

# 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 19:09:01
Data source version	GOMOS/6.01
Start time of products	23-08-2008 (23AUG2008 00:00:00)
Stop time of products	24-08-2008 (24AUG2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	47
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

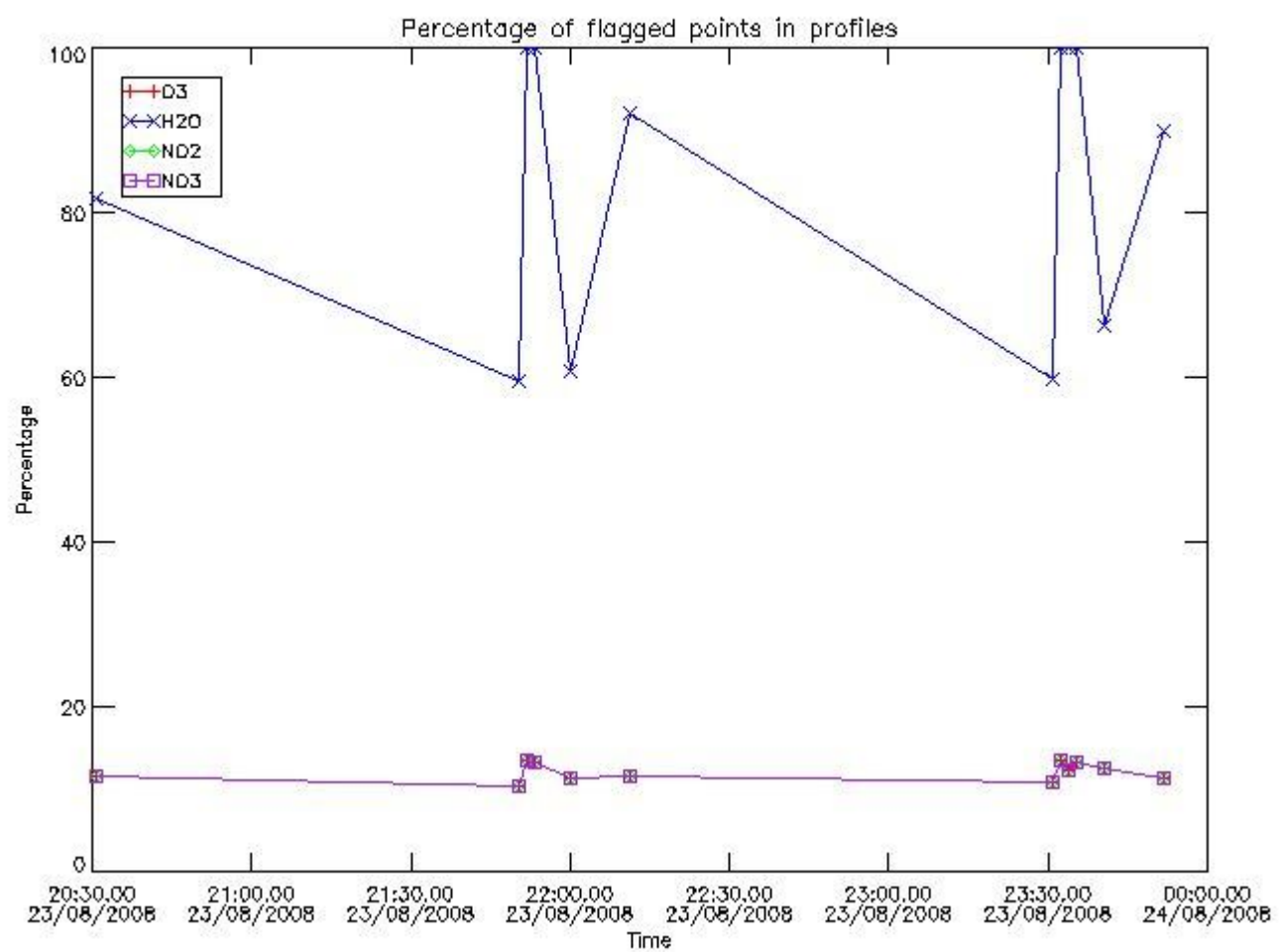
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20080823_203039_000000442071_00272_33893_8624.N1	23-AUG-2008 20:30:39	Dark	44.000	9	Alp Eri	0.45300	24000.	88	33893	No
2	GOM_NL__2PRFIN20080823_203543_000000472071_00272_33893_8625.N1	23-AUG-2008 20:35:43	Straylight	47.000	148	Alp Tuc	2.8780	4100.0	94	33893	No
3	GOM_NL__2PRFIN20080823_203920_000000452071_00272_33893_8626.N1	23-AUG-2008 20:39:20	Straylight	44.500	31	Alp Gru	1.7340	15200.	89	33893	No
4	GOM_NL__2PRFIN20080823_204321_000000492071_00272_33893_8627.N1	23-AUG-2008 20:43:21	Straylight	49.000	18	24Alp PsA	1.1660	9700.0	98	33893	No
5	GOM_NL__2PRFIN20080823_204831_000000522071_00272_33893_8628.N1	23-AUG-2008 20:48:31	Bright	51.500	142	49Del Cap	2.8500	8900.0	103	33893	No
6	GOM_NL__2PRFIN20080823_205147_000000402071_00272_33893_8629.N1	23-AUG-2008 20:51:47	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	33893	No
7	GOM_NL__2PRFIN20080823_205329_000000442071_00272_33893_8630.N1	23-AUG-2008 20:53:29	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	33893	No
8	GOM_NL__2PRFIN20080823_205633_000000422071_00272_33893_8631.N1	23-AUG-2008 20:56:33	Bright	42.000	61	8Eps Peg	2.1000	3900.0	84	33893	No
9	GOM_NL__2PRFIN20080823_210314_000000382071_00272_33893_8632.N1	23-AUG-2008 21:03:14	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	33893	No
10	GOM_NL__2PRFIN20080823_210459_000000362071_00272_33893_8633.N1	23-AUG-2008 21:04:59	Bright	36.000	66	37Gam Cyg	2.2080	5900.0	72	33893	No
11	GOM_NL__2PRFIN20080823_210626_000000352071_00272_33893_8634.N1	23-AUG-2008 21:06:26	Bright	35.000	19	50Alp Cyg	1.2460	10500.	70	33893	No
12	GOM_NL__2PRFIN20080823_211137_000000392071_00272_33893_8635.N1	23-AUG-2008 21:11:37	Bright	38.500	89	5Alp Cep	2.4510	8000.0	77	33893	No
13	GOM_NL__2PRFIN20080823_211903_000000372071_00272_33893_8636.N1	23-AUG-2008 21:19:03	Bright	37.000	49	1Alp UMi	1.9900	6300.0	74	33893	No
14	GOM_NL__2PRFIN20080823_213204_000000422071_00272_33893_8637.N1	23-AUG-2008 21:32:04	Bright	41.500	42	34Bet Aur	1.9000	10200.	83	33893	No
15	GOM_NL__2PRFIN20080823_213543_000000352071_00272_33893_8638.N1	23-AUG-2008 21:35:43	Bright	34.500	24	66Alp Gem	1.5800	10200.	69	33893	No
16	GOM_NL__2PRFIN20080823_213920_000000502071_00272_33893_8639.N1	23-AUG-2008 21:39:20	Twilight	50.000	151	13Mu Gem	2.8900	3000.0	100	33893	No
17	GOM_NL__2PRFIN20080823_214059_000000472071_00272_33893_8640.N1	23-AUG-2008 21:40:59	Twilight	47.000	44	24Gam Gem	1.9280	11000.	94	33893	No
18	GOM_NL__2PRFIN20080823_214230_000000382071_00272_33893_8641.N1	23-AUG-2008 21:42:30	Twilight	38.000	153	3Bet CMi	2.8940	13100.	76	33893	No
19	GOM_NL__2PRFIN20080823_215020_000000542071_00272_33893_8642.N1	23-AUG-2008 21:50:20	Dark	53.500	1	9Alp CMa	-1.4400	11000.	107	33893	No
20	GOM_NL__2PRFIN20080823_215148_000000382071_00272_33893_8643.N1	23-AUG-2008 21:51:48	Dark	38.000	179	24Omi2CMa	3.0320	24000.	76	33893	No
21	GOM_NL__2PRFIN20080823_215316_000000422071_00272_33893_8644.N1	23-AUG-2008 21:53:16	Dark	42.000	23	21Eps CMa	1.5020	26000.	84	33893	No
22	GOM_NL__2PRFIN20080823_220006_000000452071_00272_33893_8645.N1	23-AUG-2008 22:00:06	Dark	45.000	2	Alp Car	-0.73600	7000.0	90	33893	No
23	GOM_NL__2PRFIN20080823_221116_000000452071_00273_33894_8638.N1	23-AUG-2008 22:11:16	Dark	44.500	9	Alp Eri	0.45300	24000.	89	33894	No
24	GOM_NL__2PRFIN20080823_221619_000000462071_00273_33894_8639.N1	23-AUG-2008 22:16:19	Straylight	45.500	148	Alp Tuc	2.8780	4100.0	91	33894	No
25	GOM_NL__2PRFIN20080823_221956_000000412071_00273_33894_8640.N1	23-AUG-2008 22:19:56	Straylight	40.500	31	Alp Gru	1.7340	15200.	81	33894	No
26	GOM_NL__2PRFIN20080823_222358_000000512071_00273_33894_8641.N1	23-AUG-2008 22:23:58	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	33894	No
27	GOM_NL__2PRFIN20080823_222907_000000562071_00273_33894_8642.N1	23-AUG-2008 22:29:07	Bright	56.000	142	49Del Cap	2.8500	8900.0	112	33894	No
28	GOM_NL__2PRFIN20080823_223223_000000402071_00273_33894_8643.N1	23-AUG-2008 22:32:23	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	33894	No
29	GOM_NL__2PRFIN20080823_223405_000000442071_00273_33894_8644.N1	23-AUG-2008 22:34:05	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	33894	No
30	GOM_NL__2PRFIN20080823_223709_000000422071_00273_33894_8645.N1	23-AUG-2008 22:37:09	Bright	41.500	61	8Eps Peg	2.1000	3900.0	83	33894	No
31	GOM_NL__2PRFIN20080823_224350_000000382071_00273_33894_8646.N1	23-AUG-2008 22:43:50	Bright	38.000	92	53Eps Cyg	2.5000	4500.0	76	33894	No
32	GOM_NL__2PRFIN20080823_224535_000000342071_00273_33894_8647.N1	23-AUG-2008 22:45:35	Bright	34.000	66	37Gam Cyg	2.2080	5900.0	68	33894	No
33	GOM_NL__2PRFIN20080823_224702_000000342071_00273_33894_8648.N1	23-AUG-2008 22:47:02	Bright	34.000	19	50Alp Cyg	1.2460	10500.	68	33894	No
34	GOM_NL__2PRFIN20080823_225213_000000372071_00273_33894_8649.N1	23-AUG-2008 22:52:13	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	33894	No
35	GOM_NL__2PRFIN20080823_225938_000000362071_00273_33894_8650.N1	23-AUG-2008 22:59:38	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	33894	No
36	GOM_NL__2PRFIN20080823_231240_000000402071_00273_33894_8651.N1	23-AUG-2008 23:12:40	Bright	39.500	42	34Bet Aur	1.9000	10200.	79	33894	No
37	GOM_NL__2PRFIN20080823_231618_000000352071_00273_33894_8652.N1	23-AUG-2008 23:16:18	Bright	35.000	24	66Alp Gem	1.5800	10200.	70	33894	No
38	GOM_NL__2PRFIN20080823_231956_000000532071_00273_33894_8653.N1	23-AUG-2008 23:19:56	Twilight	52.500	151	13Mu Gem	2.8900	3000.0	105	33894	No
39	GOM_NL__2PRFIN20080823_232136_000000452071_00273_33894_8654.N1	23-AUG-2008 23:21:36	Twilight	45.000	44	24Gam Gem	1.9280	11000.	90	33894	No
40	GOM_NL__2PRFIN20080823_232306_000000392071_00273_33894_8655.N1	23-AUG-2008 23:23:06	Twilight	38.500	153	3Bet CMi	2.8940	13100.	77	33894	No
41	GOM_NL__2PRFIN20080823_233057_000000472071_00273_33894_8656.N1	23-AUG-2008 23:30:57	Dark	46.500	1	9Alp CMa	-1.4400	11000.	93	33894	No
42	GOM_NL__2PRFIN20080823_233225_000000382071_00273_33894_8657.N1	23-AUG-2008 23:32:25	Dark	38.000	179	24Omi2CMa	3.0320	24000.	76	33894	No

43	GOM_NL__2PRFIN20080823_233352_000000422071_00273_33894_8658.N1	23-AUG-2008 23:33:52	Dark	41.500	23	21Eps CMa	1.5020	26000.	83	33894	No
44	GOM_NL__2PRFIN20080823_233513_000000422071_00273_33894_8659.N1	23-AUG-2008 23:35:13	Dark	42.000	177	1Zet CMa	3.0220	26000.	84	33894	No
45	GOM_NL__2PRFIN20080823_234042_000000452071_00273_33894_8660.N1	23-AUG-2008 23:40:42	Dark	45.000	2	Alp Car	-0.73600	7000.0	90	33894	No
46	GOM_NL__2PRFIN20080823_235152_000000452071_00274_33895_8646.N1	23-AUG-2008 23:51:52	Dark	45.000	9	Alp Eri	0.45300	24000.	90	33895	No
47	GOM_NL__2PRFIN20080823_235655_000000392071_00274_33895_8647.N1	23-AUG-2008 23:56:55	Straylight	39.000	148	Alp Tuc	2.8780	4100.0	78	33895	No

### 3. Quality information per product

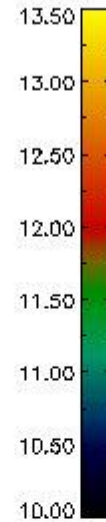
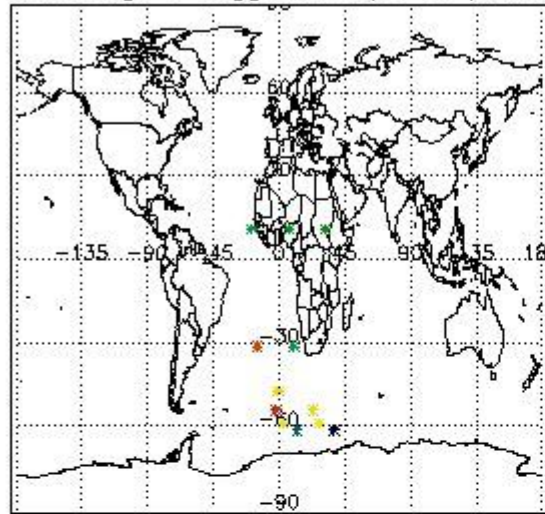
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

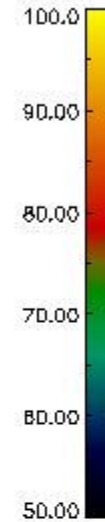
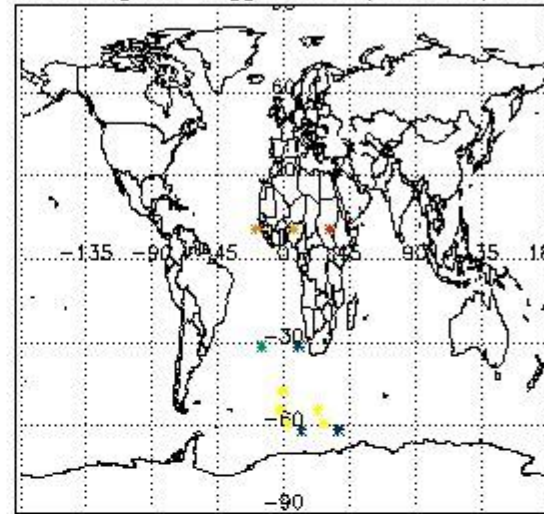


#### 3.2 Plot quality information per product (world map)

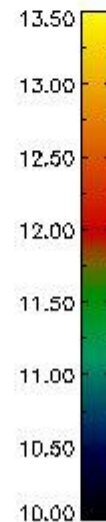
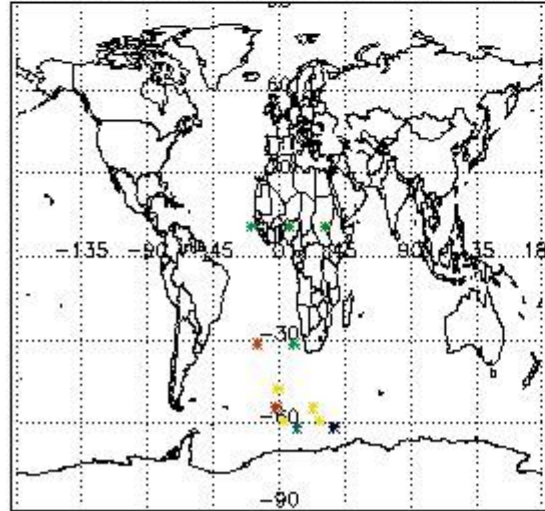
Percentage of flagged data per O3 profile



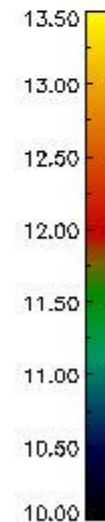
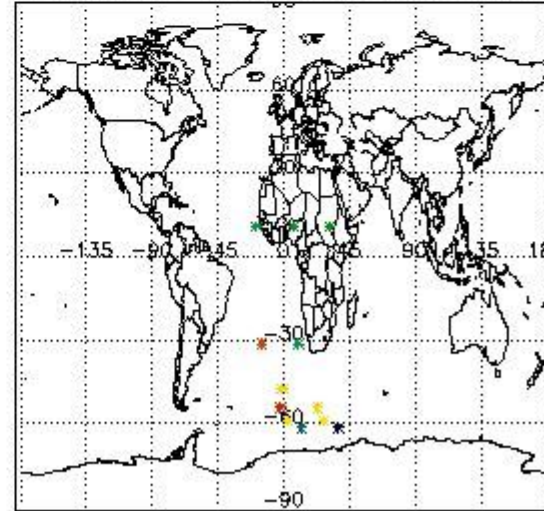
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



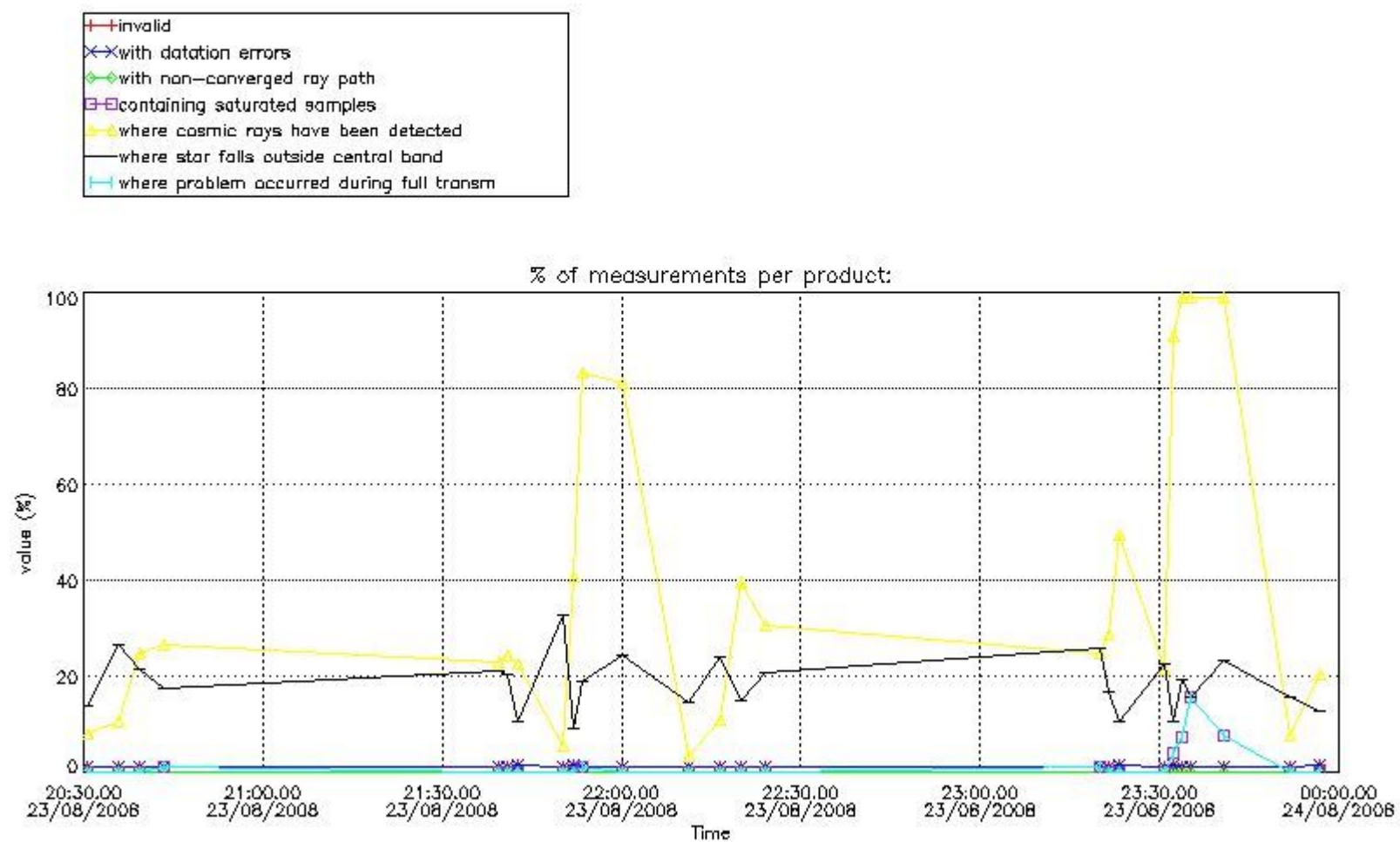
#### 4. Level 1 quality information per product

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.

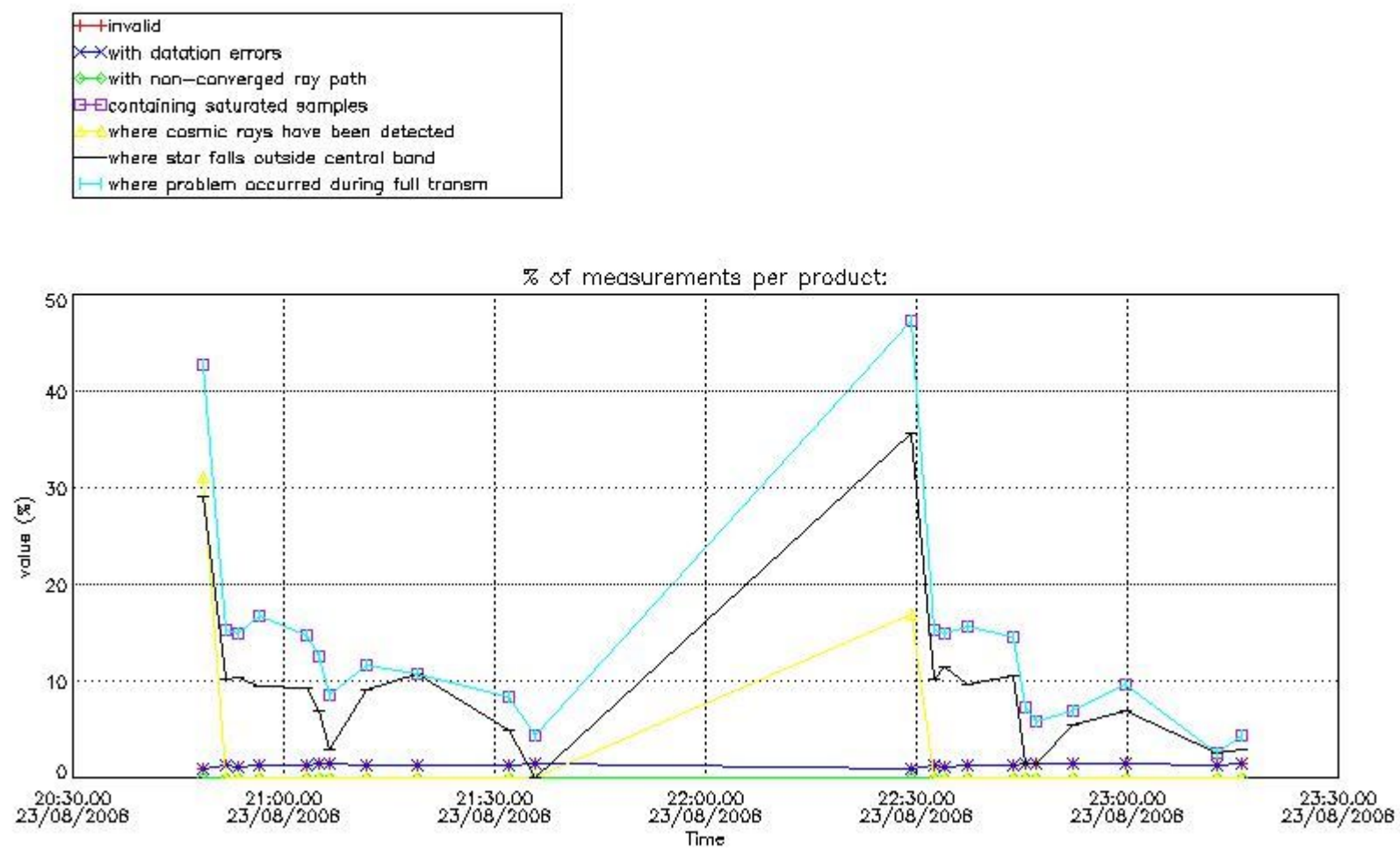
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



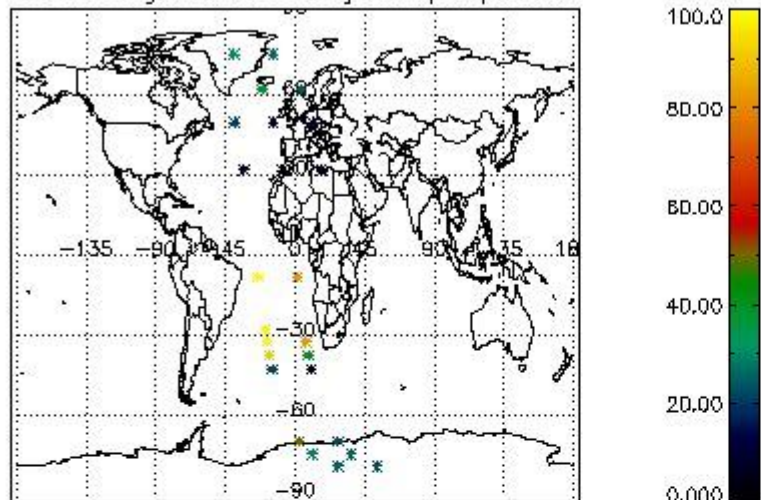


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

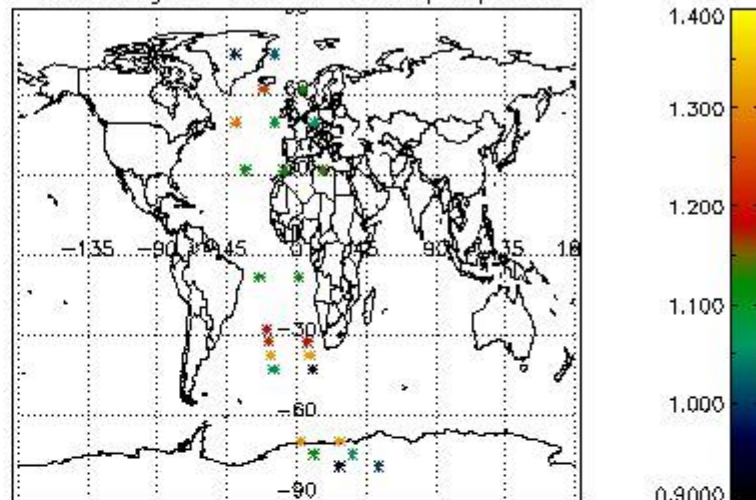


4.2 Plot quality information per product coming from level 1b processing (world map)  
 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

