

# GOMOS Level 2 Daily Report

## 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](#)

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 14:23:03
Data source version	GOMOS/6.01
Start time of products	04-06-2011 (04JUN2011 00:00:00)
Stop time of products	05-06-2011 (05JUN2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	300
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__2PRFIN20110604_000113_000000453103_00131_48421_9444.N1	04-JUN-2011 00:01:13	Bright	44.500	130	23Bet Dra	2.7990	5800.0	89	48421	No
2	GOM_NL__2PRFIN20110604_001202_000000483103_00131_48421_9445.N1	04-JUN-2011 00:12:02	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	48421	No
3	GOM_NL__2PRFIN20110604_001729_000000373103_00131_48421_9446.N1	04-JUN-2011 00:17:29	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	48421	No
4	GOM_NL__2PRFIN20110604_002522_000000543103_00131_48421_9447.N1	04-JUN-2011 00:25:22	Bright	53.500	53	43Bet And	2.0480	3300.0	107	48421	No
5	GOM_NL__2PRFIN20110604_002808_000000573103_00131_48421_9448.N1	04-JUN-2011 00:28:08	Twi_and_stray	57.000	58	21Alp And	2.0730	11000.	114	48421	No
6	GOM_NL__2PRFIN20110604_003321_000000543103_00131_48421_9449.N1	04-JUN-2011 00:33:21	Dark	53.500	140	88Gam Peg	2.8340	26000.	107	48421	No
7	GOM_NL__2PRFIN20110604_004226_000000473103_00131_48421_9450.N1	04-JUN-2011 00:42:26	Dark	46.500	52	16Bet Cet	2.0370	4500.0	93	48421	No
8	GOM_NL__2PRFIN20110604_004903_000000463103_00131_48421_9451.N1	04-JUN-2011 00:49:03	Dark	45.500	84	Alp Phe	2.3970	4500.0	91	48421	No
9	GOM_NL__2PRFIN20110604_005140_000000643103_00131_48421_9452.N1	04-JUN-2011 00:51:40	Dark	63.500	18	24Alp PsA	1.1660	9700.0	127	48421	No
10	GOM_NL__2PRFIN20110604_005436_000000503103_00132_48422_9443.N1	04-JUN-2011 00:54:36	Dark	50.000	63	Bet Gru	2.1500	2800.0	100	48422	No
11	GOM_NL__2PRFIN20110604_005632_000000483103_00132_48422_9444.N1	04-JUN-2011 00:56:32	Dark	47.500	31	Alp Gru	1.7340	15200.	95	48422	No
12	GOM_NL__2PRFIN20110604_010116_000000433103_00132_48422_9445.N1	04-JUN-2011 01:01:16	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	48422	No
13	GOM_NL__2PRFIN20110604_011009_000000493103_00132_48422_9446.N1	04-JUN-2011 01:10:09	Straylight	48.500	40	The Sco	1.8590	7100.0	97	48422	No
14	GOM_NL__2PRFIN20110604_011155_000000473103_00132_48422_9447.N1	04-JUN-2011 01:11:55	Twi_and_stray	46.500	25	35Lam Sco	1.6200	28000.	93	48422	No
15	GOM_NL__2PRFIN20110604_011336_000000433103_00132_48422_9448.N1	04-JUN-2011 01:13:36	Twi_and_stray	43.000	75	26Eps Sco	2.2910	4250.0	86	48422	No
16	GOM_NL__2PRFIN20110604_011534_000000473103_00132_48422_9449.N1	04-JUN-2011 01:15:34	Bright	47.000	136	23Tau Sco	2.8220	30000.	94	48422	No
17	GOM_NL__2PRFIN20110604_011904_000000443103_00132_48422_9450.N1	04-JUN-2011 01:19:04	Bright	44.000	86	35Eta Oph	2.4300	10200.	88	48422	No
18	GOM_NL__2PRFIN20110604_012052_000000413103_00132_48422_9451.N1	04-JUN-2011 01:20:52	Bright	41.000	98	13Zet Oph	2.5710	30000.	82	48422	No
19	GOM_NL__2PRFIN20110604_012302_000000393103_00132_48422_9452.N1	04-JUN-2011 01:23:02	Bright	38.500	120	1Del Oph	2.7340	3200.0	77	48422	No
20	GOM_NL__2PRFIN20110604_013050_000000443103_00132_48422_9453.N1	04-JUN-2011 01:30:50	Bright	44.000	127	27Bet Her	2.7810	4700.0	88	48422	No
21	GOM_NL__2PRFIN20110604_013409_000000433103_00132_48422_9454.N1	04-JUN-2011 01:34:09	Bright	43.000	133	40Zet Her	2.8070	6000.0	86	48422	No
22	GOM_NL__2PRFIN20110604_014127_000000433103_00132_48422_9455.N1	04-JUN-2011 01:41:27	Bright	42.500	130	23Bet Dra	2.7990	5800.0	85	48422	No
23	GOM_NL__2PRFIN20110604_015215_000000573103_00132_48422_9456.N1	04-JUN-2011 01:52:15	Bright	57.000	89	5Alp Cep	2.4510	8000.0	114	48422	No
24	GOM_NL__2PRFIN20110604_015742_000000413103_00132_48422_9457.N1	04-JUN-2011 01:57:42	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	48422	No
25	GOM_NL__2PRFIN20110604_020536_000000503103_00132_48422_9458.N1	04-JUN-2011 02:05:36	Bright	50.000	53	43Bet And	2.0480	3300.0	100	48422	No
26	GOM_NL__2PRFIN20110604_020822_000000543103_00132_48422_9459.N1	04-JUN-2011 02:08:22	Twi_and_stray	53.500	58	21Alp And	2.0730	11000.	107	48422	No
27	GOM_NL__2PRFIN20110604_021335_000000553103_00132_48422_9460.N1	04-JUN-2011 02:13:35	Dark	54.500	140	88Gam Peg	2.8340	26000.	109	48422	No
28	GOM_NL__2PRFIN20110604_022241_000000503103_00132_48422_9461.N1	04-JUN-2011 02:22:41	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	48422	No
29	GOM_NL__2PRFIN20110604_022918_000000463103_00132_48422_9462.N1	04-JUN-2011 02:29:18	Dark	45.500	84	Alp Phe	2.3970	4500.0	91	48422	No
30	GOM_NL__2PRFIN20110604_023155_000000603103_00132_48422_9463.N1	04-JUN-2011 02:31:55	Dark	59.500	18	24Alp PsA	1.1660	9700.0	119	48422	No
31	GOM_NL__2PRFIN20110604_023451_000000493103_00133_48423_9563.N1	04-JUN-2011 02:34:51	Dark	49.000	63	Bet Gru	2.1500	2800.0	98	48423	No
32	GOM_NL__2PRFIN20110604_023647_000000453103_00133_48423_9564.N1	04-JUN-2011 02:36:47	Dark	45.000	31	Alp Gru	1.7340	15200.	90	48423	No
33	GOM_NL__2PRFIN20110604_024131_000000423103_00133_48423_9565.N1	04-JUN-2011 02:41:31	Straylight	42.000	45	Alp Pav	1.9400	26000.	84	48423	No
34	GOM_NL__2PRFIN20110604_025023_000000473103_00133_48423_9566.N1	04-JUN-2011 02:50:23	Straylight	47.000	40	The Sco	1.8590	7100.0	94	48423	No
35	GOM_NL__2PRFIN20110604_025209_000000443103_00133_48423_9567.N1	04-JUN-2011 02:52:09	Twi_and_stray	44.000	25	35Lam Sco	1.6200	28000.	88	48423	No
36	GOM_NL__2PRFIN20110604_025350_000000493103_00133_48423_9568.N1	04-JUN-2011 02:53:50	Twi_and_stray	48.500	75	26Eps Sco	2.2910	4250.0	97	48423	No
37	GOM_NL__2PRFIN20110604_025548_000000393103_00133_48423_9569.N1	04-JUN-2011 02:55:48	Bright	39.000	136	23Tau Sco	2.8220	30000.	78	48423	No
38	GOM_NL__2PRFIN20110604_025918_000000453103_00133_48423_9570.N1	04-JUN-2011 02:59:18	Bright	44.500	86	35Eta Oph	2.4300	10200.	89	48423	No
39	GOM_NL__2PRFIN20110604_030107_000000403103_00133_48423_9571.N1	04-JUN-2011 03:01:07	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	48423	No
40	GOM_NL__2PRFIN20110604_030315_000000403103_00133_48423_9572.N1	04-JUN-2011 03:03:15	Bright	39.500	120	1Del Oph	2.7340	3200.0	79	48423	No
41	GOM_NL__2PRFIN20110604_031104_000000423103_00133_48423_9573.N1	04-JUN-2011 03:11:04	Bright	42.000	127	27Bet Her	2.7810	4700.0	84	48423	No
42	GOM_NL__2PRFIN20110604_031422_000000433103_00133_48423_9574.N1	04-JUN-2011 03:14:22	Bright	42.500	133	40Zet Her	2.8070	6000.0	85	48423	No







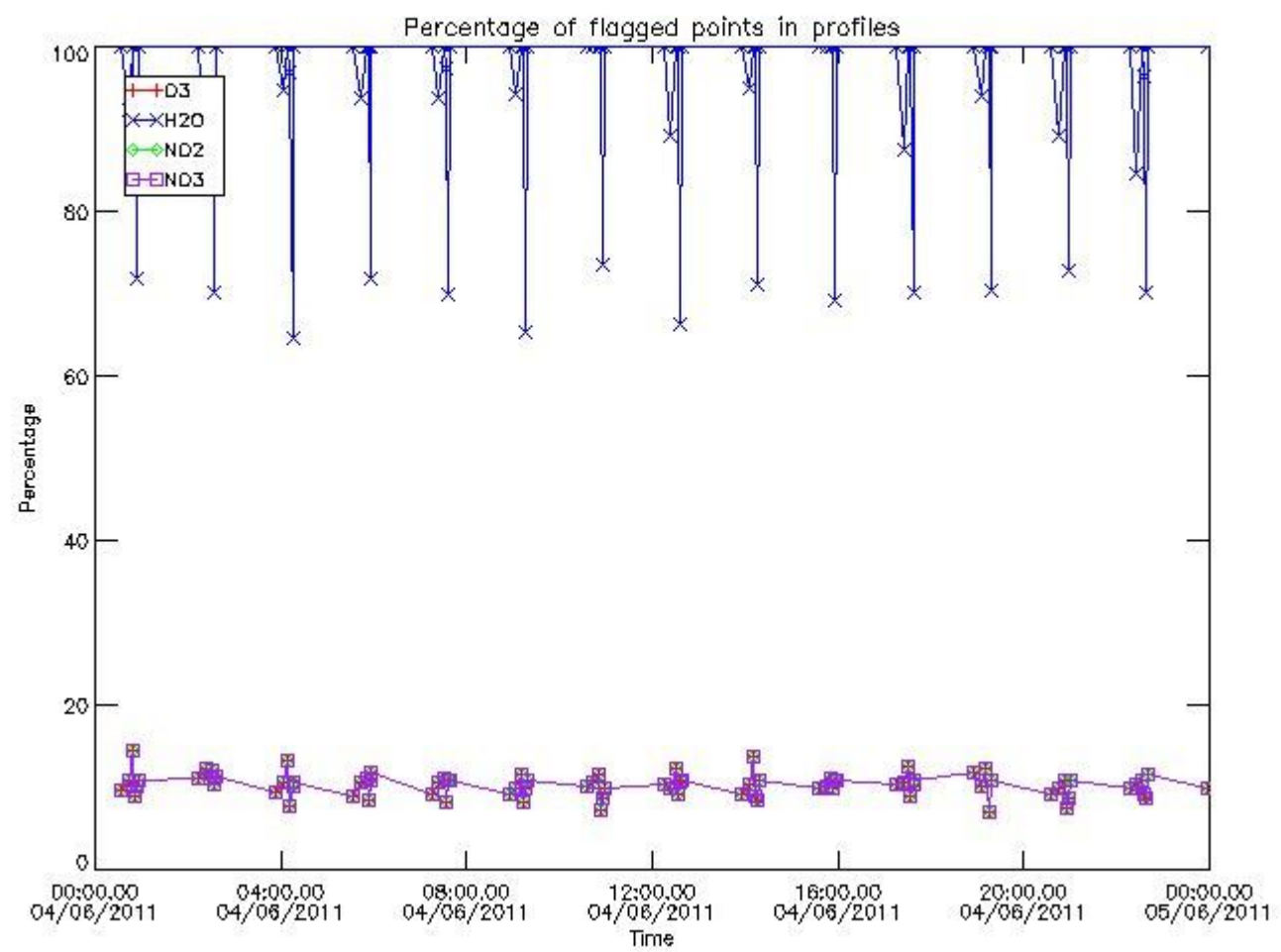


279	GOM_NL__2PRFIN20110604_221631_000000563103_00144_48434_9891.N1	04-JUN-2011 22:16:31	Dark	56.000	140	88Gam Peg	2.8340	26000.	112	48434	No
280	GOM_NL__2PRFIN20110604_222537_000000493103_00144_48434_9892.N1	04-JUN-2011 22:25:37	Dark	49.000	52	16Bet Cet	2.0370	4500.0	98	48434	No
281	GOM_NL__2PRFIN20110604_223213_000000473103_00144_48434_9893.N1	04-JUN-2011 22:32:13	Dark	46.500	84	Alp Phe	2.3970	4500.0	93	48434	No
282	GOM_NL__2PRFIN20110604_223459_000000563103_00144_48434_9894.N1	04-JUN-2011 22:34:59	Dark	56.000	18	24Alp PsA	1.1660	9700.0	112	48434	No
283	GOM_NL__2PRFIN20110604_223750_000000593103_00145_48435_9902.N1	04-JUN-2011 22:37:50	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	48435	No
284	GOM_NL__2PRFIN20110604_223946_000000453103_00145_48435_9903.N1	04-JUN-2011 22:39:46	Dark	44.500	31	Alp Gru	1.7340	15200.	89	48435	No
285	GOM_NL__2PRFIN20110604_224426_000000443103_00145_48435_9904.N1	04-JUN-2011 22:44:26	Straylight	44.000	45	Alp Pav	1.9400	26000.	88	48435	No
286	GOM_NL__2PRFIN20110604_225316_000000463103_00145_48435_9905.N1	04-JUN-2011 22:53:16	Straylight	45.500	40	The Sco	1.8590	7100.0	91	48435	No
287	GOM_NL__2PRFIN20110604_225502_000000473103_00145_48435_9906.N1	04-JUN-2011 22:55:02	Tw_i_and_stray	46.500	25	35Lam Sco	1.6200	28000.	93	48435	No
288	GOM_NL__2PRFIN20110604_225641_000000463103_00145_48435_9907.N1	04-JUN-2011 22:56:41	Tw_i_and_stray	45.500	75	26Eps Sco	2.2910	4250.0	91	48435	No
289	GOM_NL__2PRFIN20110604_225839_000000473103_00145_48435_9908.N1	04-JUN-2011 22:58:39	Bright	47.000	136	23Tau Sco	2.8220	30000.	94	48435	No
290	GOM_NL__2PRFIN20110604_230207_000000443103_00145_48435_9909.N1	04-JUN-2011 23:02:07	Bright	43.500	86	35Eta Oph	2.4300	10200.	87	48435	No
291	GOM_NL__2PRFIN20110604_230355_000000403103_00145_48435_9910.N1	04-JUN-2011 23:03:55	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	48435	No
292	GOM_NL__2PRFIN20110604_230603_000000393103_00145_48435_9911.N1	04-JUN-2011 23:06:03	Bright	39.000	120	1Del Oph	2.7340	3200.0	78	48435	No
293	GOM_NL__2PRFIN20110604_231349_000000423103_00145_48435_9912.N1	04-JUN-2011 23:13:49	Bright	42.000	127	27Bet Her	2.7810	4700.0	84	48435	No
294	GOM_NL__2PRFIN20110604_231706_000000403103_00145_48435_9913.N1	04-JUN-2011 23:17:06	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	48435	No
295	GOM_NL__2PRFIN20110604_232421_000000453103_00145_48435_9914.N1	04-JUN-2011 23:24:21	Bright	45.000	130	23Bet Dra	2.7990	5800.0	90	48435	No
296	GOM_NL__2PRFIN20110604_233509_000000483103_00145_48435_9915.N1	04-JUN-2011 23:35:09	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	48435	No
297	GOM_NL__2PRFIN20110604_234042_000000573103_00145_48435_9916.N1	04-JUN-2011 23:40:42	Bright	57.000	76	27Gam Cas	2.3000	30000.	114	48435	No
298	GOM_NL__2PRFIN20110604_234839_000000483103_00145_48435_9917.N1	04-JUN-2011 23:48:39	Bright	48.000	53	43Bet And	2.0480	3300.0	96	48435	No
299	GOM_NL__2PRFIN20110604_235126_000000573103_00145_48435_9918.N1	04-JUN-2011 23:51:26	Tw_i_and_stray	57.000	58	21Alp And	2.0730	11000.	114	48435	No
300	GOM_NL__2PRFIN20110604_235645_000000563103_00145_48435_9919.N1	04-JUN-2011 23:56:45	Dark	55.500	140	88Gam Peg	2.8340	26000.	111	48435	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.

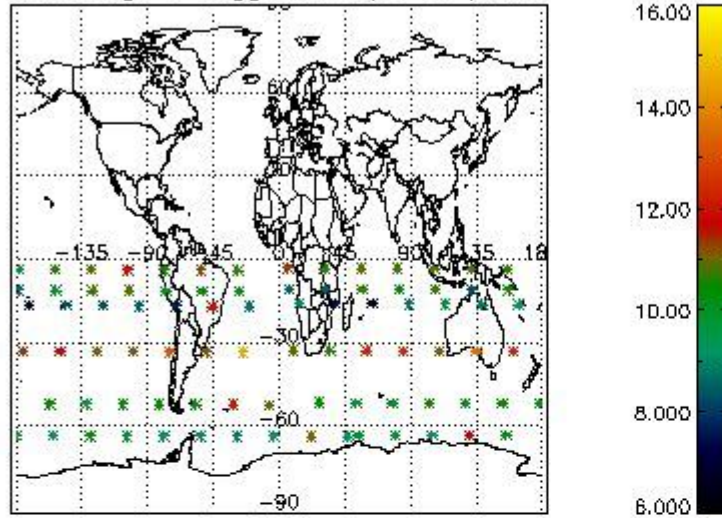
#### 3.1 Plot quality information per product (time dependant)



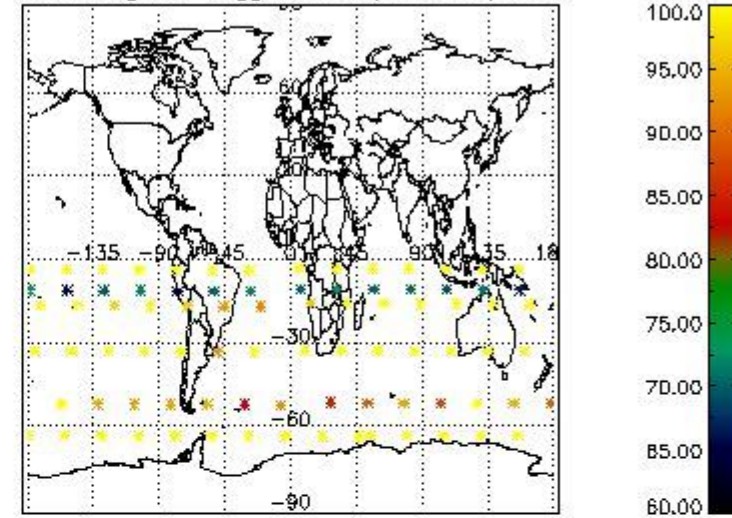
*3.2 Plot quality information per product (world map)*



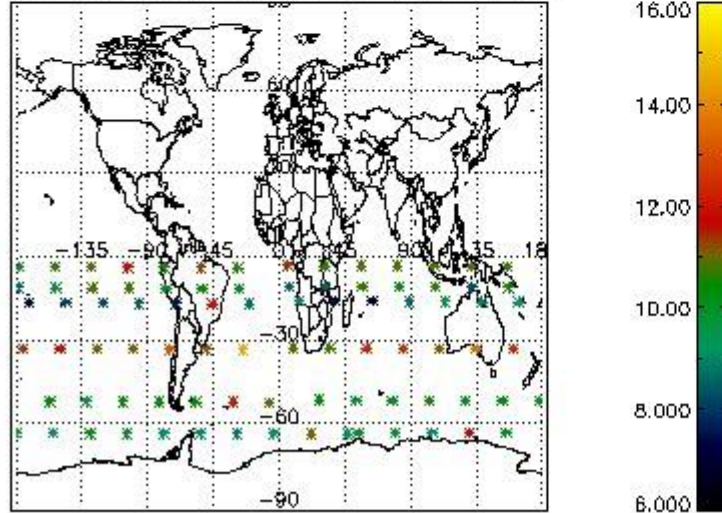
Percentage of flagged data per O3 profile



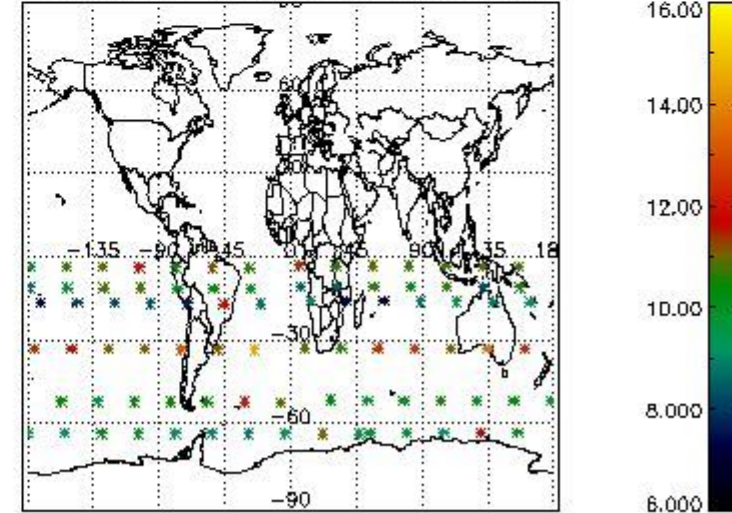
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

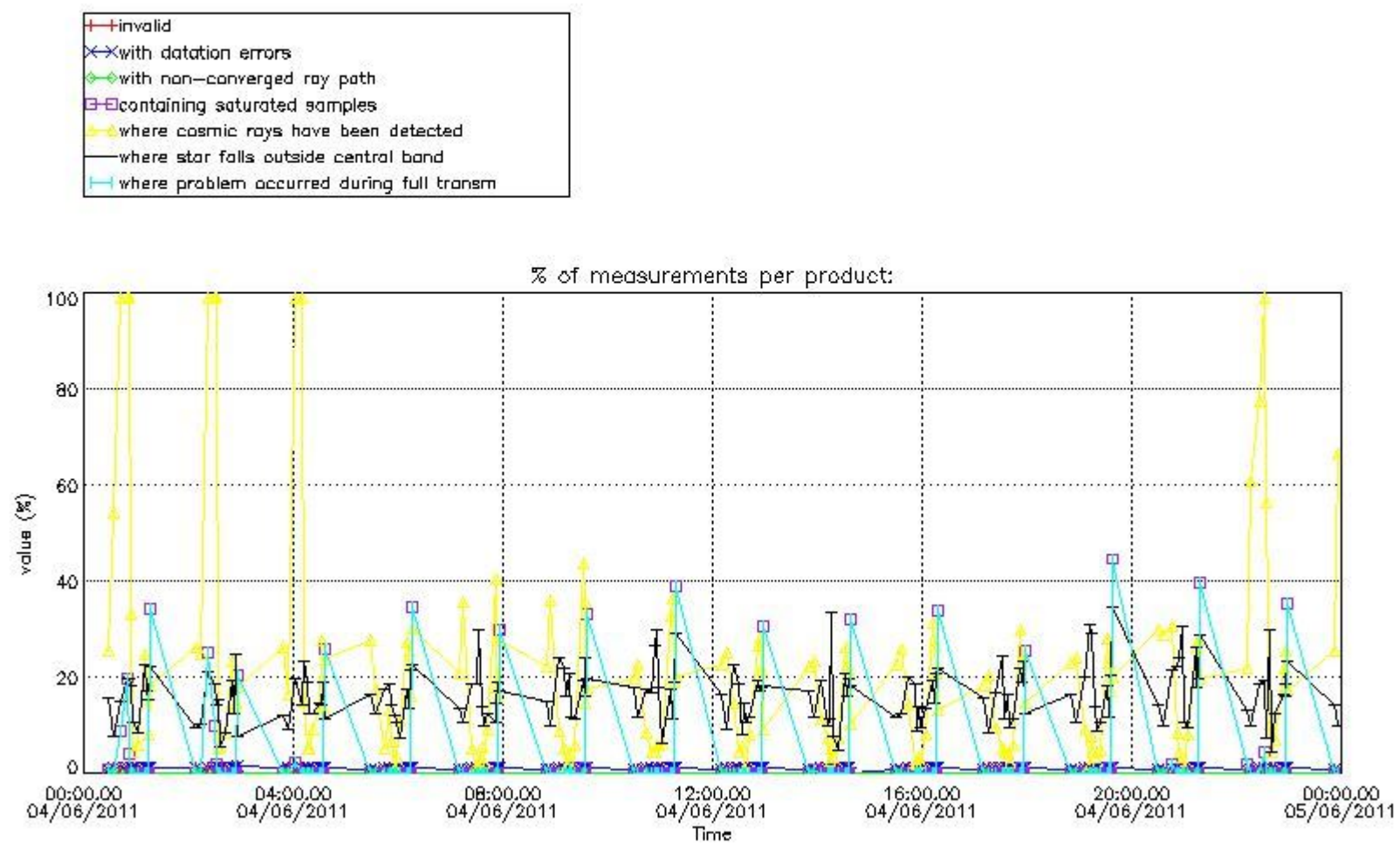


#### 4. Level 1 quality information per product

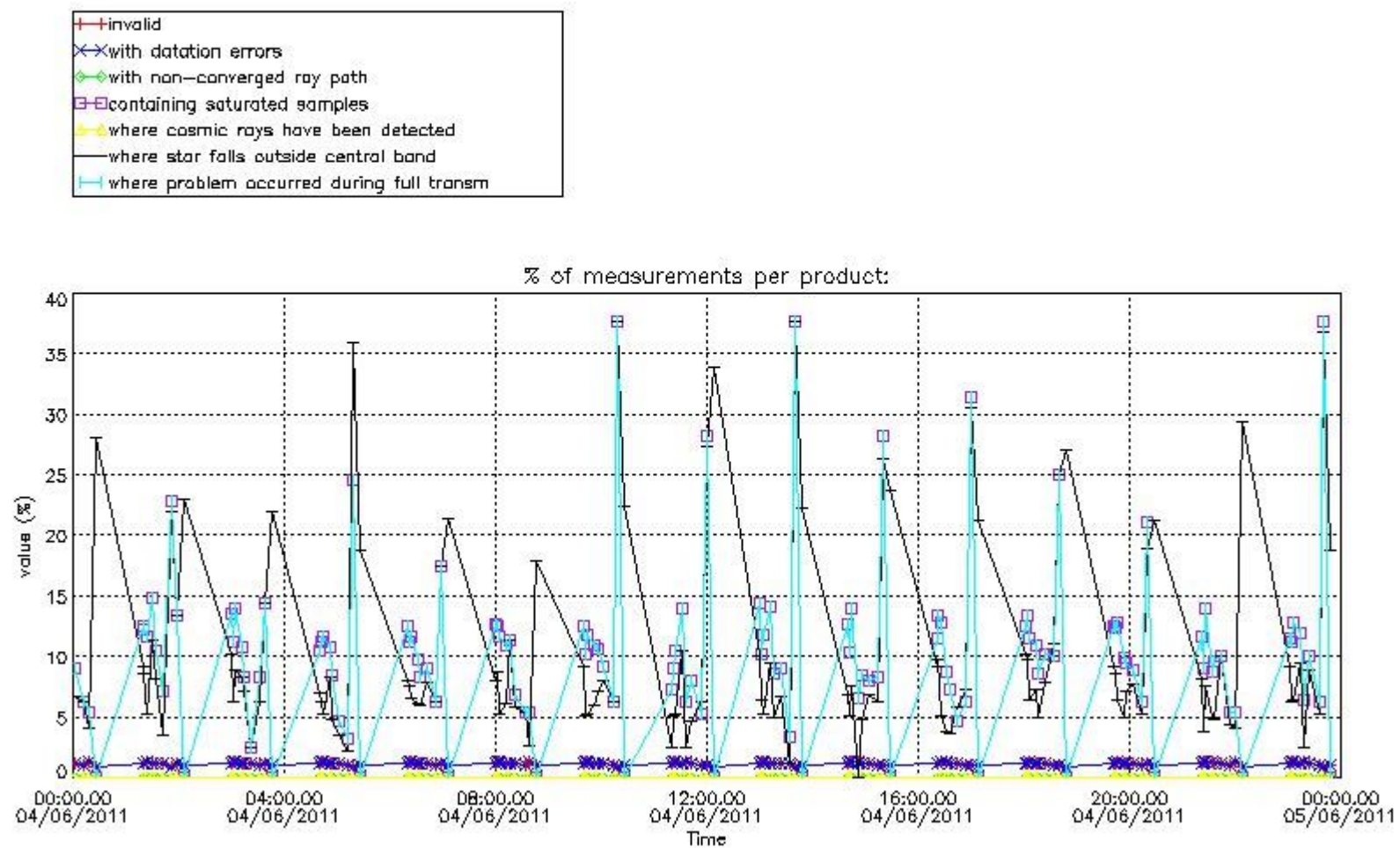
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

