

# GOMOS Level 2 Daily Report

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

Item	Value
Time of report generation	18APR2013 11:10:22
Data source version	GOMOS/6.01
Start time of products	24-09-2005 (24SEP2005 00:00:00)
Stop time of products	25-09-2005 (25SEP2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	242
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__2PRFIN20050924_000010_00000382041_00059_18650_7019.N1	24-SEP-2005 00:00:10	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	18650	No
2	GOM_NL__2PRFIN20050924_000408_00000362041_00059_18650_7020.N1	24-SEP-2005 00:04:08	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18650	No
3	GOM_NL__2PRFIN20050924_001308_00000342041_00059_18650_7021.N1	24-SEP-2005 00:13:08	Bright	33.500	60	7Bet UMi	2.0810	3950.0	67	18650	No
4	GOM_NL__2PRFIN20050924_001917_00000362041_00059_18650_7022.N1	24-SEP-2005 00:19:17	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18650	No
5	GOM_NL__2PRFIN20050924_002045_00000342041_00059_18650_7023.N1	24-SEP-2005 00:20:45	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18650	No
6	GOM_NL__2PRFIN20050924_002355_00000522041_00059_18650_7024.N1	24-SEP-2005 00:23:55	Bright	51.500	174	52Psi UMa	3.0040	4400.0	103	18650	No
7	GOM_NL__2PRFIN20050924_004934_00000472041_00059_18650_7025.N1	24-SEP-2005 00:49:34	Dark	46.500	65	Lam Vel	2.2040	4400.0	93	18650	No
8	GOM_NL__2PRFIN20050924_005252_00000382041_00059_18650_7026.N1	24-SEP-2005 00:52:52	Dark	38.000	46	Del Vel	1.9540	10600.	76	18650	No
9	GOM_NL__2PRFIN20050924_005427_00000442041_00059_18650_7027.N1	24-SEP-2005 00:54:27	Dark	43.500	41	Eps Car	1.8600	4100.0	87	18650	No
10	GOM_NL__2PRFIN20050924_005627_00000382041_00060_18651_7011.N1	24-SEP-2005 00:56:27	Dark	37.500	29	Bet Car	1.6720	10200.	75	18651	No
11	GOM_NL__2PRFIN20050924_010451_00000372041_00060_18651_7012.N1	24-SEP-2005 01:04:51	Dark	36.500	135	Bet Hyi	2.8200	5800.0	73	18651	No
12	GOM_NL__2PRFIN20050924_011018_00000412041_00060_18651_7013.N1	24-SEP-2005 01:10:18	Straylight	40.500	148	Alp Tuc	2.8780	4100.0	81	18651	No
13	GOM_NL__2PRFIN20050924_011405_00000402041_00060_18651_7014.N1	24-SEP-2005 01:14:05	Straylight	39.500	31	Alp Gru	1.7340	15200.	79	18651	No
14	GOM_NL__2PRFIN20050924_011824_00000442041_00060_18651_7015.N1	24-SEP-2005 01:18:24	Straylight	43.500	18	24Alp PsA	1.1660	9700.0	87	18651	No
15	GOM_NL__2PRFIN20050924_012254_00000402041_00060_18651_7016.N1	24-SEP-2005 01:22:54	Twilight	40.000	142	49Del Cap	2.8500	8900.0	80	18651	No
16	GOM_NL__2PRFIN20050924_012703_00000382041_00060_18651_7017.N1	24-SEP-2005 01:27:03	Bright	38.000	162	34Alp Aqr	2.9440	5350.0	76	18651	No
17	GOM_NL__2PRFIN20050924_013008_00000382041_00060_18651_7018.N1	24-SEP-2005 01:30:08	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	18651	No
18	GOM_NL__2PRFIN20050924_014046_00000382041_00060_18651_7019.N1	24-SEP-2005 01:40:46	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	18651	No
19	GOM_NL__2PRFIN20050924_014444_00000352041_00060_18651_7020.N1	24-SEP-2005 01:44:44	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	18651	No
20	GOM_NL__2PRFIN20050924_015344_00000362041_00060_18651_7021.N1	24-SEP-2005 01:53:44	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18651	No
