

# 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	18APR2013 09:56:38
Data source version	GOMOS/6.01
Start time of products	18-07-2005 (18JUL2005 00:00:00)
Stop time of products	19-07-2005 (19JUL2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	72
Nb of prods with errors	0

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

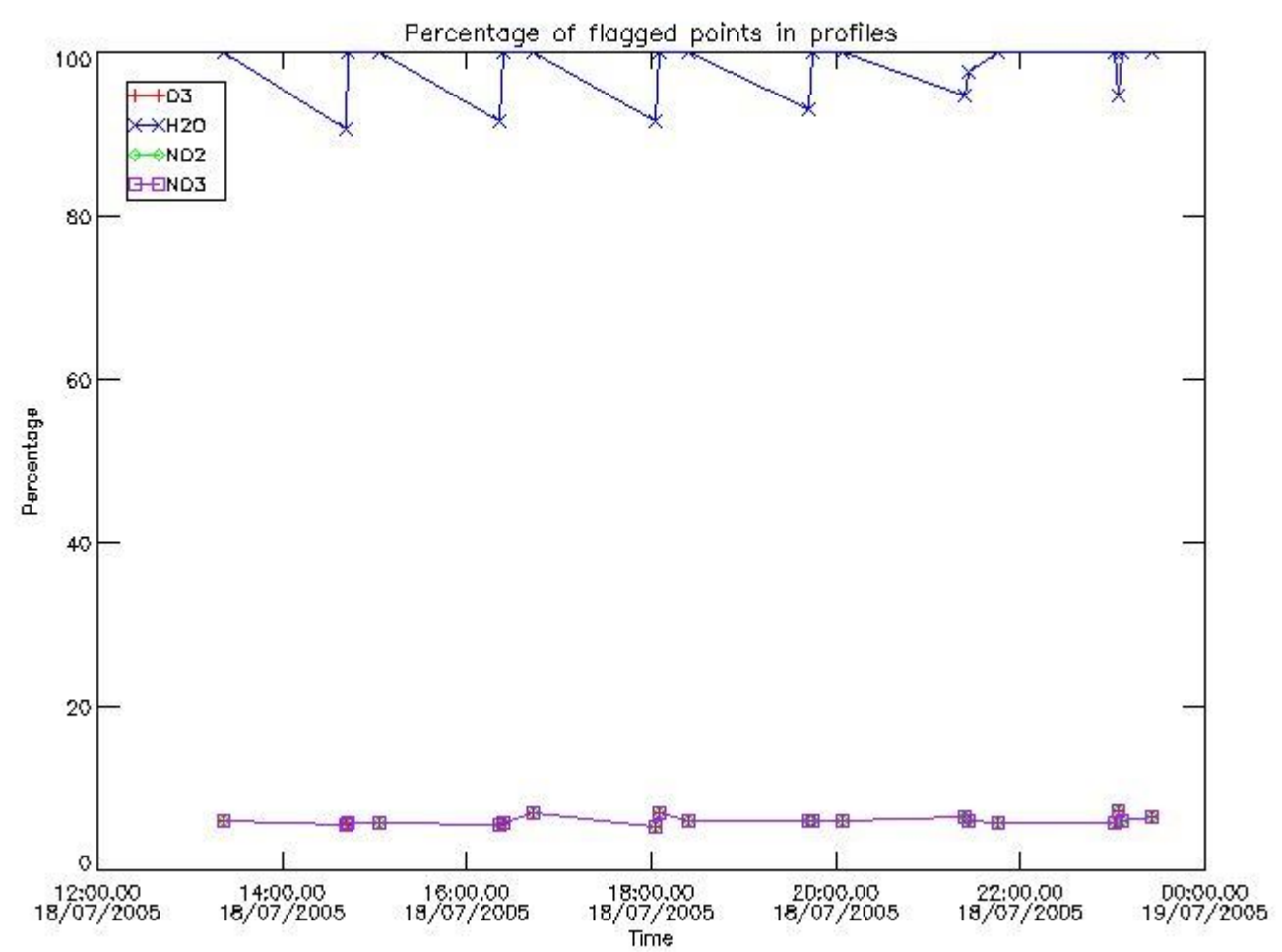
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20050718_132206_00000862039_00096_17685_4848.N1	18-JUL-2005 13:22:06	Dark	86.000	135	Bet Hyi	2.8200	5800.0	172	17685	No
2	GOM_NL__2PRFIN20050718_133757_00000902039_00096_17685_4849.N1	18-JUL-2005 13:37:57	Twilight	89.500	38	20Eps Sgr	1.8360	11000.	179	17685	No
3	GOM_NL__2PRFIN20050718_134023_00000892039_00096_17685_4850.N1	18-JUL-2005 13:40:23	Bright	88.500	137	22Lam Sgr	2.8240	4400.0	177	17685	No
4	GOM_NL__2PRFIN20050718_134909_00000872039_00096_17685_4851.N1	18-JUL-2005 13:49:09	Bright	86.500	126	60Bet Oph	2.7700	4250.0	173	17685	No
5	GOM_NL__2PRFIN20050718_135127_00000852039_00096_17685_4852.N1	18-JUL-2005 13:51:27	Bright	85.000	59	55Alp Oph	2.0800	8900.0	170	17685	No
6	GOM_NL__2PRFIN20050718_135728_00000862039_00096_17685_4853.N1	18-JUL-2005 13:57:28	Bright	85.500	133	40Zet Her	2.8070	6000.0	171	17685	No
7	GOM_NL__2PRFIN20050718_140227_00000852039_00096_17685_4854.N1	18-JUL-2005 14:02:27	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17685	No
8	GOM_NL__2PRFIN20050718_140533_00000862039_00096_17685_4855.N1	18-JUL-2005 14:05:33	Bright	85.500	119	14Eta Dra	2.7270	4700.0	171	17685	No
9	GOM_NL__2PRFIN20050718_140946_00000832039_00096_17685_4856.N1	18-JUL-2005 14:09:46	Bright	82.500	60	7Bet UMi	2.0810	3950.0	165	17685	No
10	GOM_NL__2PRFIN20050718_144055_00001022039_00096_17685_4857.N1	18-JUL-2005 14:40:55	Dark	102.00	7	19Bet Ori	0.10000	14000.	204	17685	No
11	GOM_NL__2PRFIN20050718_144320_00000902039_00096_17685_4858.N1	18-JUL-2005 14:43:20	Dark	90.000	101	11Alp Lep	2.5820	7000.0	180	17685	No
12	GOM_NL__2PRFIN20050718_150242_00000882039_00097_17686_5183.N1	18-JUL-2005 15:02:42	Dark	87.500	135	Bet Hyi	2.8200	5800.0	175	17686	No
13	GOM_NL__2PRFIN20050718_151833_00000902039_00097_17686_5184.N1	18-JUL-2005 15:18:33	Twilight	90.000	38	20Eps Sgr	1.8360	11000.	180	17686	No
14	GOM_NL__2PRFIN20050718_152059_00000892039_00097_17686_5185.N1	18-JUL-2005 15:20:59	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17686	No
15	GOM_NL__2PRFIN20050718_152945_00000862039_00097_17686_5186.N1	18-JUL-2005 15:29:45	Bright	85.500	126	60Bet Oph	2.7700	4250.0	171	17686	No
16	GOM_NL__2PRFIN20050718_153203_00000842039_00097_17686_5187.N1	18-JUL-2005 15:32:03	Bright	83.500	59	55Alp Oph	2.0800	8900.0	167	17686	No
17	GOM_NL__2PRFIN20050718_153804_00000872039_00097_17686_5188.N1	18-JUL-2005 15:38:04	Bright	86.500	133	40Zet Her	2.8070	6000.0	173	17686	No
18	GOM_NL__2PRFIN20050718_154304_00000852039_00097_17686_5189.N1	18-JUL-2005 15:43:04	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17686	No
19	GOM_NL__2PRFIN20050718_154609_00000862039_00097_17686_5190.N1	18-JUL-2005 15:46:09	Bright	86.000	119	14Eta Dra	2.7270	4700.0	172	17686	No
20	GOM_NL__2PRFIN20050718_155022_00000842039_00097_17686_5191.N1	18-JUL-2005 15:50:22	Bright	83.500	60	7Bet UMi	2.0810	3950.0	167	17686	No
21	GOM_NL__2PRFIN20050718_162131_00001022039_00097_17686_5192.N1	18-JUL-2005 16:21:31	Dark	101.50	7	19Bet Ori	0.10000	14000.	203	17686	No
22	GOM_NL__2PRFIN20050718_162356_00000892039_00097_17686_5193.N1	18-JUL-2005 16:23:56	Dark	89.000	101	11Alp Lep	2.5820	7000.0	178	17686	No
23	GOM_NL__2PRFIN20050718_164319_00000862039_00098_17687_5184.N1	18-JUL-2005 16:43:19	Dark	86.000	135	Bet Hyi	2.8200	5800.0	172	17687	No
24	GOM_NL__2PRFIN20050718_165909_00000912039_00098_17687_5185.N1	18-JUL-2005 16:59:09	Twilight	91.000	38	20Eps Sgr	1.8360	11000.	182	17687	No
25	GOM_NL__2PRFIN20050718_170135_00000892039_00098_17687_5186.N1	18-JUL-2005 17:01:35	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17687	No
26	GOM_NL__2PRFIN20050718_171022_00000842039_00098_17687_5187.N1	18-JUL-2005 17:10:22	Bright	84.000	126	60Bet Oph	2.7700	4250.0	168	17687	No
27	GOM_NL__2PRFIN20050718_171240_00000852039_00098_17687_5188.N1	18-JUL-2005 17:12:40	Bright	84.500	59	55Alp Oph	2.0800	8900.0	169	17687	No
28	GOM_NL__2PRFIN20050718_171840_00000842039_00098_17687_5189.N1	18-JUL-2005 17:18:40	Bright	84.000	133	40Zet Her	2.8070	6000.0	168	17687	No
29	GOM_NL__2PRFIN20050718_172340_00000862039_00098_17687_5190.N1	18-JUL-2005 17:23:40	Bright	86.000	130	23Bet Dra	2.7990	5800.0	172	17687	No
30	GOM_NL__2PRFIN20050718_172645_00000852039_00098_17687_5191.N1	18-JUL-2005 17:26:45	Bright	85.000	119	14Eta Dra	2.7270	4700.0	170	17687	No
31	GOM_NL__2PRFIN20050718_173059_00000832039_00098_17687_5192.N1	18-JUL-2005 17:30:59	Bright	83.000	60	7Bet UMi	2.0810	3950.0	166	17687	No
32	GOM_NL__2PRFIN20050718_180207_00000972039_00098_17687_5193.N1	18-JUL-2005 18:02:07	Dark	96.500	7	19Bet Ori	0.10000	14000.	193	17687	No
33	GOM_NL__2PRFIN20050718_180432_00000892039_00098_17687_5194.N1	18-JUL-2005 18:04:32	Dark	89.000	101	11Alp Lep	2.5820	7000.0	178	17687	No
34	GOM_NL__2PRFIN20050718_182355_00000862039_00099_17688_5186.N1	18-JUL-2005 18:23:55	Dark	85.500	135	Bet Hyi	2.8200	5800.0	171	17688	No
35	GOM_NL__2PRFIN20050718_183945_00000932039_00099_17688_5187.N1	18-JUL-2005 18:39:45	Twilight	92.500	38	20Eps Sgr	1.8360	11000.	185	17688	No
36	GOM_NL__2PRFIN20050718_184211_00000902039_00099_17688_5188.N1	18-JUL-2005 18:42:11	Bright	89.500	137	22Lam Sgr	2.8240	4400.0	179	17688	No
37	GOM_NL__2PRFIN20050718_185058_00000852039_00099_17688_5189.N1	18-JUL-2005 18:50:58	Bright	84.500	126	60Bet Oph	2.7700	4250.0	169	17688	No
38	GOM_NL__2PRFIN20050718_185316_00000842039_00099_17688_5190.N1	18-JUL-2005 18:53:16	Bright	84.000	59	55Alp Oph	2.0800	8900.0	168	17688	No
39	GOM_NL__2PRFIN20050718_185917_00000842039_00099_17688_5191.N1	18-JUL-2005 18:59:17	Bright	84.000	133	40Zet Her	2.8070	6000.0	168	17688	No
40	GOM_NL__2PRFIN20050718_190416_00000852039_00099_17688_5192.N1	18-JUL-2005 19:04:16	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17688	No
41	GOM_NL__2PRFIN20050718_190722_00000862039_00099_17688_5193.N1	18-JUL-2005 19:07:22	Bright	86.000	119	14Eta Dra	2.7270	4700.0	172	17688	No
42	GOM_NL__2PRFIN20050718_191135_00000842039_00099_17688_5194.N1	18-JUL-2005 19:11:35	Bright	84.000	60	7Bet UMi	2.0810	3950.0	168	17688	No

43	GOM_NL__2PRFIN20050718_194244_000000932039_00099_17688_5195.N1	18-JUL-2005 19:42:44	Dark	93.000	7	19Bet Ori	0.10000	14000.	186	17688	No
44	GOM_NL__2PRFIN20050718_194508_000000852039_00099_17688_5196.N1	18-JUL-2005 19:45:08	Dark	84.500	101	11Alp Lep	2.5820	7000.0	169	17688	No
45	GOM_NL__2PRFIN20050718_200431_000000852039_00100_17689_5186.N1	18-JUL-2005 20:04:31	Dark	84.500	135	Bet Hyi	2.8200	5800.0	169	17689	No
46	GOM_NL__2PRFIN20050718_202021_000000912039_00100_17689_5187.N1	18-JUL-2005 20:20:21	Twilight	91.000	38	20Eps Sgr	1.8360	11000.	182	17689	No
47	GOM_NL__2PRFIN20050718_202248_000000892039_00100_17689_5188.N1	18-JUL-2005 20:22:48	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17689	No
48	GOM_NL__2PRFIN20050718_203134_000000862039_00100_17689_5189.N1	18-JUL-2005 20:31:34	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17689	No
49	GOM_NL__2PRFIN20050718_203352_000000852039_00100_17689_5190.N1	18-JUL-2005 20:33:52	Bright	85.000	59	55Alp Oph	2.0800	8900.0	170	17689	No
50	GOM_NL__2PRFIN20050718_203953_000000872039_00100_17689_5191.N1	18-JUL-2005 20:39:53	Bright	86.500	133	40Zet Her	2.8070	6000.0	173	17689	No
51	GOM_NL__2PRFIN20050718_204452_000000862039_00100_17689_5192.N1	18-JUL-2005 20:44:52	Bright	85.500	130	23Bet Dra	2.7990	5800.0	171	17689	No
52	GOM_NL__2PRFIN20050718_204758_000000852039_00100_17689_5193.N1	18-JUL-2005 20:47:58	Bright	85.000	119	14Eta Dra	2.7270	4700.0	170	17689	No
53	GOM_NL__2PRFIN20050718_205211_000000862039_00100_17689_5194.N1	18-JUL-2005 20:52:11	Bright	86.000	60	7Bet UMi	2.0810	3950.0	172	17689	No
54	GOM_NL__2PRFIN20050718_212320_000000872039_00100_17689_5195.N1	18-JUL-2005 21:23:20	Dark	87.000	7	19Bet Ori	0.10000	14000.	174	17689	No
55	GOM_NL__2PRFIN20050718_212544_000000852039_00100_17689_5196.N1	18-JUL-2005 21:25:44	Dark	84.500	101	11Alp Lep	2.5820	7000.0	169	17689	No
56	GOM_NL__2PRFIN20050718_214507_000000872039_00101_17690_5187.N1	18-JUL-2005 21:45:07	Dark	87.000	135	Bet Hyi	2.8200	5800.0	174	17690	No
57	GOM_NL__2PRFIN20050718_220057_000000932039_00101_17690_5188.N1	18-JUL-2005 22:00:57	Twilight	93.000	38	20Eps Sgr	1.8360	11000.	186	17690	No
58	GOM_NL__2PRFIN20050718_220324_000000892039_00101_17690_5189.N1	18-JUL-2005 22:03:24	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17690	No
59	GOM_NL__2PRFIN20050718_221210_000000862039_00101_17690_5190.N1	18-JUL-2005 22:12:10	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17690	No
60	GOM_NL__2PRFIN20050718_221428_000000862039_00101_17690_5191.N1	18-JUL-2005 22:14:28	Bright	86.000	59	55Alp Oph	2.0800	8900.0	172	17690	No
61	GOM_NL__2PRFIN20050718_222029_000000852039_00101_17690_5192.N1	18-JUL-2005 22:20:29	Bright	85.000	133	40Zet Her	2.8070	6000.0	170	17690	No
62	GOM_NL__2PRFIN20050718_222528_000000852039_00101_17690_5193.N1	18-JUL-2005 22:25:28	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17690	No
63	GOM_NL__2PRFIN20050718_222834_000000862039_00101_17690_5194.N1	18-JUL-2005 22:28:34	Bright	85.500	119	14Eta Dra	2.7270	4700.0	171	17690	No
64	GOM_NL__2PRFIN20050718_223247_000001022039_00101_17690_5195.N1	18-JUL-2005 22:32:47	Bright	102.00	60	7Bet UMi	2.0810	3950.0	204	17690	No
65	GOM_NL__2PRFIN20050718_230131_000000872039_00101_17690_5196.N1	18-JUL-2005 23:01:31	Dark	87.000	72	34Del Ori	2.2500	30000.	174	17690	No
66	GOM_NL__2PRFIN20050718_230356_000000862039_00101_17690_5197.N1	18-JUL-2005 23:03:56	Dark	85.500	7	19Bet Ori	0.10000	14000.	171	17690	No
67	GOM_NL__2PRFIN20050718_230620_000000862039_00101_17690_5198.N1	18-JUL-2005 23:06:20	Dark	85.500	101	11Alp Lep	2.5820	7000.0	171	17690	No
68	GOM_NL__2PRFIN20050718_232543_000000872039_00102_17691_5025.N1	18-JUL-2005 23:25:43	Dark	87.000	135	Bet Hyi	2.8200	5800.0	174	17691	No
69	GOM_NL__2PRFIN20050718_234134_000000942039_00102_17691_5026.N1	18-JUL-2005 23:41:34	Twilight	93.500	38	20Eps Sgr	1.8360	11000.	187	17691	No
70	GOM_NL__2PRFIN20050718_234400_000000892039_00102_17691_5027.N1	18-JUL-2005 23:44:00	Bright	88.500	137	22Lam Sgr	2.8240	4400.0	177	17691	No
71	GOM_NL__2PRFIN20050718_235246_000000862039_00102_17691_5028.N1	18-JUL-2005 23:52:46	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17691	No
72	GOM_NL__2PRFIN20050718_235504_000000872039_00102_17691_5029.N1	18-JUL-2005 23:55:04	Bright	86.500	59	55Alp Oph	2.0800	8900.0	173	17691	No

### 3. Quality information per product

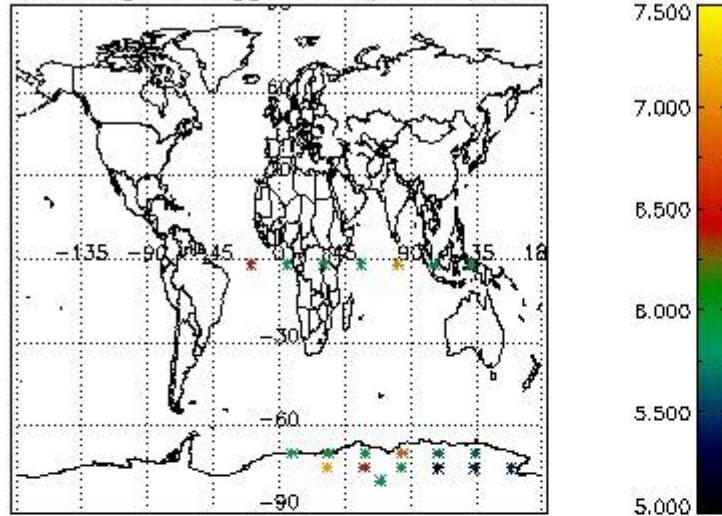
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

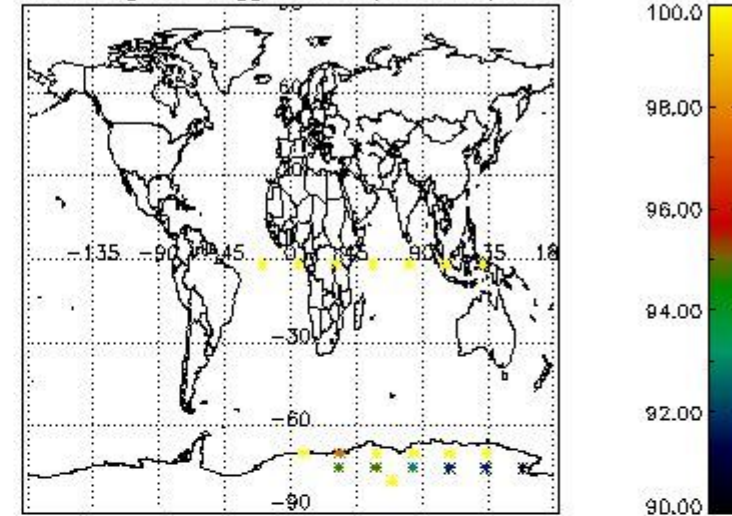


3.2 Plot quality information per product (world map)

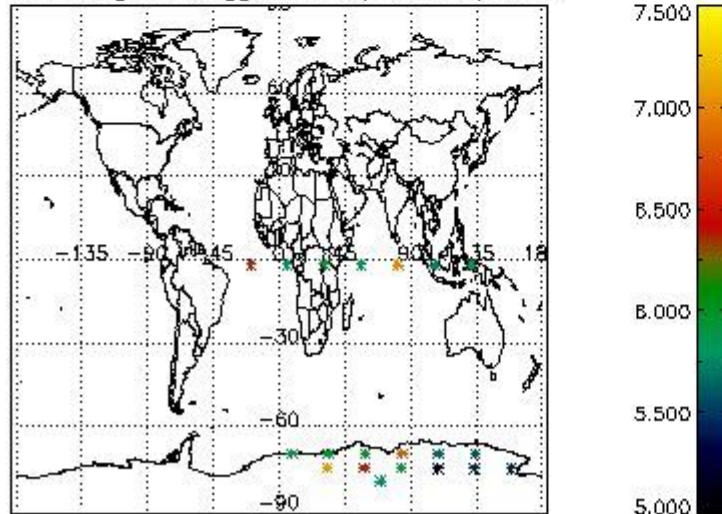
Percentage of flagged data per O3 profile



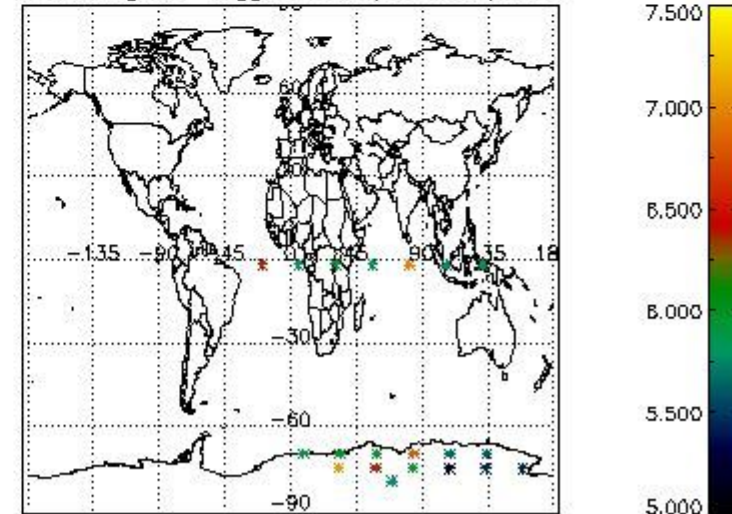
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



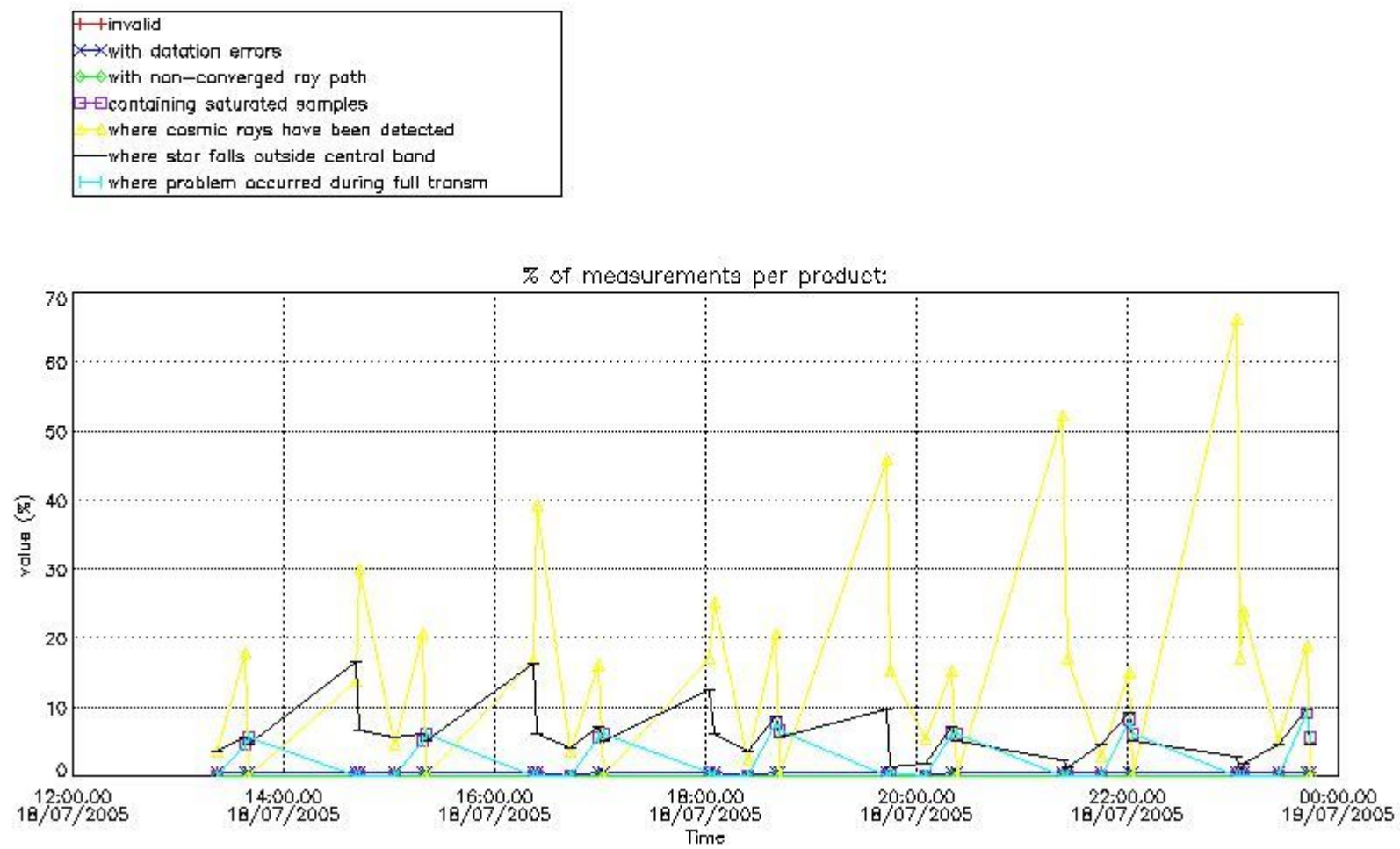
#### 4. Level 1 quality information per product

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.

