

# 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	24APR2013 17:41:17
Data source version	GOMOS/6.01
Start time of products	14-09-2011 (14SEP2011 00:00:00)
Stop time of products	15-09-2011 (15SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	48
Nb of prods with errors	0

## 2. Summary of processed GOM\_NL\_\_2P products.

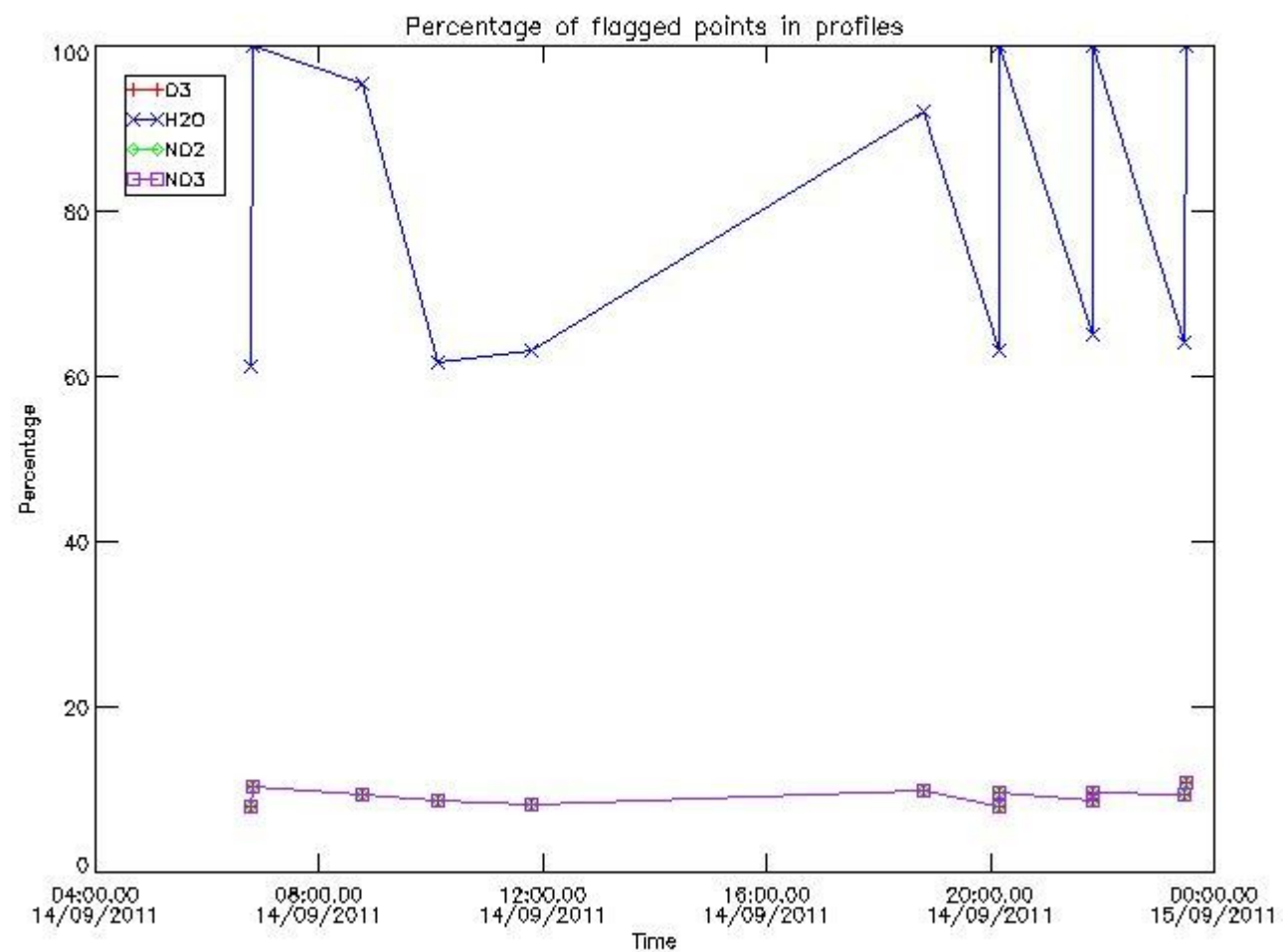
Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20110914_064632_000000643106_00307_49890_4803.N1	14-SEP-2011 06:46:32	Dark	63.500	1	9Alp CMa	-1.4400	11000.	127	49890	No
2	GOM_NL__2PRFIN20110914_064847_000000503106_00307_49890_4804.N1	14-SEP-2011 06:48:47	Dark	49.500	23	21Eps CMa	1.5020	26000.	99	49890	No
3	GOM_NL__2PRFIN20110914_084659_000000553106_00309_49892_4937.N1	14-SEP-2011 08:46:59	Dark	54.500	9	Alp Eri	0.45300	24000.	109	49892	No
4	GOM_NL__2PRFIN20110914_085242_000000453106_00309_49892_4938.N1	14-SEP-2011 08:52:42	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	49892	No
5	GOM_NL__2PRFIN20110914_091115_000000403106_00309_49892_4939.N1	14-SEP-2011 09:11:15	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49892	No
6	GOM_NL__2PRFIN20110914_091507_000000413106_00309_49892_4940.N1	14-SEP-2011 09:15:07	Bright	41.000	93	53Bet Peg	2.5200	3100.0	82	49892	No
7	GOM_NL__2PRFIN20110914_092521_000000423106_00309_49892_4941.N1	14-SEP-2011 09:25:21	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49892	No
8	GOM_NL__2PRFIN20110914_092709_000000443106_00309_49892_4942.N1	14-SEP-2011 09:27:09	Bright	44.000	76	27Gam Cas	2.3000	30000.	88	49892	No
9	GOM_NL__2PRFIN20110914_094925_000000633106_00309_49892_4943.N1	14-SEP-2011 09:49:25	Bright	63.000	24	66Alp Gem	1.5800	10200.	126	49892	No
10	GOM_NL__2PRFIN20110914_095801_000000583106_00309_49892_4944.N1	14-SEP-2011 09:58:01	Twilight	57.500	8	10Alp CMi	0.40000	6500.0	115	49892	No
11	GOM_NL__2PRFIN20110914_100702_000000583106_00309_49892_4945.N1	14-SEP-2011 10:07:02	Dark	58.000	1	9Alp CMa	-1.4400	11000.	116	49892	No
12	GOM_NL__2PRFIN20110914_103257_000000443106_00310_49893_5003.N1	14-SEP-2011 10:32:57	Straylight	43.500	84	Alp Phe	2.3970	4500.0	87	49893	No
13	GOM_NL__2PRFIN20110914_105129_000000413106_00310_49893_5004.N1	14-SEP-2011 10:51:29	Bright	41.000	90	54Alp Peg	2.4870	11000.	82	49893	No
14	GOM_NL__2PRFIN20110914_105521_000000403106_00310_49893_5005.N1	14-SEP-2011 10:55:21	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	49893	No
15	GOM_NL__2PRFIN20110914_110535_000000423106_00310_49893_5006.N1	14-SEP-2011 11:05:35	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49893	No
16	GOM_NL__2PRFIN20110914_110723_000000433106_00310_49893_5007.N1	14-SEP-2011 11:07:23	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49893	No
17	GOM_NL__2PRFIN20110914_112939_000000443106_00310_49893_5008.N1	14-SEP-2011 11:29:39	Bright	44.000	24	66Alp Gem	1.5800	10200.	88	49893	No
18	GOM_NL__2PRFIN20110914_113816_000000523106_00310_49893_5009.N1	14-SEP-2011 11:38:16	Twilight	51.500	8	10Alp CMi	0.40000	6500.0	103	49893	No
19	GOM_NL__2PRFIN20110914_114717_000000613106_00310_49893_5010.N1	14-SEP-2011 11:47:17	Dark	61.000	1	9Alp CMa	-1.4400	11000.	122	49893	No
20	GOM_NL__2PRFIN20110914_184826_000000513106_00315_49898_5249.N1	14-SEP-2011 18:48:26	Dark	51.000	9	Alp Eri	0.45300	24000.	102	49898	No
21	GOM_NL__2PRFIN20110914_185409_000000483106_00315_49898_5250.N1	14-SEP-2011 18:54:09	Straylight	48.000	84	Alp Phe	2.3970	4500.0	96	49898	No
22	GOM_NL__2PRFIN20110914_191238_000000403106_00315_49898_5251.N1	14-SEP-2011 19:12:38	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49898	No
23	GOM_NL__2PRFIN20110914_191629_000000423106_00315_49898_5252.N1	14-SEP-2011 19:16:29	Bright	42.000	93	53Bet Peg	2.5200	3100.0	84	49898	No
24	GOM_NL__2PRFIN20110914_192643_000000423106_00315_49898_5253.N1	14-SEP-2011 19:26:43	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49898	No
25	GOM_NL__2PRFIN20110914_192830_000000433106_00315_49898_5254.N1	14-SEP-2011 19:28:30	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49898	No
26	GOM_NL__2PRFIN20110914_195049_000000443106_00315_49898_5255.N1	14-SEP-2011 19:50:49	Bright	43.500	24	66Alp Gem	1.5800	10200.	87	49898	No
27	GOM_NL__2PRFIN20110914_195928_000000543106_00315_49898_5256.N1	14-SEP-2011 19:59:28	Twilight	53.500	8	10Alp CMi	0.40000	6500.0	107	49898	No
28	GOM_NL__2PRFIN20110914_200832_000000643106_00315_49898_5257.N1	14-SEP-2011 20:08:32	Dark	64.000	1	9Alp CMa	-1.4400	11000.	128	49898	No
29	GOM_NL__2PRFIN20110914_201025_000000533106_00315_49898_5258.N1	14-SEP-2011 20:10:25	Dark	53.000	47	2Bet CMa	1.9760	28000.	106	49898	No
30	GOM_NL__2PRFIN20110914_203423_000000503106_00316_49899_5289.N1	14-SEP-2011 20:34:23	Straylight	49.500	84	Alp Phe	2.3970	4500.0	99	49899	No
31	GOM_NL__2PRFIN20110914_205252_000000403106_00316_49899_5290.N1	14-SEP-2011 20:52:52	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49899	No
32	GOM_NL__2PRFIN20110914_205643_000000393106_00316_49899_5291.N1	14-SEP-2011 20:56:43	Bright	39.000	93	53Bet Peg	2.5200	3100.0	78	49899	No
33	GOM_NL__2PRFIN20110914_210656_000000423106_00316_49899_5292.N1	14-SEP-2011 21:06:56	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49899	No
34	GOM_NL__2PRFIN20110914_210843_000000443106_00316_49899_5293.N1	14-SEP-2011 21:08:43	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	49899	No
35	GOM_NL__2PRFIN20110914_213104_000000573106_00316_49899_5294.N1	14-SEP-2011 21:31:04	Bright	56.500	24	66Alp Gem	1.5800	10200.	113	49899	No
36	GOM_NL__2PRFIN20110914_213943_000000543106_00316_49899_5295.N1	14-SEP-2011 21:39:43	Twilight	53.500	8	10Alp CMi	0.40000	6500.0	107	49899	No
37	GOM_NL__2PRFIN20110914_214847_000000593106_00316_49899_5296.N1	14-SEP-2011 21:48:47	Dark	59.000	1	9Alp CMa	-1.4400	11000.	118	49899	No
38	GOM_NL__2PRFIN20110914_215040_000000533106_00316_49899_5297.N1	14-SEP-2011 21:50:40	Dark	53.000	47	2Bet CMa	1.9760	28000.	106	49899	No
39	GOM_NL__2PRFIN20110914_221437_000000433106_00317_49900_5337.N1	14-SEP-2011 22:14:37	Straylight	43.000	84	Alp Phe	2.3970	4500.0	86	49900	No
40	GOM_NL__2PRFIN20110914_223305_000000403106_00317_49900_5338.N1	14-SEP-2011 22:33:05	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49900	No
41	GOM_NL__2PRFIN20110914_223657_000000393106_00317_49900_5339.N1	14-SEP-2011 22:36:57	Bright	39.000	93	53Bet Peg	2.5200	3100.0	78	49900	No
42	GOM_NL__2PRFIN20110914_224710_000000403106_00317_49900_5340.N1	14-SEP-2011 22:47:10	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	49900	No

43	GOM_NL__2PRFIN20110914_224857_000000433106_00317_49900_5341.N1	14-SEP-2011 22:48:57	Bright	42.500	76	27Gam Cas	2.3000	30000.	85	49900	No
44	GOM_NL__2PRFIN20110914_231118_000000443106_00317_49900_5342.N1	14-SEP-2011 23:11:18	Bright	43.500	24	66Alp Gem	1.5800	10200.	87	49900	No
45	GOM_NL__2PRFIN20110914_231957_000000543106_00317_49900_5343.N1	14-SEP-2011 23:19:57	Twilight	54.000	8	10Alp CMi	0.40000	6500.0	108	49900	No
46	GOM_NL__2PRFIN20110914_232902_000000653106_00317_49900_5344.N1	14-SEP-2011 23:29:02	Dark	64.500	1	9Alp CMa	-1.4400	11000.	129	49900	No
47	GOM_NL__2PRFIN20110914_233055_000000473106_00317_49900_5345.N1	14-SEP-2011 23:30:55	Dark	47.000	47	2Bet CMa	1.9760	28000.	94	49900	No
48	GOM_NL__2PRFIN20110914_235452_000000463106_00318_49901_5409.N1	14-SEP-2011 23:54:52	Straylight	46.000	84	Alp Phe	2.3970	4500.0	92	49901	No

### 3. Quality information per product

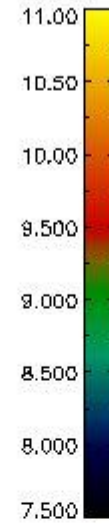
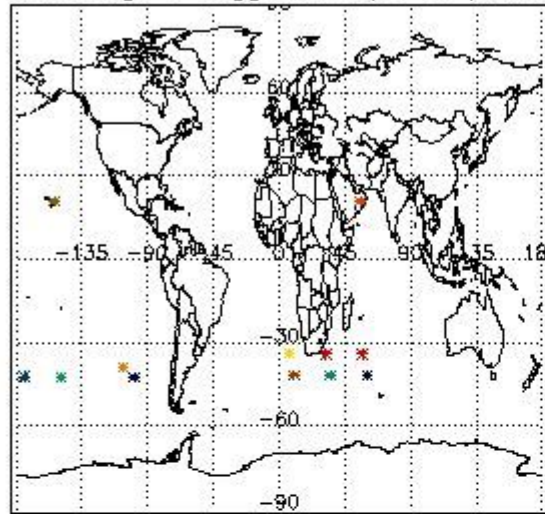
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

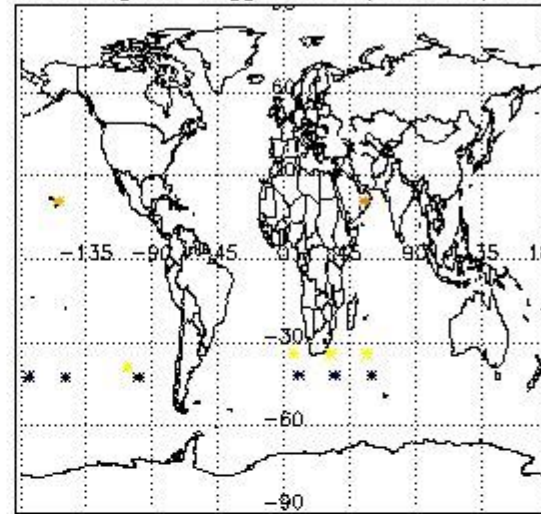


#### 3.2 Plot quality information per product (world map)

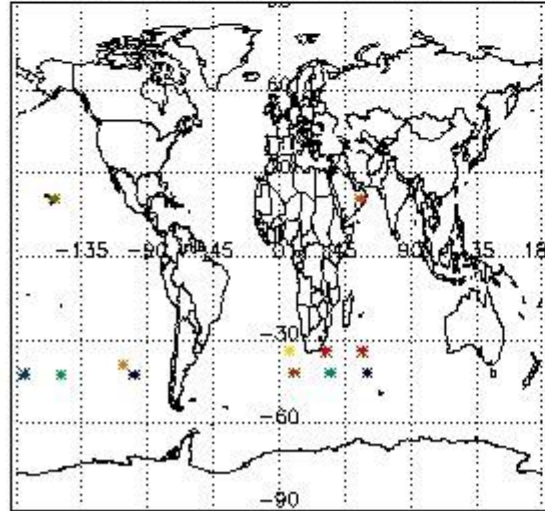
Percentage of flagged data per O3 profile



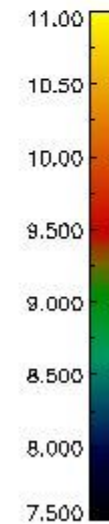
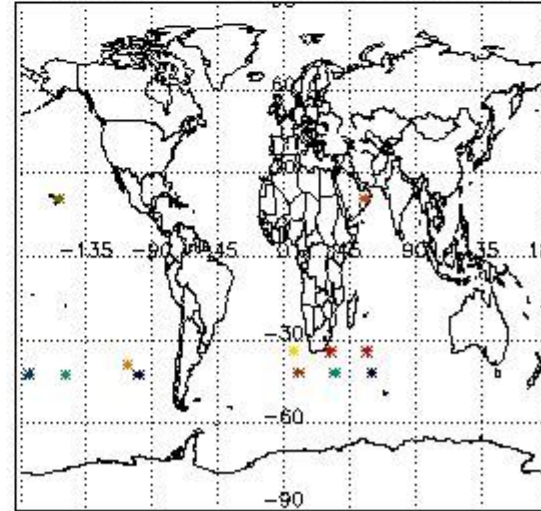
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



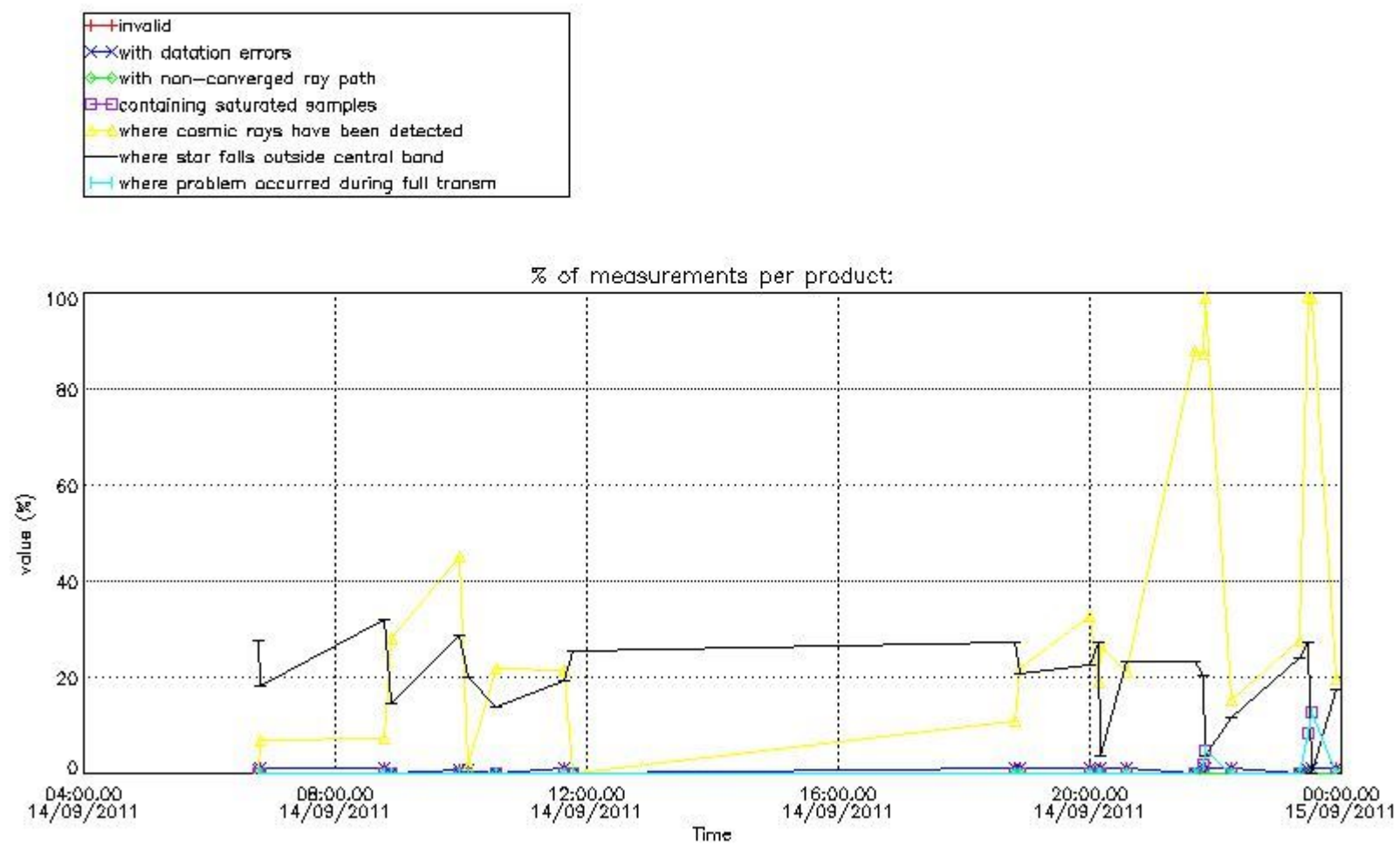
#### 4. Level 1 quality information per product

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

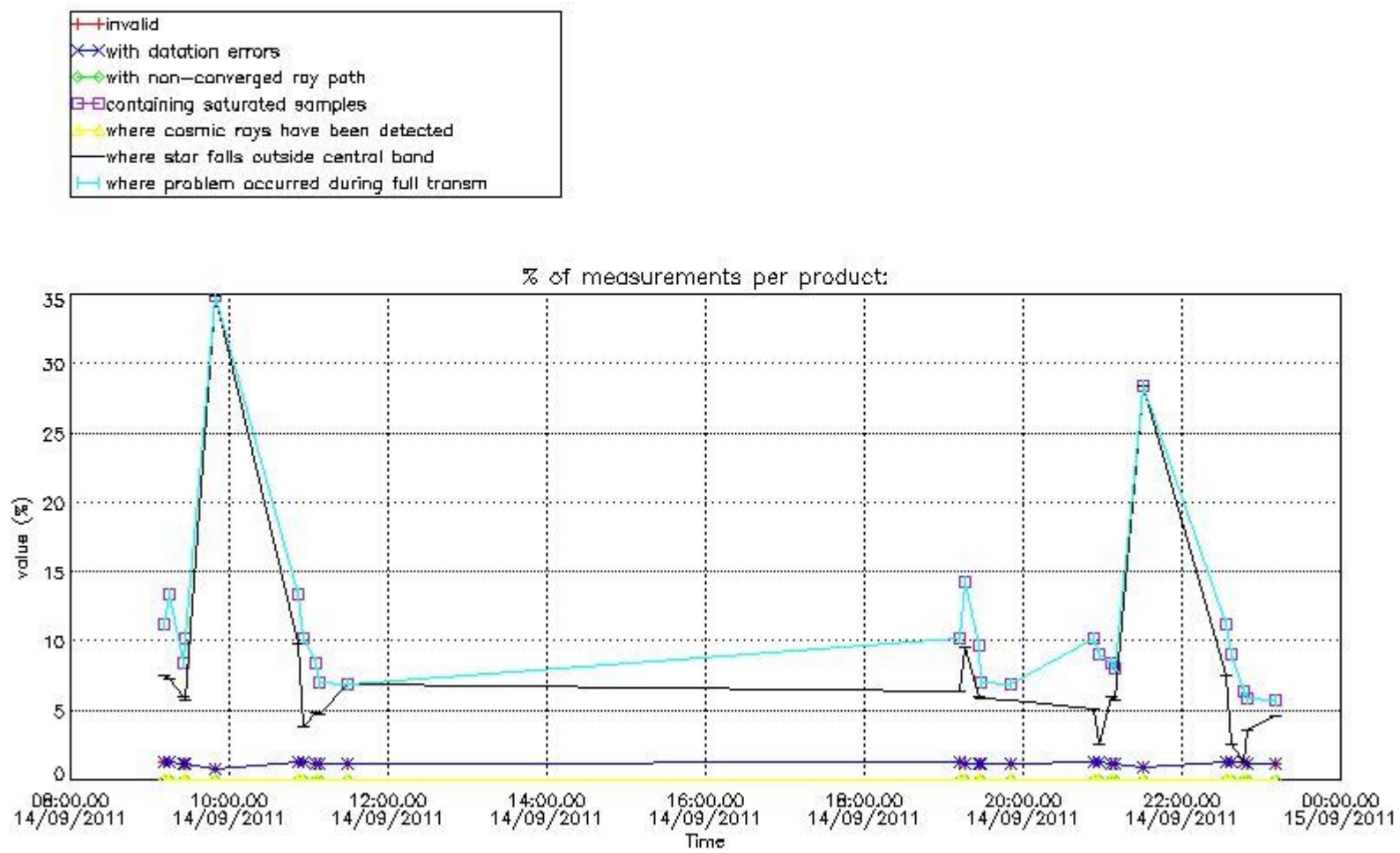
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





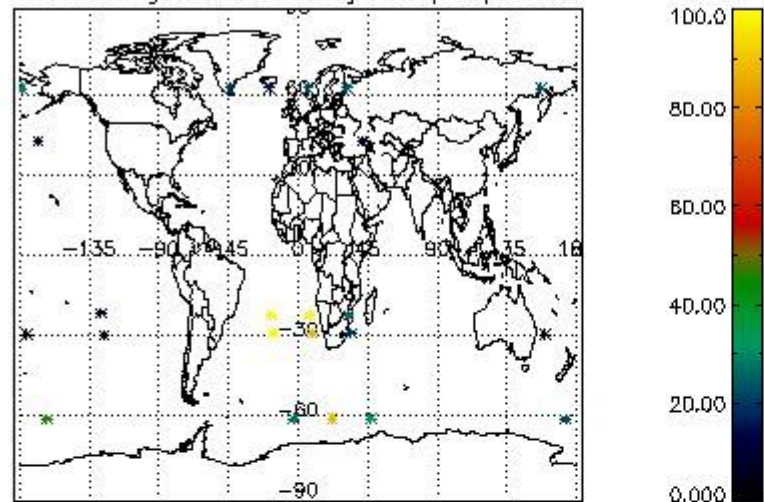
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



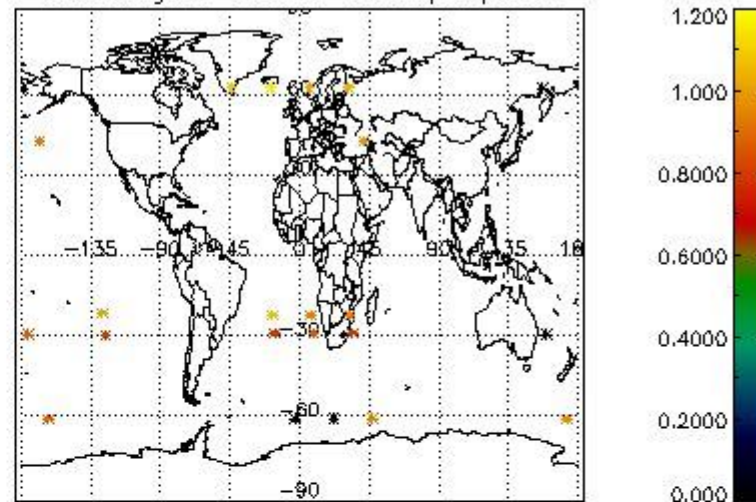
4.2 Plot quality information per product coming from level 1b processing (world map)

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

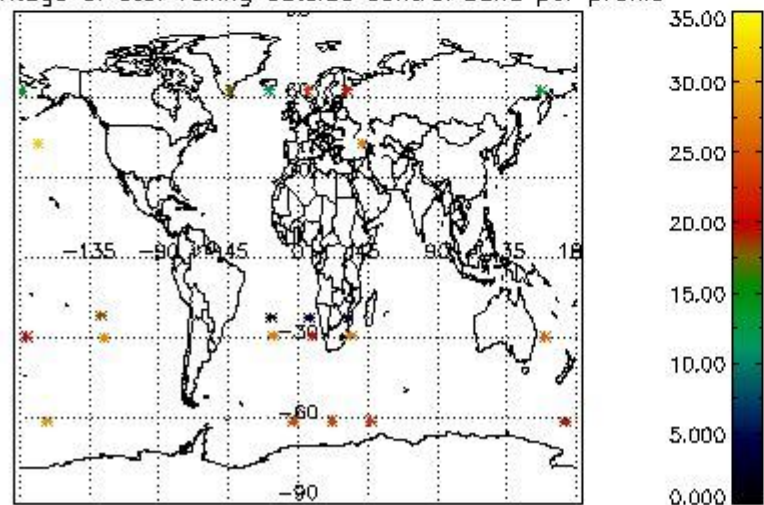
Percentage of cosmic ray hits per profile



