

# GOMOS Level 2 Daily Report

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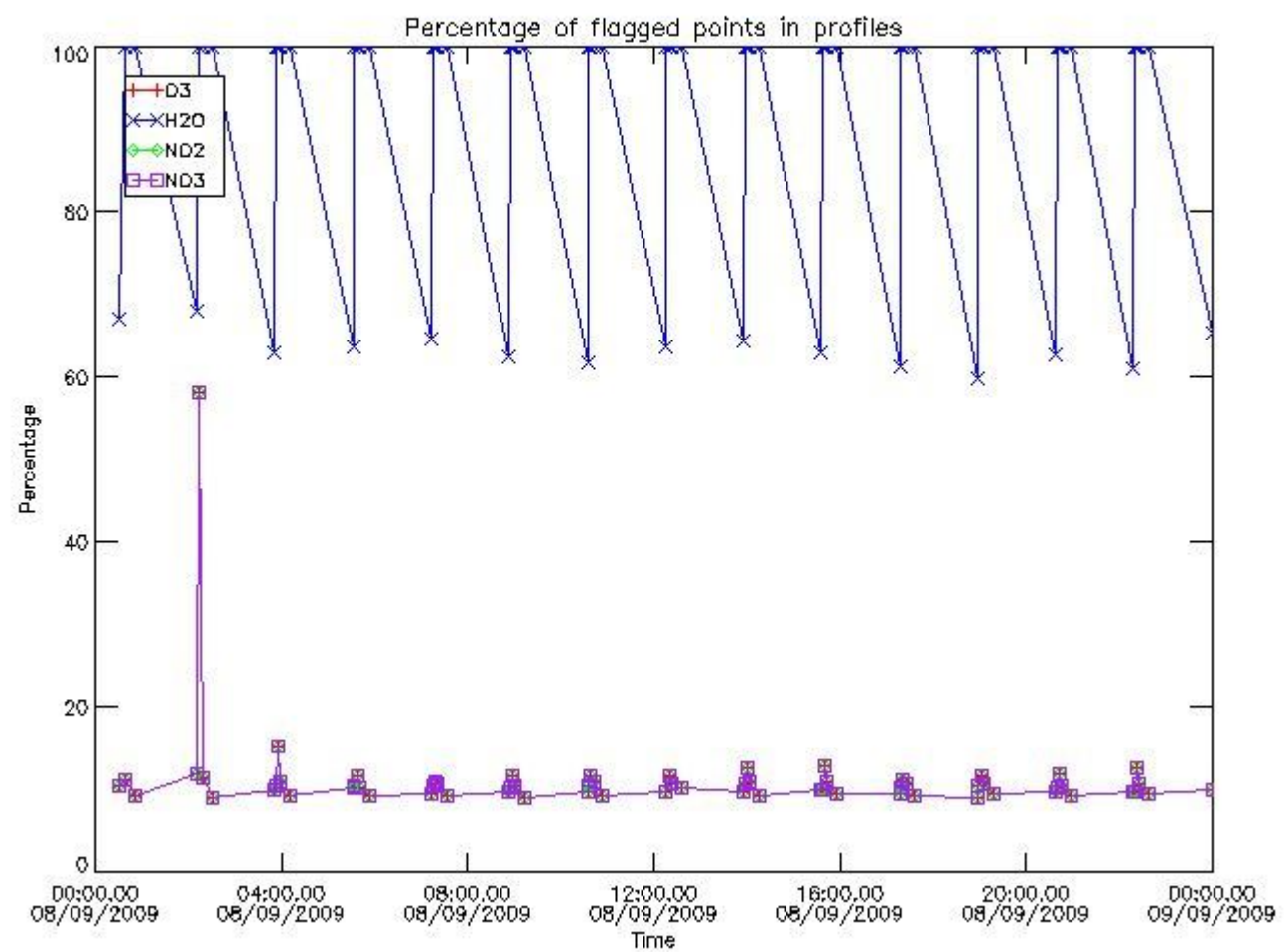


161	GOM_NL__2PRFIN20090908_201651_000000582082_00214_39346_4694.N1	08-SEP-2009 20:16:51	Bright	58.000	42	34Bet Aur	1.9000	10200.	116	39346	No
162	GOM_NL__2PRFIN20090908_201959_000000422082_00214_39346_4695.N1	08-SEP-2009 20:19:59	Bright	42.000	107	37The Aur	2.6490	11000.	84	39346	No
163	GOM_NL__2PRFIN20090908_202128_000000412082_00214_39346_4696.N1	08-SEP-2009 20:21:28	Bright	41.000	24	66Alp Gem	1.5800	10200.	82	39346	No
164	GOM_NL__2PRFIN20090908_202549_000000672082_00214_39346_4697.N1	08-SEP-2009 20:25:49	Twilight	66.500	151	13Mu Gem	2.8900	3000.0	133	39346	No
165	GOM_NL__2PRFIN20090908_202744_000000572082_00214_39346_4698.N1	08-SEP-2009 20:27:44	Twilight	57.000	44	24Gam Gem	1.9280	11000.	114	39346	No
166	GOM_NL__2PRFIN20090908_203755_000000532082_00214_39346_4699.N1	08-SEP-2009 20:37:55	Dark	52.500	1	9Alp CMa	-1.4400	11000.	105	39346	No
167	GOM_NL__2PRFIN20090908_203928_000000512082_00214_39346_4700.N1	08-SEP-2009 20:39:28	Dark	50.500	47	2Bet CMa	1.9760	28000.	101	39346	No
168	GOM_NL__2PRFIN20090908_204230_000000442082_00214_39346_4701.N1	08-SEP-2009 20:42:30	Dark	43.500	177	1Zet CMa	3.0220	26000.	87	39346	No
169	GOM_NL__2PRFIN20090908_204544_000000492082_00214_39346_4702.N1	08-SEP-2009 20:45:44	Dark	49.000	108	Alp Col	2.6520	15200.	98	39346	No
170	GOM_NL__2PRFIN20090908_205755_000000552082_00215_39347_4711.N1	08-SEP-2009 20:57:55	Dark	55.000	157	The1Eri	2.9060	9300.0	110	39347	No
171	GOM_NL__2PRFIN20090908_210438_000000482082_00215_39347_4712.N1	08-SEP-2009 21:04:38	Straylight	48.000	84	Alp Phe	2.3970	4500.0	96	39347	No
172	GOM_NL__2PRFIN20090908_212420_000000422082_00215_39347_4713.N1	08-SEP-2009 21:24:20	Bright	42.000	90	54Alp Peg	2.4870	11000.	84	39347	No
173	GOM_NL__2PRFIN20090908_212834_000000582082_00215_39347_4714.N1	08-SEP-2009 21:28:34	Bright	58.000	164	44Eta Peg	2.9480	5400.0	116	39347	No
174	GOM_NL__2PRFIN20090908_213854_000000422082_00215_39347_4715.N1	08-SEP-2009 21:38:54	Bright	42.000	74	11Bet Cas	2.2680	6600.0	84	39347	No
175	GOM_NL__2PRFIN20090908_214052_000000442082_00215_39347_4716.N1	08-SEP-2009 21:40:52	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	39347	No
176	GOM_NL__2PRFIN20090908_215726_000000492082_00215_39347_4717.N1	08-SEP-2009 21:57:26	Bright	49.000	42	34Bet Aur	1.9000	10200.	98	39347	No
177	GOM_NL__2PRFIN20090908_220034_000000422082_00215_39347_4718.N1	08-SEP-2009 22:00:34	Bright	42.000	107	37The Aur	2.6490	11000.	84	39347	No
178	GOM_NL__2PRFIN20090908_220204_000000572082_00215_39347_4719.N1	08-SEP-2009 22:02:04	Bright	56.500	24	66Alp Gem	1.5800	10200.	113	39347	No
179	GOM_NL__2PRFIN20090908_220625_000000652082_00215_39347_4720.N1	08-SEP-2009 22:06:25	Twilight	65.000	151	13Mu Gem	2.8900	3000.0	130	39347	No
180	GOM_NL__2PRFIN20090908_220820_000000542082_00215_39347_4721.N1	08-SEP-2009 22:08:20	Twilight	53.500	44	24Gam Gem	1.9280	11000.	107	39347	No
181	GOM_NL__2PRFIN20090908_221831_000000532082_00215_39347_4722.N1	08-SEP-2009 22:18:31	Dark	53.000	1	9Alp CMa	-1.4400	11000.	106	39347	No
182	GOM_NL__2PRFIN20090908_222005_000000532082_00215_39347_4723.N1	08-SEP-2009 22:20:05	Dark	53.000	47	2Bet CMa	1.9760	28000.	106	39347	No
183	GOM_NL__2PRFIN20090908_222307_000000452082_00215_39347_4724.N1	08-SEP-2009 22:23:07	Dark	45.000	177	1Zet CMa	3.0220	26000.	90	39347	No
184	GOM_NL__2PRFIN20090908_222620_000000492082_00215_39347_4725.N1	08-SEP-2009 22:26:20	Dark	48.500	108	Alp Col	2.6520	15200.	97	39347	No
185	GOM_NL__2PRFIN20090908_223832_000000552082_00216_39348_4750.N1	08-SEP-2009 22:38:32	Dark	54.500	157	The1Eri	2.9060	9300.0	109	39348	No
186	GOM_NL__2PRFIN20090908_224515_000000462082_00216_39348_4751.N1	08-SEP-2009 22:45:15	Straylight	45.500	84	Alp Phe	2.3970	4500.0	91	39348	No
187	GOM_NL__2PRFIN20090908_230455_000000622082_00216_39348_4752.N1	08-SEP-2009 23:04:55	Bright	62.000	90	54Alp Peg	2.4870	11000.	124	39348	No
188	GOM_NL__2PRFIN20090908_230909_000000392082_00216_39348_4753.N1	08-SEP-2009 23:09:09	Bright	38.500	164	44Eta Peg	2.9480	5400.0	77	39348	No
189	GOM_NL__2PRFIN20090908_231929_000000402082_00216_39348_4754.N1	08-SEP-2009 23:19:29	Bright	40.000	74	11Bet Cas	2.2680	6600.0	80	39348	No
190	GOM_NL__2PRFIN20090908_232127_000000442082_00216_39348_4755.N1	08-SEP-2009 23:21:27	Bright	44.000	76	27Gam Cas	2.3000	30000.	88	39348	No
191	GOM_NL__2PRFIN20090908_233802_000000502082_00216_39348_4756.N1	08-SEP-2009 23:38:02	Bright	49.500	42	34Bet Aur	1.9000	10200.	99	39348	No
192	GOM_NL__2PRFIN20090908_234110_000000352082_00216_39348_4757.N1	08-SEP-2009 23:41:10	Twilight	35.000	107	37The Aur	2.6490	11000.	70	39348	No
193	GOM_NL__2PRFIN20090908_234240_000000582082_00216_39348_4758.N1	08-SEP-2009 23:42:40	Bright	58.000	24	66Alp Gem	1.5800	10200.	116	39348	No
194	GOM_NL__2PRFIN20090908_234702_000000712082_00216_39348_4759.N1	08-SEP-2009 23:47:02	Twilight	70.500	151	13Mu Gem	2.8900	3000.0	141	39348	No
195	GOM_NL__2PRFIN20090908_234856_000000572082_00216_39348_4760.N1	08-SEP-2009 23:48:56	Twilight	57.000	44	24Gam Gem	1.9280	11000.	114	39348	No
196	GOM_NL__2PRFIN20090908_235908_000000512082_00216_39348_4761.N1	08-SEP-2009 23:59:08	Dark	51.000	1	9Alp CMa	-1.4400	11000.	102	39348	No

### *3. Quality information per product*

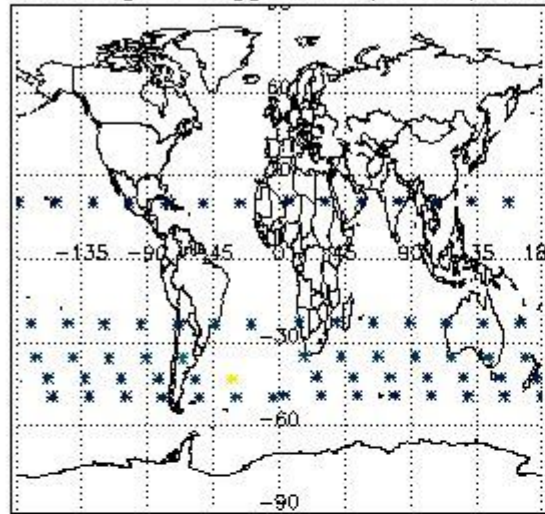
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

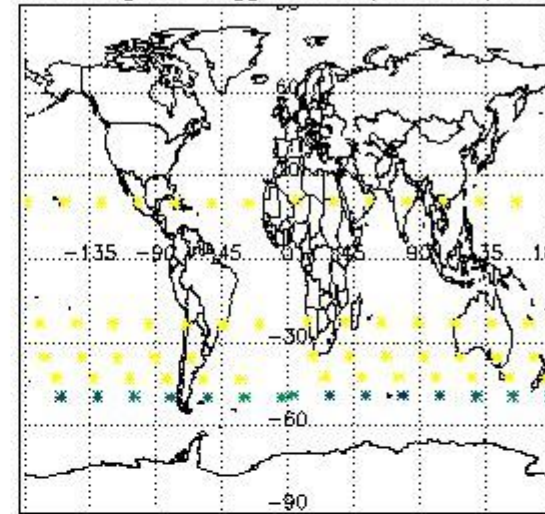


*3.2 Plot quality information per product (world map)*

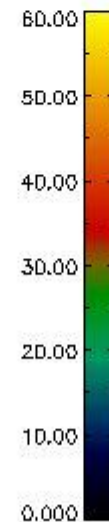
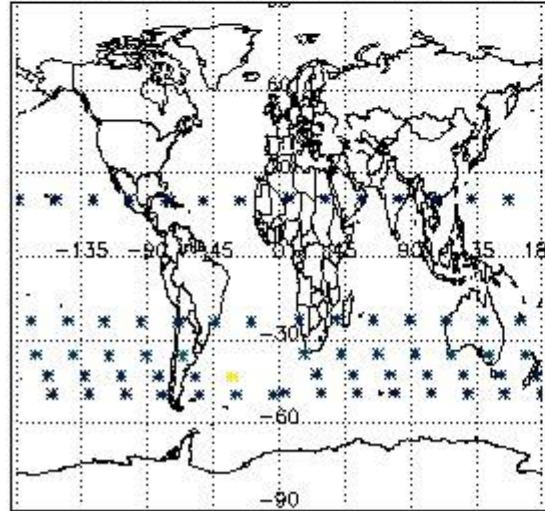
Percentage of flagged data per O3 profile



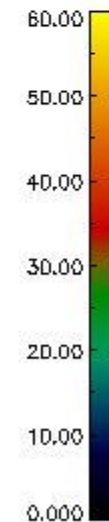
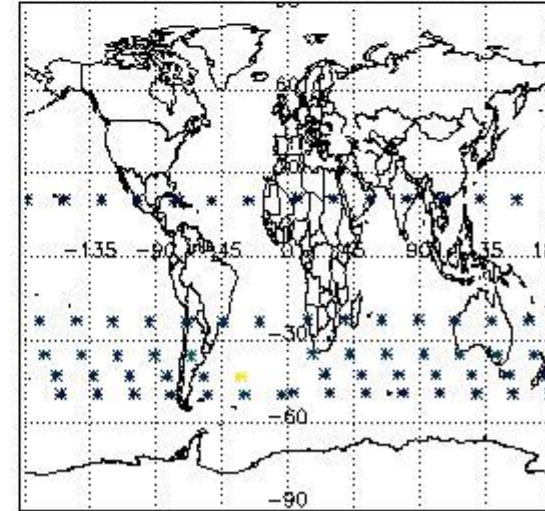
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

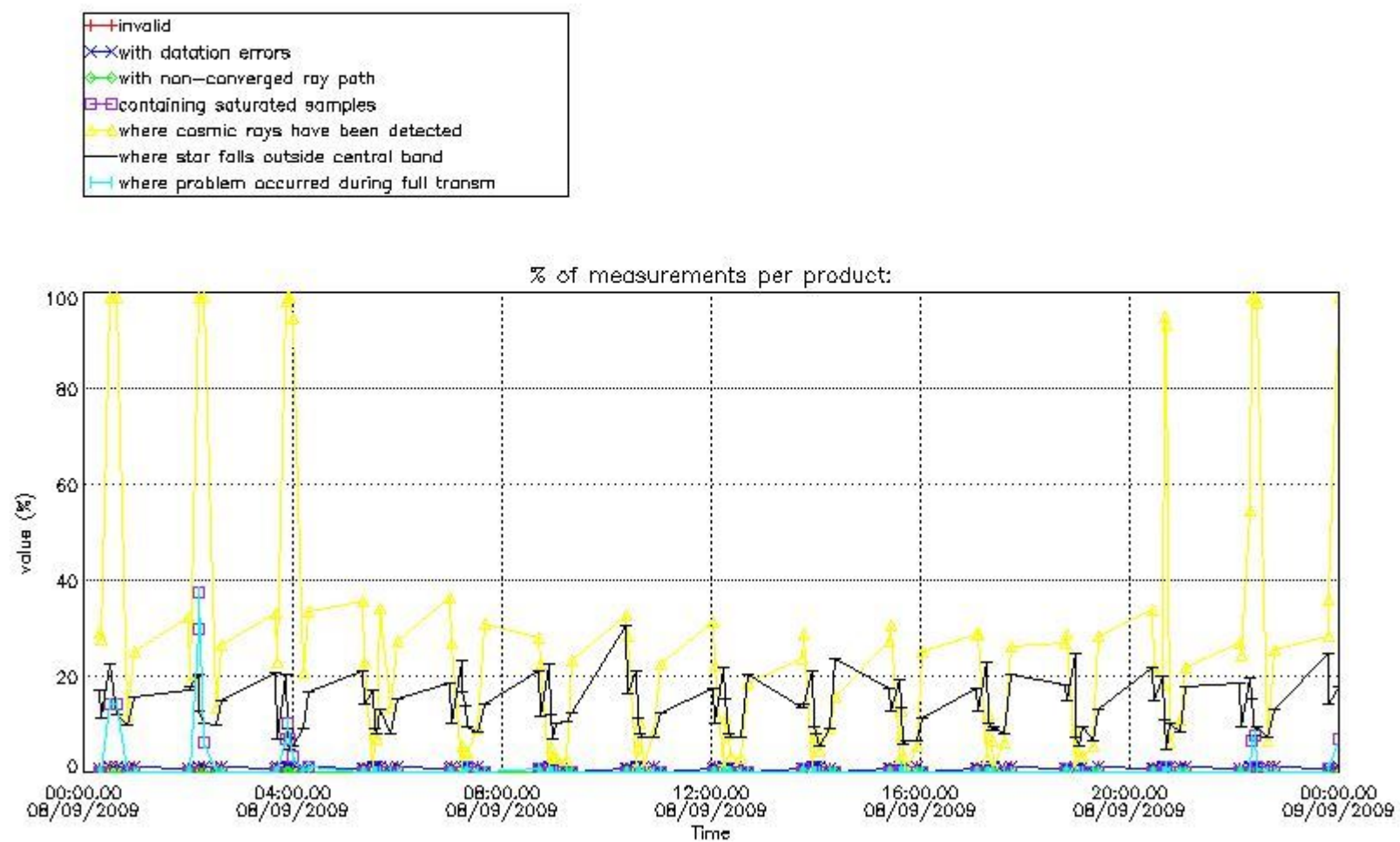


#### 4. Level 1 quality information per product

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.

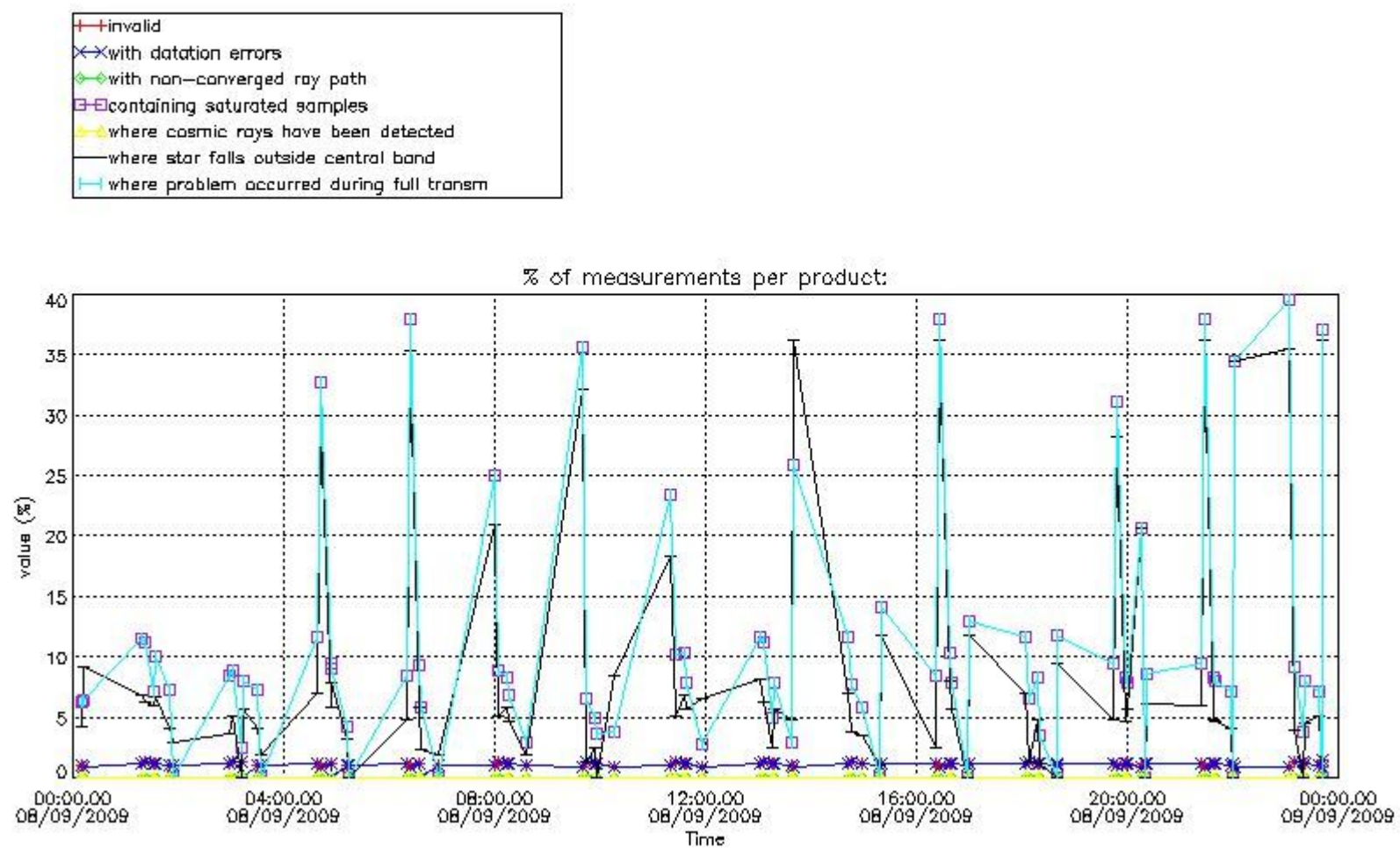
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



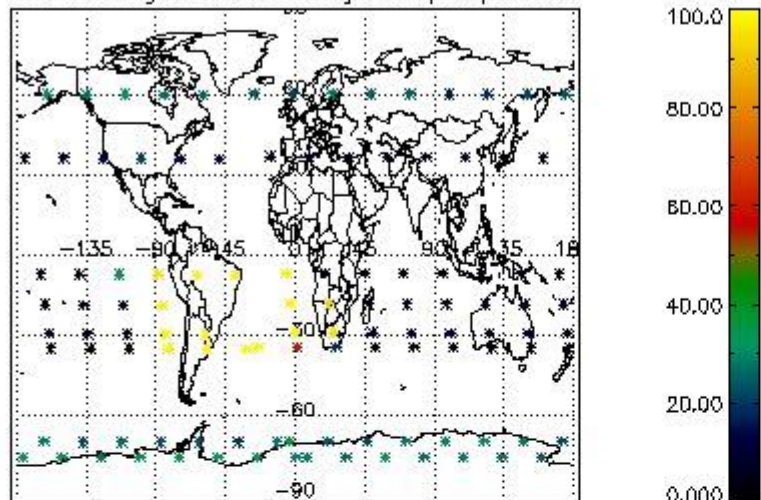
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



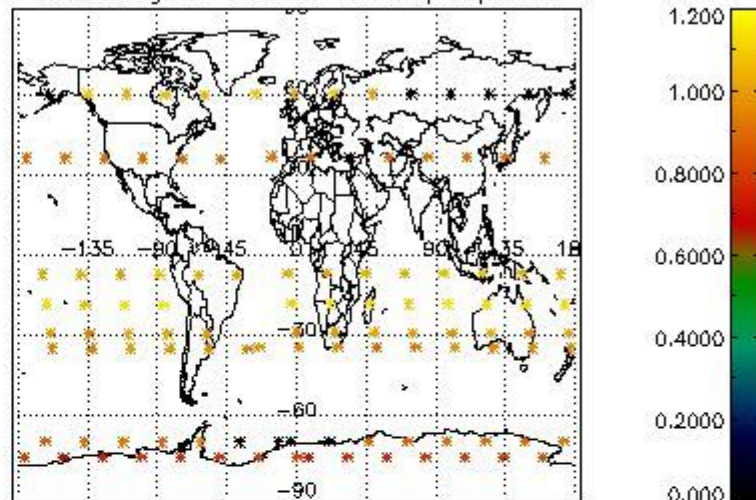


*4.2 Plot quality information per product coming from level 1b processing (world map)*  
*4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes*

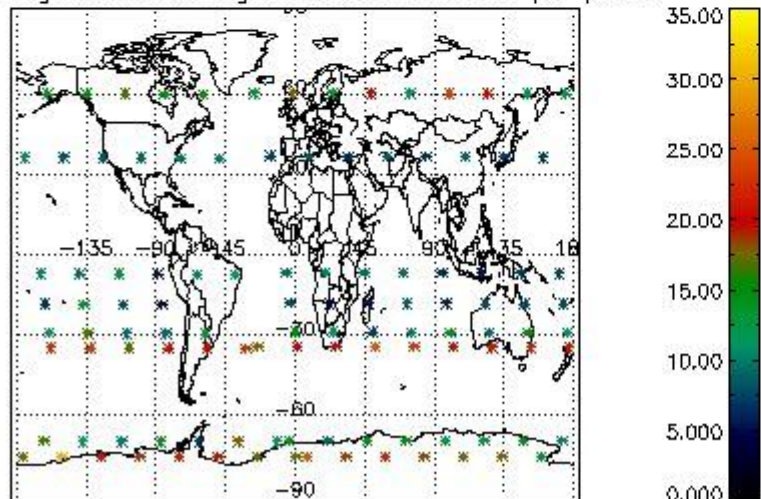
Percentage of cosmic ray hits per profile



