

# GOMOS Level 2 Daily Report

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

Item	Value
Time of report generation	22APR2013 20:26:24
Data source version	GOMOS/6.01
Start time of products	06-06-2007 (06JUN2007 00:00:00)
Stop time of products	07-06-2007 (07JUN2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	355
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__2PRFIN20070606_000705_000000412058_00417_27525_6566.N1	06-JUN-2007 00:07:05	Bright	41.000	127	27Bet Her	2.7810	4700.0	82	27525	No
2	GOM_NL__2PRFIN20070606_001023_000000402058_00417_27525_6567.N1	06-JUN-2007 00:10:23	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	27525	No
3	GOM_NL__2PRFIN20070606_001830_000000362058_00417_27525_6568.N1	06-JUN-2007 00:18:30	Bright	35.500	119	14Eta Dra	2.7270	4700.0	71	27525	No
4	GOM_NL__2PRFIN20070606_002128_000000382058_00417_27525_6569.N1	06-JUN-2007 00:21:28	Bright	37.500	60	7Bet UMi	2.0810	3950.0	75	27525	No
5	GOM_NL__2PRFIN20070606_002609_000000362058_00417_27525_6570.N1	06-JUN-2007 00:26:09	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	27525	No
6	GOM_NL__2PRFIN20070606_003405_000000382058_00417_27525_6571.N1	06-JUN-2007 00:34:05	Bright	37.500	76	27Gam Cas	2.3000	30000.	75	27525	No
7	GOM_NL__2PRFIN20070606_003944_000000352058_00417_27525_6572.N1	06-JUN-2007 00:39:44	Bright	34.500	73	57Gam1And	2.2600	13100.	69	27525	No
8	GOM_NL__2PRFIN20070606_004203_000000442058_00417_27525_6573.N1	06-JUN-2007 00:42:03	Bright	44.000	53	43Bet And	2.0480	3300.0	88	27525	No
9	GOM_NL__2PRFIN20070606_004608_000000412058_00417_27525_6574.N1	06-JUN-2007 00:46:08	Twilight	40.500	105	6Bet Ari	2.6450	8900.0	81	27525	No
10	GOM_NL__2PRFIN20070606_005918_000000472058_00417_27525_6575.N1	06-JUN-2007 00:59:18	Dark	46.500	52	16Bet Cet	2.0370	4500.0	93	27525	No
11	GOM_NL__2PRFIN20070606_010555_000000492058_00417_27525_6576.N1	06-JUN-2007 01:05:55	Dark	48.500	84	Alp Phe	2.3970	4500.0	97	27525	No
12	GOM_NL__2PRFIN20070606_011133_000000592058_00418_27526_6564.N1	06-JUN-2007 01:11:33	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	27526	No
13	GOM_NL__2PRFIN20070606_011330_000000472058_00418_27526_6565.N1	06-JUN-2007 01:13:30	Dark	47.000	31	Alp Gru	1.7340	15200.	94	27526	No
14	GOM_NL__2PRFIN20070606_011811_000000432058_00418_27526_6566.N1	06-JUN-2007 01:18:11	Straylight	43.000	45	Alp Pav	1.9400	26000.	86	27526	No
15	GOM_NL__2PRFIN20070606_012402_000000442058_00418_27526_6567.N1	06-JUN-2007 01:24:02	Straylight	44.000	141	Bet Ara	2.8400	4600.0	88	27526	No
16	GOM_NL__2PRFIN20070606_012519_000000402058_00418_27526_6568.N1	06-JUN-2007 01:25:19	Straylight	40.000	147	Alp Ara	2.8770	26000.	80	27526	No
17	GOM_NL__2PRFIN20070606_012702_000000462058_00418_27526_6569.N1	06-JUN-2007 01:27:02	Straylight	45.500	40	The Sco	1.8590	7100.0	91	27526	No
18	GOM_NL__2PRFIN20070606_012848_000000462058_00418_27526_6570.N1	06-JUN-2007 01:28:48	Twilight	46.000	25	35Lam Sco	1.6200	28000.	92	27526	No
19	GOM_NL__2PRFIN20070606_013028_000000442058_00418_27526_6571.N1	06-JUN-2007 01:30:28	Twilight	43.500	75	26Eps Sco	2.2910	4250.0	87	27526	No
20	GOM_NL__2PRFIN20070606_013226_000000412058_00418_27526_6572.N1	06-JUN-2007 01:32:26	Bright	41.000	136	23Tau Sco	2.8220	30000.	82	27526	No
21	GOM_NL__2PRFIN20070606_013427_000000372058_00418_27526_6573.N1	06-JUN-2007 01:34:27	Bright	37.000	80	7Del Sco	2.3160	30000.	74	27526	No
22	GOM_NL__2PRFIN20070606_013556_000000432058_00418_27526_6574.N1	06-JUN-2007 01:35:56	Bright	43.000	86	35Eta Oph	2.4300	10200.	86	27526	No
23	GOM_NL__2PRFIN20070606_013744_000000402058_00418_27526_6575.N1	06-JUN-2007 01:37:44	Bright	39.500	98	13Zet Oph	2.5710	30000.	79	27526	No
24	GOM_NL__2PRFIN20070606_013953_000000382058_00418_27526_6576.N1	06-JUN-2007 01:39:53	Bright	37.500	120	1Del Oph	2.7340	3200.0	75	27526	No
25	GOM_NL__2PRFIN20070606_014253_000000362058_00418_27526_6577.N1	06-JUN-2007 01:42:53	Bright	36.000	102	24Alp Ser	2.6000	4250.0	72	27526	No
26	GOM_NL__2PRFIN20070606_014740_000000402058_00418_27526_6578.N1	06-JUN-2007 01:47:40	Bright	39.500	127	27Bet Her	2.7810	4700.0	79	27526	No
27	GOM_NL__2PRFIN20070606_015058_000000412058_00418_27526_6579.N1	06-JUN-2007 01:50:58	Bright	40.500	133	40Zet Her	2.8070	6000.0	81	27526	No
28	GOM_NL__2PRFIN20070606_015906_000000362058_00418_27526_6580.N1	06-JUN-2007 01:59:06	Bright	35.500	119	14Eta Dra	2.7270	4700.0	71	27526	No
29	GOM_NL__2PRFIN20070606_020204_000000372058_00418_27526_6581.N1	06-JUN-2007 02:02:04	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	27526	No
30	GOM_NL__2PRFIN20070606_020645_000000332058_00418_27526_6582.N1	06-JUN-2007 02:06:45	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	27526	No
31	GOM_NL__2PRFIN20070606_021440_000000562058_00418_27526_6583.N1	06-JUN-2007 02:14:40	Bright	55.500	76	27Gam Cas	2.3000	30000.	111	27526	No
32	GOM_NL__2PRFIN20070606_022020_000000542058_00418_27526_6584.N1	06-JUN-2007 02:20:20	Bright	54.000	73	57Gam1And	2.2600	13100.	108	27526	No
33	GOM_NL__2PRFIN20070606_022239_000000502058_00418_27526_6585.N1	06-JUN-2007 02:22:39	Bright	49.500	53	43Bet And	2.0480	3300.0	99	27526	No
34	GOM_NL__2PRFIN20070606_022644_000000432058_00418_27526_6586.N1	06-JUN-2007 02:26:44	Twilight	42.500	105	6Bet Ari	2.6450	8900.0	85	27526	No
35	GOM_NL__2PRFIN20070606_023954_000000502058_00418_27526_6587.N1	06-JUN-2007 02:39:54	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	27526	No
36	GOM_NL__2PRFIN20070606_024631_000000462058_00418_27526_6588.N1	06-JUN-2007 02:46:31	Dark	46.000	84	Alp Phe	2.3970	4500.0	92	27526	No
37	GOM_NL__2PRFIN20070606_025210_000000602058_00419_27527_6588.N1	06-JUN-2007 02:52:10	Dark	60.000	63	Bet Gru	2.1500	2800.0	120	27527	No
38	GOM_NL__2PRFIN20070606_025407_000000472058_00419_27527_6589.N1	06-JUN-2007 02:54:07	Dark	47.000	31	Alp Gru	1.7340	15200.	94	27527	No
39	GOM_NL__2PRFIN20070606_025848_000000422058_00419_27527_6590.N1	06-JUN-2007 02:58:48	Straylight	42.000	45	Alp Pav	1.9400	26000.	84	27527	No
40	GOM_NL__2PRFIN20070606_030438_000000412058_00419_27527_6591.N1	06-JUN-2007 03:04:38	Straylight	40.500	141	Bet Ara	2.8400	4600.0	81	27527	No
41	GOM_NL__2PRFIN20070606_030556_000000392058_00419_27527_6592.N1	06-JUN-2007 03:05:56	Straylight	39.000	147	Alp Ara	2.8770	26000.	78	27527	No
42	GOM_NL__2PRFIN20070606_030739_000000472058_00419_27527_6593.N1	06-JUN-2007 03:07:39	Straylight	46.500	40	The Sco	1.8590	7100.0	93	27527	No









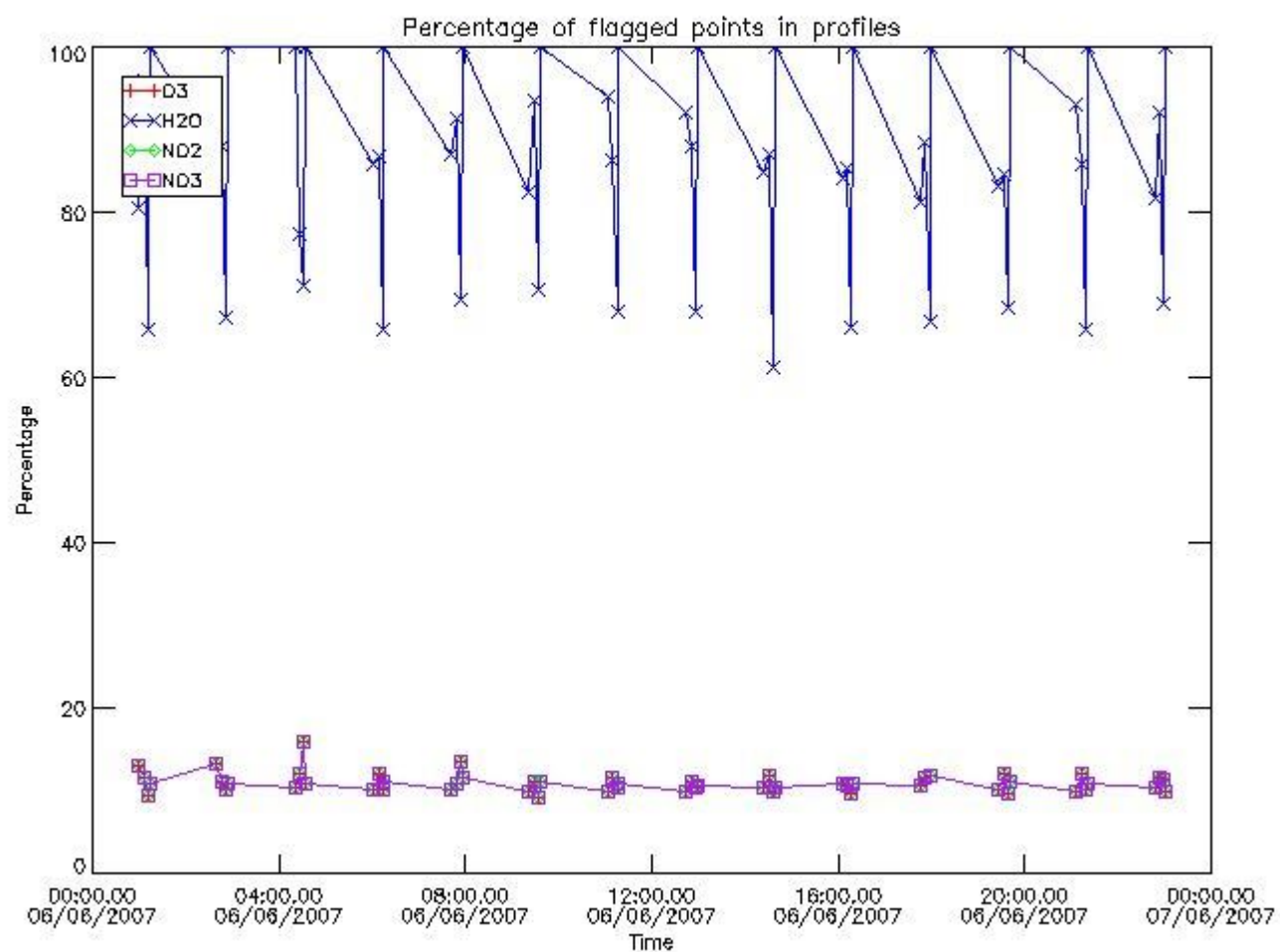


338	GOM_NL__2PRFIN20070606_230130_000000522058_00431_27539_6773.N1	06-JUN-2007 23:01:30	Dark	52.000	31	Alp Gru	1.7340	15200.	104	27539	No
339	GOM_NL__2PRFIN20070606_230607_000000432058_00431_27539_6774.N1	06-JUN-2007 23:06:07	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	27539	No
340	GOM_NL__2PRFIN20070606_231153_000000402058_00431_27539_6775.N1	06-JUN-2007 23:11:53	Straylight	40.000	141	Bet Ara	2.8400	4600.0	80	27539	No
341	GOM_NL__2PRFIN20070606_231311_000000382058_00431_27539_6776.N1	06-JUN-2007 23:13:11	Straylight	37.500	147	Alp Ara	2.8770	26000.	75	27539	No
342	GOM_NL__2PRFIN20070606_231454_000000442058_00431_27539_6777.N1	06-JUN-2007 23:14:54	Straylight	44.000	40	The Sco	1.8590	7100.0	88	27539	No
343	GOM_NL__2PRFIN20070606_231640_000000442058_00431_27539_6778.N1	06-JUN-2007 23:16:40	Twilight_stray	44.000	25	35Lam Sco	1.6200	28000.	88	27539	No
344	GOM_NL__2PRFIN20070606_231818_000000442058_00431_27539_6779.N1	06-JUN-2007 23:18:18	Twilight_stray	43.500	75	26Eps Sco	2.2910	4250.0	87	27539	No
345	GOM_NL__2PRFIN20070606_232016_000000462058_00431_27539_6780.N1	06-JUN-2007 23:20:16	Bright	45.500	136	23Tau Sco	2.8220	30000.	91	27539	No
346	GOM_NL__2PRFIN20070606_232217_000000382058_00431_27539_6781.N1	06-JUN-2007 23:22:17	Bright	37.500	80	7Del Sco	2.3160	30000.	75	27539	No
347	GOM_NL__2PRFIN20070606_232344_000000432058_00431_27539_6782.N1	06-JUN-2007 23:23:44	Bright	43.000	86	35Eta Oph	2.4300	10200.	86	27539	No
348	GOM_NL__2PRFIN20070606_232532_000000402058_00431_27539_6783.N1	06-JUN-2007 23:25:32	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	27539	No
349	GOM_NL__2PRFIN20070606_232740_000000382058_00431_27539_6784.N1	06-JUN-2007 23:27:40	Bright	37.500	120	1Del Oph	2.7340	3200.0	75	27539	No
350	GOM_NL__2PRFIN20070606_233040_000000352058_00431_27539_6785.N1	06-JUN-2007 23:30:40	Bright	35.000	102	24Alp Ser	2.6000	4250.0	70	27539	No
351	GOM_NL__2PRFIN20070606_233524_000000402058_00431_27539_6786.N1	06-JUN-2007 23:35:24	Bright	40.000	127	27Bet Her	2.7810	4700.0	80	27539	No
352	GOM_NL__2PRFIN20070606_233840_000000422058_00431_27539_6787.N1	06-JUN-2007 23:38:40	Bright	42.000	133	40Zet Her	2.8070	6000.0	84	27539	No
353	GOM_NL__2PRFIN20070606_234650_000000372058_00431_27539_6788.N1	06-JUN-2007 23:46:50	Bright	37.000	119	14Eta Dra	2.7270	4700.0	74	27539	No
354	GOM_NL__2PRFIN20070606_234951_000000362058_00431_27539_6789.N1	06-JUN-2007 23:49:51	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	27539	No
355	GOM_NL__2PRFIN20070606_235432_000000322058_00431_27539_6790.N1	06-JUN-2007 23:54:32	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	27539	No

### 3. Quality information per product

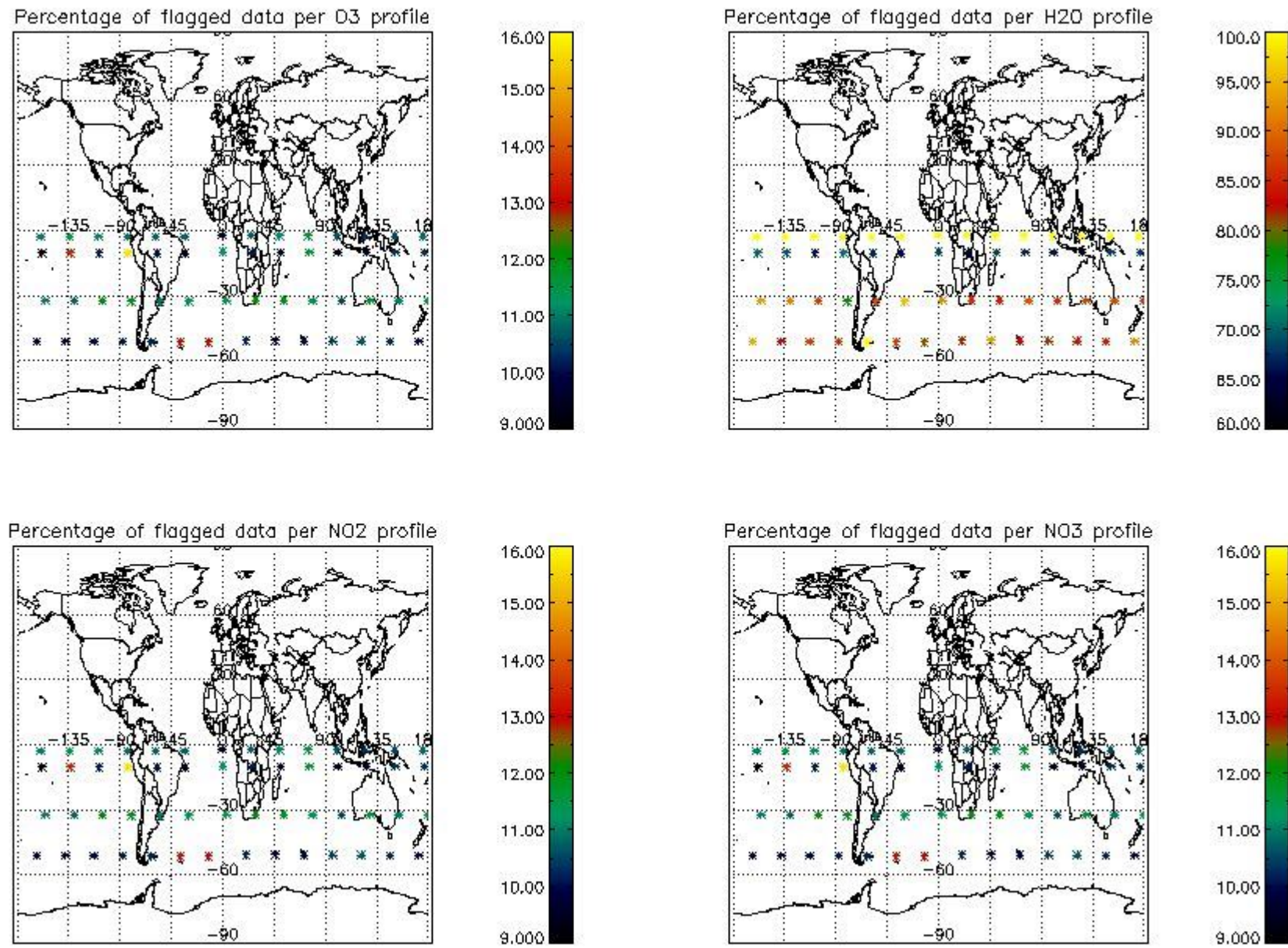
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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





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

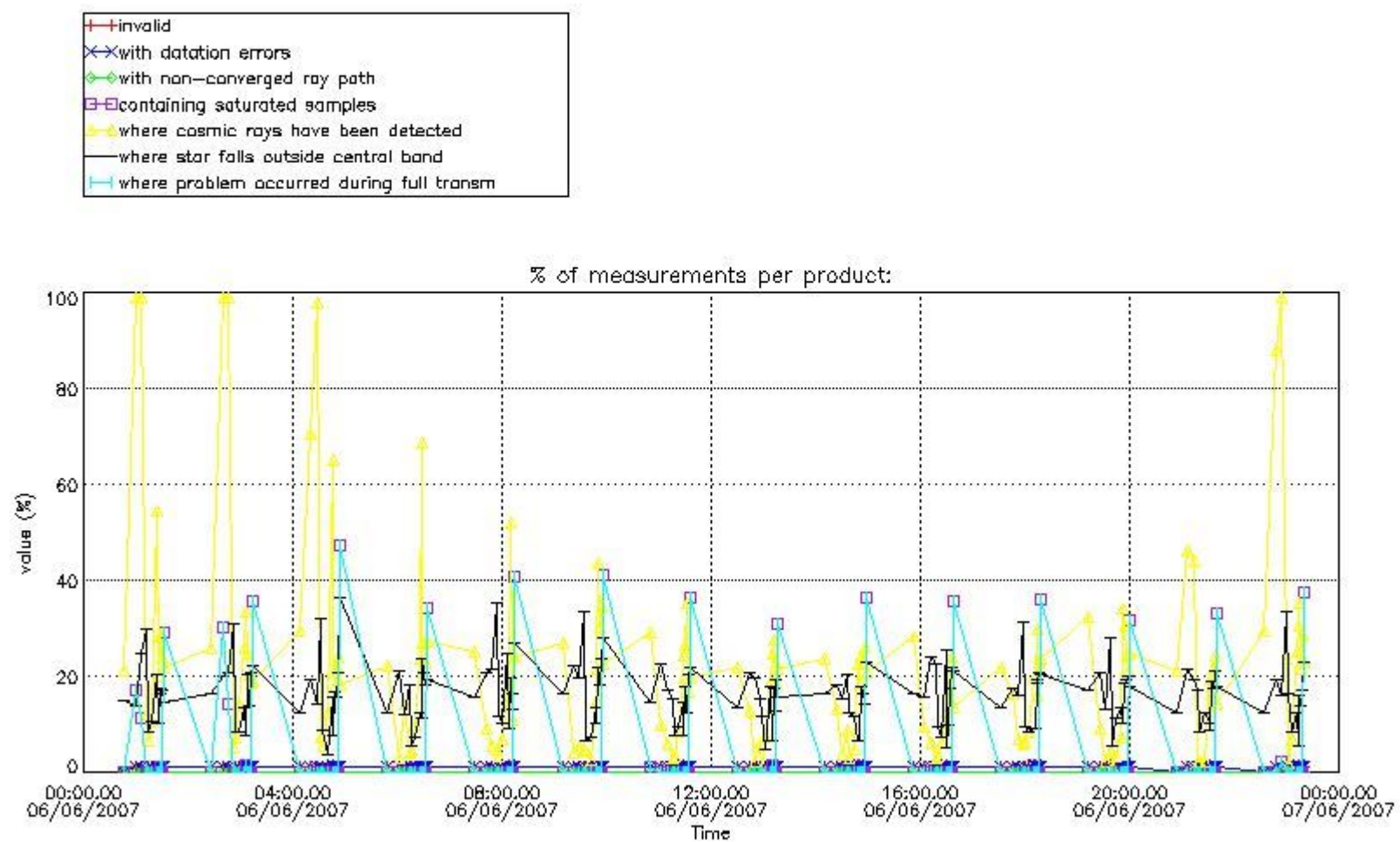


### 4. Level 1 quality information per product

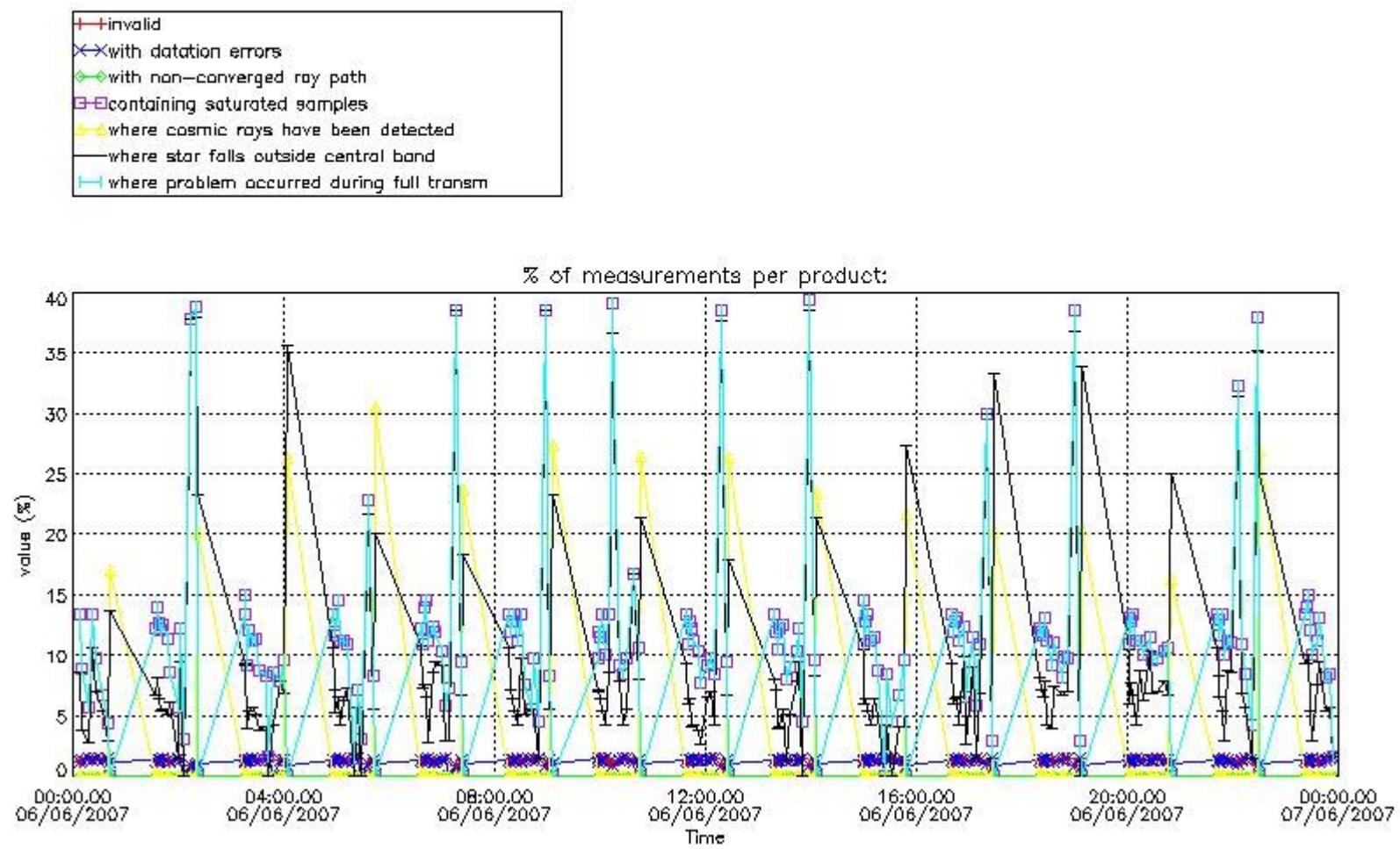
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

#### 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



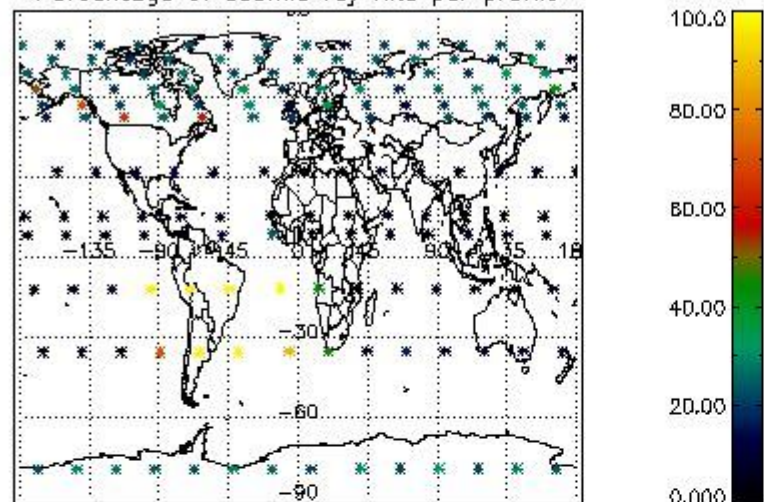
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



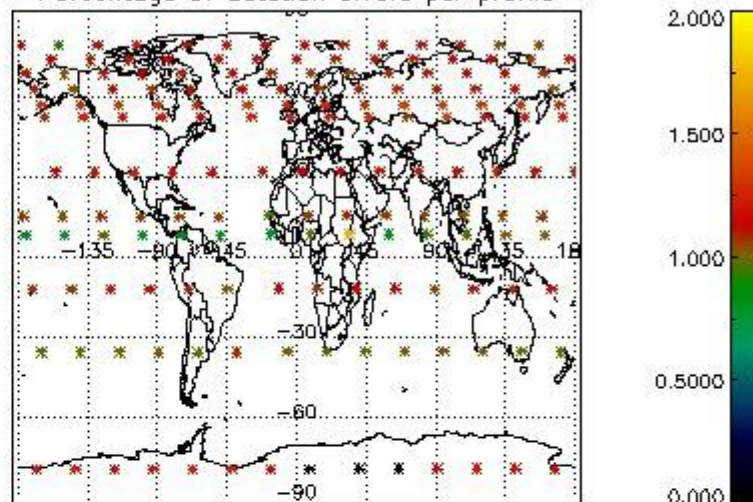
4.2 Plot quality information per product coming from level 1b processing (world map)