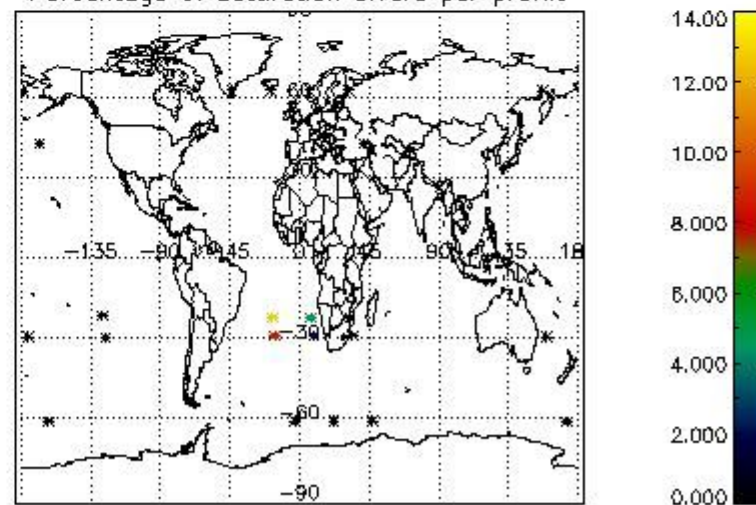
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

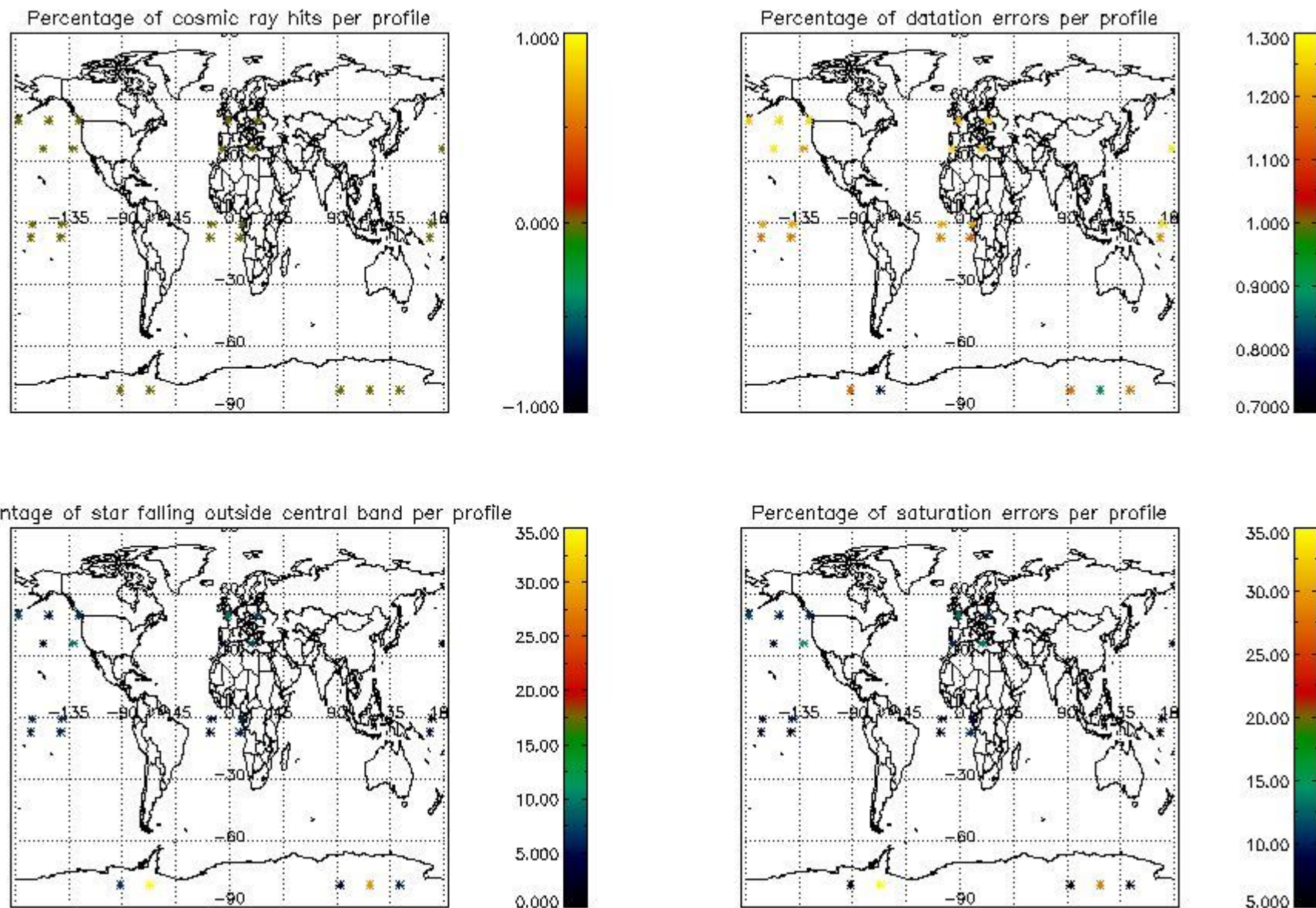


Percentage of saturation errors per profile



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.

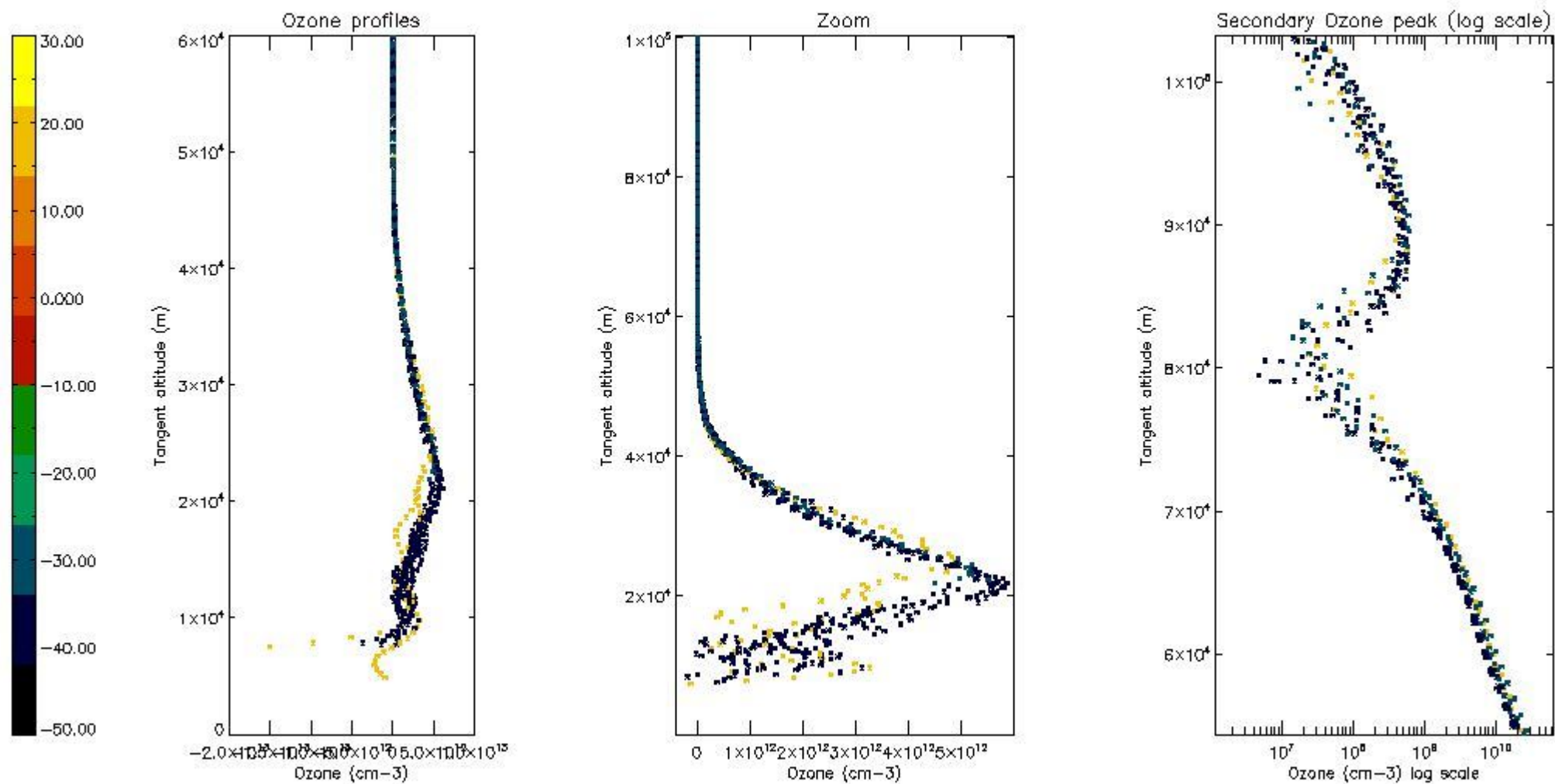
Criteria	% of total production
All STD	31
STD < 20	22



STD < 10	20
STD < 5	17

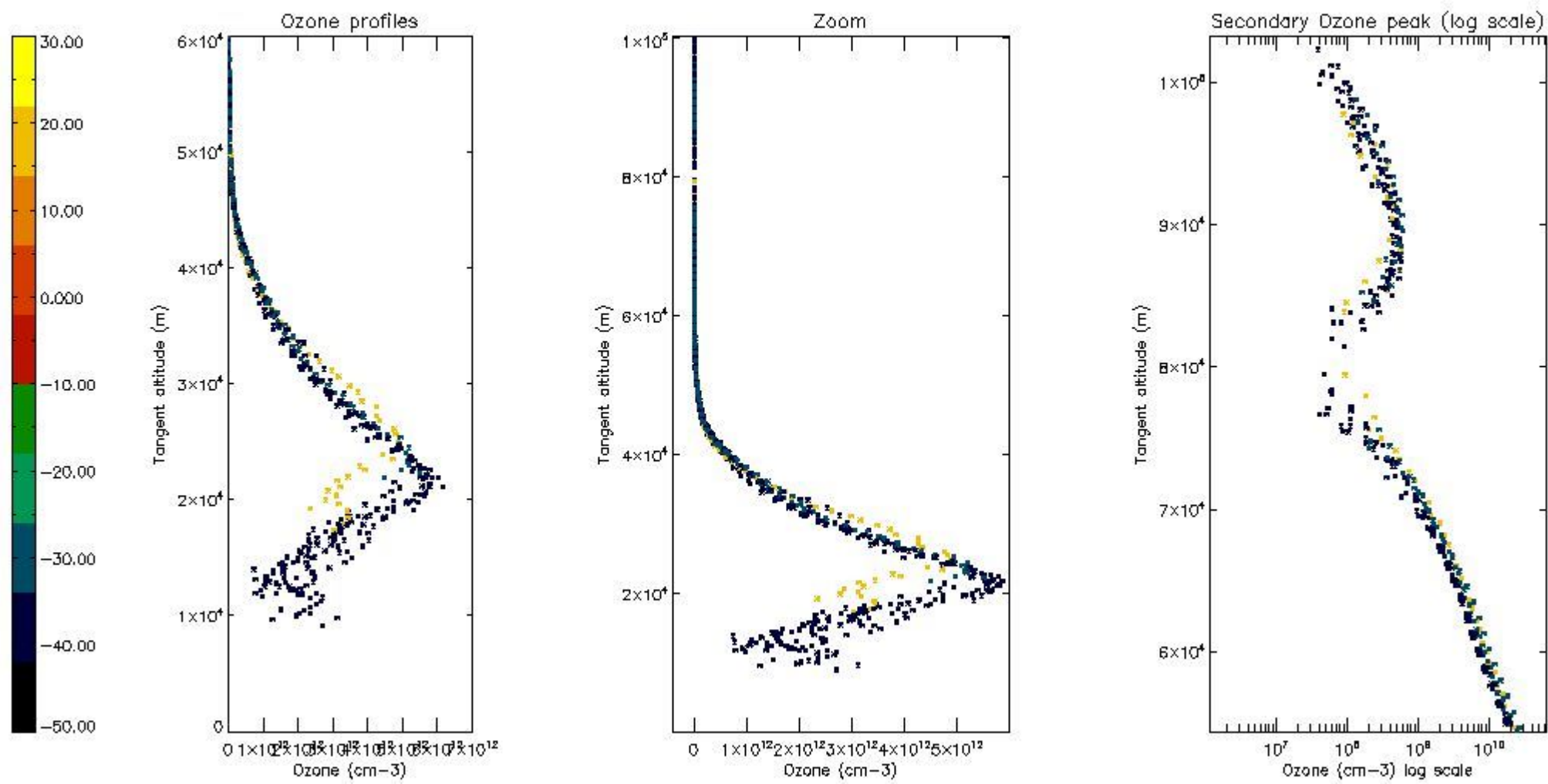
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



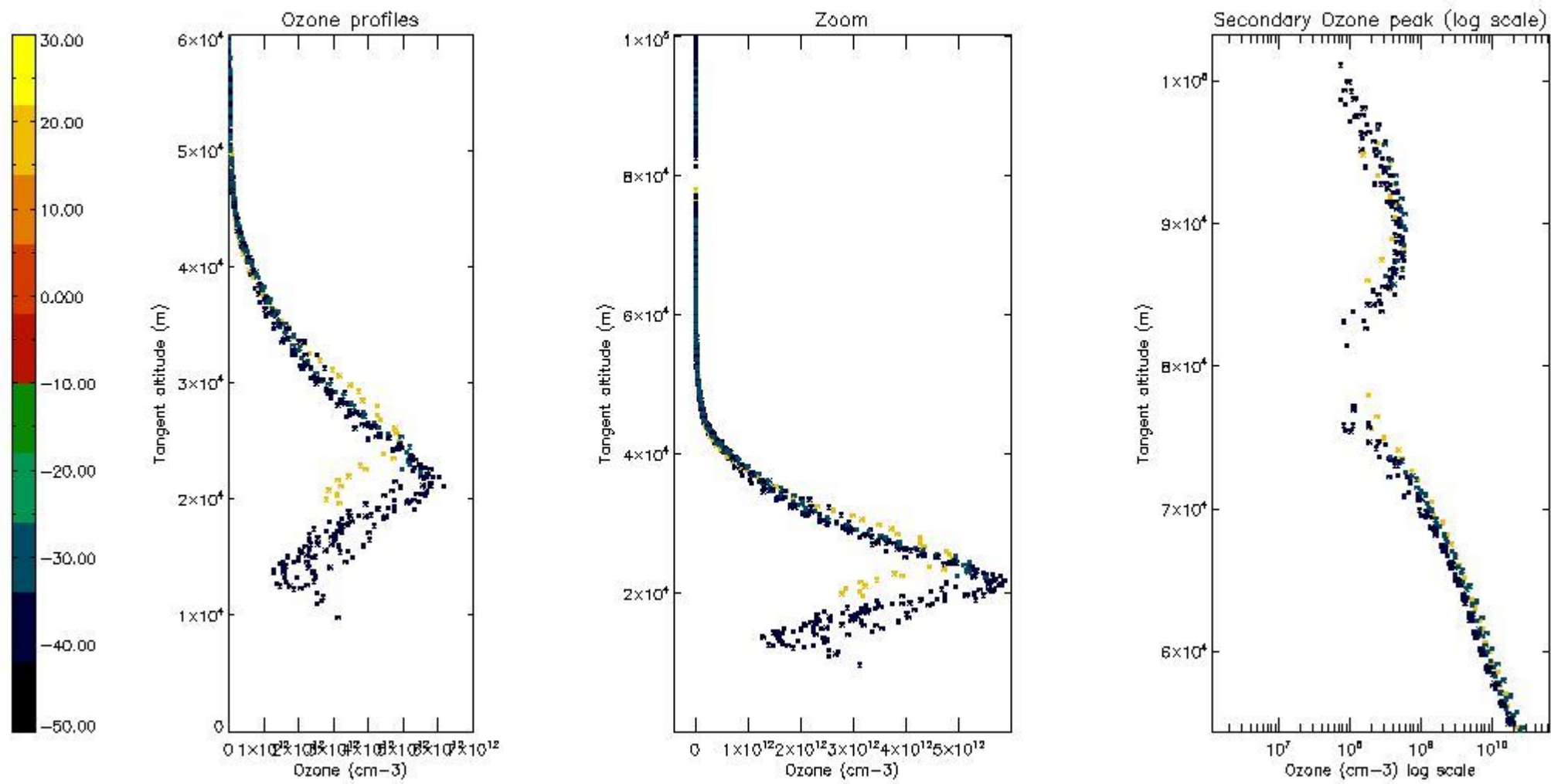
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

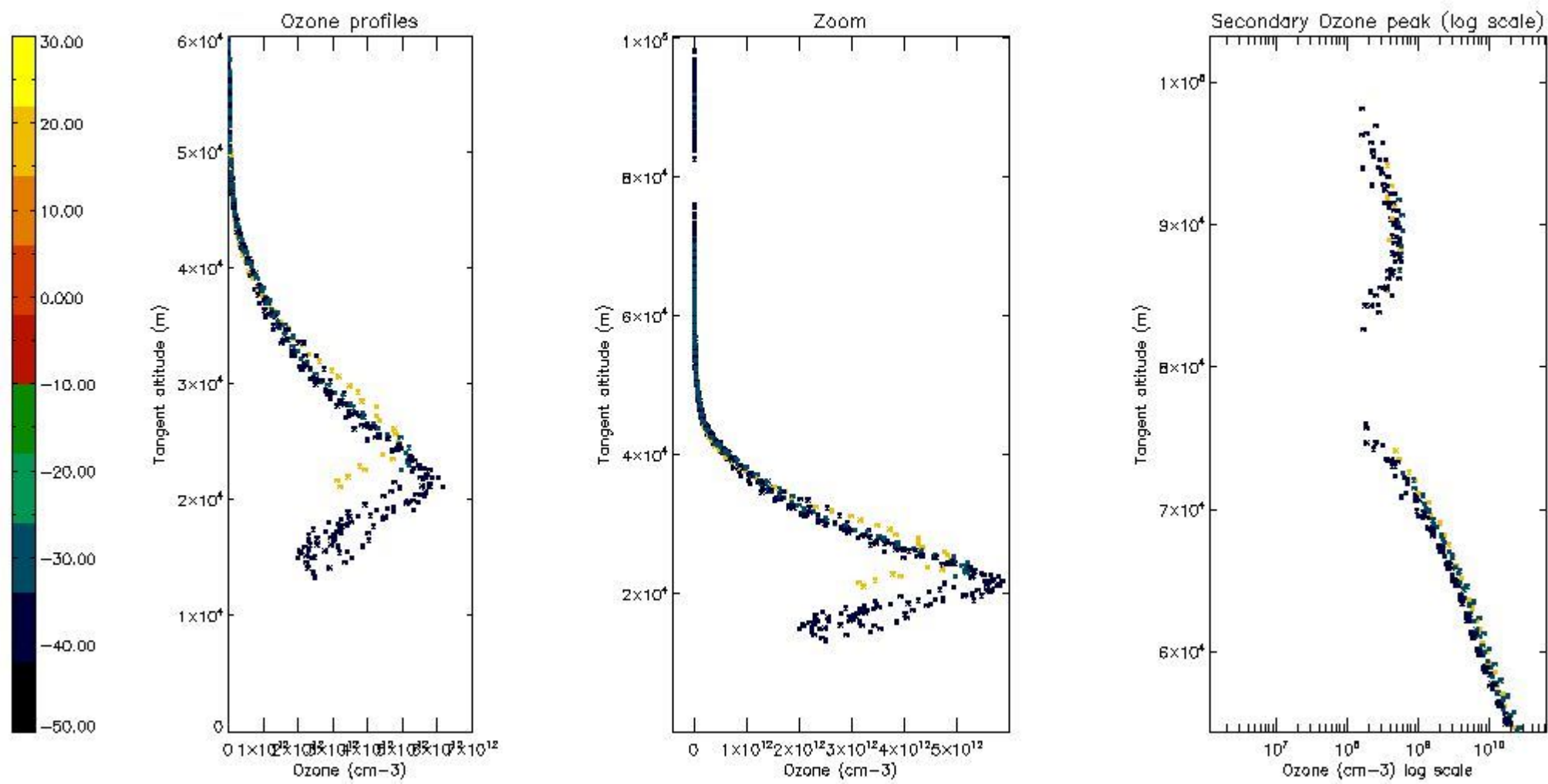
The colorbar represents the latitude.



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

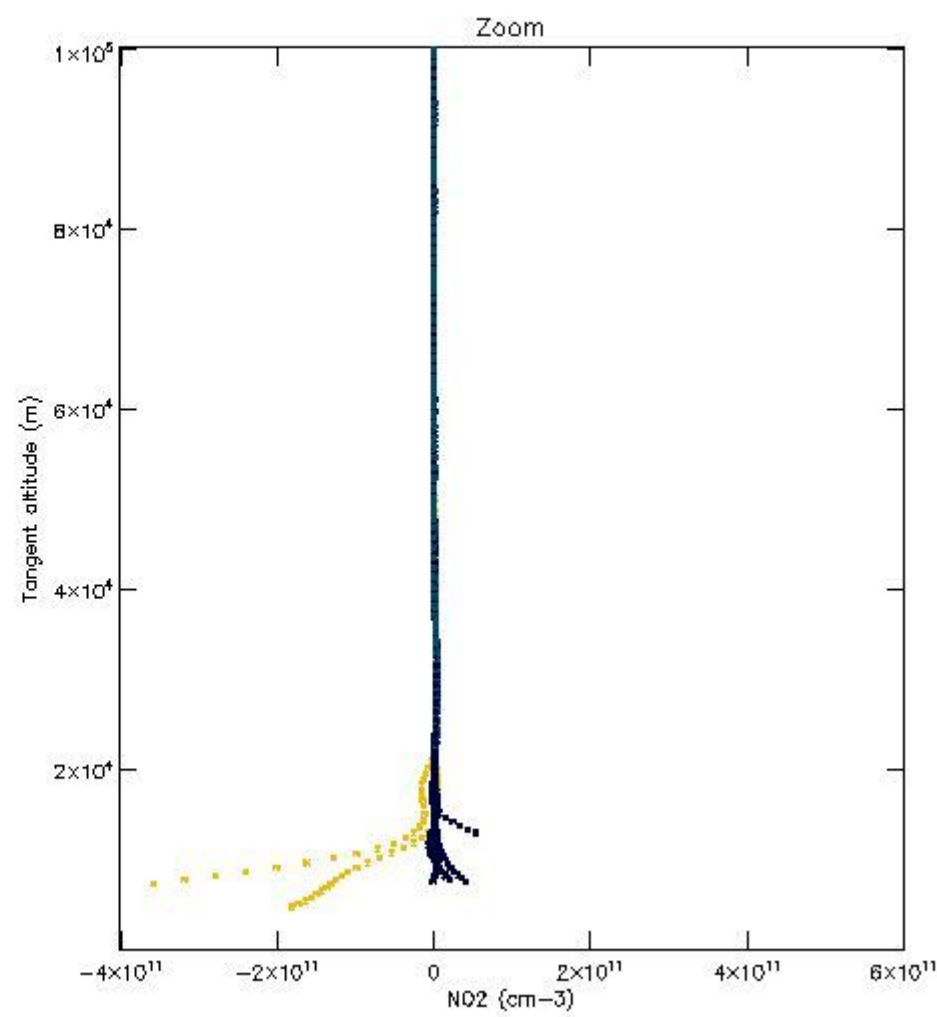
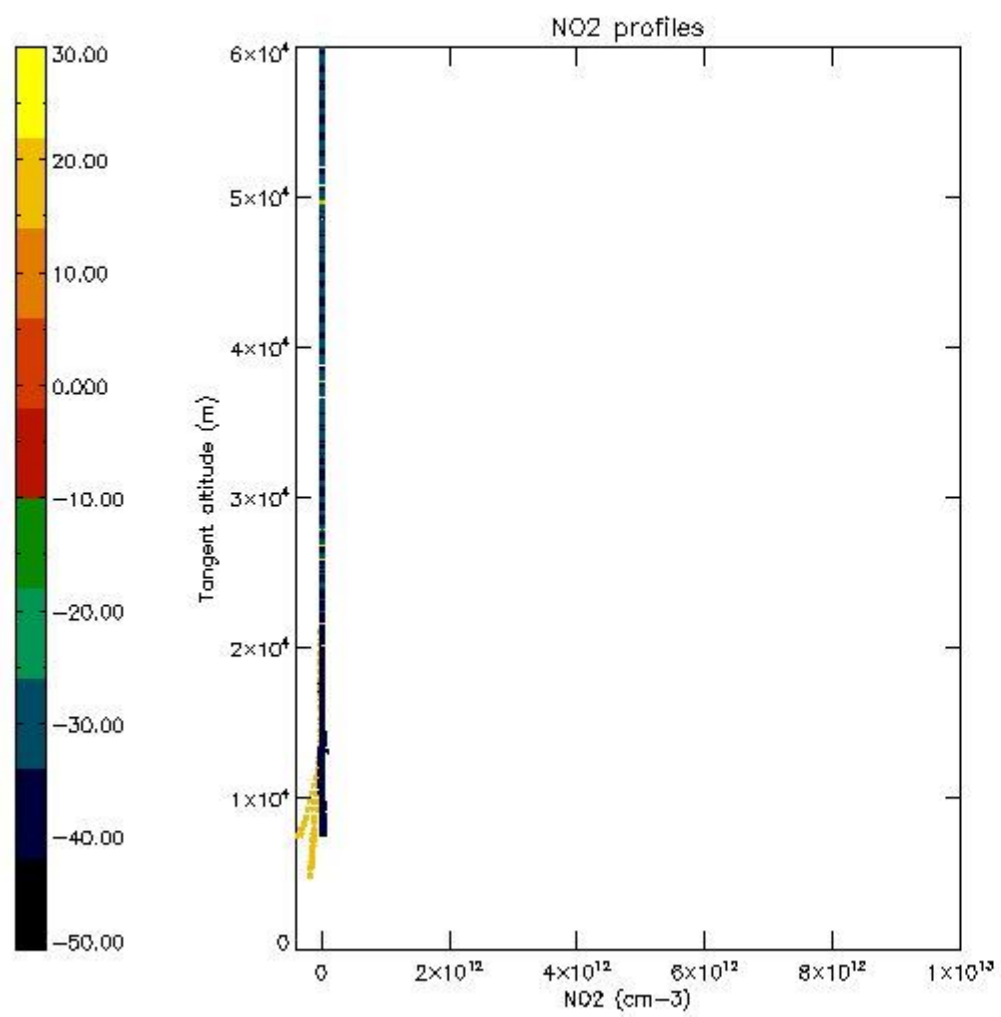
The colorbar represents the latitude.





