

# GOMOS Level 2 Daily Report

## SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Item	Value
Time of report generation	24APR2013 17:16:00
Data source version	GOMOS/6.01
Start time of products	22-08-2011 (22AUG2011 00:00:00)
Stop time of products	23-08-2011 (23AUG2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	306
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__2PRFIN20110822_000120_000000353105_00404_49556_4678.N1	22-AUG-2011 00:01:20	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	49556	No
2	GOM_NL__2PRFIN20110822_000632_000000373105_00404_49556_4679.N1	22-AUG-2011 00:06:32	Bright	37.000	89	5Alp Cep	2.4510	8000.0	74	49556	No
3	GOM_NL__2PRFIN20110822_001028_000000483105_00404_49556_4680.N1	22-AUG-2011 00:10:28	Bright	47.500	74	11Bet Cas	2.2680	6600.0	95	49556	No
4	GOM_NL__2PRFIN20110822_001241_000000293105_00404_49556_4681.N1	22-AUG-2011 00:12:41	Twilight	29.000	76	27Gam Cas	2.3000	30000.	58	49556	No
5	GOM_NL__2PRFIN20110822_002614_000000543105_00404_49556_4682.N1	22-AUG-2011 00:26:14	Bright	53.500	6	13Alp Aur	0.080000	3400.0	107	49556	No
6	GOM_NL__2PRFIN20110822_002925_000000423105_00404_49556_4683.N1	22-AUG-2011 00:29:25	Bright	42.000	107	37The Aur	2.6490	11000.	84	49556	No
7	GOM_NL__2PRFIN20110822_003243_000000563105_00404_49556_4684.N1	22-AUG-2011 00:32:43	Twilight	56.000	28	12Bet Tau	1.6500	15200.	112	49556	No
8	GOM_NL__2PRFIN20110822_003539_000000443105_00404_49556_4685.N1	22-AUG-2011 00:35:39	Twilight	43.500	44	24Gam Gem	1.9280	11000.	87	49556	No
9	GOM_NL__2PRFIN20110822_003929_000000663105_00404_49556_4686.N1	22-AUG-2011 00:39:29	Dark	66.000	14	58Alp Ori	0.87000	3000.0	132	49556	No
10	GOM_NL__2PRFIN20110822_004102_000000563105_00404_49556_4687.N1	22-AUG-2011 00:41:02	Dark	55.500	27	24Gam Ori	1.6360	26000.	111	49556	No
11	GOM_NL__2PRFIN20110822_004300_000000533105_00404_49556_4688.N1	22-AUG-2011 00:43:00	Dark	53.000	30	46Eps Ori	1.6940	30000.	106	49556	No
12	GOM_NL__2PRFIN20110822_004428_000000483105_00404_49556_4689.N1	22-AUG-2011 00:44:28	Dark	47.500	125	44Iot Ori	2.7700	30000.	95	49556	No
13	GOM_NL__2PRFIN20110822_022314_000000553105_00405_49557_8726.N1	22-AUG-2011 02:23:14	Dark	55.000	30	46Eps Ori	1.6940	30000.	110	49557	No
14	GOM_NL__2PRFIN20110822_022443_000000523105_00405_49557_8727.N1	22-AUG-2011 02:24:43	Dark	51.500	125	44Iot Ori	2.7700	30000.	103	49557	No
15	GOM_NL__2PRFIN20110822_022635_000000653105_00405_49557_8728.N1	22-AUG-2011 02:26:35	Dark	64.500	7	19Bet Ori	0.10000	14000.	129	49557	No
16	GOM_NL__2PRFIN20110822_022912_000000483105_00405_49557_8729.N1	22-AUG-2011 02:29:12	Dark	48.000	139	9Bet Lep	2.8330	5600.0	96	49557	No
17	GOM_NL__2PRFIN20110822_034641_000000543105_00406_49558_4679.N1	22-AUG-2011 03:46:41	Bright	54.000	6	13Alp Aur	0.080000	3400.0	108	49558	No
18	GOM_NL__2PRFIN20110822_034953_000000503105_00406_49558_4680.N1	22-AUG-2011 03:49:53	Bright	50.000	107	37The Aur	2.6490	11000.	100	49558	No
19	GOM_NL__2PRFIN20110822_035312_000000563105_00406_49558_4681.N1	22-AUG-2011 03:53:12	Twilight	55.500	28	12Bet Tau	1.6500	15200.	111	49558	No
20	GOM_NL__2PRFIN20110822_035607_000000473105_00406_49558_4682.N1	22-AUG-2011 03:56:07	Twilight	47.000	44	24Gam Gem	1.9280	11000.	94	49558	No
21	GOM_NL__2PRFIN20110822_035958_000000583105_00406_49558_4683.N1	22-AUG-2011 03:59:58	Dark	57.500	14	58Alp Ori	0.87000	3000.0	115	49558	No
22	GOM_NL__2PRFIN20110822_040131_000000523105_00406_49558_4684.N1	22-AUG-2011 04:01:31	Dark	52.000	27	24Gam Ori	1.6360	26000.	104	49558	No
23	GOM_NL__2PRFIN20110822_040329_000000553105_00406_49558_4685.N1	22-AUG-2011 04:03:29	Dark	54.500	30	46Eps Ori	1.6940	30000.	109	49558	No
24	GOM_NL__2PRFIN20110822_040526_000000433105_00406_49558_4686.N1	22-AUG-2011 04:05:26	Dark	42.500	1	9Alp CMa	-1.4400	11000.	85	49558	No
25	GOM_NL__2PRFIN20110822_040827_000000503105_00406_49558_4687.N1	22-AUG-2011 04:08:27	Dark	49.500	101	11Alp Lep	2.5820	7000.0	99	49558	No
26	GOM_NL__2PRFIN20110822_042259_000000533105_00407_49559_4707.N1	22-AUG-2011 04:22:59	Dark	52.500	157	The1Eri	2.9060	9300.0	105	49559	No
27	GOM_NL__2PRFIN20110822_042612_000000463105_00407_49559_4708.N1	22-AUG-2011 04:26:12	Dark	46.000	9	Alp Eri	0.45300	24000.	92	49559	No
28	GOM_NL__2PRFIN20110822_043206_000000503105_00407_49559_4709.N1	22-AUG-2011 04:32:06	Straylight	50.000	84	Alp Phe	2.3970	4500.0	100	49559	No
29	GOM_NL__2PRFIN20110822_043414_000000463105_00407_49559_4710.N1	22-AUG-2011 04:34:14	Straylight	46.000	63	Bet Gru	2.1500	2800.0	92	49559	No
30	GOM_NL__2PRFIN20110822_043856_000000543105_00407_49559_4711.N1	22-AUG-2011 04:38:56	Twilight	53.500	18	24Alp PsA	1.1660	9700.0	107	49559	No
31	GOM_NL__2PRFIN20110822_044408_000000433105_00407_49559_4712.N1	22-AUG-2011 04:44:08	Bright	42.500	142	49Del Cap	2.8500	8900.0	85	49559	No
32	GOM_NL__2PRFIN20110822_044724_000000413105_00407_49559_4713.N1	22-AUG-2011 04:47:24	Bright	40.500	154	22Bet Aqr	2.8990	5700.0	81	49559	No
33	GOM_NL__2PRFIN20110822_044908_000000443105_00407_49559_4714.N1	22-AUG-2011 04:49:08	Bright	44.000	162	34Alp Aqr	2.9440	5350.0	88	49559	No
34	GOM_NL__2PRFIN20110822_045212_000000423105_00407_49559_4715.N1	22-AUG-2011 04:52:12	Bright	42.000	61	8Eps Peg	2.1000	3900.0	84	49559	No
35	GOM_NL__2PRFIN20110822_045851_000000373105_00407_49559_4716.N1	22-AUG-2011 04:58:51	Bright	36.500	92	53Eps Cyg	2.5000	4500.0	73	49559	No
36	GOM_NL__2PRFIN20110822_050202_000000373105_00407_49559_4717.N1	22-AUG-2011 05:02:02	Bright	37.000	19	50Alp Cyg	1.2460	10500.	74	49559	No
37	GOM_NL__2PRFIN20110822_050713_000000383105_00407_49559_4718.N1	22-AUG-2011 05:07:13	Bright	37.500	89	5Alp Cep	2.4510	8000.0	75	49559	No
38	GOM_NL__2PRFIN20110822_051107_000000473105_00407_49559_4719.N1	22-AUG-2011 05:11:07	Bright	46.500	74	11Bet Cas	2.2680	6600.0	93	49559	No
39	GOM_NL__2PRFIN20110822_051320_000000313105_00407_49559_4720.N1	22-AUG-2011 05:13:20	Twilight	30.500	76	27Gam Cas	2.3000	30000.	61	49559	No
40	GOM_NL__2PRFIN20110822_052655_000000513105_00407_49559_4721.N1	22-AUG-2011 05:26:55	Bright	50.500	6	13Alp Aur	0.080000	3400.0	101	49559	No
41	GOM_NL__2PRFIN20110822_053007_000000423105_00407_49559_4722.N1	22-AUG-2011 05:30:07	Bright	41.500	107	37The Aur	2.6490	11000.	83	49559	No
42	GOM_NL__2PRFIN20110822_053326_000000593105_00407_49559_4723.N1	22-AUG-2011 05:33:26	Twilight	58.500	28	12Bet Tau	1.6500	15200.	117	49559	No







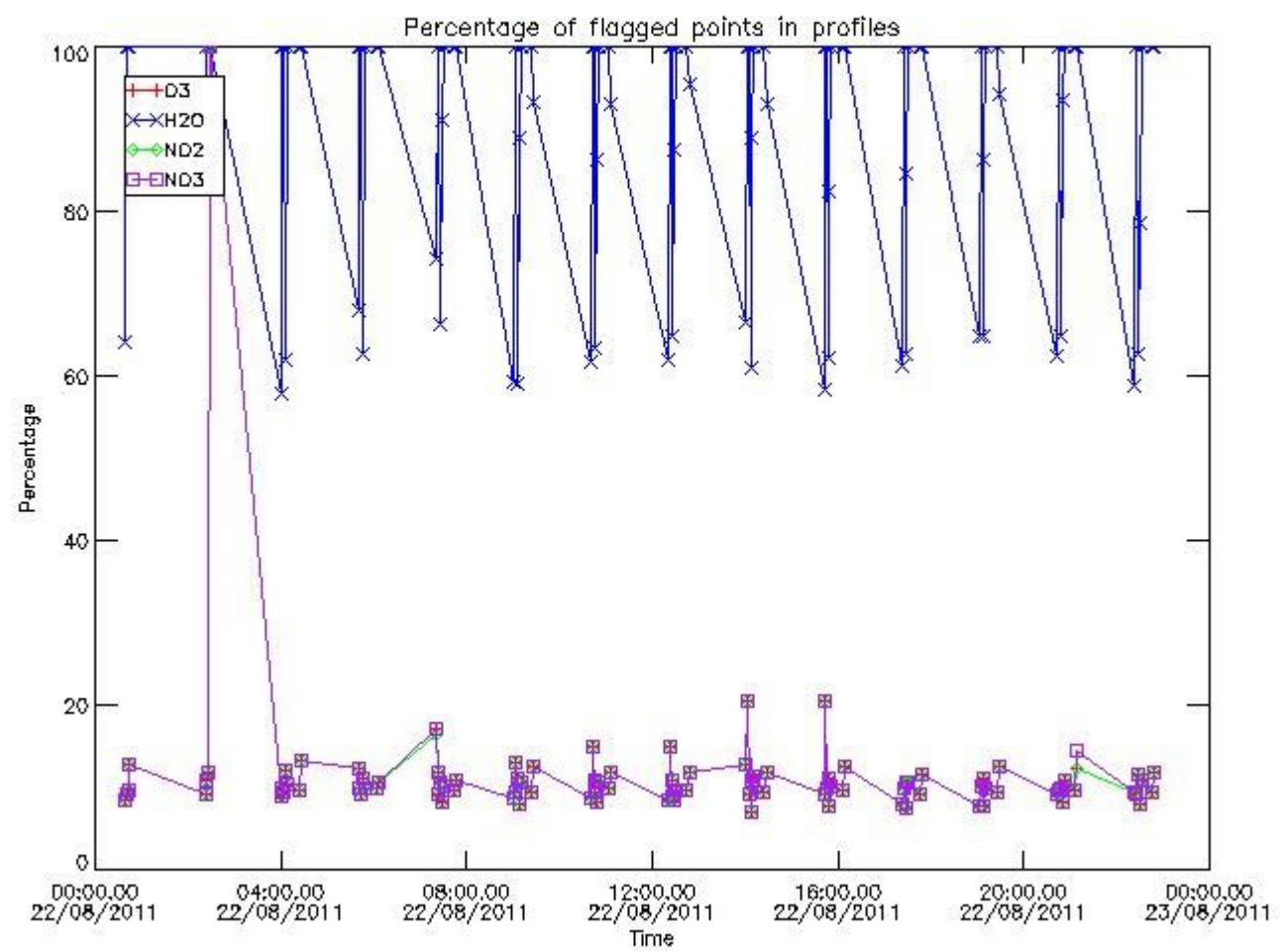


279	GOM_NL__2PRFIN20110822_215533_000000383105_00417_49569_6093.N1	22-AUG-2011 21:55:33	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	49569	No
280	GOM_NL__2PRFIN20110822_220913_000000513105_00417_49569_6094.N1	22-AUG-2011 22:09:13	Bright	51.000	6	13Alp Aur	0.080000	3400.0	102	49569	No
281	GOM_NL__2PRFIN20110822_221227_000000433105_00417_49569_6095.N1	22-AUG-2011 22:12:27	Bright	43.000	107	37The Aur	2.6490	11000.	86	49569	No
282	GOM_NL__2PRFIN20110822_221705_000000523105_00417_49569_6096.N1	22-AUG-2011 22:17:05	Twilight	51.500	151	13Mu Gem	2.8900	3000.0	103	49569	No
283	GOM_NL__2PRFIN20110822_221844_000000483105_00417_49569_6097.N1	22-AUG-2011 22:18:44	Twilight	47.500	44	24Gam Gem	1.9280	11000.	95	49569	No
284	GOM_NL__2PRFIN20110822_222238_000000603105_00417_49569_6098.N1	22-AUG-2011 22:22:38	Dark	60.000	14	58Alp Ori	0.87000	3000.0	120	49569	No
285	GOM_NL__2PRFIN20110822_222612_000000553105_00417_49569_6099.N1	22-AUG-2011 22:26:12	Dark	55.000	30	46Eps Ori	1.6940	30000.	110	49569	No
286	GOM_NL__2PRFIN20110822_222803_000000453105_00417_49569_6100.N1	22-AUG-2011 22:28:03	Dark	44.500	1	9Alp CMa	-1.4400	11000.	89	49569	No
287	GOM_NL__2PRFIN20110822_222935_000000643105_00417_49569_6101.N1	22-AUG-2011 22:29:35	Dark	63.500	7	19Bet Ori	0.10000	14000.	127	49569	No
288	GOM_NL__2PRFIN20110822_223210_000000483105_00417_49569_6102.N1	22-AUG-2011 22:32:10	Dark	47.500	139	9Bet Lep	2.8330	5600.0	95	49569	No
289	GOM_NL__2PRFIN20110822_224546_000000543105_00418_49570_6080.N1	22-AUG-2011 22:45:46	Dark	54.000	157	The1Eri	2.9060	9300.0	108	49570	No
290	GOM_NL__2PRFIN20110822_224853_000000443105_00418_49570_6081.N1	22-AUG-2011 22:48:53	Dark	43.500	9	Alp Eri	0.45300	24000.	87	49570	No
291	GOM_NL__2PRFIN20110822_225447_000000503105_00418_49570_6082.N1	22-AUG-2011 22:54:47	Straylight	49.500	84	Alp Phe	2.3970	4500.0	99	49570	No
292	GOM_NL__2PRFIN20110822_225652_000000553105_00418_49570_6083.N1	22-AUG-2011 22:56:52	Straylight	54.500	63	Bet Gru	2.1500	2800.0	109	49570	No
293	GOM_NL__2PRFIN20110822_230134_000000513105_00418_49570_6084.N1	22-AUG-2011 23:01:34	Twilight	51.000	18	24Alp PsA	1.1660	9700.0	102	49570	No
294	GOM_NL__2PRFIN20110822_230643_000000453105_00418_49570_6085.N1	22-AUG-2011 23:06:43	Bright	44.500	142	49Del Cap	2.8500	8900.0	89	49570	No
295	GOM_NL__2PRFIN20110822_230958_000000403105_00418_49570_6086.N1	22-AUG-2011 23:09:58	Bright	40.000	154	22Bet Aqr	2.8990	5700.0	80	49570	No
296	GOM_NL__2PRFIN20110822_231141_000000443105_00418_49570_6087.N1	22-AUG-2011 23:11:41	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	49570	No
297	GOM_NL__2PRFIN20110822_231444_000000403105_00418_49570_6088.N1	22-AUG-2011 23:14:44	Bright	40.000	61	8Eps Peg	2.1000	3900.0	80	49570	No
298	GOM_NL__2PRFIN20110822_232124_000000383105_00418_49570_6089.N1	22-AUG-2011 23:21:24	Bright	38.000	92	53Eps Cyg	2.5000	4500.0	76	49570	No
299	GOM_NL__2PRFIN20110822_232435_000000353105_00418_49570_6090.N1	22-AUG-2011 23:24:35	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	49570	No
300	GOM_NL__2PRFIN20110822_232945_000000383105_00418_49570_6091.N1	22-AUG-2011 23:29:45	Bright	37.500	89	5Alp Cep	2.4510	8000.0	75	49570	No
301	GOM_NL__2PRFIN20110822_233333_000000463105_00418_49570_6092.N1	22-AUG-2011 23:33:33	Bright	46.000	74	11Bet Cas	2.2680	6600.0	92	49570	No
302	GOM_NL__2PRFIN20110822_233546_000000403105_00418_49570_6093.N1	22-AUG-2011 23:35:46	Bright	40.000	76	27Gam Cas	2.3000	30000.	80	49570	No
303	GOM_NL__2PRFIN20110822_234927_000000533105_00418_49570_6094.N1	22-AUG-2011 23:49:27	Bright	52.500	6	13Alp Aur	0.080000	3400.0	105	49570	No
304	GOM_NL__2PRFIN20110822_235241_000000433105_00418_49570_6095.N1	22-AUG-2011 23:52:41	Bright	42.500	107	37The Aur	2.6490	11000.	85	49570	No
305	GOM_NL__2PRFIN20110822_235719_000000503105_00418_49570_6096.N1	22-AUG-2011 23:57:19	Twilight	49.500	151	13Mu Gem	2.8900	3000.0	99	49570	No
306	GOM_NL__2PRFIN20110822_235859_000000453105_00418_49570_6097.N1	22-AUG-2011 23:58:59	Twilight	44.500	44	24Gam Gem	1.9280	11000.	89	49570	No

### 3. Quality information per product

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

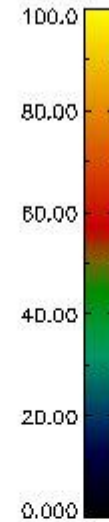
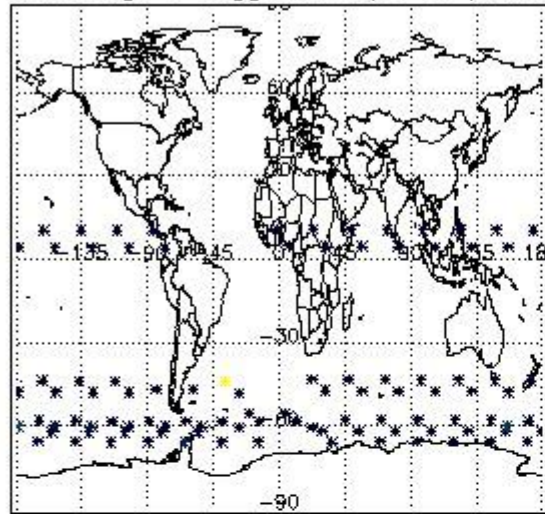
#### 3.1 Plot quality information per product (time dependant)



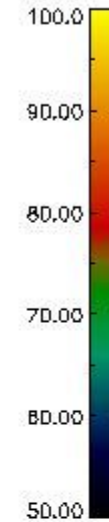
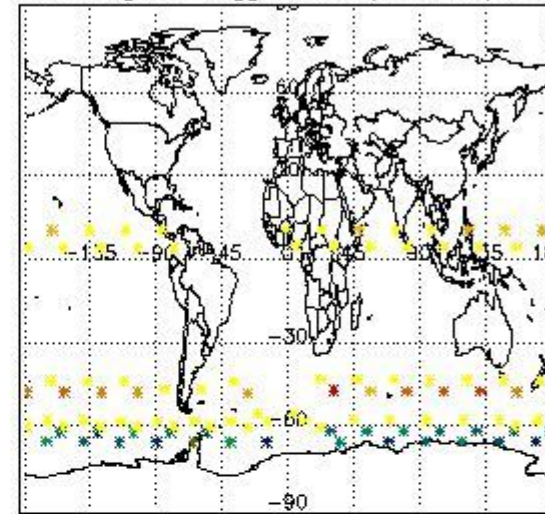
3.2 Plot quality information per product (world map)



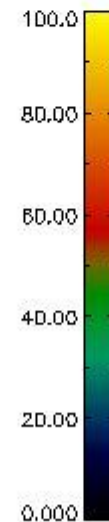
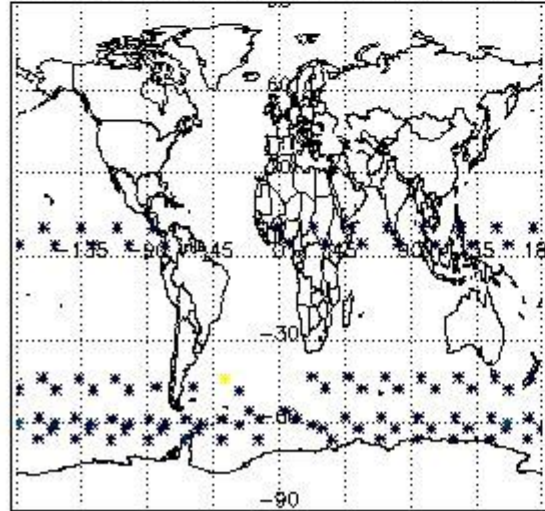
Percentage of flagged data per O3 profile



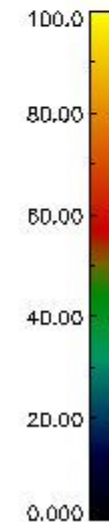
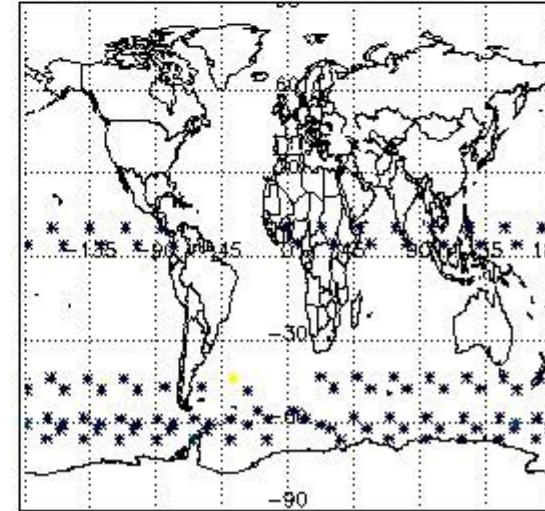
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

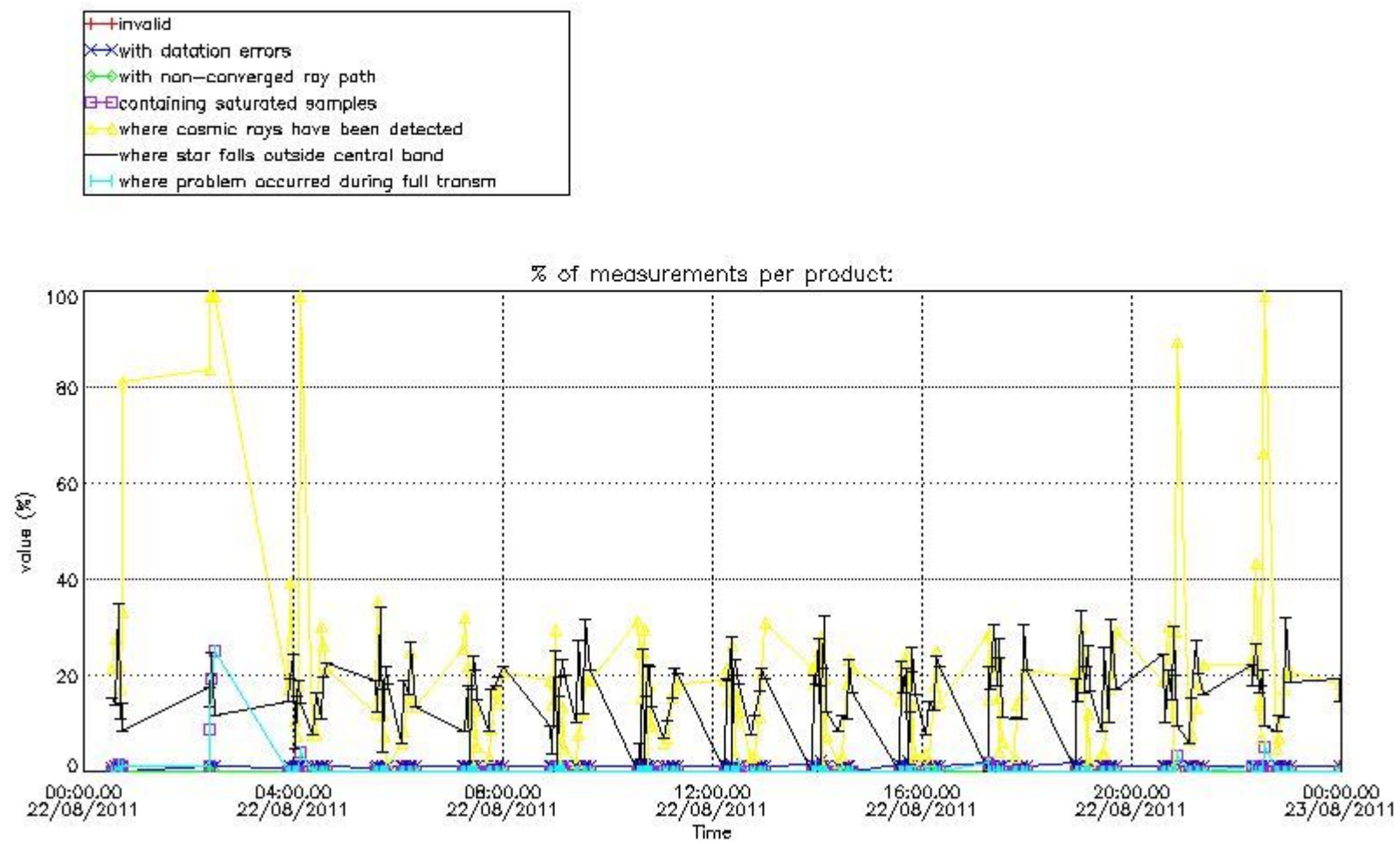


#### 4. Level 1 quality information per product

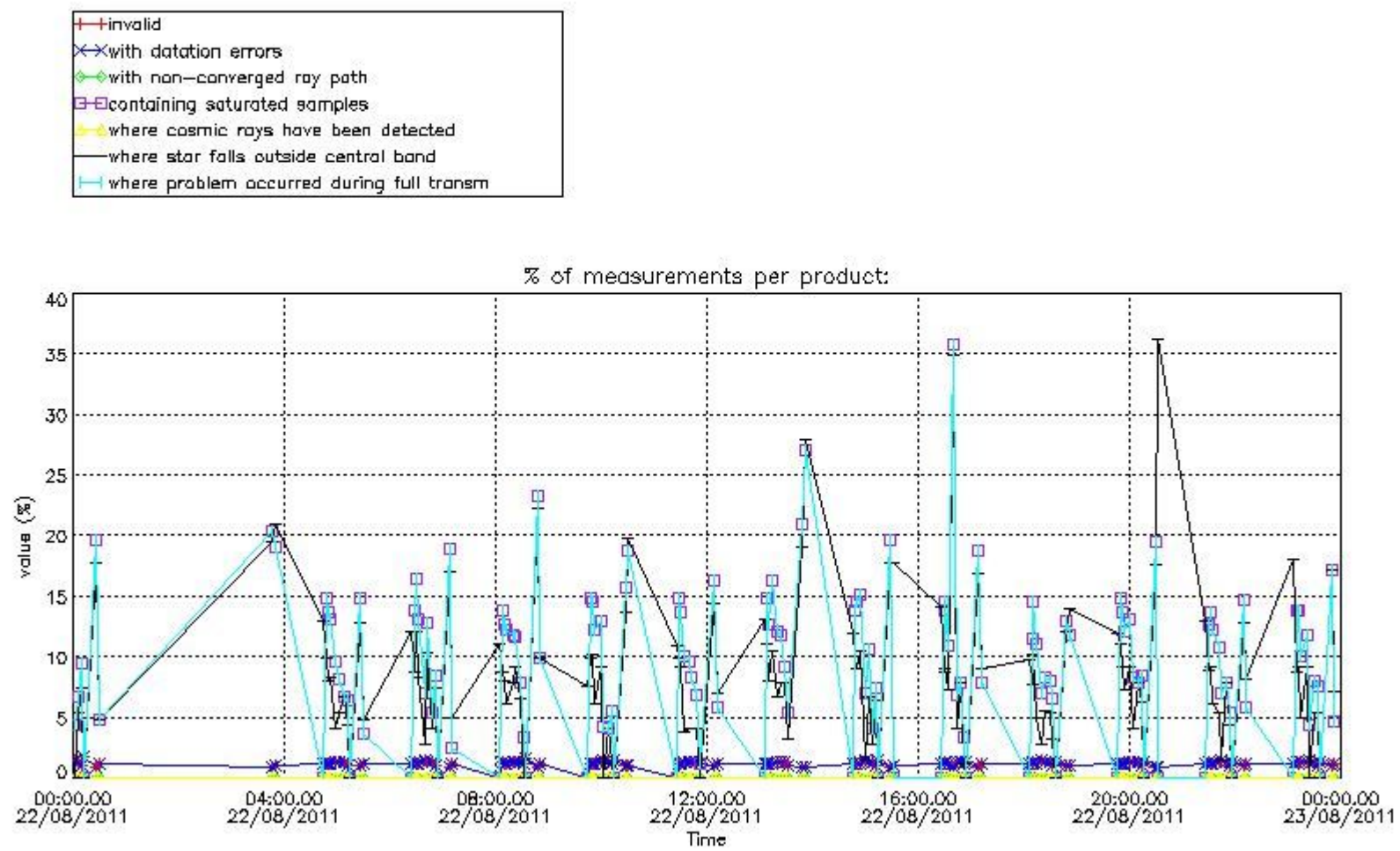
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

