

# 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 17:52:53
Data source version	GOMOS/6.01
Start time of products	28-09-2011 (28SEP2011 00:00:00)
Stop time of products	29-09-2011 (29SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	54
Nb of prods with errors	0

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

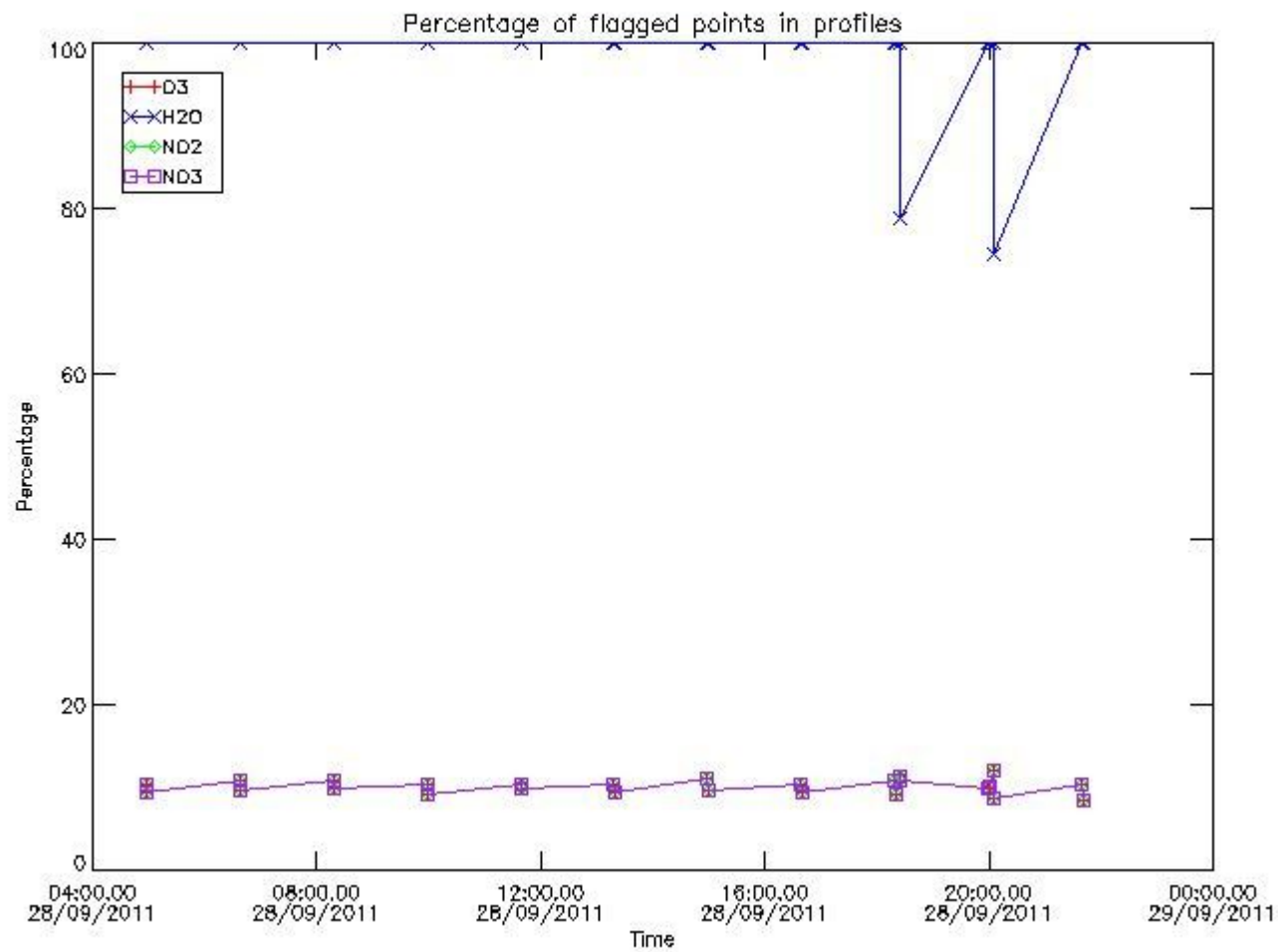
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20110928_033558_000000513107_00076_50090_0476.N1	28-SEP-2011 03:35:58	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50090	No
2	GOM_NL__2PRFIN20110928_041137_000000403107_00076_50090_0477.N1	28-SEP-2011 04:11:37	Bright	40.000	76	27Gam Cas	2.3000	30000.	80	50090	No
3	GOM_NL__2PRFIN20110928_045702_000000503107_00076_50090_0478.N1	28-SEP-2011 04:57:02	Dark	49.500	88	31Eta CMa	2.4480	20000.	99	50090	No
4	GOM_NL__2PRFIN20110928_045840_000000553107_00076_50090_0479.N1	28-SEP-2011 04:58:40	Dark	54.500	23	21Eps CMa	1.5020	26000.	109	50090	No
5	GOM_NL__2PRFIN20110928_051613_000000503107_00077_50091_0490.N1	28-SEP-2011 05:16:13	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50091	No
6	GOM_NL__2PRFIN20110928_055151_000000393107_00077_50091_0491.N1	28-SEP-2011 05:51:51	Bright	39.000	76	27Gam Cas	2.3000	30000.	78	50091	No
7	GOM_NL__2PRFIN20110928_063717_000000473107_00077_50091_0492.N1	28-SEP-2011 06:37:17	Dark	47.000	88	31Eta CMa	2.4480	20000.	94	50091	No
8	GOM_NL__2PRFIN20110928_063855_000000533107_00077_50091_0493.N1	28-SEP-2011 06:38:55	Dark	53.000	23	21Eps CMa	1.5020	26000.	106	50091	No
9	GOM_NL__2PRFIN20110928_065628_000000523107_00078_50092_0508.N1	28-SEP-2011 06:56:28	Straylight	51.500	157	The1Eri	2.9060	9300.0	103	50092	No
10	GOM_NL__2PRFIN20110928_073041_000000403107_00078_50092_0509.N1	28-SEP-2011 07:30:41	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	50092	No
11	GOM_NL__2PRFIN20110928_073204_000000403107_00078_50092_0510.N1	28-SEP-2011 07:32:04	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	50092	No
12	GOM_NL__2PRFIN20110928_081732_000000483107_00078_50092_0511.N1	28-SEP-2011 08:17:32	Dark	47.500	88	31Eta CMa	2.4480	20000.	95	50092	No
13	GOM_NL__2PRFIN20110928_081911_000000523107_00078_50092_0512.N1	28-SEP-2011 08:19:11	Dark	52.000	23	21Eps CMa	1.5020	26000.	104	50092	No
14	GOM_NL__2PRFIN20110928_083643_000000493107_00079_50093_0558.N1	28-SEP-2011 08:36:43	Straylight	49.000	157	The1Eri	2.9060	9300.0	98	50093	No
15	GOM_NL__2PRFIN20110928_091218_000000413107_00079_50093_0559.N1	28-SEP-2011 09:12:18	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50093	No
16	GOM_NL__2PRFIN20110928_095747_000000493107_00079_50093_0560.N1	28-SEP-2011 09:57:47	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50093	No
17	GOM_NL__2PRFIN20110928_095926_000000613107_00079_50093_0561.N1	28-SEP-2011 09:59:26	Dark	61.000	23	21Eps CMa	1.5020	26000.	122	50093	No
18	GOM_NL__2PRFIN20110928_101657_000000513107_00080_50094_0583.N1	28-SEP-2011 10:16:57	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50094	No
19	GOM_NL__2PRFIN20110928_105109_000000403107_00080_50094_0584.N1	28-SEP-2011 10:51:09	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	50094	No
20	GOM_NL__2PRFIN20110928_105231_000000413107_00080_50094_0585.N1	28-SEP-2011 10:52:31	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50094	No
21	GOM_NL__2PRFIN20110928_113802_000000493107_00080_50094_0586.N1	28-SEP-2011 11:38:02	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50094	No
22	GOM_NL__2PRFIN20110928_113941_000000573107_00080_50094_0587.N1	28-SEP-2011 11:39:41	Dark	57.000	23	21Eps CMa	1.5020	26000.	114	50094	No
23	GOM_NL__2PRFIN20110928_115712_000000503107_00081_50095_0617.N1	28-SEP-2011 11:57:12	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50095	No
24	GOM_NL__2PRFIN20110928_123245_000000423107_00081_50095_0618.N1	28-SEP-2011 12:32:45	Bright	41.500	76	27Gam Cas	2.3000	30000.	83	50095	No
25	GOM_NL__2PRFIN20110928_131817_000000493107_00081_50095_0619.N1	28-SEP-2011 13:18:17	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50095	No
26	GOM_NL__2PRFIN20110928_131956_000000553107_00081_50095_0620.N1	28-SEP-2011 13:19:56	Dark	54.500	23	21Eps CMa	1.5020	26000.	109	50095	No
27	GOM_NL__2PRFIN20110928_133727_000000513107_00082_50096_0656.N1	28-SEP-2011 13:37:27	Straylight	50.500	157	The1Eri	2.9060	9300.0	101	50096	No
28	GOM_NL__2PRFIN20110928_141259_000000413107_00082_50096_0657.N1	28-SEP-2011 14:12:59	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	50096	No
29	GOM_NL__2PRFIN20110928_145832_000000463107_00082_50096_0658.N1	28-SEP-2011 14:58:32	Dark	46.000	88	31Eta CMa	2.4480	20000.	92	50096	No
30	GOM_NL__2PRFIN20110928_150011_000000543107_00082_50096_0659.N1	28-SEP-2011 15:00:11	Dark	53.500	23	21Eps CMa	1.5020	26000.	107	50096	No
31	GOM_NL__2PRFIN20110928_151741_000000493107_00083_50097_0700.N1	28-SEP-2011 15:17:41	Straylight	48.500	157	The1Eri	2.9060	9300.0	97	50097	No
32	GOM_NL__2PRFIN20110928_152834_000000503107_00083_50097_0701.N1	28-SEP-2011 15:28:34	Straylight	50.000	52	16Bet Cet	2.0370	4500.0	100	50097	No
33	GOM_NL__2PRFIN20110928_153906_000000413107_00083_50097_0702.N1	28-SEP-2011 15:39:06	Bright	40.500	140	88Gam Peg	2.8340	26000.	81	50097	No
34	GOM_NL__2PRFIN20110928_154316_000000423107_00083_50097_0703.N1	28-SEP-2011 15:43:16	Bright	41.500	58	21Alp And	2.0730	11000.	83	50097	No
35	GOM_NL__2PRFIN20110928_155312_000000393107_00083_50097_0704.N1	28-SEP-2011 15:53:12	Bright	39.000	76	27Gam Cas	2.3000	30000.	78	50097	No
36	GOM_NL__2PRFIN20110928_163847_000000493107_00083_50097_0705.N1	28-SEP-2011 16:38:47	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50097	No
37	GOM_NL__2PRFIN20110928_164026_000000543107_00083_50097_0706.N1	28-SEP-2011 16:40:26	Dark	54.000	23	21Eps CMa	1.5020	26000.	108	50097	No
38	GOM_NL__2PRFIN20110928_165756_000000503107_00084_50098_0767.N1	28-SEP-2011 16:57:56	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50098	No
39	GOM_NL__2PRFIN20110928_173326_000000383107_00084_50098_0768.N1	28-SEP-2011 17:33:26	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	50098	No
40	GOM_NL__2PRFIN20110928_181902_000000473107_00084_50098_0769.N1	28-SEP-2011 18:19:02	Dark	47.000	88	31Eta CMa	2.4480	20000.	94	50098	No
41	GOM_NL__2PRFIN20110928_182041_000000553107_00084_50098_0770.N1	28-SEP-2011 18:20:41	Dark	55.000	23	21Eps CMa	1.5020	26000.	110	50098	No
42	GOM_NL__2PRFIN20110928_182426_000000453107_00085_50099_0782.N1	28-SEP-2011 18:24:26	Dark	45.000	161	Tau Pup	2.9310	4500.0	90	50099	No

43	GOM_NL__2PRFIN20110928_182550_000000483107_00085_50099_0783.N1	28-SEP-2011 18:25:50	Dark	47.500	2	Alp Car	-0.73600	7000.0	95	50099	No
44	GOM_NL__2PRFIN20110928_183811_000000503107_00085_50099_0784.N1	28-SEP-2011 18:38:11	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50099	No
45	GOM_NL__2PRFIN20110928_191339_000000413107_00085_50099_0785.N1	28-SEP-2011 19:13:39	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	50099	No
46	GOM_NL__2PRFIN20110928_195917_000000523107_00085_50099_0786.N1	28-SEP-2011 19:59:17	Dark	52.000	88	31Eta CMa	2.4480	20000.	104	50099	No
47	GOM_NL__2PRFIN20110928_200057_000000553107_00085_50099_0787.N1	28-SEP-2011 20:00:57	Dark	55.000	23	21Eps CMa	1.5020	26000.	110	50099	No
48	GOM_NL__2PRFIN20110928_200440_000000513107_00086_50100_0812.N1	28-SEP-2011 20:04:40	Dark	50.500	161	Tau Pup	2.9310	4500.0	101	50100	No
49	GOM_NL__2PRFIN20110928_200604_000000593107_00086_50100_0813.N1	28-SEP-2011 20:06:04	Dark	59.000	2	Alp Car	-0.73600	7000.0	118	50100	No
50	GOM_NL__2PRFIN20110928_201826_000000513107_00086_50100_0814.N1	28-SEP-2011 20:18:26	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50100	No
51	GOM_NL__2PRFIN20110928_205231_000000023107_00086_50100_0815.N1	28-SEP-2011 20:52:31	Straylight	2.0000	74	11Bet Cas	2.2680	6600.0	4	50100	No
52	GOM_NL__2PRFIN20110928_205353_000000413107_00086_50100_0816.N1	28-SEP-2011 20:53:53	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50100	No
53	GOM_NL__2PRFIN20110928_213931_000000493107_00086_50100_0817.N1	28-SEP-2011 21:39:31	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50100	No
54	GOM_NL__2PRFIN20110928_214112_000000603107_00086_50100_0818.N1	28-SEP-2011 21:41:12	Dark	60.000	23	21Eps CMa	1.5020	26000.	120	50100	No

### 3. Quality information per product

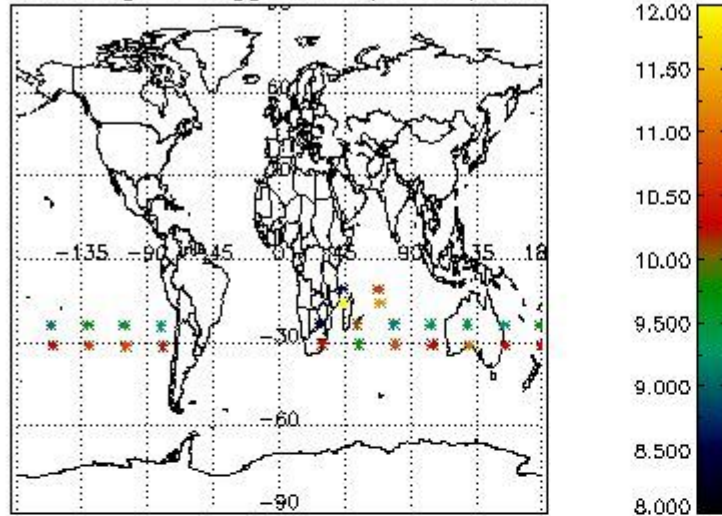
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

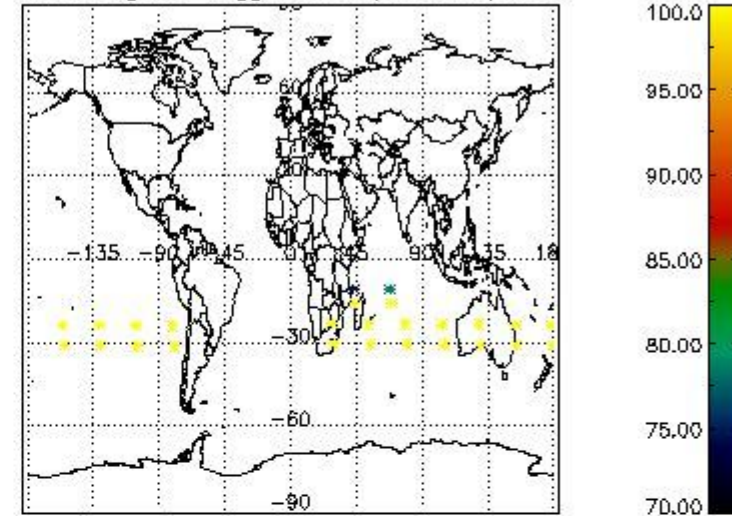


#### 3.2 Plot quality information per product (world map)

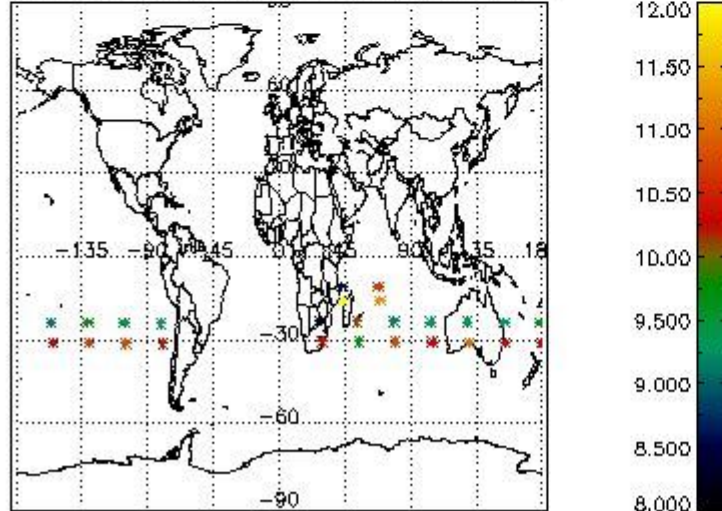
Percentage of flagged data per O3 profile



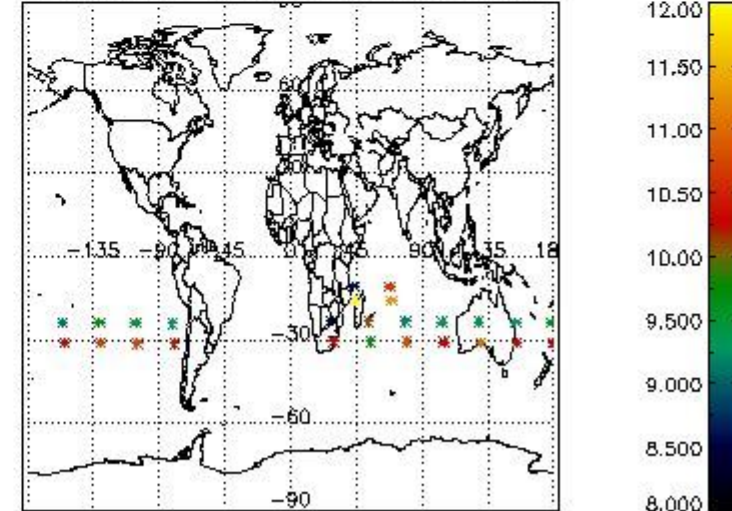
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

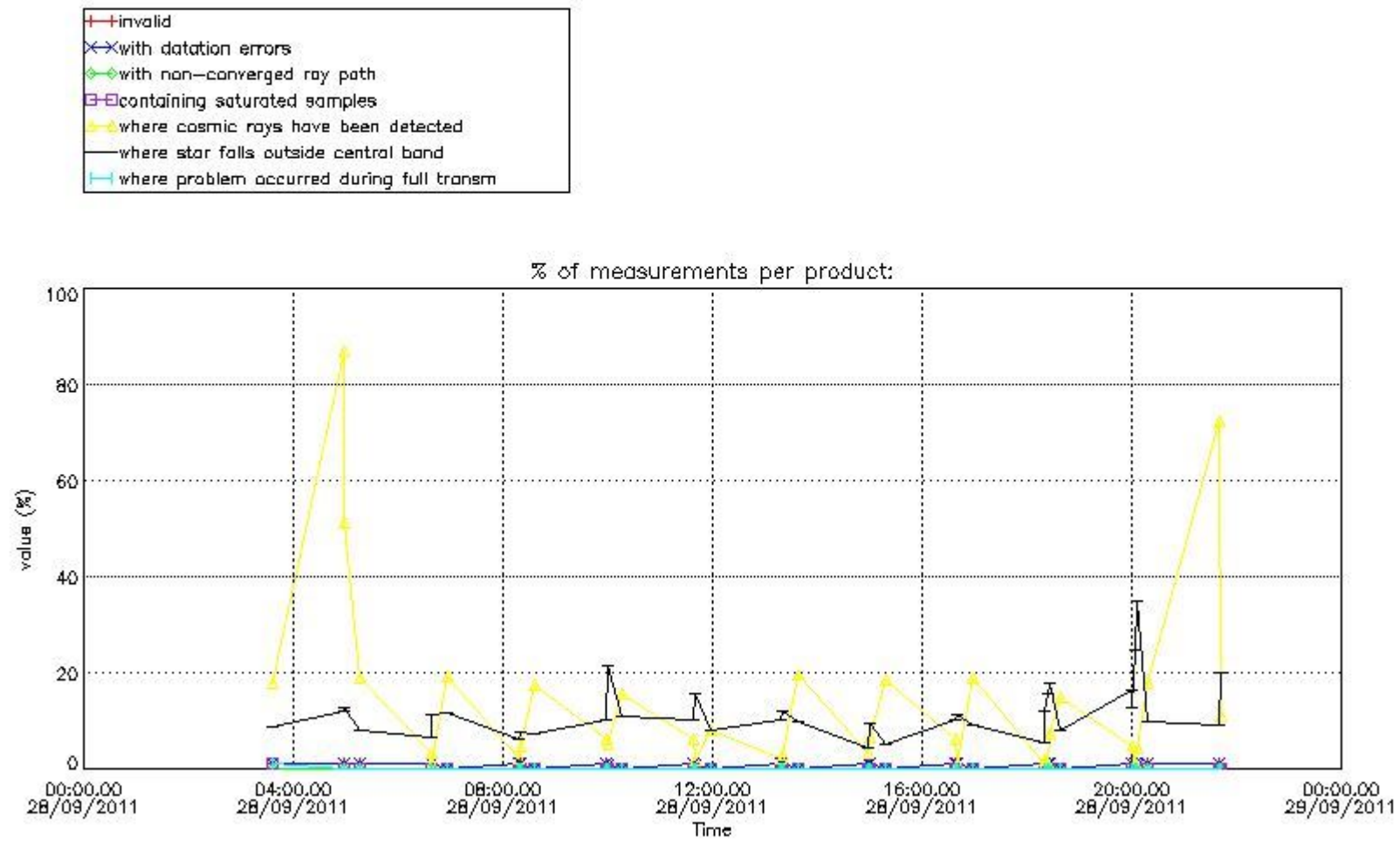


#### 4. Level 1 quality information per product

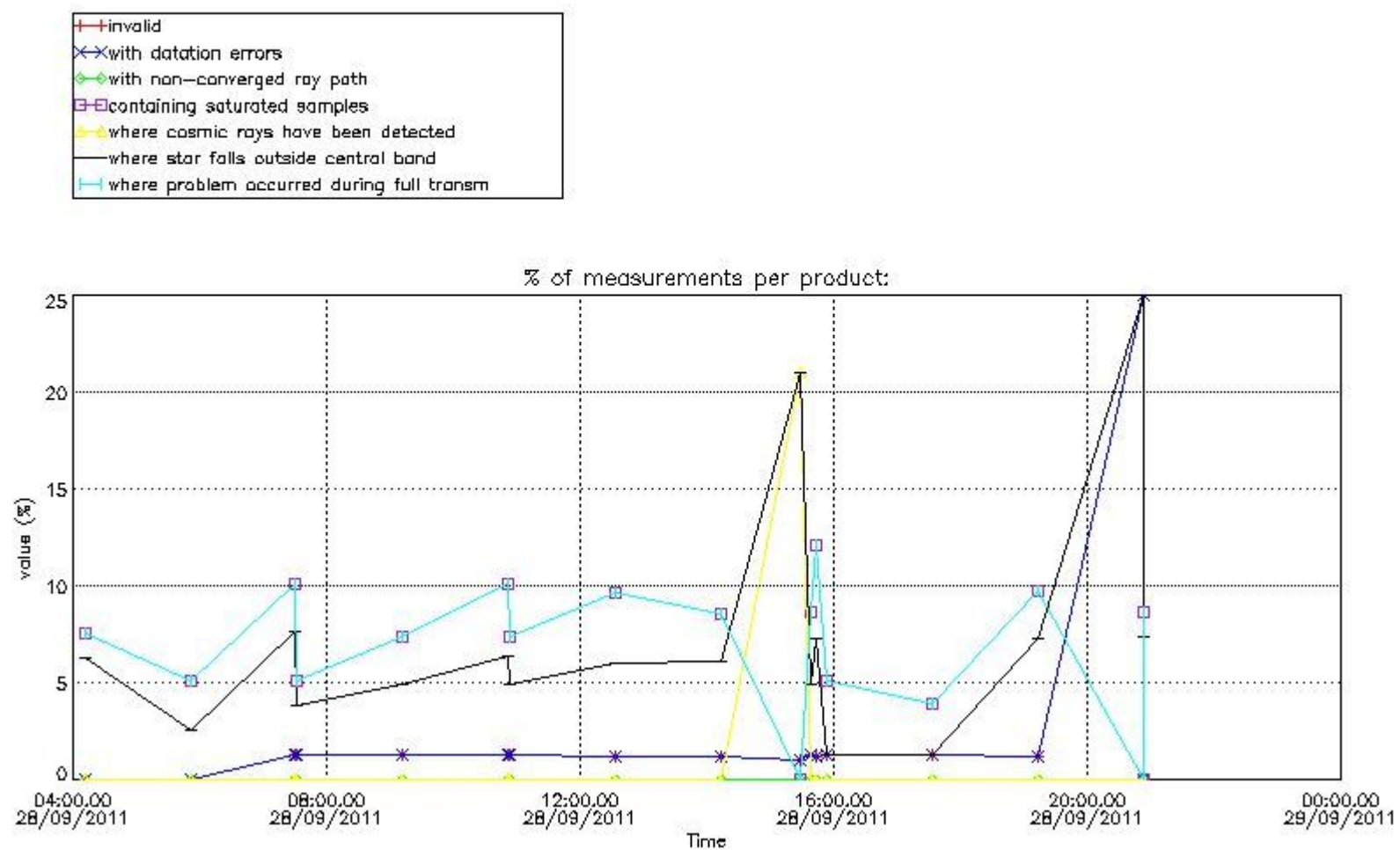
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

