

# 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 14:11:44
Data source version	GOMOS/6.01
Start time of products	30-05-2011 (30MAY2011 00:00:00)
Stop time of products	31-05-2011 (31MAY2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	327
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__2PRFIN20110530_000049_00000513103_00059_48349_7153.N1	30-MAY-2011 00:00:49	Bright	51.000	76	27Gam Cas	2.3000	30000.	102	48349	No
2	GOM_NL__2PRFIN20110530_000828_000000463103_00059_48349_7154.N1	30-MAY-2011 00:08:28	Bright	45.500	53	43Bet And	2.0480	3300.0	91	48349	No
3	GOM_NL__2PRFIN20110530_001106_000000533103_00059_48349_7155.N1	30-MAY-2011 00:11:06	Twilight	53.000	58	21Alp And	2.0730	11000.	106	48349	No
4	GOM_NL__2PRFIN20110530_001557_000000513103_00059_48349_7156.N1	30-MAY-2011 00:15:57	Dark	50.500	140	88Gam Peg	2.8340	26000.	101	48349	No
5	GOM_NL__2PRFIN20110530_002454_000000493103_00059_48349_7157.N1	30-MAY-2011 00:24:54	Dark	48.500	52	16Bet Cet	2.0370	4500.0	97	48349	No
6	GOM_NL__2PRFIN20110530_003321_000000653103_00059_48349_7158.N1	30-MAY-2011 00:33:21	Dark	65.000	18	24Alp PsA	1.1660	9700.0	130	48349	No
7	GOM_NL__2PRFIN20110530_003647_000000613103_00060_48350_7145.N1	30-MAY-2011 00:36:47	Dark	61.000	63	Bet Gru	2.1500	2800.0	122	48350	No
8	GOM_NL__2PRFIN20110530_003838_000000463103_00060_48350_7146.N1	30-MAY-2011 00:38:38	Dark	45.500	31	Alp Gru	1.7340	15200.	91	48350	No
9	GOM_NL__2PRFIN20110530_004340_000000483103_00060_48350_7147.N1	30-MAY-2011 00:43:40	Straylight	48.000	45	Alp Pav	1.9400	26000.	96	48350	No
10	GOM_NL__2PRFIN20110530_005111_000000433103_00060_48350_7148.N1	30-MAY-2011 00:51:11	Straylight	42.500	147	Alp Ara	2.8770	26000.	85	48350	No
11	GOM_NL__2PRFIN20110530_005251_000000493103_00060_48350_7149.N1	30-MAY-2011 00:52:51	Straylight	49.000	40	The Sco	1.8590	7100.0	98	48350	No
12	GOM_NL__2PRFIN20110530_005439_000000493103_00060_48350_7150.N1	30-MAY-2011 00:54:39	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	48350	No
13	GOM_NL__2PRFIN20110530_005627_000000463103_00060_48350_7151.N1	30-MAY-2011 00:56:27	Twilight	45.500	75	26Eps Sco	2.2910	4250.0	91	48350	No
14	GOM_NL__2PRFIN20110530_005830_000000433103_00060_48350_7152.N1	30-MAY-2011 00:58:30	Bright	43.000	136	23Tau Sco	2.8220	30000.	86	48350	No
15	GOM_NL__2PRFIN20110530_010036_000000423103_00060_48350_7153.N1	30-MAY-2011 01:00:36	Bright	41.500	80	7Del Sco	2.3160	30000.	83	48350	No
16	GOM_NL__2PRFIN20110530_010210_000000473103_00060_48350_7154.N1	30-MAY-2011 01:02:10	Bright	46.500	86	35Eta Oph	2.4300	10200.	93	48350	No
17	GOM_NL__2PRFIN20110530_010402_000000433103_00060_48350_7155.N1	30-MAY-2011 01:04:02	Bright	42.500	98	13Zet Oph	2.5710	30000.	85	48350	No
18	GOM_NL__2PRFIN20110530_010614_000000403103_00060_48350_7156.N1	30-MAY-2011 01:06:14	Bright	40.000	120	1Del Oph	2.7340	3200.0	80	48350	No
19	GOM_NL__2PRFIN20110530_010915_000000383103_00060_48350_7157.N1	30-MAY-2011 01:09:15	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	48350	No
20	GOM_NL__2PRFIN20110530_011510_000000373103_00060_48350_7158.N1	30-MAY-2011 01:15:10	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	48350	No
21	GOM_NL__2PRFIN20110530_011755_000000463103_00060_48350_7159.N1	30-MAY-2011 01:17:55	Bright	45.500	133	40Zet Her	2.8070	6000.0	91	48350	No
22	GOM_NL__2PRFIN20110530_012546_000000393103_00060_48350_7160.N1	30-MAY-2011 01:25:46	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	48350	No
23	GOM_NL__2PRFIN20110530_013611_000000483103_00060_48350_7161.N1	30-MAY-2011 01:36:11	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	48350	No
24	GOM_NL__2PRFIN20110530_014103_000000563103_00060_48350_7162.N1	30-MAY-2011 01:41:03	Bright	55.500	76	27Gam Cas	2.3000	30000.	111	48350	No
25	GOM_NL__2PRFIN20110530_014842_000000433103_00060_48350_7163.N1	30-MAY-2011 01:48:42	Bright	43.000	53	43Bet And	2.0480	3300.0	86	48350	No
26	GOM_NL__2PRFIN20110530_015121_000000513103_00060_48350_7164.N1	30-MAY-2011 01:51:21	Twilight	51.000	58	21Alp And	2.0730	11000.	102	48350	No
27	GOM_NL__2PRFIN20110530_015611_000000513103_00060_48350_7165.N1	30-MAY-2011 01:56:11	Dark	50.500	140	88Gam Peg	2.8340	26000.	101	48350	No
28	GOM_NL__2PRFIN20110530_020508_000000503103_00060_48350_7166.N1	30-MAY-2011 02:05:08	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	48350	No
29	GOM_NL__2PRFIN20110530_021336_000000603103_00060_48350_7167.N1	30-MAY-2011 02:13:36	Dark	60.000	18	24Alp PsA	1.1660	9700.0	120	48350	No
30	GOM_NL__2PRFIN20110530_021702_000000563103_00061_48351_7162.N1	30-MAY-2011 02:17:02	Dark	55.500	63	Bet Gru	2.1500	2800.0	111	48351	No
31	GOM_NL__2PRFIN20110530_021853_000000463103_00061_48351_7163.N1	30-MAY-2011 02:18:53	Dark	45.500	31	Alp Gru	1.7340	15200.	91	48351	No
32	GOM_NL__2PRFIN20110530_022355_000000443103_00061_48351_7164.N1	30-MAY-2011 02:23:55	Straylight	44.000	45	Alp Pav	1.9400	26000.	88	48351	No
33	GOM_NL__2PRFIN20110530_023125_000000423103_00061_48351_7165.N1	30-MAY-2011 02:31:25	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	48351	No
34	GOM_NL__2PRFIN20110530_023305_000000533103_00061_48351_7166.N1	30-MAY-2011 02:33:05	Straylight	52.500	40	The Sco	1.8590	7100.0	105	48351	No
35	GOM_NL__2PRFIN20110530_023453_000000493103_00061_48351_7167.N1	30-MAY-2011 02:34:53	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	48351	No
36	GOM_NL__2PRFIN20110530_023641_000000493103_00061_48351_7168.N1	30-MAY-2011 02:36:41	Twilight	49.000	75	26Eps Sco	2.2910	4250.0	98	48351	No
37	GOM_NL__2PRFIN20110530_023844_000000403103_00061_48351_7169.N1	30-MAY-2011 02:38:44	Bright	40.000	136	23Tau Sco	2.8220	30000.	80	48351	No
38	GOM_NL__2PRFIN20110530_024050_000000413103_00061_48351_7170.N1	30-MAY-2011 02:40:50	Bright	40.500	80	7Del Sco	2.3160	30000.	81	48351	No
39	GOM_NL__2PRFIN20110530_024224_000000463103_00061_48351_7171.N1	30-MAY-2011 02:42:24	Bright	46.000	86	35Eta Oph	2.4300	10200.	92	48351	No
40	GOM_NL__2PRFIN20110530_024416_000000433103_00061_48351_7172.N1	30-MAY-2011 02:44:16	Bright	43.000	98	13Zet Oph	2.5710	30000.	86	48351	No
41	GOM_NL__2PRFIN20110530_024628_000000403103_00061_48351_7173.N1	30-MAY-2011 02:46:28	Bright	40.000	120	1Del Oph	2.7340	3200.0	80	48351	No
42	GOM_NL__2PRFIN20110530_024929_000000383103_00061_48351_7174.N1	30-MAY-2011 02:49:29	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	48351	No

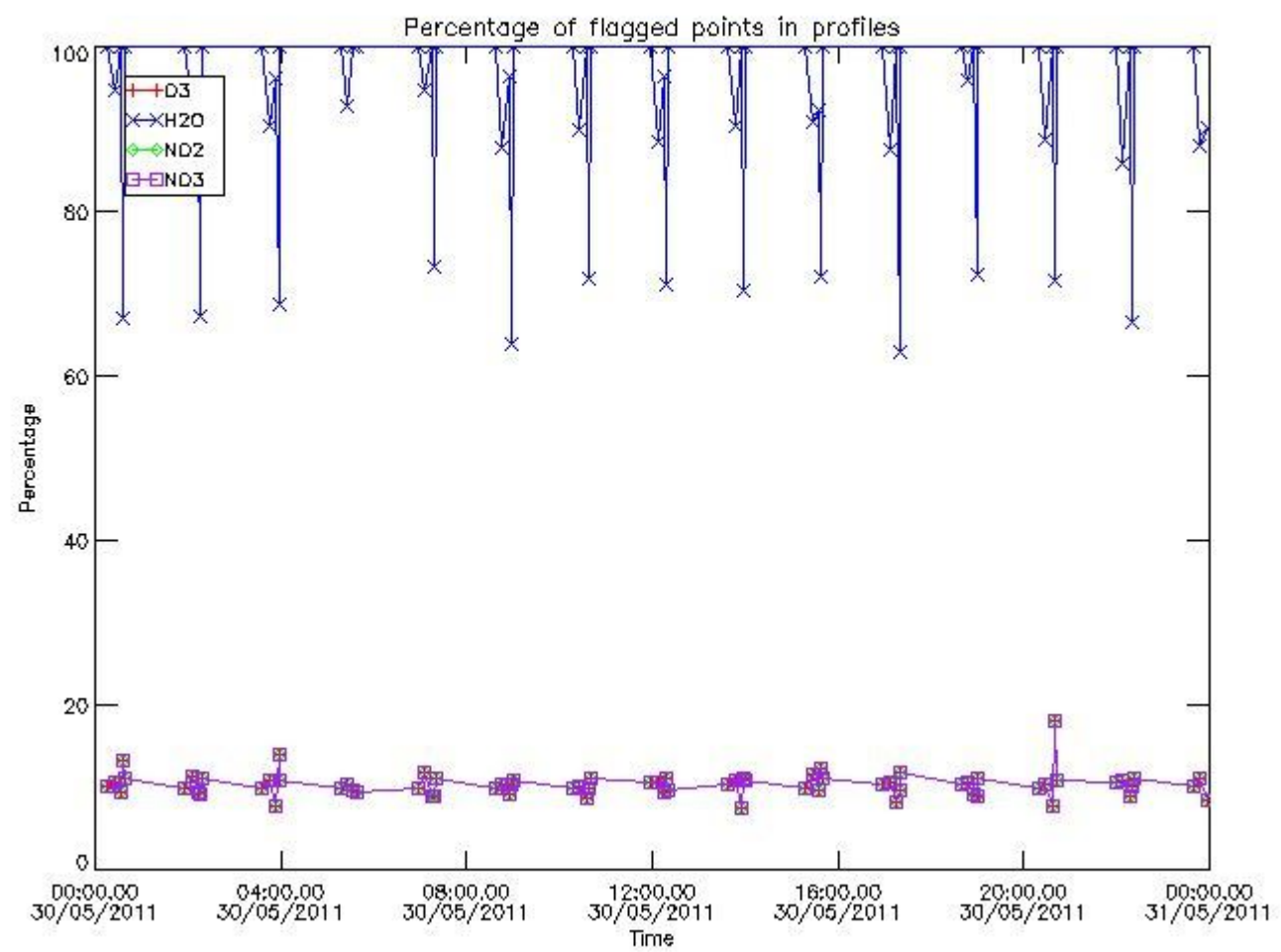








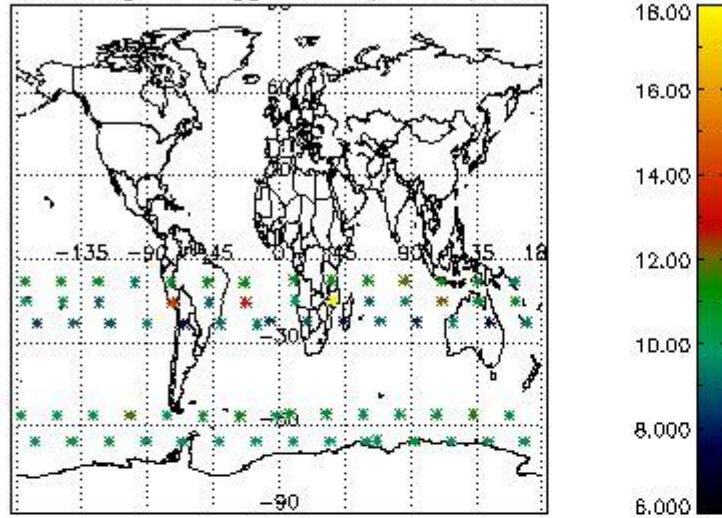




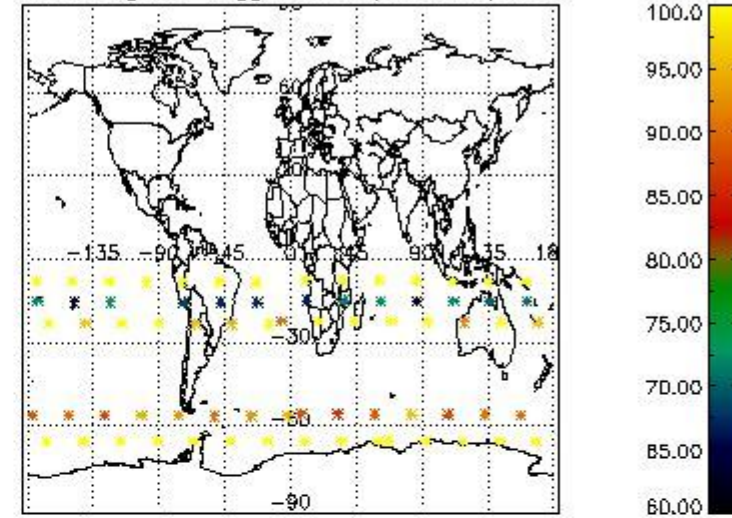
3.2 Plot quality information per product (world map)



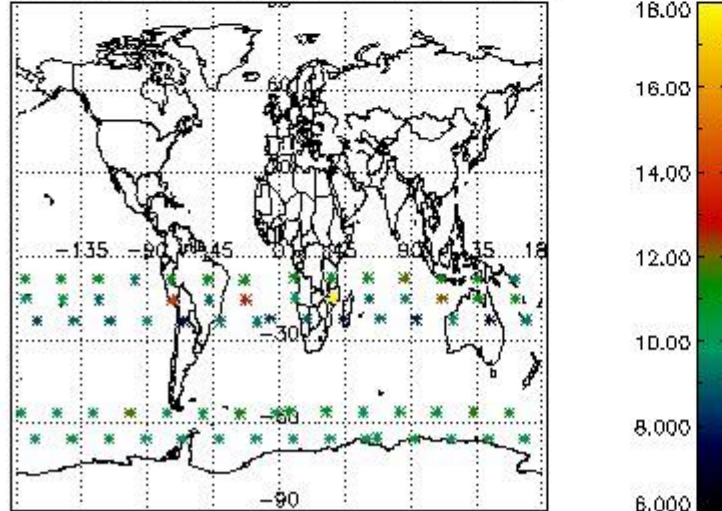
Percentage of flagged data per O3 profile



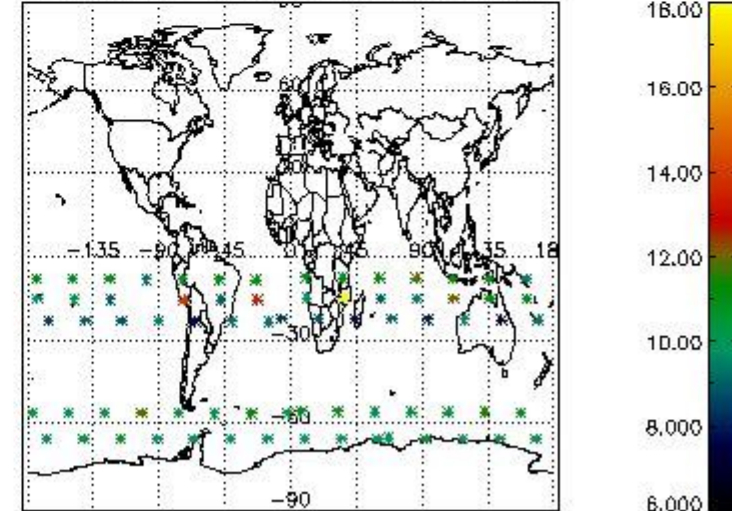
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

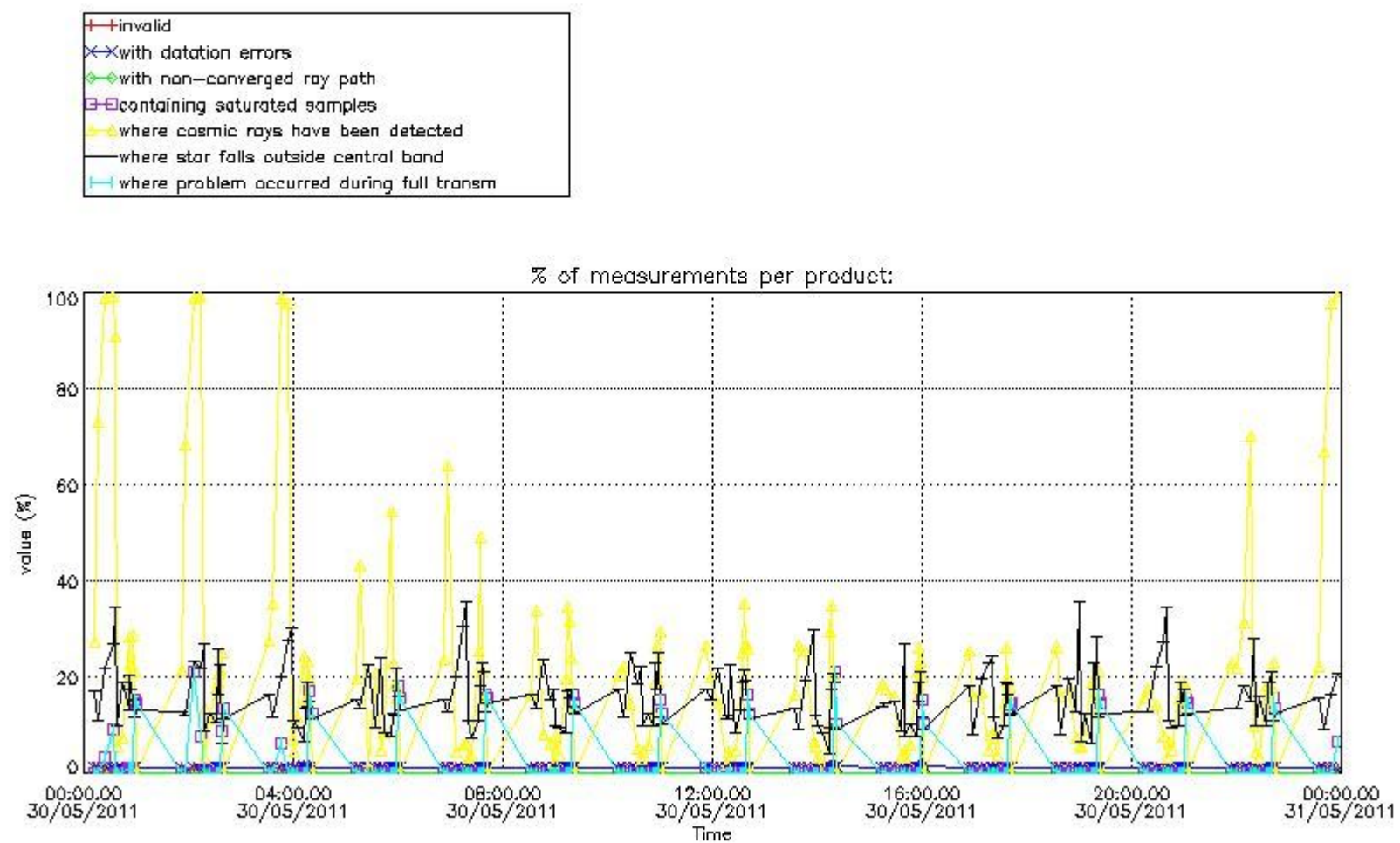


#### 4. Level 1 quality information per product

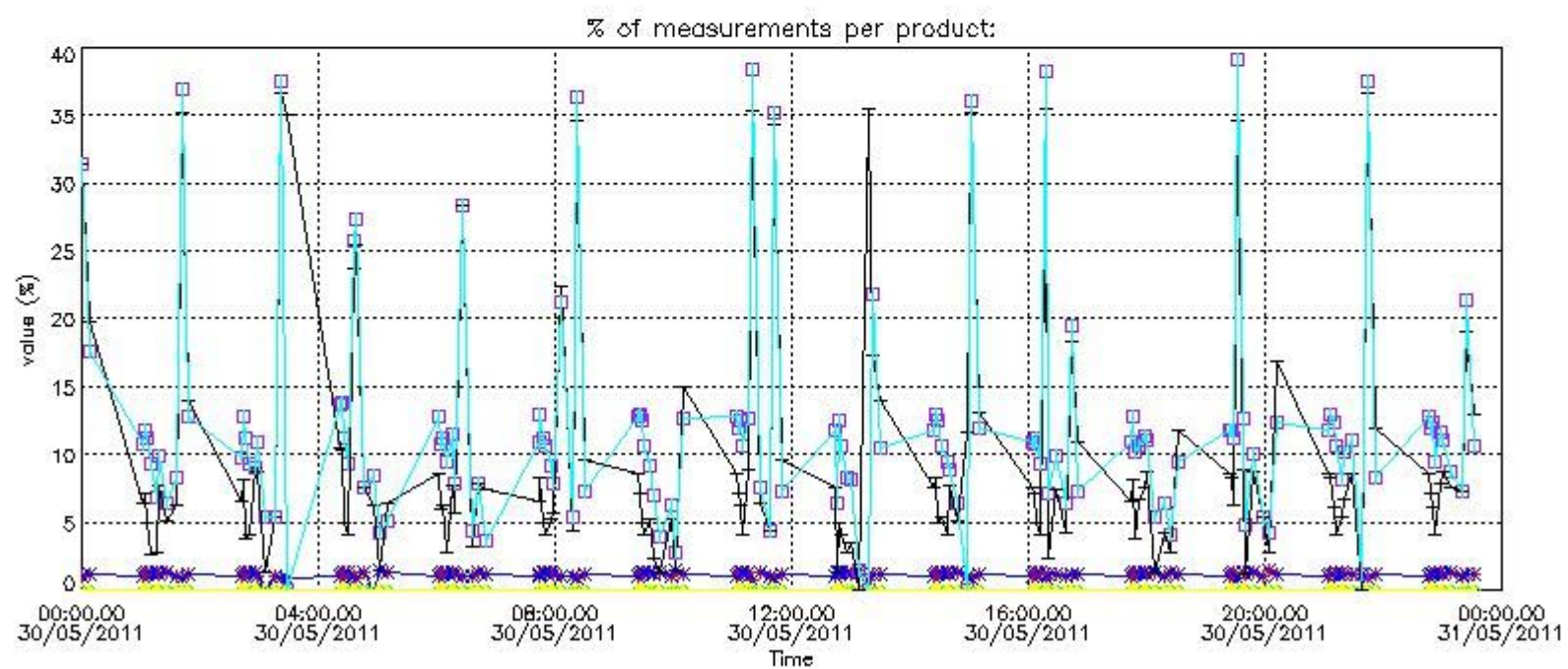
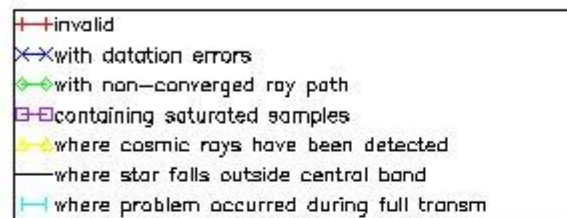
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



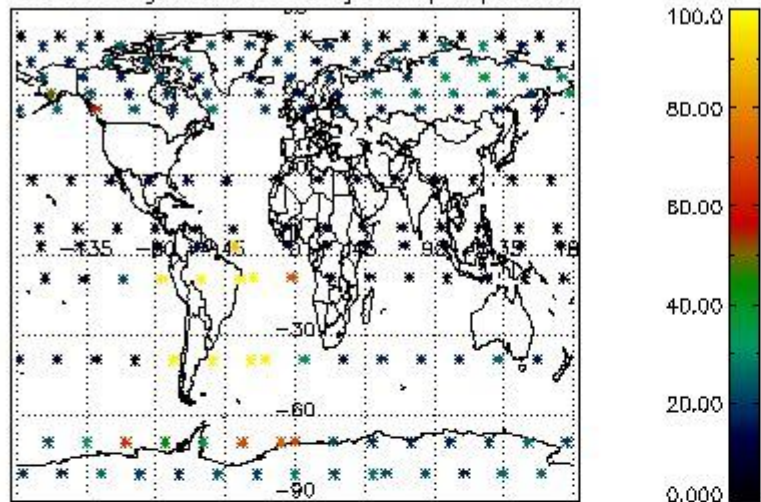
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



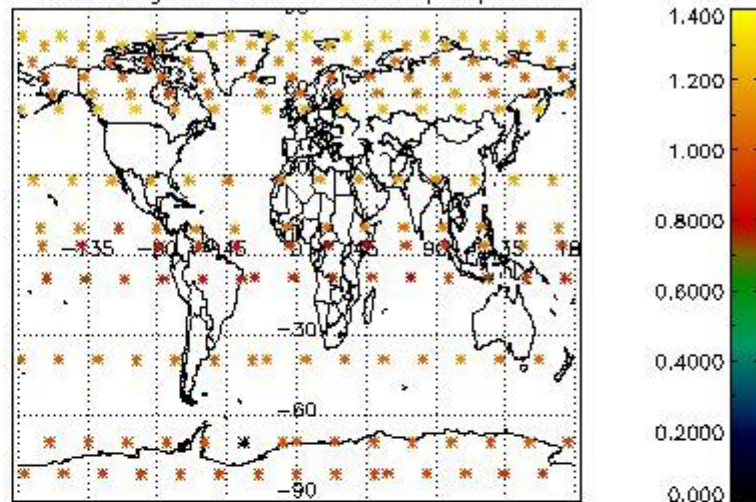
4.2 Plot quality information per product coming from level 1b processing (world map)

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

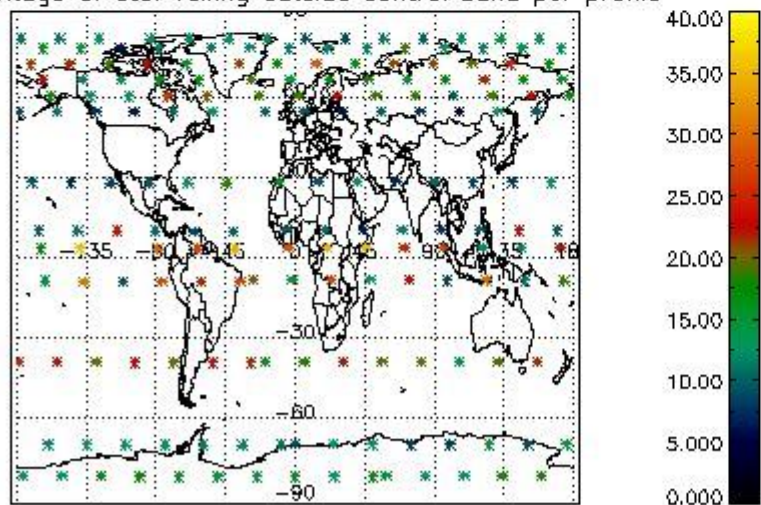
Percentage of cosmic ray hits per profile



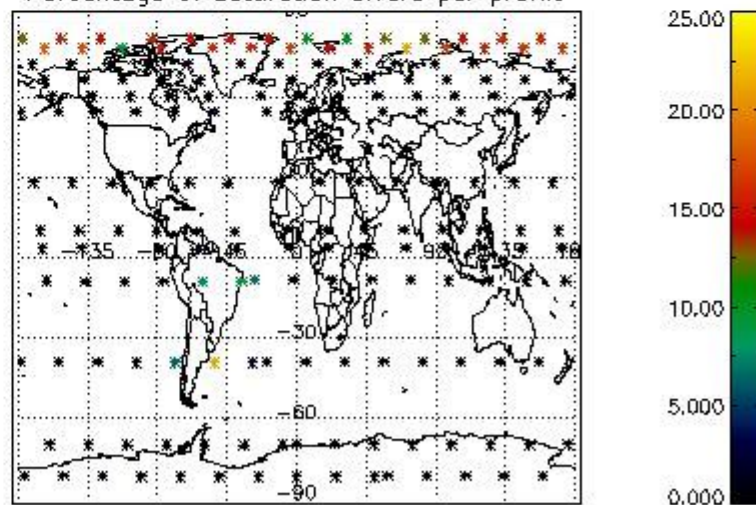
Percentage of datation errors per profile