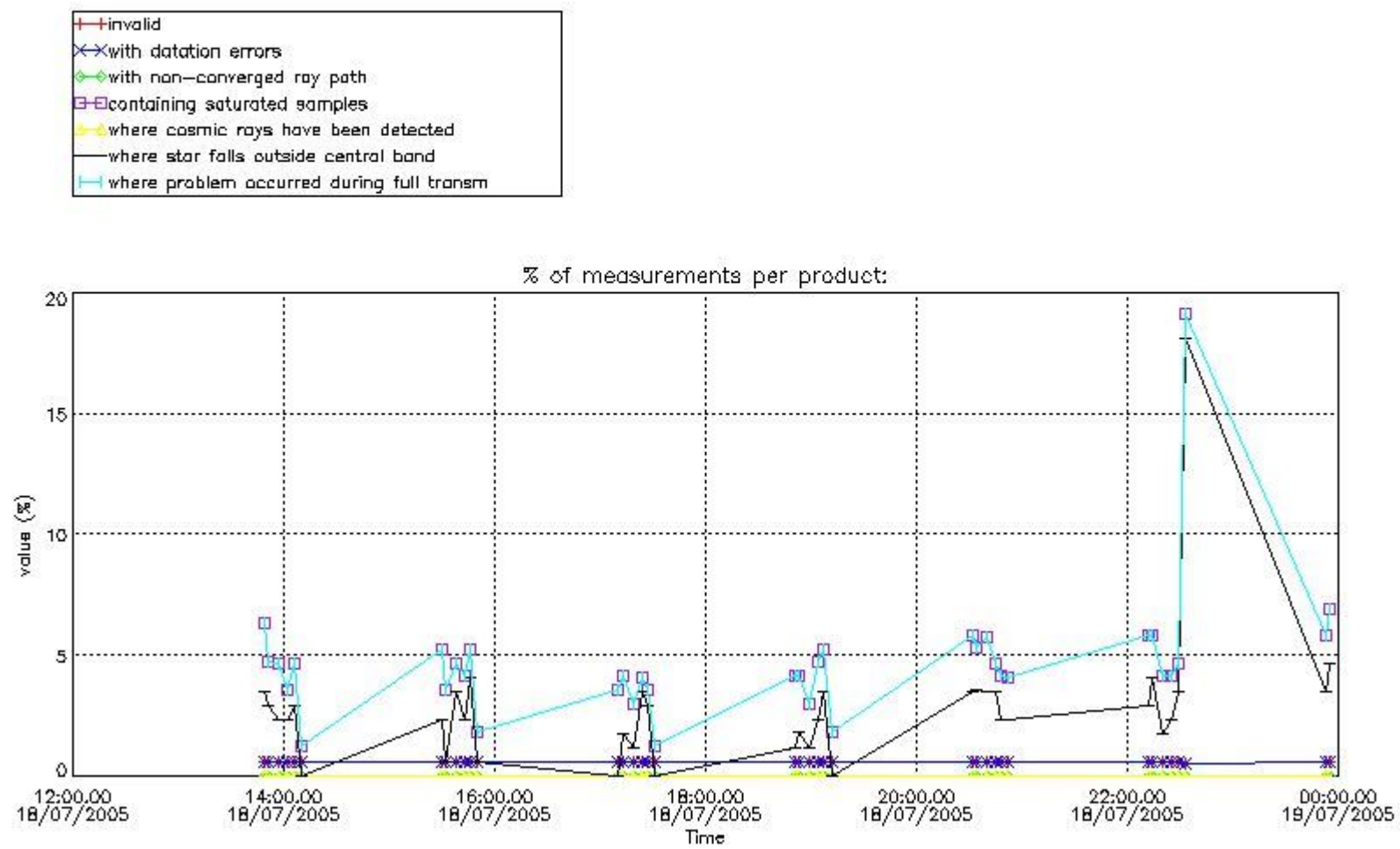
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





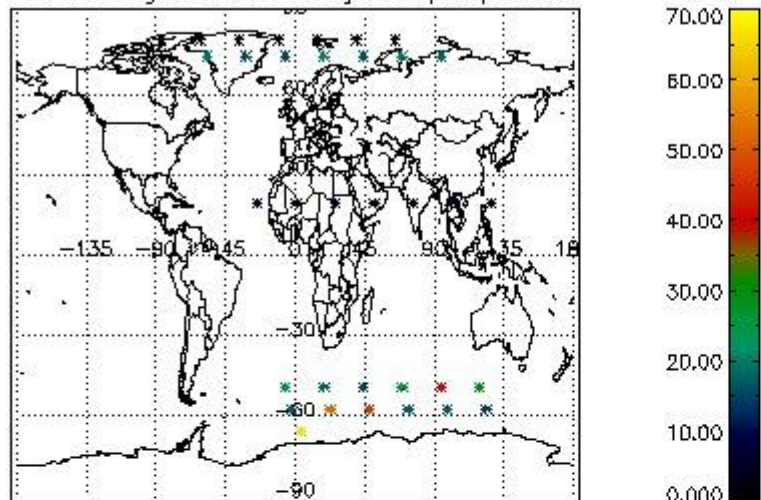
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



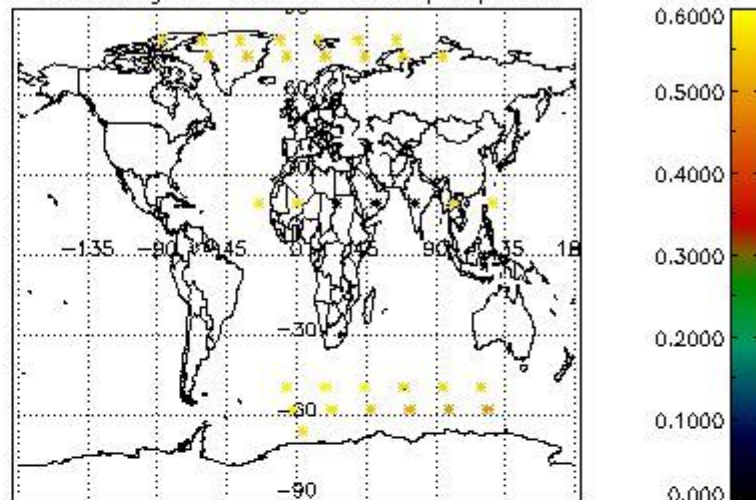
4.2 Plot quality information per product coming from level 1b processing (world map)

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

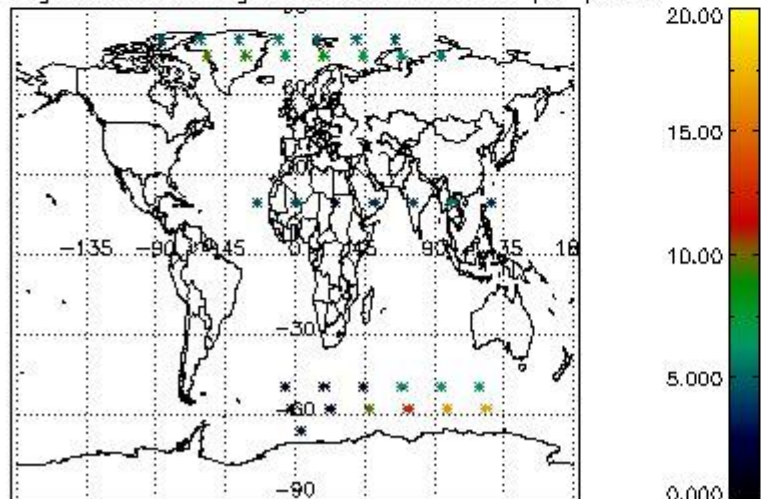
Percentage of cosmic ray hits per profile



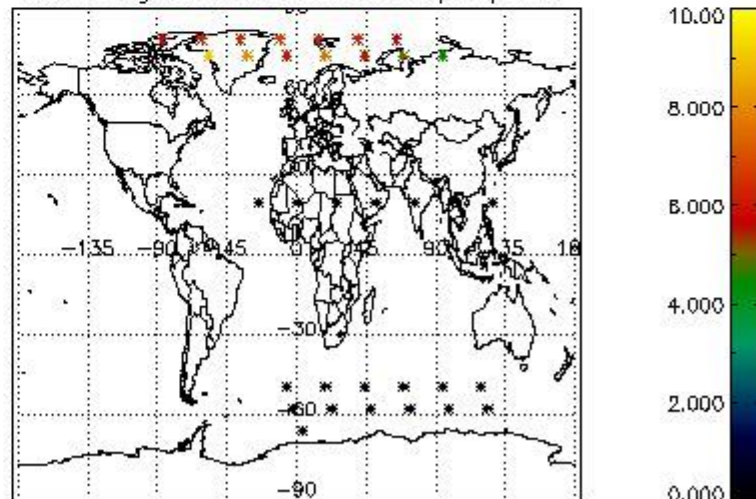
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

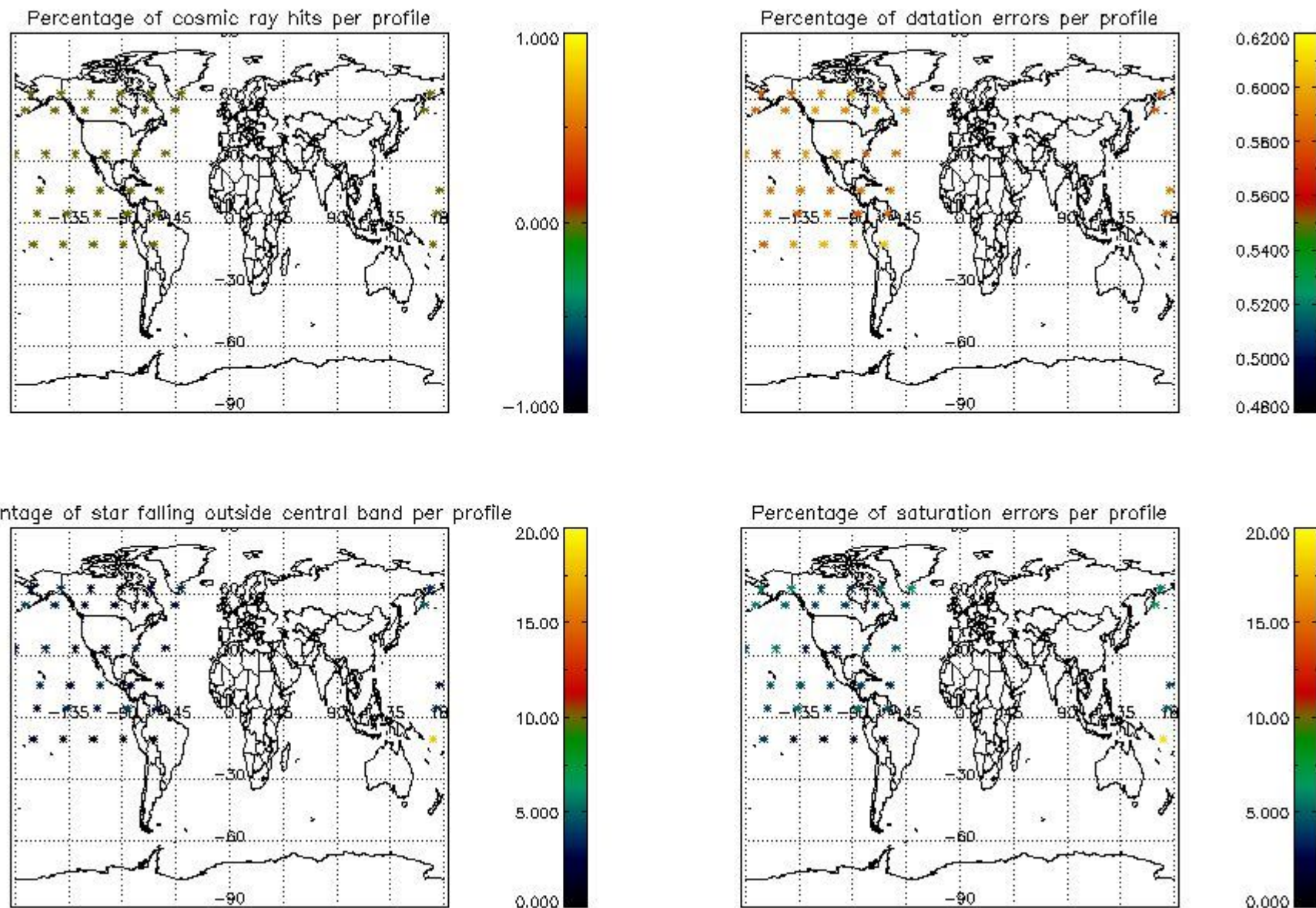


Percentage of saturation errors per profile



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

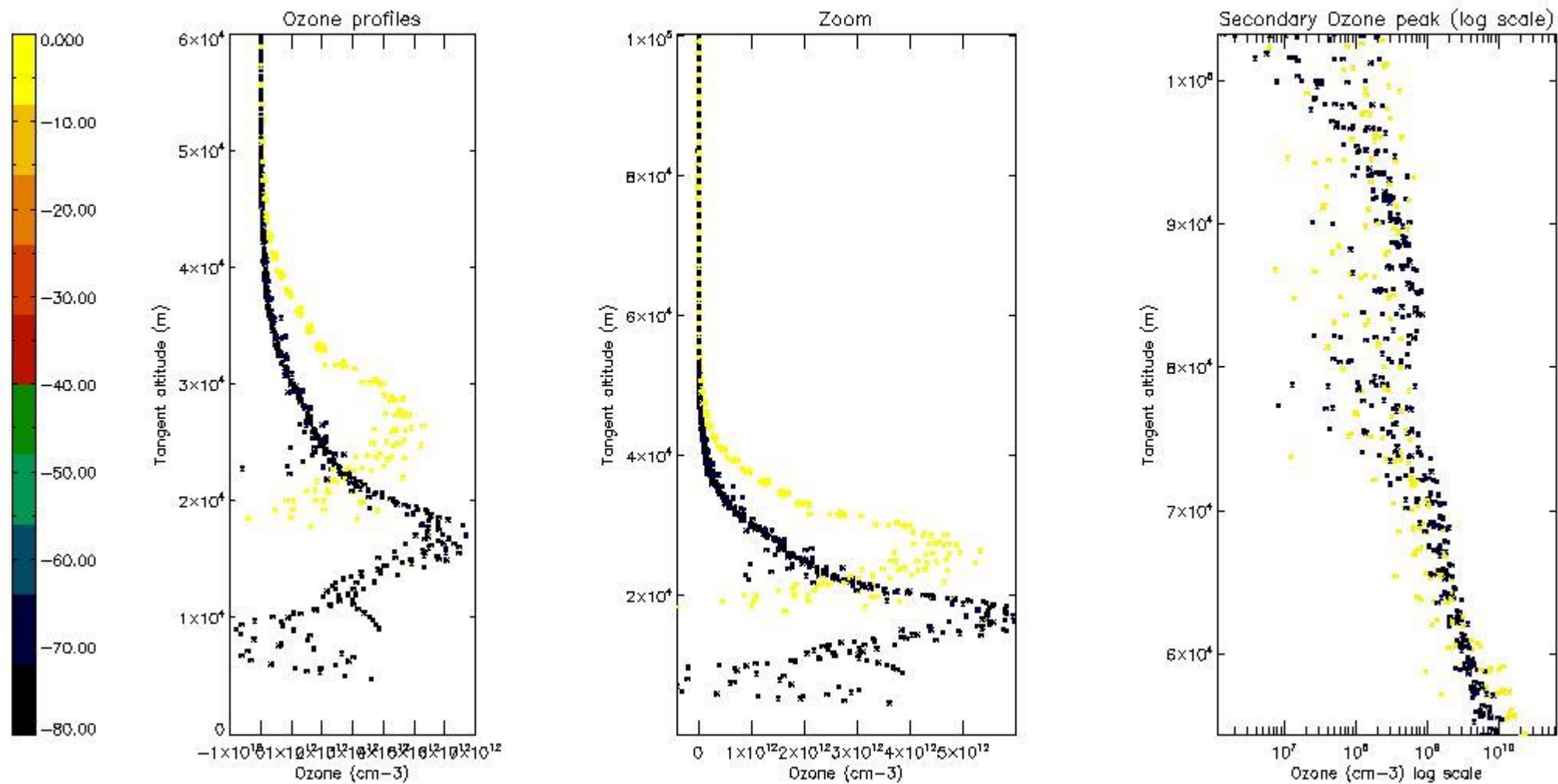
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	6

STD < 10	5
STD < 5	3

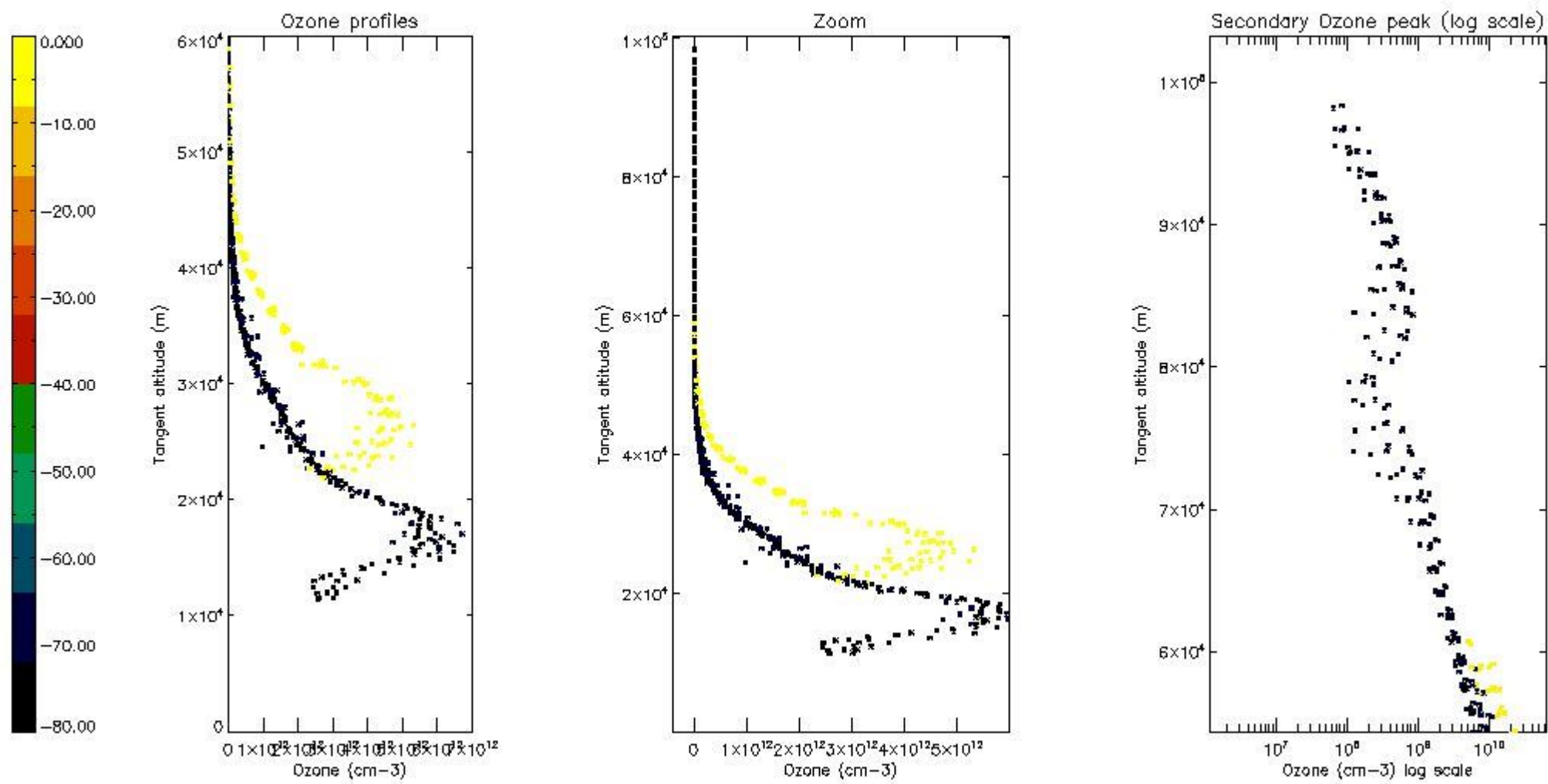
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



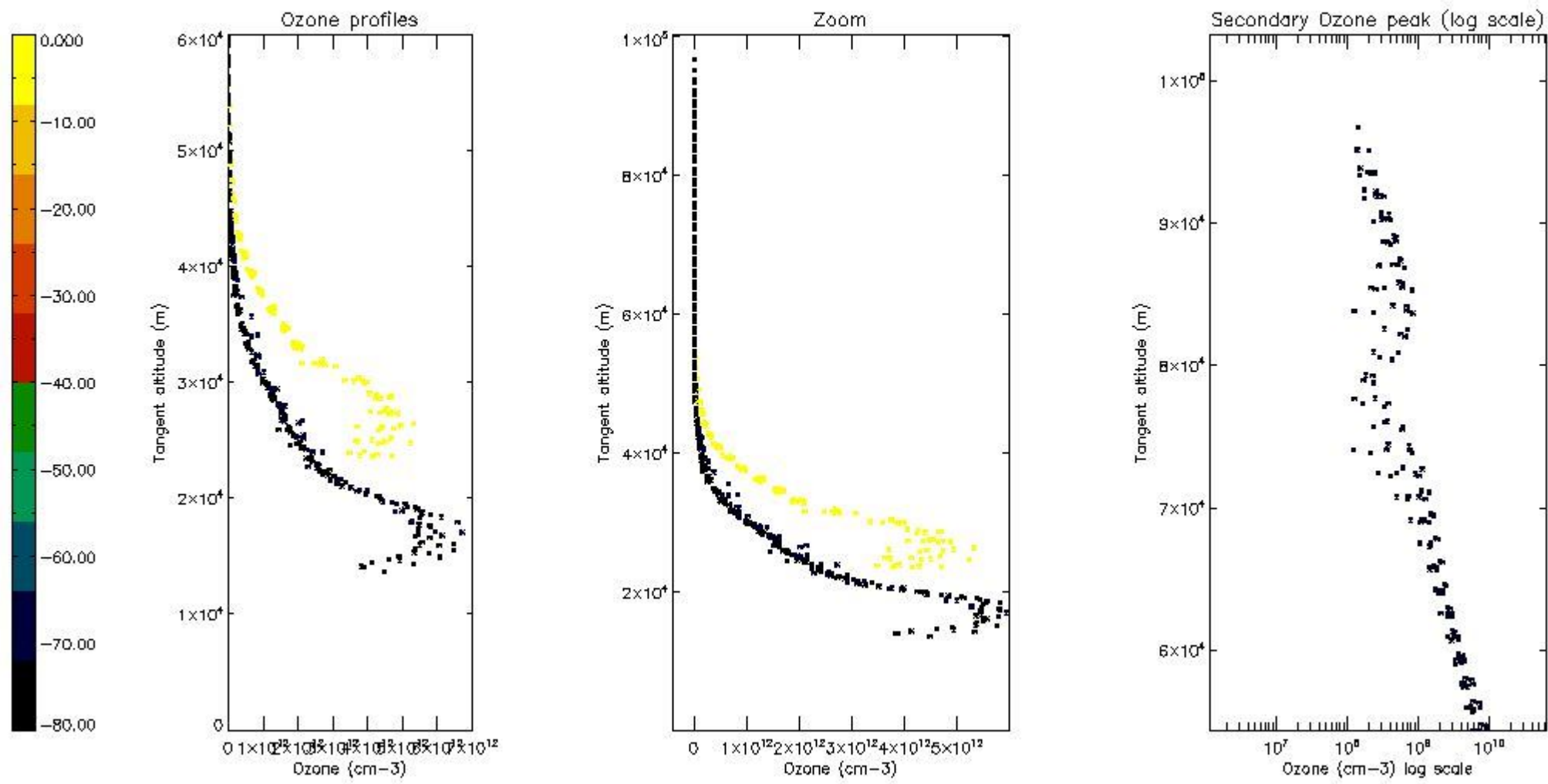
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

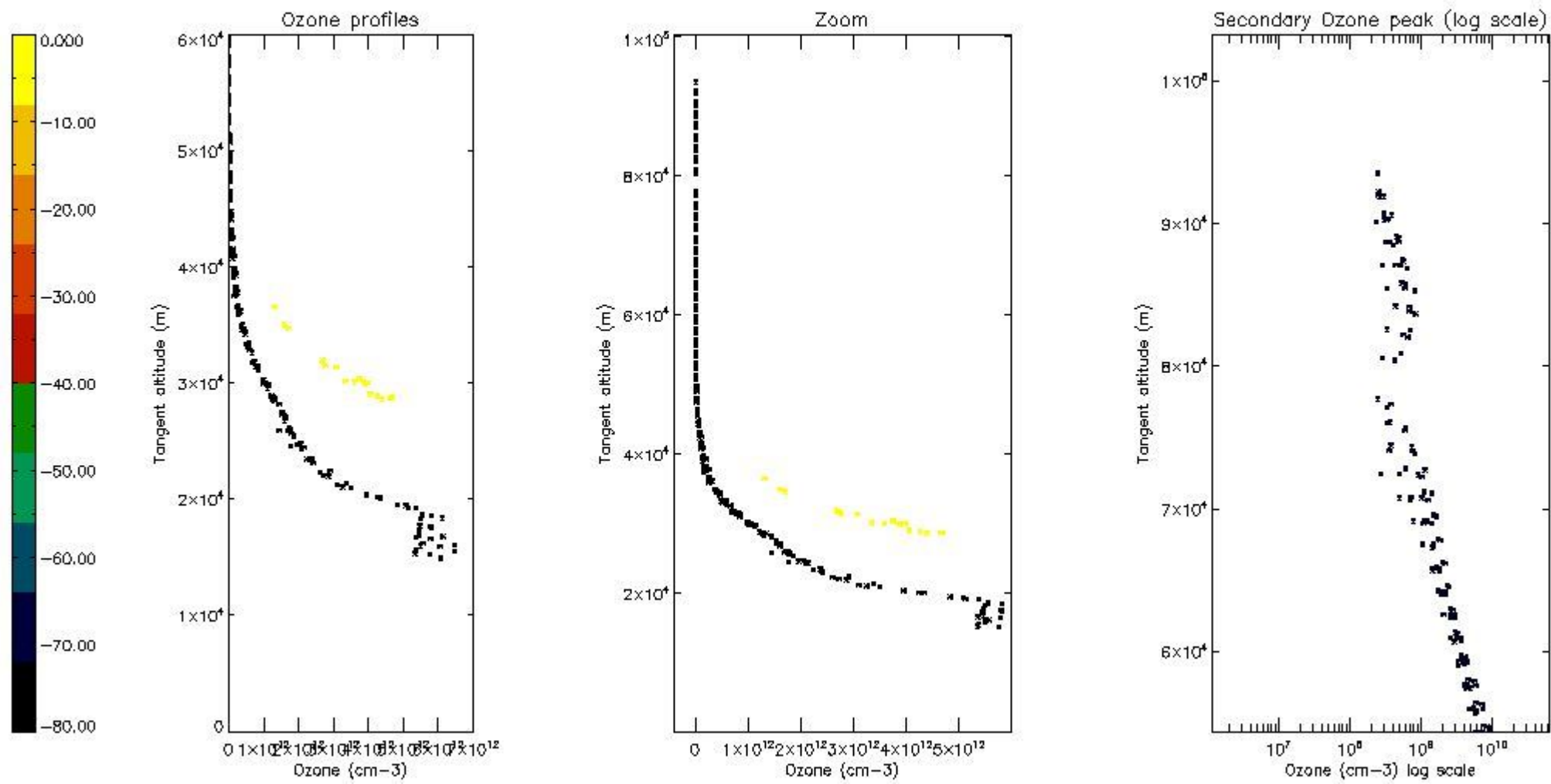
The colorbar represents the latitude.