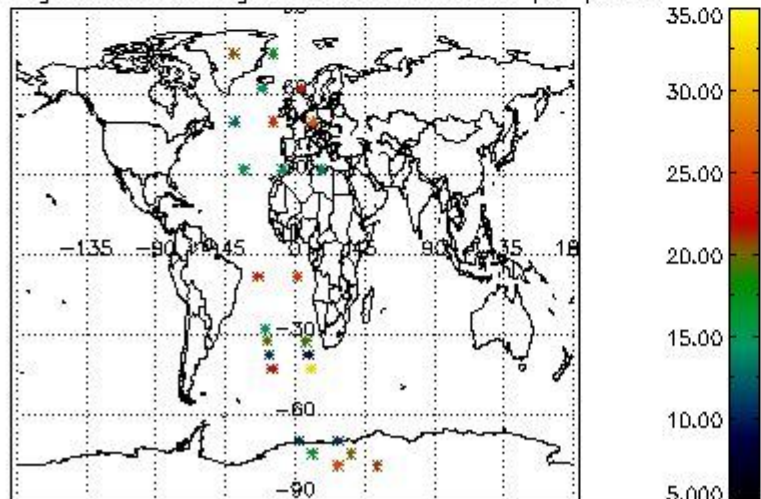
Percentage of cosmic ray hits per profile



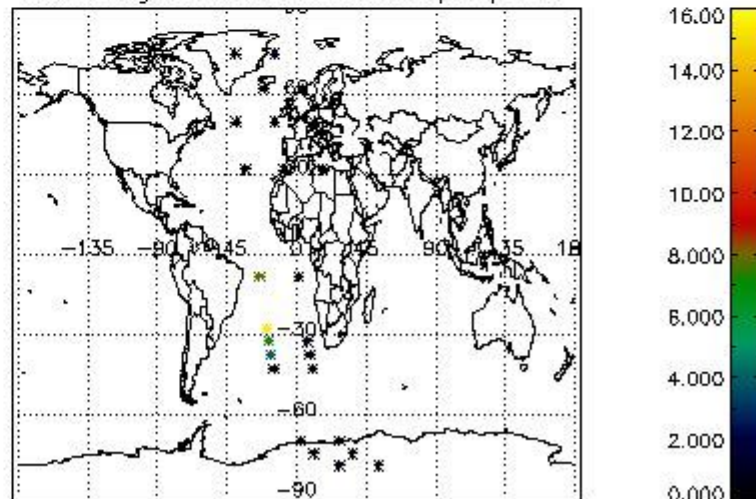
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



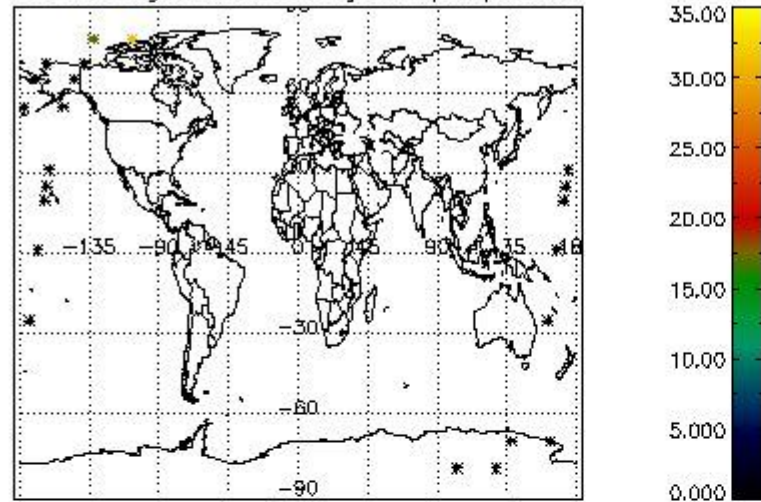
Percentage of saturation errors per profile



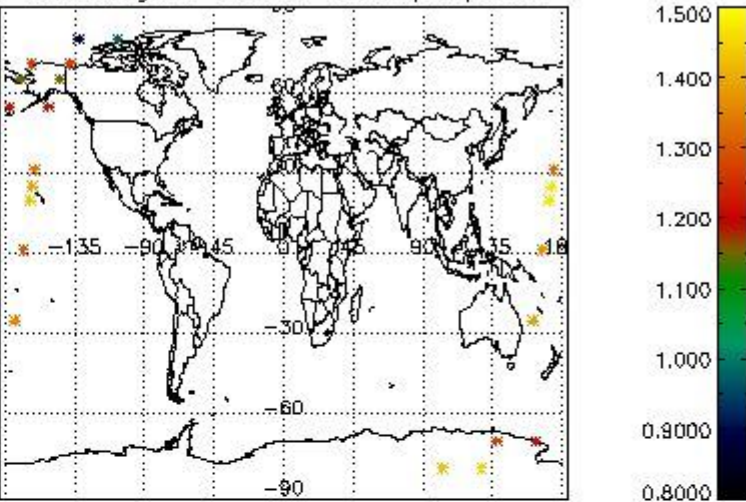
4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes



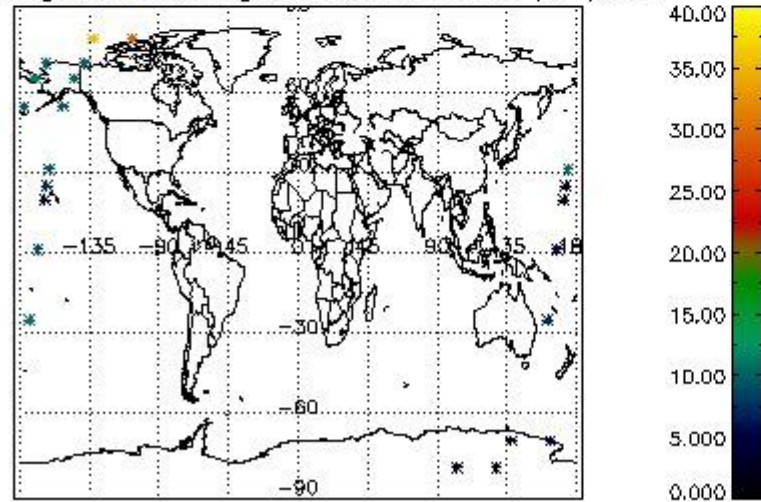
Percentage of cosmic ray hits per profile



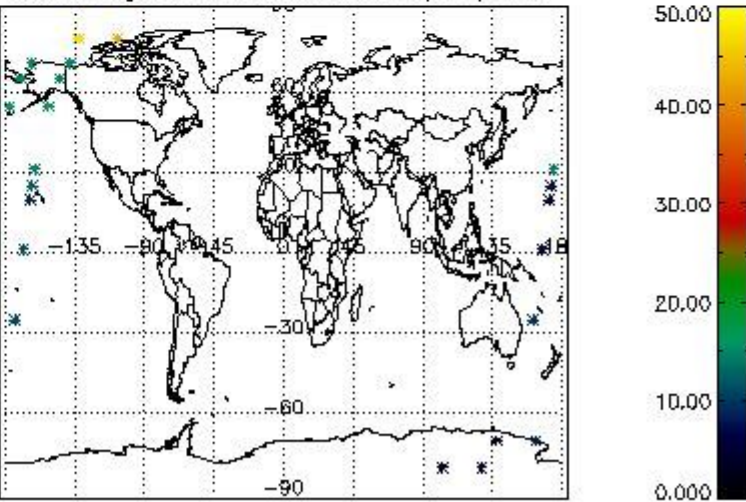
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

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

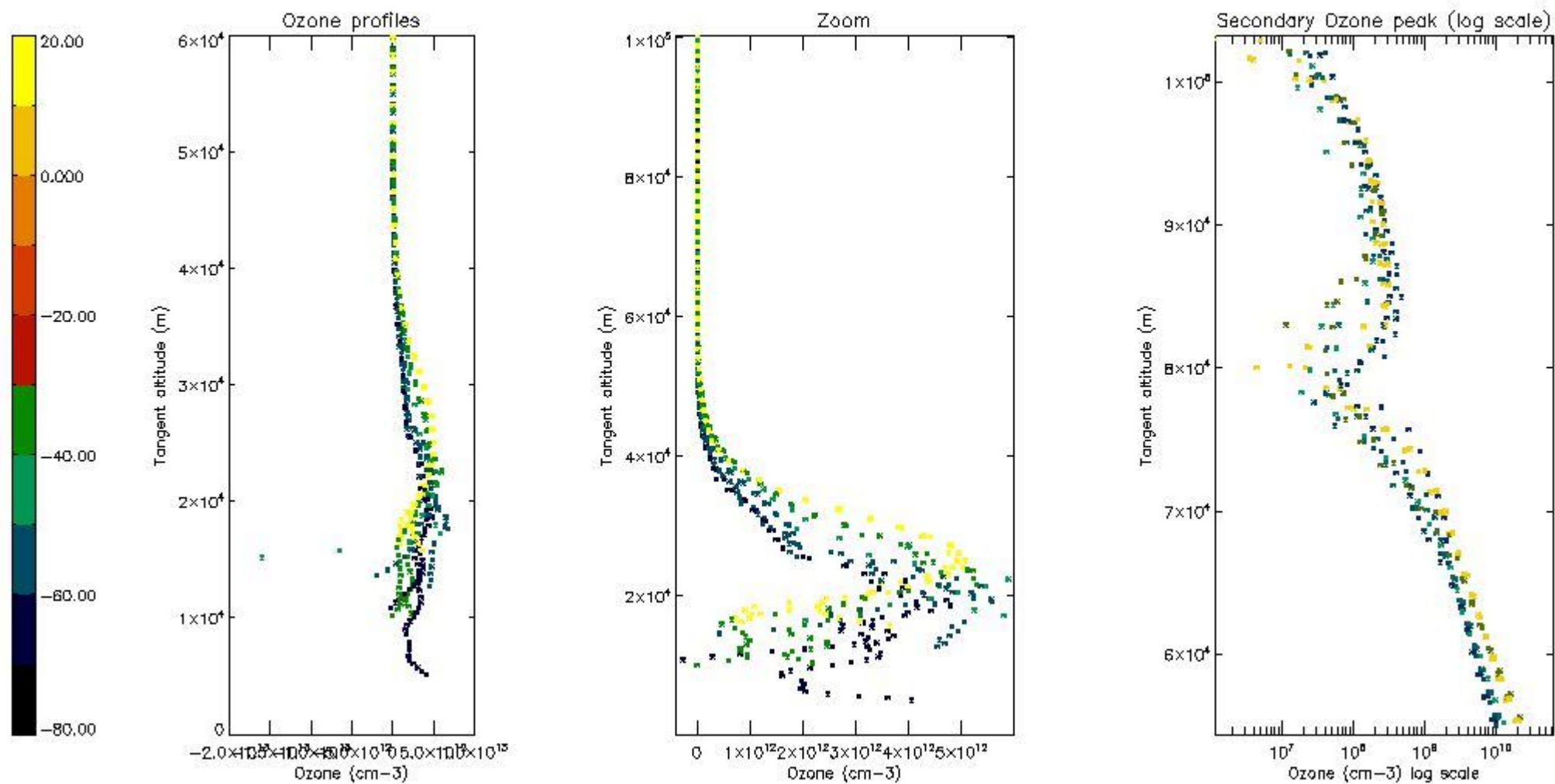
Criteria	% of total production
All STD	27
STD < 20	19



STD < 10	17
STD < 5	14

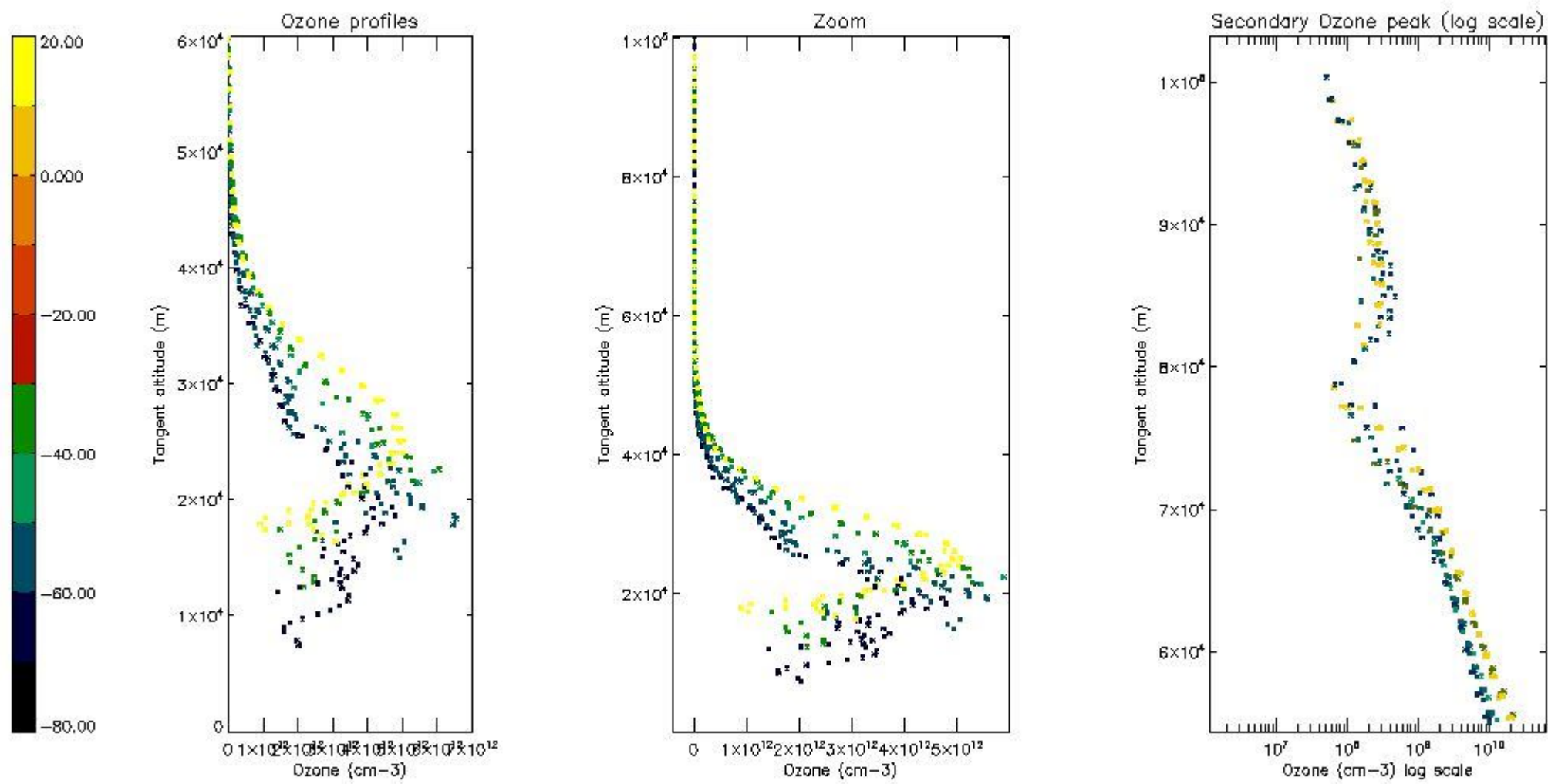
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



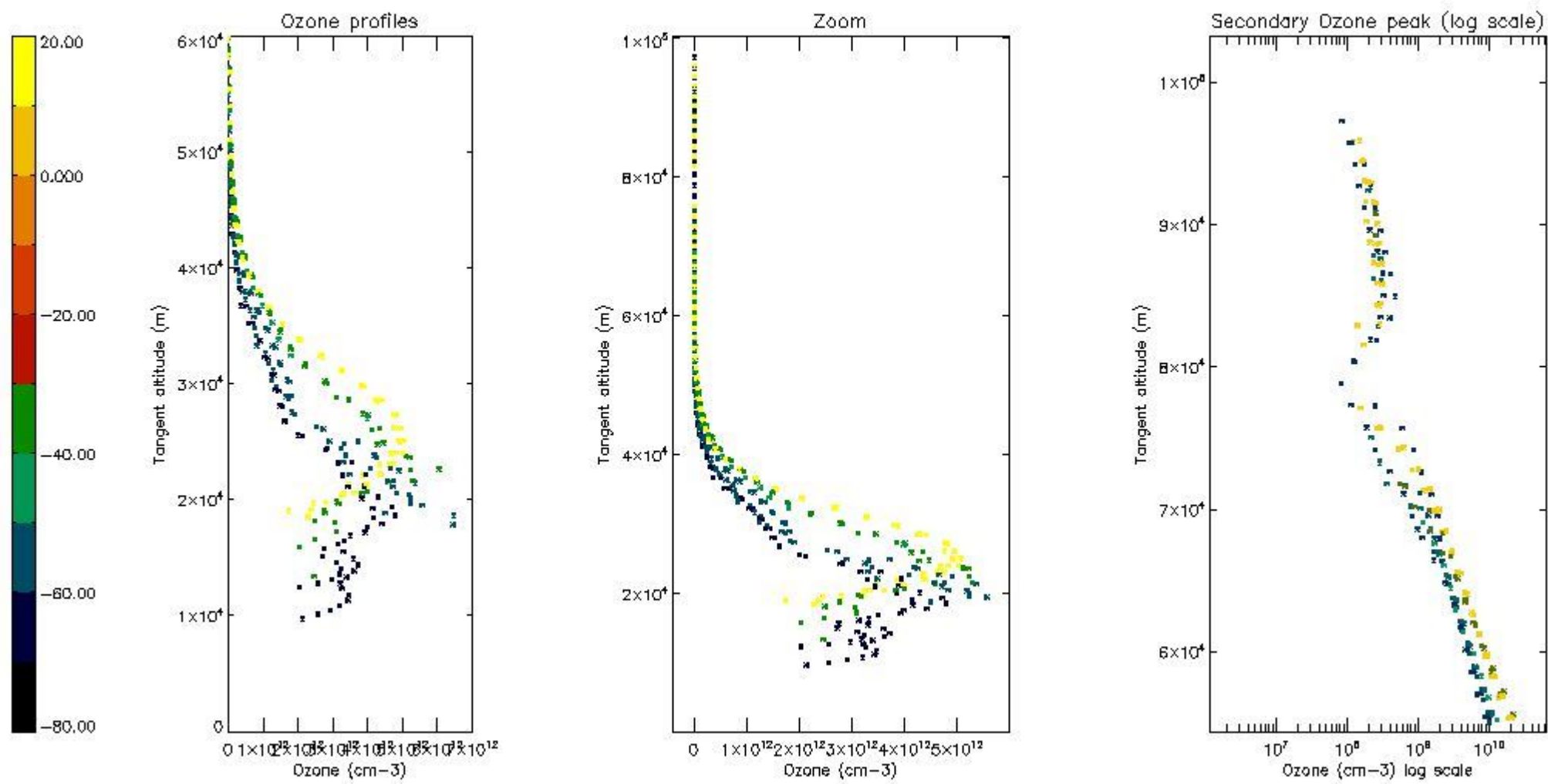
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

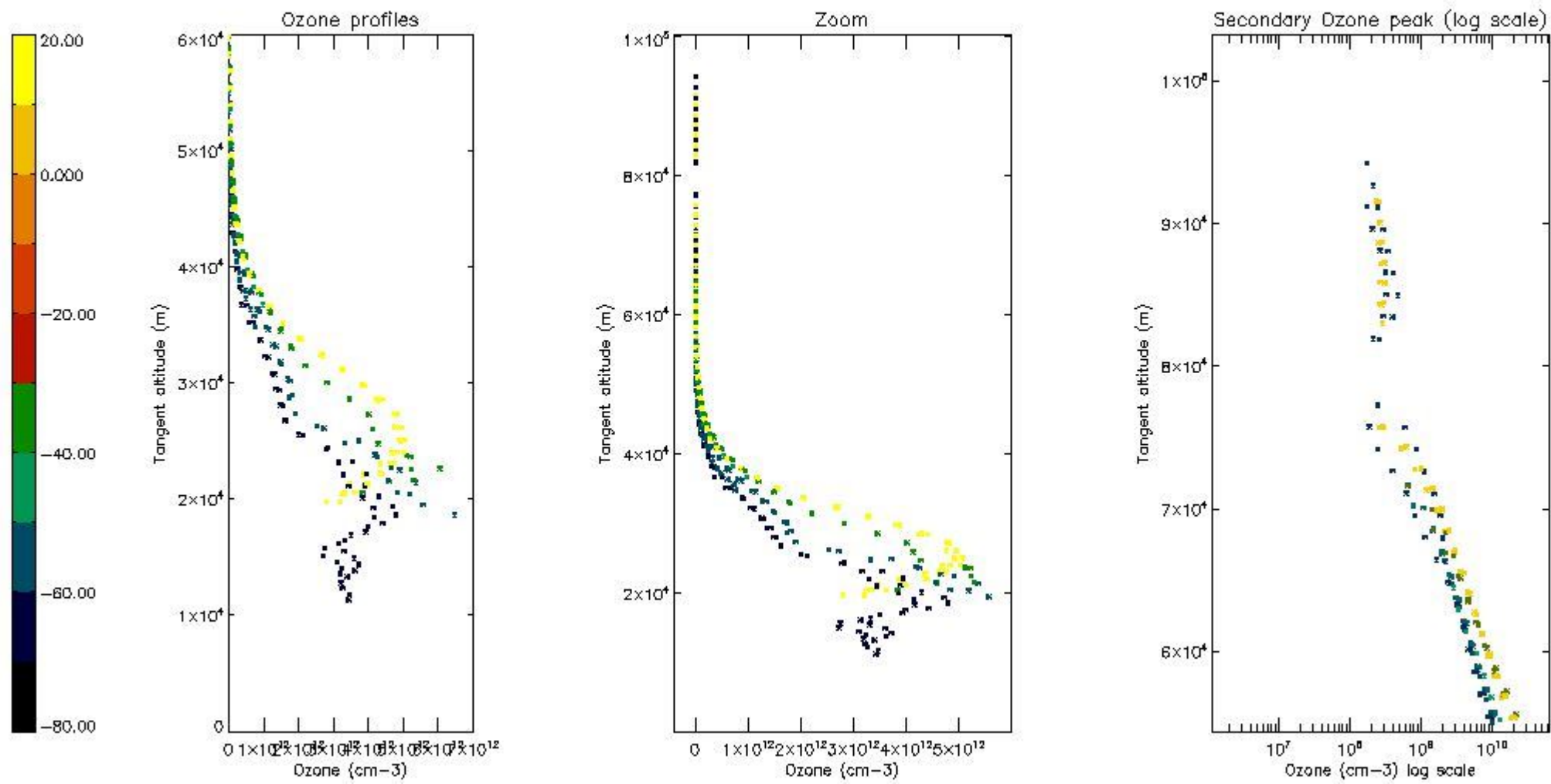
The colorbar represents the latitude.



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

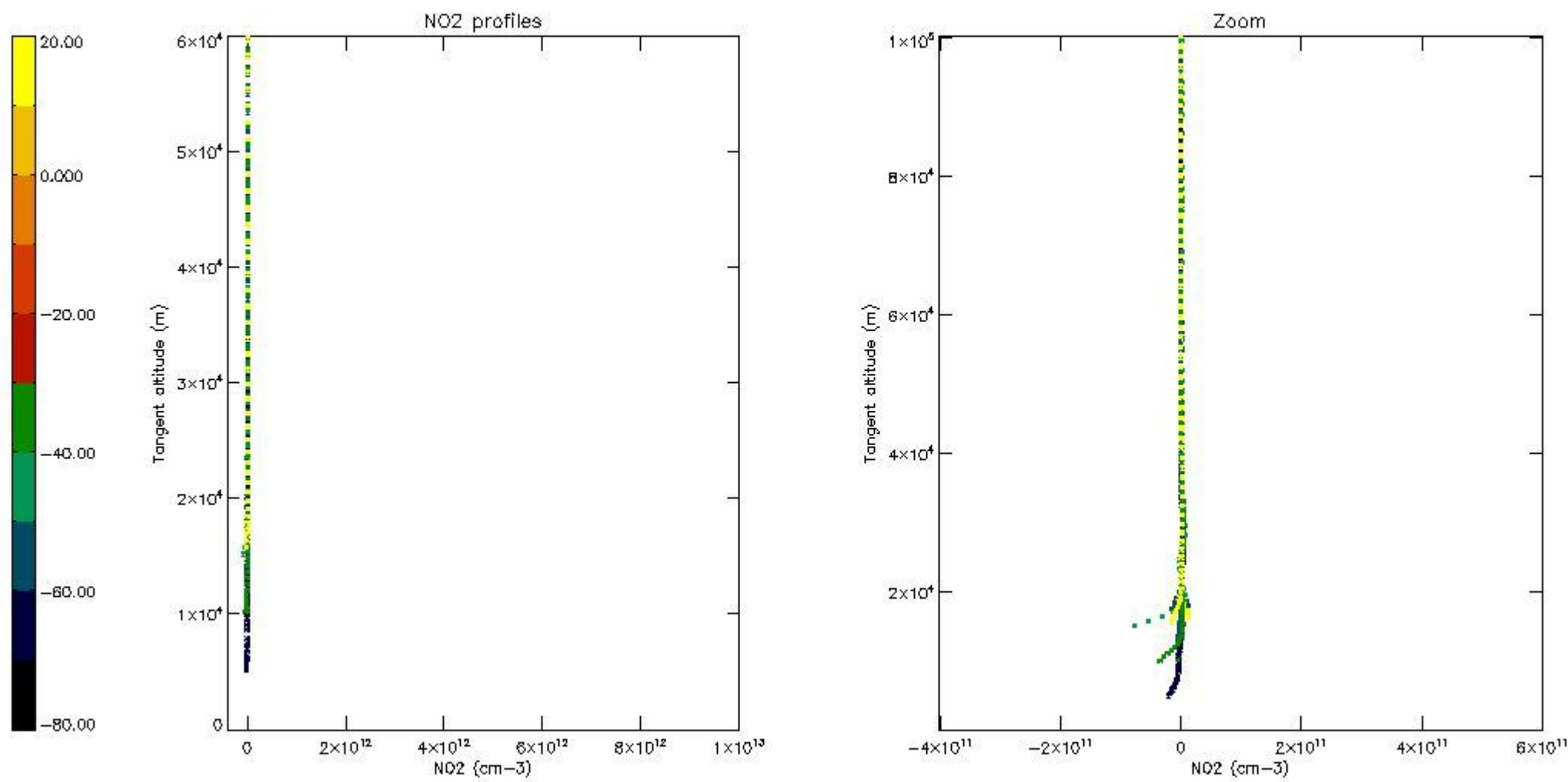
The colorbar represents the latitude.





