

# 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	23APR2013 23:07:36
Data source version	GOMOS/6.01
Start time of products	04-06-2006 (04JUN2006 00:00:00)
Stop time of products	05-06-2006 (05JUN2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	253
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__2PRFIN20060604_000200_000000592048_00173_22271_0514.N1	04-JUN-2006 00:02:00	Dark	59.000	18	24Alp PsA	1.1660	9700.0	118	22271	No
2	GOM_NL__2PRFIN20060604_000502_000000572048_00174_22272_0496.N1	04-JUN-2006 00:05:02	Dark	57.000	63	Bet Gru	2.1500	2800.0	114	22272	No
3	GOM_NL__2PRFIN20060604_000658_000000482048_00174_22272_0497.N1	04-JUN-2006 00:06:58	Dark	47.500	31	Alp Gru	1.7340	15200.	95	22272	No
4	GOM_NL__2PRFIN20060604_001146_000000442048_00174_22272_0498.N1	04-JUN-2006 00:11:46	Straylight	43.500	45	Alp Pav	1.9400	26000.	87	22272	No
5	GOM_NL__2PRFIN20060604_002044_000000472048_00174_22272_0499.N1	04-JUN-2006 00:20:44	Straylight	47.000	40	The Sco	1.8590	7100.0	94	22272	No
6	GOM_NL__2PRFIN20060604_002231_000000462048_00174_22272_0500.N1	04-JUN-2006 00:22:31	Tw_i_and_stray	46.000	25	35Lam Sco	1.6200	28000.	92	22272	No
7	GOM_NL__2PRFIN20060604_002945_000000452048_00174_22272_0501.N1	04-JUN-2006 00:29:45	Bright	44.500	86	35Eta Oph	2.4300	10200.	89	22272	No
8	GOM_NL__2PRFIN20060604_003135_000000392048_00174_22272_0502.N1	04-JUN-2006 00:31:35	Bright	39.000	98	13Zet Oph	2.5710	30000.	78	22272	No
9	GOM_NL__2PRFIN20060604_003344_000000382048_00174_22272_0503.N1	04-JUN-2006 00:33:44	Bright	38.000	120	1Del Oph	2.7340	3200.0	76	22272	No
10	GOM_NL__2PRFIN20060604_004140_000000432048_00174_22272_0504.N1	04-JUN-2006 00:41:40	Bright	42.500	127	27Bet Her	2.7810	4700.0	85	22272	No
11	GOM_NL__2PRFIN20060604_004501_000000422048_00174_22272_0505.N1	04-JUN-2006 00:45:01	Bright	41.500	133	40Zet Her	2.8070	6000.0	83	22272	No
12	GOM_NL__2PRFIN20060604_005223_000000422048_00174_22272_0506.N1	04-JUN-2006 00:52:23	Bright	41.500	130	23Bet Dra	2.7990	5800.0	83	22272	No
13	GOM_NL__2PRFIN20060604_010315_000000472048_00174_22272_0507.N1	04-JUN-2006 01:03:15	Bright	46.500	89	5Alp Cep	2.4510	8000.0	93	22272	No
14	GOM_NL__2PRFIN20060604_010836_000000562048_00174_22272_0508.N1	04-JUN-2006 01:08:36	Bright	56.000	76	27Gam Cas	2.3000	30000.	112	22272	No
15	GOM_NL__2PRFIN20060604_011628_000000482048_00174_22272_0509.N1	04-JUN-2006 01:16:28	Bright	47.500	53	43Bet And	2.0480	3300.0	95	22272	No
16	GOM_NL__2PRFIN20060604_011915_000000362048_00174_22272_0510.N1	04-JUN-2006 01:19:15	Tw_i_and_stray	36.000	58	21Alp And	2.0730	11000.	72	22272	No
17	GOM_NL__2PRFIN20060604_012425_000000552048_00174_22272_0511.N1	04-JUN-2006 01:24:25	Dark	54.500	140	88Gam Peg	2.8340	26000.	109	22272	No
18	GOM_NL__2PRFIN20060604_013329_000000472048_00174_22272_0512.N1	04-JUN-2006 01:33:29	Dark	47.000	52	16Bet Cet	2.0370	4500.0	94	22272	No
19	GOM_NL__2PRFIN20060604_014238_000000582048_00174_22272_0513.N1	04-JUN-2006 01:42:38	Dark	58.000	18	24Alp PsA	1.1660	9700.0	116	22272	No
20	GOM_NL__2PRFIN20060604_014539_000000492048_00175_22273_0496.N1	04-JUN-2006 01:45:39	Dark	48.500	63	Bet Gru	2.1500	2800.0	97	22273	No
21	GOM_NL__2PRFIN20060604_014735_000000462048_00175_22273_0497.N1	04-JUN-2006 01:47:35	Dark	46.000	31	Alp Gru	1.7340	15200.	92	22273	No
22	GOM_NL__2PRFIN20060604_015222_000000402048_00175_22273_0498.N1	04-JUN-2006 01:52:22	Straylight	40.000	45	Alp Pav	1.9400	26000.	80	22273	No
23	GOM_NL__2PRFIN20060604_020120_000000462048_00175_22273_0499.N1	04-JUN-2006 02:01:20	Straylight	46.000	40	The Sco	1.8590	7100.0	92	22273	No
24	GOM_NL__2PRFIN20060604_020307_000000452048_00175_22273_0500.N1	04-JUN-2006 02:03:07	Tw_i_and_stray	45.000	25	35Lam Sco	1.6200	28000.	90	22273	No
25	GOM_NL__2PRFIN20060604_021021_000000442048_00175_22273_0501.N1	04-JUN-2006 02:10:21	Bright	44.000	86	35Eta Oph	2.4300	10200.	88	22273	No
26	GOM_NL__2PRFIN20060604_021211_000000432048_00175_22273_0502.N1	04-JUN-2006 02:12:11	Bright	43.000	98	13Zet Oph	2.5710	30000.	86	22273	No
27	GOM_NL__2PRFIN20060604_021420_000000382048_00175_22273_0503.N1	04-JUN-2006 02:14:20	Bright	38.000	120	1Del Oph	2.7340	3200.0	76	22273	No
28	GOM_NL__2PRFIN20060604_022215_000000422048_00175_22273_0504.N1	04-JUN-2006 02:22:15	Bright	42.000	127	27Bet Her	2.7810	4700.0	84	22273	No
29	GOM_NL__2PRFIN20060604_022536_000000412048_00175_22273_0505.N1	04-JUN-2006 02:25:36	Bright	41.000	133	40Zet Her	2.8070	6000.0	82	22273	No
30	GOM_NL__2PRFIN20060604_023258_000000402048_00175_22273_0506.N1	04-JUN-2006 02:32:58	Bright	40.000	130	23Bet Dra	2.7990	5800.0	80	22273	No
31	GOM_NL__2PRFIN20060604_024350_000000452048_00175_22273_0507.N1	04-JUN-2006 02:43:50	Bright	44.500	89	5Alp Cep	2.4510	8000.0	89	22273	No
32	GOM_NL__2PRFIN20060604_024912_000000372048_00175_22273_0508.N1	04-JUN-2006 02:49:12	Bright	36.500	76	27Gam Cas	2.3000	30000.	73	22273	No
33	GOM_NL__2PRFIN20060604_025705_000000482048_00175_22273_0509.N1	04-JUN-2006 02:57:05	Bright	48.000	53	43Bet And	2.0480	3300.0	96	22273	No
34	GOM_NL__2PRFIN20060604_025951_000000362048_00175_22273_0510.N1	04-JUN-2006 02:59:51	Tw_i_and_stray	36.000	58	21Alp And	2.0730	11000.	72	22273	No
35	GOM_NL__2PRFIN20060604_030502_000000542048_00175_22273_0511.N1	04-JUN-2006 03:05:02	Dark	53.500	140	88Gam Peg	2.8340	26000.	107	22273	No
36	GOM_NL__2PRFIN20060604_031405_000000502048_00175_22273_0512.N1	04-JUN-2006 03:14:05	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	22273	No
37	GOM_NL__2PRFIN20060604_032315_000000562048_00175_22273_0513.N1	04-JUN-2006 03:23:15	Dark	56.000	18	24Alp PsA	1.1660	9700.0	112	22273	No
38	GOM_NL__2PRFIN20060604_032616_000000482048_00176_22274_0496.N1	04-JUN-2006 03:26:16	Dark	48.000	63	Bet Gru	2.1500	2800.0	96	22274	No
39	GOM_NL__2PRFIN20060604_032812_000000502048_00176_22274_0497.N1	04-JUN-2006 03:28:12	Dark	50.000	31	Alp Gru	1.7340	15200.	100	22274	No
40	GOM_NL__2PRFIN20060604_033259_000000432048_00176_22274_0498.N1	04-JUN-2006 03:32:59	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	22274	No
41	GOM_NL__2PRFIN20060604_034157_000000472048_00176_22274_0499.N1	04-JUN-2006 03:41:57	Straylight	47.000	40	The Sco	1.8590	7100.0	94	22274	No
42	GOM_NL__2PRFIN20060604_034344_000000472048_00176_22274_0500.N1	04-JUN-2006 03:43:44	Tw_i_and_stray	46.500	25	35Lam Sco	1.6200	28000.	93	22274	No





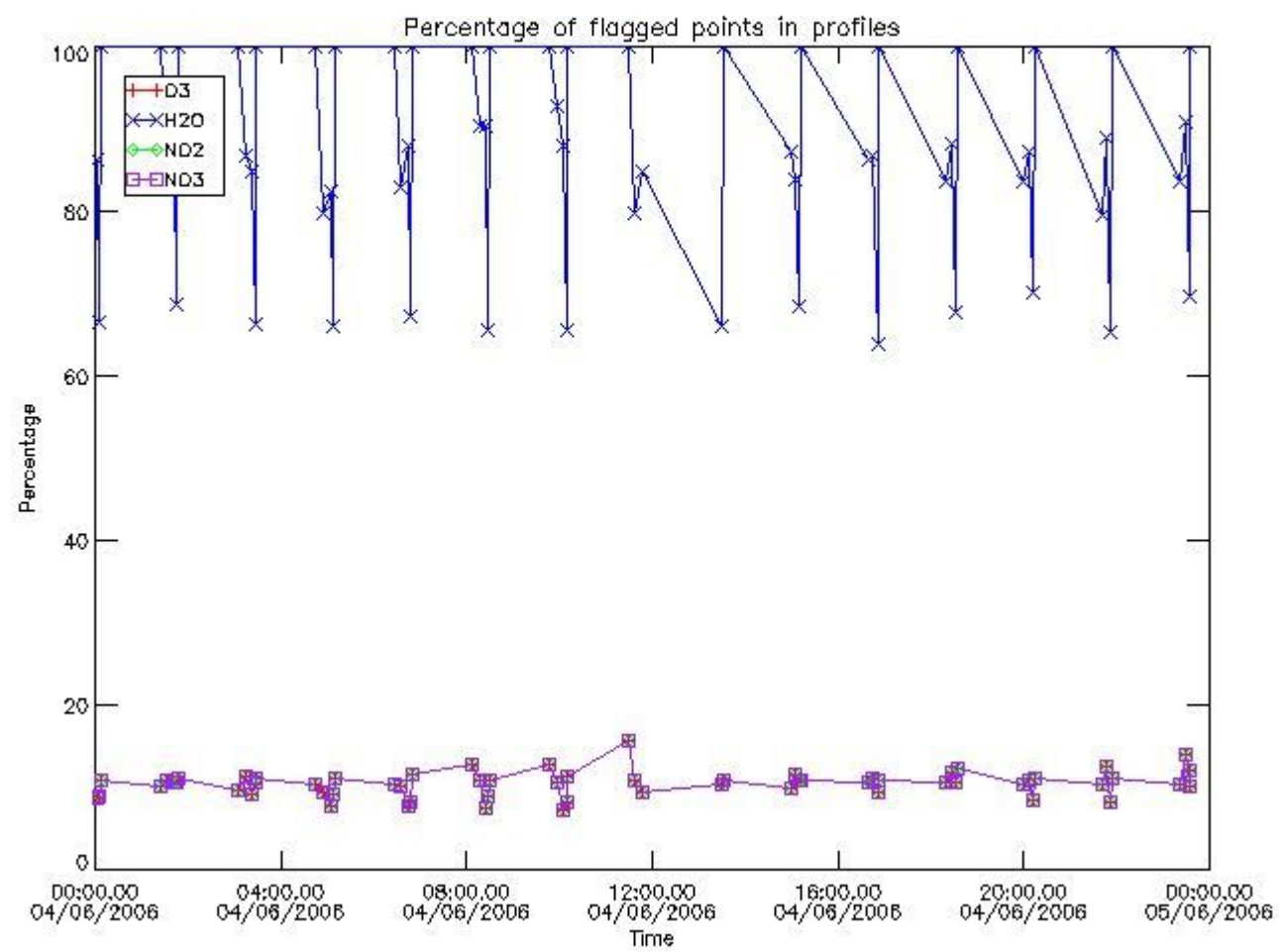


220	GOM_NL__2PRFIN20060604_212341_000000482048_00186_22284_0533.N1	04-JUN-2006 21:23:41	Bright	47.500	53	43Bet And	2.0480	3300.0	95	22284	No
221	GOM_NL__2PRFIN20060604_212745_000000412048_00186_22284_0534.N1	04-JUN-2006 21:27:45	Twilight	40.500	105	6Bet Ari	2.6450	8900.0	81	22284	No
222	GOM_NL__2PRFIN20060604_214048_000000502048_00186_22284_0535.N1	04-JUN-2006 21:40:48	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	22284	No
223	GOM_NL__2PRFIN20060604_214727_000000412048_00186_22284_0536.N1	04-JUN-2006 21:47:27	Dark	41.000	84	Alp Phe	2.3970	4500.0	82	22284	No
224	GOM_NL__2PRFIN20060604_215301_000000632048_00187_22285_0517.N1	04-JUN-2006 21:53:01	Dark	62.500	63	Bet Gru	2.1500	2800.0	125	22285	No
225	GOM_NL__2PRFIN20060604_215458_000000462048_00187_22285_0518.N1	04-JUN-2006 21:54:58	Dark	46.000	31	Alp Gru	1.7340	15200.	92	22285	No
226	GOM_NL__2PRFIN20060604_215942_000000432048_00187_22285_0519.N1	04-JUN-2006 21:59:42	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	22285	No
227	GOM_NL__2PRFIN20060604_220654_000000402048_00187_22285_0520.N1	04-JUN-2006 22:06:54	Straylight	39.500	147	Alp Ara	2.8770	26000.	79	22285	No
228	GOM_NL__2PRFIN20060604_220837_000000472048_00187_22285_0521.N1	04-JUN-2006 22:08:37	Straylight	46.500	40	The Sco	1.8590	7100.0	93	22285	No
229	GOM_NL__2PRFIN20060604_221023_000000482048_00187_22285_0522.N1	04-JUN-2006 22:10:23	Tw_i_and_stray	47.500	25	35Lam Sco	1.6200	28000.	95	22285	No
230	GOM_NL__2PRFIN20060604_221204_000000462048_00187_22285_0523.N1	04-JUN-2006 22:12:04	Tw_i_and_stray	45.500	75	26Eps Sco	2.2910	4250.0	91	22285	No
231	GOM_NL__2PRFIN20060604_221403_000000462048_00187_22285_0524.N1	04-JUN-2006 22:14:03	Bright	46.000	136	23Tau Sco	2.8220	30000.	92	22285	No
232	GOM_NL__2PRFIN20060604_221734_000000452048_00187_22285_0525.N1	04-JUN-2006 22:17:34	Bright	45.000	86	35Eta Oph	2.4300	10200.	90	22285	No
233	GOM_NL__2PRFIN20060604_221923_000000512048_00187_22285_0526.N1	04-JUN-2006 22:19:23	Bright	51.000	98	13Zet Oph	2.5710	30000.	102	22285	No
234	GOM_NL__2PRFIN20060604_222132_000000382048_00187_22285_0527.N1	04-JUN-2006 22:21:32	Bright	38.000	120	1Del Oph	2.7340	3200.0	76	22285	No
235	GOM_NL__2PRFIN20060604_222433_000000362048_00187_22285_0528.N1	04-JUN-2006 22:24:33	Bright	35.500	102	24Alp Ser	2.6000	4250.0	71	22285	No
236	GOM_NL__2PRFIN20060604_222923_000000422048_00187_22285_0529.N1	04-JUN-2006 22:29:23	Bright	41.500	127	27Bet Her	2.7810	4700.0	83	22285	No
237	GOM_NL__2PRFIN20060604_223243_000000402048_00187_22285_0530.N1	04-JUN-2006 22:32:43	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	22285	No
238	GOM_NL__2PRFIN20060604_224003_000000432048_00187_22285_0531.N1	04-JUN-2006 22:40:03	Bright	42.500	130	23Bet Dra	2.7990	5800.0	85	22285	No
239	GOM_NL__2PRFIN20060604_225622_000000552048_00187_22285_0532.N1	04-JUN-2006 22:56:22	Bright	55.000	76	27Gam Cas	2.3000	30000.	110	22285	No
240	GOM_NL__2PRFIN20060604_230417_000000472048_00187_22285_0533.N1	04-JUN-2006 23:04:17	Bright	46.500	53	43Bet And	2.0480	3300.0	93	22285	No
241	GOM_NL__2PRFIN20060604_230821_000000442048_00187_22285_0534.N1	04-JUN-2006 23:08:21	Twilight	44.000	105	6Bet Ari	2.6450	8900.0	88	22285	No
242	GOM_NL__2PRFIN20060604_232125_000000502048_00187_22285_0535.N1	04-JUN-2006 23:21:25	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	22285	No
243	GOM_NL__2PRFIN20060604_232803_000000442048_00187_22285_0536.N1	04-JUN-2006 23:28:03	Dark	44.000	84	Alp Phe	2.3970	4500.0	88	22285	No
244	GOM_NL__2PRFIN20060604_233338_000000502048_00188_22286_0517.N1	04-JUN-2006 23:33:38	Dark	50.000	63	Bet Gru	2.1500	2800.0	100	22286	No
245	GOM_NL__2PRFIN20060604_233535_000000472048_00188_22286_0518.N1	04-JUN-2006 23:35:35	Dark	46.500	31	Alp Gru	1.7340	15200.	93	22286	No
246	GOM_NL__2PRFIN20060604_234019_000000422048_00188_22286_0519.N1	04-JUN-2006 23:40:19	Straylight	41.500	45	Alp Pav	1.9400	26000.	83	22286	No
247	GOM_NL__2PRFIN20060604_234731_000000422048_00188_22286_0520.N1	04-JUN-2006 23:47:31	Straylight	41.500	147	Alp Ara	2.8770	26000.	83	22286	No
248	GOM_NL__2PRFIN20060604_234913_000000462048_00188_22286_0521.N1	04-JUN-2006 23:49:13	Straylight	45.500	40	The Sco	1.8590	7100.0	91	22286	No
249	GOM_NL__2PRFIN20060604_235100_000000462048_00188_22286_0522.N1	04-JUN-2006 23:51:00	Tw_i_and_stray	46.000	25	35Lam Sco	1.6200	28000.	92	22286	No
250	GOM_NL__2PRFIN20060604_235240_000000452048_00188_22286_0523.N1	04-JUN-2006 23:52:40	Tw_i_and_stray	44.500	75	26Eps Sco	2.2910	4250.0	89	22286	No
251	GOM_NL__2PRFIN20060604_235439_000000472048_00188_22286_0524.N1	04-JUN-2006 23:54:39	Bright	46.500	136	23Tau Sco	2.8220	30000.	93	22286	No
252	GOM_NL__2PRFIN20060604_235726_000000382048_00188_22286_0525.N1	04-JUN-2006 23:57:26	Bright	37.500	97	8Bet1Sco	2.5610	30000.	75	22286	No
253	GOM_NL__2PRFIN20060604_235959_000000392048_00188_22286_0526.N1	04-JUN-2006 23:59:59	Bright	38.500	98	13Zet Oph	2.5710	30000.	77	22286	No

### 3. Quality information per product

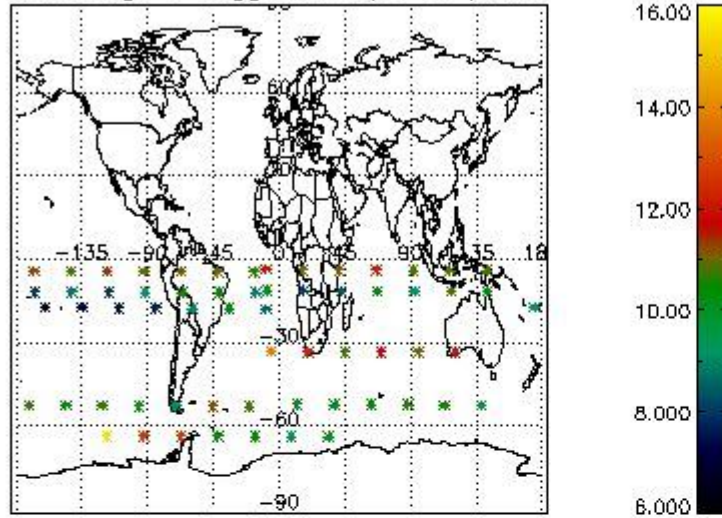
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

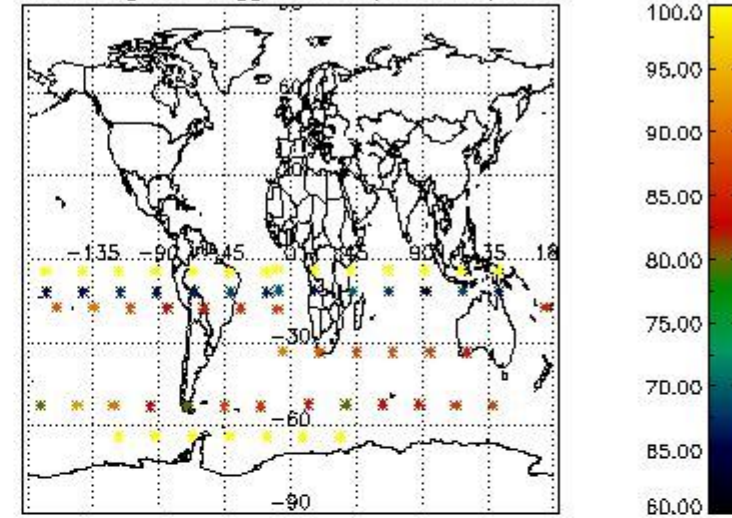


3.2 Plot quality information per product (world map)

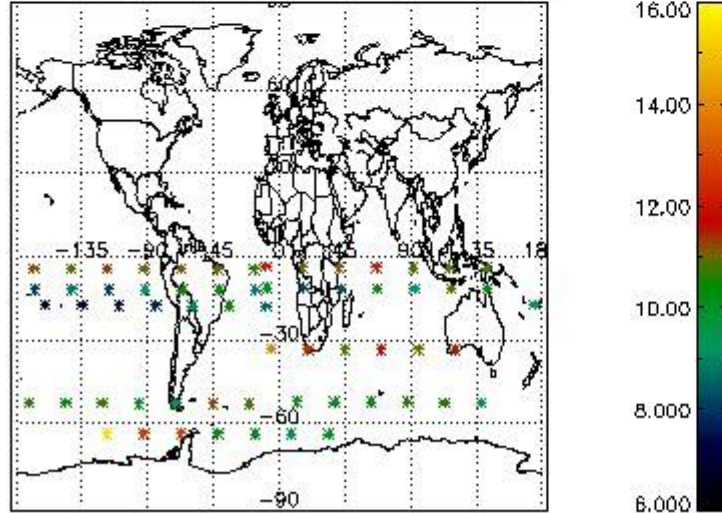
Percentage of flagged data per O3 profile



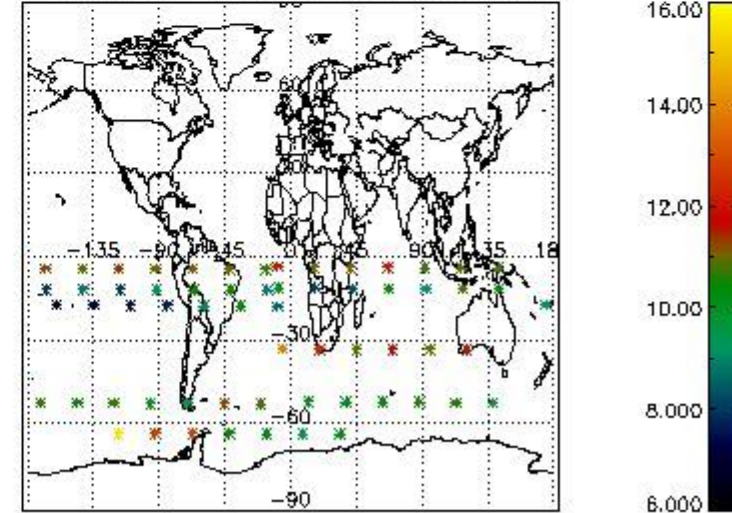
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



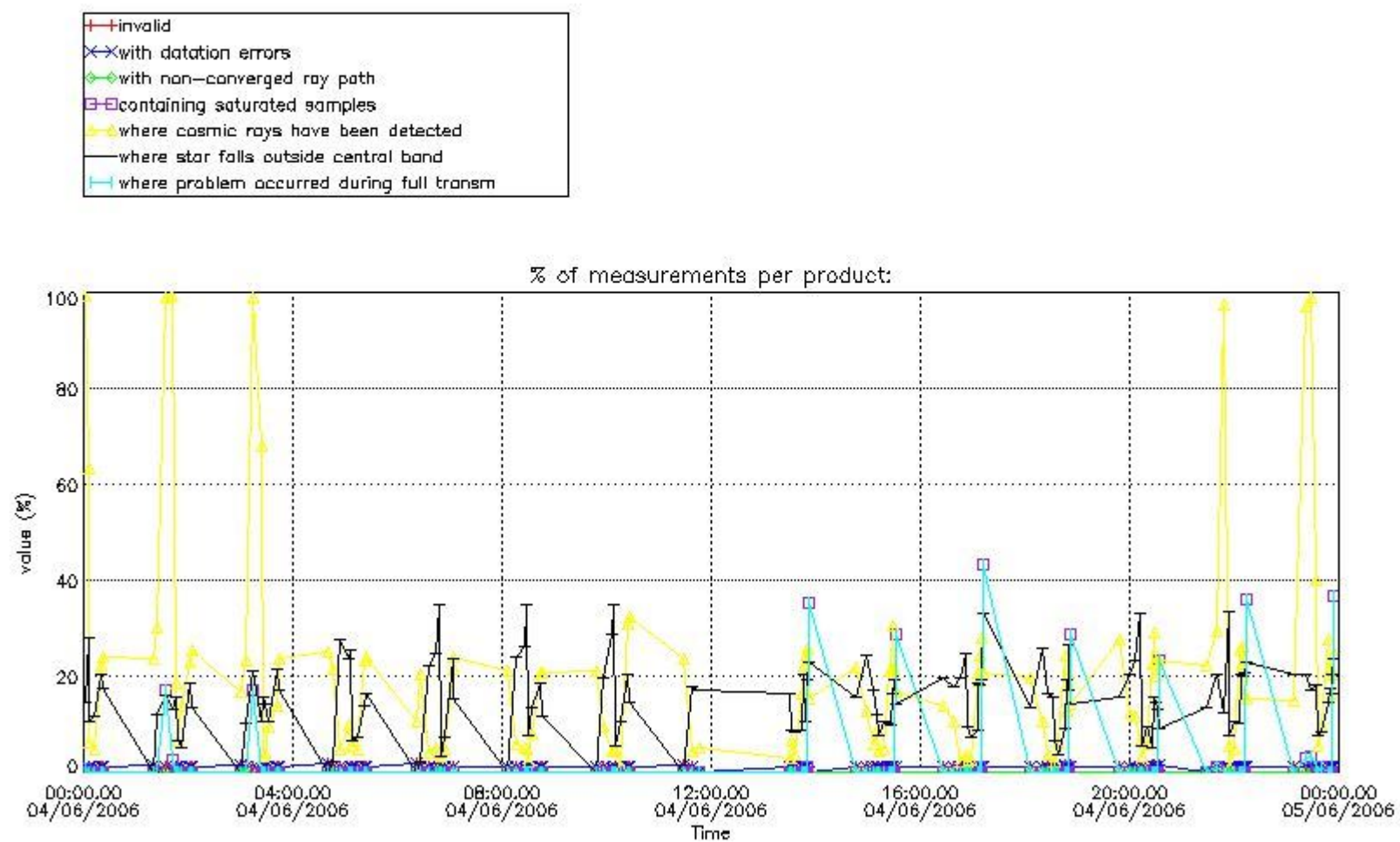
#### 4. Level 1 quality information per product

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.