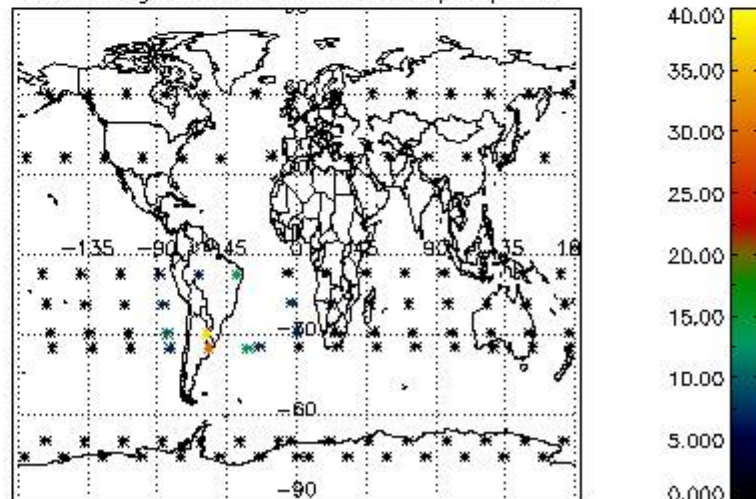
Percentage of datation errors per profile



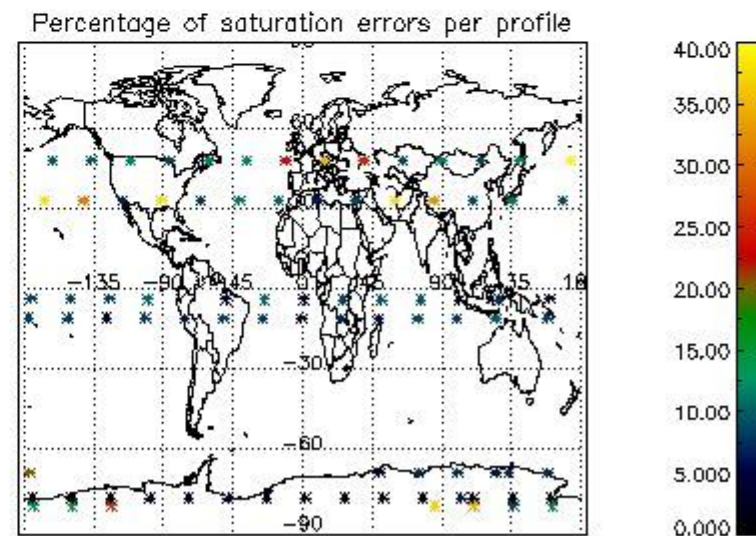
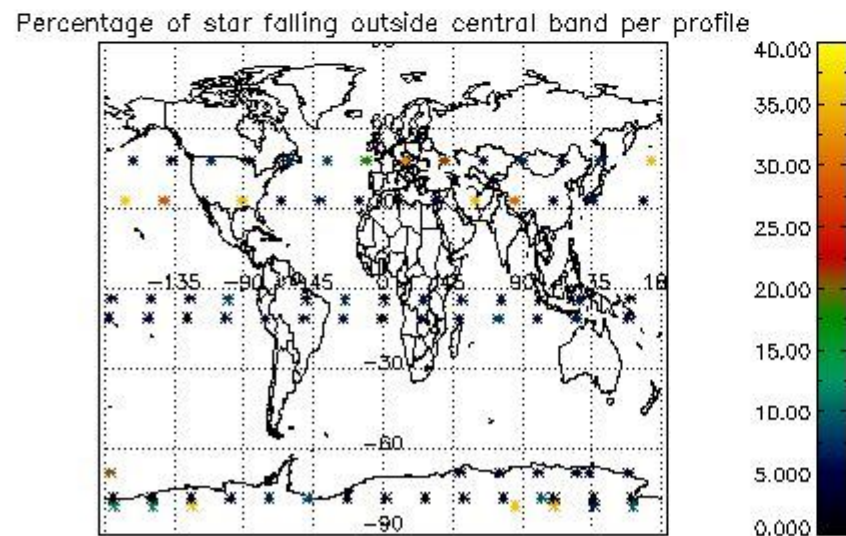
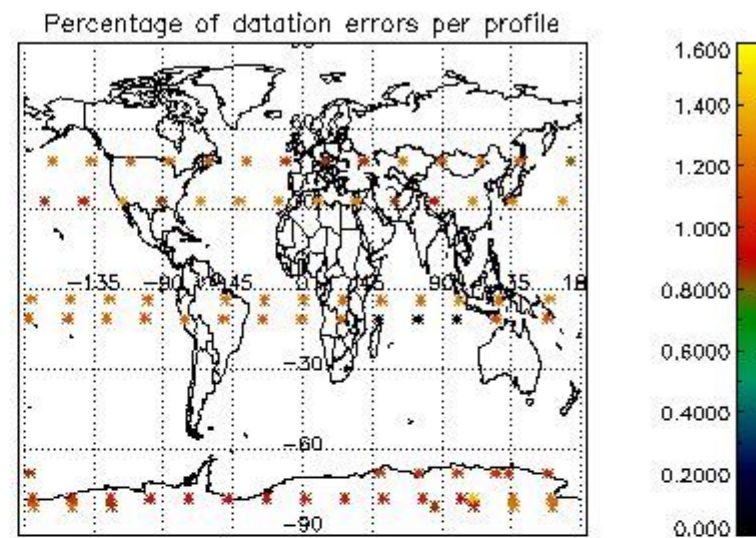
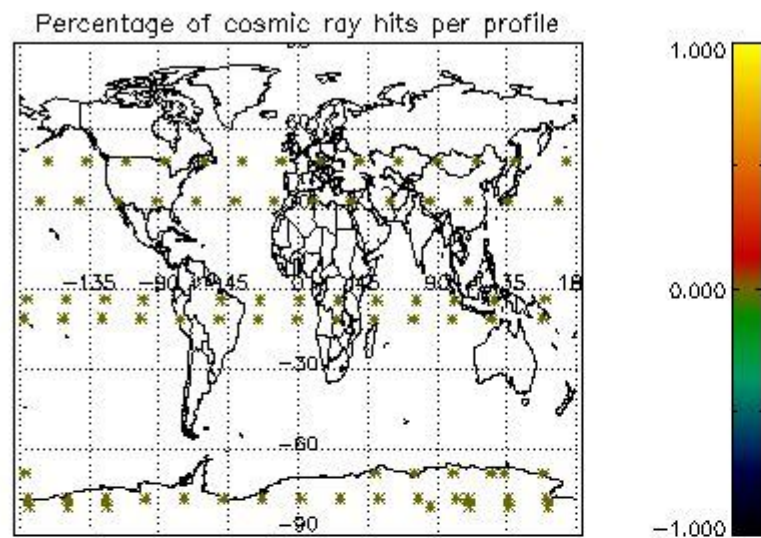
Percentage of star falling outside central band per profile



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

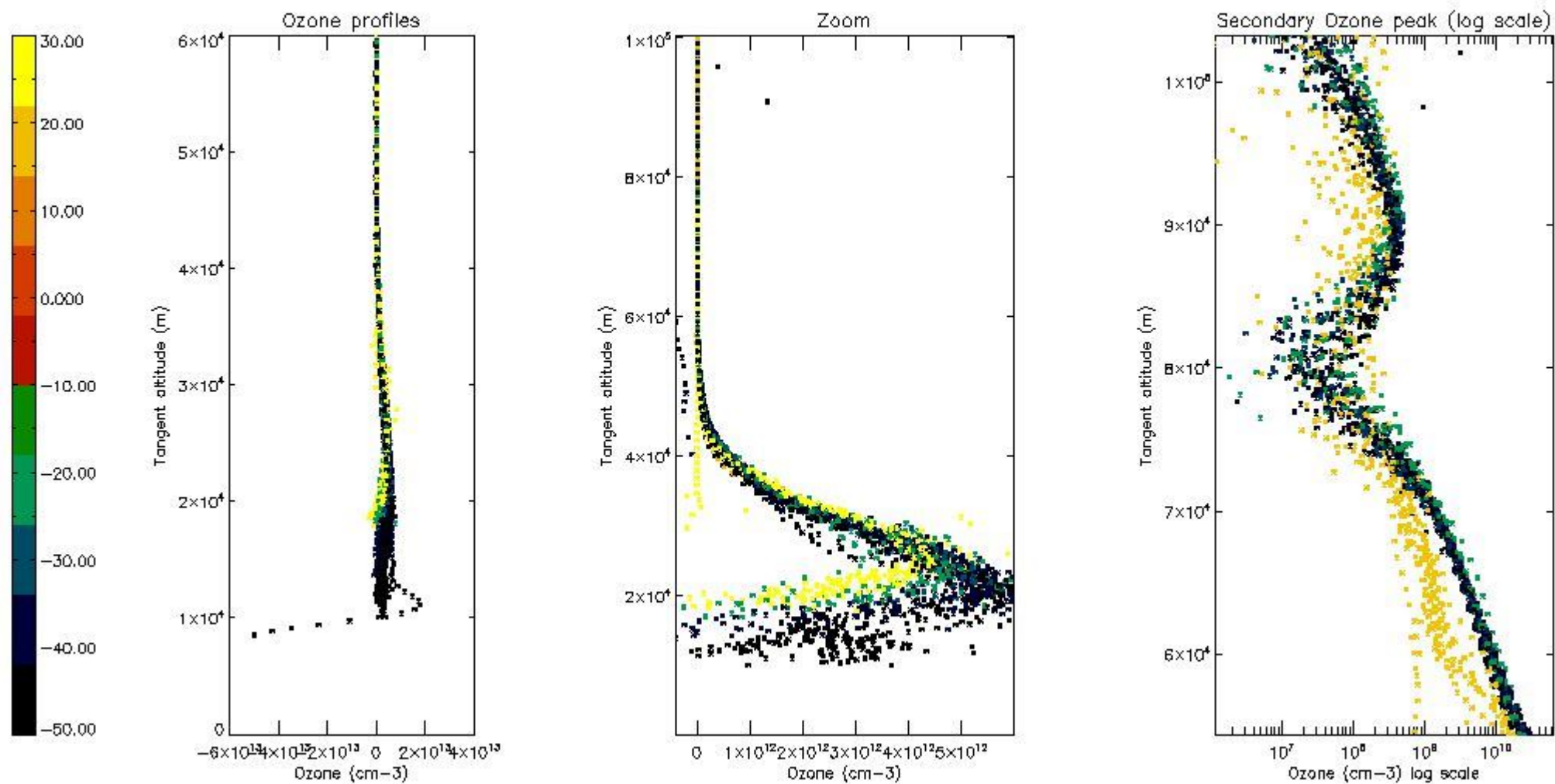
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	35
STD < 20	21

STD < 10	19
STD < 5	12

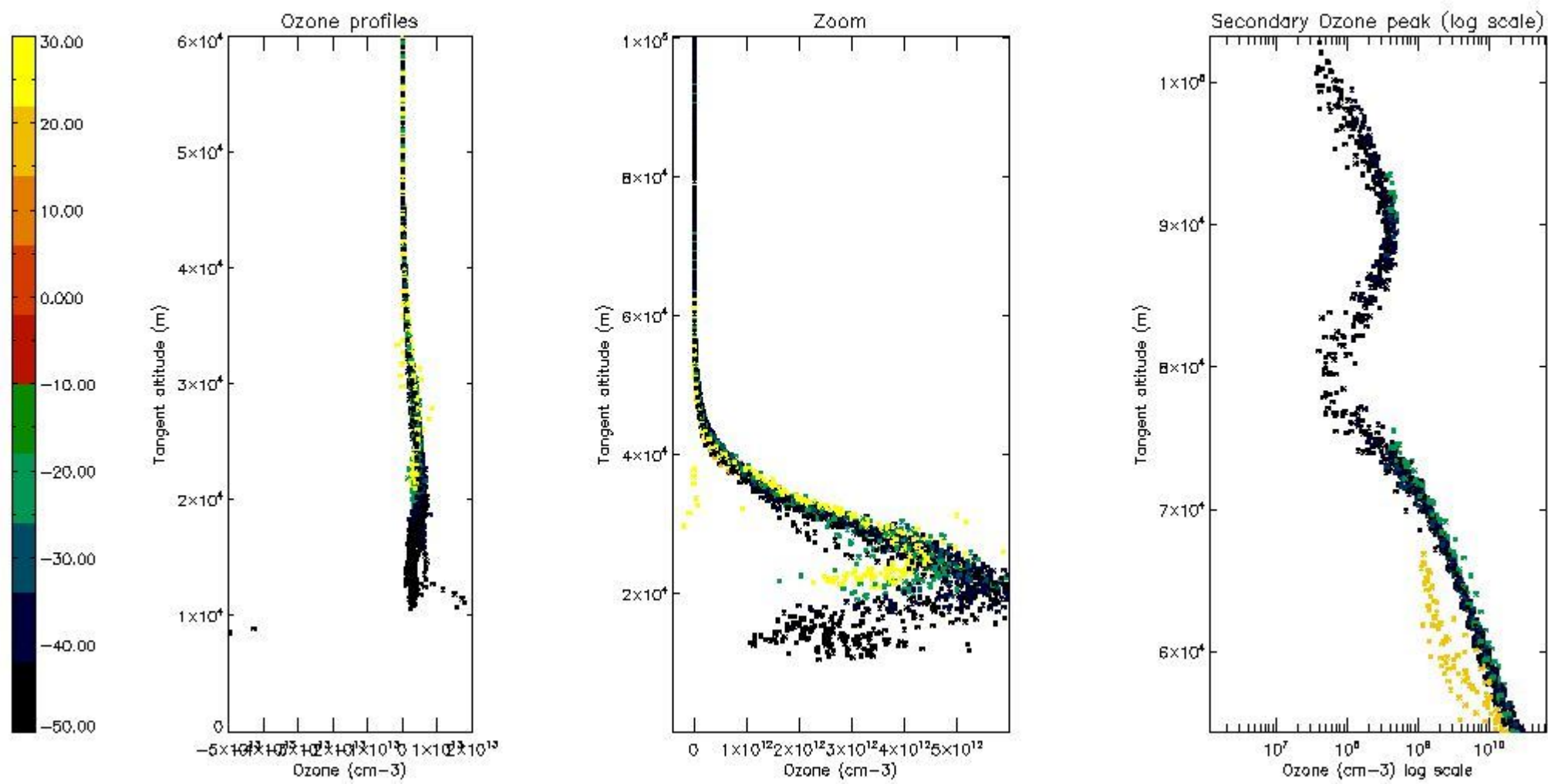
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



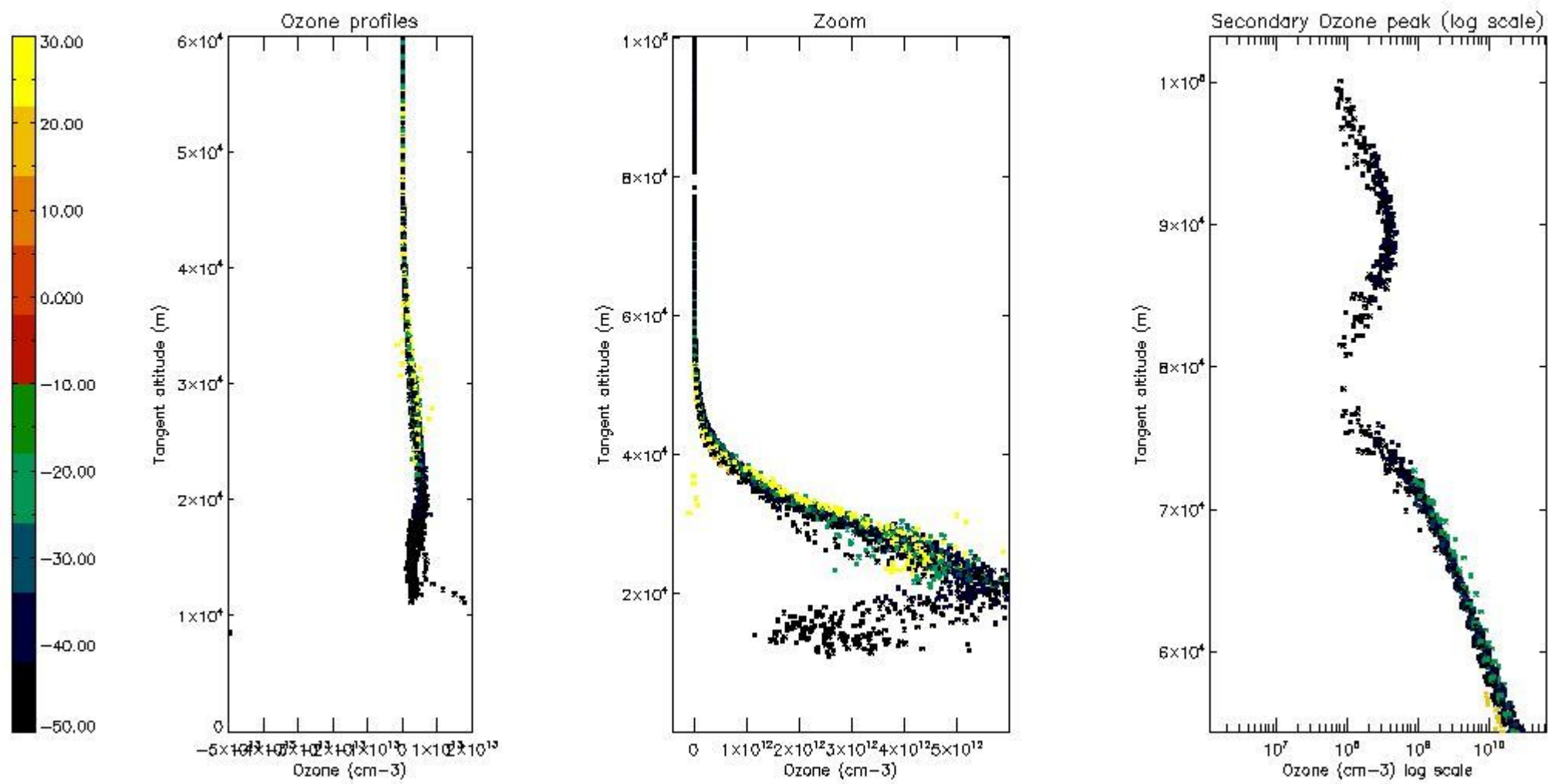
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



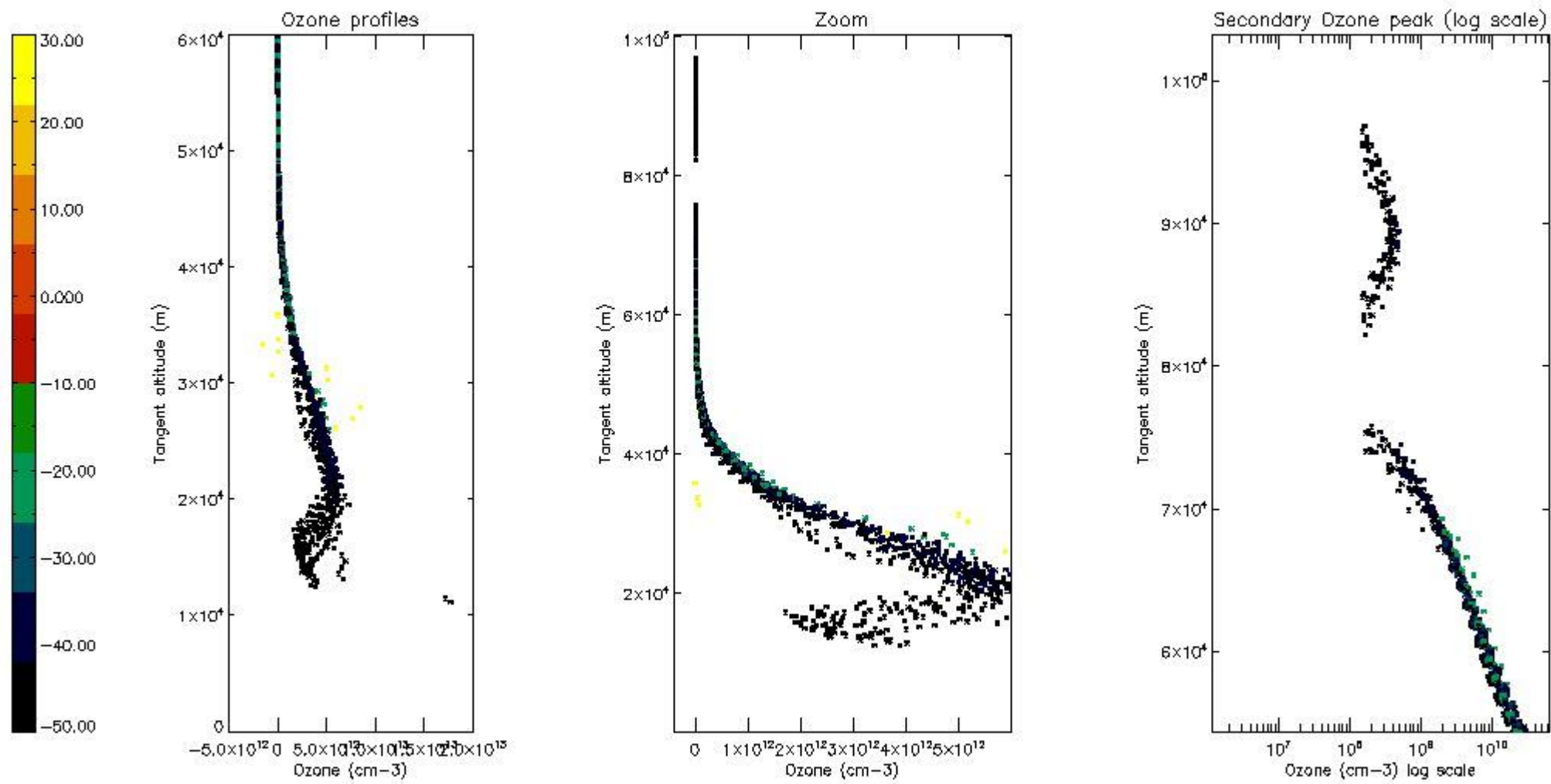
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



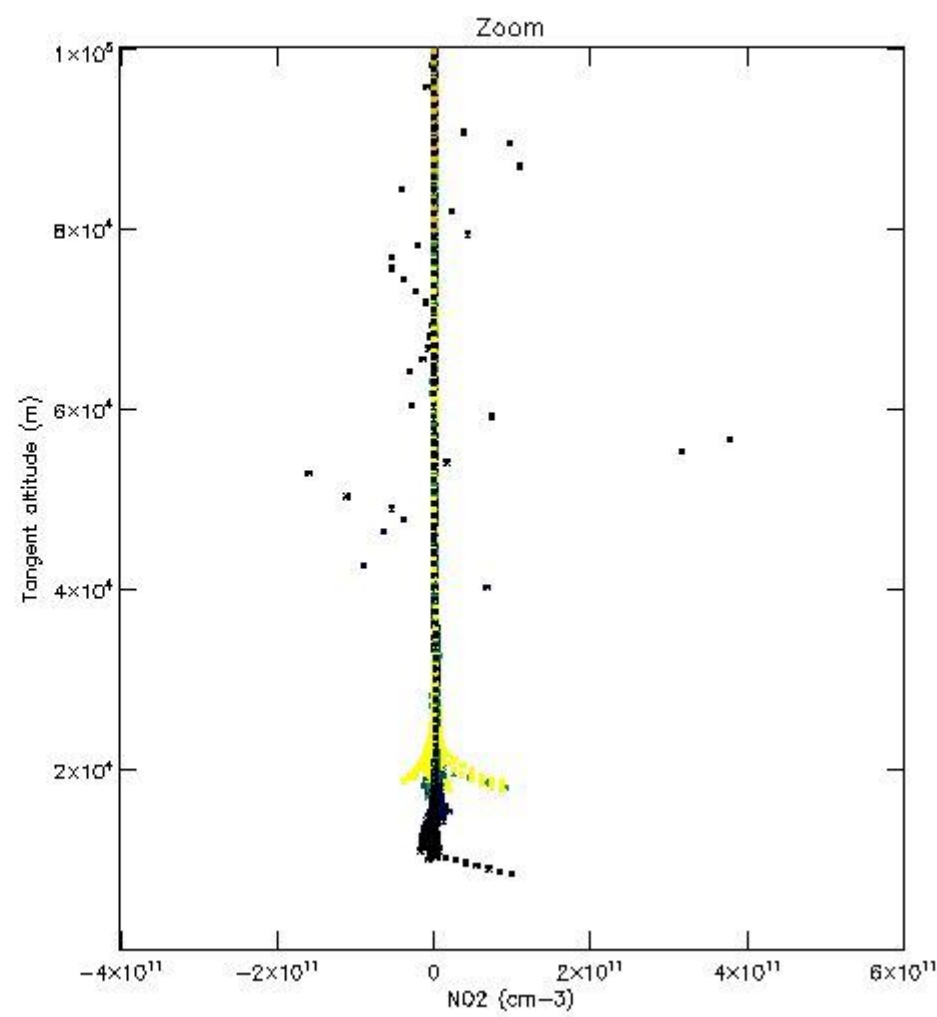
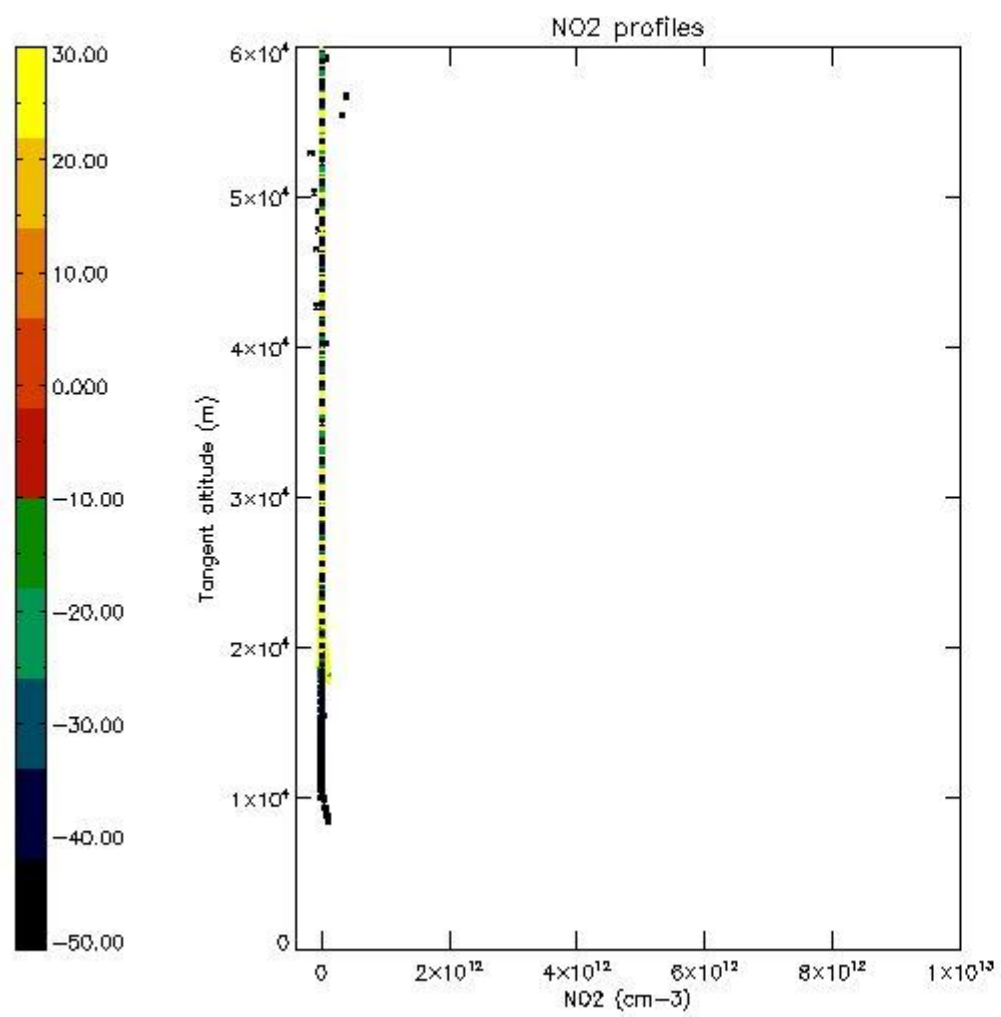
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