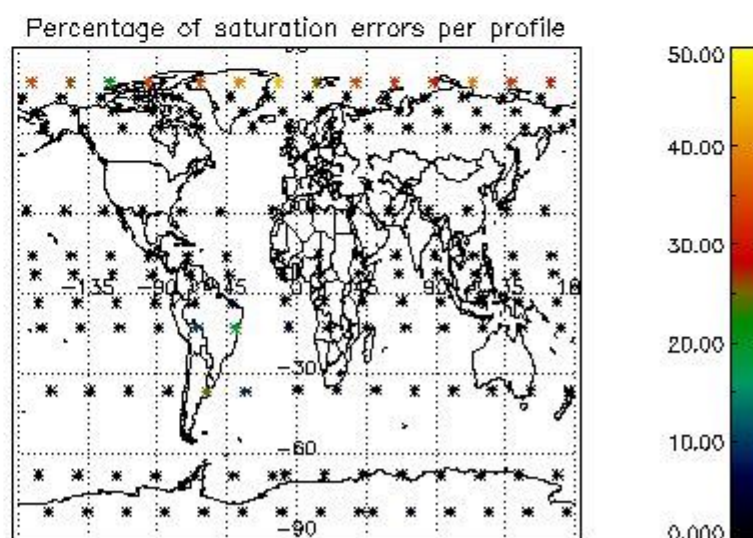
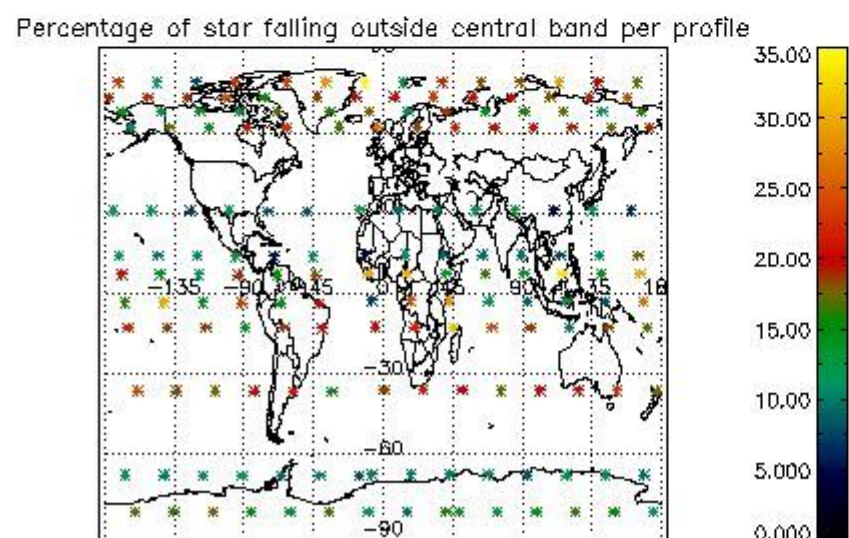
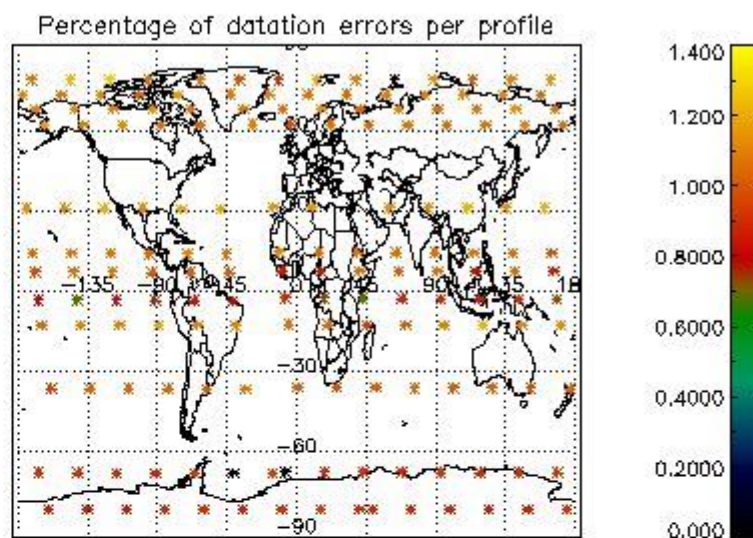
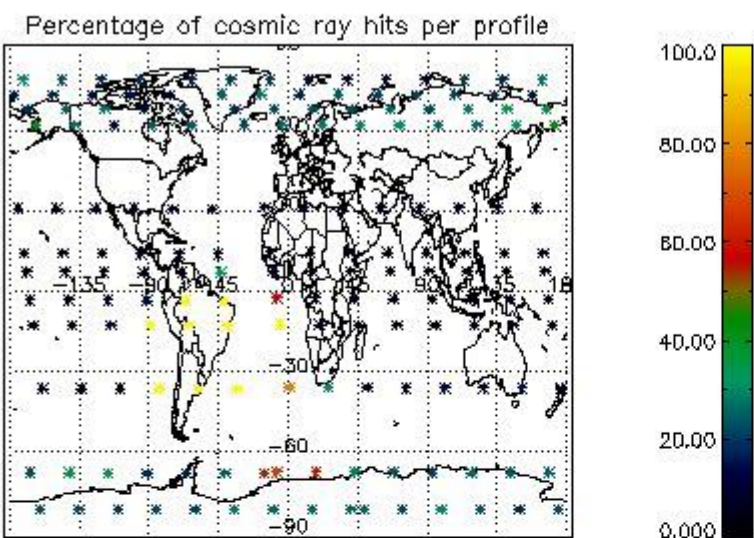
##### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes



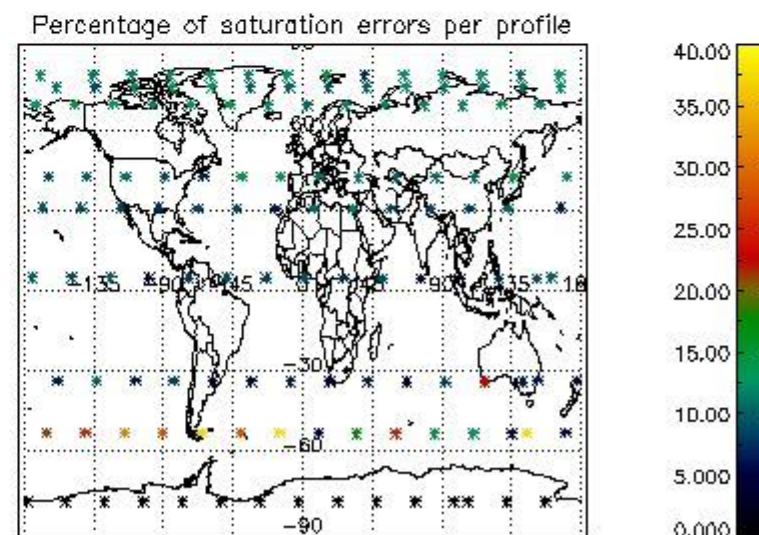
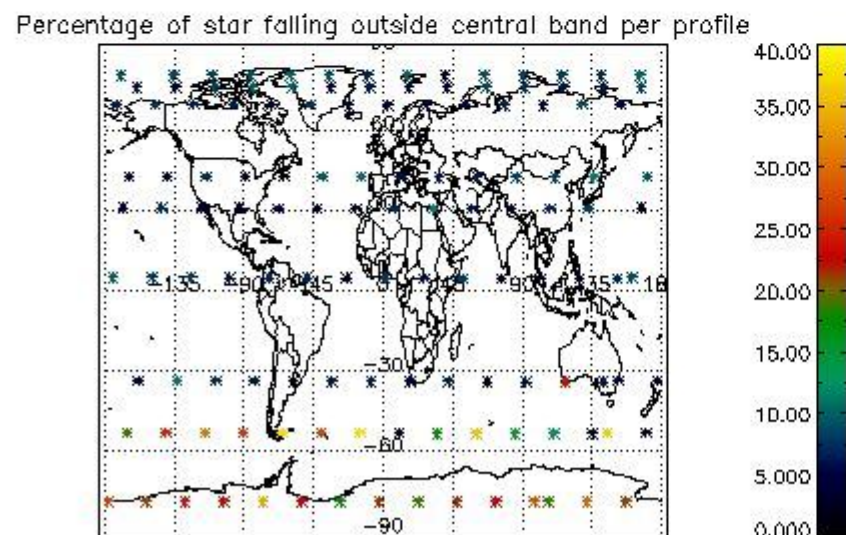
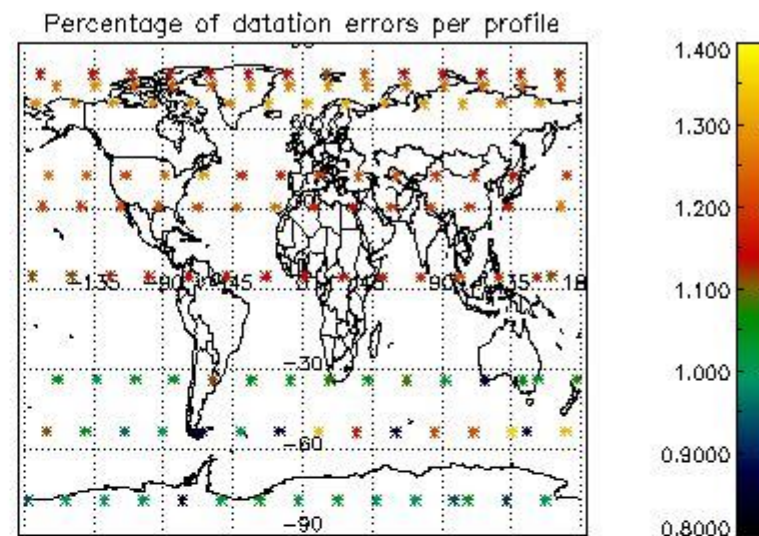
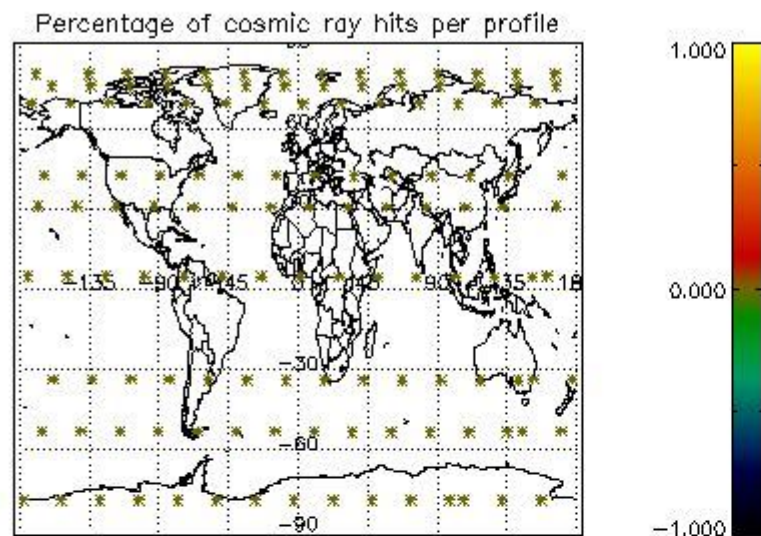
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



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

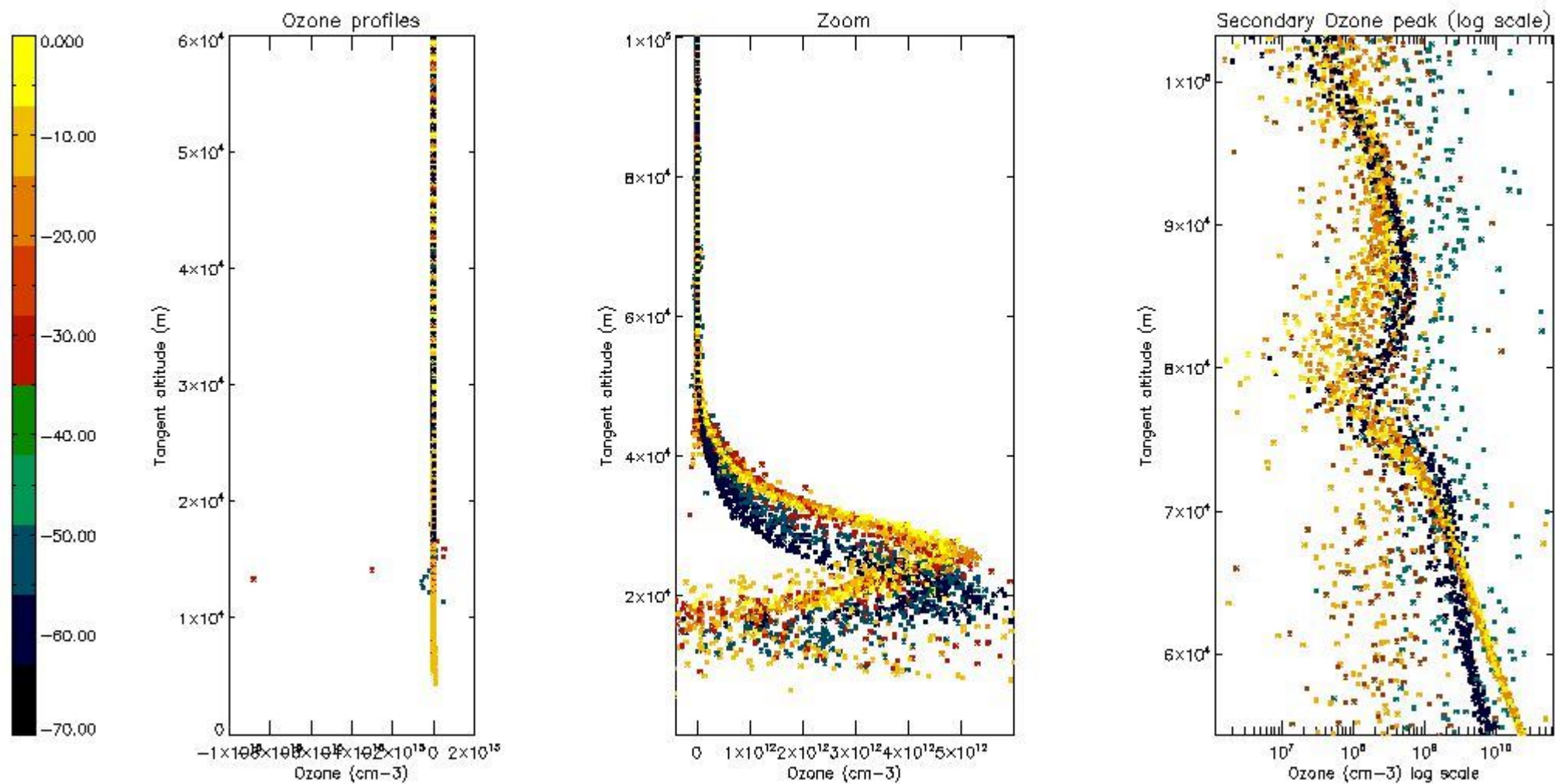
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	32
STD < 20	14

STD < 10	10
STD < 5	7

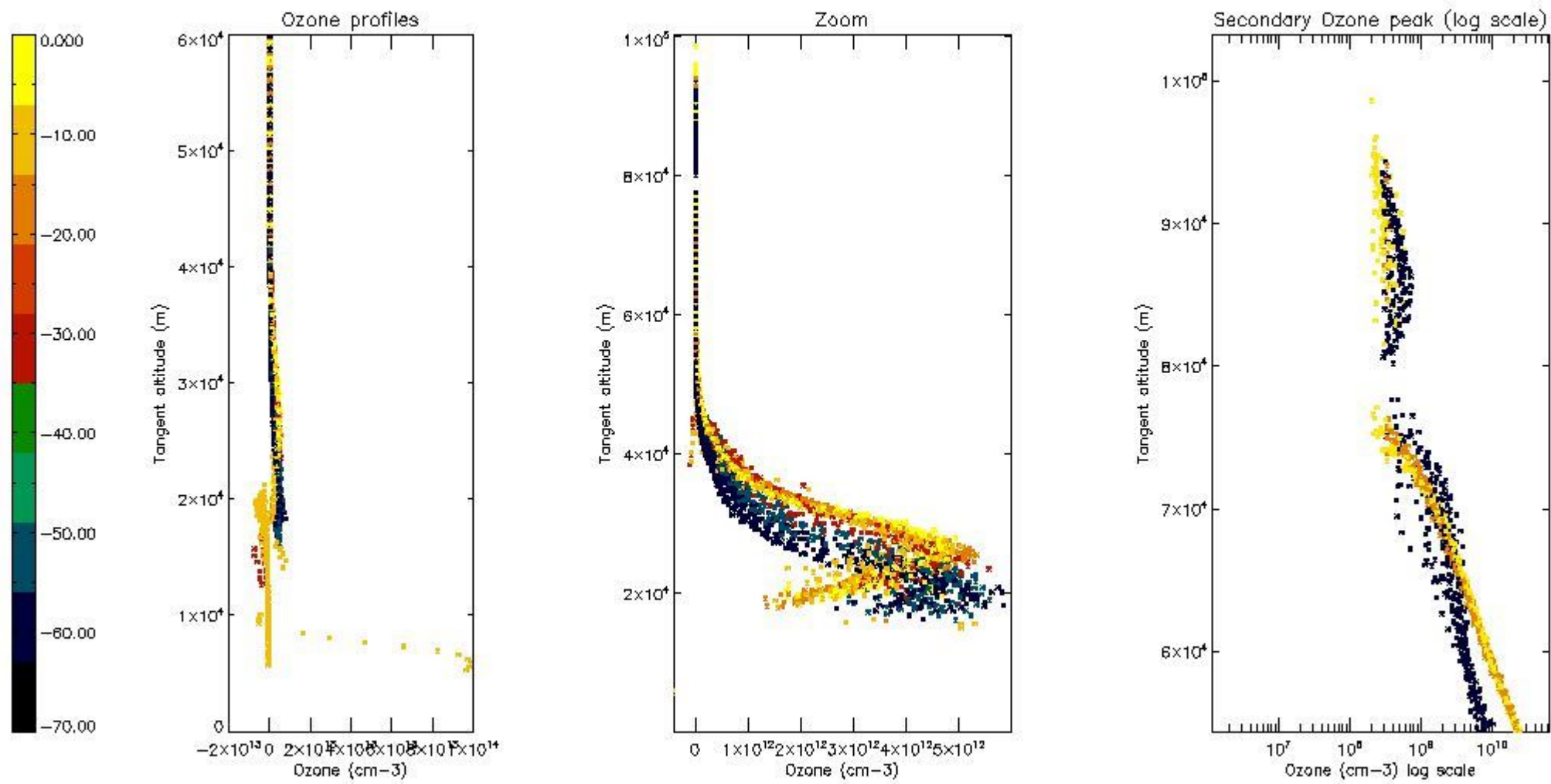
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



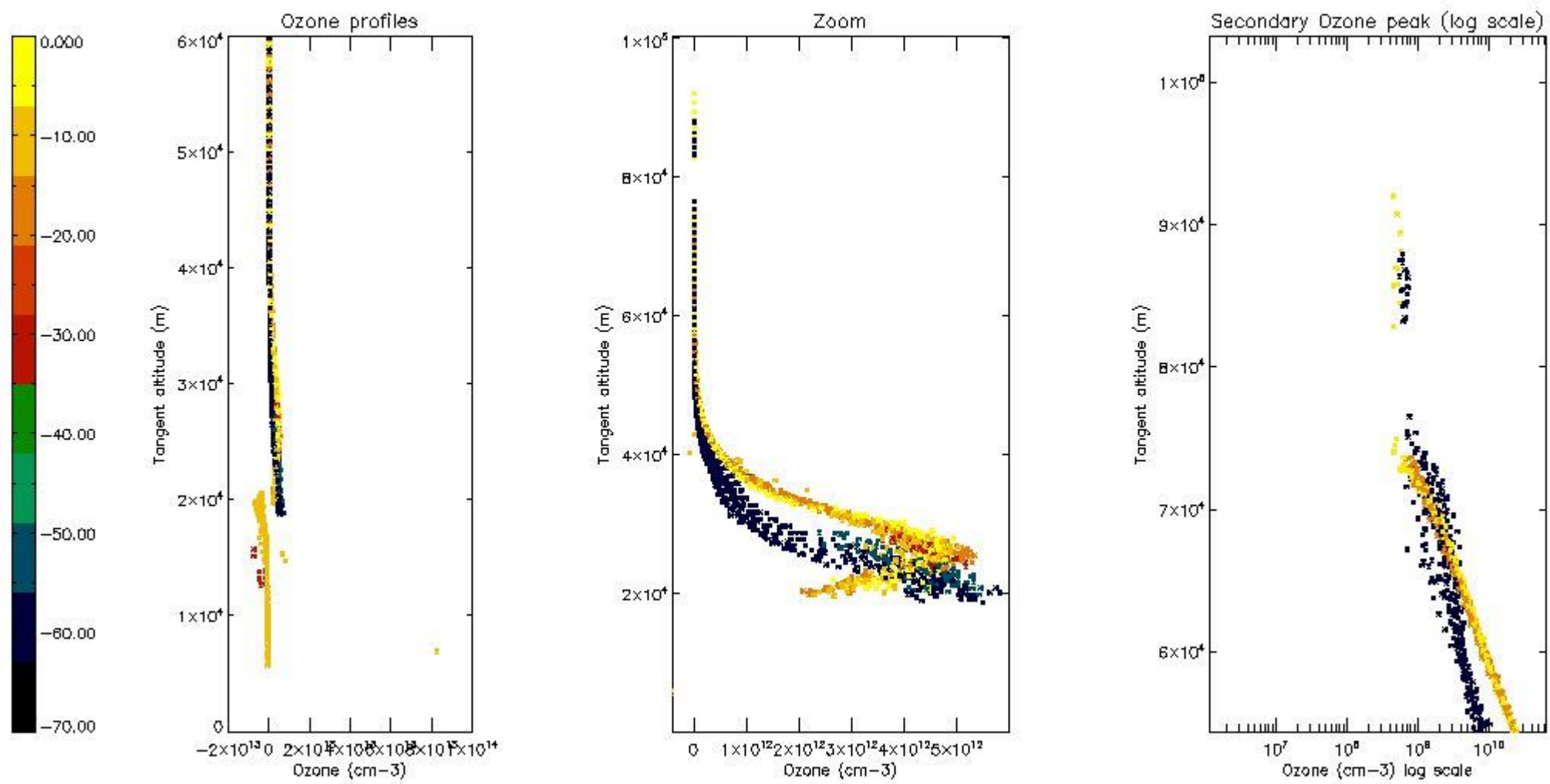
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

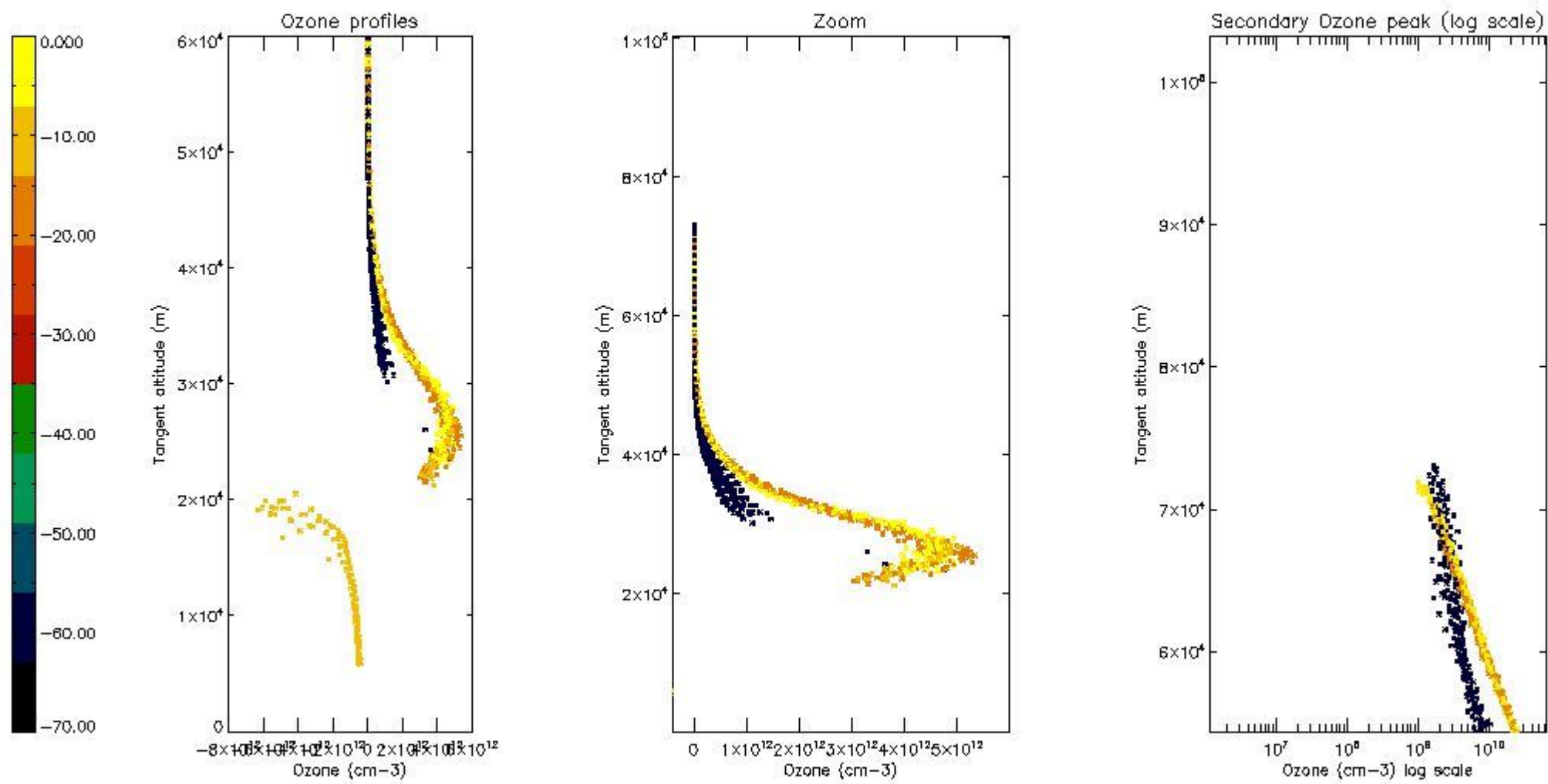
The colorbar represents the latitude.



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

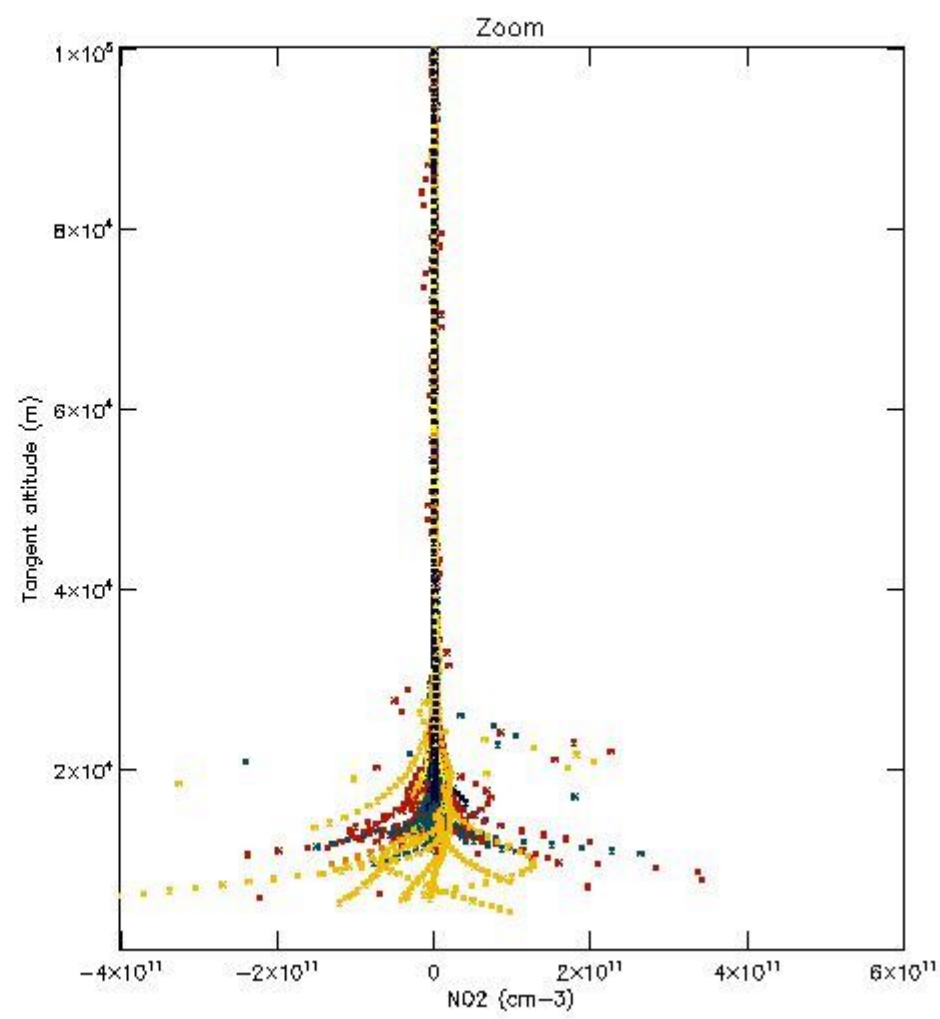
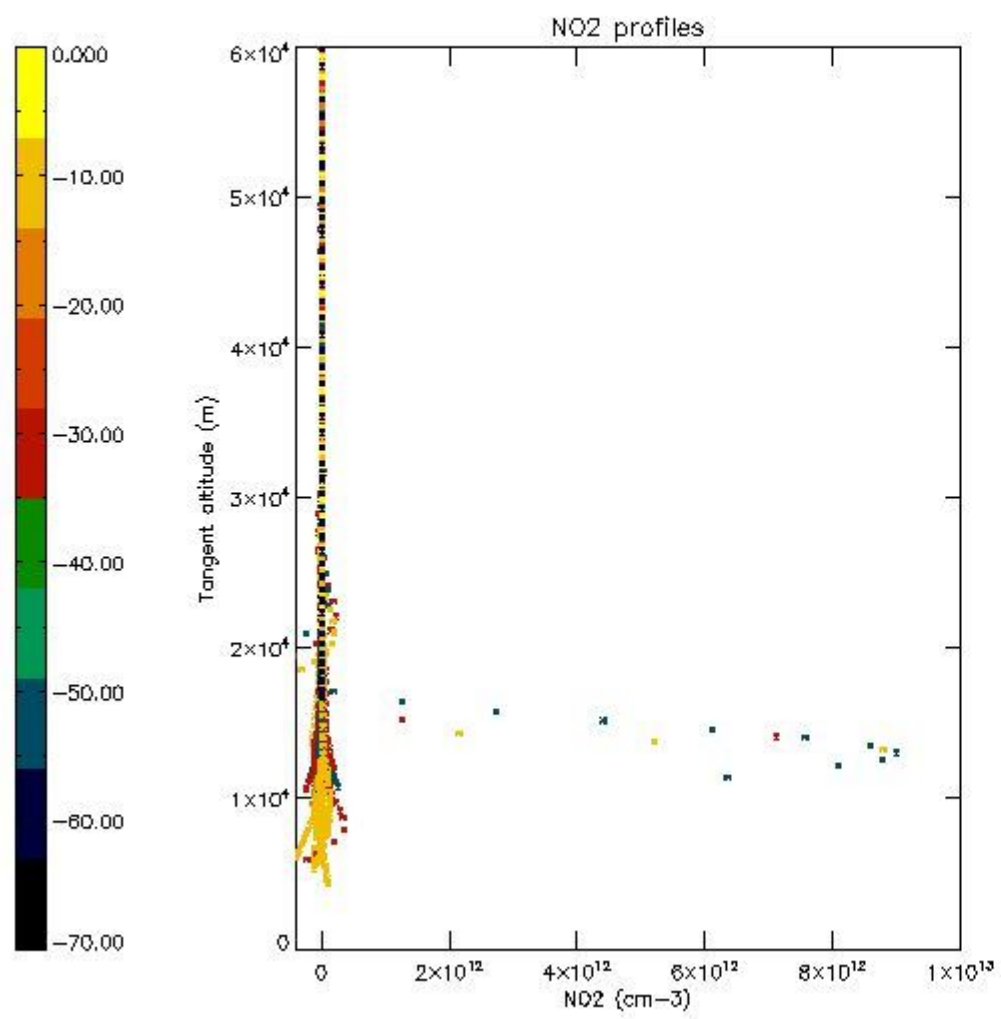
The colorbar represents the latitude.





