

# 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	18APR2013 11:15:47
Data source version	GOMOS/6.01
Start time of products	28-09-2005 (28SEP2005 00:00:00)
Stop time of products	29-09-2005 (29SEP2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	249
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__2PRFIN20050928_000452_000000352041_00116_18707_7147.N1	28-SEP-2005 00:04:52	Bright	35.000	166	17Eps Leo	2.9800	6000.0	70	18707	No
2	GOM_NL__2PRFIN20050928_001418_000000462041_00116_18707_7148.N1	28-SEP-2005 00:14:18	Twilight	45.500	48	30Alp Hya	1.9770	4100.0	91	18707	No
3	GOM_NL__2PRFIN20050928_002359_000000432041_00116_18707_7149.N1	28-SEP-2005 00:23:59	Dark	43.000	65	Lam Vel	2.2040	4400.0	86	18707	No
4	GOM_NL__2PRFIN20050928_002717_000000392041_00116_18707_7150.N1	28-SEP-2005 00:27:17	Dark	38.500	46	Del Vel	1.9540	10600.	77	18707	No
5	GOM_NL__2PRFIN20050928_002852_000000422041_00116_18707_7151.N1	28-SEP-2005 00:28:52	Dark	41.500	41	Eps Car	1.8600	4100.0	83	18707	No
6	GOM_NL__2PRFIN20050928_004104_000000382041_00117_18708_7134.N1	28-SEP-2005 00:41:04	Dark	38.000	143	Alp Hyi	2.8570	7200.0	76	18708	No
7	GOM_NL__2PRFIN20050928_004231_000000492041_00117_18708_7135.N1	28-SEP-2005 00:42:31	Dark	48.500	9	Alp Eri	0.45300	24000.	97	18708	No
8	GOM_NL__2PRFIN20050928_004757_000000422041_00117_18708_7136.N1	28-SEP-2005 00:47:57	Straylight	41.500	84	Alp Phe	2.3970	4500.0	83	18708	No
9	GOM_NL__2PRFIN20050928_005242_000000442041_00117_18708_7137.N1	28-SEP-2005 00:52:42	Straylight	43.500	18	24Alp PsA	1.1660	9700.0	87	18708	No
10	GOM_NL__2PRFIN20050928_010122_000000372041_00117_18708_7138.N1	28-SEP-2005 01:01:22	Bright	37.000	162	34Alp Aqr	2.9440	5350.0	74	18708	No
11	GOM_NL__2PRFIN20050928_010515_000000372041_00117_18708_7139.N1	28-SEP-2005 01:05:15	Bright	37.000	90	54Alp Peg	2.4870	11000.	74	18708	No
12	GOM_NL__2PRFIN20050928_010855_000000402041_00117_18708_7140.N1	28-SEP-2005 01:08:55	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	18708	No
13	GOM_NL__2PRFIN20050928_011901_000000362041_00117_18708_7141.N1	28-SEP-2005 01:19:01	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18708	No
14	GOM_NL__2PRFIN20050928_012617_000000372041_00117_18708_7142.N1	28-SEP-2005 01:26:17	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	18708	No
15	GOM_NL__2PRFIN20050928_012808_000000362041_00117_18708_7143.N1	28-SEP-2005 01:28:08	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18708	No
16	GOM_NL__2PRFIN20050928_013409_000000362041_00117_18708_7144.N1	28-SEP-2005 01:34:09	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18708	No
17	GOM_NL__2PRFIN20050928_013538_000000352041_00117_18708_7145.N1	28-SEP-2005 01:35:38	Bright	35.000	82	48Bet UMa	2.3650	10600.	70	18708	No
18	GOM_NL__2PRFIN20050928_013850_000000332041_00117_18708_7146.N1	28-SEP-2005 01:38:50	Bright	33.000	174	52Psi UMa	3.0040	4400.0	66	18708	No
19	GOM_NL__2PRFIN20050928_014528_000000342041_00117_18708_7147.N1	28-SEP-2005 01:45:28	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	18708	No
20	GOM_NL__2PRFIN20050928_015454_000000452041_00117_18708_7148.N1	28-SEP-2005 01:54:54	Twilight	45.000	48	30Alp Hya	1.9770	4100.0	90	18708	No
21	GOM_NL__2PRFIN20050928_020435_000000392041_00117_18708_7149.N1	28-SEP-2005 02:04:35	Dark	39.000	65	Lam Vel	2.2040	4400.0	78	18708	No
22	GOM_NL__2PRFIN20050928_020753_000000382041_00117_18708_7150.N1	28-SEP-2005 02:07:53	Dark	38.000	46	Del Vel	1.9540	10600.	76	18708	No
23	GOM_NL__2PRFIN20050928_020929_000000392041_00117_18708_7151.N1	28-SEP-2005 02:09:29	Dark	39.000	41	Eps Car	1.8600	4100.0	78	18708	No
24	GOM_NL__2PRFIN20050928_022140_000000402041_00118_18709_7134.N1	28-SEP-2005 02:21:40	Dark	40.000	143	Alp Hyi	2.8570	7200.0	80	18709	No
25	GOM_NL__2PRFIN20050928_022308_000000452041_00118_18709_7135.N1	28-SEP-2005 02:23:08	Dark	44.500	9	Alp Eri	0.45300	24000.	89	18709	No
26	GOM_NL__2PRFIN20050928_022834_000000452041_00118_18709_7136.N1	28-SEP-2005 02:28:34	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	18709	No
27	GOM_NL__2PRFIN20050928_023318_000000422041_00118_18709_7137.N1	28-SEP-2005 02:33:18	Straylight	42.000	18	24Alp PsA	1.1660	9700.0	84	18709	No
28	GOM_NL__2PRFIN20050928_024159_000000382041_00118_18709_7138.N1	28-SEP-2005 02:41:59	Bright	37.500	162	34Alp Aqr	2.9440	5350.0	75	18709	No
29	GOM_NL__2PRFIN20050928_024551_000000372041_00118_18709_7139.N1	28-SEP-2005 02:45:51	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	18709	No
30	GOM_NL__2PRFIN20050928_024931_000000362041_00118_18709_7140.N1	28-SEP-2005 02:49:31	Bright	36.000	93	53Bet Peg	2.5200	3100.0	72	18709	No
31	GOM_NL__2PRFIN20050928_025936_000000352041_00118_18709_7141.N1	28-SEP-2005 02:59:36	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	18709	No
32	GOM_NL__2PRFIN20050928_030653_000000372041_00118_18709_7142.N1	28-SEP-2005 03:06:53	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	18709	No
33	GOM_NL__2PRFIN20050928_030844_000000332041_00118_18709_7143.N1	28-SEP-2005 03:08:44	Bright	32.500	60	7Bet UMi	2.0810	3950.0	65	18709	No
34	GOM_NL__2PRFIN20050928_031445_000000362041_00118_18709_7144.N1	28-SEP-2005 03:14:45	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18709	No
35	GOM_NL__2PRFIN20050928_031614_000000352041_00118_18709_7145.N1	28-SEP-2005 03:16:14	Bright	34.500	82	48Bet UMa	2.3650	10600.	69	18709	No
36	GOM_NL__2PRFIN20050928_031926_000000342041_00118_18709_7146.N1	28-SEP-2005 03:19:26	Bright	34.000	174	52Psi UMa	3.0040	4400.0	68	18709	No
37	GOM_NL__2PRFIN20050928_032604_000000352041_00118_18709_7147.N1	28-SEP-2005 03:26:04	Bright	34.500	166	17Eps Leo	2.9800	6000.0	69	18709	No
38	GOM_NL__2PRFIN20050928_033531_000000512041_00118_18709_7148.N1	28-SEP-2005 03:35:31	Twilight	50.500	48	30Alp Hya	1.9770	4100.0	101	18709	No
39	GOM_NL__2PRFIN20050928_034512_000000462041_00118_18709_7149.N1	28-SEP-2005 03:45:12	Dark	46.000	65	Lam Vel	2.2040	4400.0	92	18709	No
40	GOM_NL__2PRFIN20050928_034830_000000412041_00118_18709_7150.N1	28-SEP-2005 03:48:30	Dark	40.500	46	Del Vel	1.9540	10600.	81	18709	No
41	GOM_NL__2PRFIN20050928_035005_000000452041_00118_18709_7151.N1	28-SEP-2005 03:50:05	Dark	45.000	41	Eps Car	1.8600	4100.0	90	18709	No
42	GOM_NL__2PRFIN20050928_040217_000000382041_00119_18710_7134.N1	28-SEP-2005 04:02:17	Dark	37.500	143	Alp Hyi	2.8570	7200.0	75	18710	No





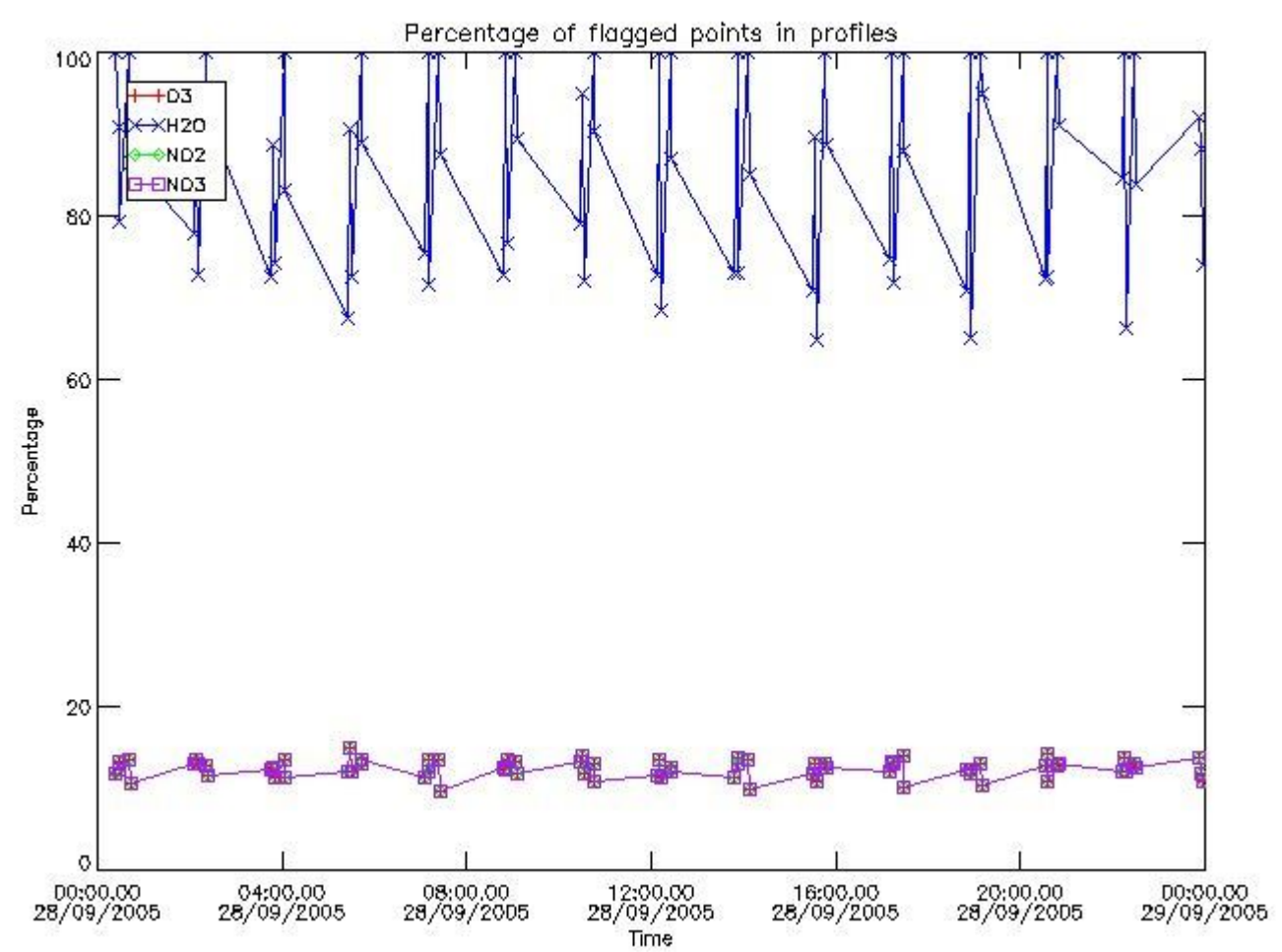


220	GOM_NL__2PRFIN20050928_211226_000000362041_00129_18720_7159.N1	28-SEP-2005 21:12:26	Bright	36.000	90	54Alp Peg	2.4870	11000.	72	18720	No
221	GOM_NL__2PRFIN20050928_211606_000000362041_00129_18720_7160.N1	28-SEP-2005 21:16:06	Bright	35.500	93	53Bet Peg	2.5200	3100.0	71	18720	No
222	GOM_NL__2PRFIN20050928_212614_000000362041_00129_18720_7161.N1	28-SEP-2005 21:26:14	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18720	No
223	GOM_NL__2PRFIN20050928_213329_000000362041_00129_18720_7162.N1	28-SEP-2005 21:33:29	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	18720	No
224	GOM_NL__2PRFIN20050928_213523_000000372041_00129_18720_7163.N1	28-SEP-2005 21:35:23	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	18720	No
225	GOM_NL__2PRFIN20050928_214122_000000342041_00129_18720_7164.N1	28-SEP-2005 21:41:22	Bright	34.000	36	50Alp UMa	1.8000	6300.0	68	18720	No
226	GOM_NL__2PRFIN20050928_214251_000000352041_00129_18720_7165.N1	28-SEP-2005 21:42:51	Bright	34.500	82	48Bet UMa	2.3650	10600.	69	18720	No
227	GOM_NL__2PRFIN20050928_214603_000000352041_00129_18720_7166.N1	28-SEP-2005 21:46:03	Bright	35.000	174	52Psi UMa	3.0040	4400.0	70	18720	No
228	GOM_NL__2PRFIN20050928_215242_000000342041_00129_18720_7167.N1	28-SEP-2005 21:52:42	Bright	34.000	166	17Eps Leo	2.9800	6000.0	68	18720	No
229	GOM_NL__2PRFIN20050928_220210_000000512041_00129_18720_7168.N1	28-SEP-2005 22:02:10	Twilight	51.000	48	30Alp Hya	1.9770	4100.0	102	18720	No
230	GOM_NL__2PRFIN20050928_221151_000000432041_00129_18720_7169.N1	28-SEP-2005 22:11:51	Dark	42.500	65	Lam Vel	2.2040	4400.0	85	18720	No
231	GOM_NL__2PRFIN20050928_221509_000000412041_00129_18720_7170.N1	28-SEP-2005 22:15:09	Dark	41.000	46	Del Vel	1.9540	10600.	82	18720	No
232	GOM_NL__2PRFIN20050928_221644_000000422041_00130_18721_7171.N1	28-SEP-2005 22:16:44	Dark	42.000	41	Eps Car	1.8600	4100.0	84	18721	No
233	GOM_NL__2PRFIN20050928_222856_000000402041_00130_18721_7155.N1	28-SEP-2005 22:28:56	Dark	39.500	143	Alp Hyi	2.8570	7200.0	79	18721	No
234	GOM_NL__2PRFIN20050928_223024_000000412041_00130_18721_7156.N1	28-SEP-2005 22:30:24	Dark	40.500	9	Alp Eri	0.45300	24000.	81	18721	No
235	GOM_NL__2PRFIN20050928_223548_000000442041_00130_18721_7157.N1	28-SEP-2005 22:35:48	Straylight	43.500	84	Alp Phe	2.3970	4500.0	87	18721	No
236	GOM_NL__2PRFIN20050928_224032_000000392041_00130_18721_7158.N1	28-SEP-2005 22:40:32	Straylight	39.000	18	24Alp PsA	1.1660	9700.0	78	18721	No
237	GOM_NL__2PRFIN20050928_225302_000000372041_00130_18721_7159.N1	28-SEP-2005 22:53:02	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	18721	No
238	GOM_NL__2PRFIN20050928_225642_000000382041_00130_18721_7160.N1	28-SEP-2005 22:56:42	Bright	38.000	93	53Bet Peg	2.5200	3100.0	76	18721	No
239	GOM_NL__2PRFIN20050928_230650_000000362041_00130_18721_7161.N1	28-SEP-2005 23:06:50	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18721	No
240	GOM_NL__2PRFIN20050928_231404_000000342041_00130_18721_7162.N1	28-SEP-2005 23:14:04	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	18721	No
241	GOM_NL__2PRFIN20050928_231559_000000372041_00130_18721_7163.N1	28-SEP-2005 23:15:59	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	18721	No
242	GOM_NL__2PRFIN20050928_232158_000000352041_00130_18721_7164.N1	28-SEP-2005 23:21:58	Bright	34.500	36	50Alp UMa	1.8000	6300.0	69	18721	No
243	GOM_NL__2PRFIN20050928_232327_000000342041_00130_18721_7165.N1	28-SEP-2005 23:23:27	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18721	No
244	GOM_NL__2PRFIN20050928_232639_000000472041_00130_18721_7166.N1	28-SEP-2005 23:26:39	Bright	46.500	174	52Psi UMa	3.0040	4400.0	93	18721	No
245	GOM_NL__2PRFIN20050928_233318_000000342041_00130_18721_7167.N1	28-SEP-2005 23:33:18	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	18721	No
246	GOM_NL__2PRFIN20050928_234246_000000442041_00130_18721_7168.N1	28-SEP-2005 23:42:46	Twilight	44.000	48	30Alp Hya	1.9770	4100.0	88	18721	No
247	GOM_NL__2PRFIN20050928_235227_000000452041_00130_18721_7169.N1	28-SEP-2005 23:52:27	Dark	44.500	65	Lam Vel	2.2040	4400.0	89	18721	No
248	GOM_NL__2PRFIN20050928_235545_000000432041_00130_18721_7170.N1	28-SEP-2005 23:55:45	Dark	43.000	46	Del Vel	1.9540	10600.	86	18721	No
249	GOM_NL__2PRFIN20050928_235720_000000472041_00131_18722_7171.N1	28-SEP-2005 23:57:20	Dark	46.500	41	Eps Car	1.8600	4100.0	93	18722	No

### 3. Quality information per product

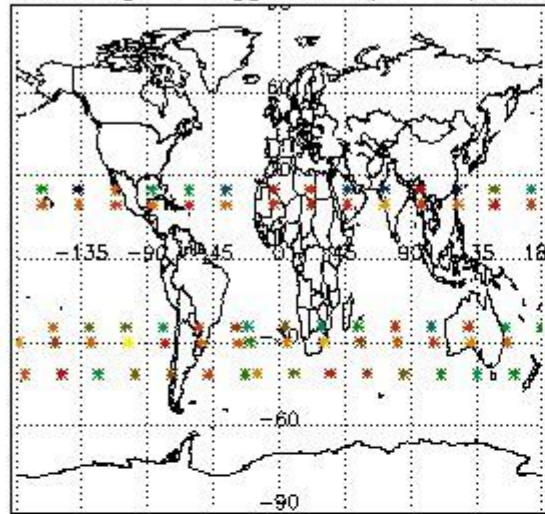
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

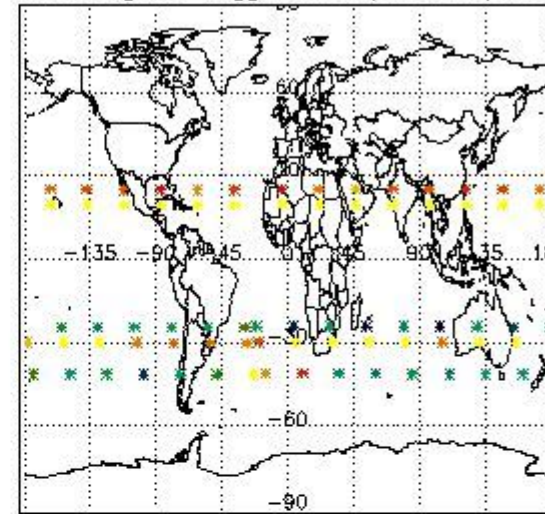


3.2 Plot quality information per product (world map)

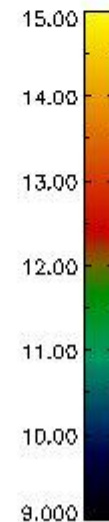
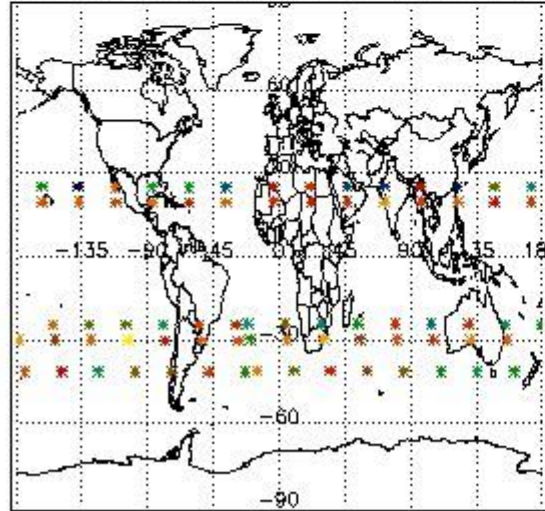
Percentage of flagged data per O3 profile



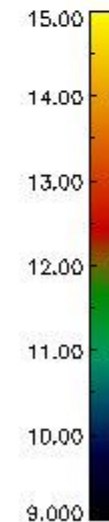
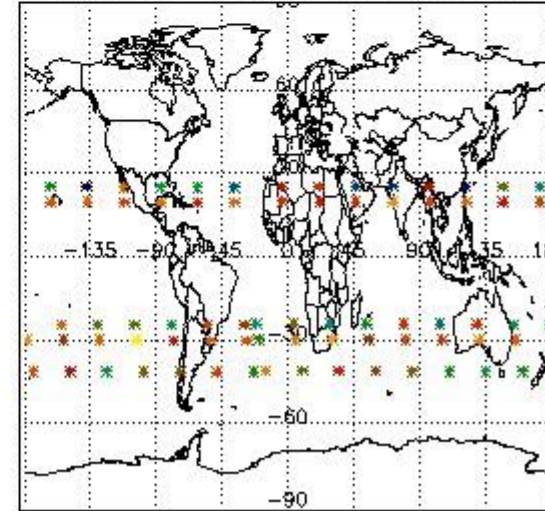
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



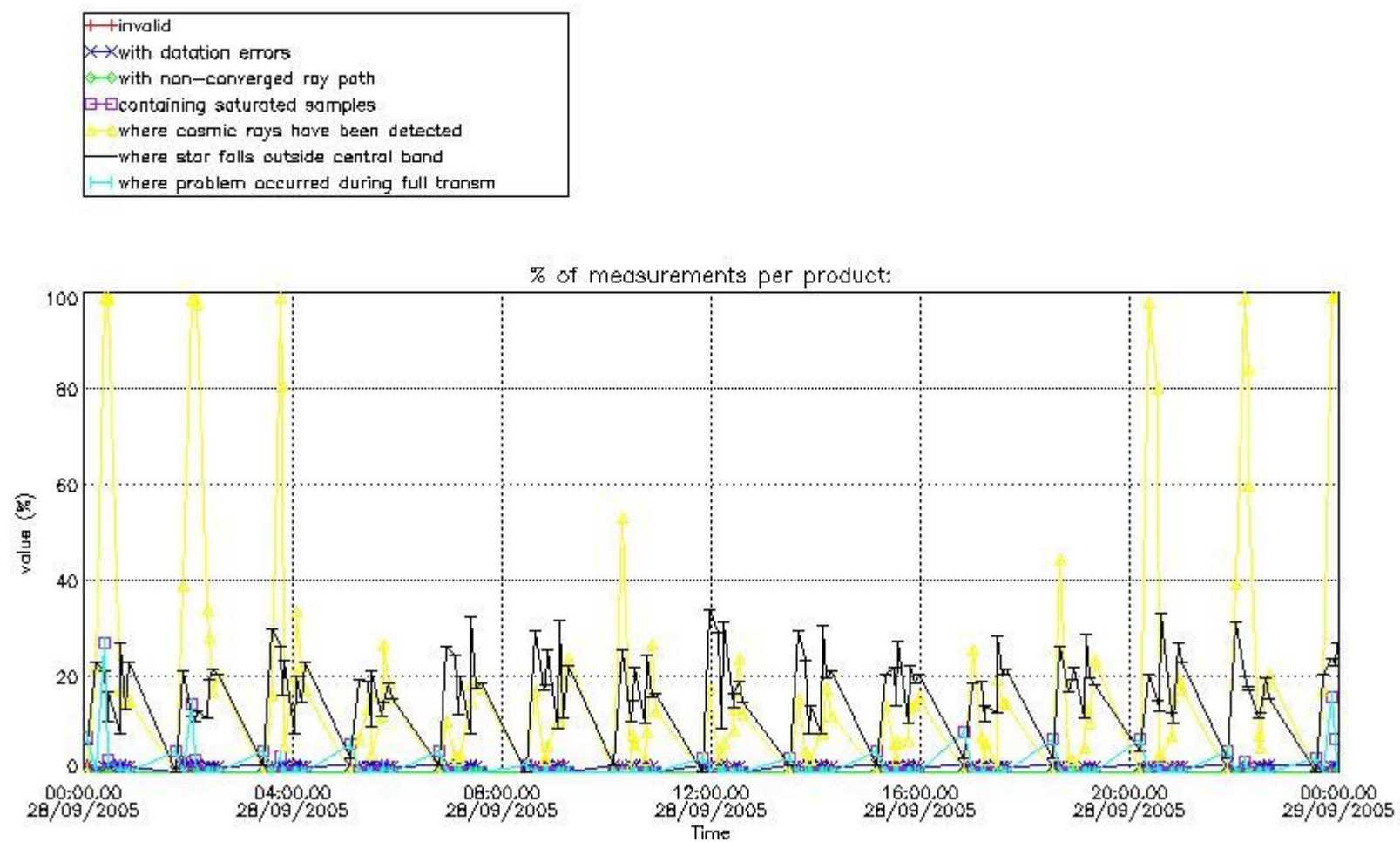
#### 4. Level 1 quality information per product

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

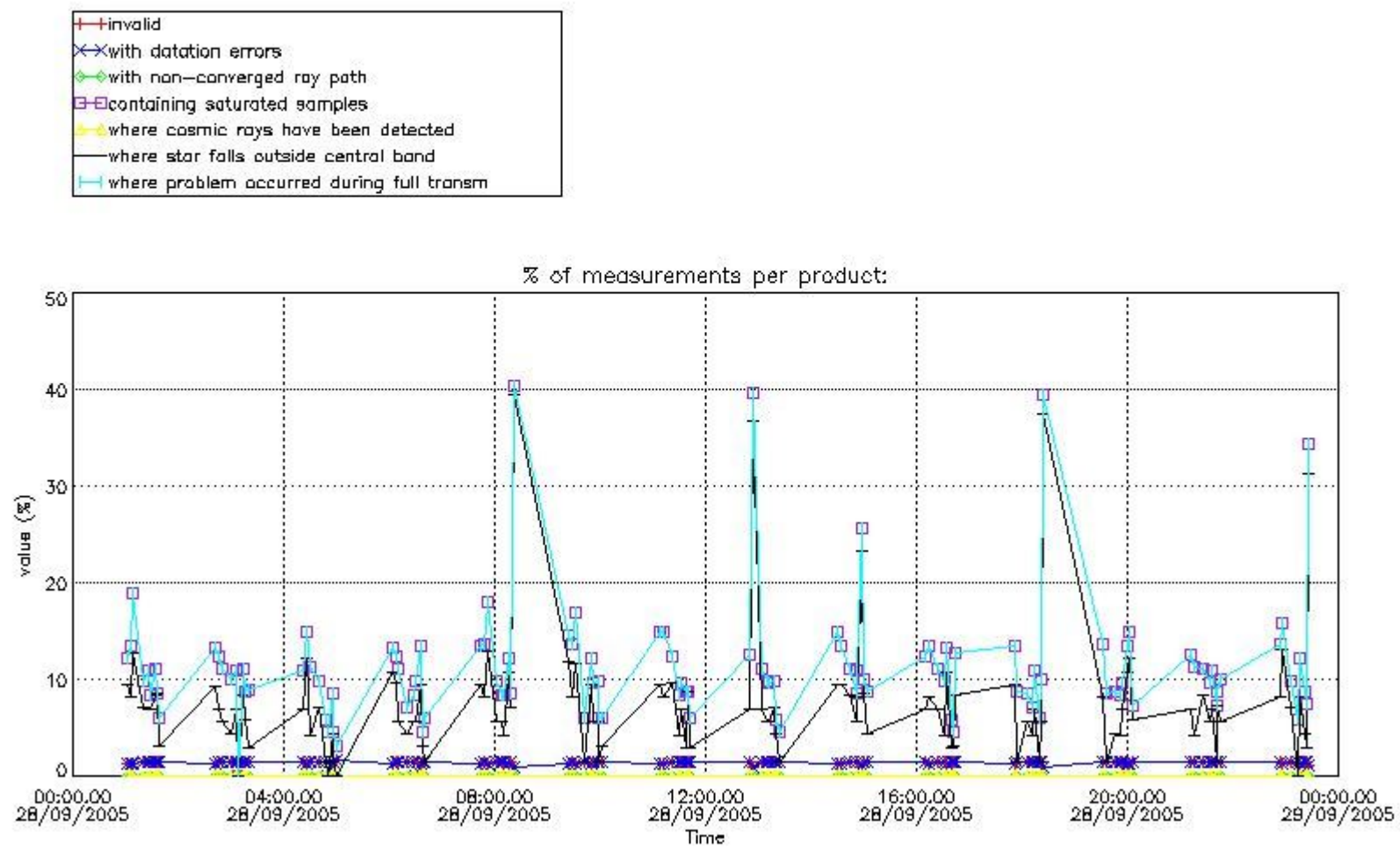
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