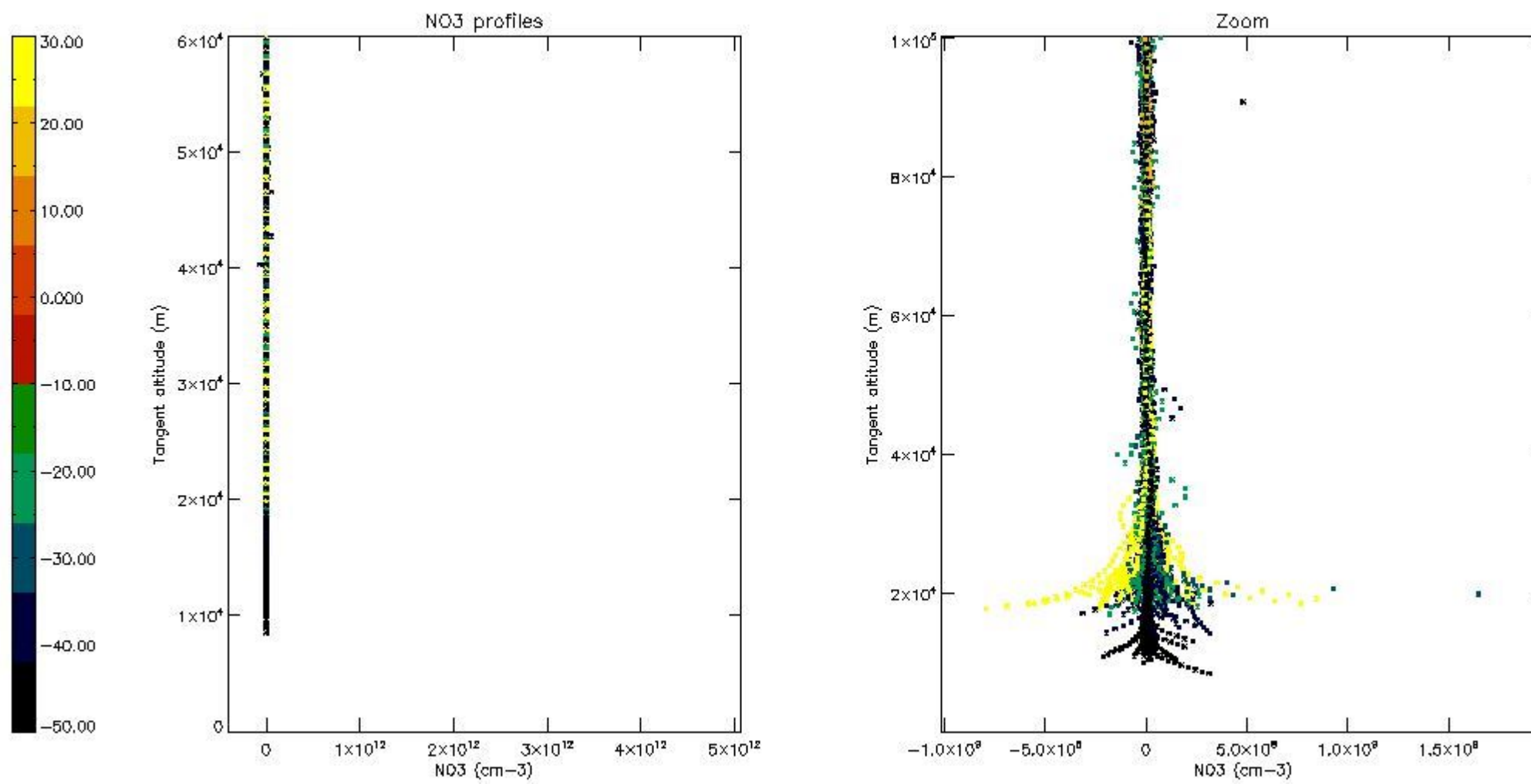
The colorbar represents the latitude.



*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	08-SEP-2009 00:09:42
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	08-SEP-2009 00:09:42
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	08-SEP-2009 00:09:42

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## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [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](#)

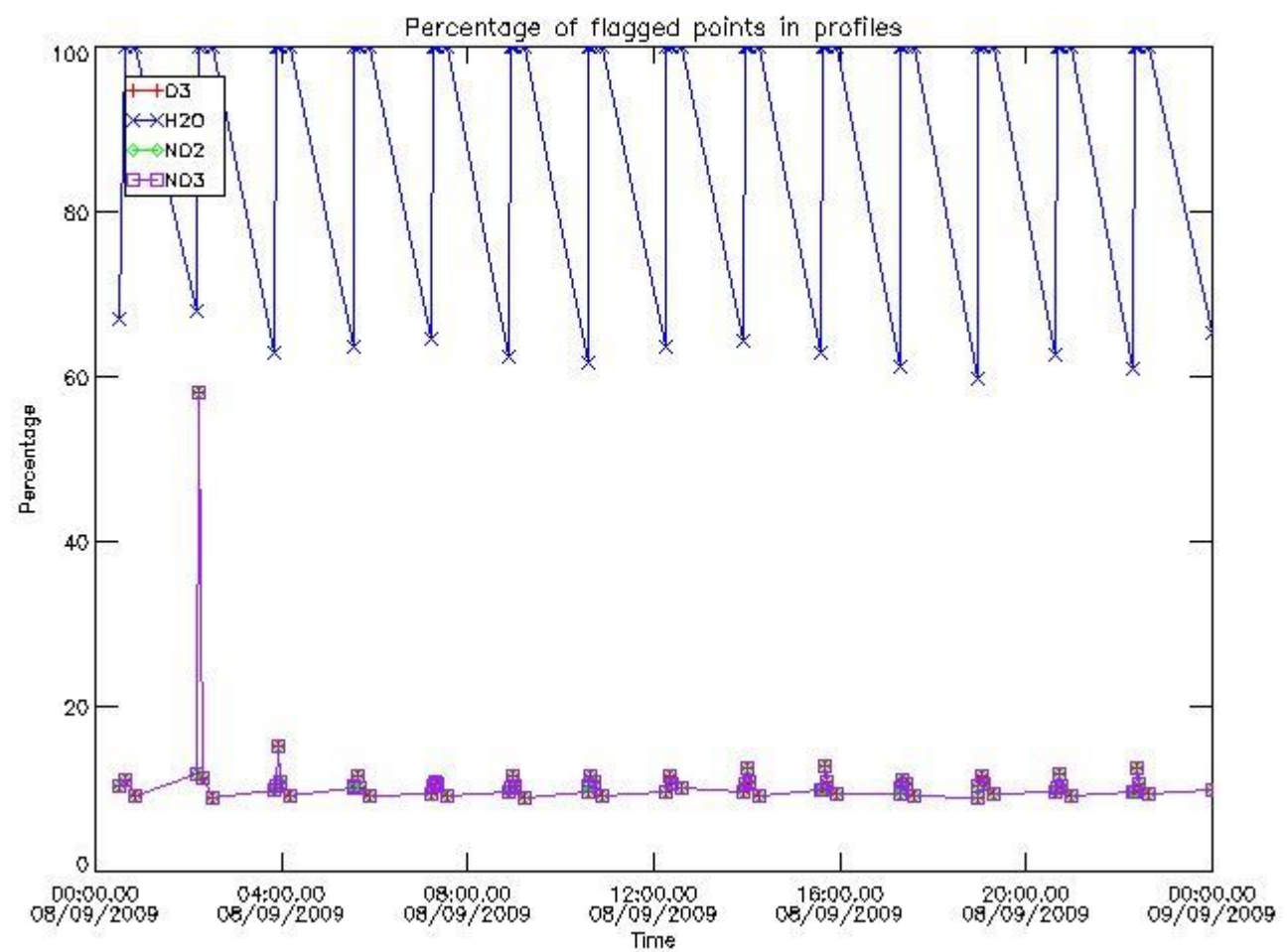
### [6. Auxiliary Data Files used for the production reported in section 2](#)





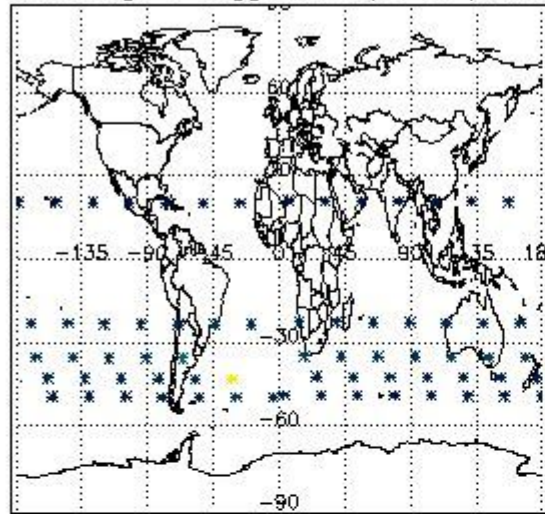




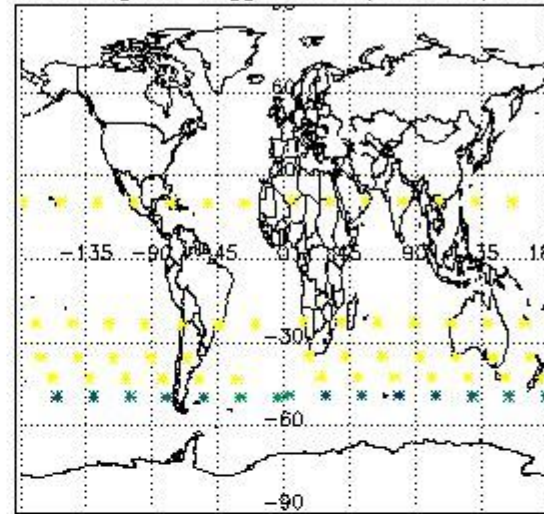


3.2 Plot quality information per product (world map)

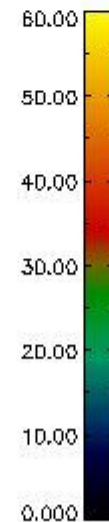
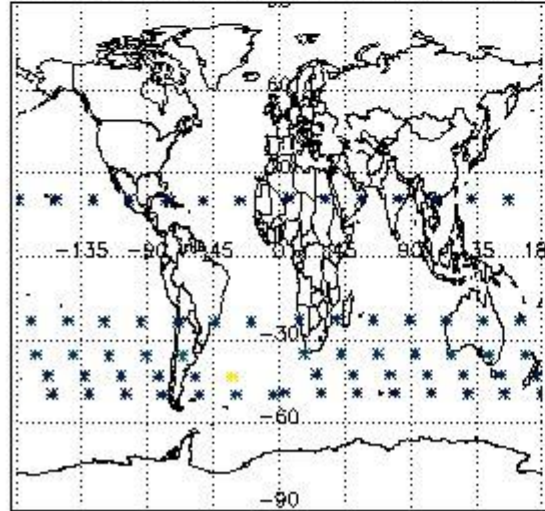
Percentage of flagged data per O3 profile



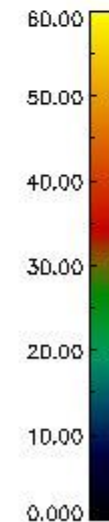
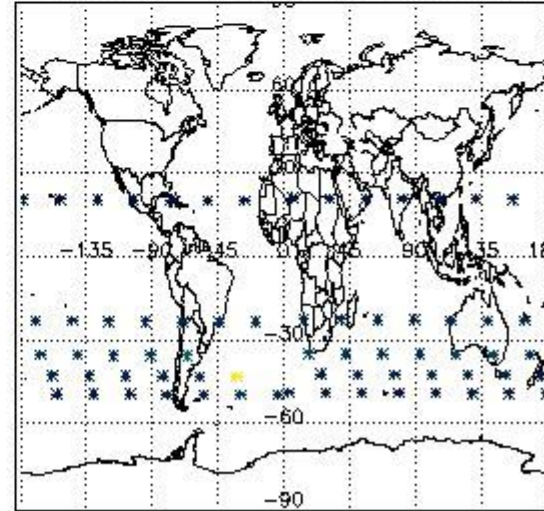
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



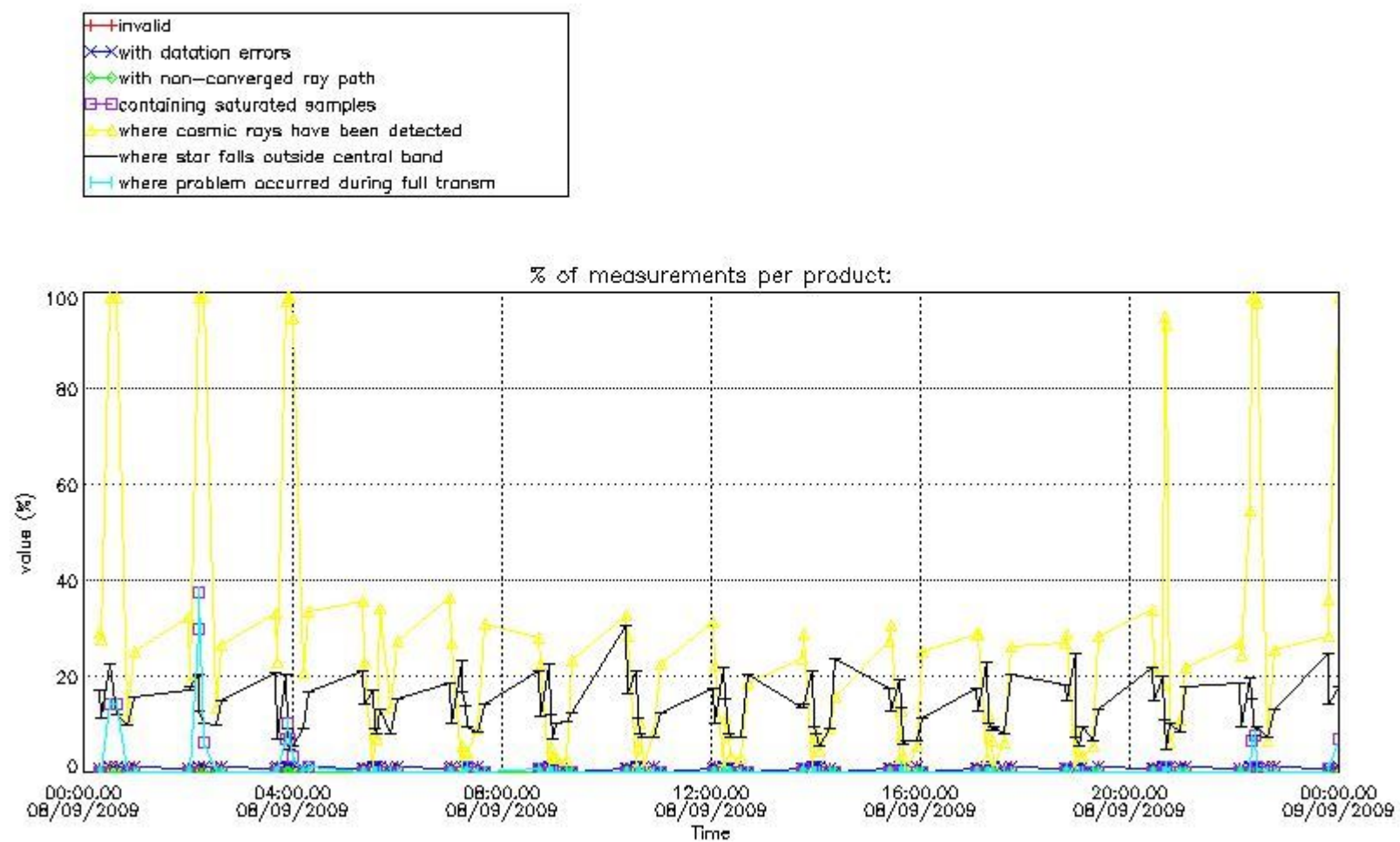
#### 4. Level 1 quality information per product

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.

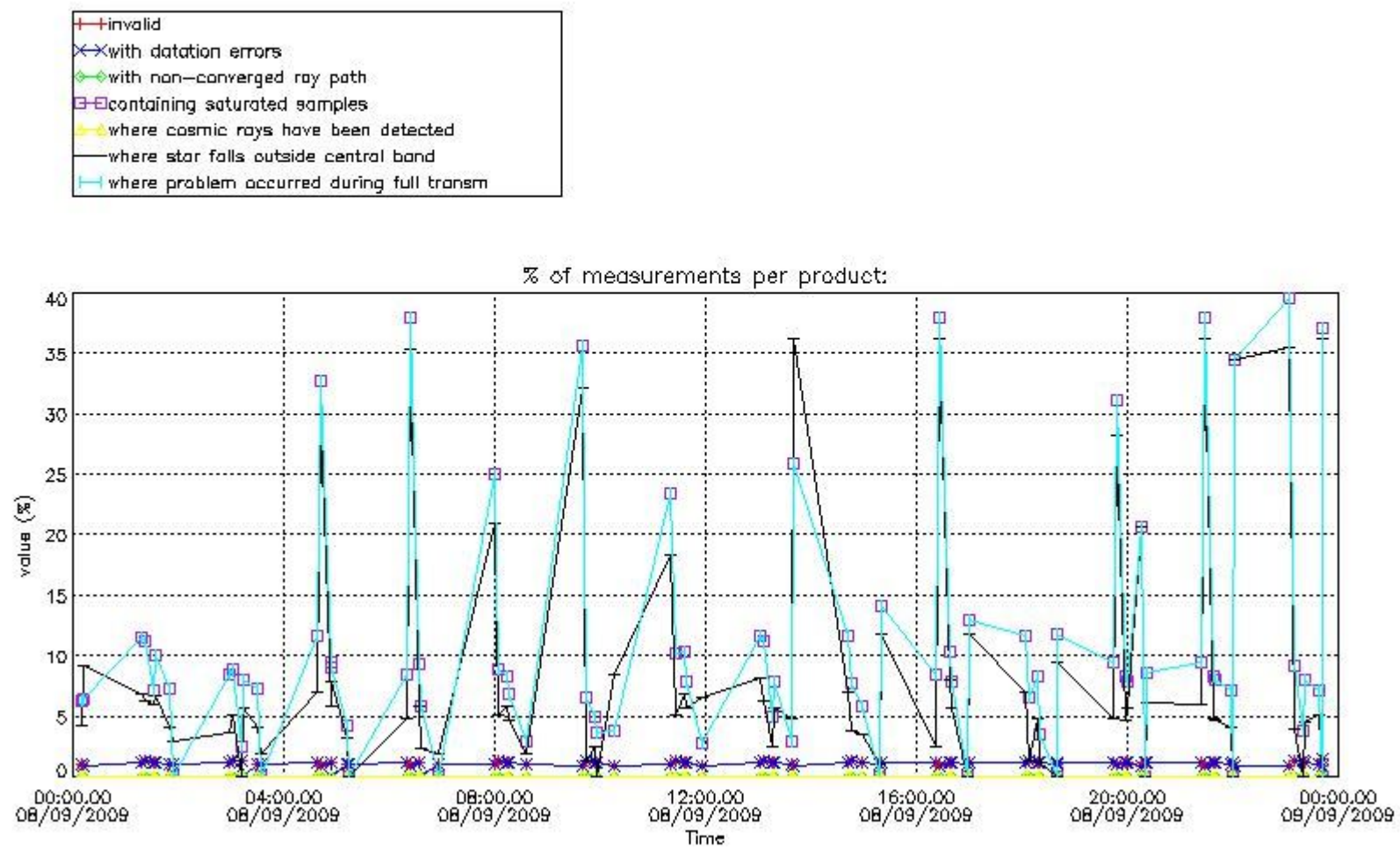
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





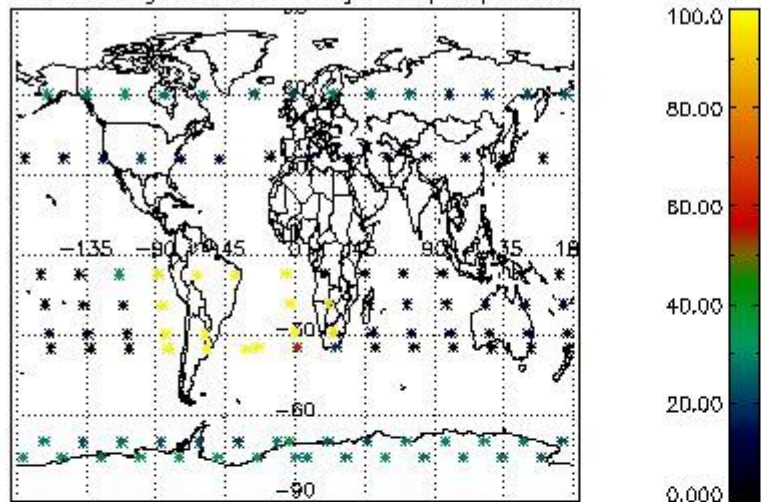
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



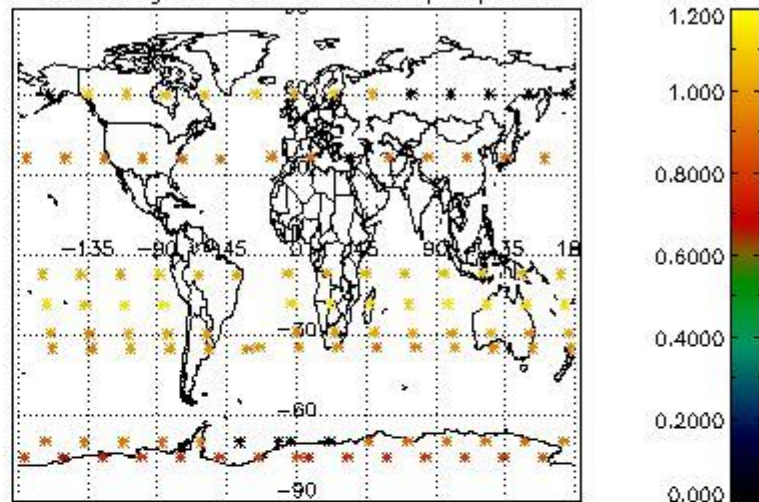
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

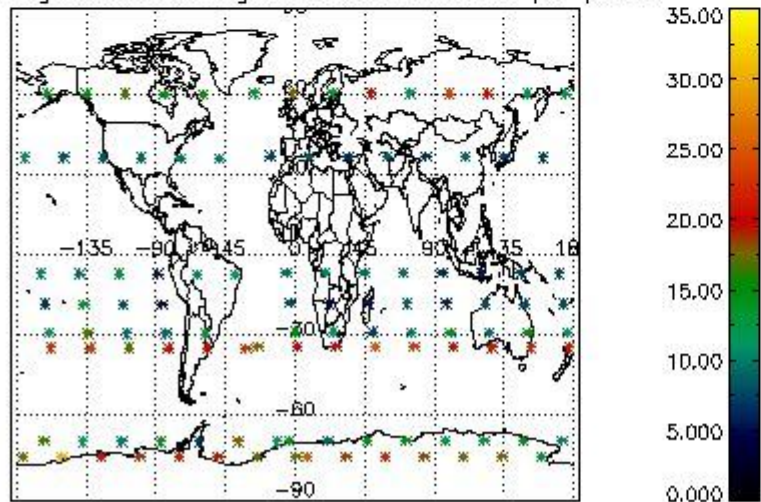
Percentage of cosmic ray hits per profile



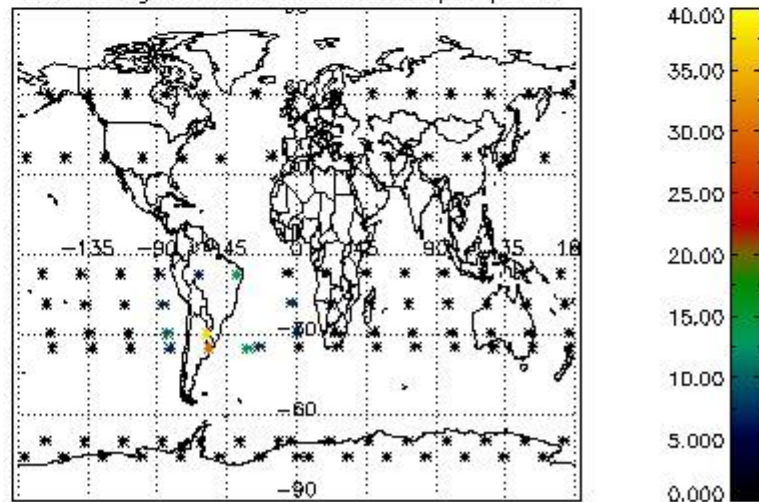
Percentage of datation errors per profile



