

# GOMOS Level 2 Daily Report

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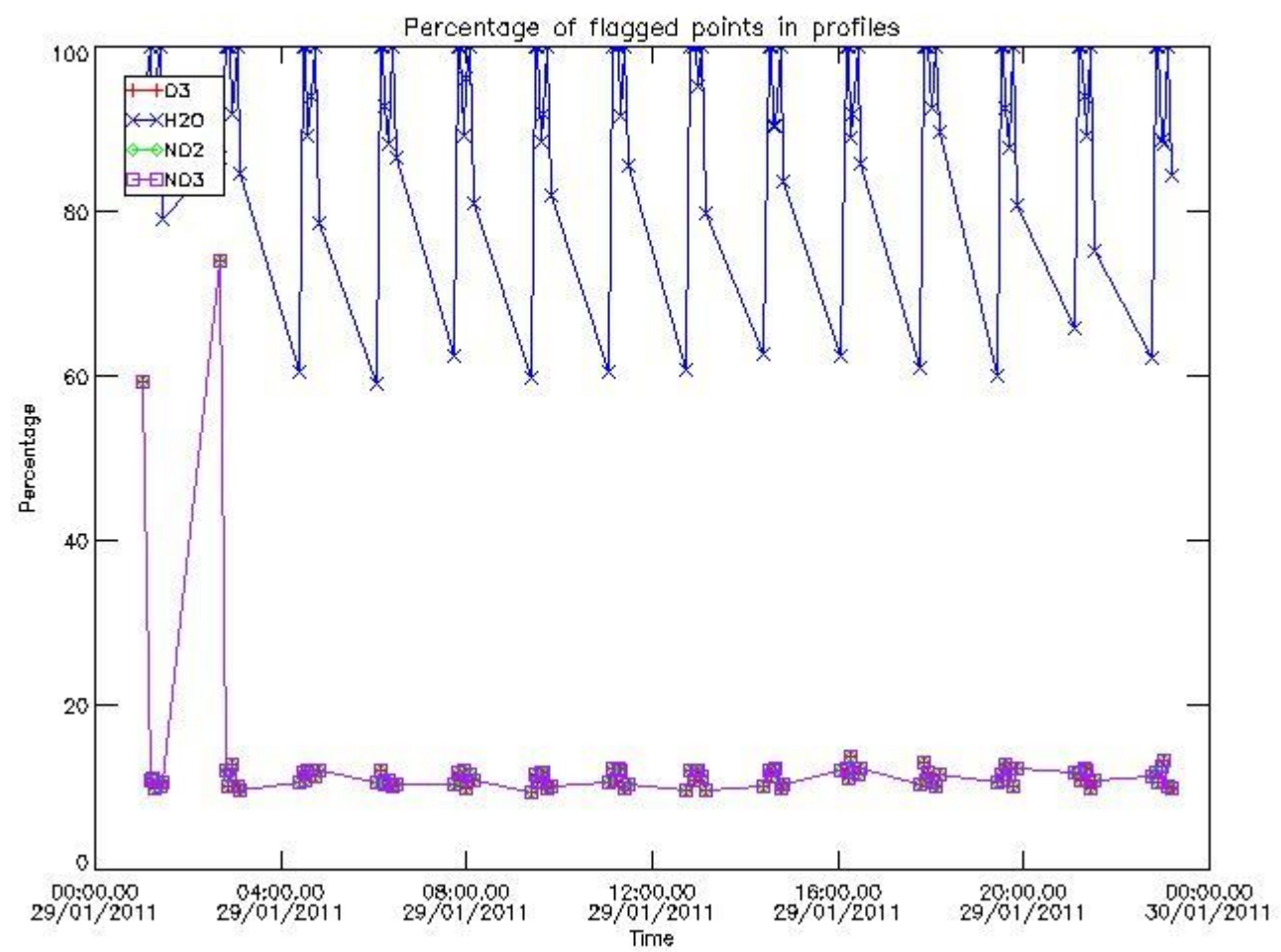


220	GOM_NL__2PRFIN20110129_203742_000000413099_00057_46623_3658.N1	29-JAN-2011 20:37:42	Bright	41.000	119	14Eta Dra	2.7270	4700.0	82	46623	No
221	GOM_NL__2PRFIN20110129_204048_000000553099_00057_46623_3659.N1	29-JAN-2011 20:40:48	Bright	55.000	130	23Bet Dra	2.7990	5800.0	110	46623	No
222	GOM_NL__2PRFIN20110129_204722_000000423099_00057_46623_3660.N1	29-JAN-2011 20:47:22	Bright	42.000	133	40Zet Her	2.8070	6000.0	84	46623	No
223	GOM_NL__2PRFIN20110129_205053_000000653099_00057_46623_3661.N1	29-JAN-2011 20:50:53	Bright	65.000	127	27Bet Her	2.7810	4700.0	130	46623	No
224	GOM_NL__2PRFIN20110129_205228_000000533099_00057_46623_3662.N1	29-JAN-2011 20:52:28	Bright	52.500	59	55Alp Oph	2.0800	8900.0	105	46623	No
225	GOM_NL__2PRFIN20110129_210058_000000473099_00057_46623_3663.N1	29-JAN-2011 21:00:58	Twilight	46.500	86	35Eta Oph	2.4300	10200.	93	46623	No
226	GOM_NL__2PRFIN20110129_210510_000000563099_00057_46623_3664.N1	29-JAN-2011 21:05:10	Dark	56.000	16	21Alp Sco	1.0200	3000.0	112	46623	No
227	GOM_NL__2PRFIN20110129_211053_000000443099_00057_46623_3665.N1	29-JAN-2011 21:10:53	Dark	43.500	131	Gam Lup	2.8000	26000.	87	46623	No
228	GOM_NL__2PRFIN20110129_211414_000000473099_00058_46624_3678.N1	29-JAN-2011 21:14:14	Dark	47.000	81	Eta Cen	2.3560	28000.	94	46624	No
229	GOM_NL__2PRFIN20110129_211720_000000423099_00058_46624_3679.N1	29-JAN-2011 21:17:20	Dark	41.500	10	Bet Cen	0.61000	28000.	83	46624	No
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231	GOM_NL__2PRFIN20110129_212625_000000513099_00058_46624_3681.N1	29-JAN-2011 21:26:25	Dark	51.000	113	Mu Vel	2.6920	5000.0	102	46624	No
232	GOM_NL__2PRFIN20110129_213056_000000473099_00058_46624_3682.N1	29-JAN-2011 21:30:56	Dark	47.000	65	Lam Vel	2.2040	4400.0	94	46624	No
233	GOM_NL__2PRFIN20110129_213727_000000403099_00058_46624_3683.N1	29-JAN-2011 21:37:27	Straylight	39.500	132	15Rho Pup	2.8030	6900.0	79	46624	No
234	GOM_NL__2PRFIN20110129_214615_000000543099_00058_46624_3684.N1	29-JAN-2011 21:46:15	Twilight	53.500	8	10Alp CMi	0.40000	6500.0	107	46624	No
235	GOM_NL__2PRFIN20110129_215259_000000433099_00058_46624_3685.N1	29-JAN-2011 21:52:59	Bright	43.000	17	78Bet Gem	1.1610	4500.0	86	46624	No
236	GOM_NL__2PRFIN20110129_220800_000000483099_00058_46624_3686.N1	29-JAN-2011 22:08:00	Bright	47.500	36	50Alp UMa	1.8000	6300.0	95	46624	No
237	GOM_NL__2PRFIN20110129_221316_000000383099_00058_46624_3687.N1	29-JAN-2011 22:13:16	Bright	38.000	60	7Bet UMi	2.0810	3950.0	76	46624	No
238	GOM_NL__2PRFIN20110129_221756_000000403099_00058_46624_3688.N1	29-JAN-2011 22:17:56	Bright	40.000	119	14Eta Dra	2.7270	4700.0	80	46624	No
239	GOM_NL__2PRFIN20110129_222102_000000553099_00058_46624_3689.N1	29-JAN-2011 22:21:02	Bright	55.000	130	23Bet Dra	2.7990	5800.0	110	46624	No
240	GOM_NL__2PRFIN20110129_222736_000000433099_00058_46624_3690.N1	29-JAN-2011 22:27:36	Bright	42.500	133	40Zet Her	2.8070	6000.0	85	46624	No
241	GOM_NL__2PRFIN20110129_223108_000000653099_00058_46624_3691.N1	29-JAN-2011 22:31:08	Bright	65.000	127	27Bet Her	2.7810	4700.0	130	46624	No
242	GOM_NL__2PRFIN20110129_223242_000000383099_00058_46624_3692.N1	29-JAN-2011 22:32:42	Bright	37.500	59	55Alp Oph	2.0800	8900.0	75	46624	No
243	GOM_NL__2PRFIN20110129_224112_000000433099_00058_46624_3693.N1	29-JAN-2011 22:41:12	Twilight	43.000	86	35Eta Oph	2.4300	10200.	86	46624	No
244	GOM_NL__2PRFIN20110129_224524_000000593099_00058_46624_3694.N1	29-JAN-2011 22:45:24	Dark	58.500	16	21Alp Sco	1.0200	3000.0	117	46624	No
245	GOM_NL__2PRFIN20110129_225108_000000433099_00058_46624_3695.N1	29-JAN-2011 22:51:08	Dark	43.000	131	Gam Lup	2.8000	26000.	86	46624	No
246	GOM_NL__2PRFIN20110129_225429_000000493099_00059_46625_3690.N1	29-JAN-2011 22:54:29	Dark	48.500	81	Eta Cen	2.3560	28000.	97	46625	No
247	GOM_NL__2PRFIN20110129_225734_000000413099_00059_46625_3691.N1	29-JAN-2011 22:57:34	Dark	40.500	10	Bet Cen	0.61000	28000.	81	46625	No
248	GOM_NL__2PRFIN20110129_230059_000000433099_00059_46625_3692.N1	29-JAN-2011 23:00:59	Dark	42.500	12	Alp1Cru	0.77500	30000.	85	46625	No
249	GOM_NL__2PRFIN20110129_230639_000000503099_00059_46625_3693.N1	29-JAN-2011 23:06:39	Dark	50.000	113	Mu Vel	2.6920	5000.0	100	46625	No
250	GOM_NL__2PRFIN20110129_231110_000000523099_00059_46625_3694.N1	29-JAN-2011 23:11:10	Dark	51.500	65	Lam Vel	2.2040	4400.0	103	46625	No
251	GOM_NL__2PRFIN20110129_231741_000000453099_00059_46625_3695.N1	29-JAN-2011 23:17:41	Straylight	44.500	132	15Rho Pup	2.8030	6900.0	89	46625	No
252	GOM_NL__2PRFIN20110129_232629_000000493099_00059_46625_3696.N1	29-JAN-2011 23:26:29	Twilight	48.500	8	10Alp CMi	0.40000	6500.0	97	46625	No
253	GOM_NL__2PRFIN20110129_233313_000000433099_00059_46625_3697.N1	29-JAN-2011 23:33:13	Bright	42.500	17	78Bet Gem	1.1610	4500.0	85	46625	No
254	GOM_NL__2PRFIN20110129_234814_000000473099_00059_46625_3698.N1	29-JAN-2011 23:48:14	Bright	47.000	36	50Alp UMa	1.8000	6300.0	94	46625	No
255	GOM_NL__2PRFIN20110129_235330_000000393099_00059_46625_3699.N1	29-JAN-2011 23:53:30	Bright	39.000	60	7Bet UMi	2.0810	3950.0	78	46625	No
256	GOM_NL__2PRFIN20110129_235810_000000413099_00059_46625_3700.N1	29-JAN-2011 23:58:10	Bright	40.500	119	14Eta Dra	2.7270	4700.0	81	46625	No

### 3. Quality information per product

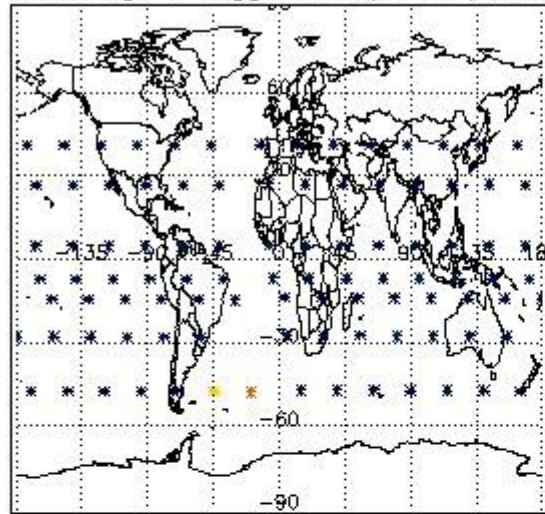
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

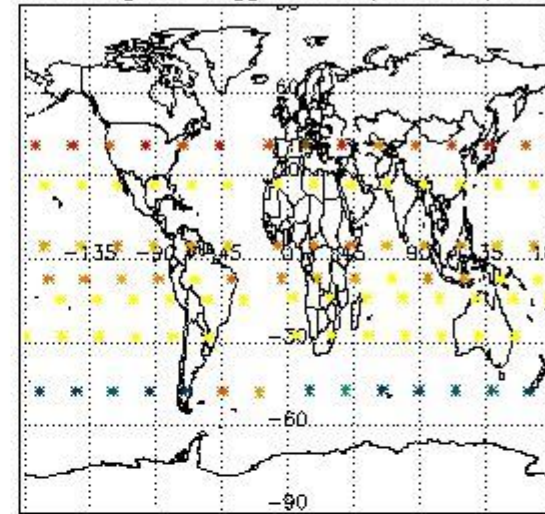


*3.2 Plot quality information per product (world map)*

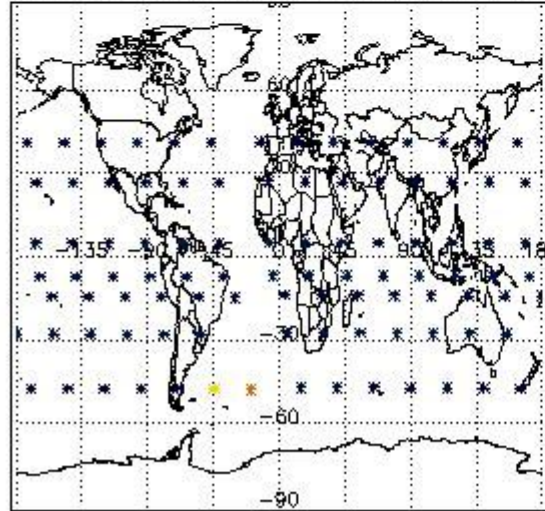
Percentage of flagged data per O3 profile



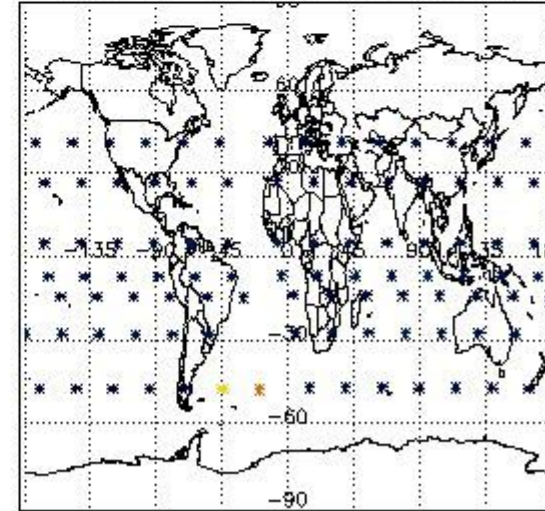
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



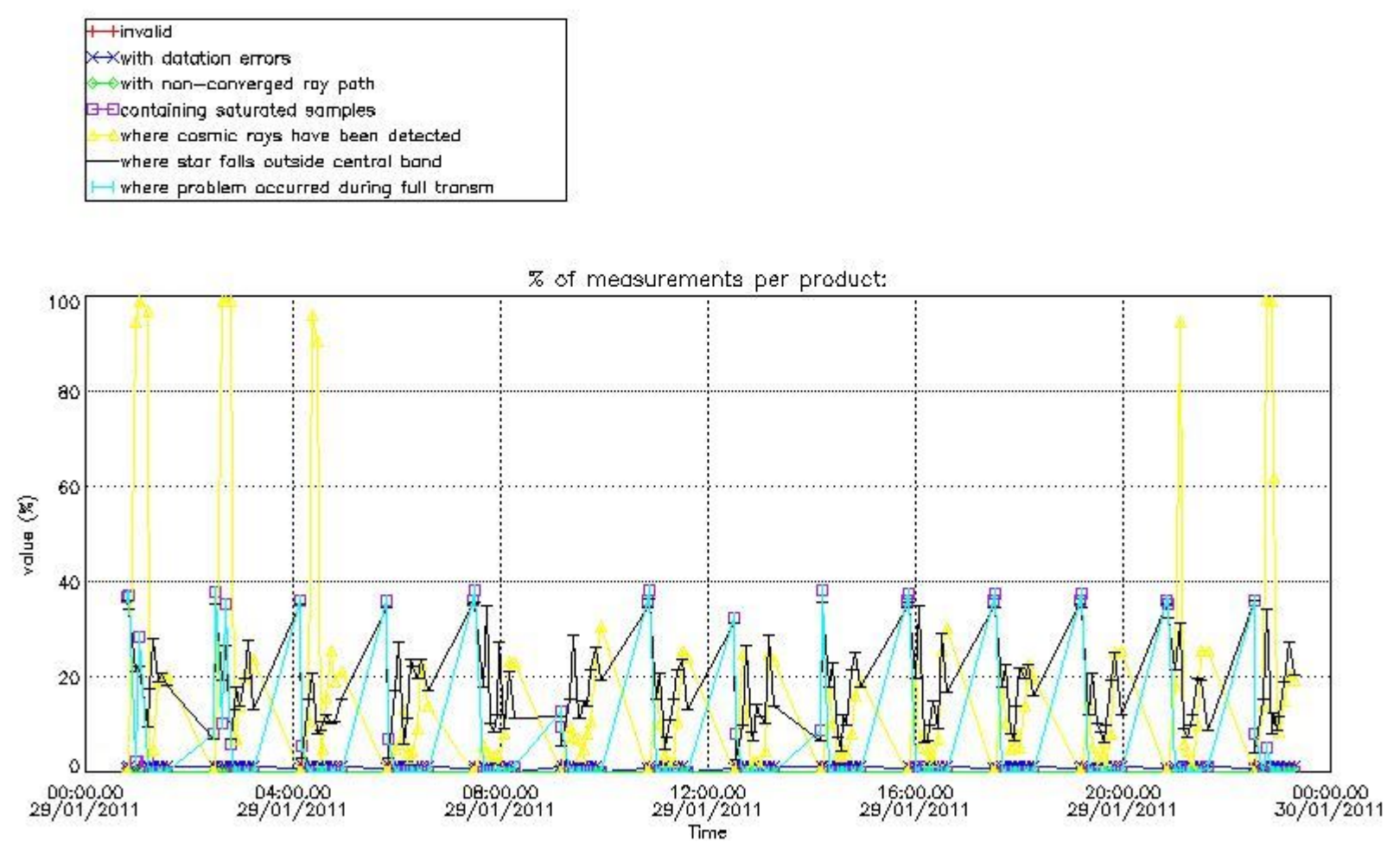
#### 4. Level 1 quality information per product

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.

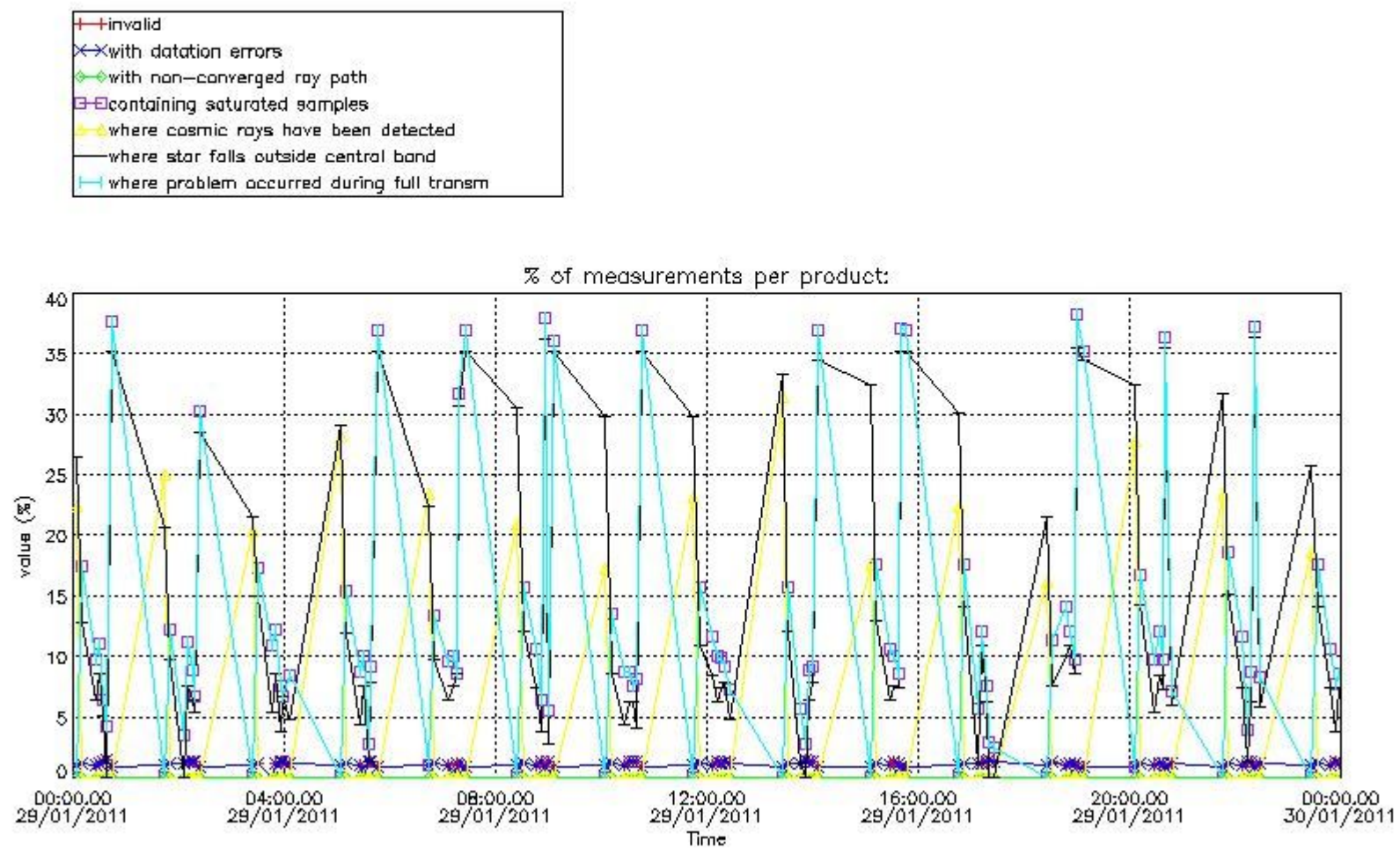
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



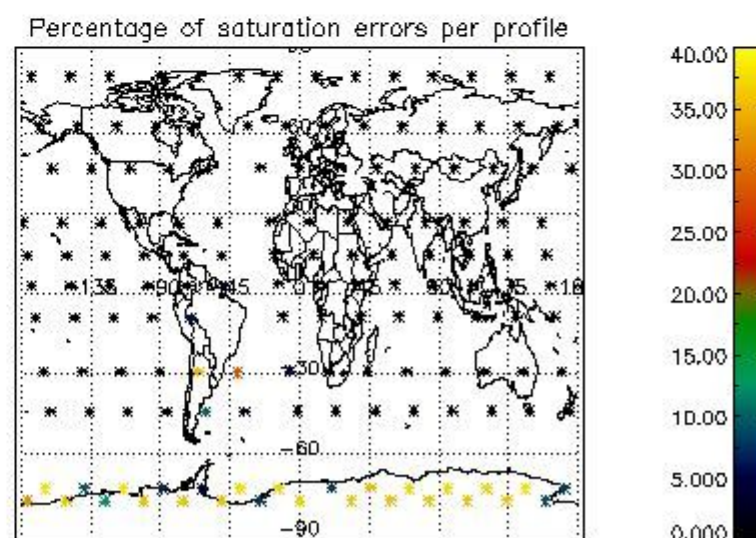
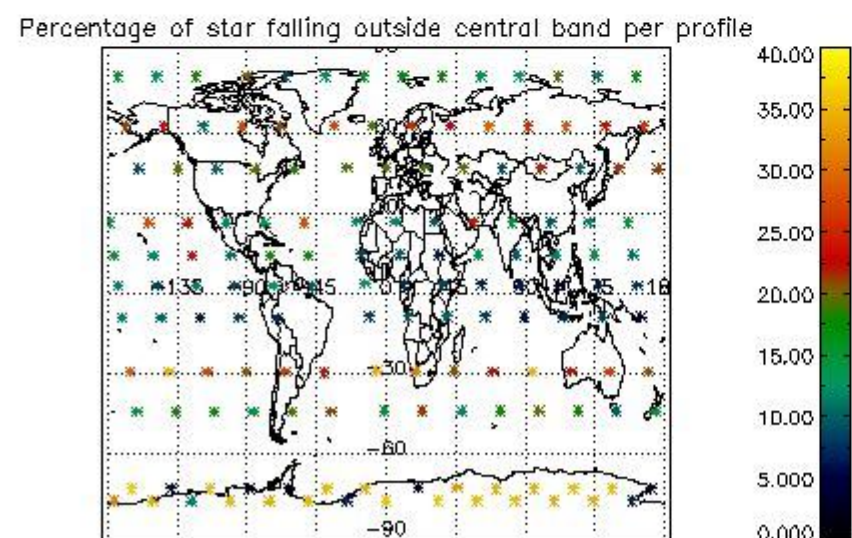
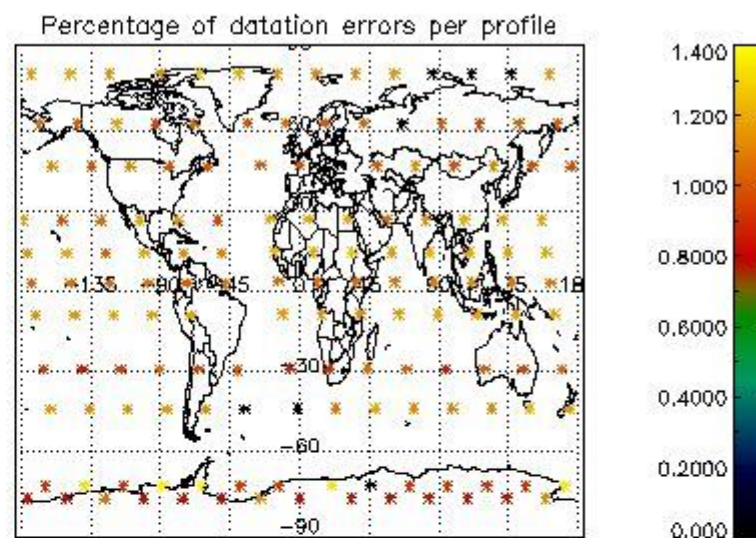
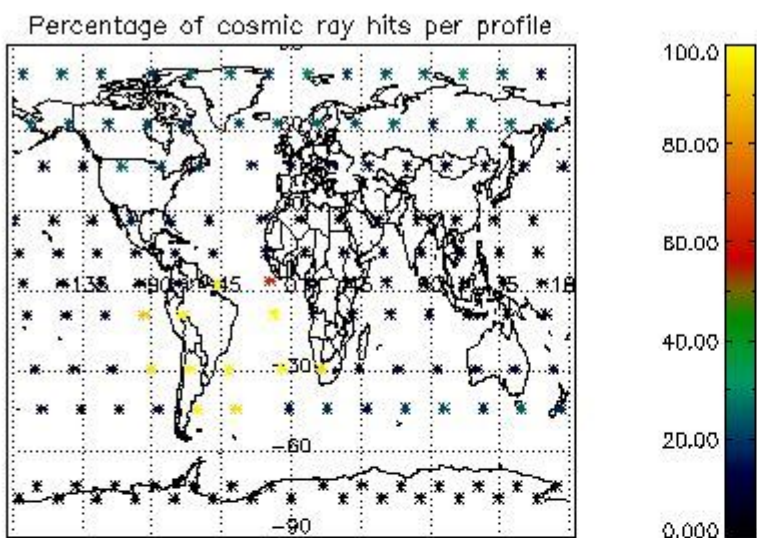