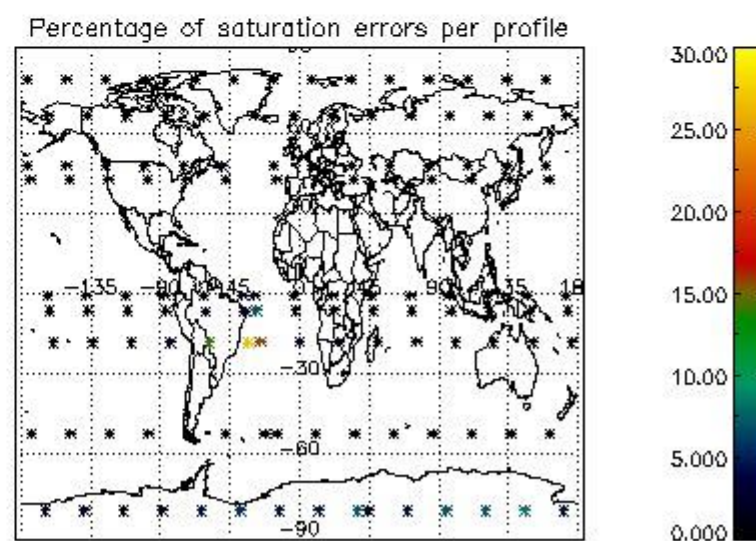
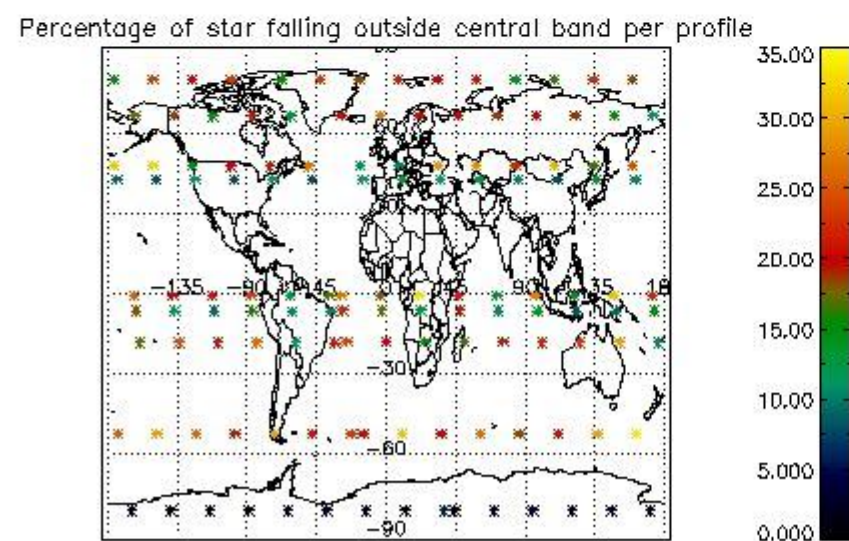
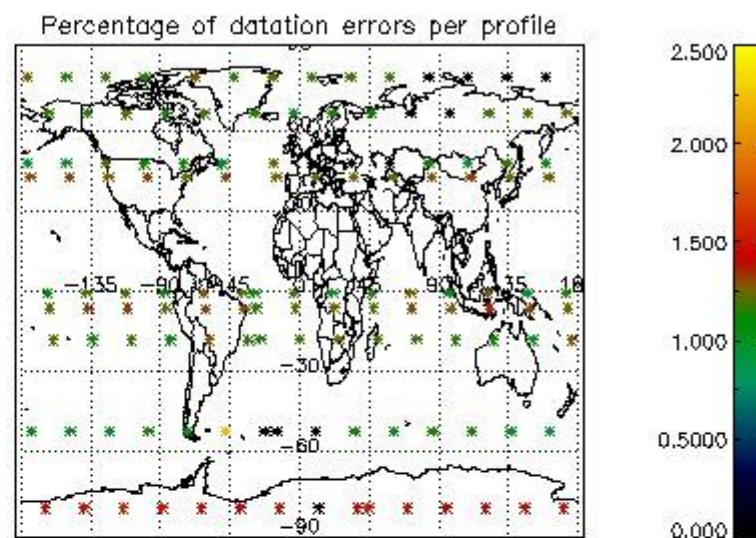
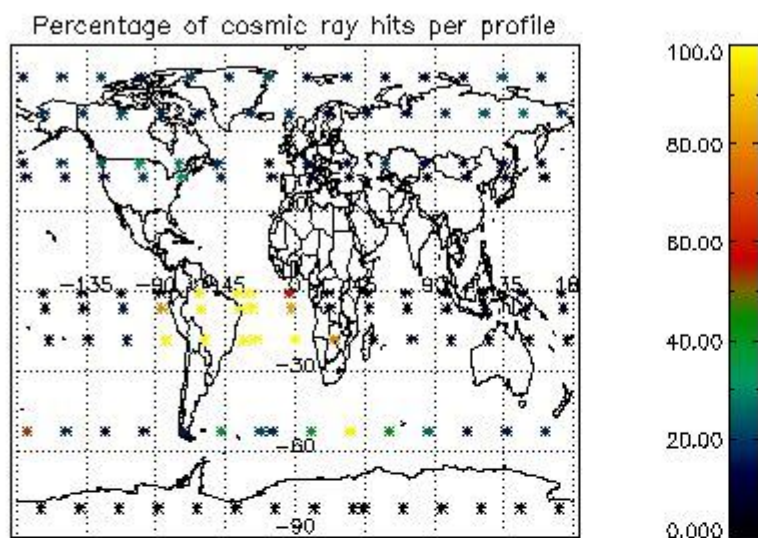


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

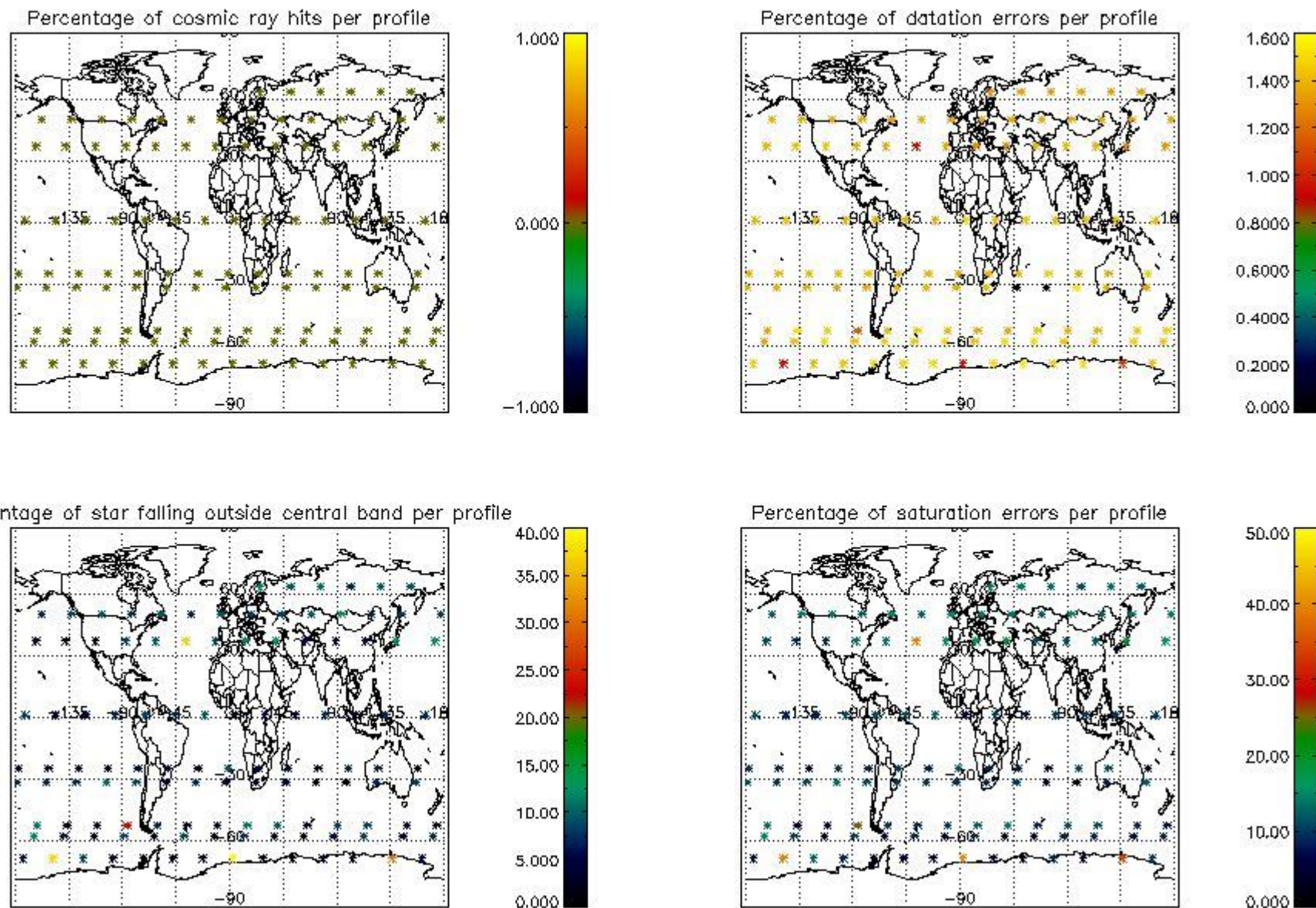


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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

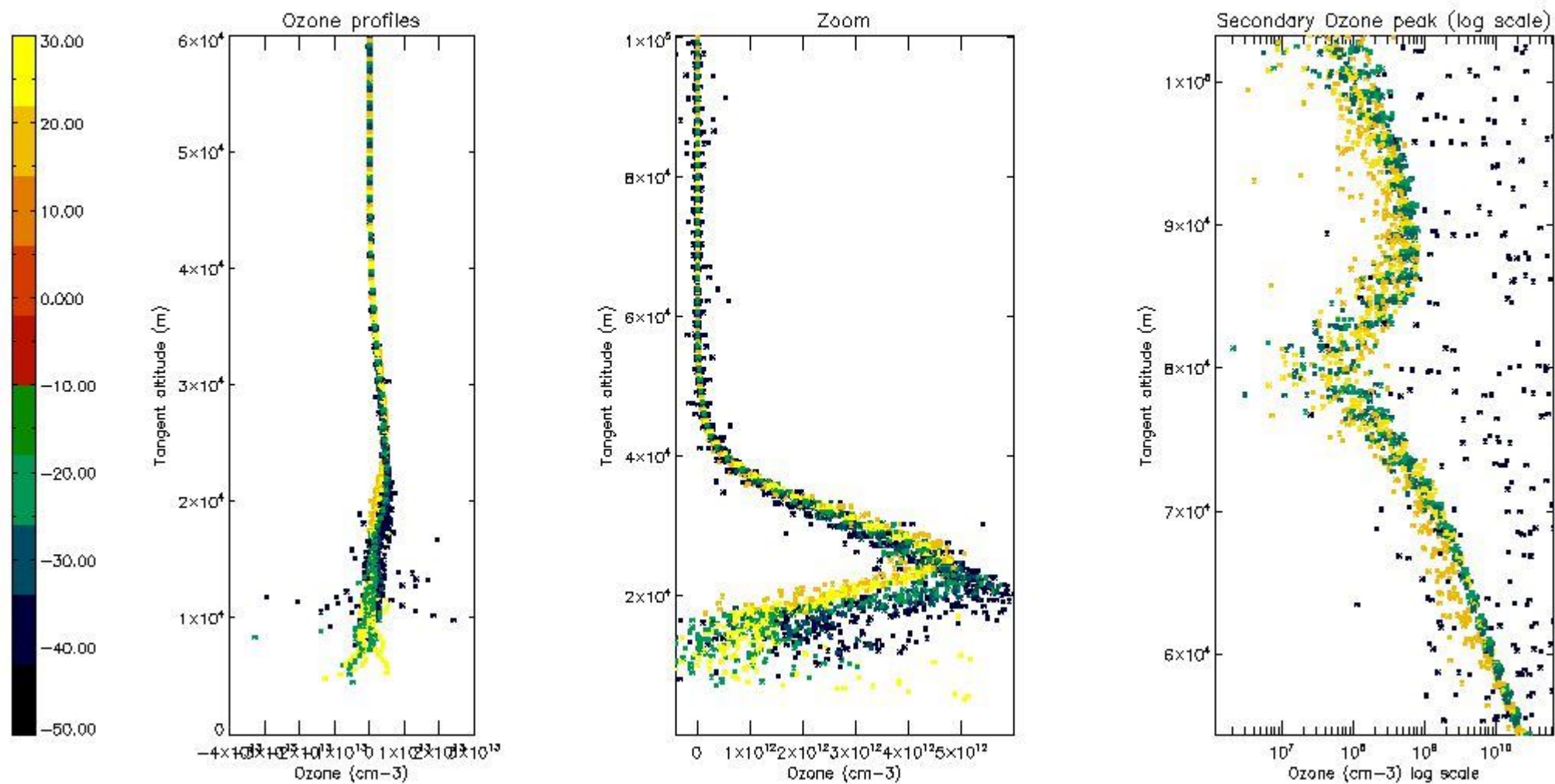
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	33
STD < 20	17

STD < 10	14
STD < 5	6

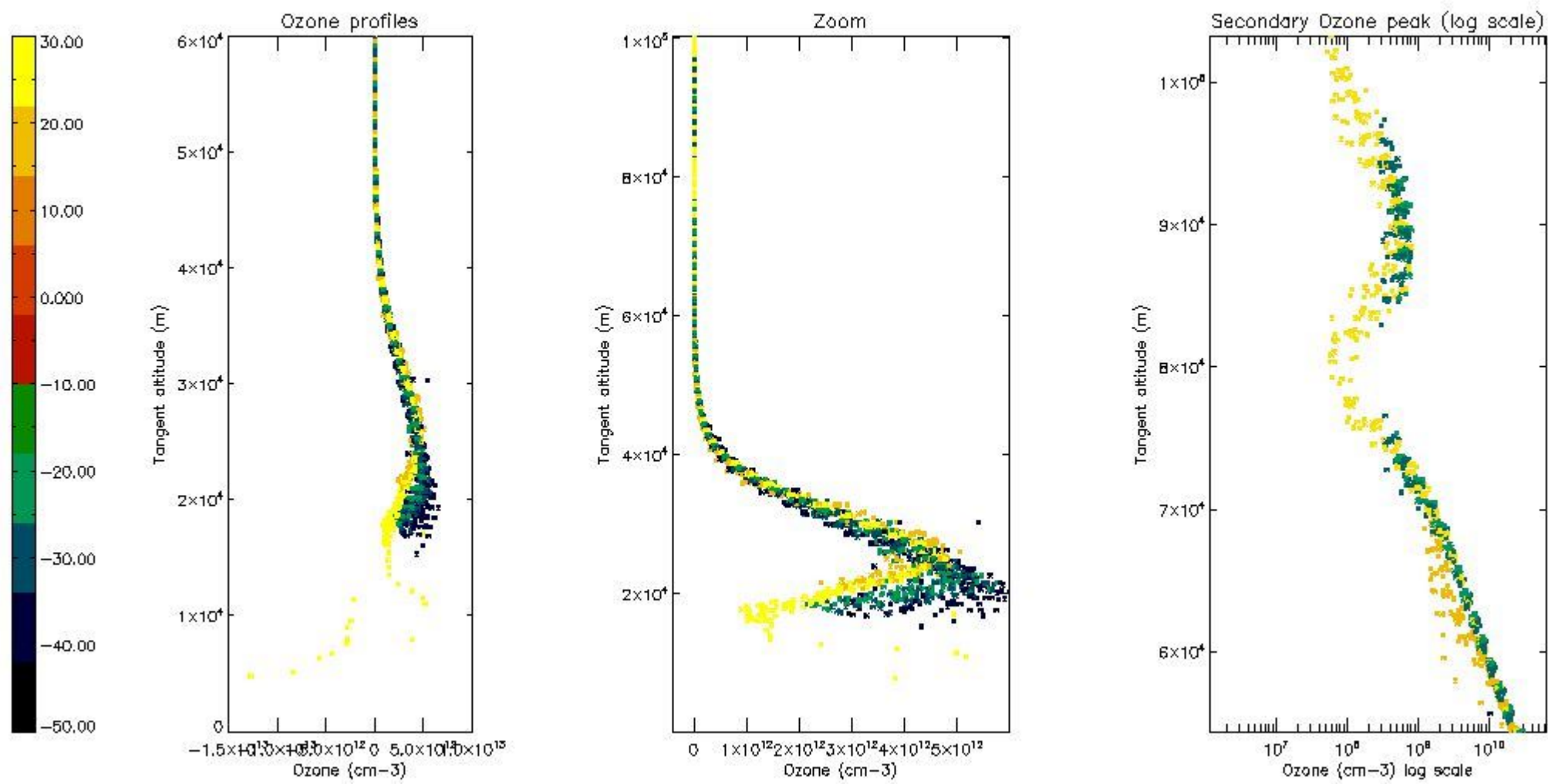
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



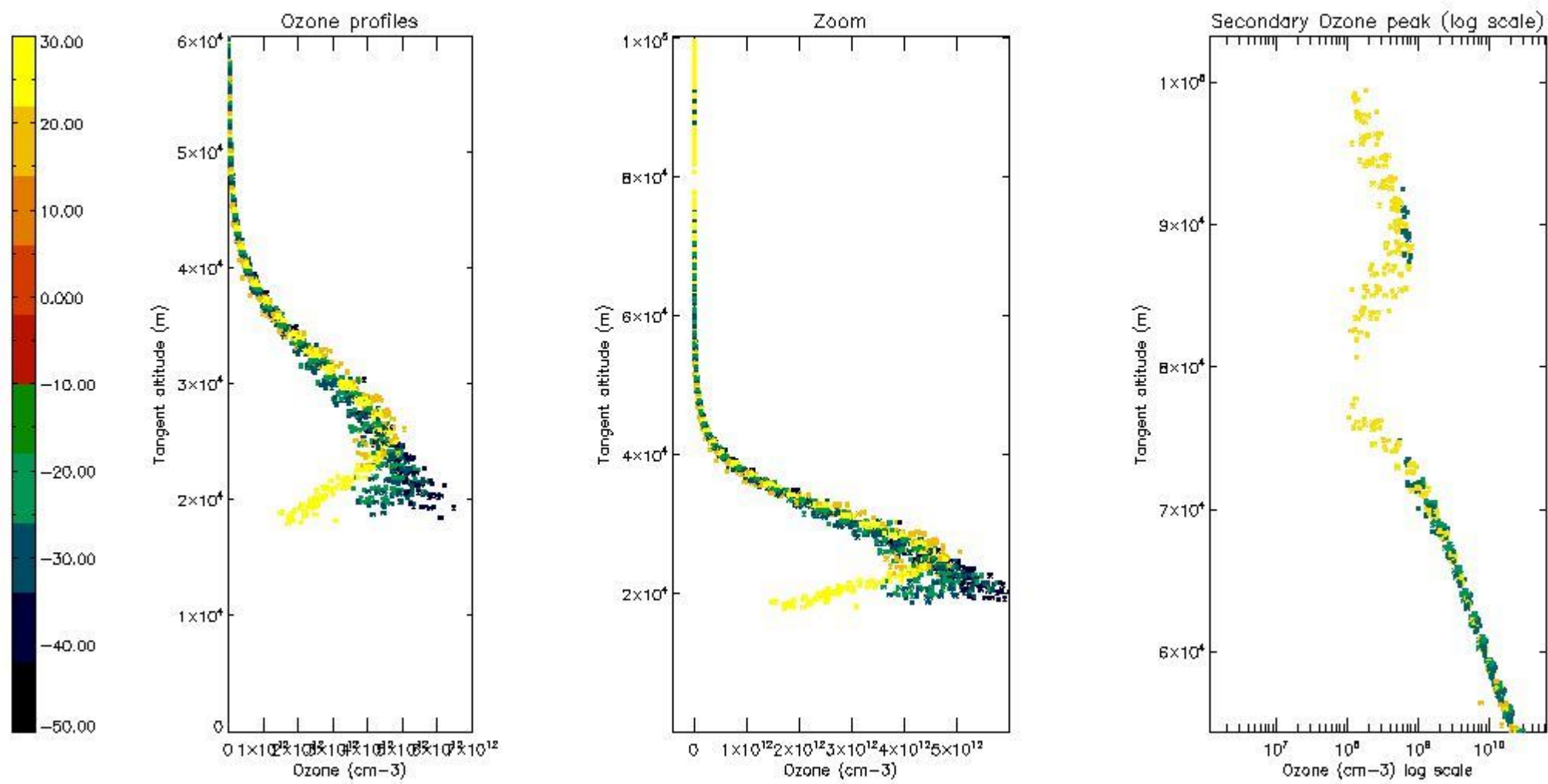
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



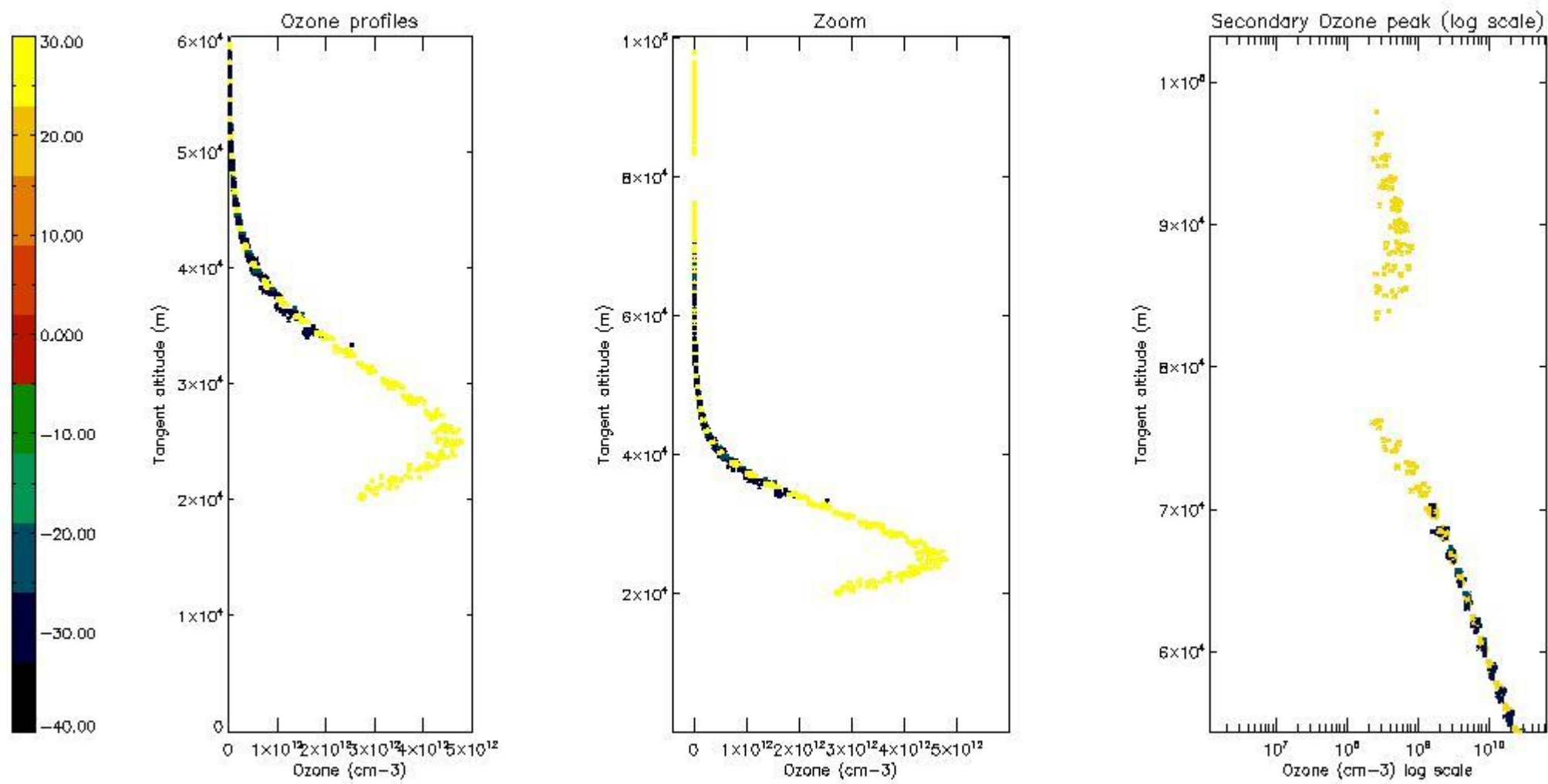
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

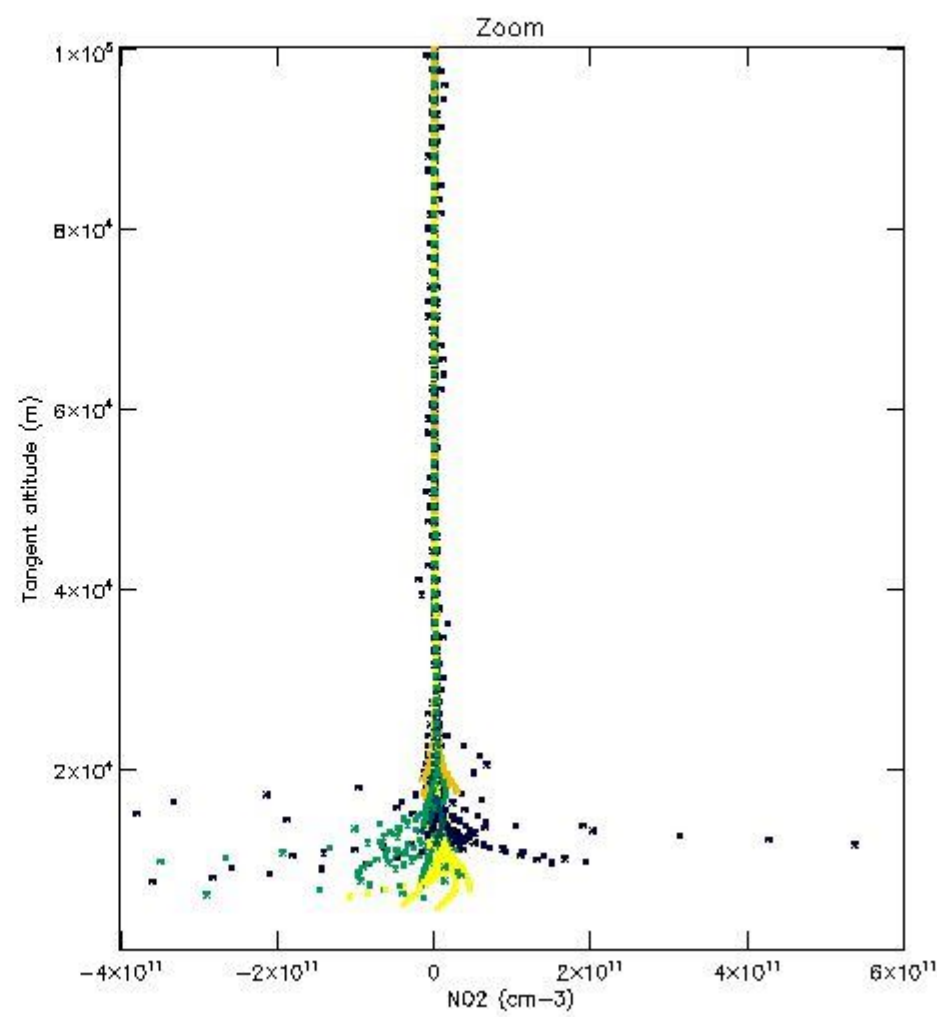
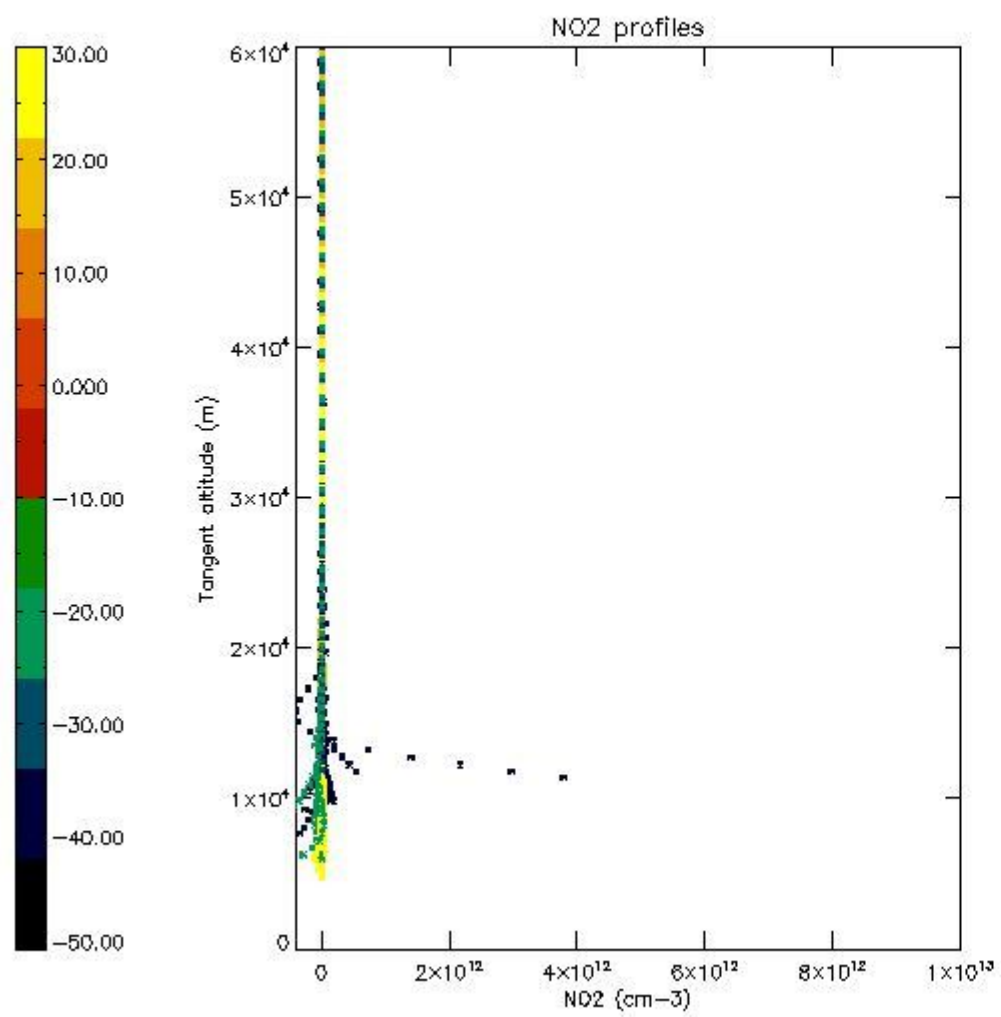
The colorbar represents the latitude.