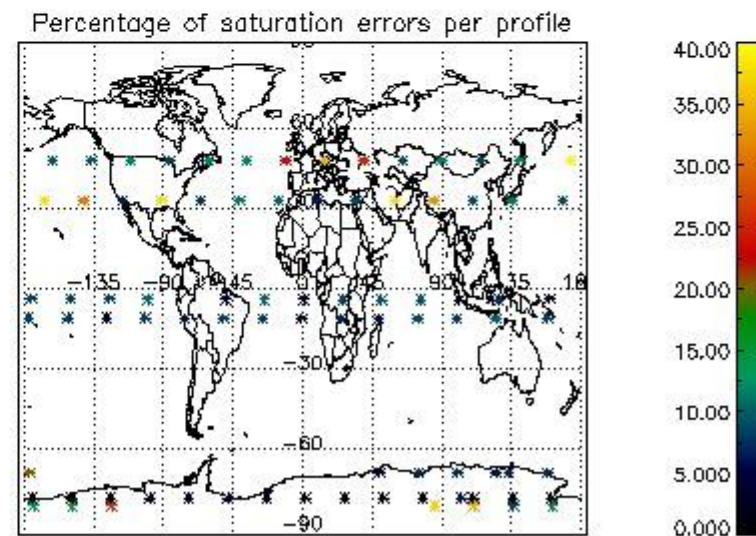
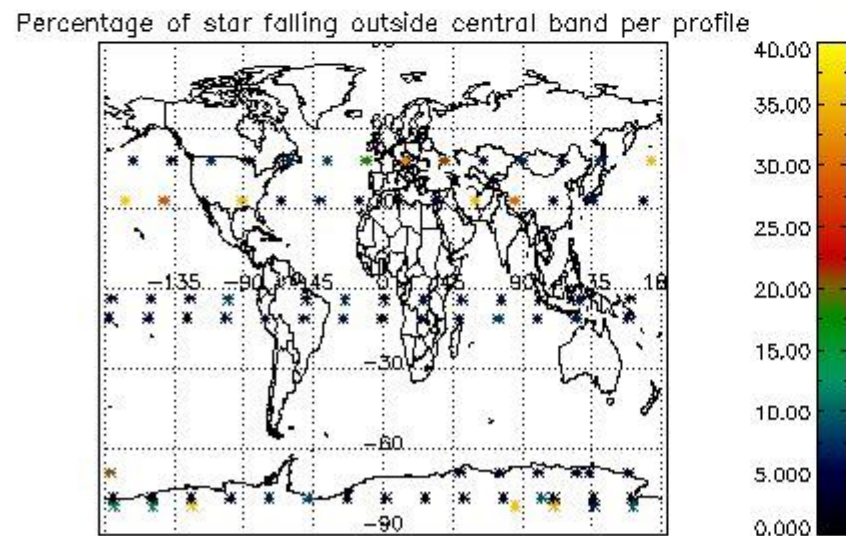
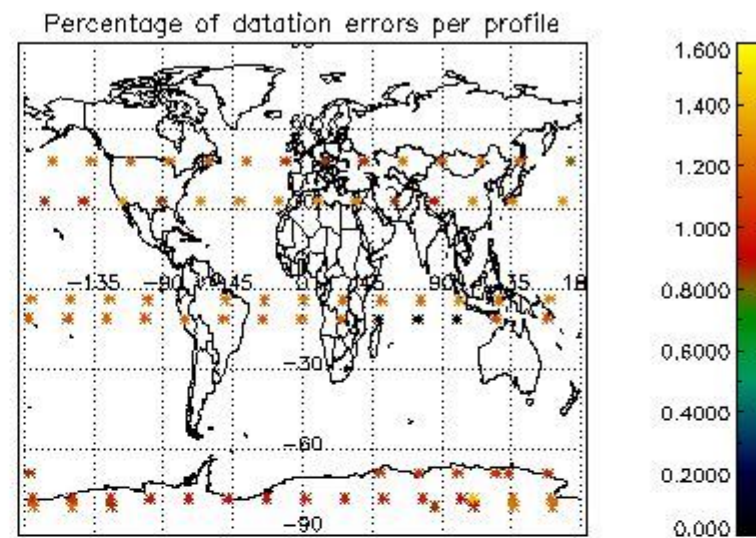
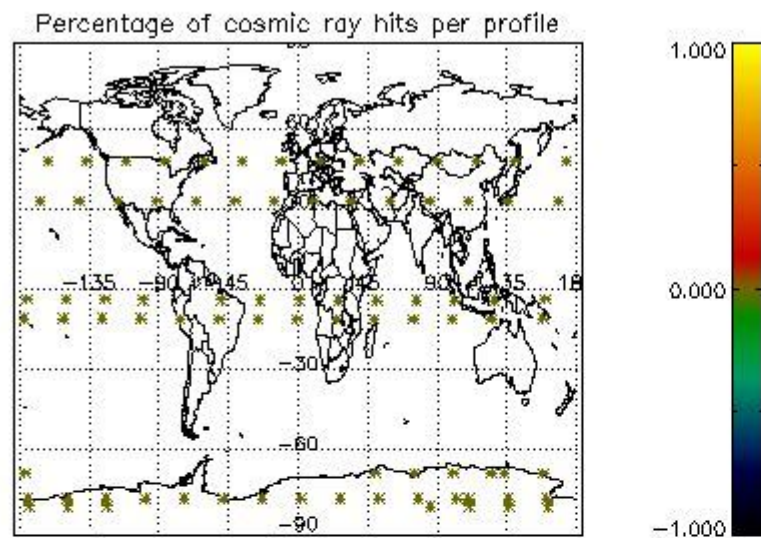
Percentage of star falling outside central band per profile



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

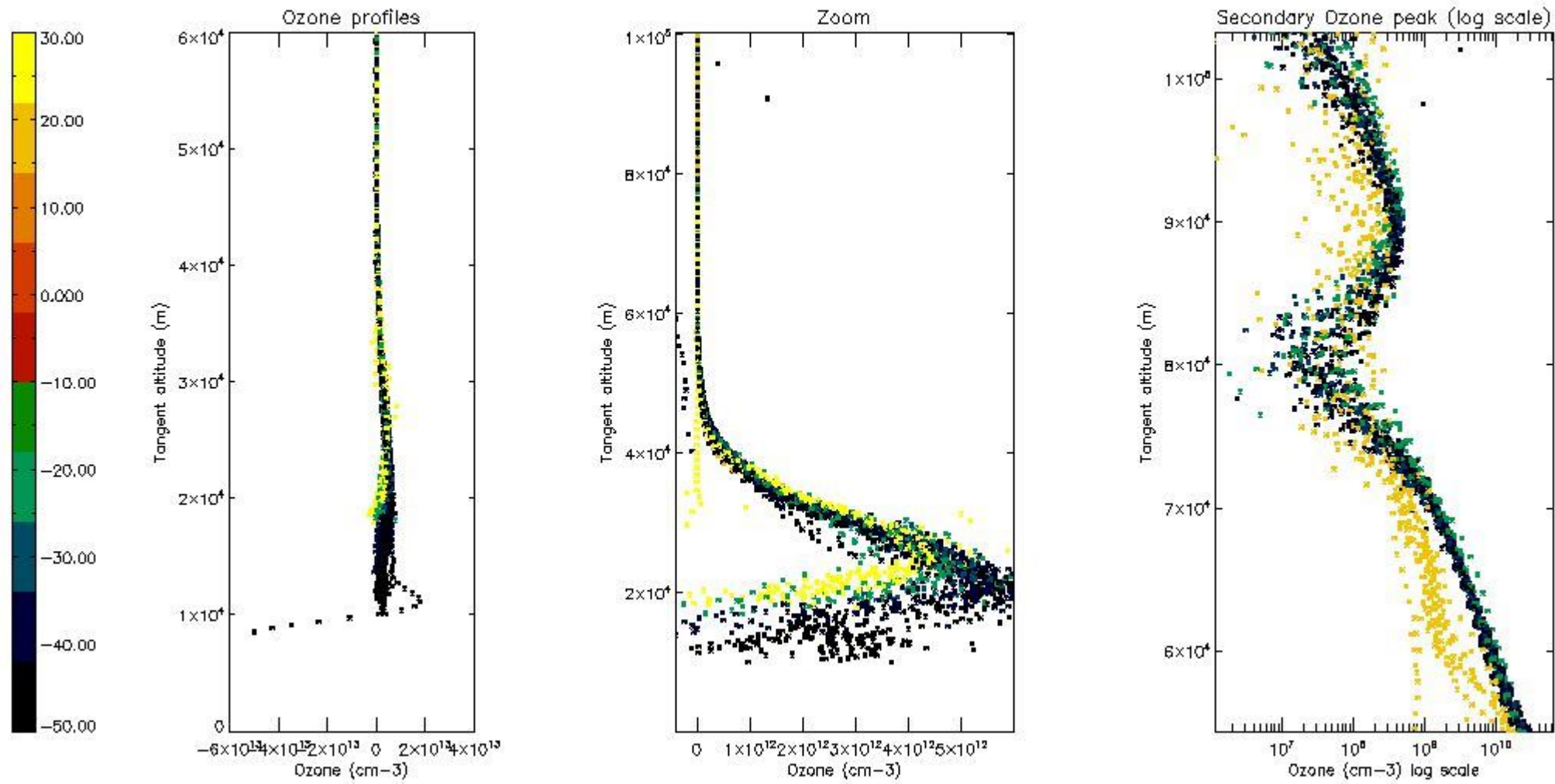
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	35
STD < 20	21

STD < 10	19
STD < 5	12

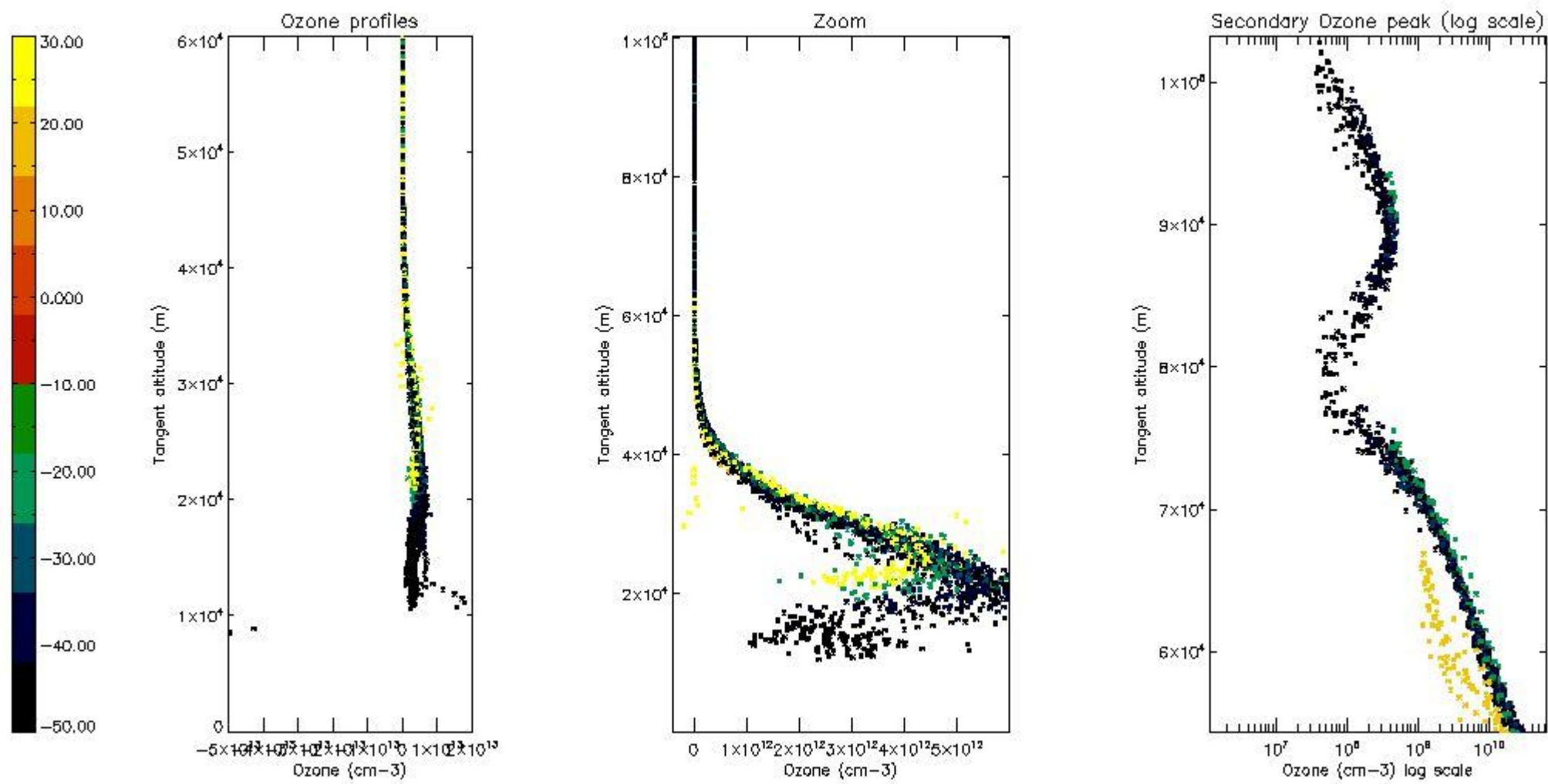
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



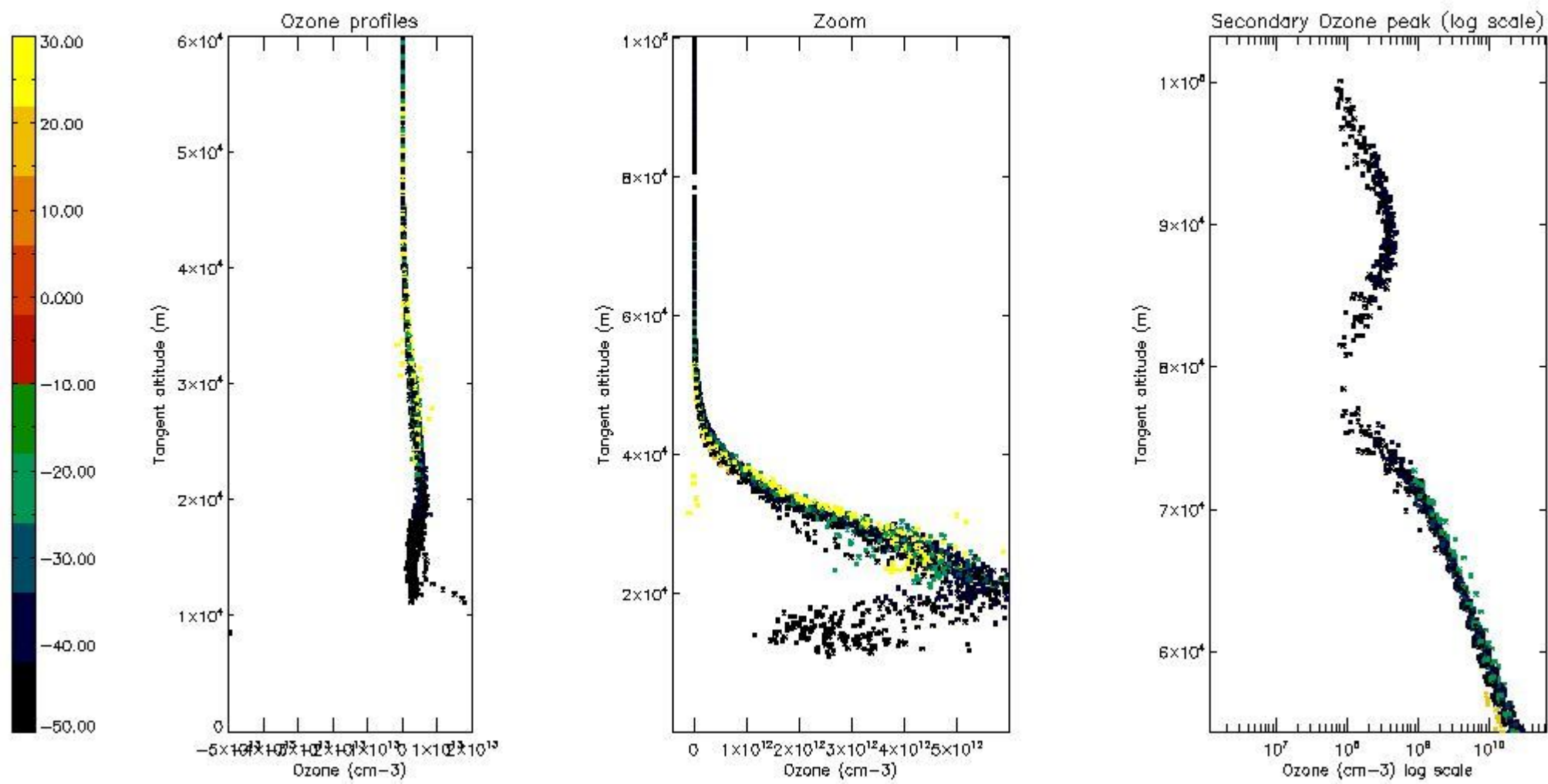
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



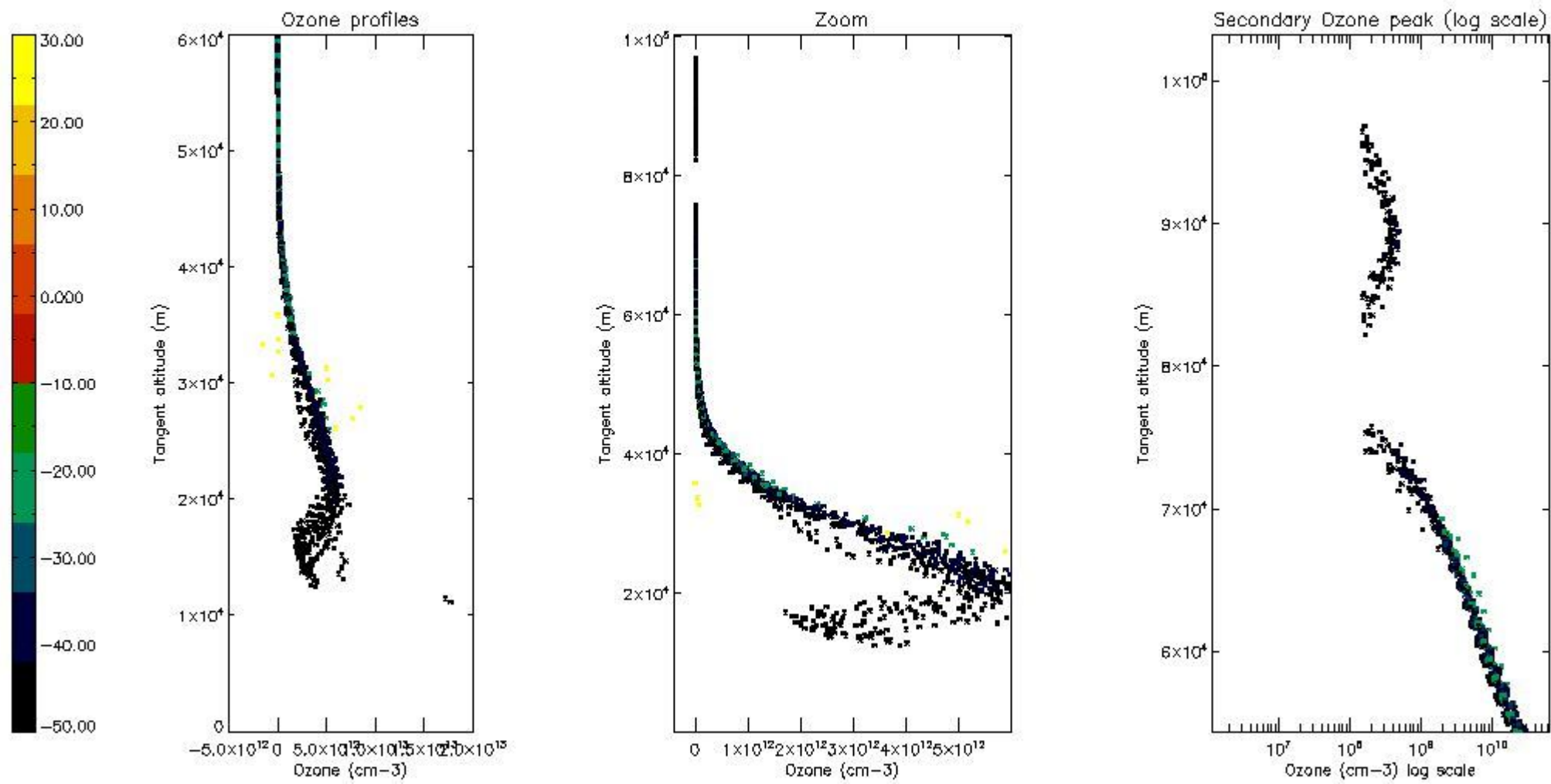
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

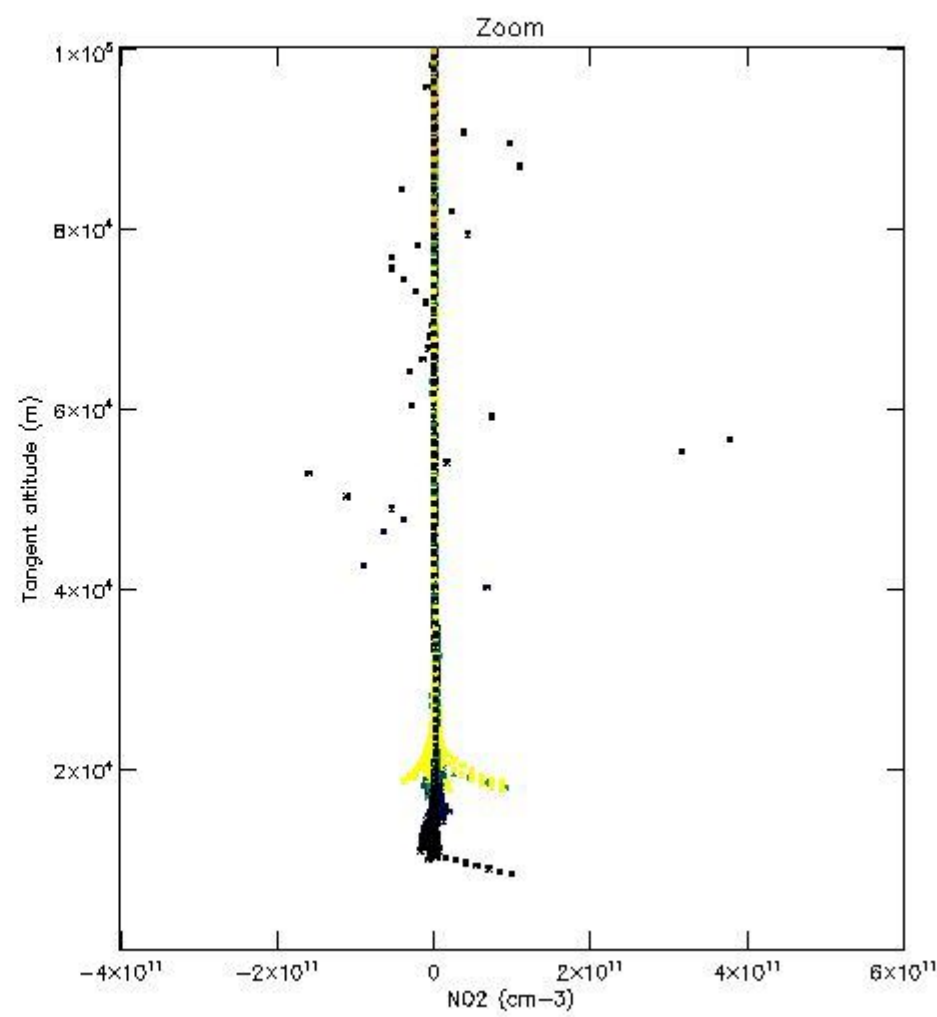
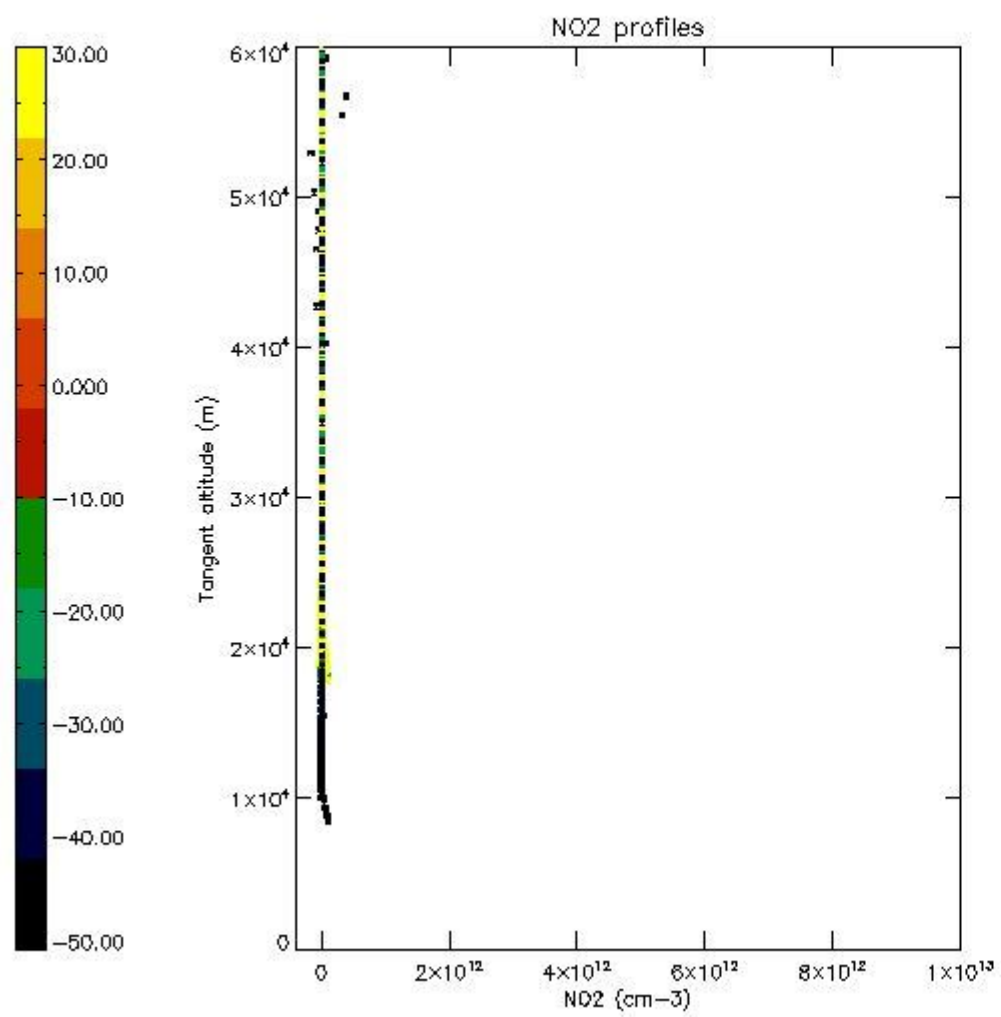
The colorbar represents the latitude.