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

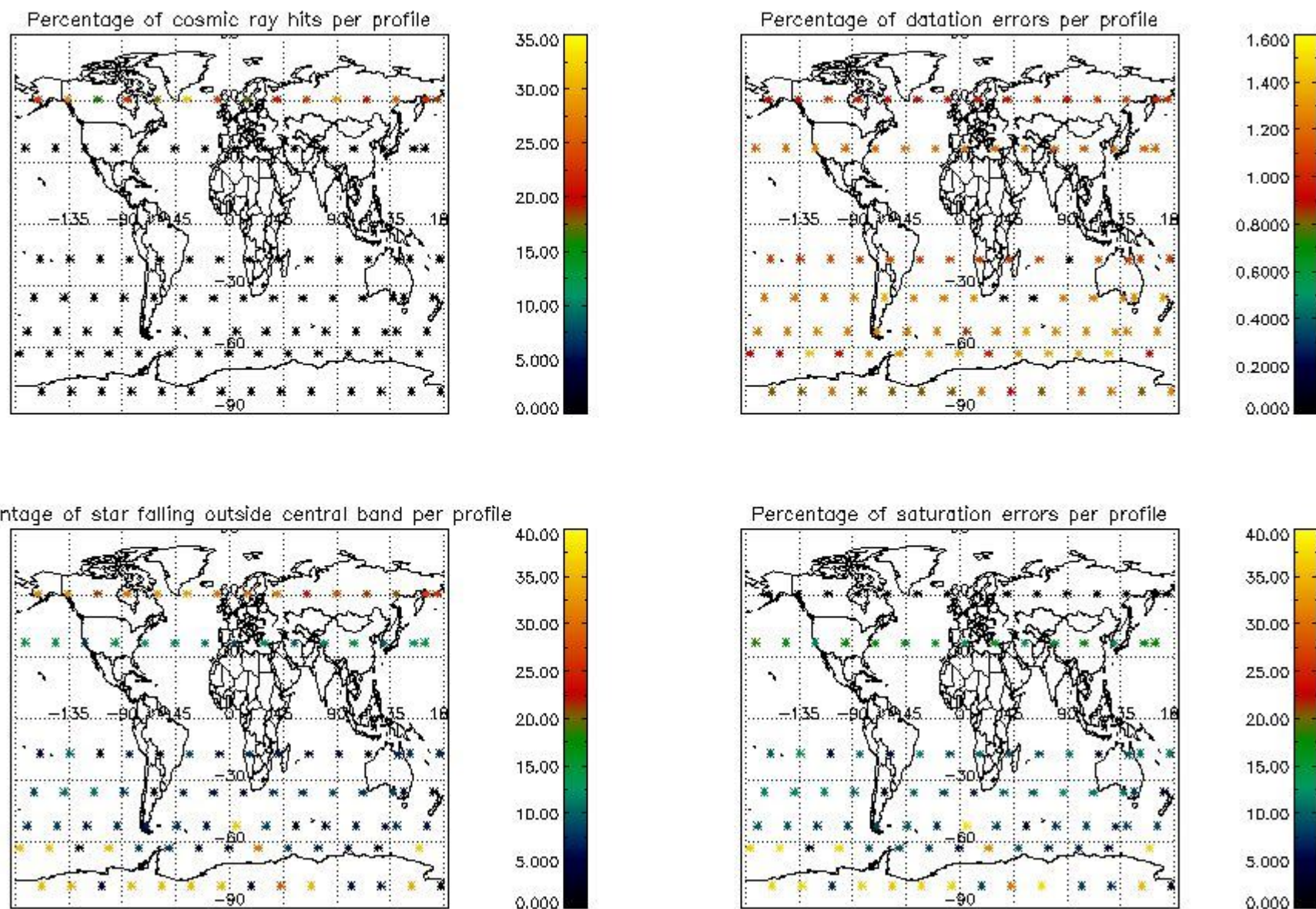


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

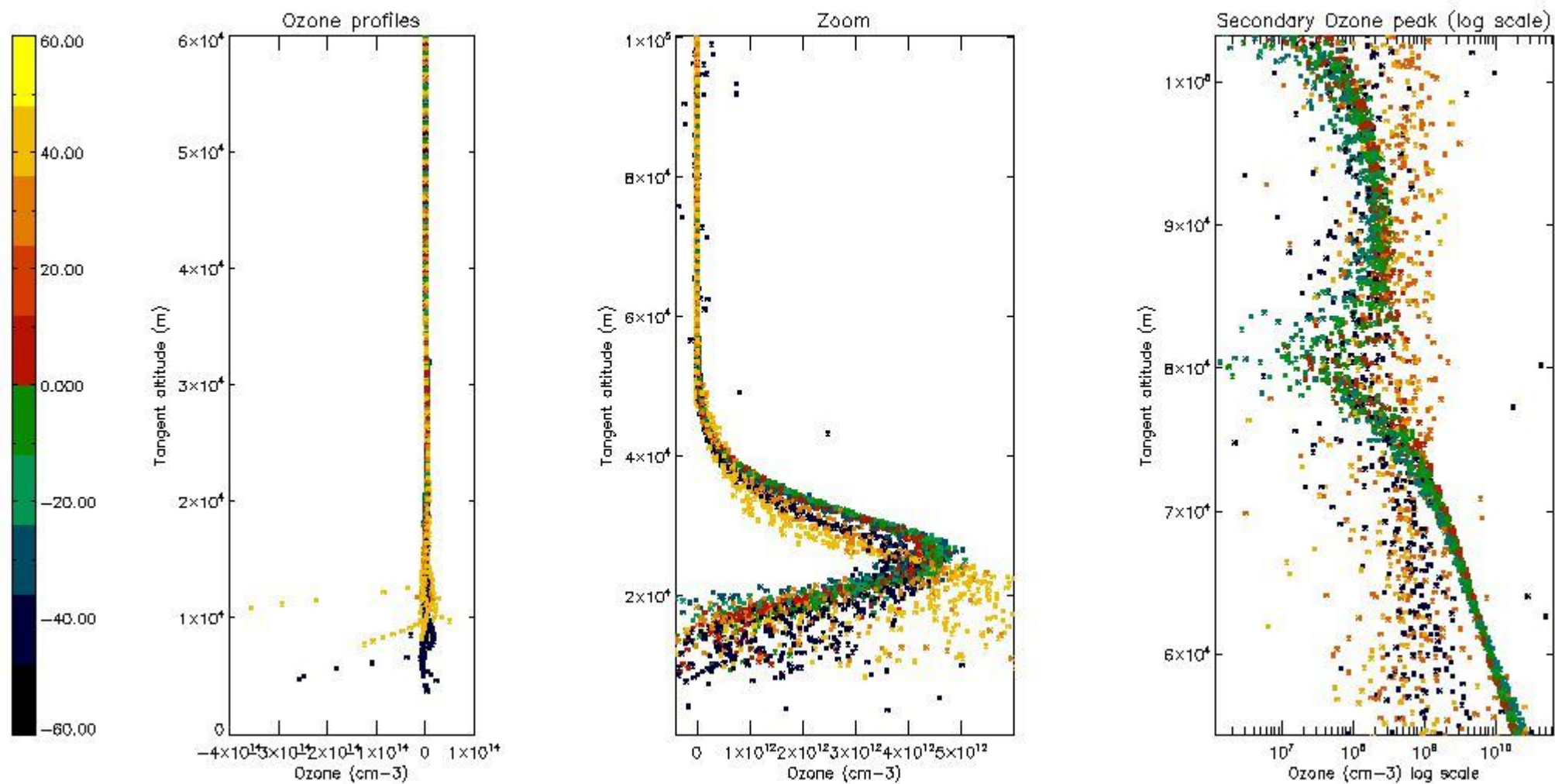
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	39
STD < 20	19

STD < 10	14
STD < 5	10

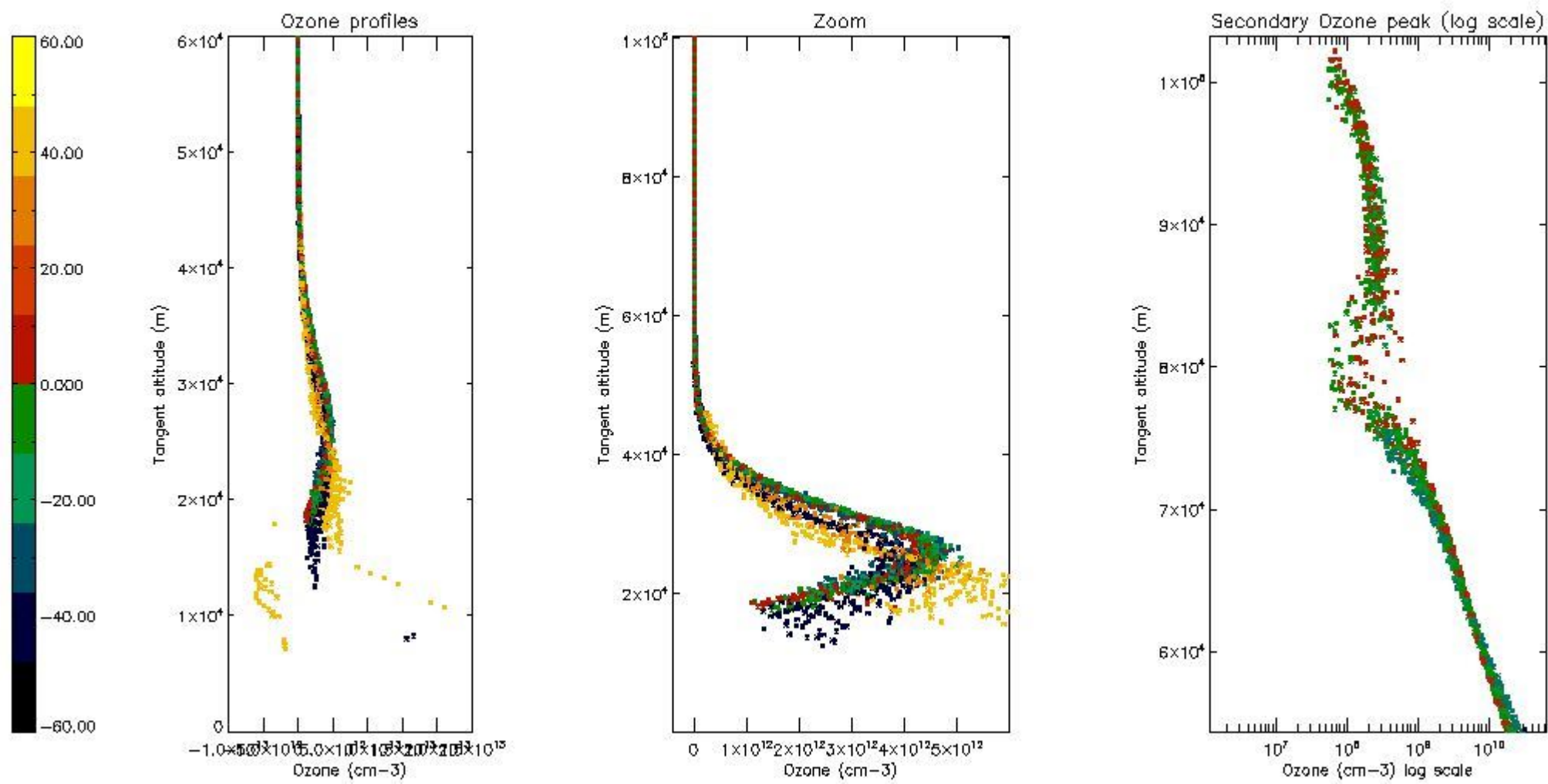
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



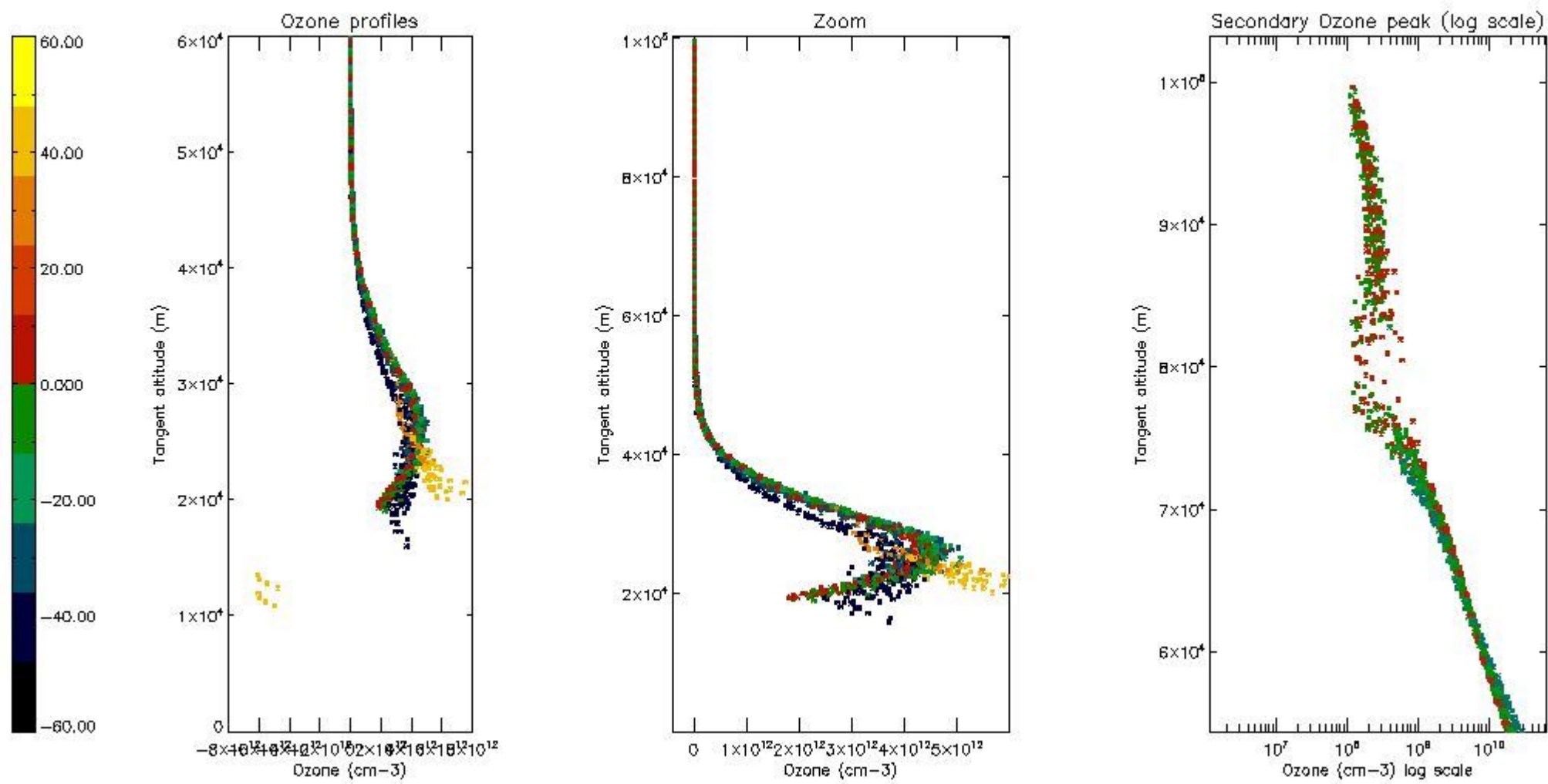
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



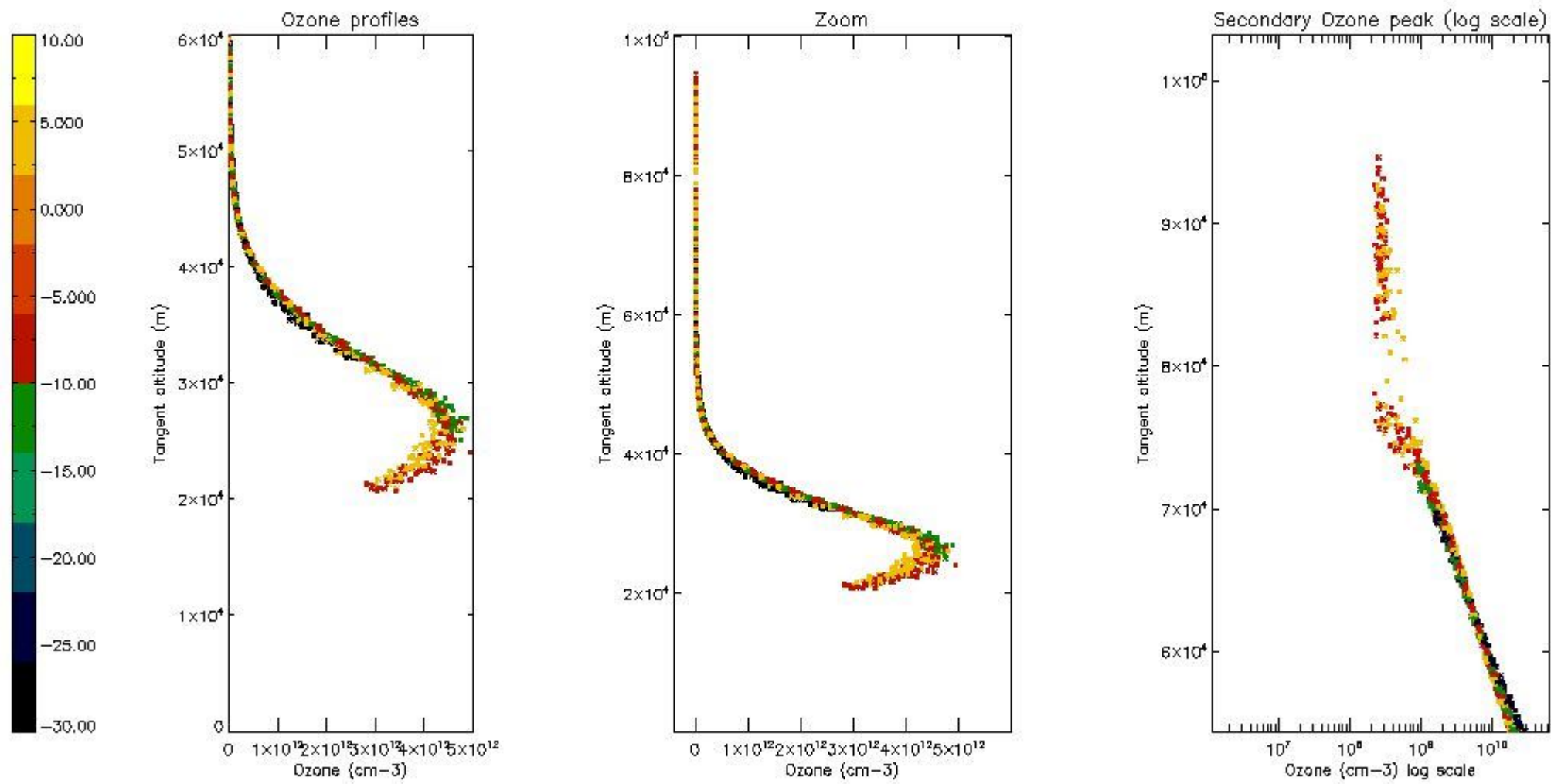
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



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

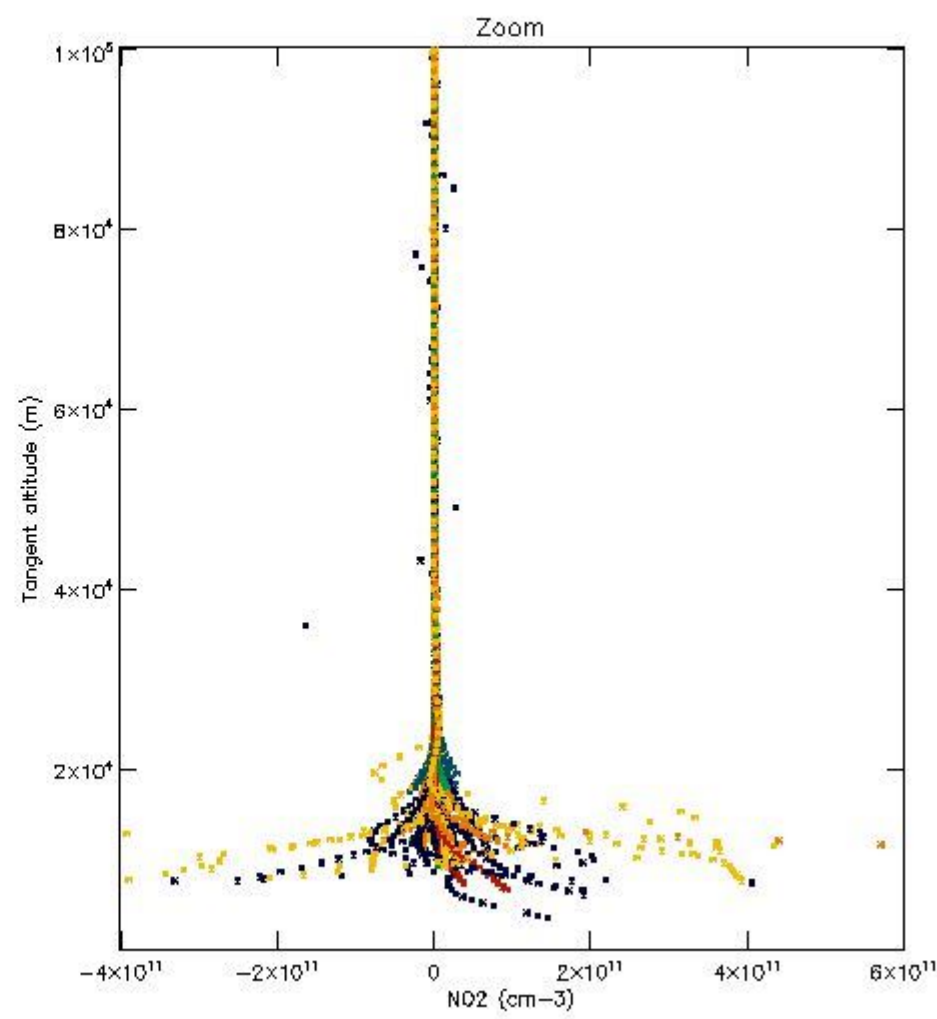
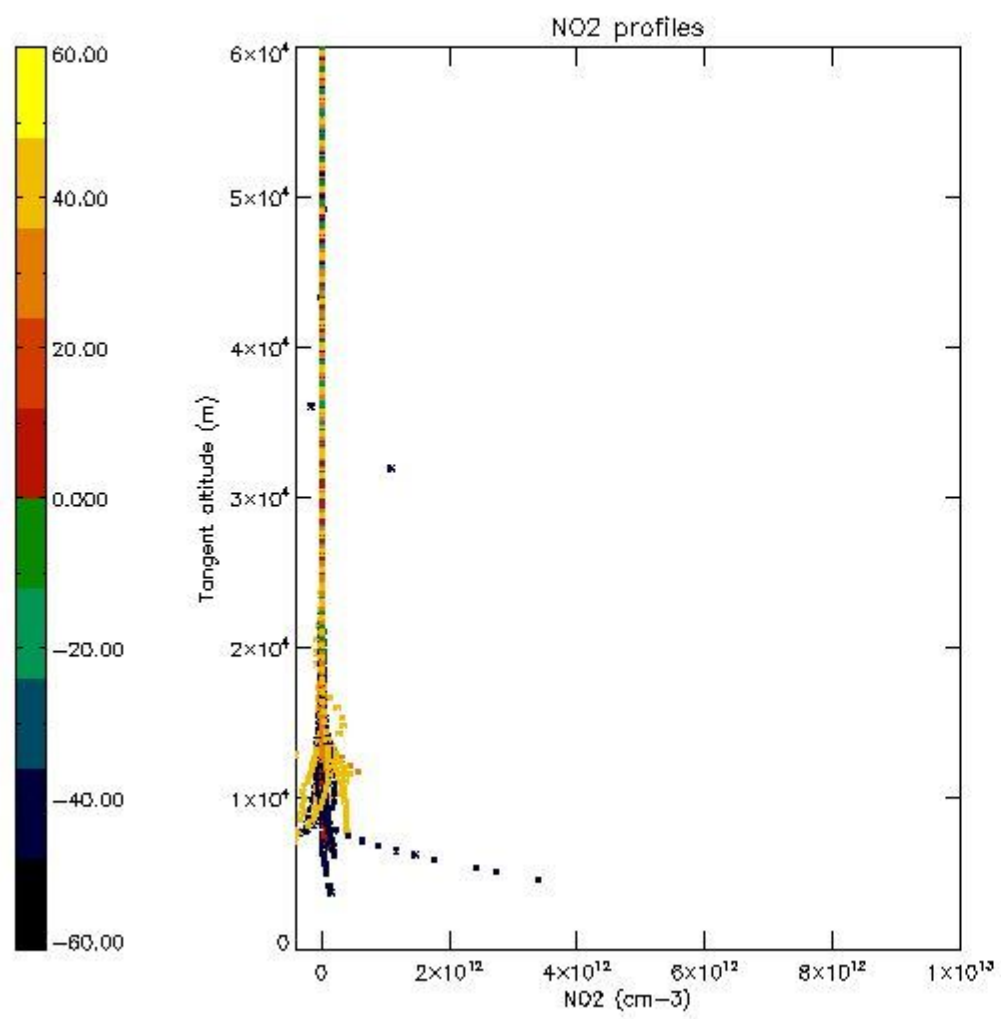
The colorbar represents the latitude.