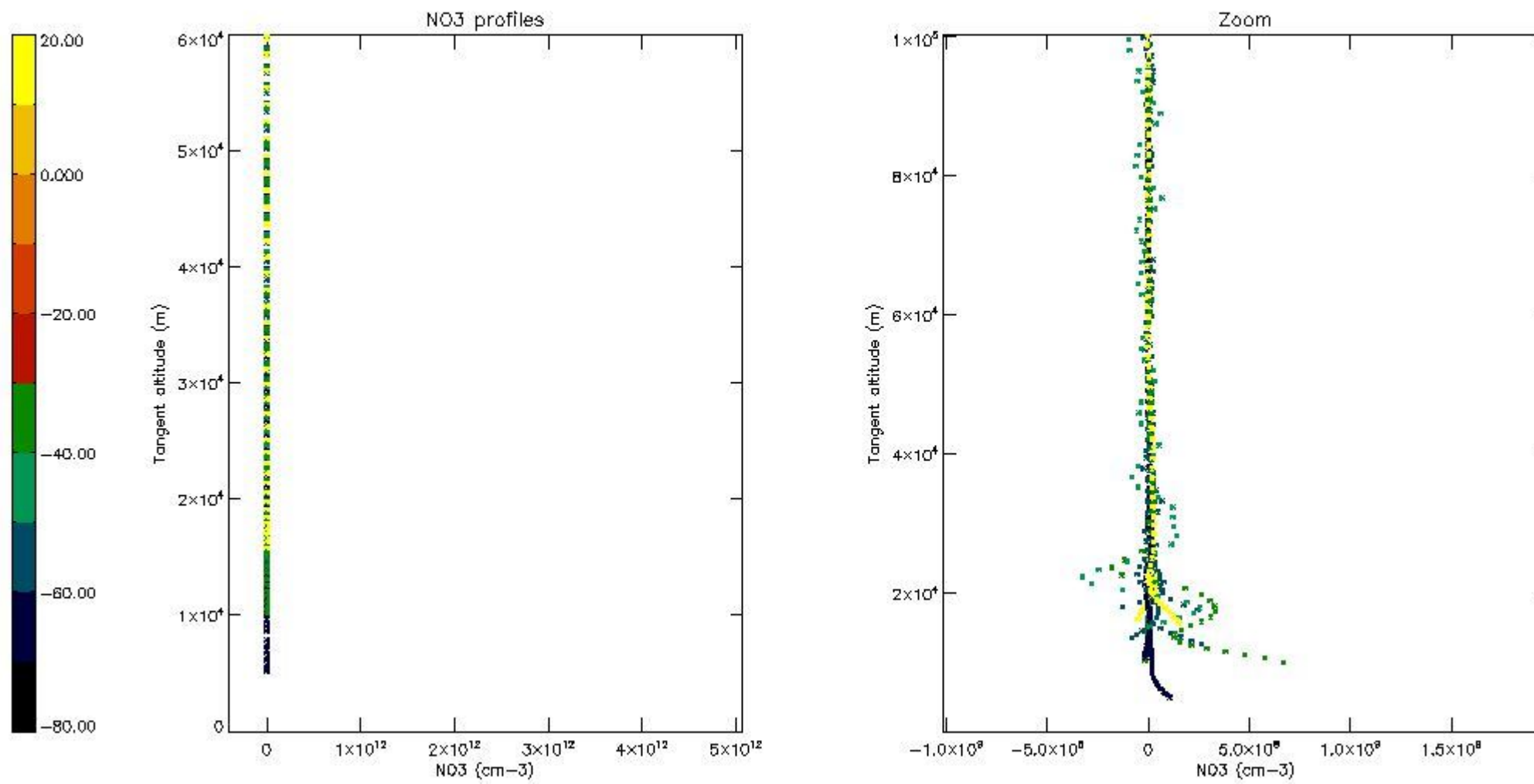
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



## 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	23-AUG-2008 20:30:39
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-AUG-2008 20:30:39
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-AUG-2008 20:30:39



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

#### [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	25APR2013 19:09:01
Data source version	GOMOS/6.01
Start time of products	23-08-2008 (23AUG2008 00:00:00)
Stop time of products	24-08-2008 (24AUG2008 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	47
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

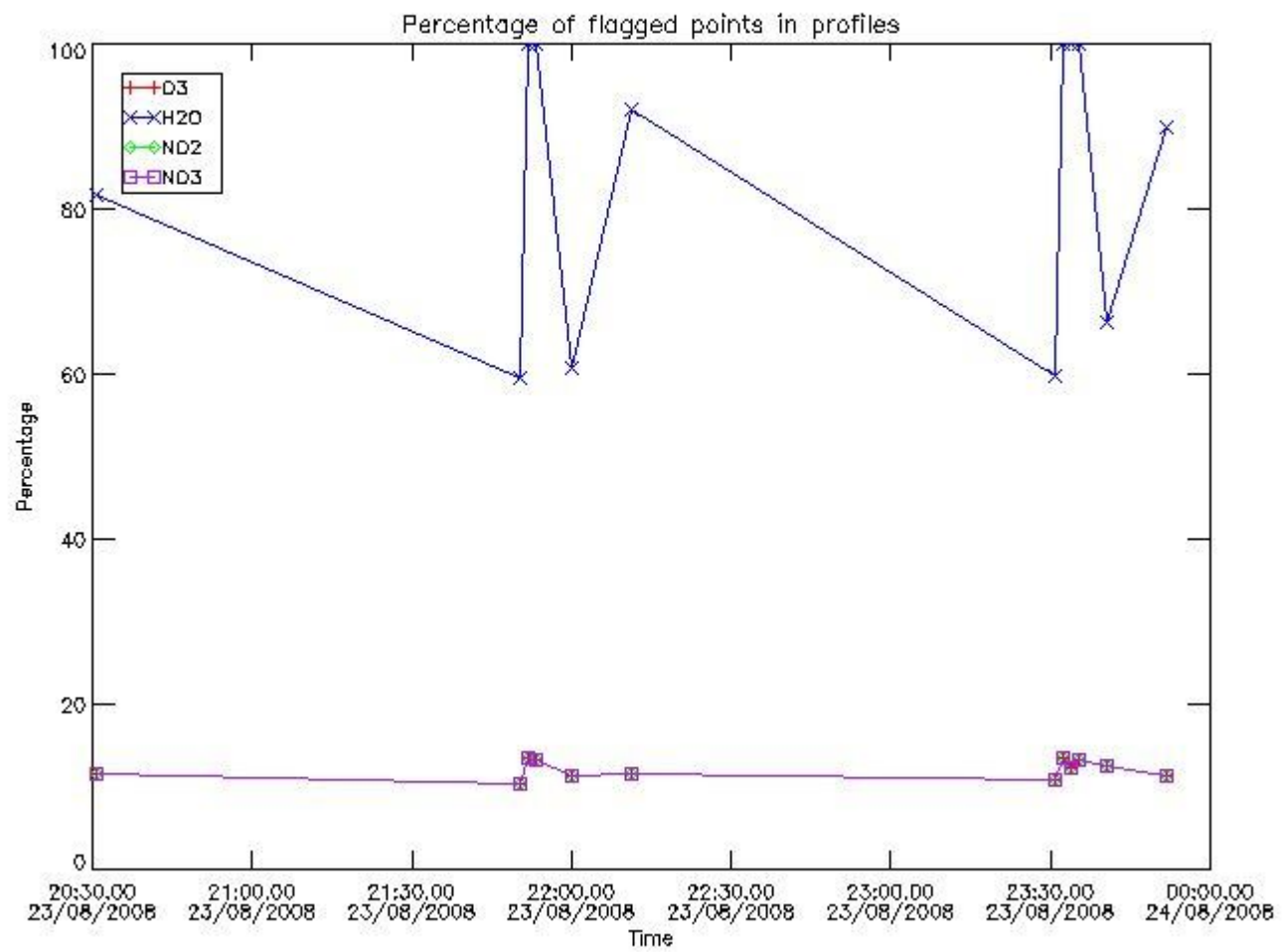
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20080823_203039_000000442071_00272_33893_8624.N1	23-AUG-2008 20:30:39	Dark	44.000	9	Alp Eri	0.45300	24000.	88	33893	No
2	GOM_NL__2PRFIN20080823_203543_000000472071_00272_33893_8625.N1	23-AUG-2008 20:35:43	Straylight	47.000	148	Alp Tuc	2.8780	4100.0	94	33893	No
3	GOM_NL__2PRFIN20080823_203920_000000452071_00272_33893_8626.N1	23-AUG-2008 20:39:20	Straylight	44.500	31	Alp Gru	1.7340	15200.	89	33893	No
4	GOM_NL__2PRFIN20080823_204321_000000492071_00272_33893_8627.N1	23-AUG-2008 20:43:21	Straylight	49.000	18	24Alp PsA	1.1660	9700.0	98	33893	No
5	GOM_NL__2PRFIN20080823_204831_000000522071_00272_33893_8628.N1	23-AUG-2008 20:48:31	Bright	51.500	142	49Del Cap	2.8500	8900.0	103	33893	No
6	GOM_NL__2PRFIN20080823_205147_000000402071_00272_33893_8629.N1	23-AUG-2008 20:51:47	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	33893	No
7	GOM_NL__2PRFIN20080823_205329_000000442071_00272_33893_8630.N1	23-AUG-2008 20:53:29	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	33893	No
8	GOM_NL__2PRFIN20080823_205633_000000422071_00272_33893_8631.N1	23-AUG-2008 20:56:33	Bright	42.000	61	8Eps Peg	2.1000	3900.0	84	33893	No
9	GOM_NL__2PRFIN20080823_210314_000000382071_00272_33893_8632.N1	23-AUG-2008 21:03:14	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	33893	No
10	GOM_NL__2PRFIN20080823_210459_000000362071_00272_33893_8633.N1	23-AUG-2008 21:04:59	Bright	36.000	66	37Gam Cyg	2.2080	5900.0	72	33893	No
11	GOM_NL__2PRFIN20080823_210626_000000352071_00272_33893_8634.N1	23-AUG-2008 21:06:26	Bright	35.000	19	50Alp Cyg	1.2460	10500.	70	33893	No
12	GOM_NL__2PRFIN20080823_211137_000000392071_00272_33893_8635.N1	23-AUG-2008 21:11:37	Bright	38.500	89	5Alp Cep	2.4510	8000.0	77	33893	No
13	GOM_NL__2PRFIN20080823_211903_000000372071_00272_33893_8636.N1	23-AUG-2008 21:19:03	Bright	37.000	49	1Alp UMi	1.9900	6300.0	74	33893	No
14	GOM_NL__2PRFIN20080823_213204_000000422071_00272_33893_8637.N1	23-AUG-2008 21:32:04	Bright	41.500	42	34Bet Aur	1.9000	10200.	83	33893	No
15	GOM_NL__2PRFIN20080823_213543_000000352071_00272_33893_8638.N1	23-AUG-2008 21:35:43	Bright	34.500	24	66Alp Gem	1.5800	10200.	69	33893	No
16	GOM_NL__2PRFIN20080823_213920_000000502071_00272_33893_8639.N1	23-AUG-2008 21:39:20	Twilight	50.000	151	13Mu Gem	2.8900	3000.0	100	33893	No
17	GOM_NL__2PRFIN20080823_214059_000000472071_00272_33893_8640.N1	23-AUG-2008 21:40:59	Twilight	47.000	44	24Gam Gem	1.9280	11000.	94	33893	No
18	GOM_NL__2PRFIN20080823_214230_000000382071_00272_33893_8641.N1	23-AUG-2008 21:42:30	Twilight	38.000	153	3Bet CMi	2.8940	13100.	76	33893	No
19	GOM_NL__2PRFIN20080823_215020_000000542071_00272_33893_8642.N1	23-AUG-2008 21:50:20	Dark	53.500	1	9Alp CMa	-1.4400	11000.	107	33893	No
20	GOM_NL__2PRFIN20080823_215148_000000382071_00272_33893_8643.N1	23-AUG-2008 21:51:48	Dark	38.000	179	24Omi2CMa	3.0320	24000.	76	33893	No
21	GOM_NL__2PRFIN20080823_215316_000000422071_00272_33893_8644.N1	23-AUG-2008 21:53:16	Dark	42.000	23	21Eps CMa	1.5020	26000.	84	33893	No
22	GOM_NL__2PRFIN20080823_220006_000000452071_00272_33893_8645.N1	23-AUG-2008 22:00:06	Dark	45.000	2	Alp Car	-0.73600	7000.0	90	33893	No
23	GOM_NL__2PRFIN20080823_221116_000000452071_00273_33894_8638.N1	23-AUG-2008 22:11:16	Dark	44.500	9	Alp Eri	0.45300	24000.	89	33894	No
24	GOM_NL__2PRFIN20080823_221619_000000462071_00273_33894_8639.N1	23-AUG-2008 22:16:19	Straylight	45.500	148	Alp Tuc	2.8780	4100.0	91	33894	No
25	GOM_NL__2PRFIN20080823_221956_000000412071_00273_33894_8640.N1	23-AUG-2008 22:19:56	Straylight	40.500	31	Alp Gru	1.7340	15200.	81	33894	No
26	GOM_NL__2PRFIN20080823_222358_000000512071_00273_33894_8641.N1	23-AUG-2008 22:23:58	Straylight	51.000	18	24Alp PsA	1.1660	9700.0	102	33894	No
27	GOM_NL__2PRFIN20080823_222907_000000562071_00273_33894_8642.N1	23-AUG-2008 22:29:07	Bright	56.000	142	49Del Cap	2.8500	8900.0	112	33894	No
28	GOM_NL__2PRFIN20080823_223223_000000402071_00273_33894_8643.N1	23-AUG-2008 22:32:23	Bright	39.500	154	22Bet Aqr	2.8990	5700.0	79	33894	No
29	GOM_NL__2PRFIN20080823_223405_000000442071_00273_33894_8644.N1	23-AUG-2008 22:34:05	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	33894	No
30	GOM_NL__2PRFIN20080823_223709_000000422071_00273_33894_8645.N1	23-AUG-2008 22:37:09	Bright	41.500	61	8Eps Peg	2.1000	3900.0	83	33894	No
31	GOM_NL__2PRFIN20080823_224350_000000382071_00273_33894_8646.N1	23-AUG-2008 22:43:50	Bright	38.000	92	53Eps Cyg	2.5000	4500.0	76	33894	No
32	GOM_NL__2PRFIN20080823_224535_000000342071_00273_33894_8647.N1	23-AUG-2008 22:45:35	Bright	34.000	66	37Gam Cyg	2.2080	5900.0	68	33894	No
33	GOM_NL__2PRFIN20080823_224702_000000342071_00273_33894_8648.N1	23-AUG-2008 22:47:02	Bright	34.000	19	50Alp Cyg	1.2460	10500.	68	33894	No
34	GOM_NL__2PRFIN20080823_225213_000000372071_00273_33894_8649.N1	23-AUG-2008 22:52:13	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	33894	No
35	GOM_NL__2PRFIN20080823_225938_000000362071_00273_33894_8650.N1	23-AUG-2008 22:59:38	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	33894	No
36	GOM_NL__2PRFIN20080823_231240_000000402071_00273_33894_8651.N1	23-AUG-2008 23:12:40	Bright	39.500	42	34Bet Aur	1.9000	10200.	79	33894	No
37	GOM_NL__2PRFIN20080823_231618_000000352071_00273_33894_8652.N1	23-AUG-2008 23:16:18	Bright	35.000	24	66Alp Gem	1.5800	10200.	70	33894	No
38	GOM_NL__2PRFIN20080823_231956_000000532071_00273_33894_8653.N1	23-AUG-2008 23:19:56	Twilight	52.500	151	13Mu Gem	2.8900	3000.0	105	33894	No
39	GOM_NL__2PRFIN20080823_232136_000000452071_00273_33894_8654.N1	23-AUG-2008 23:21:36	Twilight	45.000	44	24Gam Gem	1.9280	11000.	90	33894	No
40	GOM_NL__2PRFIN20080823_232306_000000392071_00273_33894_8655.N1	23-AUG-2008 23:23:06	Twilight	38.500	153	3Bet CMi	2.8940	13100.	77	33894	No
41	GOM_NL__2PRFIN20080823_233057_000000472071_00273_33894_8656.N1	23-AUG-2008 23:30:57	Dark	46.500	1	9Alp CMa	-1.4400	11000.	93	33894	No
42	GOM_NL__2PRFIN20080823_233225_000000382071_00273_33894_8657.N1	23-AUG-2008 23:32:25	Dark	38.000	179	24Omi2CMa	3.0320	24000.	76	33894	No

43	GOM_NL__2PRFIN20080823_233352_000000422071_00273_33894_8658.N1	23-AUG-2008 23:33:52	Dark	41.500	23	21Eps CMa	1.5020	26000.	83	33894	No
44	GOM_NL__2PRFIN20080823_233513_000000422071_00273_33894_8659.N1	23-AUG-2008 23:35:13	Dark	42.000	177	1Zet CMa	3.0220	26000.	84	33894	No
45	GOM_NL__2PRFIN20080823_234042_000000452071_00273_33894_8660.N1	23-AUG-2008 23:40:42	Dark	45.000	2	Alp Car	-0.73600	7000.0	90	33894	No
46	GOM_NL__2PRFIN20080823_235152_000000452071_00274_33895_8646.N1	23-AUG-2008 23:51:52	Dark	45.000	9	Alp Eri	0.45300	24000.	90	33895	No
47	GOM_NL__2PRFIN20080823_235655_000000392071_00274_33895_8647.N1	23-AUG-2008 23:56:55	Straylight	39.000	148	Alp Tuc	2.8780	4100.0	78	33895	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.

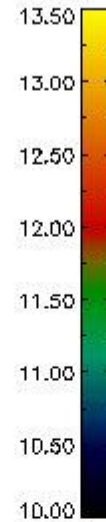
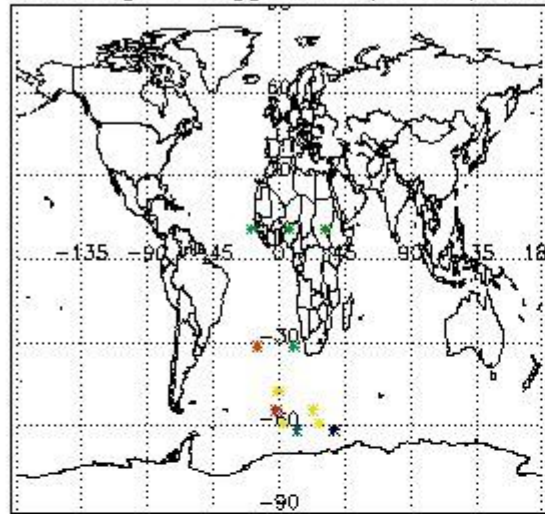
#### 3.1 Plot quality information per product (time dependant)



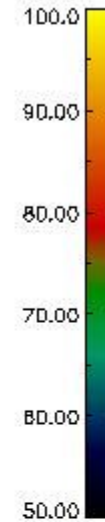
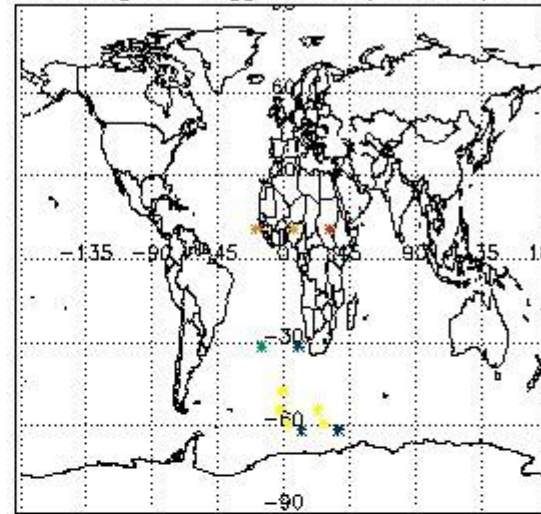
#### 3.2 Plot quality information per product (world map)



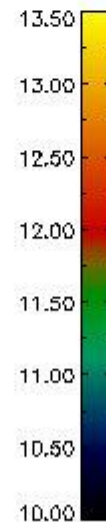
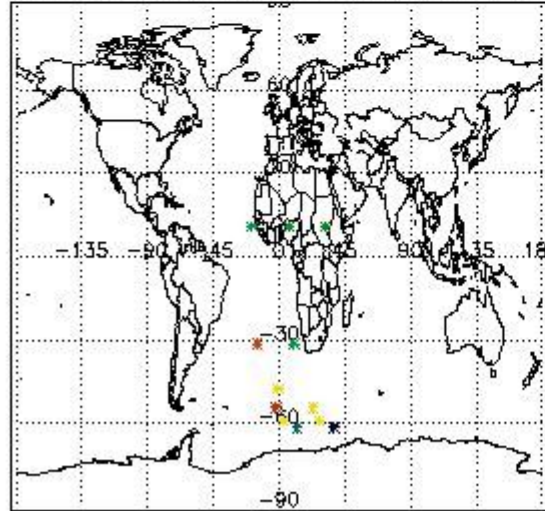
Percentage of flagged data per O3 profile



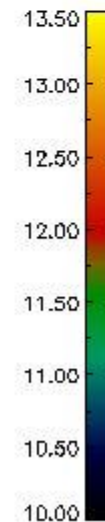
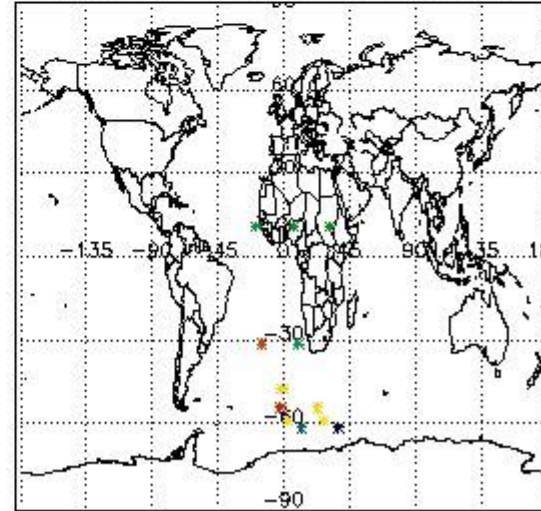
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

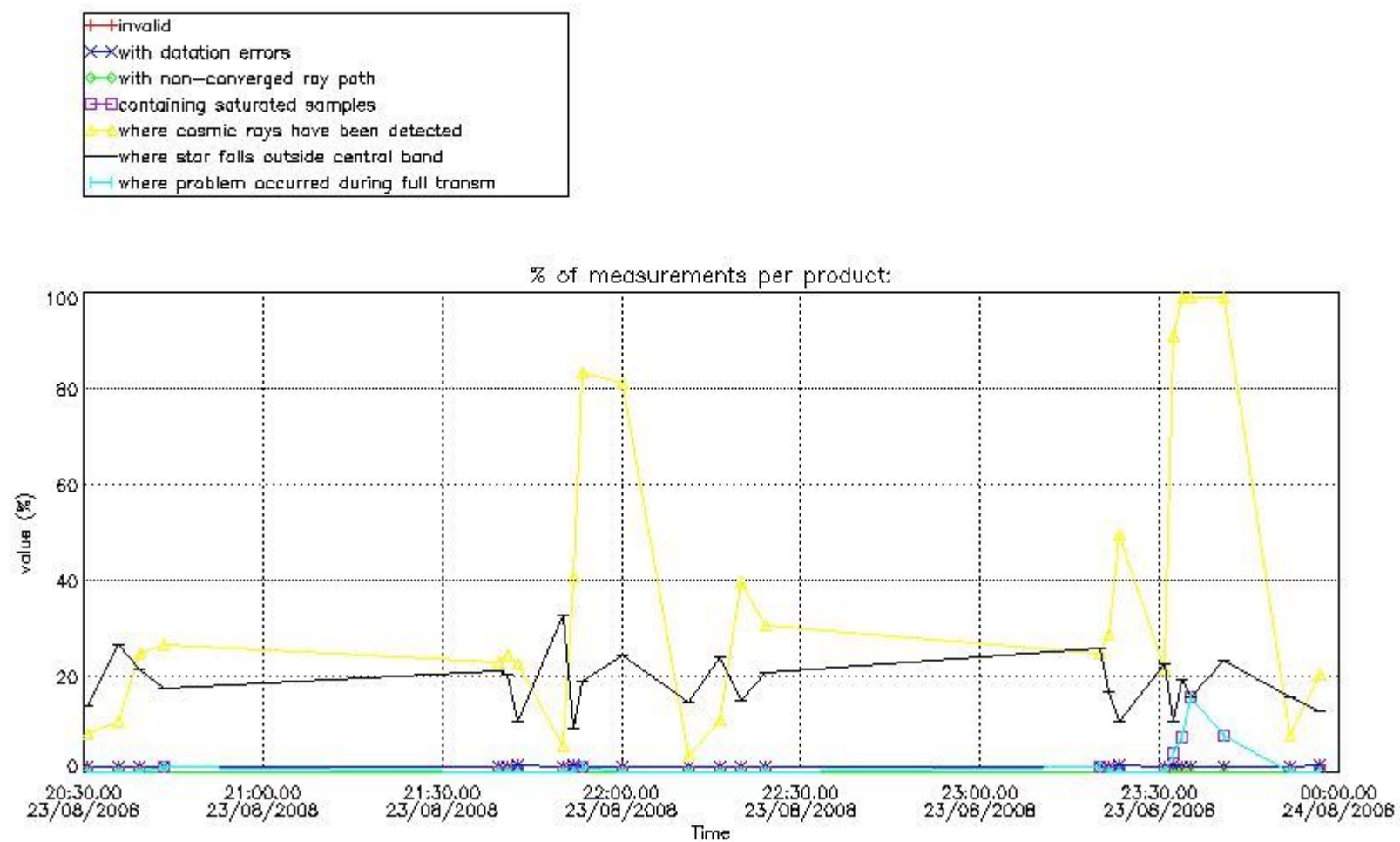


#### 4. Level 1 quality information per product

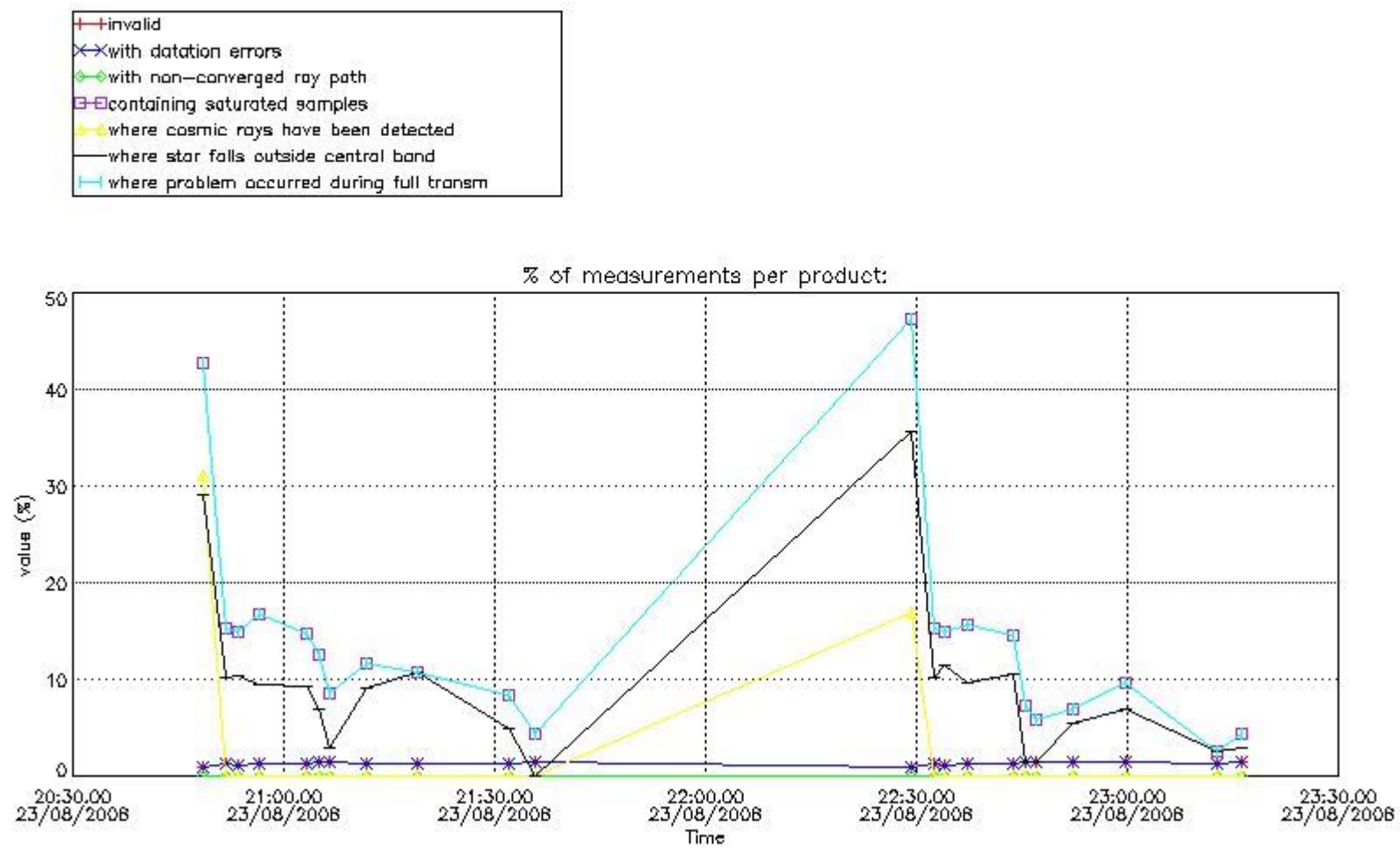
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