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

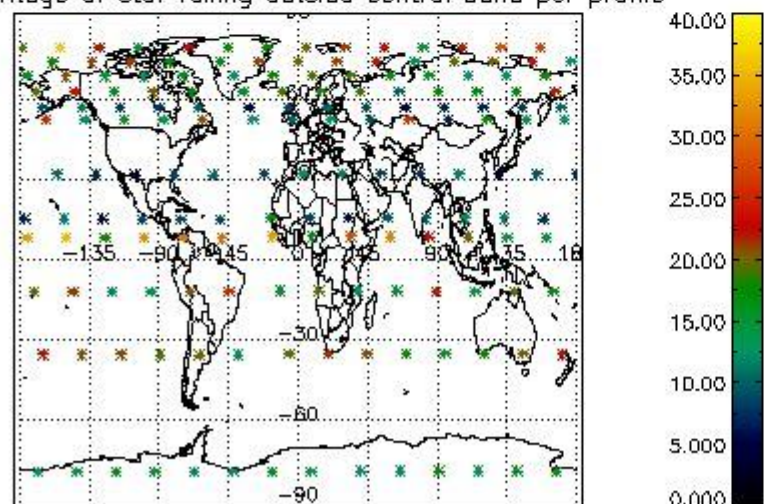
Percentage of cosmic ray hits per profile



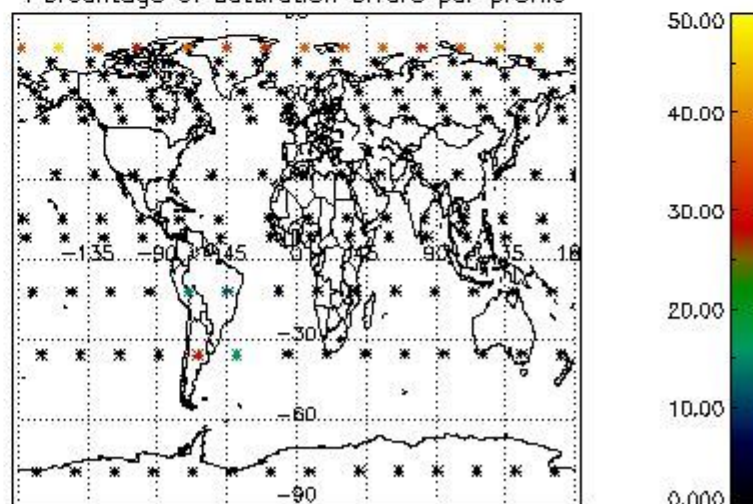
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

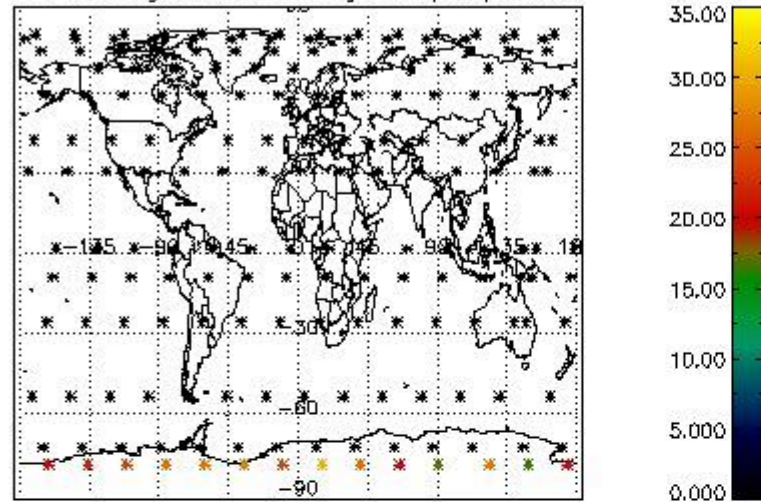


Percentage of saturation errors per profile

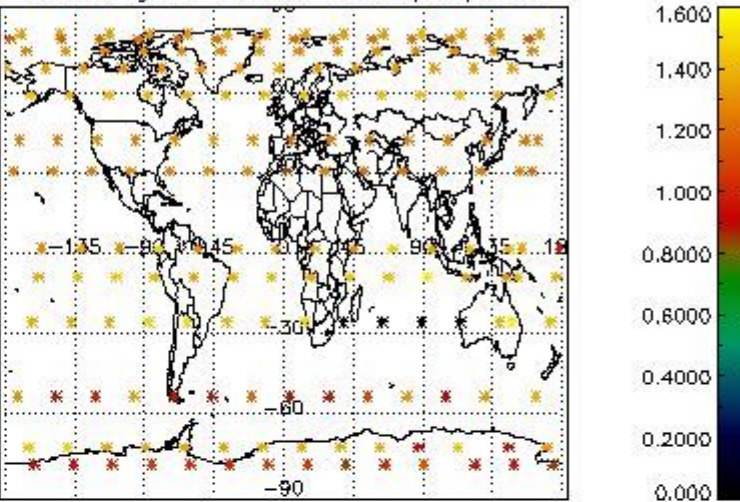


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

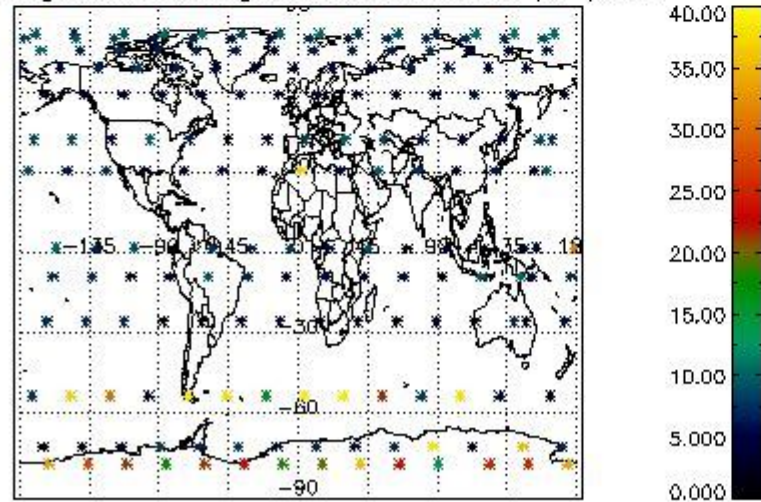
Percentage of cosmic ray hits per profile



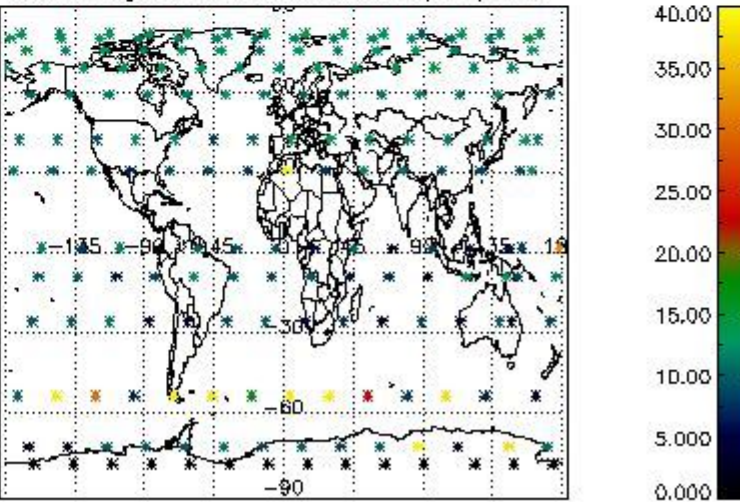
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

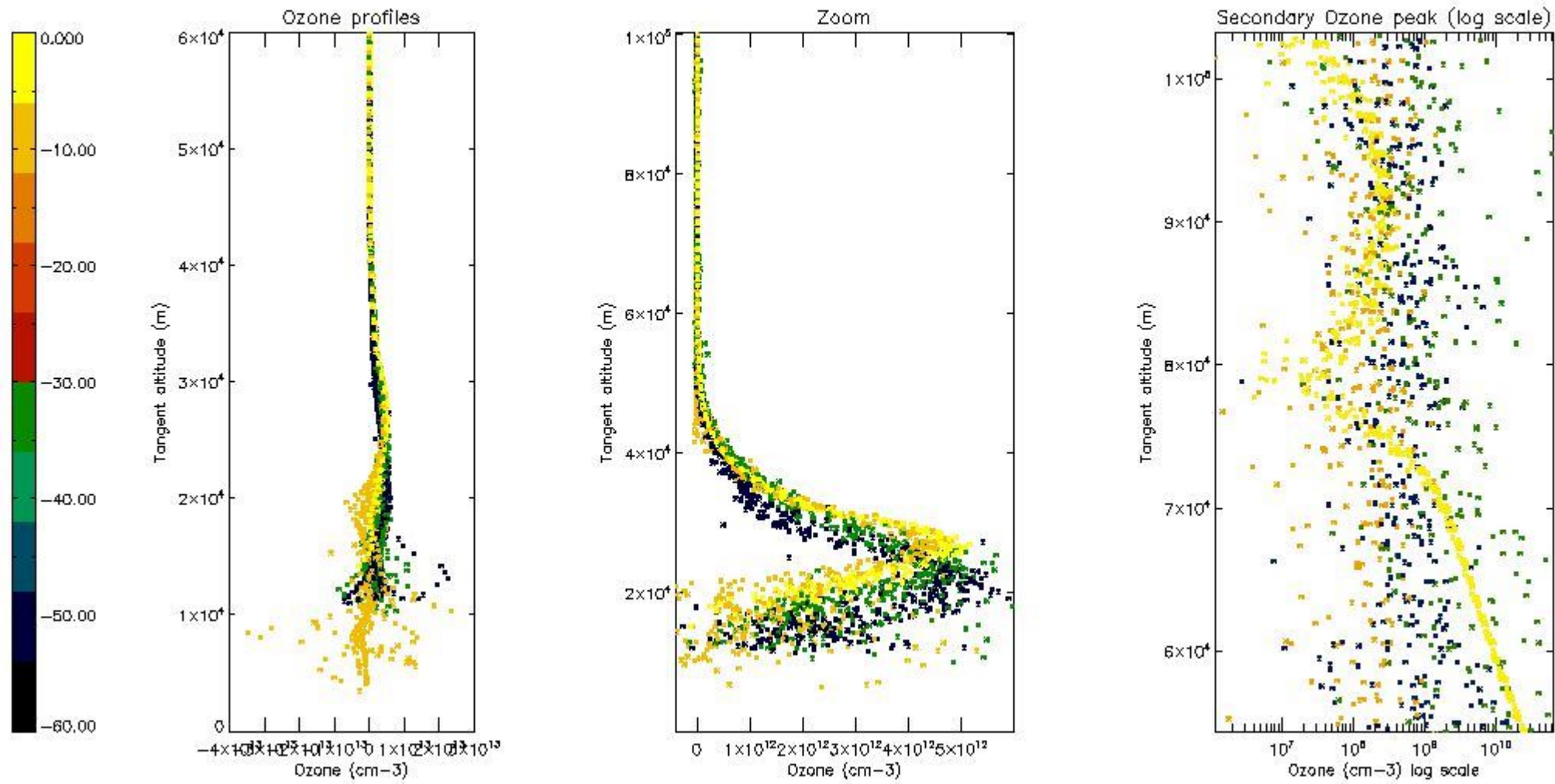
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	19
STD < 20	7

STD < 10	4
STD < 5	2

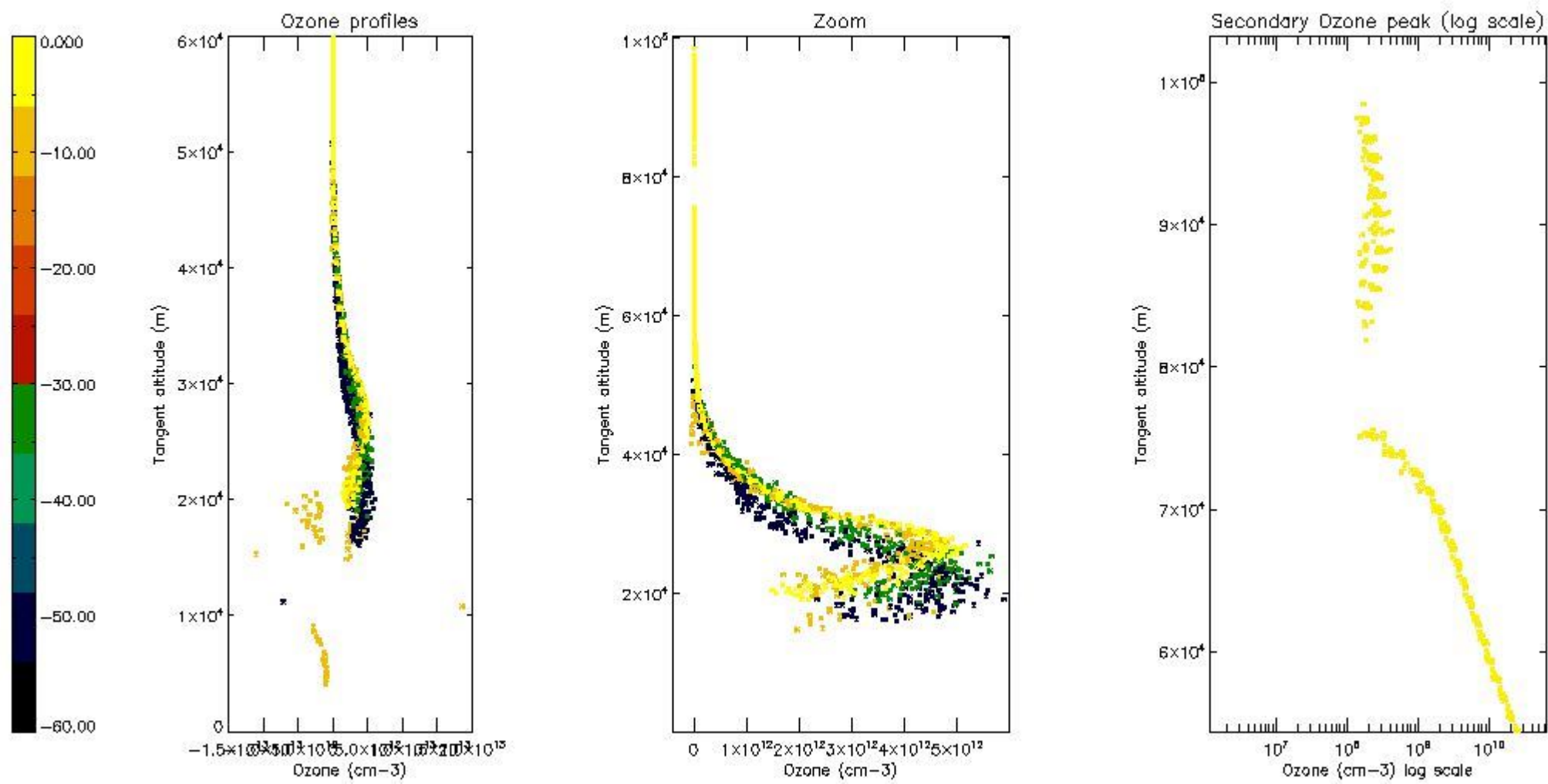
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



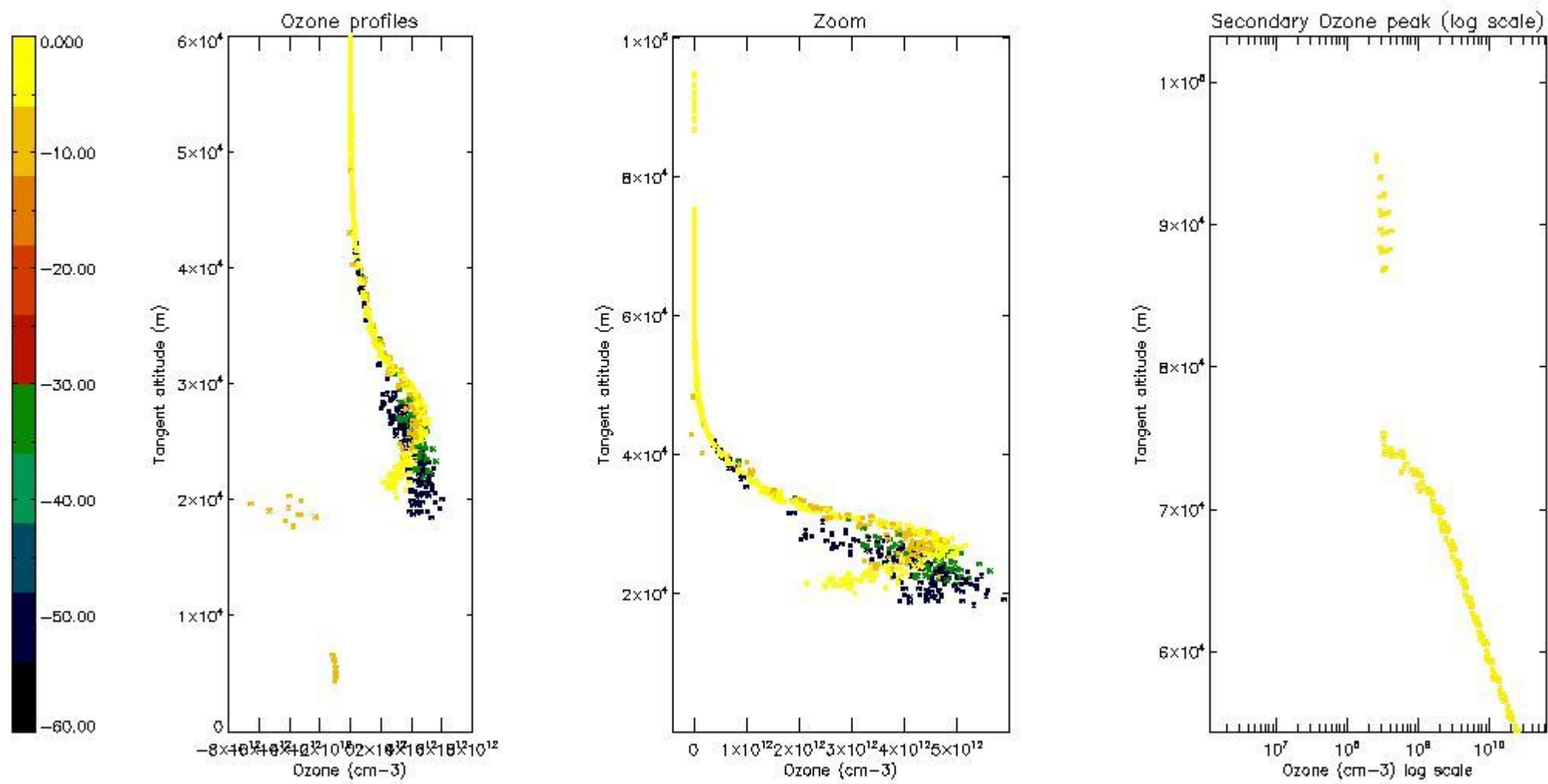
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

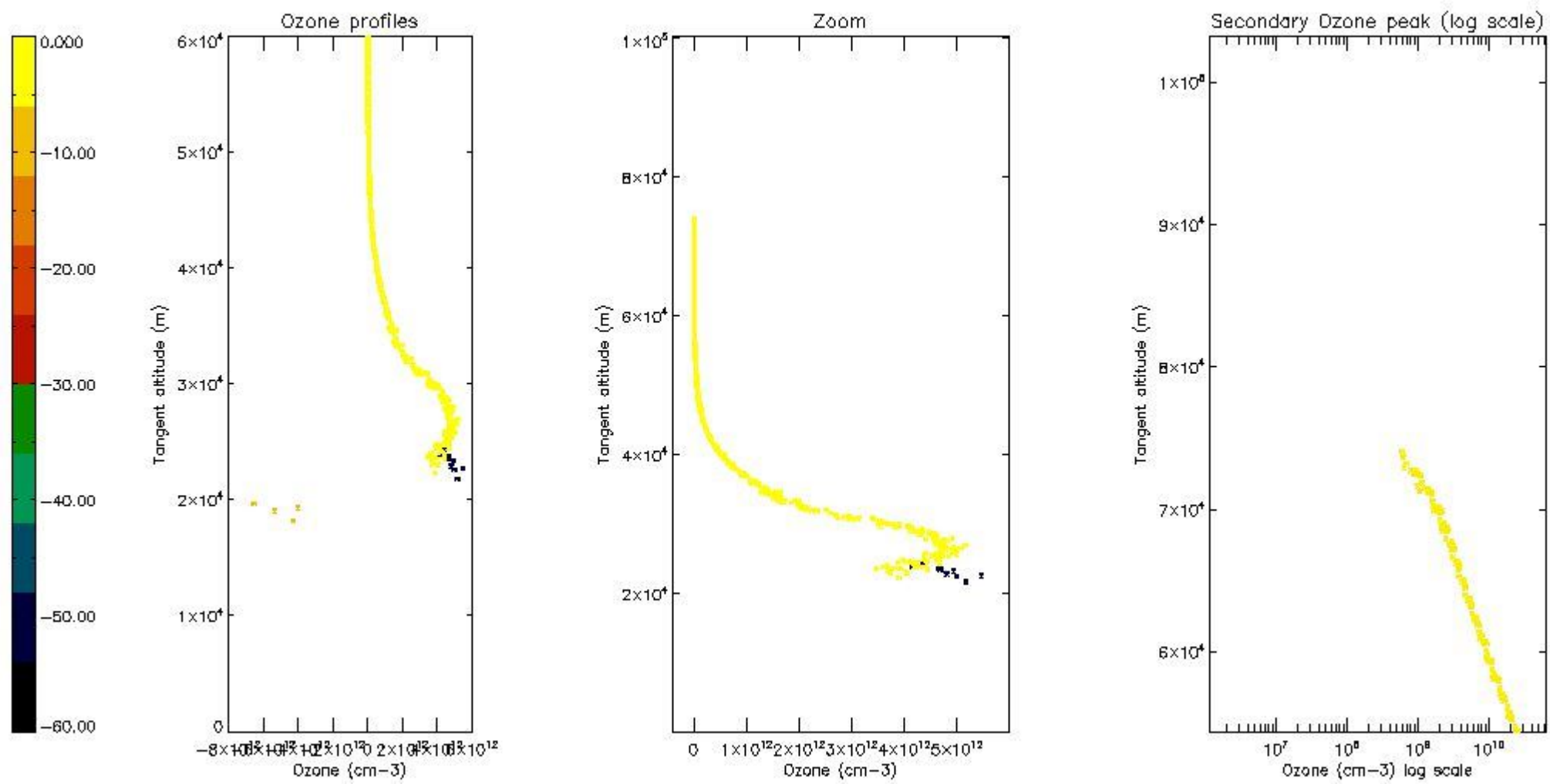
The colorbar represents the latitude.



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

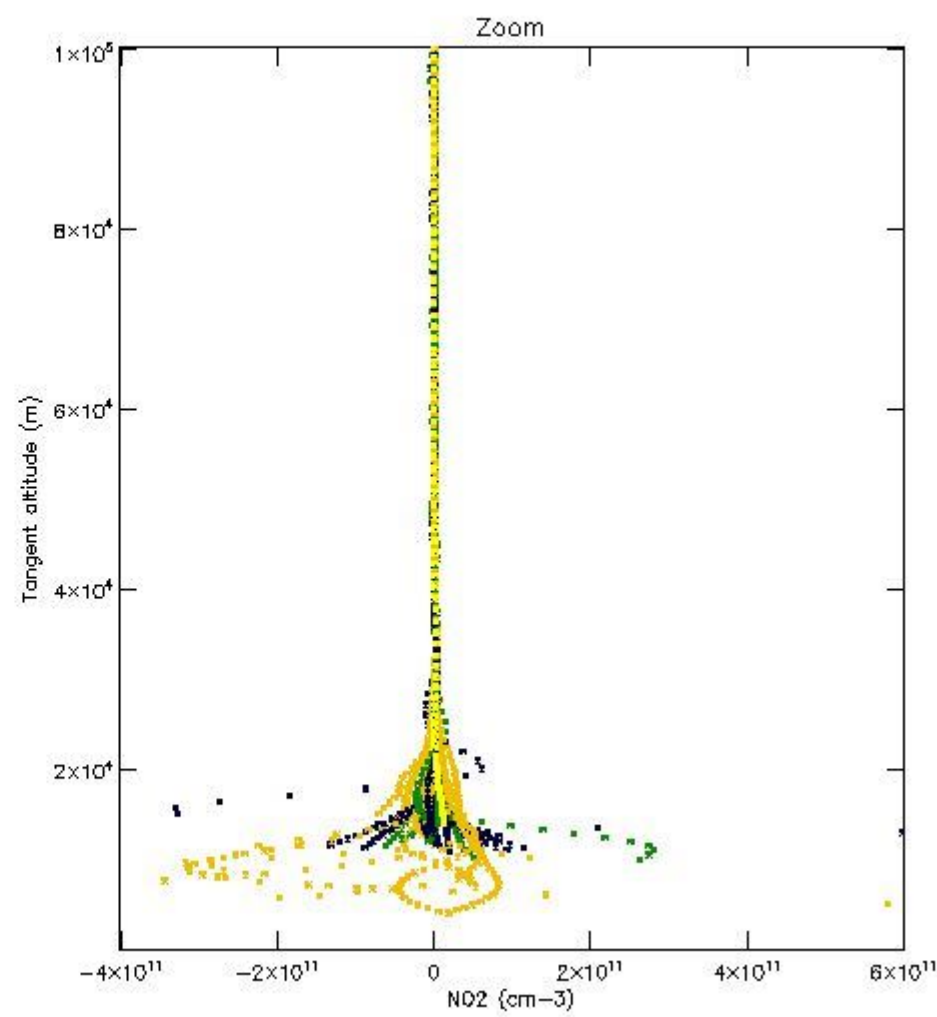
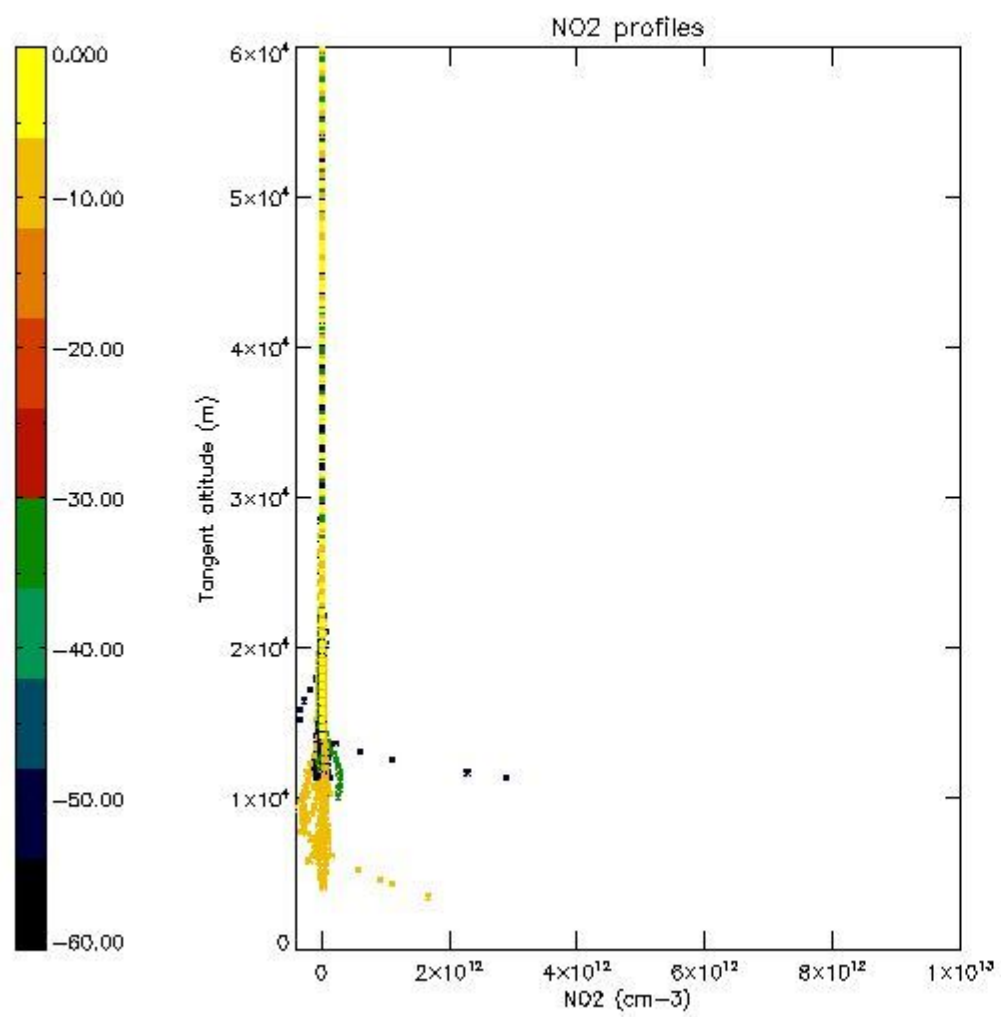
The colorbar represents the latitude.