21	GOM_NL__2PRFIN20050924_015953_00000372041_00060_18651_7022.N1	24-SEP-2005 01:59:53	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	18651	No
22	GOM_NL__2PRFIN20050924_020121_00000522041_00060_18651_7023.N1	24-SEP-2005 02:01:21	Bright	52.000	82	48Bet UMa	2.3650	10600.	104	18651	No
23	GOM_NL__2PRFIN20050924_020431_00000522041_00060_18651_7024.N1	24-SEP-2005 02:04:31	Bright	51.500	174	52Psi UMa	3.0040	4400.0	103	18651	No
24	GOM_NL__2PRFIN20050924_023010_00000422041_00060_18651_7025.N1	24-SEP-2005 02:30:10	Dark	42.000	65	Lam Vel	2.2040	4400.0	84	18651	No
25	GOM_NL__2PRFIN20050924_023328_00000412041_00060_18651_7026.N1	24-SEP-2005 02:33:28	Dark	41.000	46	Del Vel	1.9540	10600.	82	18651	No
26	GOM_NL__2PRFIN20050924_023503_00000402041_00060_18651_7027.N1	24-SEP-2005 02:35:03	Dark	40.000	41	Eps Car	1.8600	4100.0	80	18651	No
27	GOM_NL__2PRFIN20050924_023703_00000382041_00061_18652_7031.N1	24-SEP-2005 02:37:03	Dark	37.500	29	Bet Car	1.6720	10200.	75	18652	No
28	GOM_NL__2PRFIN20050924_024527_00000362041_00061_18652_7032.N1	24-SEP-2005 02:45:27	Dark	35.500	135	Bet Hyi	2.8200	5800.0	71	18652	No
29	GOM_NL__2PRFIN20050924_025054_00000392041_00061_18652_7033.N1	24-SEP-2005 02:50:54	Straylight	39.000	148	Alp Tuc	2.8780	4100.0	78	18652	No
30	GOM_NL__2PRFIN20050924_025441_00000392041_00061_18652_7034.N1	24-SEP-2005 02:54:41	Straylight	38.500	31	Alp Gru	1.7340	15200.	77	18652	No
31	GOM_NL__2PRFIN20050924_025900_00000442041_00061_18652_7035.N1	24-SEP-2005 02:59:00	Straylight	44.000	18	24Alp PsA	1.1660	9700.0	88	18652	No
32	GOM_NL__2PRFIN20050924_030330_00000382041_00061_18652_7036.N1	24-SEP-2005 03:03:30	Twilight	38.000	142	49Del Cap	2.8500	8900.0	76	18652	No
33	GOM_NL__2PRFIN20050924_030739_00000382041_00061_18652_7037.N1	24-SEP-2005 03:07:39	Bright	38.000	162	34Alp Aqr	2.9440	5350.0	76	18652	No
34	GOM_NL__2PRFIN20050924_031044_00000392041_00061_18652_7038.N1	24-SEP-2005 03:10:44	Bright	39.000	61	8Eps Peg	2.1000	3900.0	78	18652	No
35	GOM_NL__2PRFIN20050924_032122_00000372041_00061_18652_7039.N1	24-SEP-2005 03:21:22	Bright	36.500	19	50Alp Cyg	1.2460	10500.	73	18652	No
36	GOM_NL__2PRFIN20050924_032520_00000332041_00061_18652_7040.N1	24-SEP-2005 03:25:20	Bright	32.500	89	5Alp Cep	2.4510	8000.0	65	18652	No
37	GOM_NL__2PRFIN20050924_033420_00000332041_00061_18652_7041.N1	24-SEP-2005 03:34:20	Bright	32.500	60	7Bet UMi	2.0810	3950.0	65	18652	No
38	GOM_NL__2PRFIN20050924_034029_00000362041_00061_18652_7042.N1	24-SEP-2005 03:40:29	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18652	No
39	GOM_NL__2PRFIN20050924_034158_00000522041_00061_18652_7043.N1	24-SEP-2005 03:41:58	Bright	52.000	82	48Bet UMa	2.3650	10600.	104	18652	No
40	GOM_NL__2PRFIN20050924_034507_00000352041_00061_18652_7044.N1	24-SEP-2005 03:45:07	Bright	35.000	174	52Psi UMa	3.0040	4400.0	70	18652	No
41	GOM_NL__2PRFIN20050924_041046_00000472041_00061_18652_7045.N1	24-SEP-2005 04:10:46	Dark	47.000	65	Lam Vel	2.2040	4400.0	94	18652	No
42	GOM_NL__2PRFIN20050924_041405_00000412041_00061_18652_7046.N1	24-SEP-2005 04:14:05	Dark	41.000	46	Del Vel	1.9540	10600.	82	18652	No