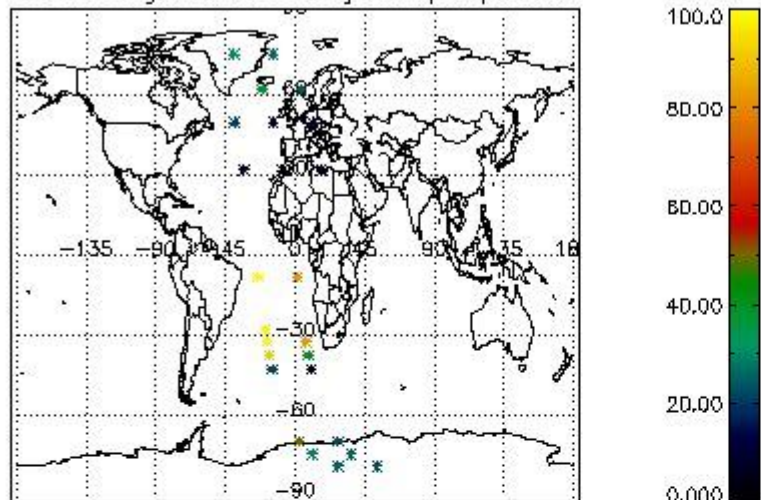


4.2 Plot quality information per product coming from level 1b processing (world map)

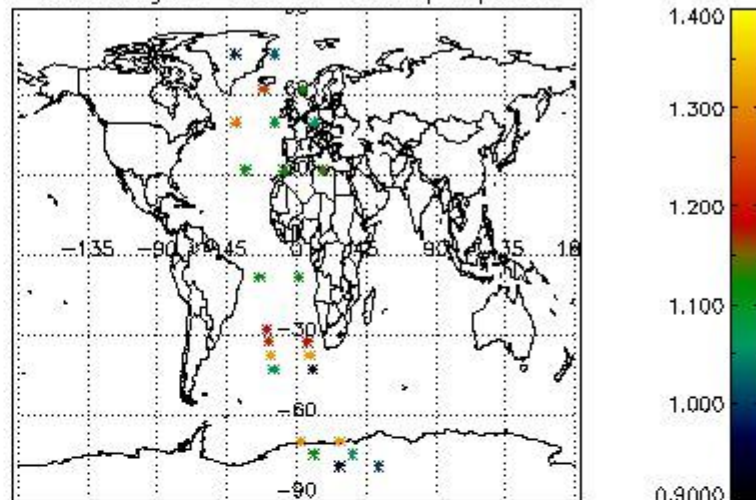
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



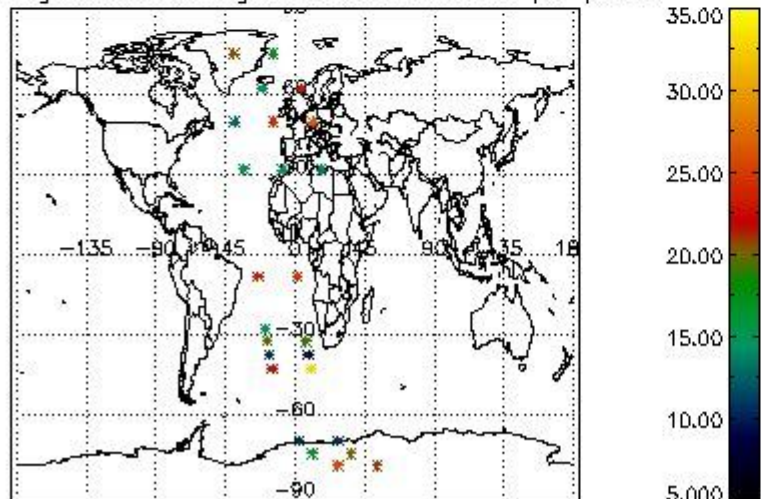
Percentage of cosmic ray hits per profile



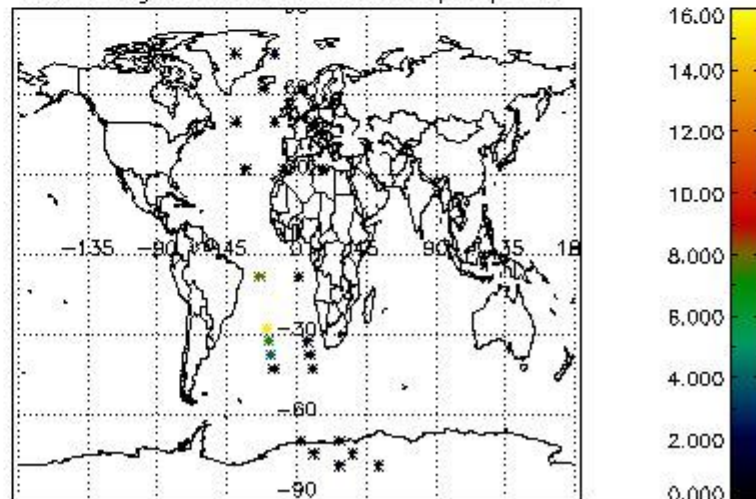
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



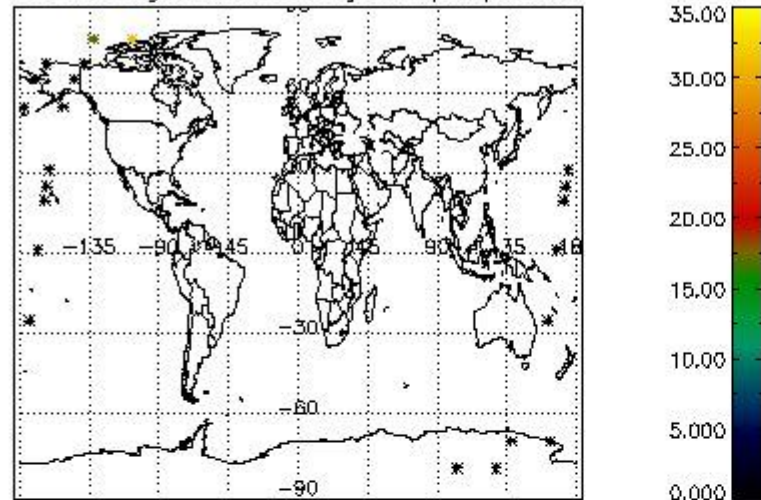
Percentage of saturation errors per profile



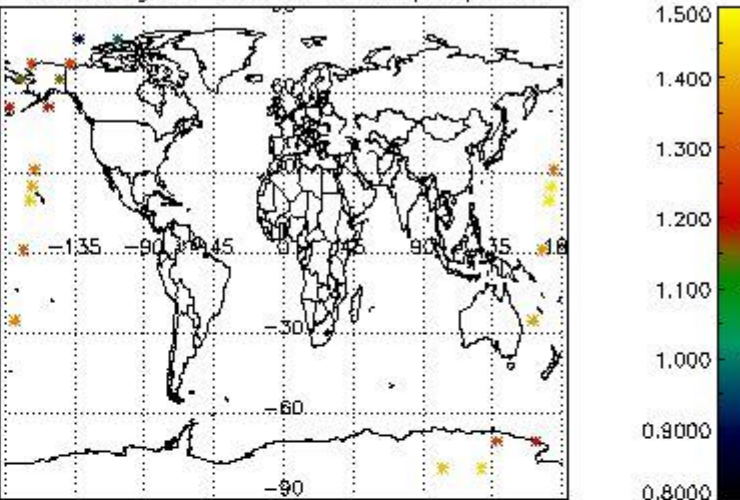
4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes



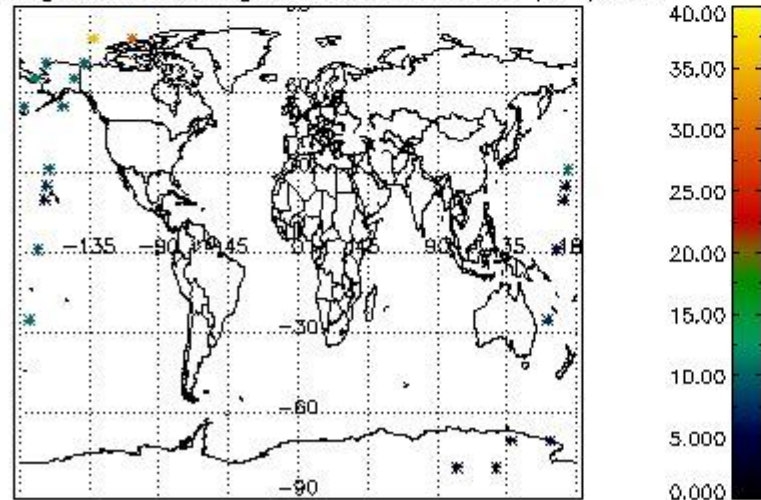
Percentage of cosmic ray hits per profile



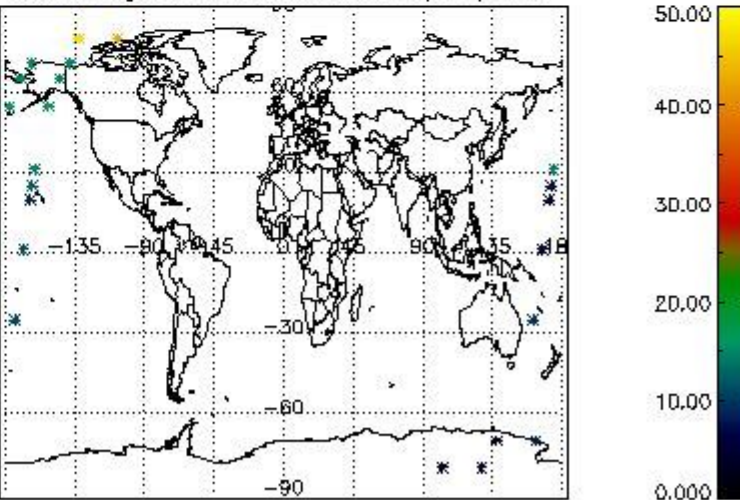
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

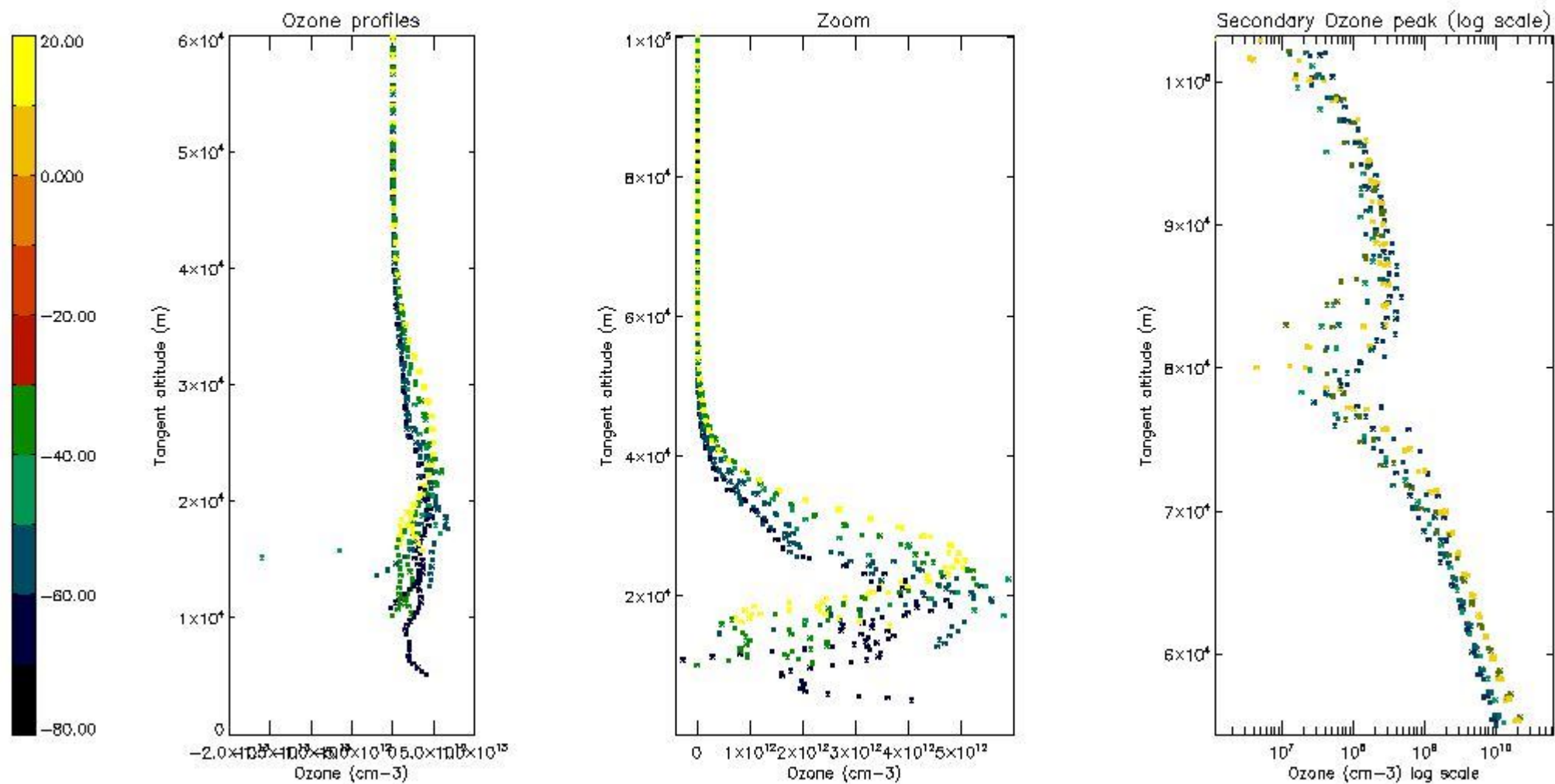
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	27
STD < 20	19

STD < 10	17
STD < 5	14

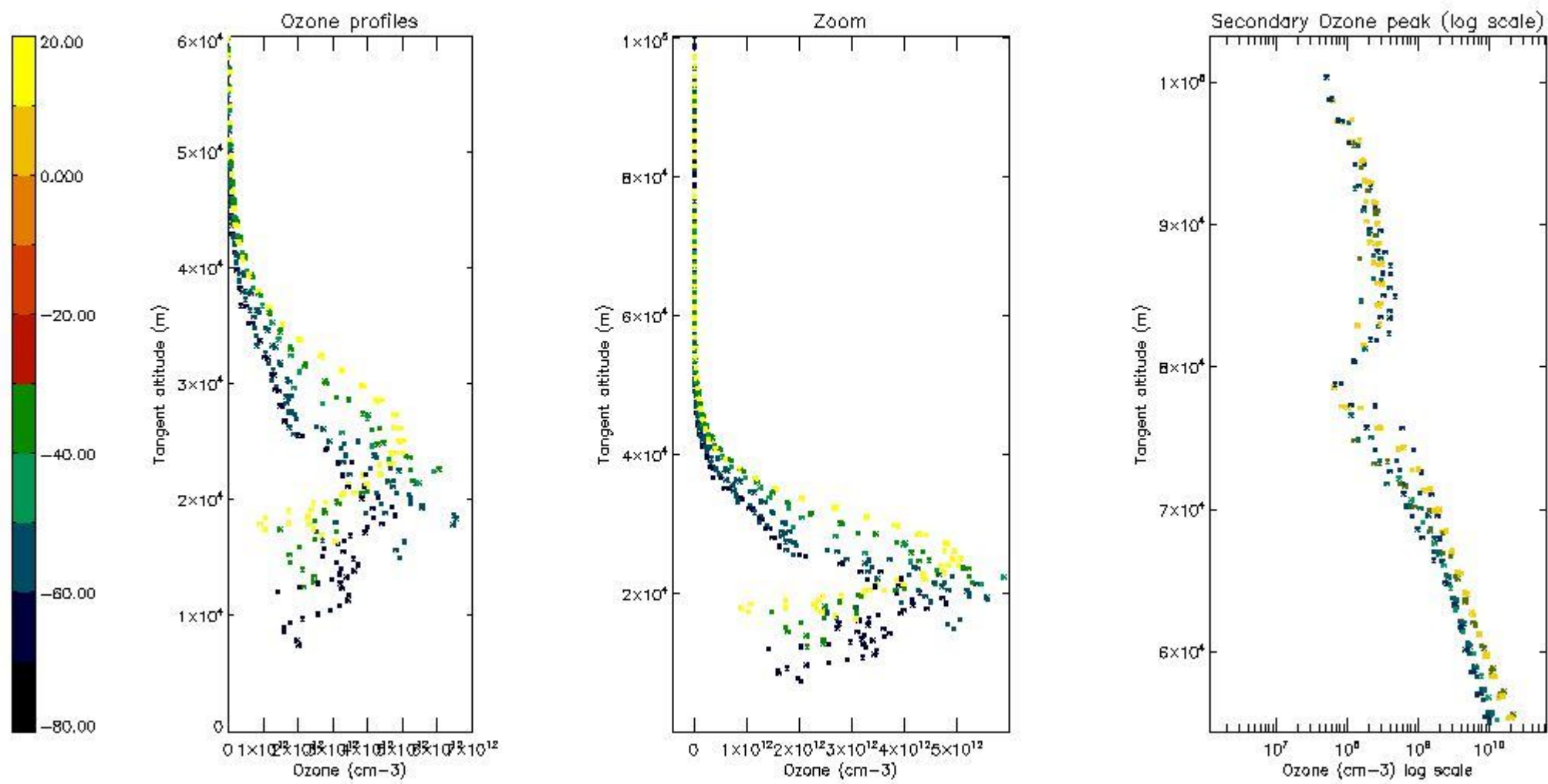
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



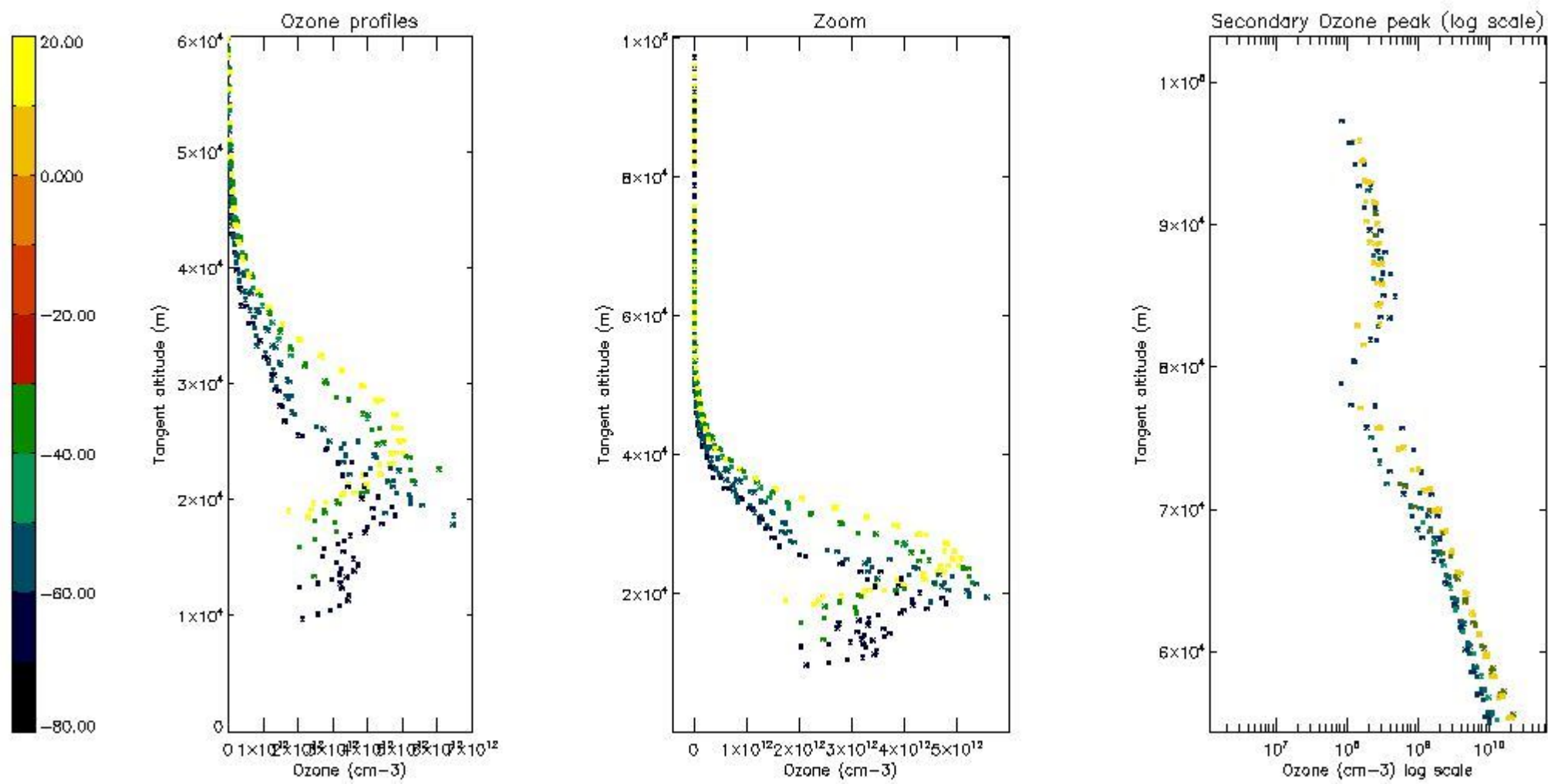
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

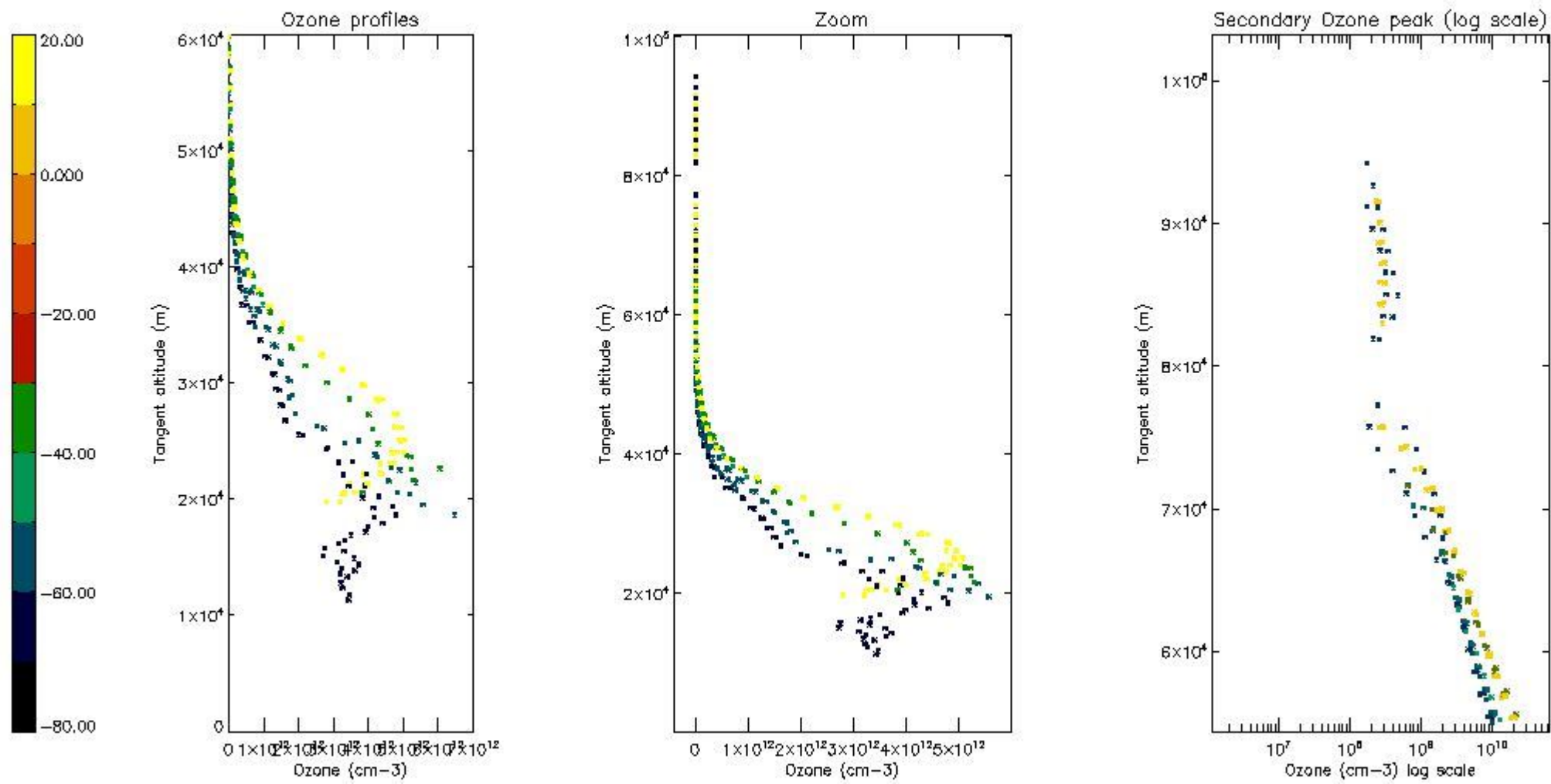
The colorbar represents the latitude.