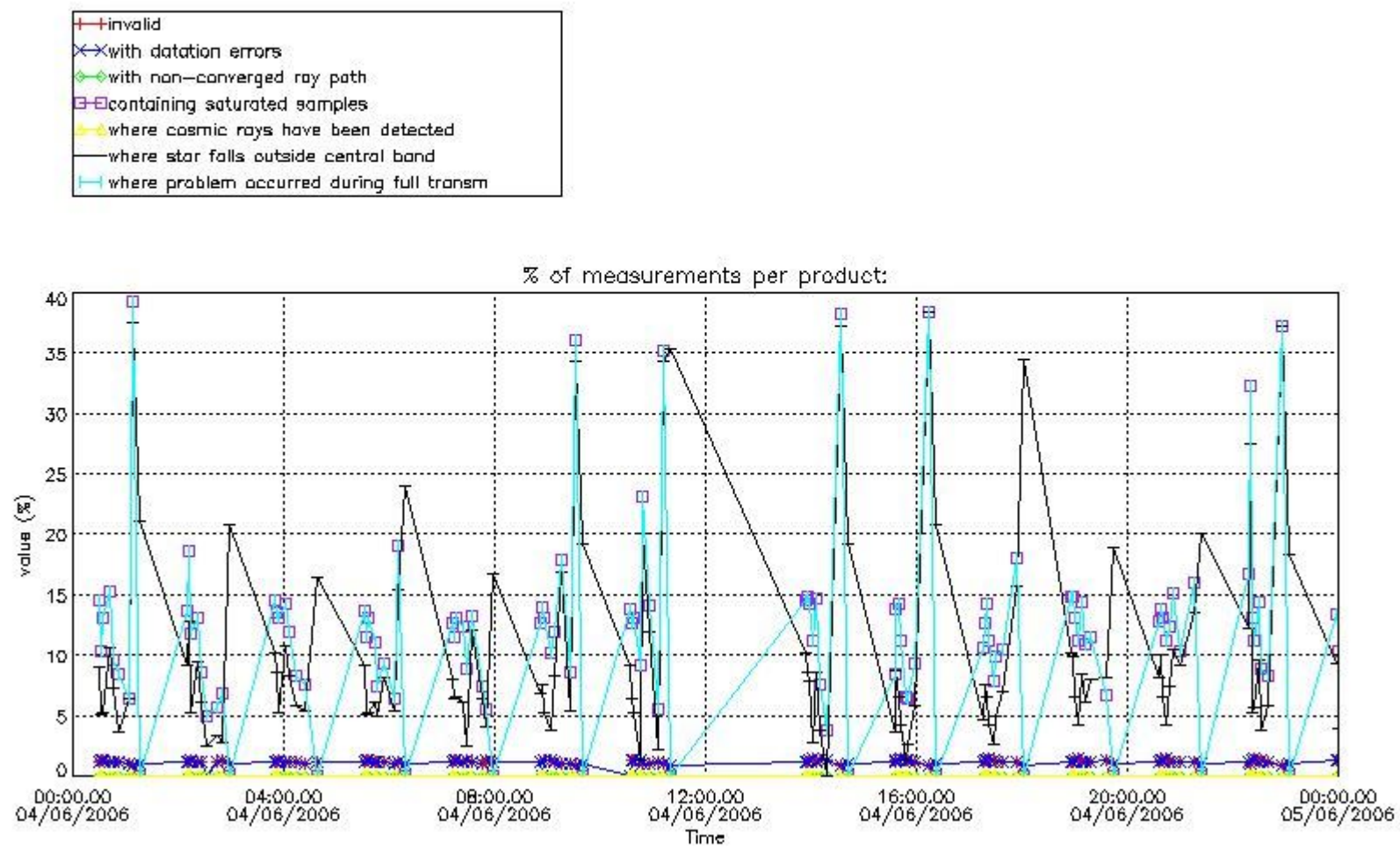
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





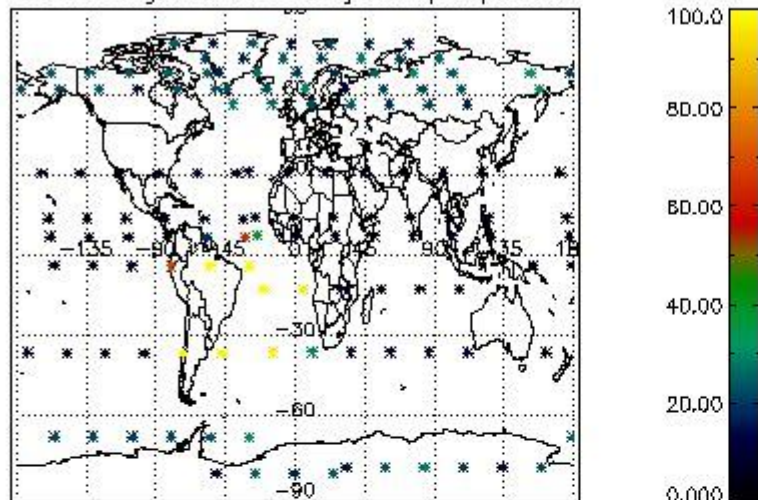
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



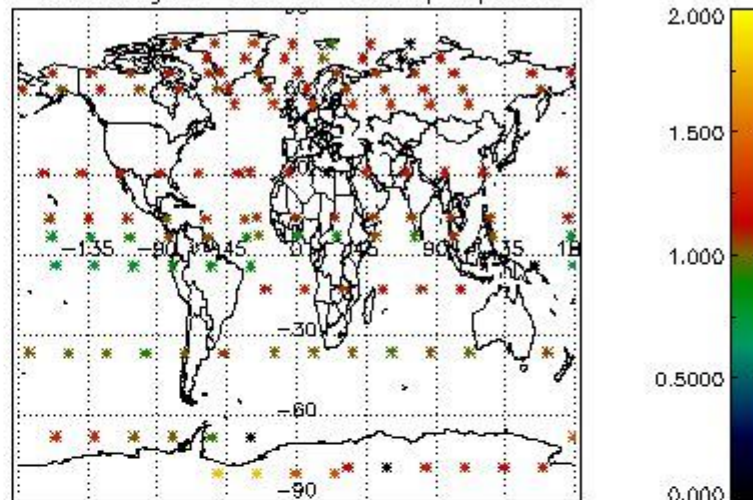
4.2 Plot quality information per product coming from level 1b processing (world map)

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

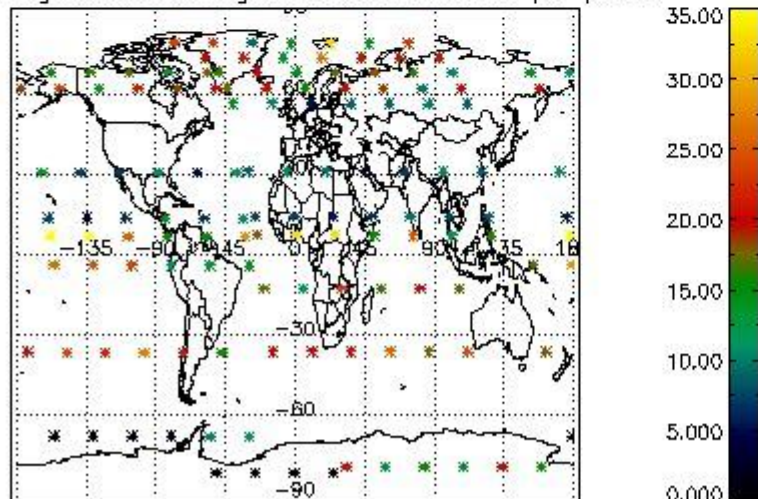
Percentage of cosmic ray hits per profile



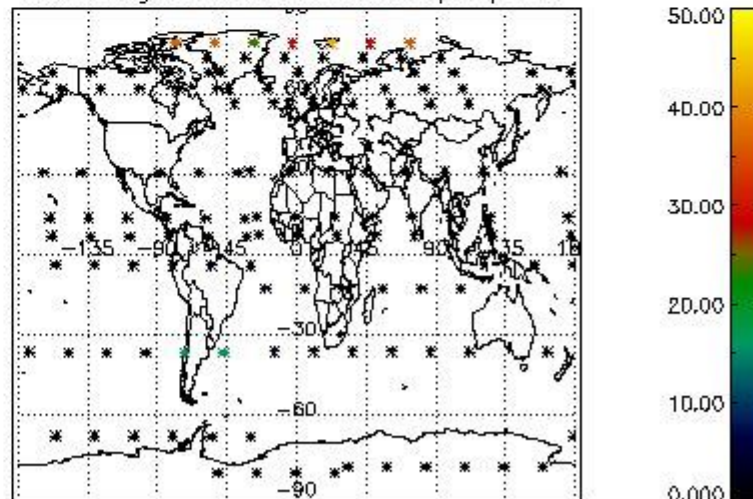
Percentage of datation errors per profile



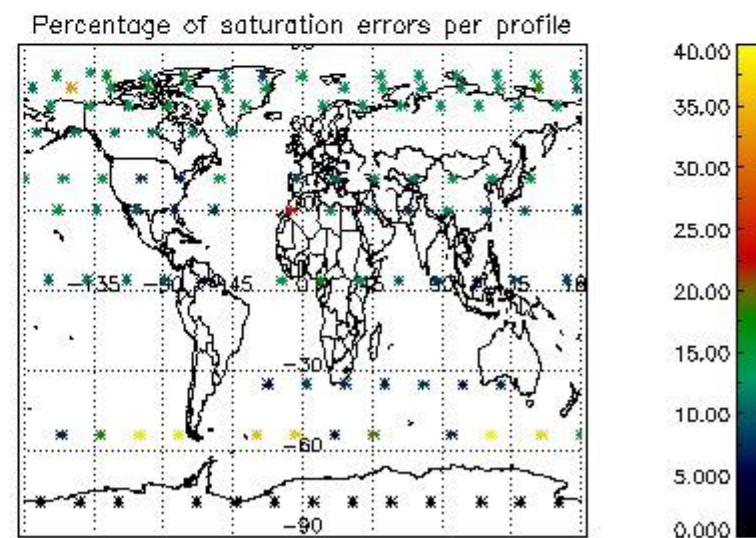
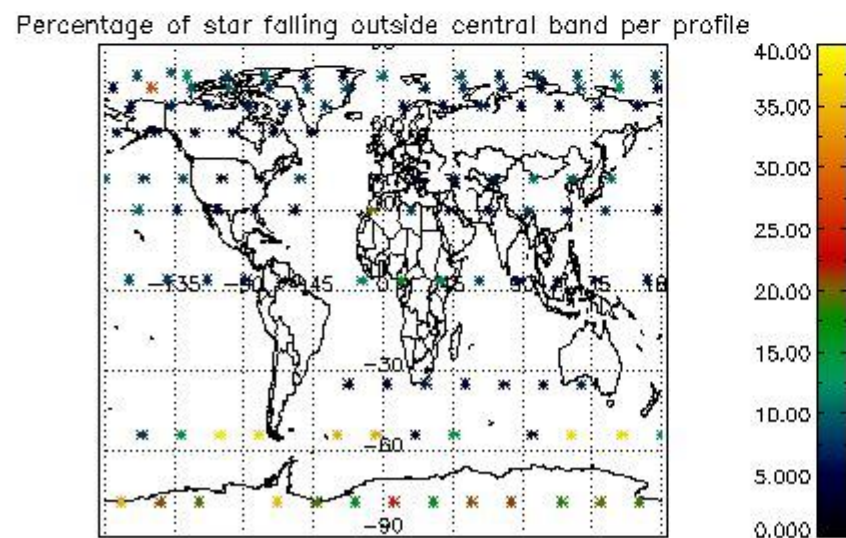
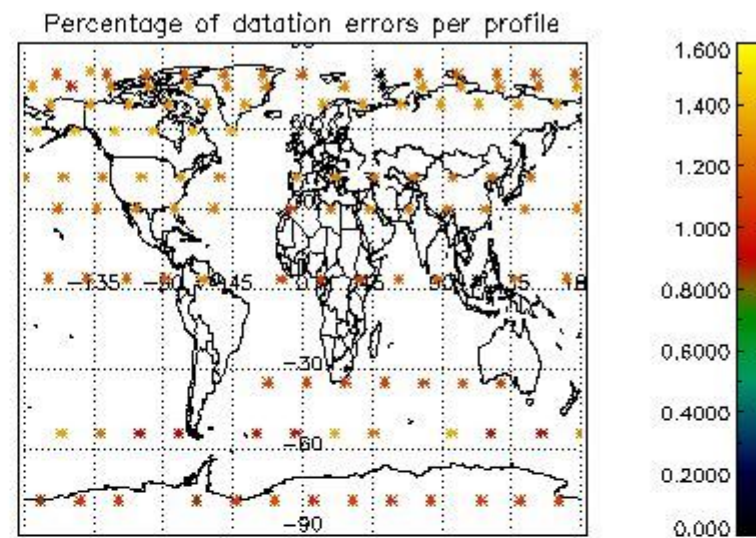
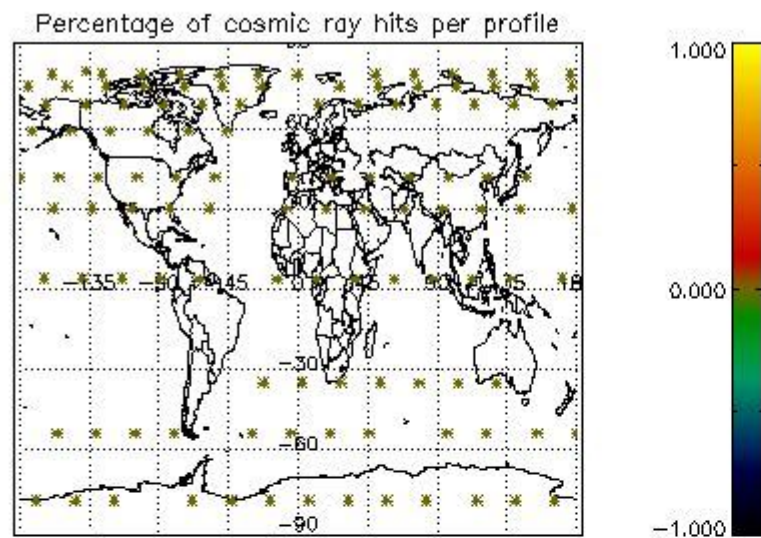
Percentage of star falling outside central band per profile



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

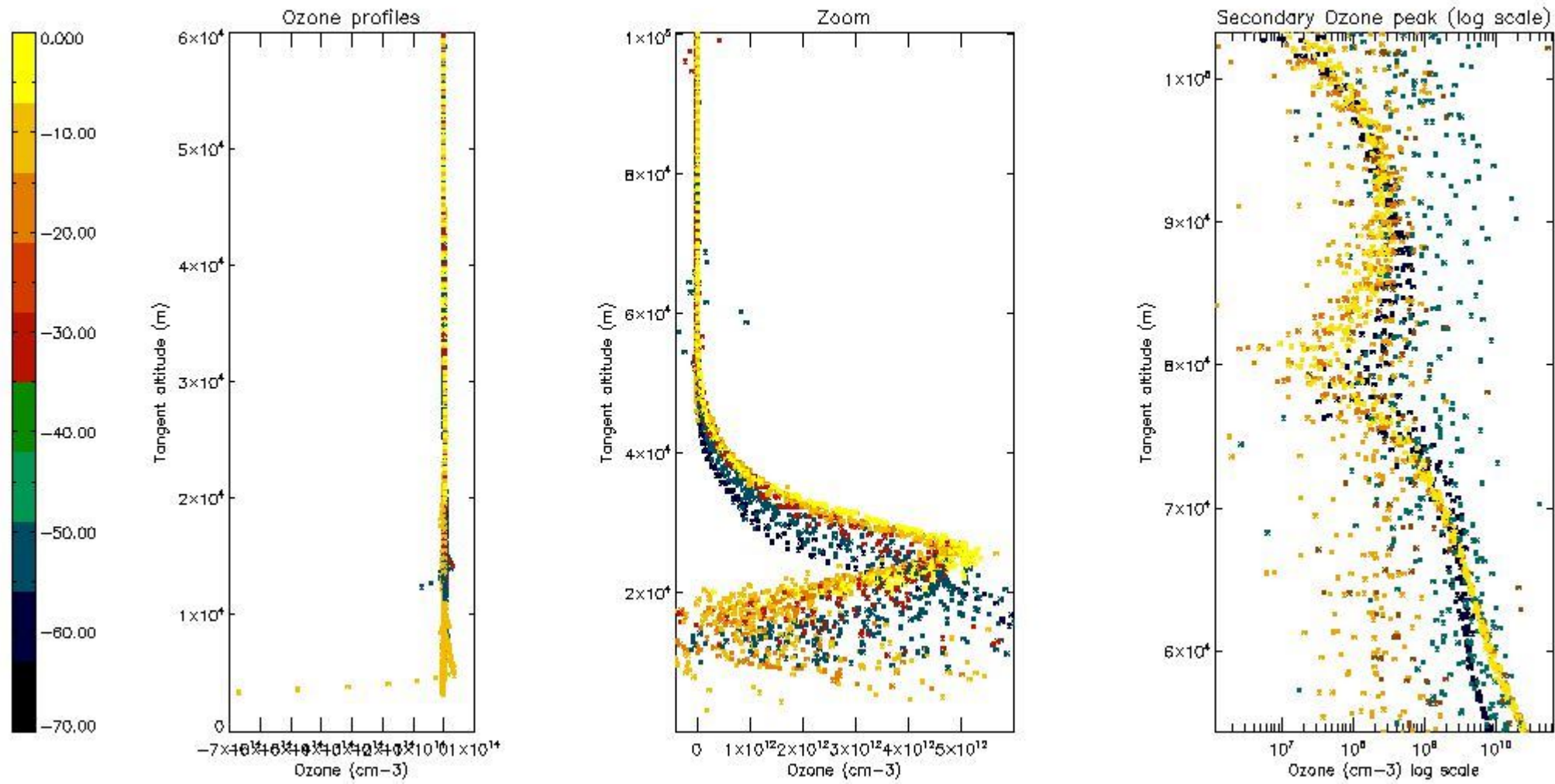
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	13

STD < 10	9
STD < 5	7

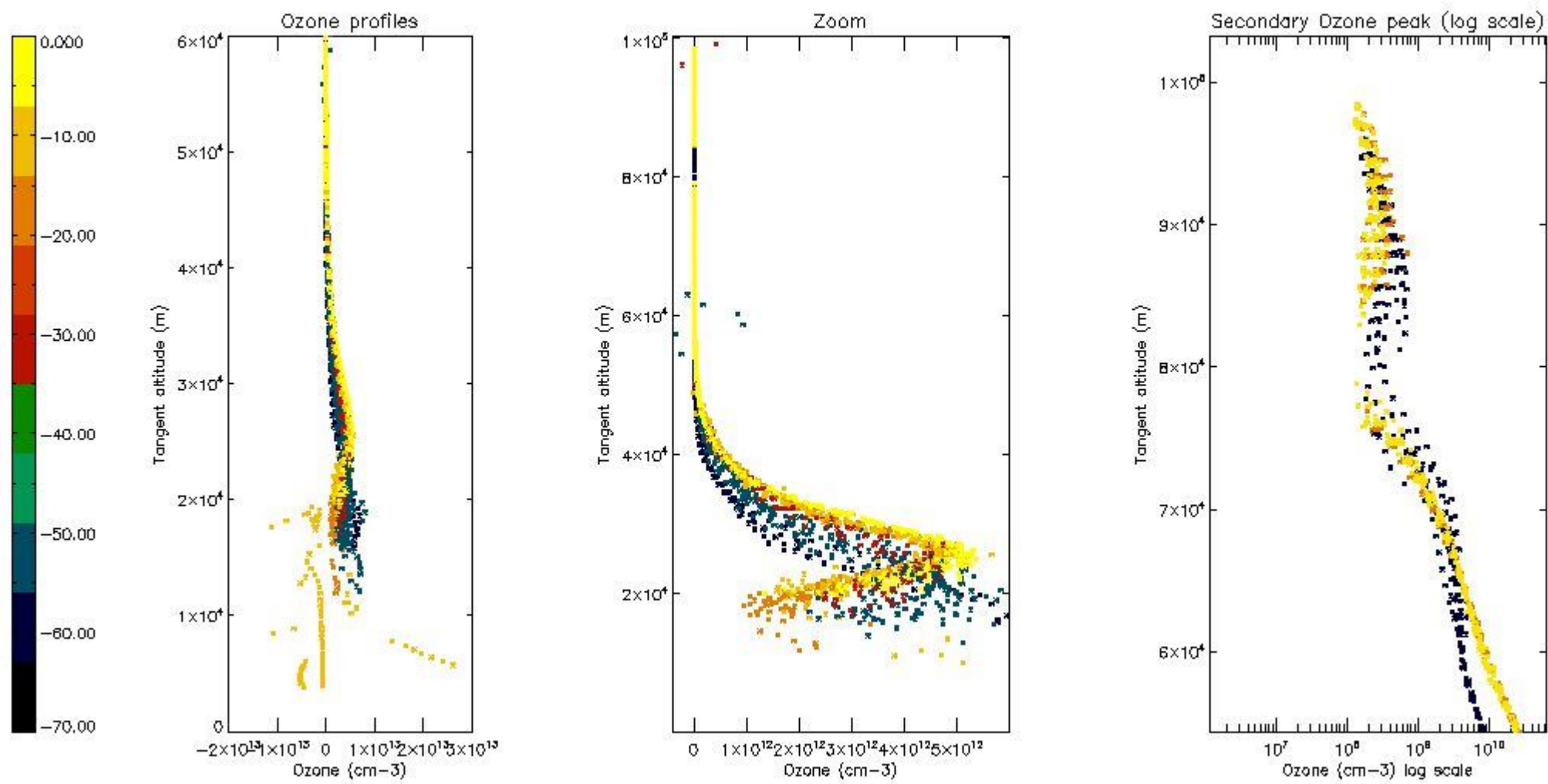
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



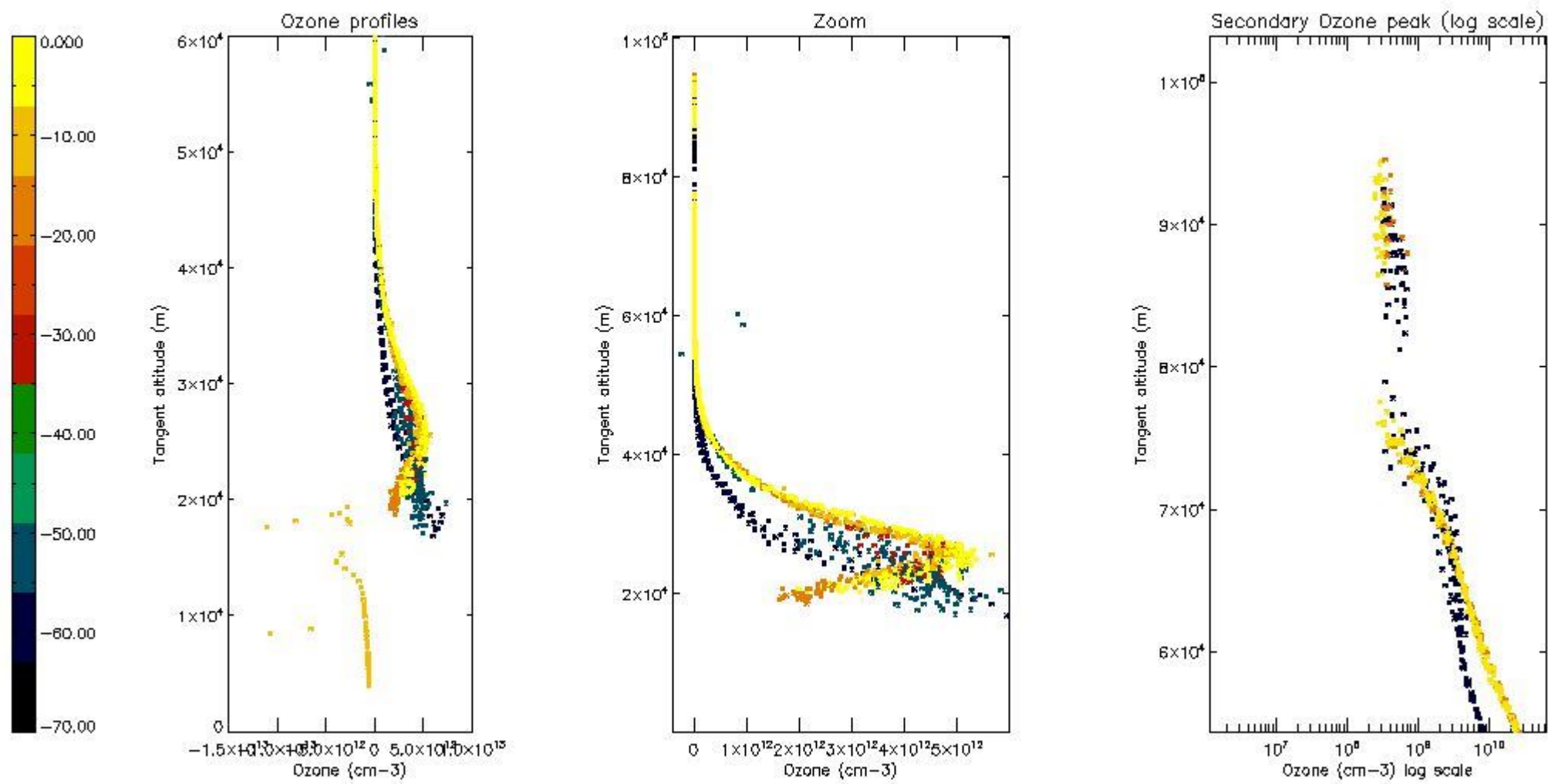
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



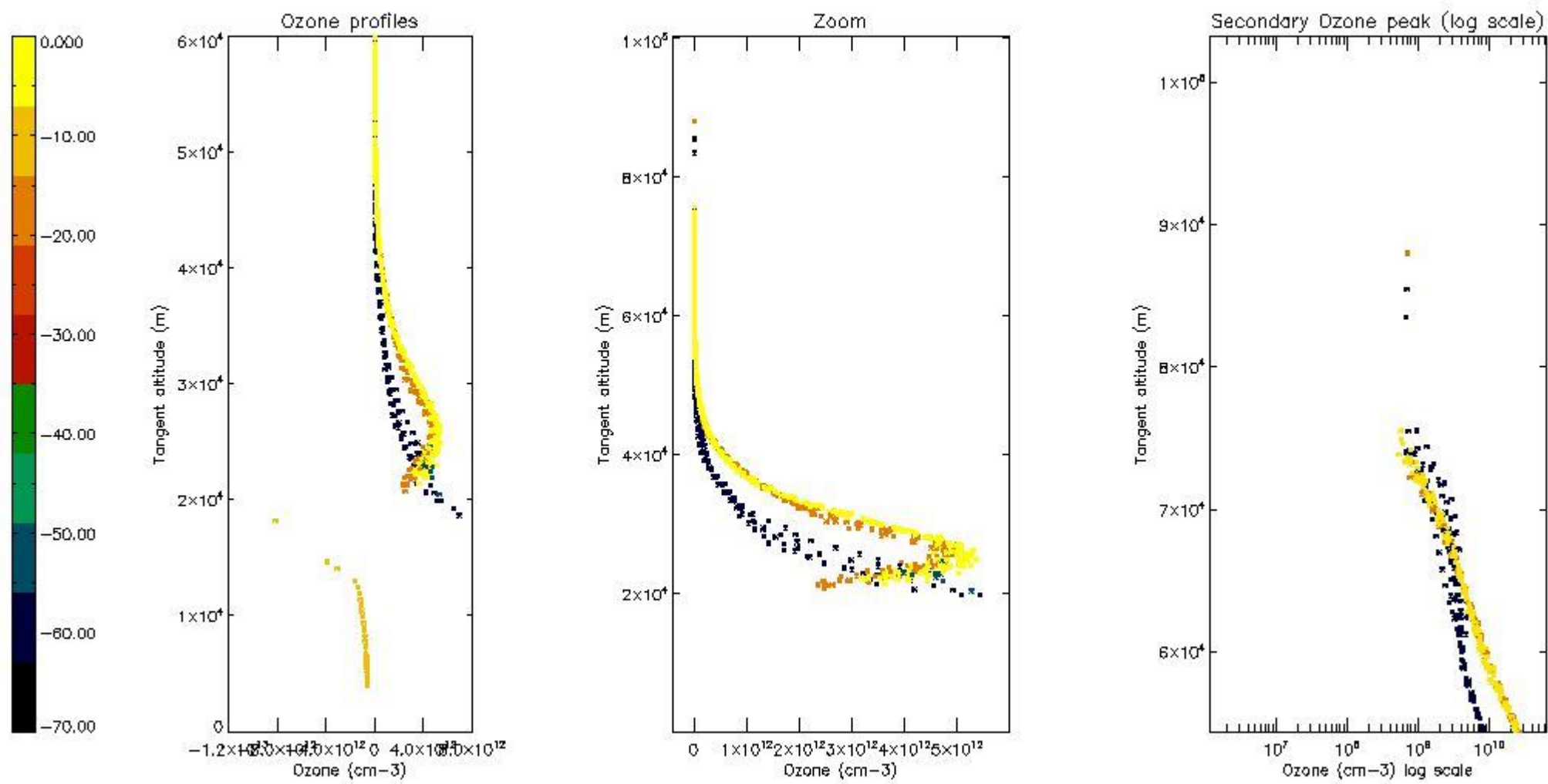
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



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

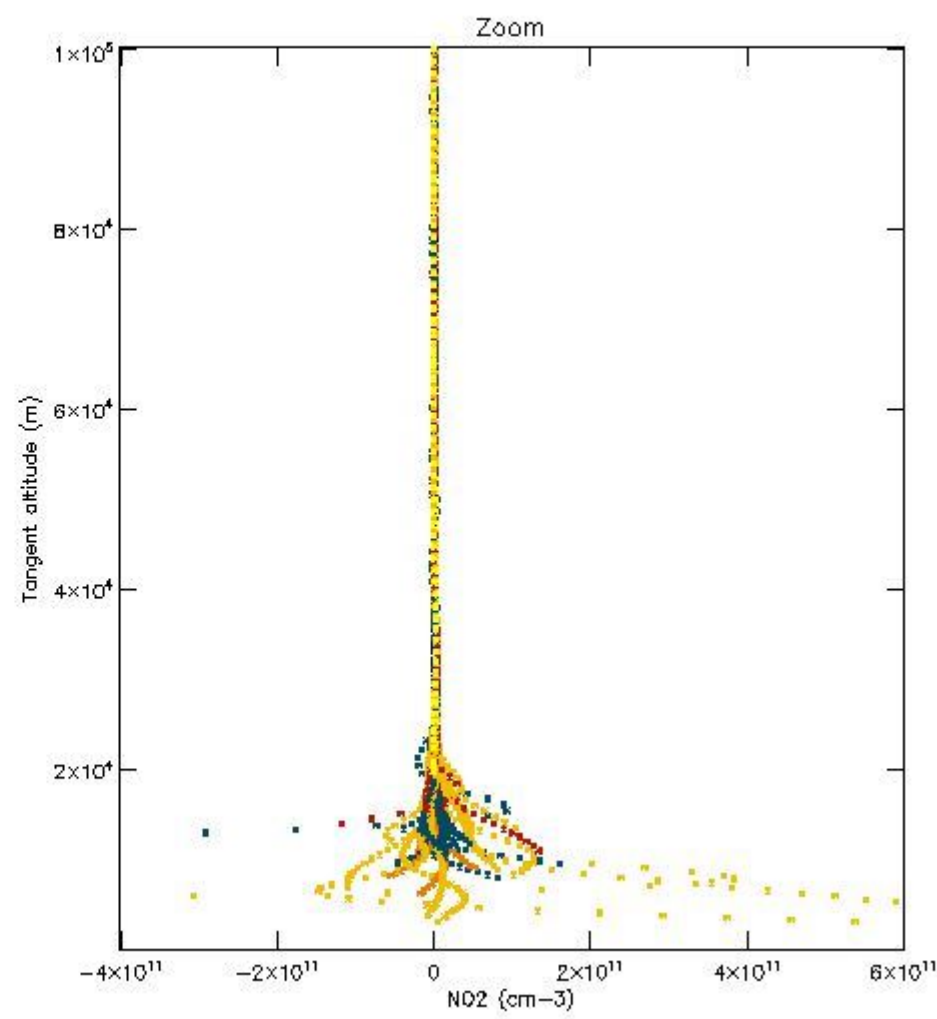
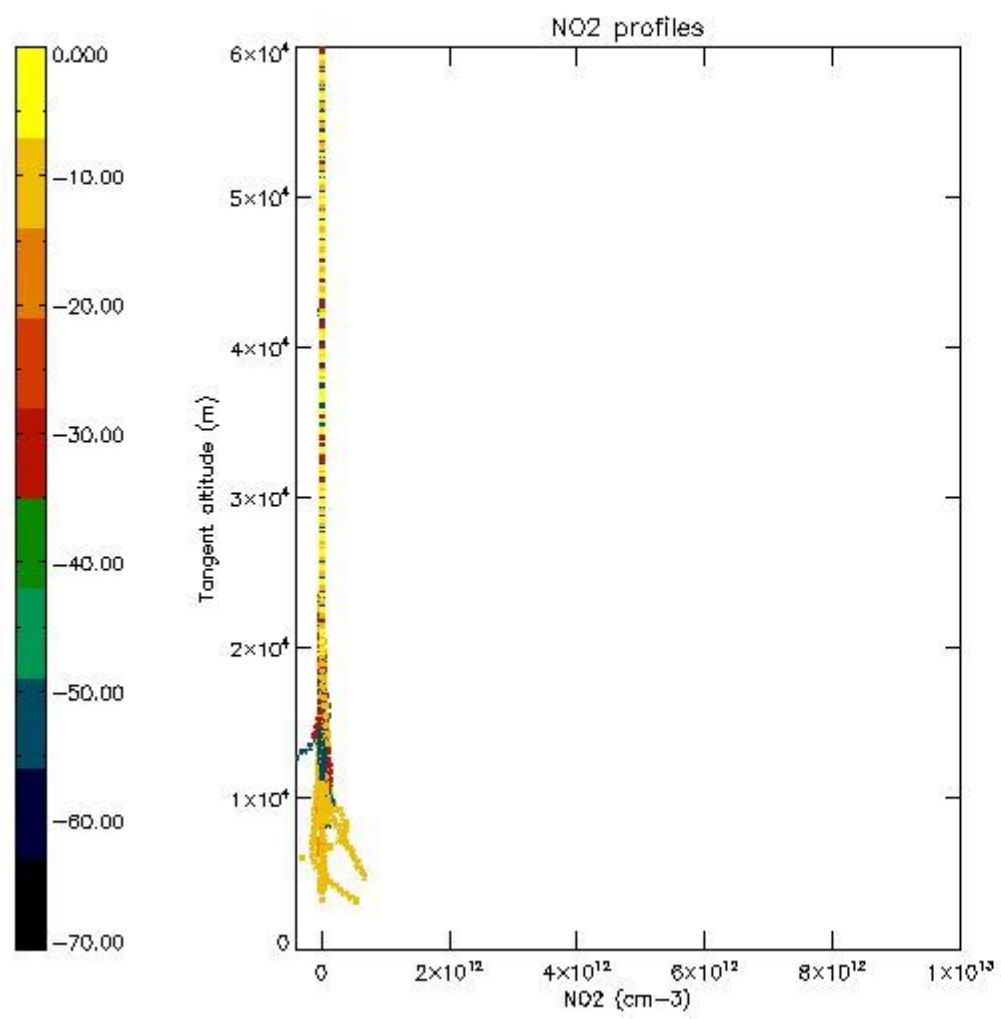
The colorbar represents the latitude.