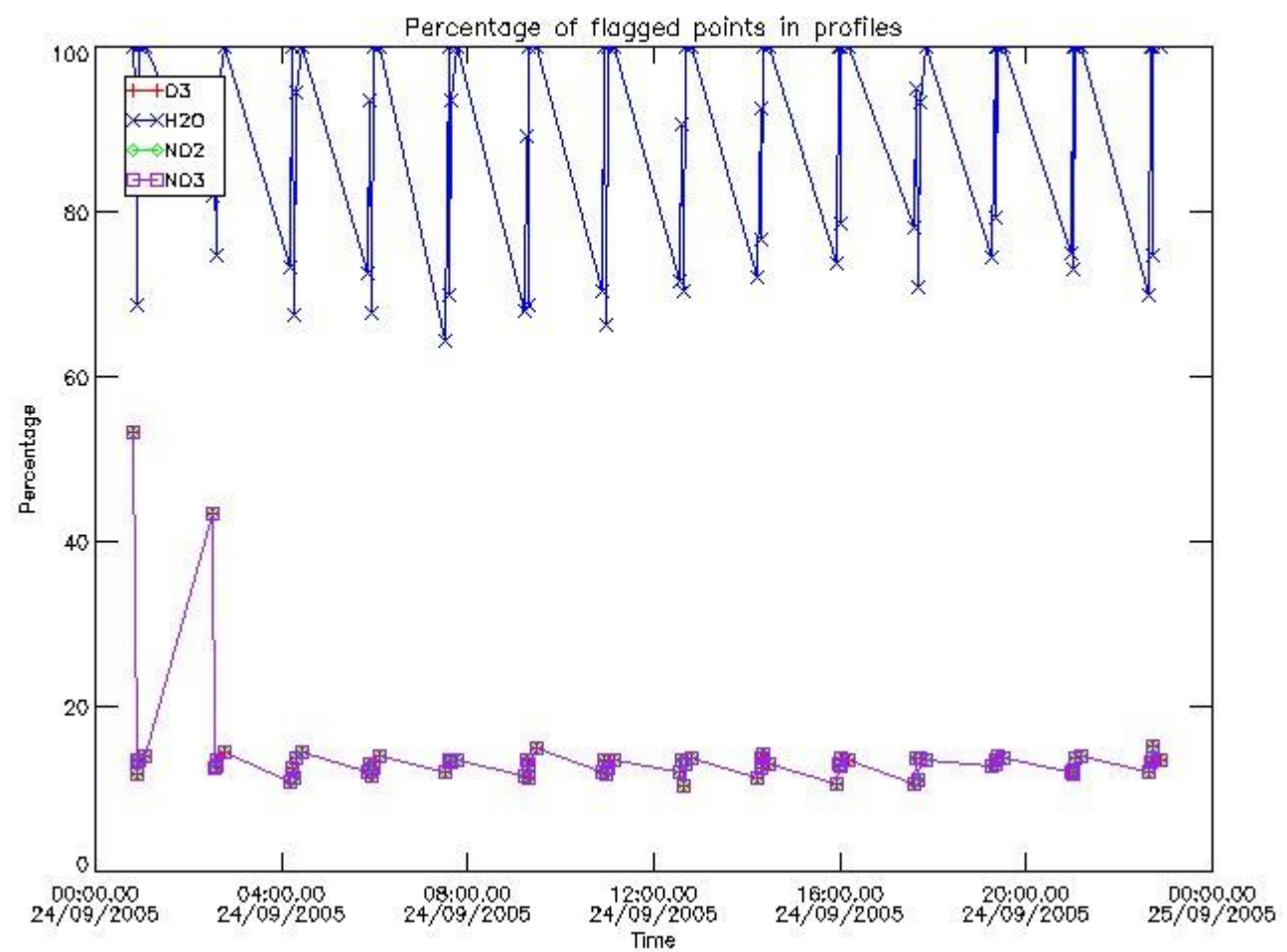


220	GOM_NL__2PRFIN20050924_214802_000000372041_00072_18663_7057.N1	24-SEP-2005 21:48:02	Bright	37.000	19	50Alp Cyg	1.2460	10500.	74	18663	No
221	GOM_NL__2PRFIN20050924_215157_000000362041_00072_18663_7058.N1	24-SEP-2005 21:51:57	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18663	No
222	GOM_NL__2PRFIN20050924_220059_000000362041_00072_18663_7059.N1	24-SEP-2005 22:00:59	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18663	No
223	GOM_NL__2PRFIN20050924_220706_000000492041_00072_18663_7060.N1	24-SEP-2005 22:07:06	Bright	48.500	36	50Alp UMa	1.8000	6300.0	97	18663	No
224	GOM_NL__2PRFIN20050924_220835_000000362041_00072_18663_7061.N1	24-SEP-2005 22:08:35	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	18663	No
225	GOM_NL__2PRFIN20050924_221144_000000332041_00072_18663_7062.N1	24-SEP-2005 22:11:44	Bright	33.000	174	52Psi UMa	3.0040	4400.0	66	18663	No
226	GOM_NL__2PRFIN20050924_222743_000000512041_00072_18663_7063.N1	24-SEP-2005 22:27:43	Twilight	50.500	48	30Alp Hya	1.9770	4100.0	101	18663	No
227	GOM_NL__2PRFIN20050924_223725_000000422041_00072_18663_7064.N1	24-SEP-2005 22:37:25	Dark	42.000	65	Lam Vel	2.2040	4400.0	84	18663	No
228	GOM_NL__2PRFIN20050924_224043_000000392041_00072_18663_7065.N1	24-SEP-2005 22:40:43	Dark	38.500	46	Del Vel	1.9540	10600.	77	18663	No
229	GOM_NL__2PRFIN20050924_224218_000000402041_00072_18663_7066.N1	24-SEP-2005 22:42:18	Dark	40.000	41	Eps Car	1.8600	4100.0	80	18663	No
230	GOM_NL__2PRFIN20050924_224415_000000372041_00073_18664_7050.N1	24-SEP-2005 22:44:15	Dark	37.000	29	Bet Car	1.6720	10200.	74	18664	No
231	GOM_NL__2PRFIN20050924_225240_000000382041_00073_18664_7051.N1	24-SEP-2005 22:52:40	Dark	38.000	135	Bet Hyi	2.8200	5800.0	76	18664	No
