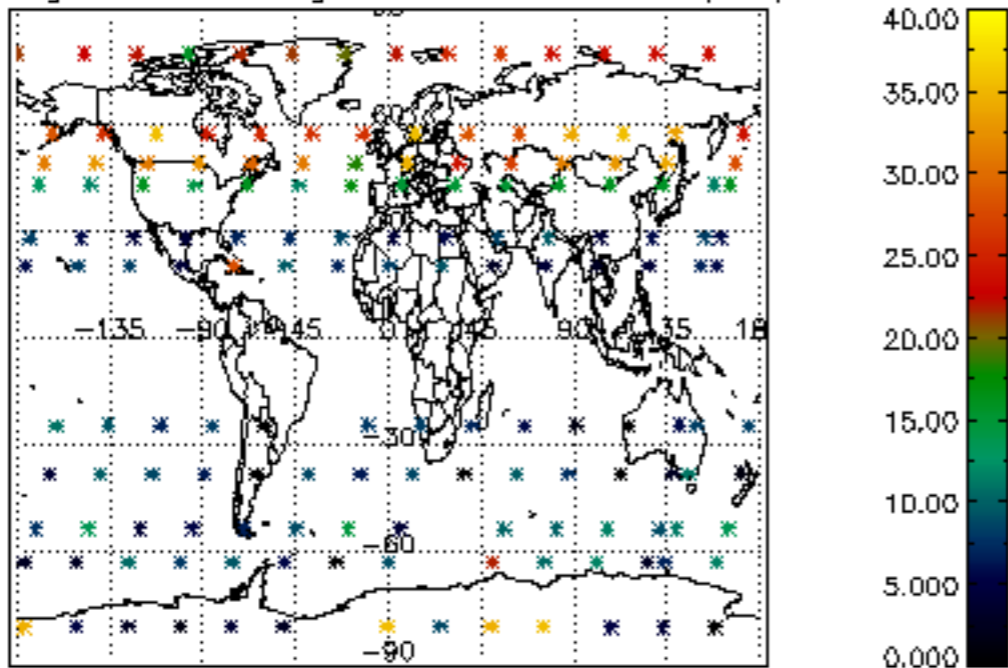
Percentage of cosmic ray hits per profile



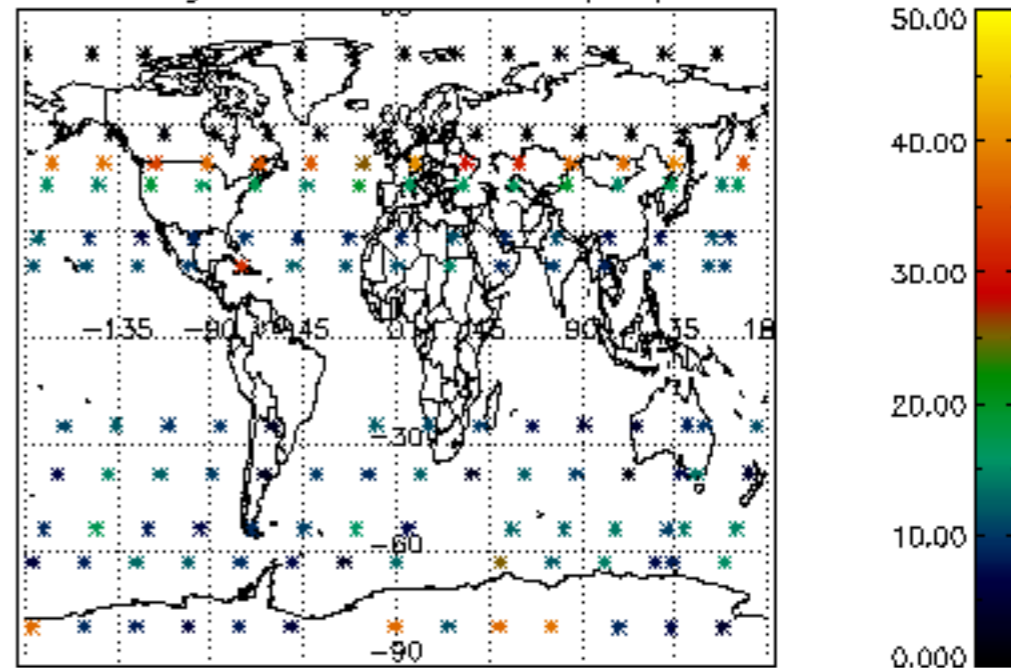
Percentage of datation errors per profile



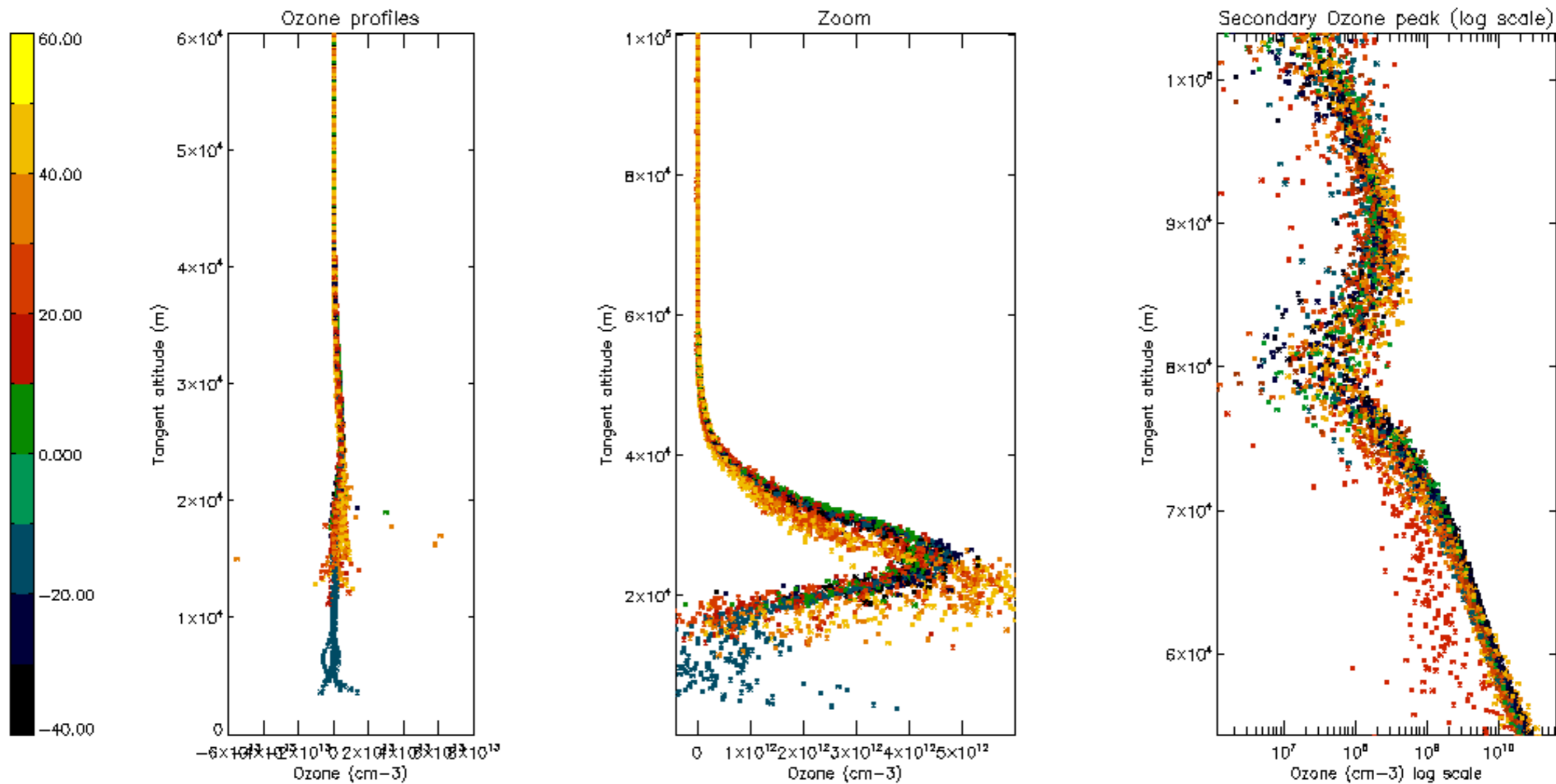
Percentage of star falling outside central band per profile

