

# GOMOS Level 2 Daily Report

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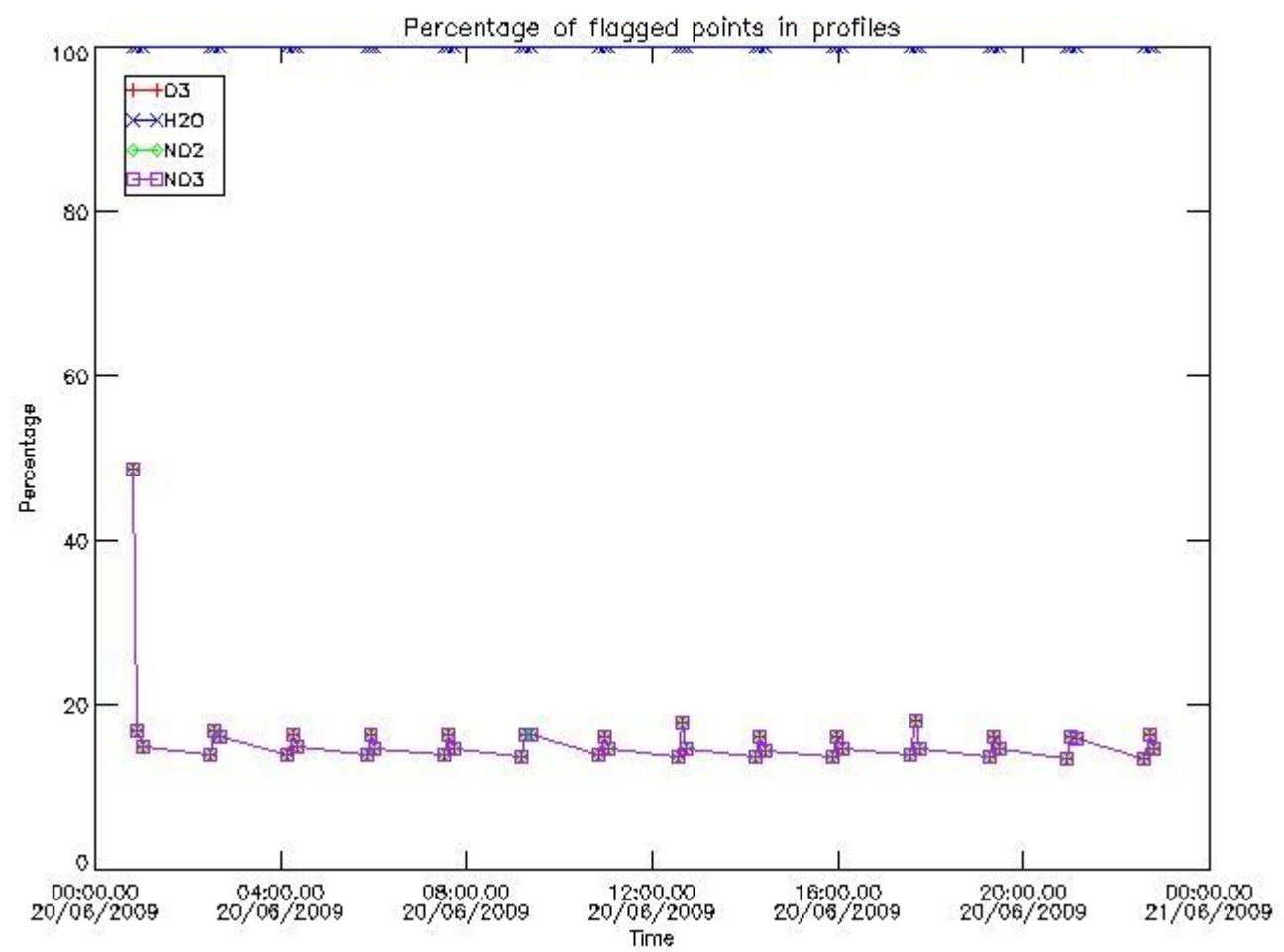


220	GOM_NL__2PRFIN20090620_203236_000000232080_00071_38201_4701.N1	20-JUN-2009 20:32:36	Twilight	22.500	73	57Gam1And	2.2600	13100.	45	38201	No
221	GOM_NL__2PRFIN20090620_203500_000000272080_00071_38201_4702.N1	20-JUN-2009 20:35:00	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38201	No
222	GOM_NL__2PRFIN20090620_203843_000000232080_00071_38201_4703.N1	20-JUN-2009 20:38:43	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38201	No
223	GOM_NL__2PRFIN20090620_205530_000000382080_00071_38201_4704.N1	20-JUN-2009 20:55:30	Dark	37.500	52	16Bet Cet	2.0370	4500.0	75	38201	No
224	GOM_NL__2PRFIN20090620_210121_000000322080_00071_38201_4705.N1	20-JUN-2009 21:01:21	Dark	31.500	84	Alp Phe	2.3970	4500.0	63	38201	No
225	GOM_NL__2PRFIN20090620_210745_000000352080_00072_38202_4706.N1	20-JUN-2009 21:07:45	Dark	35.000	63	Bet Gru	2.1500	2800.0	70	38202	No
226	GOM_NL__2PRFIN20090620_210948_000000352080_00072_38202_4707.N1	20-JUN-2009 21:09:48	Straylight	34.500	31	Alp Gru	1.7340	15200.	69	38202	No
227	GOM_NL__2PRFIN20090620_211207_000000422080_00072_38202_4708.N1	20-JUN-2009 21:12:07	Straylight	42.000	172	Gam Gru	3.0030	13100.	84	38202	No
228	GOM_NL__2PRFIN20090620_212231_000000292080_00072_38202_4709.N1	20-JUN-2009 21:22:31	Twilight	28.500	38	20Eps Sgr	1.8360	11000.	57	38202	No
229	GOM_NL__2PRFIN20090620_212359_000000282080_00072_38202_4710.N1	20-JUN-2009 21:23:59	Twilight	28.000	116	19Del Sgr	2.7000	4100.0	56	38202	No
230	GOM_NL__2PRFIN20090620_212611_000000352080_00072_38202_4711.N1	20-JUN-2009 21:26:11	Twilight	35.000	155	41Pi Sgr	2.9000	6600.0	70	38202	No
231	GOM_NL__2PRFIN20090620_213514_000000292080_00072_38202_4712.N1	20-JUN-2009 21:35:14	Bright	29.000	126	60Bet Oph	2.7700	4250.0	58	38202	No
232	GOM_NL__2PRFIN20090620_213741_000000292080_00072_38202_4713.N1	20-JUN-2009 21:37:41	Bright	29.000	59	55Alp Oph	2.0800	8900.0	58	38202	No
233	GOM_NL__2PRFIN20090620_214741_000000352080_00072_38202_4714.N1	20-JUN-2009 21:47:41	Bright	35.000	5	3Alp Lyr	0.033000	11000.	70	38202	No
234	GOM_NL__2PRFIN20090620_214923_000000282080_00072_38202_4715.N1	20-JUN-2009 21:49:23	Bright	28.000	130	23Bet Dra	2.7990	5800.0	56	38202	No
235	GOM_NL__2PRFIN20090620_215924_000000322080_00072_38202_4716.N1	20-JUN-2009 21:59:24	Twilight	31.500	89	5Alp Cep	2.4510	8000.0	63	38202	No
236	GOM_NL__2PRFIN20090620_220612_000000272080_00072_38202_4717.N1	20-JUN-2009 22:06:12	Twilight	27.000	74	11Bet Cas	2.2680	6600.0	54	38202	No
237	GOM_NL__2PRFIN20090620_220742_000000262080_00072_38202_4718.N1	20-JUN-2009 22:07:42	Twilight	26.000	68	18Alp Cas	2.2250	4500.0	52	38202	No
238	GOM_NL__2PRFIN20090620_221536_000000282080_00072_38202_4719.N1	20-JUN-2009 22:15:36	Twilight	27.500	53	43Bet And	2.0480	3300.0	55	38202	No
239	GOM_NL__2PRFIN20090620_221919_000000232080_00072_38202_4720.N1	20-JUN-2009 22:19:19	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38202	No
240	GOM_NL__2PRFIN20090620_223607_000000382080_00072_38202_4721.N1	20-JUN-2009 22:36:07	Dark	37.500	52	16Bet Cet	2.0370	4500.0	75	38202	No
241	GOM_NL__2PRFIN20090620_224158_000000312080_00072_38202_4722.N1	20-JUN-2009 22:41:58	Dark	31.000	84	Alp Phe	2.3970	4500.0	62	38202	No
242	GOM_NL__2PRFIN20090620_224822_000000352080_00073_38203_4722.N1	20-JUN-2009 22:48:22	Dark	34.500	63	Bet Gru	2.1500	2800.0	69	38203	No
243	GOM_NL__2PRFIN20090620_225025_000000342080_00073_38203_4723.N1	20-JUN-2009 22:50:25	Straylight	34.000	31	Alp Gru	1.7340	15200.	68	38203	No
244	GOM_NL__2PRFIN20090620_225244_000000422080_00073_38203_4724.N1	20-JUN-2009 22:52:44	Straylight	42.000	172	Gam Gru	3.0030	13100.	84	38203	No
245	GOM_NL__2PRFIN20090620_230308_000000292080_00073_38203_4725.N1	20-JUN-2009 23:03:08	Twilight	28.500	38	20Eps Sgr	1.8360	11000.	57	38203	No
246	GOM_NL__2PRFIN20090620_230435_000000292080_00073_38203_4726.N1	20-JUN-2009 23:04:35	Twilight	28.500	116	19Del Sgr	2.7000	4100.0	57	38203	No
247	GOM_NL__2PRFIN20090620_230647_000000352080_00073_38203_4727.N1	20-JUN-2009 23:06:47	Twilight	34.500	155	41Pi Sgr	2.9000	6600.0	69	38203	No
248	GOM_NL__2PRFIN20090620_231550_000000302080_00073_38203_4728.N1	20-JUN-2009 23:15:50	Bright	29.500	126	60Bet Oph	2.7700	4250.0	59	38203	No
249	GOM_NL__2PRFIN20090620_231816_000000302080_00073_38203_4729.N1	20-JUN-2009 23:18:16	Bright	29.500	59	55Alp Oph	2.0800	8900.0	59	38203	No
250	GOM_NL__2PRFIN20090620_232816_000000352080_00073_38203_4730.N1	20-JUN-2009 23:28:16	Bright	35.000	5	3Alp Lyr	0.033000	11000.	70	38203	No
251	GOM_NL__2PRFIN20090620_232959_000000292080_00073_38203_4731.N1	20-JUN-2009 23:29:59	Bright	28.500	130	23Bet Dra	2.7990	5800.0	57	38203	No
252	GOM_NL__2PRFIN20090620_233959_000000312080_00073_38203_4732.N1	20-JUN-2009 23:39:59	Twilight	31.000	89	5Alp Cep	2.4510	8000.0	62	38203	No
253	GOM_NL__2PRFIN20090620_234648_000000282080_00073_38203_4733.N1	20-JUN-2009 23:46:48	Twilight	27.500	74	11Bet Cas	2.2680	6600.0	55	38203	No
254	GOM_NL__2PRFIN20090620_234817_000000272080_00073_38203_4734.N1	20-JUN-2009 23:48:17	Twilight	26.500	68	18Alp Cas	2.2250	4500.0	53	38203	No
255	GOM_NL__2PRFIN20090620_235612_000000272080_00073_38203_4735.N1	20-JUN-2009 23:56:12	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38203	No
256	GOM_NL__2PRFIN20090620_235955_000000232080_00073_38203_4736.N1	20-JUN-2009 23:59:55	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38203	No

### 3. Quality information per product

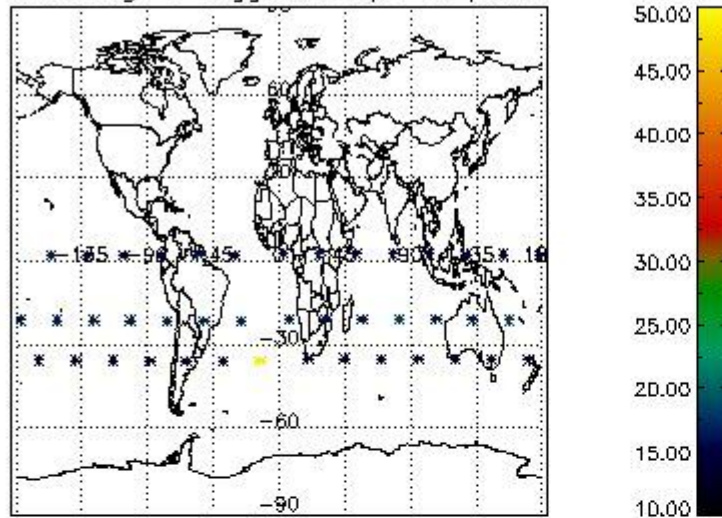
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

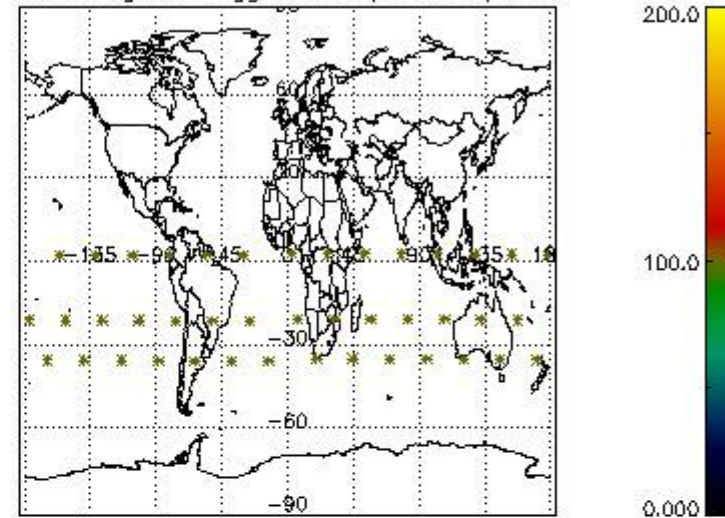


*3.2 Plot quality information per product (world map)*

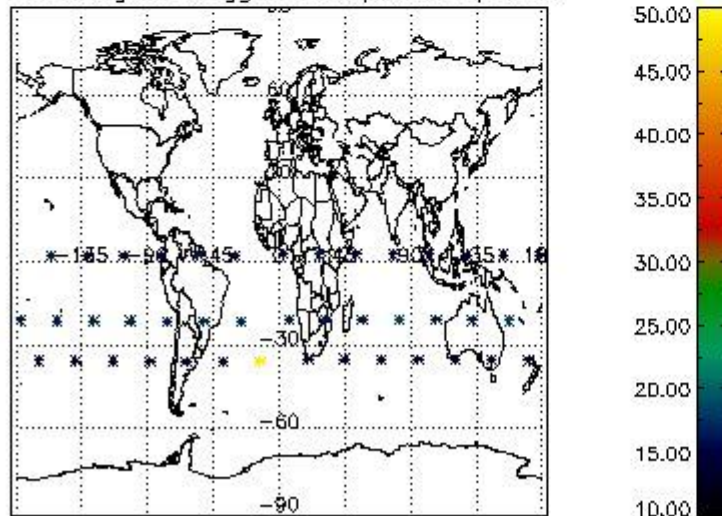
Percentage of flagged data per O3 profile



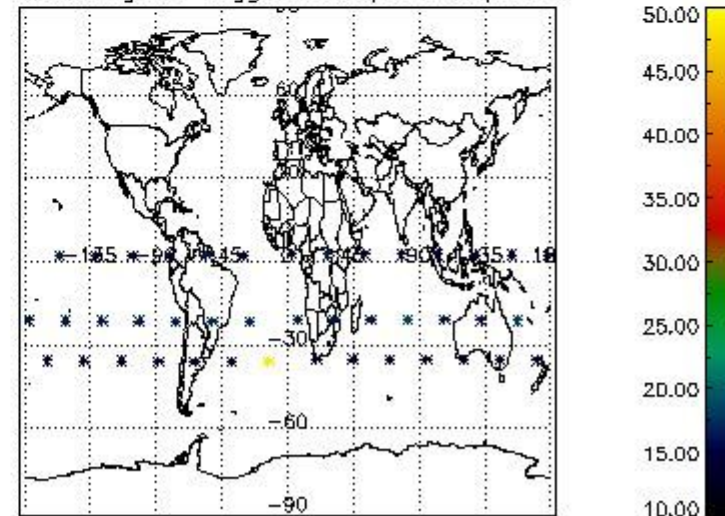
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



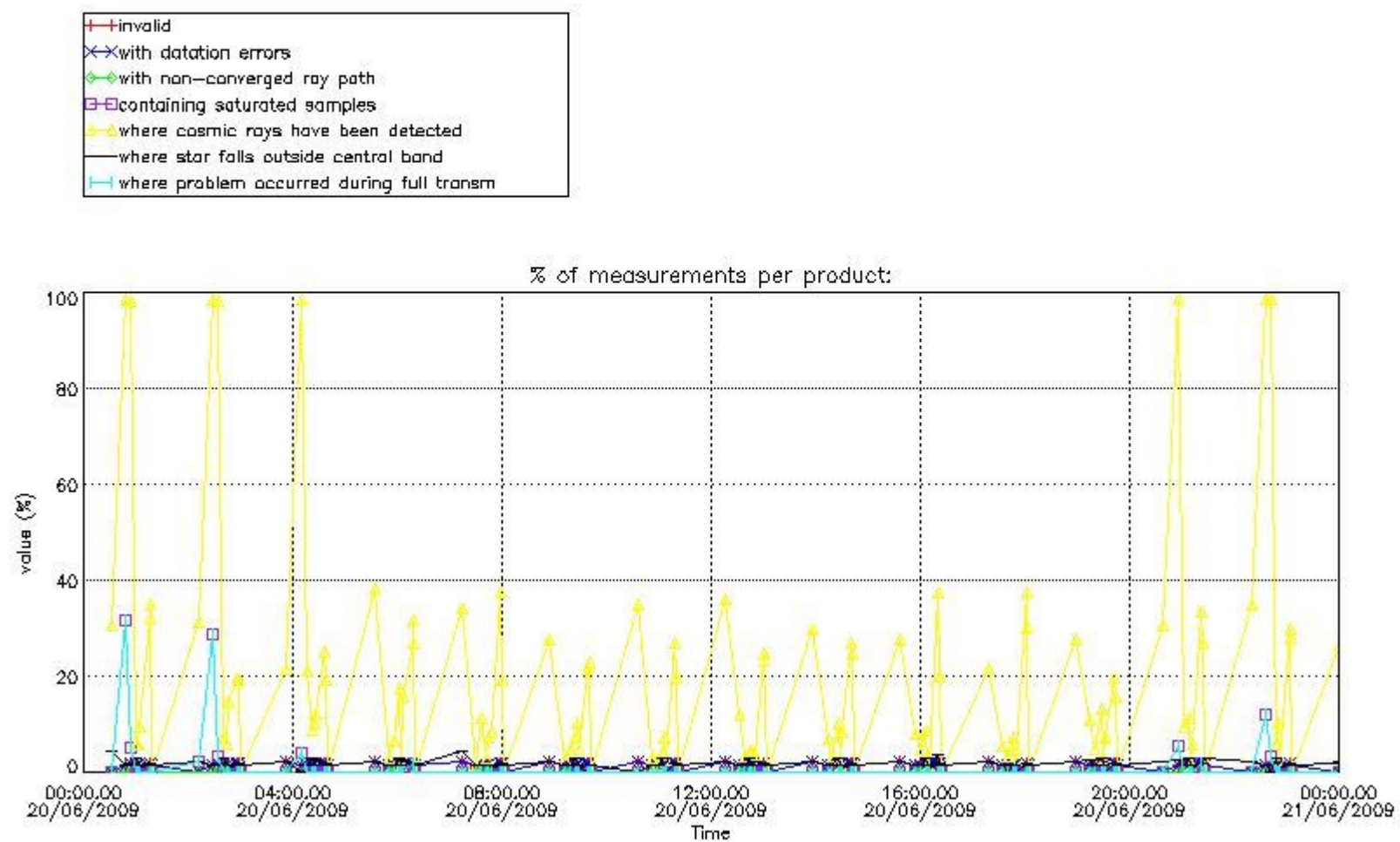
#### 4. Level 1 quality information per product

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

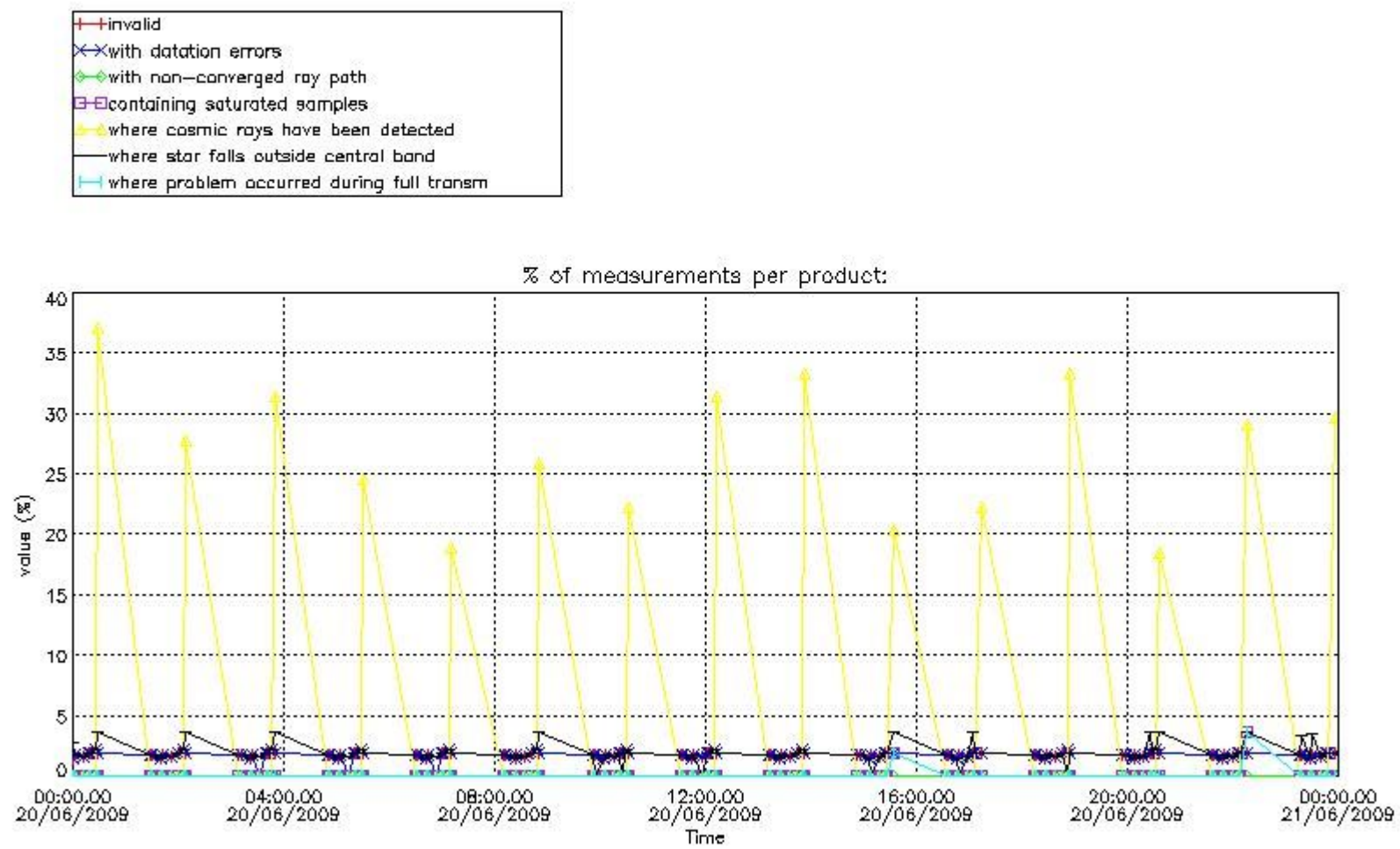
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