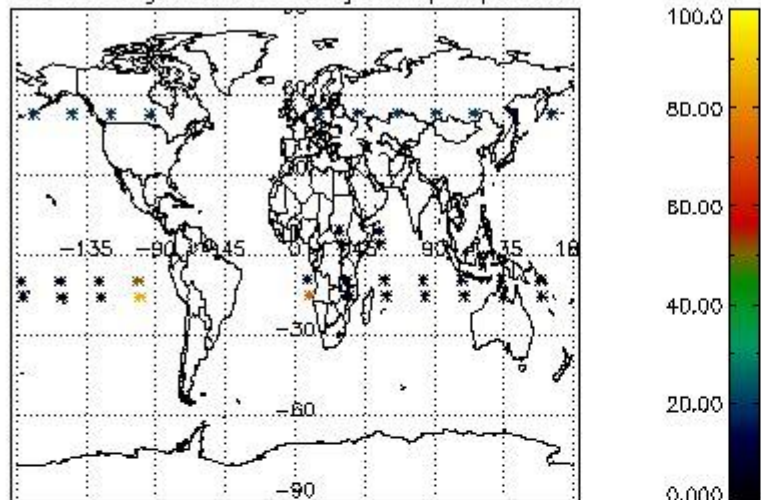


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

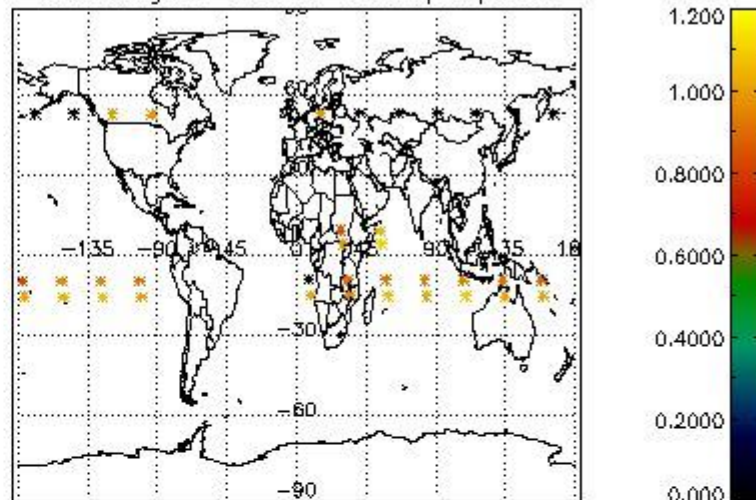


4.2 Plot quality information per product coming from level 1b processing (world map)  
 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

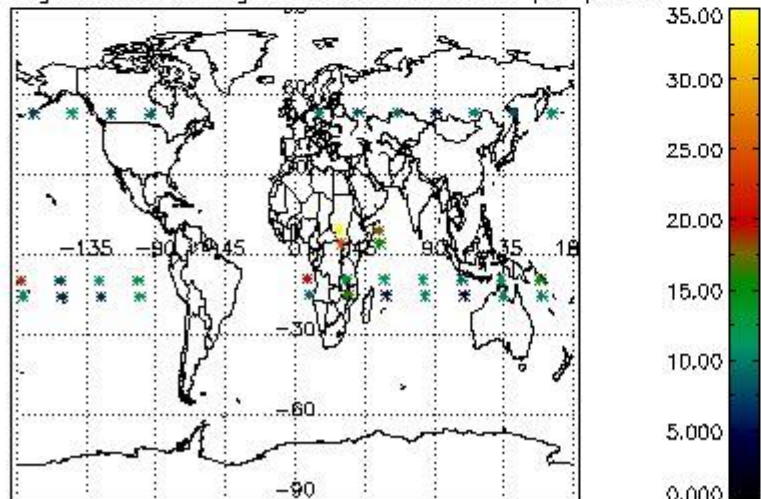
Percentage of cosmic ray hits per profile



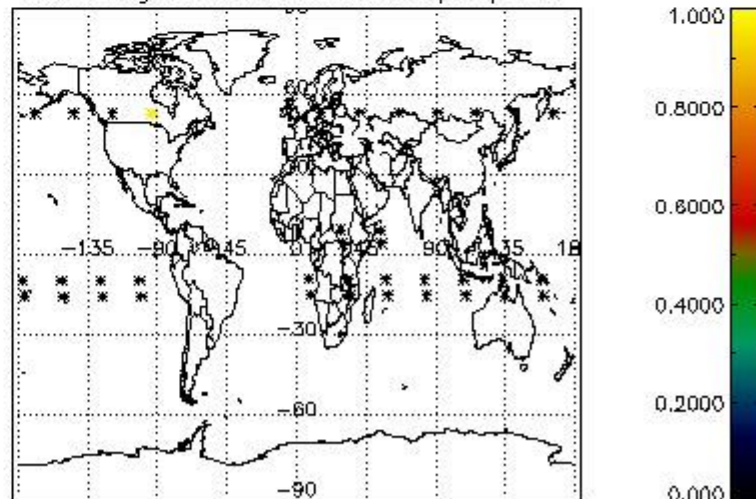
Percentage of datation errors per profile



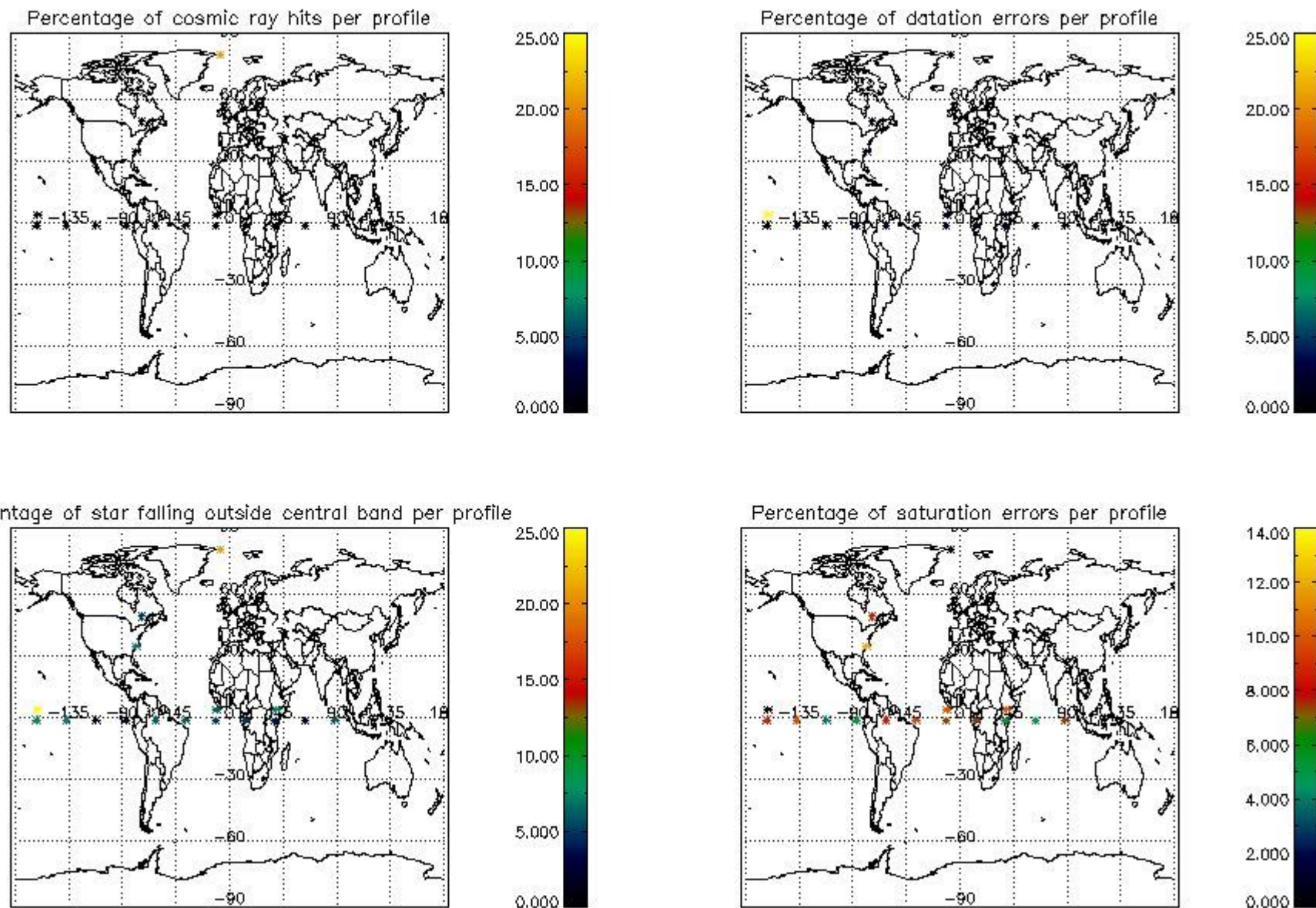
Percentage of star falling outside central band per profile



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.

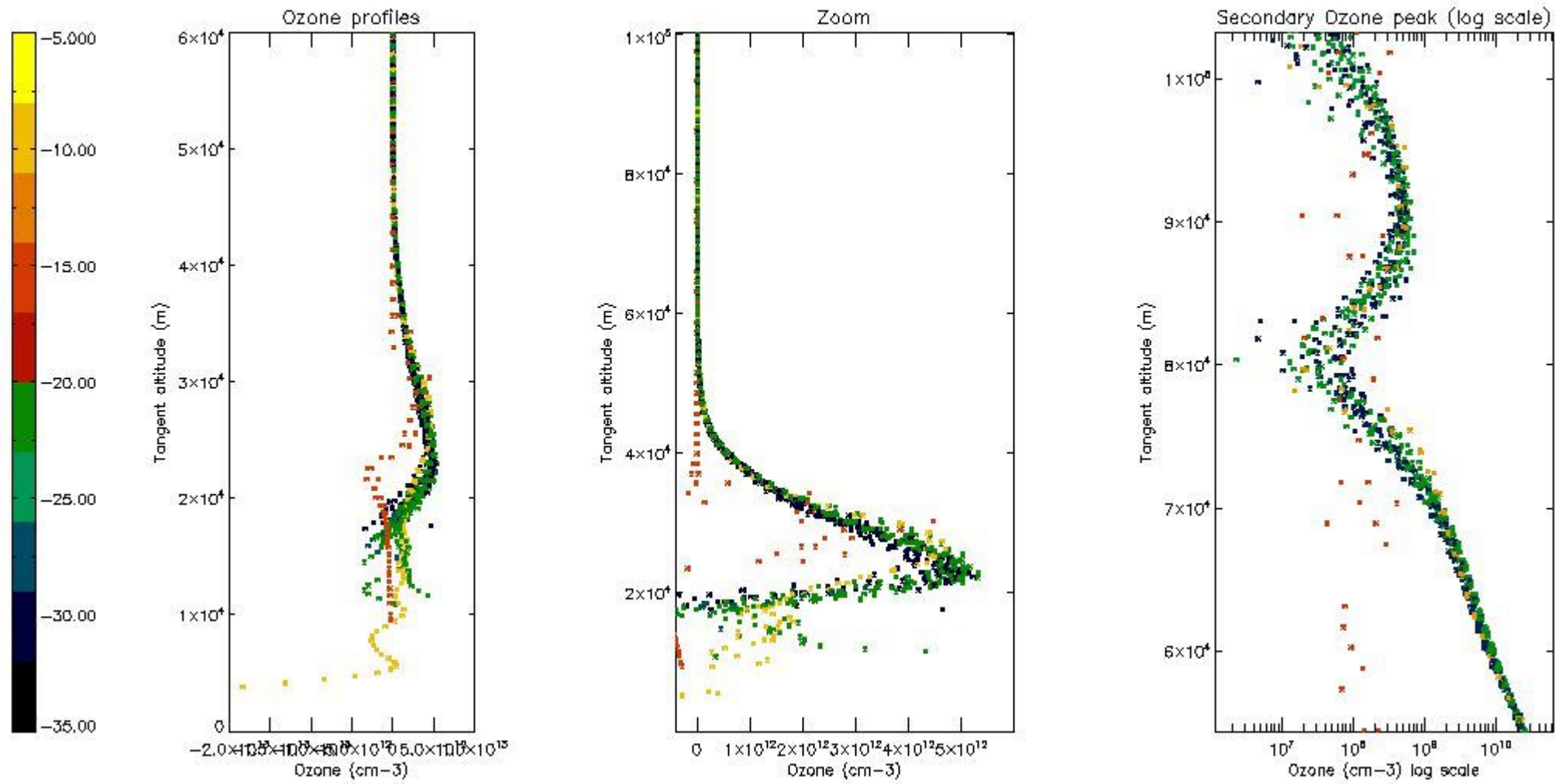
Criteria	% of total production
All STD	54
STD < 20	34



STD < 10	29
STD < 5	23

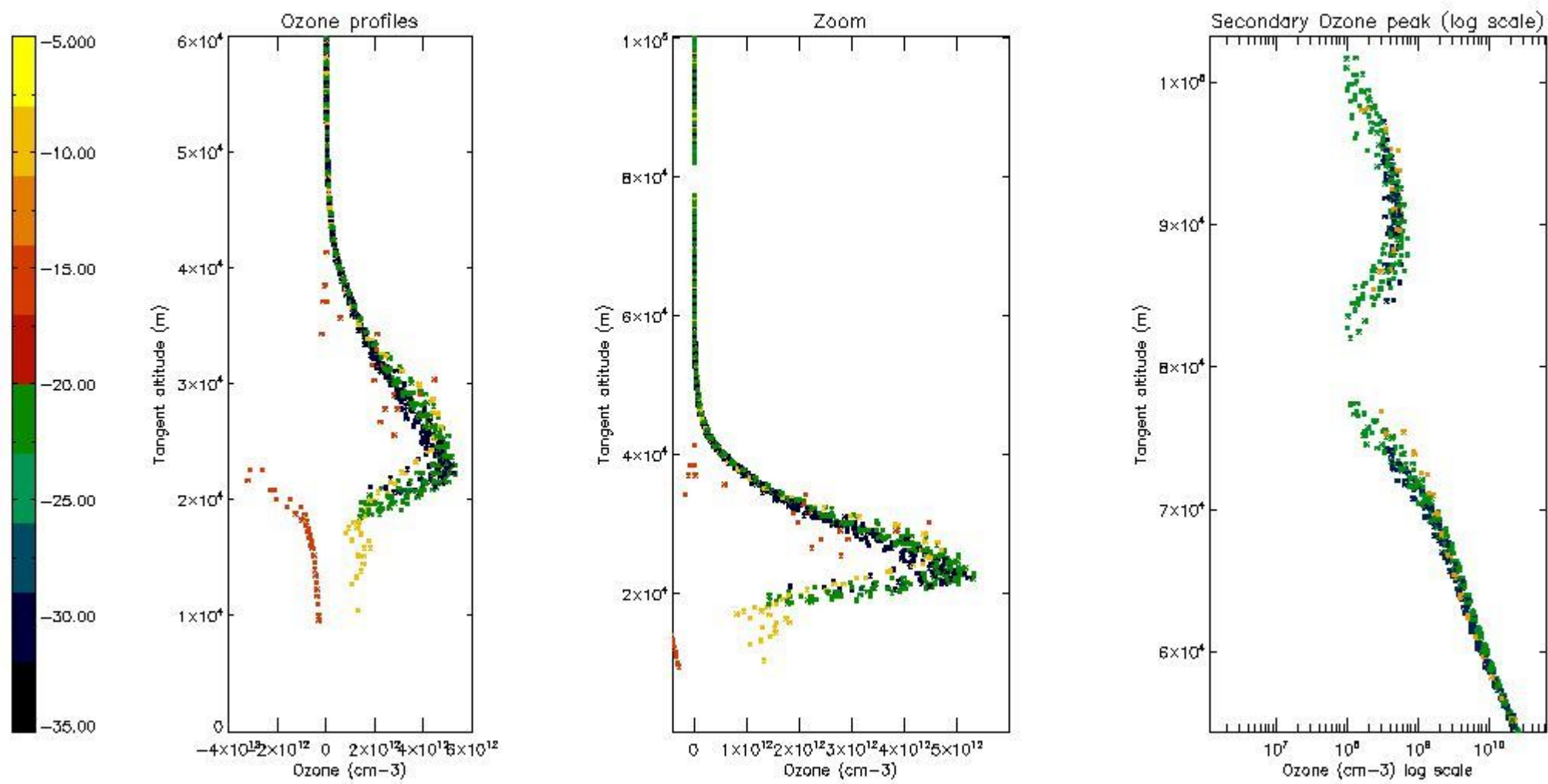
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



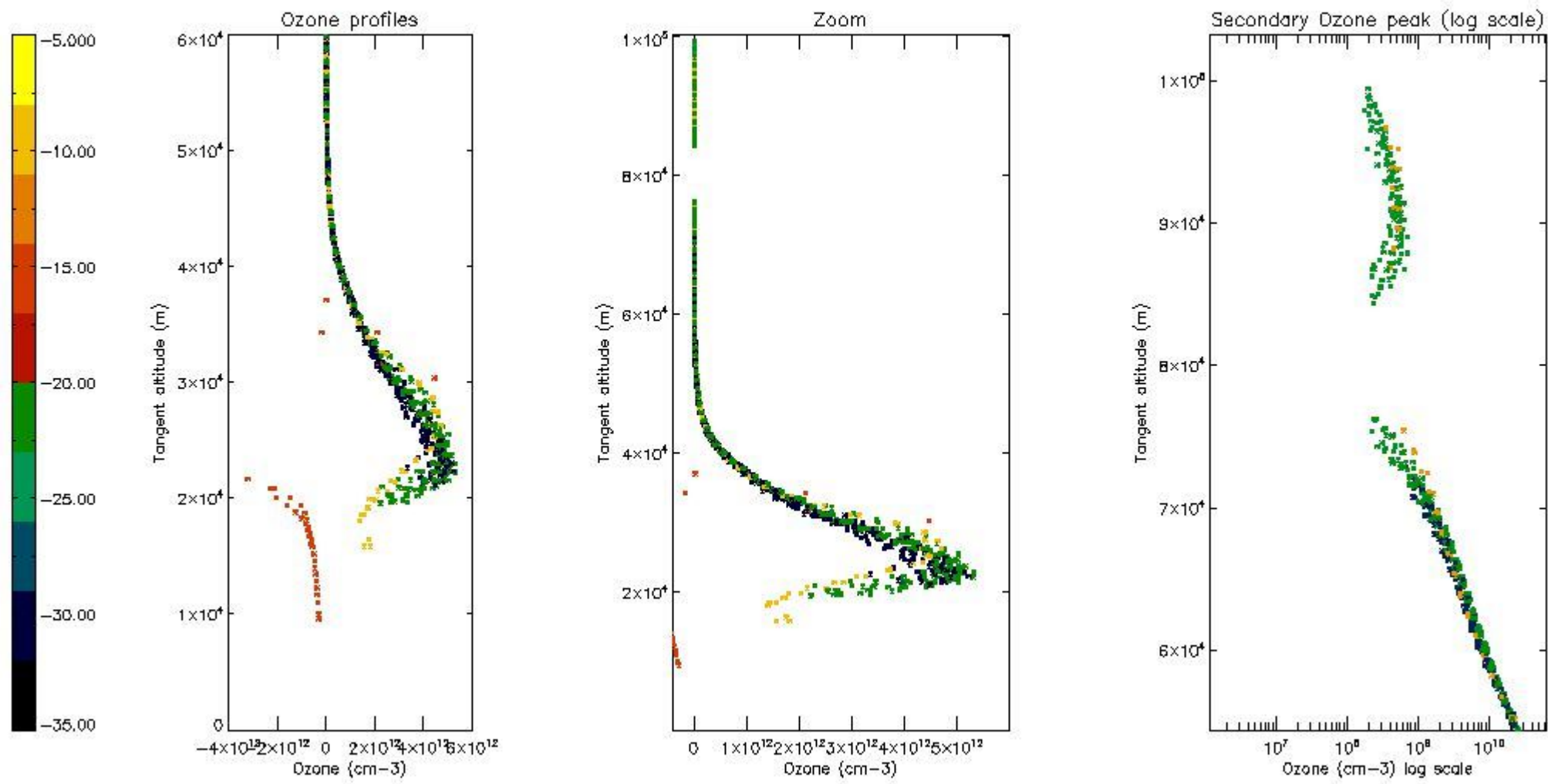
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



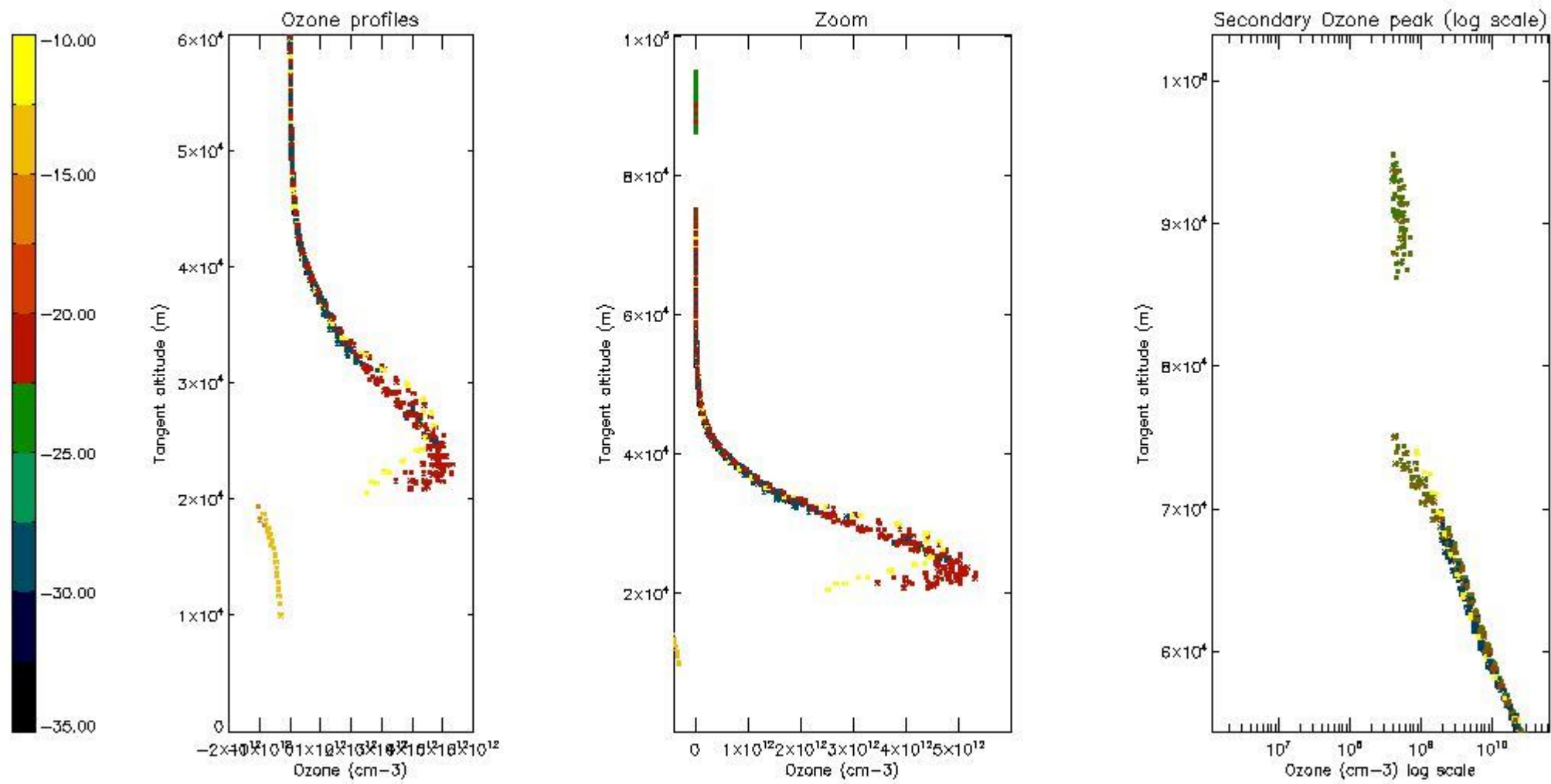
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



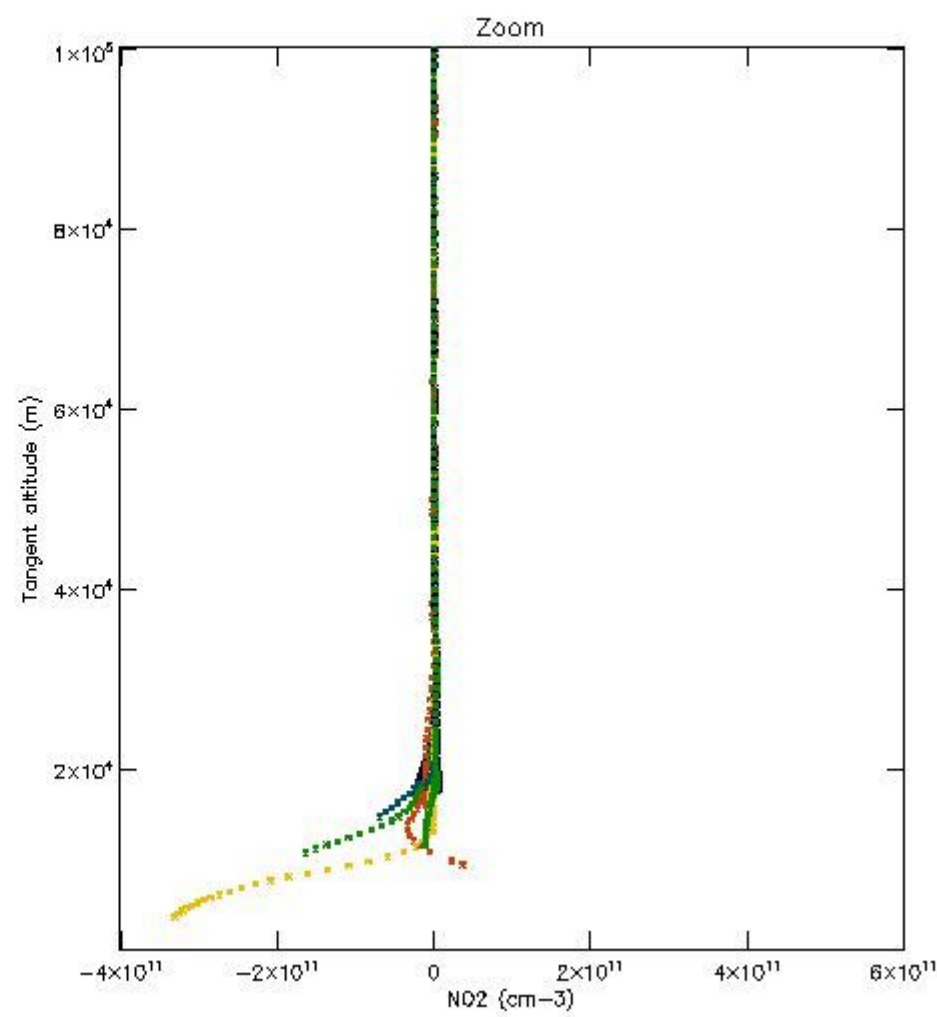
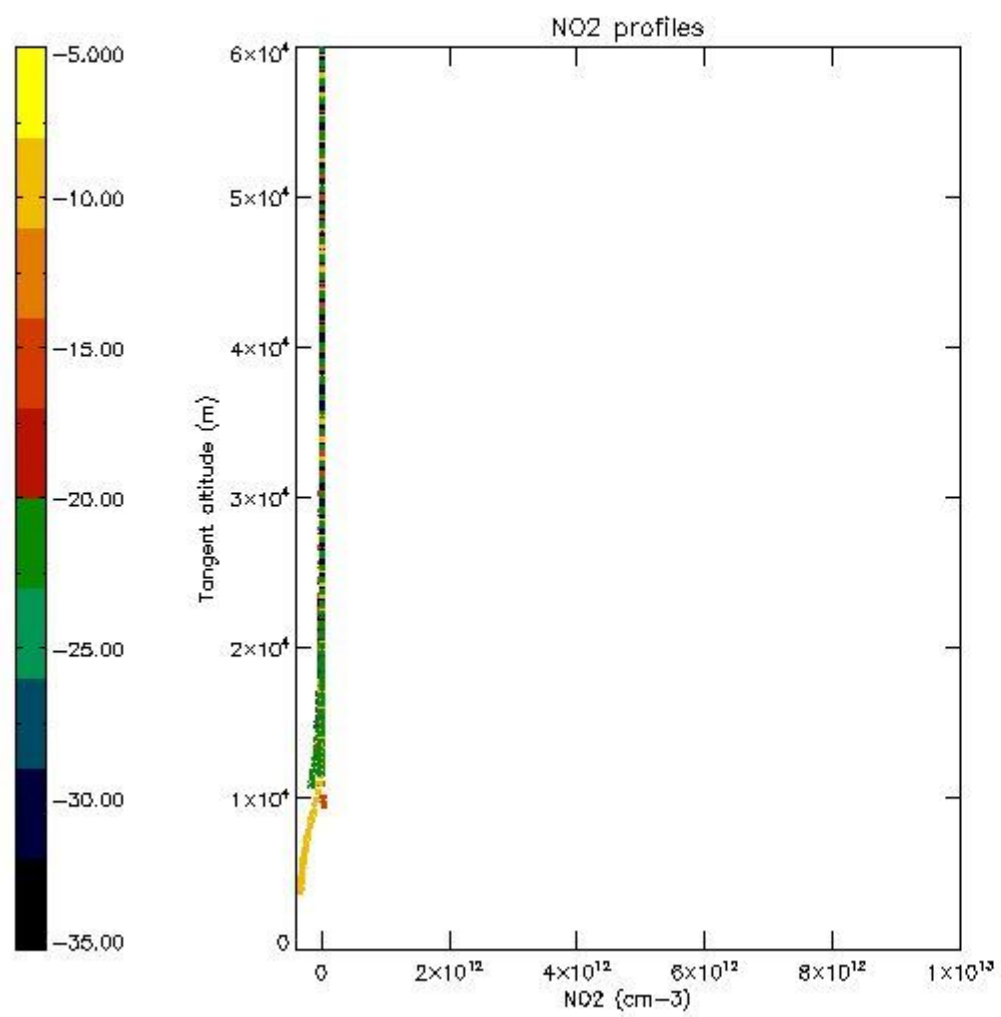
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