232	GOM_NL__2PRFIN20050924_230153_000000382041_00073_18664_7052.N1	24-SEP-2005 23:01:53	Straylight	38.000	31	Alp Gru	1.7340	15200.	76	18664	No
233	GOM_NL__2PRFIN20050924_230613_000000402041_00073_18664_7053.N1	24-SEP-2005 23:06:13	Straylight	40.000	18	24Alp PsA	1.1660	9700.0	80	18664	No
234	GOM_NL__2PRFIN20050924_231044_000000402041_00073_18664_7054.N1	24-SEP-2005 23:10:44	Twilight_and_stray	40.000	142	49Del Cap	2.8500	8900.0	80	18664	No
235	GOM_NL__2PRFIN20050924_231453_000000372041_00073_18664_7055.N1	24-SEP-2005 23:14:53	Bright	37.000	162	34Alp Aqr	2.9440	5350.0	74	18664	No
236	GOM_NL__2PRFIN20050924_231758_000000382041_00073_18664_7056.N1	24-SEP-2005 23:17:58	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	18664	No
237	GOM_NL__2PRFIN20050924_232838_000000382041_00073_18664_7057.N1	24-SEP-2005 23:28:38	Bright	38.000	19	50Alp Cyg	1.2460	10500.	76	18664	No
238	GOM_NL__2PRFIN20050924_233233_000000362041_00073_18664_7058.N1	24-SEP-2005 23:32:33	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18664	No
239	GOM_NL__2PRFIN20050924_234135_000000352041_00073_18664_7059.N1	24-SEP-2005 23:41:35	Bright	34.500	60	7Bet UMi	2.0810	3950.0	69	18664	No
240	GOM_NL__2PRFIN20050924_234742_000000362041_00073_18664_7060.N1	24-SEP-2005 23:47:42	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	18664	No
241	GOM_NL__2PRFIN20050924_234911_000000342041_00073_18664_7061.N1	24-SEP-2005 23:49:11	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18664	No
242	GOM_NL__2PRFIN20050924_235220_000000342041_00073_18664_7062.N1	24-SEP-2005 23:52:20	Bright	34.000	174	52Psi UMa	3.0040	4400.0	68	18664	No

### 3. Quality information per product

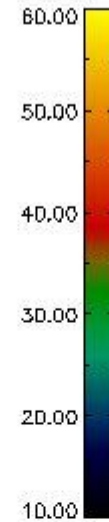
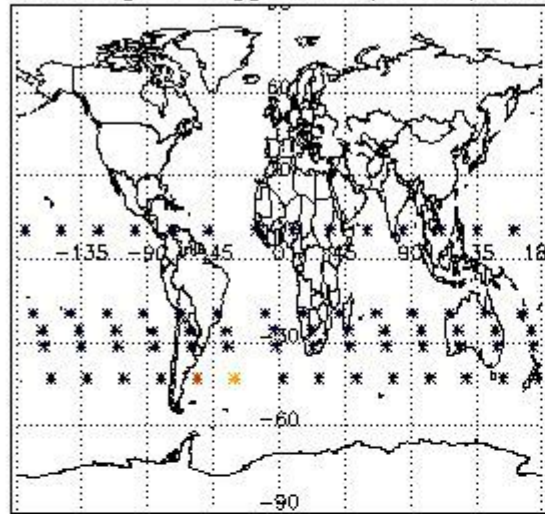
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