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

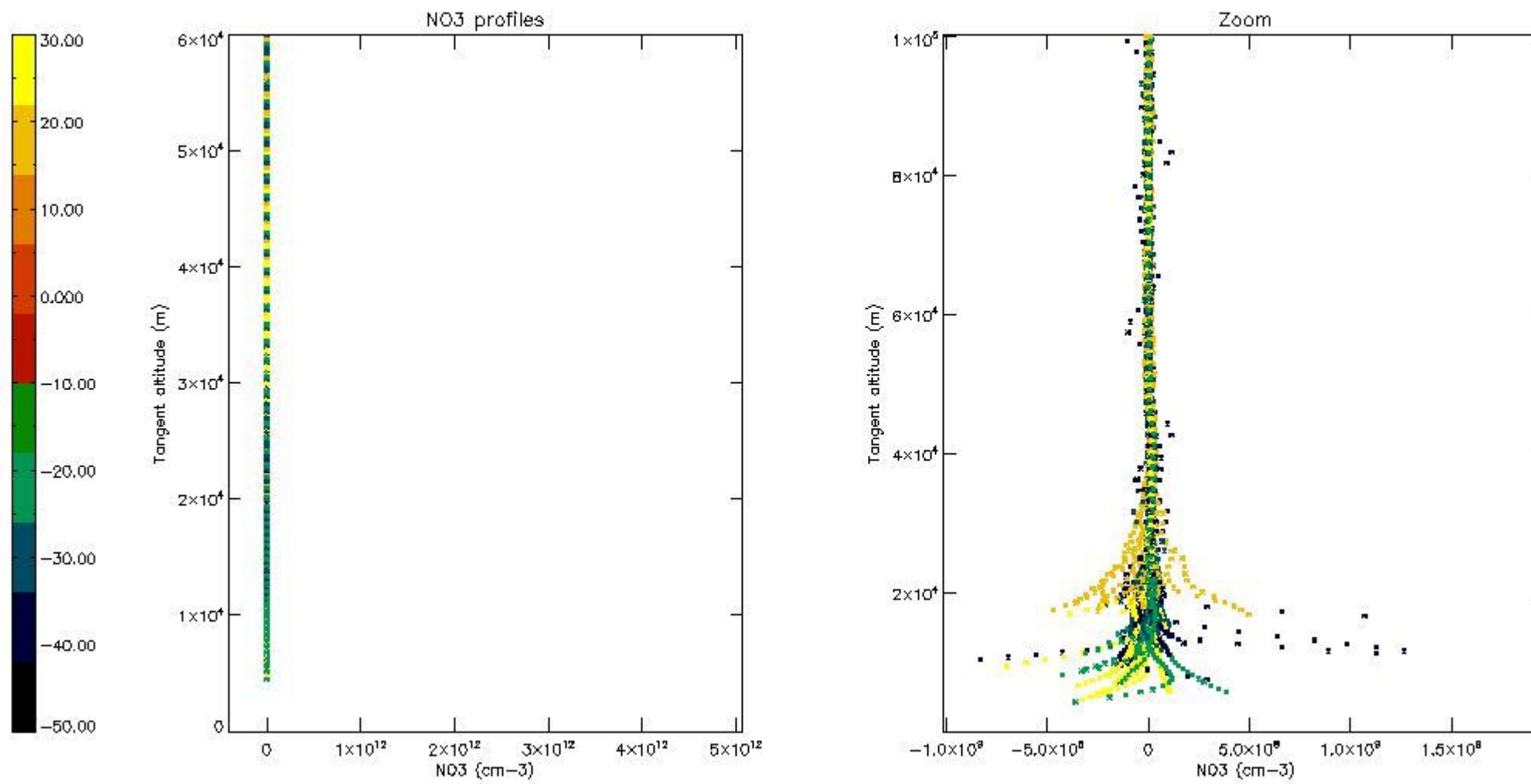
The colorbar represents the latitude.





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

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	28-SEP-2005 00:04:52
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-SEP-2005 00:04:52
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-SEP-2005 00:04:52

# GOMOS Level 2 Daily Report

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

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#### [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	18APR2013 11:15:47
Data source version	GOMOS/6.01
Start time of products	28-09-2005 (28SEP2005 00:00:00)
Stop time of products	29-09-2005 (29SEP2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	249
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__2PRFIN20050928_000452_000000352041_00116_18707_7147.N1	28-SEP-2005 00:04:52	Bright	35.000	166	17Eps Leo	2.9800	6000.0	70	18707	No
2	GOM_NL__2PRFIN20050928_001418_000000462041_00116_18707_7148.N1	28-SEP-2005 00:14:18	Twilight	45.500	48	30Alp Hya	1.9770	4100.0	91	18707	No
3	GOM_NL__2PRFIN20050928_002359_000000432041_00116_18707_7149.N1	28-SEP-2005 00:23:59	Dark	43.000	65	Lam Vel	2.2040	4400.0	86	18707	No
4	GOM_NL__2PRFIN20050928_002717_000000392041_00116_18707_7150.N1	28-SEP-2005 00:27:17	Dark	38.500	46	Del Vel	1.9540	10600.	77	18707	No
5	GOM_NL__2PRFIN20050928_002852_000000422041_00116_18707_7151.N1	28-SEP-2005 00:28:52	Dark	41.500	41	Eps Car	1.8600	4100.0	83	18707	No
6	GOM_NL__2PRFIN20050928_004104_000000382041_00117_18708_7134.N1	28-SEP-2005 00:41:04	Dark	38.000	143	Alp Hyi	2.8570	7200.0	76	18708	No
7	GOM_NL__2PRFIN20050928_004231_000000492041_00117_18708_7135.N1	28-SEP-2005 00:42:31	Dark	48.500	9	Alp Eri	0.45300	24000.	97	18708	No
8	GOM_NL__2PRFIN20050928_004757_000000422041_00117_18708_7136.N1	28-SEP-2005 00:47:57	Straylight	41.500	84	Alp Phe	2.3970	4500.0	83	18708	No
9	GOM_NL__2PRFIN20050928_005242_000000442041_00117_18708_7137.N1	28-SEP-2005 00:52:42	Straylight	43.500	18	24Alp PsA	1.1660	9700.0	87	18708	No
10	GOM_NL__2PRFIN20050928_010122_000000372041_00117_18708_7138.N1	28-SEP-2005 01:01:22	Bright	37.000	162	34Alp Aqr	2.9440	5350.0	74	18708	No
11	GOM_NL__2PRFIN20050928_010515_000000372041_00117_18708_7139.N1	28-SEP-2005 01:05:15	Bright	37.000	90	54Alp Peg	2.4870	11000.	74	18708	No
12	GOM_NL__2PRFIN20050928_010855_000000402041_00117_18708_7140.N1	28-SEP-2005 01:08:55	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	18708	No
13	GOM_NL__2PRFIN20050928_011901_000000362041_00117_18708_7141.N1	28-SEP-2005 01:19:01	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18708	No
14	GOM_NL__2PRFIN20050928_012617_000000372041_00117_18708_7142.N1	28-SEP-2005 01:26:17	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	18708	No
15	GOM_NL__2PRFIN20050928_012808_000000362041_00117_18708_7143.N1	28-SEP-2005 01:28:08	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18708	No
16	GOM_NL__2PRFIN20050928_013409_000000362041_00117_18708_7144.N1	28-SEP-2005 01:34:09	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18708	No
17	GOM_NL__2PRFIN20050928_013538_000000352041_00117_18708_7145.N1	28-SEP-2005 01:35:38	Bright	35.000	82	48Bet UMa	2.3650	10600.	70	18708	No
18	GOM_NL__2PRFIN20050928_013850_000000332041_00117_18708_7146.N1	28-SEP-2005 01:38:50	Bright	33.000	174	52Psi UMa	3.0040	4400.0	66	18708	No
19	GOM_NL__2PRFIN20050928_014528_000000342041_00117_18708_7147.N1	28-SEP-2005 01:45:28	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	18708	No
20	GOM_NL__2PRFIN20050928_015454_000000452041_00117_18708_7148.N1	28-SEP-2005 01:54:54	Twilight	45.000	48	30Alp Hya	1.9770	4100.0	90	18708	No
21	GOM_NL__2PRFIN20050928_020435_000000392041_00117_18708_7149.N1	28-SEP-2005 02:04:35	Dark	39.000	65	Lam Vel	2.2040	4400.0	78	18708	No
22	GOM_NL__2PRFIN20050928_020753_000000382041_00117_18708_7150.N1	28-SEP-2005 02:07:53	Dark	38.000	46	Del Vel	1.9540	10600.	76	18708	No
23	GOM_NL__2PRFIN20050928_020929_000000392041_00117_18708_7151.N1	28-SEP-2005 02:09:29	Dark	39.000	41	Eps Car	1.8600	4100.0	78	18708	No
24	GOM_NL__2PRFIN20050928_022140_000000402041_00118_18709_7134.N1	28-SEP-2005 02:21:40	Dark	40.000	143	Alp Hyi	2.8570	7200.0	80	18709	No
25	GOM_NL__2PRFIN20050928_022308_000000452041_00118_18709_7135.N1	28-SEP-2005 02:23:08	Dark	44.500	9	Alp Eri	0.45300	24000.	89	18709	No
26	GOM_NL__2PRFIN20050928_022834_000000452041_00118_18709_7136.N1	28-SEP-2005 02:28:34	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	18709	No
27	GOM_NL__2PRFIN20050928_023318_000000422041_00118_18709_7137.N1	28-SEP-2005 02:33:18	Straylight	42.000	18	24Alp PsA	1.1660	9700.0	84	18709	No
28	GOM_NL__2PRFIN20050928_024159_000000382041_00118_18709_7138.N1	28-SEP-2005 02:41:59	Bright	37.500	162	34Alp Aqr	2.9440	5350.0	75	18709	No
29	GOM_NL__2PRFIN20050928_024551_000000372041_00118_18709_7139.N1	28-SEP-2005 02:45:51	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	18709	No
30	GOM_NL__2PRFIN20050928_024931_000000362041_00118_18709_7140.N1	28-SEP-2005 02:49:31	Bright	36.000	93	53Bet Peg	2.5200	3100.0	72	18709	No
31	GOM_NL__2PRFIN20050928_025936_000000352041_00118_18709_7141.N1	28-SEP-2005 02:59:36	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	18709	No
32	GOM_NL__2PRFIN20050928_030653_000000372041_00118_18709_7142.N1	28-SEP-2005 03:06:53	Bright	36.500	49	1Alp UMi	1.9900	6300.0	73	18709	No
33	GOM_NL__2PRFIN20050928_030844_000000332041_00118_18709_7143.N1	28-SEP-2005 03:08:44	Bright	32.500	60	7Bet UMi	2.0810	3950.0	65	18709	No
34	GOM_NL__2PRFIN20050928_031445_000000362041_00118_18709_7144.N1	28-SEP-2005 03:14:45	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18709	No
35	GOM_NL__2PRFIN20050928_031614_000000352041_00118_18709_7145.N1	28-SEP-2005 03:16:14	Bright	34.500	82	48Bet UMa	2.3650	10600.	69	18709	No
36	GOM_NL__2PRFIN20050928_031926_000000342041_00118_18709_7146.N1	28-SEP-2005 03:19:26	Bright	34.000	174	52Psi UMa	3.0040	4400.0	68	18709	No
37	GOM_NL__2PRFIN20050928_032604_000000352041_00118_18709_7147.N1	28-SEP-2005 03:26:04	Bright	34.500	166	17Eps Leo	2.9800	6000.0	69	18709	No
38	GOM_NL__2PRFIN20050928_033531_000000512041_00118_18709_7148.N1	28-SEP-2005 03:35:31	Twilight	50.500	48	30Alp Hya	1.9770	4100.0	101	18709	No
39	GOM_NL__2PRFIN20050928_034512_000000462041_00118_18709_7149.N1	28-SEP-2005 03:45:12	Dark	46.000	65	Lam Vel	2.2040	4400.0	92	18709	No
40	GOM_NL__2PRFIN20050928_034830_000000412041_00118_18709_7150.N1	28-SEP-2005 03:48:30	Dark	40.500	46	Del Vel	1.9540	10600.	81	18709	No
41	GOM_NL__2PRFIN20050928_035005_000000452041_00118_18709_7151.N1	28-SEP-2005 03:50:05	Dark	45.000	41	Eps Car	1.8600	4100.0	90	18709	No
42	GOM_NL__2PRFIN20050928_040217_000000382041_00119_18710_7134.N1	28-SEP-2005 04:02:17	Dark	37.500	143	Alp Hyi	2.8570	7200.0	75	18710	No







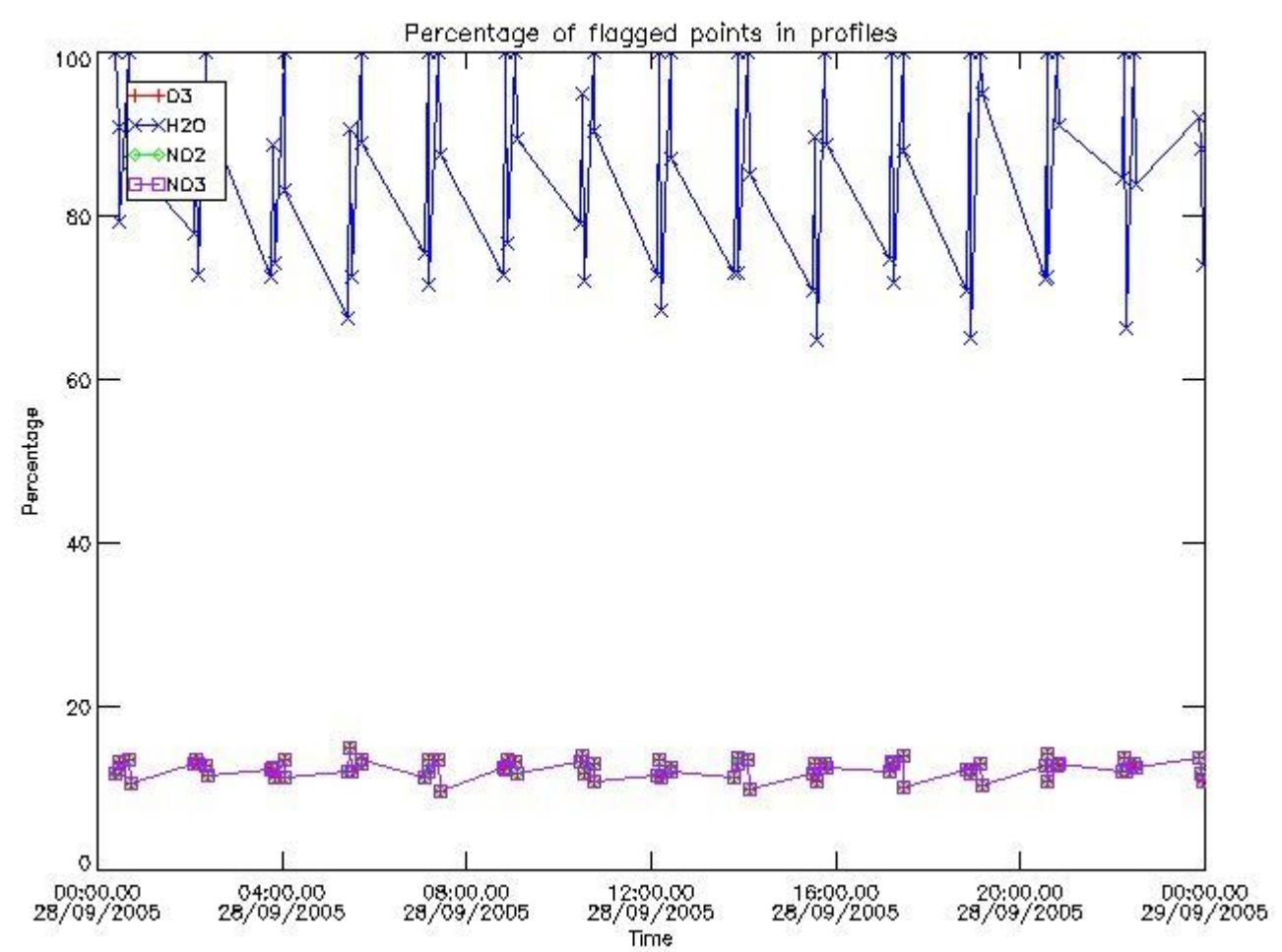
220	GOM_NL__2PRFIN20050928_211226_000000362041_00129_18720_7159.N1	28-SEP-2005 21:12:26	Bright	36.000	90	54Alp Peg	2.4870	11000.	72	18720	No
221	GOM_NL__2PRFIN20050928_211606_000000362041_00129_18720_7160.N1	28-SEP-2005 21:16:06	Bright	35.500	93	53Bet Peg	2.5200	3100.0	71	18720	No
222	GOM_NL__2PRFIN20050928_212614_000000362041_00129_18720_7161.N1	28-SEP-2005 21:26:14	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18720	No
223	GOM_NL__2PRFIN20050928_213329_000000362041_00129_18720_7162.N1	28-SEP-2005 21:33:29	Bright	36.000	49	1Alp UMi	1.9900	6300.0	72	18720	No
224	GOM_NL__2PRFIN20050928_213523_000000372041_00129_18720_7163.N1	28-SEP-2005 21:35:23	Bright	36.500	60	7Bet UMi	2.0810	3950.0	73	18720	No
225	GOM_NL__2PRFIN20050928_214122_000000342041_00129_18720_7164.N1	28-SEP-2005 21:41:22	Bright	34.000	36	50Alp UMa	1.8000	6300.0	68	18720	No
226	GOM_NL__2PRFIN20050928_214251_000000352041_00129_18720_7165.N1	28-SEP-2005 21:42:51	Bright	34.500	82	48Bet UMa	2.3650	10600.	69	18720	No
227	GOM_NL__2PRFIN20050928_214603_000000352041_00129_18720_7166.N1	28-SEP-2005 21:46:03	Bright	35.000	174	52Psi UMa	3.0040	4400.0	70	18720	No
228	GOM_NL__2PRFIN20050928_215242_000000342041_00129_18720_7167.N1	28-SEP-2005 21:52:42	Bright	34.000	166	17Eps Leo	2.9800	6000.0	68	18720	No
229	GOM_NL__2PRFIN20050928_220210_000000512041_00129_18720_7168.N1	28-SEP-2005 22:02:10	Twilight	51.000	48	30Alp Hya	1.9770	4100.0	102	18720	No
230	GOM_NL__2PRFIN20050928_221151_000000432041_00129_18720_7169.N1	28-SEP-2005 22:11:51	Dark	42.500	65	Lam Vel	2.2040	4400.0	85	18720	No
231	GOM_NL__2PRFIN20050928_221509_000000412041_00129_18720_7170.N1	28-SEP-2005 22:15:09	Dark	41.000	46	Del Vel	1.9540	10600.	82	18720	No
232	GOM_NL__2PRFIN20050928_221644_000000422041_00130_18721_7171.N1	28-SEP-2005 22:16:44	Dark	42.000	41	Eps Car	1.8600	4100.0	84	18721	No
233	GOM_NL__2PRFIN20050928_222856_000000402041_00130_18721_7155.N1	28-SEP-2005 22:28:56	Dark	39.500	143	Alp Hyi	2.8570	7200.0	79	18721	No
234	GOM_NL__2PRFIN20050928_223024_000000412041_00130_18721_7156.N1	28-SEP-2005 22:30:24	Dark	40.500	9	Alp Eri	0.45300	24000.	81	18721	No
235	GOM_NL__2PRFIN20050928_223548_000000442041_00130_18721_7157.N1	28-SEP-2005 22:35:48	Straylight	43.500	84	Alp Phe	2.3970	4500.0	87	18721	No
236	GOM_NL__2PRFIN20050928_224032_000000392041_00130_18721_7158.N1	28-SEP-2005 22:40:32	Straylight	39.000	18	24Alp PsA	1.1660	9700.0	78	18721	No
237	GOM_NL__2PRFIN20050928_225302_000000372041_00130_18721_7159.N1	28-SEP-2005 22:53:02	Bright	36.500	90	54Alp Peg	2.4870	11000.	73	18721	No
238	GOM_NL__2PRFIN20050928_225642_000000382041_00130_18721_7160.N1	28-SEP-2005 22:56:42	Bright	38.000	93	53Bet Peg	2.5200	3100.0	76	18721	No
239	GOM_NL__2PRFIN20050928_230650_000000362041_00130_18721_7161.N1	28-SEP-2005 23:06:50	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18721	No
240	GOM_NL__2PRFIN20050928_231404_000000342041_00130_18721_7162.N1	28-SEP-2005 23:14:04	Bright	34.000	49	1Alp UMi	1.9900	6300.0	68	18721	No
241	GOM_NL__2PRFIN20050928_231559_000000372041_00130_18721_7163.N1	28-SEP-2005 23:15:59	Bright	37.000	60	7Bet UMi	2.0810	3950.0	74	18721	No
242	GOM_NL__2PRFIN20050928_232158_000000352041_00130_18721_7164.N1	28-SEP-2005 23:21:58	Bright	34.500	36	50Alp UMa	1.8000	6300.0	69	18721	No
243	GOM_NL__2PRFIN20050928_232327_000000342041_00130_18721_7165.N1	28-SEP-2005 23:23:27	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18721	No
244	GOM_NL__2PRFIN20050928_232639_000000472041_00130_18721_7166.N1	28-SEP-2005 23:26:39	Bright	46.500	174	52Psi UMa	3.0040	4400.0	93	18721	No
245	GOM_NL__2PRFIN20050928_233318_000000342041_00130_18721_7167.N1	28-SEP-2005 23:33:18	Bright	33.500	166	17Eps Leo	2.9800	6000.0	67	18721	No
246	GOM_NL__2PRFIN20050928_234246_000000442041_00130_18721_7168.N1	28-SEP-2005 23:42:46	Twilight	44.000	48	30Alp Hya	1.9770	4100.0	88	18721	No
247	GOM_NL__2PRFIN20050928_235227_000000452041_00130_18721_7169.N1	28-SEP-2005 23:52:27	Dark	44.500	65	Lam Vel	2.2040	4400.0	89	18721	No
248	GOM_NL__2PRFIN20050928_235545_000000432041_00130_18721_7170.N1	28-SEP-2005 23:55:45	Dark	43.000	46	Del Vel	1.9540	10600.	86	18721	No
249	GOM_NL__2PRFIN20050928_235720_000000472041_00131_18722_7171.N1	28-SEP-2005 23:57:20	Dark	46.500	41	Eps Car	1.8600	4100.0	93	18722	No

### 3. Quality information per product

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

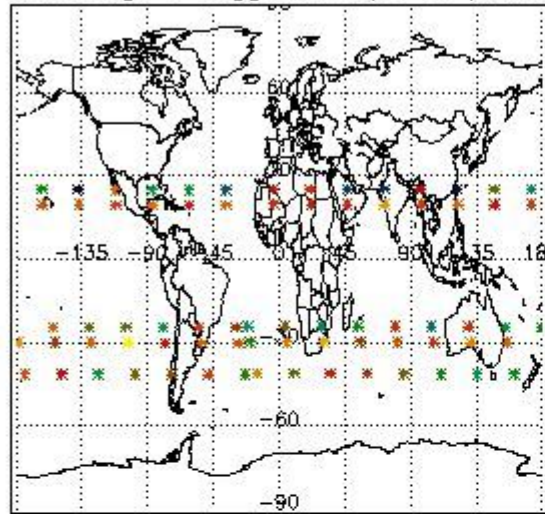
#### 3.1 Plot quality information per product (time dependant)



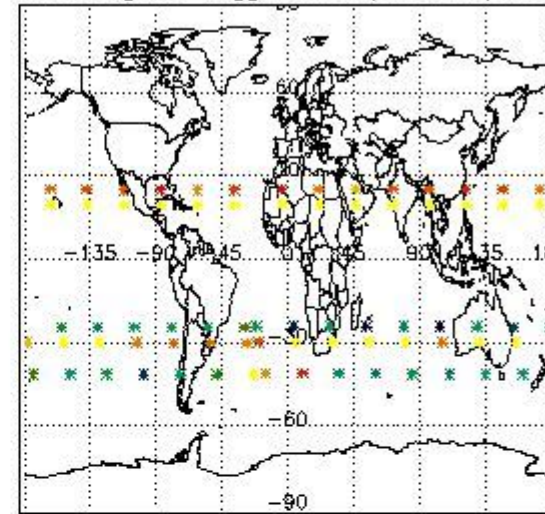


3.2 Plot quality information per product (world map)

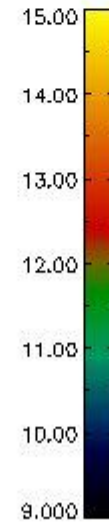
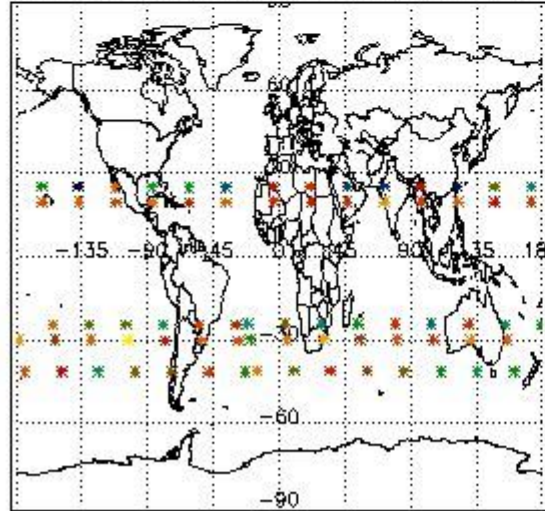
Percentage of flagged data per O3 profile



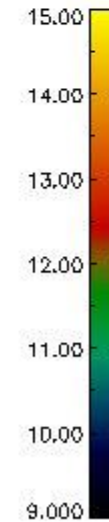
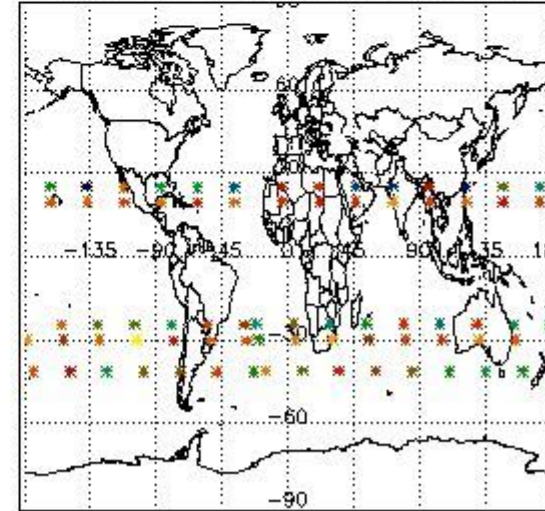
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