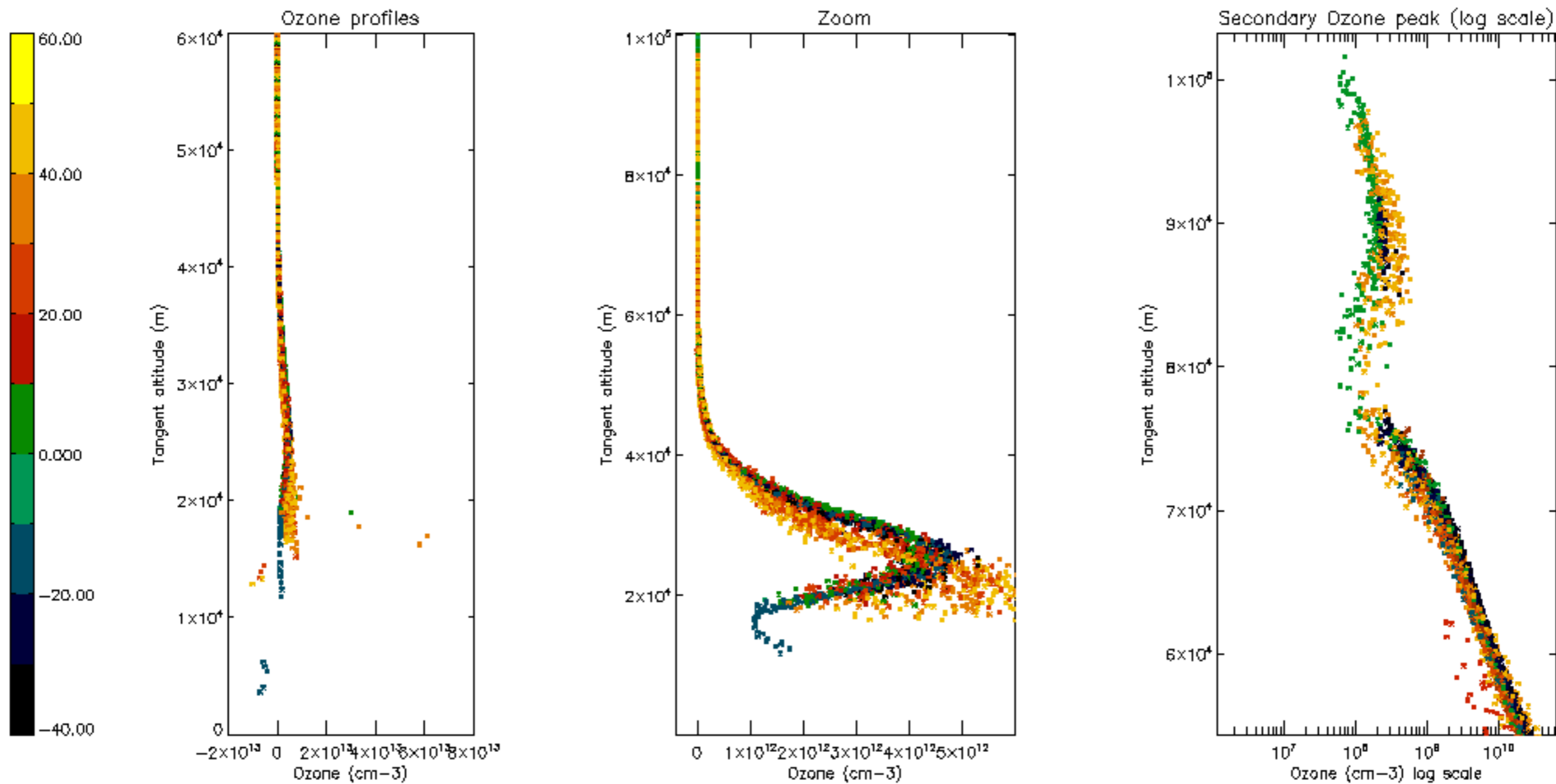


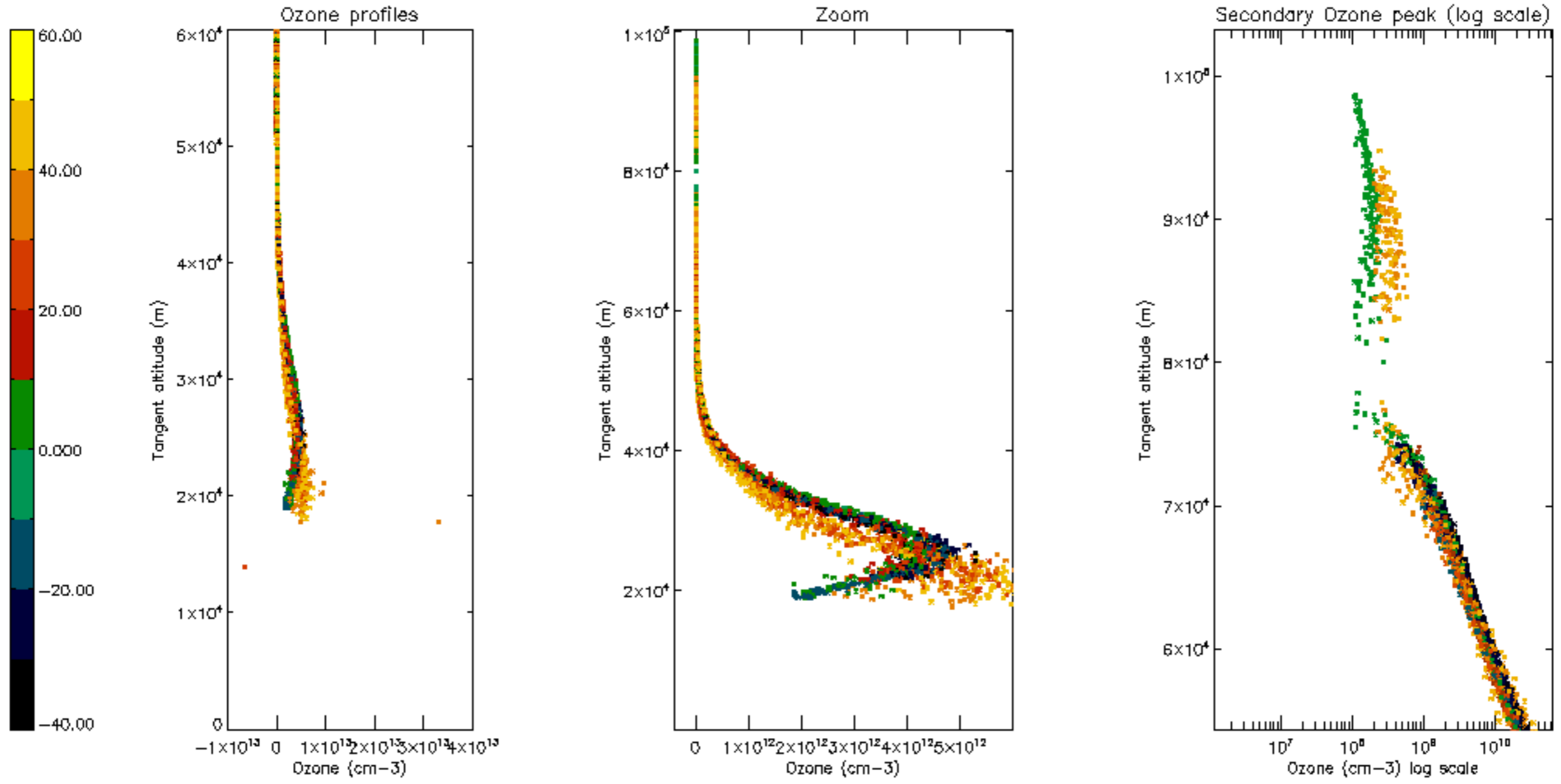
Percentage of saturation errors per profile