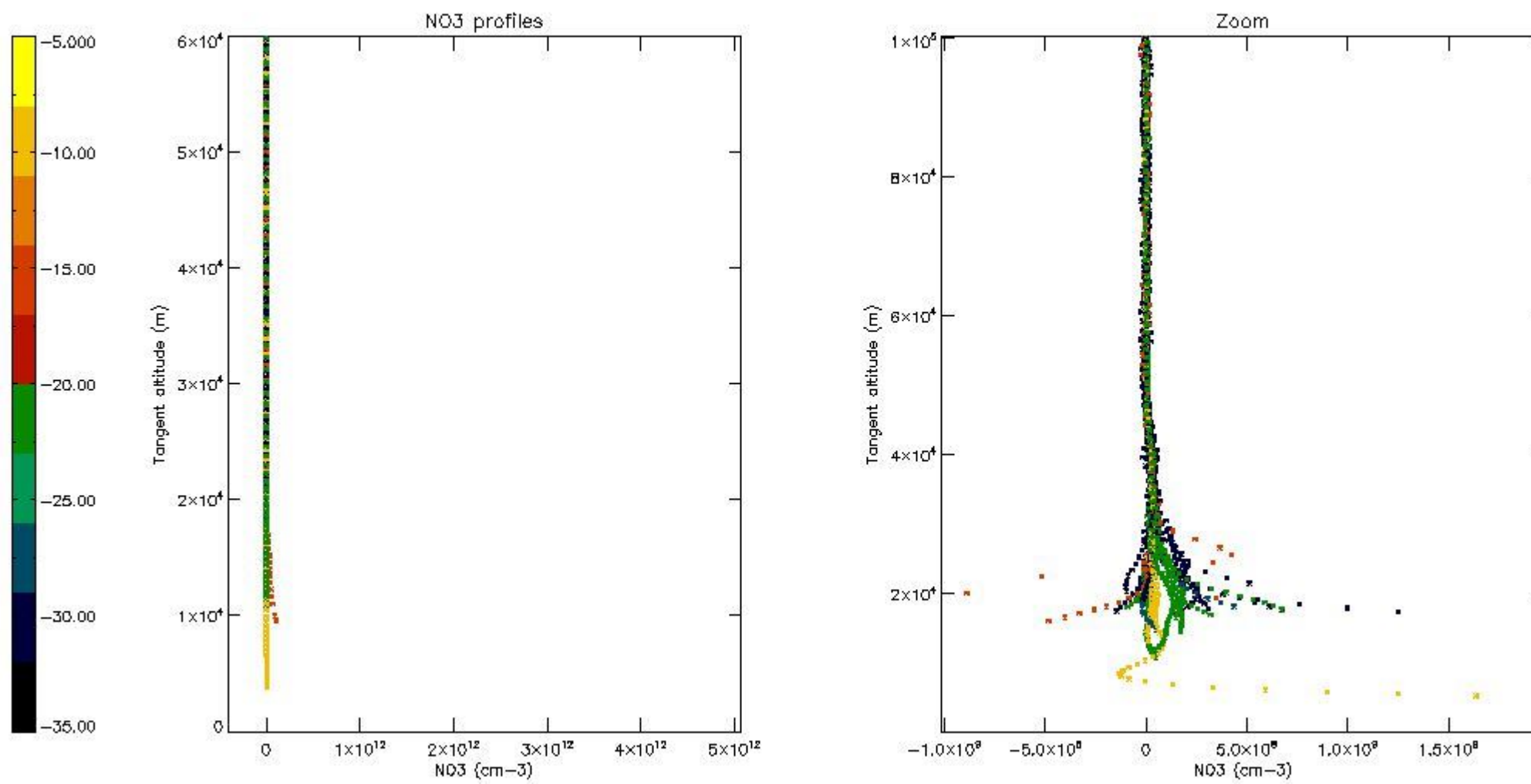
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

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	28-SEP-2011 03:35:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-SEP-2011 03:35:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-SEP-2011 03:35:58

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Item	Value
Time of report generation	24APR2013 17:52:53
Data source version	GOMOS/6.01
Start time of products	28-09-2011 (28SEP2011 00:00:00)
Stop time of products	29-09-2011 (29SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	54
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__2PRFIN20110928_033558_000000513107_00076_50090_0476.N1	28-SEP-2011 03:35:58	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50090	No
2	GOM_NL__2PRFIN20110928_041137_000000403107_00076_50090_0477.N1	28-SEP-2011 04:11:37	Bright	40.000	76	27Gam Cas	2.3000	30000.	80	50090	No
3	GOM_NL__2PRFIN20110928_045702_000000503107_00076_50090_0478.N1	28-SEP-2011 04:57:02	Dark	49.500	88	31Eta CMa	2.4480	20000.	99	50090	No
4	GOM_NL__2PRFIN20110928_045840_000000553107_00076_50090_0479.N1	28-SEP-2011 04:58:40	Dark	54.500	23	21Eps CMa	1.5020	26000.	109	50090	No
5	GOM_NL__2PRFIN20110928_051613_000000503107_00077_50091_0490.N1	28-SEP-2011 05:16:13	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50091	No
6	GOM_NL__2PRFIN20110928_055151_000000393107_00077_50091_0491.N1	28-SEP-2011 05:51:51	Bright	39.000	76	27Gam Cas	2.3000	30000.	78	50091	No
7	GOM_NL__2PRFIN20110928_063717_000000473107_00077_50091_0492.N1	28-SEP-2011 06:37:17	Dark	47.000	88	31Eta CMa	2.4480	20000.	94	50091	No
8	GOM_NL__2PRFIN20110928_063855_000000533107_00077_50091_0493.N1	28-SEP-2011 06:38:55	Dark	53.000	23	21Eps CMa	1.5020	26000.	106	50091	No
9	GOM_NL__2PRFIN20110928_065628_000000523107_00078_50092_0508.N1	28-SEP-2011 06:56:28	Straylight	51.500	157	The1Eri	2.9060	9300.0	103	50092	No
10	GOM_NL__2PRFIN20110928_073041_000000403107_00078_50092_0509.N1	28-SEP-2011 07:30:41	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	50092	No
11	GOM_NL__2PRFIN20110928_073204_000000403107_00078_50092_0510.N1	28-SEP-2011 07:32:04	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	50092	No
12	GOM_NL__2PRFIN20110928_081732_000000483107_00078_50092_0511.N1	28-SEP-2011 08:17:32	Dark	47.500	88	31Eta CMa	2.4480	20000.	95	50092	No
13	GOM_NL__2PRFIN20110928_081911_000000523107_00078_50092_0512.N1	28-SEP-2011 08:19:11	Dark	52.000	23	21Eps CMa	1.5020	26000.	104	50092	No
14	GOM_NL__2PRFIN20110928_083643_000000493107_00079_50093_0558.N1	28-SEP-2011 08:36:43	Straylight	49.000	157	The1Eri	2.9060	9300.0	98	50093	No
15	GOM_NL__2PRFIN20110928_091218_000000413107_00079_50093_0559.N1	28-SEP-2011 09:12:18	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50093	No
16	GOM_NL__2PRFIN20110928_095747_000000493107_00079_50093_0560.N1	28-SEP-2011 09:57:47	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50093	No
17	GOM_NL__2PRFIN20110928_095926_000000613107_00079_50093_0561.N1	28-SEP-2011 09:59:26	Dark	61.000	23	21Eps CMa	1.5020	26000.	122	50093	No
18	GOM_NL__2PRFIN20110928_101657_000000513107_00080_50094_0583.N1	28-SEP-2011 10:16:57	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50094	No
19	GOM_NL__2PRFIN20110928_105109_000000403107_00080_50094_0584.N1	28-SEP-2011 10:51:09	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	50094	No
20	GOM_NL__2PRFIN20110928_105231_000000413107_00080_50094_0585.N1	28-SEP-2011 10:52:31	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50094	No
21	GOM_NL__2PRFIN20110928_113802_000000493107_00080_50094_0586.N1	28-SEP-2011 11:38:02	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50094	No
22	GOM_NL__2PRFIN20110928_113941_000000573107_00080_50094_0587.N1	28-SEP-2011 11:39:41	Dark	57.000	23	21Eps CMa	1.5020	26000.	114	50094	No
23	GOM_NL__2PRFIN20110928_115712_000000503107_00081_50095_0617.N1	28-SEP-2011 11:57:12	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50095	No
24	GOM_NL__2PRFIN20110928_123245_000000423107_00081_50095_0618.N1	28-SEP-2011 12:32:45	Bright	41.500	76	27Gam Cas	2.3000	30000.	83	50095	No
25	GOM_NL__2PRFIN20110928_131817_000000493107_00081_50095_0619.N1	28-SEP-2011 13:18:17	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50095	No
26	GOM_NL__2PRFIN20110928_131956_000000553107_00081_50095_0620.N1	28-SEP-2011 13:19:56	Dark	54.500	23	21Eps CMa	1.5020	26000.	109	50095	No
27	GOM_NL__2PRFIN20110928_133727_000000513107_00082_50096_0656.N1	28-SEP-2011 13:37:27	Straylight	50.500	157	The1Eri	2.9060	9300.0	101	50096	No
28	GOM_NL__2PRFIN20110928_141259_000000413107_00082_50096_0657.N1	28-SEP-2011 14:12:59	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	50096	No
29	GOM_NL__2PRFIN20110928_145832_000000463107_00082_50096_0658.N1	28-SEP-2011 14:58:32	Dark	46.000	88	31Eta CMa	2.4480	20000.	92	50096	No
30	GOM_NL__2PRFIN20110928_150011_000000543107_00082_50096_0659.N1	28-SEP-2011 15:00:11	Dark	53.500	23	21Eps CMa	1.5020	26000.	107	50096	No
31	GOM_NL__2PRFIN20110928_151741_000000493107_00083_50097_0700.N1	28-SEP-2011 15:17:41	Straylight	48.500	157	The1Eri	2.9060	9300.0	97	50097	No
32	GOM_NL__2PRFIN20110928_152834_000000503107_00083_50097_0701.N1	28-SEP-2011 15:28:34	Straylight	50.000	52	16Bet Cet	2.0370	4500.0	100	50097	No
33	GOM_NL__2PRFIN20110928_153906_000000413107_00083_50097_0702.N1	28-SEP-2011 15:39:06	Bright	40.500	140	88Gam Peg	2.8340	26000.	81	50097	No
34	GOM_NL__2PRFIN20110928_154316_000000423107_00083_50097_0703.N1	28-SEP-2011 15:43:16	Bright	41.500	58	21Alp And	2.0730	11000.	83	50097	No
35	GOM_NL__2PRFIN20110928_155312_000000393107_00083_50097_0704.N1	28-SEP-2011 15:53:12	Bright	39.000	76	27Gam Cas	2.3000	30000.	78	50097	No
36	GOM_NL__2PRFIN20110928_163847_000000493107_00083_50097_0705.N1	28-SEP-2011 16:38:47	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50097	No
37	GOM_NL__2PRFIN20110928_164026_000000543107_00083_50097_0706.N1	28-SEP-2011 16:40:26	Dark	54.000	23	21Eps CMa	1.5020	26000.	108	50097	No
38	GOM_NL__2PRFIN20110928_165756_000000503107_00084_50098_0767.N1	28-SEP-2011 16:57:56	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50098	No
39	GOM_NL__2PRFIN20110928_173326_000000383107_00084_50098_0768.N1	28-SEP-2011 17:33:26	Bright	38.000	76	27Gam Cas	2.3000	30000.	76	50098	No
40	GOM_NL__2PRFIN20110928_181902_000000473107_00084_50098_0769.N1	28-SEP-2011 18:19:02	Dark	47.000	88	31Eta CMa	2.4480	20000.	94	50098	No
41	GOM_NL__2PRFIN20110928_182041_000000553107_00084_50098_0770.N1	28-SEP-2011 18:20:41	Dark	55.000	23	21Eps CMa	1.5020	26000.	110	50098	No
42	GOM_NL__2PRFIN20110928_182426_000000453107_00085_50099_0782.N1	28-SEP-2011 18:24:26	Dark	45.000	161	Tau Pup	2.9310	4500.0	90	50099	No

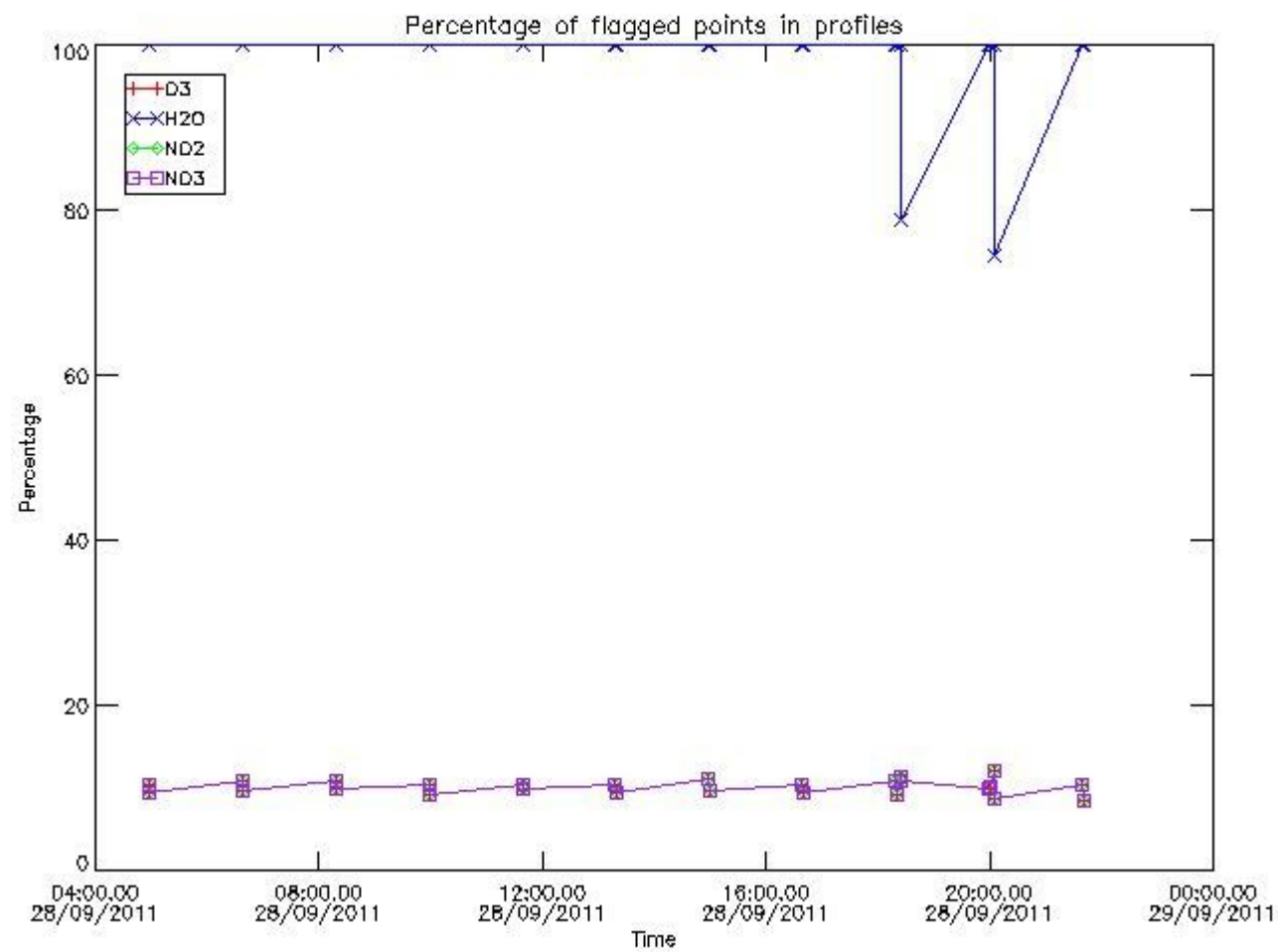


43	GOM_NL__2PRFIN20110928_182550_000000483107_00085_50099_0783.N1	28-SEP-2011 18:25:50	Dark	47.500	2	Alp Car	-0.73600	7000.0	95	50099	No
44	GOM_NL__2PRFIN20110928_183811_000000503107_00085_50099_0784.N1	28-SEP-2011 18:38:11	Straylight	50.000	157	The1Eri	2.9060	9300.0	100	50099	No
45	GOM_NL__2PRFIN20110928_191339_000000413107_00085_50099_0785.N1	28-SEP-2011 19:13:39	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	50099	No
46	GOM_NL__2PRFIN20110928_195917_000000523107_00085_50099_0786.N1	28-SEP-2011 19:59:17	Dark	52.000	88	31Eta CMa	2.4480	20000.	104	50099	No
47	GOM_NL__2PRFIN20110928_200057_000000553107_00085_50099_0787.N1	28-SEP-2011 20:00:57	Dark	55.000	23	21Eps CMa	1.5020	26000.	110	50099	No
48	GOM_NL__2PRFIN20110928_200440_000000513107_00086_50100_0812.N1	28-SEP-2011 20:04:40	Dark	50.500	161	Tau Pup	2.9310	4500.0	101	50100	No
49	GOM_NL__2PRFIN20110928_200604_000000593107_00086_50100_0813.N1	28-SEP-2011 20:06:04	Dark	59.000	2	Alp Car	-0.73600	7000.0	118	50100	No
50	GOM_NL__2PRFIN20110928_201826_000000513107_00086_50100_0814.N1	28-SEP-2011 20:18:26	Straylight	51.000	157	The1Eri	2.9060	9300.0	102	50100	No
51	GOM_NL__2PRFIN20110928_205231_000000023107_00086_50100_0815.N1	28-SEP-2011 20:52:31	Straylight	2.0000	74	11Bet Cas	2.2680	6600.0	4	50100	No
52	GOM_NL__2PRFIN20110928_205353_000000413107_00086_50100_0816.N1	28-SEP-2011 20:53:53	Bright	40.500	76	27Gam Cas	2.3000	30000.	81	50100	No
53	GOM_NL__2PRFIN20110928_213931_000000493107_00086_50100_0817.N1	28-SEP-2011 21:39:31	Dark	49.000	88	31Eta CMa	2.4480	20000.	98	50100	No
54	GOM_NL__2PRFIN20110928_214112_000000603107_00086_50100_0818.N1	28-SEP-2011 21:41:12	Dark	60.000	23	21Eps CMa	1.5020	26000.	120	50100	No

### 3. Quality information per product

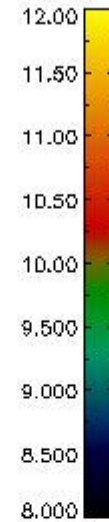
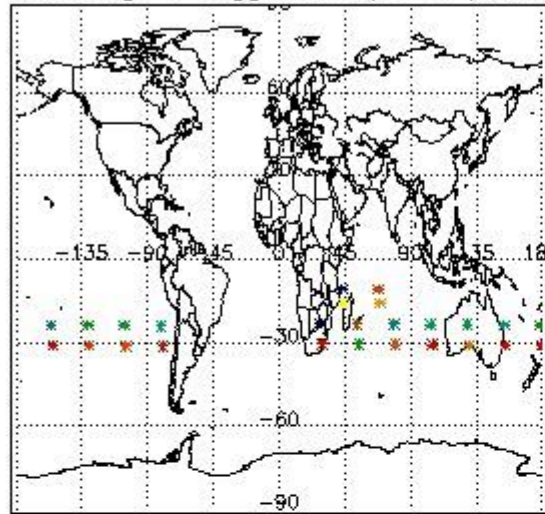
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

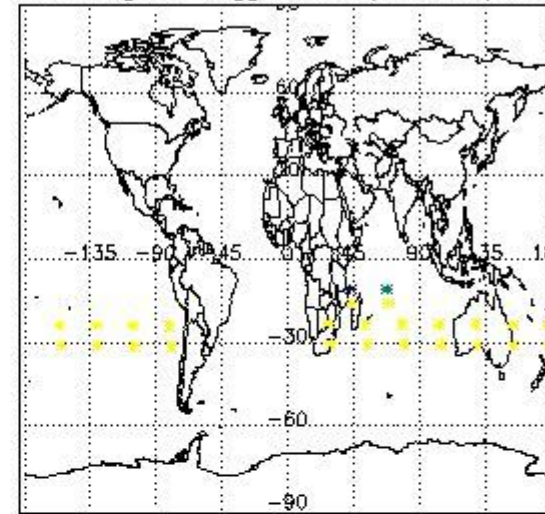


#### 3.2 Plot quality information per product (world map)

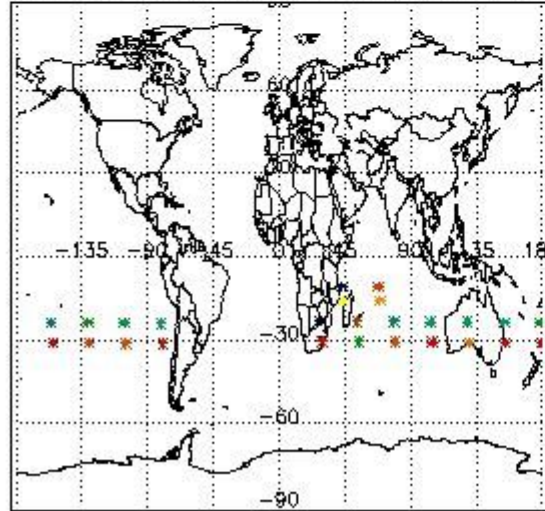
Percentage of flagged data per O3 profile



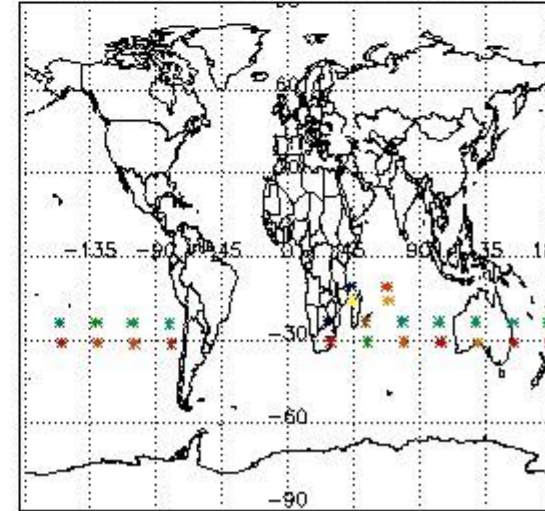
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