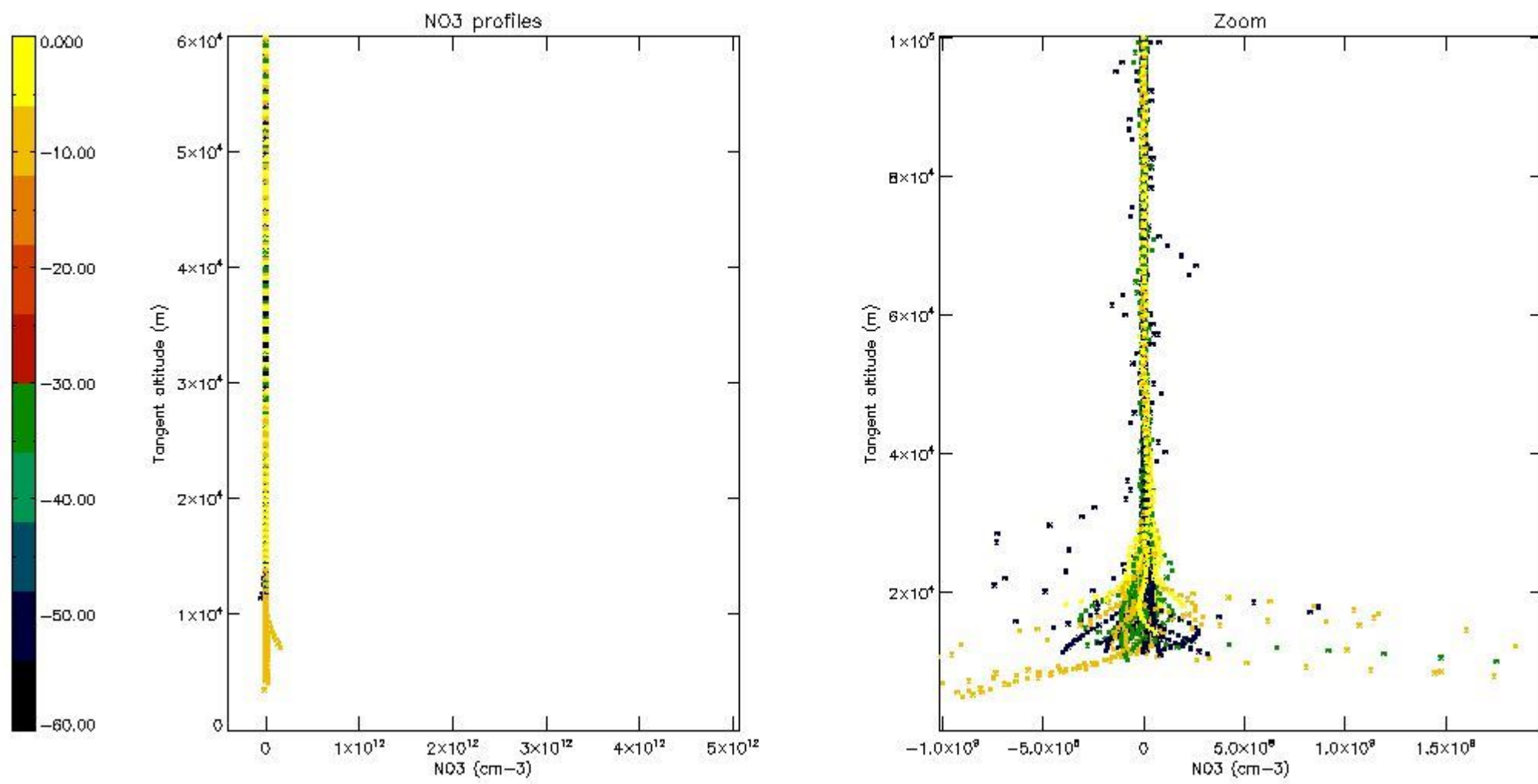
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



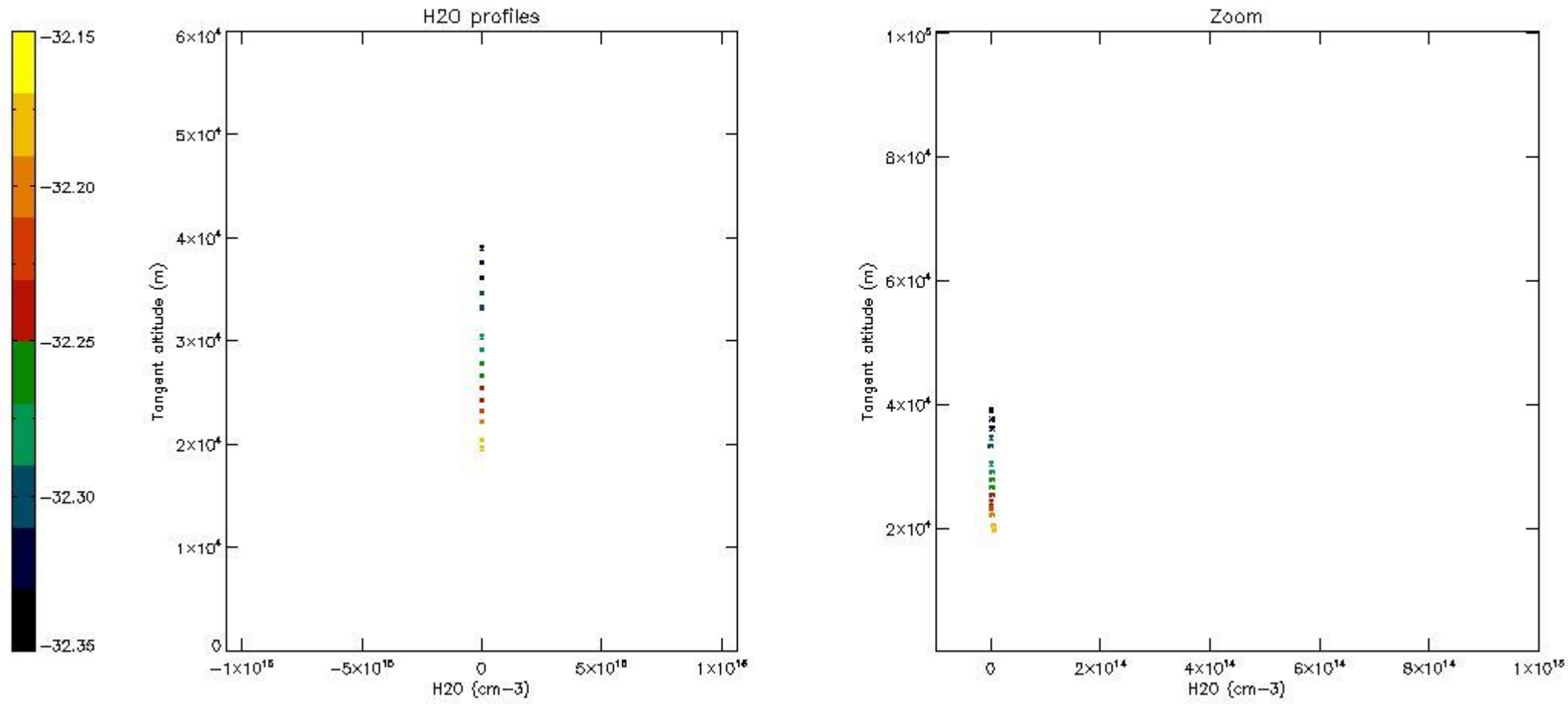
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	06-JUN-2007 00:07:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	06-JUN-2007 00:07:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	06-JUN-2007 00:07:05

# GOMOS Level 2 Daily Report

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

Item	Value
Time of report generation	22APR2013 20:26:24
Data source version	GOMOS/6.01
Start time of products	06-06-2007 (06JUN2007 00:00:00)
Stop time of products	07-06-2007 (07JUN2007 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	355
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__2PRFIN20070606_000705_000000412058_00417_27525_6566.N1	06-JUN-2007 00:07:05	Bright	41.000	127	27Bet Her	2.7810	4700.0	82	27525	No
2	GOM_NL__2PRFIN20070606_001023_000000402058_00417_27525_6567.N1	06-JUN-2007 00:10:23	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	27525	No
3	GOM_NL__2PRFIN20070606_001830_000000362058_00417_27525_6568.N1	06-JUN-2007 00:18:30	Bright	35.500	119	14Eta Dra	2.7270	4700.0	71	27525	No
4	GOM_NL__2PRFIN20070606_002128_000000382058_00417_27525_6569.N1	06-JUN-2007 00:21:28	Bright	37.500	60	7Bet UMi	2.0810	3950.0	75	27525	No
5	GOM_NL__2PRFIN20070606_002609_000000362058_00417_27525_6570.N1	06-JUN-2007 00:26:09	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	27525	No
6	GOM_NL__2PRFIN20070606_003405_000000382058_00417_27525_6571.N1	06-JUN-2007 00:34:05	Bright	37.500	76	27Gam Cas	2.3000	30000.	75	27525	No
7	GOM_NL__2PRFIN20070606_003944_000000352058_00417_27525_6572.N1	06-JUN-2007 00:39:44	Bright	34.500	73	57Gam1And	2.2600	13100.	69	27525	No
8	GOM_NL__2PRFIN20070606_004203_000000442058_00417_27525_6573.N1	06-JUN-2007 00:42:03	Bright	44.000	53	43Bet And	2.0480	3300.0	88	27525	No
9	GOM_NL__2PRFIN20070606_004608_000000412058_00417_27525_6574.N1	06-JUN-2007 00:46:08	Twilight	40.500	105	6Bet Ari	2.6450	8900.0	81	27525	No
10	GOM_NL__2PRFIN20070606_005918_000000472058_00417_27525_6575.N1	06-JUN-2007 00:59:18	Dark	46.500	52	16Bet Cet	2.0370	4500.0	93	27525	No
11	GOM_NL__2PRFIN20070606_010555_000000492058_00417_27525_6576.N1	06-JUN-2007 01:05:55	Dark	48.500	84	Alp Phe	2.3970	4500.0	97	27525	No
12	GOM_NL__2PRFIN20070606_011133_000000592058_00418_27526_6564.N1	06-JUN-2007 01:11:33	Dark	59.000	63	Bet Gru	2.1500	2800.0	118	27526	No
13	GOM_NL__2PRFIN20070606_011330_000000472058_00418_27526_6565.N1	06-JUN-2007 01:13:30	Dark	47.000	31	Alp Gru	1.7340	15200.	94	27526	No
14	GOM_NL__2PRFIN20070606_011811_000000432058_00418_27526_6566.N1	06-JUN-2007 01:18:11	Straylight	43.000	45	Alp Pav	1.9400	26000.	86	27526	No
15	GOM_NL__2PRFIN20070606_012402_000000442058_00418_27526_6567.N1	06-JUN-2007 01:24:02	Straylight	44.000	141	Bet Ara	2.8400	4600.0	88	27526	No
16	GOM_NL__2PRFIN20070606_012519_000000402058_00418_27526_6568.N1	06-JUN-2007 01:25:19	Straylight	40.000	147	Alp Ara	2.8770	26000.	80	27526	No
17	GOM_NL__2PRFIN20070606_012702_000000462058_00418_27526_6569.N1	06-JUN-2007 01:27:02	Straylight	45.500	40	The Sco	1.8590	7100.0	91	27526	No
18	GOM_NL__2PRFIN20070606_012848_000000462058_00418_27526_6570.N1	06-JUN-2007 01:28:48	Twilight	46.000	25	35Lam Sco	1.6200	28000.	92	27526	No
19	GOM_NL__2PRFIN20070606_013028_000000442058_00418_27526_6571.N1	06-JUN-2007 01:30:28	Twilight	43.500	75	26Eps Sco	2.2910	4250.0	87	27526	No
20	GOM_NL__2PRFIN20070606_013226_000000412058_00418_27526_6572.N1	06-JUN-2007 01:32:26	Bright	41.000	136	23Tau Sco	2.8220	30000.	82	27526	No
21	GOM_NL__2PRFIN20070606_013427_000000372058_00418_27526_6573.N1	06-JUN-2007 01:34:27	Bright	37.000	80	7Del Sco	2.3160	30000.	74	27526	No
22	GOM_NL__2PRFIN20070606_013556_000000432058_00418_27526_6574.N1	06-JUN-2007 01:35:56	Bright	43.000	86	35Eta Oph	2.4300	10200.	86	27526	No
23	GOM_NL__2PRFIN20070606_013744_000000402058_00418_27526_6575.N1	06-JUN-2007 01:37:44	Bright	39.500	98	13Zet Oph	2.5710	30000.	79	27526	No
24	GOM_NL__2PRFIN20070606_013953_000000382058_00418_27526_6576.N1	06-JUN-2007 01:39:53	Bright	37.500	120	1Del Oph	2.7340	3200.0	75	27526	No
25	GOM_NL__2PRFIN20070606_014253_000000362058_00418_27526_6577.N1	06-JUN-2007 01:42:53	Bright	36.000	102	24Alp Ser	2.6000	4250.0	72	27526	No
26	GOM_NL__2PRFIN20070606_014740_000000402058_00418_27526_6578.N1	06-JUN-2007 01:47:40	Bright	39.500	127	27Bet Her	2.7810	4700.0	79	27526	No
27	GOM_NL__2PRFIN20070606_015058_000000412058_00418_27526_6579.N1	06-JUN-2007 01:50:58	Bright	40.500	133	40Zet Her	2.8070	6000.0	81	27526	No
28	GOM_NL__2PRFIN20070606_015906_000000362058_00418_27526_6580.N1	06-JUN-2007 01:59:06	Bright	35.500	119	14Eta Dra	2.7270	4700.0	71	27526	No
29	GOM_NL__2PRFIN20070606_020204_000000372058_00418_27526_6581.N1	06-JUN-2007 02:02:04	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	27526	No
30	GOM_NL__2PRFIN20070606_020645_000000332058_00418_27526_6582.N1	06-JUN-2007 02:06:45	Bright	32.500	49	1Alp UMi	1.9900	6300.0	65	27526	No
31	GOM_NL__2PRFIN20070606_021440_000000562058_00418_27526_6583.N1	06-JUN-2007 02:14:40	Bright	55.500	76	27Gam Cas	2.3000	30000.	111	27526	No
32	GOM_NL__2PRFIN20070606_022020_000000542058_00418_27526_6584.N1	06-JUN-2007 02:20:20	Bright	54.000	73	57Gam1And	2.2600	13100.	108	27526	No
33	GOM_NL__2PRFIN20070606_022239_000000502058_00418_27526_6585.N1	06-JUN-2007 02:22:39	Bright	49.500	53	43Bet And	2.0480	3300.0	99	27526	No
34	GOM_NL__2PRFIN20070606_022644_000000432058_00418_27526_6586.N1	06-JUN-2007 02:26:44	Twilight	42.500	105	6Bet Ari	2.6450	8900.0	85	27526	No
35	GOM_NL__2PRFIN20070606_023954_000000502058_00418_27526_6587.N1	06-JUN-2007 02:39:54	Dark	50.000	52	16Bet Cet	2.0370	4500.0	100	27526	No
36	GOM_NL__2PRFIN20070606_024631_000000462058_00418_27526_6588.N1	06-JUN-2007 02:46:31	Dark	46.000	84	Alp Phe	2.3970	4500.0	92	27526	No
37	GOM_NL__2PRFIN20070606_025210_000000602058_00419_27527_6588.N1	06-JUN-2007 02:52:10	Dark	60.000	63	Bet Gru	2.1500	2800.0	120	27527	No
38	GOM_NL__2PRFIN20070606_025407_000000472058_00419_27527_6589.N1	06-JUN-2007 02:54:07	Dark	47.000	31	Alp Gru	1.7340	15200.	94	27527	No
39	GOM_NL__2PRFIN20070606_025848_000000422058_00419_27527_6590.N1	06-JUN-2007 02:58:48	Straylight	42.000	45	Alp Pav	1.9400	26000.	84	27527	No
40	GOM_NL__2PRFIN20070606_030438_000000412058_00419_27527_6591.N1	06-JUN-2007 03:04:38	Straylight	40.500	141	Bet Ara	2.8400	4600.0	81	27527	No
41	GOM_NL__2PRFIN20070606_030556_000000392058_00419_27527_6592.N1	06-JUN-2007 03:05:56	Straylight	39.000	147	Alp Ara	2.8770	26000.	78	27527	No
42	GOM_NL__2PRFIN20070606_030739_000000472058_00419_27527_6593.N1	06-JUN-2007 03:07:39	Straylight	46.500	40	The Sco	1.8590	7100.0	93	27527	No











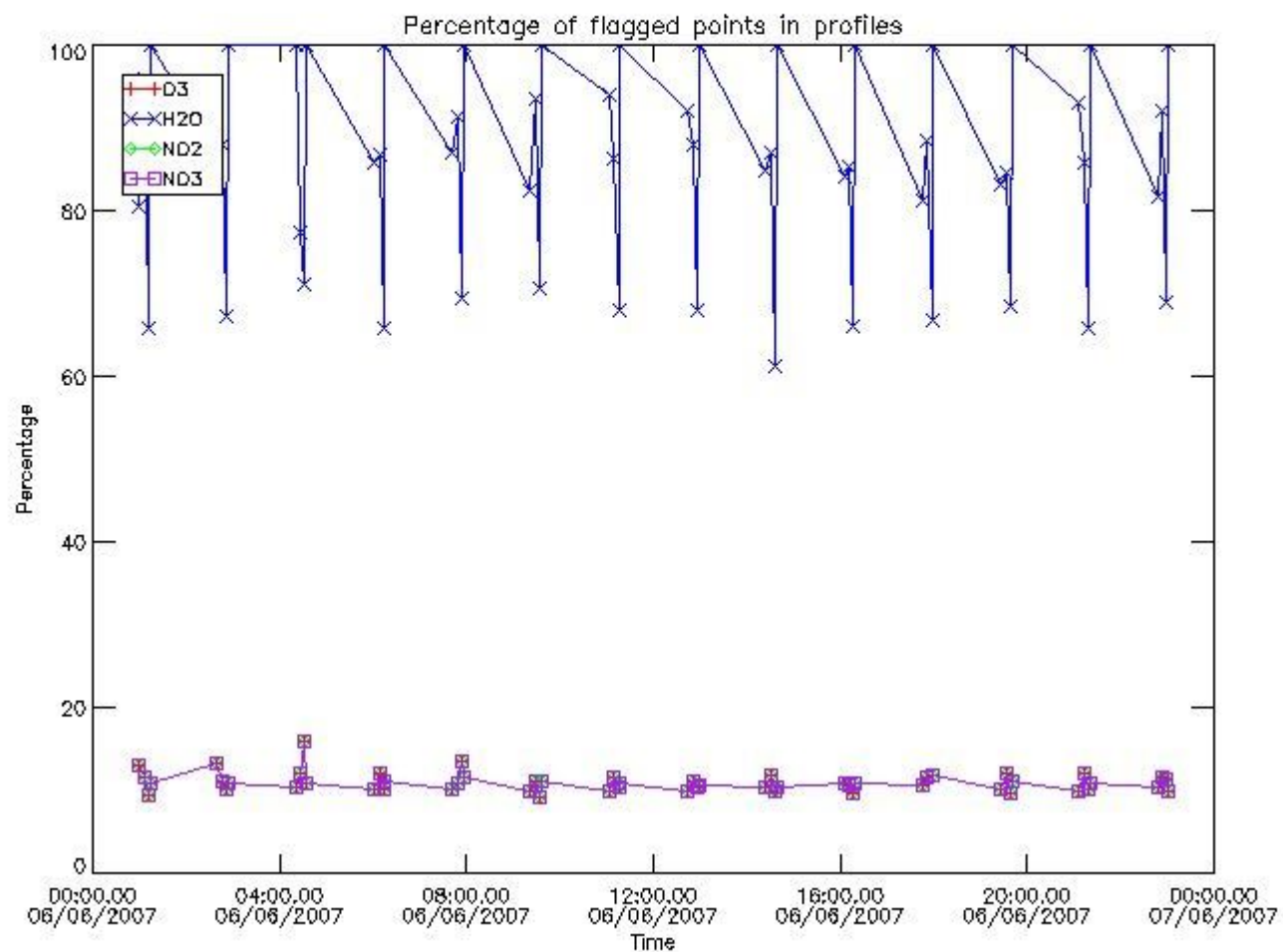


338	GOM_NL__2PRFIN20070606_230130_000000522058_00431_27539_6773.N1	06-JUN-2007 23:01:30	Dark	52.000	31	Alp Gru	1.7340	15200.	104	27539	No
339	GOM_NL__2PRFIN20070606_230607_000000432058_00431_27539_6774.N1	06-JUN-2007 23:06:07	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	27539	No
340	GOM_NL__2PRFIN20070606_231153_000000402058_00431_27539_6775.N1	06-JUN-2007 23:11:53	Straylight	40.000	141	Bet Ara	2.8400	4600.0	80	27539	No
341	GOM_NL__2PRFIN20070606_231311_000000382058_00431_27539_6776.N1	06-JUN-2007 23:13:11	Straylight	37.500	147	Alp Ara	2.8770	26000.	75	27539	No
342	GOM_NL__2PRFIN20070606_231454_000000442058_00431_27539_6777.N1	06-JUN-2007 23:14:54	Straylight	44.000	40	The Sco	1.8590	7100.0	88	27539	No
343	GOM_NL__2PRFIN20070606_231640_000000442058_00431_27539_6778.N1	06-JUN-2007 23:16:40	Twilight_and_stray	44.000	25	35Lam Sco	1.6200	28000.	88	27539	No
344	GOM_NL__2PRFIN20070606_231818_000000442058_00431_27539_6779.N1	06-JUN-2007 23:18:18	Twilight_and_stray	43.500	75	26Eps Sco	2.2910	4250.0	87	27539	No
345	GOM_NL__2PRFIN20070606_232016_000000462058_00431_27539_6780.N1	06-JUN-2007 23:20:16	Bright	45.500	136	23Tau Sco	2.8220	30000.	91	27539	No
346	GOM_NL__2PRFIN20070606_232217_000000382058_00431_27539_6781.N1	06-JUN-2007 23:22:17	Bright	37.500	80	7Del Sco	2.3160	30000.	75	27539	No
347	GOM_NL__2PRFIN20070606_232344_000000432058_00431_27539_6782.N1	06-JUN-2007 23:23:44	Bright	43.000	86	35Eta Oph	2.4300	10200.	86	27539	No
348	GOM_NL__2PRFIN20070606_232532_000000402058_00431_27539_6783.N1	06-JUN-2007 23:25:32	Bright	40.000	98	13Zet Oph	2.5710	30000.	80	27539	No
349	GOM_NL__2PRFIN20070606_232740_000000382058_00431_27539_6784.N1	06-JUN-2007 23:27:40	Bright	37.500	120	1Del Oph	2.7340	3200.0	75	27539	No
350	GOM_NL__2PRFIN20070606_233040_000000352058_00431_27539_6785.N1	06-JUN-2007 23:30:40	Bright	35.000	102	24Alp Ser	2.6000	4250.0	70	27539	No
351	GOM_NL__2PRFIN20070606_233524_000000402058_00431_27539_6786.N1	06-JUN-2007 23:35:24	Bright	40.000	127	27Bet Her	2.7810	4700.0	80	27539	No
352	GOM_NL__2PRFIN20070606_233840_000000422058_00431_27539_6787.N1	06-JUN-2007 23:38:40	Bright	42.000	133	40Zet Her	2.8070	6000.0	84	27539	No
353	GOM_NL__2PRFIN20070606_234650_000000372058_00431_27539_6788.N1	06-JUN-2007 23:46:50	Bright	37.000	119	14Eta Dra	2.7270	4700.0	74	27539	No
354	GOM_NL__2PRFIN20070606_234951_000000362058_00431_27539_6789.N1	06-JUN-2007 23:49:51	Bright	35.500	60	7Bet UMi	2.0810	3950.0	71	27539	No
355	GOM_NL__2PRFIN20070606_235432_000000322058_00431_27539_6790.N1	06-JUN-2007 23:54:32	Bright	32.000	49	1Alp UMi	1.9900	6300.0	64	27539	No

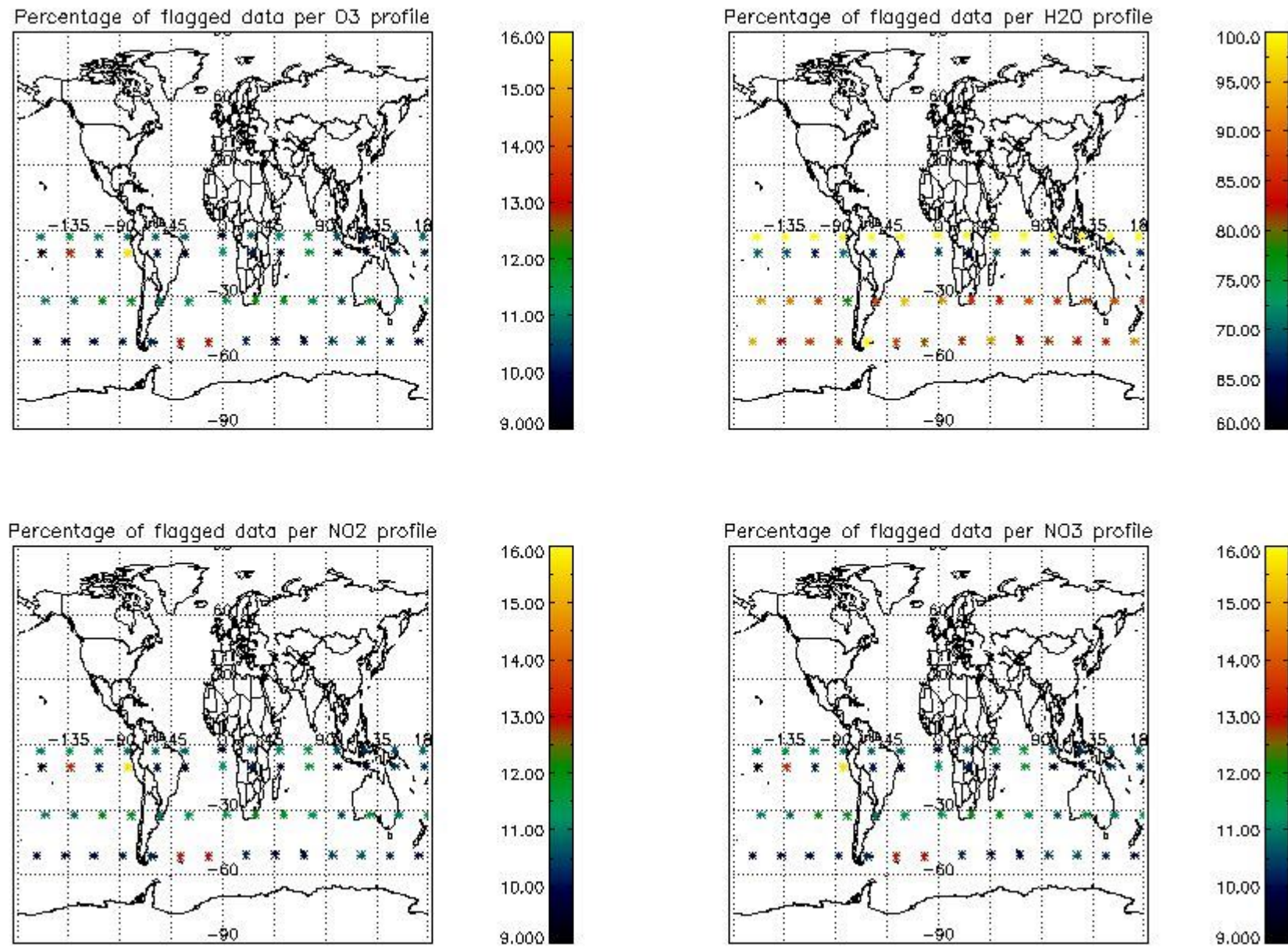
### 3. Quality information per product

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)

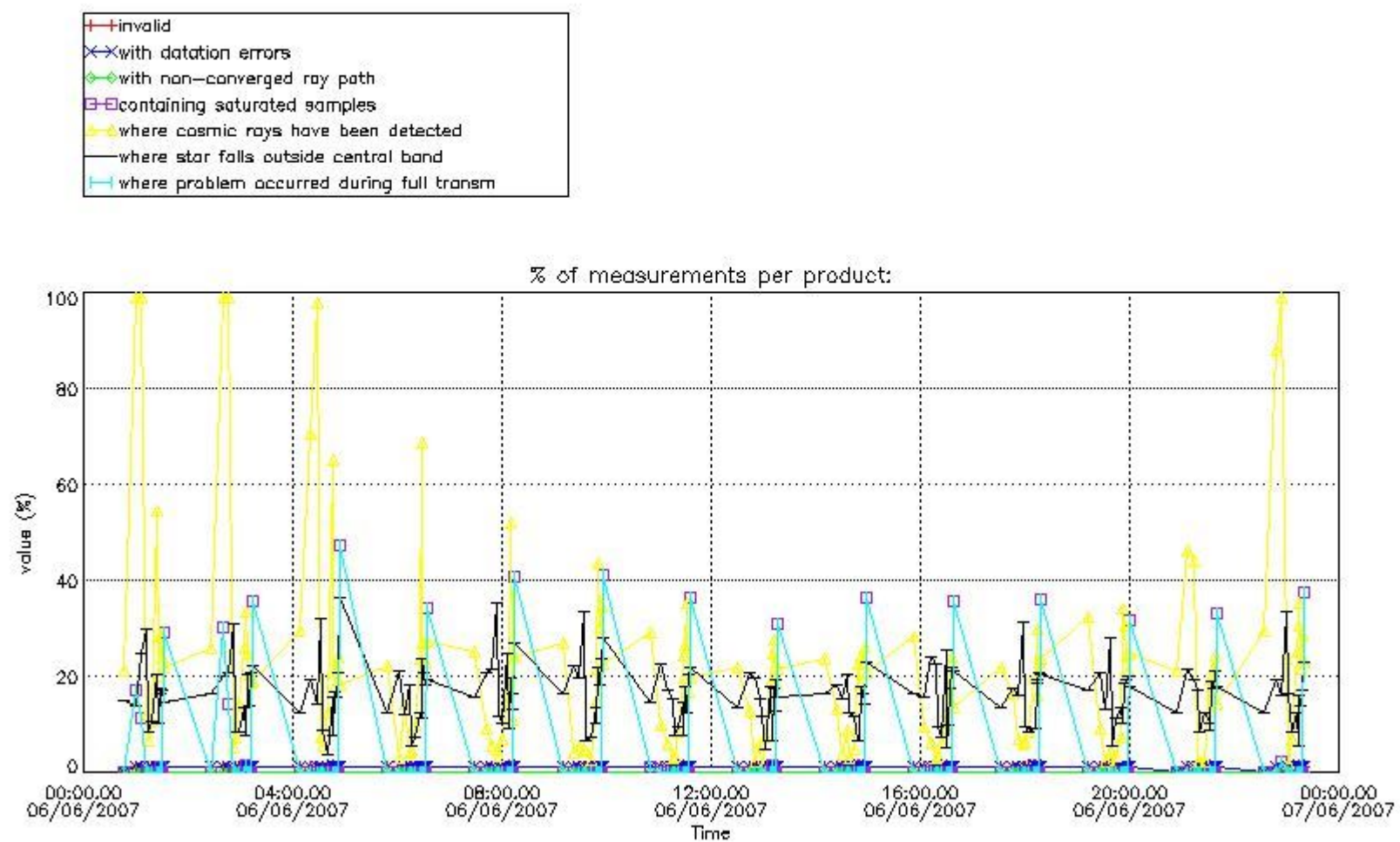


### 4. Level 1 quality information per product

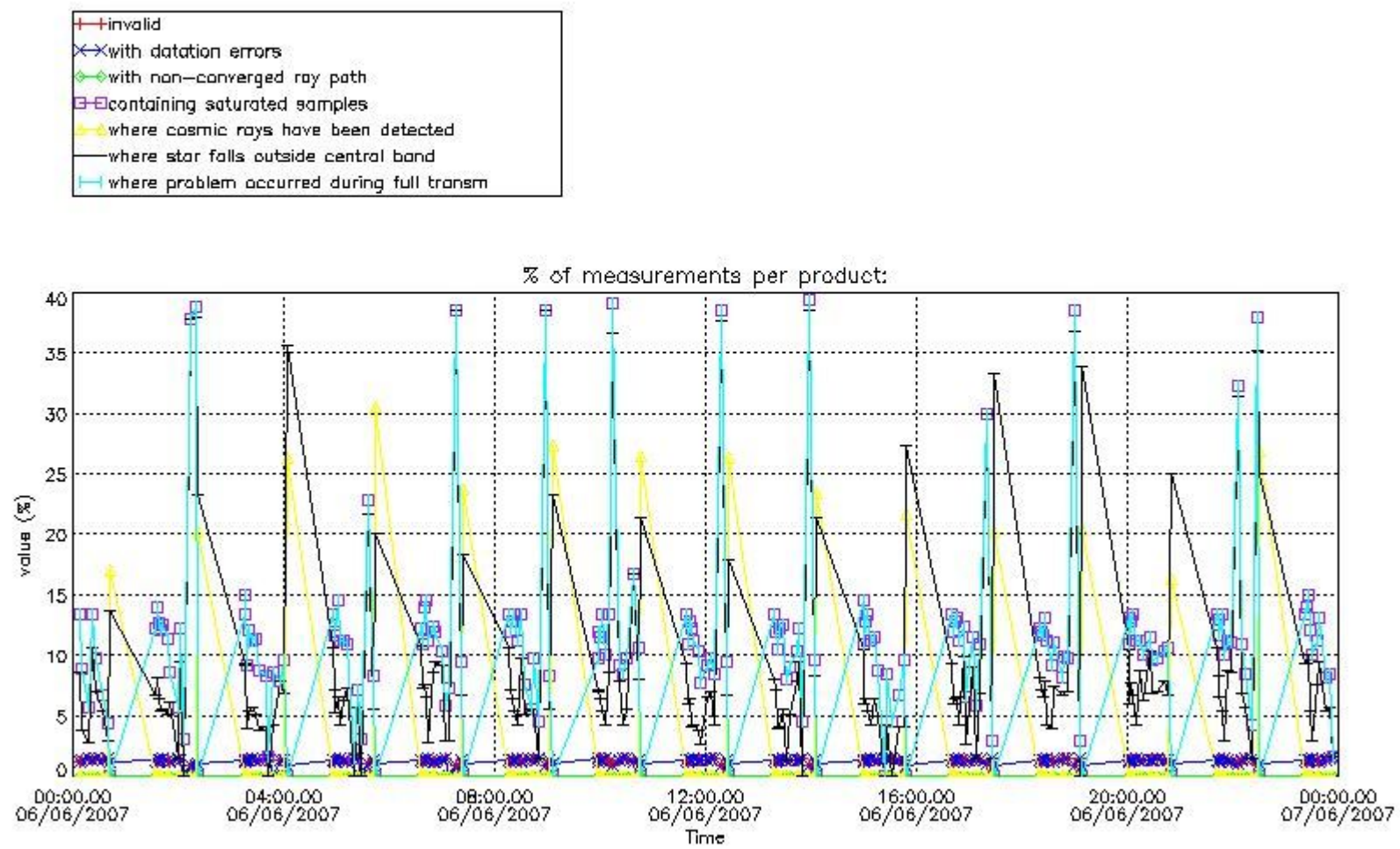
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