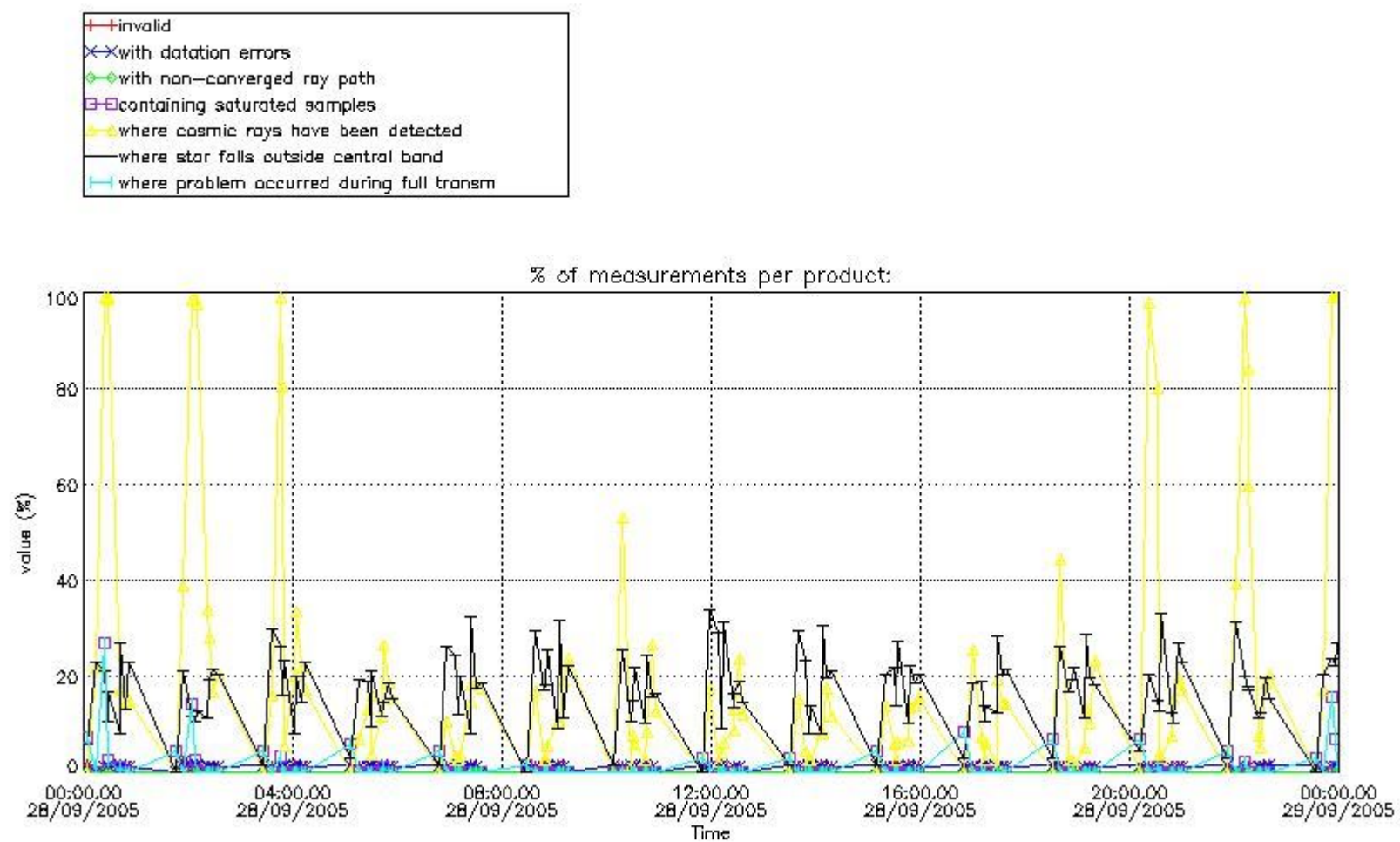


#### 4. Level 1 quality information per product

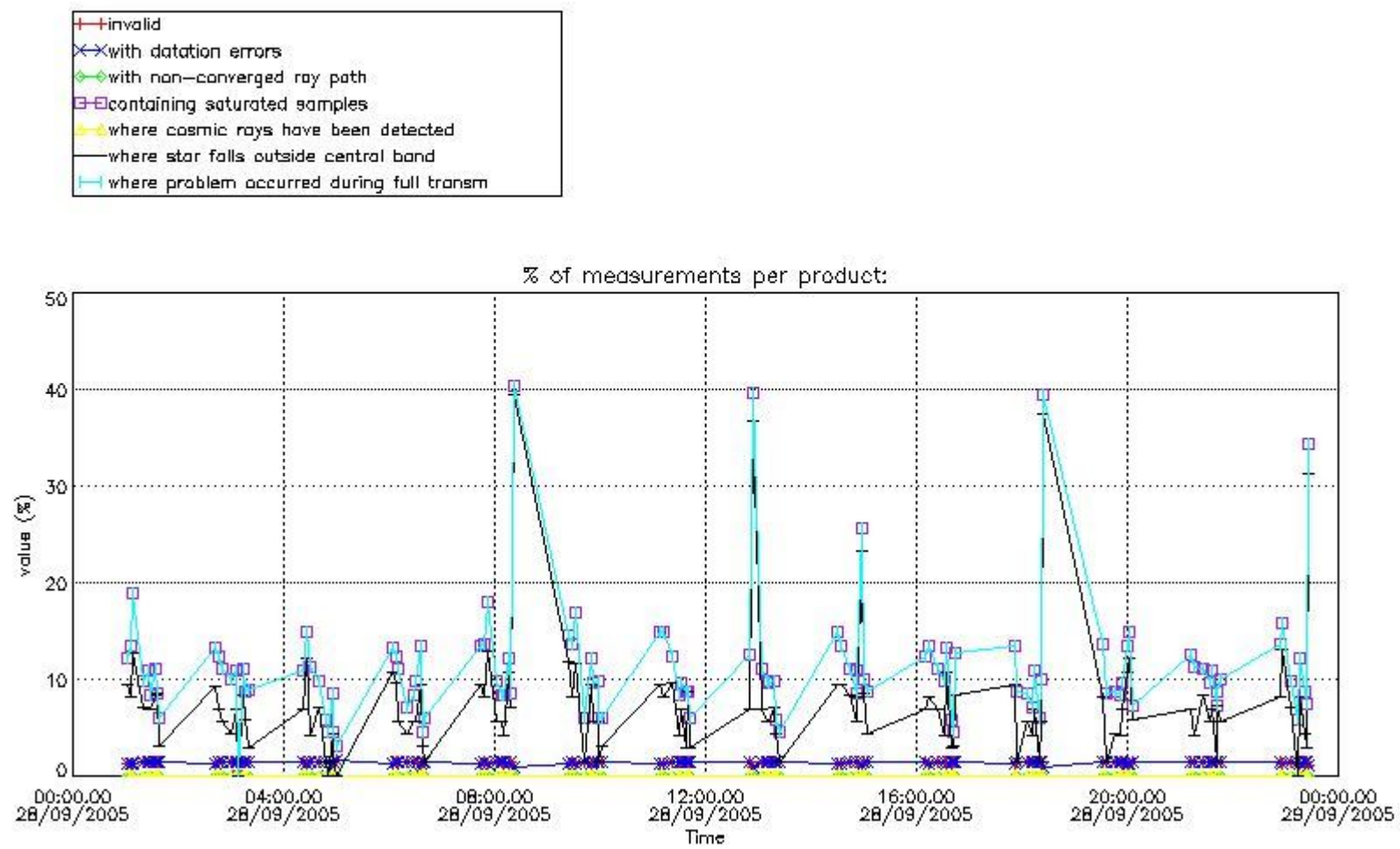
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

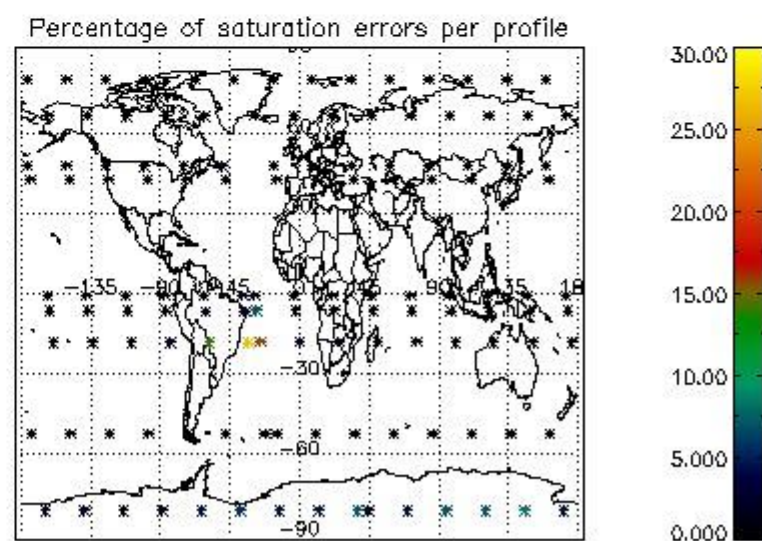
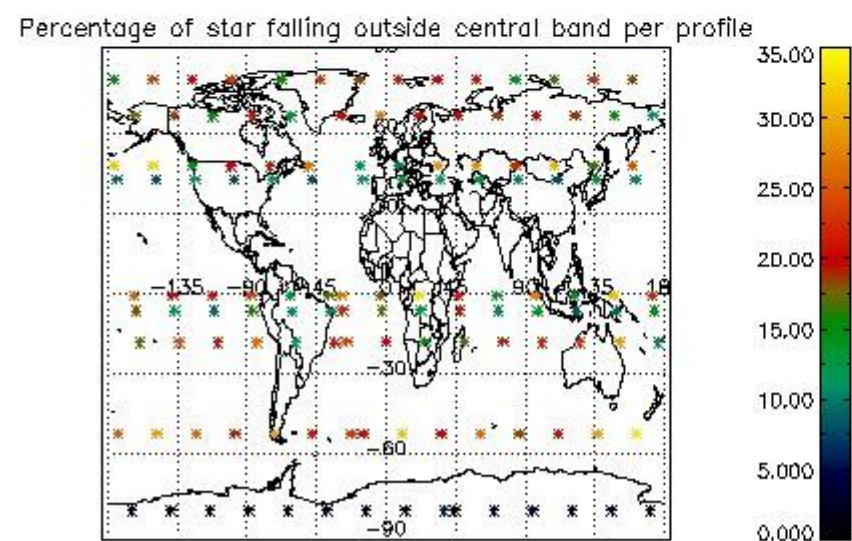
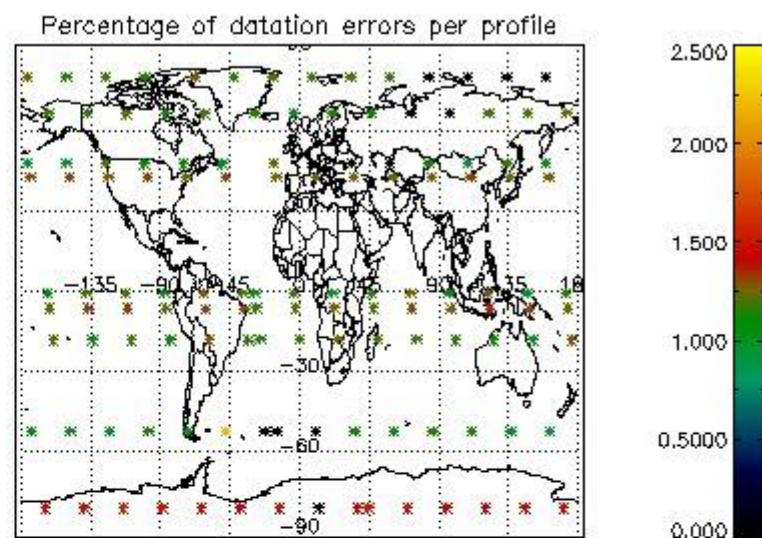
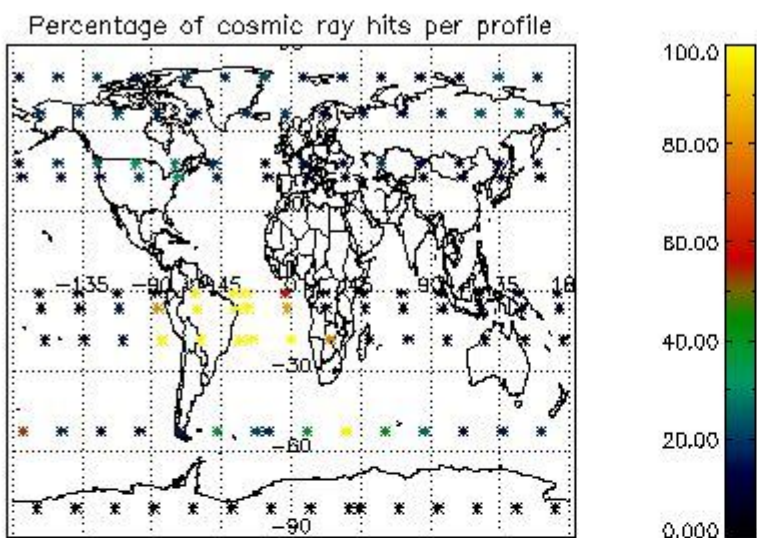


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

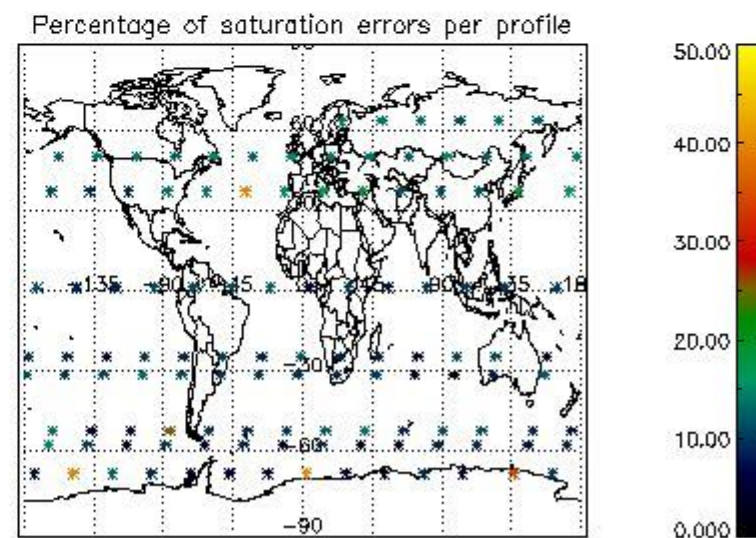
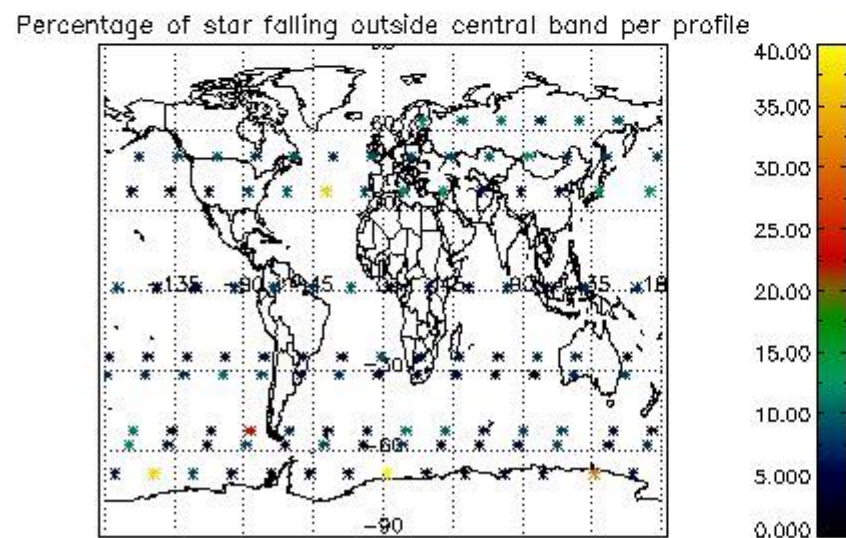
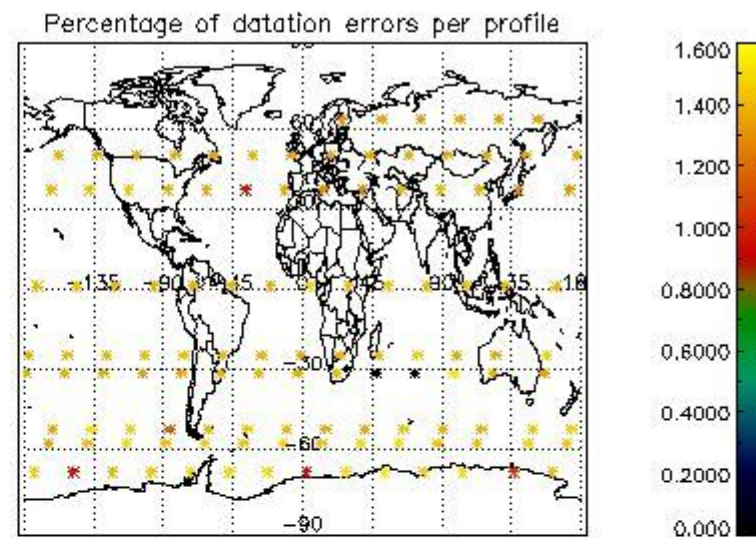
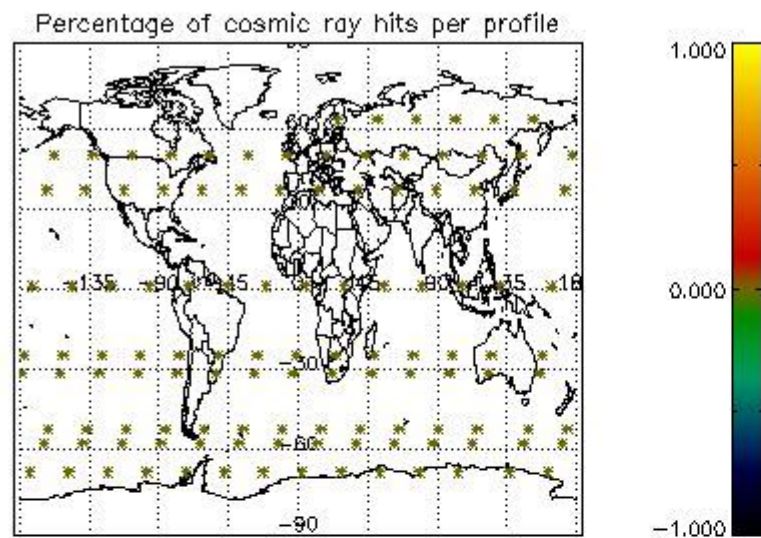


*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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

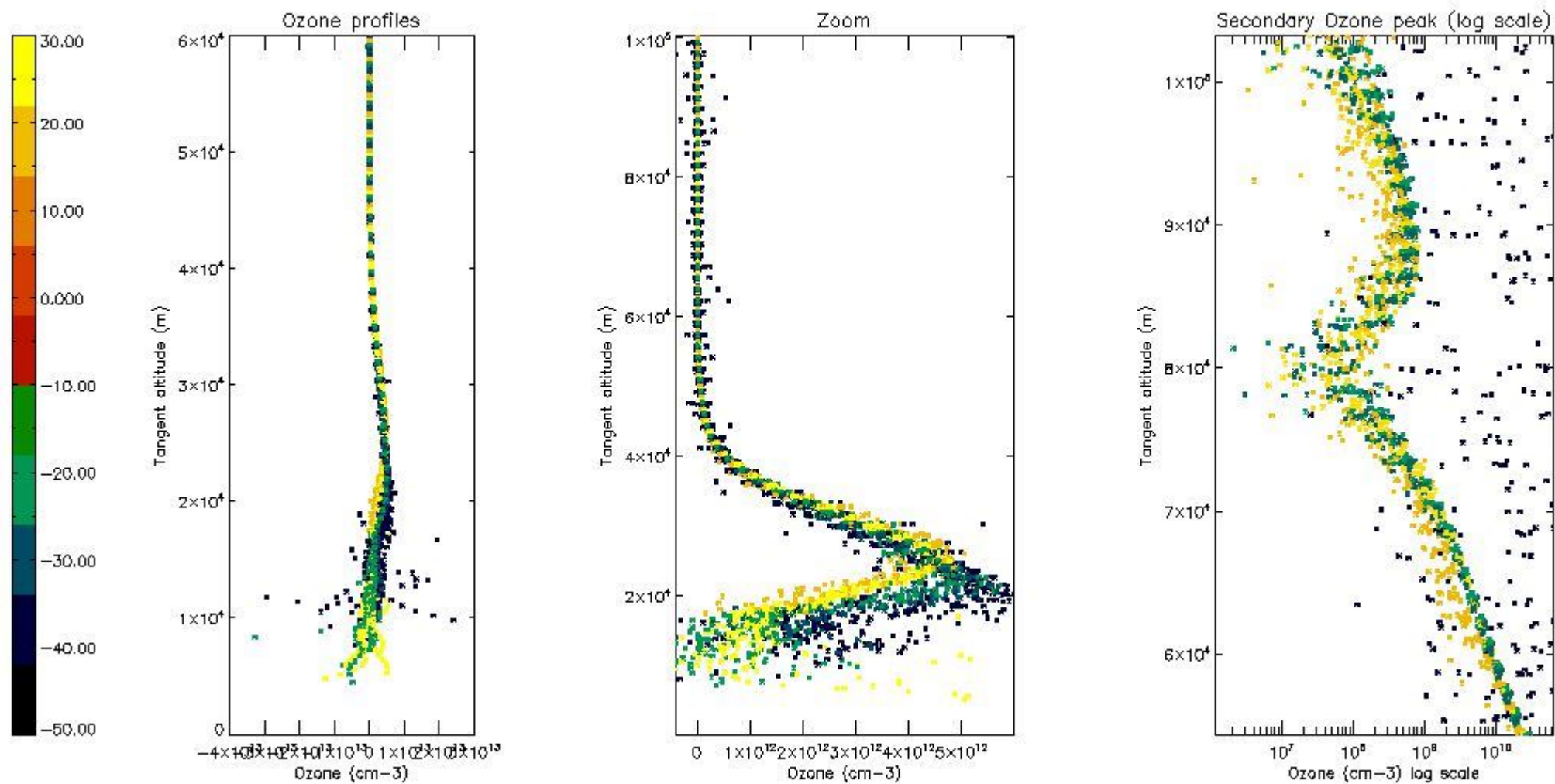
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	33
STD < 20	17

STD < 10	14
STD < 5	6

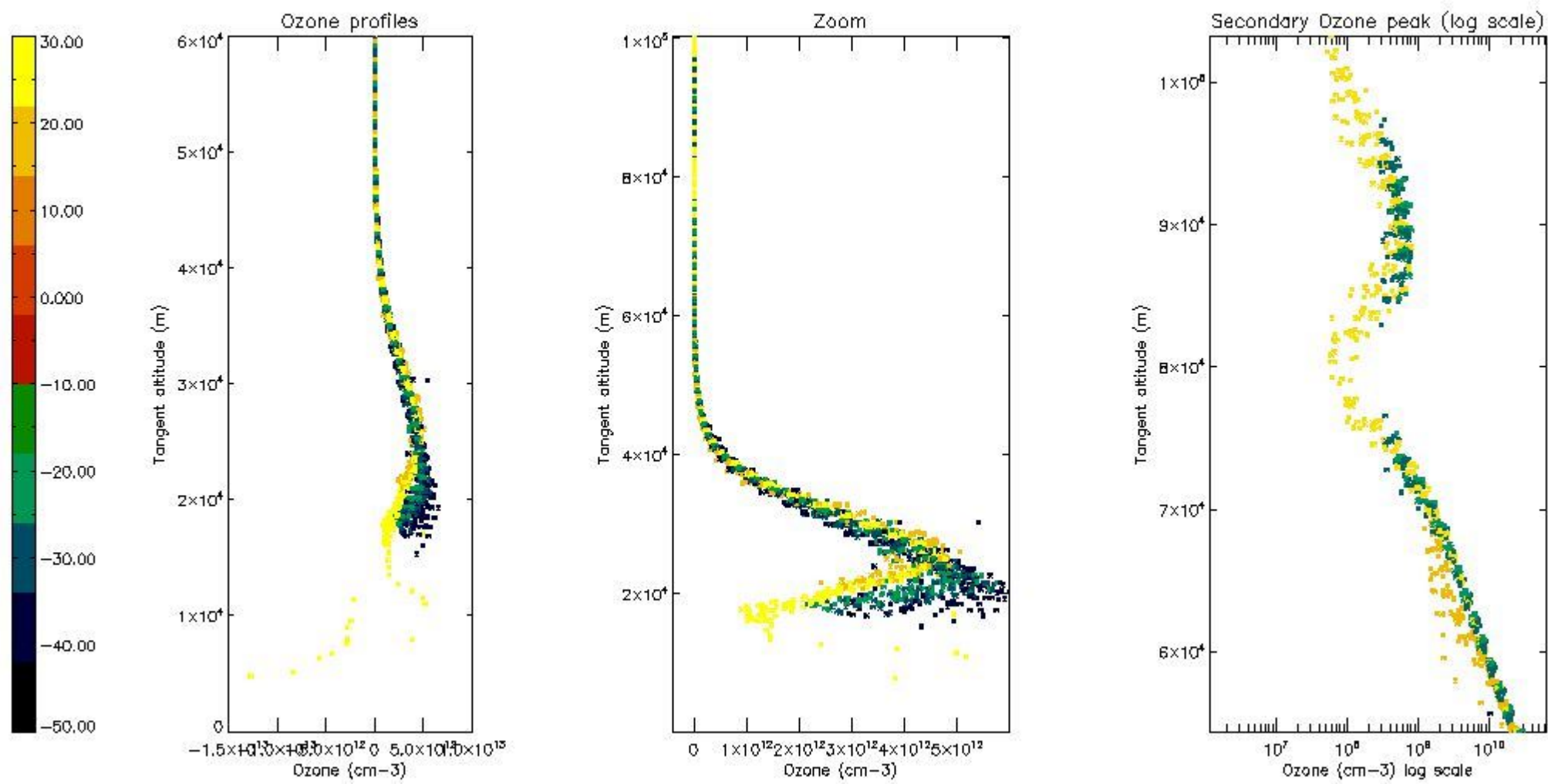
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

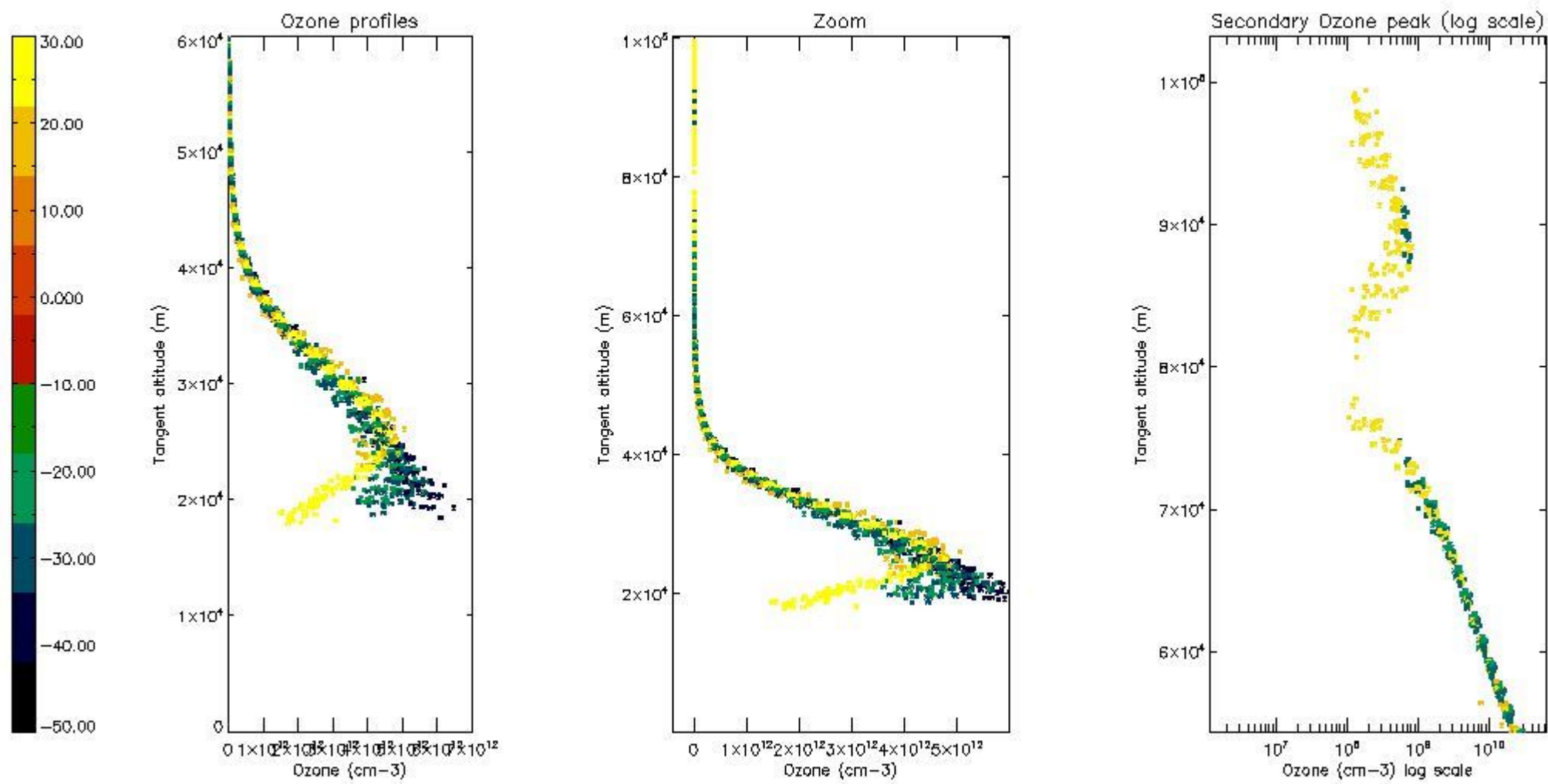
The colorbar represents the latitude.