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

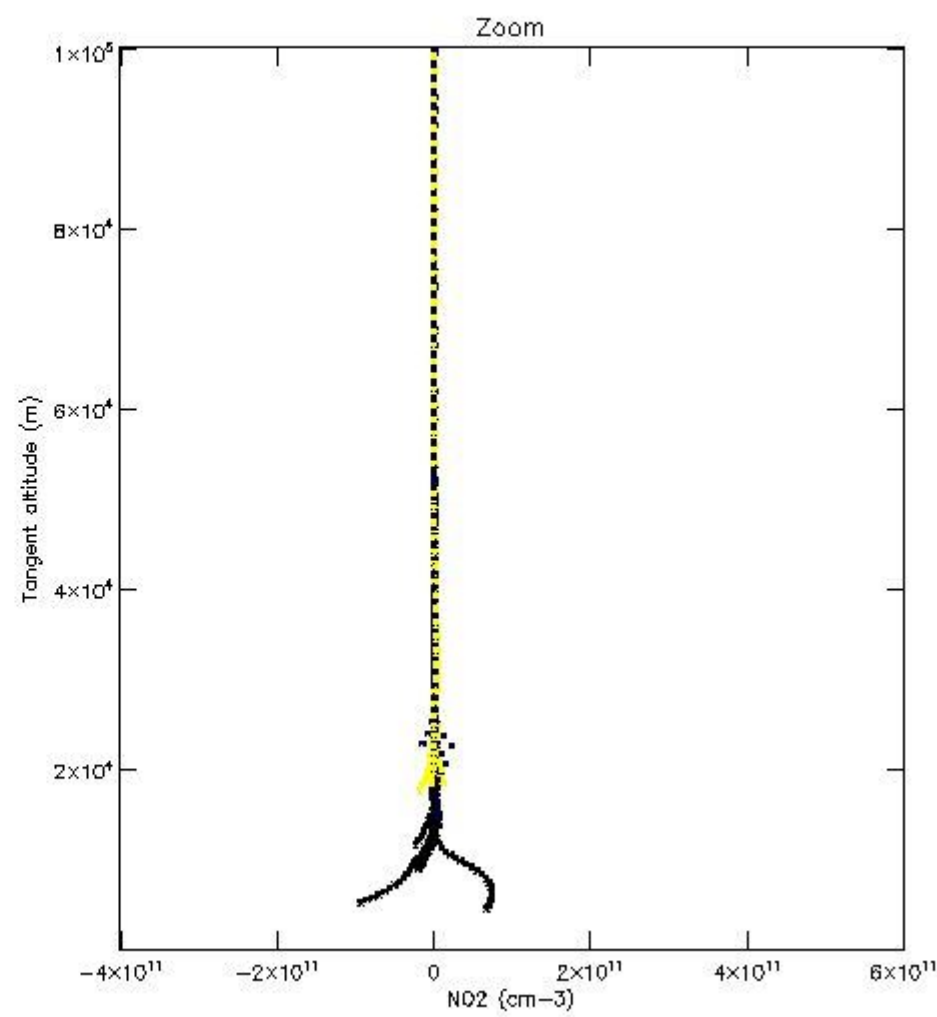
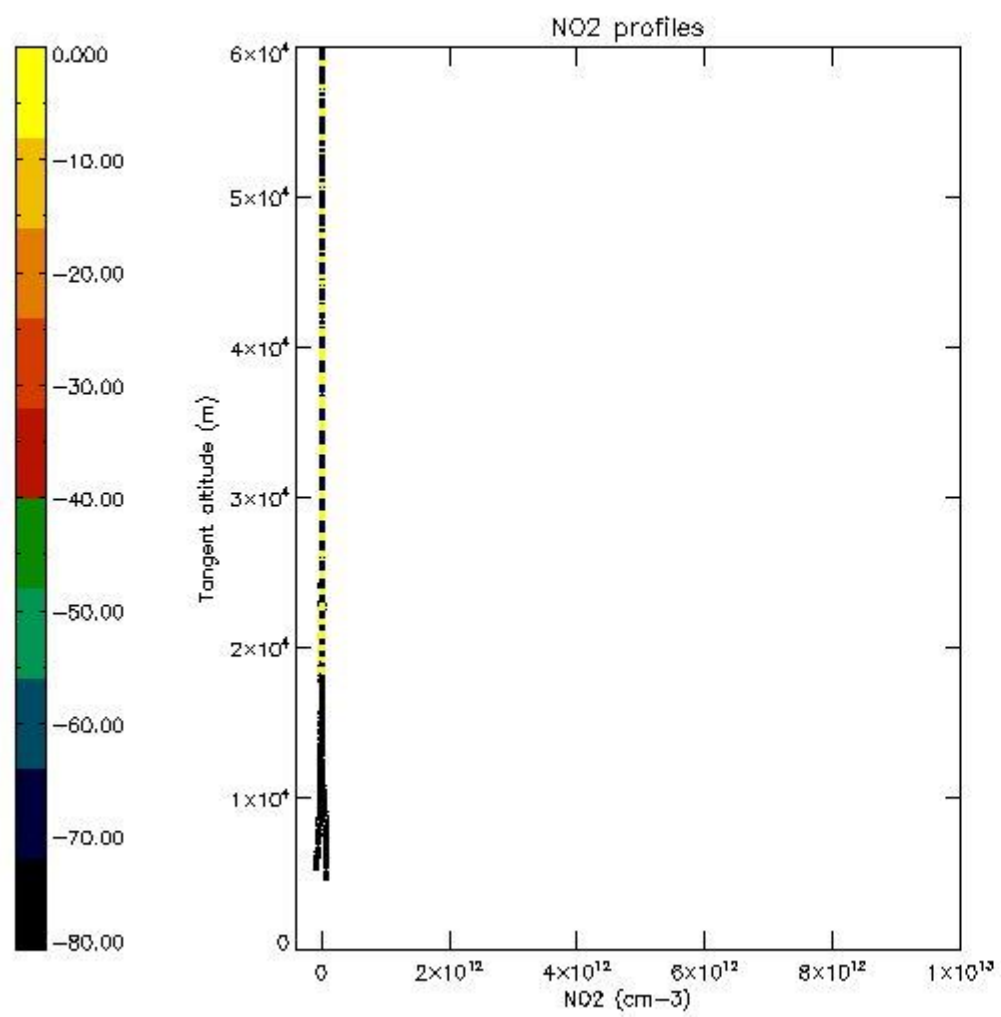
The colorbar represents the latitude.





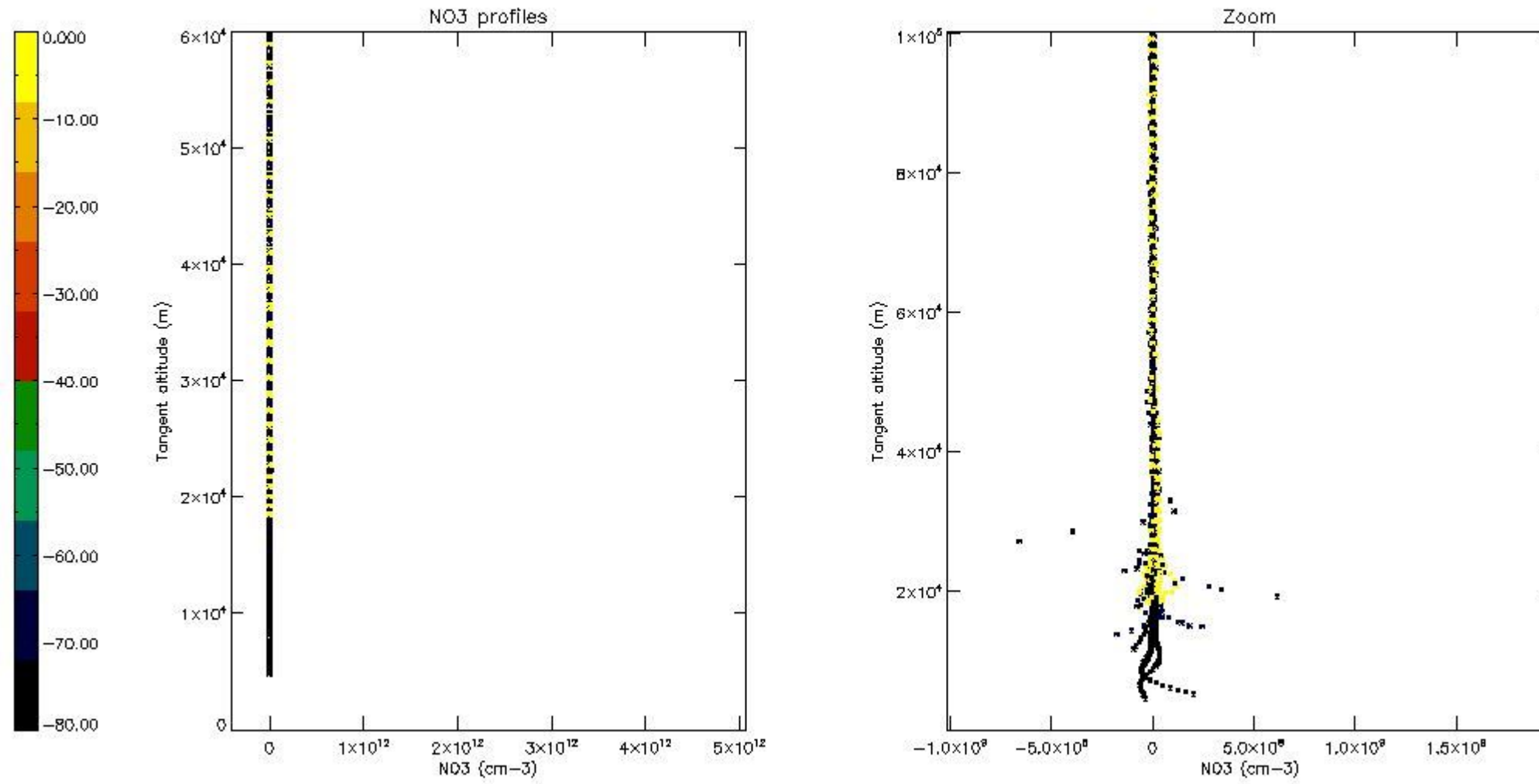
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

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	18-JUL-2005 13:22:06
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-JUL-2005 13:22:06
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-JUL-2005 13:22:06

# GOMOS Level 2 Daily Report

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#### [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	18APR2013 09:56:38
Data source version	GOMOS/6.01
Start time of products	18-07-2005 (18JUL2005 00:00:00)
Stop time of products	19-07-2005 (19JUL2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	72
Nb of prods with errors	0

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

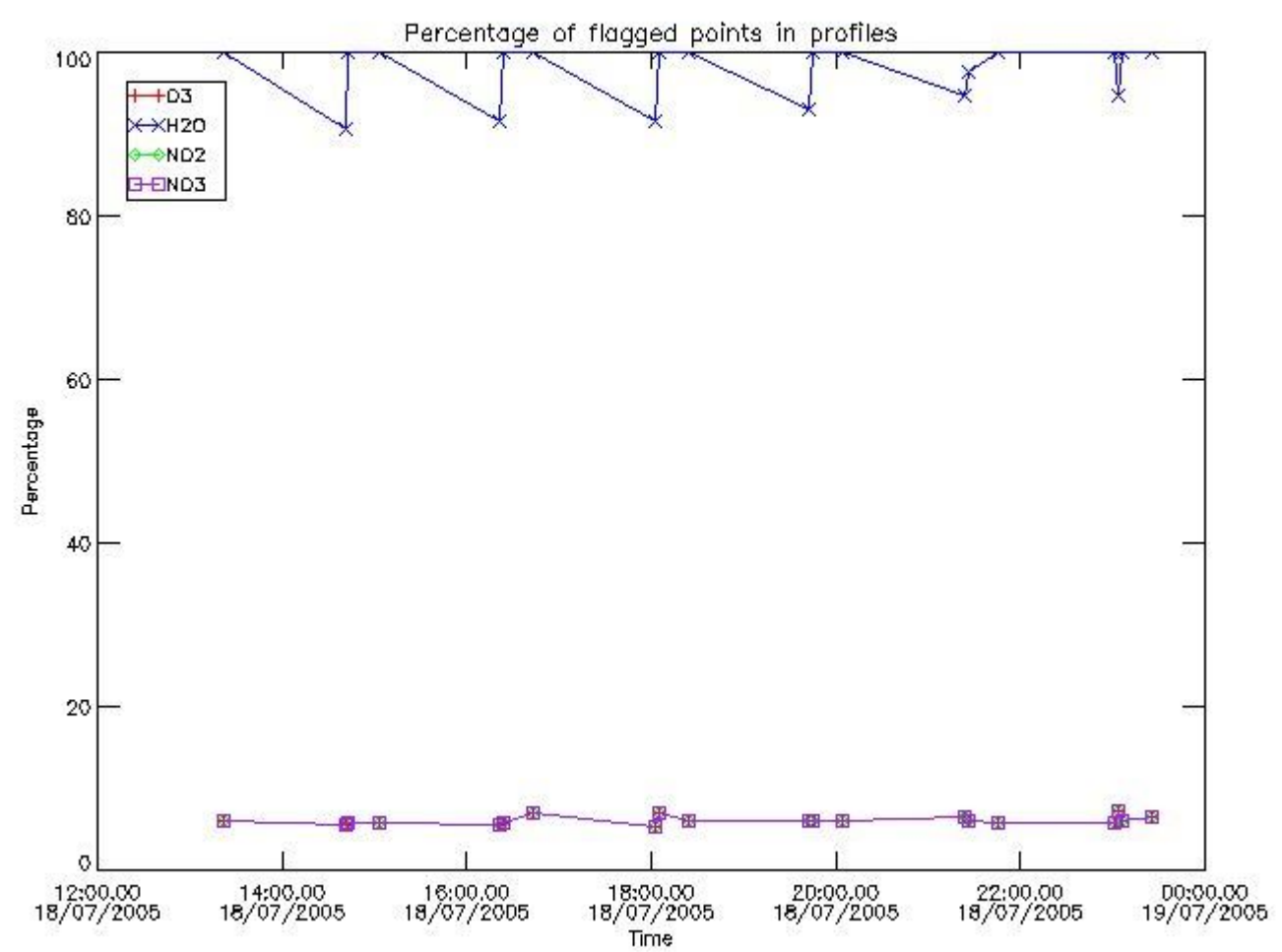
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20050718_132206_00000862039_00096_17685_4848.N1	18-JUL-2005 13:22:06	Dark	86.000	135	Bet Hyi	2.8200	5800.0	172	17685	No
2	GOM_NL__2PRFIN20050718_133757_00000902039_00096_17685_4849.N1	18-JUL-2005 13:37:57	Twilight	89.500	38	20Eps Sgr	1.8360	11000.	179	17685	No
3	GOM_NL__2PRFIN20050718_134023_00000892039_00096_17685_4850.N1	18-JUL-2005 13:40:23	Bright	88.500	137	22Lam Sgr	2.8240	4400.0	177	17685	No
4	GOM_NL__2PRFIN20050718_134909_00000872039_00096_17685_4851.N1	18-JUL-2005 13:49:09	Bright	86.500	126	60Bet Oph	2.7700	4250.0	173	17685	No
5	GOM_NL__2PRFIN20050718_135127_00000852039_00096_17685_4852.N1	18-JUL-2005 13:51:27	Bright	85.000	59	55Alp Oph	2.0800	8900.0	170	17685	No
6	GOM_NL__2PRFIN20050718_135728_00000862039_00096_17685_4853.N1	18-JUL-2005 13:57:28	Bright	85.500	133	40Zet Her	2.8070	6000.0	171	17685	No
7	GOM_NL__2PRFIN20050718_140227_00000852039_00096_17685_4854.N1	18-JUL-2005 14:02:27	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17685	No
8	GOM_NL__2PRFIN20050718_140533_00000862039_00096_17685_4855.N1	18-JUL-2005 14:05:33	Bright	85.500	119	14Eta Dra	2.7270	4700.0	171	17685	No
9	GOM_NL__2PRFIN20050718_140946_00000832039_00096_17685_4856.N1	18-JUL-2005 14:09:46	Bright	82.500	60	7Bet UMi	2.0810	3950.0	165	17685	No
10	GOM_NL__2PRFIN20050718_144055_00001022039_00096_17685_4857.N1	18-JUL-2005 14:40:55	Dark	102.00	7	19Bet Ori	0.10000	14000.	204	17685	No
11	GOM_NL__2PRFIN20050718_144320_00000902039_00096_17685_4858.N1	18-JUL-2005 14:43:20	Dark	90.000	101	11Alp Lep	2.5820	7000.0	180	17685	No
12	GOM_NL__2PRFIN20050718_150242_00000882039_00097_17686_5183.N1	18-JUL-2005 15:02:42	Dark	87.500	135	Bet Hyi	2.8200	5800.0	175	17686	No
13	GOM_NL__2PRFIN20050718_151833_00000902039_00097_17686_5184.N1	18-JUL-2005 15:18:33	Twilight	90.000	38	20Eps Sgr	1.8360	11000.	180	17686	No
14	GOM_NL__2PRFIN20050718_152059_00000892039_00097_17686_5185.N1	18-JUL-2005 15:20:59	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17686	No
15	GOM_NL__2PRFIN20050718_152945_00000862039_00097_17686_5186.N1	18-JUL-2005 15:29:45	Bright	85.500	126	60Bet Oph	2.7700	4250.0	171	17686	No
16	GOM_NL__2PRFIN20050718_153203_00000842039_00097_17686_5187.N1	18-JUL-2005 15:32:03	Bright	83.500	59	55Alp Oph	2.0800	8900.0	167	17686	No
17	GOM_NL__2PRFIN20050718_153804_00000872039_00097_17686_5188.N1	18-JUL-2005 15:38:04	Bright	86.500	133	40Zet Her	2.8070	6000.0	173	17686	No
18	GOM_NL__2PRFIN20050718_154304_00000852039_00097_17686_5189.N1	18-JUL-2005 15:43:04	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17686	No
19	GOM_NL__2PRFIN20050718_154609_00000862039_00097_17686_5190.N1	18-JUL-2005 15:46:09	Bright	86.000	119	14Eta Dra	2.7270	4700.0	172	17686	No
20	GOM_NL__2PRFIN20050718_155022_00000842039_00097_17686_5191.N1	18-JUL-2005 15:50:22	Bright	83.500	60	7Bet UMi	2.0810	3950.0	167	17686	No
21	GOM_NL__2PRFIN20050718_162131_00001022039_00097_17686_5192.N1	18-JUL-2005 16:21:31	Dark	101.50	7	19Bet Ori	0.10000	14000.	203	17686	No
22	GOM_NL__2PRFIN20050718_162356_00000892039_00097_17686_5193.N1	18-JUL-2005 16:23:56	Dark	89.000	101	11Alp Lep	2.5820	7000.0	178	17686	No
23	GOM_NL__2PRFIN20050718_164319_00000862039_00098_17687_5184.N1	18-JUL-2005 16:43:19	Dark	86.000	135	Bet Hyi	2.8200	5800.0	172	17687	No
24	GOM_NL__2PRFIN20050718_165909_00000912039_00098_17687_5185.N1	18-JUL-2005 16:59:09	Twilight	91.000	38	20Eps Sgr	1.8360	11000.	182	17687	No
25	GOM_NL__2PRFIN20050718_170135_00000892039_00098_17687_5186.N1	18-JUL-2005 17:01:35	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17687	No
26	GOM_NL__2PRFIN20050718_171022_00000842039_00098_17687_5187.N1	18-JUL-2005 17:10:22	Bright	84.000	126	60Bet Oph	2.7700	4250.0	168	17687	No
27	GOM_NL__2PRFIN20050718_171240_00000852039_00098_17687_5188.N1	18-JUL-2005 17:12:40	Bright	84.500	59	55Alp Oph	2.0800	8900.0	169	17687	No
28	GOM_NL__2PRFIN20050718_171840_00000842039_00098_17687_5189.N1	18-JUL-2005 17:18:40	Bright	84.000	133	40Zet Her	2.8070	6000.0	168	17687	No
29	GOM_NL__2PRFIN20050718_172340_00000862039_00098_17687_5190.N1	18-JUL-2005 17:23:40	Bright	86.000	130	23Bet Dra	2.7990	5800.0	172	17687	No
30	GOM_NL__2PRFIN20050718_172645_00000852039_00098_17687_5191.N1	18-JUL-2005 17:26:45	Bright	85.000	119	14Eta Dra	2.7270	4700.0	170	17687	No
31	GOM_NL__2PRFIN20050718_173059_00000832039_00098_17687_5192.N1	18-JUL-2005 17:30:59	Bright	83.000	60	7Bet UMi	2.0810	3950.0	166	17687	No
32	GOM_NL__2PRFIN20050718_180207_00000972039_00098_17687_5193.N1	18-JUL-2005 18:02:07	Dark	96.500	7	19Bet Ori	0.10000	14000.	193	17687	No
33	GOM_NL__2PRFIN20050718_180432_00000892039_00098_17687_5194.N1	18-JUL-2005 18:04:32	Dark	89.000	101	11Alp Lep	2.5820	7000.0	178	17687	No
34	GOM_NL__2PRFIN20050718_182355_00000862039_00099_17688_5186.N1	18-JUL-2005 18:23:55	Dark	85.500	135	Bet Hyi	2.8200	5800.0	171	17688	No
35	GOM_NL__2PRFIN20050718_183945_00000932039_00099_17688_5187.N1	18-JUL-2005 18:39:45	Twilight	92.500	38	20Eps Sgr	1.8360	11000.	185	17688	No
36	GOM_NL__2PRFIN20050718_184211_00000902039_00099_17688_5188.N1	18-JUL-2005 18:42:11	Bright	89.500	137	22Lam Sgr	2.8240	4400.0	179	17688	No
37	GOM_NL__2PRFIN20050718_185058_00000852039_00099_17688_5189.N1	18-JUL-2005 18:50:58	Bright	84.500	126	60Bet Oph	2.7700	4250.0	169	17688	No
38	GOM_NL__2PRFIN20050718_185316_00000842039_00099_17688_5190.N1	18-JUL-2005 18:53:16	Bright	84.000	59	55Alp Oph	2.0800	8900.0	168	17688	No
39	GOM_NL__2PRFIN20050718_185917_00000842039_00099_17688_5191.N1	18-JUL-2005 18:59:17	Bright	84.000	133	40Zet Her	2.8070	6000.0	168	17688	No
40	GOM_NL__2PRFIN20050718_190416_00000852039_00099_17688_5192.N1	18-JUL-2005 19:04:16	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17688	No
41	GOM_NL__2PRFIN20050718_190722_00000862039_00099_17688_5193.N1	18-JUL-2005 19:07:22	Bright	86.000	119	14Eta Dra	2.7270	4700.0	172	17688	No
42	GOM_NL__2PRFIN20050718_191135_00000842039_00099_17688_5194.N1	18-JUL-2005 19:11:35	Bright	84.000	60	7Bet UMi	2.0810	3950.0	168	17688	No

43	GOM_NL__2PRFIN20050718_194244_000000932039_00099_17688_5195.N1	18-JUL-2005 19:42:44	Dark	93.000	7	19Bet Ori	0.10000	14000.	186	17688	No
44	GOM_NL__2PRFIN20050718_194508_000000852039_00099_17688_5196.N1	18-JUL-2005 19:45:08	Dark	84.500	101	11Alp Lep	2.5820	7000.0	169	17688	No
45	GOM_NL__2PRFIN20050718_200431_000000852039_00100_17689_5186.N1	18-JUL-2005 20:04:31	Dark	84.500	135	Bet Hyi	2.8200	5800.0	169	17689	No
46	GOM_NL__2PRFIN20050718_202021_000000912039_00100_17689_5187.N1	18-JUL-2005 20:20:21	Twilight	91.000	38	20Eps Sgr	1.8360	11000.	182	17689	No
47	GOM_NL__2PRFIN20050718_202248_000000892039_00100_17689_5188.N1	18-JUL-2005 20:22:48	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17689	No
48	GOM_NL__2PRFIN20050718_203134_000000862039_00100_17689_5189.N1	18-JUL-2005 20:31:34	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17689	No
49	GOM_NL__2PRFIN20050718_203352_000000852039_00100_17689_5190.N1	18-JUL-2005 20:33:52	Bright	85.000	59	55Alp Oph	2.0800	8900.0	170	17689	No
50	GOM_NL__2PRFIN20050718_203953_000000872039_00100_17689_5191.N1	18-JUL-2005 20:39:53	Bright	86.500	133	40Zet Her	2.8070	6000.0	173	17689	No
51	GOM_NL__2PRFIN20050718_204452_000000862039_00100_17689_5192.N1	18-JUL-2005 20:44:52	Bright	85.500	130	23Bet Dra	2.7990	5800.0	171	17689	No
52	GOM_NL__2PRFIN20050718_204758_000000852039_00100_17689_5193.N1	18-JUL-2005 20:47:58	Bright	85.000	119	14Eta Dra	2.7270	4700.0	170	17689	No
53	GOM_NL__2PRFIN20050718_205211_000000862039_00100_17689_5194.N1	18-JUL-2005 20:52:11	Bright	86.000	60	7Bet UMi	2.0810	3950.0	172	17689	No
54	GOM_NL__2PRFIN20050718_212320_000000872039_00100_17689_5195.N1	18-JUL-2005 21:23:20	Dark	87.000	7	19Bet Ori	0.10000	14000.	174	17689	No
55	GOM_NL__2PRFIN20050718_212544_000000852039_00100_17689_5196.N1	18-JUL-2005 21:25:44	Dark	84.500	101	11Alp Lep	2.5820	7000.0	169	17689	No
56	GOM_NL__2PRFIN20050718_214507_000000872039_00101_17690_5187.N1	18-JUL-2005 21:45:07	Dark	87.000	135	Bet Hyi	2.8200	5800.0	174	17690	No
57	GOM_NL__2PRFIN20050718_220057_000000932039_00101_17690_5188.N1	18-JUL-2005 22:00:57	Twilight	93.000	38	20Eps Sgr	1.8360	11000.	186	17690	No
58	GOM_NL__2PRFIN20050718_220324_000000892039_00101_17690_5189.N1	18-JUL-2005 22:03:24	Bright	89.000	137	22Lam Sgr	2.8240	4400.0	178	17690	No
59	GOM_NL__2PRFIN20050718_221210_000000862039_00101_17690_5190.N1	18-JUL-2005 22:12:10	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17690	No
60	GOM_NL__2PRFIN20050718_221428_000000862039_00101_17690_5191.N1	18-JUL-2005 22:14:28	Bright	86.000	59	55Alp Oph	2.0800	8900.0	172	17690	No
61	GOM_NL__2PRFIN20050718_222029_000000852039_00101_17690_5192.N1	18-JUL-2005 22:20:29	Bright	85.000	133	40Zet Her	2.8070	6000.0	170	17690	No
62	GOM_NL__2PRFIN20050718_222528_000000852039_00101_17690_5193.N1	18-JUL-2005 22:25:28	Bright	85.000	130	23Bet Dra	2.7990	5800.0	170	17690	No
63	GOM_NL__2PRFIN20050718_222834_000000862039_00101_17690_5194.N1	18-JUL-2005 22:28:34	Bright	85.500	119	14Eta Dra	2.7270	4700.0	171	17690	No
64	GOM_NL__2PRFIN20050718_223247_000001022039_00101_17690_5195.N1	18-JUL-2005 22:32:47	Bright	102.00	60	7Bet UMi	2.0810	3950.0	204	17690	No
65	GOM_NL__2PRFIN20050718_230131_000000872039_00101_17690_5196.N1	18-JUL-2005 23:01:31	Dark	87.000	72	34Del Ori	2.2500	30000.	174	17690	No
66	GOM_NL__2PRFIN20050718_230356_000000862039_00101_17690_5197.N1	18-JUL-2005 23:03:56	Dark	85.500	7	19Bet Ori	0.10000	14000.	171	17690	No
67	GOM_NL__2PRFIN20050718_230620_000000862039_00101_17690_5198.N1	18-JUL-2005 23:06:20	Dark	85.500	101	11Alp Lep	2.5820	7000.0	171	17690	No
68	GOM_NL__2PRFIN20050718_232543_000000872039_00102_17691_5025.N1	18-JUL-2005 23:25:43	Dark	87.000	135	Bet Hyi	2.8200	5800.0	174	17691	No
69	GOM_NL__2PRFIN20050718_234134_000000942039_00102_17691_5026.N1	18-JUL-2005 23:41:34	Twilight	93.500	38	20Eps Sgr	1.8360	11000.	187	17691	No
70	GOM_NL__2PRFIN20050718_234400_000000892039_00102_17691_5027.N1	18-JUL-2005 23:44:00	Bright	88.500	137	22Lam Sgr	2.8240	4400.0	177	17691	No
71	GOM_NL__2PRFIN20050718_235246_000000862039_00102_17691_5028.N1	18-JUL-2005 23:52:46	Bright	86.000	126	60Bet Oph	2.7700	4250.0	172	17691	No
72	GOM_NL__2PRFIN20050718_235504_000000872039_00102_17691_5029.N1	18-JUL-2005 23:55:04	Bright	86.500	59	55Alp Oph	2.0800	8900.0	173	17691	No

### 3. Quality information per product

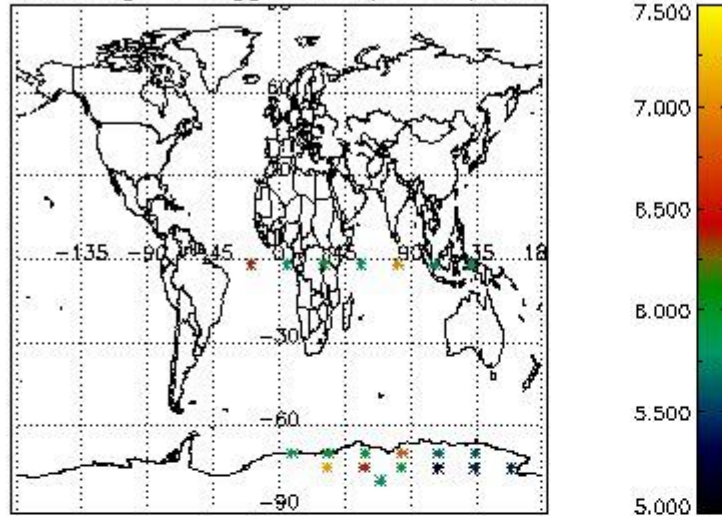
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