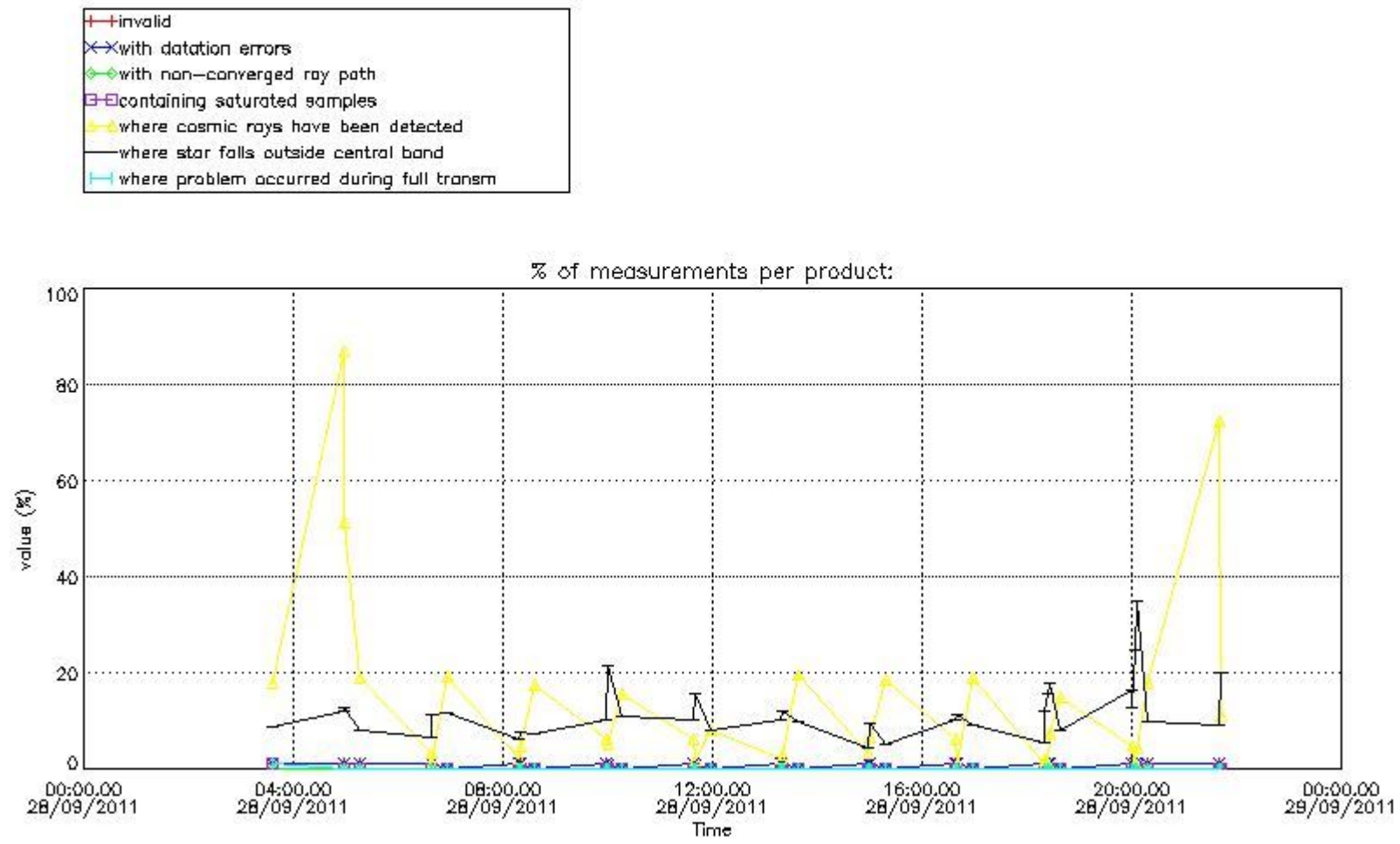


#### 4. Level 1 quality information per product

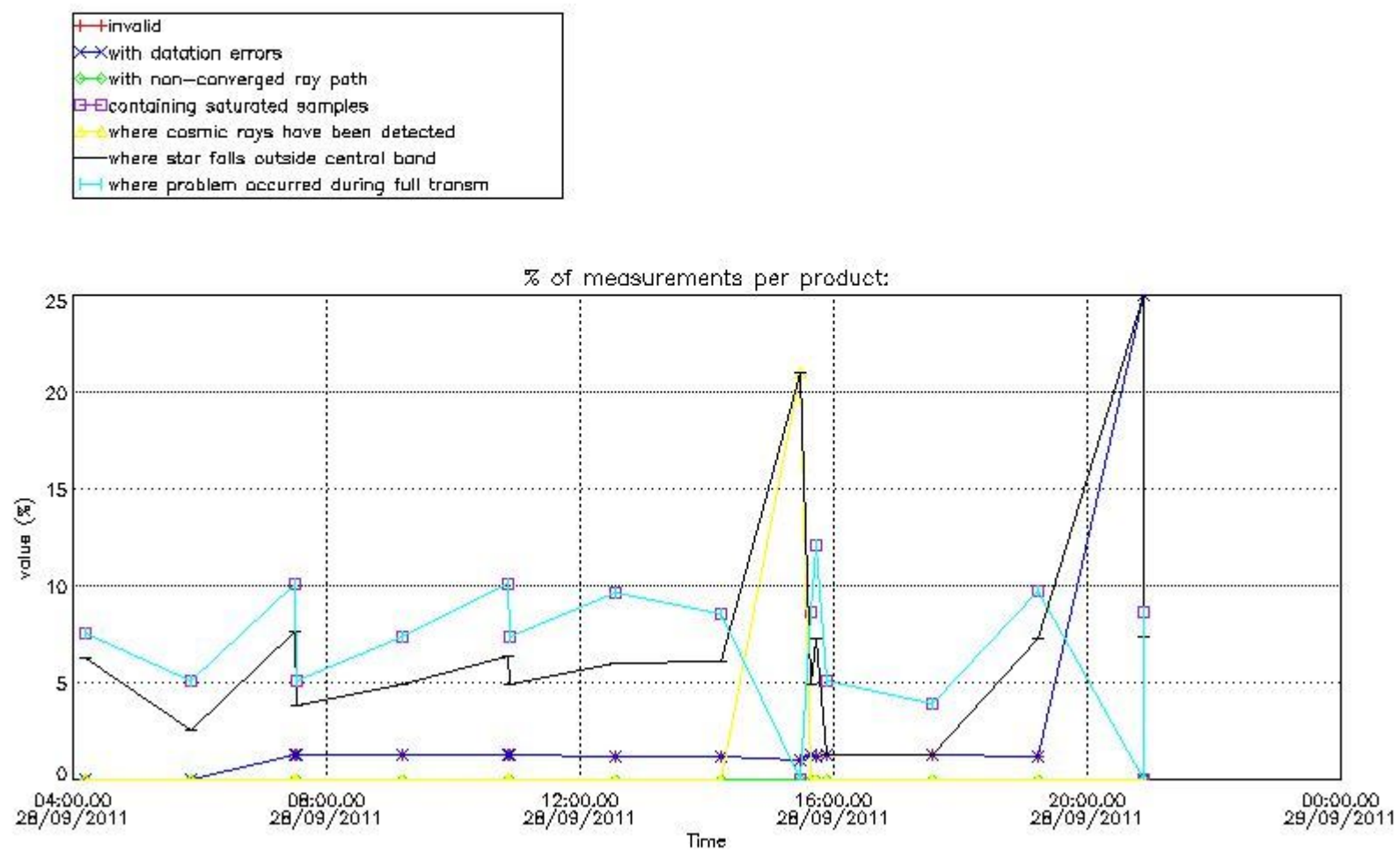
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

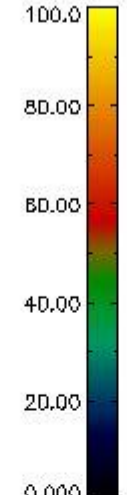
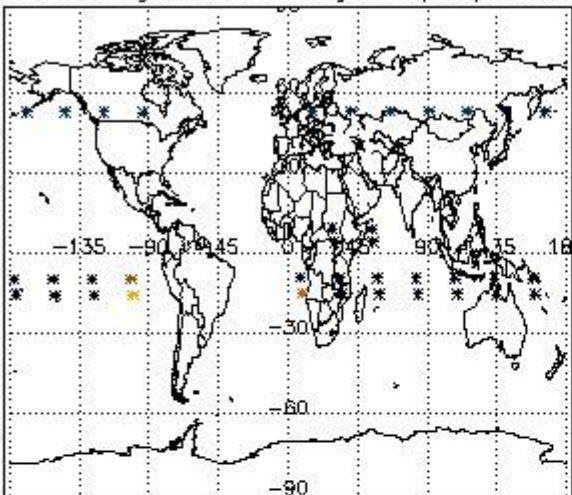


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

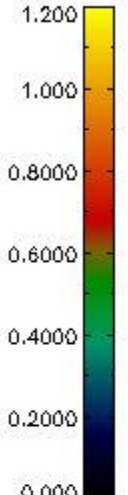
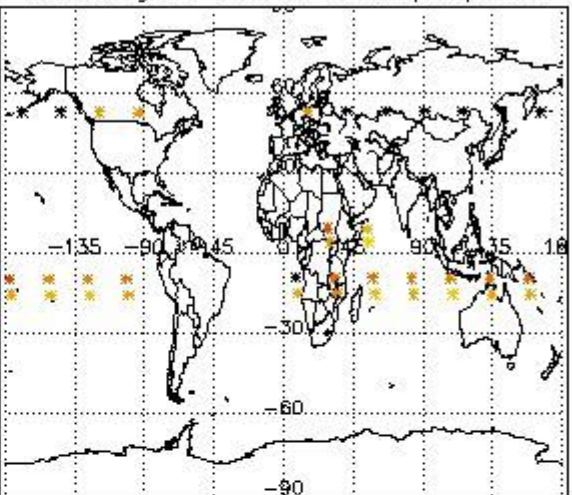


4.2 Plot quality information per product coming from level 1b processing (world map)  
 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

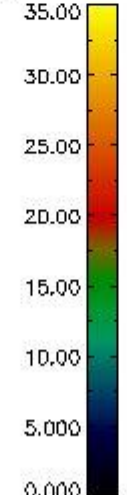
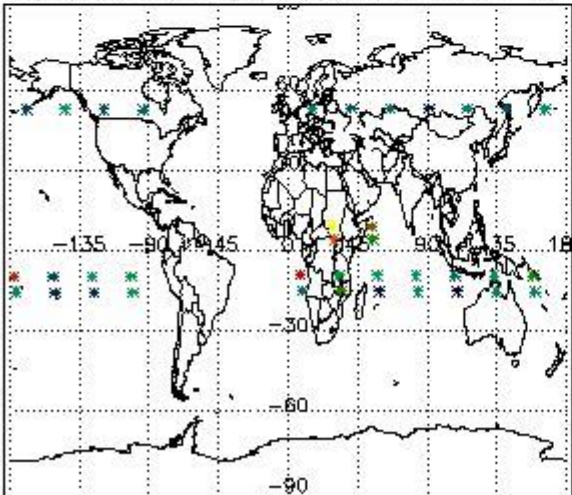
Percentage of cosmic ray hits per profile



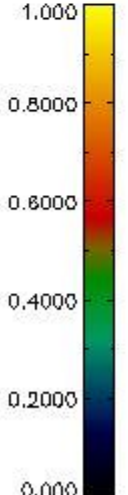
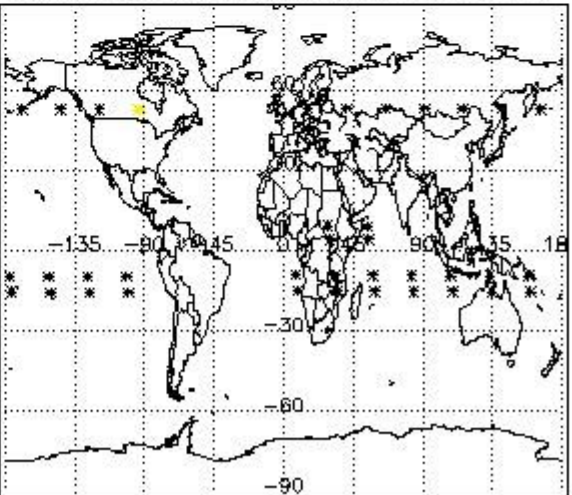
Percentage of datation errors per profile



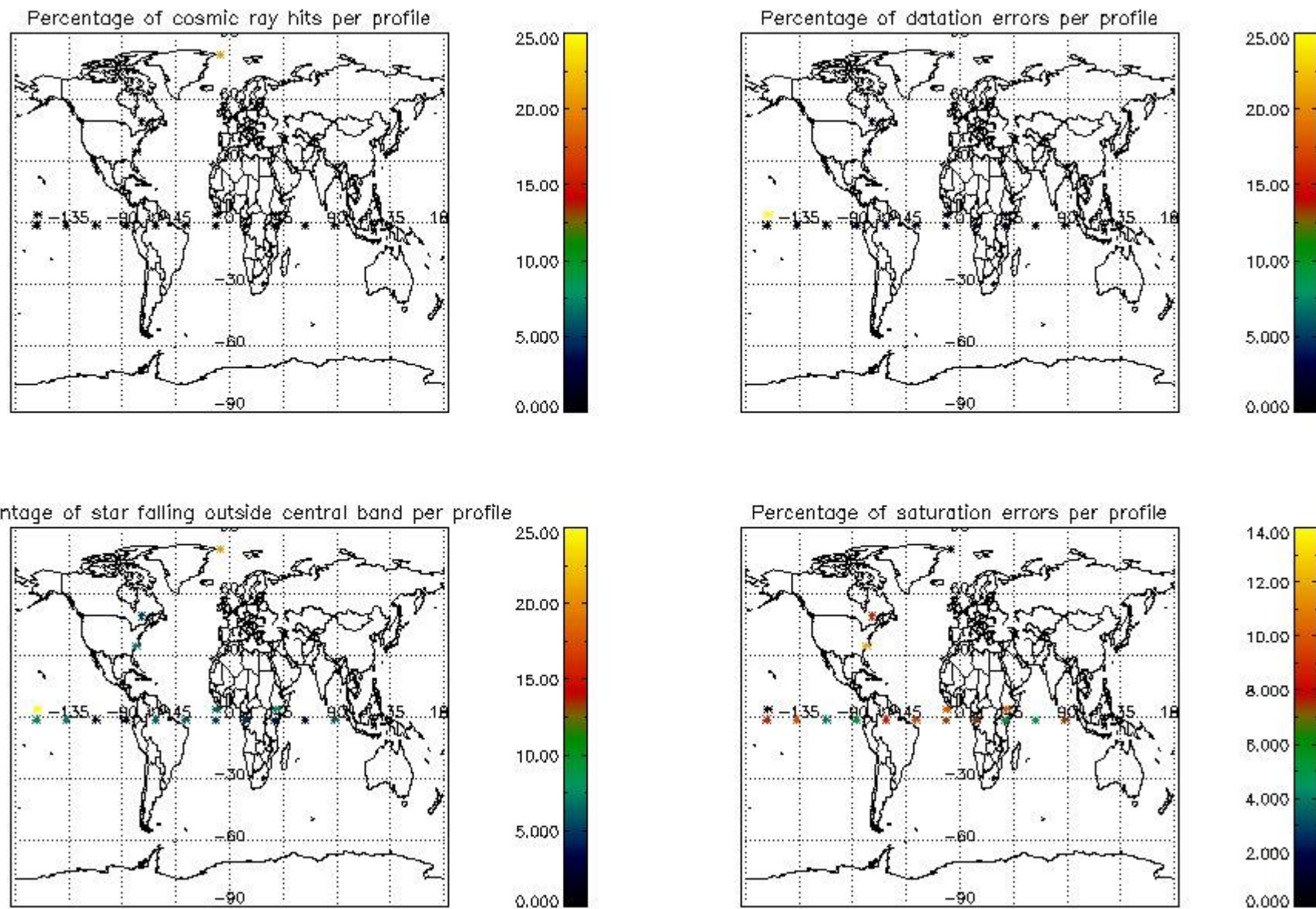
Percentage of star falling outside central band per profile



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

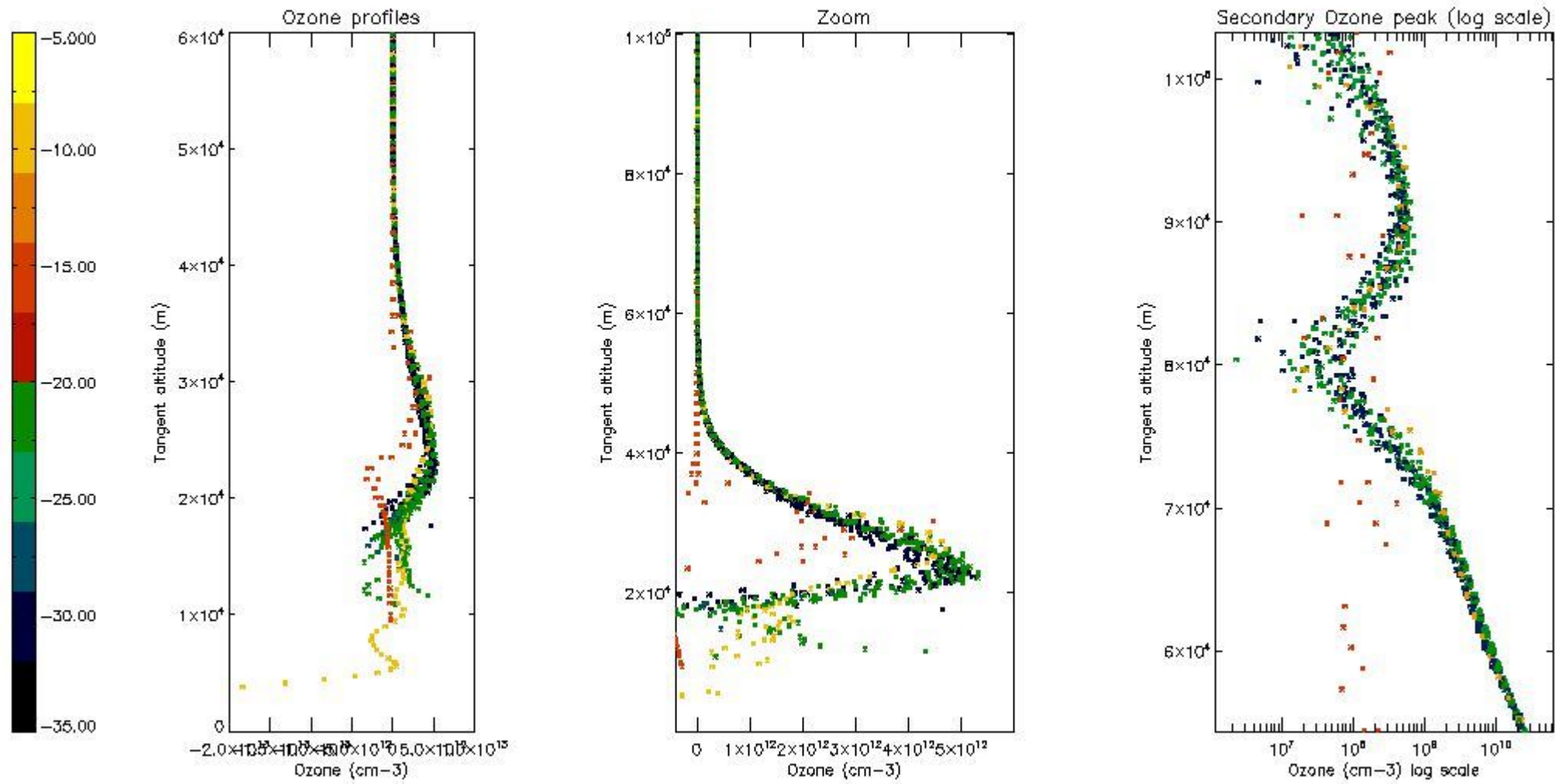
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	54
STD < 20	34

STD < 10	29
STD < 5	23

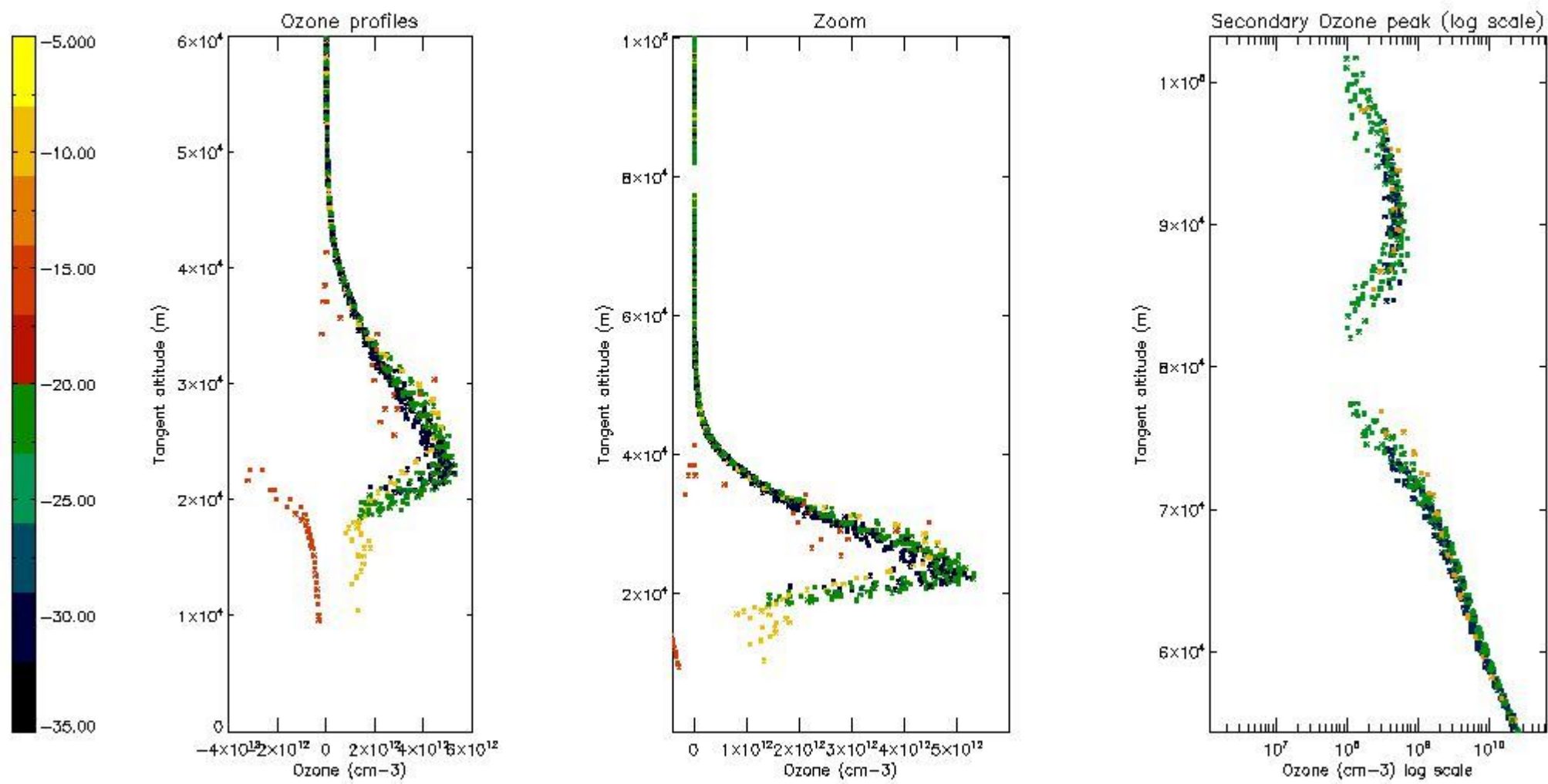
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

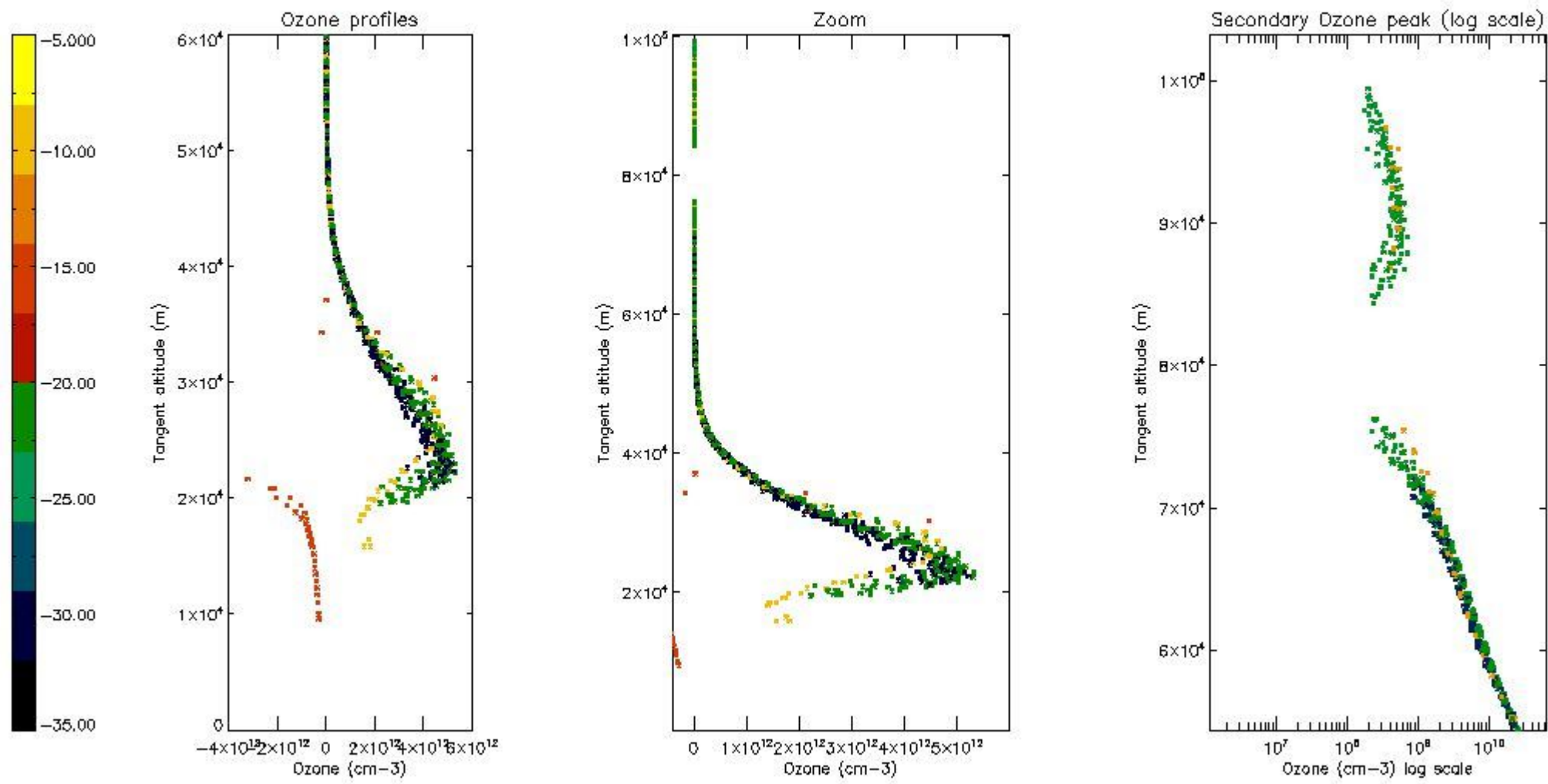
The colorbar represents the latitude.



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

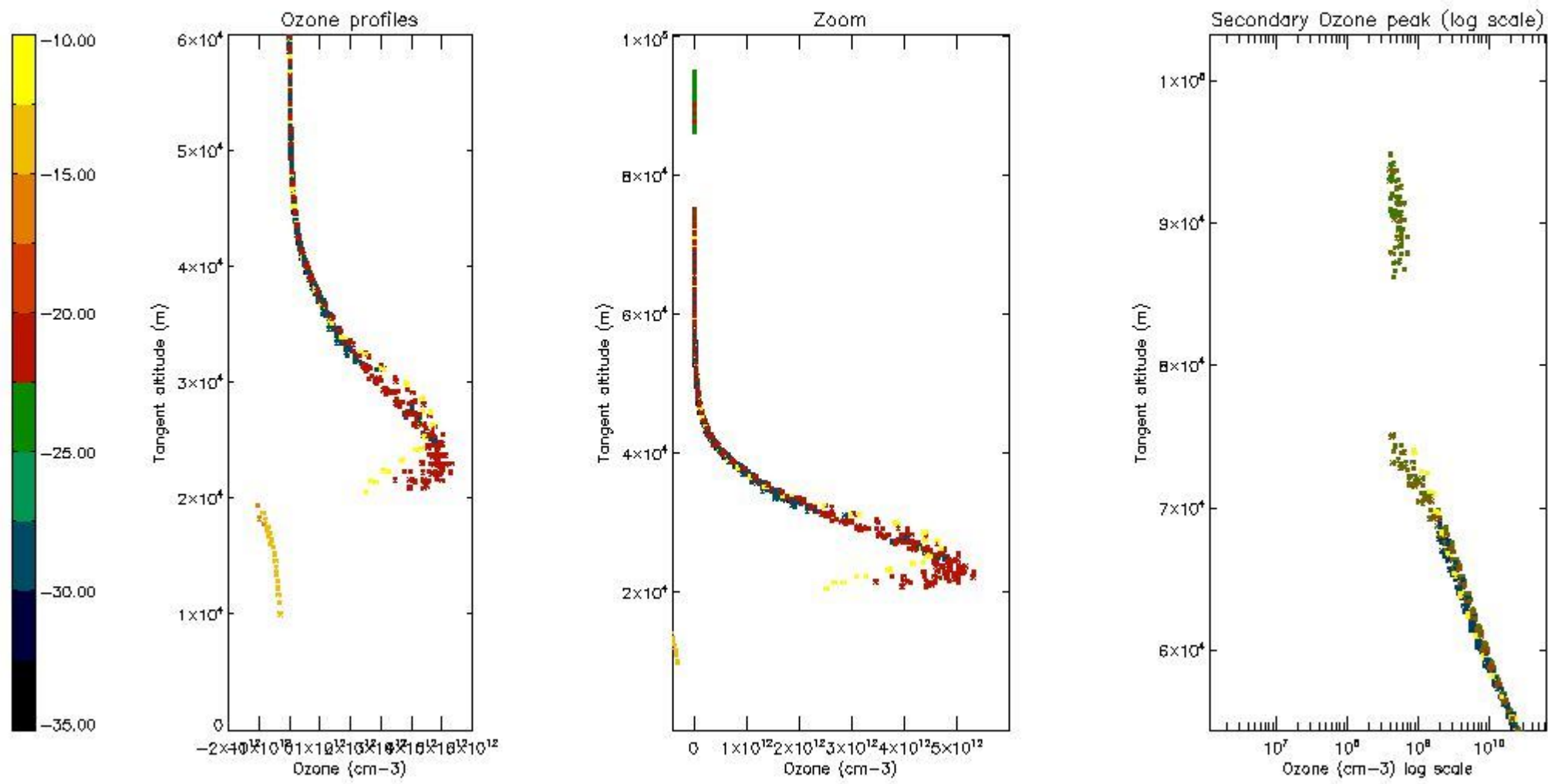
The colorbar represents the latitude.