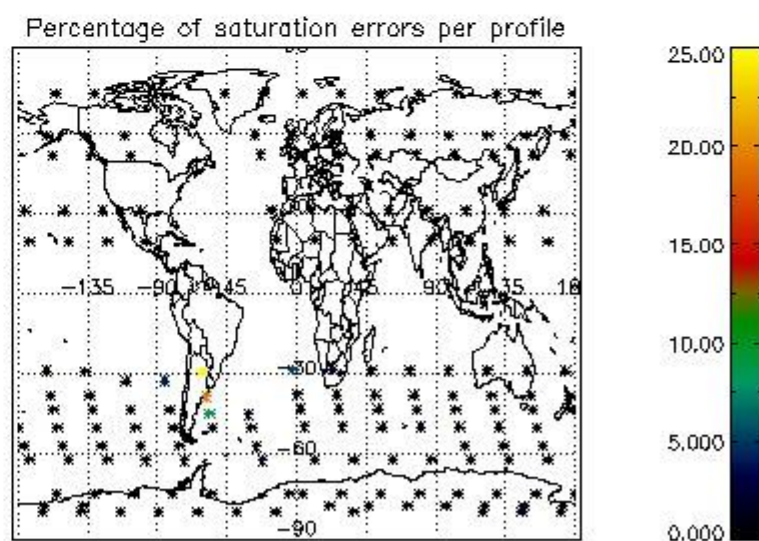
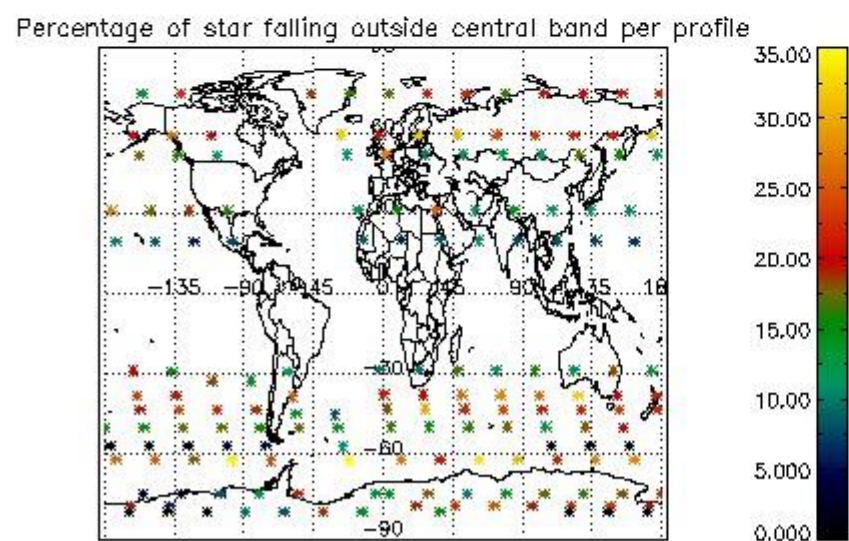
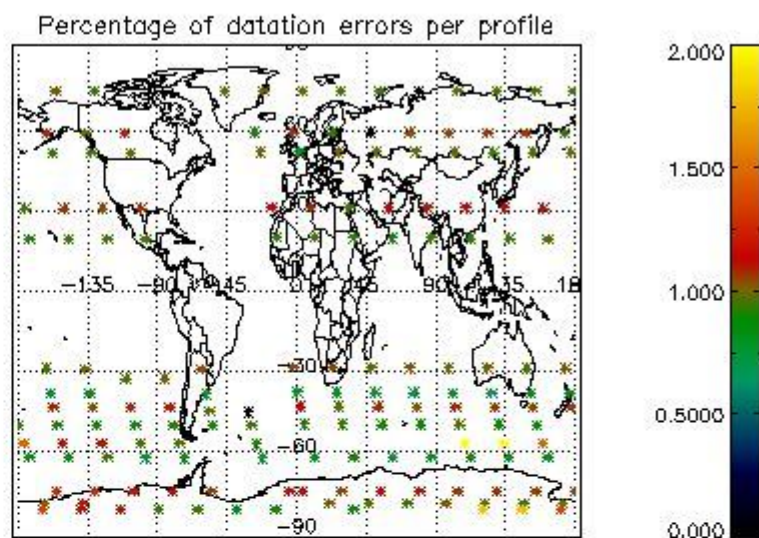
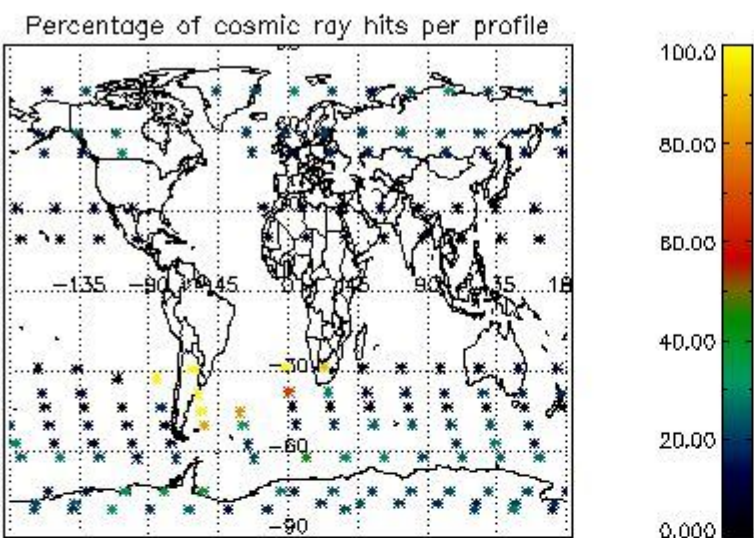


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

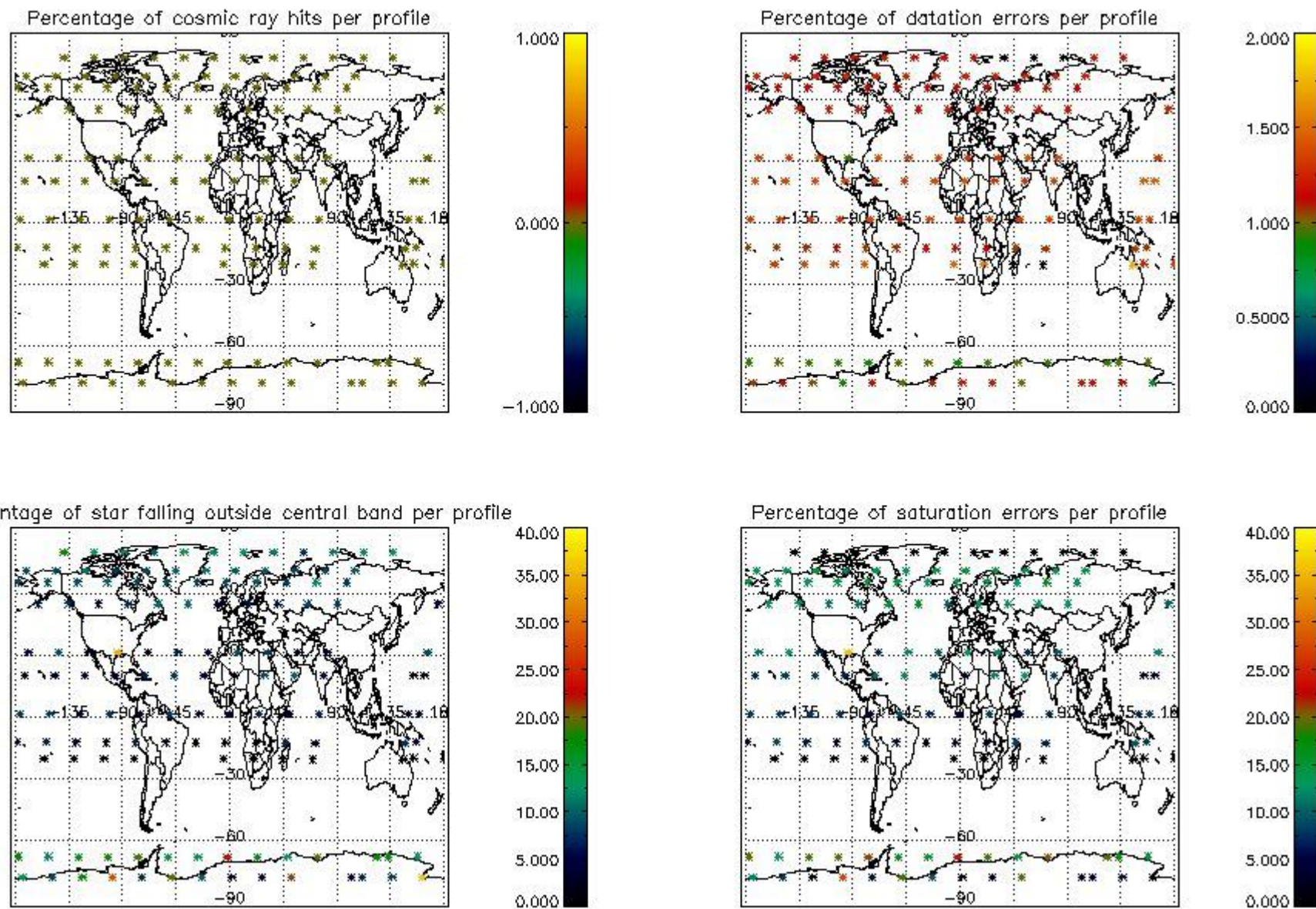


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

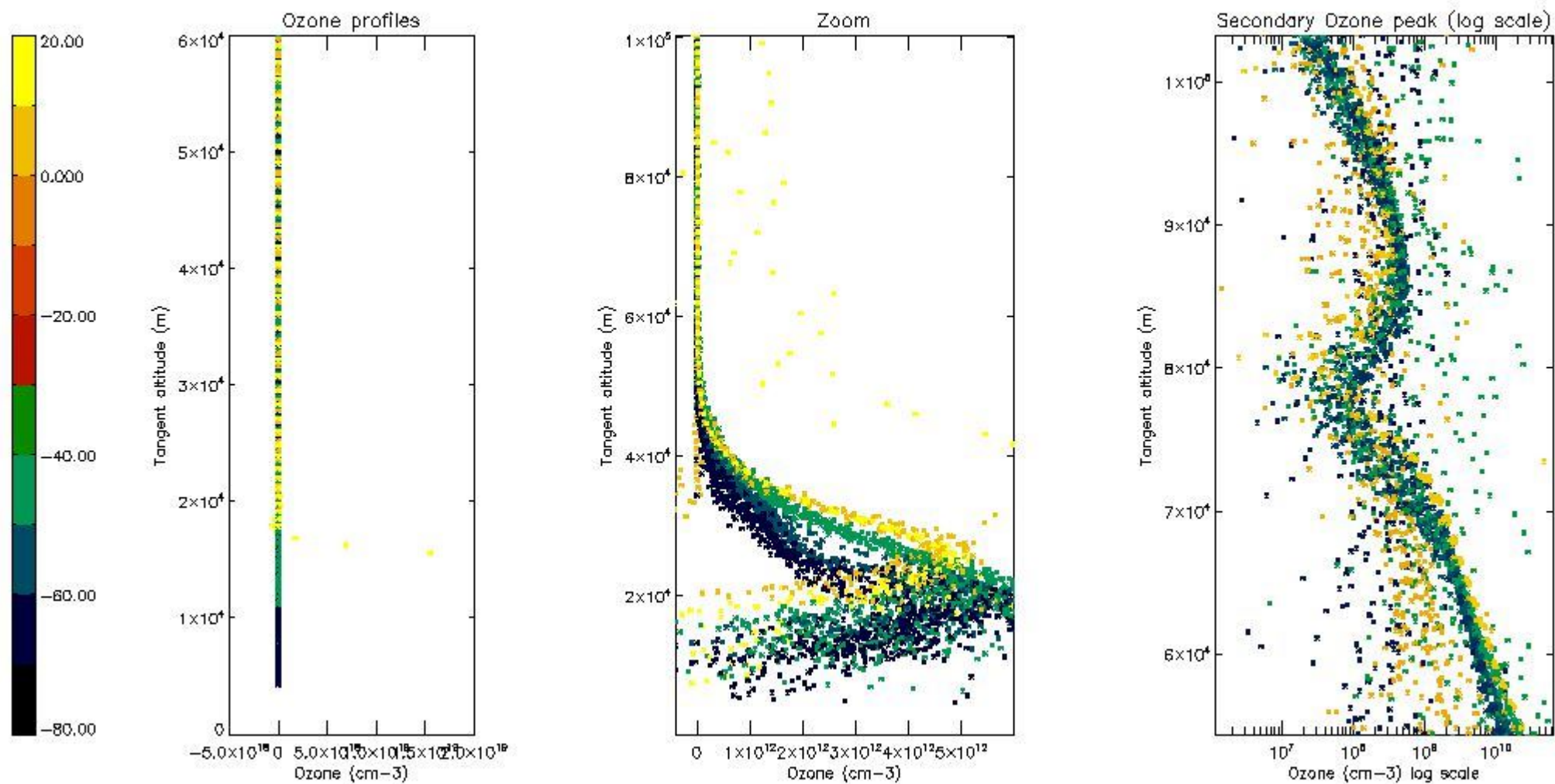
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	20

STD < 10	16
STD < 5	12

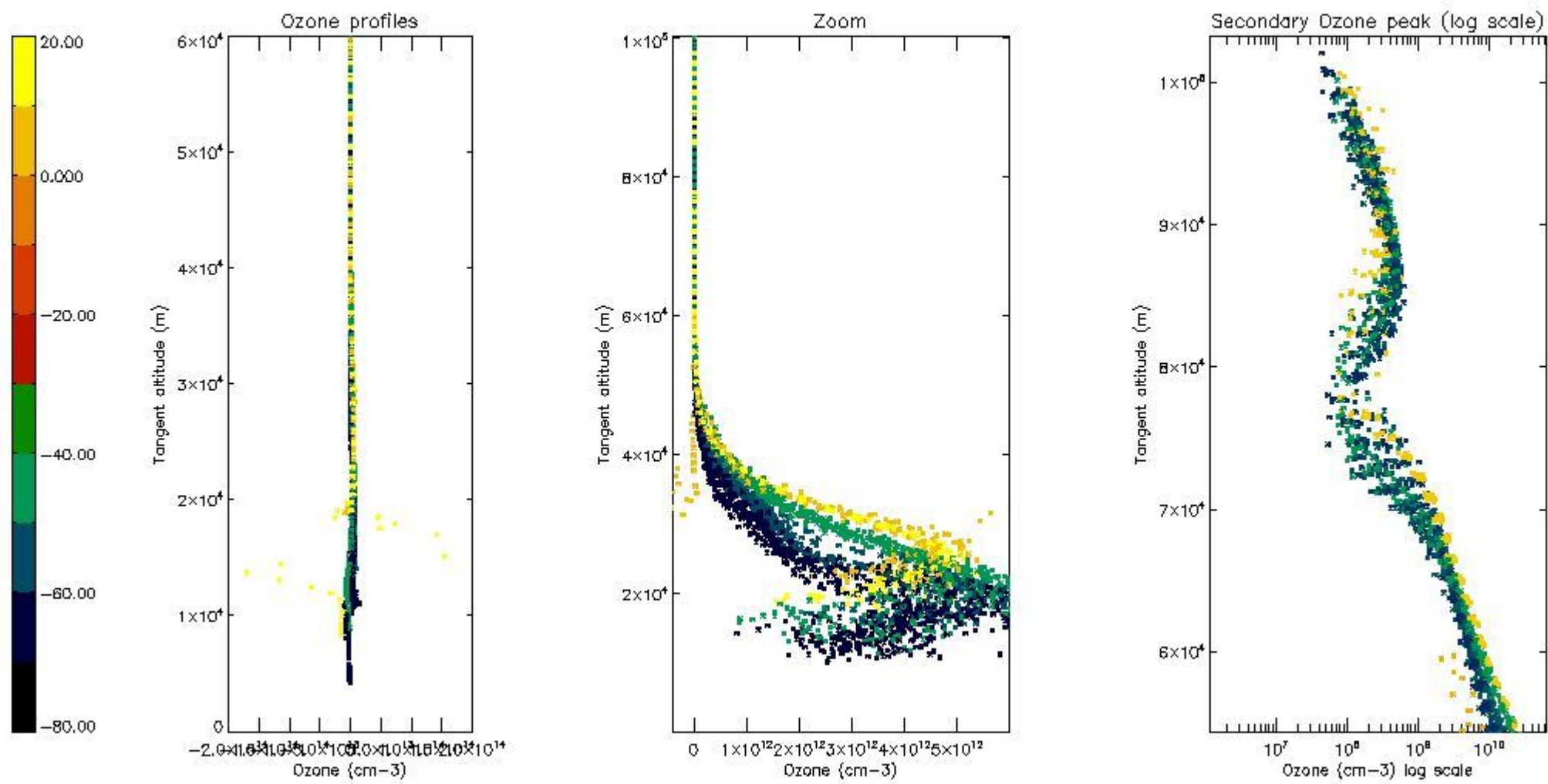
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



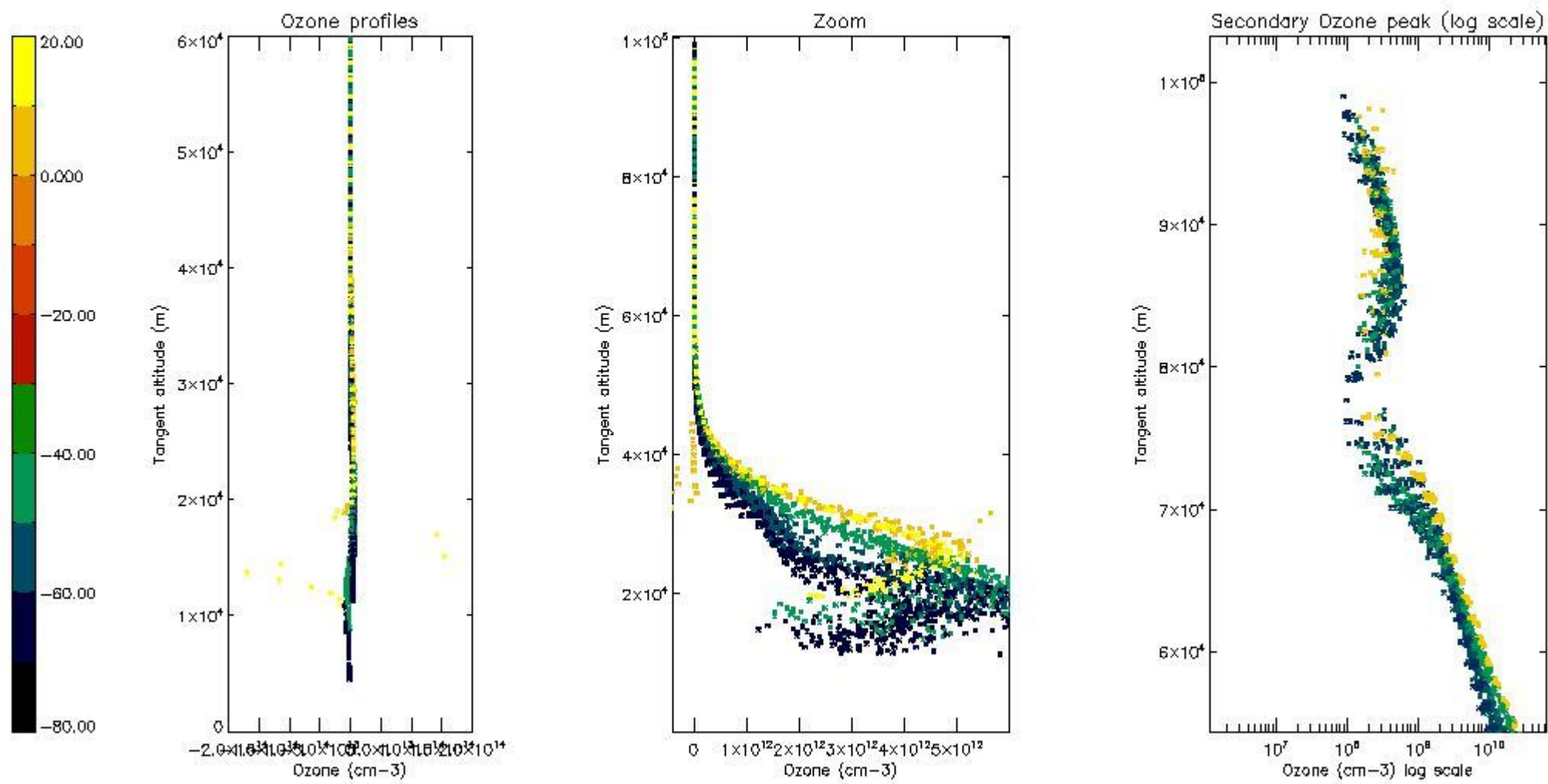
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

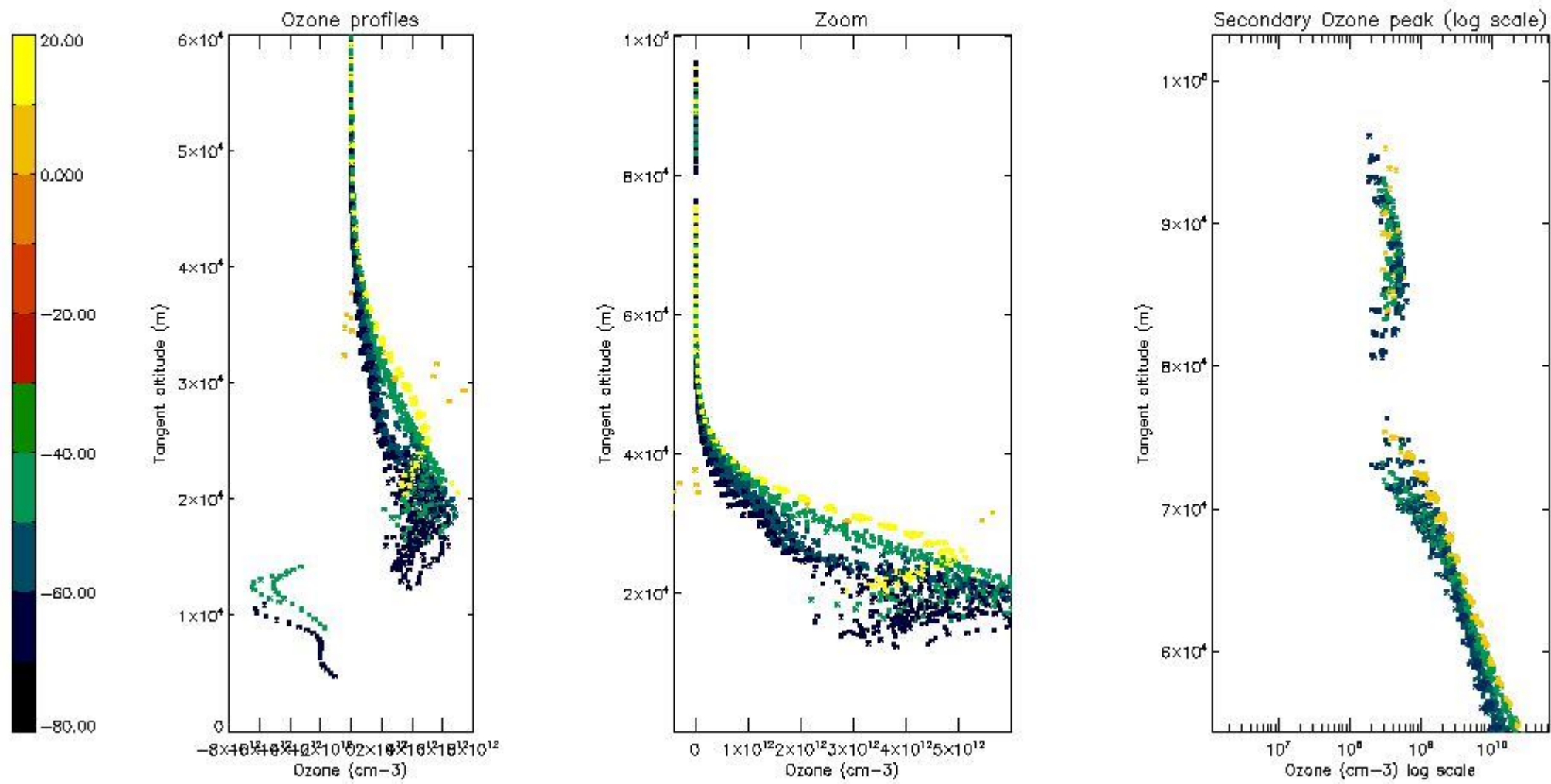
The colorbar represents the latitude.



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

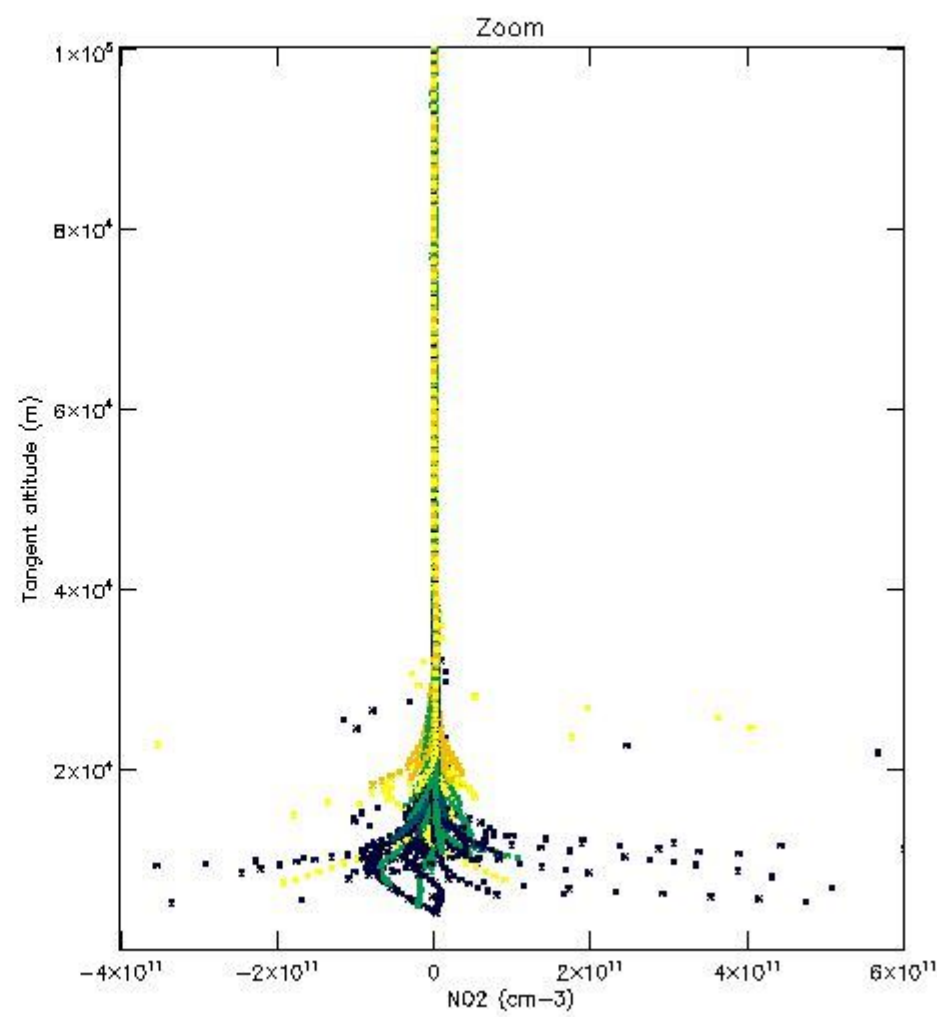
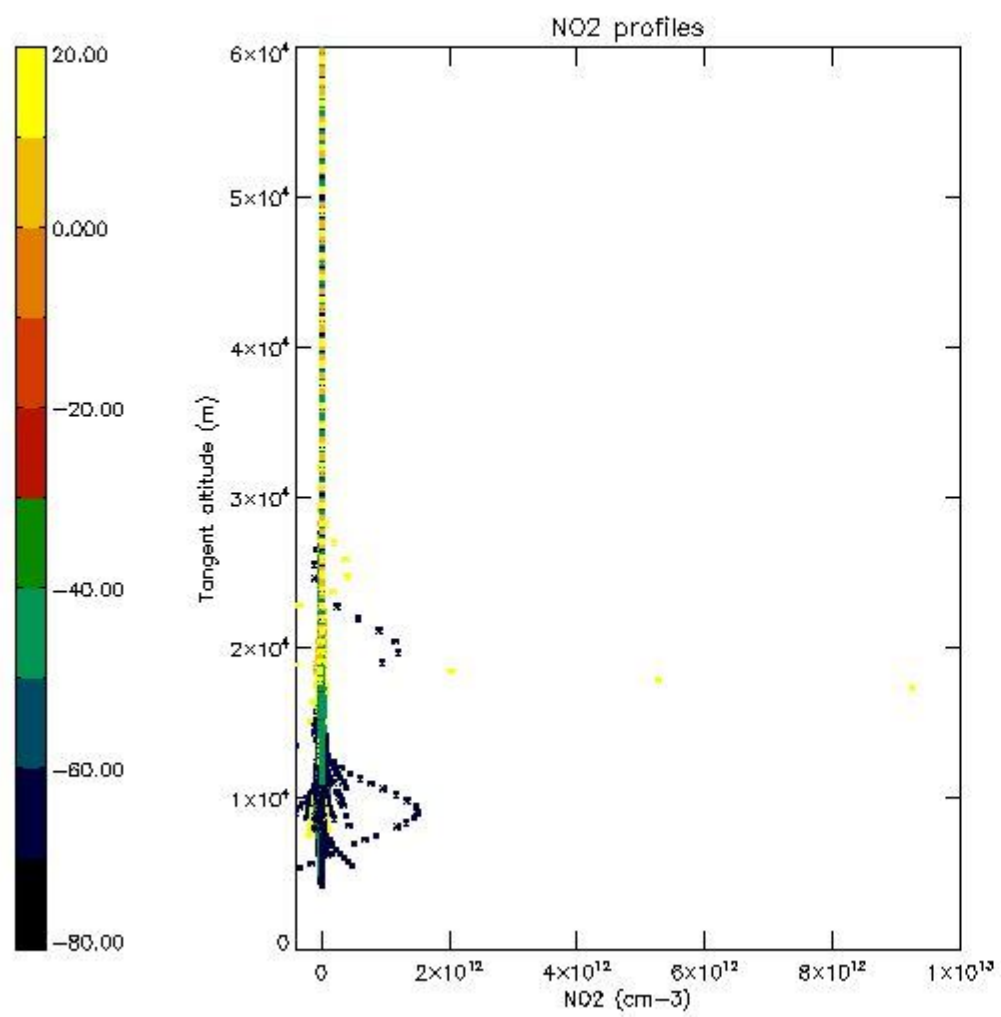
The colorbar represents the latitude.