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

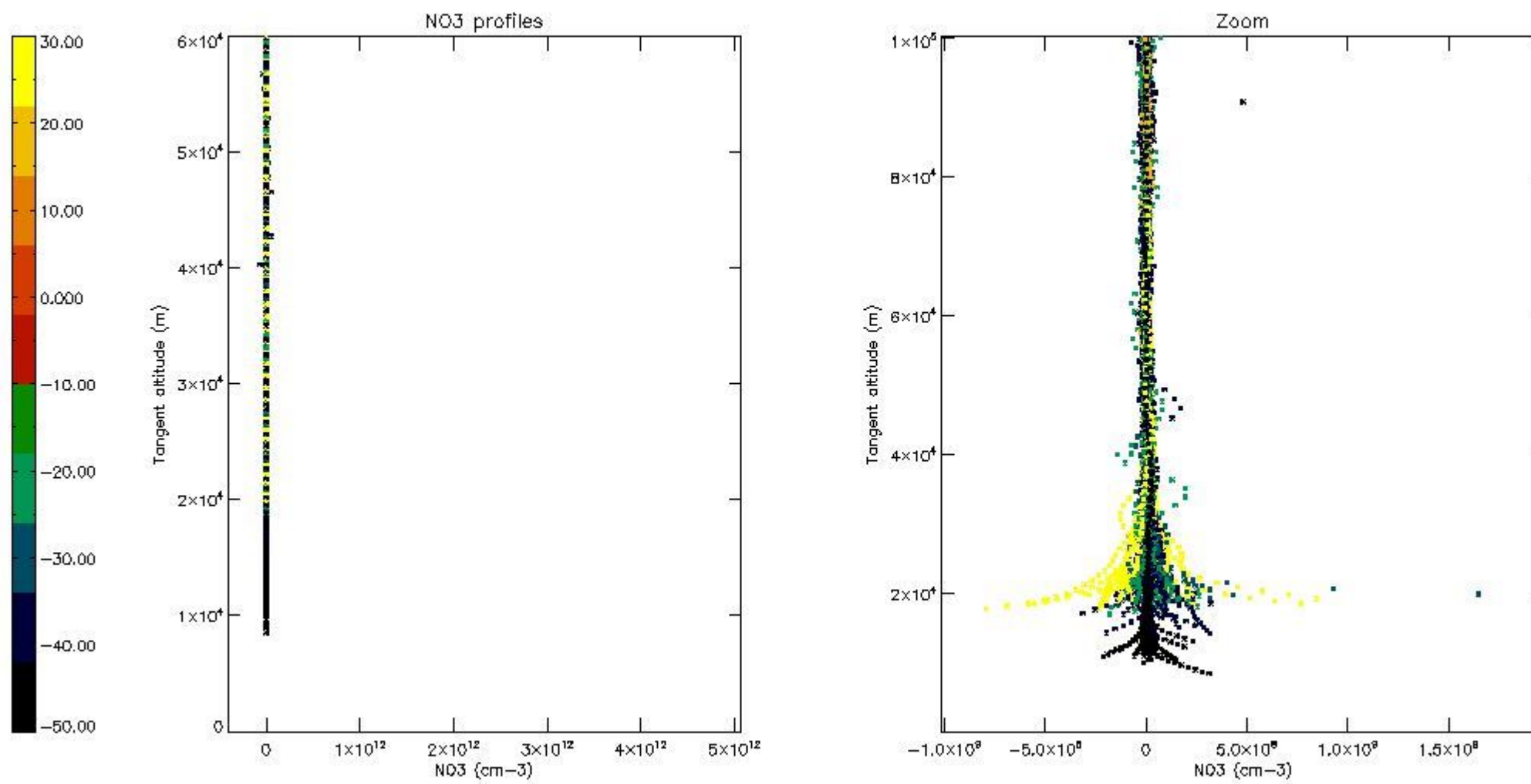
The colorbar represents the latitude.





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

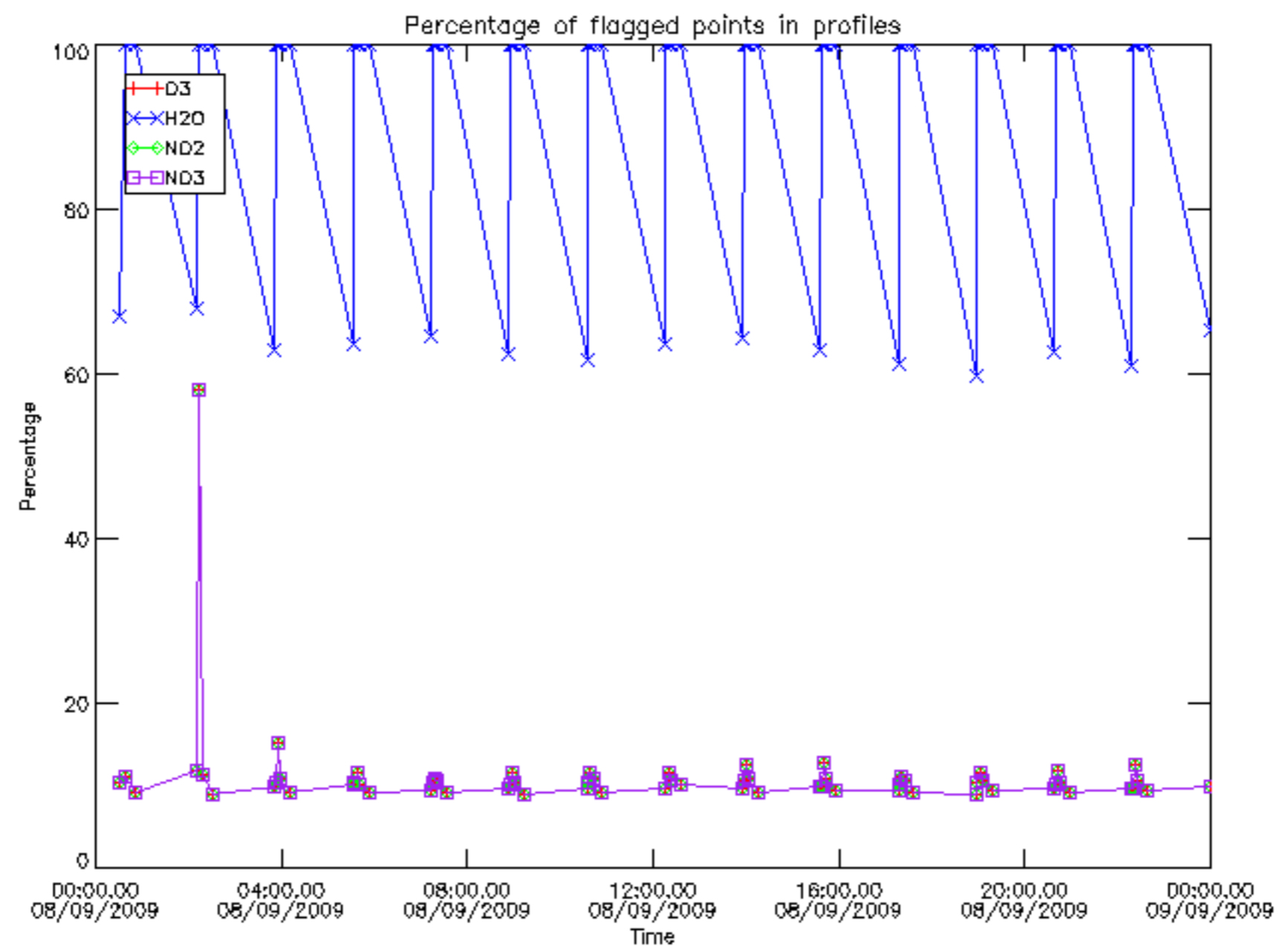
The colorbar represents the latitude.



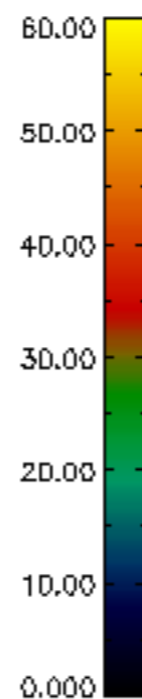
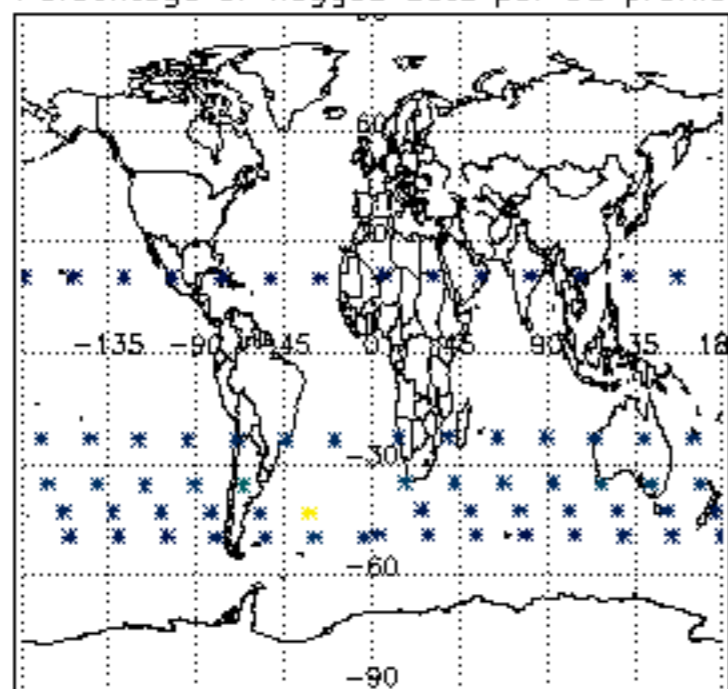
## 6. Auxiliary Data Files used for the production reported in section 2

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.

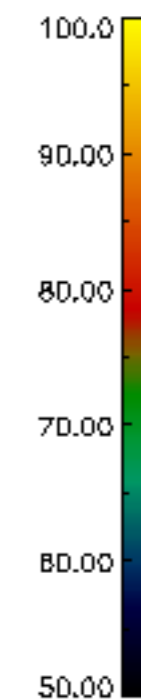
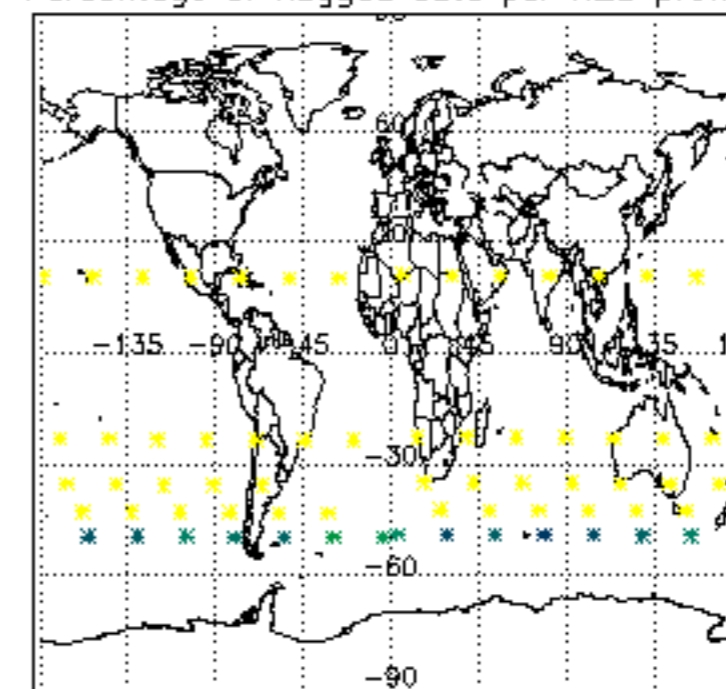
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	08-SEP-2009 00:09:42
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	08-SEP-2009 00:09:42
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	08-SEP-2009 00:09:42



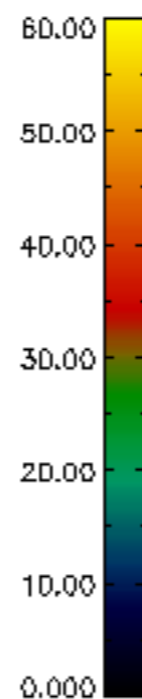
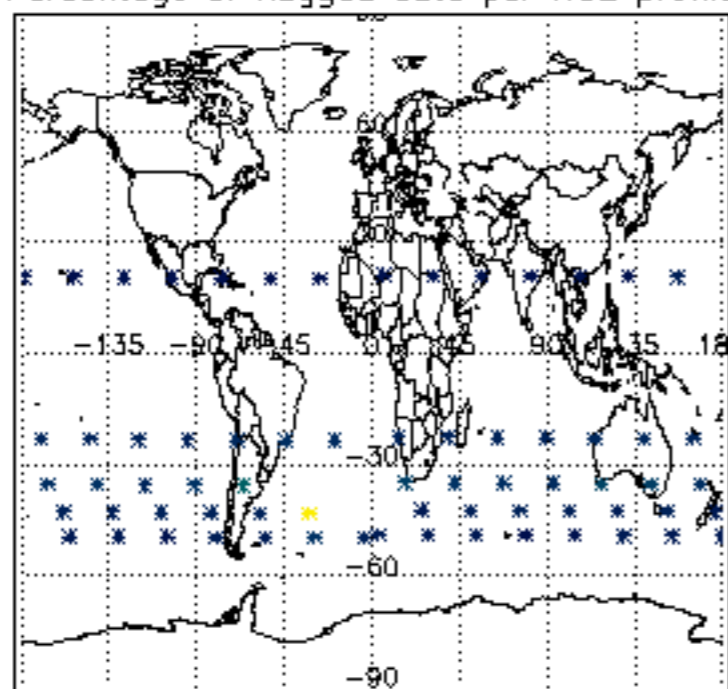
Percentage of flagged data per D3 profile



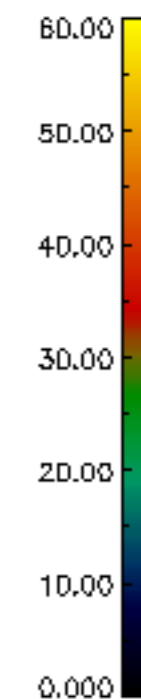
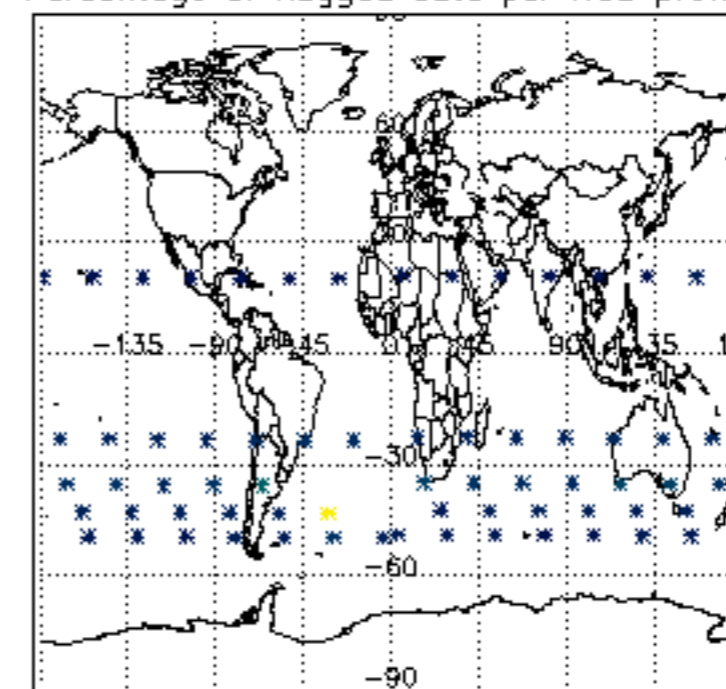
Percentage of flagged data per H2O profile

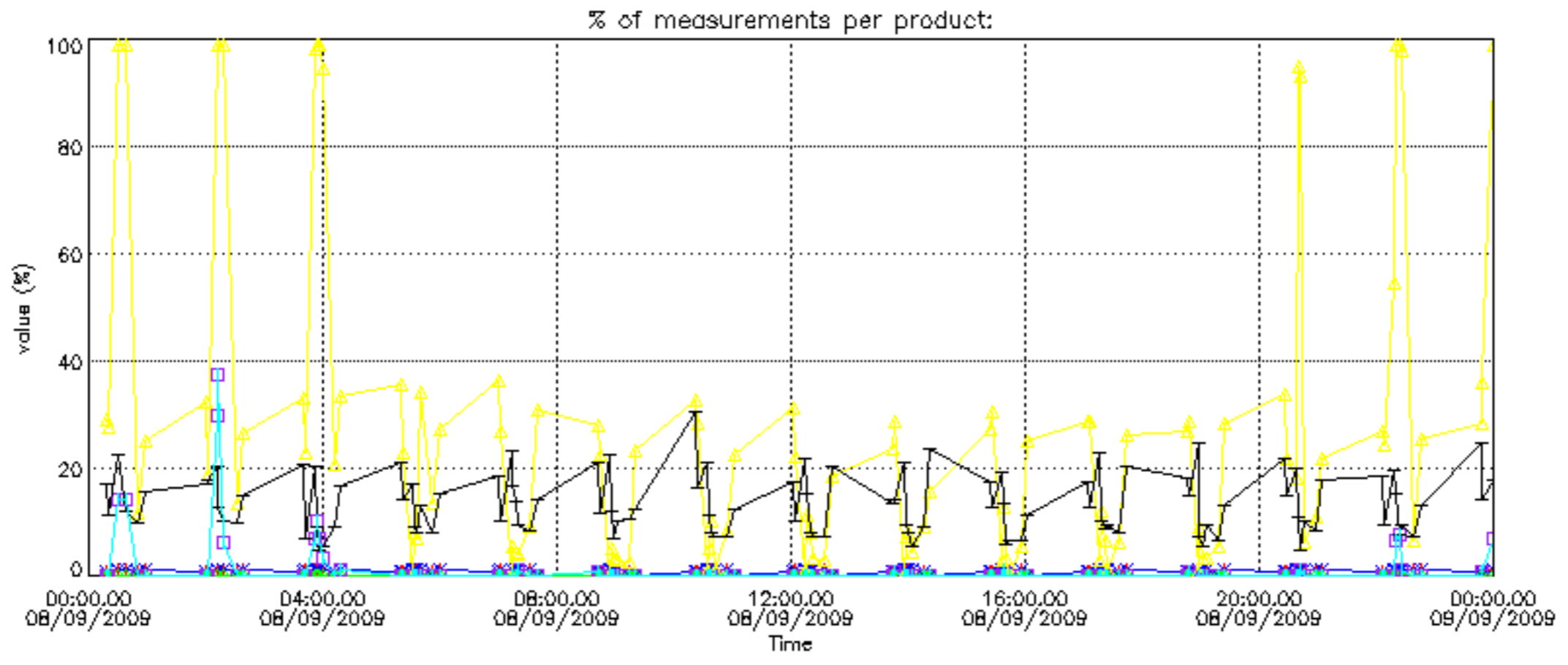


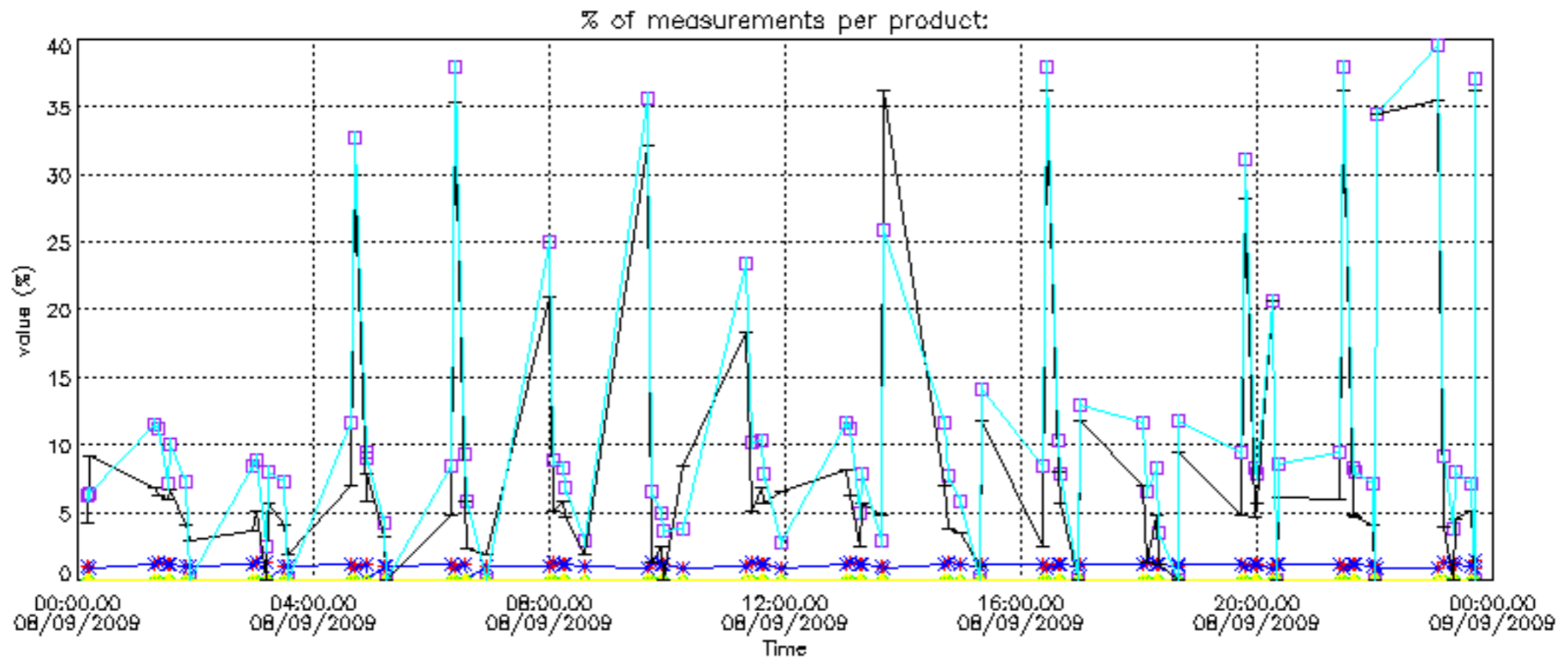
Percentage of flagged data per NO2 profile



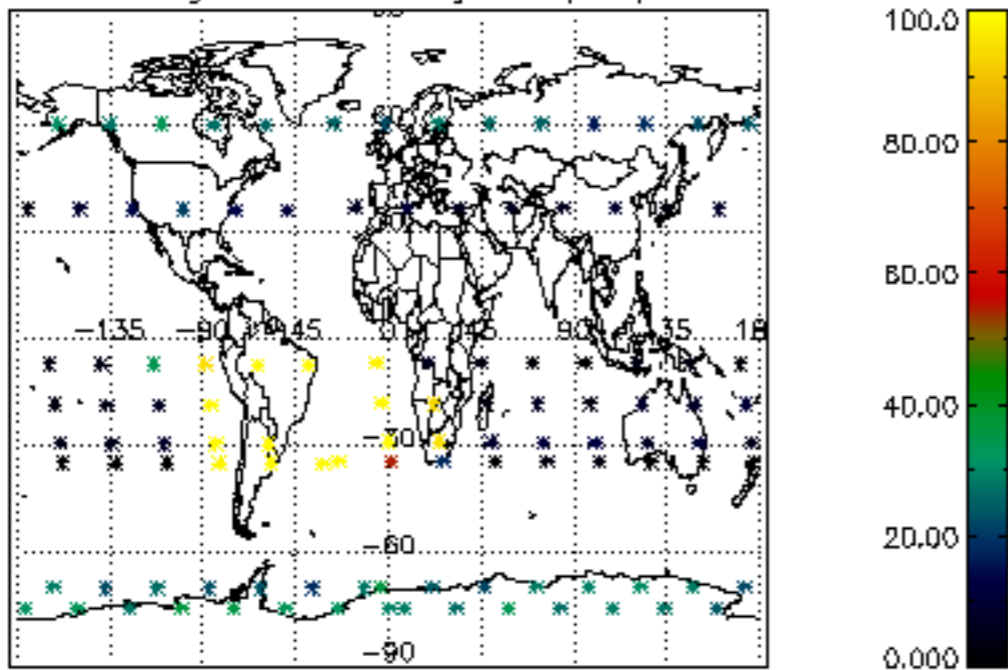
Percentage of flagged data per NO3 profile



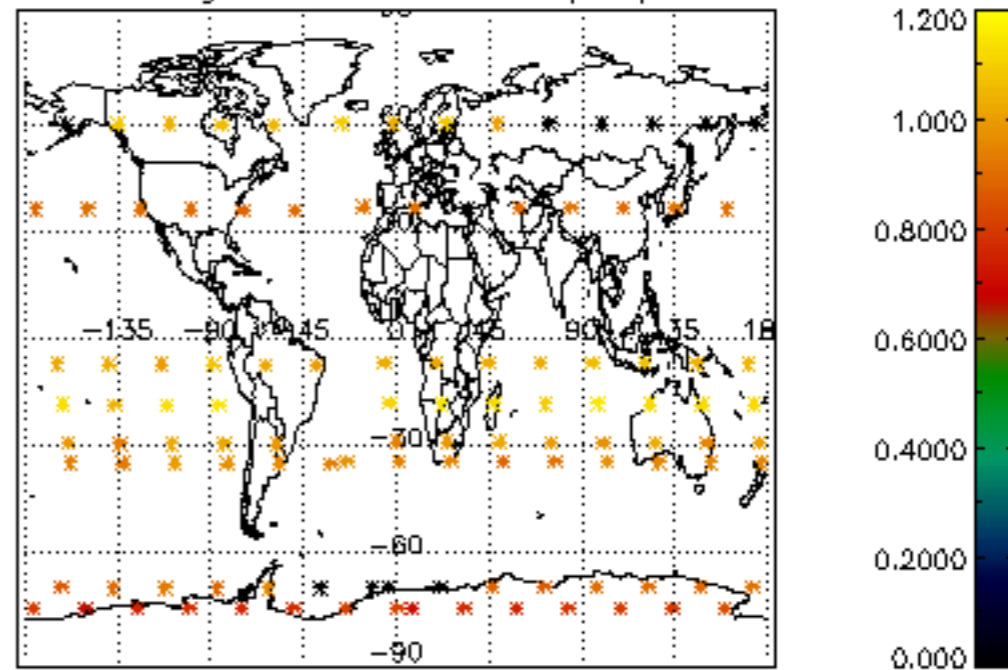




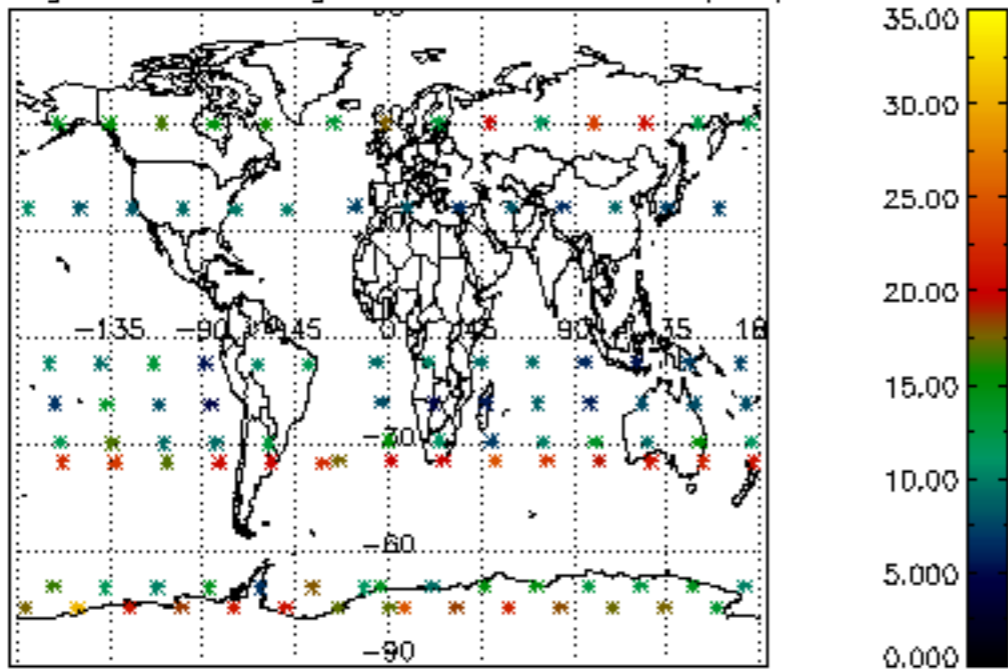
Percentage of cosmic ray hits per profile