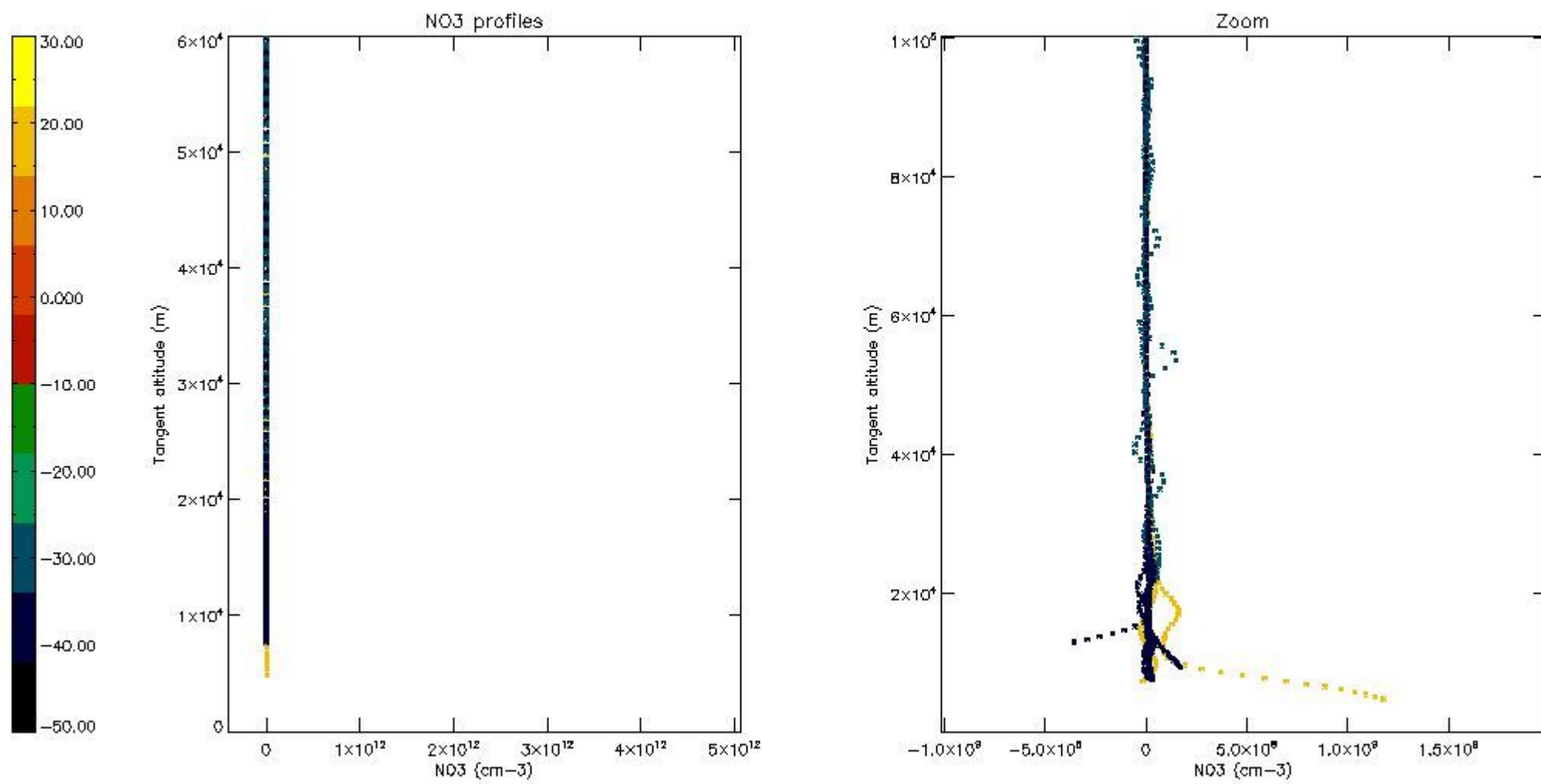
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

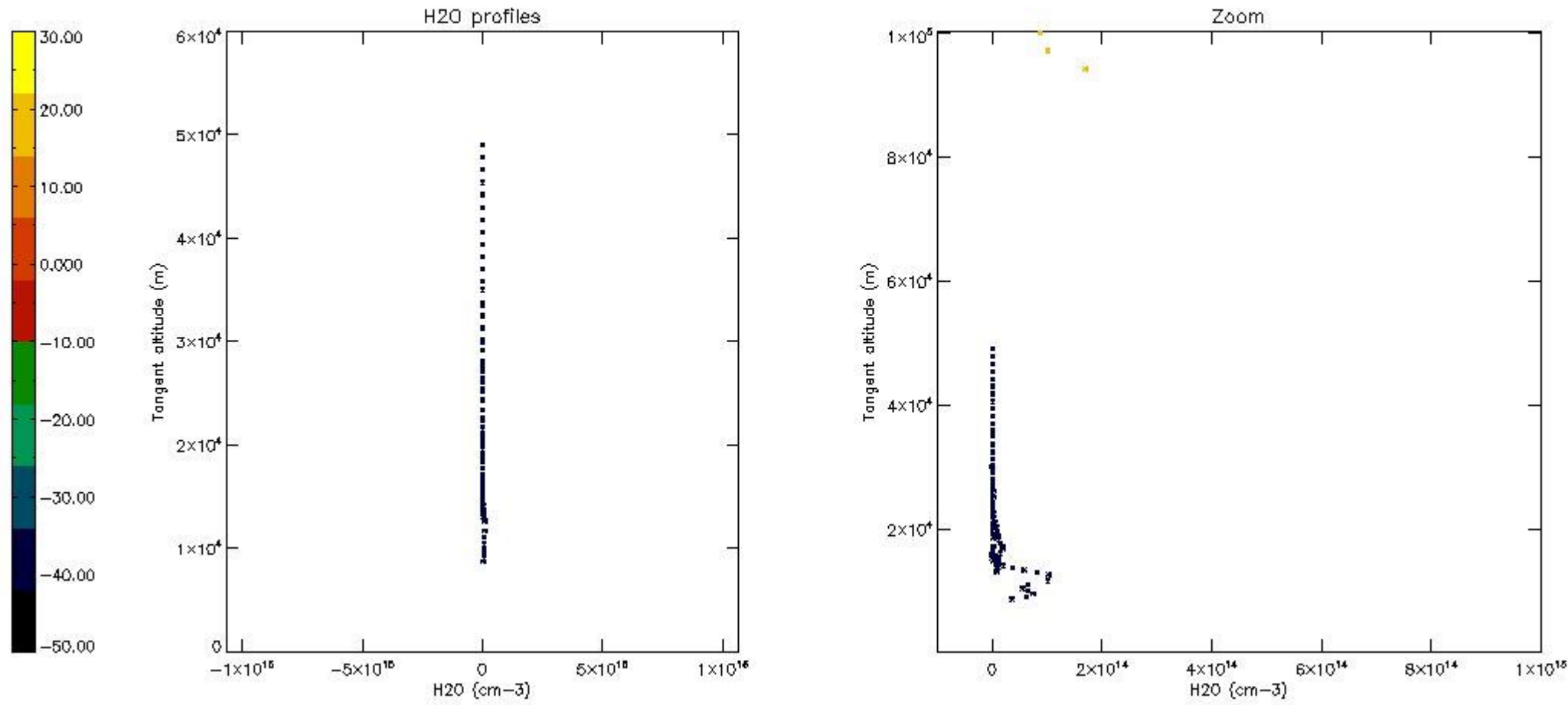
The colorbar represents the latitude.



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	14-SEP-2011 06:46:32
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	14-SEP-2011 06:46:32
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	14-SEP-2011 06:46:32

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##### [4.1.1 Plot of level 1 quality information per product \(time dependant\): ASCENDING](#)

##### [4.1.2 Plot of level 1 quality information per product \(time dependant\): DESCENDING](#)

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##### [4.2.1 Plot of level 1 quality information per product \(world map\): ASCENDING](#)

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### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

#### [5.1 Ozone statistics based on quality of products](#)

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

#### [5.7 Plot NO3 profiles for all STD \(dark without errors\)](#)

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

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

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Nb of level 2 prods	48
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__2PRFIN20110914_064632_000000643106_00307_49890_4803.N1	14-SEP-2011 06:46:32	Dark	63.500	1	9Alp CMa	-1.4400	11000.	127	49890	No
2	GOM_NL__2PRFIN20110914_064847_000000503106_00307_49890_4804.N1	14-SEP-2011 06:48:47	Dark	49.500	23	21Eps CMa	1.5020	26000.	99	49890	No
3	GOM_NL__2PRFIN20110914_084659_000000553106_00309_49892_4937.N1	14-SEP-2011 08:46:59	Dark	54.500	9	Alp Eri	0.45300	24000.	109	49892	No
4	GOM_NL__2PRFIN20110914_085242_000000453106_00309_49892_4938.N1	14-SEP-2011 08:52:42	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	49892	No
5	GOM_NL__2PRFIN20110914_091115_000000403106_00309_49892_4939.N1	14-SEP-2011 09:11:15	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49892	No
6	GOM_NL__2PRFIN20110914_091507_000000413106_00309_49892_4940.N1	14-SEP-2011 09:15:07	Bright	41.000	93	53Bet Peg	2.5200	3100.0	82	49892	No
7	GOM_NL__2PRFIN20110914_092521_000000423106_00309_49892_4941.N1	14-SEP-2011 09:25:21	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49892	No
8	GOM_NL__2PRFIN20110914_092709_000000443106_00309_49892_4942.N1	14-SEP-2011 09:27:09	Bright	44.000	76	27Gam Cas	2.3000	30000.	88	49892	No
9	GOM_NL__2PRFIN20110914_094925_000000633106_00309_49892_4943.N1	14-SEP-2011 09:49:25	Bright	63.000	24	66Alp Gem	1.5800	10200.	126	49892	No
10	GOM_NL__2PRFIN20110914_095801_000000583106_00309_49892_4944.N1	14-SEP-2011 09:58:01	Twilight	57.500	8	10Alp CMi	0.40000	6500.0	115	49892	No
11	GOM_NL__2PRFIN20110914_100702_000000583106_00309_49892_4945.N1	14-SEP-2011 10:07:02	Dark	58.000	1	9Alp CMa	-1.4400	11000.	116	49892	No
12	GOM_NL__2PRFIN20110914_103257_000000443106_00310_49893_5003.N1	14-SEP-2011 10:32:57	Straylight	43.500	84	Alp Phe	2.3970	4500.0	87	49893	No
13	GOM_NL__2PRFIN20110914_105129_000000413106_00310_49893_5004.N1	14-SEP-2011 10:51:29	Bright	41.000	90	54Alp Peg	2.4870	11000.	82	49893	No
14	GOM_NL__2PRFIN20110914_105521_000000403106_00310_49893_5005.N1	14-SEP-2011 10:55:21	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	49893	No
15	GOM_NL__2PRFIN20110914_110535_000000423106_00310_49893_5006.N1	14-SEP-2011 11:05:35	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49893	No
16	GOM_NL__2PRFIN20110914_110723_000000433106_00310_49893_5007.N1	14-SEP-2011 11:07:23	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49893	No
17	GOM_NL__2PRFIN20110914_112939_000000443106_00310_49893_5008.N1	14-SEP-2011 11:29:39	Bright	44.000	24	66Alp Gem	1.5800	10200.	88	49893	No
18	GOM_NL__2PRFIN20110914_113816_000000523106_00310_49893_5009.N1	14-SEP-2011 11:38:16	Twilight	51.500	8	10Alp CMi	0.40000	6500.0	103	49893	No
19	GOM_NL__2PRFIN20110914_114717_000000613106_00310_49893_5010.N1	14-SEP-2011 11:47:17	Dark	61.000	1	9Alp CMa	-1.4400	11000.	122	49893	No
20	GOM_NL__2PRFIN20110914_184826_000000513106_00315_49898_5249.N1	14-SEP-2011 18:48:26	Dark	51.000	9	Alp Eri	0.45300	24000.	102	49898	No
21	GOM_NL__2PRFIN20110914_185409_000000483106_00315_49898_5250.N1	14-SEP-2011 18:54:09	Straylight	48.000	84	Alp Phe	2.3970	4500.0	96	49898	No
22	GOM_NL__2PRFIN20110914_191238_000000403106_00315_49898_5251.N1	14-SEP-2011 19:12:38	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49898	No
23	GOM_NL__2PRFIN20110914_191629_000000423106_00315_49898_5252.N1	14-SEP-2011 19:16:29	Bright	42.000	93	53Bet Peg	2.5200	3100.0	84	49898	No
24	GOM_NL__2PRFIN20110914_192643_000000423106_00315_49898_5253.N1	14-SEP-2011 19:26:43	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49898	No
25	GOM_NL__2PRFIN20110914_192830_000000433106_00315_49898_5254.N1	14-SEP-2011 19:28:30	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49898	No
26	GOM_NL__2PRFIN20110914_195049_000000443106_00315_49898_5255.N1	14-SEP-2011 19:50:49	Bright	43.500	24	66Alp Gem	1.5800	10200.	87	49898	No
27	GOM_NL__2PRFIN20110914_195928_000000543106_00315_49898_5256.N1	14-SEP-2011 19:59:28	Twilight	53.500	8	10Alp CMi	0.40000	6500.0	107	49898	No
28	GOM_NL__2PRFIN20110914_200832_000000643106_00315_49898_5257.N1	14-SEP-2011 20:08:32	Dark	64.000	1	9Alp CMa	-1.4400	11000.	128	49898	No
29	GOM_NL__2PRFIN20110914_201025_000000533106_00315_49898_5258.N1	14-SEP-2011 20:10:25	Dark	53.000	47	2Bet CMa	1.9760	28000.	106	49898	No
30	GOM_NL__2PRFIN20110914_203423_000000503106_00316_49899_5289.N1	14-SEP-2011 20:34:23	Straylight	49.500	84	Alp Phe	2.3970	4500.0	99	49899	No
31	GOM_NL__2PRFIN20110914_205252_000000403106_00316_49899_5290.N1	14-SEP-2011 20:52:52	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49899	No
32	GOM_NL__2PRFIN20110914_205643_000000393106_00316_49899_5291.N1	14-SEP-2011 20:56:43	Bright	39.000	93	53Bet Peg	2.5200	3100.0	78	49899	No
33	GOM_NL__2PRFIN20110914_210656_000000423106_00316_49899_5292.N1	14-SEP-2011 21:06:56	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49899	No
34	GOM_NL__2PRFIN20110914_210843_000000443106_00316_49899_5293.N1	14-SEP-2011 21:08:43	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	49899	No
35	GOM_NL__2PRFIN20110914_213104_000000573106_00316_49899_5294.N1	14-SEP-2011 21:31:04	Bright	56.500	24	66Alp Gem	1.5800	10200.	113	49899	No
36	GOM_NL__2PRFIN20110914_213943_000000543106_00316_49899_5295.N1	14-SEP-2011 21:39:43	Twilight	53.500	8	10Alp CMi	0.40000	6500.0	107	49899	No
37	GOM_NL__2PRFIN20110914_214847_000000593106_00316_49899_5296.N1	14-SEP-2011 21:48:47	Dark	59.000	1	9Alp CMa	-1.4400	11000.	118	49899	No
38	GOM_NL__2PRFIN20110914_215040_000000533106_00316_49899_5297.N1	14-SEP-2011 21:50:40	Dark	53.000	47	2Bet CMa	1.9760	28000.	106	49899	No
39	GOM_NL__2PRFIN20110914_221437_000000433106_00317_49900_5337.N1	14-SEP-2011 22:14:37	Straylight	43.000	84	Alp Phe	2.3970	4500.0	86	49900	No
40	GOM_NL__2PRFIN20110914_223305_000000403106_00317_49900_5338.N1	14-SEP-2011 22:33:05	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49900	No
41	GOM_NL__2PRFIN20110914_223657_000000393106_00317_49900_5339.N1	14-SEP-2011 22:36:57	Bright	39.000	93	53Bet Peg	2.5200	3100.0	78	49900	No
42	GOM_NL__2PRFIN20110914_224710_000000403106_00317_49900_5340.N1	14-SEP-2011 22:47:10	Bright	39.500	74	11Bet Cas	2.2680	6600.0	79	49900	No

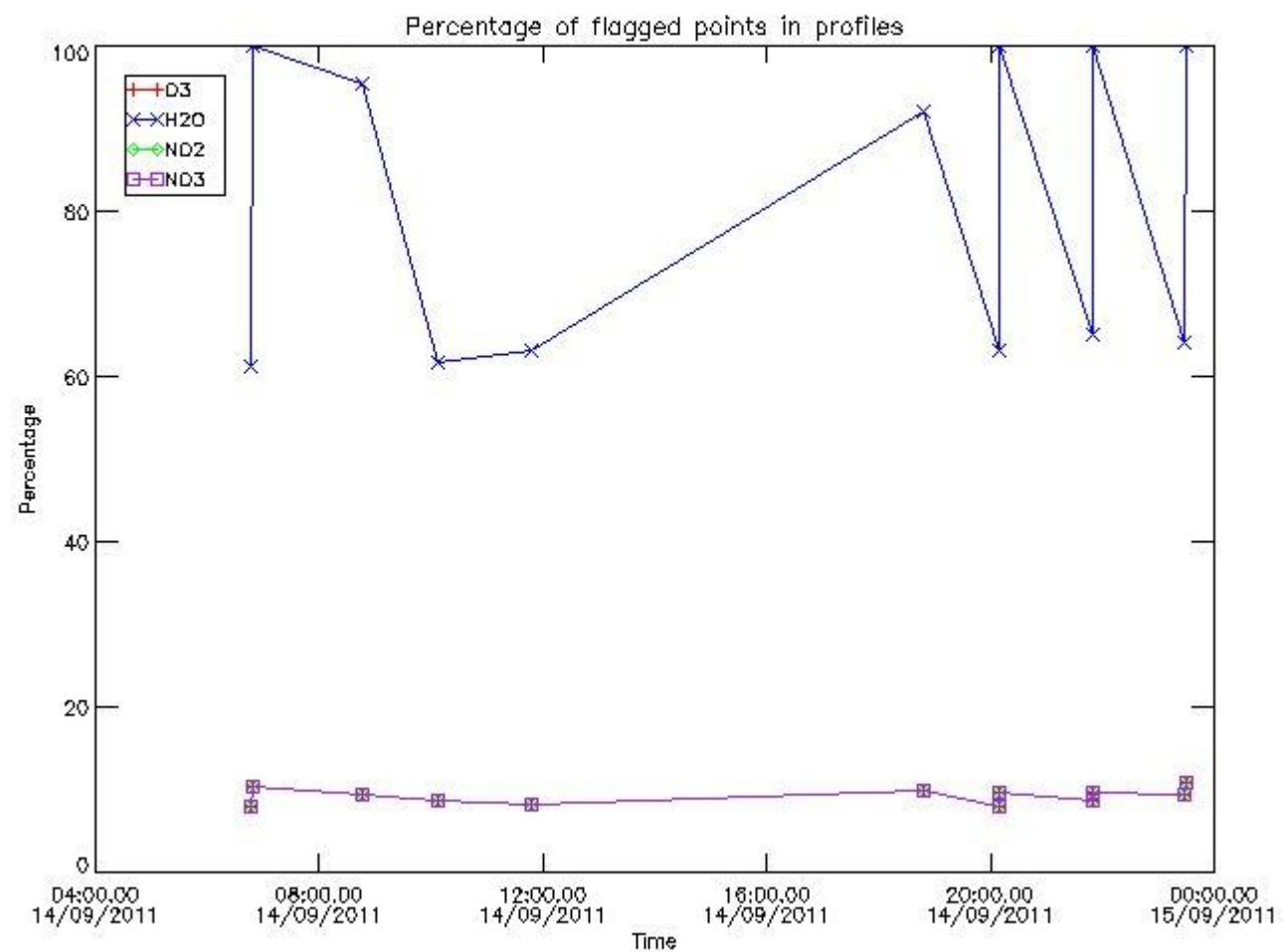


43	GOM_NL__2PRFIN20110914_224857_000000433106_00317_49900_5341.N1	14-SEP-2011 22:48:57	Bright	42.500	76	27Gam Cas	2.3000	30000.	85	49900	No
44	GOM_NL__2PRFIN20110914_231118_000000443106_00317_49900_5342.N1	14-SEP-2011 23:11:18	Bright	43.500	24	66Alp Gem	1.5800	10200.	87	49900	No
45	GOM_NL__2PRFIN20110914_231957_000000543106_00317_49900_5343.N1	14-SEP-2011 23:19:57	Twilight	54.000	8	10Alp CMi	0.40000	6500.0	108	49900	No
46	GOM_NL__2PRFIN20110914_232902_000000653106_00317_49900_5344.N1	14-SEP-2011 23:29:02	Dark	64.500	1	9Alp CMa	-1.4400	11000.	129	49900	No
47	GOM_NL__2PRFIN20110914_233055_000000473106_00317_49900_5345.N1	14-SEP-2011 23:30:55	Dark	47.000	47	2Bet CMa	1.9760	28000.	94	49900	No
48	GOM_NL__2PRFIN20110914_235452_000000463106_00318_49901_5409.N1	14-SEP-2011 23:54:52	Straylight	46.000	84	Alp Phe	2.3970	4500.0	92	49901	No

### 3. Quality information per product

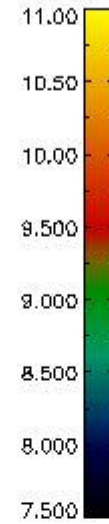
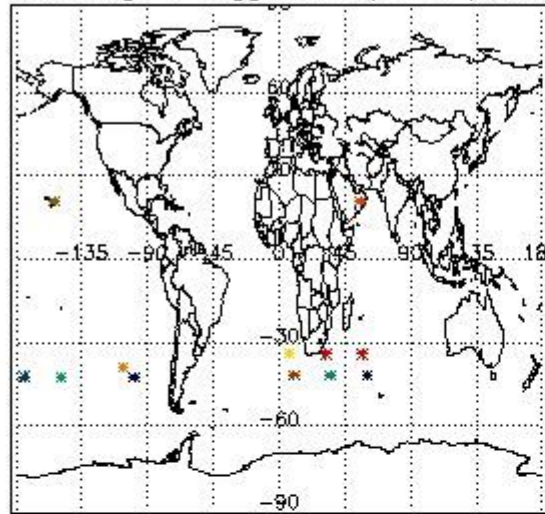
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

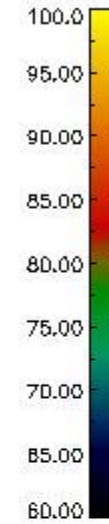
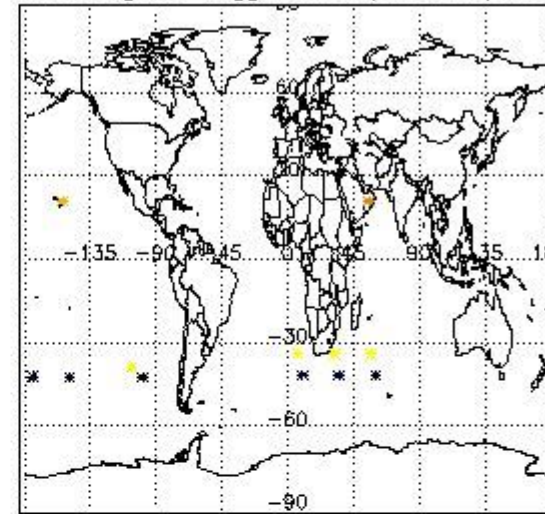


#### 3.2 Plot quality information per product (world map)

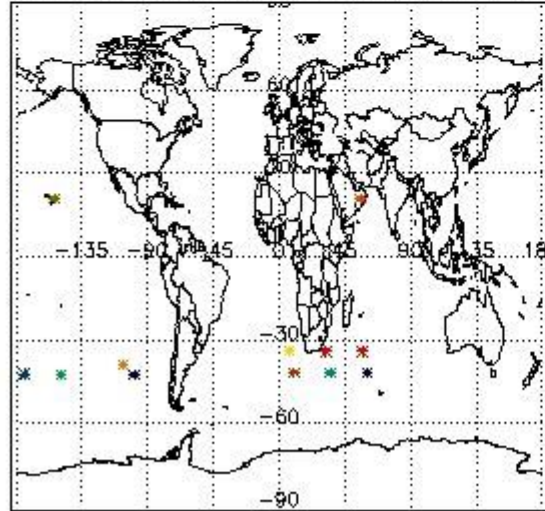
Percentage of flagged data per O3 profile



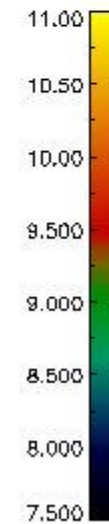
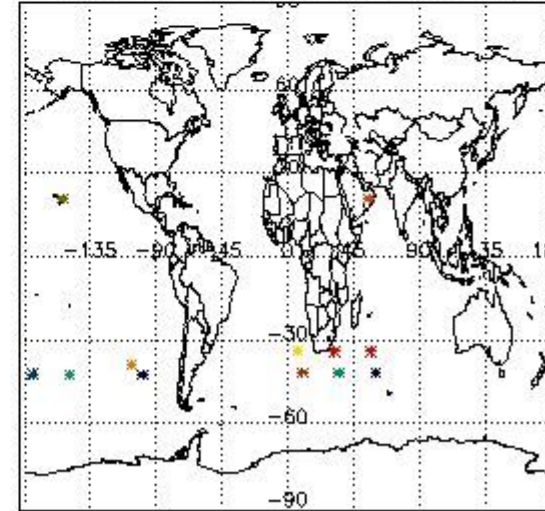
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

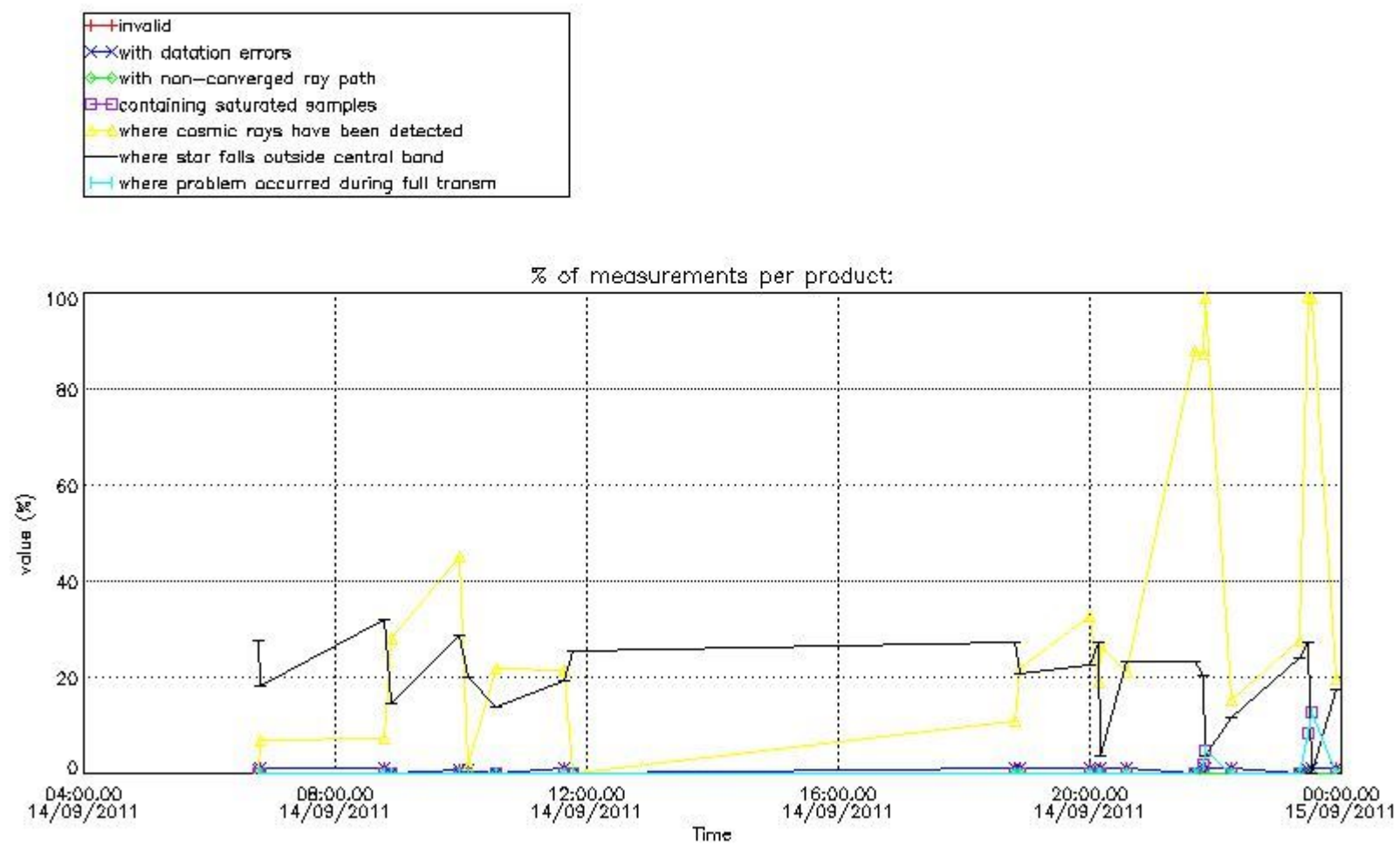


#### 4. Level 1 quality information per product

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

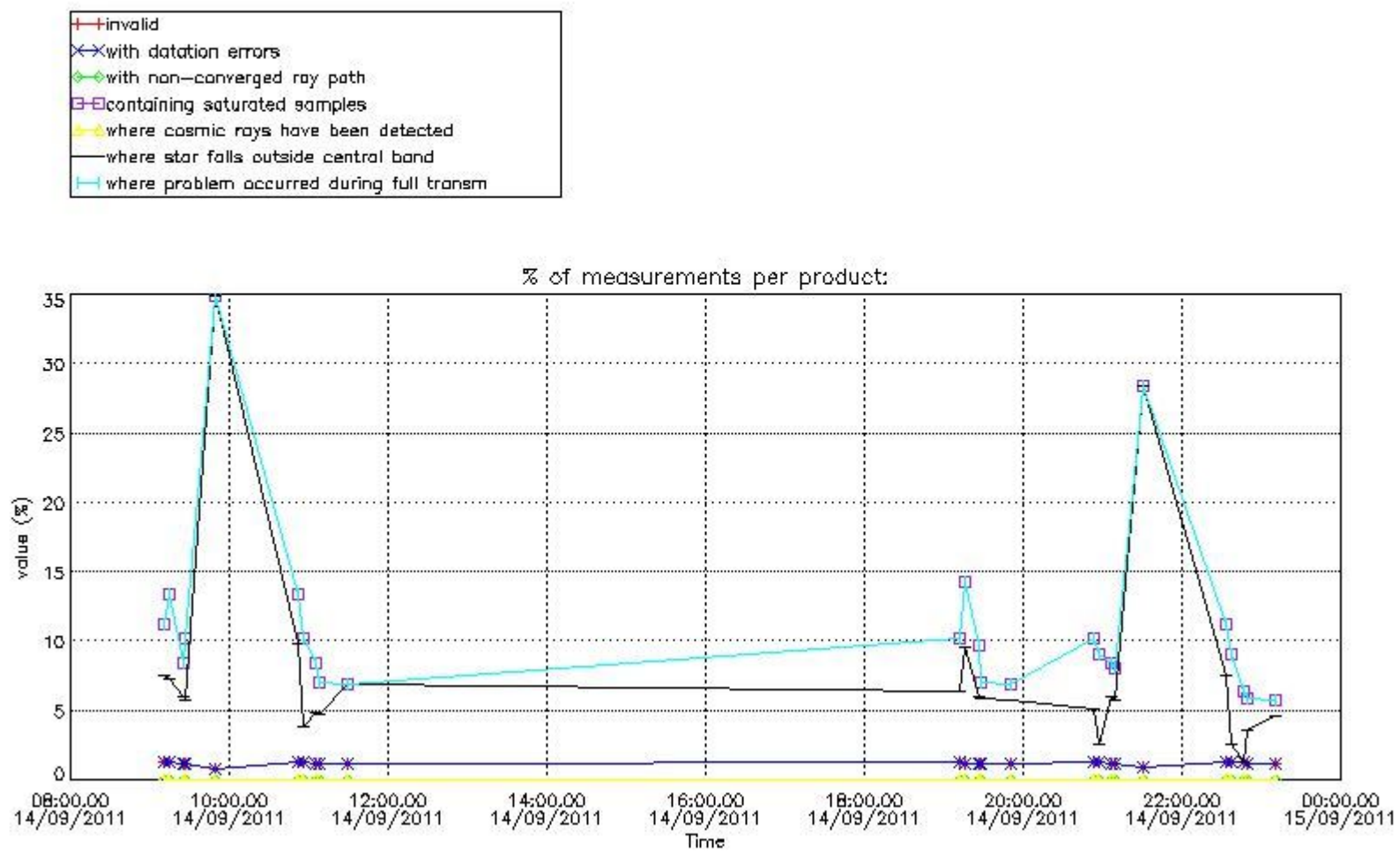
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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



