

# 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	19APR2013 09:16:51
Data source version	GOMOS/6.01
Start time of products	23-08-2004 (23AUG2004 00:00:00)
Stop time of products	24-08-2004 (24AUG2004 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	377
Nb of prods with errors	1

## 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__2PRFIN20040823_000208_000002552029_00388_12967_2908.N1	23-AUG-2004 00:02:08	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12967	No
2	GOM_NL__2PRFIN20040823_000739_000000592029_00388_12967_2909.N1	23-AUG-2004 00:07:39	Twilight	59.000	28	12Bet Tau	1.6500	15200.	118	12967	No
3	GOM_NL__2PRFIN20040823_001033_000000492029_00388_12967_2910.N1	23-AUG-2004 00:10:33	Twilight	49.000	44	24Gam Gem	1.9280	11000.	98	12967	No
4	GOM_NL__2PRFIN20040823_001427_000000592029_00388_12967_2911.N1	23-AUG-2004 00:14:27	Dark	59.000	14	58Alp Ori	0.87000	3000.0	118	12967	No
5	GOM_NL__2PRFIN20040823_001601_000000652029_00388_12967_2912.N1	23-AUG-2004 00:16:01	Dark	64.500	27	24Gam Ori	1.6360	26000.	129	12967	No
6	GOM_NL__2PRFIN20040823_001759_000000602029_00388_12967_2913.N1	23-AUG-2004 00:17:59	Dark	60.000	30	46Eps Ori	1.6940	30000.	120	12967	Yes
7	GOM_NL__2PRFIN20040823_001949_000000552029_00388_12967_2914.N1	23-AUG-2004 00:19:49	Dark	55.000	1	9Alp CMa	-1.4400	11000.	110	12967	No
8	GOM_NL__2PRFIN20040823_002121_000000652029_00388_12967_2915.N1	23-AUG-2004 00:21:21	Dark	65.000	7	19Bet Ori	0.10000	14000.	130	12967	No
9	GOM_NL__2PRFIN20040823_002437_000000442029_00388_12967_2916.N1	23-AUG-2004 00:24:37	Dark	44.000	117	Pi Pup	2.7060	3800.0	88	12967	No
10	GOM_NL__2PRFIN20040823_002939_000000462029_00388_12967_2917.N1	23-AUG-2004 00:29:39	Dark	46.000	2	Alp Car	-0.73600	7000.0	92	12967	No
11	GOM_NL__2PRFIN20040823_003732_000000572029_00389_12968_2854.N1	23-AUG-2004 00:37:32	Dark	56.500	157	The1Eri	2.9060	9300.0	113	12968	No
12	GOM_NL__2PRFIN20040823_004044_000000512029_00389_12968_2855.N1	23-AUG-2004 00:40:44	Dark	50.500	9	Alp Eri	0.45300	24000.	101	12968	No
13	GOM_NL__2PRFIN20040823_004639_000000592029_00389_12968_2856.N1	23-AUG-2004 00:46:39	Straylight	59.000	84	Alp Phe	2.3970	4500.0	118	12968	No
14	GOM_NL__2PRFIN20040823_004928_000000452029_00389_12968_2857.N1	23-AUG-2004 00:49:28	Straylight	45.000	31	Alp Gru	1.7340	15200.	90	12968	No
15	GOM_NL__2PRFIN20040823_005328_000000542029_00389_12968_2858.N1	23-AUG-2004 00:53:28	Straylight	53.500	18	24Alp PsA	1.1660	9700.0	107	12968	No
16	GOM_NL__2PRFIN20040823_005842_000000482029_00389_12968_2859.N1	23-AUG-2004 00:58:42	Bright	48.000	142	49Del Cap	2.8500	8900.0	96	12968	No
17	GOM_NL__2PRFIN20040823_010158_000000432029_00389_12968_2860.N1	23-AUG-2004 01:01:58	Bright	43.000	154	22Bet Aqr	2.8990	5700.0	86	12968	No
18	GOM_NL__2PRFIN20040823_010343_000000452029_00389_12968_2861.N1	23-AUG-2004 01:03:43	Bright	45.000	162	34Alp Aqr	2.9440	5350.0	90	12968	No
19	GOM_NL__2PRFIN20040823_010648_000000432029_00389_12968_2862.N1	23-AUG-2004 01:06:48	Bright	42.500	61	8Eps Peg	2.1000	3900.0	85	12968	No
20	GOM_NL__2PRFIN20040823_011057_000000582029_00389_12968_2863.N1	23-AUG-2004 01:10:57	Bright	57.500	90	54Alp Peg	2.4870	11000.	115	12968	No
21	GOM_NL__2PRFIN20040823_011327_000000382029_00389_12968_2864.N1	23-AUG-2004 01:13:27	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	12968	No
22	GOM_NL__2PRFIN20040823_011509_000000432029_00389_12968_2865.N1	23-AUG-2004 01:15:09	Bright	42.500	66	37Gam Cyg	2.2080	5900.0	85	12968	No
23	GOM_NL__2PRFIN20040823_011640_000000382029_00389_12968_2866.N1	23-AUG-2004 01:16:40	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	12968	No
24	GOM_NL__2PRFIN20040823_012014_000000422029_00389_12968_2867.N1	23-AUG-2004 01:20:14	Bright	41.500	69	33Gam Dra	2.2310	3800.0	83	12968	No
25	GOM_NL__2PRFIN20040823_012151_000000372029_00389_12968_2868.N1	23-AUG-2004 01:21:51	Bright	36.500	89	5Alp Cep	2.4510	8000.0	73	12968	No
26	GOM_NL__2PRFIN20040823_012548_000000482029_00389_12968_2869.N1	23-AUG-2004 01:25:48	Bright	48.000	74	11Bet Cas	2.2680	6600.0	96	12968	No
27	GOM_NL__2PRFIN20040823_012821_000000392029_00389_12968_2870.N1	23-AUG-2004 01:28:21	Bright	38.500	60	7Bet UMi	2.0810	3950.0	77	12968	No
28	GOM_NL__2PRFIN20040823_013457_000000402029_00389_12968_2871.N1	23-AUG-2004 01:34:57	Bright	39.500	36	50Alp UMa	1.8000	6300.0	79	12968	No
29	GOM_NL__2PRFIN20040823_013734_000000592029_00389_12968_2872.N1	23-AUG-2004 01:37:34	Bright	59.000	35	33Alp Per	1.7950	6250.0	118	12968	No
30	GOM_NL__2PRFIN20040823_014242_000002552029_00389_12968_2873.N1	23-AUG-2004 01:42:42	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12968	No
31	GOM_NL__2PRFIN20040823_014815_000000602029_00389_12968_2874.N1	23-AUG-2004 01:48:15	Twilight	60.000	28	12Bet Tau	1.6500	15200.	120	12968	No
32	GOM_NL__2PRFIN20040823_015108_000000502029_00389_12968_2875.N1	23-AUG-2004 01:51:08	Twilight	50.000	44	24Gam Gem	1.9280	11000.	100	12968	No
33	GOM_NL__2PRFIN20040823_015502_000000602029_00389_12968_2876.N1	23-AUG-2004 01:55:02	Dark	60.000	14	58Alp Ori	0.87000	3000.0	120	12968	No
34	GOM_NL__2PRFIN20040823_015638_000000642029_00389_12968_2877.N1	23-AUG-2004 01:56:38	Dark	63.500	27	24Gam Ori	1.6360	26000.	127	12968	No
35	GOM_NL__2PRFIN20040823_015835_000000602029_00389_12968_2878.N1	23-AUG-2004 01:58:35	Dark	59.500	30	46Eps Ori	1.6940	30000.	119	12968	No
36	GOM_NL__2PRFIN20040823_020026_000000552029_00389_12968_2879.N1	23-AUG-2004 02:00:26	Dark	55.000	1	9Alp CMa	-1.4400	11000.	110	12968	No
37	GOM_NL__2PRFIN20040823_020158_000000662029_00389_12968_2880.N1	23-AUG-2004 02:01:58	Dark	65.500	7	19Bet Ori	0.10000	14000.	131	12968	No
38	GOM_NL__2PRFIN20040823_020513_000000432029_00389_12968_2881.N1	23-AUG-2004 02:05:13	Dark	42.500	117	Pi Pup	2.7060	3800.0	85	12968	No
39	GOM_NL__2PRFIN20040823_021014_000000472029_00389_12968_2882.N1	23-AUG-2004 02:10:14	Dark	47.000	2	Alp Car	-0.73600	7000.0	94	12968	No
40	GOM_NL__2PRFIN20040823_021810_000000582029_00390_12969_2856.N1	23-AUG-2004 02:18:10	Dark	57.500	157	The1Eri	2.9060	9300.0	115	12969	No
41	GOM_NL__2PRFIN20040823_022120_000000592029_00390_12969_2857.N1	23-AUG-2004 02:21:20	Dark	58.500	9	Alp Eri	0.45300	24000.	117	12969	No
42	GOM_NL__2PRFIN20040823_022717_000000582029_00390_12969_2858.N1	23-AUG-2004 02:27:17	Straylight	57.500	84	Alp Phe	2.3970	4500.0	115	12969	No











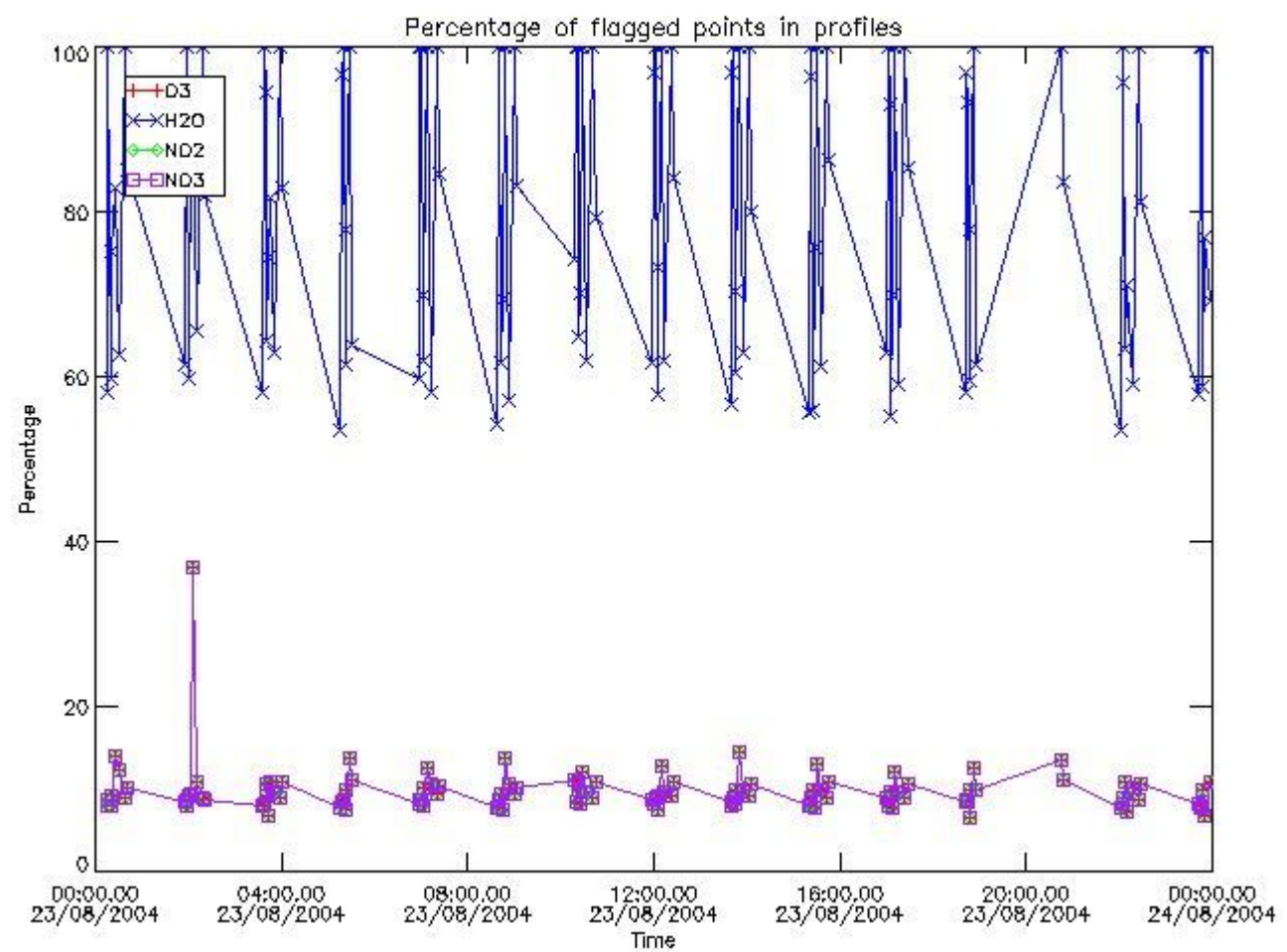
338	GOM_NL__2PRFIN20040823_214928_000002552029_00401_12980_2798.N1	23-AUG-2004 21:49:28	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12980	No
339	GOM_NL__2PRFIN20040823_215529_000000602029_00401_12980_2799.N1	23-AUG-2004 21:55:29	Twilight	59.500	28	12Bet Tau	1.6500	15200.	119	12980	No
340	GOM_NL__2PRFIN20040823_215823_000000512029_00401_12980_2800.N1	23-AUG-2004 21:58:23	Twilight	50.500	44	24Gam Gem	1.9280	11000.	101	12980	No
341	GOM_NL__2PRFIN20040823_215954_000000422029_00401_12980_2801.N1	23-AUG-2004 21:59:54	Twilight	42.000	153	3Bet CMi	2.8940	13100.	84	12980	No
342	GOM_NL__2PRFIN20040823_220221_000000662029_00401_12980_2802.N1	23-AUG-2004 22:02:21	Dark	66.000	14	58Alp Ori	0.87000	3000.0	132	12980	No
343	GOM_NL__2PRFIN20040823_220400_000000682029_00401_12980_2803.N1	23-AUG-2004 22:04:00	Dark	68.000	27	24Gam Ori	1.6360	26000.	136	12980	No
344	GOM_NL__2PRFIN20040823_220556_000000632029_00401_12980_2804.N1	23-AUG-2004 22:05:56	Dark	62.500	30	46Eps Ori	1.6940	30000.	125	12980	No
345	GOM_NL__2PRFIN20040823_220745_000000472029_00401_12980_2805.N1	23-AUG-2004 22:07:45	Dark	47.000	1	9Alp CMa	-1.4400	11000.	94	12980	No
346	GOM_NL__2PRFIN20040823_220922_000000782029_00401_12980_2806.N1	23-AUG-2004 22:09:22	Dark	78.000	7	19Bet Ori	0.10000	14000.	156	12980	No
347	GOM_NL__2PRFIN20040823_221730_000000512029_00401_12980_2807.N1	23-AUG-2004 22:17:30	Dark	50.500	2	Alp Car	-0.73600	7000.0	101	12980	No
348	GOM_NL__2PRFIN20040823_222536_000000592029_00402_12981_2778.N1	23-AUG-2004 22:25:36	Dark	59.000	157	The1Eri	2.9060	9300.0	118	12981	No
349	GOM_NL__2PRFIN20040823_222840_000000492029_00402_12981_2779.N1	23-AUG-2004 22:28:40	Dark	48.500	9	Alp Eri	0.45300	24000.	97	12981	No
350	GOM_NL__2PRFIN20040823_223341_000000432029_00402_12981_2780.N1	23-AUG-2004 22:33:41	Straylight	43.000	148	Alp Tuc	2.8780	4100.0	86	12981	No
351	GOM_NL__2PRFIN20040823_223600_000000402029_00402_12981_2781.N1	23-AUG-2004 22:36:00	Straylight	39.500	45	Alp Pav	1.9400	26000.	79	12981	No
352	GOM_NL__2PRFIN20040823_223720_000000412029_00402_12981_2782.N1	23-AUG-2004 22:37:20	Straylight	40.500	31	Alp Gru	1.7340	15200.	81	12981	No
353	GOM_NL__2PRFIN20040823_224121_000000542029_00402_12981_2783.N1	23-AUG-2004 22:41:21	Straylight	54.000	18	24Alp PsA	1.1660	9700.0	108	12981	No
354	GOM_NL__2PRFIN20040823_224629_000000542029_00402_12981_2784.N1	23-AUG-2004 22:46:29	Bright	53.500	142	49Del Cap	2.8500	8900.0	107	12981	No
355	GOM_NL__2PRFIN20040823_224946_000000422029_00402_12981_2785.N1	23-AUG-2004 22:49:46	Bright	41.500	154	22Bet Aqr	2.8990	5700.0	83	12981	No
356	GOM_NL__2PRFIN20040823_225127_000000472029_00402_12981_2786.N1	23-AUG-2004 22:51:27	Bright	46.500	162	34Alp Aqr	2.9440	5350.0	93	12981	No
357	GOM_NL__2PRFIN20040823_225432_000000432029_00402_12981_2787.N1	23-AUG-2004 22:54:32	Bright	43.000	61	8Eps Peg	2.1000	3900.0	86	12981	No
358	GOM_NL__2PRFIN20040823_225833_000000552029_00402_12981_2788.N1	23-AUG-2004 22:58:33	Bright	55.000	90	54Alp Peg	2.4870	11000.	110	12981	No
359	GOM_NL__2PRFIN20040823_230114_000000382029_00402_12981_2789.N1	23-AUG-2004 23:01:14	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	12981	No
360	GOM_NL__2PRFIN20040823_230258_000000402029_00402_12981_2790.N1	23-AUG-2004 23:02:58	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	12981	No
361	GOM_NL__2PRFIN20040823_230427_000000412029_00402_12981_2791.N1	23-AUG-2004 23:04:27	Bright	40.500	19	50Alp Cyg	1.2460	10500.	81	12981	No
362	GOM_NL__2PRFIN20040823_230937_000000402029_00402_12981_2792.N1	23-AUG-2004 23:09:37	Bright	40.000	89	5Alp Cep	2.4510	8000.0	80	12981	No
363	GOM_NL__2PRFIN20040823_231326_000000462029_00402_12981_2793.N1	23-AUG-2004 23:13:26	Bright	45.500	74	11Bet Cas	2.2680	6600.0	91	12981	No
364	GOM_NL__2PRFIN20040823_231612_000000382029_00402_12981_2794.N1	23-AUG-2004 23:16:12	Bright	38.000	60	7Bet UMi	2.0810	3950.0	76	12981	No
365	GOM_NL__2PRFIN20040823_231844_000001352029_00402_12981_2795.N1	23-AUG-2004 23:18:44	Bright	135.00	53	43Bet And	2.0480	3300.0	270	12981	No
366	GOM_NL__2PRFIN20040823_232305_000000572029_00402_12981_2796.N1	23-AUG-2004 23:23:05	Bright	57.000	160	23Gam Per	2.9300	4700.0	114	12981	No
367	GOM_NL__2PRFIN20040823_232512_000000622029_00402_12981_2797.N1	23-AUG-2004 23:25:12	Bright	61.500	35	33Alp Per	1.7950	6250.0	123	12981	No
368	GOM_NL__2PRFIN20040823_233002_000002552029_00402_12981_2798.N1	23-AUG-2004 23:30:02	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12981	No
369	GOM_NL__2PRFIN20040823_233605_000000602029_00402_12981_2799.N1	23-AUG-2004 23:36:05	Twilight	60.000	28	12Bet Tau	1.6500	15200.	120	12981	No
370	GOM_NL__2PRFIN20040823_233858_000000522029_00402_12981_2800.N1	23-AUG-2004 23:38:58	Twilight	52.000	44	24Gam Gem	1.9280	11000.	104	12981	No
371	GOM_NL__2PRFIN20040823_234030_000000412029_00402_12981_2801.N1	23-AUG-2004 23:40:30	Twilight	41.000	153	3Bet CMi	2.8940	13100.	82	12981	No
372	GOM_NL__2PRFIN20040823_234257_000000622029_00402_12981_2802.N1	23-AUG-2004 23:42:57	Dark	62.000	14	58Alp Ori	0.87000	3000.0	124	12981	No
373	GOM_NL__2PRFIN20040823_234437_000000662029_00402_12981_2803.N1	23-AUG-2004 23:44:37	Dark	65.500	27	24Gam Ori	1.6360	26000.	131	12981	No
374	GOM_NL__2PRFIN20040823_234631_000000652029_00402_12981_2804.N1	23-AUG-2004 23:46:31	Dark	64.500	30	46Eps Ori	1.6940	30000.	129	12981	No
375	GOM_NL__2PRFIN20040823_234822_000000522029_00402_12981_2805.N1	23-AUG-2004 23:48:22	Dark	51.500	1	9Alp CMa	-1.4400	11000.	103	12981	No
376	GOM_NL__2PRFIN20040823_234959_000000762029_00402_12981_2806.N1	23-AUG-2004 23:49:59	Dark	76.000	7	19Bet Ori	0.10000	14000.	152	12981	No
377	GOM_NL__2PRFIN20040823_235804_000000482029_00402_12981_2807.N1	23-AUG-2004 23:58:04	Dark	47.500	2	Alp Car	-0.73600	7000.0	95	12981	No

### 3. Quality information per product

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

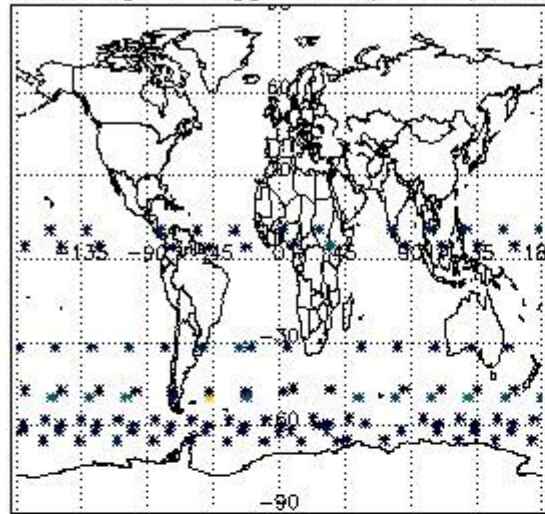
#### 3.1 Plot quality information per product (time dependant)



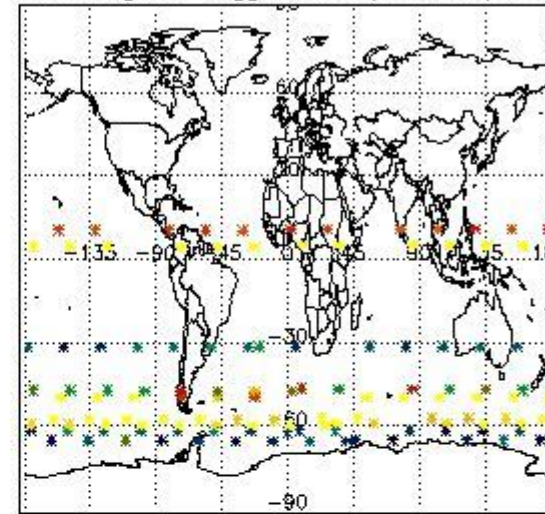


3.2 Plot quality information per product (world map)

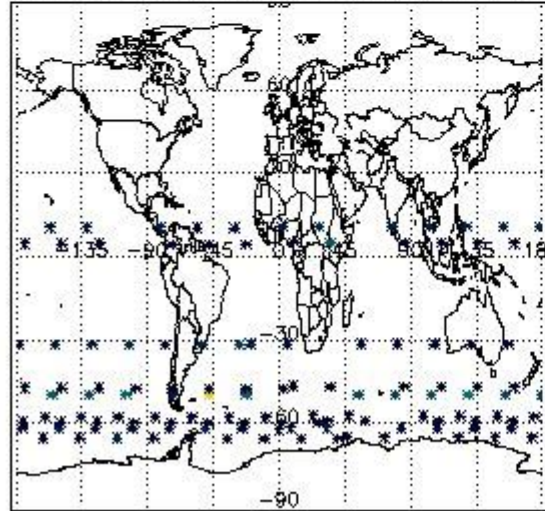
Percentage of flagged data per O3 profile



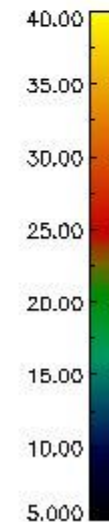
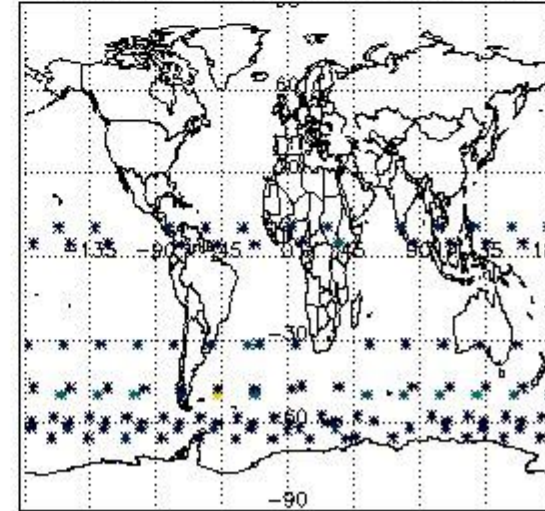
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

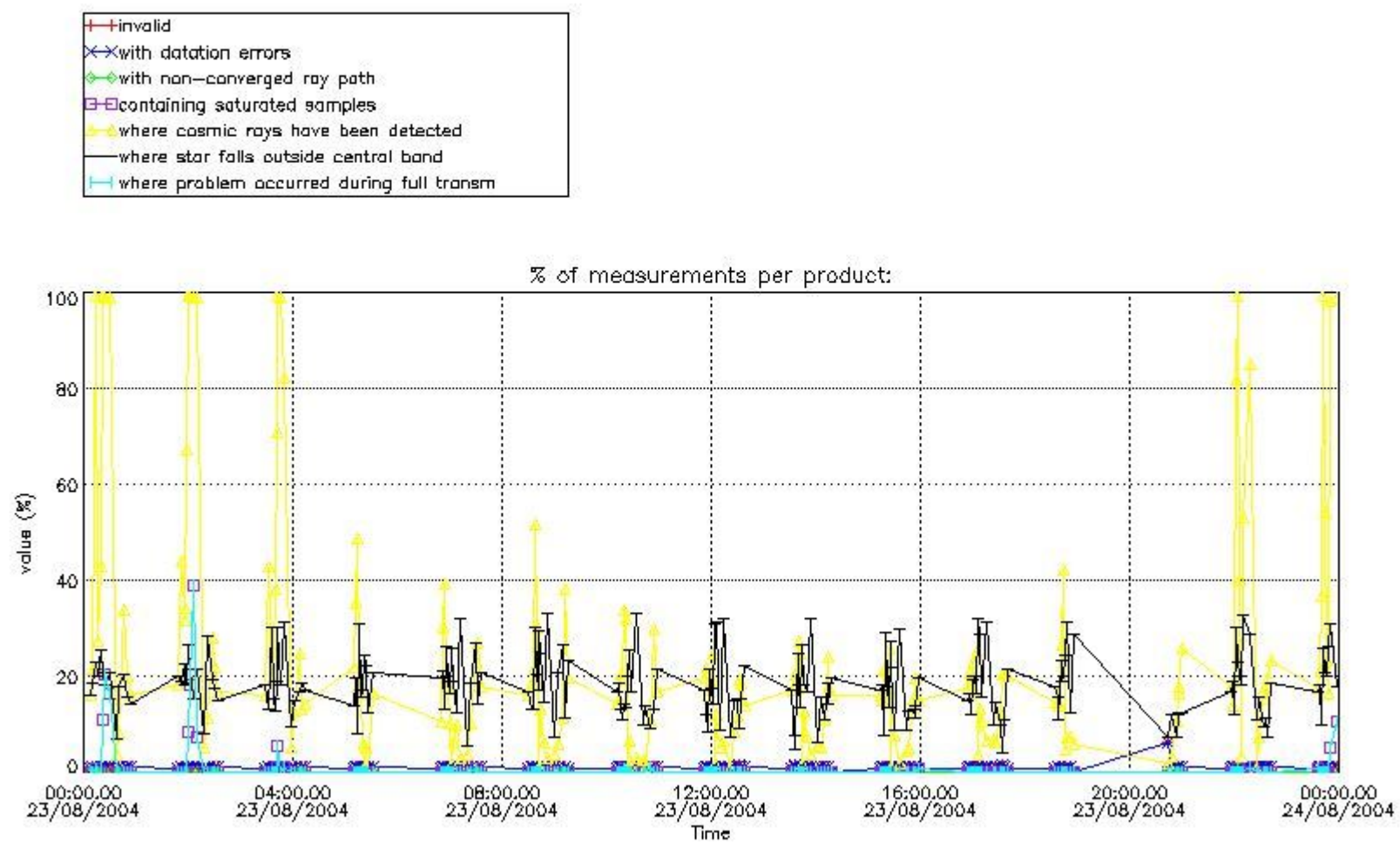


#### 4. Level 1 quality information per product

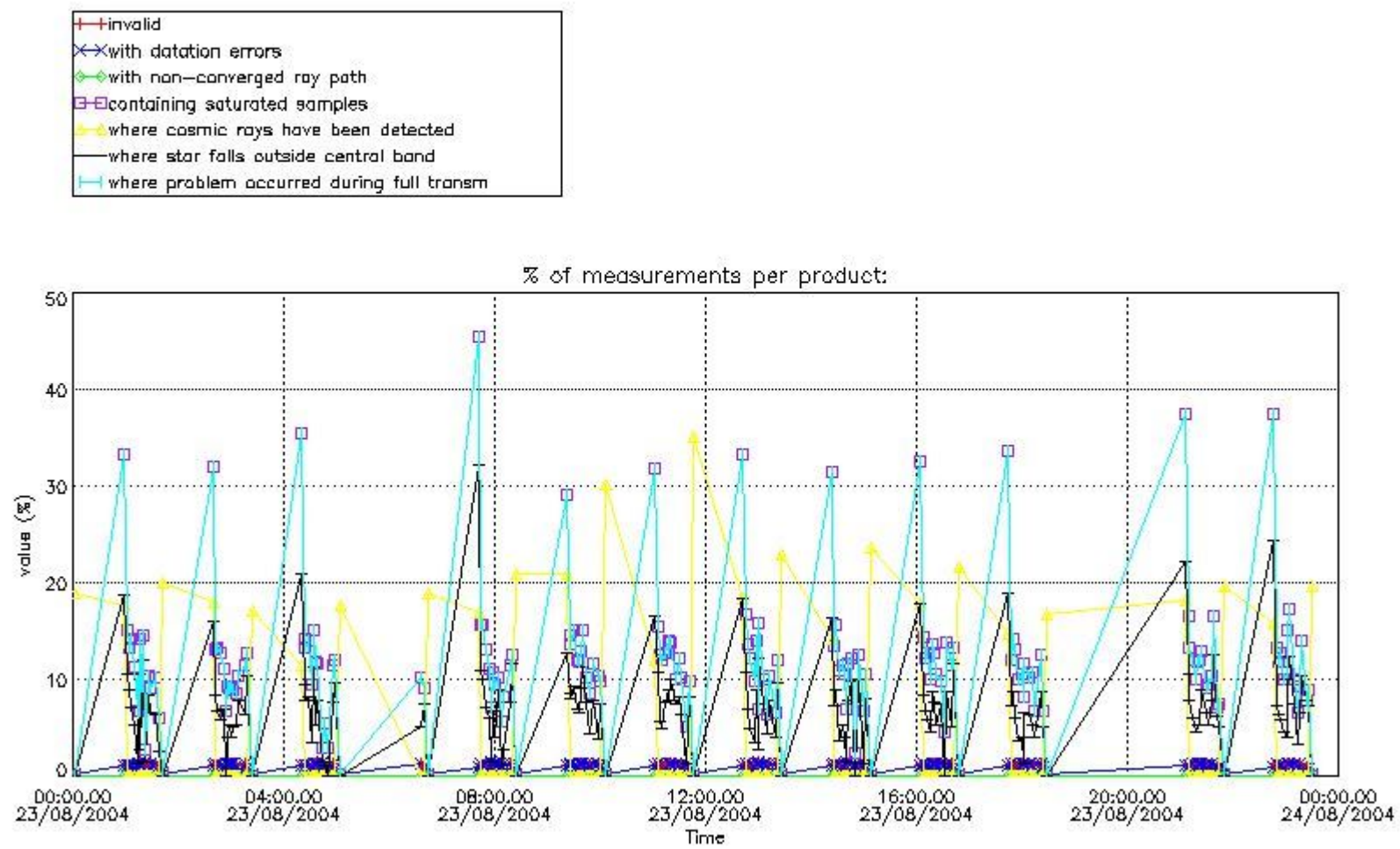
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