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

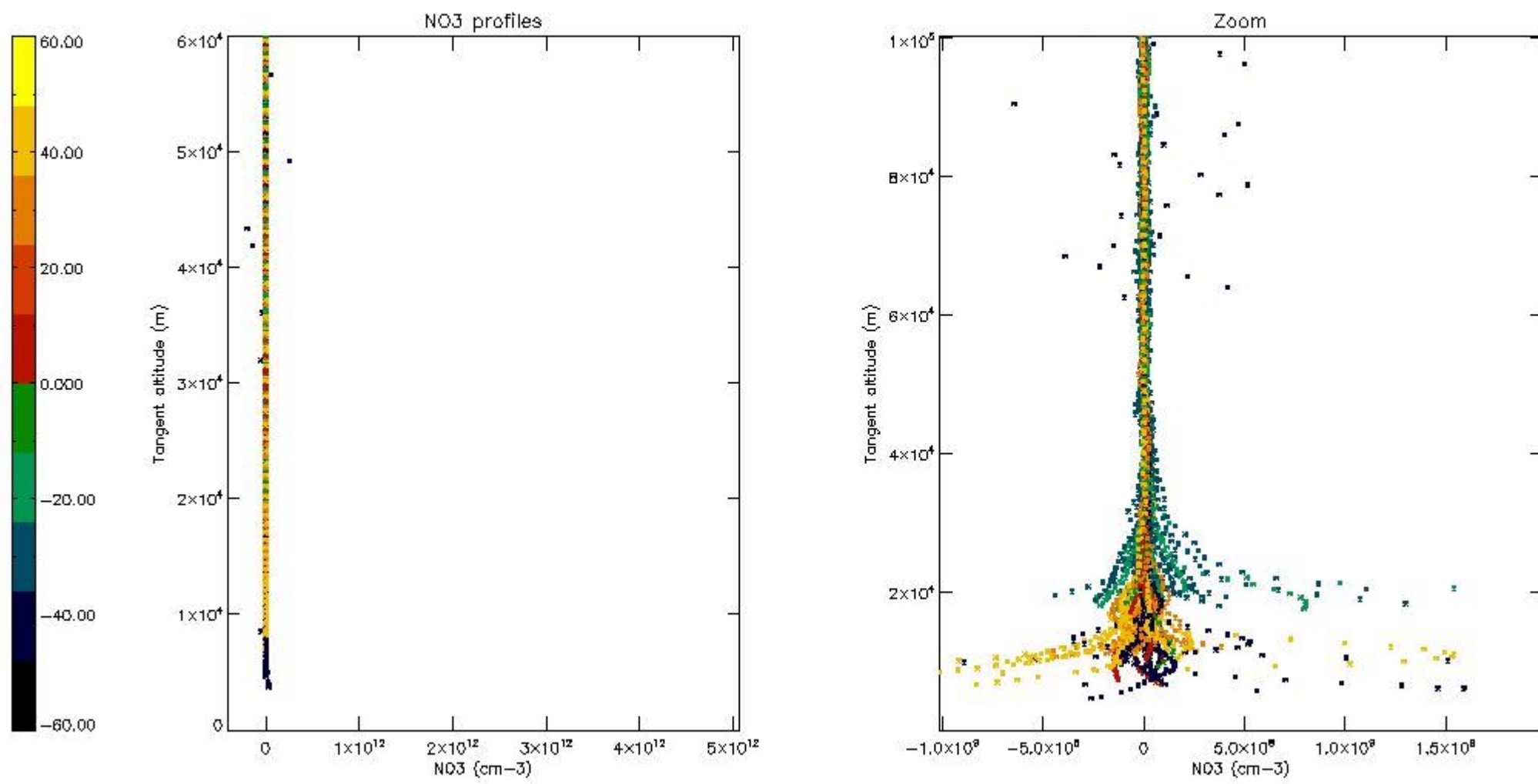
The colorbar represents the latitude.





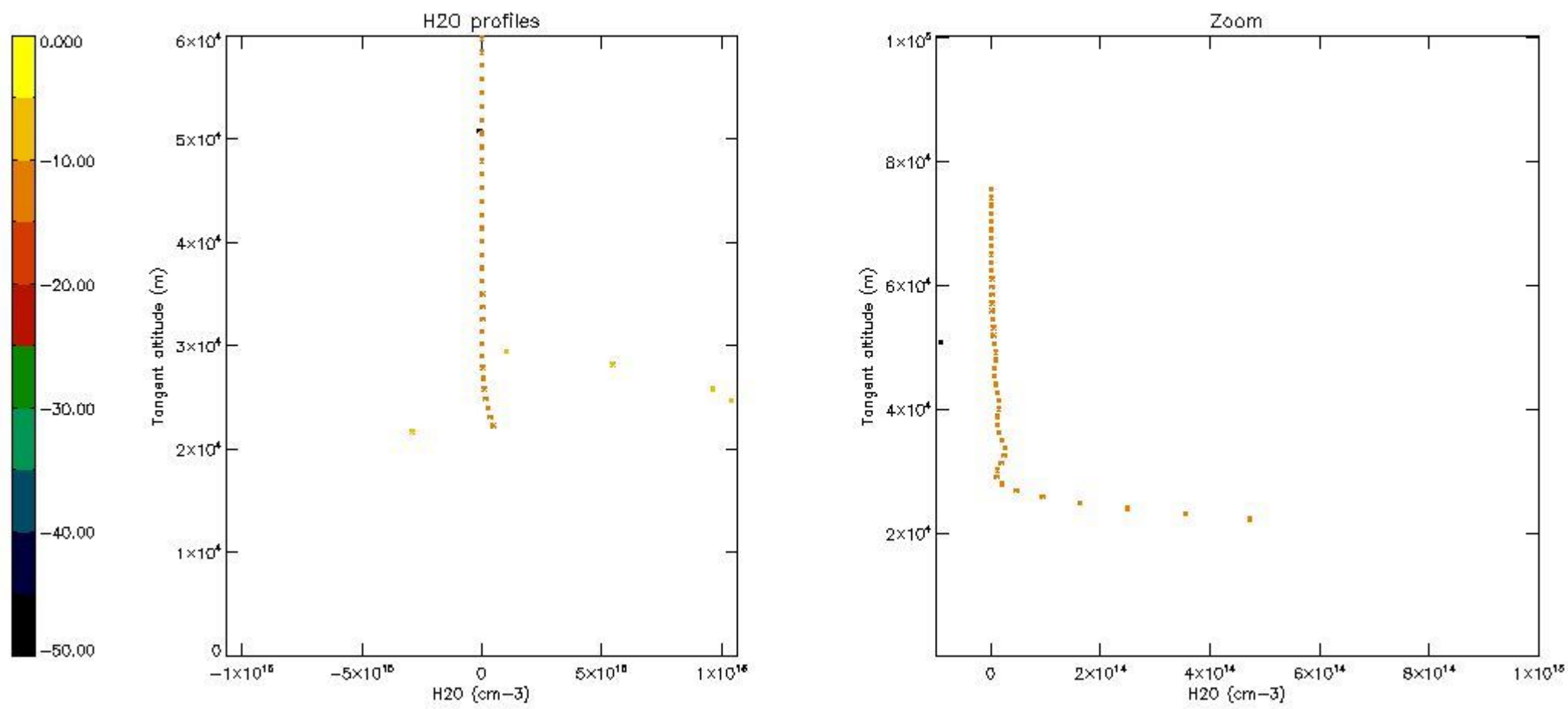
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	29-JAN-2011 00:03:13
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	29-JAN-2011 00:03:13
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	29-JAN-2011 00:03:13

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



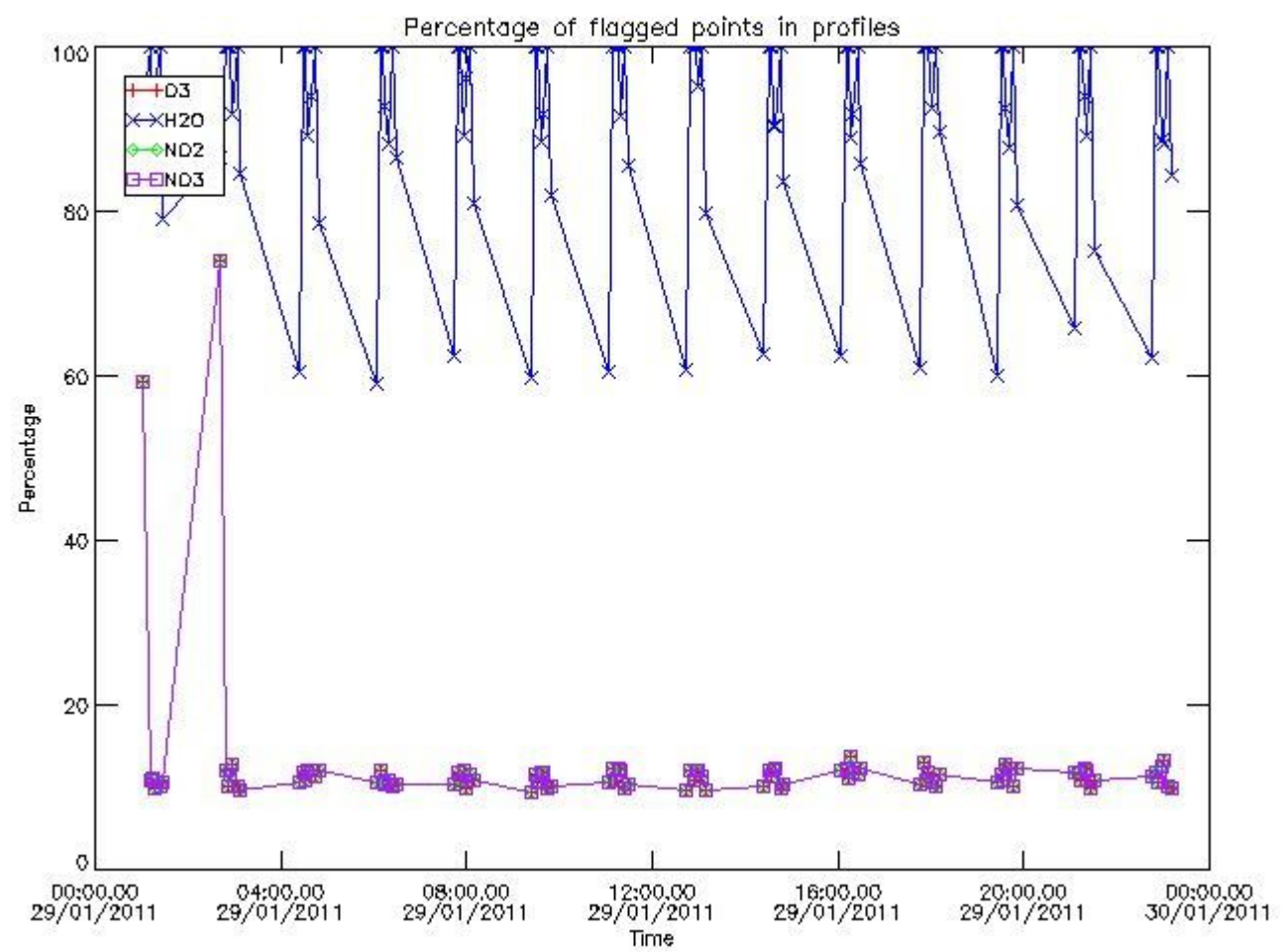






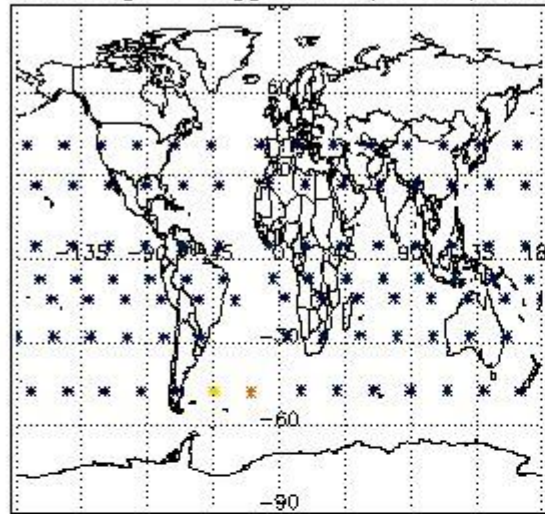




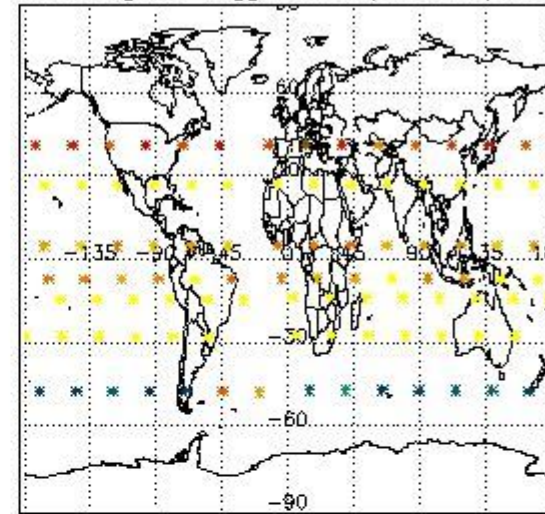


*3.2 Plot quality information per product (world map)*

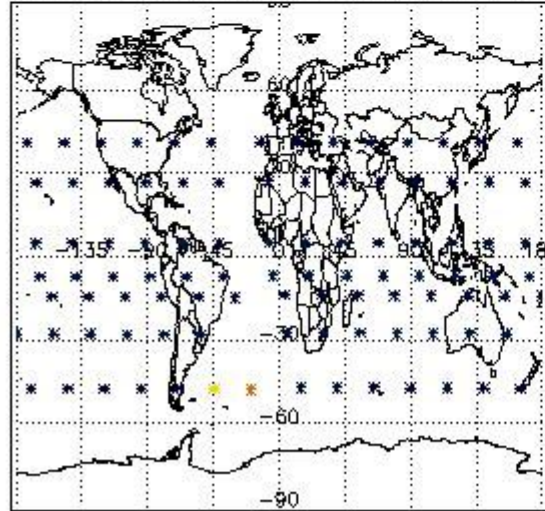
Percentage of flagged data per O3 profile



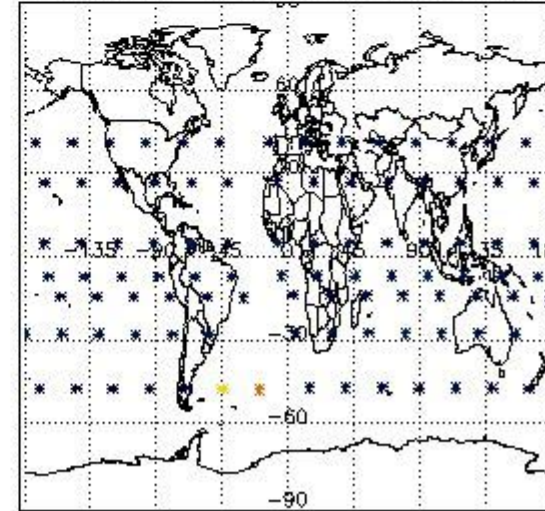
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

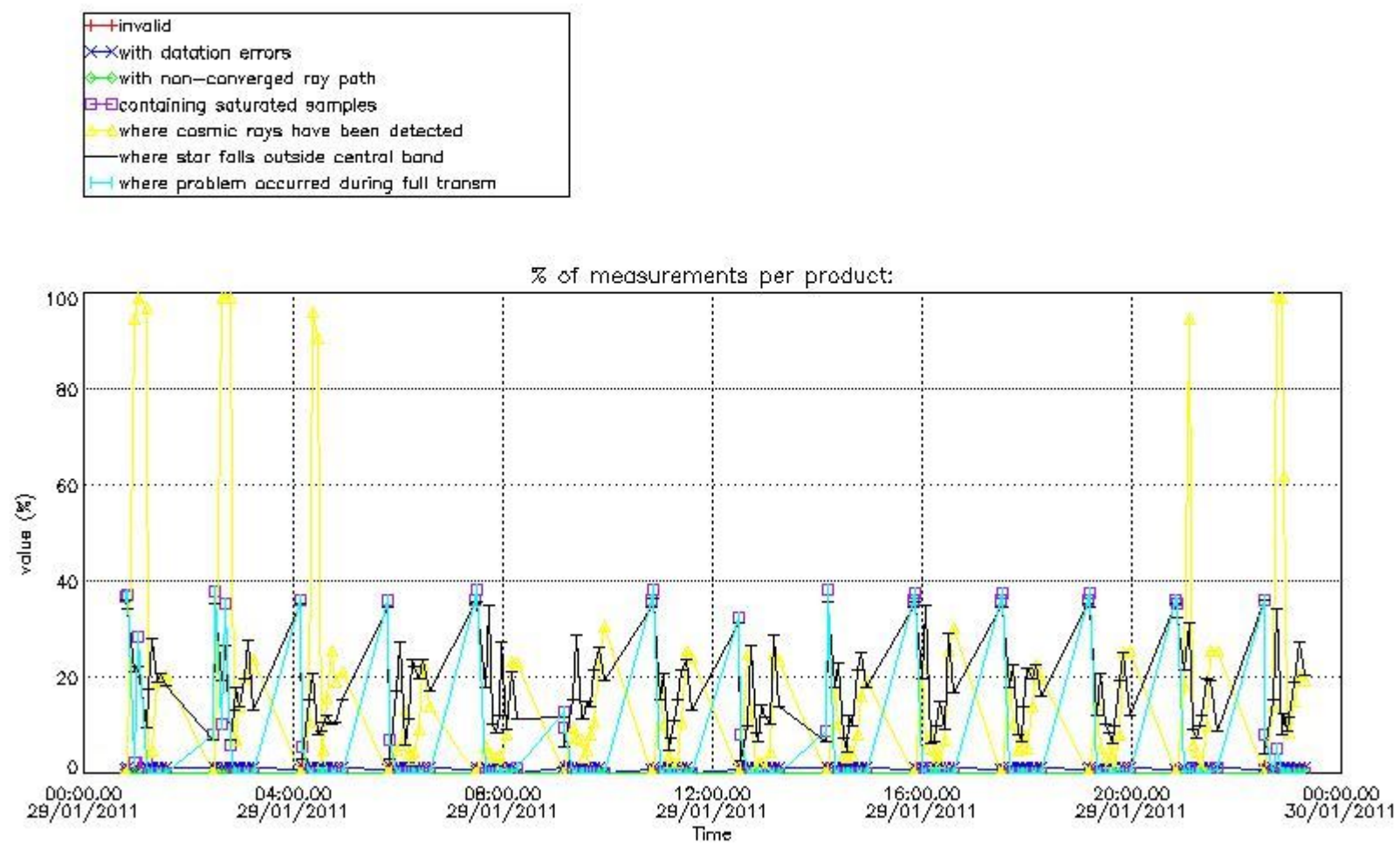


#### 4. Level 1 quality information per product

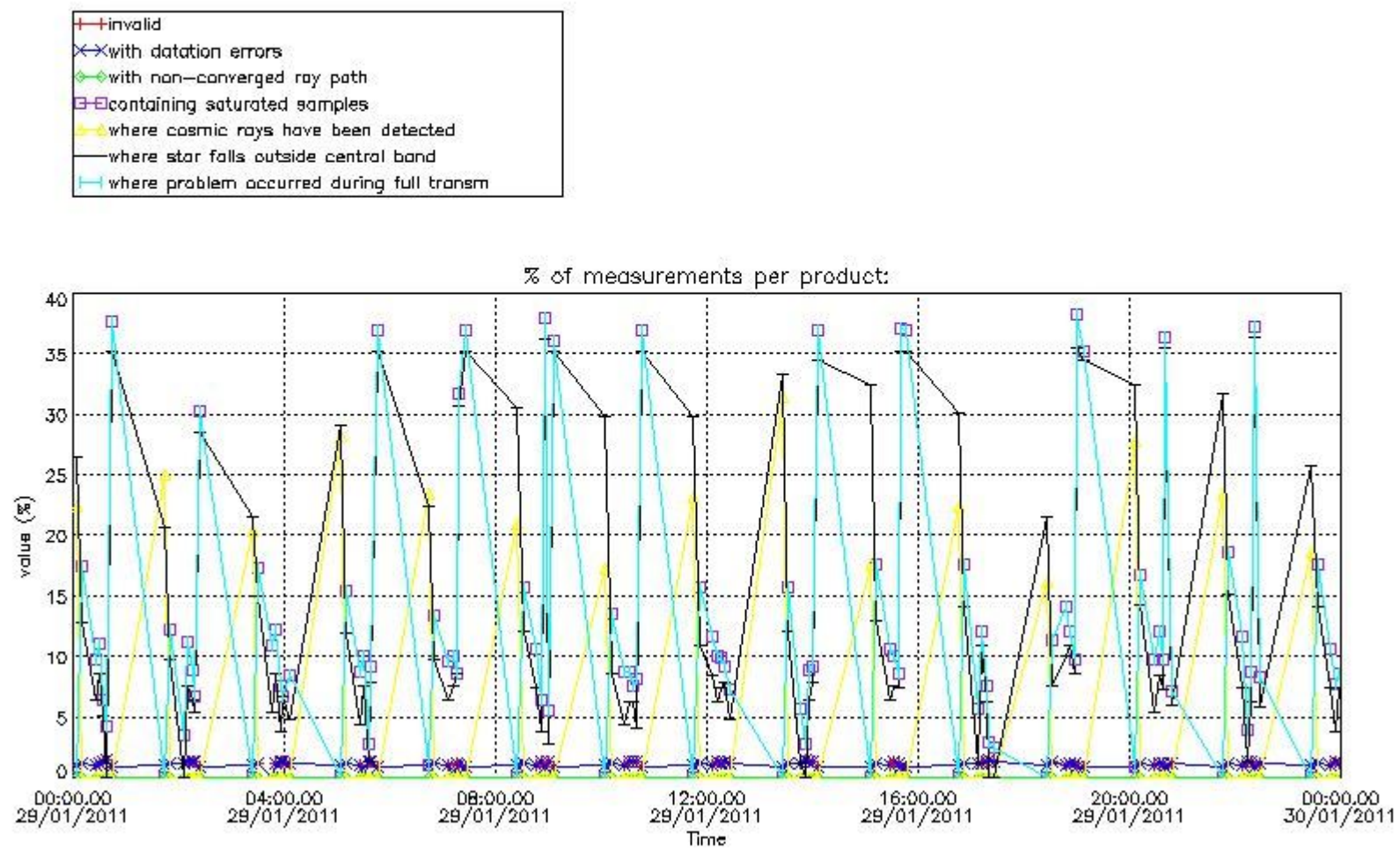
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

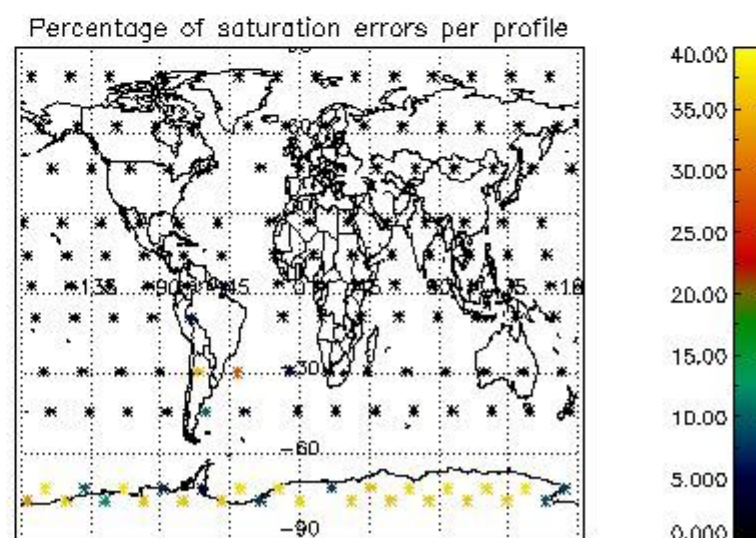
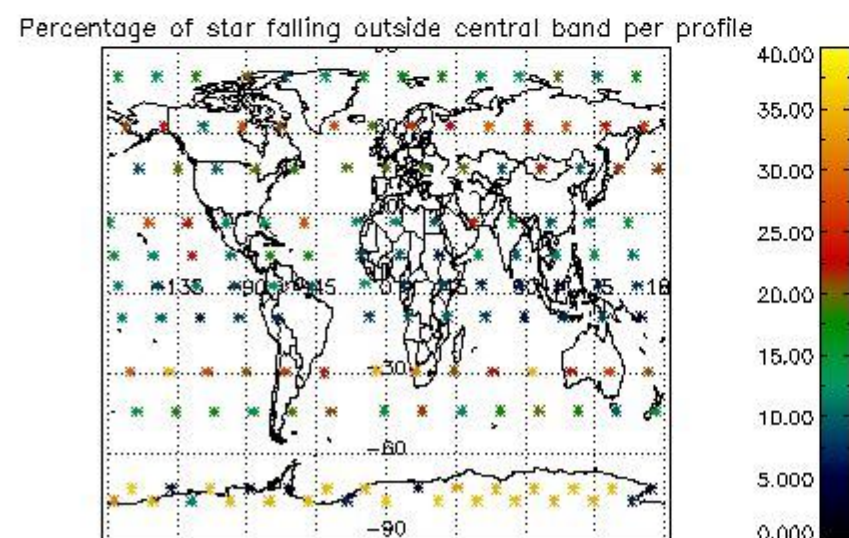
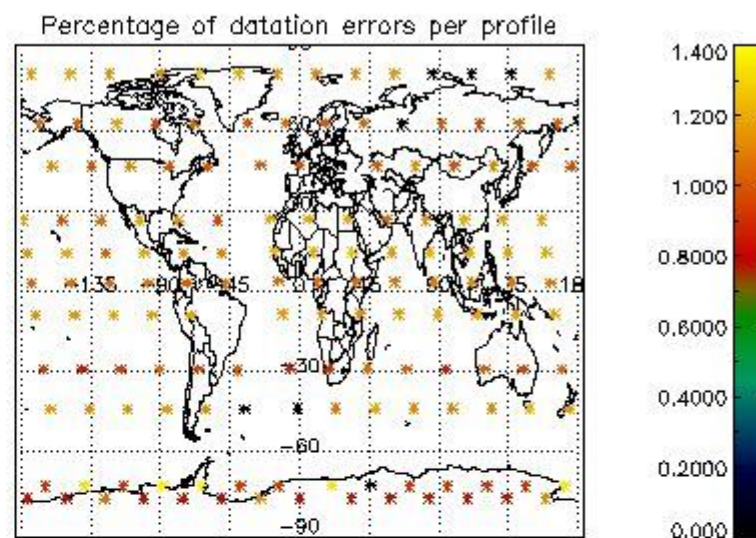
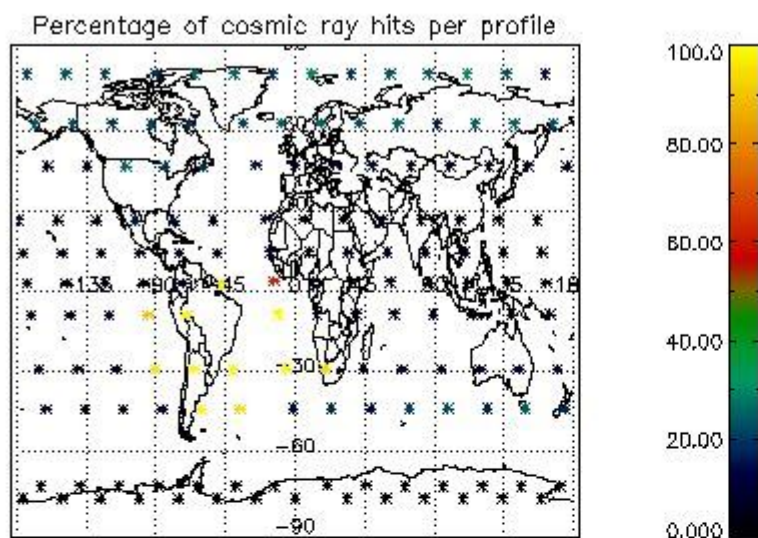