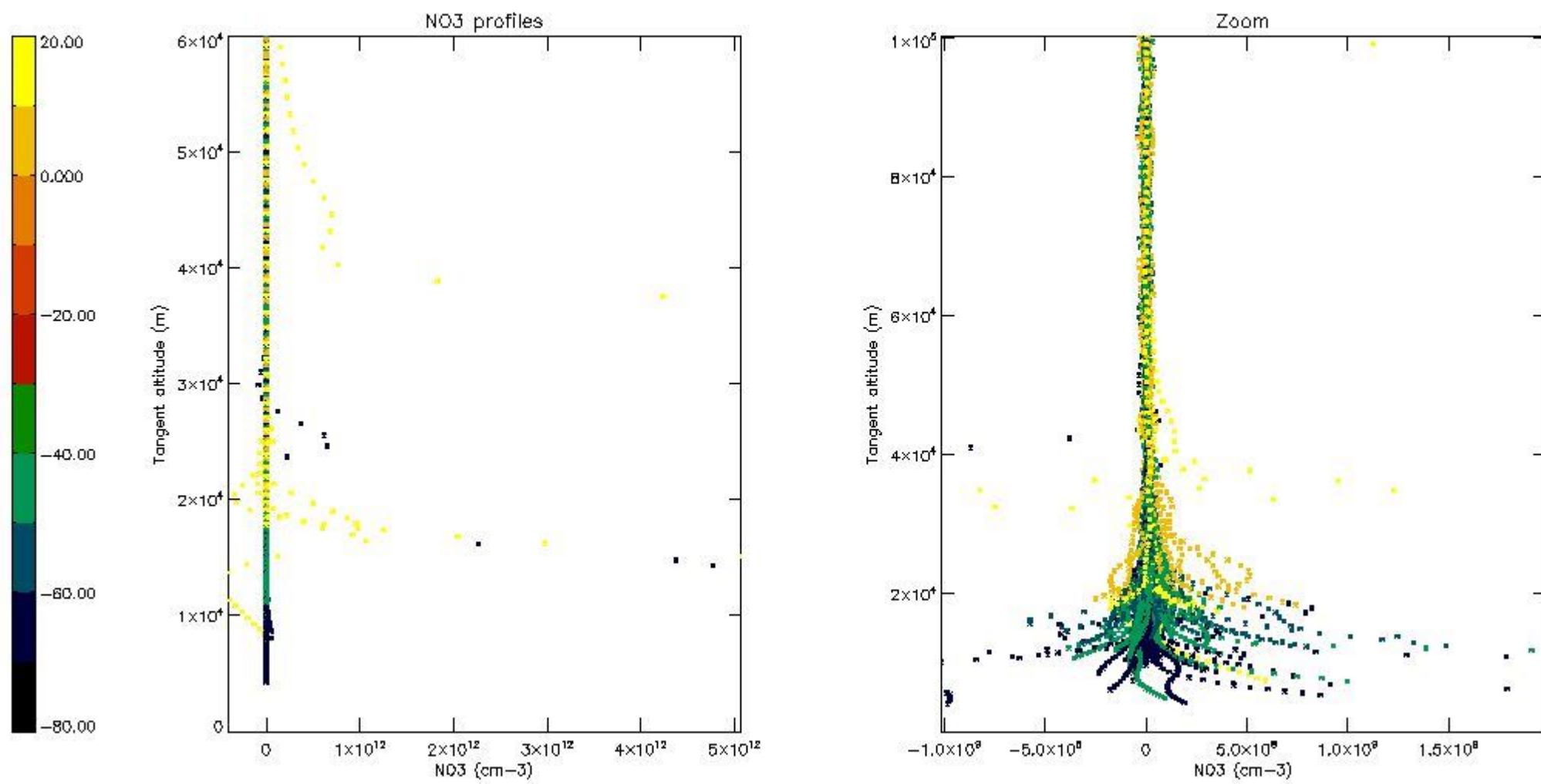
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



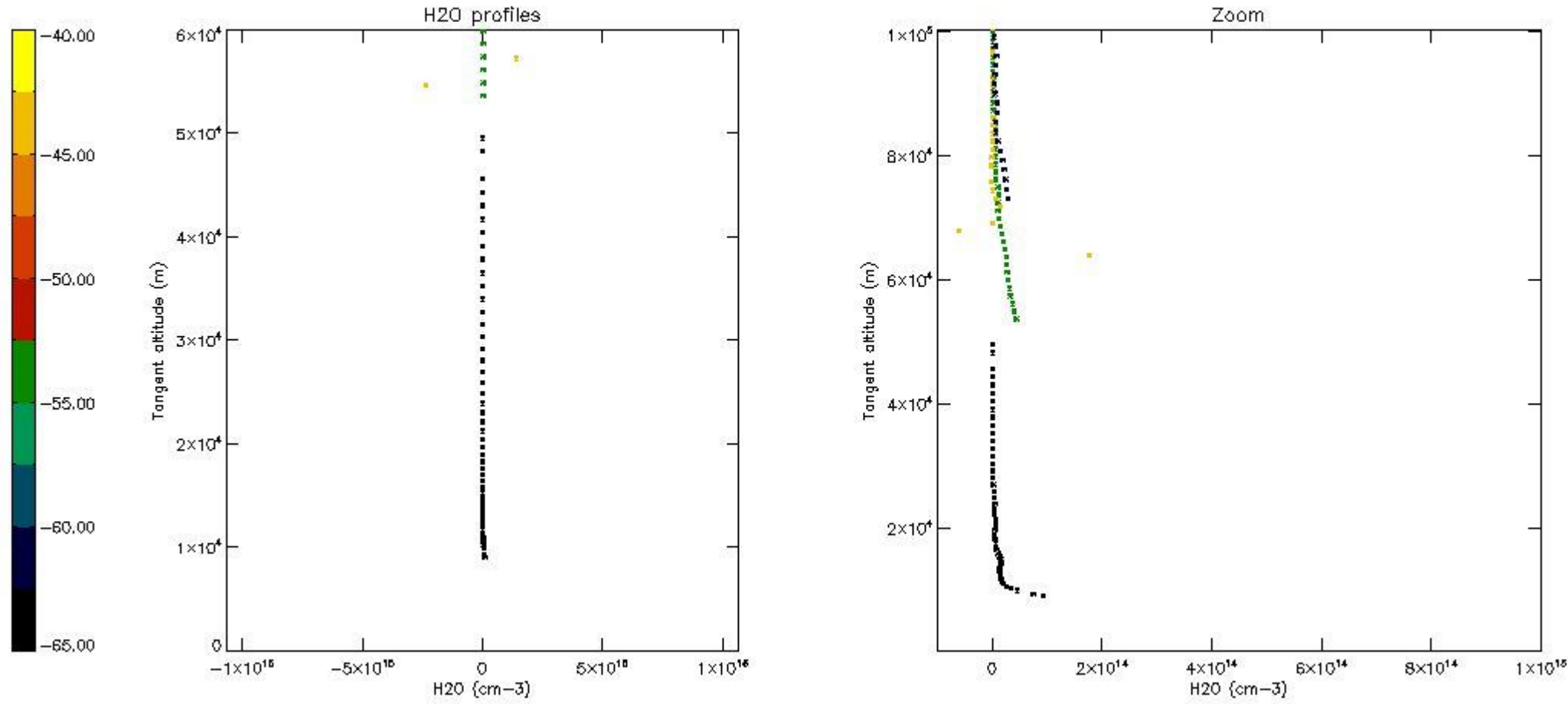
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	22-AUG-2011 00:01:20
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	22-AUG-2011 00:01:20
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	22-AUG-2011 00:01:20

# GOMOS Level 2 Daily Report

## SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Item	Value
Time of report generation	24APR2013 17:16:00
Data source version	GOMOS/6.01
Start time of products	22-08-2011 (22AUG2011 00:00:00)
Stop time of products	23-08-2011 (23AUG2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	306
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__2PRFIN20110822_000120_000000353105_00404_49556_4678.N1	22-AUG-2011 00:01:20	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	49556	No
2	GOM_NL__2PRFIN20110822_000632_000000373105_00404_49556_4679.N1	22-AUG-2011 00:06:32	Bright	37.000	89	5Alp Cep	2.4510	8000.0	74	49556	No
3	GOM_NL__2PRFIN20110822_001028_000000483105_00404_49556_4680.N1	22-AUG-2011 00:10:28	Bright	47.500	74	11Bet Cas	2.2680	6600.0	95	49556	No
4	GOM_NL__2PRFIN20110822_001241_000000293105_00404_49556_4681.N1	22-AUG-2011 00:12:41	Twilight	29.000	76	27Gam Cas	2.3000	30000.	58	49556	No
5	GOM_NL__2PRFIN20110822_002614_000000543105_00404_49556_4682.N1	22-AUG-2011 00:26:14	Bright	53.500	6	13Alp Aur	0.080000	3400.0	107	49556	No
6	GOM_NL__2PRFIN20110822_002925_000000423105_00404_49556_4683.N1	22-AUG-2011 00:29:25	Bright	42.000	107	37The Aur	2.6490	11000.	84	49556	No
7	GOM_NL__2PRFIN20110822_003243_000000563105_00404_49556_4684.N1	22-AUG-2011 00:32:43	Twilight	56.000	28	12Bet Tau	1.6500	15200.	112	49556	No
8	GOM_NL__2PRFIN20110822_003539_000000443105_00404_49556_4685.N1	22-AUG-2011 00:35:39	Twilight	43.500	44	24Gam Gem	1.9280	11000.	87	49556	No
9	GOM_NL__2PRFIN20110822_003929_000000663105_00404_49556_4686.N1	22-AUG-2011 00:39:29	Dark	66.000	14	58Alp Ori	0.87000	3000.0	132	49556	No
10	GOM_NL__2PRFIN20110822_004102_000000563105_00404_49556_4687.N1	22-AUG-2011 00:41:02	Dark	55.500	27	24Gam Ori	1.6360	26000.	111	49556	No
11	GOM_NL__2PRFIN20110822_004300_000000533105_00404_49556_4688.N1	22-AUG-2011 00:43:00	Dark	53.000	30	46Eps Ori	1.6940	30000.	106	49556	No
12	GOM_NL__2PRFIN20110822_004428_000000483105_00404_49556_4689.N1	22-AUG-2011 00:44:28	Dark	47.500	125	44Iot Ori	2.7700	30000.	95	49556	No
13	GOM_NL__2PRFIN20110822_022314_000000553105_00405_49557_8726.N1	22-AUG-2011 02:23:14	Dark	55.000	30	46Eps Ori	1.6940	30000.	110	49557	No
14	GOM_NL__2PRFIN20110822_022443_000000523105_00405_49557_8727.N1	22-AUG-2011 02:24:43	Dark	51.500	125	44Iot Ori	2.7700	30000.	103	49557	No
15	GOM_NL__2PRFIN20110822_022635_000000653105_00405_49557_8728.N1	22-AUG-2011 02:26:35	Dark	64.500	7	19Bet Ori	0.10000	14000.	129	49557	No
16	GOM_NL__2PRFIN20110822_022912_000000483105_00405_49557_8729.N1	22-AUG-2011 02:29:12	Dark	48.000	139	9Bet Lep	2.8330	5600.0	96	49557	No
17	GOM_NL__2PRFIN20110822_034641_000000543105_00406_49558_4679.N1	22-AUG-2011 03:46:41	Bright	54.000	6	13Alp Aur	0.080000	3400.0	108	49558	No
18	GOM_NL__2PRFIN20110822_034953_000000503105_00406_49558_4680.N1	22-AUG-2011 03:49:53	Bright	50.000	107	37The Aur	2.6490	11000.	100	49558	No
19	GOM_NL__2PRFIN20110822_035312_000000563105_00406_49558_4681.N1	22-AUG-2011 03:53:12	Twilight	55.500	28	12Bet Tau	1.6500	15200.	111	49558	No
20	GOM_NL__2PRFIN20110822_035607_000000473105_00406_49558_4682.N1	22-AUG-2011 03:56:07	Twilight	47.000	44	24Gam Gem	1.9280	11000.	94	49558	No
21	GOM_NL__2PRFIN20110822_035958_000000583105_00406_49558_4683.N1	22-AUG-2011 03:59:58	Dark	57.500	14	58Alp Ori	0.87000	3000.0	115	49558	No
22	GOM_NL__2PRFIN20110822_040131_000000523105_00406_49558_4684.N1	22-AUG-2011 04:01:31	Dark	52.000	27	24Gam Ori	1.6360	26000.	104	49558	No
23	GOM_NL__2PRFIN20110822_040329_000000553105_00406_49558_4685.N1	22-AUG-2011 04:03:29	Dark	54.500	30	46Eps Ori	1.6940	30000.	109	49558	No
24	GOM_NL__2PRFIN20110822_040526_000000433105_00406_49558_4686.N1	22-AUG-2011 04:05:26	Dark	42.500	1	9Alp CMa	-1.4400	11000.	85	49558	No
25	GOM_NL__2PRFIN20110822_040827_000000503105_00406_49558_4687.N1	22-AUG-2011 04:08:27	Dark	49.500	101	11Alp Lep	2.5820	7000.0	99	49558	No
26	GOM_NL__2PRFIN20110822_042259_000000533105_00407_49559_4707.N1	22-AUG-2011 04:22:59	Dark	52.500	157	The1Eri	2.9060	9300.0	105	49559	No
27	GOM_NL__2PRFIN20110822_042612_000000463105_00407_49559_4708.N1	22-AUG-2011 04:26:12	Dark	46.000	9	Alp Eri	0.45300	24000.	92	49559	No
28	GOM_NL__2PRFIN20110822_043206_000000503105_00407_49559_4709.N1	22-AUG-2011 04:32:06	Straylight	50.000	84	Alp Phe	2.3970	4500.0	100	49559	No
29	GOM_NL__2PRFIN20110822_043414_000000463105_00407_49559_4710.N1	22-AUG-2011 04:34:14	Straylight	46.000	63	Bet Gru	2.1500	2800.0	92	49559	No
30	GOM_NL__2PRFIN20110822_043856_000000543105_00407_49559_4711.N1	22-AUG-2011 04:38:56	Twilight	53.500	18	24Alp PsA	1.1660	9700.0	107	49559	No
31	GOM_NL__2PRFIN20110822_044408_000000433105_00407_49559_4712.N1	22-AUG-2011 04:44:08	Bright	42.500	142	49Del Cap	2.8500	8900.0	85	49559	No
32	GOM_NL__2PRFIN20110822_044724_000000413105_00407_49559_4713.N1	22-AUG-2011 04:47:24	Bright	40.500	154	22Bet Aqr	2.8990	5700.0	81	49559	No
33	GOM_NL__2PRFIN20110822_044908_000000443105_00407_49559_4714.N1	22-AUG-2011 04:49:08	Bright	44.000	162	34Alp Aqr	2.9440	5350.0	88	49559	No
34	GOM_NL__2PRFIN20110822_045212_000000423105_00407_49559_4715.N1	22-AUG-2011 04:52:12	Bright	42.000	61	8Eps Peg	2.1000	3900.0	84	49559	No
35	GOM_NL__2PRFIN20110822_045851_000000373105_00407_49559_4716.N1	22-AUG-2011 04:58:51	Bright	36.500	92	53Eps Cyg	2.5000	4500.0	73	49559	No
36	GOM_NL__2PRFIN20110822_050202_000000373105_00407_49559_4717.N1	22-AUG-2011 05:02:02	Bright	37.000	19	50Alp Cyg	1.2460	10500.	74	49559	No
37	GOM_NL__2PRFIN20110822_050713_000000383105_00407_49559_4718.N1	22-AUG-2011 05:07:13	Bright	37.500	89	5Alp Cep	2.4510	8000.0	75	49559	No
38	GOM_NL__2PRFIN20110822_051107_000000473105_00407_49559_4719.N1	22-AUG-2011 05:11:07	Bright	46.500	74	11Bet Cas	2.2680	6600.0	93	49559	No
39	GOM_NL__2PRFIN20110822_051320_000000313105_00407_49559_4720.N1	22-AUG-2011 05:13:20	Twilight	30.500	76	27Gam Cas	2.3000	30000.	61	49559	No
40	GOM_NL__2PRFIN20110822_052655_000000513105_00407_49559_4721.N1	22-AUG-2011 05:26:55	Bright	50.500	6	13Alp Aur	0.080000	3400.0	101	49559	No
41	GOM_NL__2PRFIN20110822_053007_000000423105_00407_49559_4722.N1	22-AUG-2011 05:30:07	Bright	41.500	107	37The Aur	2.6490	11000.	83	49559	No
42	GOM_NL__2PRFIN20110822_053326_000000593105_00407_49559_4723.N1	22-AUG-2011 05:33:26	Twilight	58.500	28	12Bet Tau	1.6500	15200.	117	49559	No









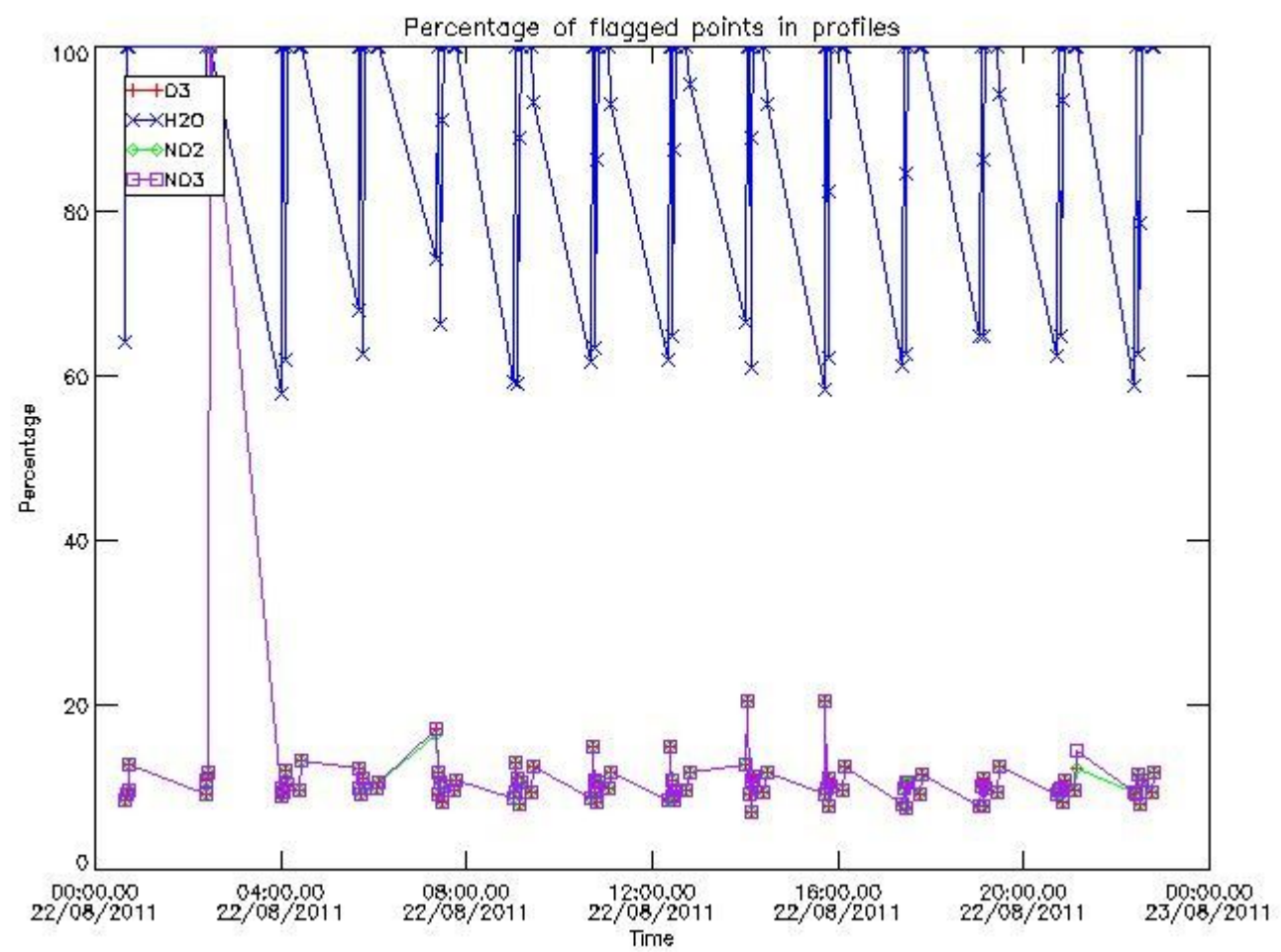


279	GOM_NL__2PRFIN20110822_215533_000000383105_00417_49569_6093.N1	22-AUG-2011 21:55:33	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	49569	No
280	GOM_NL__2PRFIN20110822_220913_000000513105_00417_49569_6094.N1	22-AUG-2011 22:09:13	Bright	51.000	6	13Alp Aur	0.080000	3400.0	102	49569	No
281	GOM_NL__2PRFIN20110822_221227_000000433105_00417_49569_6095.N1	22-AUG-2011 22:12:27	Bright	43.000	107	37The Aur	2.6490	11000.	86	49569	No
282	GOM_NL__2PRFIN20110822_221705_000000523105_00417_49569_6096.N1	22-AUG-2011 22:17:05	Twilight	51.500	151	13Mu Gem	2.8900	3000.0	103	49569	No
283	GOM_NL__2PRFIN20110822_221844_000000483105_00417_49569_6097.N1	22-AUG-2011 22:18:44	Twilight	47.500	44	24Gam Gem	1.9280	11000.	95	49569	No
284	GOM_NL__2PRFIN20110822_222238_000000603105_00417_49569_6098.N1	22-AUG-2011 22:22:38	Dark	60.000	14	58Alp Ori	0.87000	3000.0	120	49569	No
285	GOM_NL__2PRFIN20110822_222612_000000553105_00417_49569_6099.N1	22-AUG-2011 22:26:12	Dark	55.000	30	46Eps Ori	1.6940	30000.	110	49569	No
286	GOM_NL__2PRFIN20110822_222803_000000453105_00417_49569_6100.N1	22-AUG-2011 22:28:03	Dark	44.500	1	9Alp CMa	-1.4400	11000.	89	49569	No
287	GOM_NL__2PRFIN20110822_222935_000000643105_00417_49569_6101.N1	22-AUG-2011 22:29:35	Dark	63.500	7	19Bet Ori	0.10000	14000.	127	49569	No
288	GOM_NL__2PRFIN20110822_223210_000000483105_00417_49569_6102.N1	22-AUG-2011 22:32:10	Dark	47.500	139	9Bet Lep	2.8330	5600.0	95	49569	No
289	GOM_NL__2PRFIN20110822_224546_000000543105_00418_49570_6080.N1	22-AUG-2011 22:45:46	Dark	54.000	157	The1Eri	2.9060	9300.0	108	49570	No
290	GOM_NL__2PRFIN20110822_224853_000000443105_00418_49570_6081.N1	22-AUG-2011 22:48:53	Dark	43.500	9	Alp Eri	0.45300	24000.	87	49570	No
291	GOM_NL__2PRFIN20110822_225447_000000503105_00418_49570_6082.N1	22-AUG-2011 22:54:47	Straylight	49.500	84	Alp Phe	2.3970	4500.0	99	49570	No
292	GOM_NL__2PRFIN20110822_225652_000000553105_00418_49570_6083.N1	22-AUG-2011 22:56:52	Straylight	54.500	63	Bet Gru	2.1500	2800.0	109	49570	No
293	GOM_NL__2PRFIN20110822_230134_000000513105_00418_49570_6084.N1	22-AUG-2011 23:01:34	Twilight	51.000	18	24Alp PsA	1.1660	9700.0	102	49570	No
294	GOM_NL__2PRFIN20110822_230643_000000453105_00418_49570_6085.N1	22-AUG-2011 23:06:43	Bright	44.500	142	49Del Cap	2.8500	8900.0	89	49570	No
295	GOM_NL__2PRFIN20110822_230958_000000403105_00418_49570_6086.N1	22-AUG-2011 23:09:58	Bright	40.000	154	22Bet Aqr	2.8990	5700.0	80	49570	No
296	GOM_NL__2PRFIN20110822_231141_000000443105_00418_49570_6087.N1	22-AUG-2011 23:11:41	Bright	43.500	162	34Alp Aqr	2.9440	5350.0	87	49570	No
297	GOM_NL__2PRFIN20110822_231444_000000403105_00418_49570_6088.N1	22-AUG-2011 23:14:44	Bright	40.000	61	8Eps Peg	2.1000	3900.0	80	49570	No
298	GOM_NL__2PRFIN20110822_232124_000000383105_00418_49570_6089.N1	22-AUG-2011 23:21:24	Bright	38.000	92	53Eps Cyg	2.5000	4500.0	76	49570	No
299	GOM_NL__2PRFIN20110822_232435_000000353105_00418_49570_6090.N1	22-AUG-2011 23:24:35	Bright	34.500	19	50Alp Cyg	1.2460	10500.	69	49570	No
300	GOM_NL__2PRFIN20110822_232945_000000383105_00418_49570_6091.N1	22-AUG-2011 23:29:45	Bright	37.500	89	5Alp Cep	2.4510	8000.0	75	49570	No
301	GOM_NL__2PRFIN20110822_233333_000000463105_00418_49570_6092.N1	22-AUG-2011 23:33:33	Bright	46.000	74	11Bet Cas	2.2680	6600.0	92	49570	No
302	GOM_NL__2PRFIN20110822_233546_000000403105_00418_49570_6093.N1	22-AUG-2011 23:35:46	Bright	40.000	76	27Gam Cas	2.3000	30000.	80	49570	No
303	GOM_NL__2PRFIN20110822_234927_000000533105_00418_49570_6094.N1	22-AUG-2011 23:49:27	Bright	52.500	6	13Alp Aur	0.080000	3400.0	105	49570	No
304	GOM_NL__2PRFIN20110822_235241_000000433105_00418_49570_6095.N1	22-AUG-2011 23:52:41	Bright	42.500	107	37The Aur	2.6490	11000.	85	49570	No
305	GOM_NL__2PRFIN20110822_235719_000000503105_00418_49570_6096.N1	22-AUG-2011 23:57:19	Twilight	49.500	151	13Mu Gem	2.8900	3000.0	99	49570	No
306	GOM_NL__2PRFIN20110822_235859_000000453105_00418_49570_6097.N1	22-AUG-2011 23:58:59	Twilight	44.500	44	24Gam Gem	1.9280	11000.	89	49570	No

### 3. Quality information per product

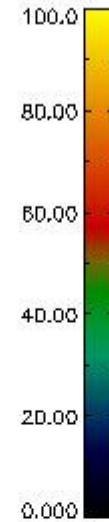
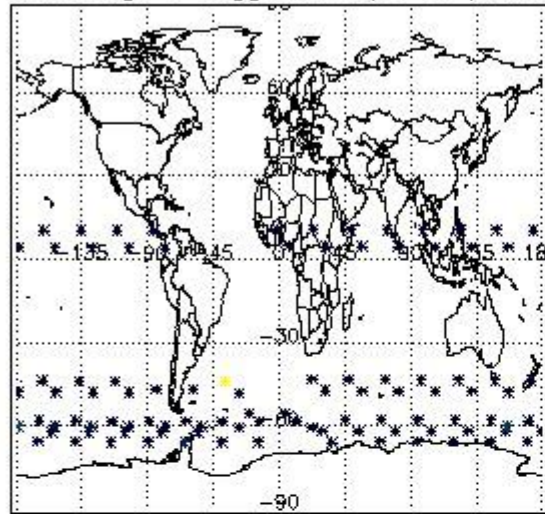
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

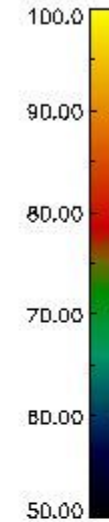
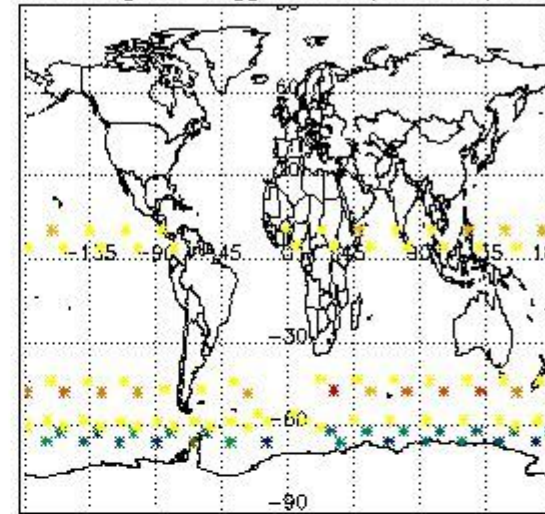


3.2 Plot quality information per product (world map)

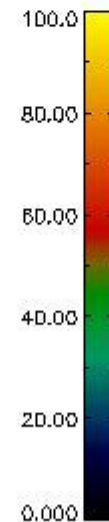
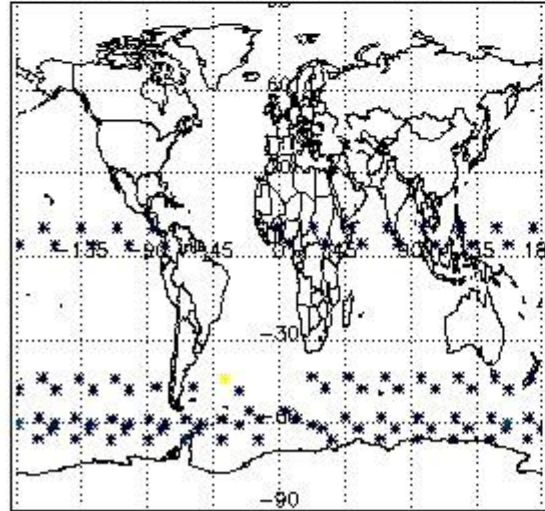
Percentage of flagged data per O3 profile