#### 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



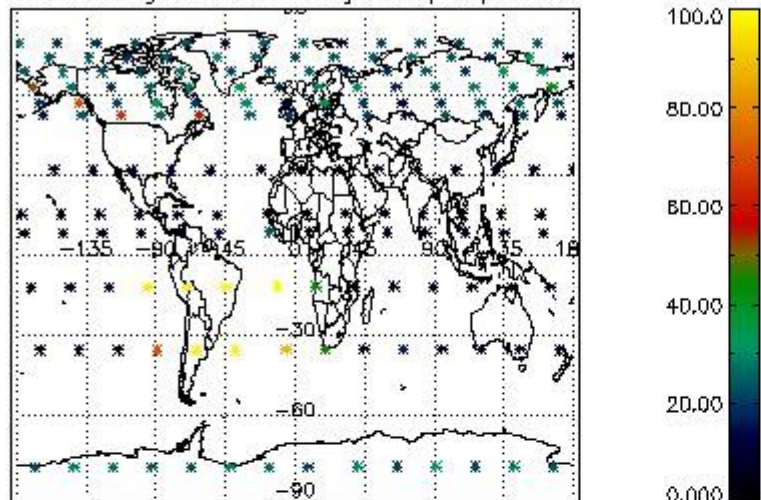
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



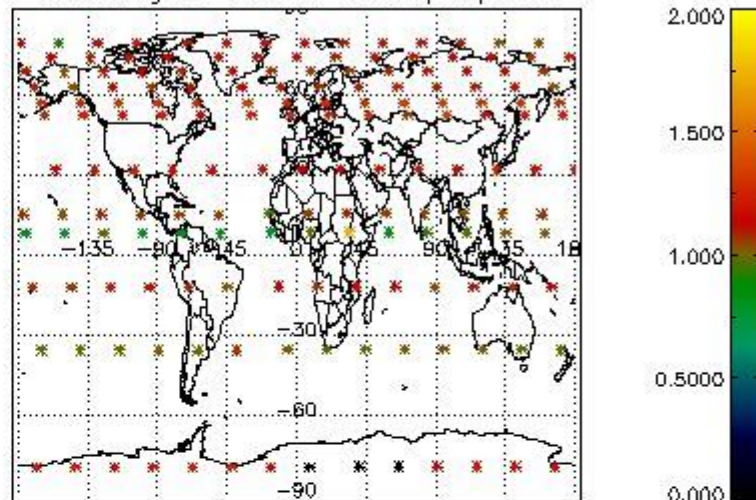
4.2 Plot quality information per product coming from level 1b processing (world map)

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

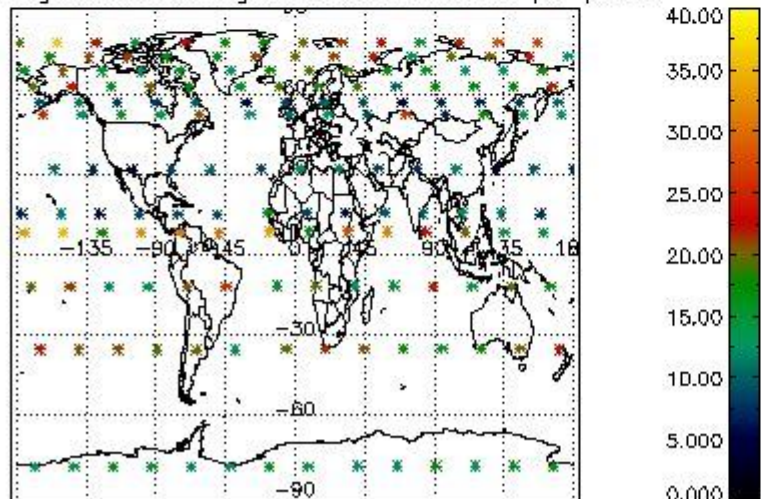
Percentage of cosmic ray hits per profile



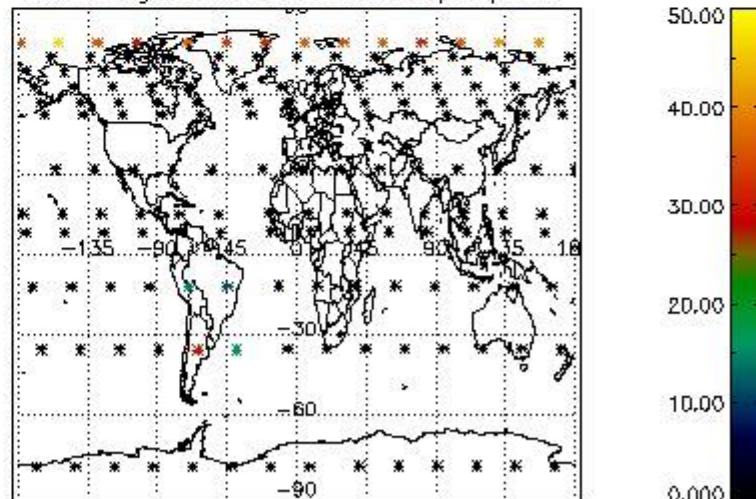
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

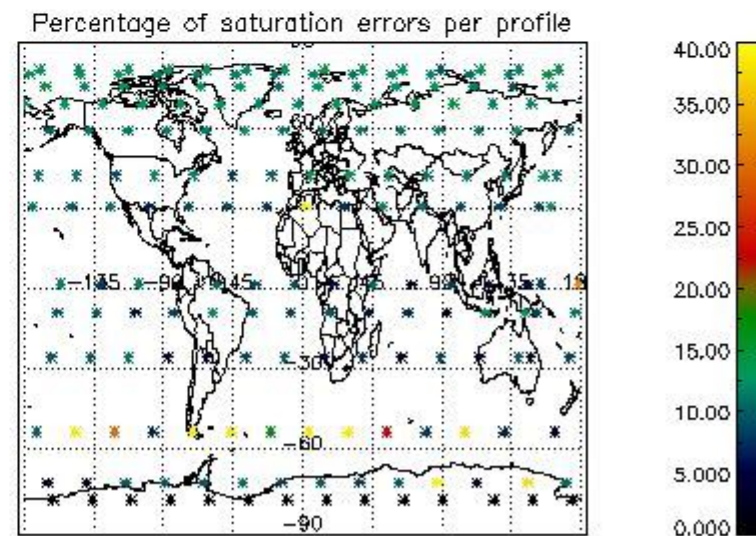
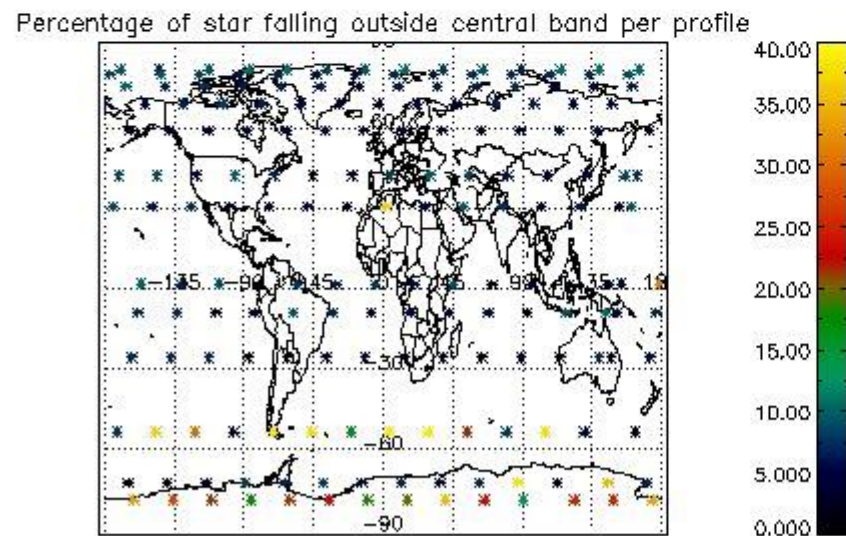
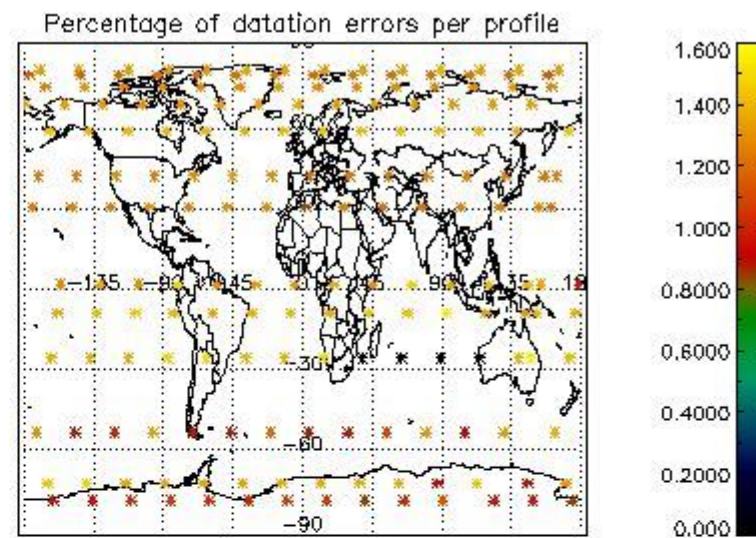
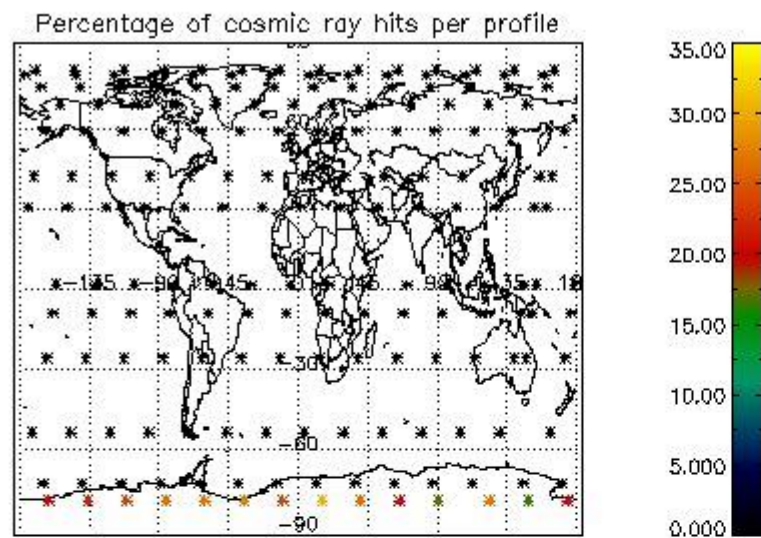


Percentage of saturation errors per profile



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

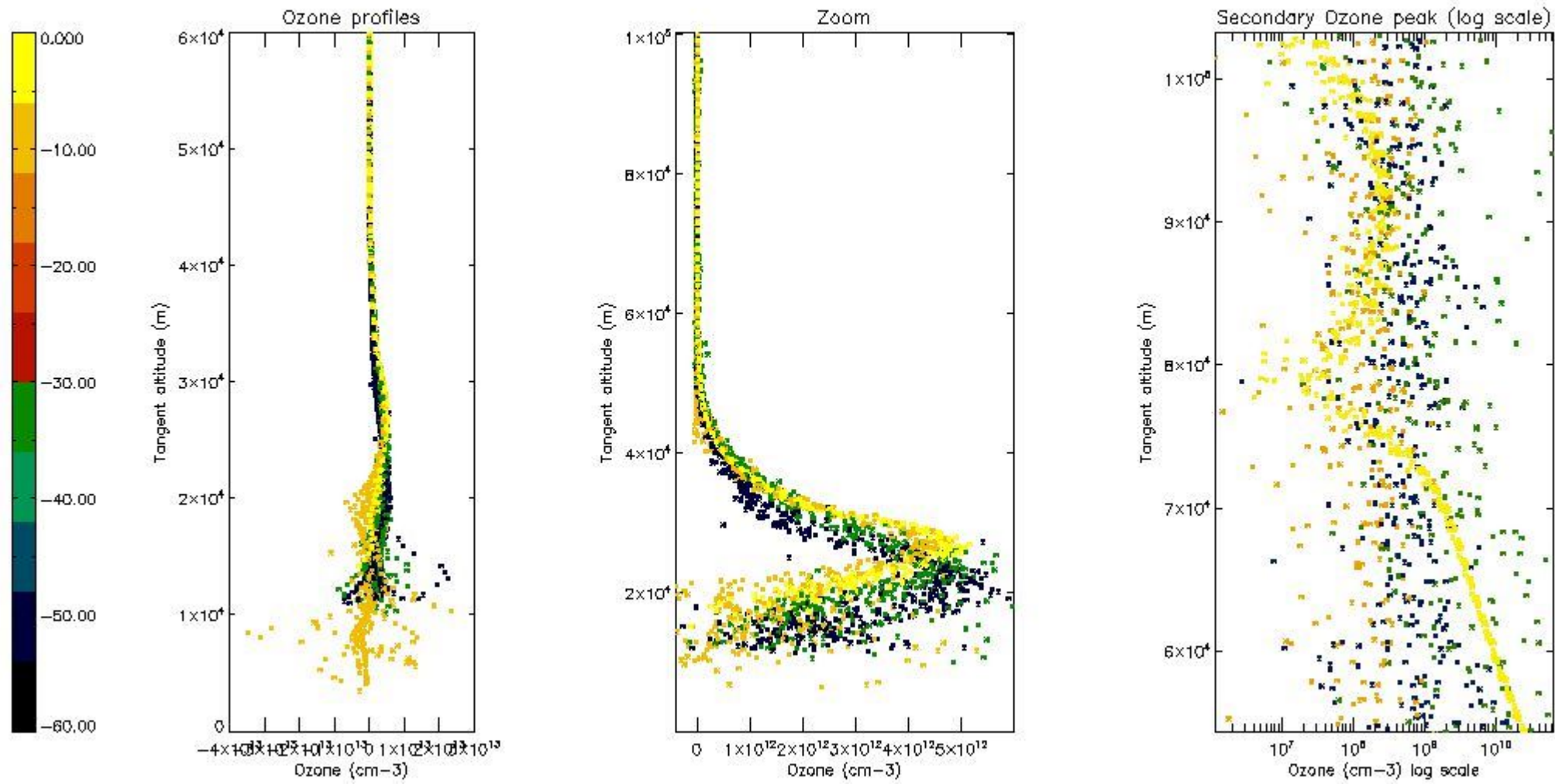
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	19
STD < 20	7

STD < 10	4
STD < 5	2

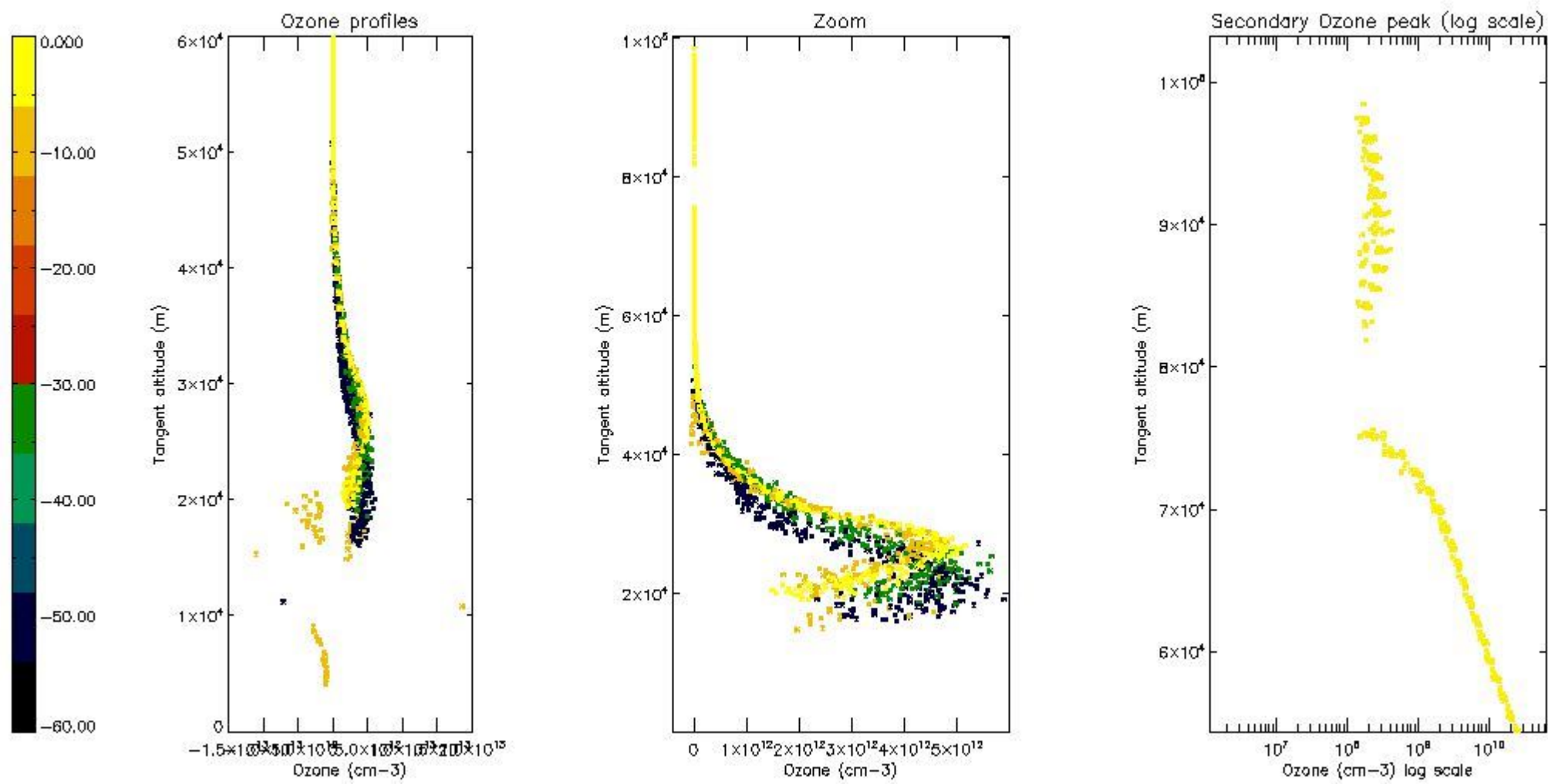
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



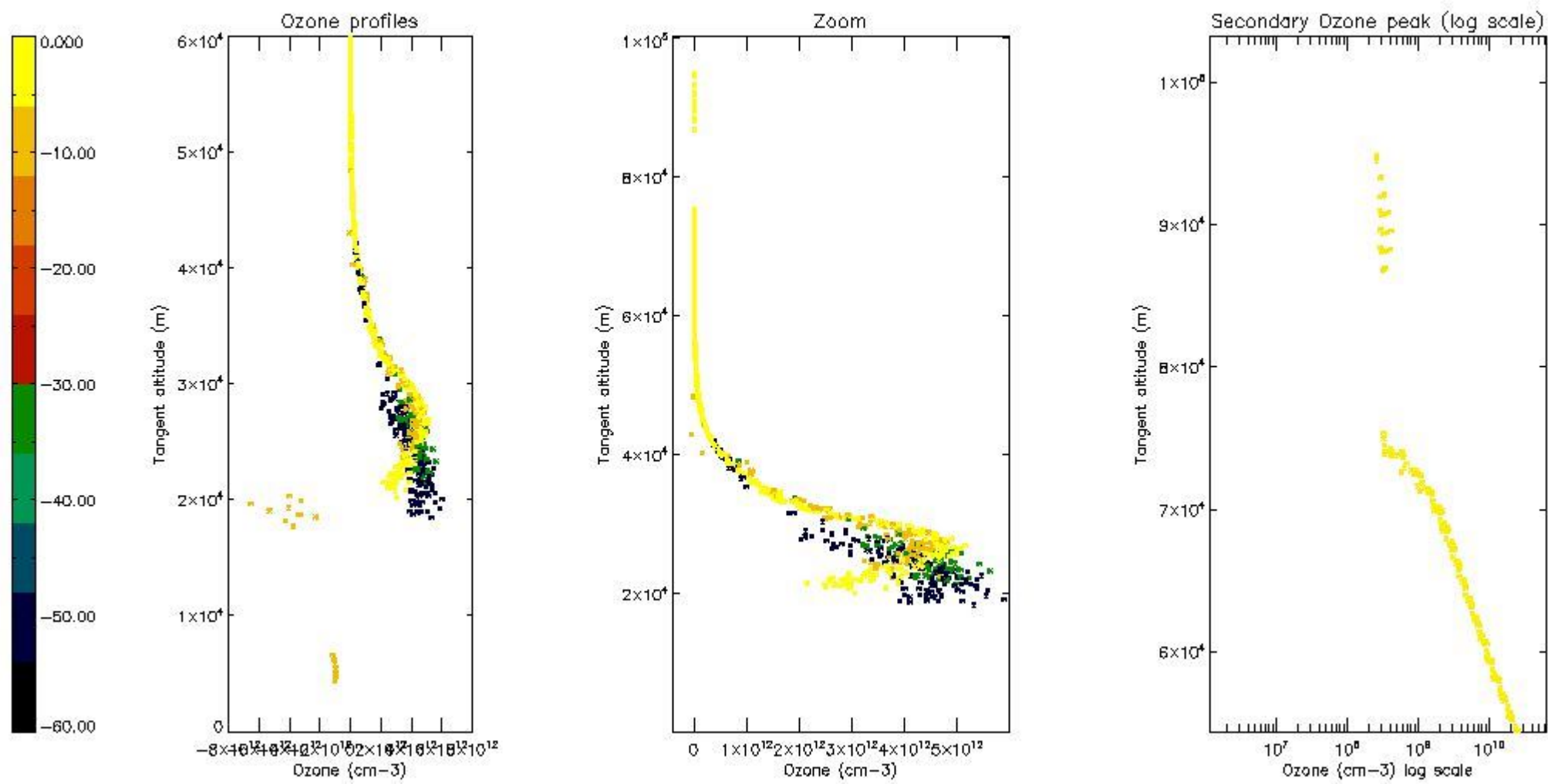
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



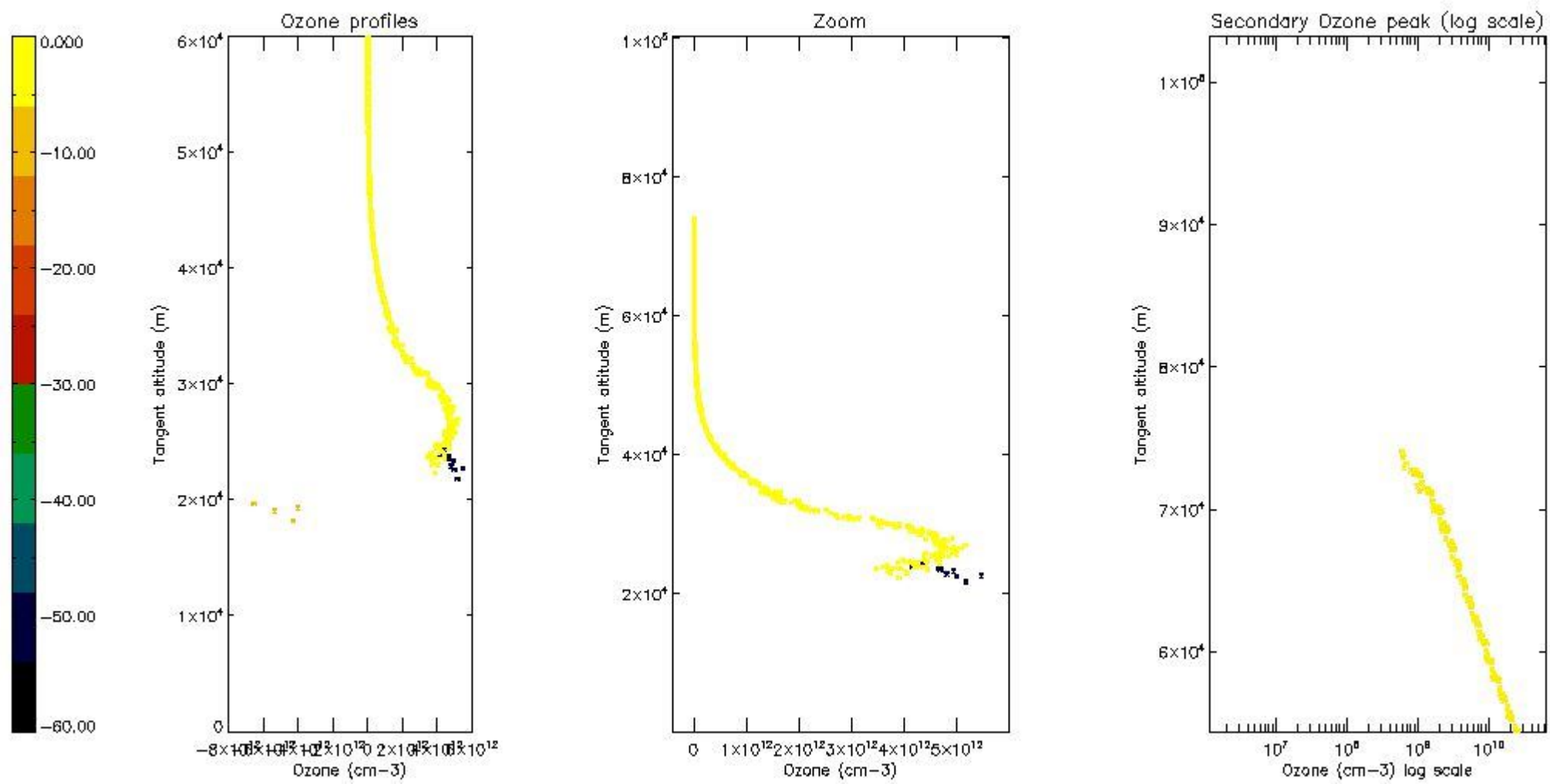
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