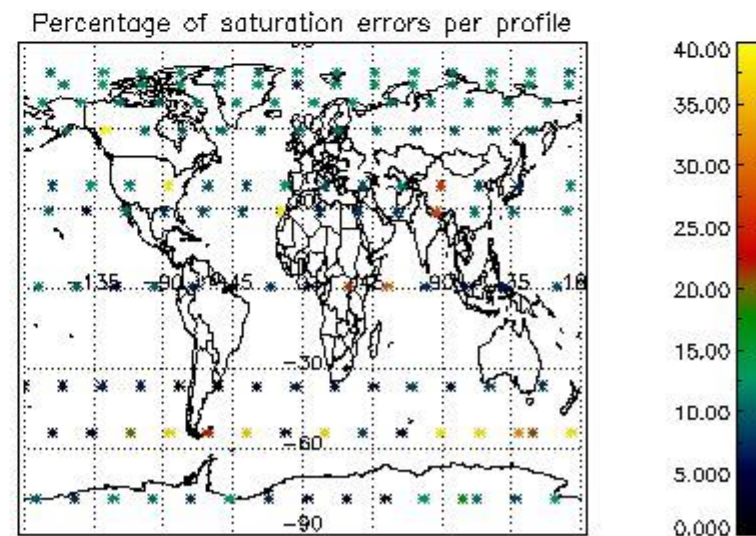
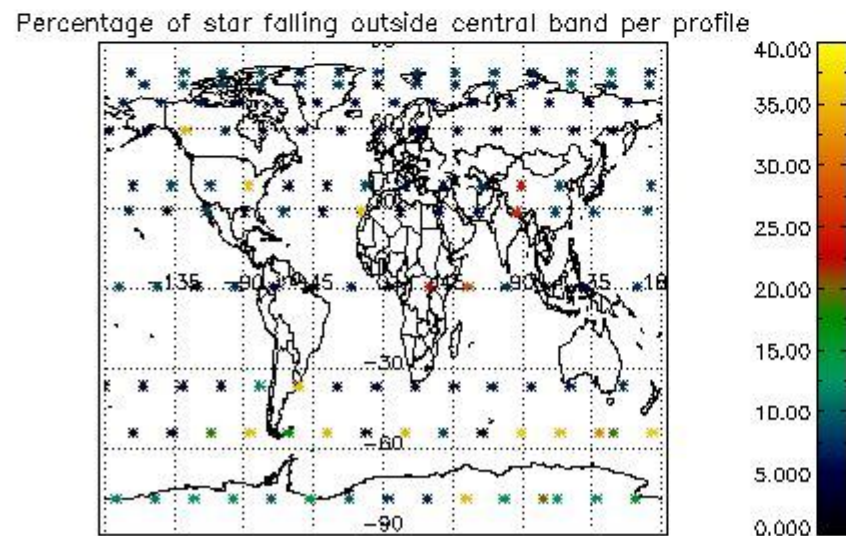
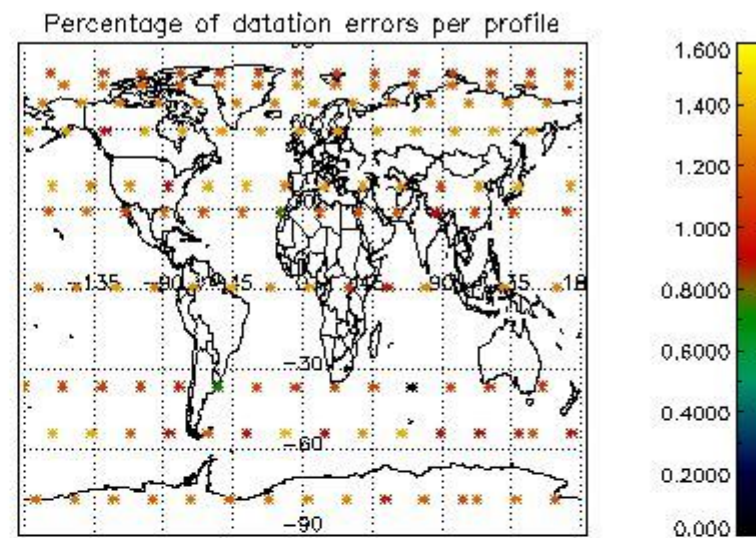
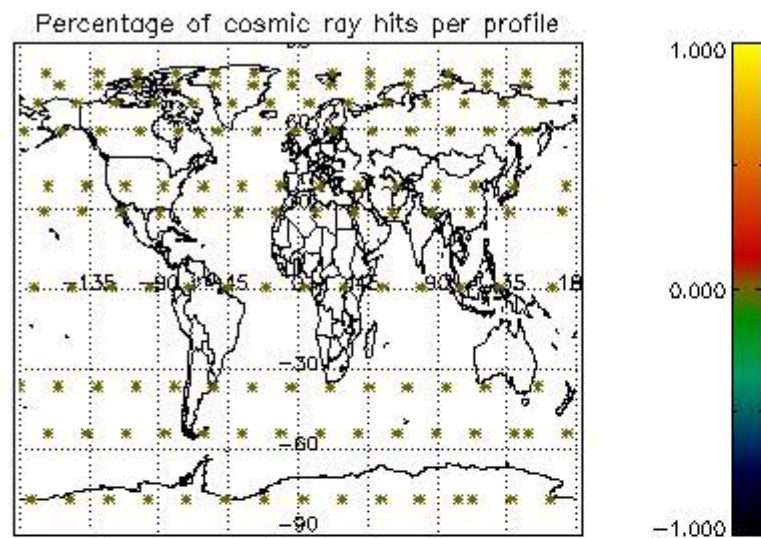
Percentage of star falling outside central band per profile



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

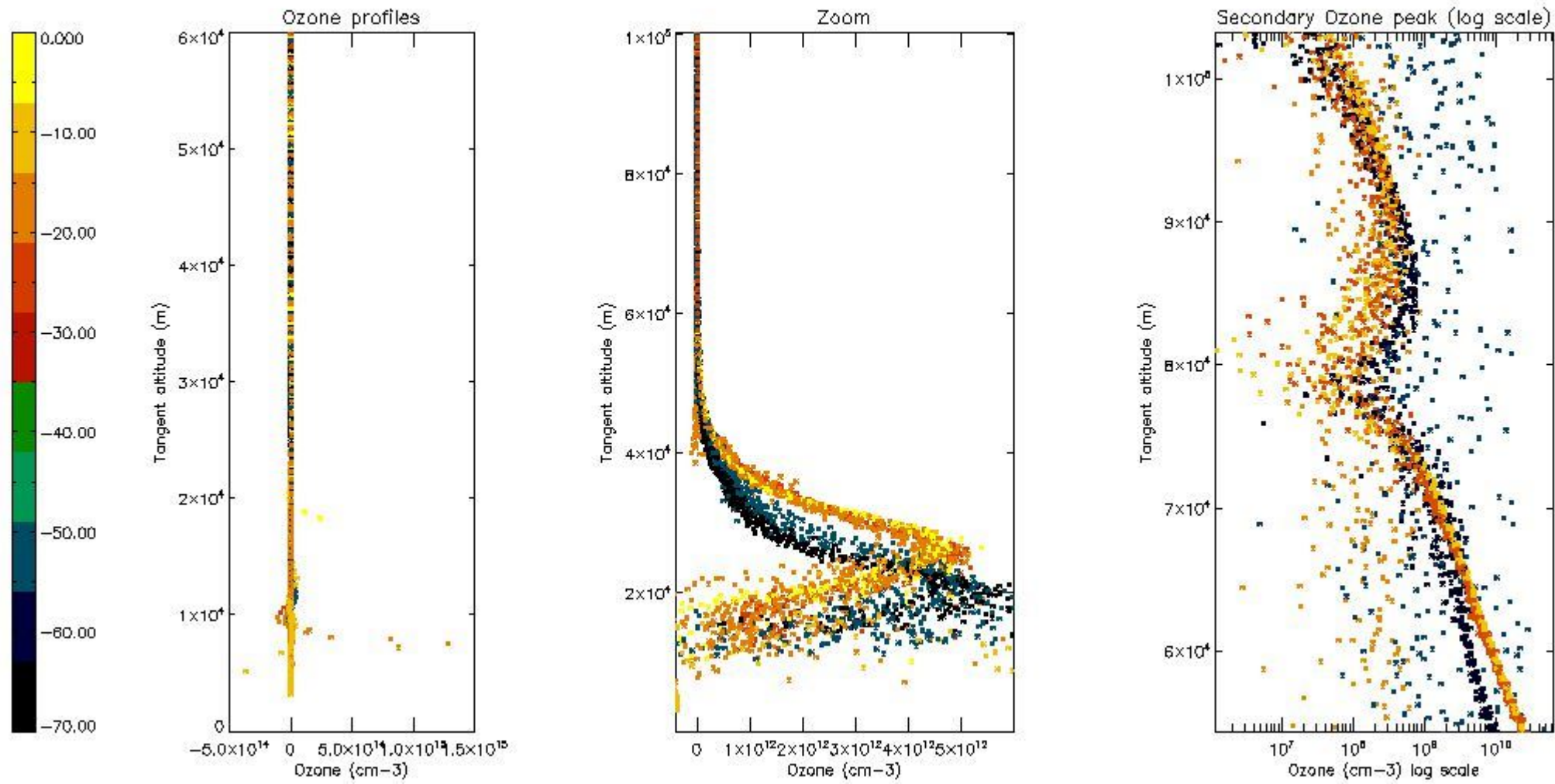
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	26
STD < 20	12

STD < 10	9
STD < 5	6

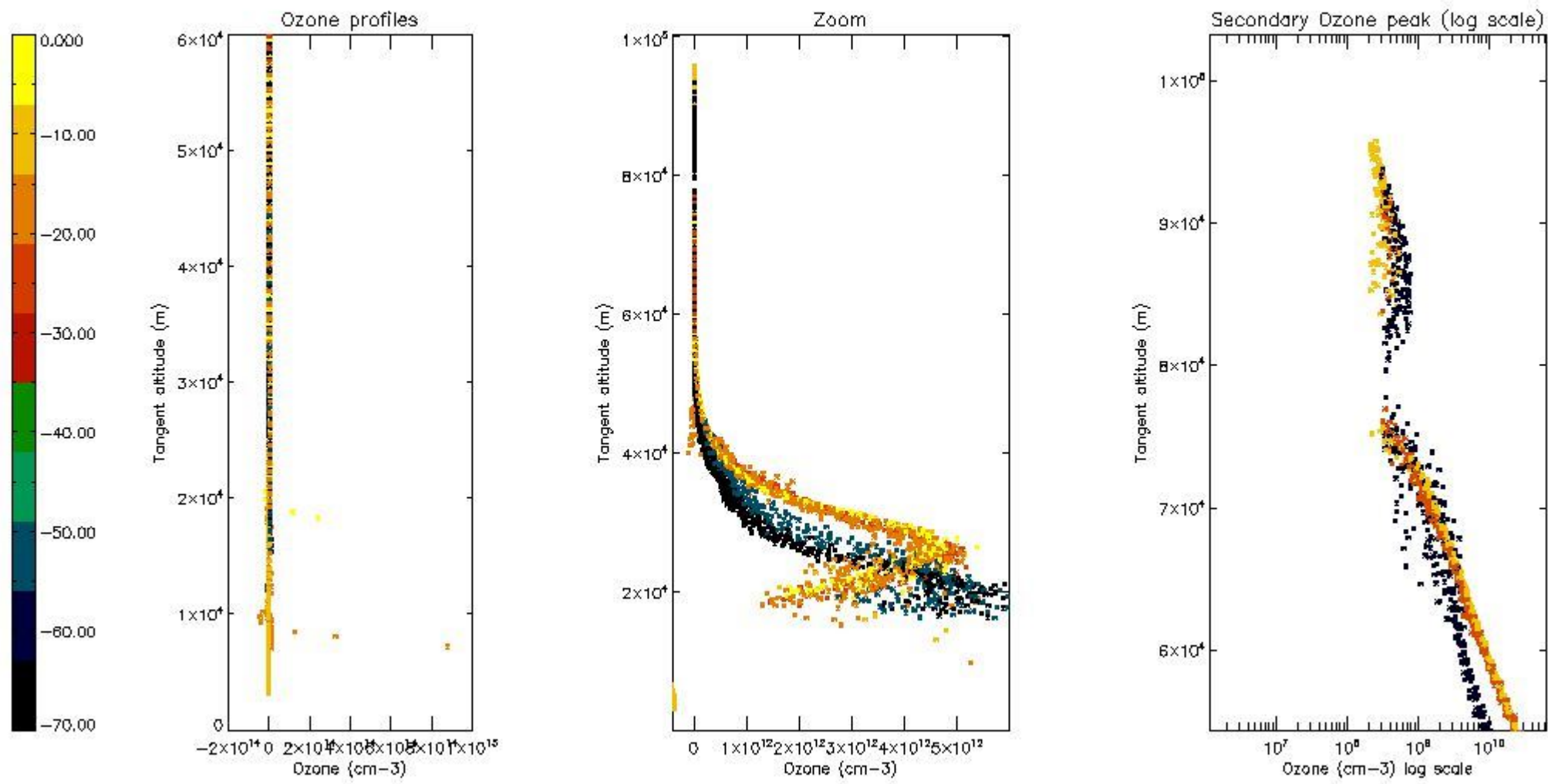
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



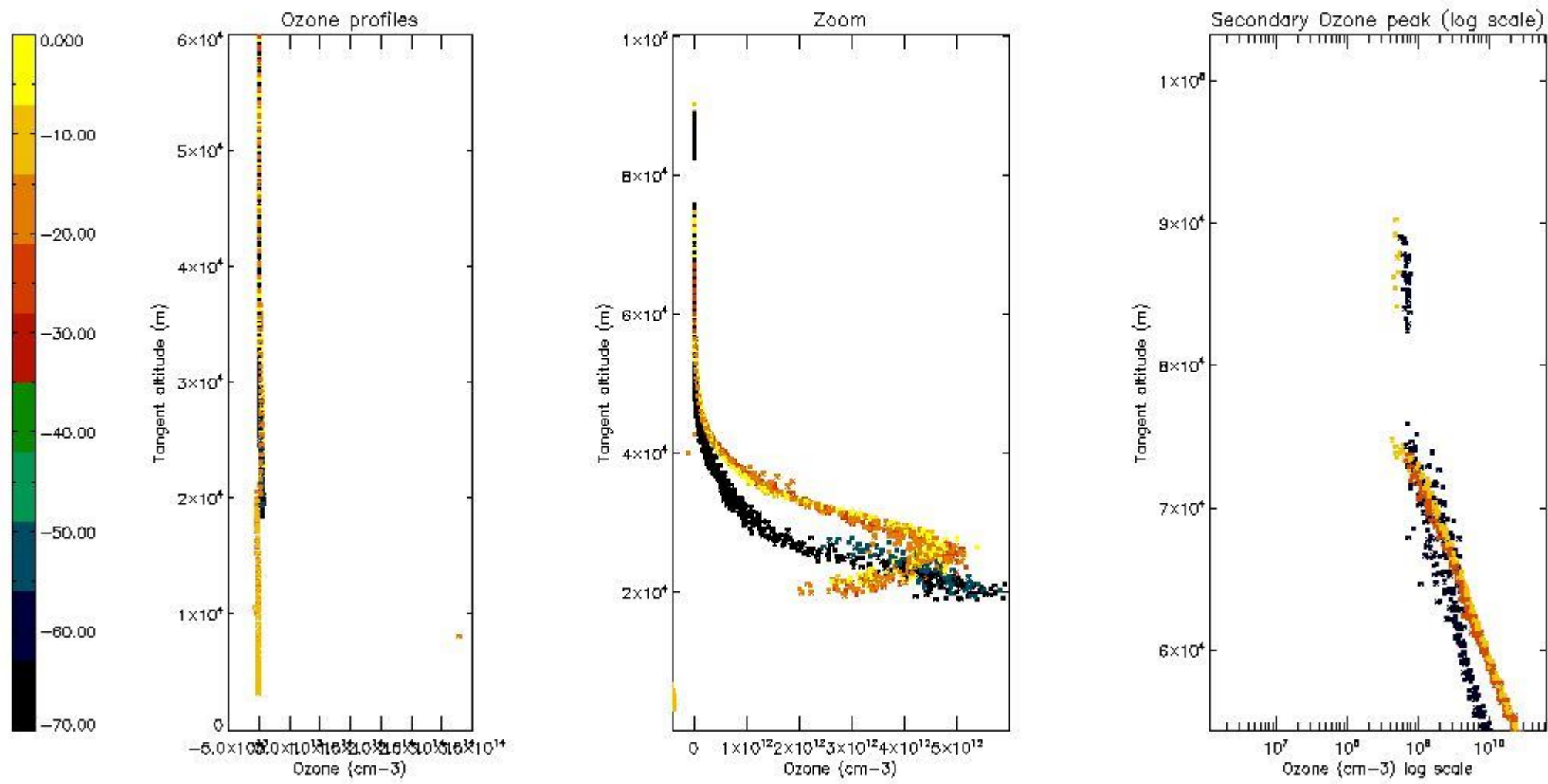
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

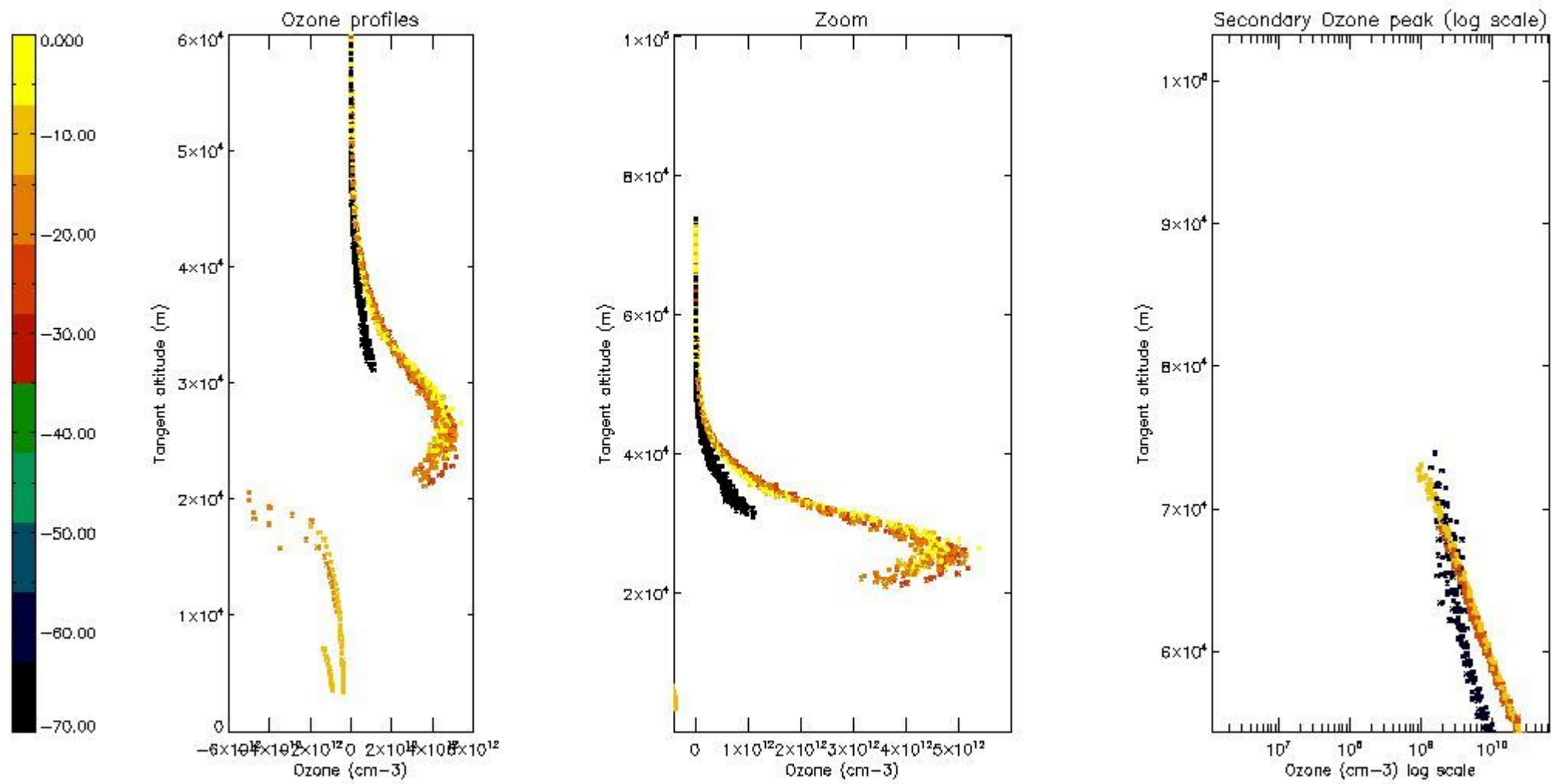
The colorbar represents the latitude.



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

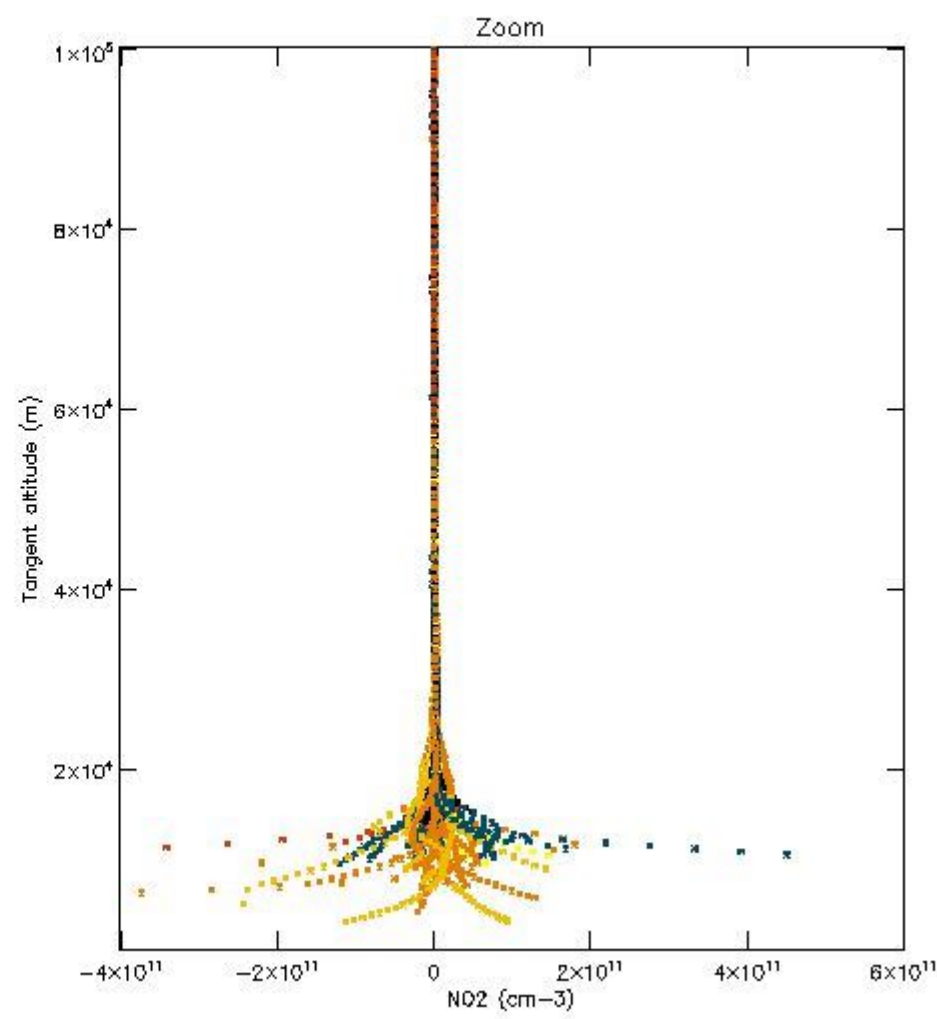
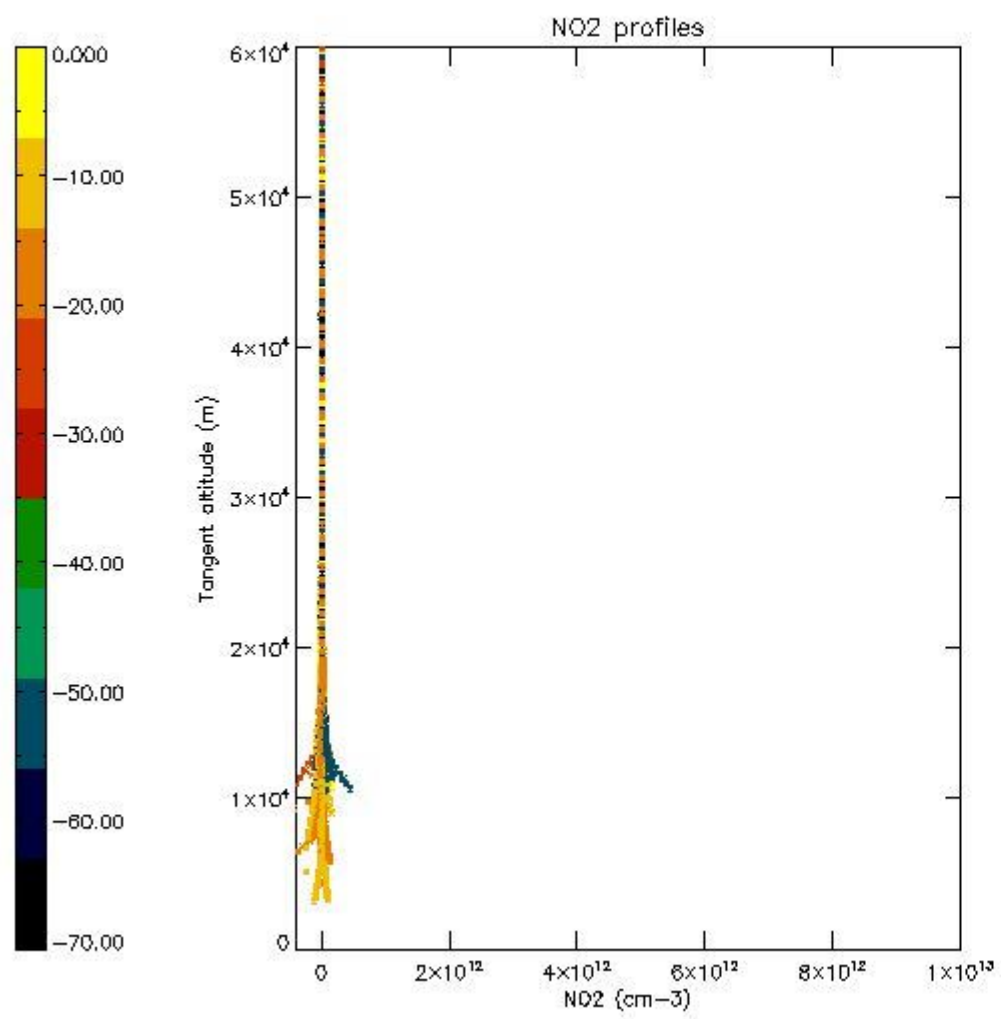
The colorbar represents the latitude.