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

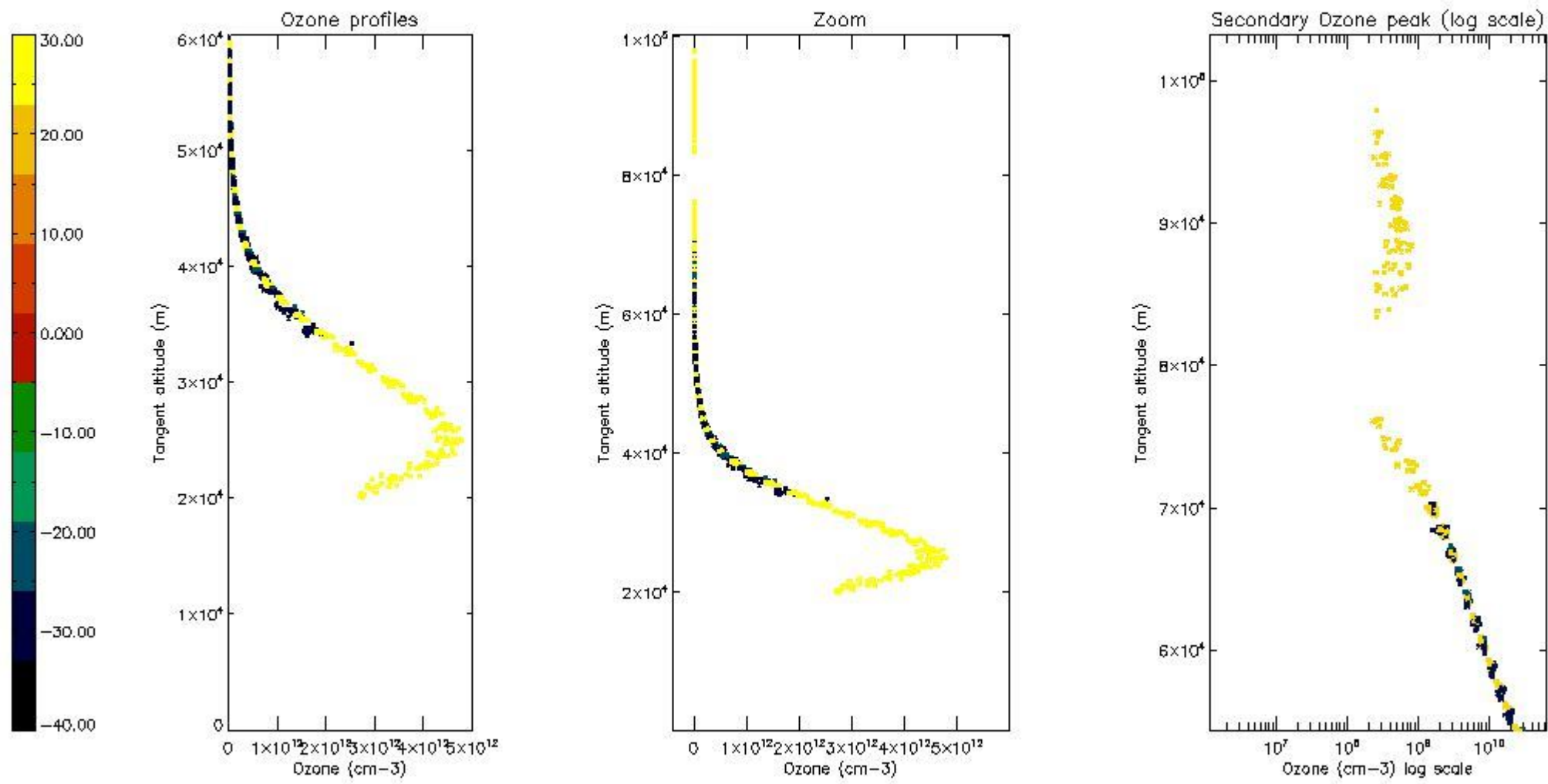
The colorbar represents the latitude.





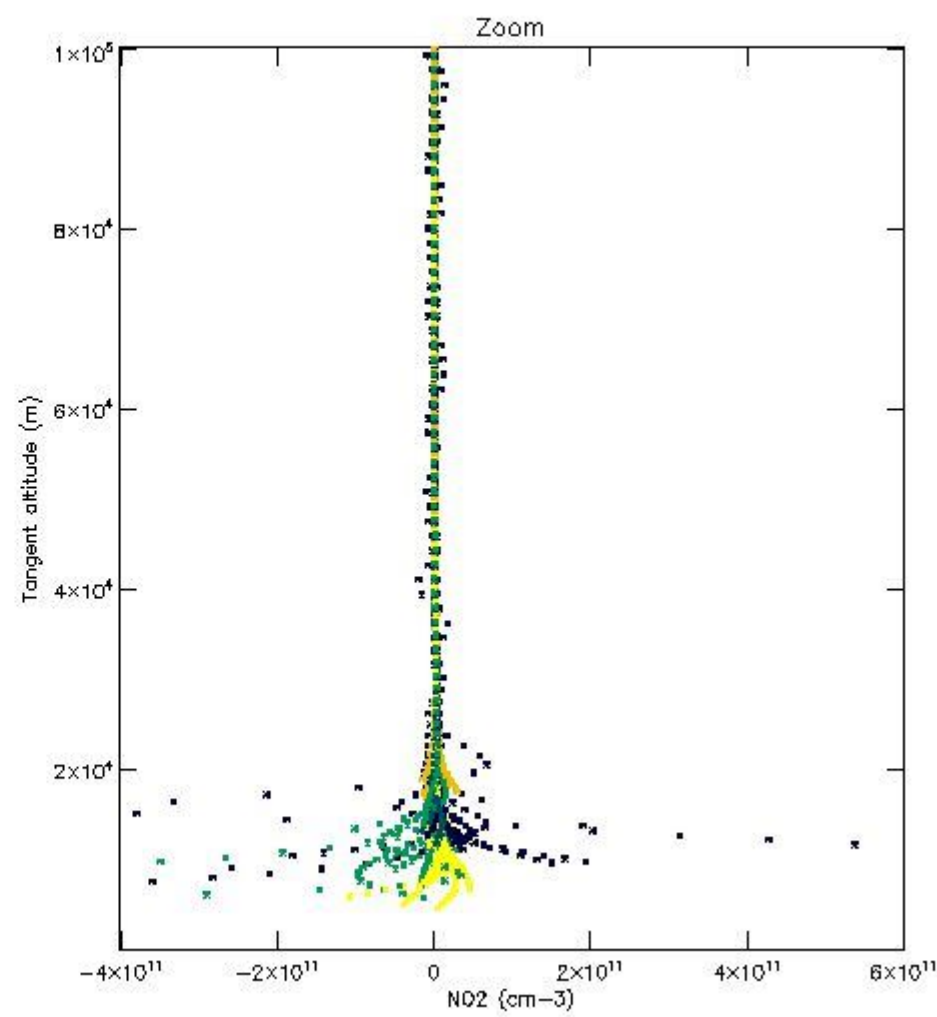
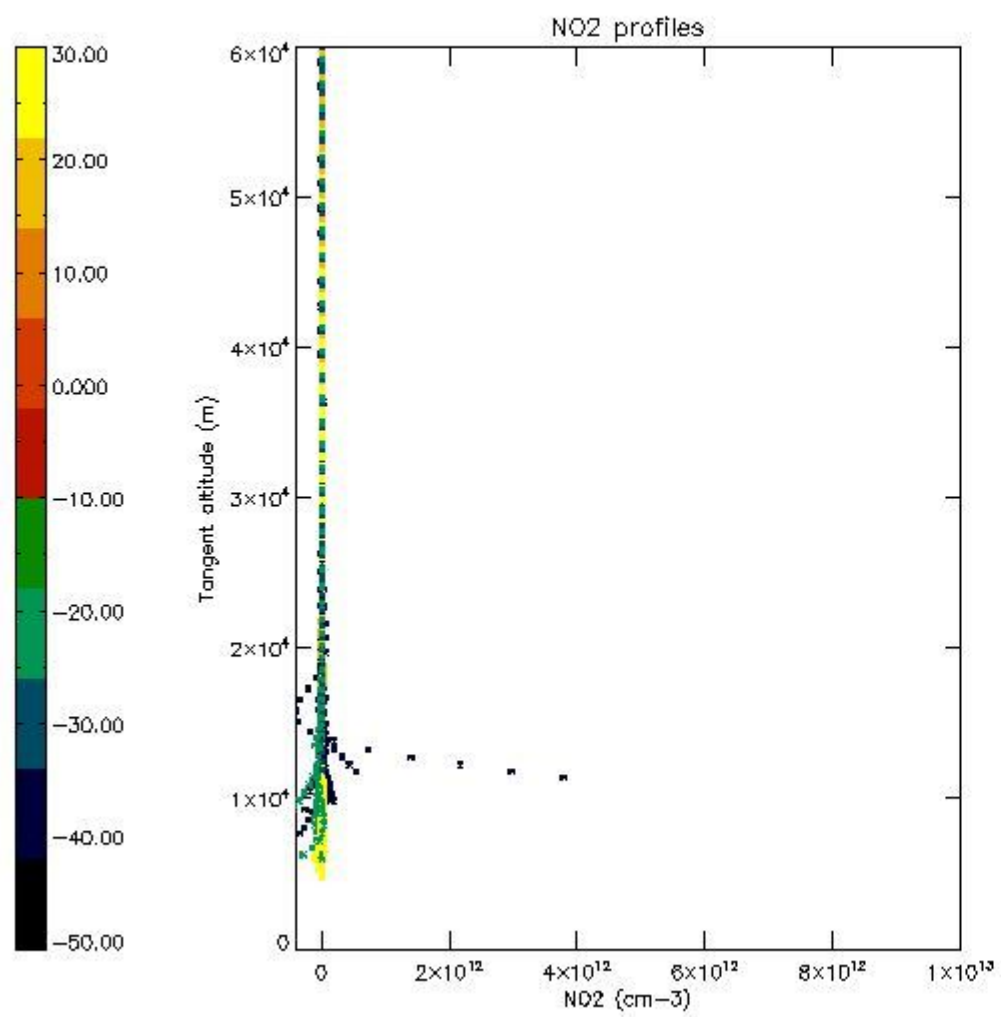
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



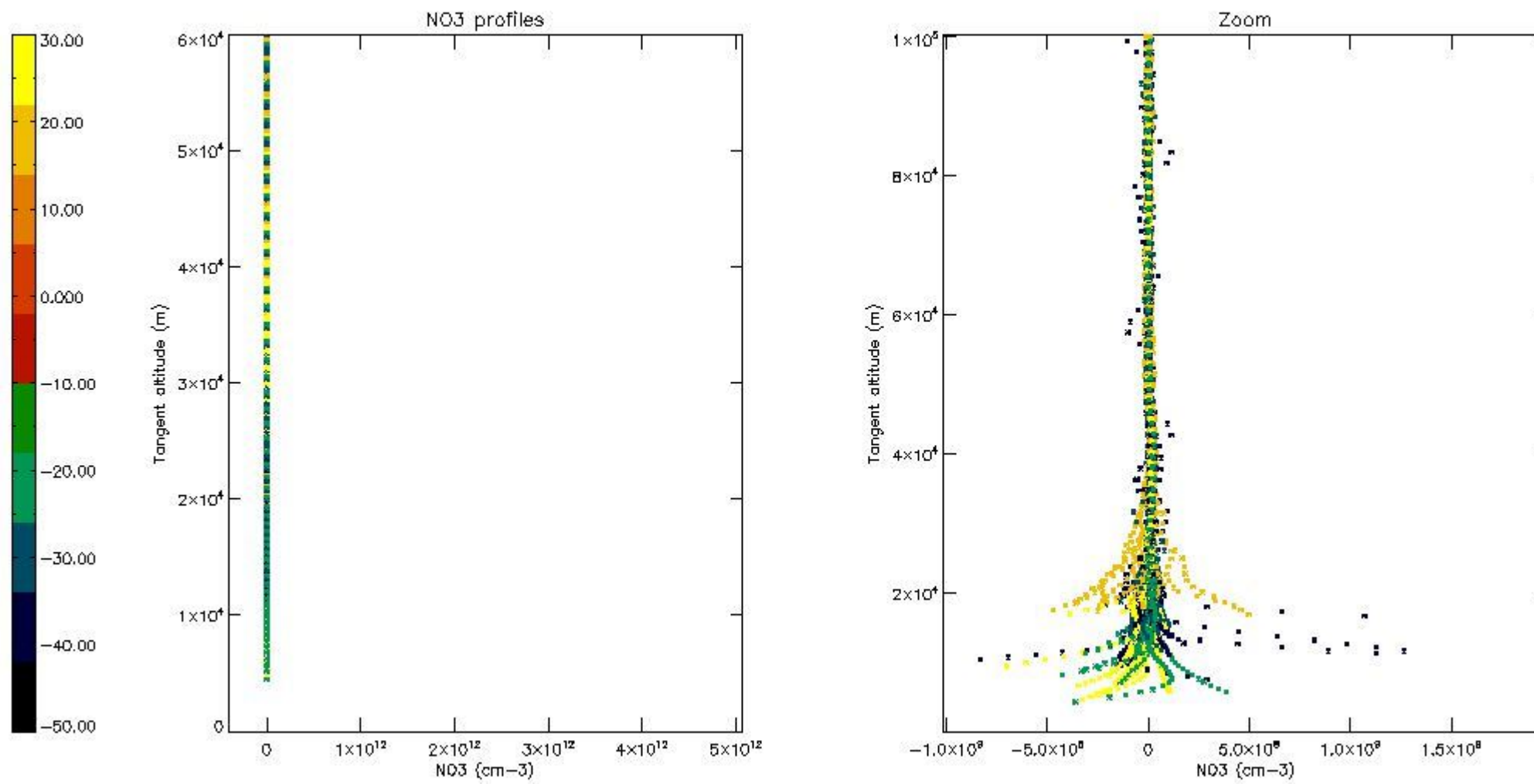
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

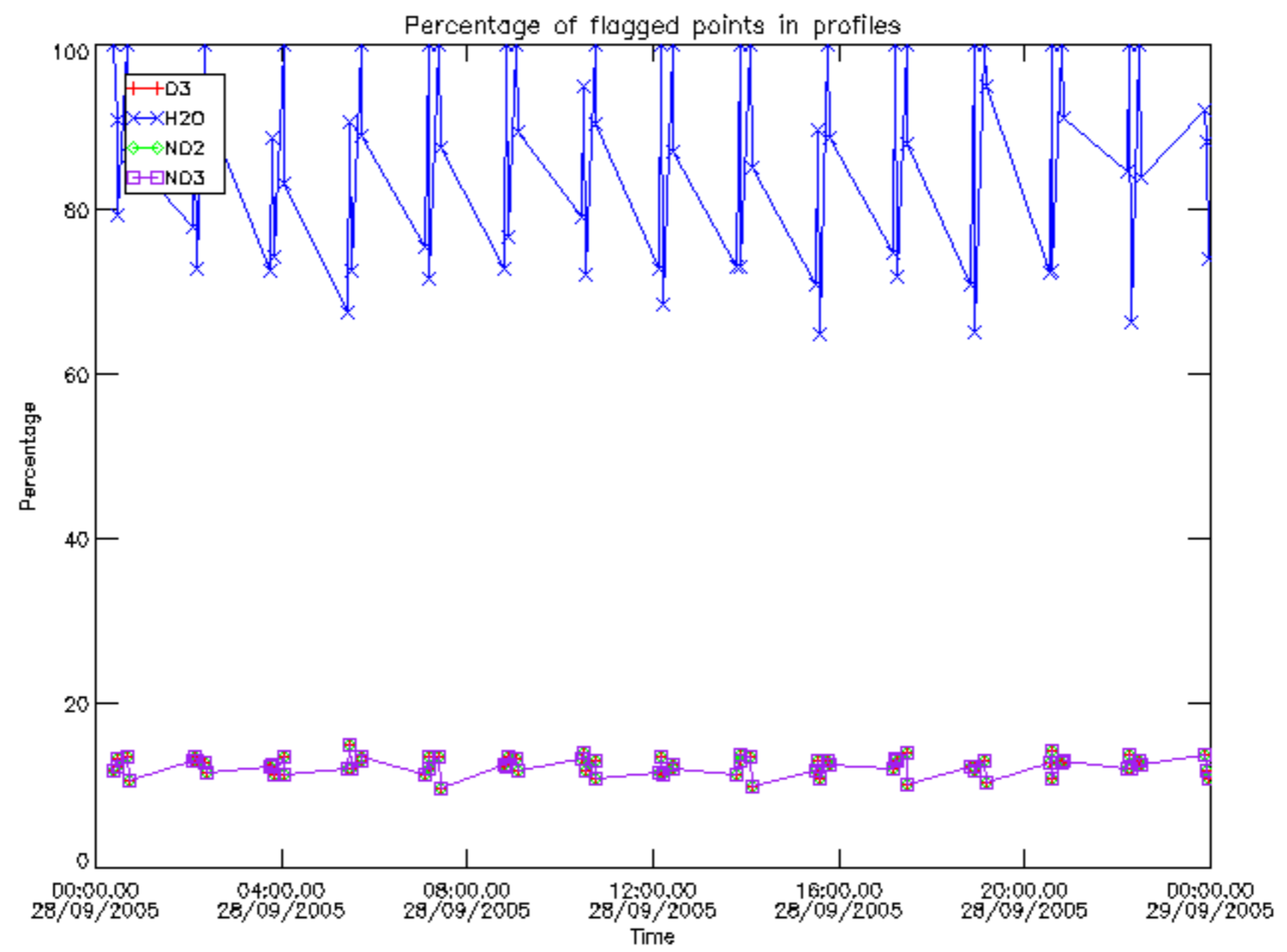
The colorbar represents the latitude.



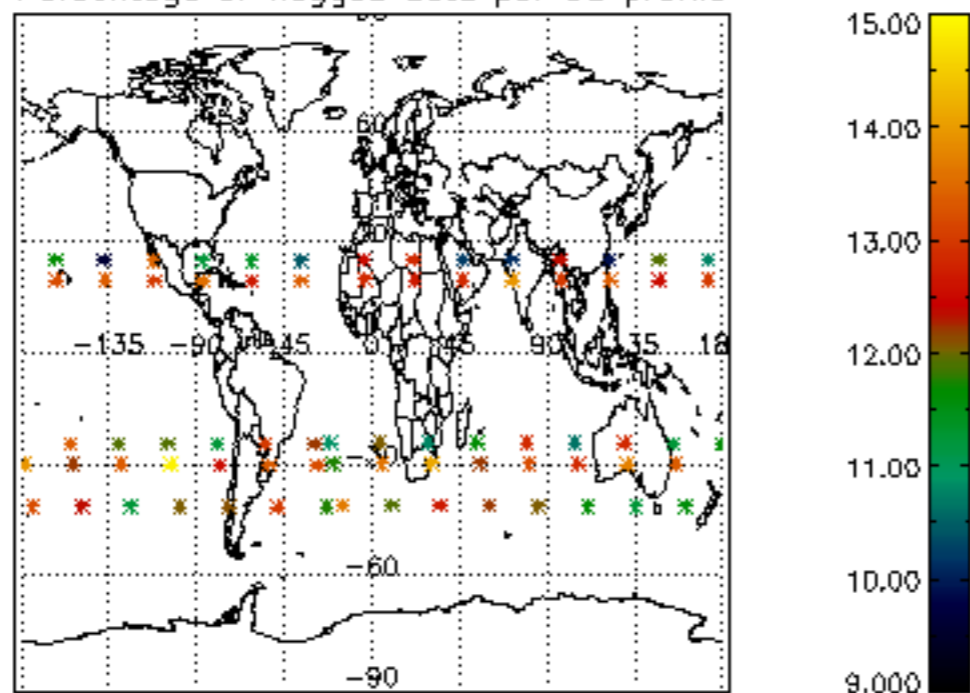
## 6. Auxiliary Data Files used for the production reported in section 2

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

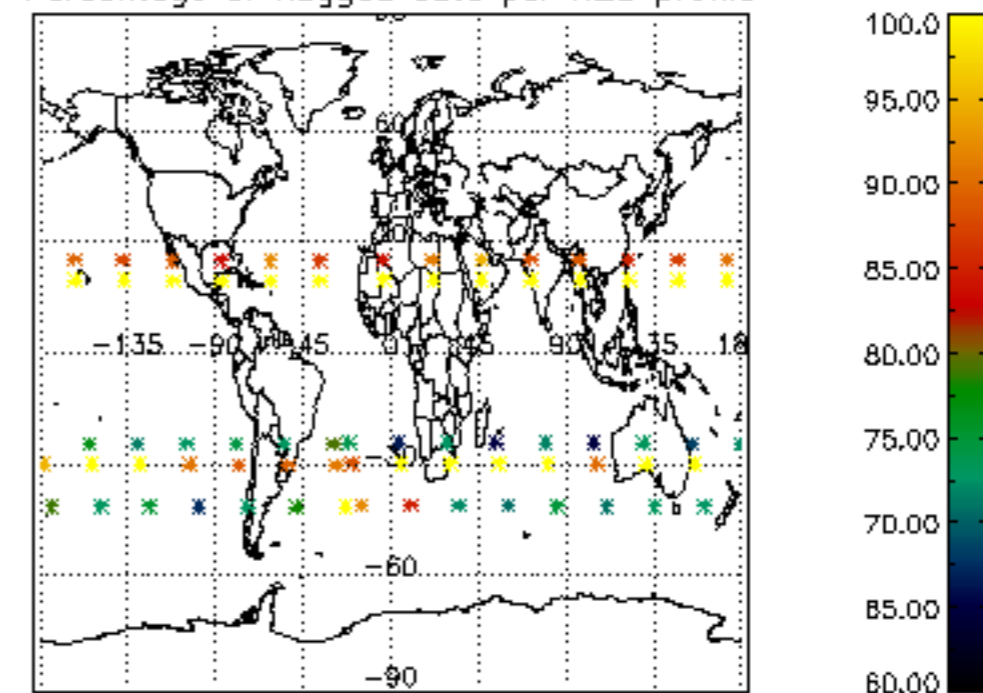
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	28-SEP-2005 00:04:52
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-SEP-2005 00:04:52
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-SEP-2005 00:04:52



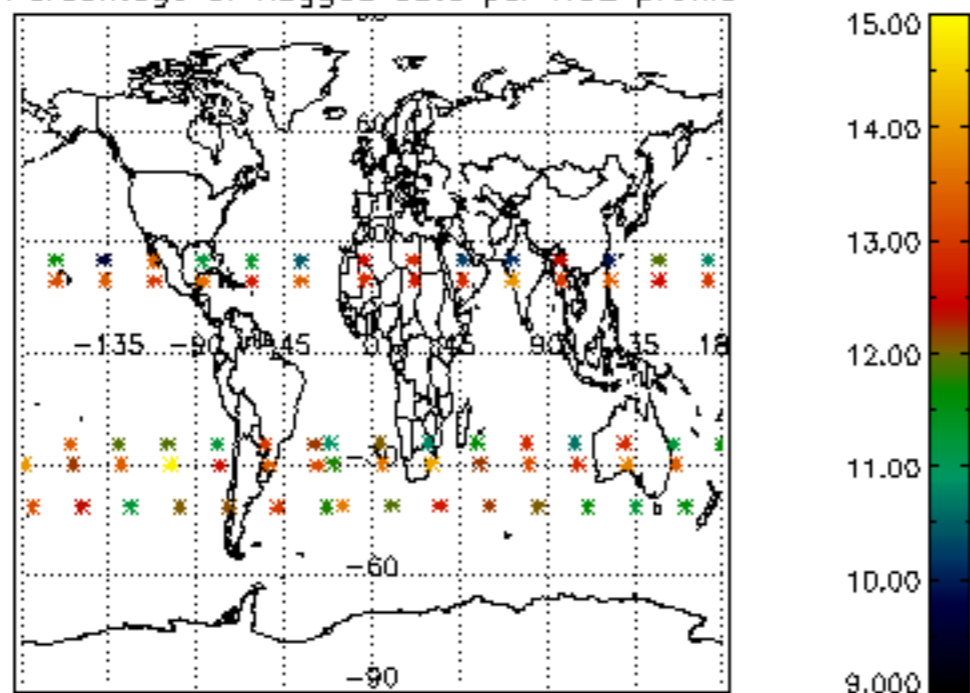
Percentage of flagged data per D3 profile



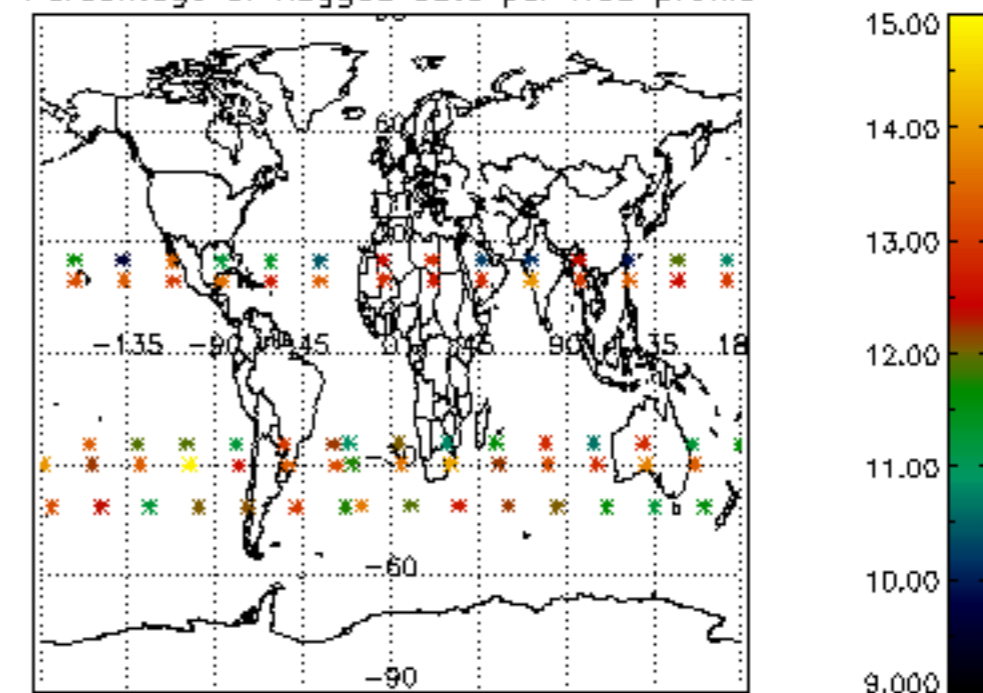
Percentage of flagged data per H2O profile