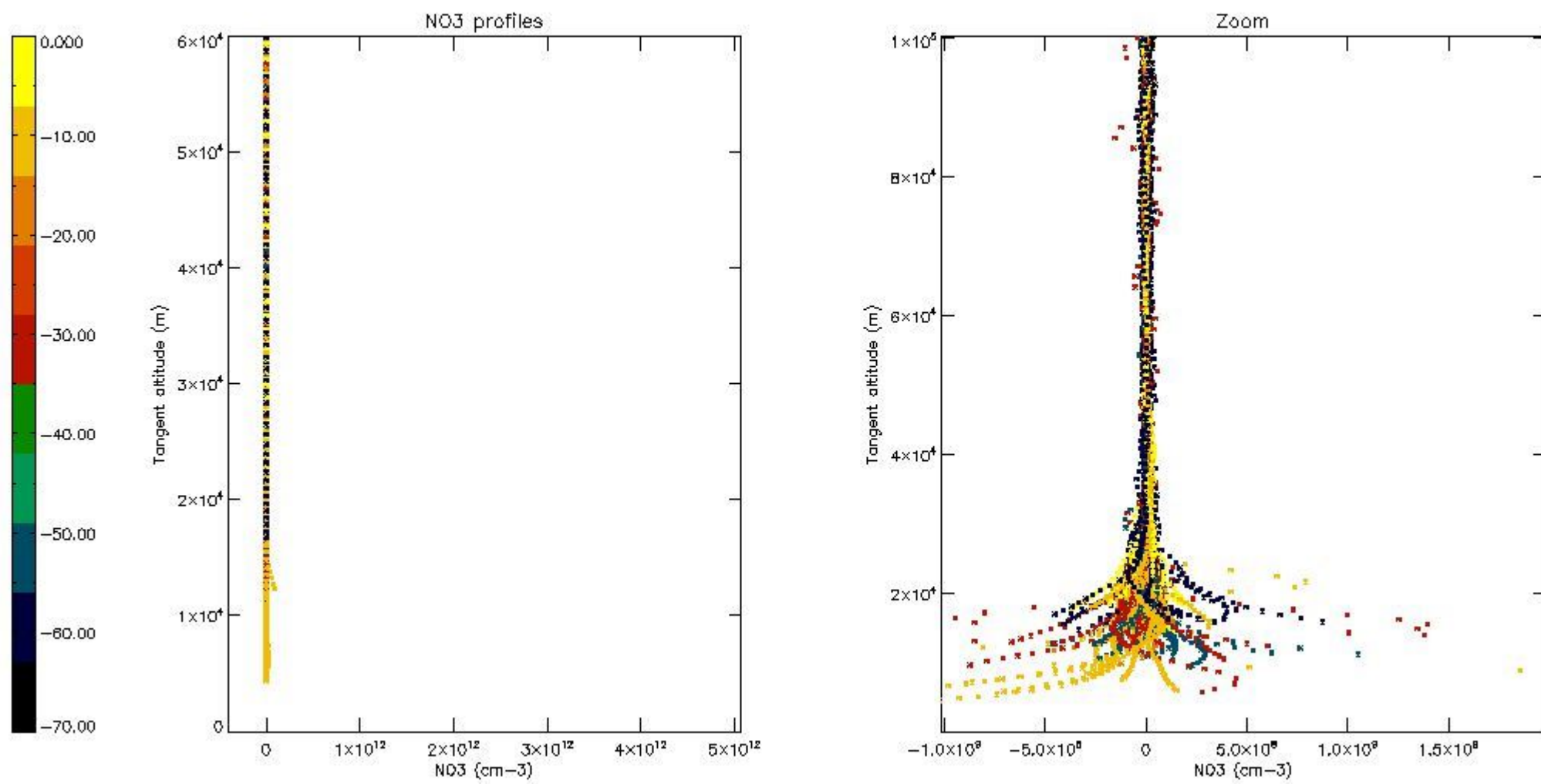
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



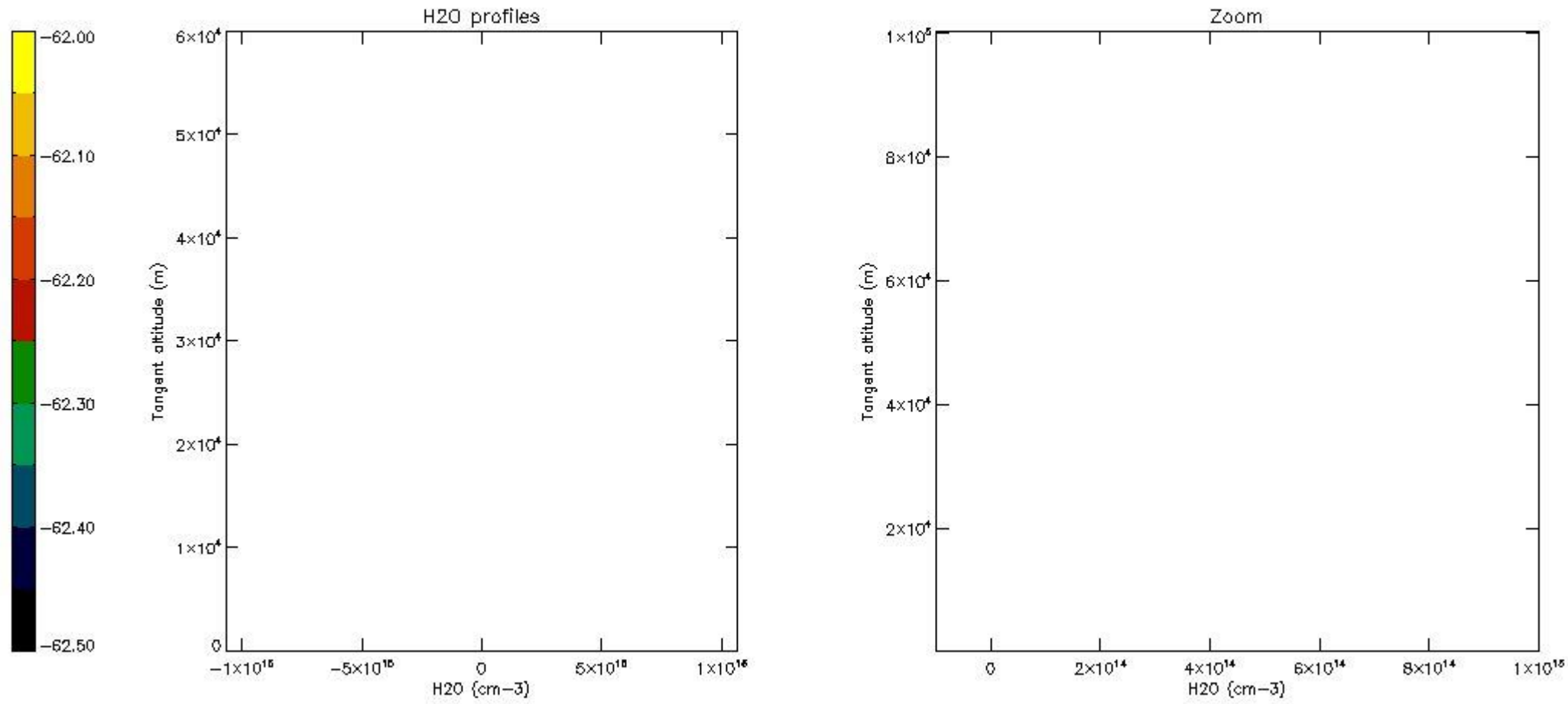
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O 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	04-JUN-2011 00:01:13
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-JUN-2011 00:01:13
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-JUN-2011 00:01:13

# GOMOS Level 2 Daily Report

## 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](#)

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 14:23:03
Data source version	GOMOS/6.01
Start time of products	04-06-2011 (04JUN2011 00:00:00)
Stop time of products	05-06-2011 (05JUN2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	300
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__2PRFIN20110604_000113_000000453103_00131_48421_9444.N1	04-JUN-2011 00:01:13	Bright	44.500	130	23Bet Dra	2.7990	5800.0	89	48421	No
2	GOM_NL__2PRFIN20110604_001202_000000483103_00131_48421_9445.N1	04-JUN-2011 00:12:02	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	48421	No
3	GOM_NL__2PRFIN20110604_001729_000000373103_00131_48421_9446.N1	04-JUN-2011 00:17:29	Bright	37.000	76	27Gam Cas	2.3000	30000.	74	48421	No
4	GOM_NL__2PRFIN20110604_002522_000000543103_00131_48421_9447.N1	04-JUN-2011 00:25:22	Bright	53.500	53	43Bet And	2.0480	3300.0	107	48421	No
5	GOM_NL__2PRFIN20110604_002808_000000573103_00131_48421_9448.N1	04-JUN-2011 00:28:08	Twilight	57.000	58	21Alp And	2.0730	11000.	114	48421	No
6	GOM_NL__2PRFIN20110604_003321_000000543103_00131_48421_9449.N1	04-JUN-2011 00:33:21	Dark	53.500	140	88Gam Peg	2.8340	26000.	107	48421	No
7	GOM_NL__2PRFIN20110604_004226_000000473103_00131_48421_9450.N1	04-JUN-2011 00:42:26	Dark	46.500	52	16Bet Cet	2.0370	4500.0	93	48421	No
8	GOM_NL__2PRFIN20110604_004903_000000463103_00131_48421_9451.N1	04-JUN-2011 00:49:03	Dark	45.500	84	Alp Phe	2.3970	4500.0	91	48421	No
9	GOM_NL__2PRFIN20110604_005140_000000643103_00131_48421_9452.N1	04-JUN-2011 00:51:40	Dark	63.500	18	24Alp PsA	1.1660	9700.0	127	48421	No
10	GOM_NL__2PRFIN20110604_005436_000000503103_00132_48422_9443.N1	04-JUN-2011 00:54:36	Dark	50.000	63	Bet Gru	2.1500	2800.0	100	48422	No
11	GOM_NL__2PRFIN20110604_005632_000000483103_00132_48422_9444.N1	04-JUN-2011 00:56:32	Dark	47.500	31	Alp Gru	1.7340	15200.	95	48422	No
12	GOM_NL__2PRFIN20110604_010116_000000433103_00132_48422_9445.N1	04-JUN-2011 01:01:16	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	48422	No
13	GOM_NL__2PRFIN20110604_011009_000000493103_00132_48422_9446.N1	04-JUN-2011 01:10:09	Straylight	48.500	40	The Sco	1.8590	7100.0	97	48422	No
14	GOM_NL__2PRFIN20110604_011155_000000473103_00132_48422_9447.N1	04-JUN-2011 01:11:55	Twilight	46.500	25	35Lam Sco	1.6200	28000.	93	48422	No
15	GOM_NL__2PRFIN20110604_011336_000000433103_00132_48422_9448.N1	04-JUN-2011 01:13:36	Twilight	43.000	75	26Eps Sco	2.2910	4250.0	86	48422	No
16	GOM_NL__2PRFIN20110604_011534_000000473103_00132_48422_9449.N1	04-JUN-2011 01:15:34	Bright	47.000	136	23Tau Sco	2.8220	30000.	94	48422	No
17	GOM_NL__2PRFIN20110604_011904_000000443103_00132_48422_9450.N1	04-JUN-2011 01:19:04	Bright	44.000	86	35Eta Oph	2.4300	10200.	88	48422	No
18	GOM_NL__2PRFIN20110604_012052_000000413103_00132_48422_9451.N1	04-JUN-2011 01:20:52	Bright	41.000	98	13Zet Oph	2.5710	30000.	82	48422	No
19	GOM_NL__2PRFIN20110604_012302_000000393103_00132_48422_9452.N1	04-JUN-2011 01:23:02	Bright	38.500	120	1Del Oph	2.7340	3200.0	77	48422	No
20	GOM_NL__2PRFIN20110604_013050_000000443103_00132_48422_9453.N1	04-JUN-2011 01:30:50	Bright	44.000	127	27Bet Her	2.7810	4700.0	88	48422	No
21	GOM_NL__2PRFIN20110604_013409_000000433103_00132_48422_9454.N1	04-JUN-2011 01:34:09	Bright	43.000	133	40Zet Her	2.8070	6000.0	86	48422	No
22	GOM_NL__2PRFIN20110604_014127_000000433103_00132_48422_9455.N1	04-JUN-2011 01:41:27	Bright	42.500	130	23Bet Dra	2.7990	5800.0	85	48422	No
23	GOM_NL__2PRFIN20110604_015215_000000573103_00132_48422_9456.N1	04-JUN-2011 01:52:15	Bright	57.000	89	5Alp Cep	2.4510	8000.0	114	48422	No
24	GOM_NL__2PRFIN20110604_015742_000000413103_00132_48422_9457.N1	04-JUN-2011 01:57:42	Bright	41.000	76	27Gam Cas	2.3000	30000.	82	48422	No
25	GOM_NL__2PRFIN20110604_020536_000000503103_00132_48422_9458.N1	04-JUN-2011 02:05:36	Bright	50.000	53	43Bet And	2.0480	3300.0	100	48422	No
26	GOM_NL__2PRFIN20110604_020822_000000543103_00132_48422_9459.N1	04-JUN-2011 02:08:22	Twilight	53.500	58	21Alp And	2.0730	11000.	107	48422	No
27	GOM_NL__2PRFIN20110604_021335_000000553103_00132_48422_9460.N1	04-JUN-2011 02:13:35	Dark	54.500	140	88Gam Peg	2.8340	26000.	109	48422	No
28	GOM_NL__2PRFIN20110604_022241_000000503103_00132_48422_9461.N1	04-JUN-2011 02:22:41	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	48422	No
29	GOM_NL__2PRFIN20110604_022918_000000463103_00132_48422_9462.N1	04-JUN-2011 02:29:18	Dark	45.500	84	Alp Phe	2.3970	4500.0	91	48422	No
30	GOM_NL__2PRFIN20110604_023155_000000603103_00132_48422_9463.N1	04-JUN-2011 02:31:55	Dark	59.500	18	24Alp PsA	1.1660	9700.0	119	48422	No
31	GOM_NL__2PRFIN20110604_023451_000000493103_00133_48423_9563.N1	04-JUN-2011 02:34:51	Dark	49.000	63	Bet Gru	2.1500	2800.0	98	48423	No
32	GOM_NL__2PRFIN20110604_023647_000000453103_00133_48423_9564.N1	04-JUN-2011 02:36:47	Dark	45.000	31	Alp Gru	1.7340	15200.	90	48423	No
33	GOM_NL__2PRFIN20110604_024131_000000423103_00133_48423_9565.N1	04-JUN-2011 02:41:31	Straylight	42.000	45	Alp Pav	1.9400	26000.	84	48423	No
34	GOM_NL__2PRFIN20110604_025023_000000473103_00133_48423_9566.N1	04-JUN-2011 02:50:23	Straylight	47.000	40	The Sco	1.8590	7100.0	94	48423	No
35	GOM_NL__2PRFIN20110604_025209_000000443103_00133_48423_9567.N1	04-JUN-2011 02:52:09	Twilight	44.000	25	35Lam Sco	1.6200	28000.	88	48423	No
36	GOM_NL__2PRFIN20110604_025350_000000493103_00133_48423_9568.N1	04-JUN-2011 02:53:50	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	48423	No
37	GOM_NL__2PRFIN20110604_025548_000000393103_00133_48423_9569.N1	04-JUN-2011 02:55:48	Bright	39.000	136	23Tau Sco	2.8220	30000.	78	48423	No
38	GOM_NL__2PRFIN20110604_025918_000000453103_00133_48423_9570.N1	04-JUN-2011 02:59:18	Bright	44.500	86	35Eta Oph	2.4300	10200.	89	48423	No
39	GOM_NL__2PRFIN20110604_030107_000000403103_00133_48423_9571.N1	04-JUN-2011 03:01:07	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	48423	No
40	GOM_NL__2PRFIN20110604_030315_000000403103_00133_48423_9572.N1	04-JUN-2011 03:03:15	Bright	39.500	120	1Del Oph	2.7340	3200.0	79	48423	No
41	GOM_NL__2PRFIN20110604_031104_000000423103_00133_48423_9573.N1	04-JUN-2011 03:11:04	Bright	42.000	127	27Bet Her	2.7810	4700.0	84	48423	No
42	GOM_NL__2PRFIN20110604_031422_000000433103_00133_48423_9574.N1	04-JUN-2011 03:14:22	Bright	42.500	133	40Zet Her	2.8070	6000.0	85	48423	No









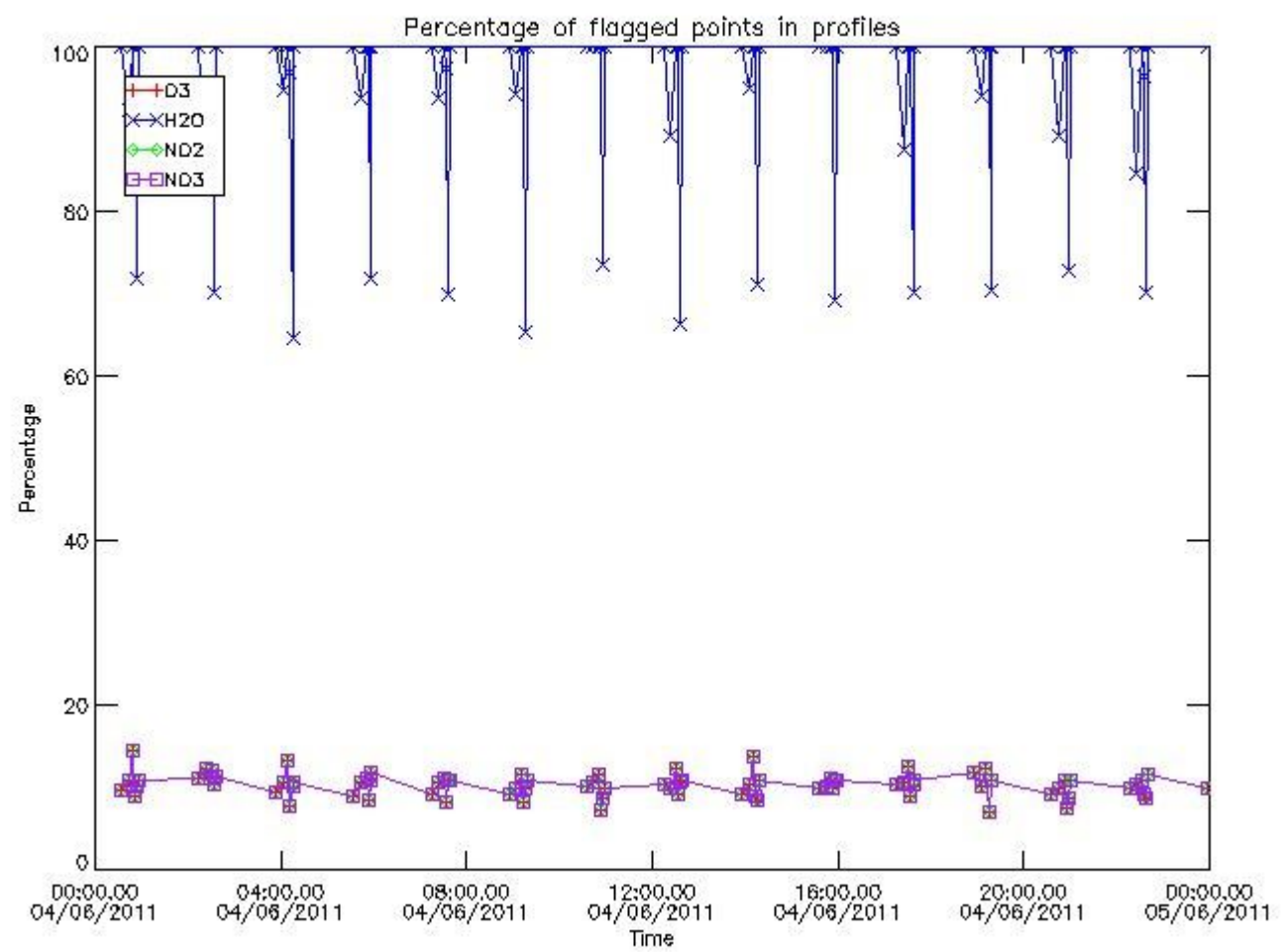


279	GOM_NL__2PRFIN20110604_221631_000000563103_00144_48434_9891.N1	04-JUN-2011 22:16:31	Dark	56.000	140	88Gam Peg	2.8340	26000.	112	48434	No
280	GOM_NL__2PRFIN20110604_222537_000000493103_00144_48434_9892.N1	04-JUN-2011 22:25:37	Dark	49.000	52	16Bet Cet	2.0370	4500.0	98	48434	No
281	GOM_NL__2PRFIN20110604_223213_000000473103_00144_48434_9893.N1	04-JUN-2011 22:32:13	Dark	46.500	84	Alp Phe	2.3970	4500.0	93	48434	No
282	GOM_NL__2PRFIN20110604_223459_000000563103_00144_48434_9894.N1	04-JUN-2011 22:34:59	Dark	56.000	18	24Alp PsA	1.1660	9700.0	112	48434	No
283	GOM_NL__2PRFIN20110604_223750_000000593103_00145_48435_9902.N1	04-JUN-2011 22:37:50	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	48435	No
284	GOM_NL__2PRFIN20110604_223946_000000453103_00145_48435_9903.N1	04-JUN-2011 22:39:46	Dark	44.500	31	Alp Gru	1.7340	15200.	89	48435	No
285	GOM_NL__2PRFIN20110604_224426_000000443103_00145_48435_9904.N1	04-JUN-2011 22:44:26	Straylight	44.000	45	Alp Pav	1.9400	26000.	88	48435	No
286	GOM_NL__2PRFIN20110604_225316_000000463103_00145_48435_9905.N1	04-JUN-2011 22:53:16	Straylight	45.500	40	The Sco	1.8590	7100.0	91	48435	No
287	GOM_NL__2PRFIN20110604_225502_000000473103_00145_48435_9906.N1	04-JUN-2011 22:55:02	Tw_i_and_stray	46.500	25	35Lam Sco	1.6200	28000.	93	48435	No
288	GOM_NL__2PRFIN20110604_225641_000000463103_00145_48435_9907.N1	04-JUN-2011 22:56:41	Tw_i_and_stray	45.500	75	26Eps Sco	2.2910	4250.0	91	48435	No
289	GOM_NL__2PRFIN20110604_225839_000000473103_00145_48435_9908.N1	04-JUN-2011 22:58:39	Bright	47.000	136	23Tau Sco	2.8220	30000.	94	48435	No
290	GOM_NL__2PRFIN20110604_230207_000000443103_00145_48435_9909.N1	04-JUN-2011 23:02:07	Bright	43.500	86	35Eta Oph	2.4300	10200.	87	48435	No
291	GOM_NL__2PRFIN20110604_230355_000000403103_00145_48435_9910.N1	04-JUN-2011 23:03:55	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	48435	No
292	GOM_NL__2PRFIN20110604_230603_000000393103_00145_48435_9911.N1	04-JUN-2011 23:06:03	Bright	39.000	120	1Del Oph	2.7340	3200.0	78	48435	No
293	GOM_NL__2PRFIN20110604_231349_000000423103_00145_48435_9912.N1	04-JUN-2011 23:13:49	Bright	42.000	127	27Bet Her	2.7810	4700.0	84	48435	No
294	GOM_NL__2PRFIN20110604_231706_000000403103_00145_48435_9913.N1	04-JUN-2011 23:17:06	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	48435	No
295	GOM_NL__2PRFIN20110604_232421_000000453103_00145_48435_9914.N1	04-JUN-2011 23:24:21	Bright	45.000	130	23Bet Dra	2.7990	5800.0	90	48435	No
296	GOM_NL__2PRFIN20110604_233509_000000483103_00145_48435_9915.N1	04-JUN-2011 23:35:09	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	48435	No
297	GOM_NL__2PRFIN20110604_234042_000000573103_00145_48435_9916.N1	04-JUN-2011 23:40:42	Bright	57.000	76	27Gam Cas	2.3000	30000.	114	48435	No
298	GOM_NL__2PRFIN20110604_234839_000000483103_00145_48435_9917.N1	04-JUN-2011 23:48:39	Bright	48.000	53	43Bet And	2.0480	3300.0	96	48435	No
299	GOM_NL__2PRFIN20110604_235126_000000573103_00145_48435_9918.N1	04-JUN-2011 23:51:26	Tw_i_and_stray	57.000	58	21Alp And	2.0730	11000.	114	48435	No
300	GOM_NL__2PRFIN20110604_235645_000000563103_00145_48435_9919.N1	04-JUN-2011 23:56:45	Dark	55.500	140	88Gam Peg	2.8340	26000.	111	48435	No

### 3. Quality information per product

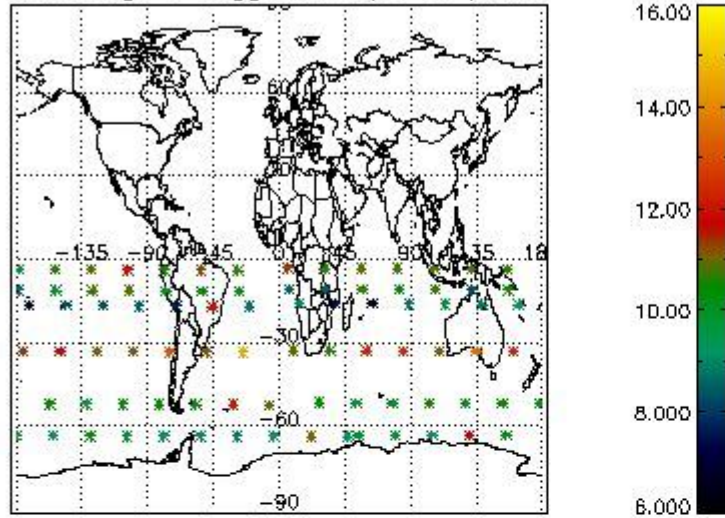
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

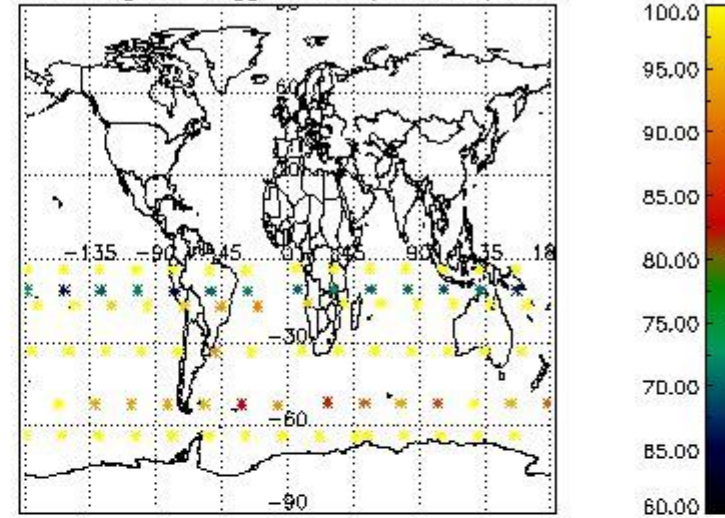


*3.2 Plot quality information per product (world map)*

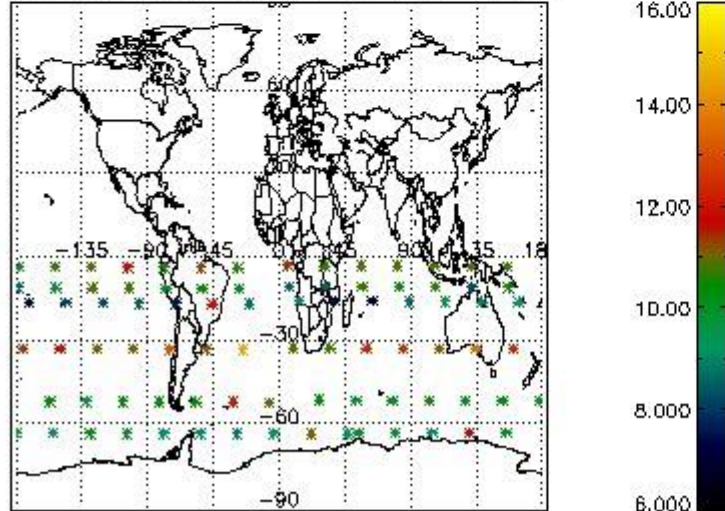
Percentage of flagged data per O3 profile



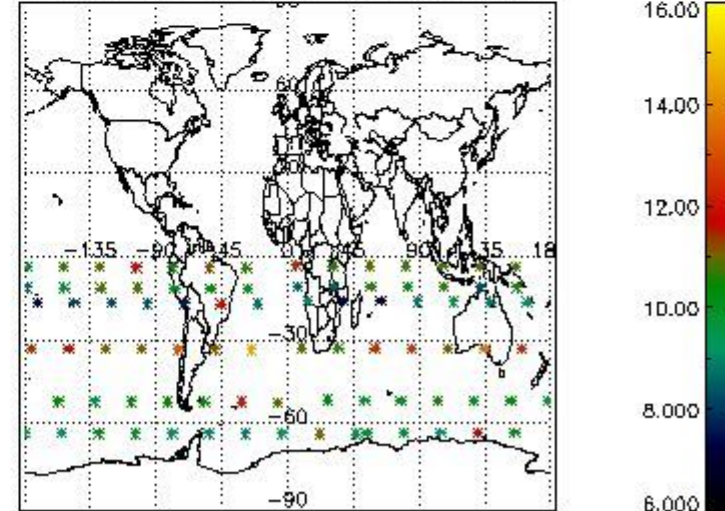
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