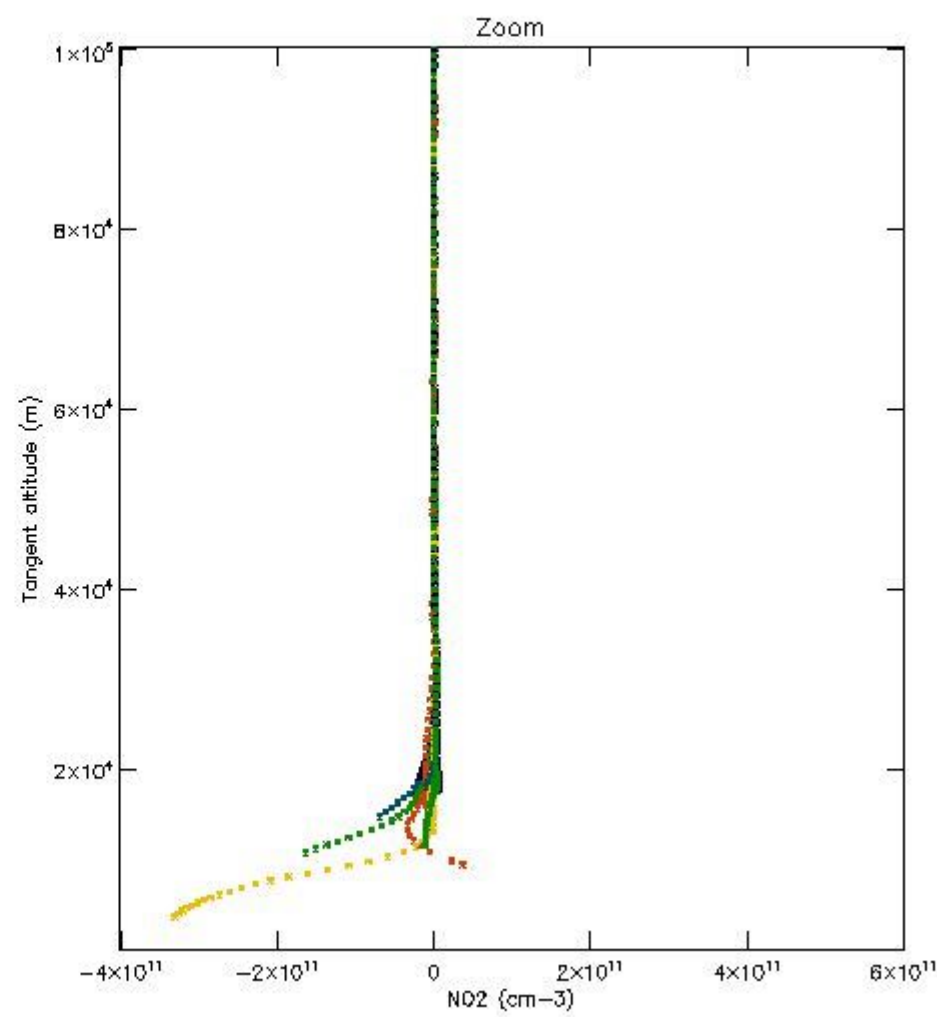
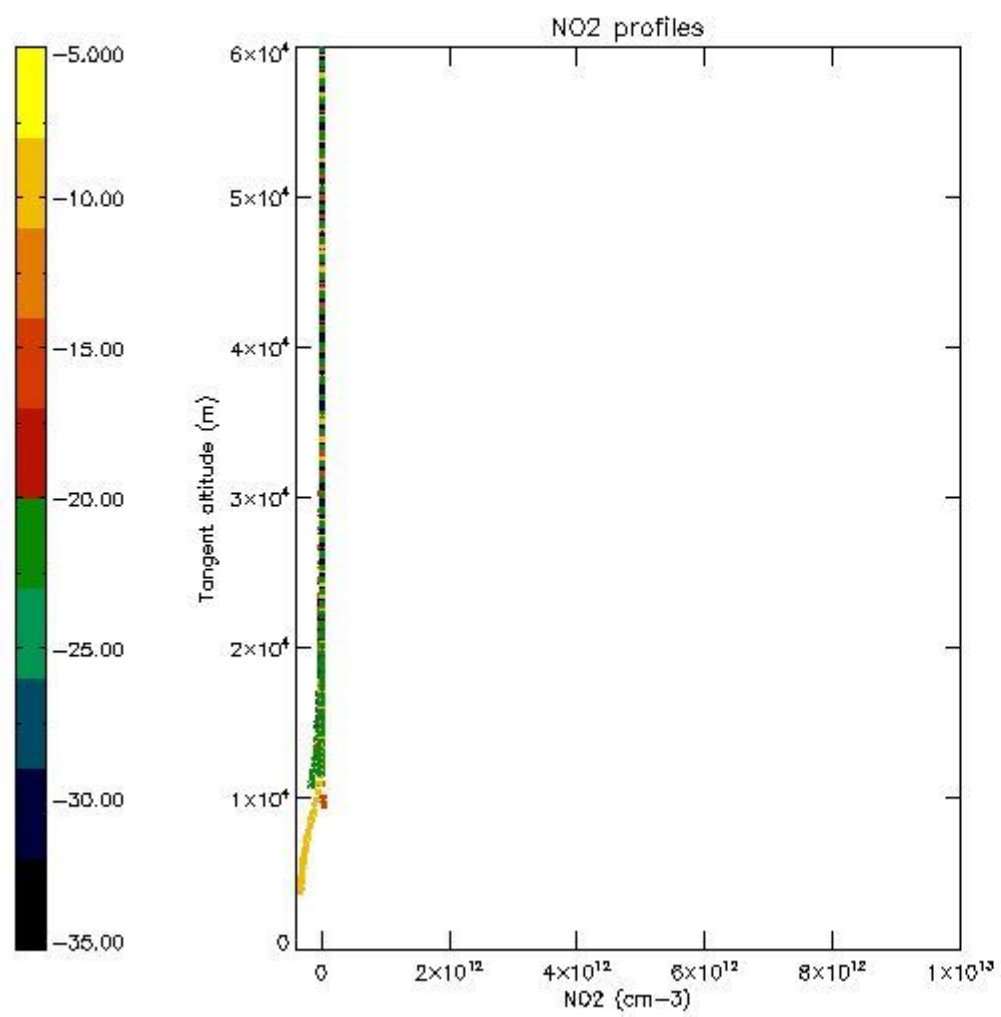
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



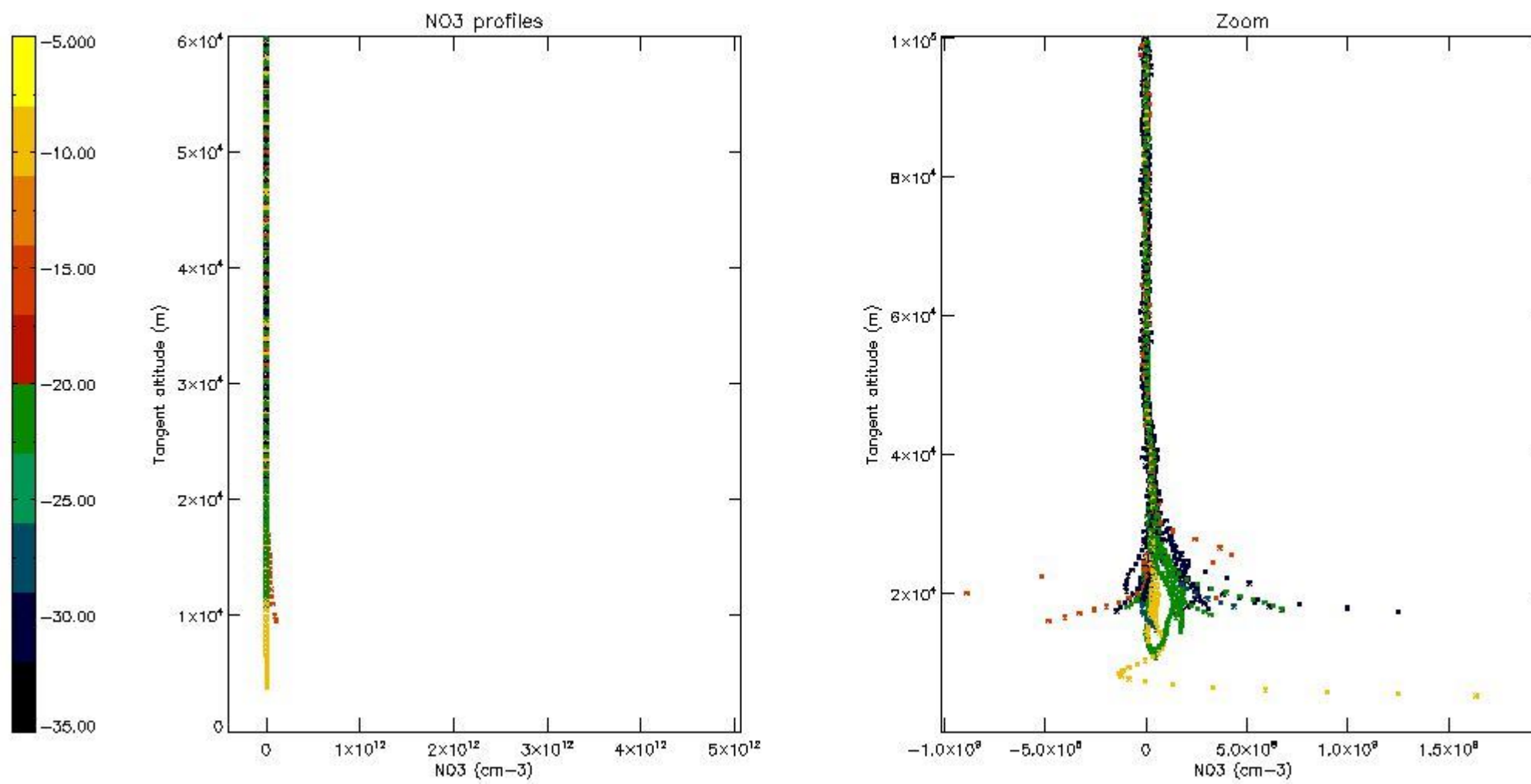
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

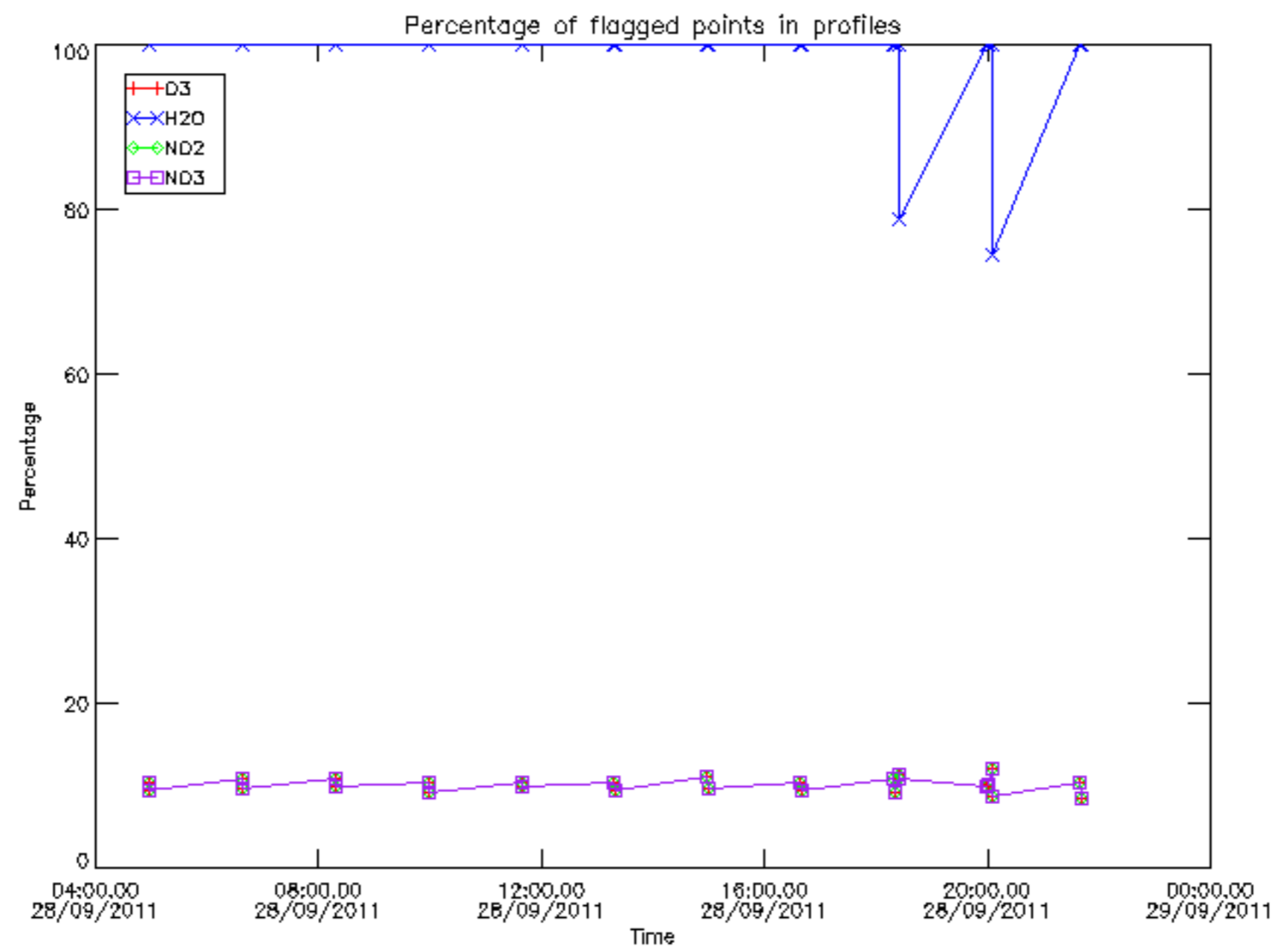
The colorbar represents the latitude.



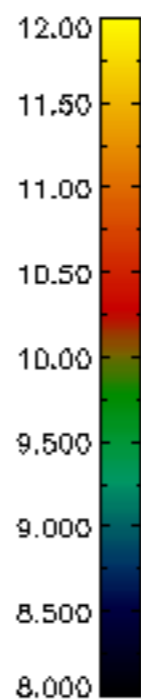
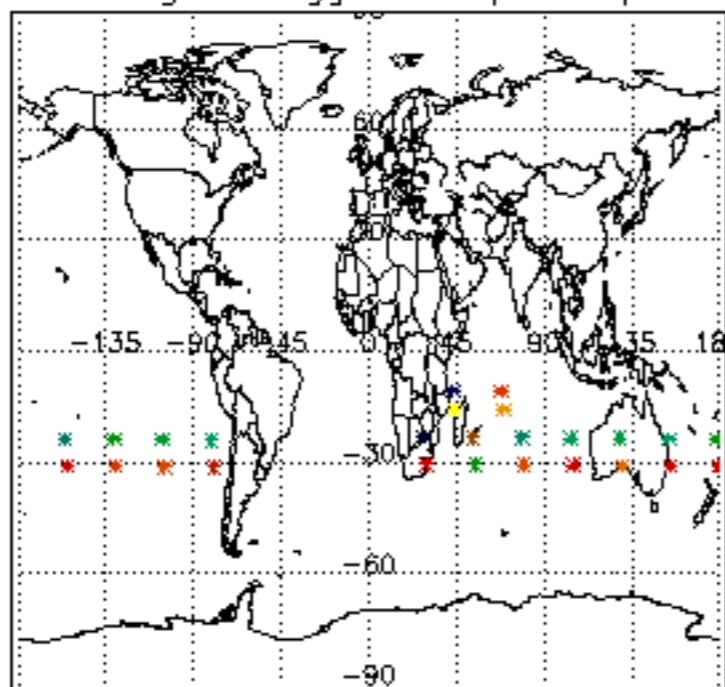
## 6. Auxiliary Data Files used for the production reported in section 2

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.

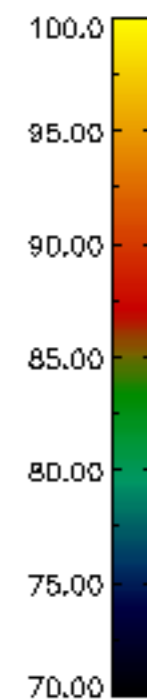
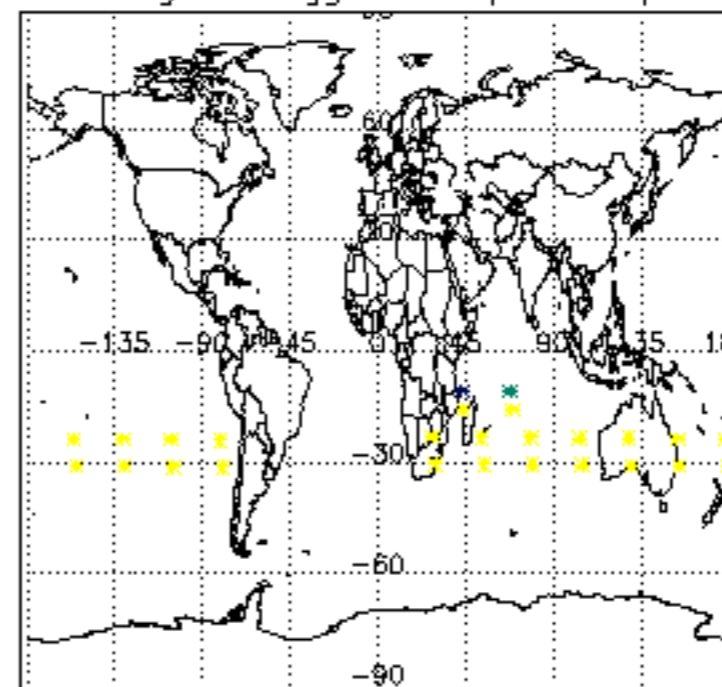
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	28-SEP-2011 03:35:58
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-SEP-2011 03:35:58
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-SEP-2011 03:35:58



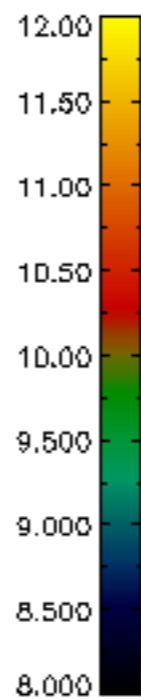
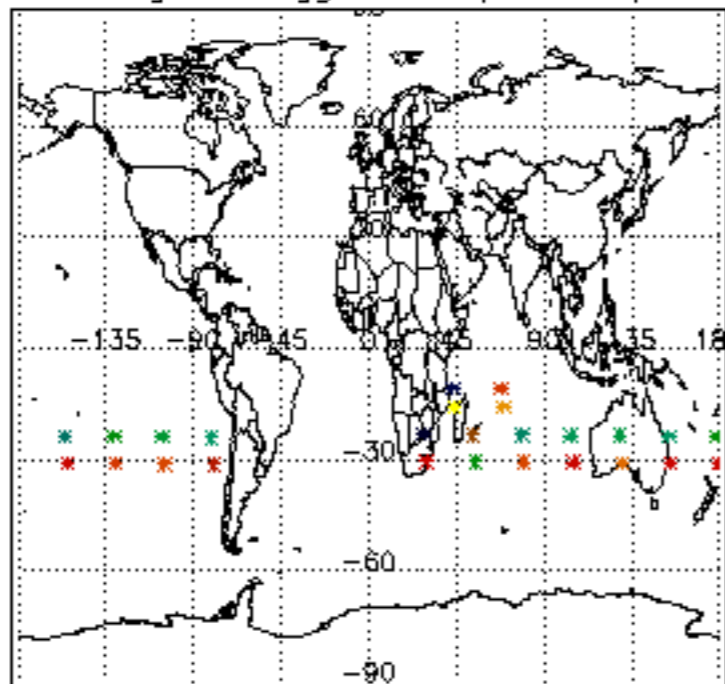
Percentage of flagged data per D3 profile



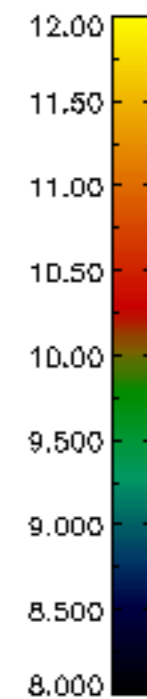
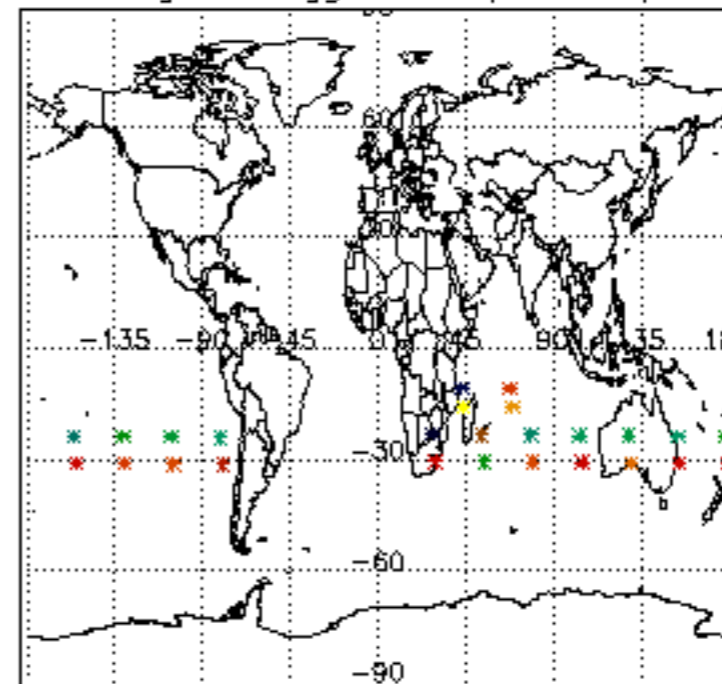
Percentage of flagged data per H2O profile

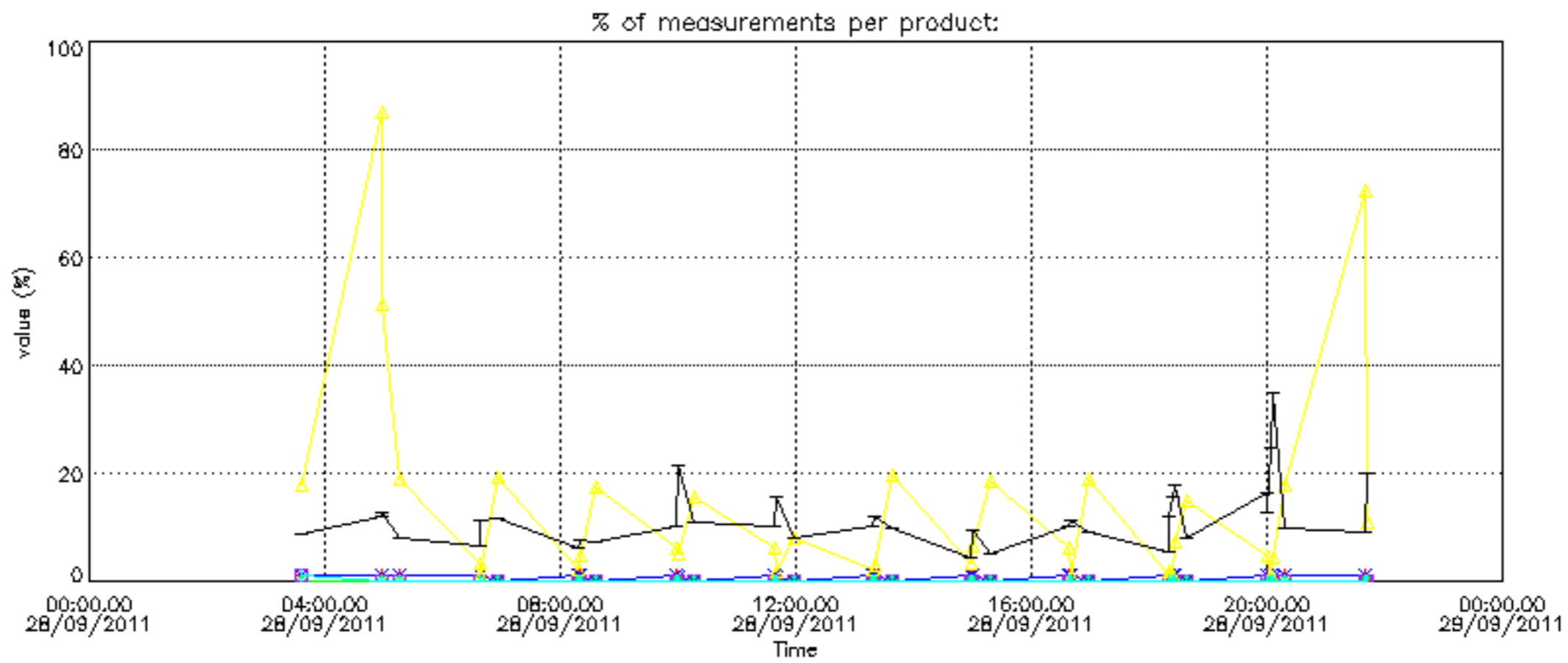


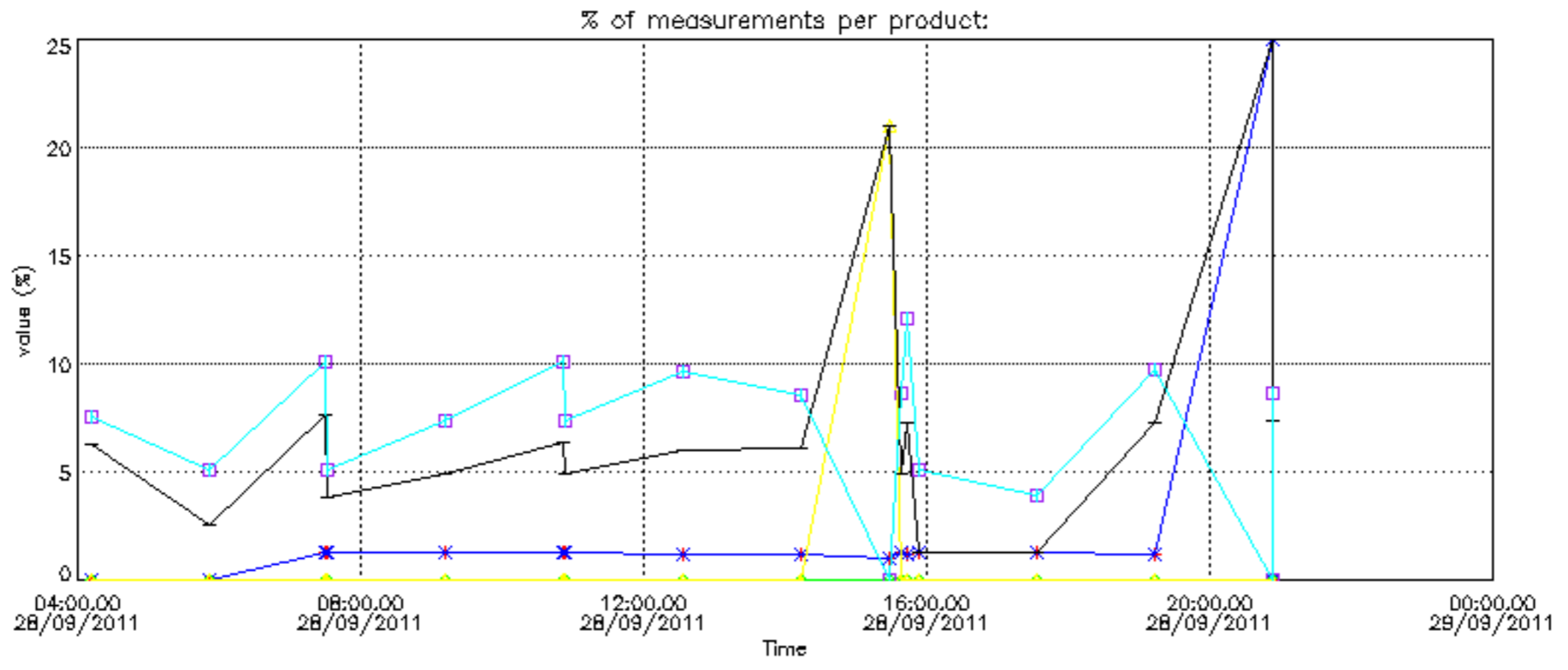
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