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

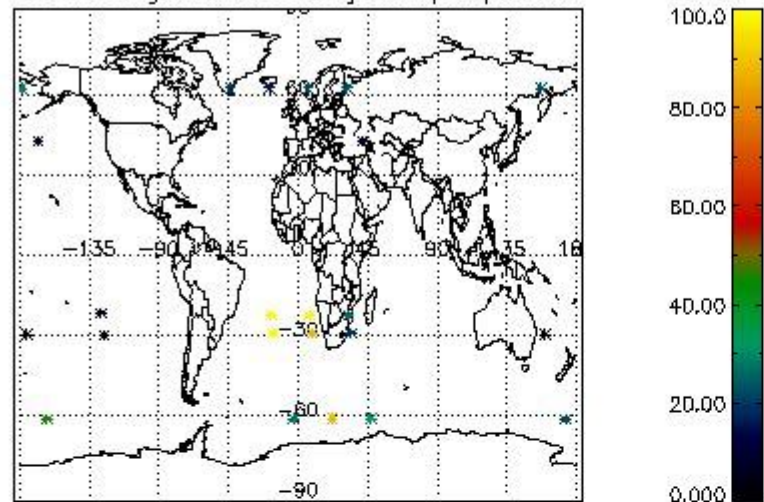




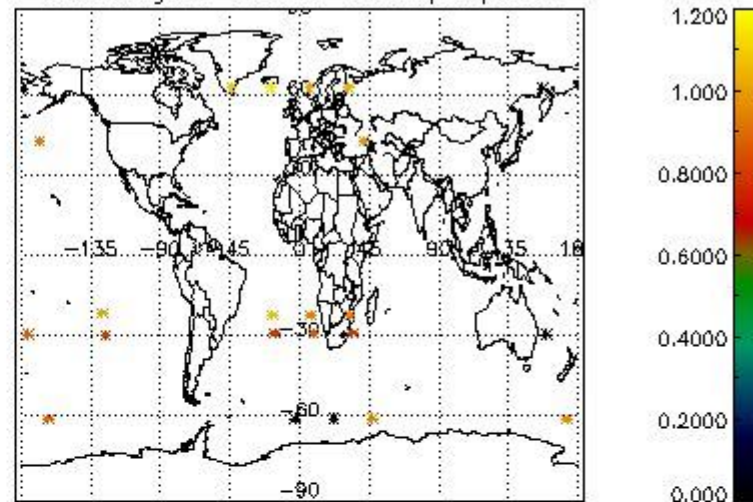
4.2 Plot quality information per product coming from level 1b processing (world map)

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

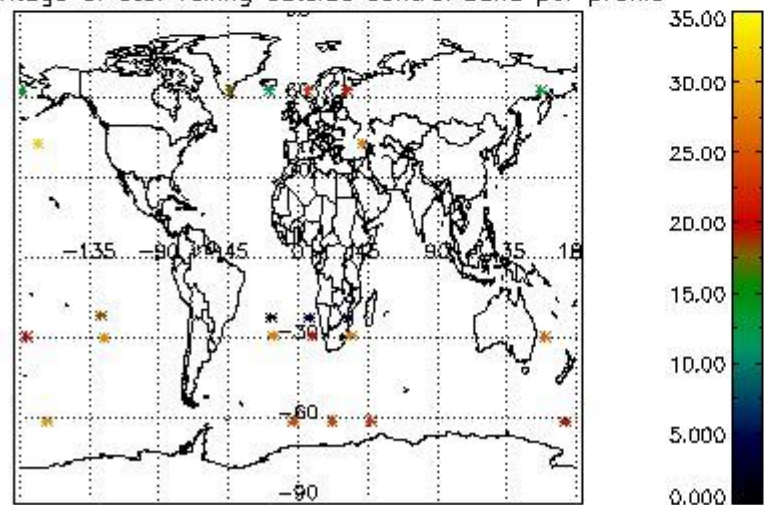
Percentage of cosmic ray hits per profile



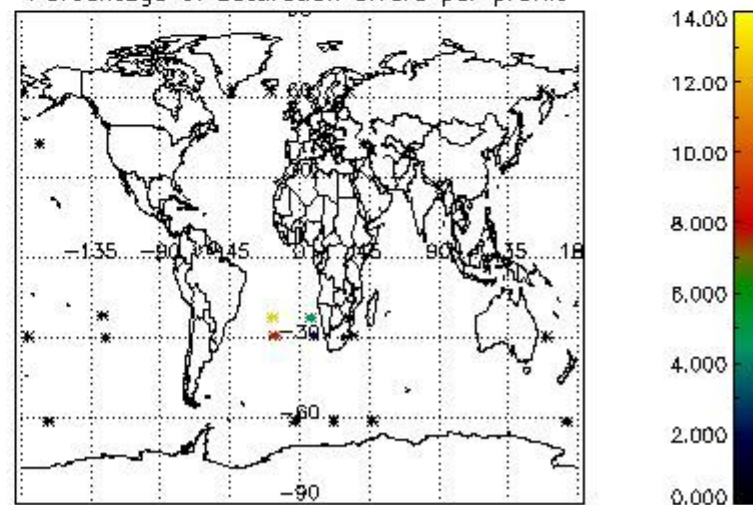
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

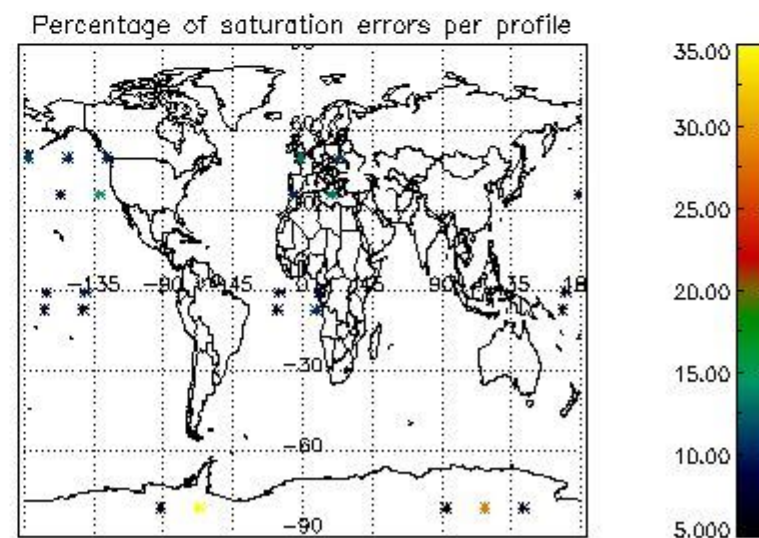
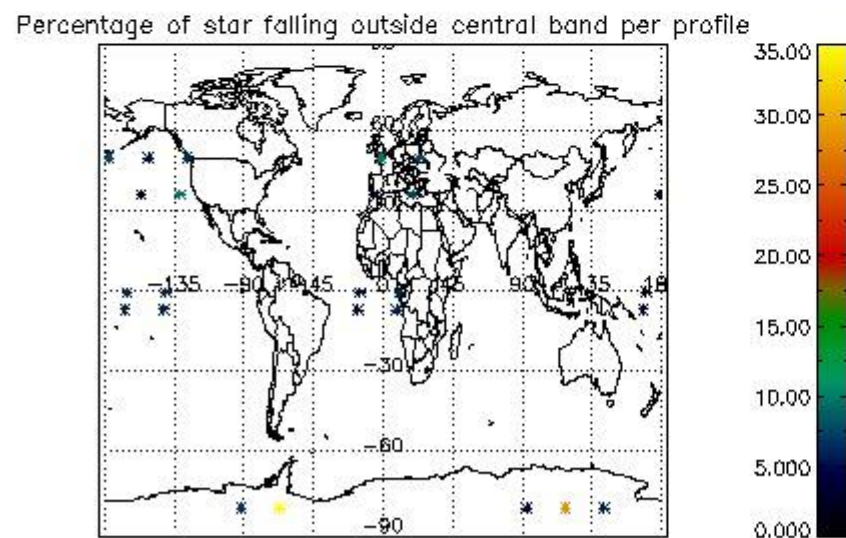
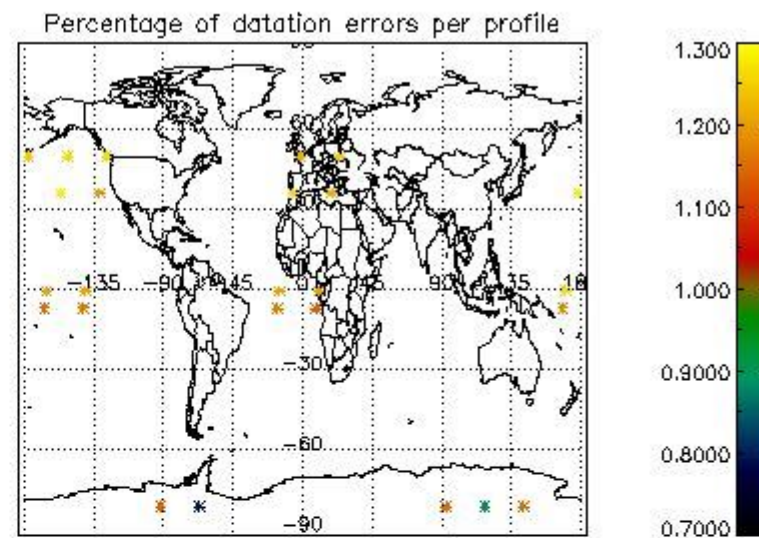
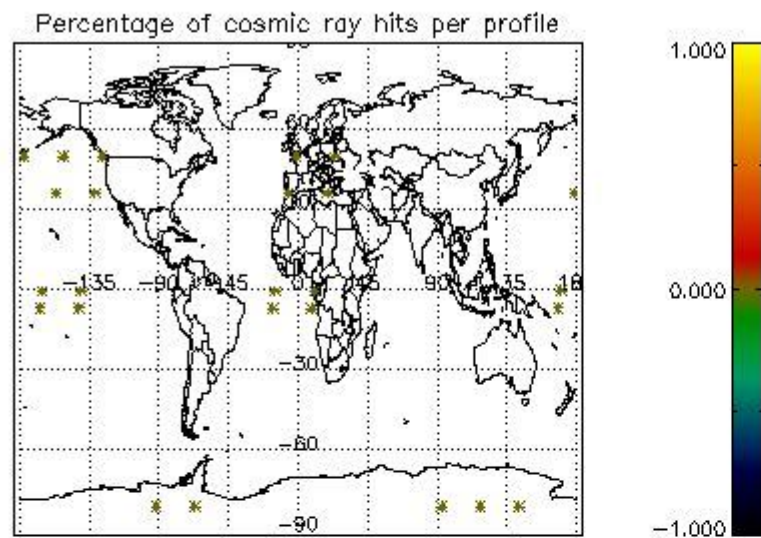


Percentage of saturation errors per profile



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

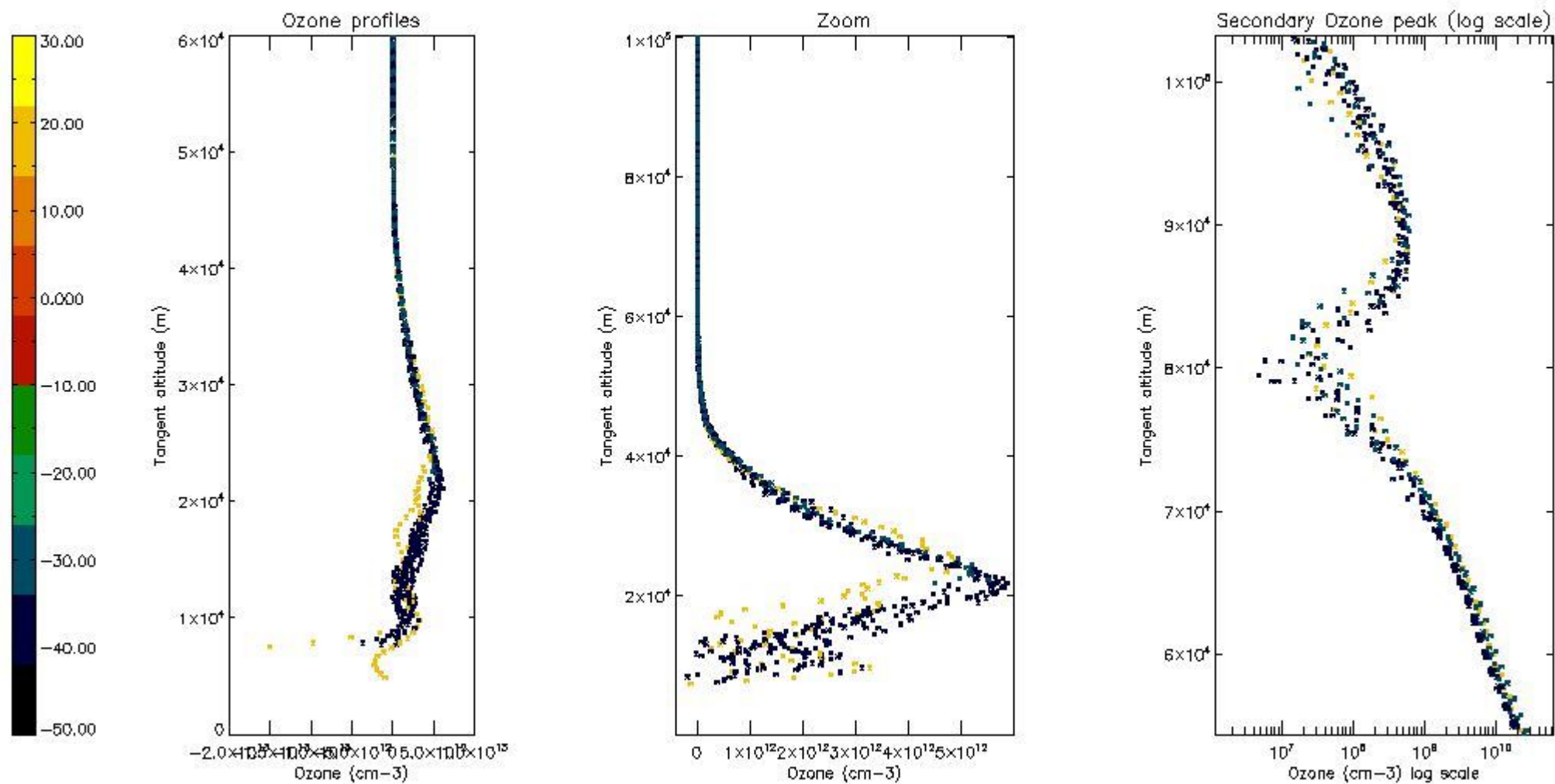
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	31
STD < 20	22

STD < 10	20
STD < 5	17

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

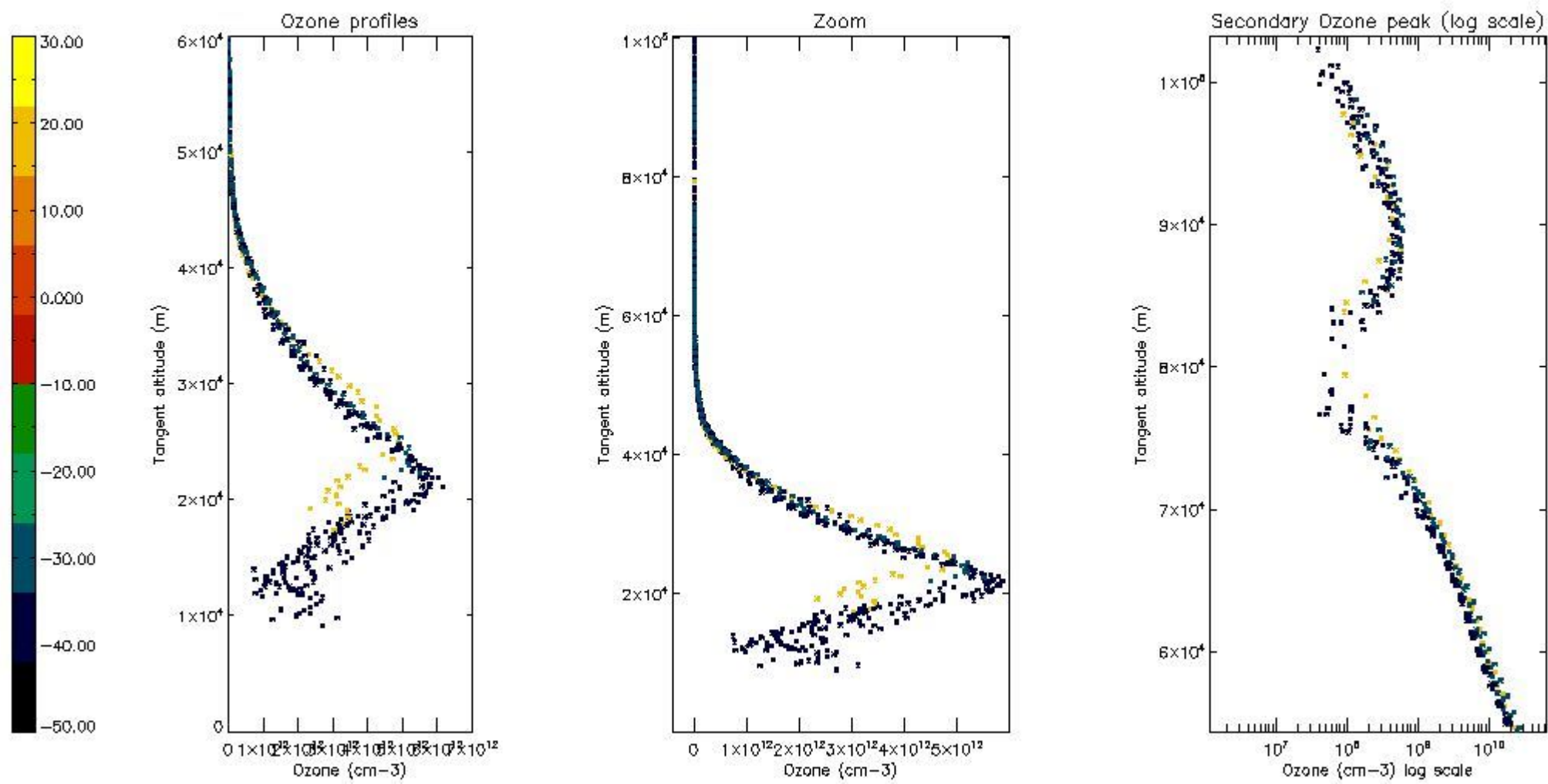
The colorbar represents the latitude.



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

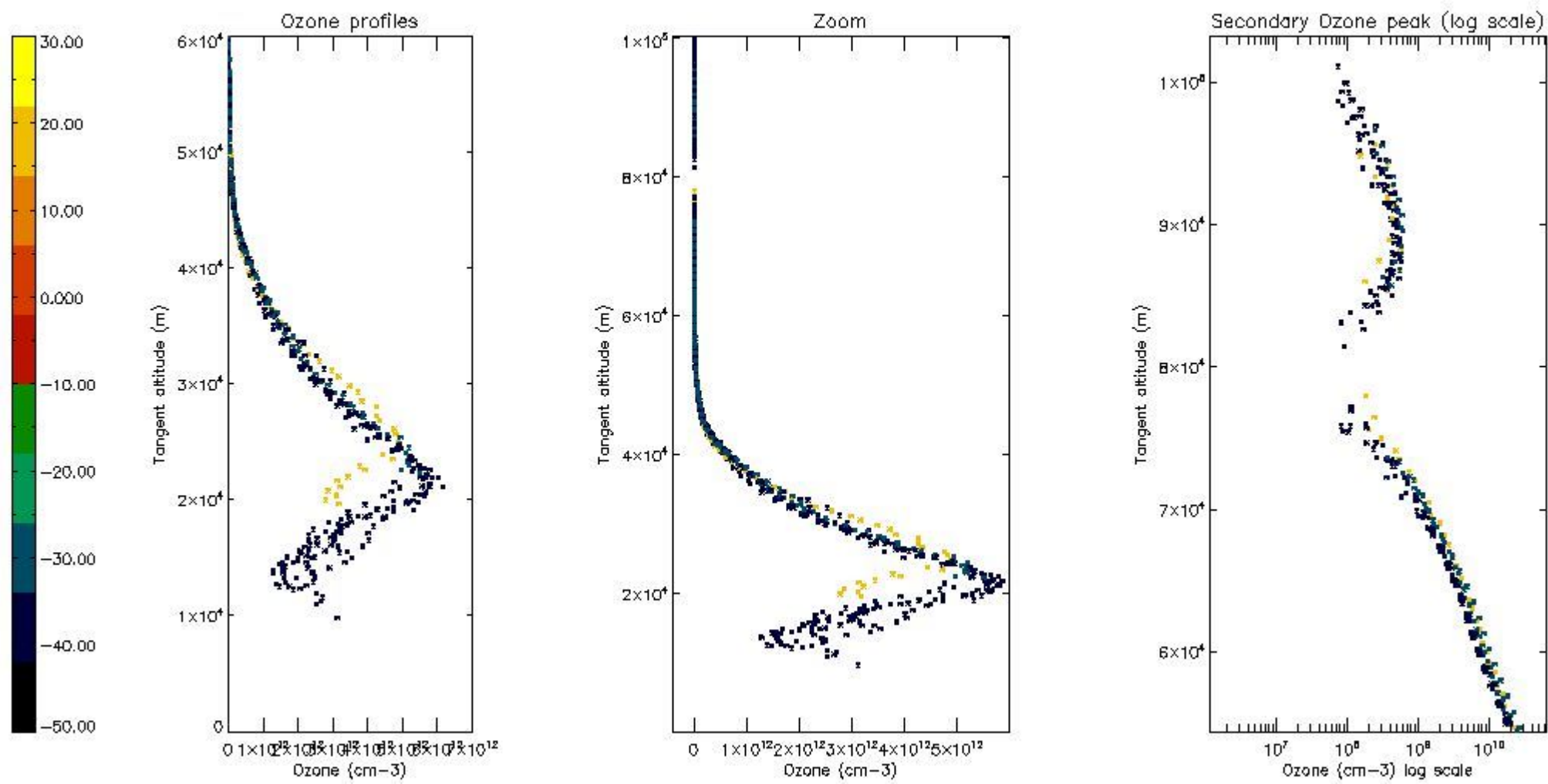
The colorbar represents the latitude.





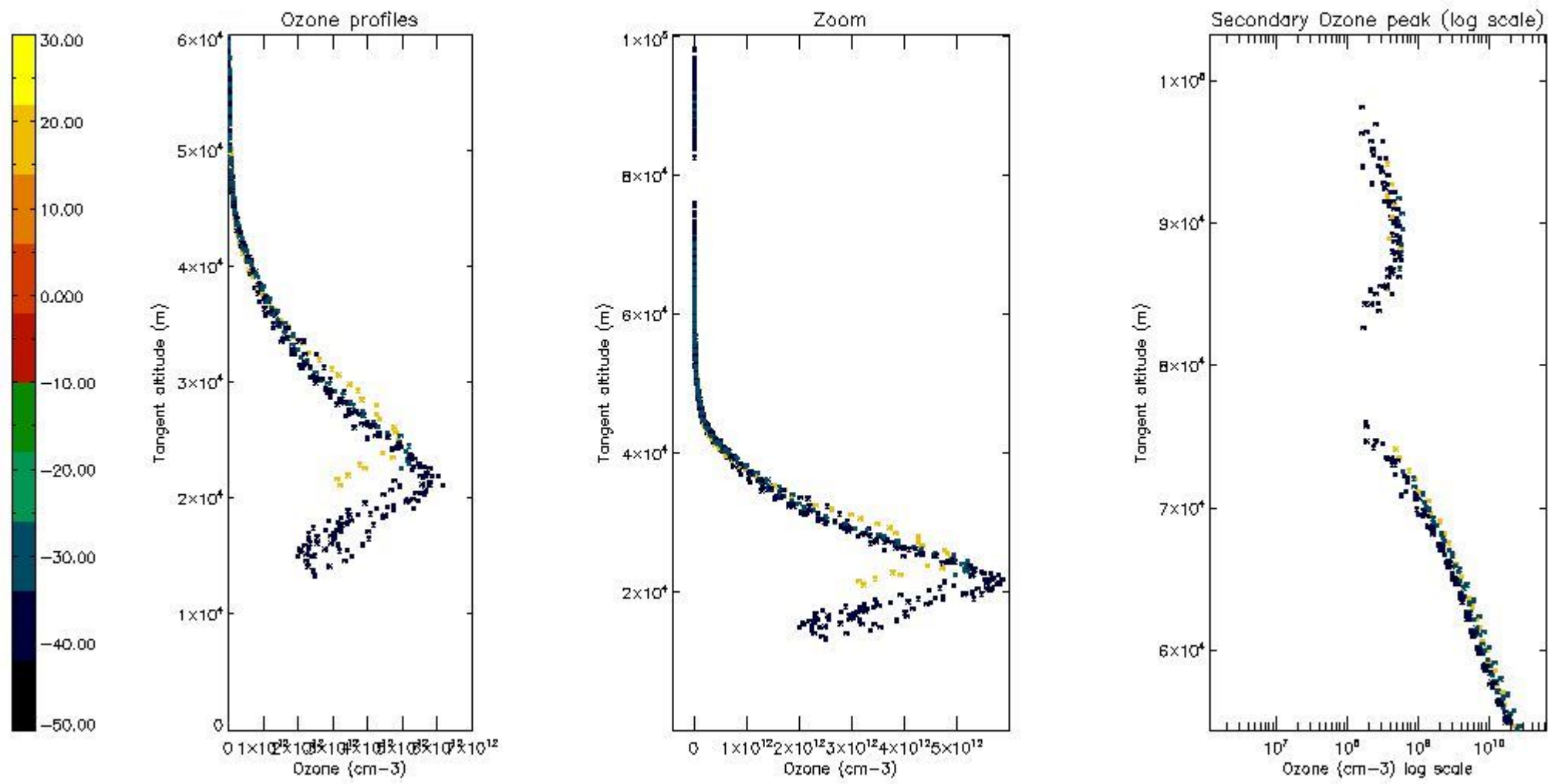
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