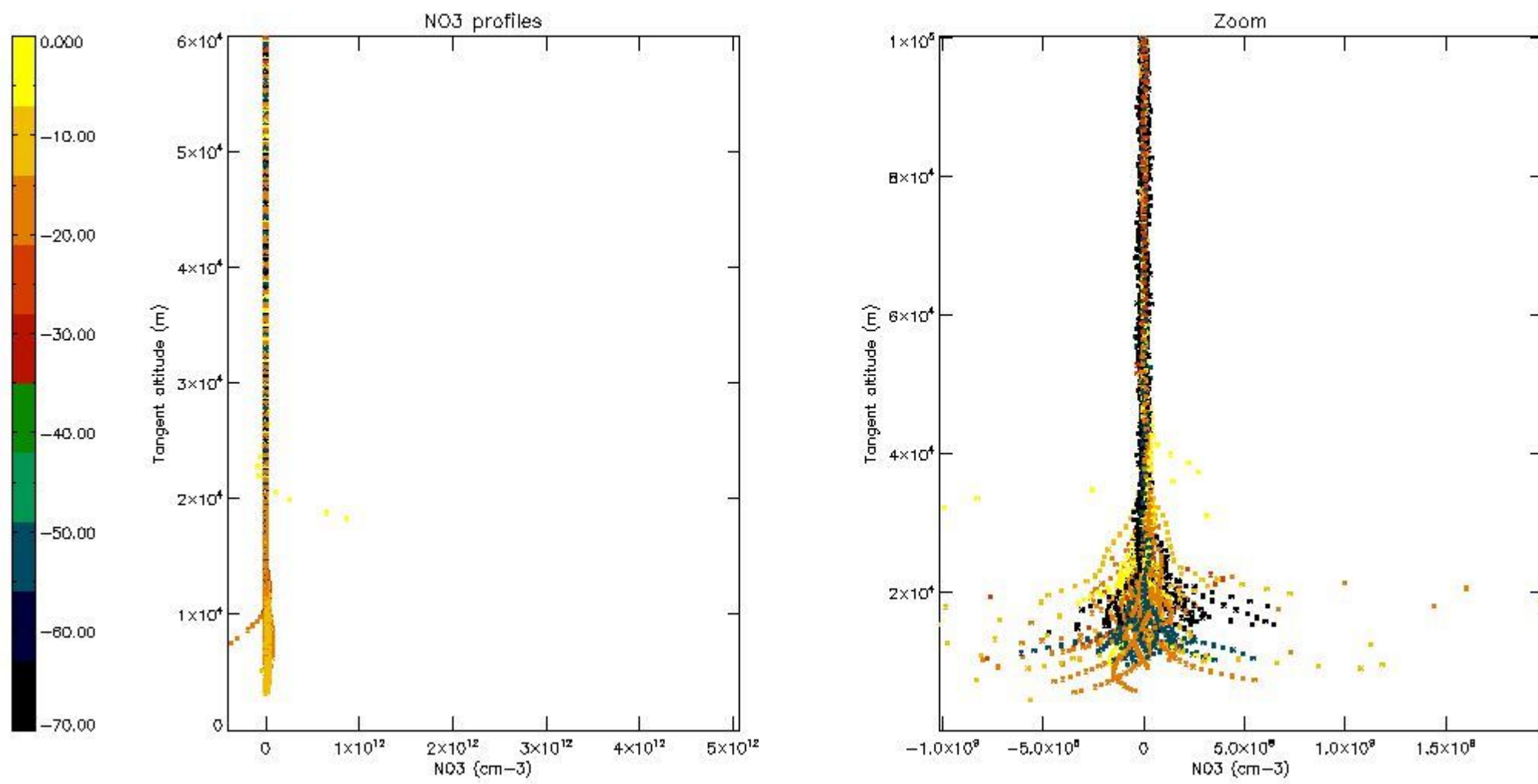
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



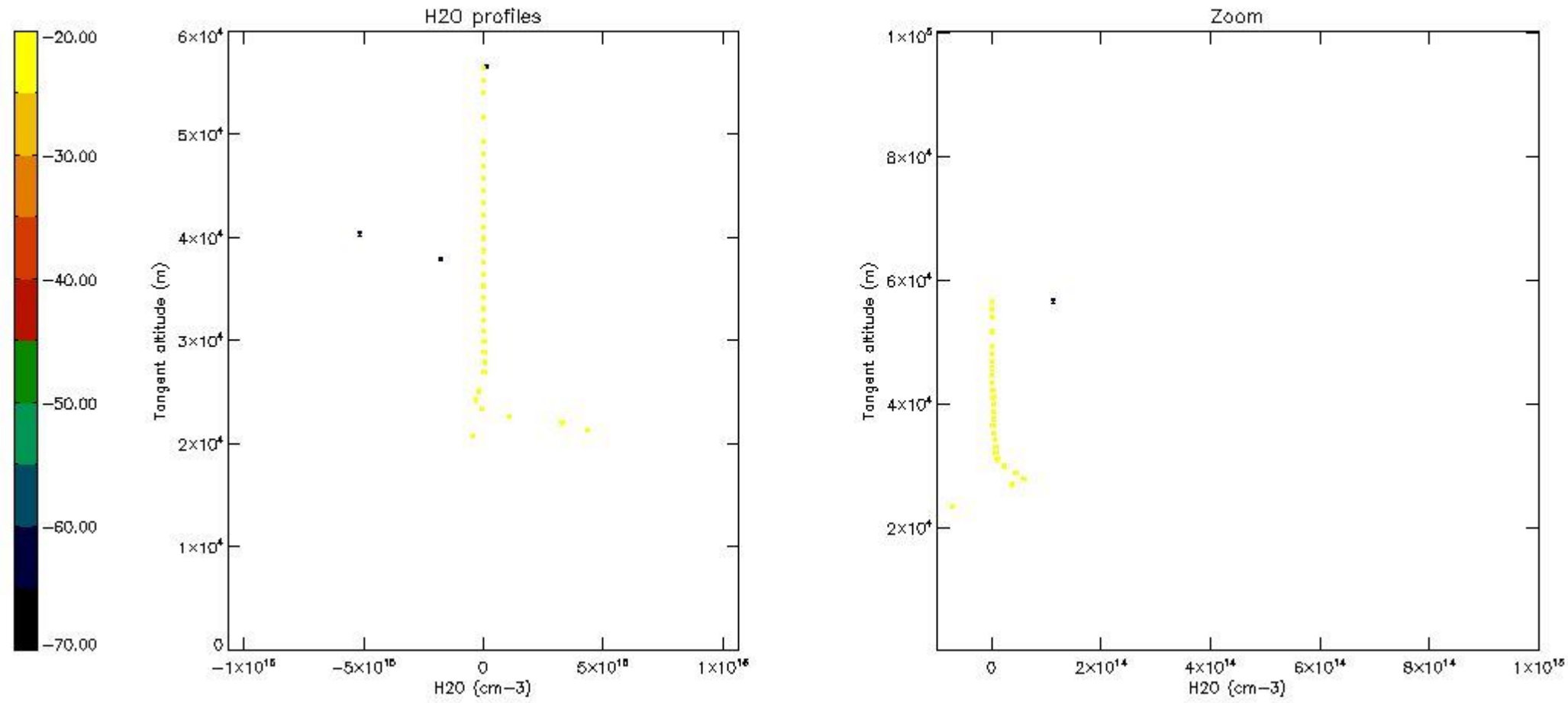
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*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	30-MAY-2011 00:00:49
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	30-MAY-2011 00:00:49
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	30-MAY-2011 00:00:49

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

##### [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](#)

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

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

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

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

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

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Time of report generation	24APR2013 14:11:44
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Stop time of products	31-05-2011 (31MAY2011 00:00:00)
Store outputs in DB	Yes
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Nb of prods with errors	0

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Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20110530_000049_00000513103_00059_48349_7153.N1	30-MAY-2011 00:00:49	Bright	51.000	76	27Gam Cas	2.3000	30000.	102	48349	No
2	GOM_NL__2PRFIN20110530_000828_000000463103_00059_48349_7154.N1	30-MAY-2011 00:08:28	Bright	45.500	53	43Bet And	2.0480	3300.0	91	48349	No
3	GOM_NL__2PRFIN20110530_001106_000000533103_00059_48349_7155.N1	30-MAY-2011 00:11:06	Twilight	53.000	58	21Alp And	2.0730	11000.	106	48349	No
4	GOM_NL__2PRFIN20110530_001557_000000513103_00059_48349_7156.N1	30-MAY-2011 00:15:57	Dark	50.500	140	88Gam Peg	2.8340	26000.	101	48349	No
5	GOM_NL__2PRFIN20110530_002454_000000493103_00059_48349_7157.N1	30-MAY-2011 00:24:54	Dark	48.500	52	16Bet Cet	2.0370	4500.0	97	48349	No
6	GOM_NL__2PRFIN20110530_003321_000000653103_00059_48349_7158.N1	30-MAY-2011 00:33:21	Dark	65.000	18	24Alp PsA	1.1660	9700.0	130	48349	No
7	GOM_NL__2PRFIN20110530_003647_000000613103_00060_48350_7145.N1	30-MAY-2011 00:36:47	Dark	61.000	63	Bet Gru	2.1500	2800.0	122	48350	No
8	GOM_NL__2PRFIN20110530_003838_000000463103_00060_48350_7146.N1	30-MAY-2011 00:38:38	Dark	45.500	31	Alp Gru	1.7340	15200.	91	48350	No
9	GOM_NL__2PRFIN20110530_004340_000000483103_00060_48350_7147.N1	30-MAY-2011 00:43:40	Straylight	48.000	45	Alp Pav	1.9400	26000.	96	48350	No
10	GOM_NL__2PRFIN20110530_005111_000000433103_00060_48350_7148.N1	30-MAY-2011 00:51:11	Straylight	42.500	147	Alp Ara	2.8770	26000.	85	48350	No
11	GOM_NL__2PRFIN20110530_005251_000000493103_00060_48350_7149.N1	30-MAY-2011 00:52:51	Straylight	49.000	40	The Sco	1.8590	7100.0	98	48350	No
12	GOM_NL__2PRFIN20110530_005439_000000493103_00060_48350_7150.N1	30-MAY-2011 00:54:39	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	48350	No
13	GOM_NL__2PRFIN20110530_005627_000000463103_00060_48350_7151.N1	30-MAY-2011 00:56:27	Twilight	45.500	75	26Eps Sco	2.2910	4250.0	91	48350	No
14	GOM_NL__2PRFIN20110530_005830_000000433103_00060_48350_7152.N1	30-MAY-2011 00:58:30	Bright	43.000	136	23Tau Sco	2.8220	30000.	86	48350	No
15	GOM_NL__2PRFIN20110530_010036_000000423103_00060_48350_7153.N1	30-MAY-2011 01:00:36	Bright	41.500	80	7Del Sco	2.3160	30000.	83	48350	No
16	GOM_NL__2PRFIN20110530_010210_000000473103_00060_48350_7154.N1	30-MAY-2011 01:02:10	Bright	46.500	86	35Eta Oph	2.4300	10200.	93	48350	No
17	GOM_NL__2PRFIN20110530_010402_000000433103_00060_48350_7155.N1	30-MAY-2011 01:04:02	Bright	42.500	98	13Zet Oph	2.5710	30000.	85	48350	No
18	GOM_NL__2PRFIN20110530_010614_000000403103_00060_48350_7156.N1	30-MAY-2011 01:06:14	Bright	40.000	120	1Del Oph	2.7340	3200.0	80	48350	No
19	GOM_NL__2PRFIN20110530_010915_000000383103_00060_48350_7157.N1	30-MAY-2011 01:09:15	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	48350	No
20	GOM_NL__2PRFIN20110530_011510_000000373103_00060_48350_7158.N1	30-MAY-2011 01:15:10	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	48350	No
21	GOM_NL__2PRFIN20110530_011755_000000463103_00060_48350_7159.N1	30-MAY-2011 01:17:55	Bright	45.500	133	40Zet Her	2.8070	6000.0	91	48350	No
22	GOM_NL__2PRFIN20110530_012546_000000393103_00060_48350_7160.N1	30-MAY-2011 01:25:46	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	48350	No
23	GOM_NL__2PRFIN20110530_013611_000000483103_00060_48350_7161.N1	30-MAY-2011 01:36:11	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	48350	No
24	GOM_NL__2PRFIN20110530_014103_000000563103_00060_48350_7162.N1	30-MAY-2011 01:41:03	Bright	55.500	76	27Gam Cas	2.3000	30000.	111	48350	No
25	GOM_NL__2PRFIN20110530_014842_000000433103_00060_48350_7163.N1	30-MAY-2011 01:48:42	Bright	43.000	53	43Bet And	2.0480	3300.0	86	48350	No
26	GOM_NL__2PRFIN20110530_015121_000000513103_00060_48350_7164.N1	30-MAY-2011 01:51:21	Twilight	51.000	58	21Alp And	2.0730	11000.	102	48350	No
27	GOM_NL__2PRFIN20110530_015611_000000513103_00060_48350_7165.N1	30-MAY-2011 01:56:11	Dark	50.500	140	88Gam Peg	2.8340	26000.	101	48350	No
28	GOM_NL__2PRFIN20110530_020508_000000503103_00060_48350_7166.N1	30-MAY-2011 02:05:08	Dark	49.500	52	16Bet Cet	2.0370	4500.0	99	48350	No
29	GOM_NL__2PRFIN20110530_021336_000000603103_00060_48350_7167.N1	30-MAY-2011 02:13:36	Dark	60.000	18	24Alp PsA	1.1660	9700.0	120	48350	No
30	GOM_NL__2PRFIN20110530_021702_000000563103_00061_48351_7162.N1	30-MAY-2011 02:17:02	Dark	55.500	63	Bet Gru	2.1500	2800.0	111	48351	No
31	GOM_NL__2PRFIN20110530_021853_000000463103_00061_48351_7163.N1	30-MAY-2011 02:18:53	Dark	45.500	31	Alp Gru	1.7340	15200.	91	48351	No
32	GOM_NL__2PRFIN20110530_022355_000000443103_00061_48351_7164.N1	30-MAY-2011 02:23:55	Straylight	44.000	45	Alp Pav	1.9400	26000.	88	48351	No
33	GOM_NL__2PRFIN20110530_023125_000000423103_00061_48351_7165.N1	30-MAY-2011 02:31:25	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	48351	No
34	GOM_NL__2PRFIN20110530_023305_000000533103_00061_48351_7166.N1	30-MAY-2011 02:33:05	Straylight	52.500	40	The Sco	1.8590	7100.0	105	48351	No
35	GOM_NL__2PRFIN20110530_023453_000000493103_00061_48351_7167.N1	30-MAY-2011 02:34:53	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	48351	No
36	GOM_NL__2PRFIN20110530_023641_000000493103_00061_48351_7168.N1	30-MAY-2011 02:36:41	Twilight	49.000	75	26Eps Sco	2.2910	4250.0	98	48351	No
37	GOM_NL__2PRFIN20110530_023844_000000403103_00061_48351_7169.N1	30-MAY-2011 02:38:44	Bright	40.000	136	23Tau Sco	2.8220	30000.	80	48351	No
38	GOM_NL__2PRFIN20110530_024050_000000413103_00061_48351_7170.N1	30-MAY-2011 02:40:50	Bright	40.500	80	7Del Sco	2.3160	30000.	81	48351	No
39	GOM_NL__2PRFIN20110530_024224_000000463103_00061_48351_7171.N1	30-MAY-2011 02:42:24	Bright	46.000	86	35Eta Oph	2.4300	10200.	92	48351	No
40	GOM_NL__2PRFIN20110530_024416_000000433103_00061_48351_7172.N1	30-MAY-2011 02:44:16	Bright	43.000	98	13Zet Oph	2.5710	30000.	86	48351	No
41	GOM_NL__2PRFIN20110530_024628_000000403103_00061_48351_7173.N1	30-MAY-2011 02:46:28	Bright	40.000	120	1Del Oph	2.7340	3200.0	80	48351	No
42	GOM_NL__2PRFIN20110530_024929_000000383103_00061_48351_7174.N1	30-MAY-2011 02:49:29	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	48351	No



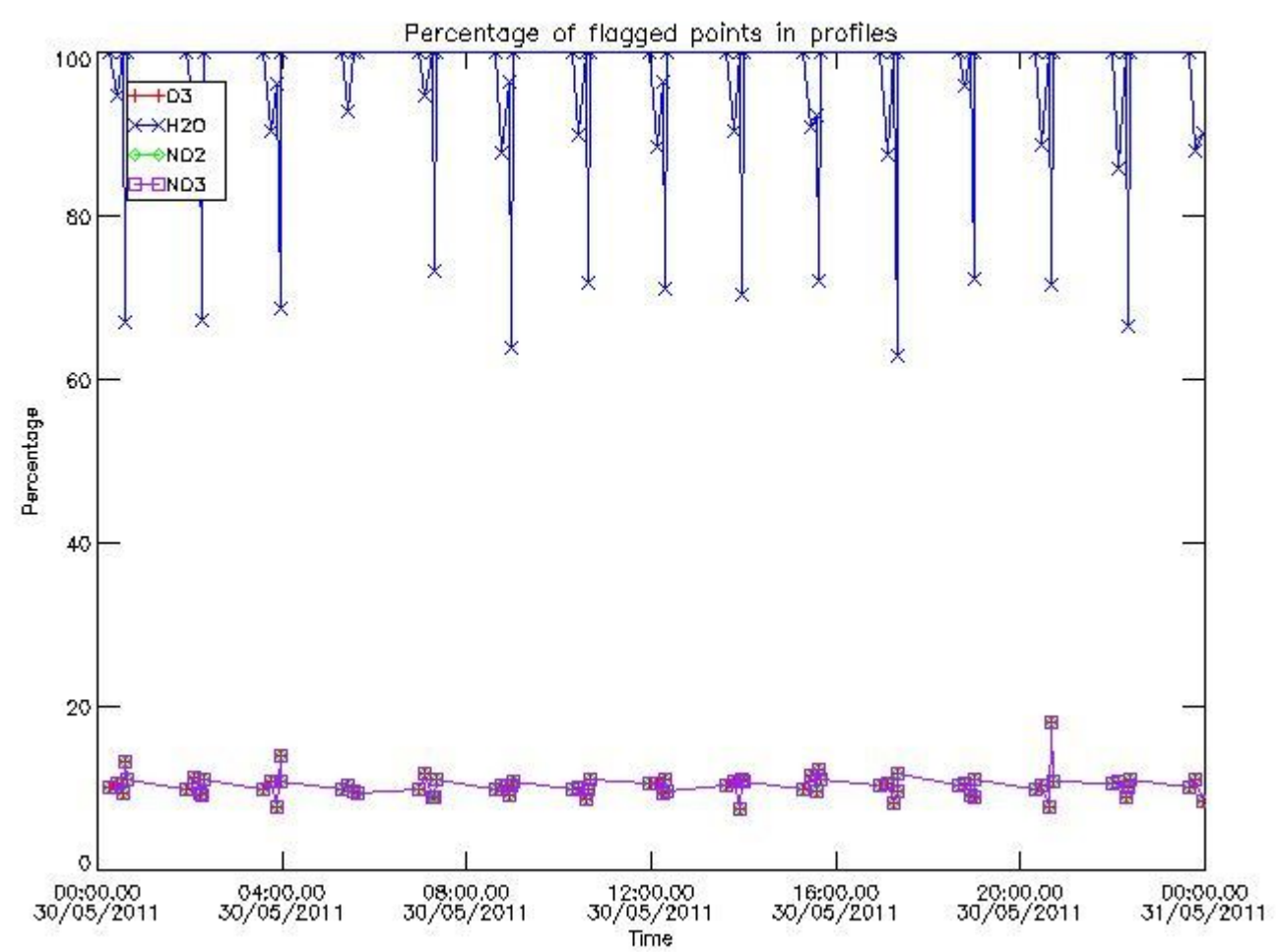






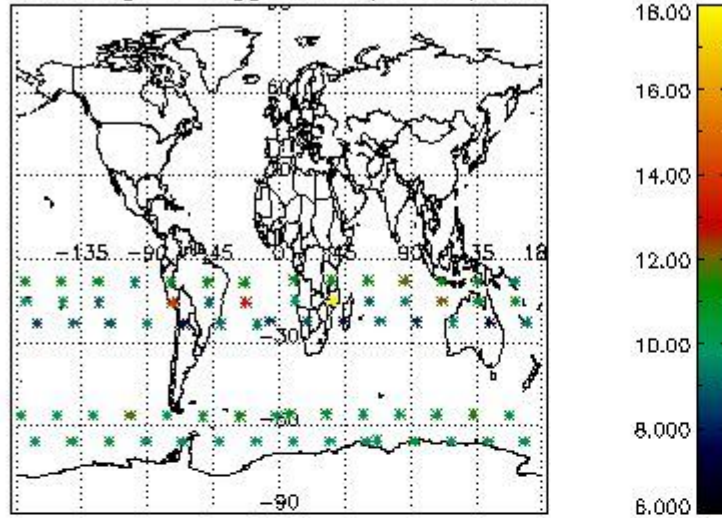




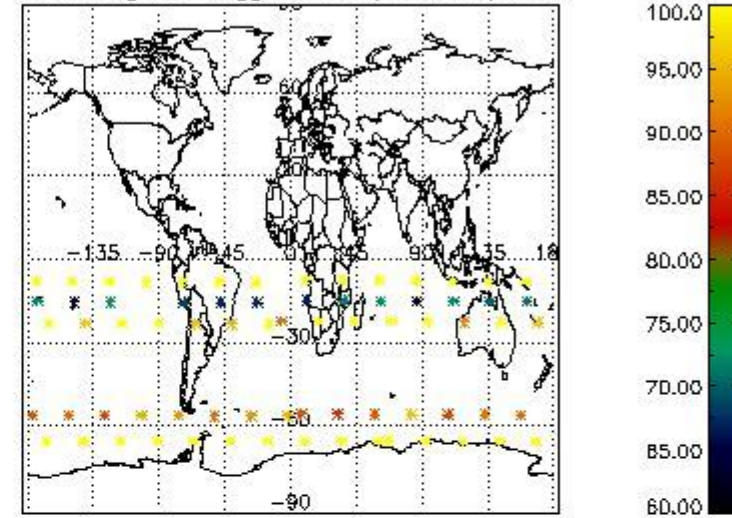


3.2 Plot quality information per product (world map)

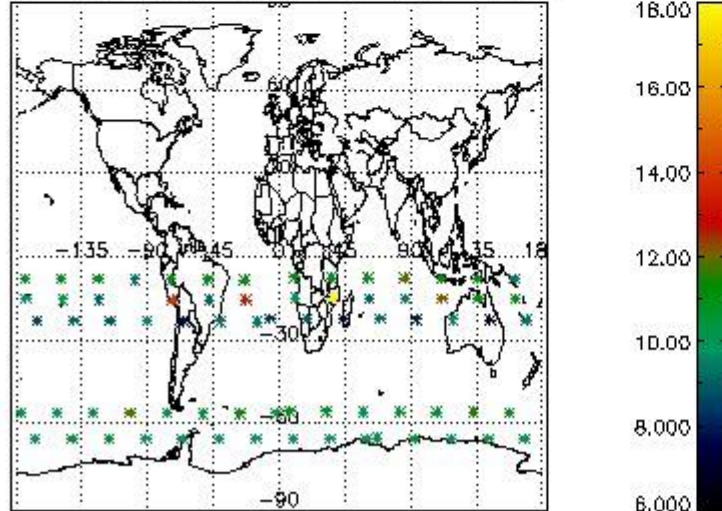
Percentage of flagged data per O3 profile



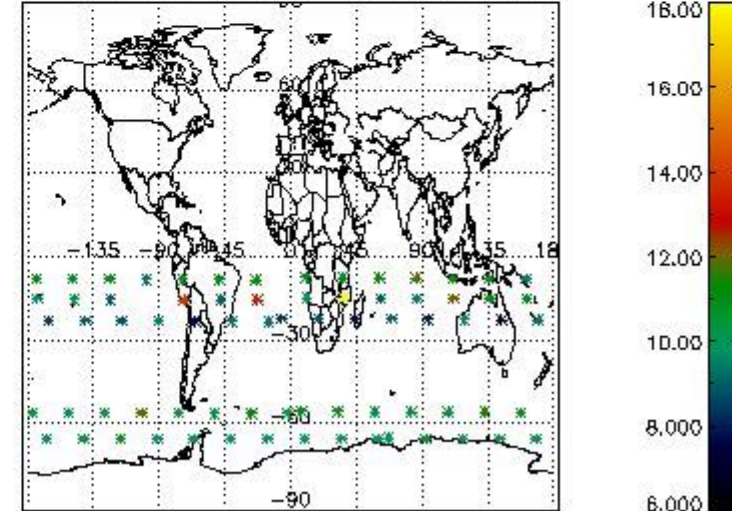
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

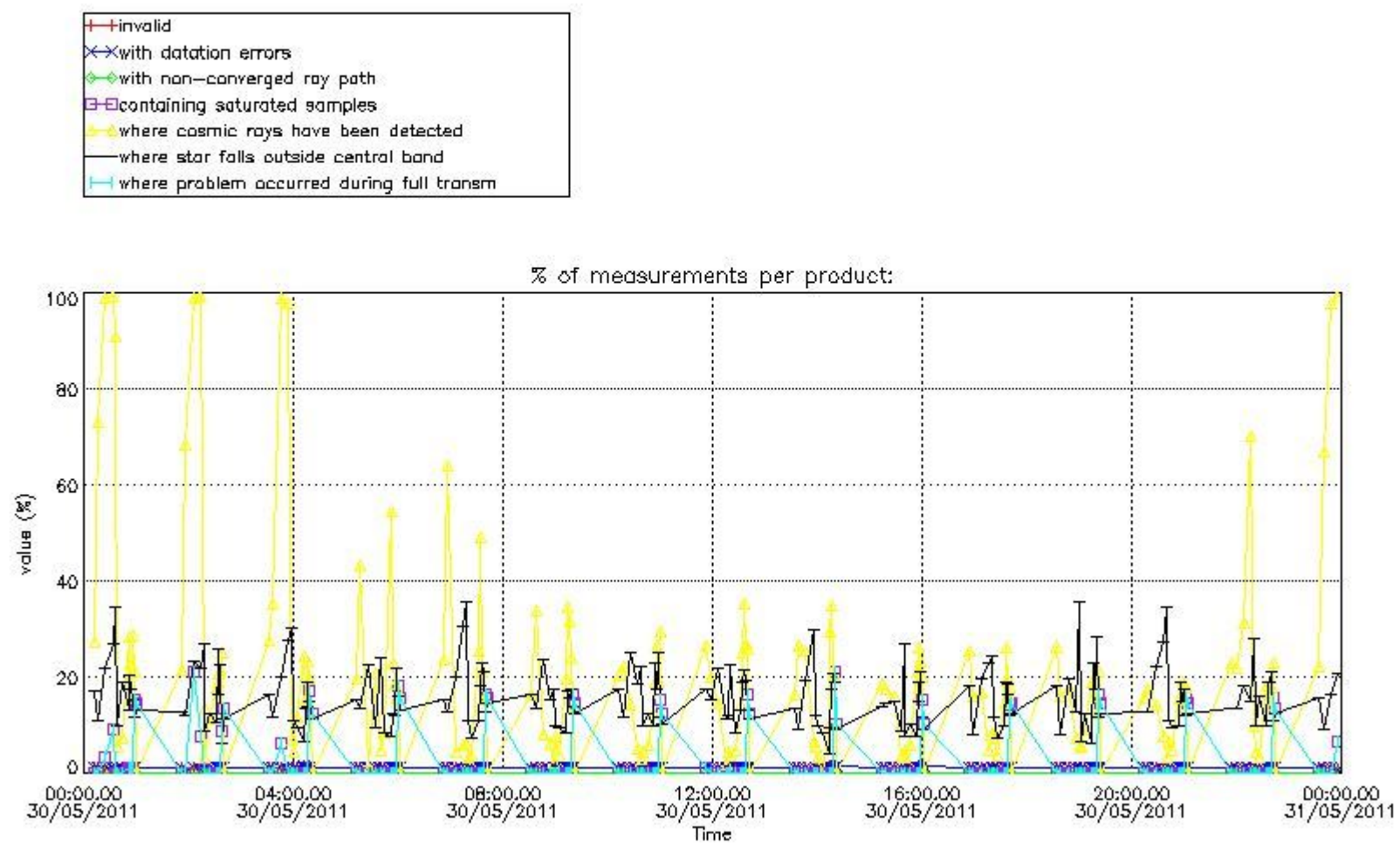


#### 4. Level 1 quality information per product

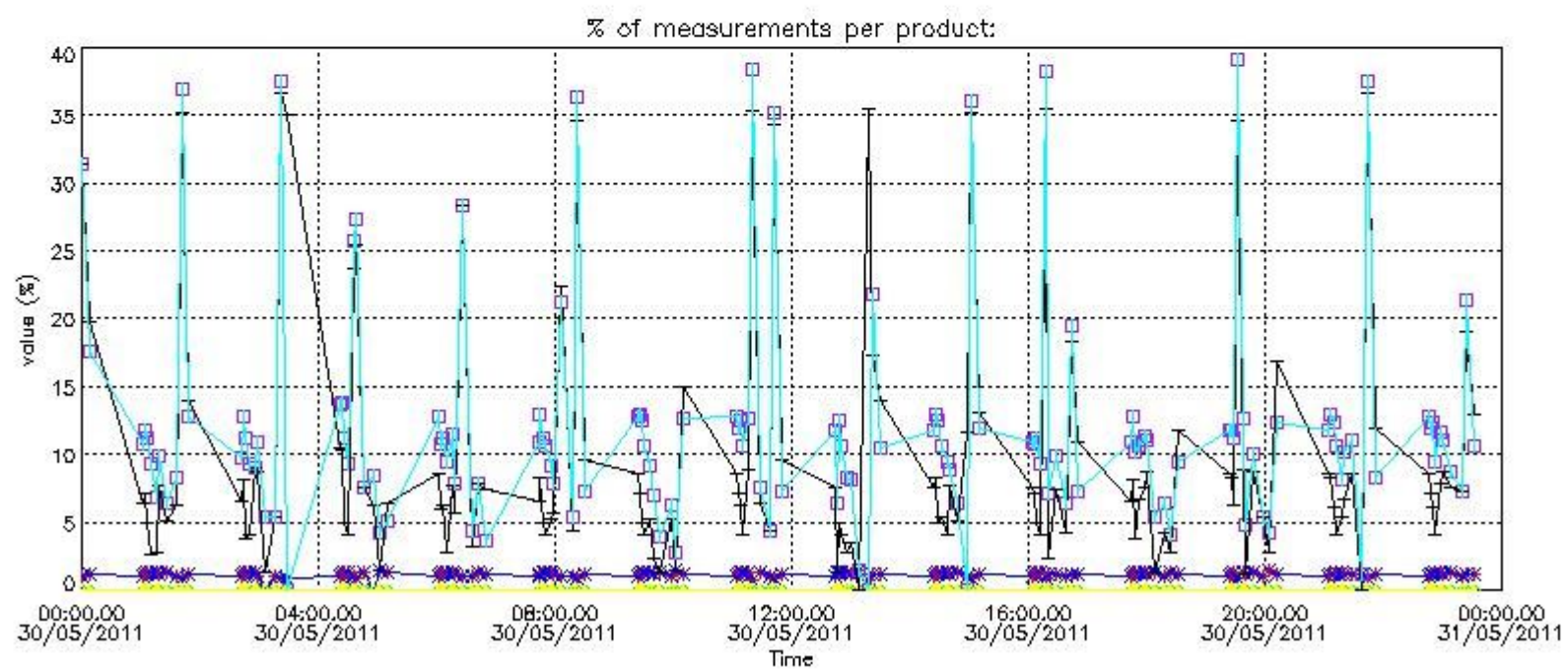
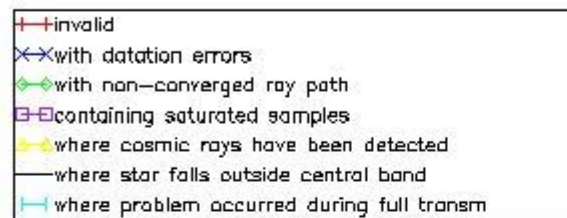
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