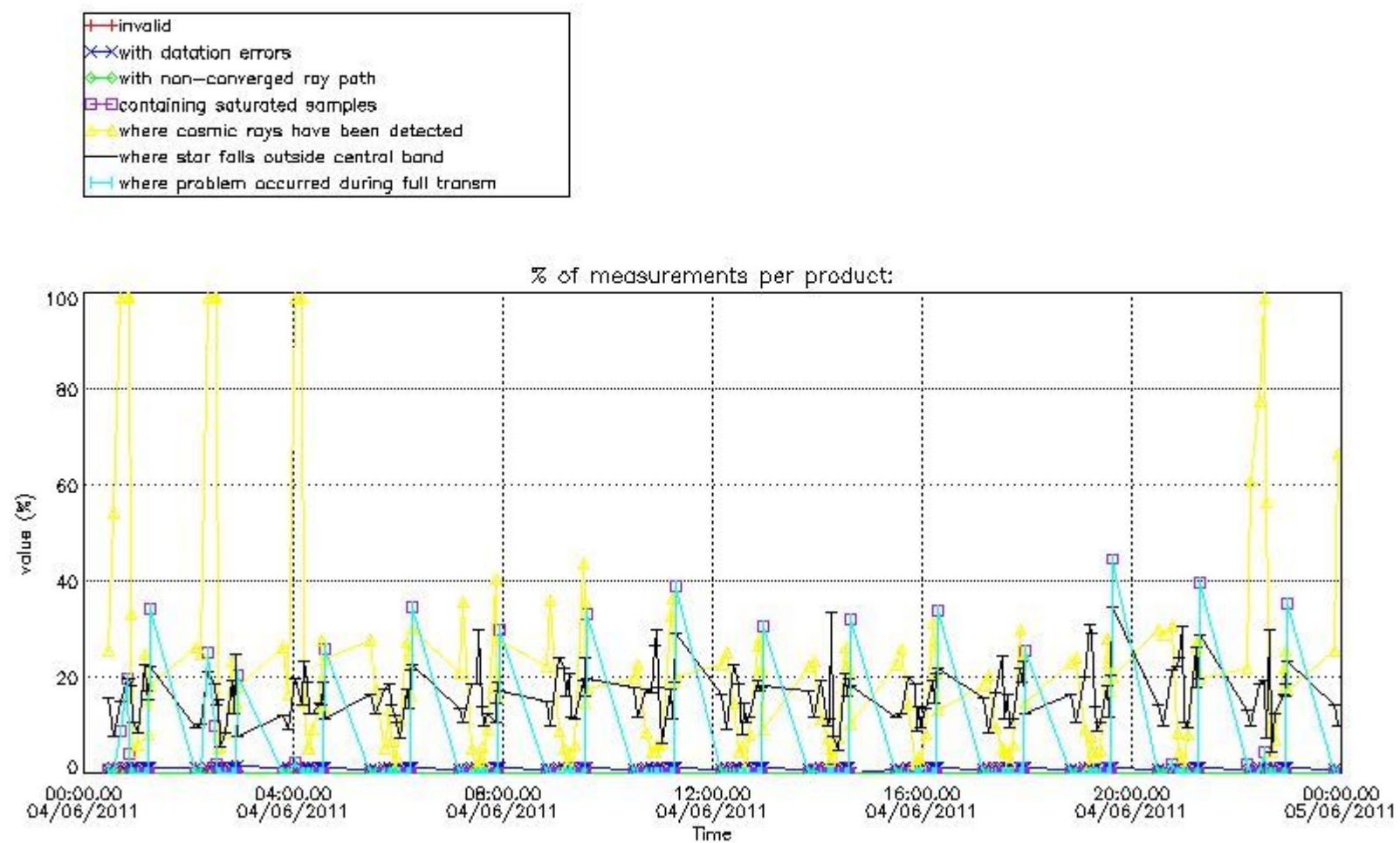


#### 4. Level 1 quality information per product

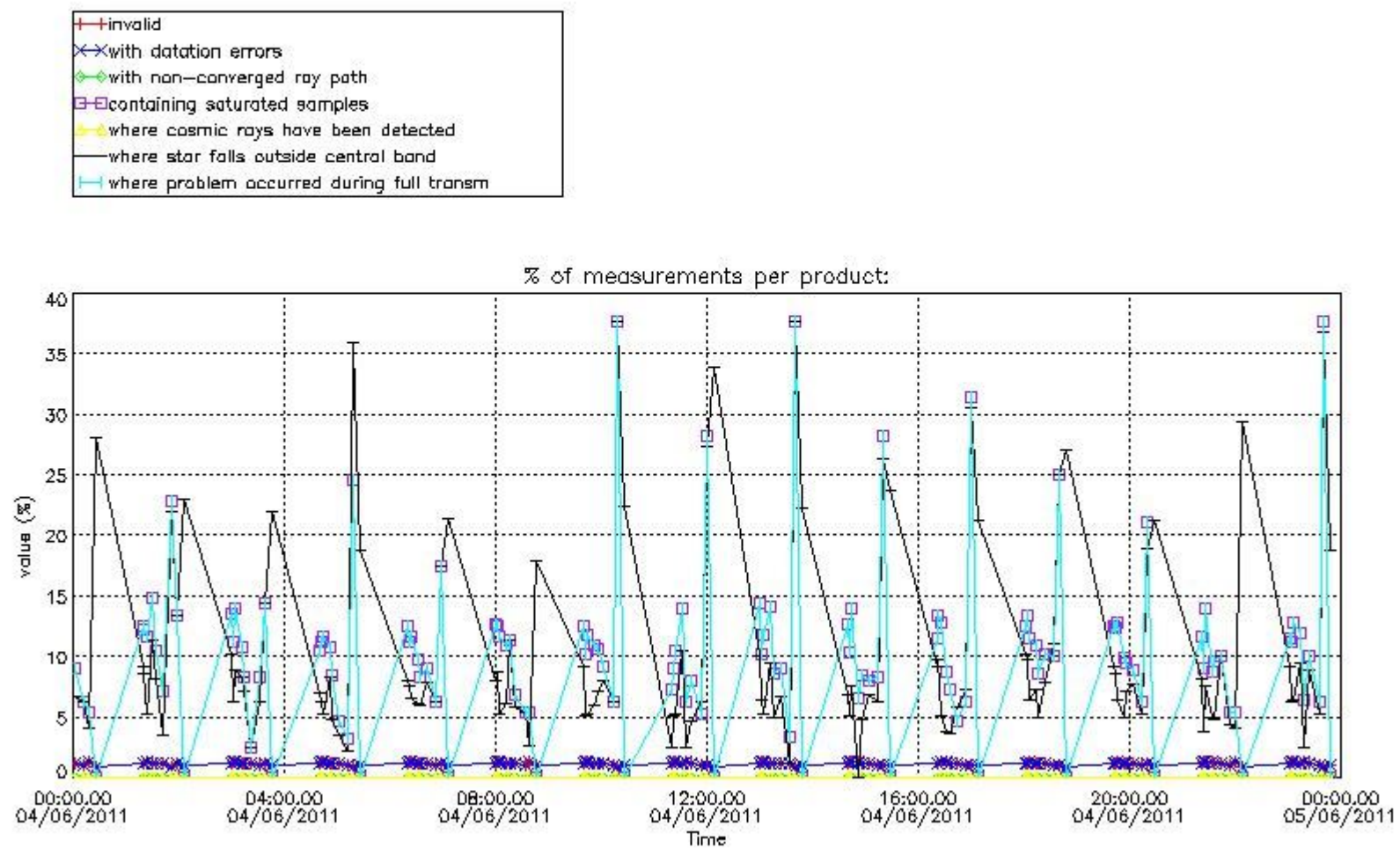
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

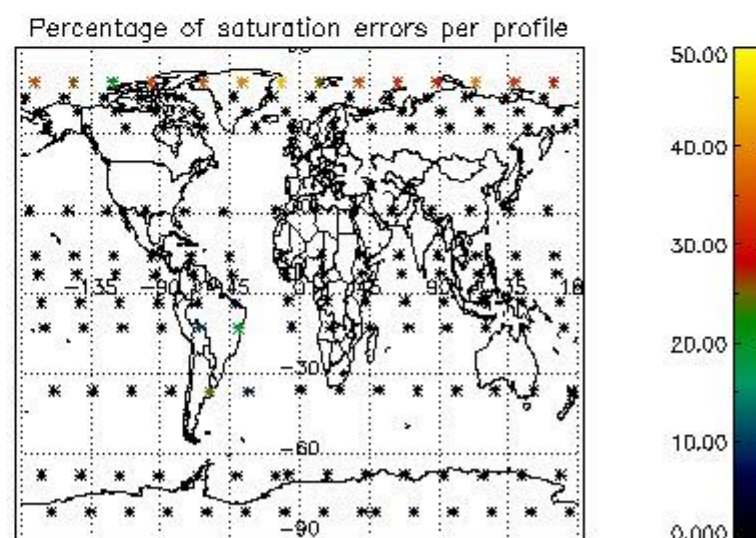
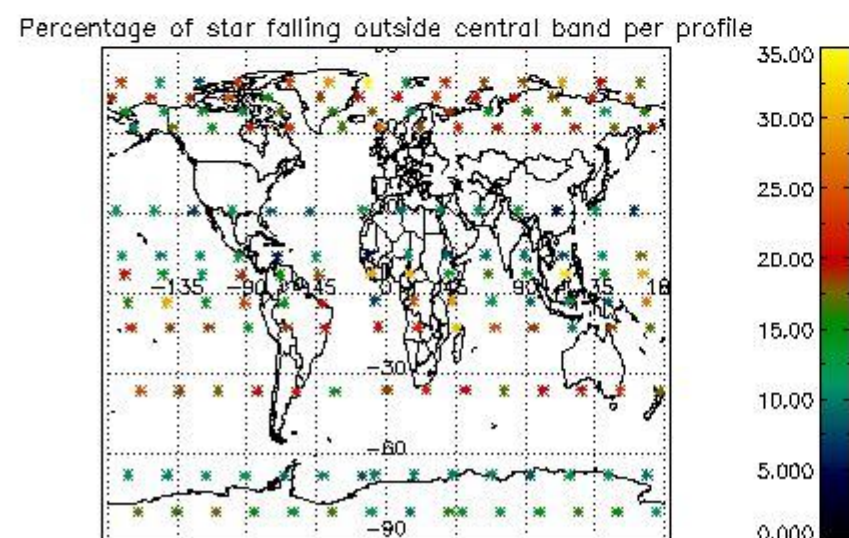
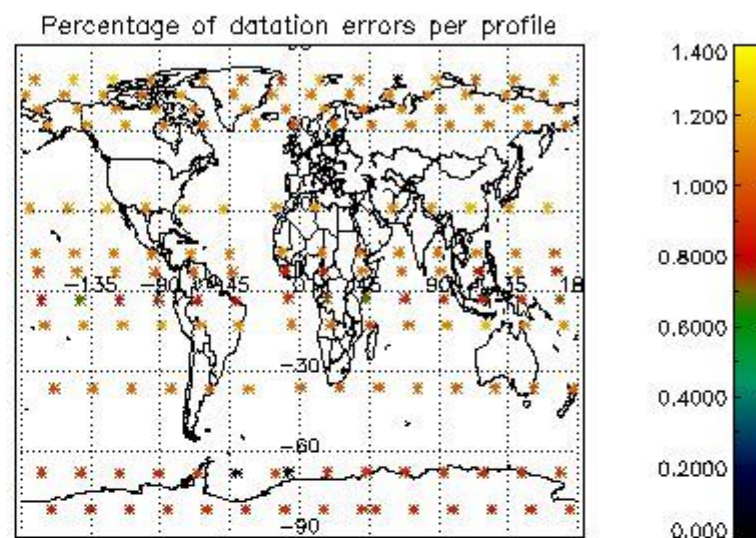
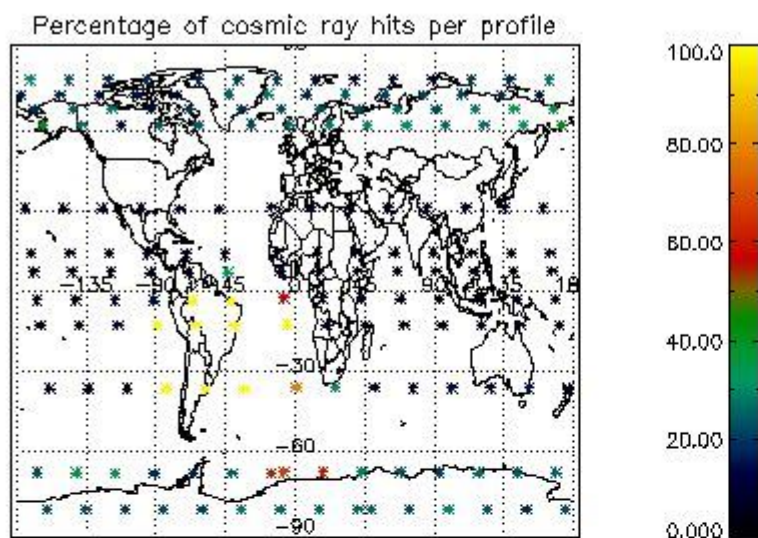
##### 4.1.1 Plot level 1 quality information per product (time dependant): ENVISAT ASCENDING passes



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

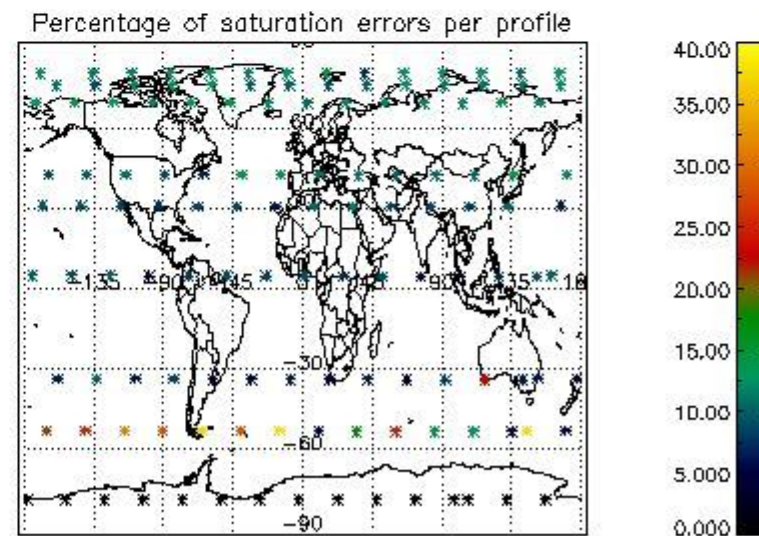
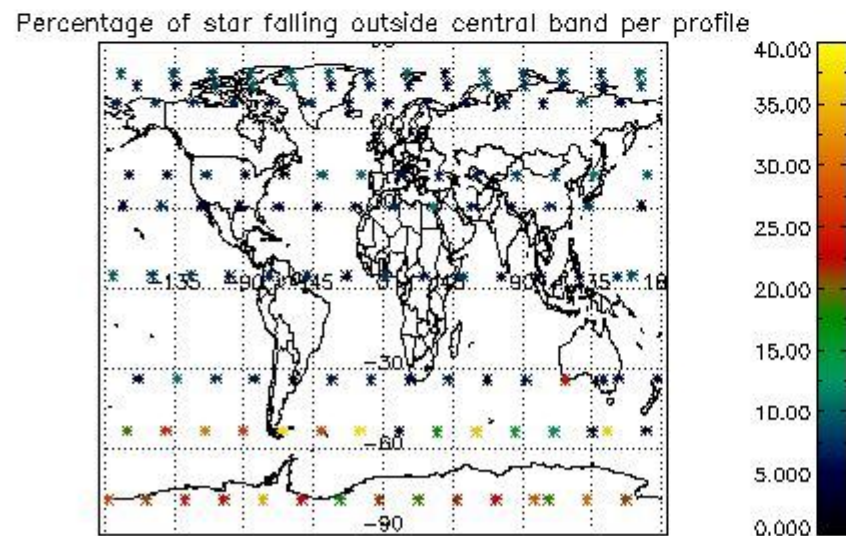
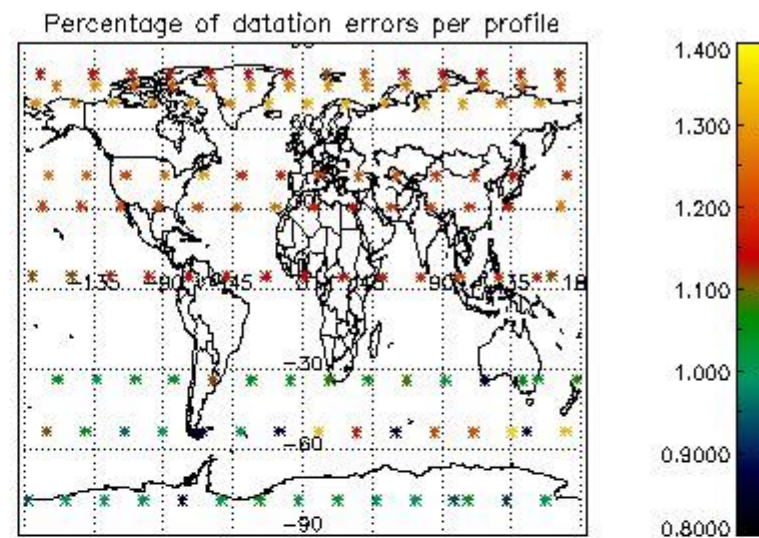
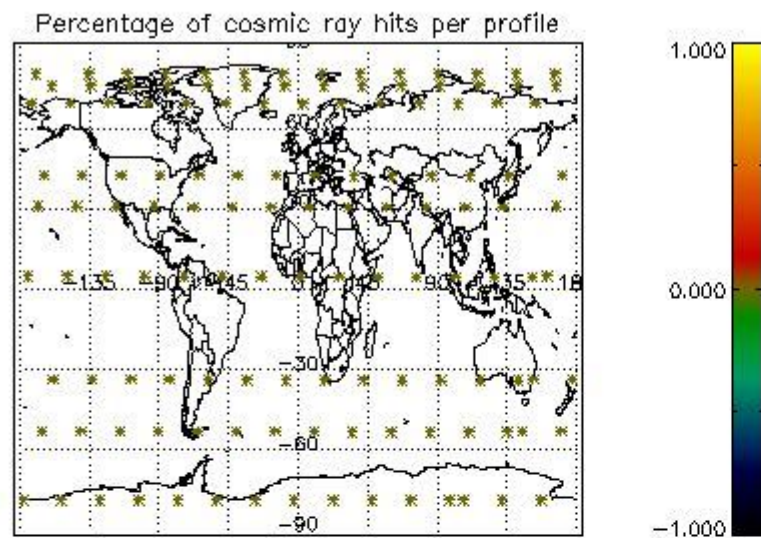


4.2 Plot quality information per product coming from level 1b processing (world map)  
 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



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

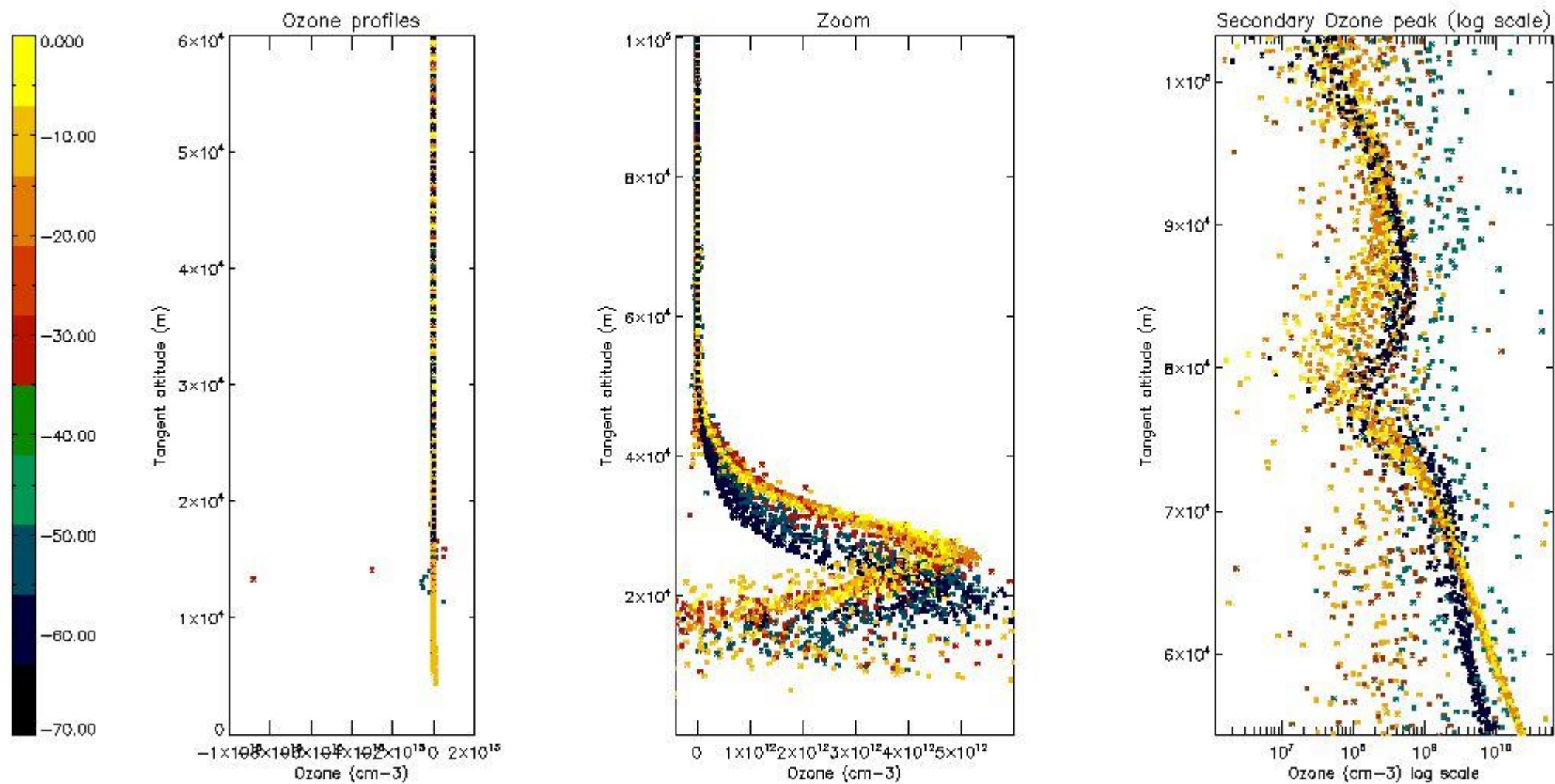
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	32
STD < 20	14

STD < 10	10
STD < 5	7

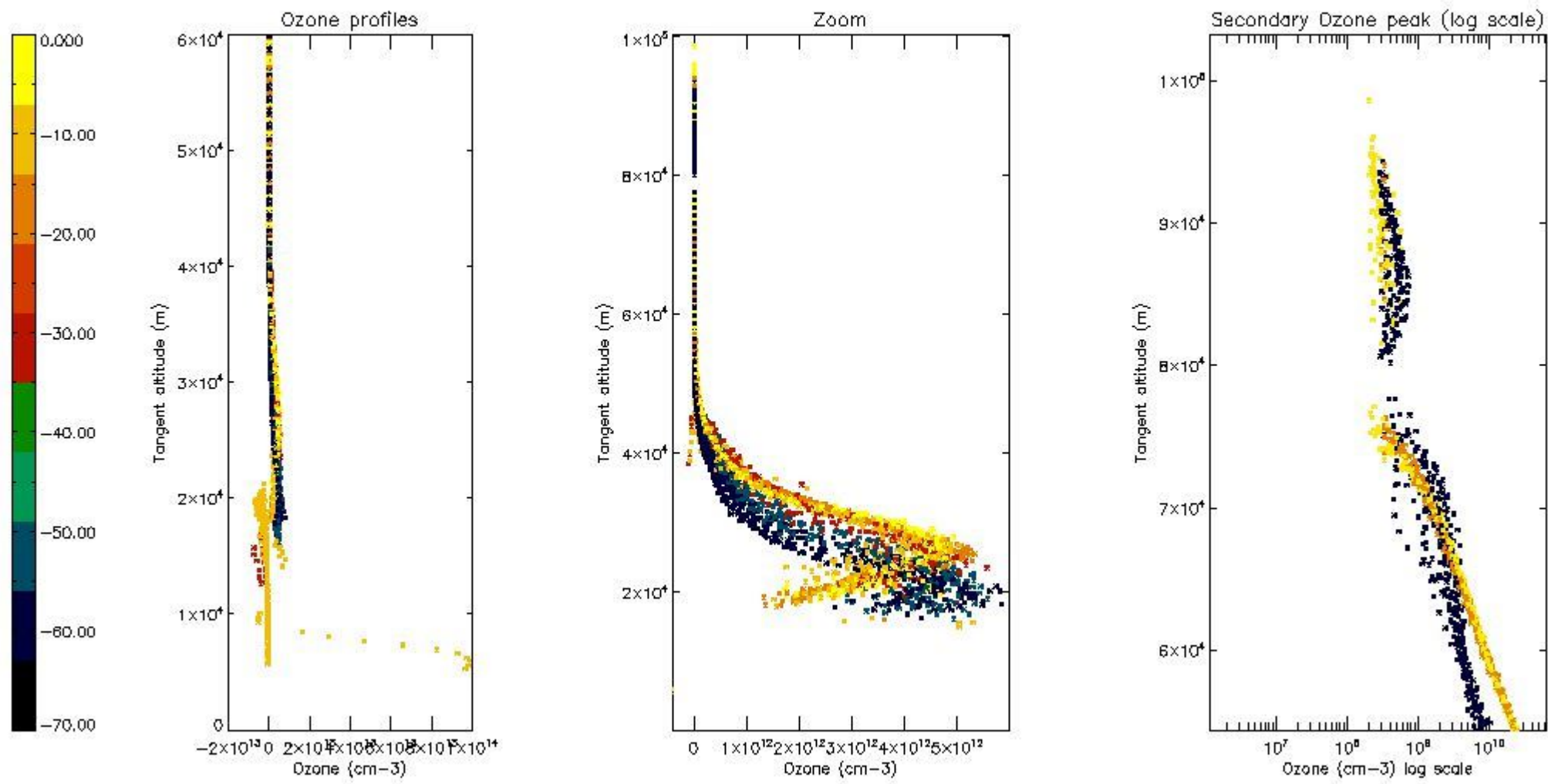
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



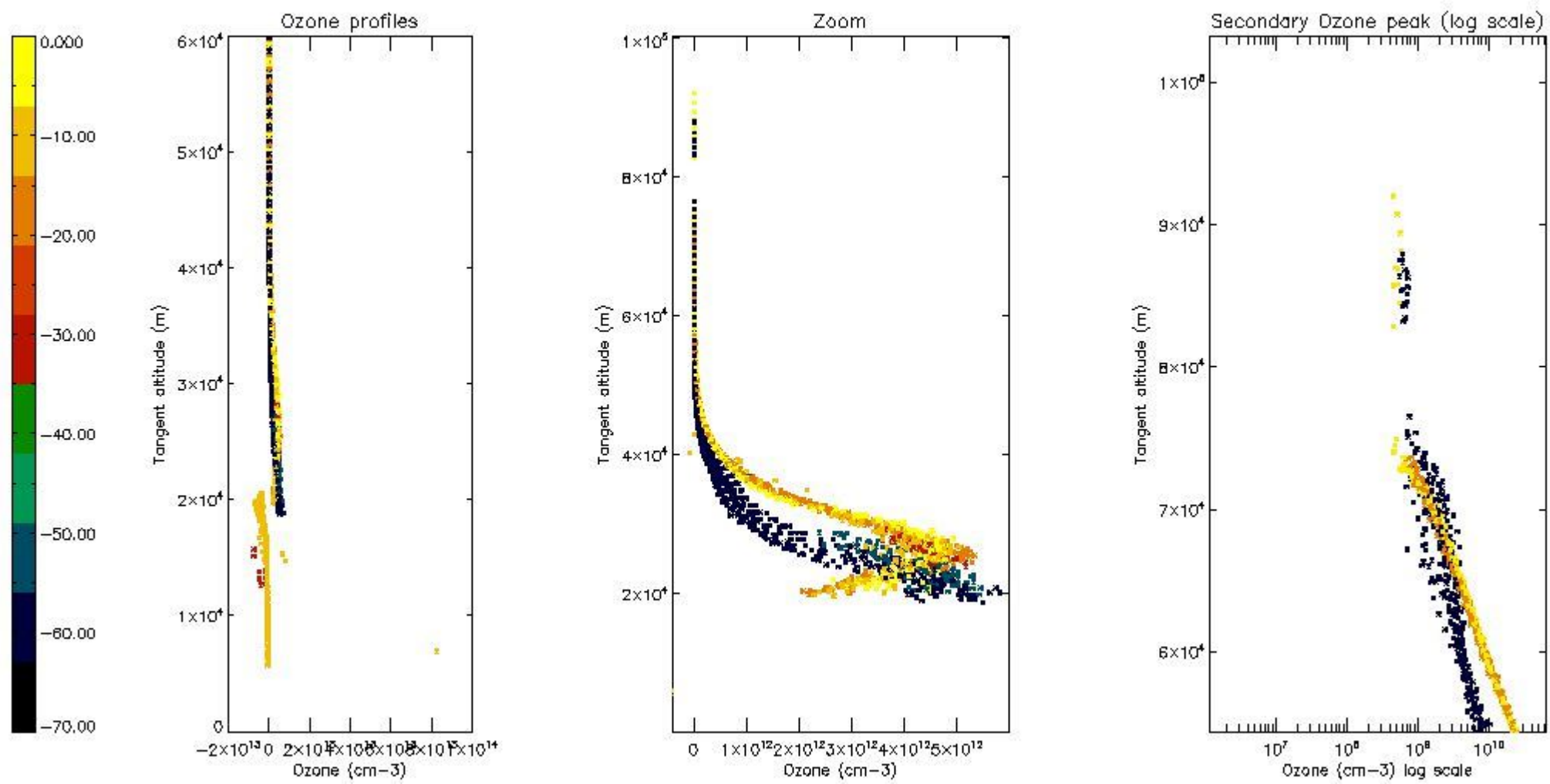
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