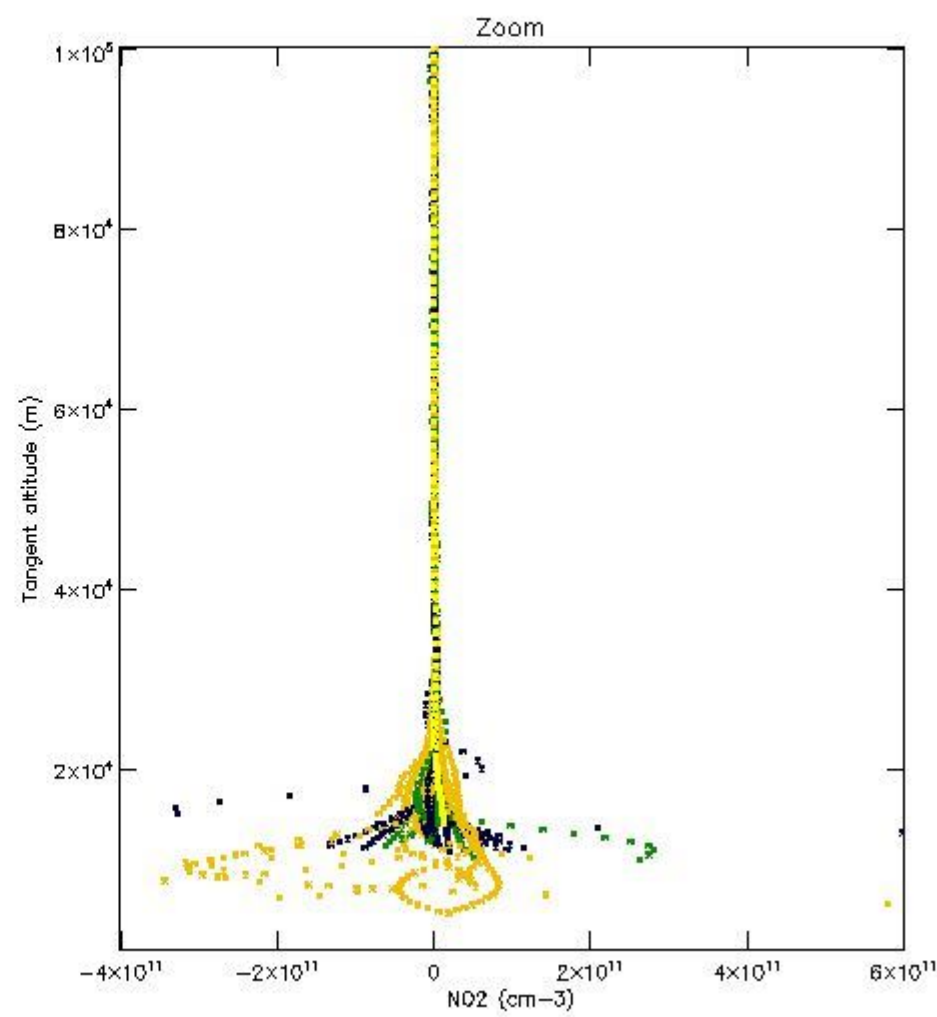
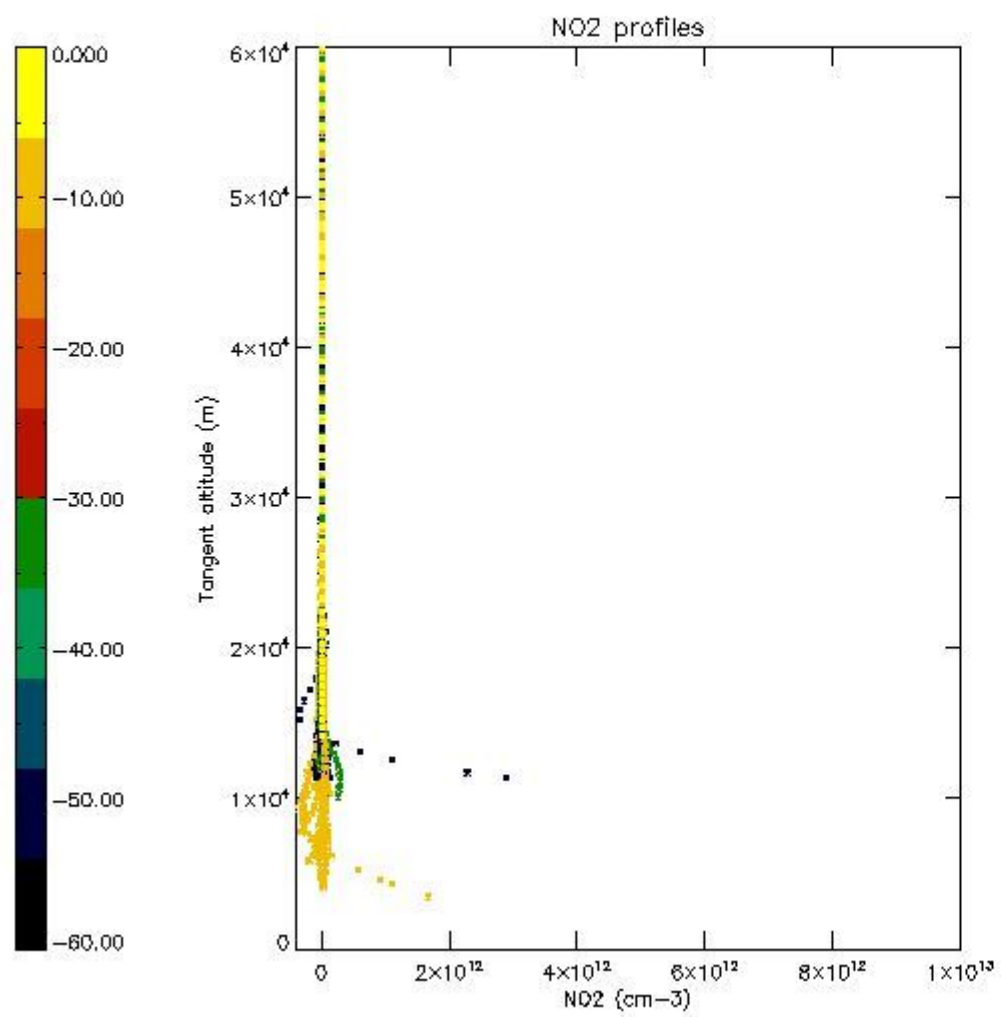
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



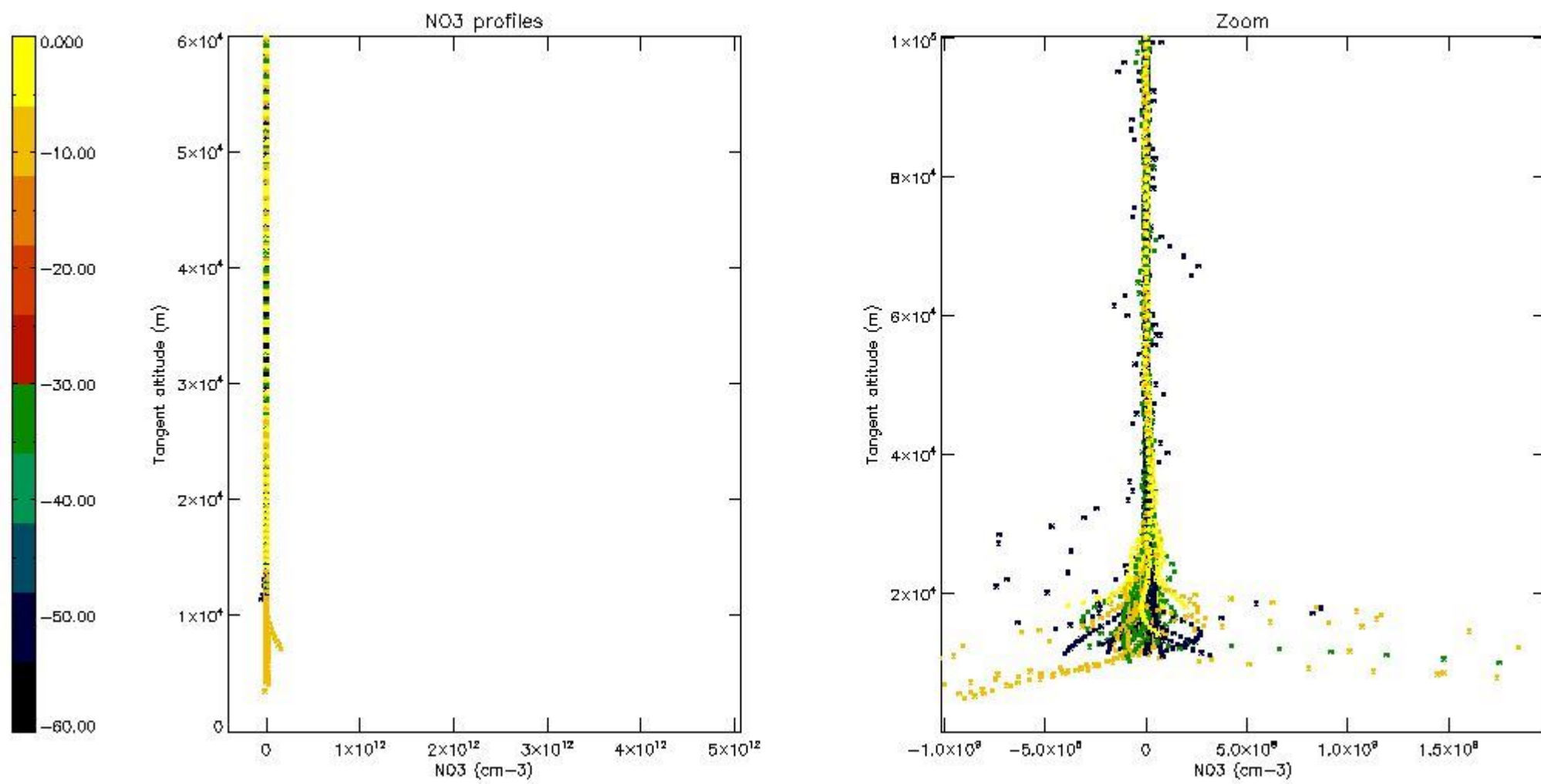
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



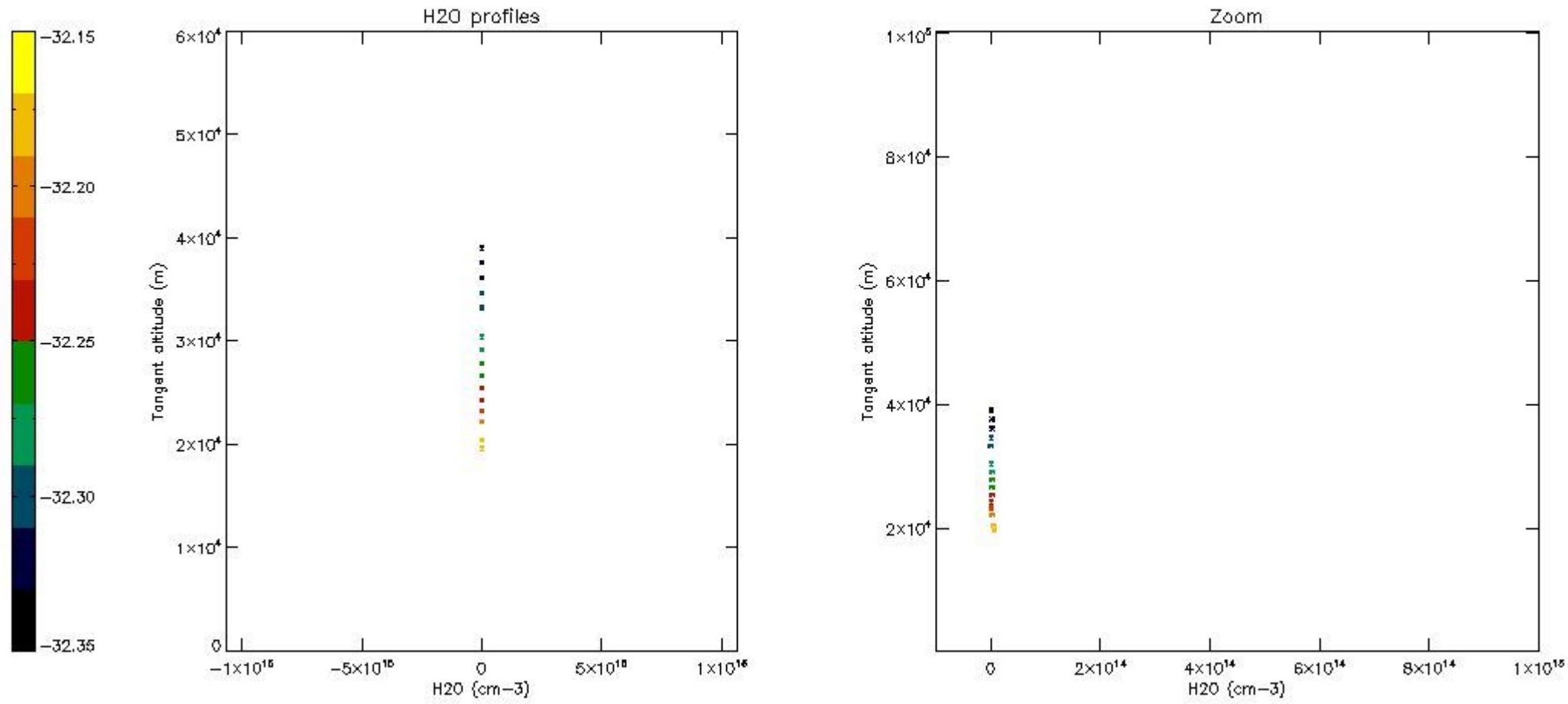
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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.

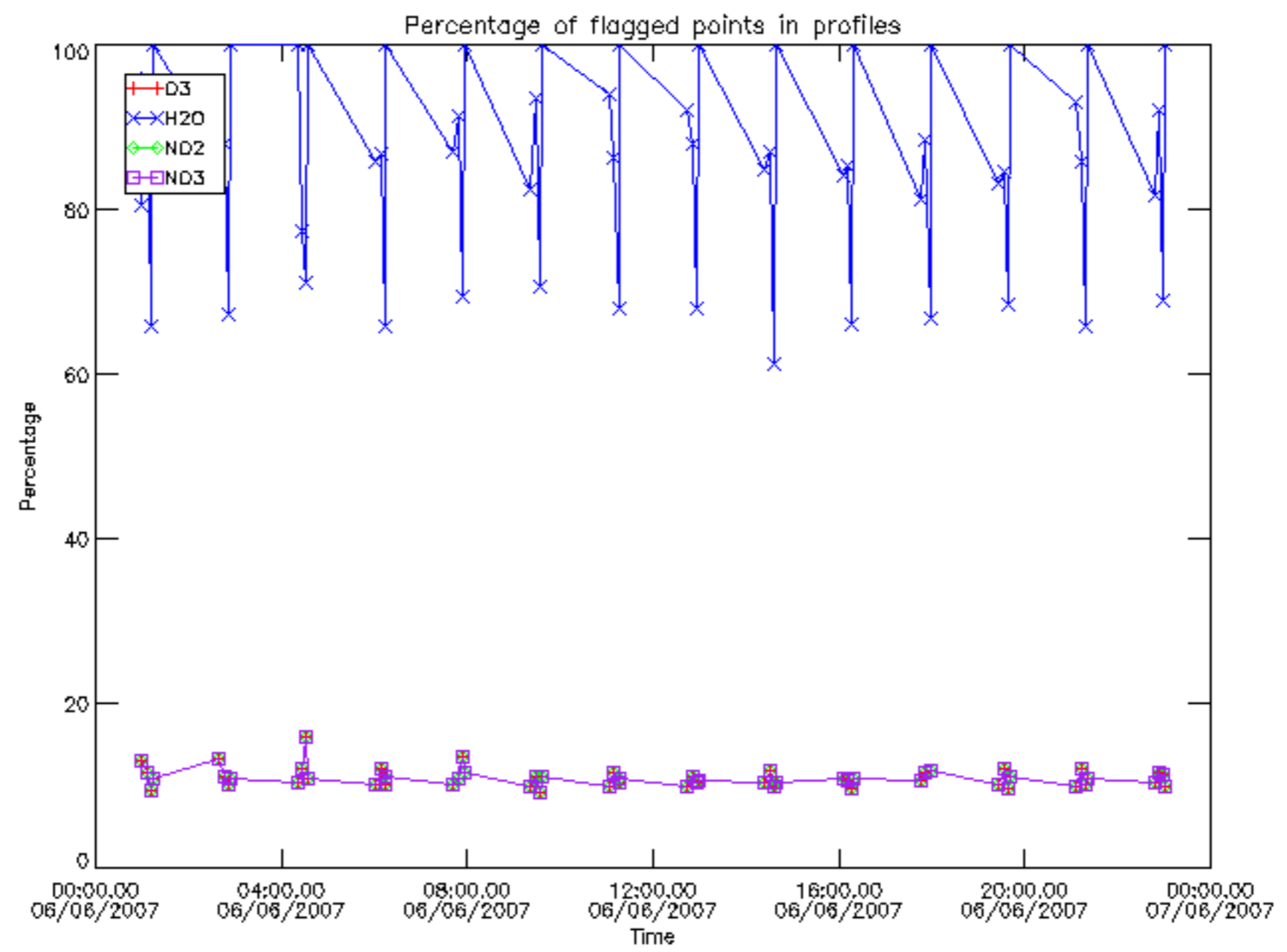


## 6. Auxiliary Data Files used for the production reported in section 2

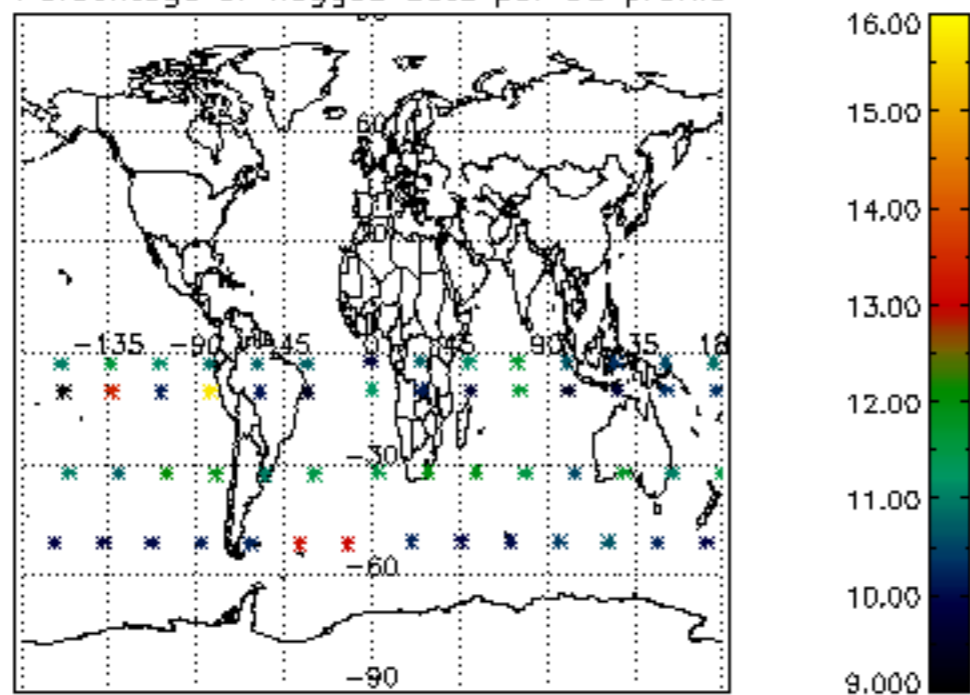
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	06-JUN-2007 00:07:05
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	06-JUN-2007 00:07:05
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	06-JUN-2007 00:07:05

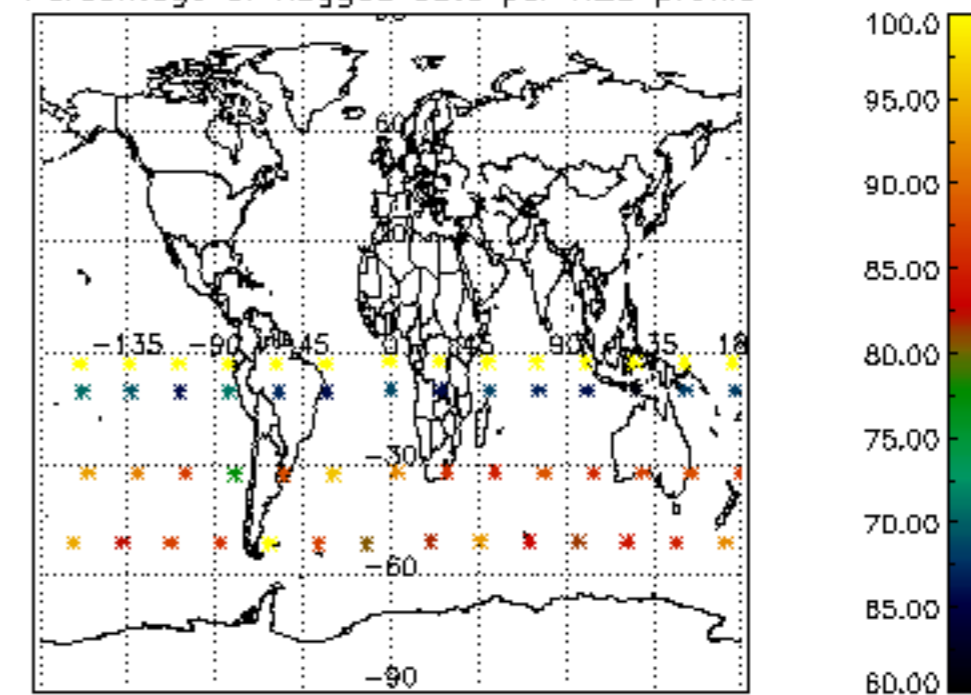




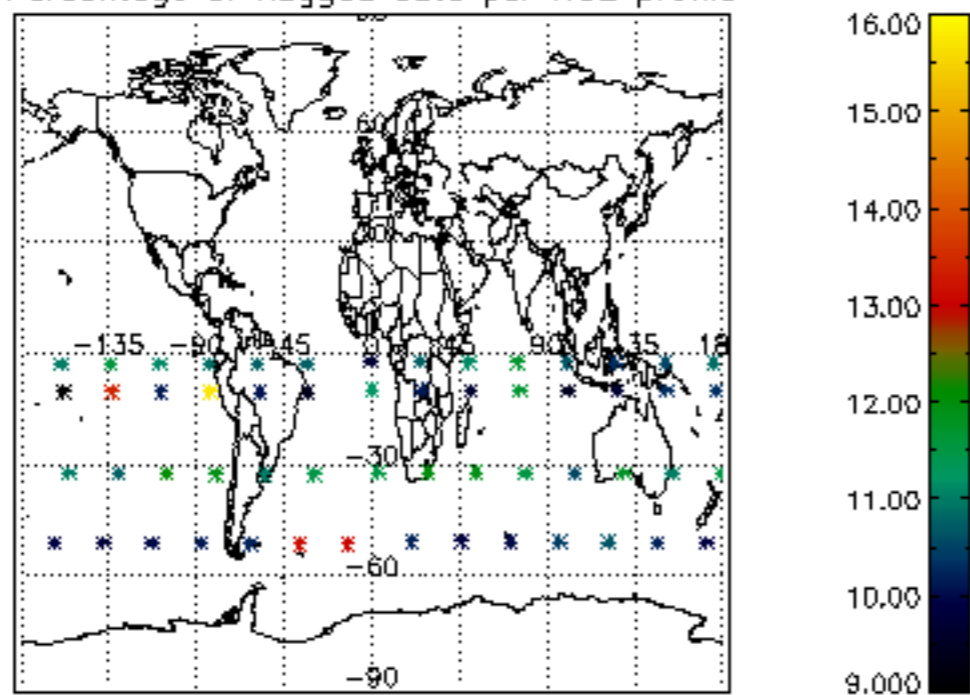
Percentage of flagged data per D3 profile



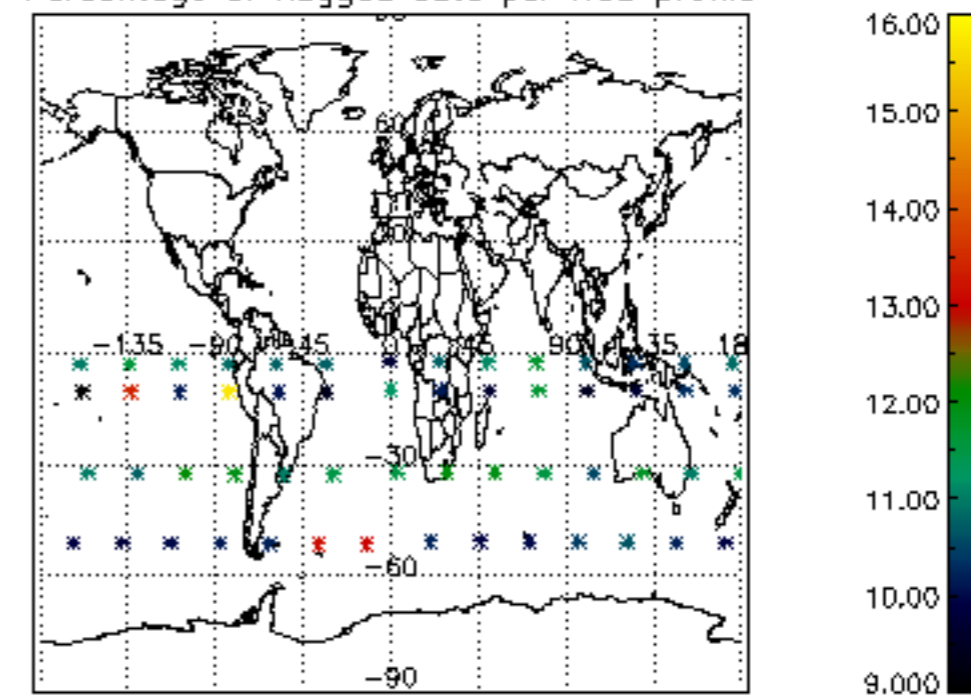
Percentage of flagged data per H2O profile

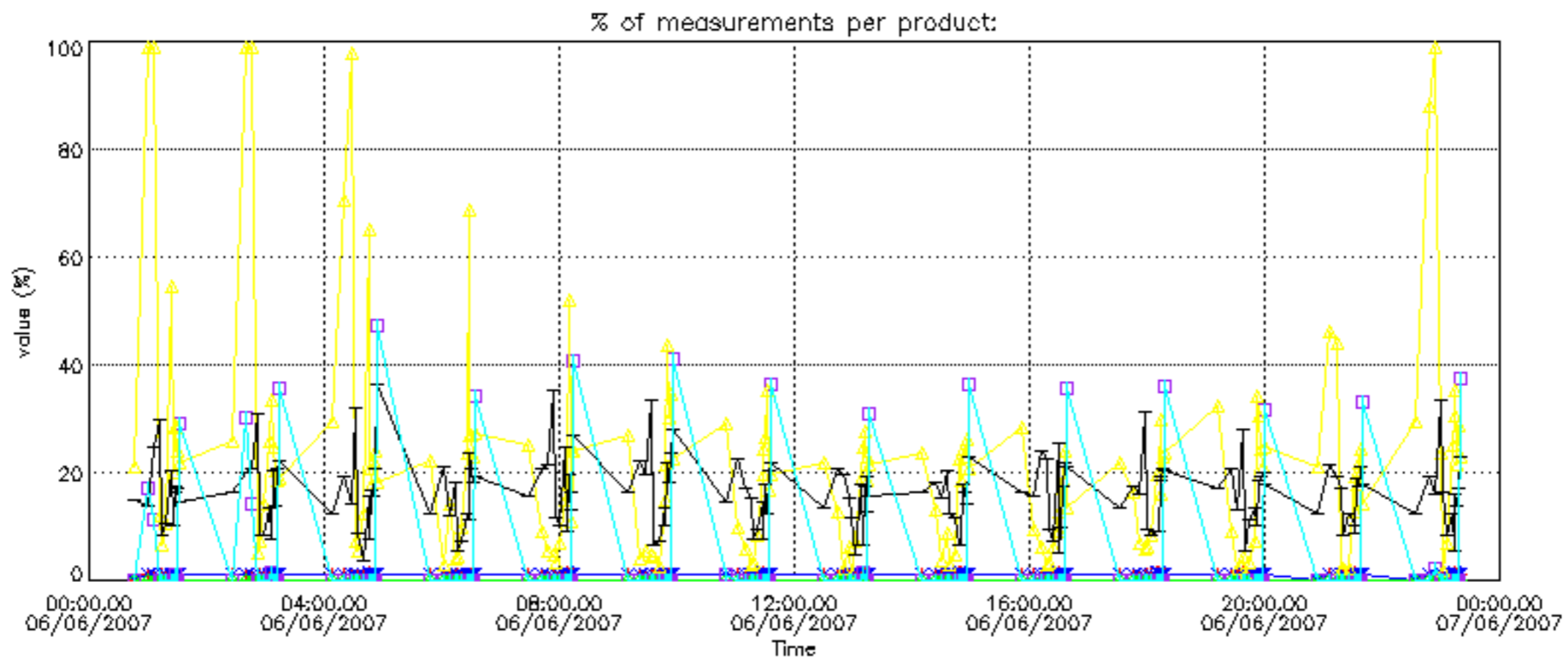


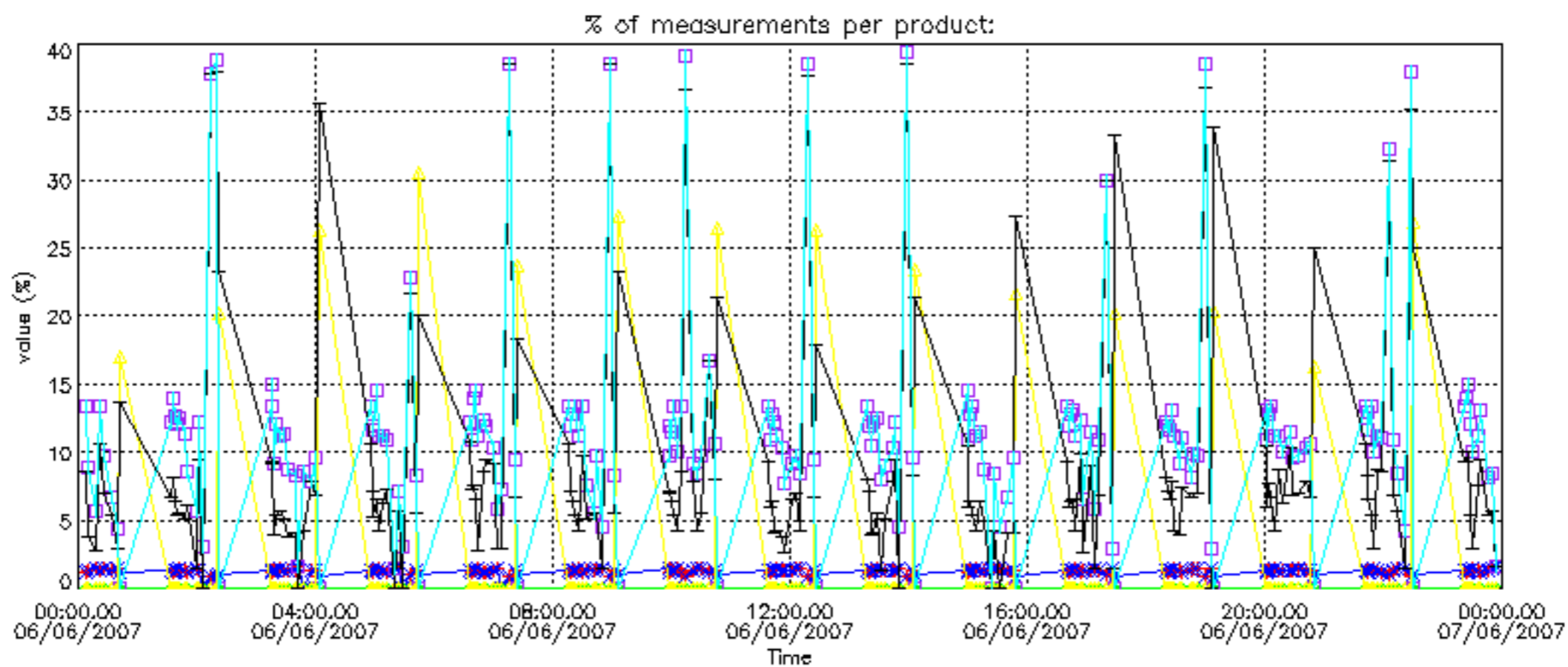
Percentage of flagged data per NO2 profile