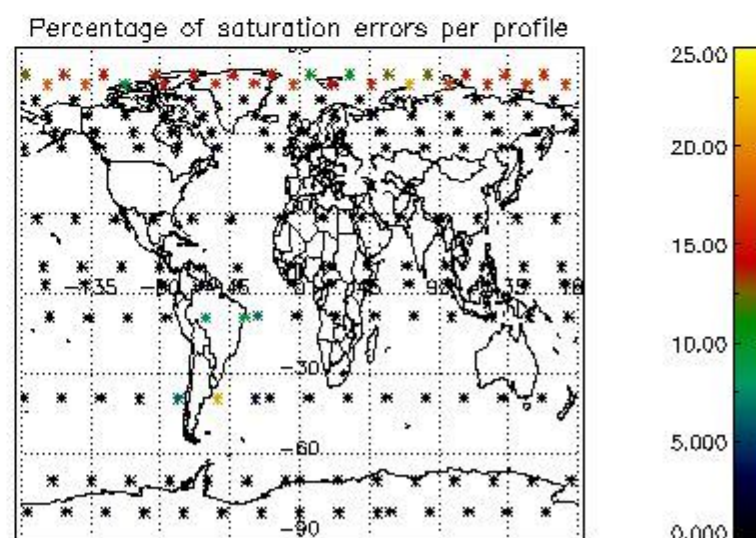
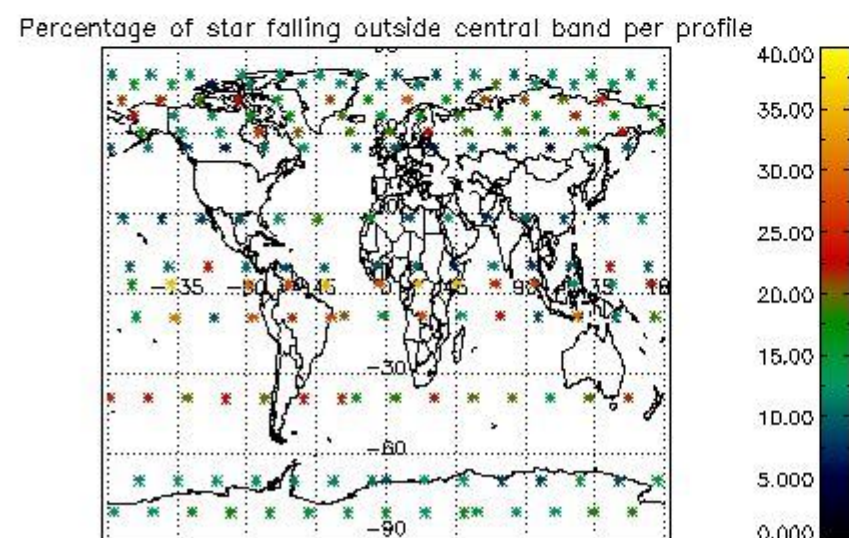
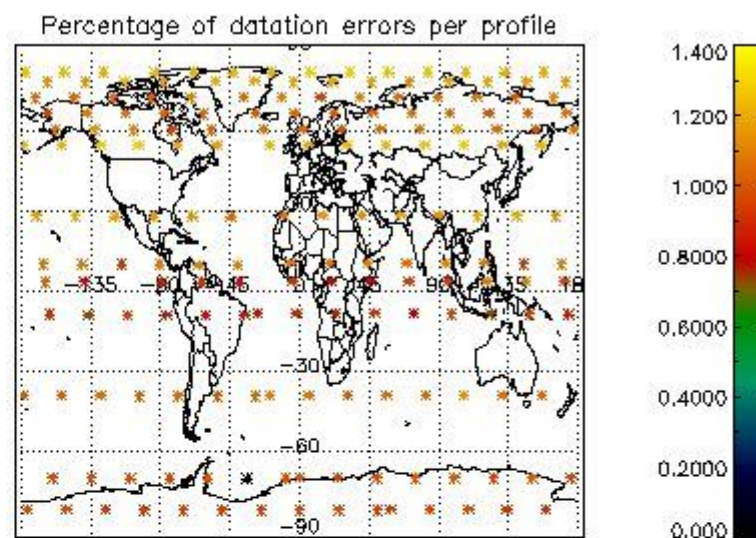
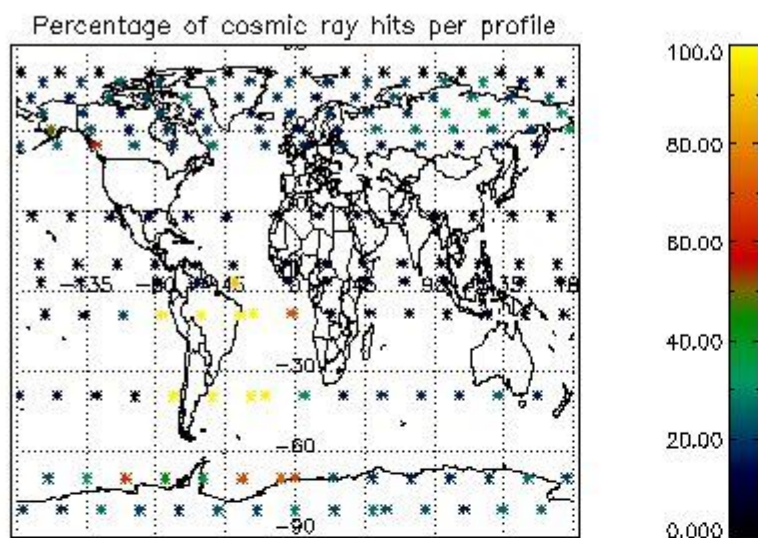


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



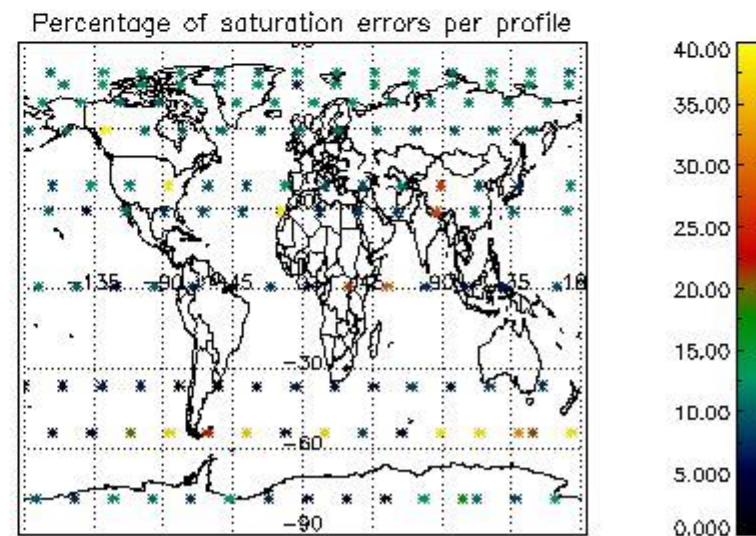
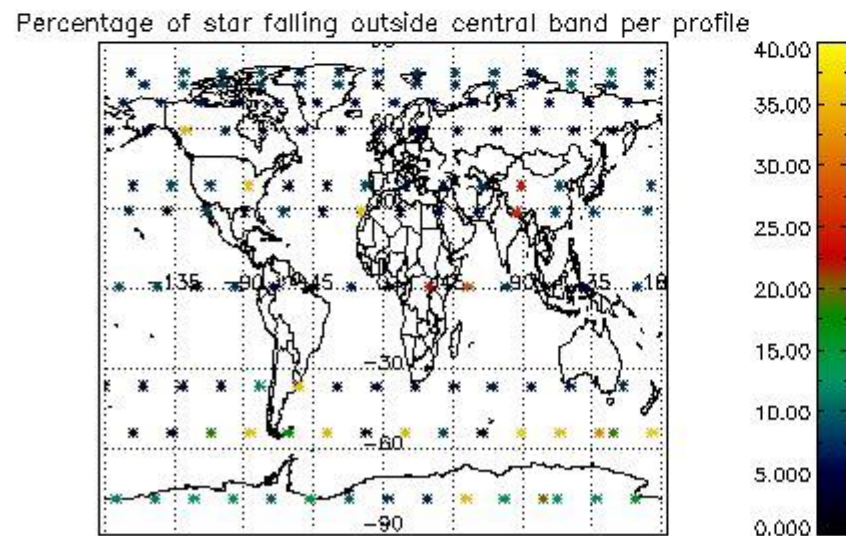
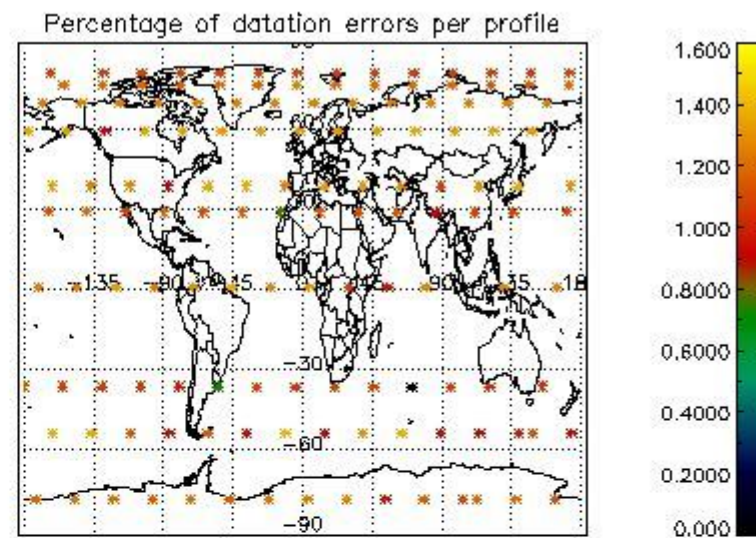
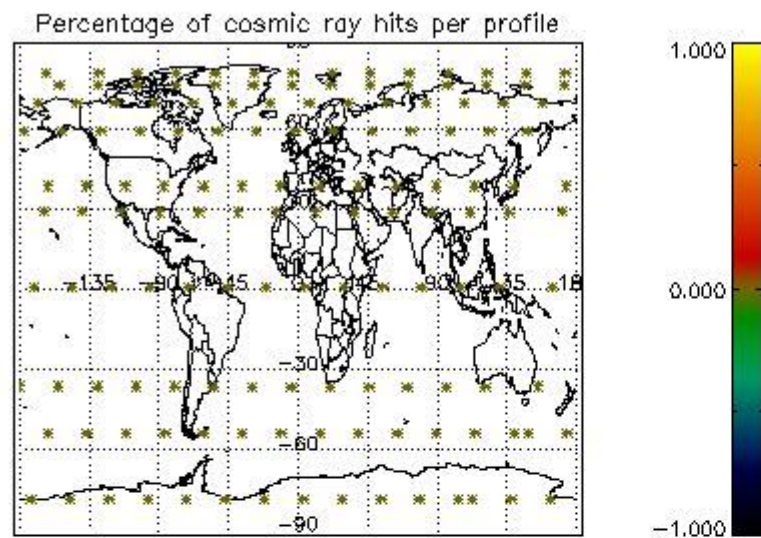
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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





## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

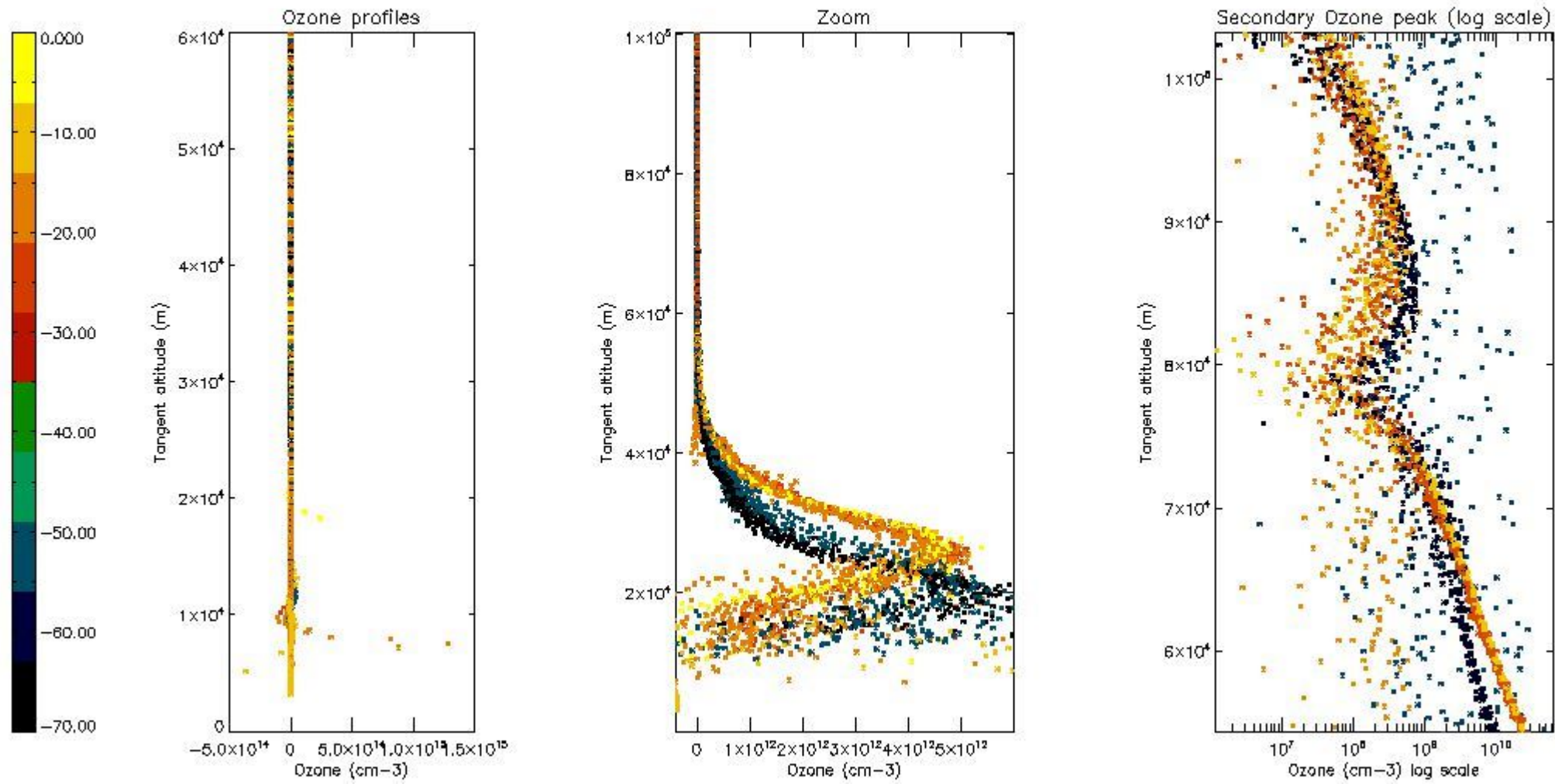
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	26
STD < 20	12

STD < 10	9
STD < 5	6

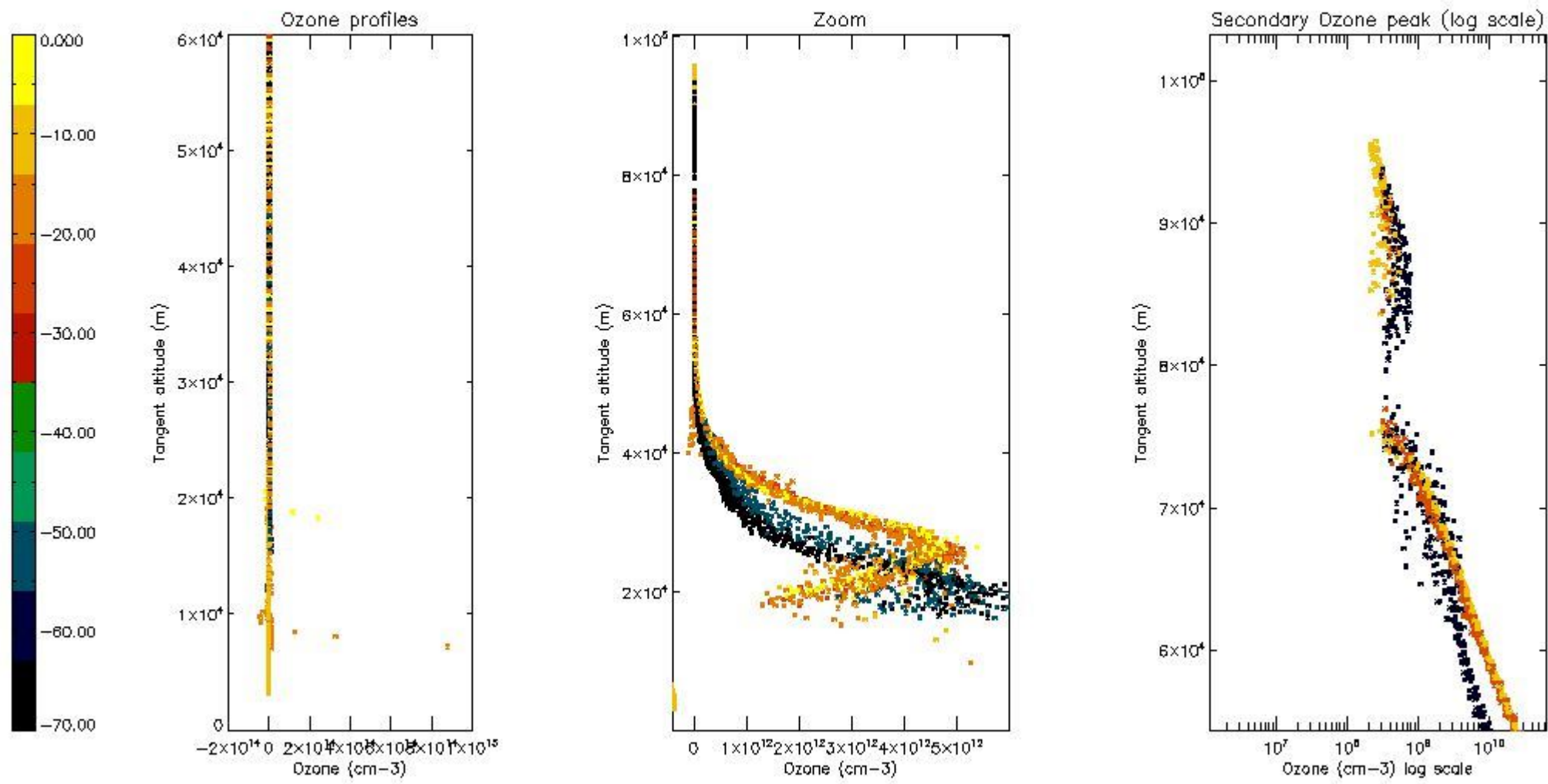
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



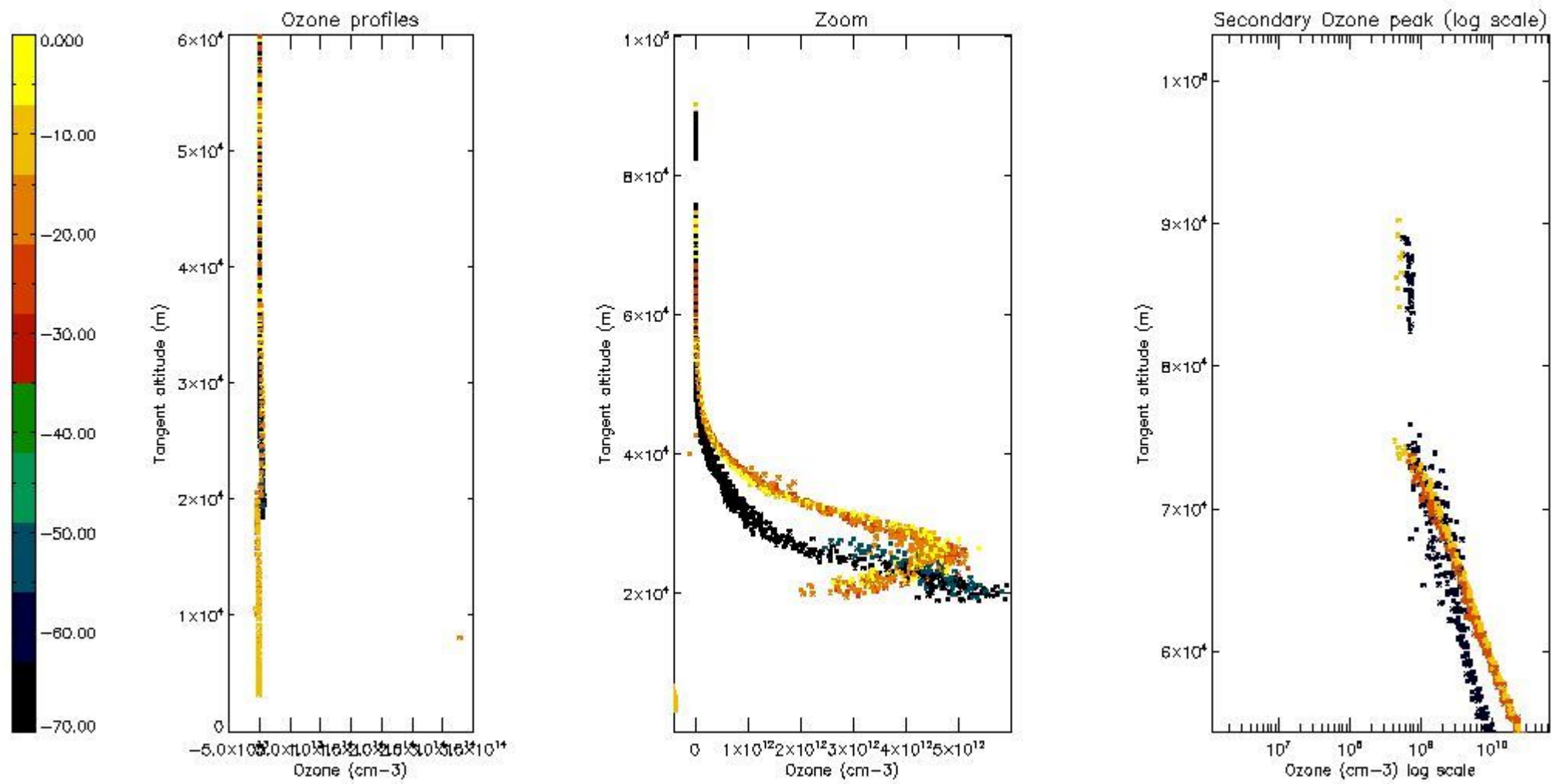
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



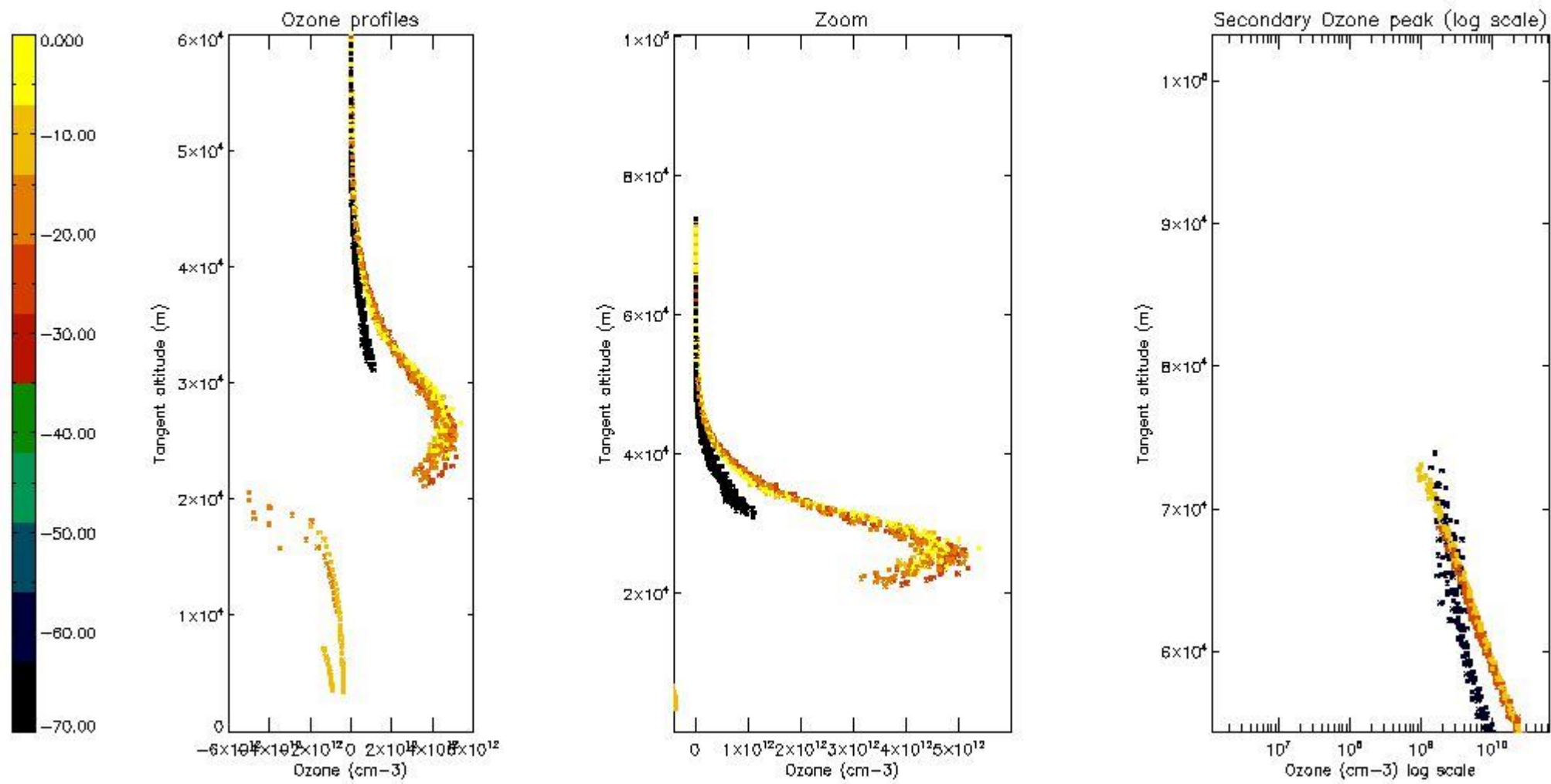
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



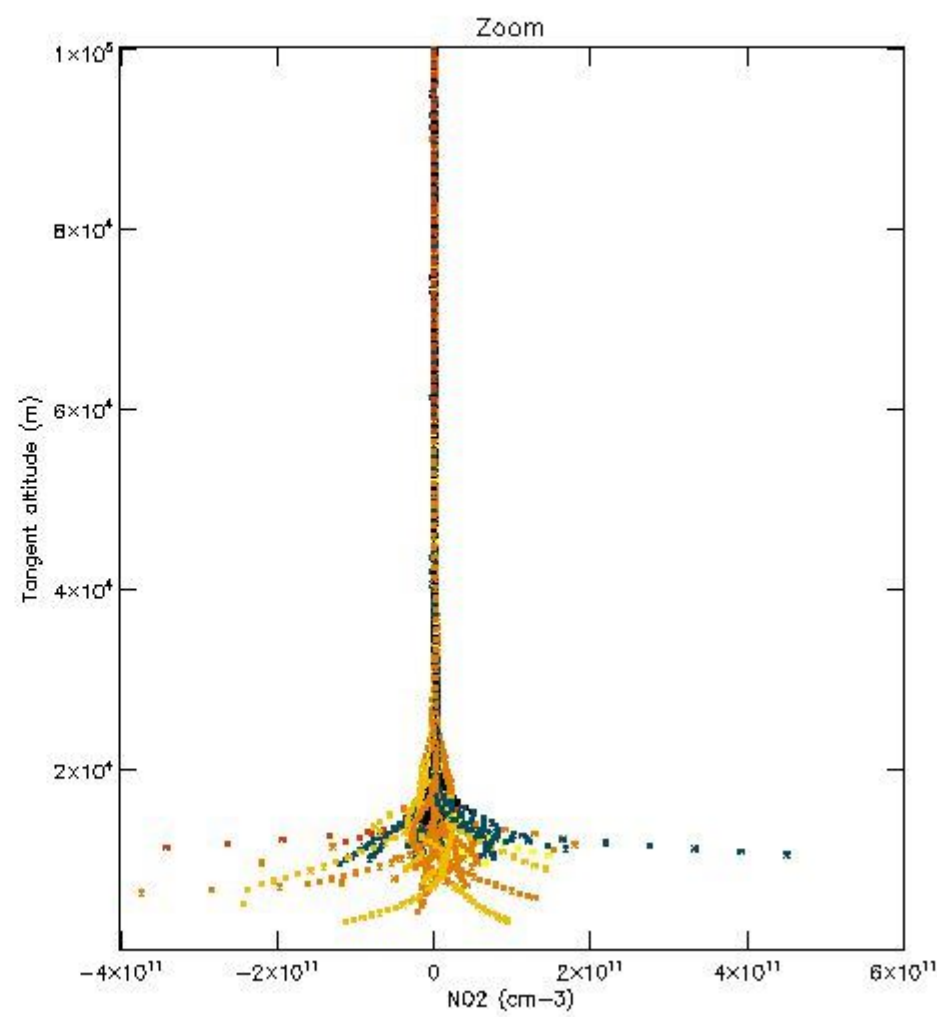
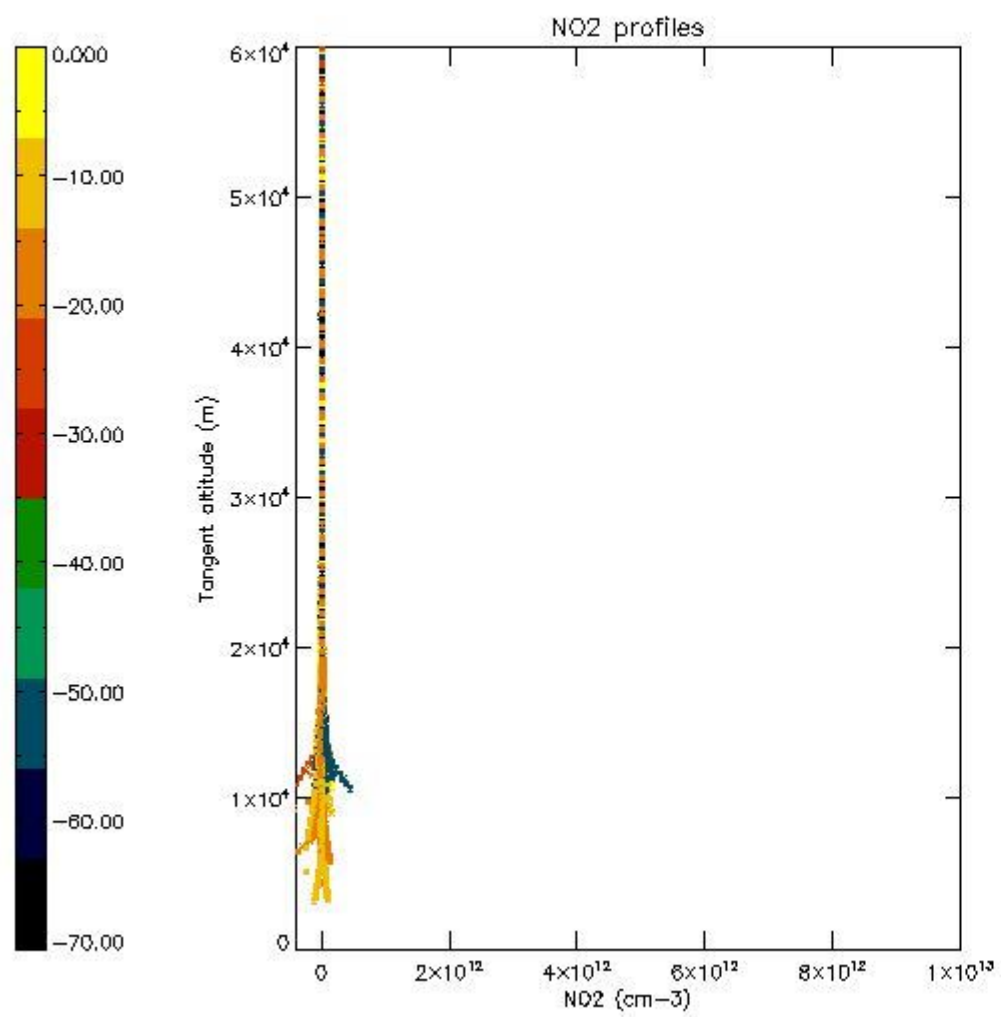
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