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

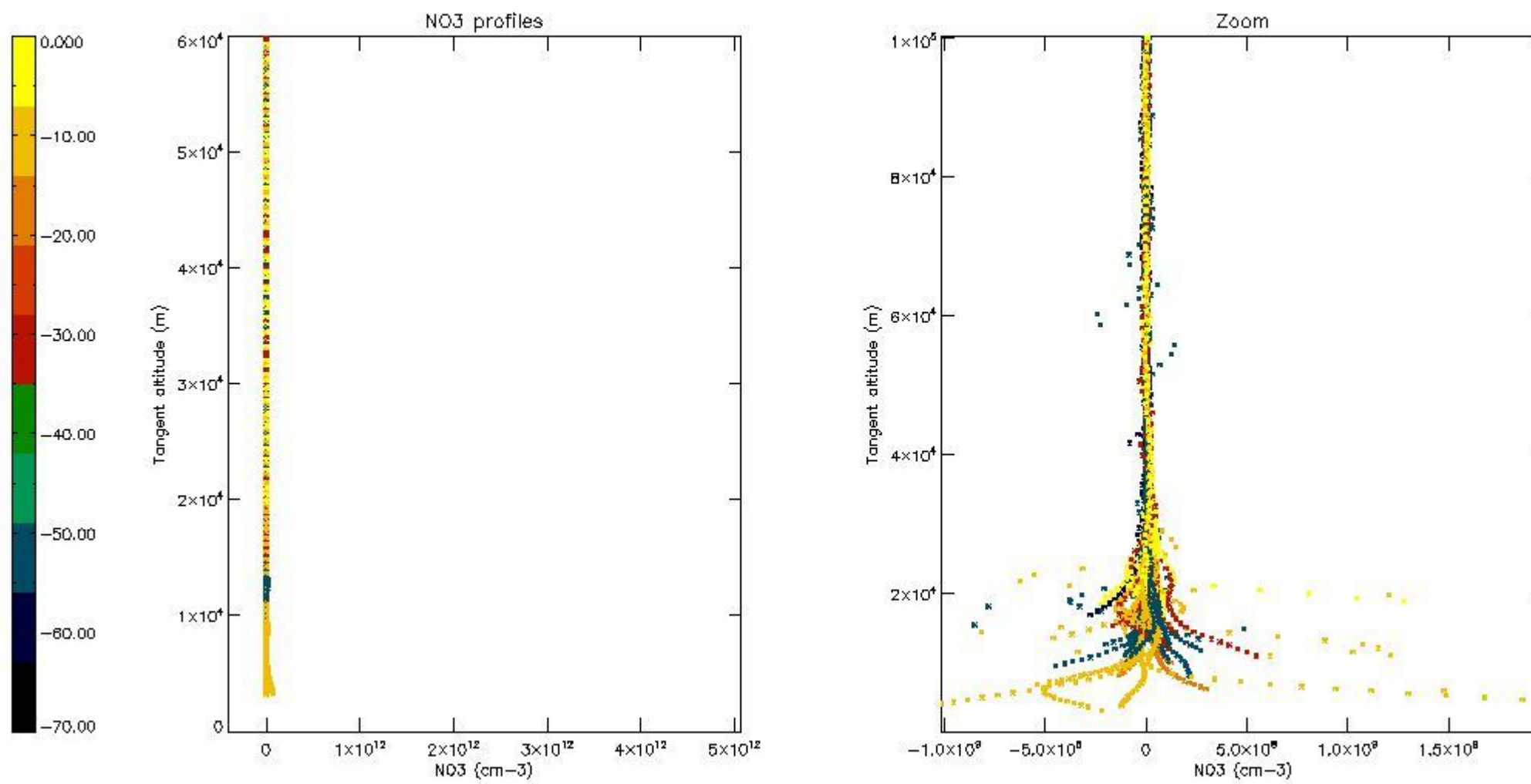
The colorbar represents the latitude.





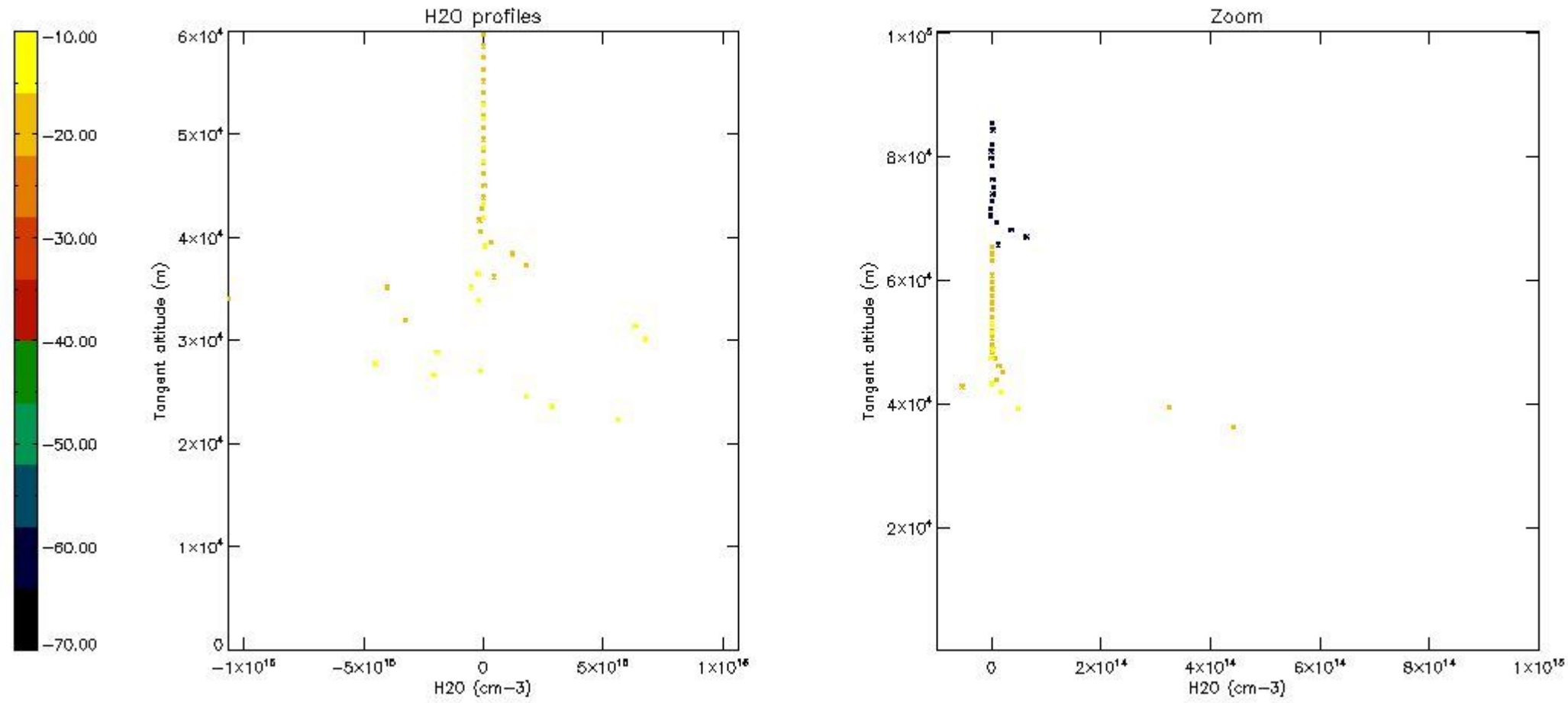
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-JUN-2006 00:02:00
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-JUN-2006 00:02:00
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-JUN-2006 00:02:00

# GOMOS Level 2 Daily Report

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









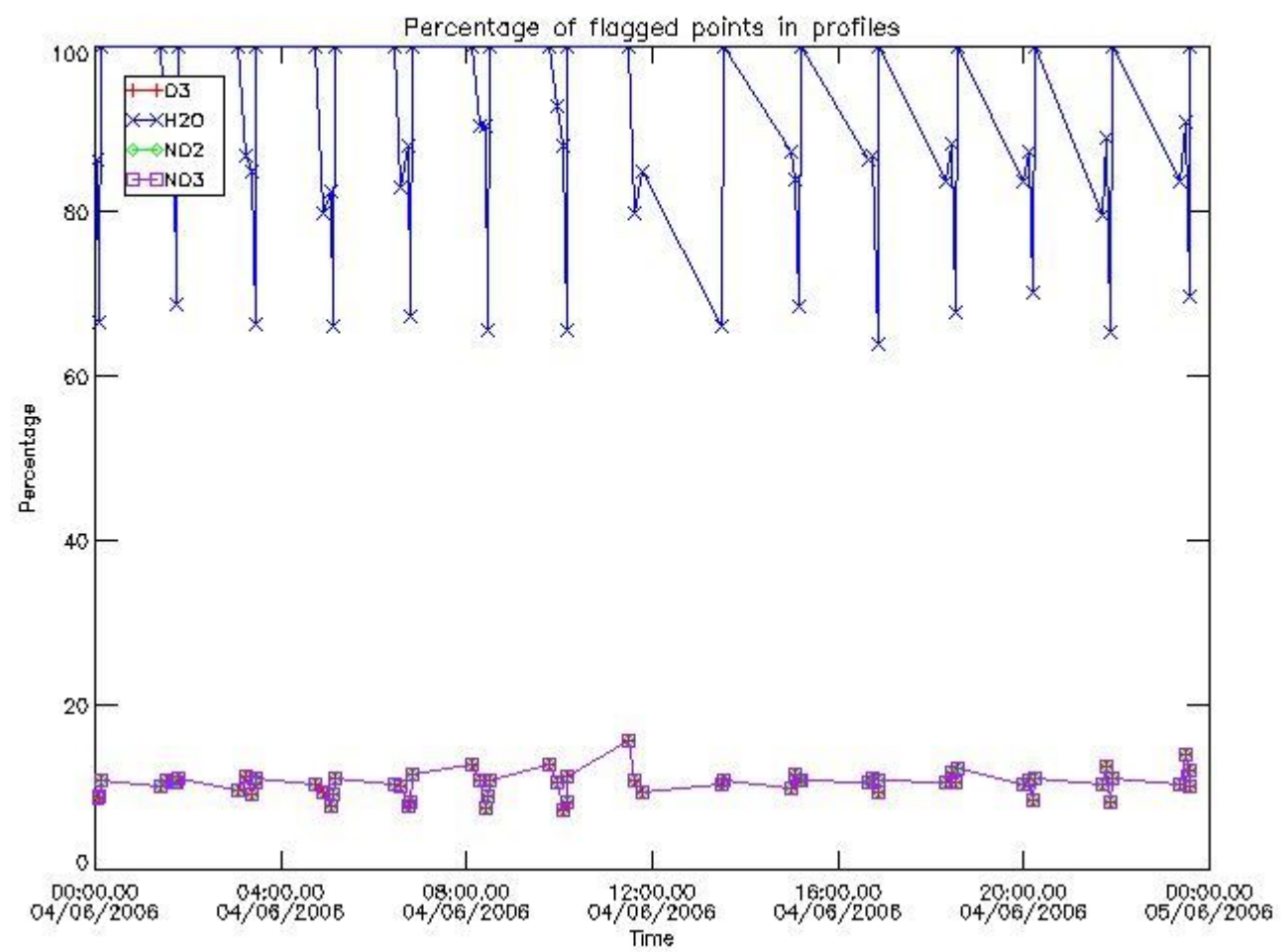


220	GOM_NL__2PRFIN20060604_212341_000000482048_00186_22284_0533.N1	04-JUN-2006 21:23:41	Bright	47.500	53	43Bet And	2.0480	3300.0	95	22284	No
221	GOM_NL__2PRFIN20060604_212745_000000412048_00186_22284_0534.N1	04-JUN-2006 21:27:45	Twilight	40.500	105	6Bet Ari	2.6450	8900.0	81	22284	No
222	GOM_NL__2PRFIN20060604_214048_000000502048_00186_22284_0535.N1	04-JUN-2006 21:40:48	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	22284	No
223	GOM_NL__2PRFIN20060604_214727_000000412048_00186_22284_0536.N1	04-JUN-2006 21:47:27	Dark	41.000	84	Alp Phe	2.3970	4500.0	82	22284	No
224	GOM_NL__2PRFIN20060604_215301_000000632048_00187_22285_0517.N1	04-JUN-2006 21:53:01	Dark	62.500	63	Bet Gru	2.1500	2800.0	125	22285	No
225	GOM_NL__2PRFIN20060604_215458_000000462048_00187_22285_0518.N1	04-JUN-2006 21:54:58	Dark	46.000	31	Alp Gru	1.7340	15200.	92	22285	No
226	GOM_NL__2PRFIN20060604_215942_000000432048_00187_22285_0519.N1	04-JUN-2006 21:59:42	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	22285	No
227	GOM_NL__2PRFIN20060604_220654_000000402048_00187_22285_0520.N1	04-JUN-2006 22:06:54	Straylight	39.500	147	Alp Ara	2.8770	26000.	79	22285	No
228	GOM_NL__2PRFIN20060604_220837_000000472048_00187_22285_0521.N1	04-JUN-2006 22:08:37	Straylight	46.500	40	The Sco	1.8590	7100.0	93	22285	No
229	GOM_NL__2PRFIN20060604_221023_000000482048_00187_22285_0522.N1	04-JUN-2006 22:10:23	Tw_i_and_stray	47.500	25	35Lam Sco	1.6200	28000.	95	22285	No
230	GOM_NL__2PRFIN20060604_221204_000000462048_00187_22285_0523.N1	04-JUN-2006 22:12:04	Tw_i_and_stray	45.500	75	26Eps Sco	2.2910	4250.0	91	22285	No
231	GOM_NL__2PRFIN20060604_221403_000000462048_00187_22285_0524.N1	04-JUN-2006 22:14:03	Bright	46.000	136	23Tau Sco	2.8220	30000.	92	22285	No
232	GOM_NL__2PRFIN20060604_221734_000000452048_00187_22285_0525.N1	04-JUN-2006 22:17:34	Bright	45.000	86	35Eta Oph	2.4300	10200.	90	22285	No
233	GOM_NL__2PRFIN20060604_221923_000000512048_00187_22285_0526.N1	04-JUN-2006 22:19:23	Bright	51.000	98	13Zet Oph	2.5710	30000.	102	22285	No
234	GOM_NL__2PRFIN20060604_222132_000000382048_00187_22285_0527.N1	04-JUN-2006 22:21:32	Bright	38.000	120	1Del Oph	2.7340	3200.0	76	22285	No
235	GOM_NL__2PRFIN20060604_222433_000000362048_00187_22285_0528.N1	04-JUN-2006 22:24:33	Bright	35.500	102	24Alp Ser	2.6000	4250.0	71	22285	No
236	GOM_NL__2PRFIN20060604_222923_000000422048_00187_22285_0529.N1	04-JUN-2006 22:29:23	Bright	41.500	127	27Bet Her	2.7810	4700.0	83	22285	No
237	GOM_NL__2PRFIN20060604_223243_000000402048_00187_22285_0530.N1	04-JUN-2006 22:32:43	Bright	39.500	133	40Zet Her	2.8070	6000.0	79	22285	No
238	GOM_NL__2PRFIN20060604_224003_000000432048_00187_22285_0531.N1	04-JUN-2006 22:40:03	Bright	42.500	130	23Bet Dra	2.7990	5800.0	85	22285	No
239	GOM_NL__2PRFIN20060604_225622_000000552048_00187_22285_0532.N1	04-JUN-2006 22:56:22	Bright	55.000	76	27Gam Cas	2.3000	30000.	110	22285	No
240	GOM_NL__2PRFIN20060604_230417_000000472048_00187_22285_0533.N1	04-JUN-2006 23:04:17	Bright	46.500	53	43Bet And	2.0480	3300.0	93	22285	No
241	GOM_NL__2PRFIN20060604_230821_000000442048_00187_22285_0534.N1	04-JUN-2006 23:08:21	Twilight	44.000	105	6Bet Ari	2.6450	8900.0	88	22285	No
242	GOM_NL__2PRFIN20060604_232125_000000502048_00187_22285_0535.N1	04-JUN-2006 23:21:25	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	22285	No
243	GOM_NL__2PRFIN20060604_232803_000000442048_00187_22285_0536.N1	04-JUN-2006 23:28:03	Dark	44.000	84	Alp Phe	2.3970	4500.0	88	22285	No
244	GOM_NL__2PRFIN20060604_233338_000000502048_00188_22286_0517.N1	04-JUN-2006 23:33:38	Dark	50.000	63	Bet Gru	2.1500	2800.0	100	22286	No
245	GOM_NL__2PRFIN20060604_233535_000000472048_00188_22286_0518.N1	04-JUN-2006 23:35:35	Dark	46.500	31	Alp Gru	1.7340	15200.	93	22286	No
246	GOM_NL__2PRFIN20060604_234019_000000422048_00188_22286_0519.N1	04-JUN-2006 23:40:19	Straylight	41.500	45	Alp Pav	1.9400	26000.	83	22286	No
247	GOM_NL__2PRFIN20060604_234731_000000422048_00188_22286_0520.N1	04-JUN-2006 23:47:31	Straylight	41.500	147	Alp Ara	2.8770	26000.	83	22286	No
248	GOM_NL__2PRFIN20060604_234913_000000462048_00188_22286_0521.N1	04-JUN-2006 23:49:13	Straylight	45.500	40	The Sco	1.8590	7100.0	91	22286	No
249	GOM_NL__2PRFIN20060604_235100_000000462048_00188_22286_0522.N1	04-JUN-2006 23:51:00	Tw_i_and_stray	46.000	25	35Lam Sco	1.6200	28000.	92	22286	No
250	GOM_NL__2PRFIN20060604_235240_000000452048_00188_22286_0523.N1	04-JUN-2006 23:52:40	Tw_i_and_stray	44.500	75	26Eps Sco	2.2910	4250.0	89	22286	No
251	GOM_NL__2PRFIN20060604_235439_000000472048_00188_22286_0524.N1	04-JUN-2006 23:54:39	Bright	46.500	136	23Tau Sco	2.8220	30000.	93	22286	No
252	GOM_NL__2PRFIN20060604_235726_000000382048_00188_22286_0525.N1	04-JUN-2006 23:57:26	Bright	37.500	97	8Bet1Sco	2.5610	30000.	75	22286	No
253	GOM_NL__2PRFIN20060604_235959_000000392048_00188_22286_0526.N1	04-JUN-2006 23:59:59	Bright	38.500	98	13Zet Oph	2.5710	30000.	77	22286	No

### 3. Quality information per product

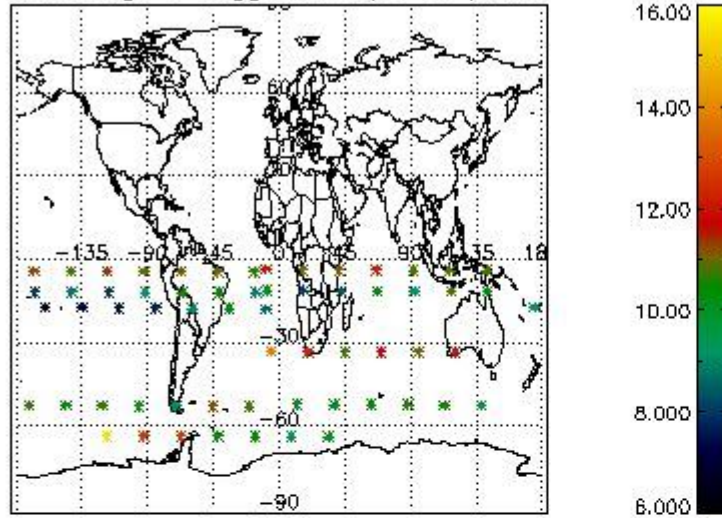
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

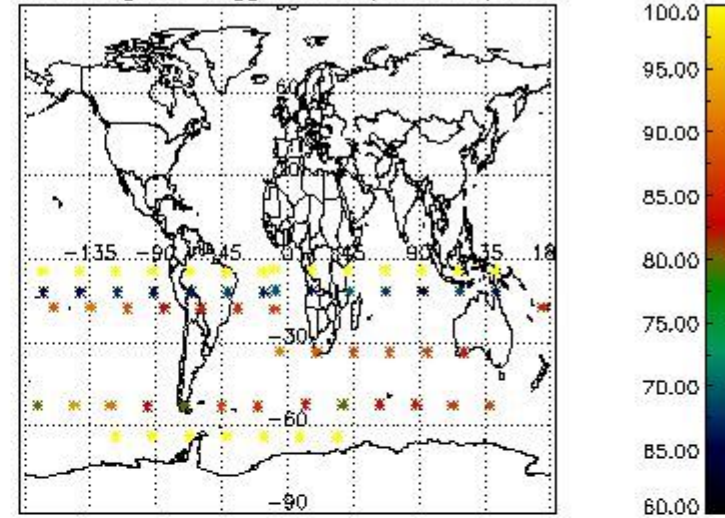


3.2 Plot quality information per product (world map)

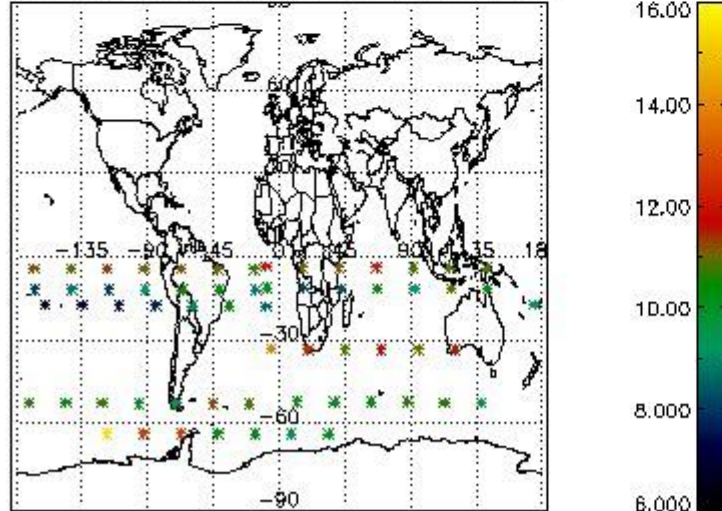
Percentage of flagged data per O3 profile



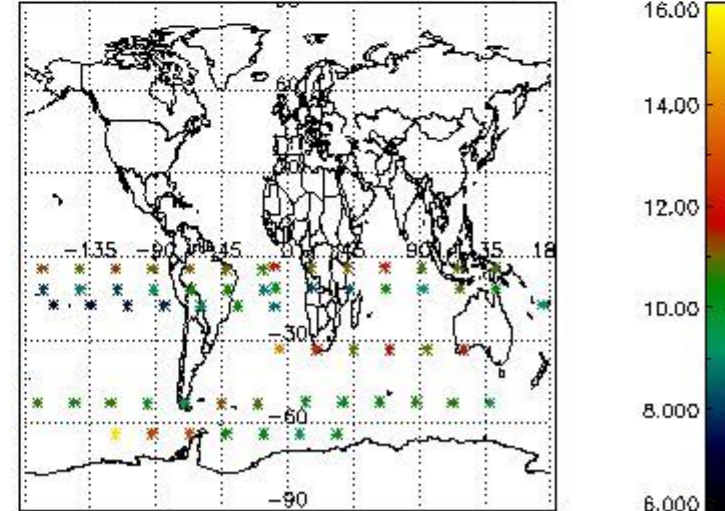
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