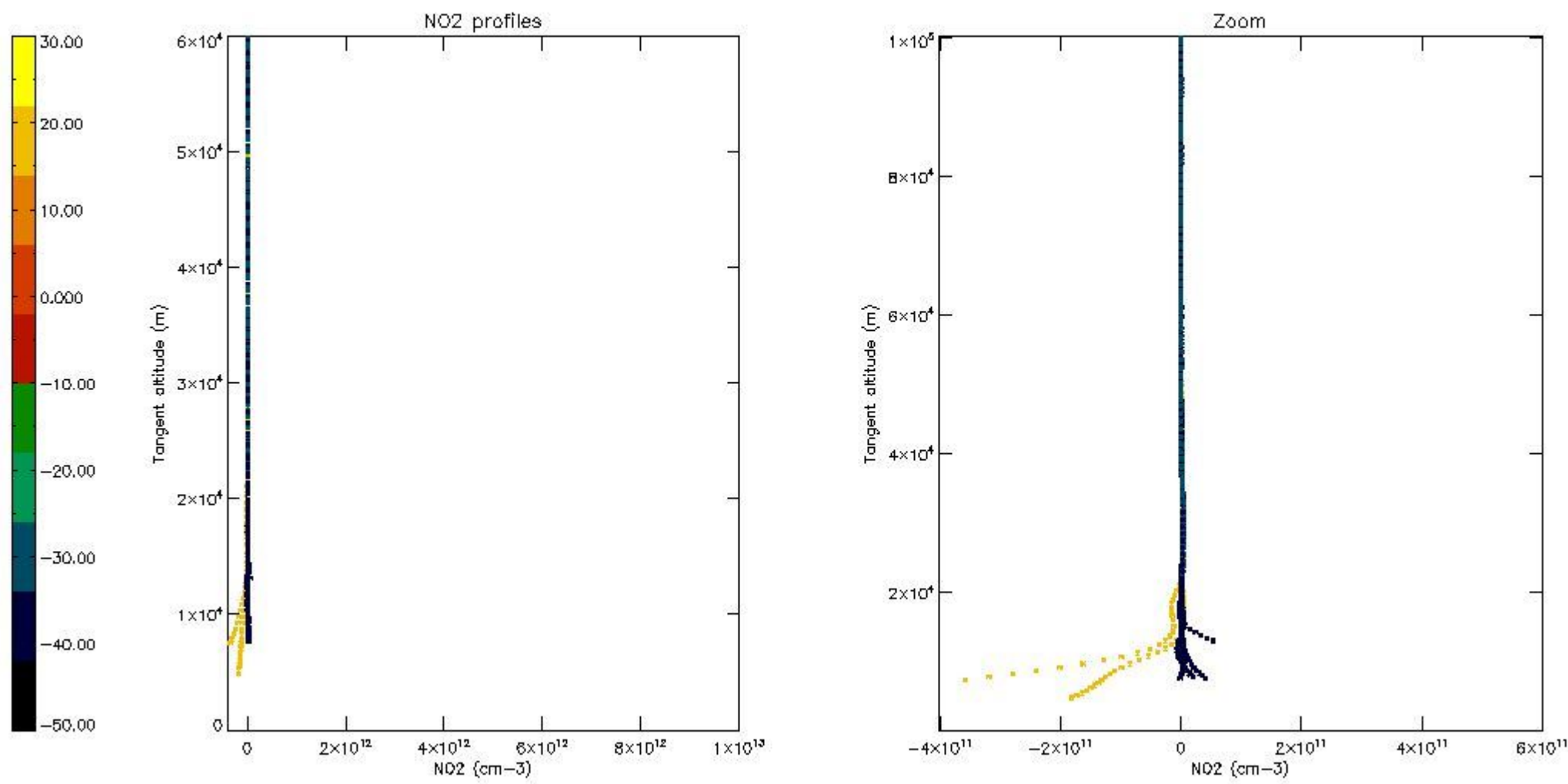
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



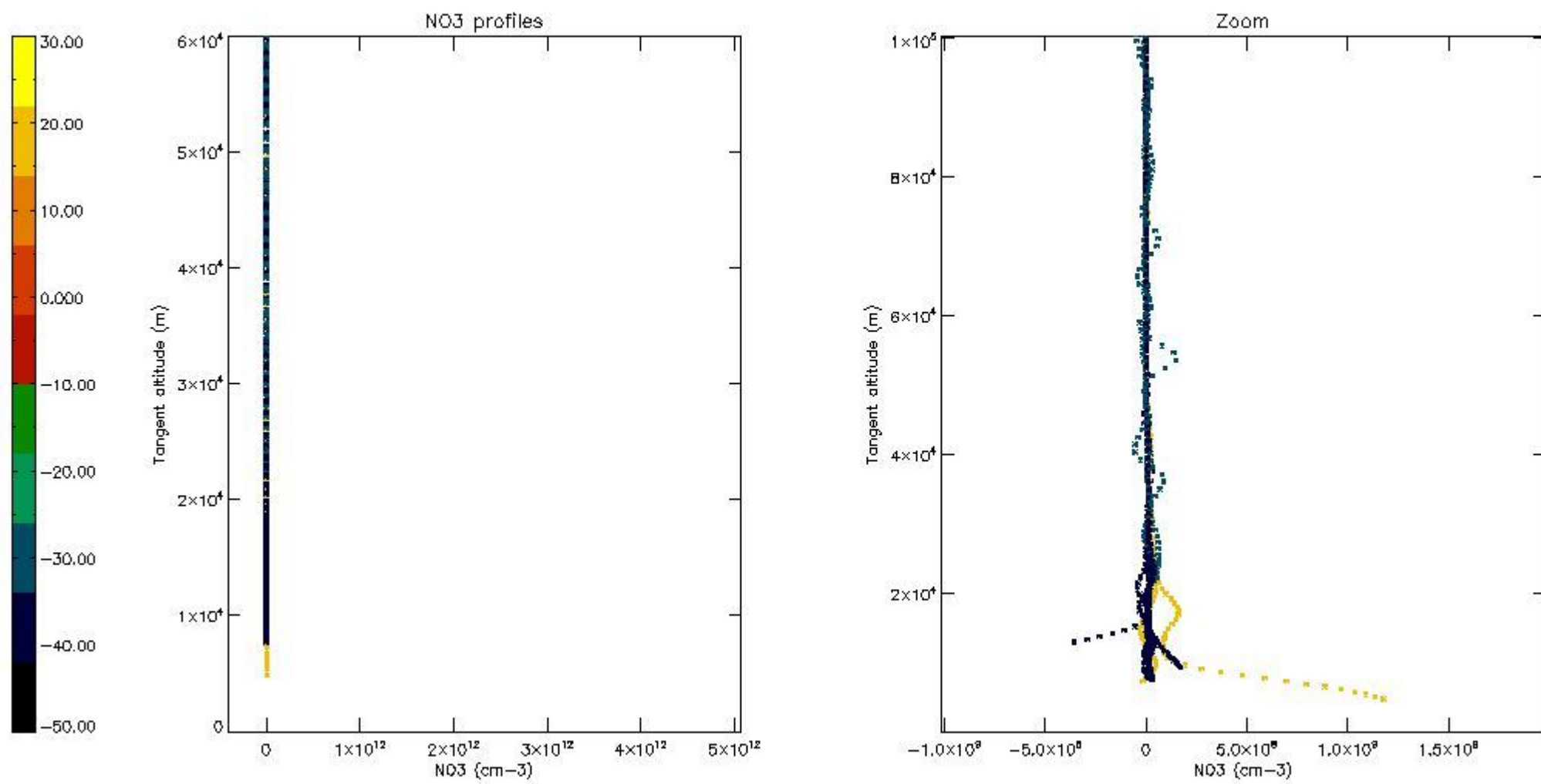
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

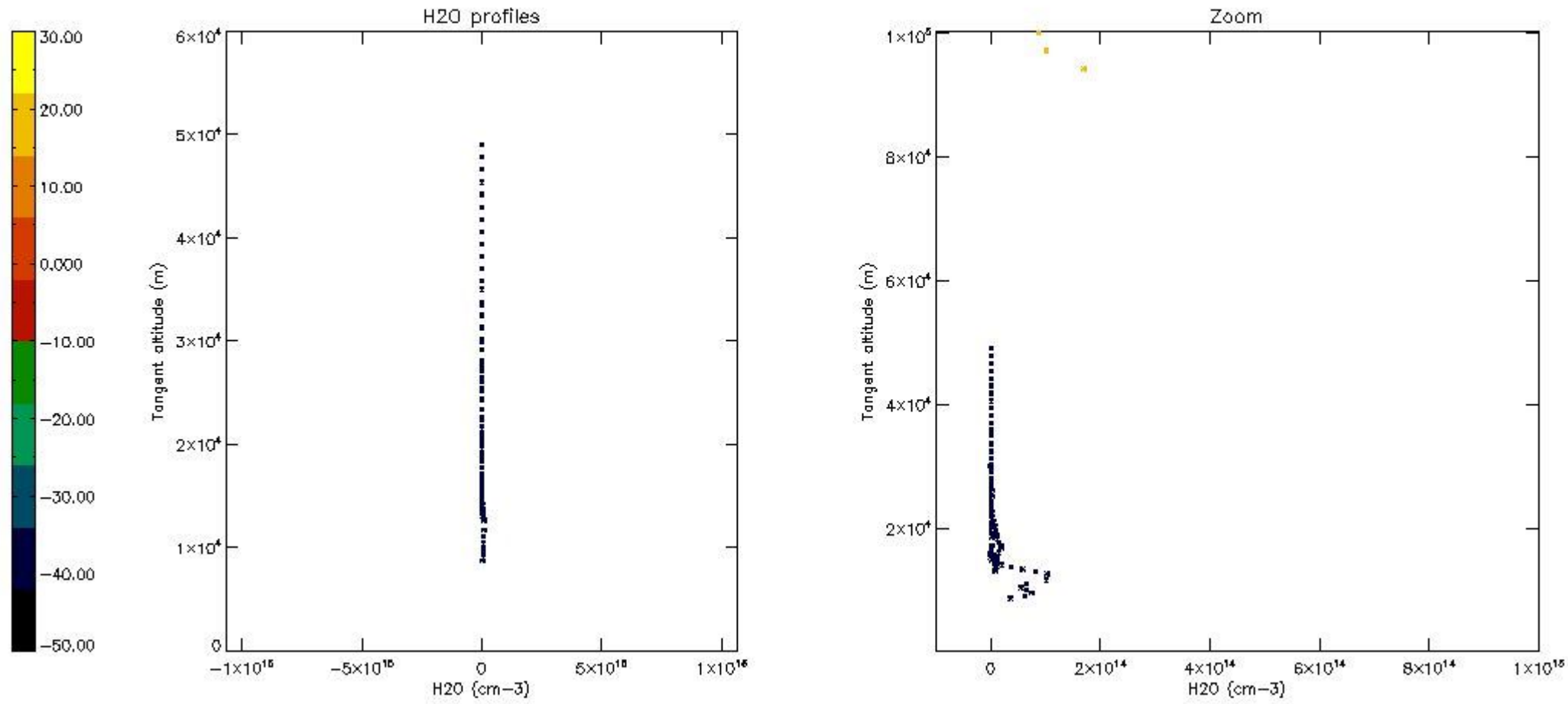
The colorbar represents the latitude.



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.

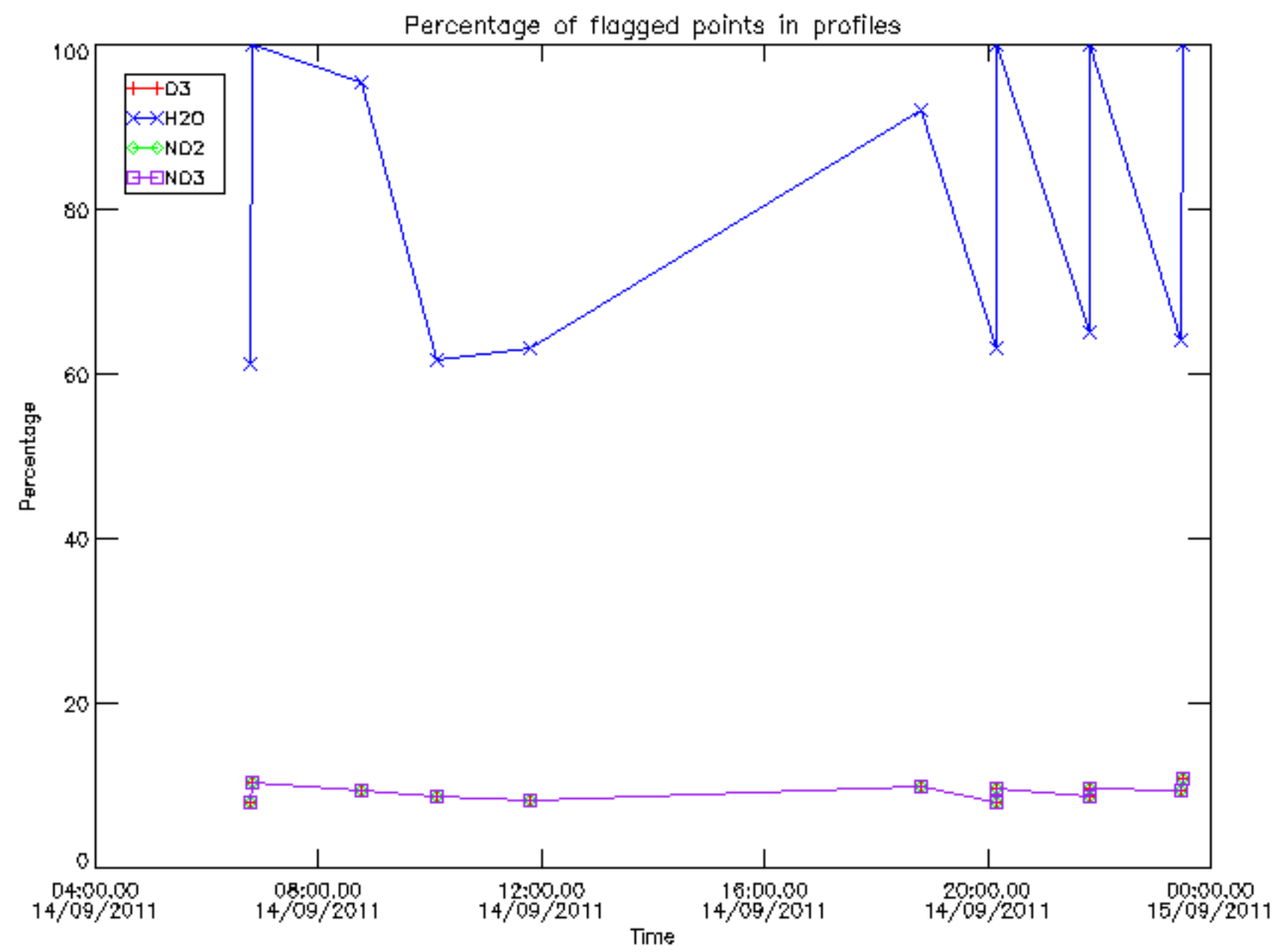




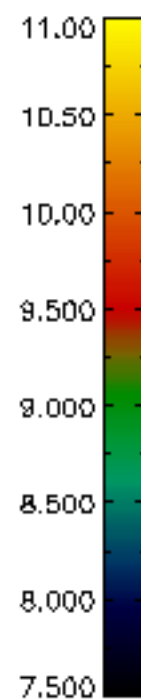
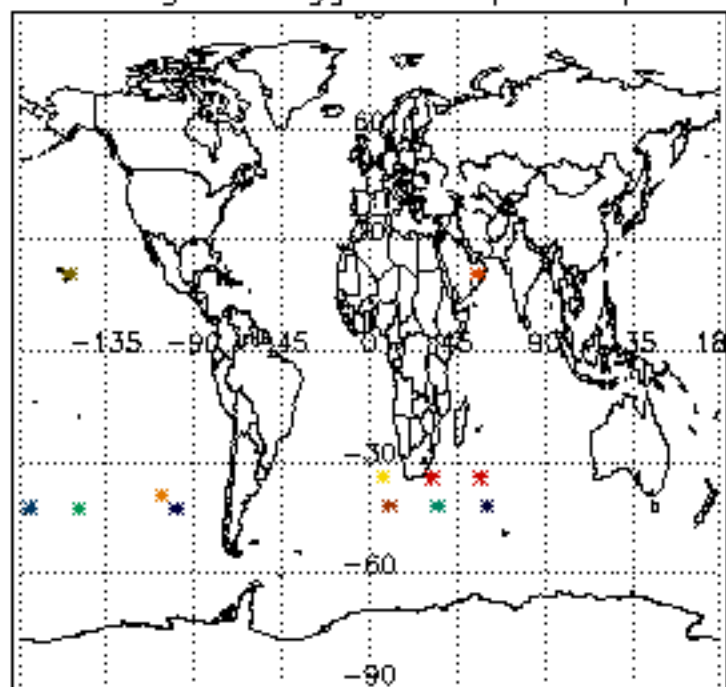
## 6. Auxiliary Data Files used for the production reported in section 2

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.

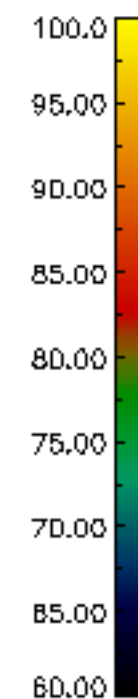
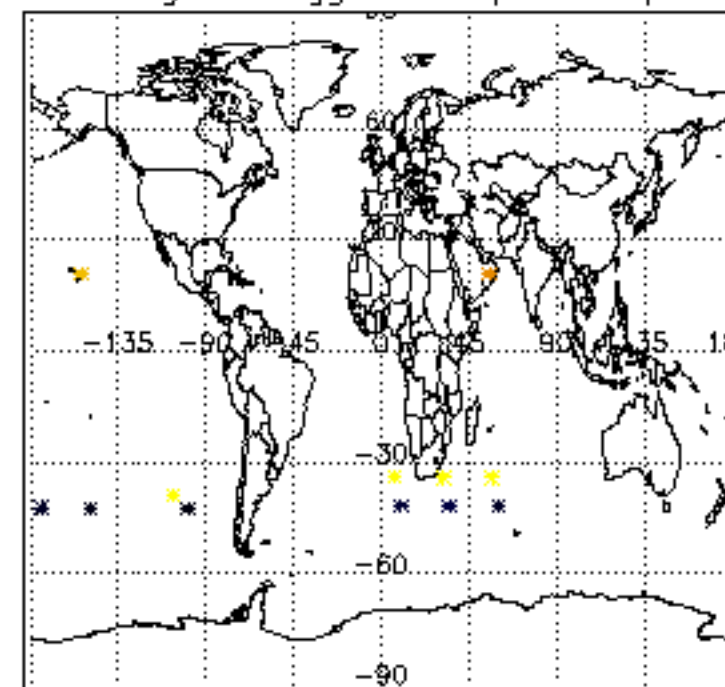
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	14-SEP-2011 06:46:32
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	14-SEP-2011 06:46:32
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	14-SEP-2011 06:46:32



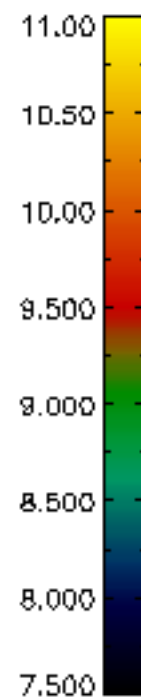
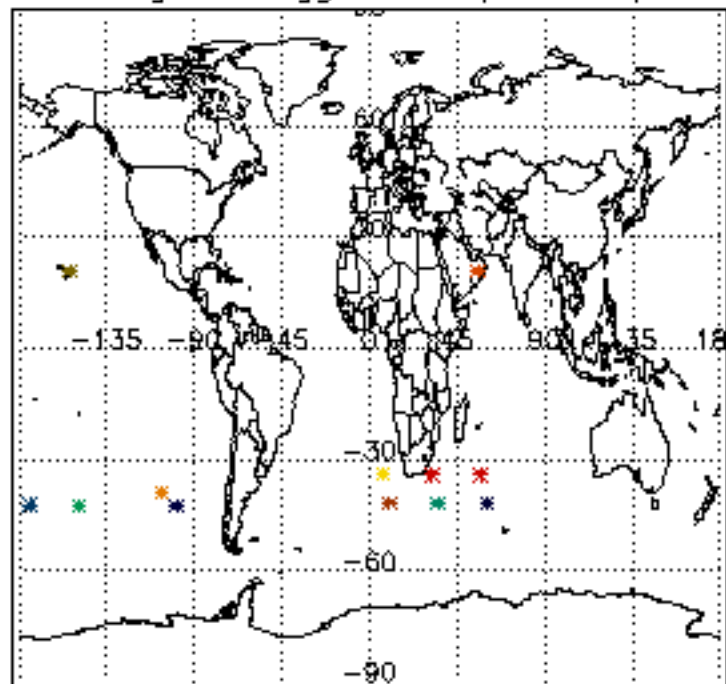
Percentage of flagged data per D3 profile



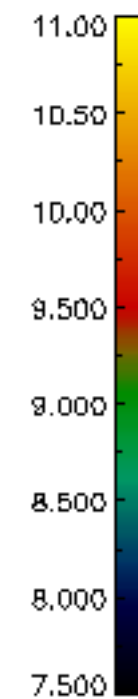
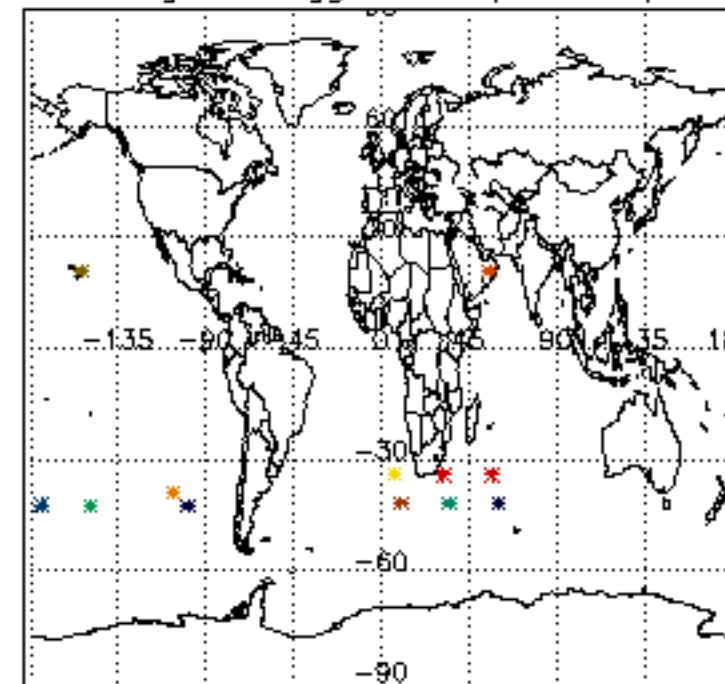
Percentage of flagged data per H2O profile

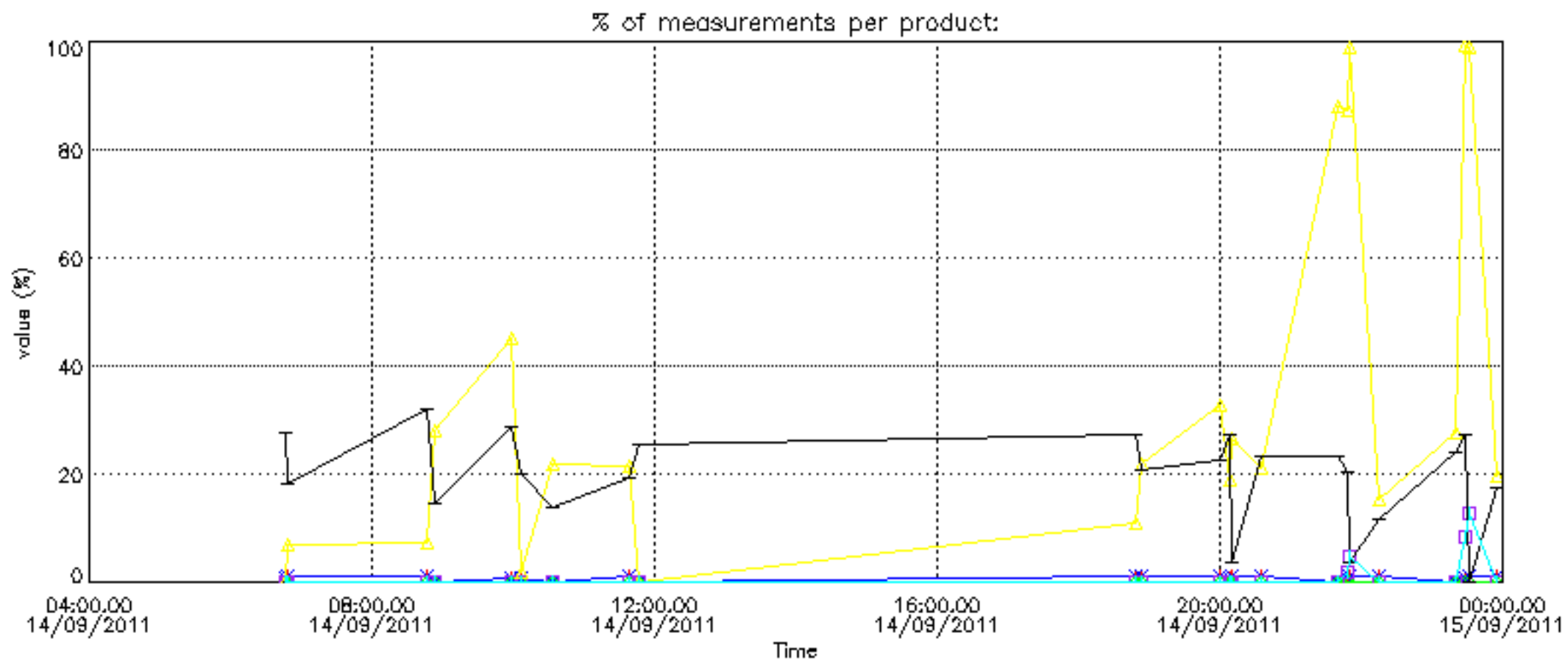


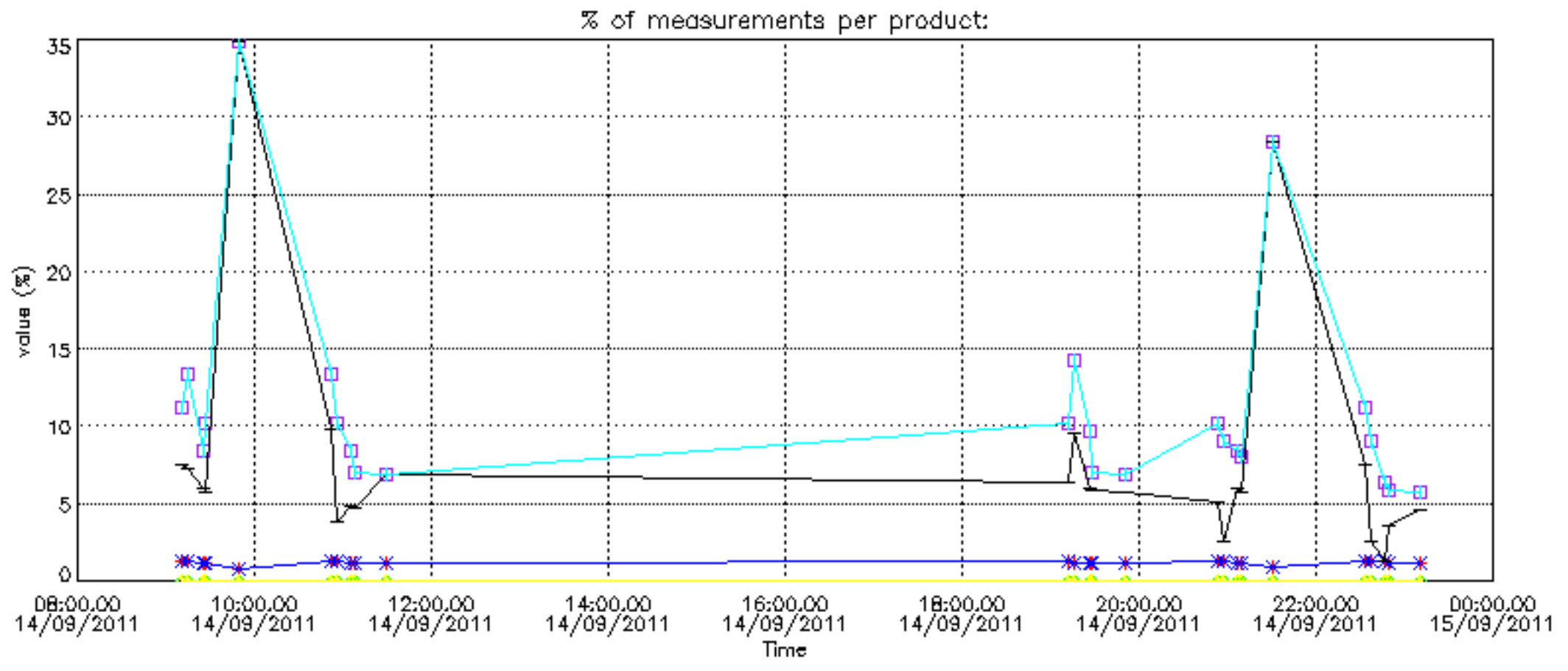
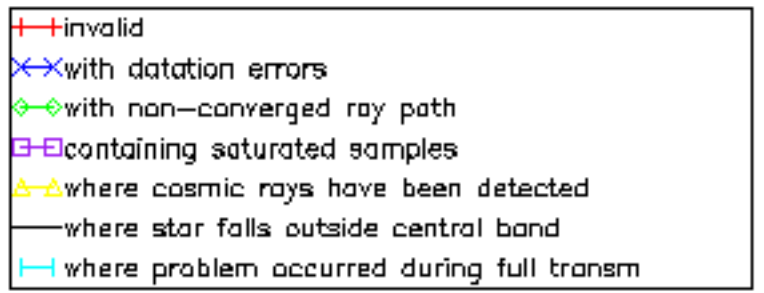
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