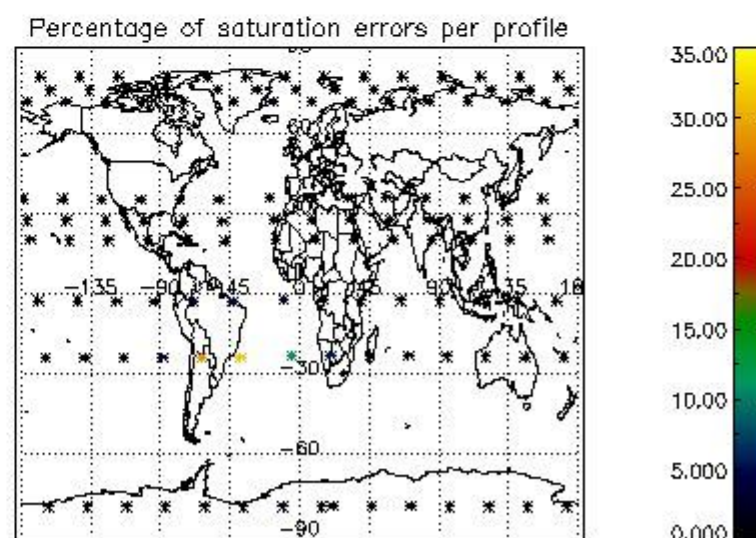
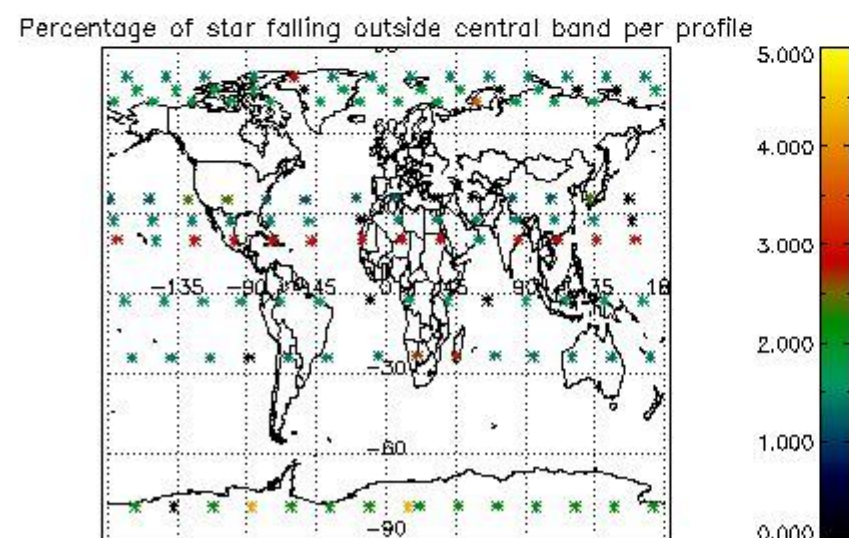
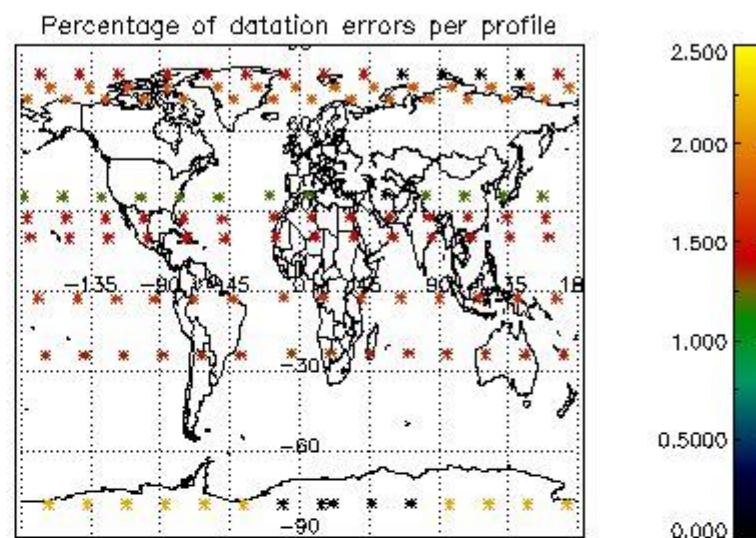
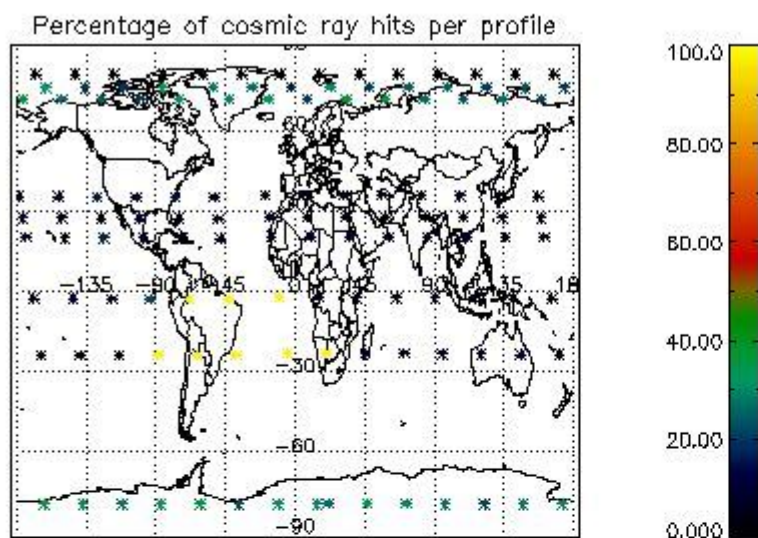


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



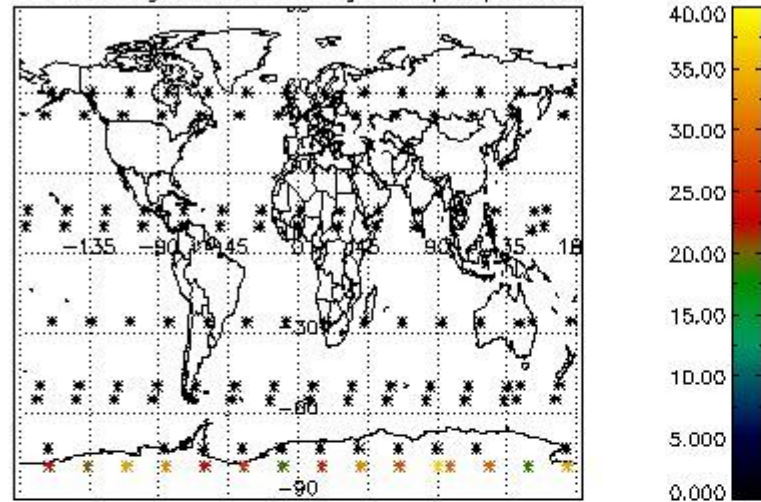
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

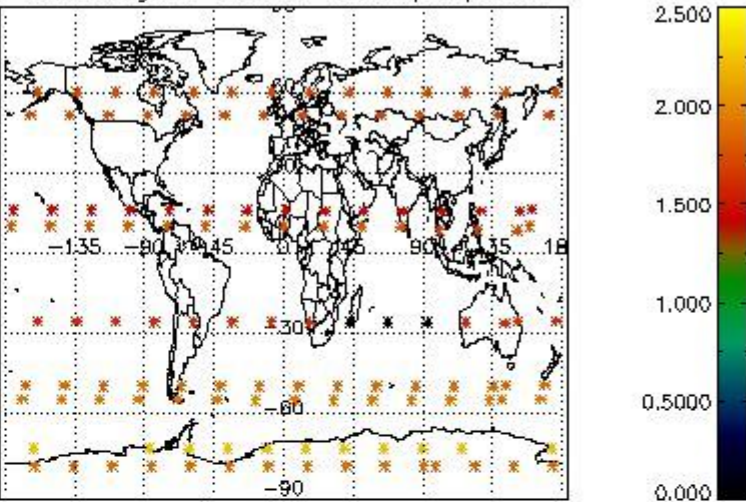


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

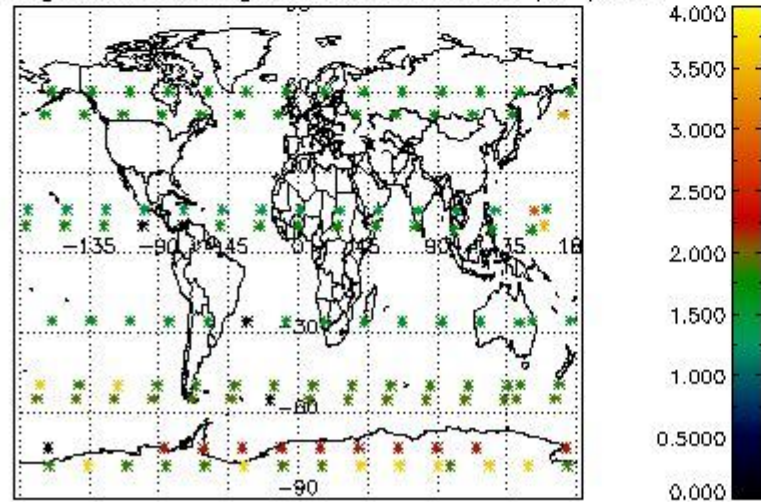
Percentage of cosmic ray hits per profile



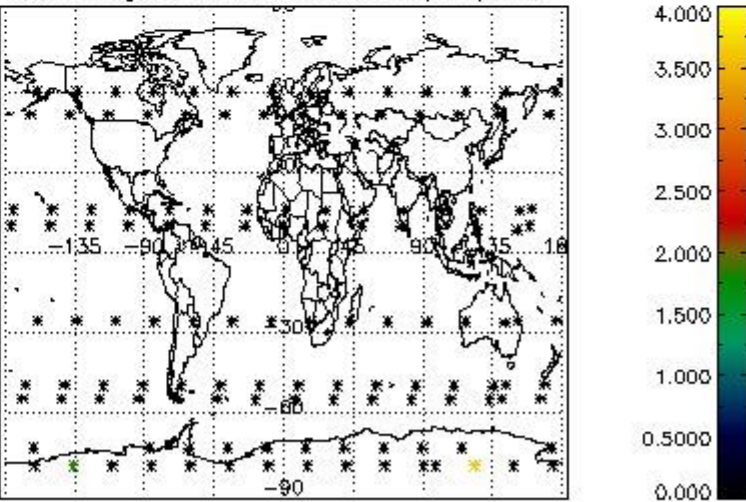
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

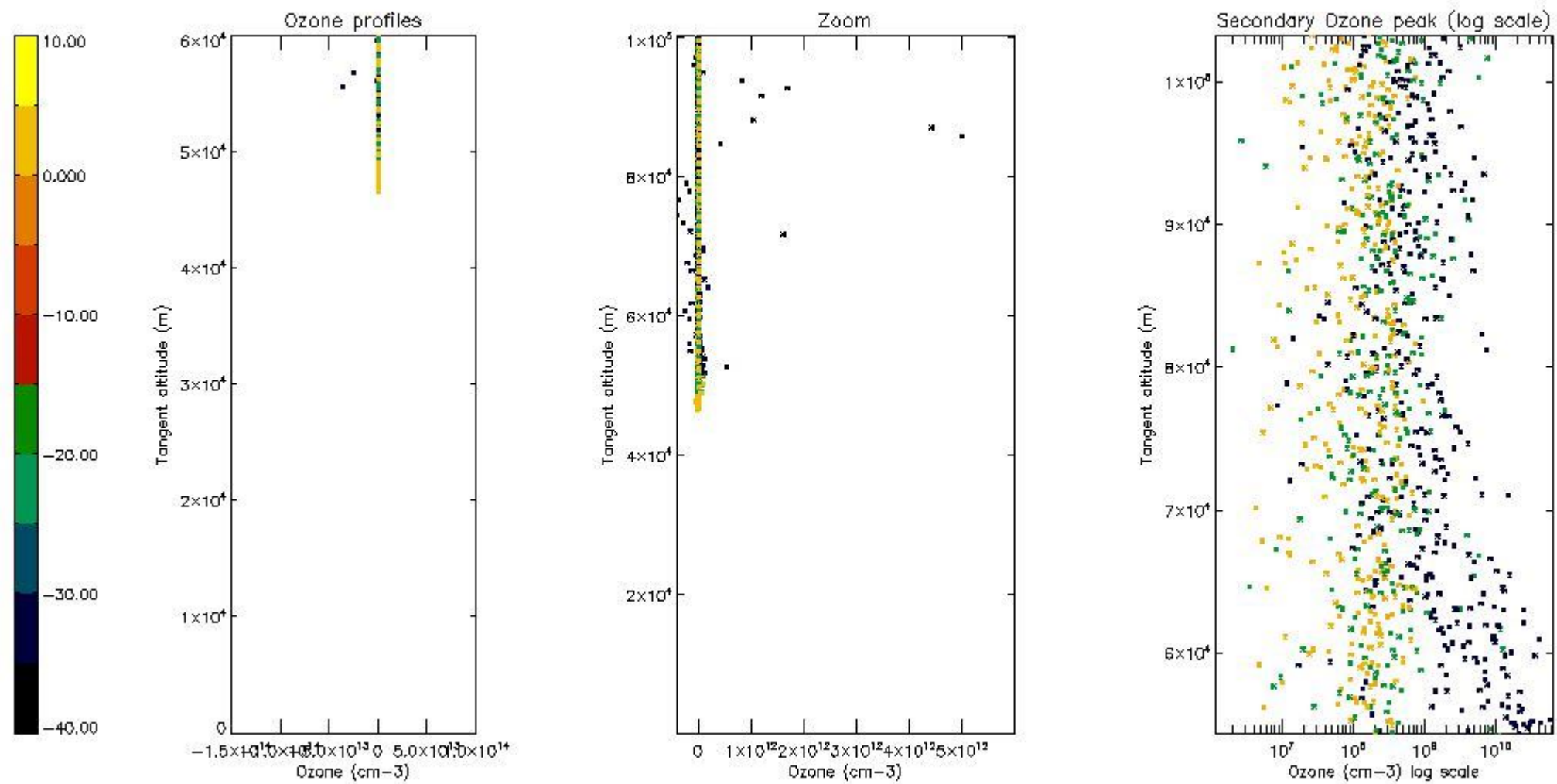
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	19.000
STD < 20	0.0000

STD < 10	NaN
STD < 5	NaN

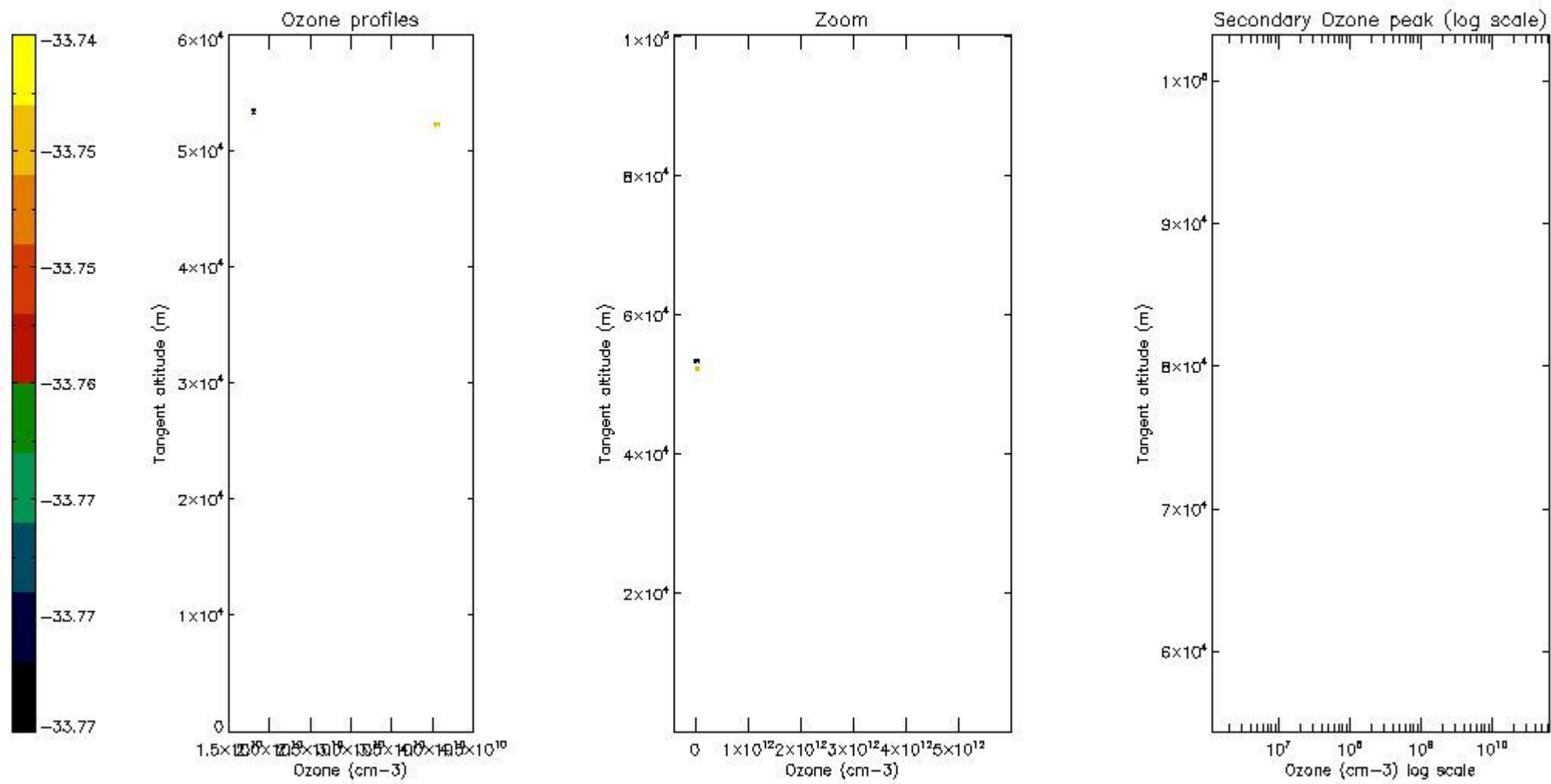
5.2 Plot ozone profiles for all STD (dark without errors)

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)*

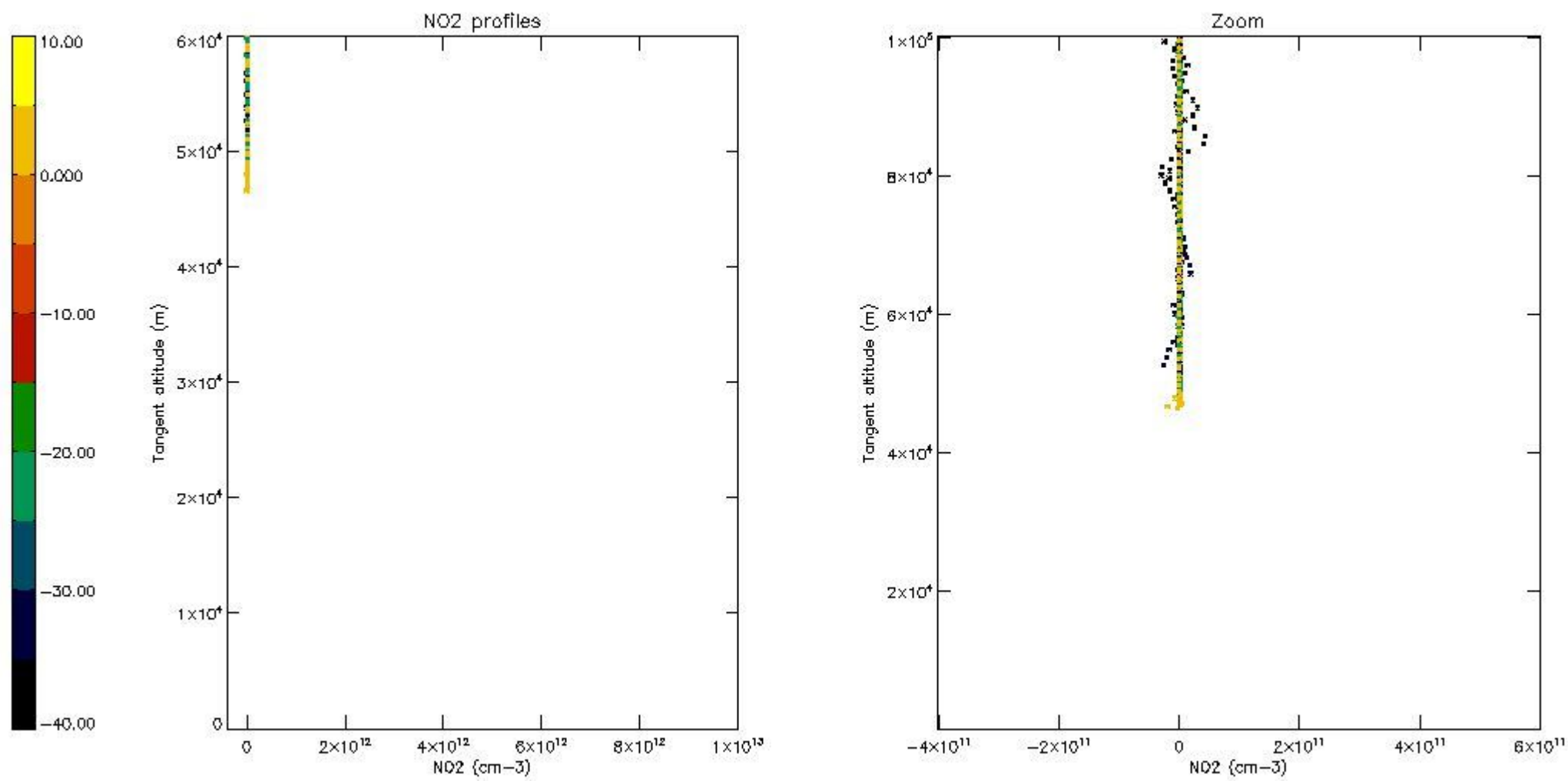
The colorbar represents the latitude.

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

The colorbar represents the latitude.

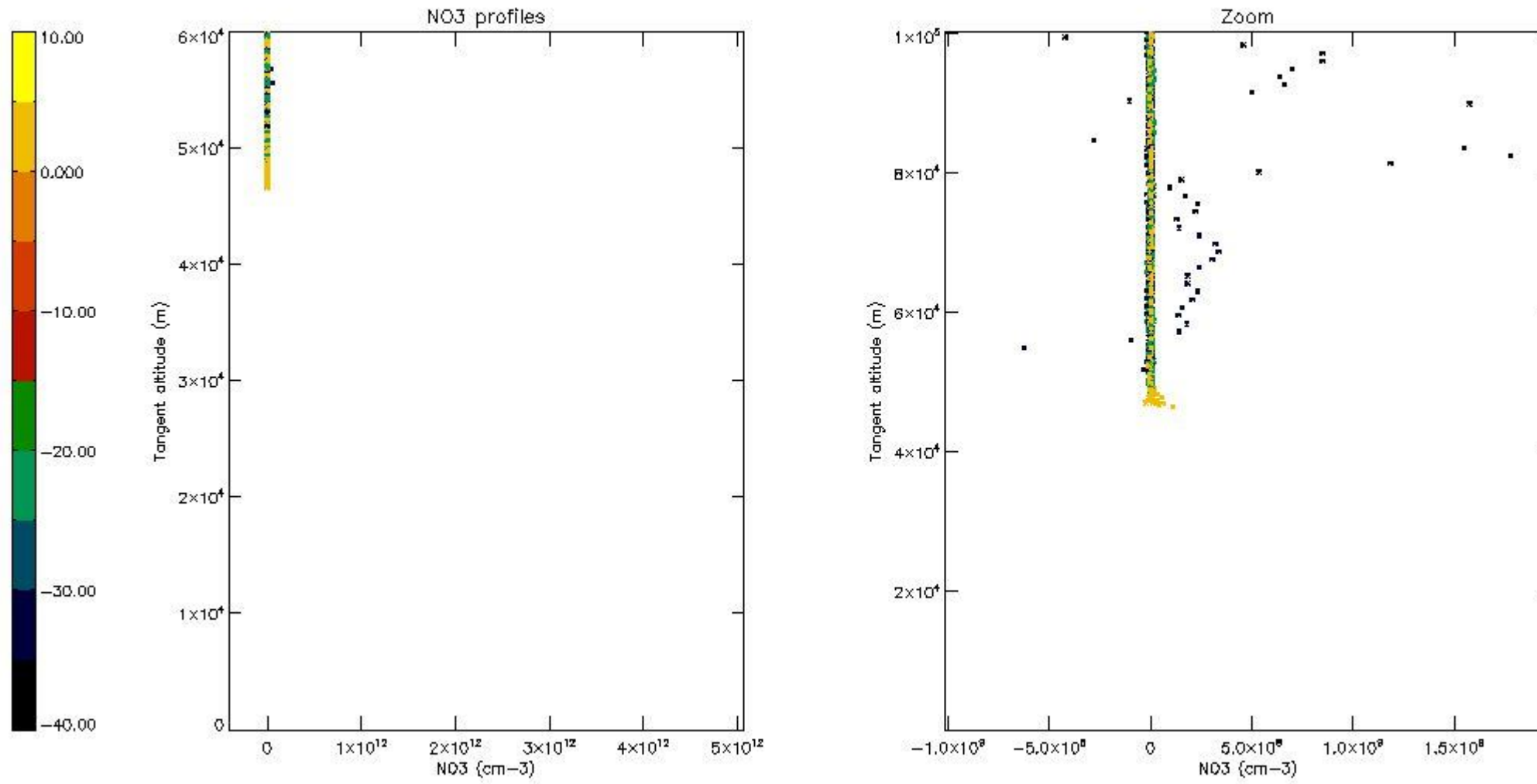
*5.6 Plot NO2 profiles for all STD (dark without errors)*

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	20-JUN-2009 00:00:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	20-JUN-2009 00:00:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	20-JUN-2009 00:00:05