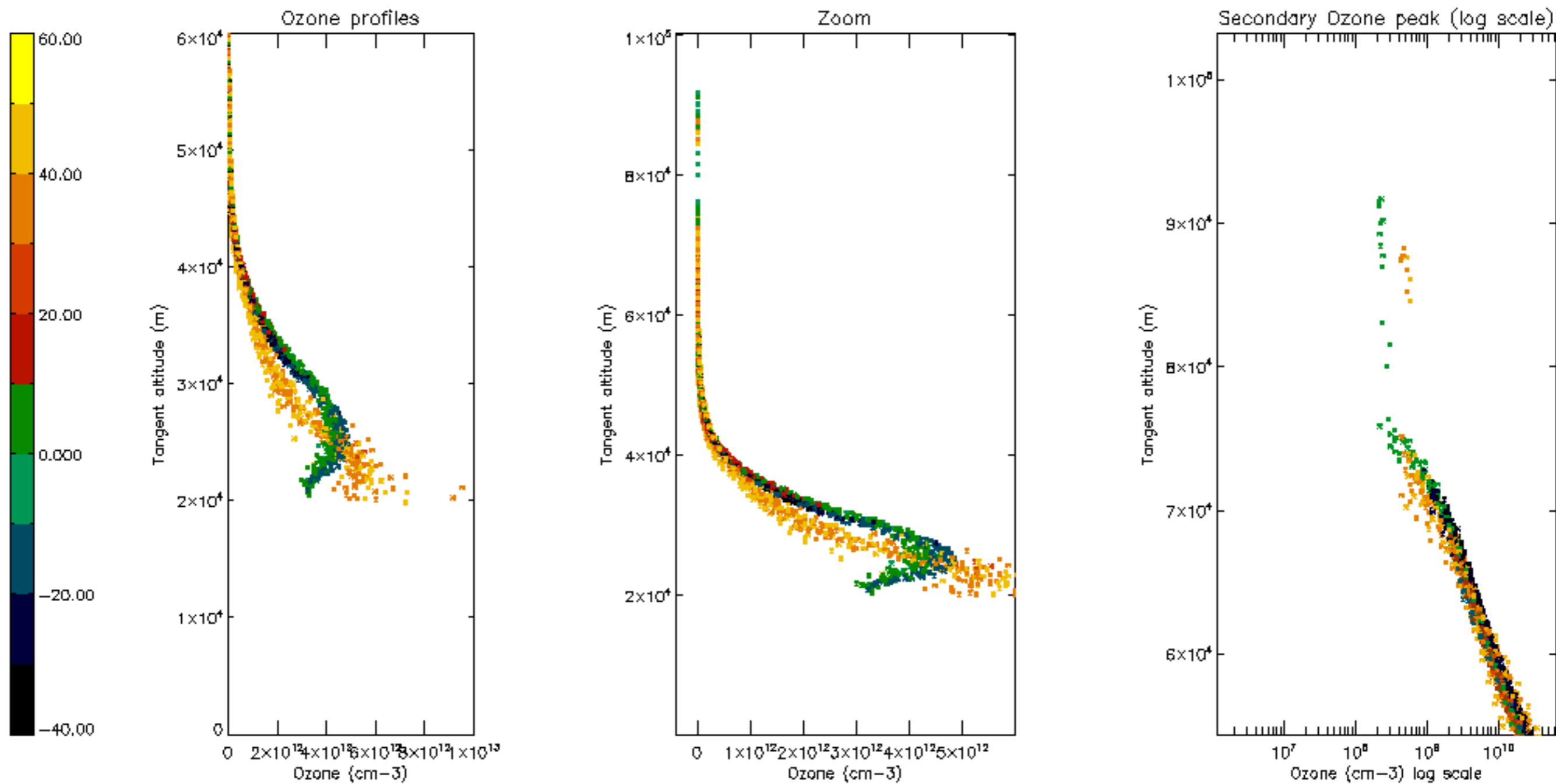


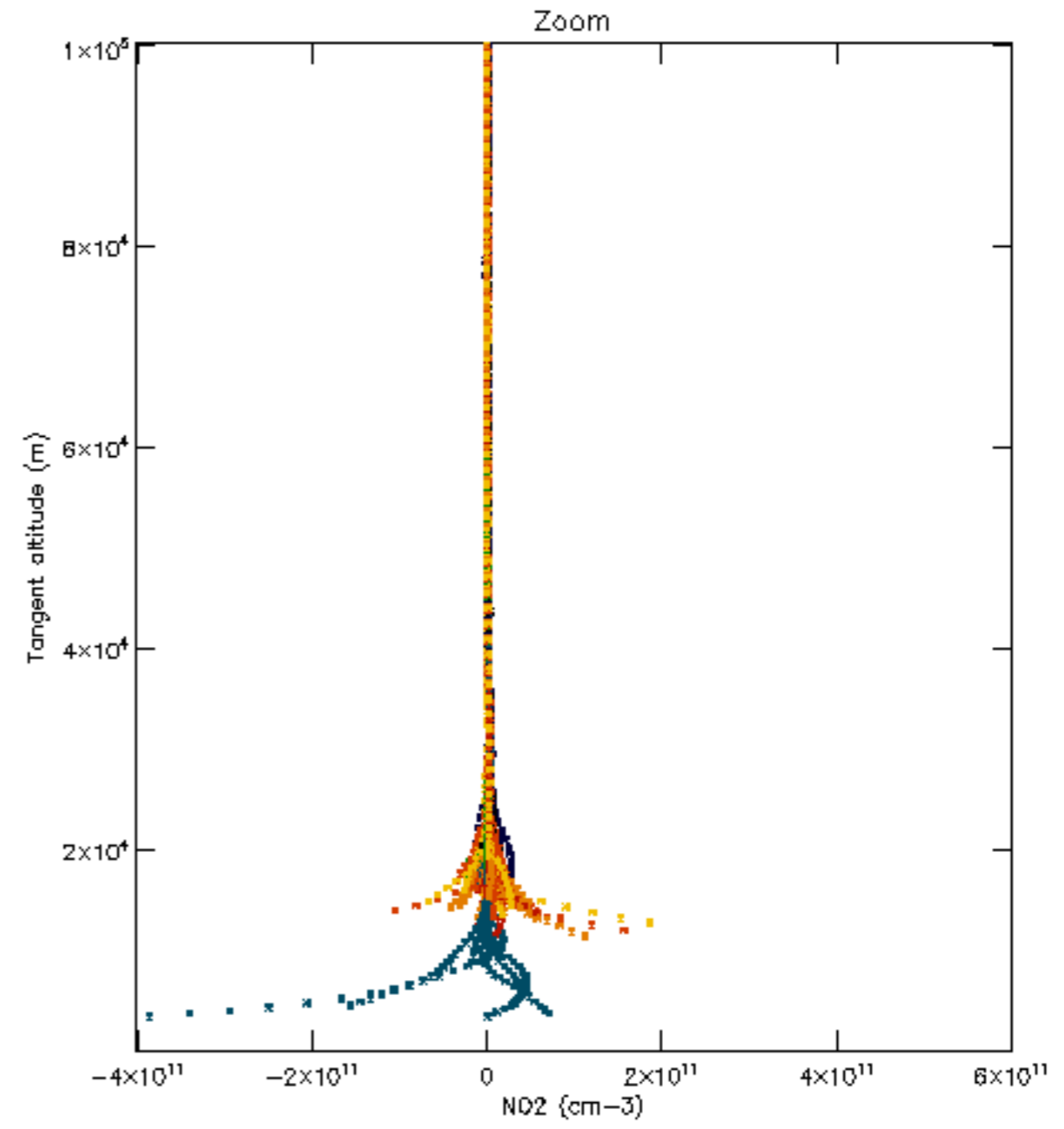
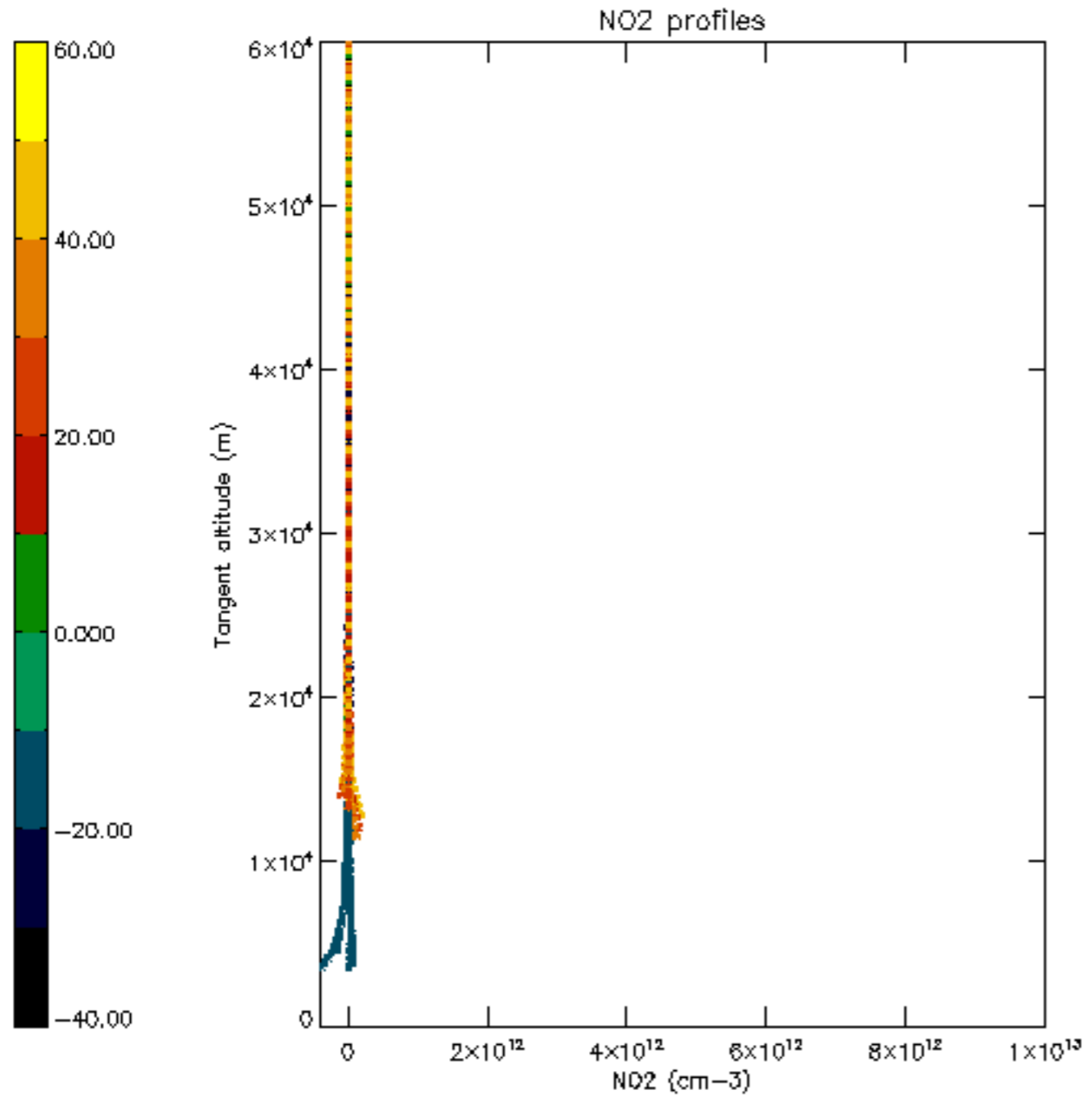