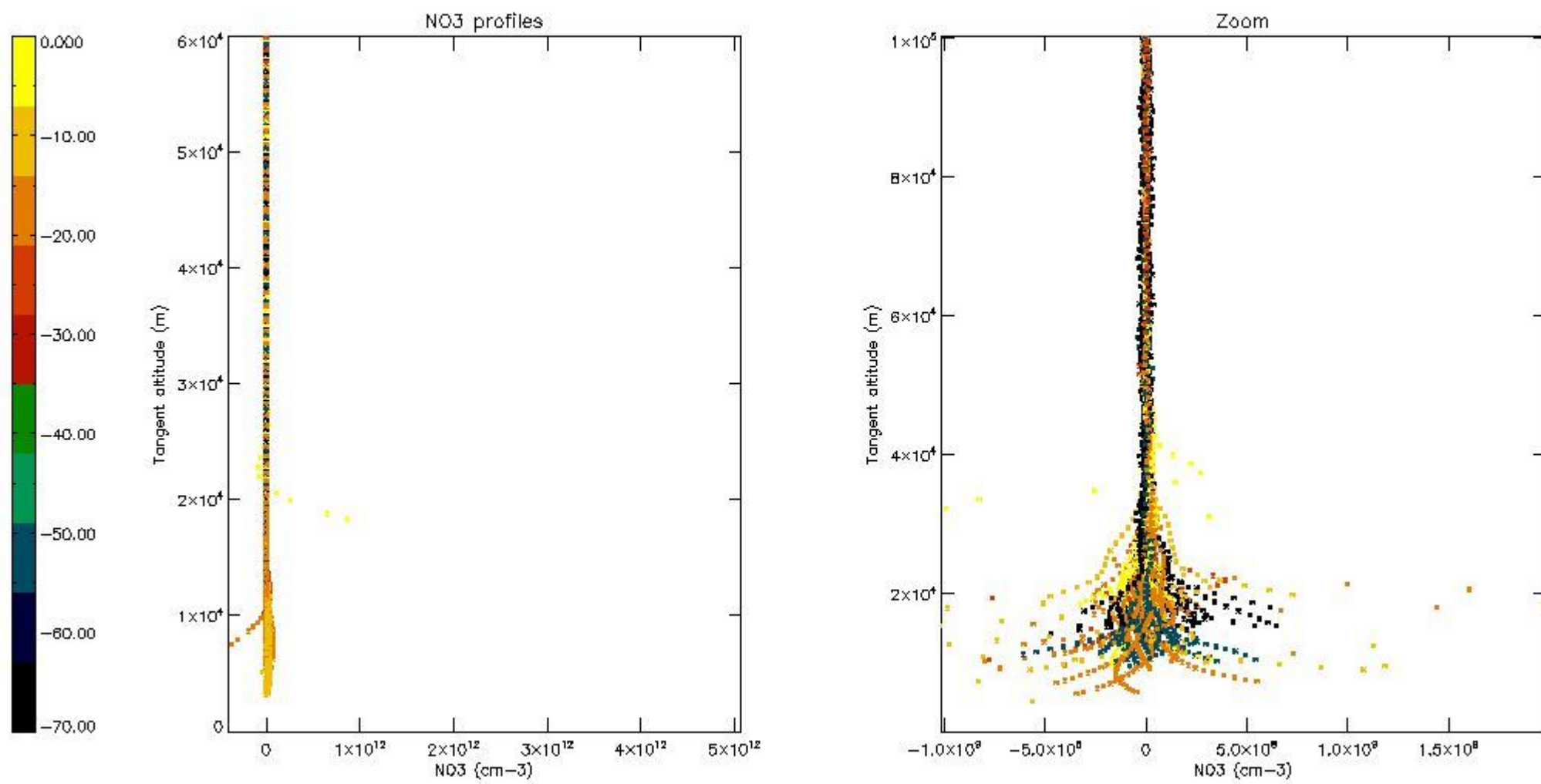
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



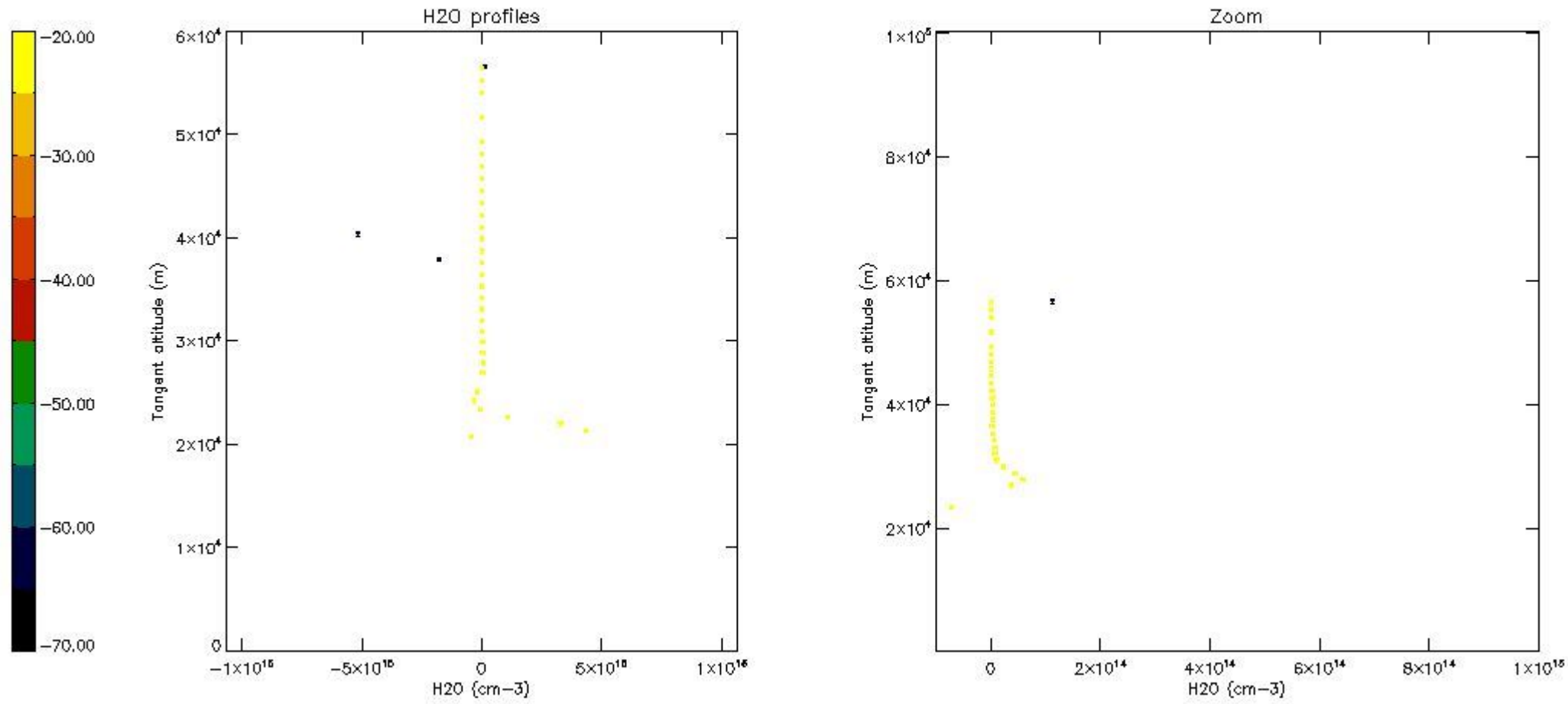
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*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.

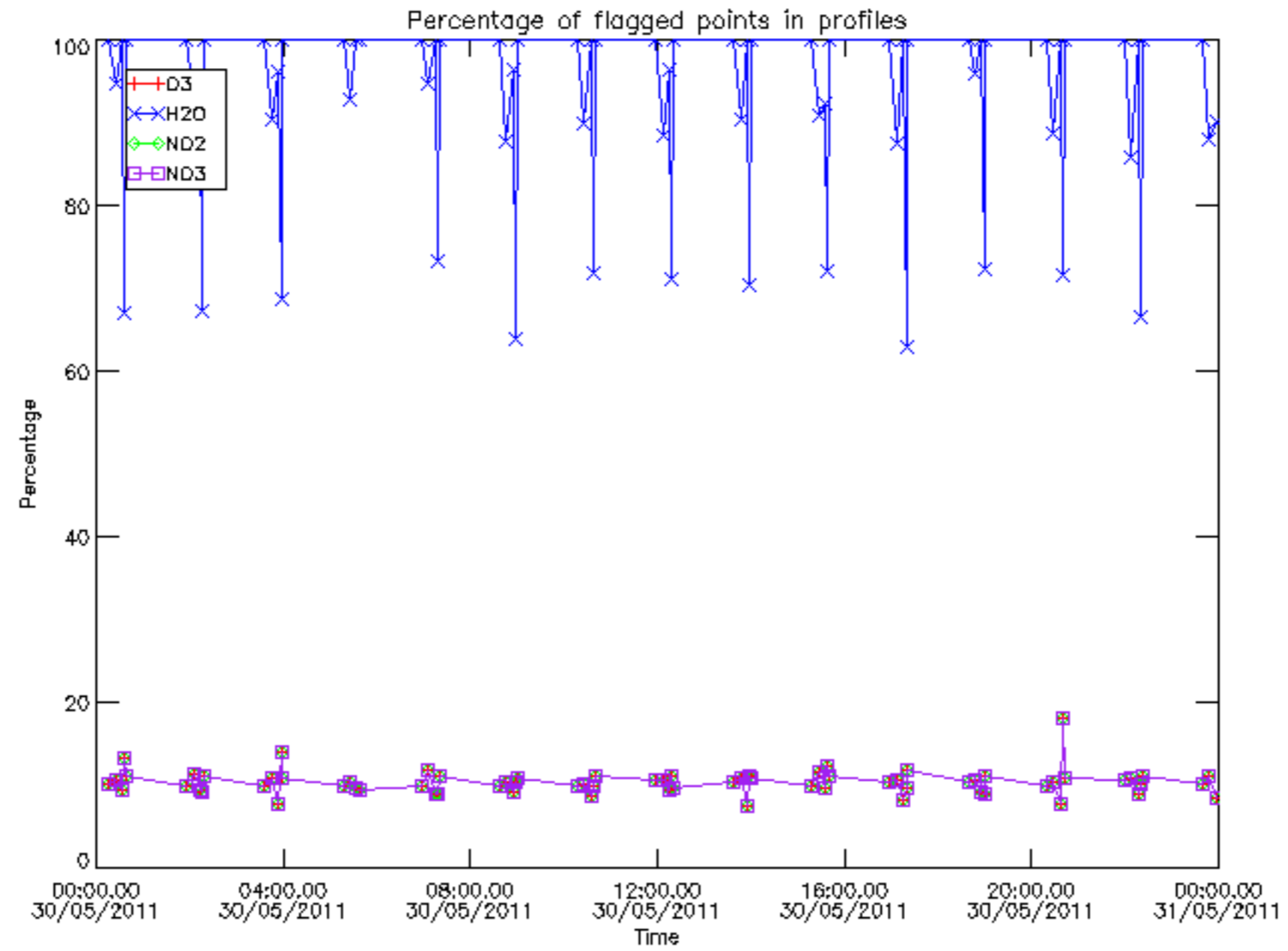


## 6. Auxiliary Data Files used for the production reported in section 2

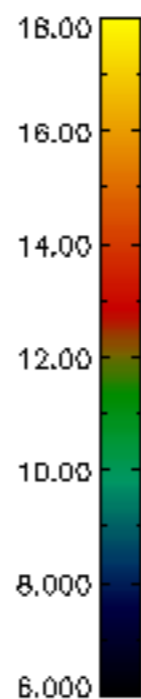
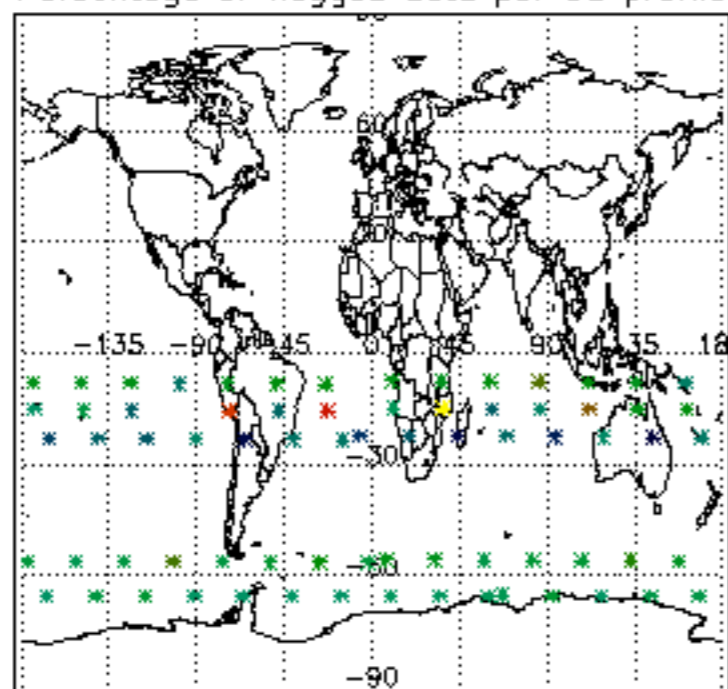
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	30-MAY-2011 00:00:49
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	30-MAY-2011 00:00:49
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	30-MAY-2011 00:00:49

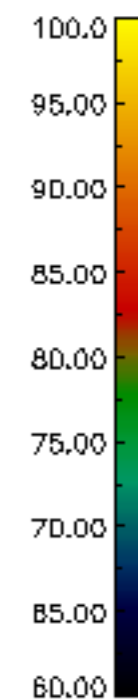
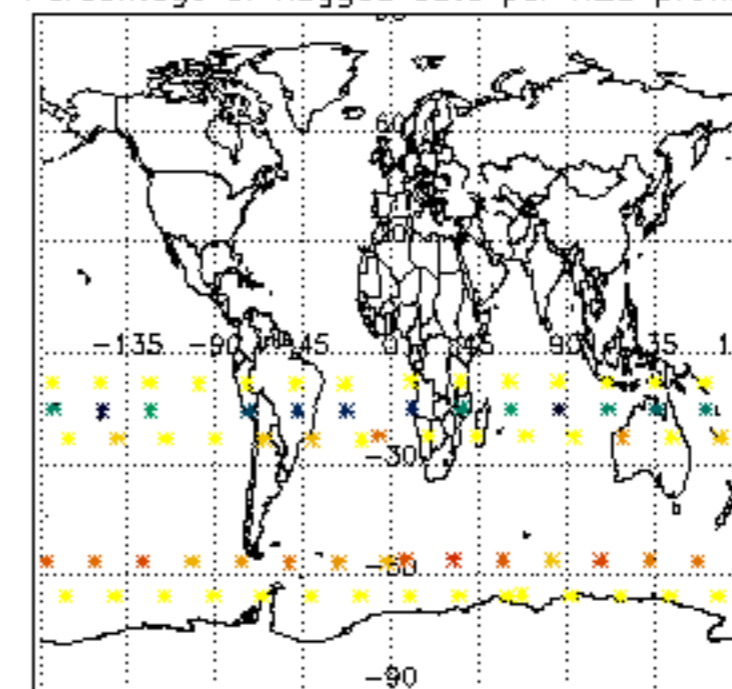




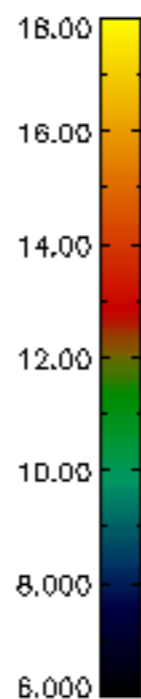
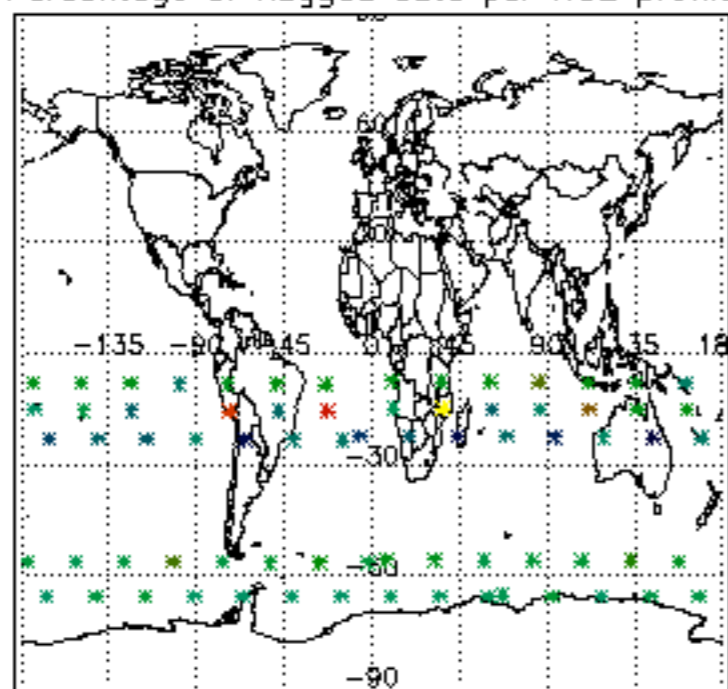
Percentage of flagged data per D3 profile



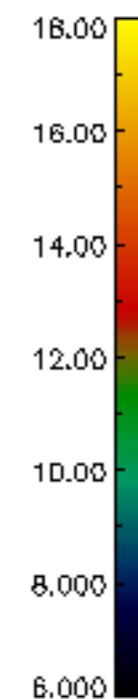
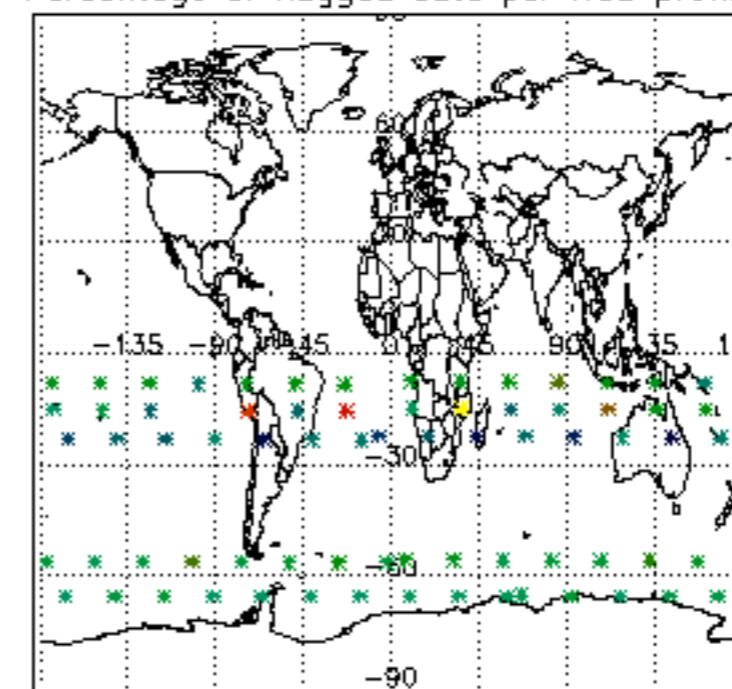
Percentage of flagged data per H2O profile

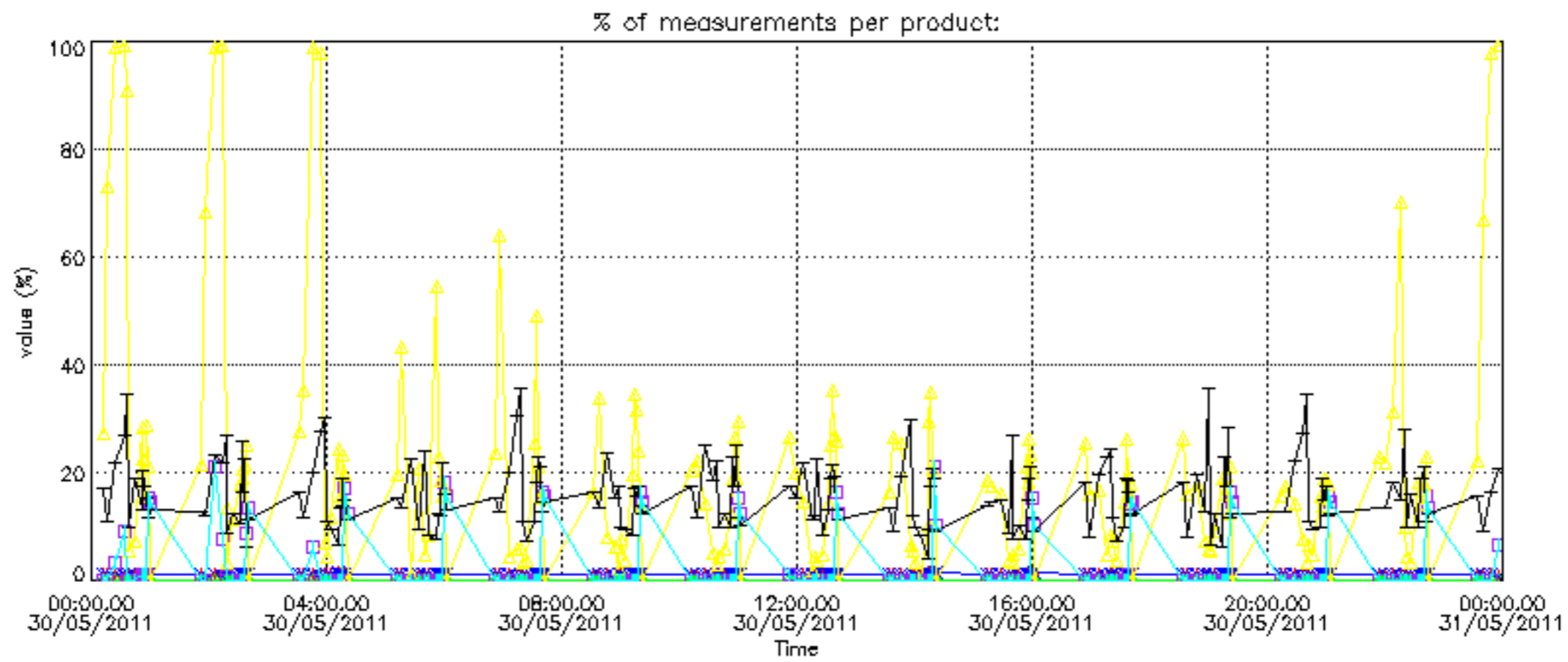
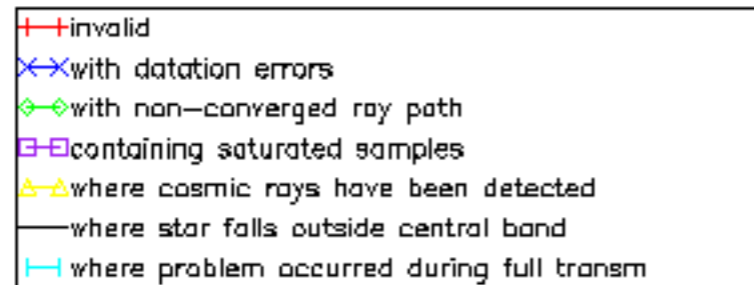


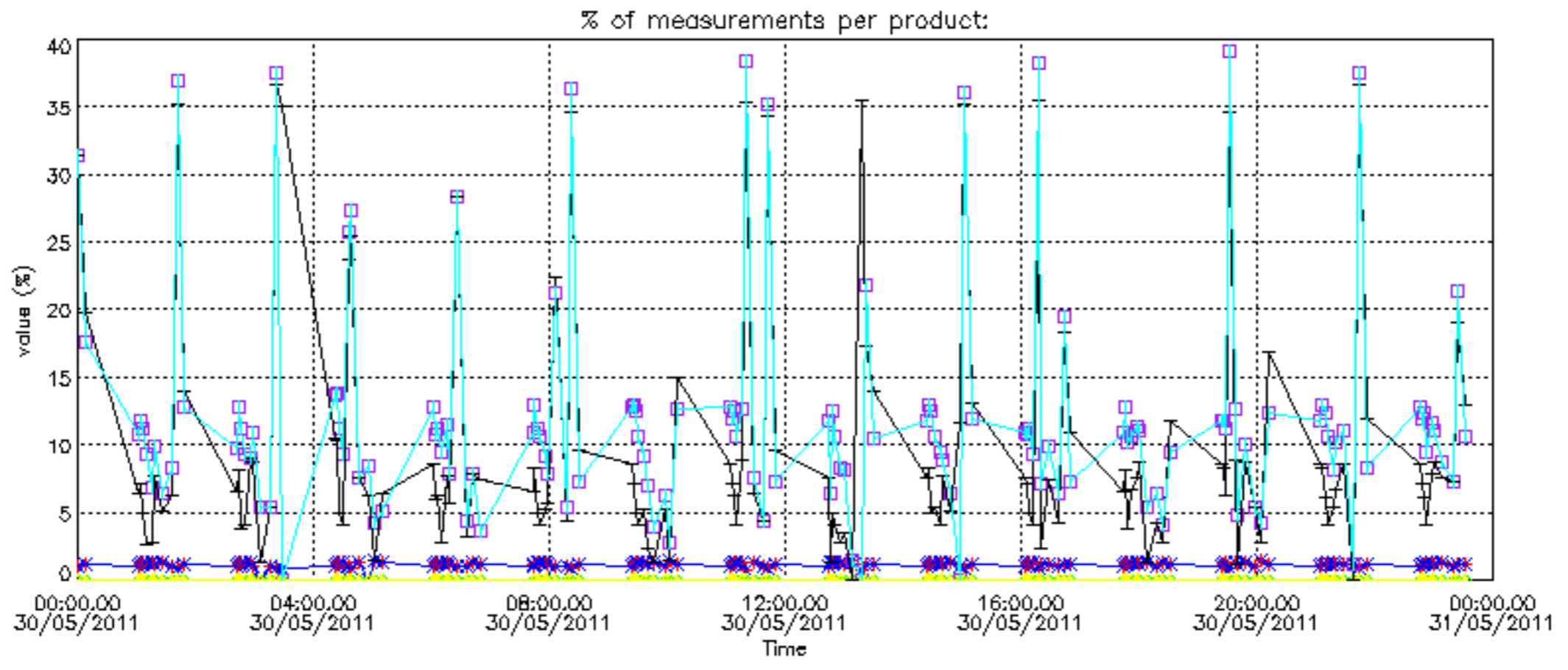
Percentage of flagged data per NO2 profile



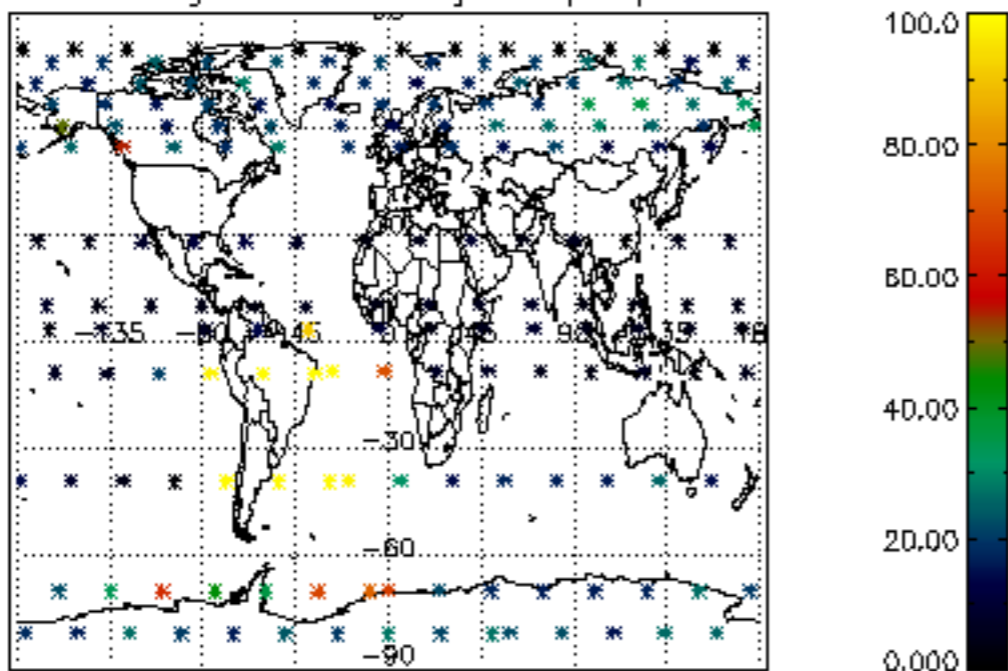
Percentage of flagged data per NO3 profile



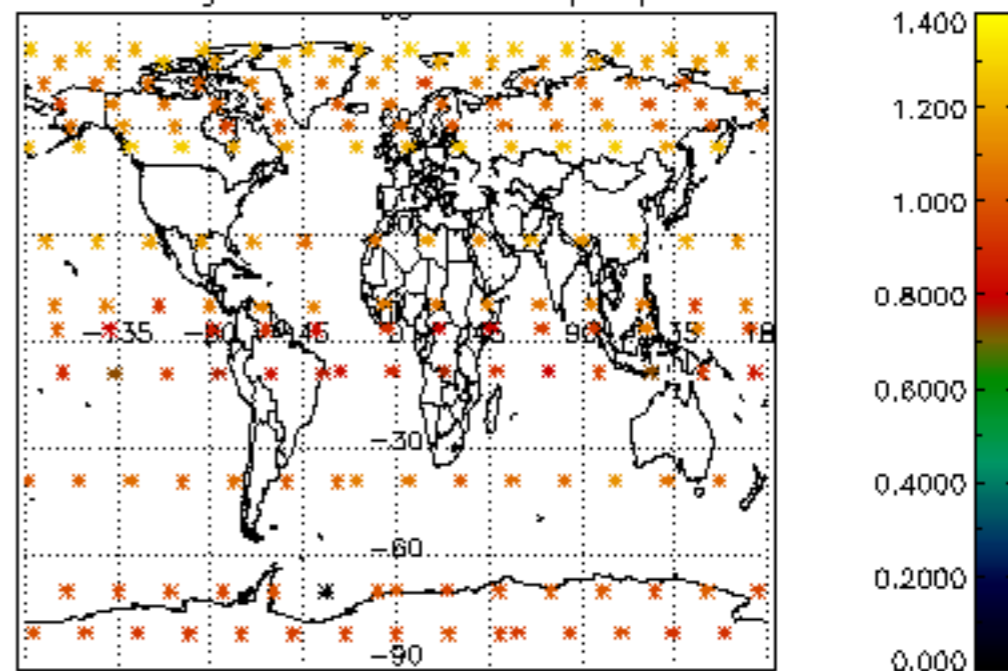




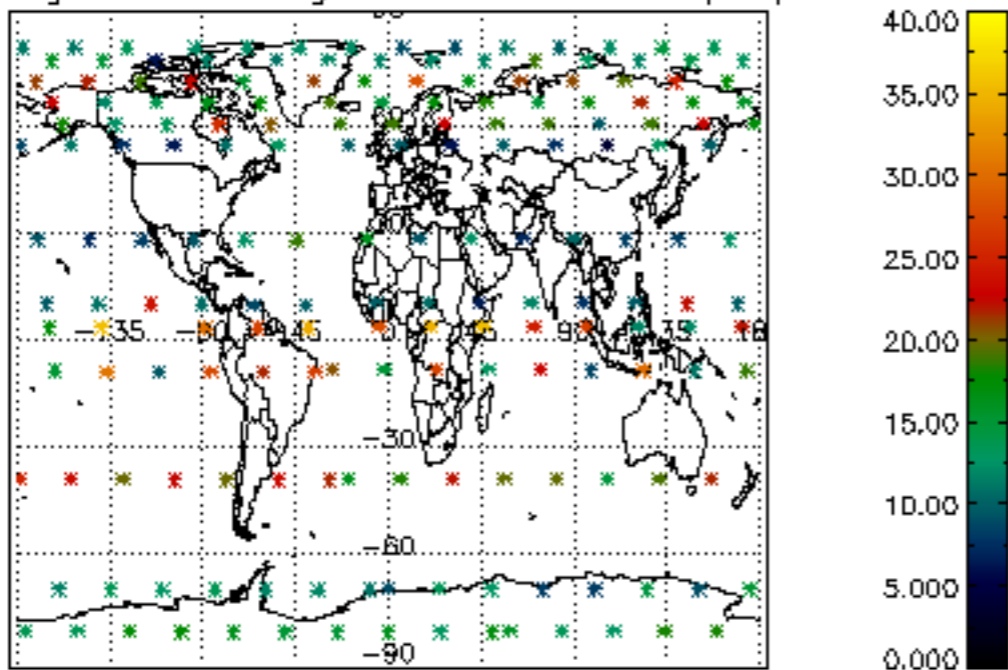
Percentage of cosmic ray hits per profile