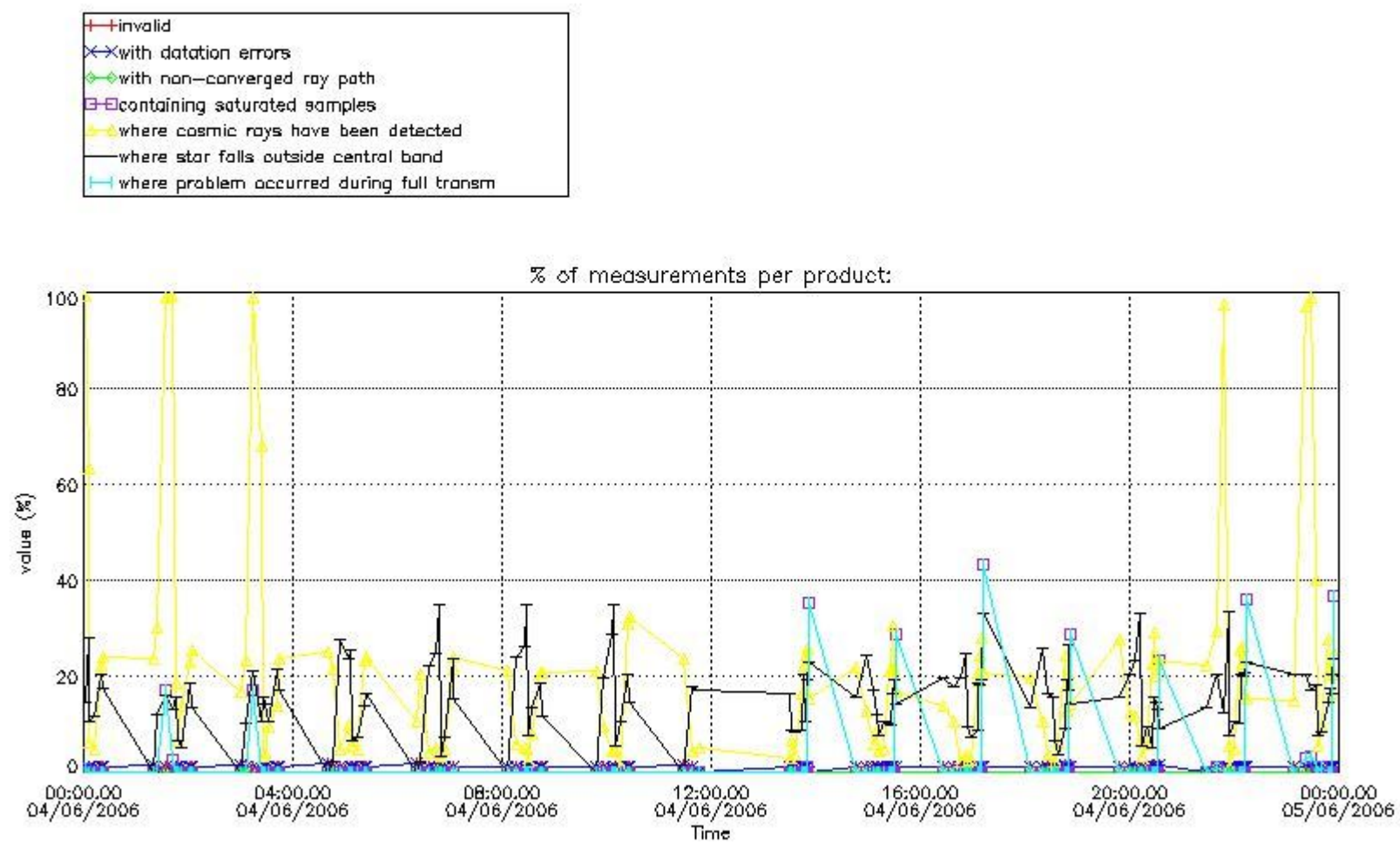


#### 4. Level 1 quality information per product

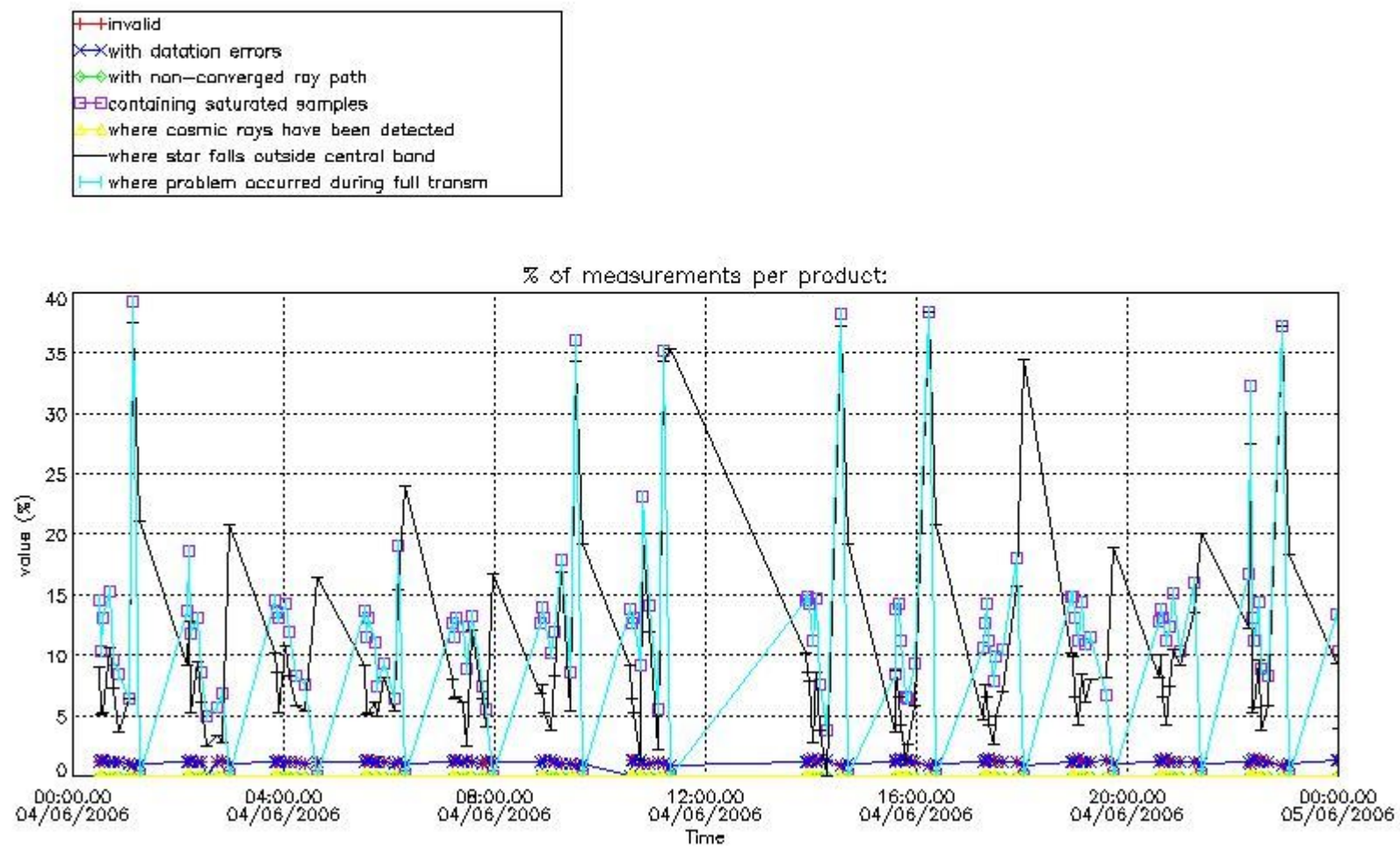
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



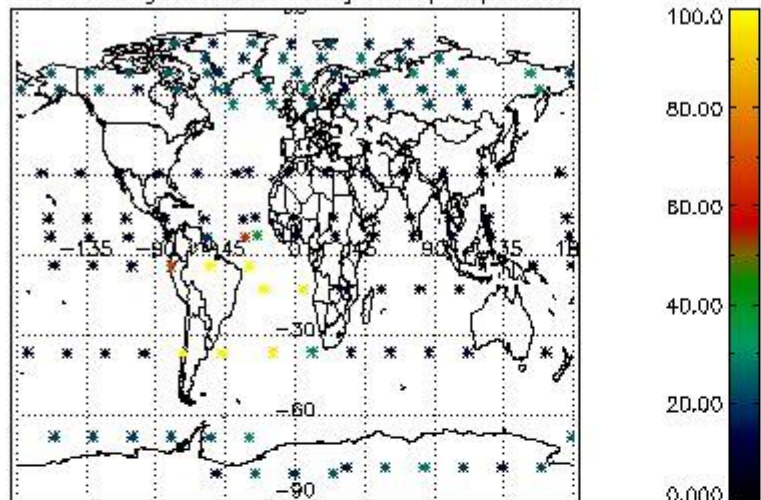
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



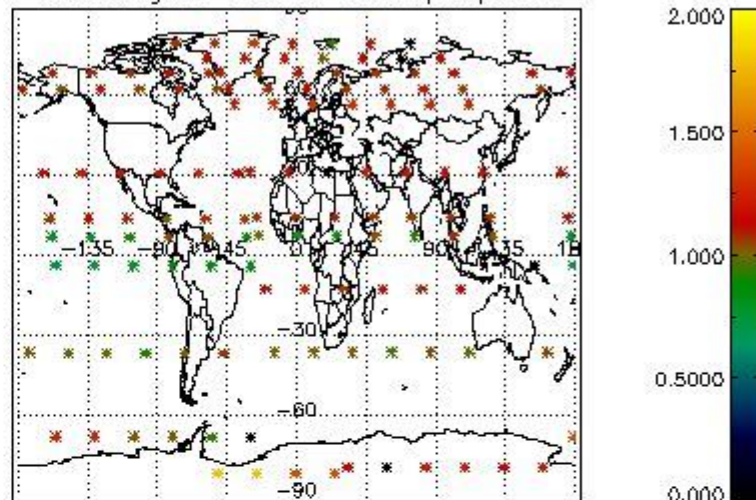
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

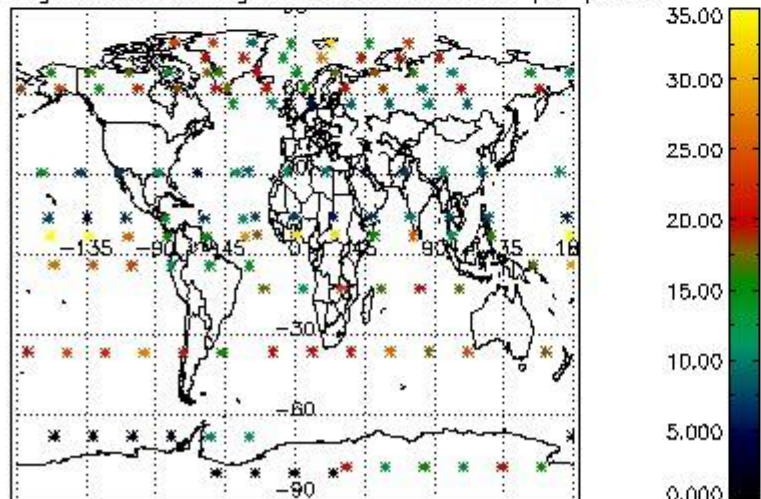
Percentage of cosmic ray hits per profile



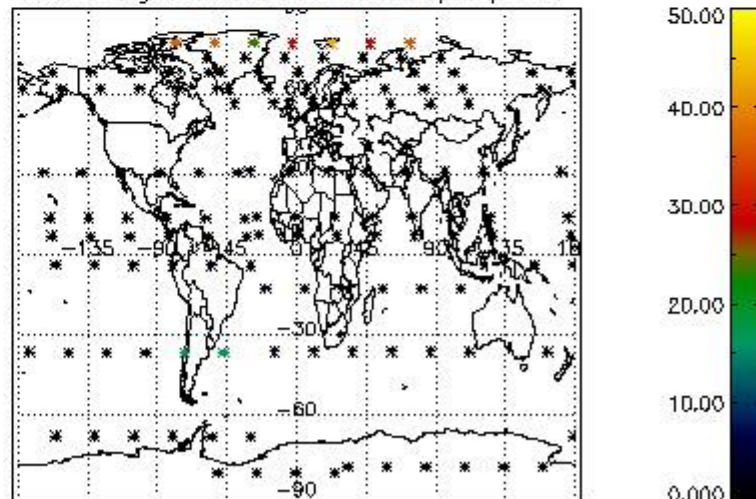
Percentage of datation errors per profile



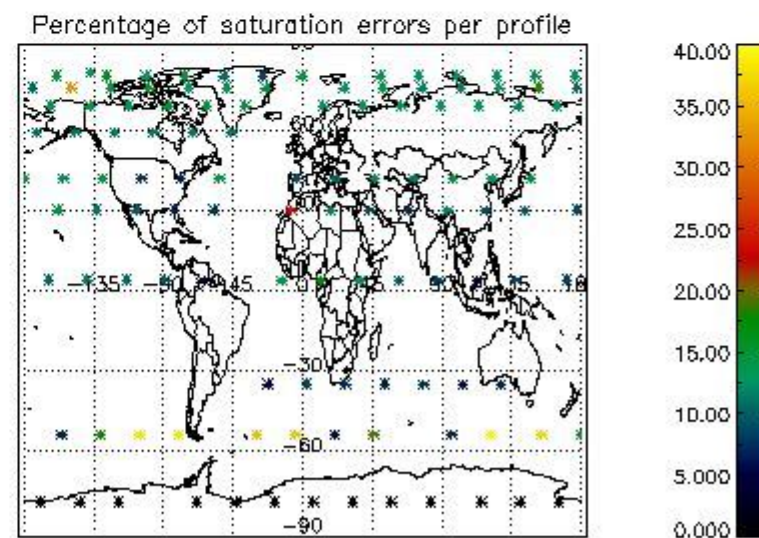
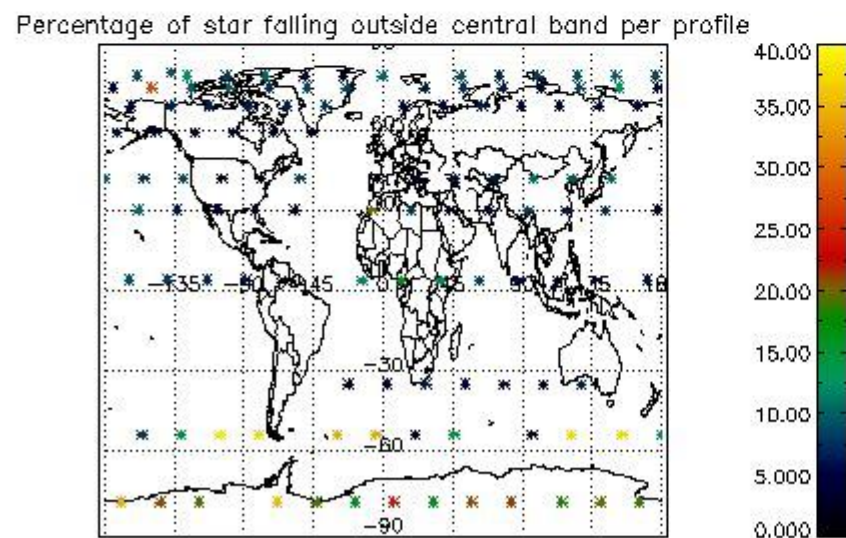
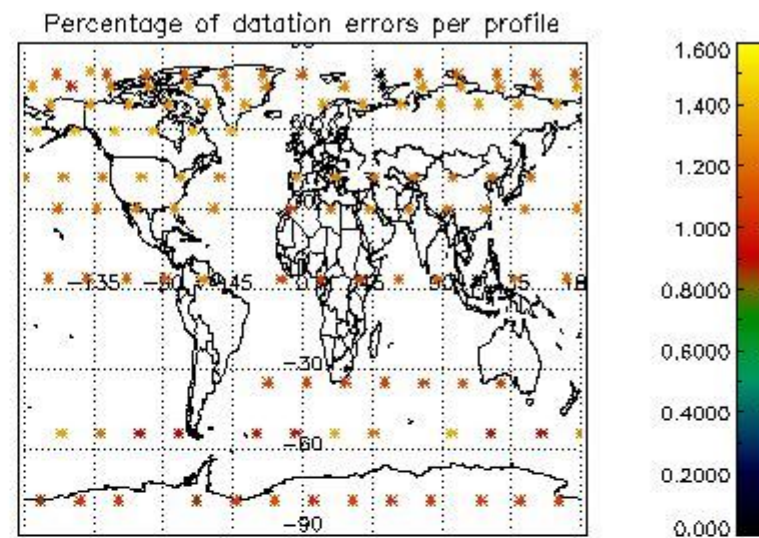
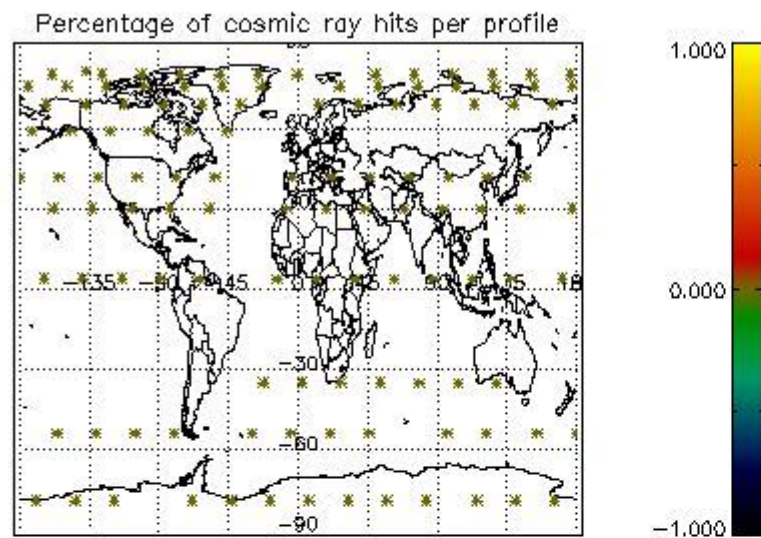
Percentage of star falling outside central band per profile



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

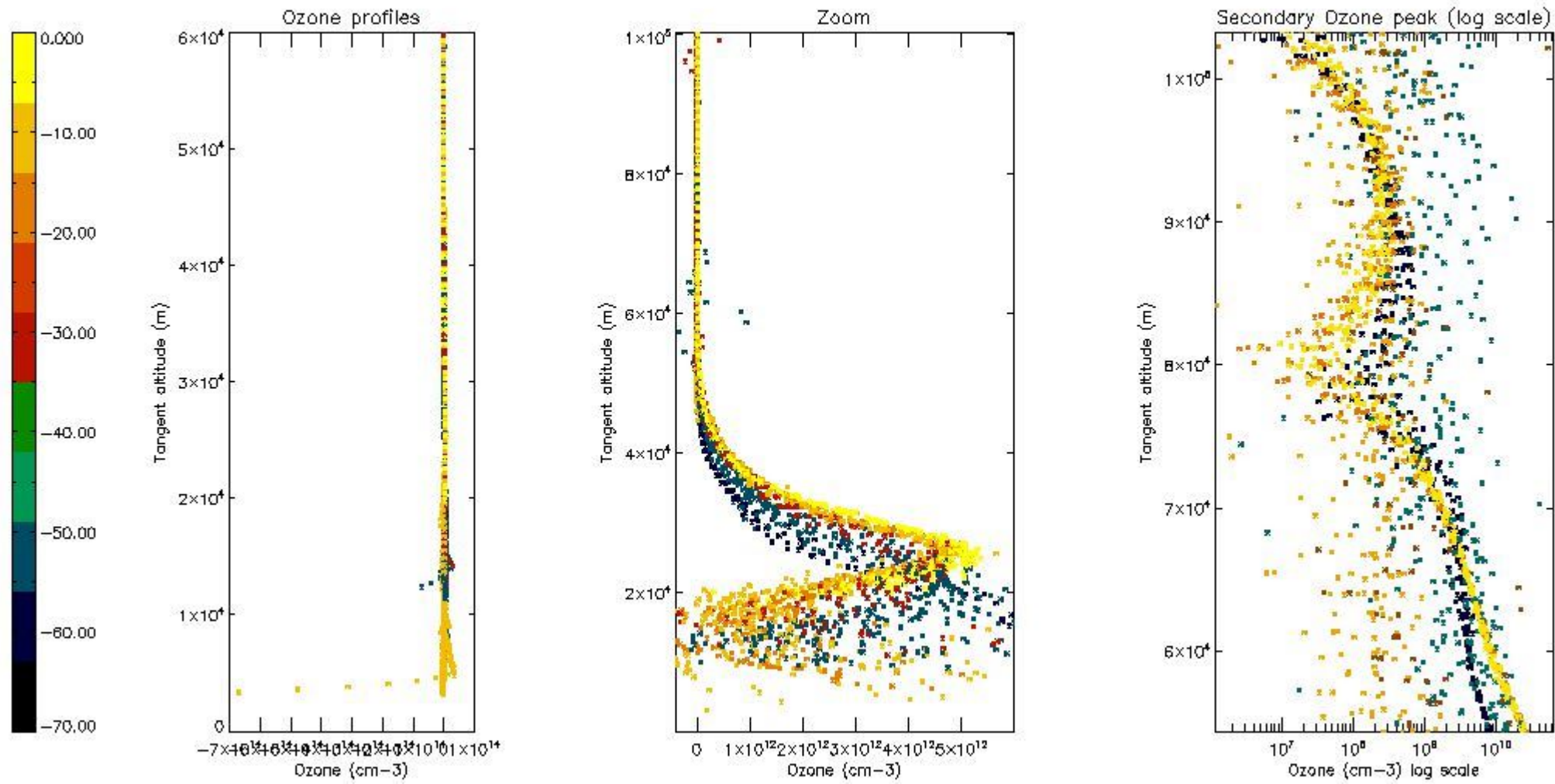
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	29
STD < 20	13

STD < 10	9
STD < 5	7

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

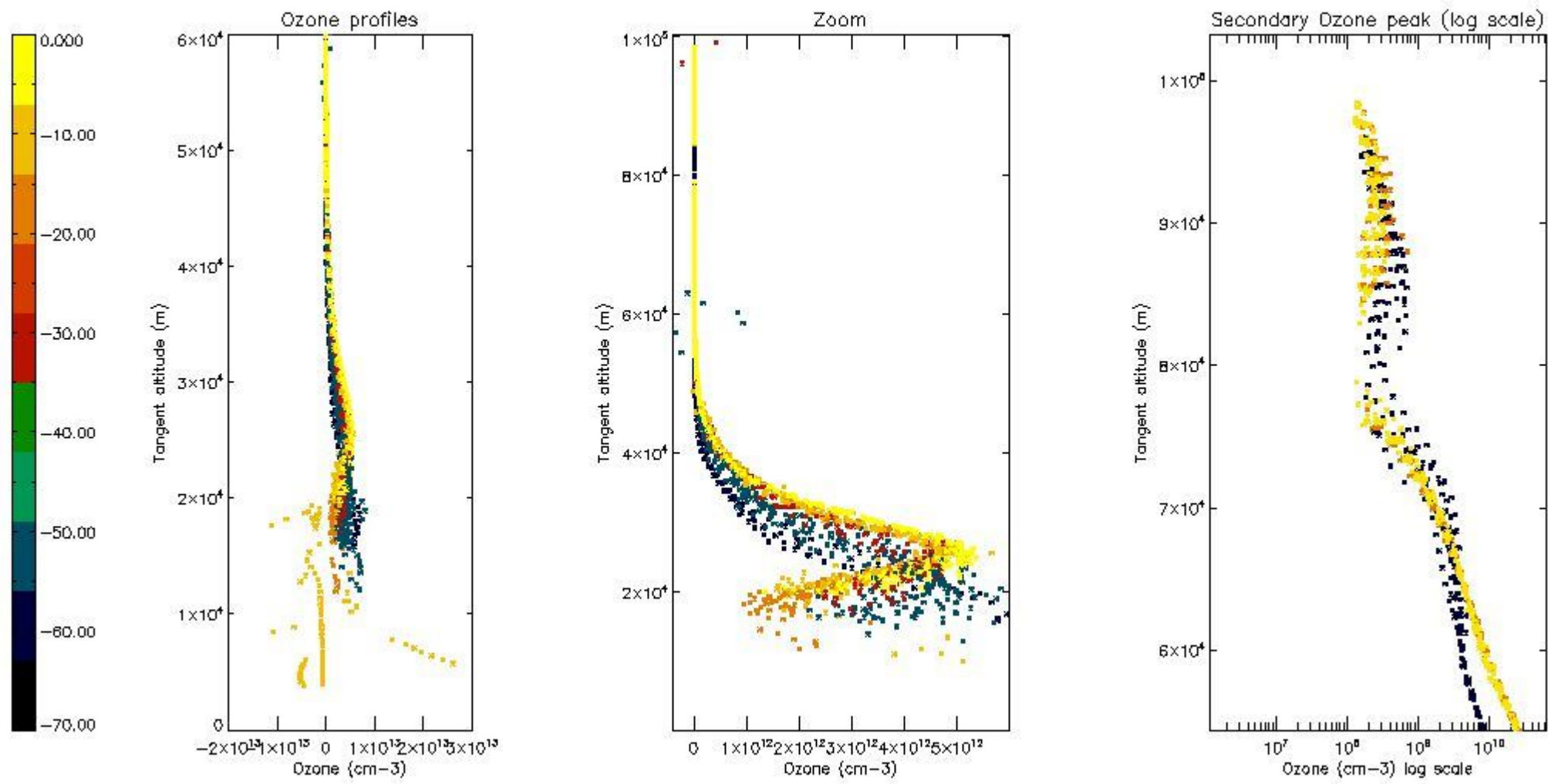
The colorbar represents the latitude.



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

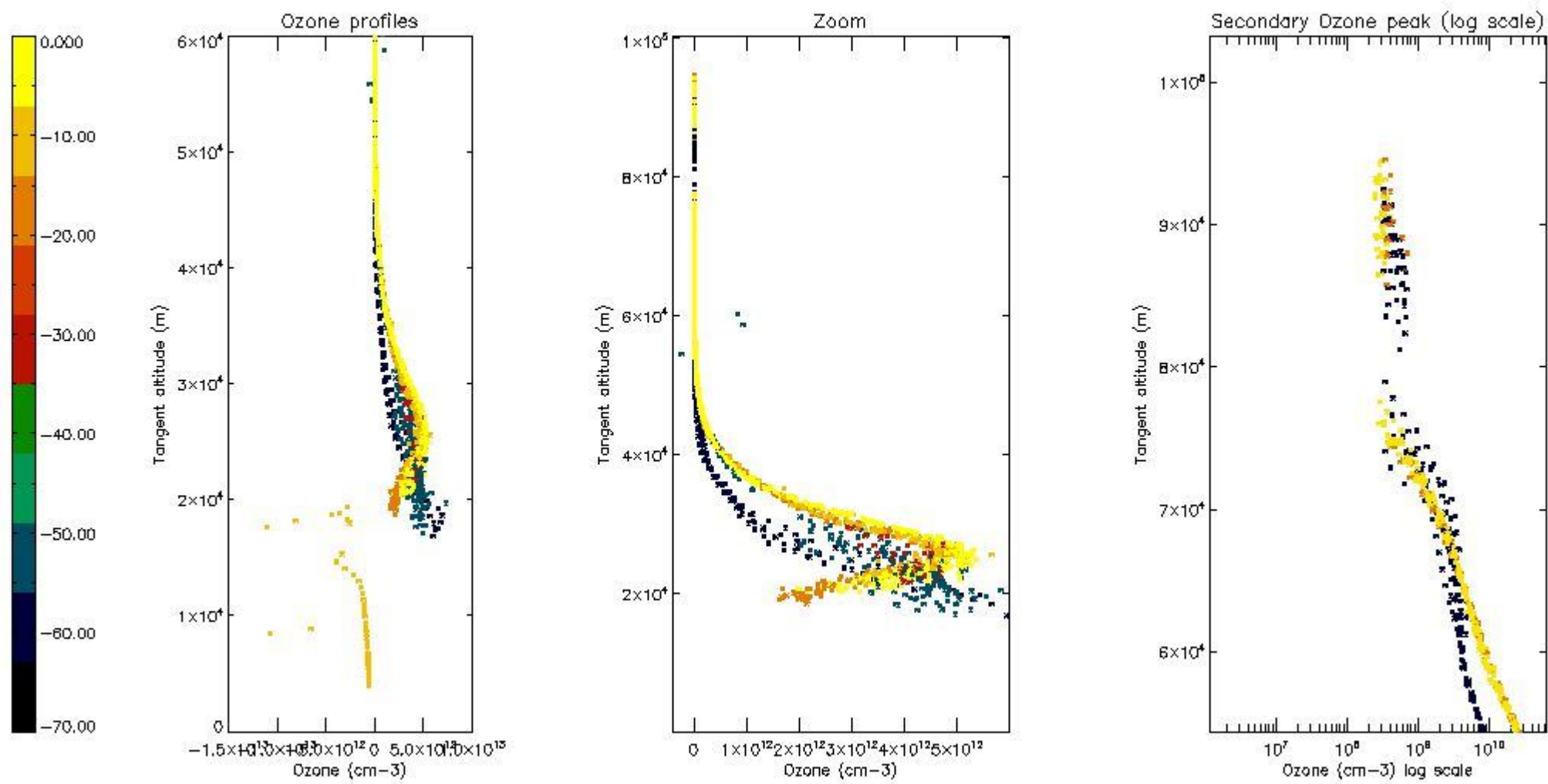
The colorbar represents the latitude.