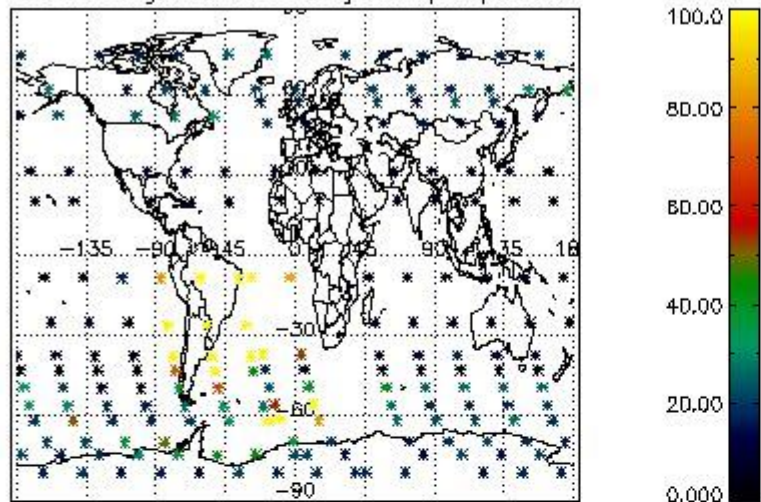
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



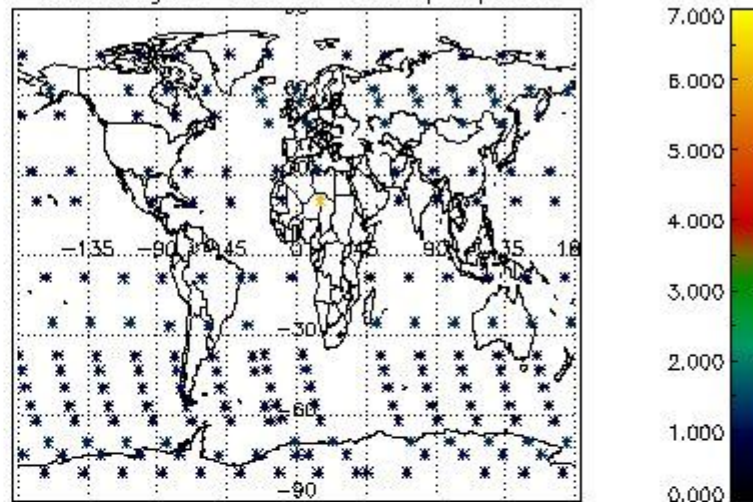
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

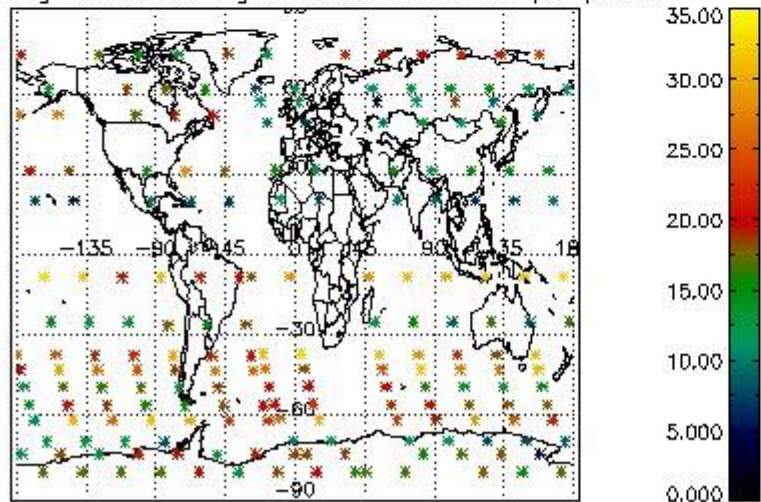
Percentage of cosmic ray hits per profile



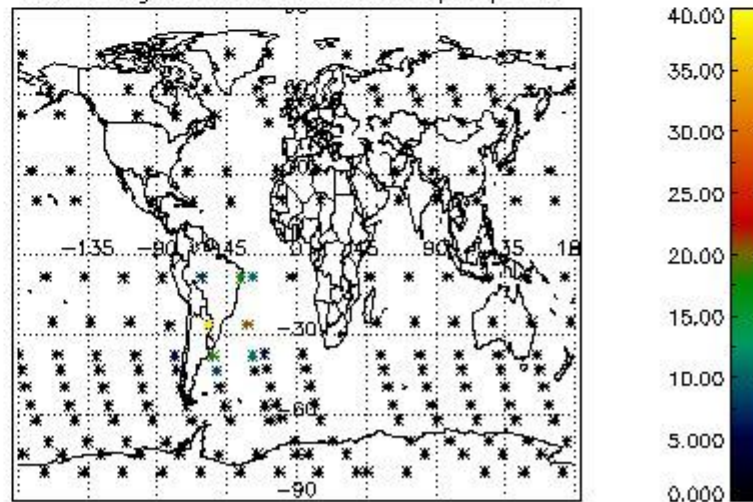
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

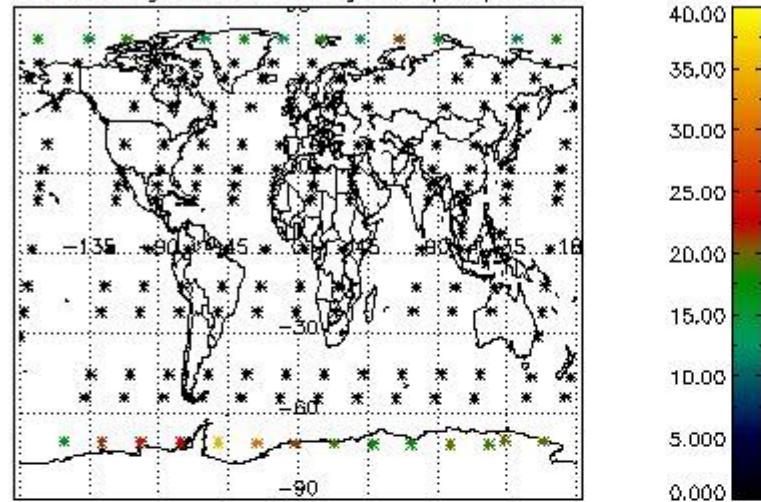


Percentage of saturation errors per profile

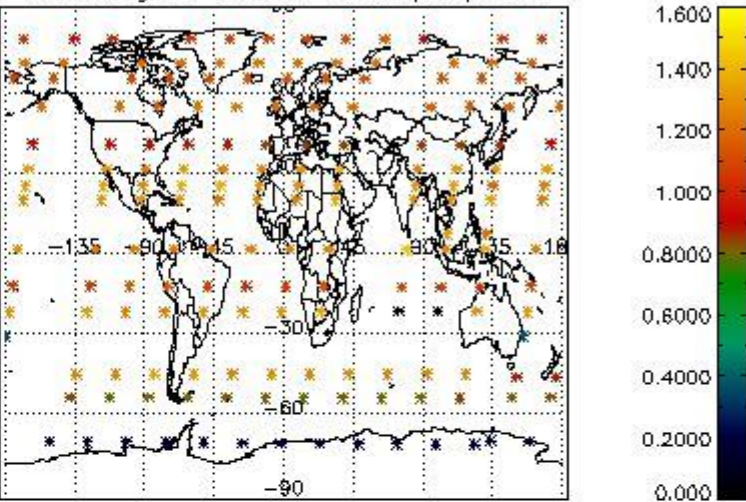


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

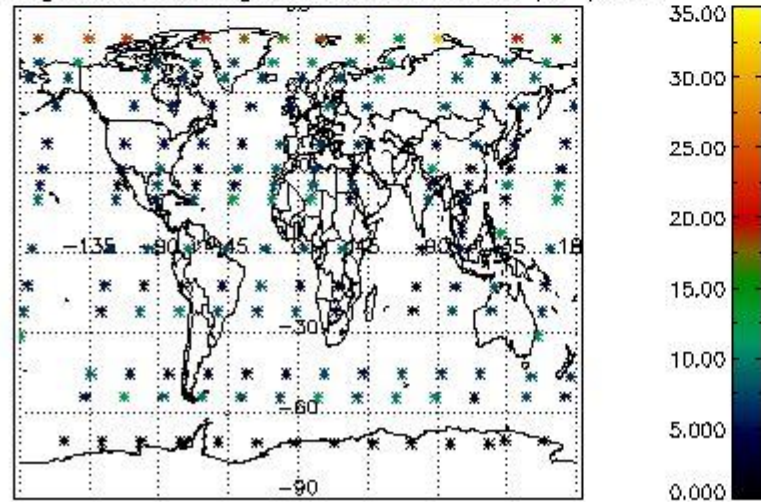
Percentage of cosmic ray hits per profile



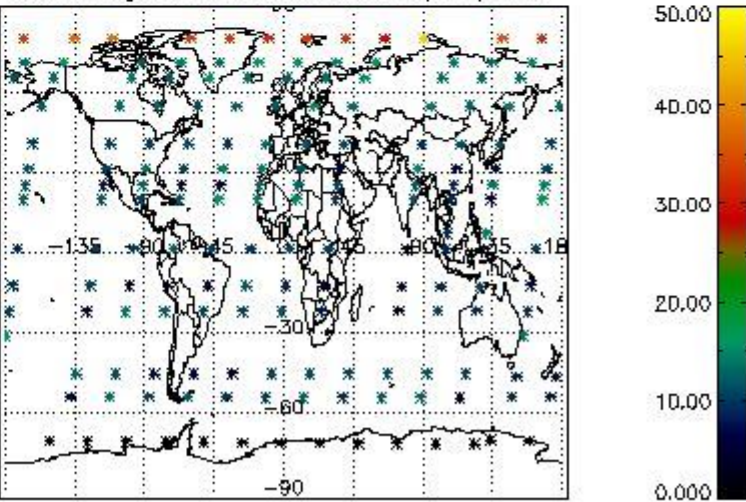
Percentage of datation errors per profile



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

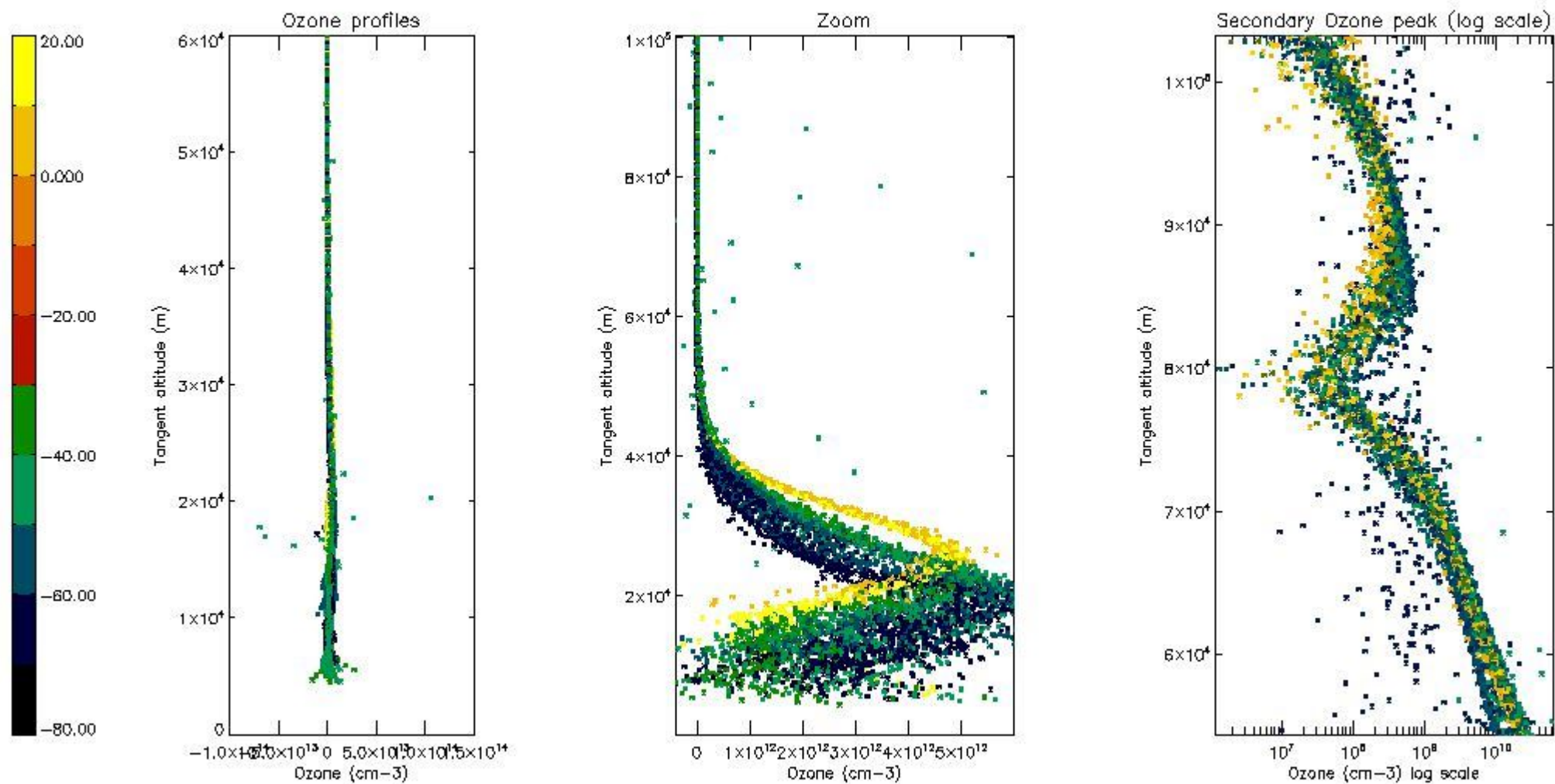
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	31
STD < 20	21

STD < 10	18
STD < 5	15

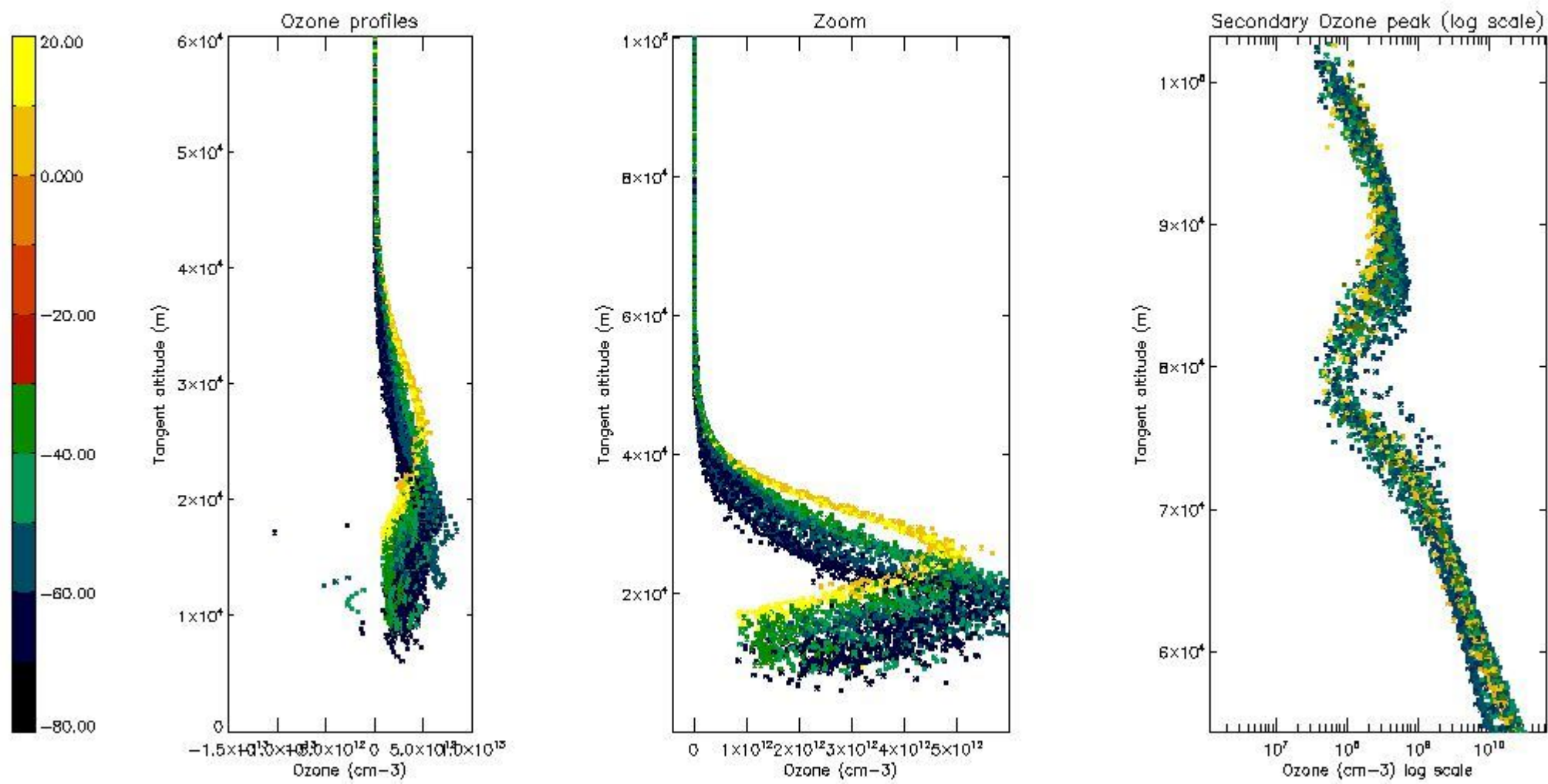
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

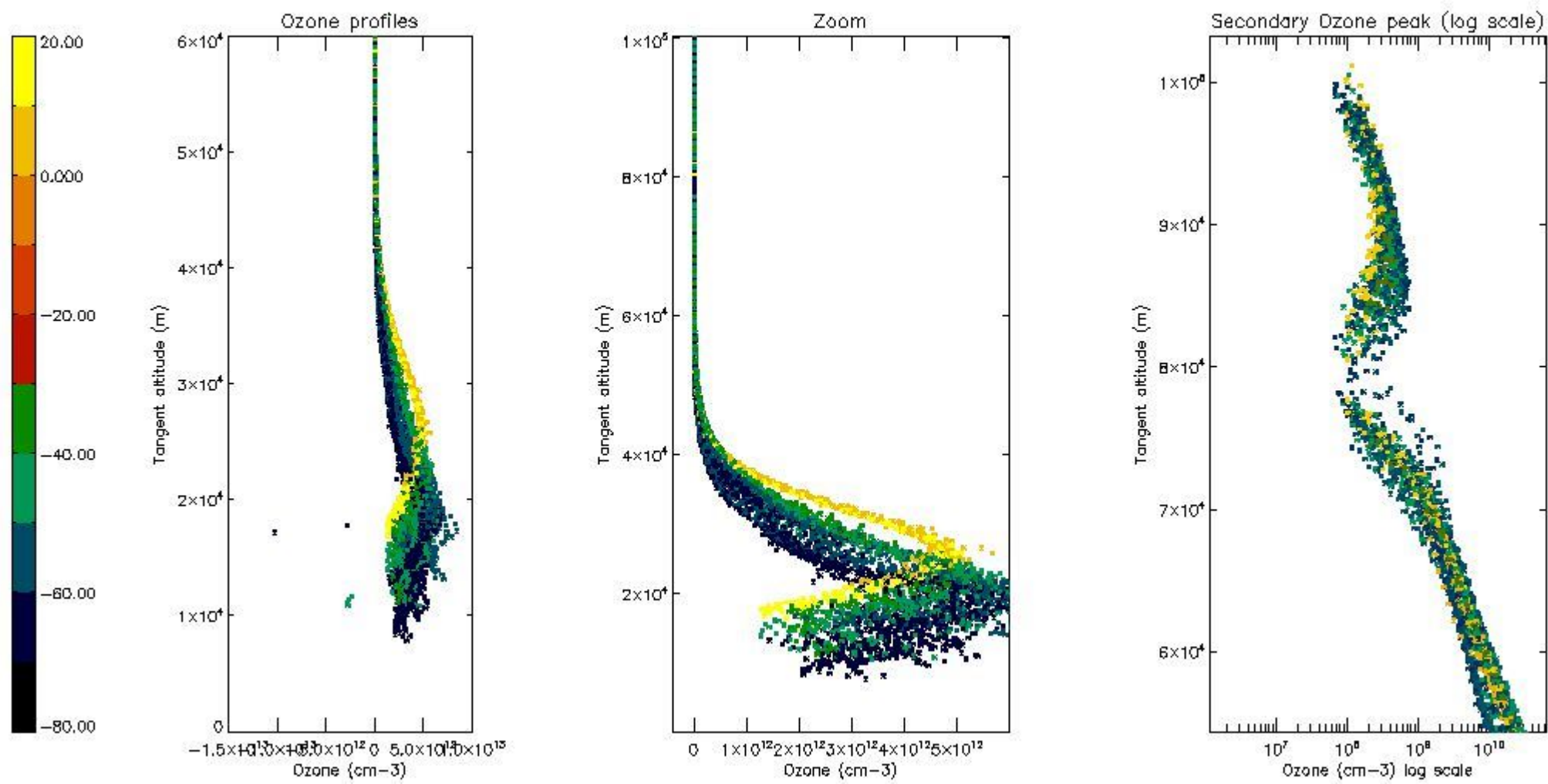
The colorbar represents the latitude.



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

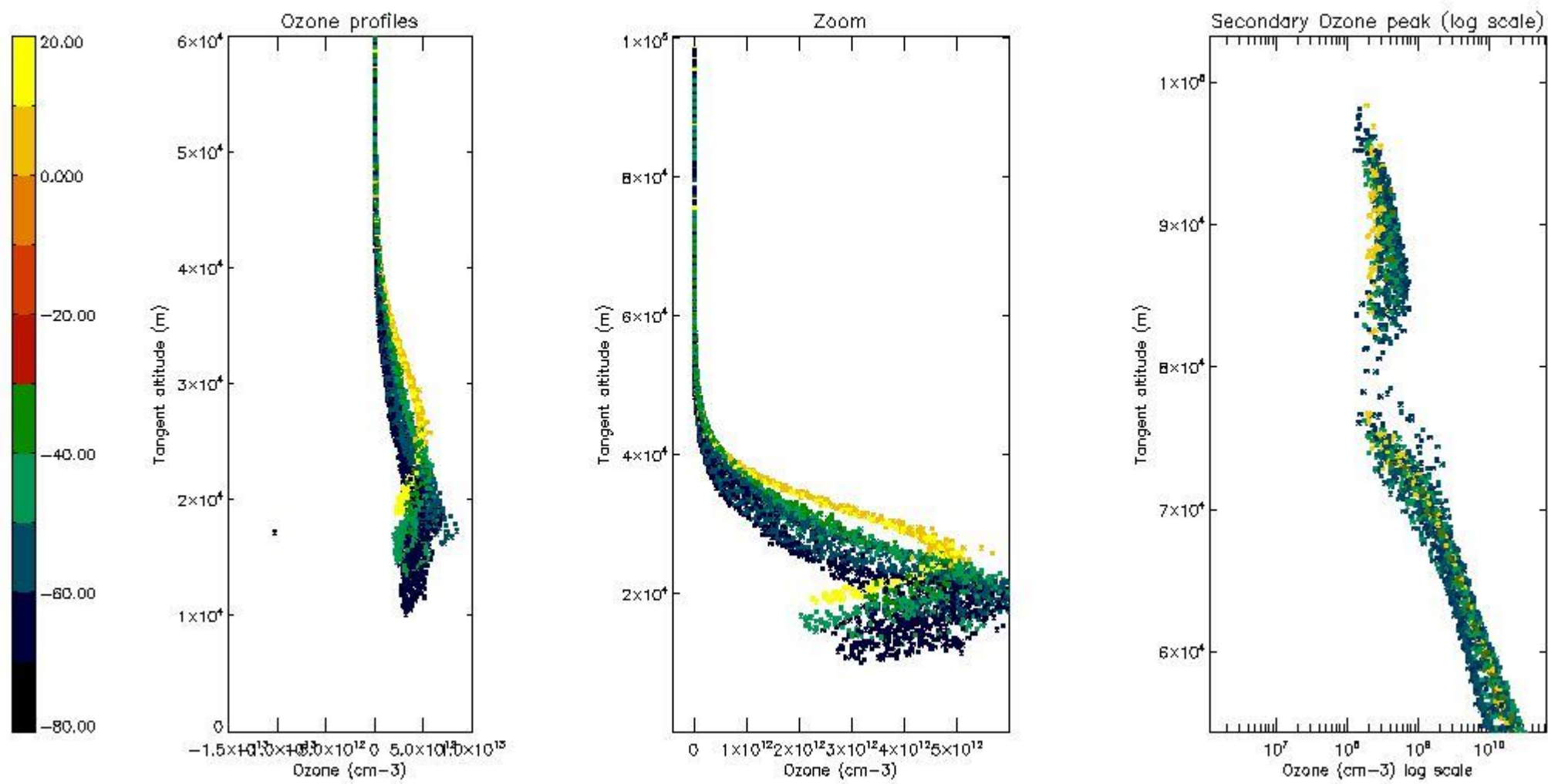
The colorbar represents the latitude.