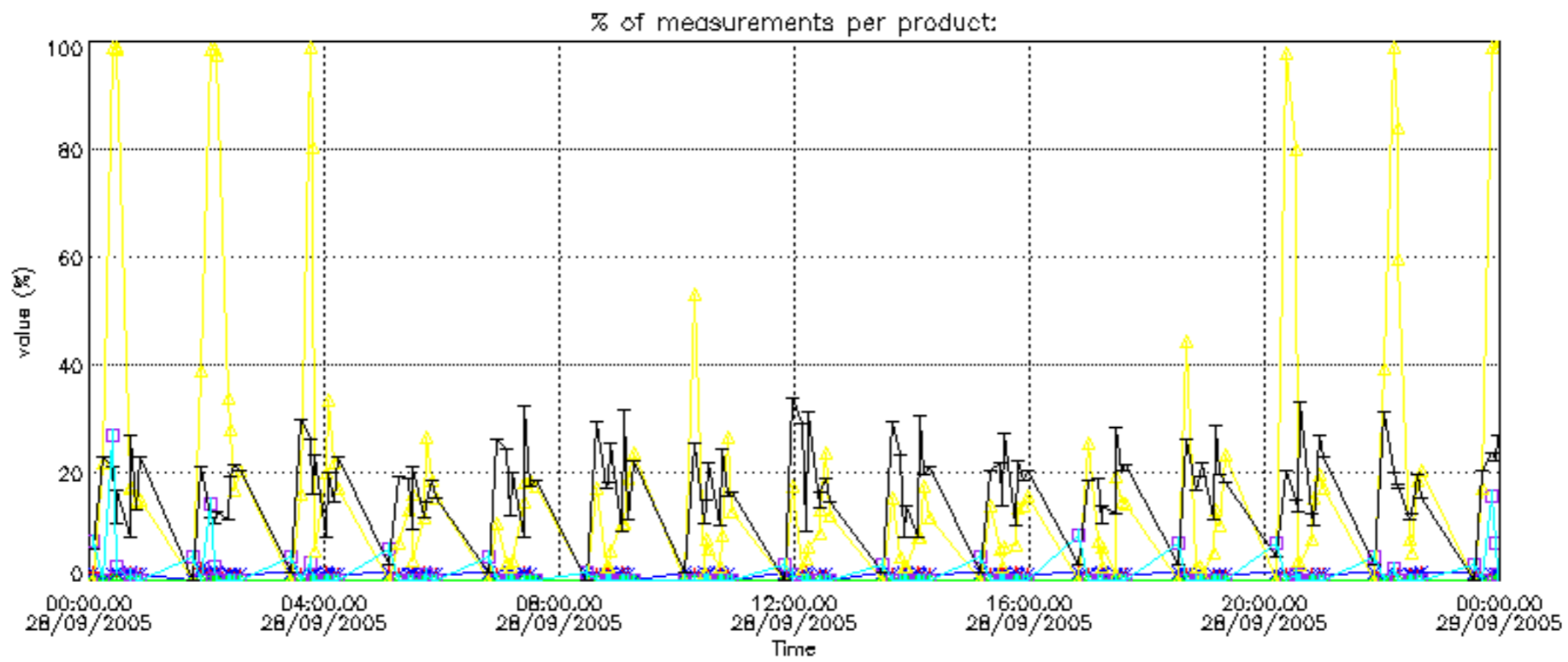


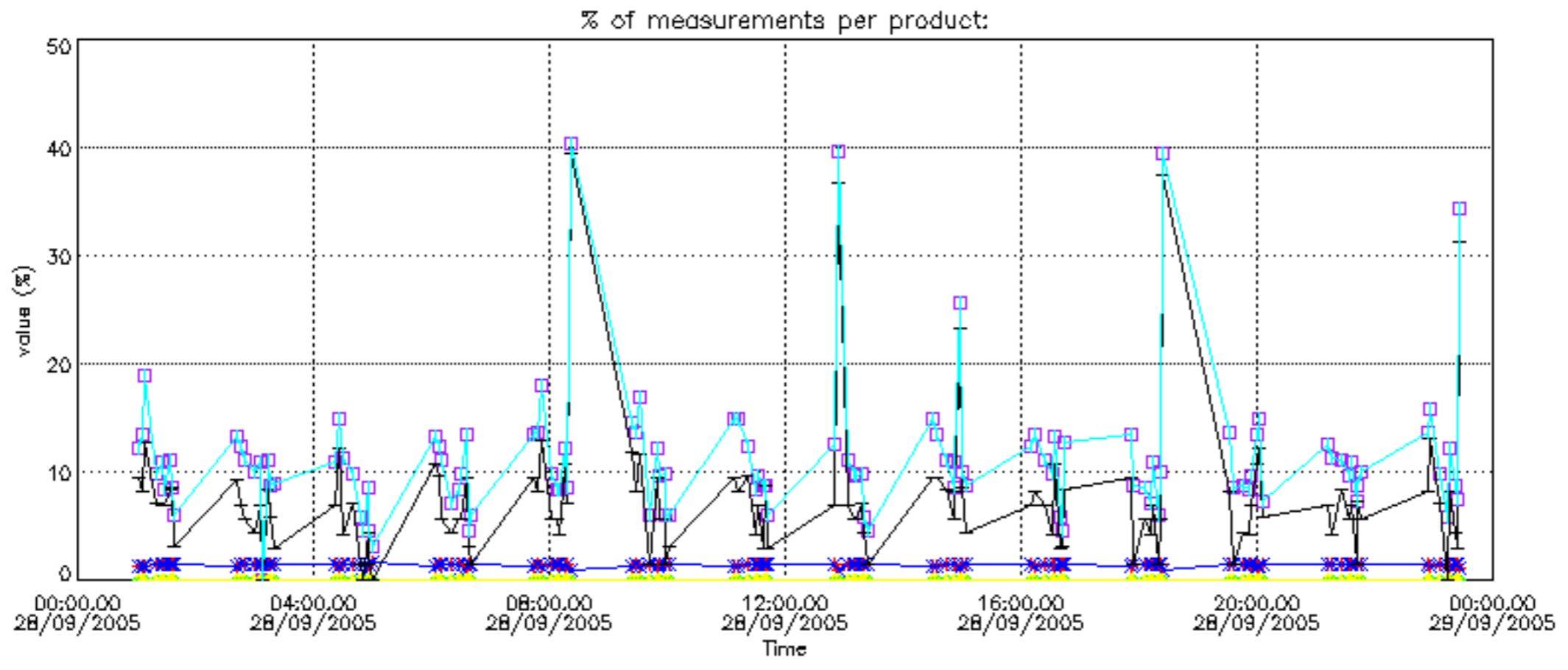
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

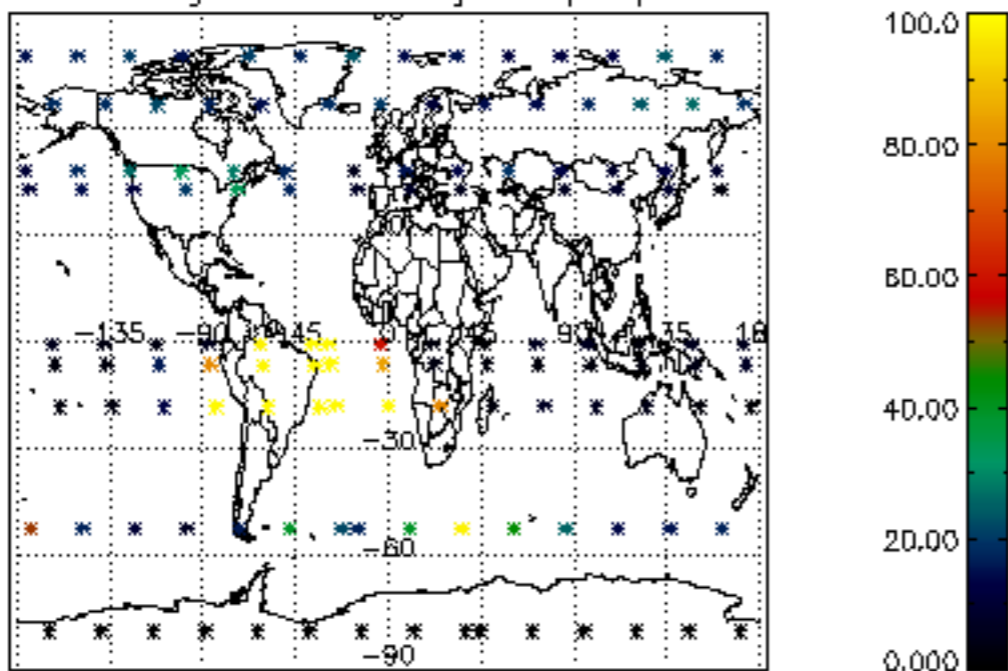




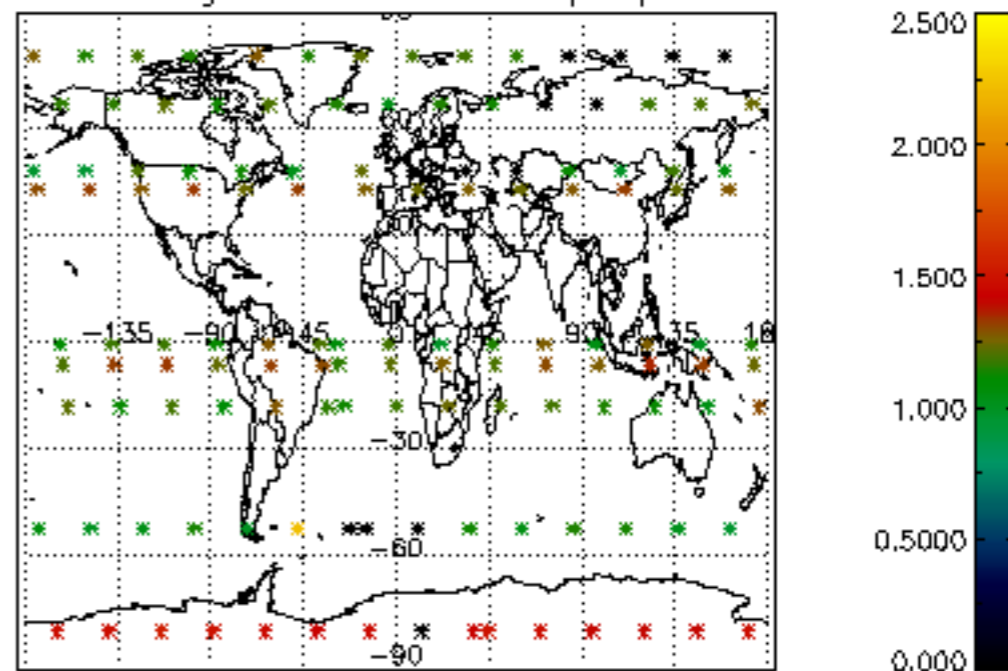




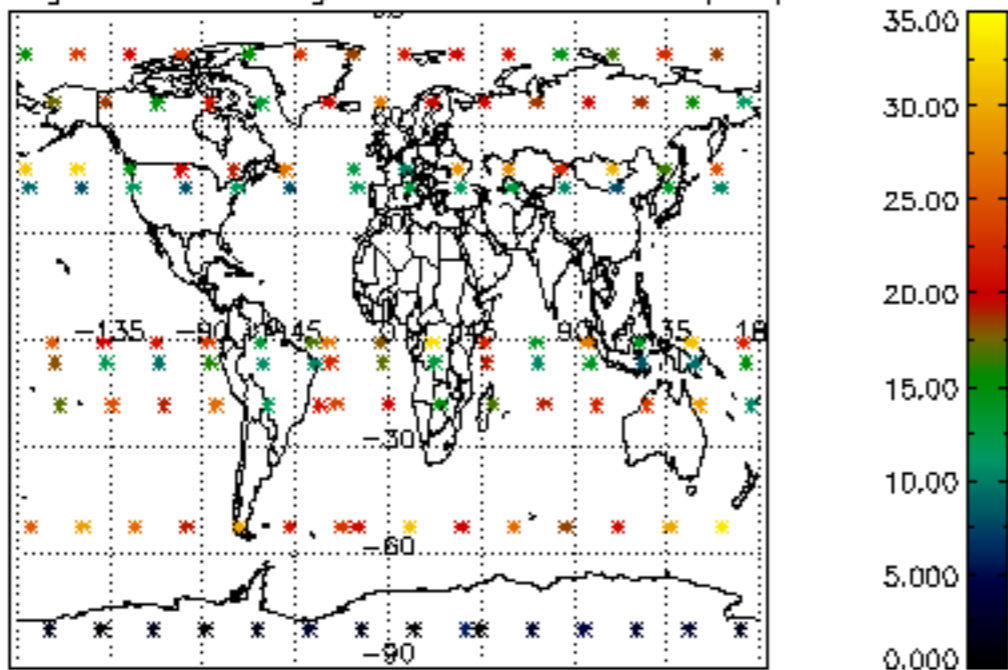
Percentage of cosmic ray hits per profile



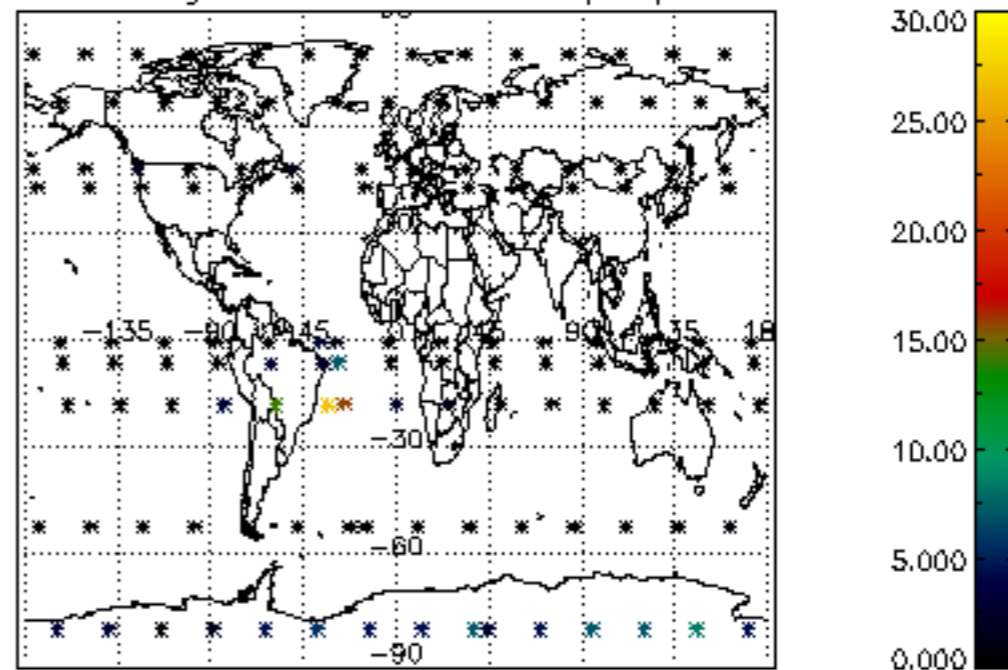
Percentage of datation errors per profile



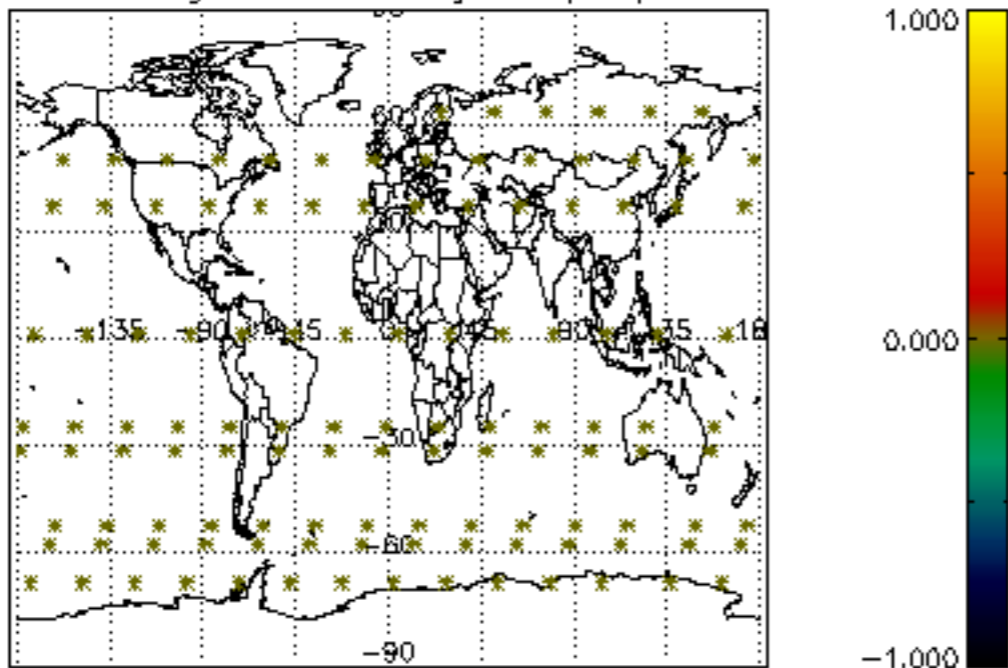
Percentage of star falling outside central band per profile



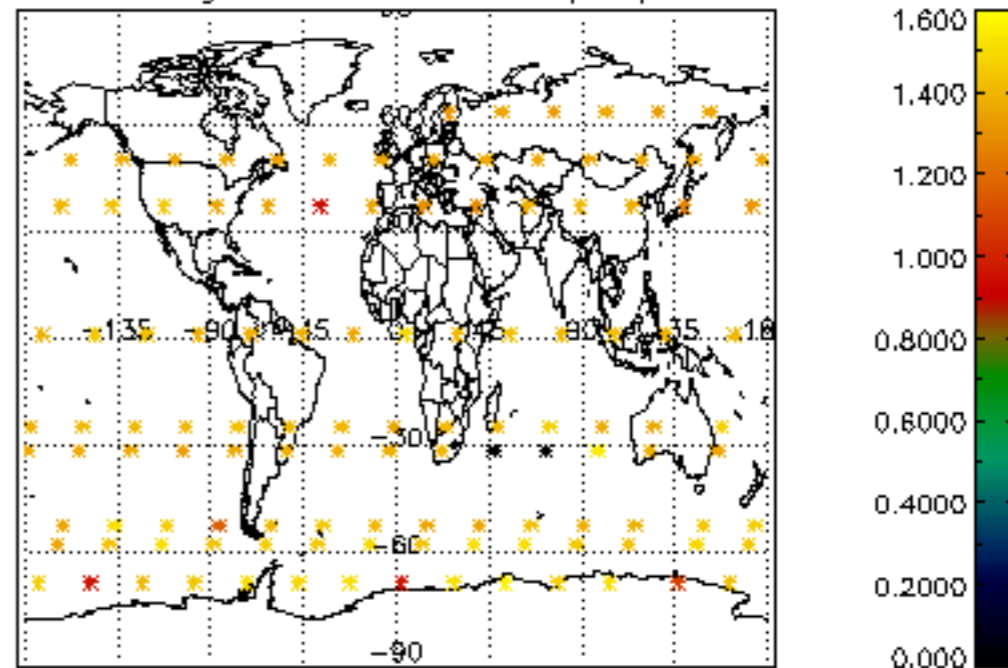
Percentage of saturation errors per profile



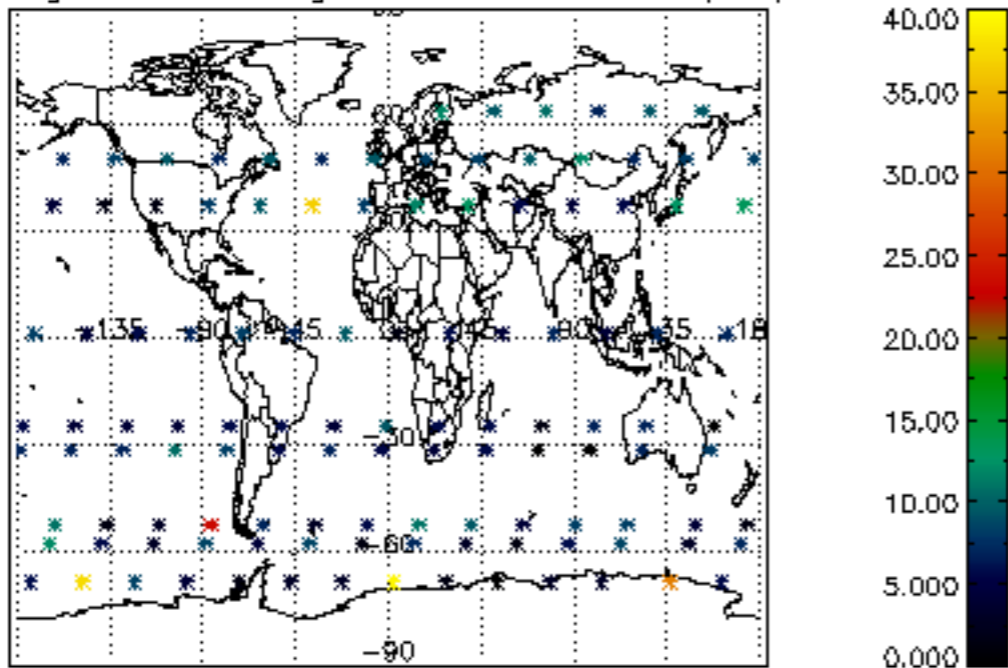
Percentage of cosmic ray hits per profile



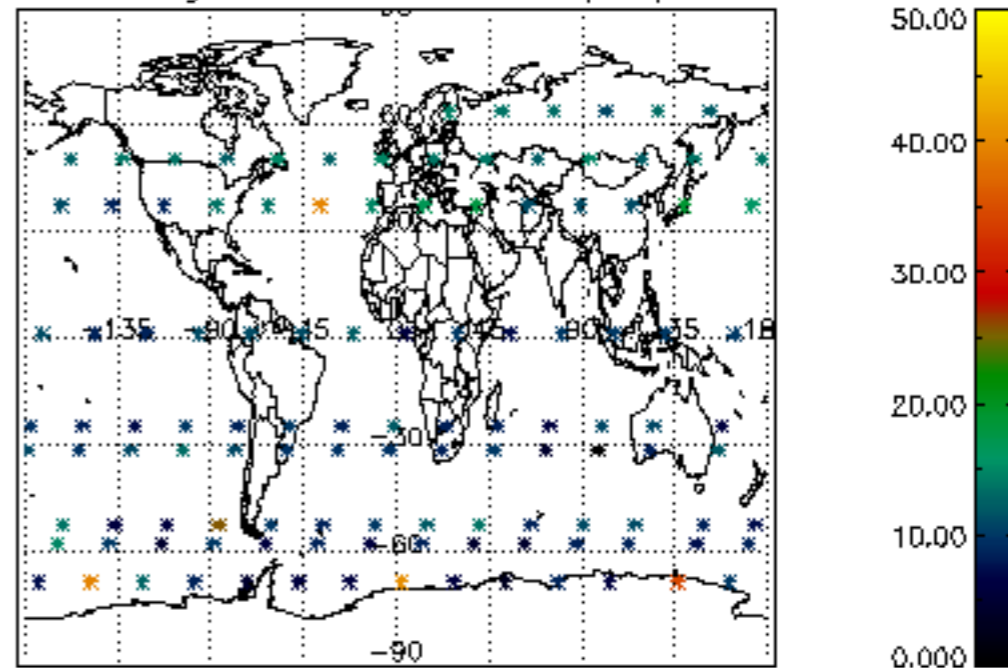
Percentage of datation errors per profile

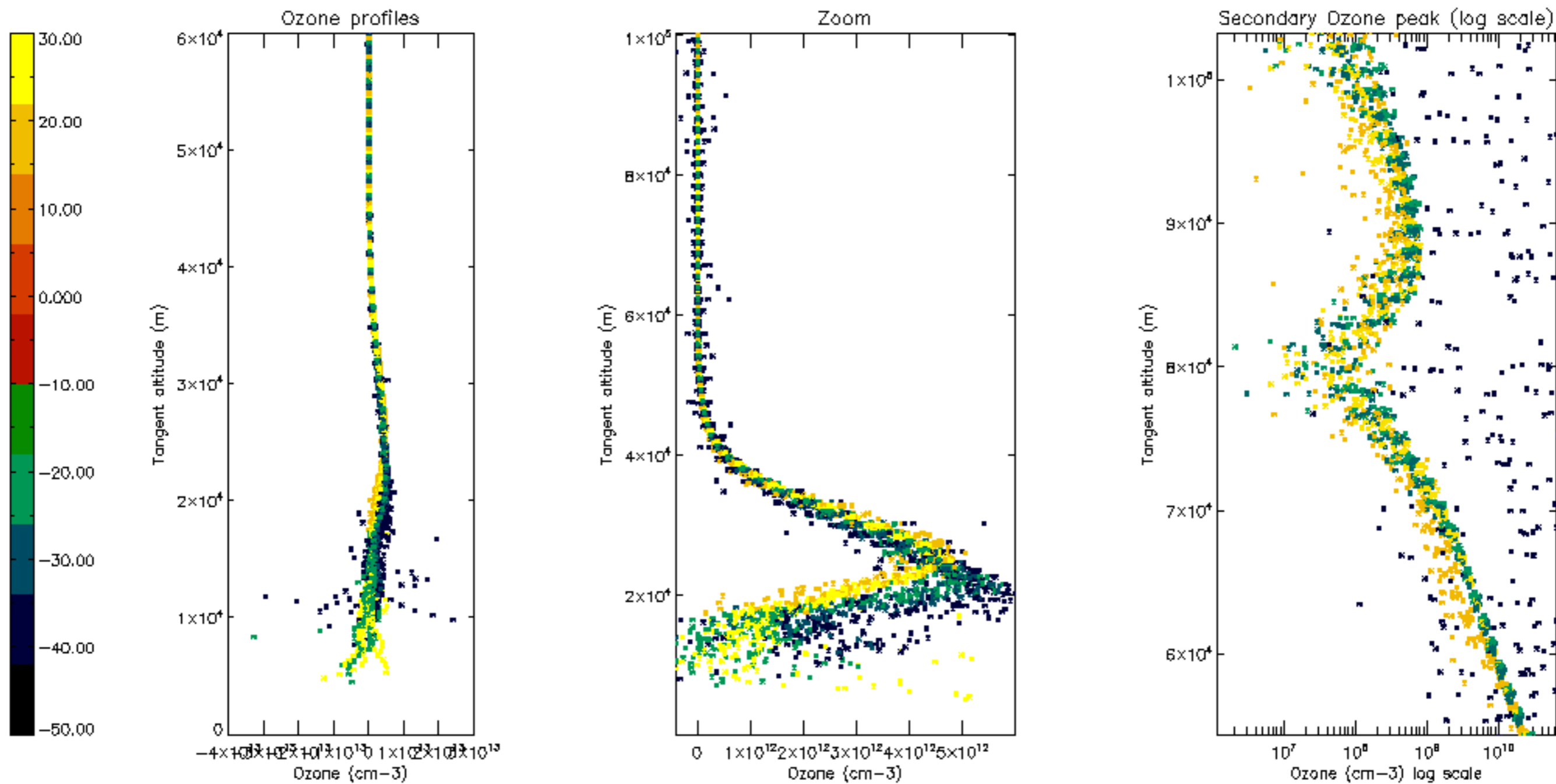


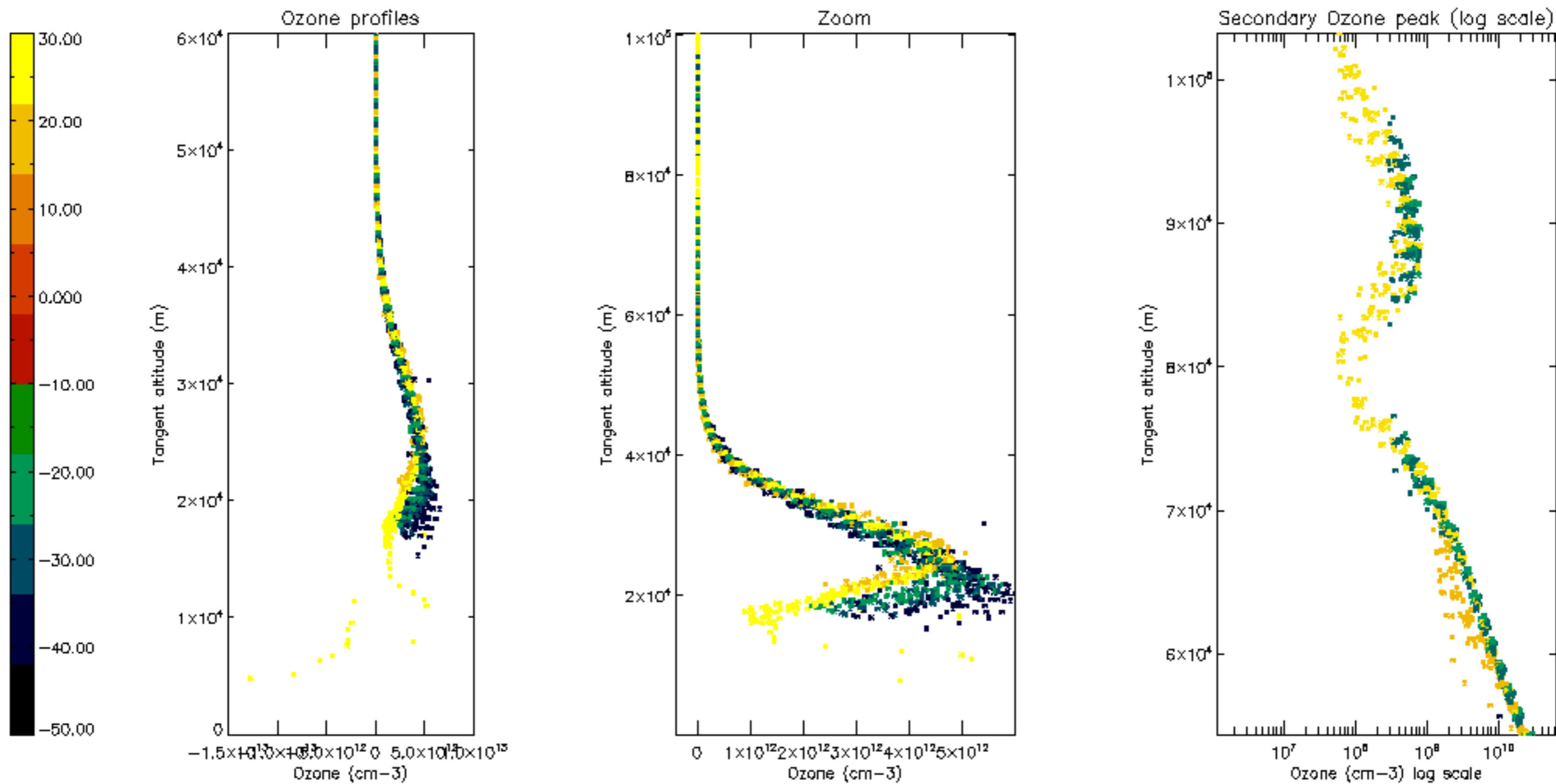
Percentage of star falling outside central band per profile