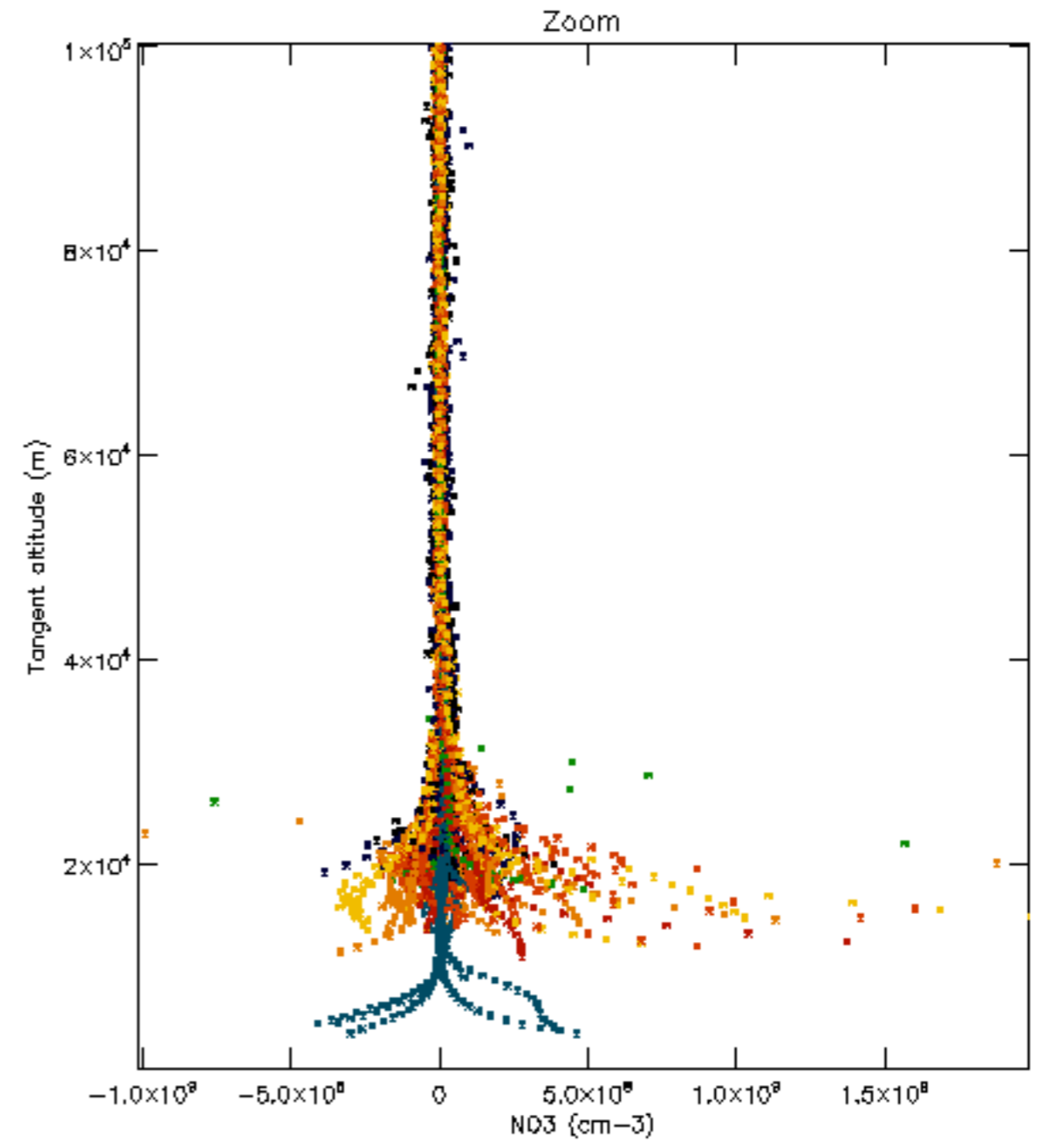
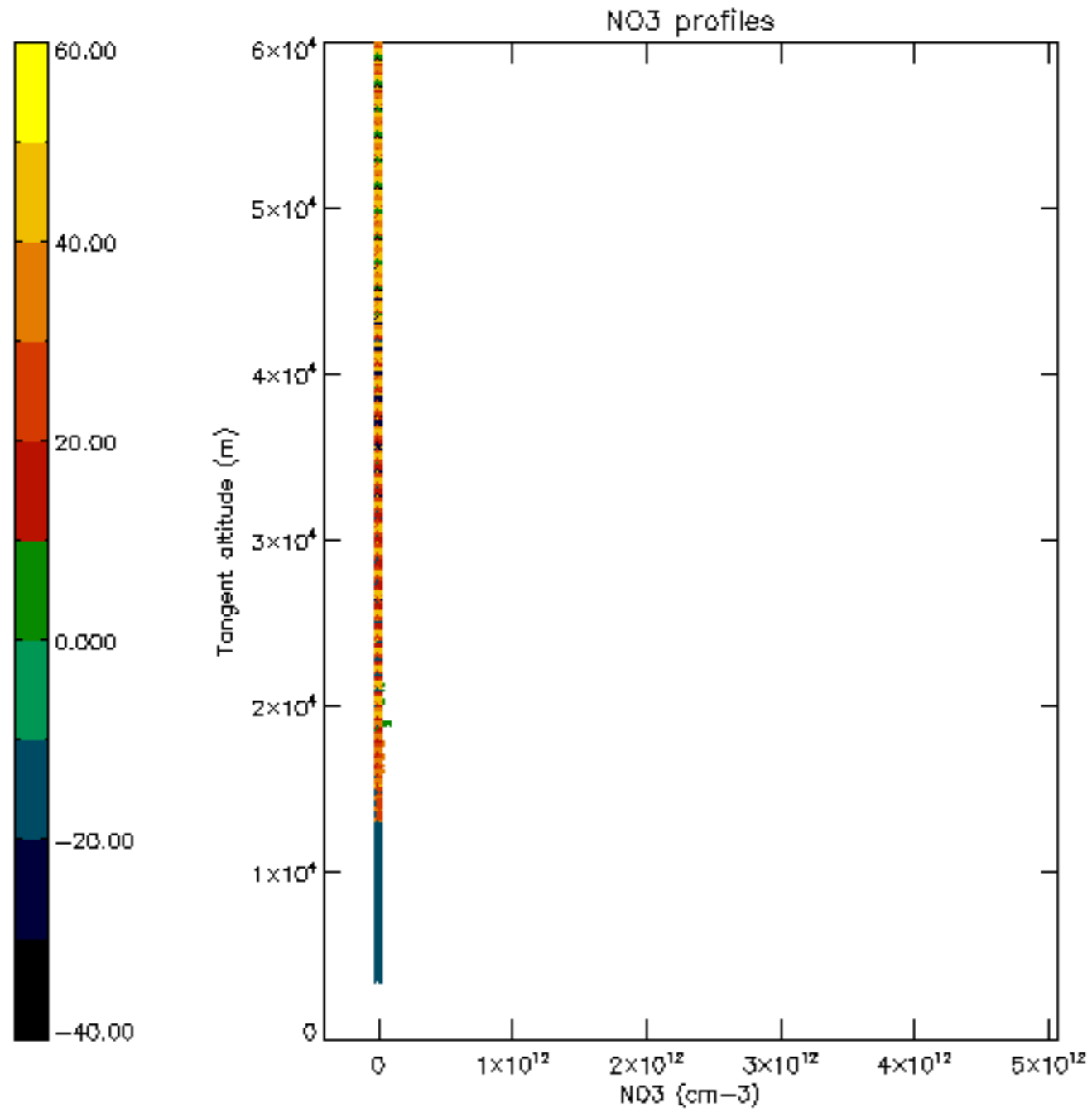