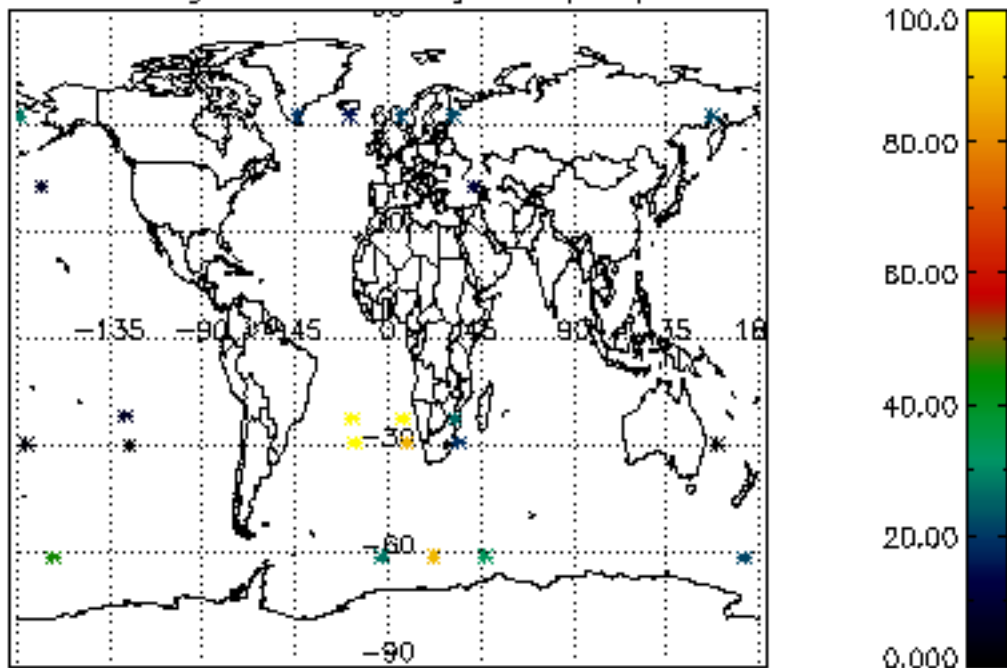




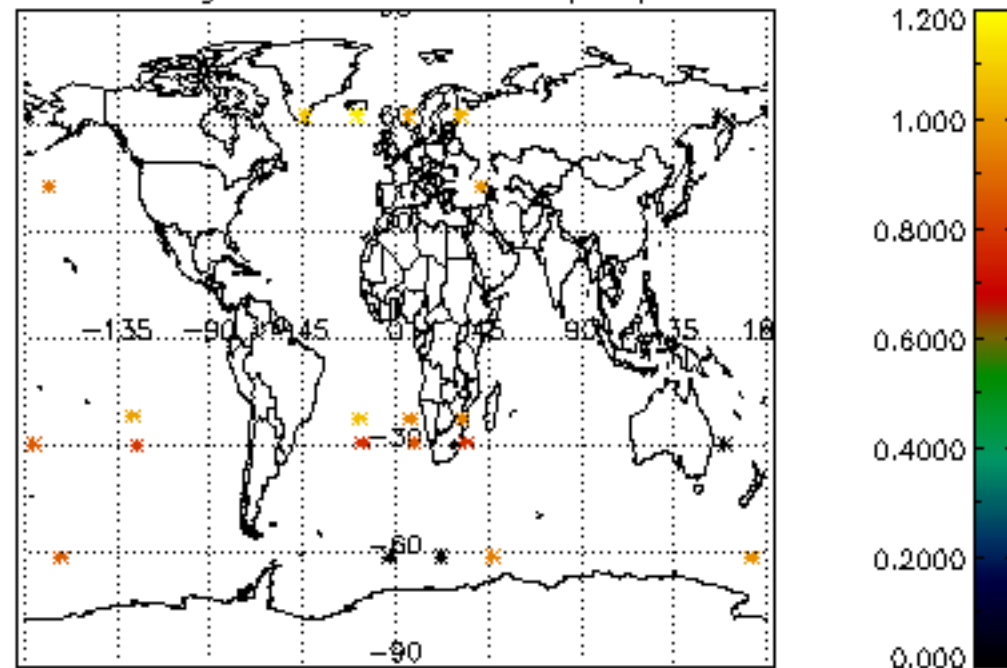




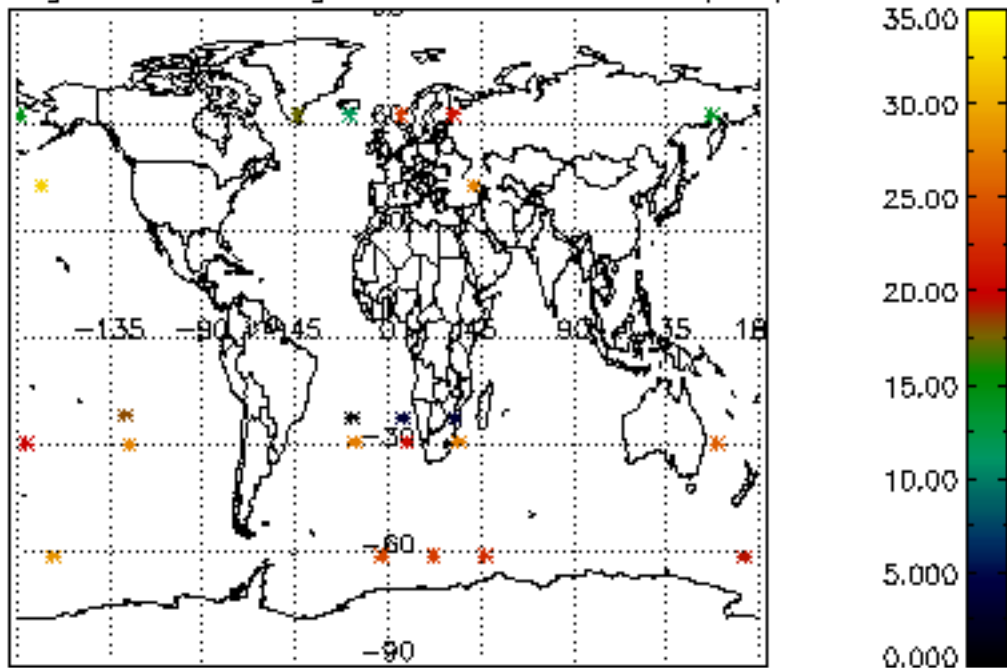
Percentage of cosmic ray hits per profile



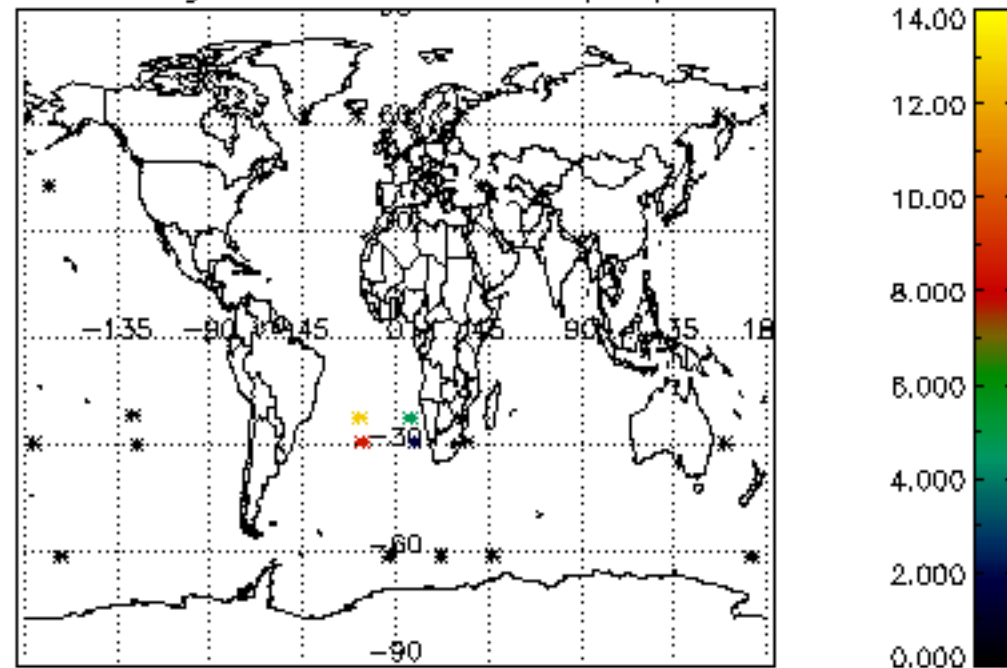
Percentage of datation errors per profile



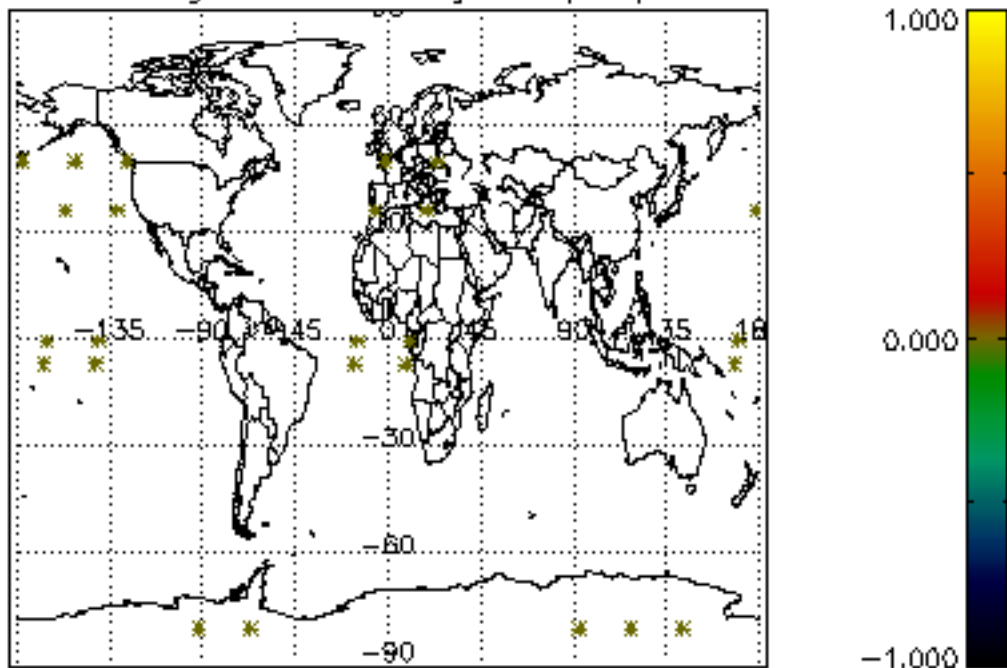
Percentage of star falling outside central band per profile



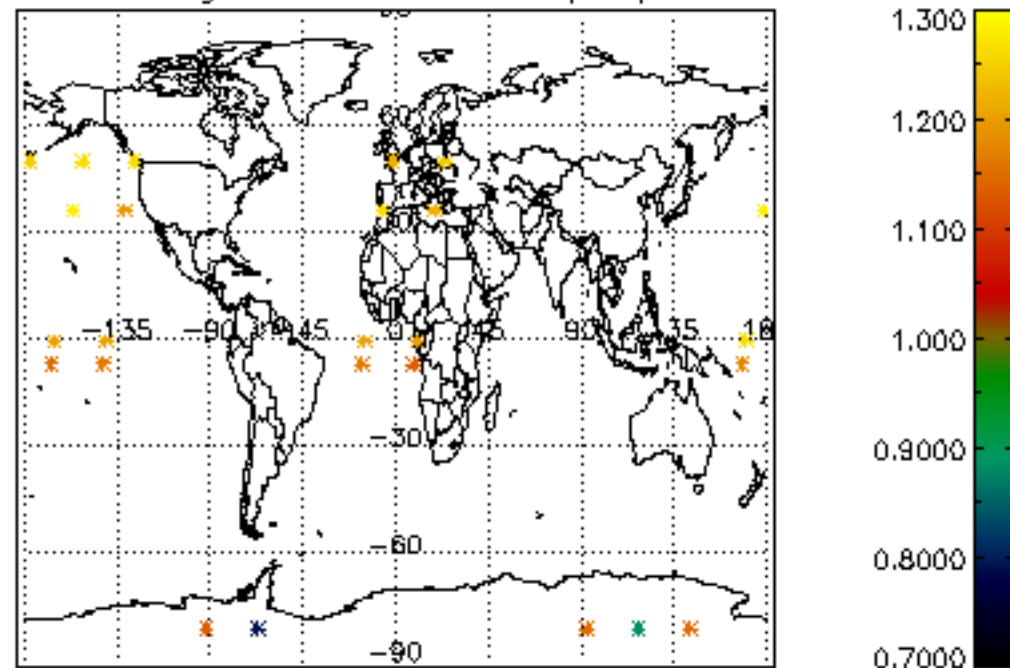
Percentage of saturation errors per profile



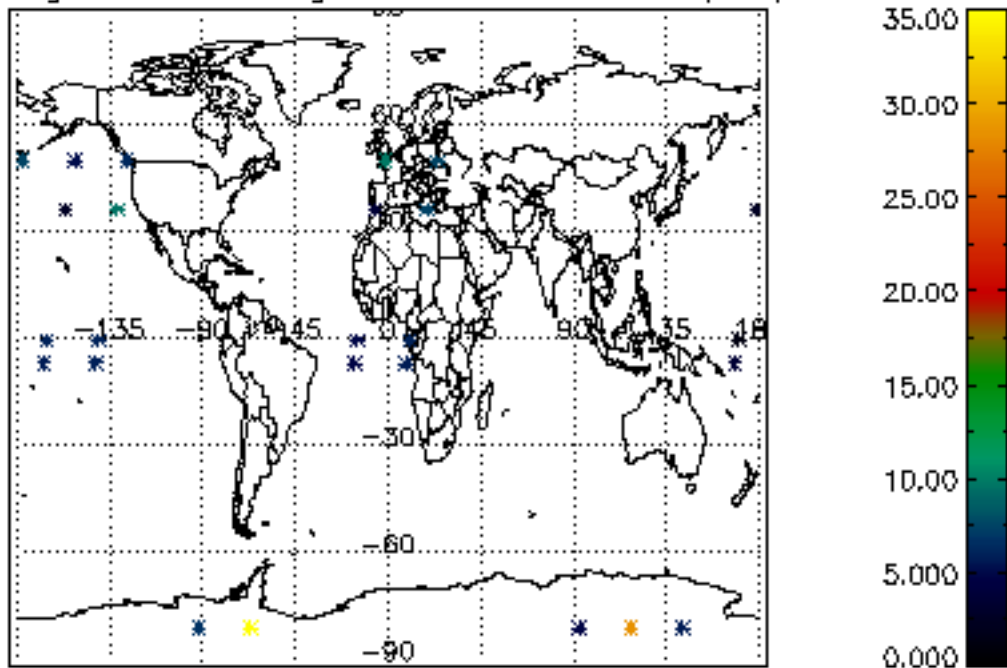
Percentage of cosmic ray hits per profile



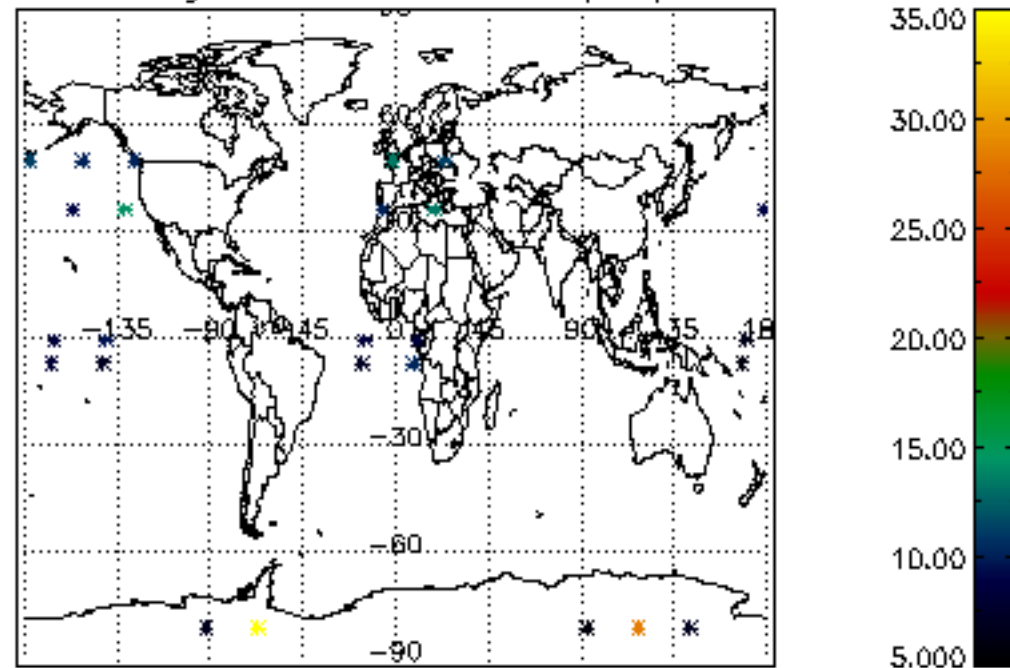
Percentage of datation errors per profile

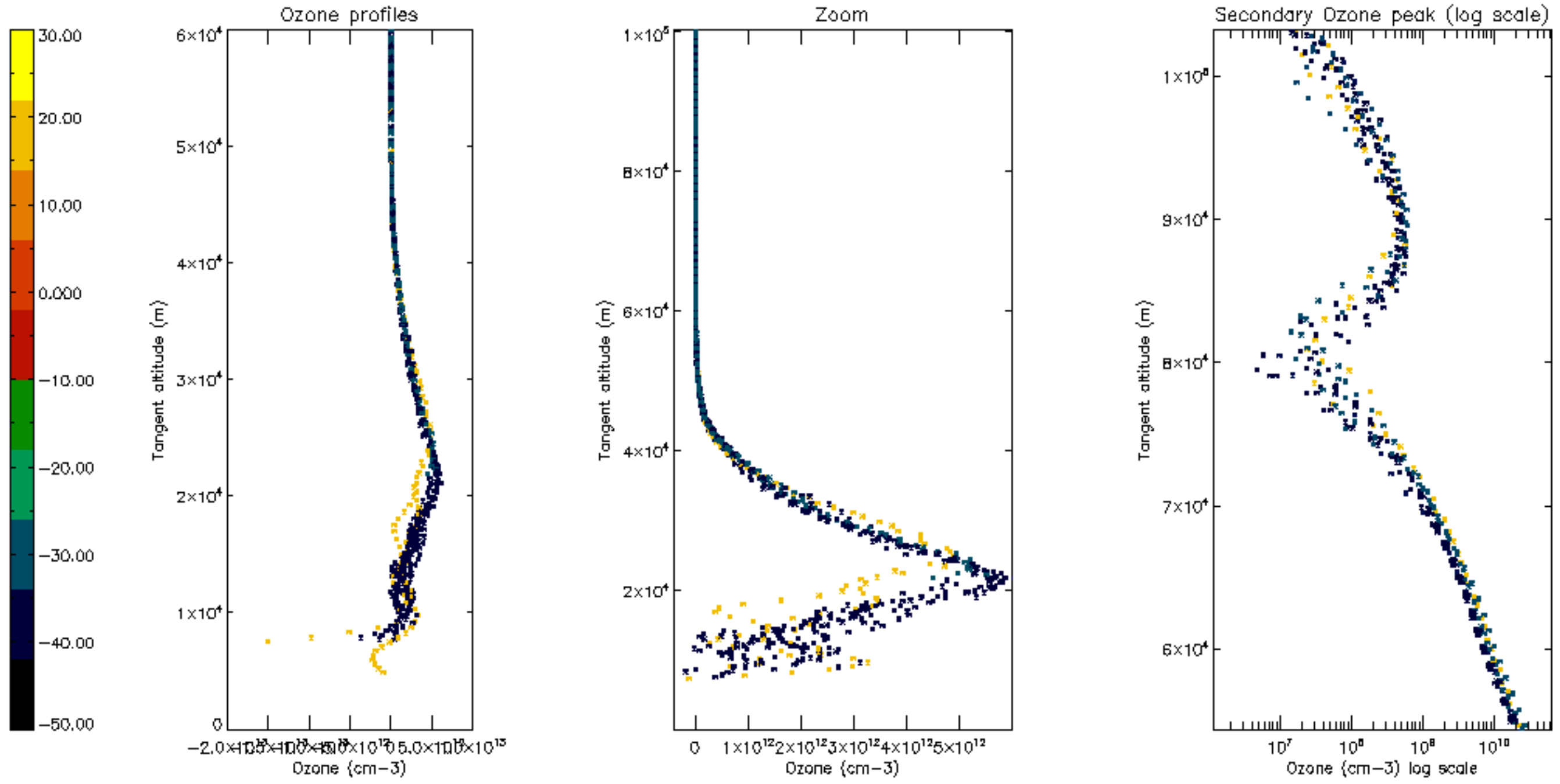


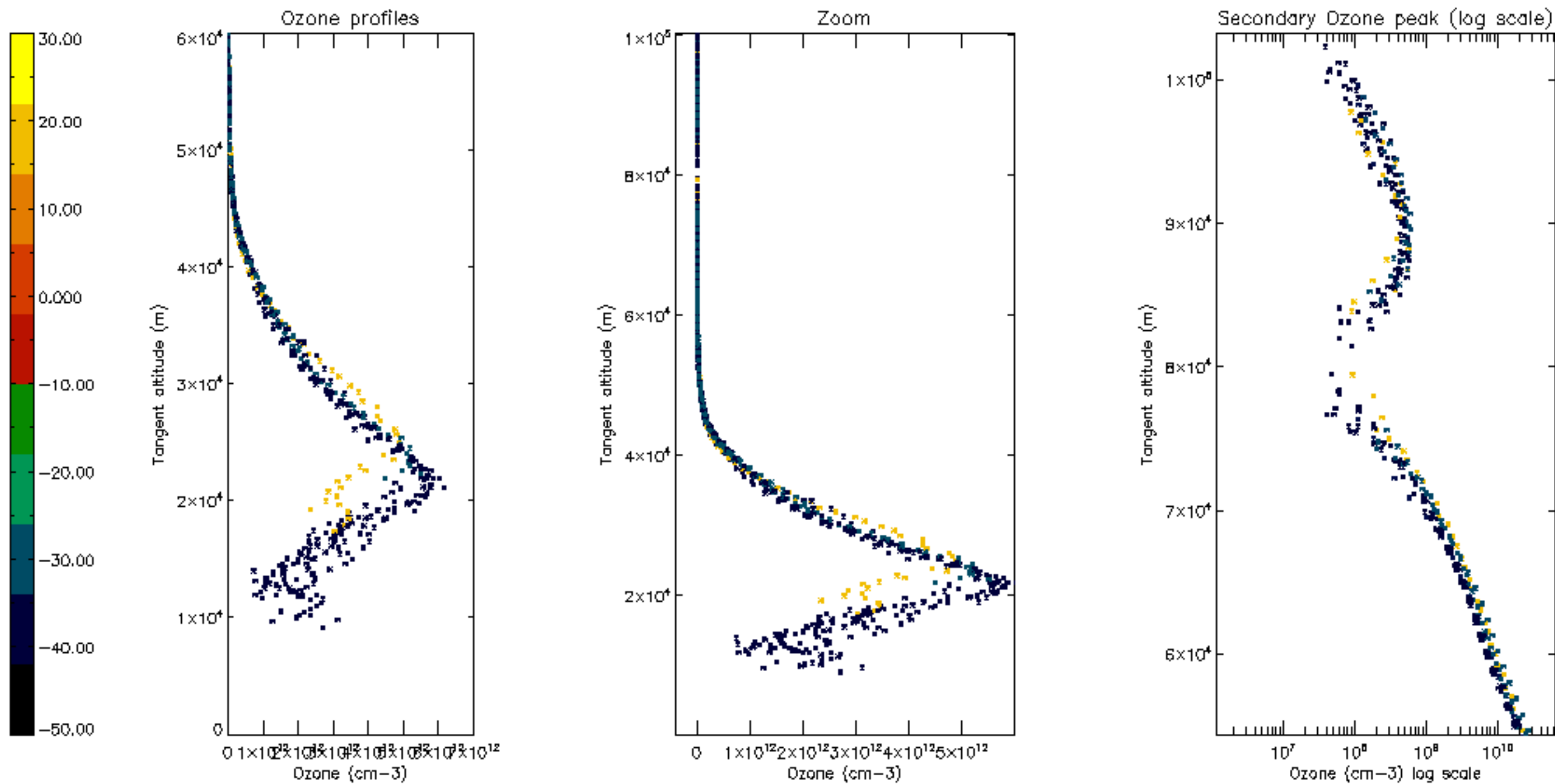
Percentage of star falling outside central band per profile



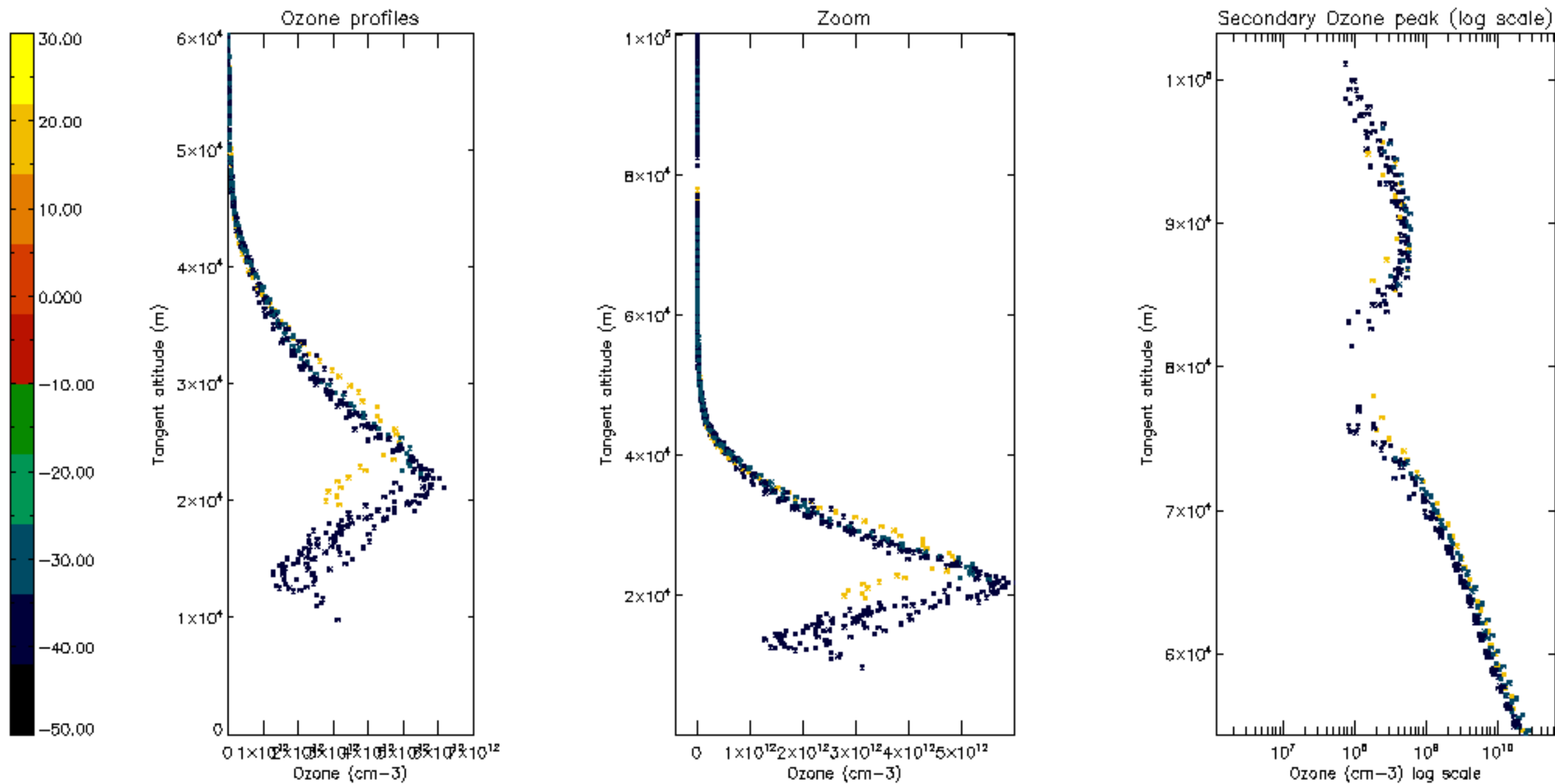
Percentage of saturation errors per profile