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

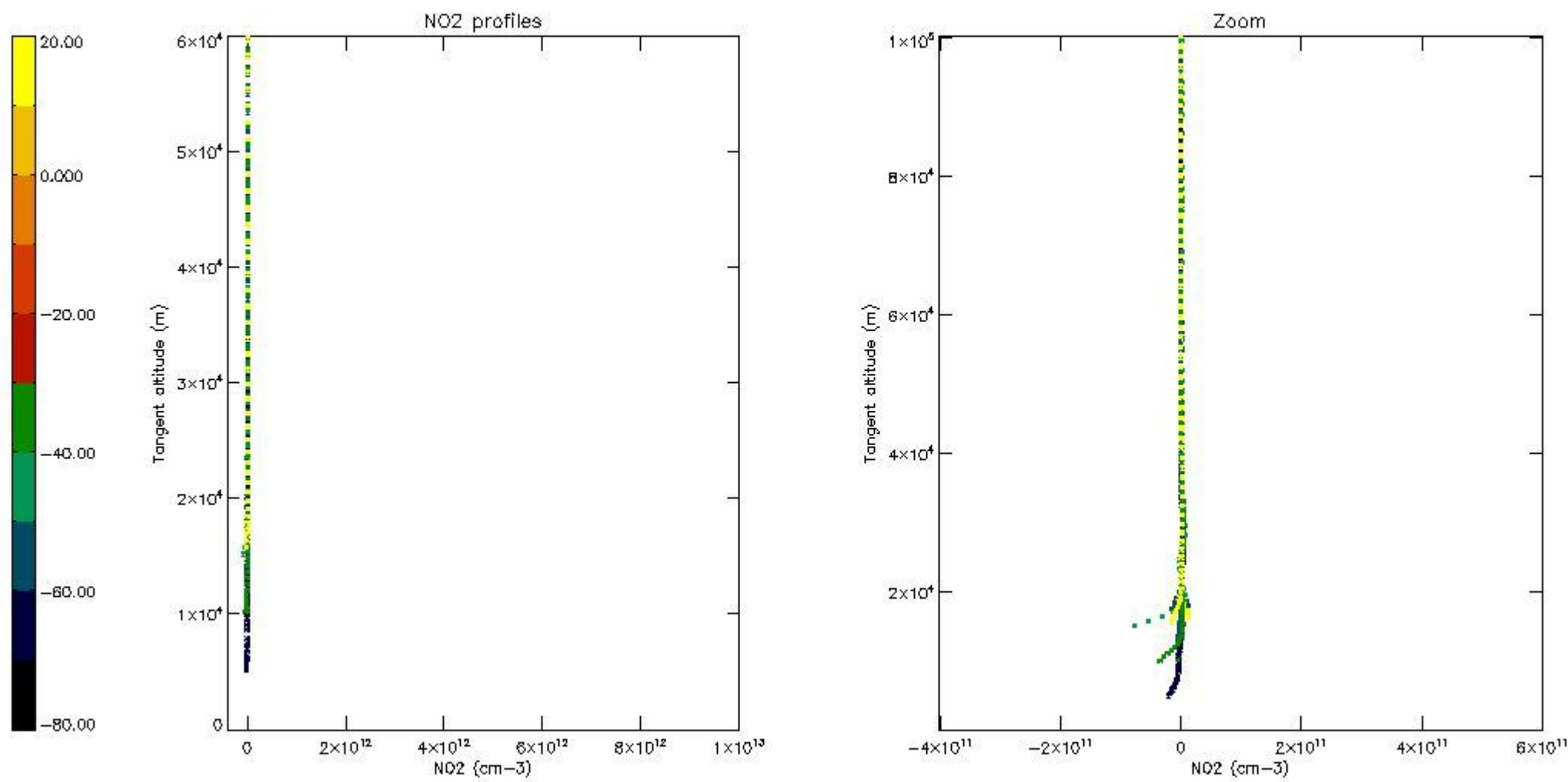
The colorbar represents the latitude.





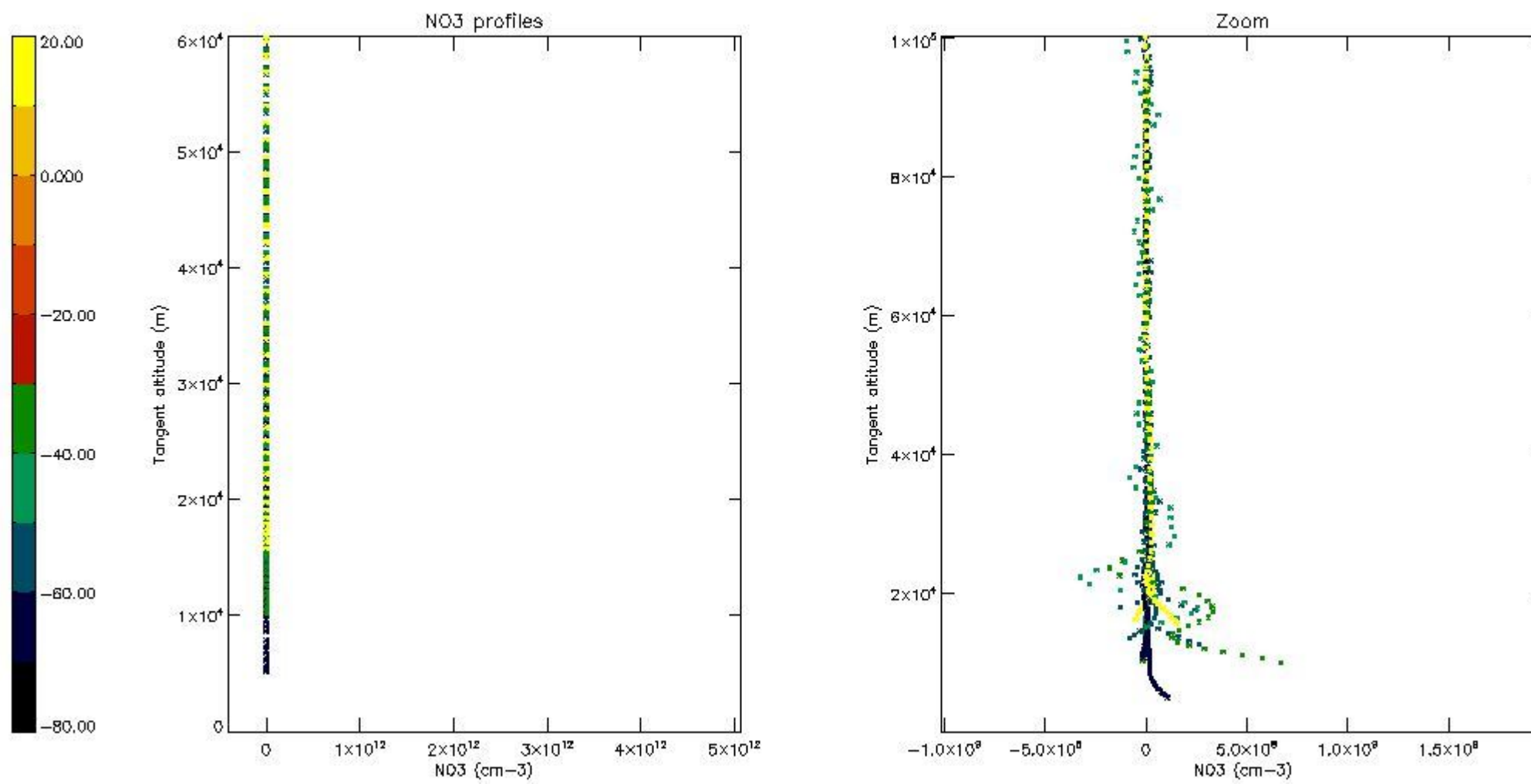
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

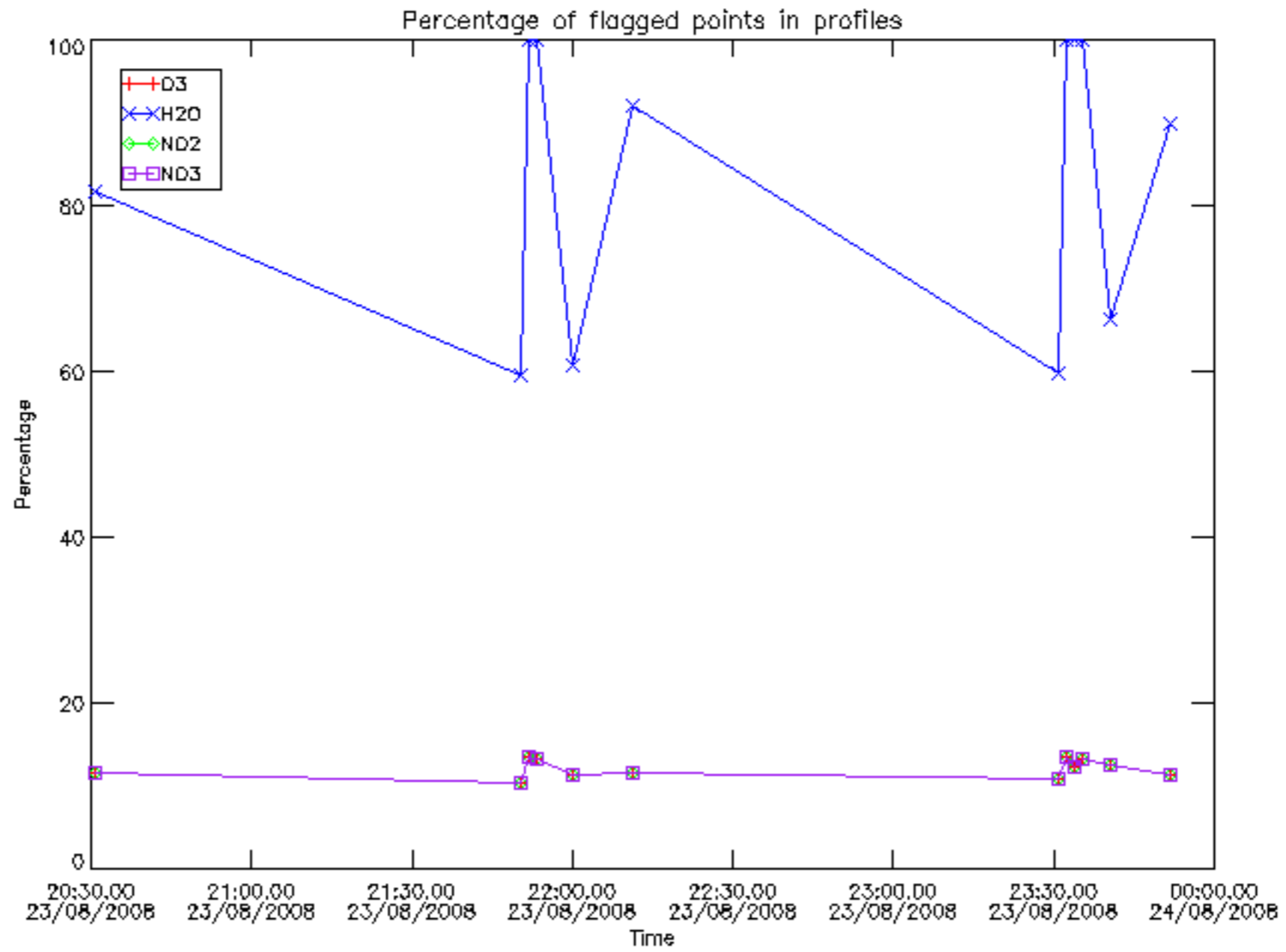
The colorbar represents the latitude.



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

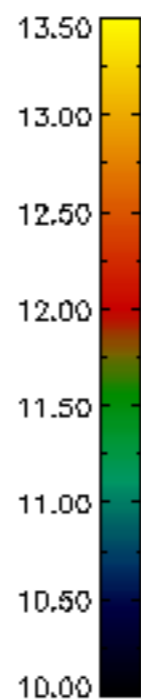
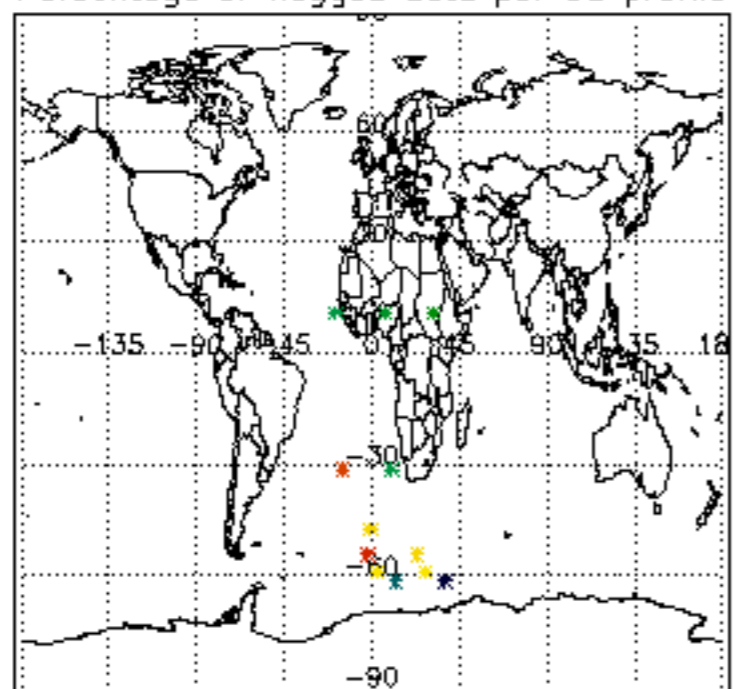
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	23-AUG-2008 20:30:39
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-AUG-2008 20:30:39
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-AUG-2008 20:30:39

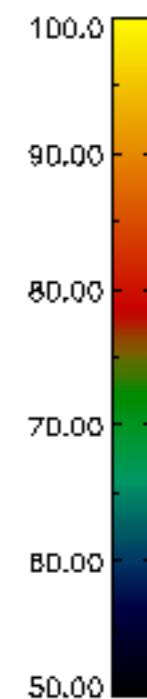
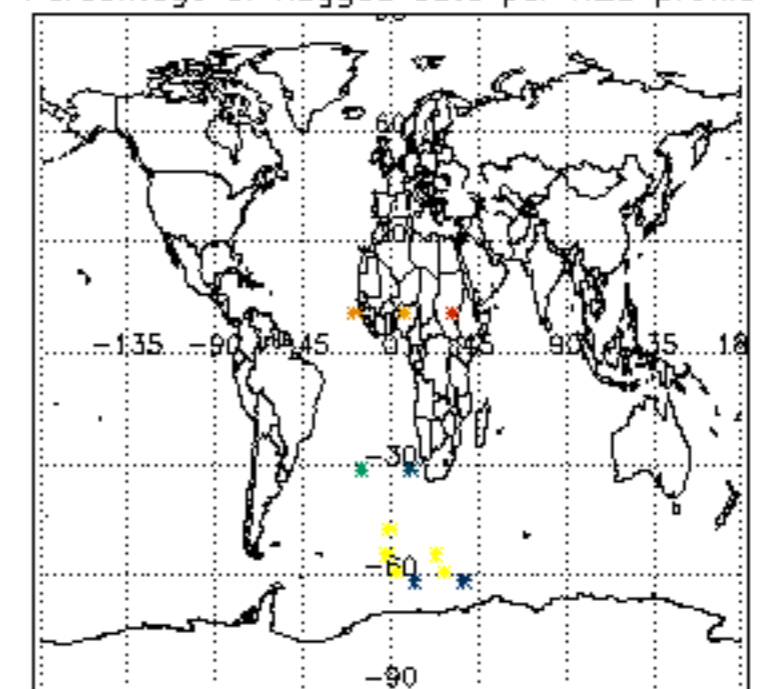




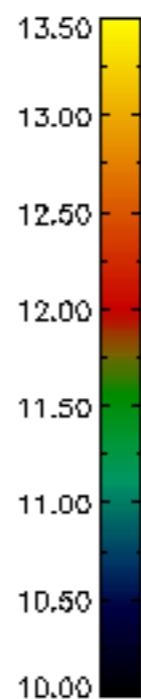
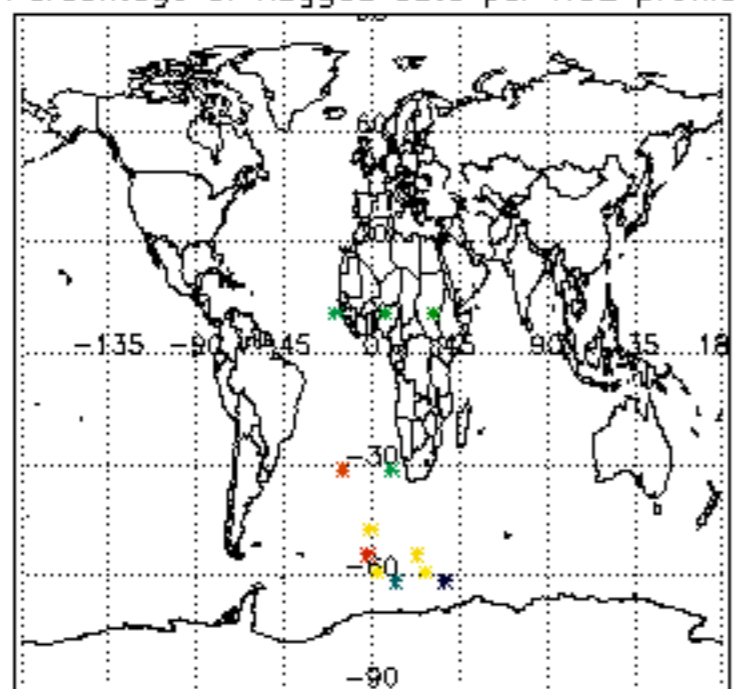
Percentage of flagged data per D3 profile



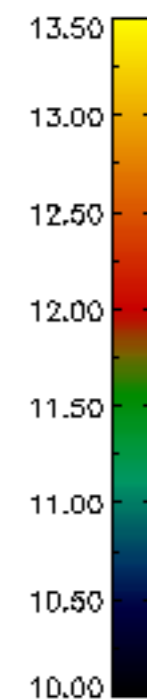
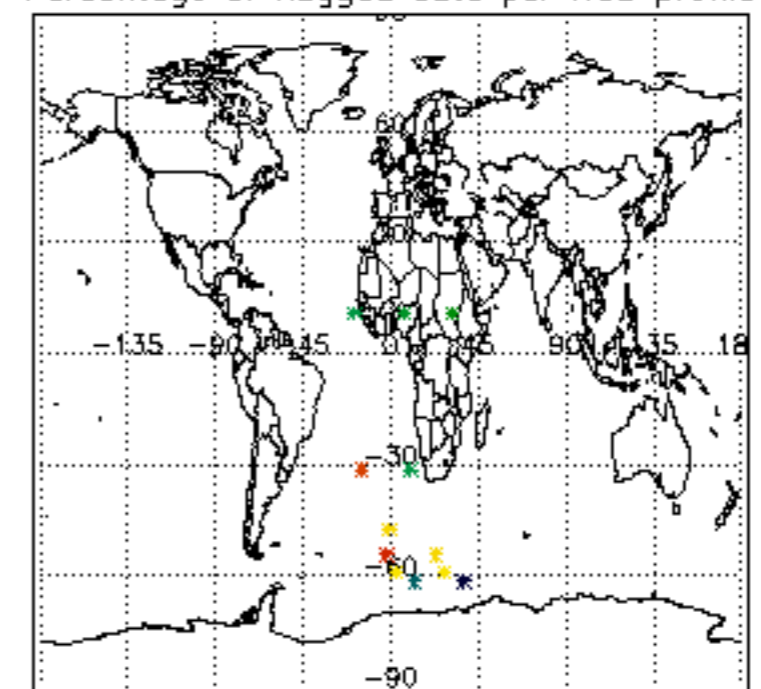
Percentage of flagged data per H2O profile

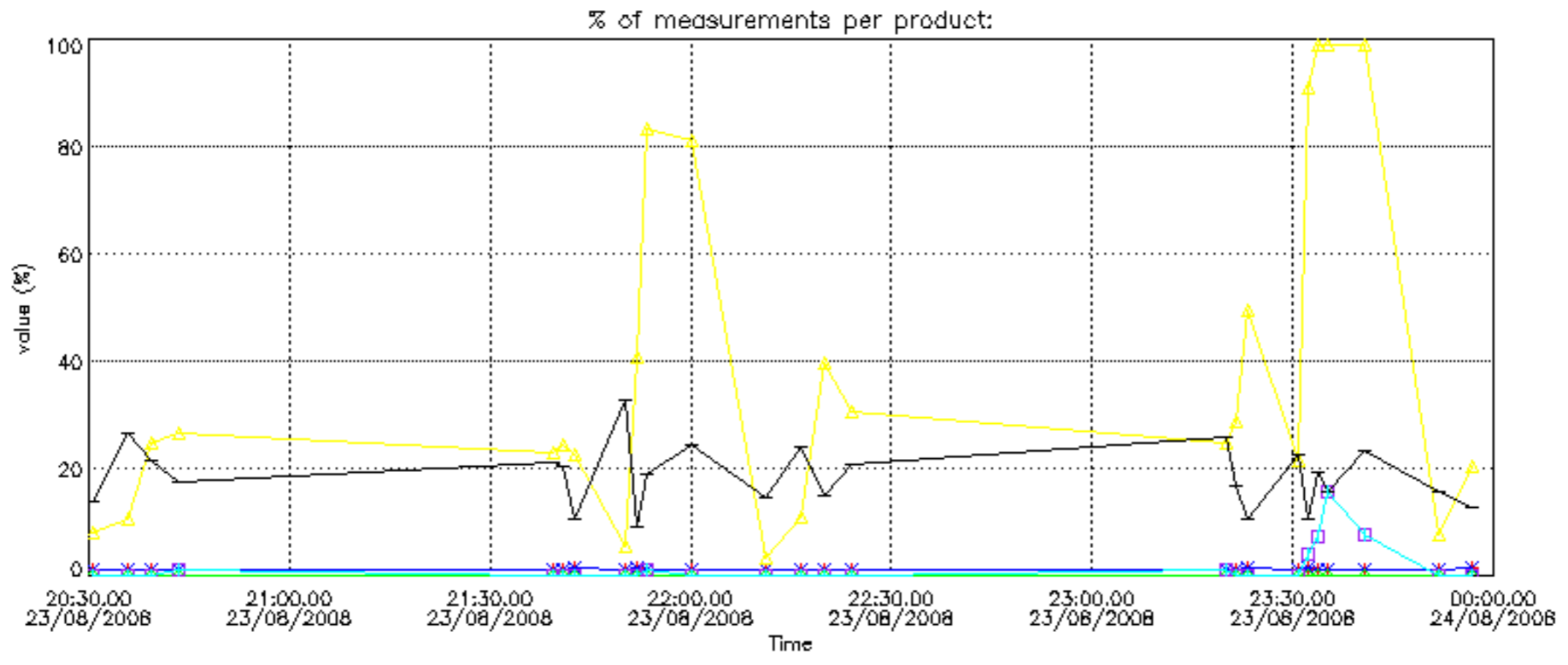


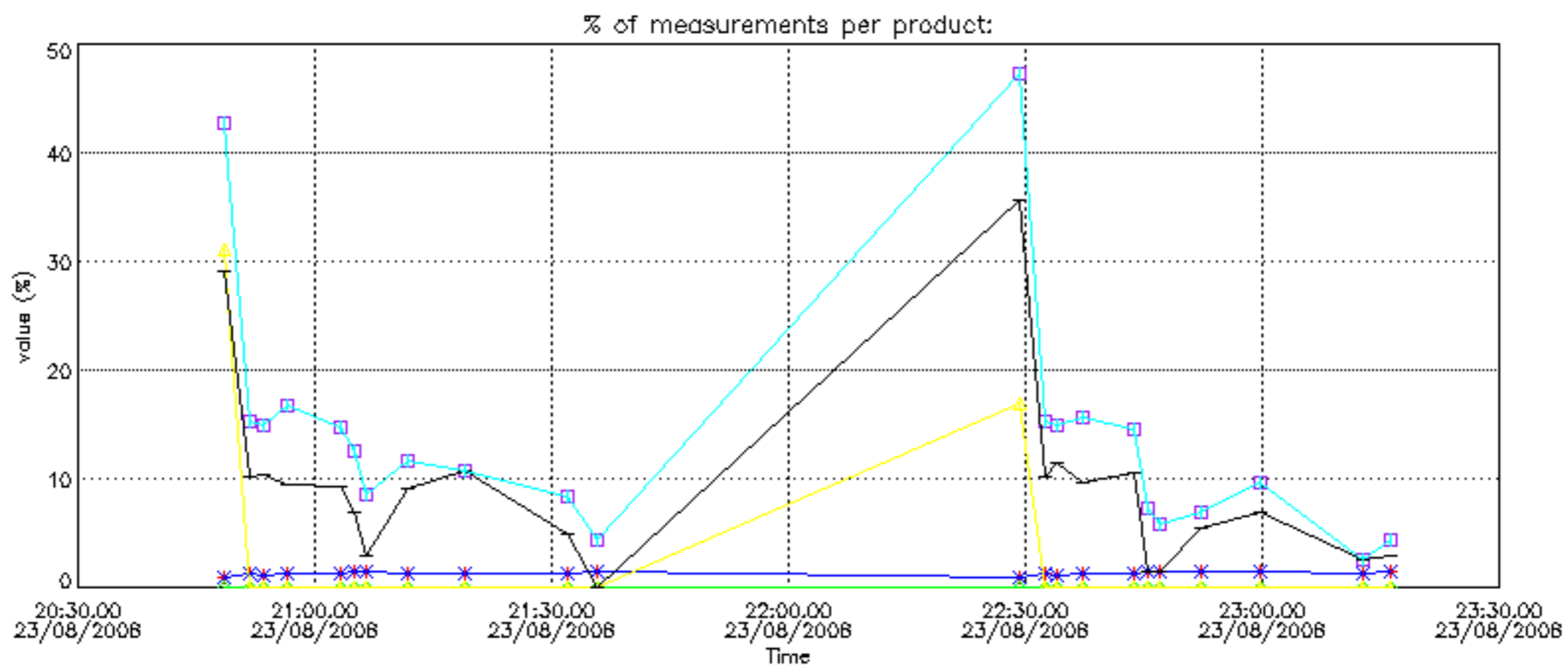
Percentage of flagged data per NO2 profile