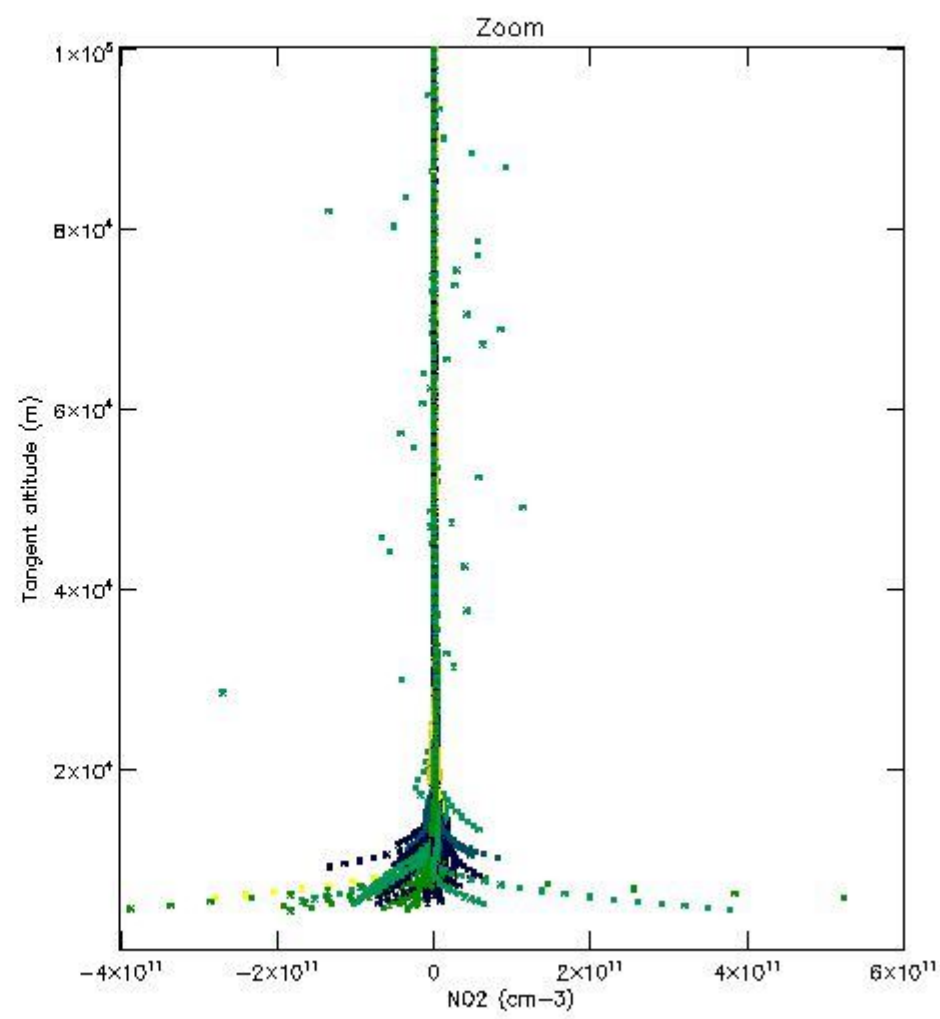
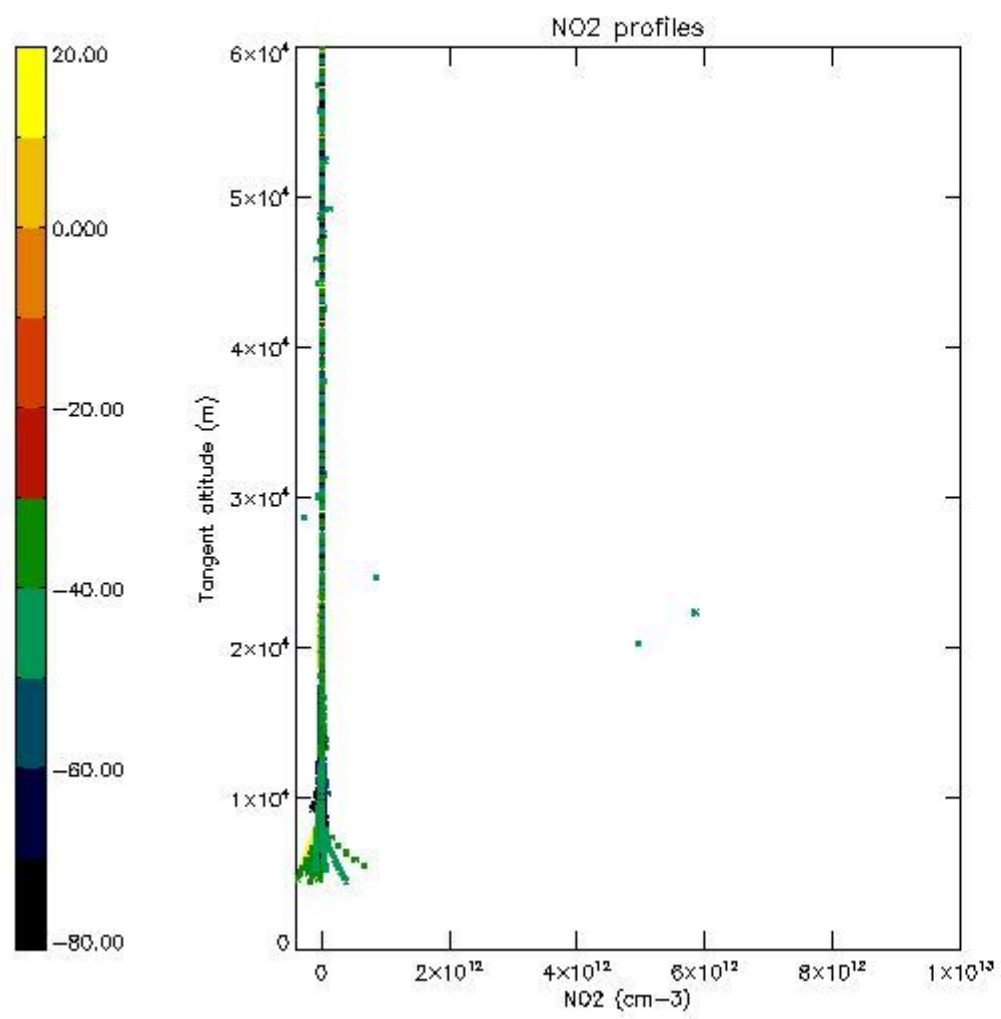
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



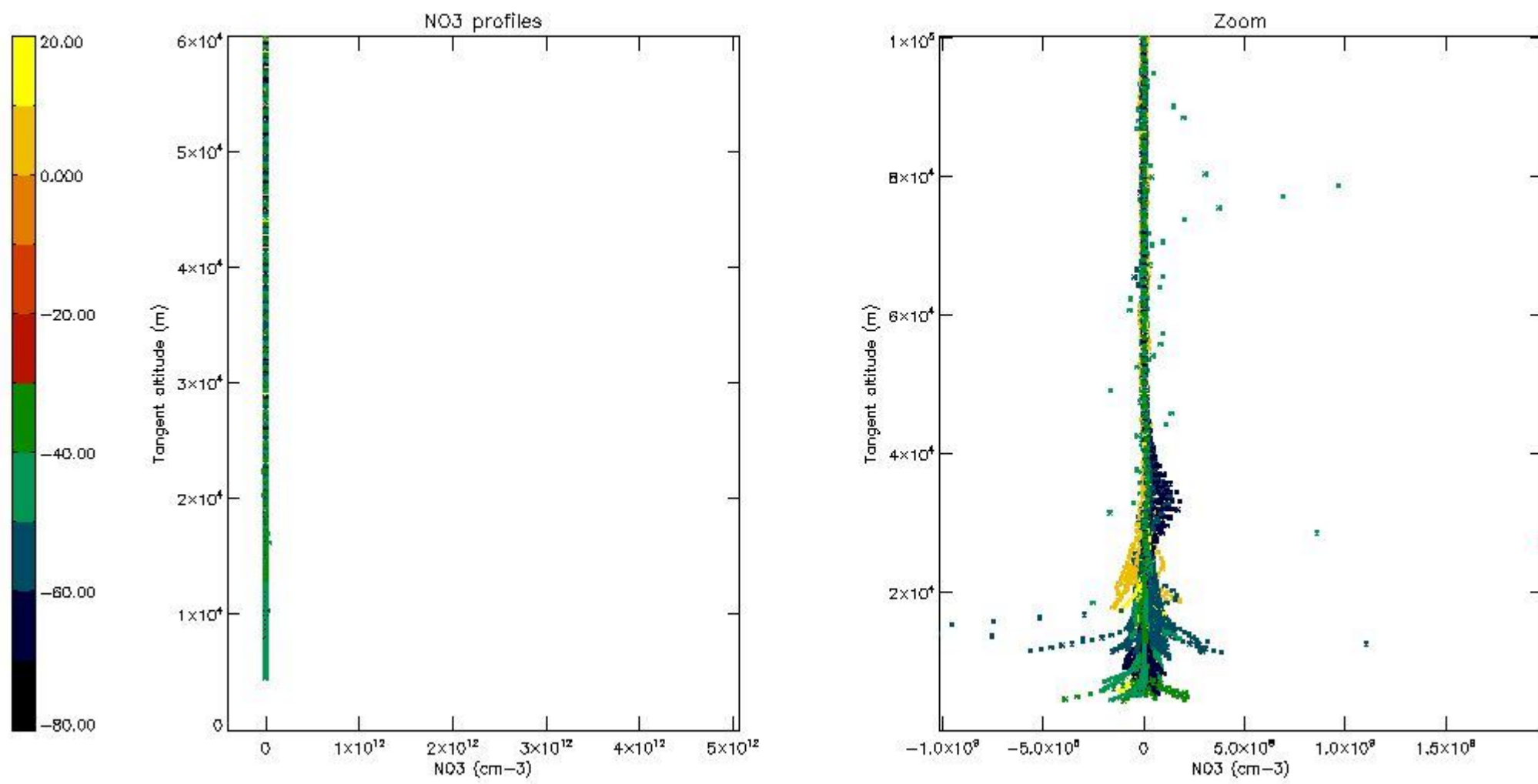
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



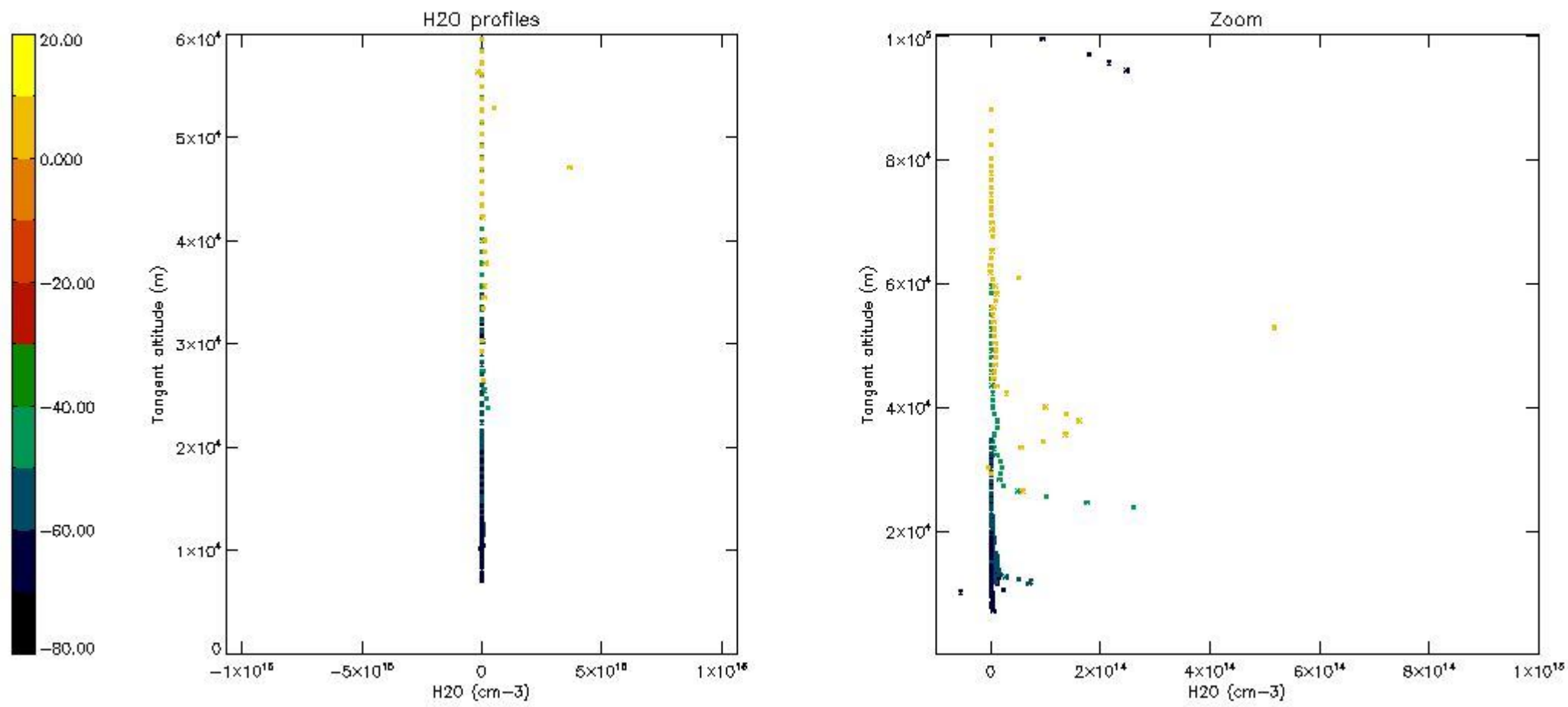
*5.7 Plot NO3 profiles for all STD (dark without errors)*

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	23-AUG-2004 00:02:08
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-AUG-2004 00:02:08
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-AUG-2004 00:02:08

# GOMOS Level 2 Daily Report

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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](#)













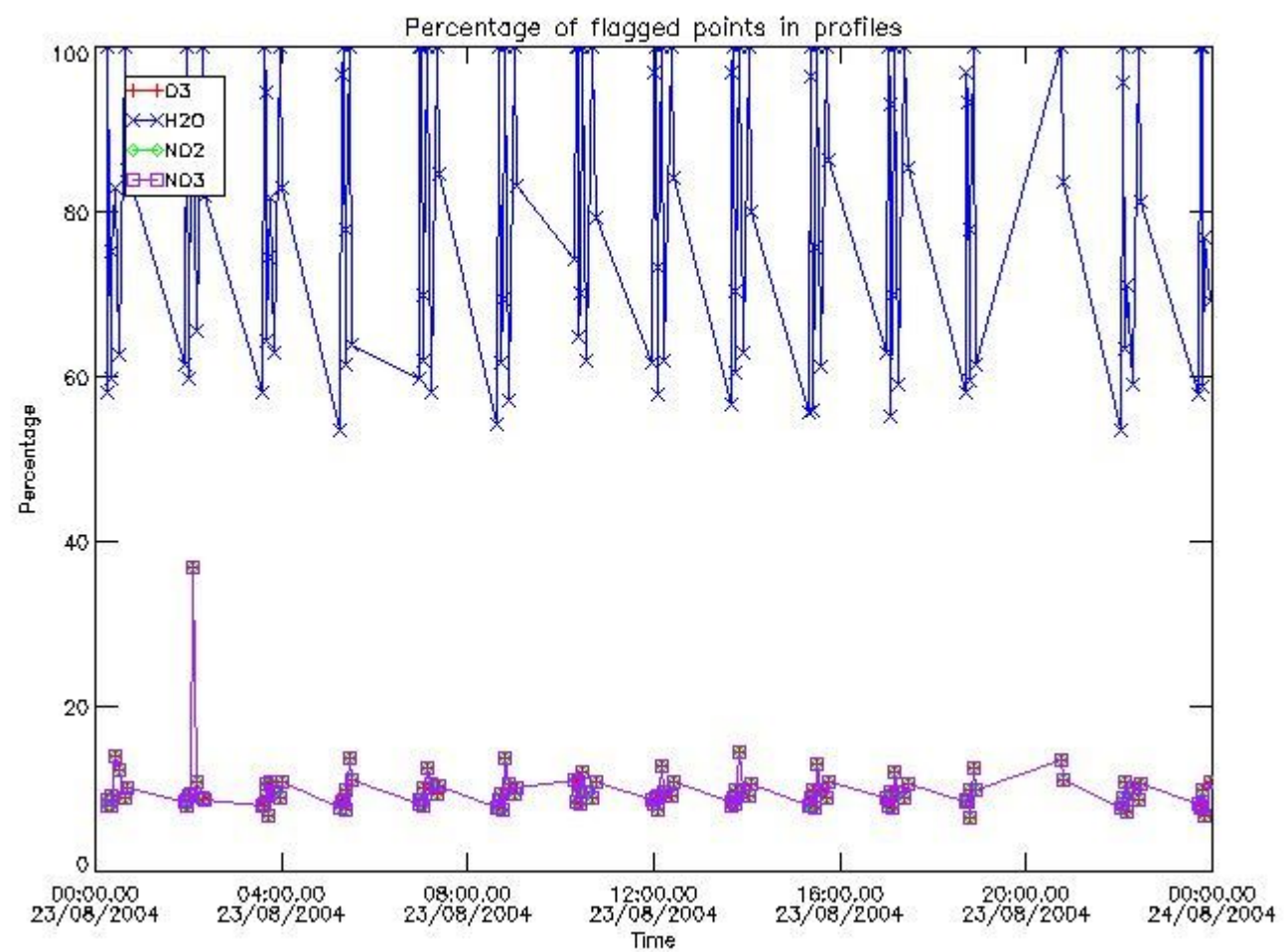


338	GOM_NL__2PRFIN20040823_214928_000002552029_00401_12980_2798.N1	23-AUG-2004 21:49:28	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12980	No
339	GOM_NL__2PRFIN20040823_215529_000000602029_00401_12980_2799.N1	23-AUG-2004 21:55:29	Twilight	59.500	28	12Bet Tau	1.6500	15200.	119	12980	No
340	GOM_NL__2PRFIN20040823_215823_000000512029_00401_12980_2800.N1	23-AUG-2004 21:58:23	Twilight	50.500	44	24Gam Gem	1.9280	11000.	101	12980	No
341	GOM_NL__2PRFIN20040823_215954_000000422029_00401_12980_2801.N1	23-AUG-2004 21:59:54	Twilight	42.000	153	3Bet CMi	2.8940	13100.	84	12980	No
342	GOM_NL__2PRFIN20040823_220221_000000662029_00401_12980_2802.N1	23-AUG-2004 22:02:21	Dark	66.000	14	58Alp Ori	0.87000	3000.0	132	12980	No
343	GOM_NL__2PRFIN20040823_220400_000000682029_00401_12980_2803.N1	23-AUG-2004 22:04:00	Dark	68.000	27	24Gam Ori	1.6360	26000.	136	12980	No
344	GOM_NL__2PRFIN20040823_220556_000000632029_00401_12980_2804.N1	23-AUG-2004 22:05:56	Dark	62.500	30	46Eps Ori	1.6940	30000.	125	12980	No
345	GOM_NL__2PRFIN20040823_220745_000000472029_00401_12980_2805.N1	23-AUG-2004 22:07:45	Dark	47.000	1	9Alp CMa	-1.4400	11000.	94	12980	No
346	GOM_NL__2PRFIN20040823_220922_000000782029_00401_12980_2806.N1	23-AUG-2004 22:09:22	Dark	78.000	7	19Bet Ori	0.10000	14000.	156	12980	No
347	GOM_NL__2PRFIN20040823_221730_000000512029_00401_12980_2807.N1	23-AUG-2004 22:17:30	Dark	50.500	2	Alp Car	-0.73600	7000.0	101	12980	No
348	GOM_NL__2PRFIN20040823_222536_000000592029_00402_12981_2778.N1	23-AUG-2004 22:25:36	Dark	59.000	157	The1Eri	2.9060	9300.0	118	12981	No
349	GOM_NL__2PRFIN20040823_222840_000000492029_00402_12981_2779.N1	23-AUG-2004 22:28:40	Dark	48.500	9	Alp Eri	0.45300	24000.	97	12981	No
350	GOM_NL__2PRFIN20040823_223341_000000432029_00402_12981_2780.N1	23-AUG-2004 22:33:41	Straylight	43.000	148	Alp Tuc	2.8780	4100.0	86	12981	No
351	GOM_NL__2PRFIN20040823_223600_000000402029_00402_12981_2781.N1	23-AUG-2004 22:36:00	Straylight	39.500	45	Alp Pav	1.9400	26000.	79	12981	No
352	GOM_NL__2PRFIN20040823_223720_000000412029_00402_12981_2782.N1	23-AUG-2004 22:37:20	Straylight	40.500	31	Alp Gru	1.7340	15200.	81	12981	No
353	GOM_NL__2PRFIN20040823_224121_000000542029_00402_12981_2783.N1	23-AUG-2004 22:41:21	Straylight	54.000	18	24Alp PsA	1.1660	9700.0	108	12981	No
354	GOM_NL__2PRFIN20040823_224629_000000542029_00402_12981_2784.N1	23-AUG-2004 22:46:29	Bright	53.500	142	49Del Cap	2.8500	8900.0	107	12981	No
355	GOM_NL__2PRFIN20040823_224946_000000422029_00402_12981_2785.N1	23-AUG-2004 22:49:46	Bright	41.500	154	22Bet Aqr	2.8990	5700.0	83	12981	No
356	GOM_NL__2PRFIN20040823_225127_000000472029_00402_12981_2786.N1	23-AUG-2004 22:51:27	Bright	46.500	162	34Alp Aqr	2.9440	5350.0	93	12981	No
357	GOM_NL__2PRFIN20040823_225432_000000432029_00402_12981_2787.N1	23-AUG-2004 22:54:32	Bright	43.000	61	8Eps Peg	2.1000	3900.0	86	12981	No
358	GOM_NL__2PRFIN20040823_225833_000000552029_00402_12981_2788.N1	23-AUG-2004 22:58:33	Bright	55.000	90	54Alp Peg	2.4870	11000.	110	12981	No
359	GOM_NL__2PRFIN20040823_230114_000000382029_00402_12981_2789.N1	23-AUG-2004 23:01:14	Bright	37.500	92	53Eps Cyg	2.5000	4500.0	75	12981	No
360	GOM_NL__2PRFIN20040823_230258_000000402029_00402_12981_2790.N1	23-AUG-2004 23:02:58	Bright	40.000	66	37Gam Cyg	2.2080	5900.0	80	12981	No
361	GOM_NL__2PRFIN20040823_230427_000000412029_00402_12981_2791.N1	23-AUG-2004 23:04:27	Bright	40.500	19	50Alp Cyg	1.2460	10500.	81	12981	No
362	GOM_NL__2PRFIN20040823_230937_000000402029_00402_12981_2792.N1	23-AUG-2004 23:09:37	Bright	40.000	89	5Alp Cep	2.4510	8000.0	80	12981	No
363	GOM_NL__2PRFIN20040823_231326_000000462029_00402_12981_2793.N1	23-AUG-2004 23:13:26	Bright	45.500	74	11Bet Cas	2.2680	6600.0	91	12981	No
364	GOM_NL__2PRFIN20040823_231612_000000382029_00402_12981_2794.N1	23-AUG-2004 23:16:12	Bright	38.000	60	7Bet UMi	2.0810	3950.0	76	12981	No
365	GOM_NL__2PRFIN20040823_231844_000001352029_00402_12981_2795.N1	23-AUG-2004 23:18:44	Bright	135.00	53	43Bet And	2.0480	3300.0	270	12981	No
366	GOM_NL__2PRFIN20040823_232305_000000572029_00402_12981_2796.N1	23-AUG-2004 23:23:05	Bright	57.000	160	23Gam Per	2.9300	4700.0	114	12981	No
367	GOM_NL__2PRFIN20040823_232512_000000622029_00402_12981_2797.N1	23-AUG-2004 23:25:12	Bright	61.500	35	33Alp Per	1.7950	6250.0	123	12981	No
368	GOM_NL__2PRFIN20040823_233002_000002552029_00402_12981_2798.N1	23-AUG-2004 23:30:02	Twilight	255.00	173	4Bet Tri	3.0040	8900.0	510	12981	No
369	GOM_NL__2PRFIN20040823_233605_000000602029_00402_12981_2799.N1	23-AUG-2004 23:36:05	Twilight	60.000	28	12Bet Tau	1.6500	15200.	120	12981	No
370	GOM_NL__2PRFIN20040823_233858_000000522029_00402_12981_2800.N1	23-AUG-2004 23:38:58	Twilight	52.000	44	24Gam Gem	1.9280	11000.	104	12981	No
371	GOM_NL__2PRFIN20040823_234030_000000412029_00402_12981_2801.N1	23-AUG-2004 23:40:30	Twilight	41.000	153	3Bet CMi	2.8940	13100.	82	12981	No
372	GOM_NL__2PRFIN20040823_234257_000000622029_00402_12981_2802.N1	23-AUG-2004 23:42:57	Dark	62.000	14	58Alp Ori	0.87000	3000.0	124	12981	No
373	GOM_NL__2PRFIN20040823_234437_000000662029_00402_12981_2803.N1	23-AUG-2004 23:44:37	Dark	65.500	27	24Gam Ori	1.6360	26000.	131	12981	No
374	GOM_NL__2PRFIN20040823_234631_000000652029_00402_12981_2804.N1	23-AUG-2004 23:46:31	Dark	64.500	30	46Eps Ori	1.6940	30000.	129	12981	No
375	GOM_NL__2PRFIN20040823_234822_000000522029_00402_12981_2805.N1	23-AUG-2004 23:48:22	Dark	51.500	1	9Alp CMa	-1.4400	11000.	103	12981	No
376	GOM_NL__2PRFIN20040823_234959_000000762029_00402_12981_2806.N1	23-AUG-2004 23:49:59	Dark	76.000	7	19Bet Ori	0.10000	14000.	152	12981	No
377	GOM_NL__2PRFIN20040823_235804_000000482029_00402_12981_2807.N1	23-AUG-2004 23:58:04	Dark	47.500	2	Alp Car	-0.73600	7000.0	95	12981	No

### 3. Quality information per product

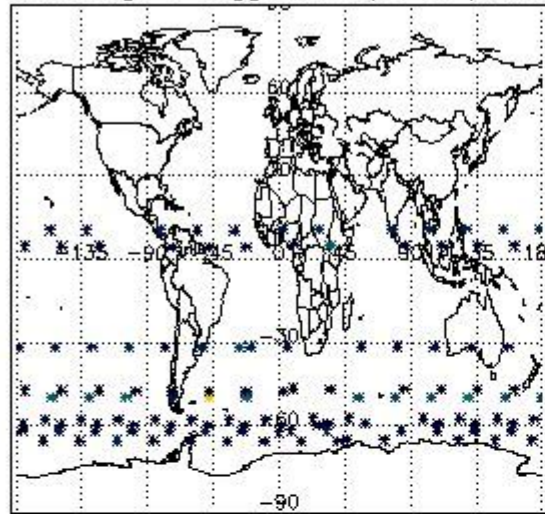
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

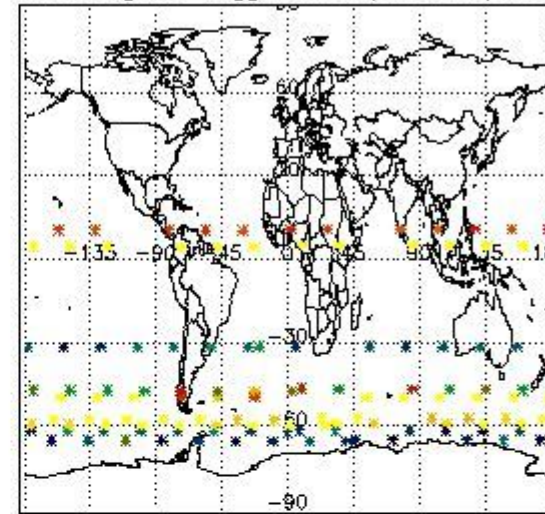


3.2 Plot quality information per product (world map)

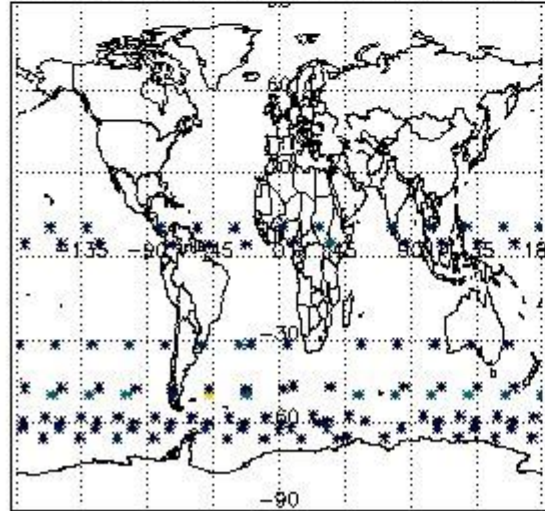
Percentage of flagged data per O3 profile



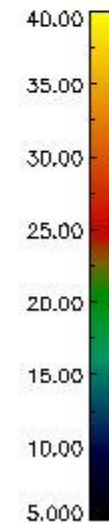
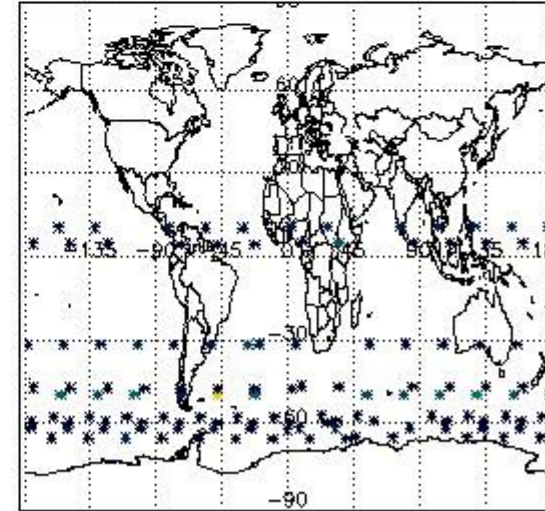
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