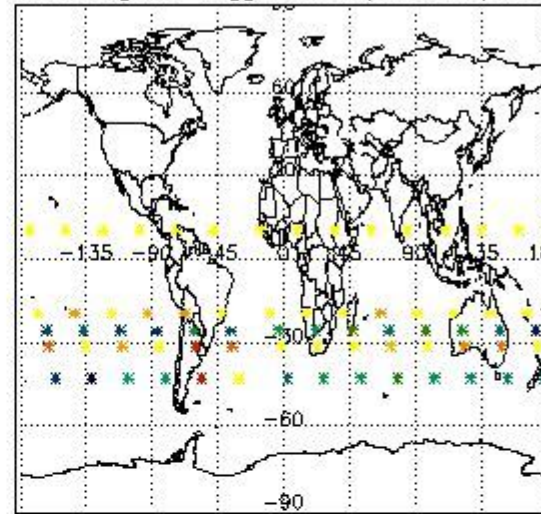


3.2 Plot quality information per product (world map)

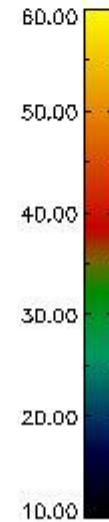
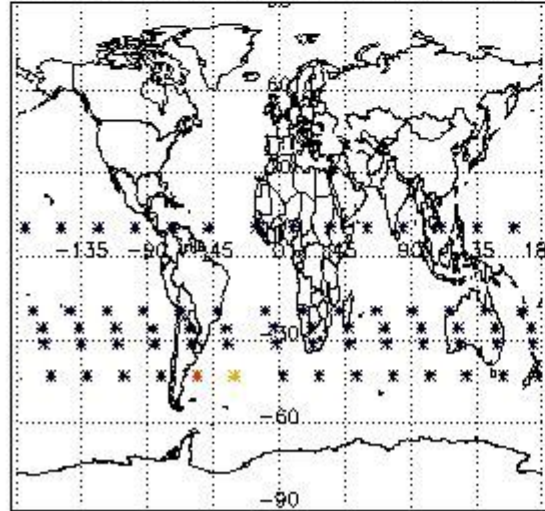
Percentage of flagged data per O3 profile



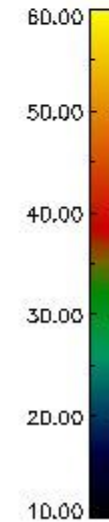
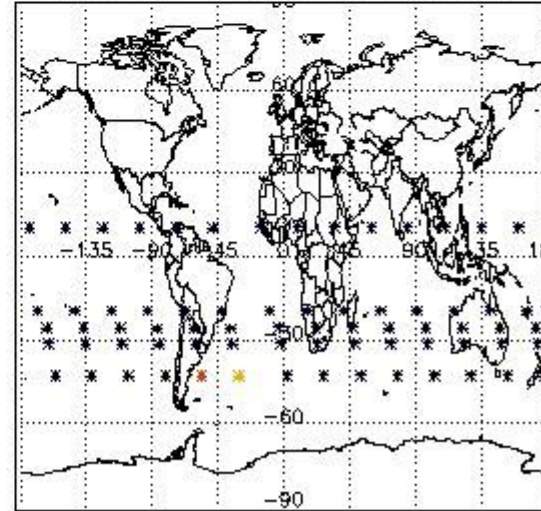
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



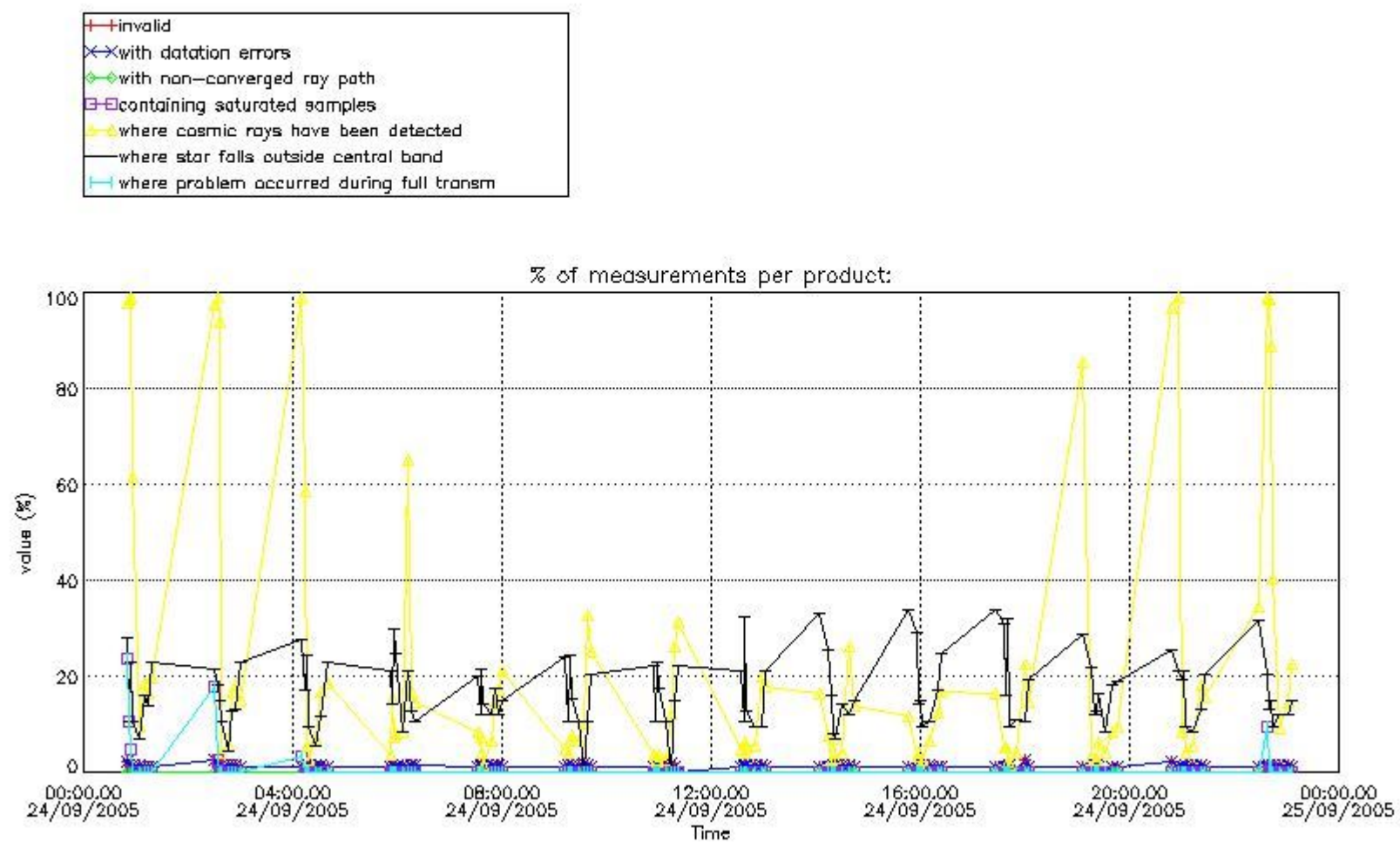
#### 4. Level 1 quality information per product