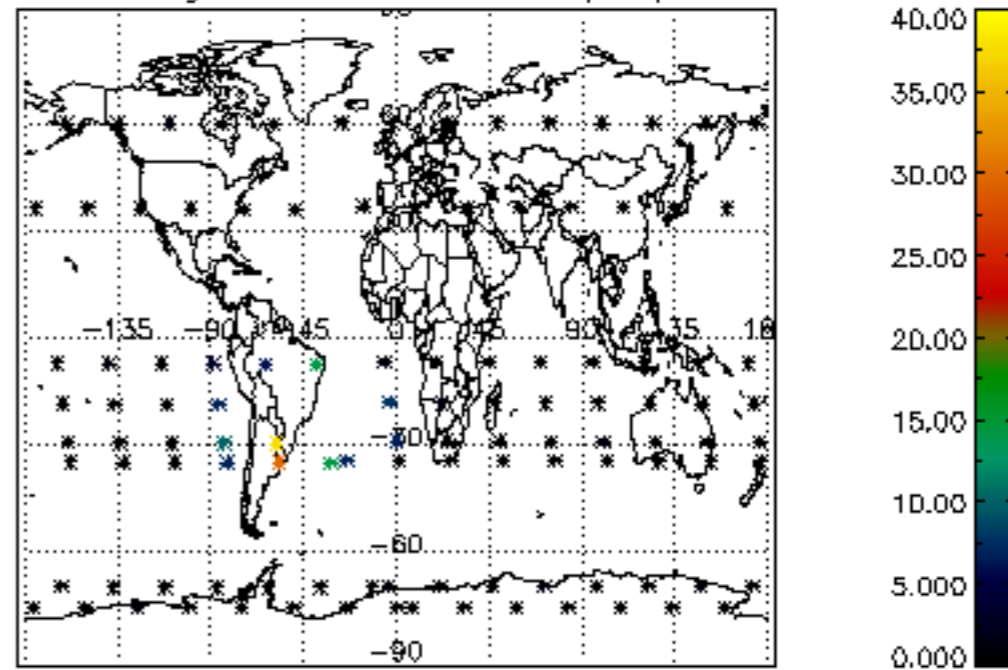
Percentage of datation errors per profile



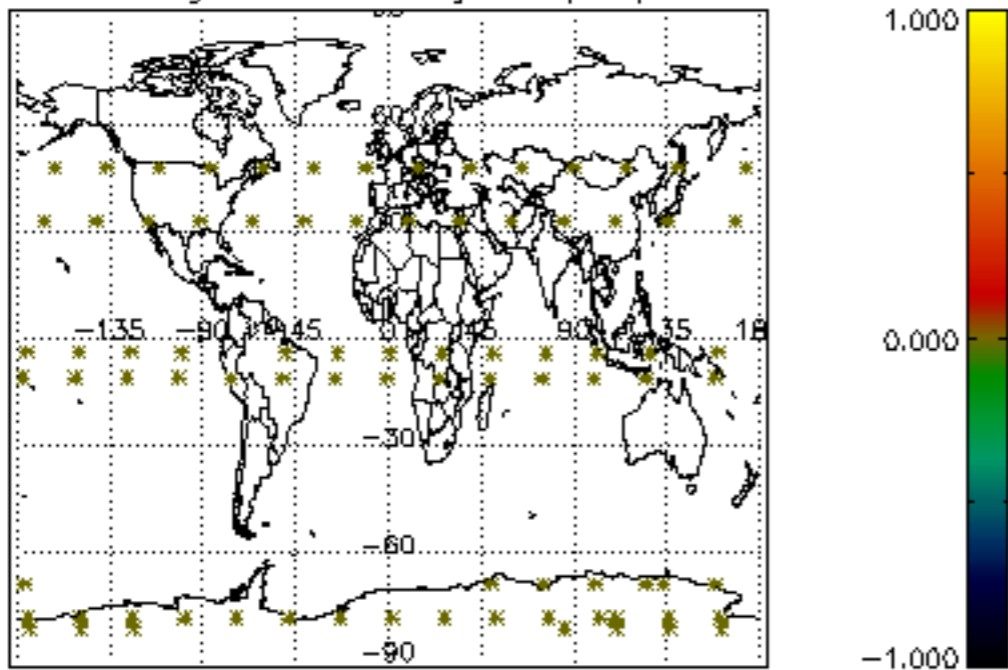
Percentage of star falling outside central band per profile



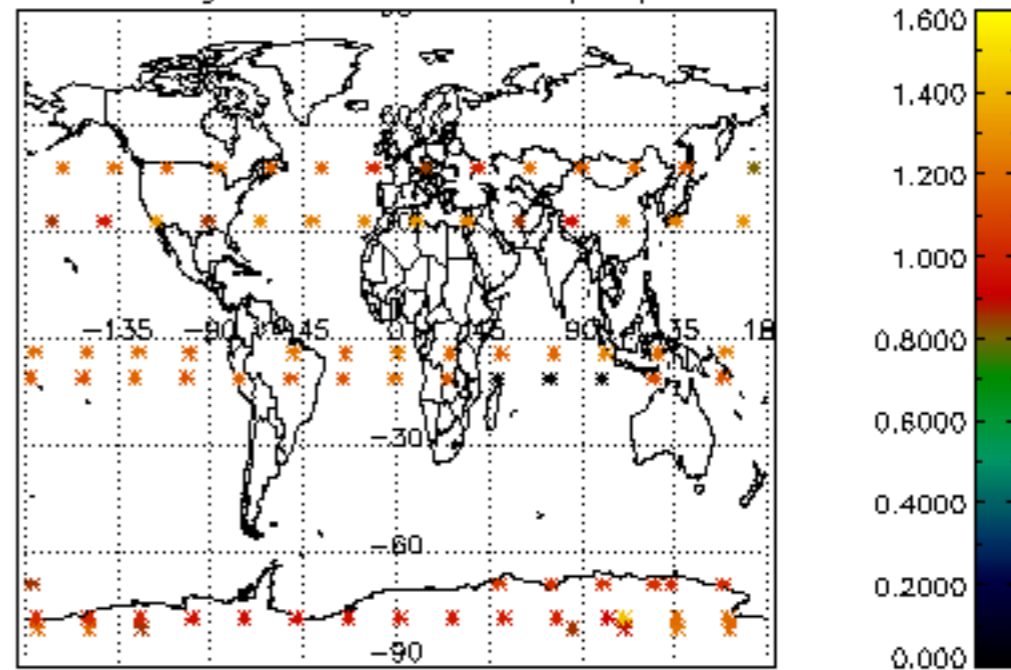
Percentage of saturation errors per profile



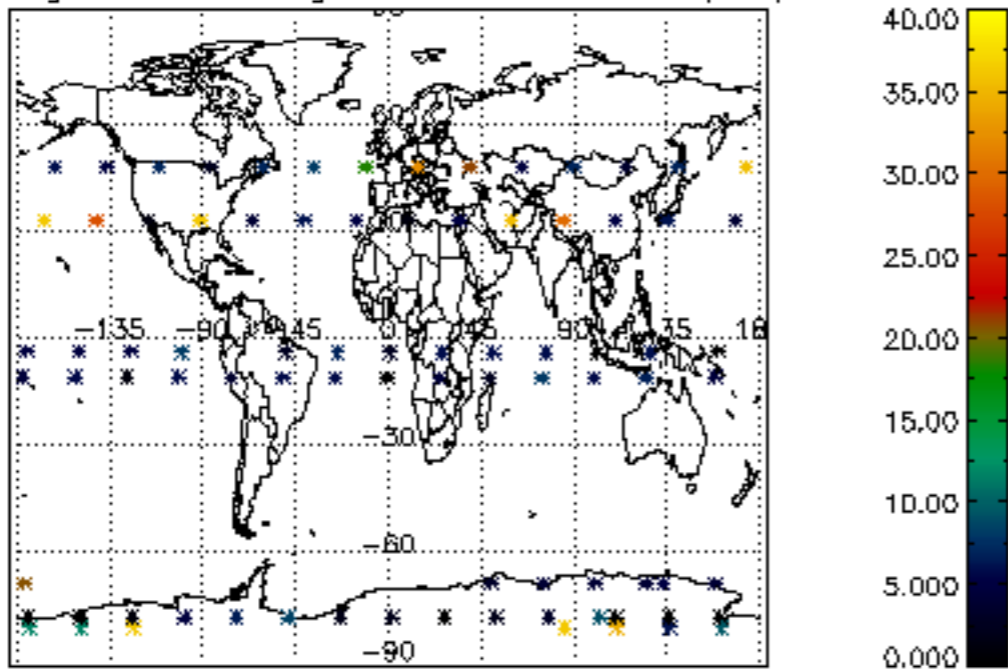
Percentage of cosmic ray hits per profile



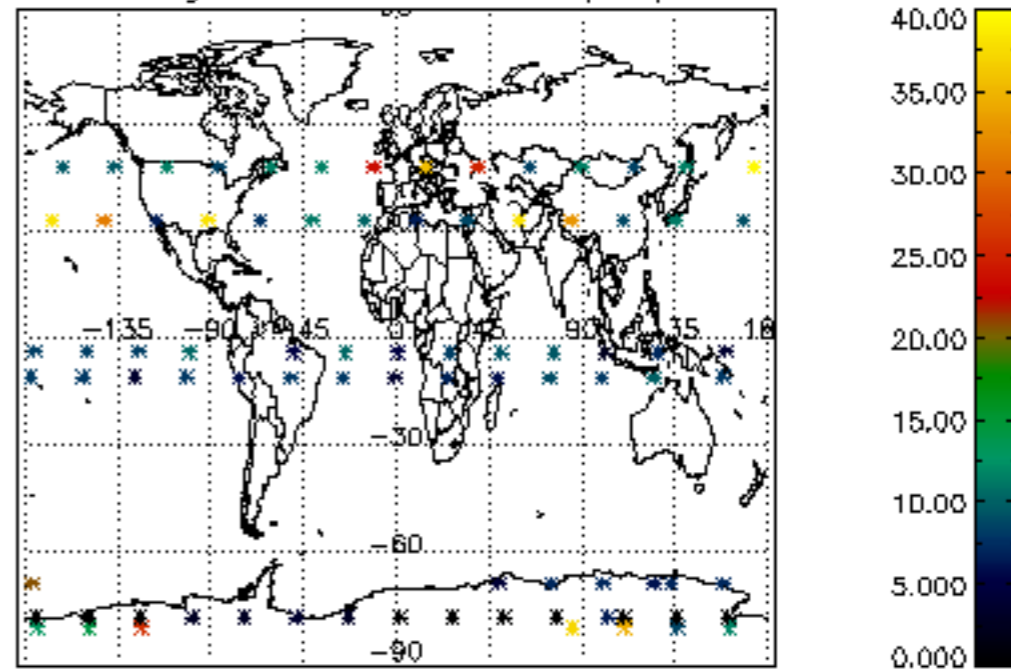
Percentage of datation errors per profile



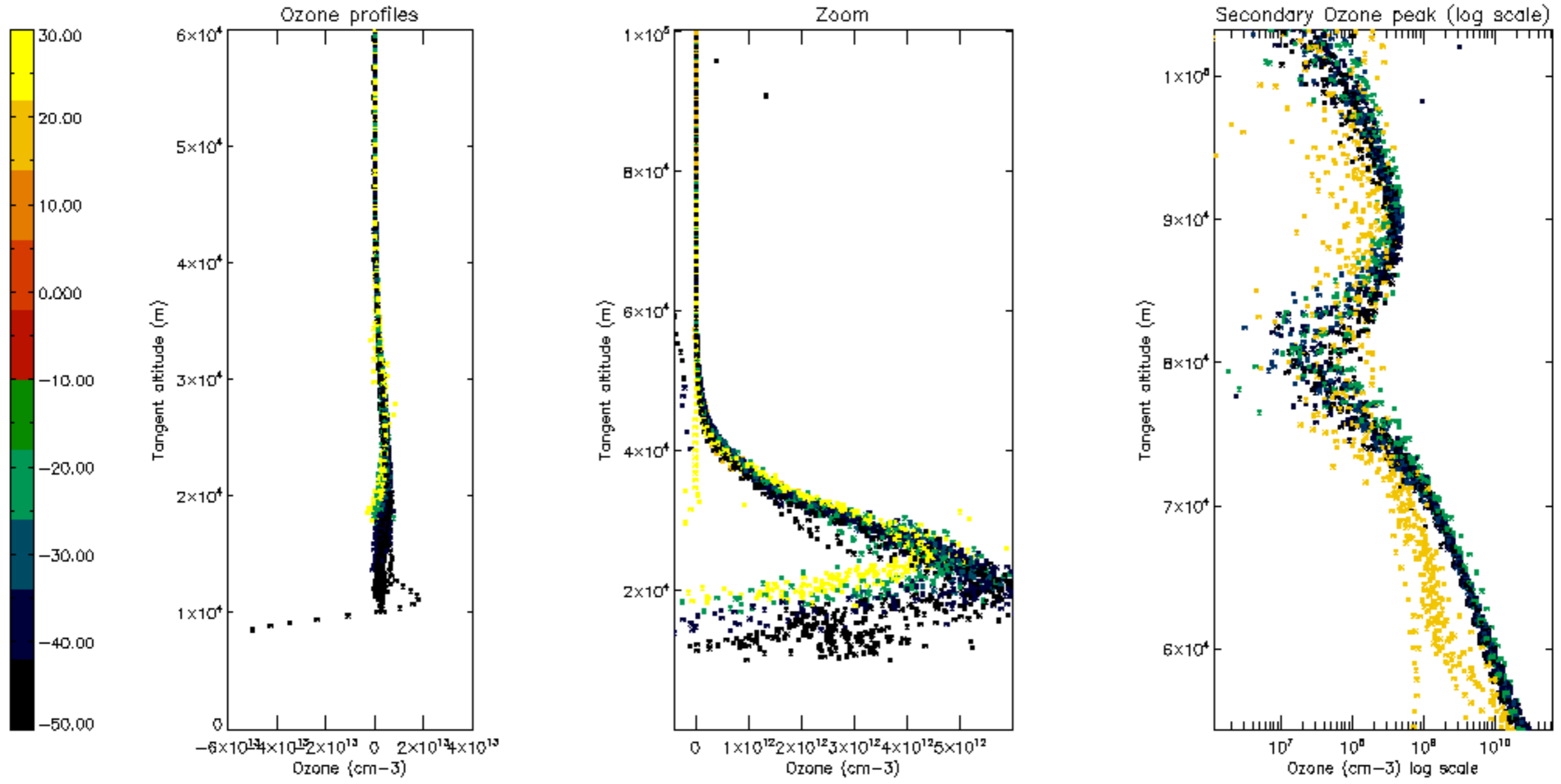
Percentage of star falling outside central band per profile

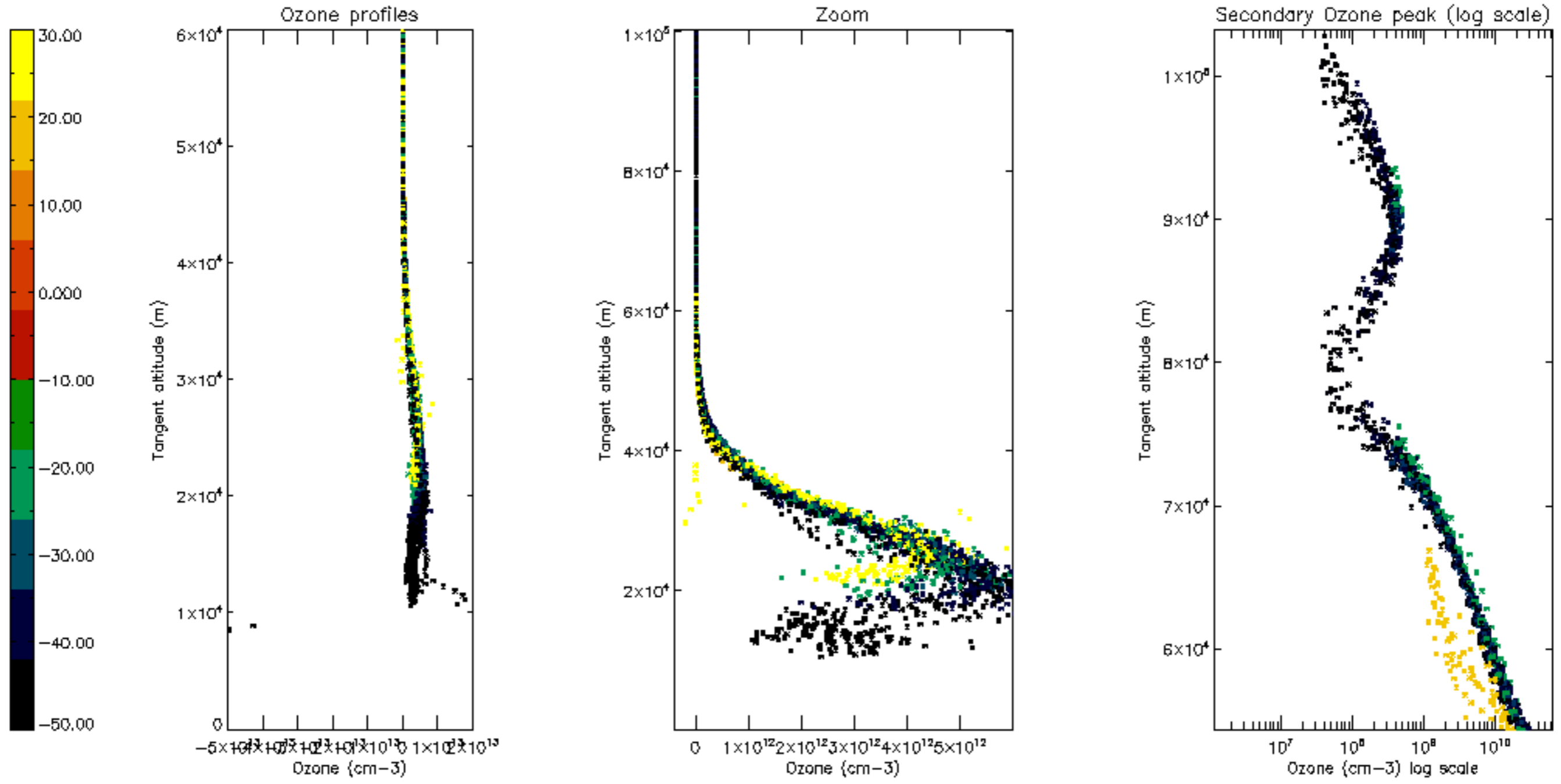


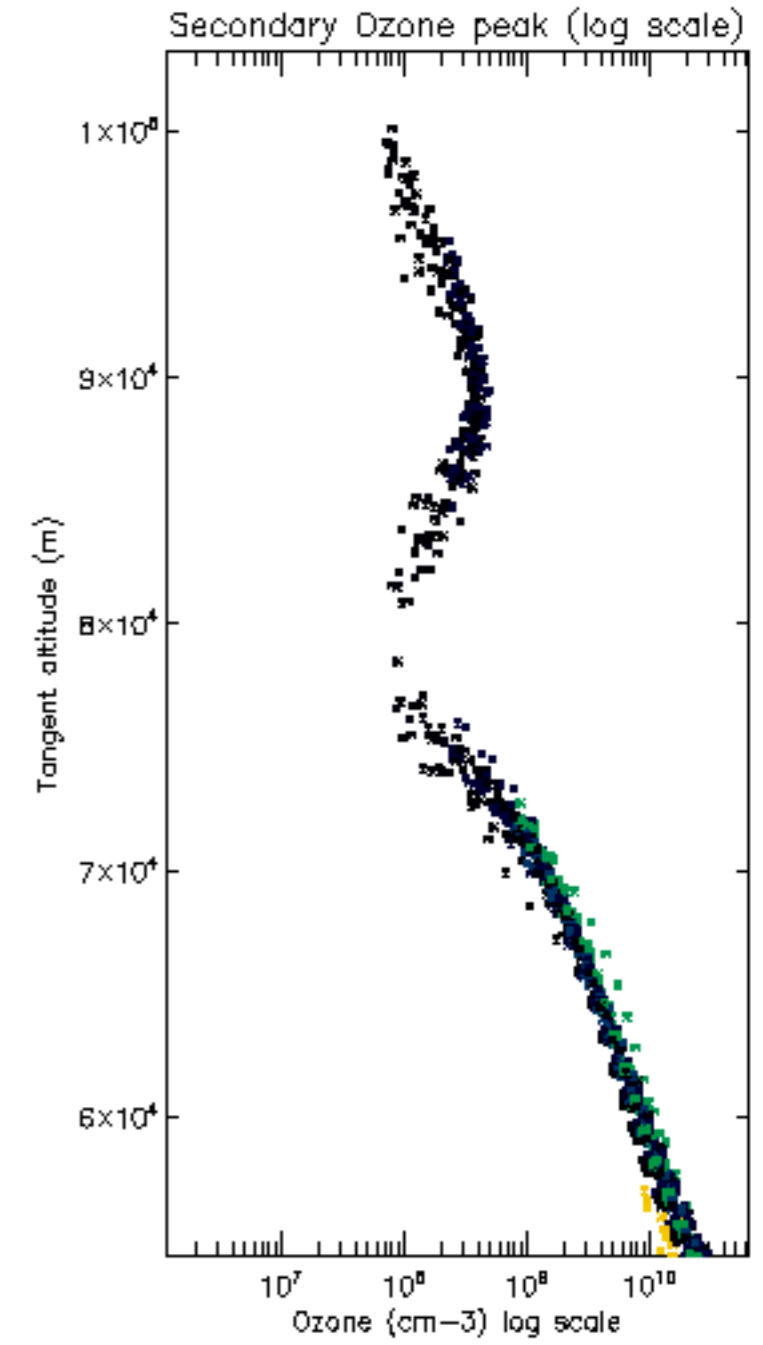
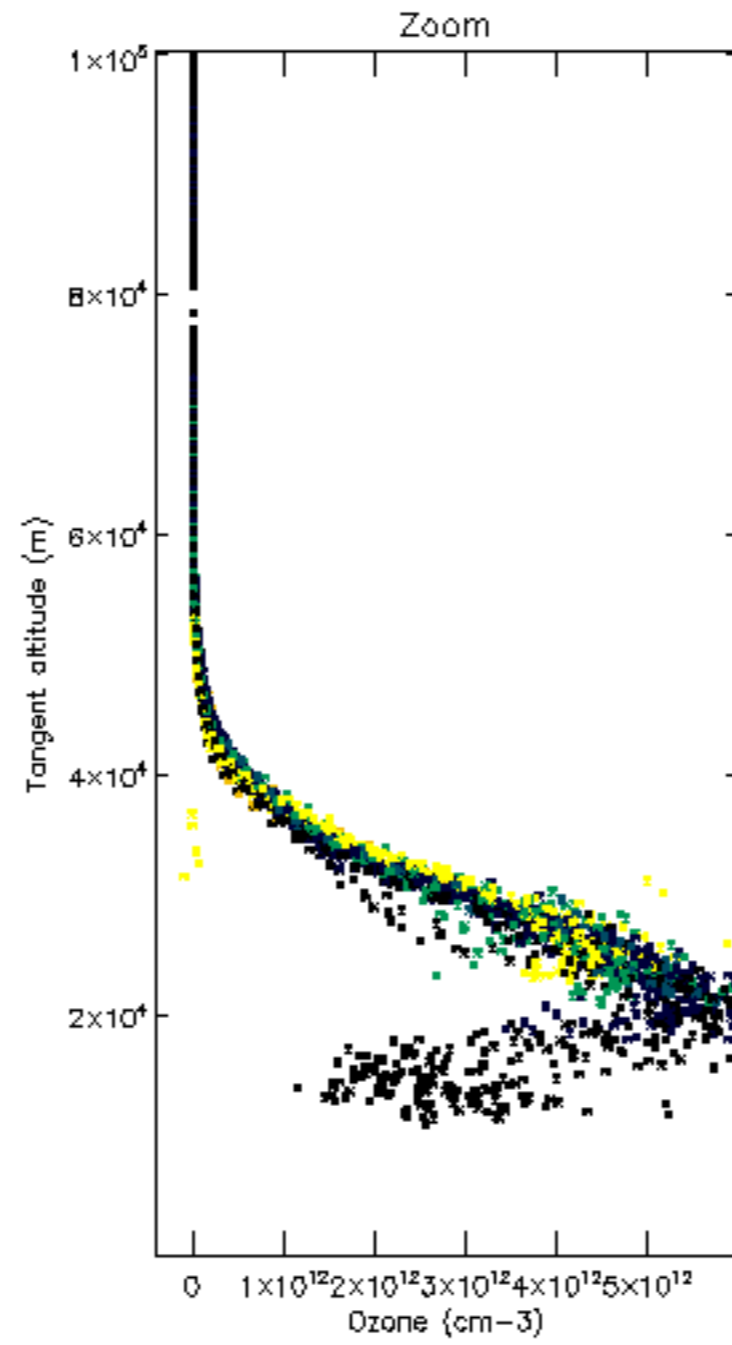
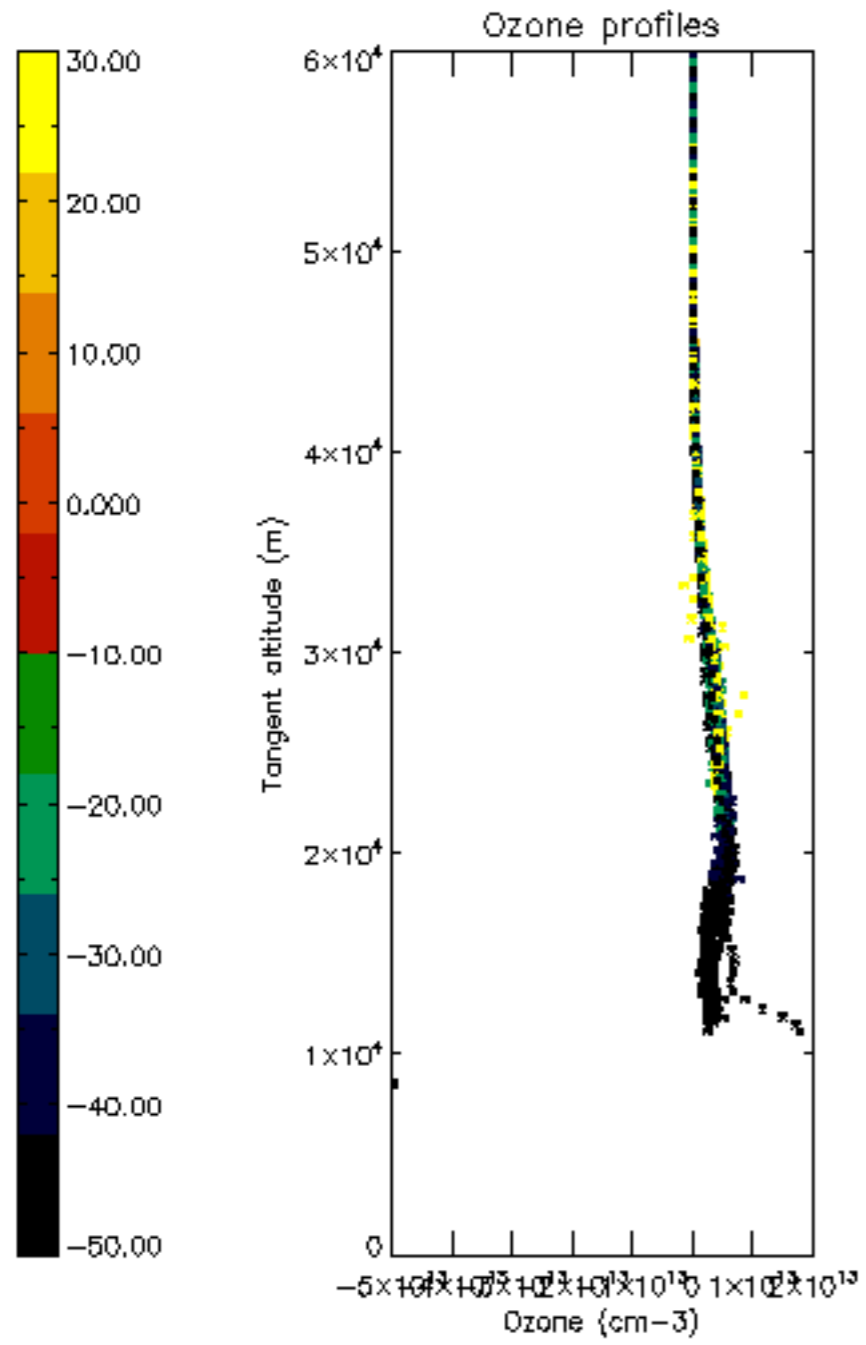
Percentage of saturation errors per profile