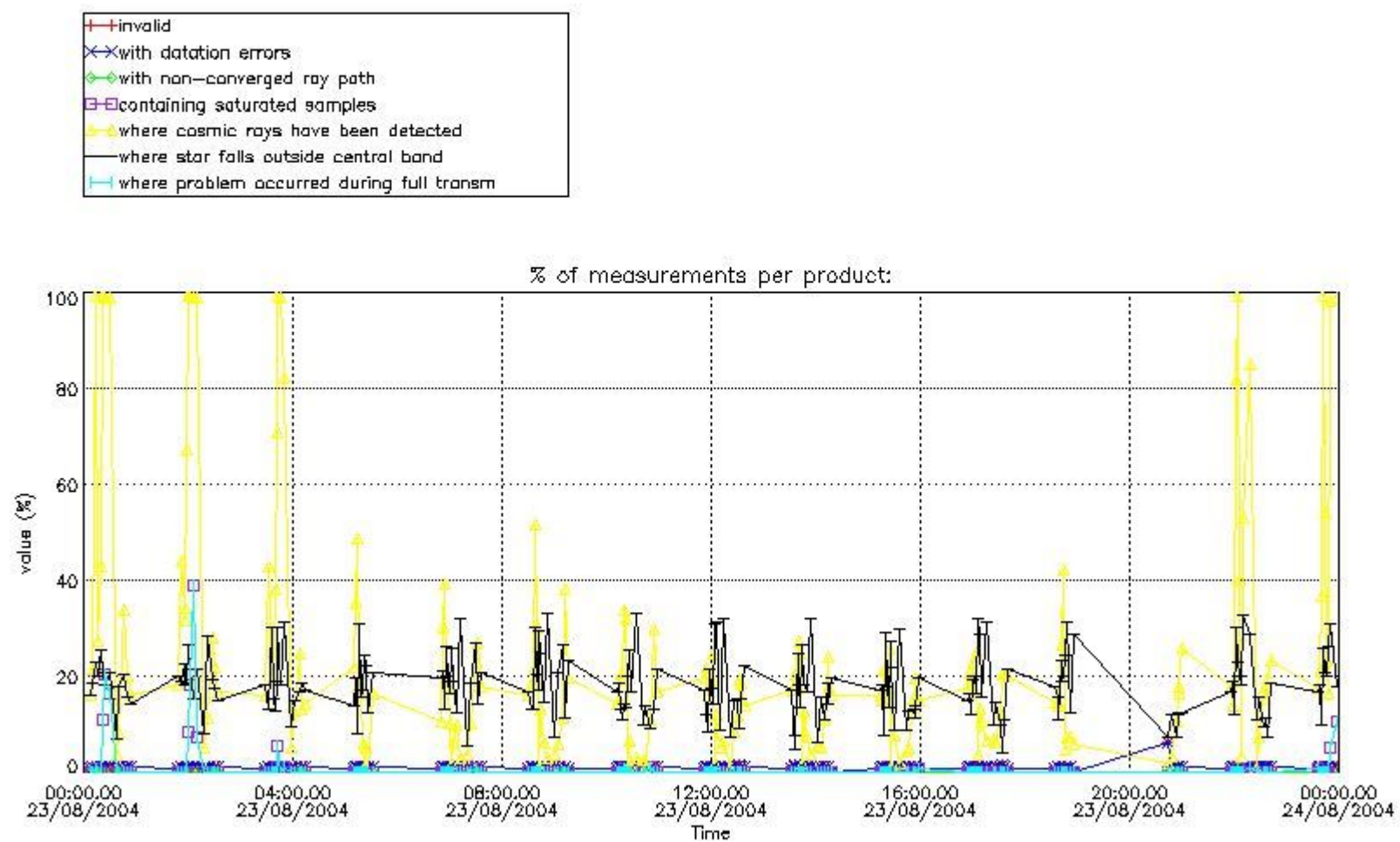


#### 4. Level 1 quality information per product

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

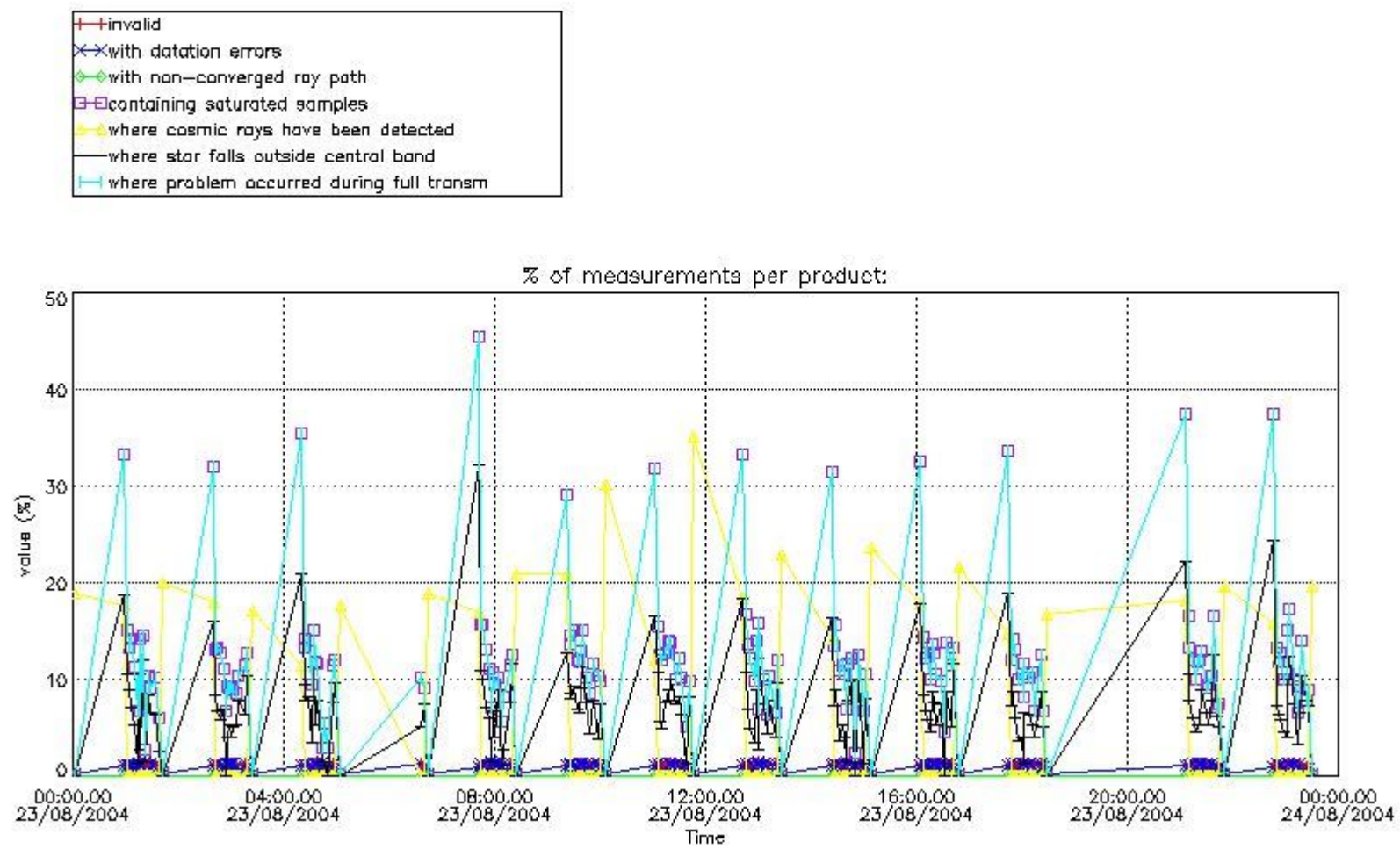
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



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

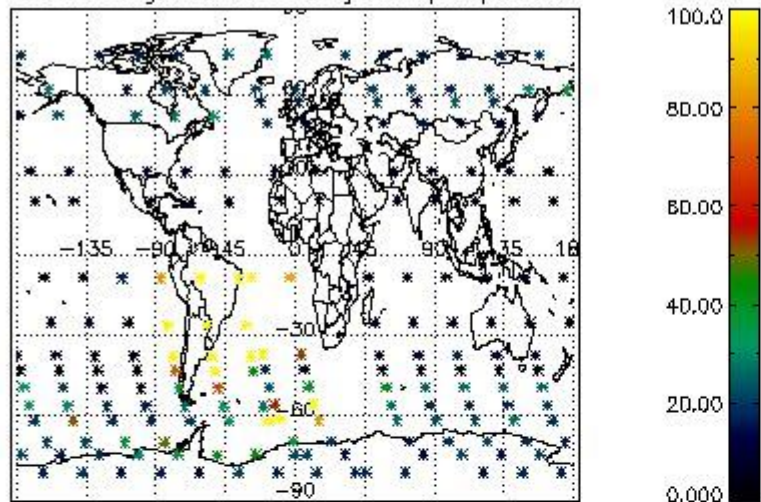




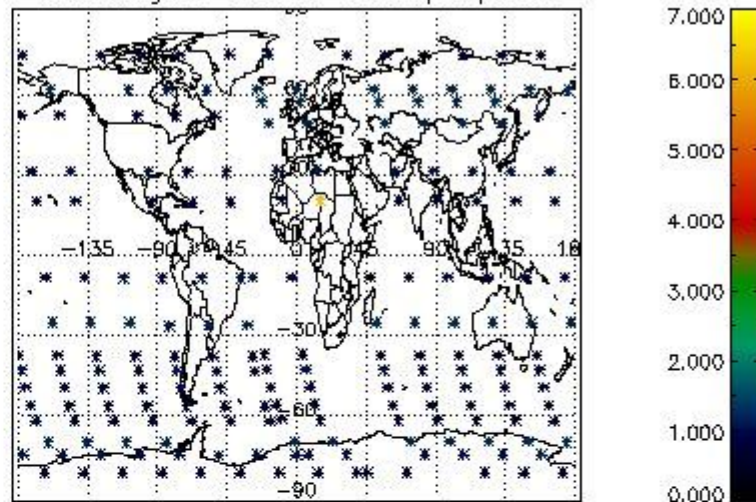
4.2 Plot quality information per product coming from level 1b processing (world map)

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

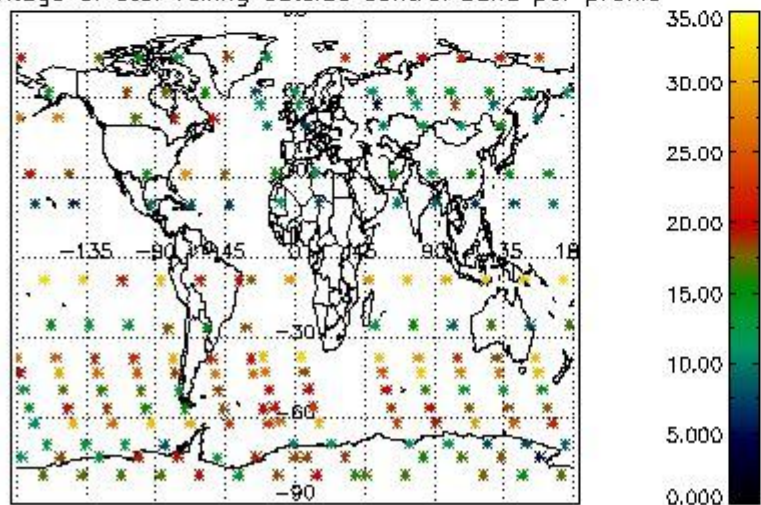
Percentage of cosmic ray hits per profile



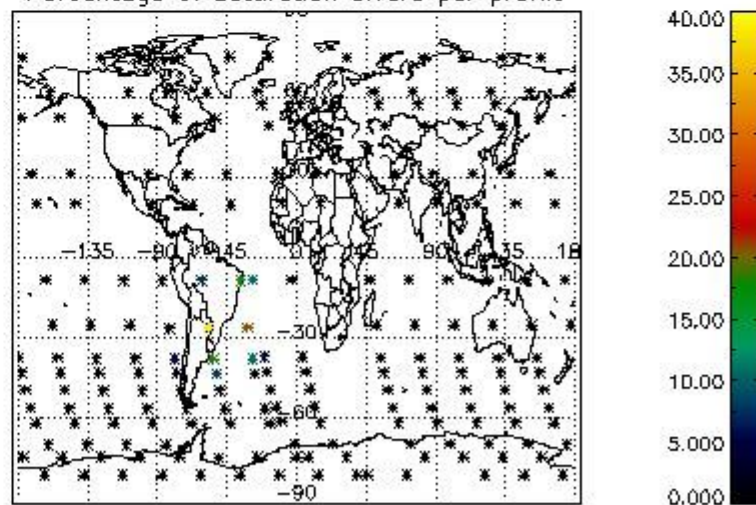
Percentage of datation errors per profile



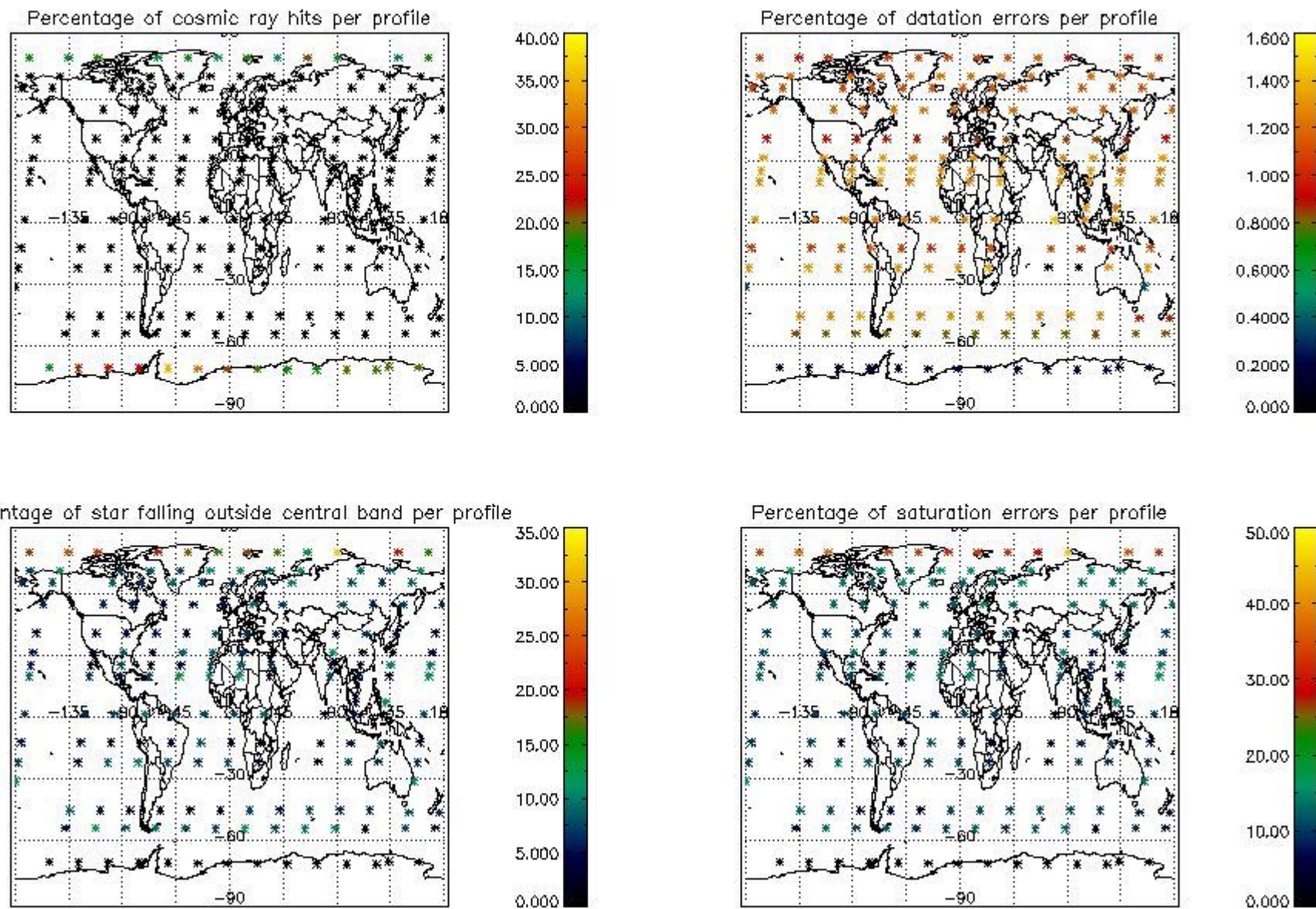
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

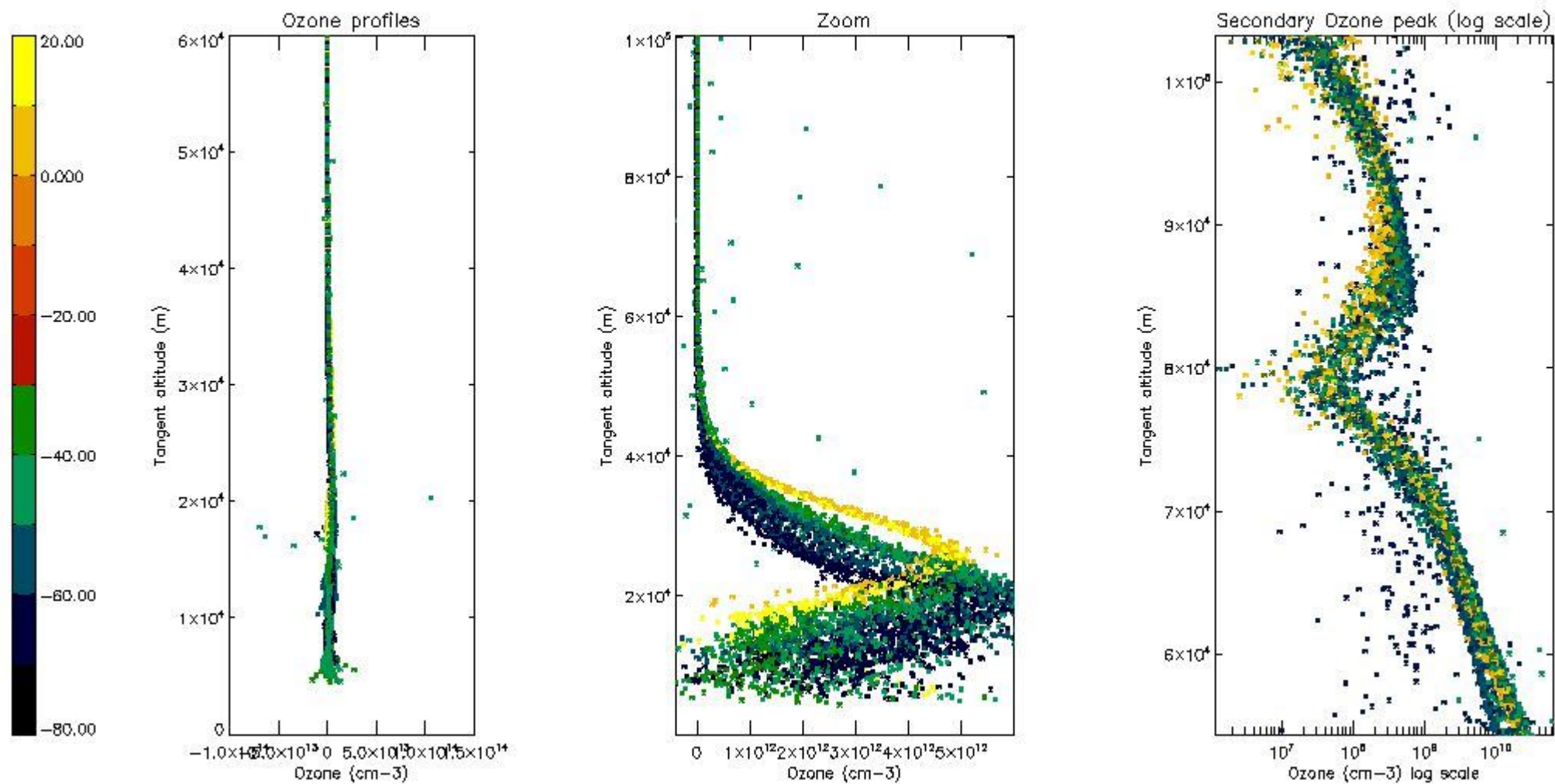
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	31
STD < 20	21

STD < 10	18
STD < 5	15

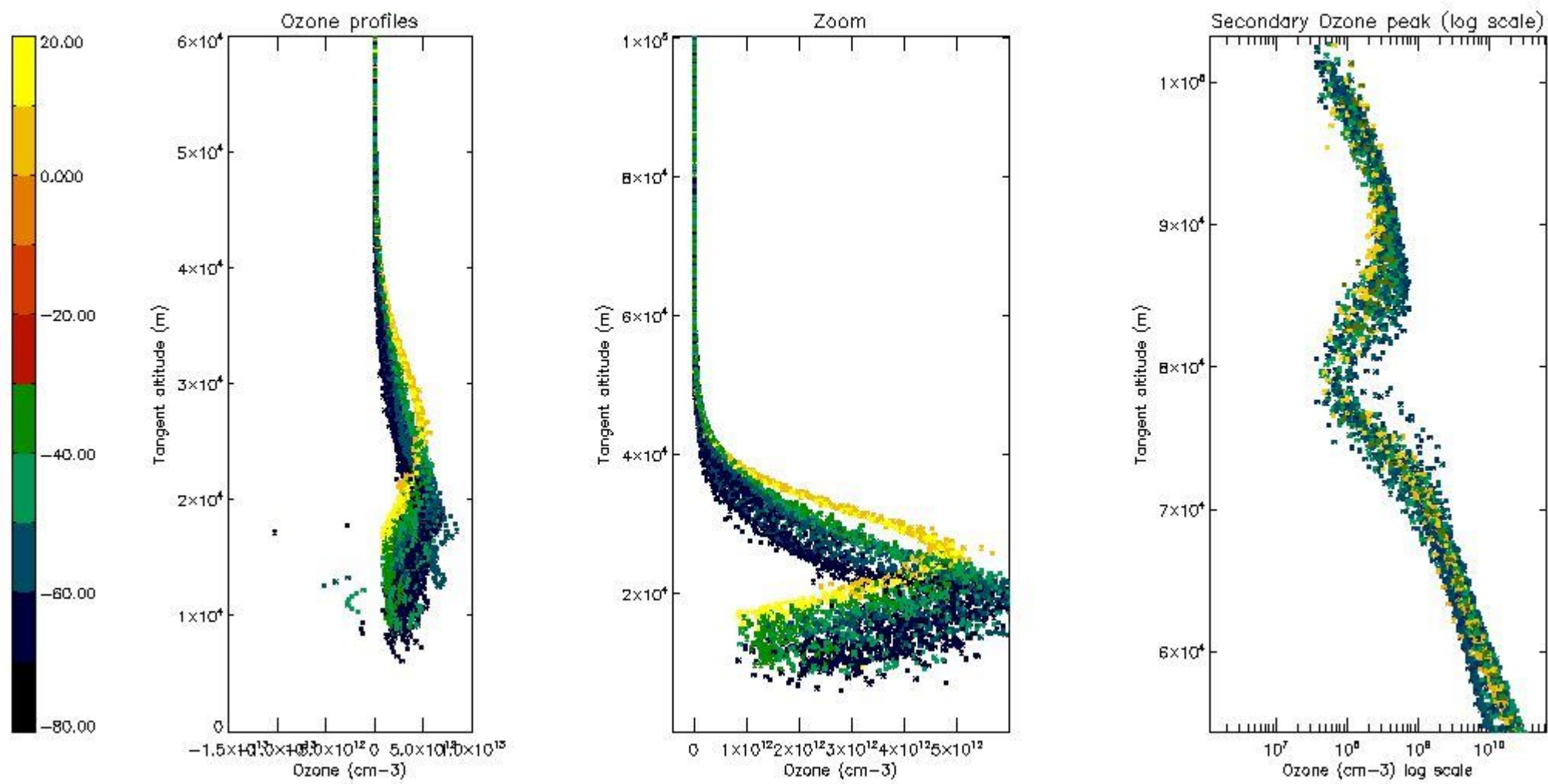
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



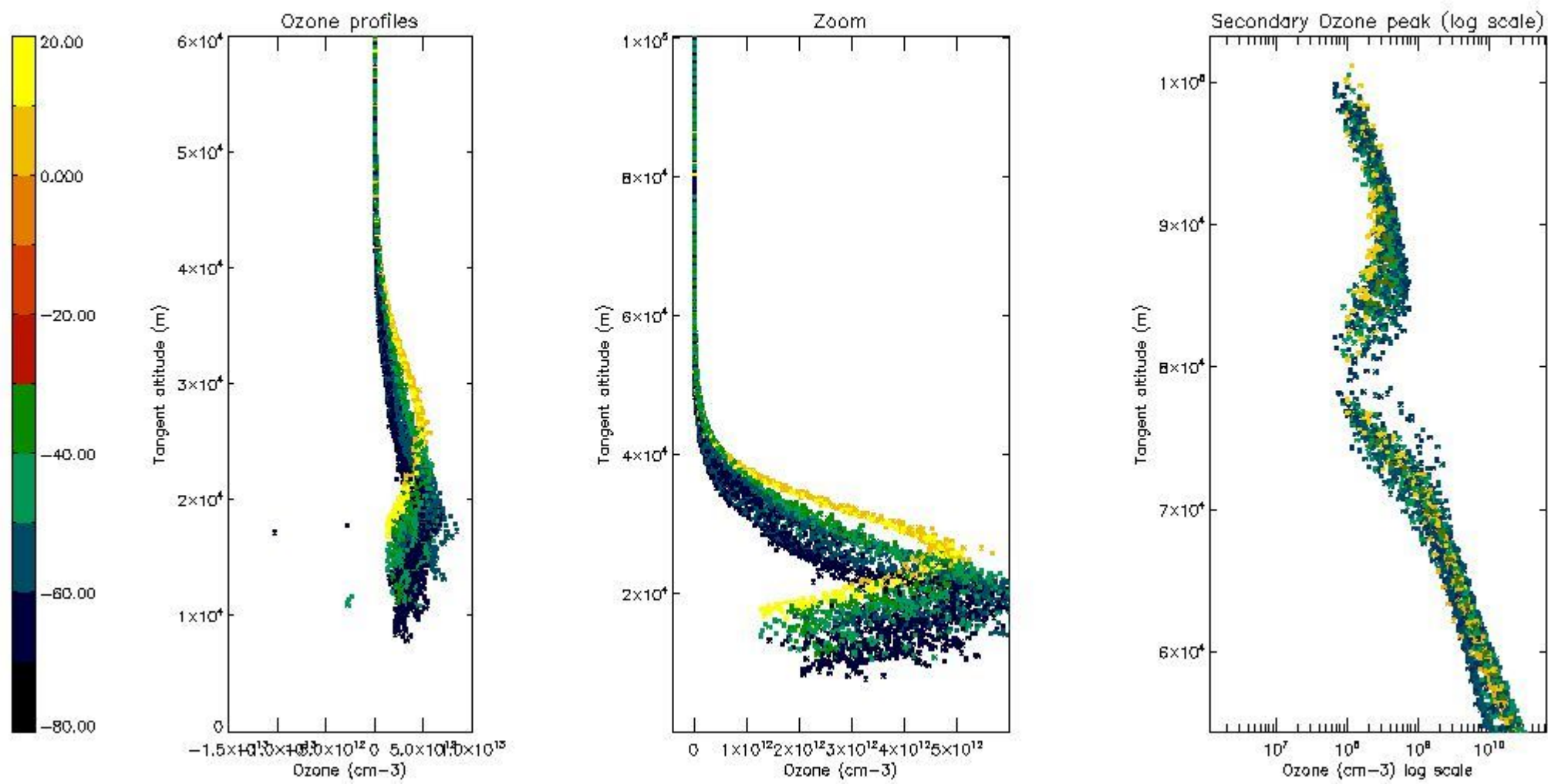
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



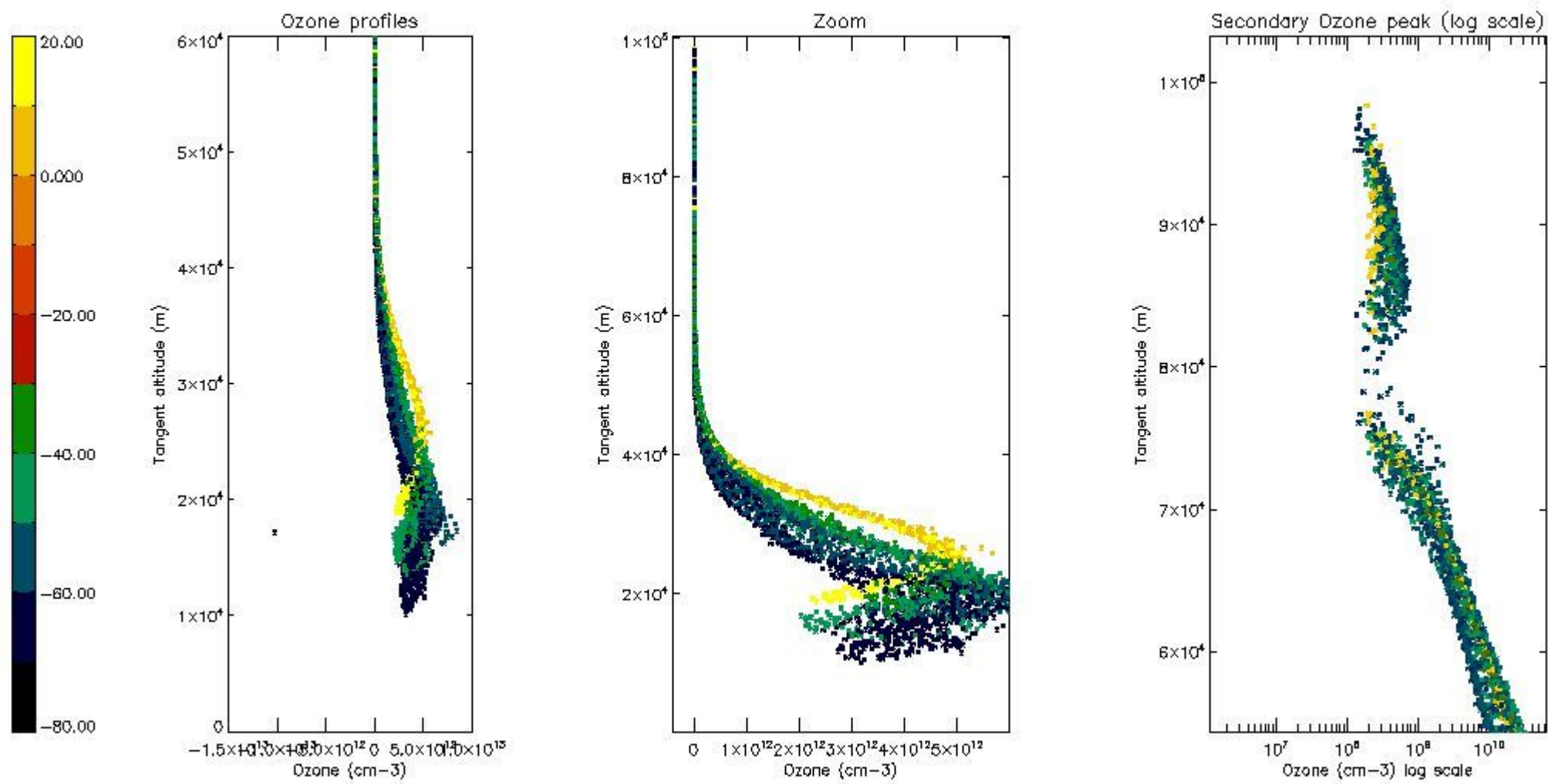
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