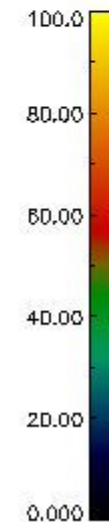
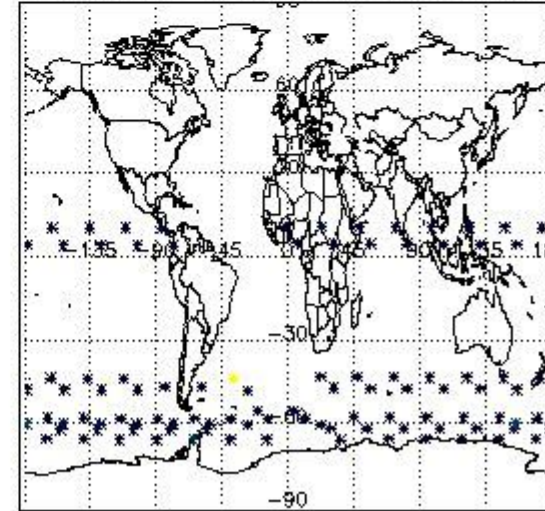
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

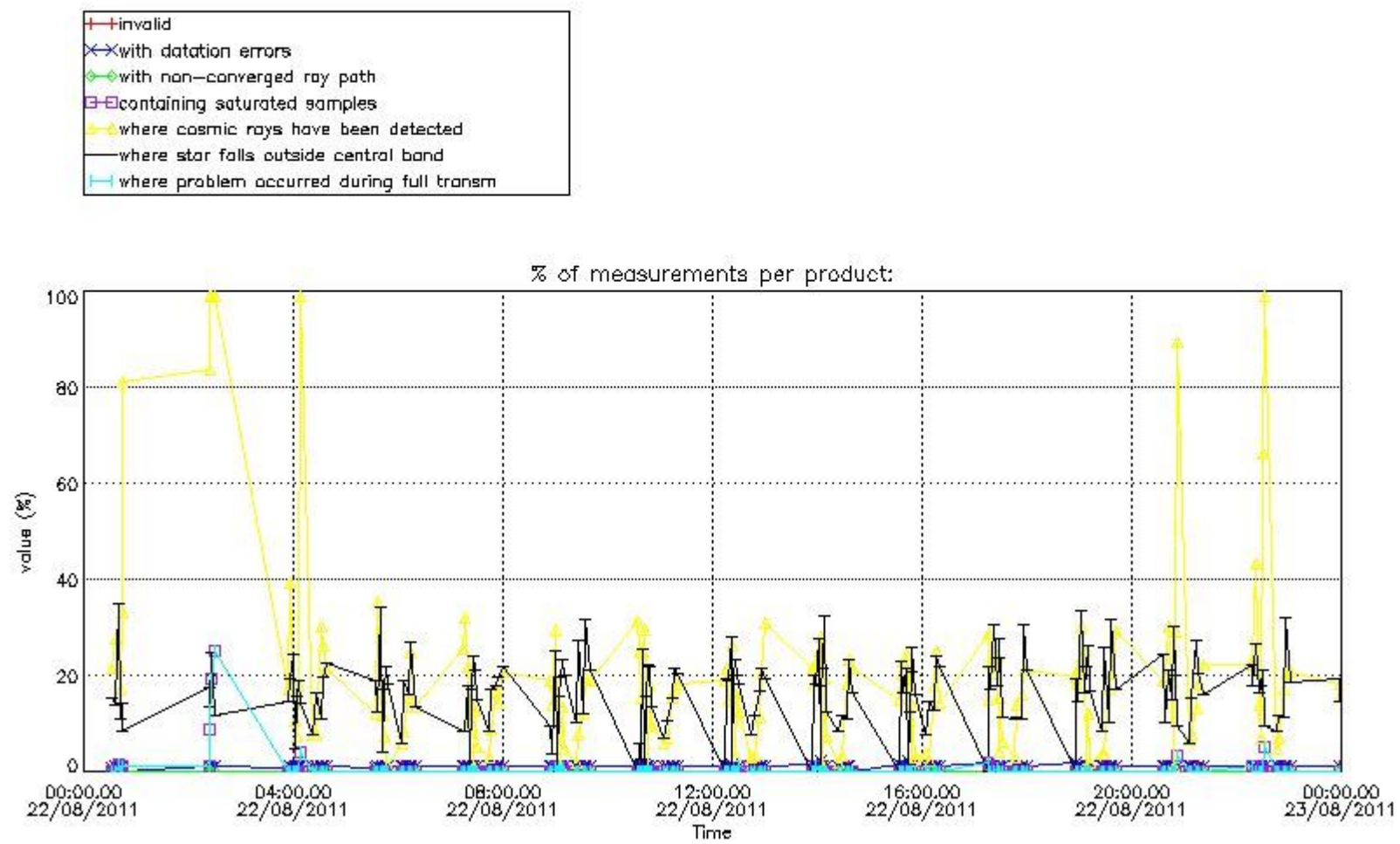


#### 4. Level 1 quality information per product

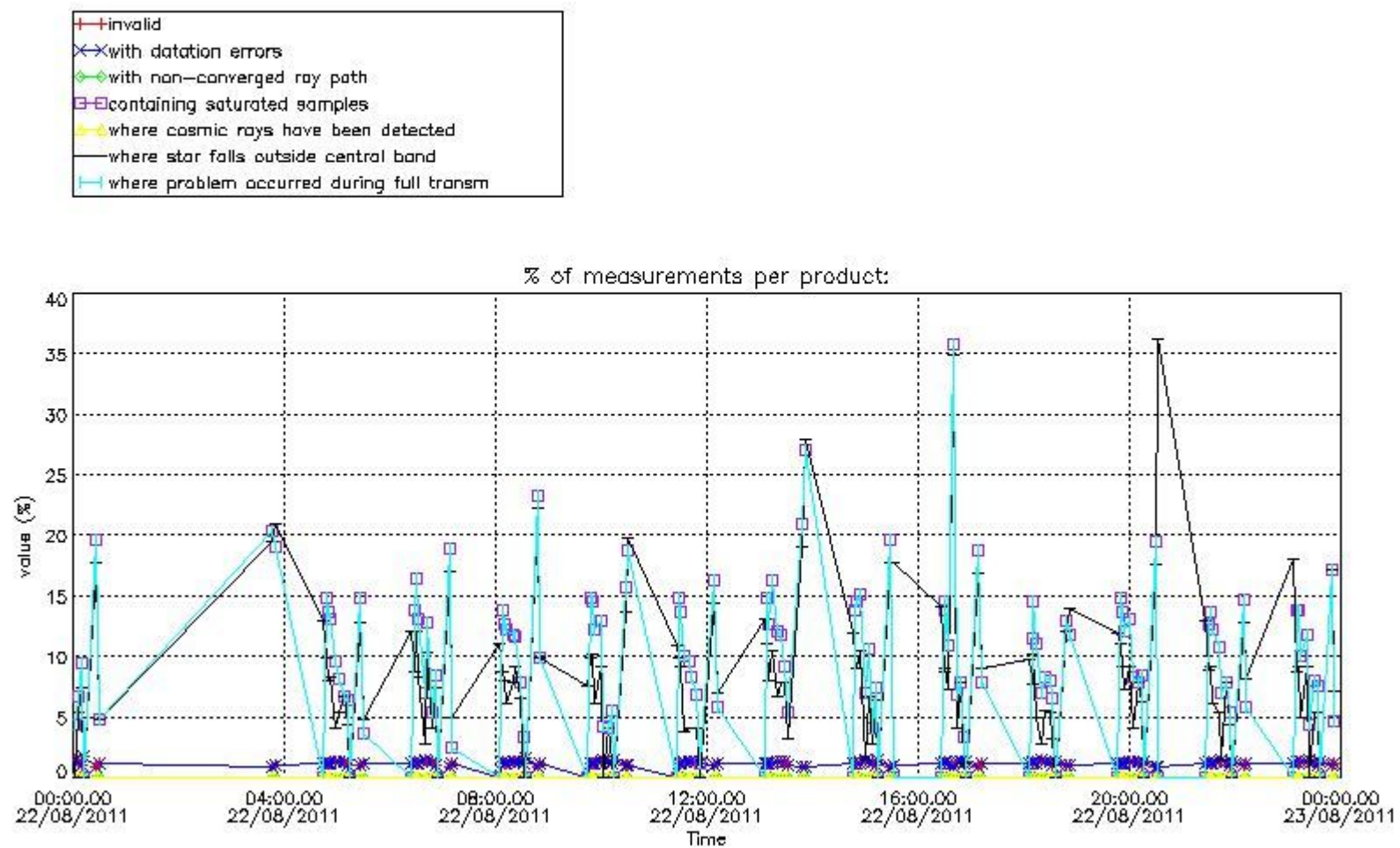
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



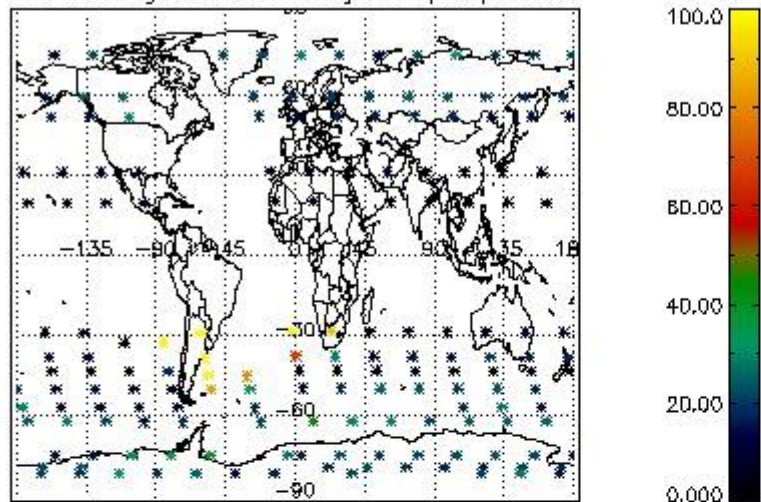
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



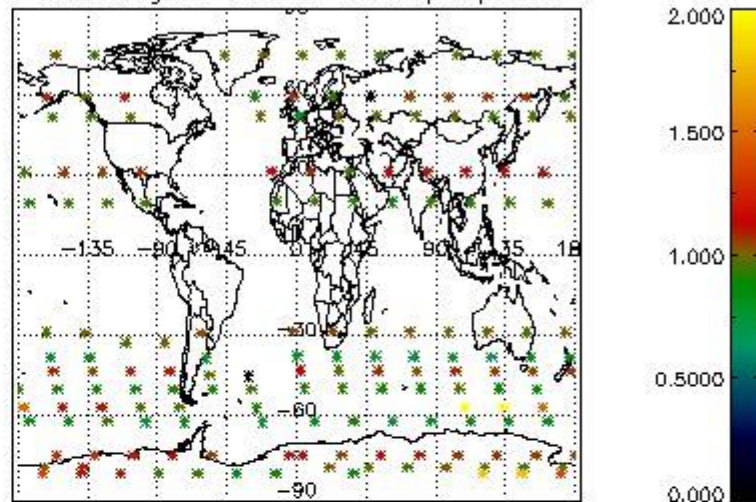
4.2 Plot quality information per product coming from level 1b processing (world map)

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

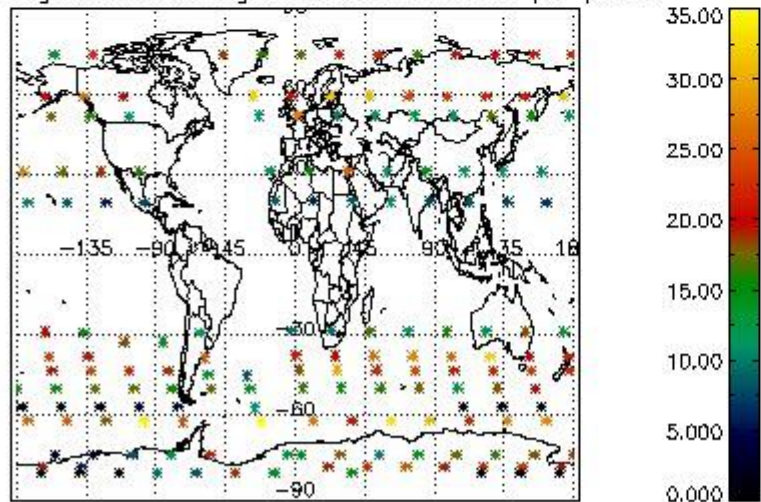
Percentage of cosmic ray hits per profile



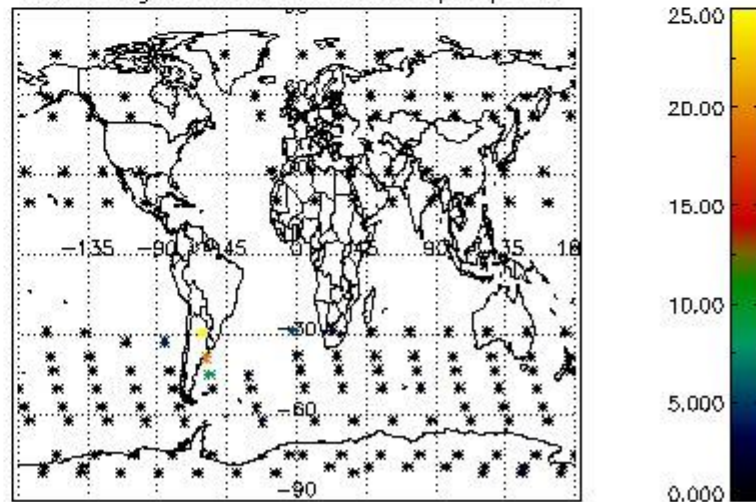
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

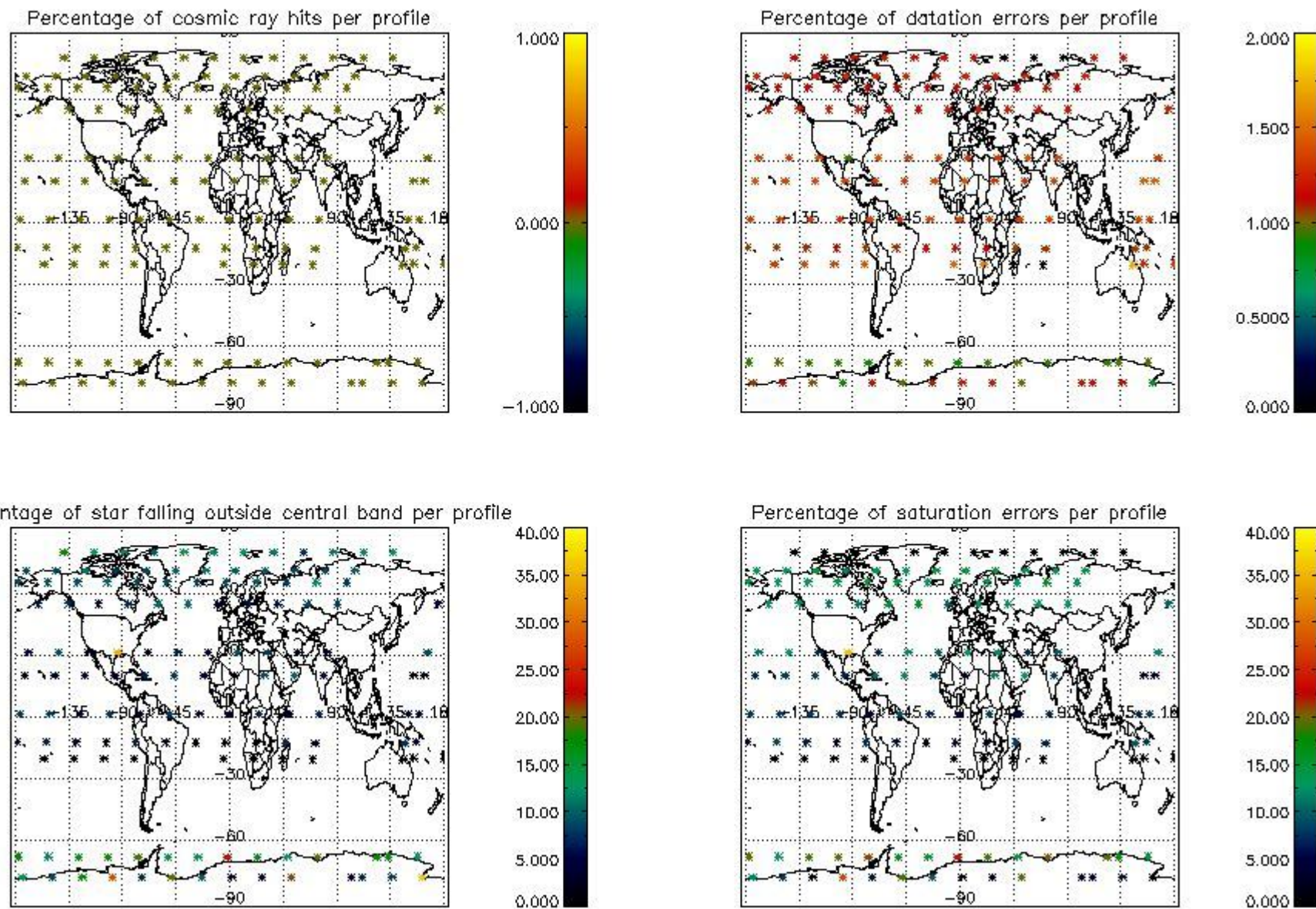


Percentage of saturation errors per profile



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

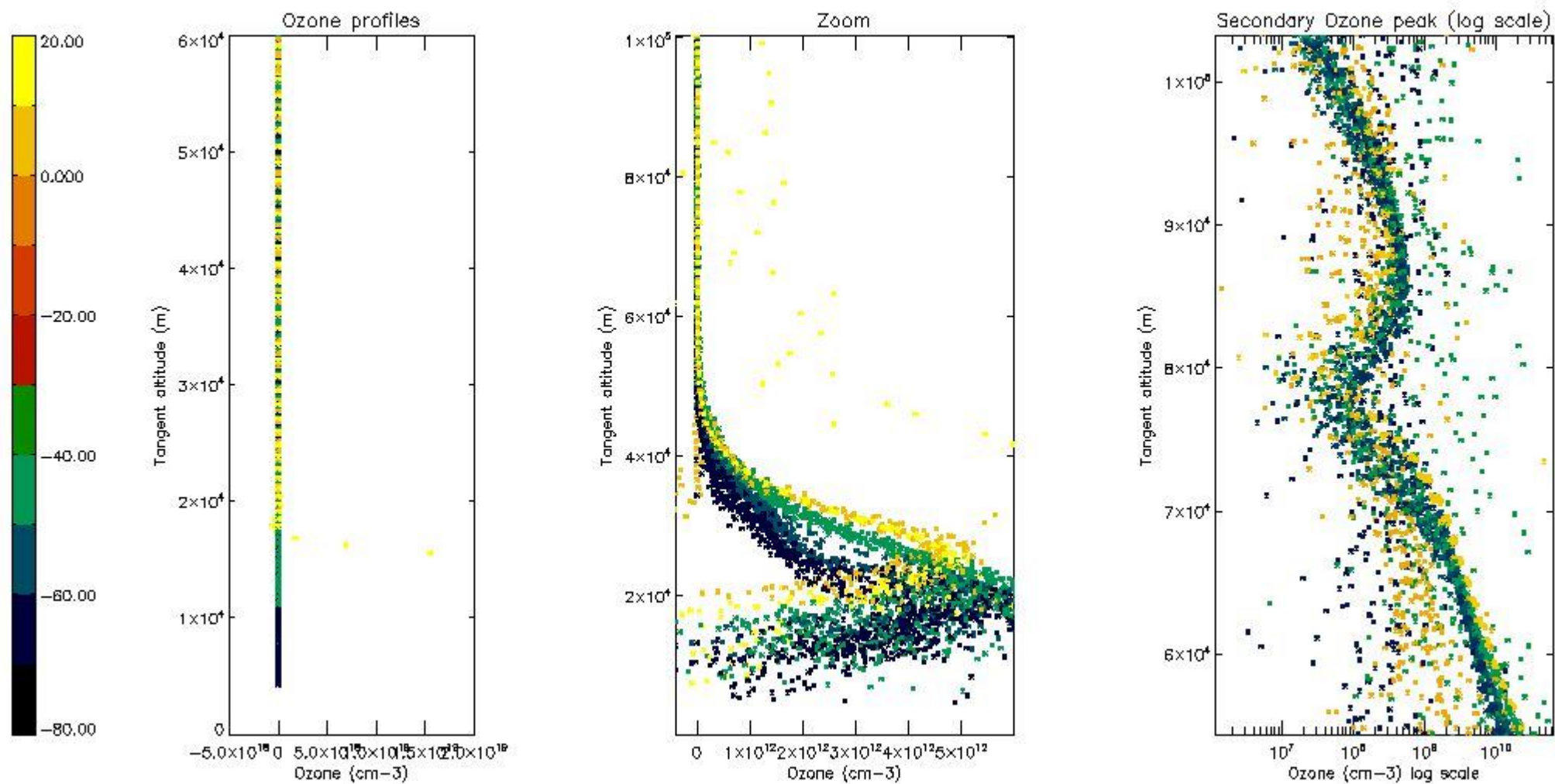
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	37
STD < 20	20

STD < 10	16
STD < 5	12

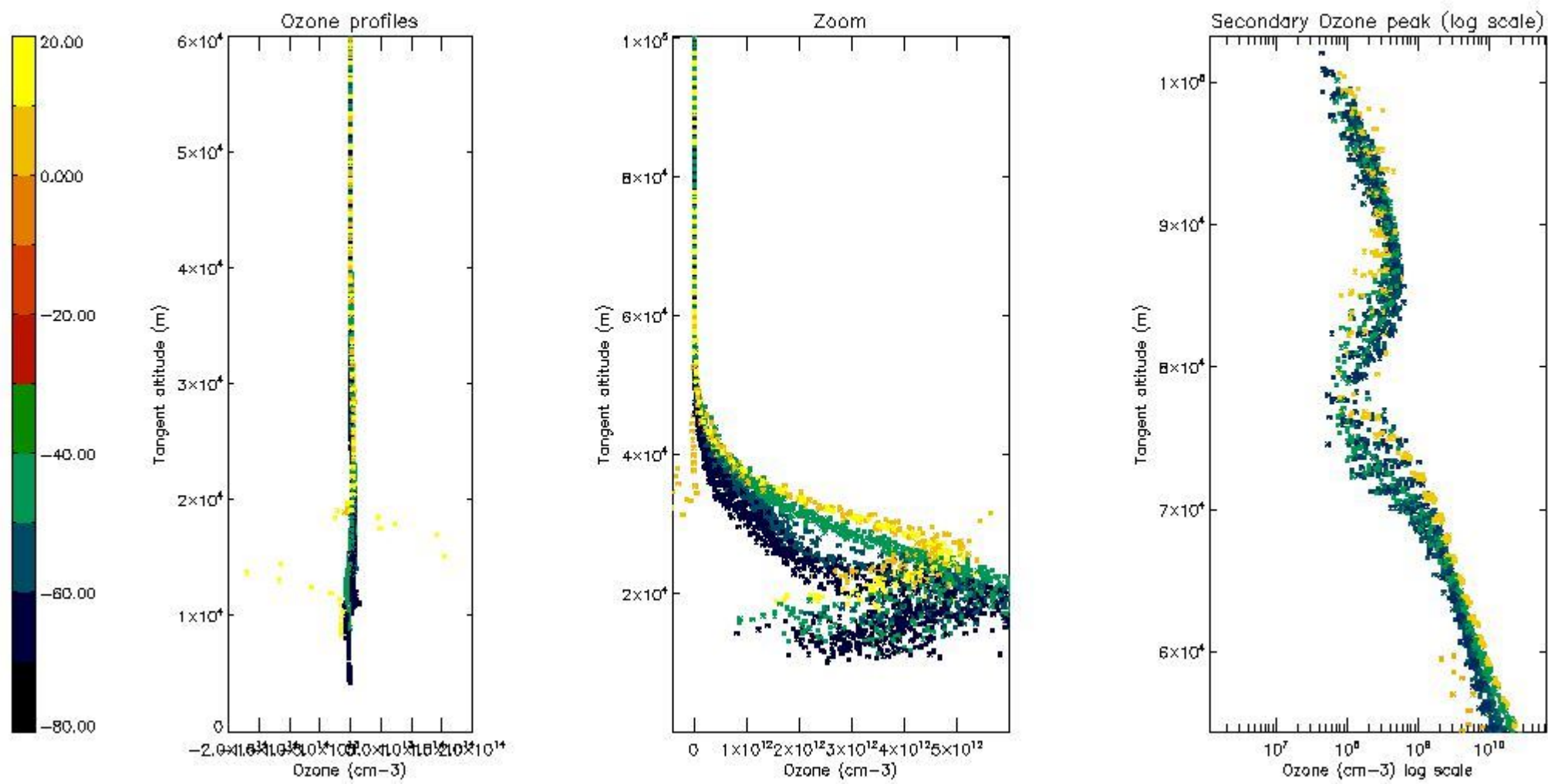
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



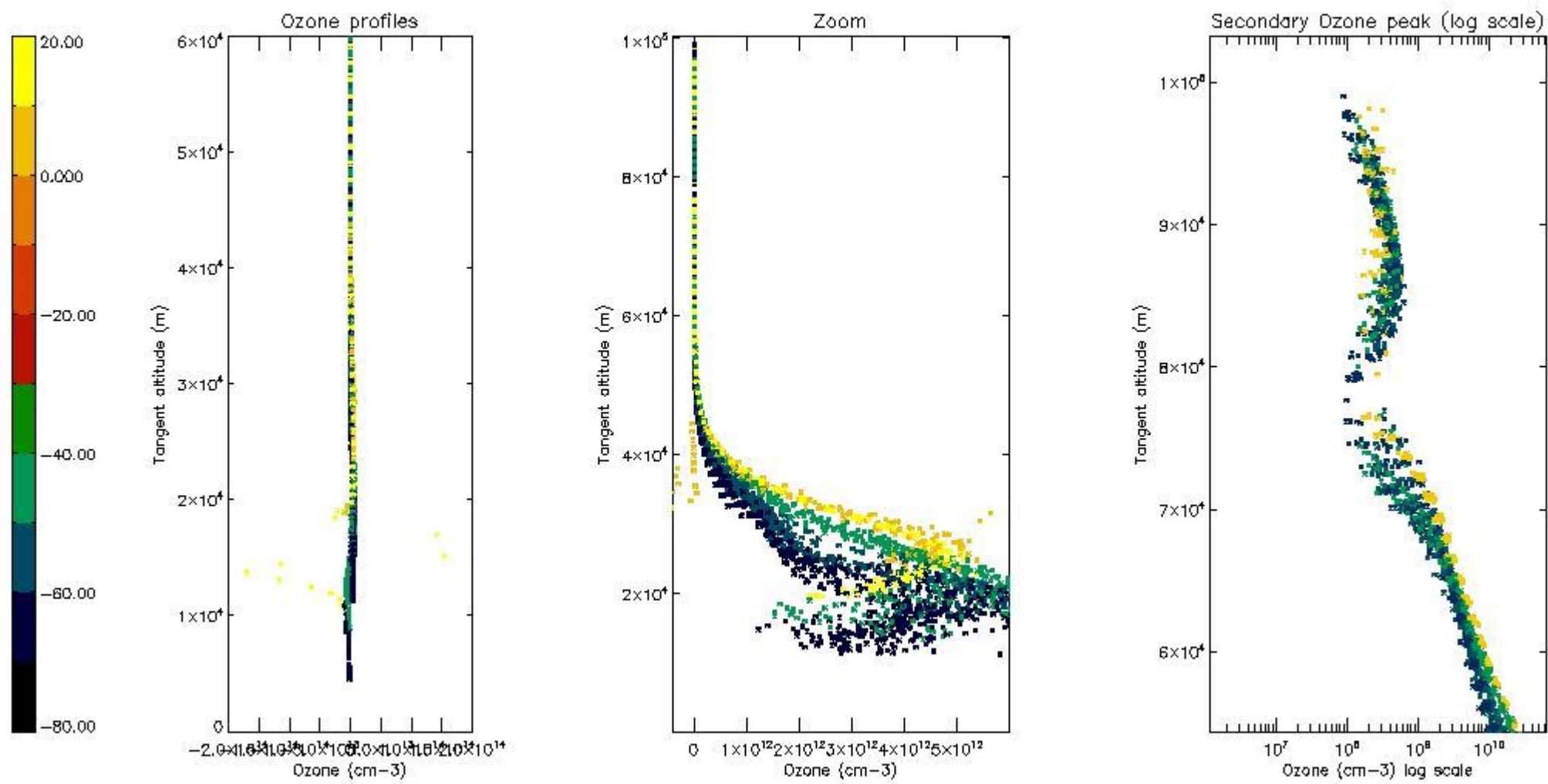
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



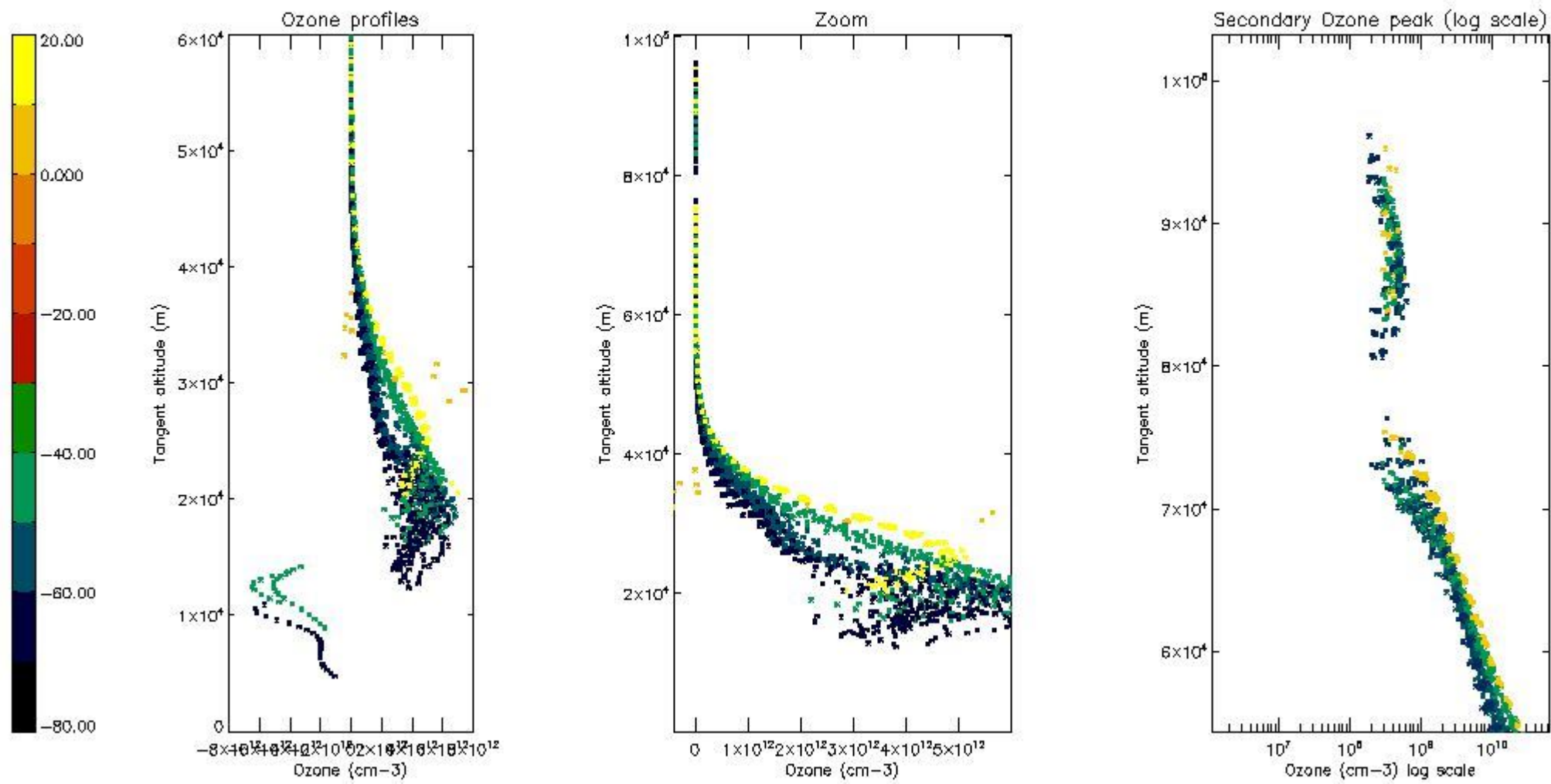
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