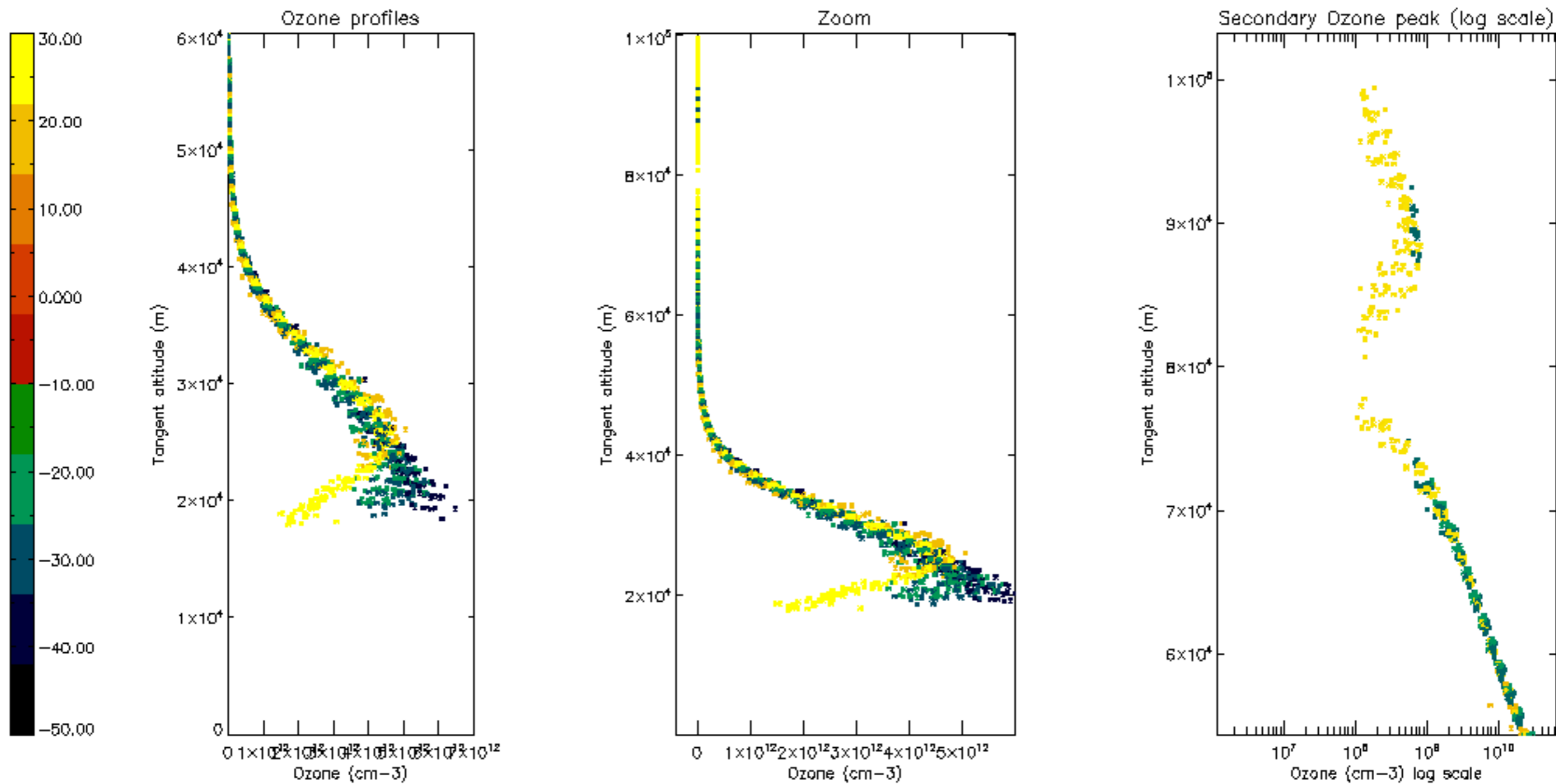


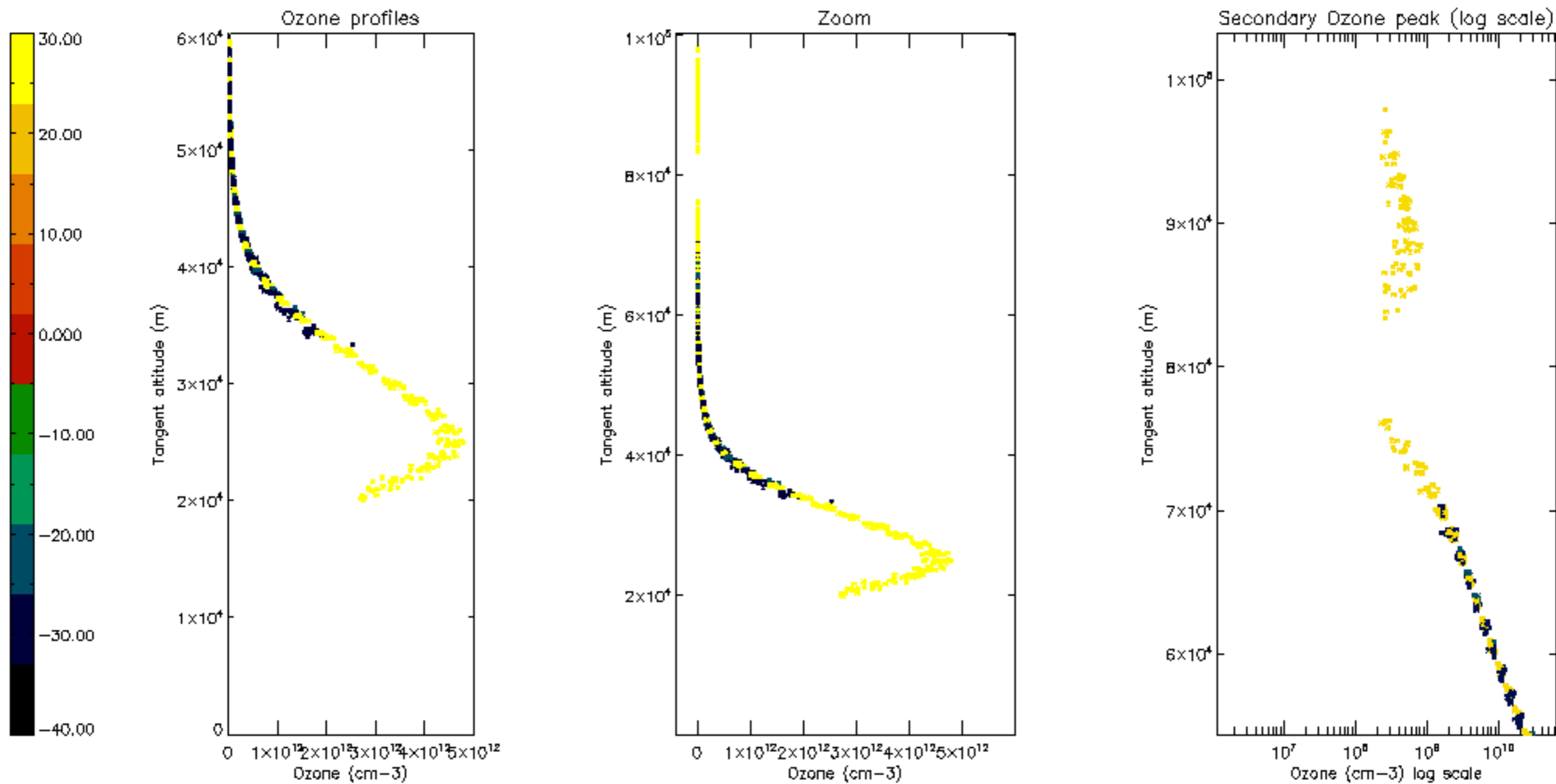
Percentage of saturation errors per profile

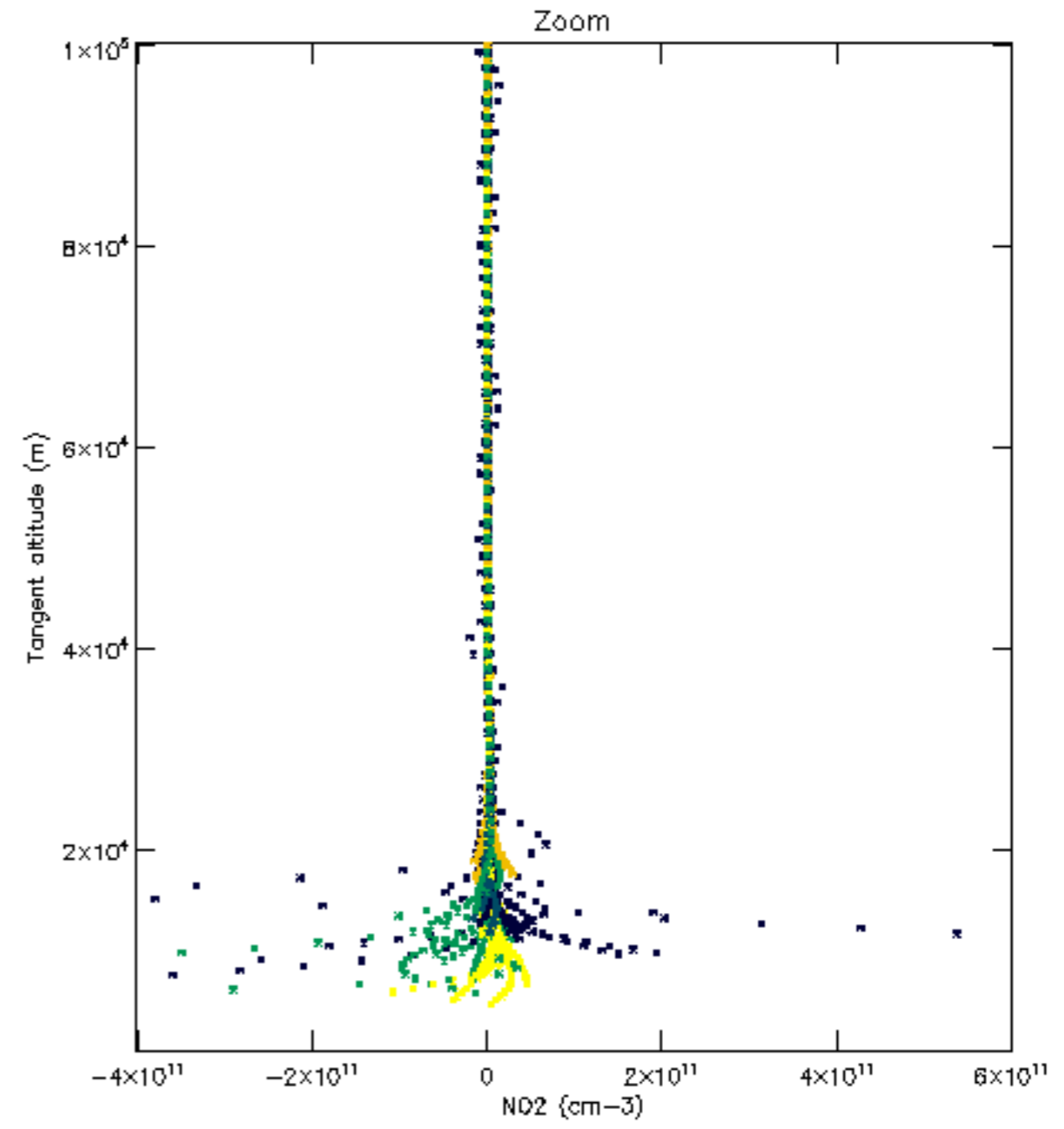
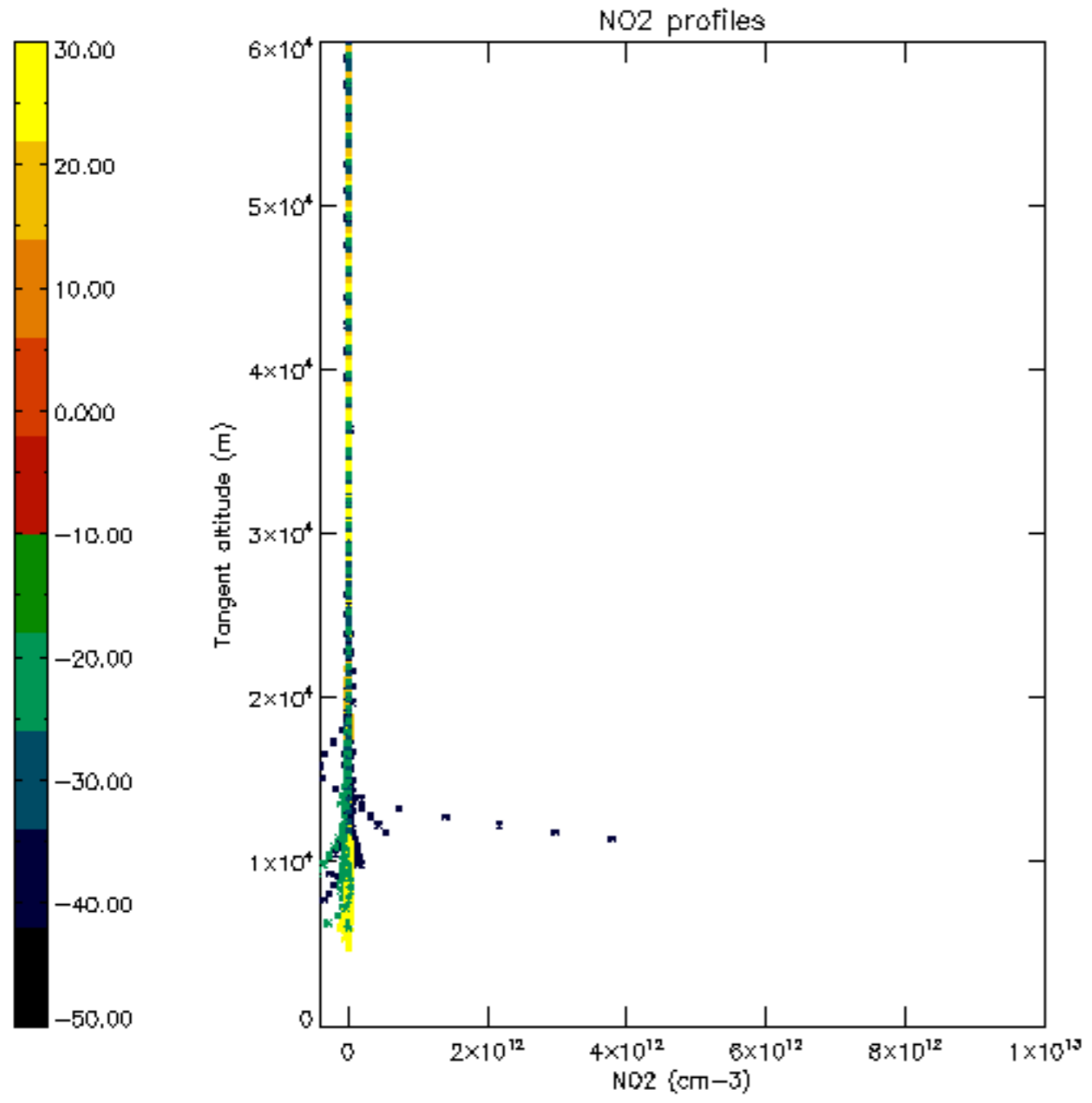


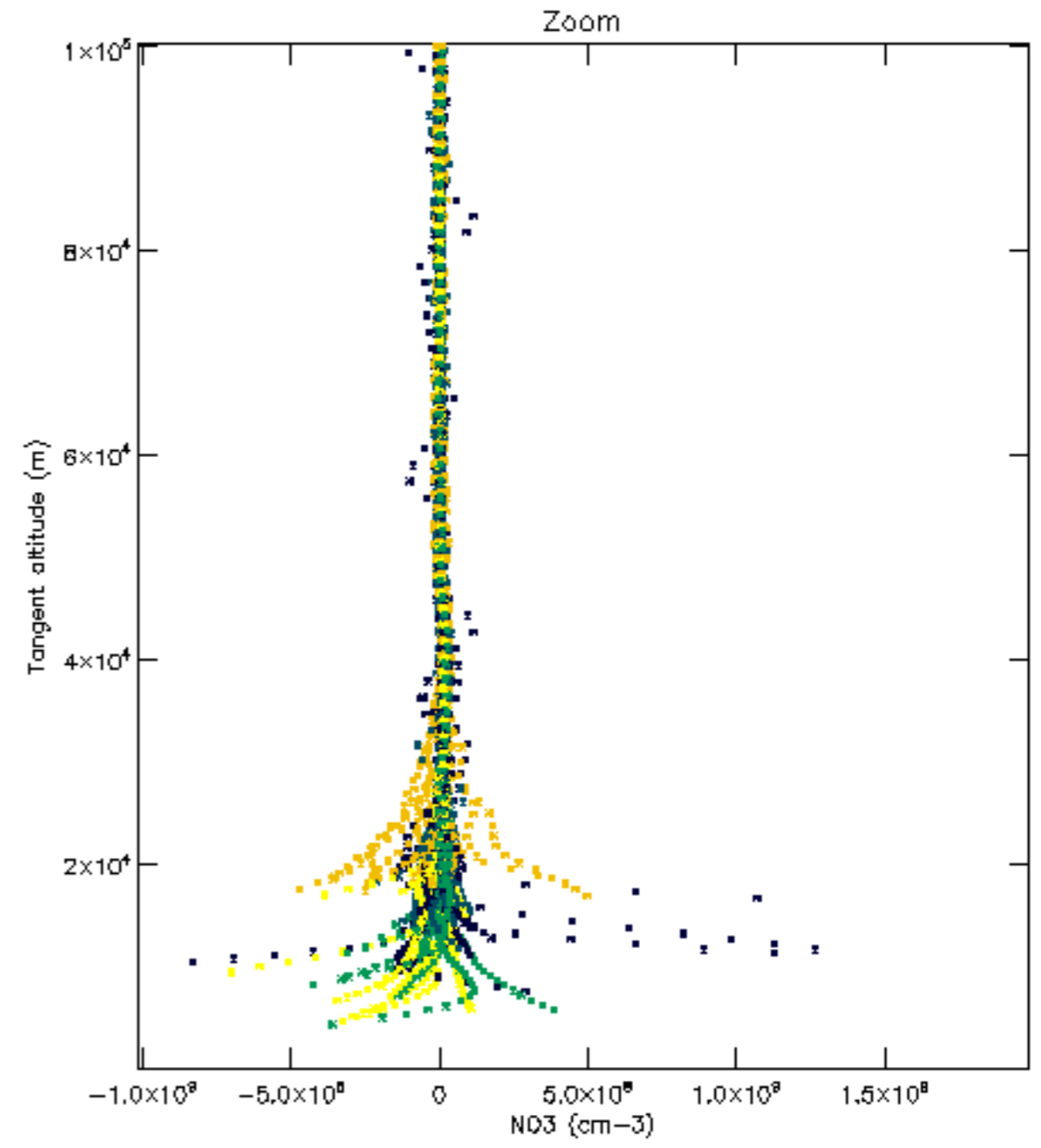
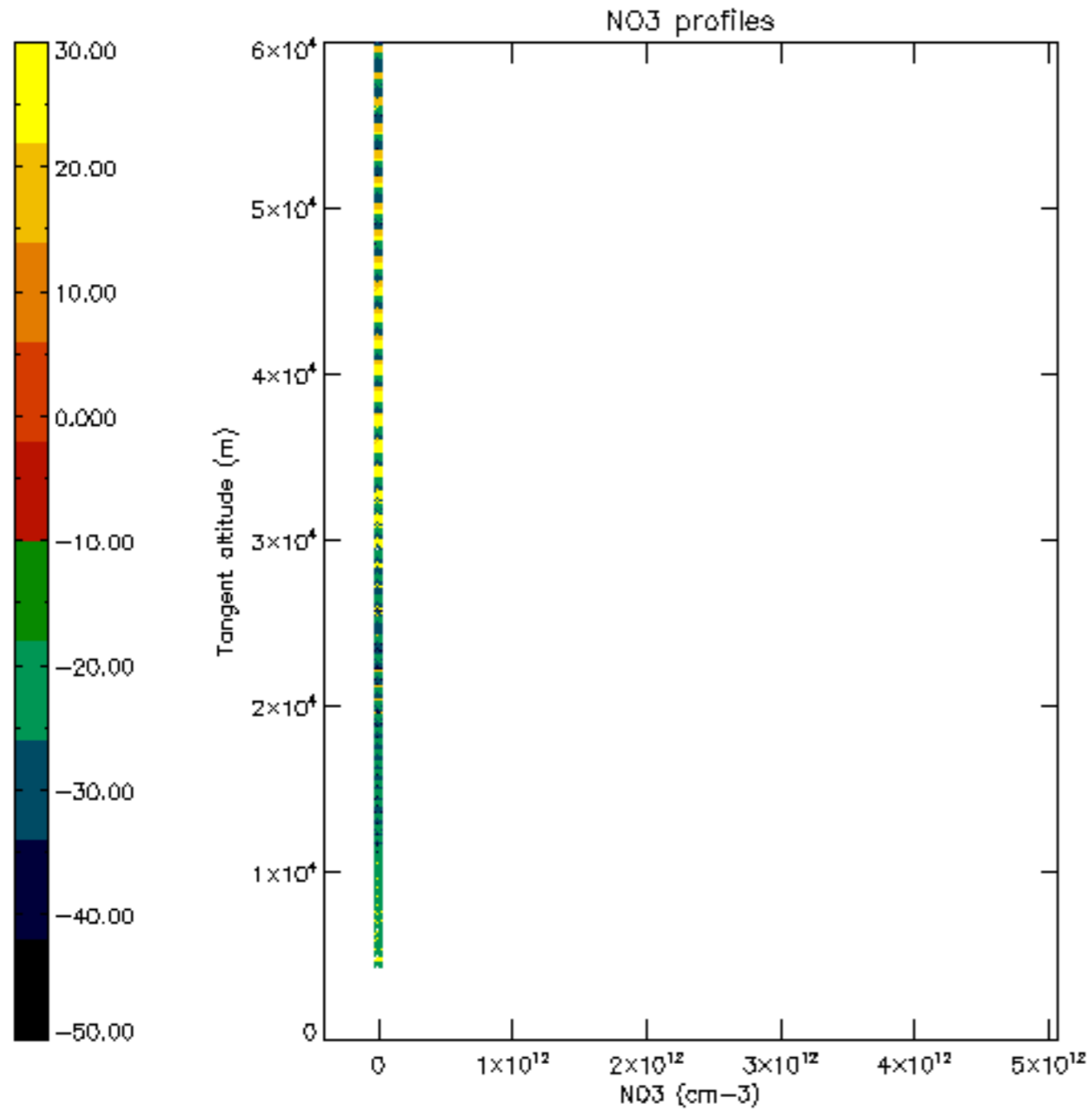