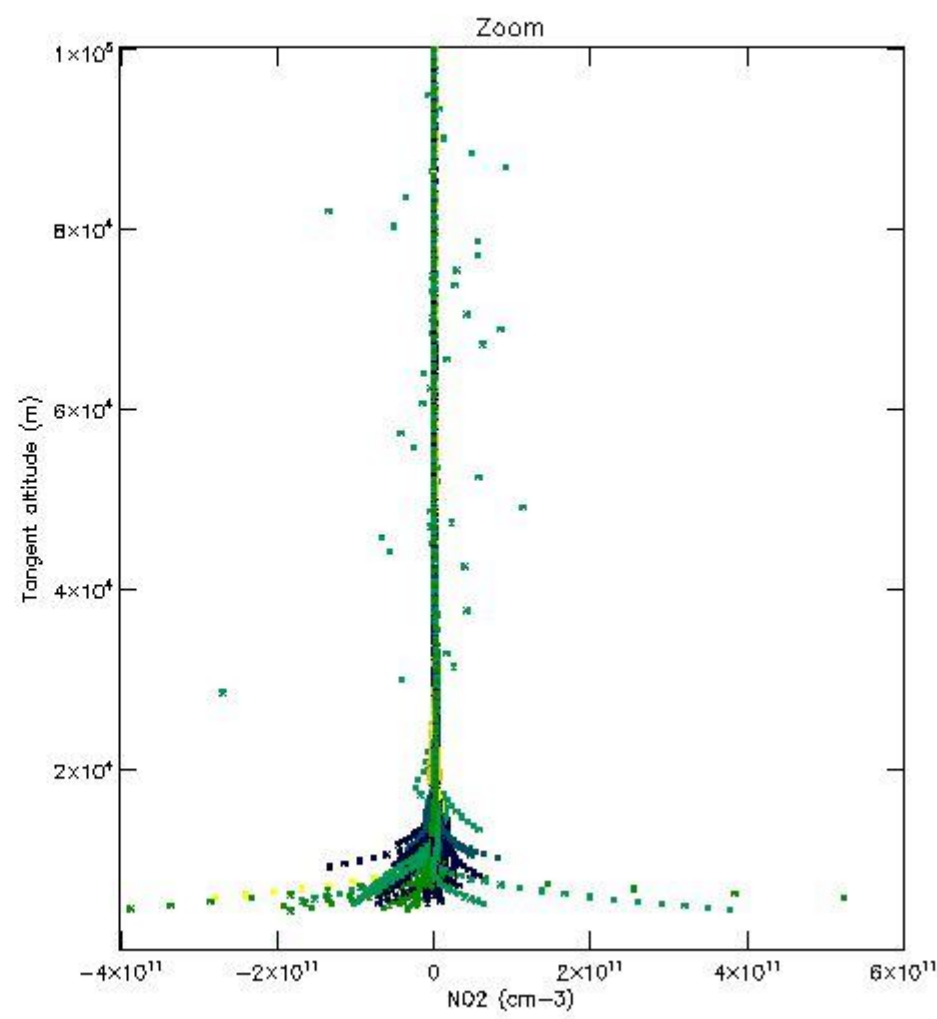
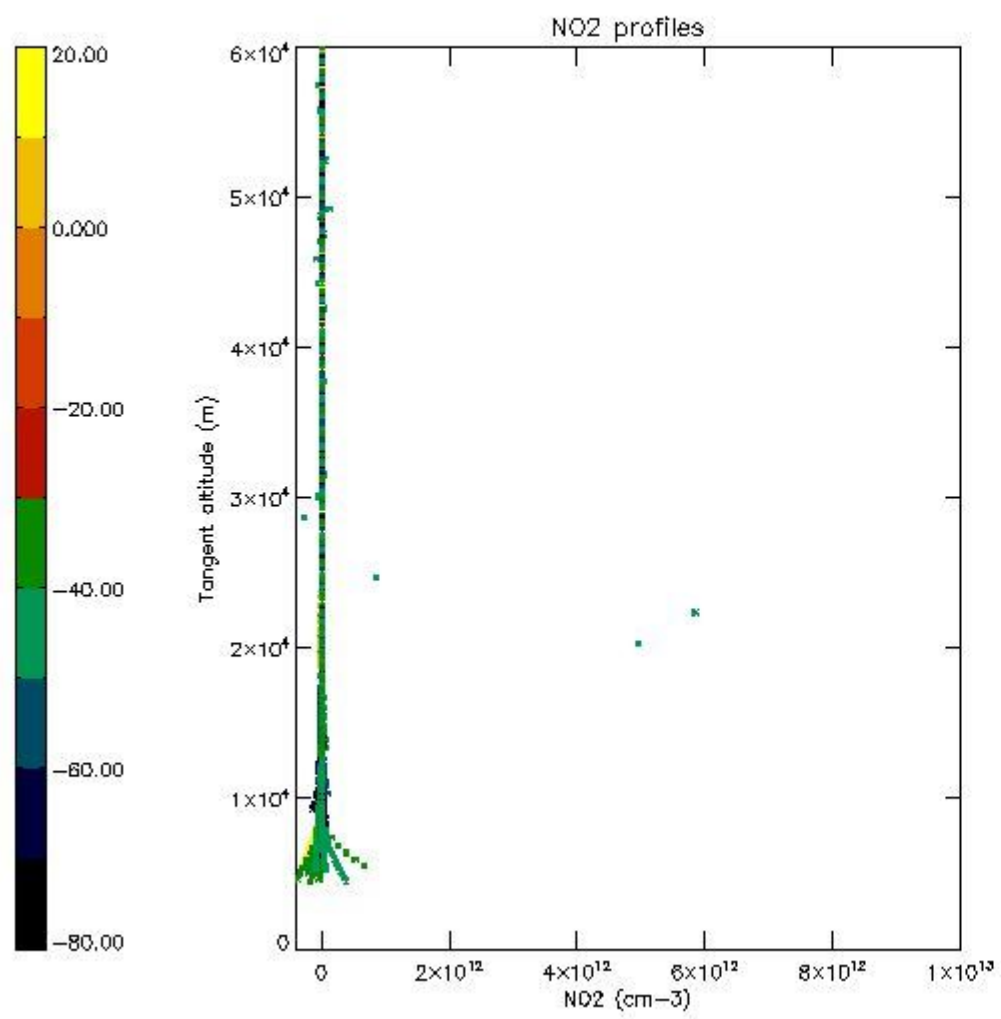
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



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

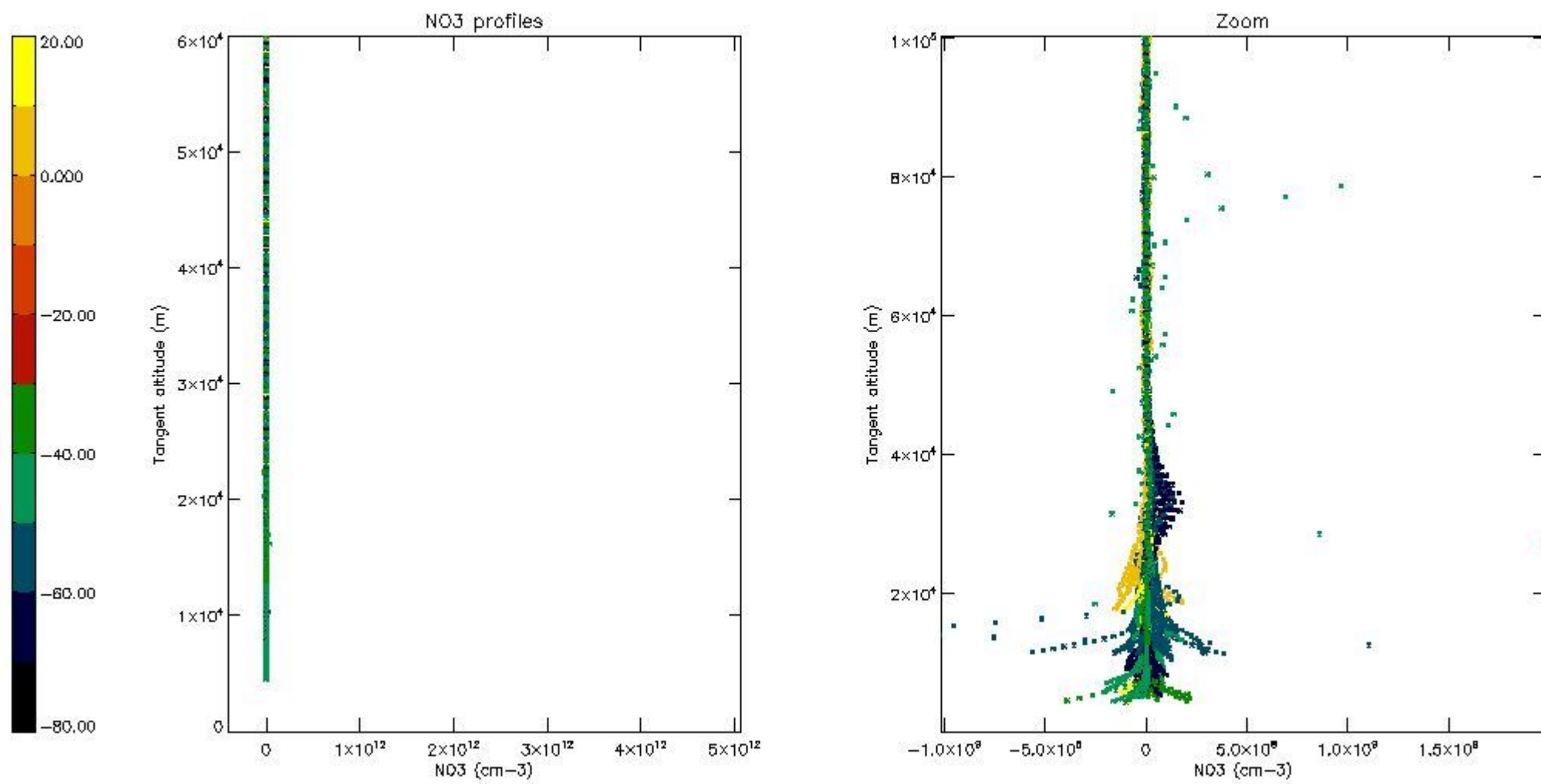
The colorbar represents the latitude.



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

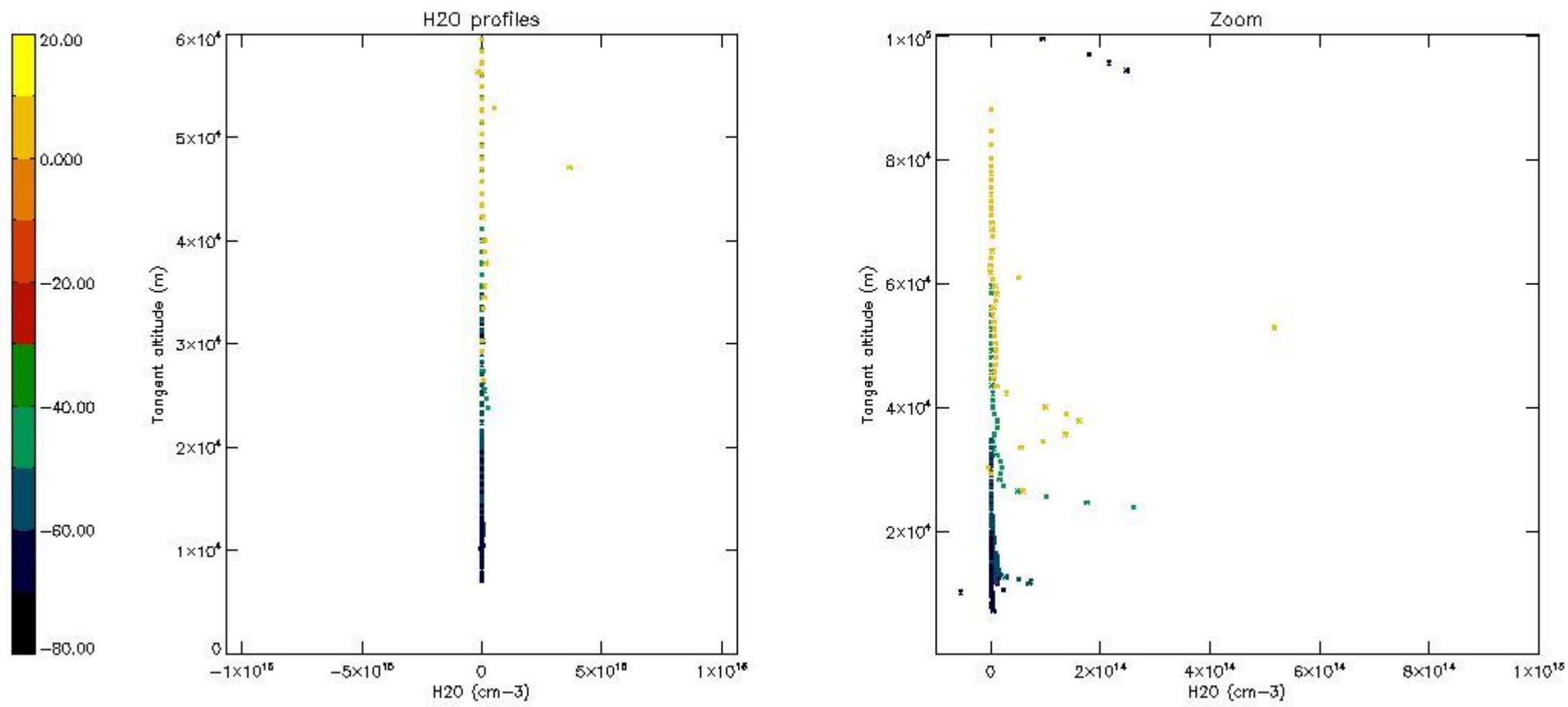
The colorbar represents the latitude.





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

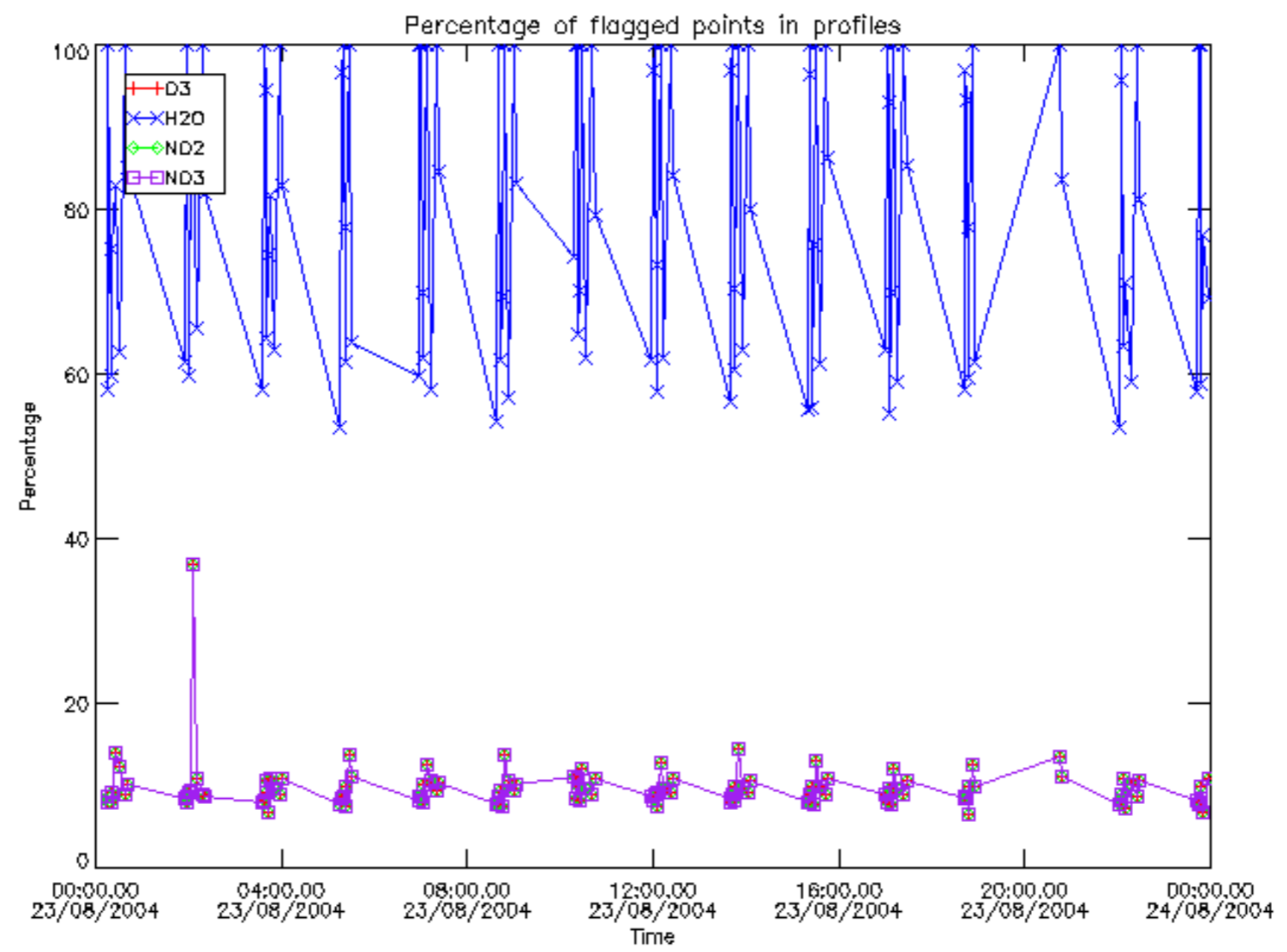
The colorbar represents the latitude.



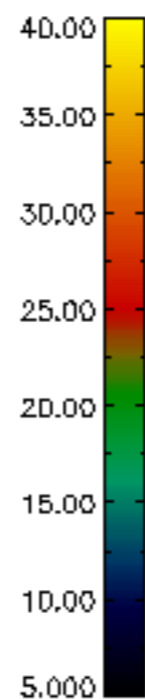
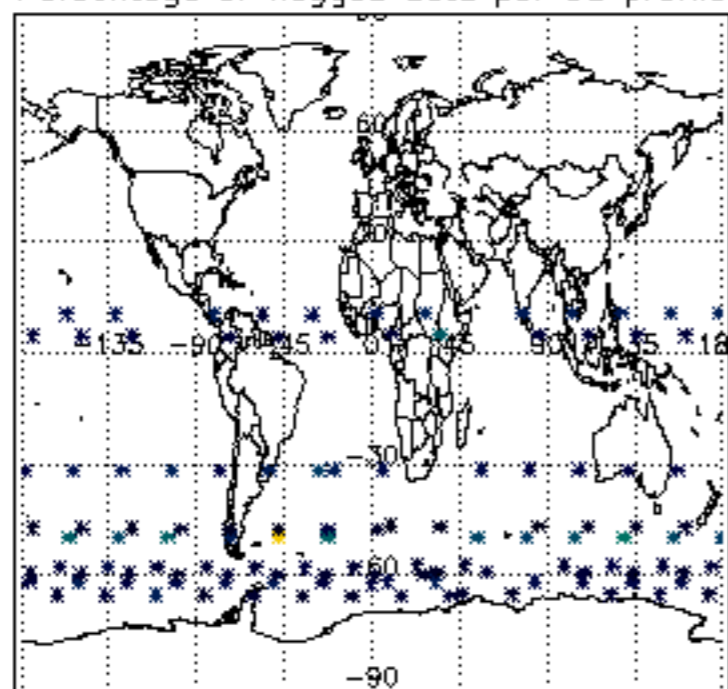
## 6. Auxiliary Data Files used for the production reported in section 2

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

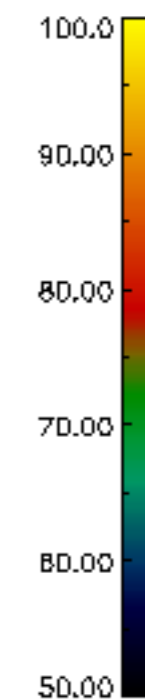
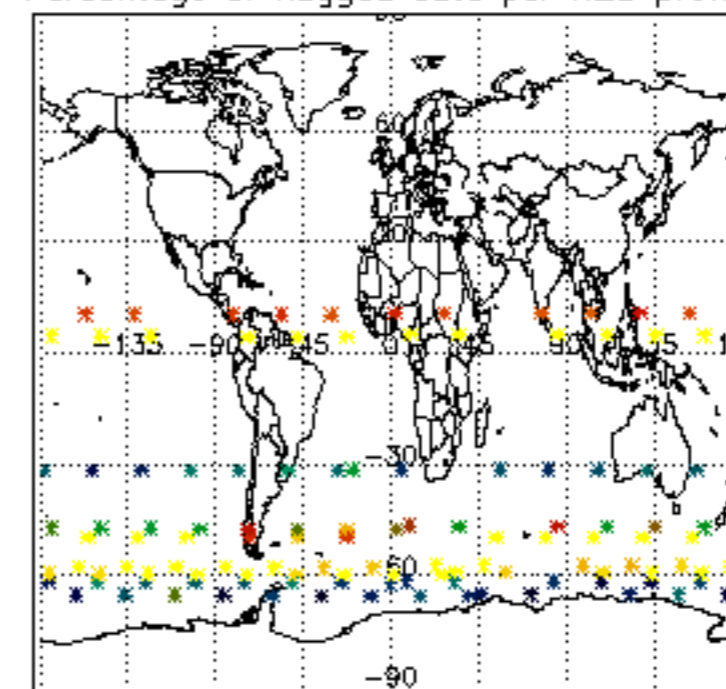
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	23-AUG-2004 00:02:08
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	23-AUG-2004 00:02:08
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	23-AUG-2004 00:02:08



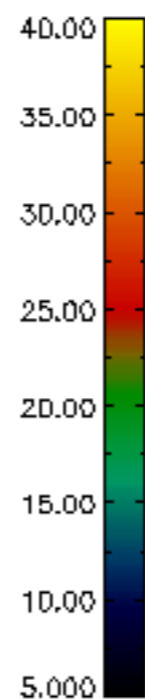
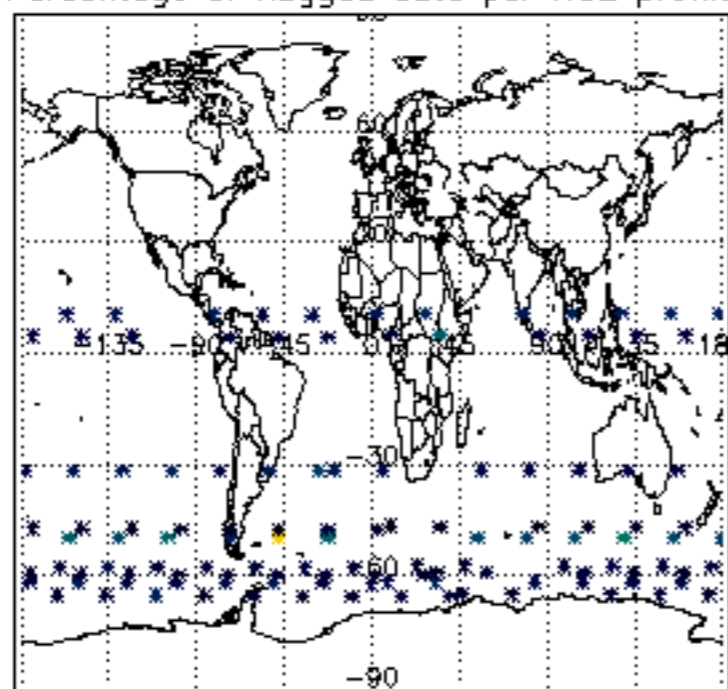
Percentage of flagged data per D3 profile



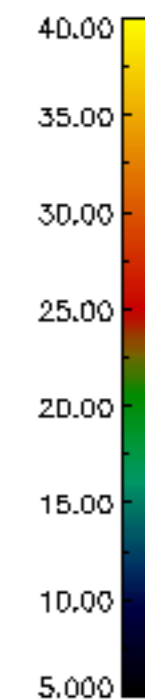
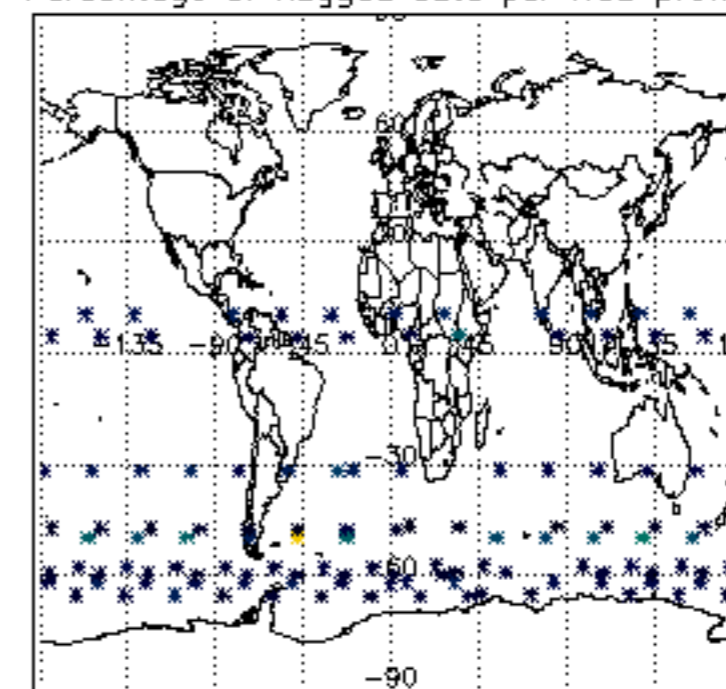
Percentage of flagged data per H2O profile

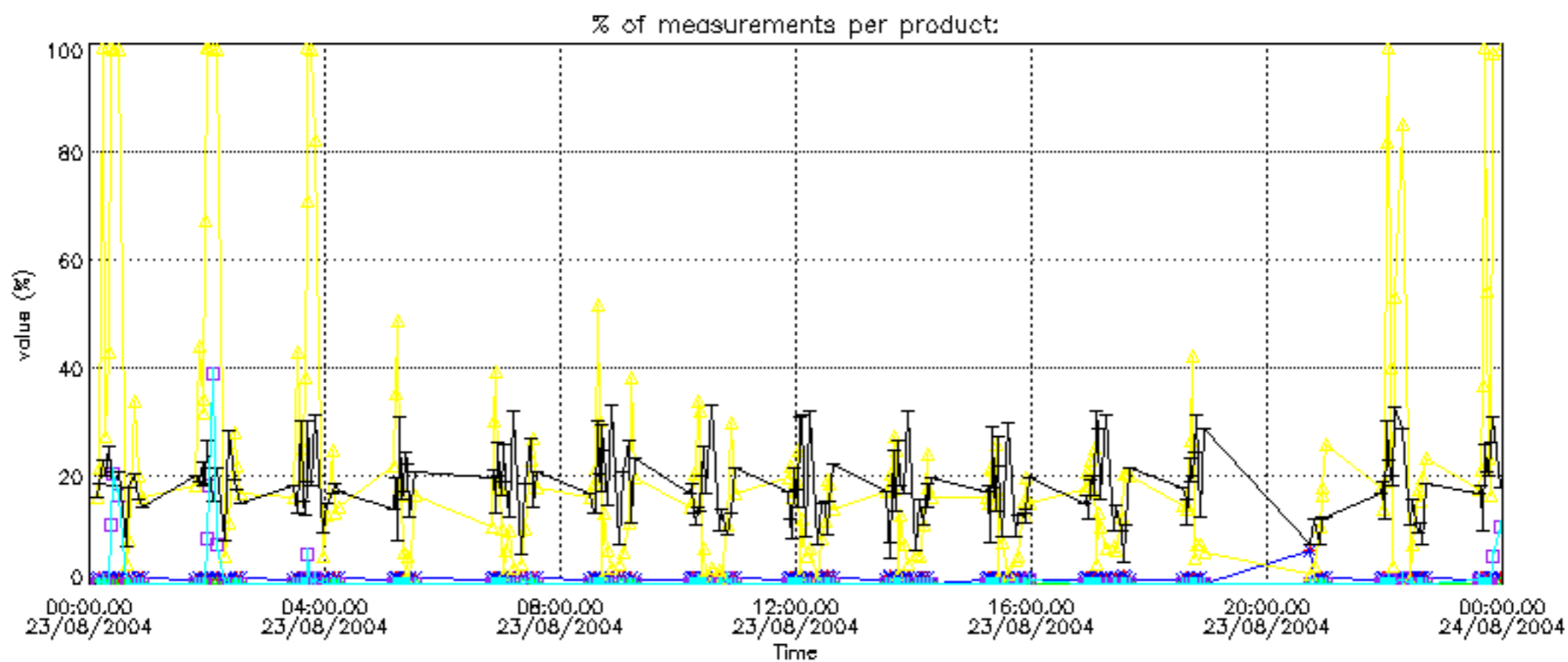


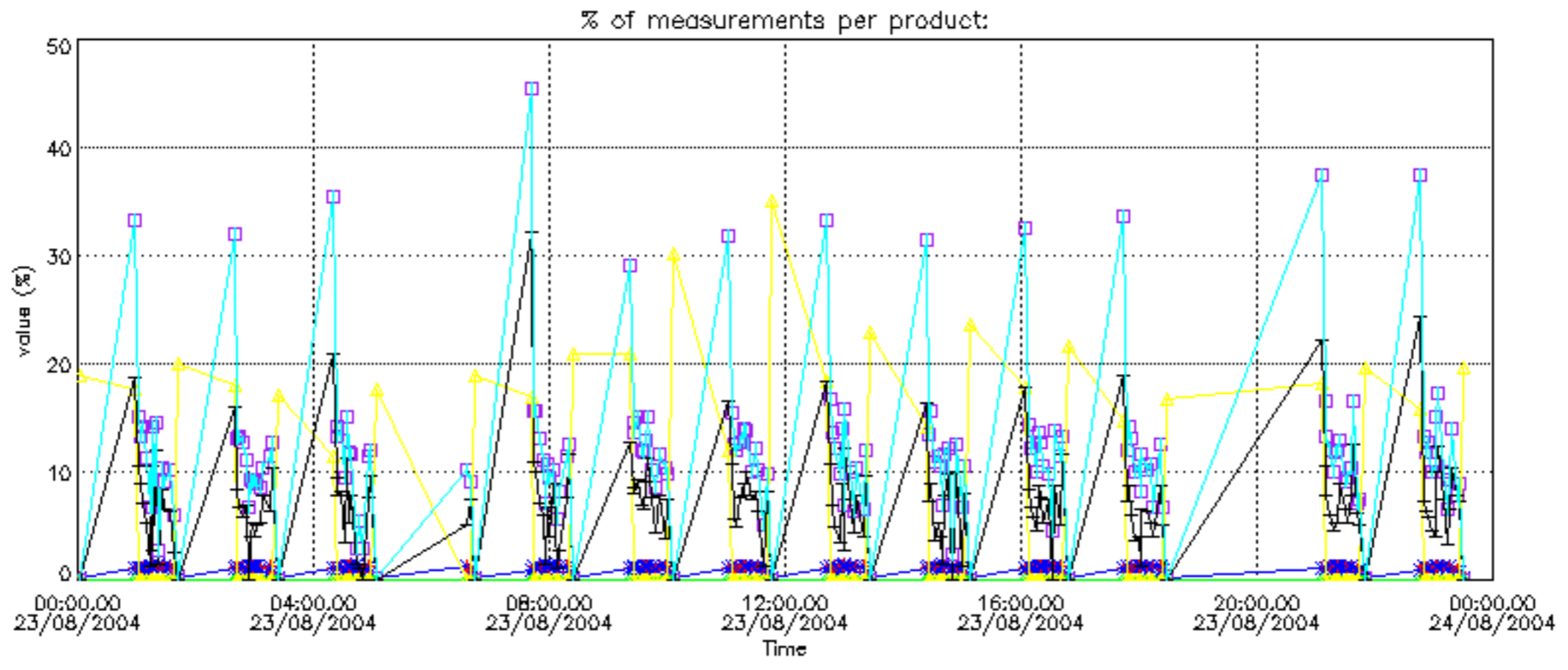
Percentage of flagged data per NO2 profile



