

# GOMOS Level 2 Daily Report

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

Item	Value
Time of report generation	24APR2013 05:00:57
Data source version	GOMOS/6.01
Start time of products	16-10-2006 (16OCT2006 00:00:00)
Stop time of products	17-10-2006 (17OCT2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	240
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__2PRFIN20061016_000509_000000382052_00088_24190_2740.N1	16-OCT-2006 00:05:09	Dark	38.000	143	Alp Hyi	2.8570	7200.0	76	24190	No
2	GOM_NL__2PRFIN20061016_000635_000000422052_00088_24190_2741.N1	16-OCT-2006 00:06:35	Dark	42.000	9	Alp Eri	0.45300	24000.	84	24190	No
3	GOM_NL__2PRFIN20061016_001137_000000372052_00088_24190_2742.N1	16-OCT-2006 00:11:37	Straylight	37.000	84	Alp Phe	2.3970	4500.0	74	24190	No
4	GOM_NL__2PRFIN20061016_001812_000000432052_00088_24190_2743.N1	16-OCT-2006 00:18:12	Straylight	42.500	52	16Bet Cet	2.0370	4500.0	85	24190	No
5	GOM_NL__2PRFIN20061016_002751_000000362052_00088_24190_2744.N1	16-OCT-2006 00:27:51	Bright	35.500	140	88Gam Peg	2.8340	26000.	71	24190	No
6	GOM_NL__2PRFIN20061016_003149_000000352052_00088_24190_2745.N1	16-OCT-2006 00:31:49	Bright	35.000	58	21Alp And	2.0730	11000.	70	24190	No
7	GOM_NL__2PRFIN20061016_004021_000000362052_00088_24190_2746.N1	16-OCT-2006 00:40:21	Bright	36.000	74	11Bet Cas	2.2680	6600.0	72	24190	No
8	GOM_NL__2PRFIN20061016_004242_000000352052_00088_24190_2747.N1	16-OCT-2006 00:42:42	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	24190	No
9	GOM_NL__2PRFIN20061016_004851_000000372052_00088_24190_2748.N1	16-OCT-2006 00:48:51	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	24190	No
10	GOM_NL__2PRFIN20061016_005151_000000372052_00088_24190_2749.N1	16-OCT-2006 00:51:51	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	24190	No
11	GOM_NL__2PRFIN20061016_005705_000000352052_00088_24190_2750.N1	16-OCT-2006 00:57:05	Bright	34.500	36	50Alp UMa	1.8000	6300.0	69	24190	No
12	GOM_NL__2PRFIN20061016_005838_000000362052_00088_24190_2751.N1	16-OCT-2006 00:58:38	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	24190	No
13	GOM_NL__2PRFIN20061016_010202_000000522052_00088_24190_2752.N1	16-OCT-2006 01:02:02	Bright	52.000	174	52Psi UMa	3.0040	4400.0	104	24190	No
14	GOM_NL__2PRFIN20061016_010848_000000342052_00088_24190_2753.N1	16-OCT-2006 01:08:48	Bright	33.500	96	68Del Leo	2.5600	9300.0	67	24190	No
15	GOM_NL__2PRFIN20061016_012912_000000522052_00088_24190_2754.N1	16-OCT-2006 01:29:12	Dark	52.000	65	Lam Vel	2.2040	4400.0	104	24190	No
16	GOM_NL__2PRFIN20061016_013443_000000382052_00089_24191_2739.N1	16-OCT-2006 01:34:43	Dark	37.500	29	Bet Car	1.6720	10200.	75	24191	No
17	GOM_NL__2PRFIN20061016_014545_000000382052_00089_24191_2740.N1	16-OCT-2006 01:45:45	Dark	37.500	143	Alp Hyi	2.8570	7200.0	75	24191	No
18	GOM_NL__2PRFIN20061016_014712_000000422052_00089_24191_2741.N1	16-OCT-2006 01:47:12	Dark	42.000	9	Alp Eri	0.45300	24000.	84	24191	No
19	GOM_NL__2PRFIN20061016_015213_000000412052_00089_24191_2742.N1	16-OCT-2006 01:52:13	Straylight	40.500	84	Alp Phe	2.3970	4500.0	81	24191	No
20	GOM_NL__2PRFIN20061016_015849_000000402052_00089_24191_2743.N1	16-OCT-2006 01:58:49	Straylight	39.500	52	16Bet Cet	2.0370	4500.0	79	24191	No
21	GOM_NL__2PRFIN20061016_020827_000000372052_00089_24191_2744.N1	16-OCT-2006 02:08:27	Bright	37.000	140	88Gam Peg	2.8340	26000.	74	24191	No
22	GOM_NL__2PRFIN20061016_021225_000000362052_00089_24191_2745.N1	16-OCT-2006 02:12:25	Bright	36.000	58	21Alp And	2.0730	11000.	72	24191	No
23	GOM_NL__2PRFIN20061016_022057_000000372052_00089_24191_2746.N1	16-OCT-2006 02:20:57	Bright	36.500	74	11Bet Cas	2.2680	6600.0	73	24191	No
24	GOM_NL__2PRFIN20061016_022318_000000362052_00089_24191_2747.N1	16-OCT-2006 02:23:18	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	24191	No
25	GOM_NL__2PRFIN20061016_022927_000000352052_00089_24191_2748.N1	16-OCT-2006 02:29:27	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	24191	No
26	GOM_NL__2PRFIN20061016_023228_000000372052_00089_24191_2749.N1	16-OCT-2006 02:32:28	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	24191	No
27	GOM_NL__2PRFIN20061016_023741_000000362052_00089_24191_2750.N1	16-OCT-2006 02:37:41	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	24191	No
28	GOM_NL__2PRFIN20061016_023914_000000532052_00089_24191_2751.N1	16-OCT-2006 02:39:14	Bright	53.000	82	48Bet UMa	2.3650	10600.	106	24191	No
29	GOM_NL__2PRFIN20061016_024238_000000362052_00089_24191_2752.N1	16-OCT-2006 02:42:38	Bright	35.500	174	52Psi UMa	3.0040	4400.0	71	24191	No
30	GOM_NL__2PRFIN20061016_024924_000000342052_00089_24191_2753.N1	16-OCT-2006 02:49:24	Bright	33.500	96	68Del Leo	2.5600	9300.0	67	24191	No
31	GOM_NL__2PRFIN20061016_030948_000000412052_00089_24191_2754.N1	16-OCT-2006 03:09:48	Dark	40.500	65	Lam Vel	2.2040	4400.0	81	24191	No
32	GOM_NL__2PRFIN20061016_031255_000000392052_00090_24192_2755.N1	16-OCT-2006 03:12:55	Dark	39.000	46	Del Vel	1.9540	10600.	78	24192	No
33	GOM_NL__2PRFIN20061016_031519_000000382052_00090_24192_2739.N1	16-OCT-2006 03:15:19	Dark	37.500	29	Bet Car	1.6720	10200.	75	24192	No
34	GOM_NL__2PRFIN20061016_032622_000000372052_00090_24192_2740.N1	16-OCT-2006 03:26:22	Dark	36.500	143	Alp Hyi	2.8570	7200.0	73	24192	No
35	GOM_NL__2PRFIN20061016_032748_000000412052_00090_24192_2741.N1	16-OCT-2006 03:27:48	Dark	41.000	9	Alp Eri	0.45300	24000.	82	24192	No
36	GOM_NL__2PRFIN20061016_033249_000000412052_00090_24192_2742.N1	16-OCT-2006 03:32:49	Straylight	41.000	84	Alp Phe	2.3970	4500.0	82	24192	No
37	GOM_NL__2PRFIN20061016_033925_000000442052_00090_24192_2743.N1	16-OCT-2006 03:39:25	Straylight	44.000	52	16Bet Cet	2.0370	4500.0	88	24192	No
38	GOM_NL__2PRFIN20061016_034903_000000352052_00090_24192_2744.N1	16-OCT-2006 03:49:03	Bright	35.000	140	88Gam Peg	2.8340	26000.	70	24192	No
39	GOM_NL__2PRFIN20061016_035301_000000372052_00090_24192_2745.N1	16-OCT-2006 03:53:01	Bright	37.000	58	21Alp And	2.0730	11000.	74	24192	No
40	GOM_NL__2PRFIN20061016_040133_000000372052_00090_24192_2746.N1	16-OCT-2006 04:01:33	Bright	37.000	74	11Bet Cas	2.2680	6600.0	74	24192	No
41	GOM_NL__2PRFIN20061016_040354_000000352052_00090_24192_2747.N1	16-OCT-2006 04:03:54	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	24192	No
42	GOM_NL__2PRFIN20061016_041003_000000342052_00090_24192_2748.N1	16-OCT-2006 04:10:03	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	24192	No





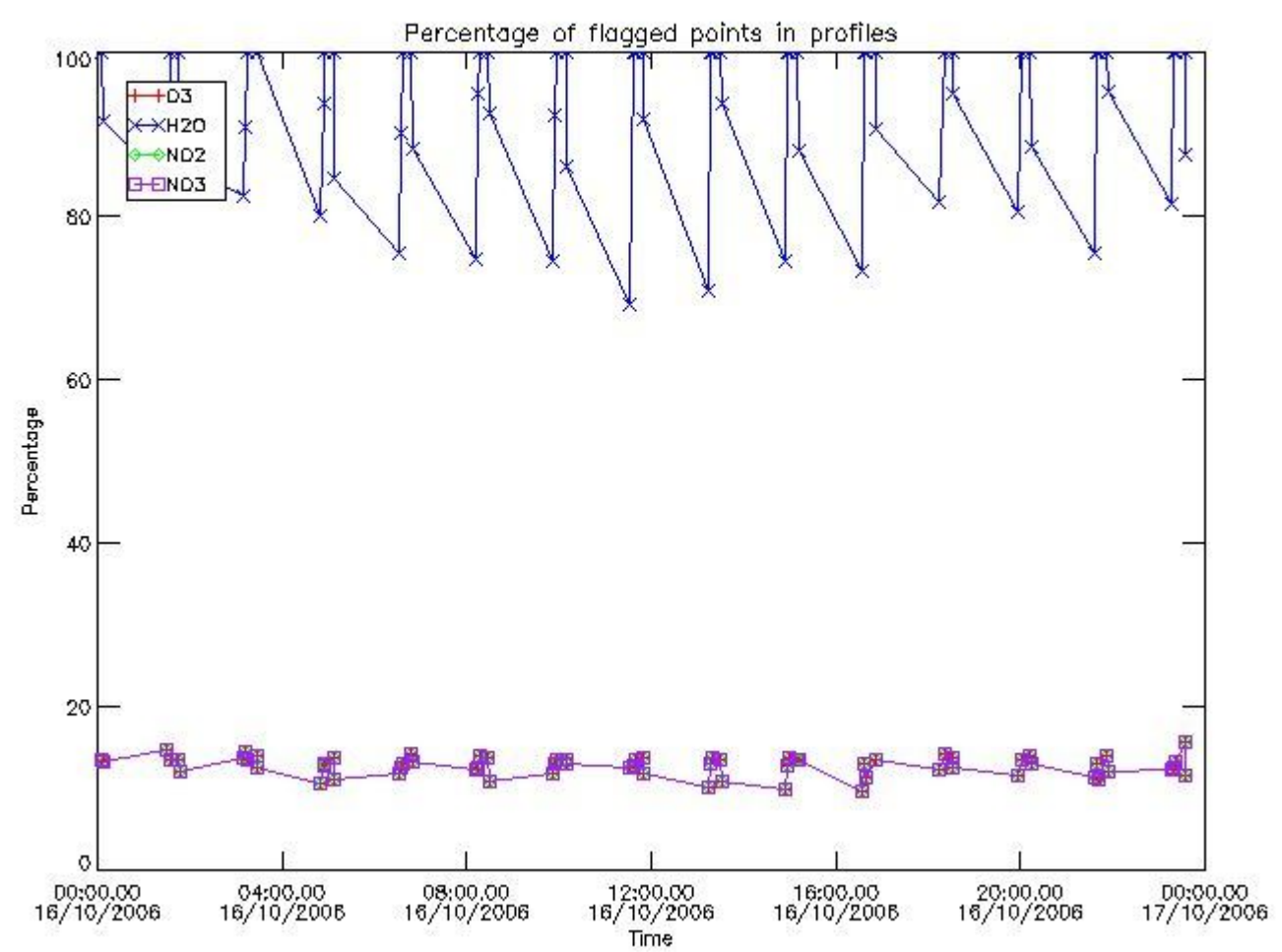


220	GOM_NL__2PRFIN20061016_215427_000000422052_00101_24203_2762.N1	16-OCT-2006 21:54:27	Dark	41.500	9	Alp Eri	0.45300	24000.	83	24203	No
221	GOM_NL__2PRFIN20061016_215927_000000422052_00101_24203_2763.N1	16-OCT-2006 21:59:27	Straylight	42.000	84	Alp Phe	2.3970	4500.0	84	24203	No
222	GOM_NL__2PRFIN20061016_220602_000000422052_00101_24203_2764.N1	16-OCT-2006 22:06:02	Straylight	41.500	52	16Bet Cet	2.0370	4500.0	83	24203	No
223	GOM_NL__2PRFIN20061016_221539_000000352052_00101_24203_2765.N1	16-OCT-2006 22:15:39	Bright	35.000	140	88Gam Peg	2.8340	26000.	70	24203	No
224	GOM_NL__2PRFIN20061016_221936_000000362052_00101_24203_2766.N1	16-OCT-2006 22:19:36	Bright	35.500	58	21Alp And	2.0730	11000.	71	24203	No
225	GOM_NL__2PRFIN20061016_222808_000000362052_00101_24203_2767.N1	16-OCT-2006 22:28:08	Bright	36.000	74	11Bet Cas	2.2680	6600.0	72	24203	No
226	GOM_NL__2PRFIN20061016_223033_000000372052_00101_24203_2768.N1	16-OCT-2006 22:30:33	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	24203	No
227	GOM_NL__2PRFIN20061016_223638_000000362052_00101_24203_2769.N1	16-OCT-2006 22:36:38	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	24203	No
228	GOM_NL__2PRFIN20061016_223942_000000372052_00101_24203_2770.N1	16-OCT-2006 22:39:42	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	24203	No
229	GOM_NL__2PRFIN20061016_224453_000000362052_00101_24203_2771.N1	16-OCT-2006 22:44:53	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	24203	No
230	GOM_NL__2PRFIN20061016_224626_000000362052_00101_24203_2772.N1	16-OCT-2006 22:46:26	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	24203	No
231	GOM_NL__2PRFIN20061016_224951_000000362052_00101_24203_2773.N1	16-OCT-2006 22:49:51	Bright	35.500	174	52Psi UMa	3.0040	4400.0	71	24203	No
232	GOM_NL__2PRFIN20061016_225637_000000342052_00101_24203_2774.N1	16-OCT-2006 22:56:37	Bright	34.000	96	68Del Leo	2.5600	9300.0	68	24203	No
233	GOM_NL__2PRFIN20061016_231707_000000462052_00101_24203_2775.N1	16-OCT-2006 23:17:07	Dark	46.000	65	Lam Vel	2.2040	4400.0	92	24203	No
234	GOM_NL__2PRFIN20061016_232013_000000412052_00102_24204_2779.N1	16-OCT-2006 23:20:13	Dark	40.500	46	Del Vel	1.9540	10600.	81	24204	No
235	GOM_NL__2PRFIN20061016_232234_000000392052_00102_24204_2780.N1	16-OCT-2006 23:22:34	Dark	38.500	29	Bet Car	1.6720	10200.	77	24204	No
236	GOM_NL__2PRFIN20061016_233337_000000392052_00102_24204_2781.N1	16-OCT-2006 23:33:37	Dark	39.000	143	Alp Hyi	2.8570	7200.0	78	24204	No
237	GOM_NL__2PRFIN20061016_233503_000000452052_00102_24204_2782.N1	16-OCT-2006 23:35:03	Dark	44.500	9	Alp Eri	0.45300	24000.	89	24204	No
238	GOM_NL__2PRFIN20061016_234003_000000432052_00102_24204_2783.N1	16-OCT-2006 23:40:03	Straylight	42.500	84	Alp Phe	2.3970	4500.0	85	24204	No
239	GOM_NL__2PRFIN20061016_234638_000000442052_00102_24204_2784.N1	16-OCT-2006 23:46:38	Straylight	44.000	52	16Bet Cet	2.0370	4500.0	88	24204	No
240	GOM_NL__2PRFIN20061016_235615_000000362052_00102_24204_2785.N1	16-OCT-2006 23:56:15	Bright	35.500	140	88Gam Peg	2.8340	26000.	71	24204	No

### *3. Quality information per product*

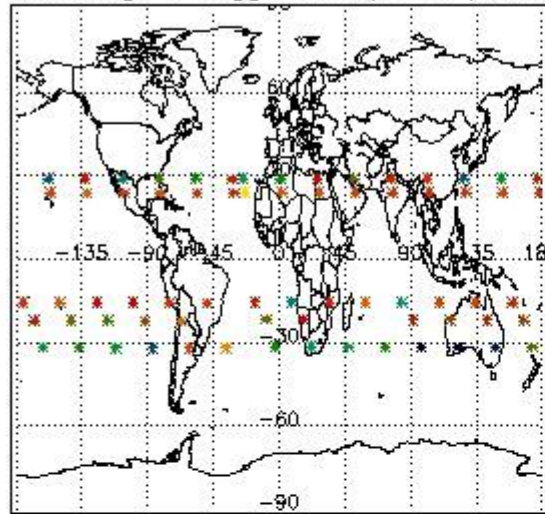
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

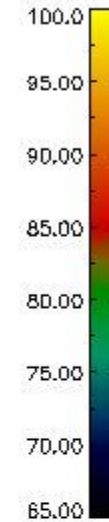
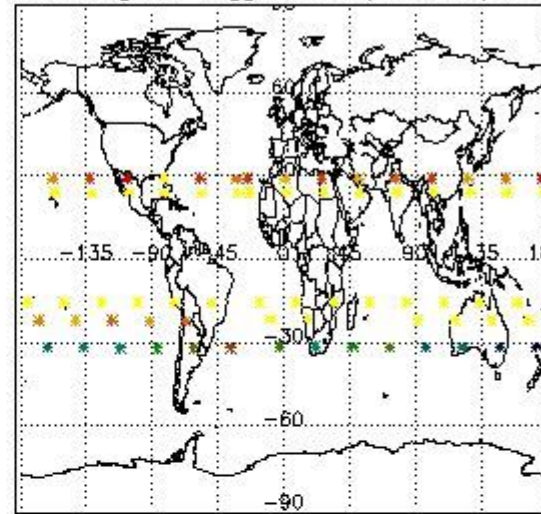


3.2 Plot quality information per product (world map)

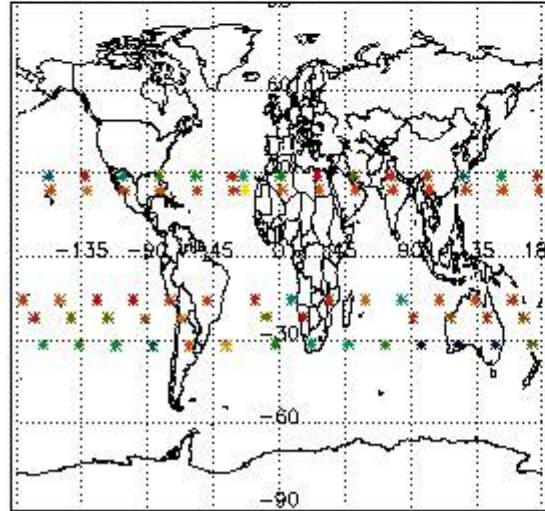
Percentage of flagged data per O3 profile



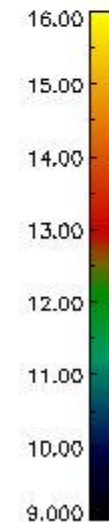
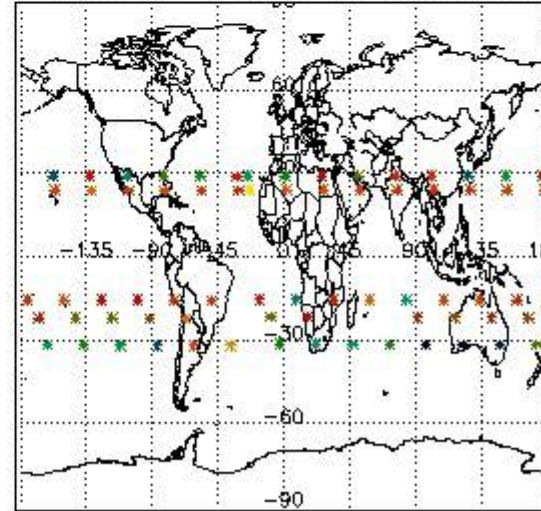
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



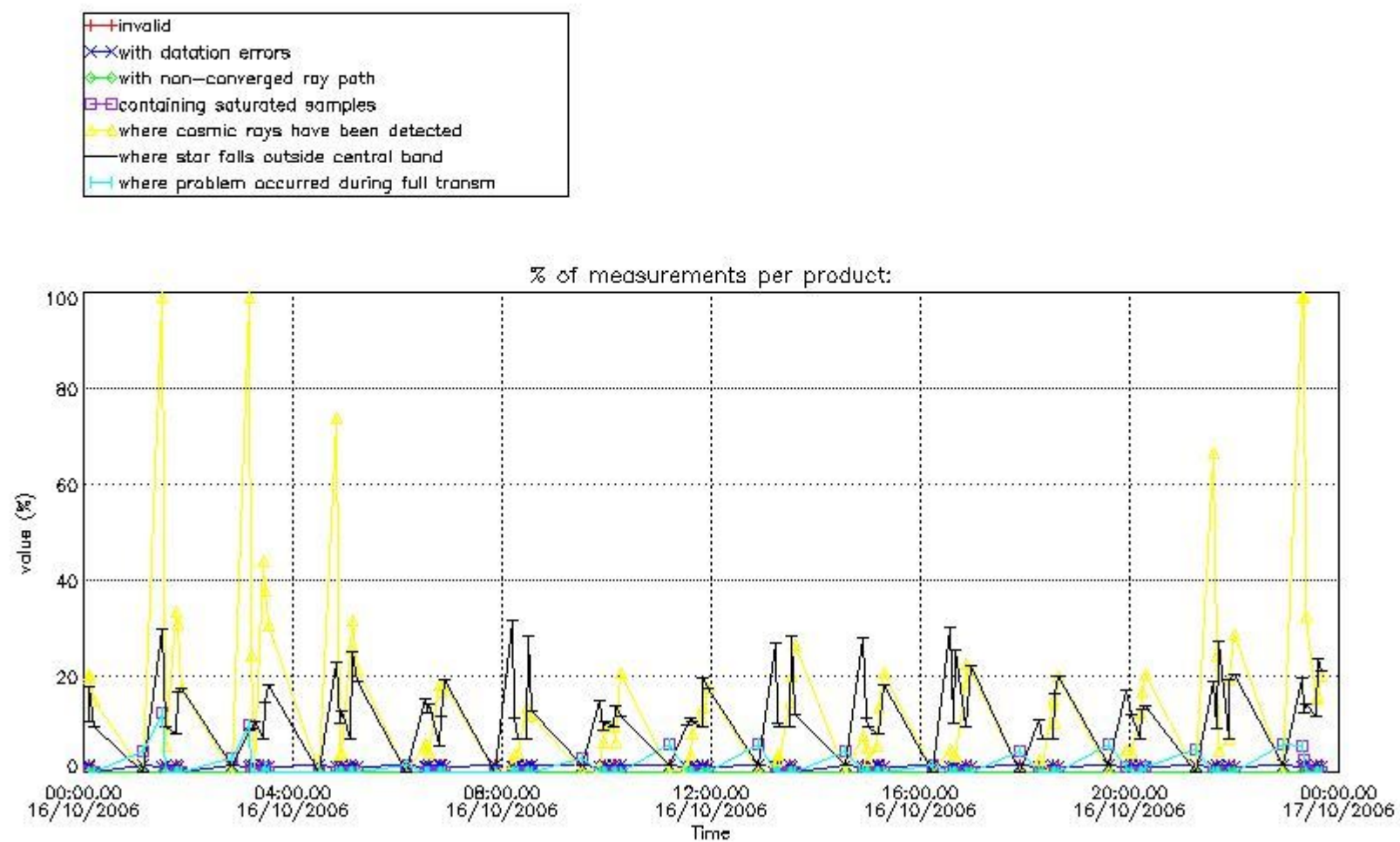
#### 4. Level 1 quality information per product

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.