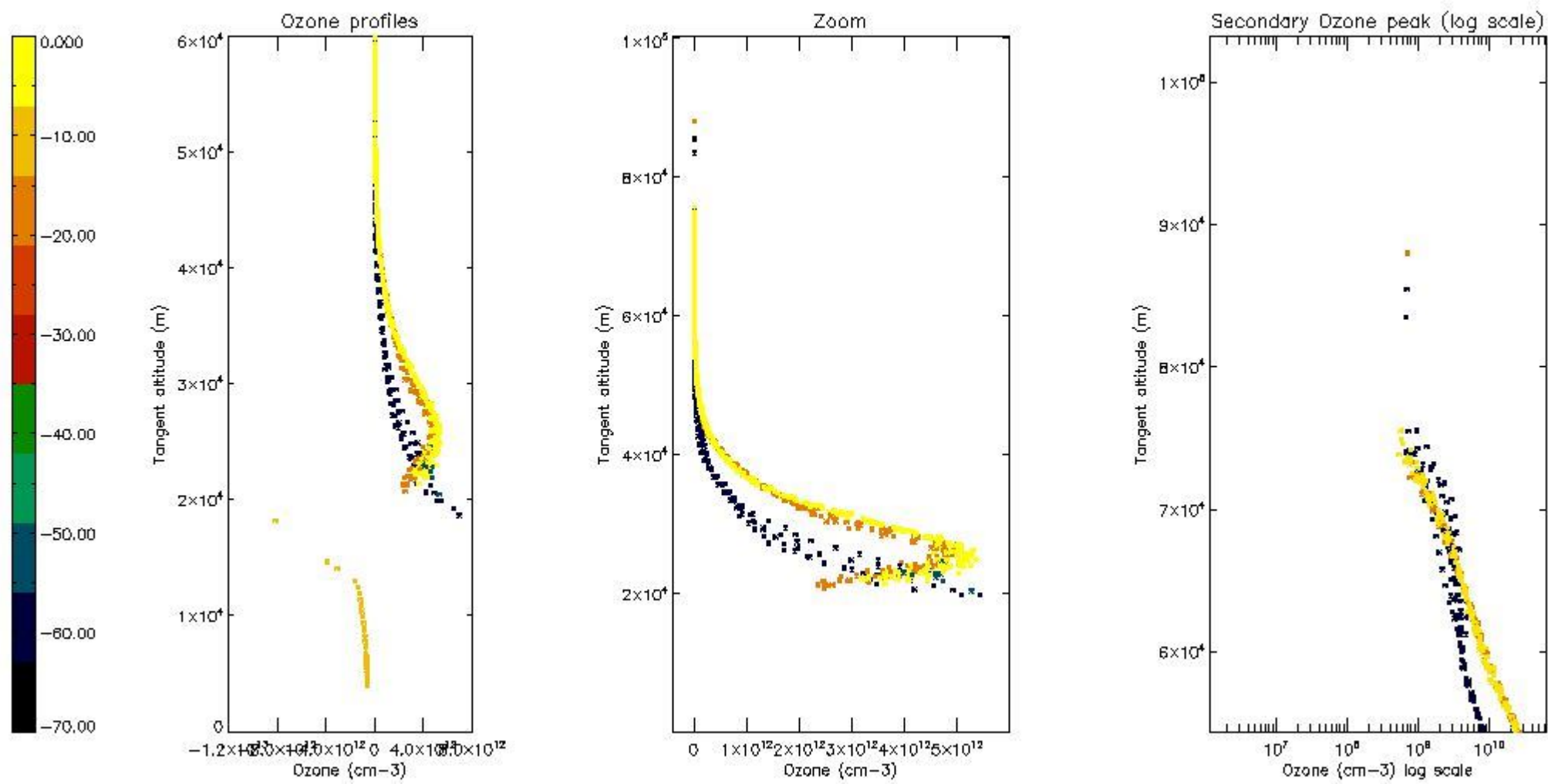
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



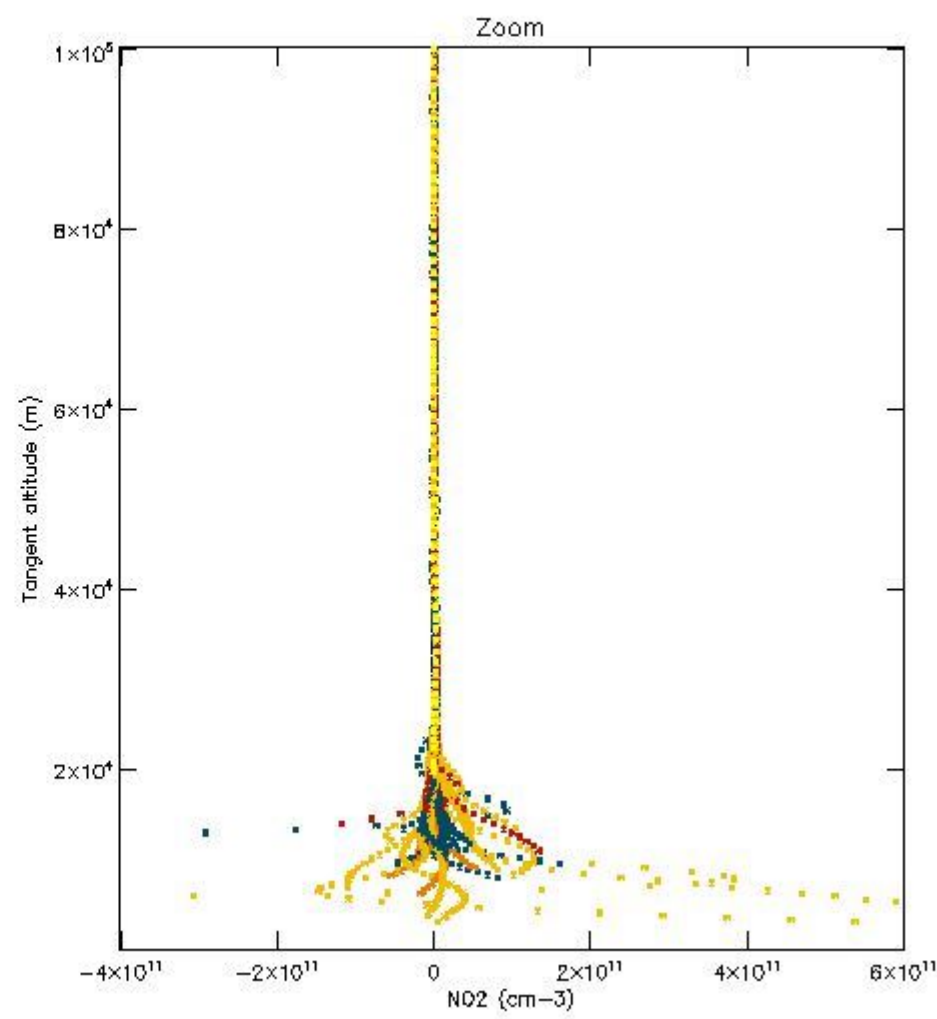
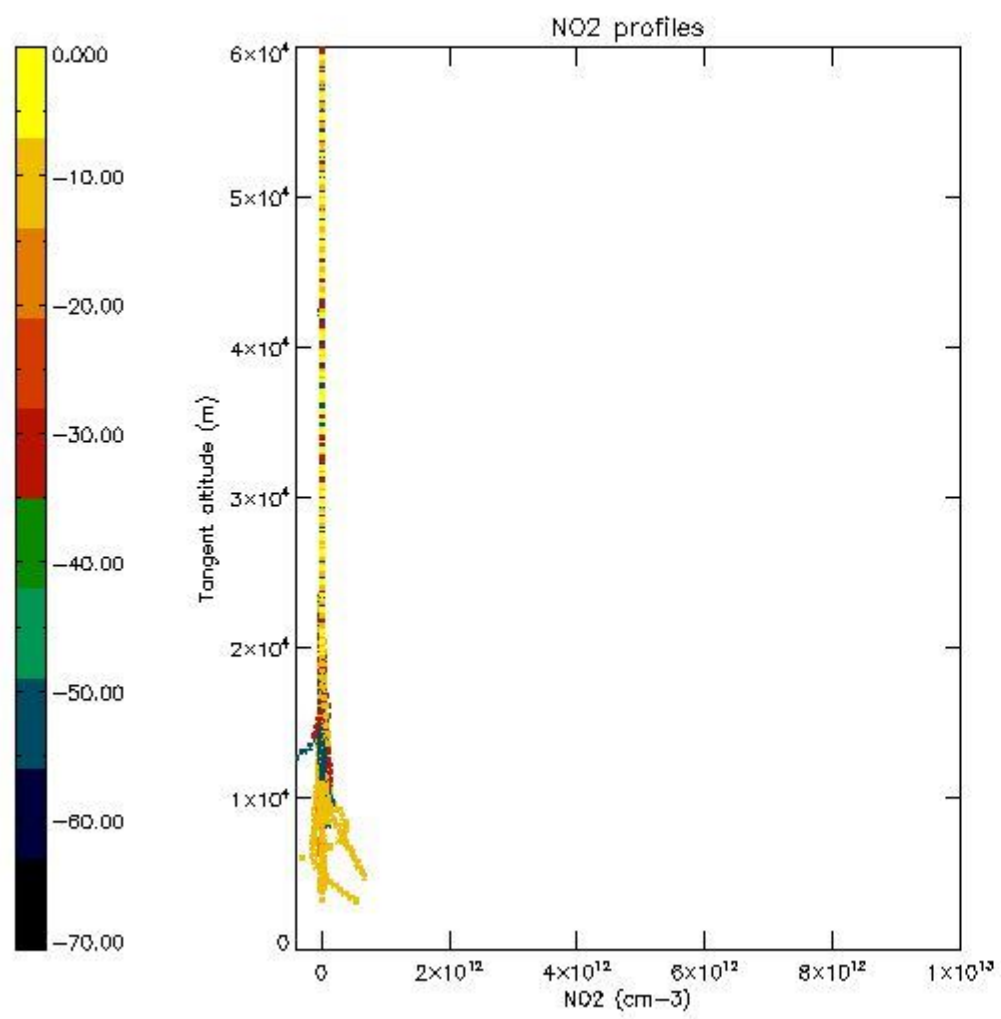
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



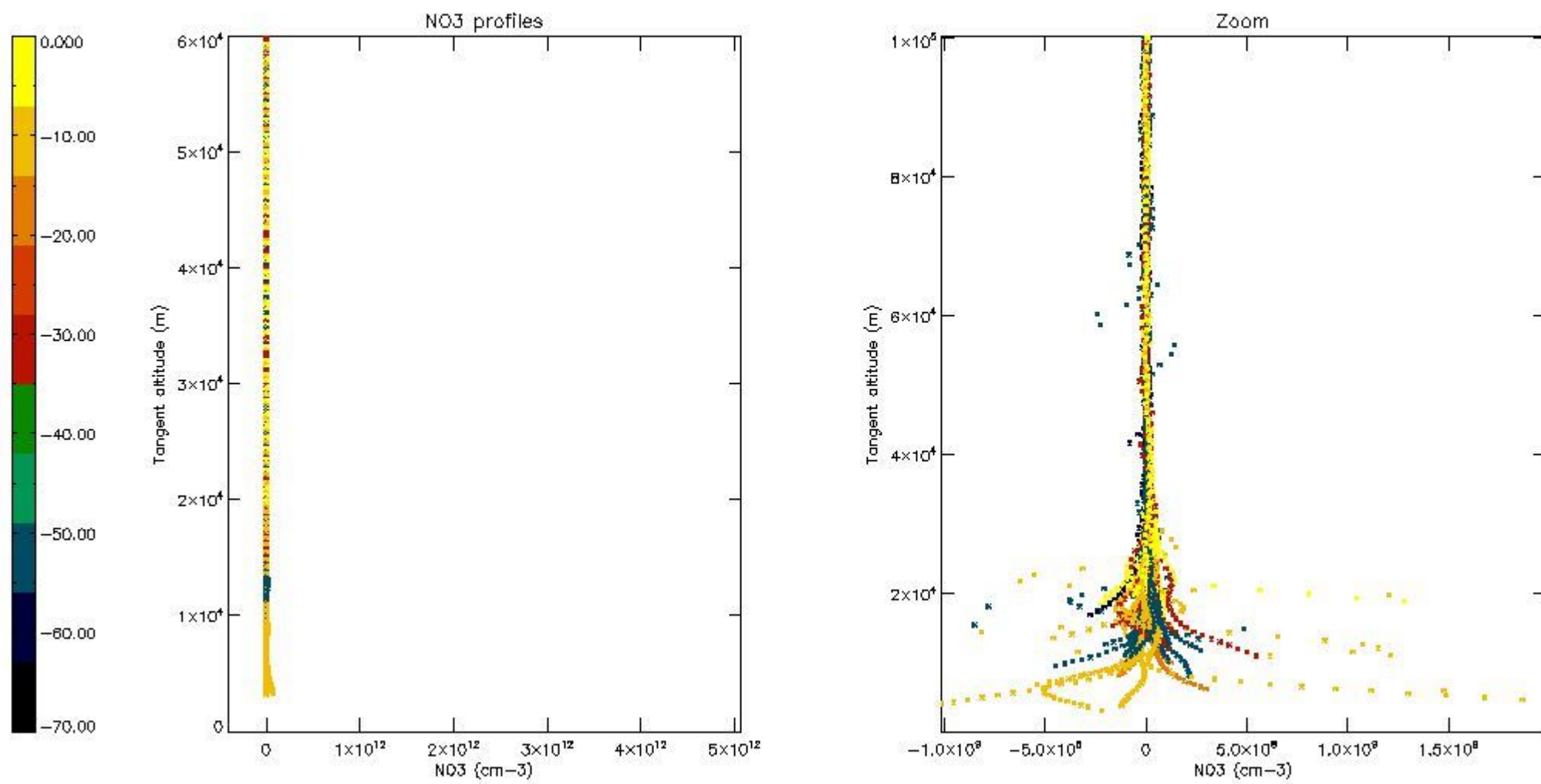
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



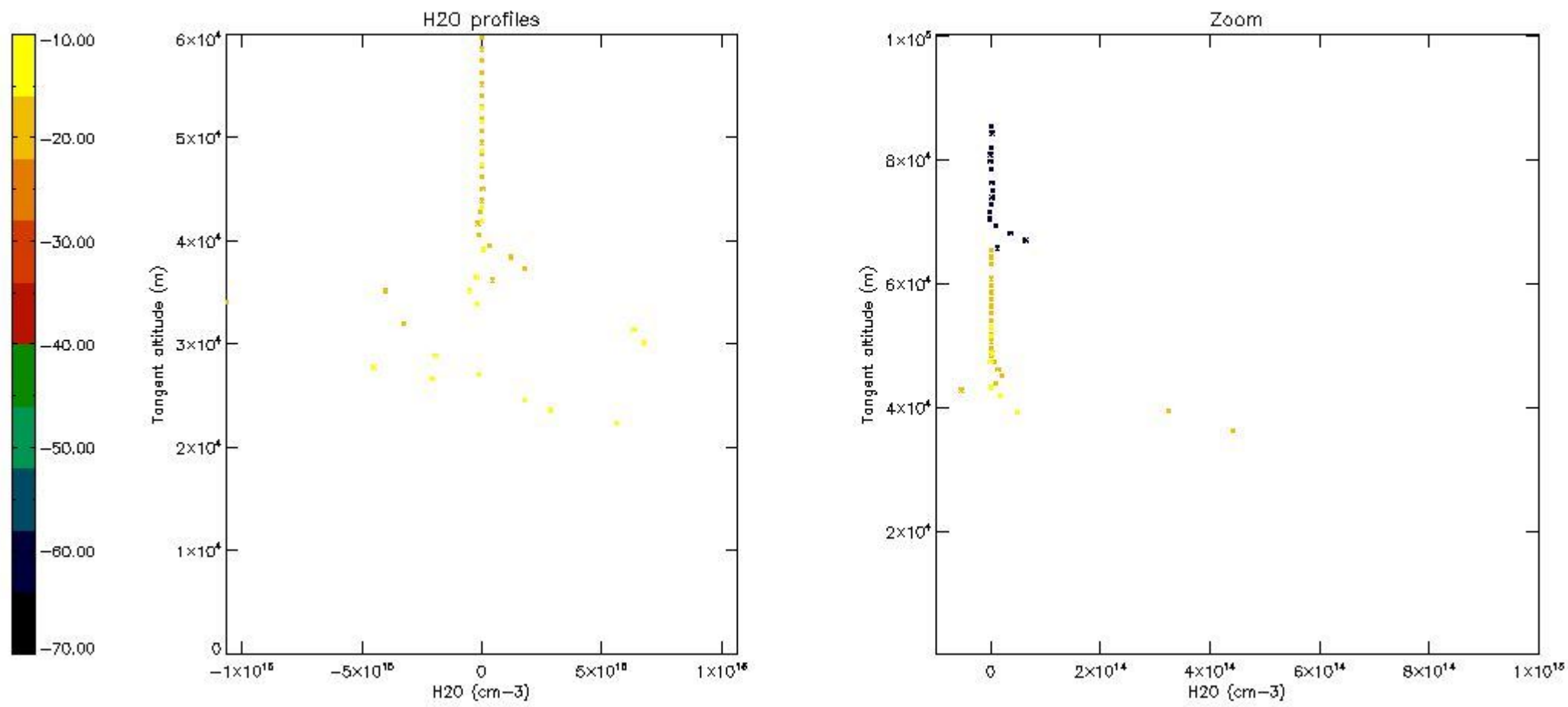
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

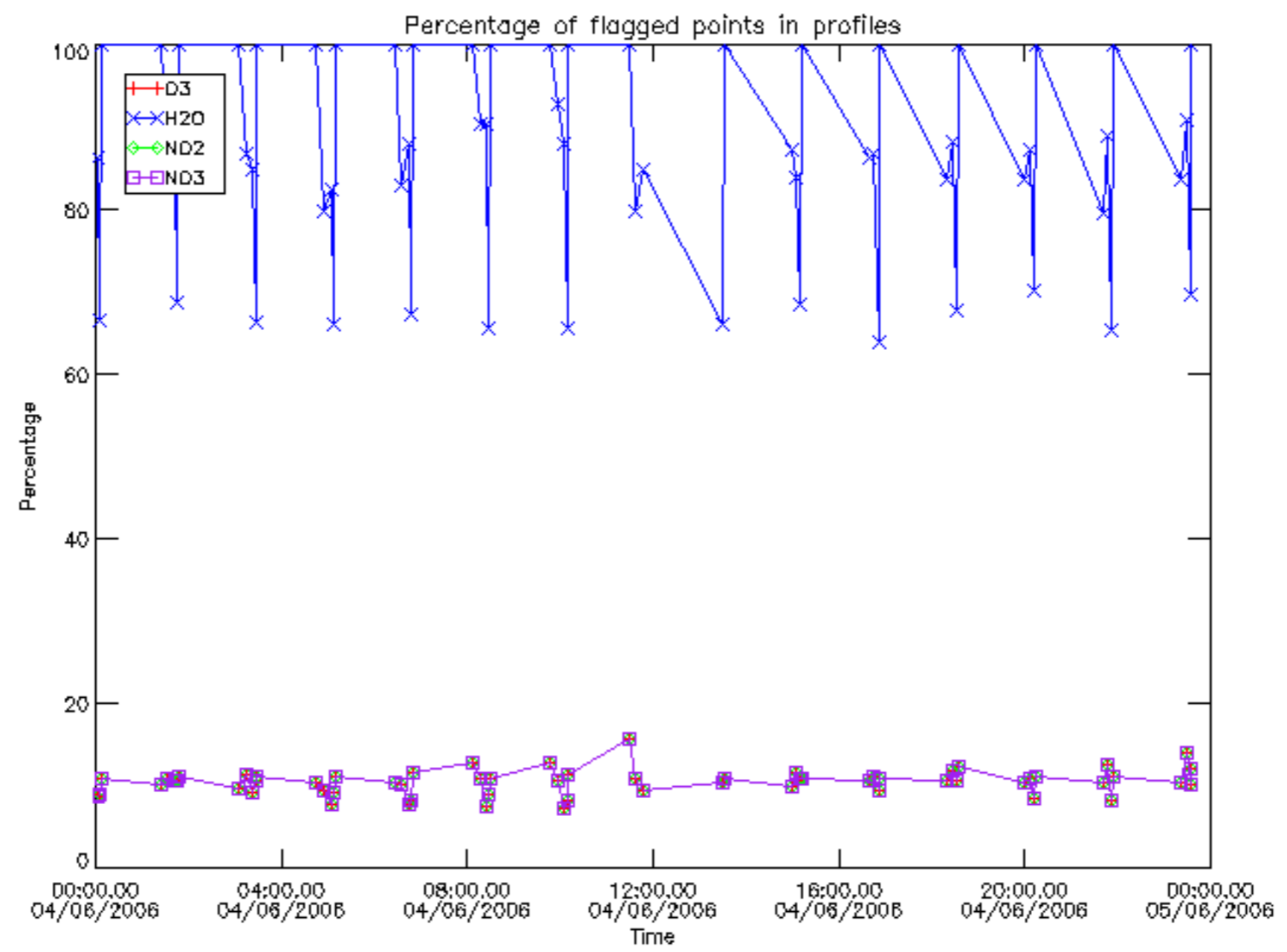
The colorbar represents the latitude.



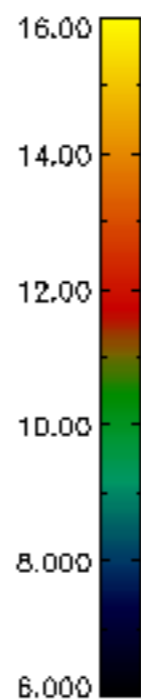
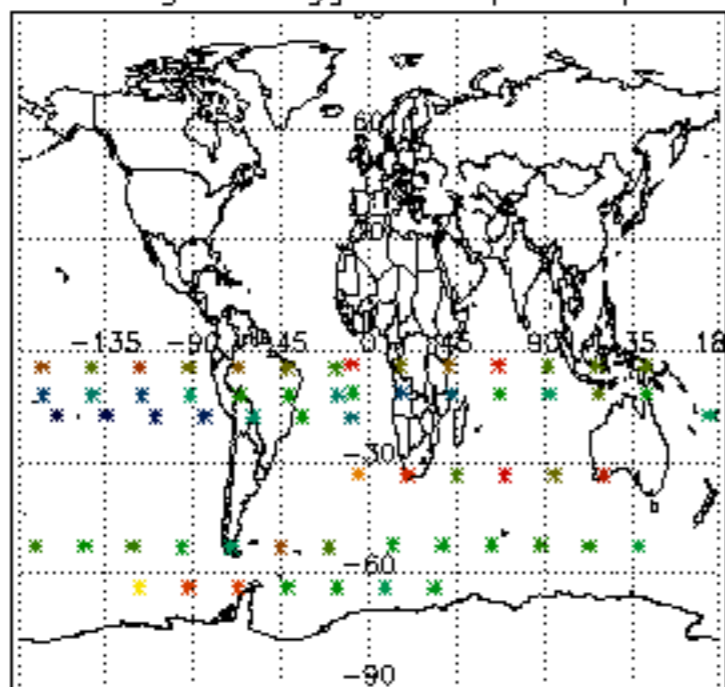
## 6. Auxiliary Data Files used for the production reported in section 2

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

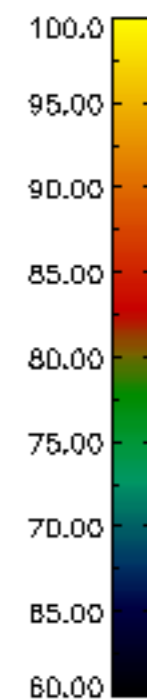
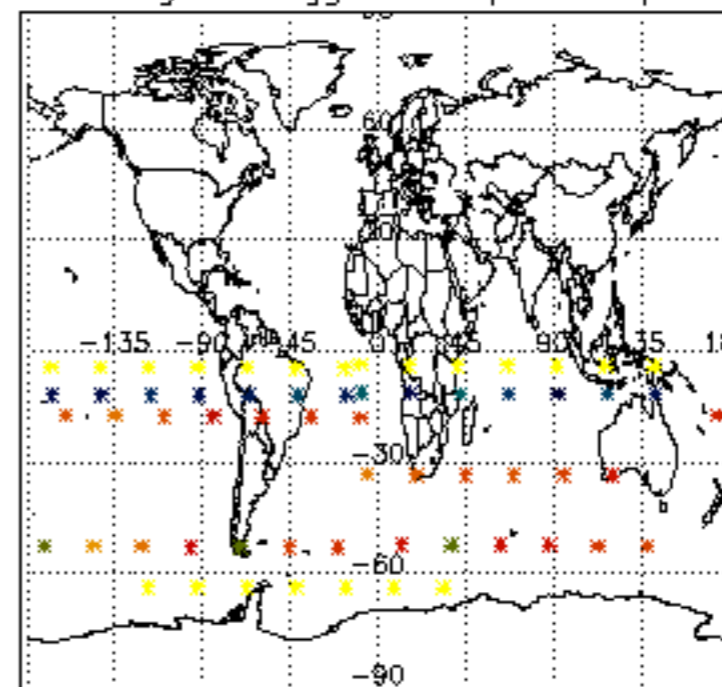
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	04-JUN-2006 00:02:00
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	04-JUN-2006 00:02:00
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	04-JUN-2006 00:02:00



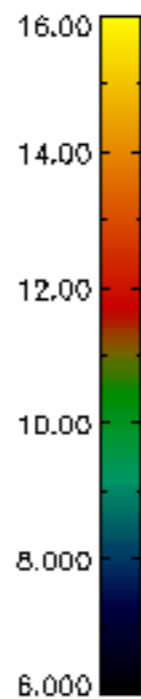
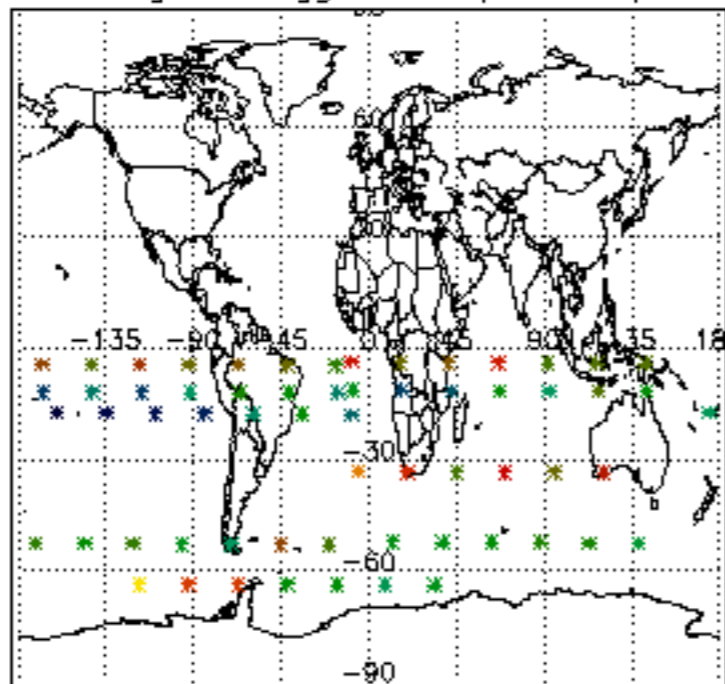
Percentage of flagged data per D3 profile



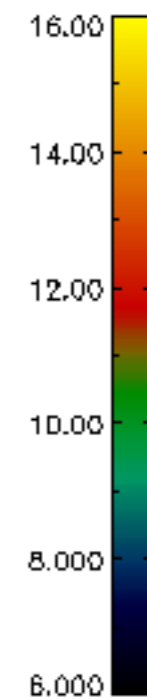
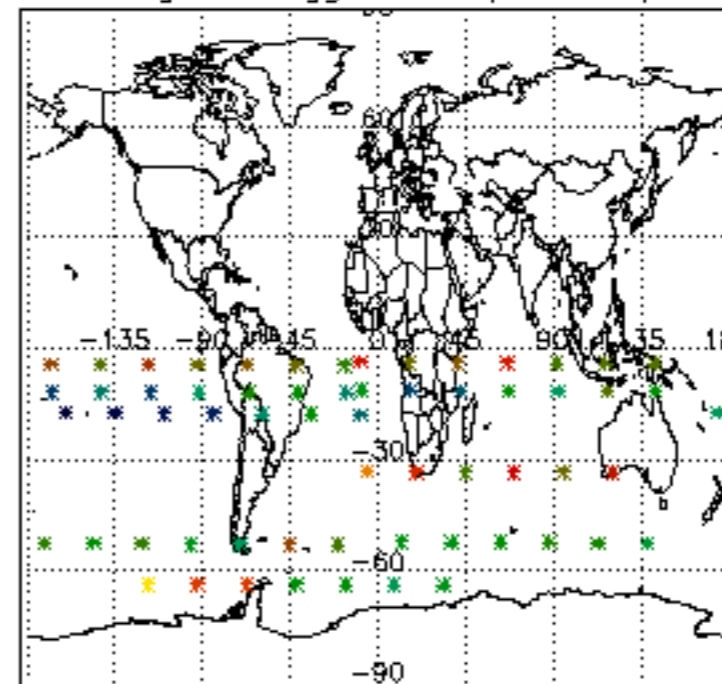
Percentage of flagged data per H2O profile



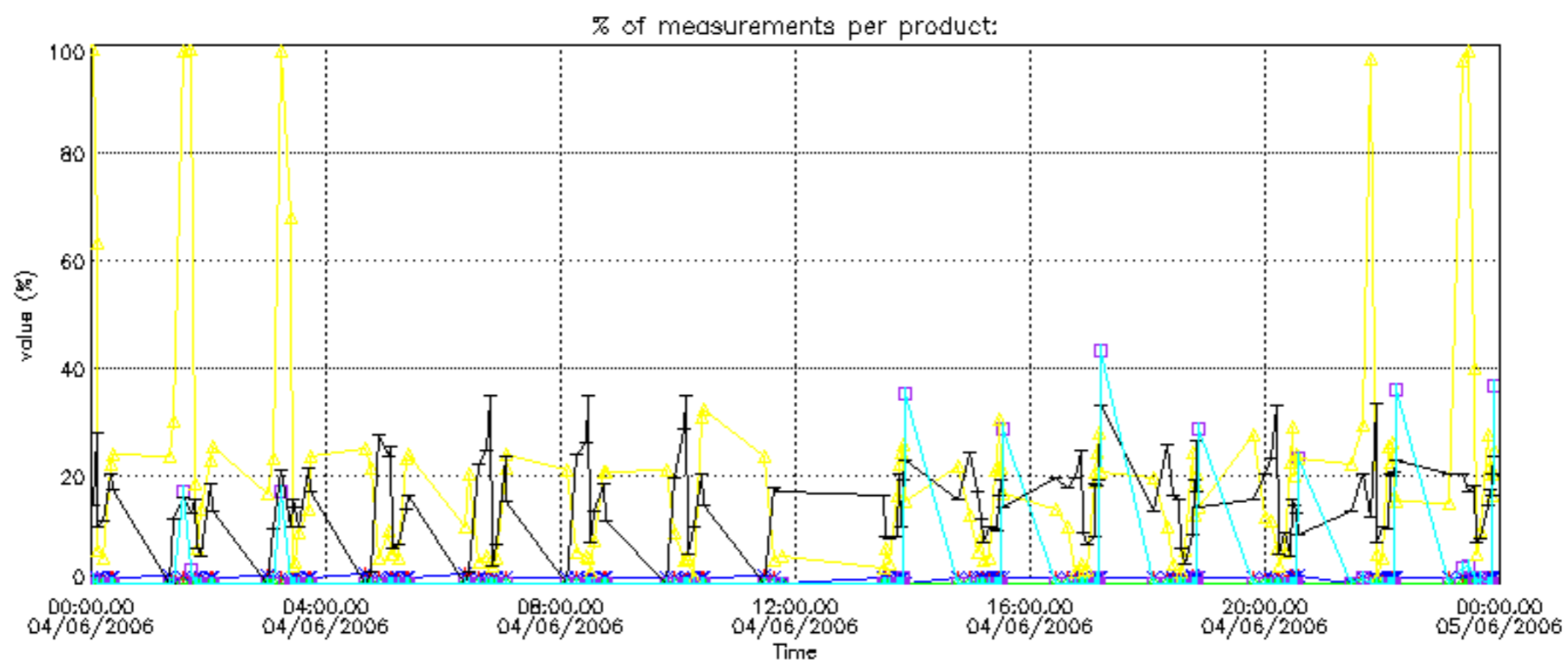
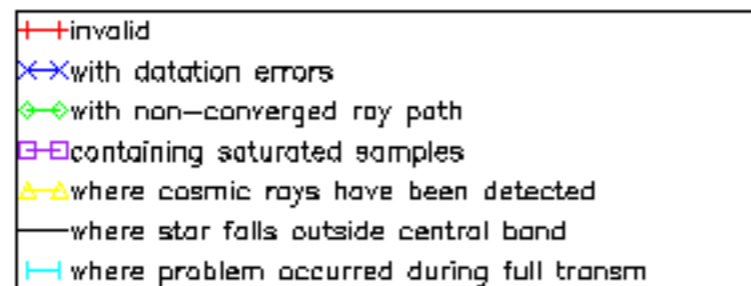
Percentage of flagged data per NO2 profile