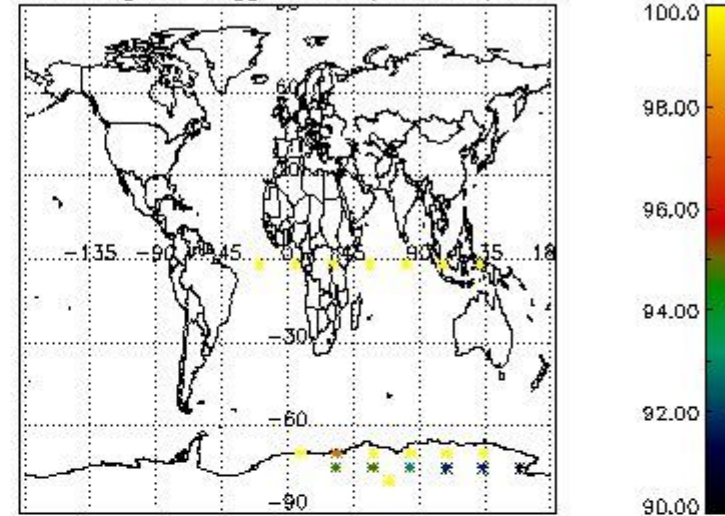


3.2 Plot quality information per product (world map)

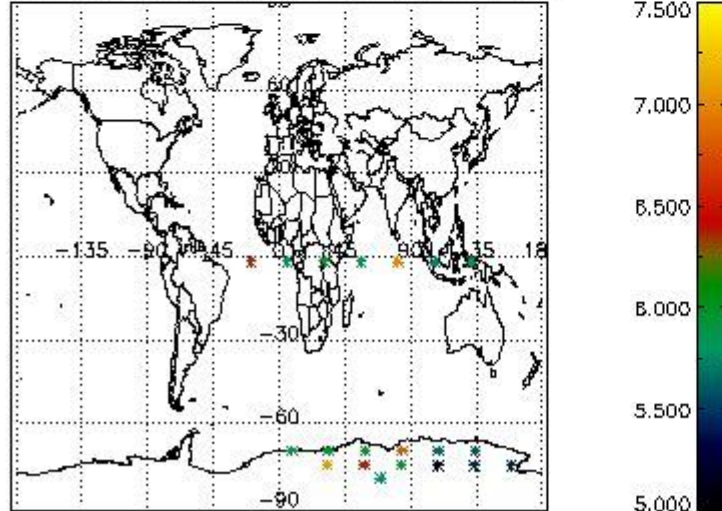
Percentage of flagged data per O3 profile



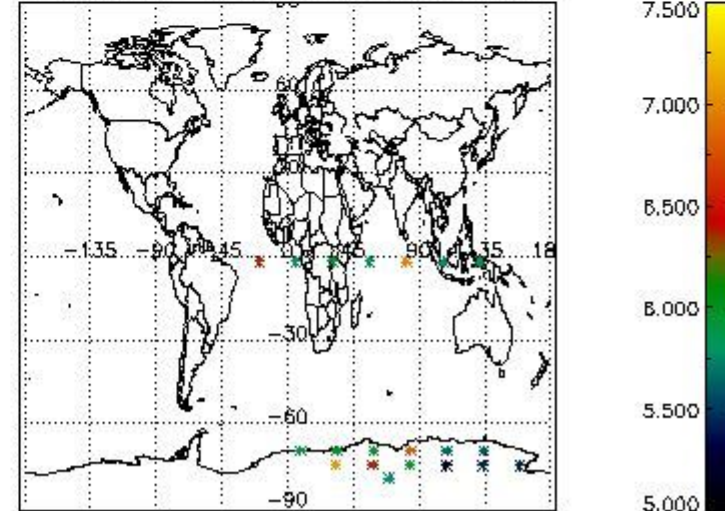
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



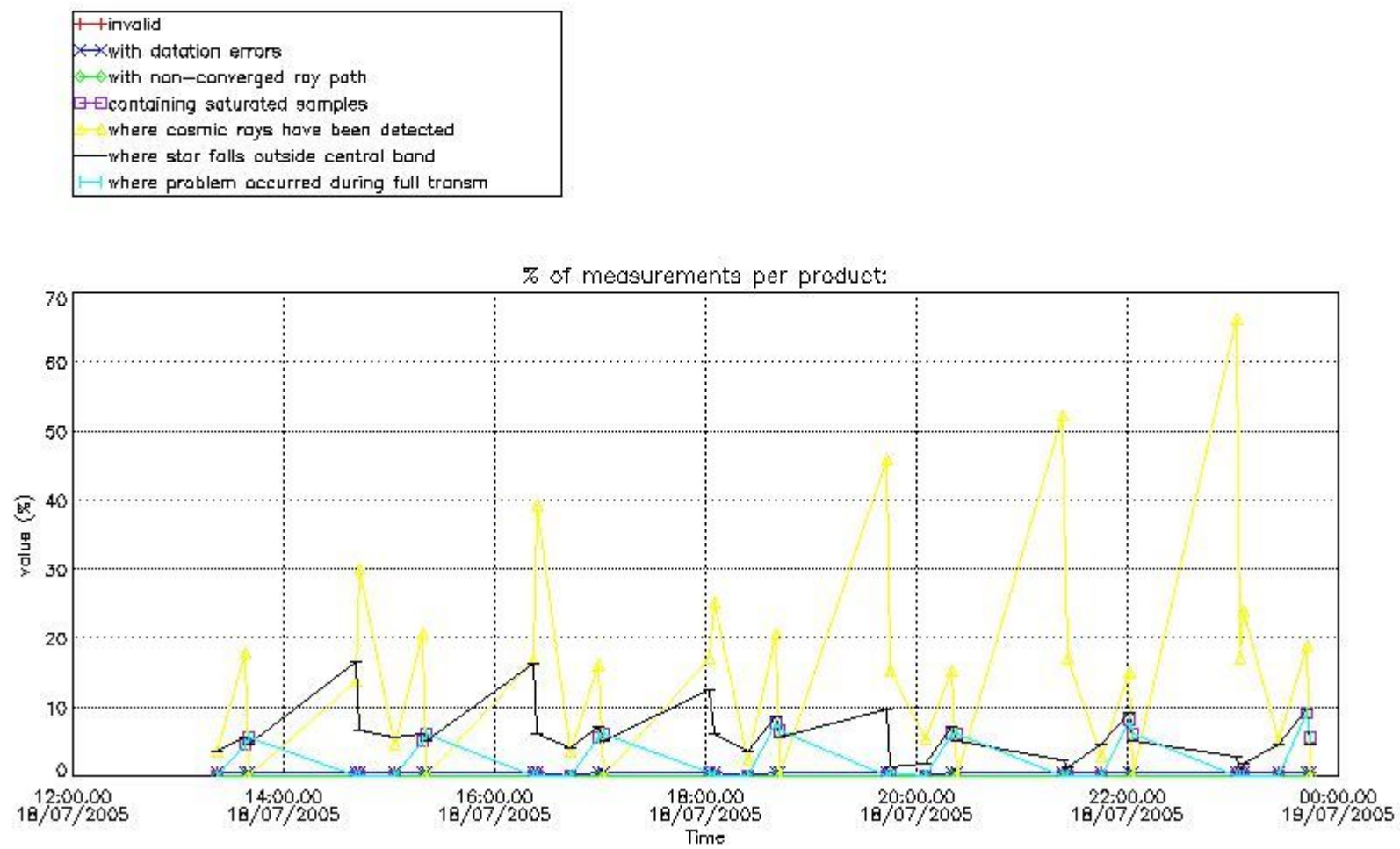
#### 4. Level 1 quality information per product

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.

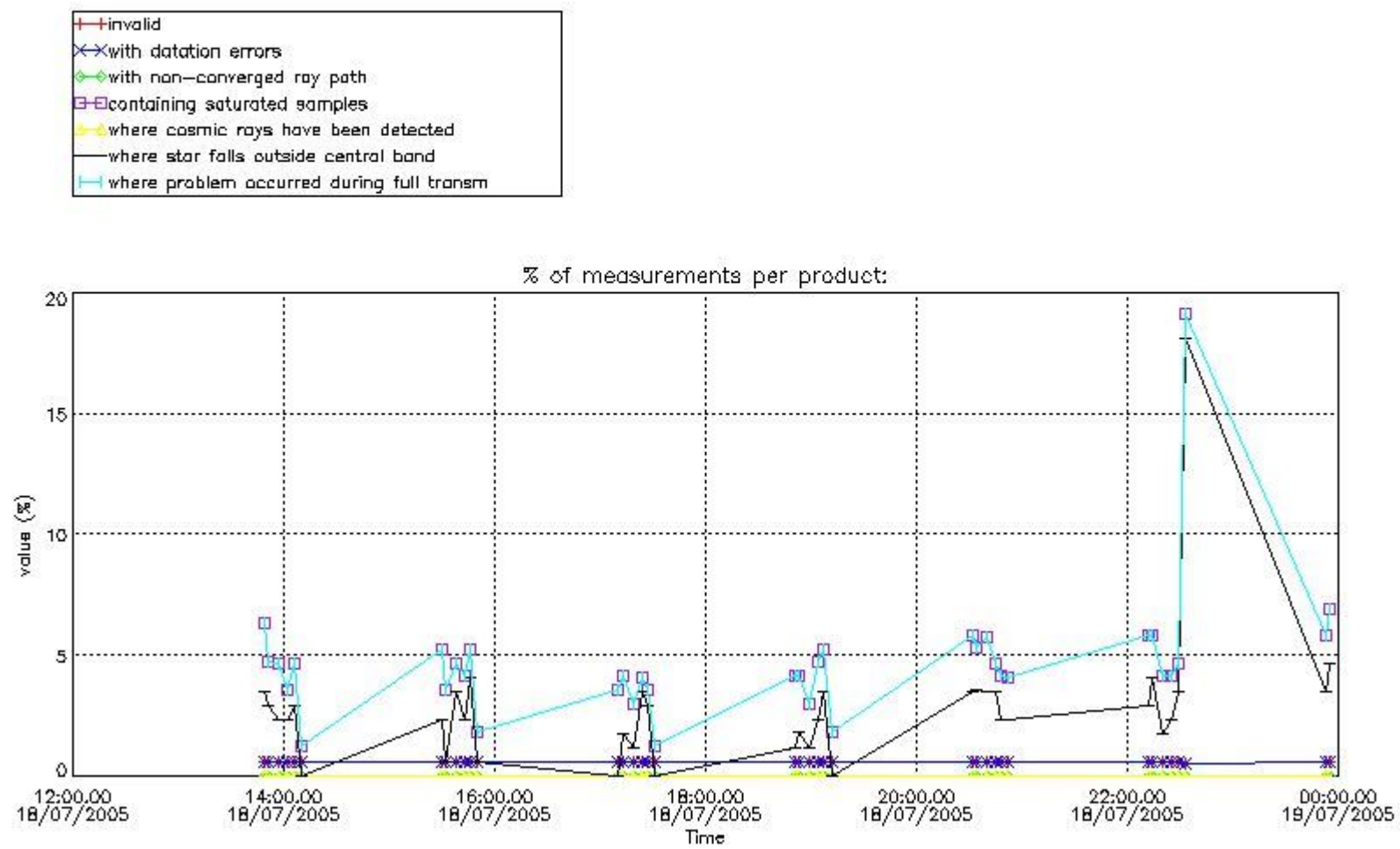
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





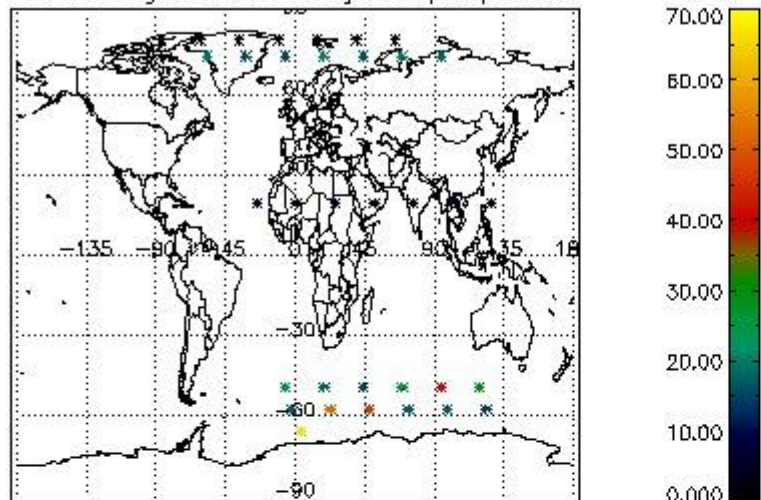
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



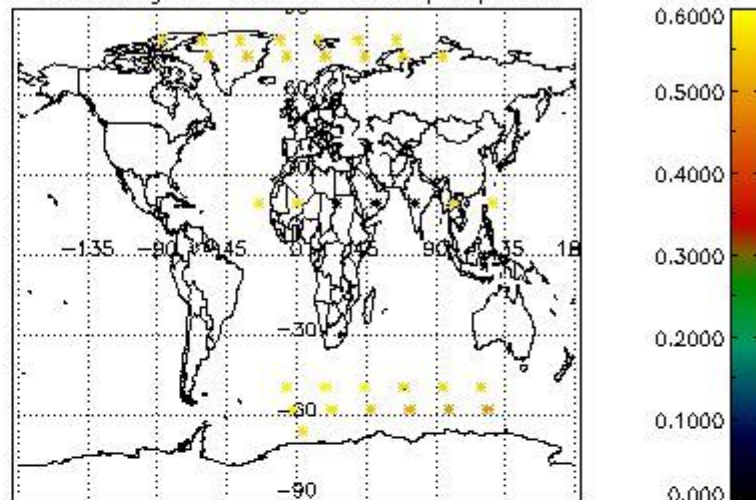
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

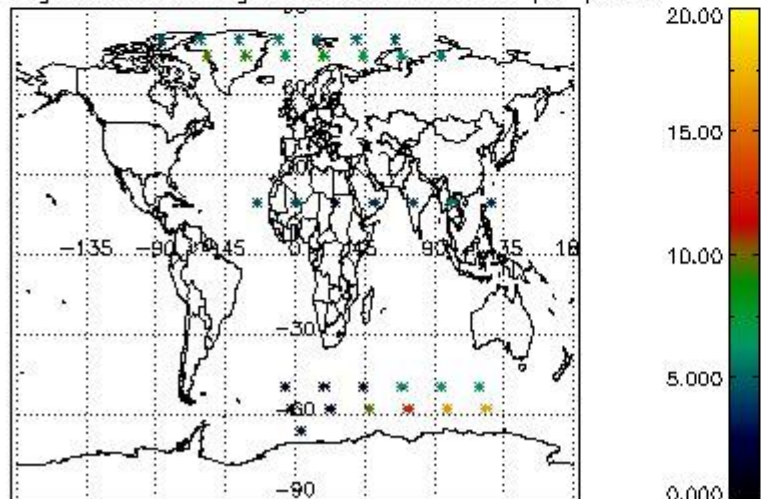
Percentage of cosmic ray hits per profile



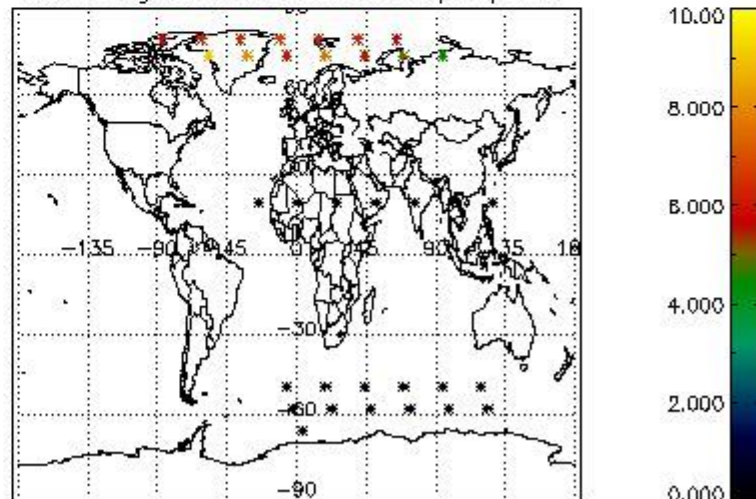
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

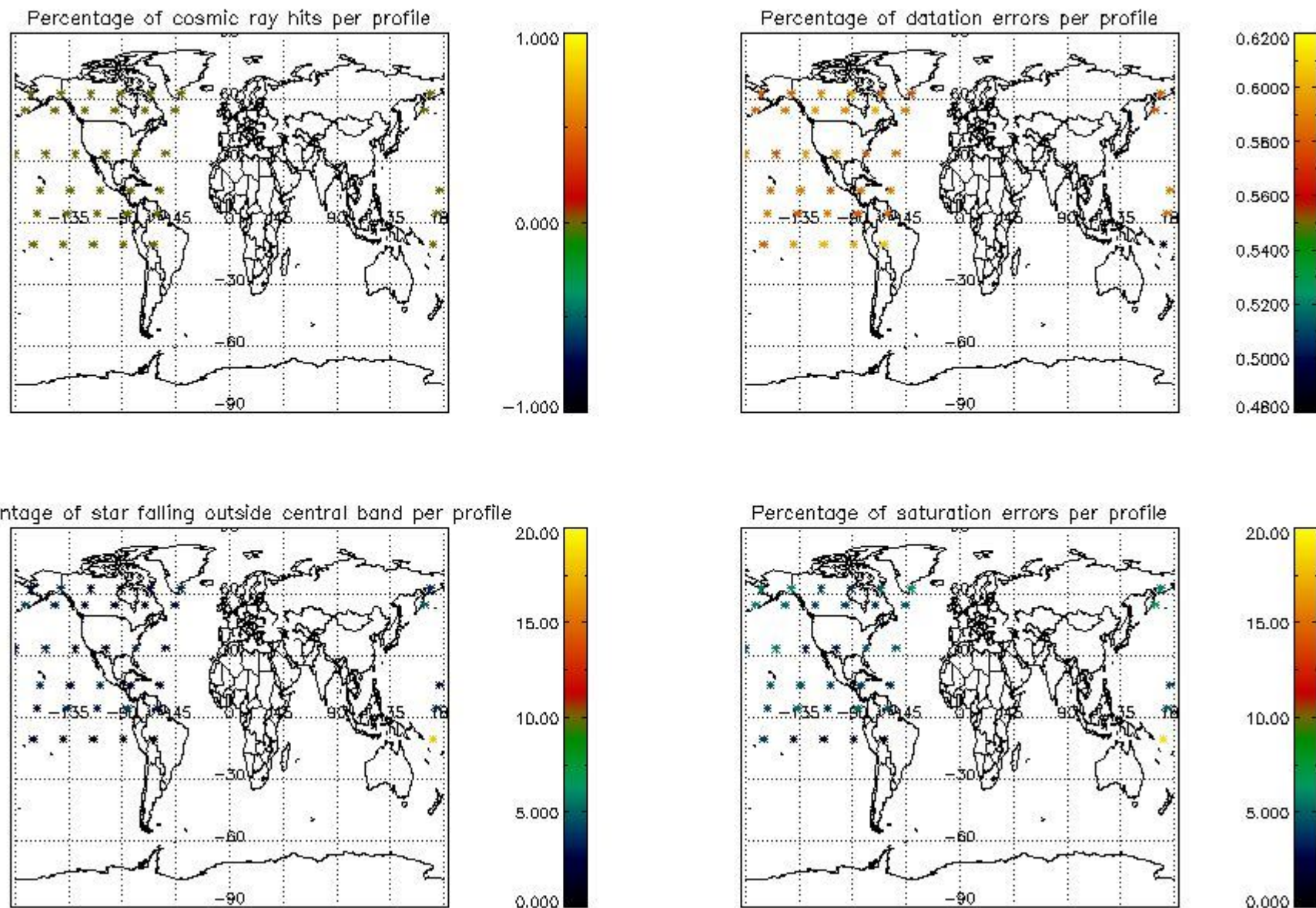


Percentage of saturation errors per profile



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.

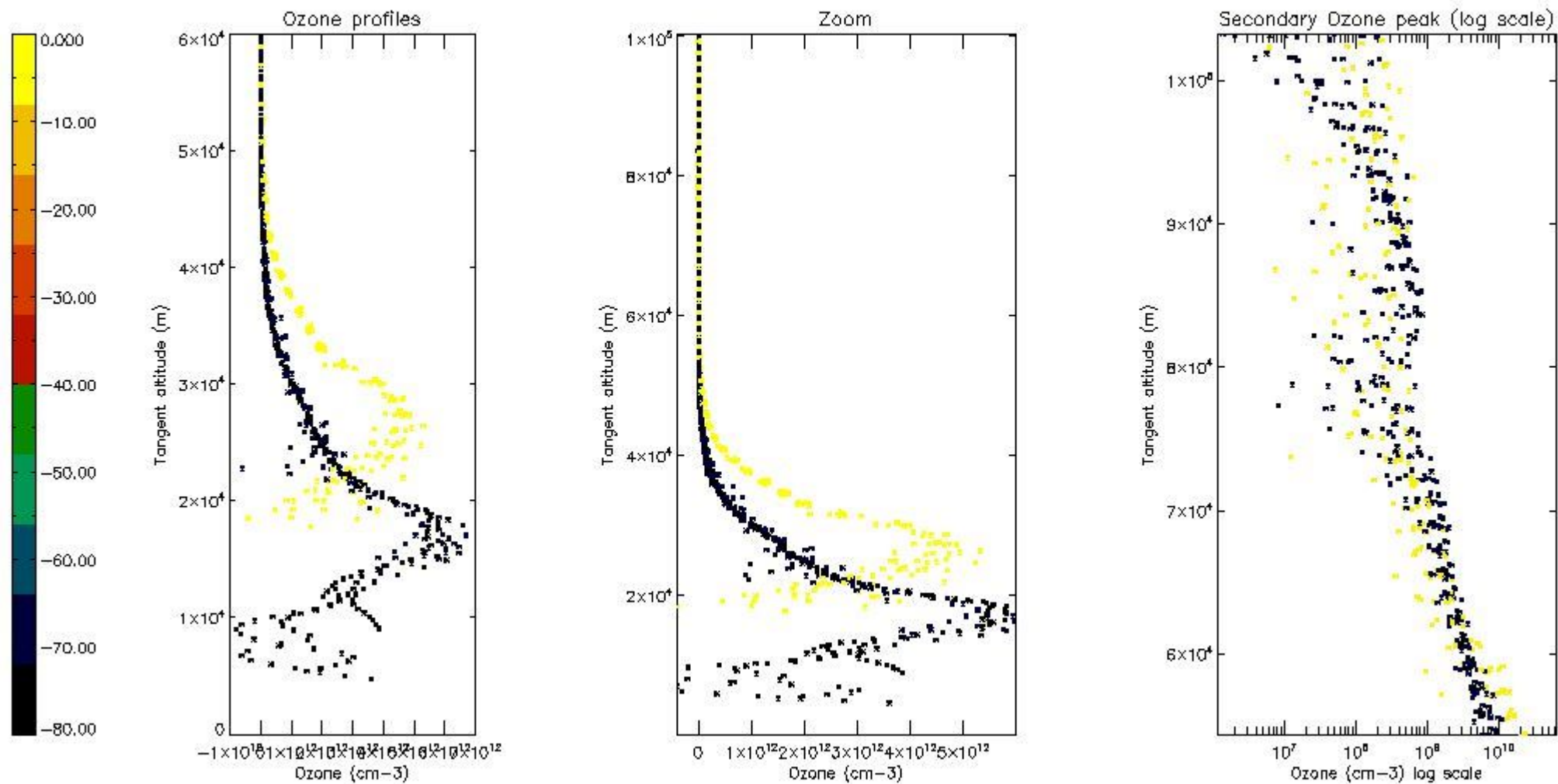
Criteria	% of total production
All STD	29
STD < 20	6



STD < 10	5
STD < 5	3

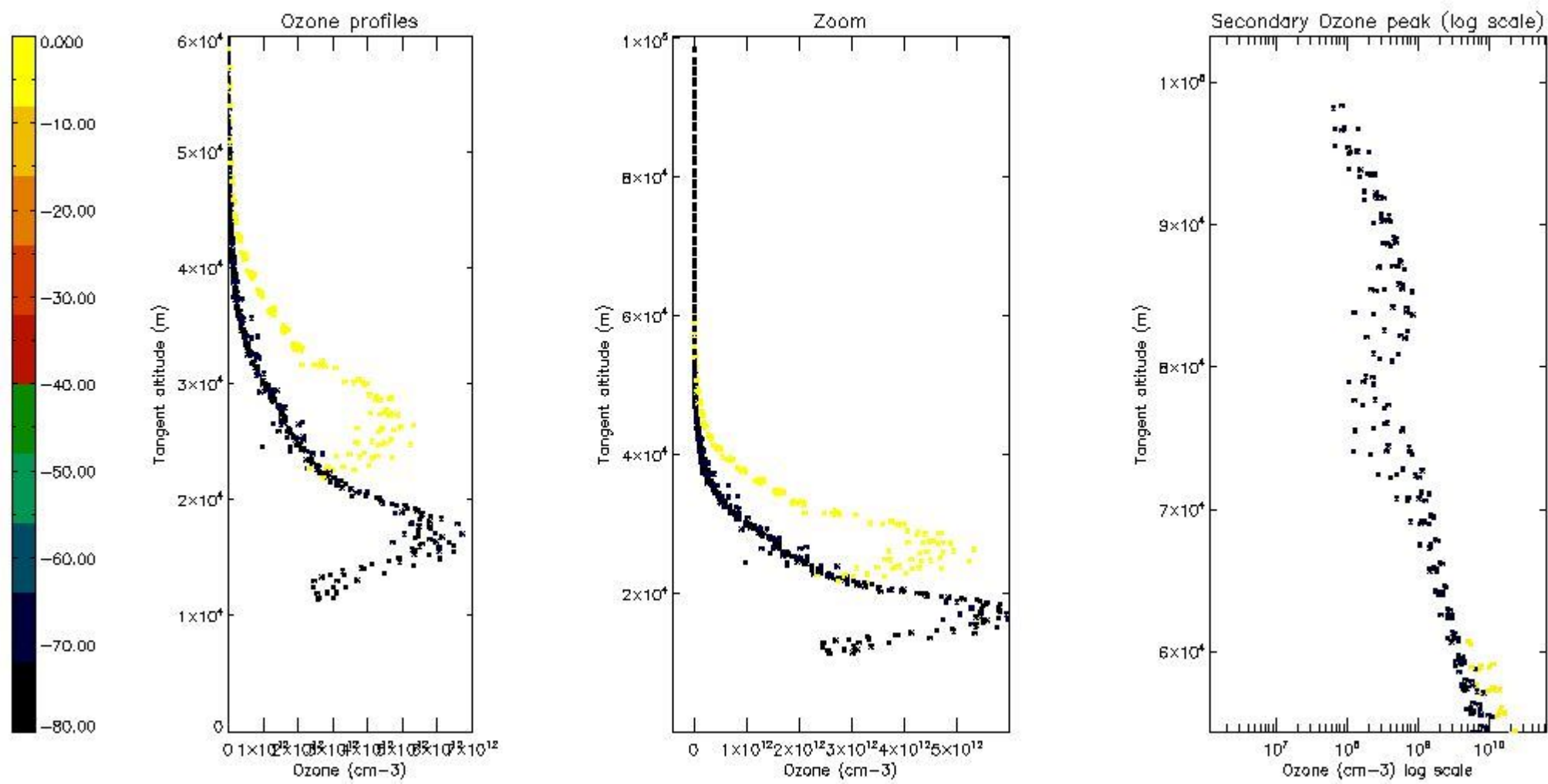
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



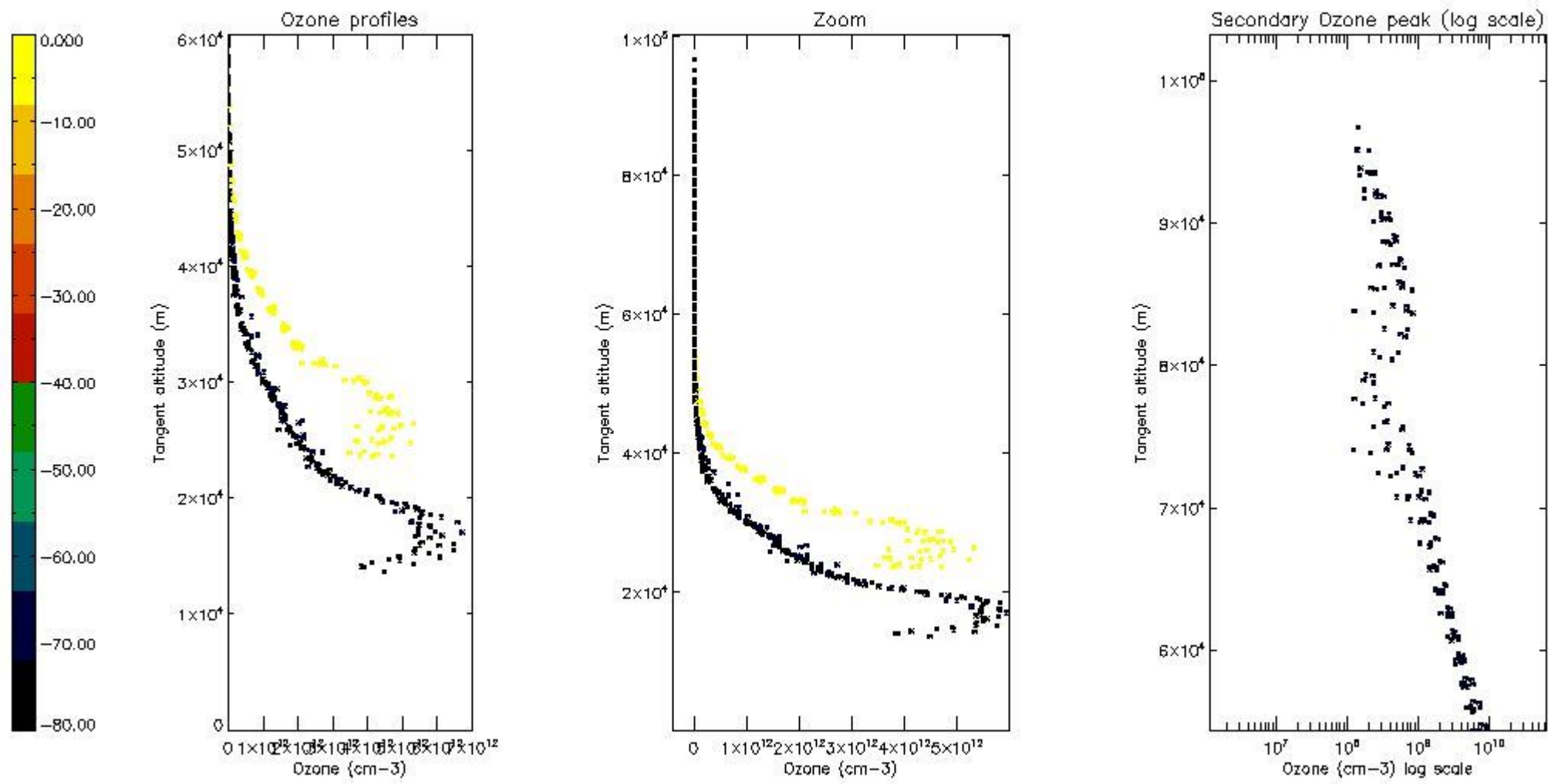
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