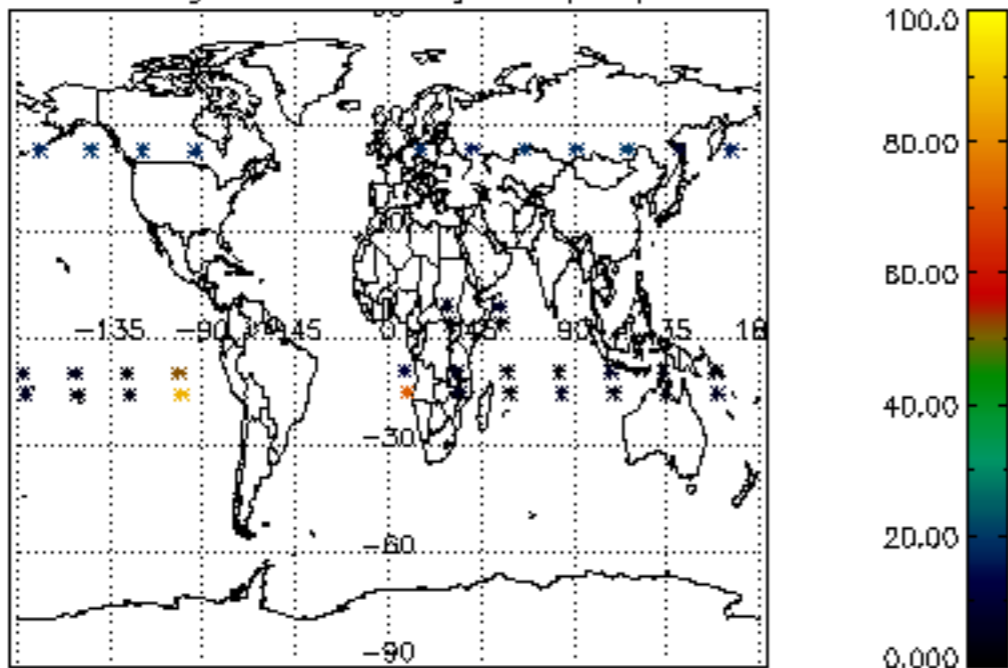




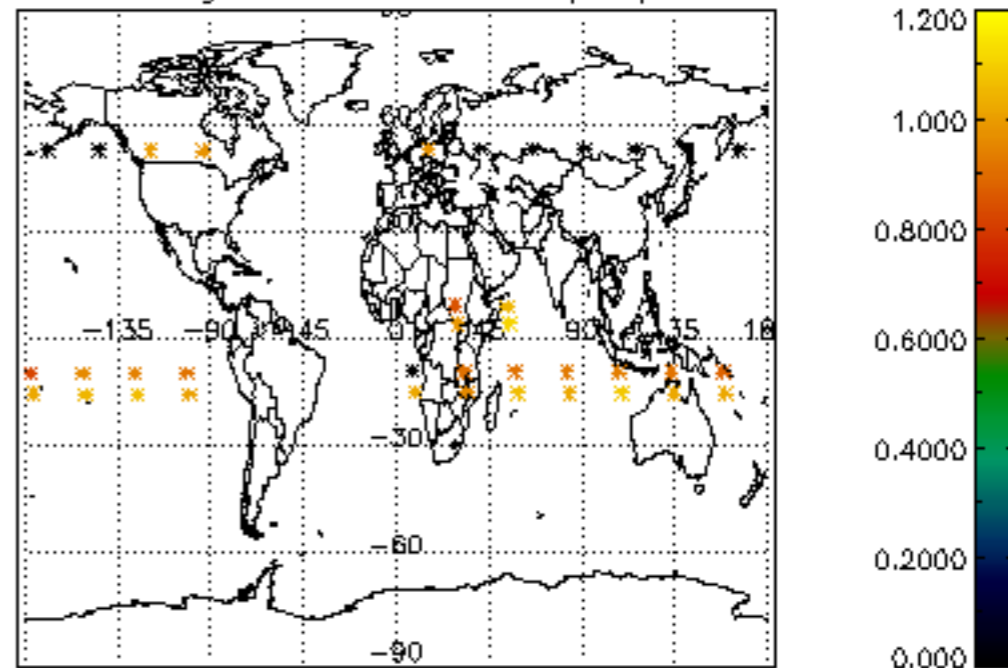




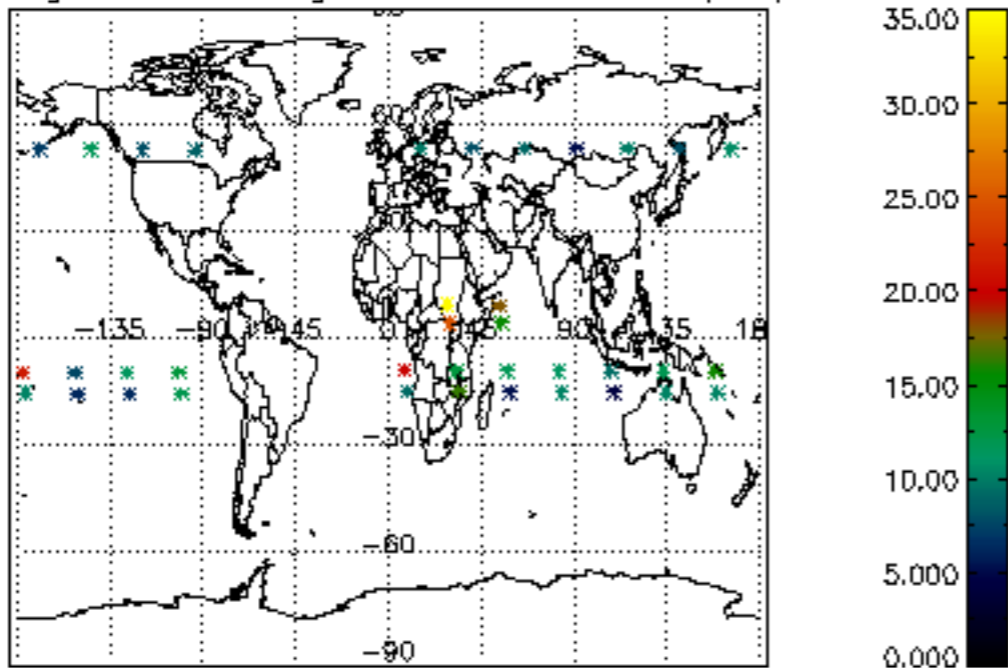
Percentage of cosmic ray hits per profile



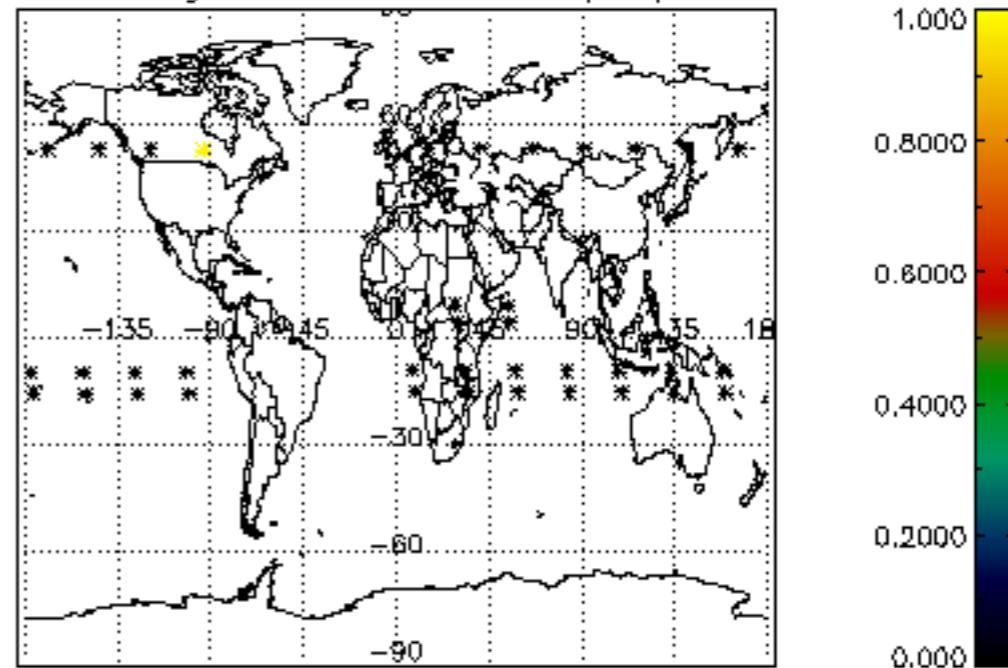
Percentage of datation errors per profile



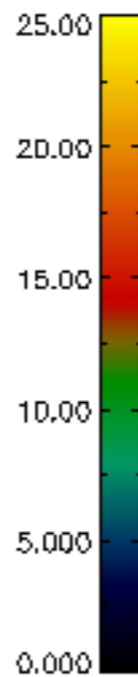
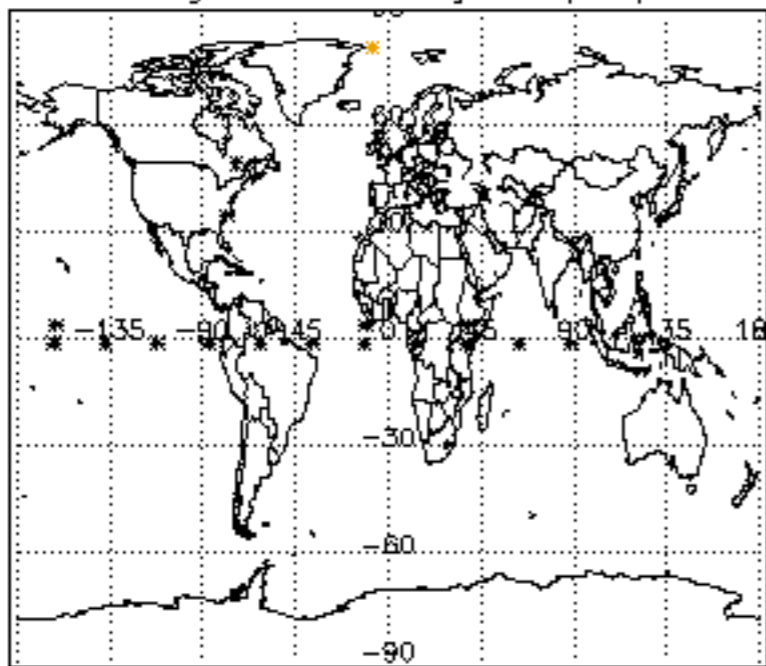
Percentage of star falling outside central band per profile



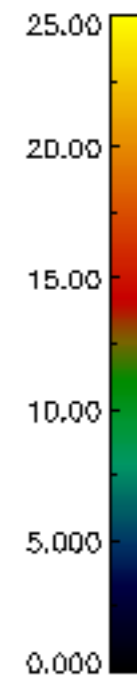
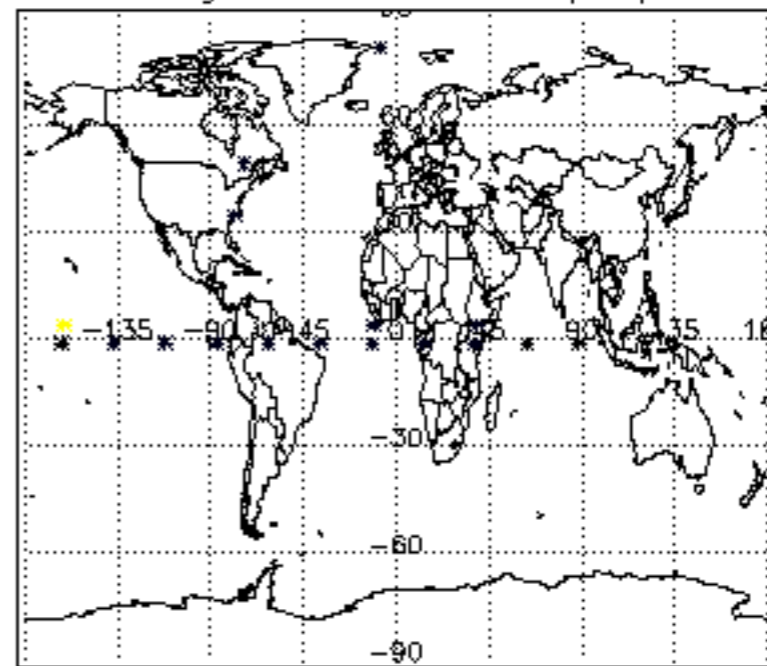
Percentage of saturation errors per profile



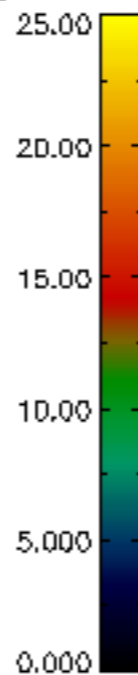
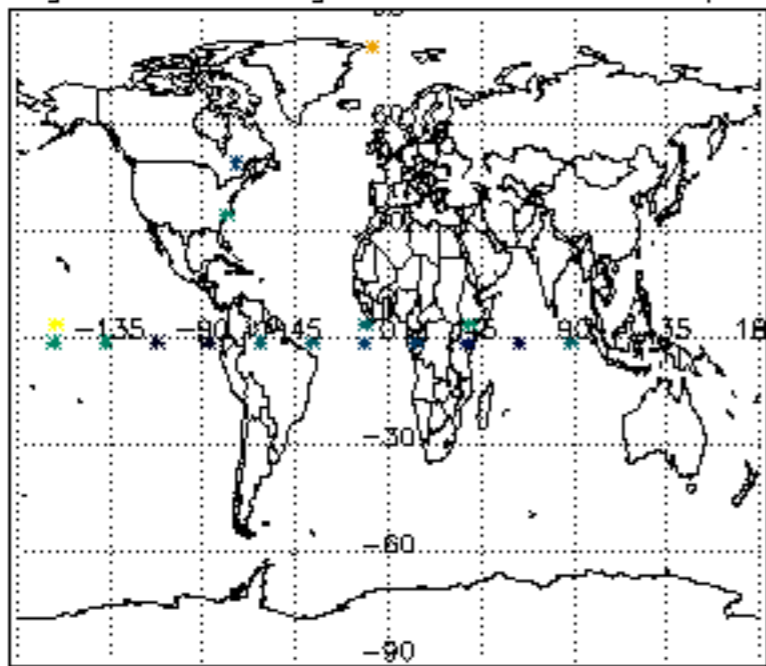
Percentage of cosmic ray hits per profile



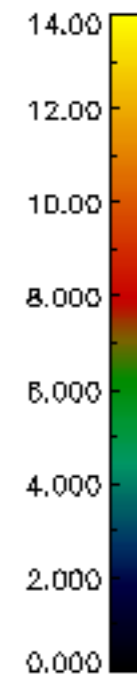
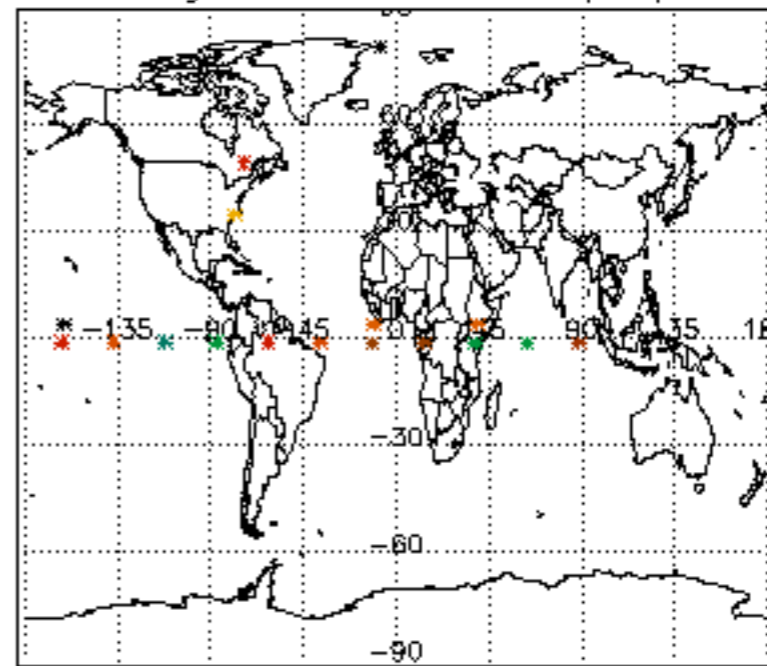
Percentage of datation errors per profile

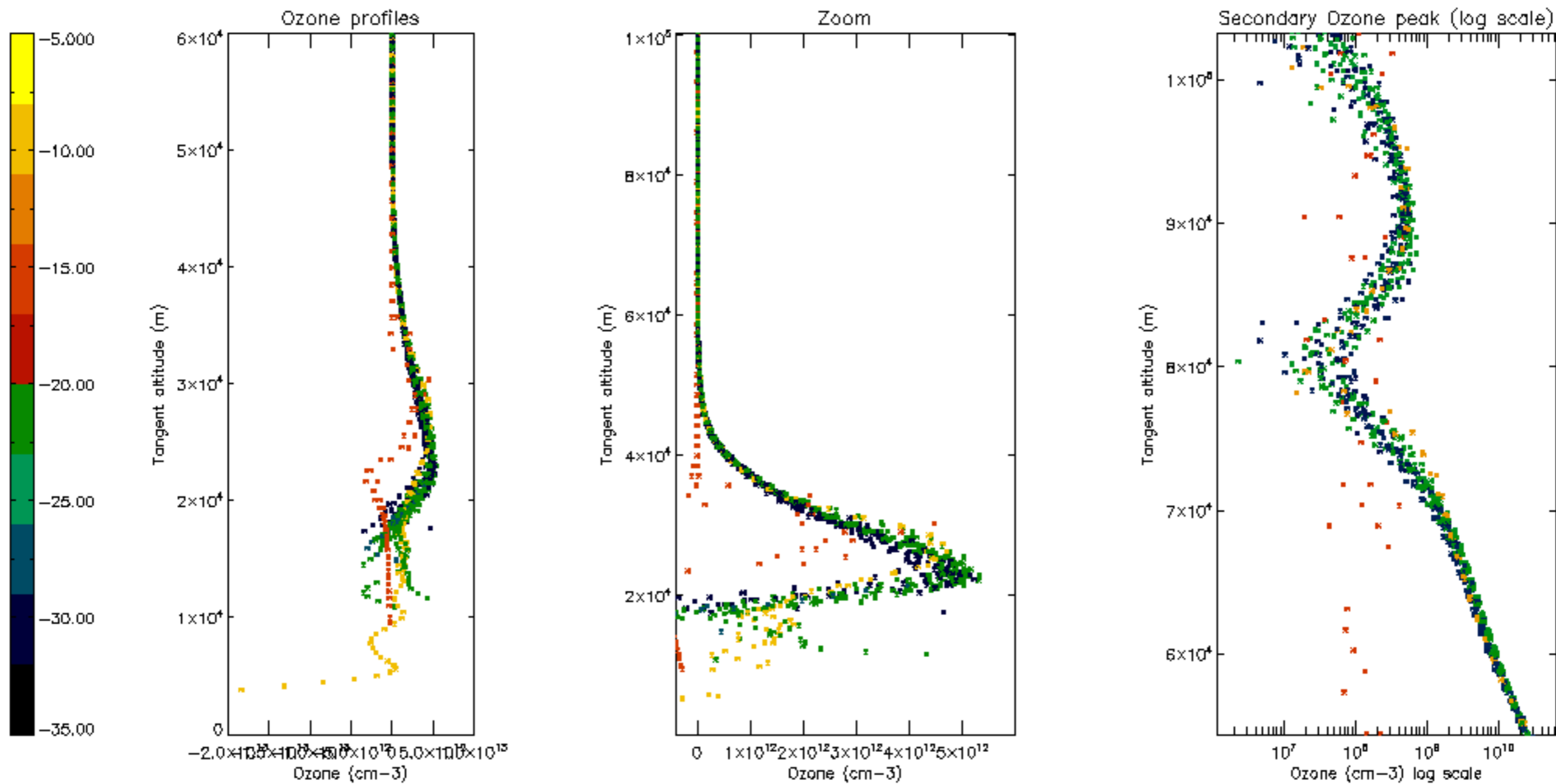


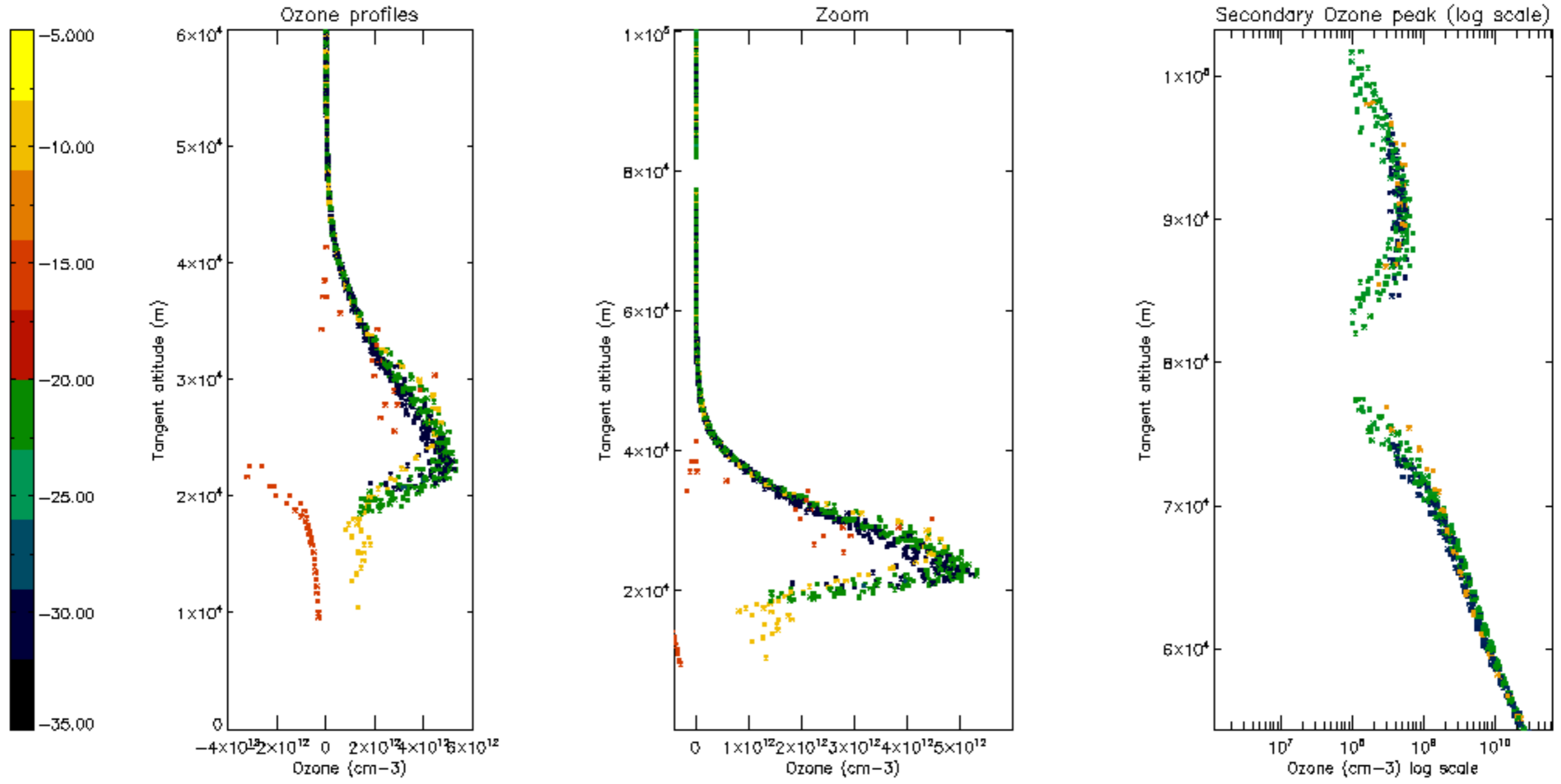
Percentage of star falling outside central band per profile