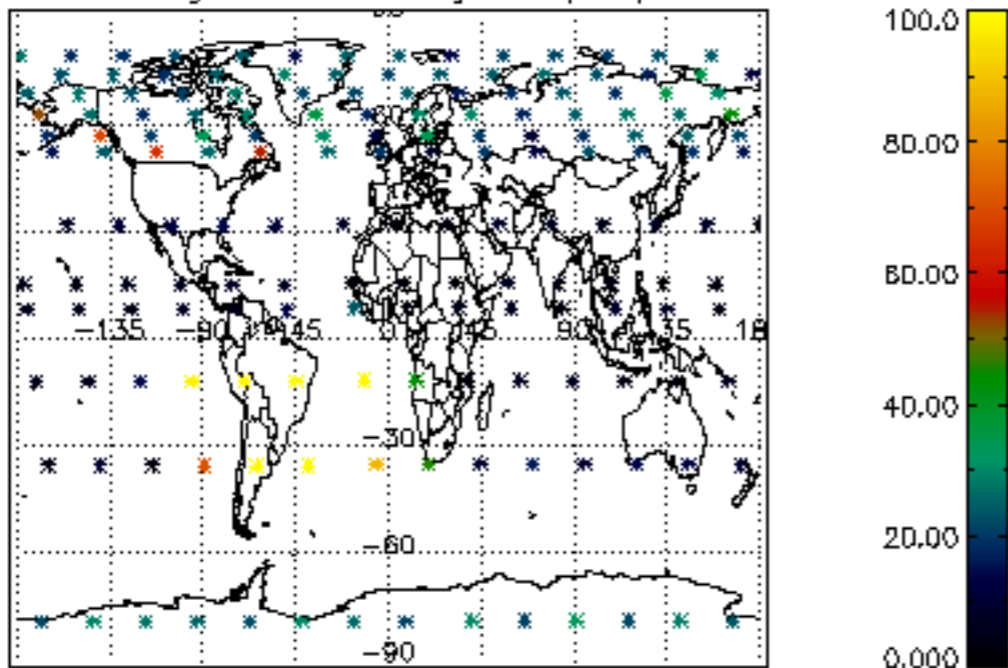
Percentage of flagged data per NO3 profile



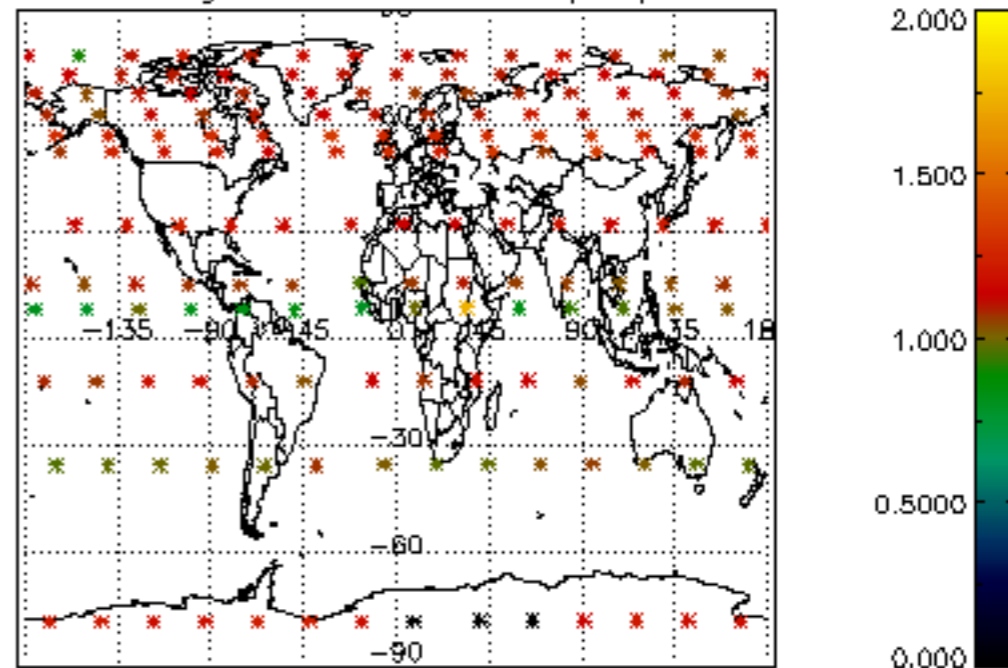




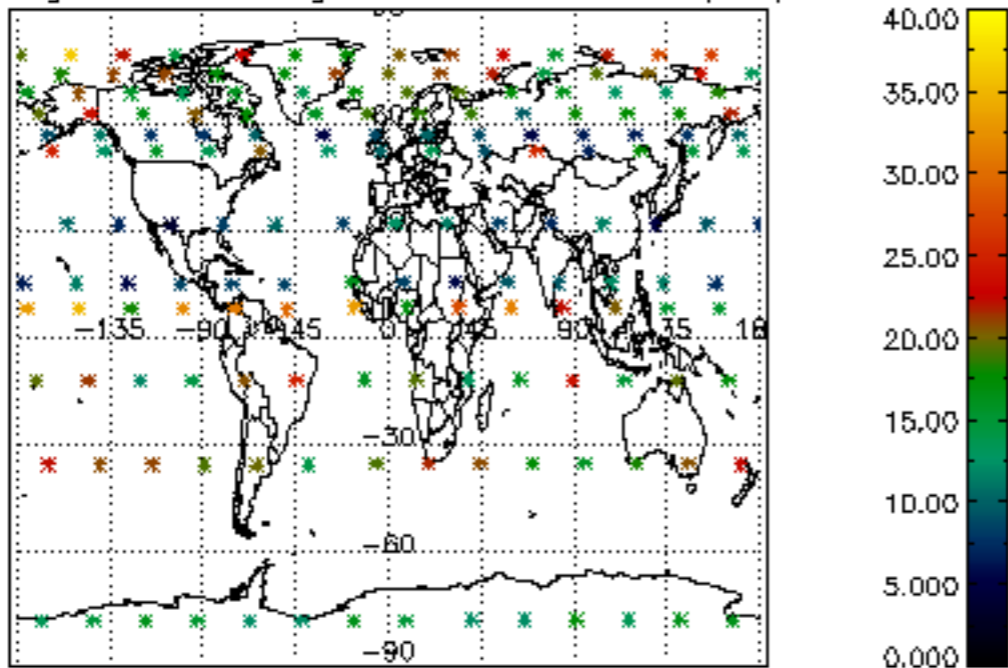
Percentage of cosmic ray hits per profile



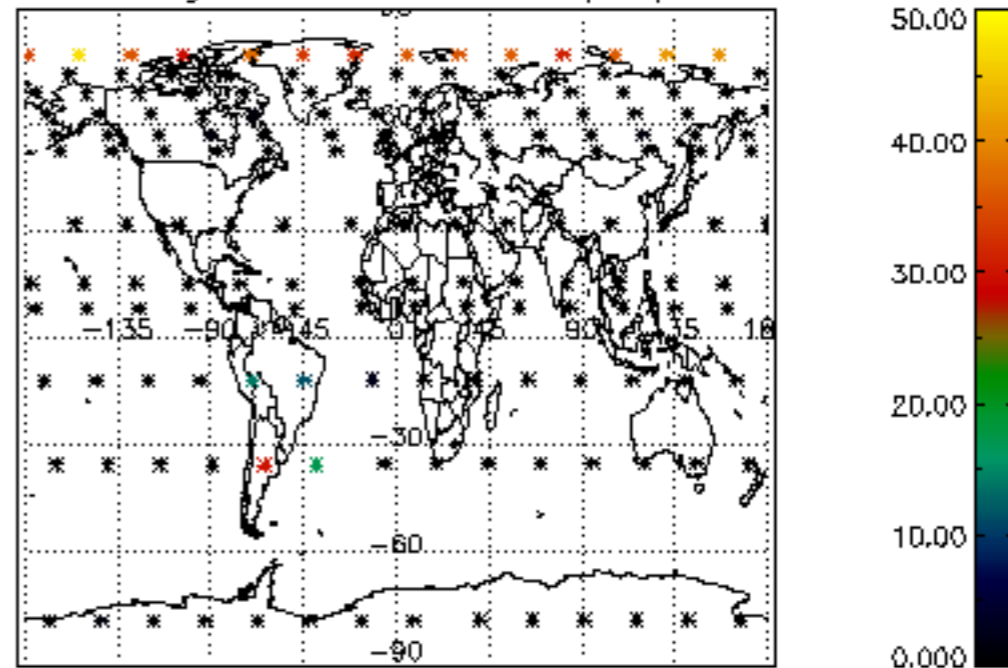
Percentage of datation errors per profile



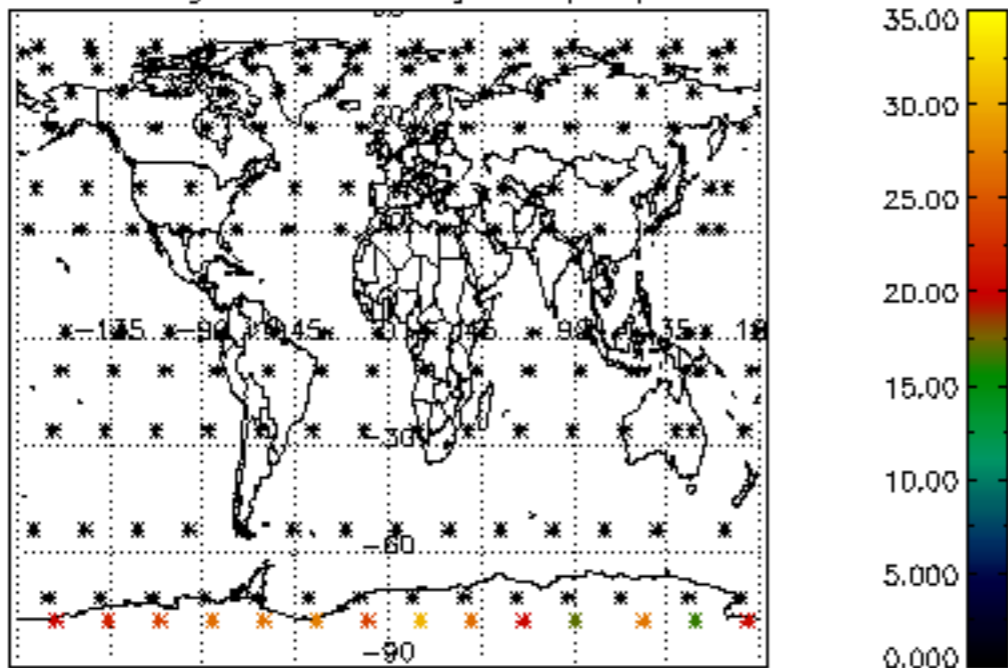
Percentage of star falling outside central band per profile



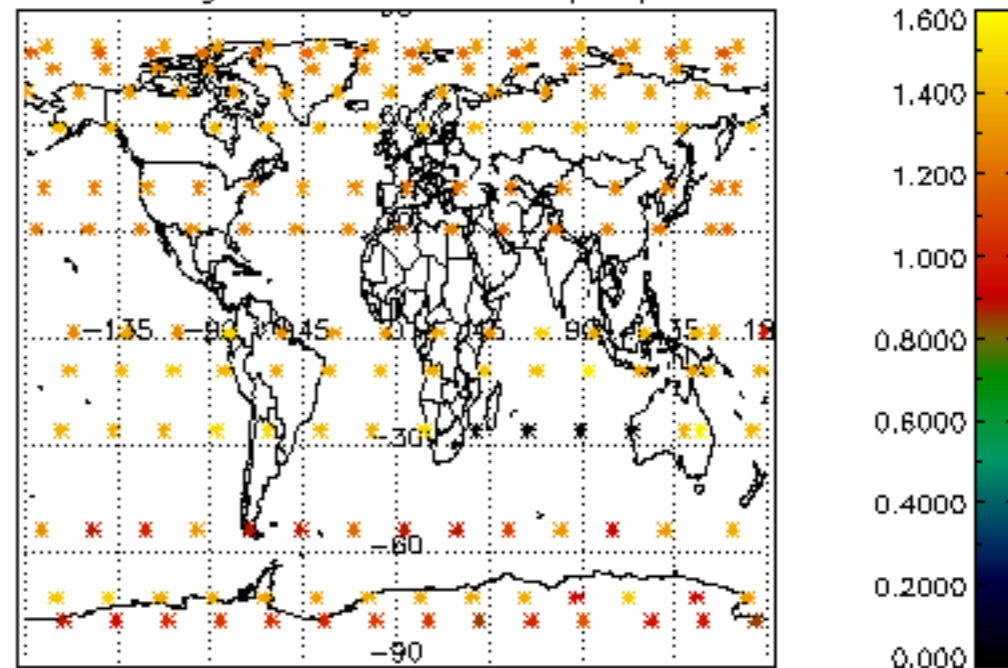
Percentage of saturation errors per profile



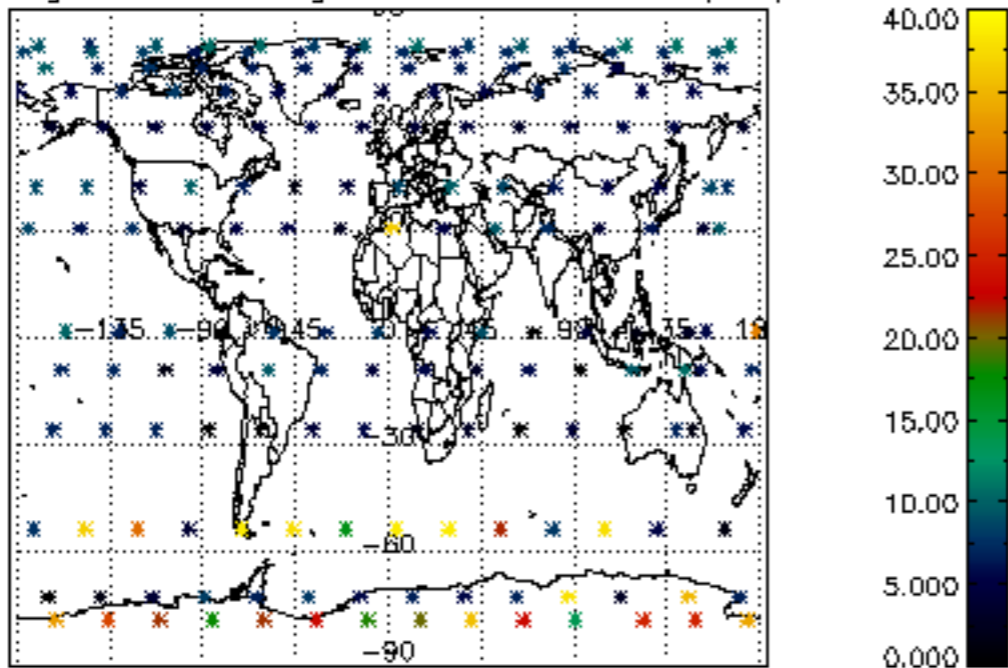
Percentage of cosmic ray hits per profile



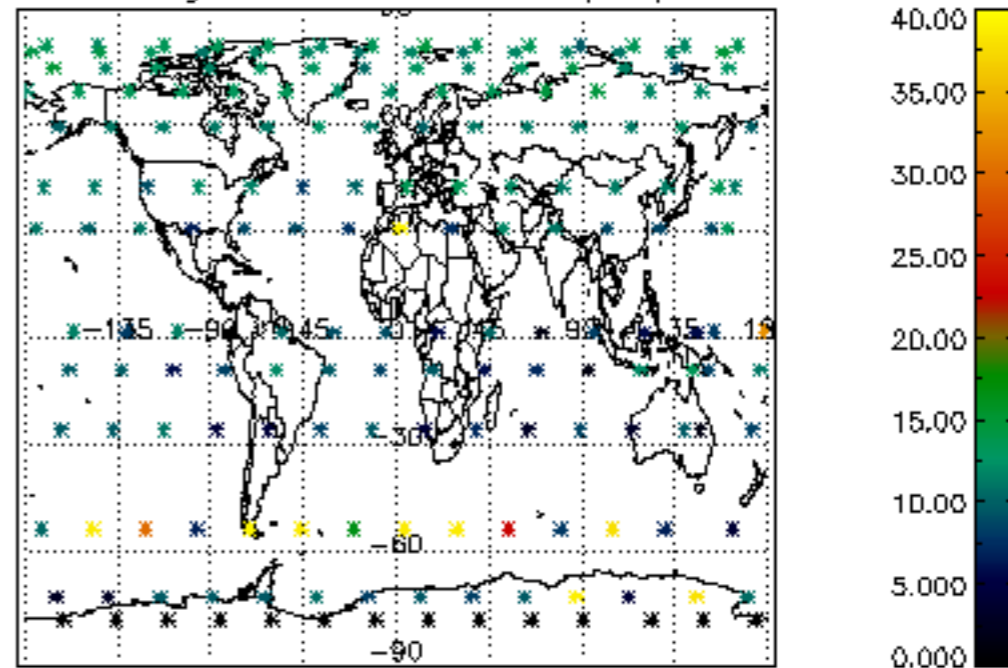
Percentage of datation errors per profile

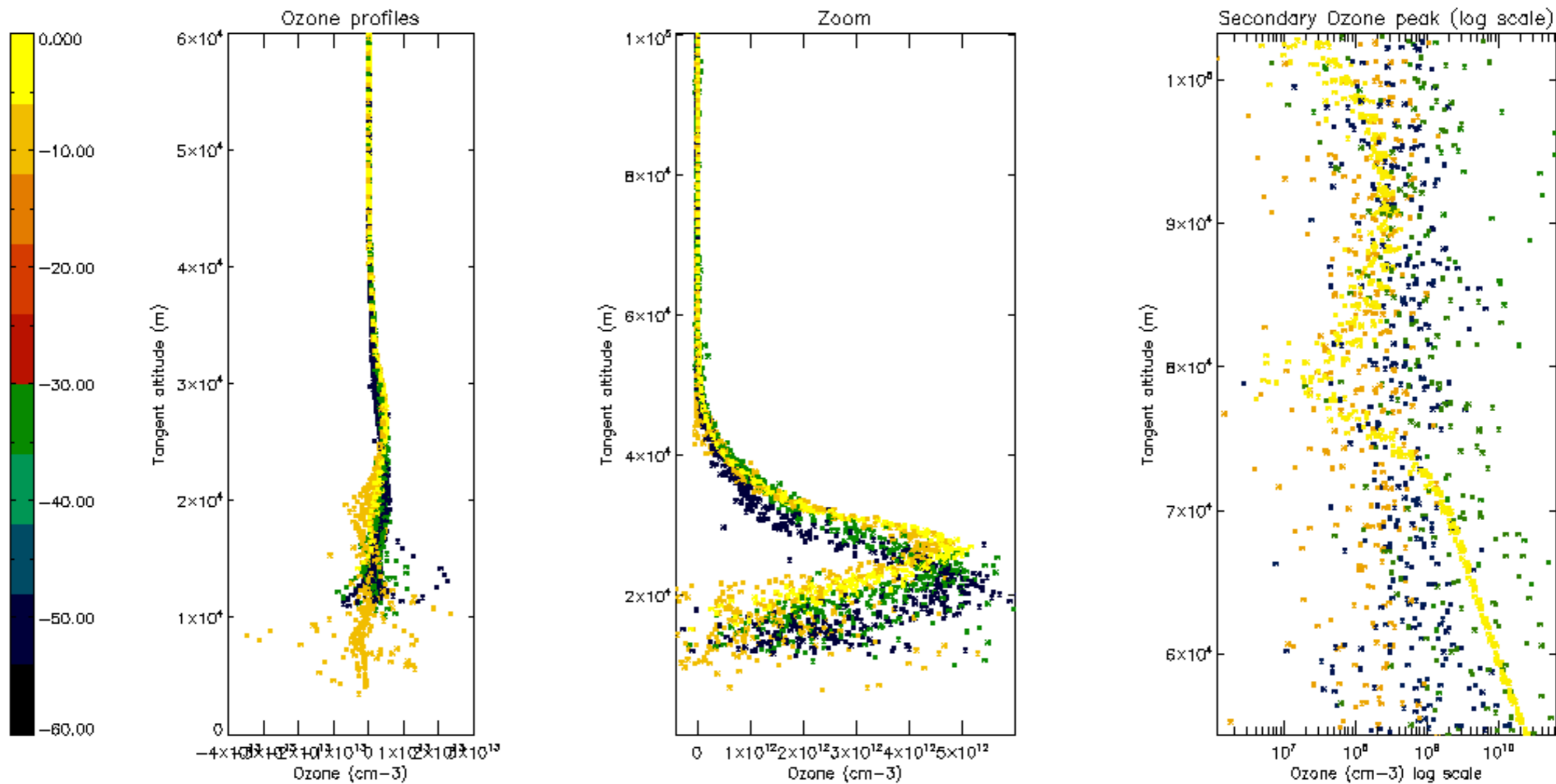


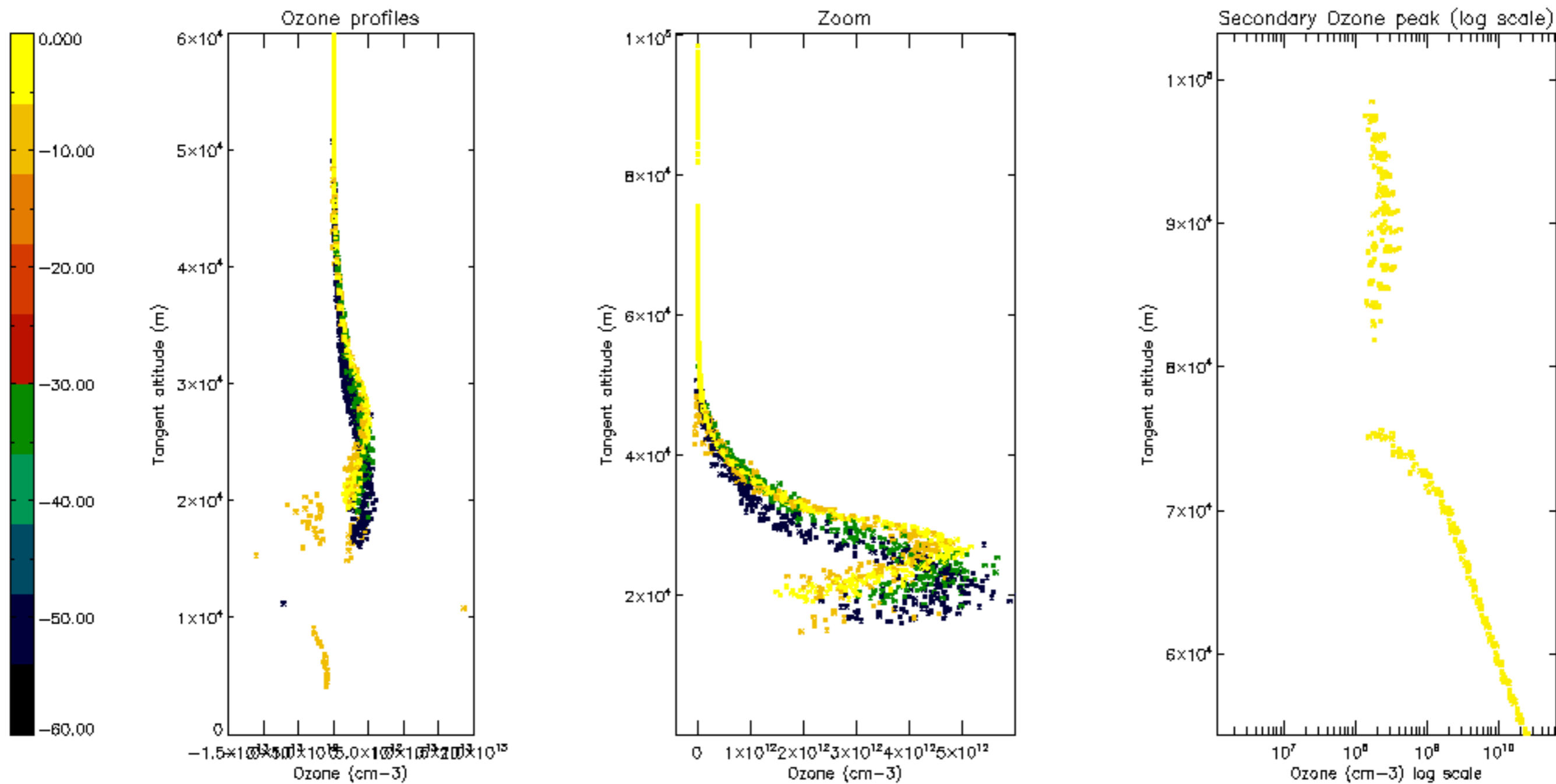
Percentage of star falling outside central band per profile



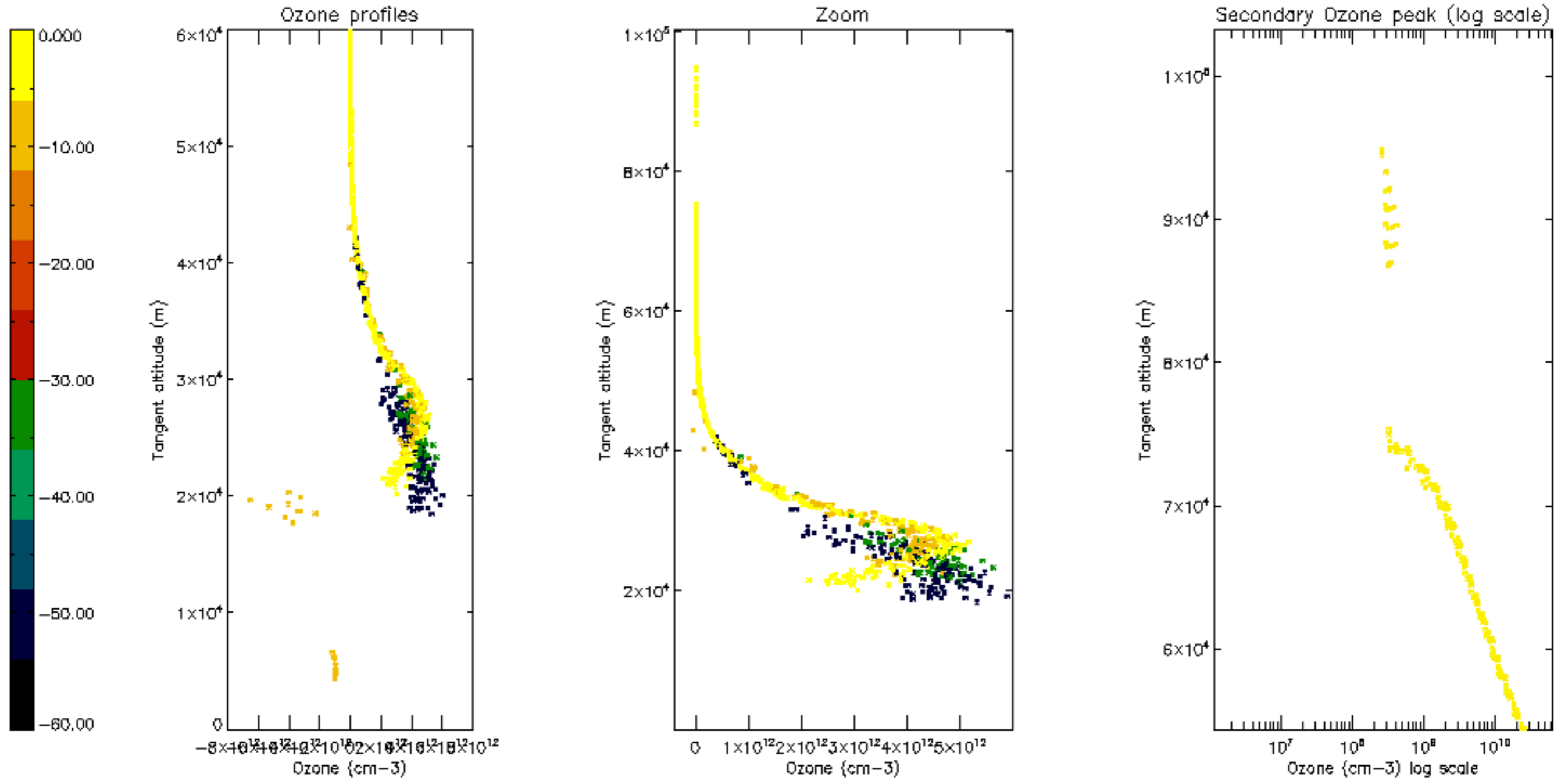
Percentage of saturation errors per profile