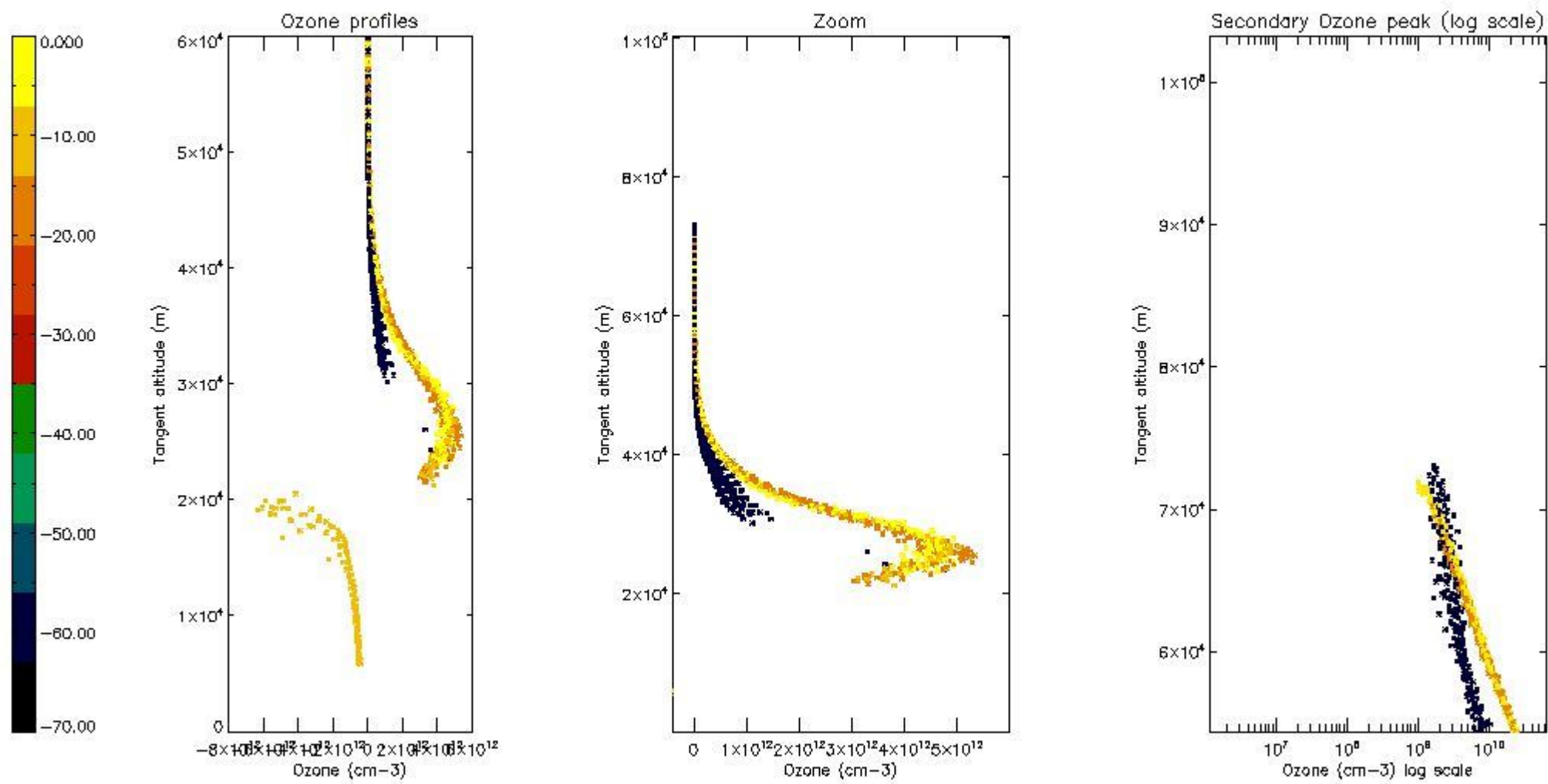
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



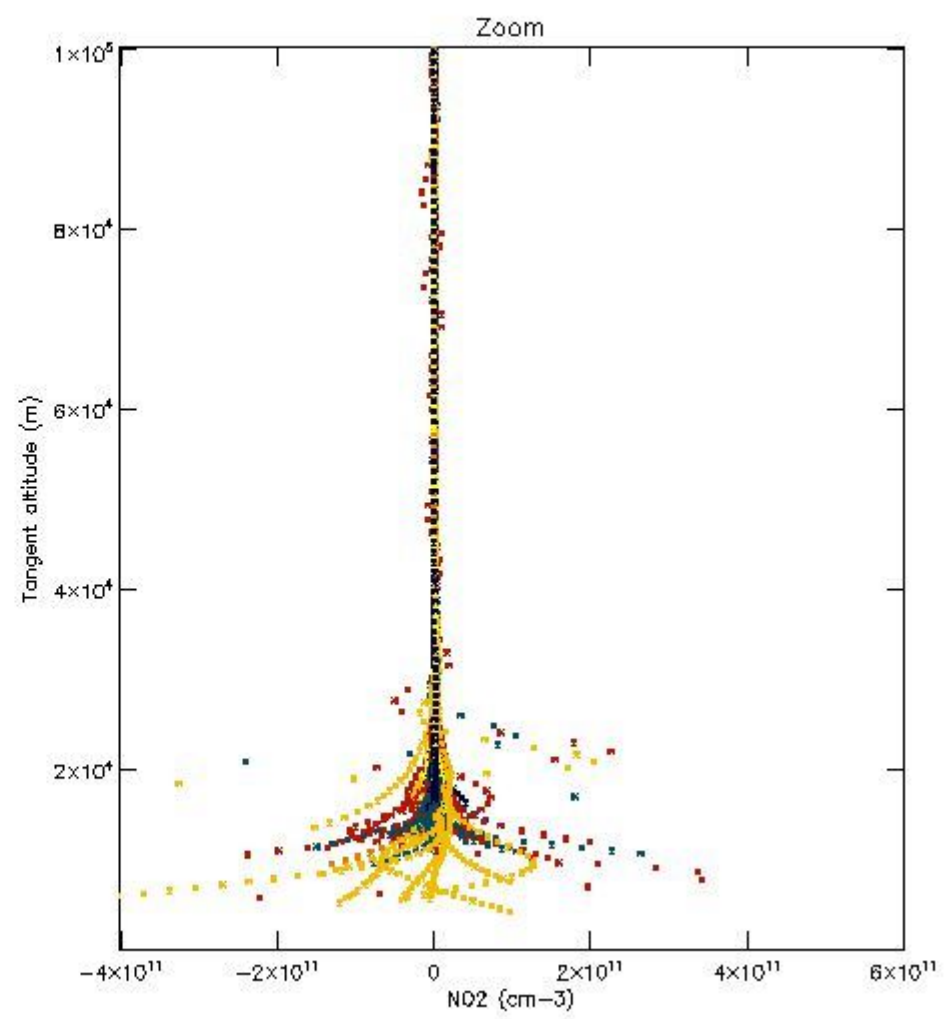
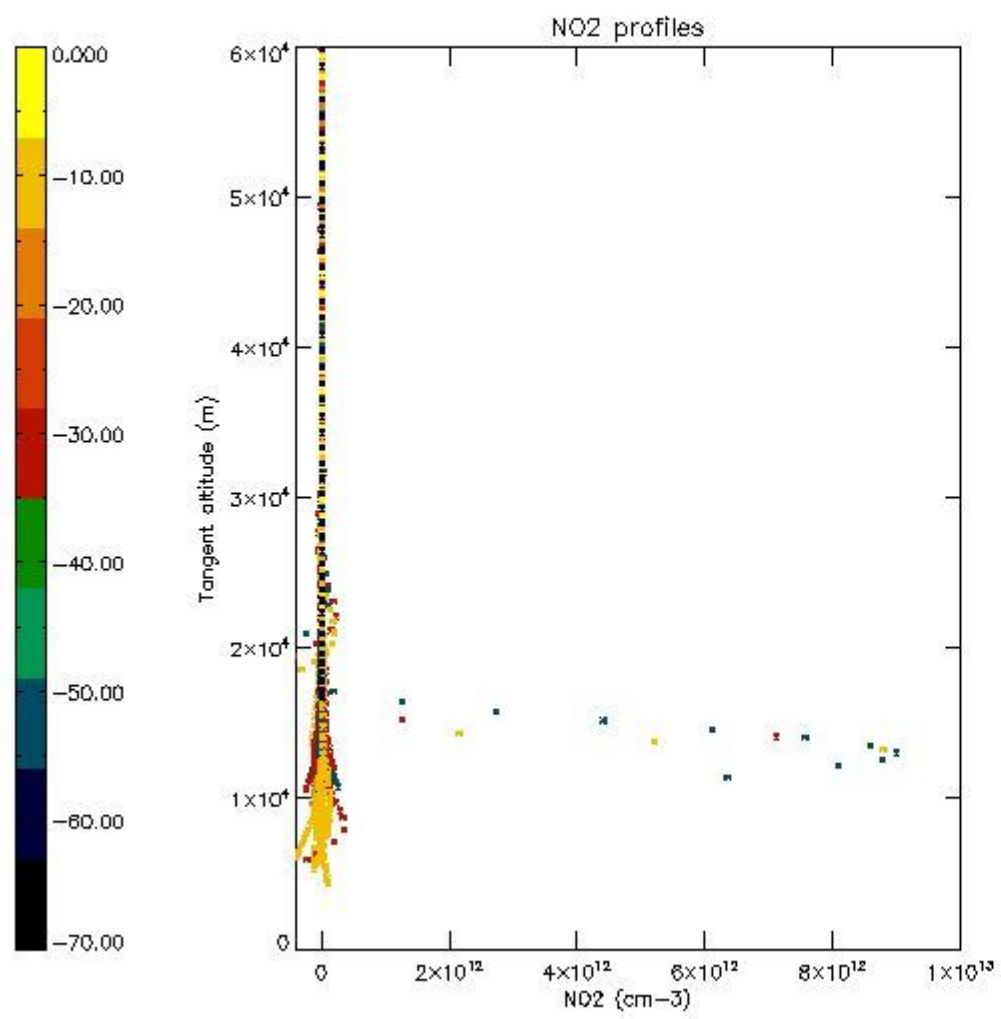
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



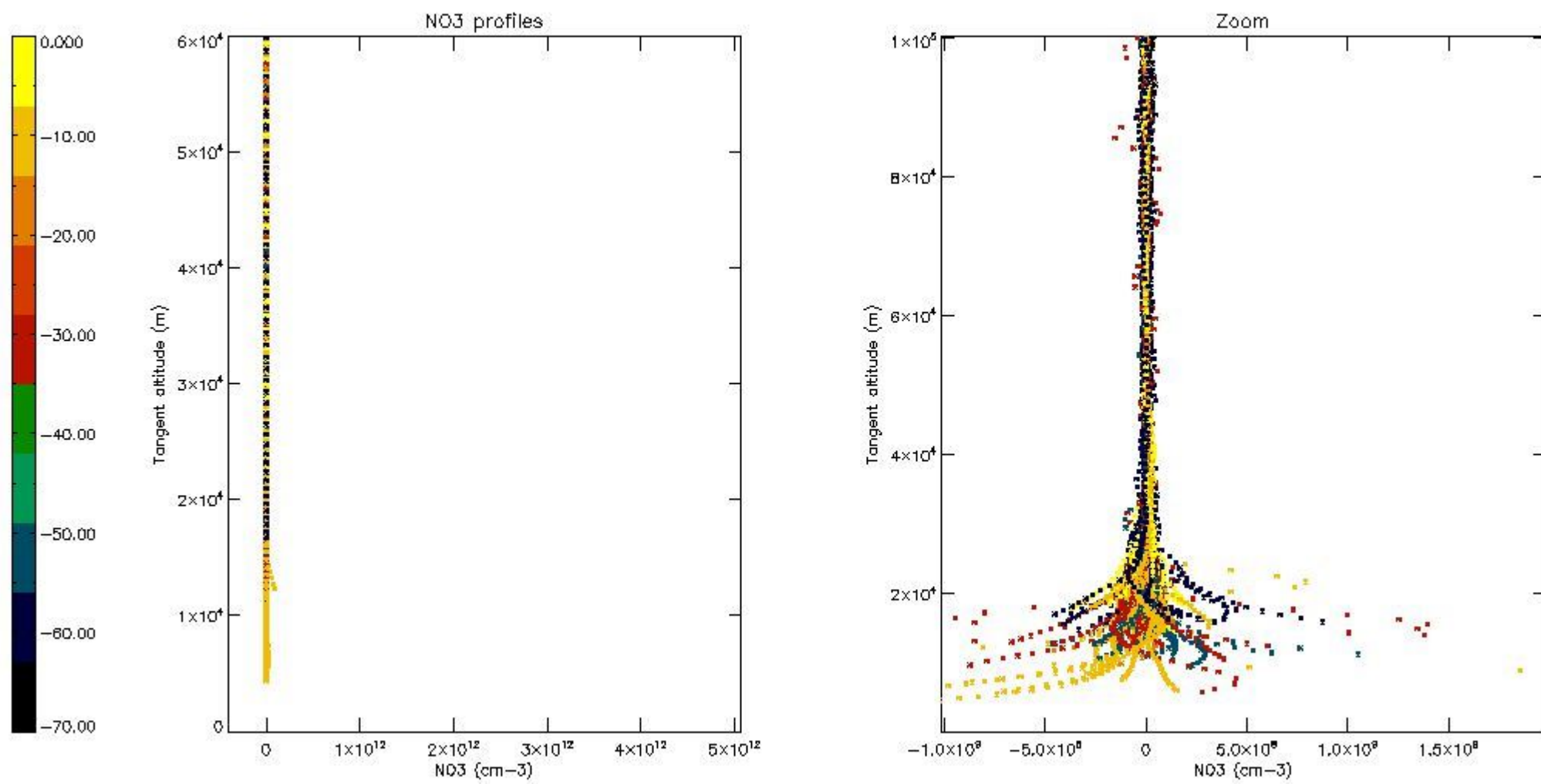
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



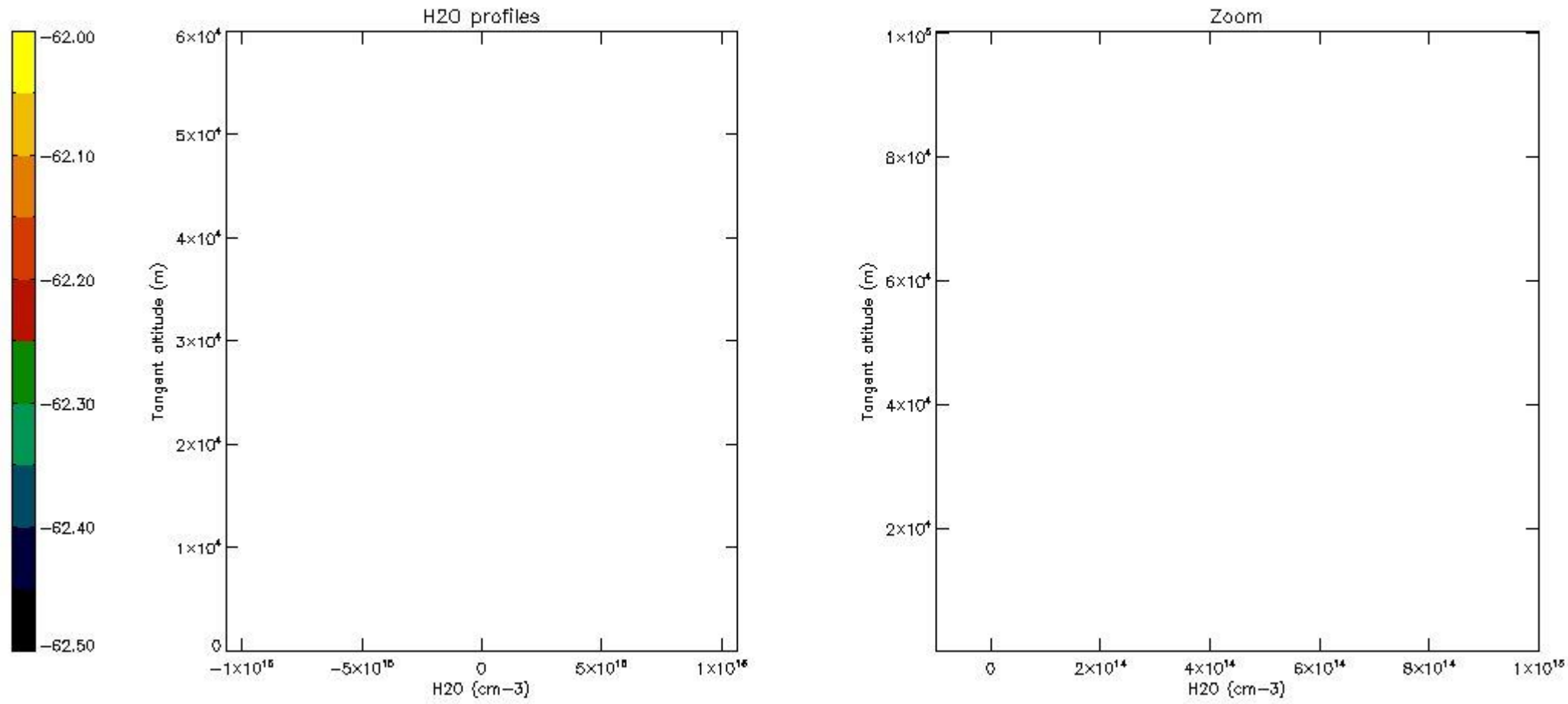
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

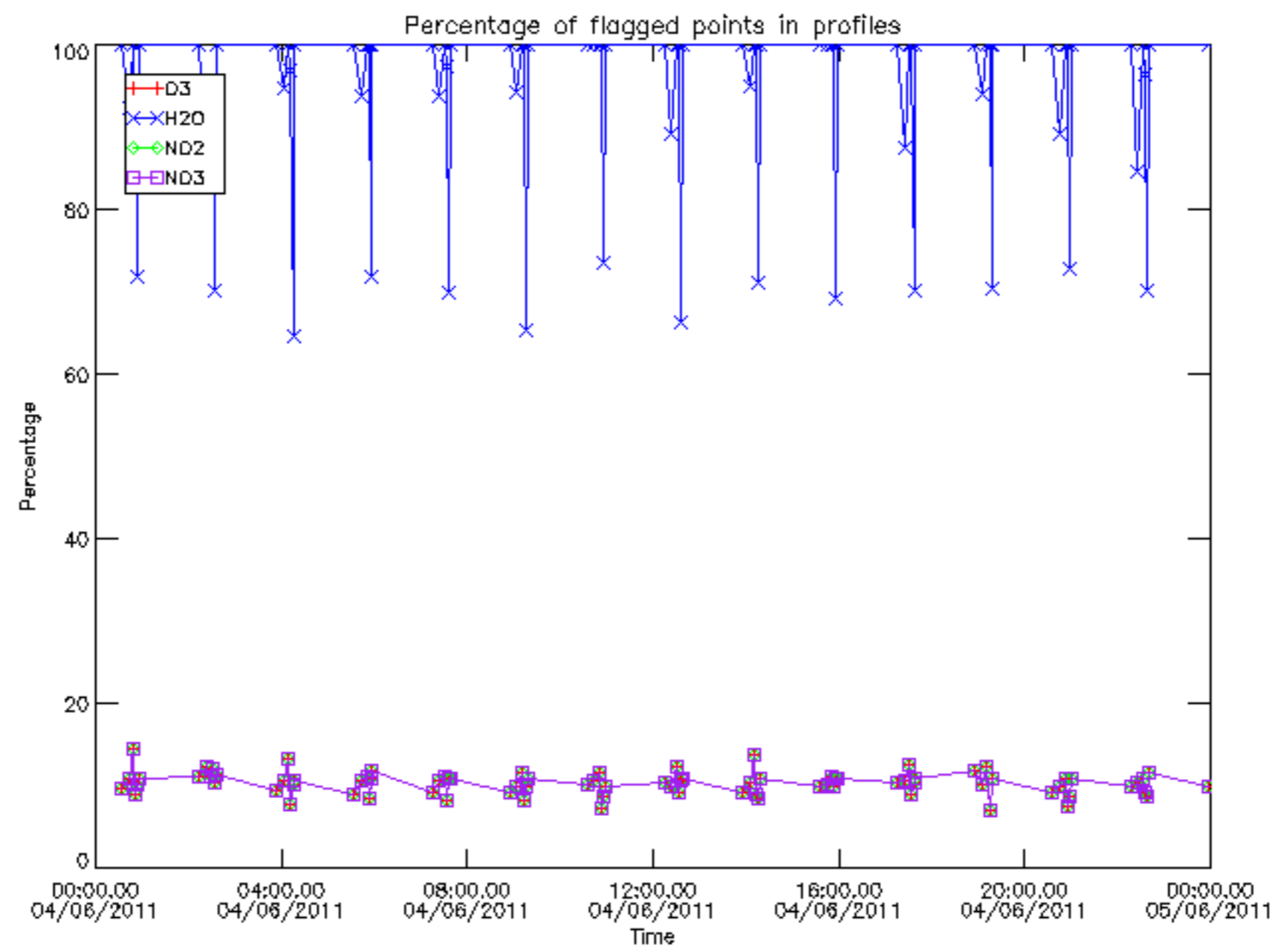


## 6. Auxiliary Data Files used for the production reported in section 2

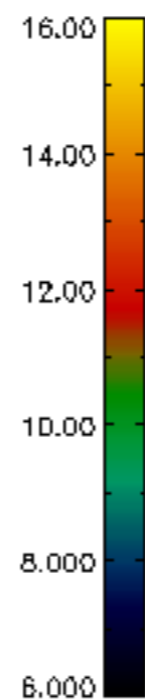
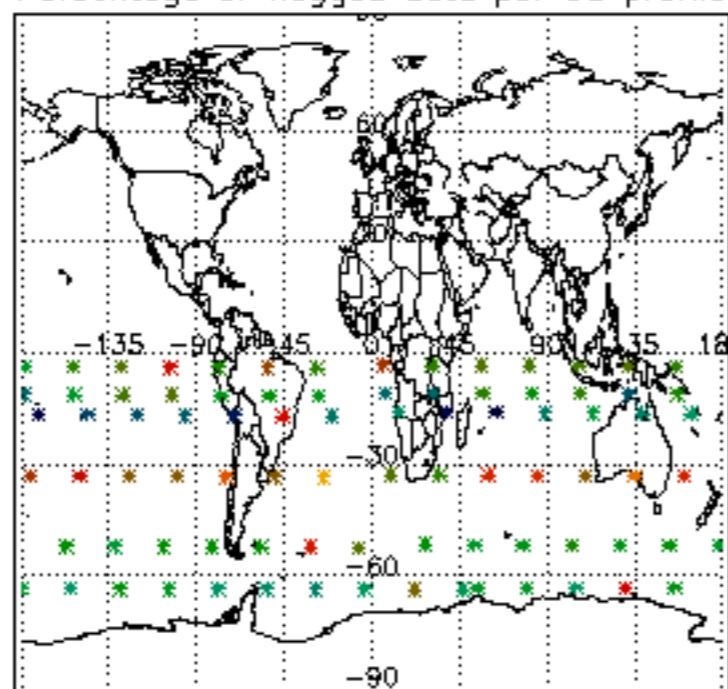
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-JUN-2011 00:01:13
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-JUN-2011 00:01:13
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-JUN-2011 00:01:13

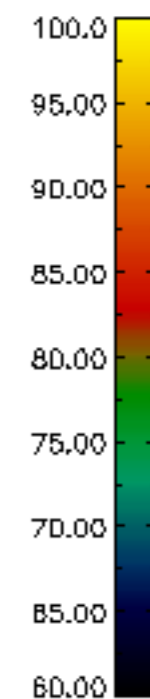
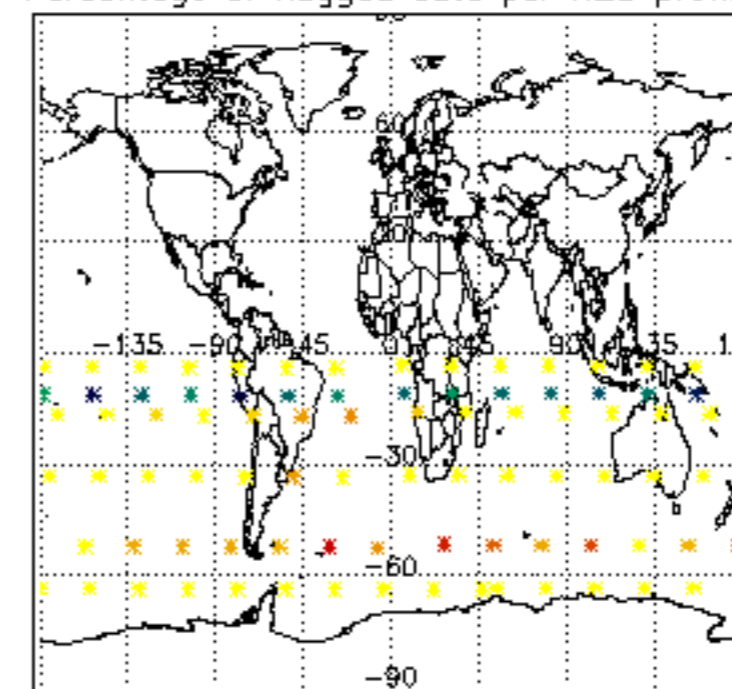




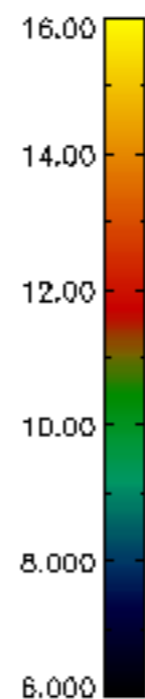
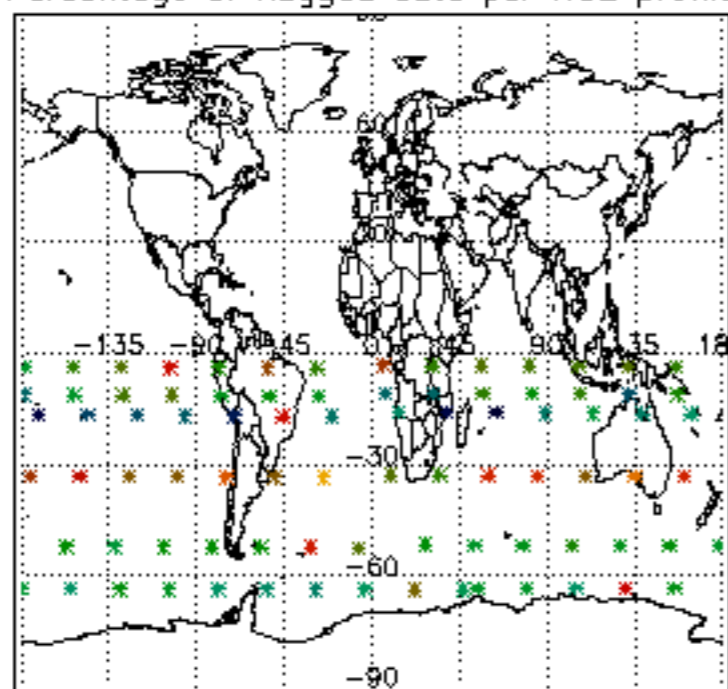
Percentage of flagged data per D3 profile



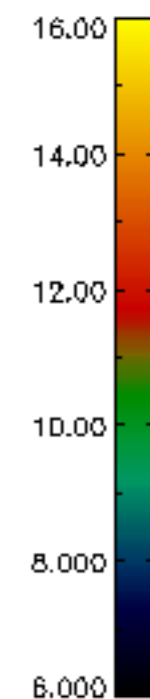
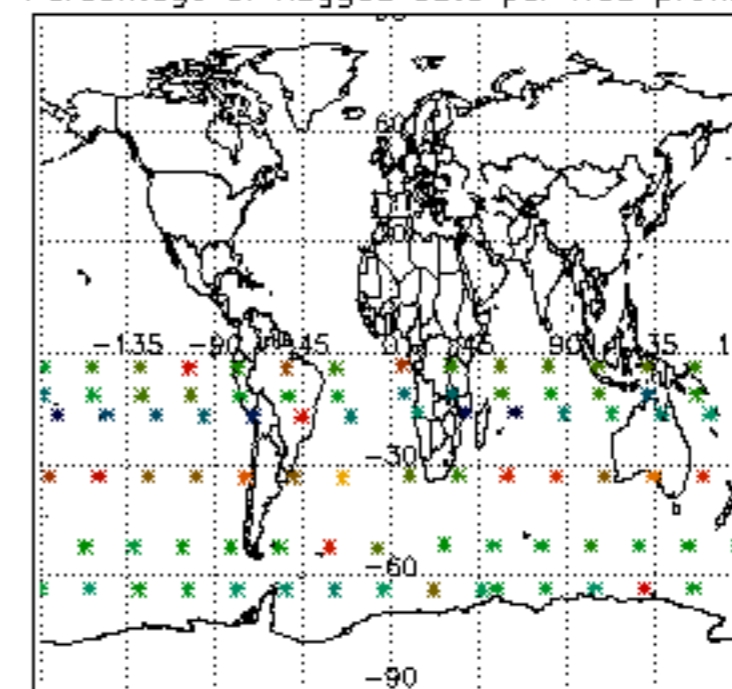
Percentage of flagged data per H2O profile