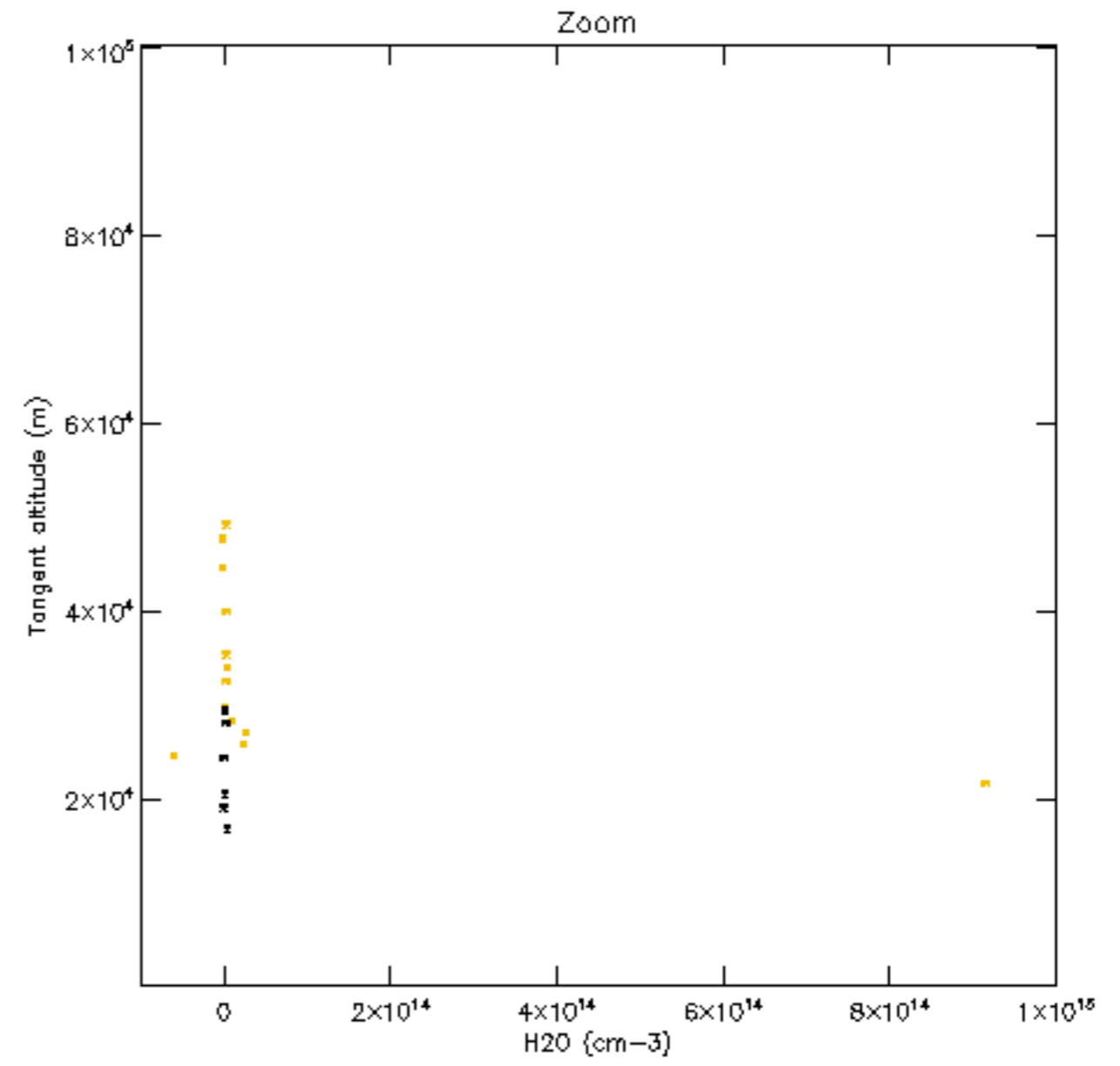
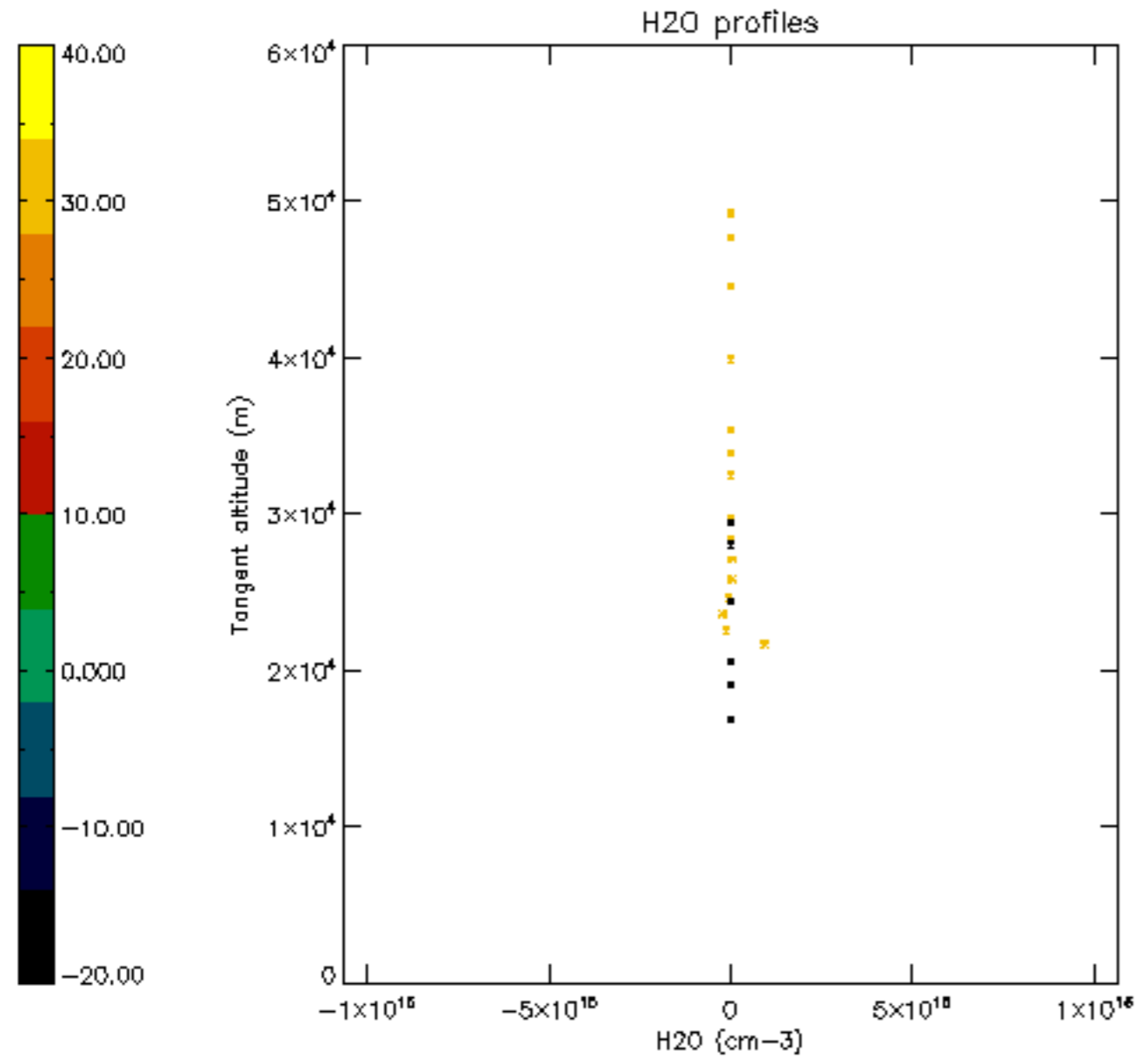