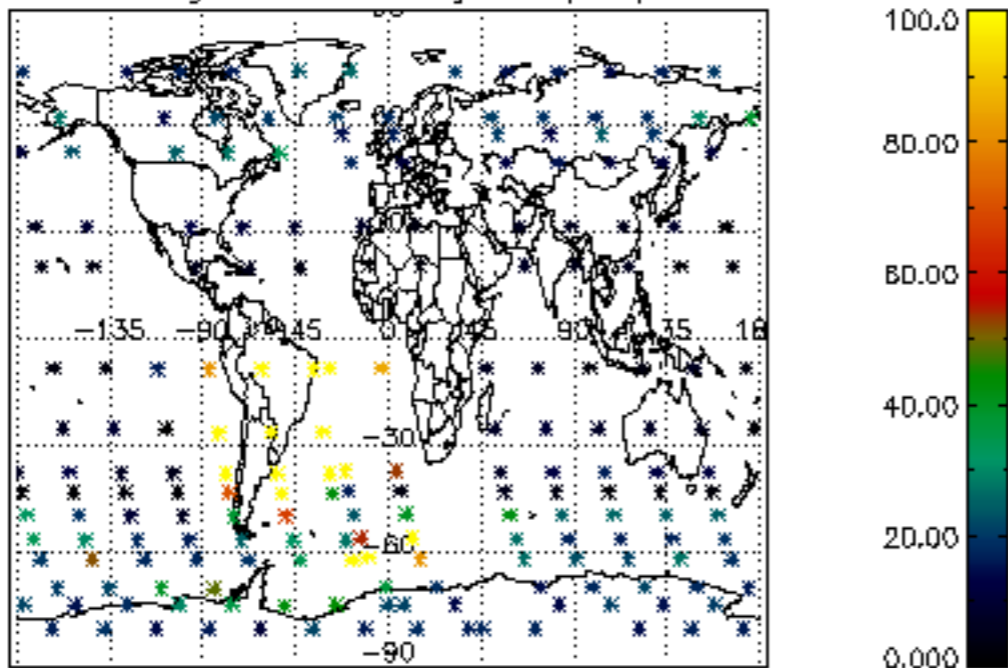
Percentage of flagged data per NO3 profile



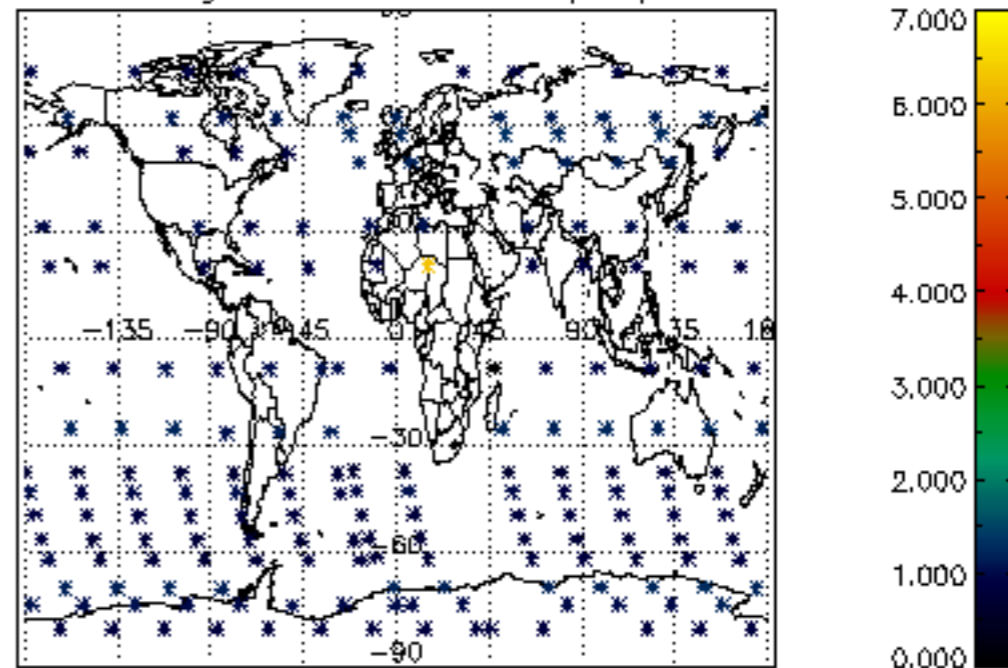




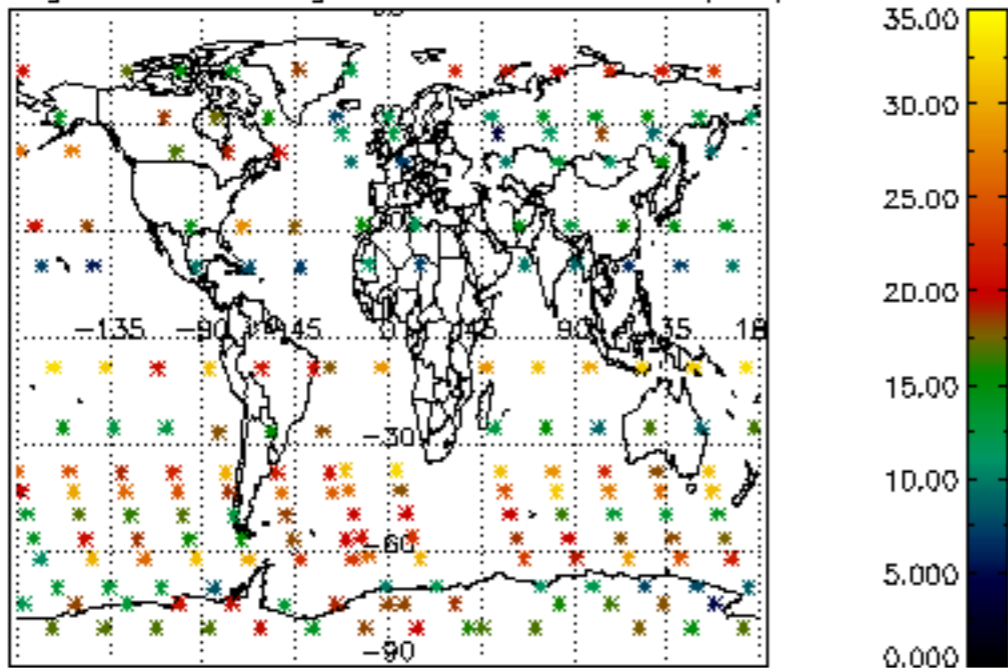
Percentage of cosmic ray hits per profile



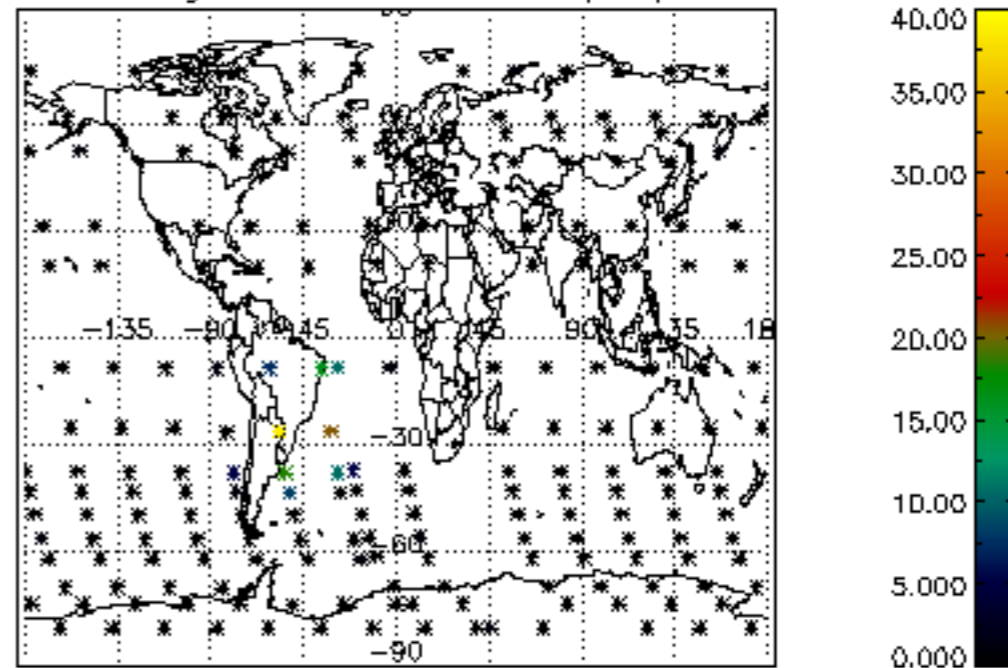
Percentage of datation errors per profile



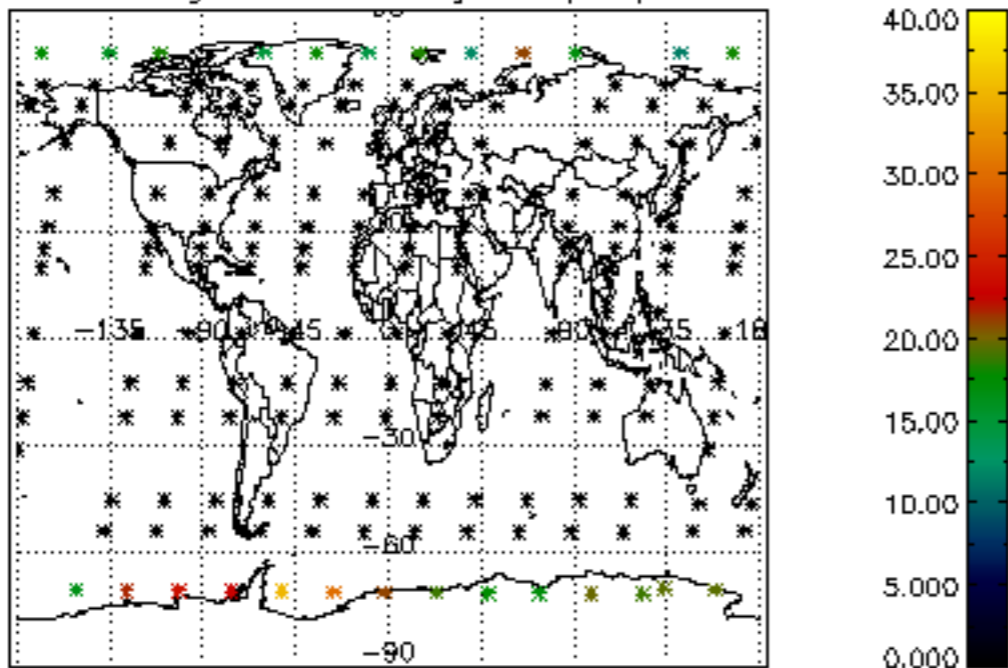
Percentage of star falling outside central band per profile



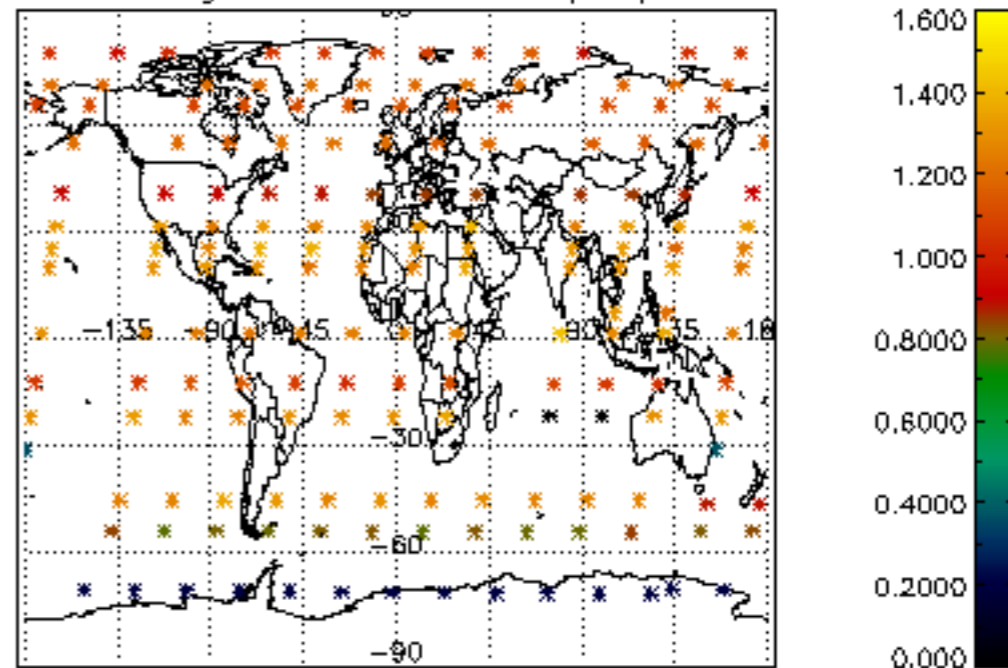
Percentage of saturation errors per profile



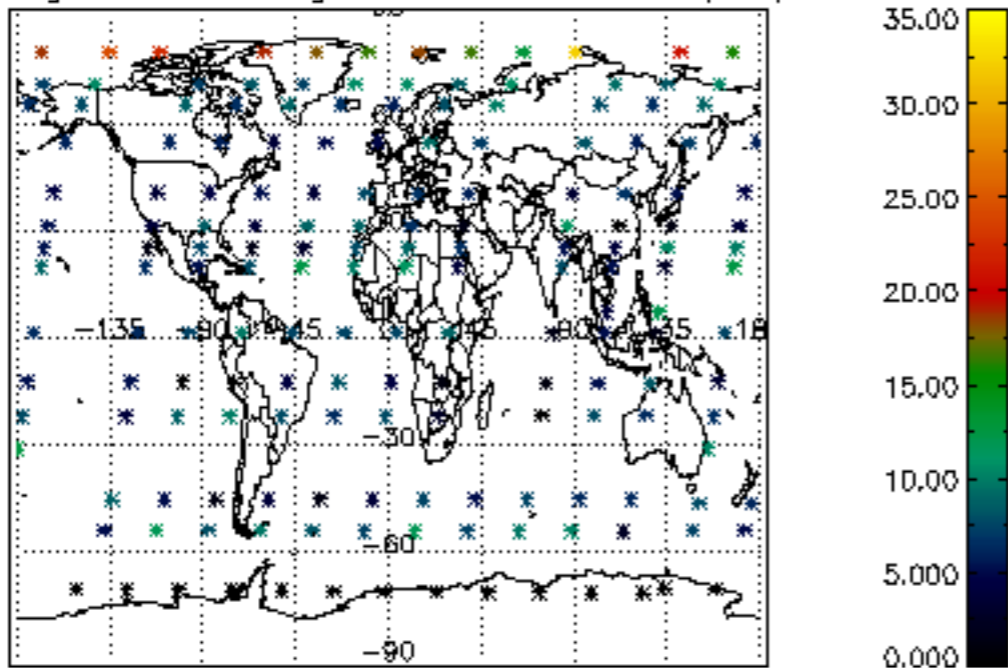
Percentage of cosmic ray hits per profile



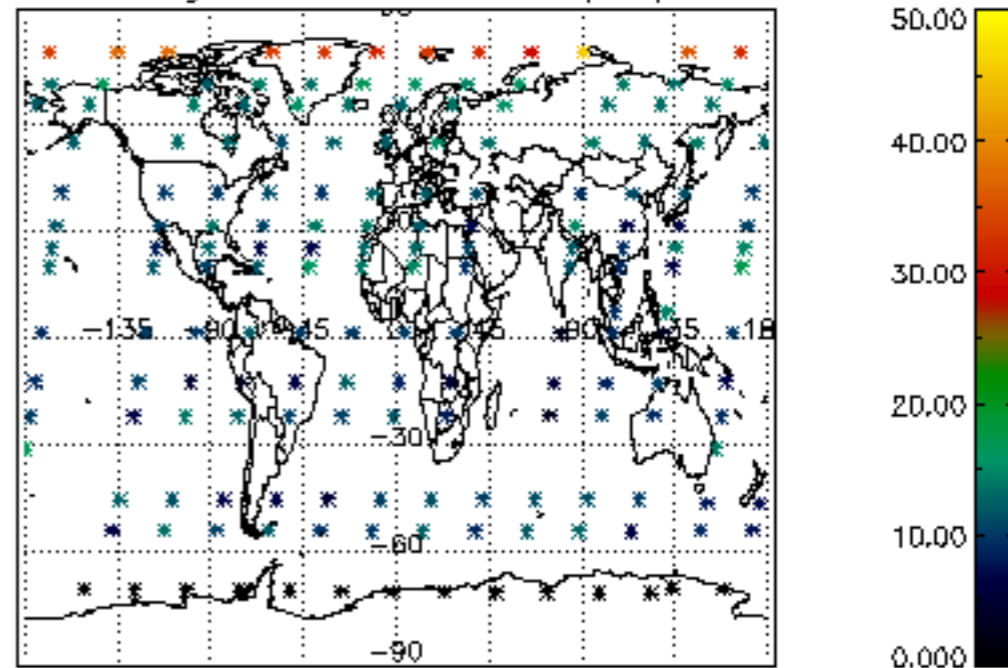
Percentage of datation errors per profile



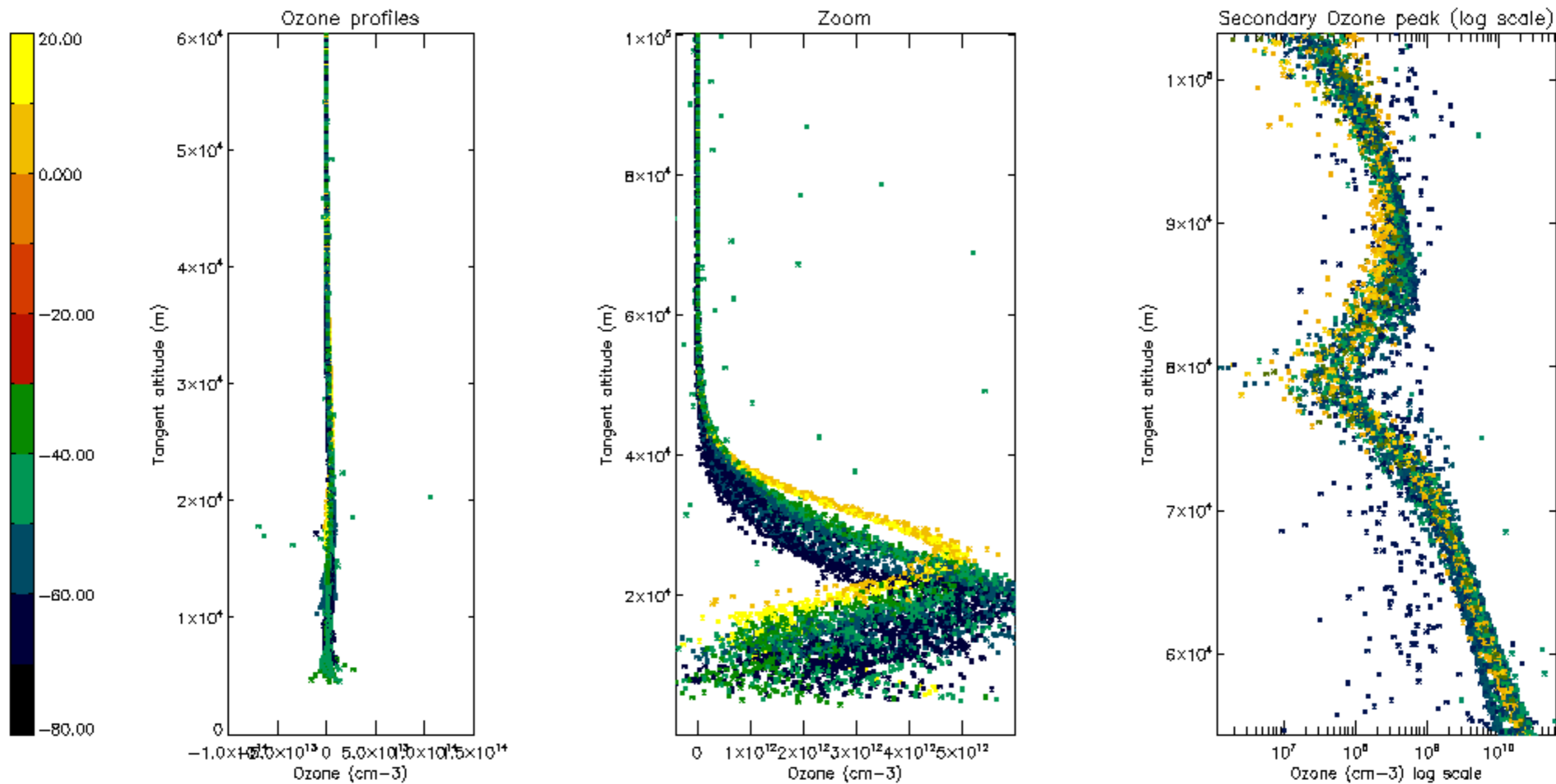
Percentage of star falling outside central band per profile

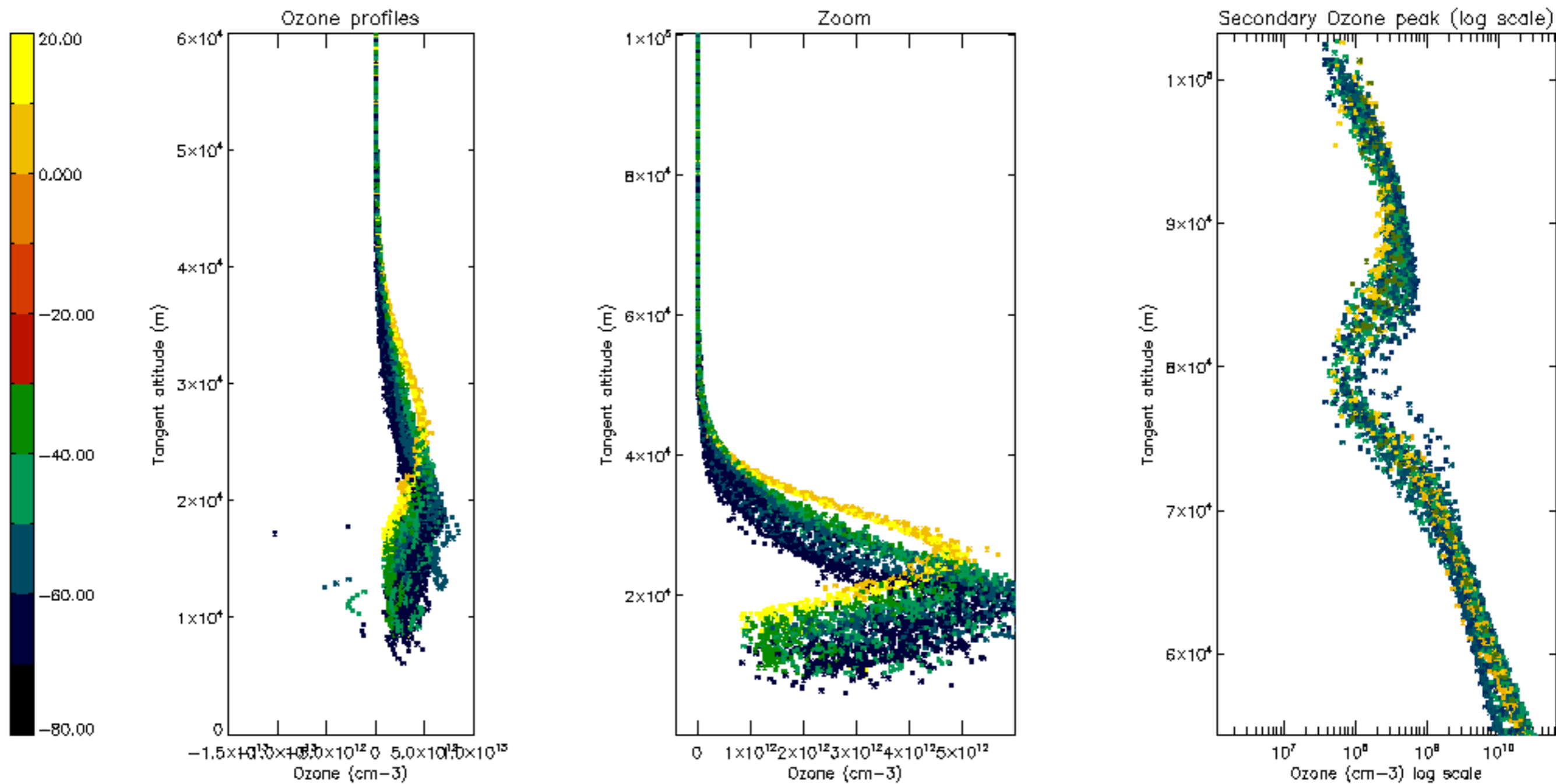


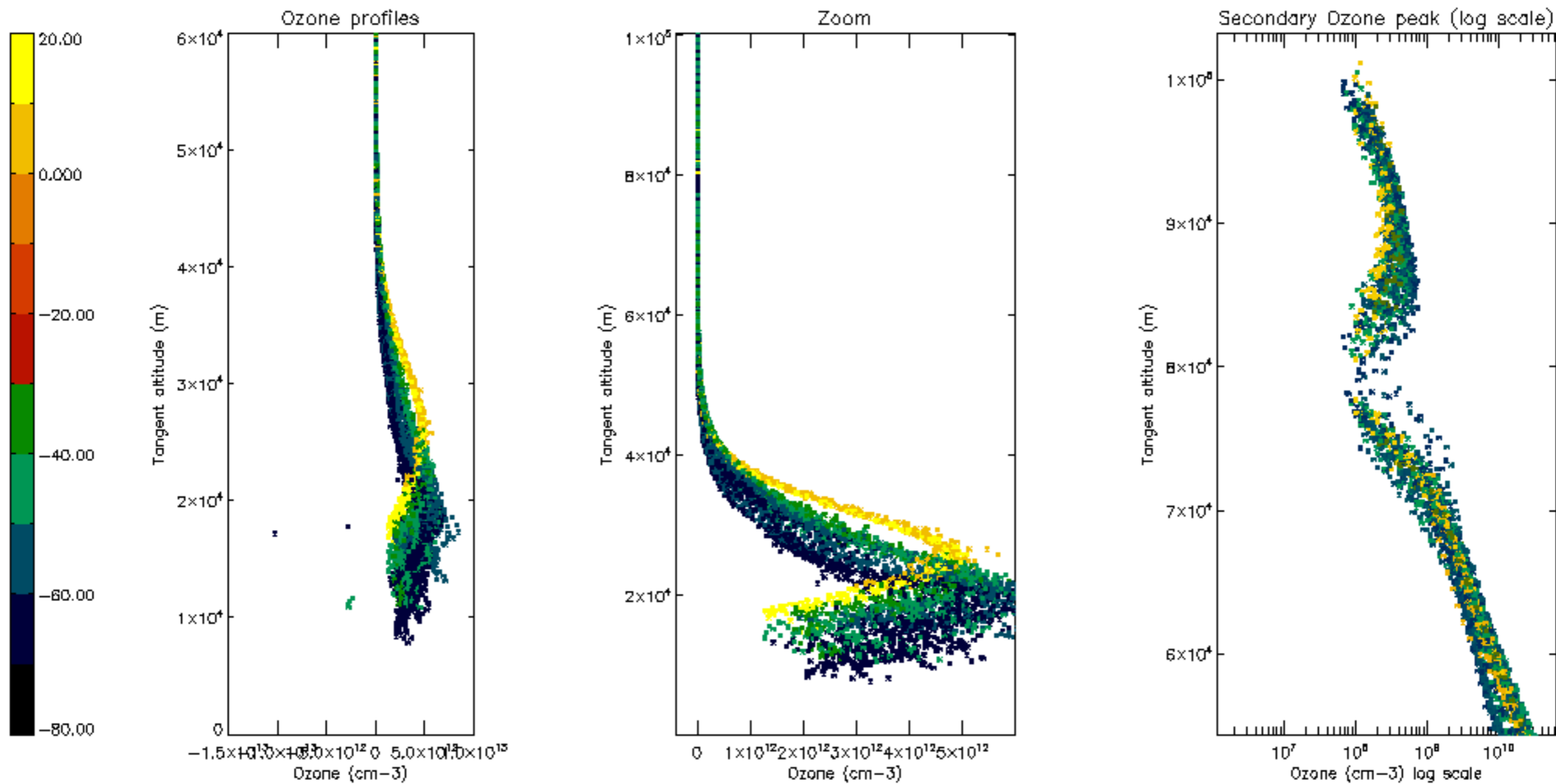
Percentage of saturation errors per profile