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

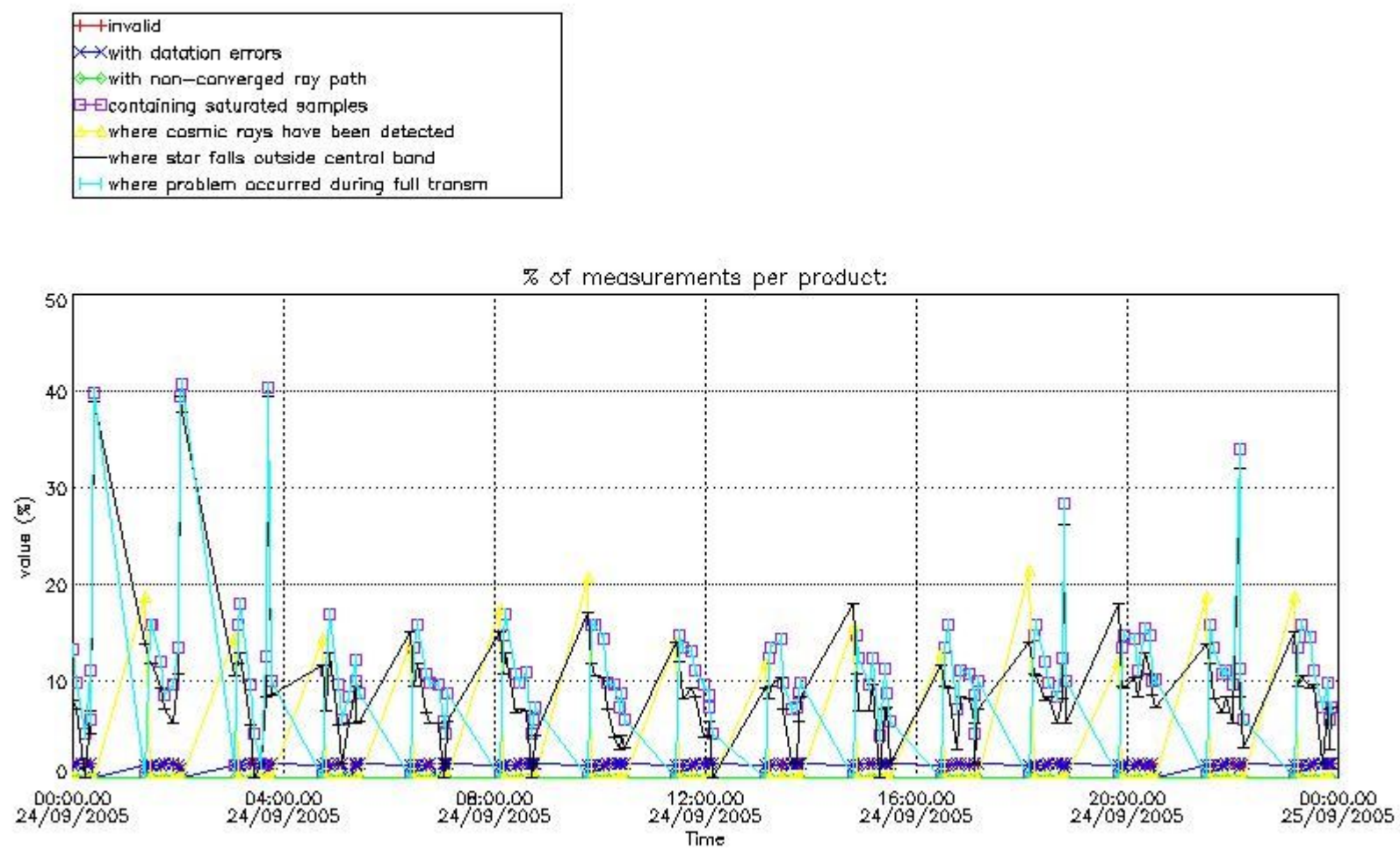
##### 4.1 Plot quality information per product (time dependant) coming from level 1b processing