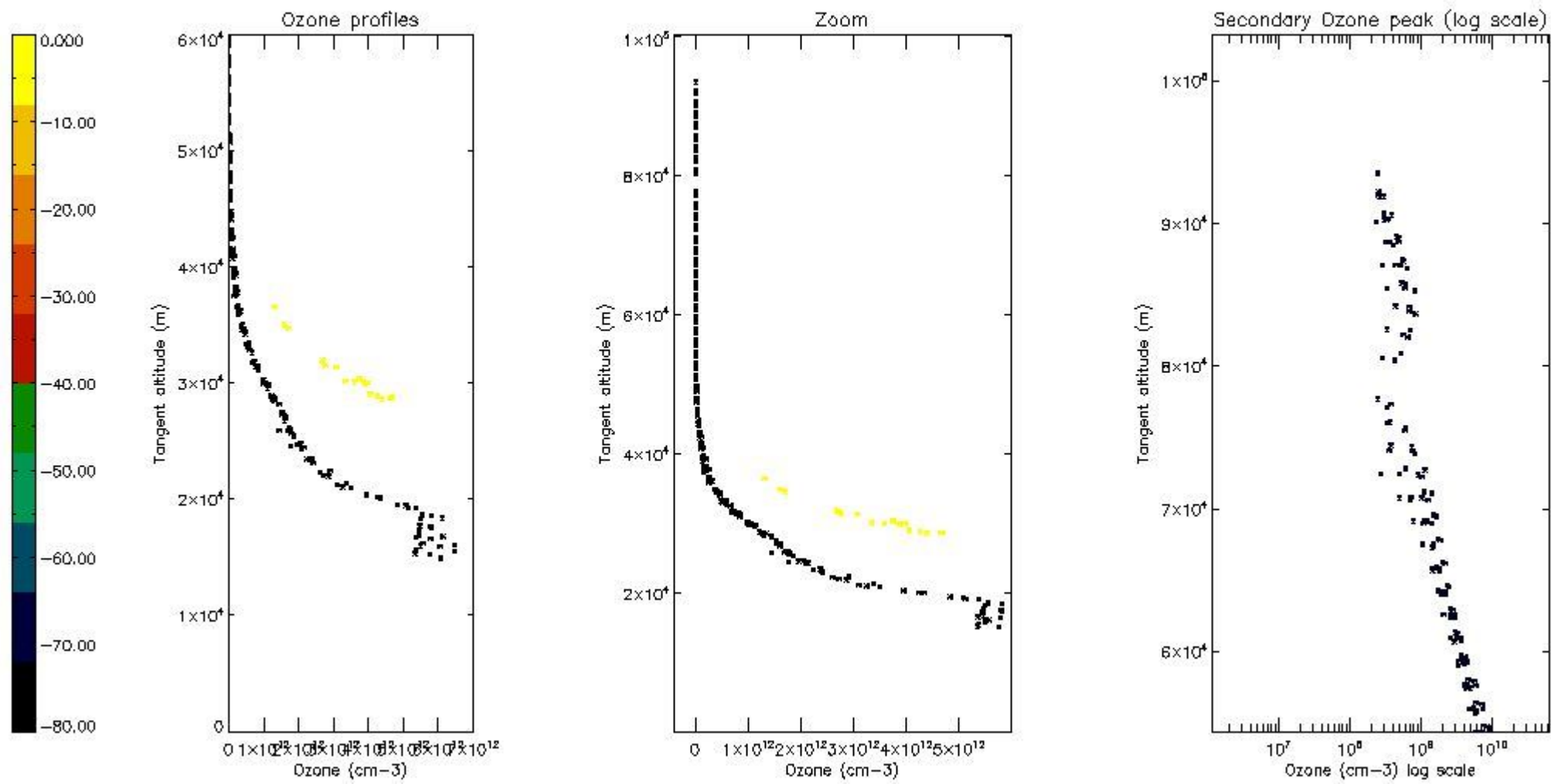
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



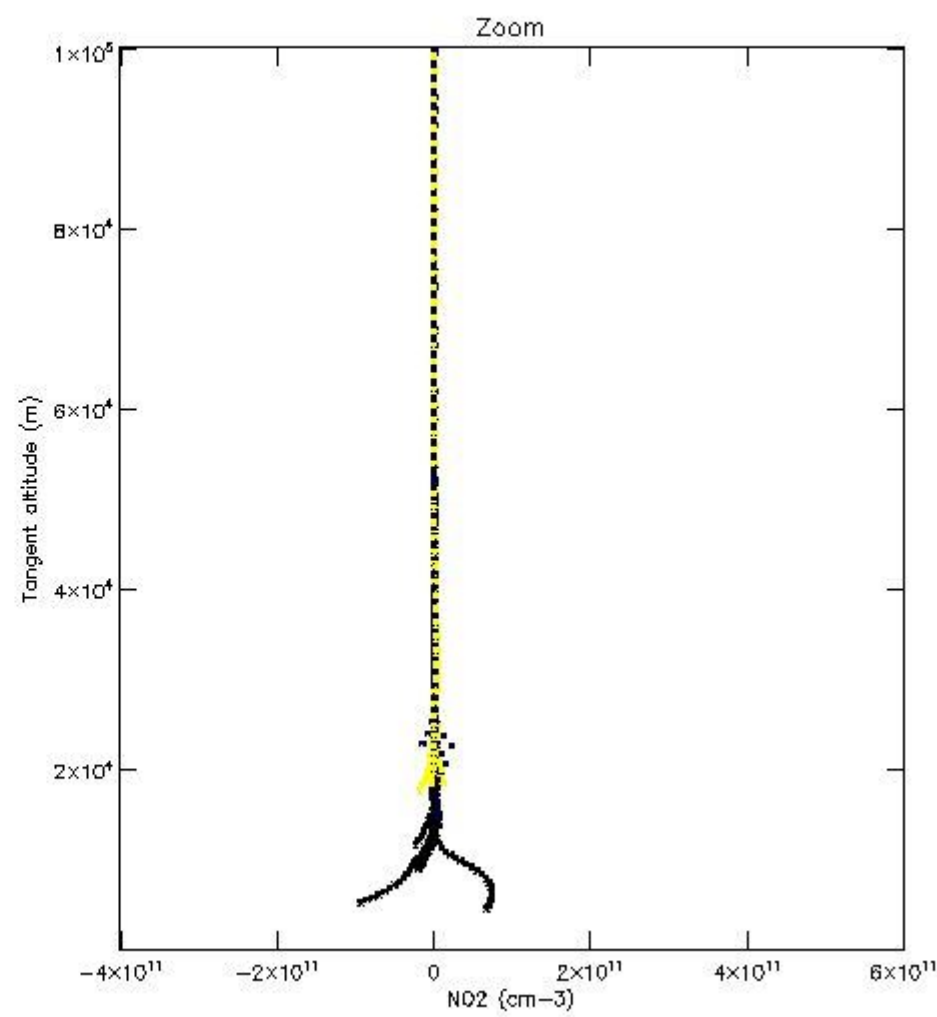
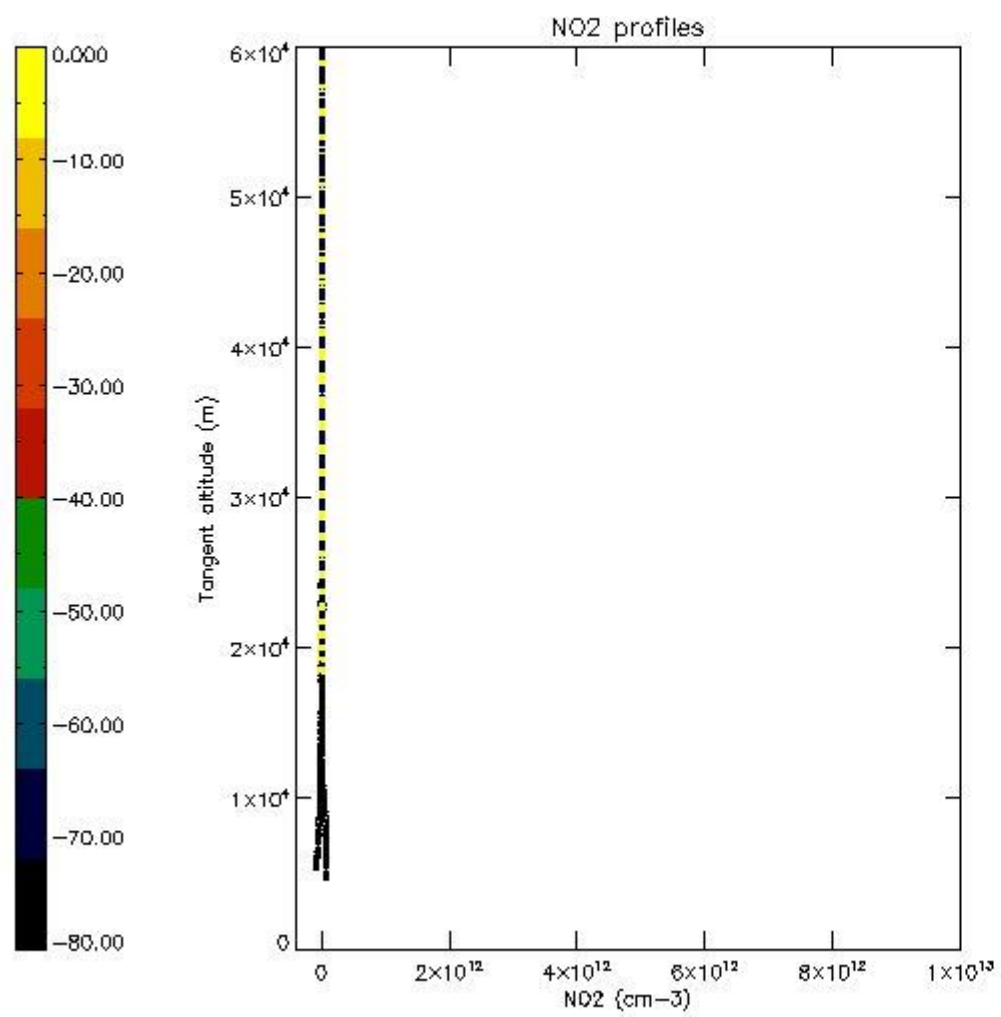
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



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

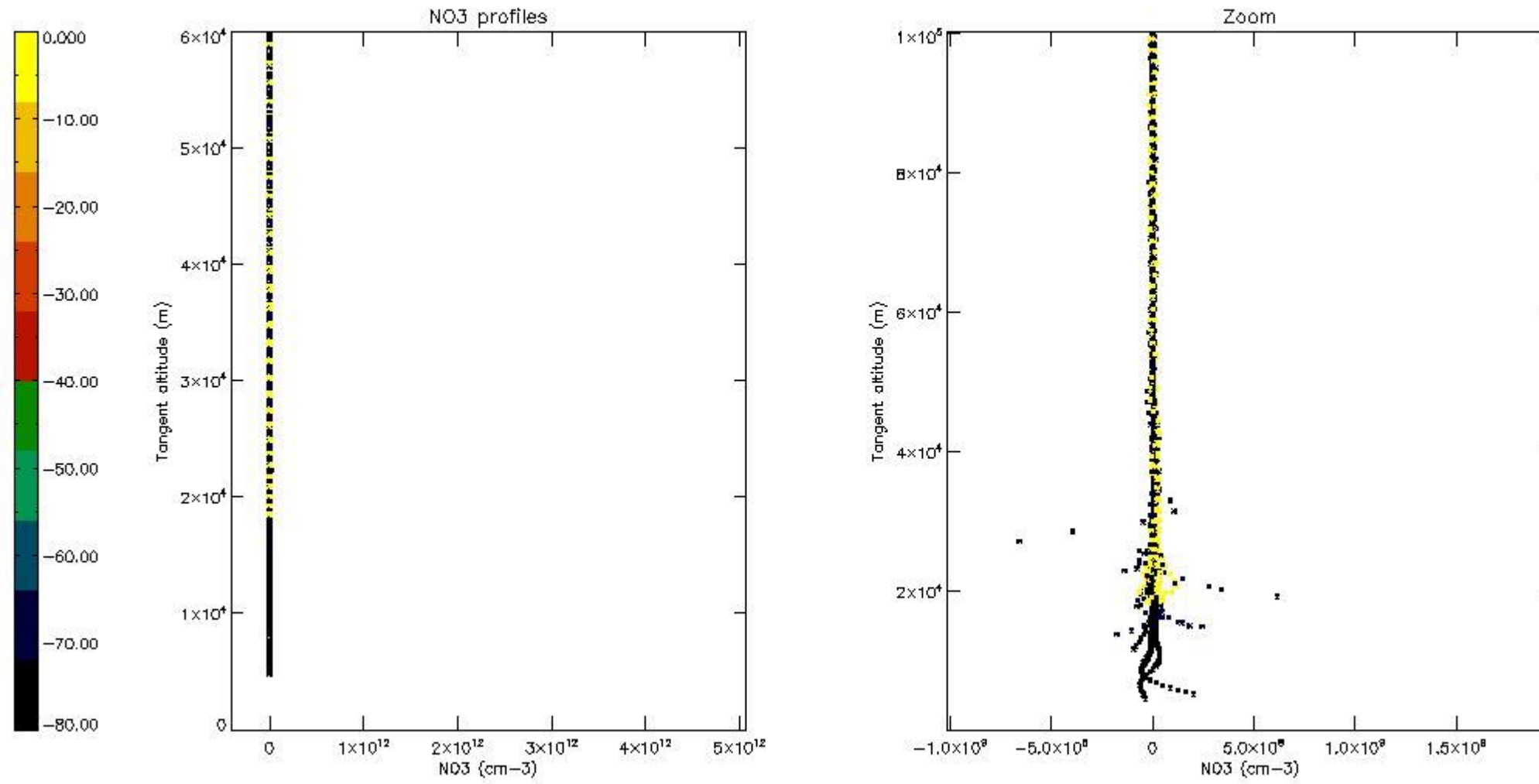
The colorbar represents the latitude.



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

The colorbar represents the latitude.

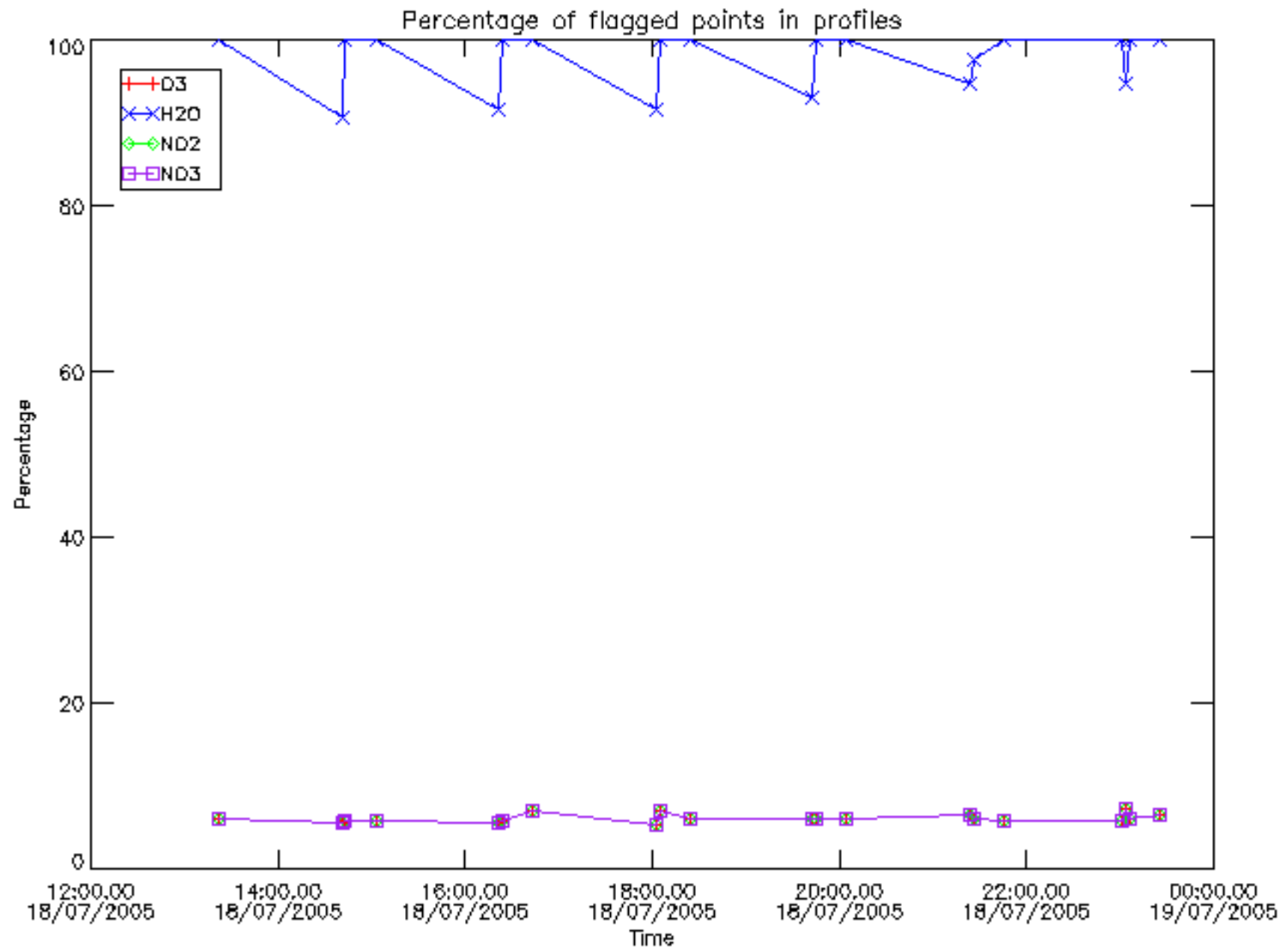




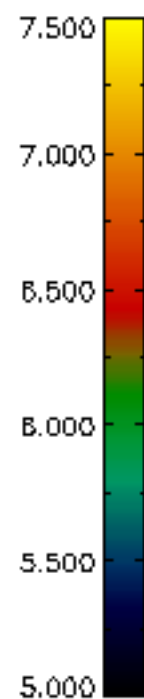
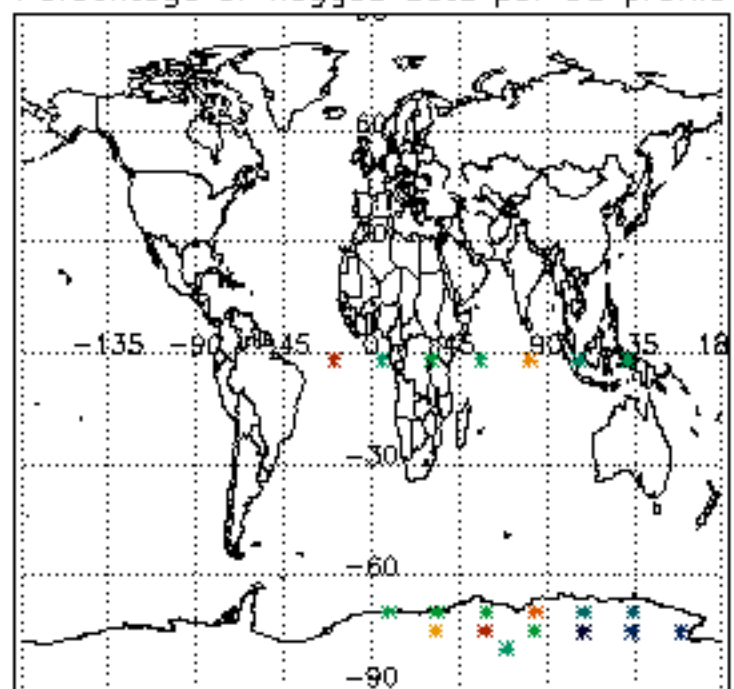
## 6. Auxiliary Data Files used for the production reported in section 2

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.

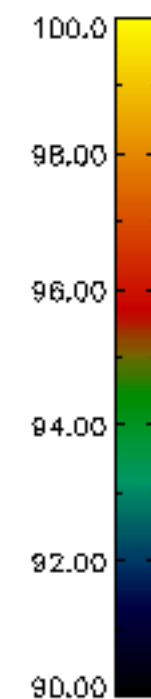
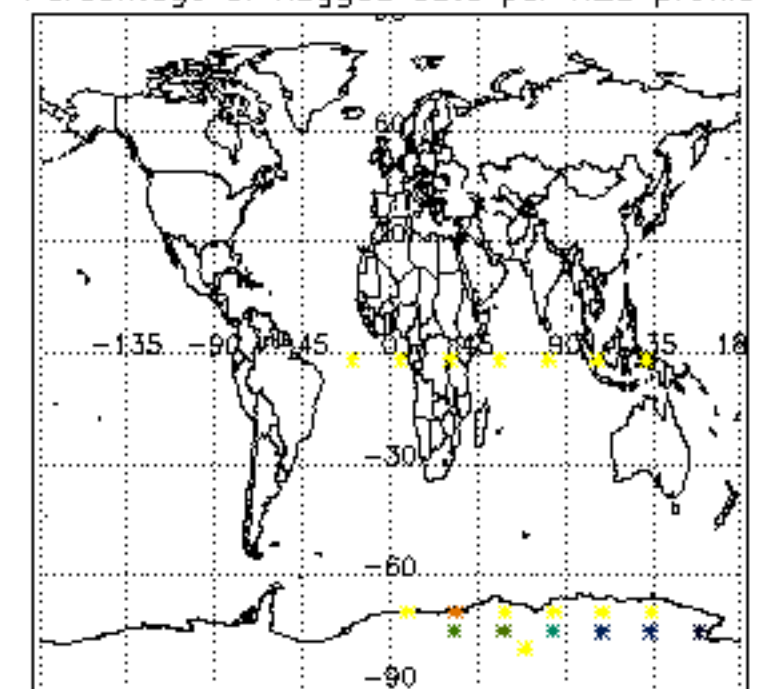
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	18-JUL-2005 13:22:06
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	18-JUL-2005 13:22:06
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	18-JUL-2005 13:22:06



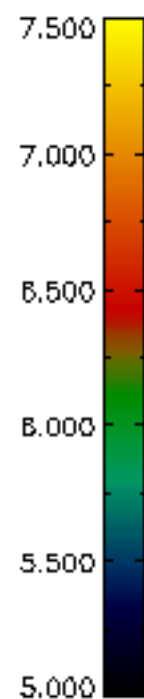
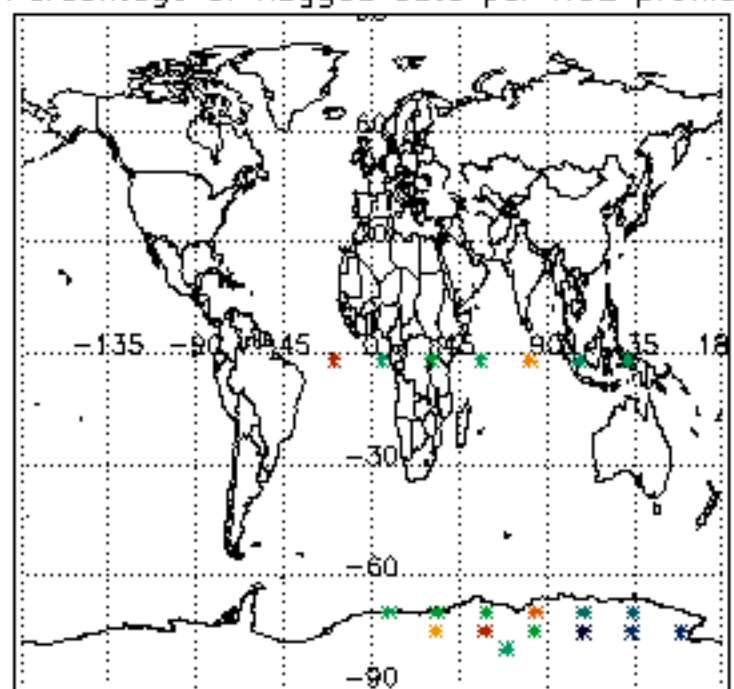
Percentage of flagged data per D3 profile



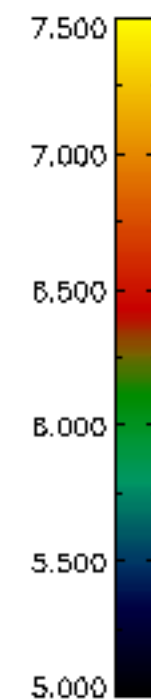
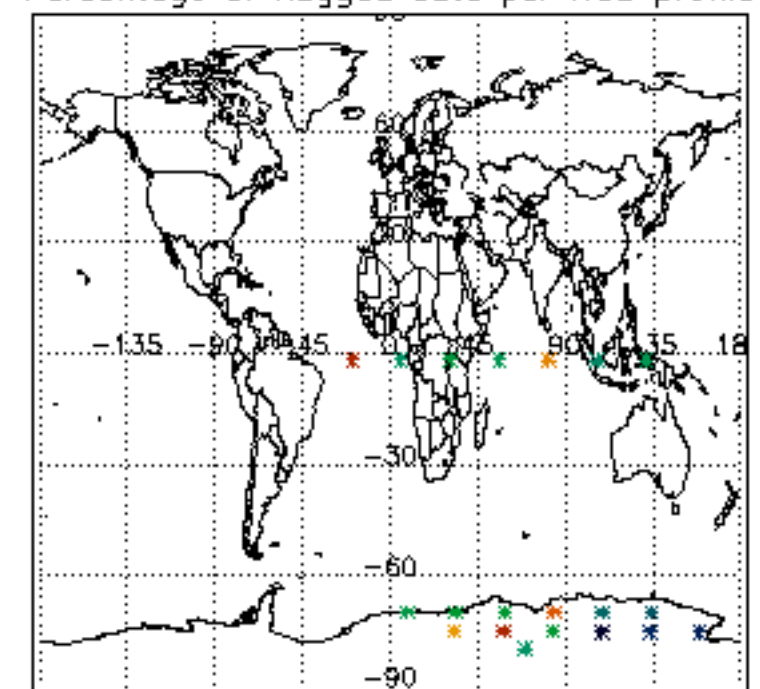
Percentage of flagged data per H2O profile