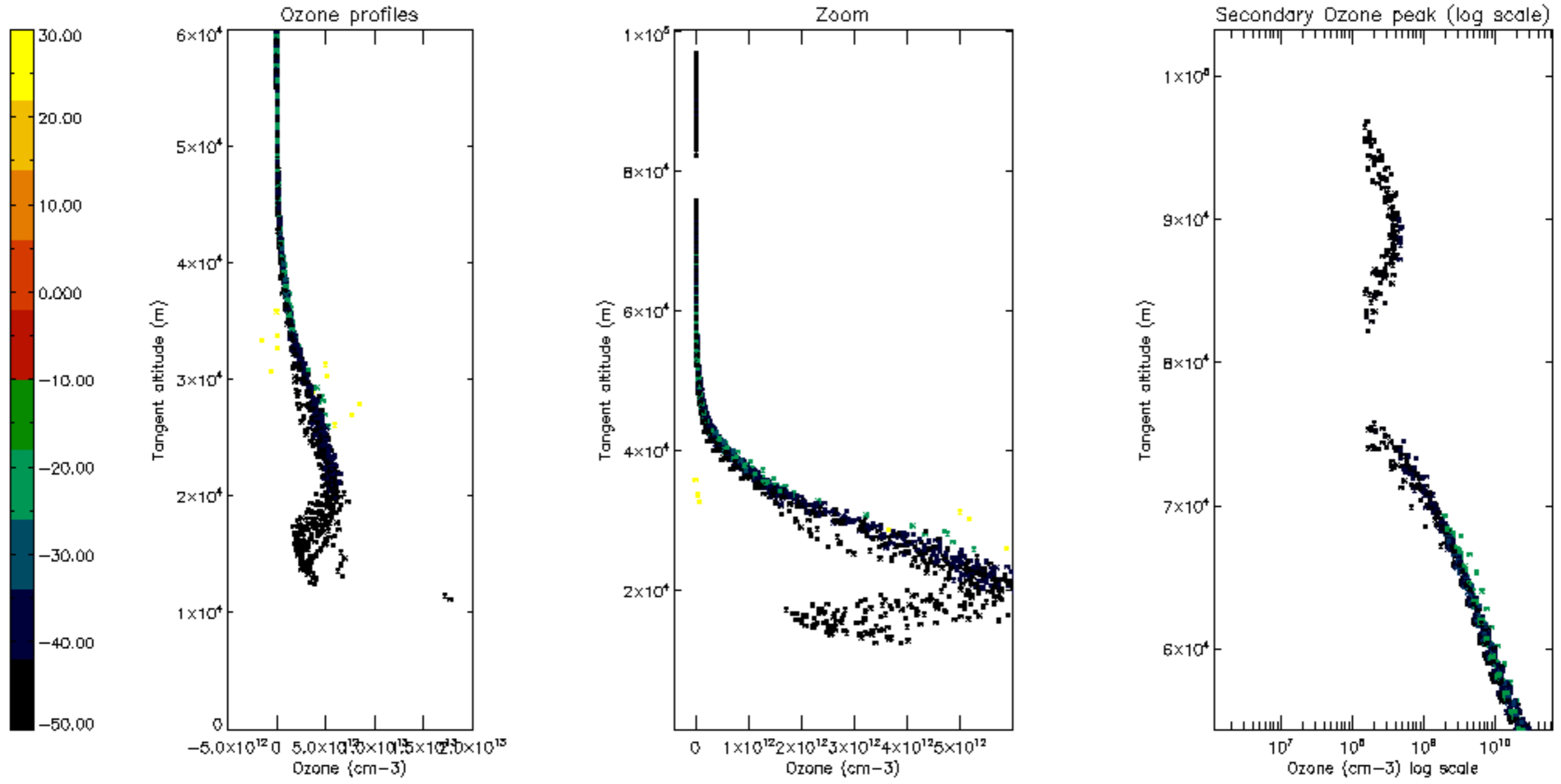


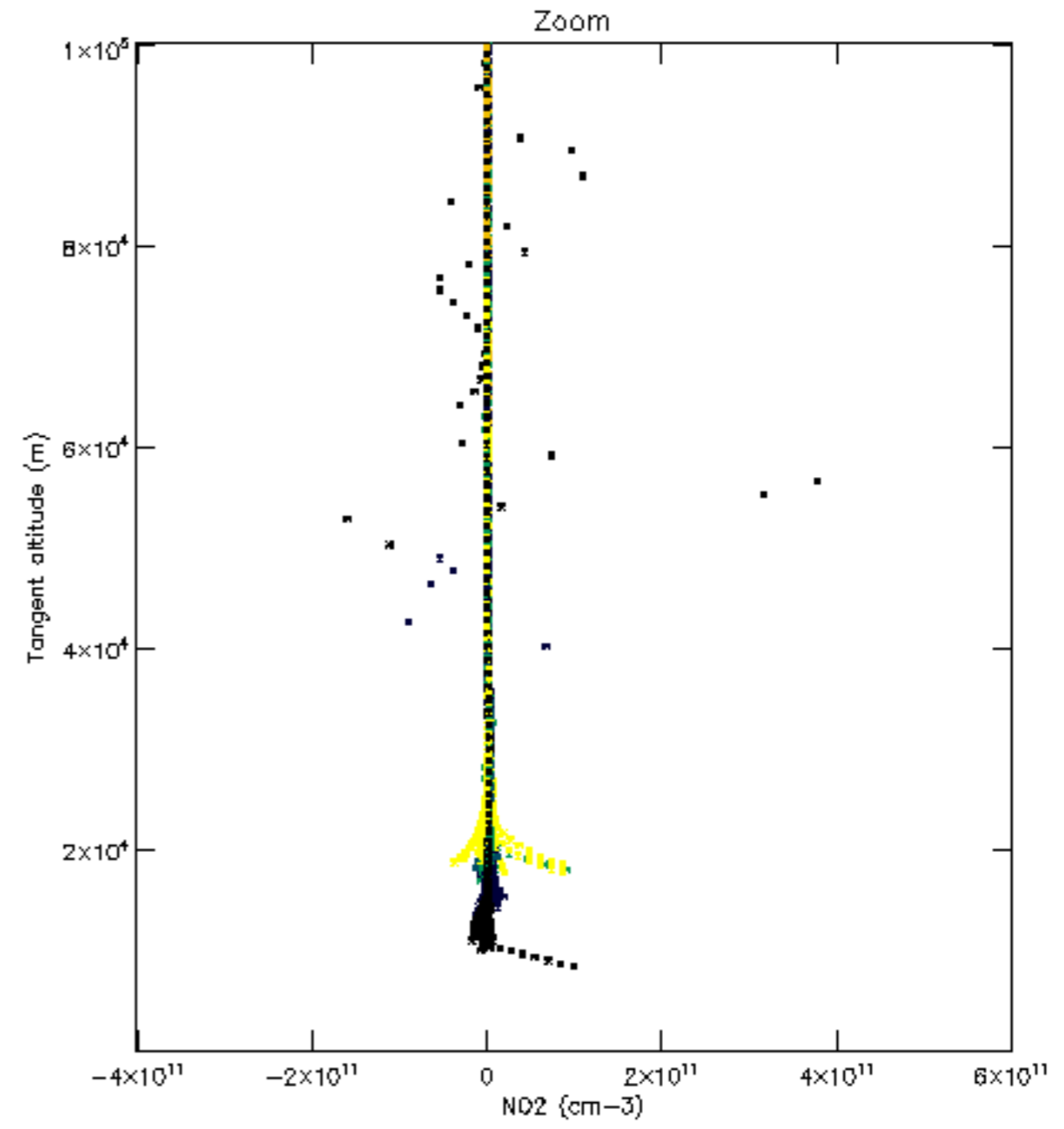
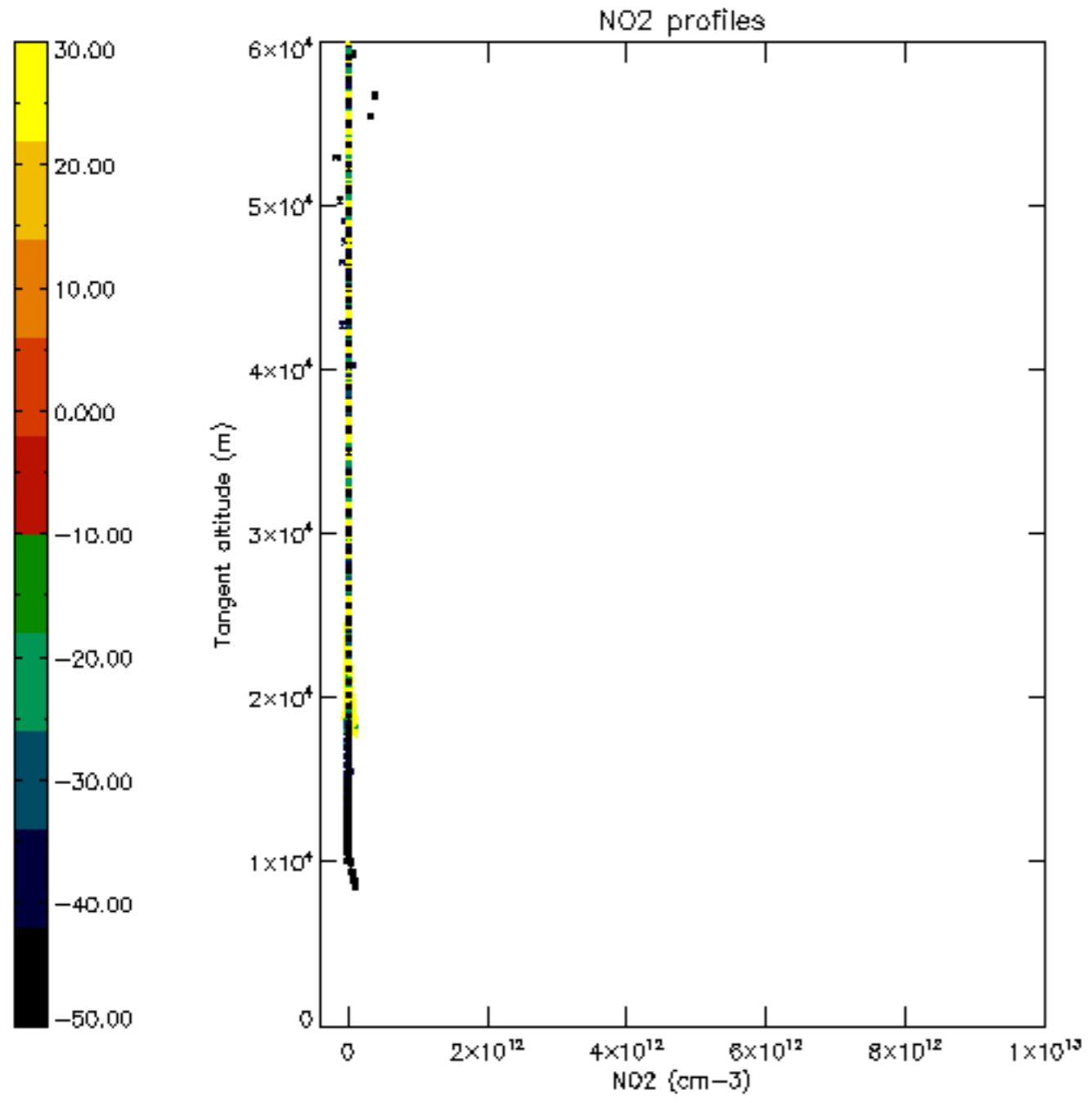


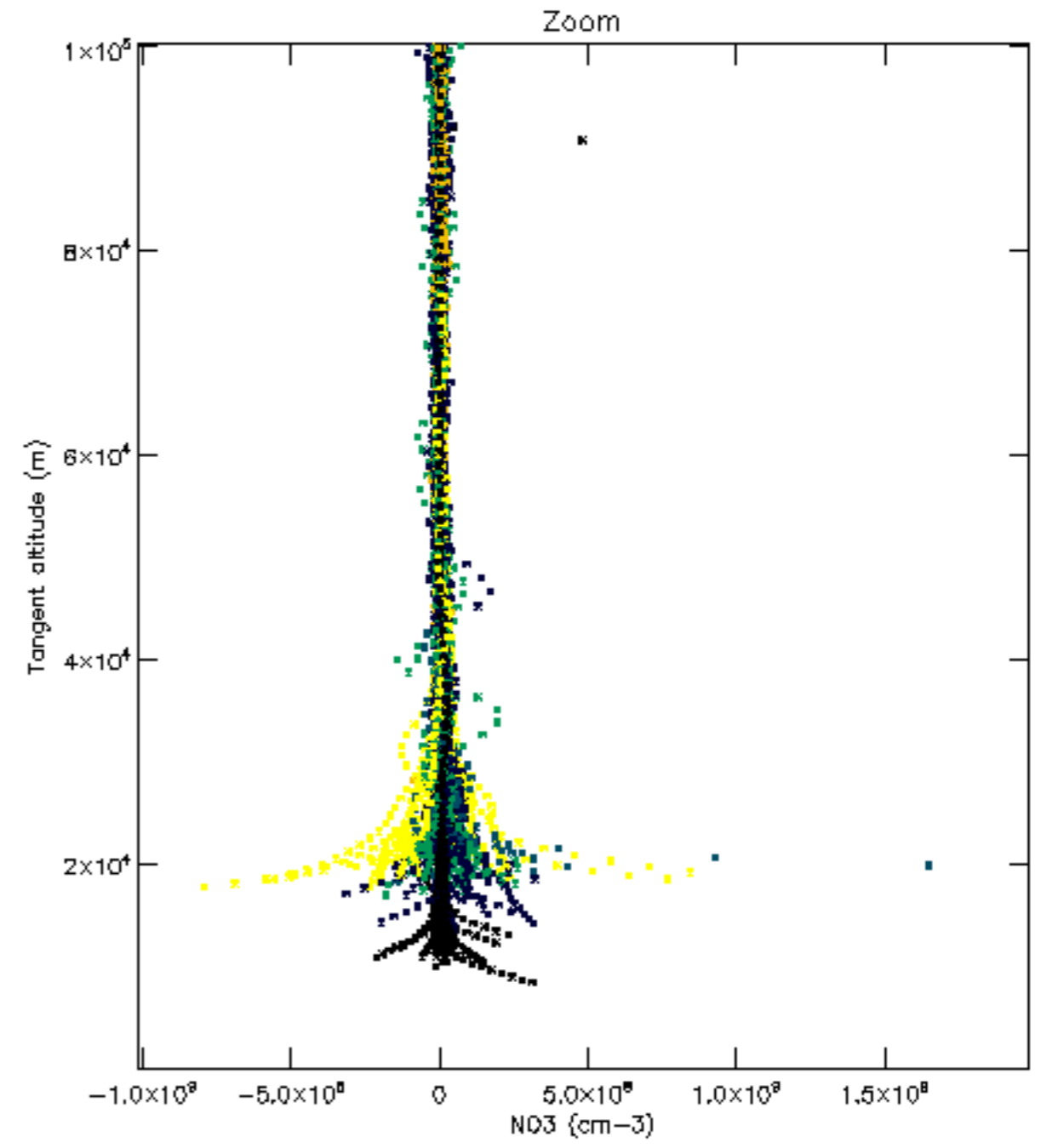
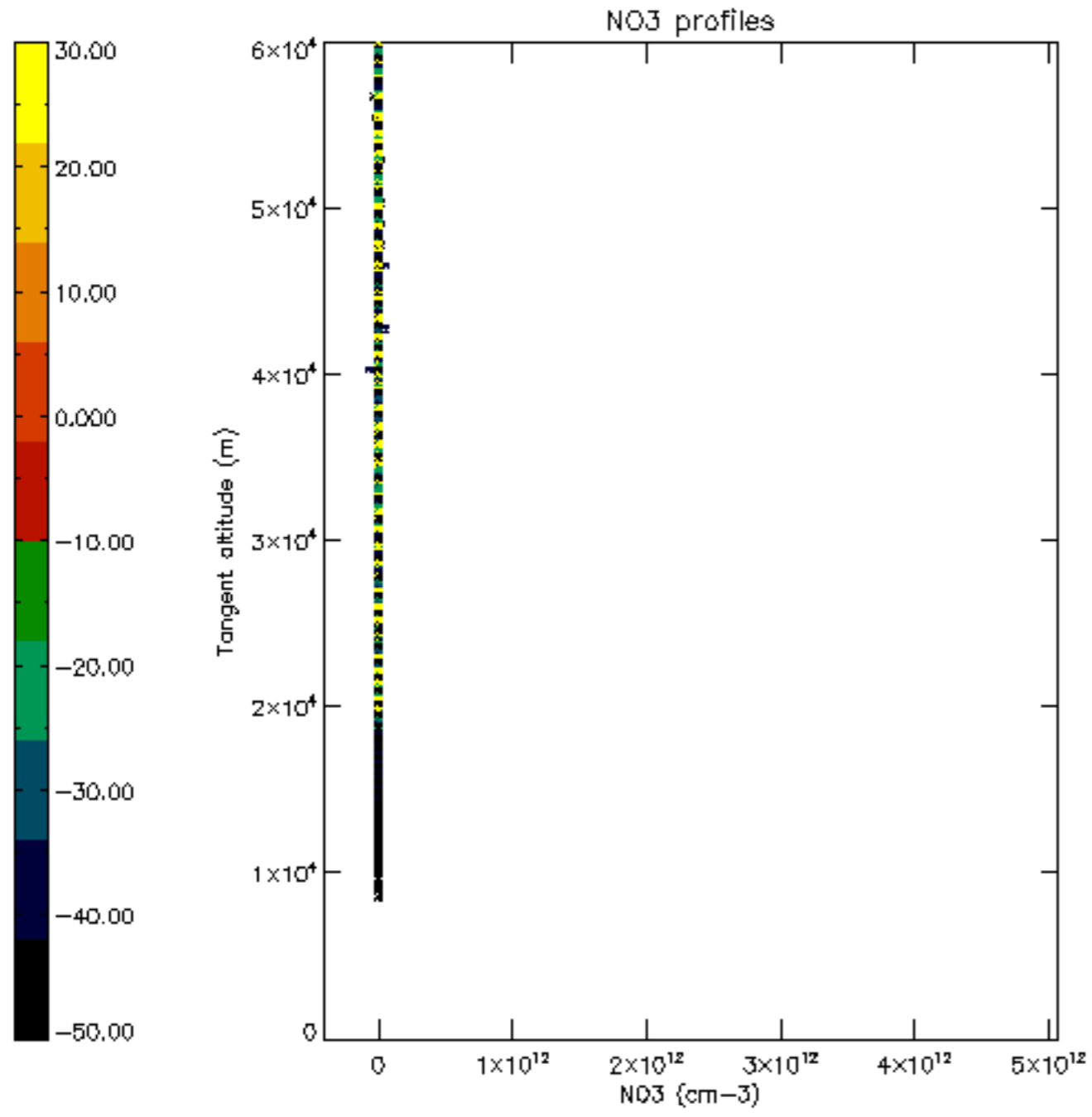


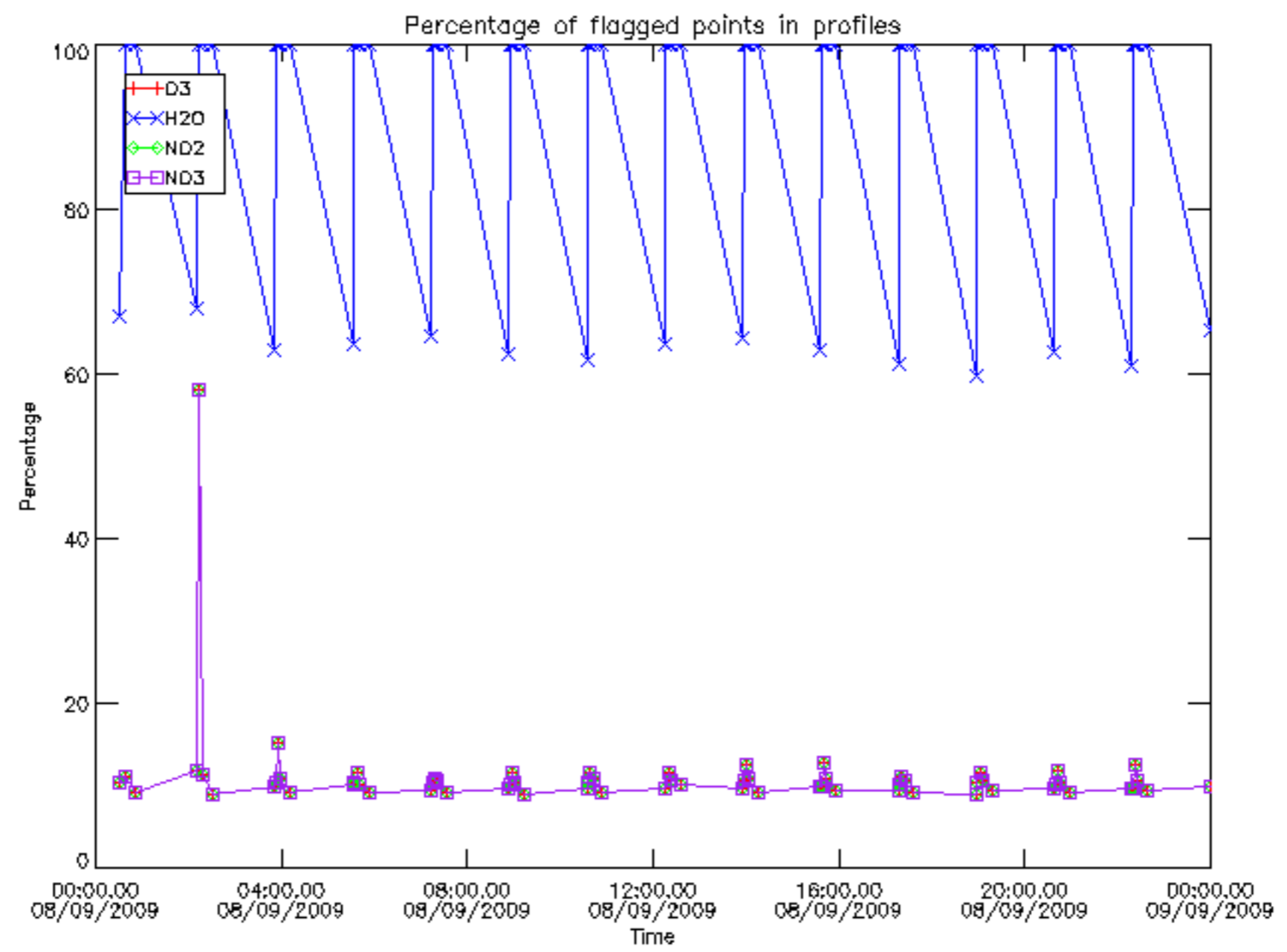




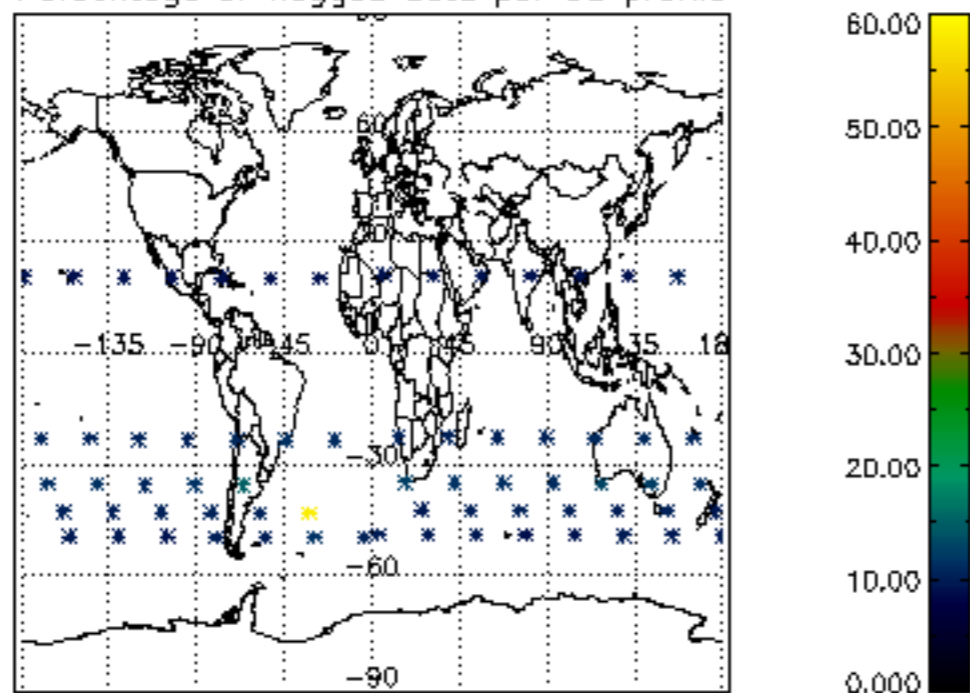




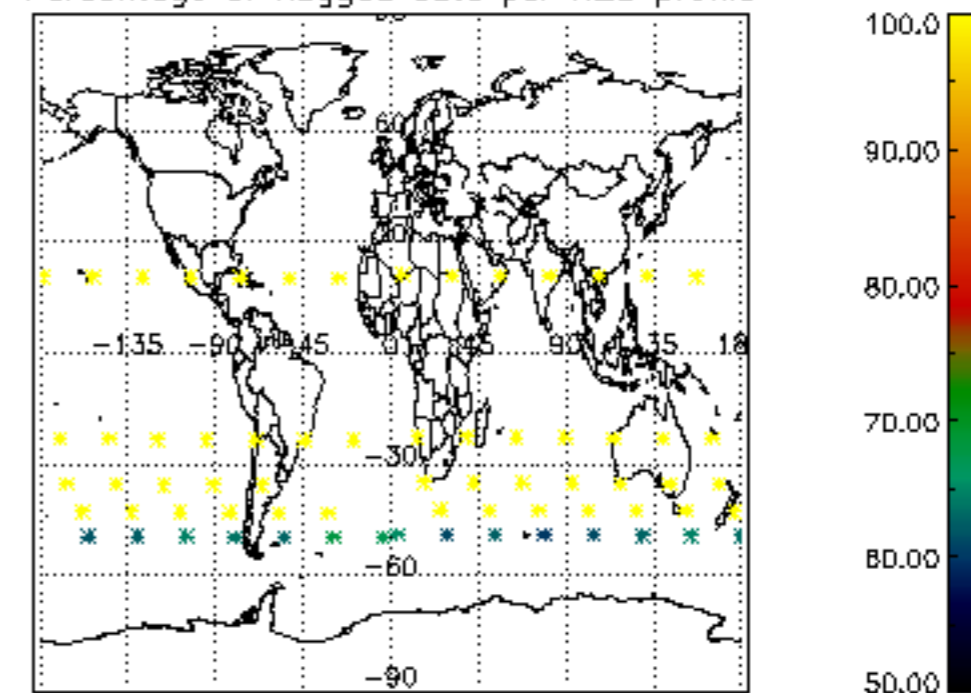




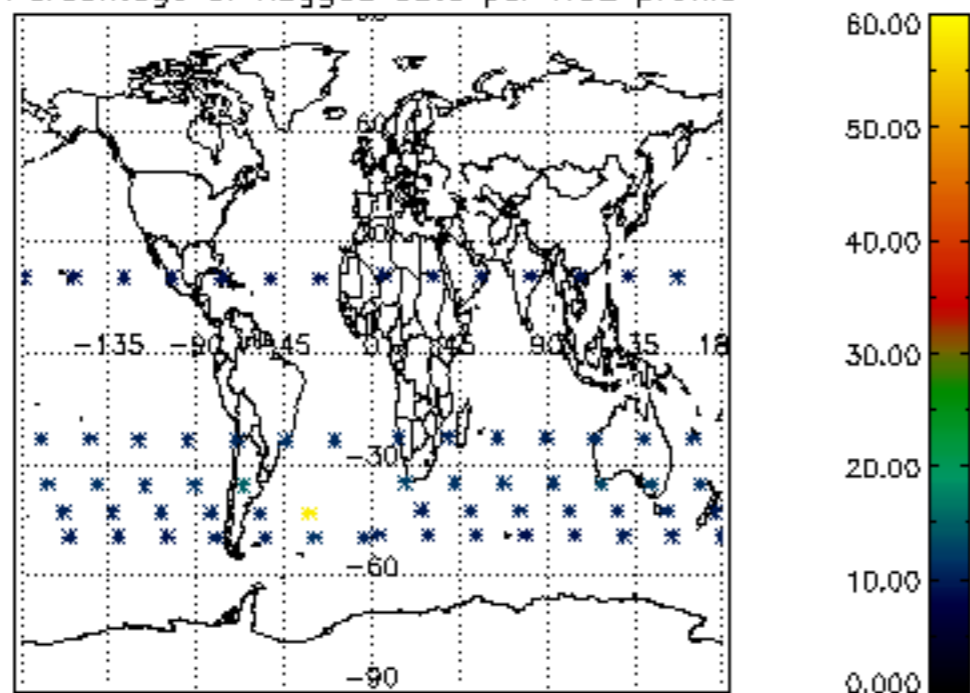
Percentage of flagged data per D3 profile