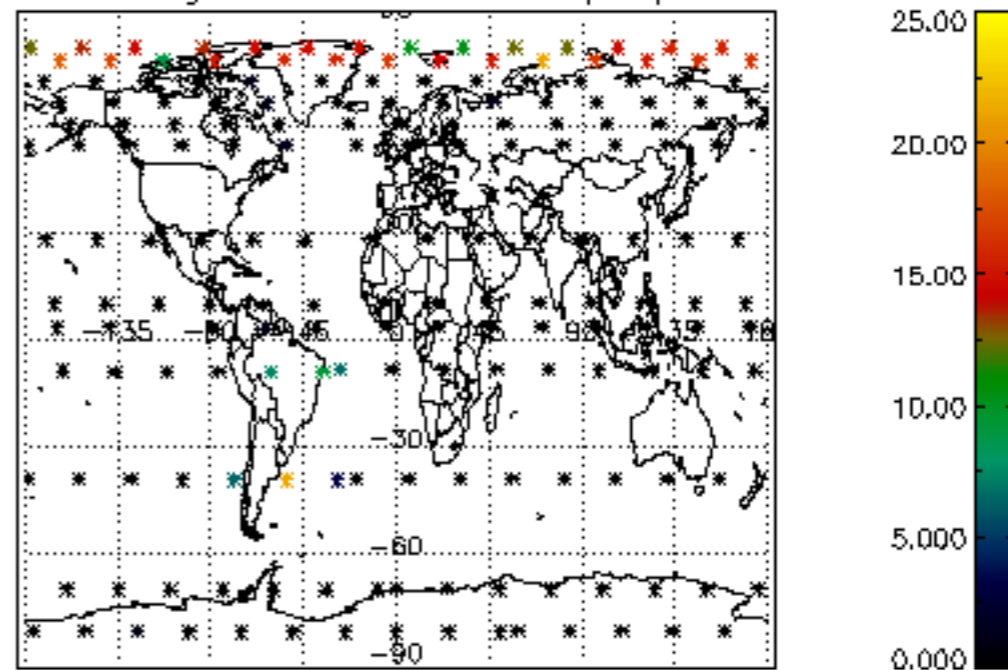
Percentage of datation errors per profile



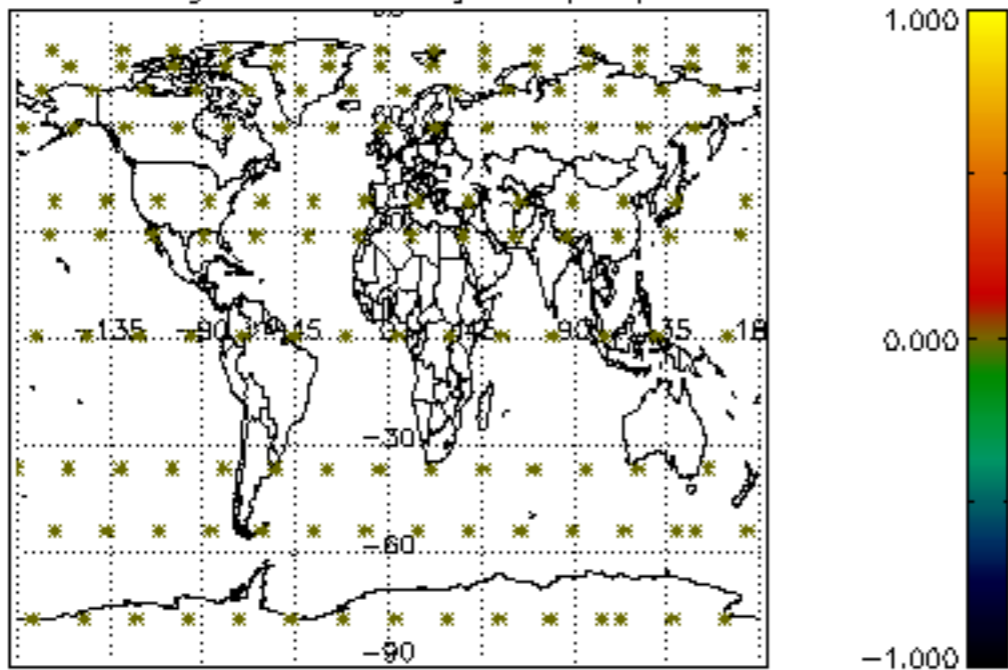
Percentage of star falling outside central band per profile



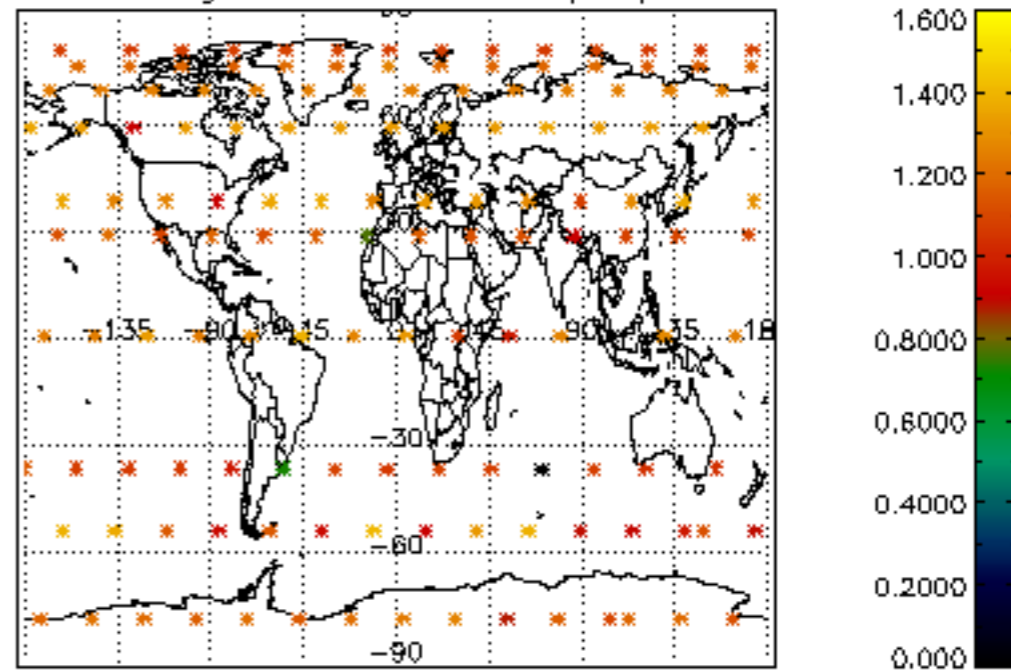
Percentage of saturation errors per profile



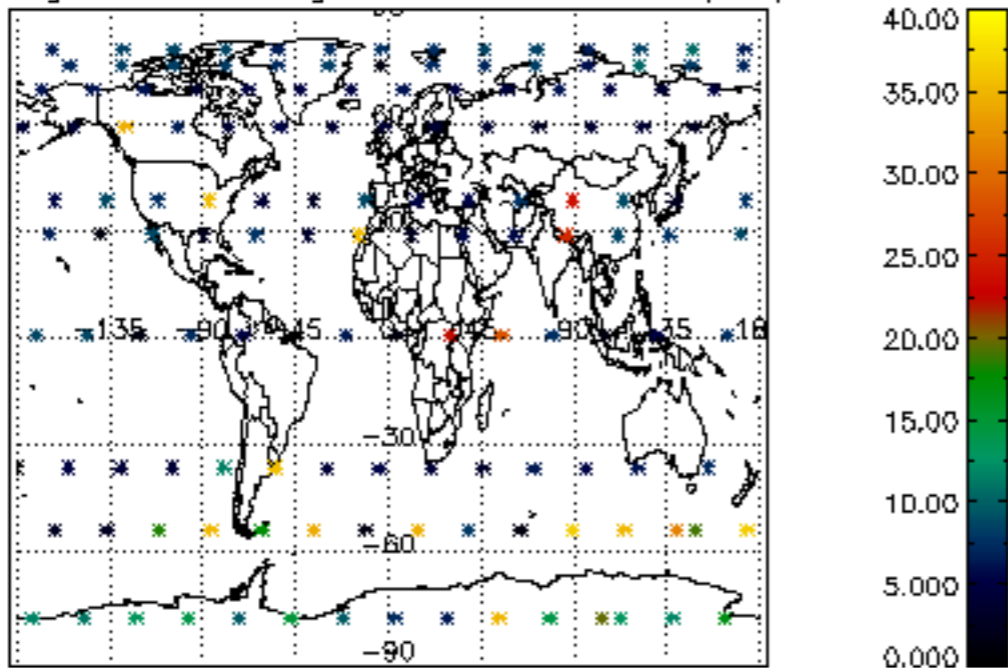
Percentage of cosmic ray hits per profile



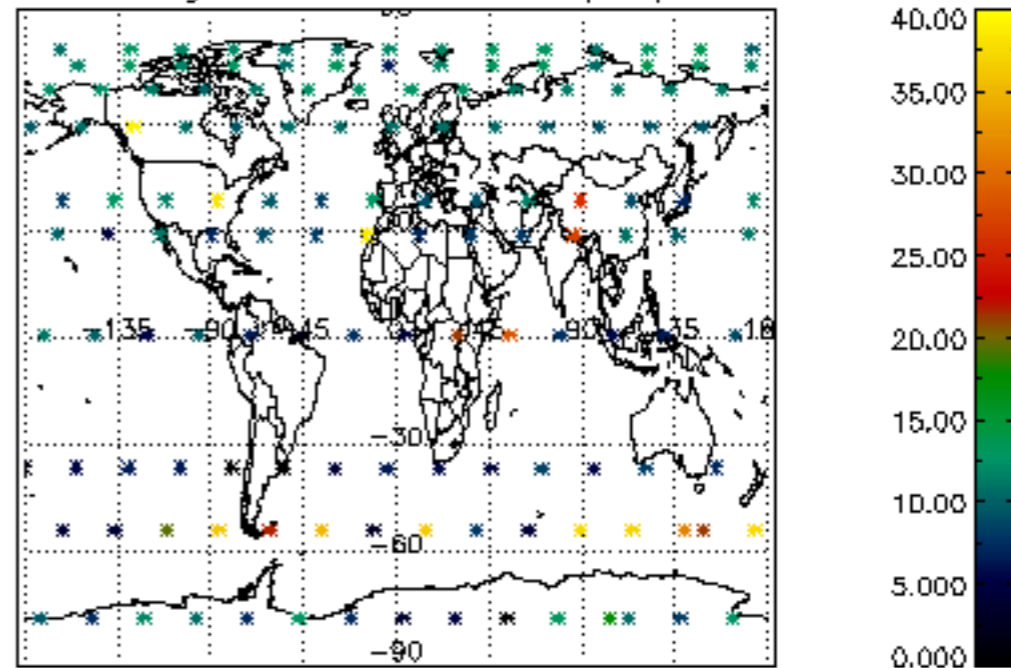
Percentage of datation errors per profile

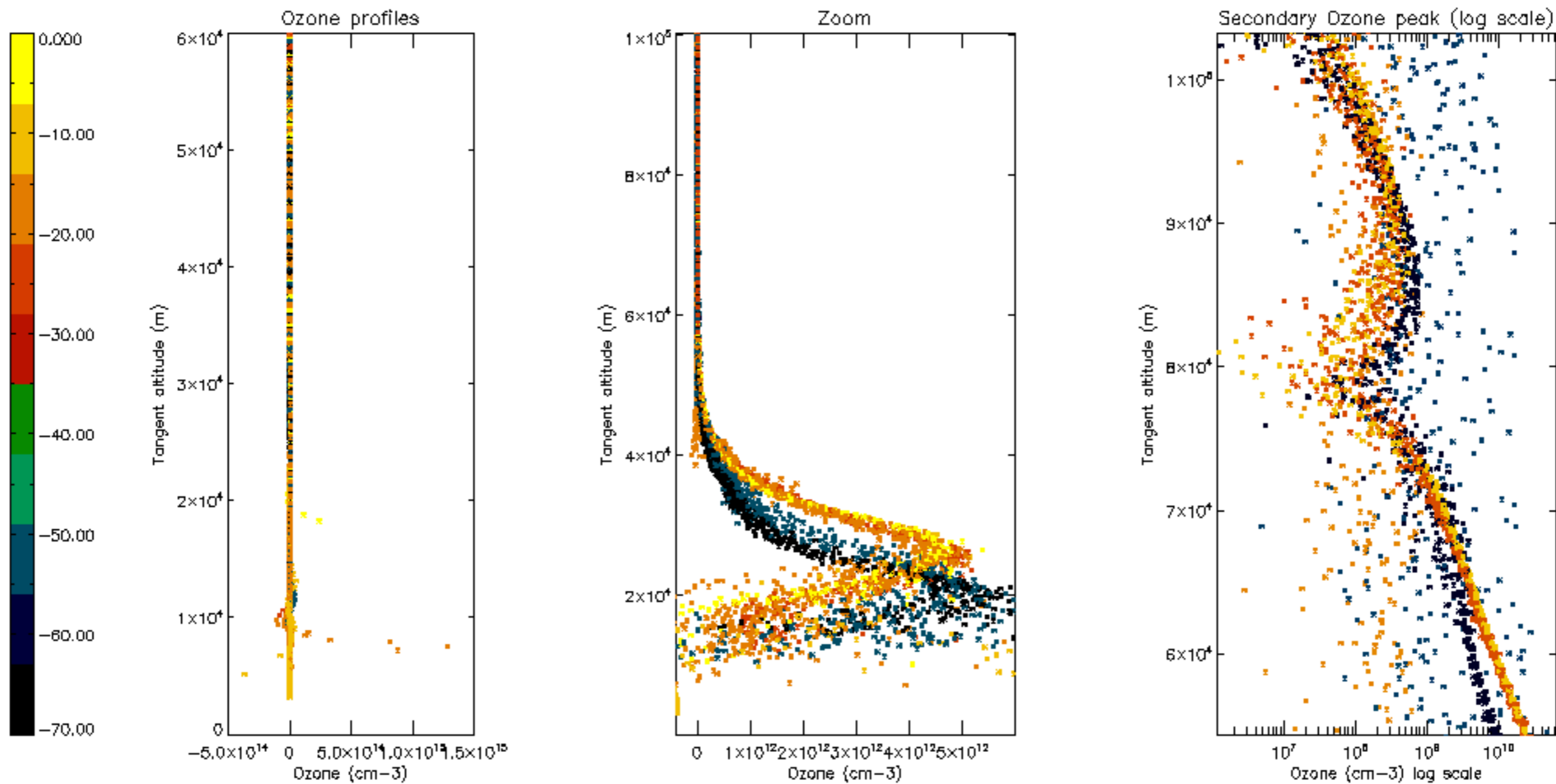


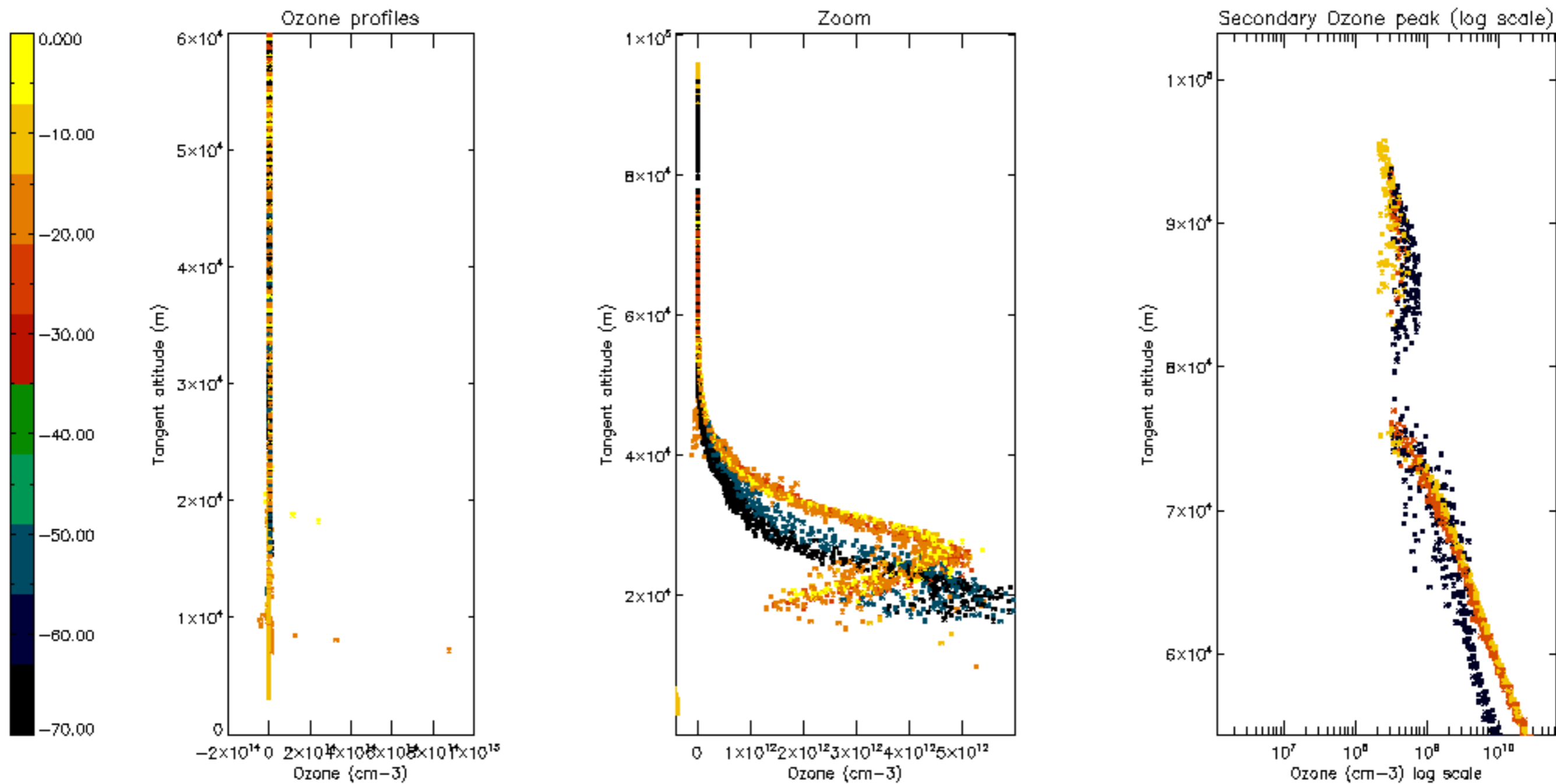
Percentage of star falling outside central band per profile



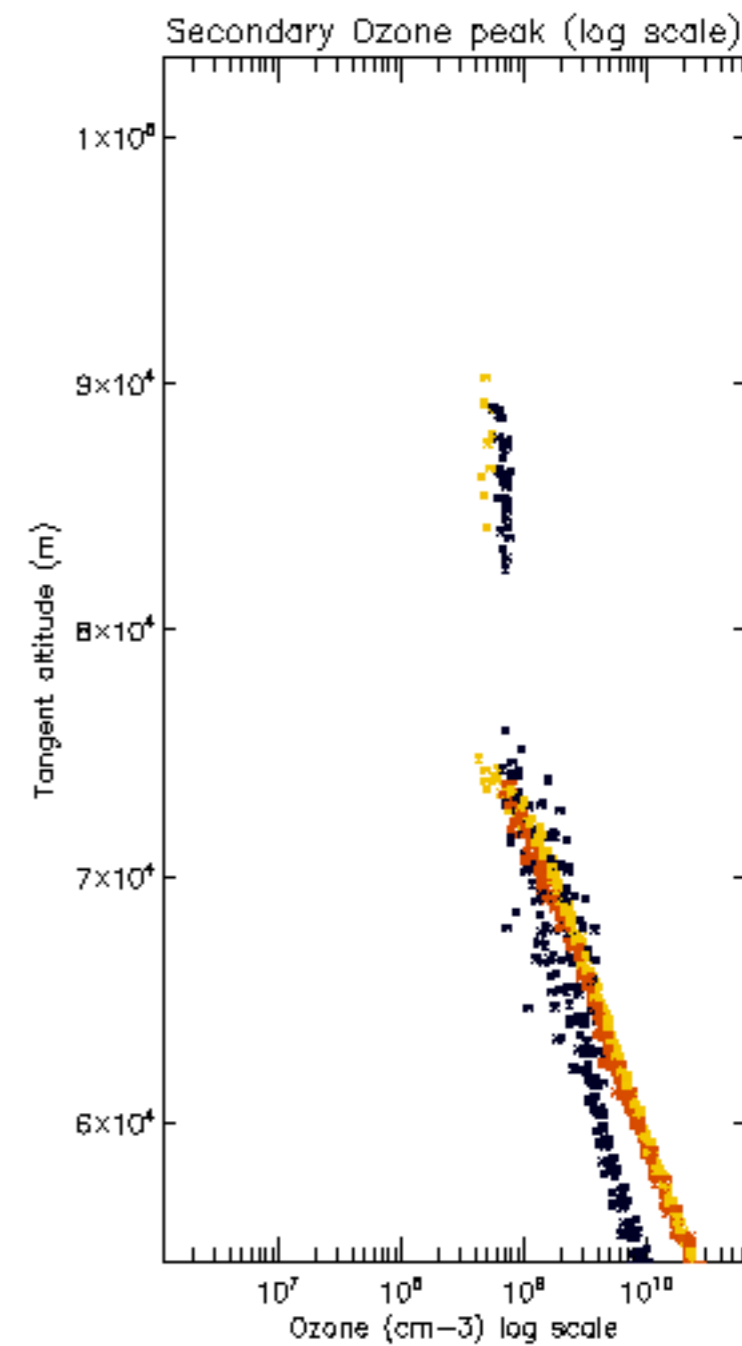
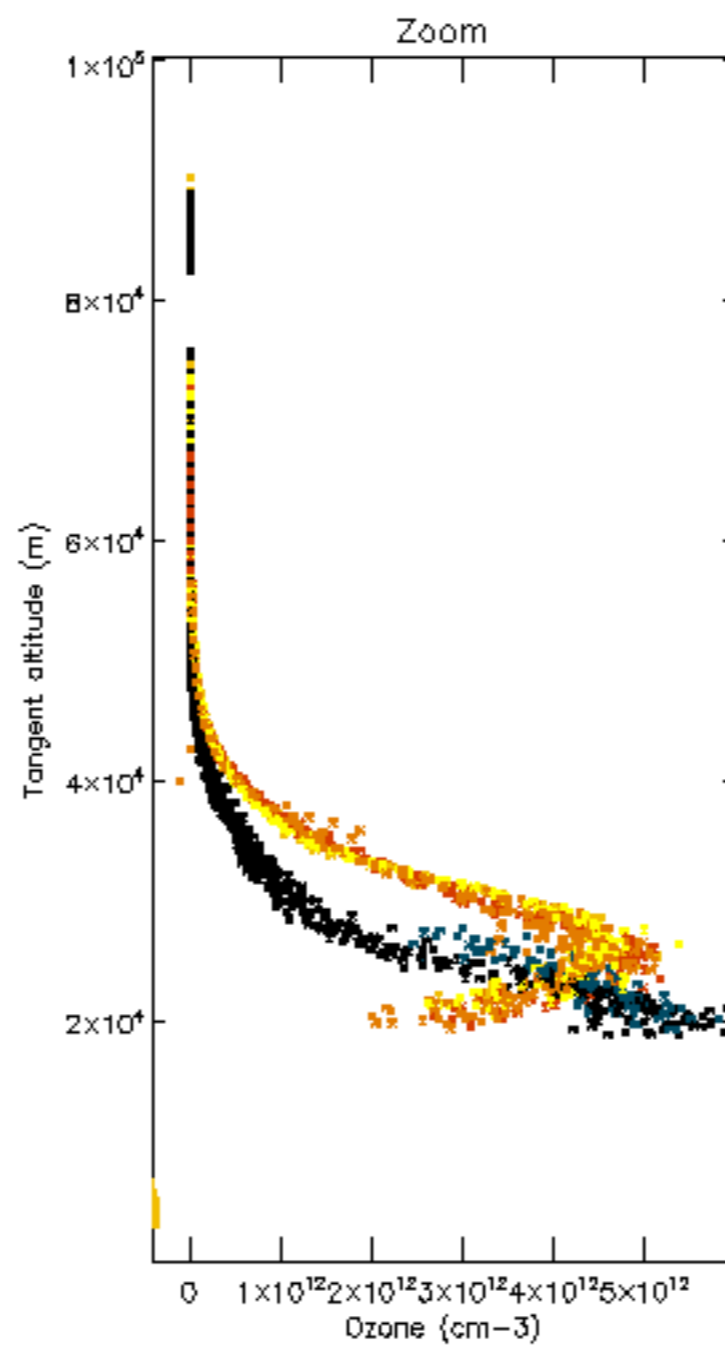
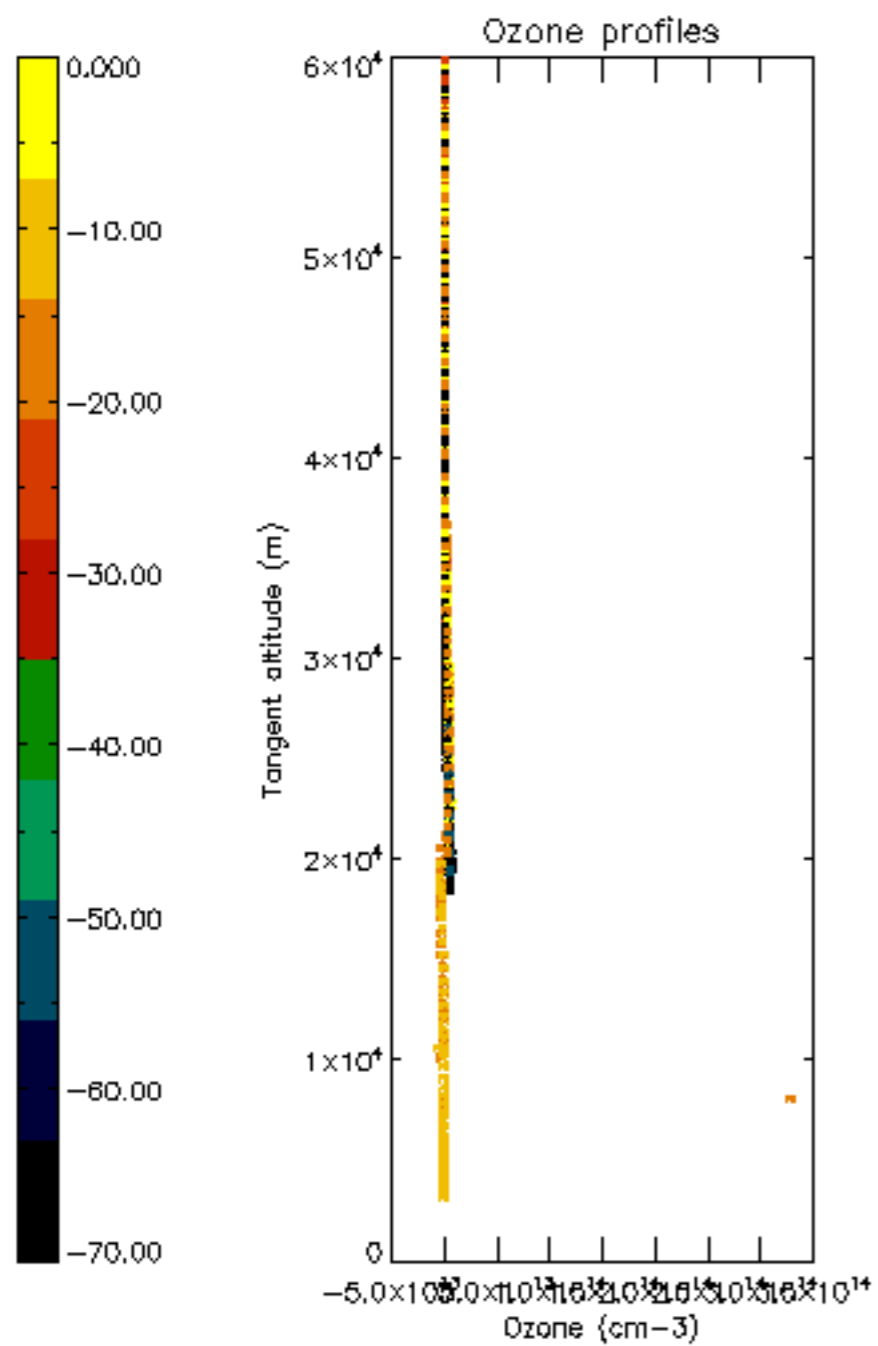
Percentage of saturation errors per profile