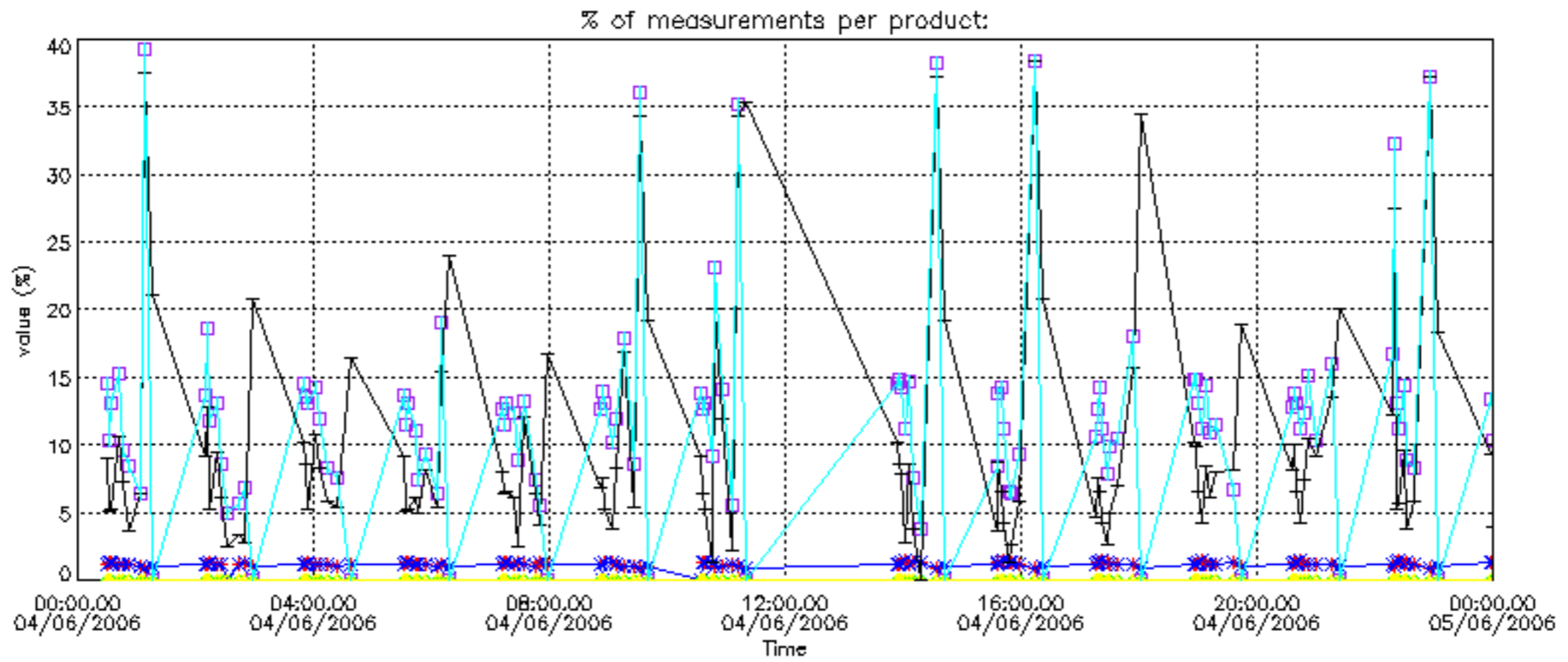


Percentage of flagged data per NO3 profile

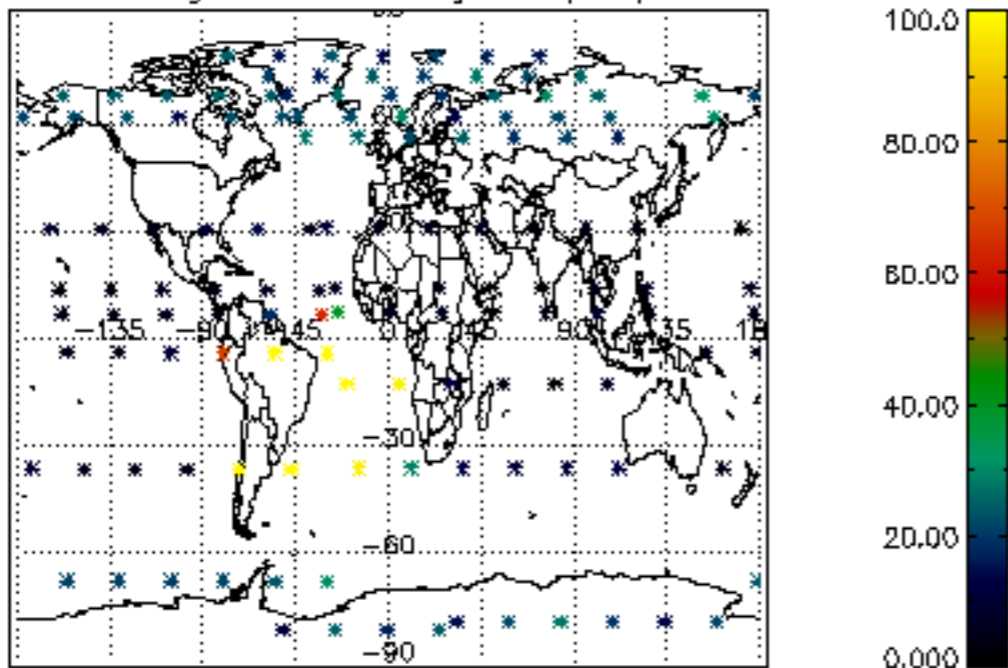




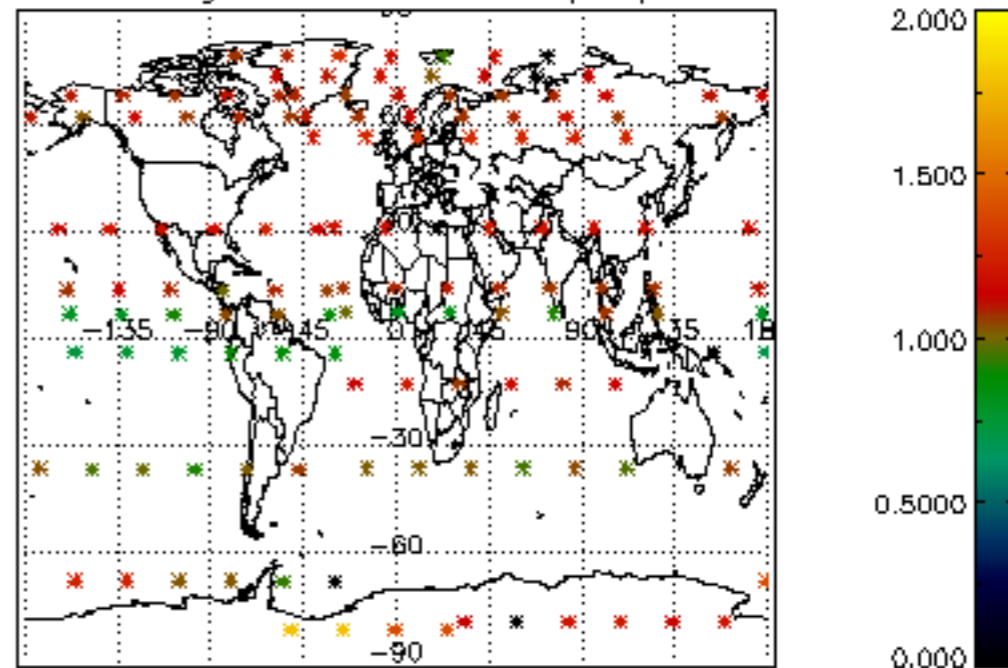




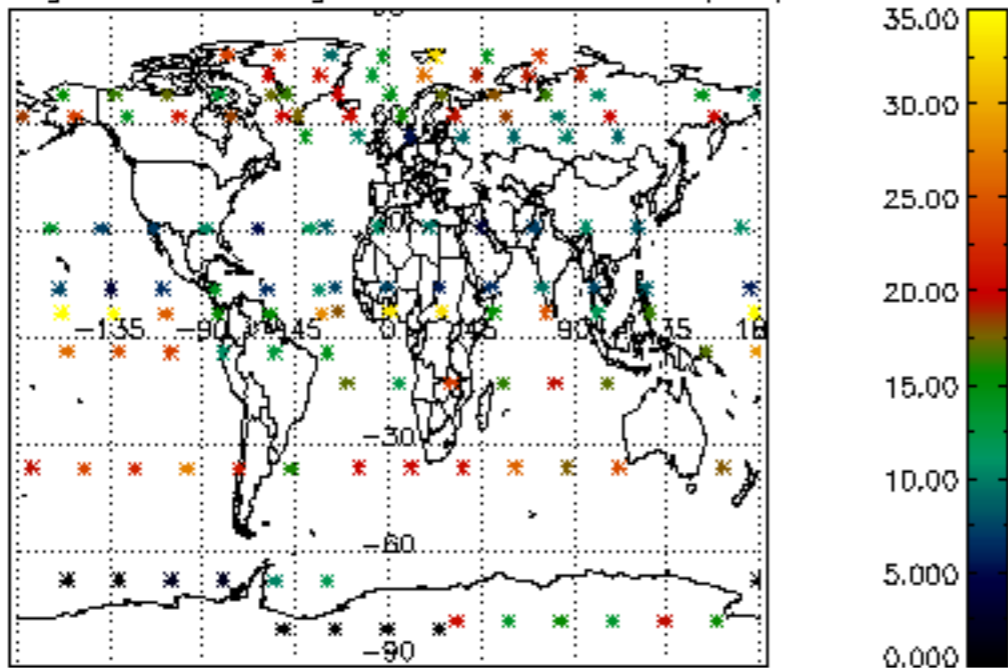
Percentage of cosmic ray hits per profile



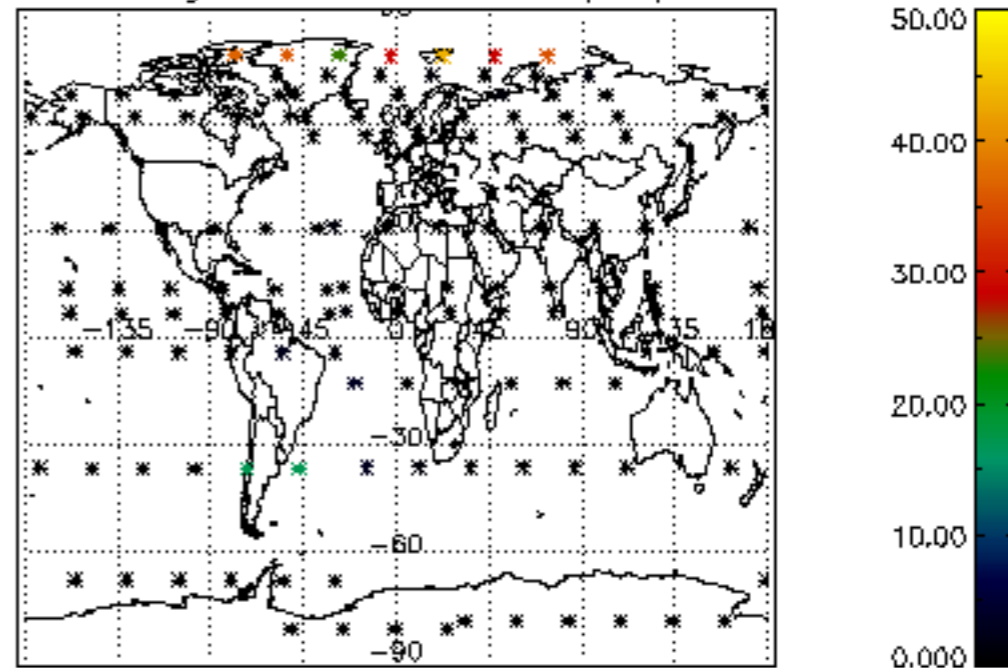
Percentage of datation errors per profile



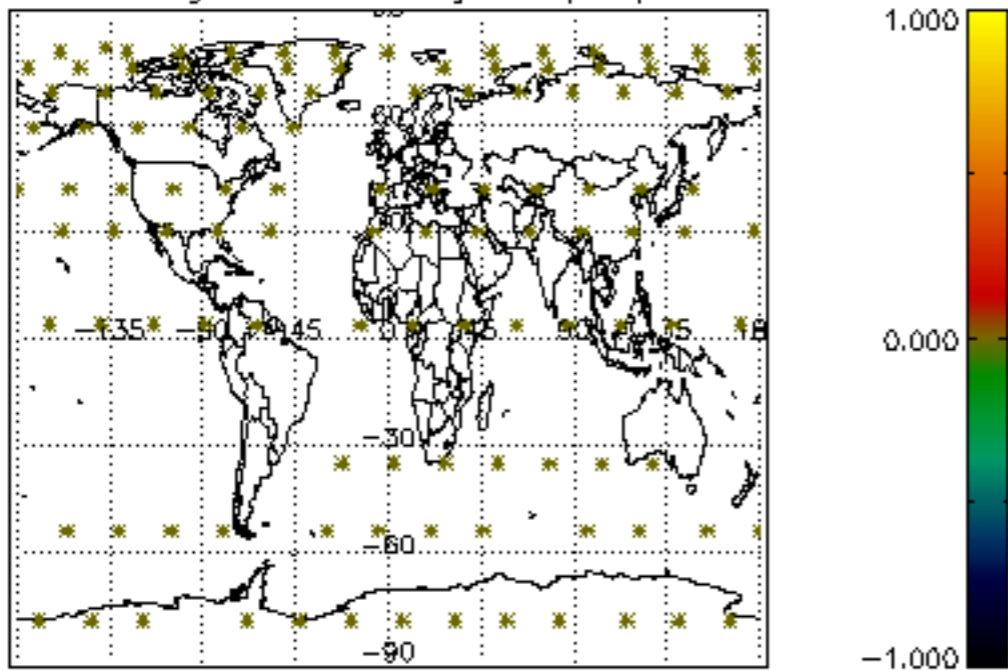
Percentage of star falling outside central band per profile



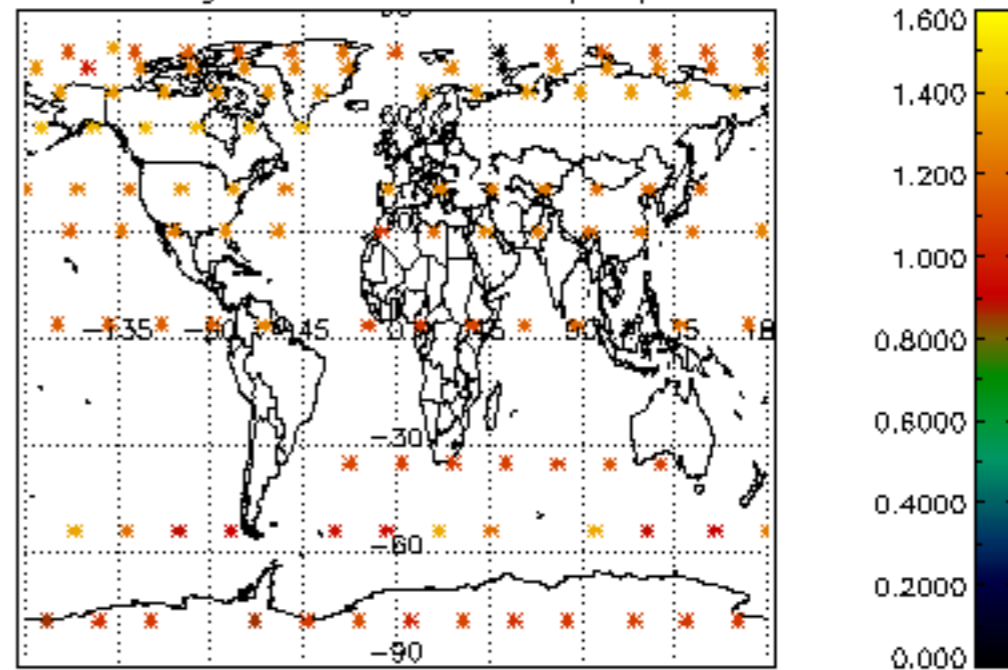
Percentage of saturation errors per profile



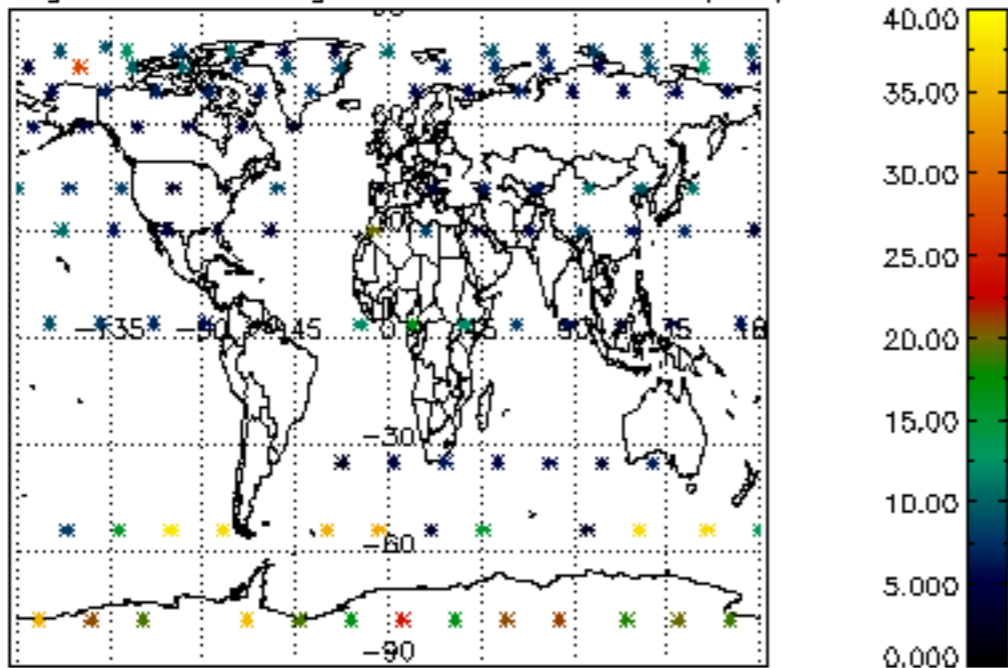
Percentage of cosmic ray hits per profile



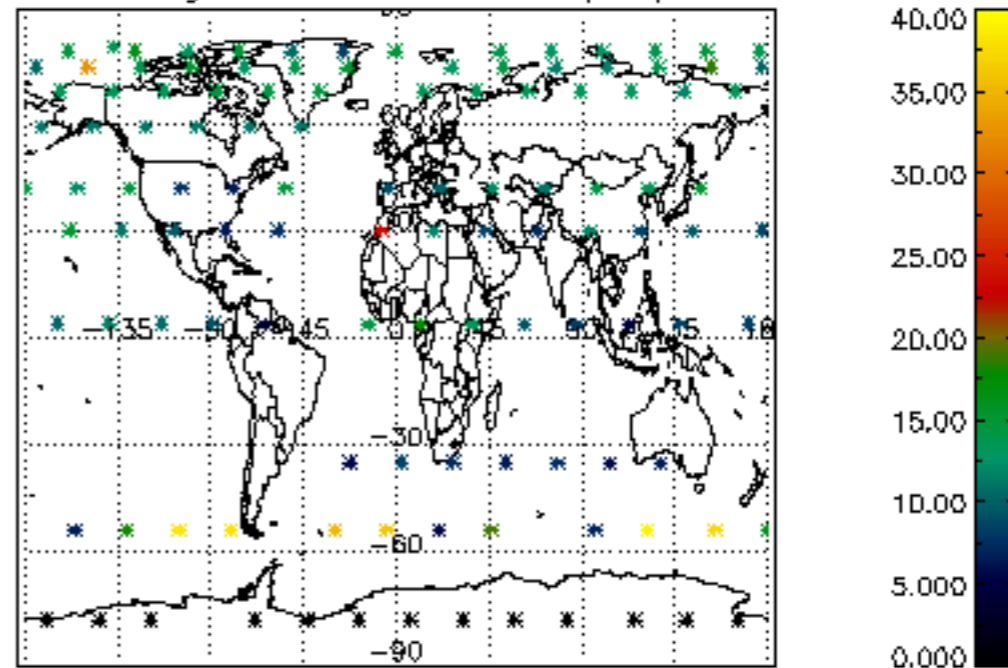
Percentage of datation errors per profile

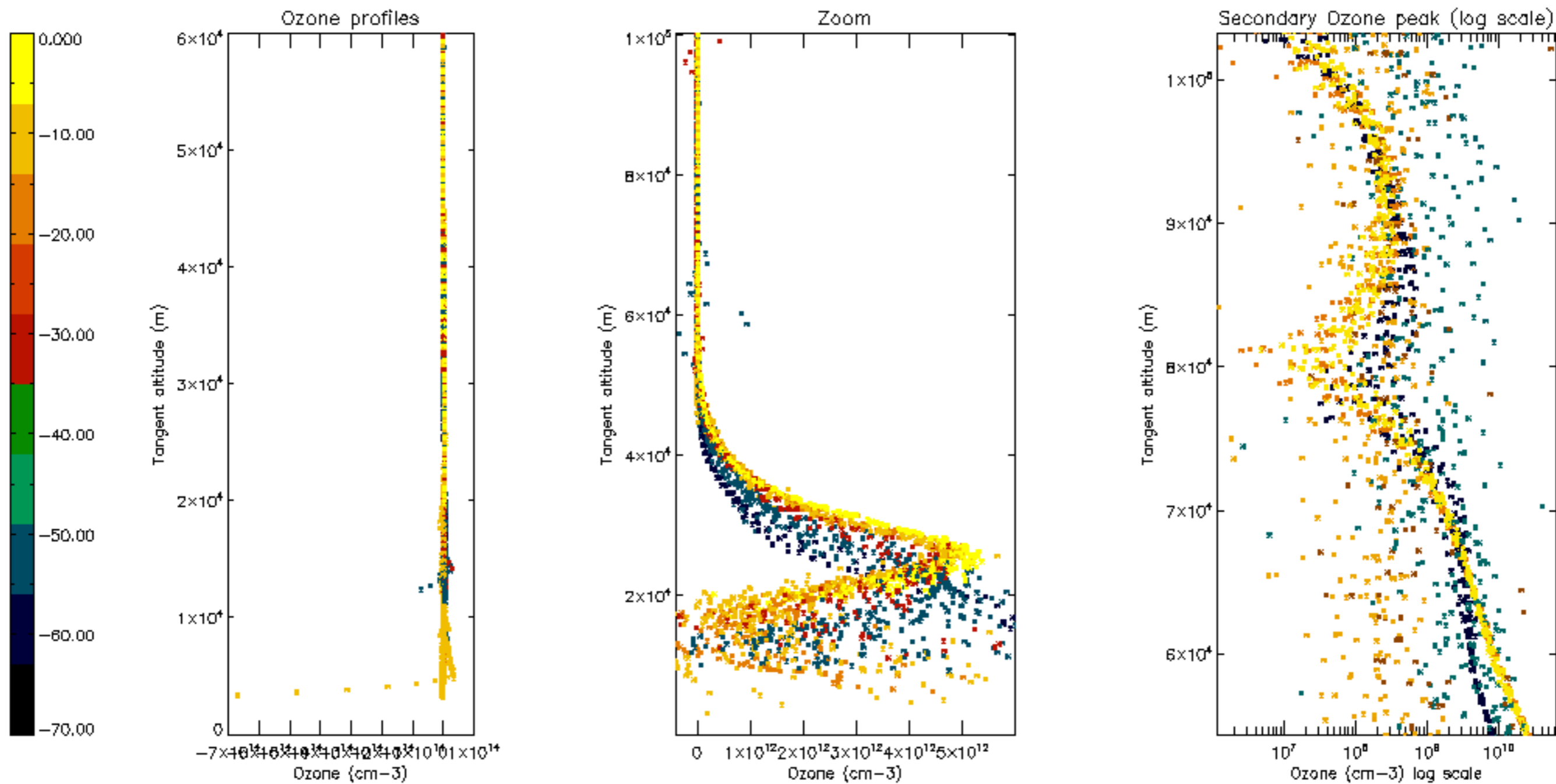


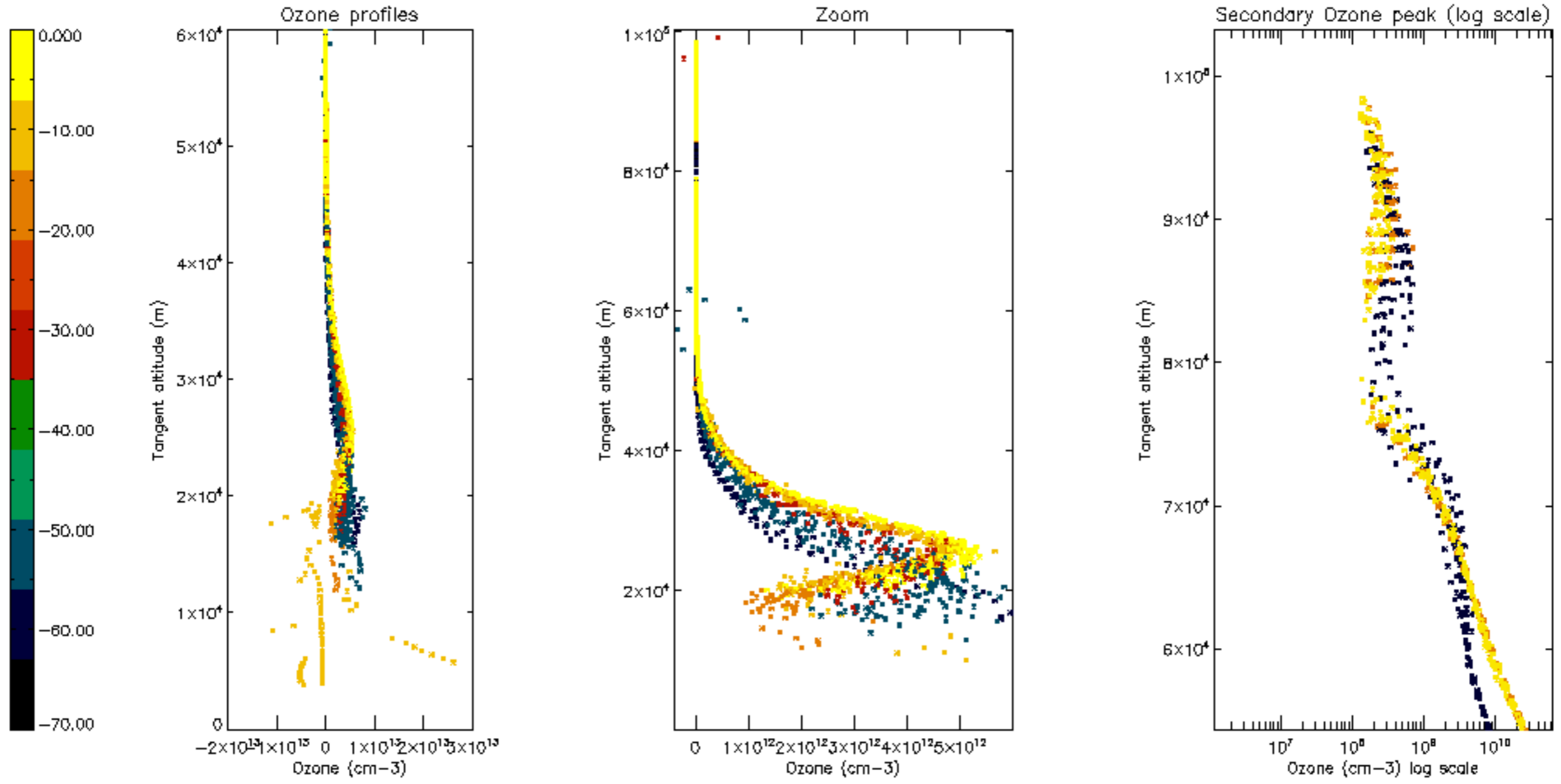
Percentage of star falling outside central band per profile