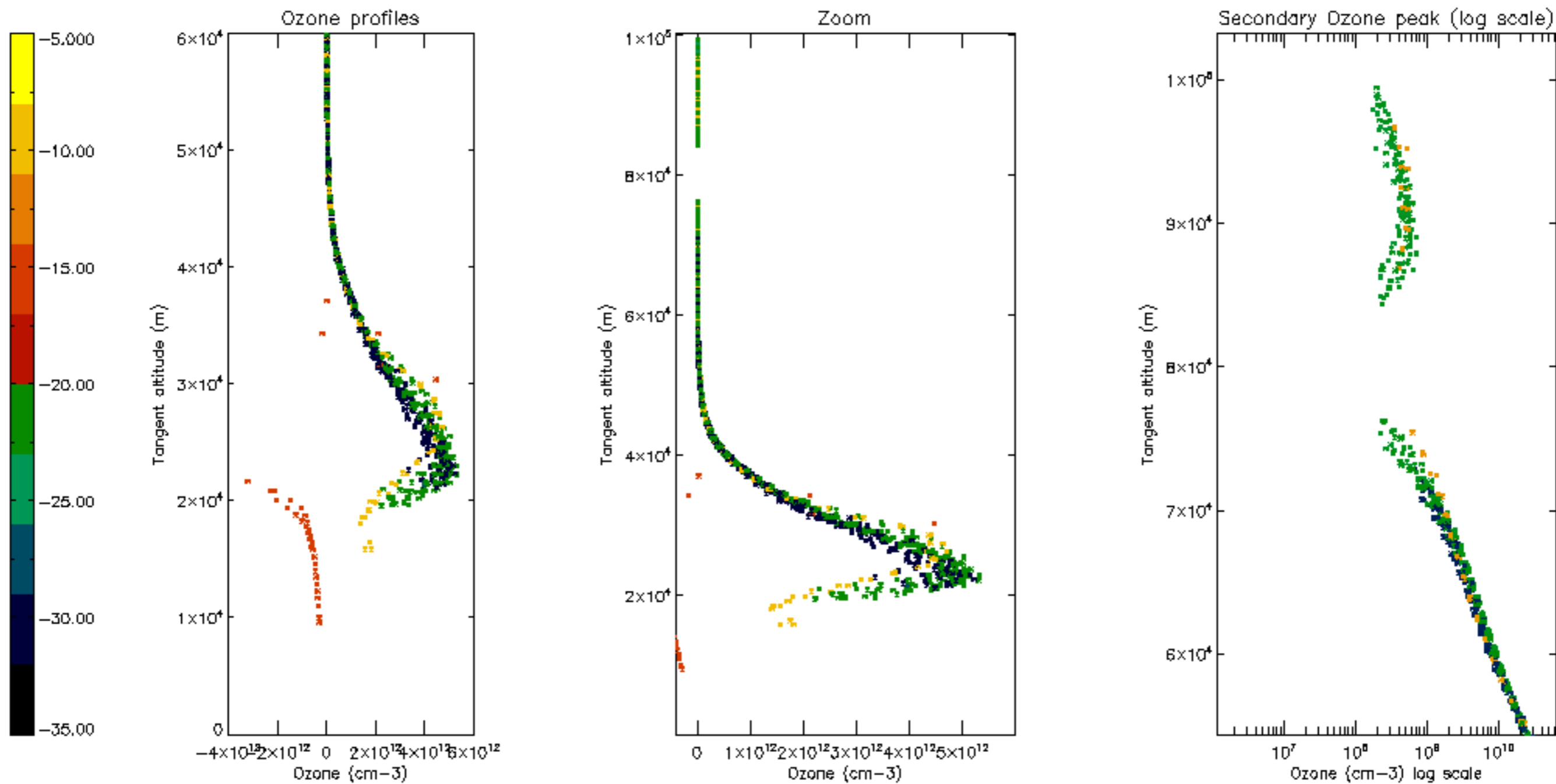


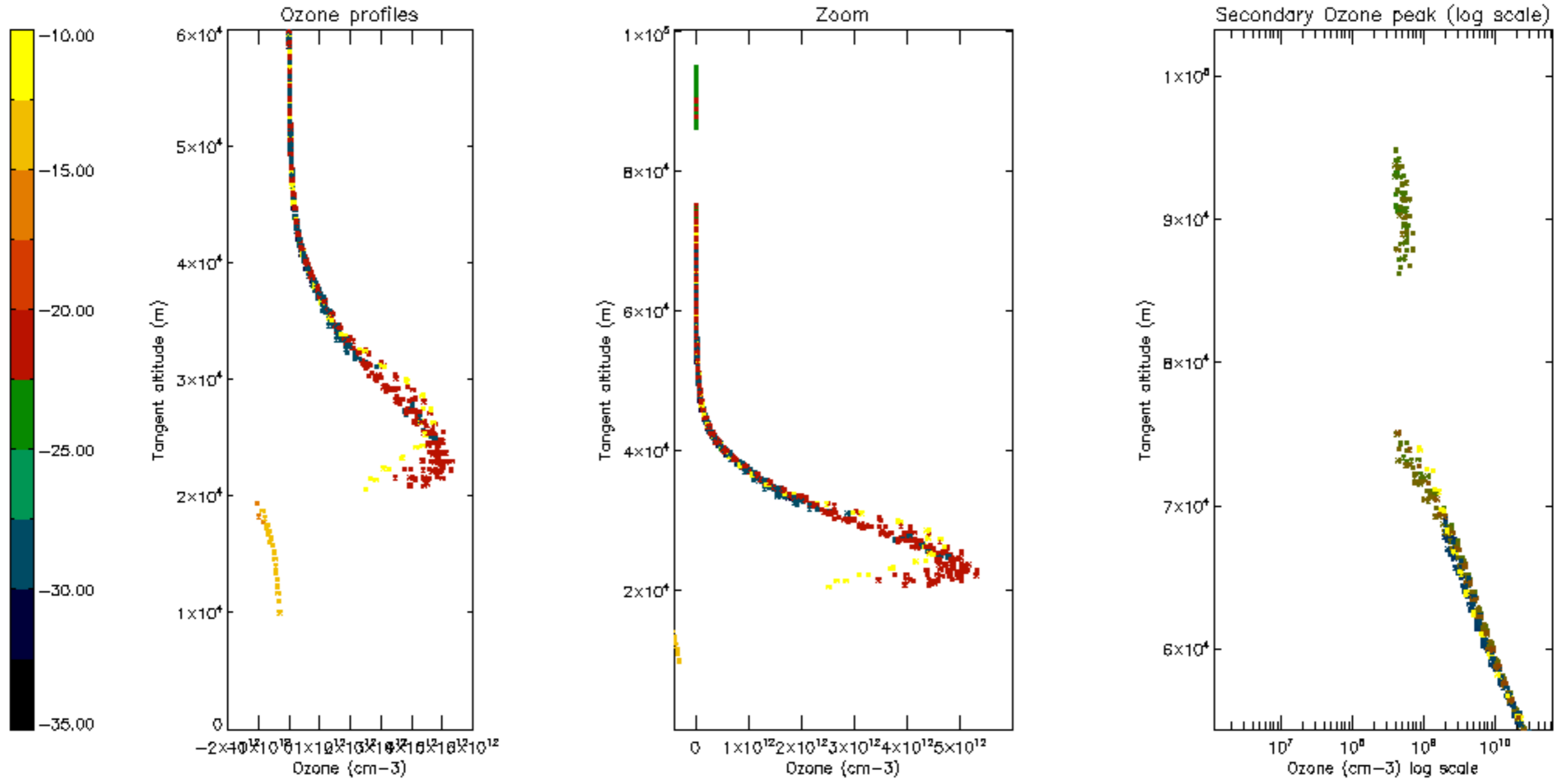
Percentage of saturation errors per profile

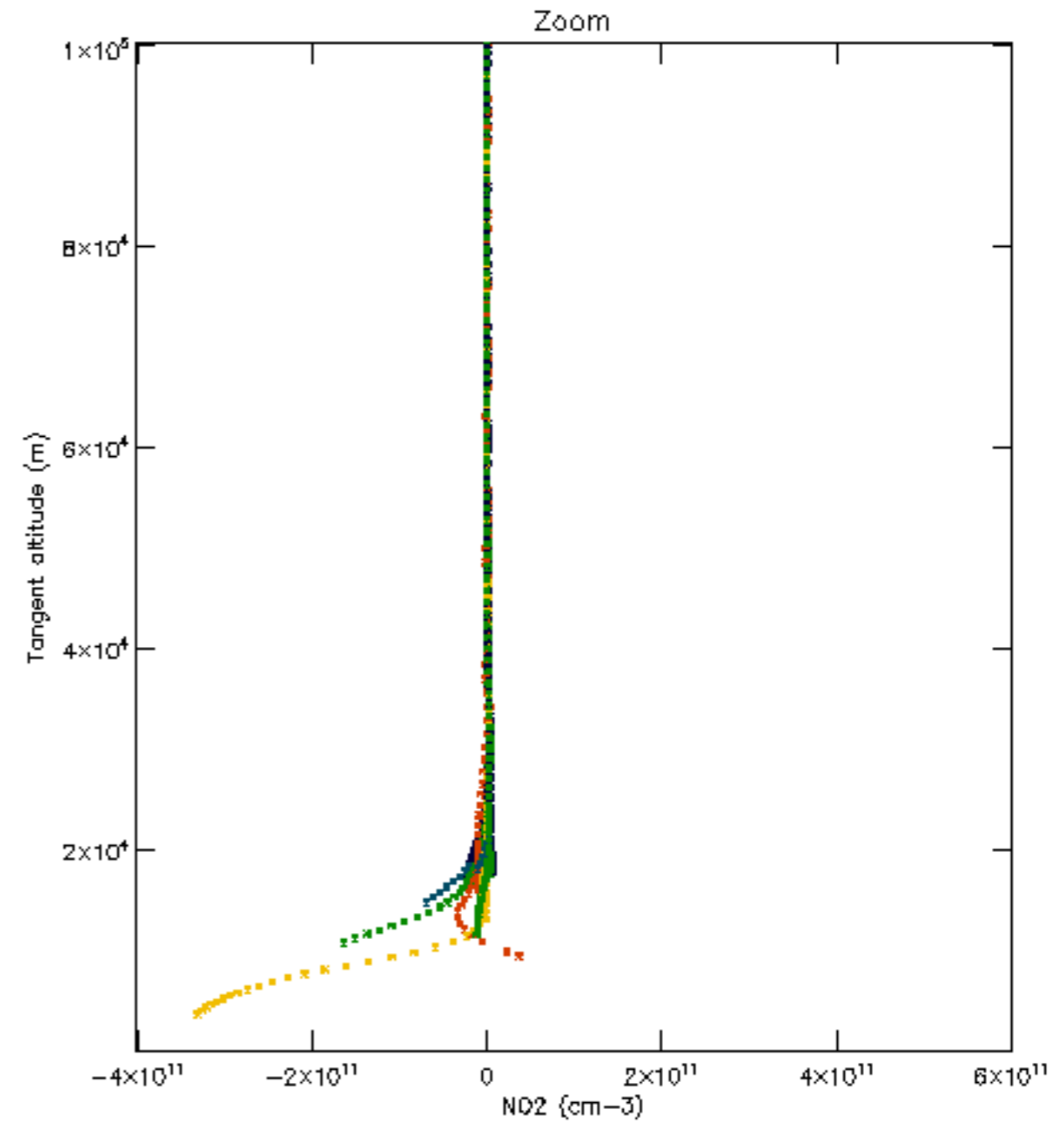
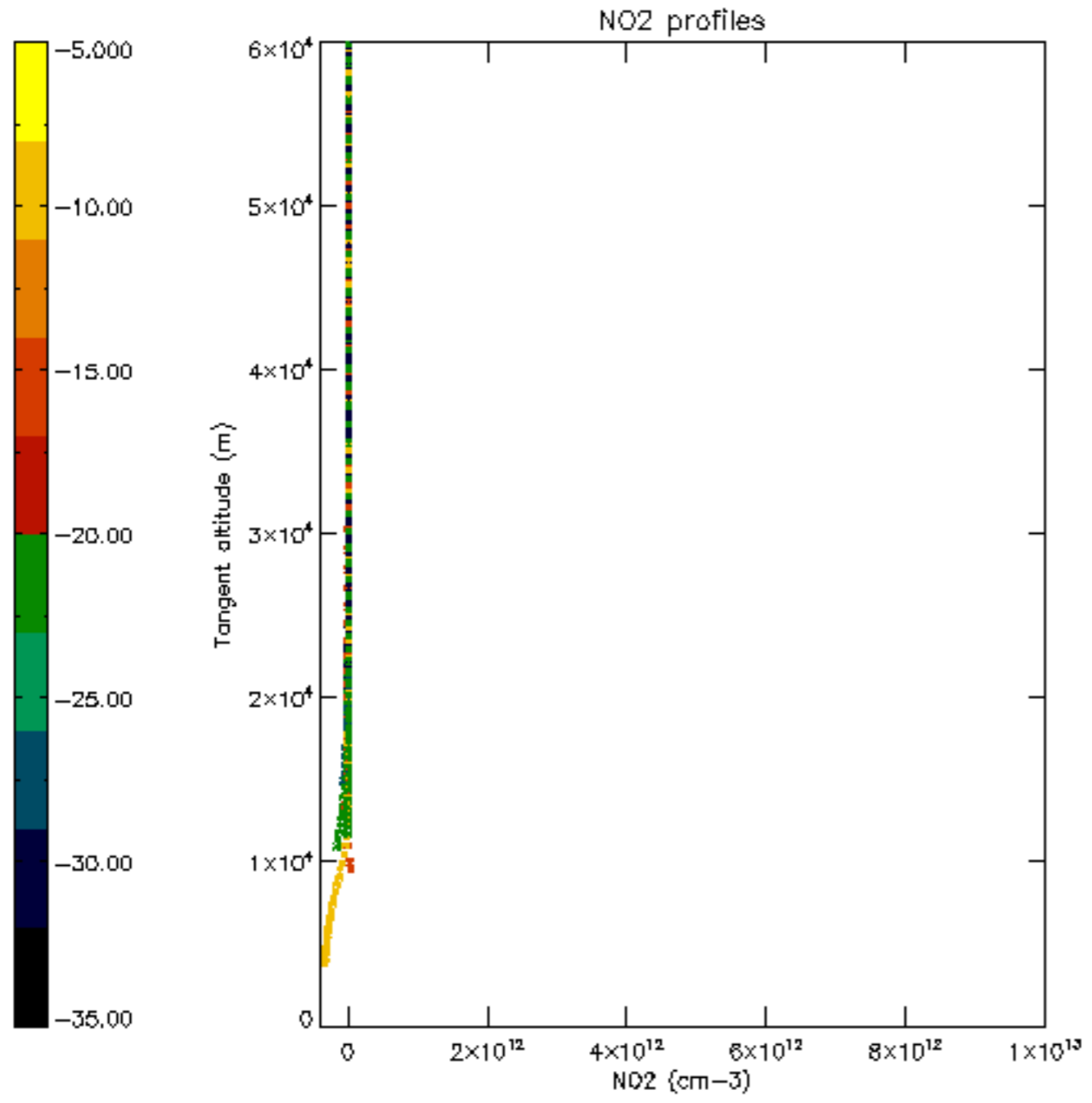


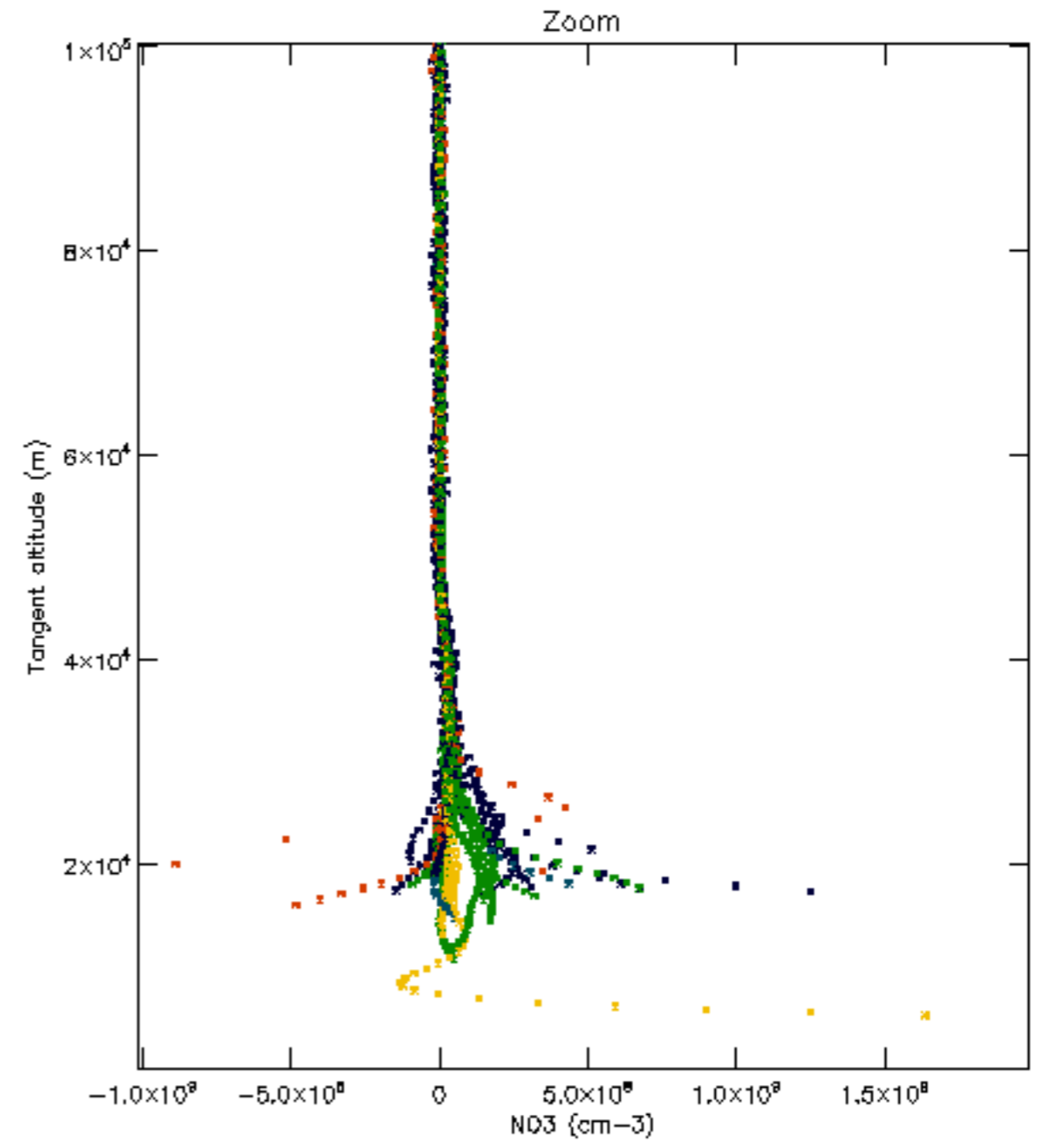
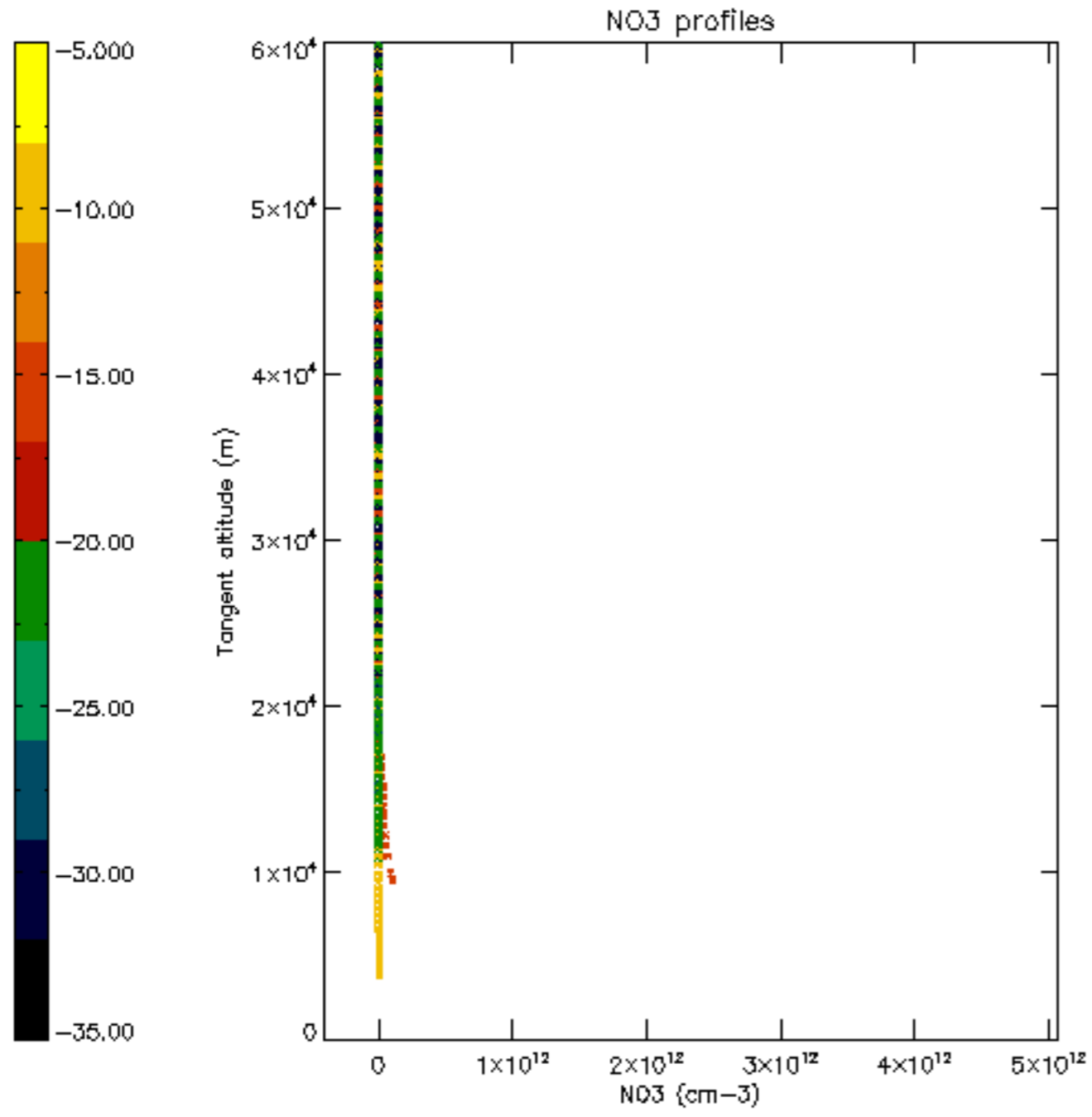