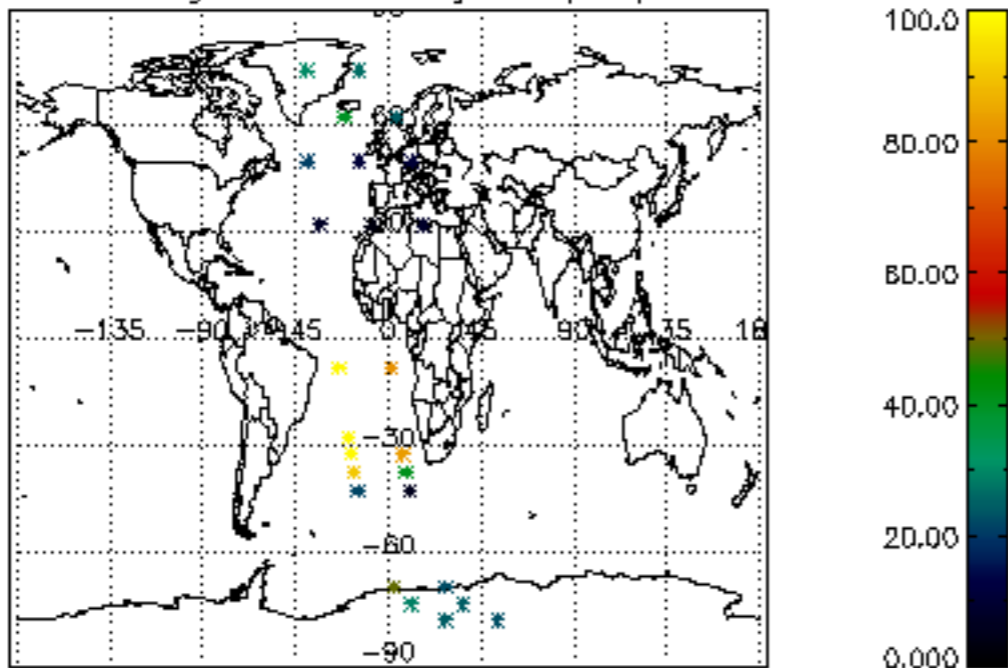
Percentage of flagged data per NO3 profile



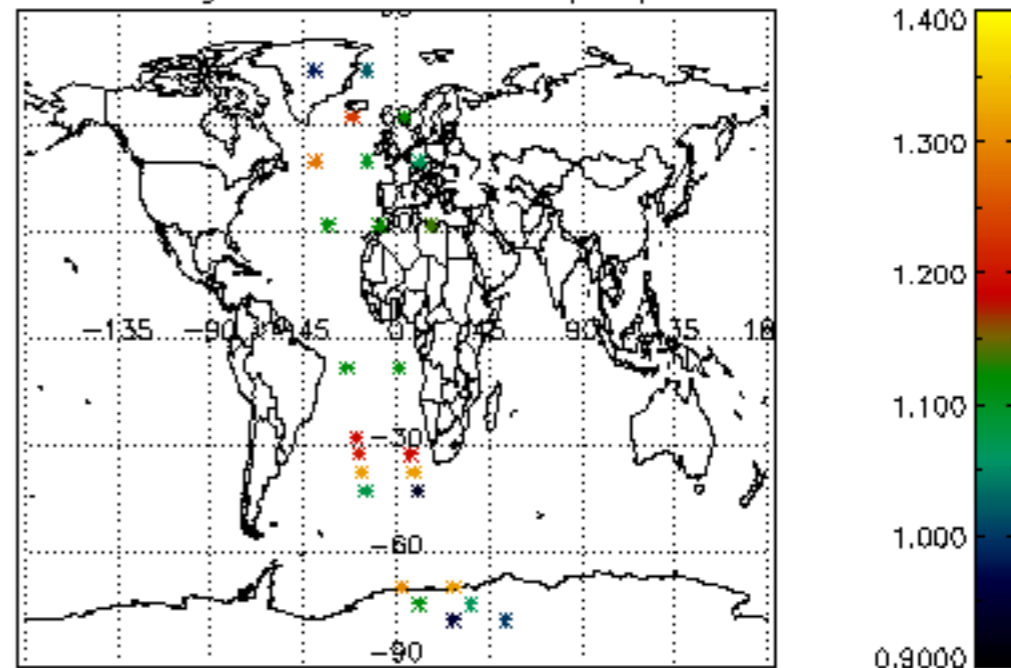




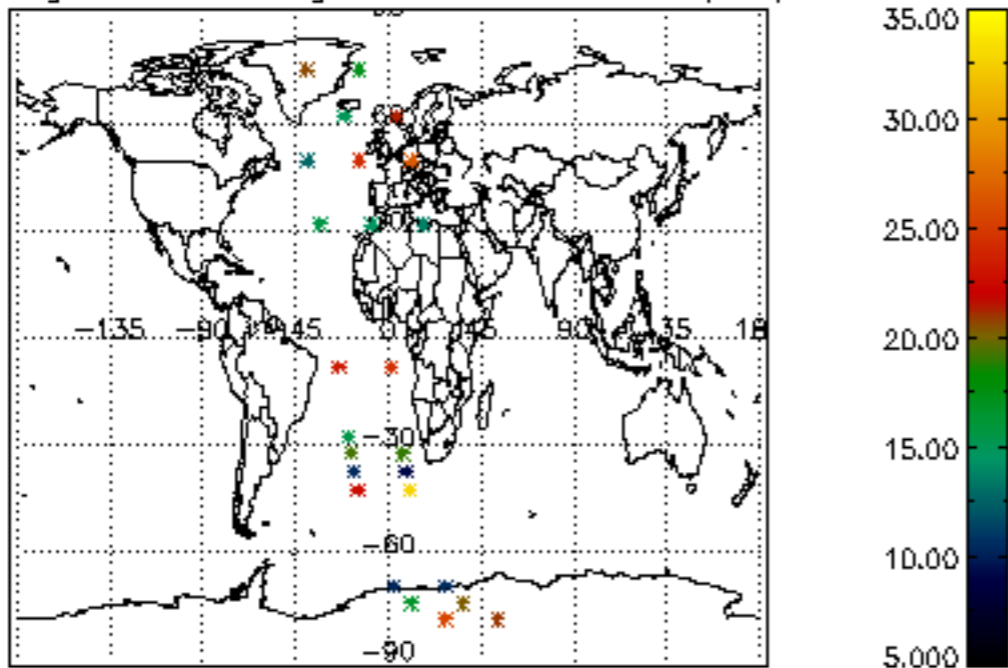
Percentage of cosmic ray hits per profile



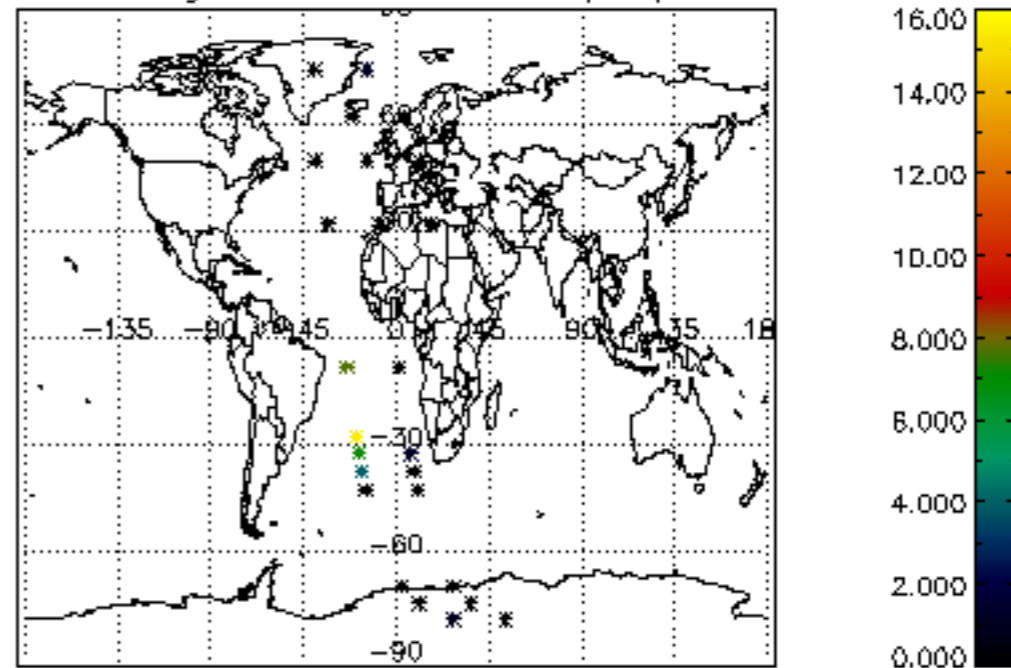
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

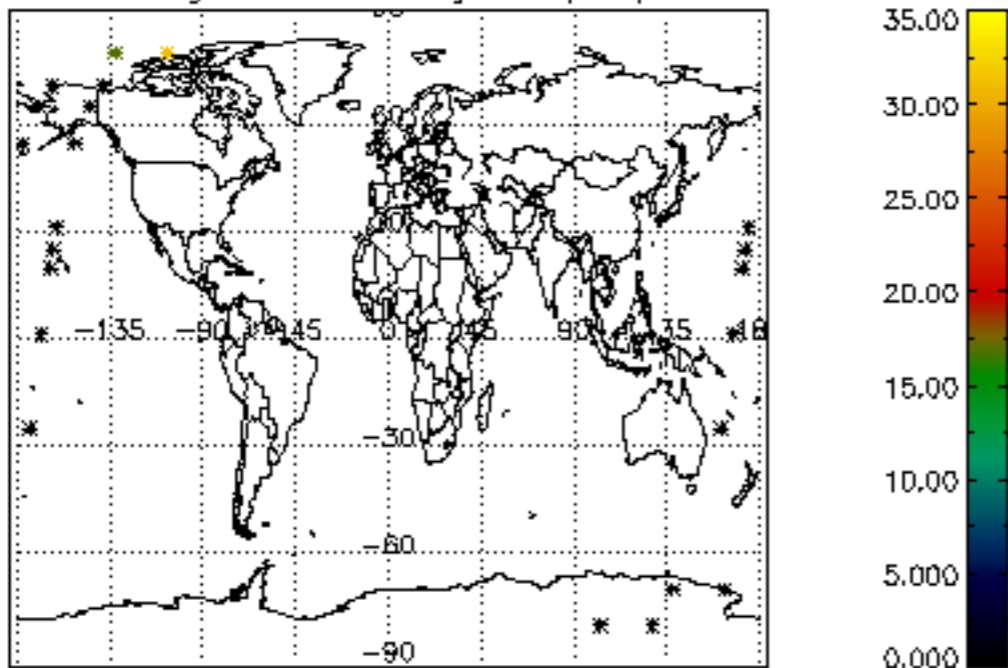


Percentage of saturation errors per profile

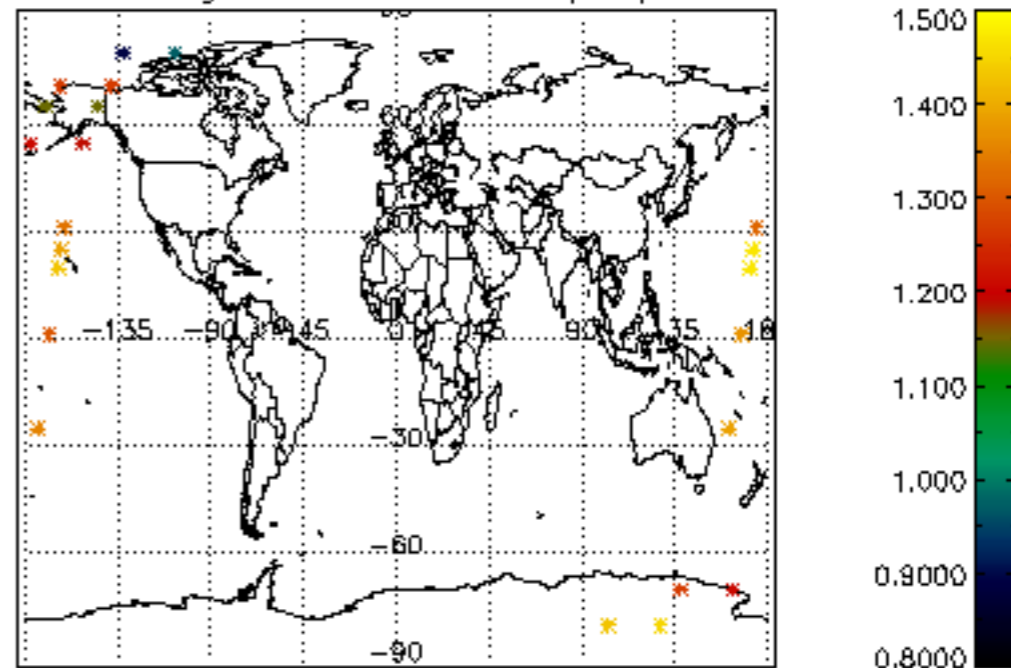




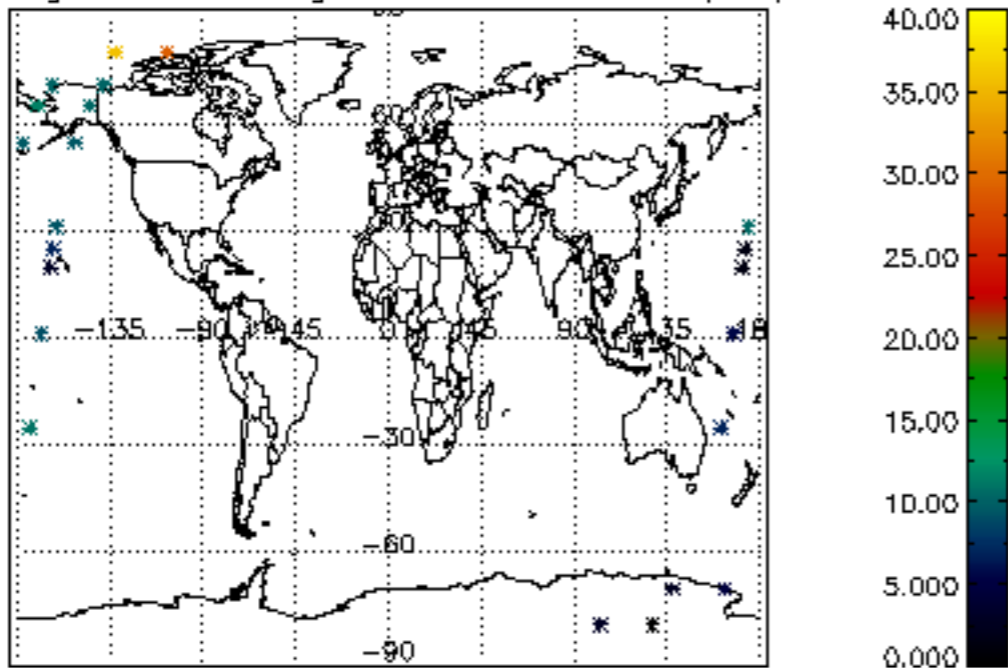
Percentage of cosmic ray hits per profile



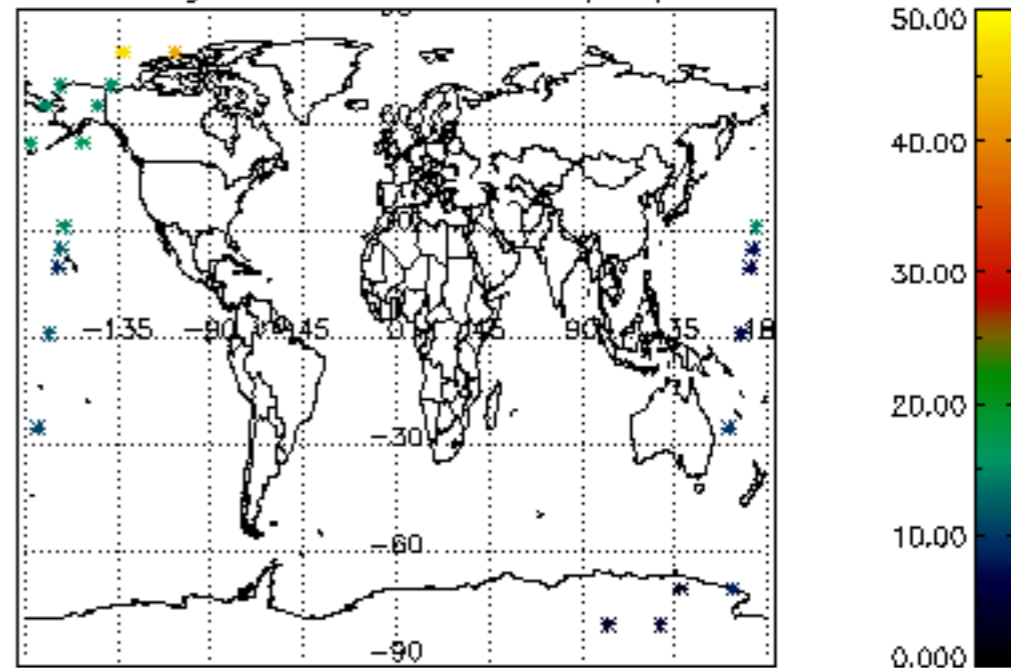
Percentage of datation errors per profile

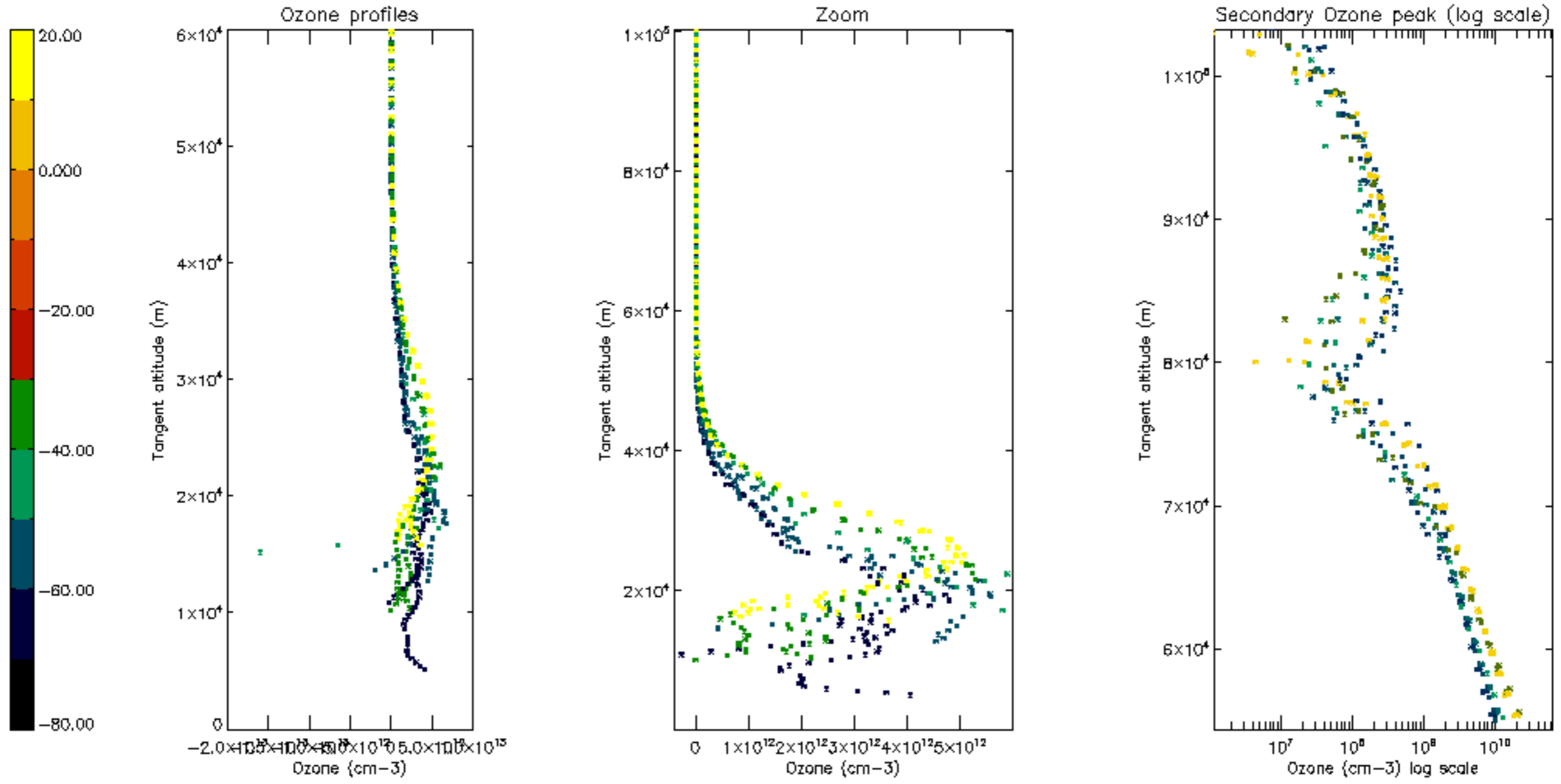


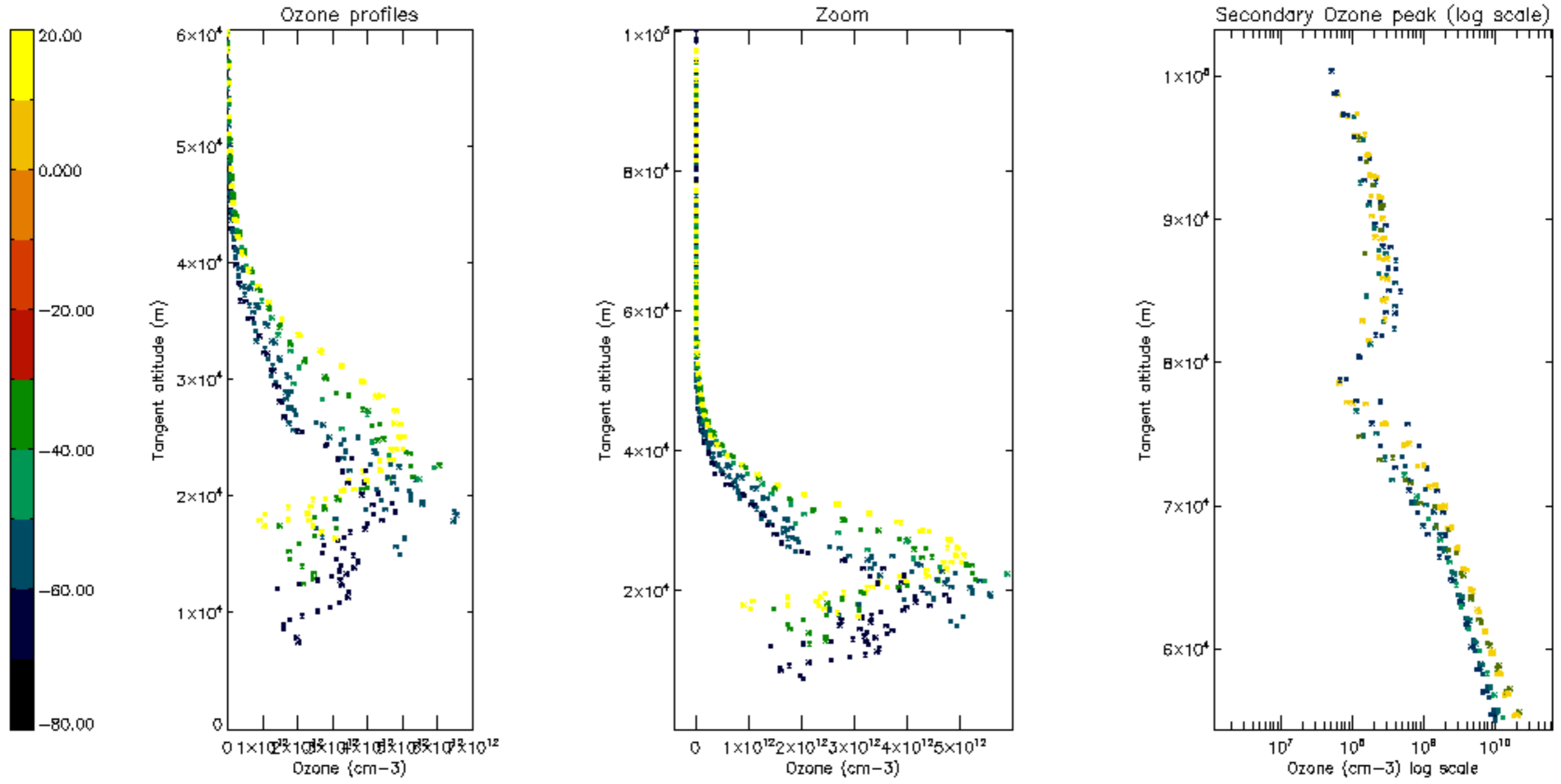
Percentage of star falling outside central band per profile