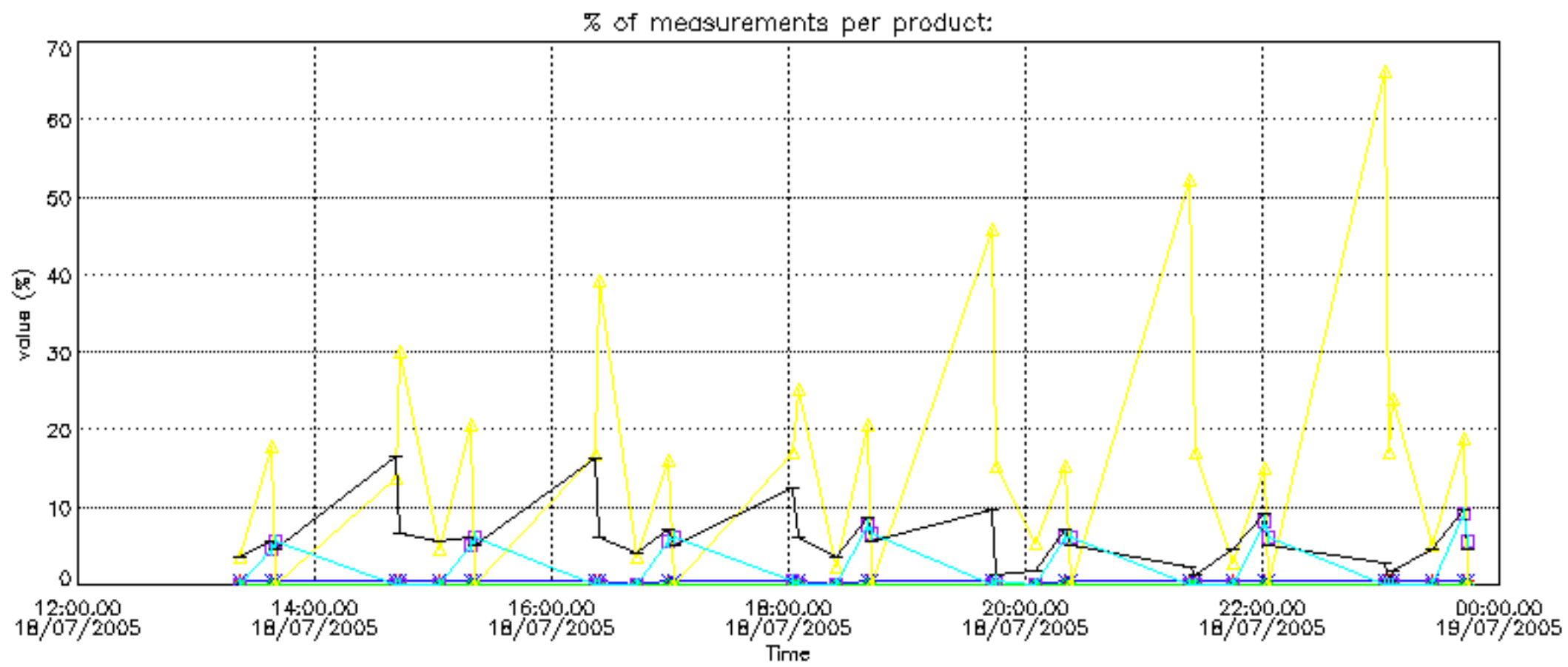


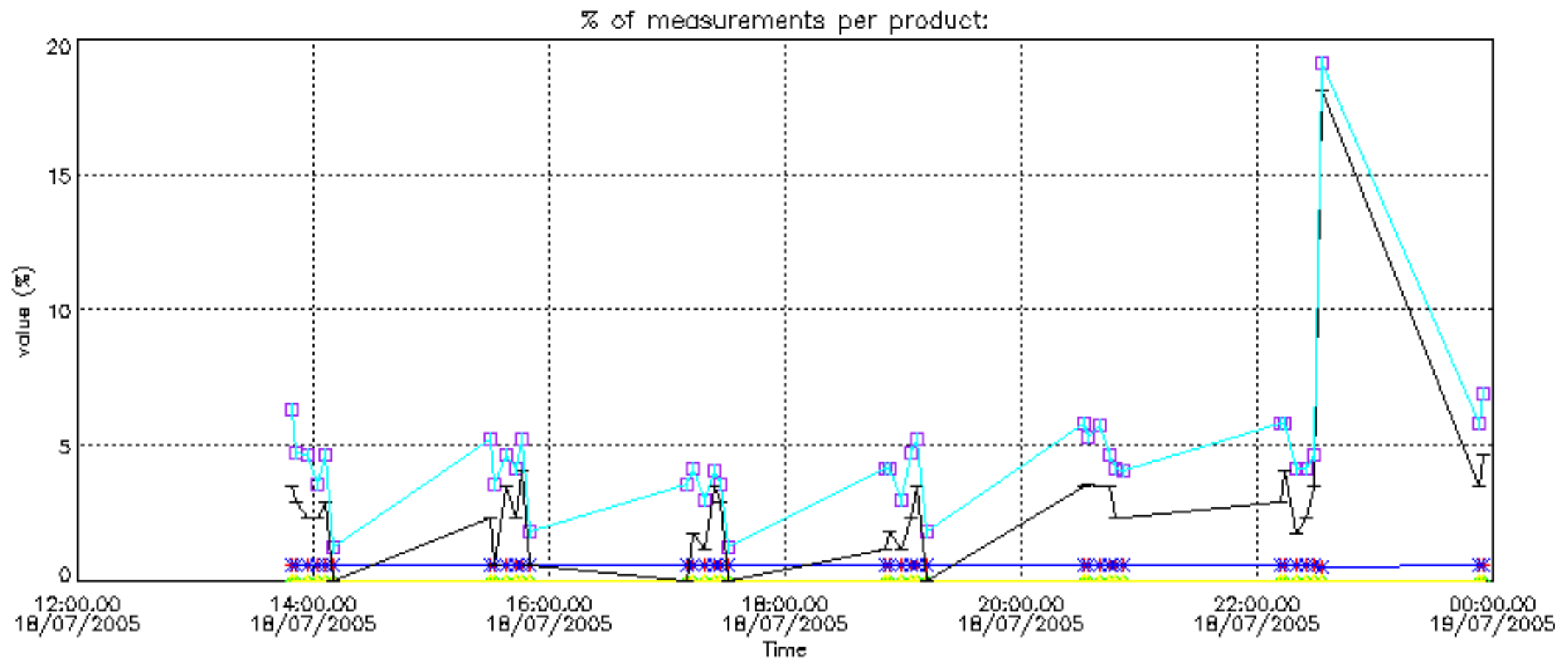
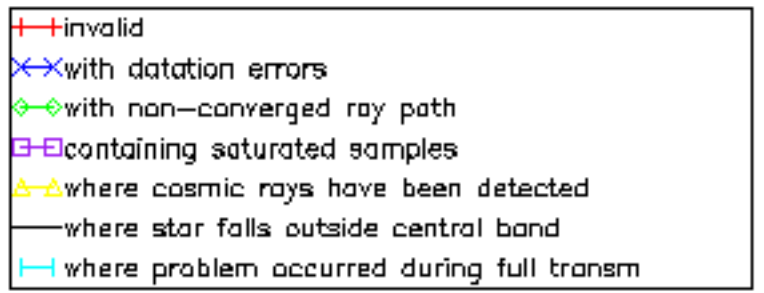
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

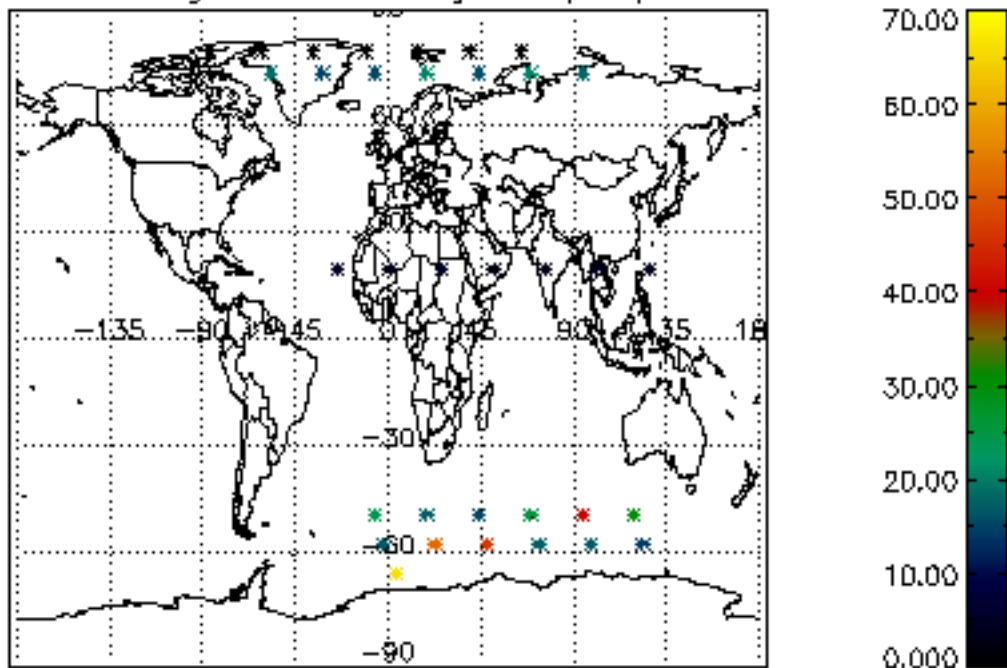




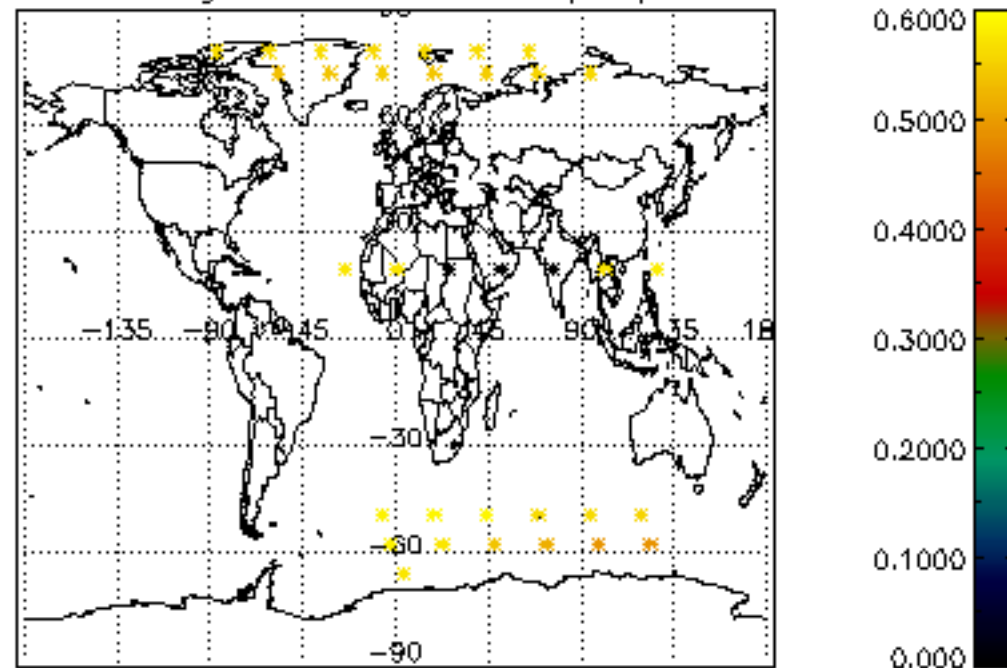




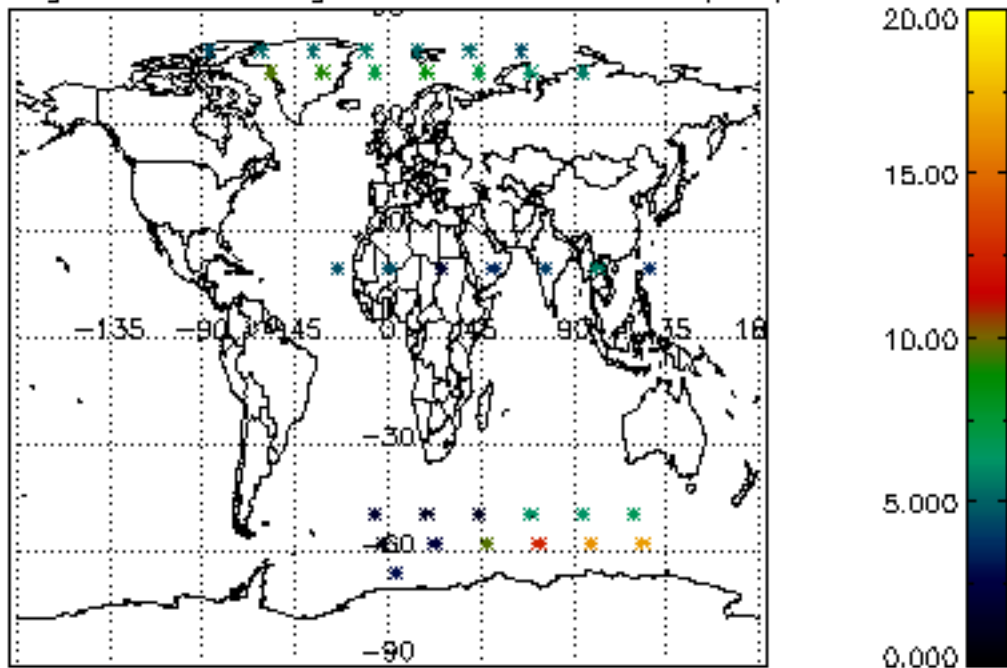
Percentage of cosmic ray hits per profile



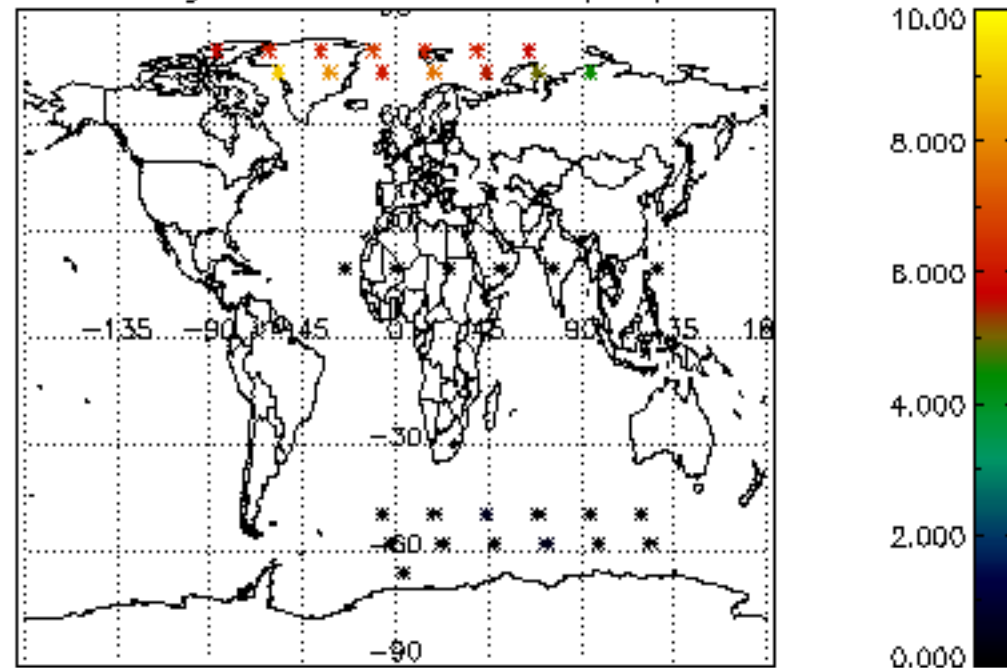
Percentage of datation errors per profile



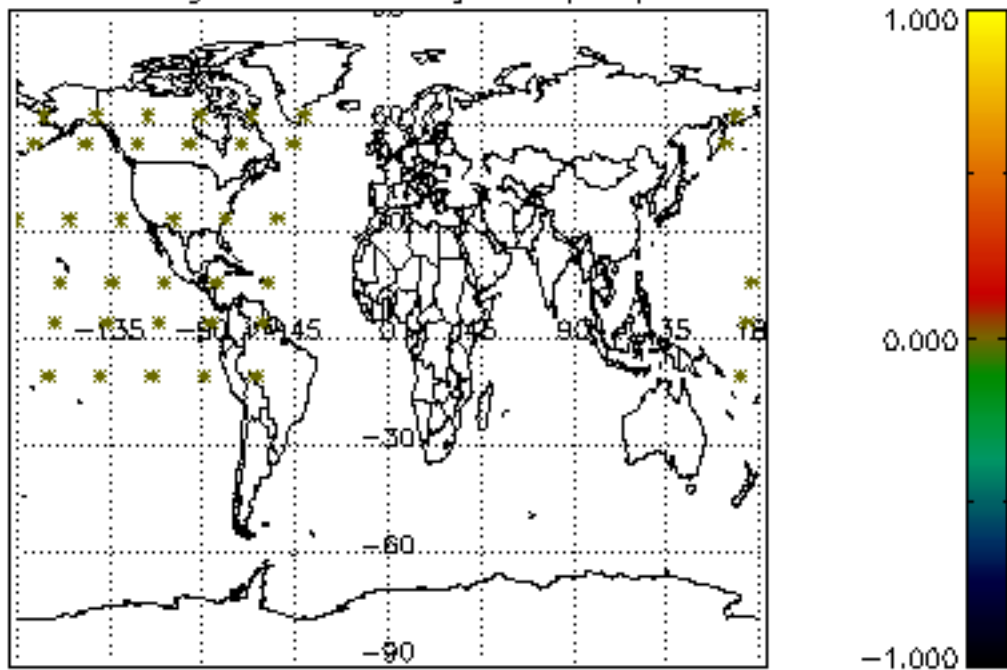
Percentage of star falling outside central band per profile



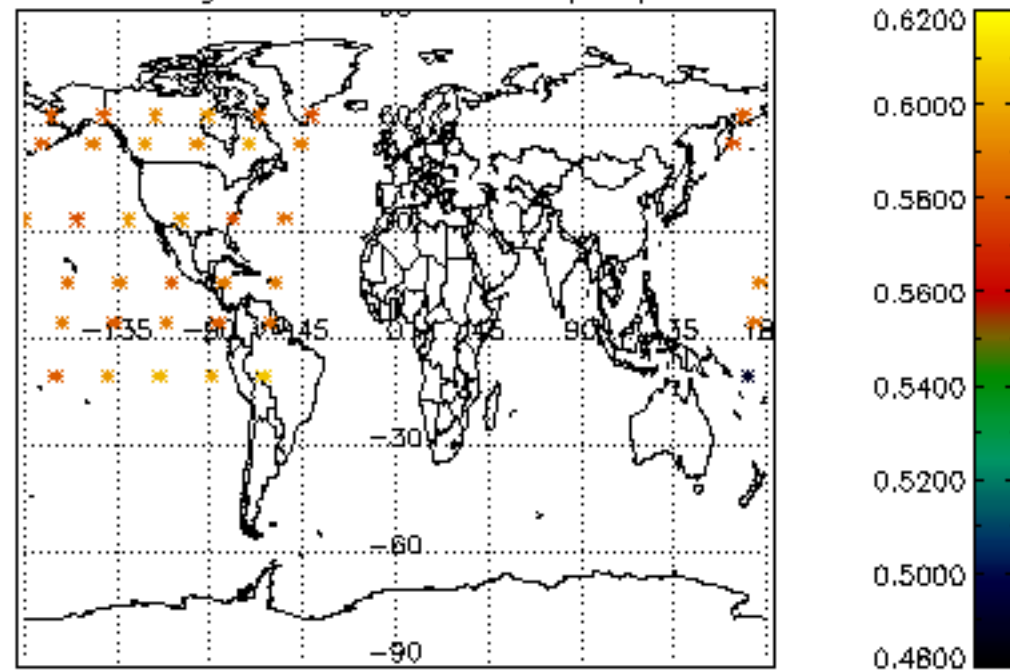
Percentage of saturation errors per profile



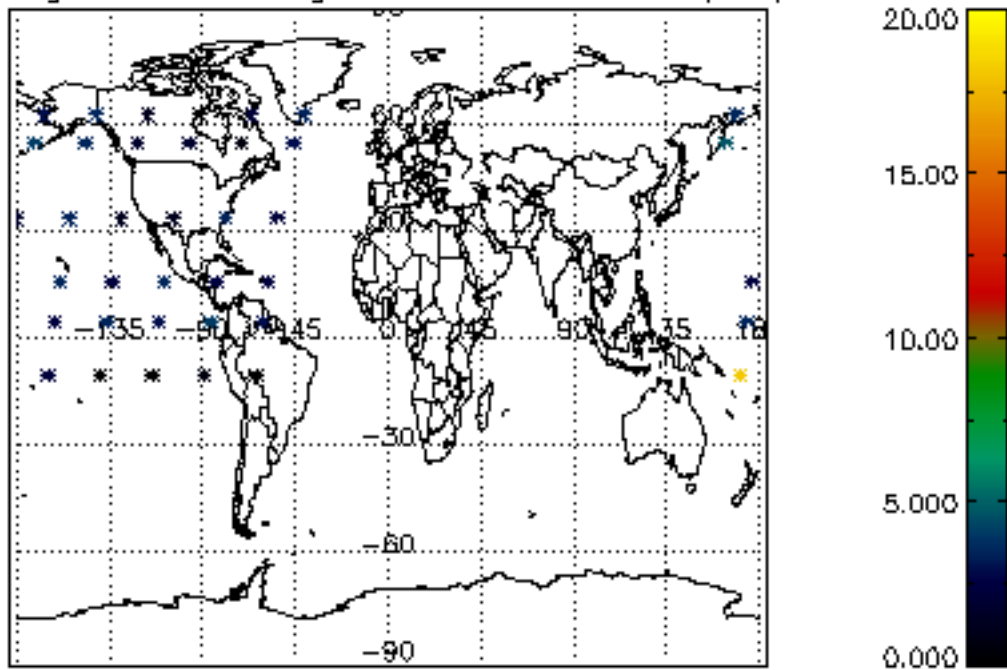
Percentage of cosmic ray hits per profile



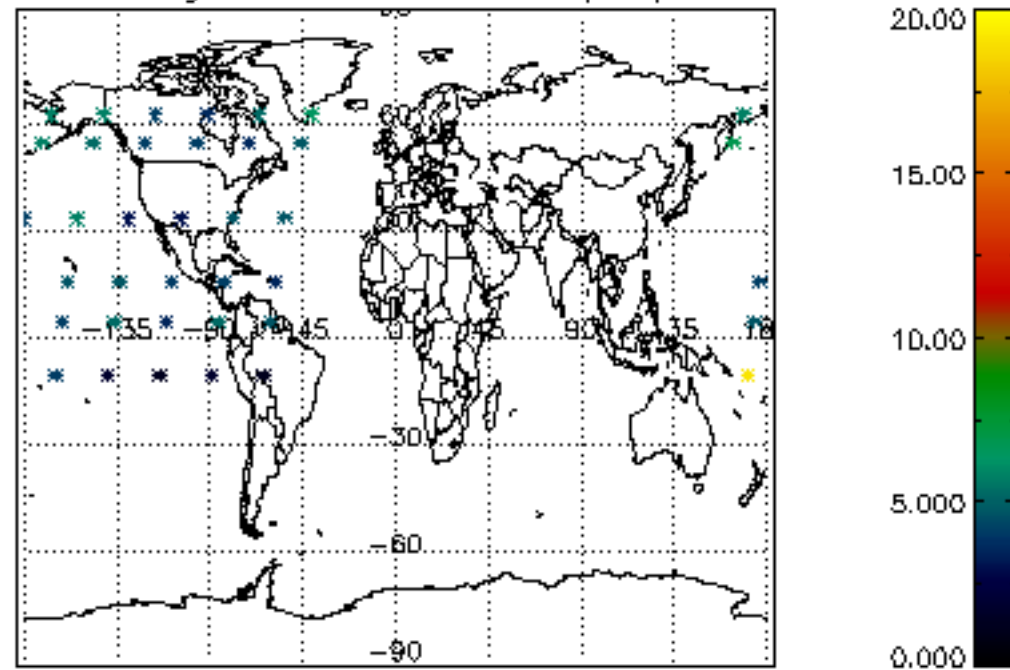
Percentage of datation errors per profile

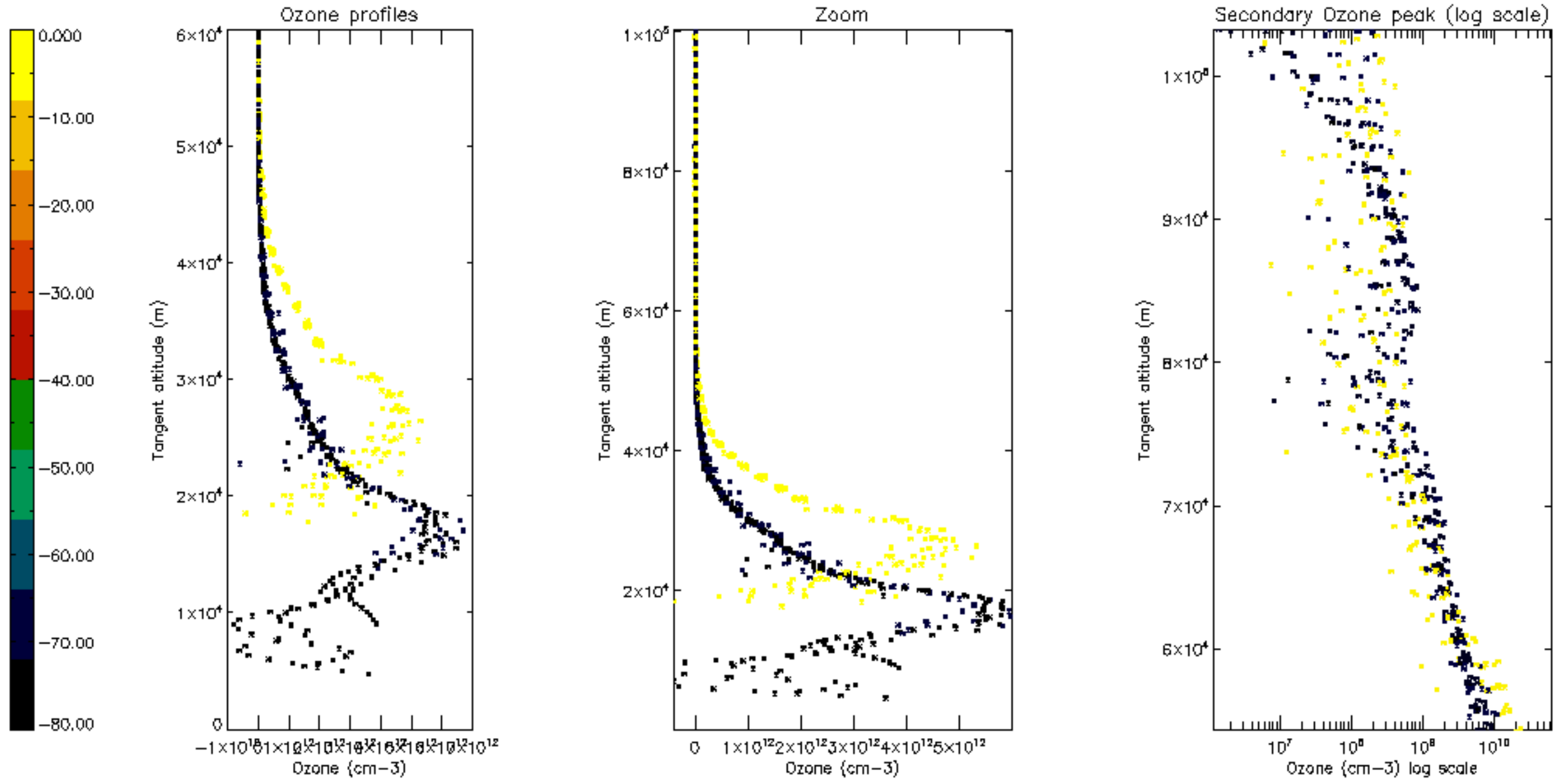


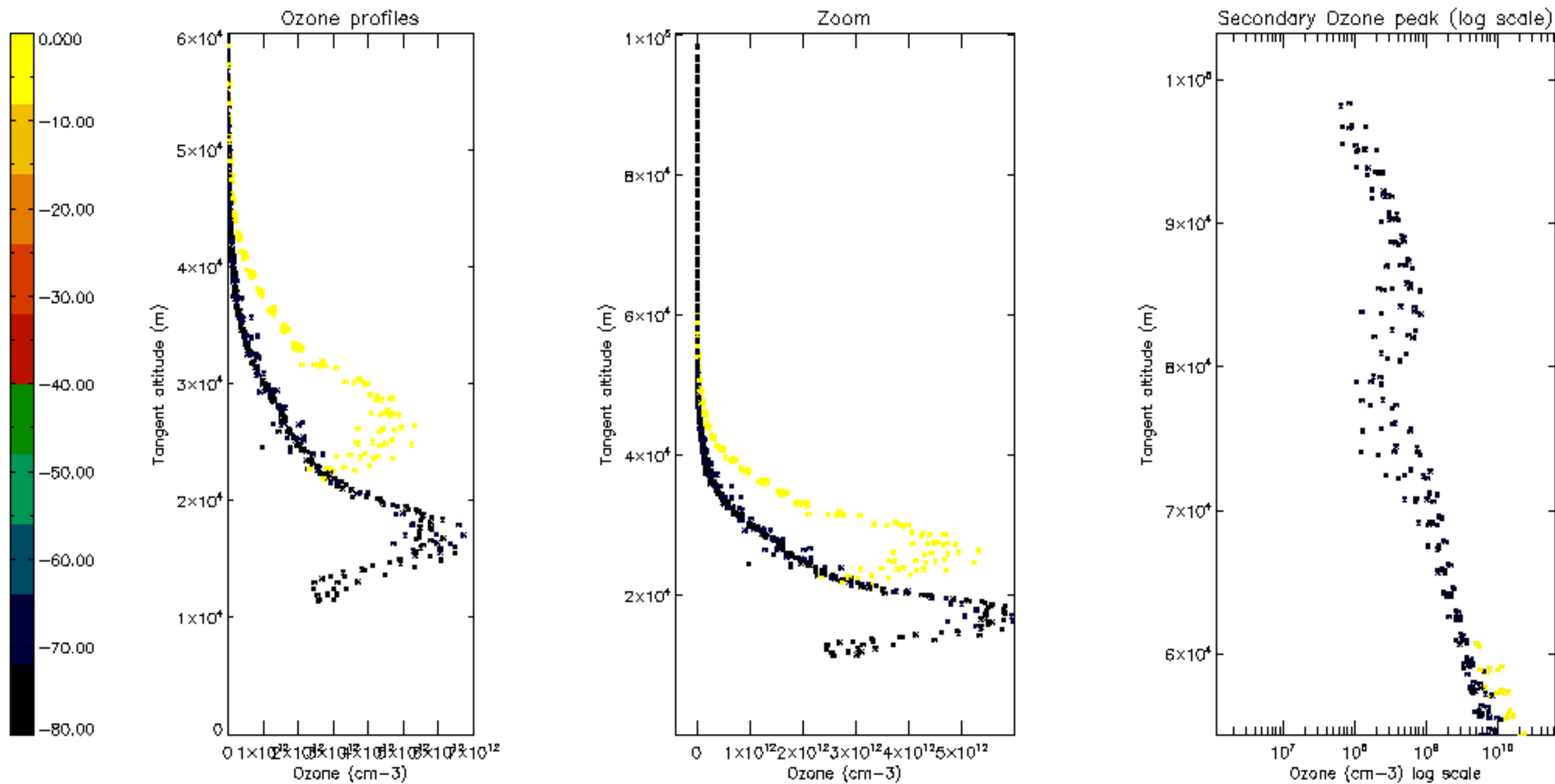
Percentage of star falling outside central band per profile