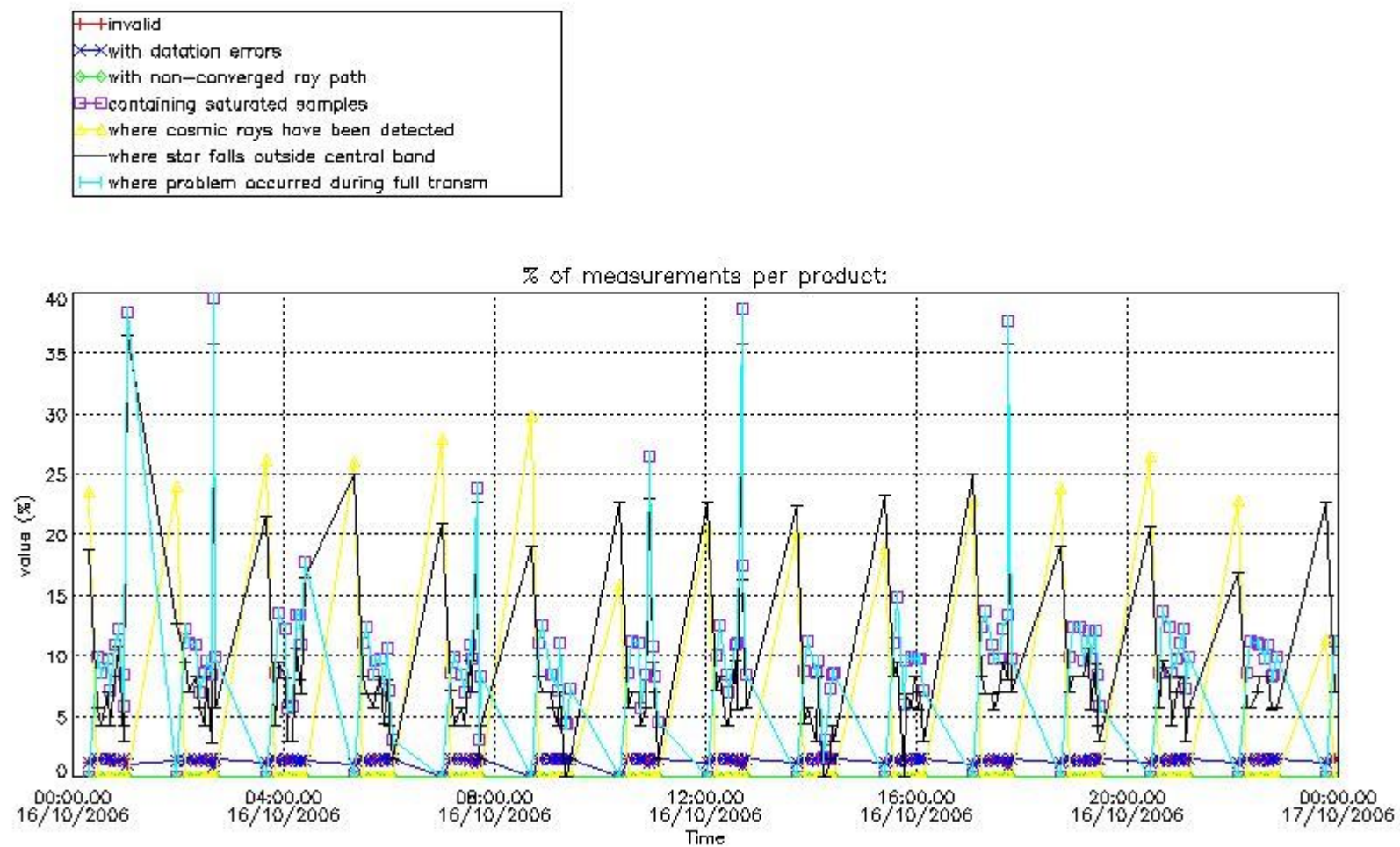
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





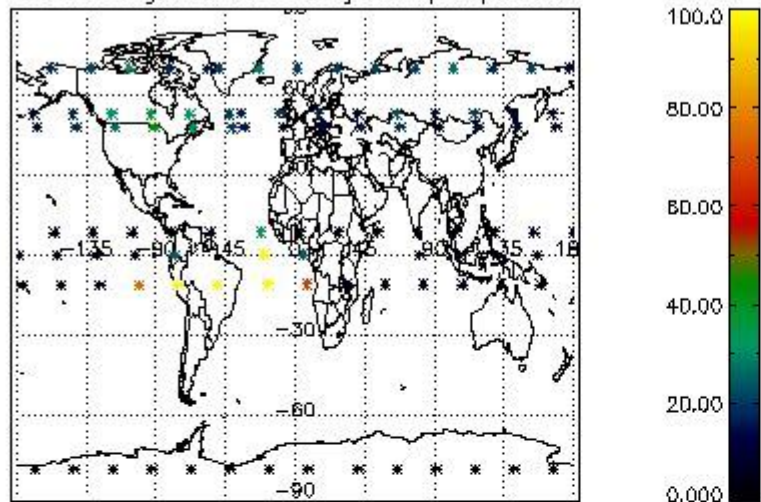
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



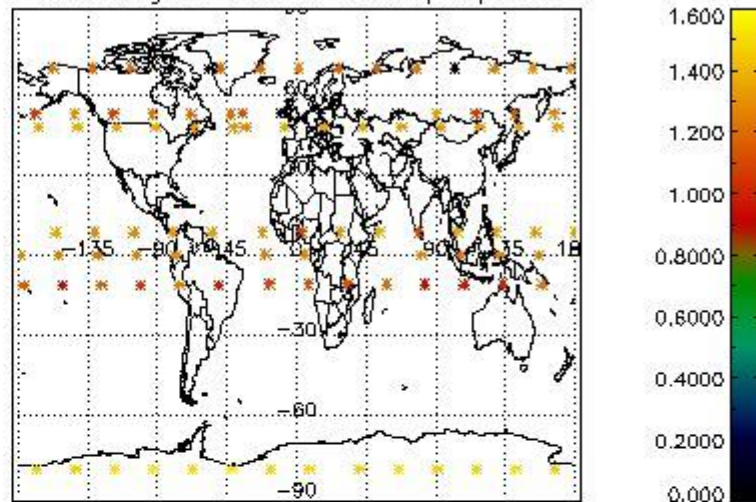
4.2 Plot quality information per product coming from level 1b processing (world map)

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

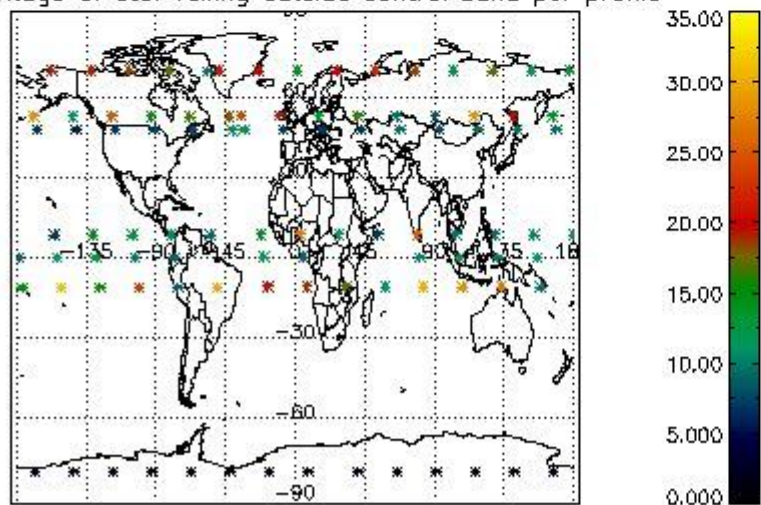
Percentage of cosmic ray hits per profile



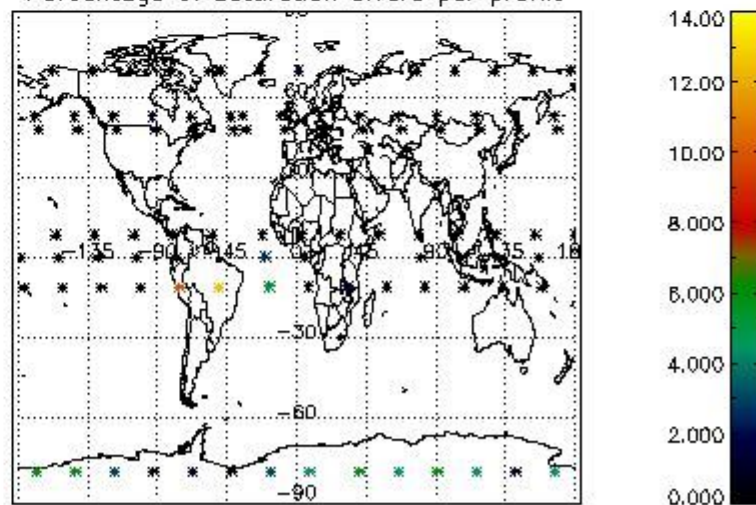
Percentage of datation errors per profile



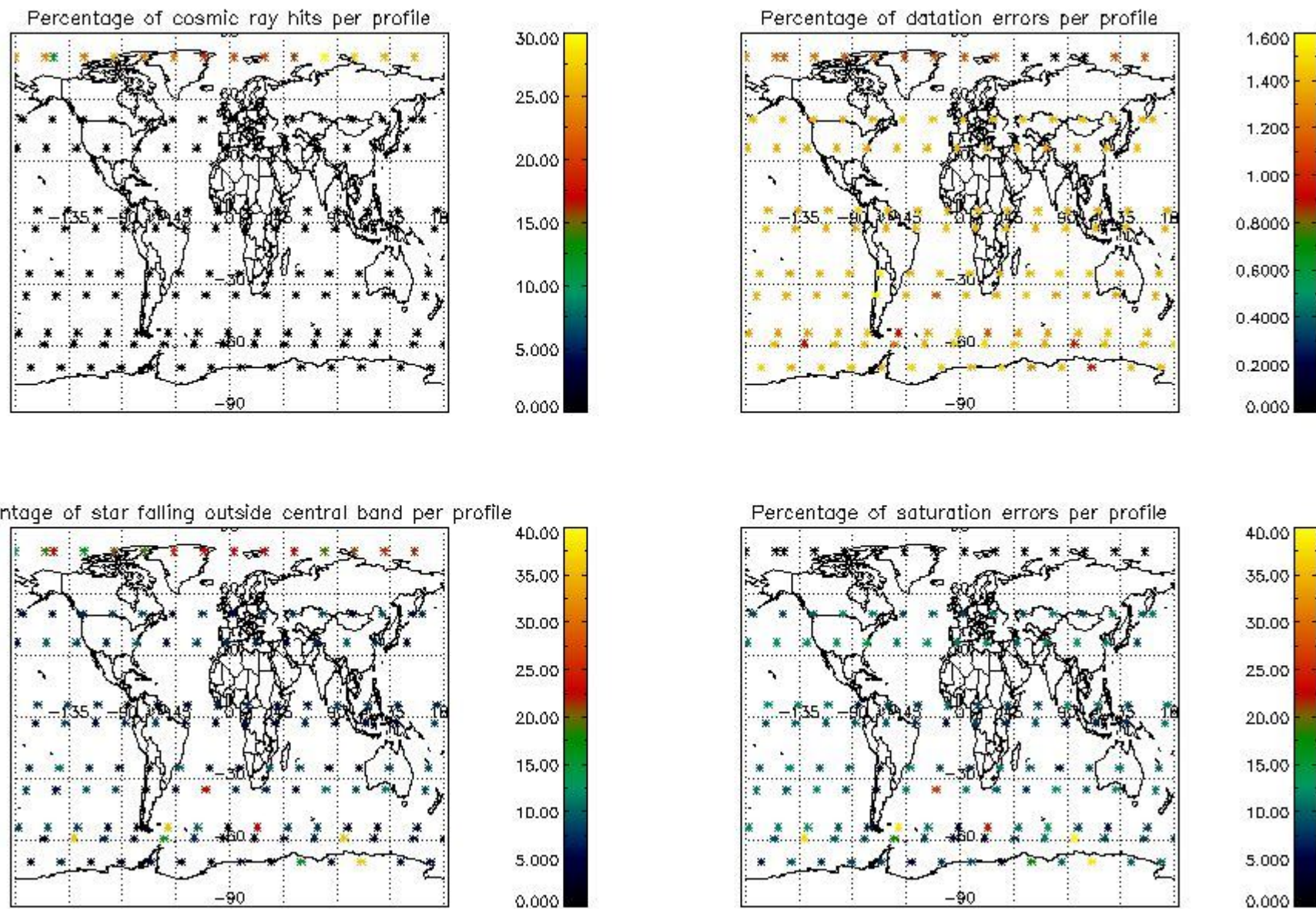
Percentage of star falling outside central band per profile



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

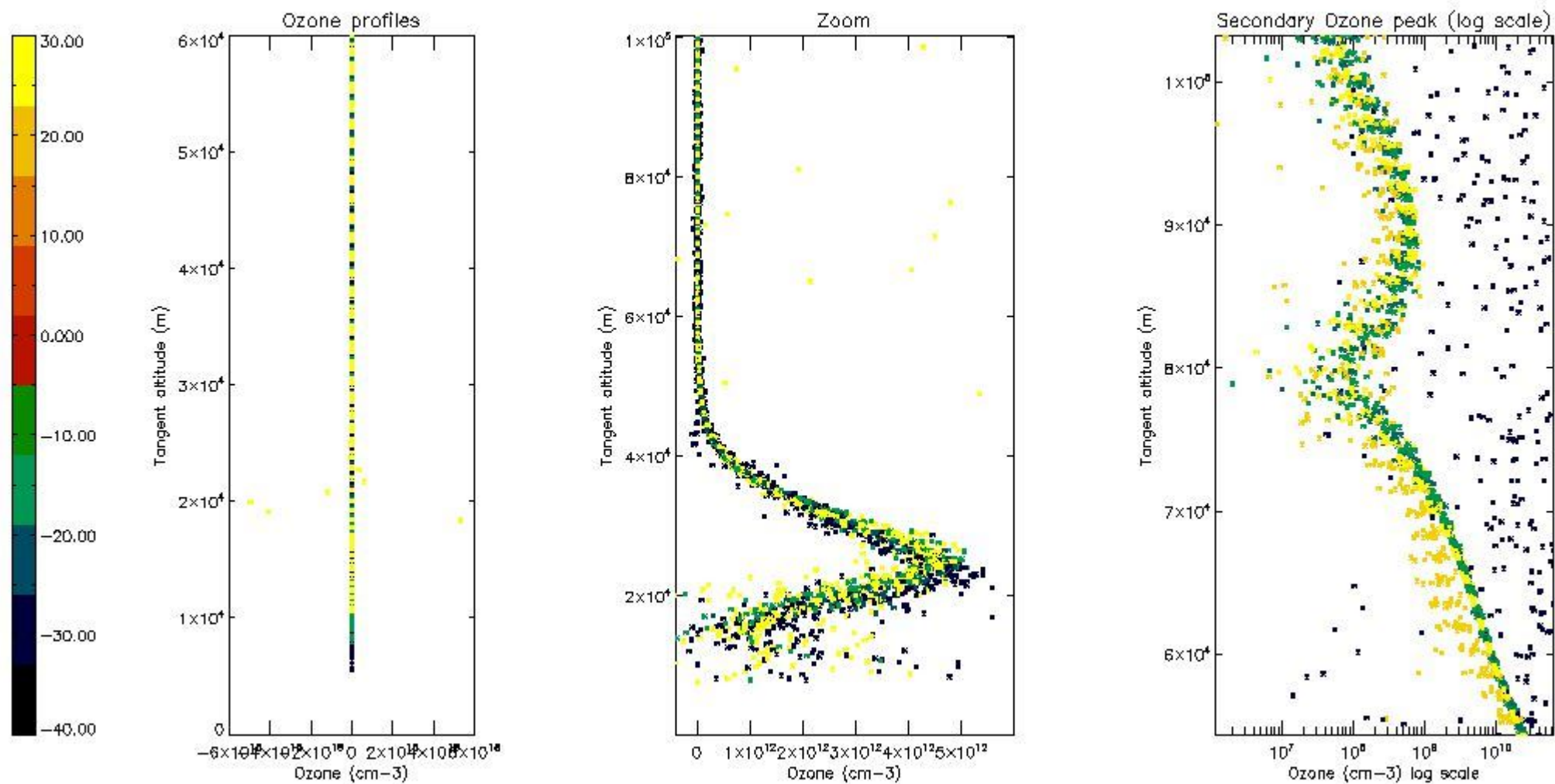
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	32
STD < 20	17

STD < 10	13
STD < 5	9

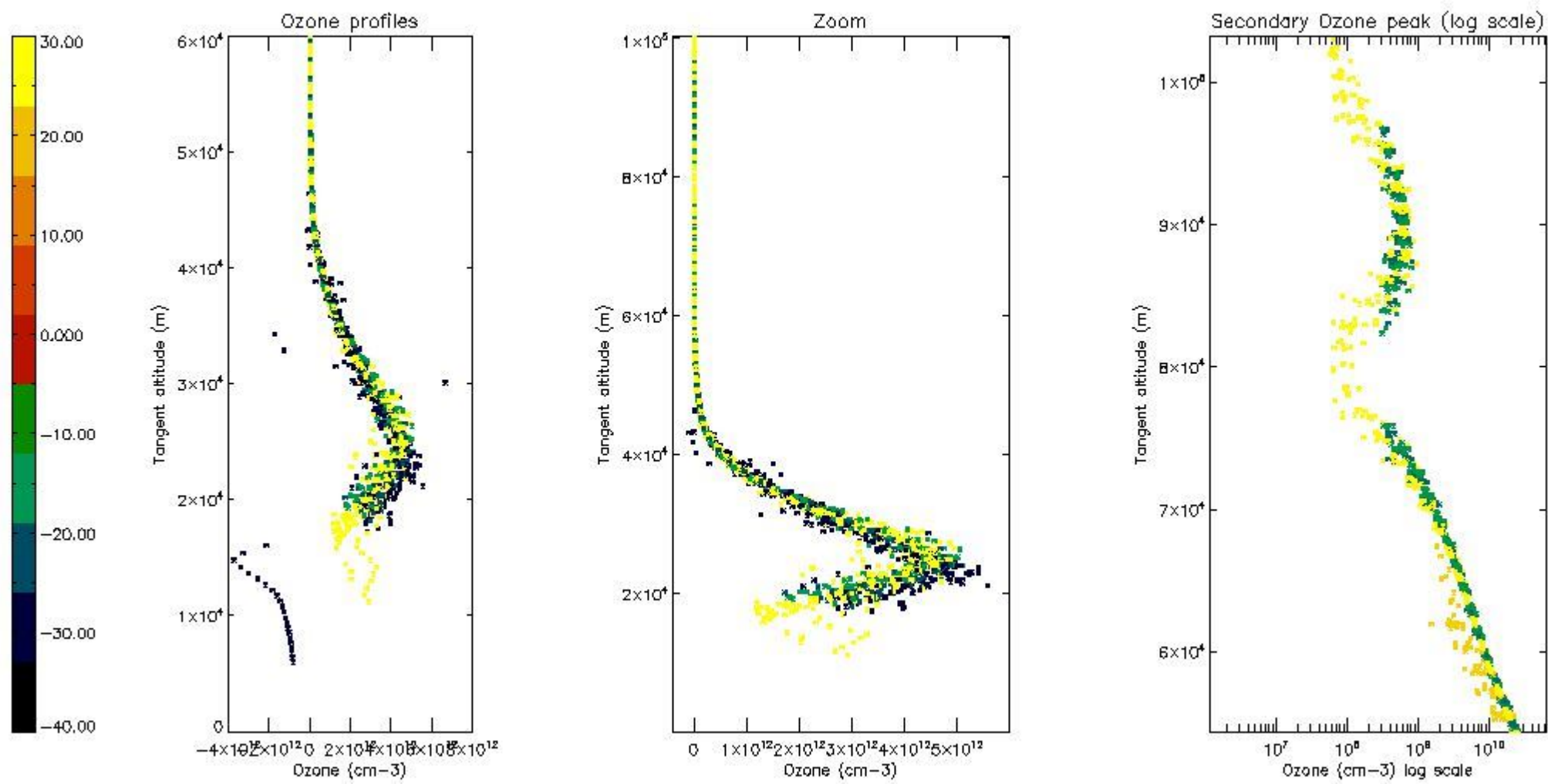
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



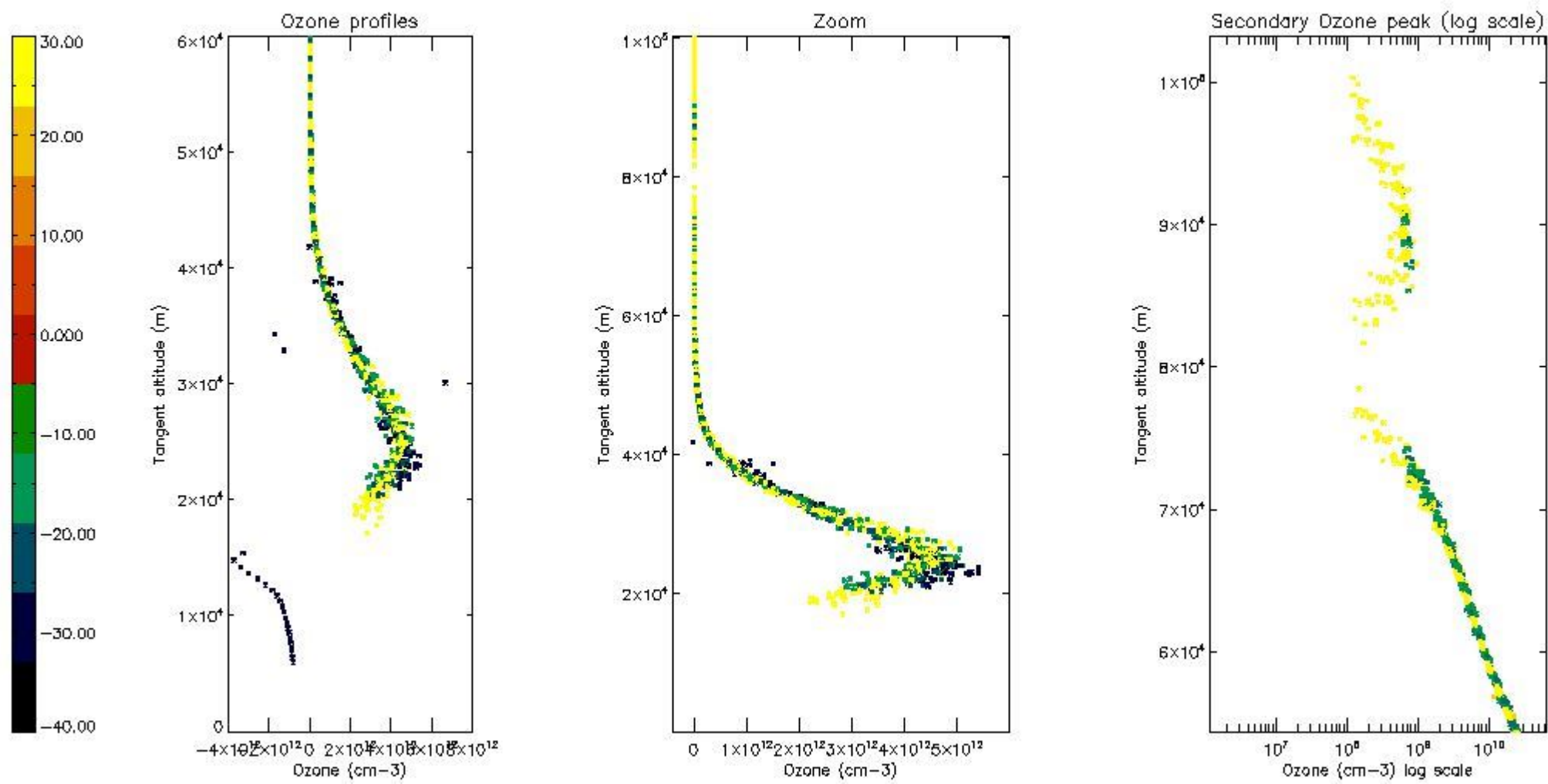
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



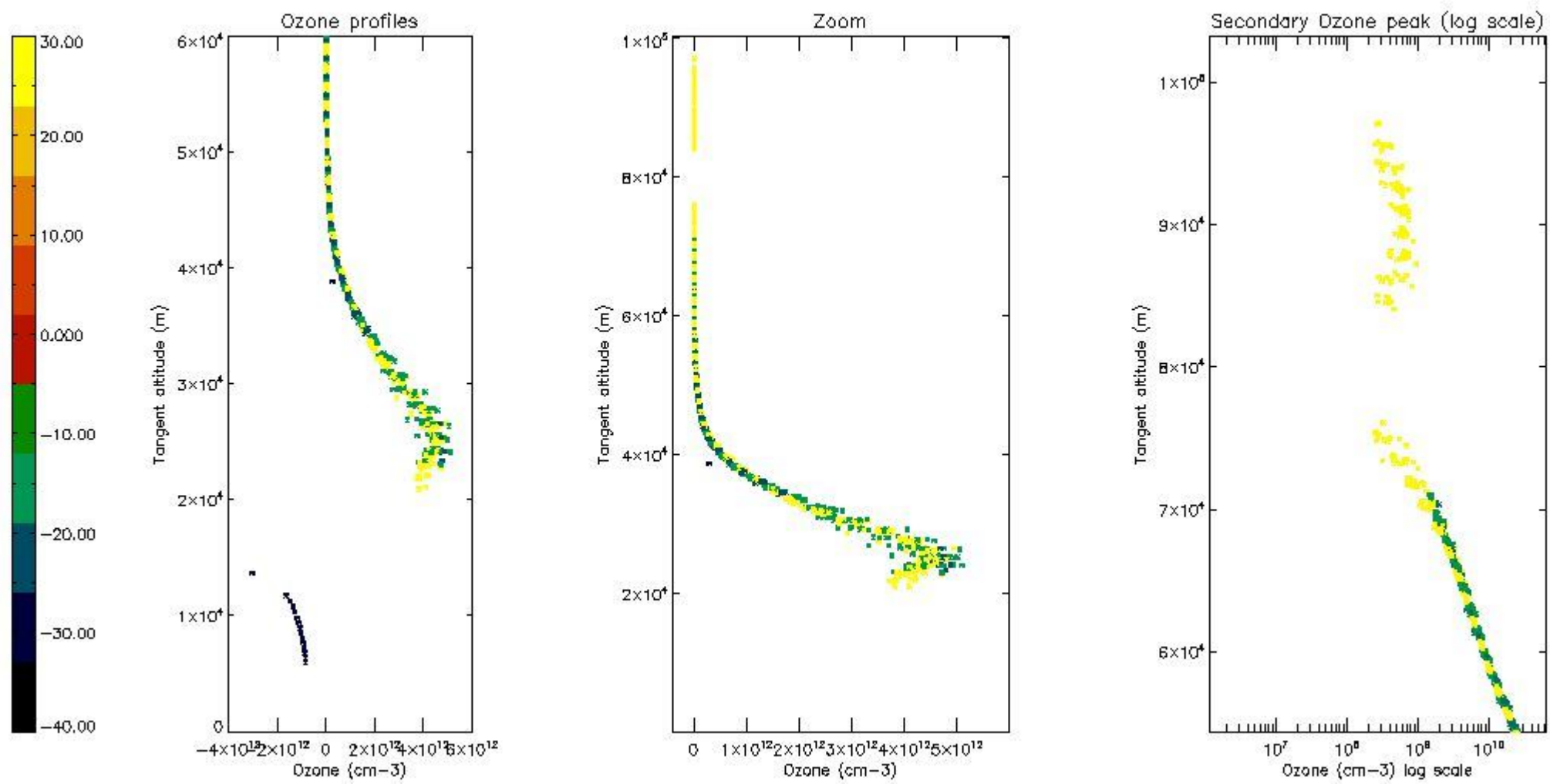
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

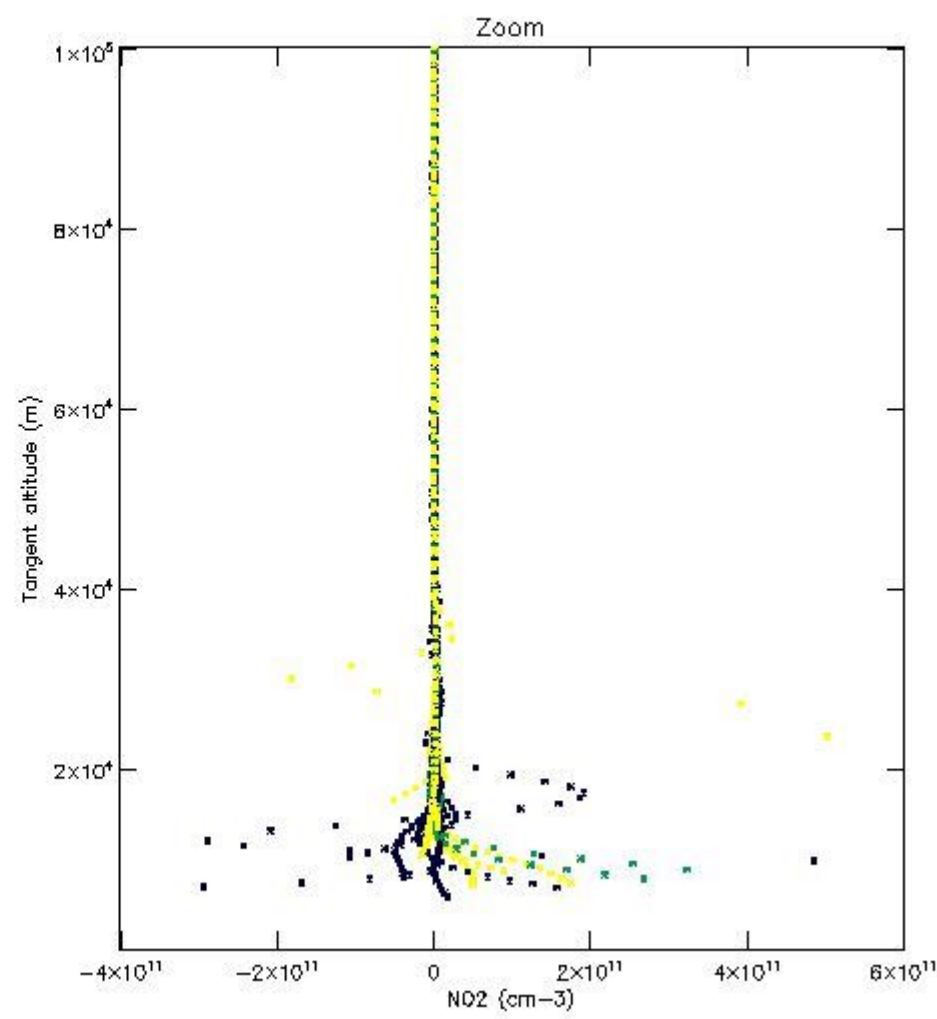
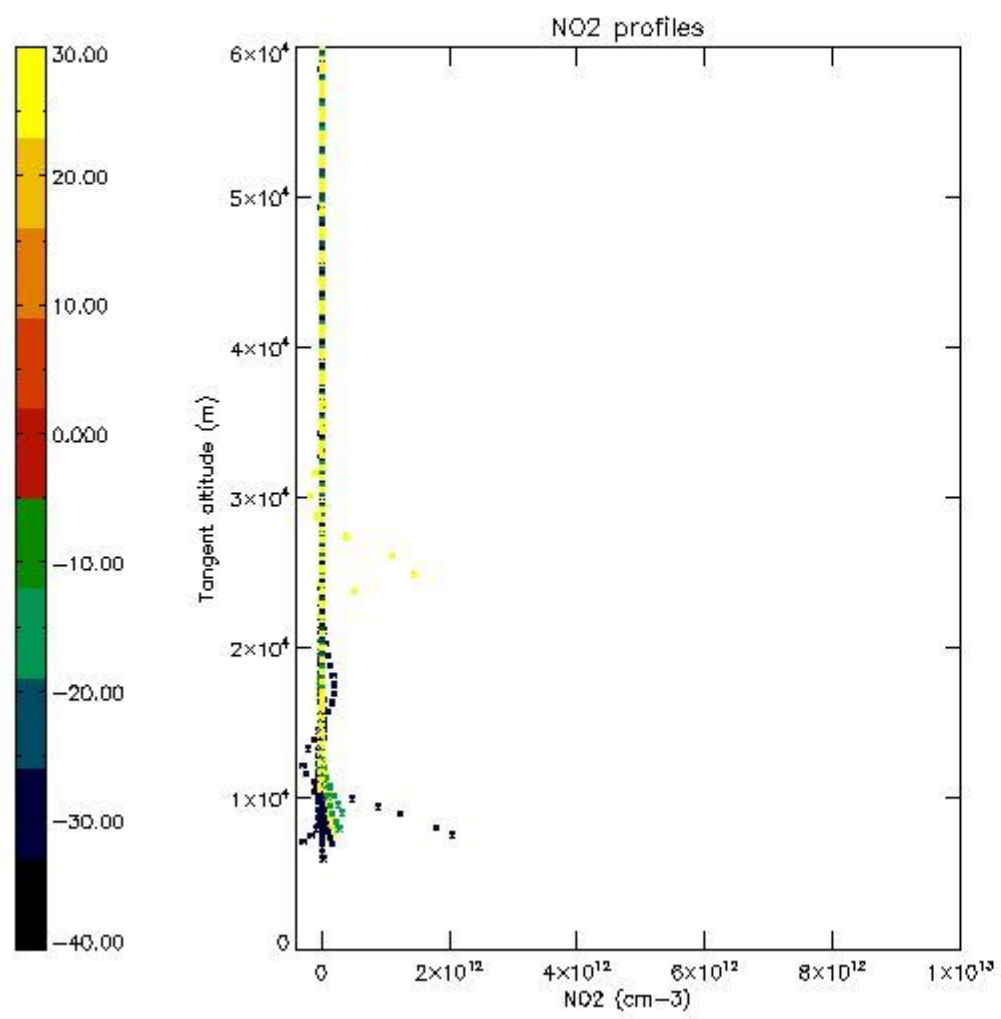
The colorbar represents the latitude.