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

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

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

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

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

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

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

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

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

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

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

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

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

Item	Value
Time of report generation	26APR2013 10:18:05
Data source version	GOMOS/6.01
Start time of products	20-06-2009 (20JUN2009 00:00:00)
Stop time of products	21-06-2009 (21JUN2009 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	256
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__2PRFIN20090620_000005_000000362080_00059_38189_4470.N1	20-JUN-2009 00:00:05	Bright	35.500	5	3Alp Lyr	0.033000	11000.	71	38189	No
2	GOM_NL__2PRFIN20090620_000203_000000292080_00059_38189_4471.N1	20-JUN-2009 00:02:03	Bright	29.000	69	33Gam Dra	2.2310	3800.0	58	38189	No
3	GOM_NL__2PRFIN20090620_001145_000000322080_00059_38189_4472.N1	20-JUN-2009 00:11:45	Twilight	31.500	89	5Alp Cep	2.4510	8000.0	63	38189	No
4	GOM_NL__2PRFIN20090620_001830_000000272080_00059_38189_4473.N1	20-JUN-2009 00:18:30	Twilight	27.000	74	11Bet Cas	2.2680	6600.0	54	38189	No
5	GOM_NL__2PRFIN20090620_001958_000000262080_00059_38189_4474.N1	20-JUN-2009 00:19:58	Twilight	26.000	68	18Alp Cas	2.2250	4500.0	52	38189	No
6	GOM_NL__2PRFIN20090620_002525_000000232080_00059_38189_4475.N1	20-JUN-2009 00:25:25	Twilight	22.500	73	57Gam1And	2.2600	13100.	45	38189	No
7	GOM_NL__2PRFIN20090620_002749_000000272080_00059_38189_4476.N1	20-JUN-2009 00:27:49	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38189	No
8	GOM_NL__2PRFIN20090620_003129_000000232080_00059_38189_4477.N1	20-JUN-2009 00:31:29	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38189	No
9	GOM_NL__2PRFIN20090620_004804_000000372080_00059_38189_4478.N1	20-JUN-2009 00:48:04	Dark	36.500	52	16Bet Cet	2.0370	4500.0	73	38189	No
10	GOM_NL__2PRFIN20090620_005400_000000312080_00059_38189_4479.N1	20-JUN-2009 00:54:00	Dark	30.500	84	Alp Phe	2.3970	4500.0	61	38189	No
11	GOM_NL__2PRFIN20090620_010023_000000342080_00060_38190_4498.N1	20-JUN-2009 01:00:23	Dark	34.000	63	Bet Gru	2.1500	2800.0	68	38190	No
12	GOM_NL__2PRFIN20090620_010226_000000342080_00060_38190_4499.N1	20-JUN-2009 01:02:26	Straylight	34.000	31	Alp Gru	1.7340	15200.	68	38190	No
13	GOM_NL__2PRFIN20090620_010440_000000422080_00060_38190_4500.N1	20-JUN-2009 01:04:40	Straylight	42.000	172	Gam Gru	3.0030	13100.	84	38190	No
14	GOM_NL__2PRFIN20090620_011517_000000282080_00060_38190_4501.N1	20-JUN-2009 01:15:17	Twilight	28.000	38	20Eps Sgr	1.8360	11000.	56	38190	No
15	GOM_NL__2PRFIN20090620_011644_000000292080_00060_38190_4502.N1	20-JUN-2009 01:16:44	Twilight	28.500	116	19Del Sgr	2.7000	4100.0	57	38190	No
16	GOM_NL__2PRFIN20090620_011857_000000352080_00060_38190_4503.N1	20-JUN-2009 01:18:57	Twilight	35.000	155	41Pi Sgr	2.9000	6600.0	70	38190	No
17	GOM_NL__2PRFIN20090620_012805_000000292080_00060_38190_4504.N1	20-JUN-2009 01:28:05	Twilight	29.000	126	60Bet Oph	2.7700	4250.0	58	38190	No
18	GOM_NL__2PRFIN20090620_013032_000000302080_00060_38190_4505.N1	20-JUN-2009 01:30:32	Bright	29.500	59	55Alp Oph	2.0800	8900.0	59	38190	No
19	GOM_NL__2PRFIN20090620_014040_000000352080_00060_38190_4506.N1	20-JUN-2009 01:40:40	Bright	35.000	5	3Alp Lyr	0.033000	11000.	70	38190	No
20	GOM_NL__2PRFIN20090620_014239_000000302080_00060_38190_4507.N1	20-JUN-2009 01:42:39	Bright	29.500	69	33Gam Dra	2.2310	3800.0	59	38190	No
21	GOM_NL__2PRFIN20090620_015221_000000322080_00060_38190_4508.N1	20-JUN-2009 01:52:21	Twilight	31.500	89	5Alp Cep	2.4510	8000.0	63	38190	No
22	GOM_NL__2PRFIN20090620_015906_000000272080_00060_38190_4509.N1	20-JUN-2009 01:59:06	Twilight	27.000	74	11Bet Cas	2.2680	6600.0	54	38190	No
23	GOM_NL__2PRFIN20090620_020034_000000262080_00060_38190_4510.N1	20-JUN-2009 02:00:34	Twilight	26.000	68	18Alp Cas	2.2250	4500.0	52	38190	No
24	GOM_NL__2PRFIN20090620_020601_000000232080_00060_38190_4511.N1	20-JUN-2009 02:06:01	Twilight	22.500	73	57Gam1And	2.2600	13100.	45	38190	No
25	GOM_NL__2PRFIN20090620_020824_000000272080_00060_38190_4512.N1	20-JUN-2009 02:08:24	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38190	No
26	GOM_NL__2PRFIN20090620_021205_000000232080_00060_38190_4513.N1	20-JUN-2009 02:12:05	Twilight	22.500	50	13Alp Ari	2.0070	4250.0	45	38190	No
27	GOM_NL__2PRFIN20090620_022841_000000372080_00060_38190_4514.N1	20-JUN-2009 02:28:41	Dark	36.500	52	16Bet Cet	2.0370	4500.0	73	38190	No
28	GOM_NL__2PRFIN20090620_023437_000000312080_00060_38190_4515.N1	20-JUN-2009 02:34:37	Dark	30.500	84	Alp Phe	2.3970	4500.0	61	38190	No
29	GOM_NL__2PRFIN20090620_024059_000000352080_00061_38191_4513.N1	20-JUN-2009 02:40:59	Dark	34.500	63	Bet Gru	2.1500	2800.0	69	38191	No
30	GOM_NL__2PRFIN20090620_024302_000000342080_00061_38191_4514.N1	20-JUN-2009 02:43:02	Straylight	34.000	31	Alp Gru	1.7340	15200.	68	38191	No
31	GOM_NL__2PRFIN20090620_024518_000000422080_00061_38191_4515.N1	20-JUN-2009 02:45:18	Straylight	41.500	172	Gam Gru	3.0030	13100.	83	38191	No
32	GOM_NL__2PRFIN20090620_025553_000000282080_00061_38191_4516.N1	20-JUN-2009 02:55:53	Twilight	28.000	38	20Eps Sgr	1.8360	11000.	56	38191	No
33	GOM_NL__2PRFIN20090620_025720_000000292080_00061_38191_4517.N1	20-JUN-2009 02:57:20	Twilight	28.500	116	19Del Sgr	2.7000	4100.0	57	38191	No
34	GOM_NL__2PRFIN20090620_025933_000000362080_00061_38191_4518.N1	20-JUN-2009 02:59:33	Twilight	35.500	155	41Pi Sgr	2.9000	6600.0	71	38191	No
35	GOM_NL__2PRFIN20090620_030841_000000302080_00061_38191_4519.N1	20-JUN-2009 03:08:41	Twilight	29.500	126	60Bet Oph	2.7700	4250.0	59	38191	No
36	GOM_NL__2PRFIN20090620_031108_000000302080_00061_38191_4520.N1	20-JUN-2009 03:11:08	Bright	29.500	59	55Alp Oph	2.0800	8900.0	59	38191	No
37	GOM_NL__2PRFIN20090620_032115_000000362080_00061_38191_4521.N1	20-JUN-2009 03:21:15	Bright	35.500	5	3Alp Lyr	0.033000	11000.	71	38191	No
38	GOM_NL__2PRFIN20090620_032314_000000302080_00061_38191_4522.N1	20-JUN-2009 03:23:14	Bright	29.500	69	33Gam Dra	2.2310	3800.0	59	38191	No
39	GOM_NL__2PRFIN20090620_033256_000000312080_00061_38191_4523.N1	20-JUN-2009 03:32:56	Twilight	31.000	89	5Alp Cep	2.4510	8000.0	62	38191	No
40	GOM_NL__2PRFIN20090620_033941_000000272080_00061_38191_4524.N1	20-JUN-2009 03:39:41	Twilight	27.000	74	11Bet Cas	2.2680	6600.0	54	38191	No
41	GOM_NL__2PRFIN20090620_034110_000000262080_00061_38191_4525.N1	20-JUN-2009 03:41:10	Twilight	26.000	68	18Alp Cas	2.2250	4500.0	52	38191	No
42	GOM_NL__2PRFIN20090620_034636_000000232080_00061_38191_4526.N1	20-JUN-2009 03:46:36	Twilight	22.500	73	57Gam1And	2.2600	13100.	45	38191	No





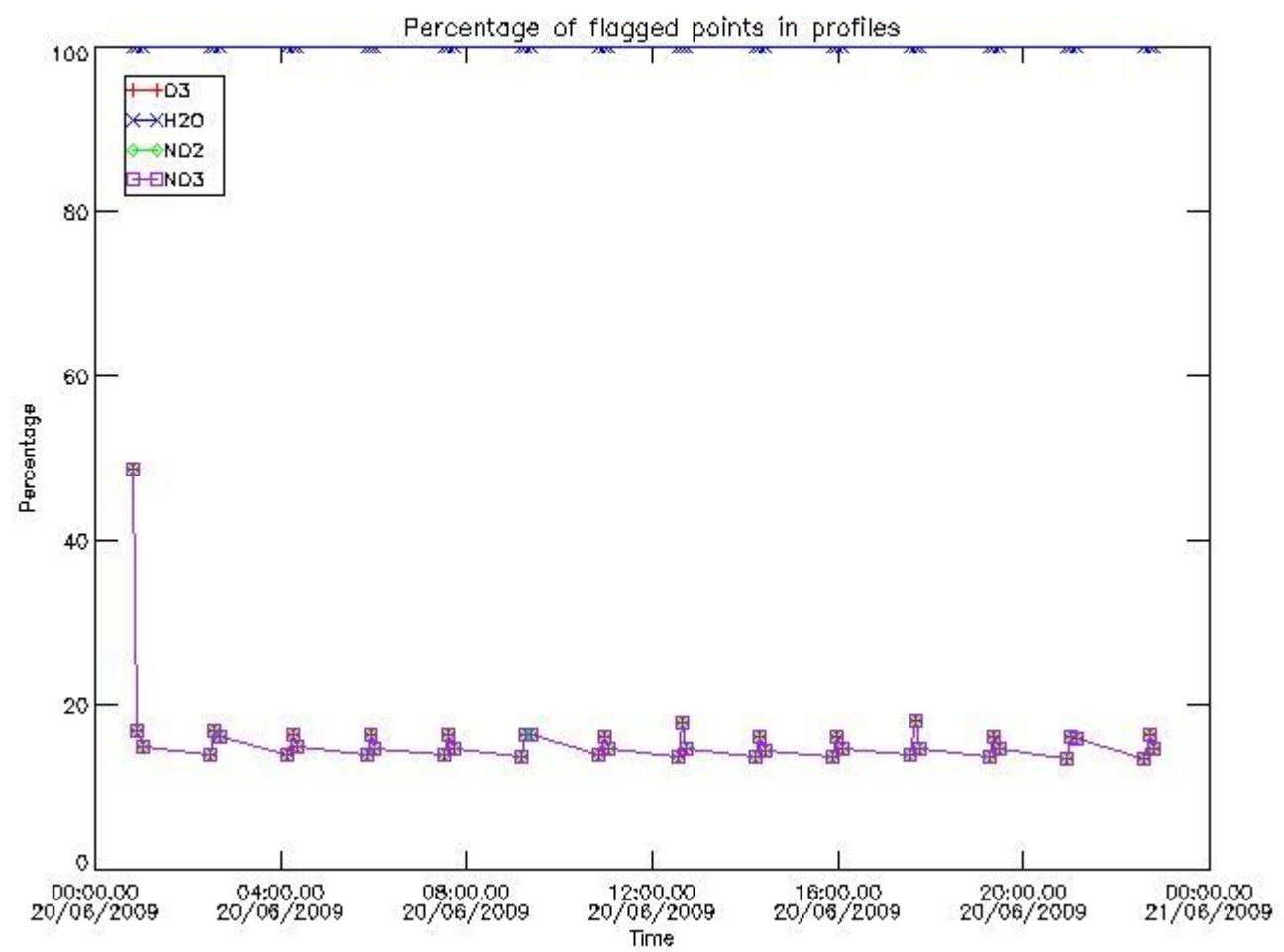


220	GOM_NL__2PRFIN20090620_203236_000000232080_00071_38201_4701.N1	20-JUN-2009 20:32:36	Twilight	22.500	73	57Gam1And	2.2600	13100.	45	38201	No
221	GOM_NL__2PRFIN20090620_203500_000000272080_00071_38201_4702.N1	20-JUN-2009 20:35:00	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38201	No
222	GOM_NL__2PRFIN20090620_203843_000000232080_00071_38201_4703.N1	20-JUN-2009 20:38:43	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38201	No
223	GOM_NL__2PRFIN20090620_205530_000000382080_00071_38201_4704.N1	20-JUN-2009 20:55:30	Dark	37.500	52	16Bet Cet	2.0370	4500.0	75	38201	No
224	GOM_NL__2PRFIN20090620_210121_000000322080_00071_38201_4705.N1	20-JUN-2009 21:01:21	Dark	31.500	84	Alp Phe	2.3970	4500.0	63	38201	No
225	GOM_NL__2PRFIN20090620_210745_000000352080_00072_38202_4706.N1	20-JUN-2009 21:07:45	Dark	35.000	63	Bet Gru	2.1500	2800.0	70	38202	No
226	GOM_NL__2PRFIN20090620_210948_000000352080_00072_38202_4707.N1	20-JUN-2009 21:09:48	Straylight	34.500	31	Alp Gru	1.7340	15200.	69	38202	No
227	GOM_NL__2PRFIN20090620_211207_000000422080_00072_38202_4708.N1	20-JUN-2009 21:12:07	Straylight	42.000	172	Gam Gru	3.0030	13100.	84	38202	No
228	GOM_NL__2PRFIN20090620_212231_000000292080_00072_38202_4709.N1	20-JUN-2009 21:22:31	Twilight	28.500	38	20Eps Sgr	1.8360	11000.	57	38202	No
229	GOM_NL__2PRFIN20090620_212359_000000282080_00072_38202_4710.N1	20-JUN-2009 21:23:59	Twilight	28.000	116	19Del Sgr	2.7000	4100.0	56	38202	No
230	GOM_NL__2PRFIN20090620_212611_000000352080_00072_38202_4711.N1	20-JUN-2009 21:26:11	Twilight	35.000	155	41Pi Sgr	2.9000	6600.0	70	38202	No
231	GOM_NL__2PRFIN20090620_213514_000000292080_00072_38202_4712.N1	20-JUN-2009 21:35:14	Bright	29.000	126	60Bet Oph	2.7700	4250.0	58	38202	No
232	GOM_NL__2PRFIN20090620_213741_000000292080_00072_38202_4713.N1	20-JUN-2009 21:37:41	Bright	29.000	59	55Alp Oph	2.0800	8900.0	58	38202	No
233	GOM_NL__2PRFIN20090620_214741_000000352080_00072_38202_4714.N1	20-JUN-2009 21:47:41	Bright	35.000	5	3Alp Lyr	0.033000	11000.	70	38202	No
234	GOM_NL__2PRFIN20090620_214923_000000282080_00072_38202_4715.N1	20-JUN-2009 21:49:23	Bright	28.000	130	23Bet Dra	2.7990	5800.0	56	38202	No
235	GOM_NL__2PRFIN20090620_215924_000000322080_00072_38202_4716.N1	20-JUN-2009 21:59:24	Twilight	31.500	89	5Alp Cep	2.4510	8000.0	63	38202	No
236	GOM_NL__2PRFIN20090620_220612_000000272080_00072_38202_4717.N1	20-JUN-2009 22:06:12	Twilight	27.000	74	11Bet Cas	2.2680	6600.0	54	38202	No
237	GOM_NL__2PRFIN20090620_220742_000000262080_00072_38202_4718.N1	20-JUN-2009 22:07:42	Twilight	26.000	68	18Alp Cas	2.2250	4500.0	52	38202	No
238	GOM_NL__2PRFIN20090620_221536_000000282080_00072_38202_4719.N1	20-JUN-2009 22:15:36	Twilight	27.500	53	43Bet And	2.0480	3300.0	55	38202	No
239	GOM_NL__2PRFIN20090620_221919_000000232080_00072_38202_4720.N1	20-JUN-2009 22:19:19	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38202	No
240	GOM_NL__2PRFIN20090620_223607_000000382080_00072_38202_4721.N1	20-JUN-2009 22:36:07	Dark	37.500	52	16Bet Cet	2.0370	4500.0	75	38202	No
241	GOM_NL__2PRFIN20090620_224158_000000312080_00072_38202_4722.N1	20-JUN-2009 22:41:58	Dark	31.000	84	Alp Phe	2.3970	4500.0	62	38202	No
242	GOM_NL__2PRFIN20090620_224822_000000352080_00073_38203_4722.N1	20-JUN-2009 22:48:22	Dark	34.500	63	Bet Gru	2.1500	2800.0	69	38203	No
243	GOM_NL__2PRFIN20090620_225025_000000342080_00073_38203_4723.N1	20-JUN-2009 22:50:25	Straylight	34.000	31	Alp Gru	1.7340	15200.	68	38203	No
244	GOM_NL__2PRFIN20090620_225244_000000422080_00073_38203_4724.N1	20-JUN-2009 22:52:44	Straylight	42.000	172	Gam Gru	3.0030	13100.	84	38203	No
245	GOM_NL__2PRFIN20090620_230308_000000292080_00073_38203_4725.N1	20-JUN-2009 23:03:08	Twilight	28.500	38	20Eps Sgr	1.8360	11000.	57	38203	No
246	GOM_NL__2PRFIN20090620_230435_000000292080_00073_38203_4726.N1	20-JUN-2009 23:04:35	Twilight	28.500	116	19Del Sgr	2.7000	4100.0	57	38203	No
247	GOM_NL__2PRFIN20090620_230647_000000352080_00073_38203_4727.N1	20-JUN-2009 23:06:47	Twilight	34.500	155	41Pi Sgr	2.9000	6600.0	69	38203	No
248	GOM_NL__2PRFIN20090620_231550_000000302080_00073_38203_4728.N1	20-JUN-2009 23:15:50	Bright	29.500	126	60Bet Oph	2.7700	4250.0	59	38203	No
249	GOM_NL__2PRFIN20090620_231816_000000302080_00073_38203_4729.N1	20-JUN-2009 23:18:16	Bright	29.500	59	55Alp Oph	2.0800	8900.0	59	38203	No
250	GOM_NL__2PRFIN20090620_232816_000000352080_00073_38203_4730.N1	20-JUN-2009 23:28:16	Bright	35.000	5	3Alp Lyr	0.033000	11000.	70	38203	No
251	GOM_NL__2PRFIN20090620_232959_000000292080_00073_38203_4731.N1	20-JUN-2009 23:29:59	Bright	28.500	130	23Bet Dra	2.7990	5800.0	57	38203	No
252	GOM_NL__2PRFIN20090620_233959_000000312080_00073_38203_4732.N1	20-JUN-2009 23:39:59	Twilight	31.000	89	5Alp Cep	2.4510	8000.0	62	38203	No
253	GOM_NL__2PRFIN20090620_234648_000000282080_00073_38203_4733.N1	20-JUN-2009 23:46:48	Twilight	27.500	74	11Bet Cas	2.2680	6600.0	55	38203	No
254	GOM_NL__2PRFIN20090620_234817_000000272080_00073_38203_4734.N1	20-JUN-2009 23:48:17	Twilight	26.500	68	18Alp Cas	2.2250	4500.0	53	38203	No
255	GOM_NL__2PRFIN20090620_235612_000000272080_00073_38203_4735.N1	20-JUN-2009 23:56:12	Twilight	27.000	53	43Bet And	2.0480	3300.0	54	38203	No
256	GOM_NL__2PRFIN20090620_235955_000000232080_00073_38203_4736.N1	20-JUN-2009 23:59:55	Twilight	23.000	50	13Alp Ari	2.0070	4250.0	46	38203	No

### 3. Quality information per product

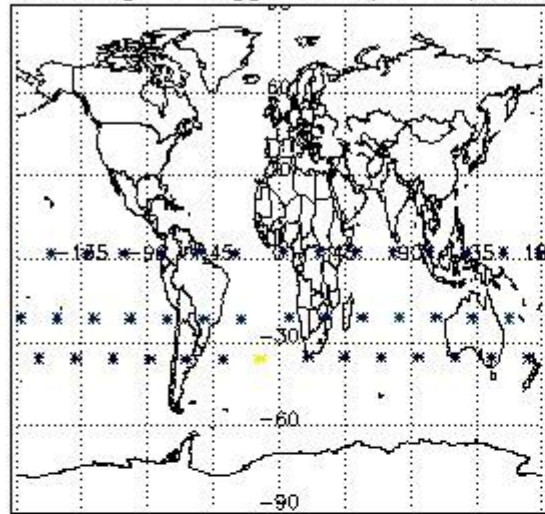
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

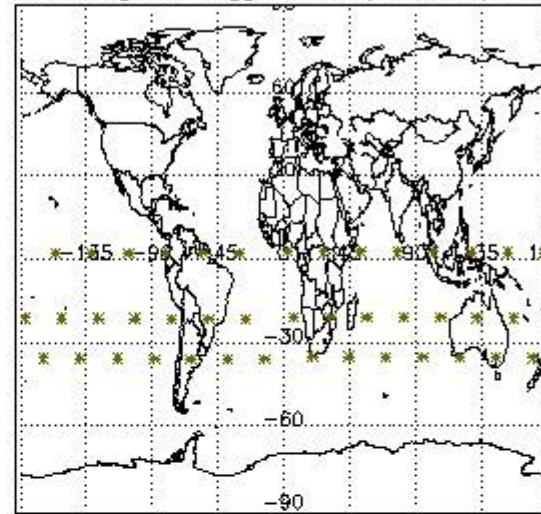


*3.2 Plot quality information per product (world map)*

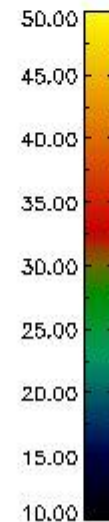
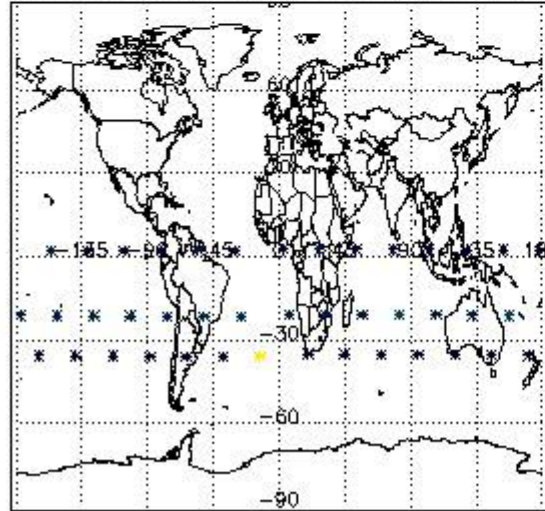
Percentage of flagged data per O3 profile



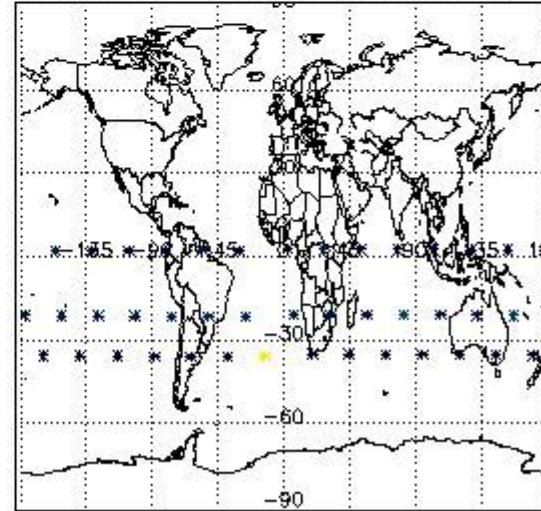
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