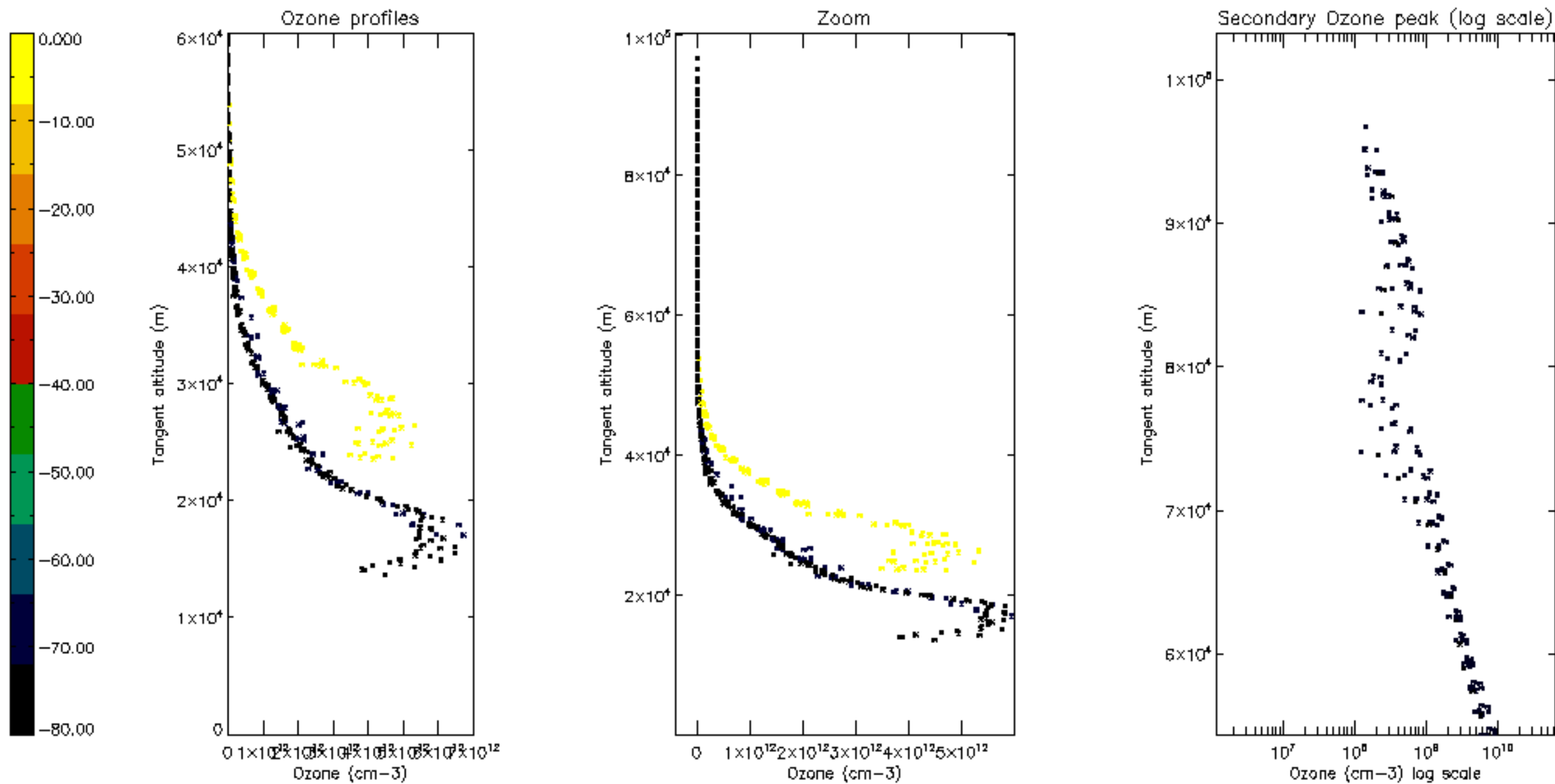
Percentage of saturation errors per profile

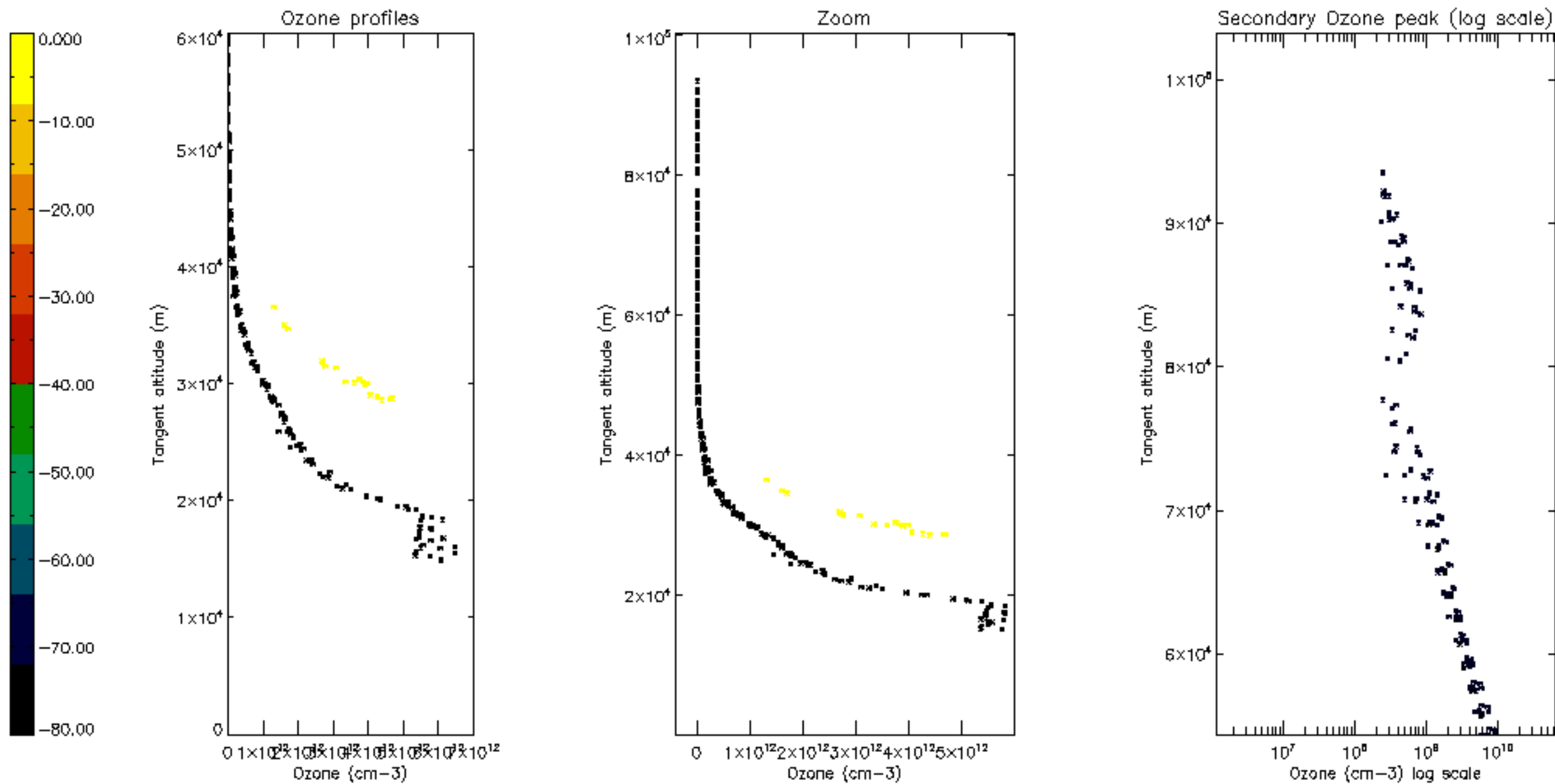


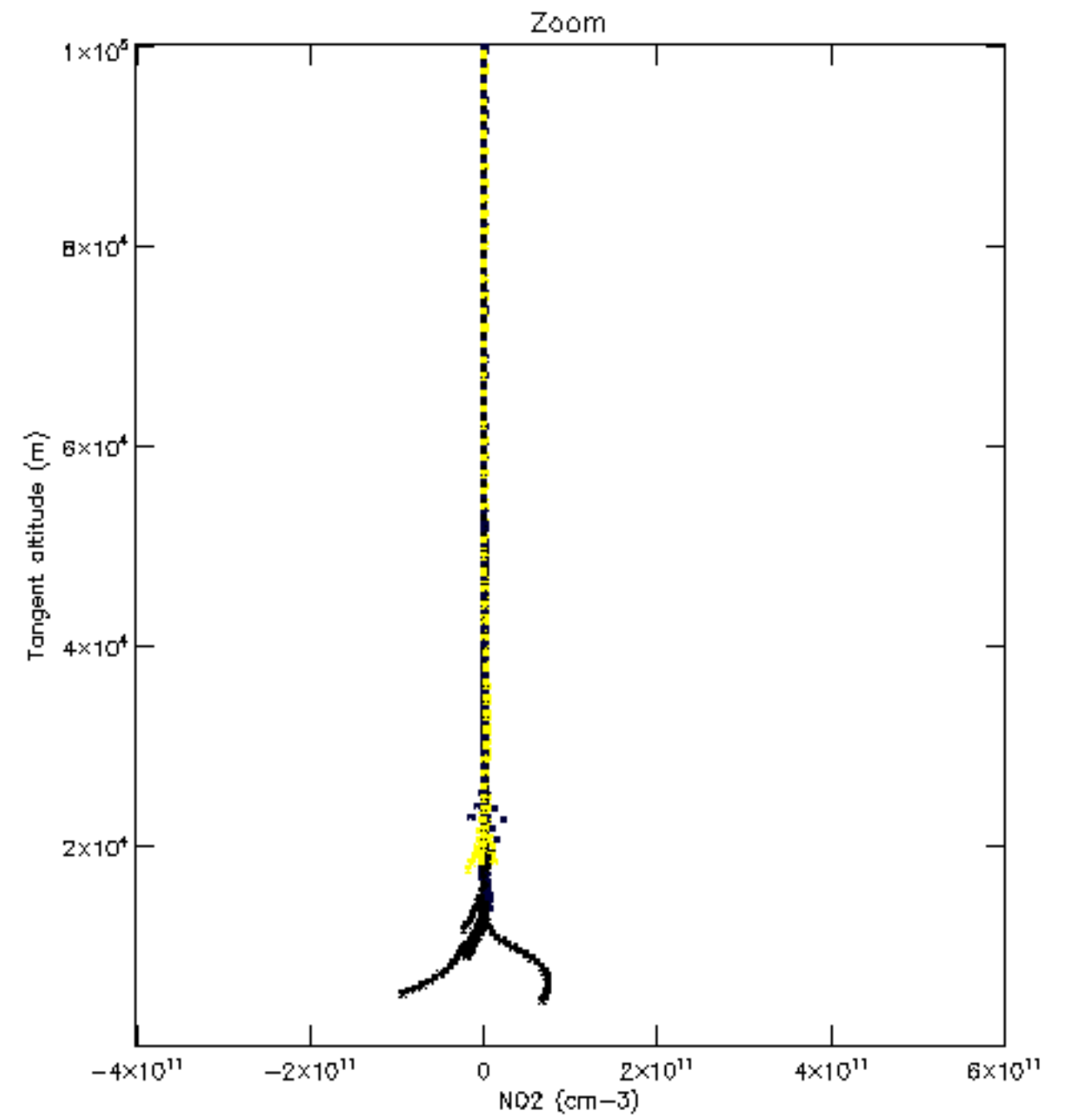
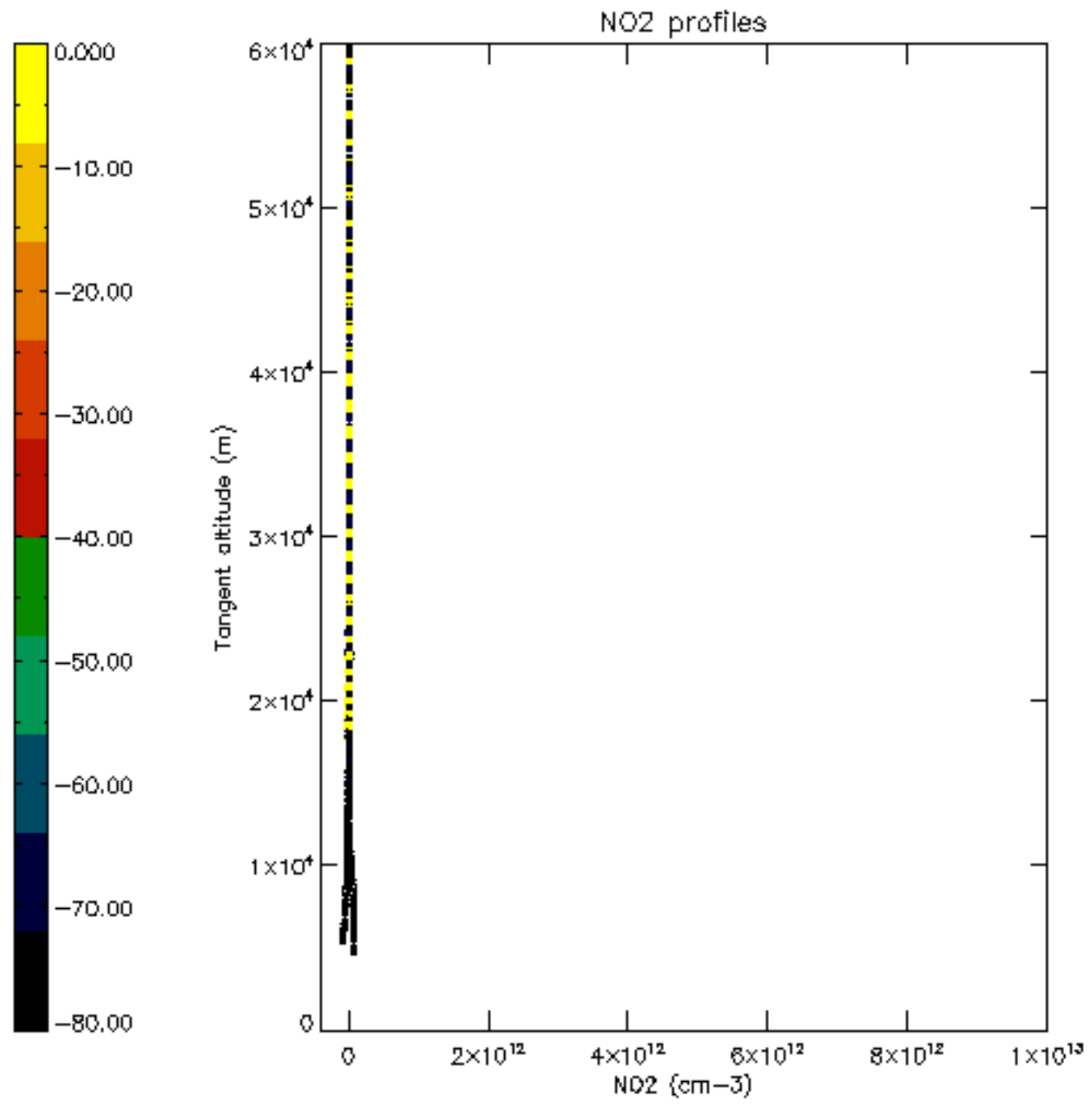


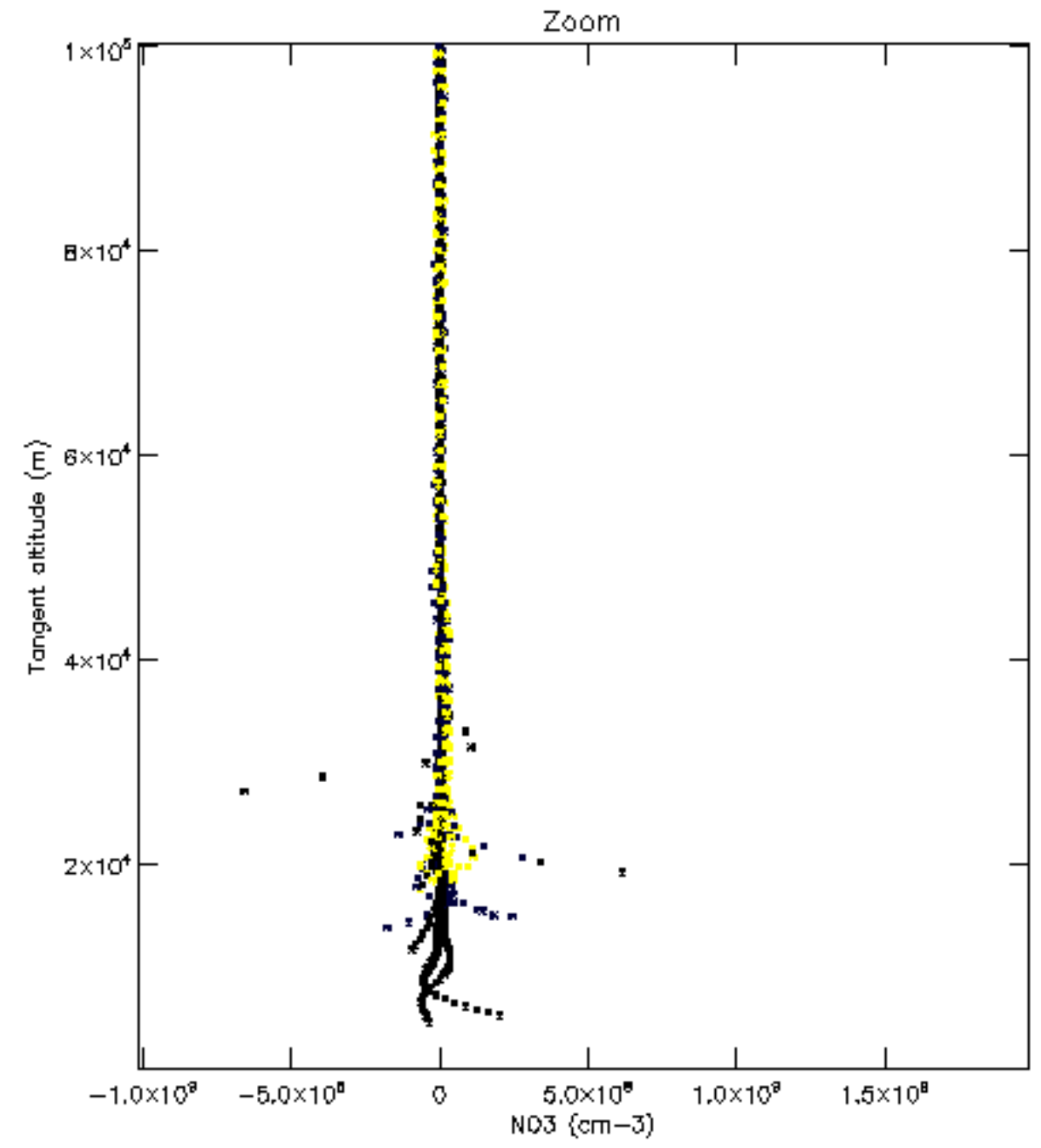
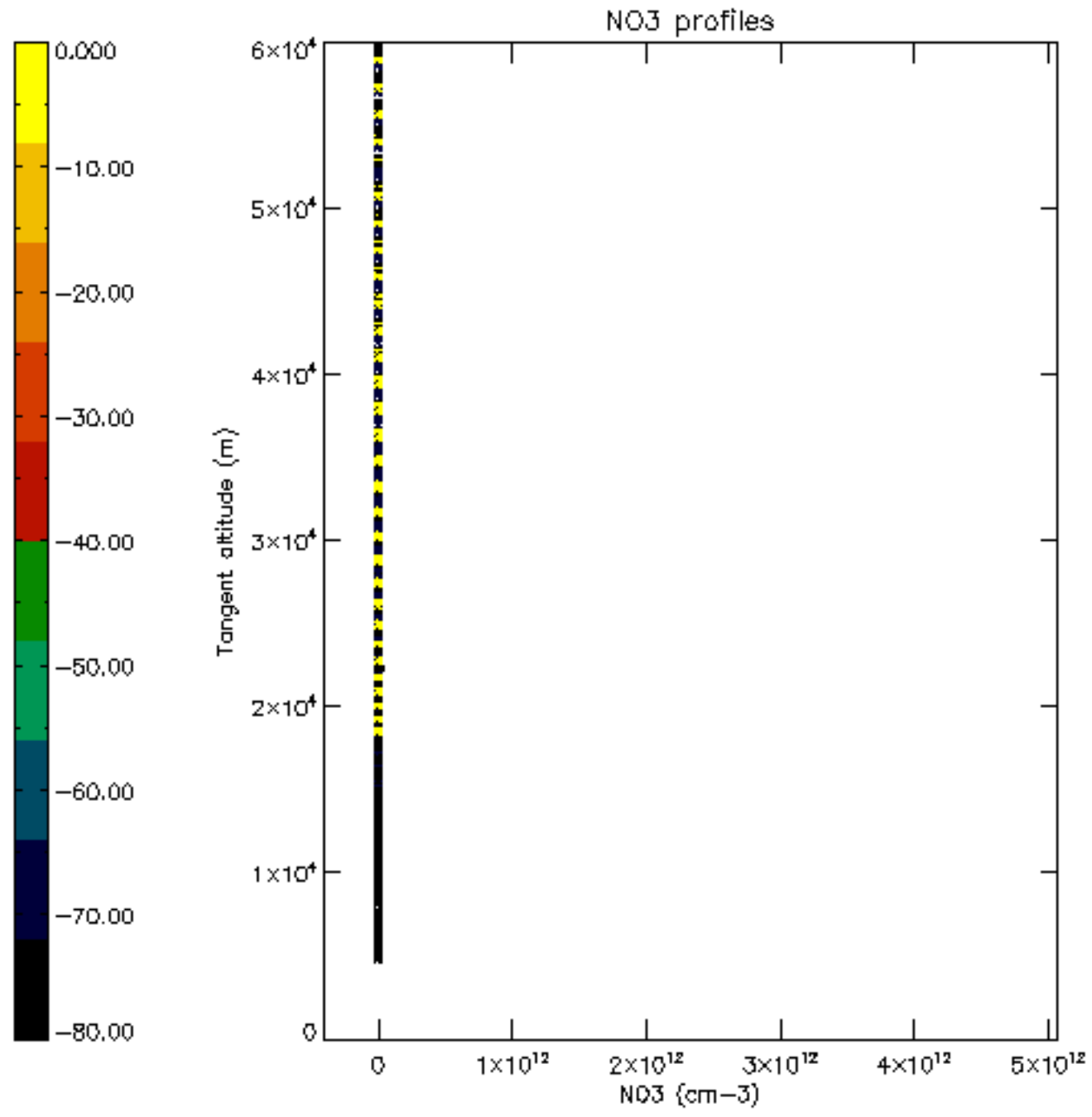




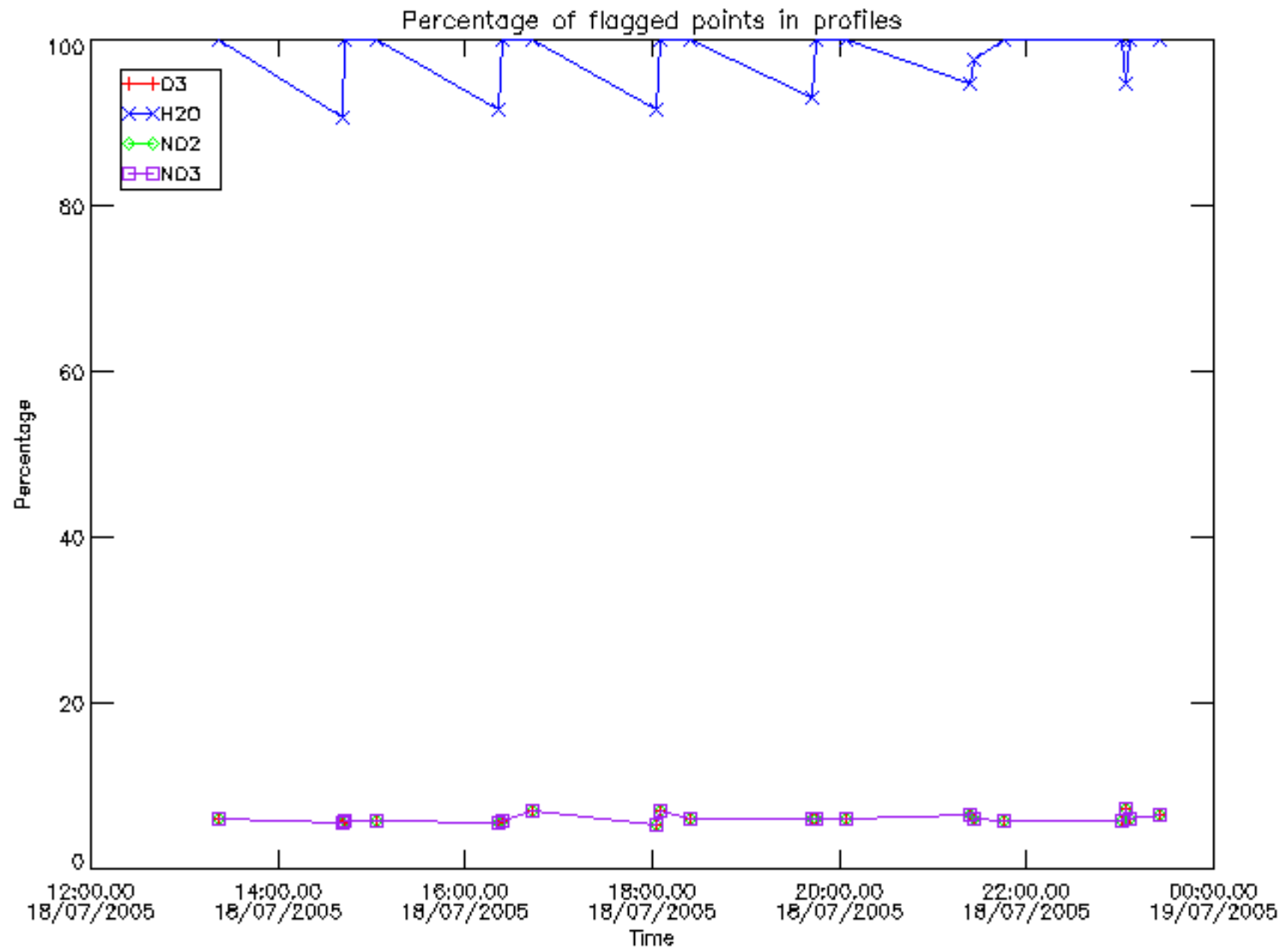




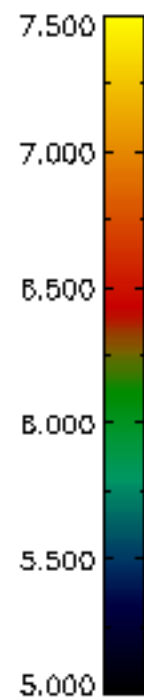
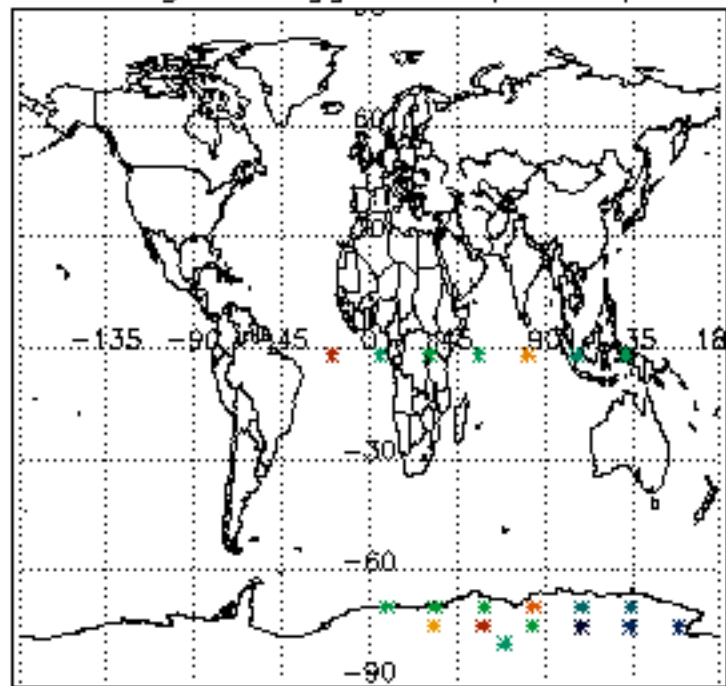