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





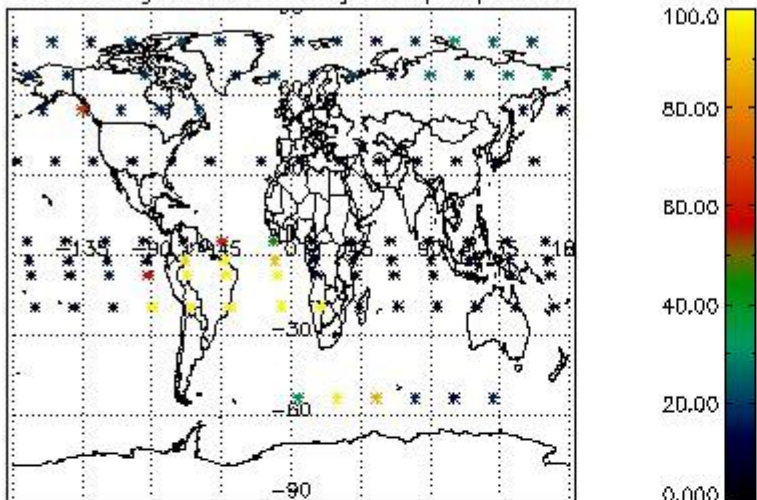
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



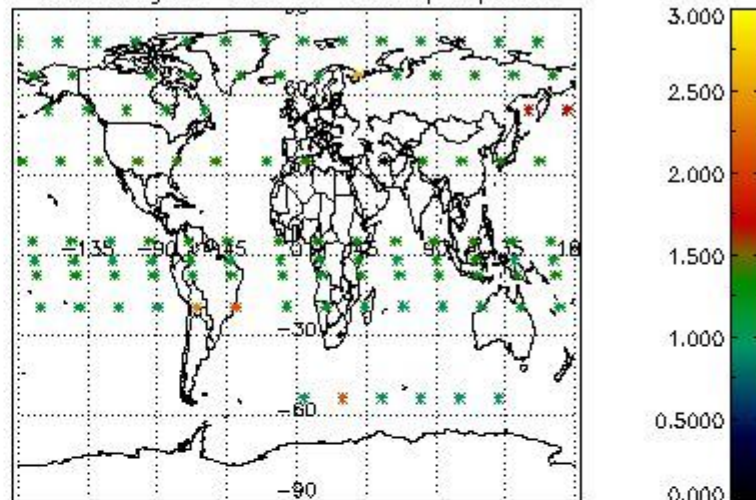
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

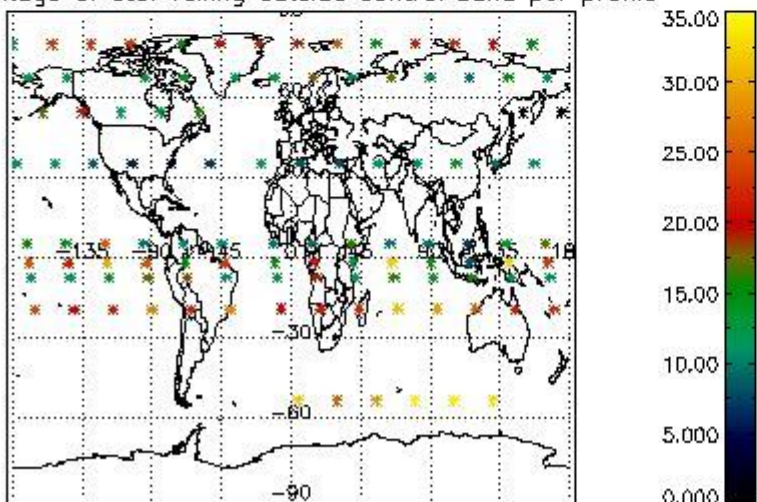
Percentage of cosmic ray hits per profile



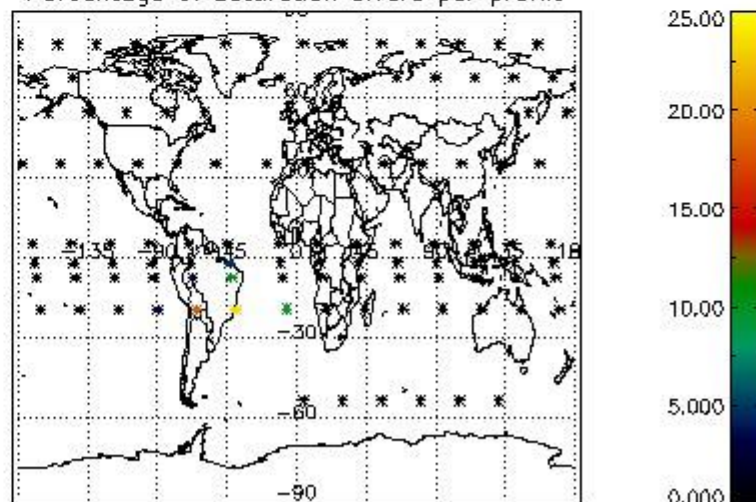
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