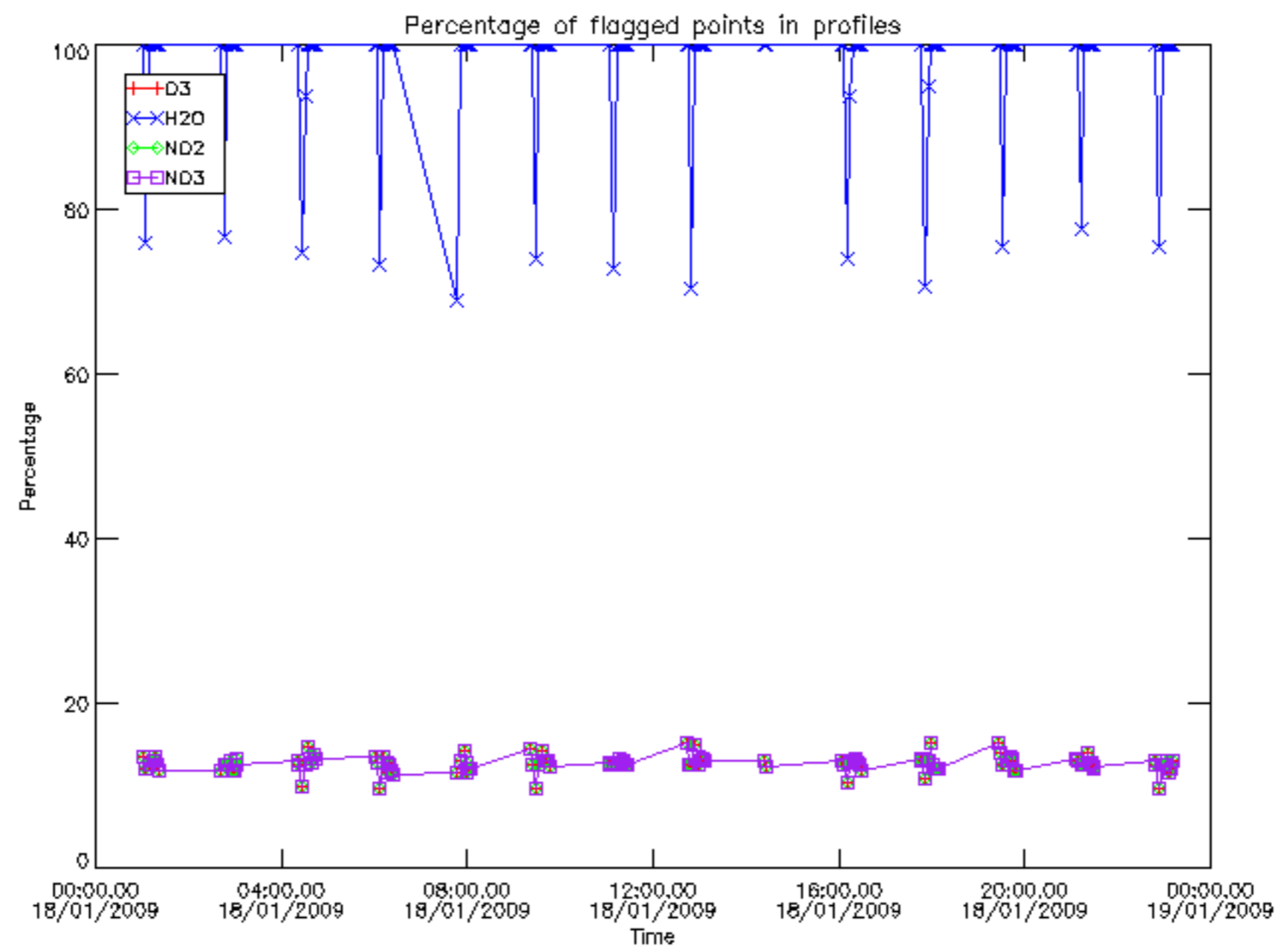






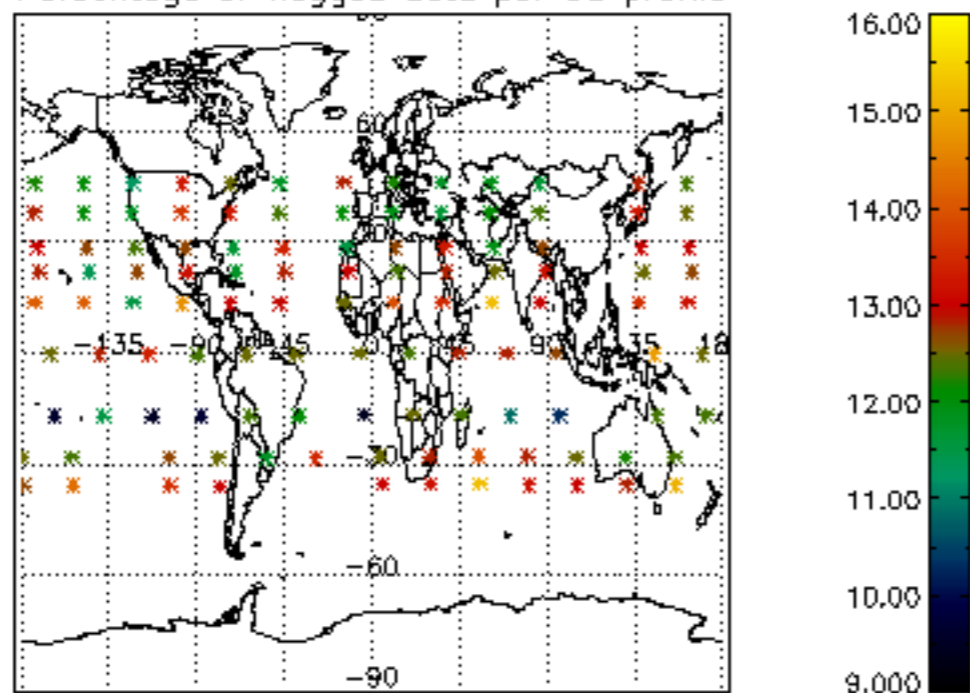




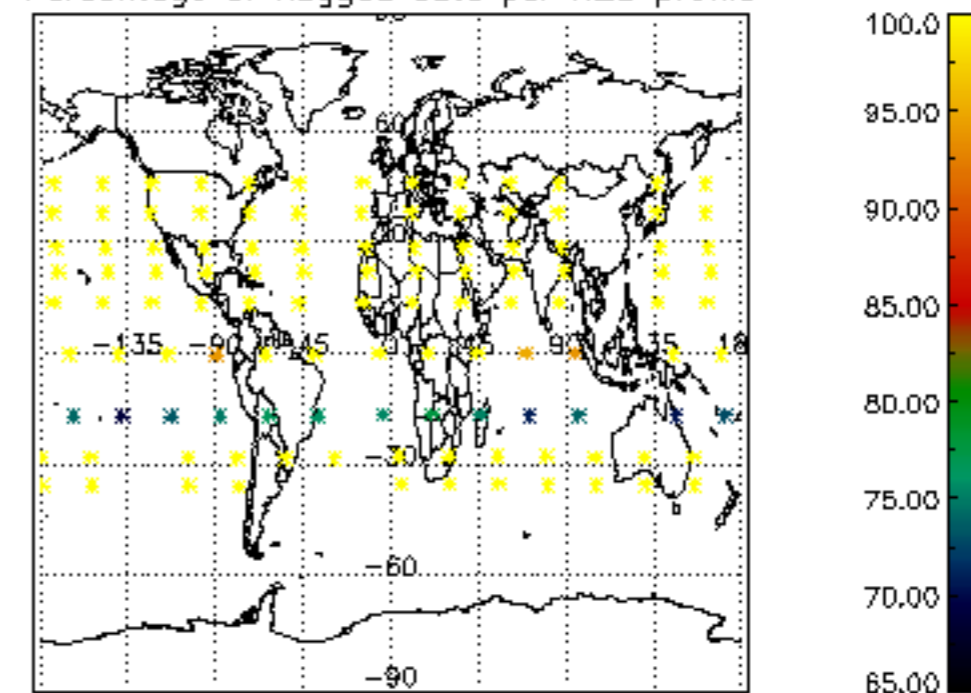




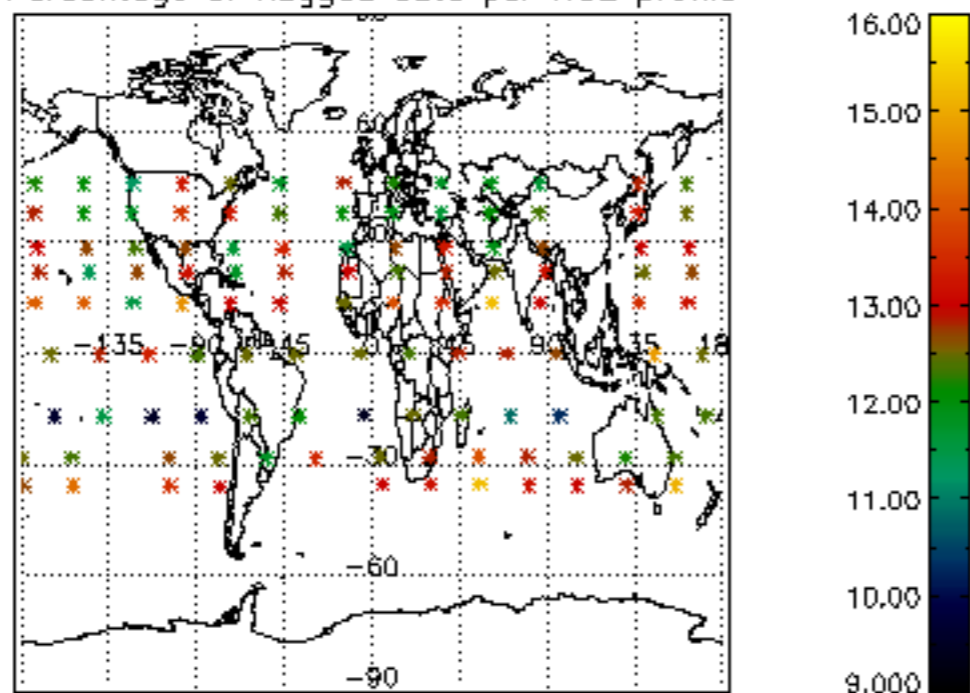
Percentage of flagged data per D3 profile



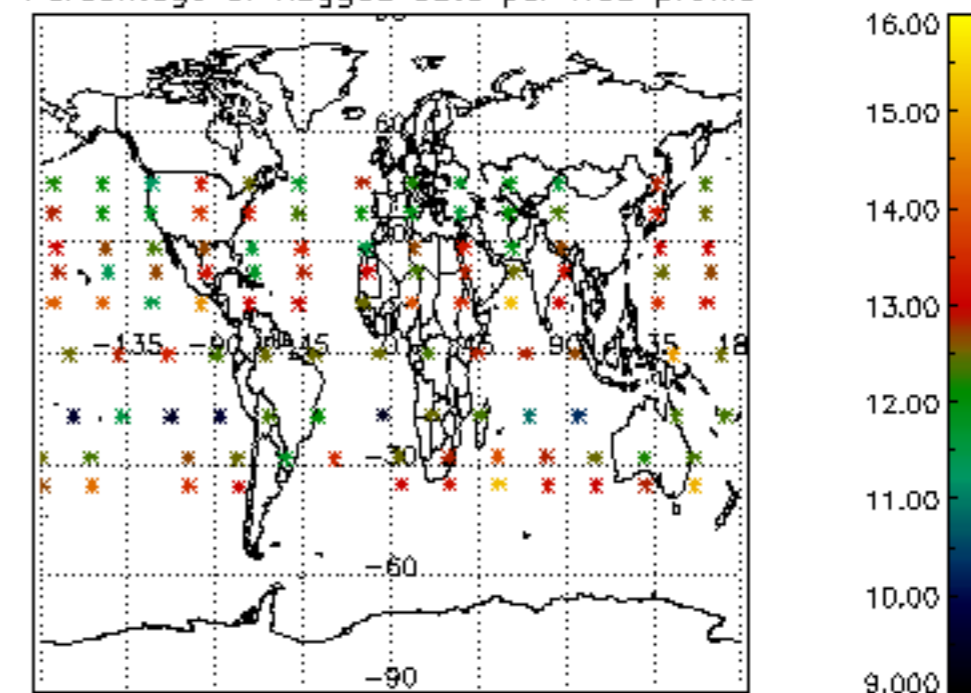
Percentage of flagged data per H2O profile