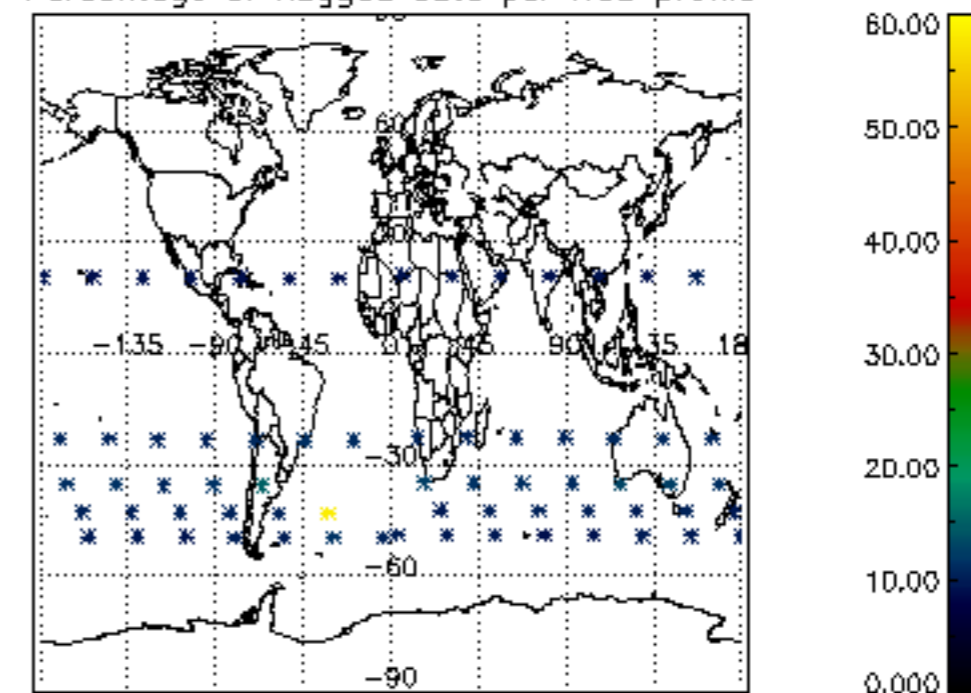
Percentage of flagged data per H2O profile



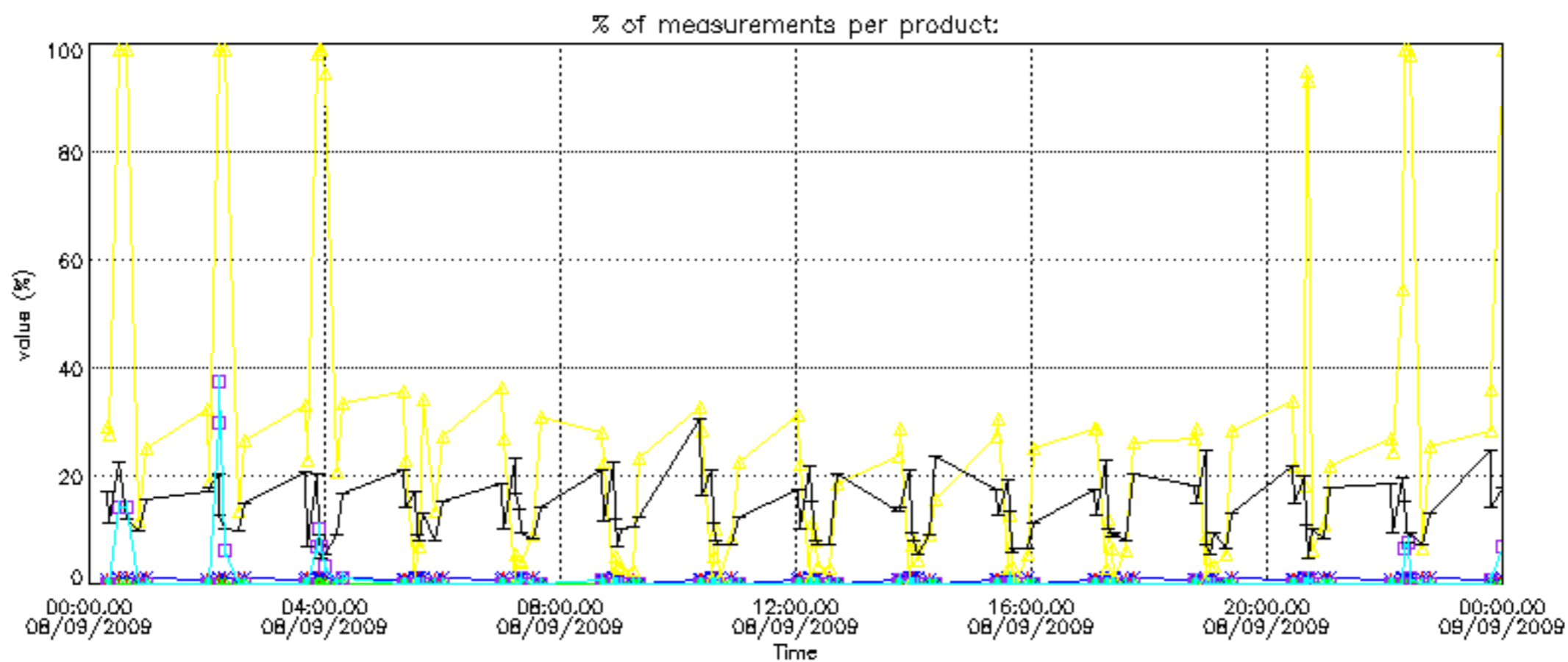
Percentage of flagged data per NO2 profile

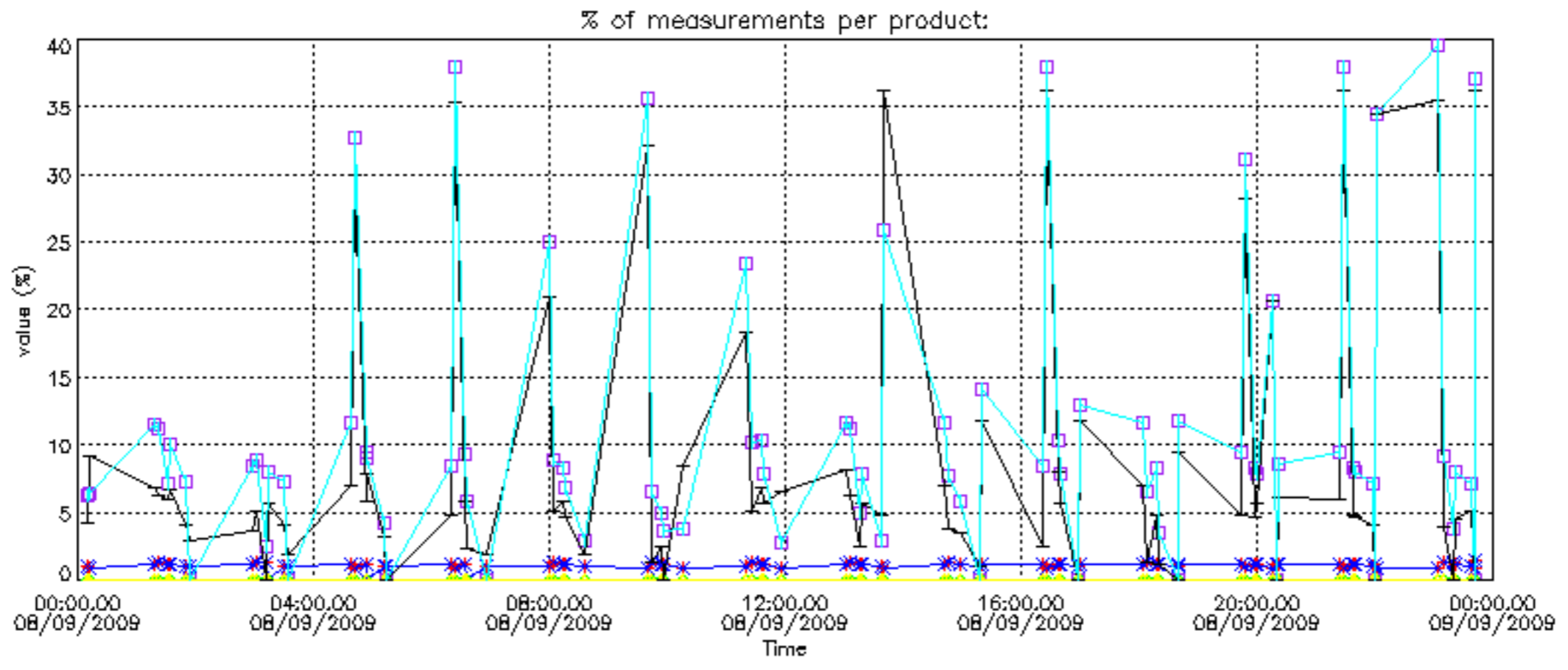


Percentage of flagged data per NO3 profile

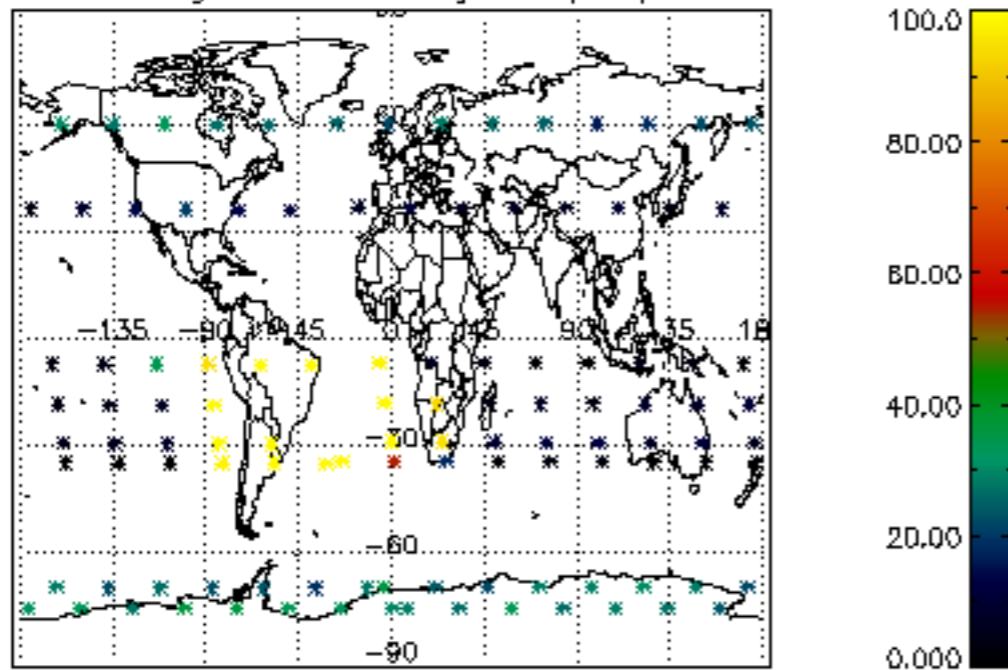




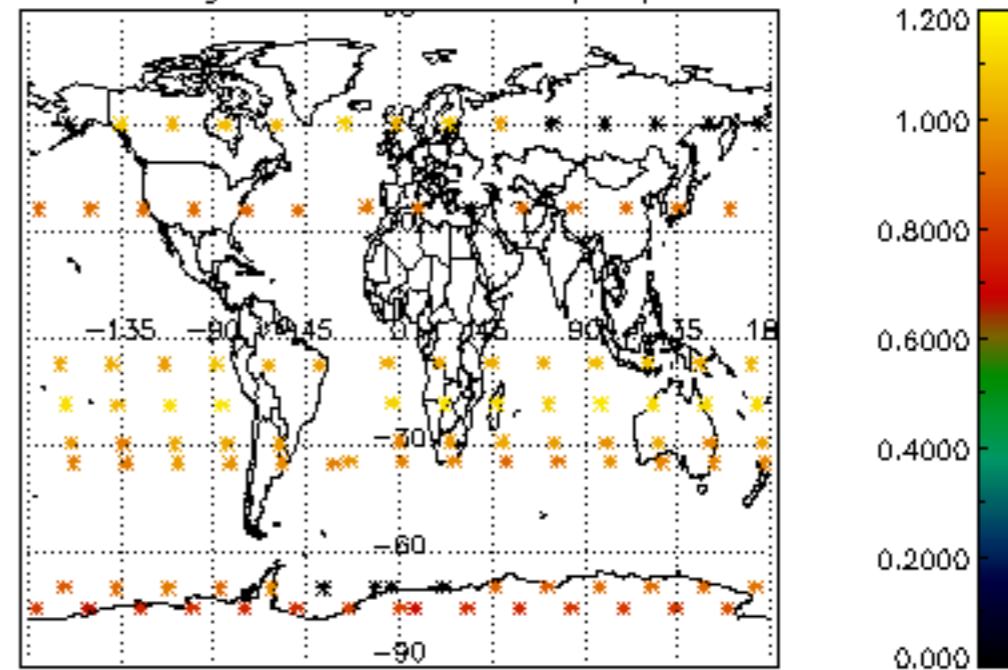




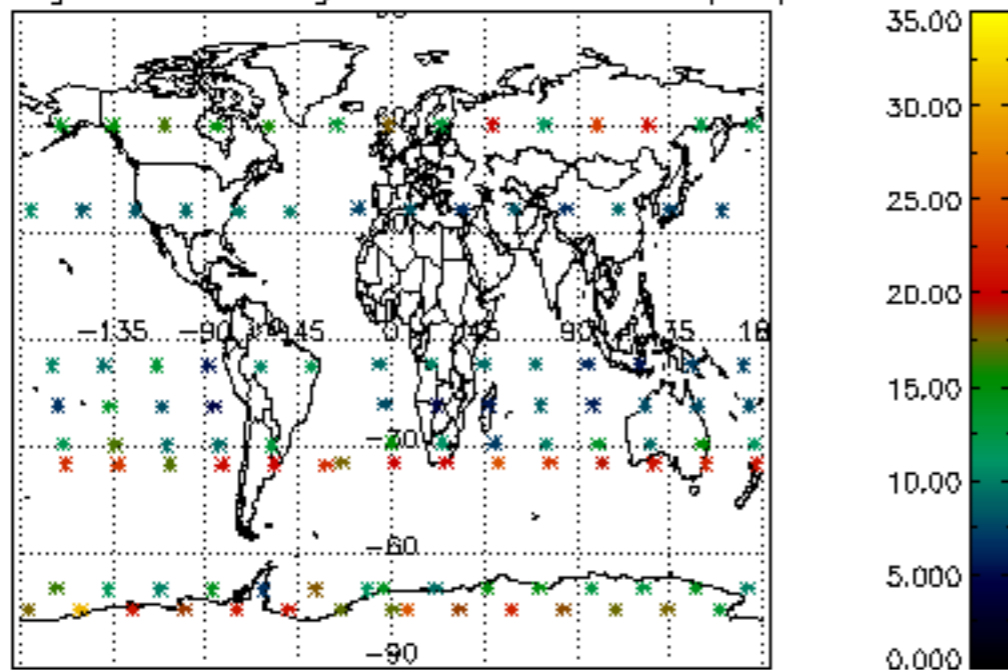
Percentage of cosmic ray hits per profile



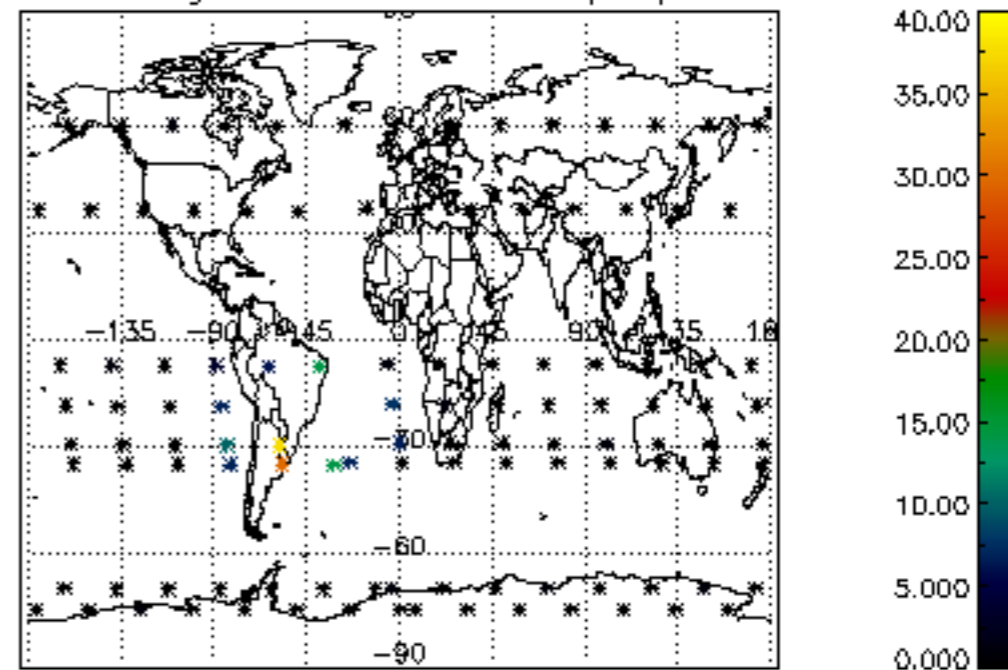
Percentage of datation errors per profile



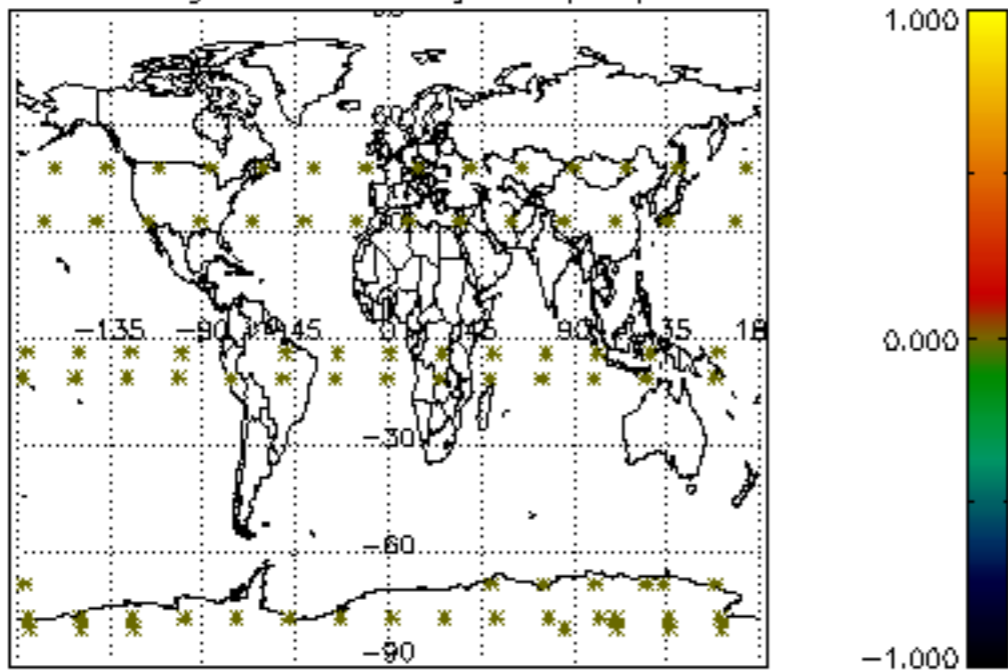
Percentage of star falling outside central band per profile



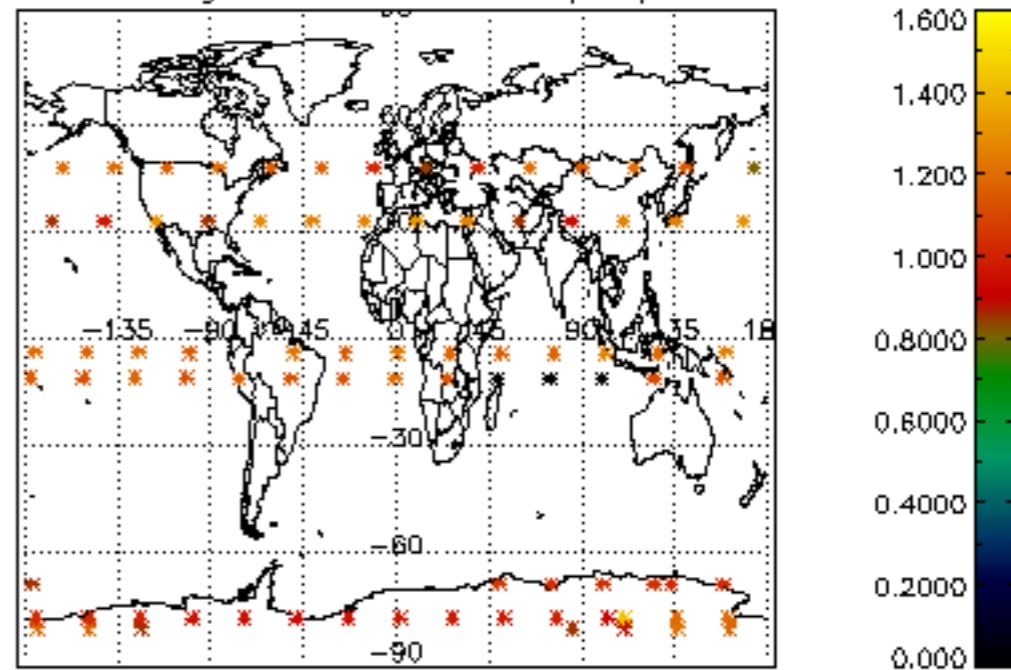
Percentage of saturation errors per profile



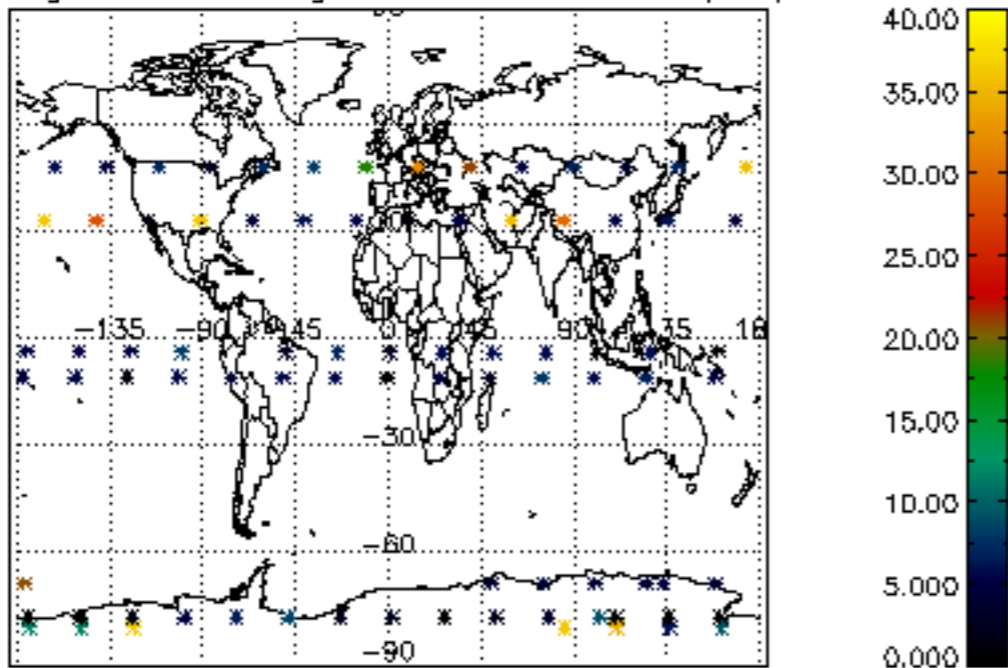
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