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

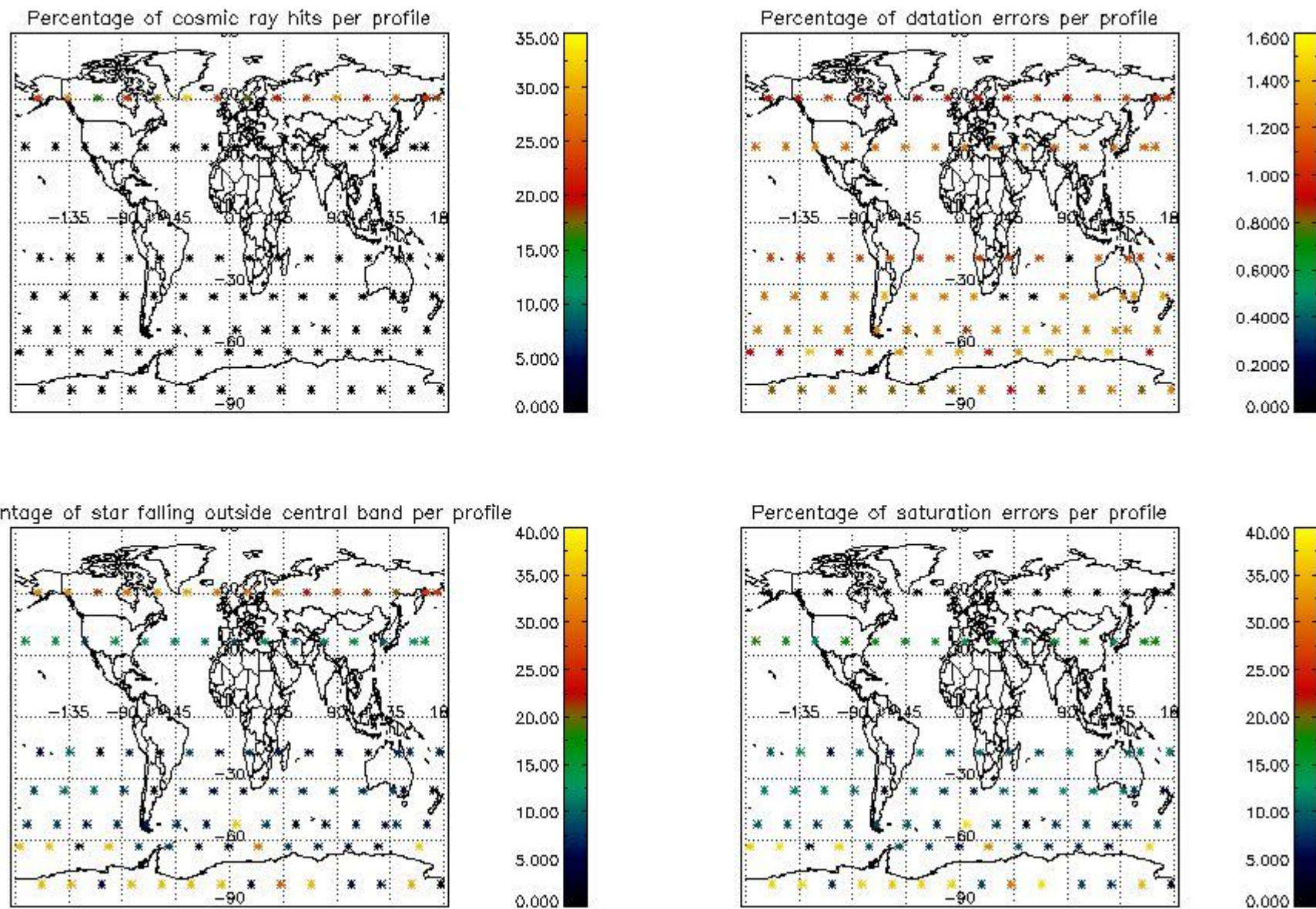


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

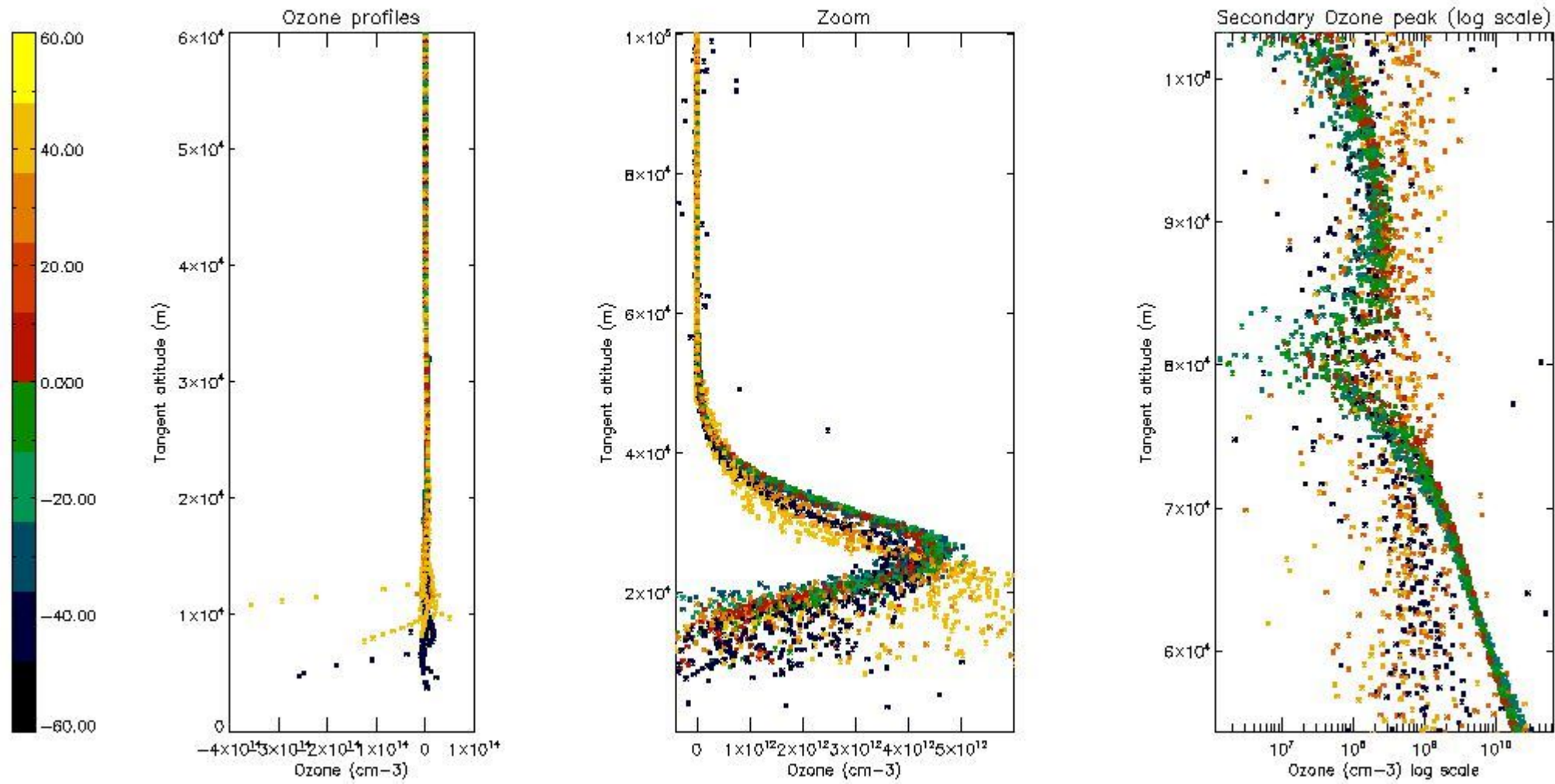
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	39
STD < 20	19

STD < 10	14
STD < 5	10

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

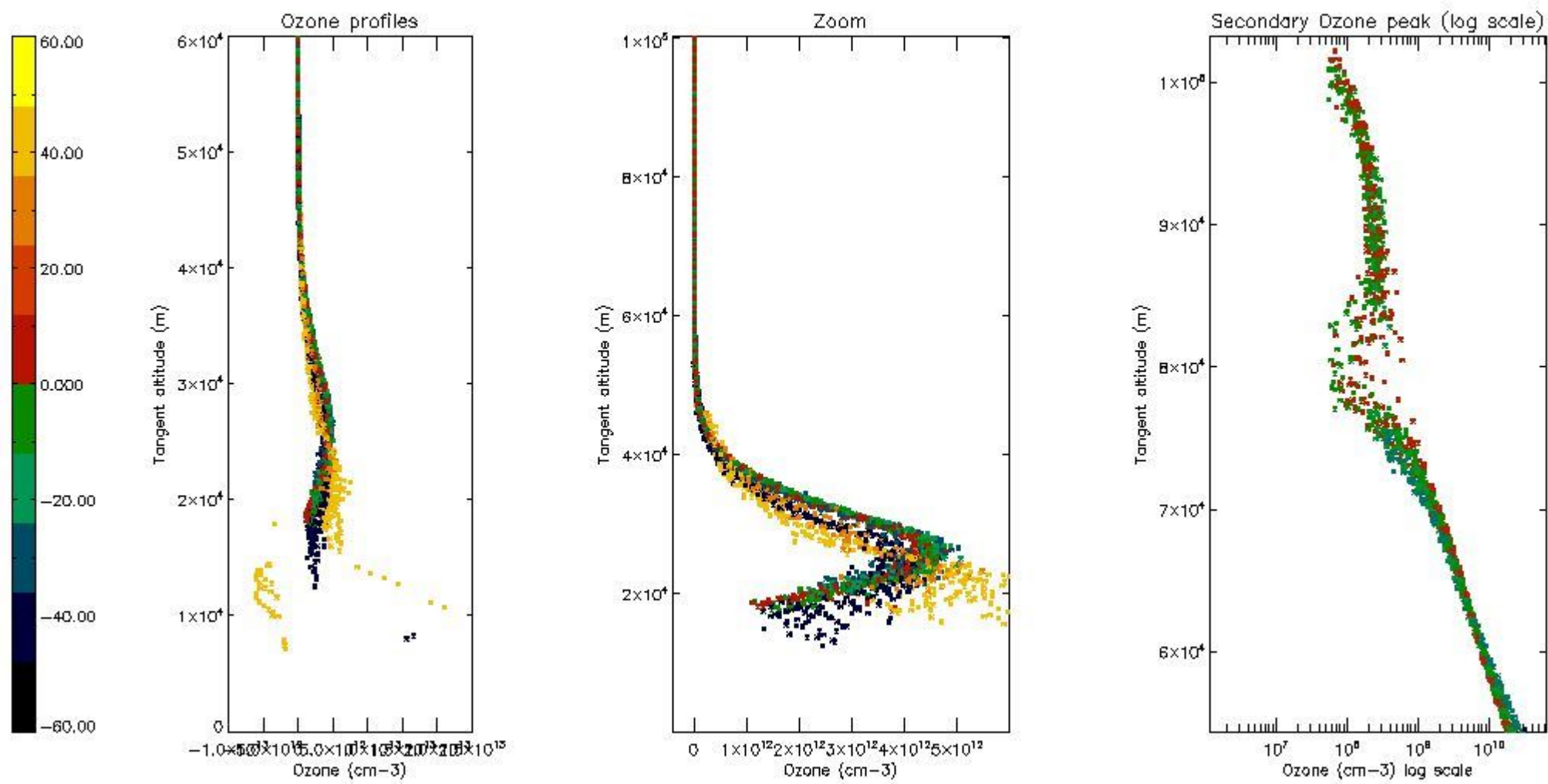
The colorbar represents the latitude.



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

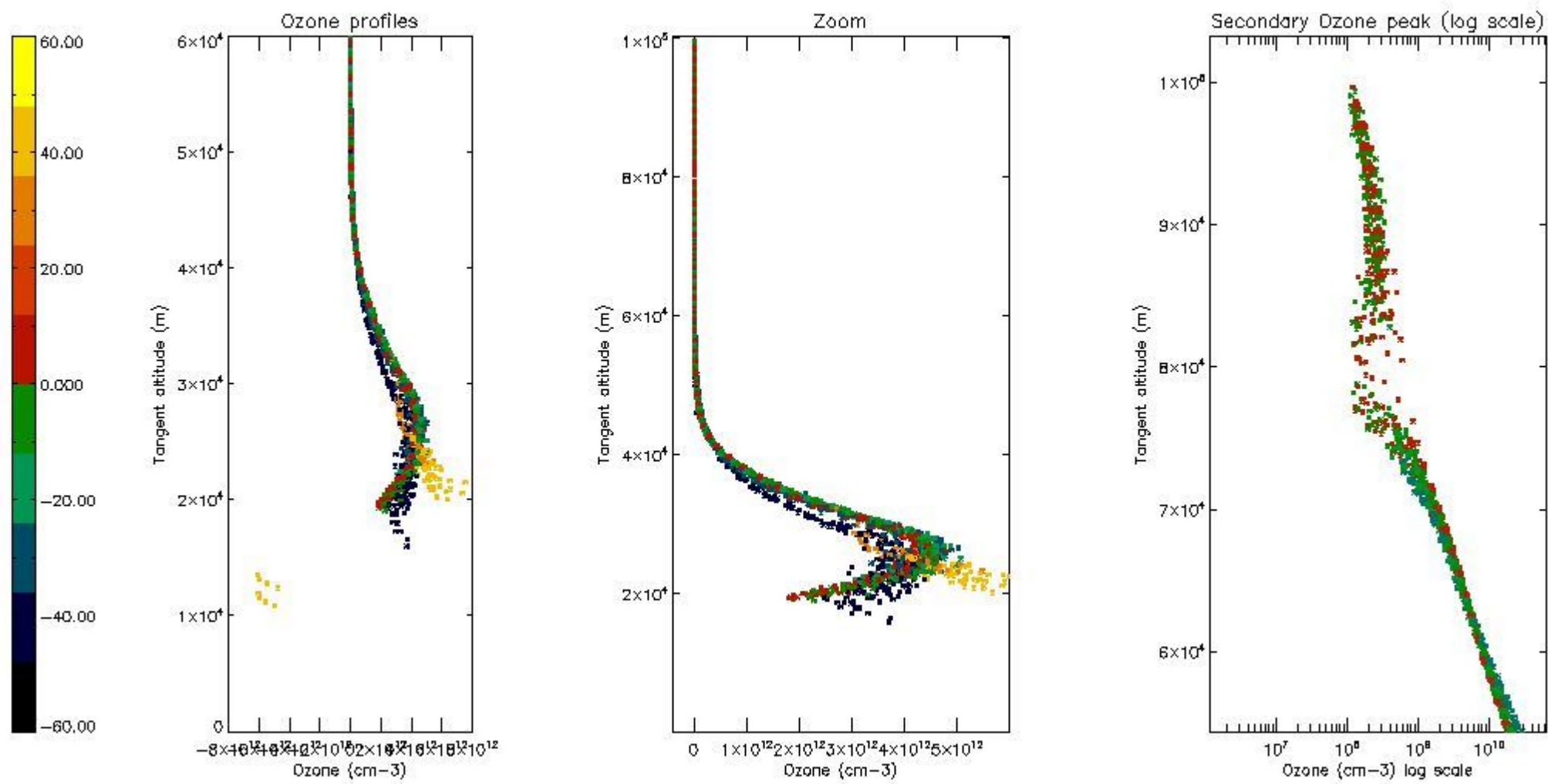
The colorbar represents the latitude.





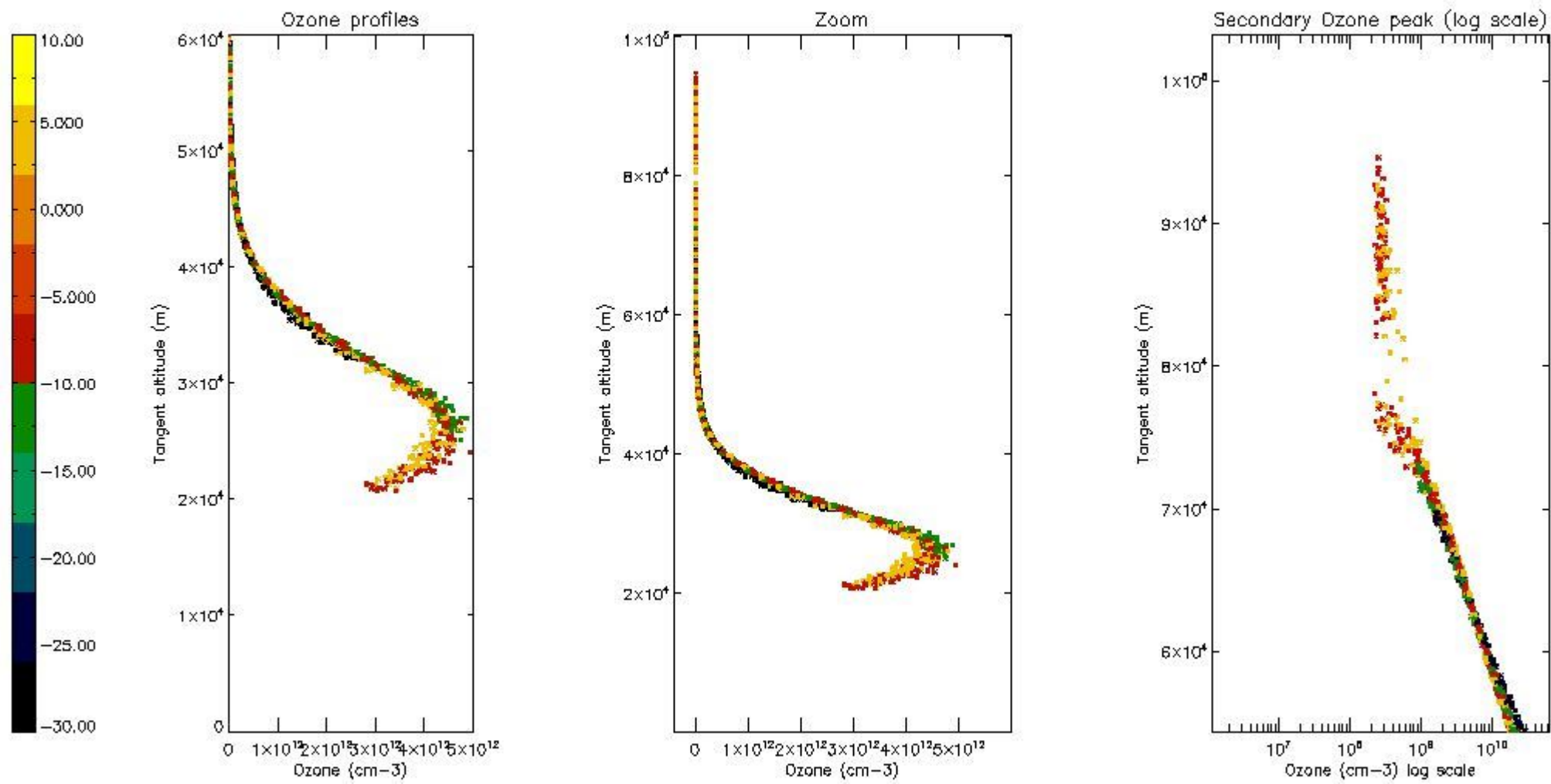
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



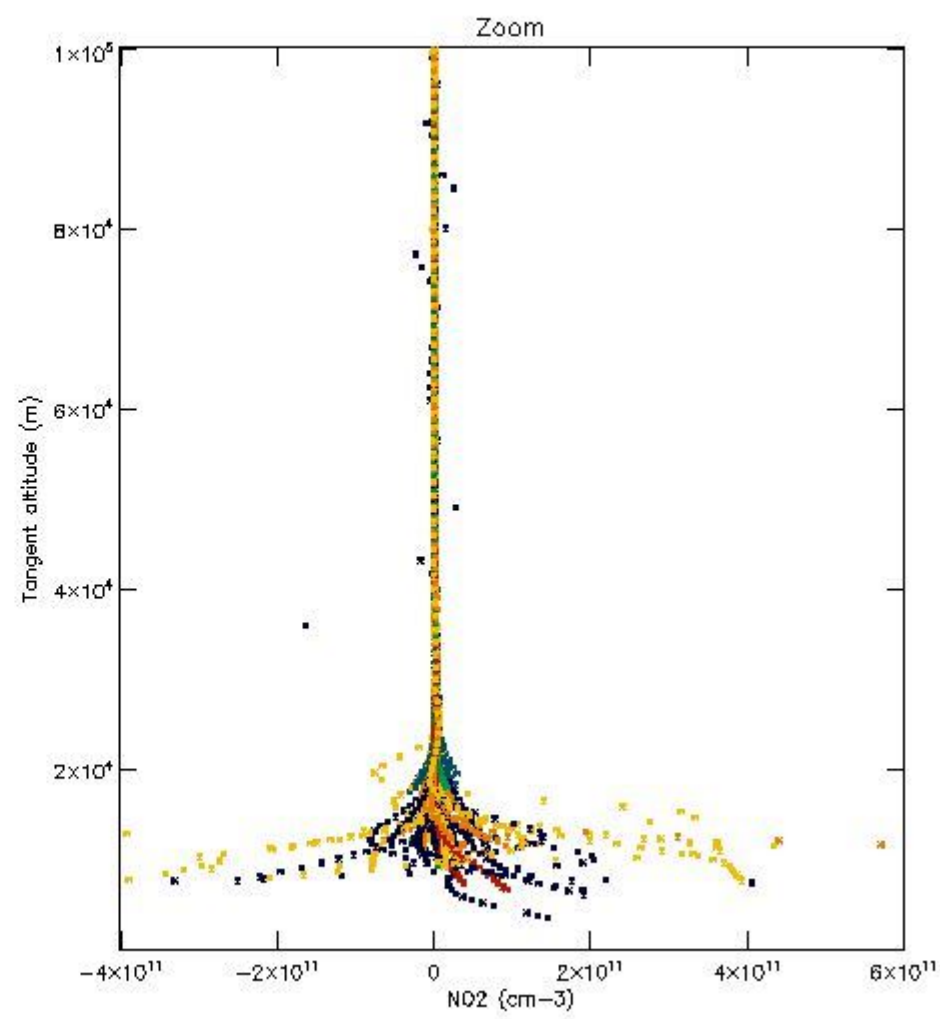
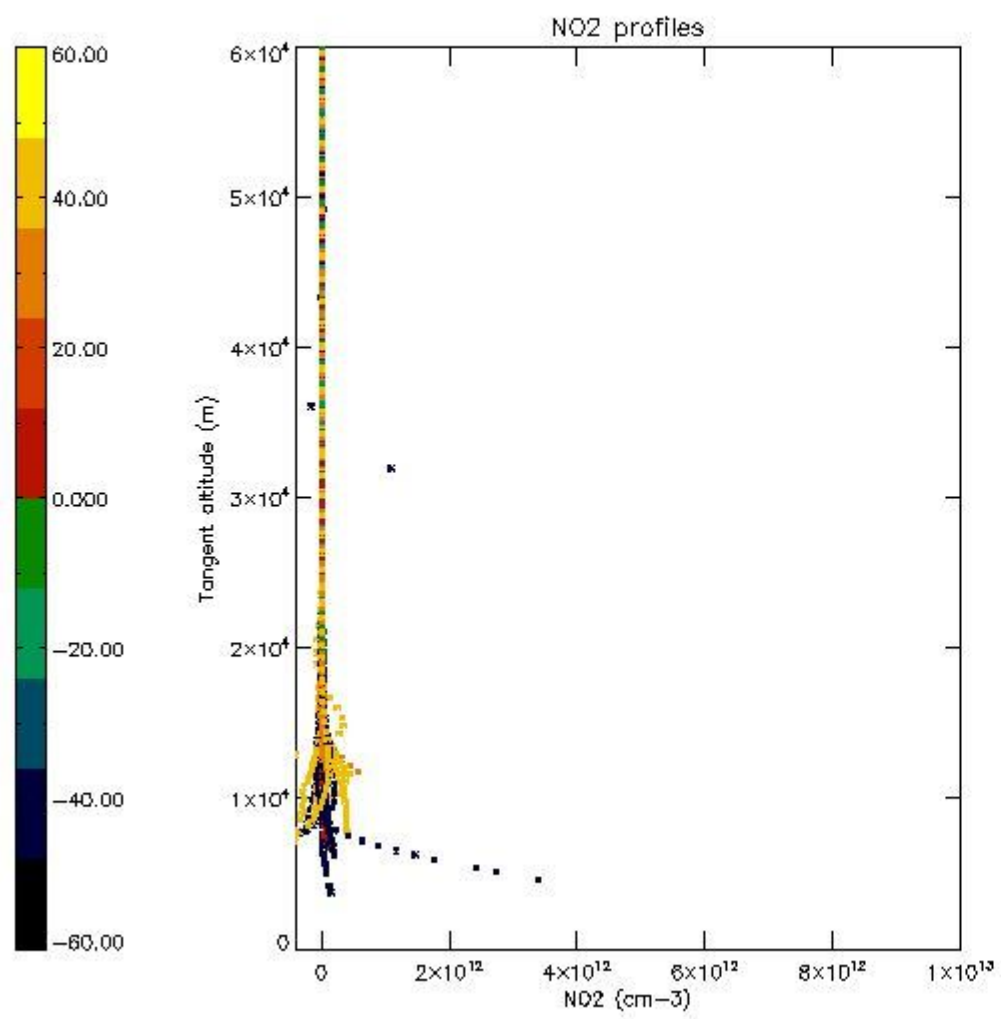
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



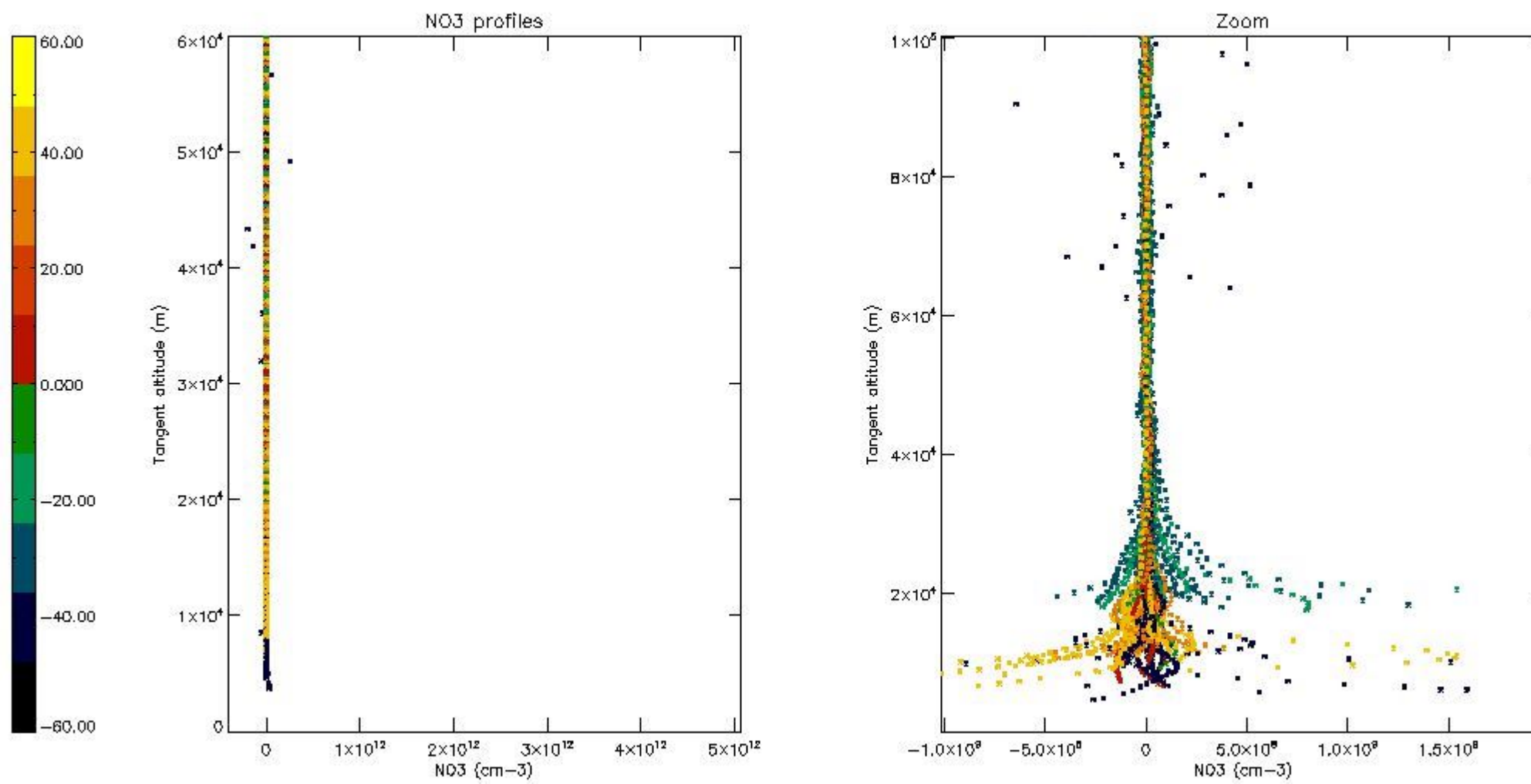
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