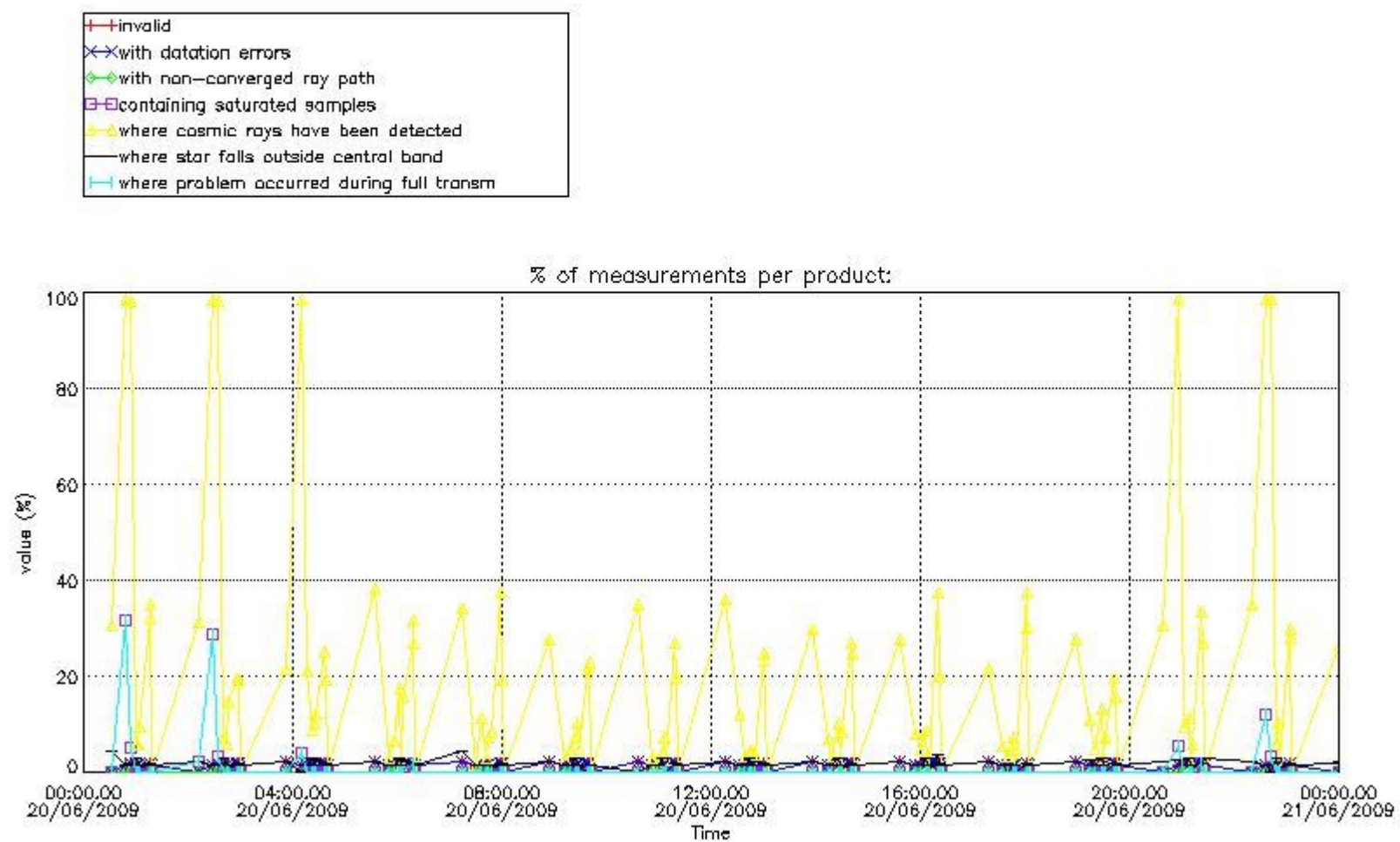
#### 4. Level 1 quality information per product

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

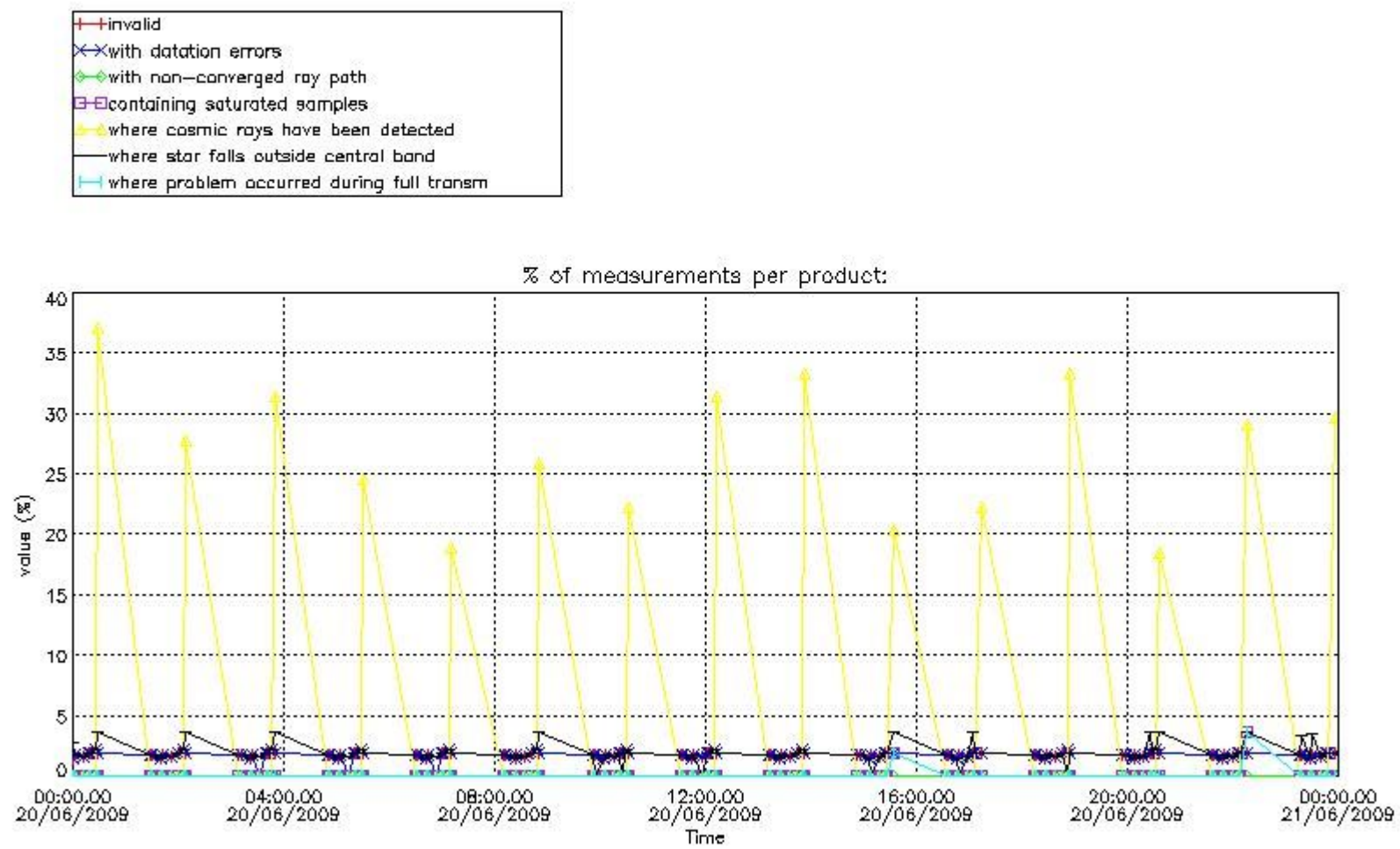
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



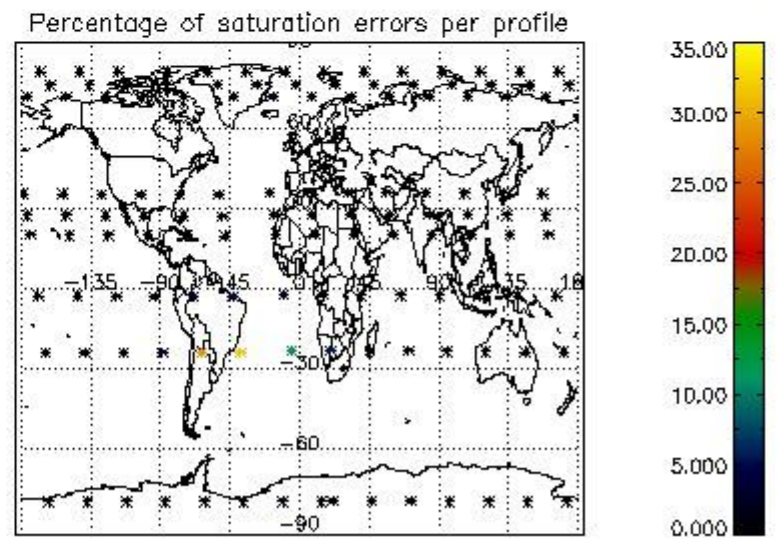
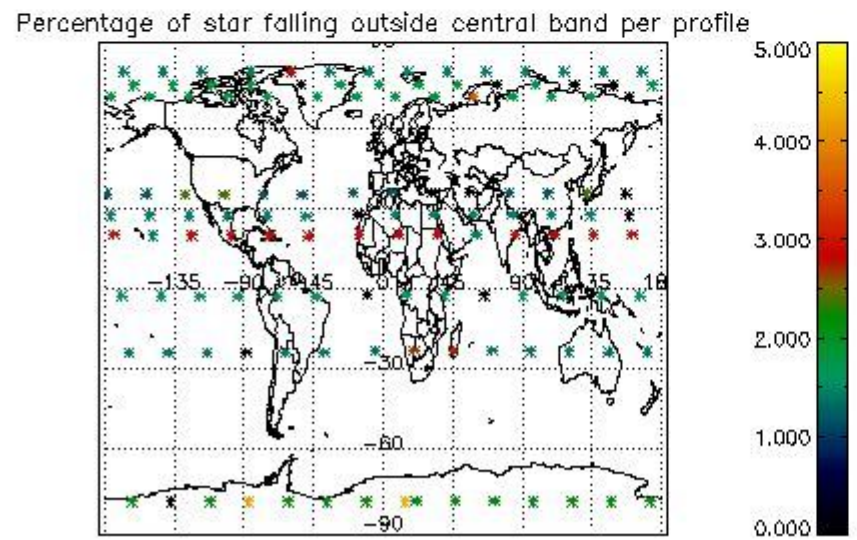
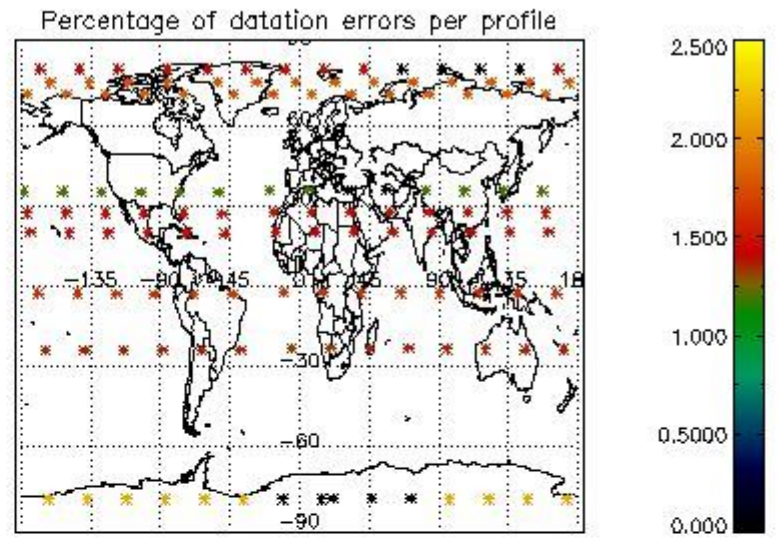
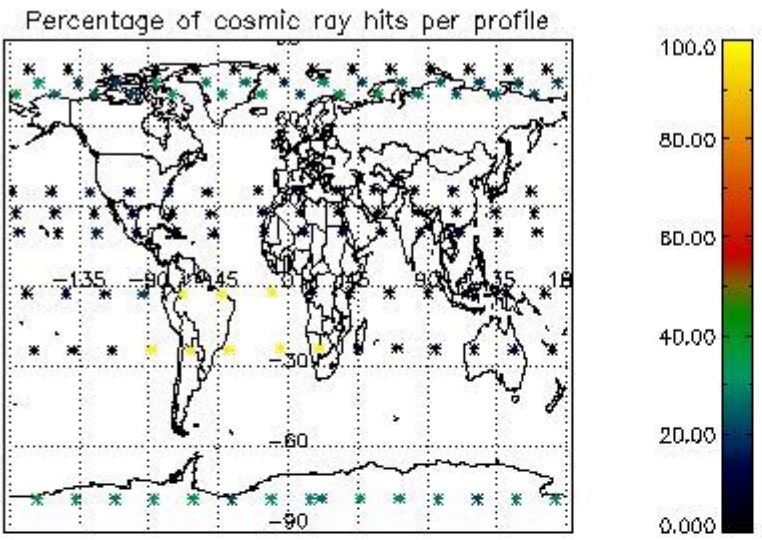


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



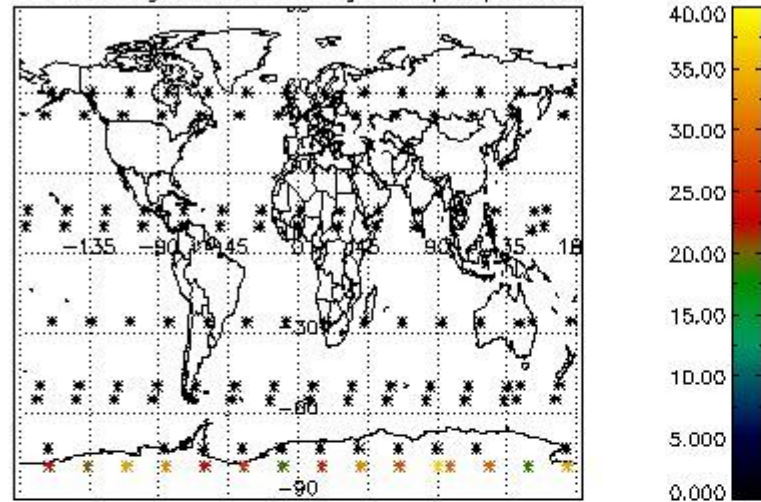
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

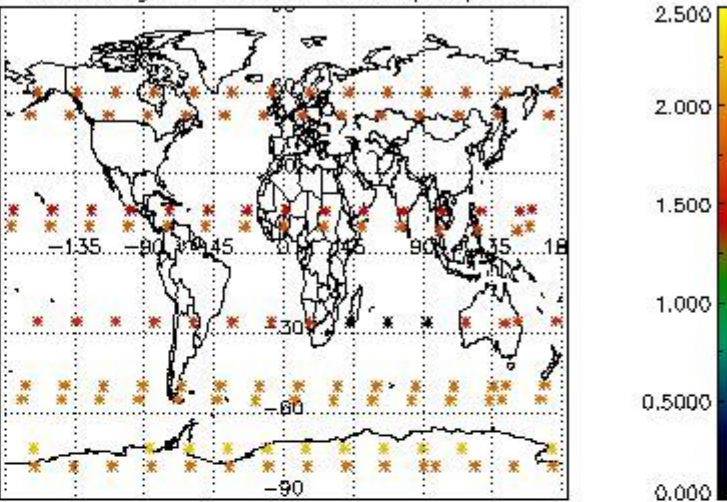


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

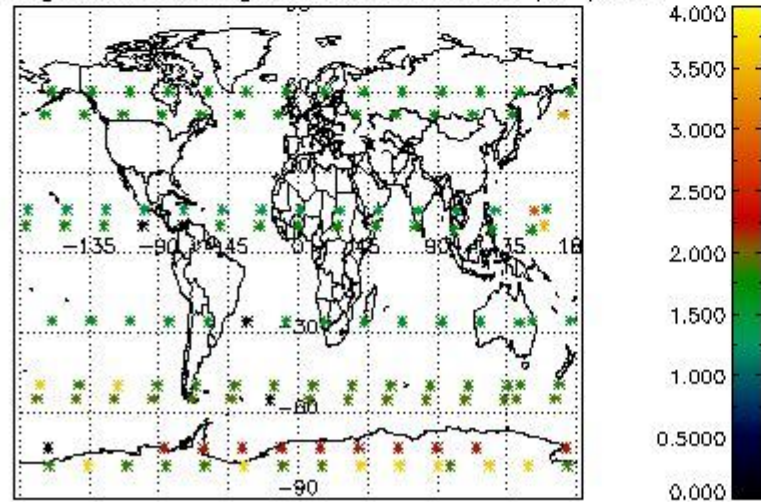
Percentage of cosmic ray hits per profile



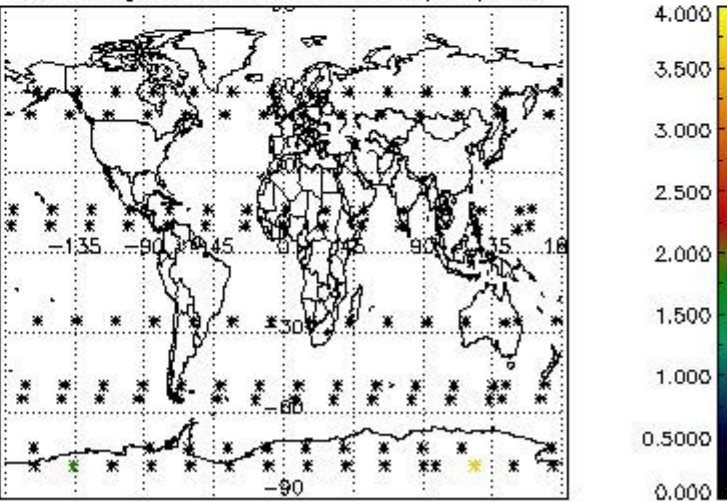
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

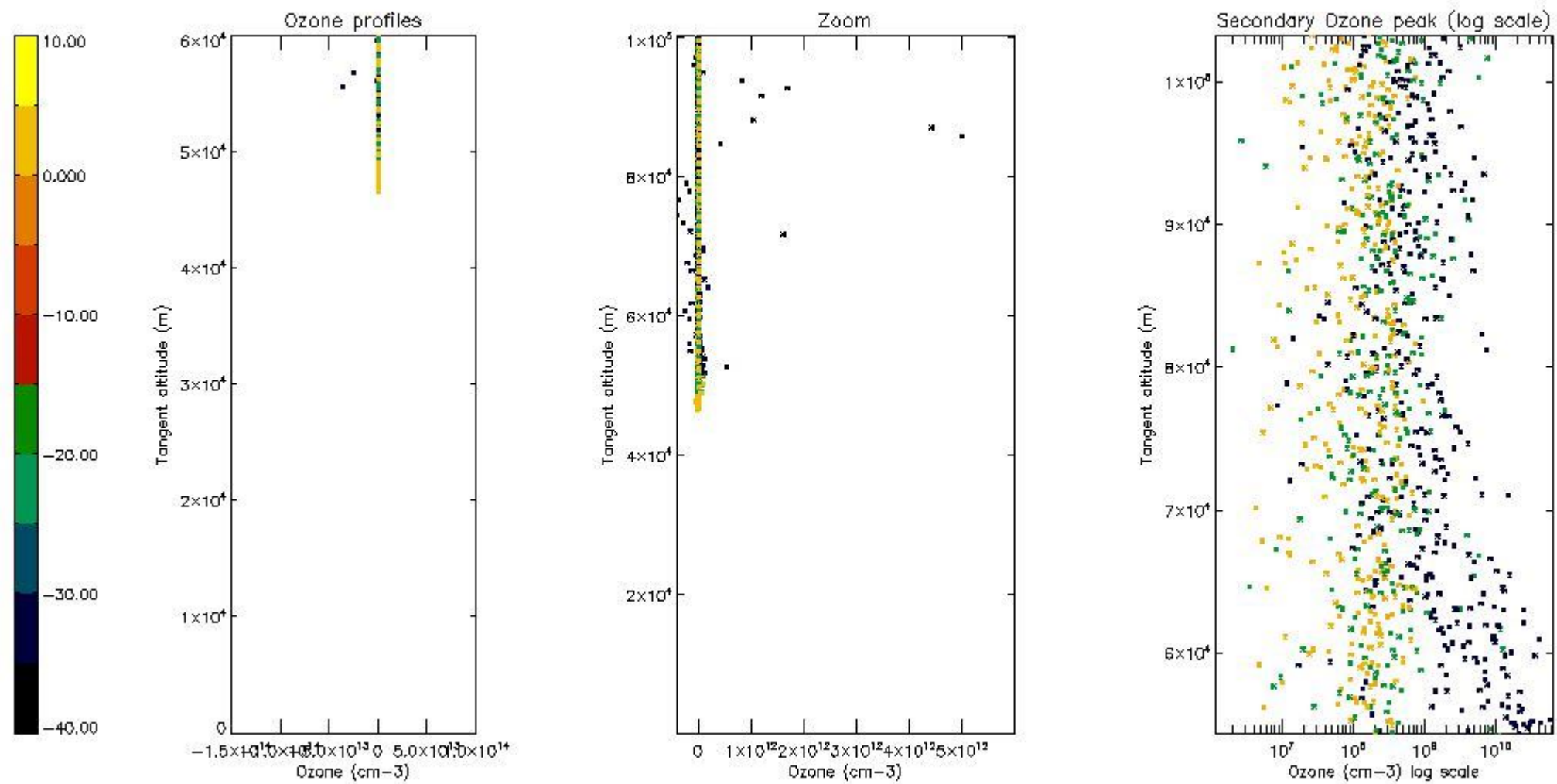
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	19.000
STD < 20	0.0000

STD < 10	NaN
STD < 5	NaN

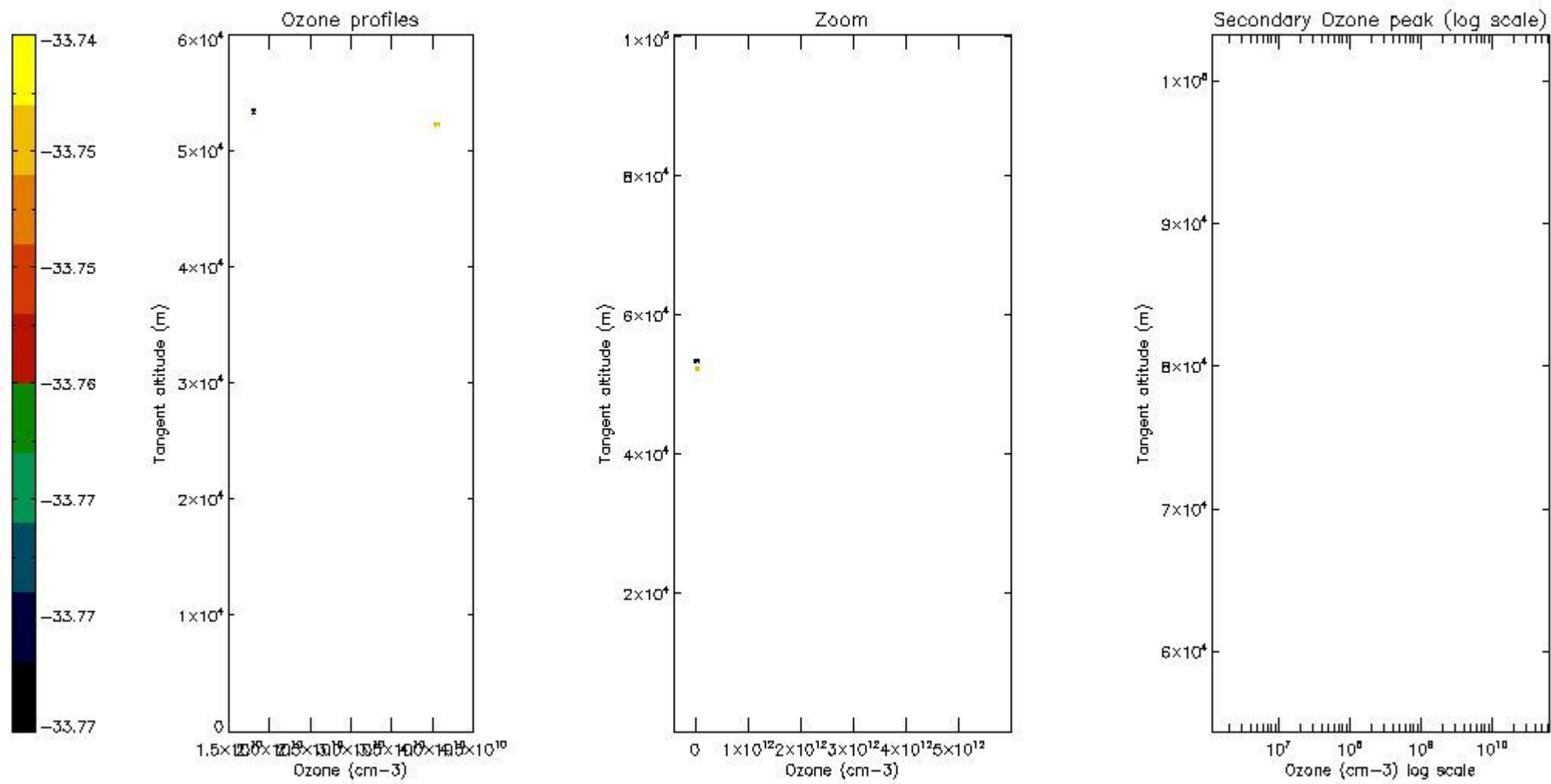
5.2 Plot ozone profiles for all STD (dark without errors)

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)*

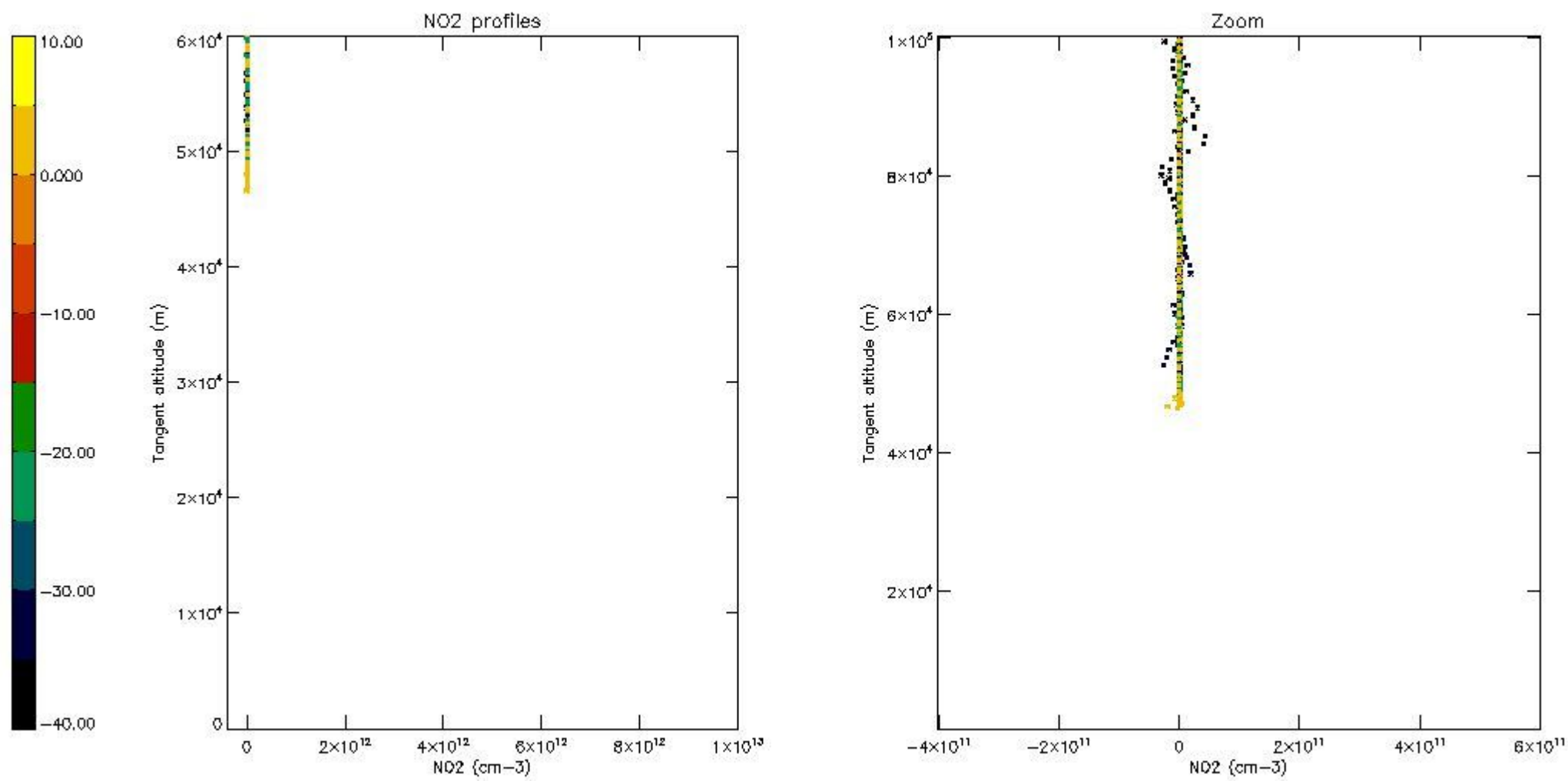
The colorbar represents the latitude.