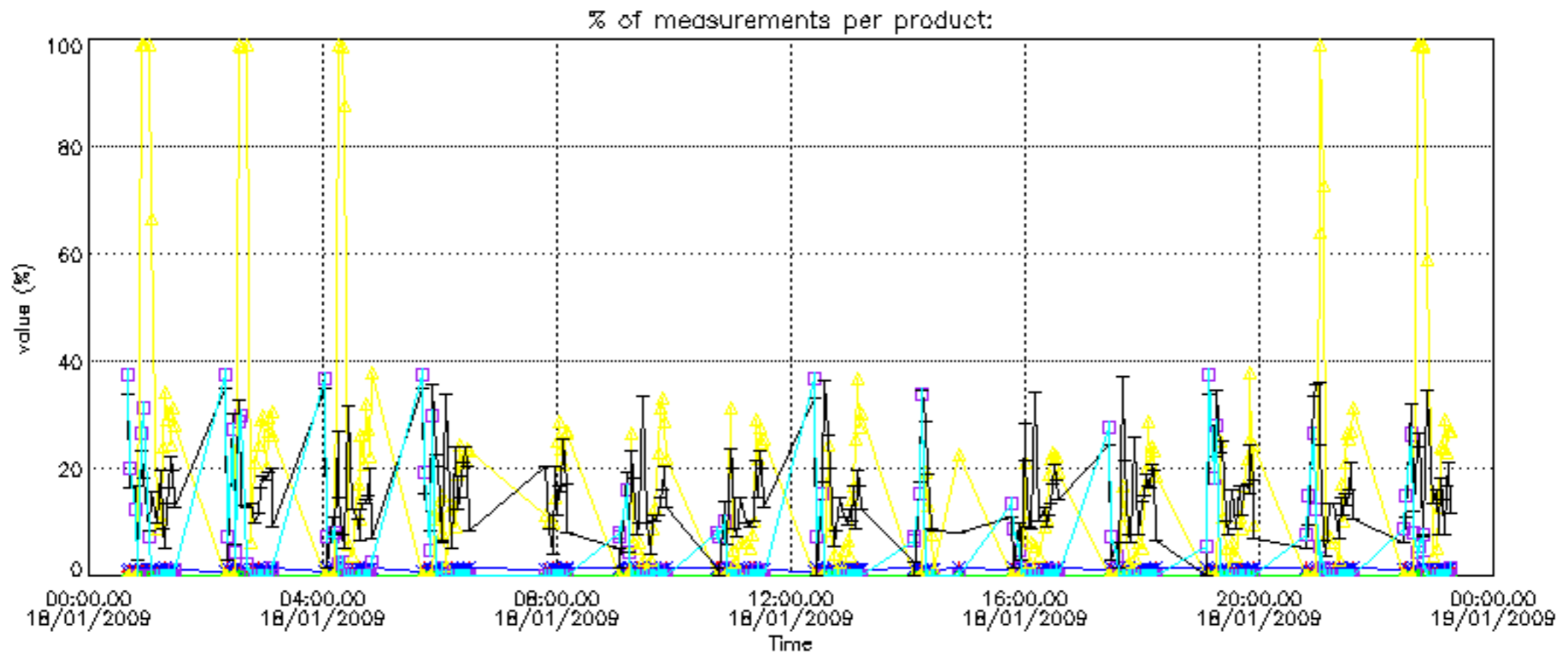


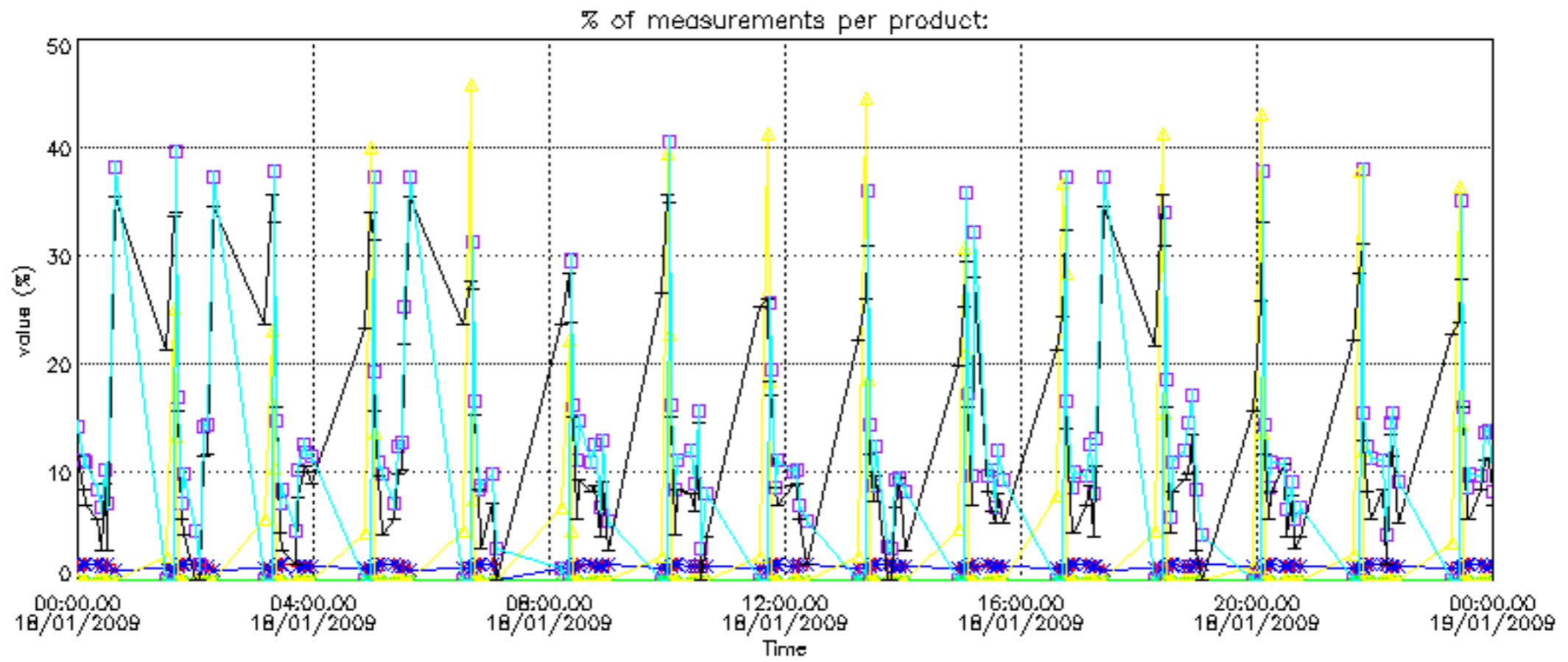
Percentage of flagged data per NO2 profile



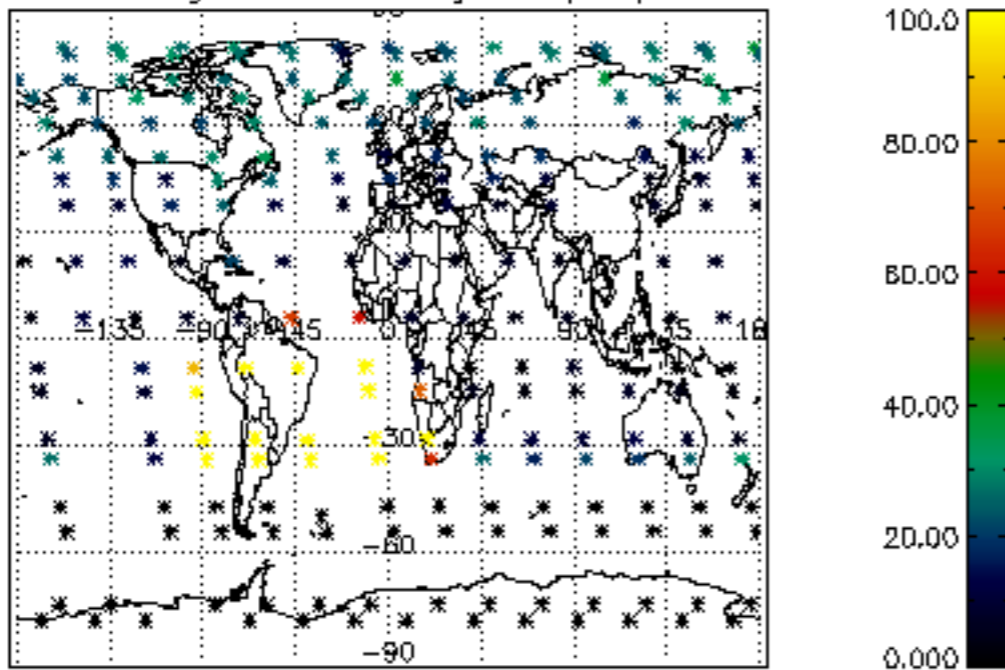
Percentage of flagged data per NO3 profile



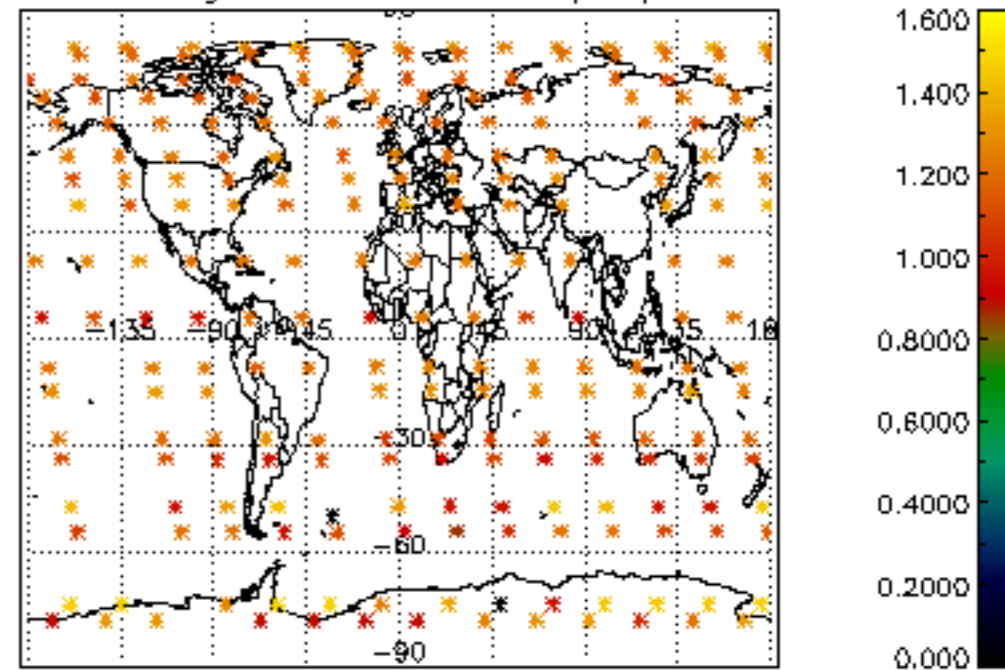




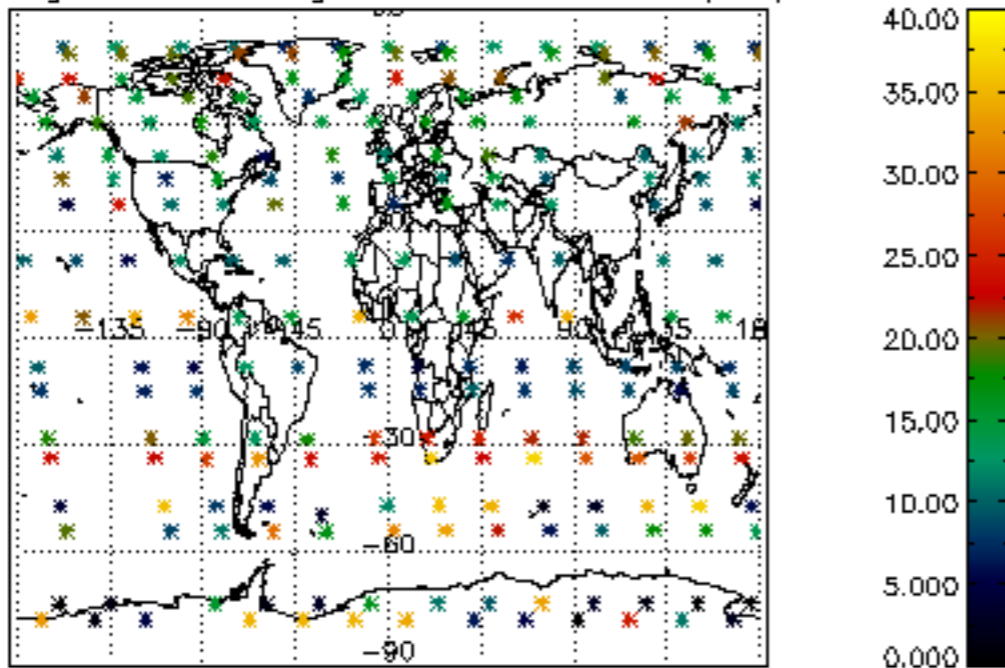
Percentage of cosmic ray hits per profile