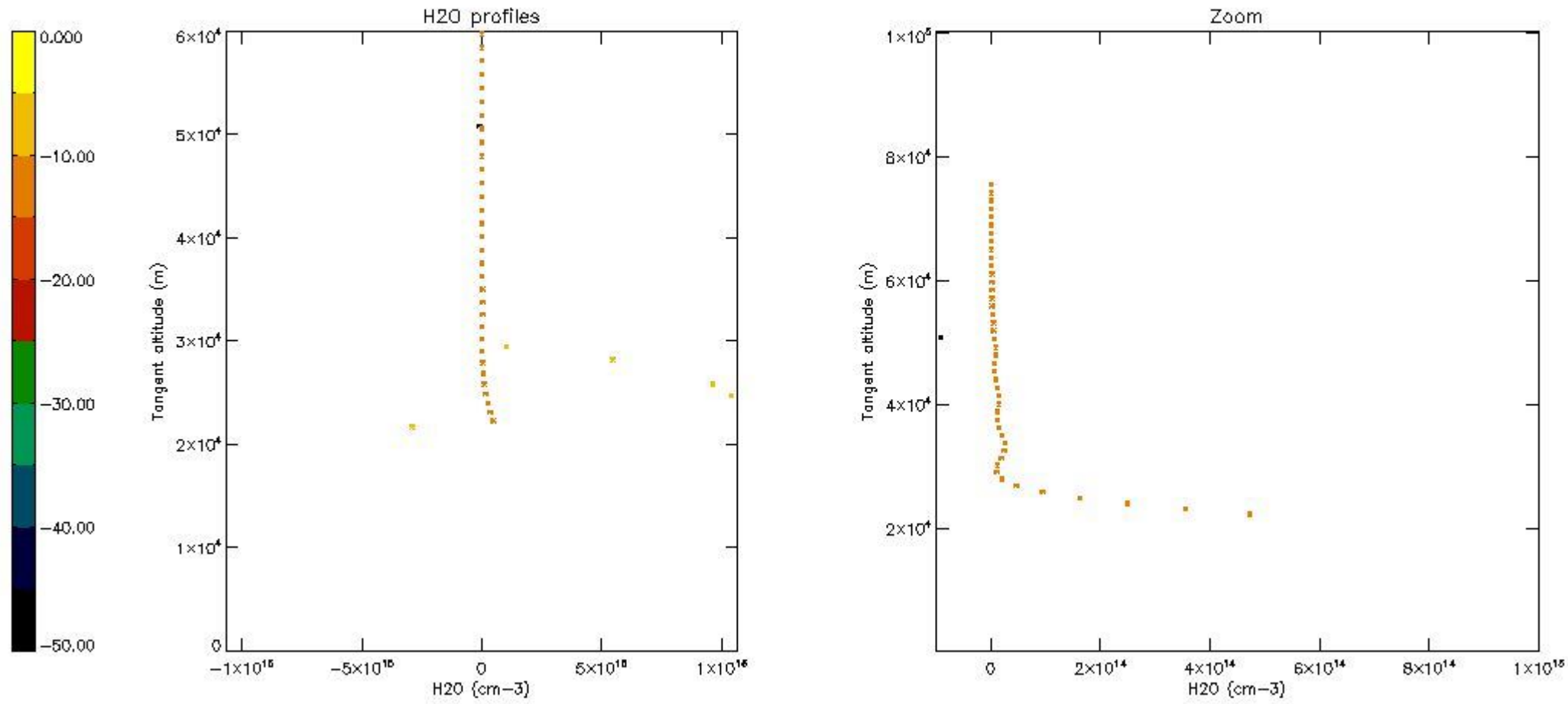
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

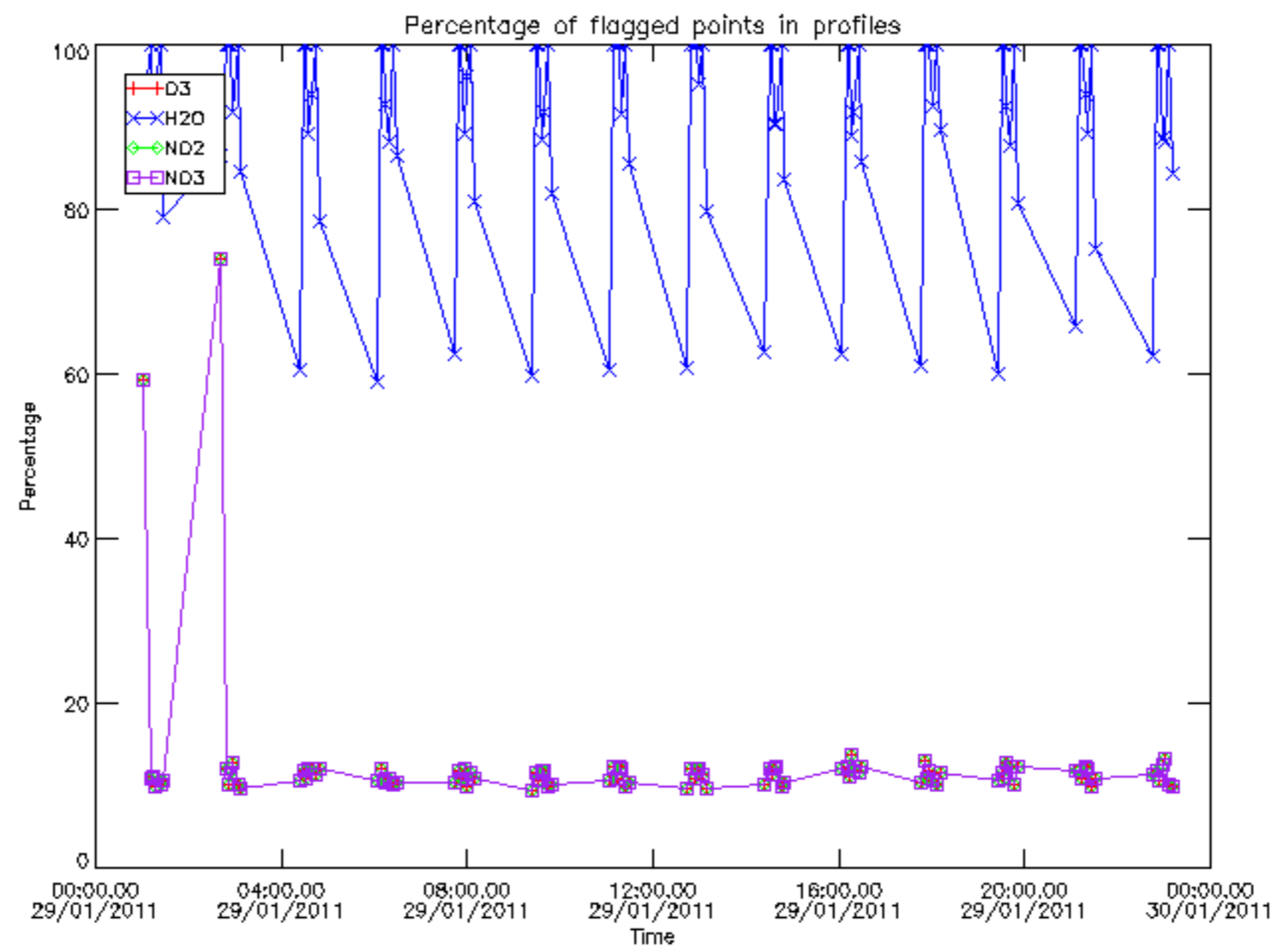
The colorbar represents the latitude.



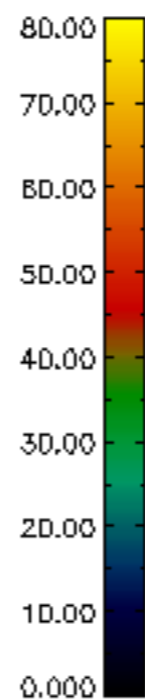
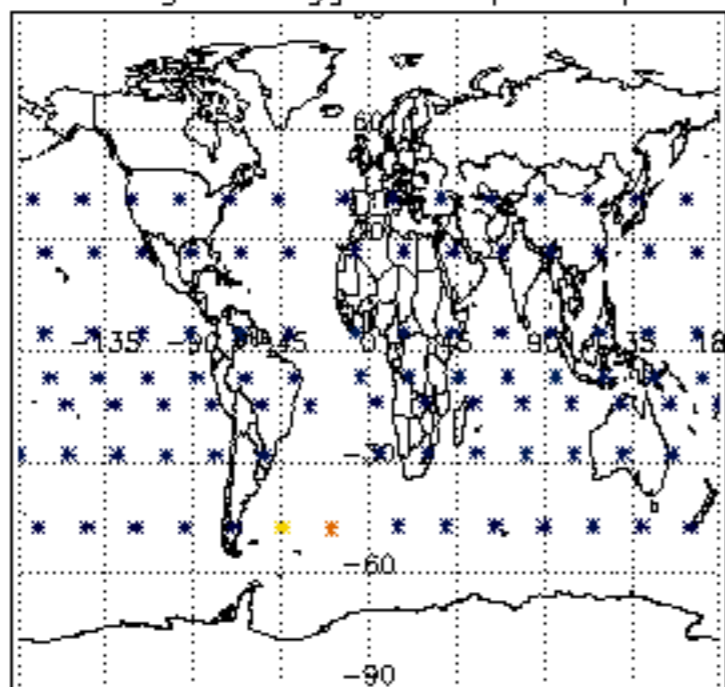
## 6. Auxiliary Data Files used for the production reported in section 2

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

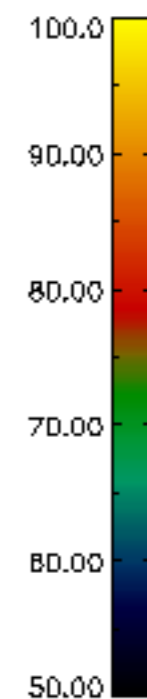
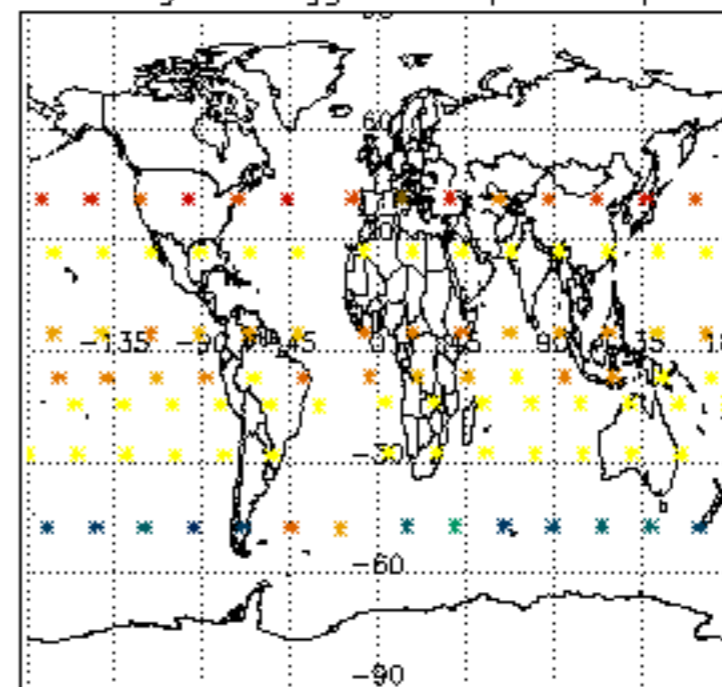
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	29-JAN-2011 00:03:13
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	29-JAN-2011 00:03:13
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	29-JAN-2011 00:03:13



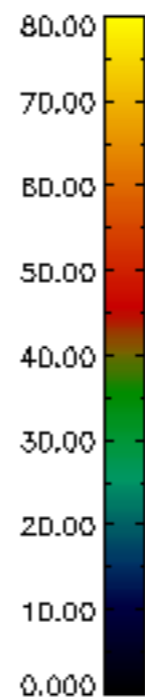
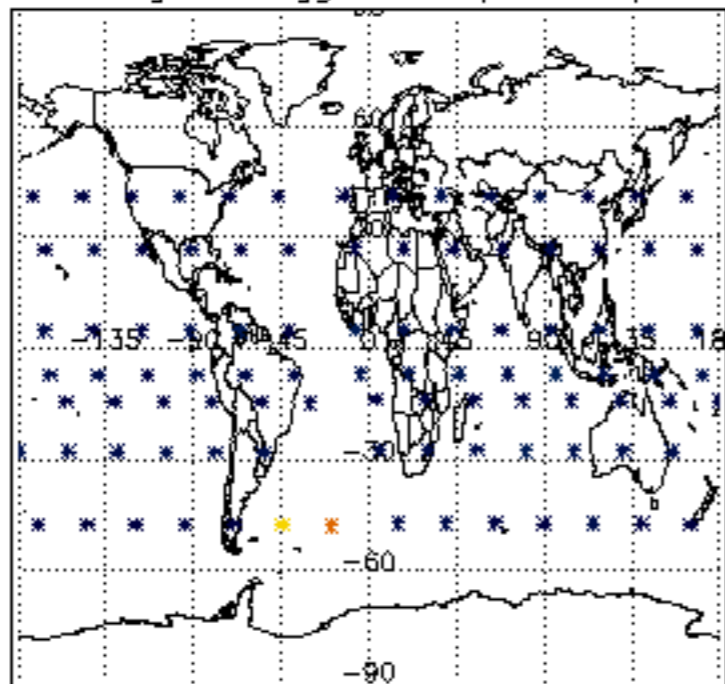
Percentage of flagged data per D3 profile



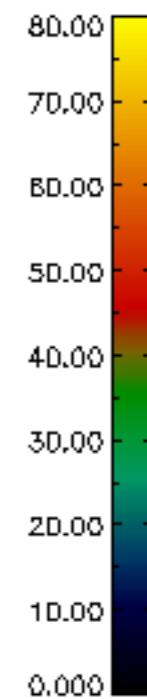
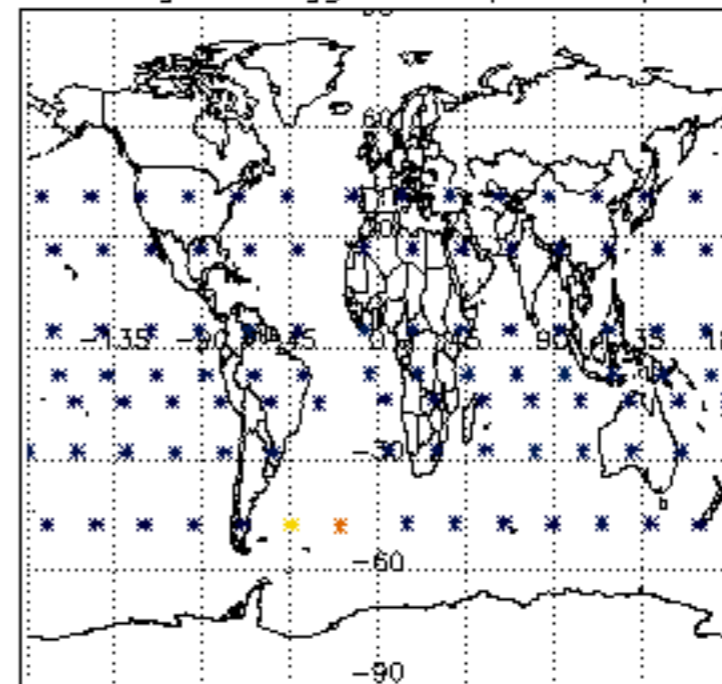
Percentage of flagged data per H2O profile



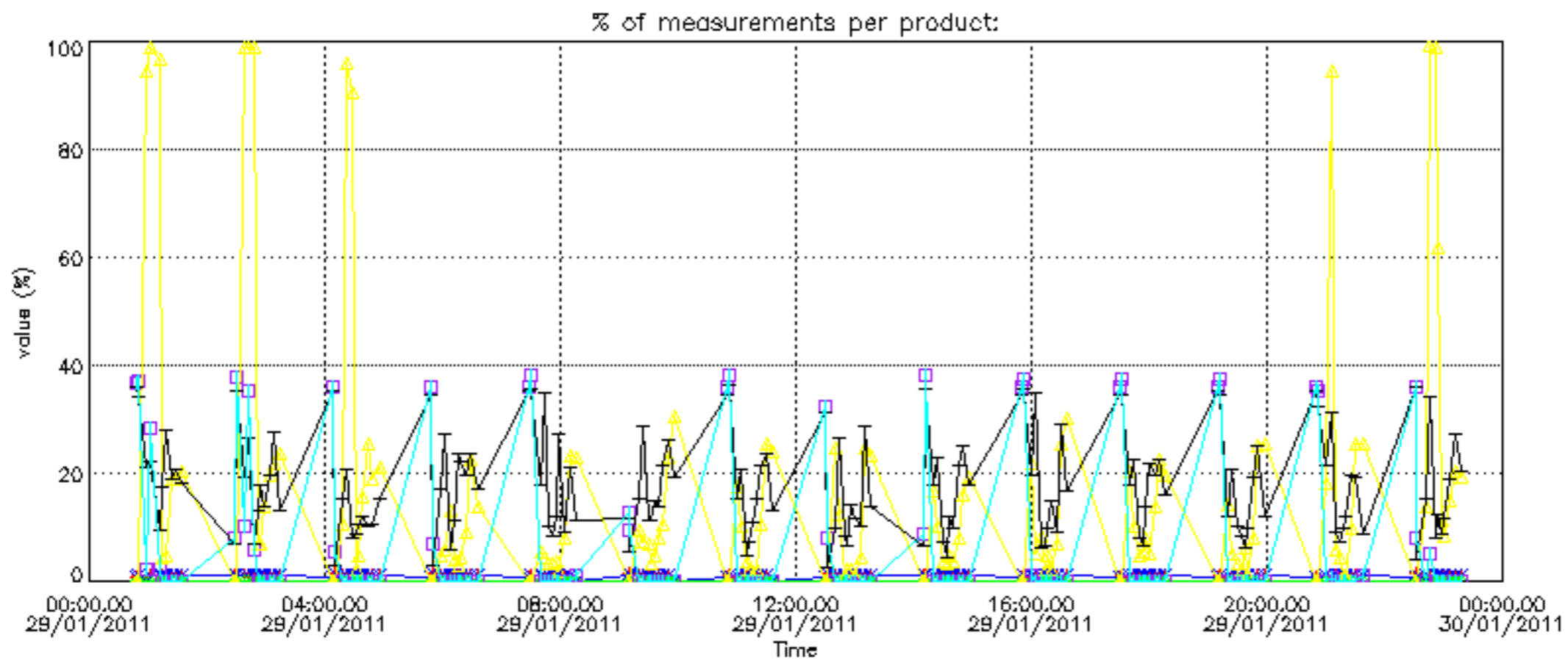
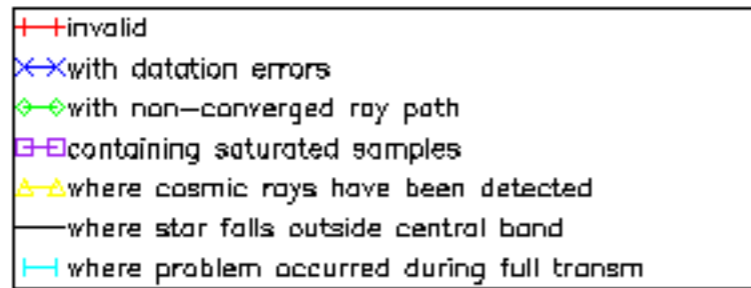
Percentage of flagged data per NO2 profile

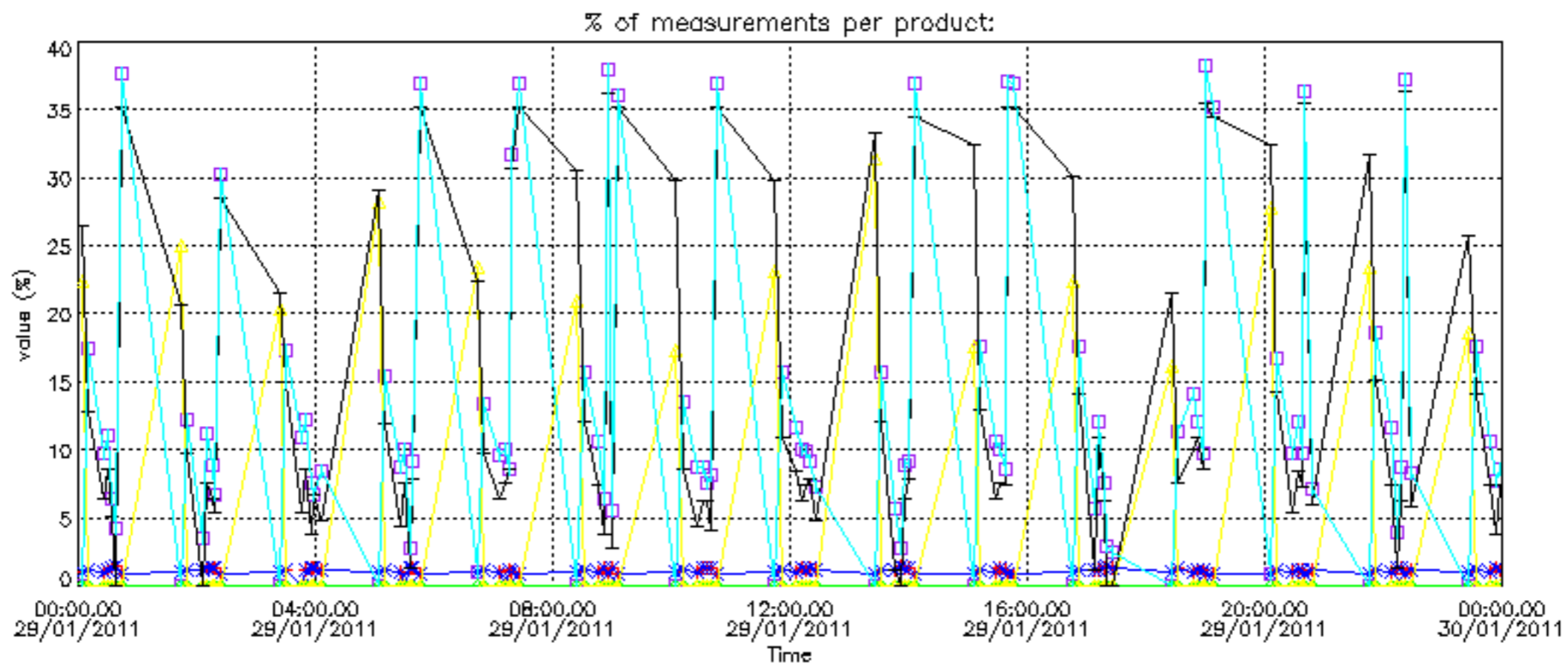


Percentage of flagged data per NO3 profile

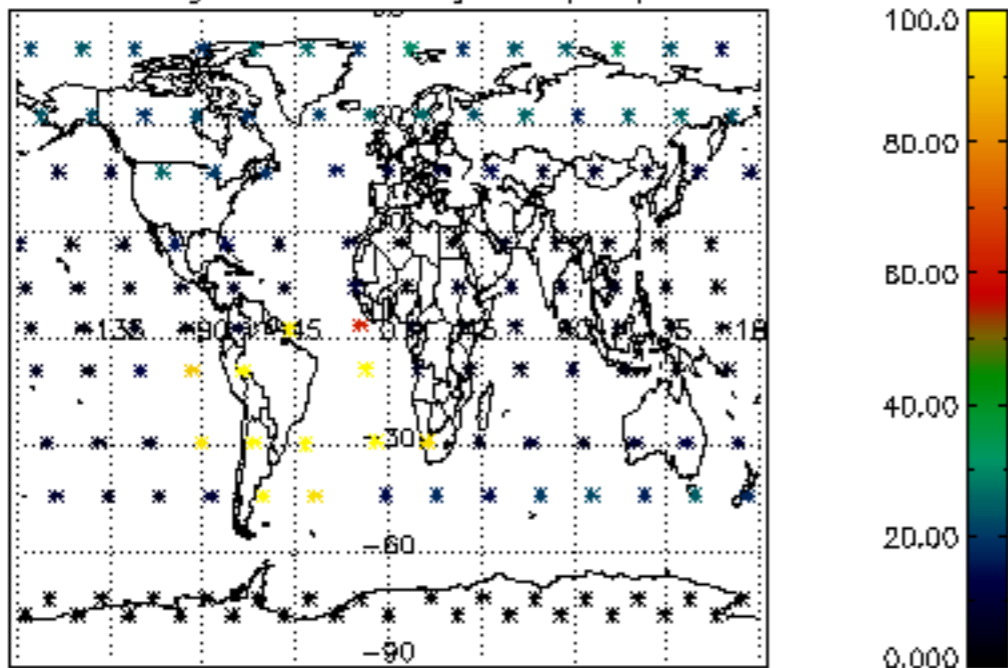




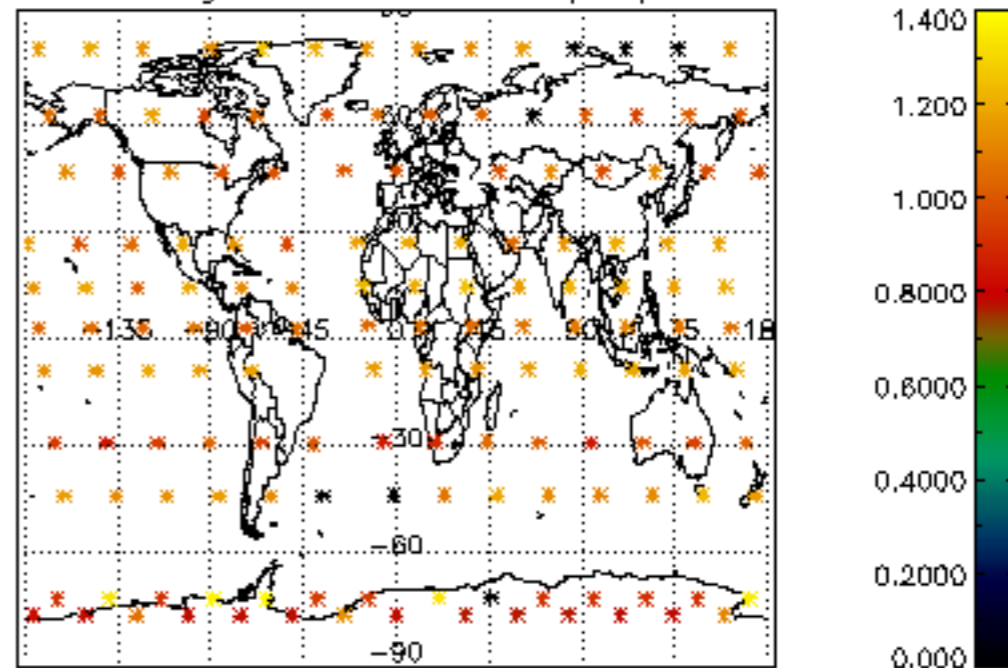




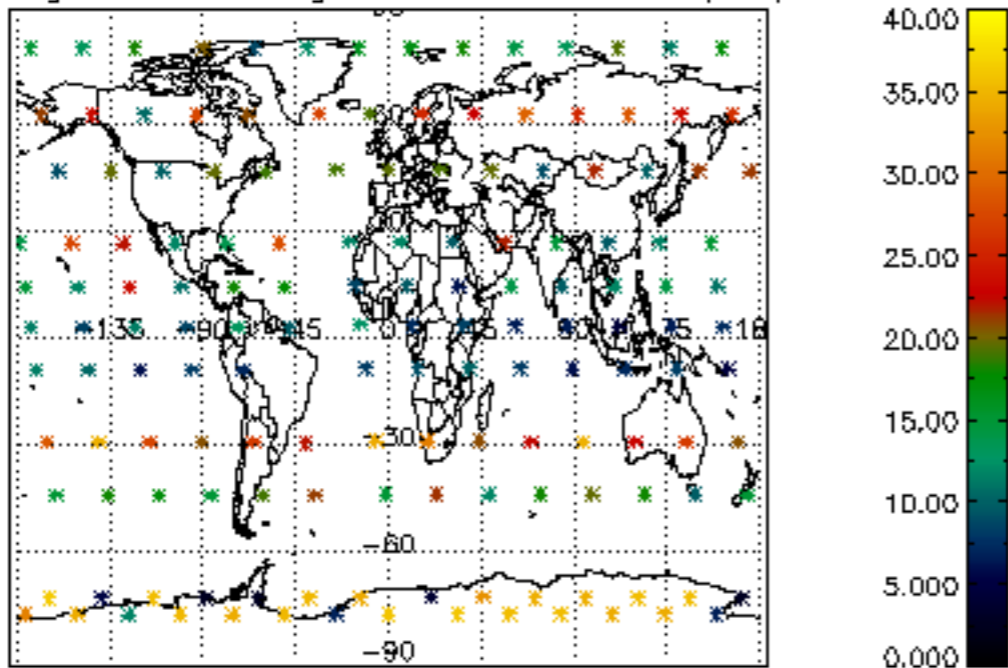
Percentage of cosmic ray hits per profile