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

The colorbar represents the latitude.

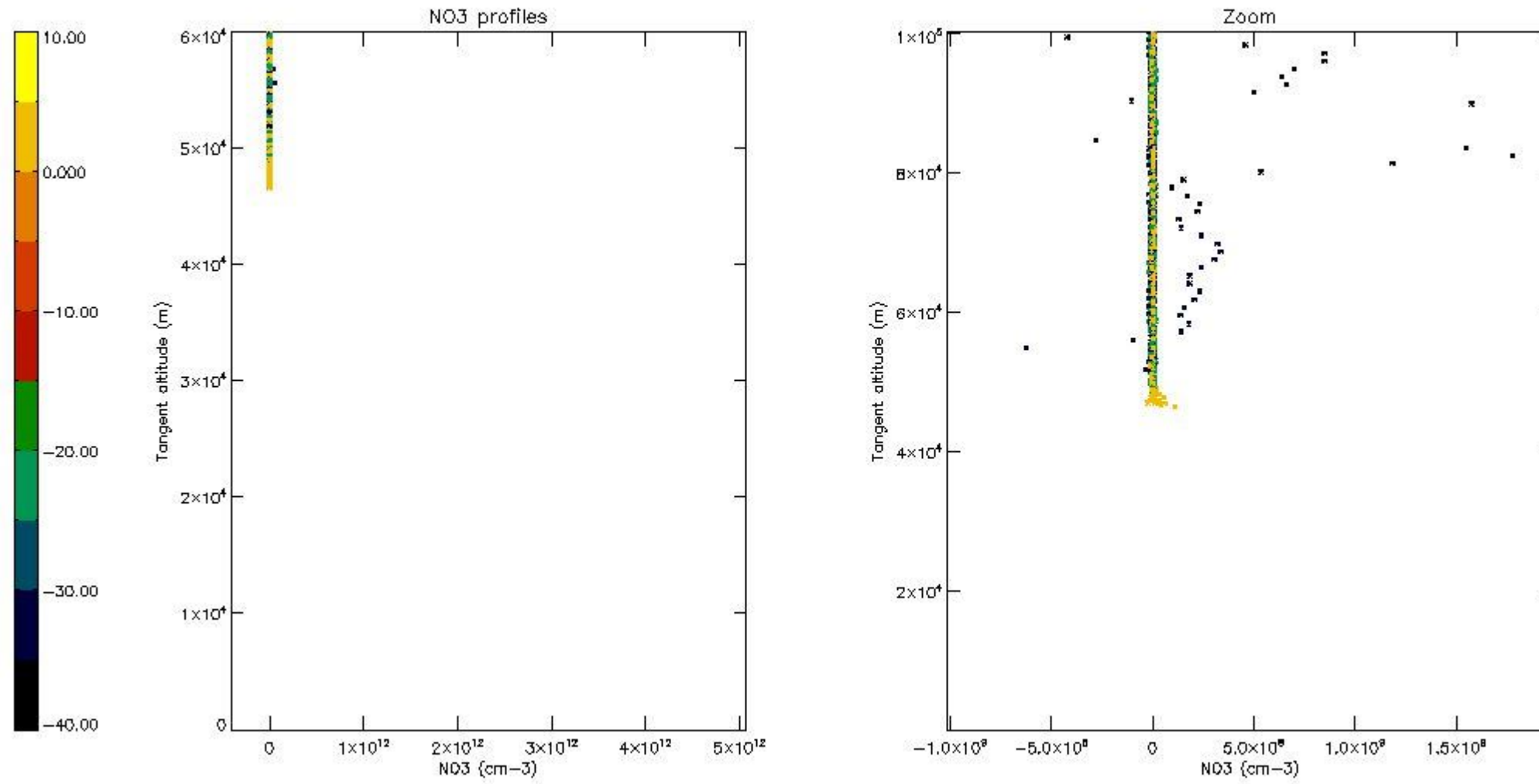
*5.6 Plot NO2 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.

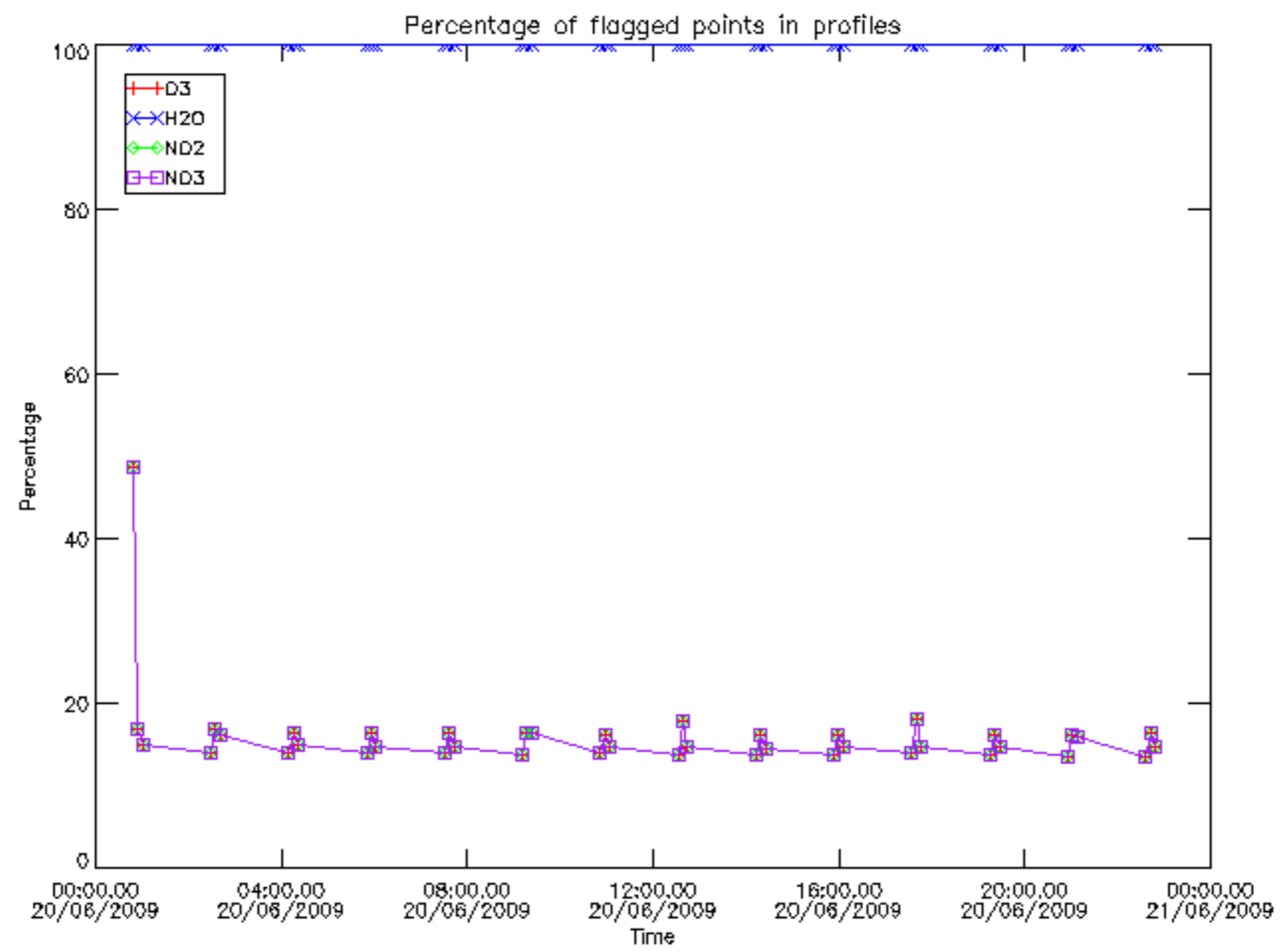


## 6. Auxiliary Data Files used for the production reported in section 2

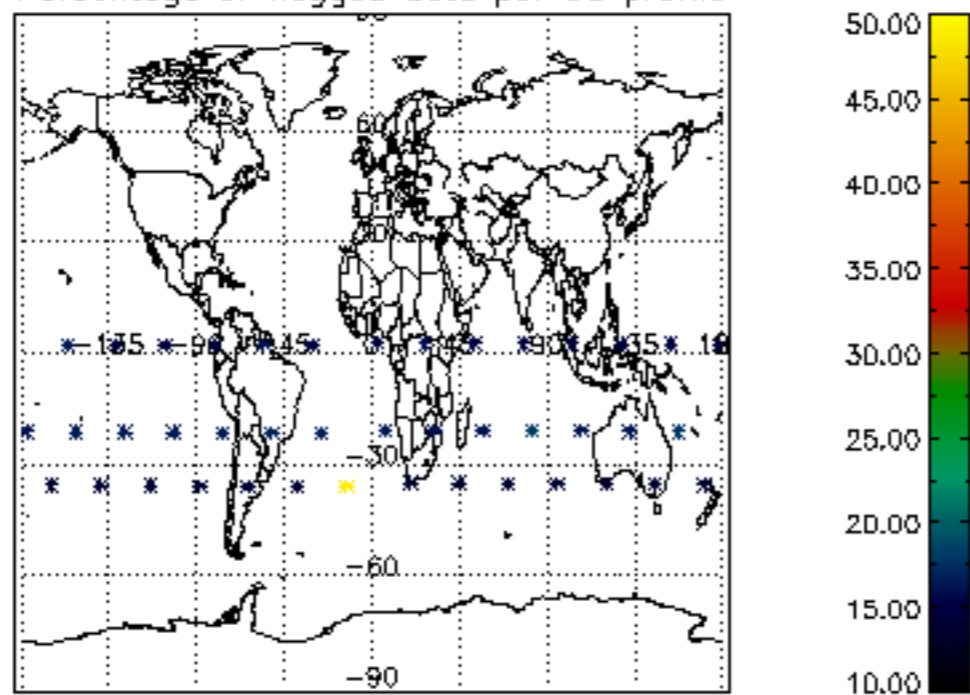
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	20-JUN-2009 00:00:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	20-JUN-2009 00:00:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	20-JUN-2009 00:00:05

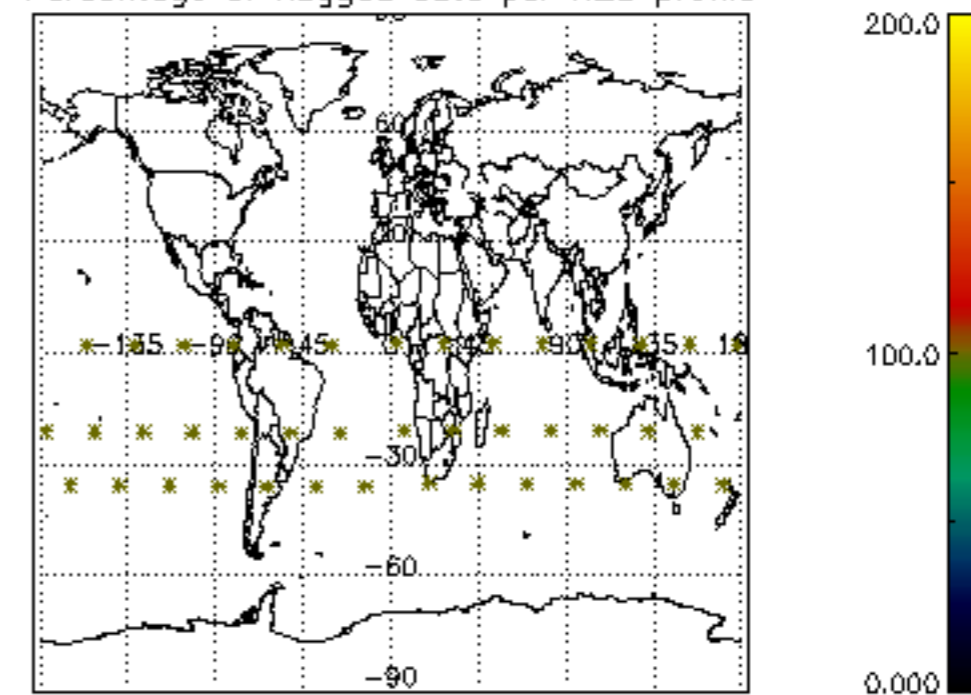




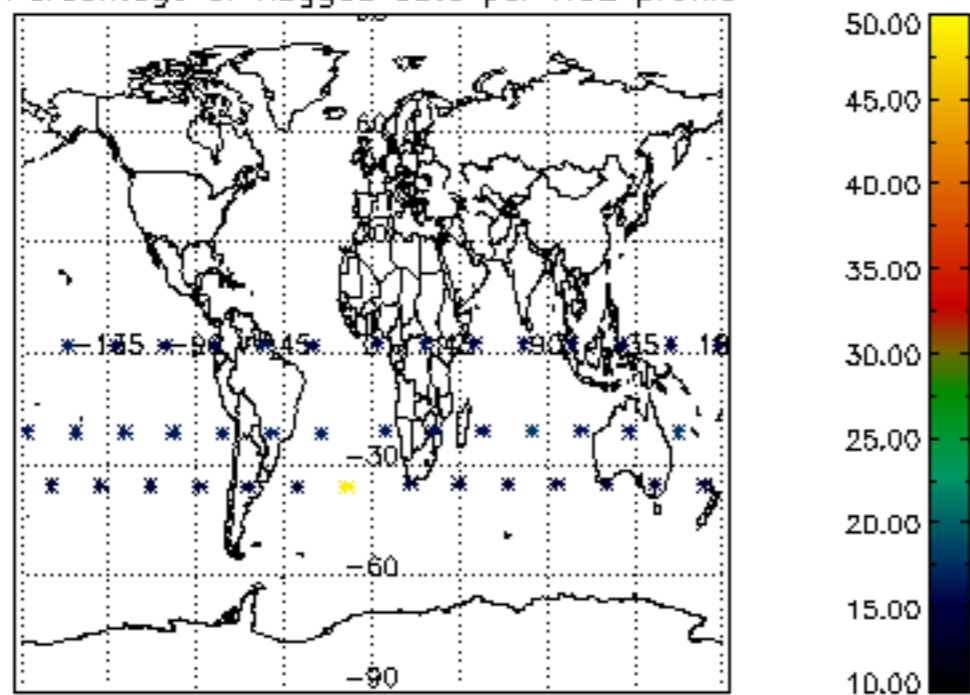
Percentage of flagged data per D3 profile



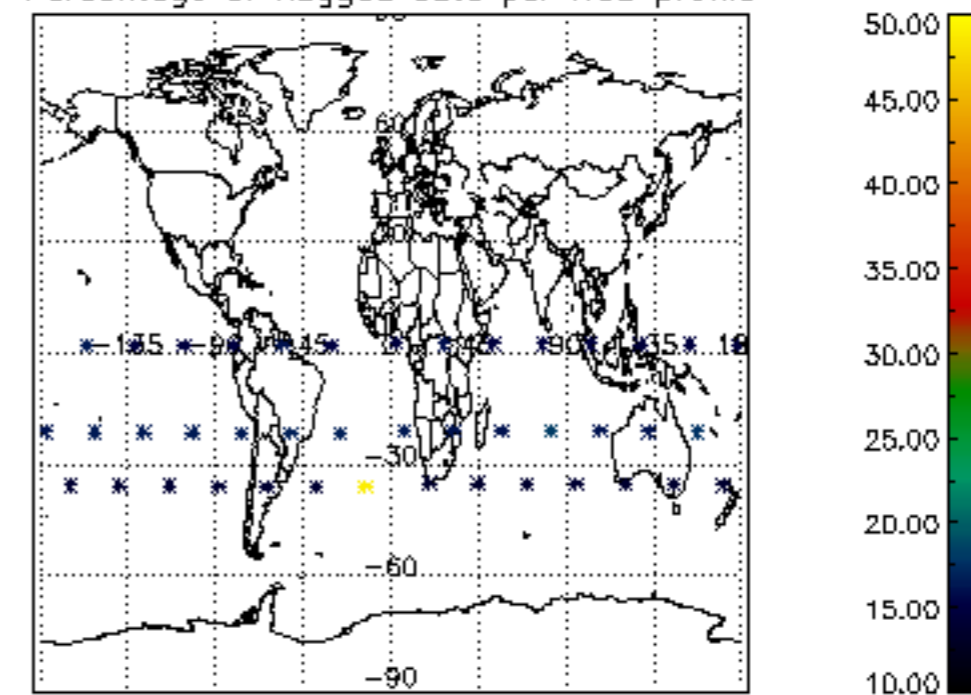
Percentage of flagged data per H2O profile

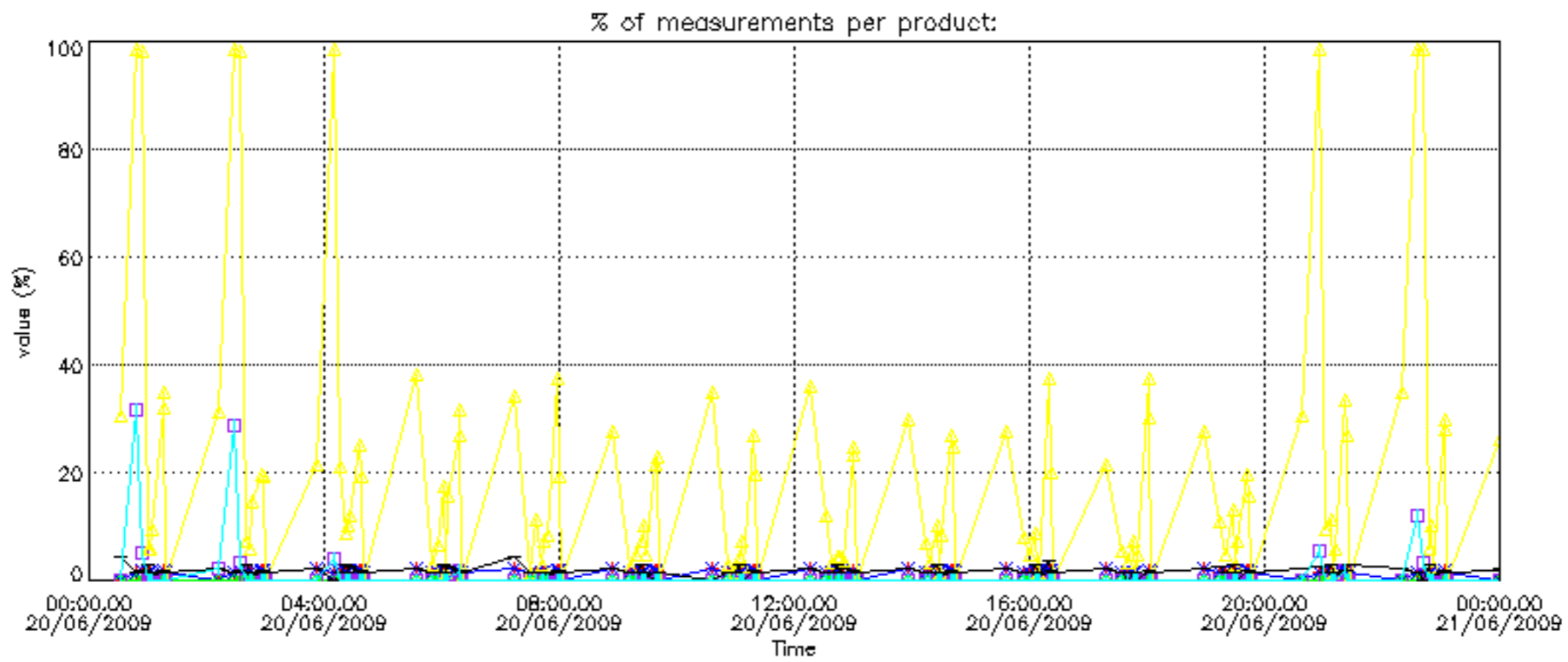
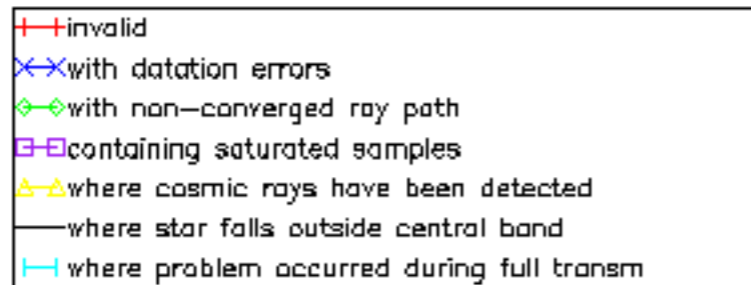


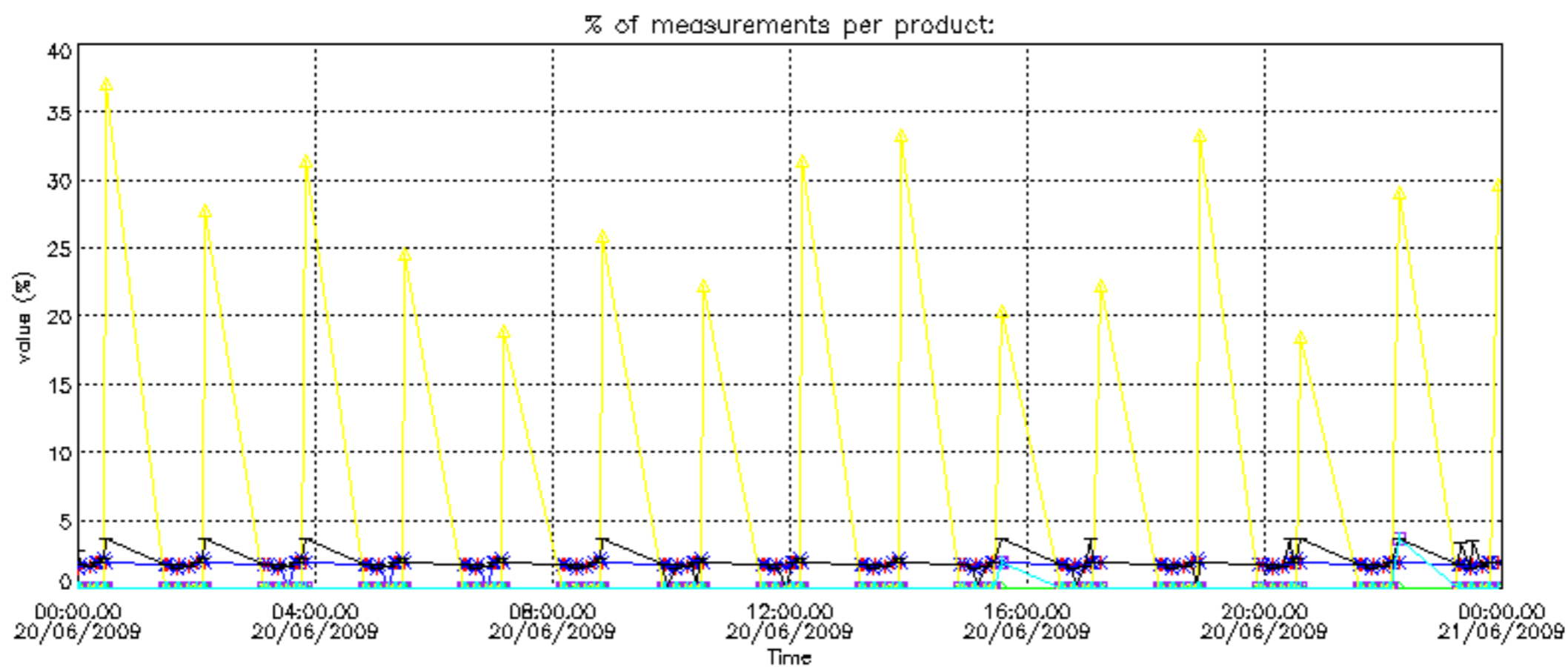
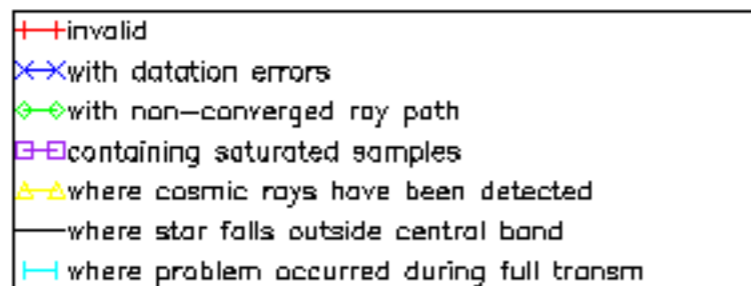
Percentage of flagged data per NO2 profile