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

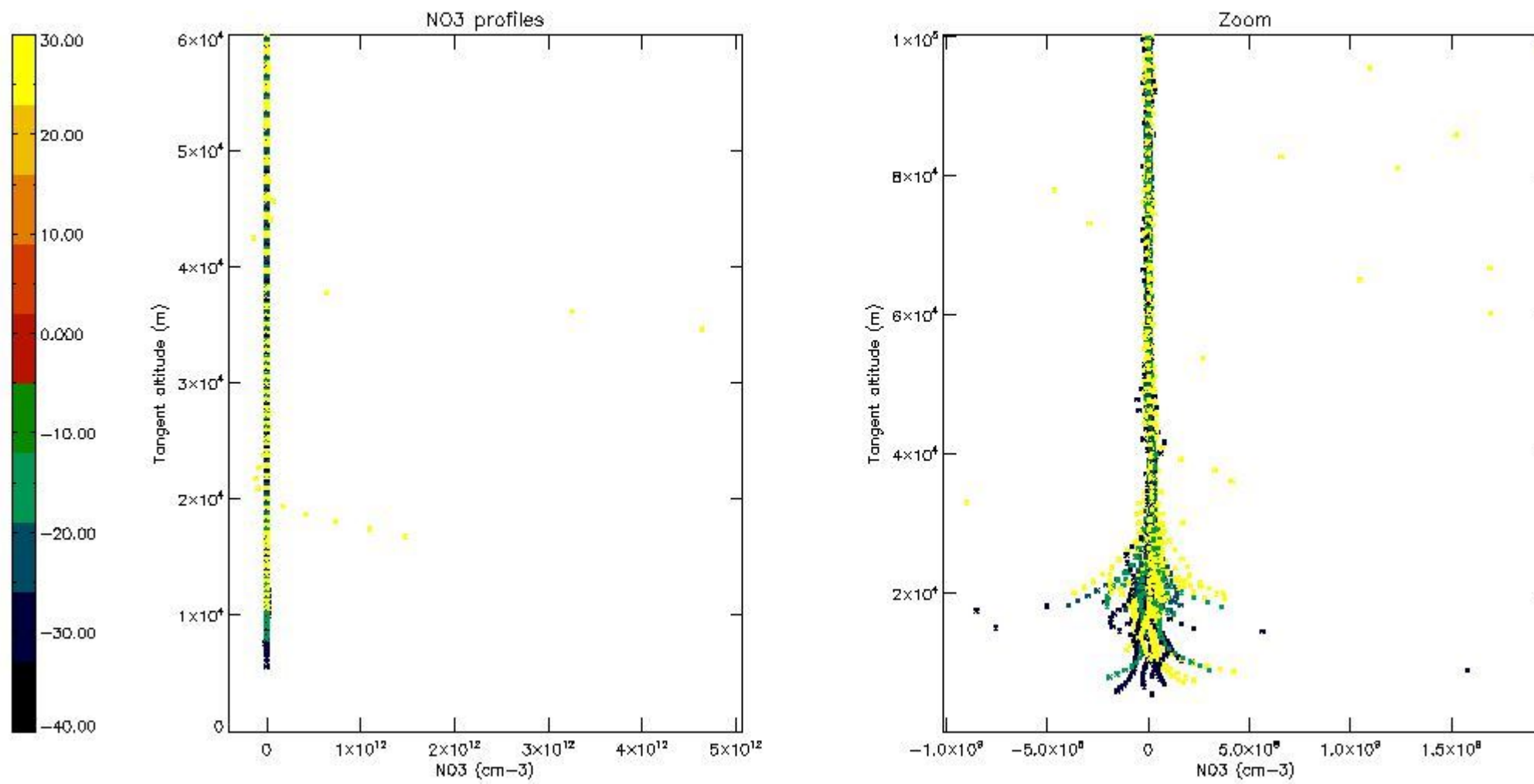
The colorbar represents the latitude.





*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	16-OCT-2006 00:05:09
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-OCT-2006 00:05:09
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-OCT-2006 00:05:09

# GOMOS Level 2 Daily Report

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### [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 05:00:57
Data source version	GOMOS/6.01
Start time of products	16-10-2006 (16OCT2006 00:00:00)
Stop time of products	17-10-2006 (17OCT2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	240
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__2PRFIN20061016_000509_000000382052_00088_24190_2740.N1	16-OCT-2006 00:05:09	Dark	38.000	143	Alp Hyi	2.8570	7200.0	76	24190	No
2	GOM_NL__2PRFIN20061016_000635_000000422052_00088_24190_2741.N1	16-OCT-2006 00:06:35	Dark	42.000	9	Alp Eri	0.45300	24000.	84	24190	No
3	GOM_NL__2PRFIN20061016_001137_000000372052_00088_24190_2742.N1	16-OCT-2006 00:11:37	Straylight	37.000	84	Alp Phe	2.3970	4500.0	74	24190	No
4	GOM_NL__2PRFIN20061016_001812_000000432052_00088_24190_2743.N1	16-OCT-2006 00:18:12	Straylight	42.500	52	16Bet Cet	2.0370	4500.0	85	24190	No
5	GOM_NL__2PRFIN20061016_002751_000000362052_00088_24190_2744.N1	16-OCT-2006 00:27:51	Bright	35.500	140	88Gam Peg	2.8340	26000.	71	24190	No
6	GOM_NL__2PRFIN20061016_003149_000000352052_00088_24190_2745.N1	16-OCT-2006 00:31:49	Bright	35.000	58	21Alp And	2.0730	11000.	70	24190	No
7	GOM_NL__2PRFIN20061016_004021_000000362052_00088_24190_2746.N1	16-OCT-2006 00:40:21	Bright	36.000	74	11Bet Cas	2.2680	6600.0	72	24190	No
8	GOM_NL__2PRFIN20061016_004242_000000352052_00088_24190_2747.N1	16-OCT-2006 00:42:42	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	24190	No
9	GOM_NL__2PRFIN20061016_004851_000000372052_00088_24190_2748.N1	16-OCT-2006 00:48:51	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	24190	No
10	GOM_NL__2PRFIN20061016_005151_000000372052_00088_24190_2749.N1	16-OCT-2006 00:51:51	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	24190	No
11	GOM_NL__2PRFIN20061016_005705_000000352052_00088_24190_2750.N1	16-OCT-2006 00:57:05	Bright	34.500	36	50Alp UMa	1.8000	6300.0	69	24190	No
12	GOM_NL__2PRFIN20061016_005838_000000362052_00088_24190_2751.N1	16-OCT-2006 00:58:38	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	24190	No
13	GOM_NL__2PRFIN20061016_010202_000000522052_00088_24190_2752.N1	16-OCT-2006 01:02:02	Bright	52.000	174	52Psi UMa	3.0040	4400.0	104	24190	No
14	GOM_NL__2PRFIN20061016_010848_000000342052_00088_24190_2753.N1	16-OCT-2006 01:08:48	Bright	33.500	96	68Del Leo	2.5600	9300.0	67	24190	No
15	GOM_NL__2PRFIN20061016_012912_000000522052_00088_24190_2754.N1	16-OCT-2006 01:29:12	Dark	52.000	65	Lam Vel	2.2040	4400.0	104	24190	No
16	GOM_NL__2PRFIN20061016_013443_000000382052_00089_24191_2739.N1	16-OCT-2006 01:34:43	Dark	37.500	29	Bet Car	1.6720	10200.	75	24191	No
17	GOM_NL__2PRFIN20061016_014545_000000382052_00089_24191_2740.N1	16-OCT-2006 01:45:45	Dark	37.500	143	Alp Hyi	2.8570	7200.0	75	24191	No
18	GOM_NL__2PRFIN20061016_014712_000000422052_00089_24191_2741.N1	16-OCT-2006 01:47:12	Dark	42.000	9	Alp Eri	0.45300	24000.	84	24191	No
19	GOM_NL__2PRFIN20061016_015213_000000412052_00089_24191_2742.N1	16-OCT-2006 01:52:13	Straylight	40.500	84	Alp Phe	2.3970	4500.0	81	24191	No
20	GOM_NL__2PRFIN20061016_015849_000000402052_00089_24191_2743.N1	16-OCT-2006 01:58:49	Straylight	39.500	52	16Bet Cet	2.0370	4500.0	79	24191	No
21	GOM_NL__2PRFIN20061016_020827_000000372052_00089_24191_2744.N1	16-OCT-2006 02:08:27	Bright	37.000	140	88Gam Peg	2.8340	26000.	74	24191	No
22	GOM_NL__2PRFIN20061016_021225_000000362052_00089_24191_2745.N1	16-OCT-2006 02:12:25	Bright	36.000	58	21Alp And	2.0730	11000.	72	24191	No
23	GOM_NL__2PRFIN20061016_022057_000000372052_00089_24191_2746.N1	16-OCT-2006 02:20:57	Bright	36.500	74	11Bet Cas	2.2680	6600.0	73	24191	No
24	GOM_NL__2PRFIN20061016_022318_000000362052_00089_24191_2747.N1	16-OCT-2006 02:23:18	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	24191	No
25	GOM_NL__2PRFIN20061016_022927_000000352052_00089_24191_2748.N1	16-OCT-2006 02:29:27	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	24191	No
26	GOM_NL__2PRFIN20061016_023228_000000372052_00089_24191_2749.N1	16-OCT-2006 02:32:28	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	24191	No
27	GOM_NL__2PRFIN20061016_023741_000000362052_00089_24191_2750.N1	16-OCT-2006 02:37:41	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	24191	No
28	GOM_NL__2PRFIN20061016_023914_000000532052_00089_24191_2751.N1	16-OCT-2006 02:39:14	Bright	53.000	82	48Bet UMa	2.3650	10600.	106	24191	No
29	GOM_NL__2PRFIN20061016_024238_000000362052_00089_24191_2752.N1	16-OCT-2006 02:42:38	Bright	35.500	174	52Psi UMa	3.0040	4400.0	71	24191	No
30	GOM_NL__2PRFIN20061016_024924_000000342052_00089_24191_2753.N1	16-OCT-2006 02:49:24	Bright	33.500	96	68Del Leo	2.5600	9300.0	67	24191	No
31	GOM_NL__2PRFIN20061016_030948_000000412052_00089_24191_2754.N1	16-OCT-2006 03:09:48	Dark	40.500	65	Lam Vel	2.2040	4400.0	81	24191	No
32	GOM_NL__2PRFIN20061016_031255_000000392052_00090_24192_2755.N1	16-OCT-2006 03:12:55	Dark	39.000	46	Del Vel	1.9540	10600.	78	24192	No
33	GOM_NL__2PRFIN20061016_031519_000000382052_00090_24192_2739.N1	16-OCT-2006 03:15:19	Dark	37.500	29	Bet Car	1.6720	10200.	75	24192	No
34	GOM_NL__2PRFIN20061016_032622_000000372052_00090_24192_2740.N1	16-OCT-2006 03:26:22	Dark	36.500	143	Alp Hyi	2.8570	7200.0	73	24192	No
35	GOM_NL__2PRFIN20061016_032748_000000412052_00090_24192_2741.N1	16-OCT-2006 03:27:48	Dark	41.000	9	Alp Eri	0.45300	24000.	82	24192	No
36	GOM_NL__2PRFIN20061016_033249_000000412052_00090_24192_2742.N1	16-OCT-2006 03:32:49	Straylight	41.000	84	Alp Phe	2.3970	4500.0	82	24192	No
37	GOM_NL__2PRFIN20061016_033925_000000442052_00090_24192_2743.N1	16-OCT-2006 03:39:25	Straylight	44.000	52	16Bet Cet	2.0370	4500.0	88	24192	No
38	GOM_NL__2PRFIN20061016_034903_000000352052_00090_24192_2744.N1	16-OCT-2006 03:49:03	Bright	35.000	140	88Gam Peg	2.8340	26000.	70	24192	No
39	GOM_NL__2PRFIN20061016_035301_000000372052_00090_24192_2745.N1	16-OCT-2006 03:53:01	Bright	37.000	58	21Alp And	2.0730	11000.	74	24192	No
40	GOM_NL__2PRFIN20061016_040133_000000372052_00090_24192_2746.N1	16-OCT-2006 04:01:33	Bright	37.000	74	11Bet Cas	2.2680	6600.0	74	24192	No
41	GOM_NL__2PRFIN20061016_040354_000000352052_00090_24192_2747.N1	16-OCT-2006 04:03:54	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	24192	No
42	GOM_NL__2PRFIN20061016_041003_000000342052_00090_24192_2748.N1	16-OCT-2006 04:10:03	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	24192	No







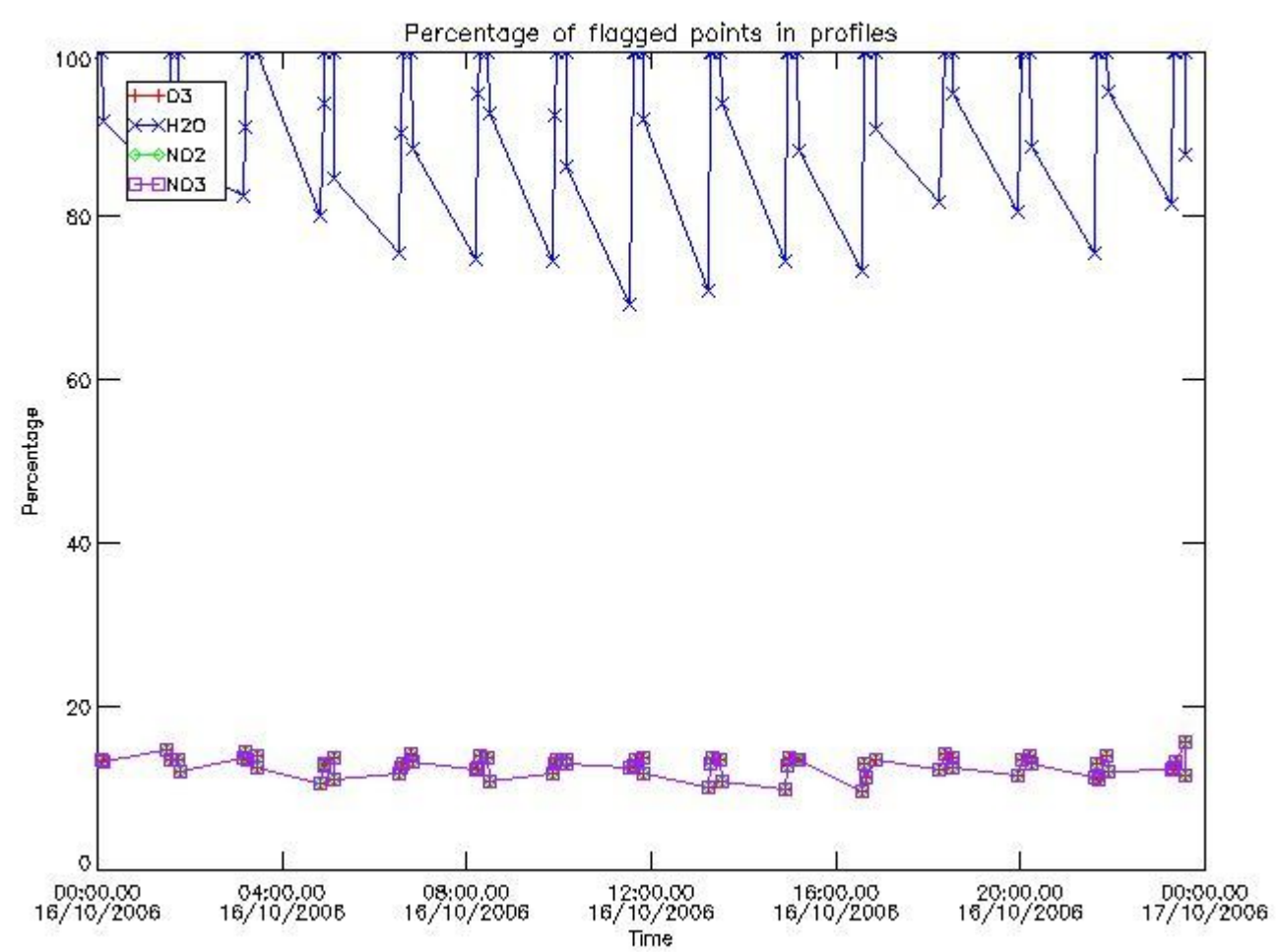
220	GOM_NL__2PRFIN20061016_215427_000000422052_00101_24203_2762.N1	16-OCT-2006 21:54:27	Dark	41.500	9	Alp Eri	0.45300	24000.	83	24203	No
221	GOM_NL__2PRFIN20061016_215927_000000422052_00101_24203_2763.N1	16-OCT-2006 21:59:27	Straylight	42.000	84	Alp Phe	2.3970	4500.0	84	24203	No
222	GOM_NL__2PRFIN20061016_220602_000000422052_00101_24203_2764.N1	16-OCT-2006 22:06:02	Straylight	41.500	52	16Bet Cet	2.0370	4500.0	83	24203	No
223	GOM_NL__2PRFIN20061016_221539_000000352052_00101_24203_2765.N1	16-OCT-2006 22:15:39	Bright	35.000	140	88Gam Peg	2.8340	26000.	70	24203	No
224	GOM_NL__2PRFIN20061016_221936_000000362052_00101_24203_2766.N1	16-OCT-2006 22:19:36	Bright	35.500	58	21Alp And	2.0730	11000.	71	24203	No
225	GOM_NL__2PRFIN20061016_222808_000000362052_00101_24203_2767.N1	16-OCT-2006 22:28:08	Bright	36.000	74	11Bet Cas	2.2680	6600.0	72	24203	No
226	GOM_NL__2PRFIN20061016_223033_000000372052_00101_24203_2768.N1	16-OCT-2006 22:30:33	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	24203	No
227	GOM_NL__2PRFIN20061016_223638_000000362052_00101_24203_2769.N1	16-OCT-2006 22:36:38	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	24203	No
228	GOM_NL__2PRFIN20061016_223942_000000372052_00101_24203_2770.N1	16-OCT-2006 22:39:42	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	24203	No
229	GOM_NL__2PRFIN20061016_224453_000000362052_00101_24203_2771.N1	16-OCT-2006 22:44:53	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	24203	No
230	GOM_NL__2PRFIN20061016_224626_000000362052_00101_24203_2772.N1	16-OCT-2006 22:46:26	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	24203	No
231	GOM_NL__2PRFIN20061016_224951_000000362052_00101_24203_2773.N1	16-OCT-2006 22:49:51	Bright	35.500	174	52Psi UMa	3.0040	4400.0	71	24203	No
232	GOM_NL__2PRFIN20061016_225637_000000342052_00101_24203_2774.N1	16-OCT-2006 22:56:37	Bright	34.000	96	68Del Leo	2.5600	9300.0	68	24203	No
233	GOM_NL__2PRFIN20061016_231707_000000462052_00101_24203_2775.N1	16-OCT-2006 23:17:07	Dark	46.000	65	Lam Vel	2.2040	4400.0	92	24203	No
234	GOM_NL__2PRFIN20061016_232013_000000412052_00102_24204_2779.N1	16-OCT-2006 23:20:13	Dark	40.500	46	Del Vel	1.9540	10600.	81	24204	No
235	GOM_NL__2PRFIN20061016_232234_000000392052_00102_24204_2780.N1	16-OCT-2006 23:22:34	Dark	38.500	29	Bet Car	1.6720	10200.	77	24204	No
236	GOM_NL__2PRFIN20061016_233337_000000392052_00102_24204_2781.N1	16-OCT-2006 23:33:37	Dark	39.000	143	Alp Hyi	2.8570	7200.0	78	24204	No
237	GOM_NL__2PRFIN20061016_233503_000000452052_00102_24204_2782.N1	16-OCT-2006 23:35:03	Dark	44.500	9	Alp Eri	0.45300	24000.	89	24204	No
238	GOM_NL__2PRFIN20061016_234003_000000432052_00102_24204_2783.N1	16-OCT-2006 23:40:03	Straylight	42.500	84	Alp Phe	2.3970	4500.0	85	24204	No
239	GOM_NL__2PRFIN20061016_234638_000000442052_00102_24204_2784.N1	16-OCT-2006 23:46:38	Straylight	44.000	52	16Bet Cet	2.0370	4500.0	88	24204	No
240	GOM_NL__2PRFIN20061016_235615_000000362052_00102_24204_2785.N1	16-OCT-2006 23:56:15	Bright	35.500	140	88Gam Peg	2.8340	26000.	71	24204	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.

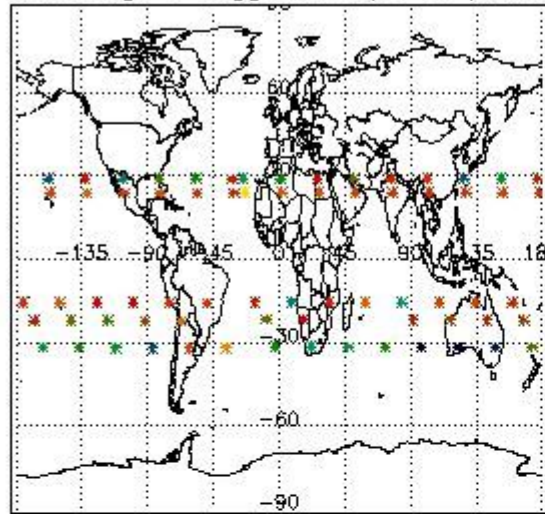
#### *3.1 Plot quality information per product (time dependant)*



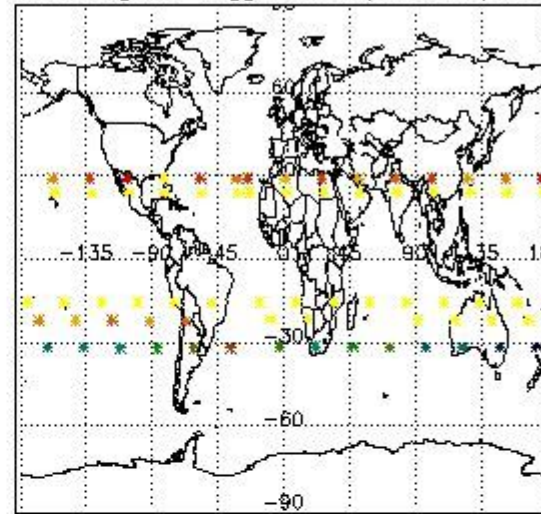


3.2 Plot quality information per product (world map)

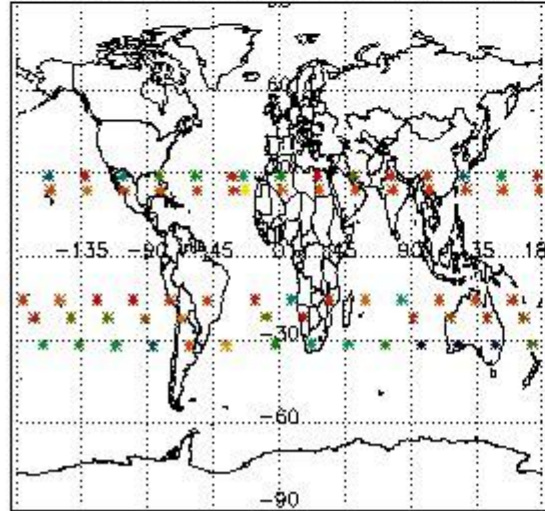
Percentage of flagged data per O3 profile



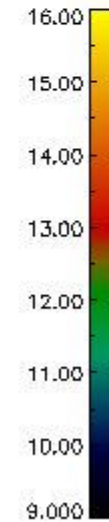
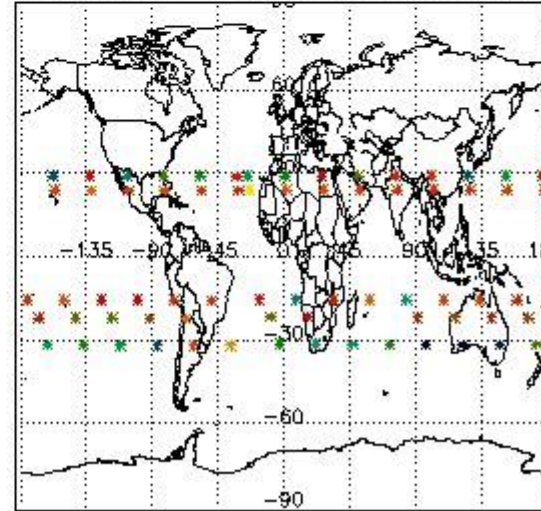
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