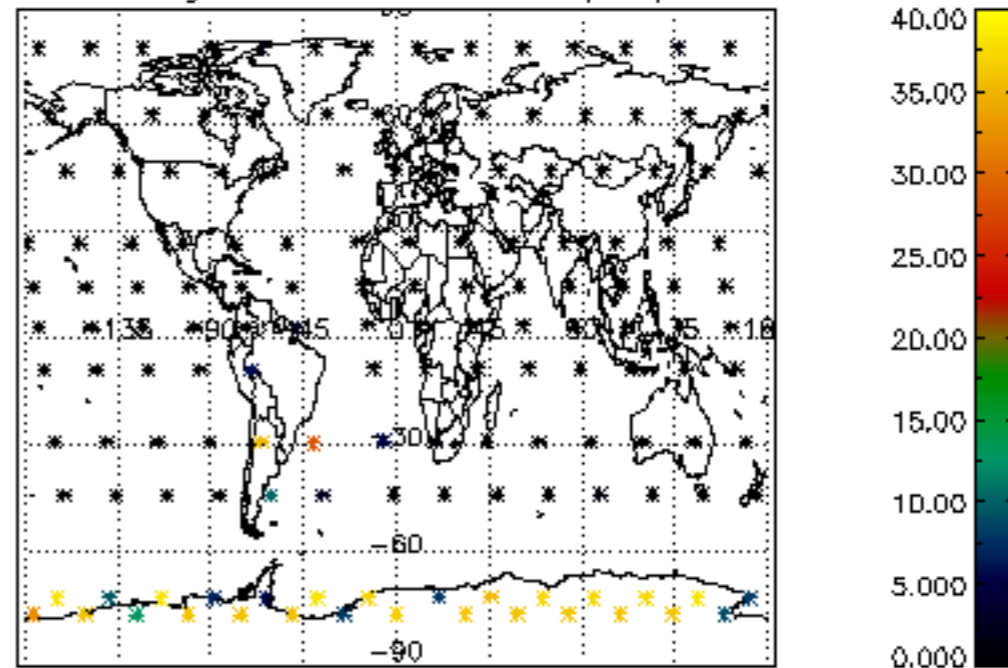
Percentage of datation errors per profile



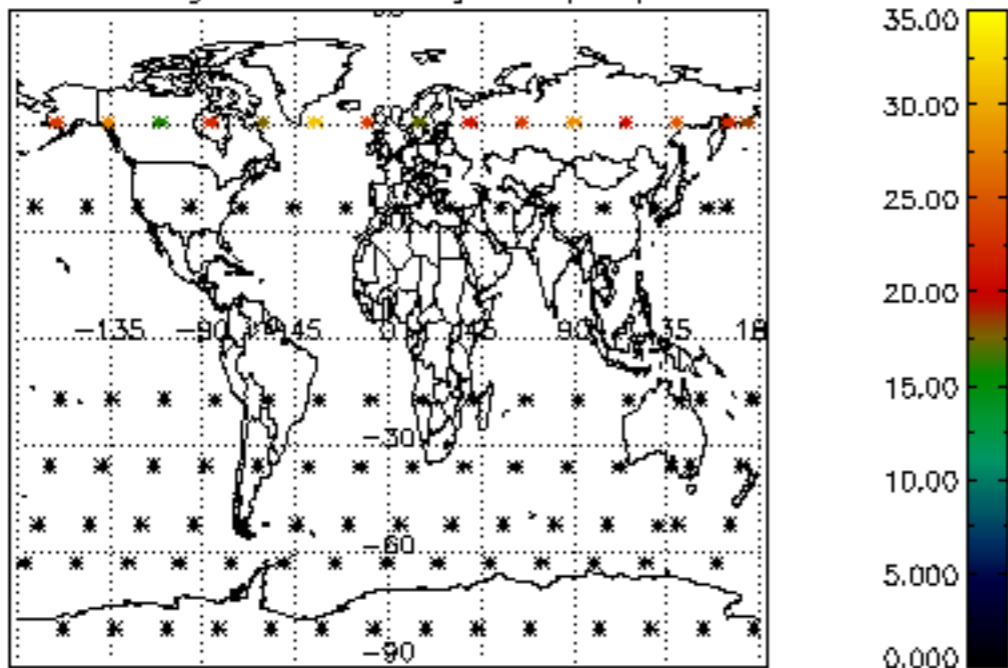
Percentage of star falling outside central band per profile



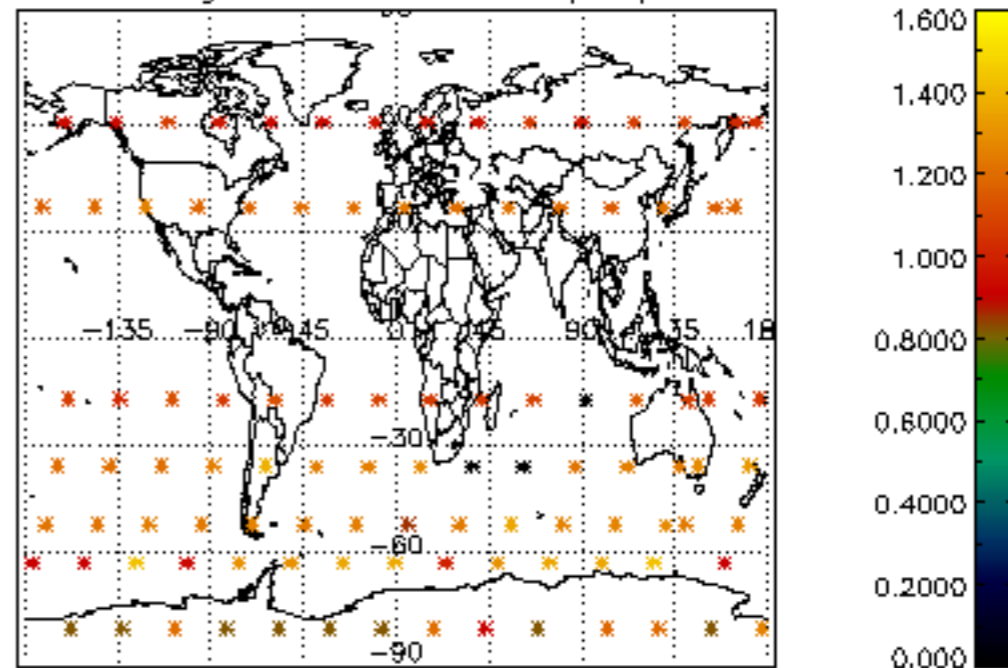
Percentage of saturation errors per profile



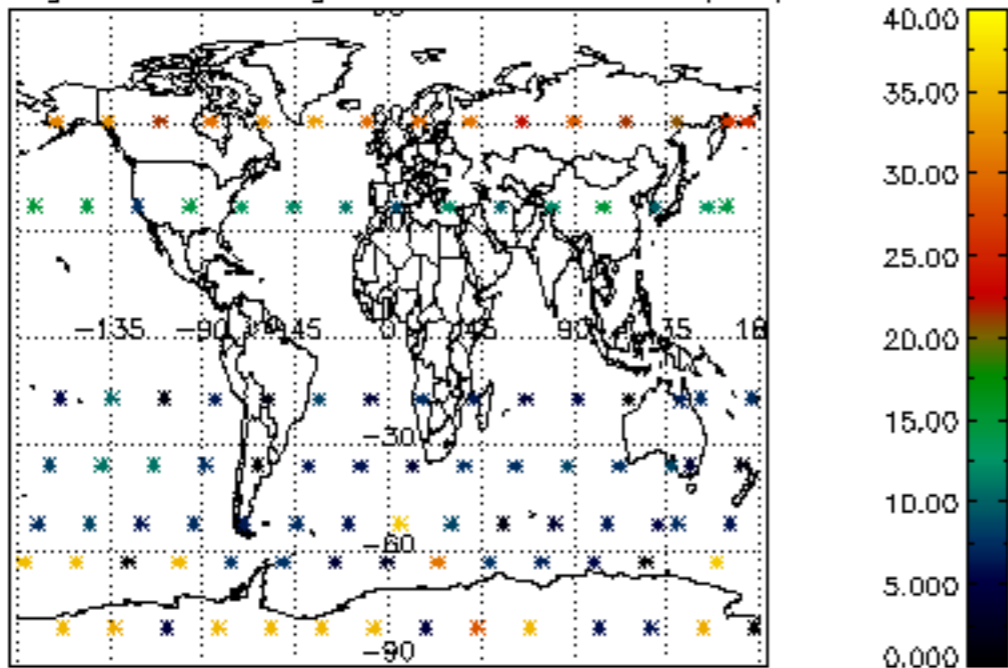
Percentage of cosmic ray hits per profile



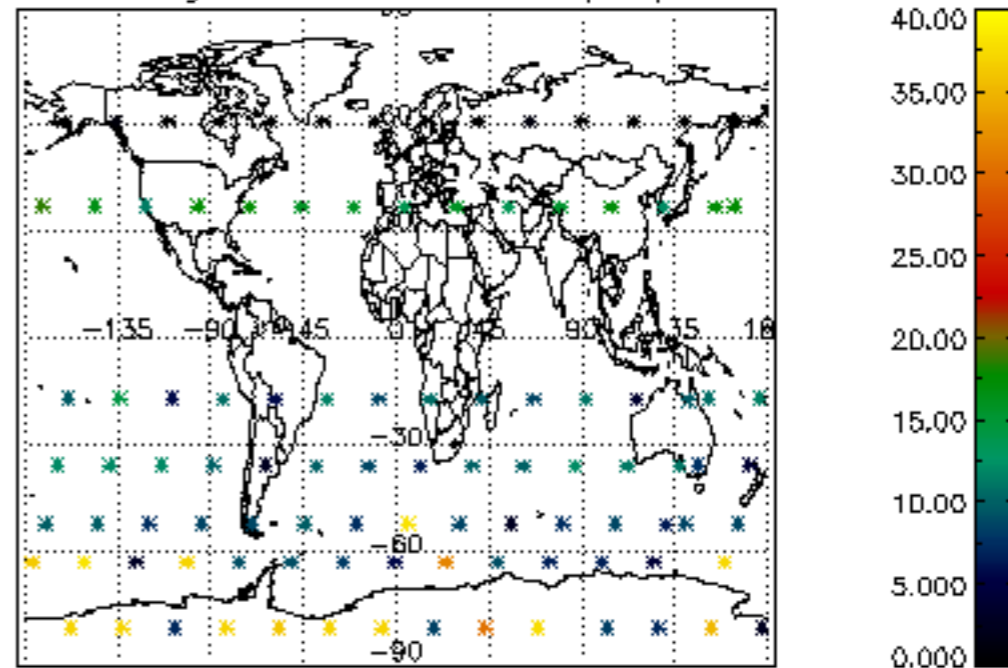
Percentage of datation errors per profile

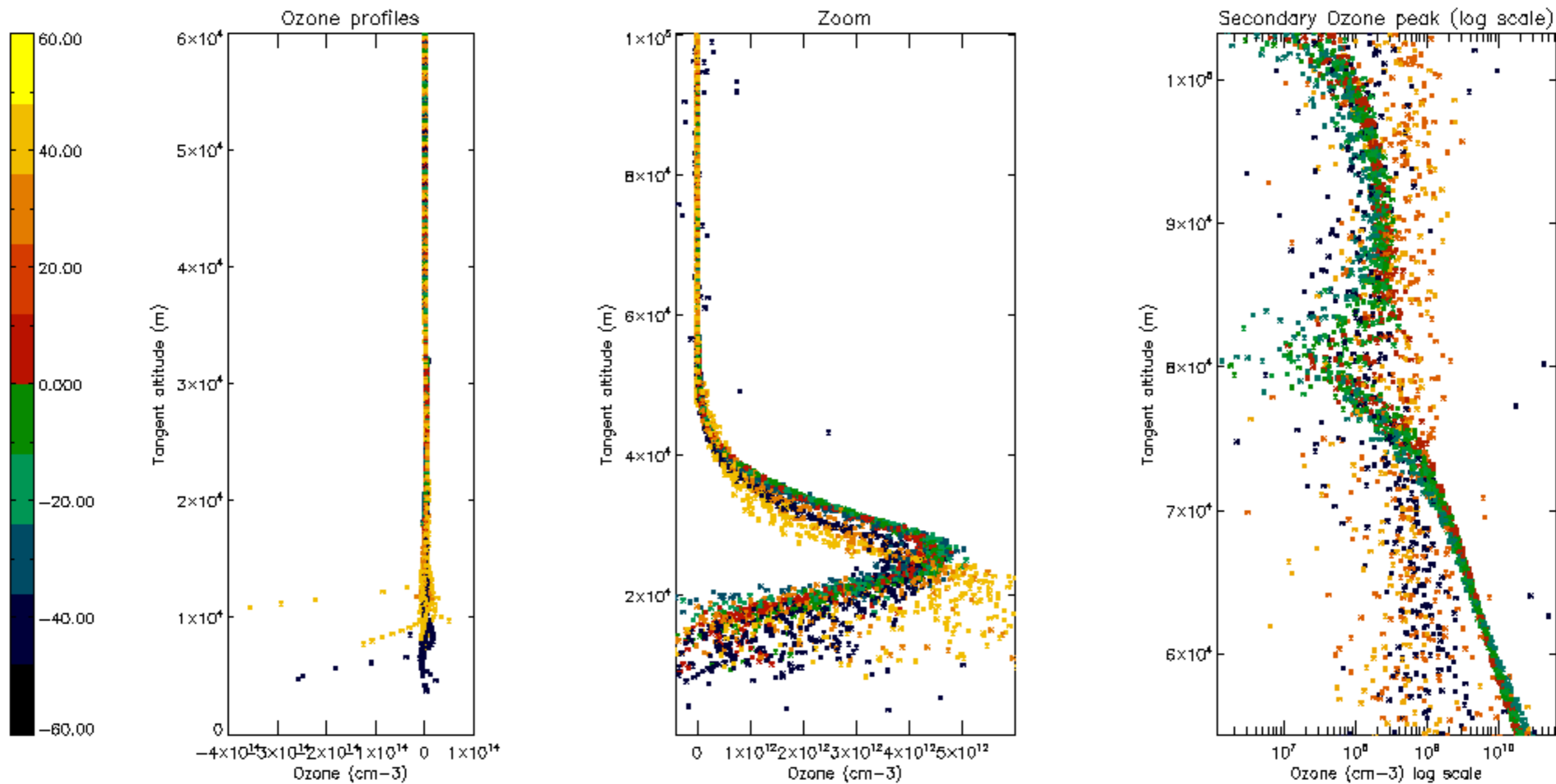


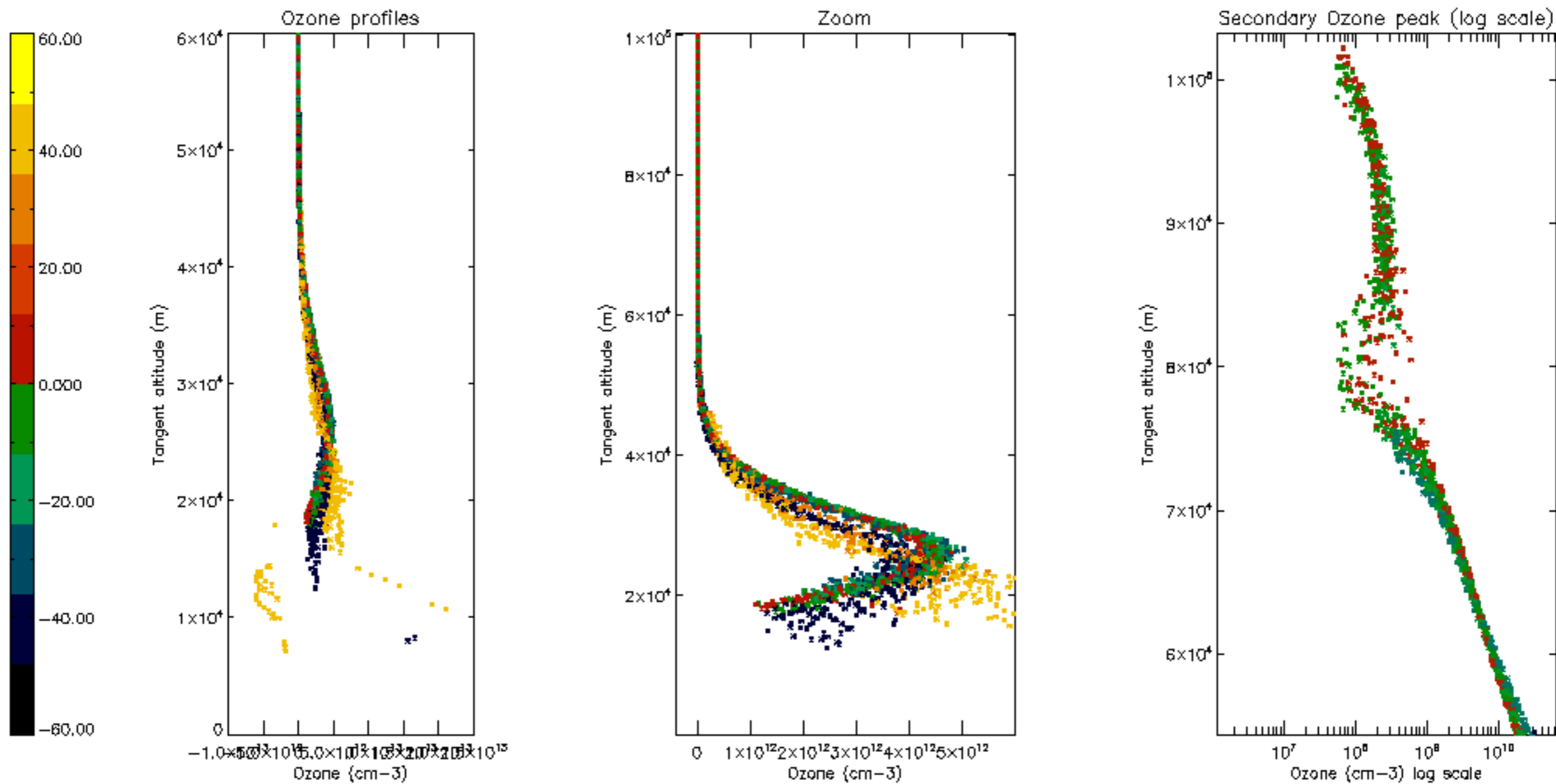
Percentage of star falling outside central band per profile

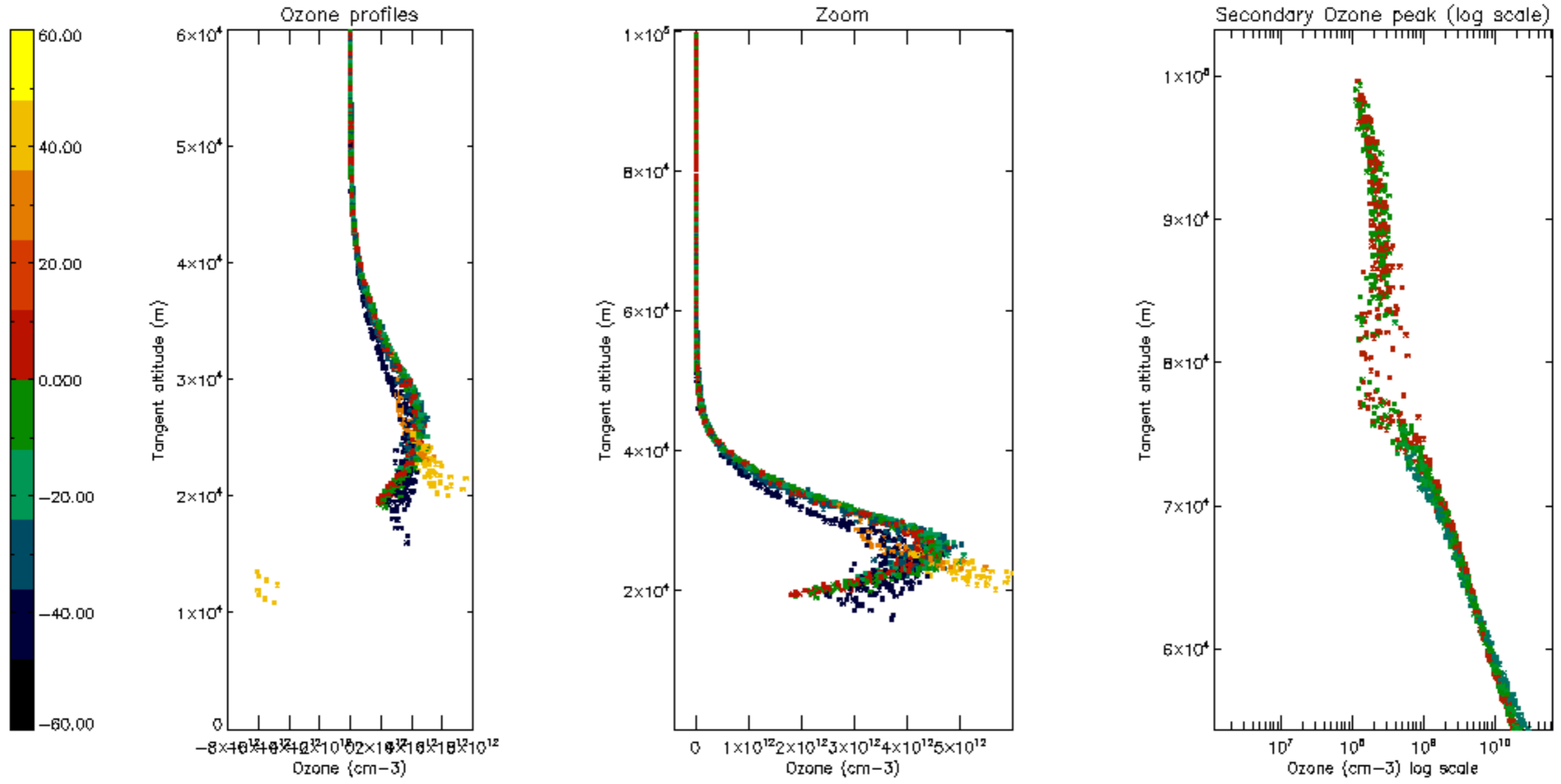


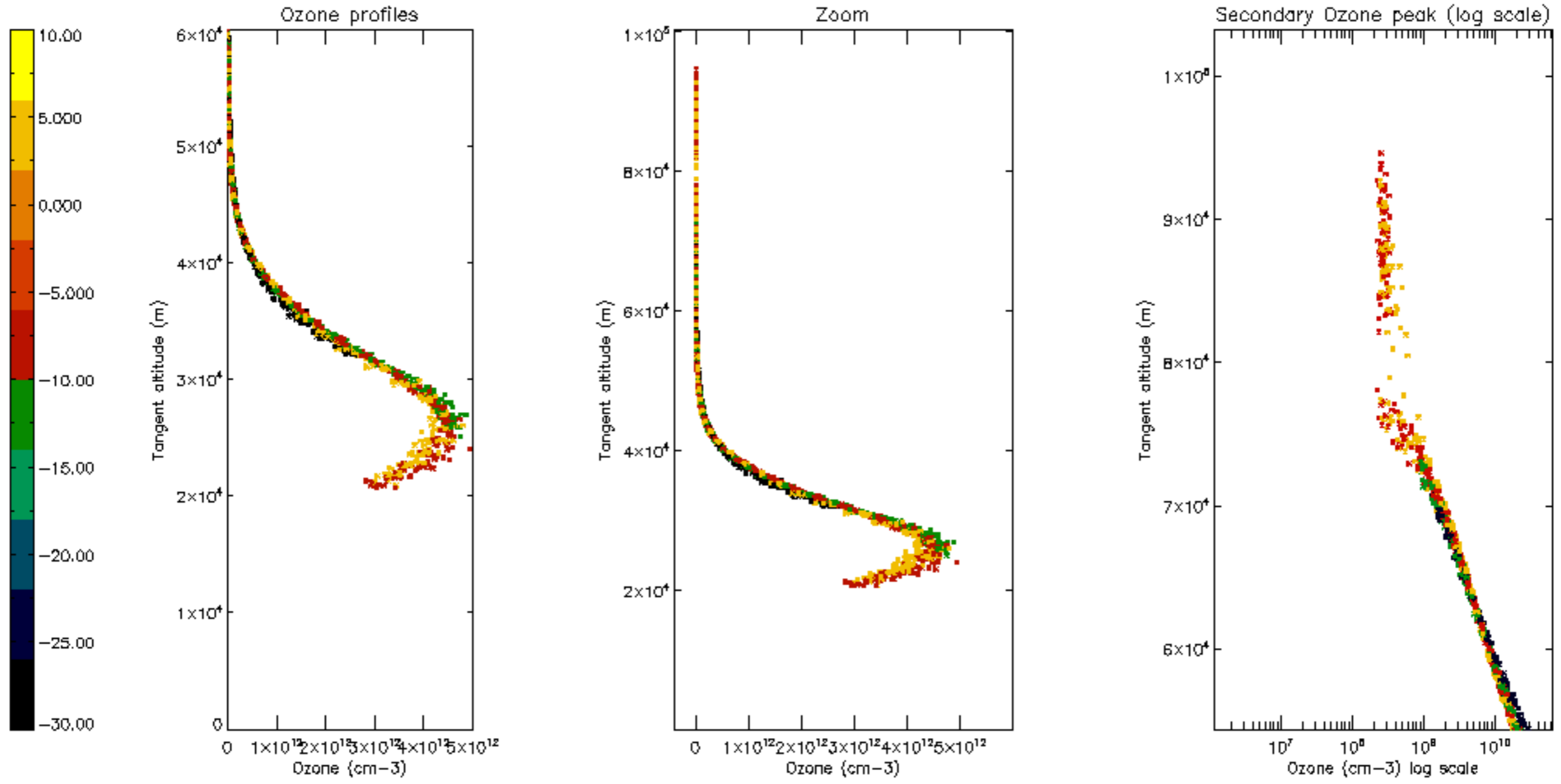
Percentage of saturation errors per profile