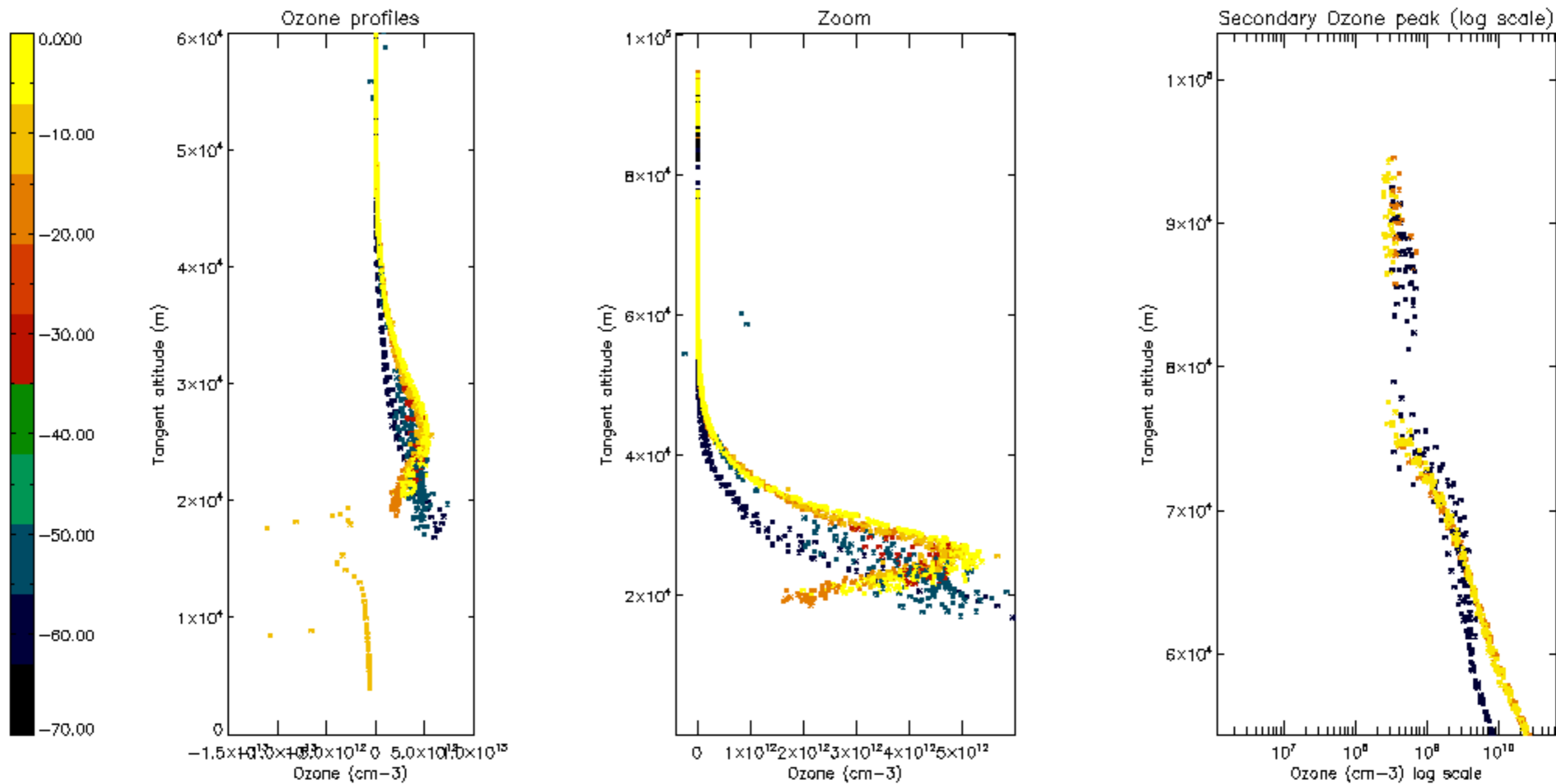


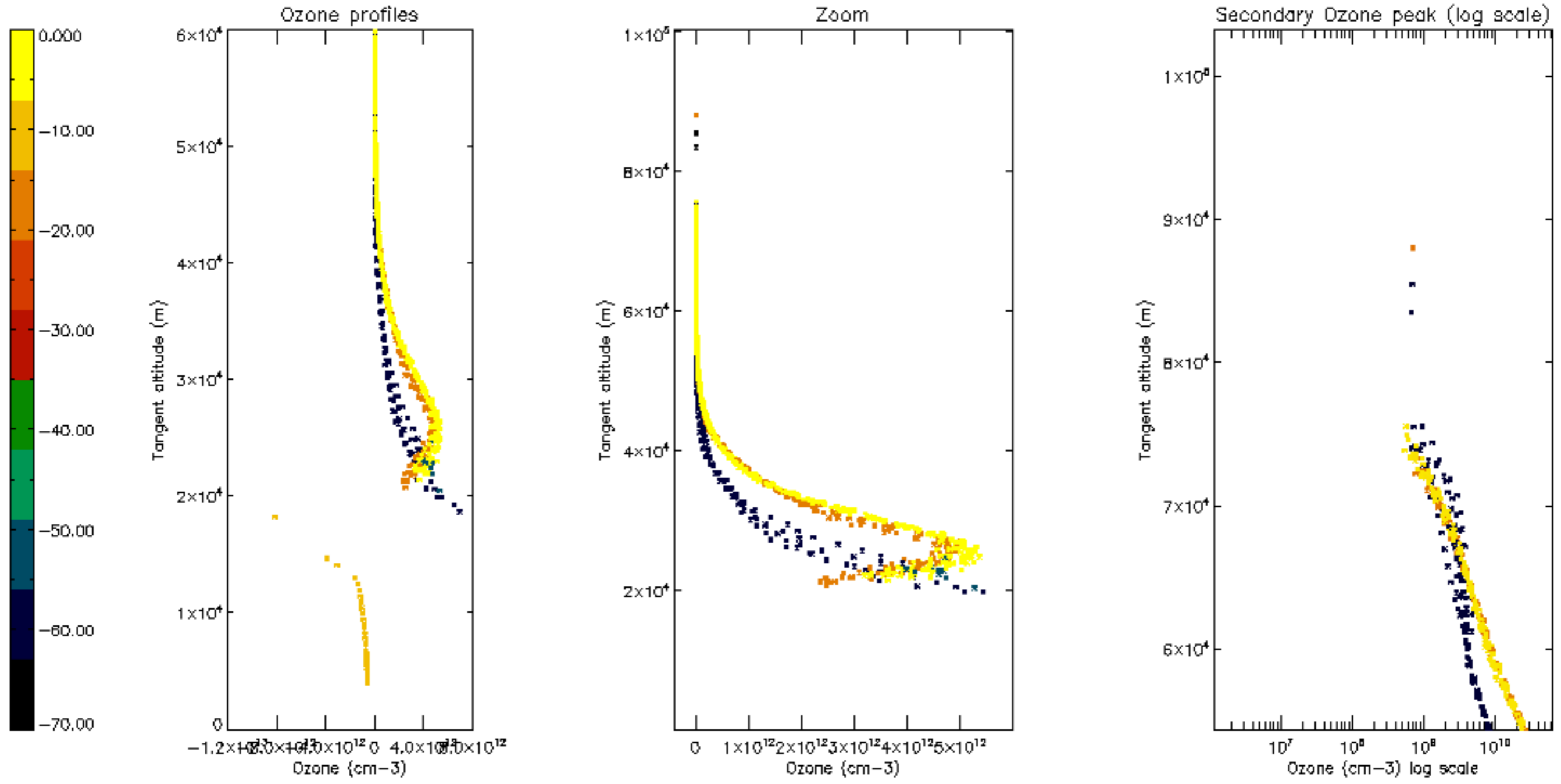
Percentage of saturation errors per profile



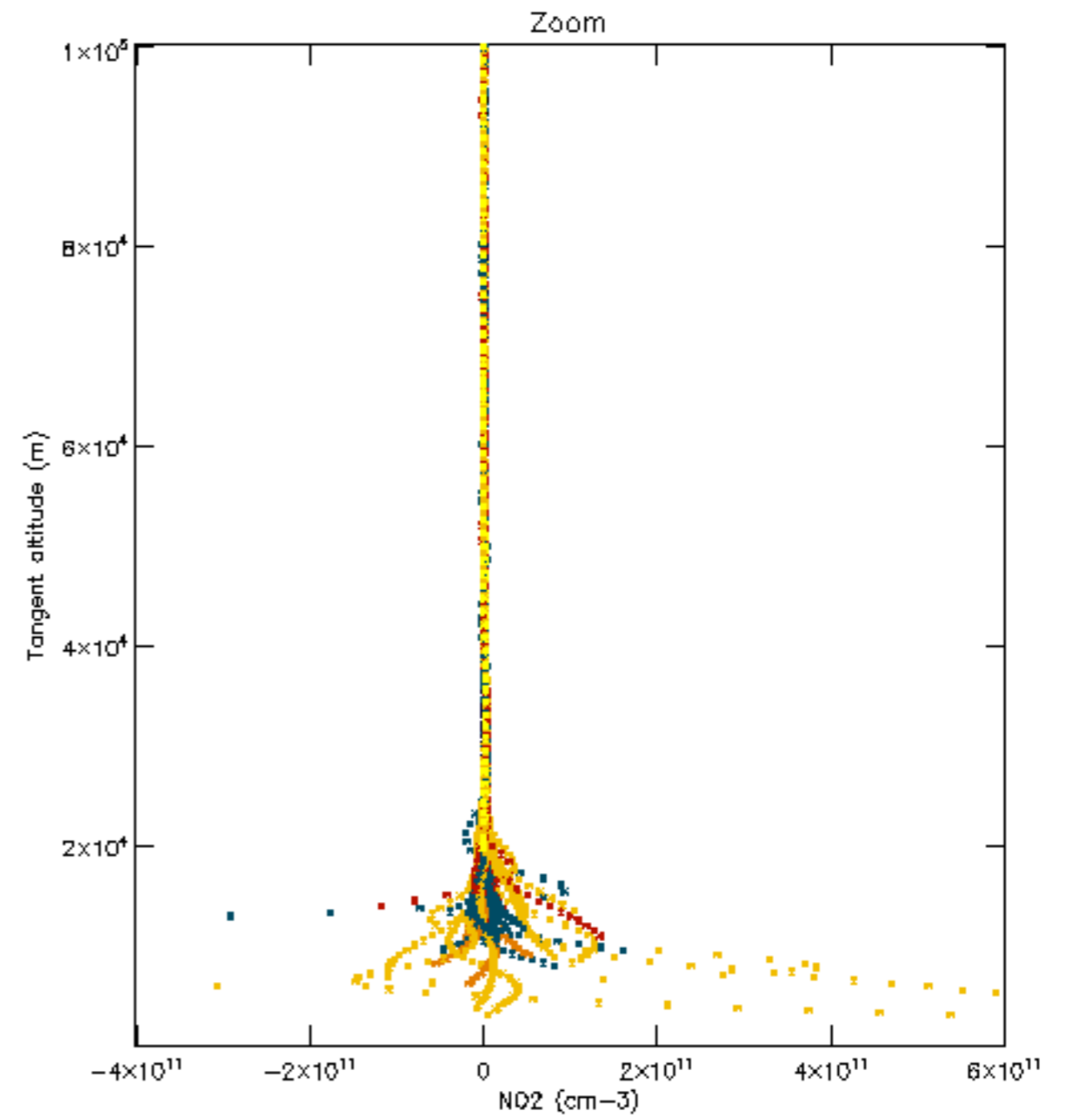
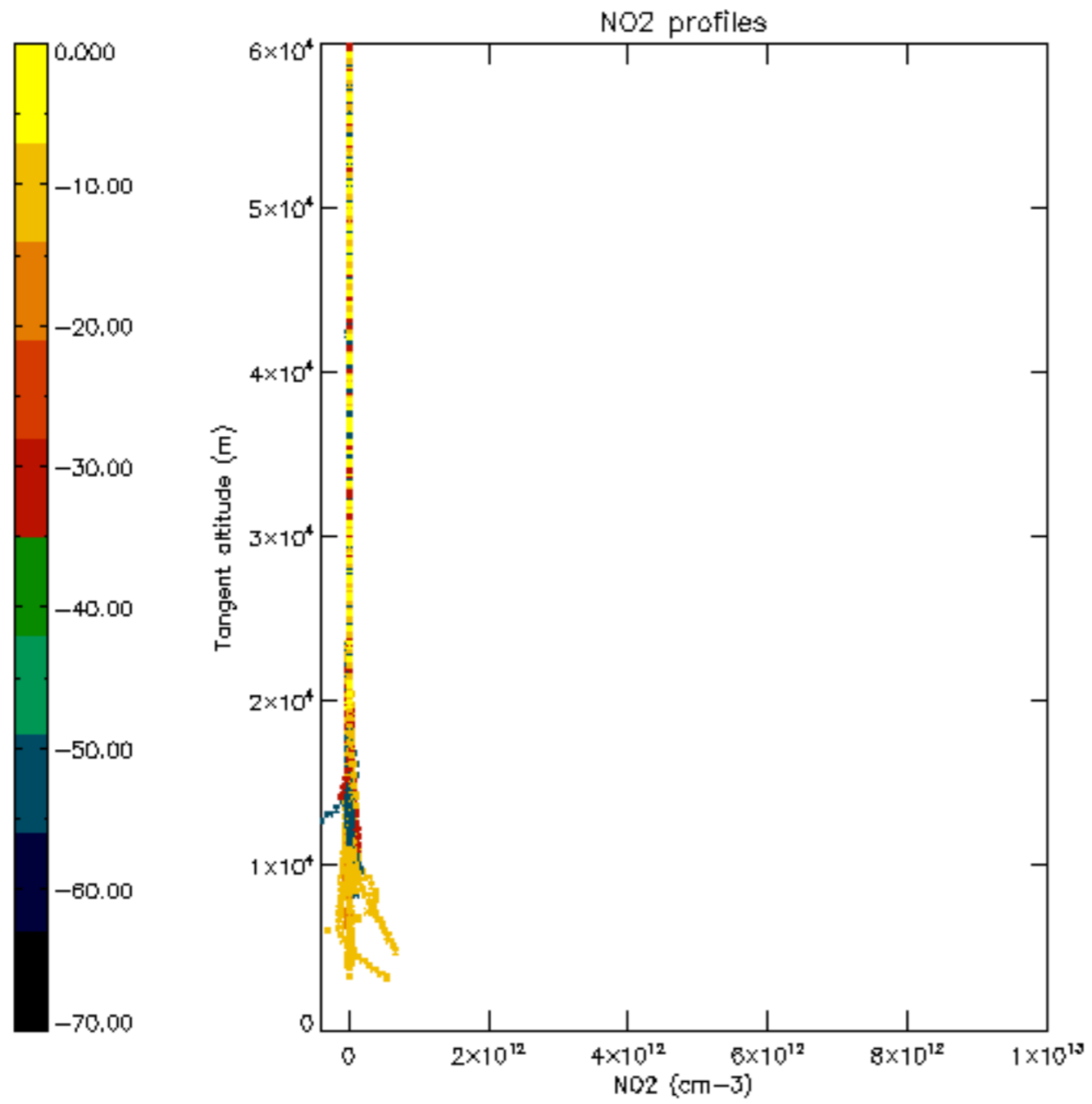


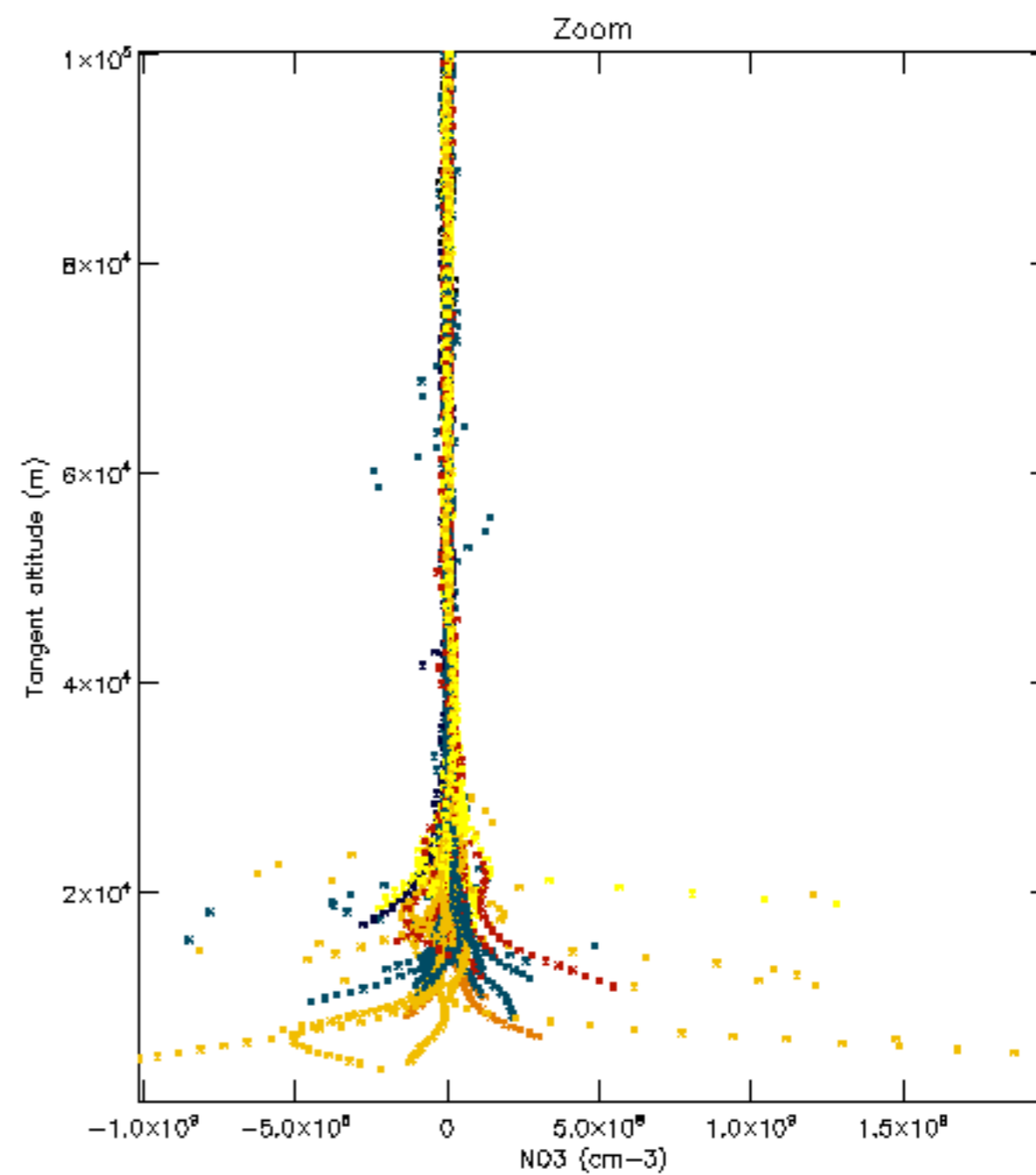
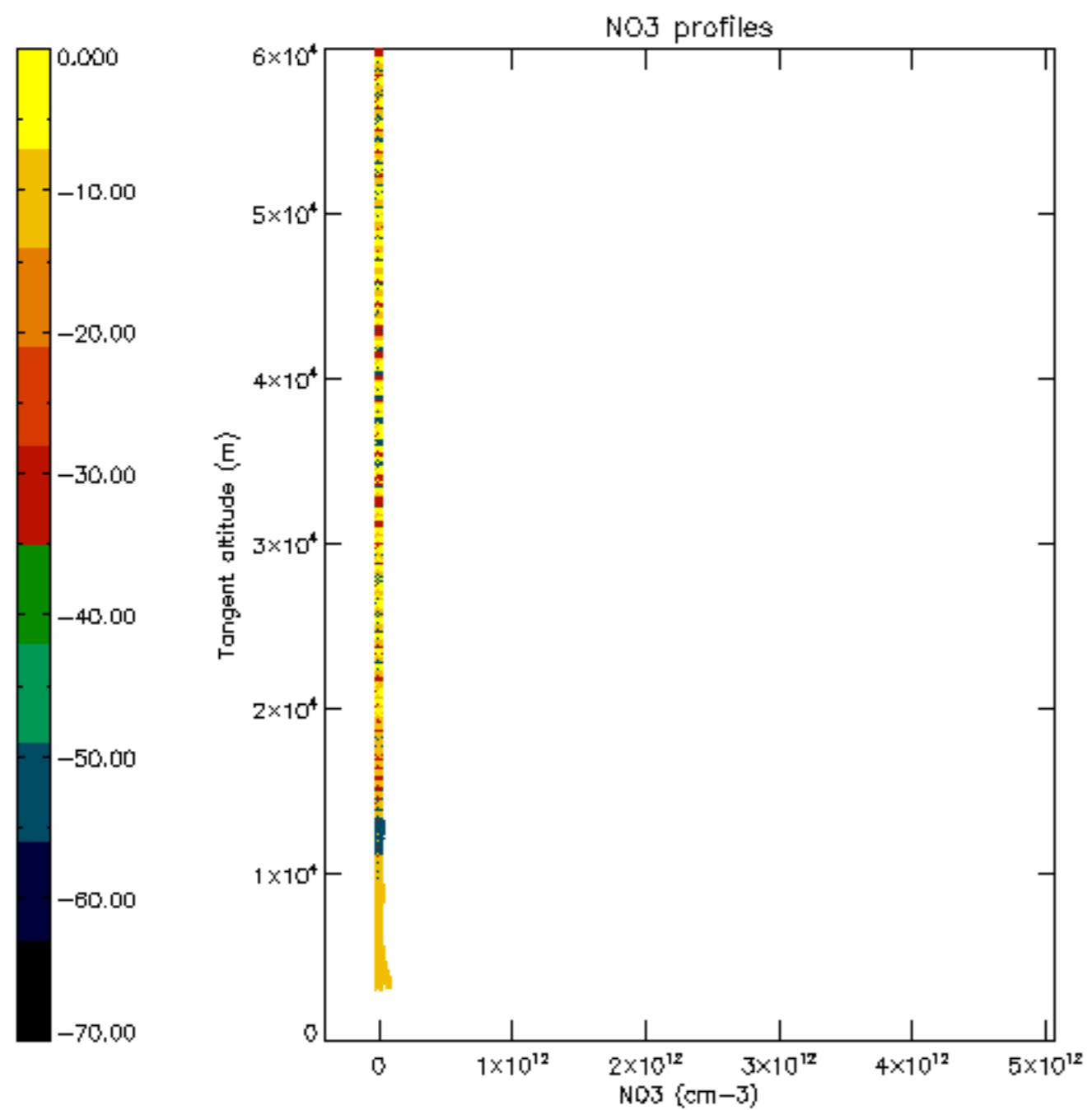


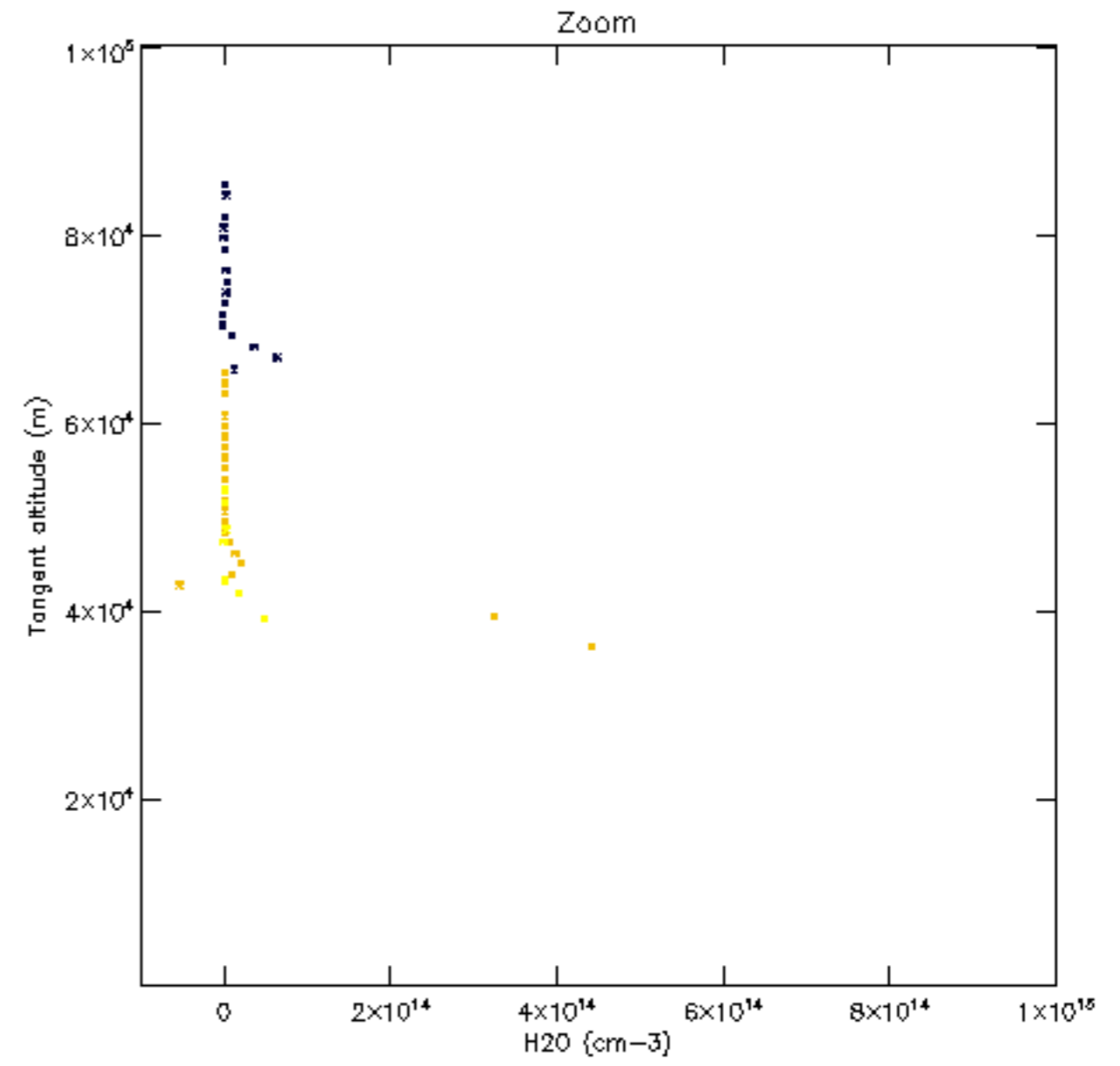
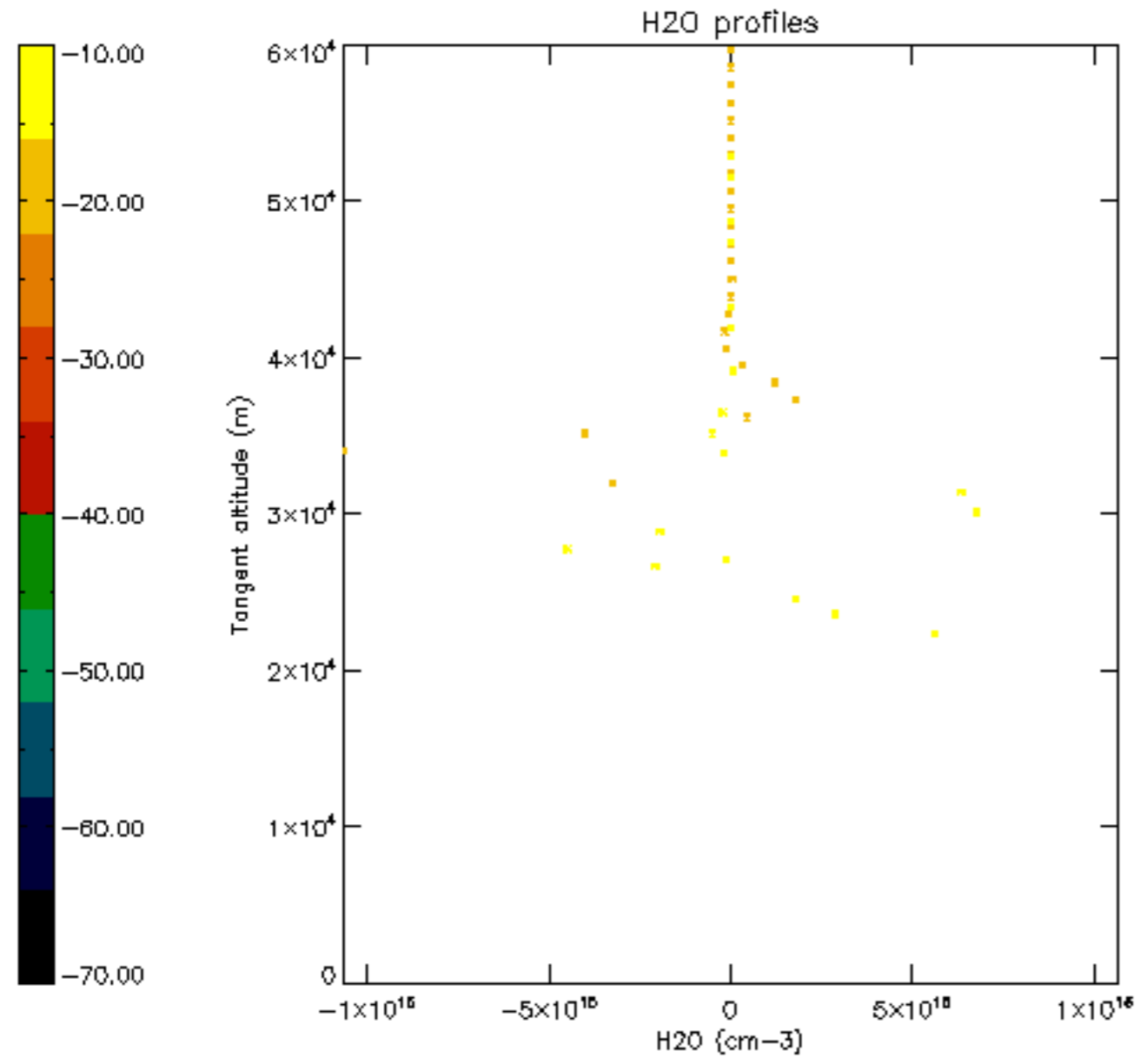