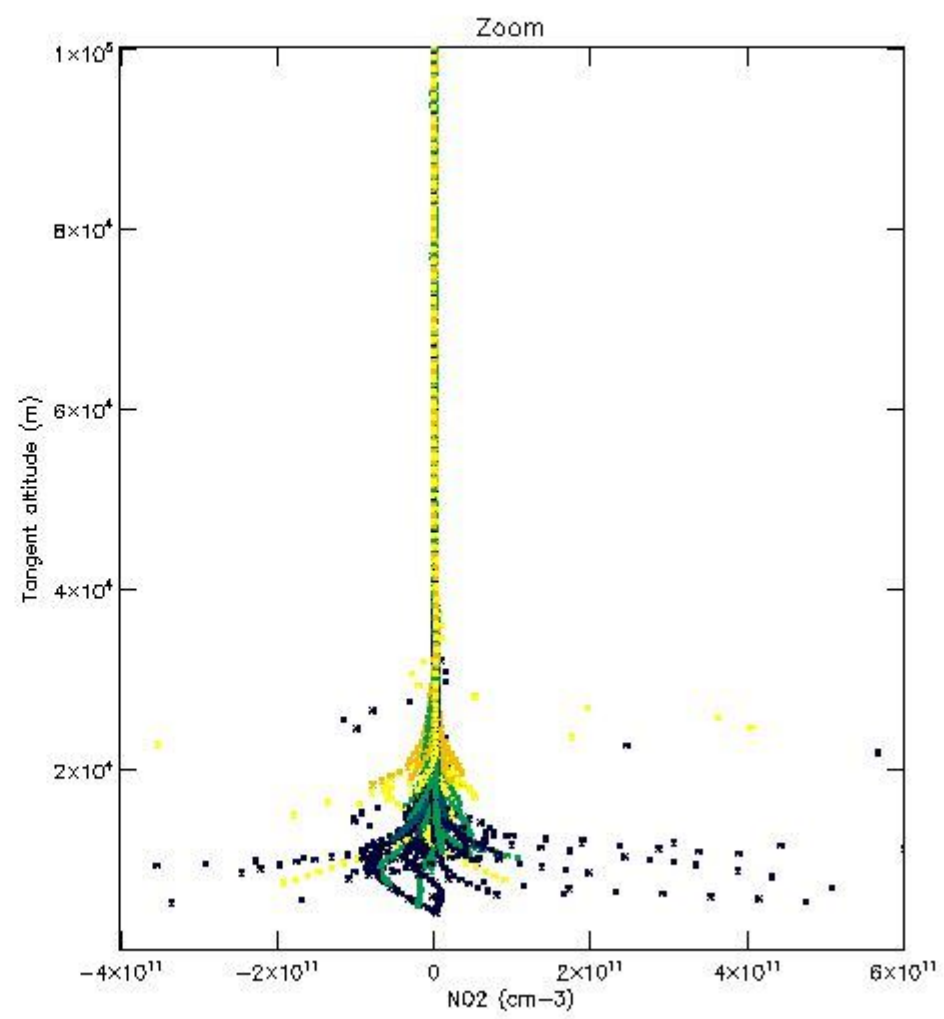
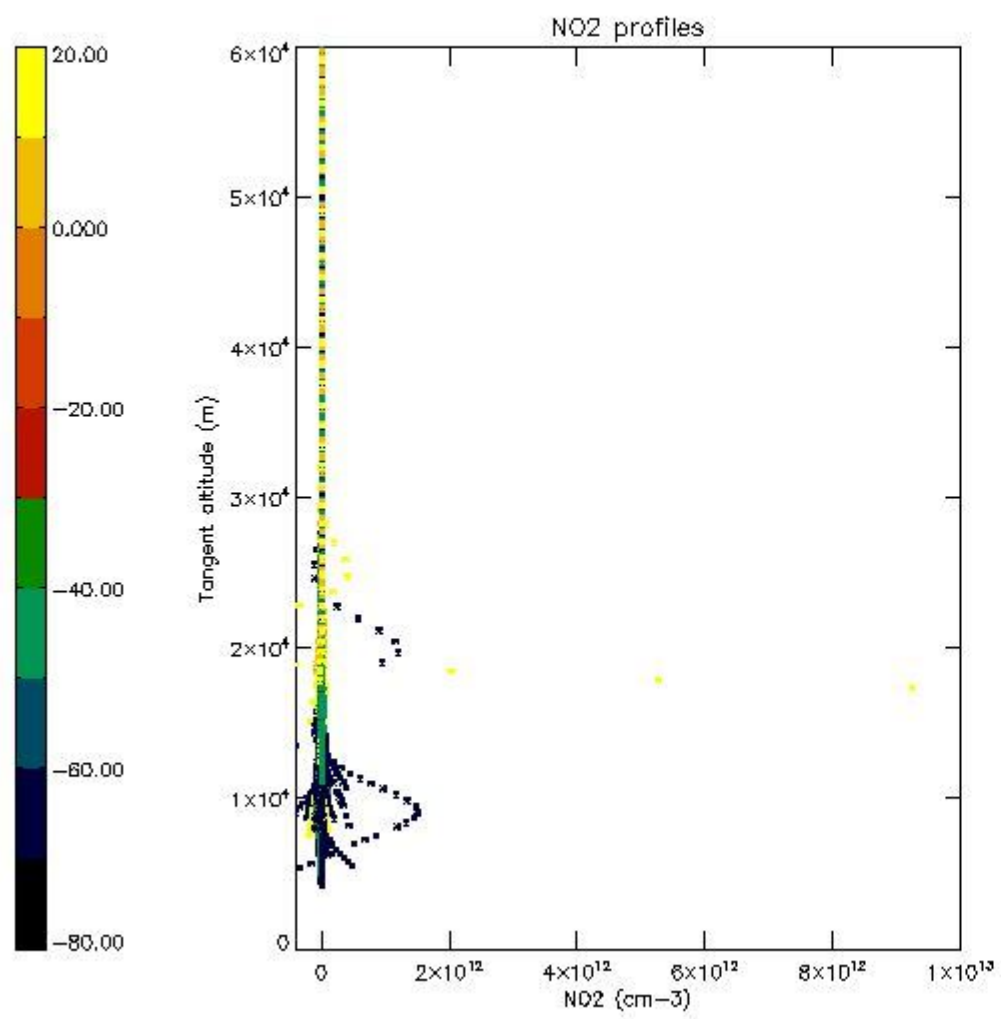
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



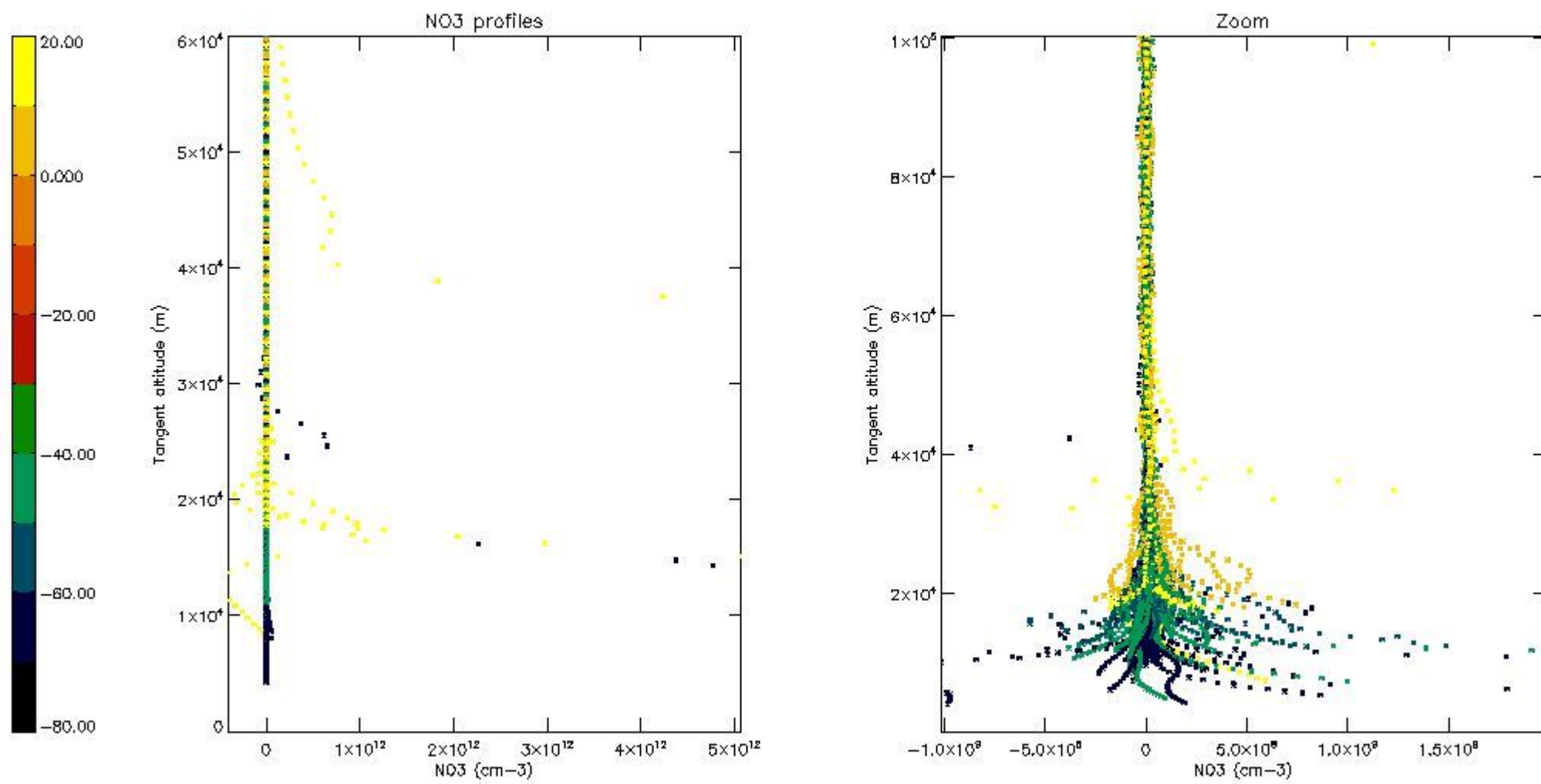
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



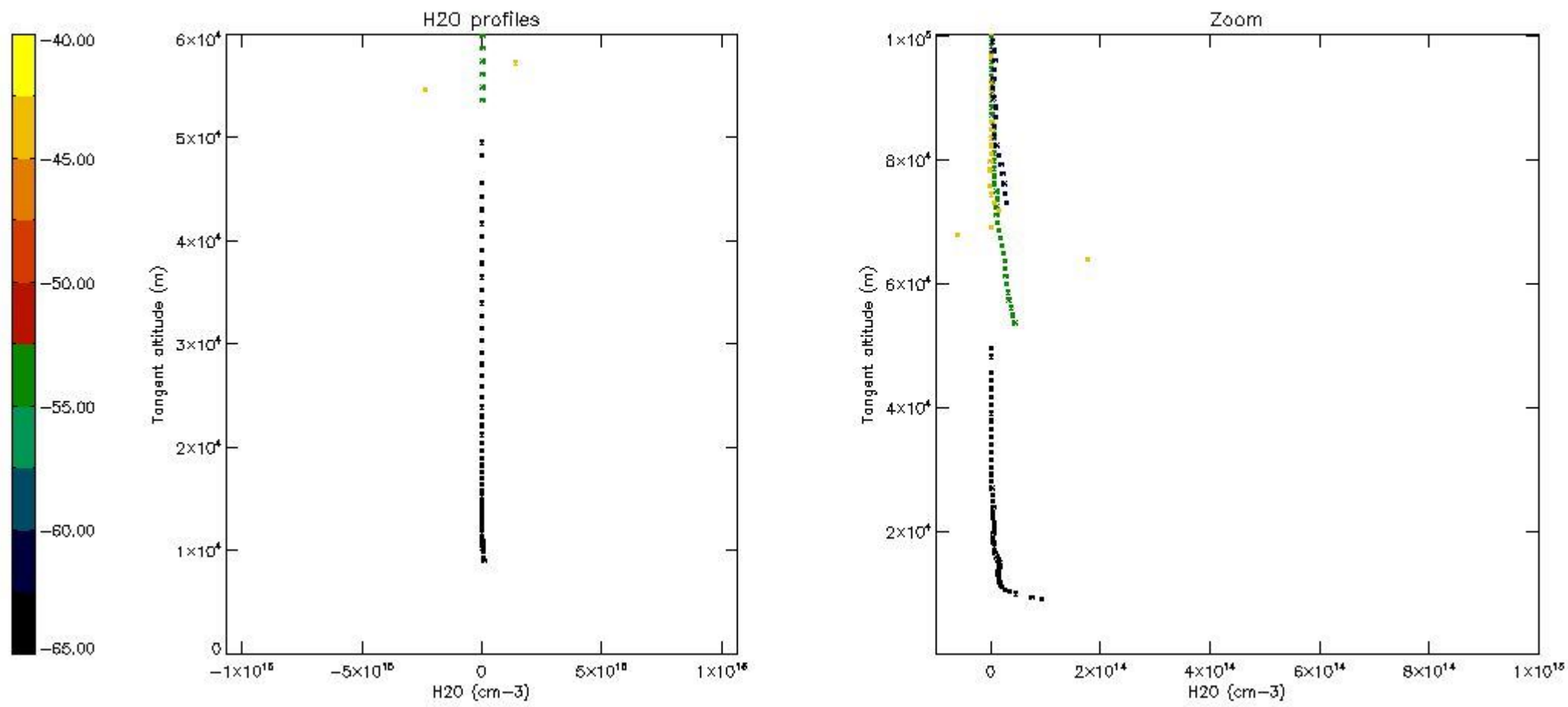
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

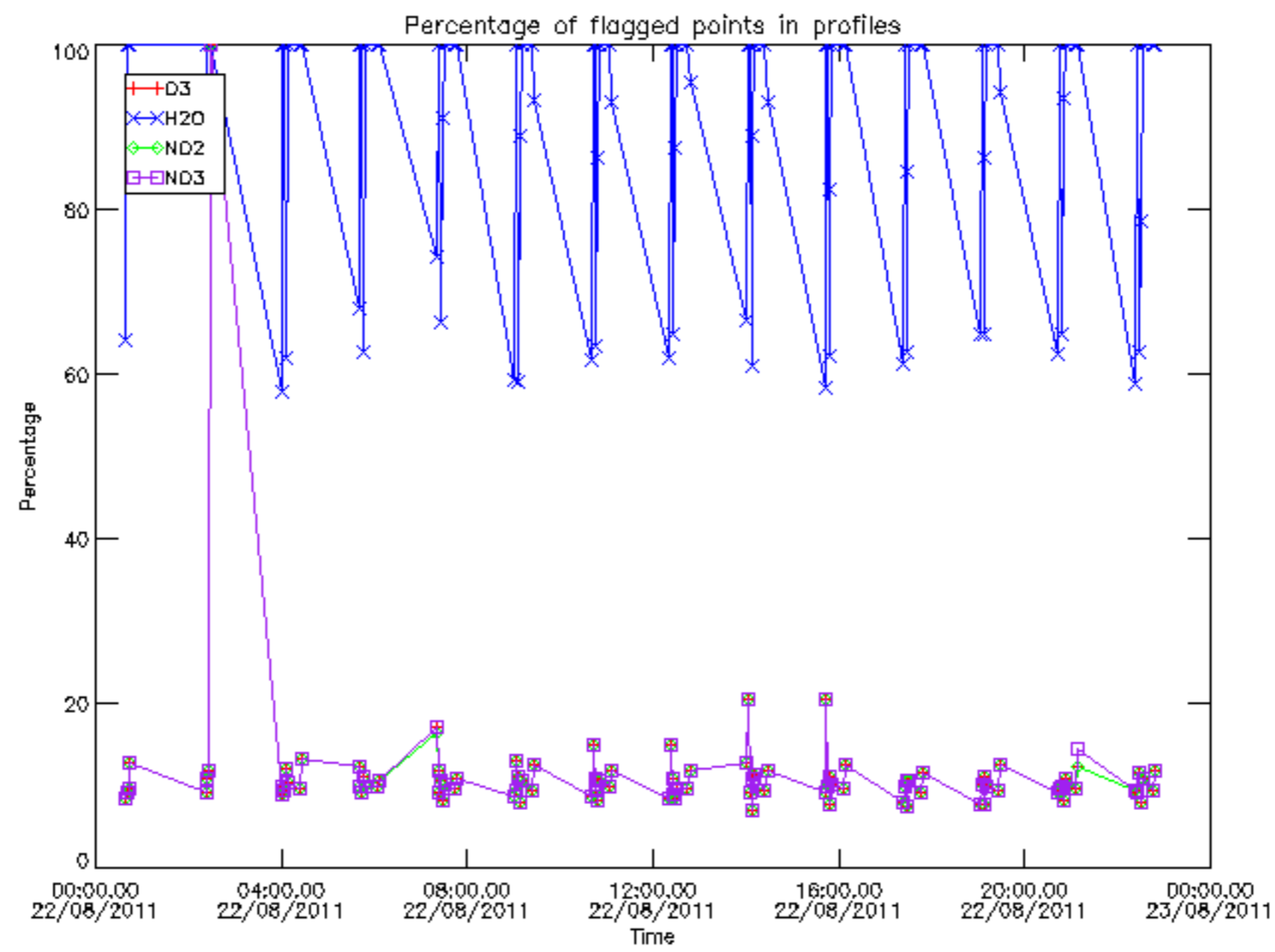


## 6. Auxiliary Data Files used for the production reported in section 2

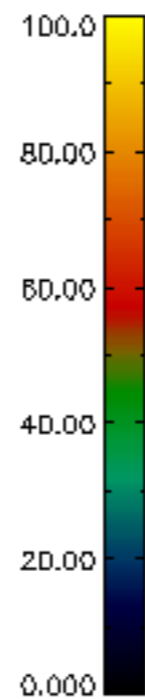
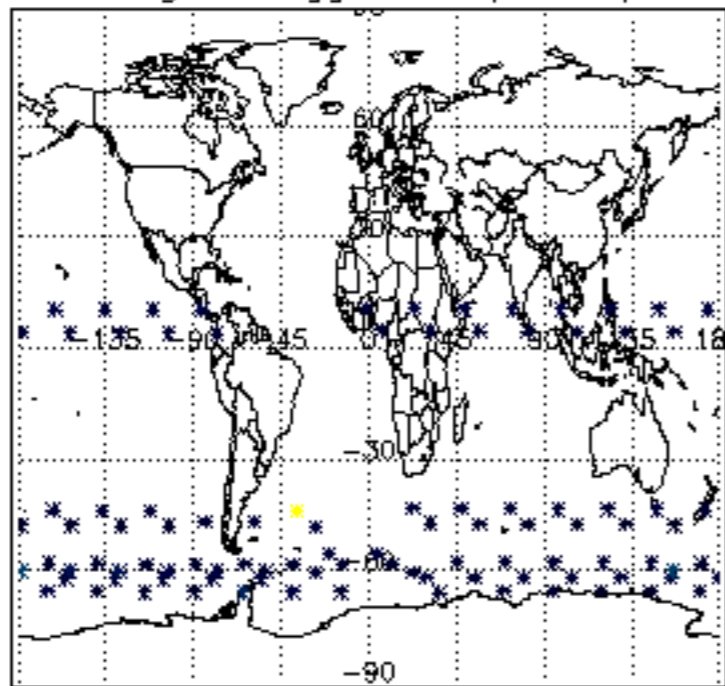
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	22-AUG-2011 00:01:20
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	22-AUG-2011 00:01:20
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	22-AUG-2011 00:01:20

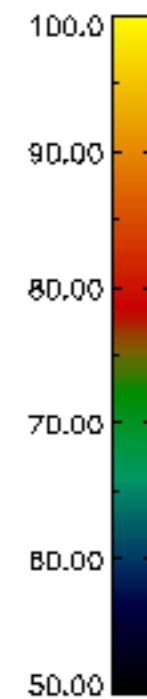
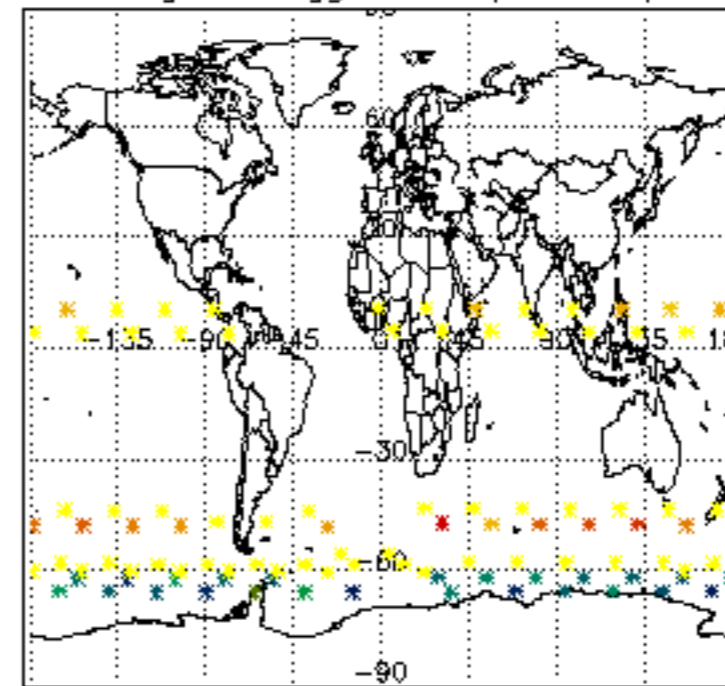




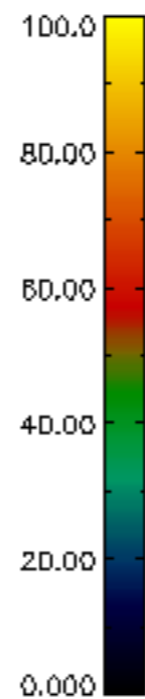
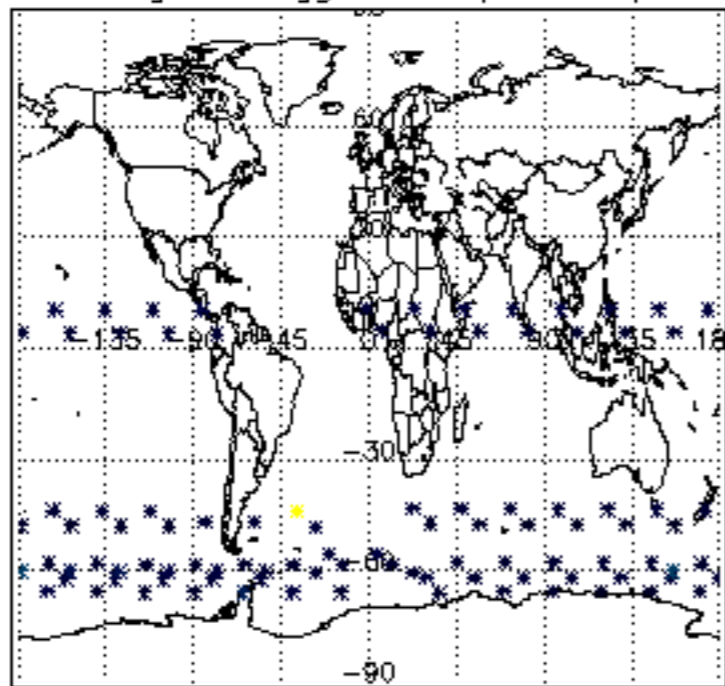
Percentage of flagged data per D3 profile



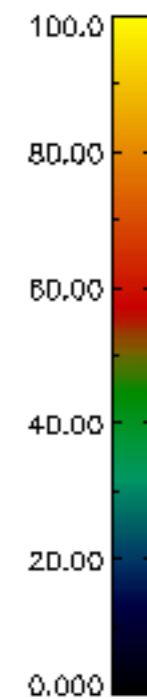
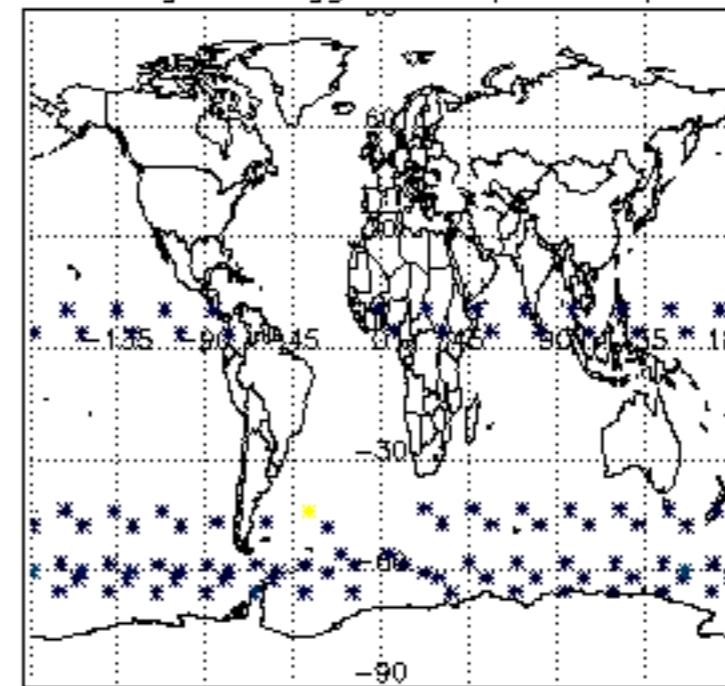
Percentage of flagged data per H2O profile

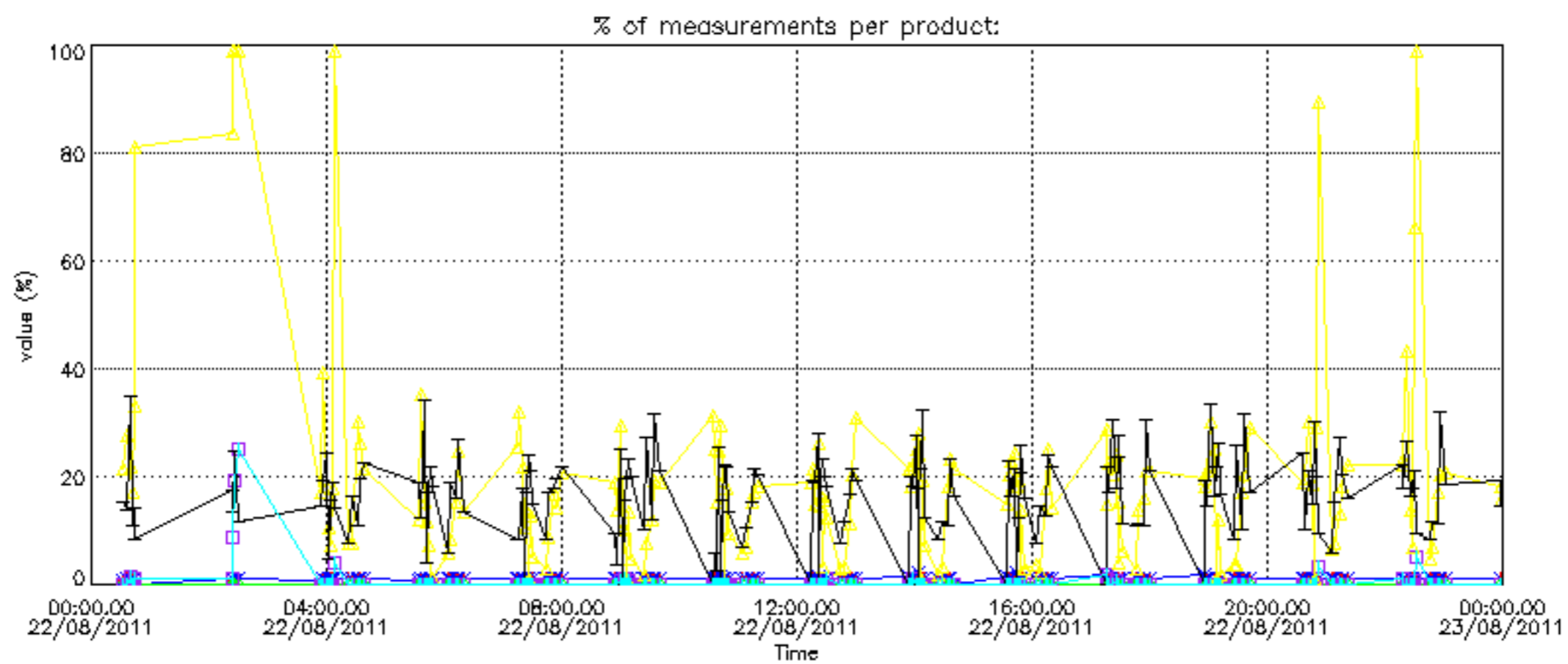
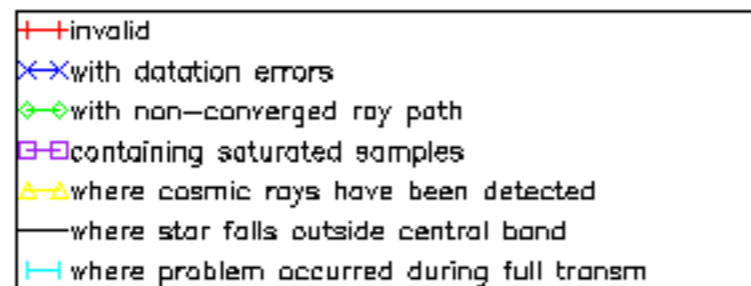