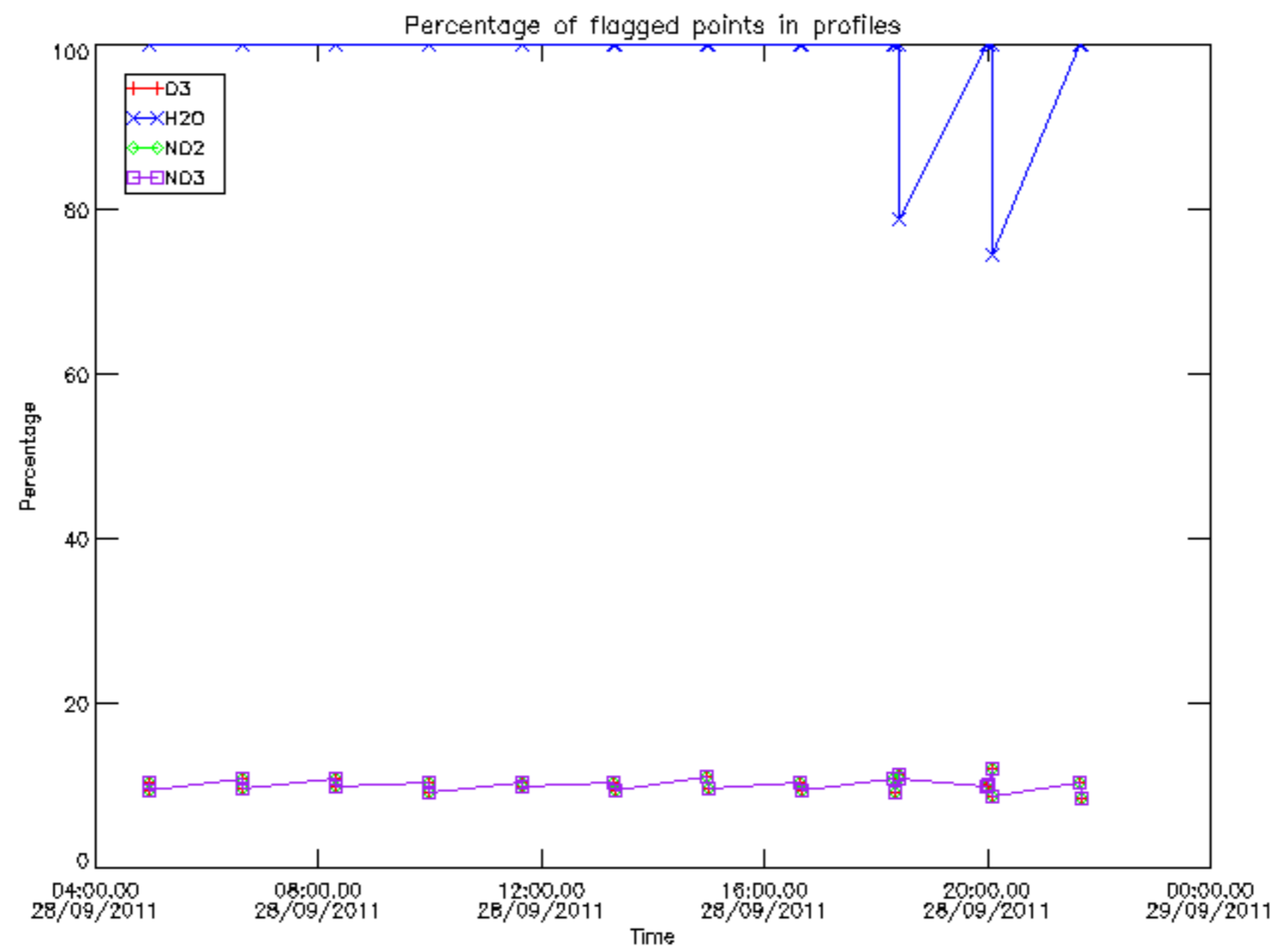




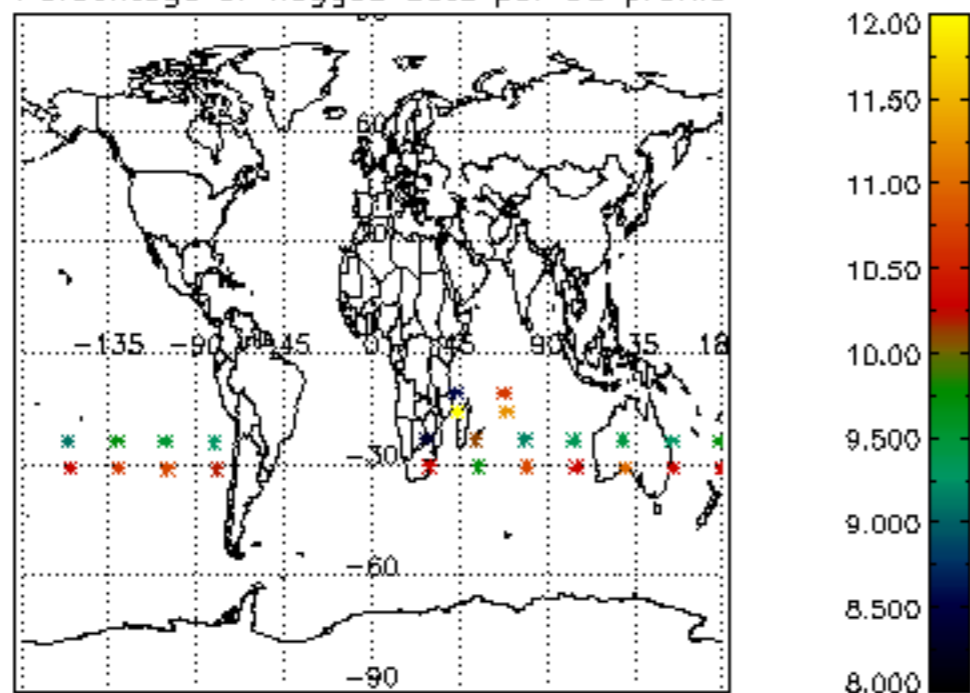




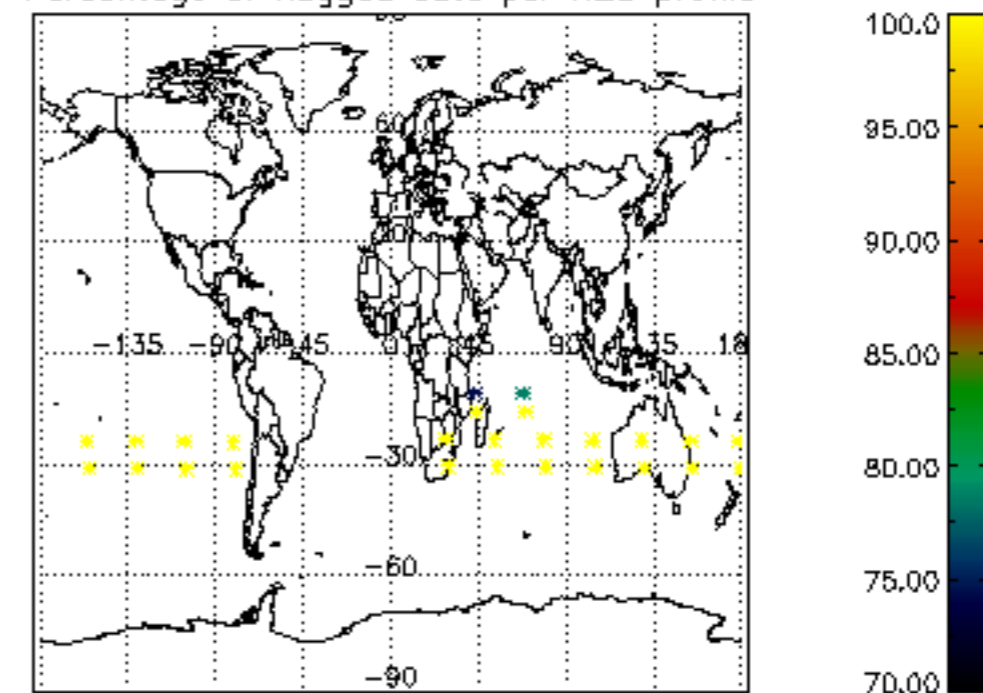




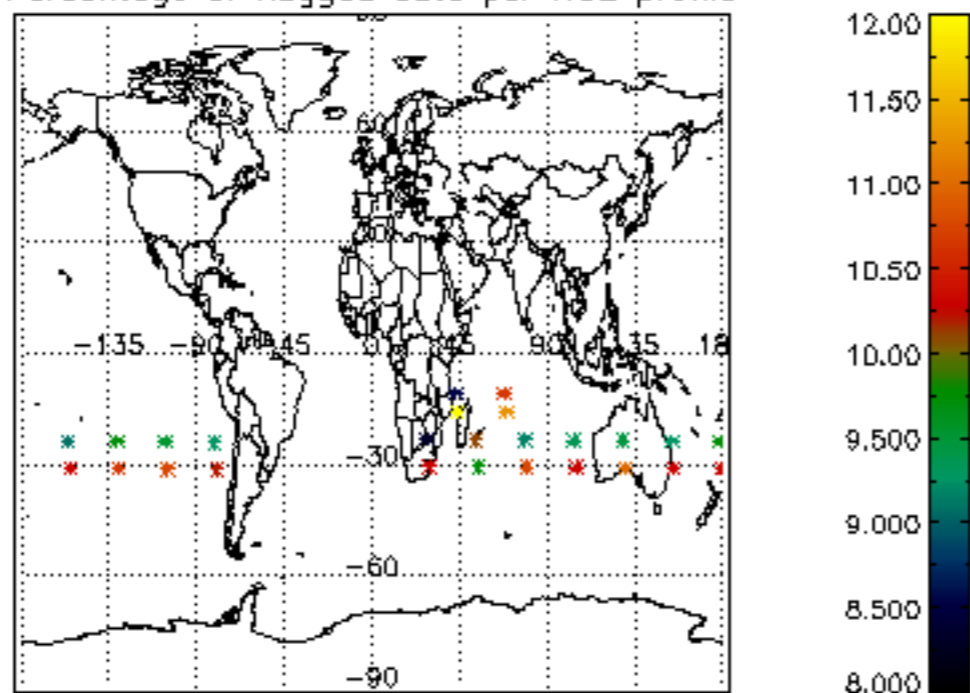
Percentage of flagged data per D3 profile



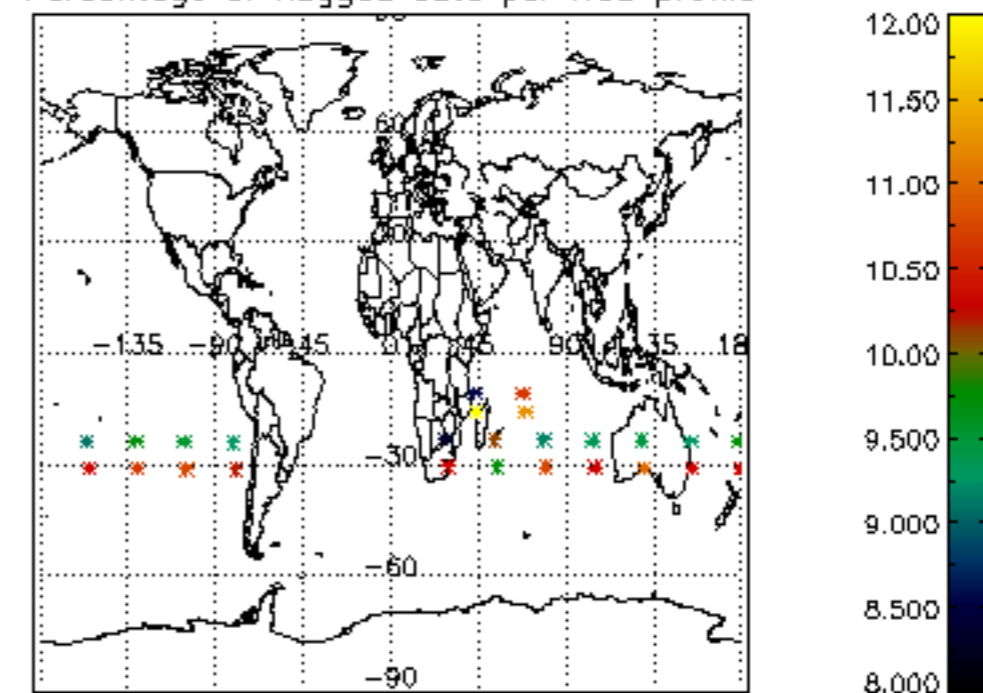
Percentage of flagged data per H2O profile

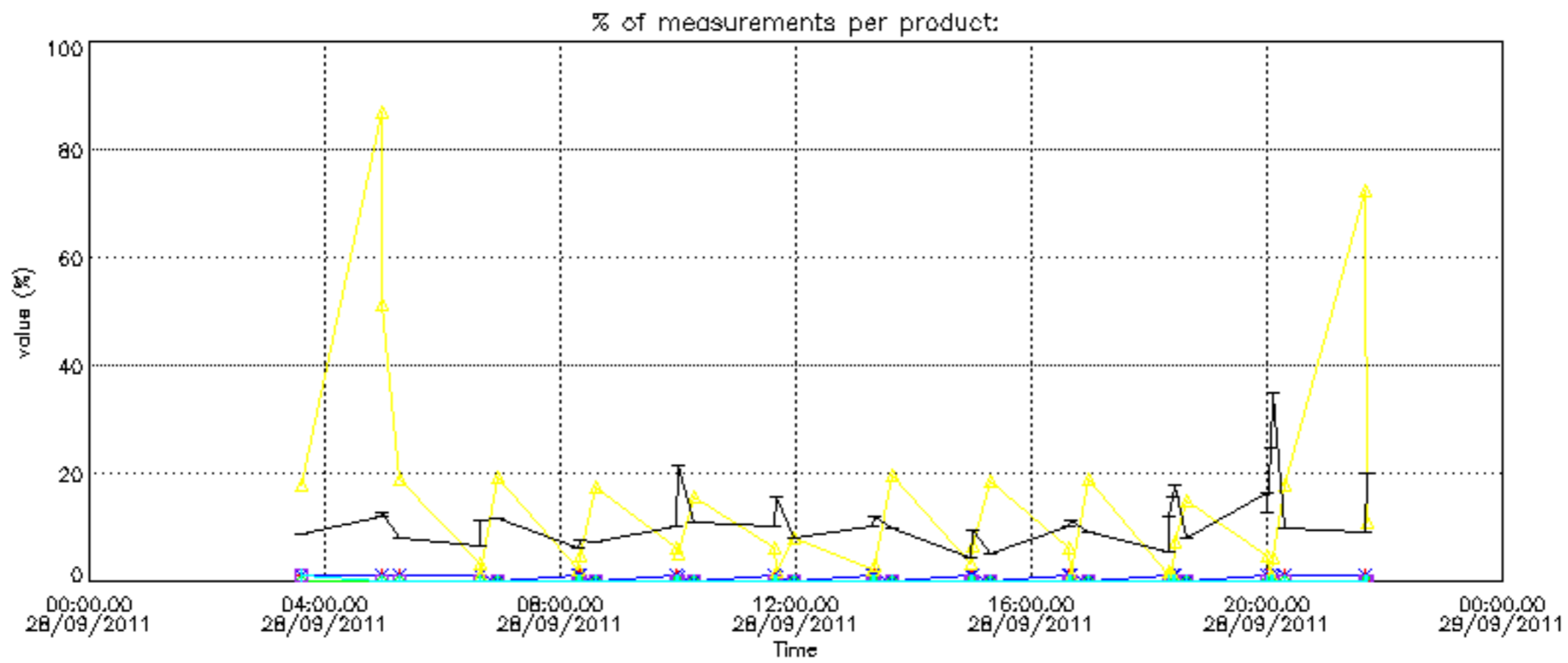


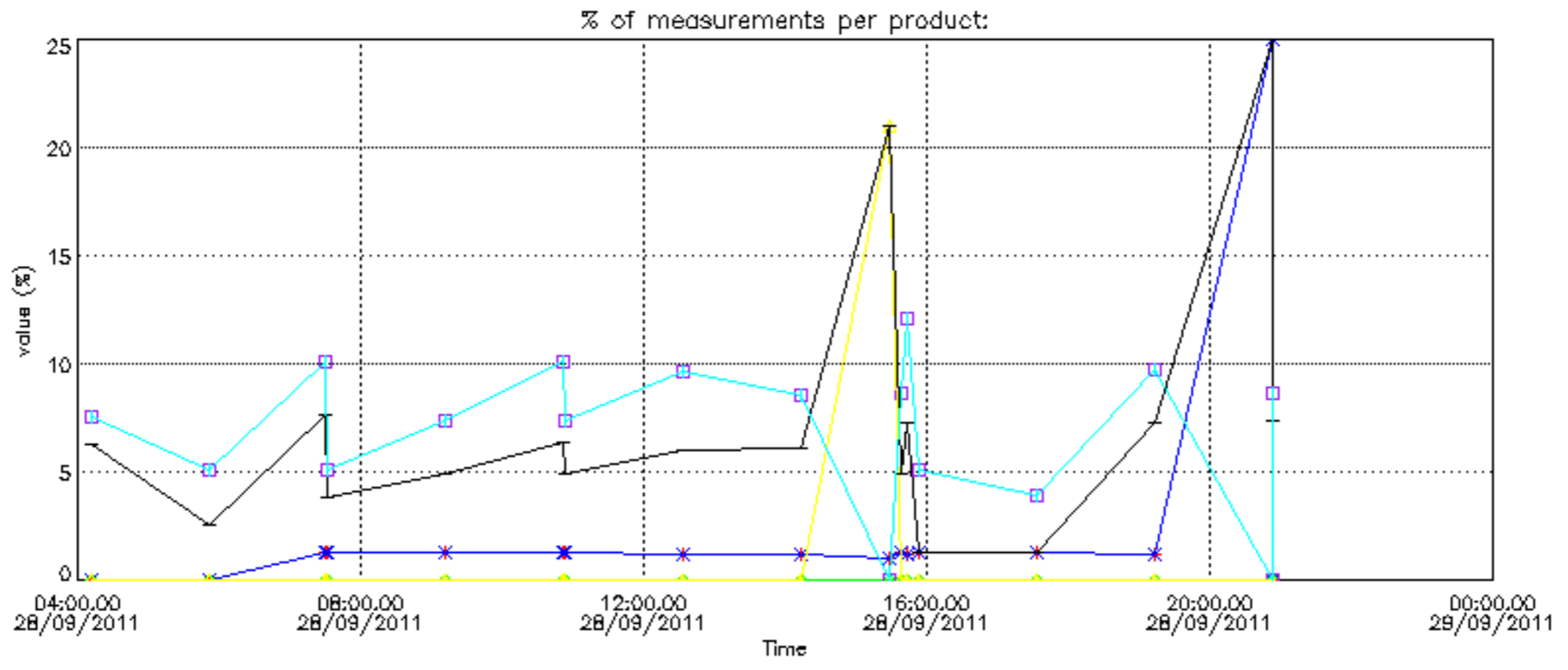
Percentage of flagged data per NO2 profile



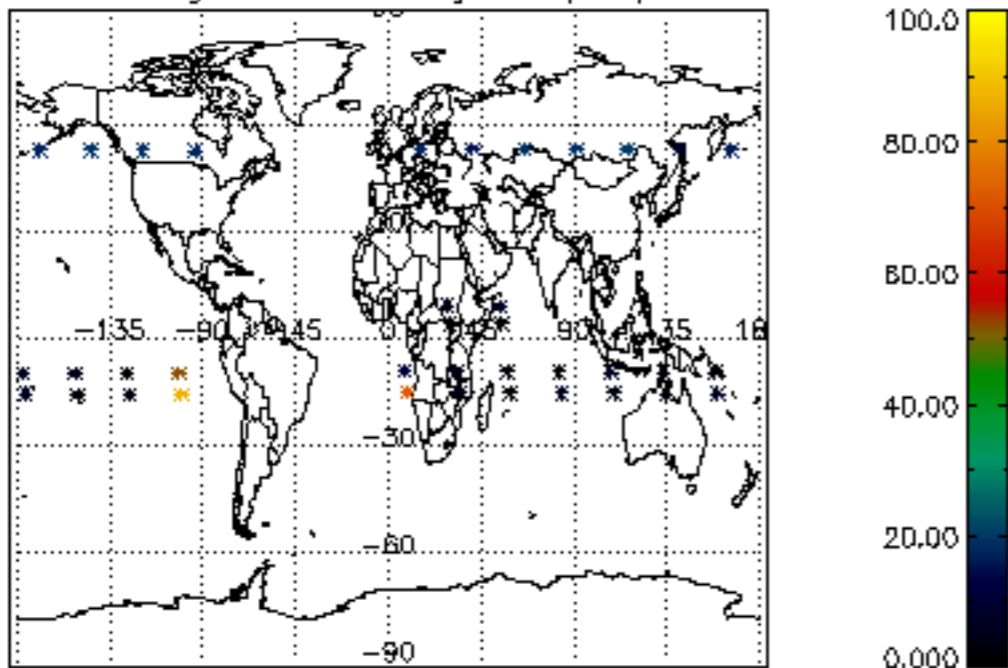
Percentage of flagged data per NO3 profile



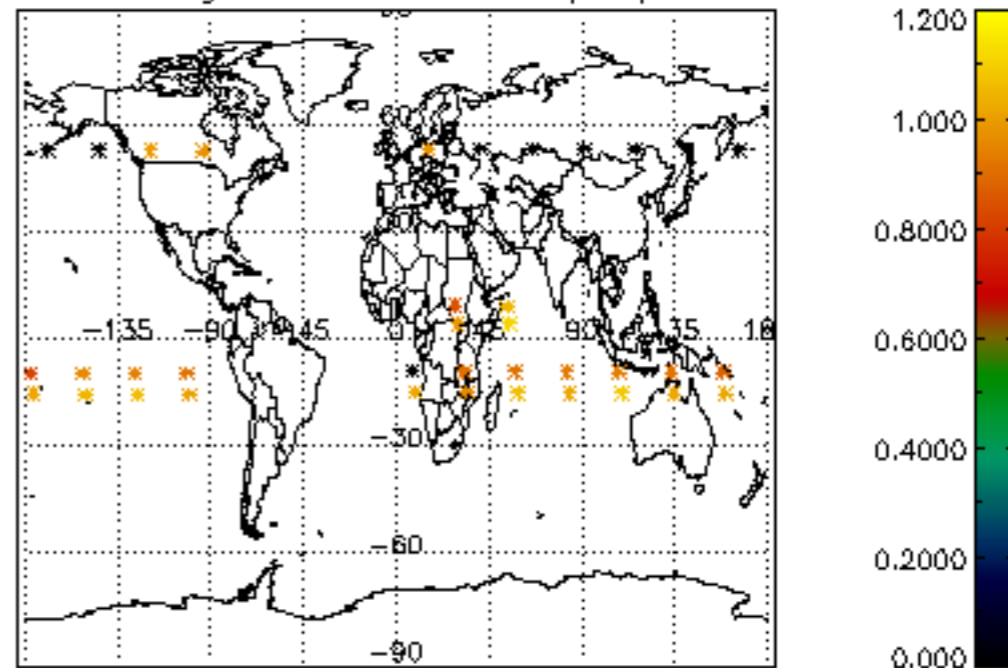




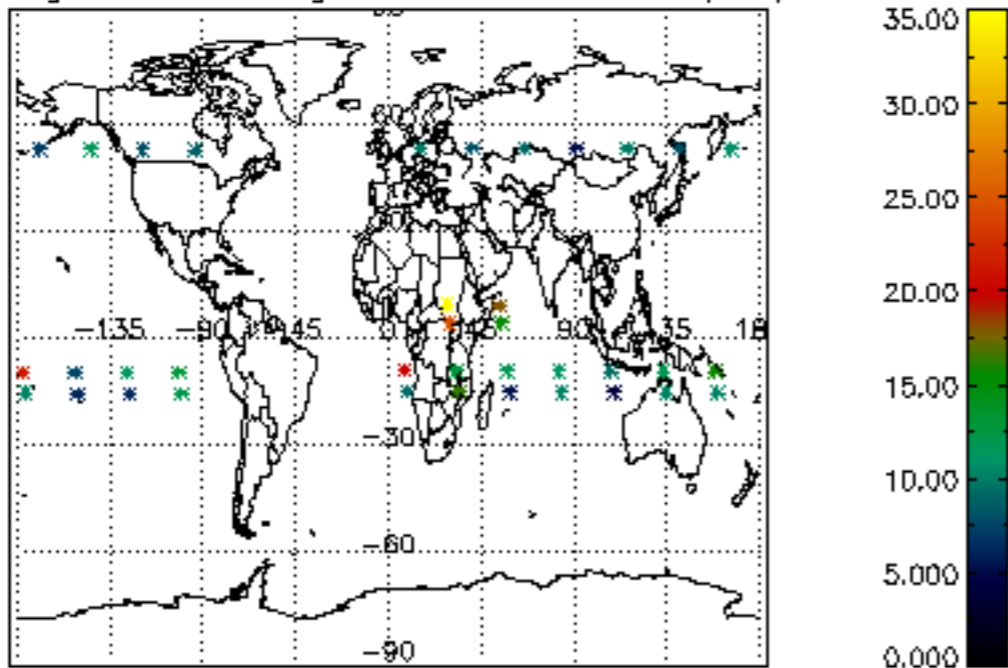
Percentage of cosmic ray hits per profile



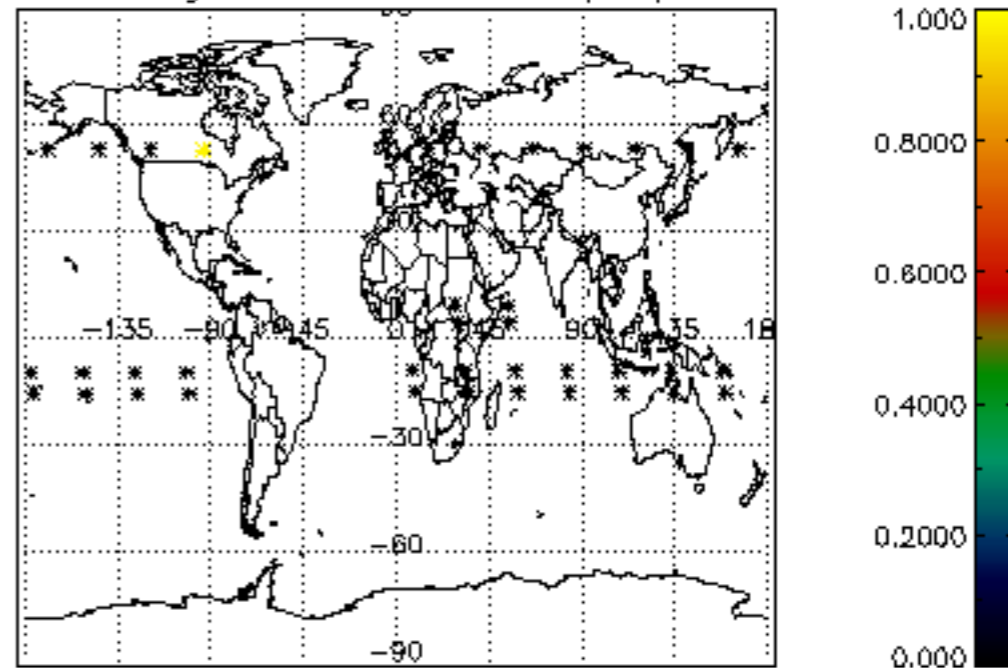
Percentage of datation errors per profile



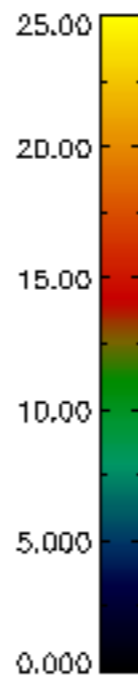
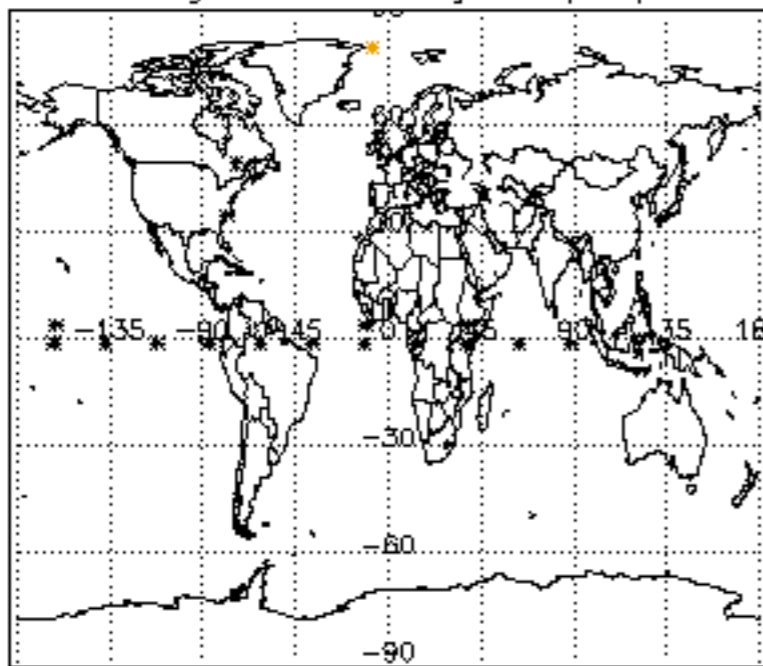
Percentage of star falling outside central band per profile



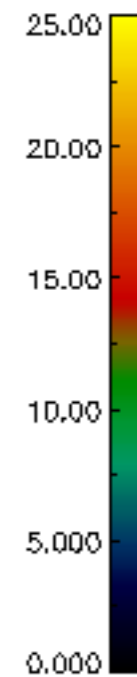
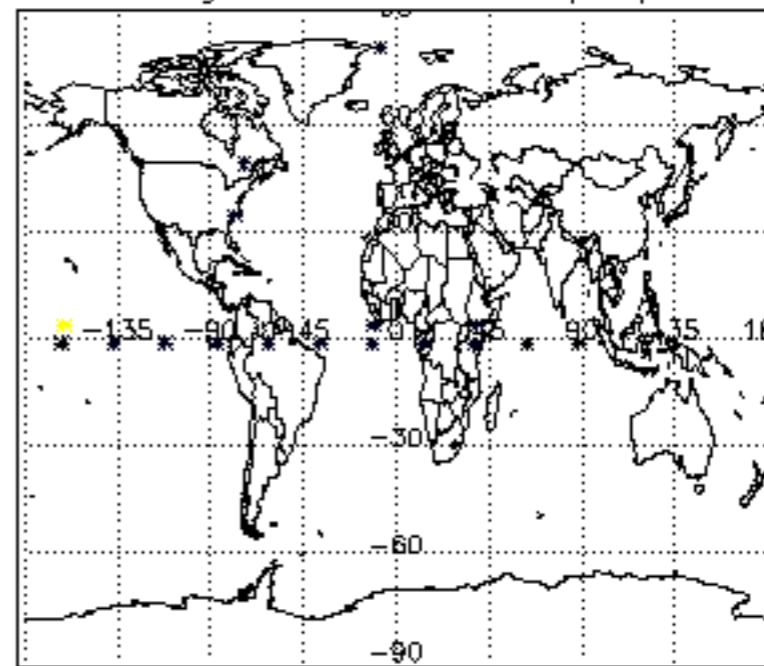
Percentage of saturation errors per profile



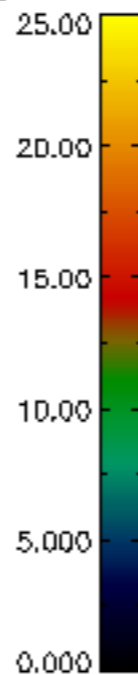
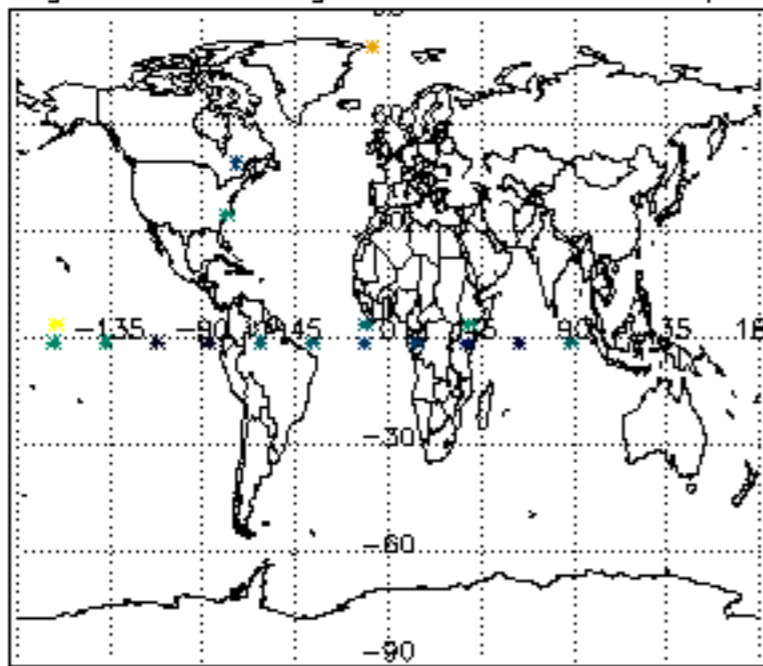
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