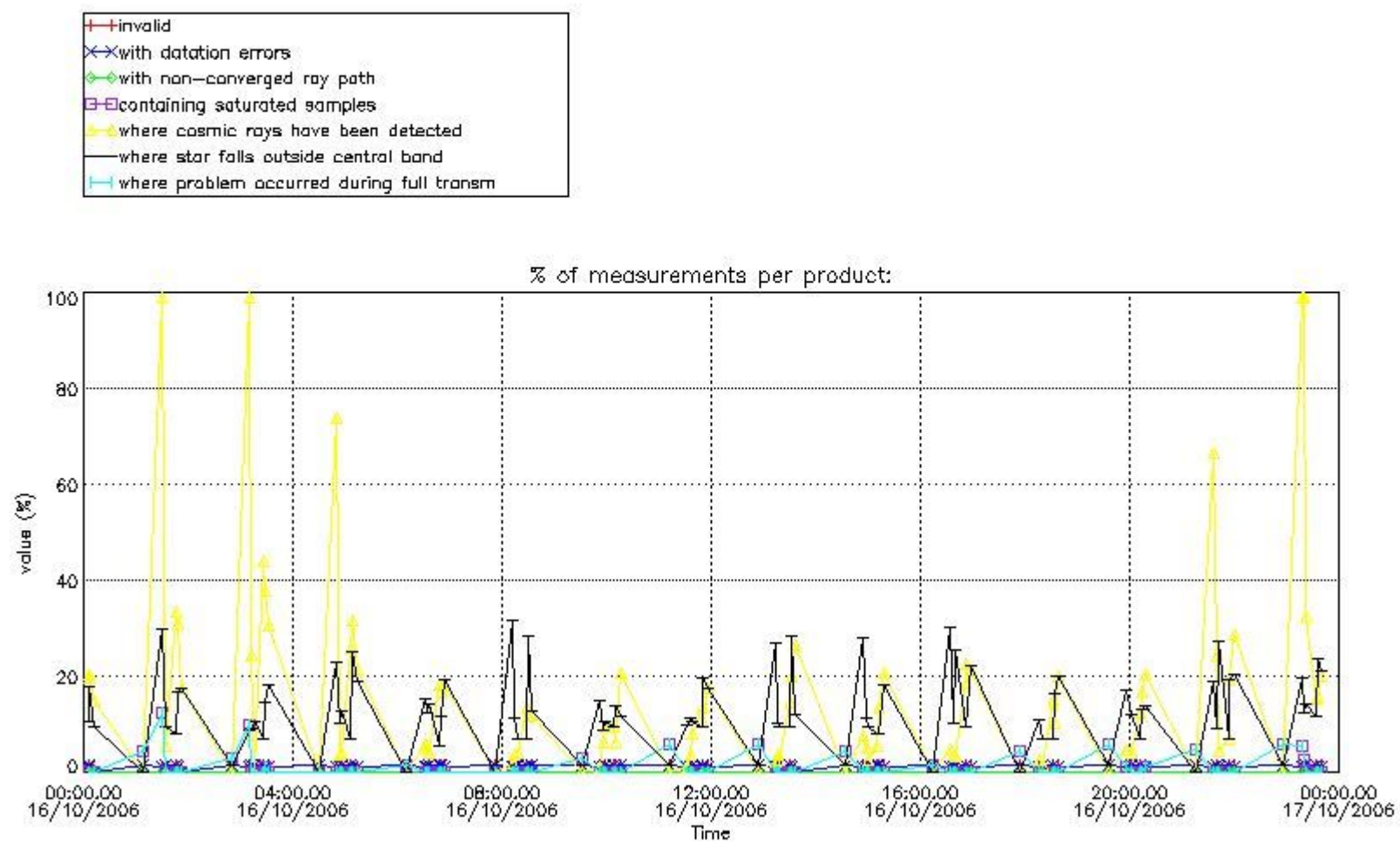


#### 4. Level 1 quality information per product

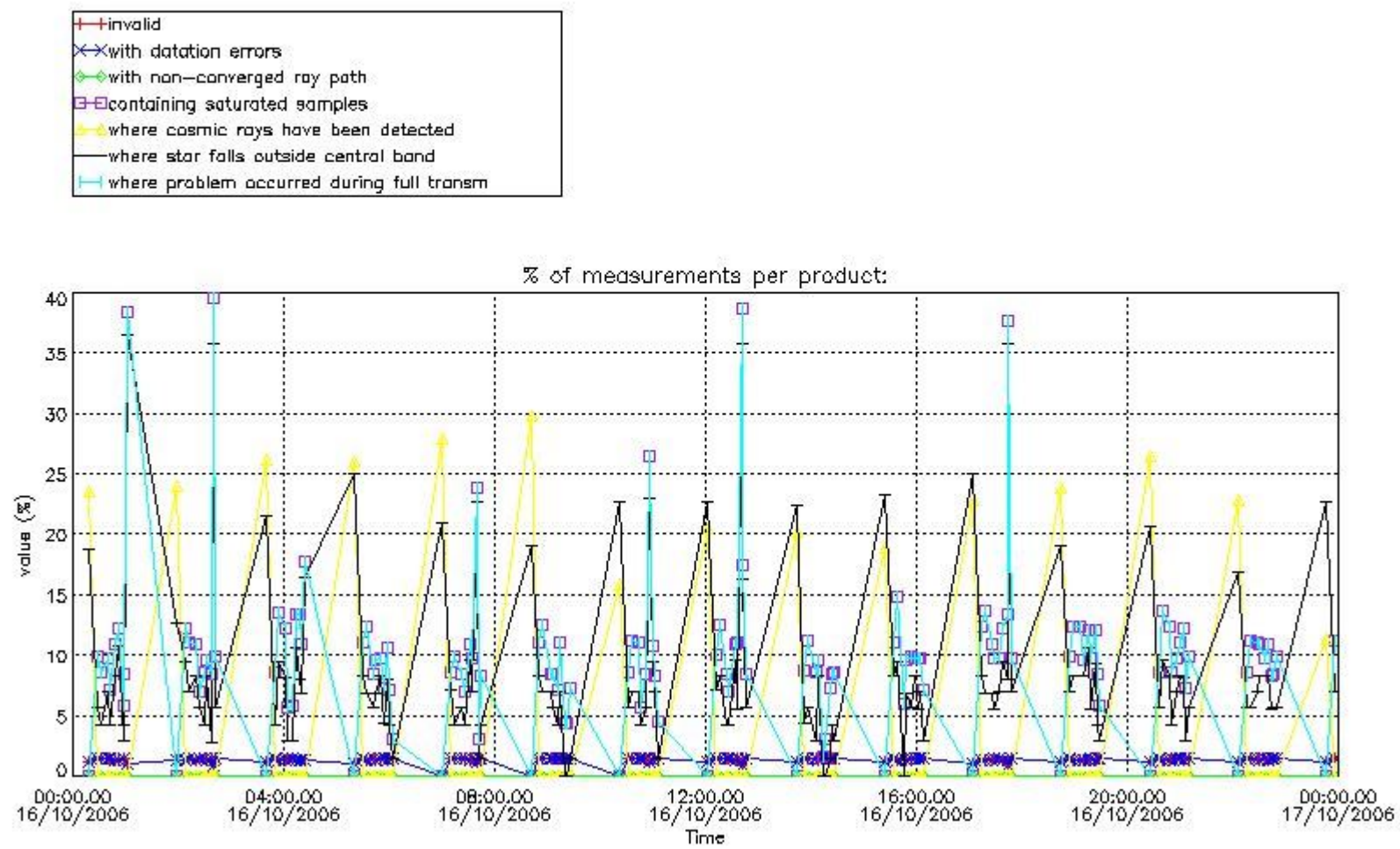
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



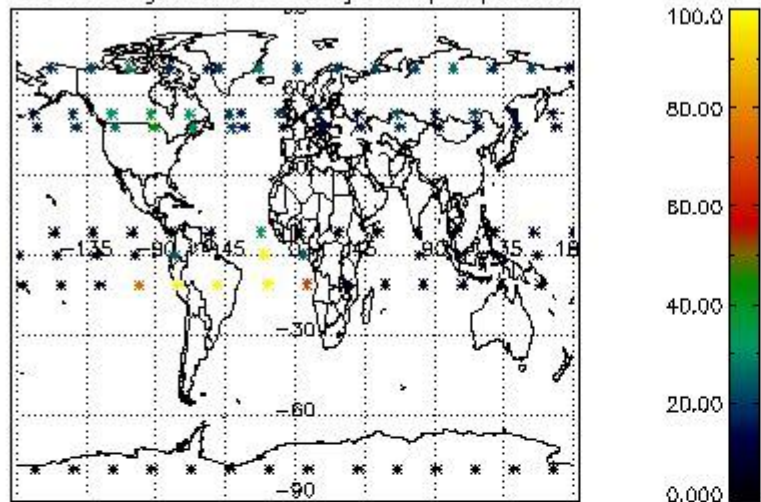
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



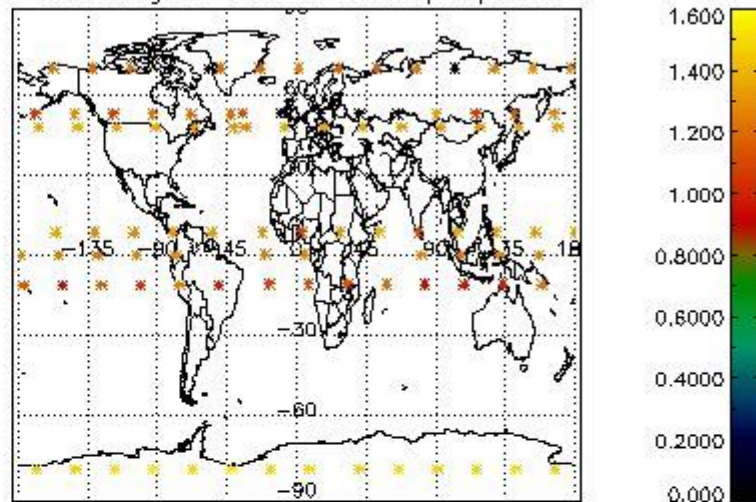
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

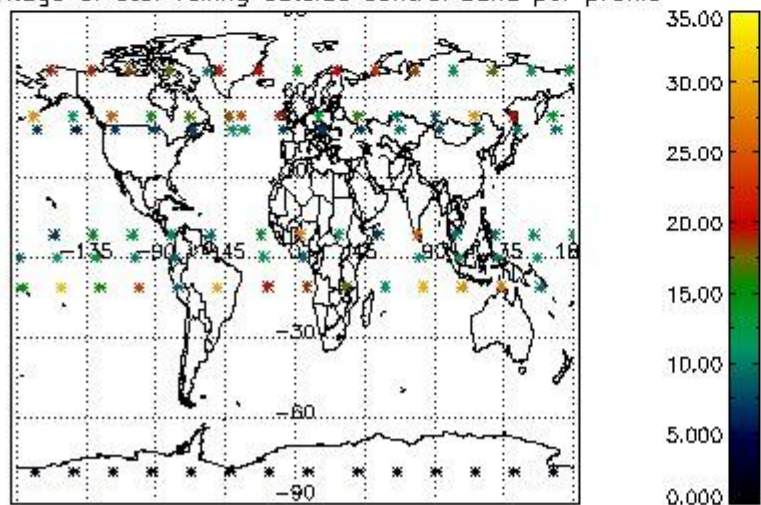
Percentage of cosmic ray hits per profile



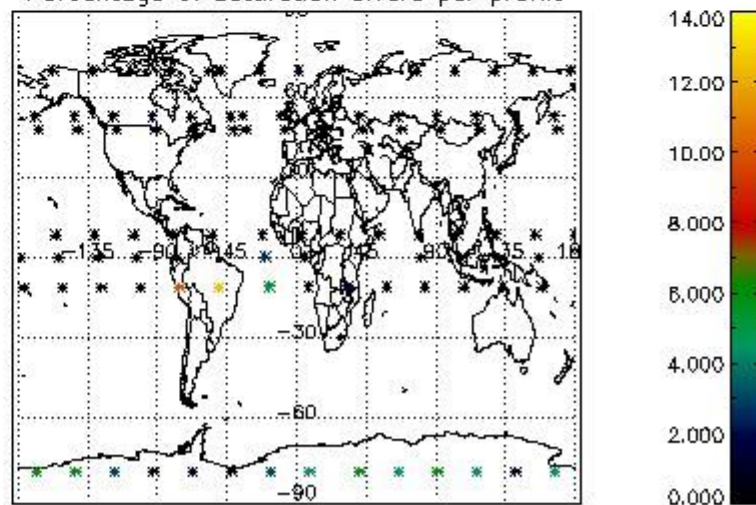
Percentage of datation errors per profile



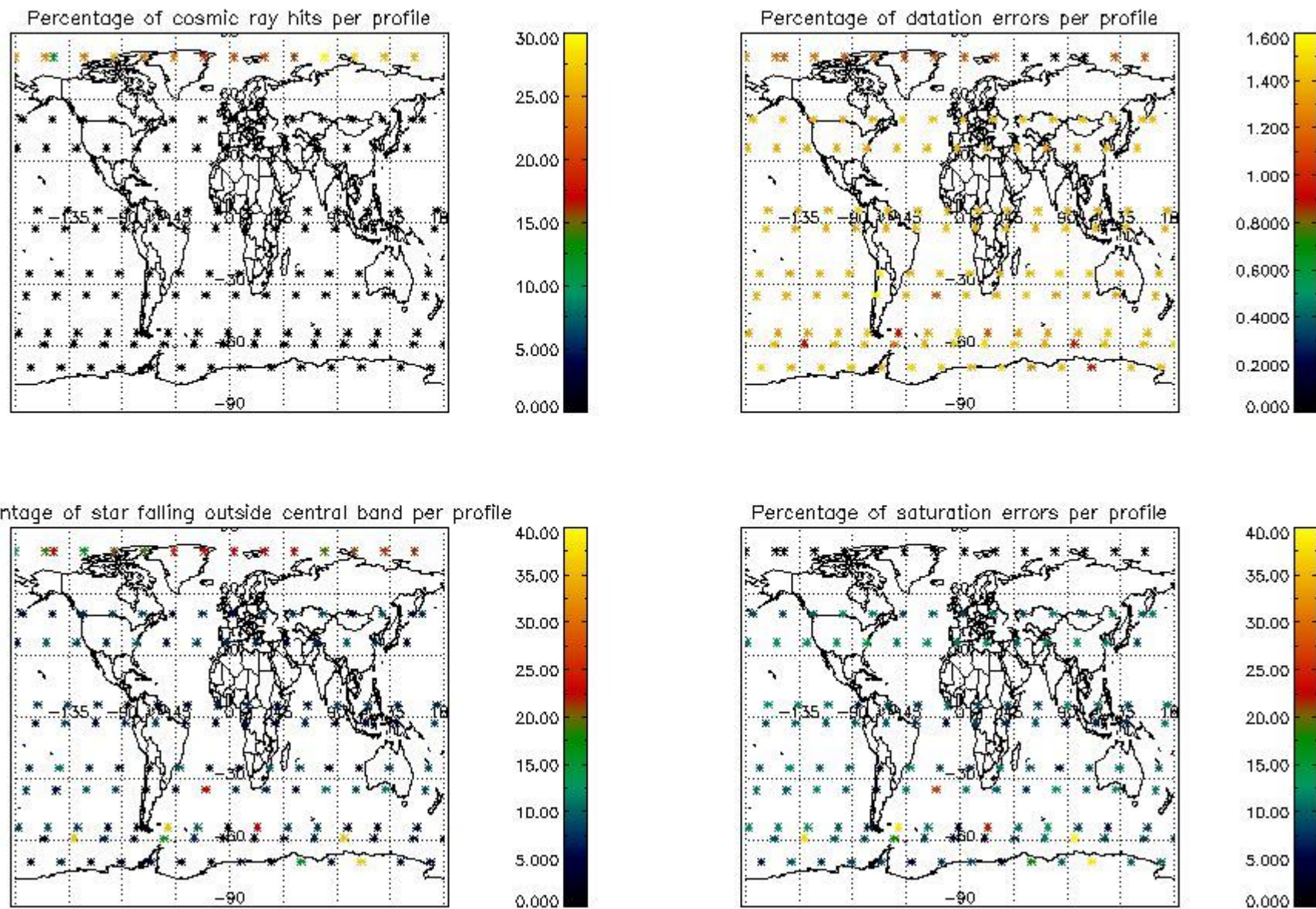
Percentage of star falling outside central band per profile



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

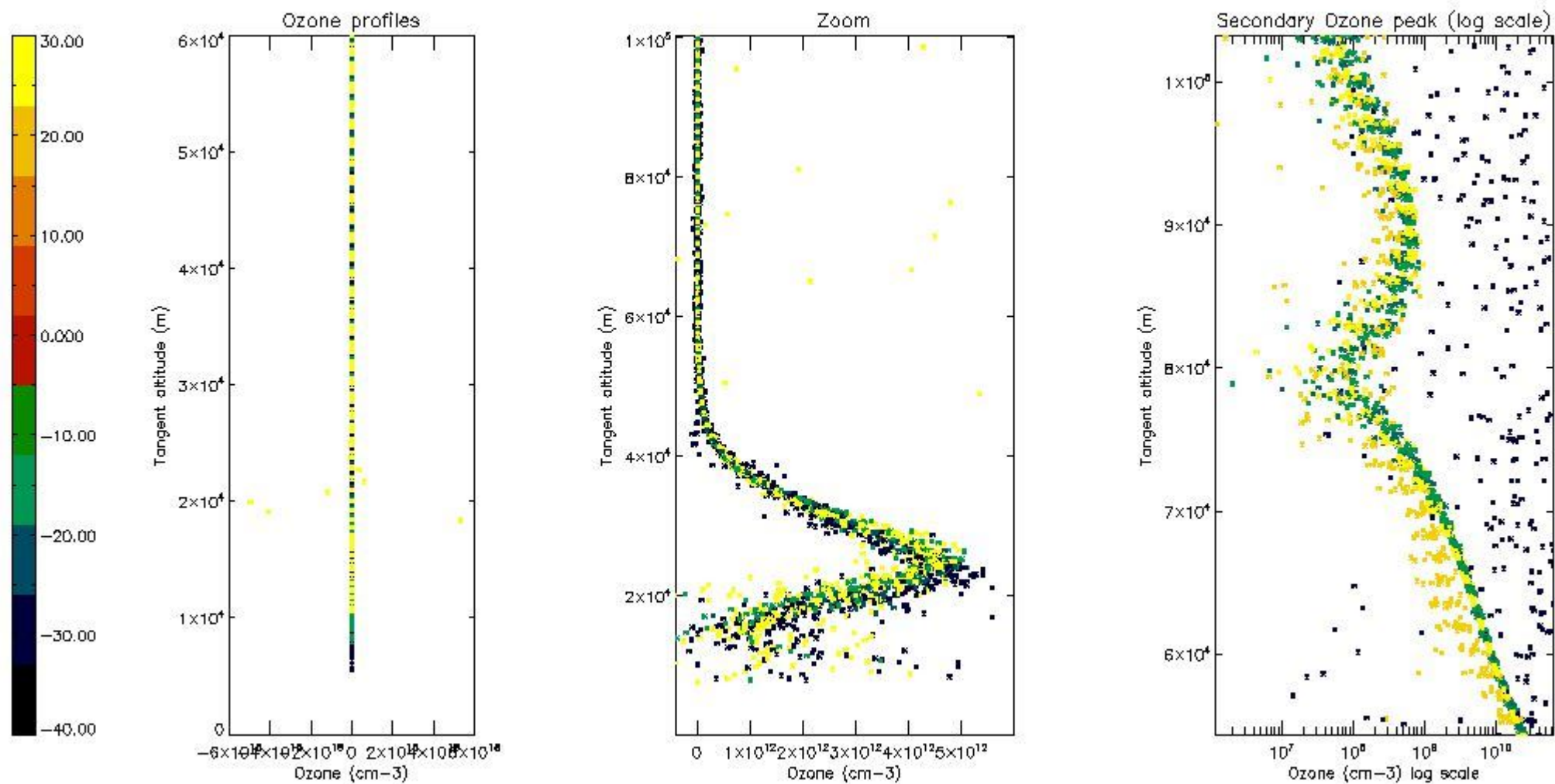
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	32
STD < 20	17

STD < 10	13
STD < 5	9

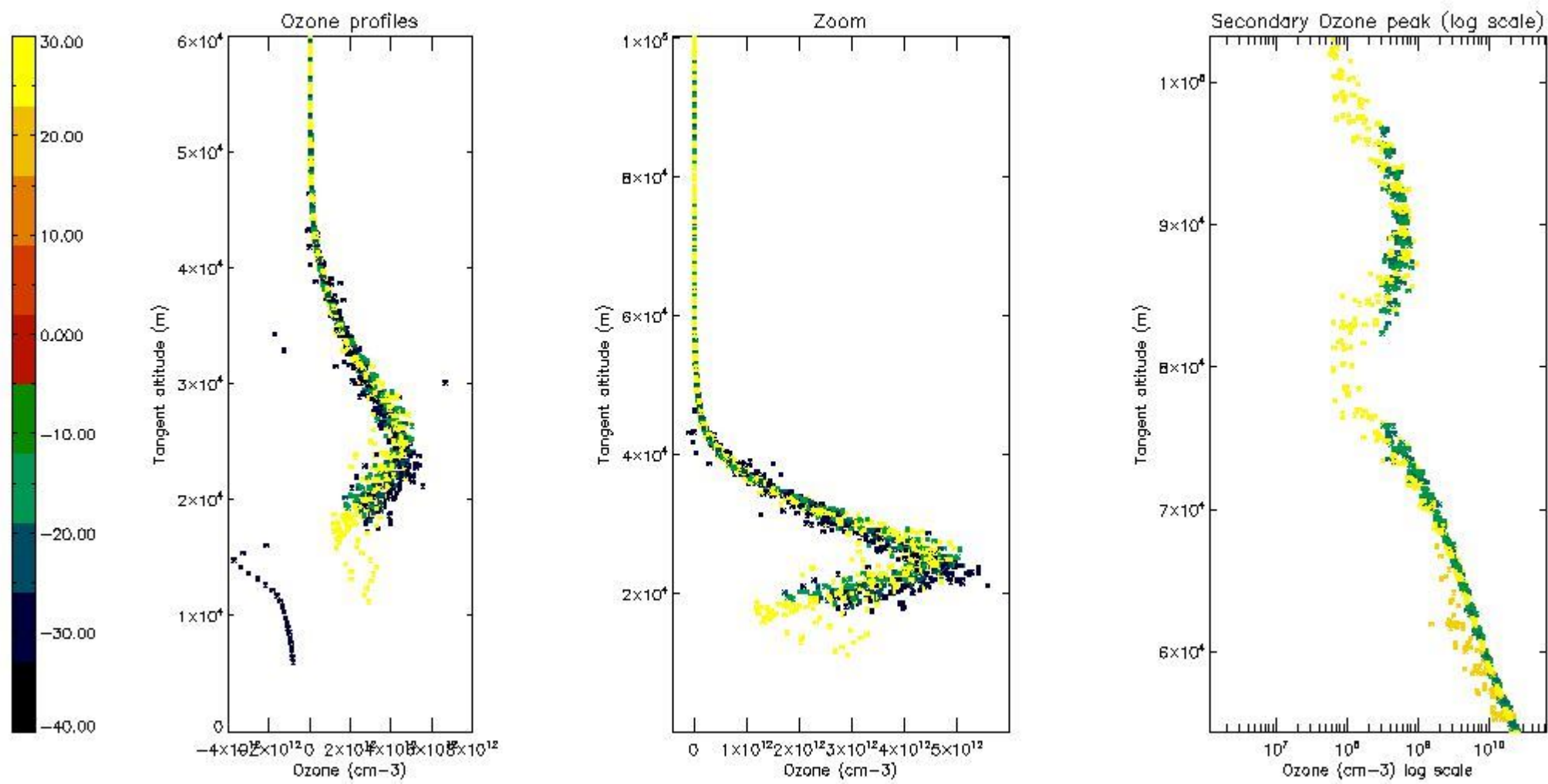
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

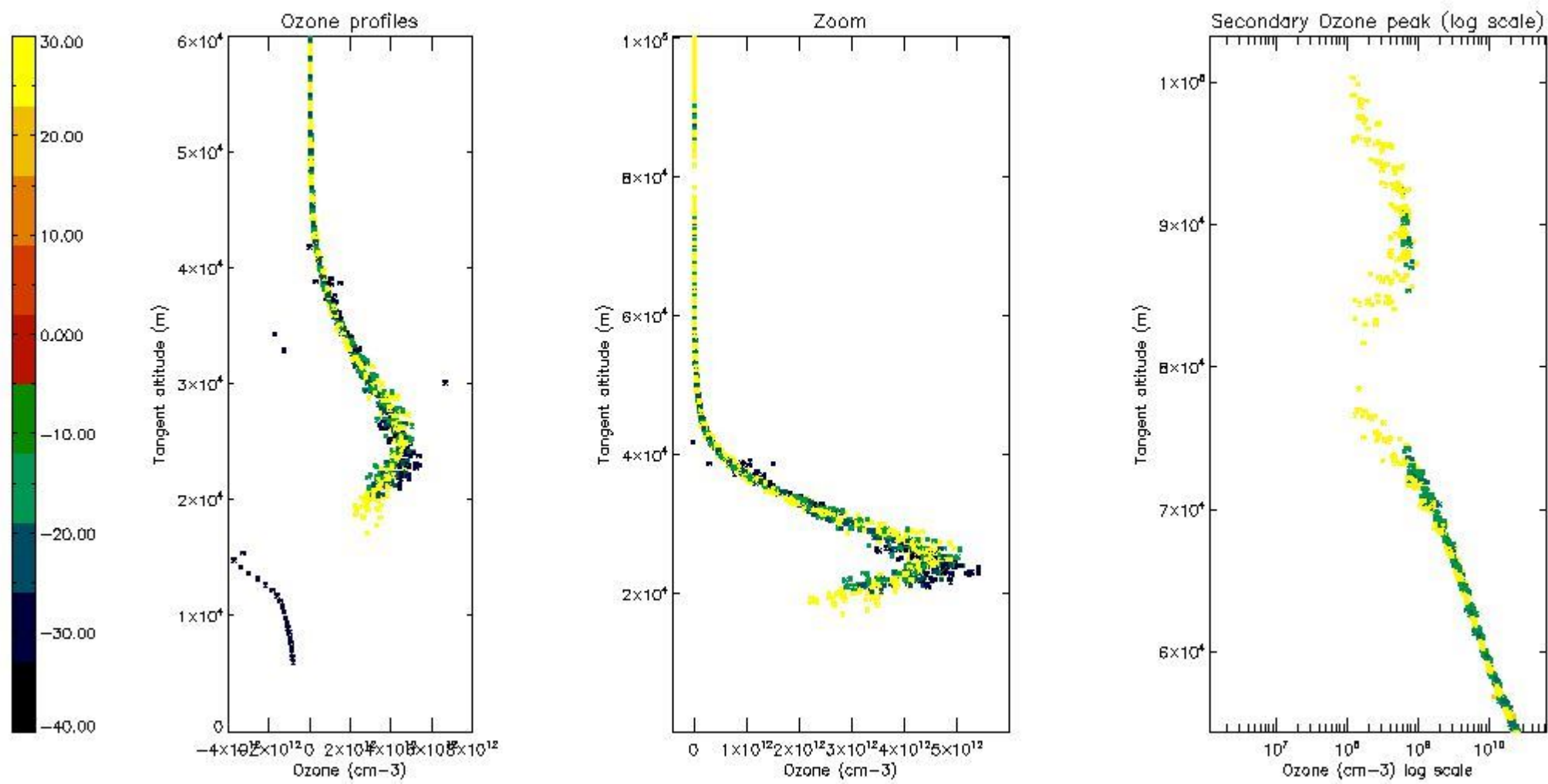
The colorbar represents the latitude.