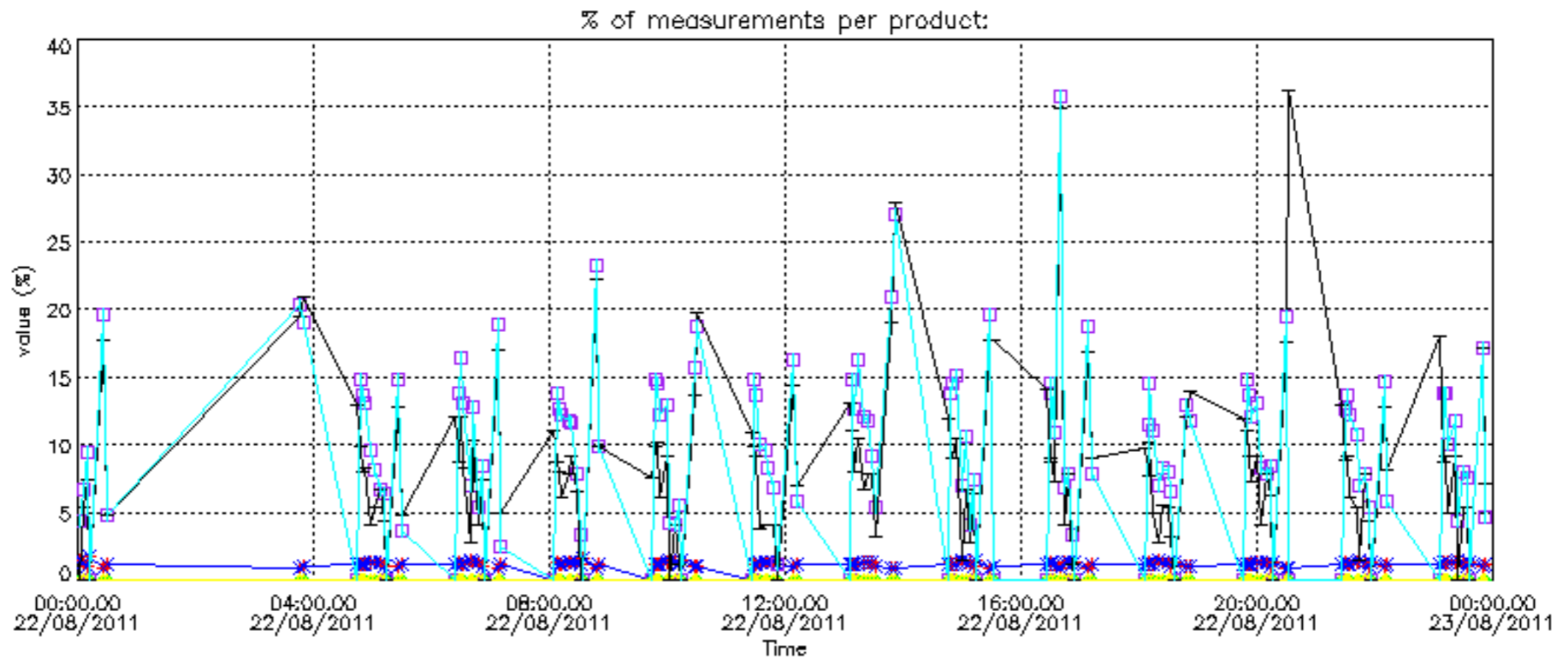
Percentage of flagged data per NO2 profile



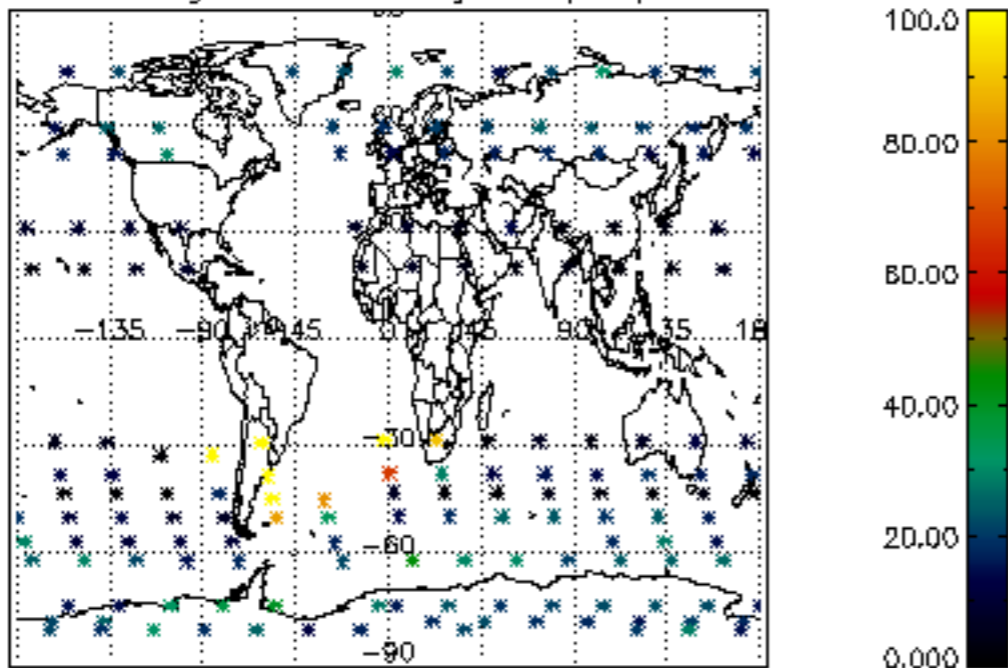
Percentage of flagged data per NO3 profile



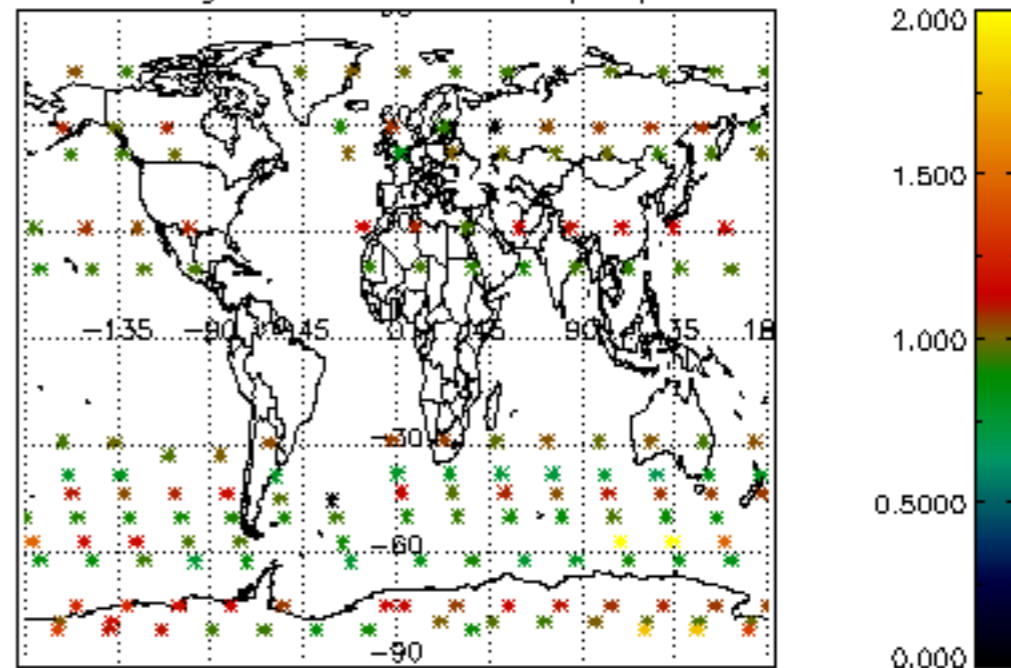




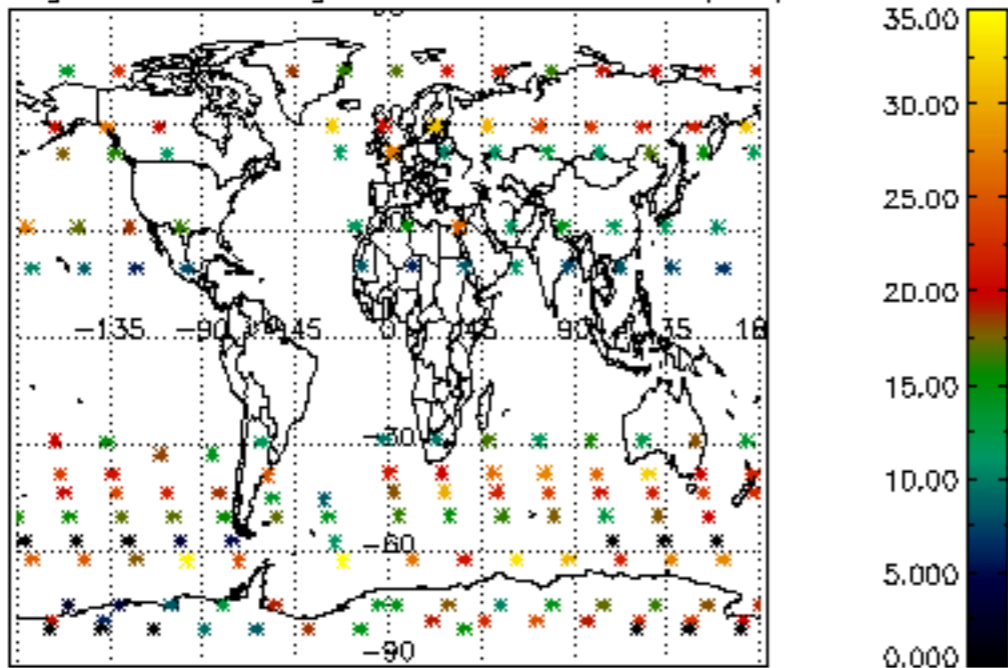
Percentage of cosmic ray hits per profile



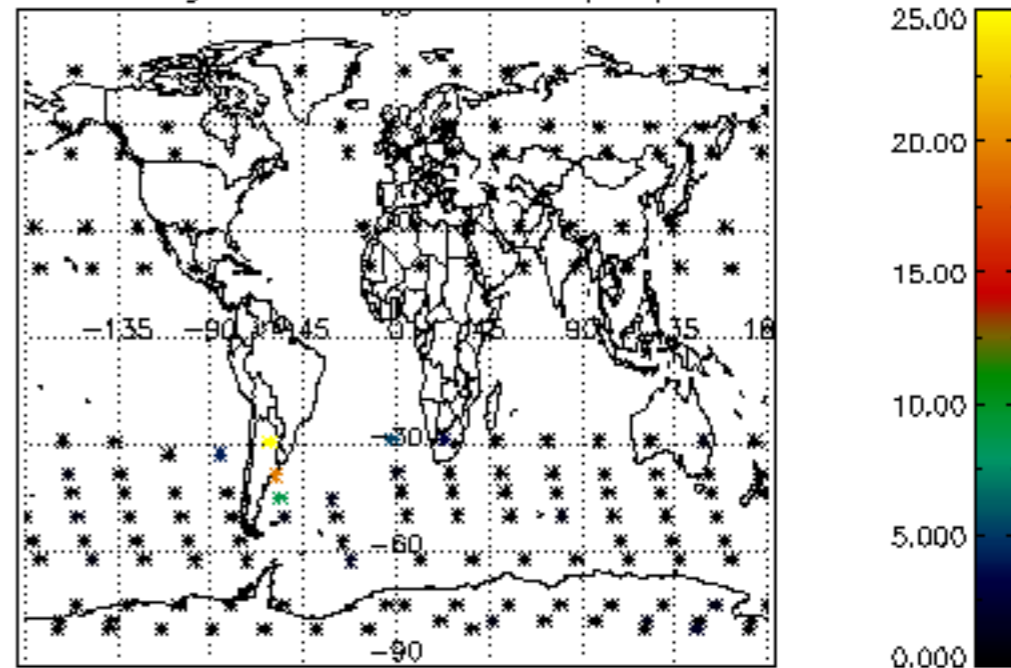
Percentage of datation errors per profile



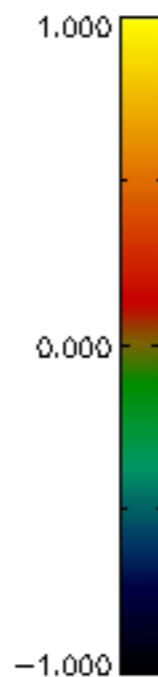
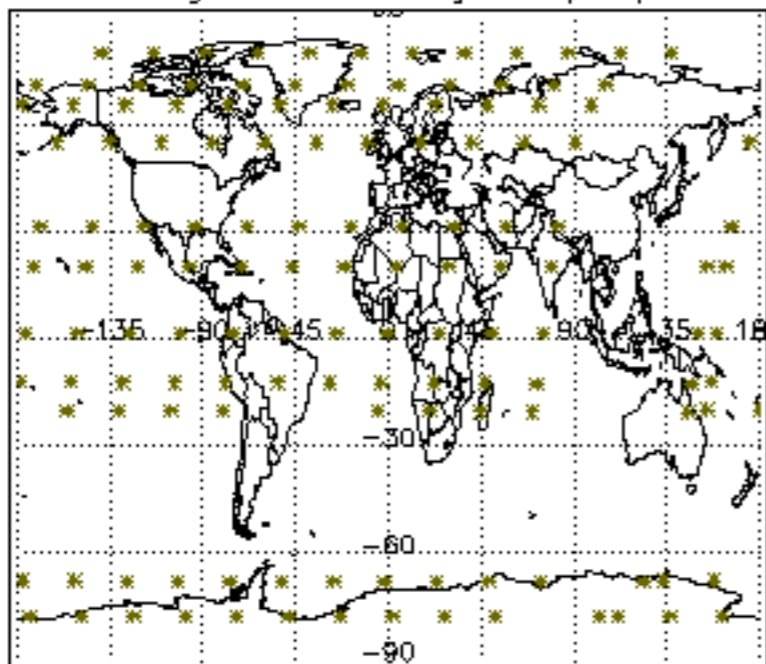
Percentage of star falling outside central band per profile



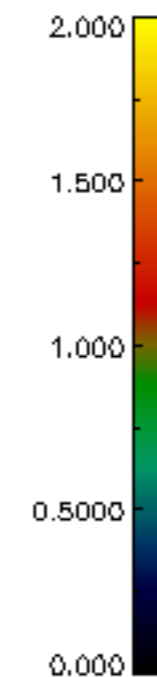
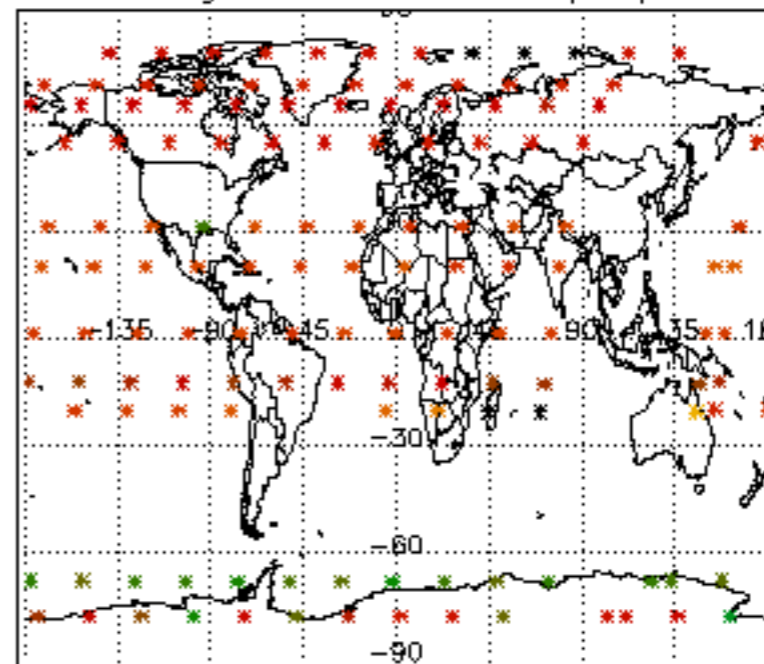
Percentage of saturation errors per profile



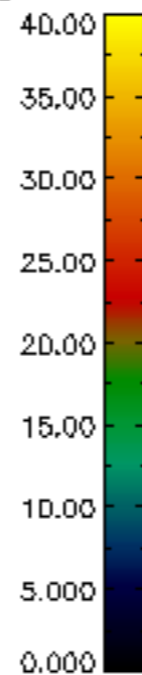
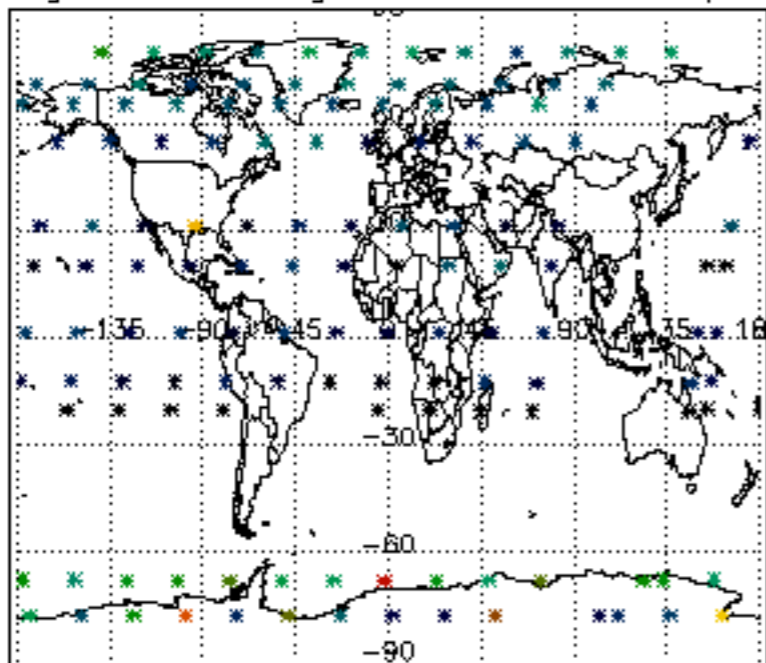
Percentage of cosmic ray hits per profile



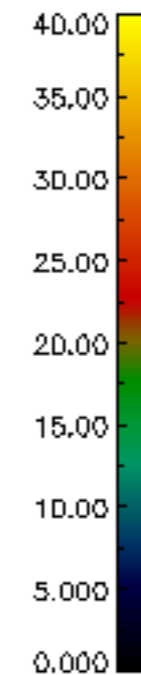
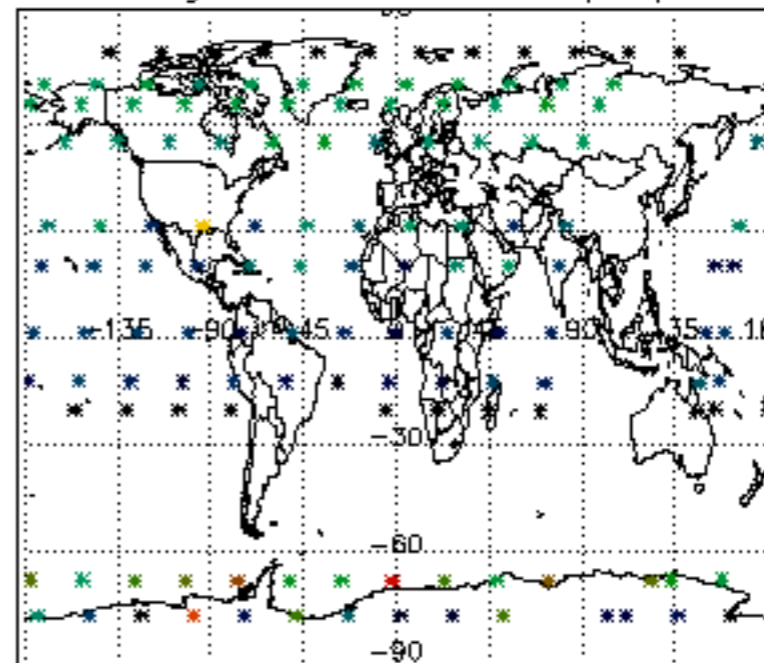
Percentage of datation errors per profile

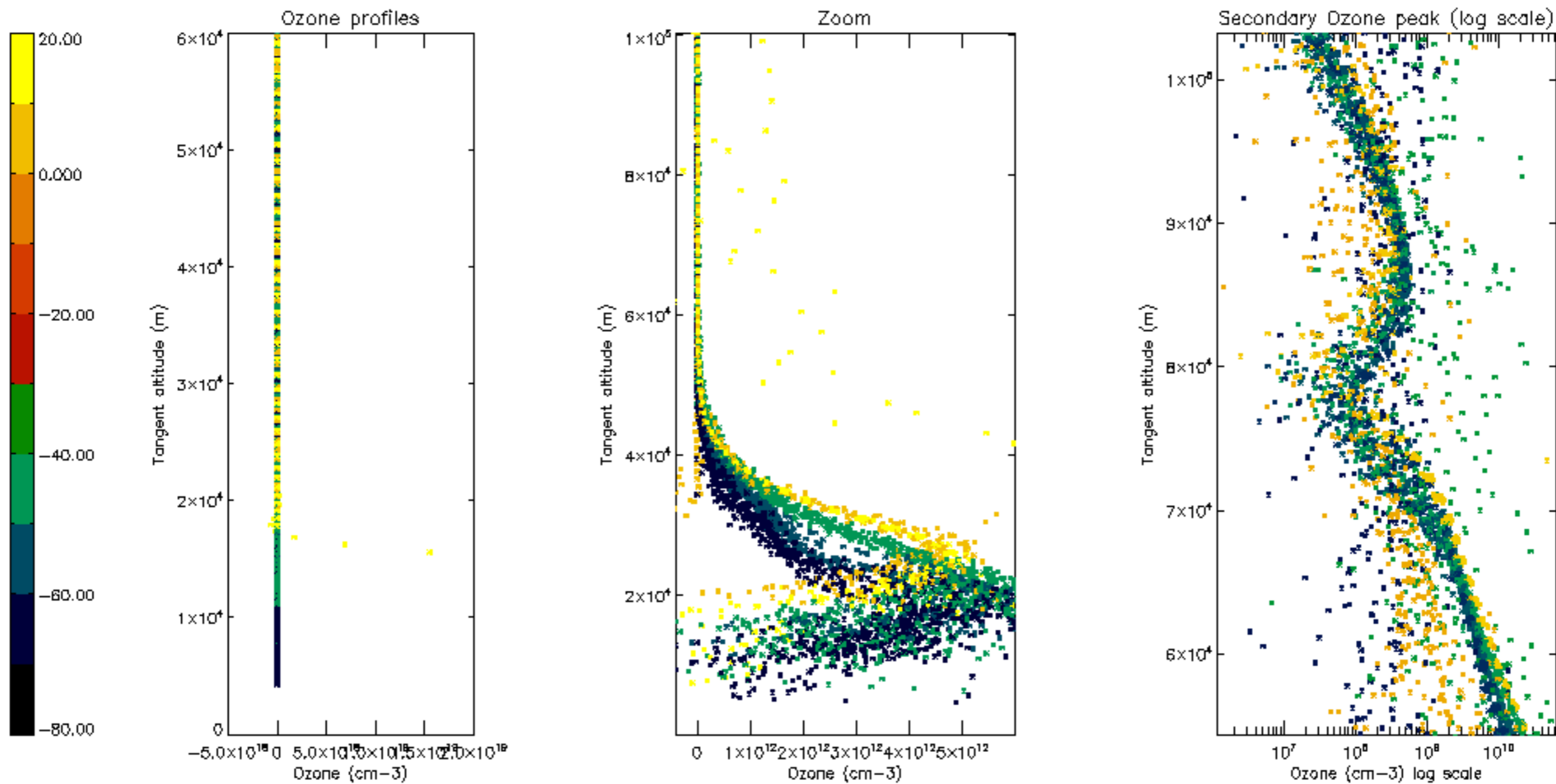


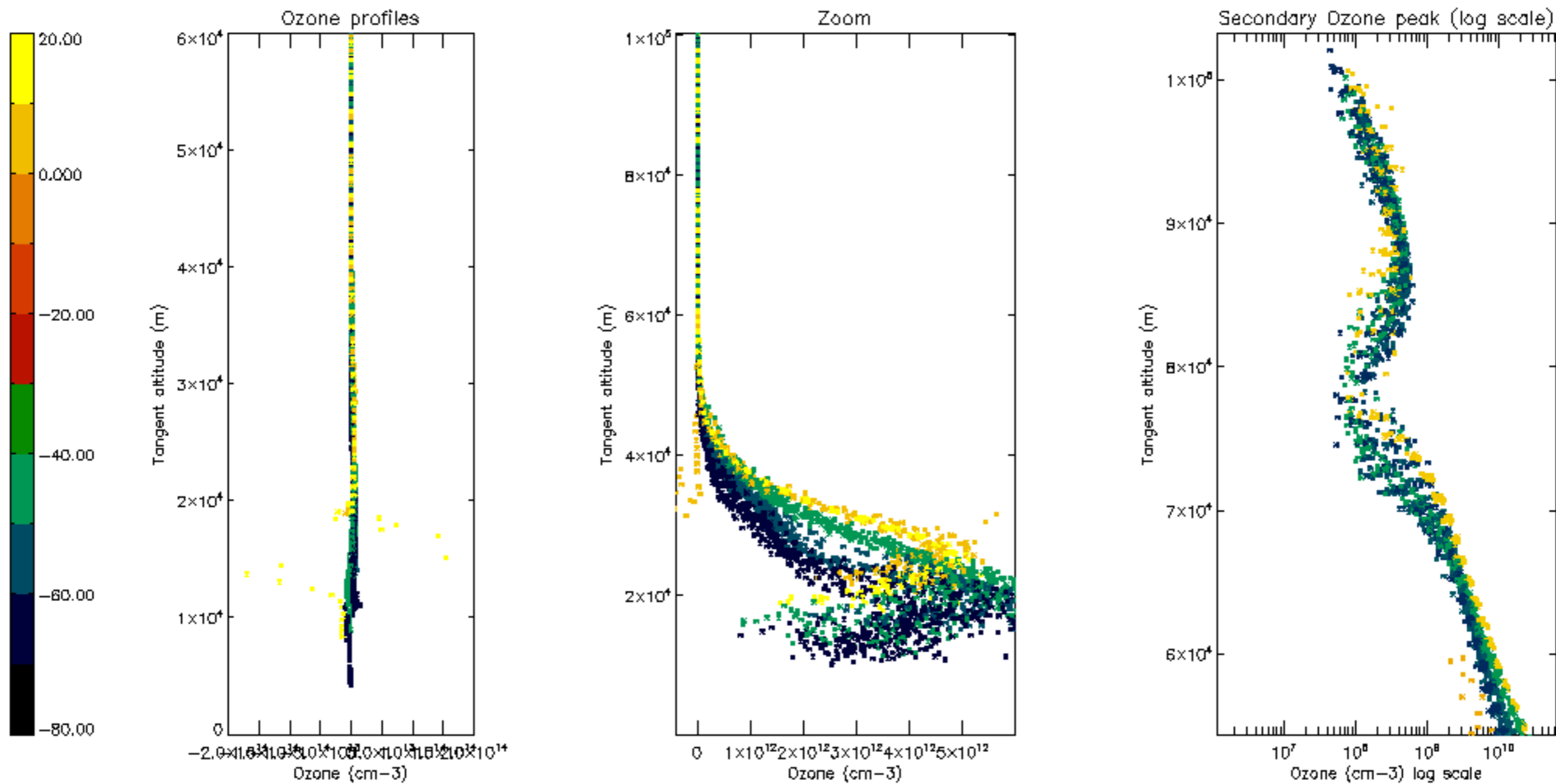
Percentage of star falling outside central band per profile



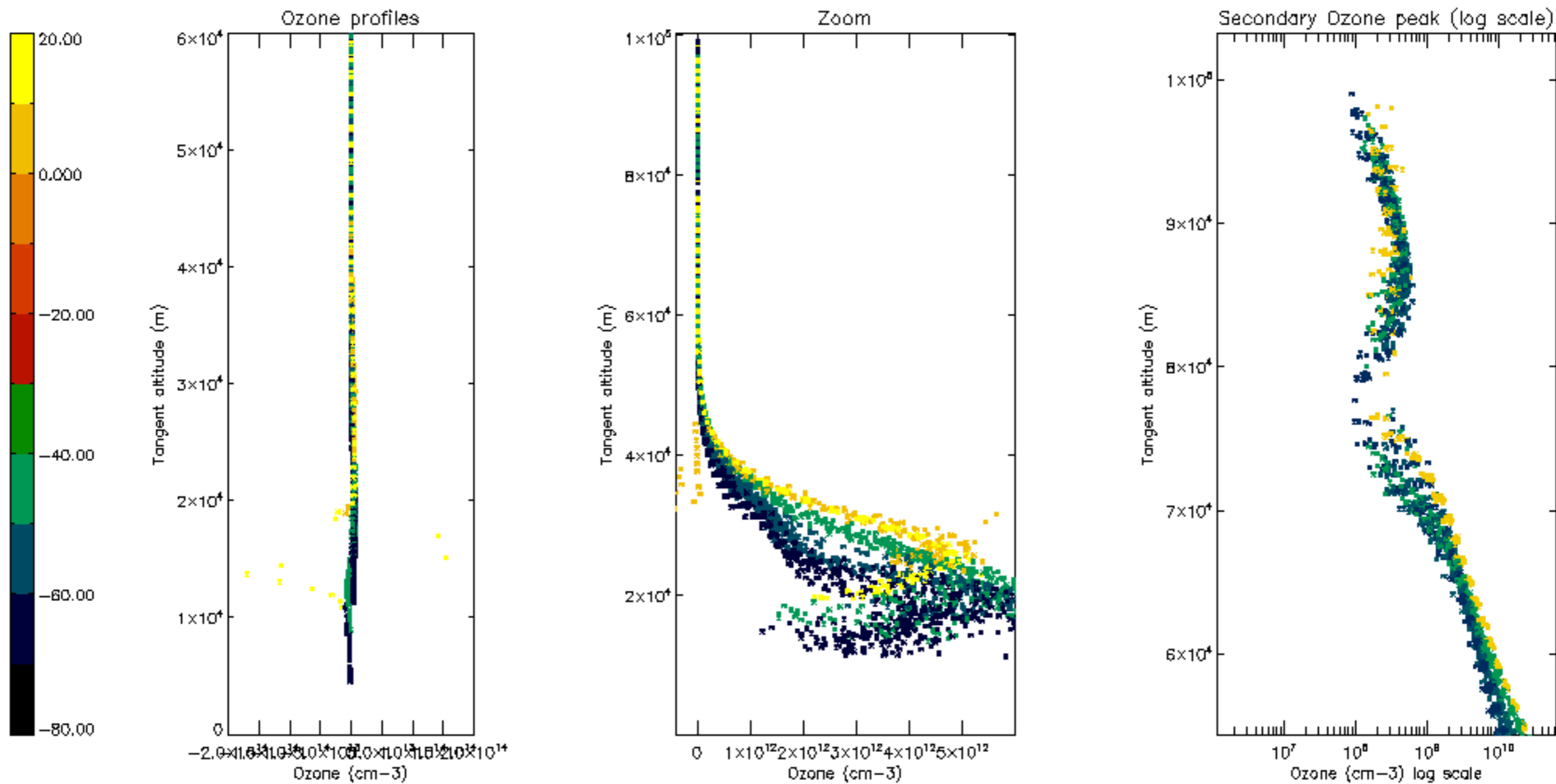
Percentage of saturation errors per profile