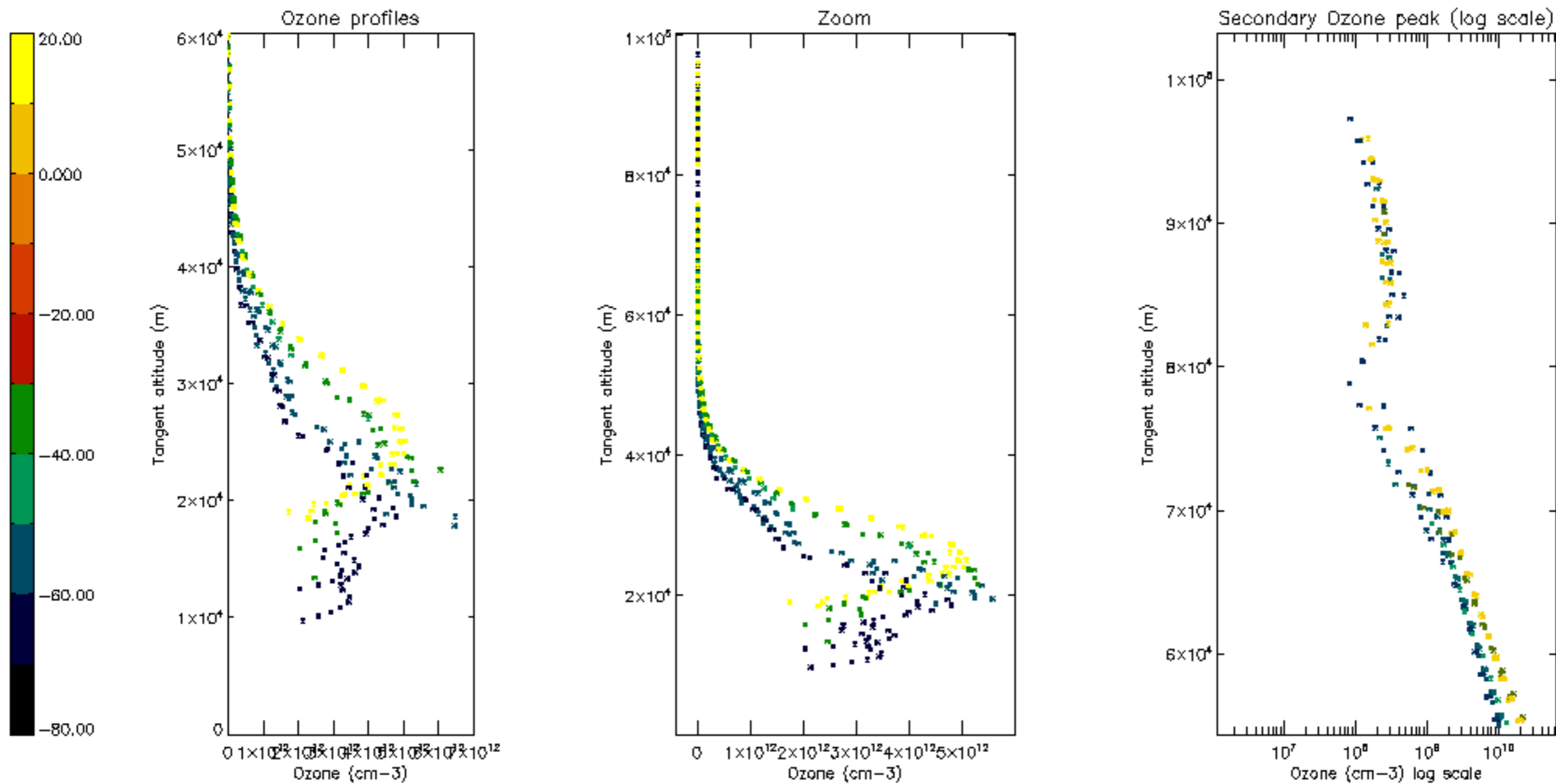


Percentage of saturation errors per profile

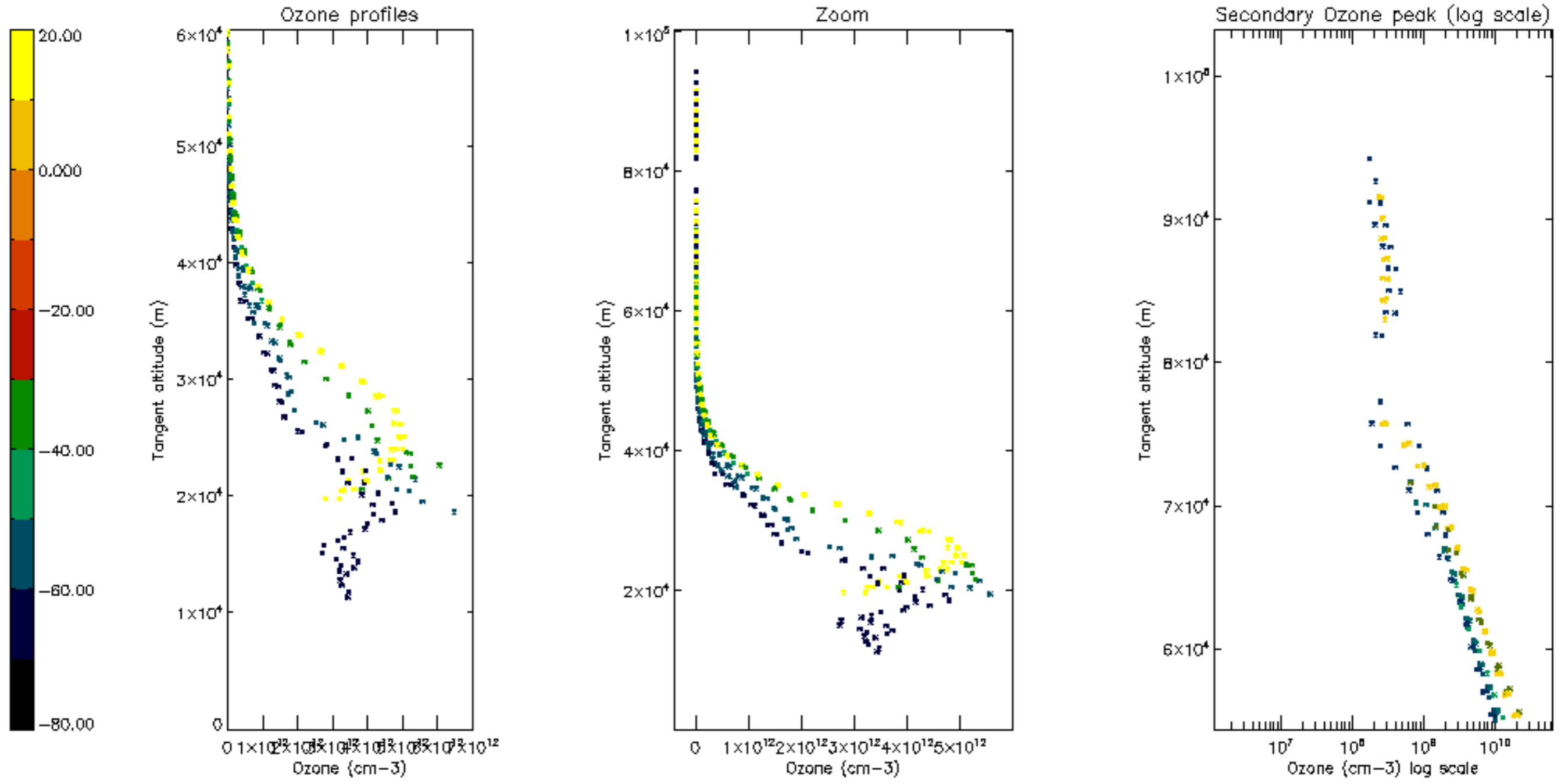


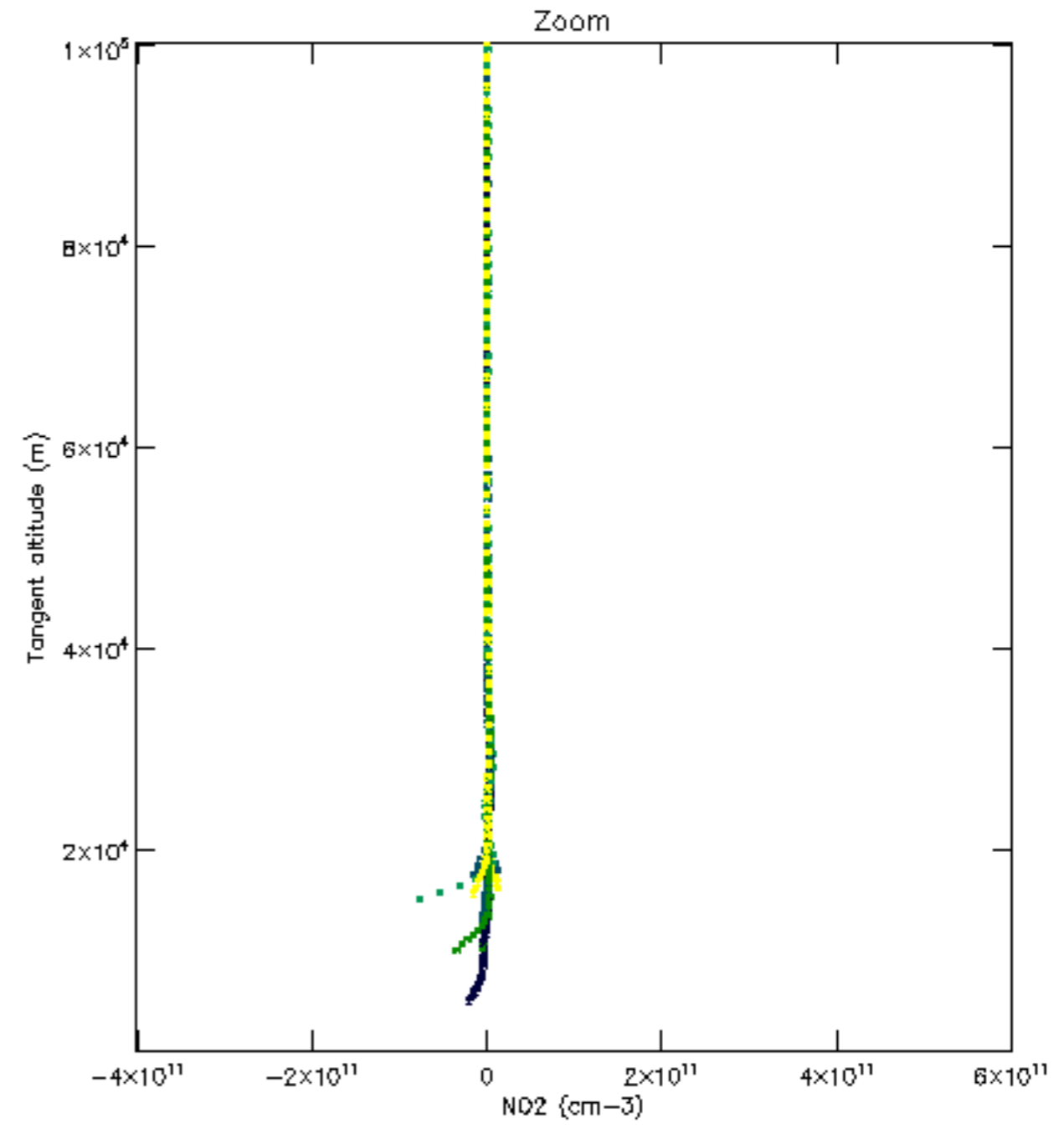
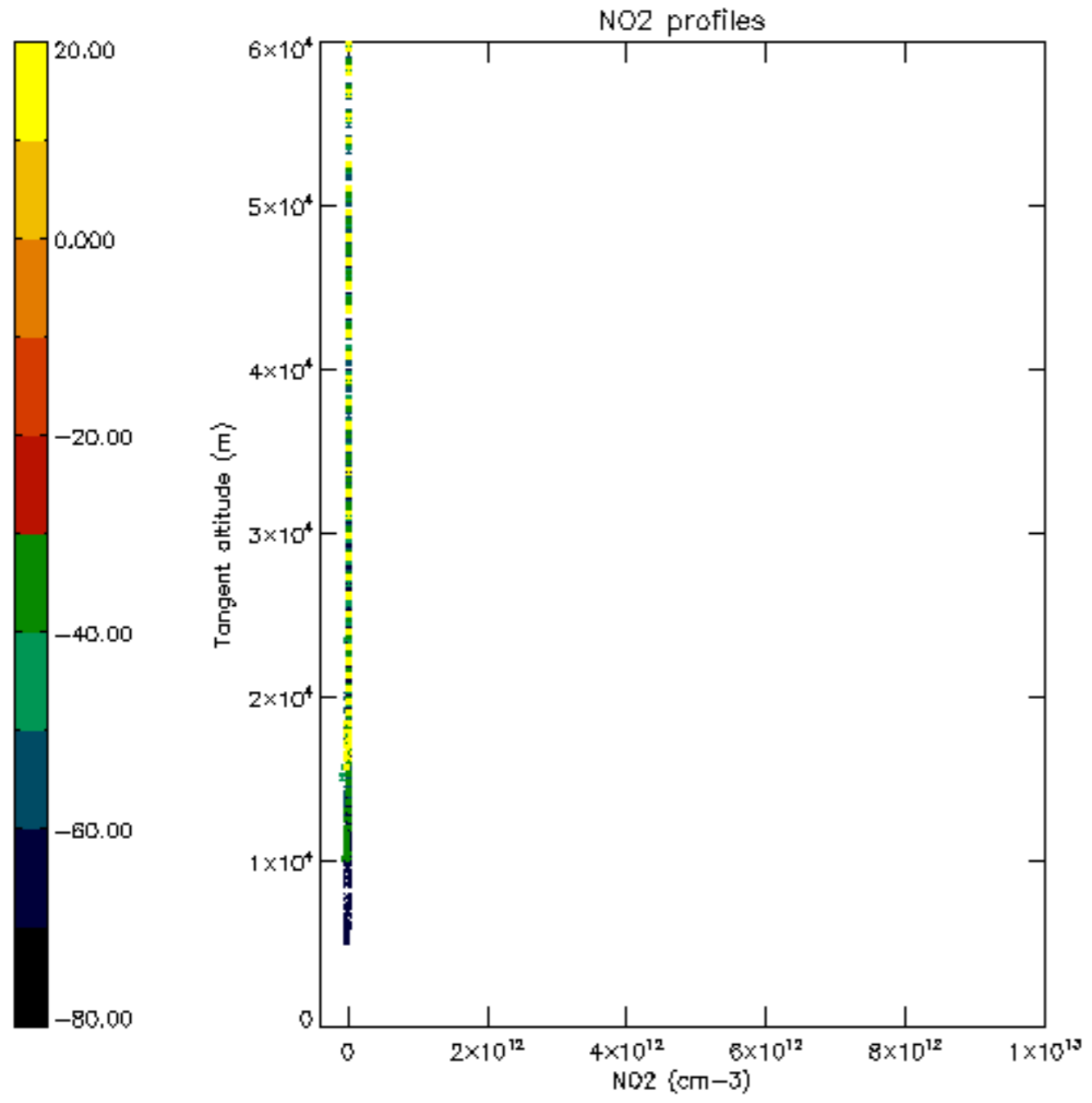


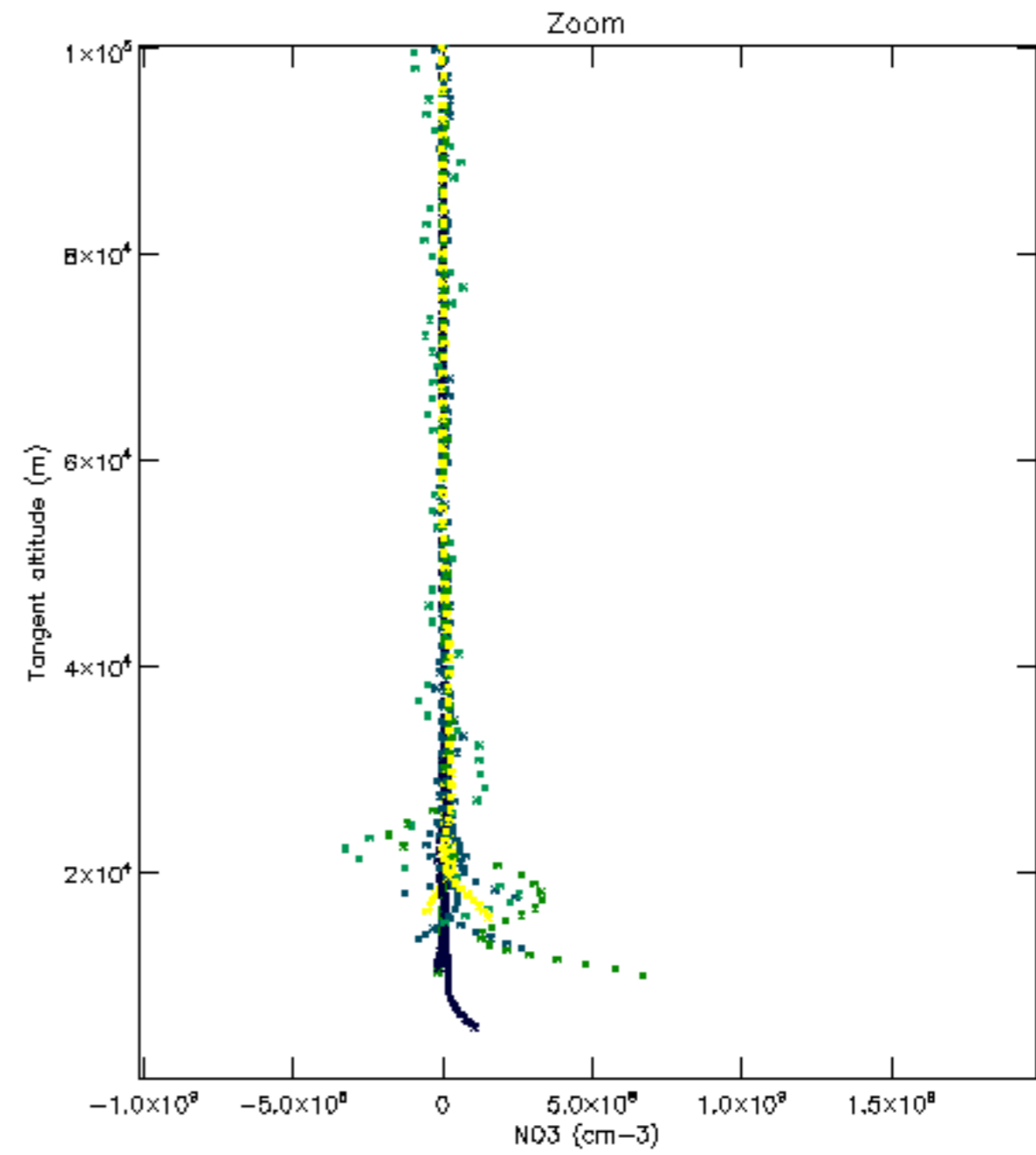
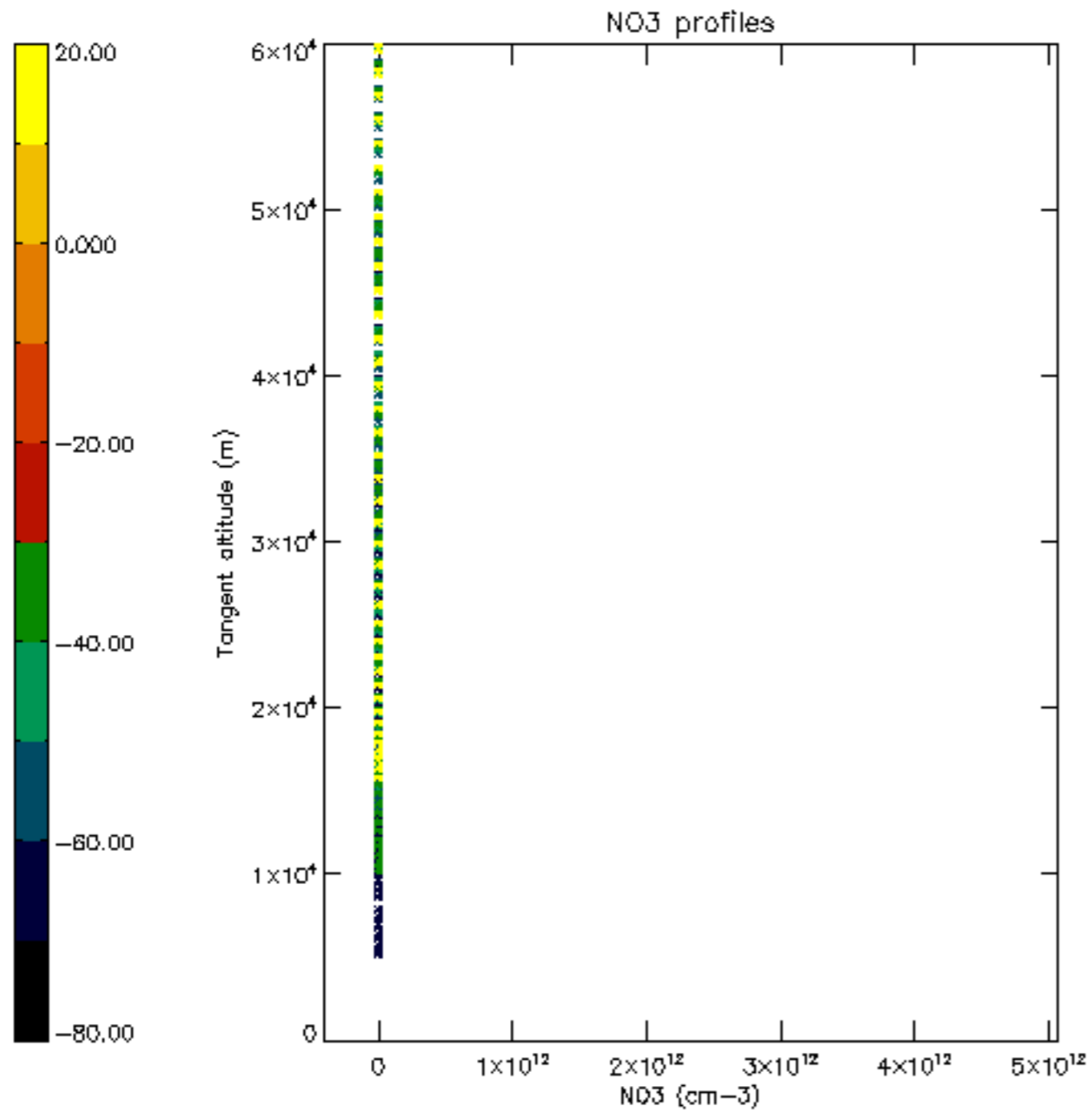


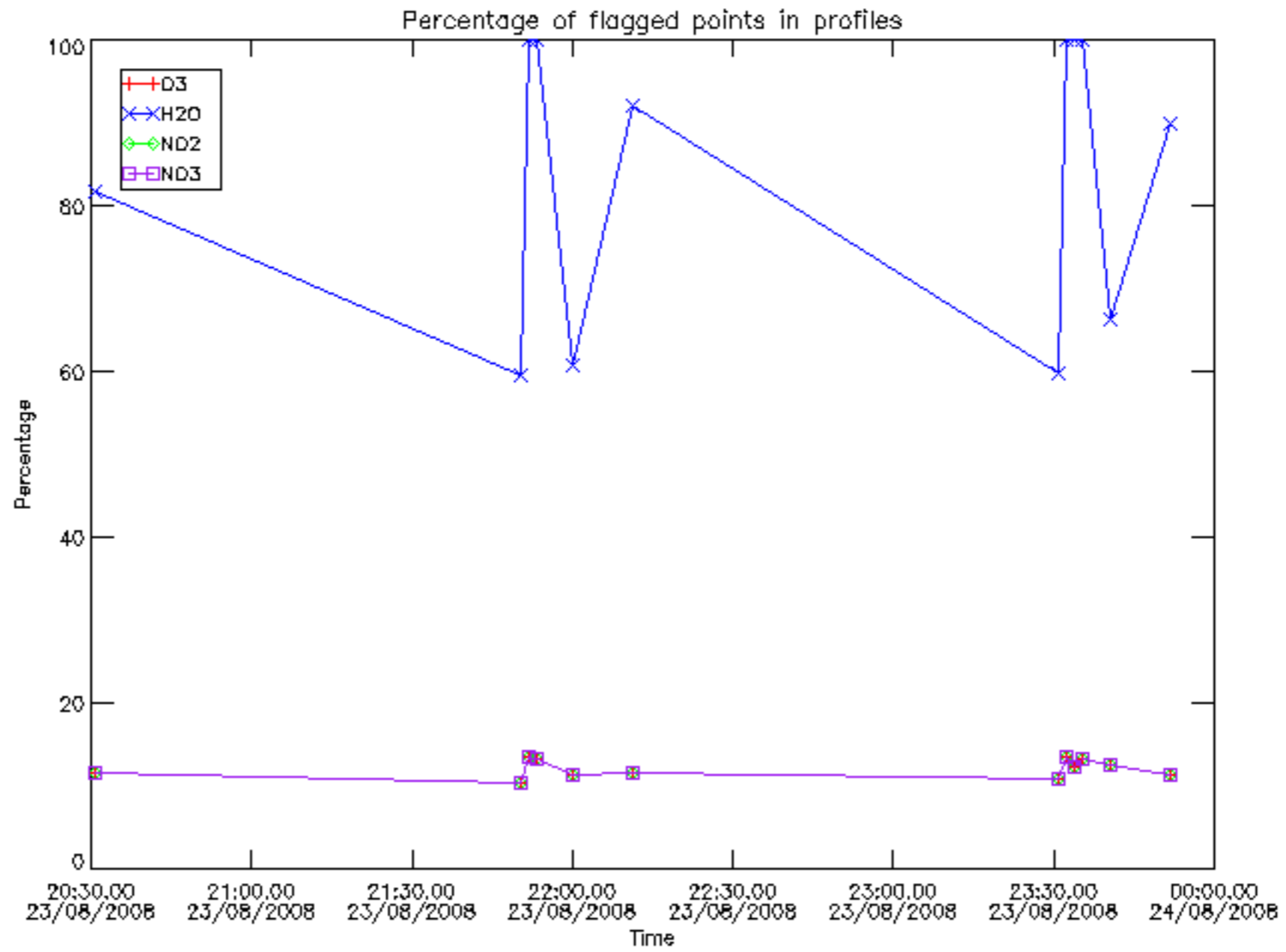






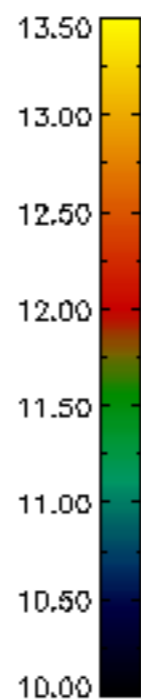
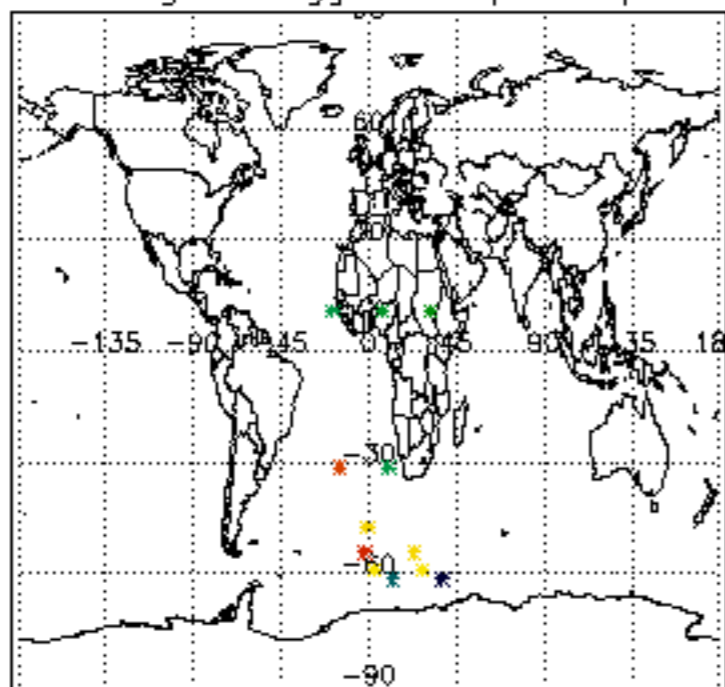