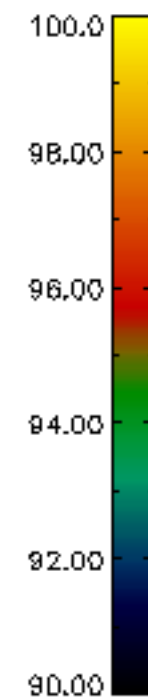
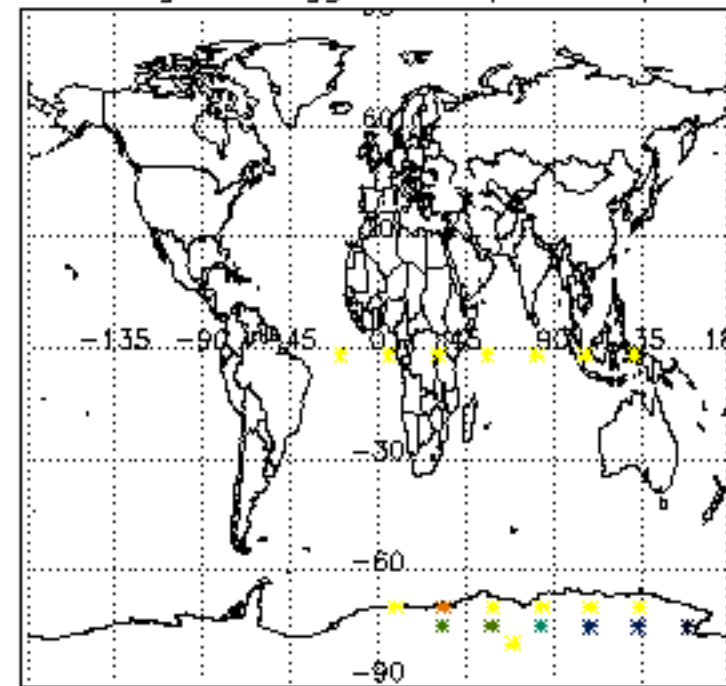




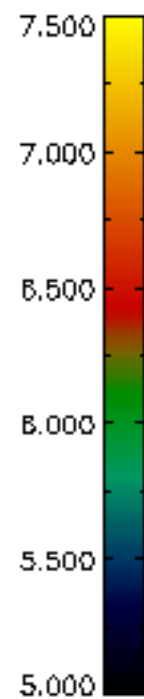
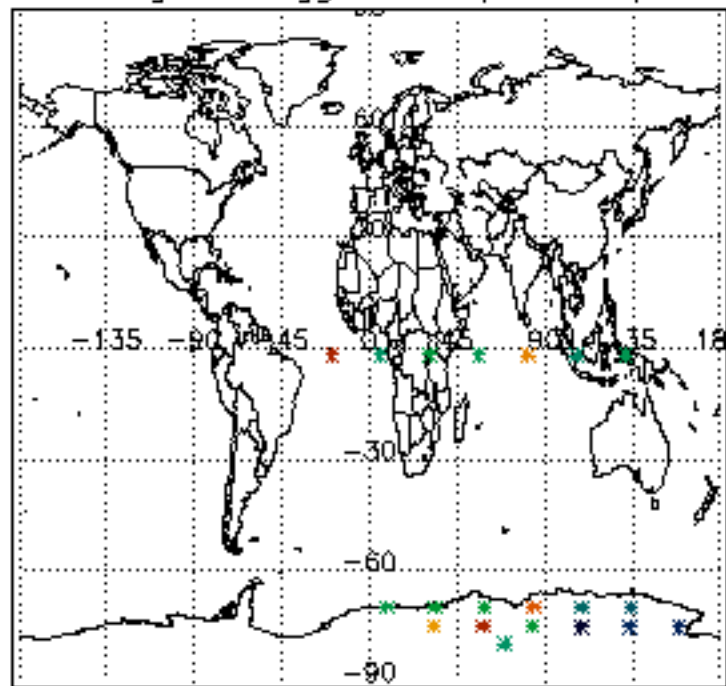
Percentage of flagged data per D3 profile



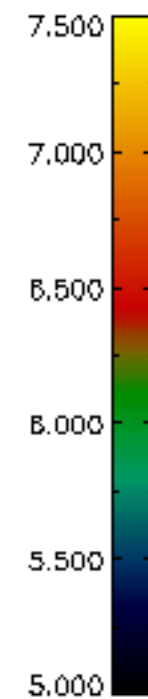
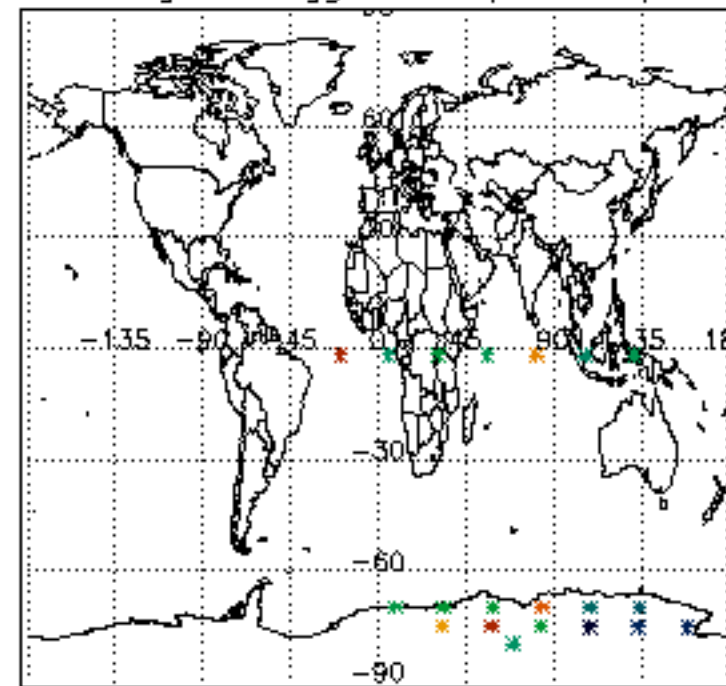
Percentage of flagged data per H2O profile

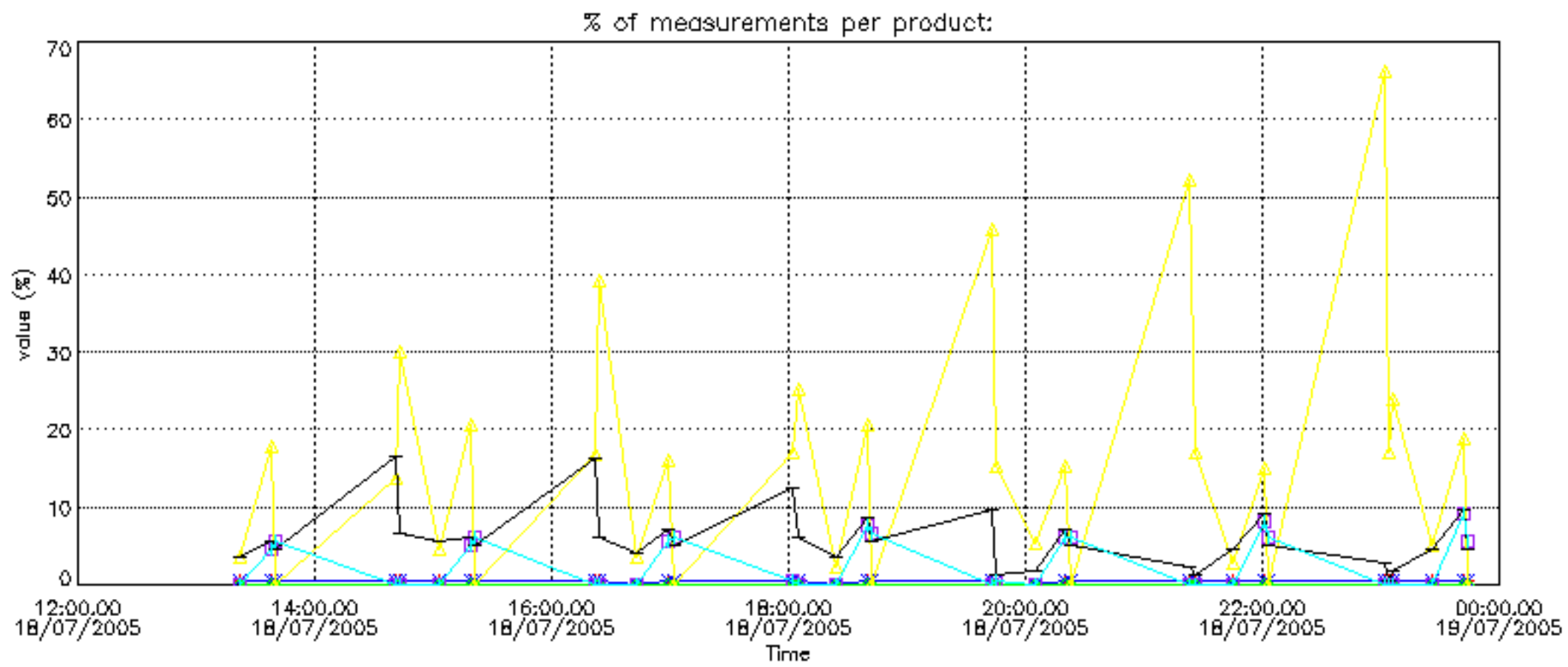


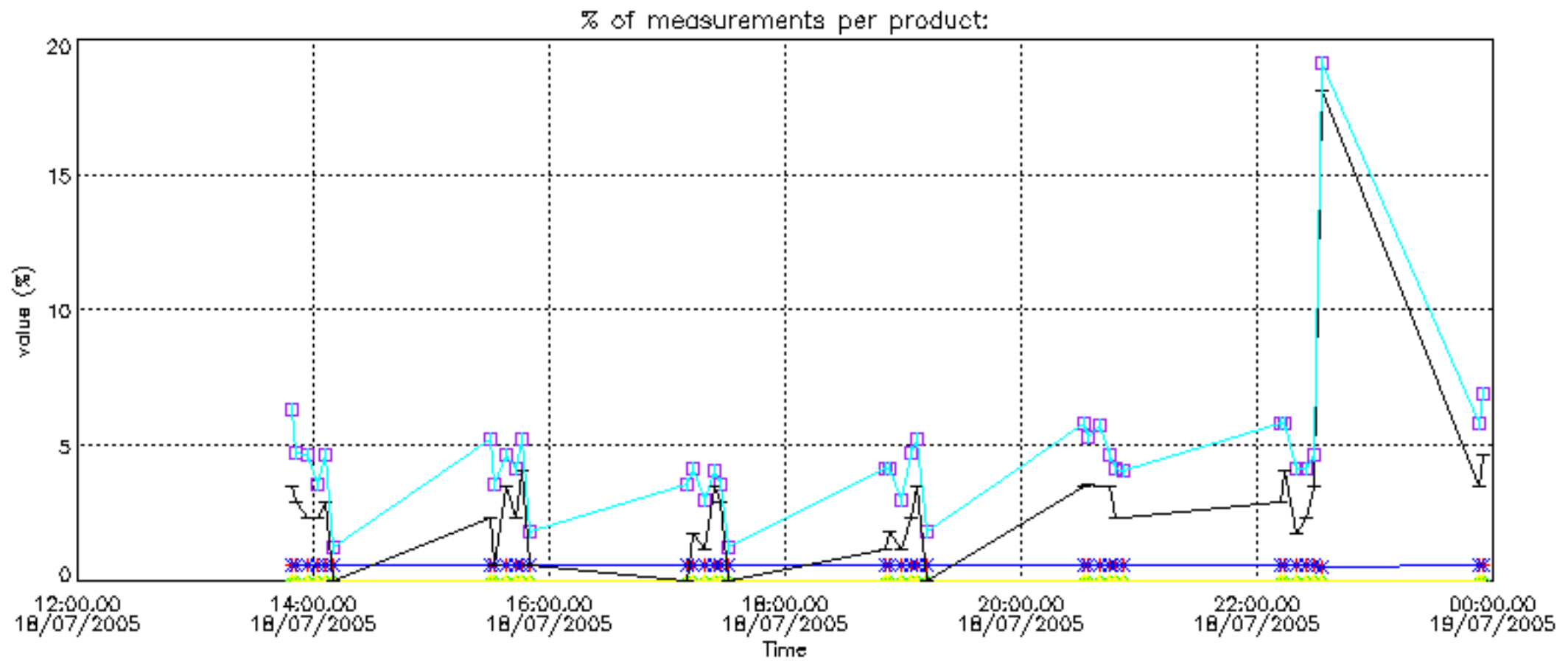
Percentage of flagged data per NO2 profile



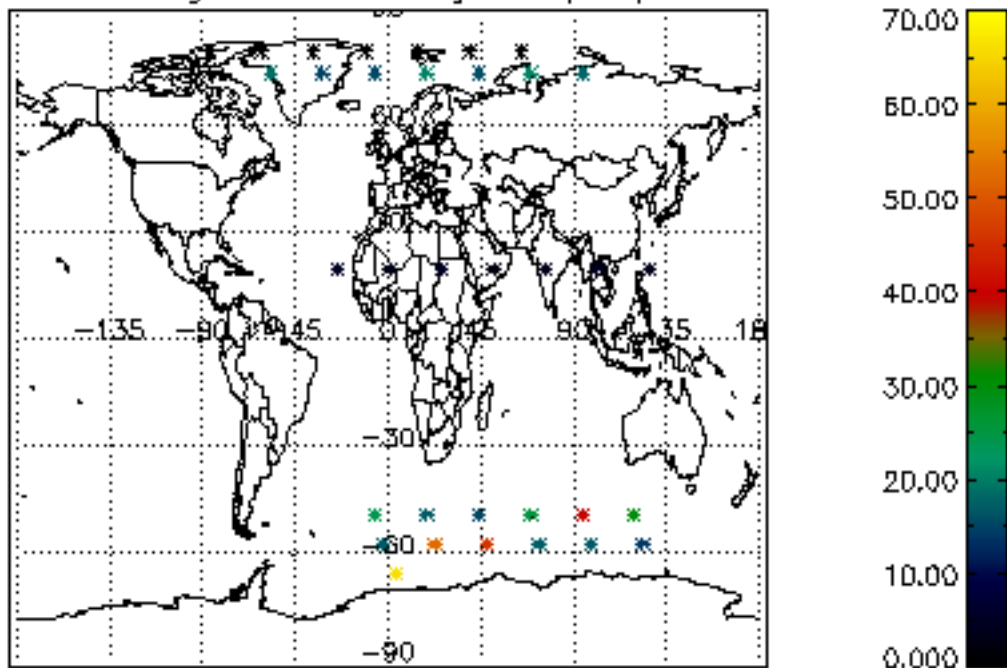
Percentage of flagged data per NO3 profile



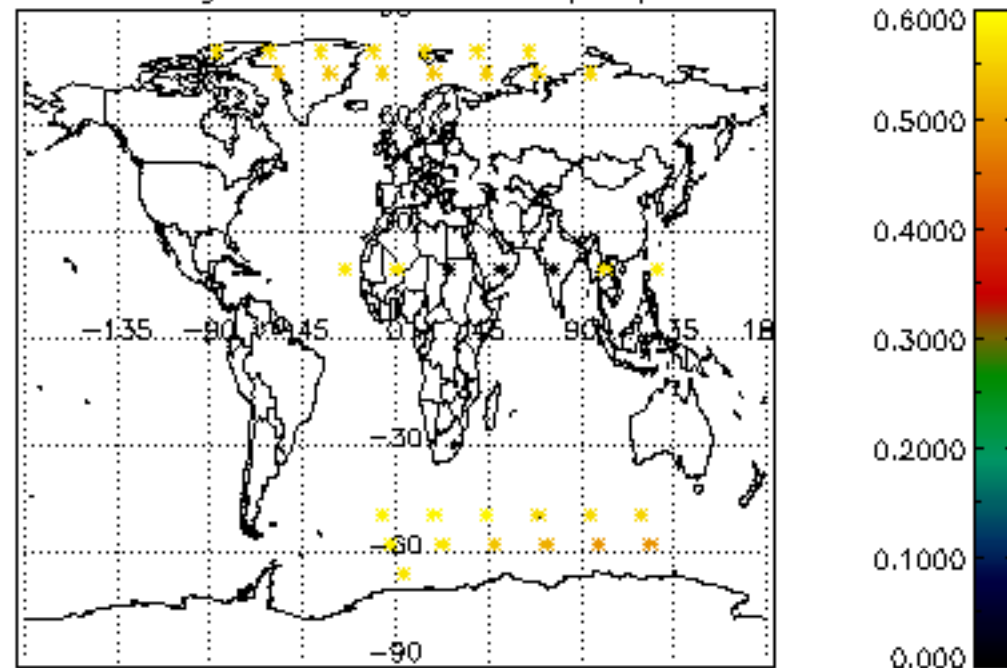




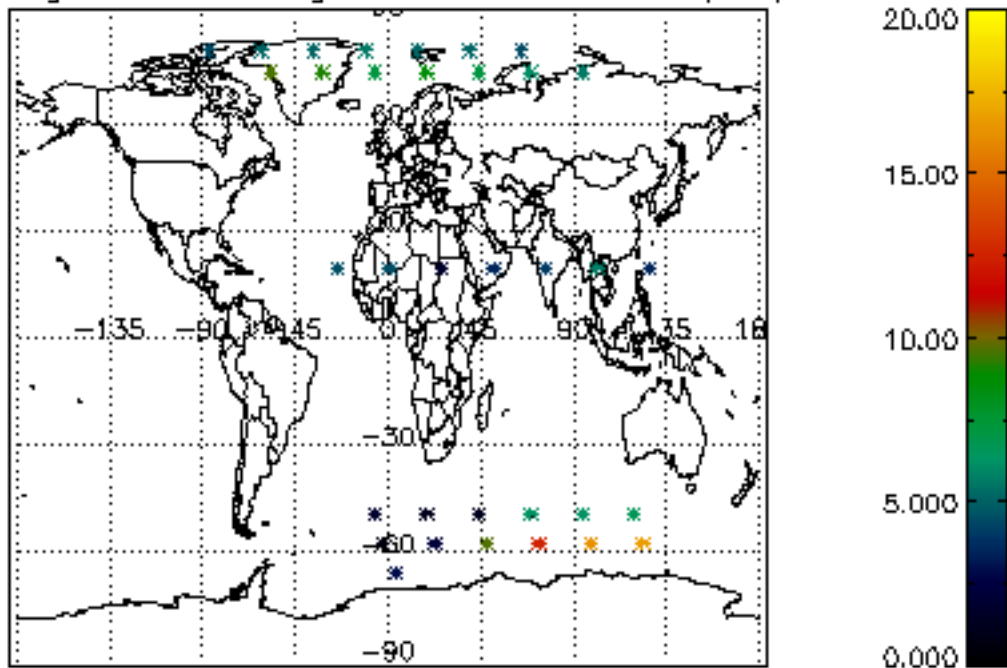
Percentage of cosmic ray hits per profile



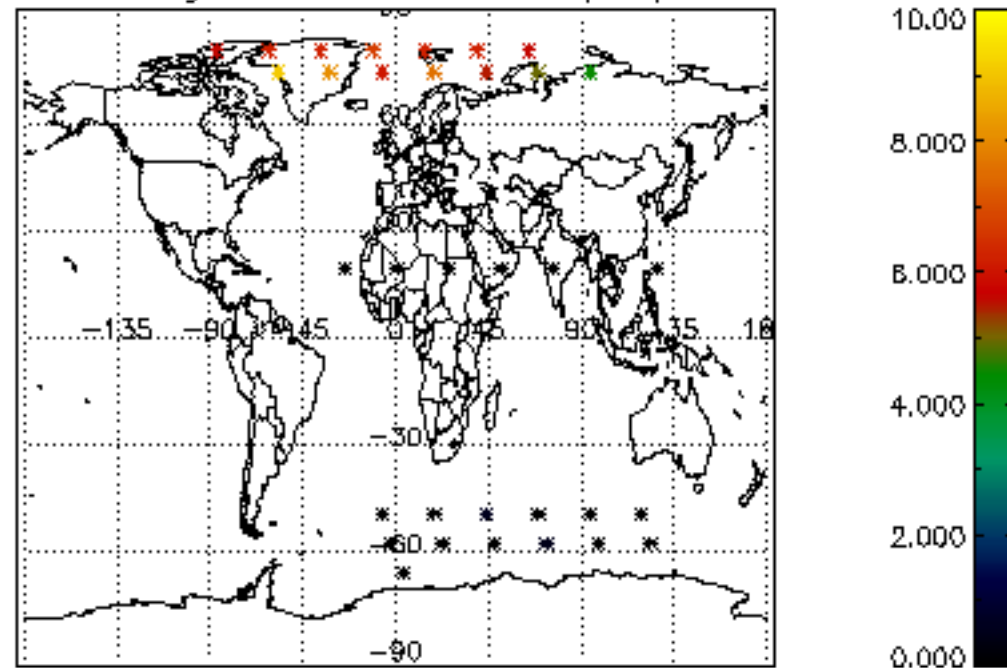
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

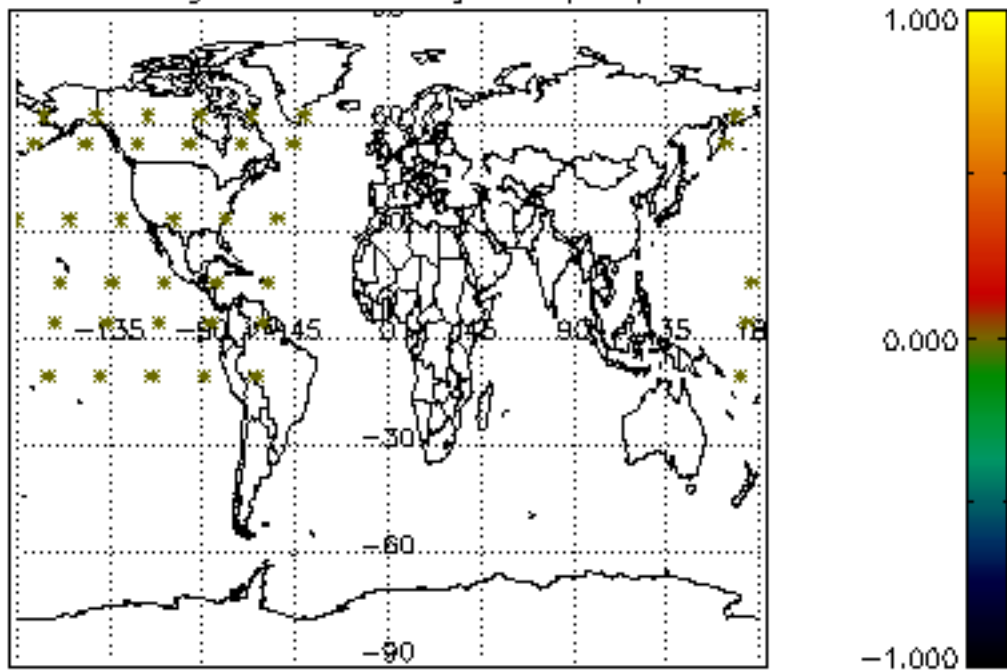


Percentage of saturation errors per profile

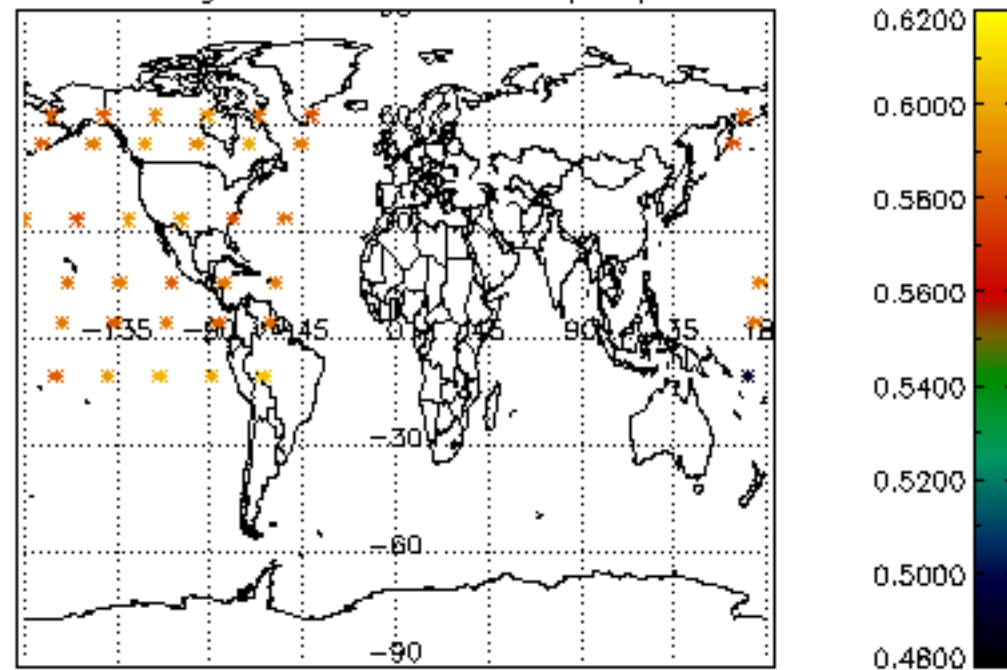




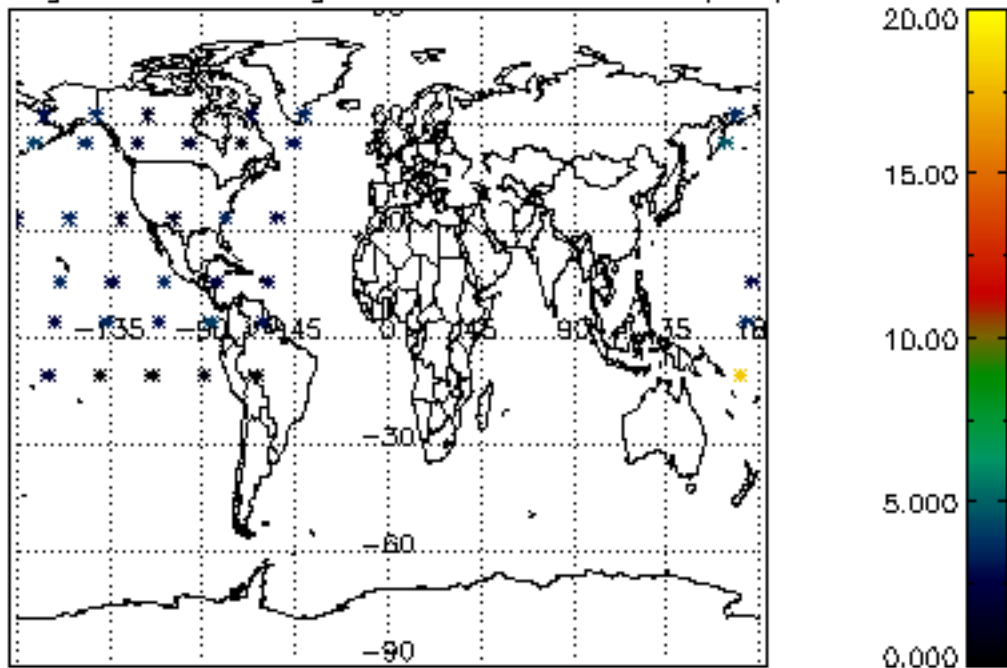
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