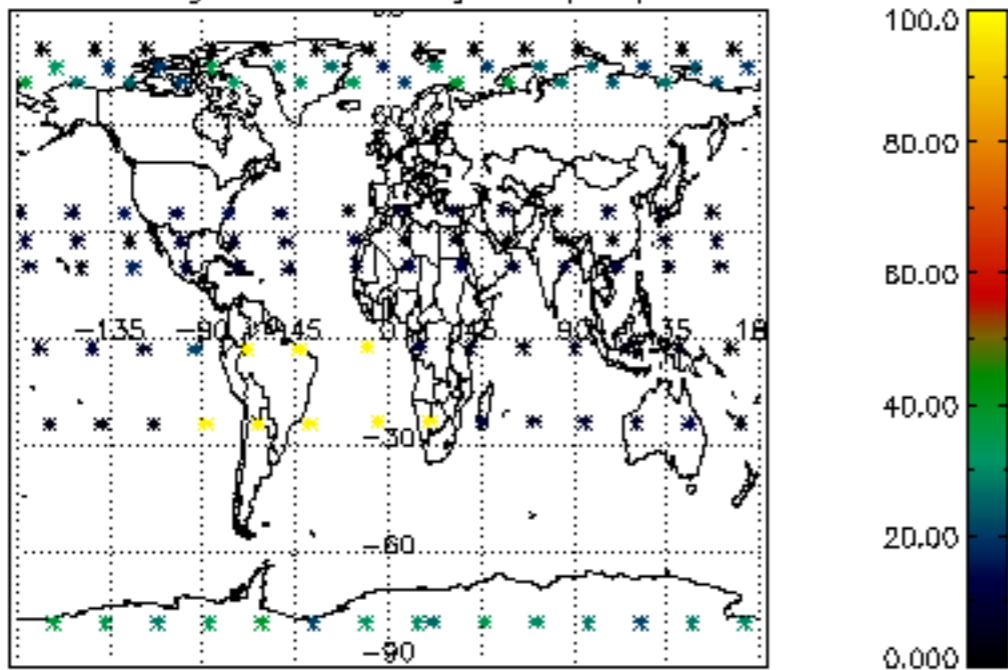
Percentage of flagged data per NO3 profile



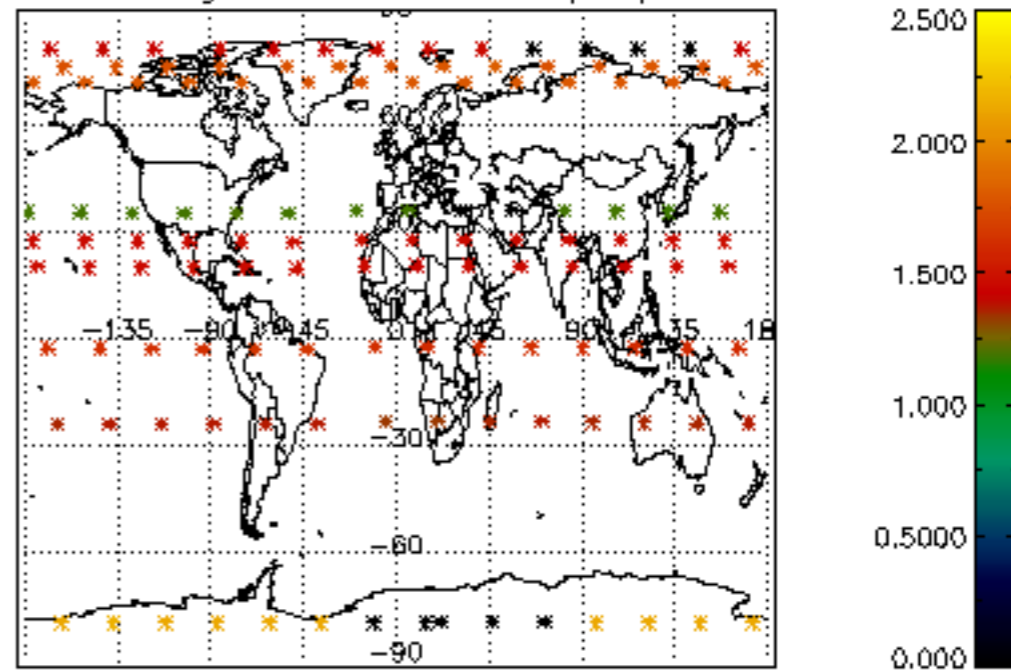




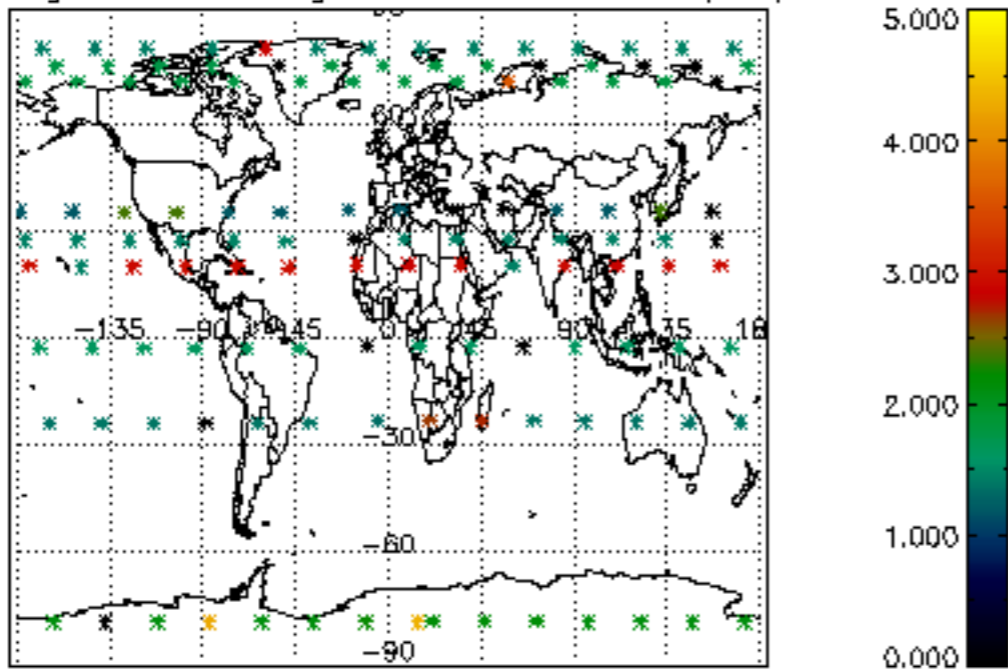
Percentage of cosmic ray hits per profile



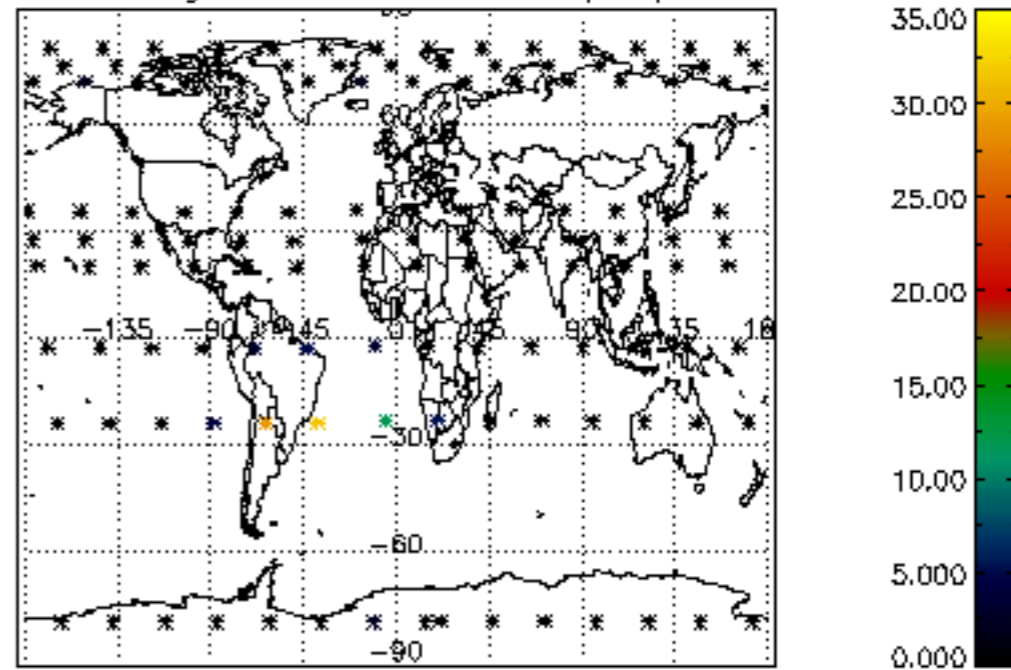
Percentage of datation errors per profile



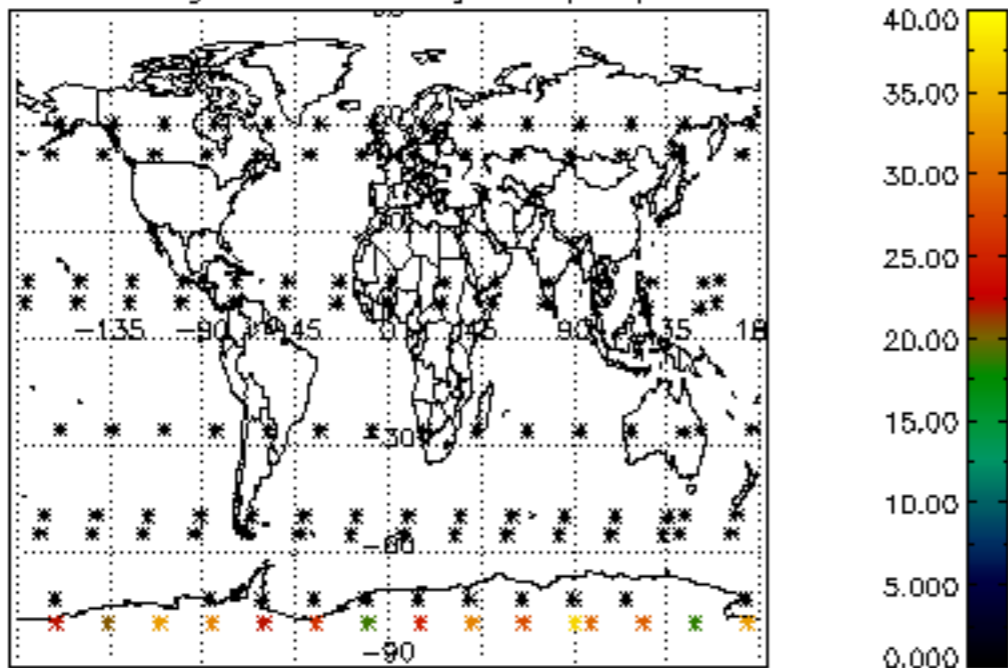
Percentage of star falling outside central band per profile



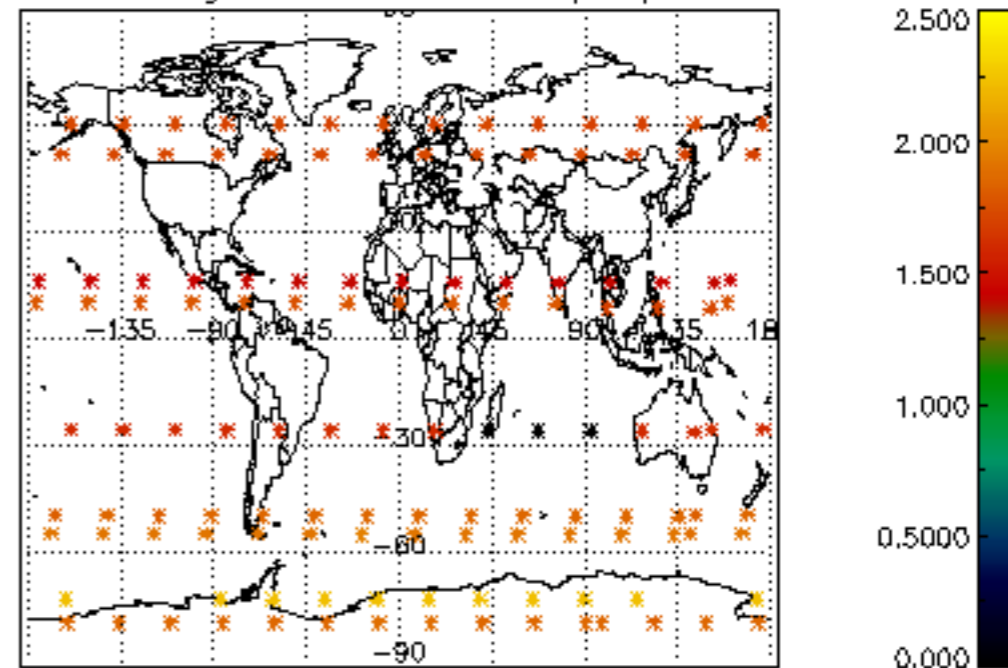
Percentage of saturation errors per profile



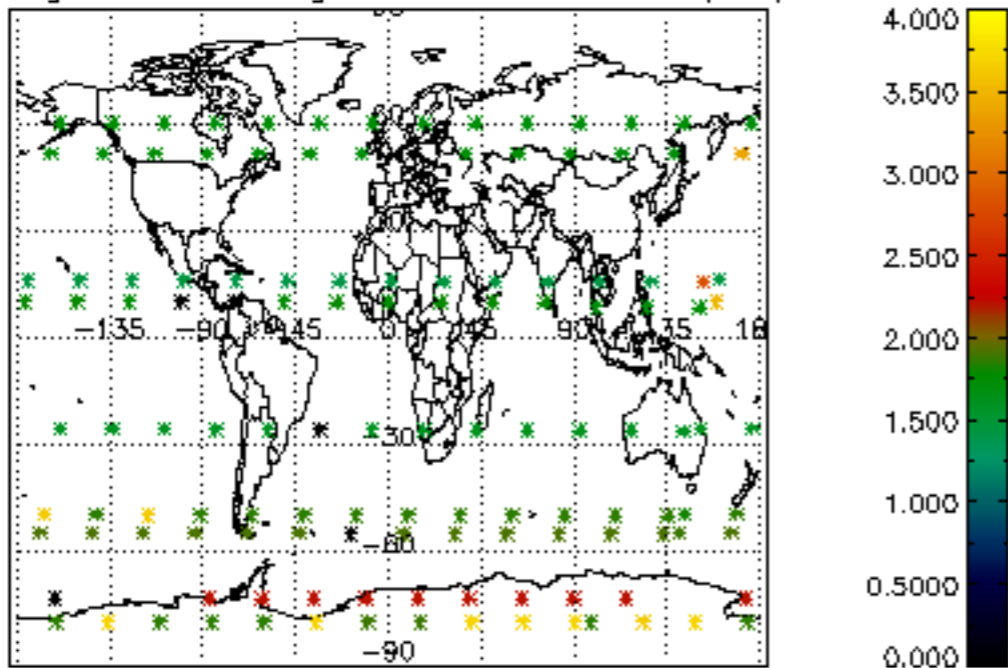
Percentage of cosmic ray hits per profile



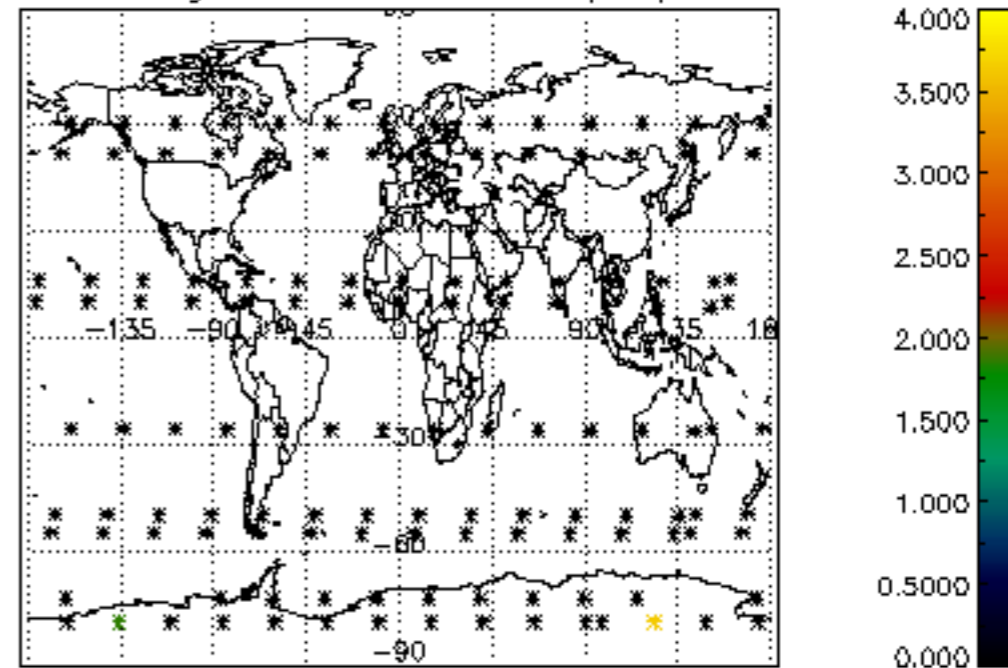
Percentage of datation errors per profile

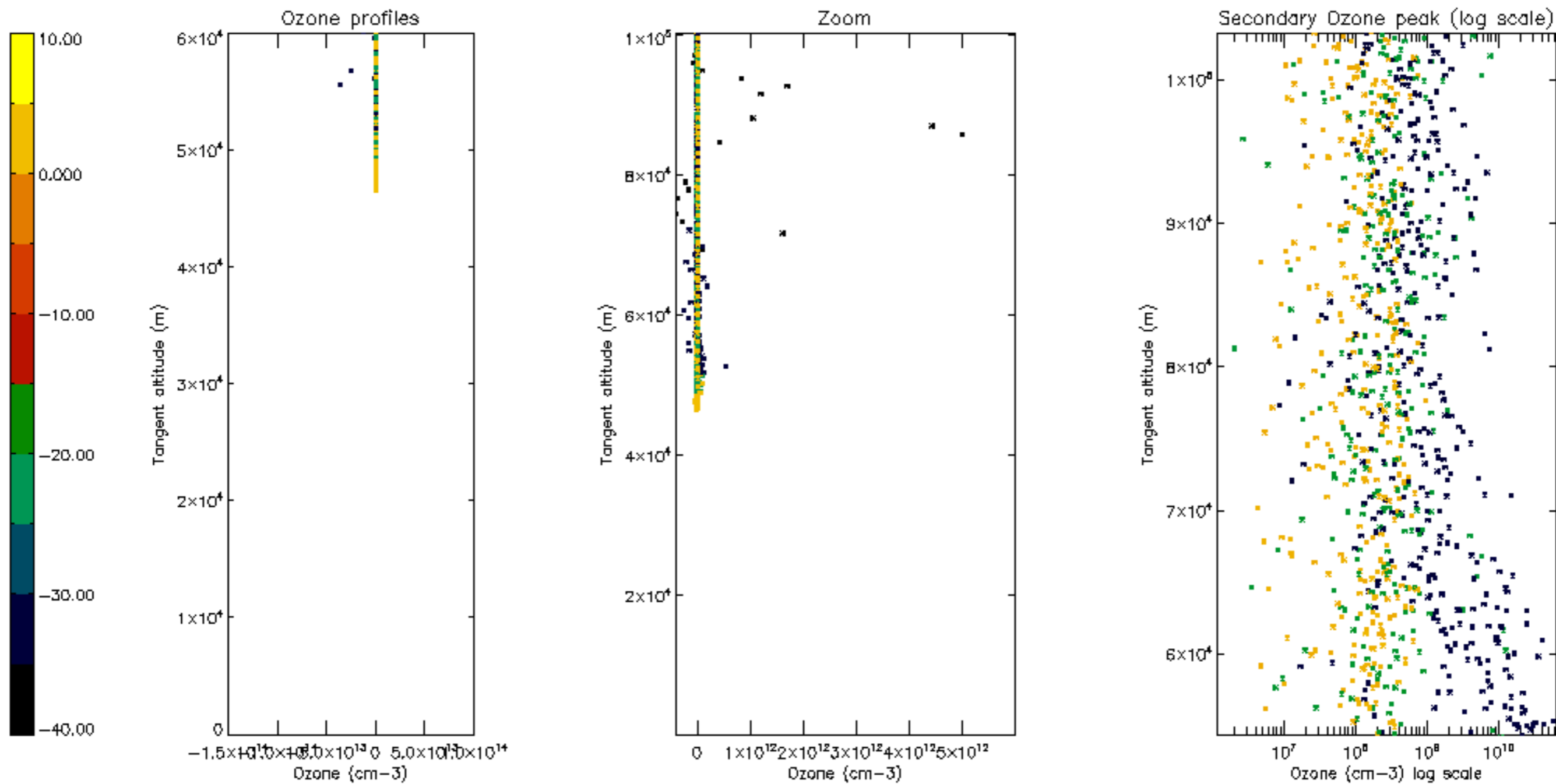


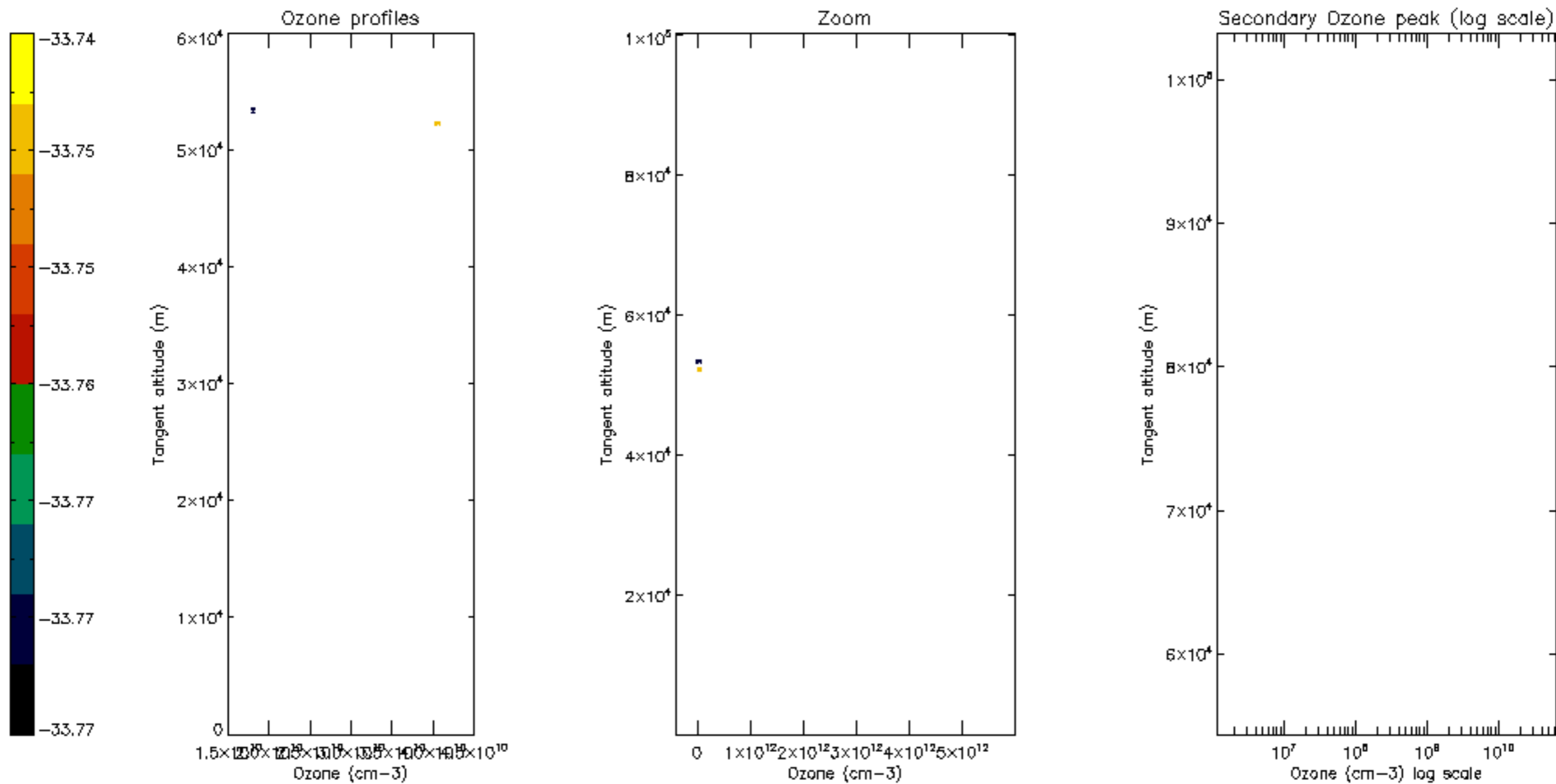
Percentage of star falling outside central band per profile