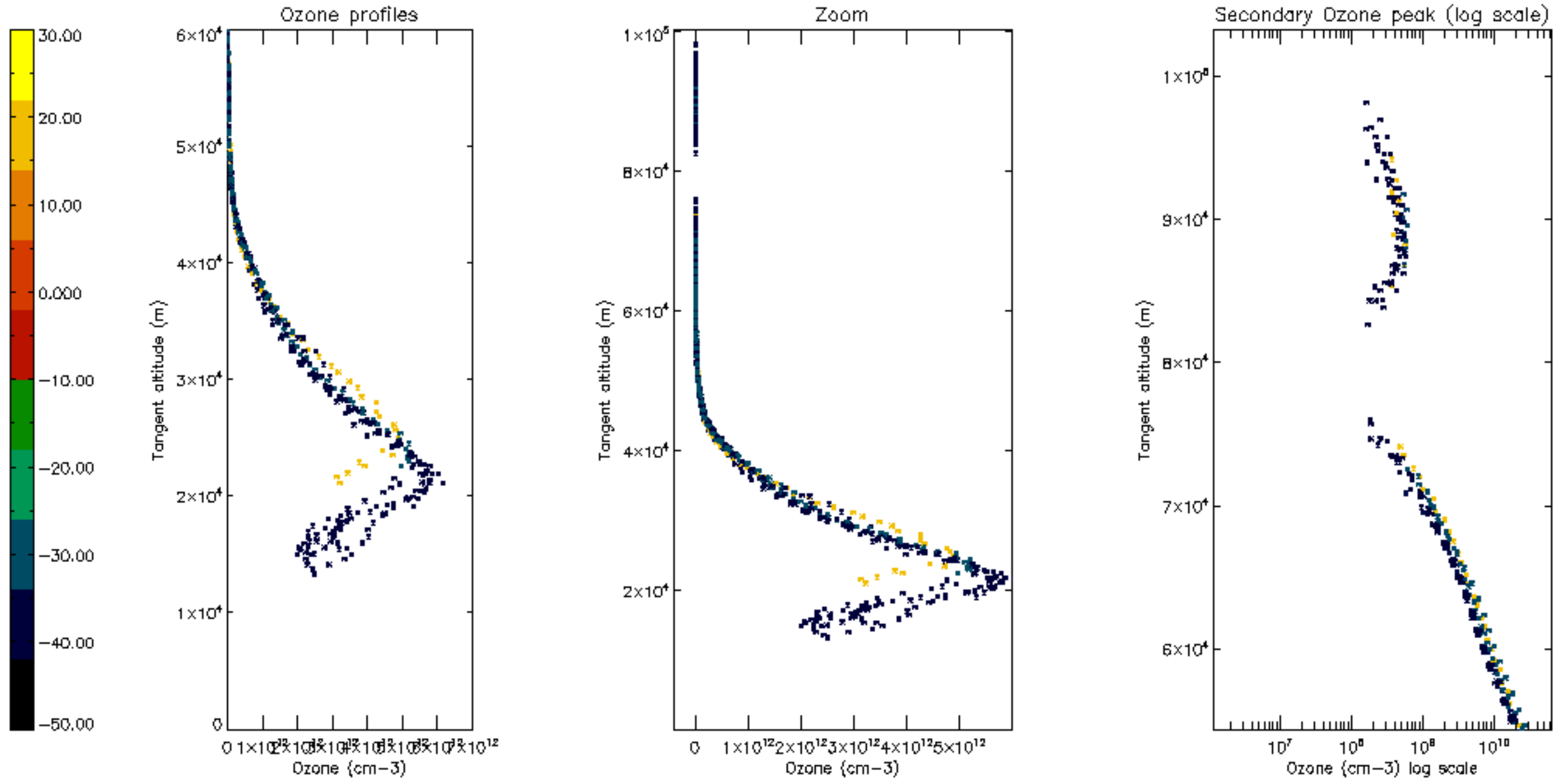


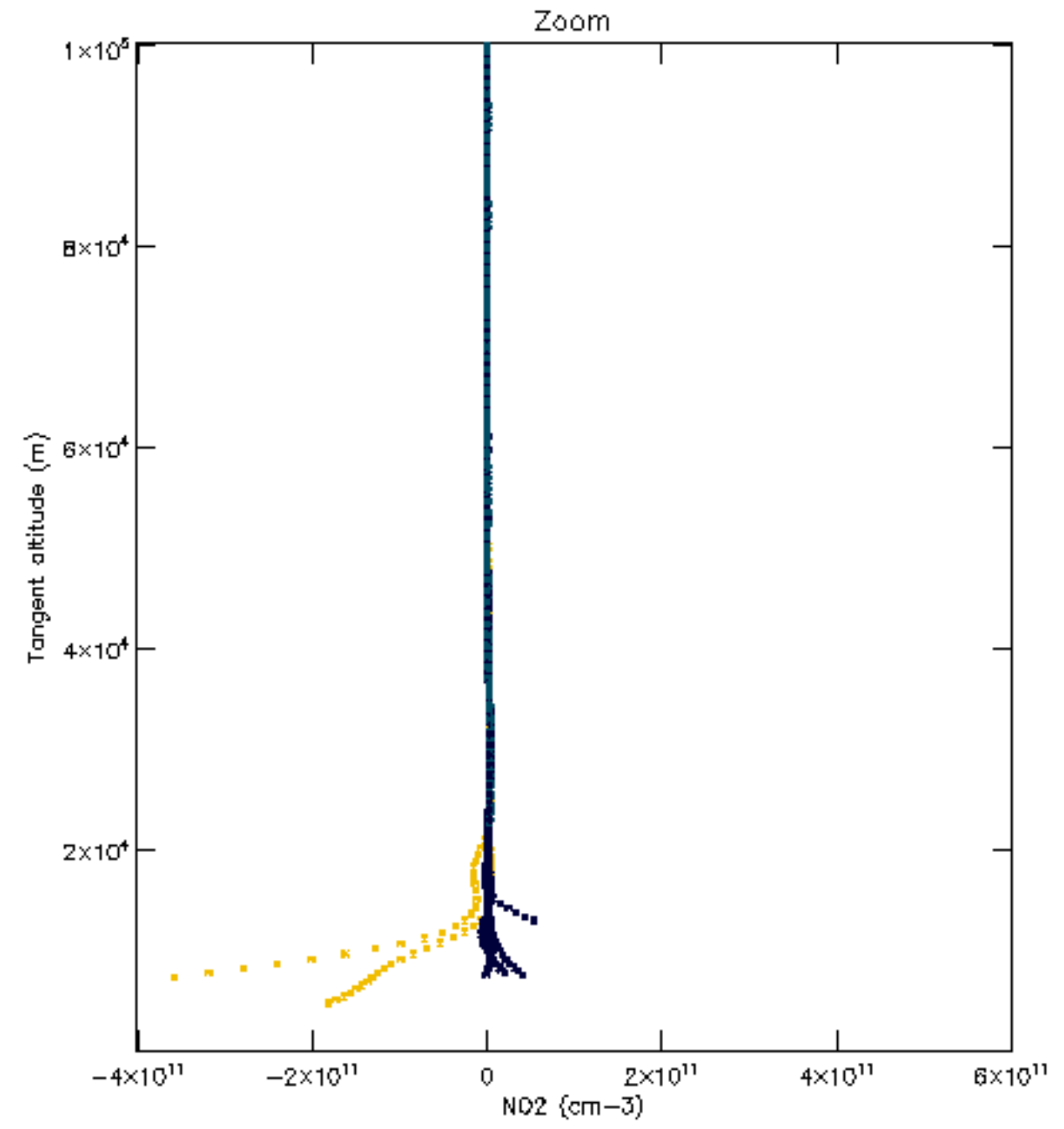
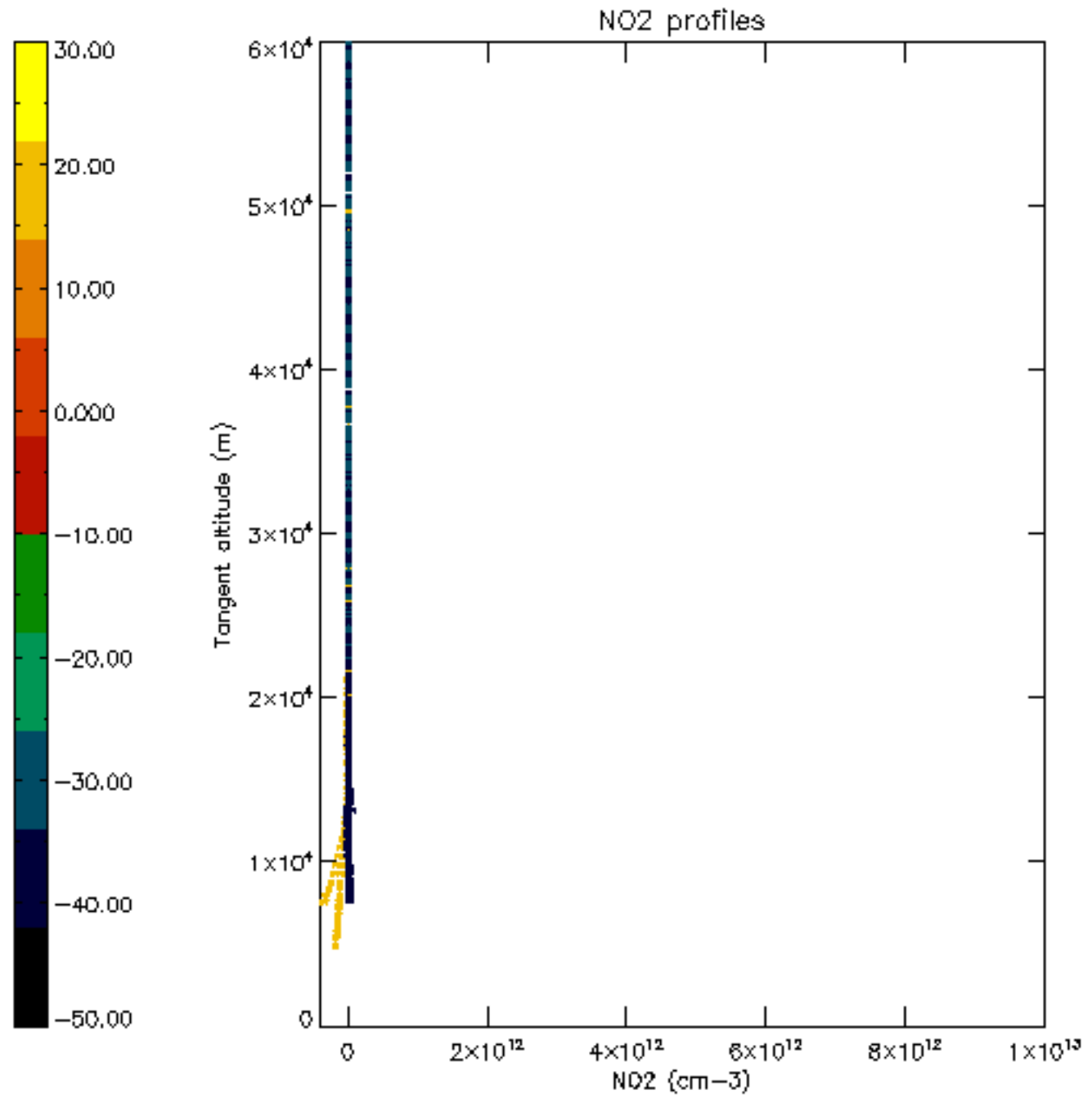


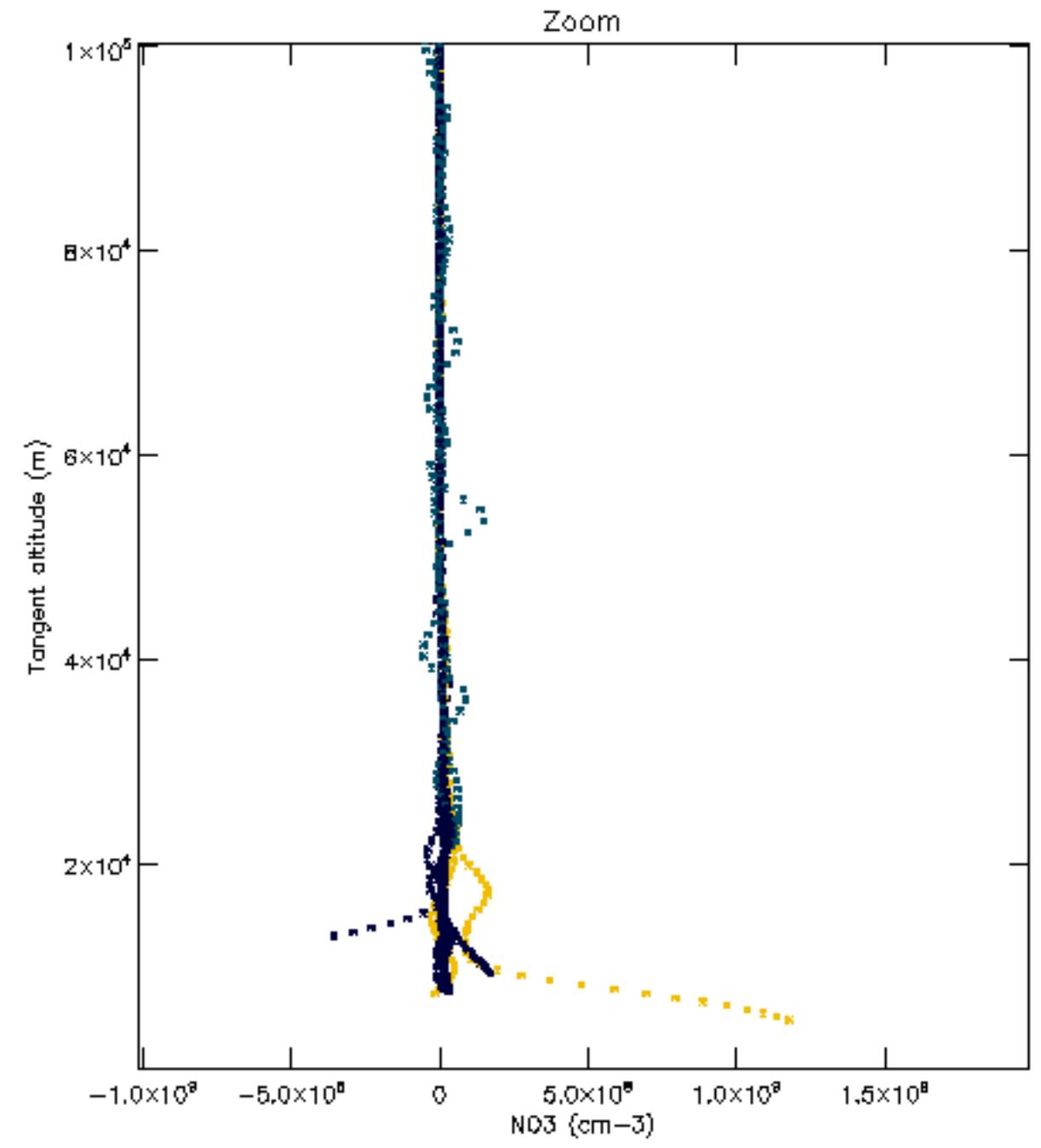
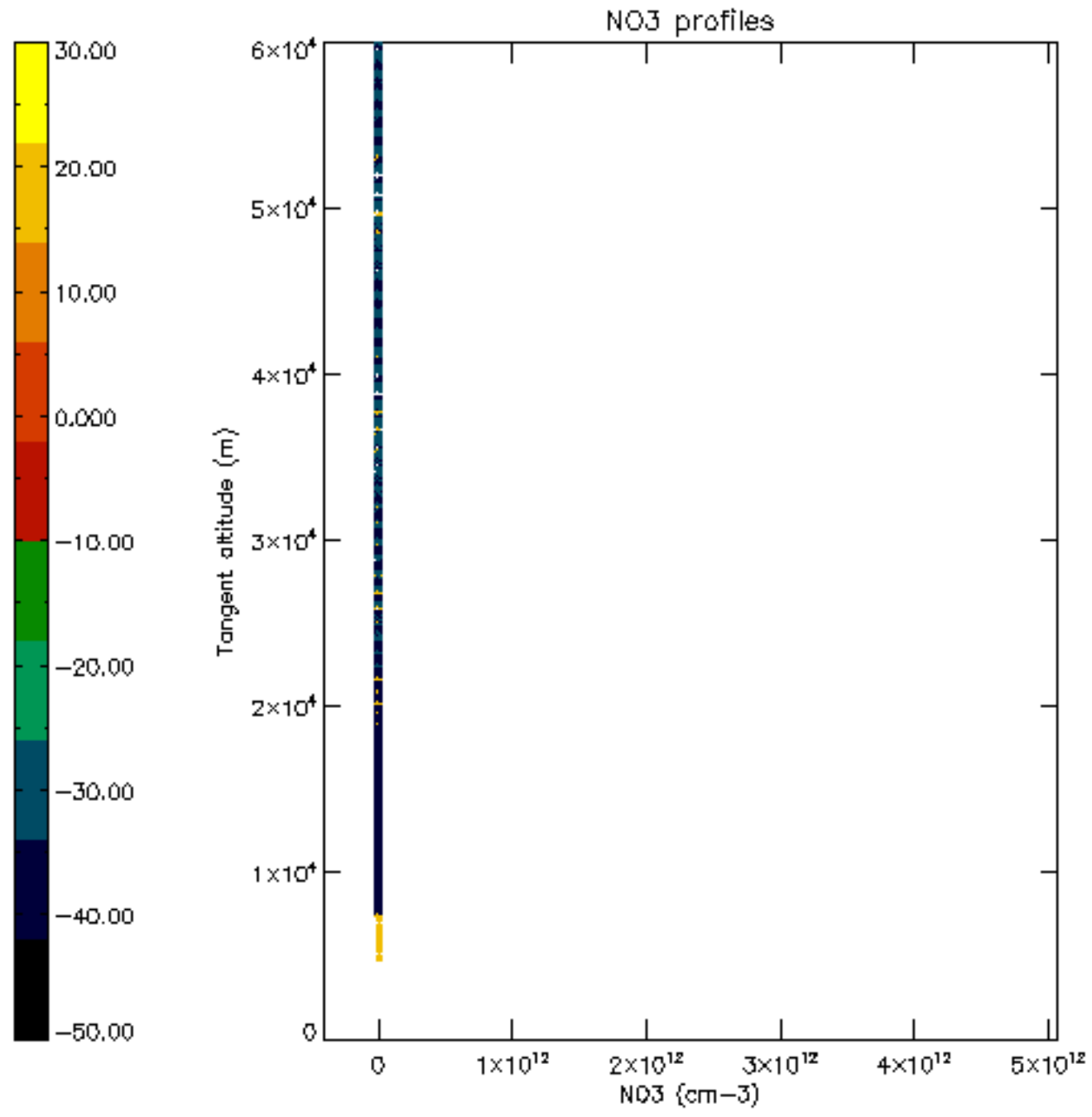


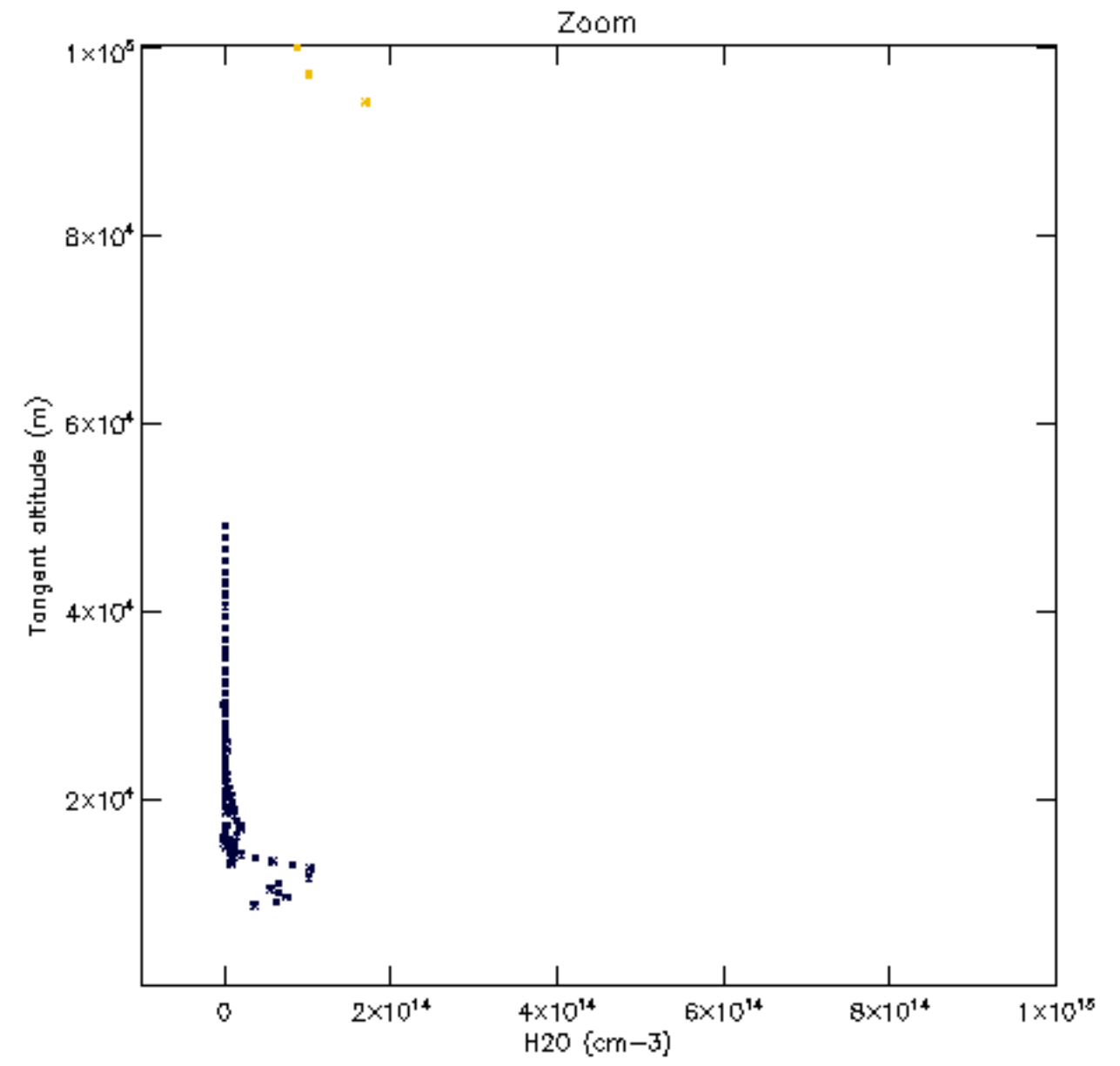
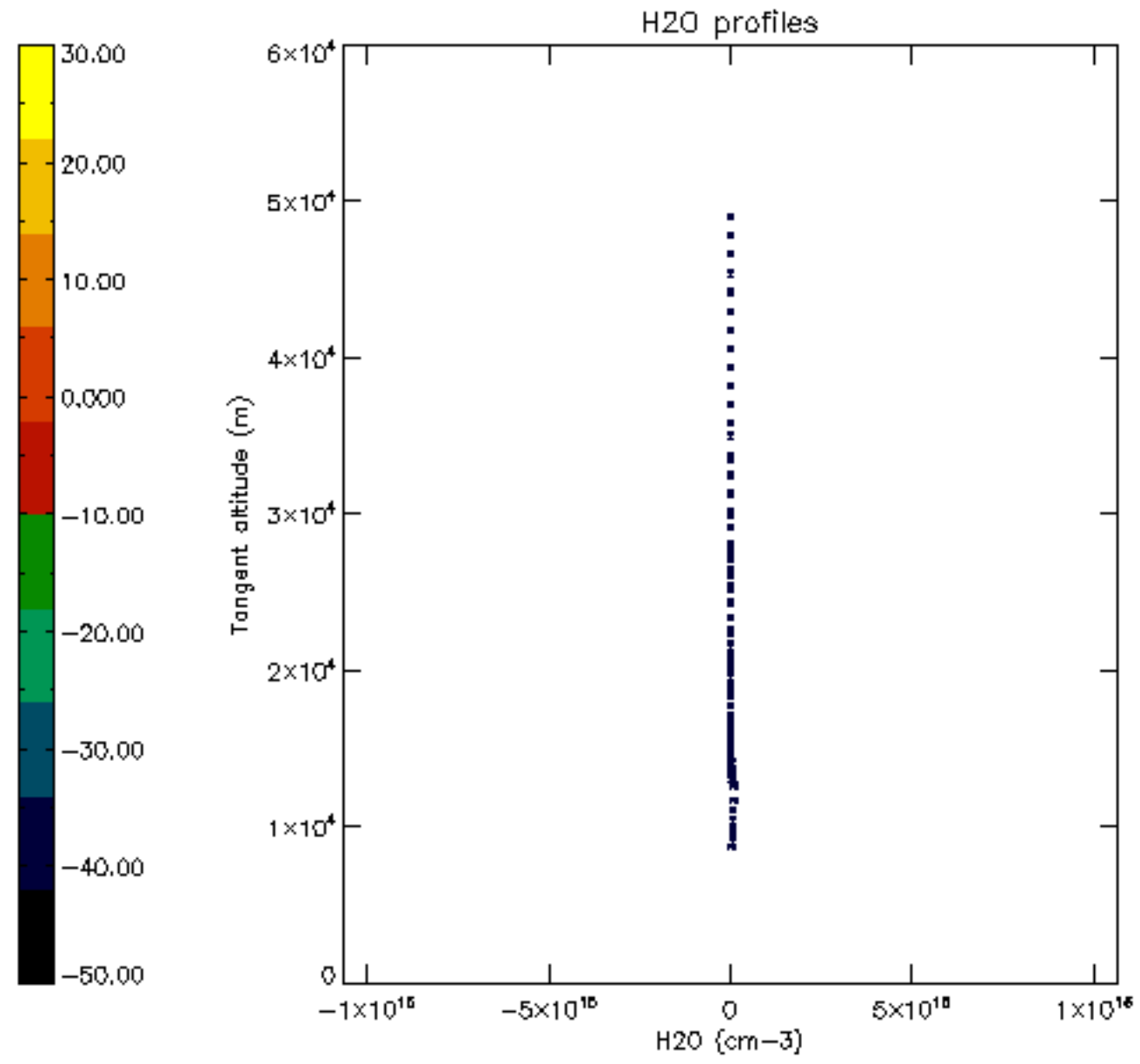




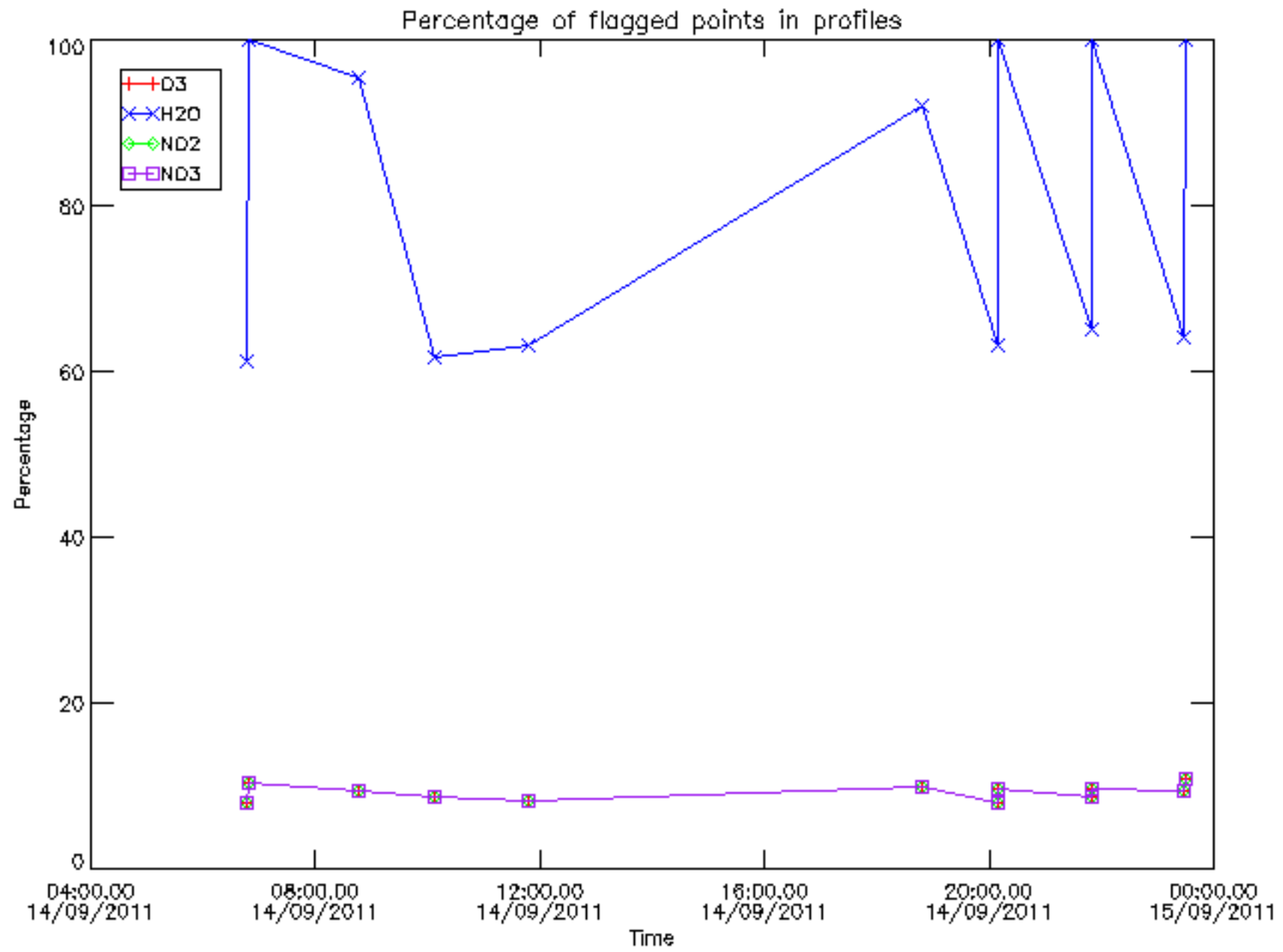




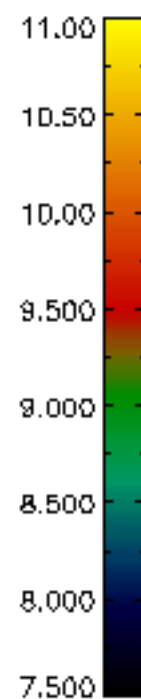
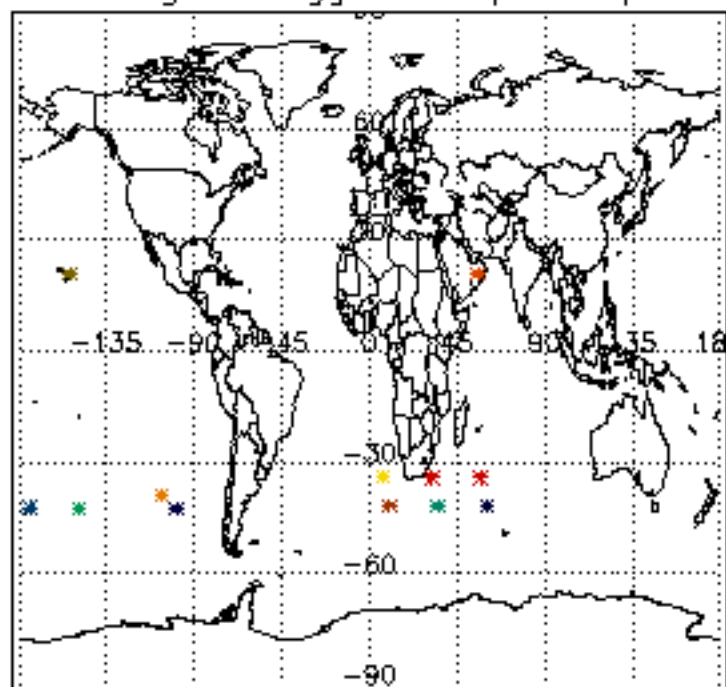