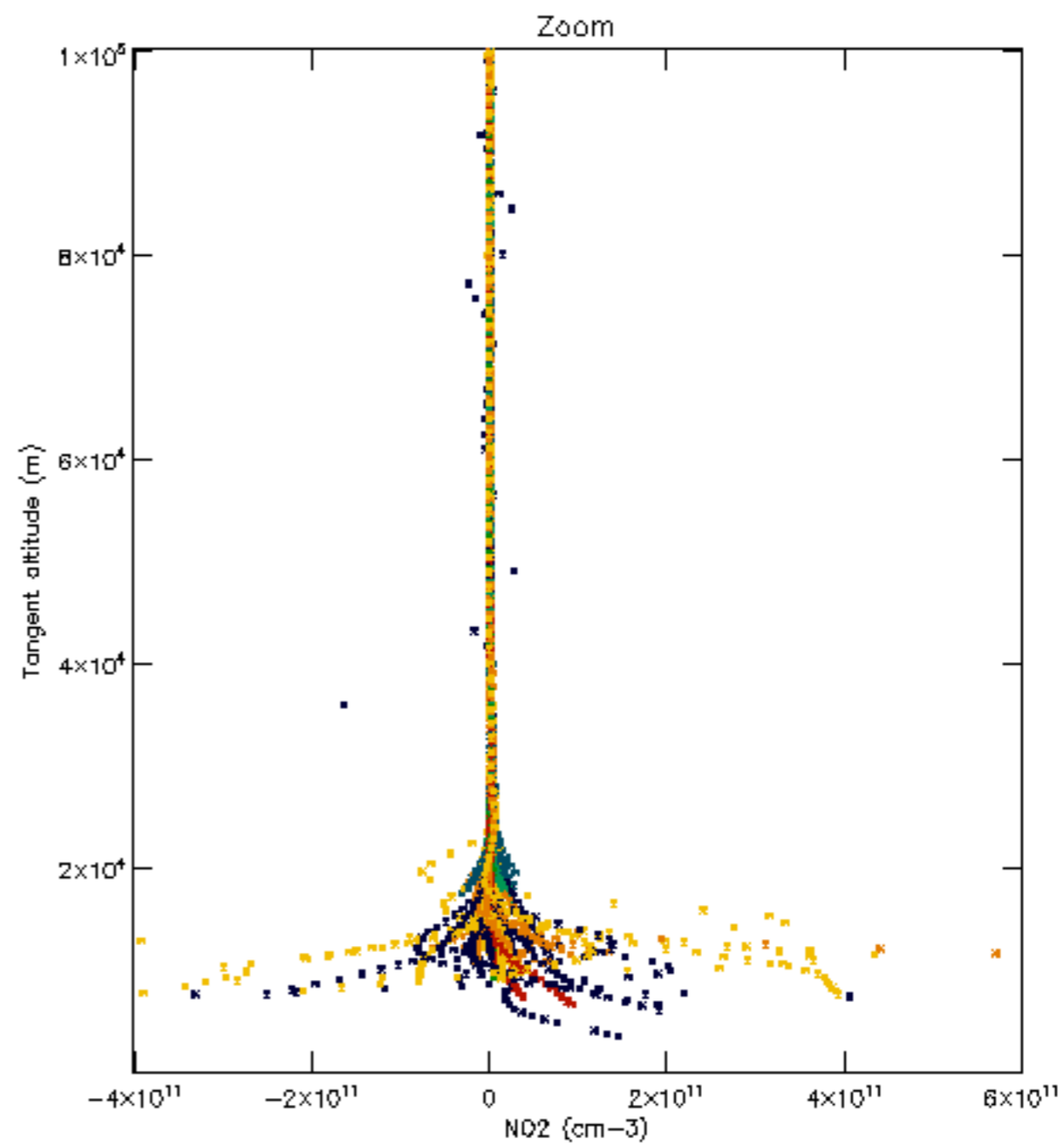
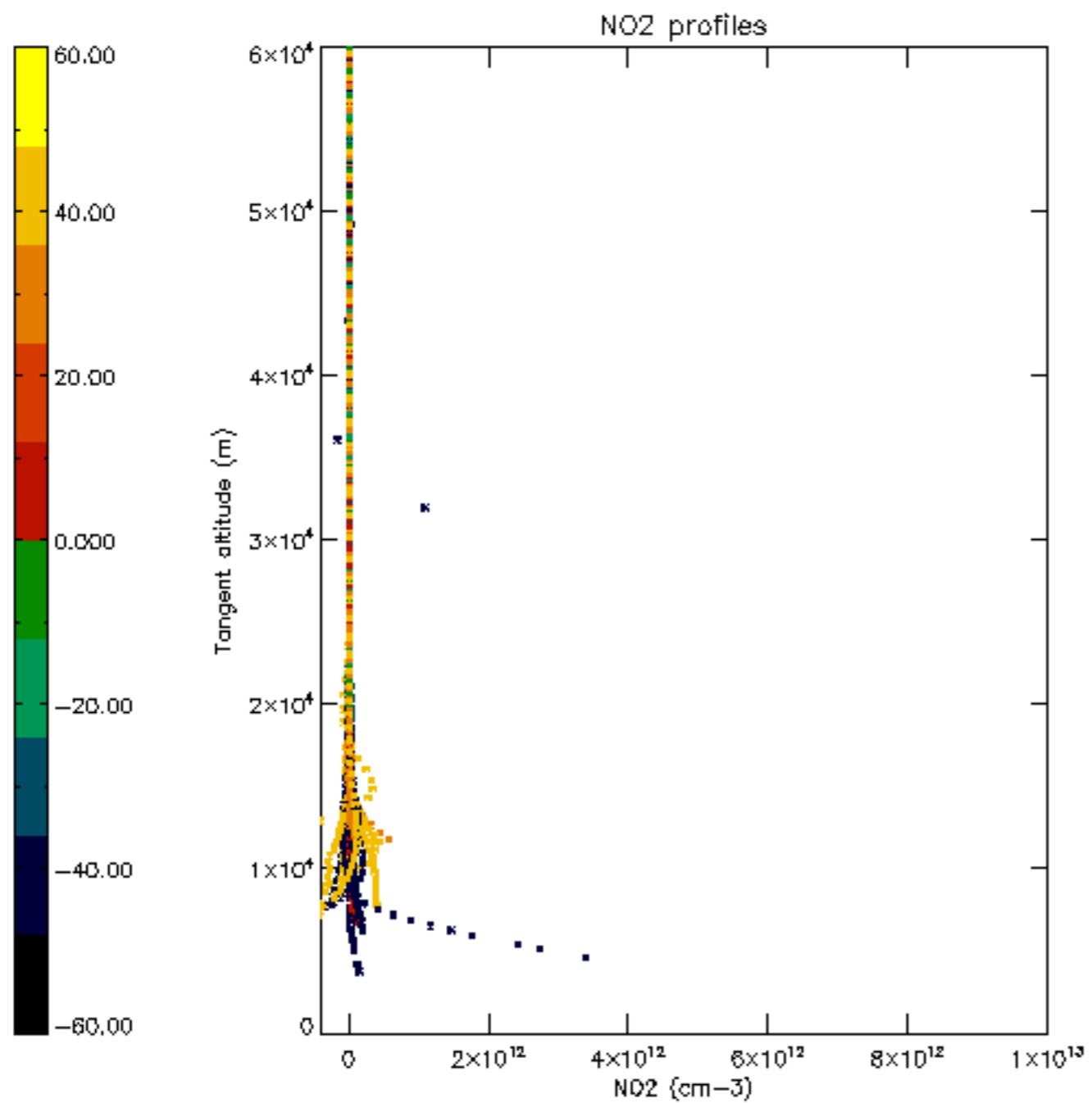


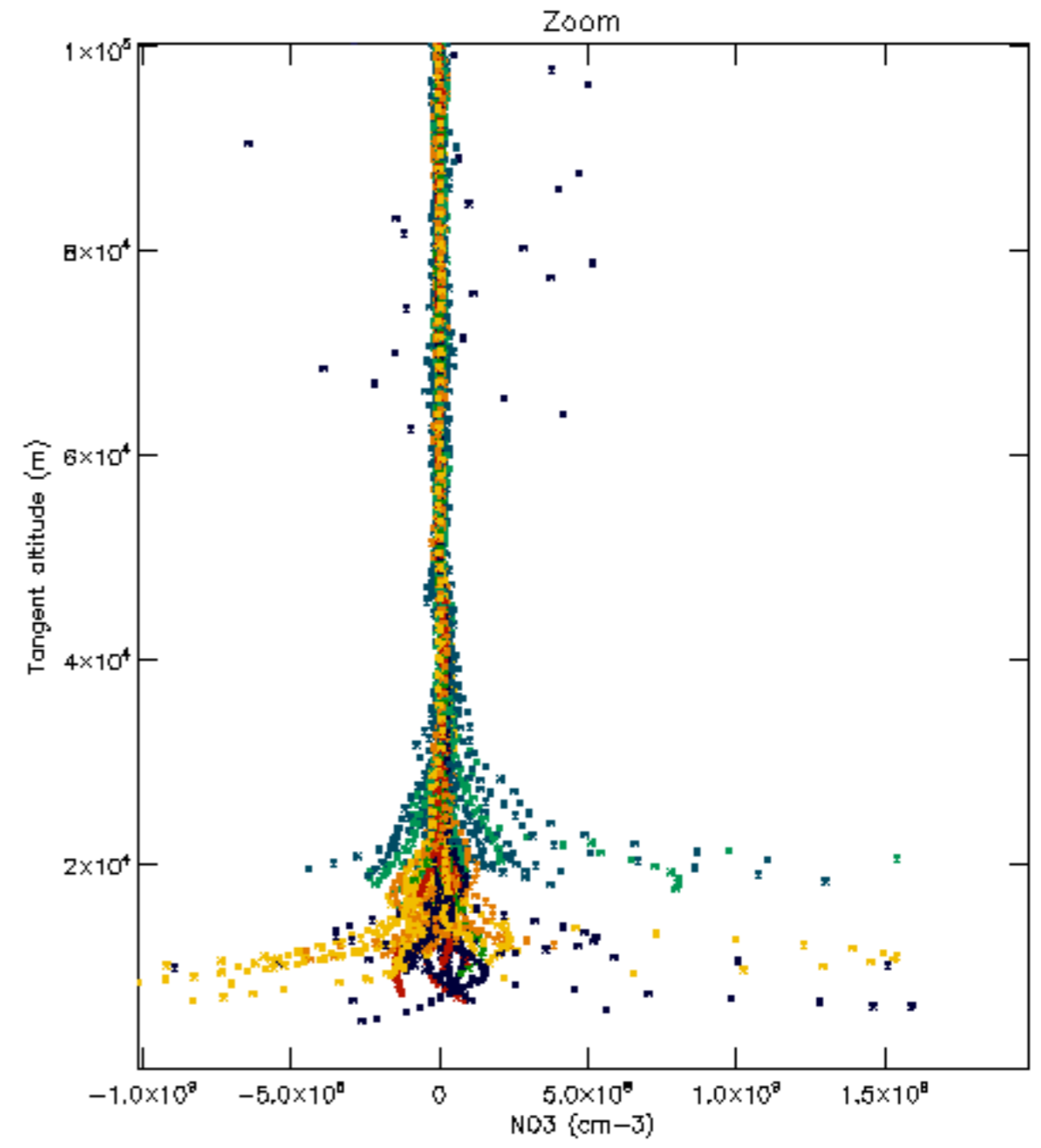
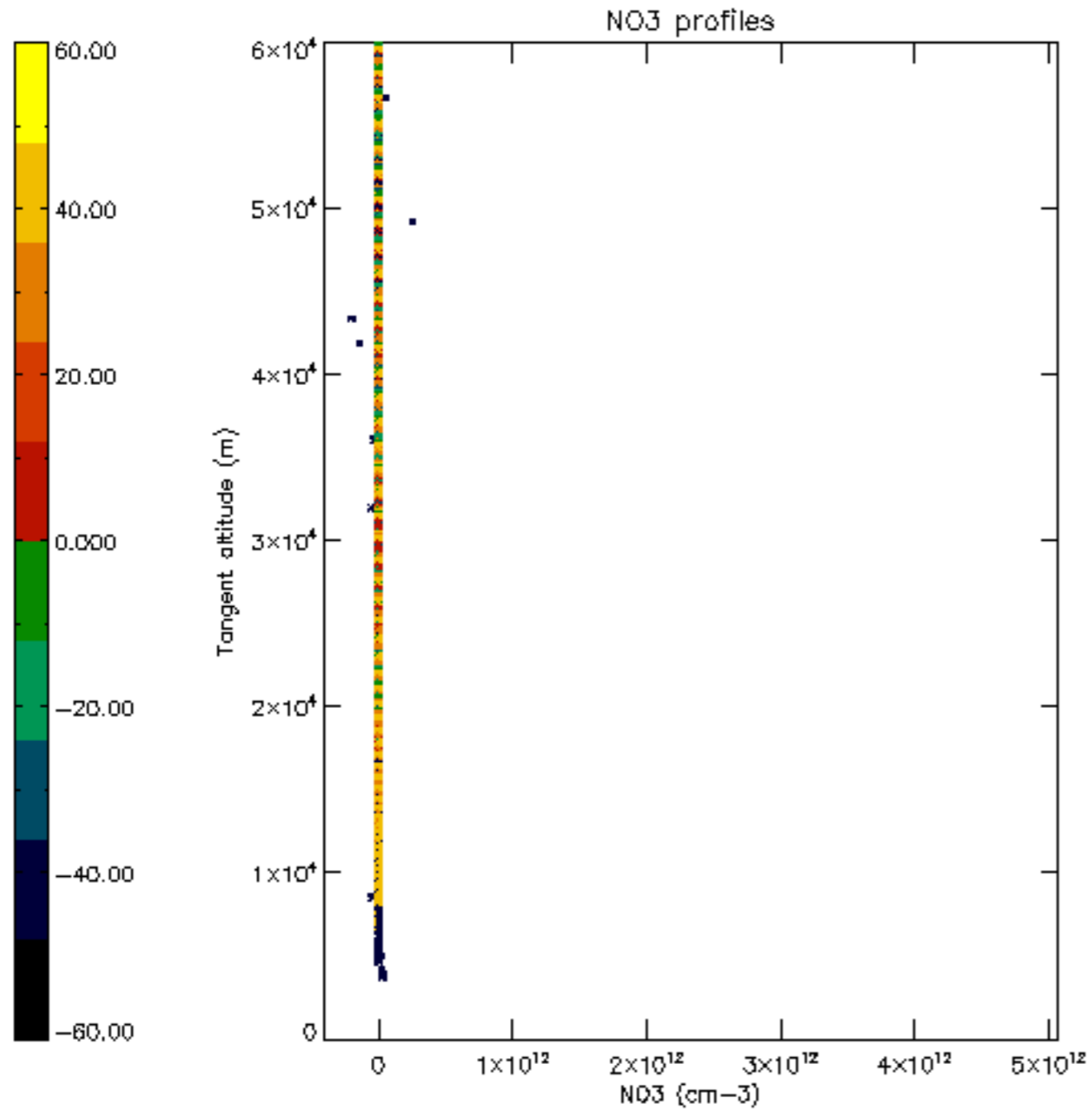


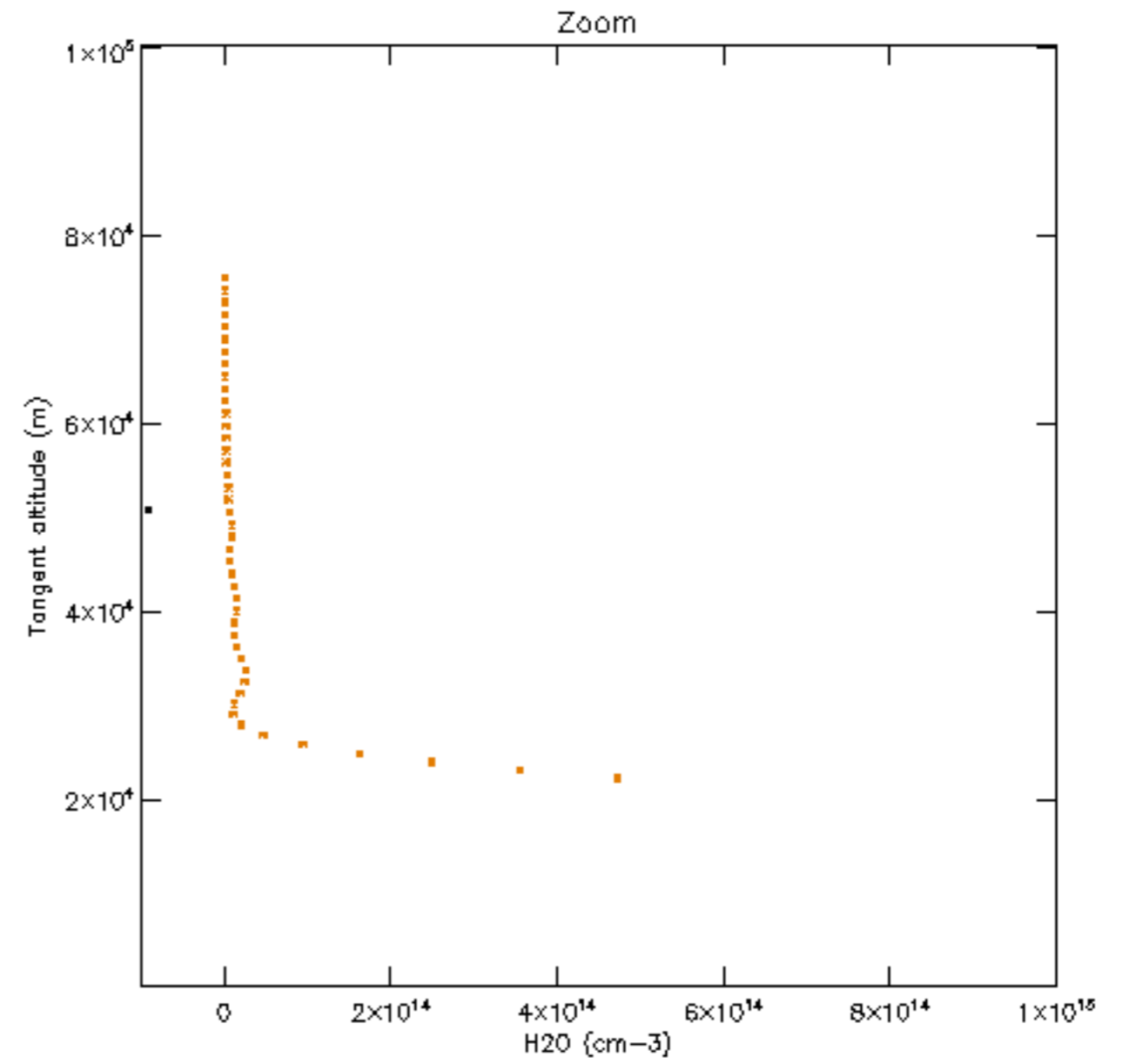
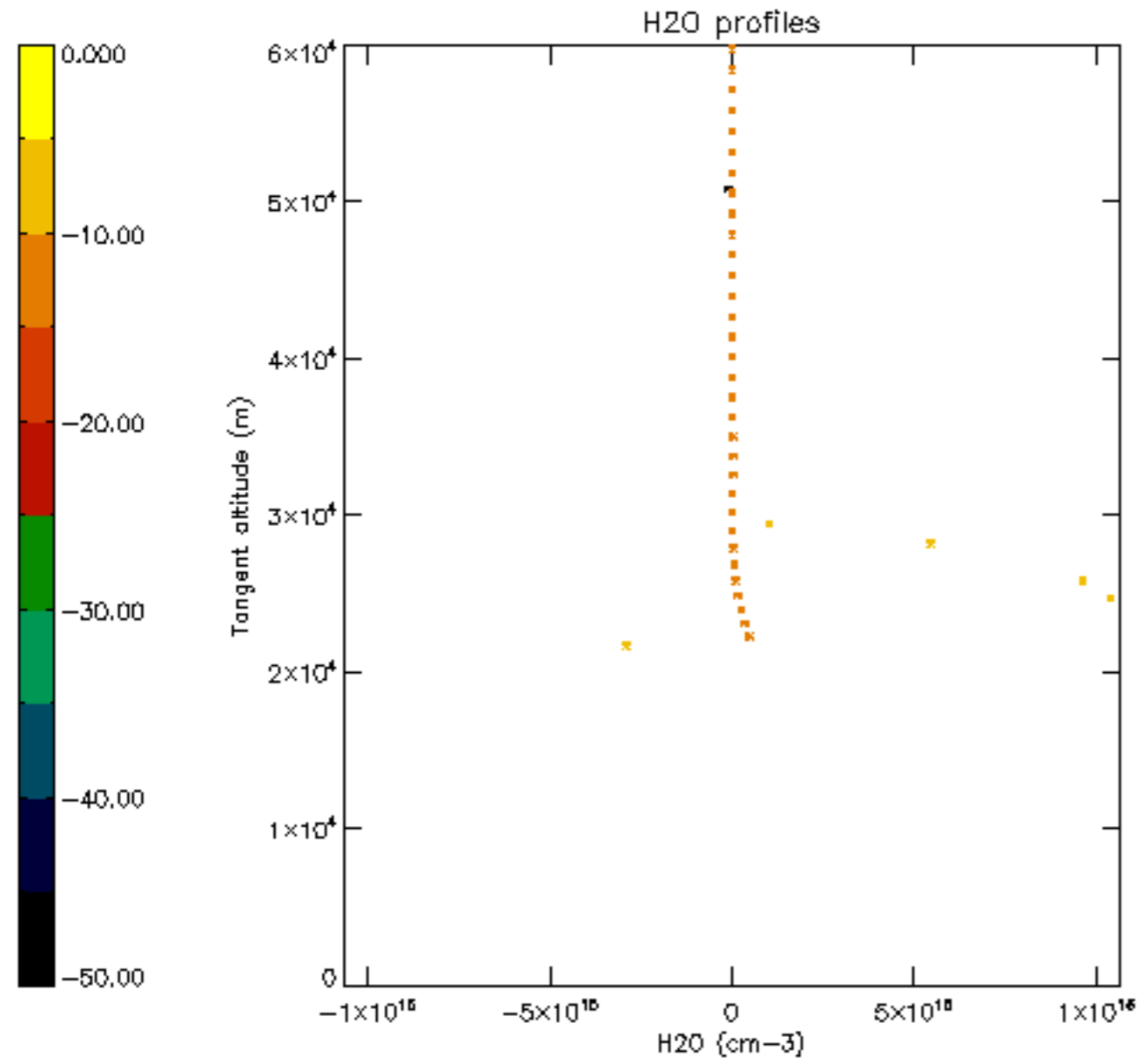


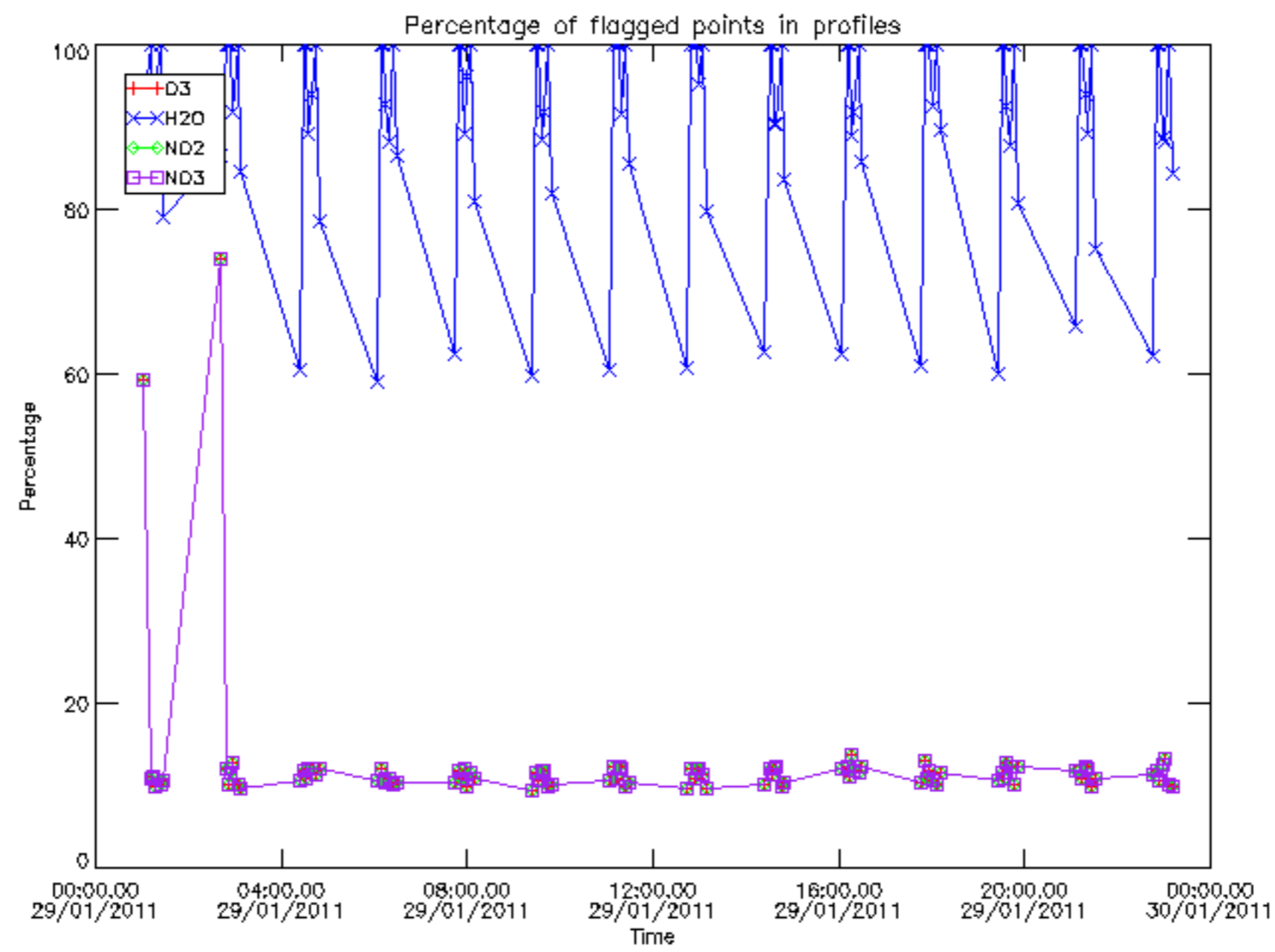




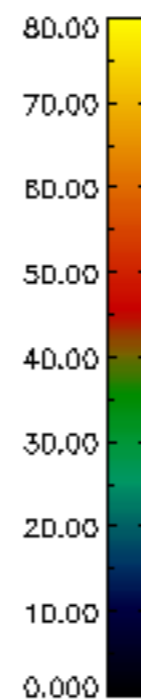
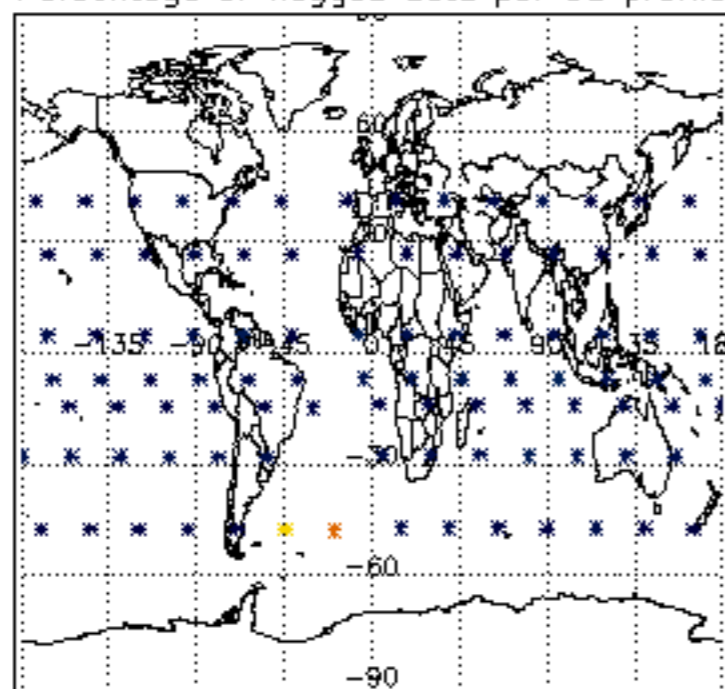