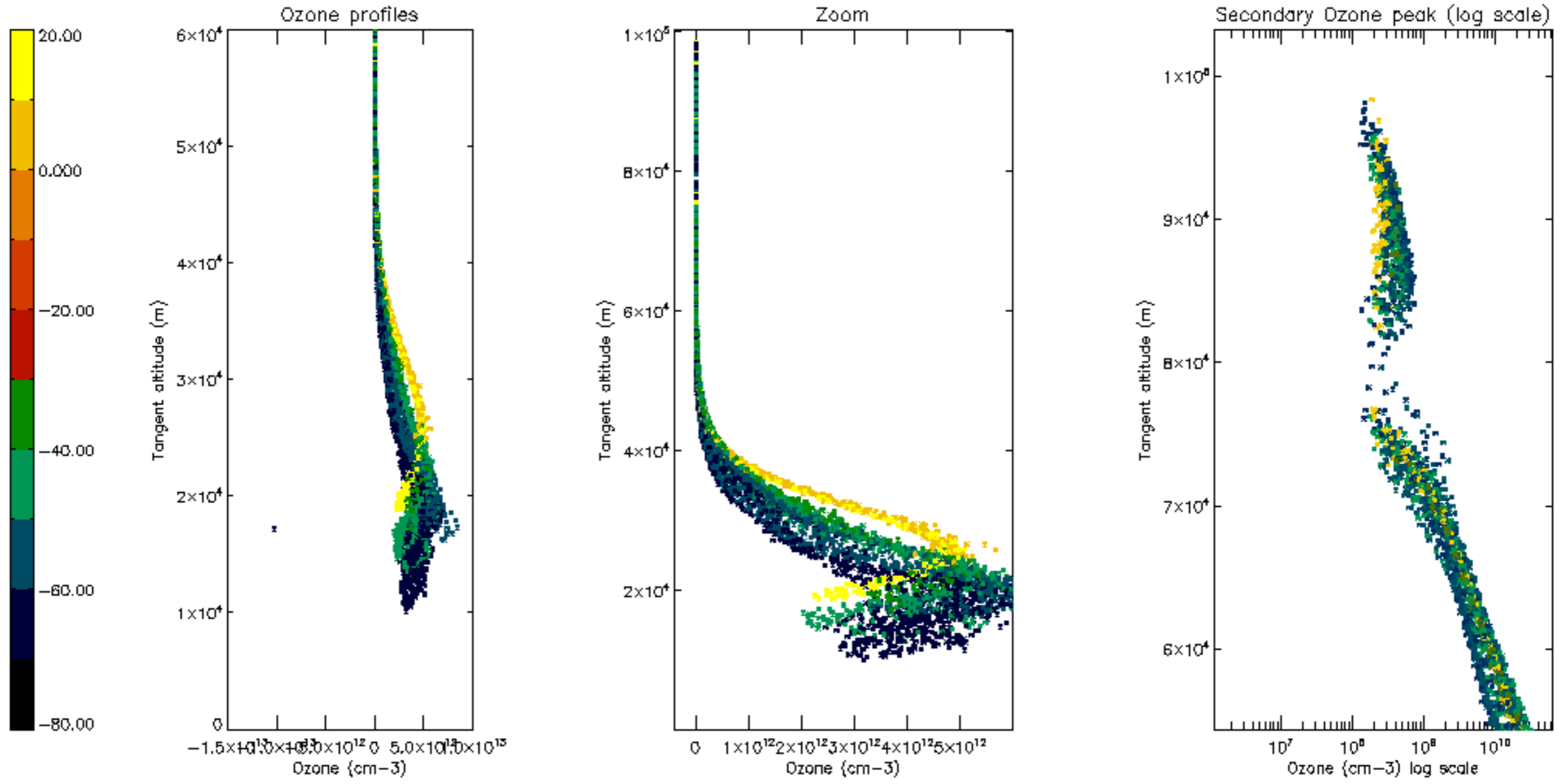


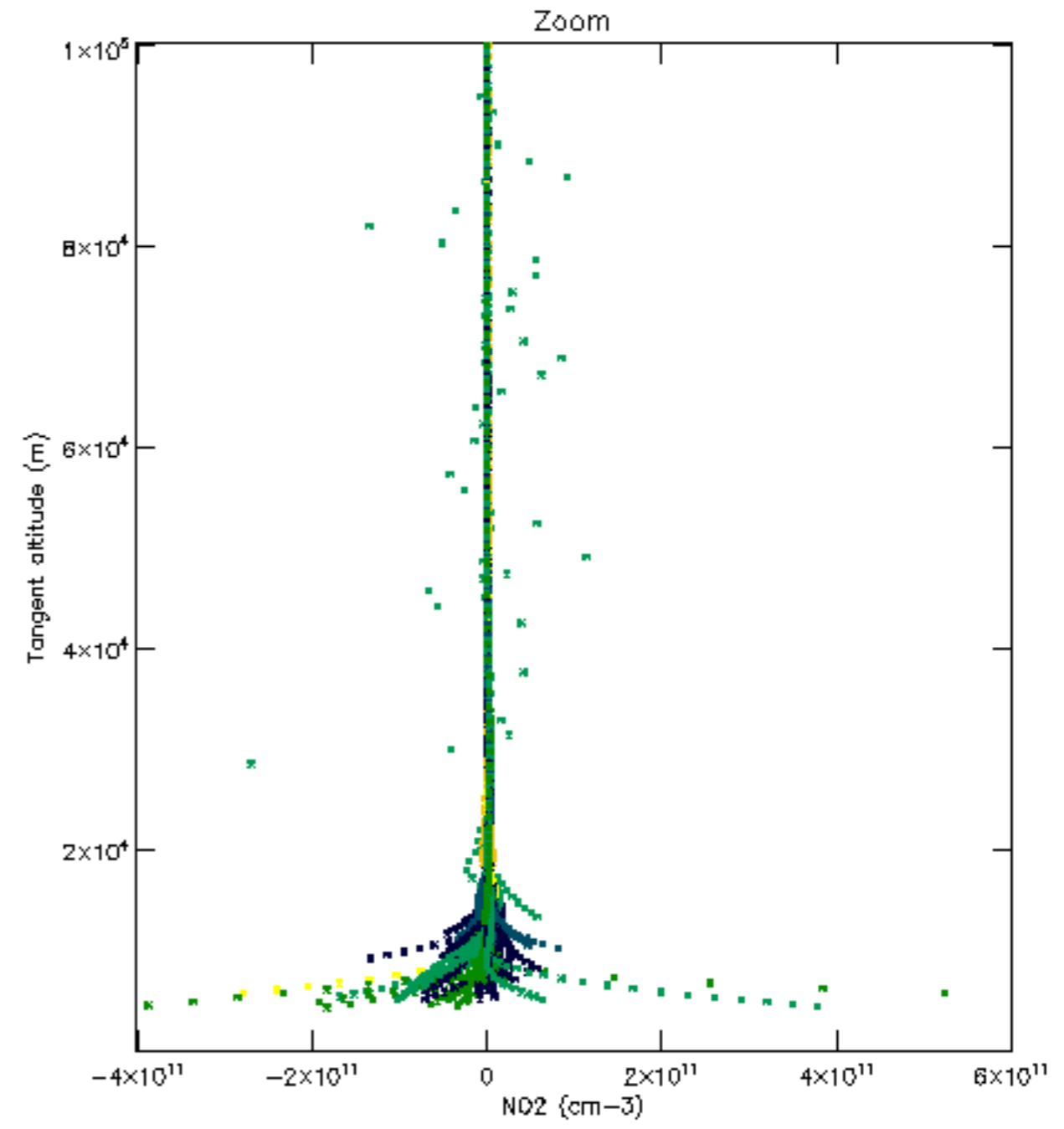
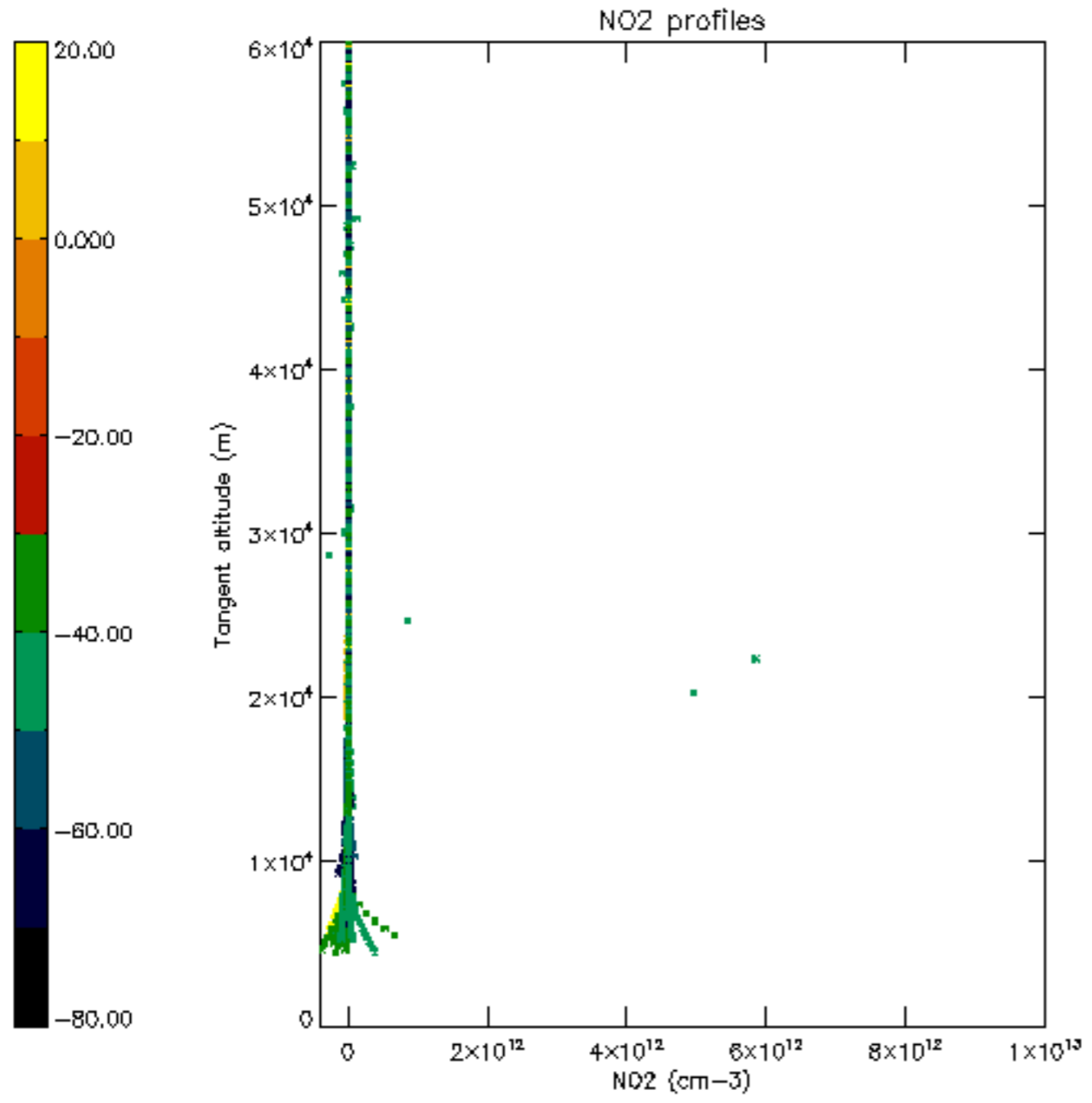


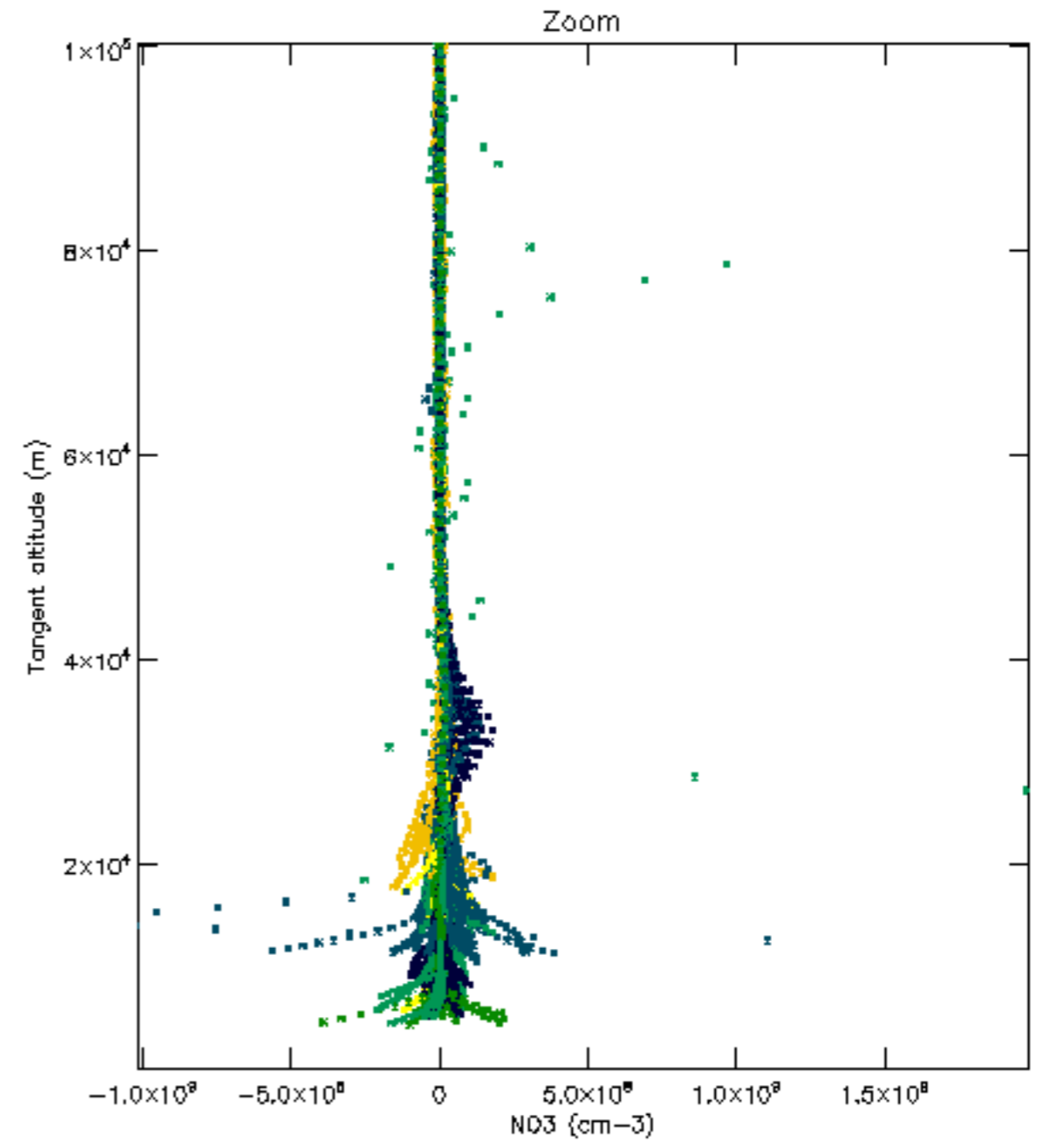
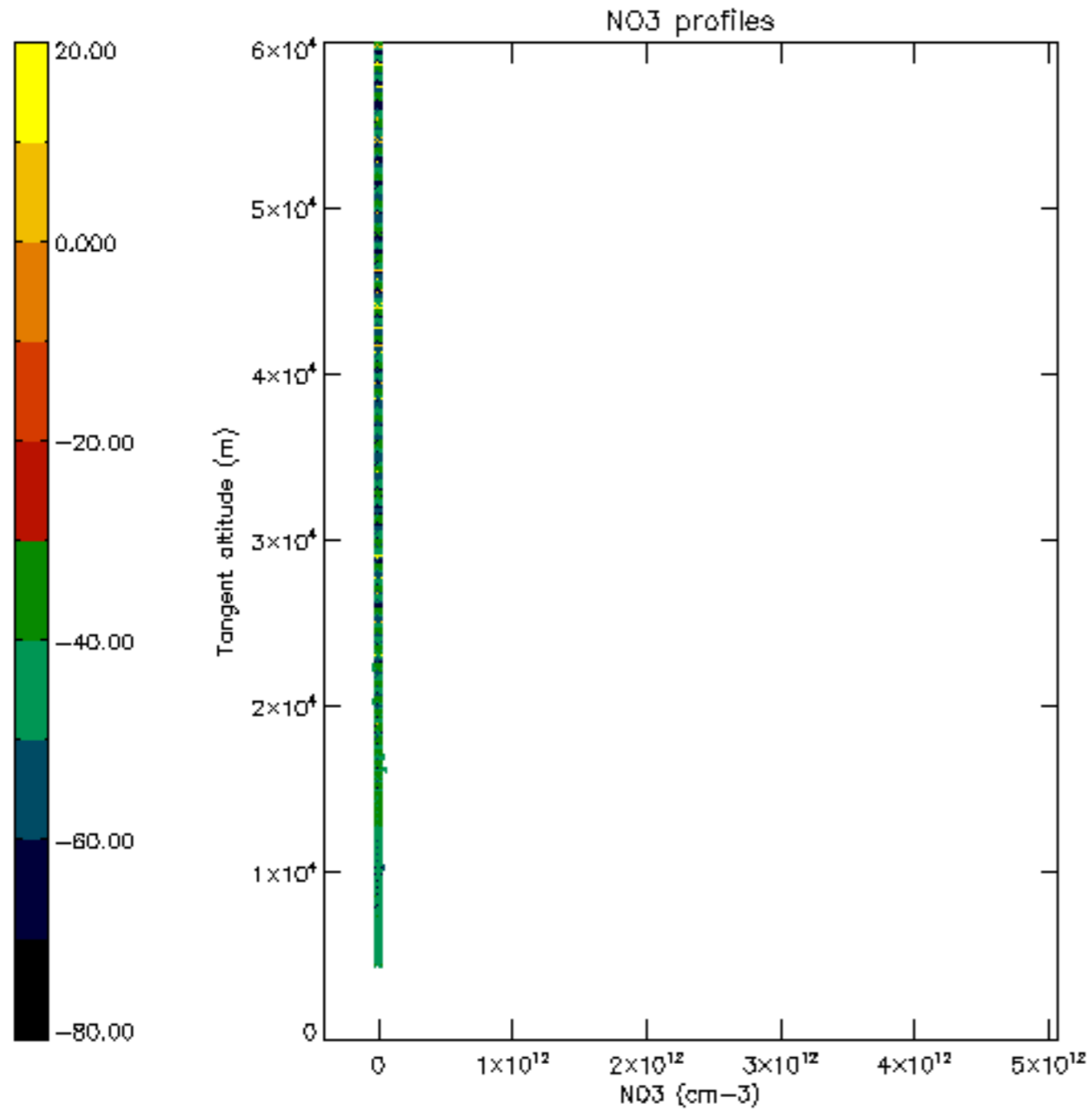


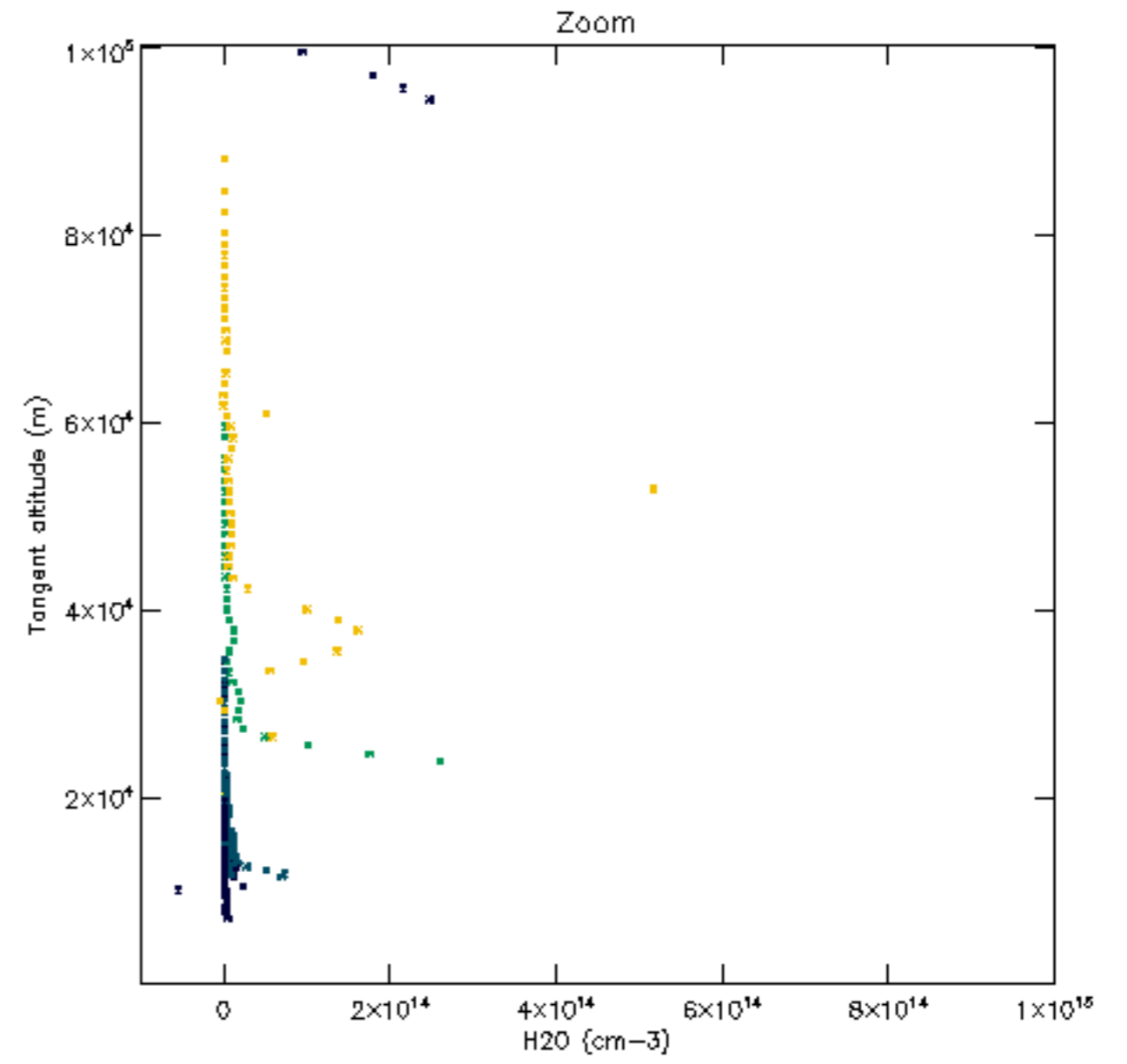
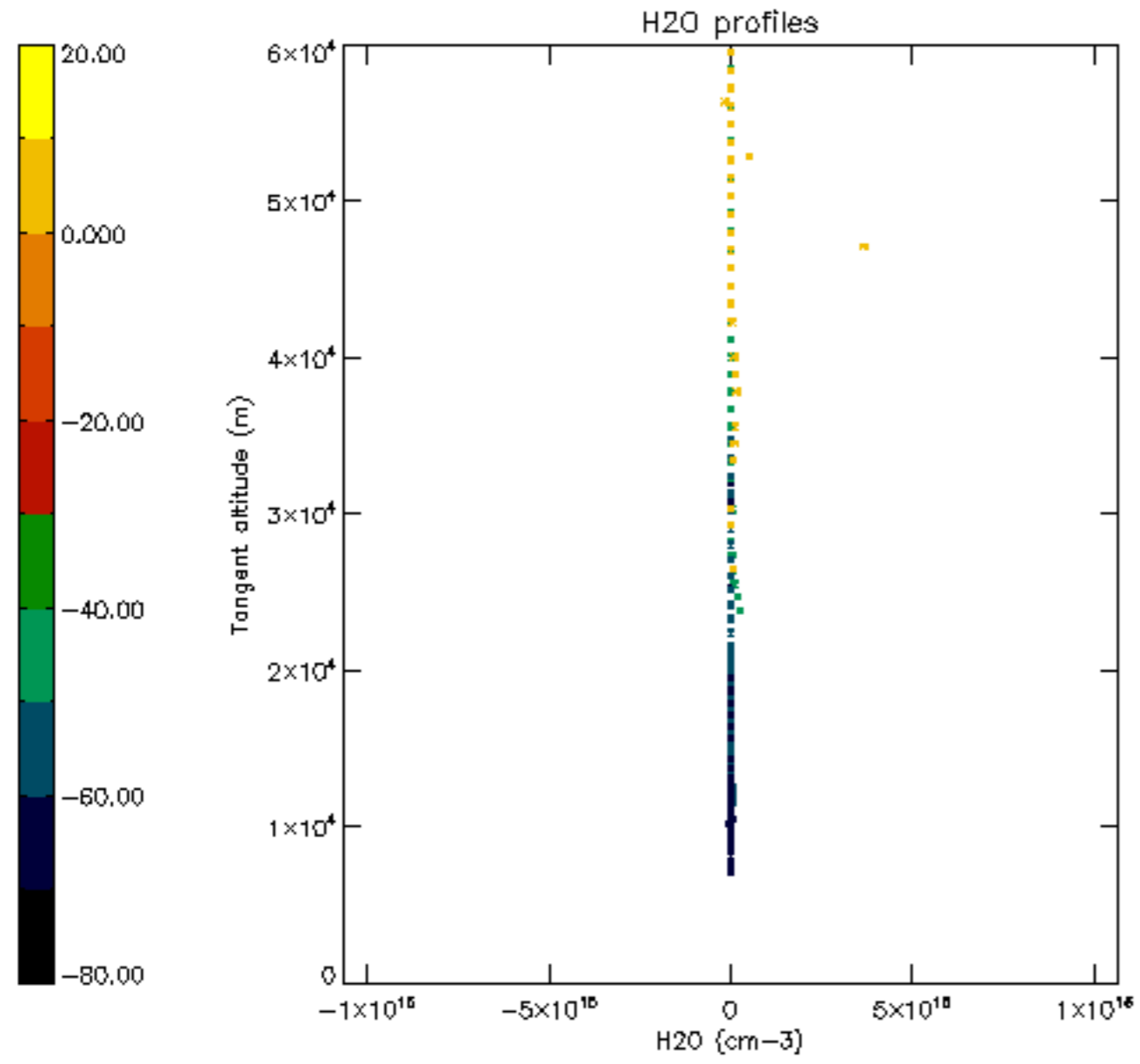


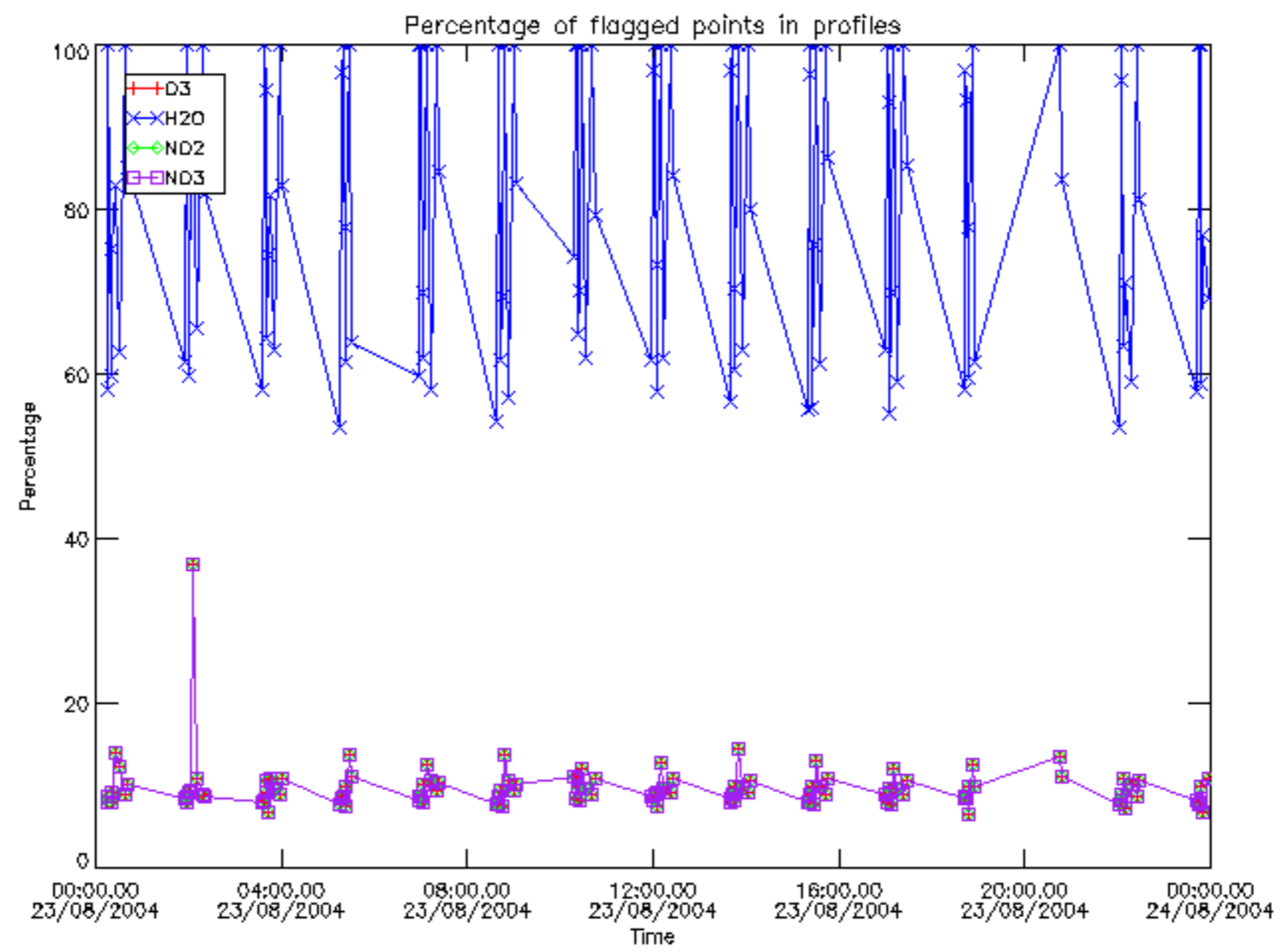






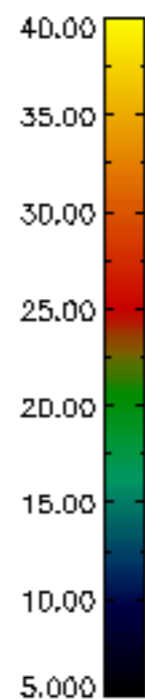
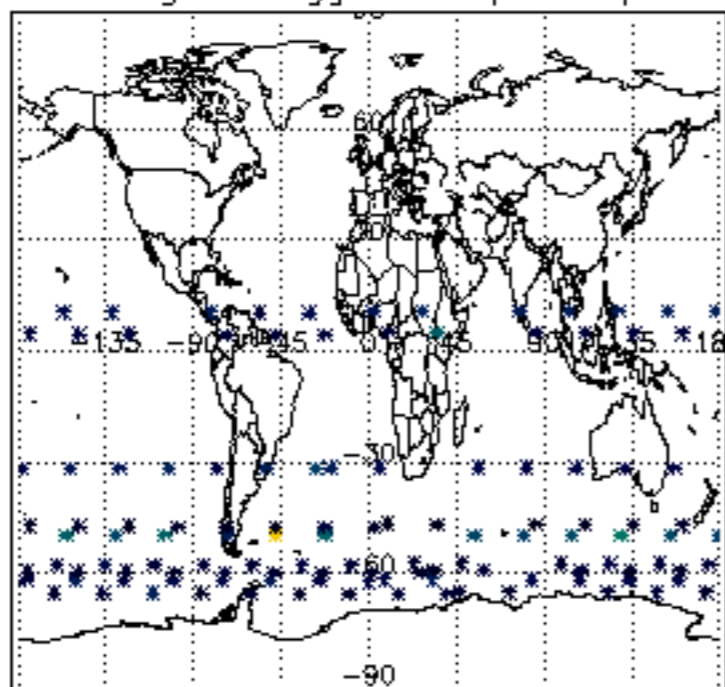