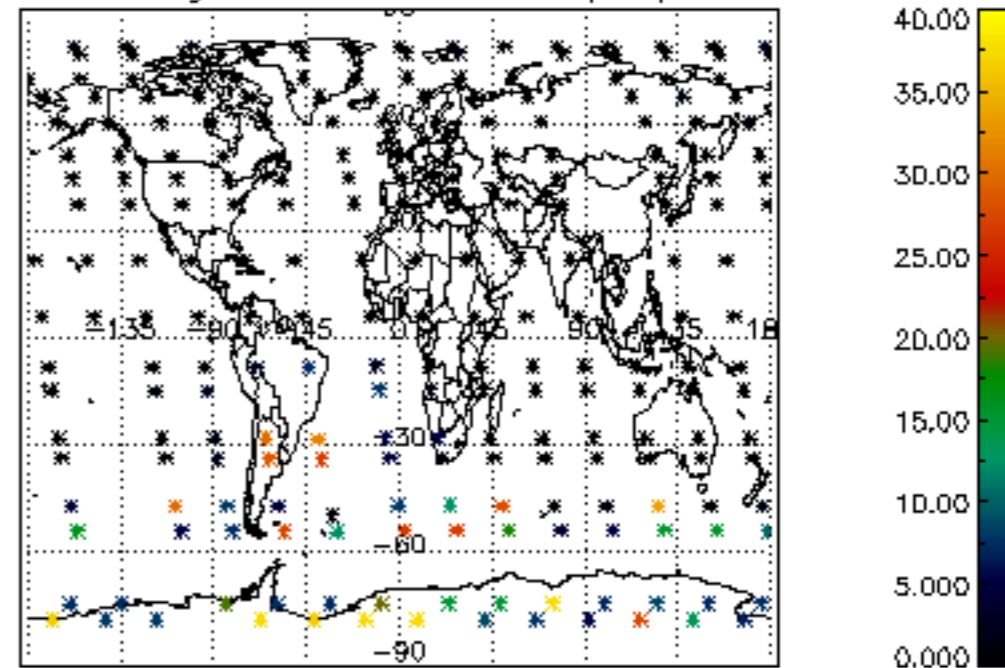
Percentage of datation errors per profile



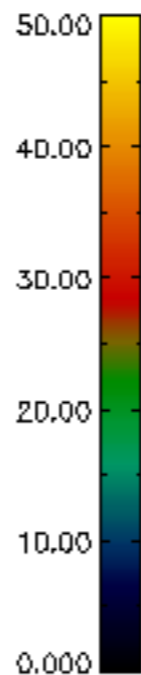
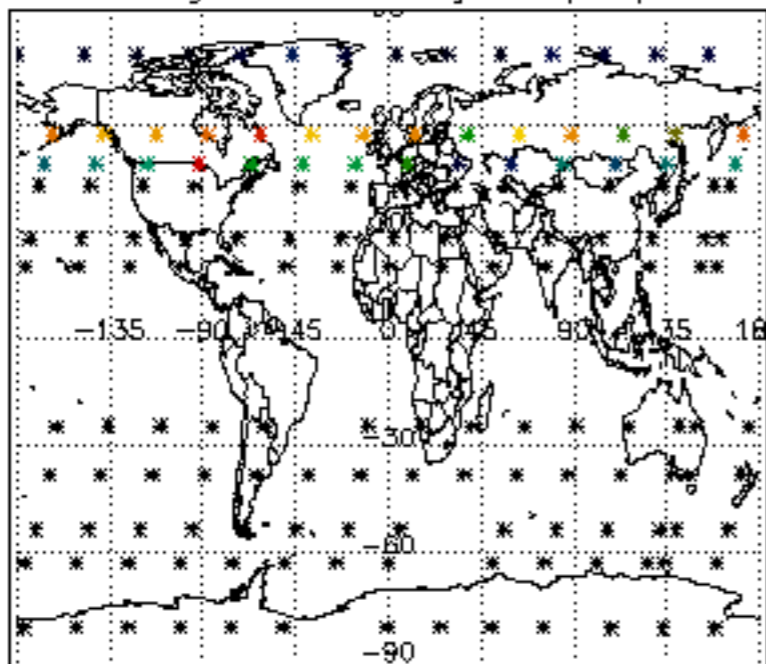
Percentage of star falling outside central band per profile



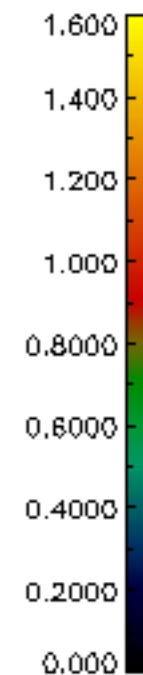
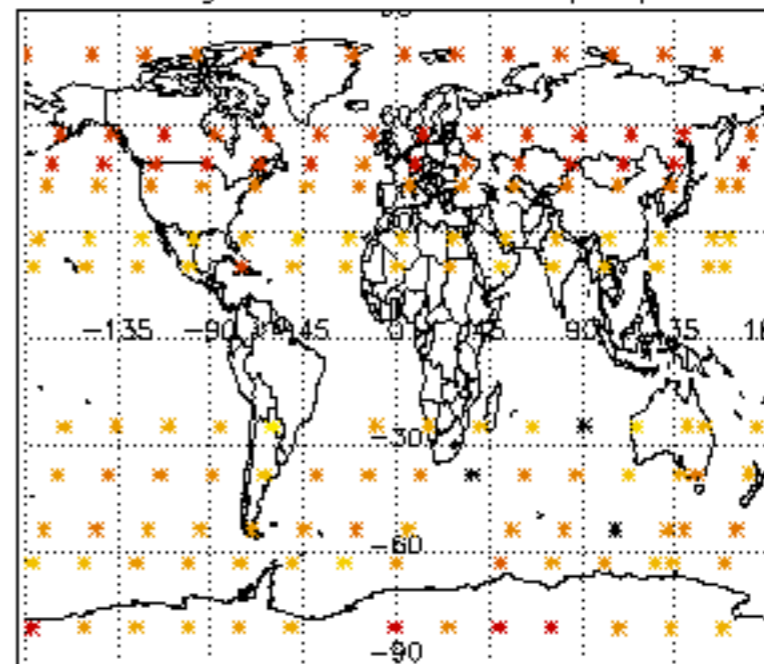
Percentage of saturation errors per profile



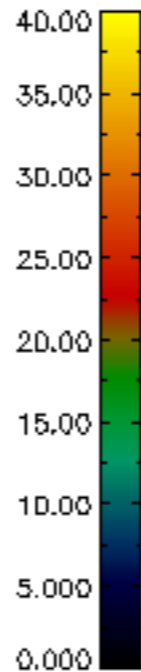
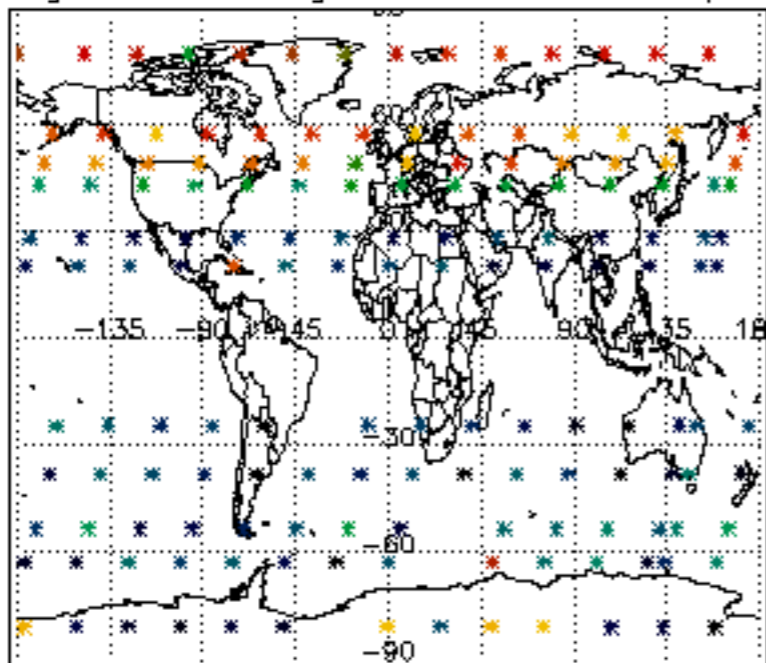
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