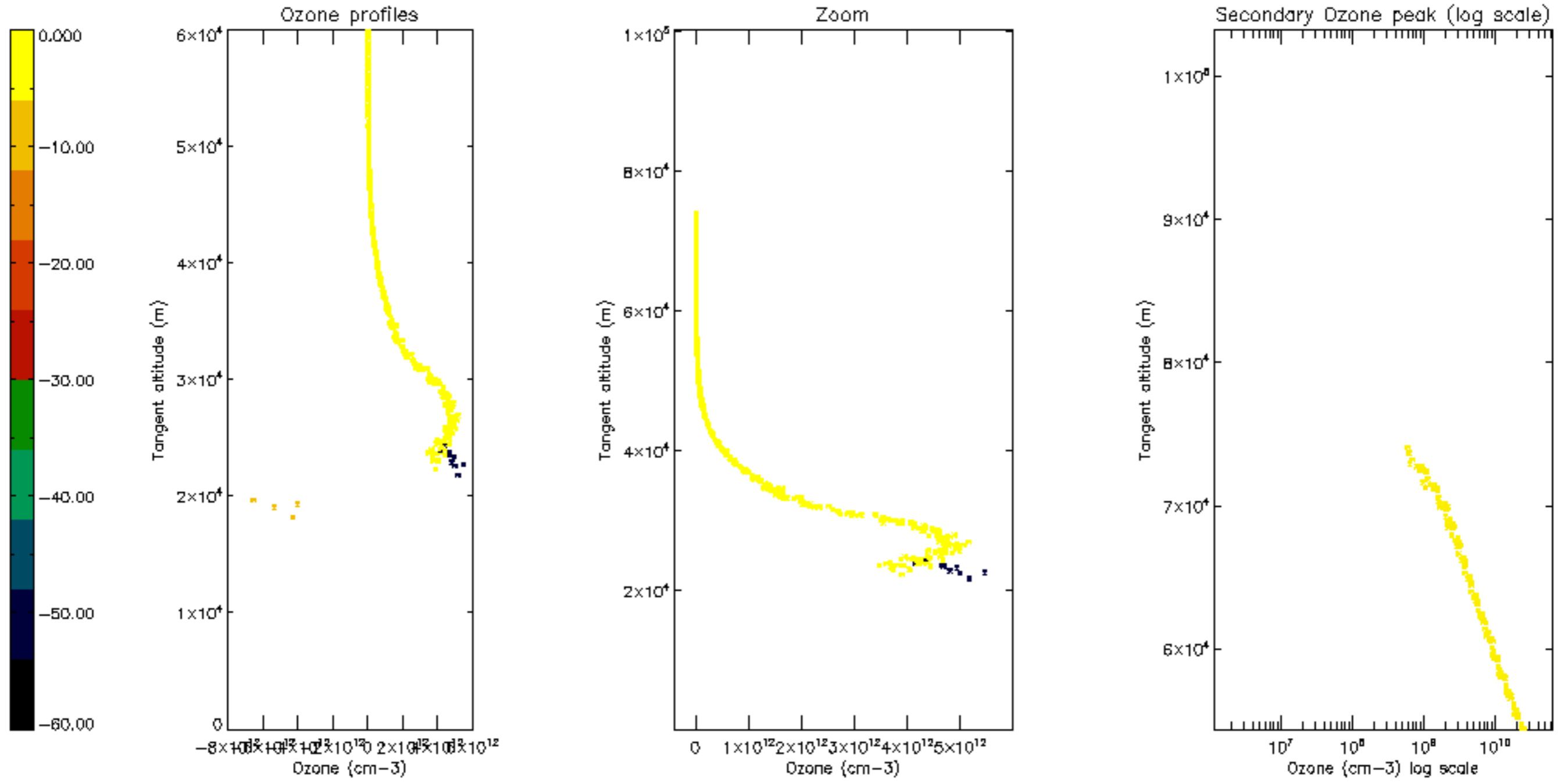


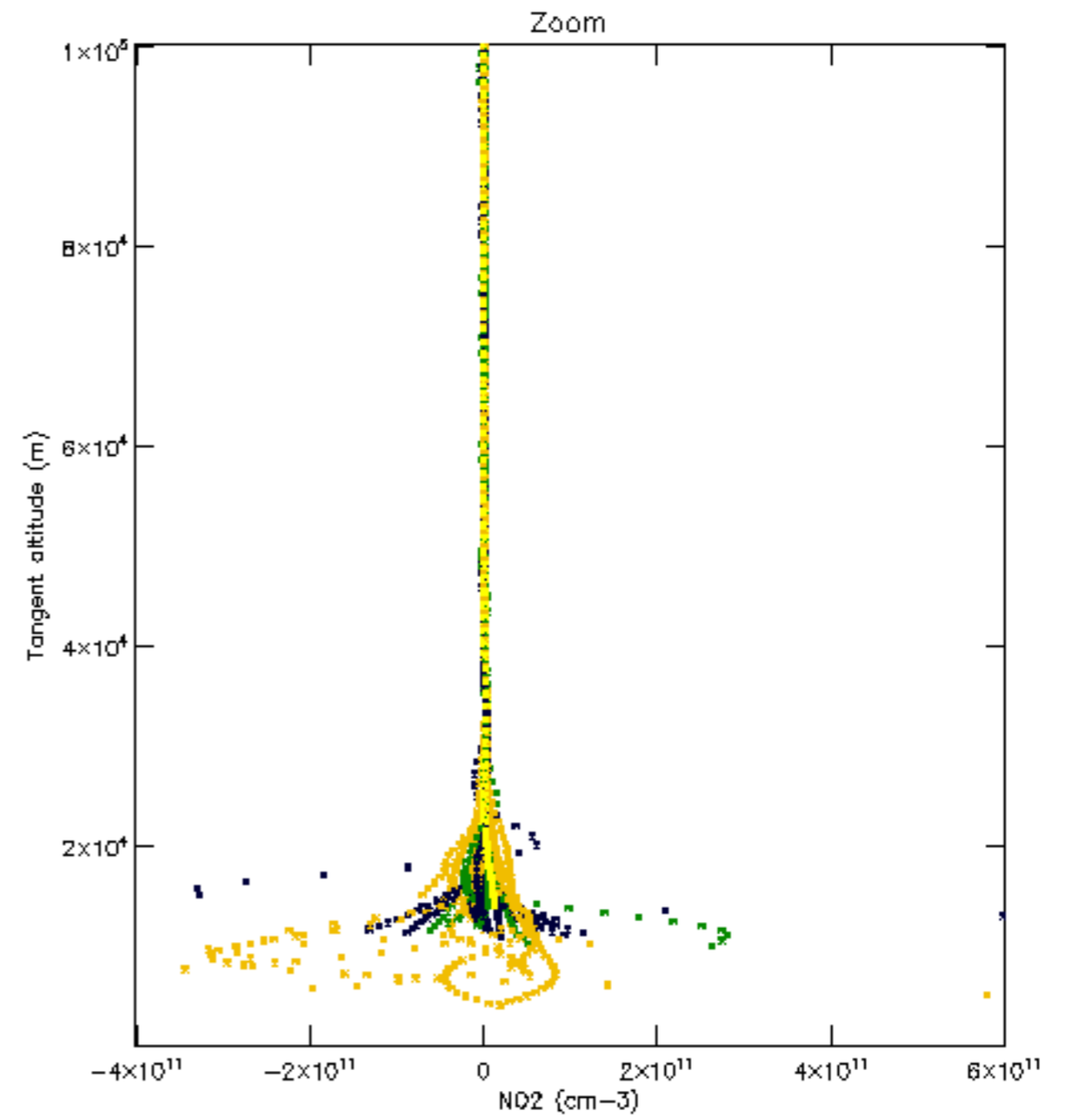
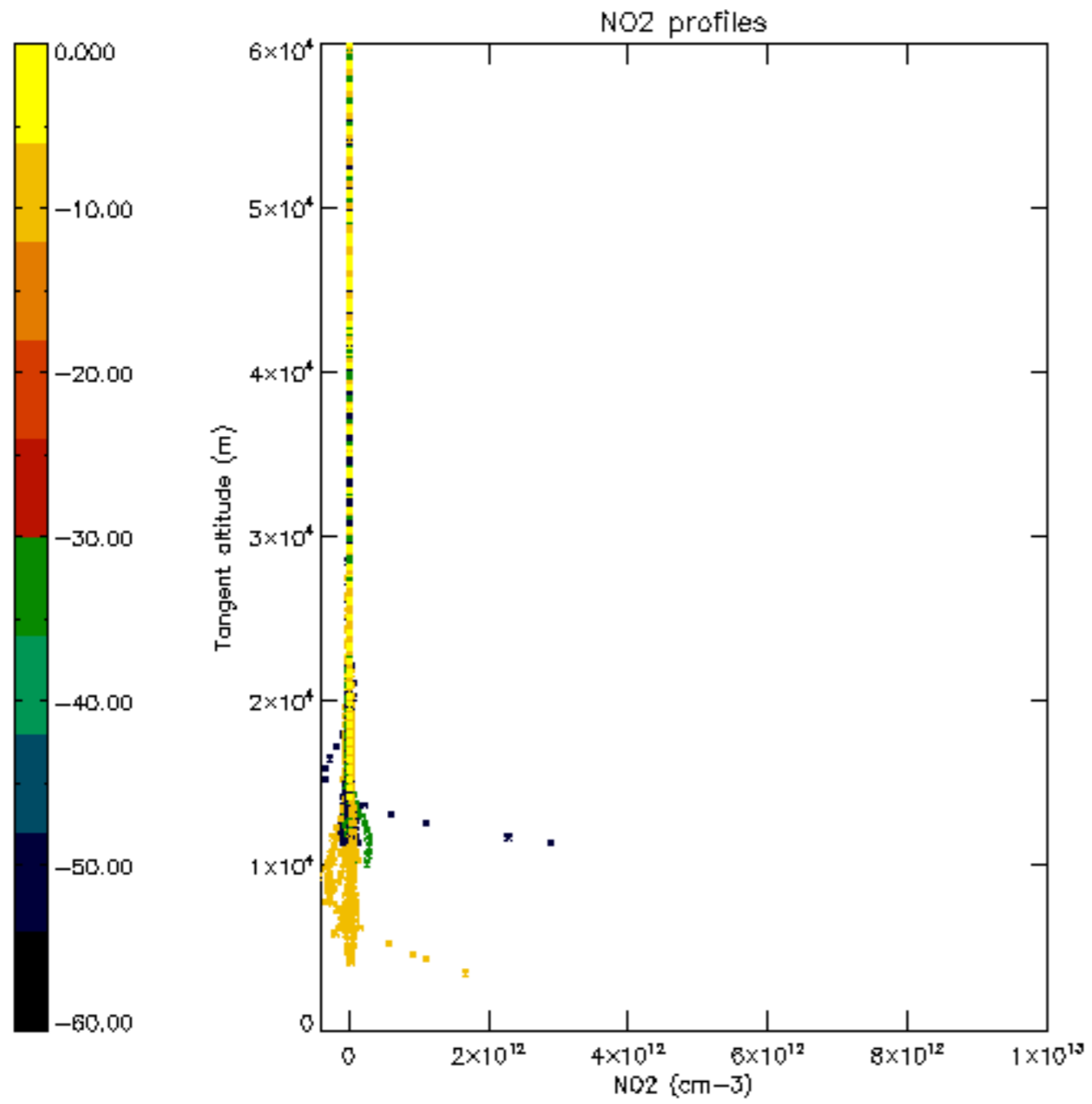


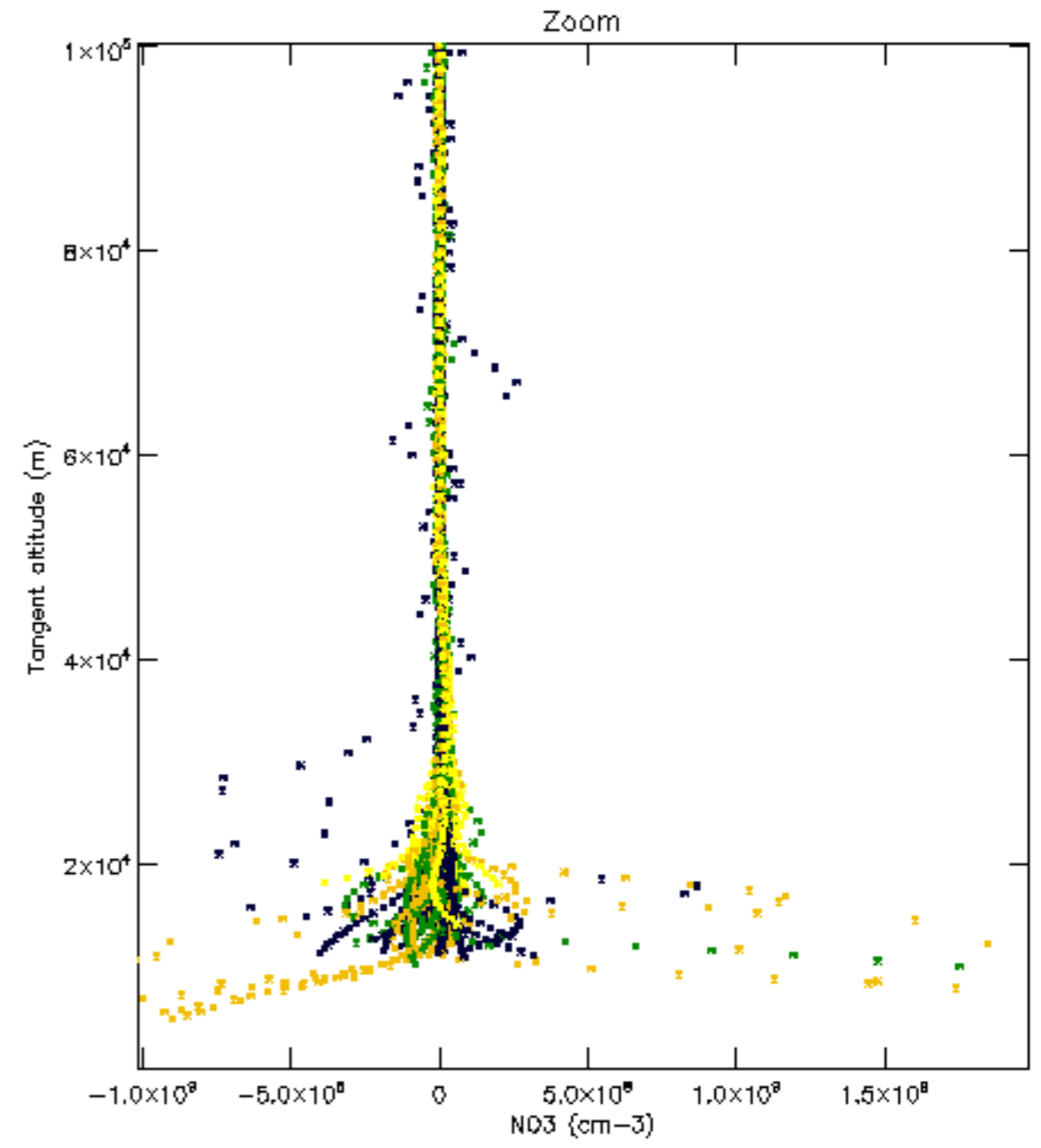
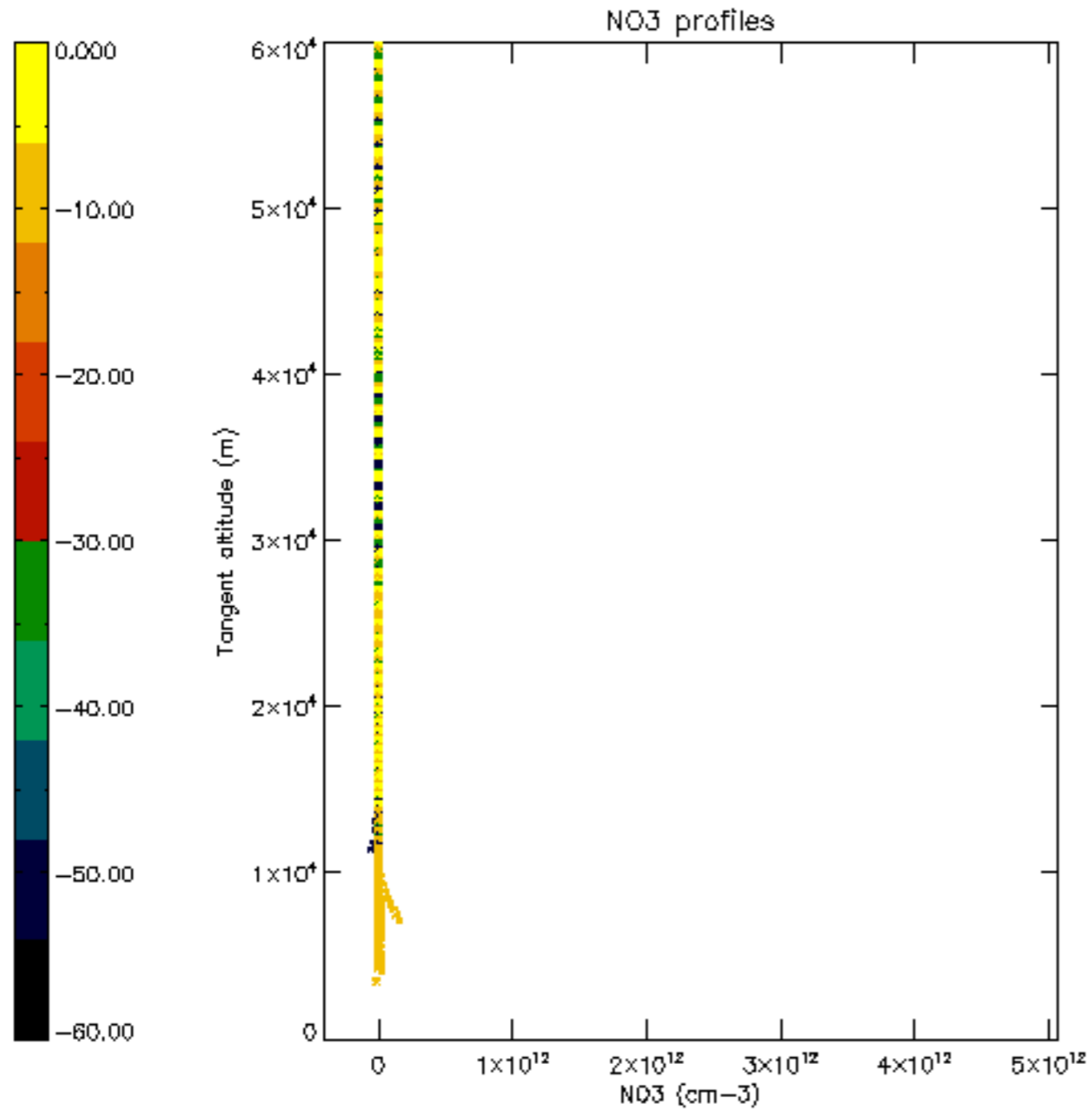


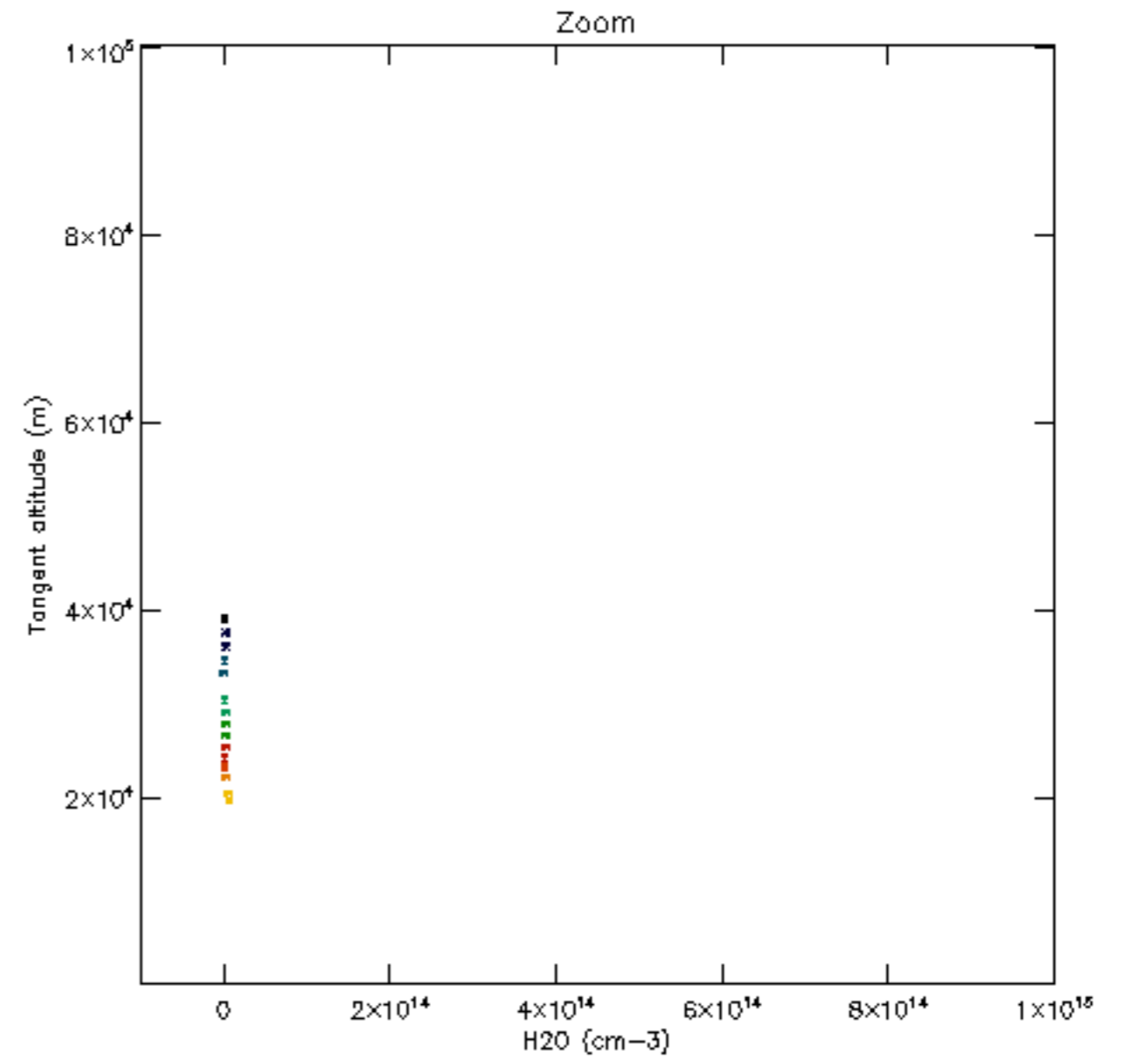
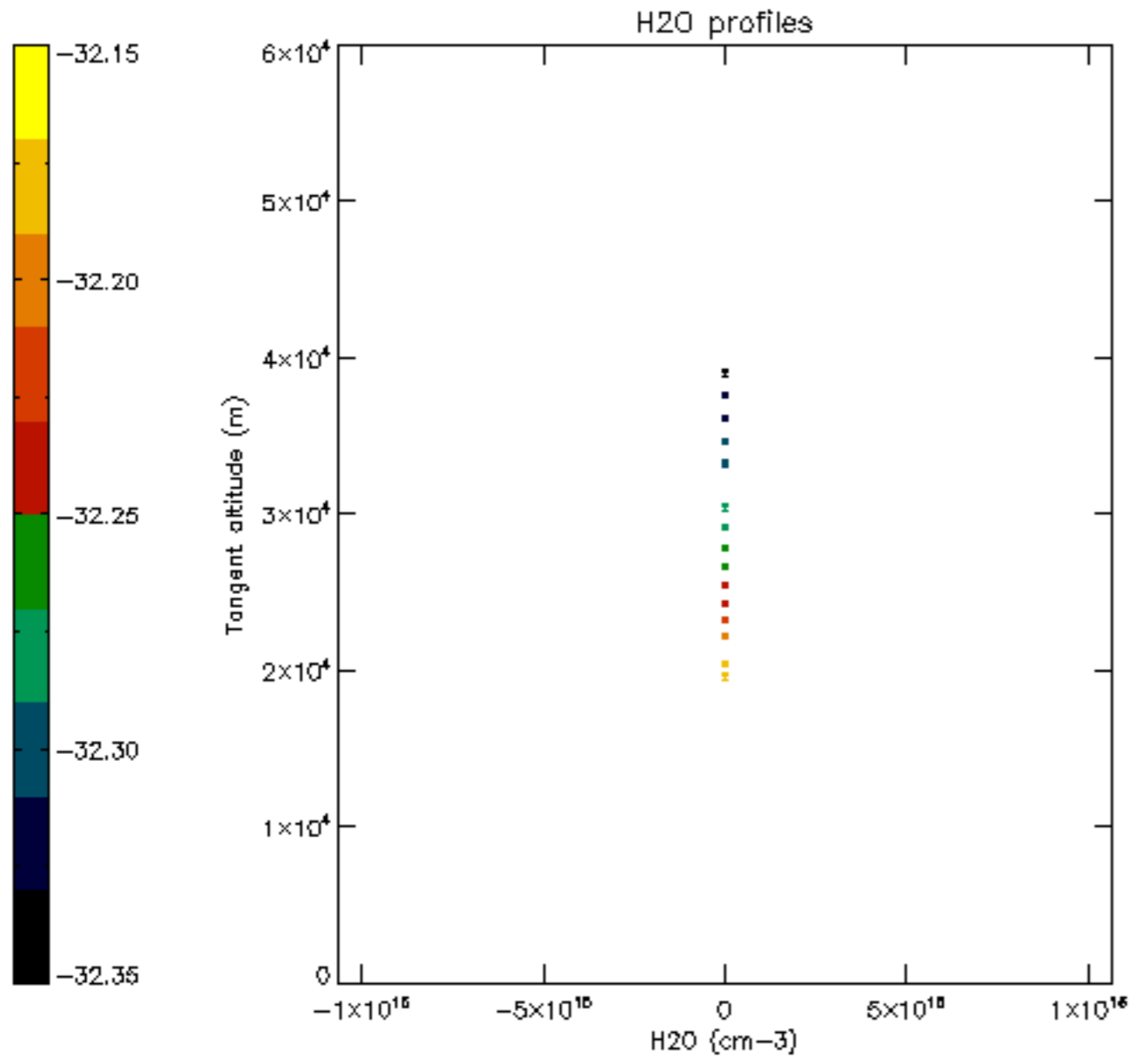