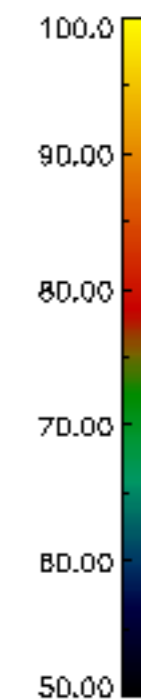
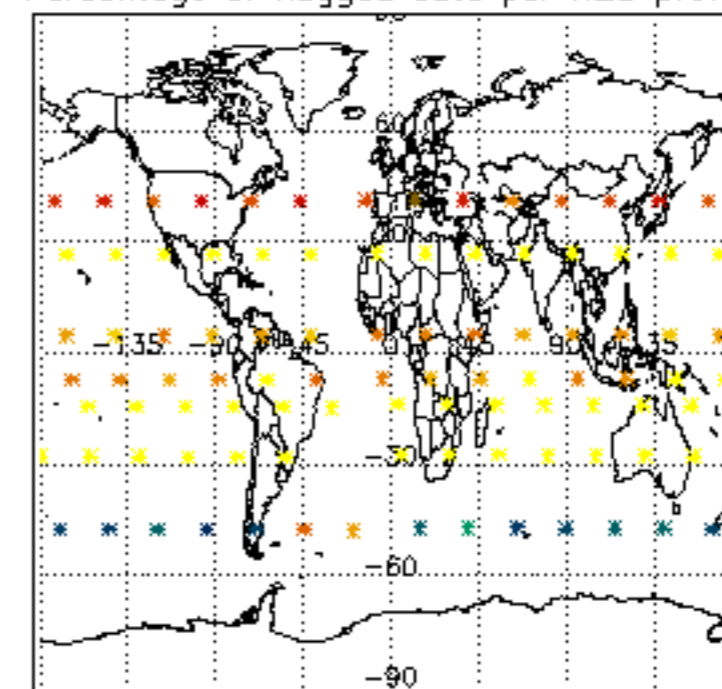




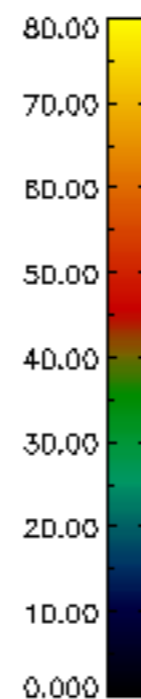
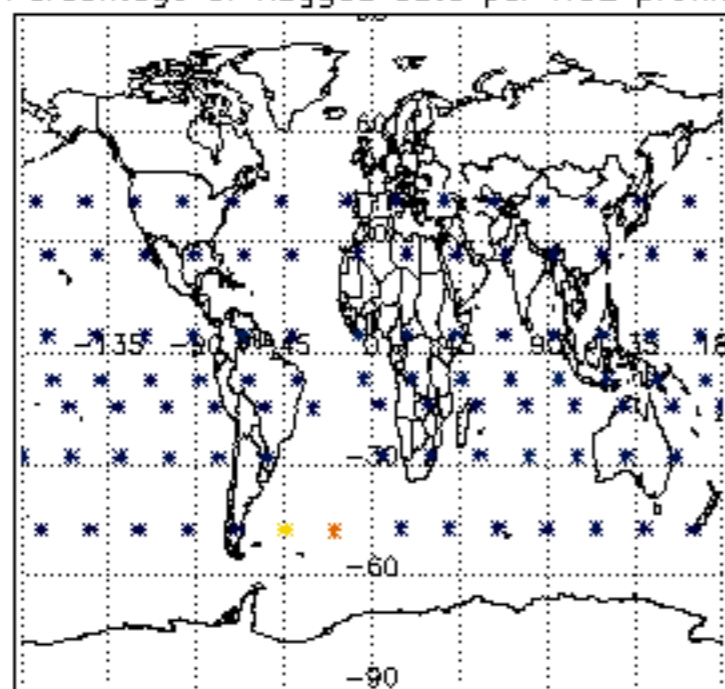
Percentage of flagged data per D3 profile



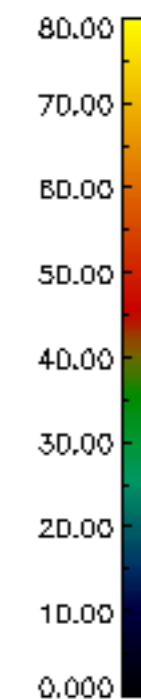
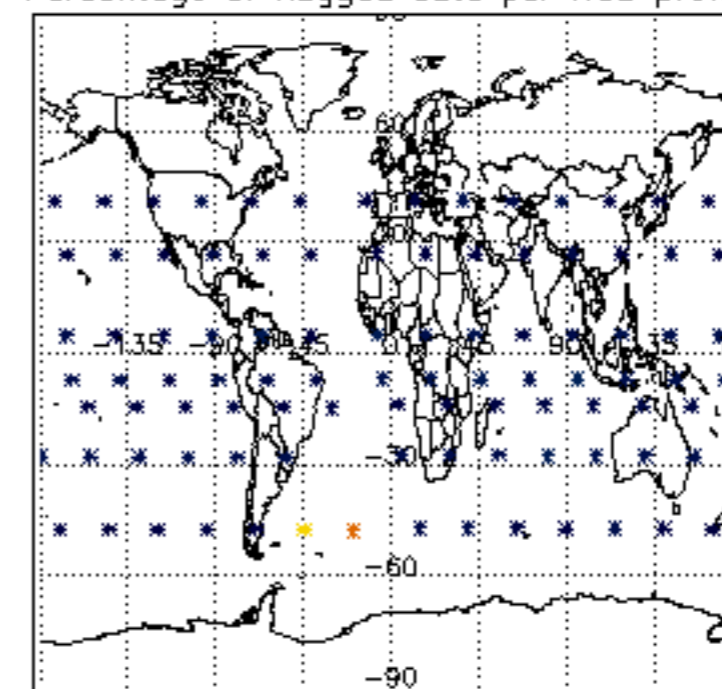
Percentage of flagged data per H2O profile

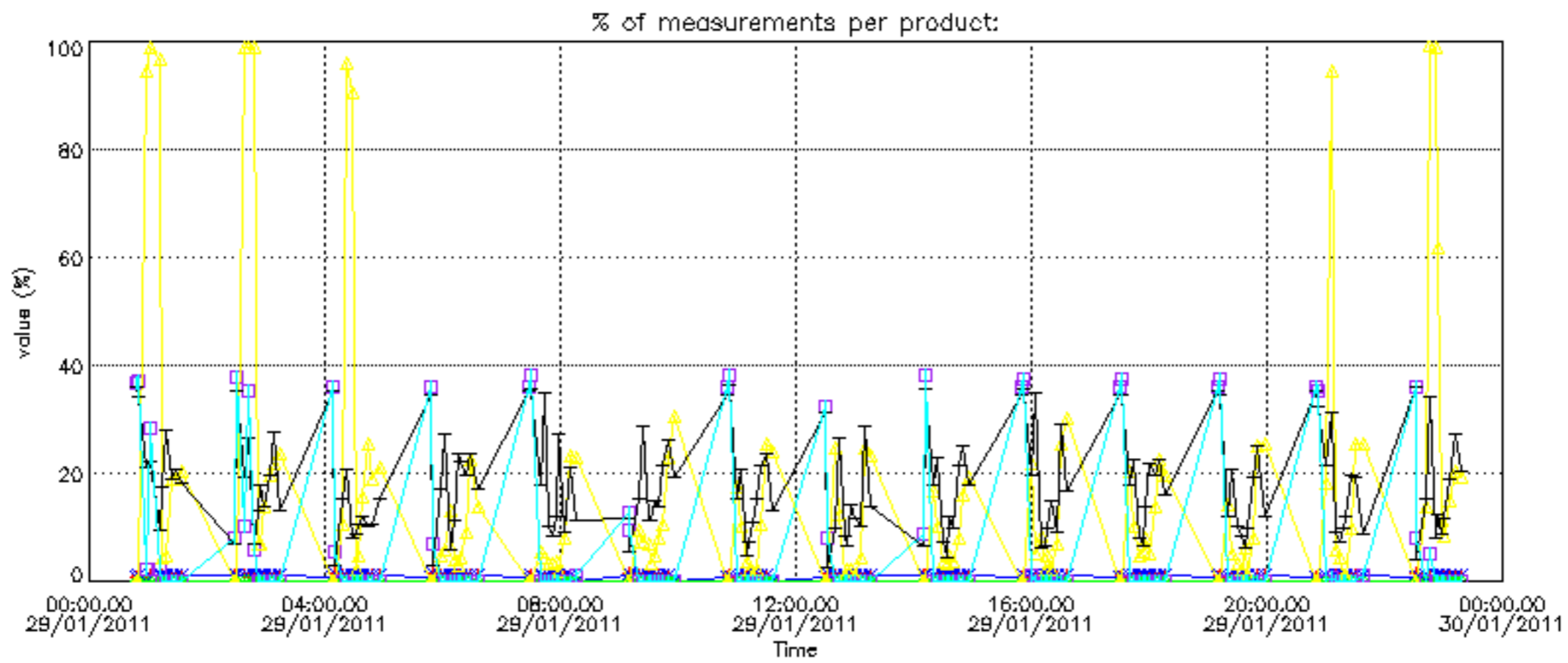
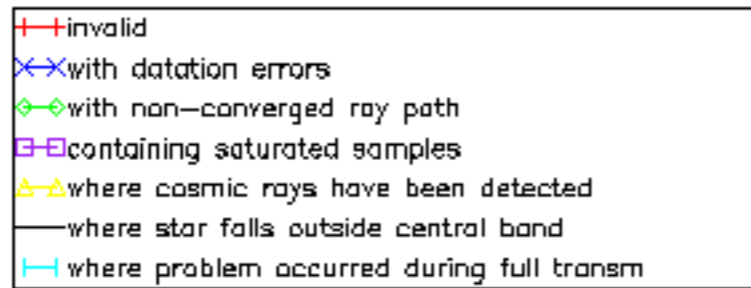


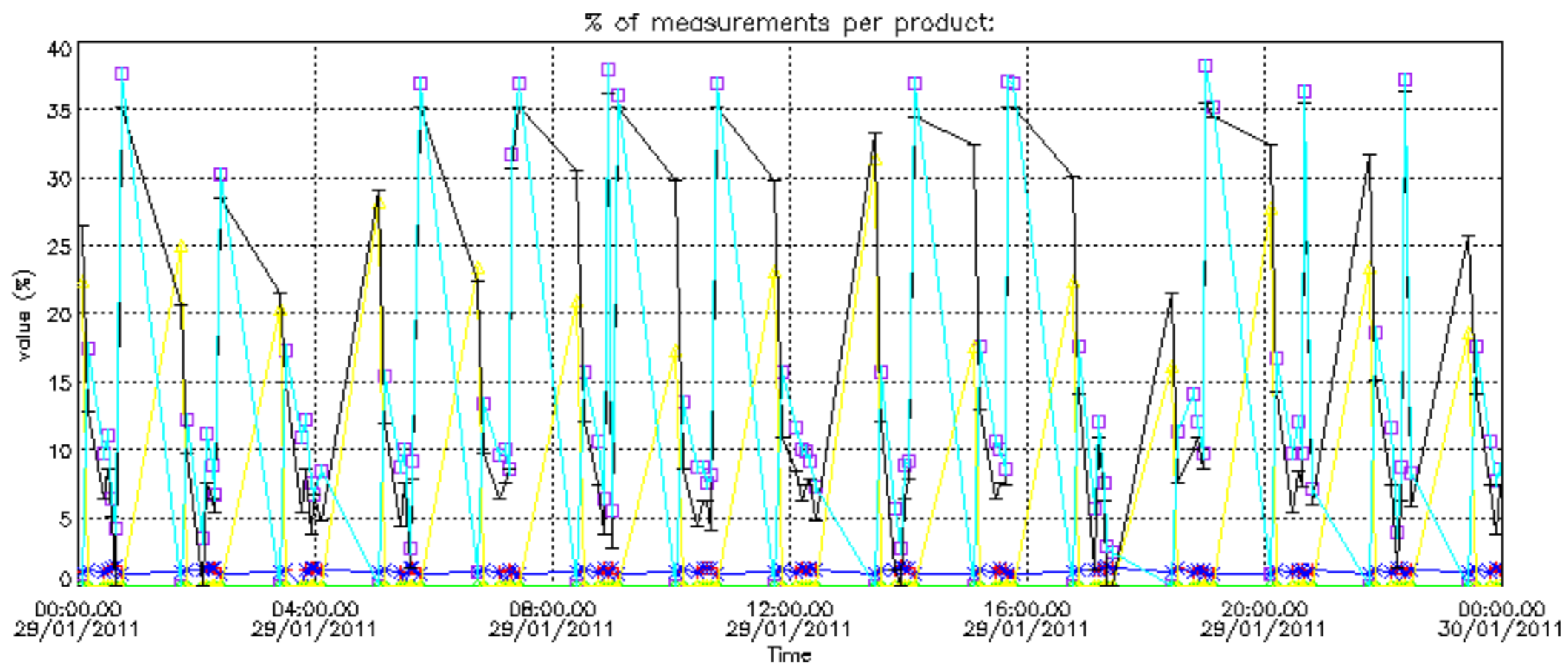
Percentage of flagged data per NO2 profile



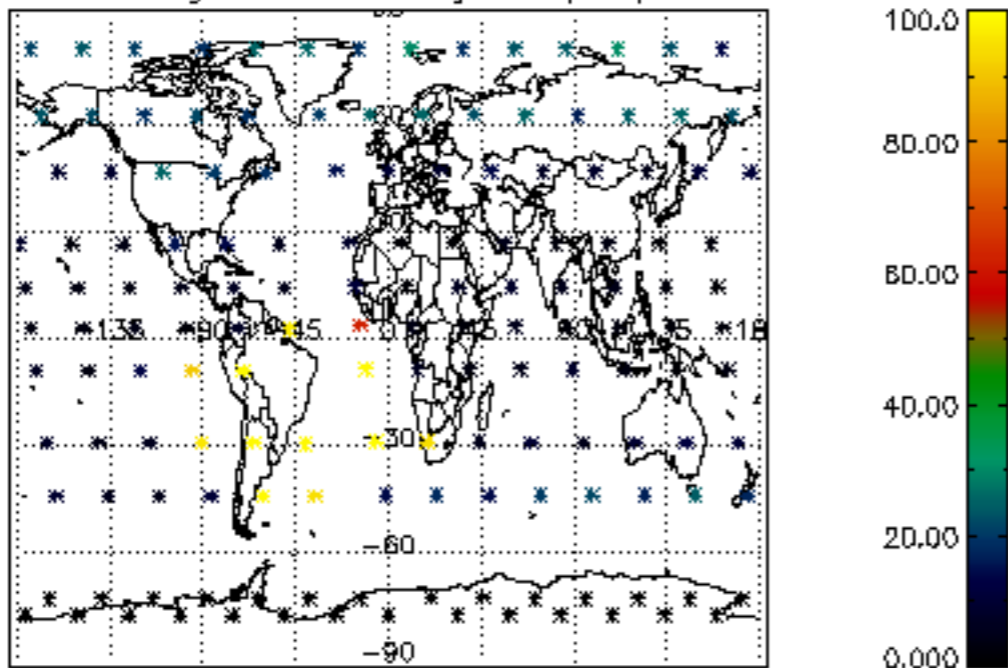
Percentage of flagged data per NO3 profile



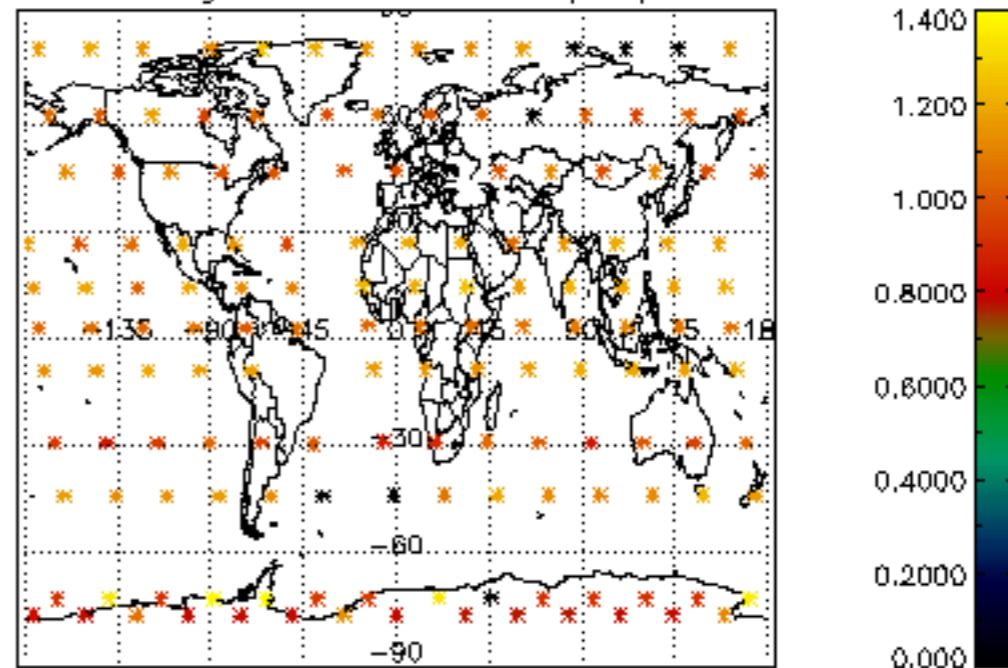




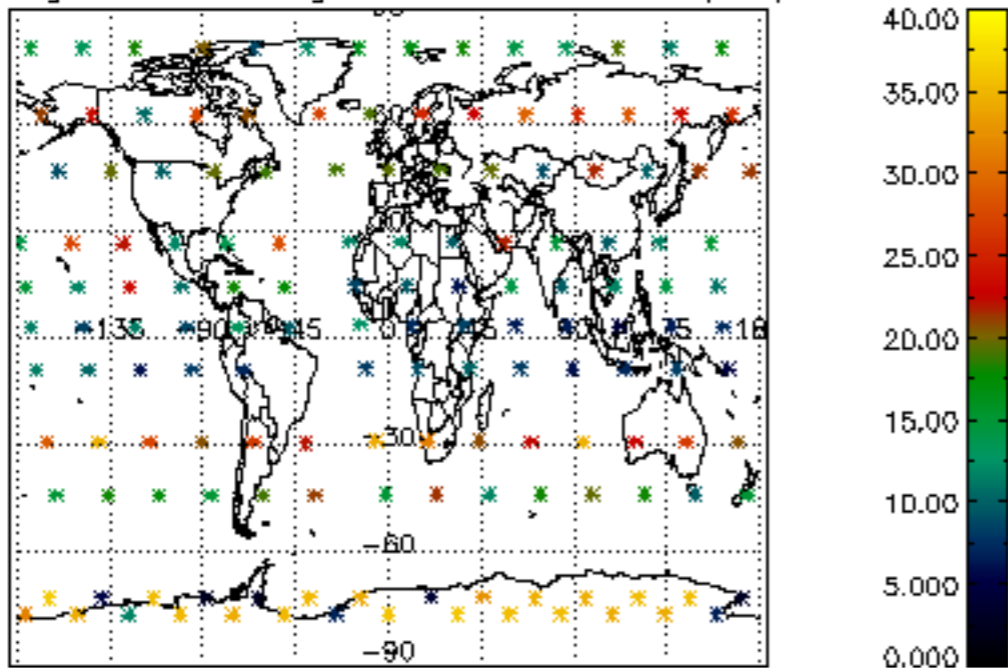
Percentage of cosmic ray hits per profile



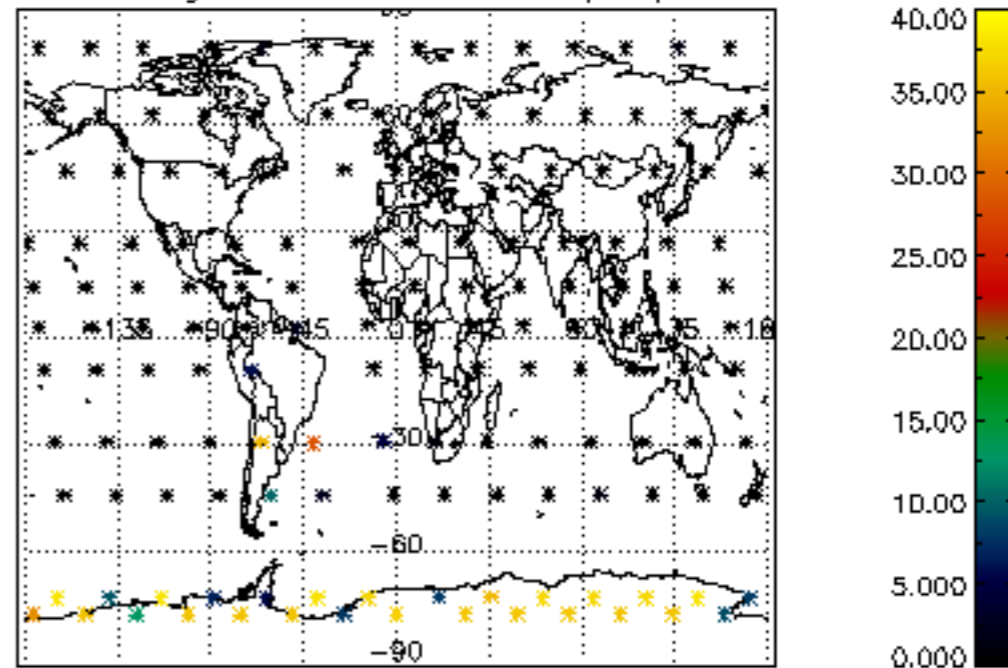
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

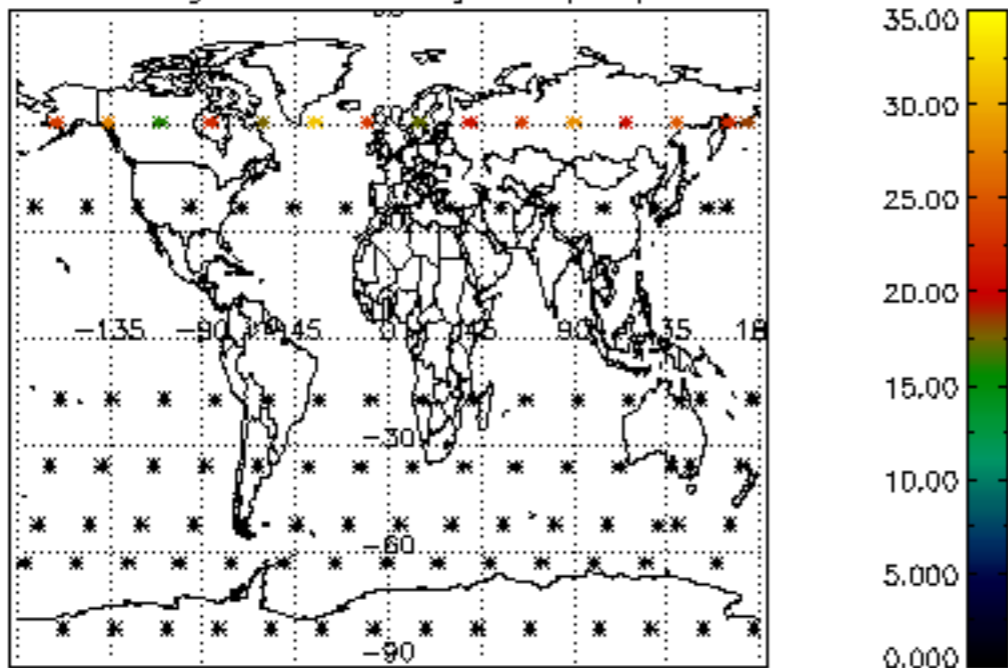


Percentage of saturation errors per profile

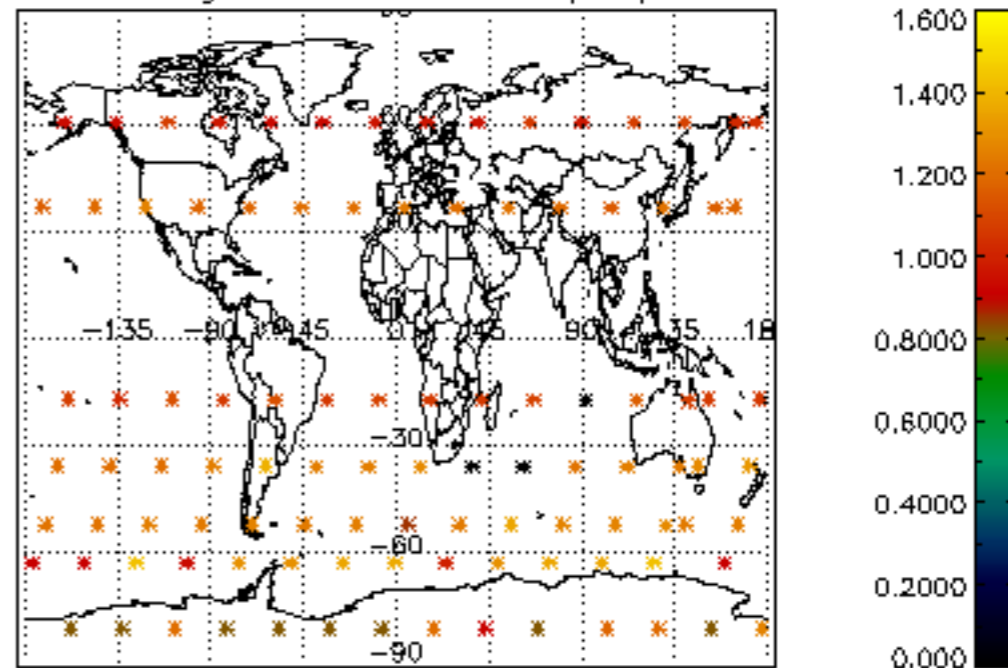




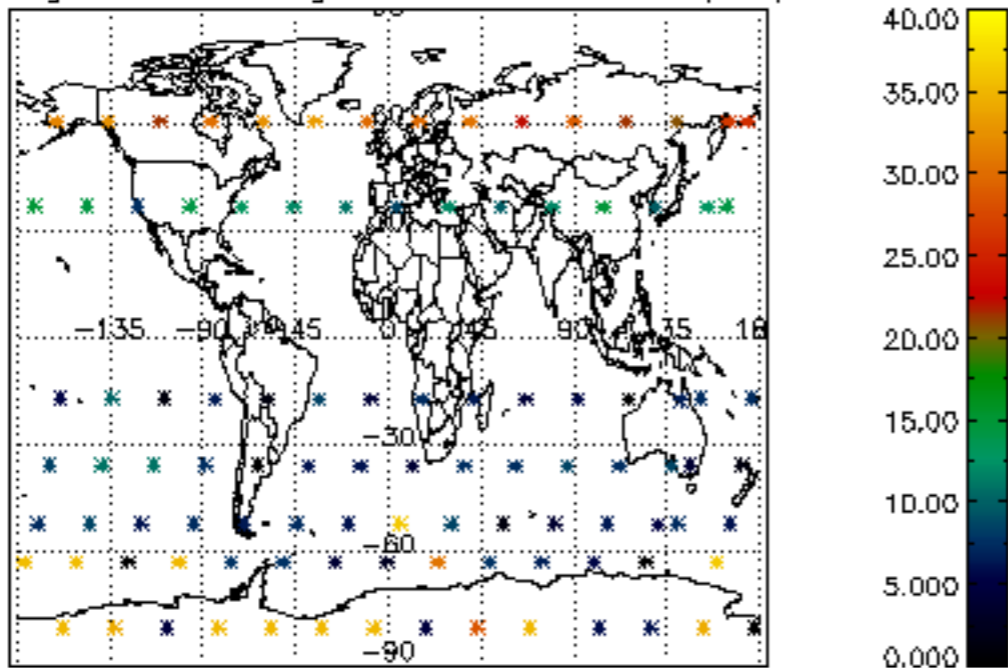
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