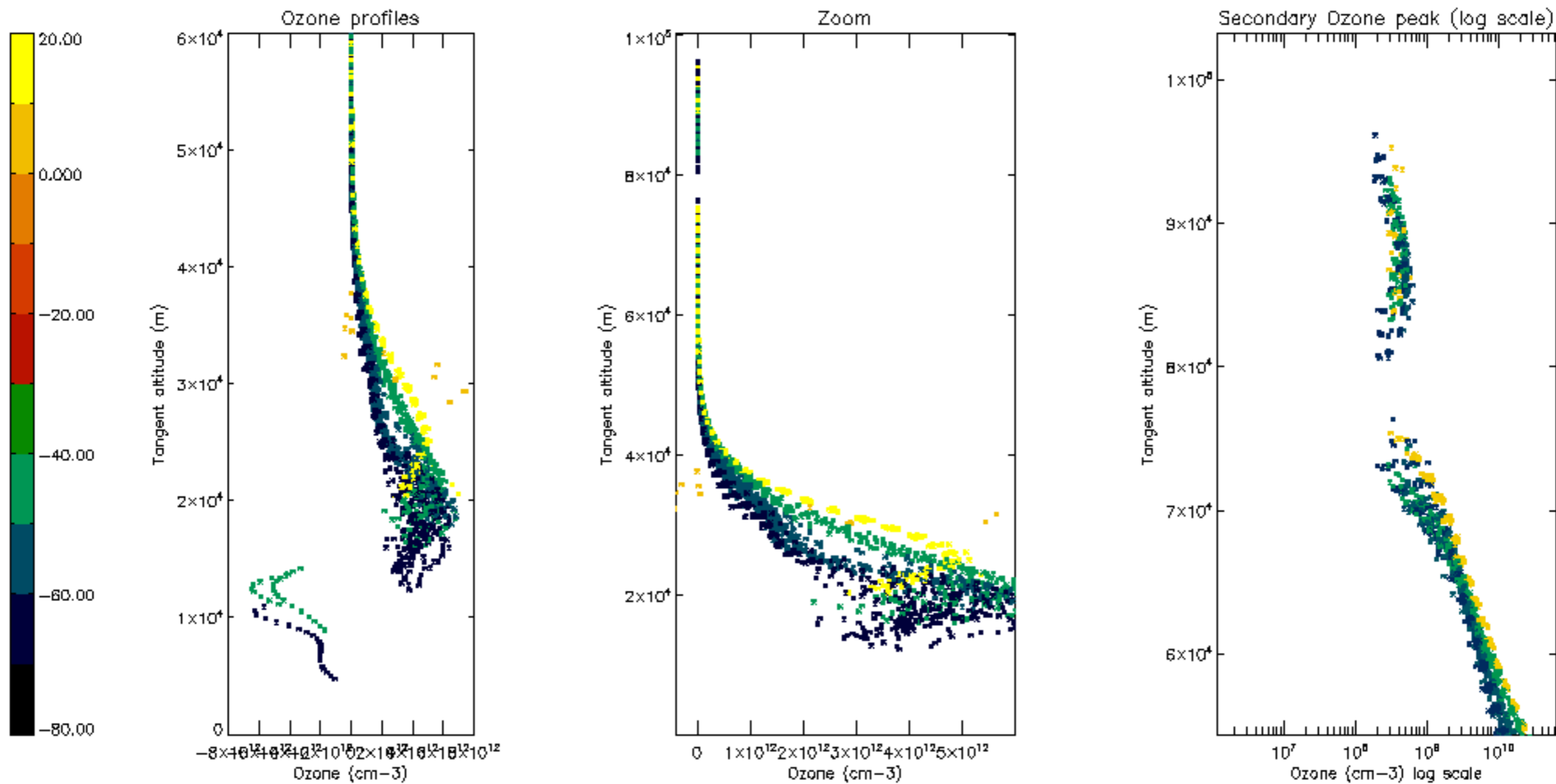


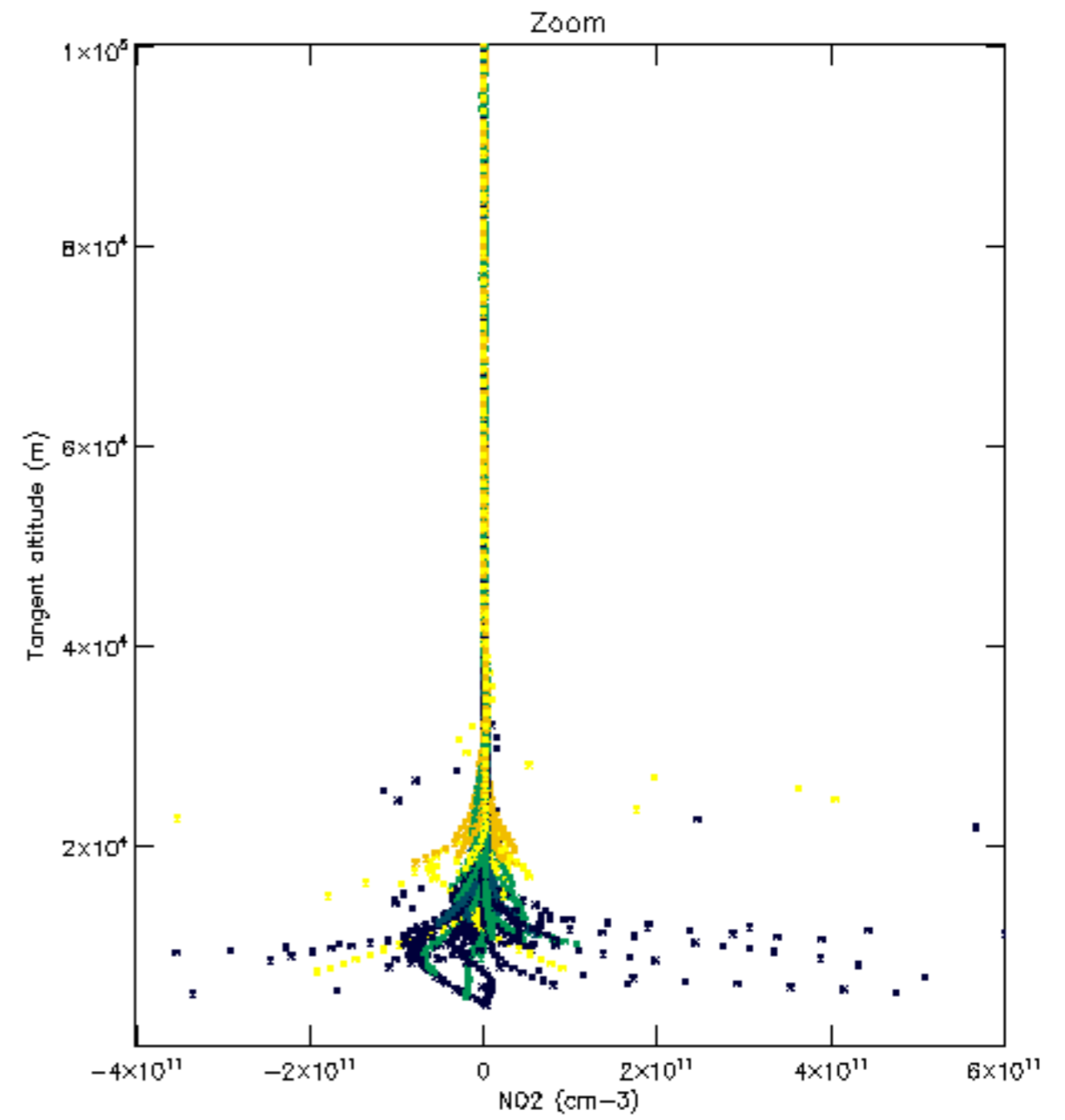
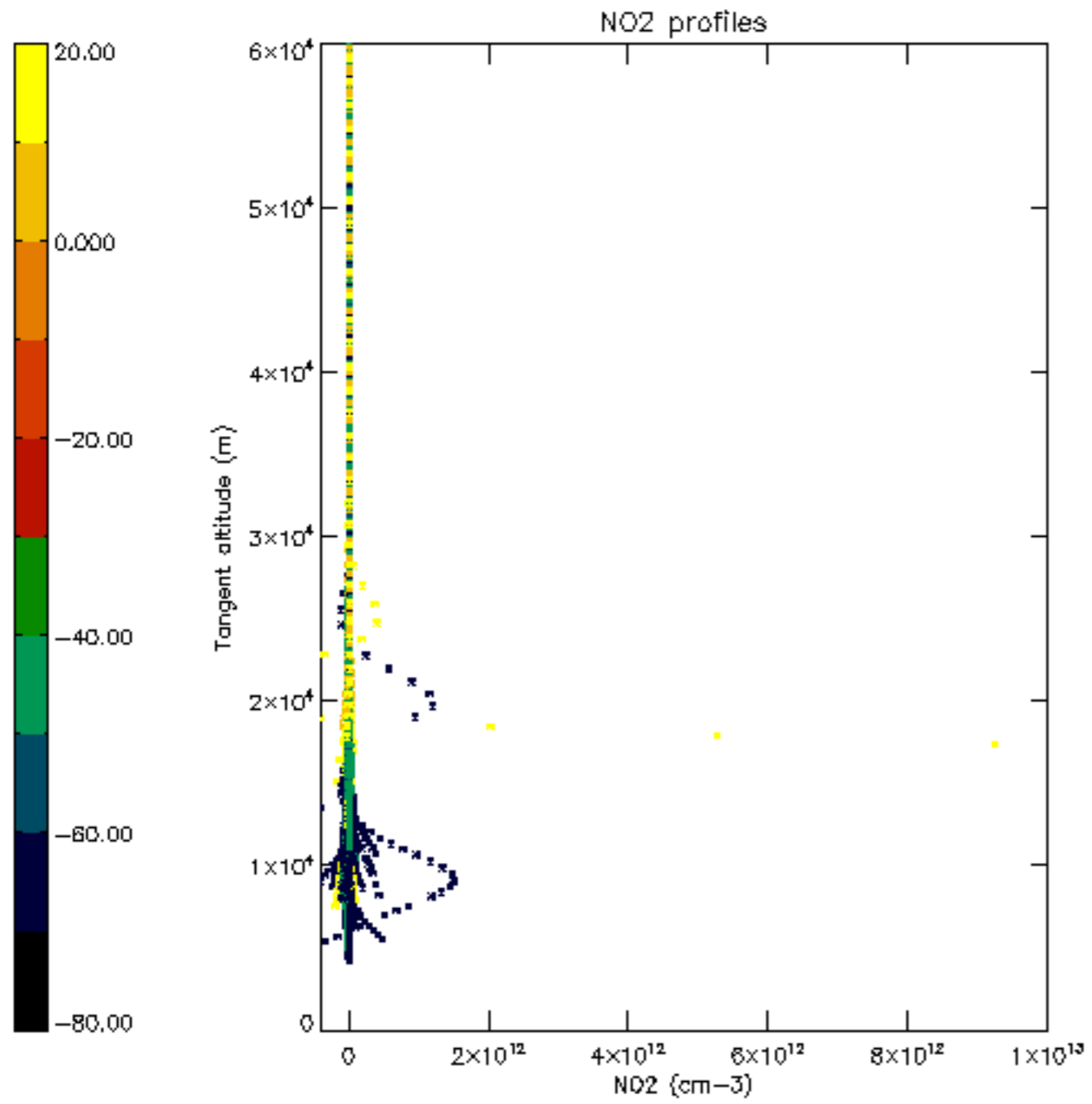


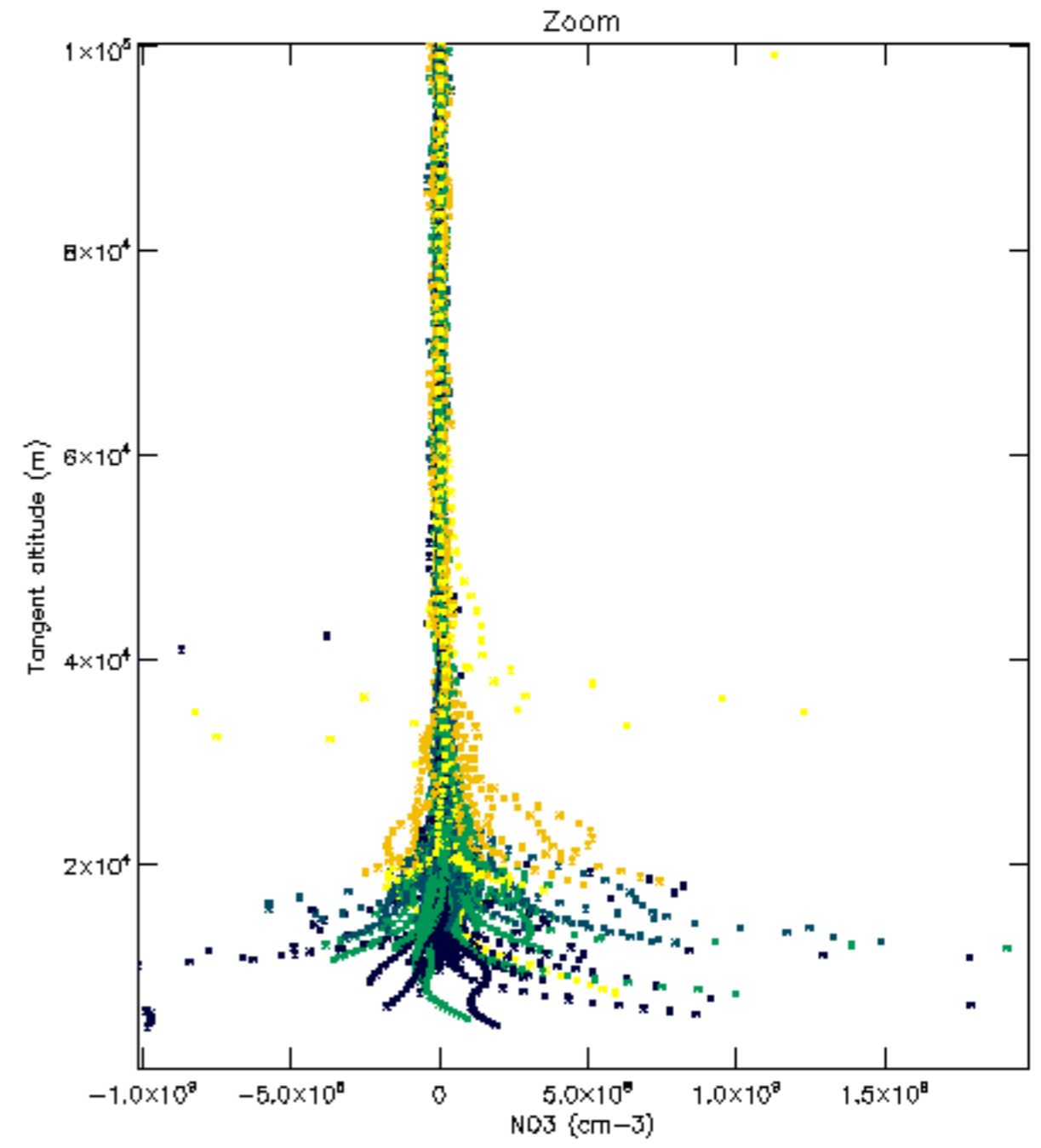
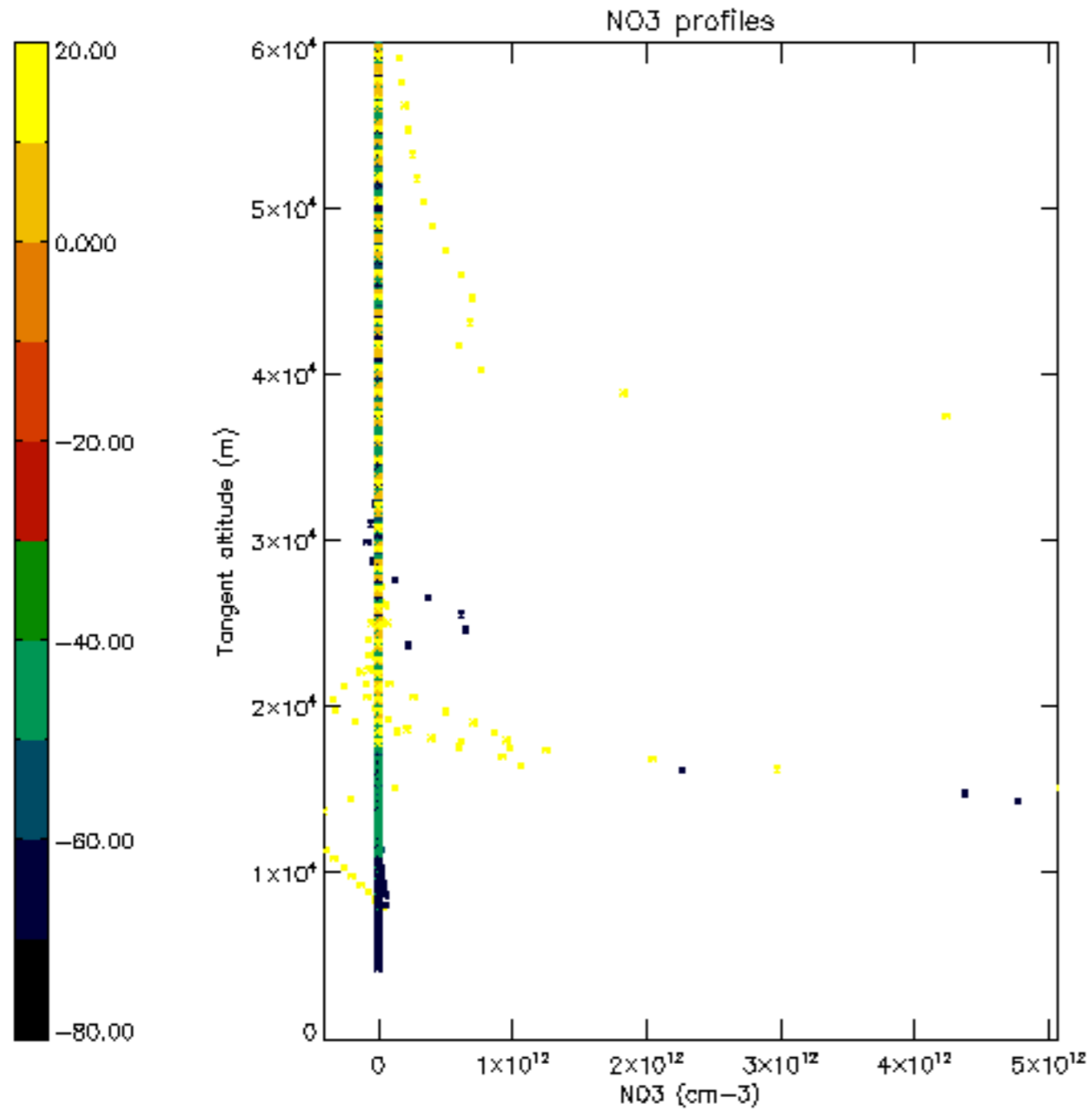


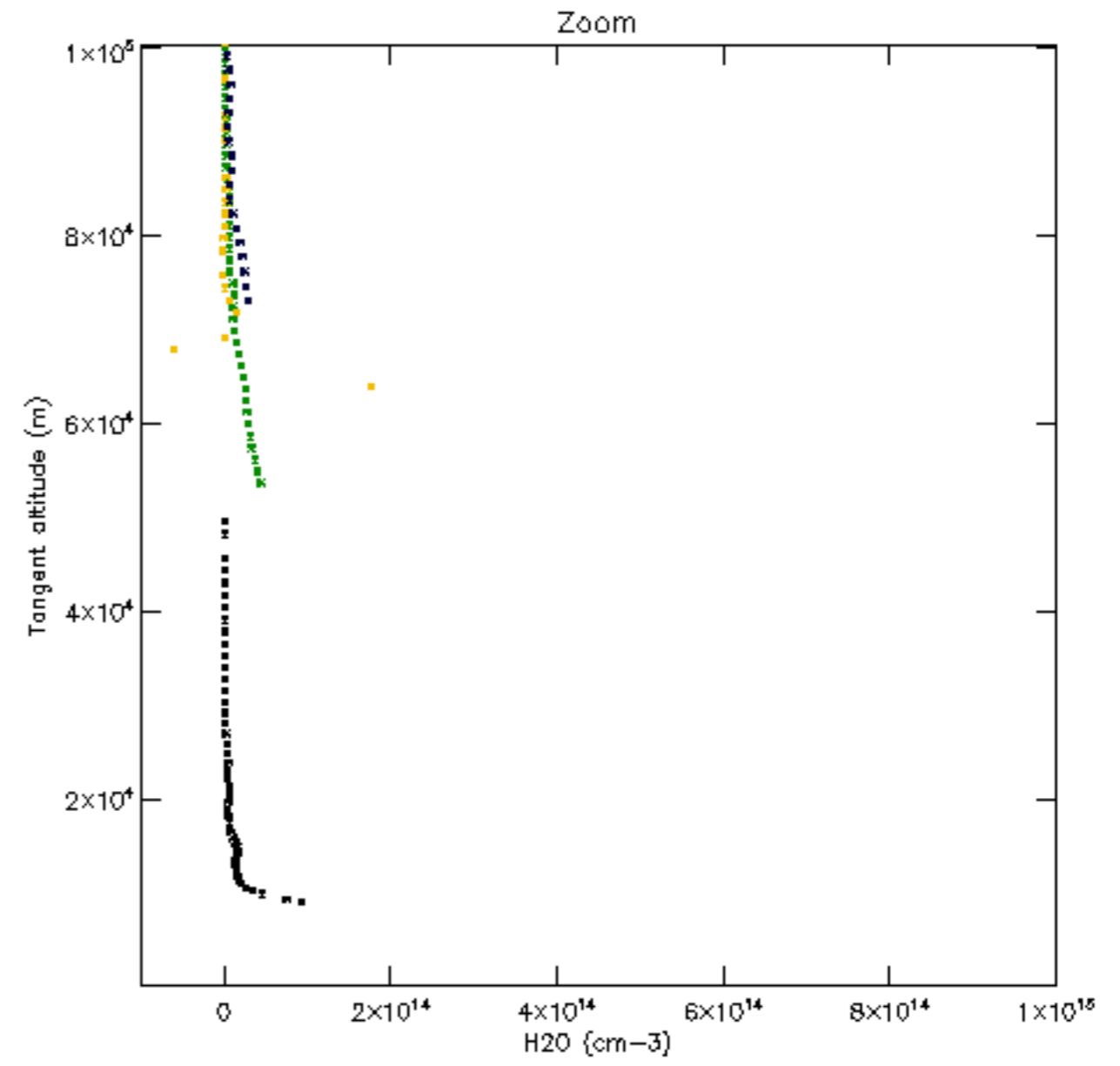
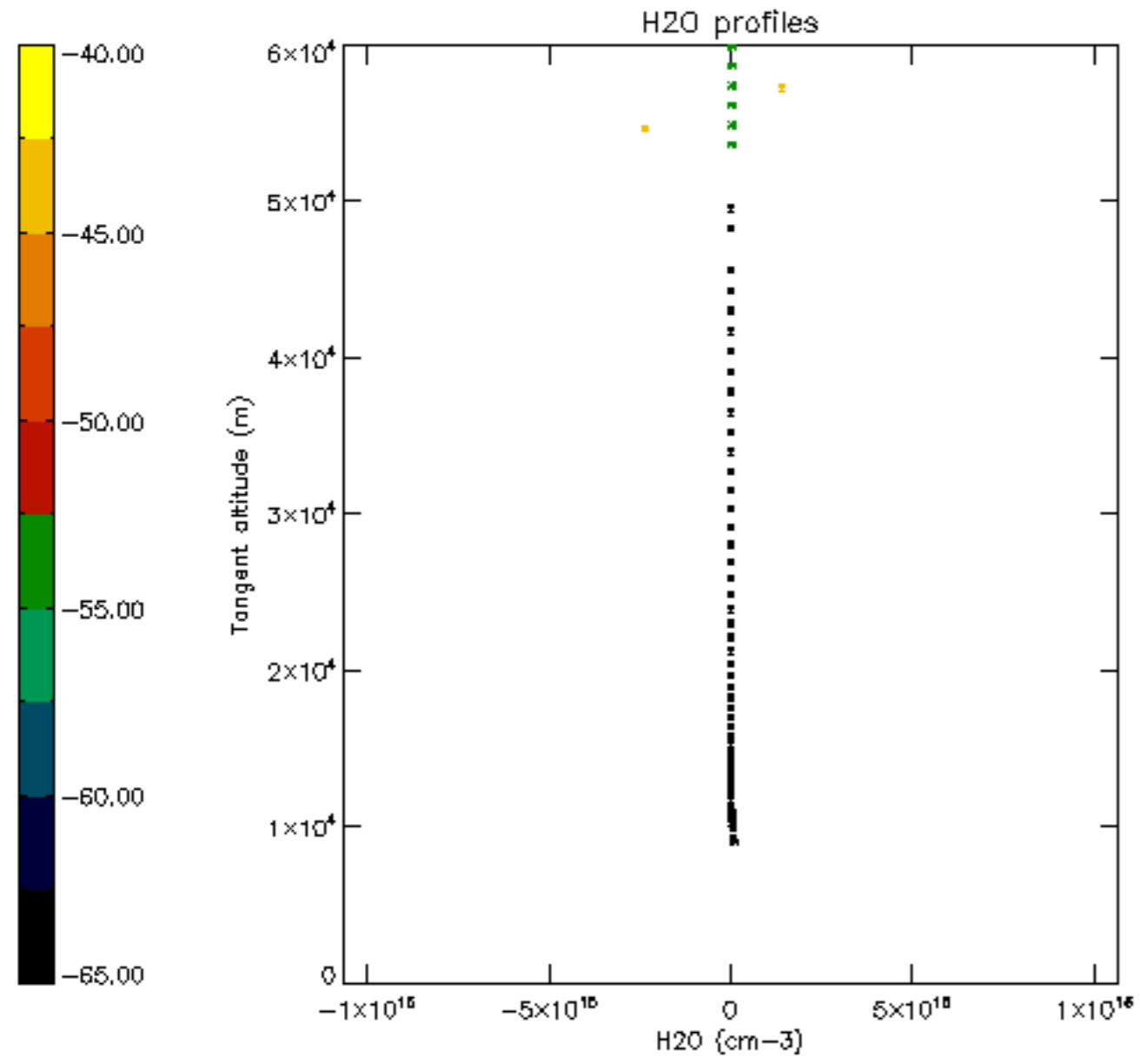


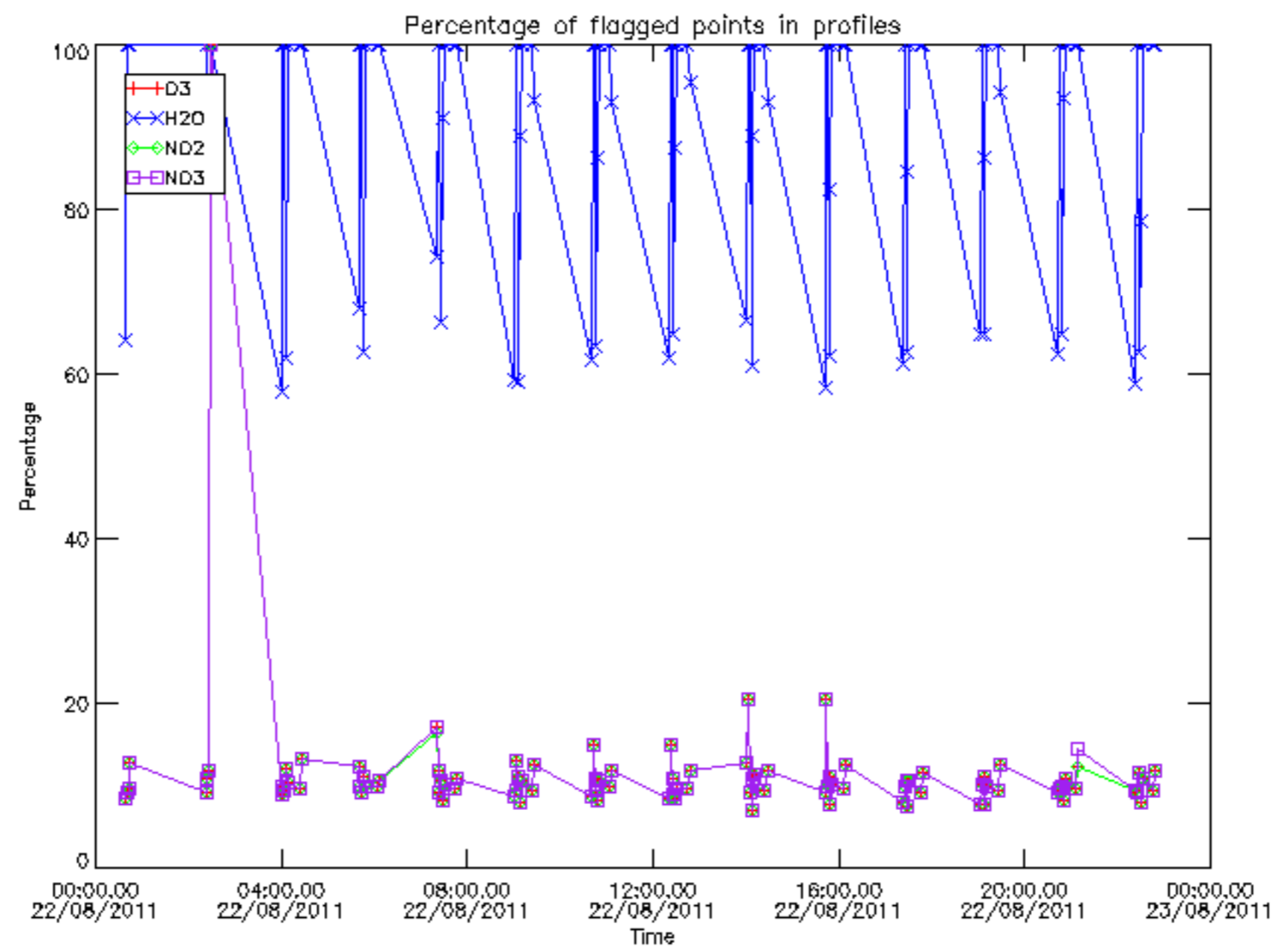




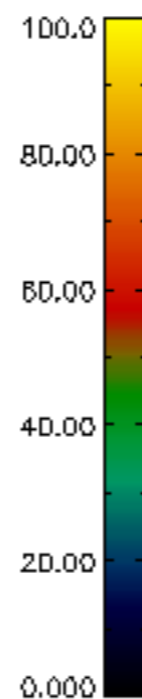
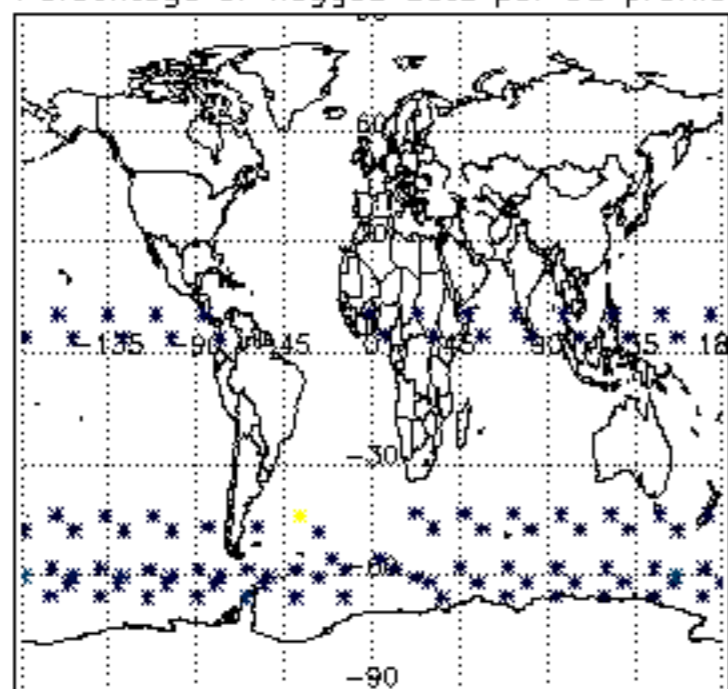