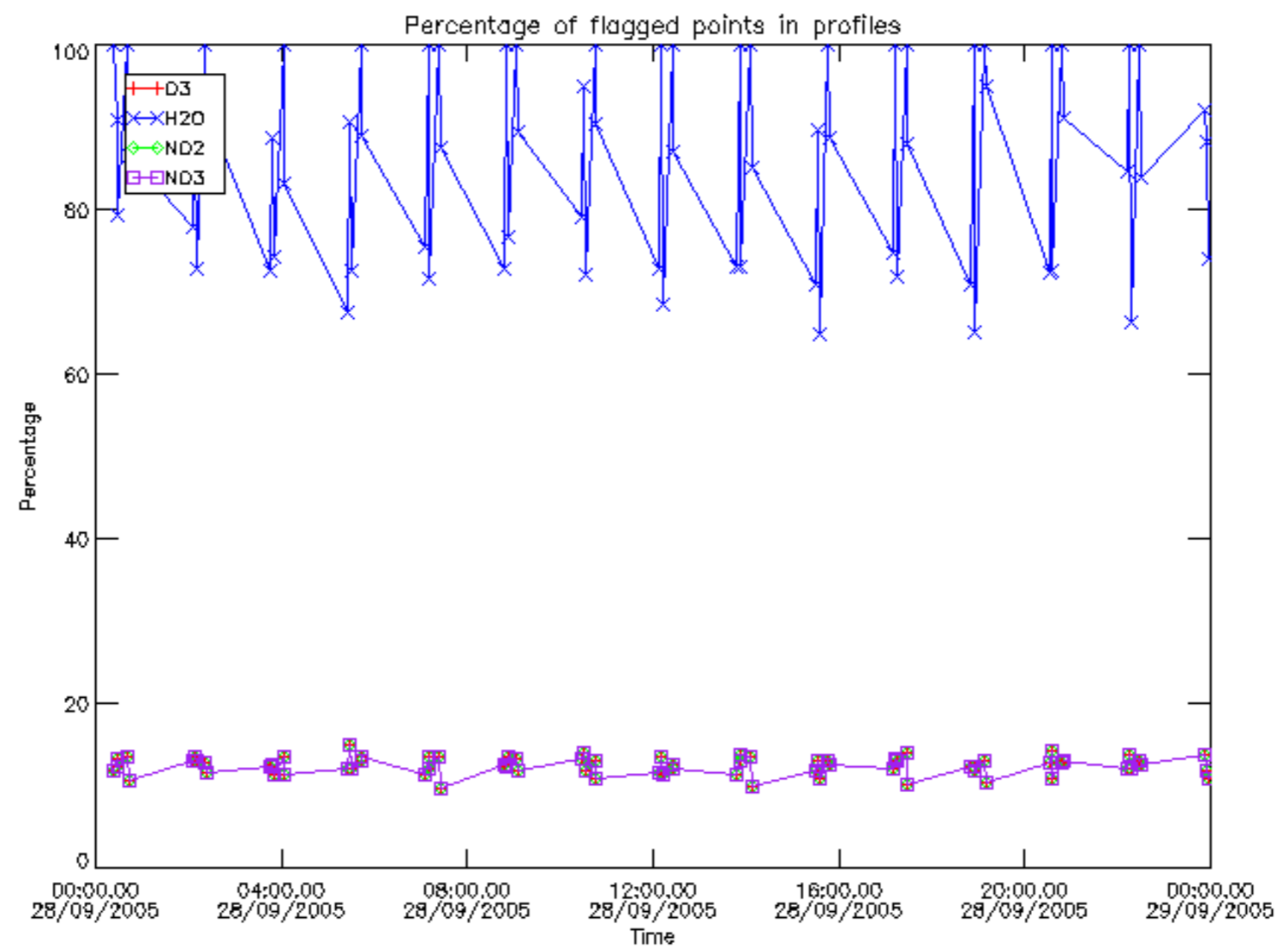




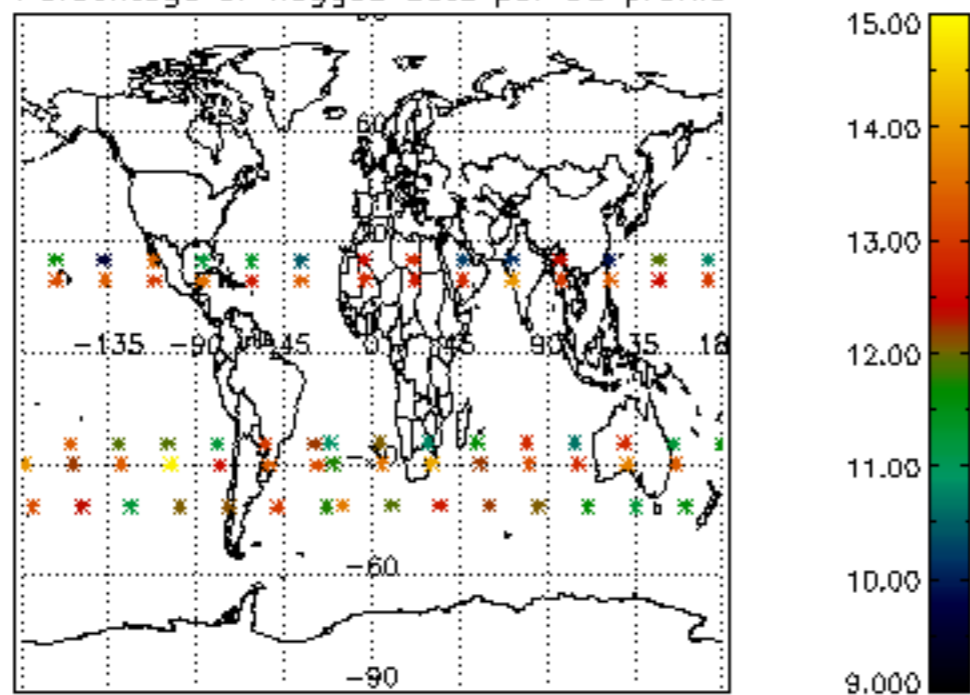




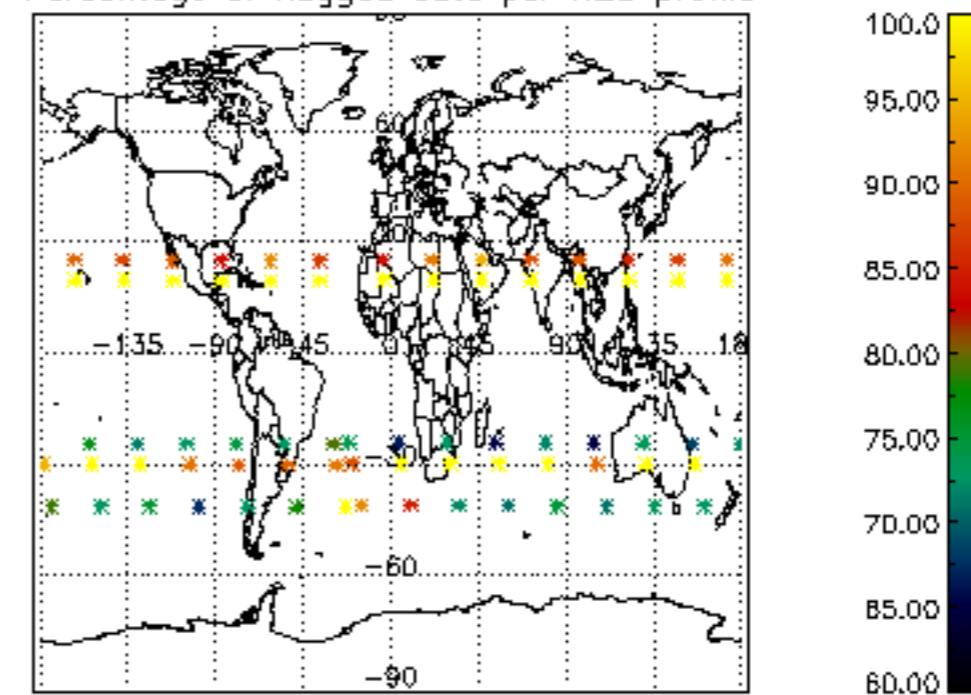




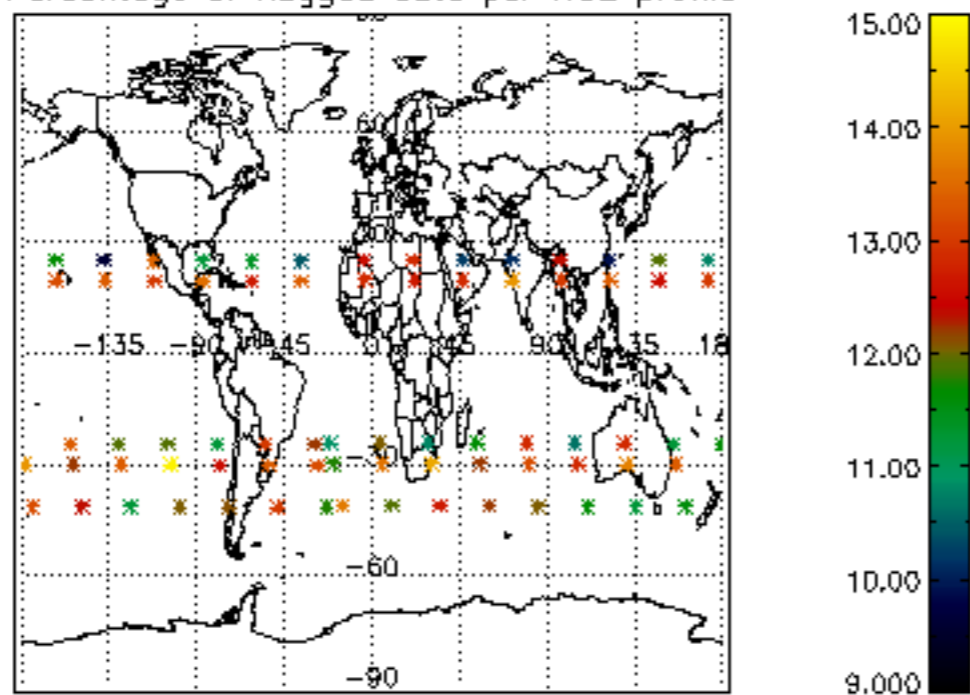
Percentage of flagged data per D3 profile



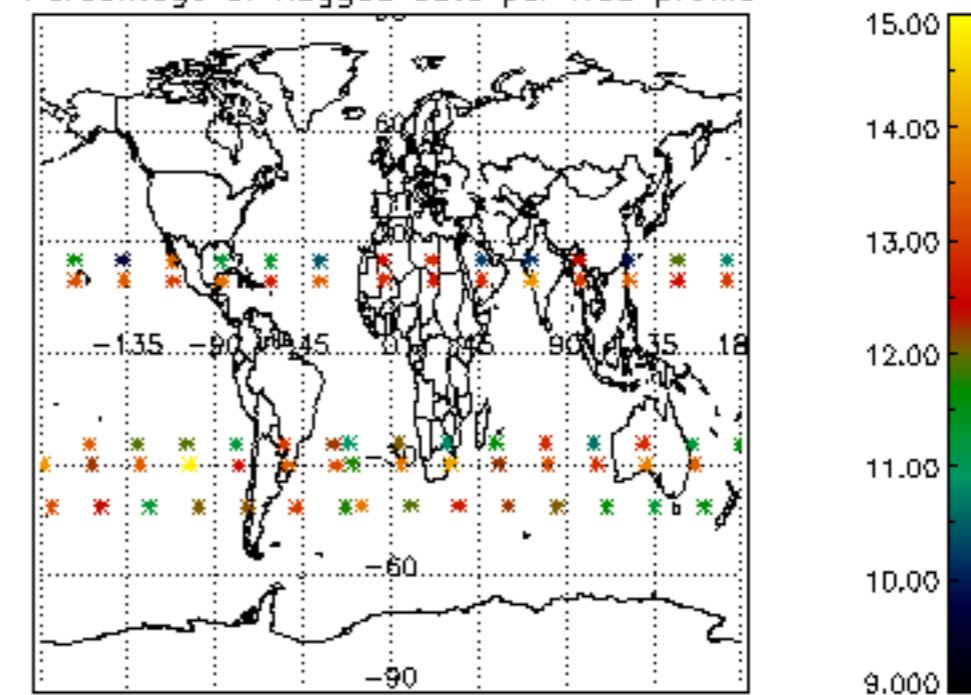
Percentage of flagged data per H2O profile

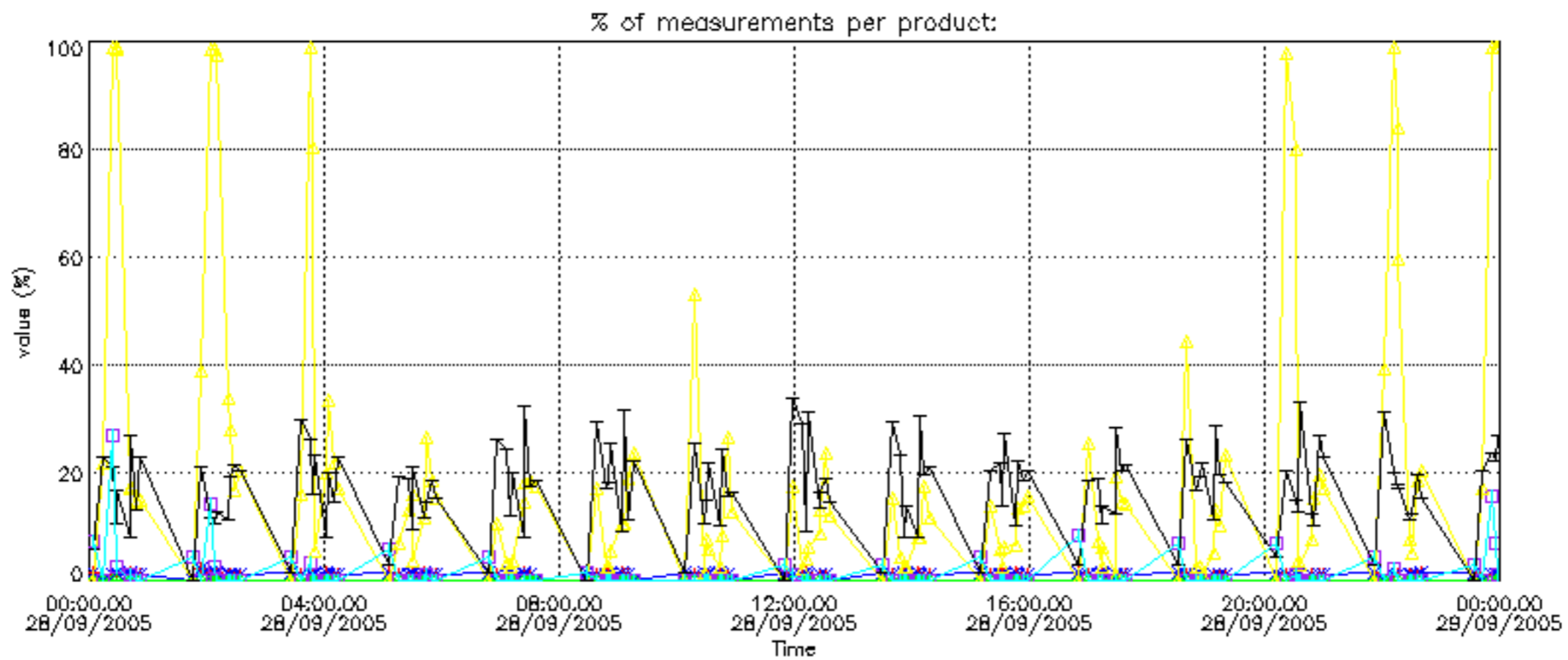


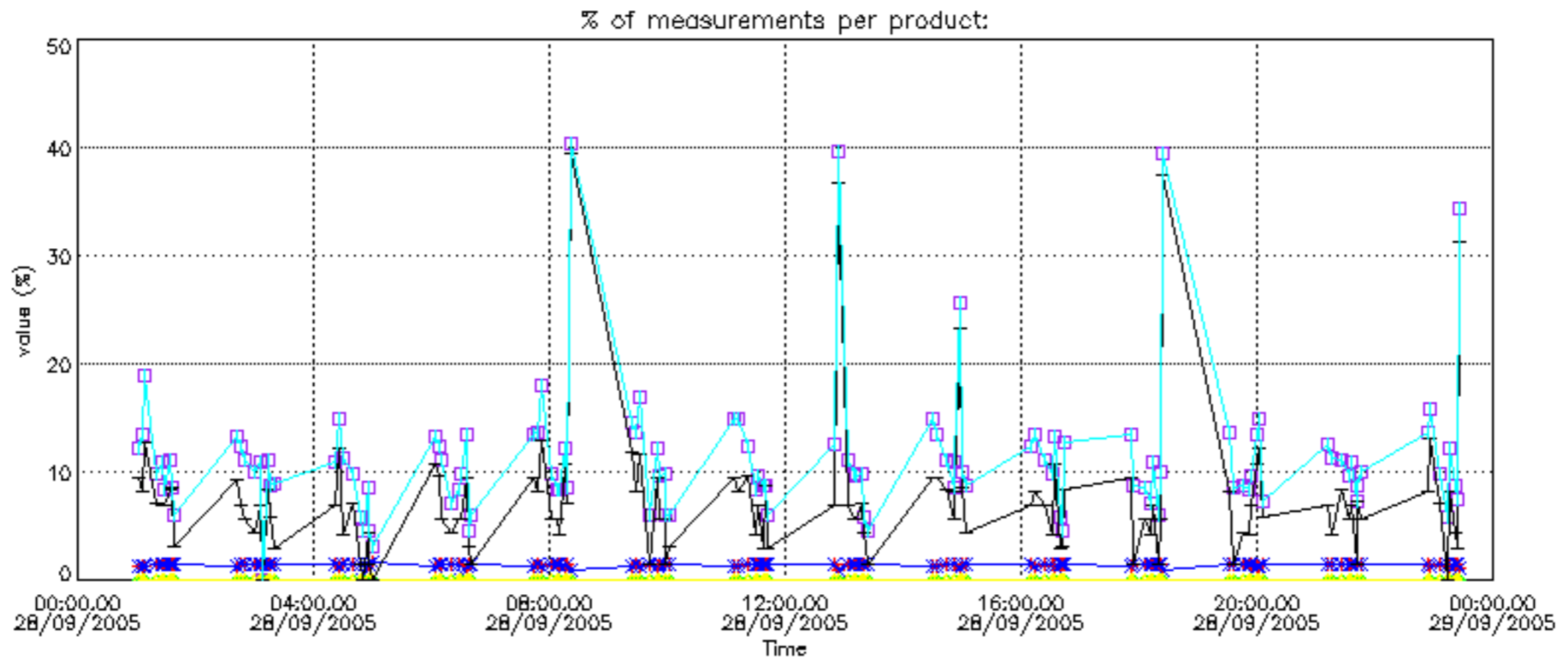
Percentage of flagged data per NO2 profile



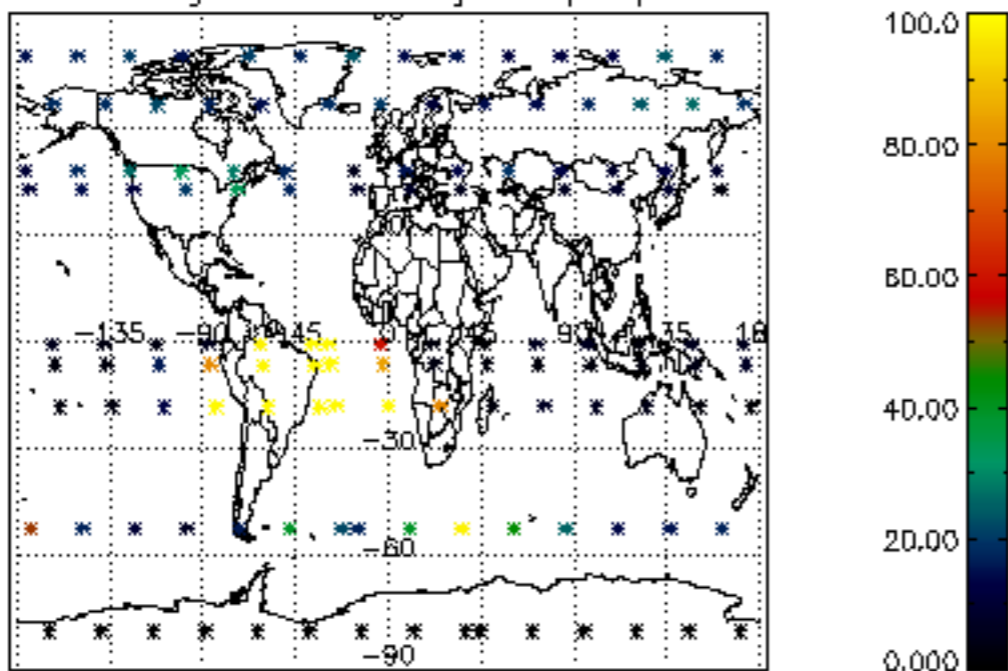
Percentage of flagged data per NO3 profile



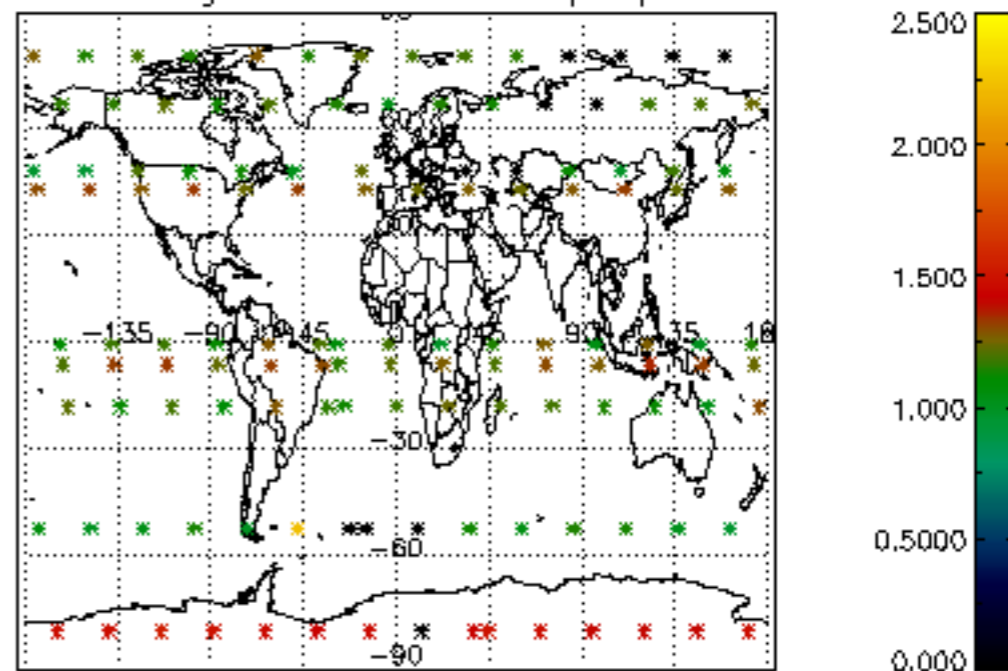




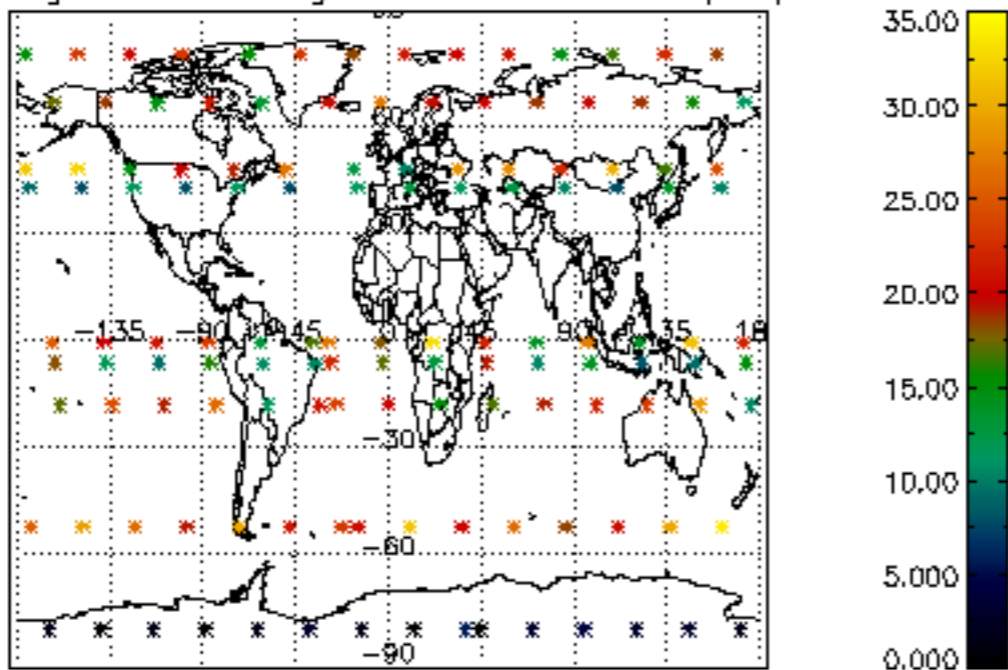
Percentage of cosmic ray hits per profile



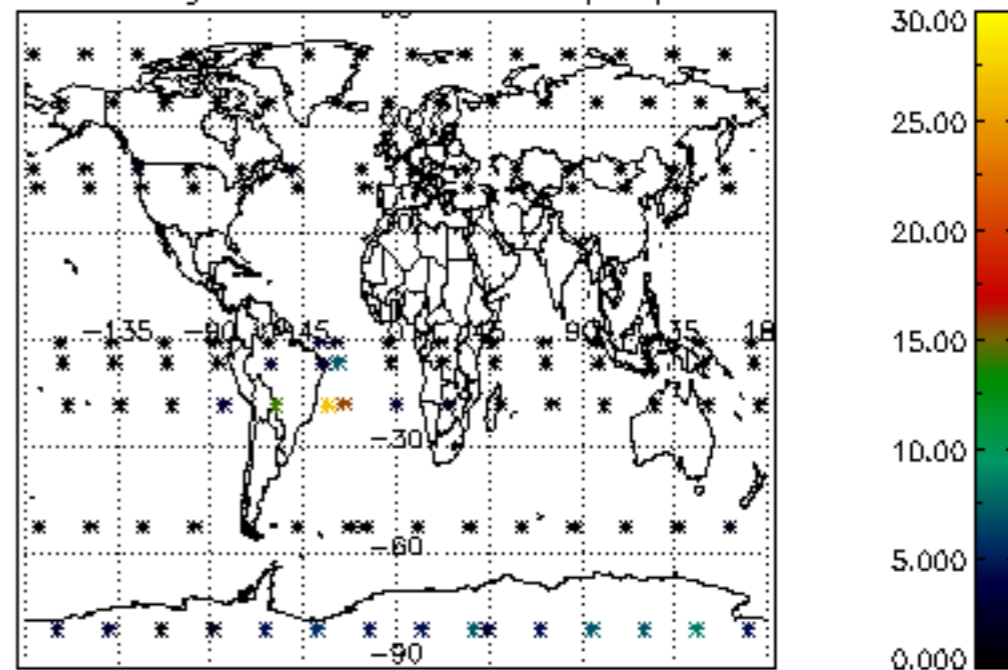
Percentage of datation errors per profile



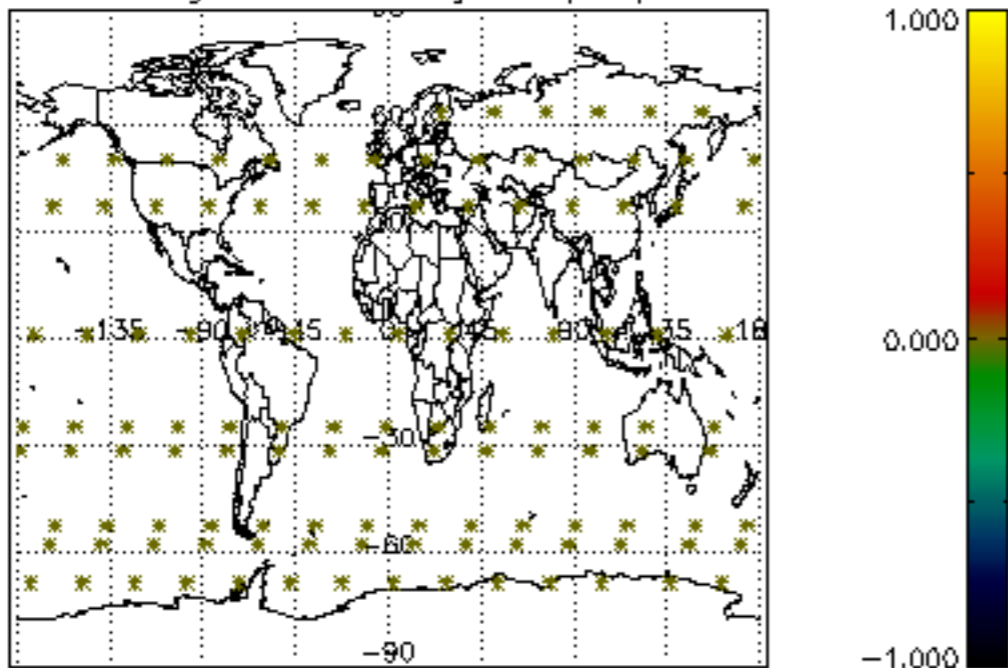
Percentage of star falling outside central band per profile



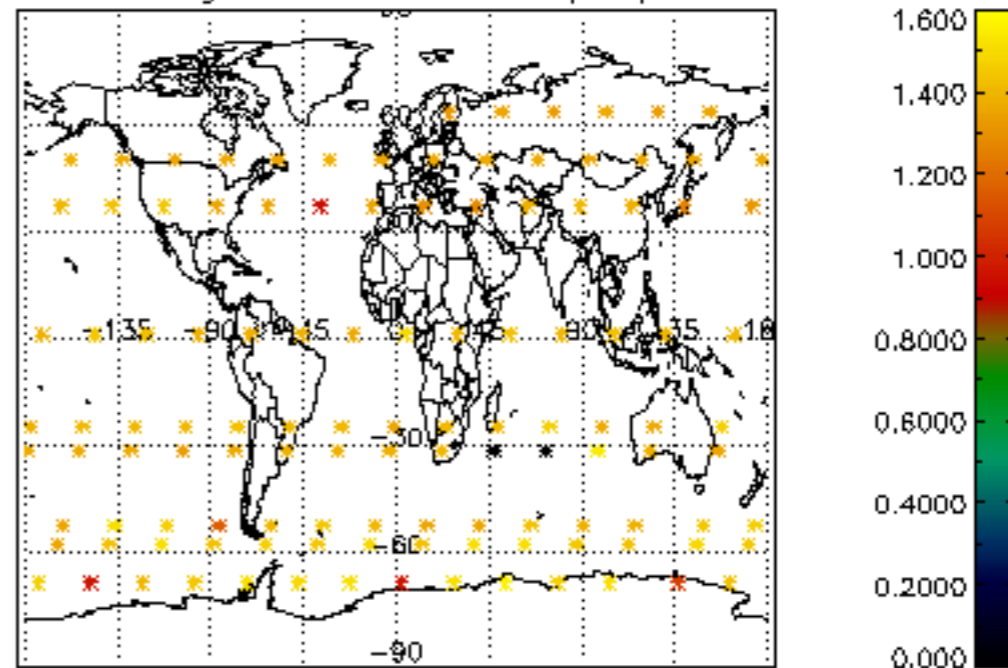
Percentage of saturation errors per profile



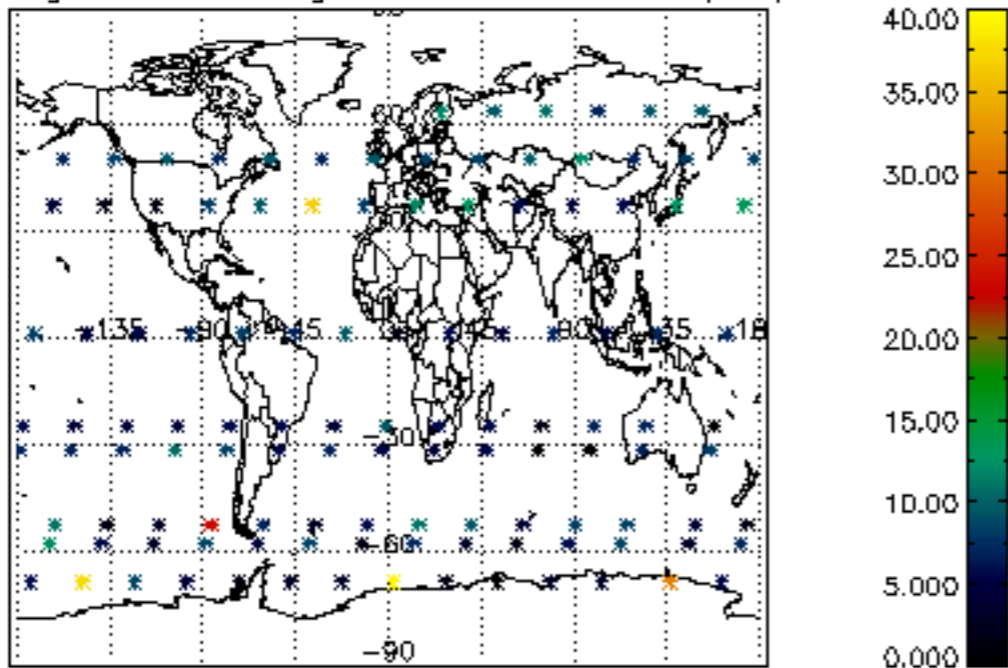
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