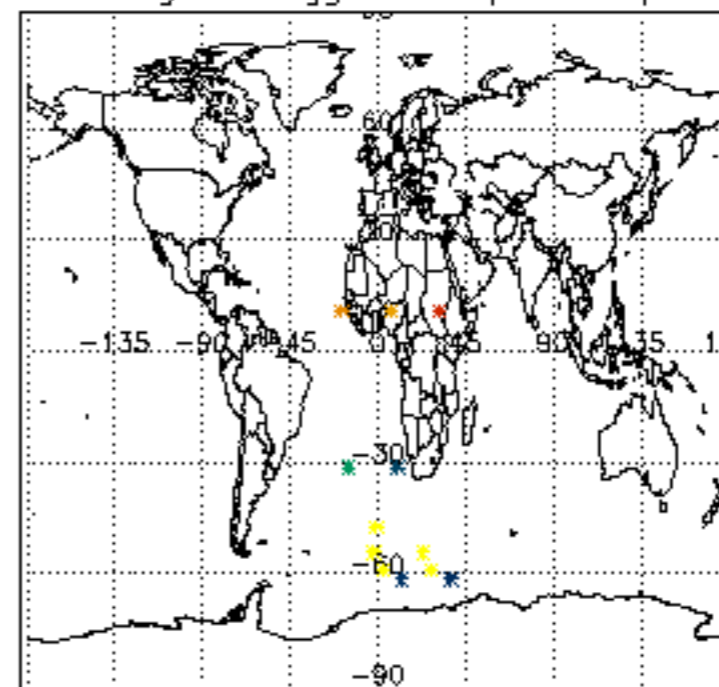




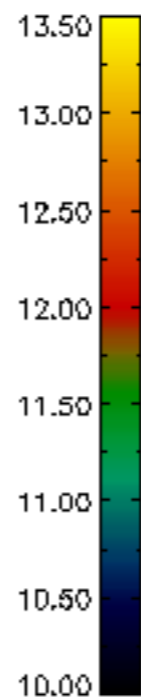
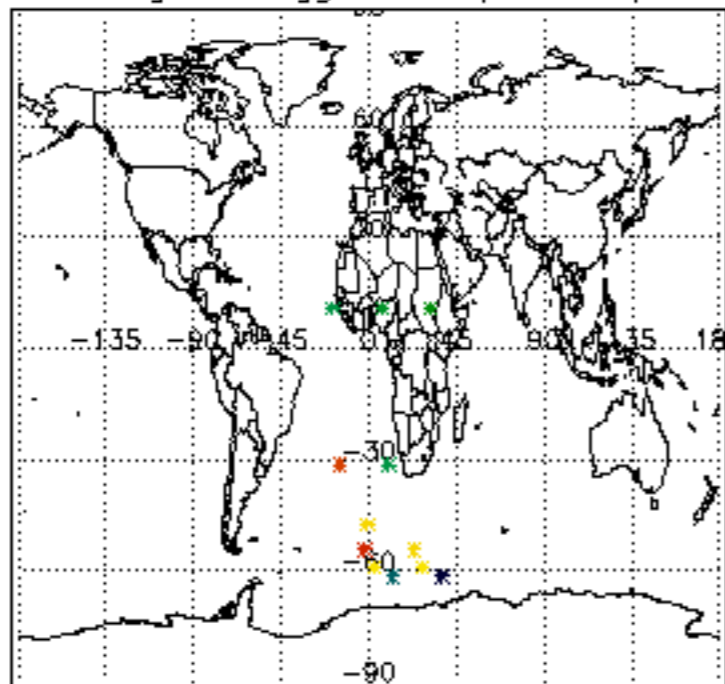
Percentage of flagged data per D3 profile



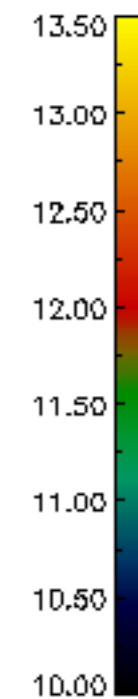
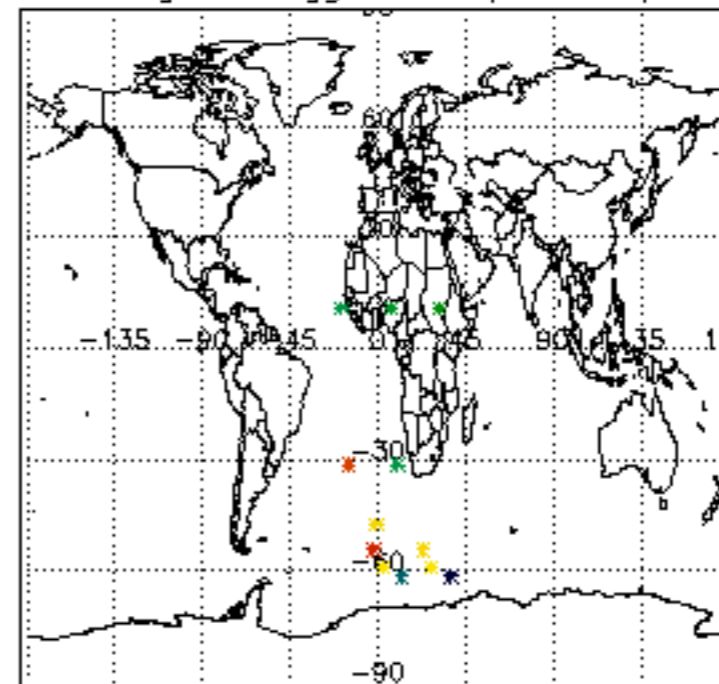
Percentage of flagged data per H2O profile

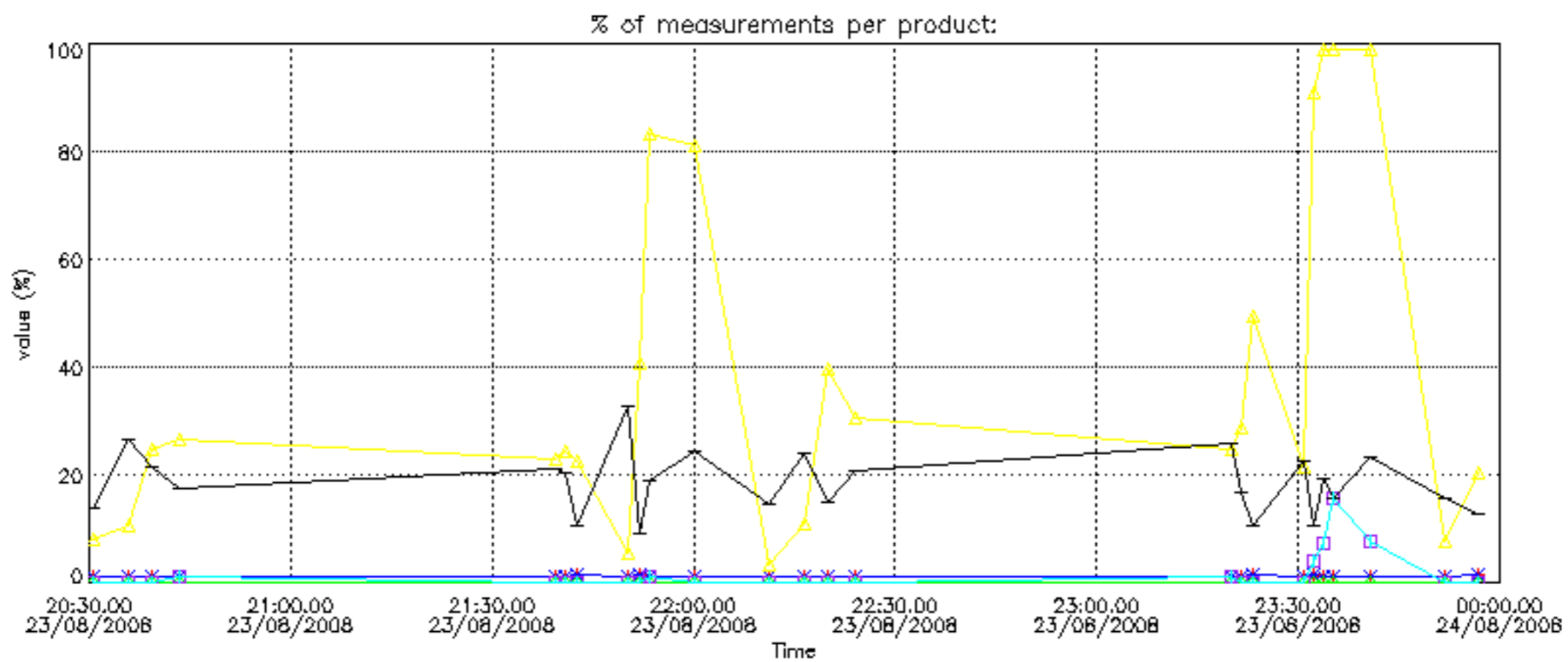


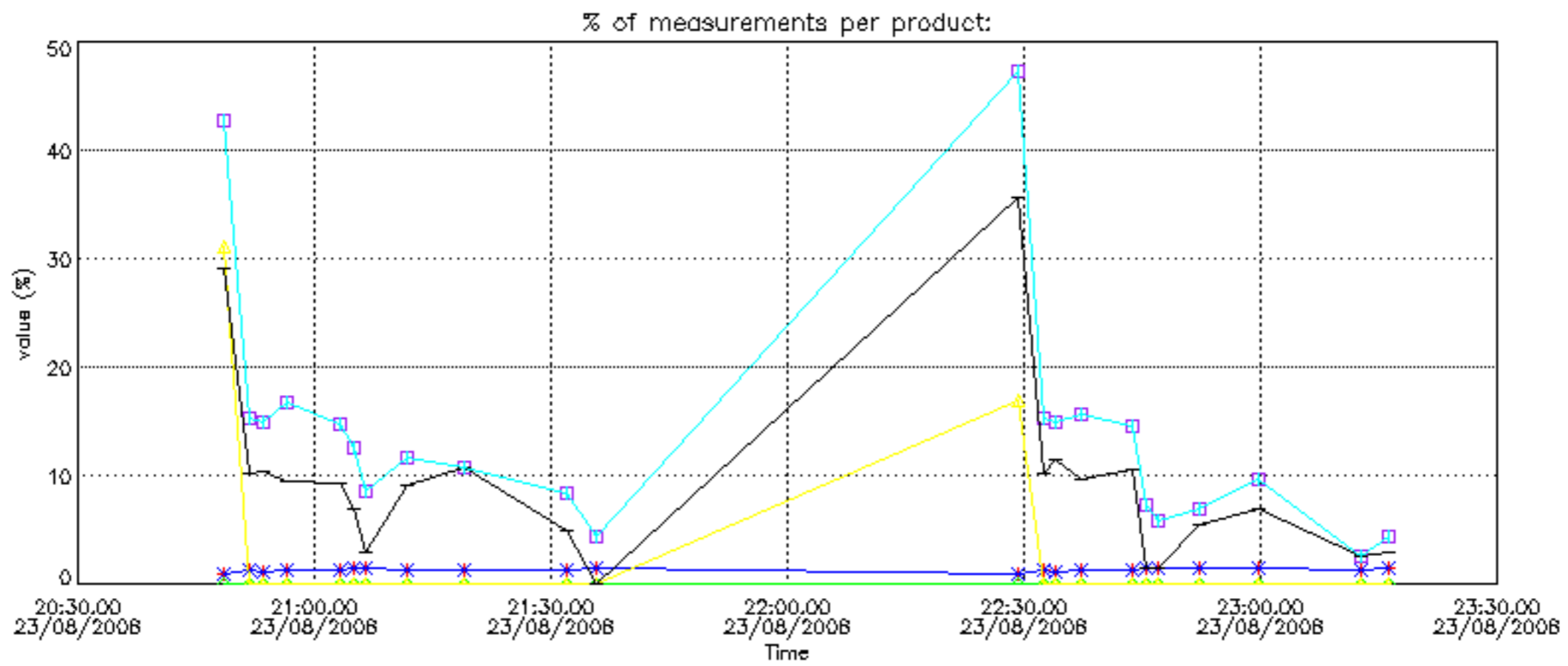
Percentage of flagged data per NO2 profile



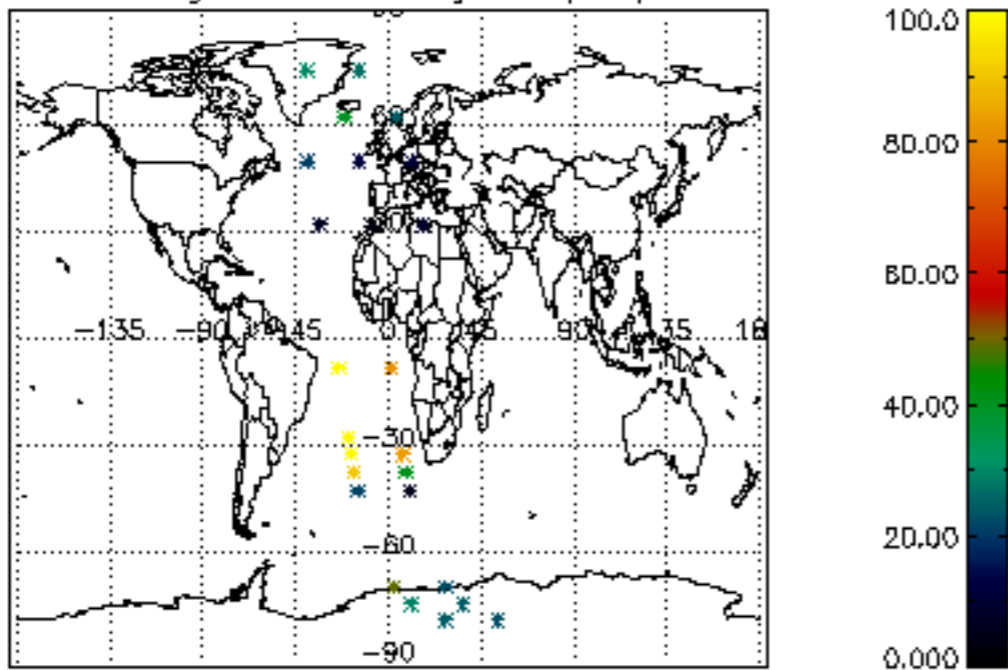
Percentage of flagged data per NO3 profile



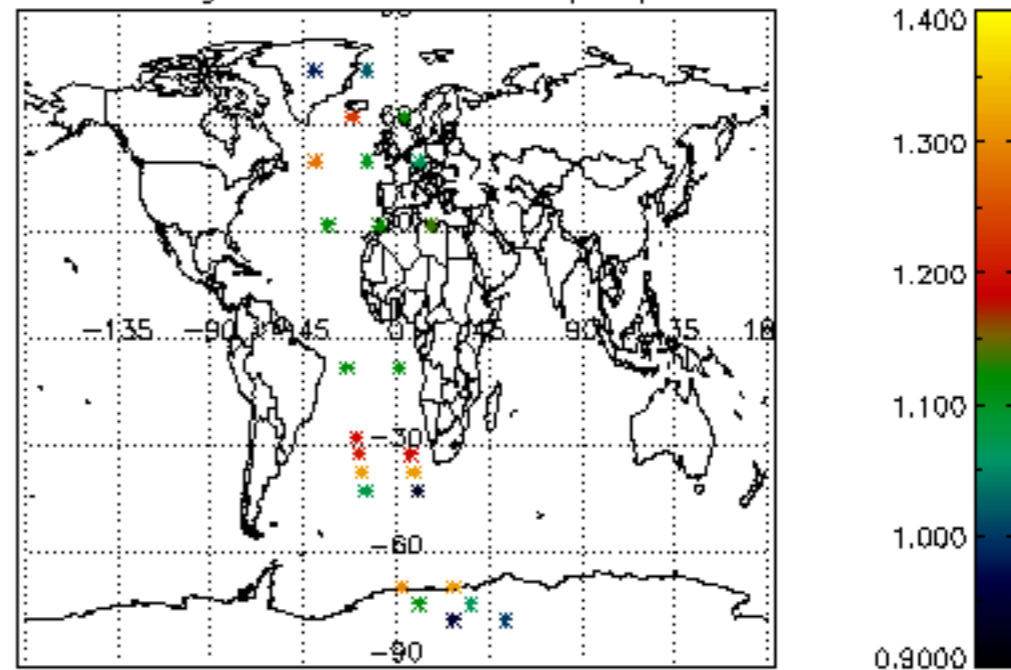




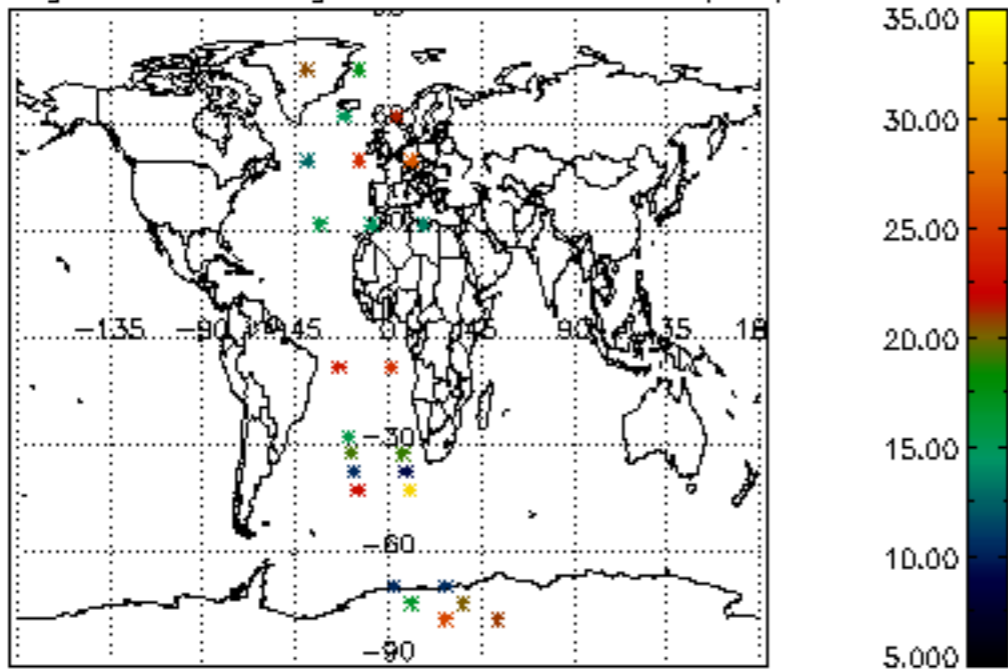
Percentage of cosmic ray hits per profile



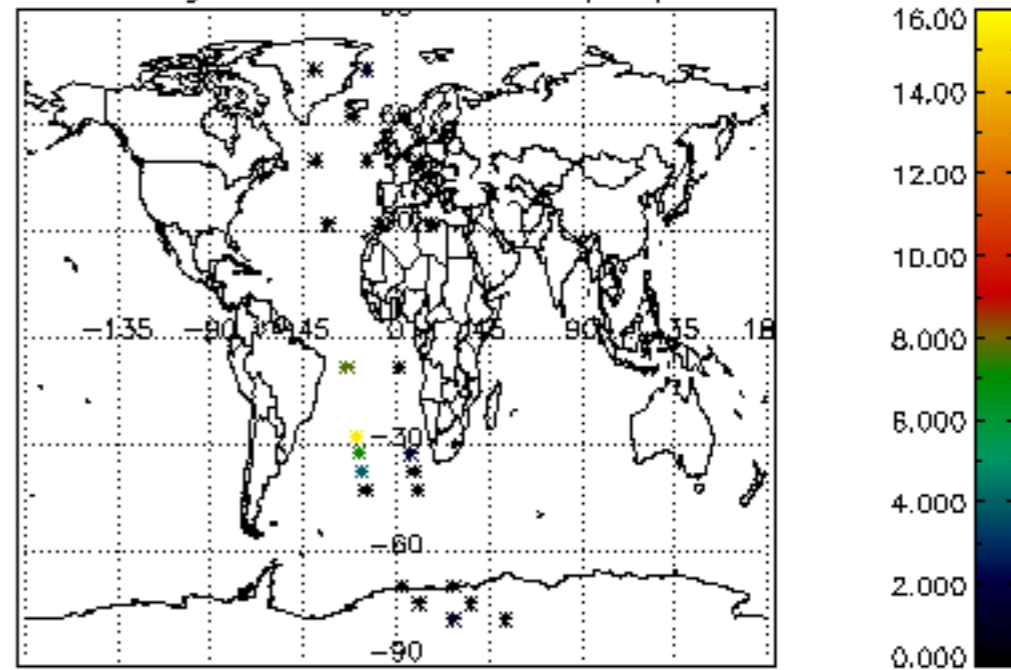
Percentage of datation errors per profile



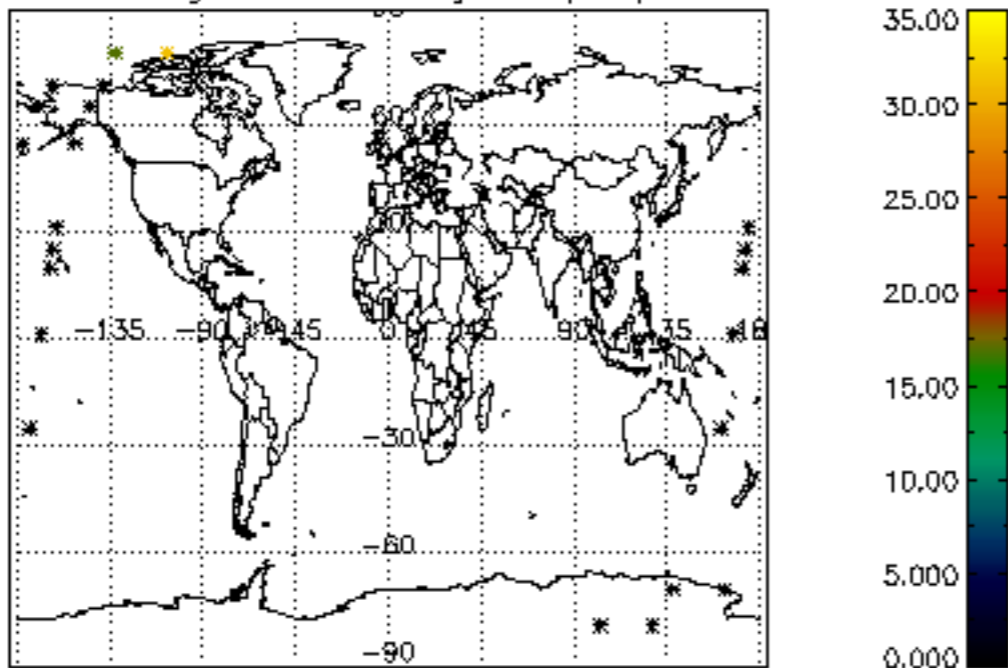
Percentage of star falling outside central band per profile



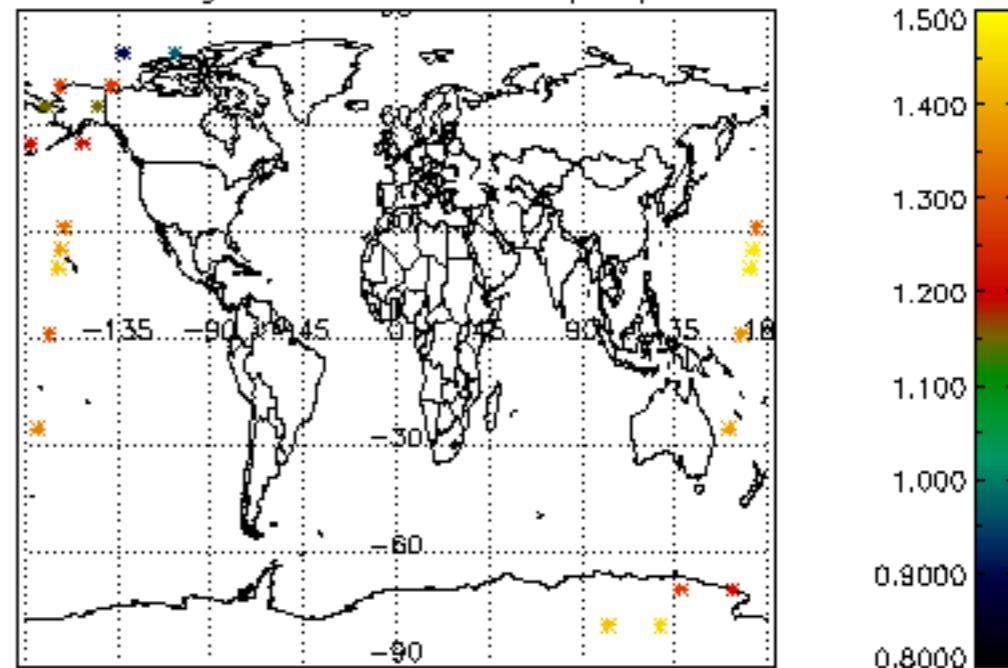
Percentage of saturation errors per profile



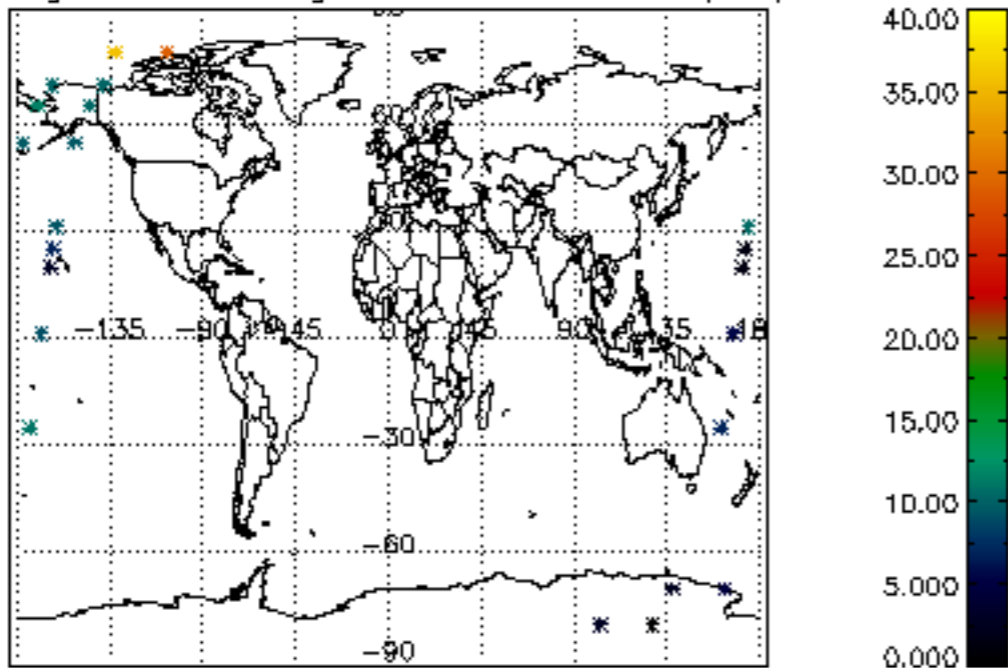
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