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

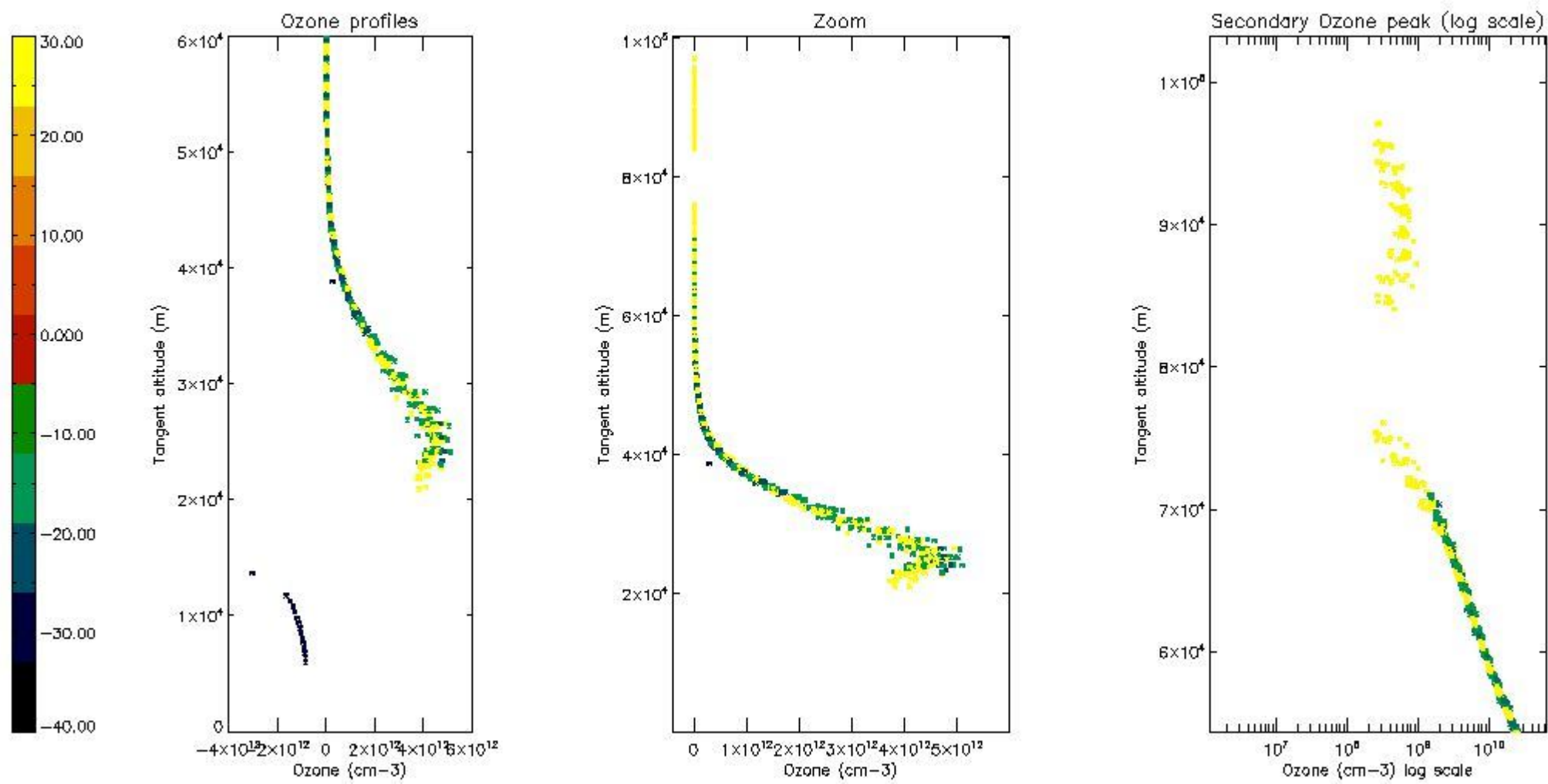
The colorbar represents the latitude.





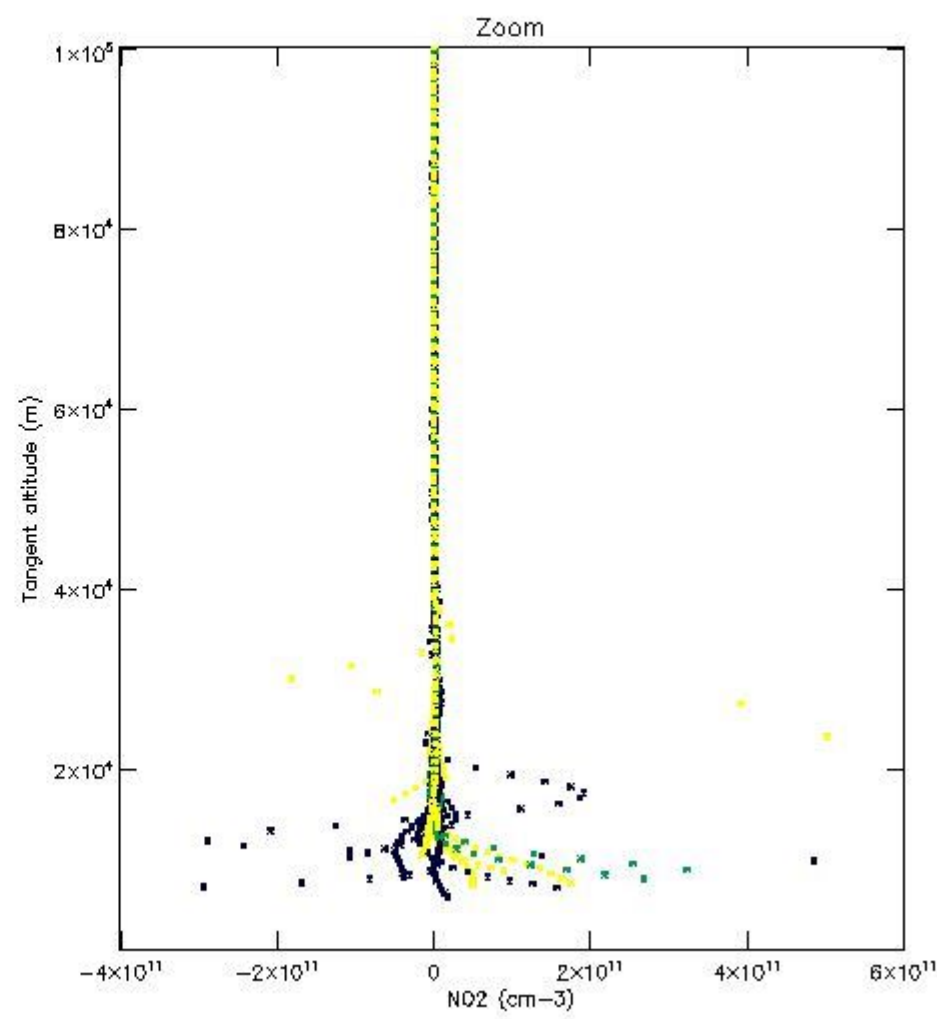
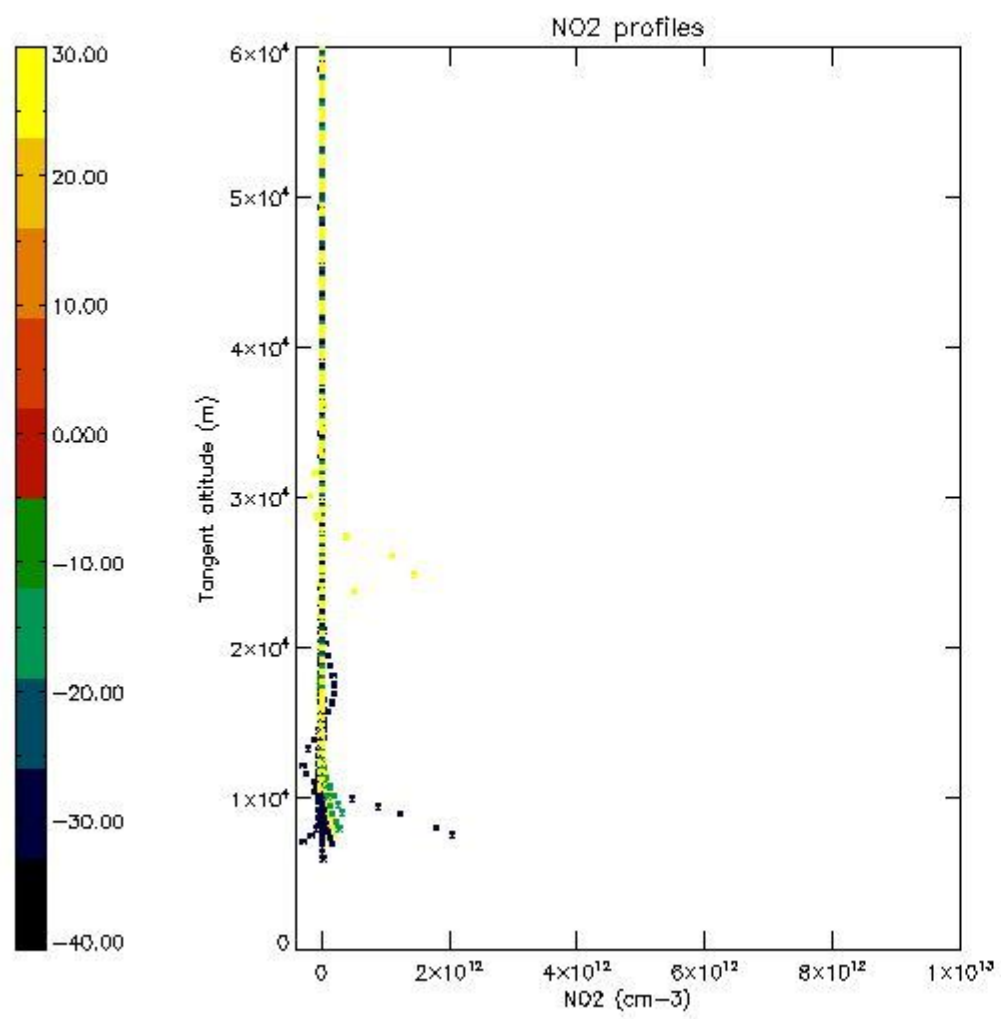
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



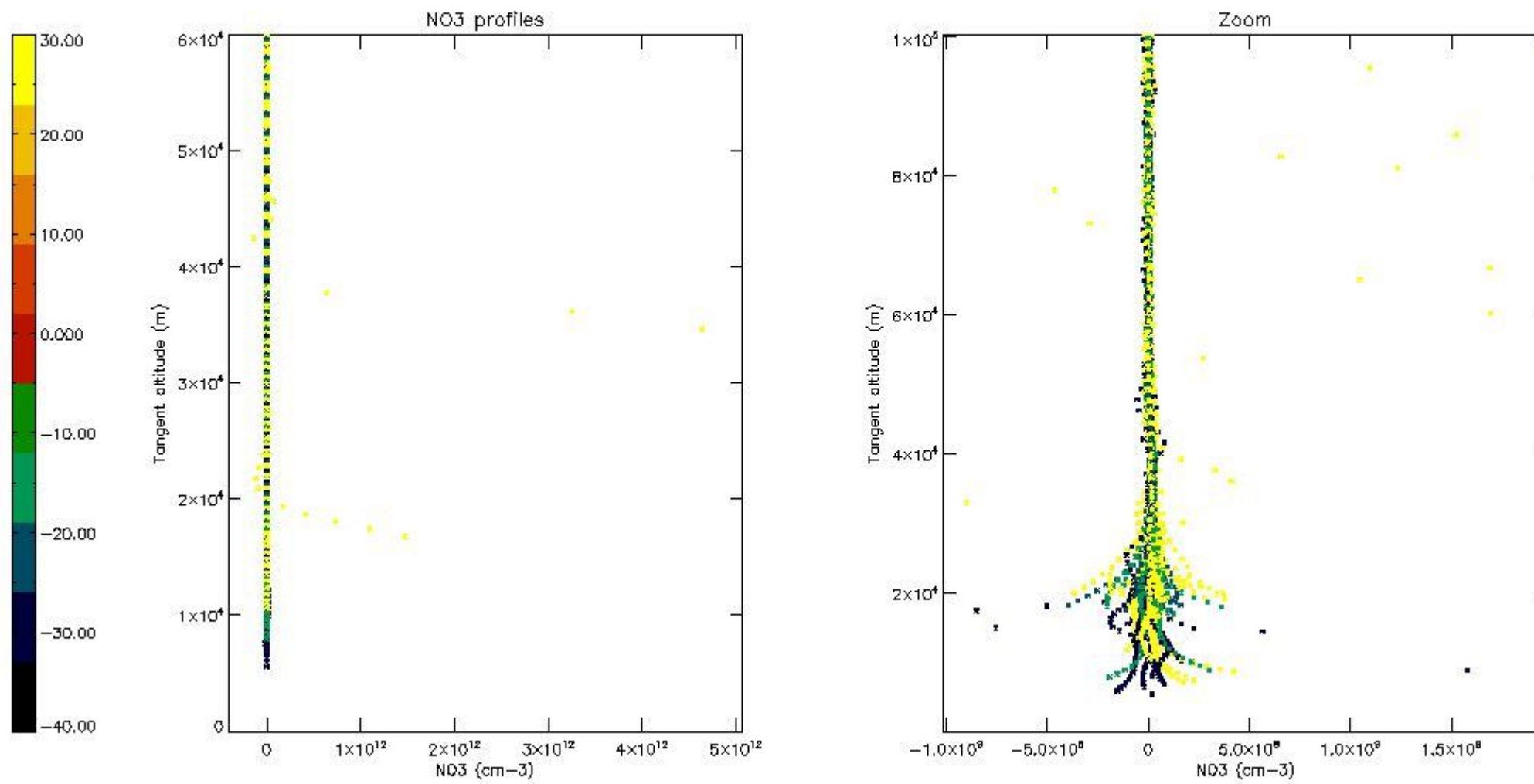
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

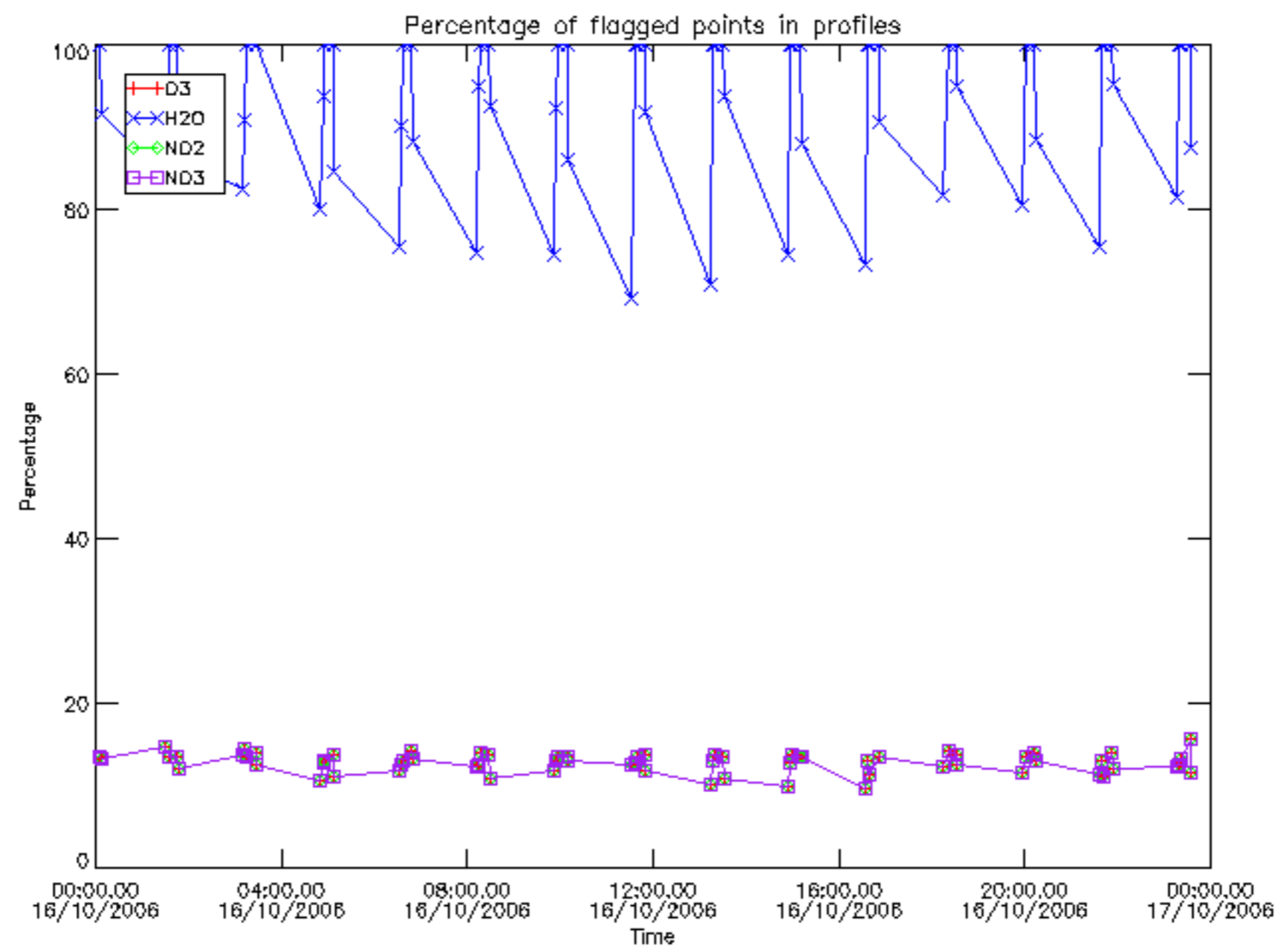
The colorbar represents the latitude.



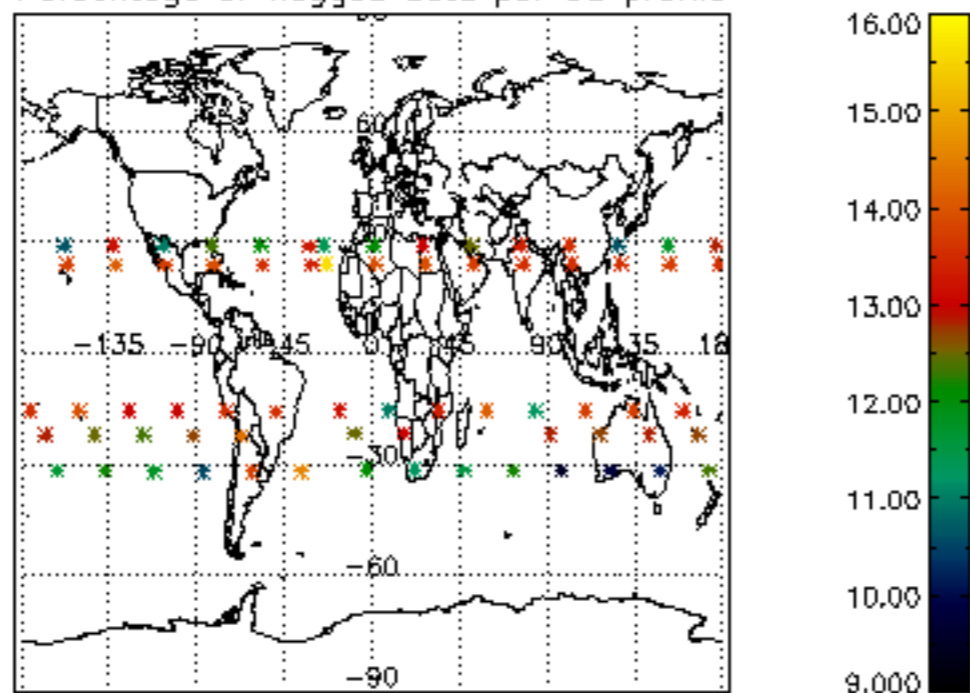
## 6. Auxiliary Data Files used for the production reported in section 2

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.

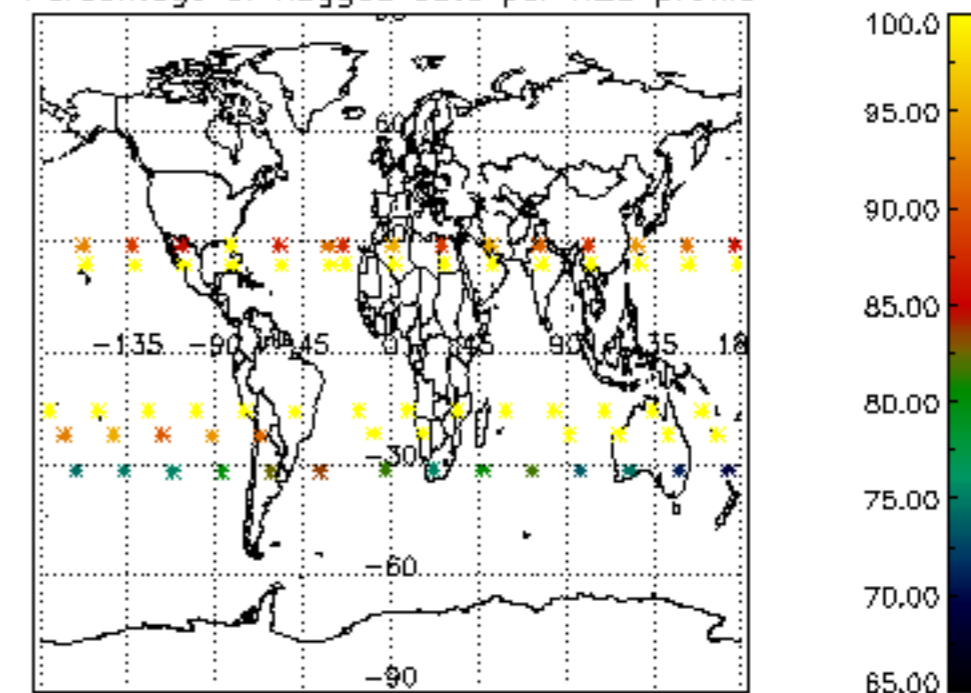
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	16-OCT-2006 00:05:09
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	16-OCT-2006 00:05:09
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	16-OCT-2006 00:05:09



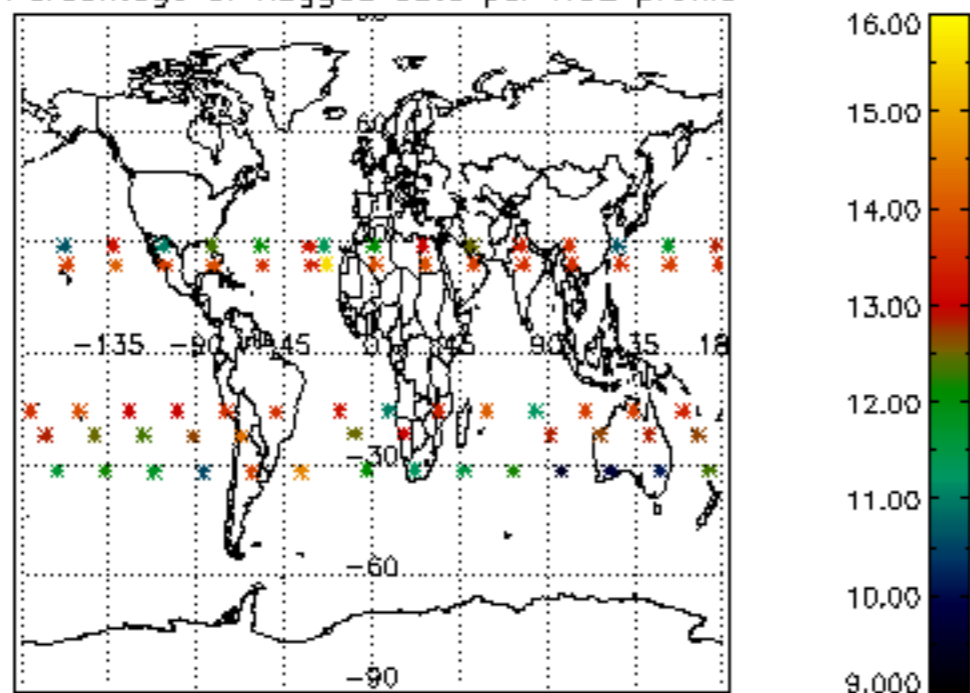
Percentage of flagged data per D3 profile



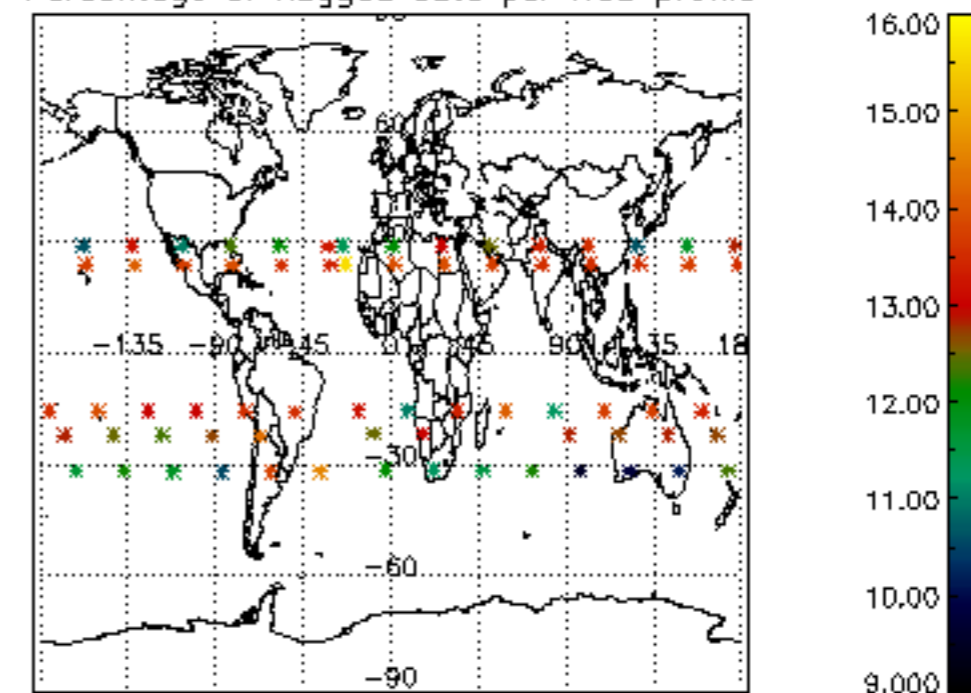
Percentage of flagged data per H2O profile

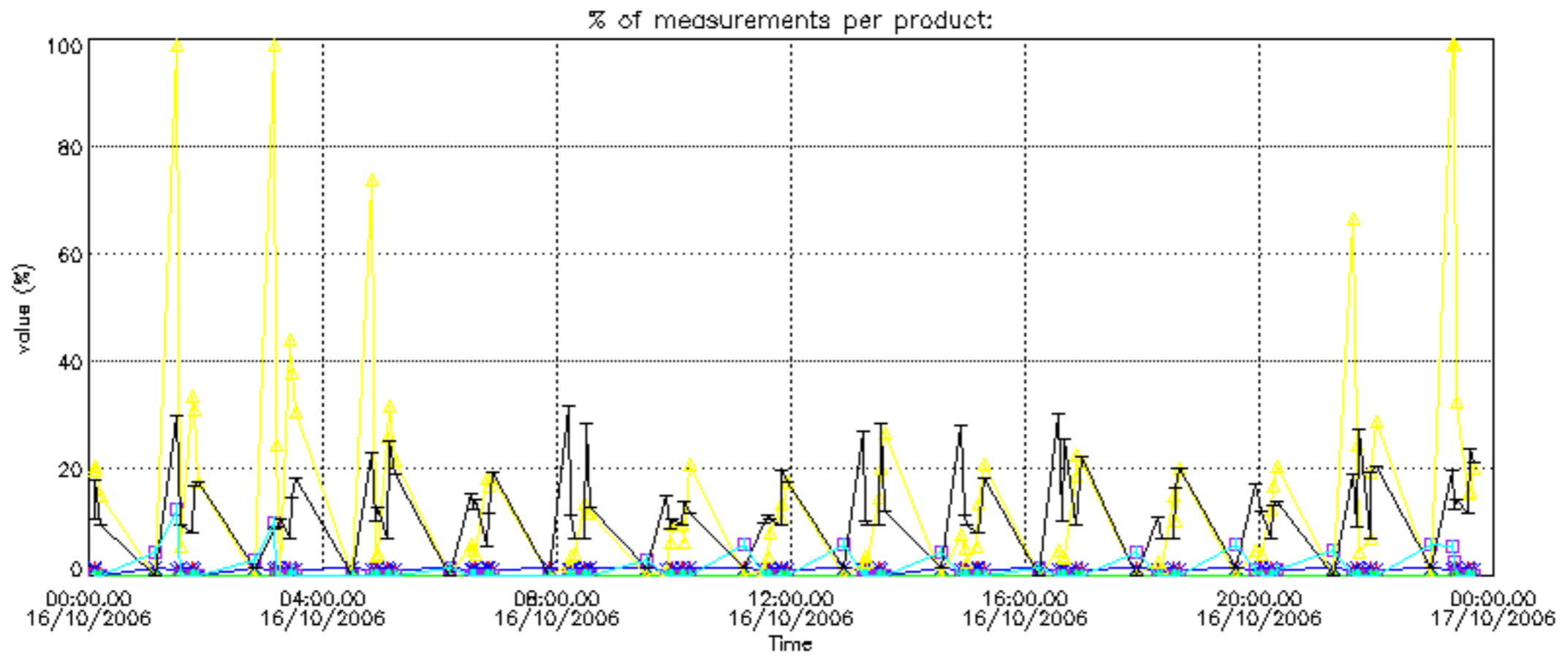


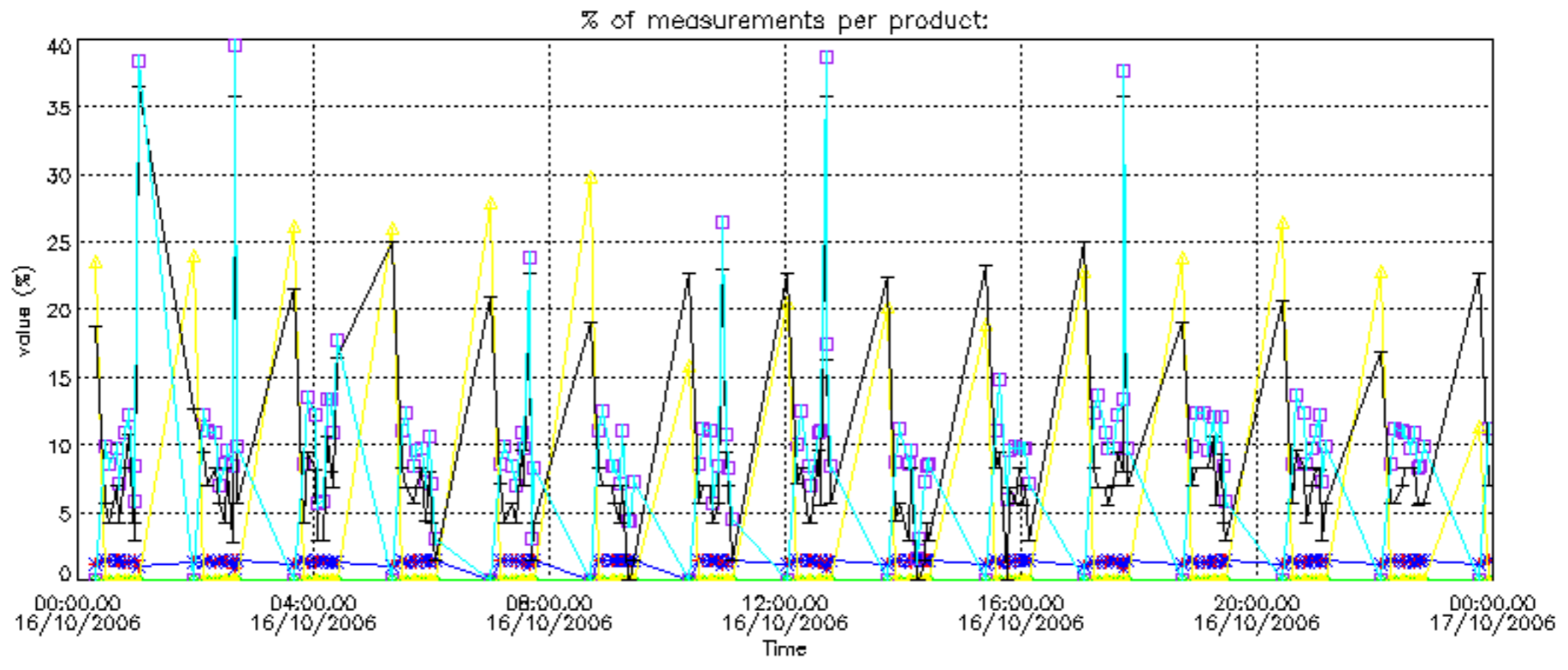
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