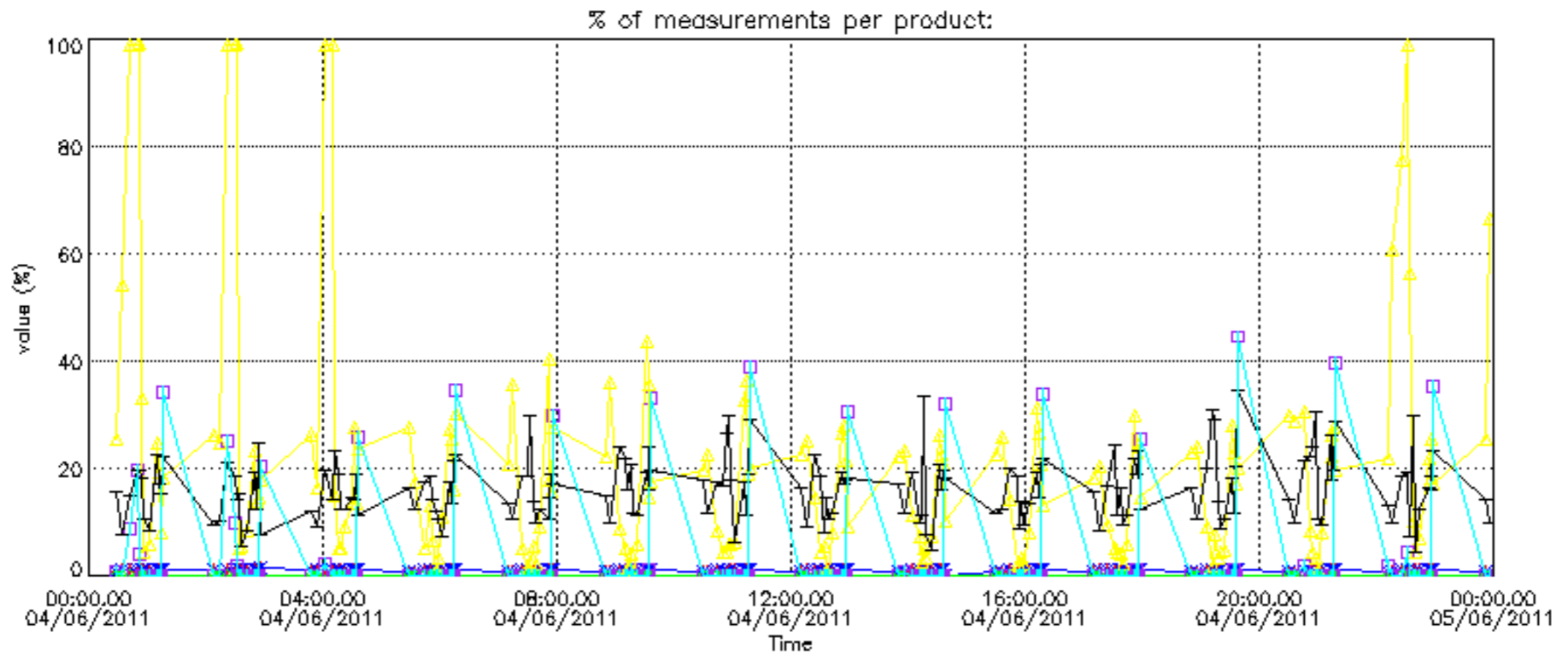


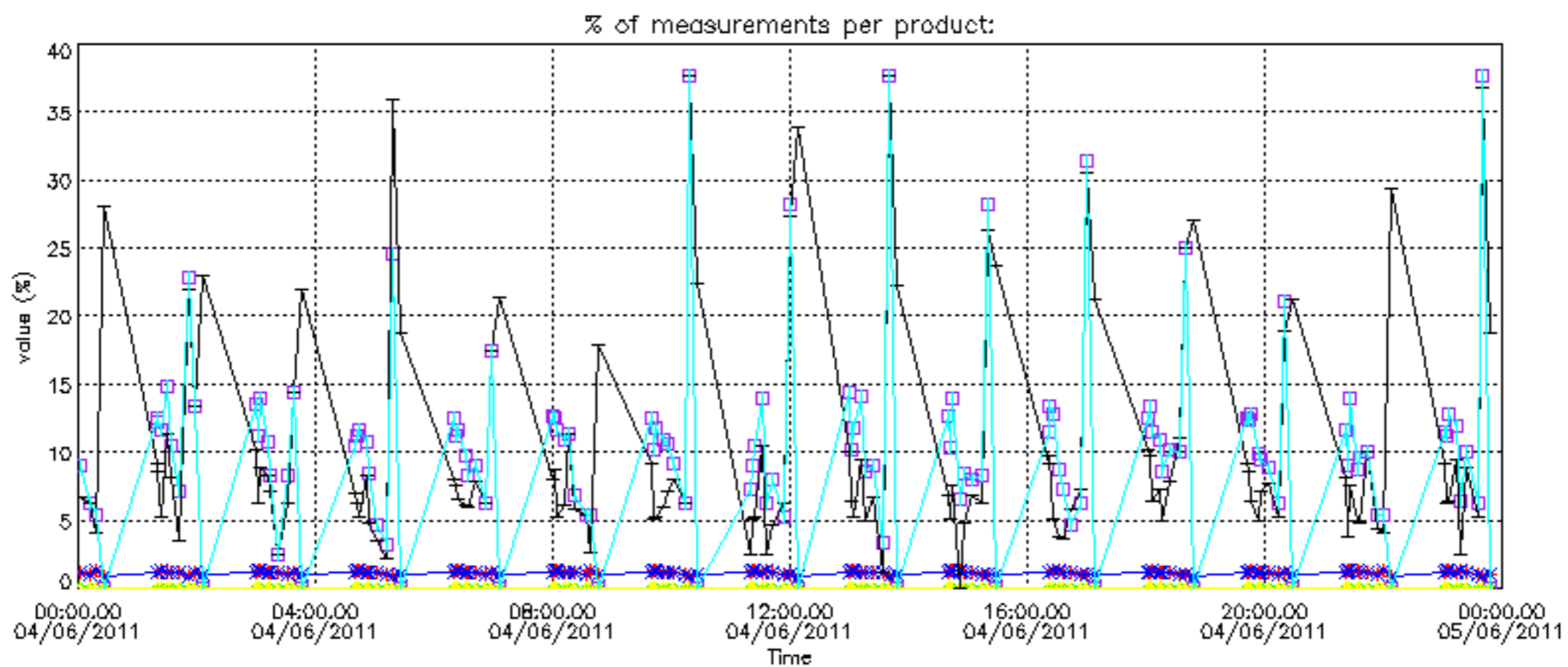
Percentage of flagged data per NO2 profile



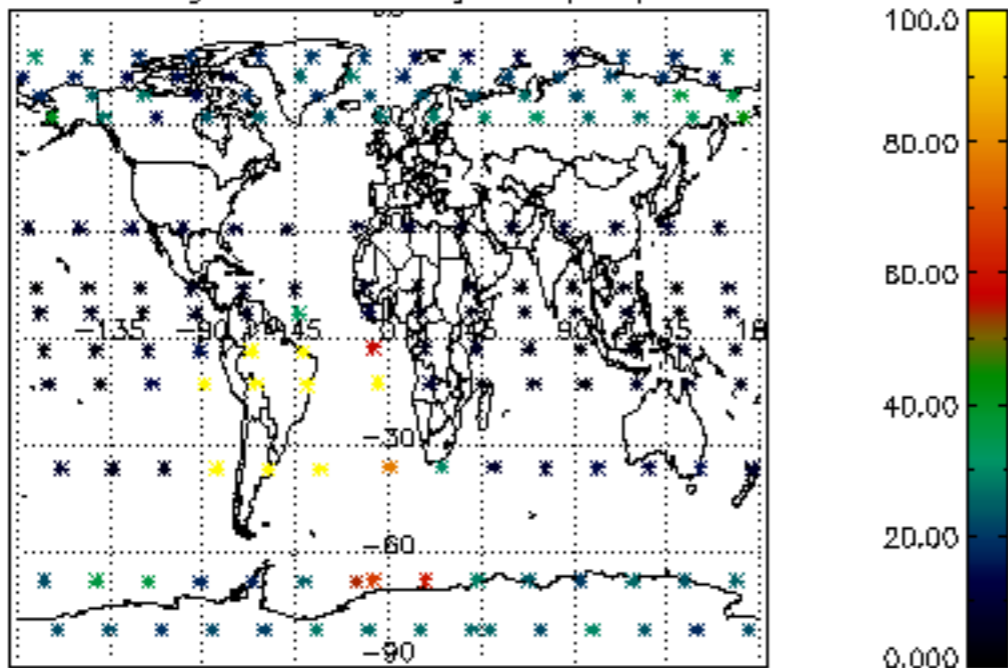
Percentage of flagged data per NO3 profile



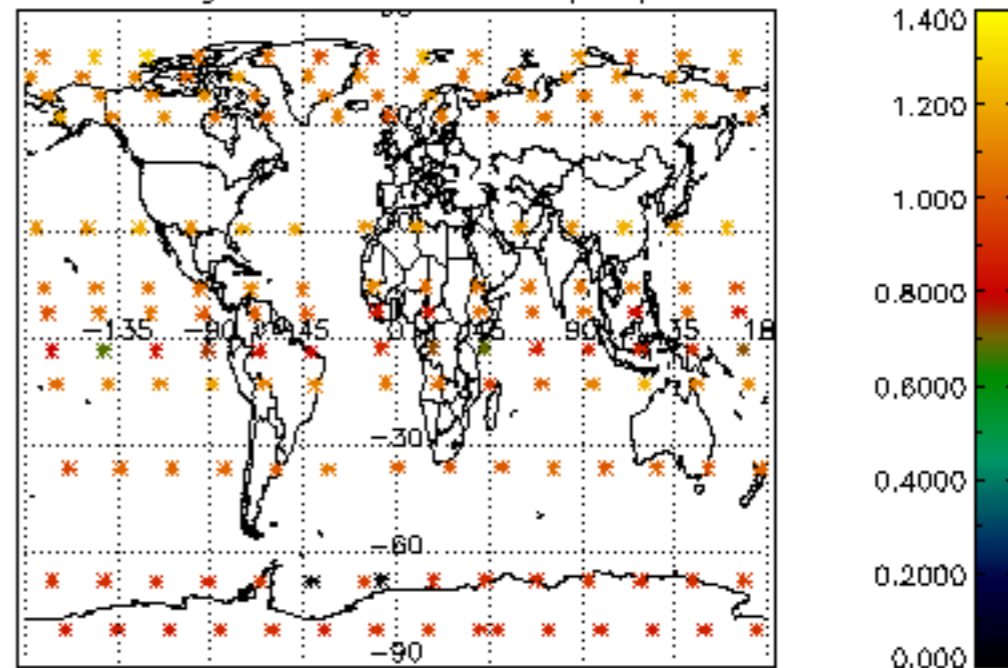




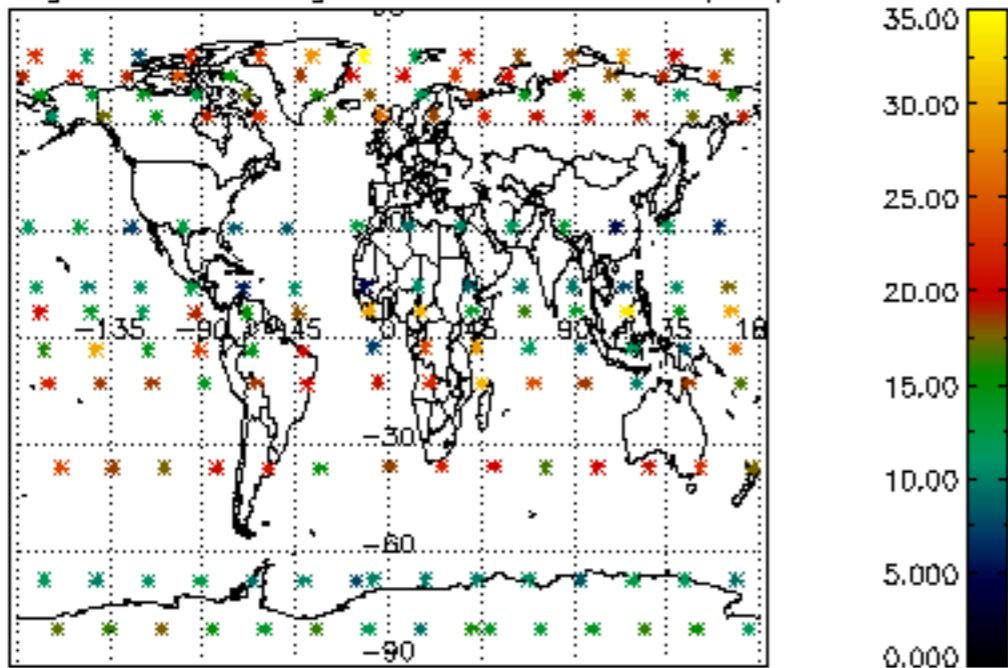
Percentage of cosmic ray hits per profile



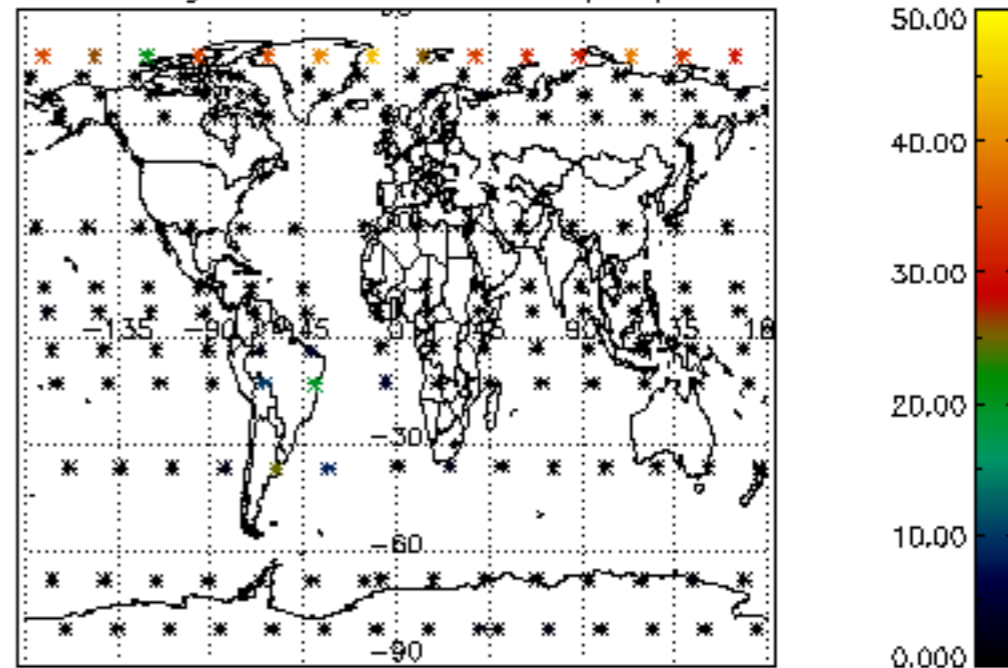
Percentage of datation errors per profile



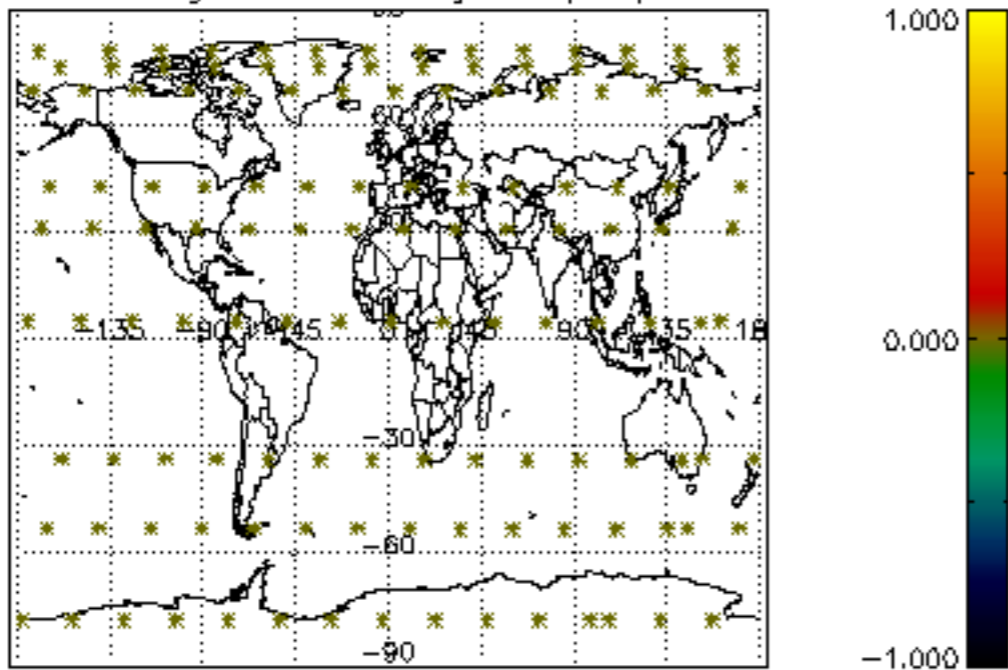
Percentage of star falling outside central band per profile



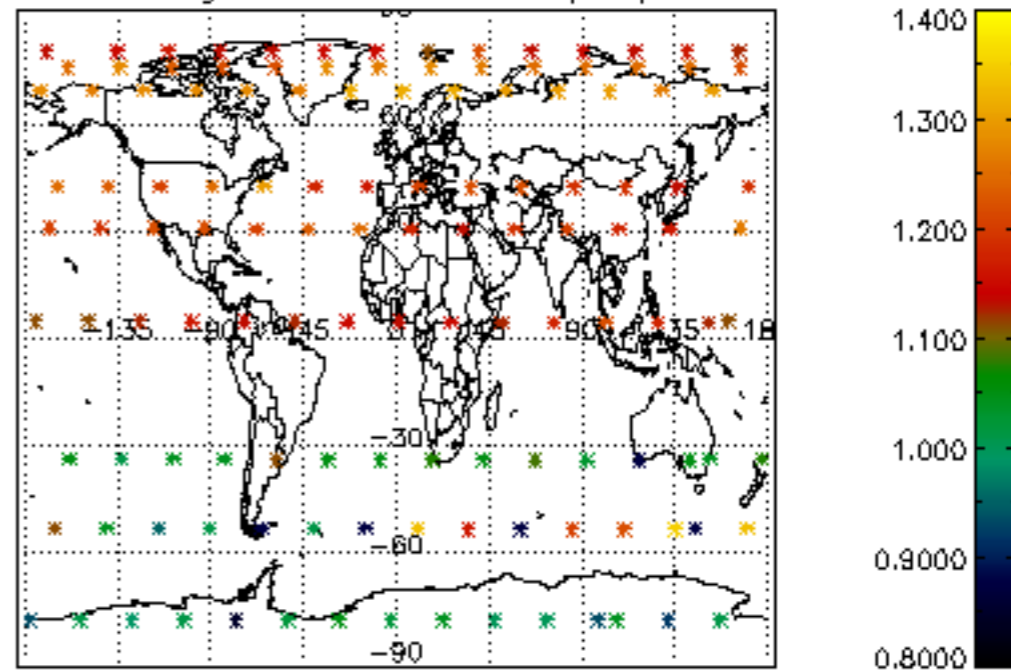
Percentage of saturation errors per profile



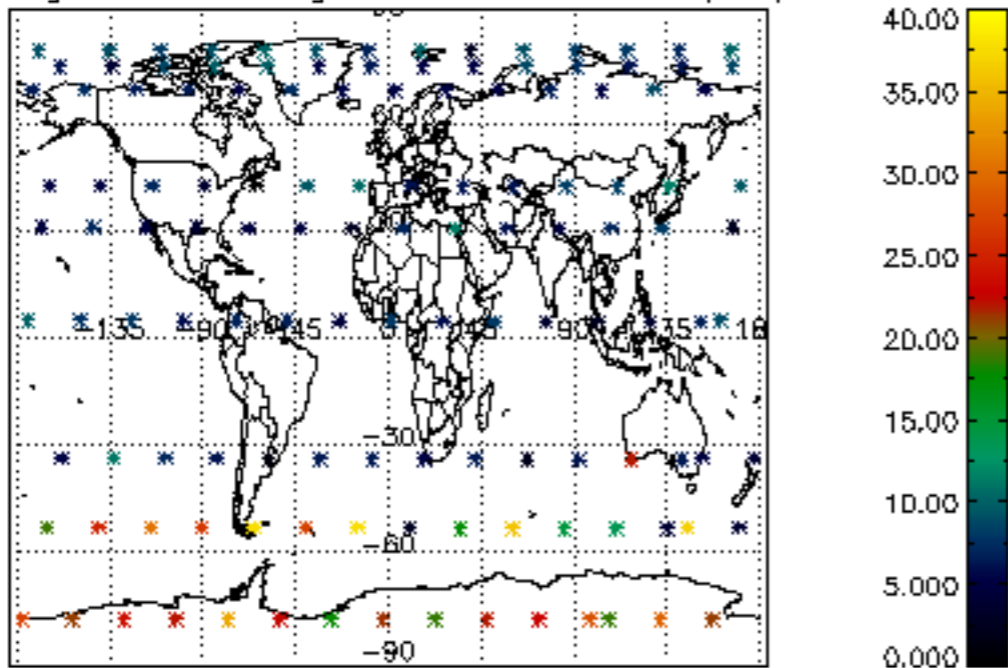
Percentage of cosmic ray hits per profile



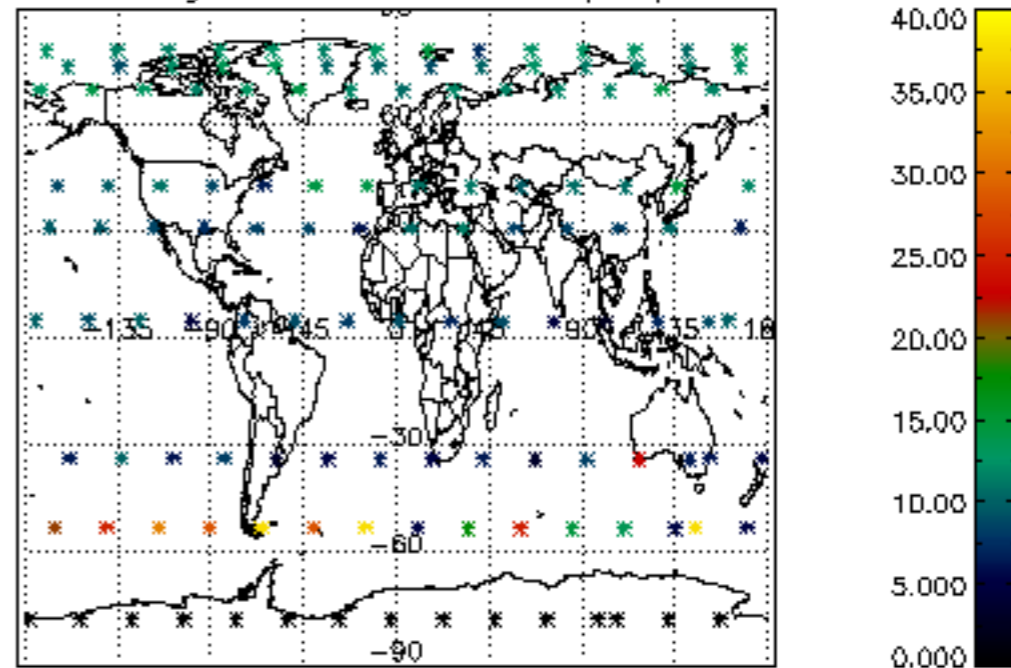
Percentage of datation errors per profile

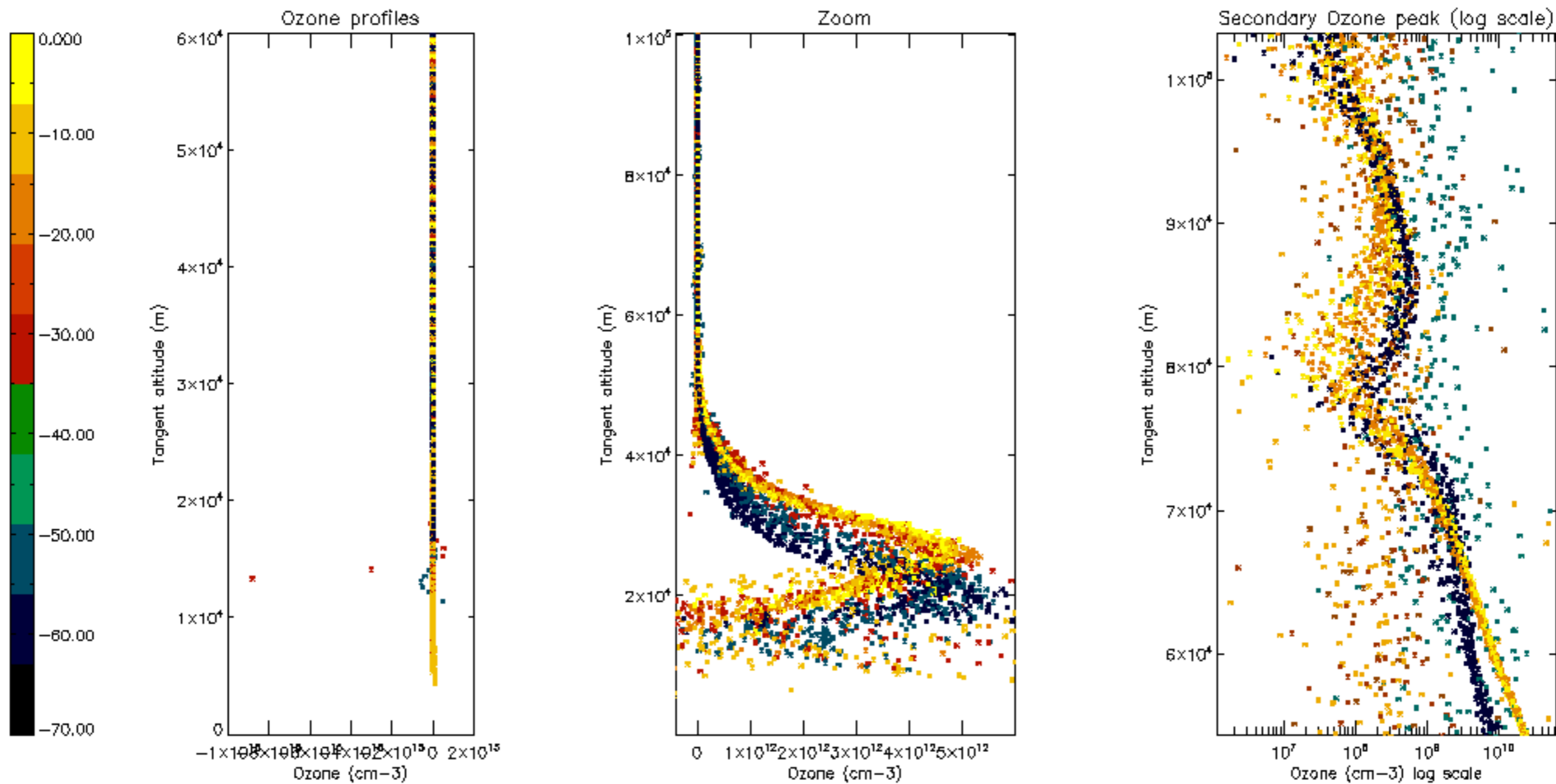


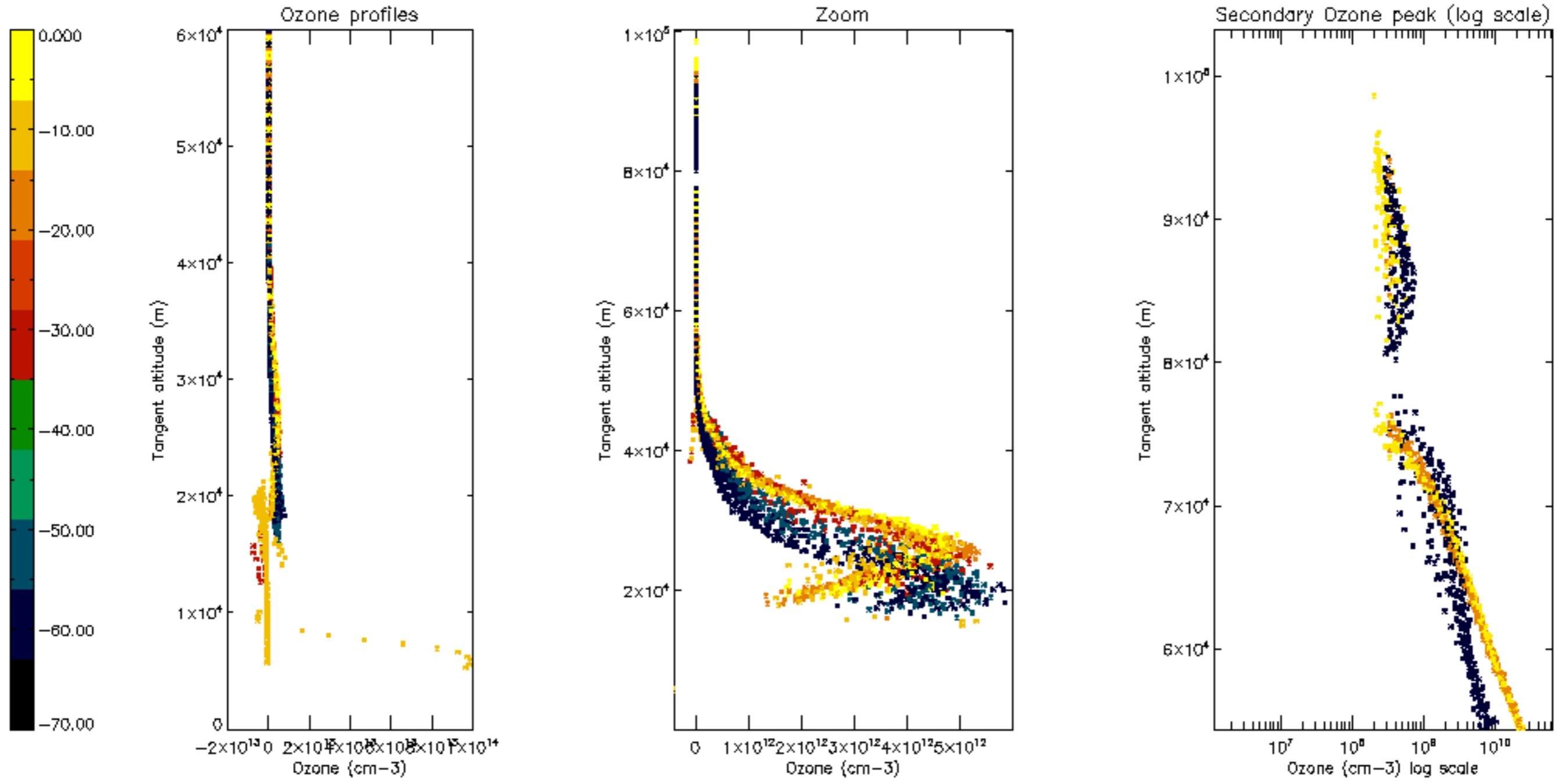
Percentage of star falling outside central band per profile