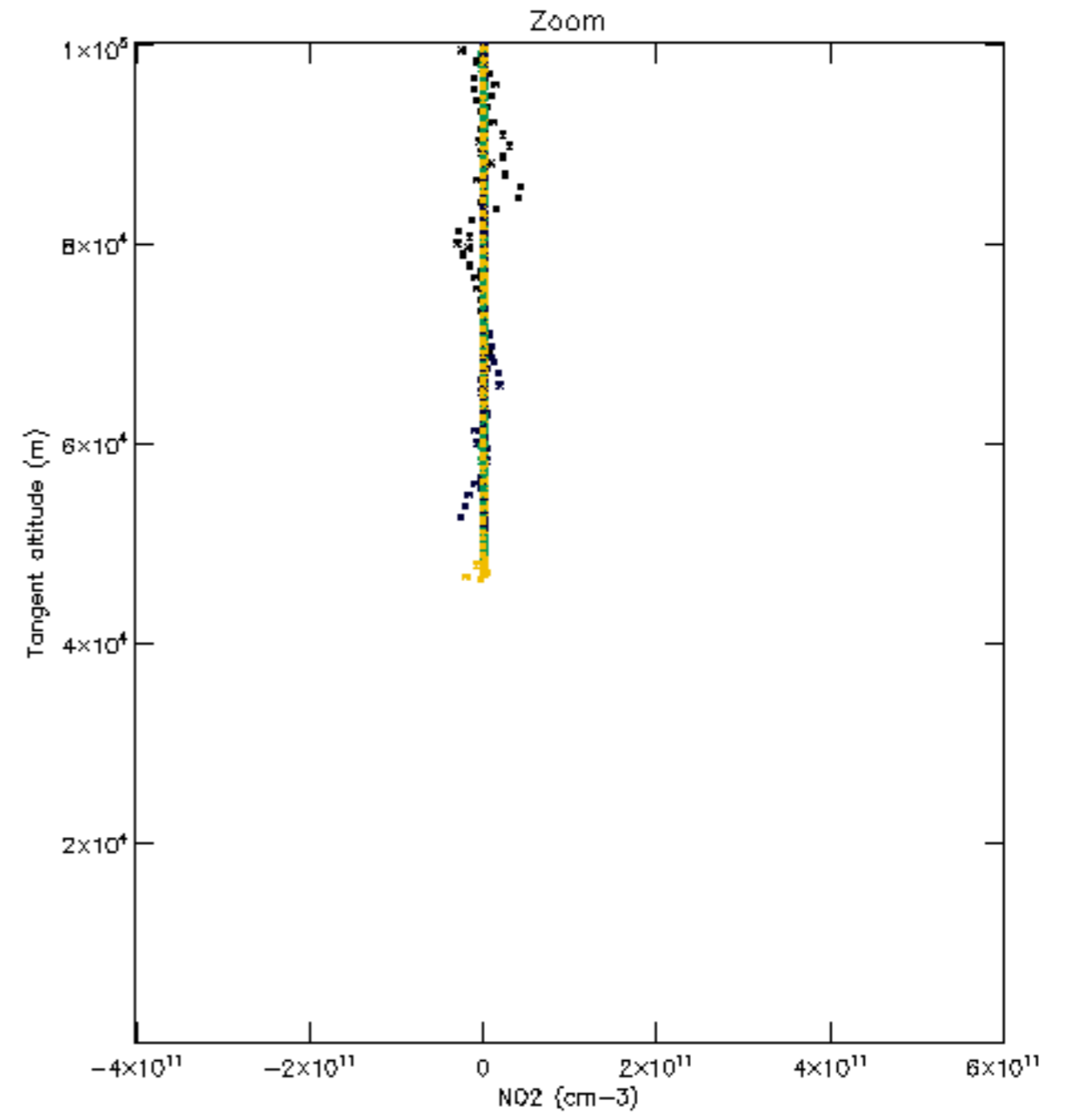
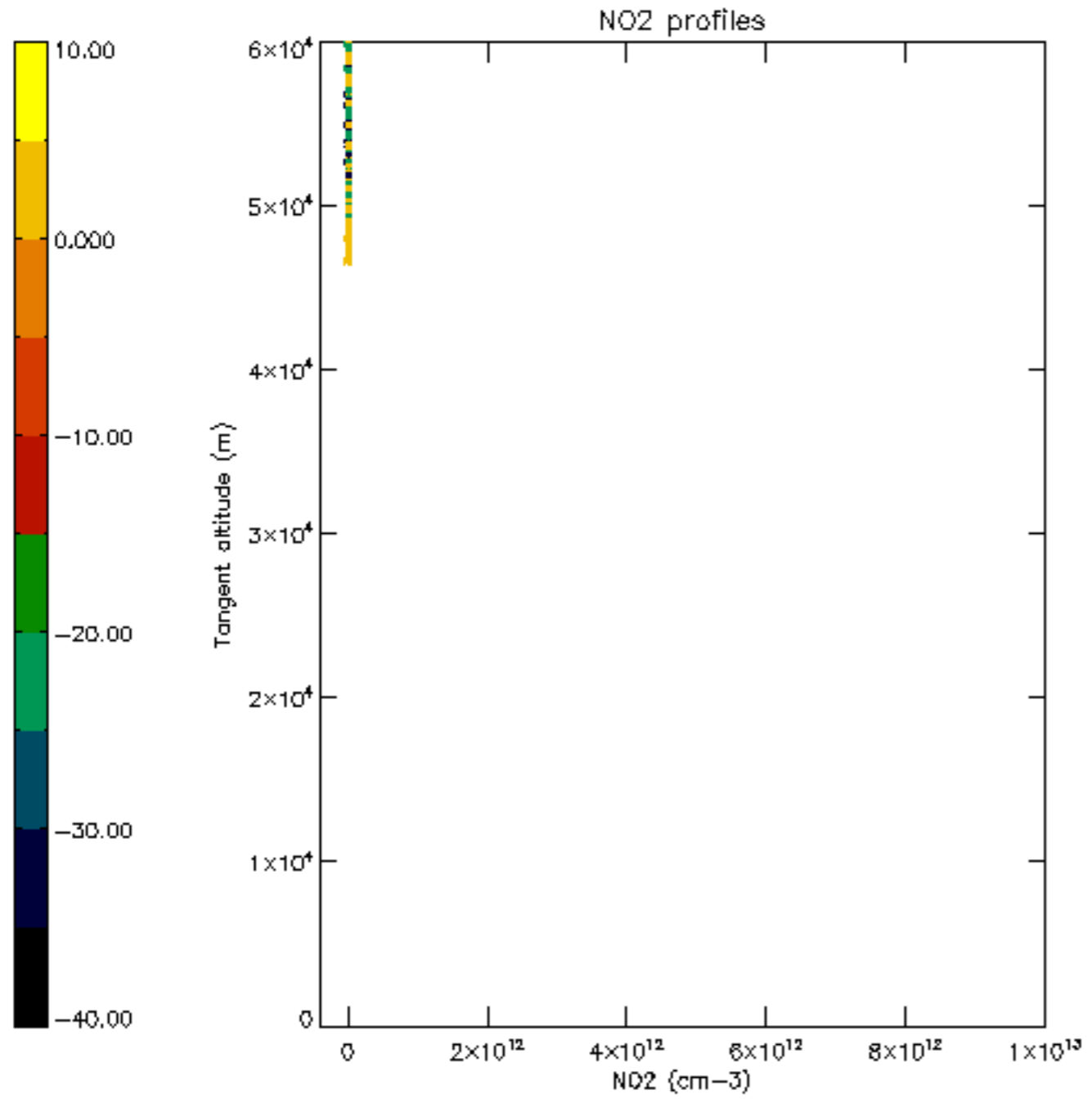
Percentage of saturation errors per profile

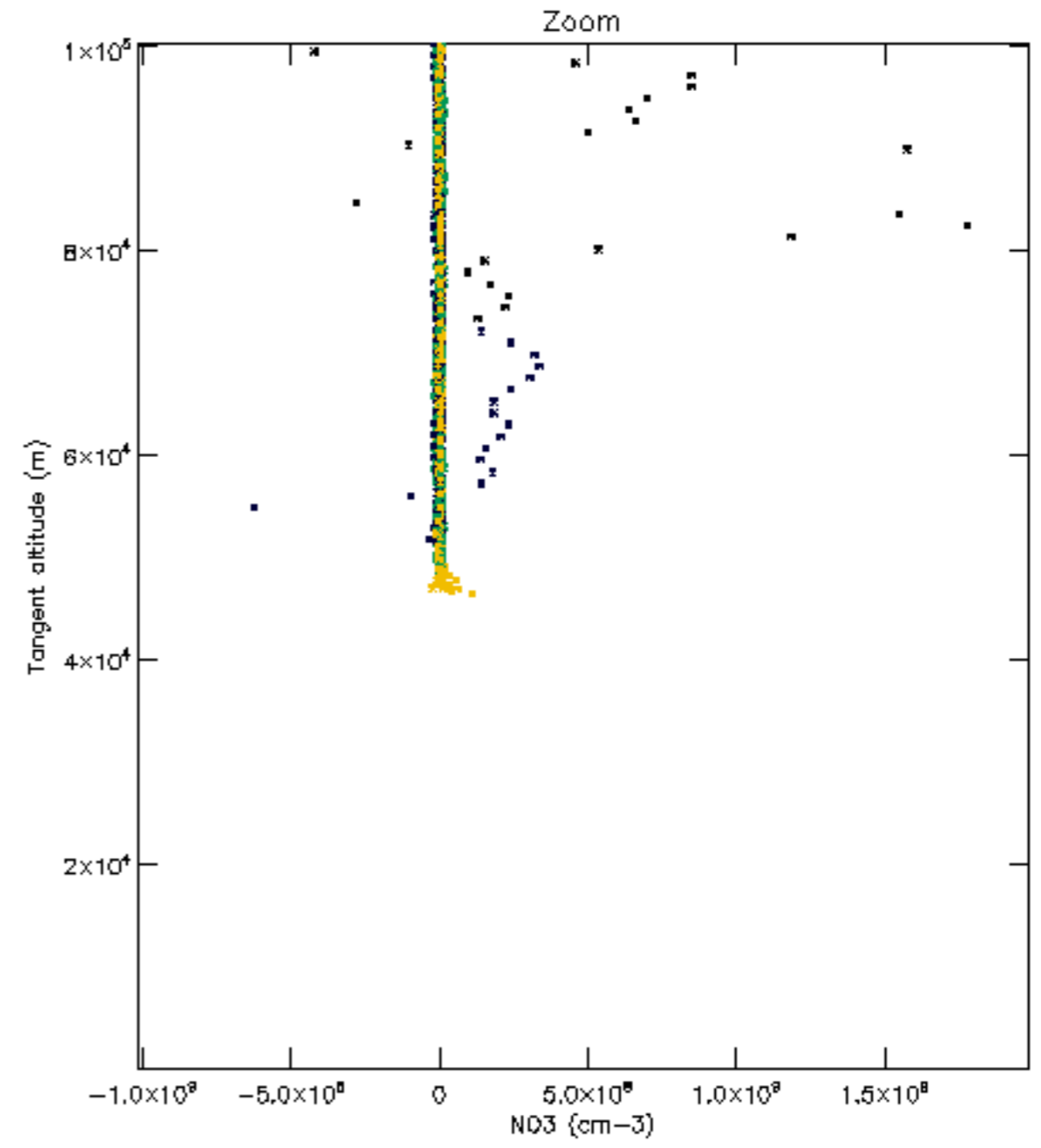
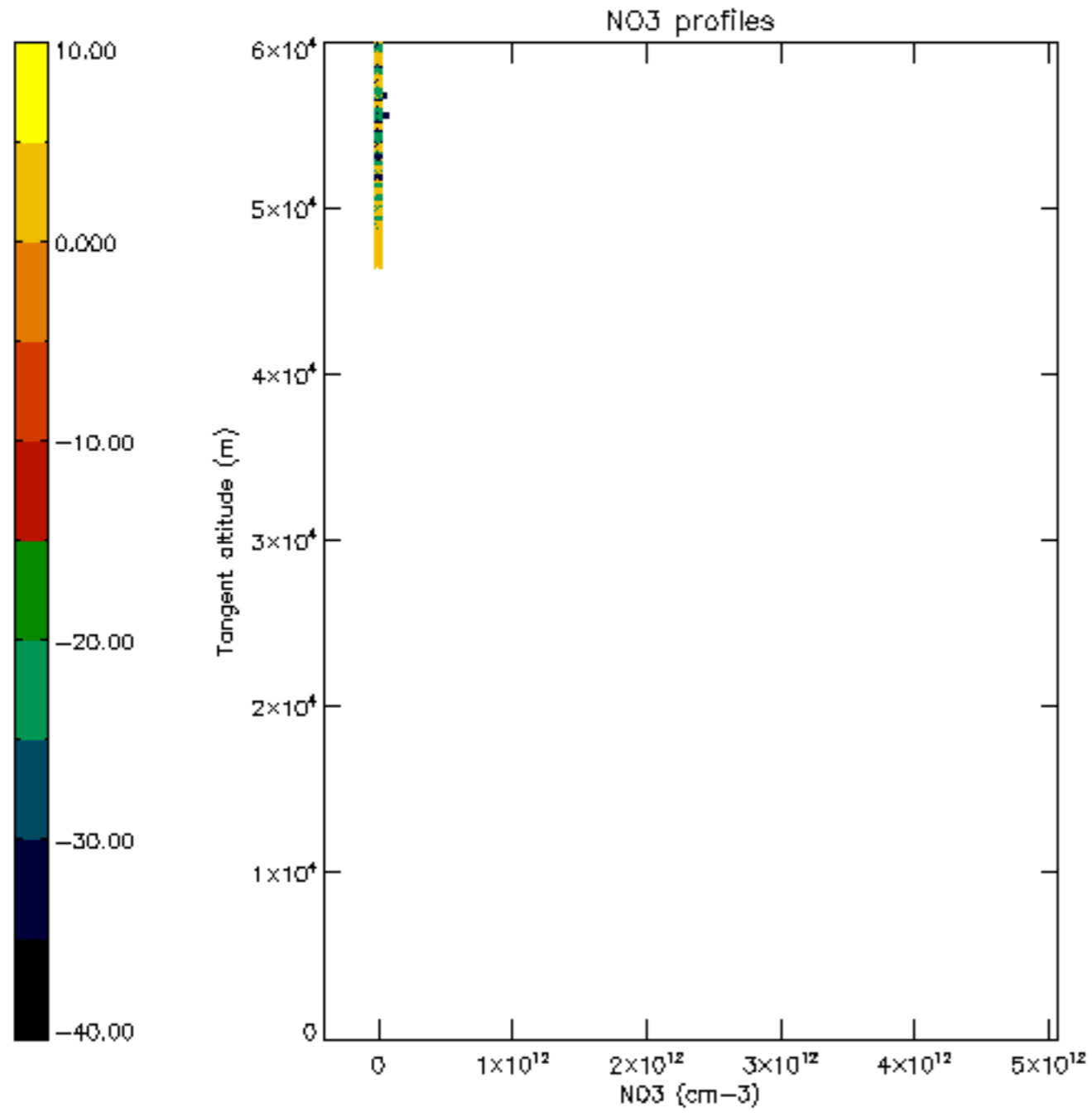


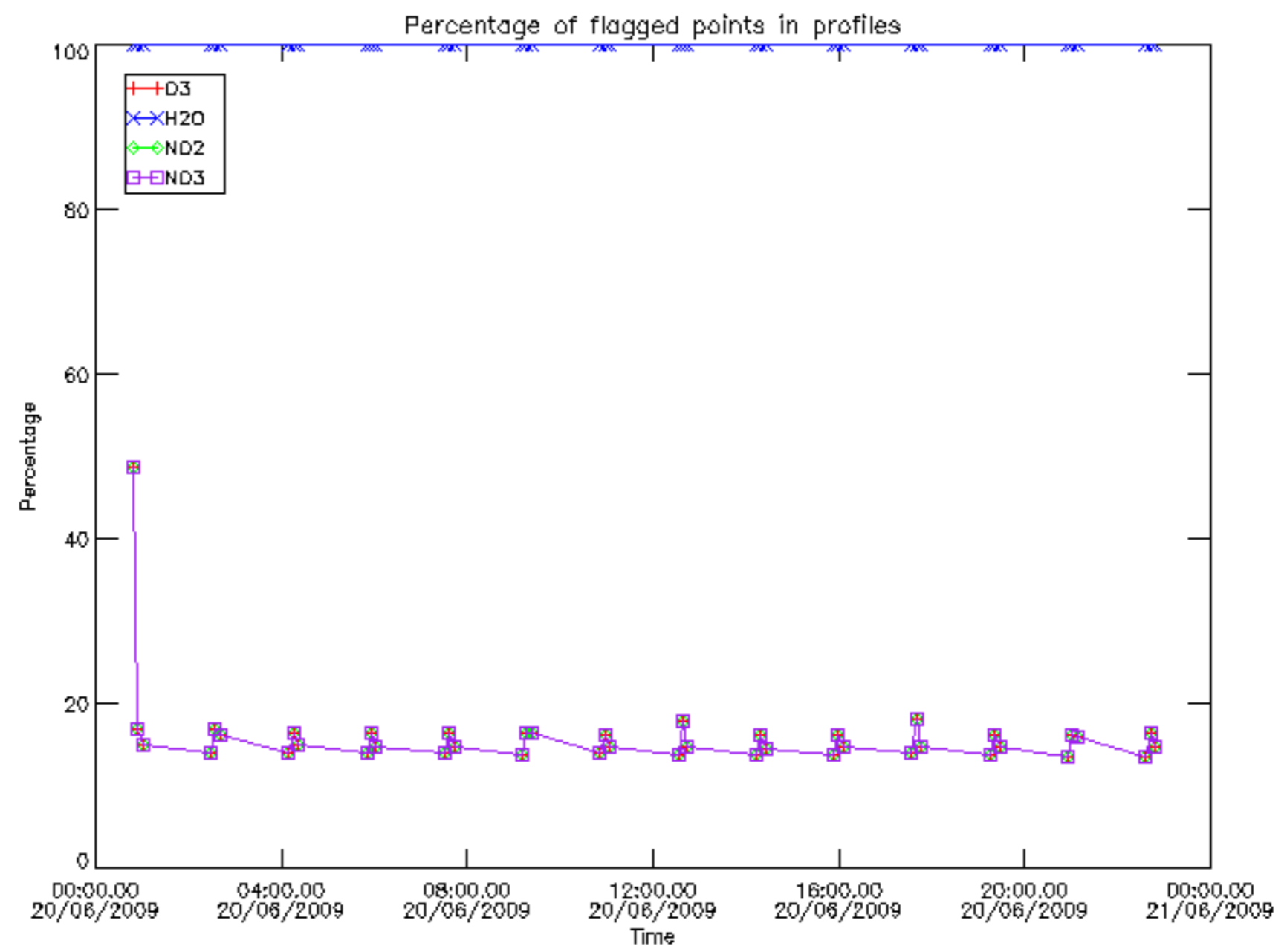




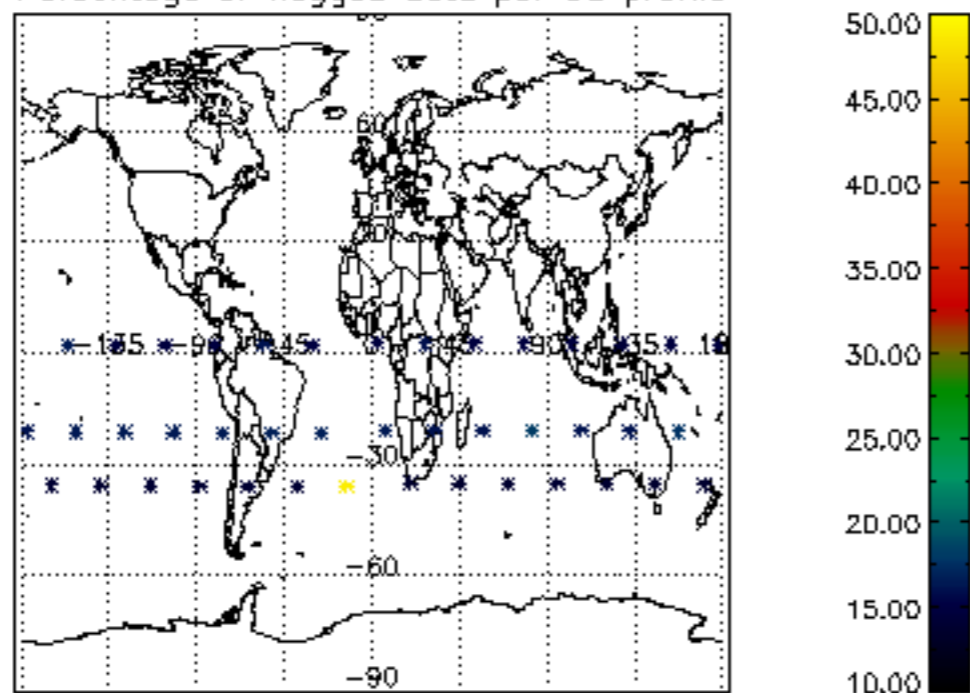




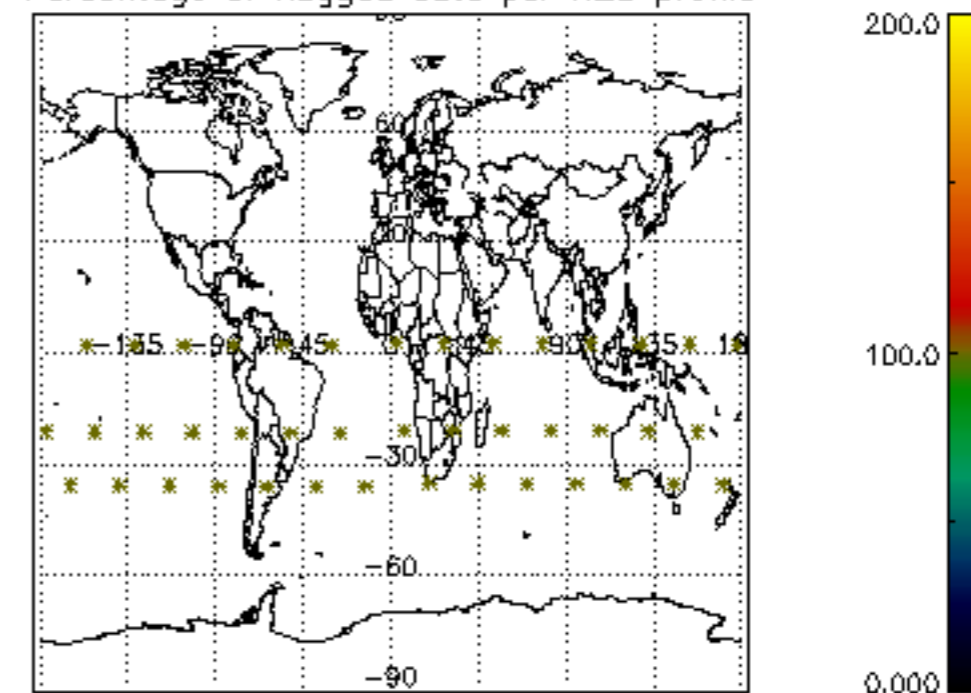




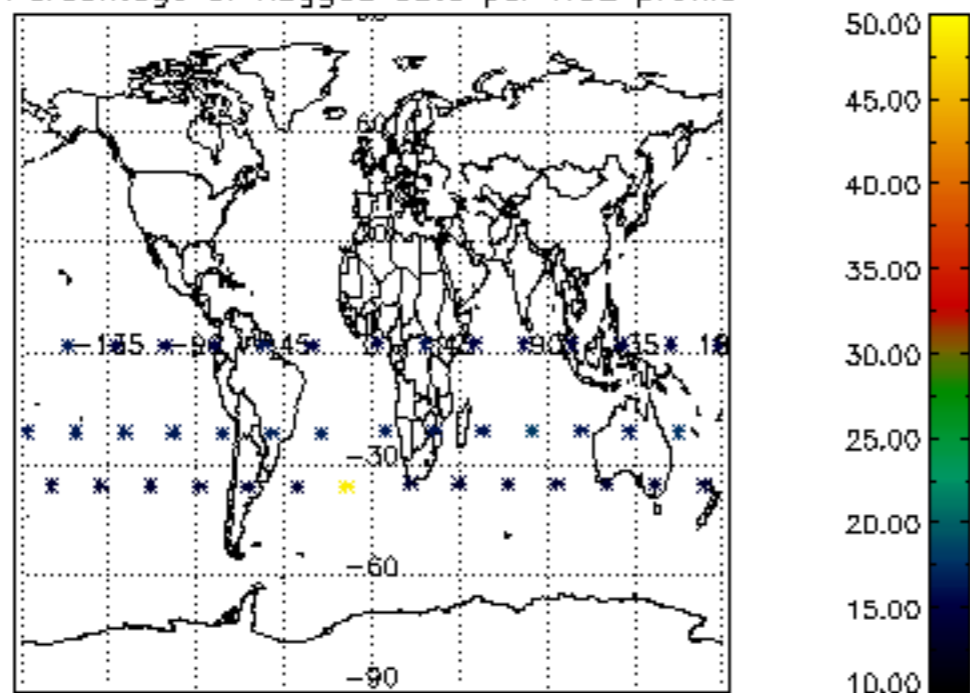
Percentage of flagged data per D3 profile