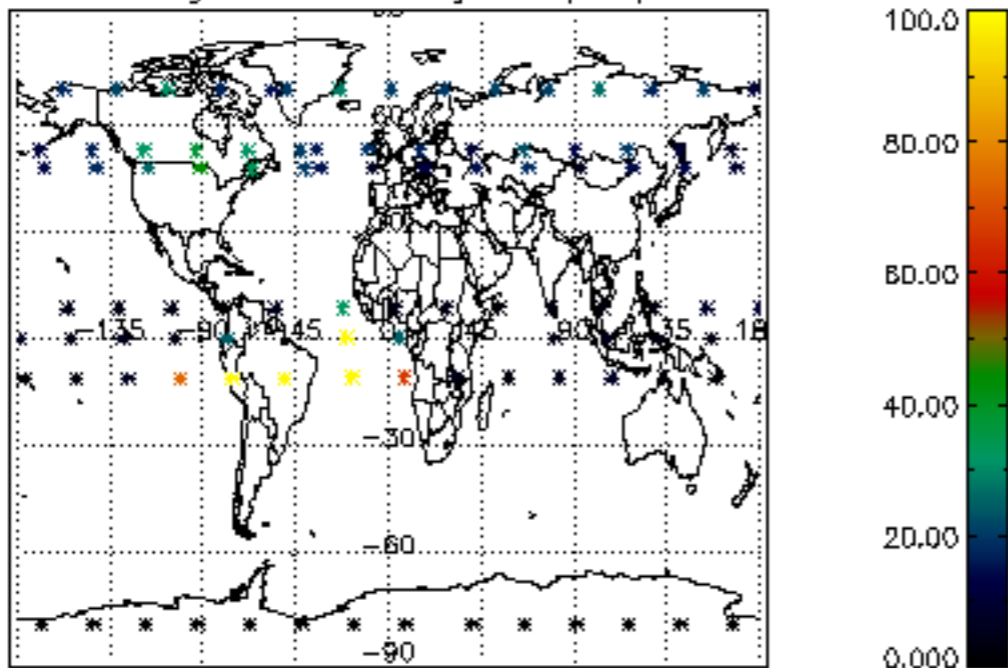




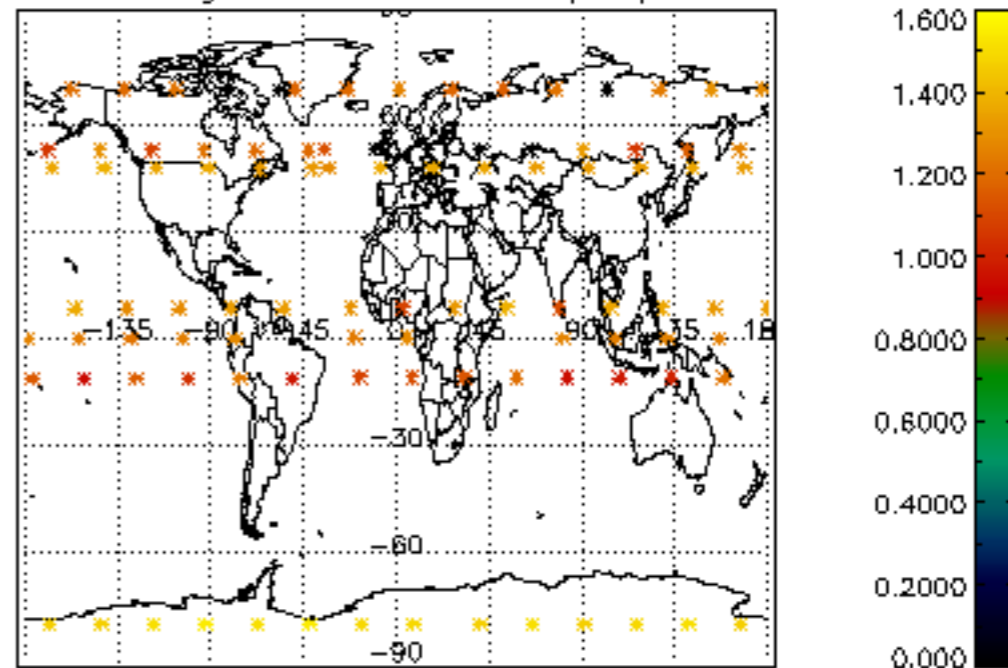




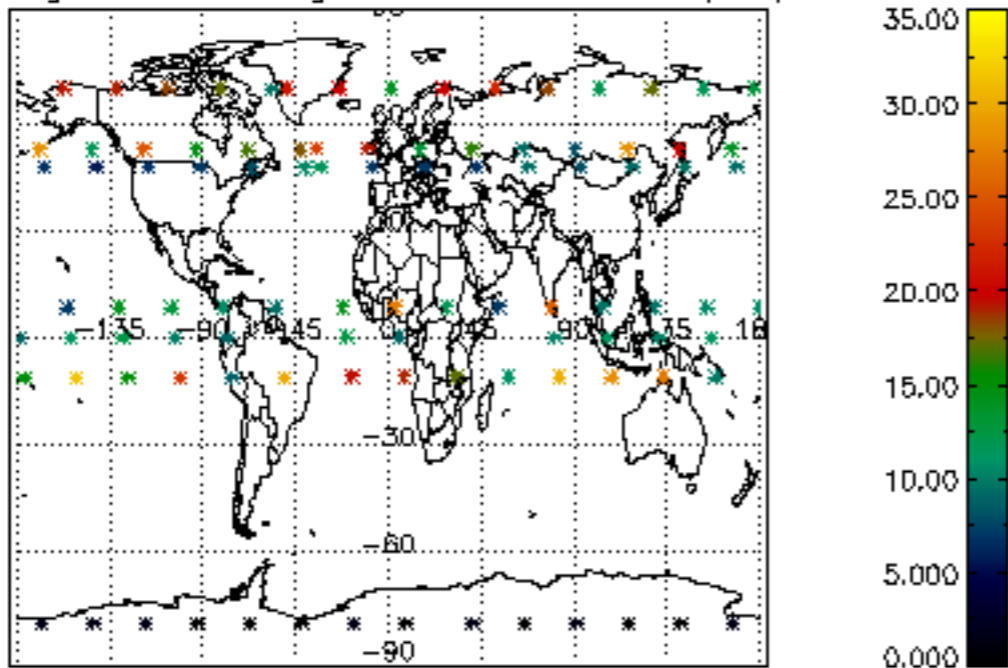
Percentage of cosmic ray hits per profile



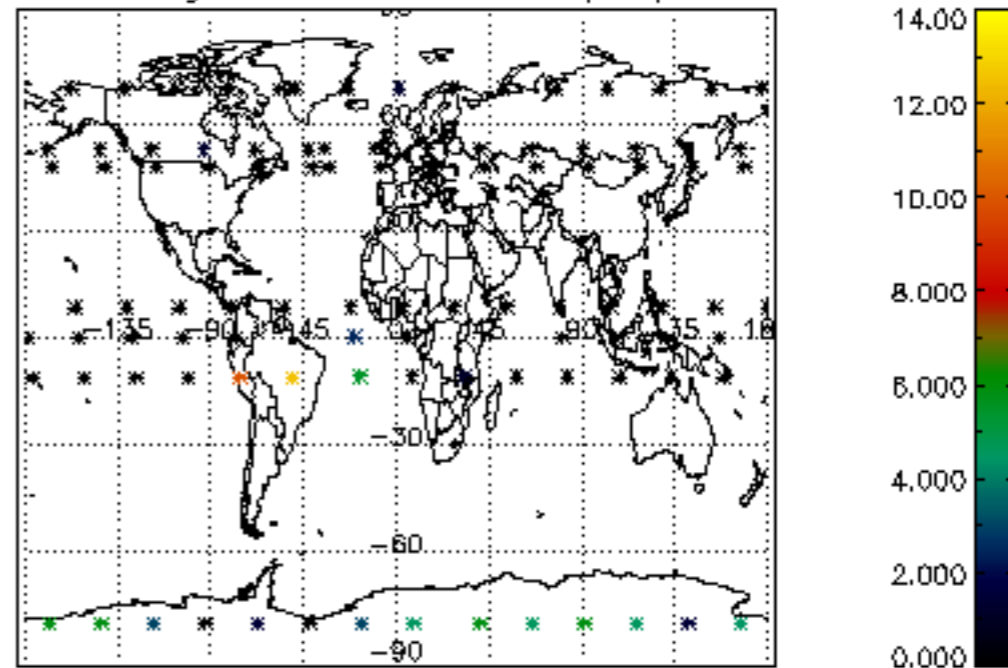
Percentage of datation errors per profile



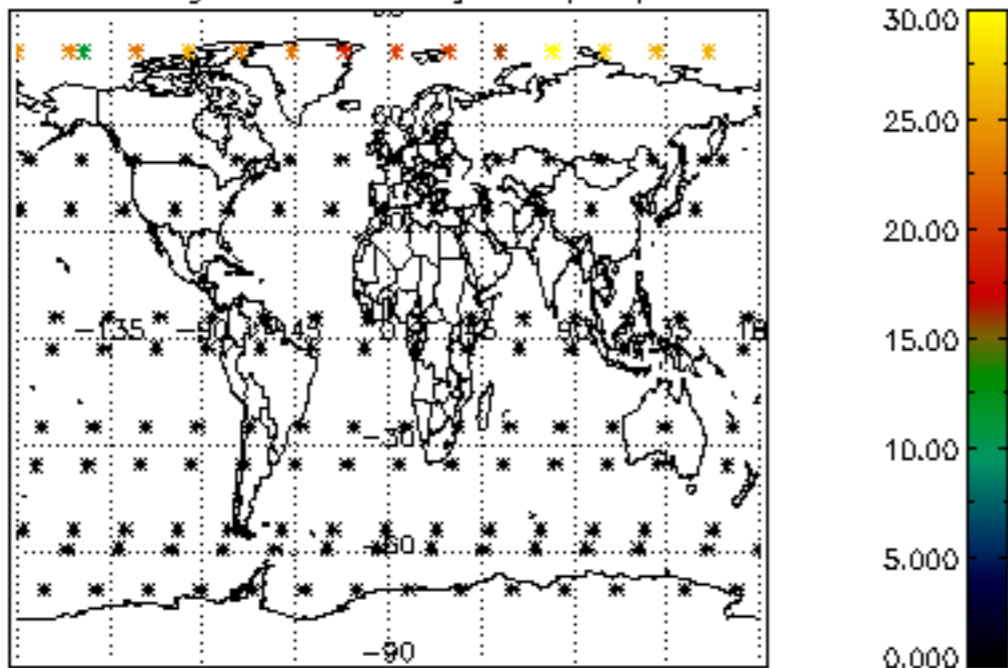
Percentage of star falling outside central band per profile



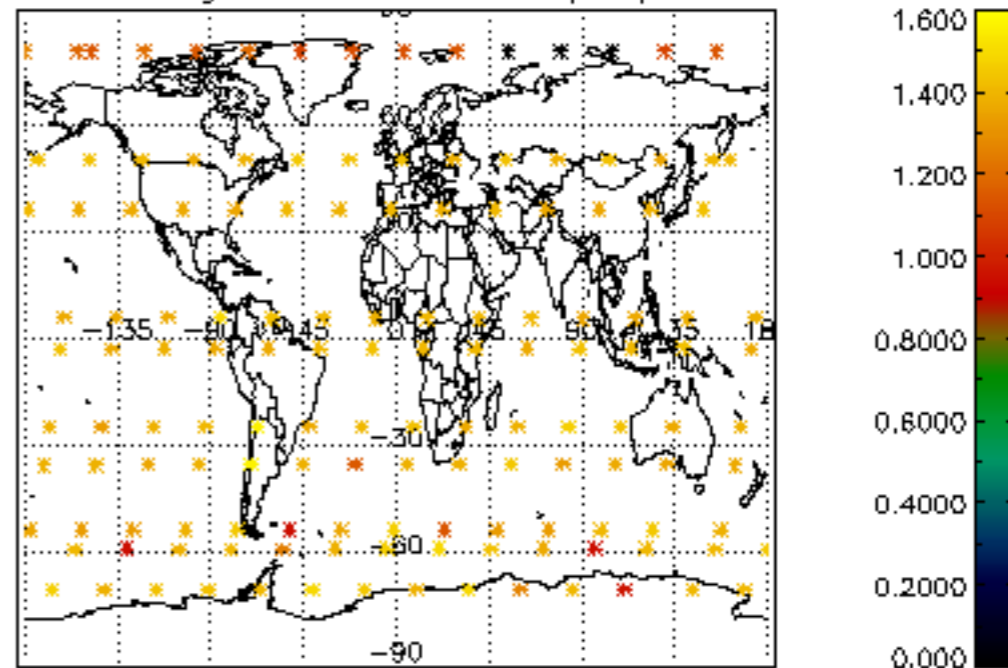
Percentage of saturation errors per profile



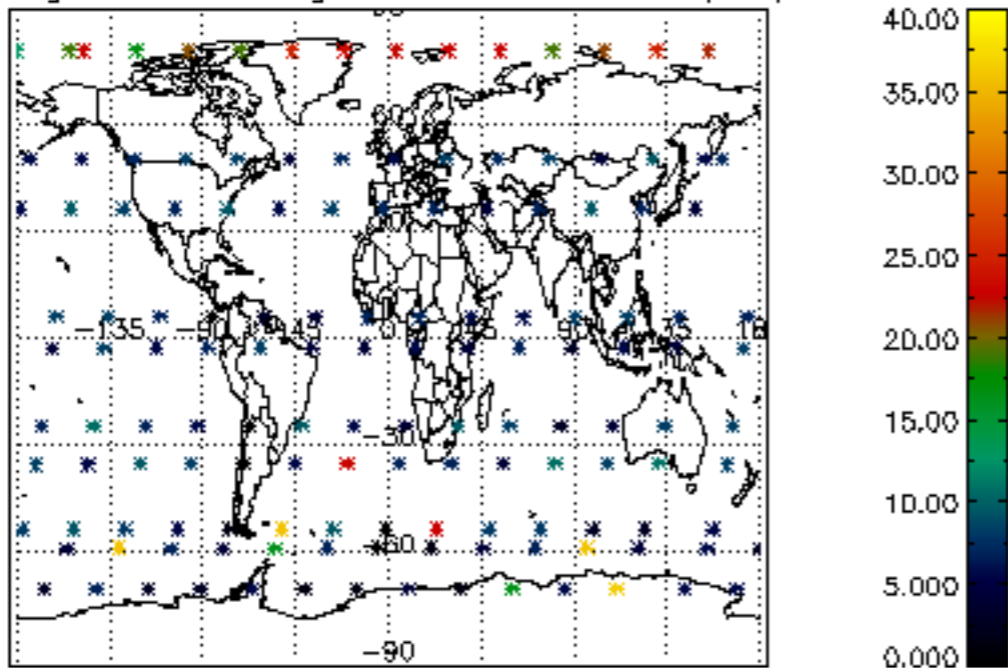
Percentage of cosmic ray hits per profile



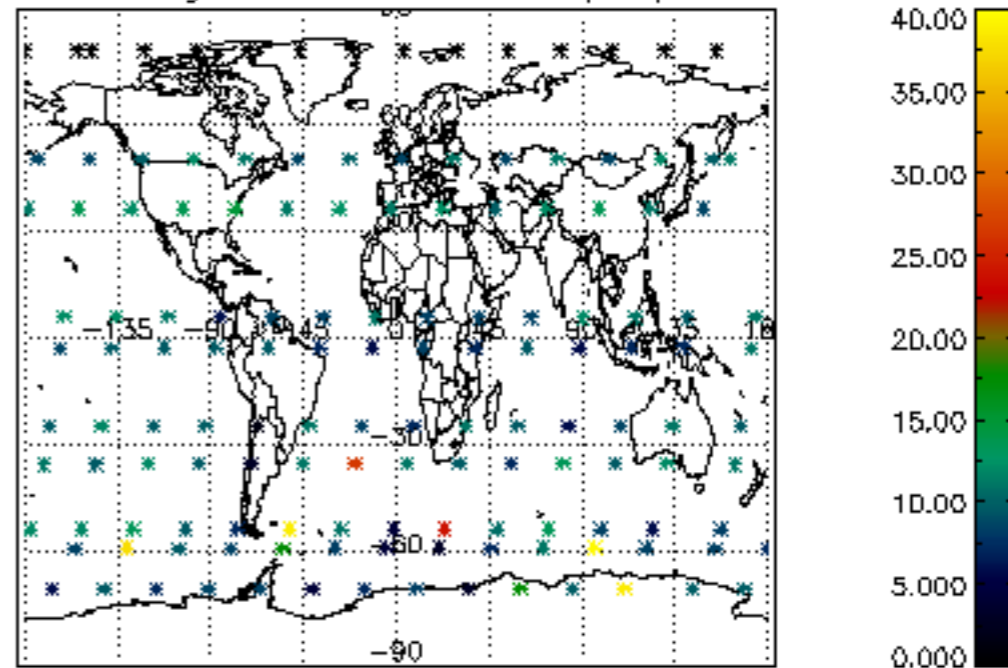
Percentage of datation errors per profile

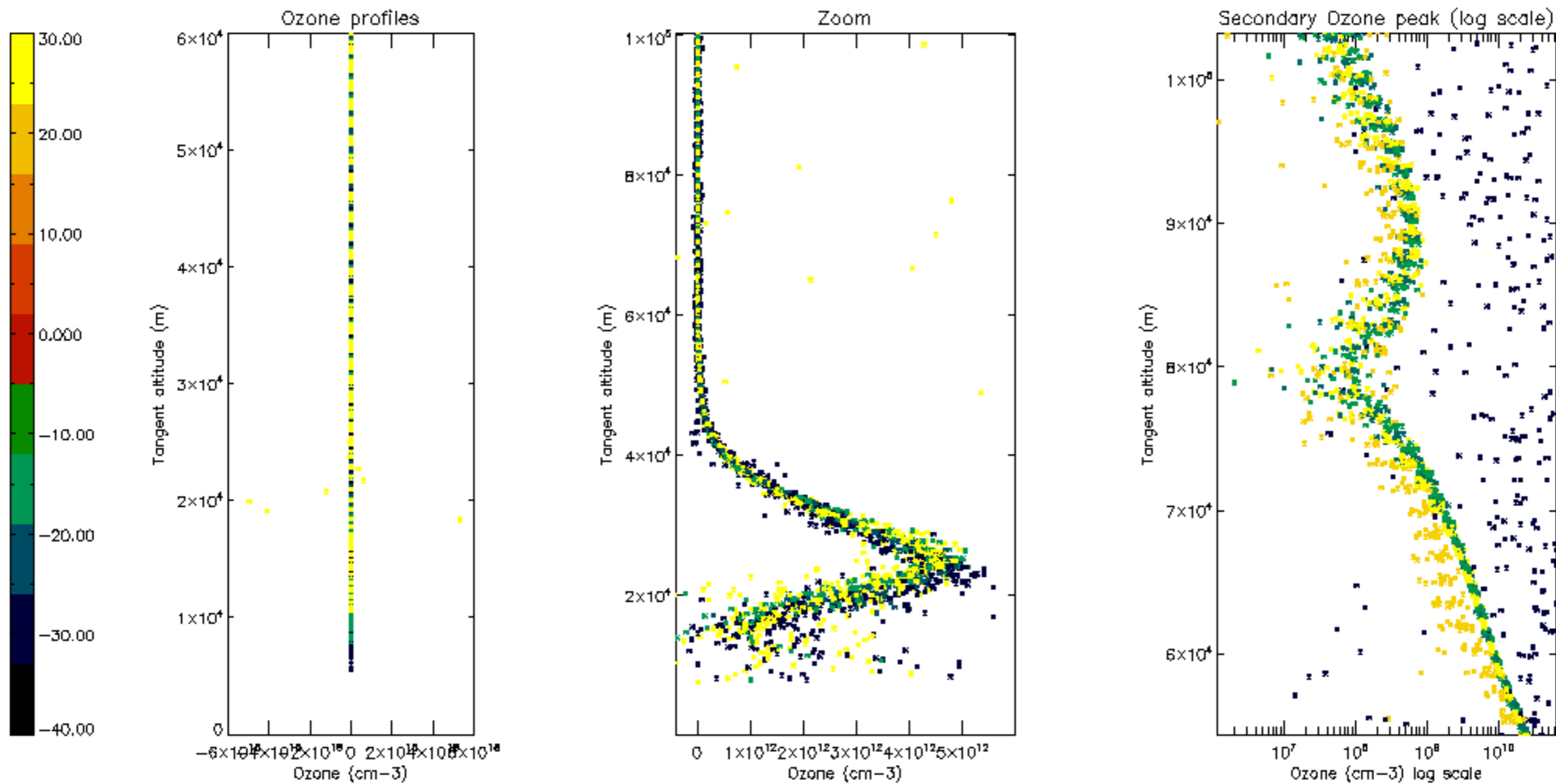


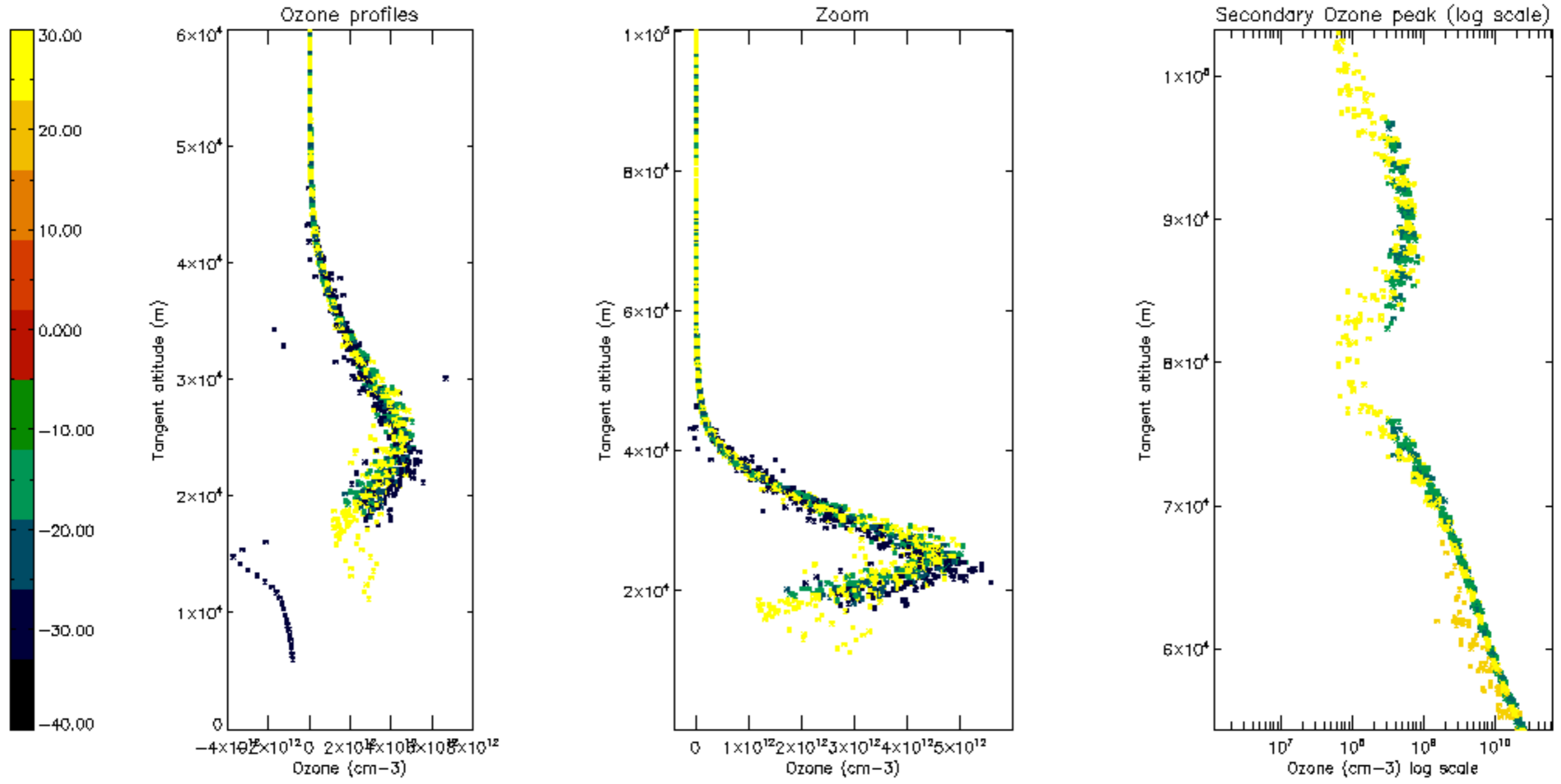
Percentage of star falling outside central band per profile