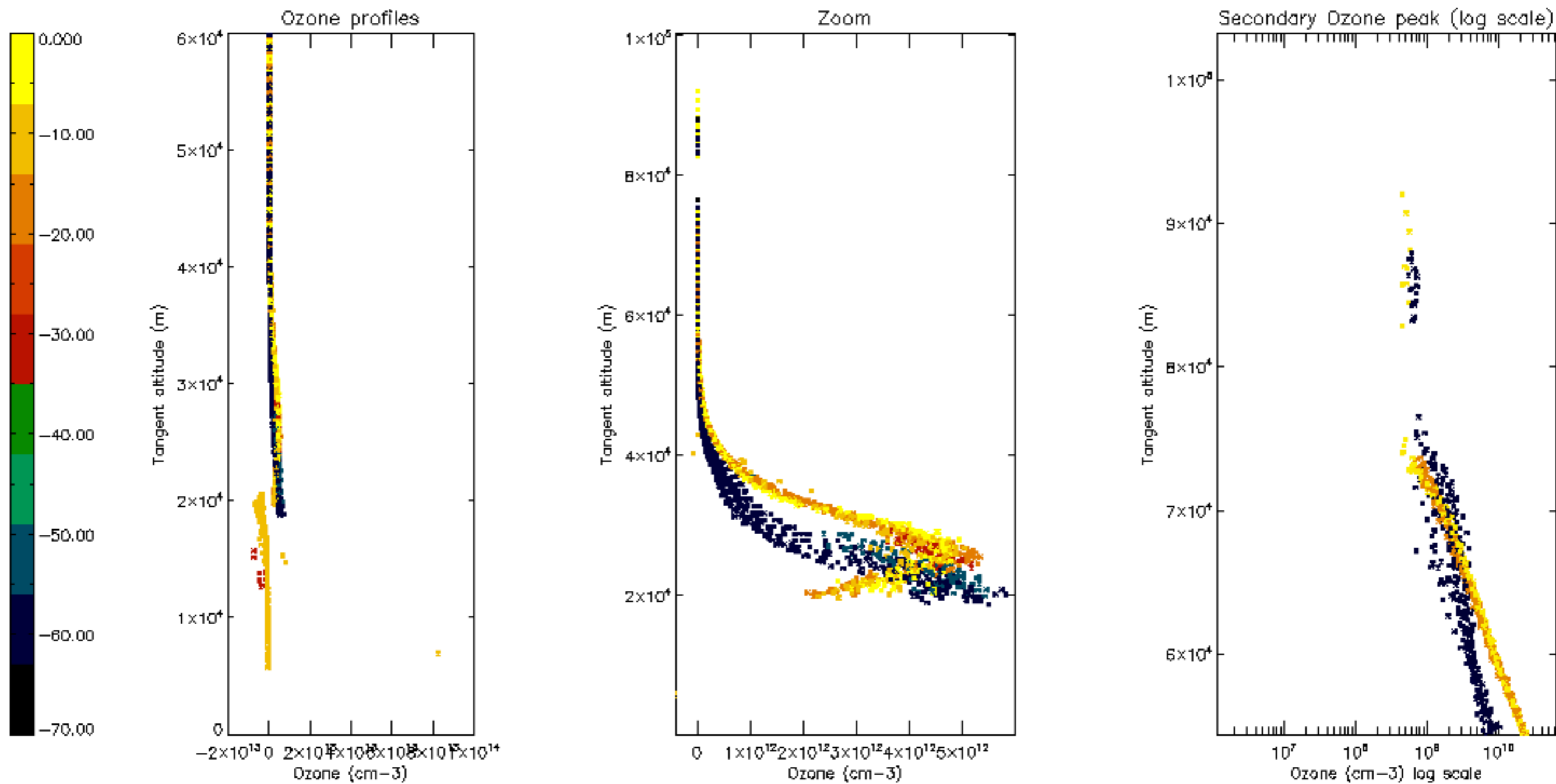
Percentage of saturation errors per profile

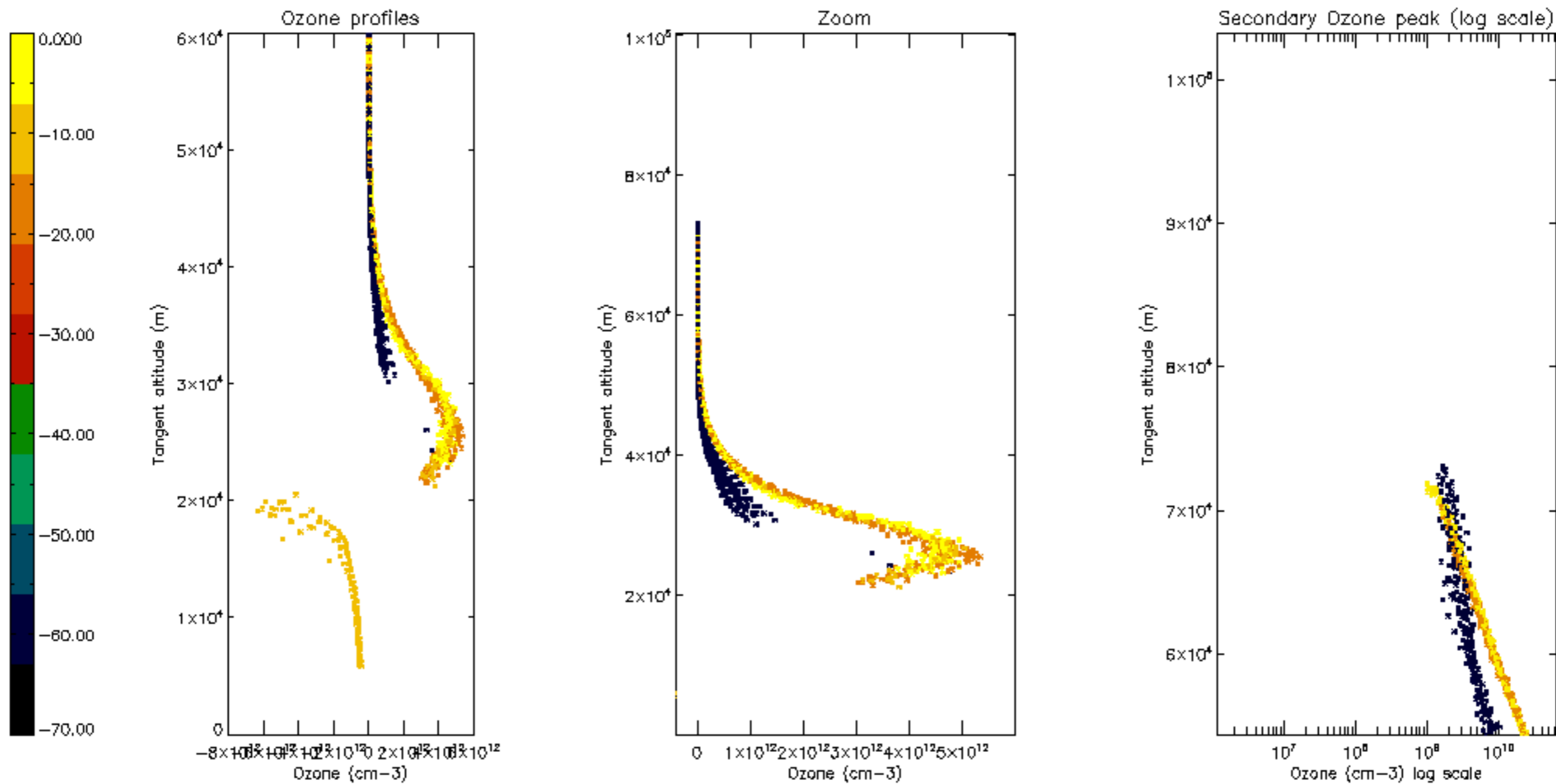


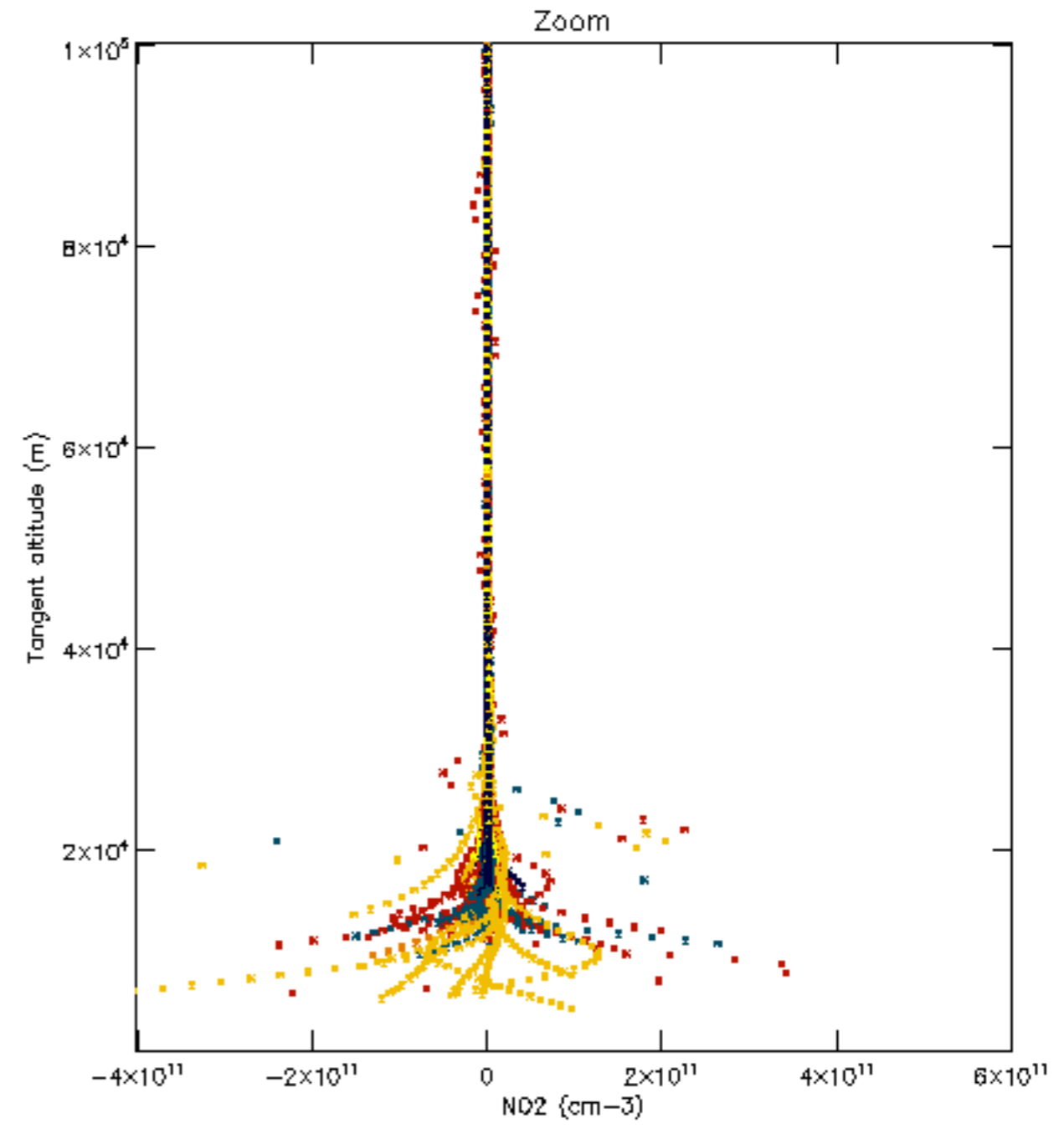
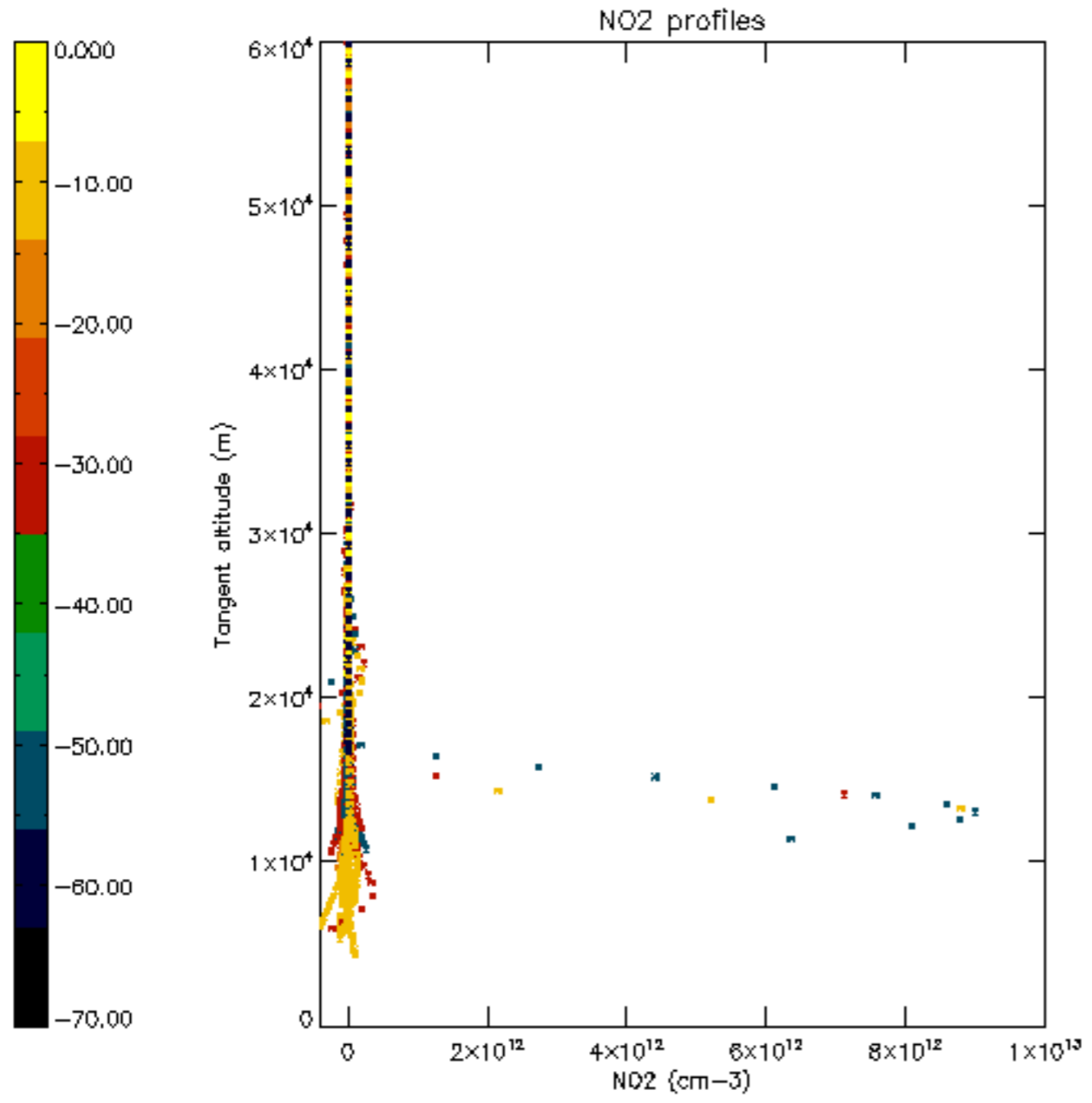


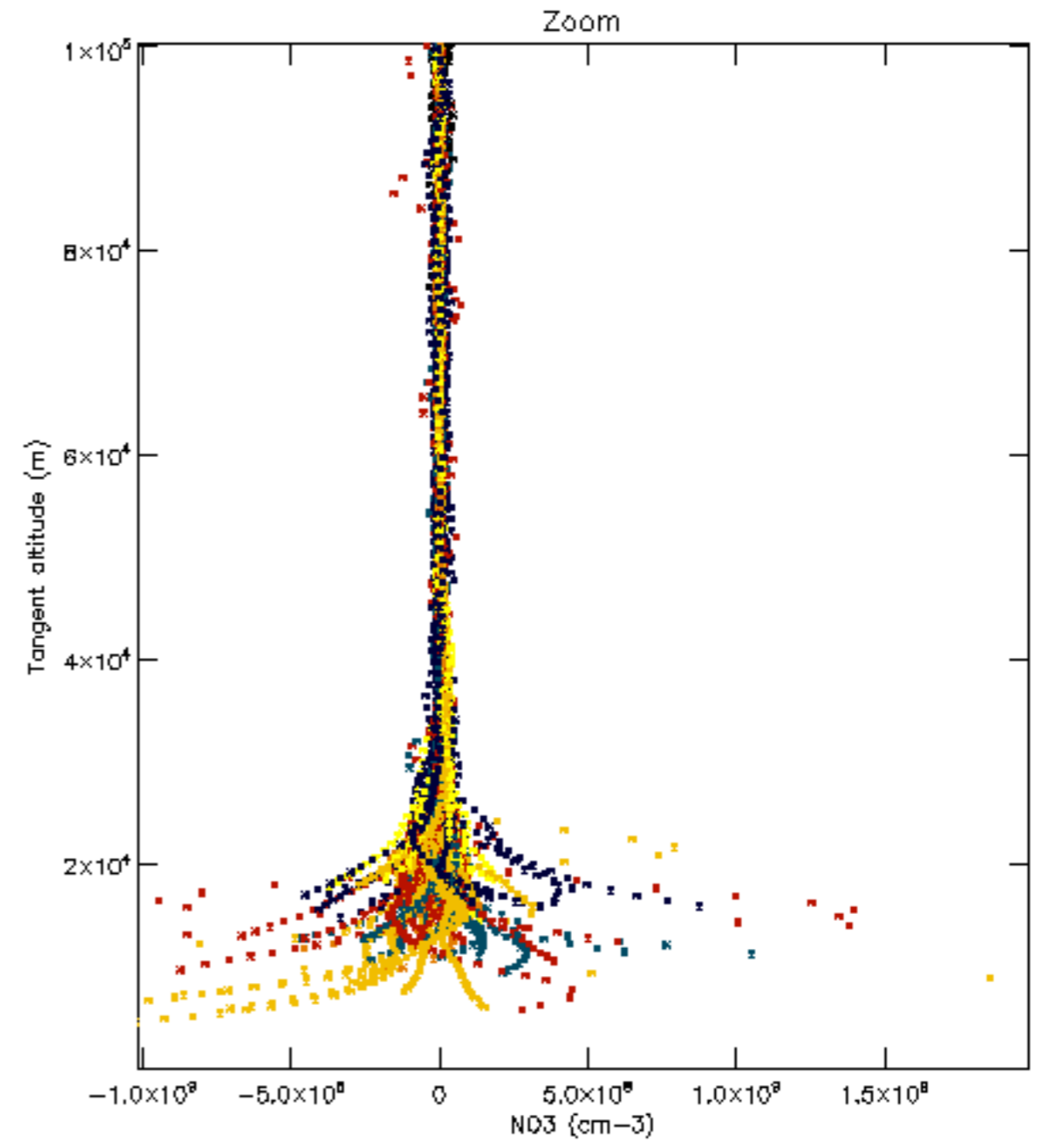
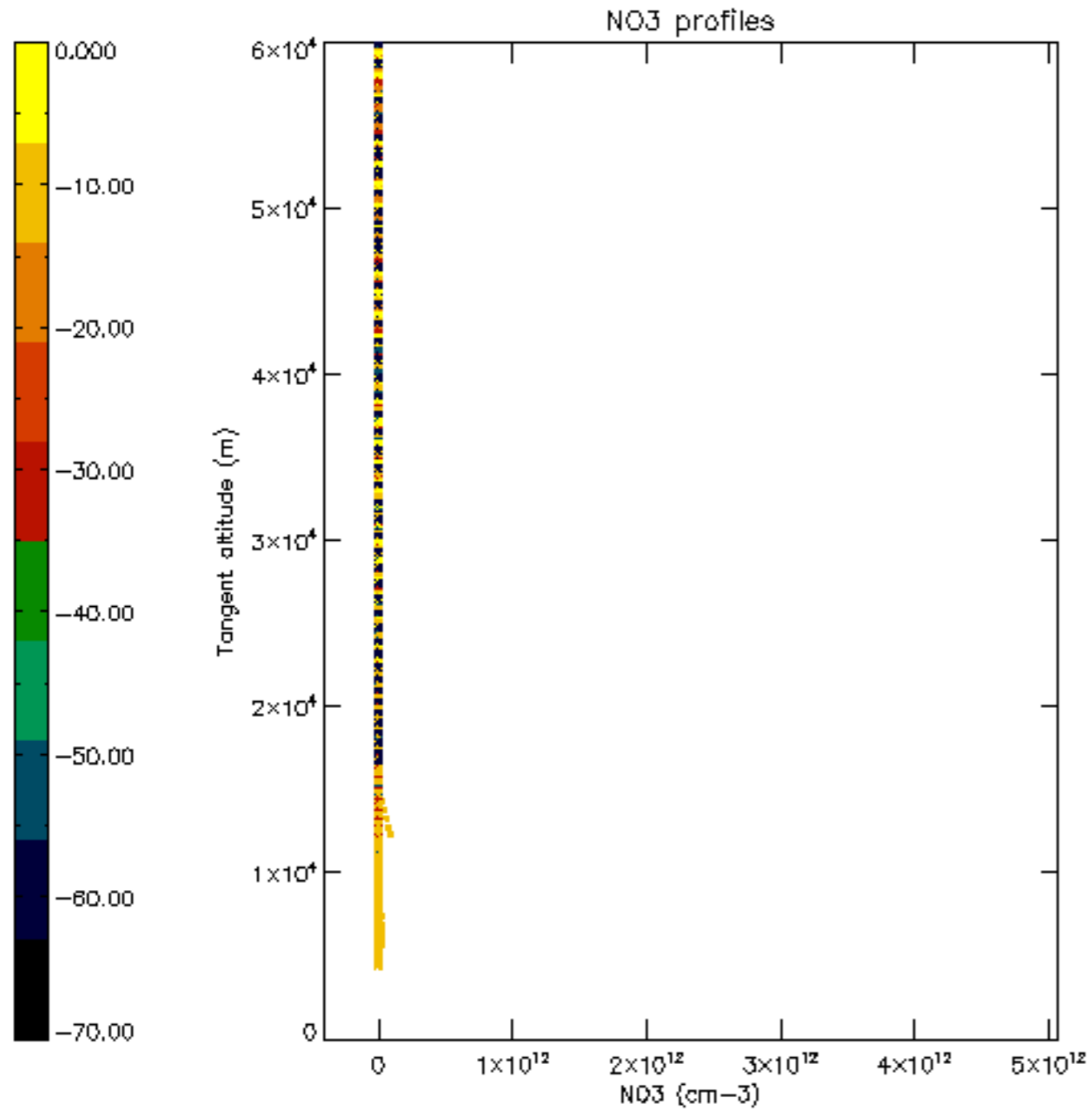


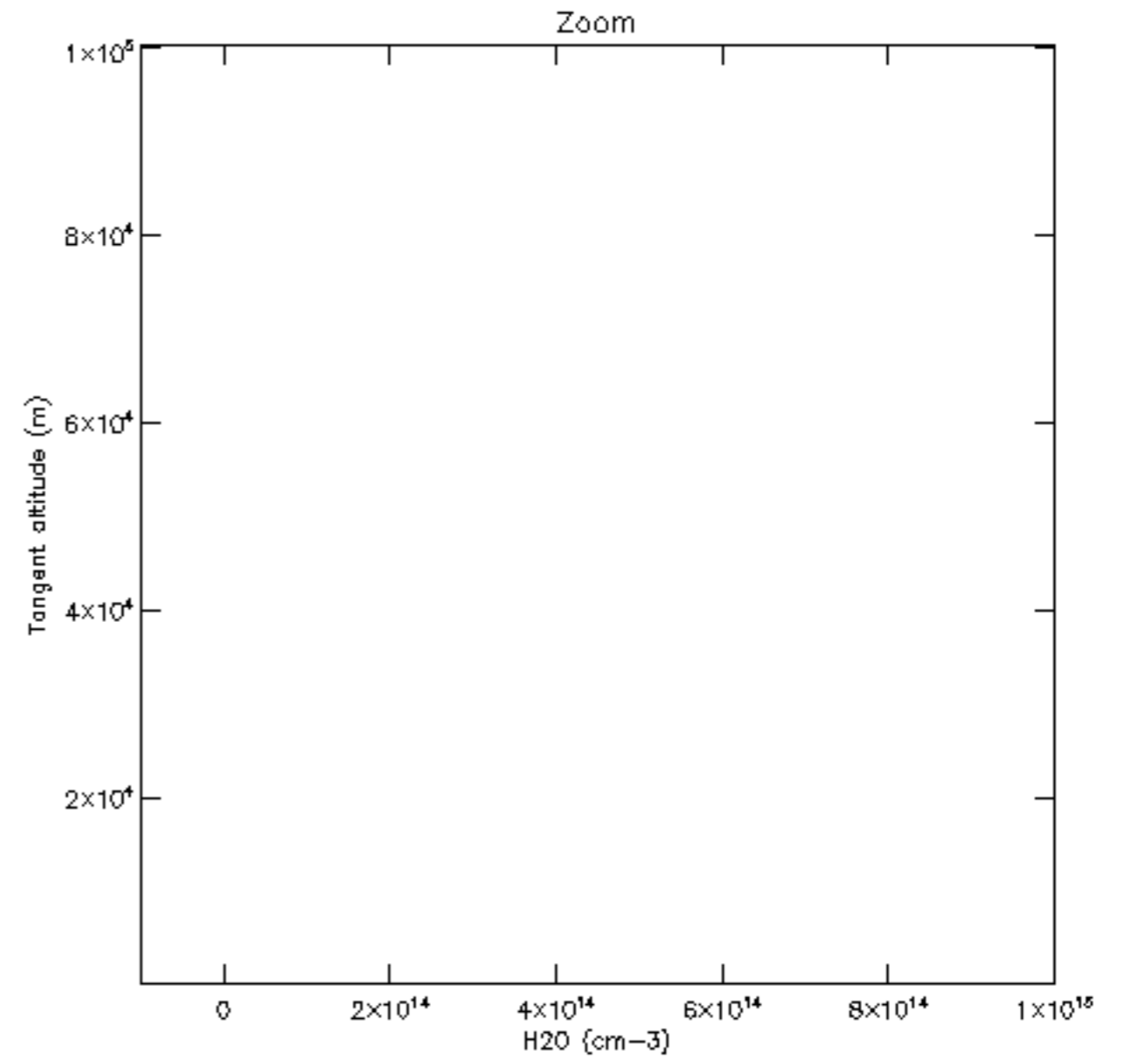
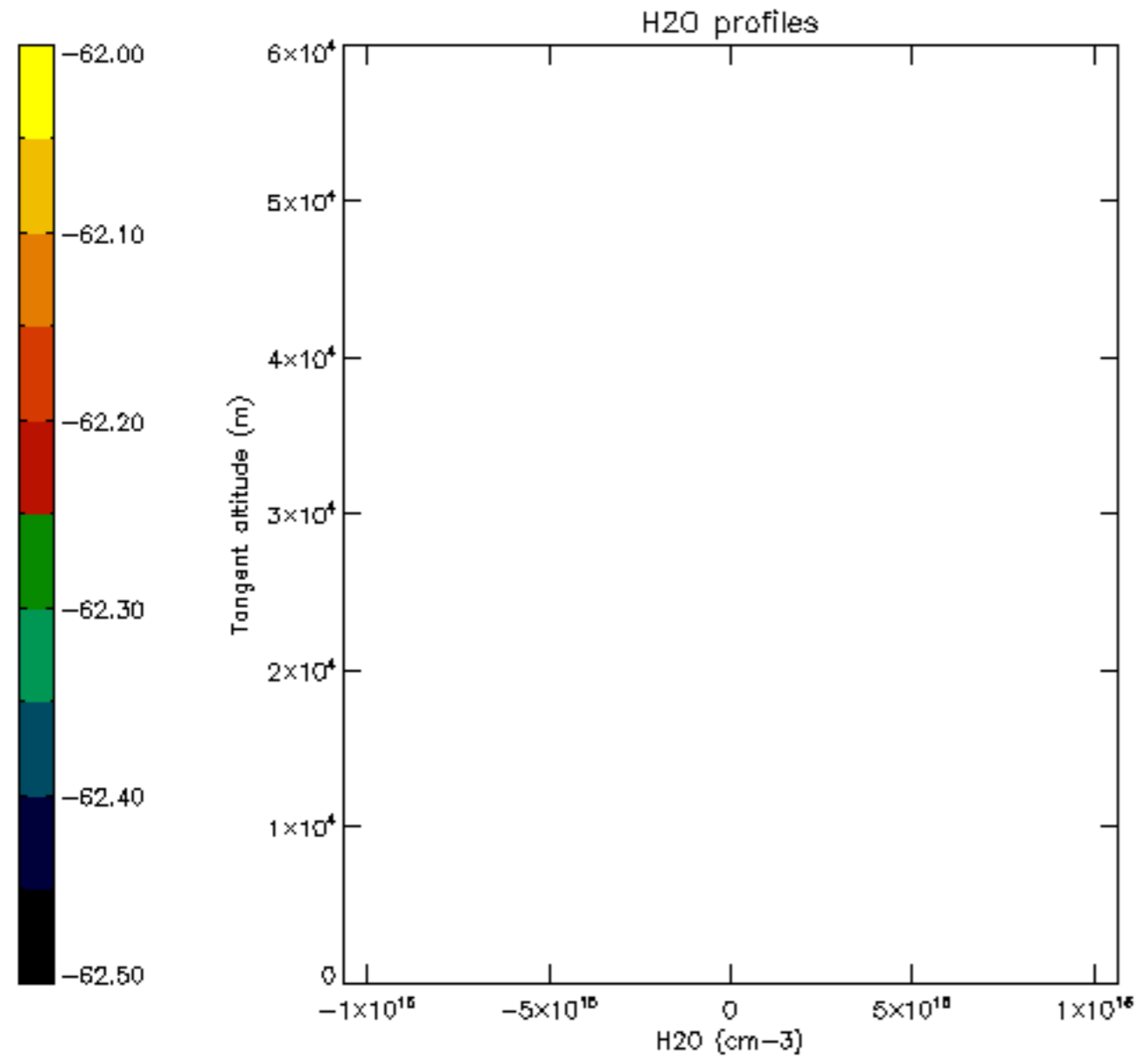