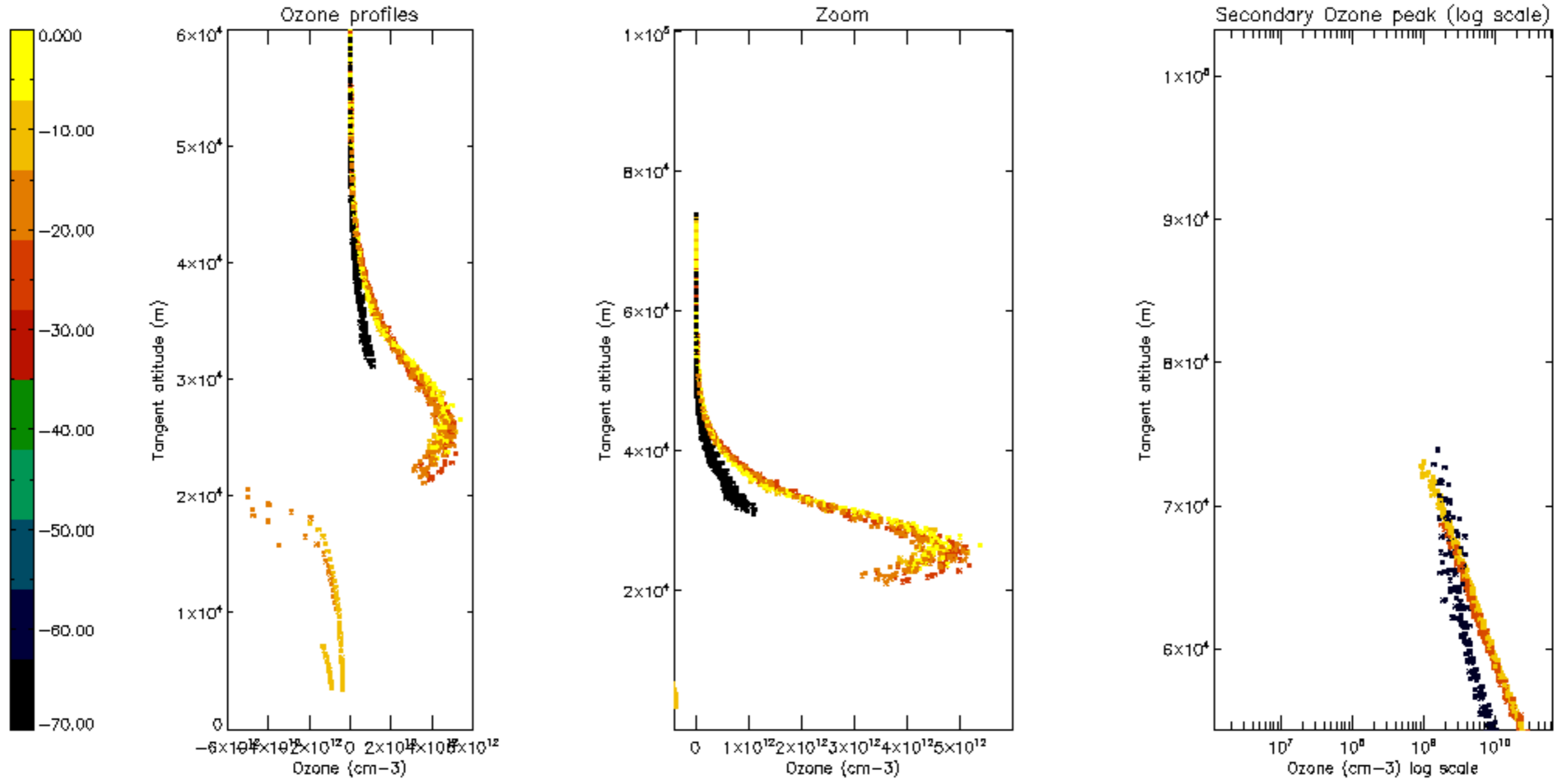


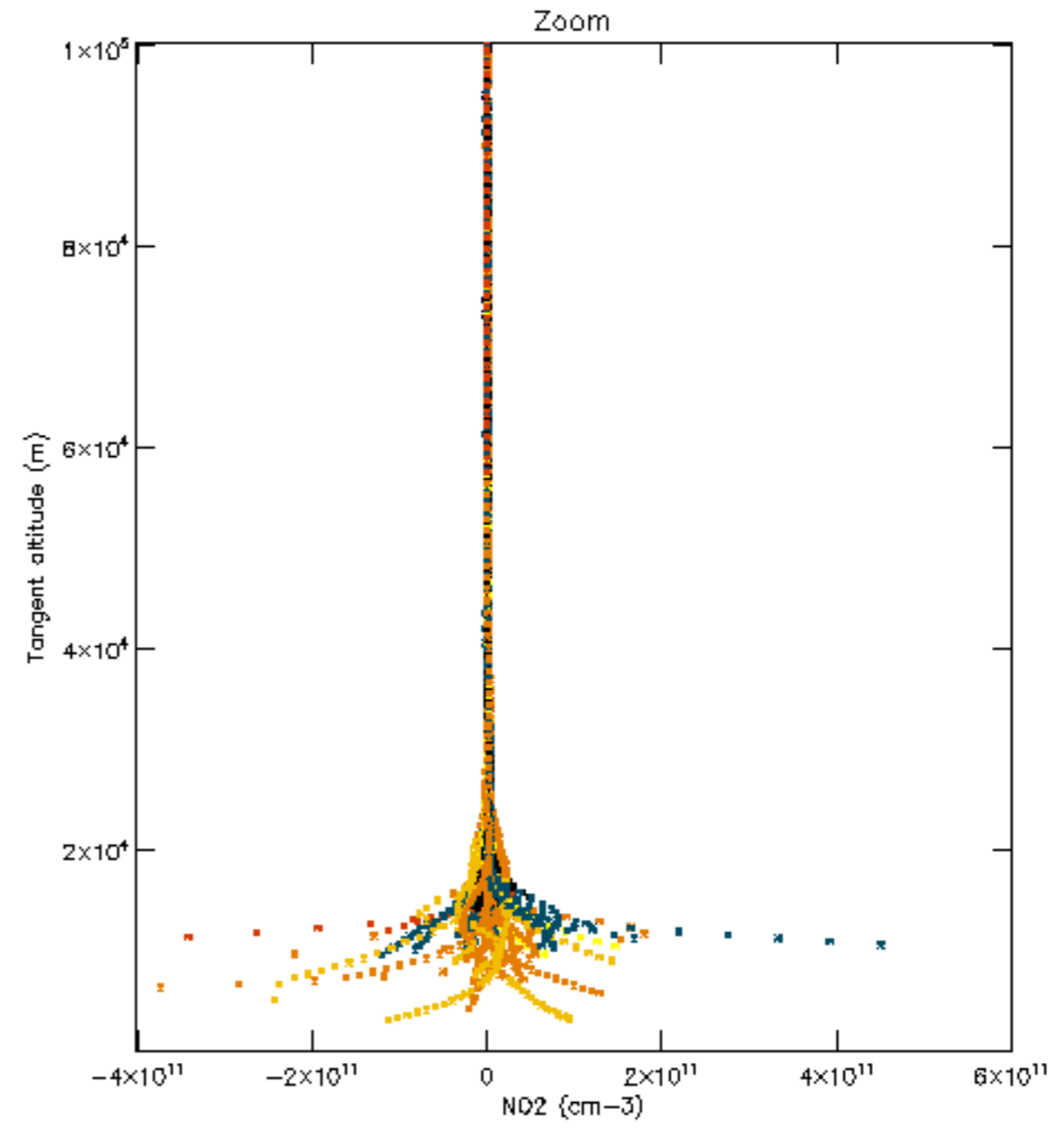
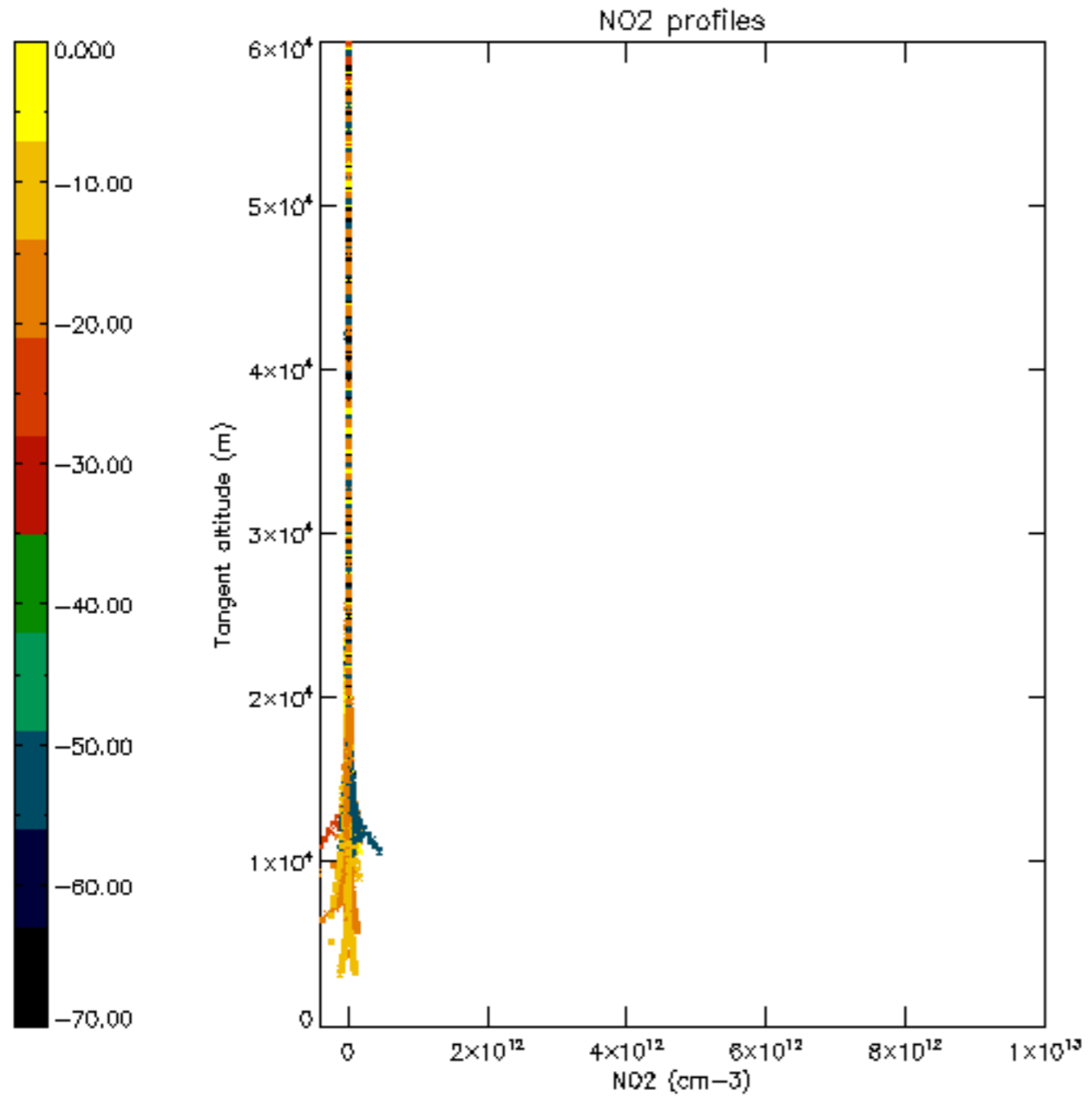


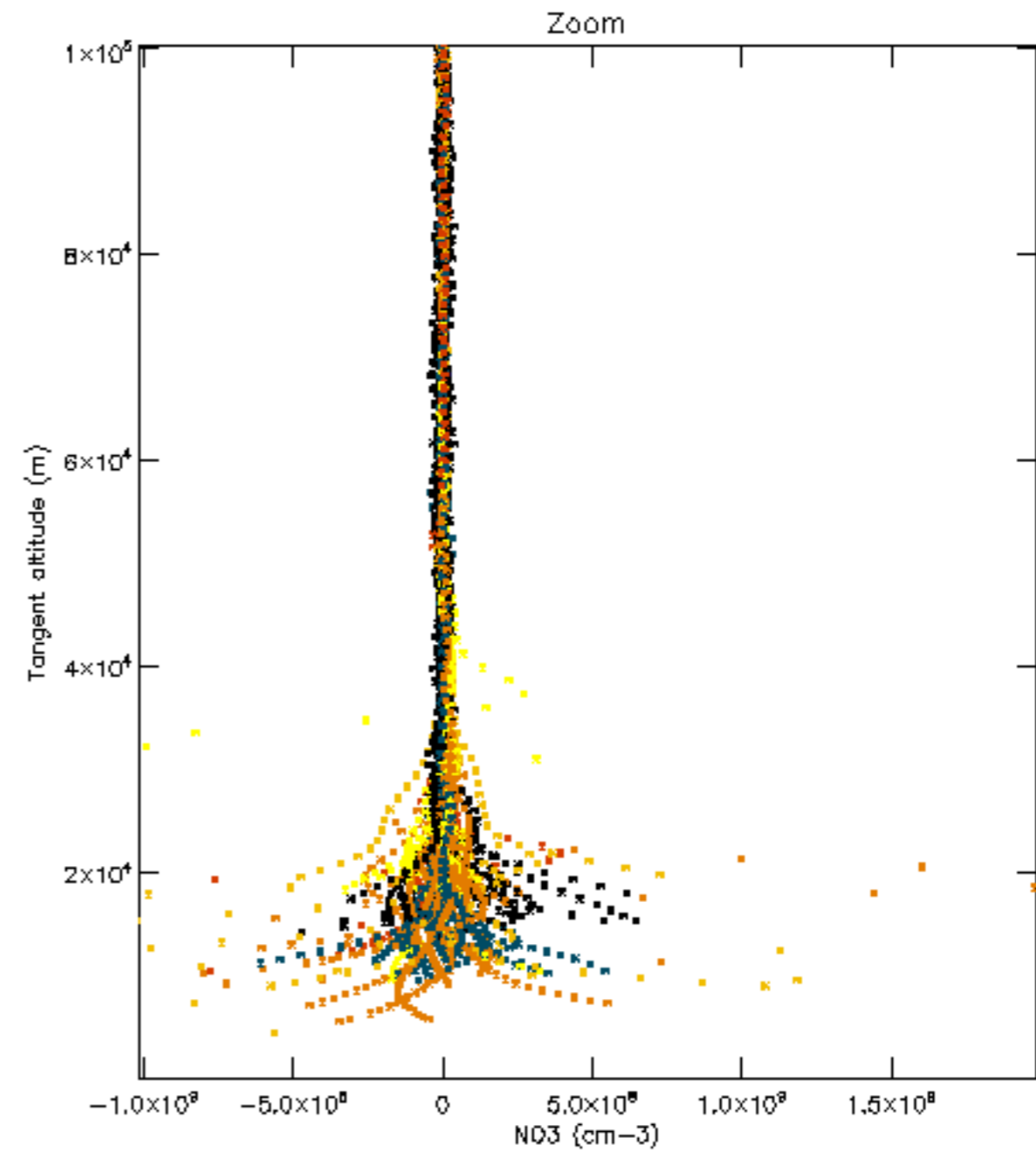
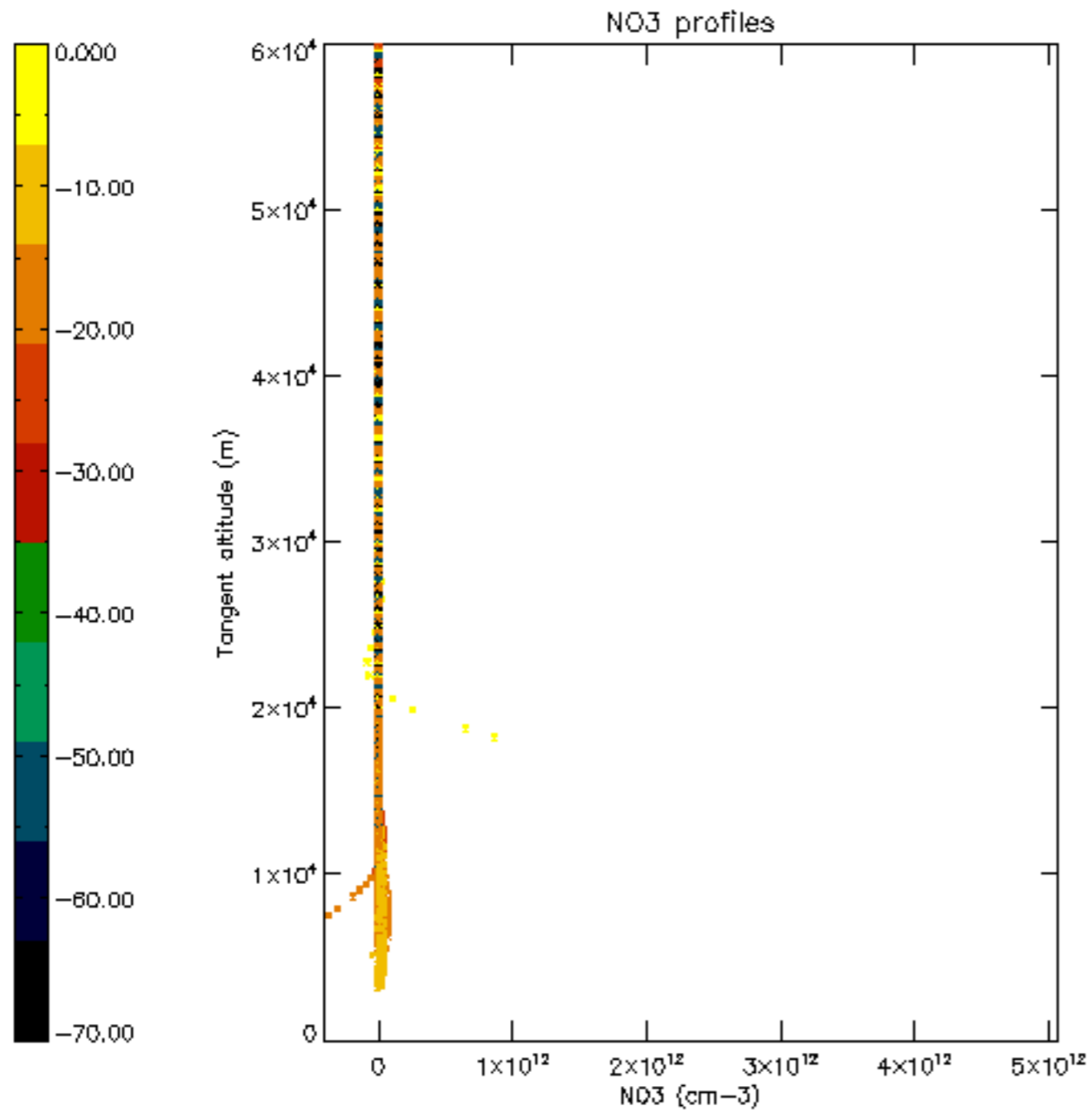


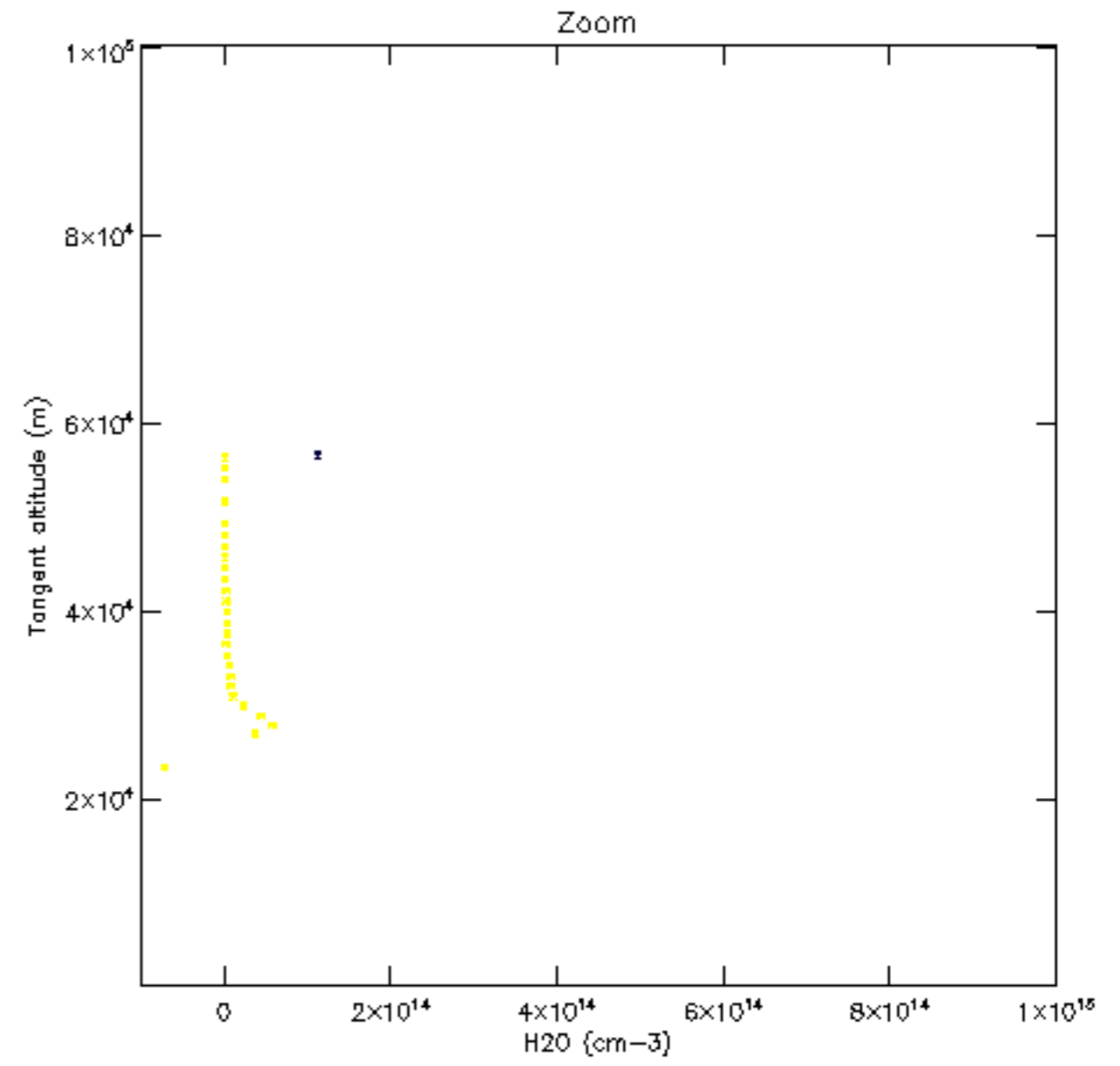
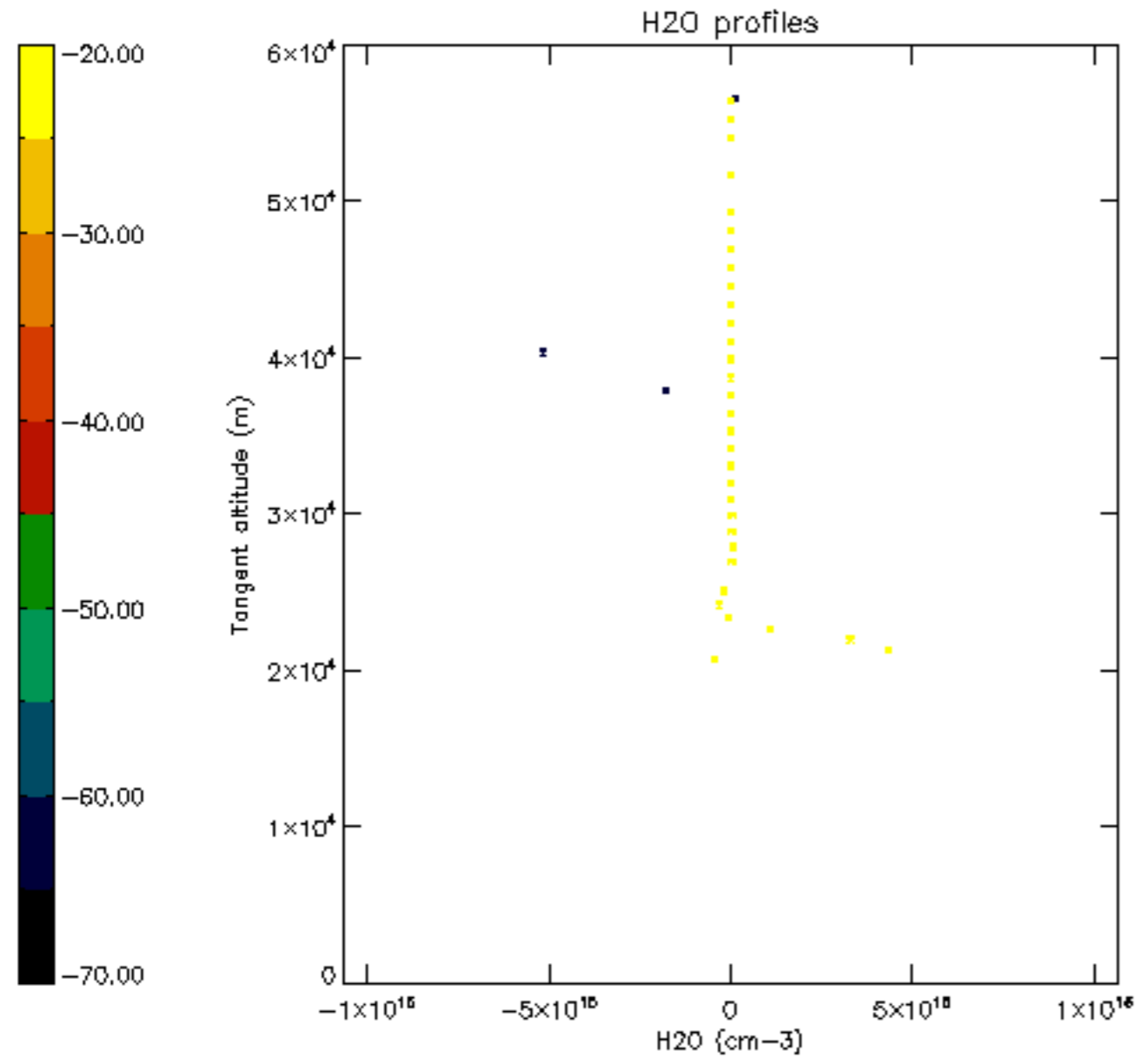