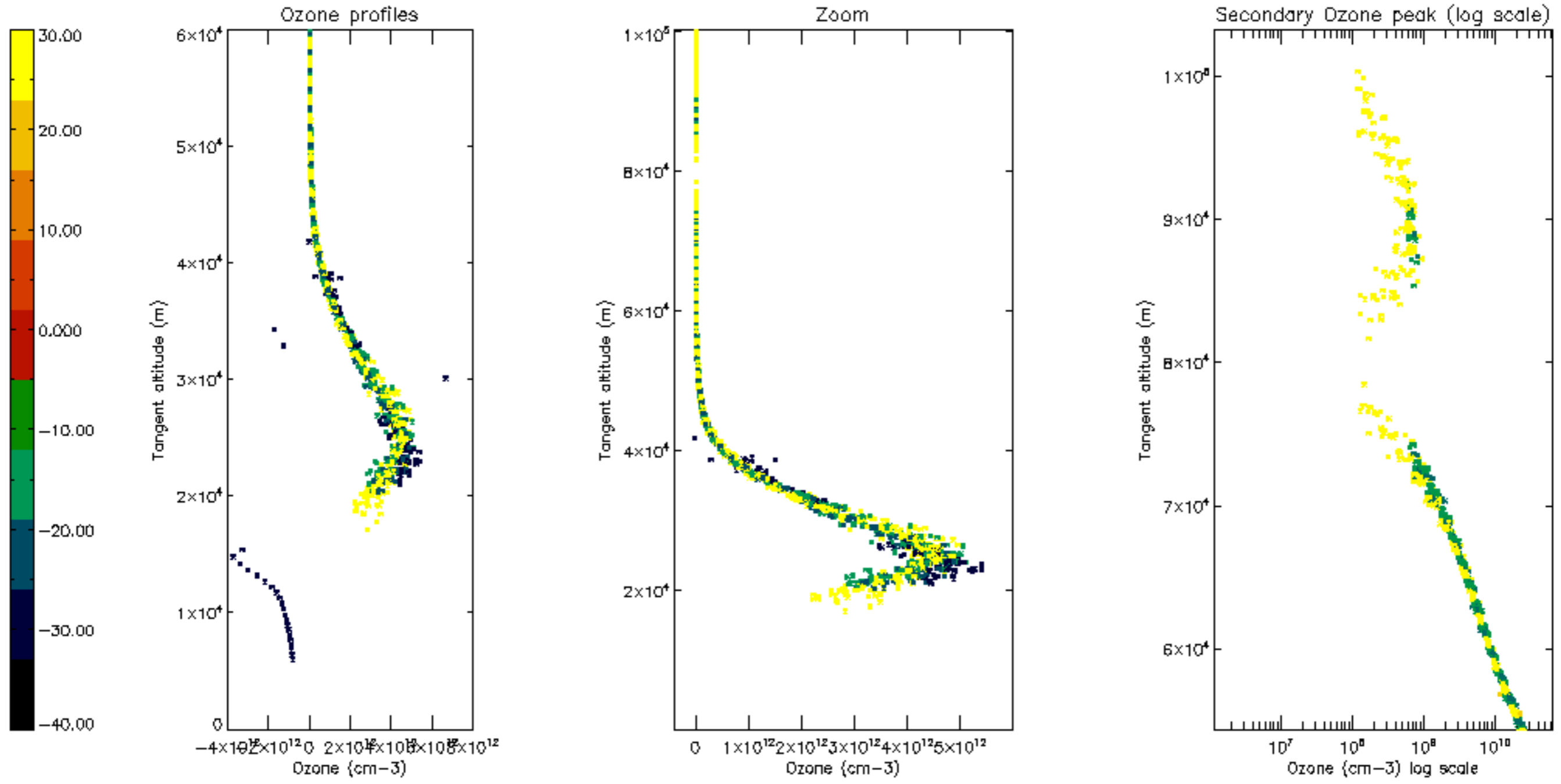


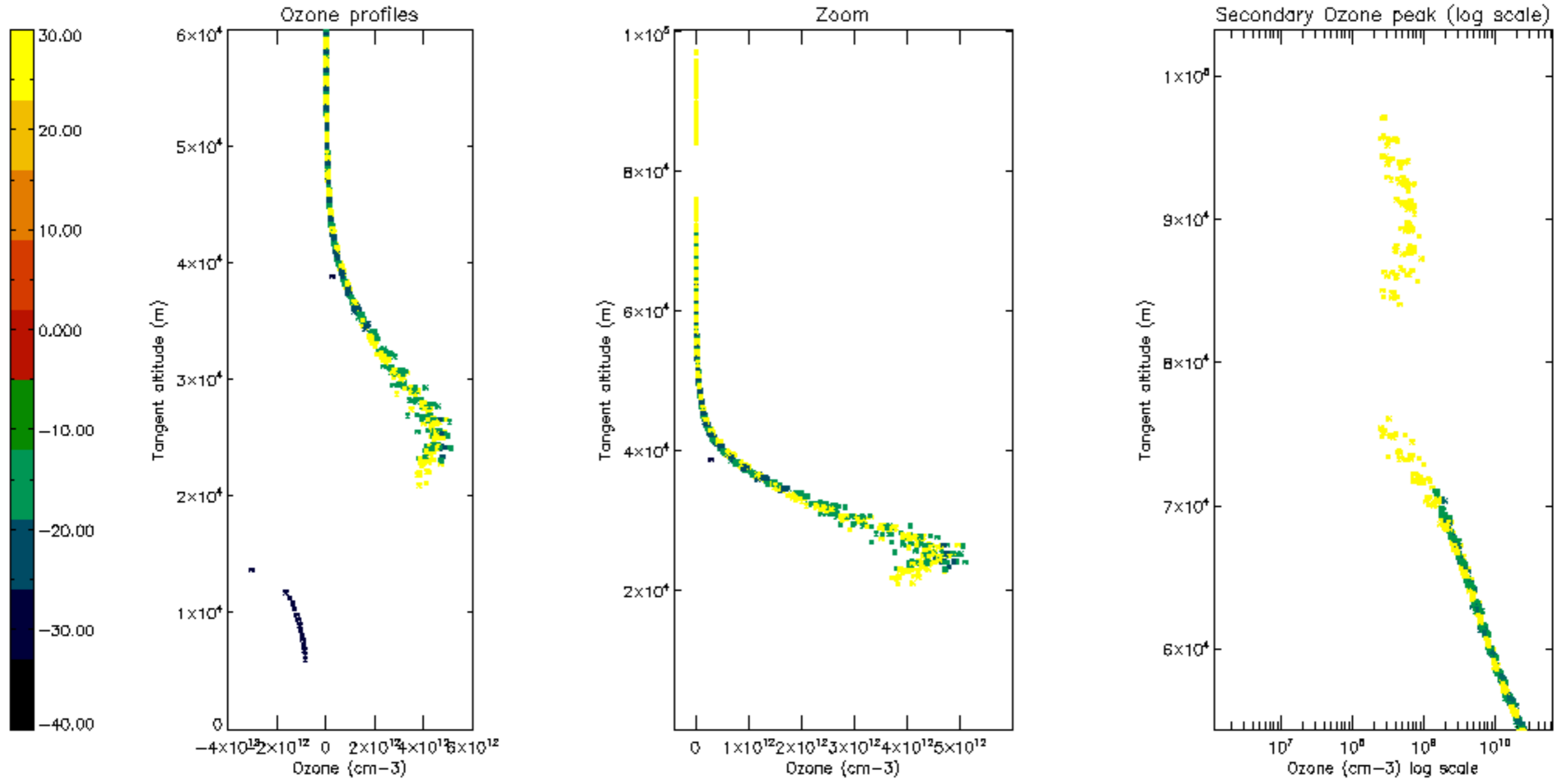
Percentage of saturation errors per profile

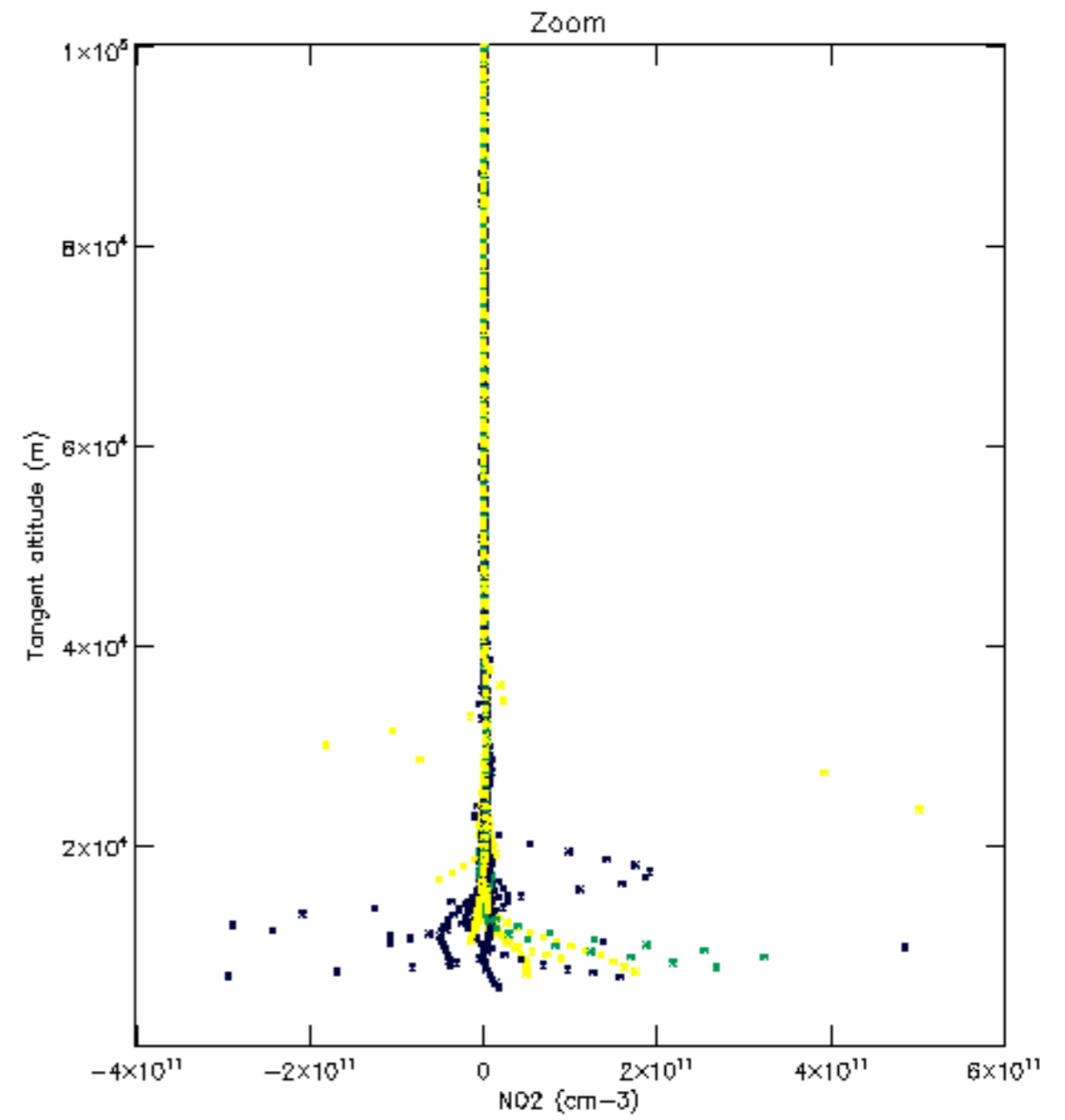
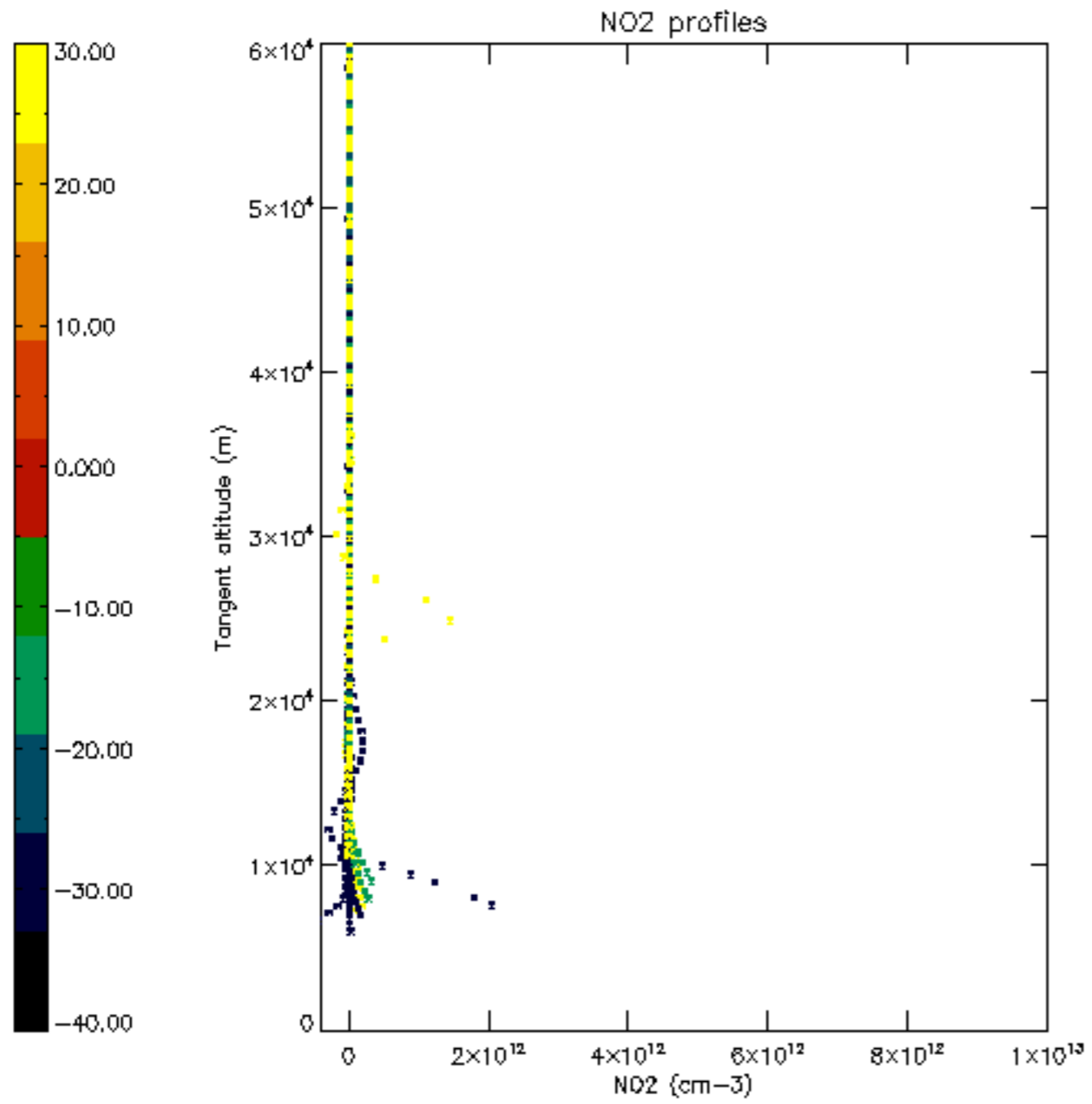


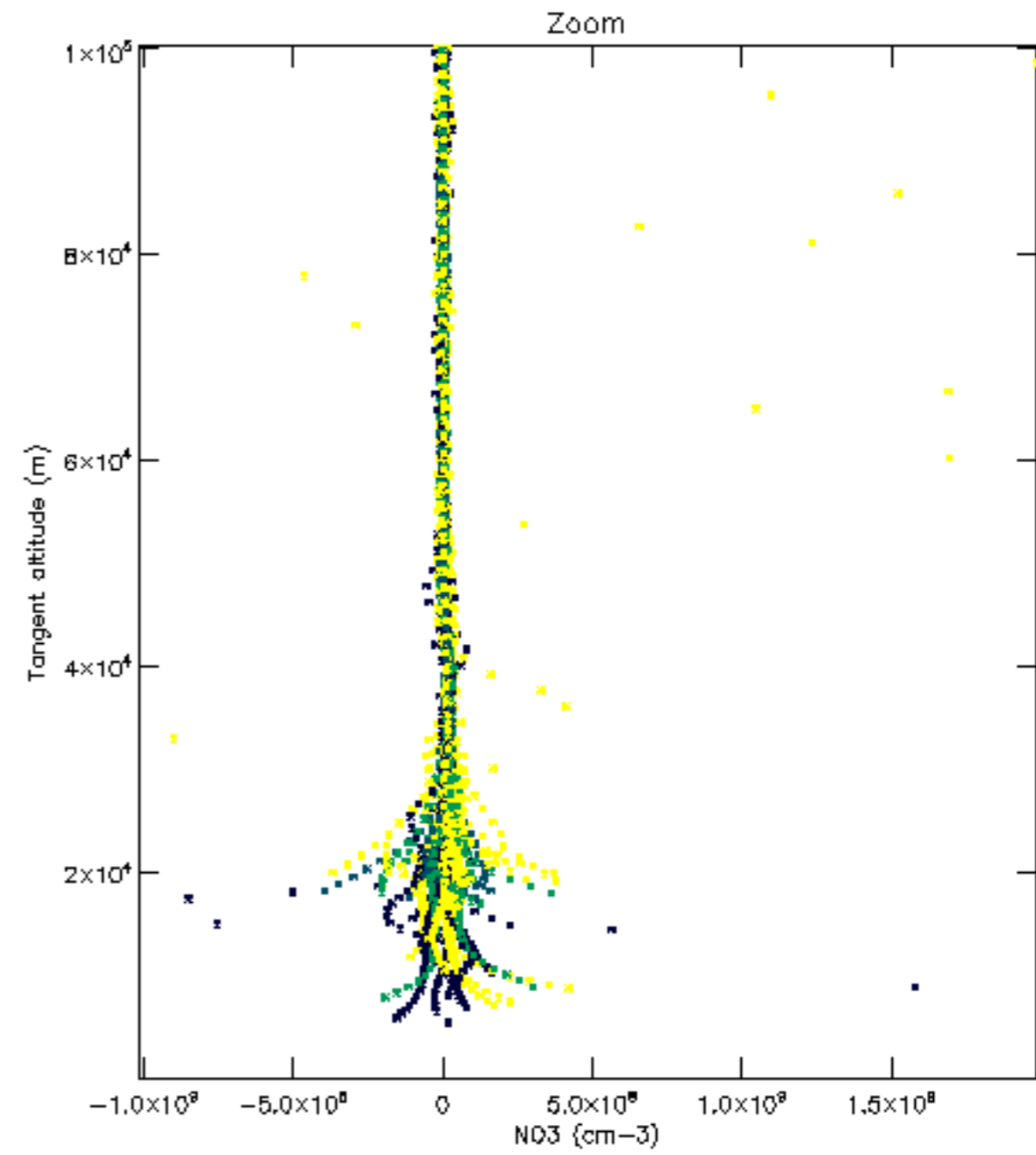
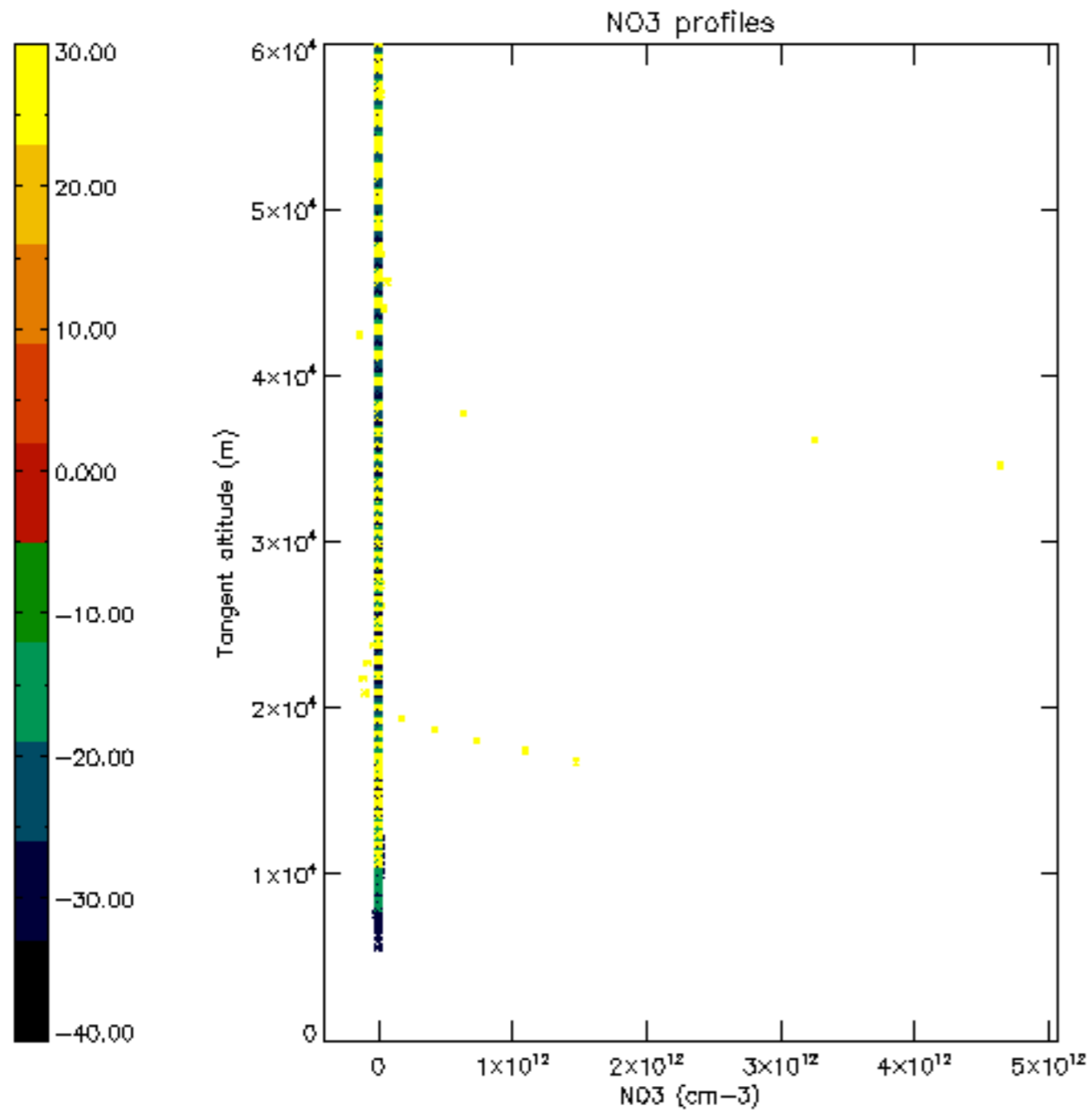