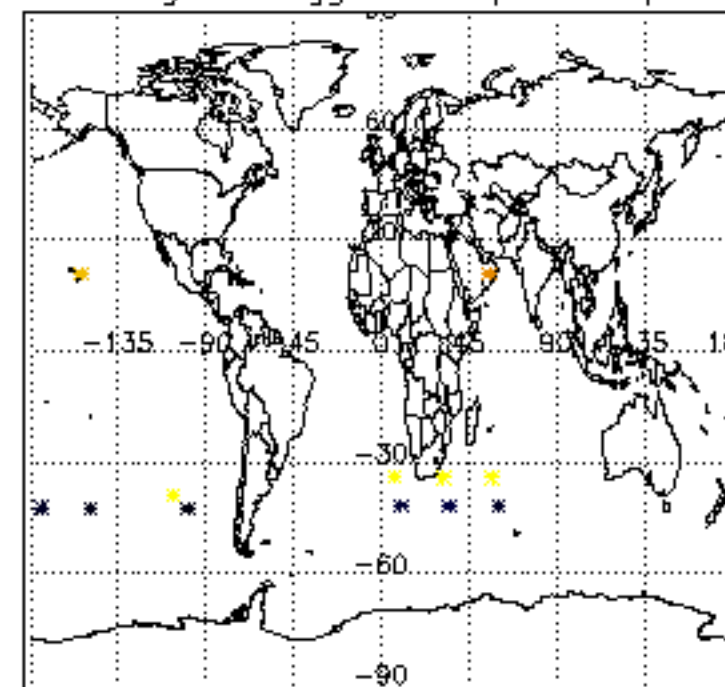




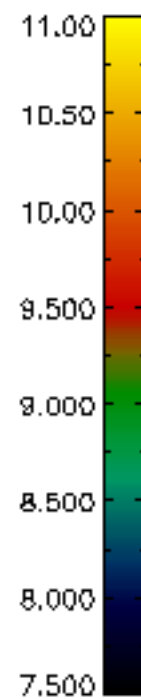
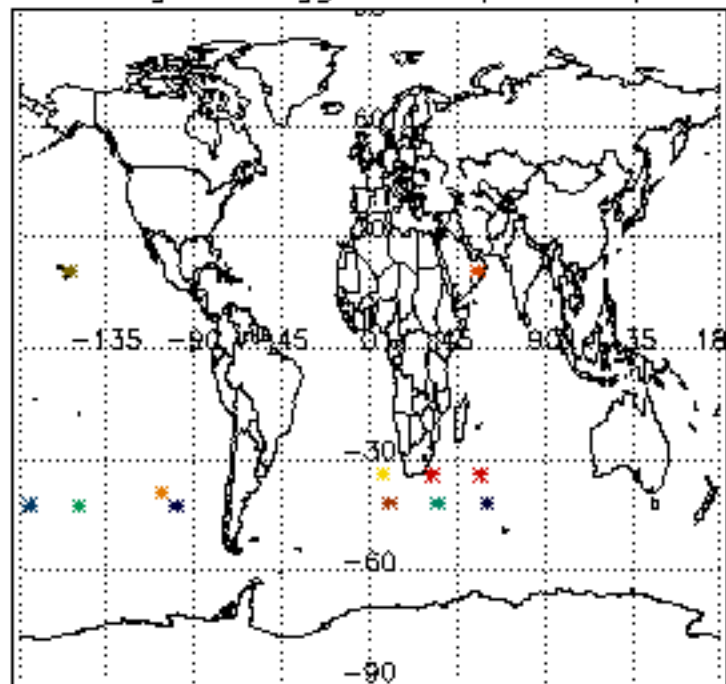
Percentage of flagged data per D3 profile



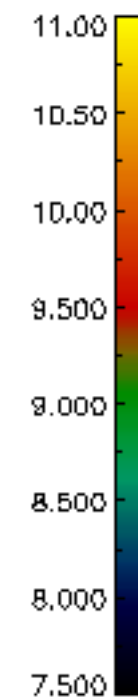
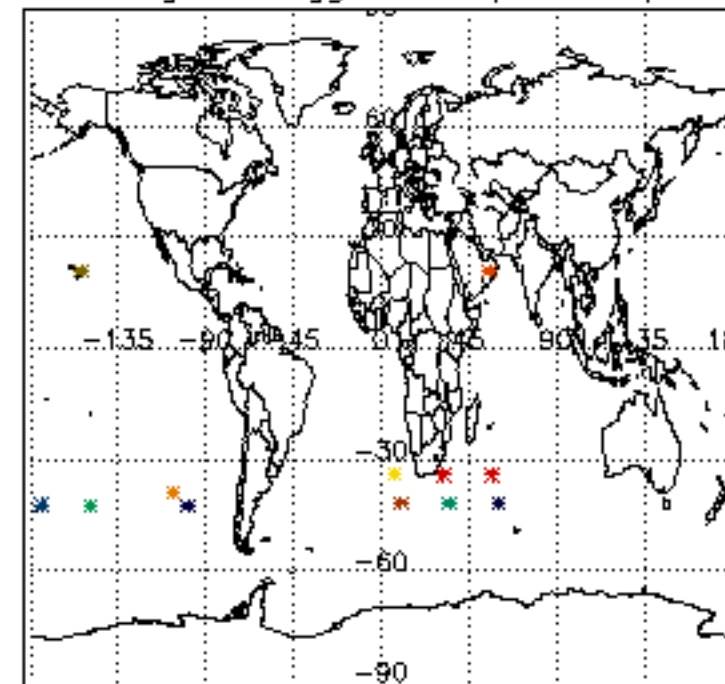
Percentage of flagged data per H2O profile

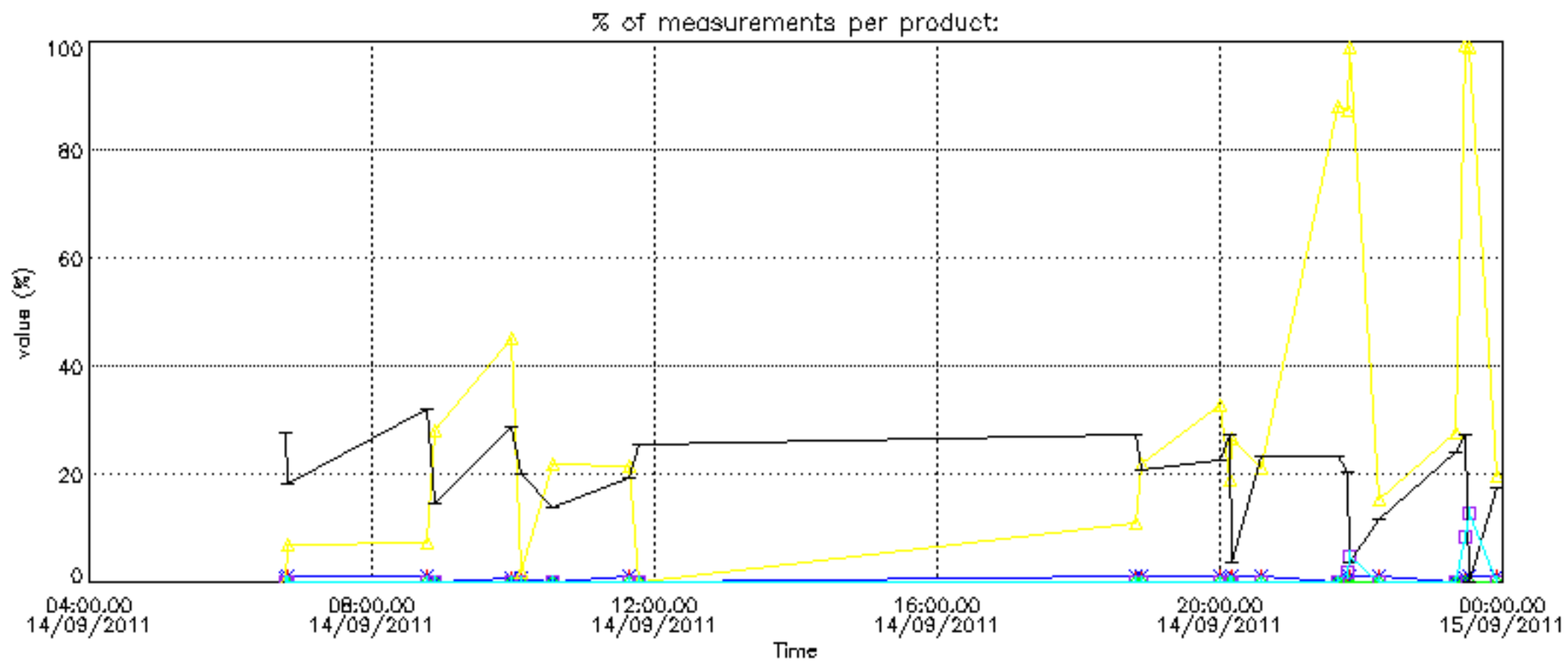


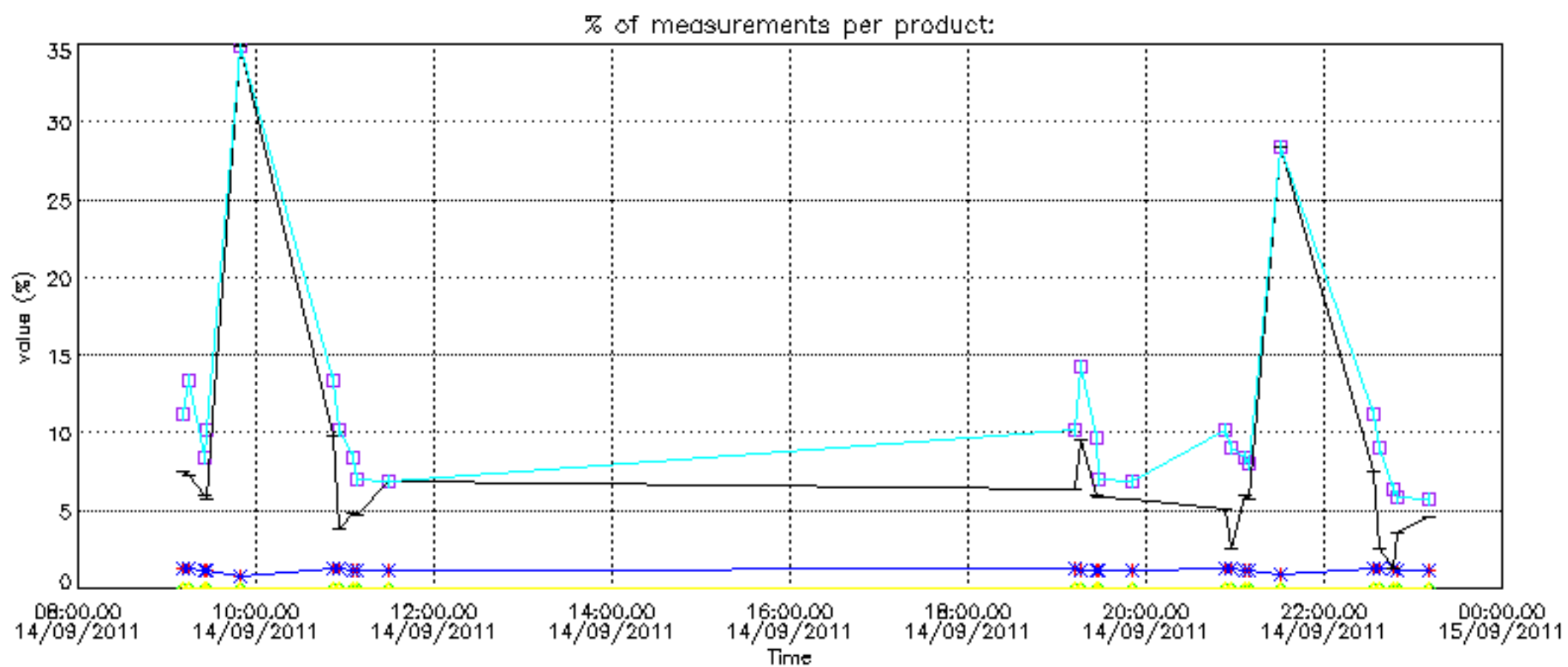
Percentage of flagged data per NO2 profile



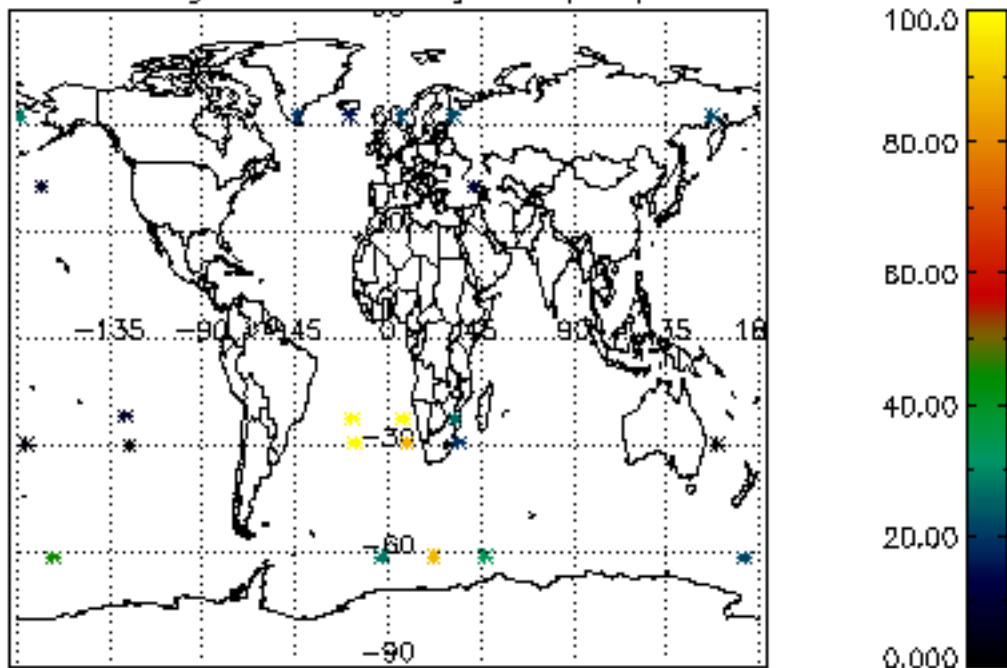
Percentage of flagged data per NO3 profile



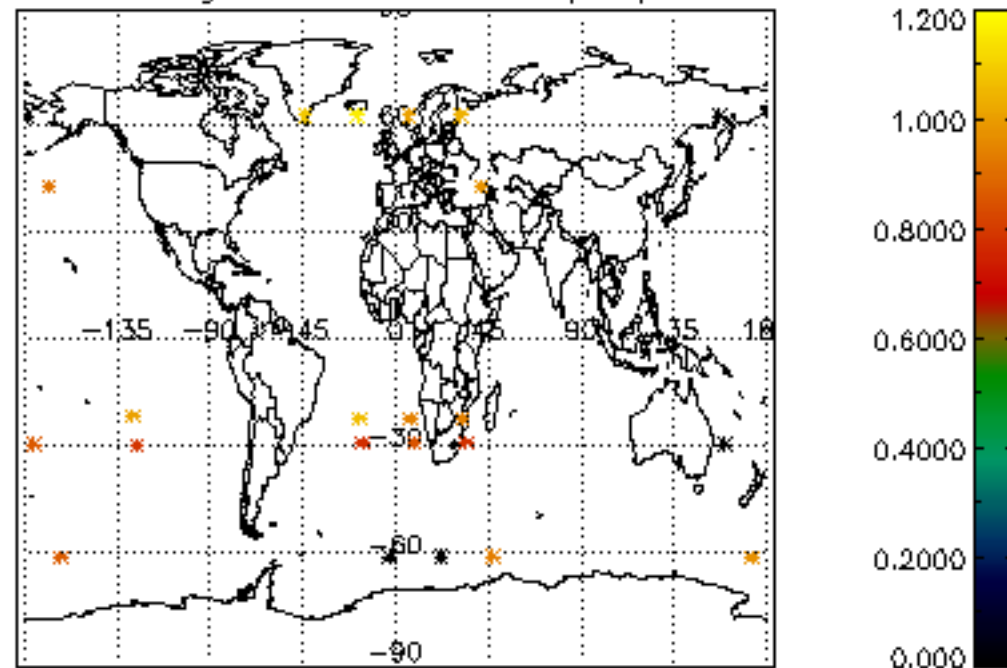




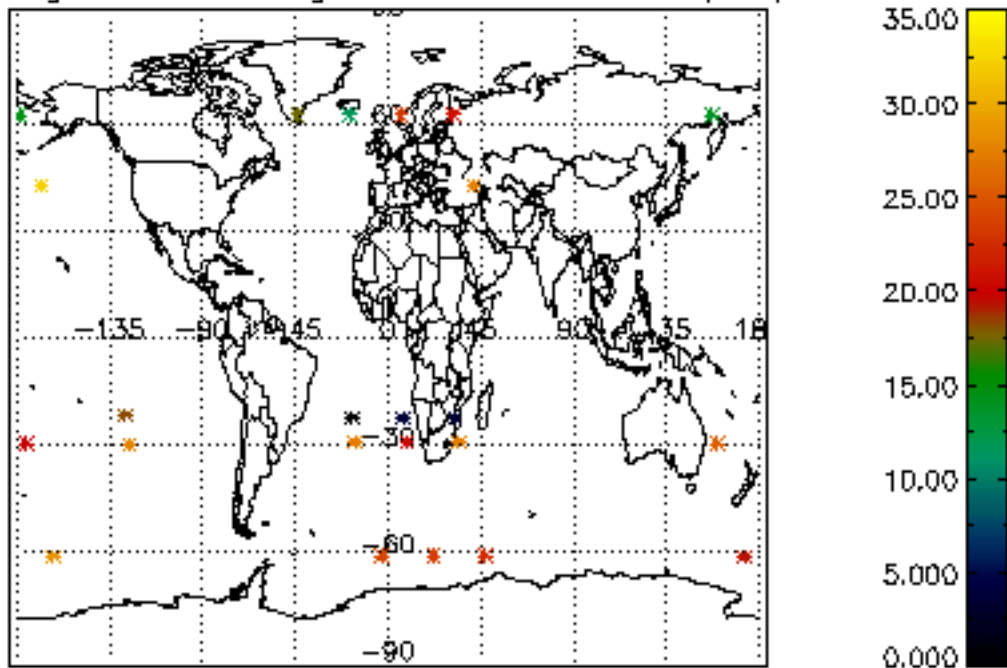
Percentage of cosmic ray hits per profile



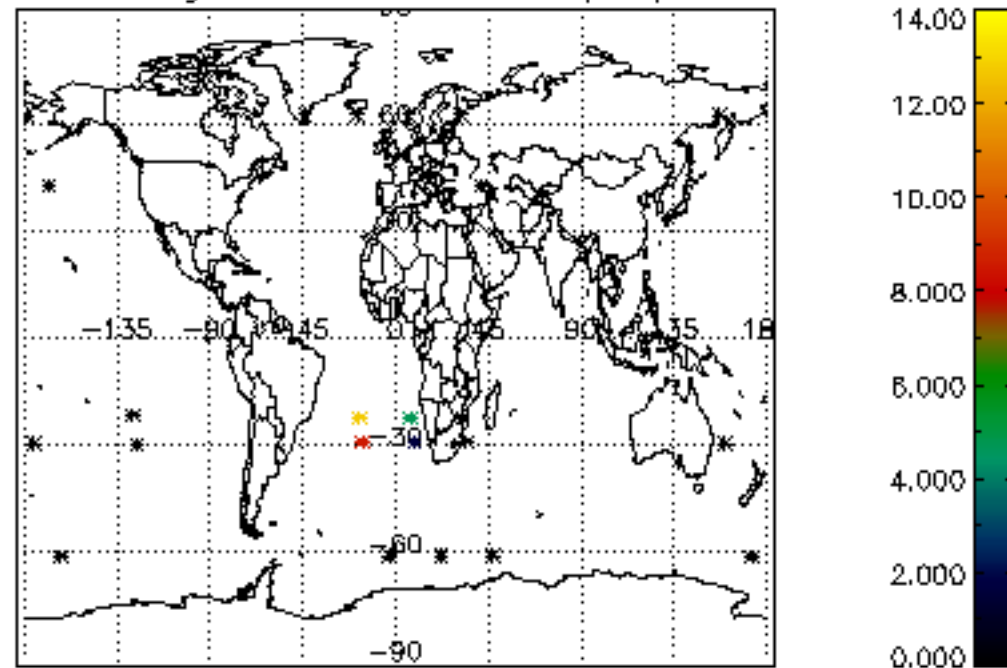
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

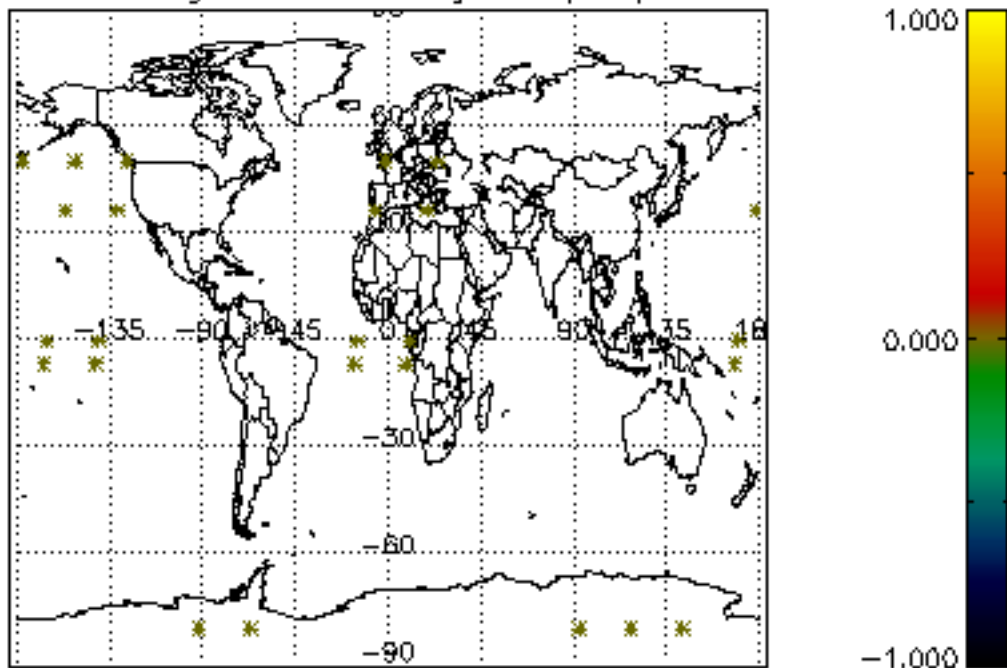


Percentage of saturation errors per profile

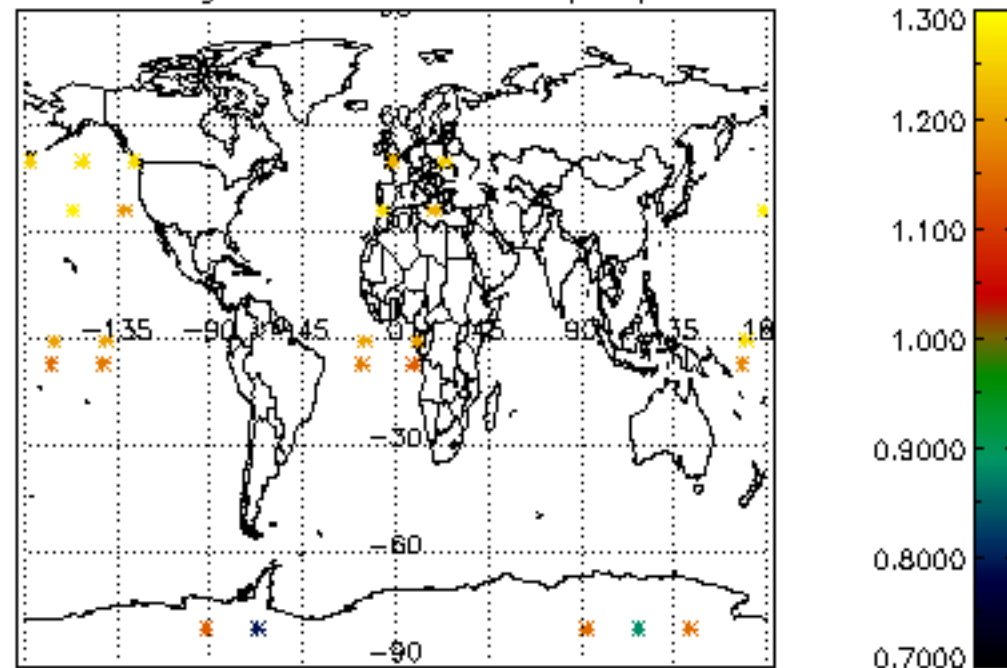




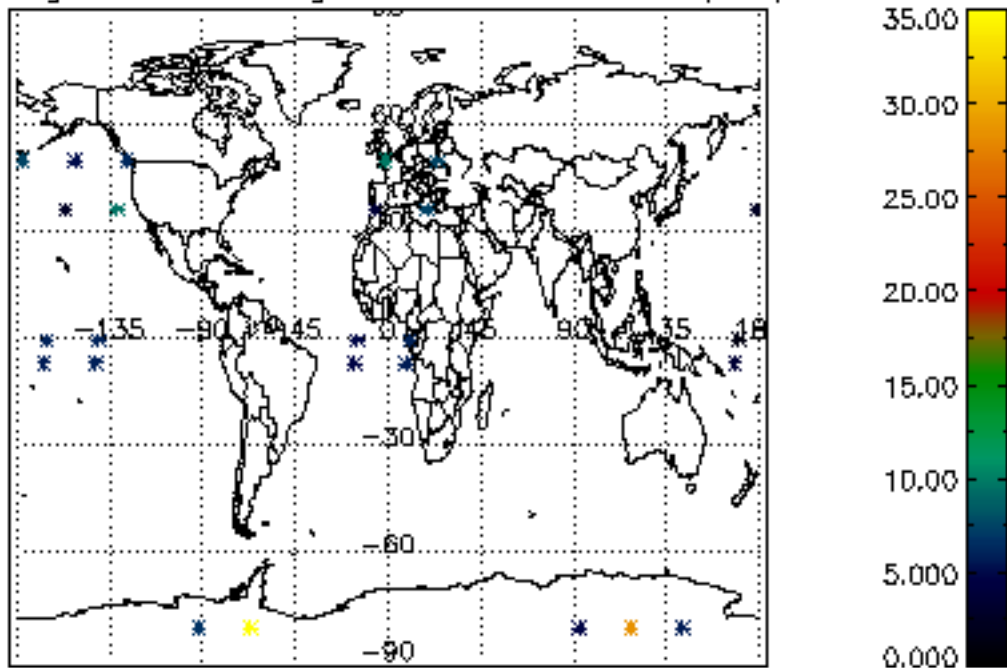
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