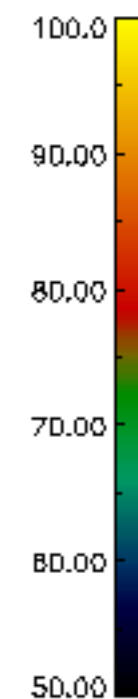
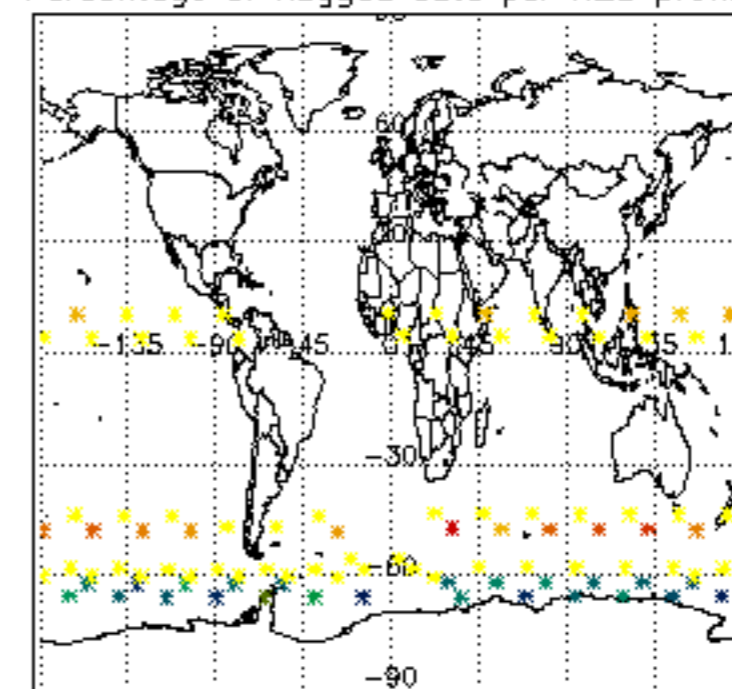




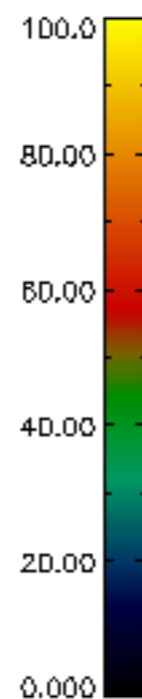
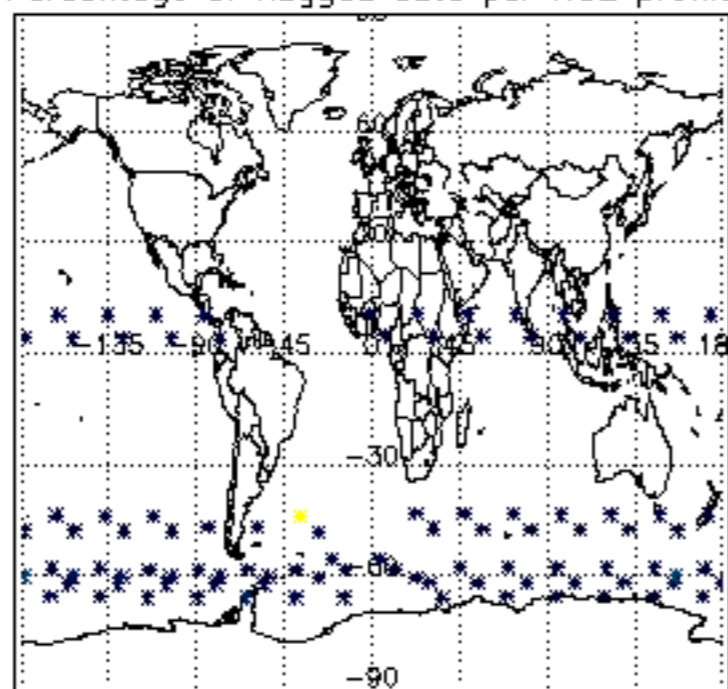
Percentage of flagged data per D3 profile



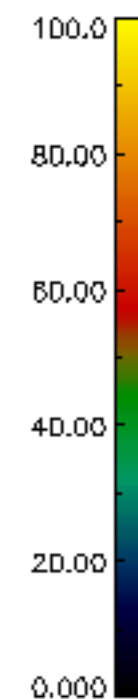
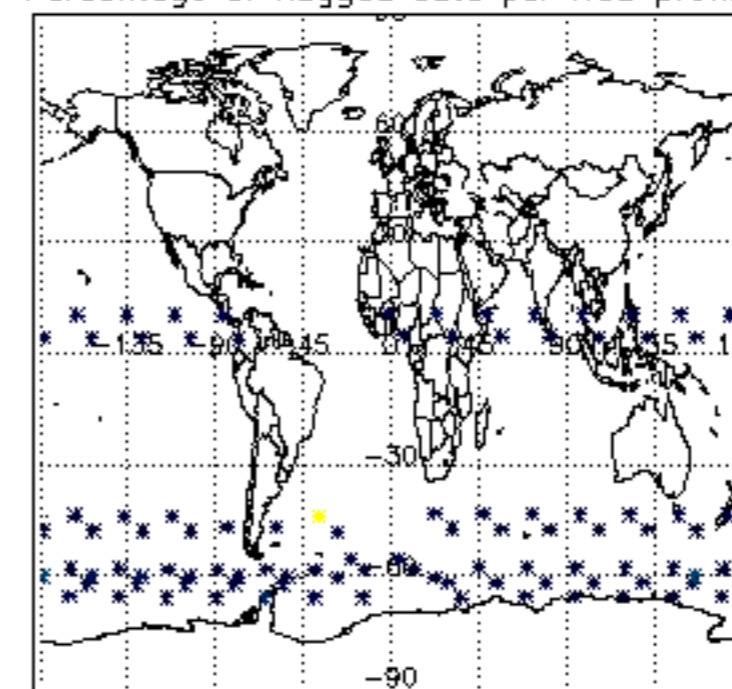
Percentage of flagged data per H2O profile

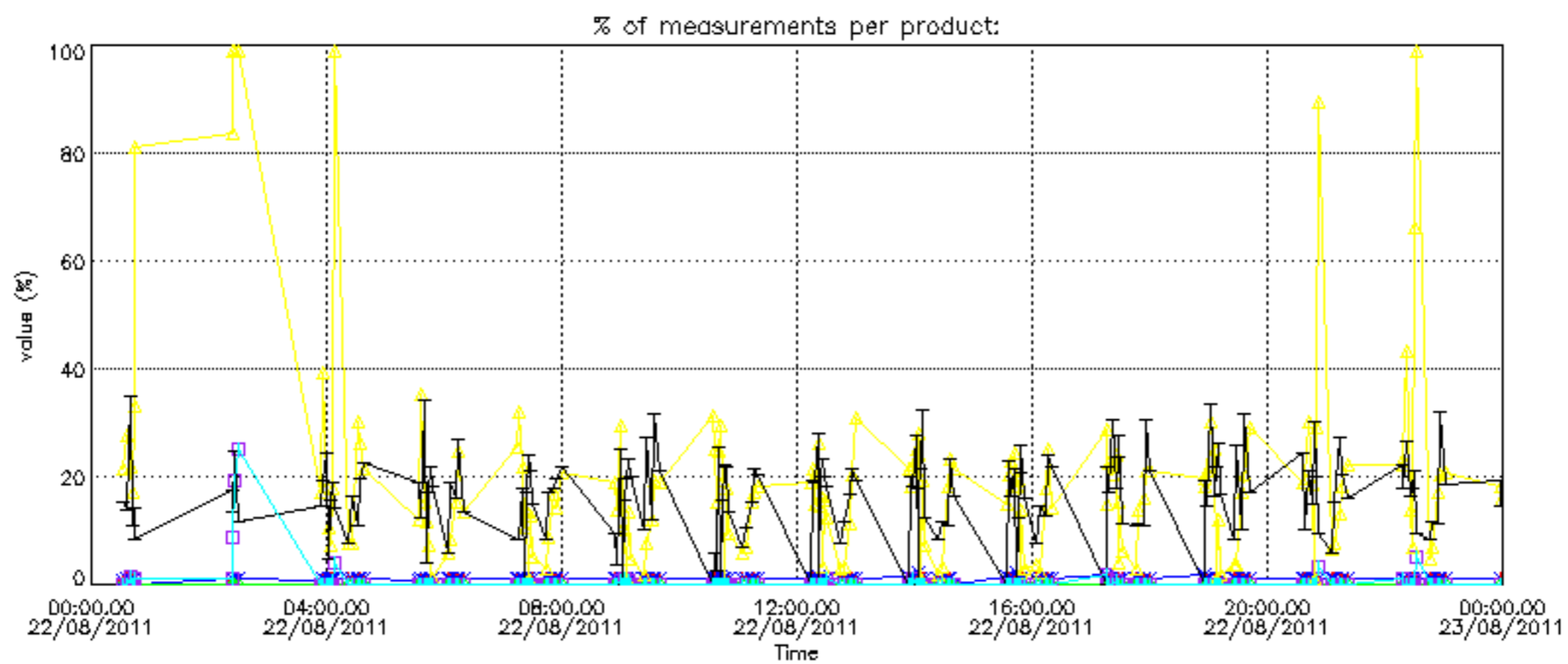
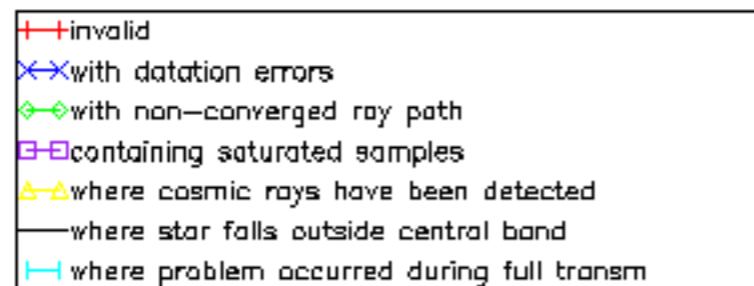


Percentage of flagged data per NO2 profile

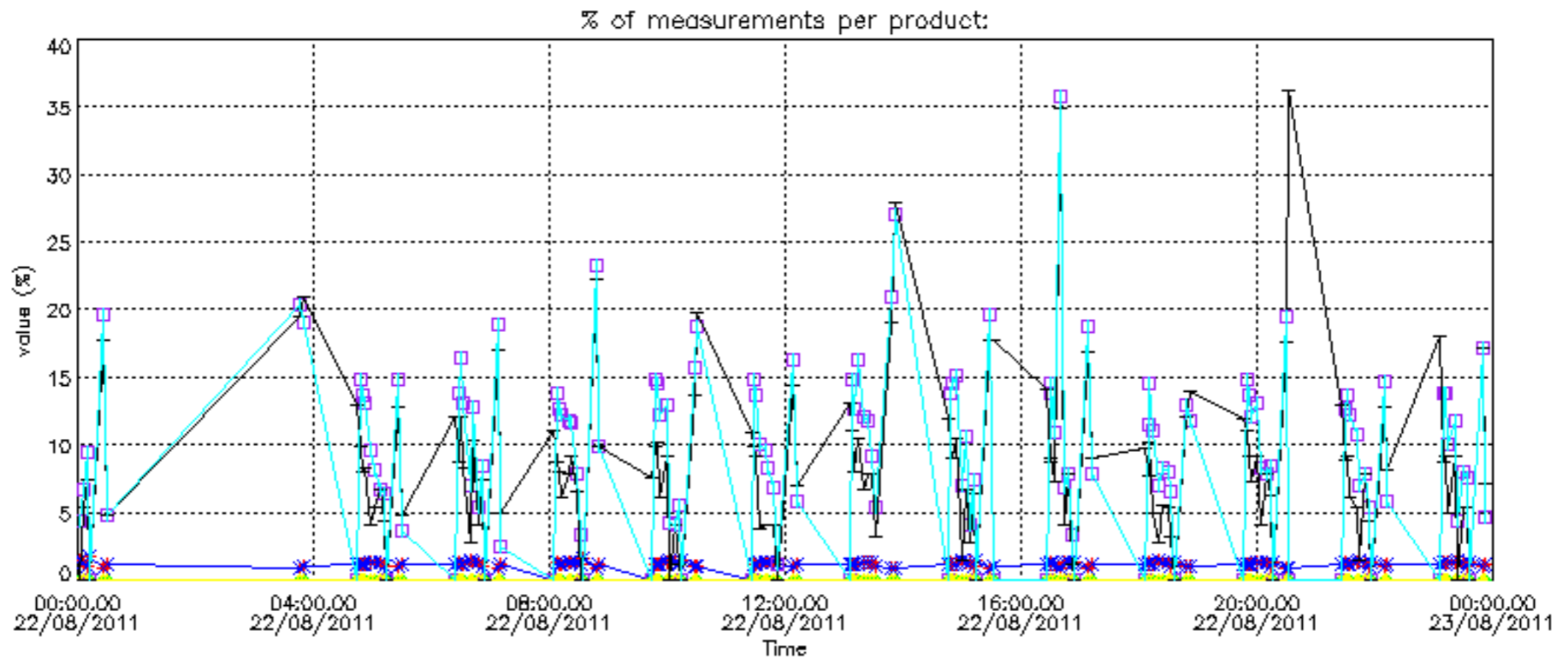


Percentage of flagged data per NO3 profile

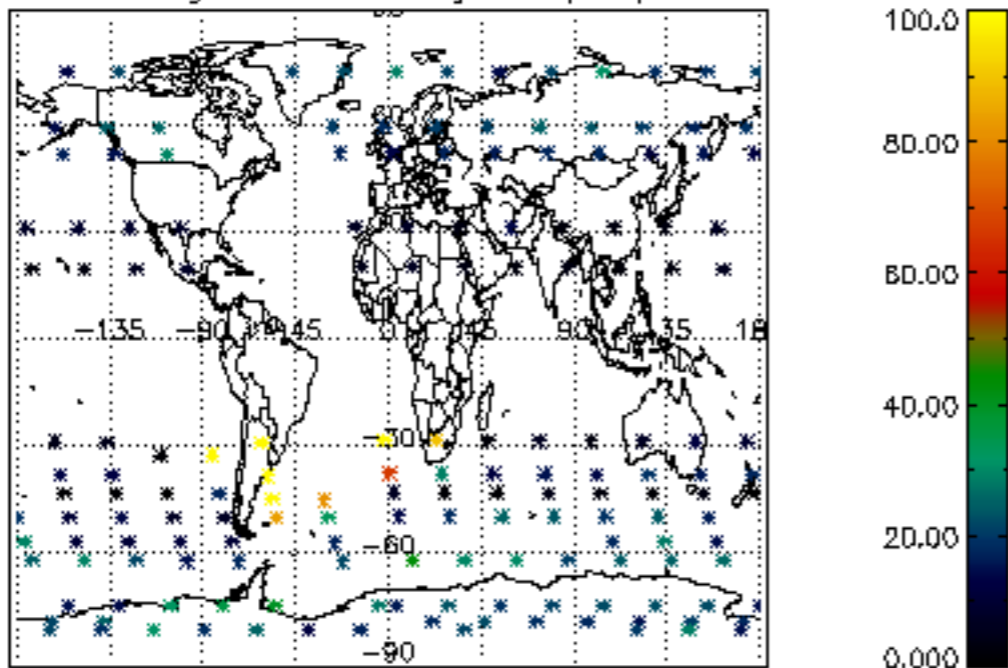




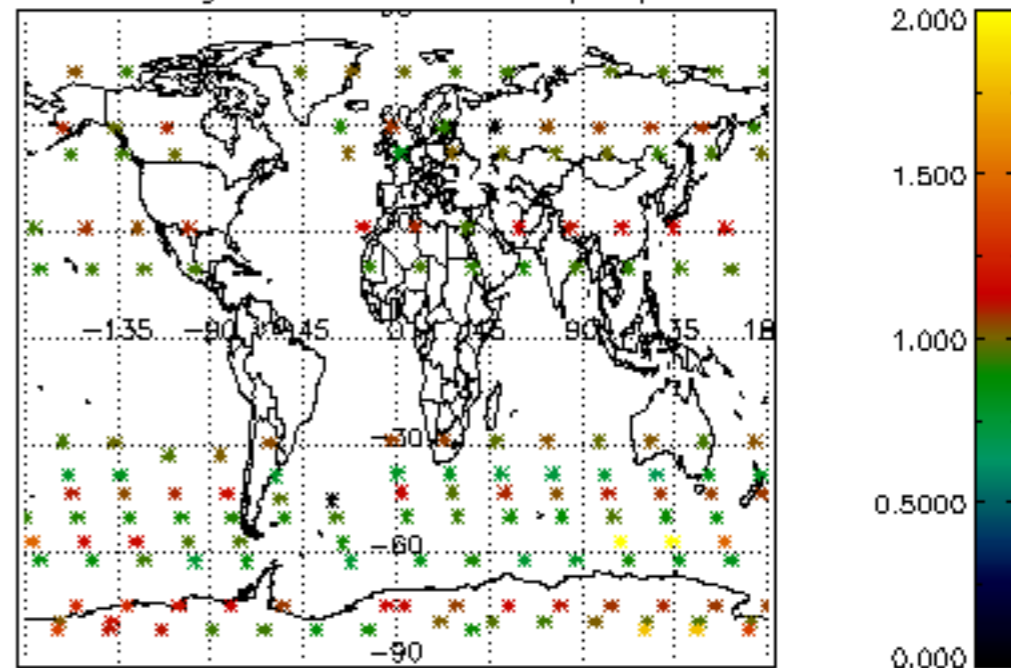




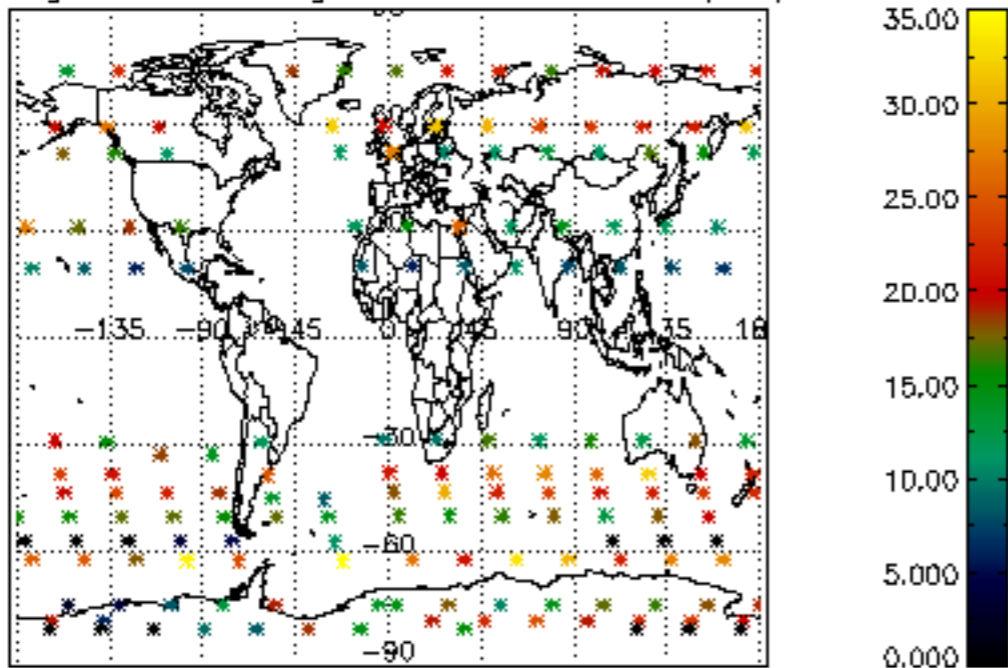
Percentage of cosmic ray hits per profile



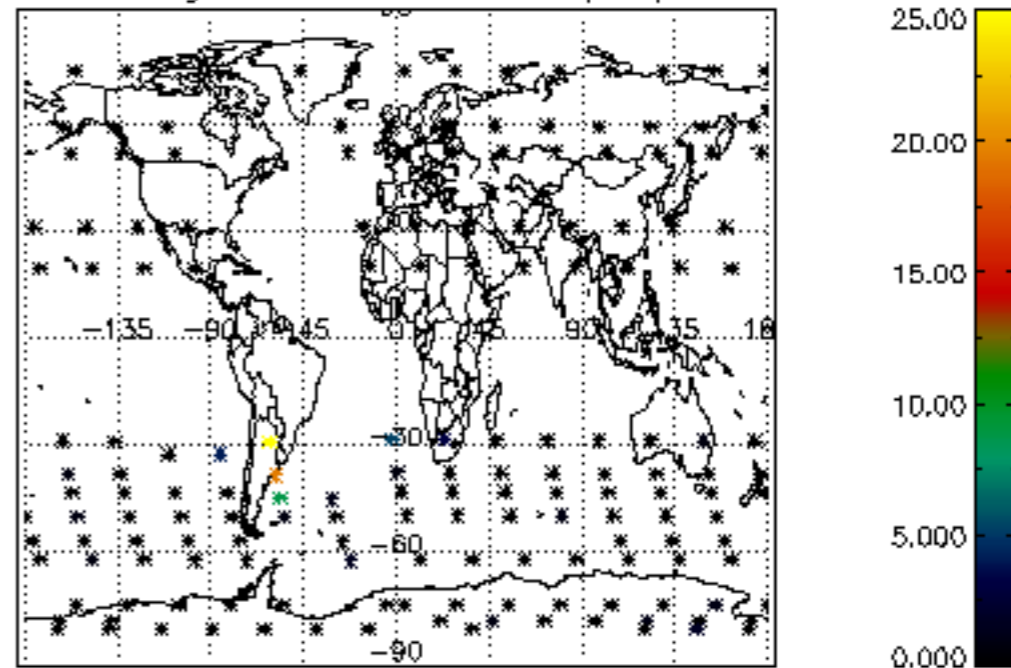
Percentage of datation errors per profile



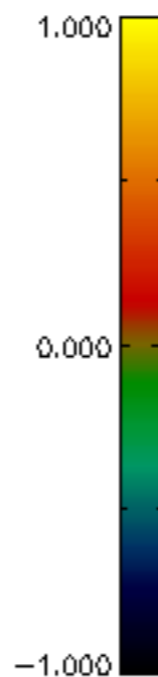
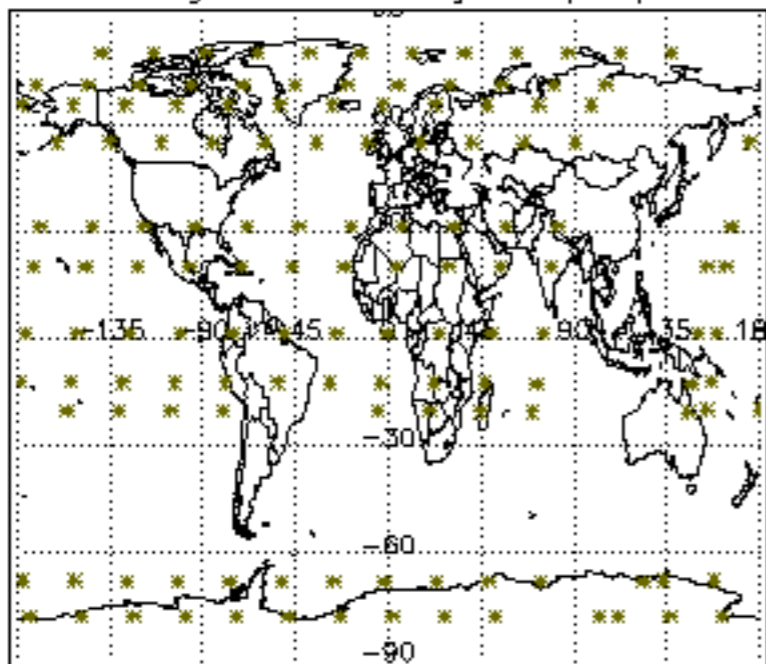
Percentage of star falling outside central band per profile



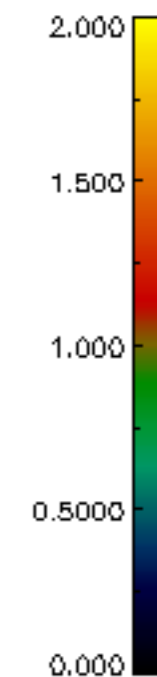
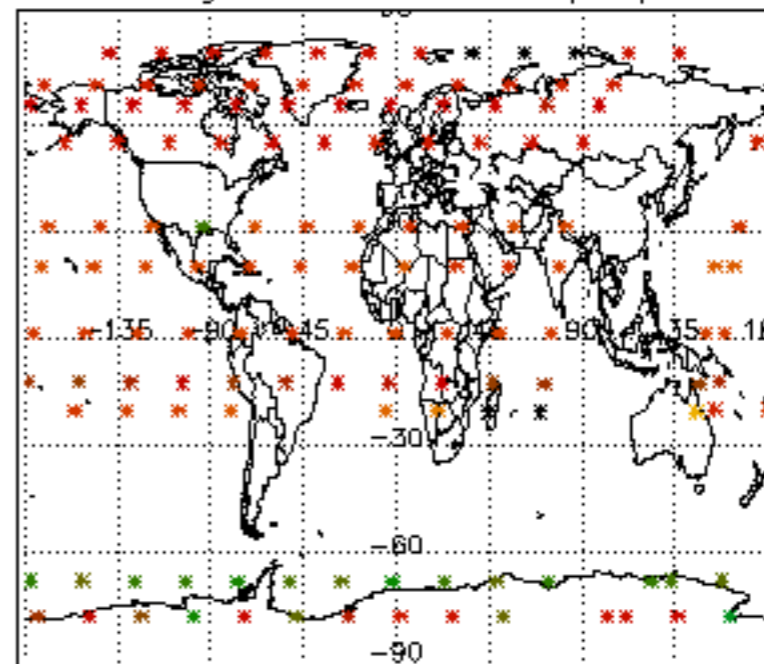
Percentage of saturation errors per profile



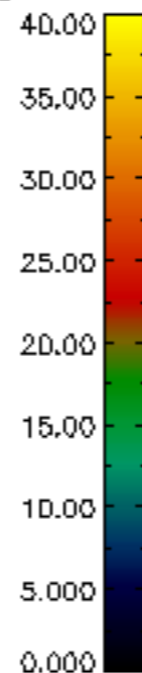
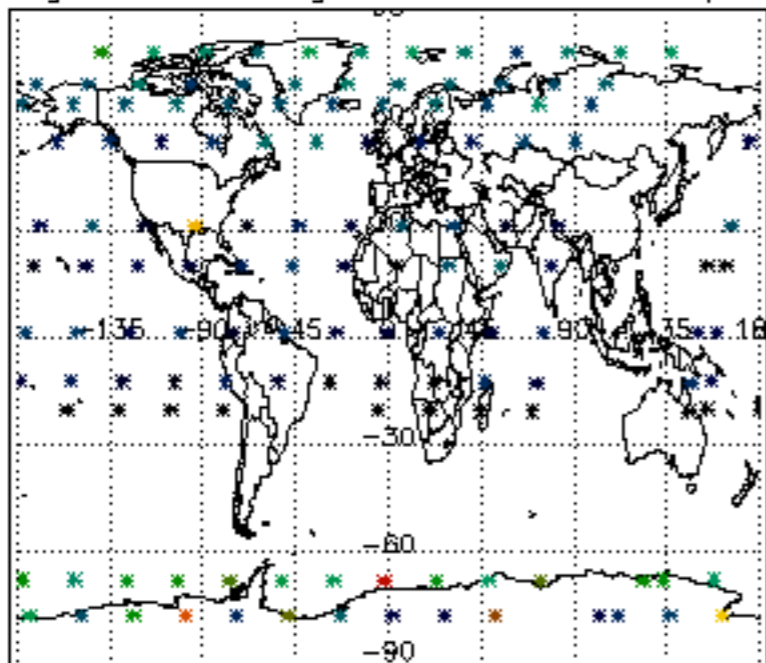
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