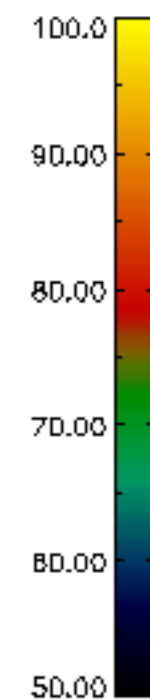
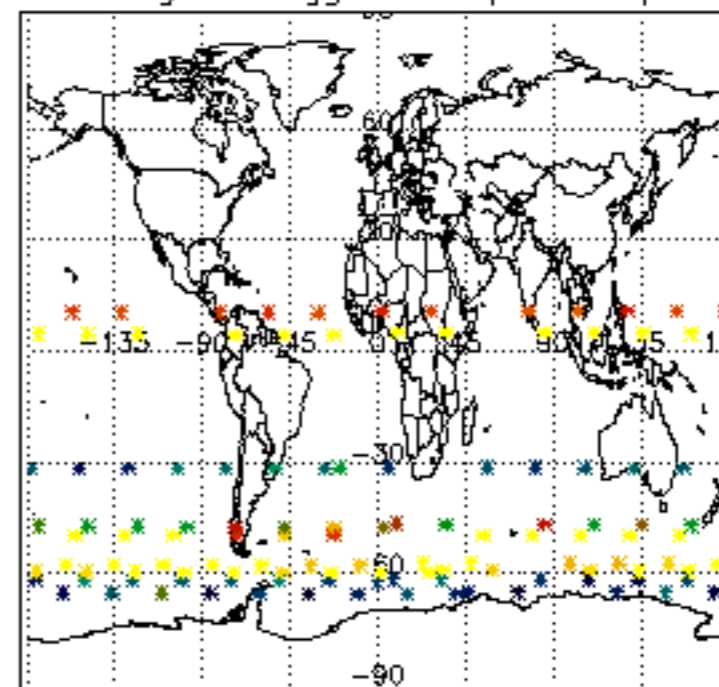




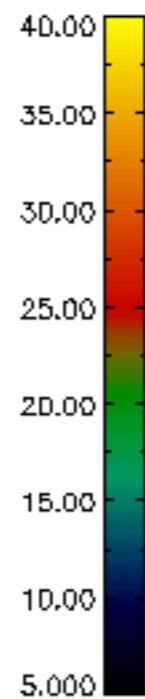
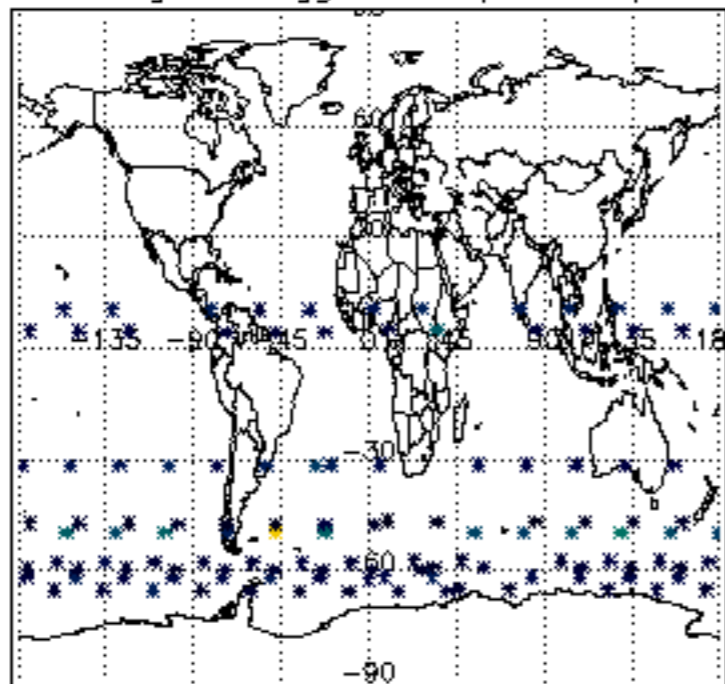
Percentage of flagged data per D3 profile



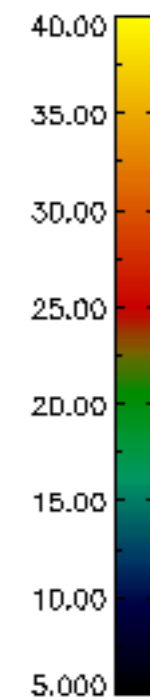
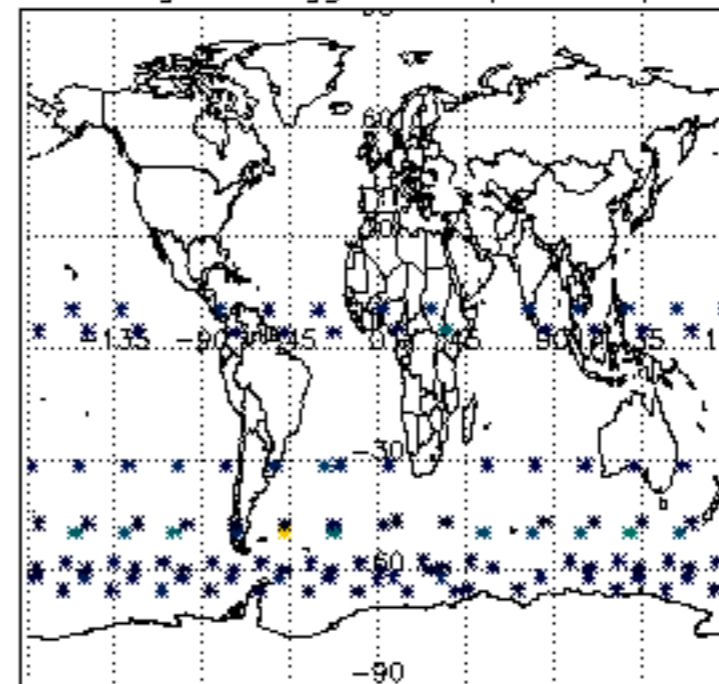
Percentage of flagged data per H2O profile

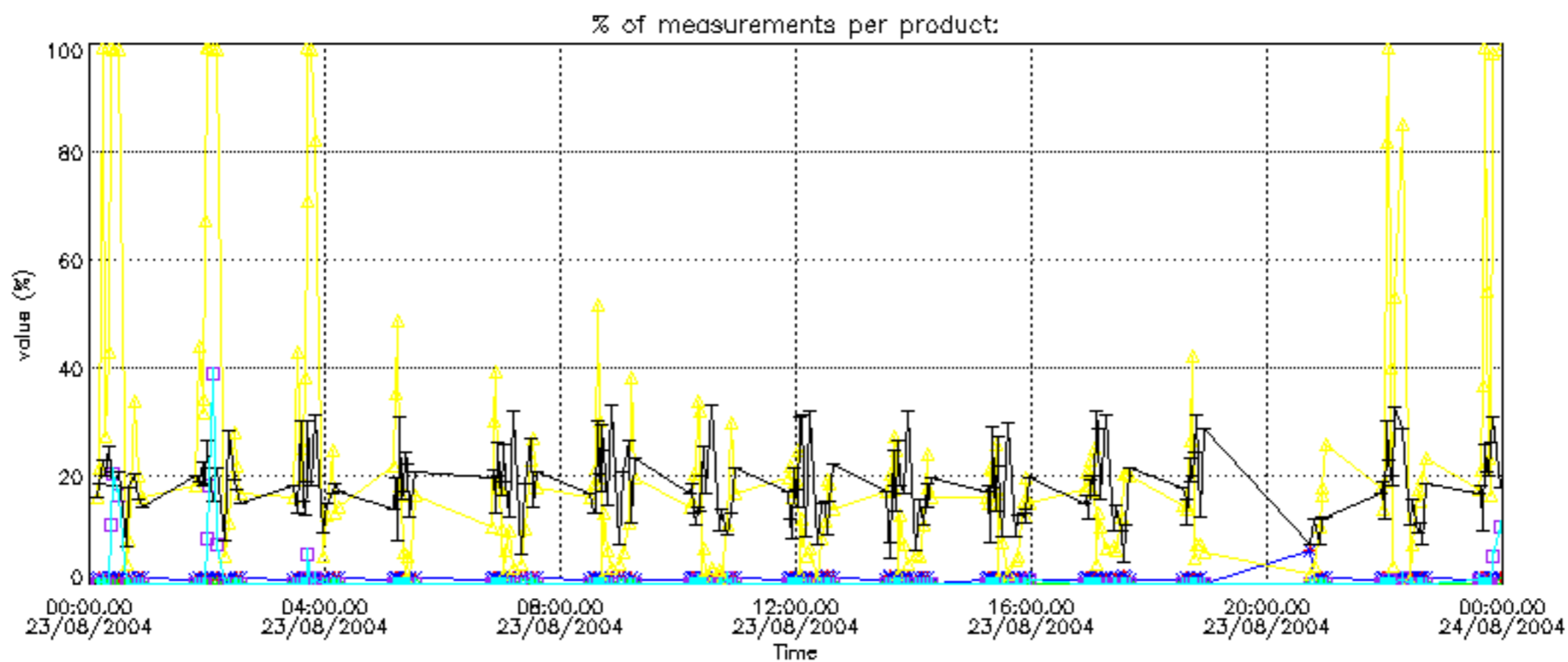


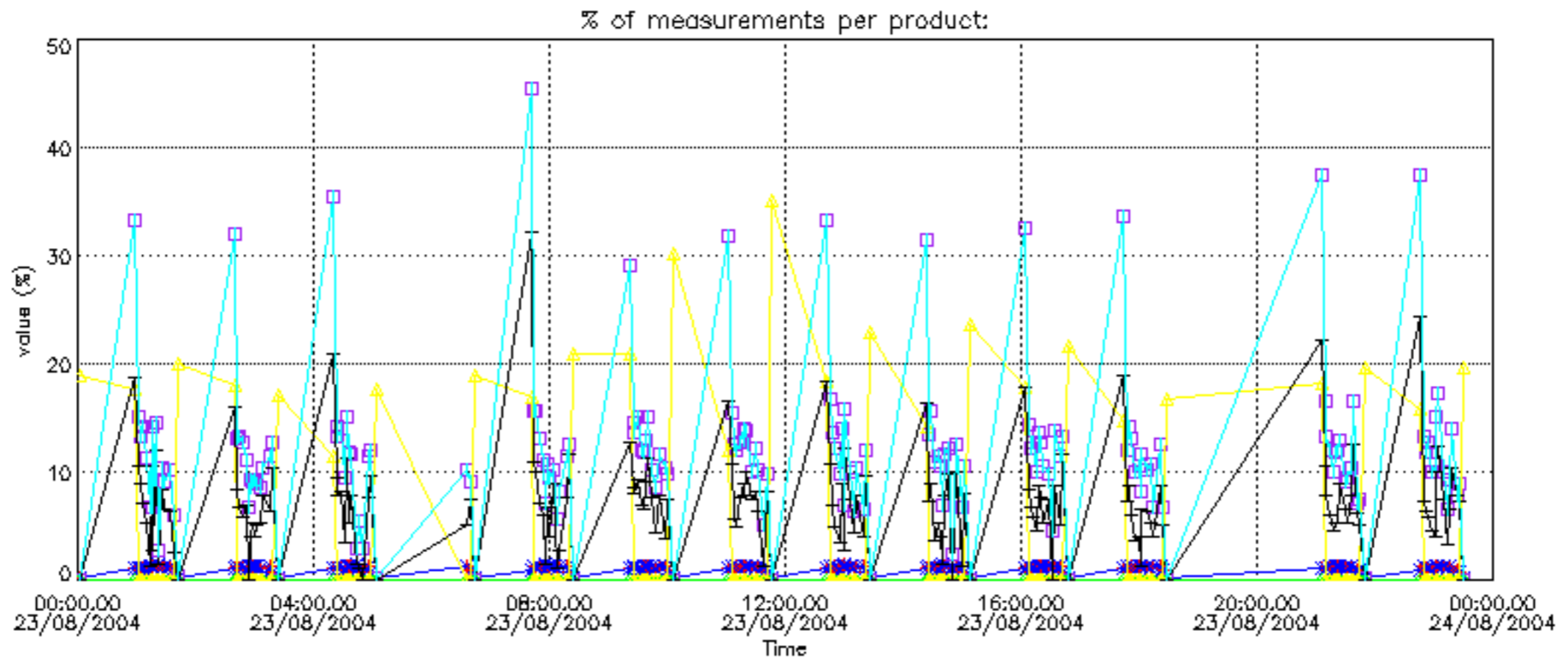
Percentage of flagged data per NO2 profile



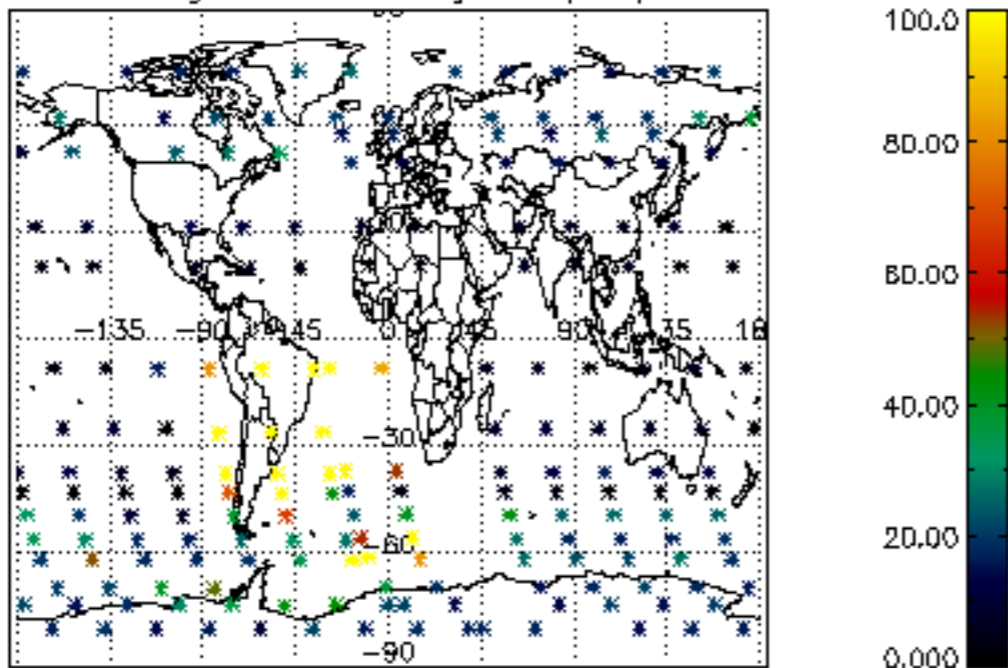
Percentage of flagged data per NO3 profile



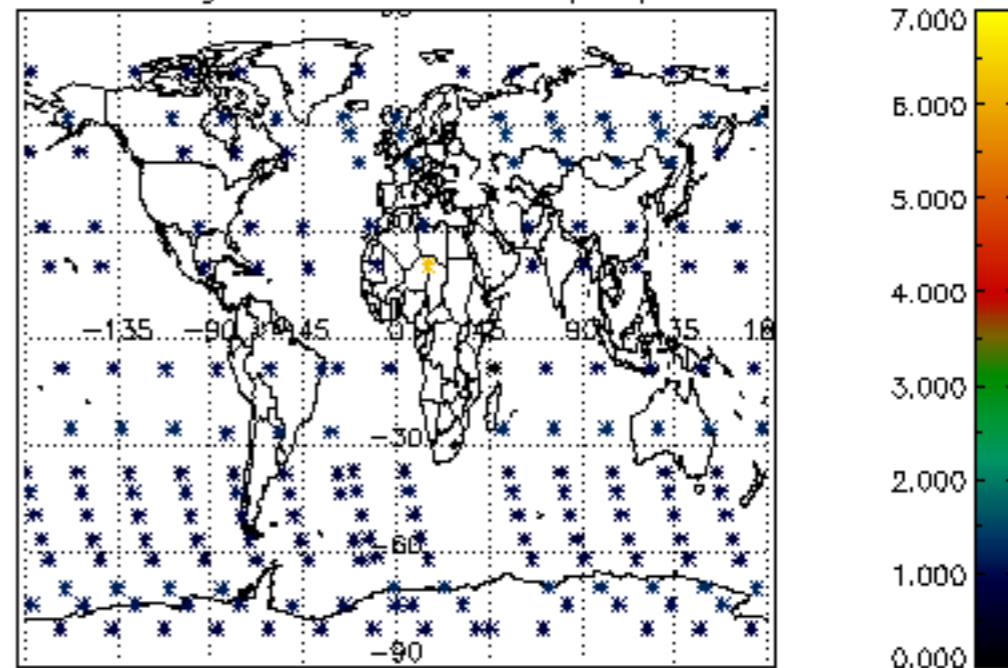




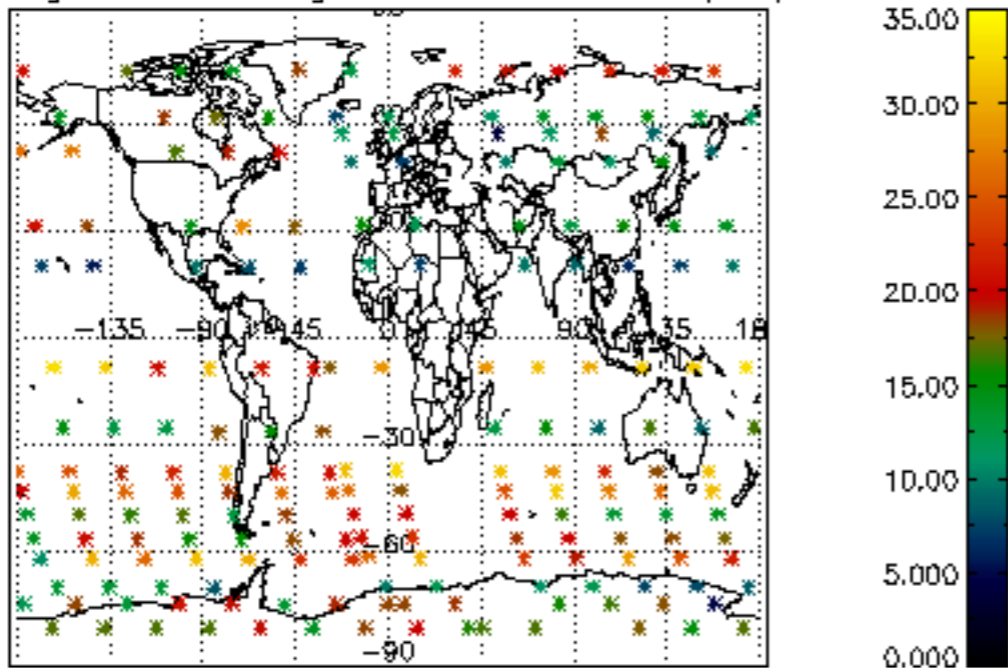
Percentage of cosmic ray hits per profile



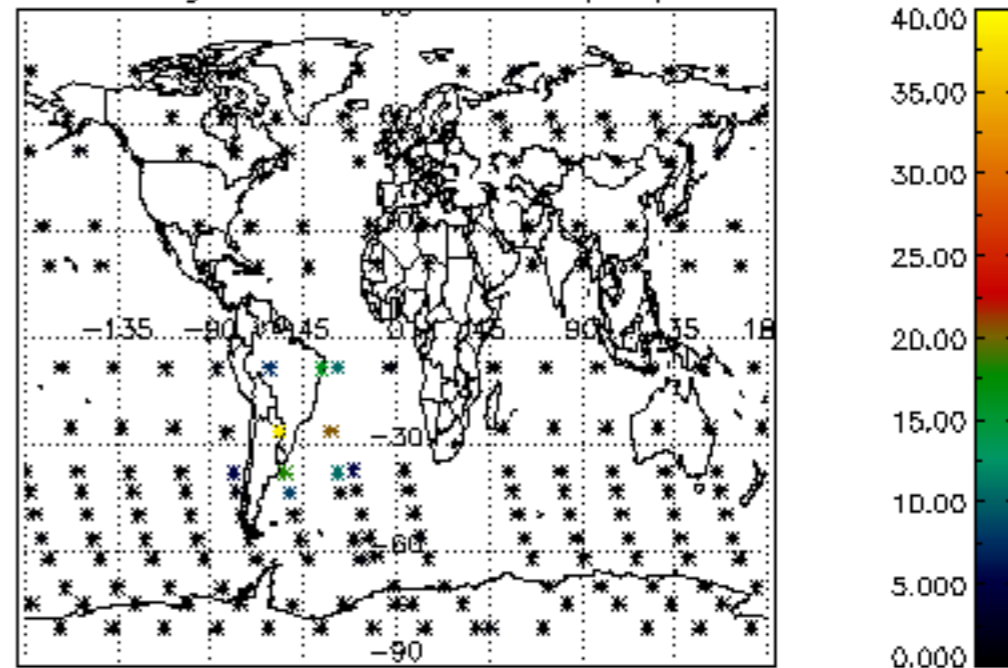
Percentage of datation errors per profile



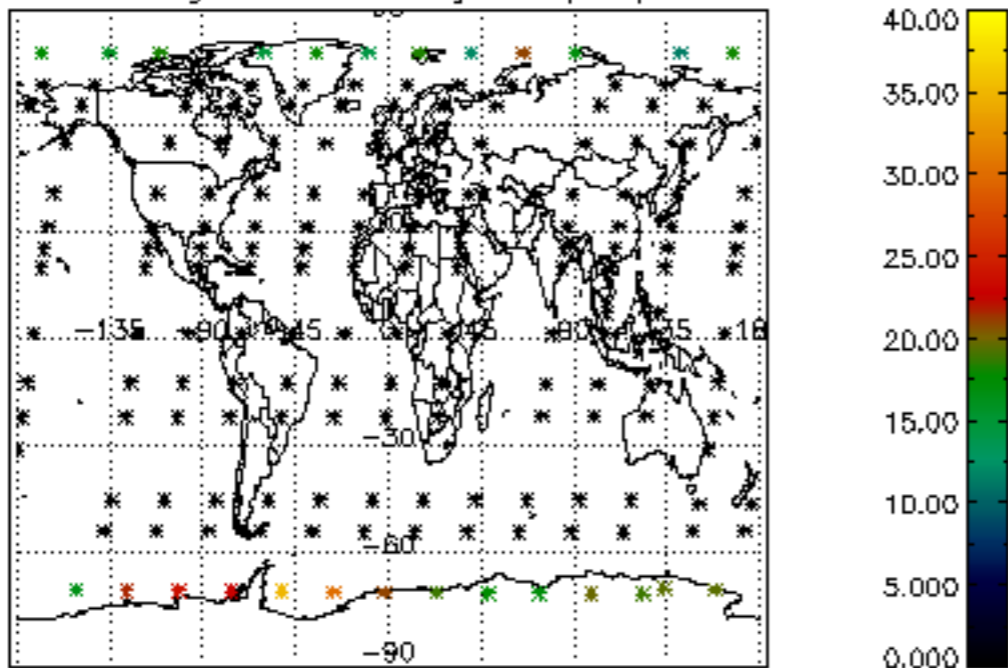
Percentage of star falling outside central band per profile



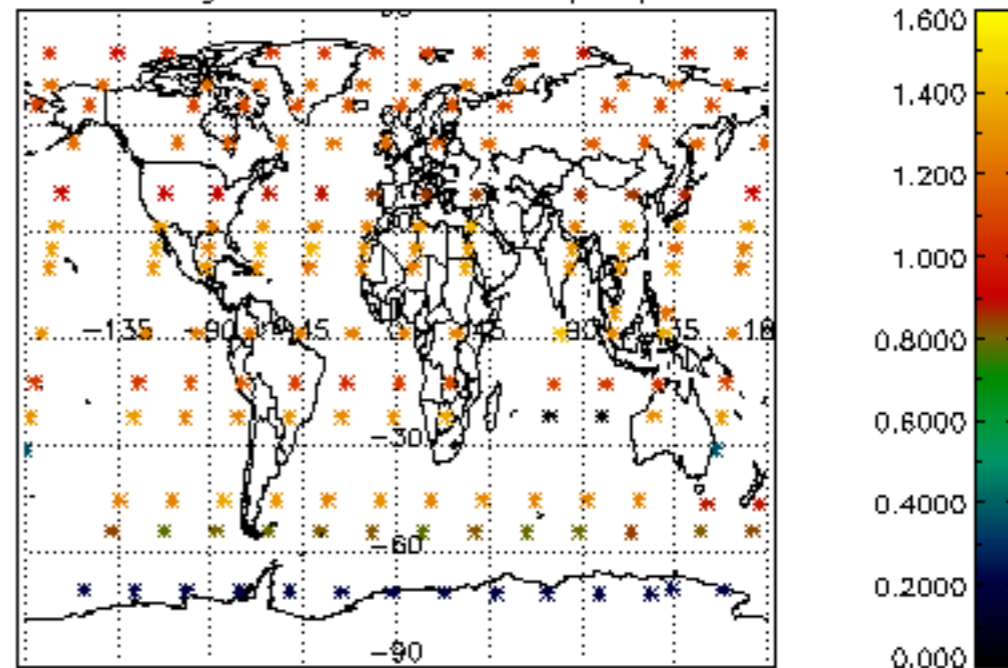
Percentage of saturation errors per profile



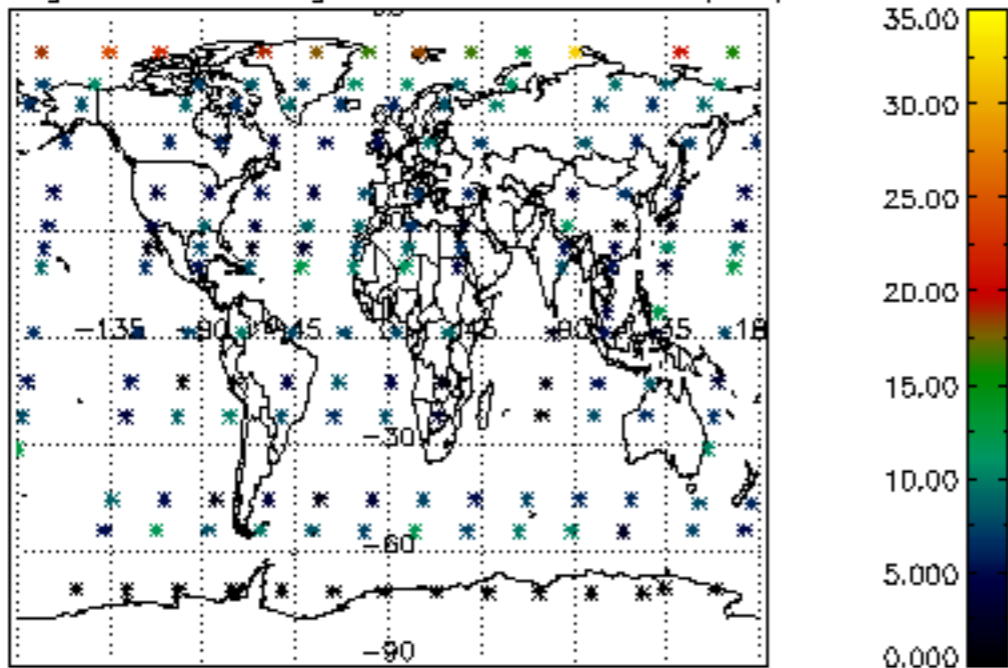
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