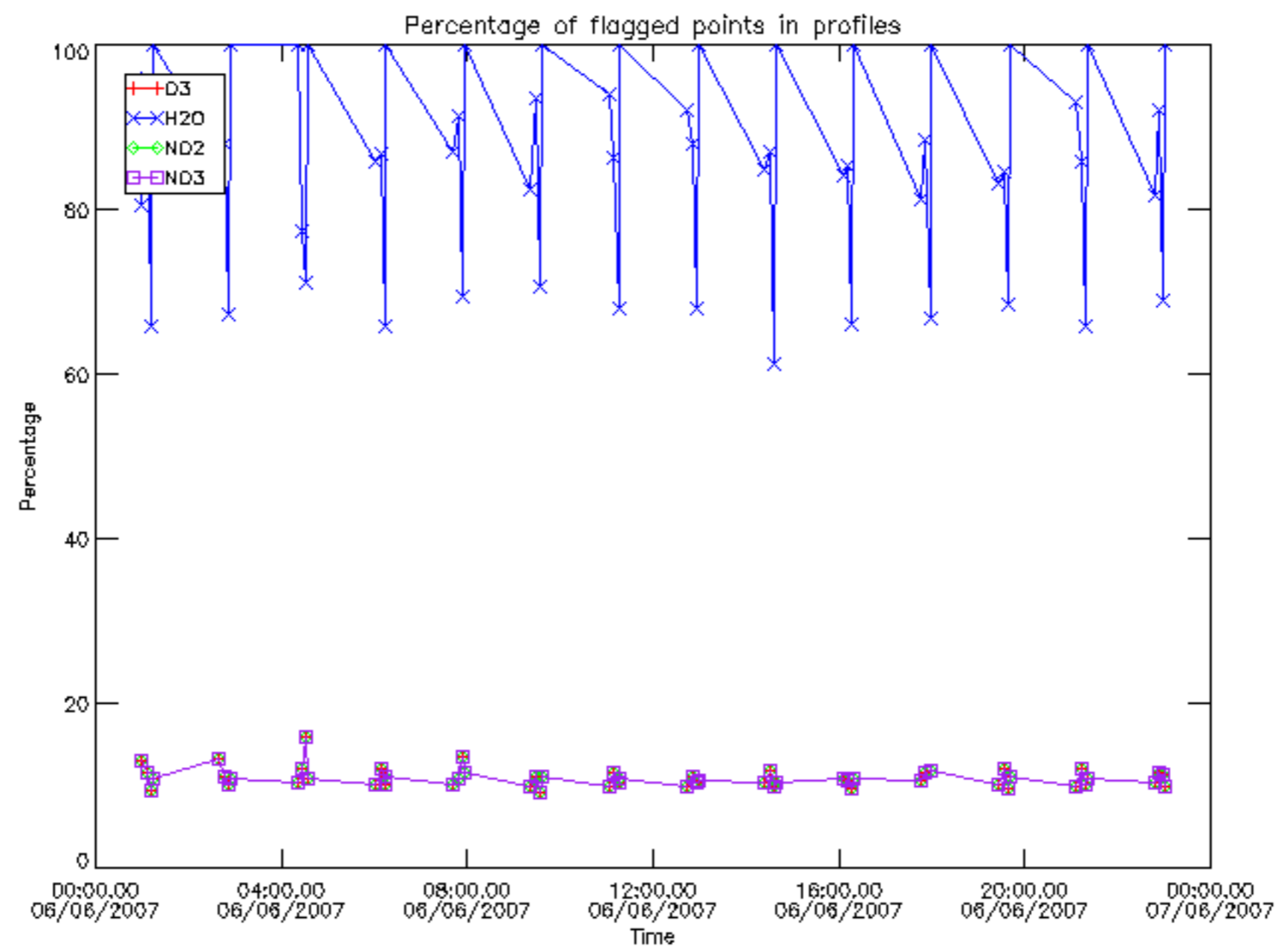




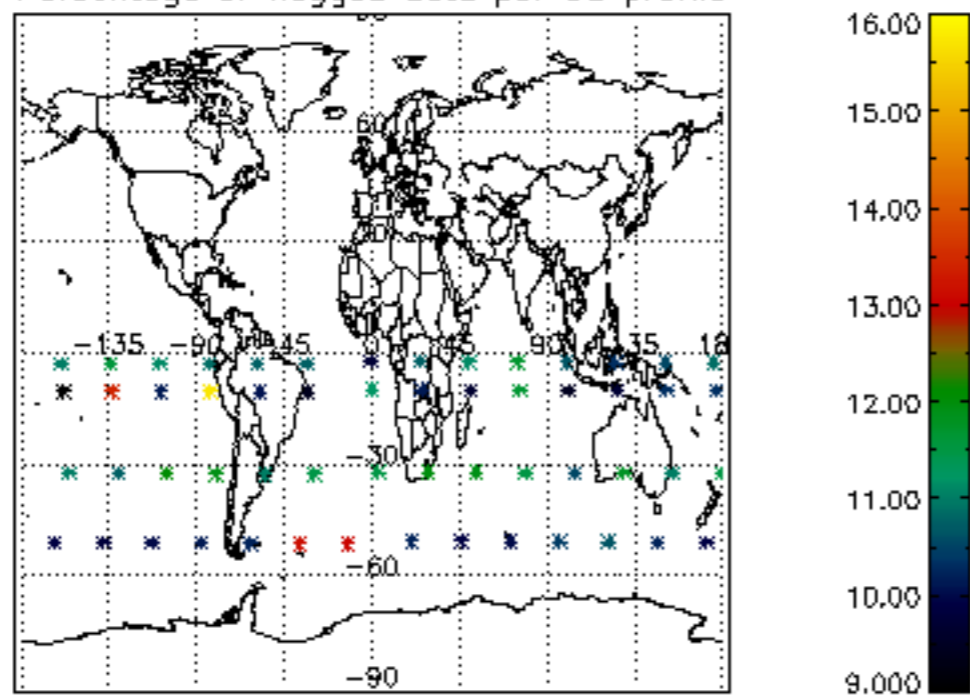




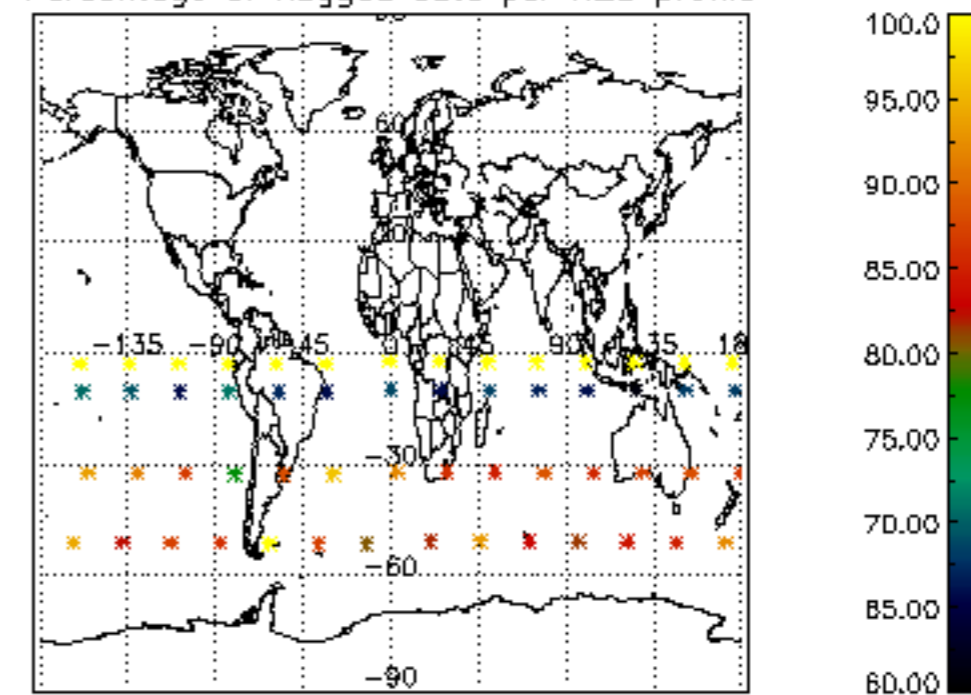




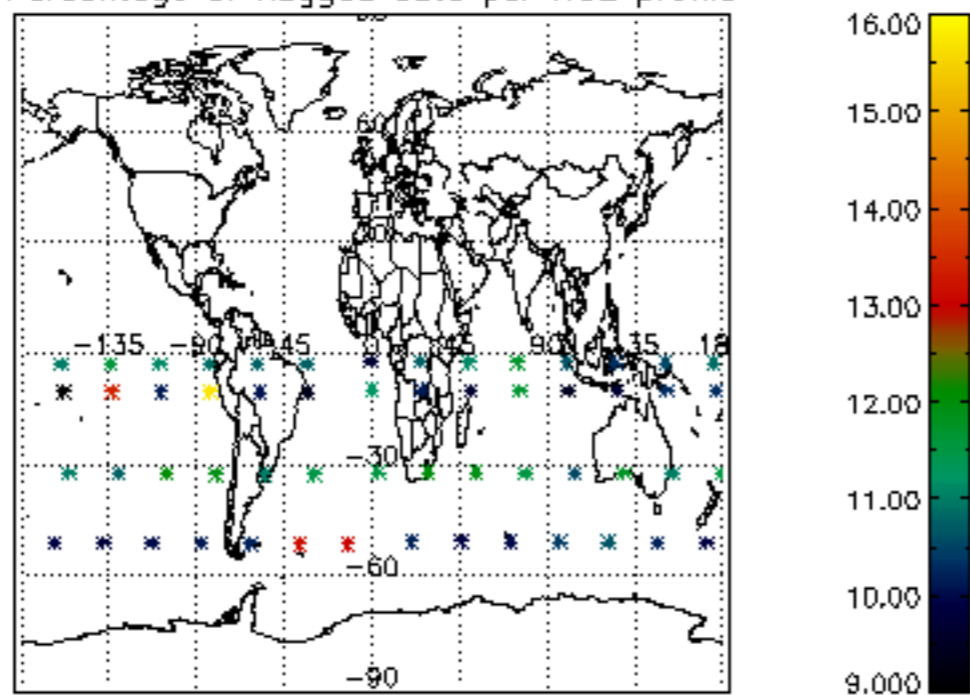
Percentage of flagged data per D3 profile



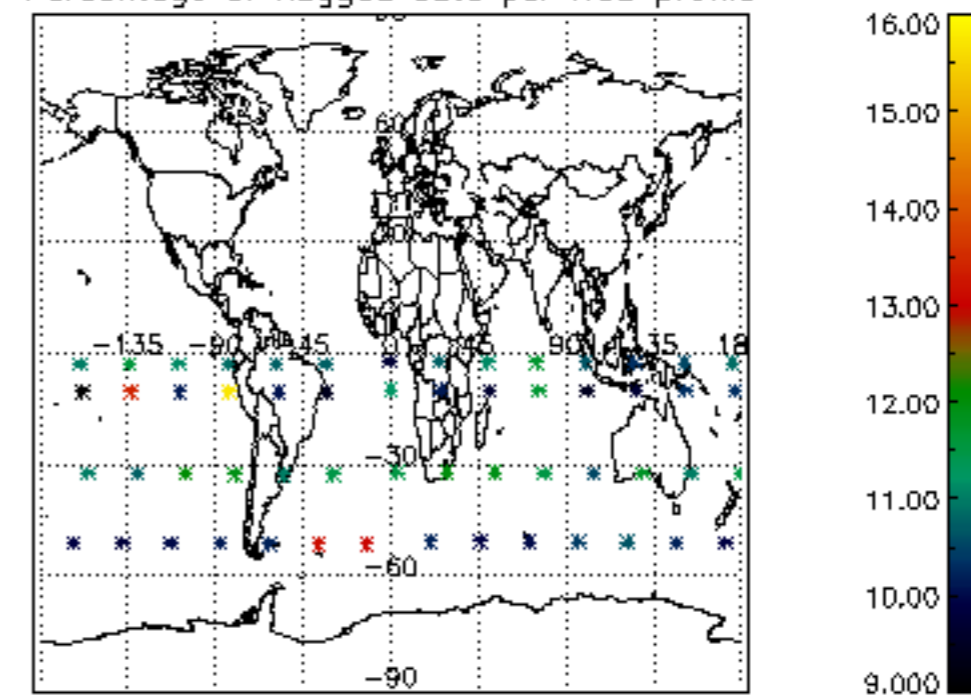
Percentage of flagged data per H2O profile

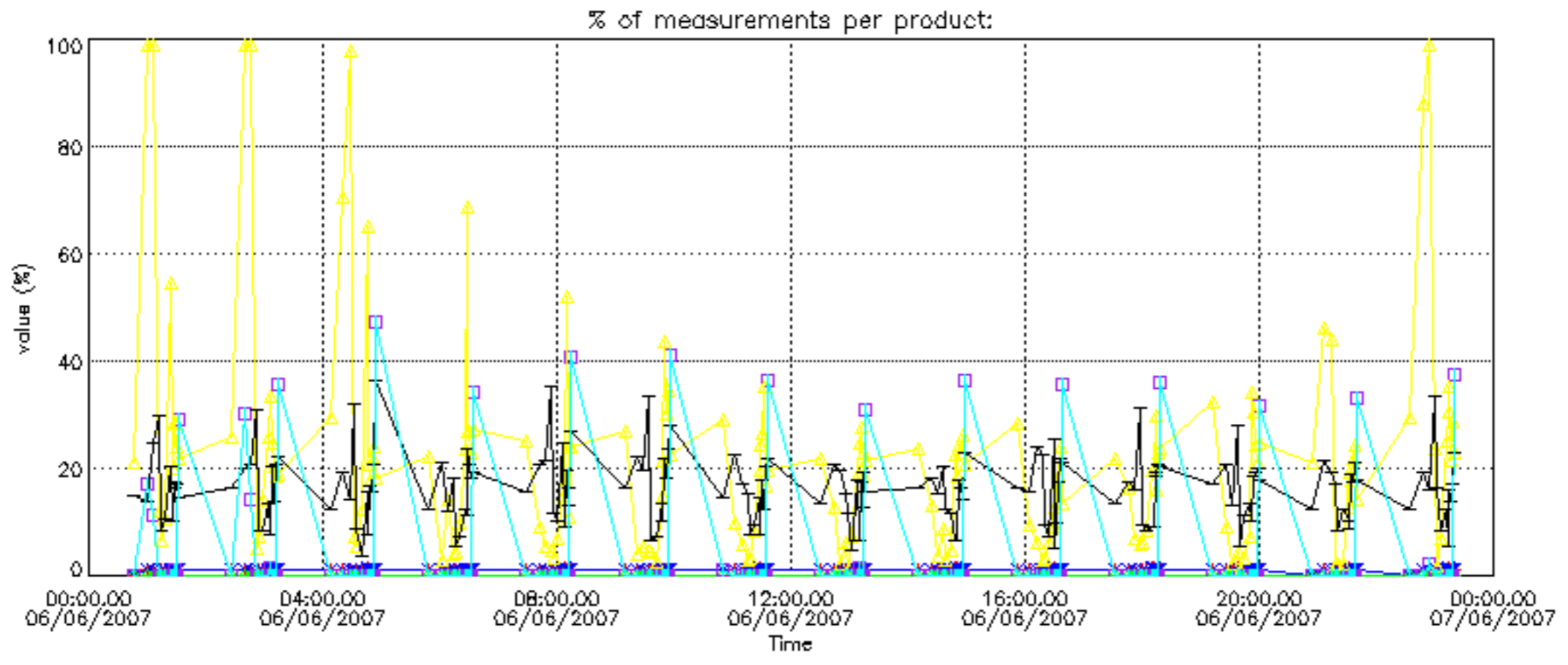


Percentage of flagged data per NO2 profile

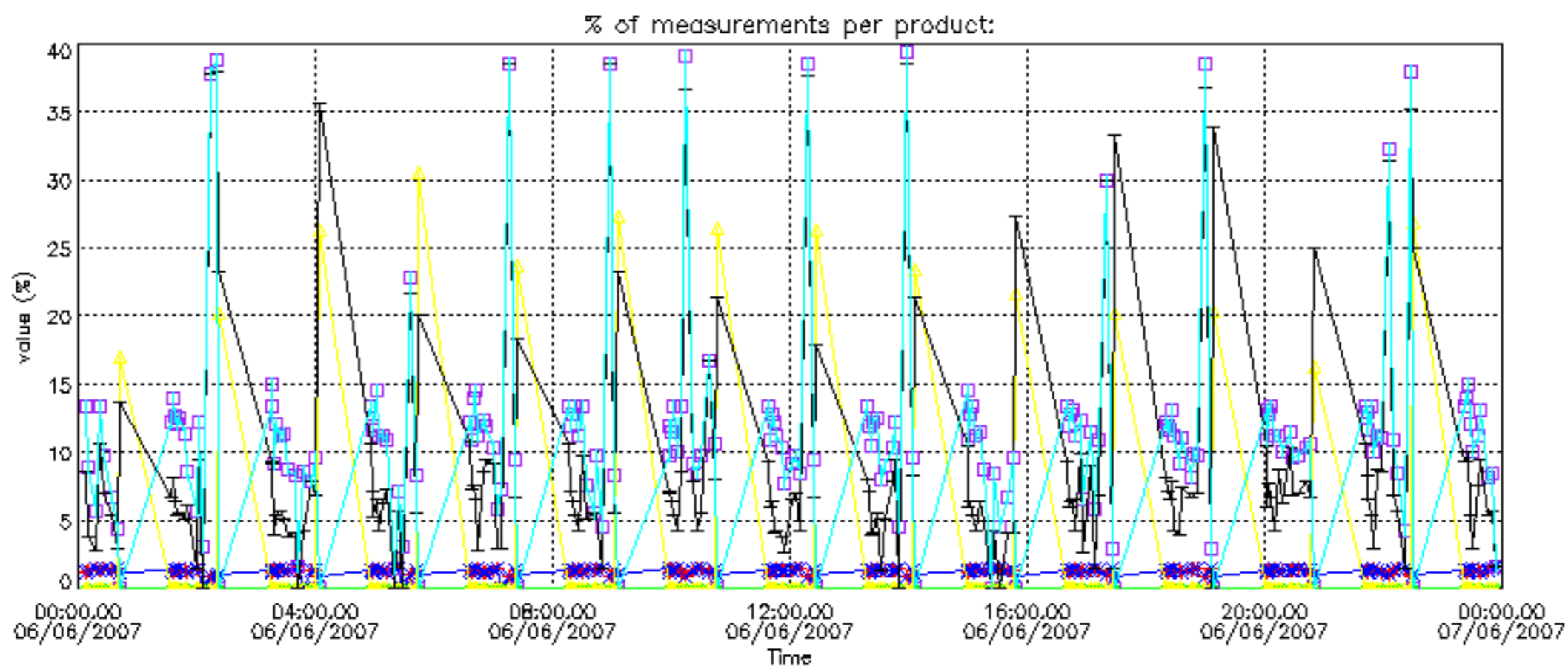


Percentage of flagged data per NO3 profile

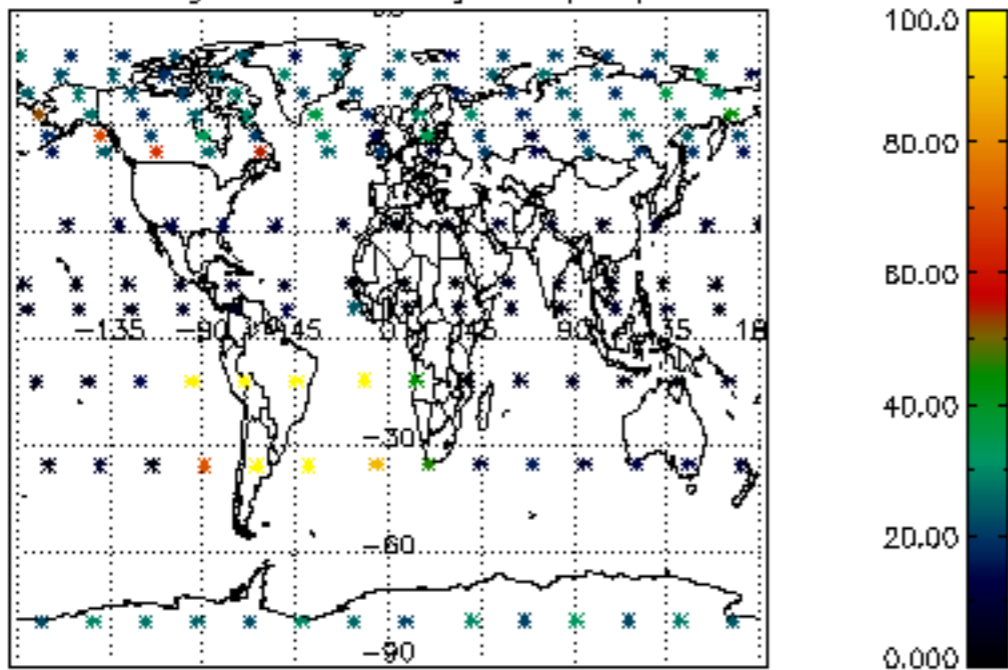




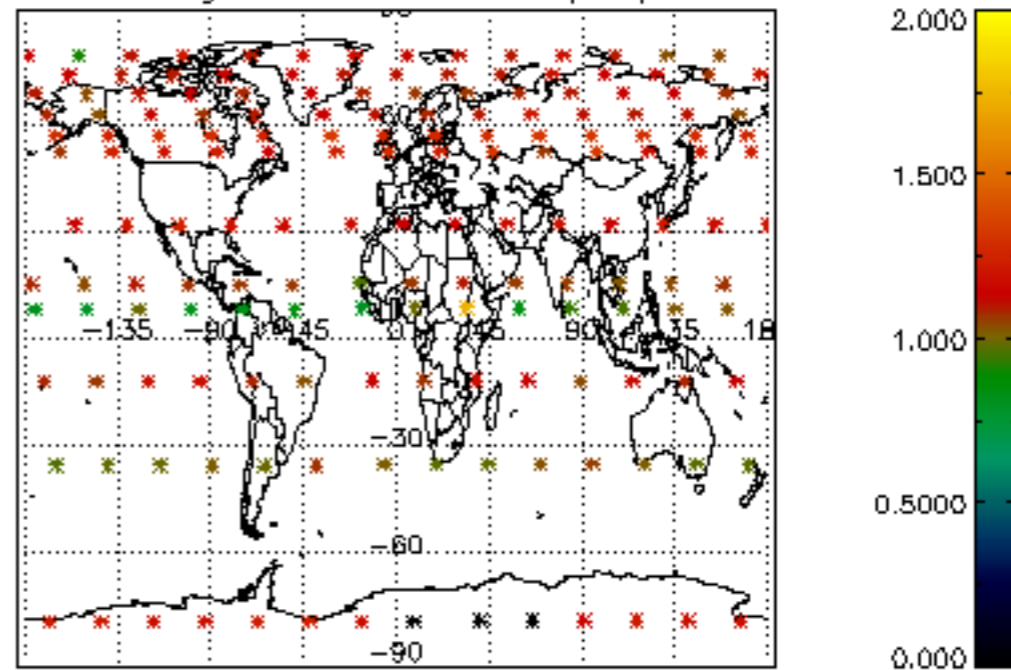




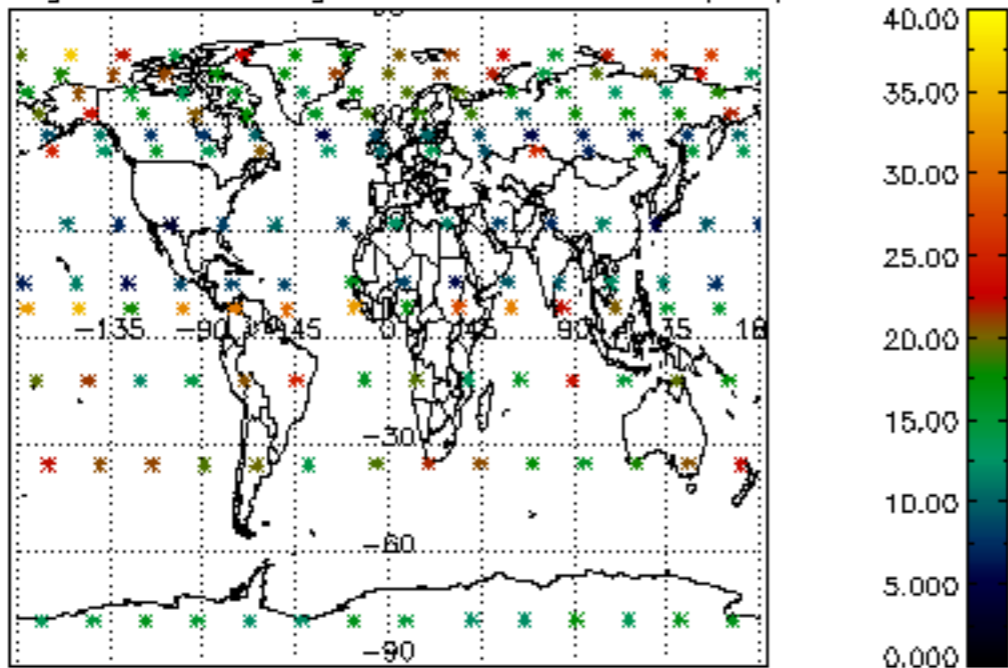
Percentage of cosmic ray hits per profile



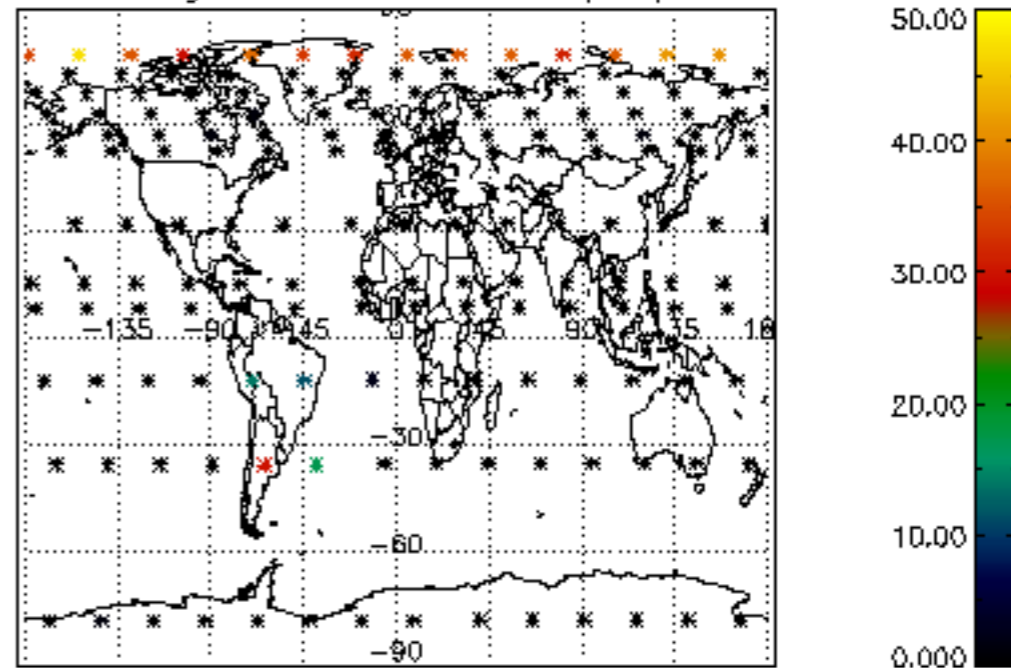
Percentage of datation errors per profile



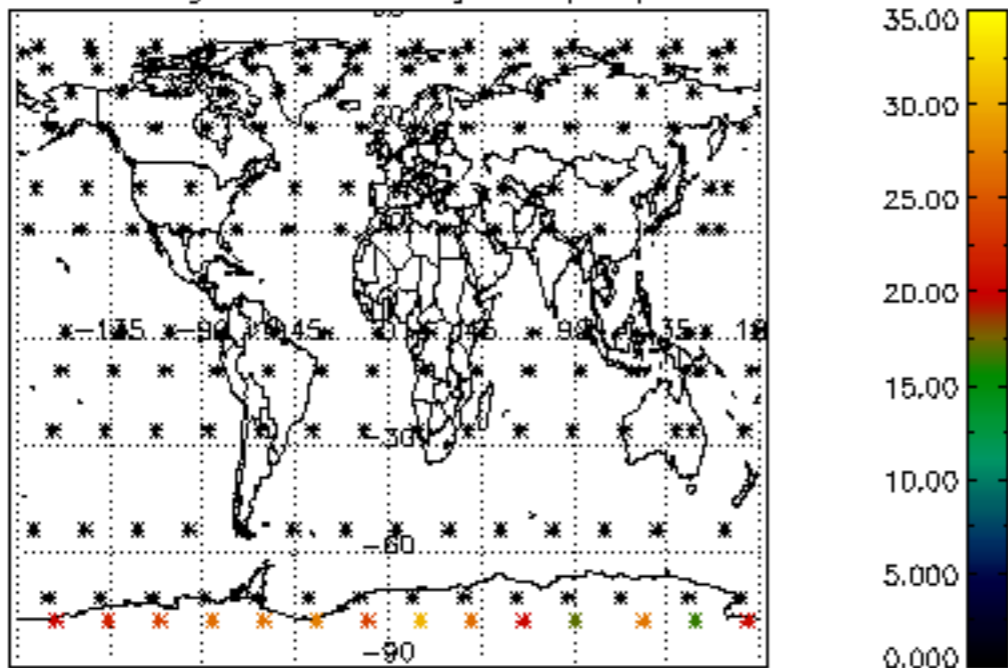
Percentage of star falling outside central band per profile



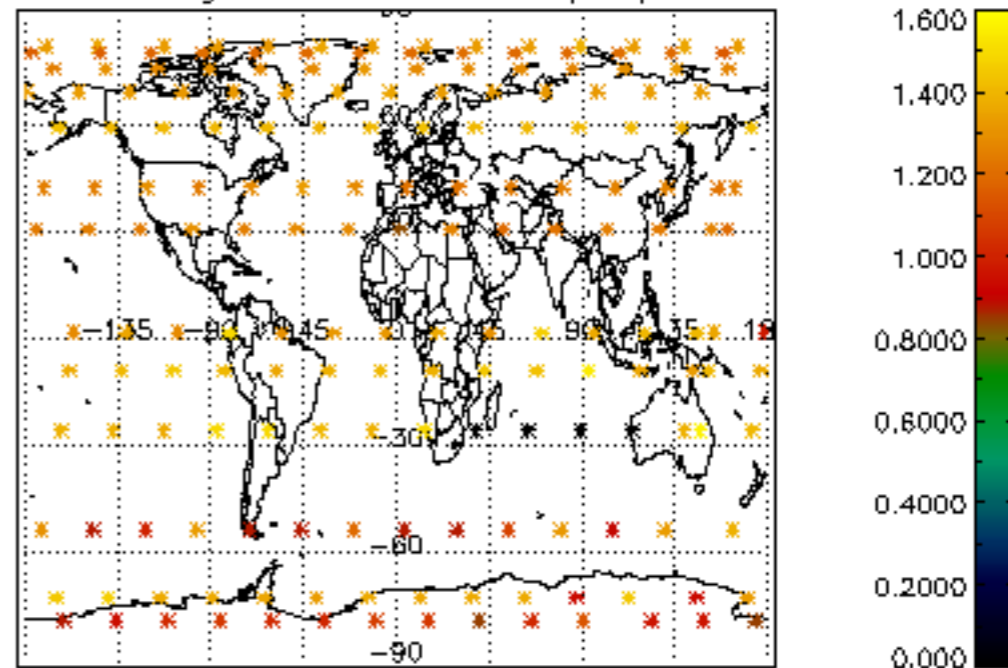
Percentage of saturation errors per profile



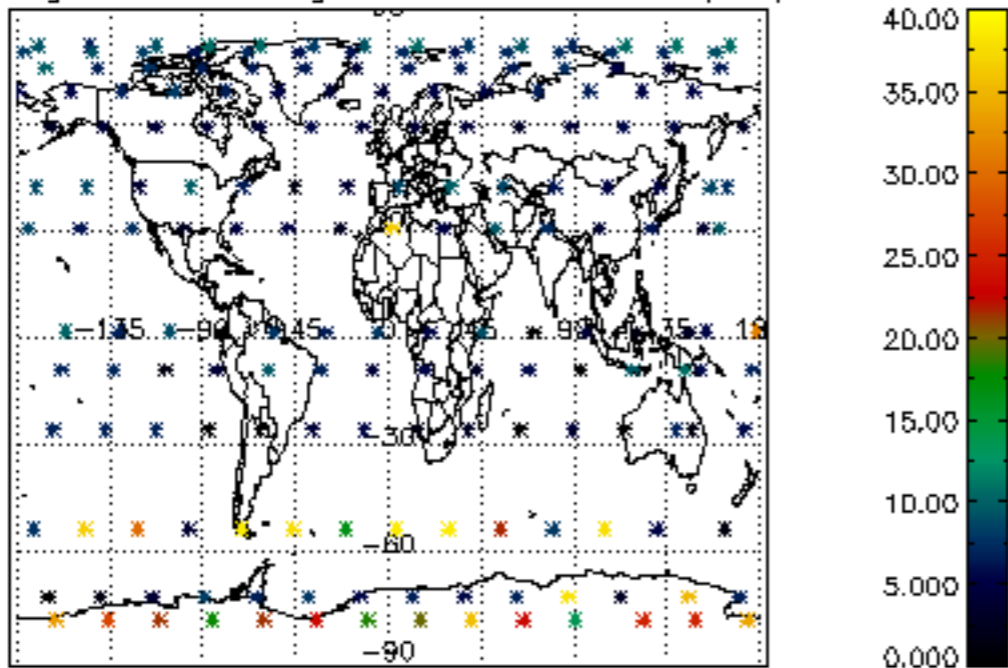
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