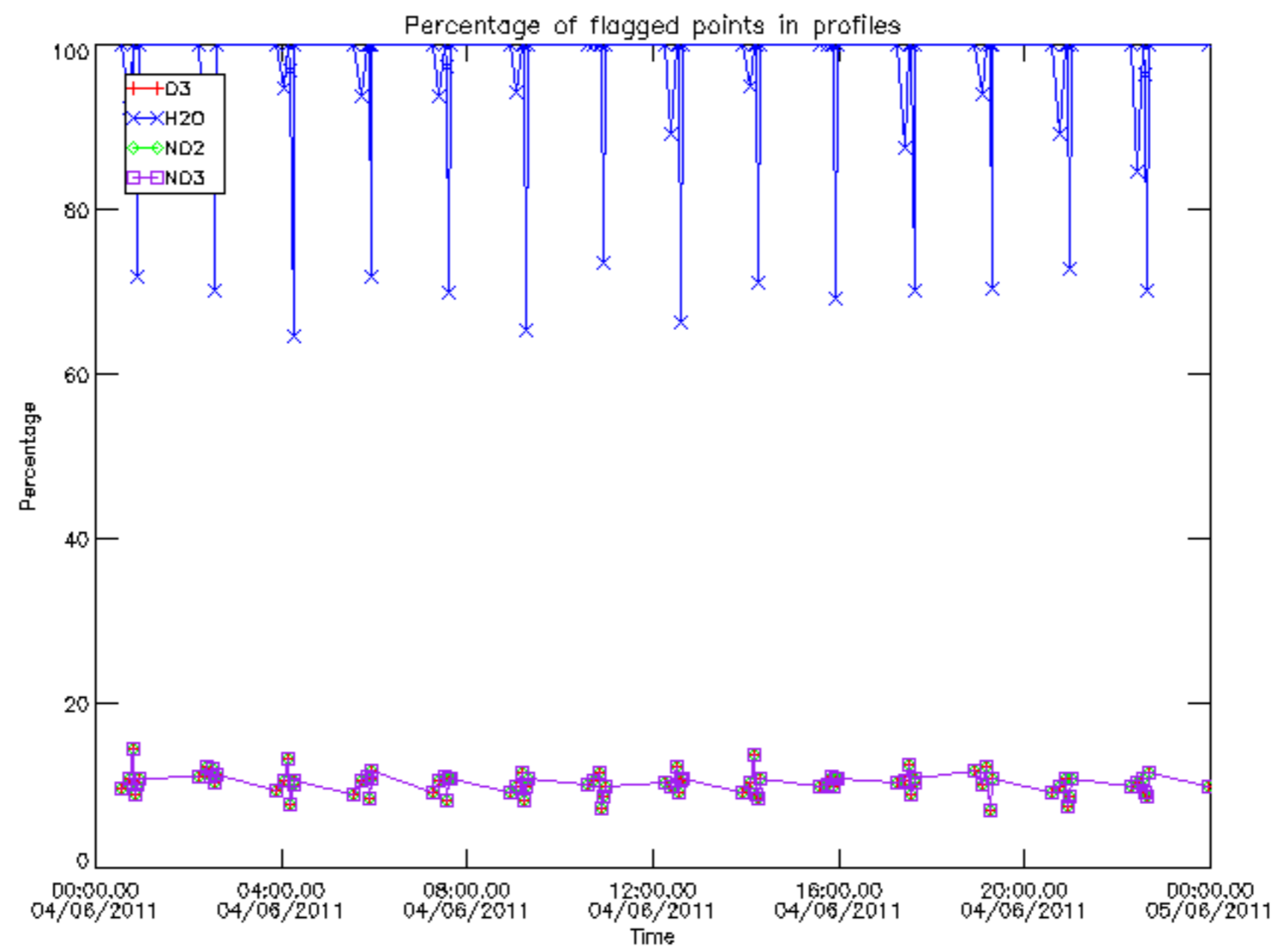




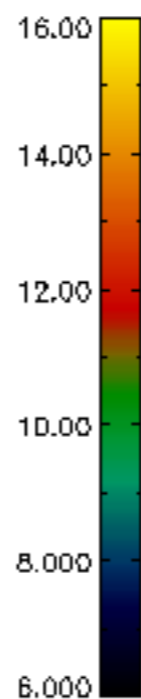
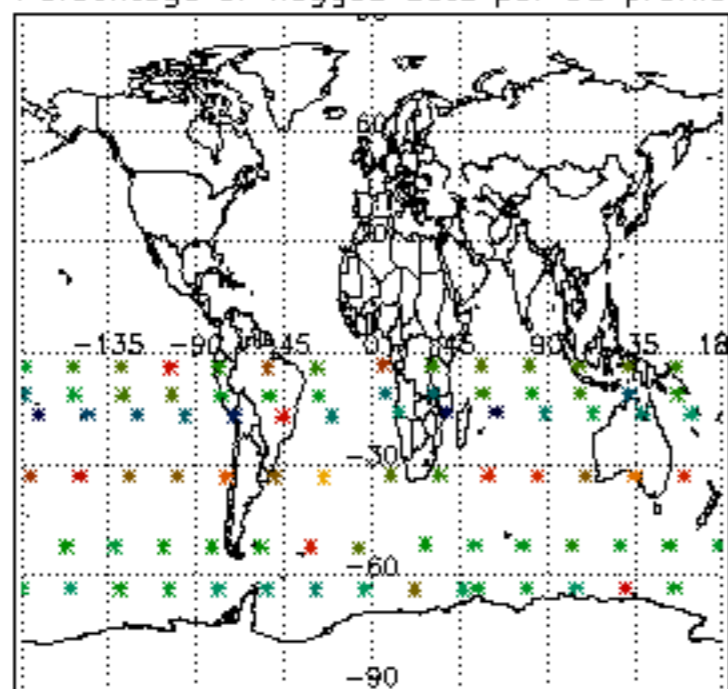




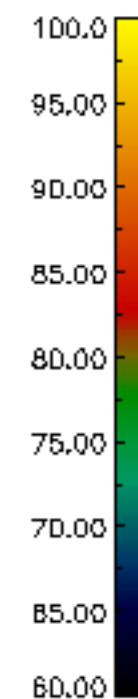
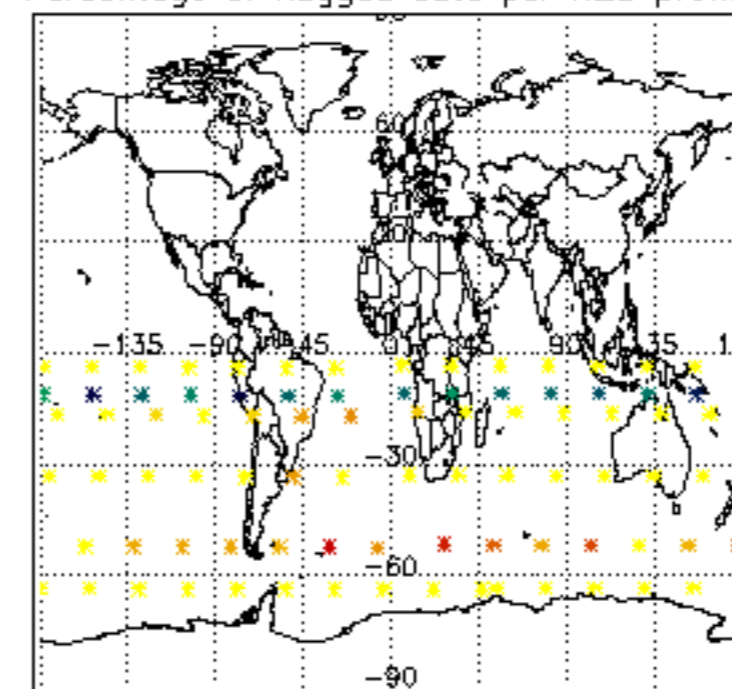




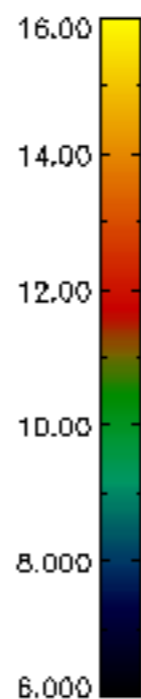
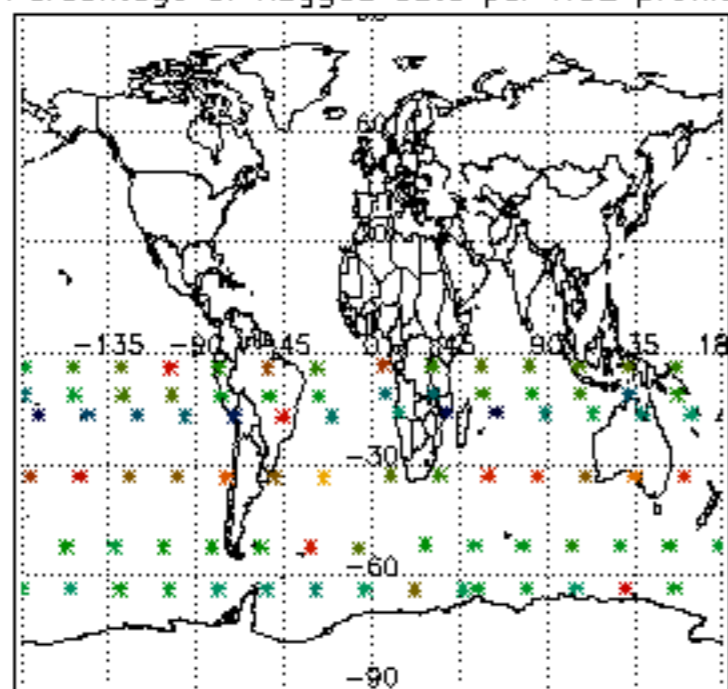
Percentage of flagged data per D3 profile



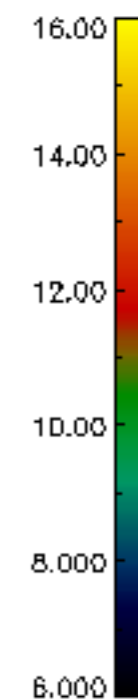
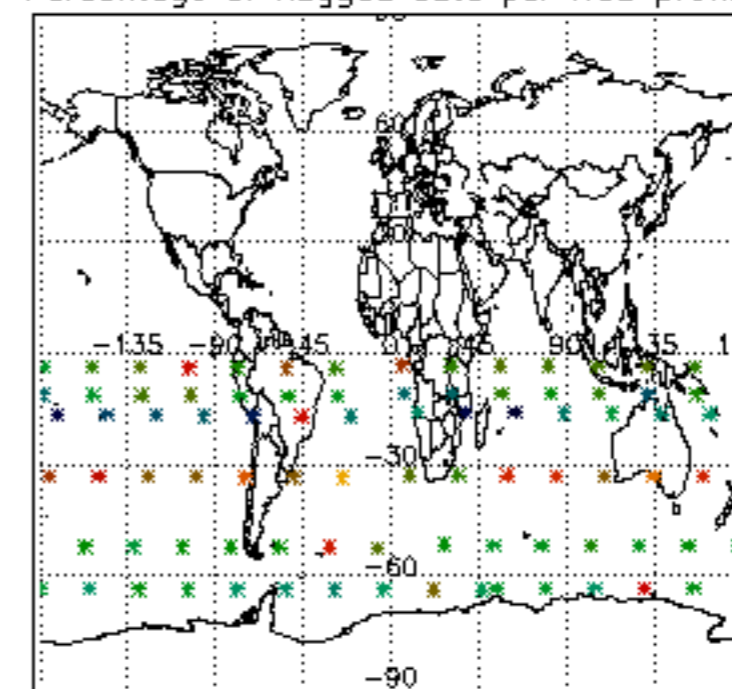
Percentage of flagged data per H2O profile

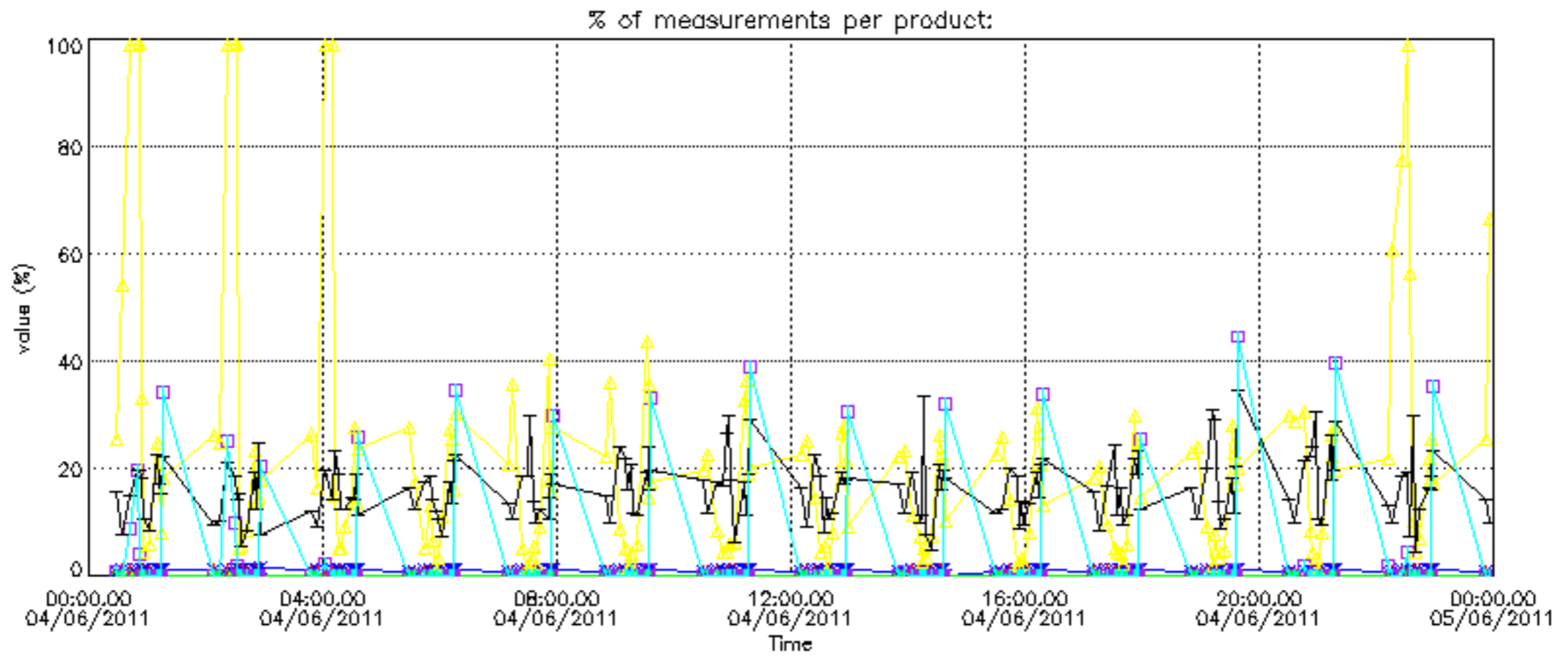


Percentage of flagged data per NO2 profile

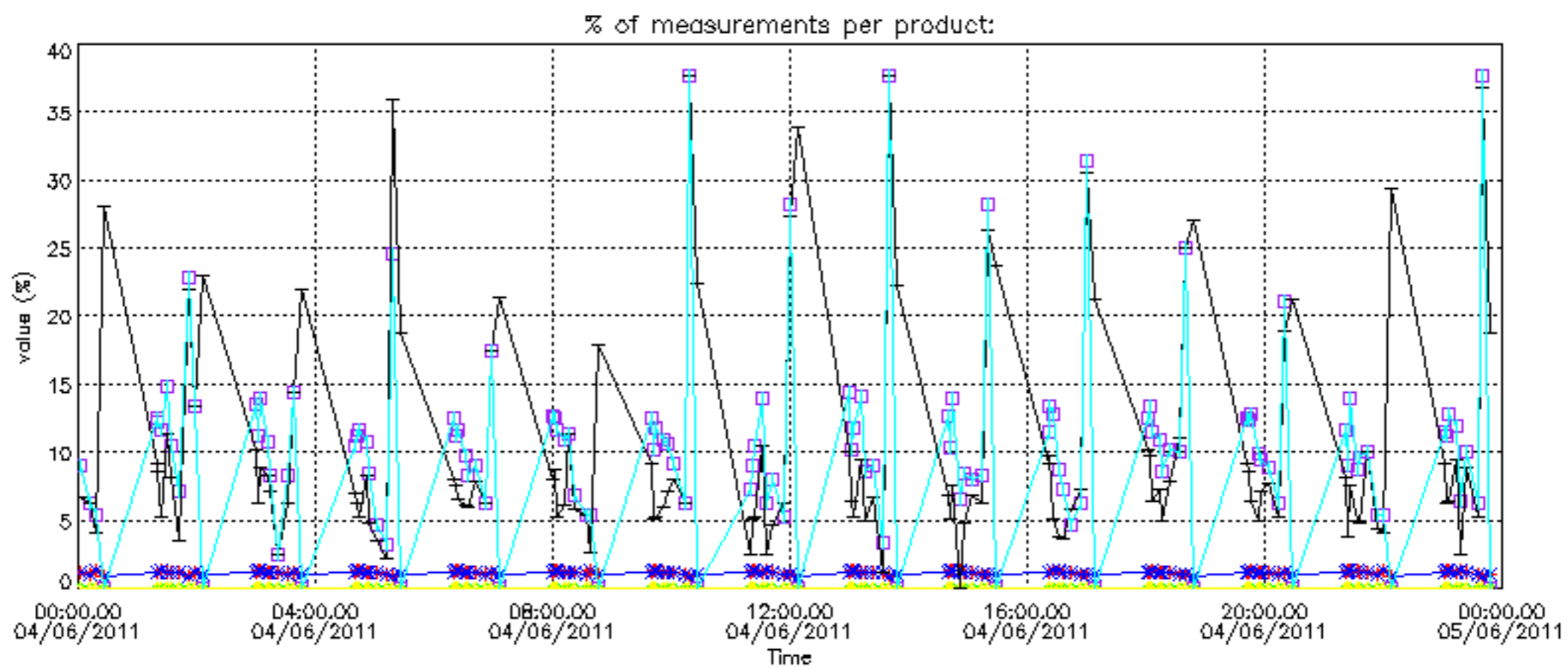


Percentage of flagged data per NO3 profile

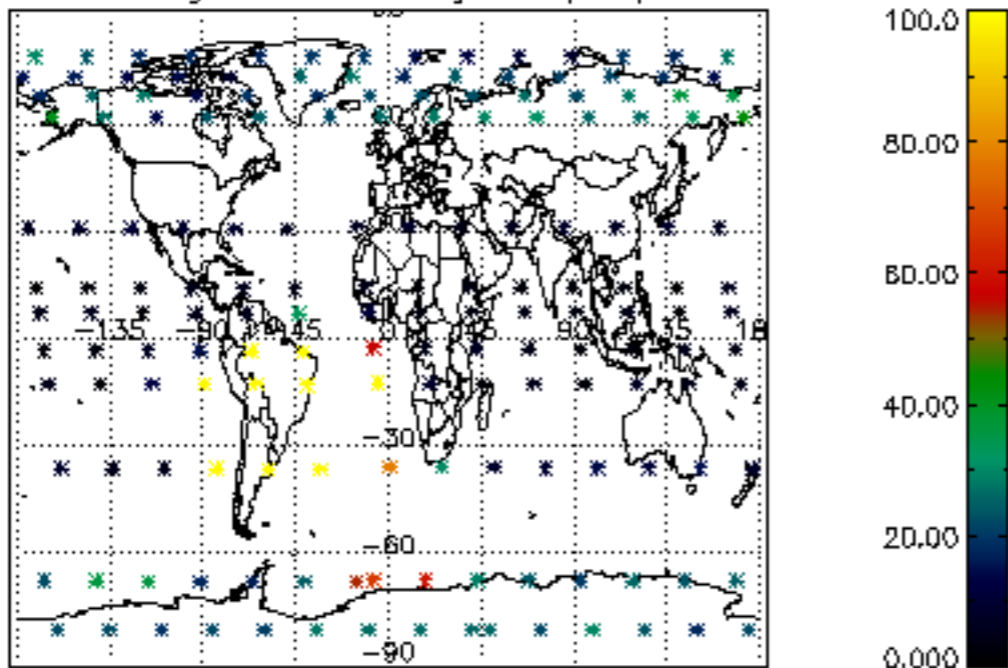




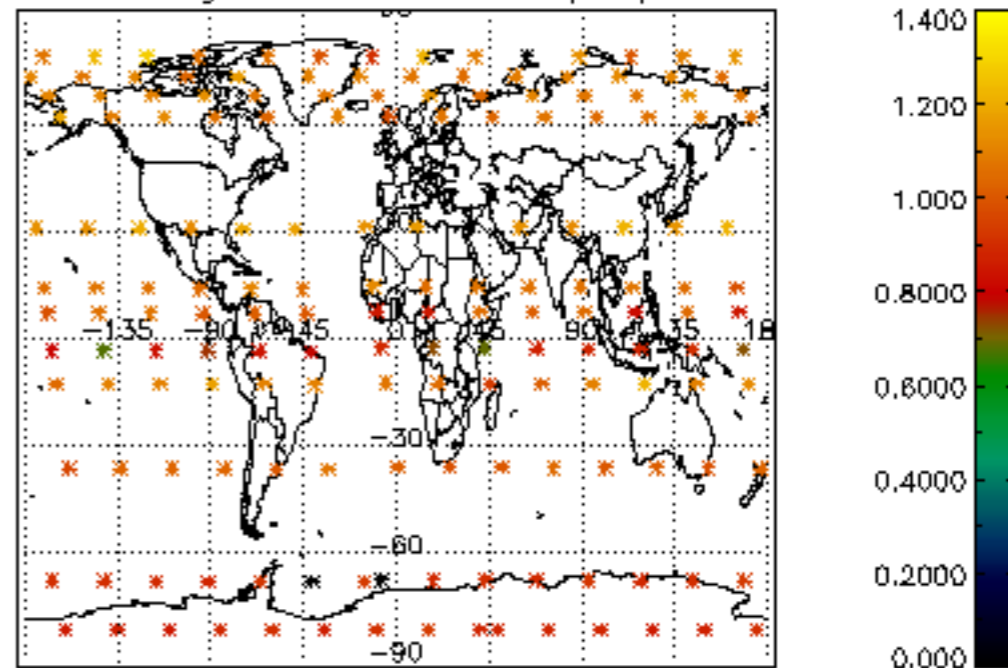




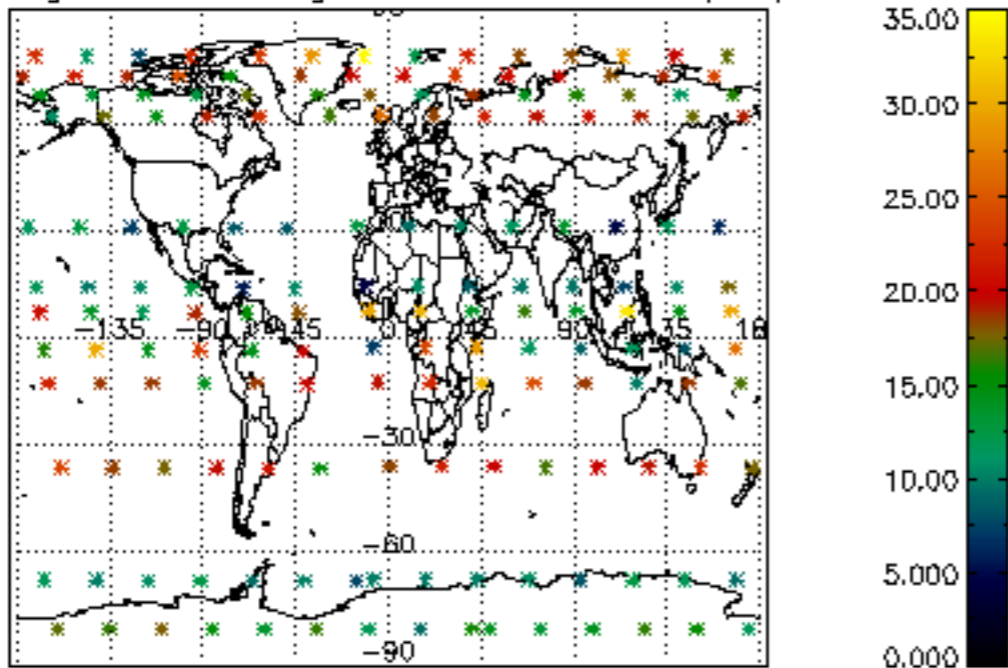
Percentage of cosmic ray hits per profile



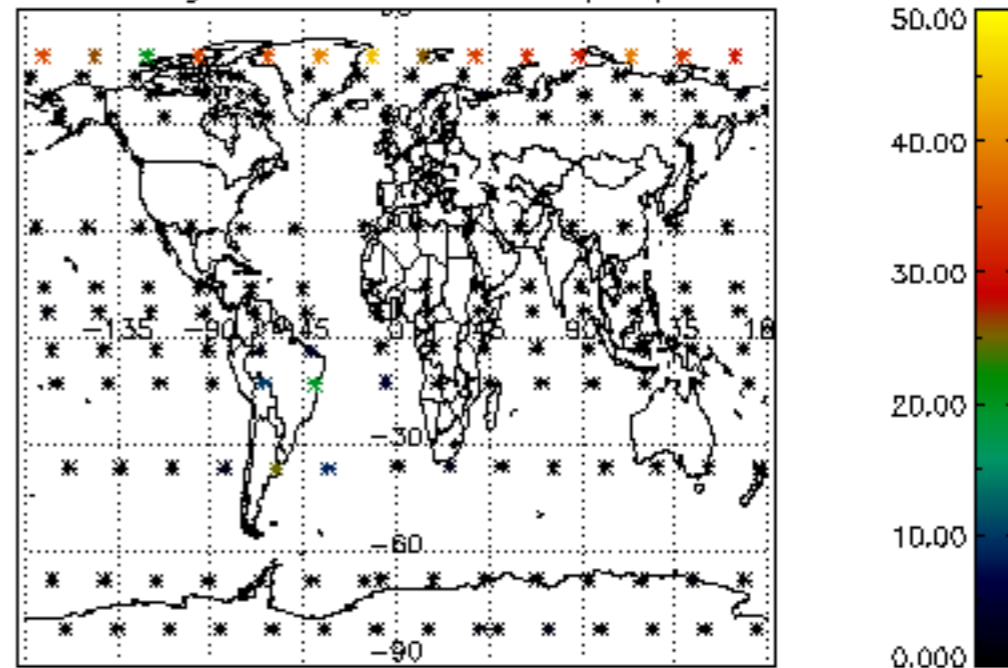
Percentage of datation errors per profile



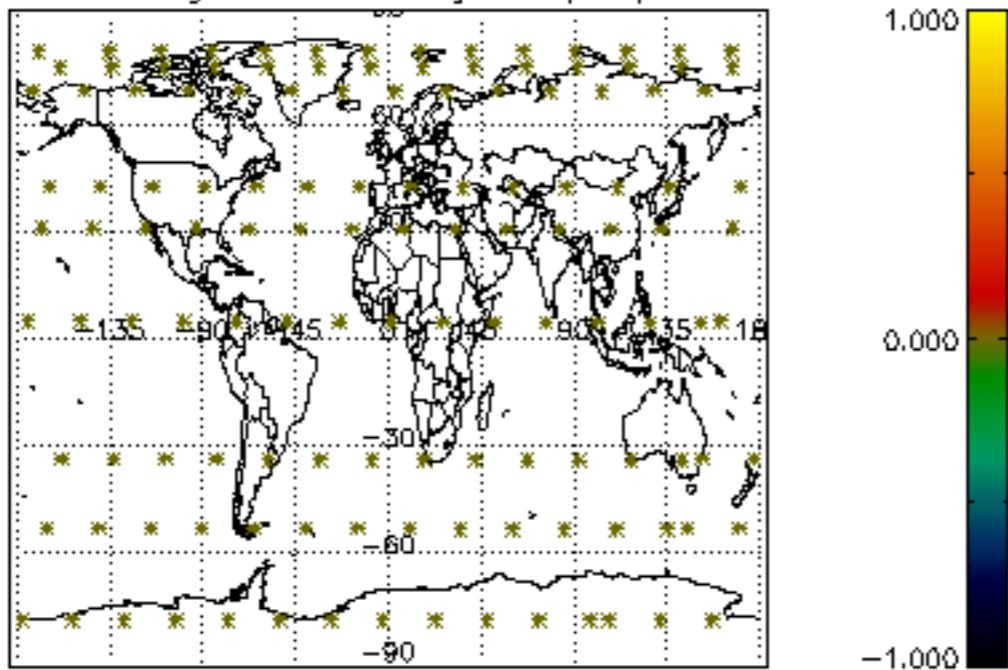
Percentage of star falling outside central band per profile



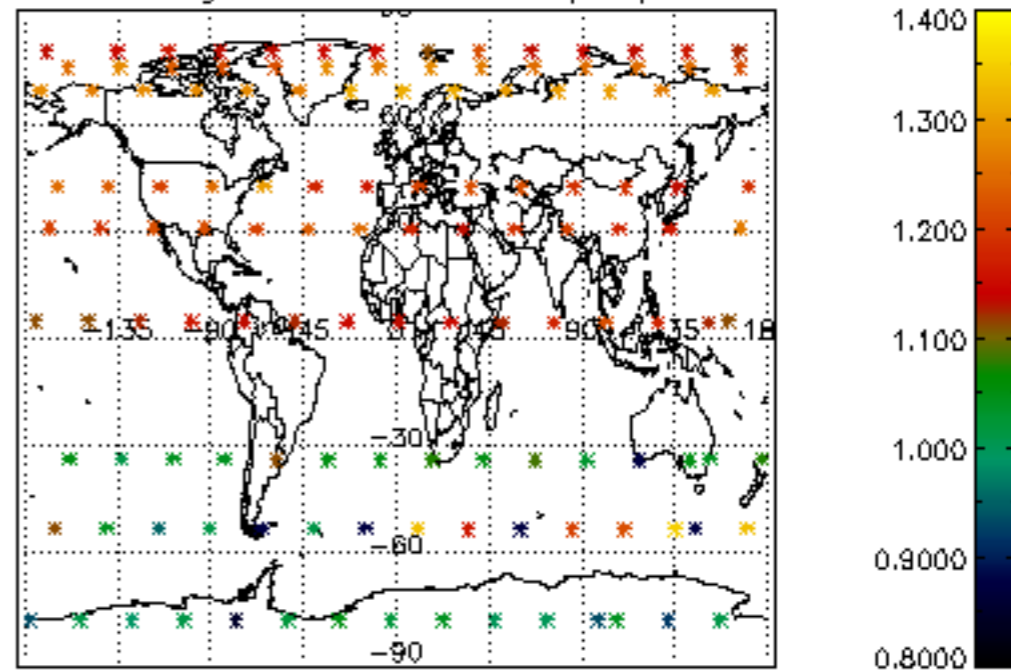
Percentage of saturation errors per profile



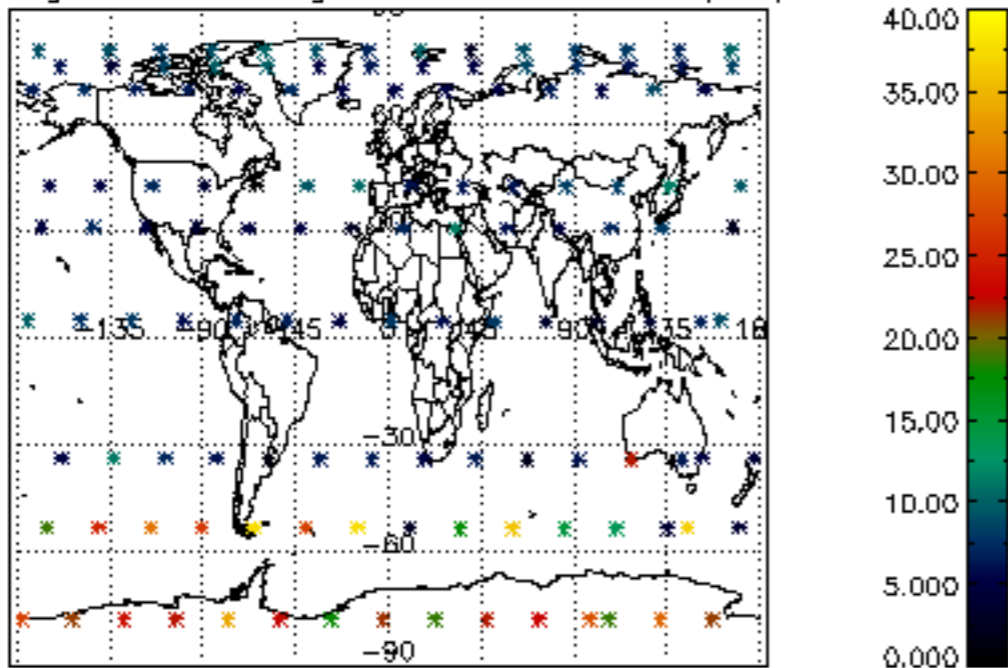
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