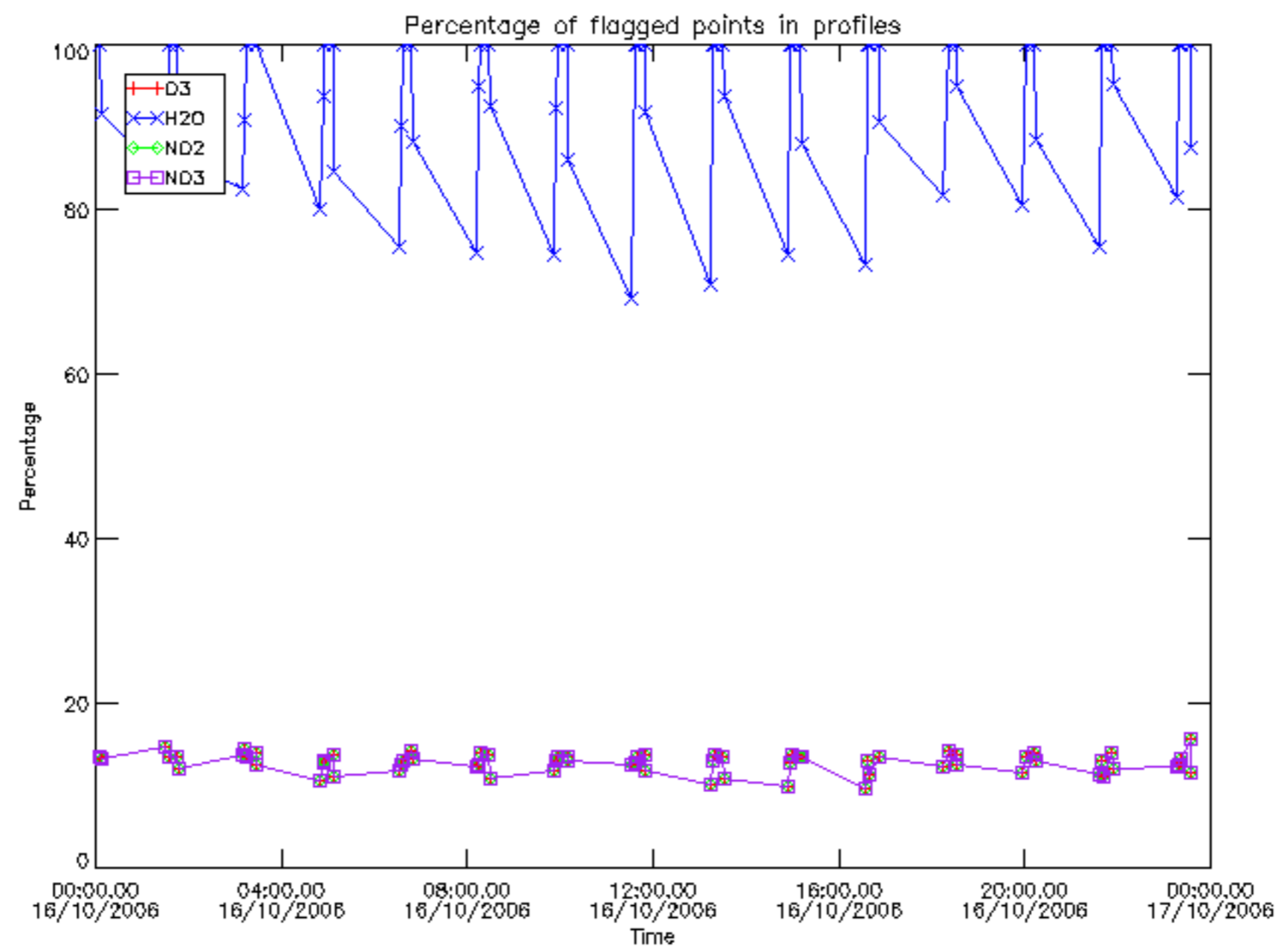




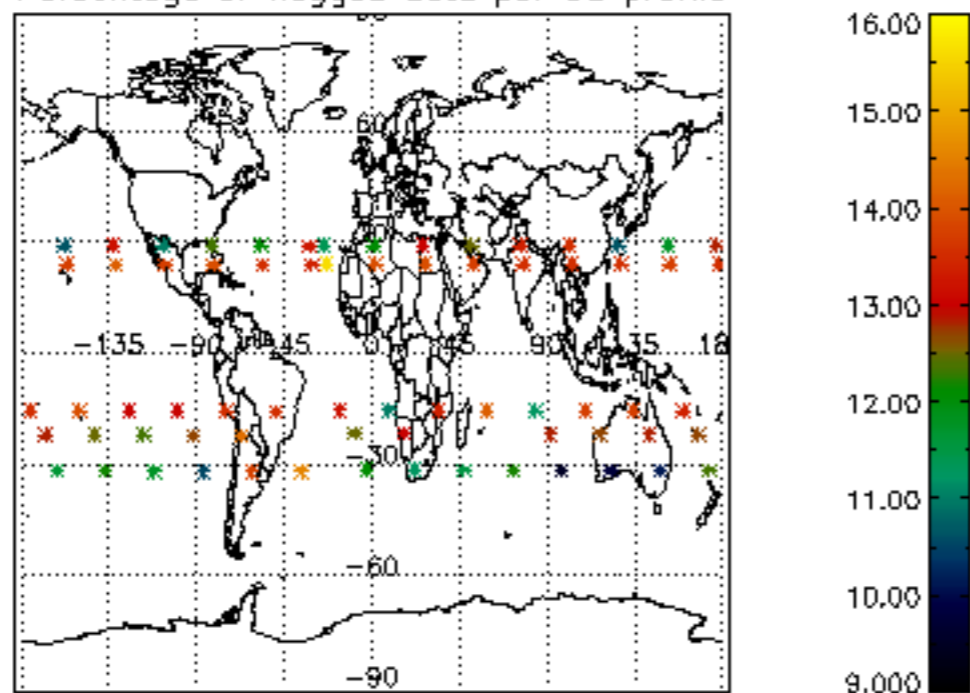




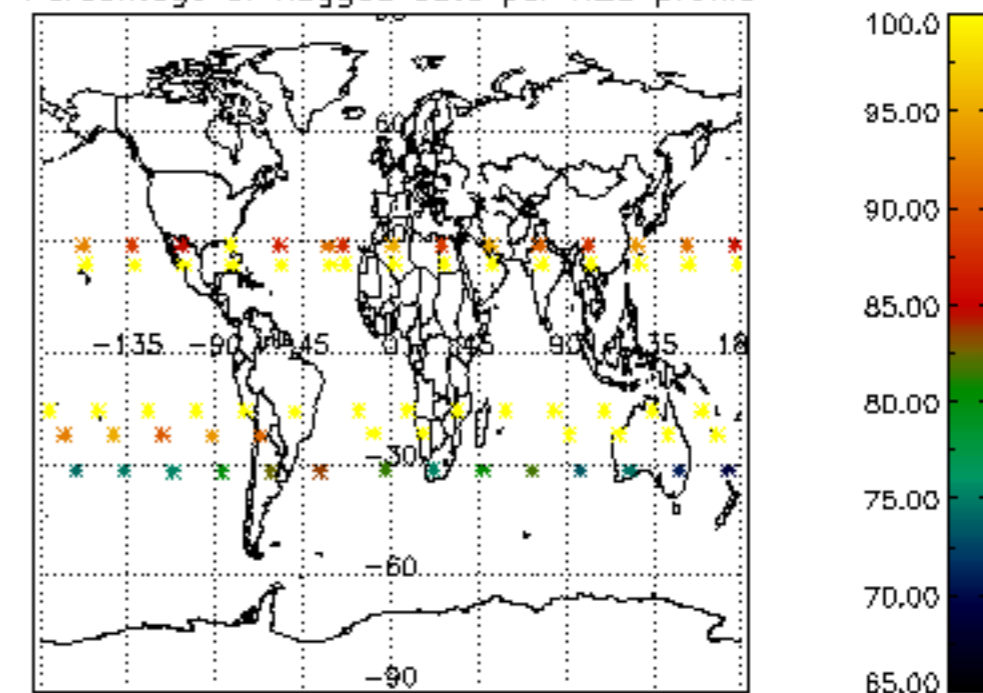




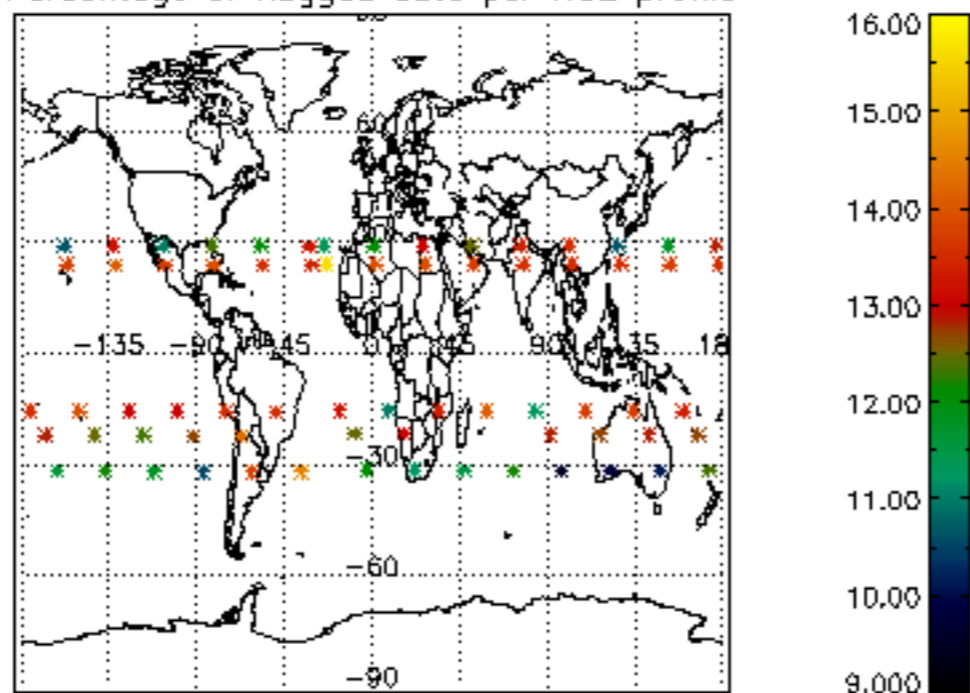
Percentage of flagged data per D3 profile



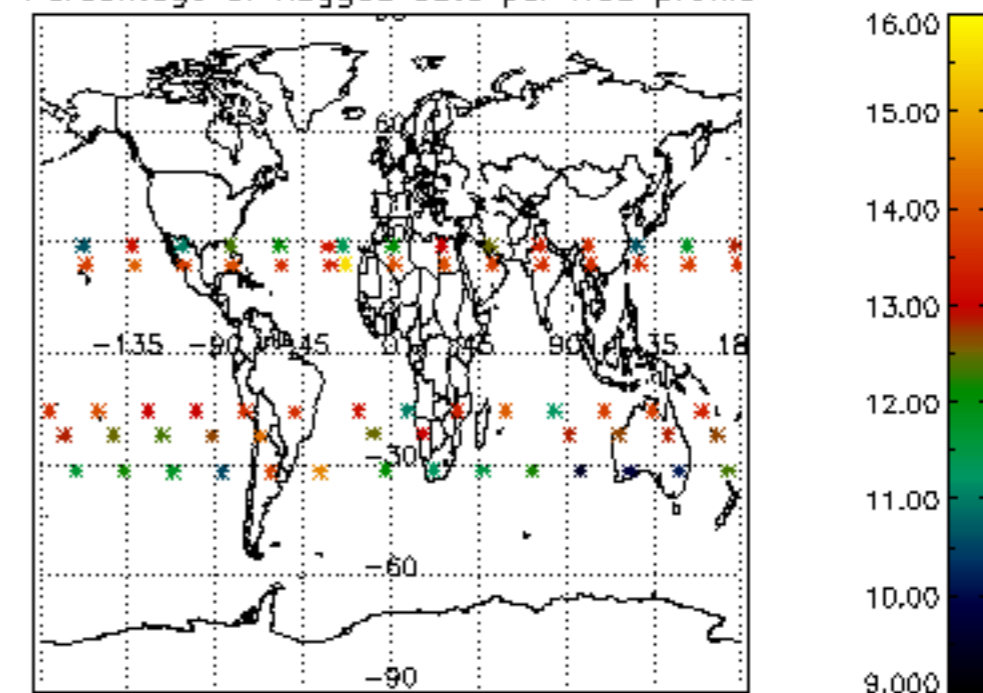
Percentage of flagged data per H2O profile

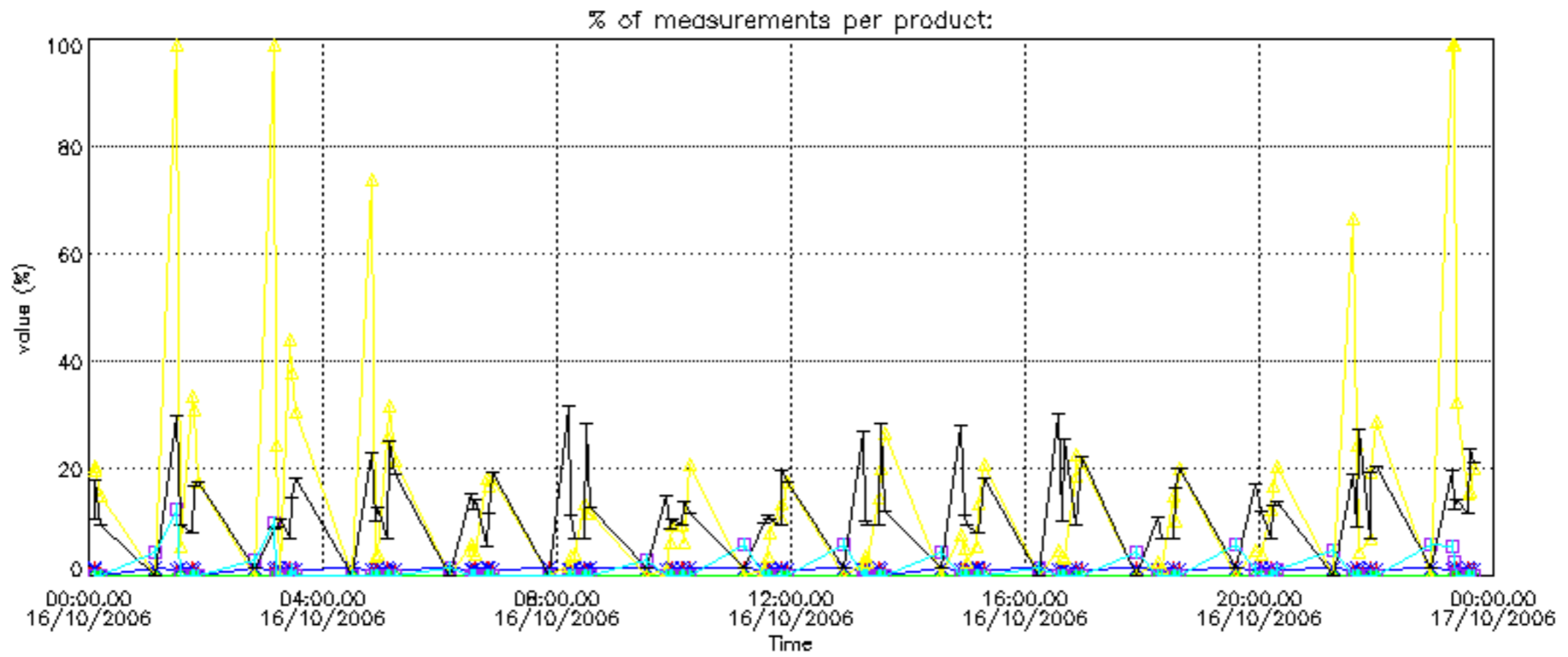


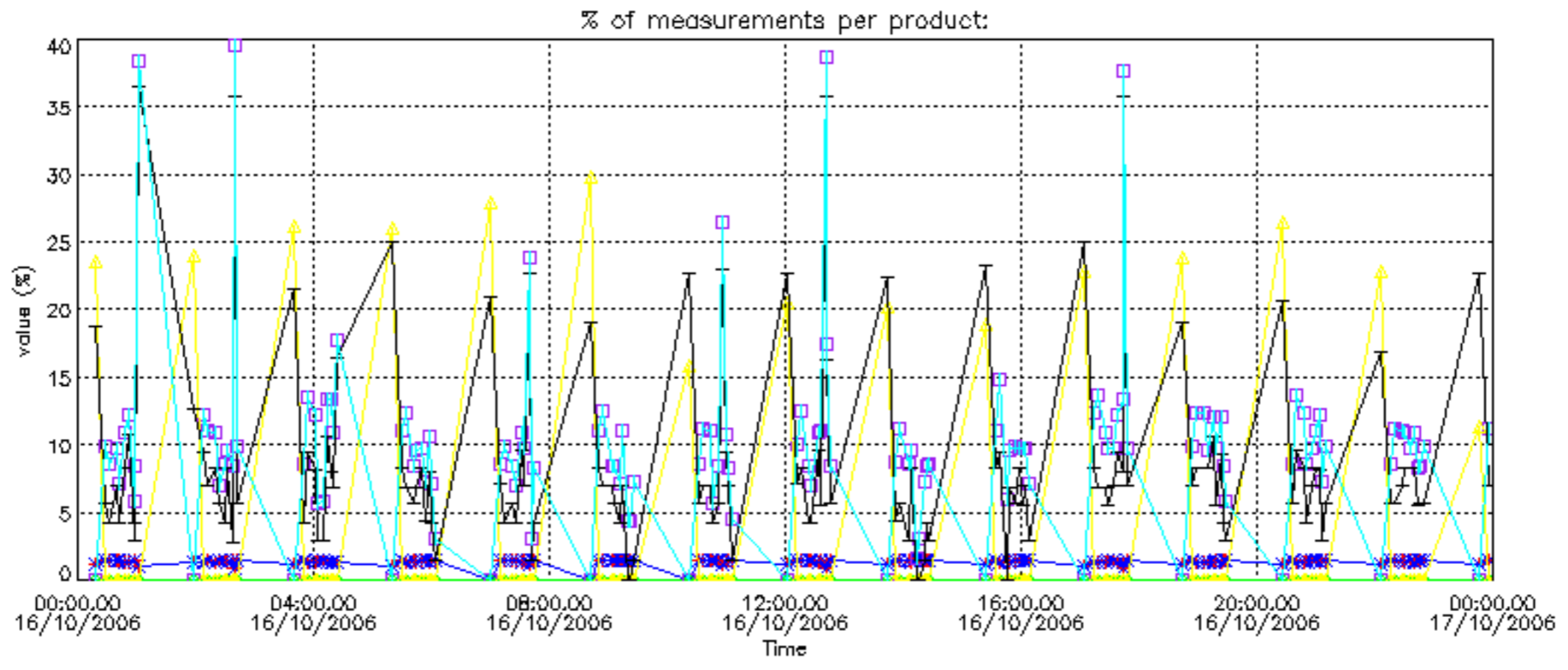
Percentage of flagged data per NO2 profile



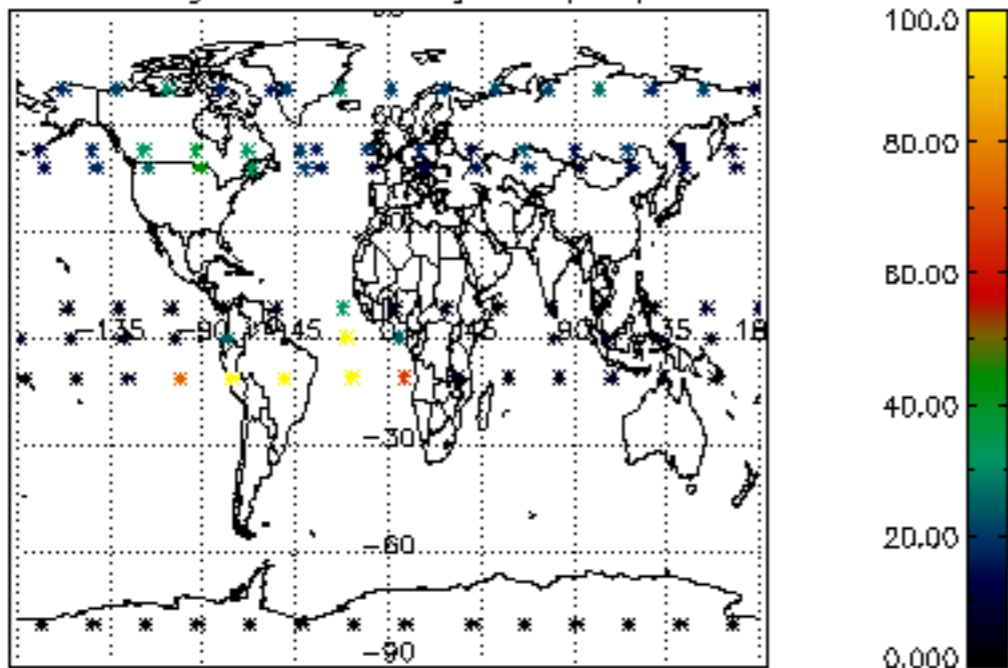
Percentage of flagged data per NO3 profile



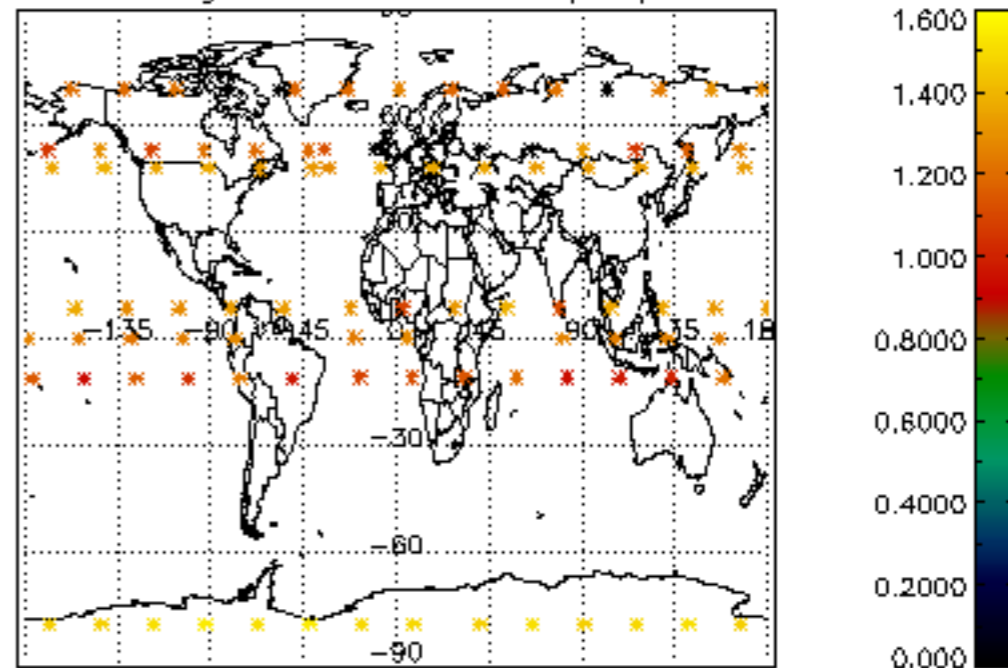




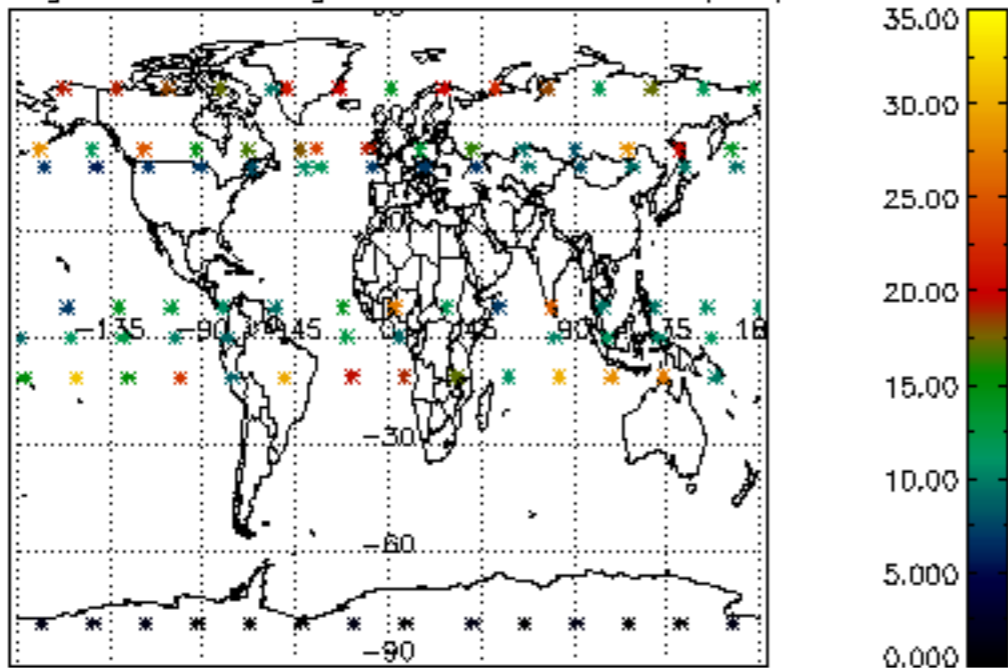
Percentage of cosmic ray hits per profile



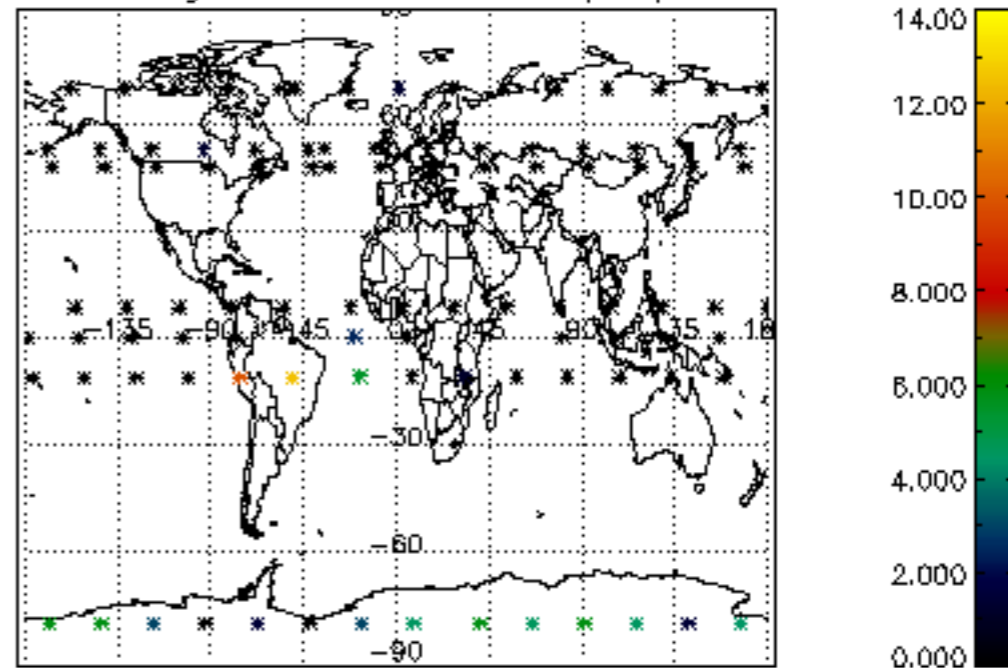
Percentage of datation errors per profile



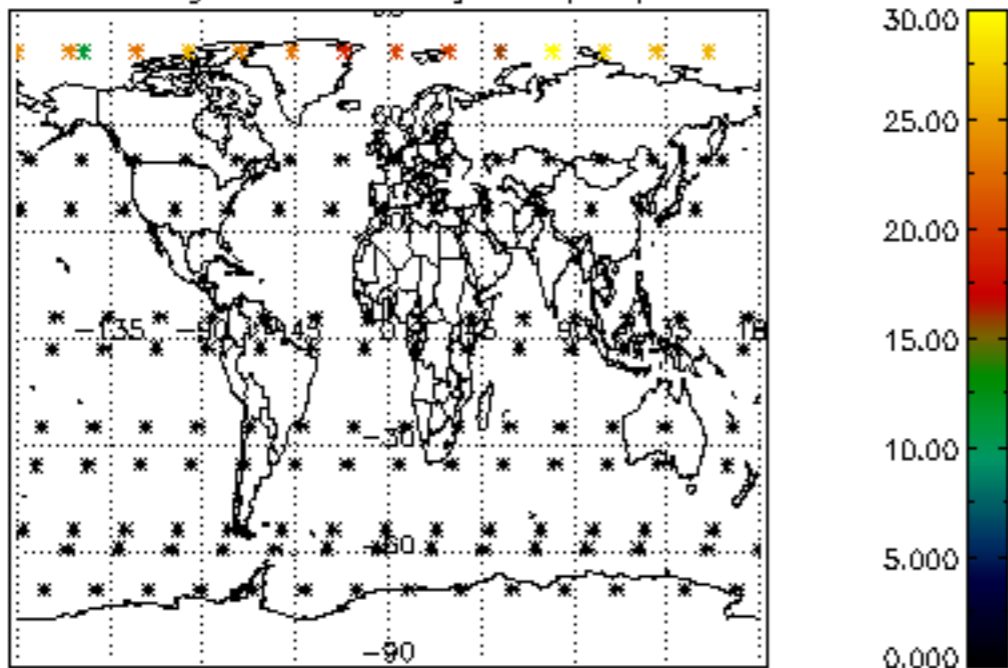
Percentage of star falling outside central band per profile



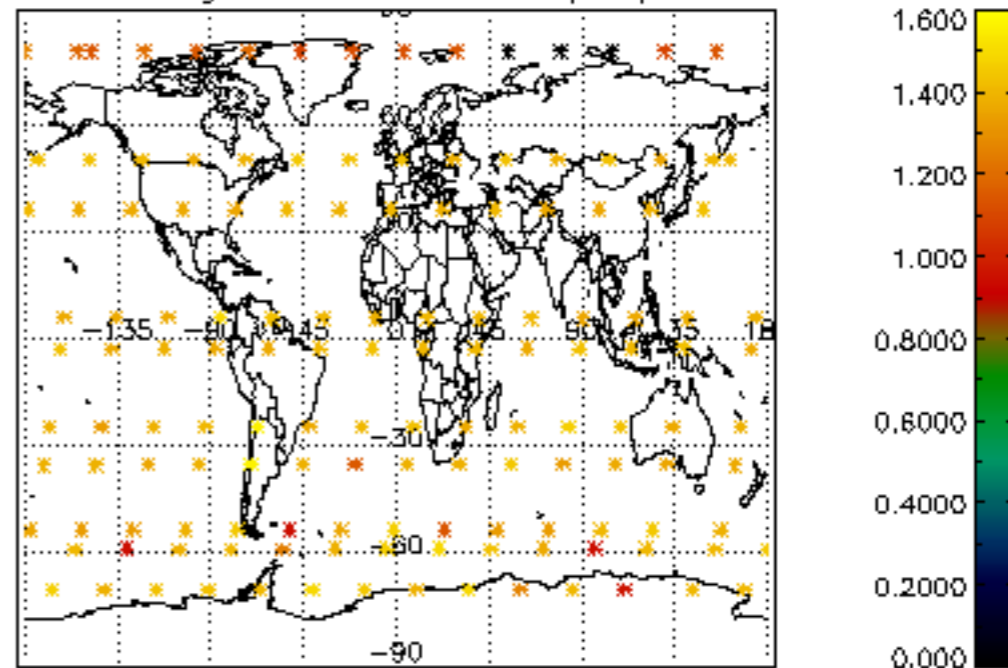
Percentage of saturation errors per profile



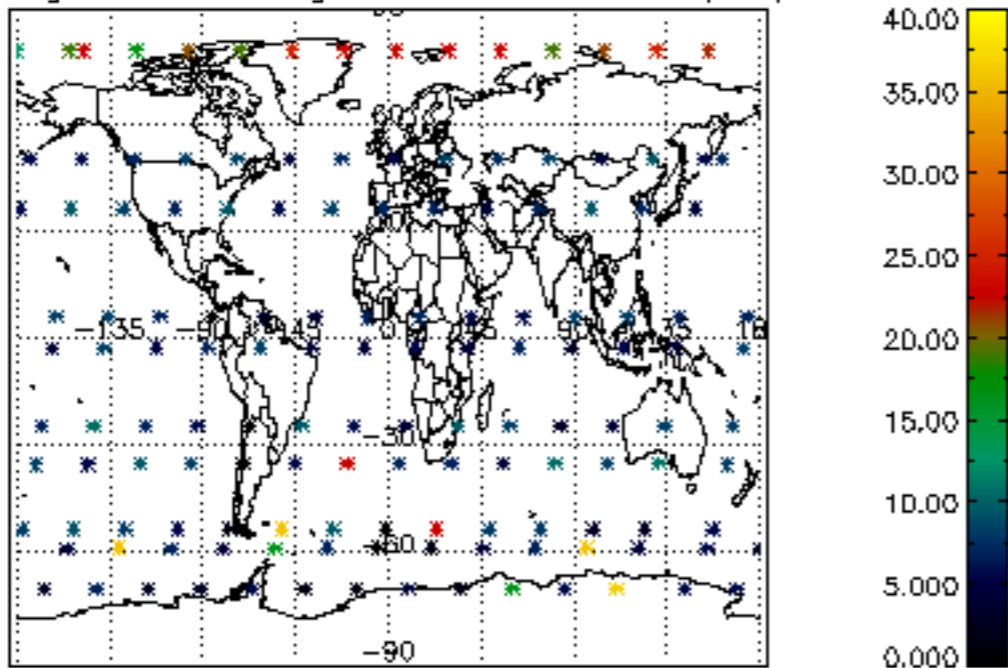
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