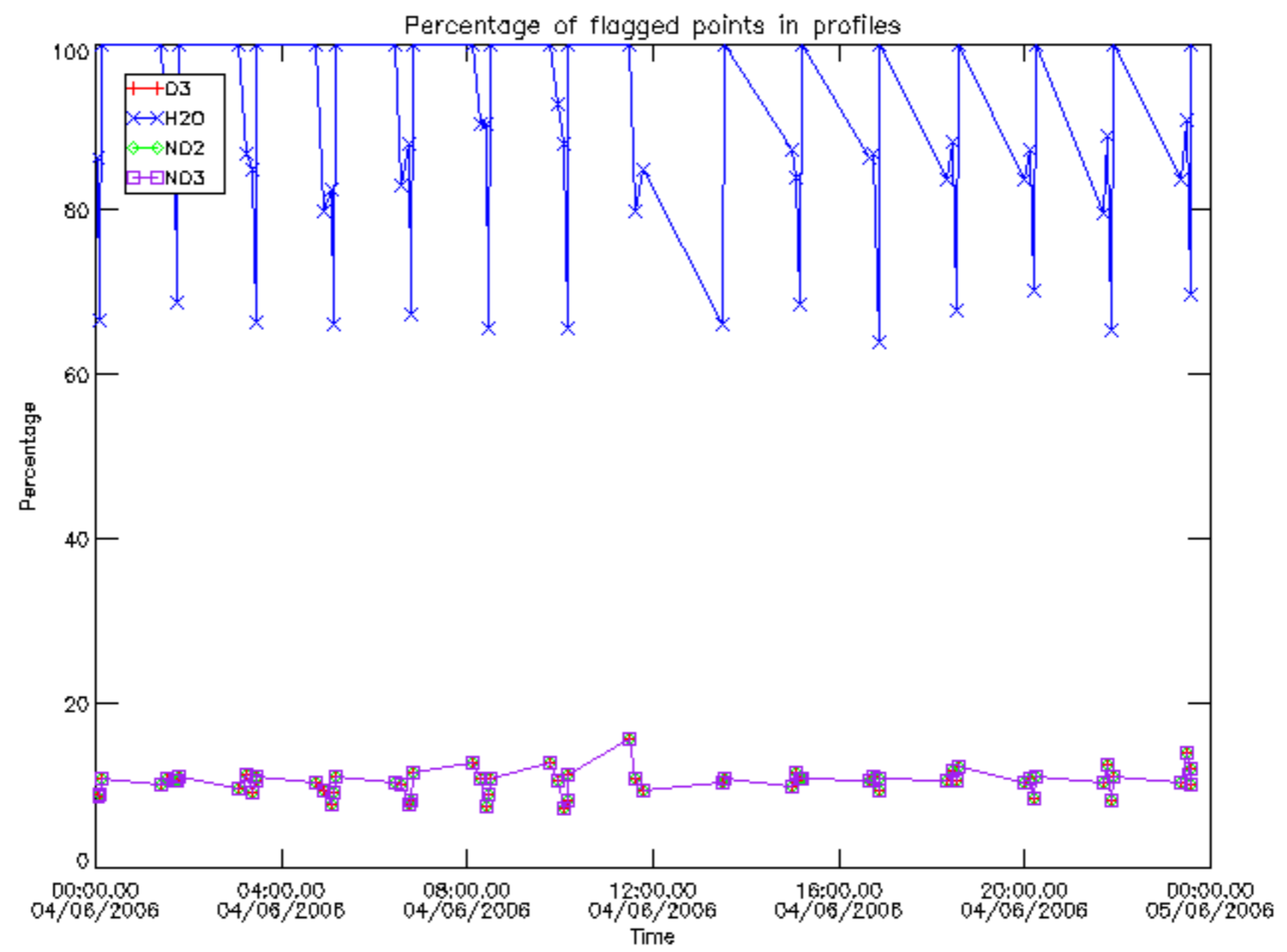




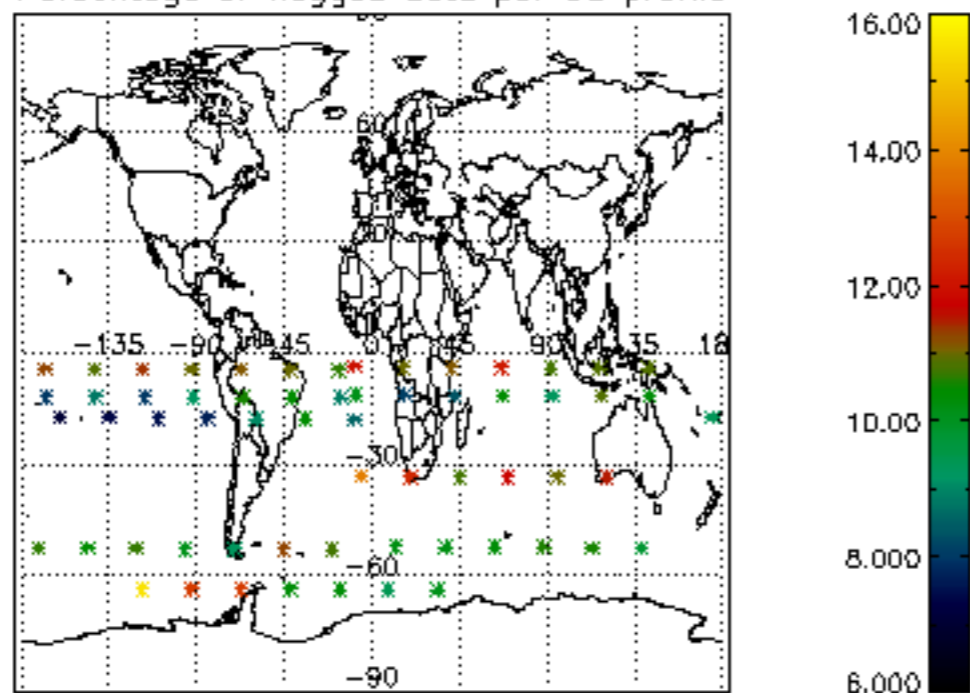




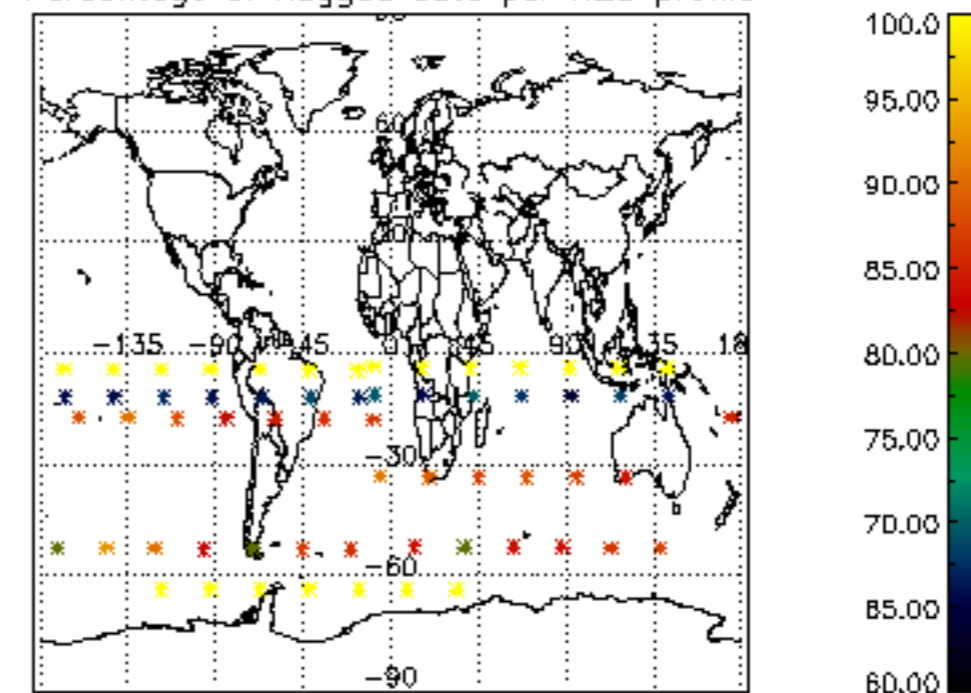




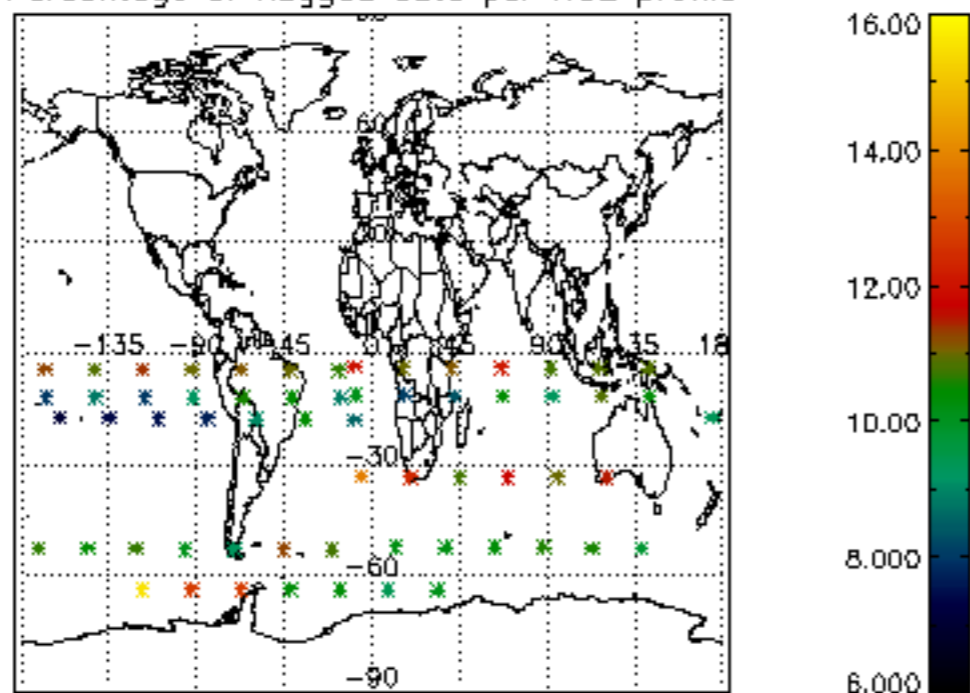
Percentage of flagged data per D3 profile



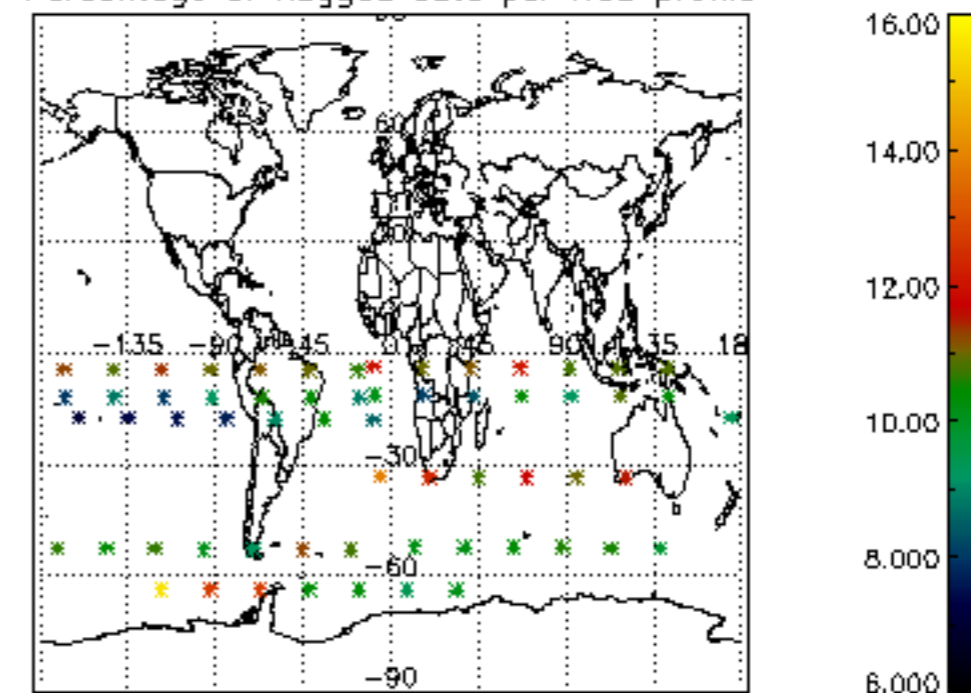
Percentage of flagged data per H2O profile

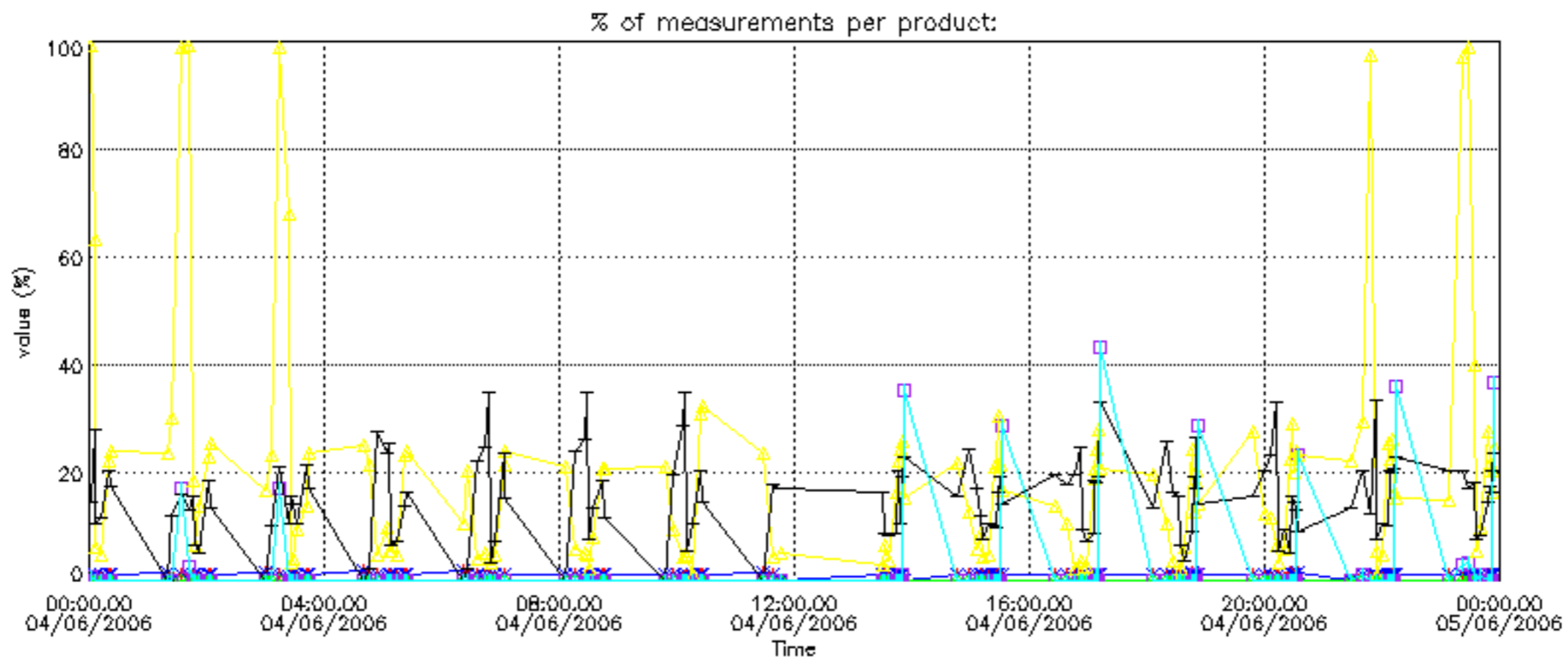


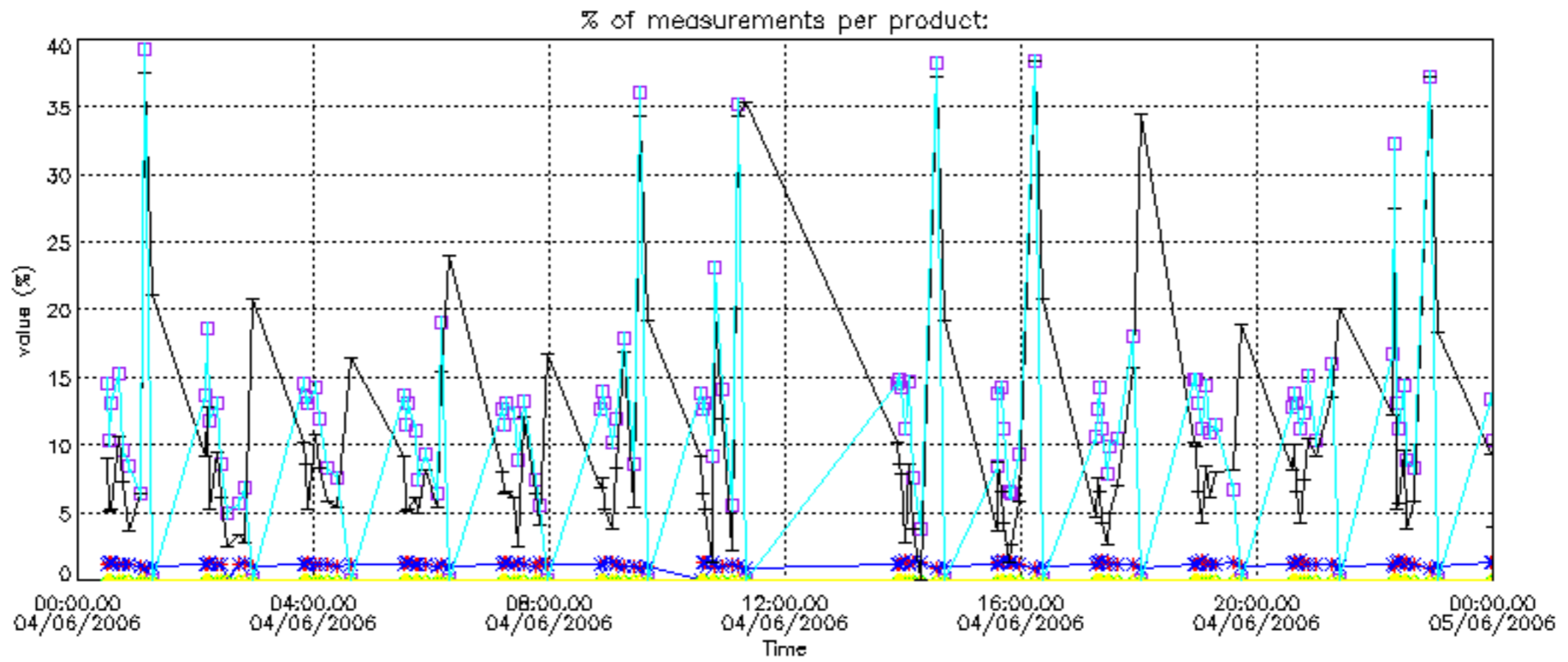
Percentage of flagged data per NO2 profile



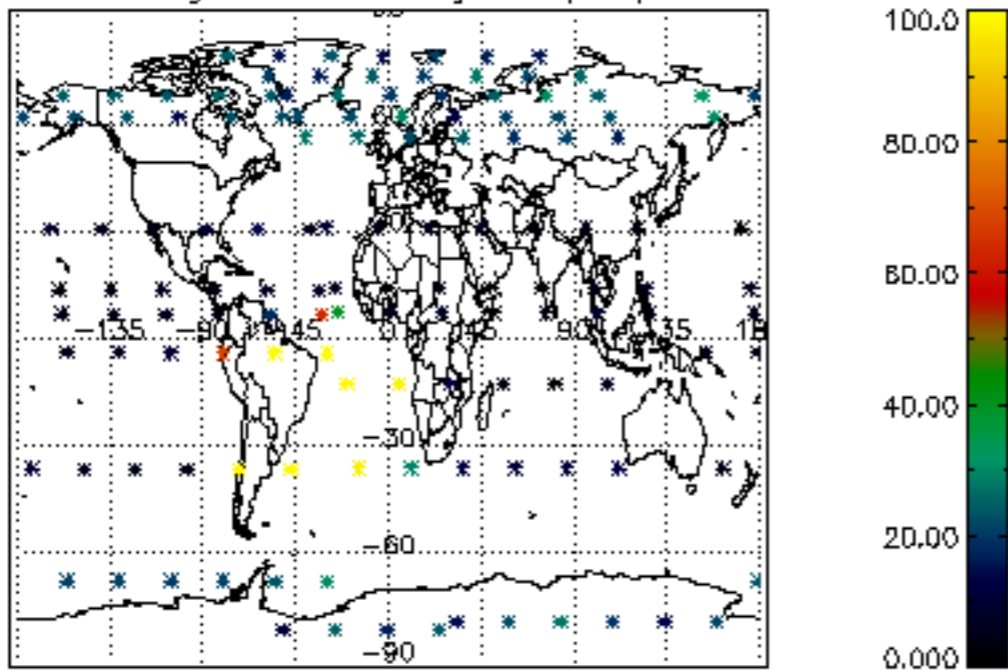
Percentage of flagged data per NO3 profile



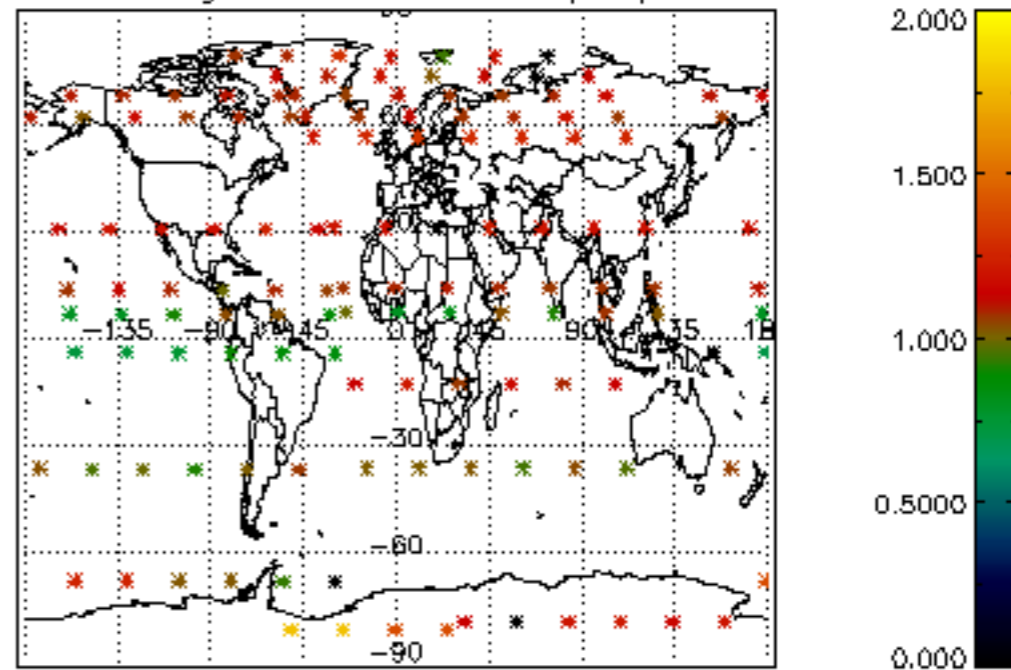




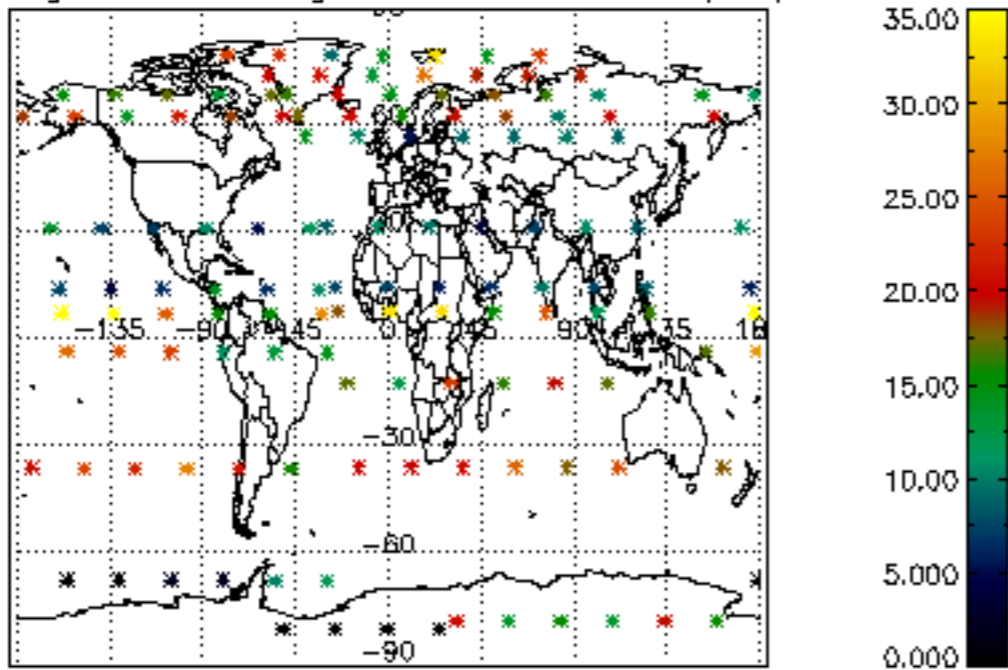
Percentage of cosmic ray hits per profile



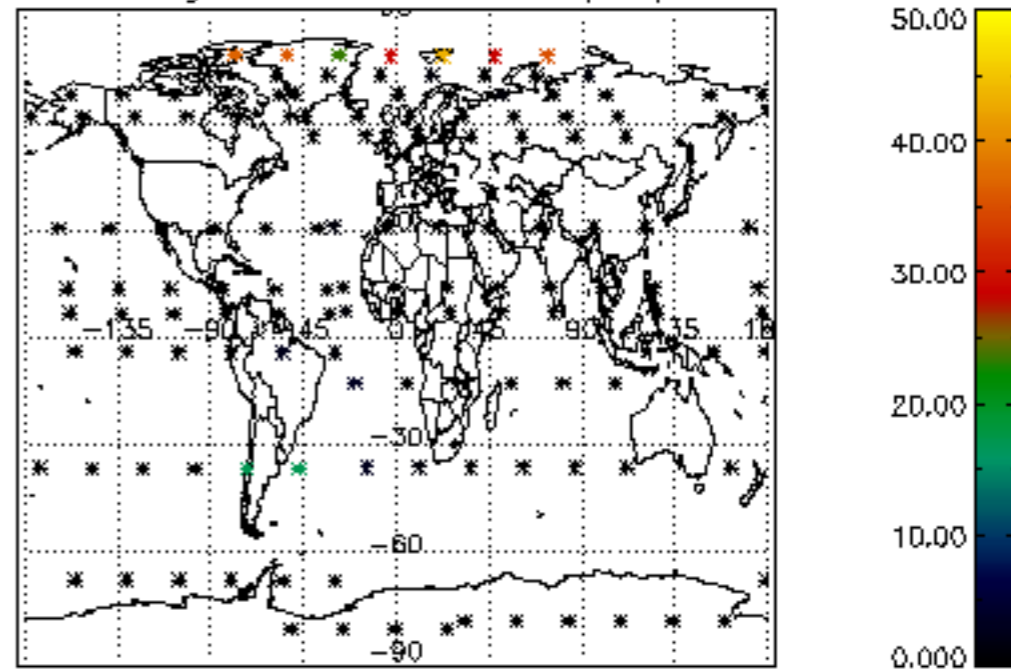
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

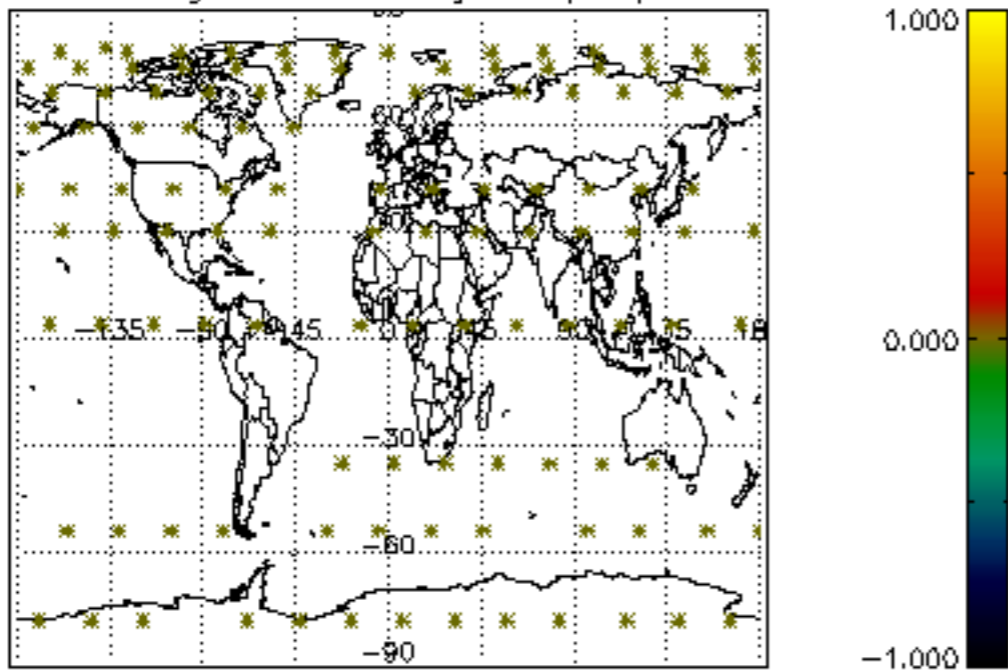


Percentage of saturation errors per profile

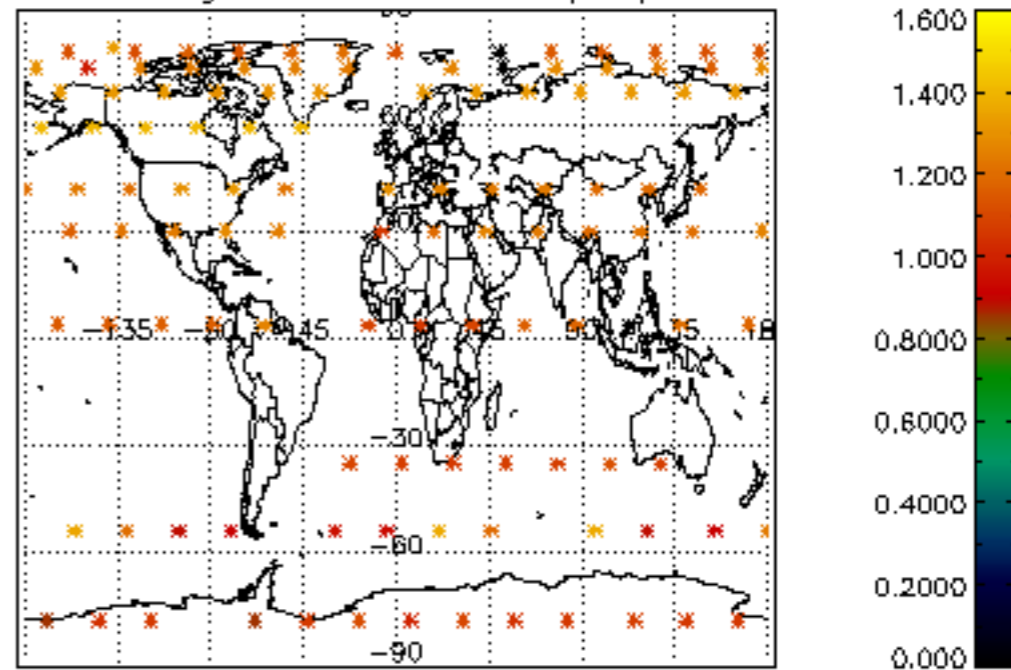




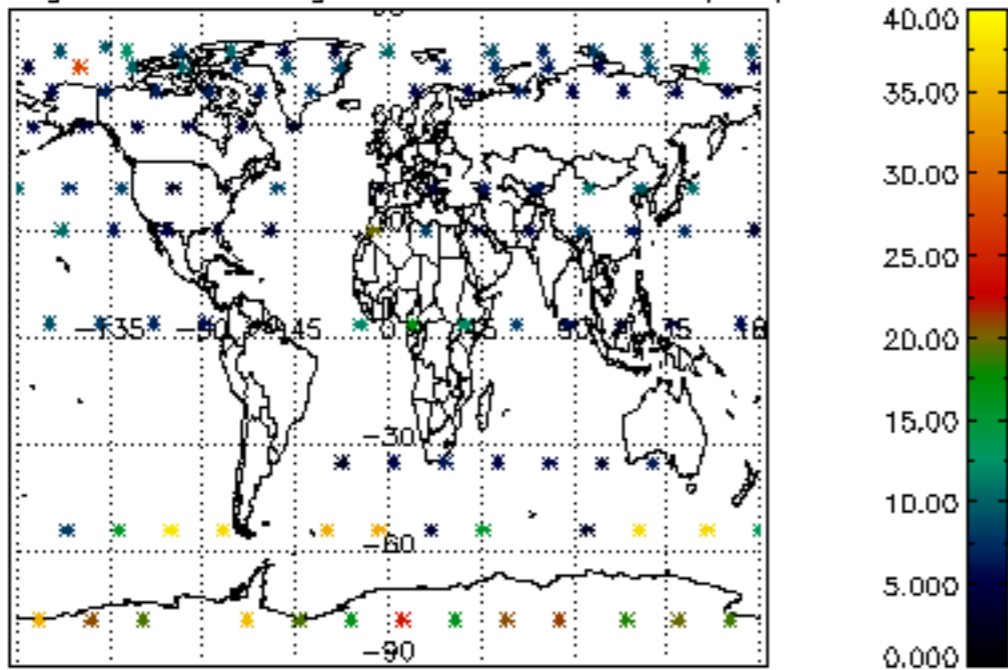
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