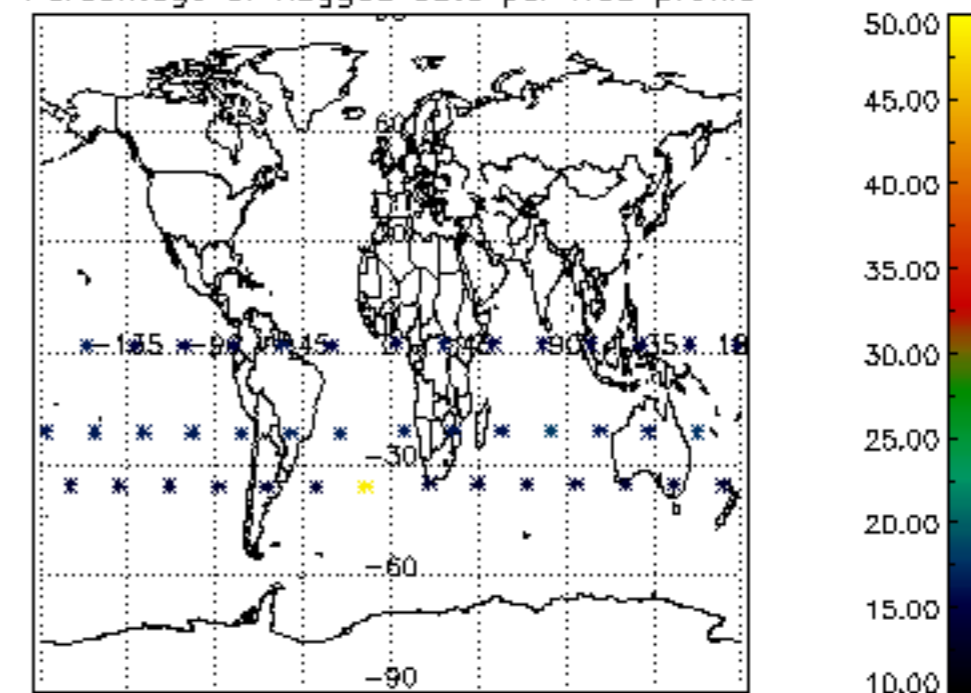
Percentage of flagged data per H2O profile

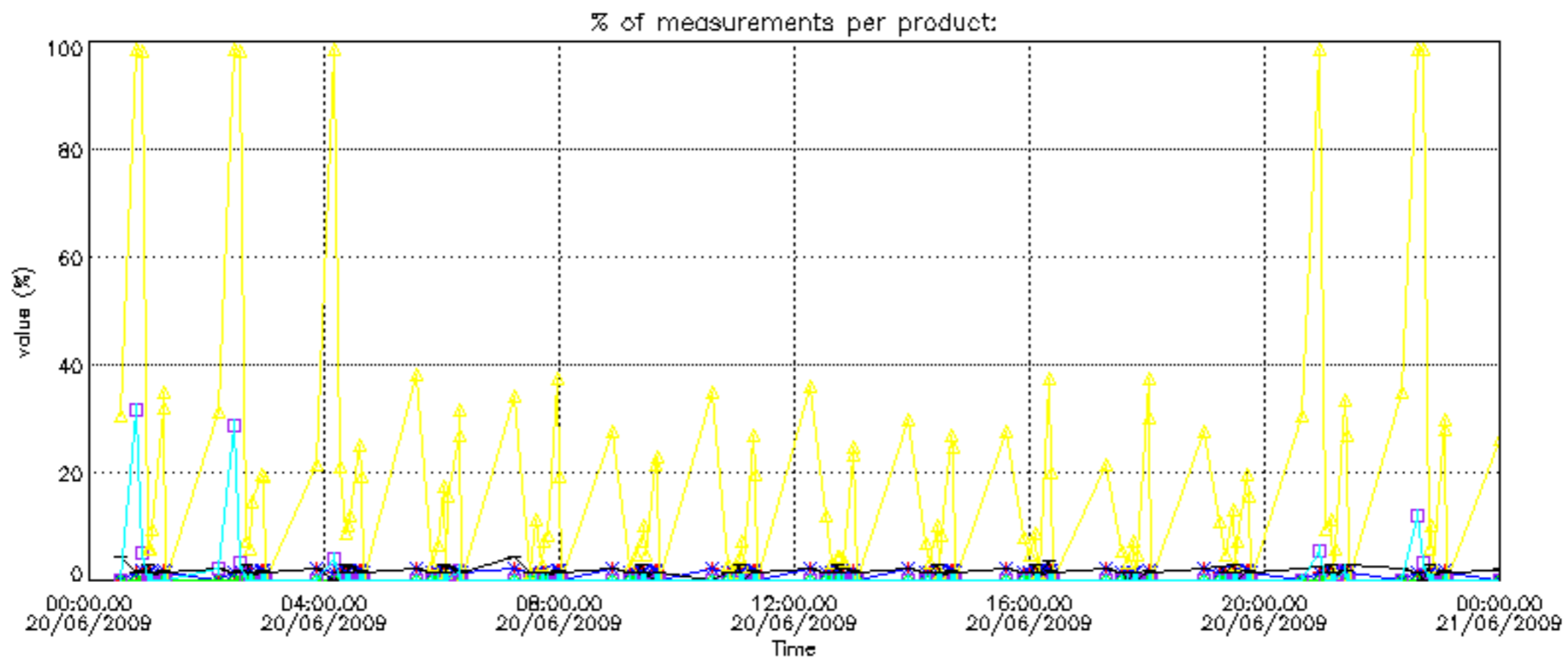
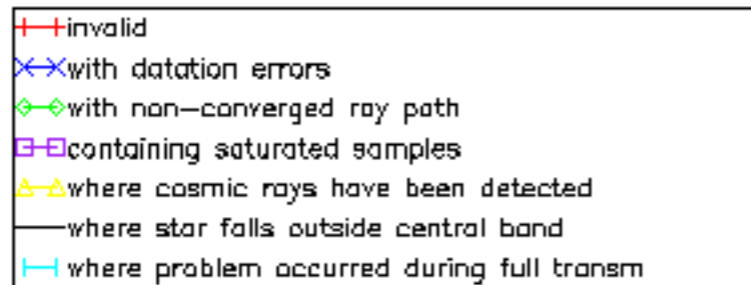


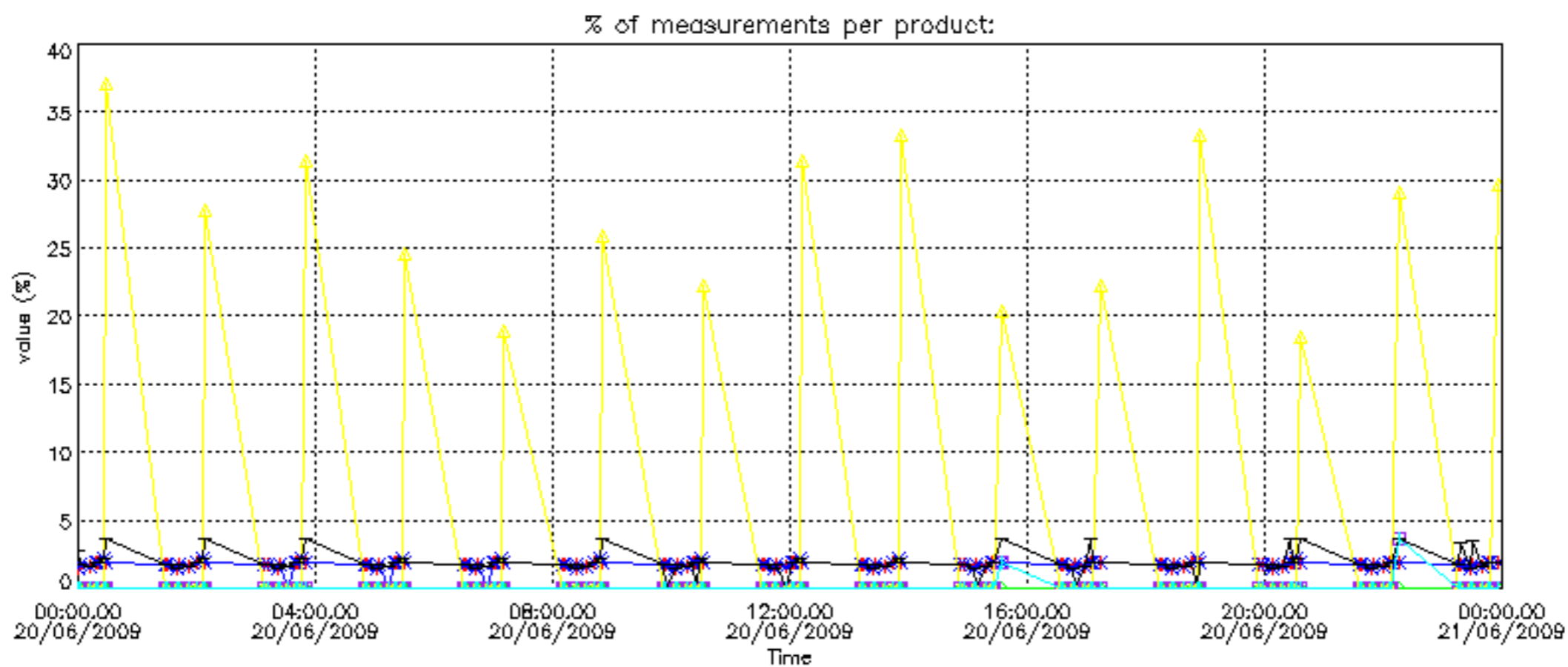
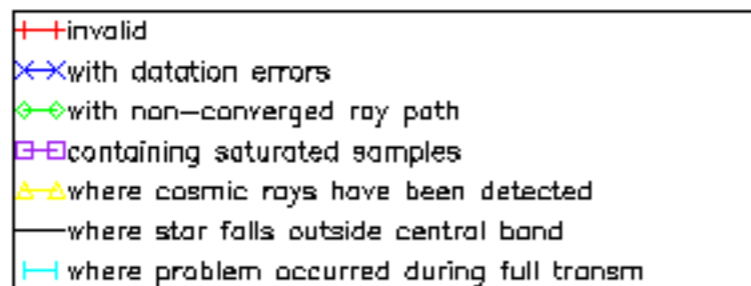
Percentage of flagged data per NO2 profile



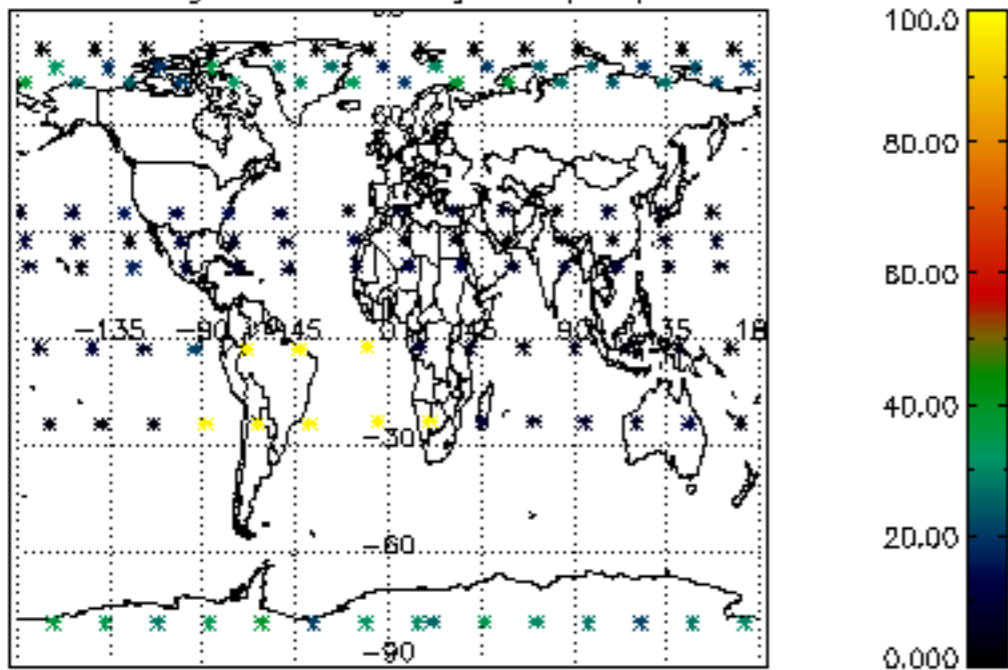
Percentage of flagged data per NO3 profile



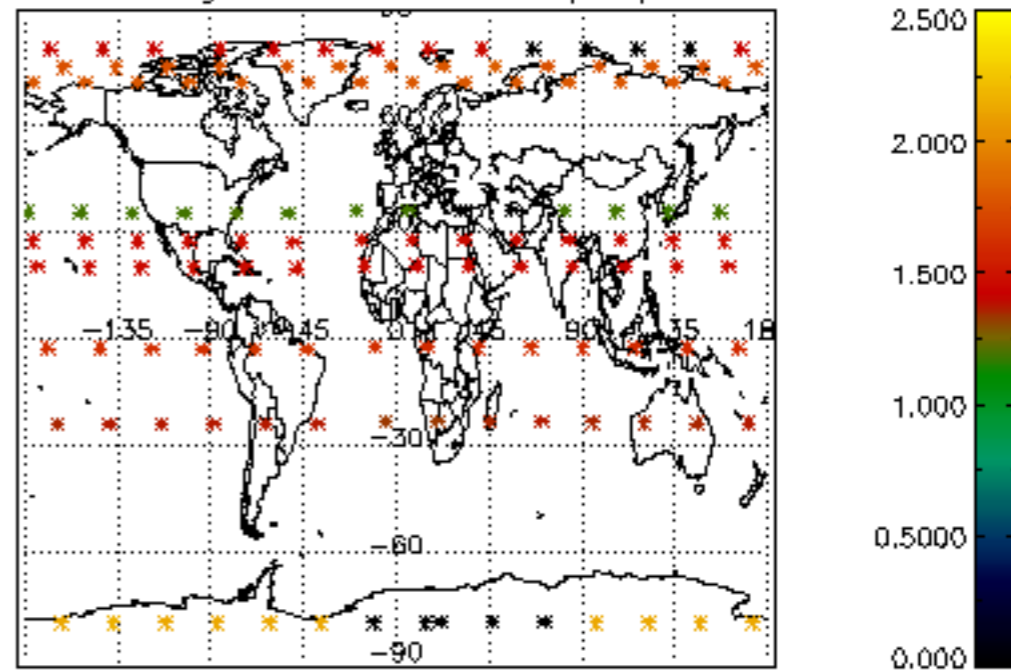




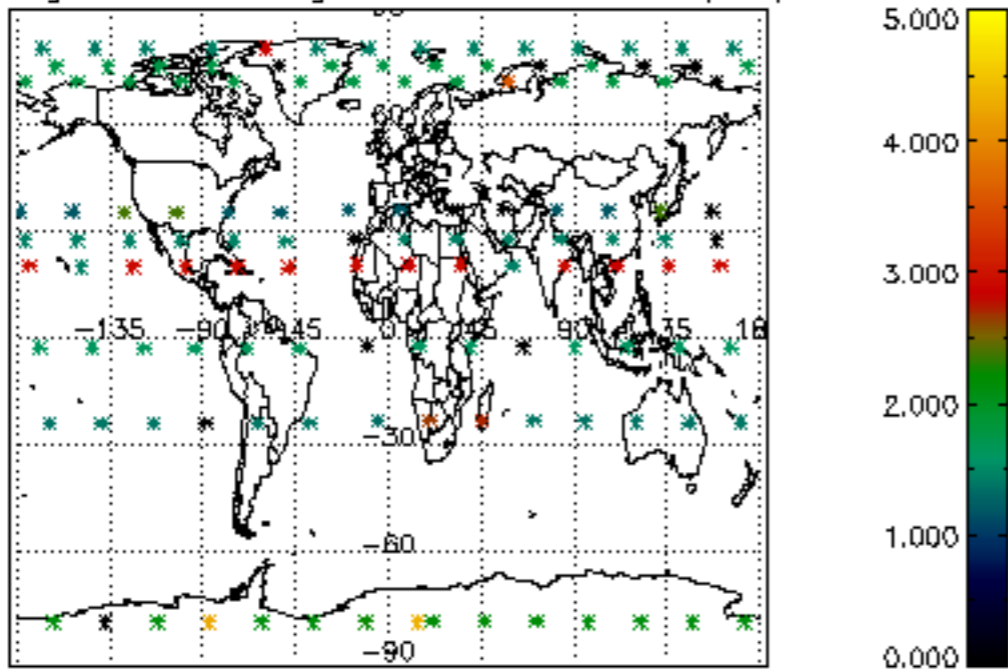
Percentage of cosmic ray hits per profile



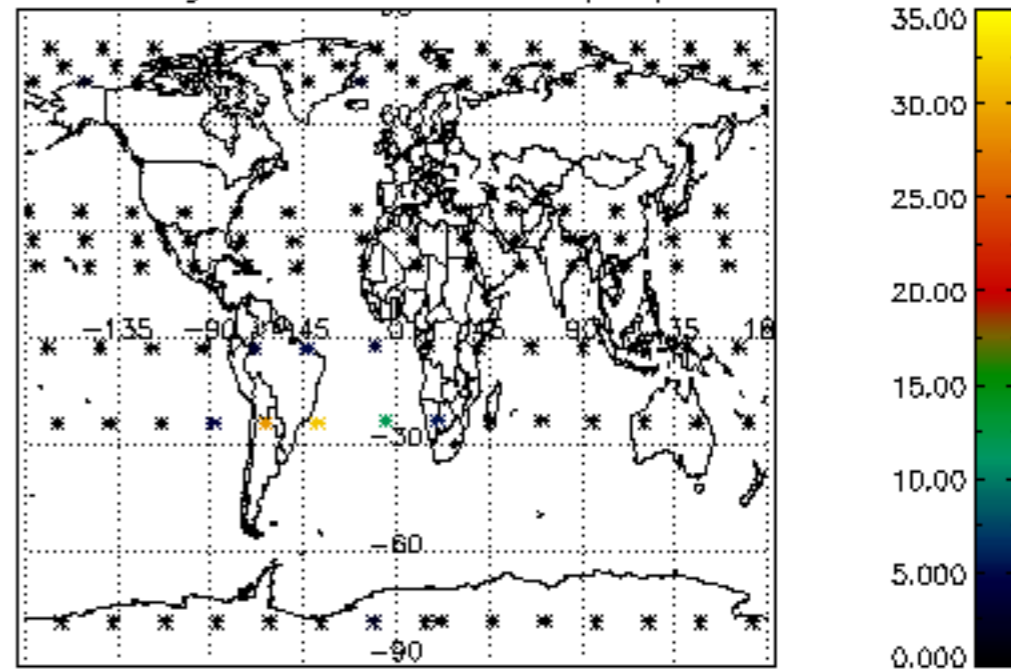
Percentage of datation errors per profile



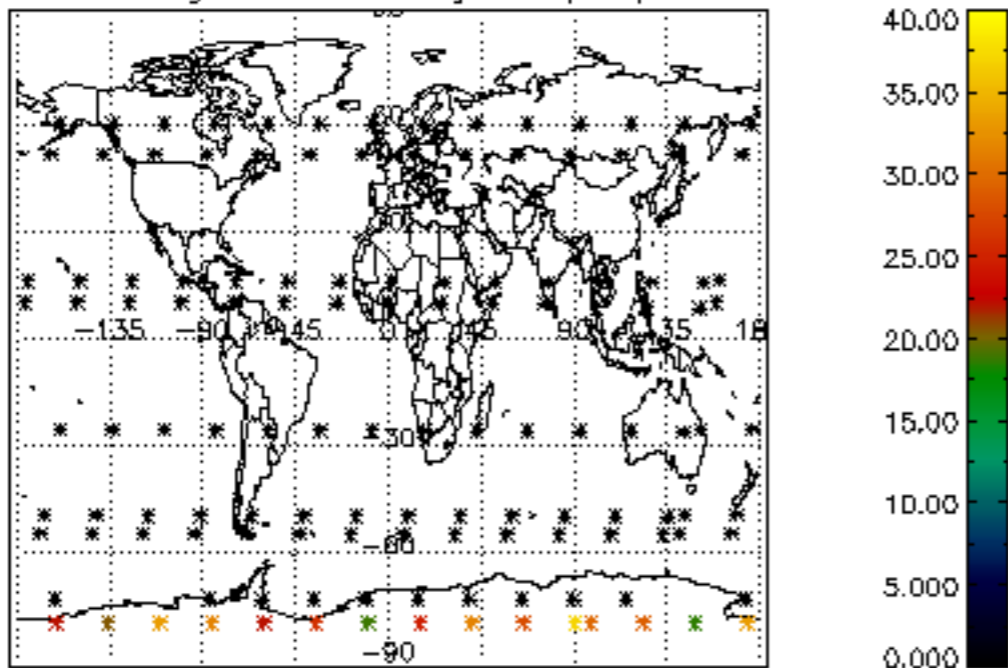
Percentage of star falling outside central band per profile



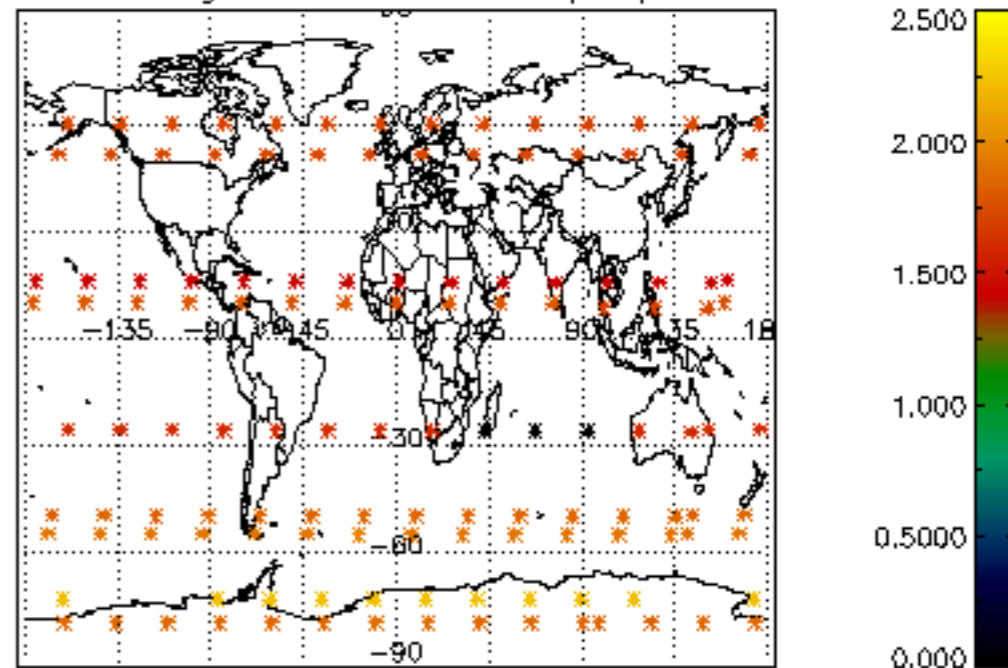
Percentage of saturation errors per profile



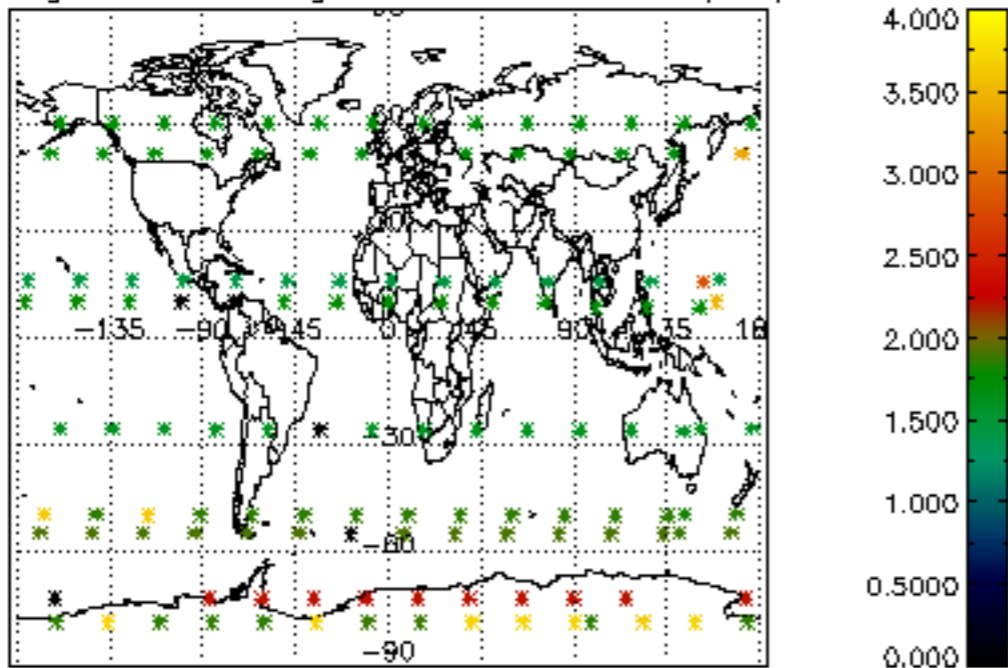
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