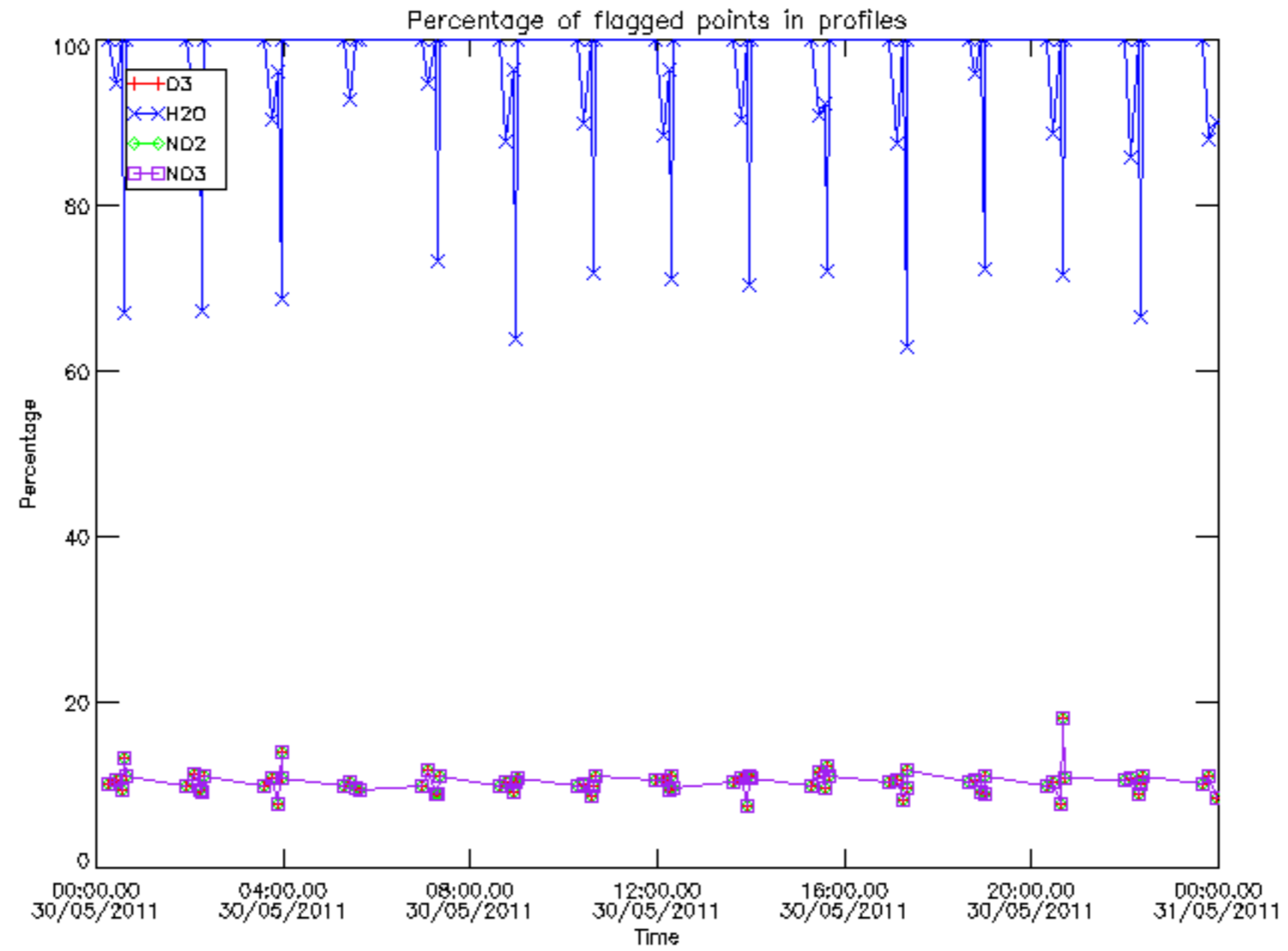




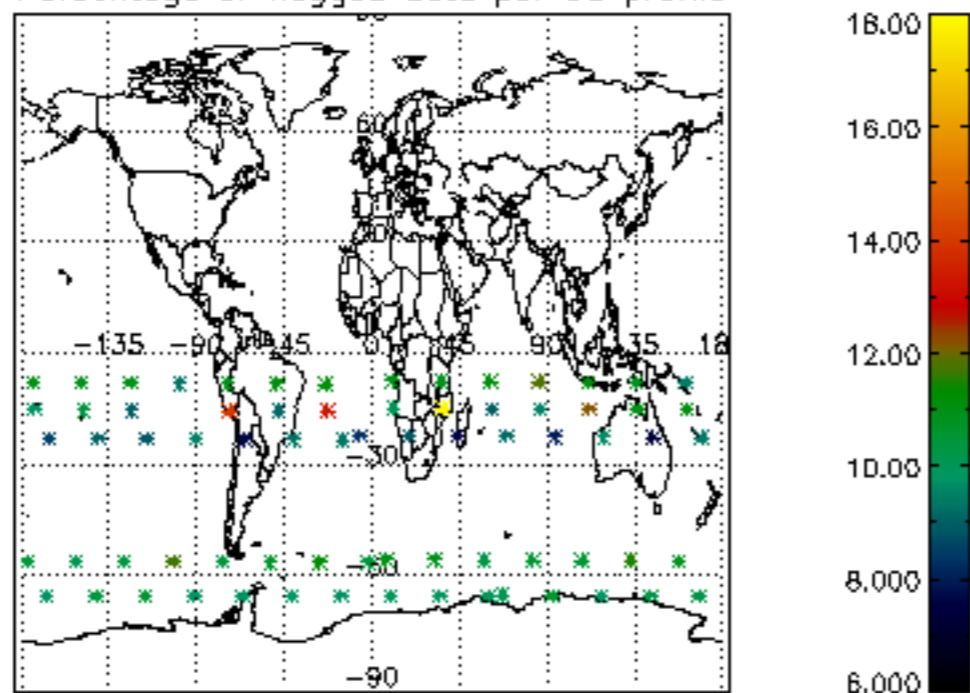




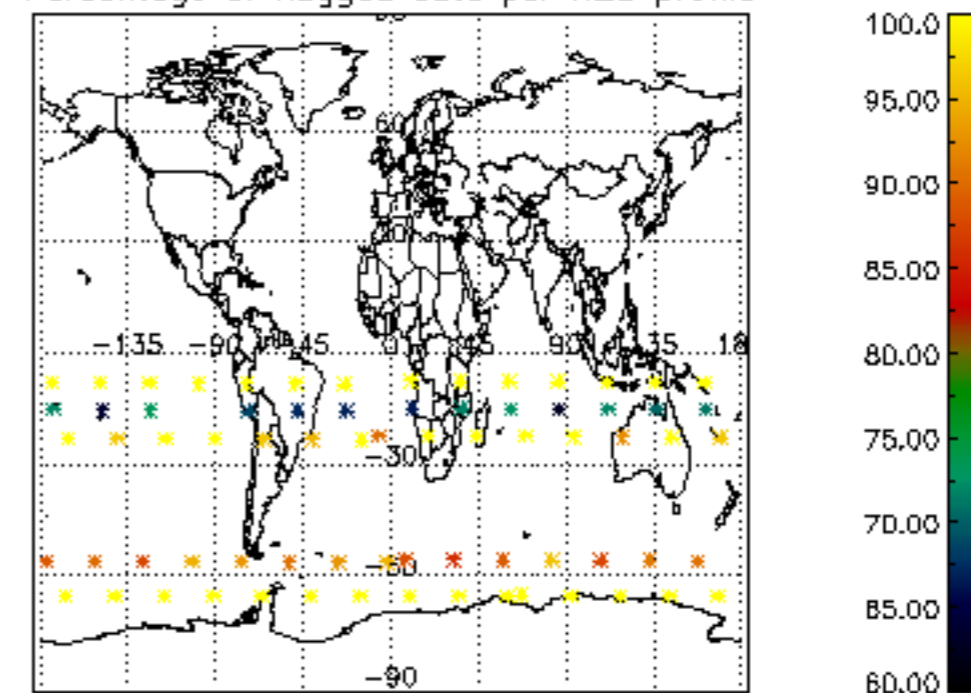




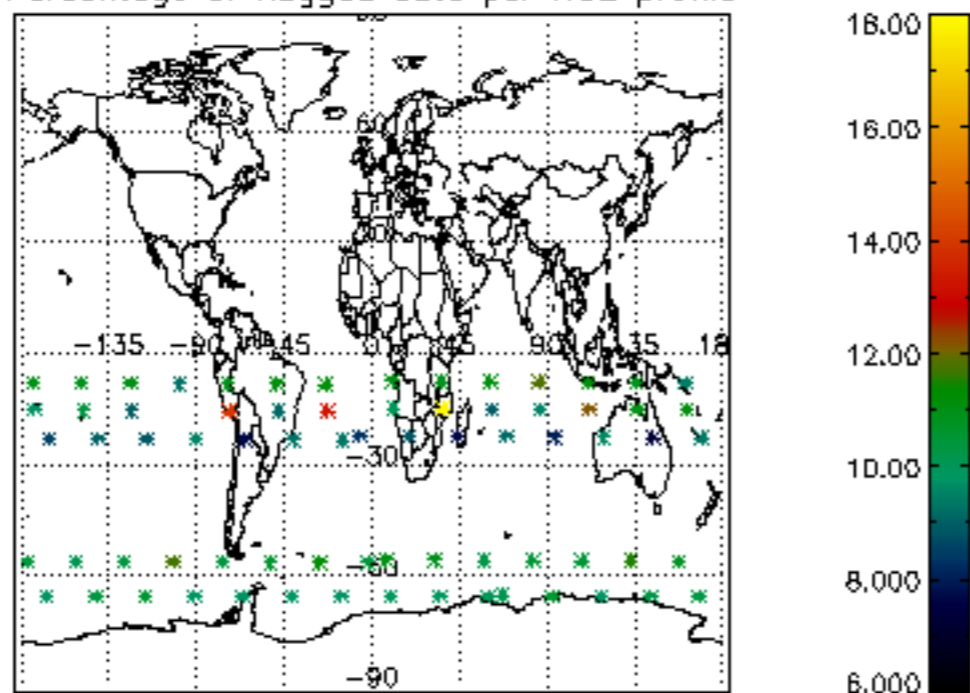
Percentage of flagged data per D3 profile



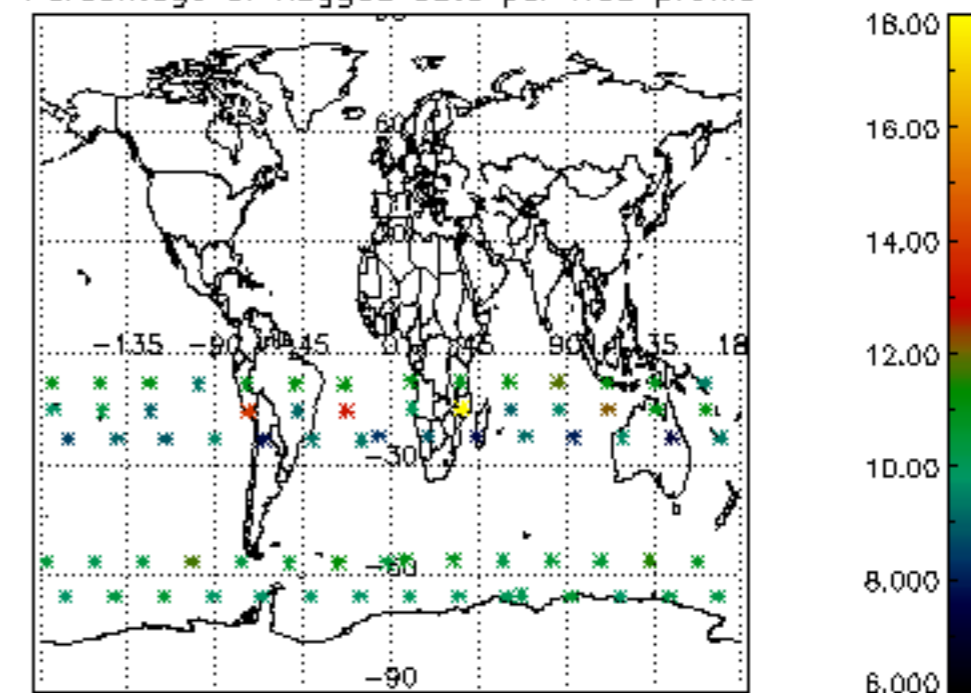
Percentage of flagged data per H2O profile

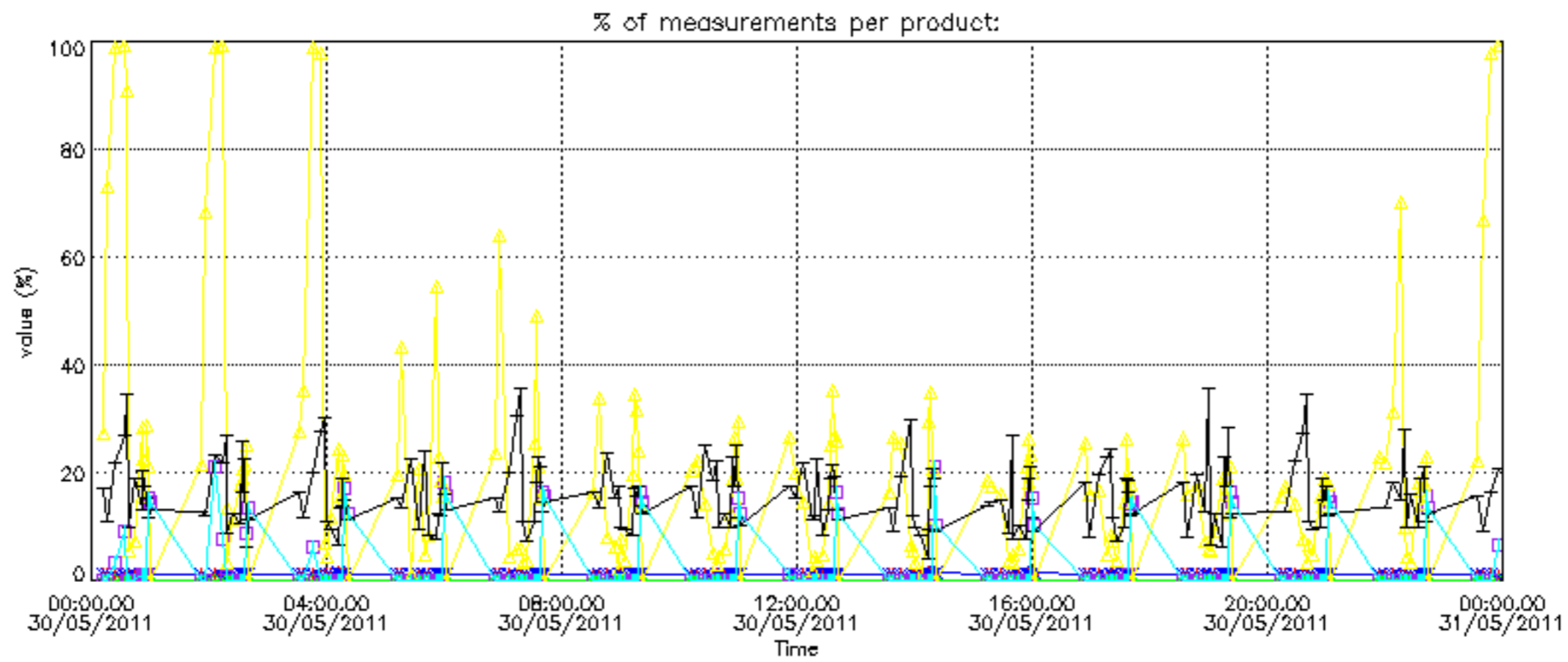
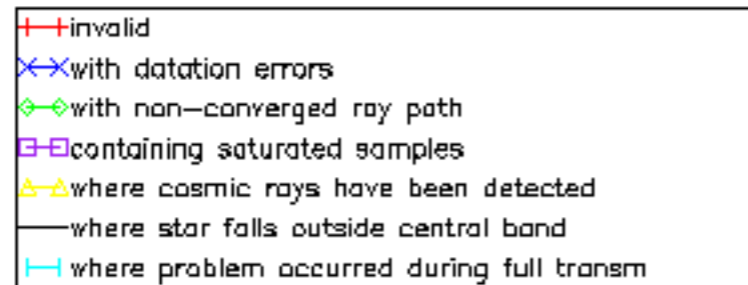


Percentage of flagged data per NO2 profile

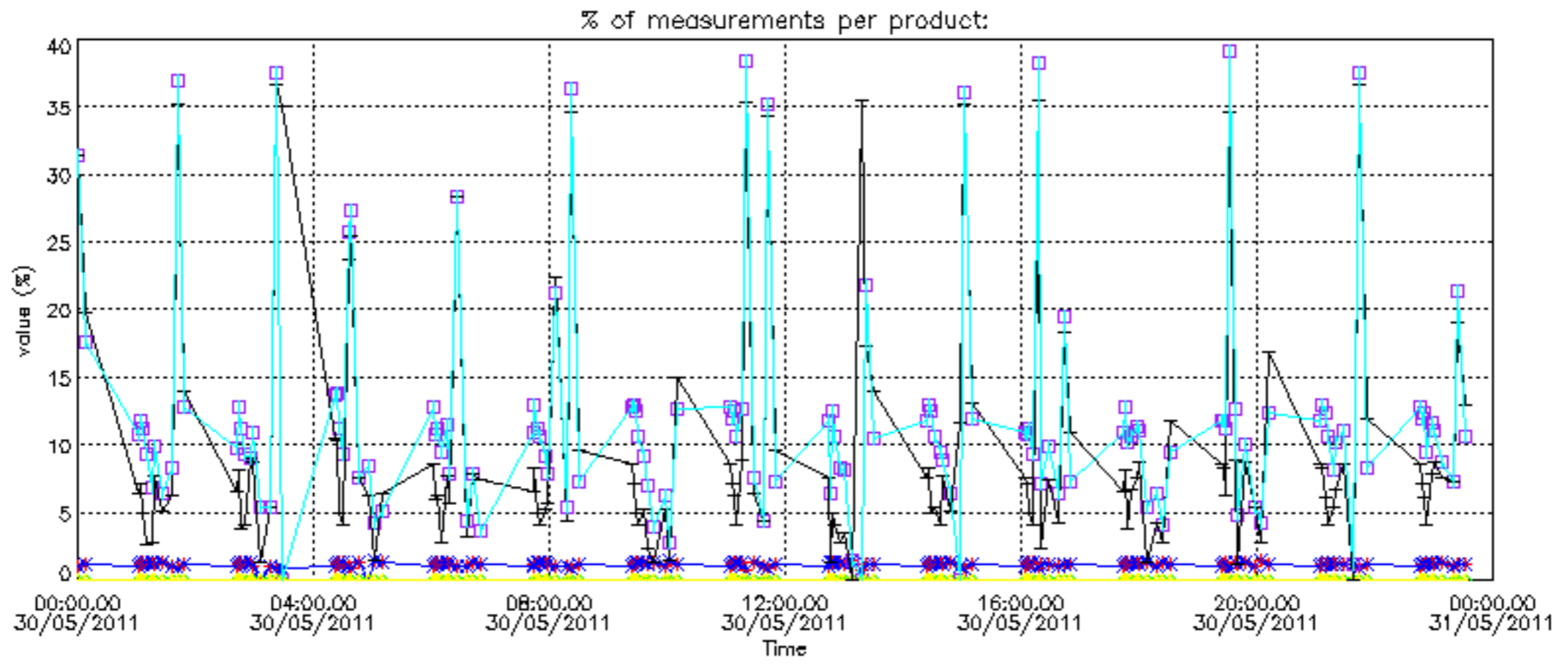


Percentage of flagged data per NO3 profile

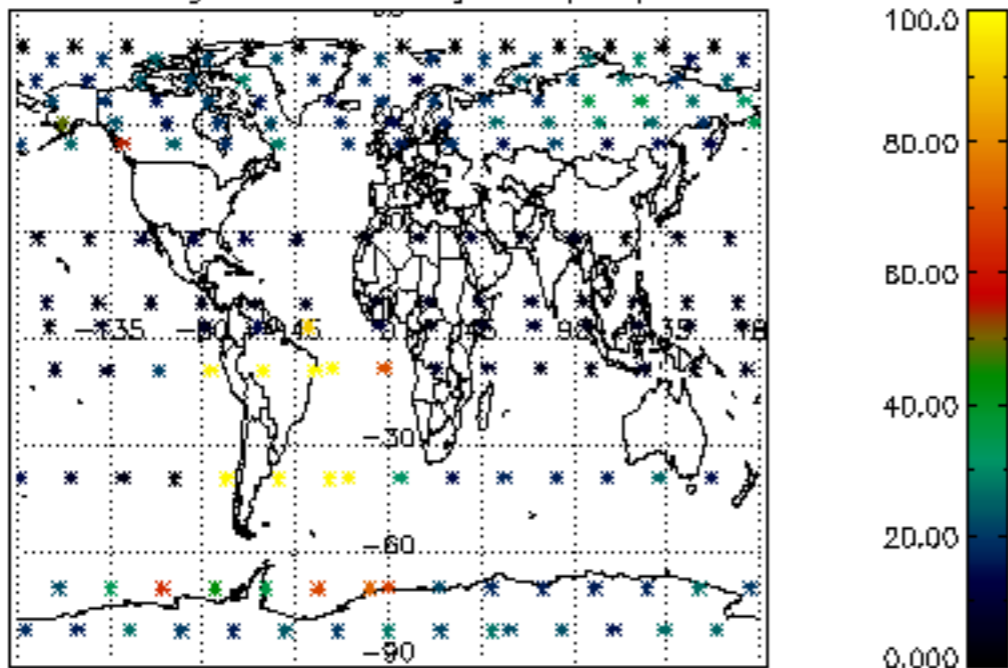




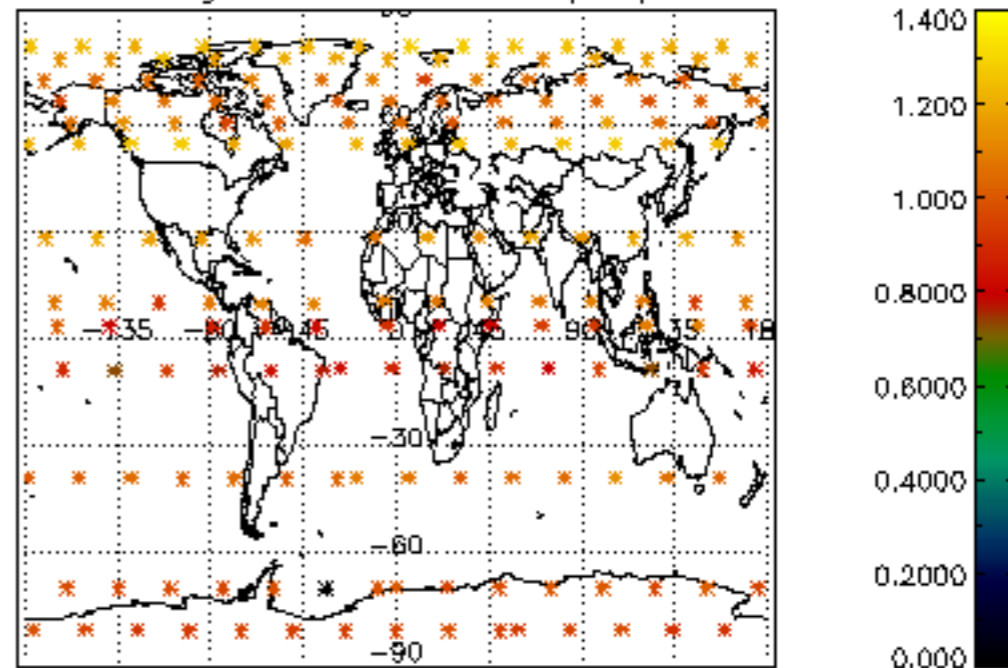




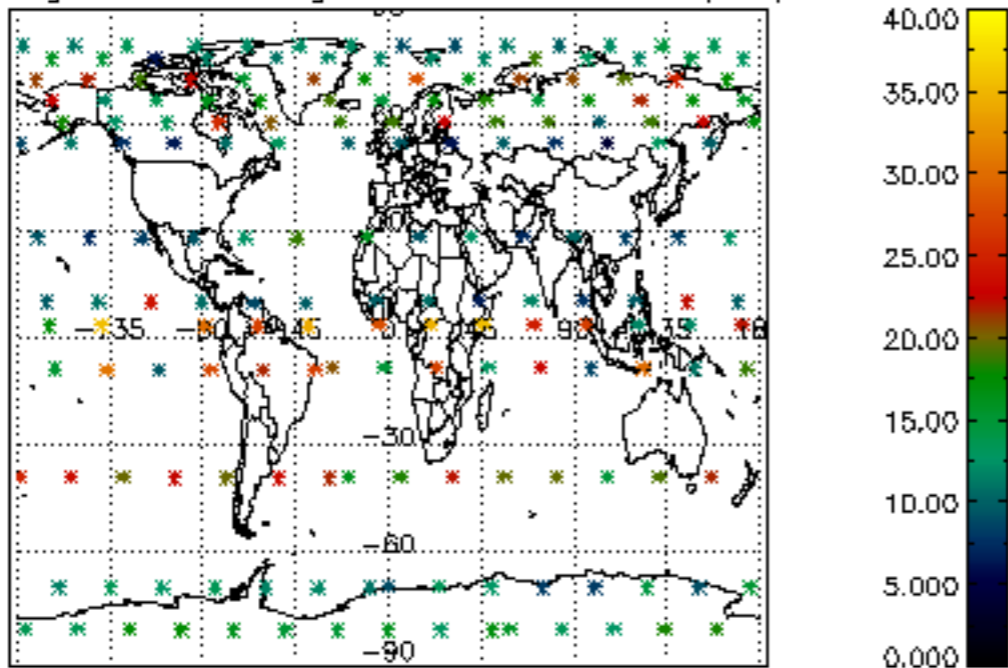
Percentage of cosmic ray hits per profile



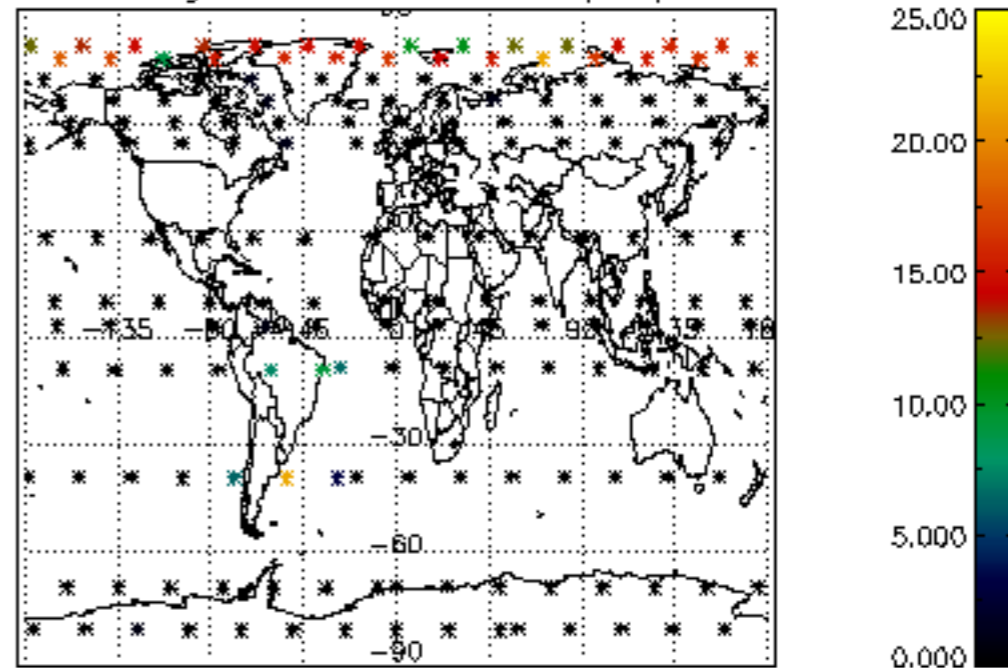
Percentage of datation errors per profile



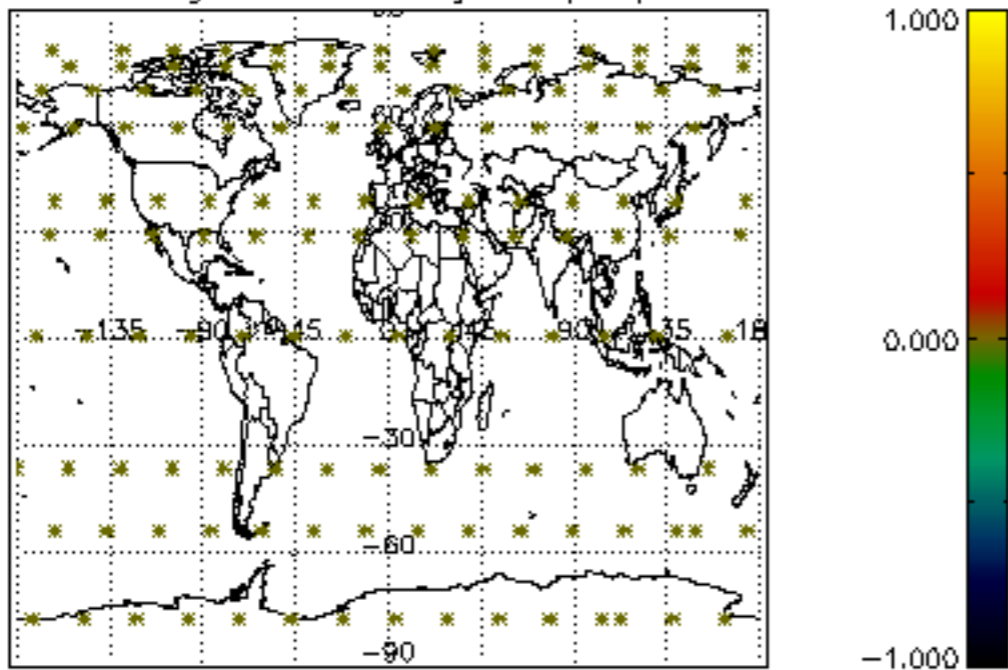
Percentage of star falling outside central band per profile



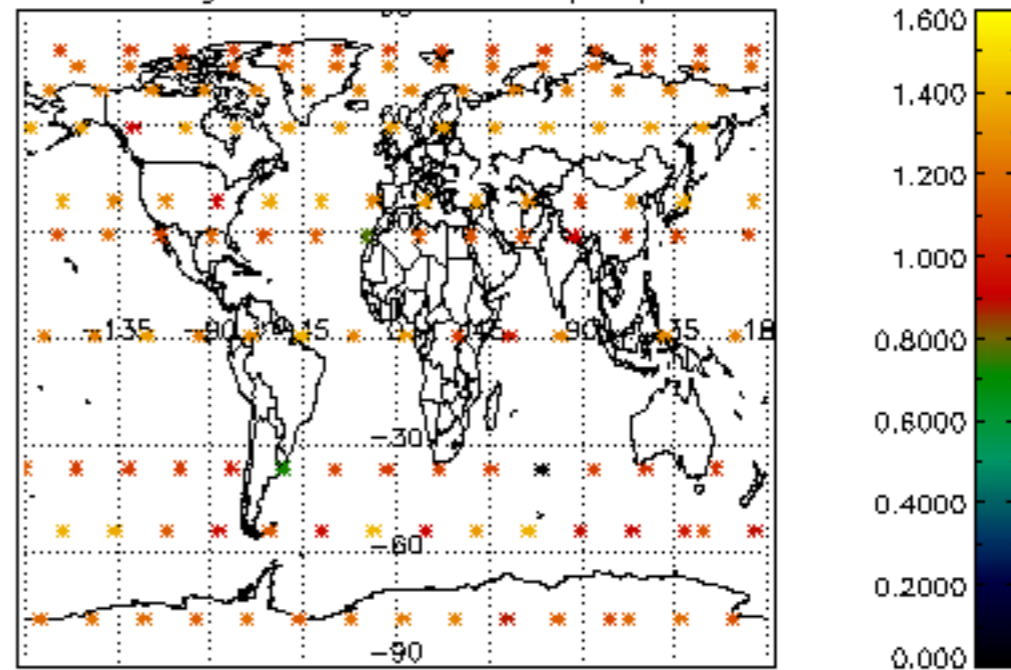
Percentage of saturation errors per profile



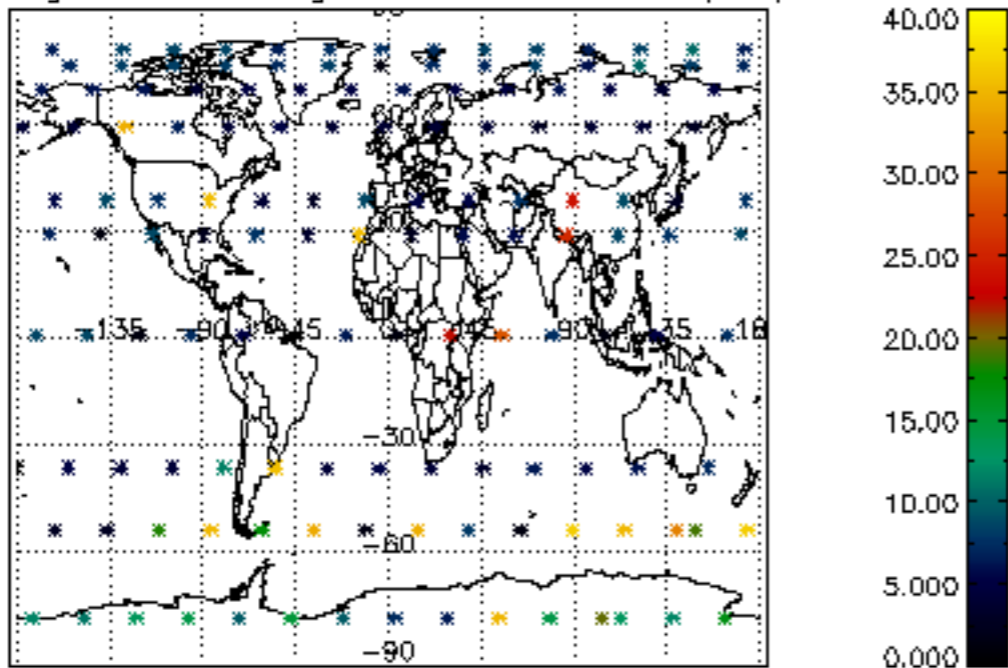
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