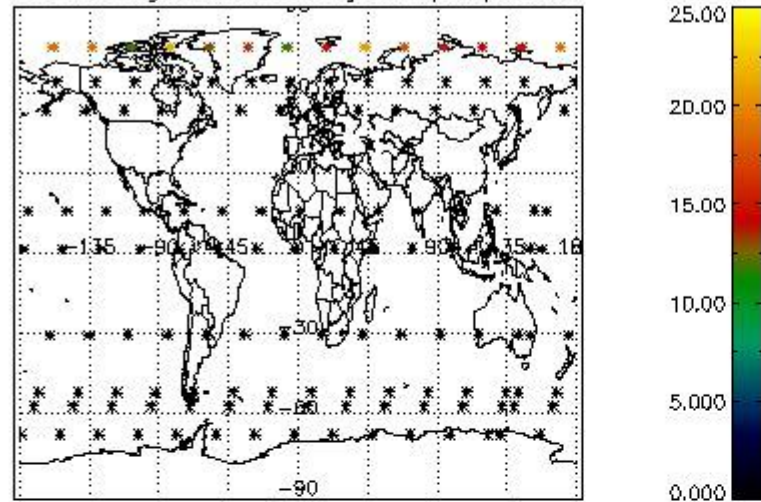


Percentage of saturation errors per profile

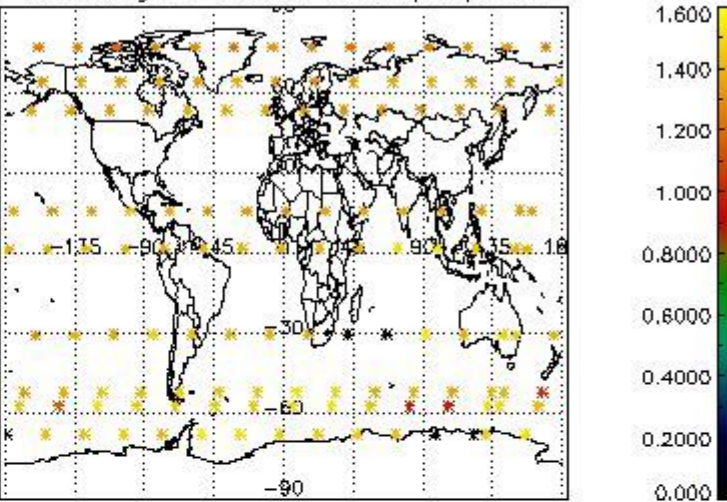


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

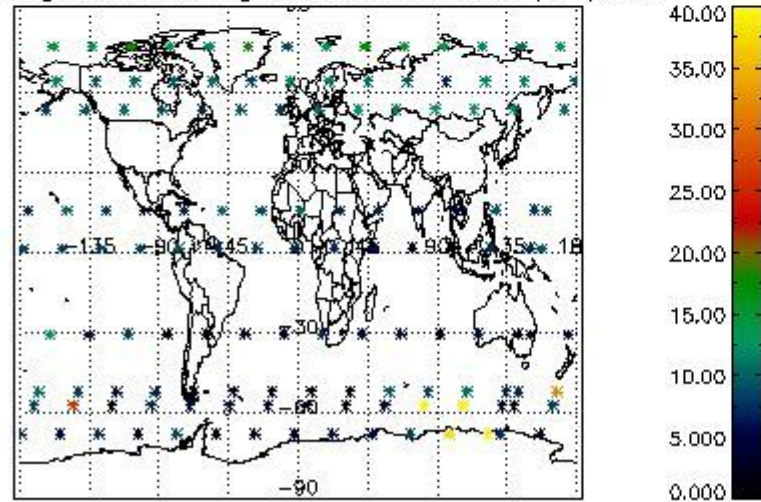
Percentage of cosmic ray hits per profile



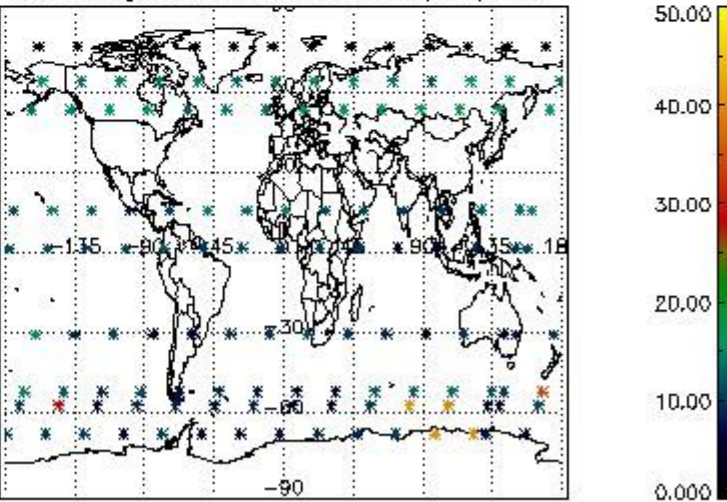
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

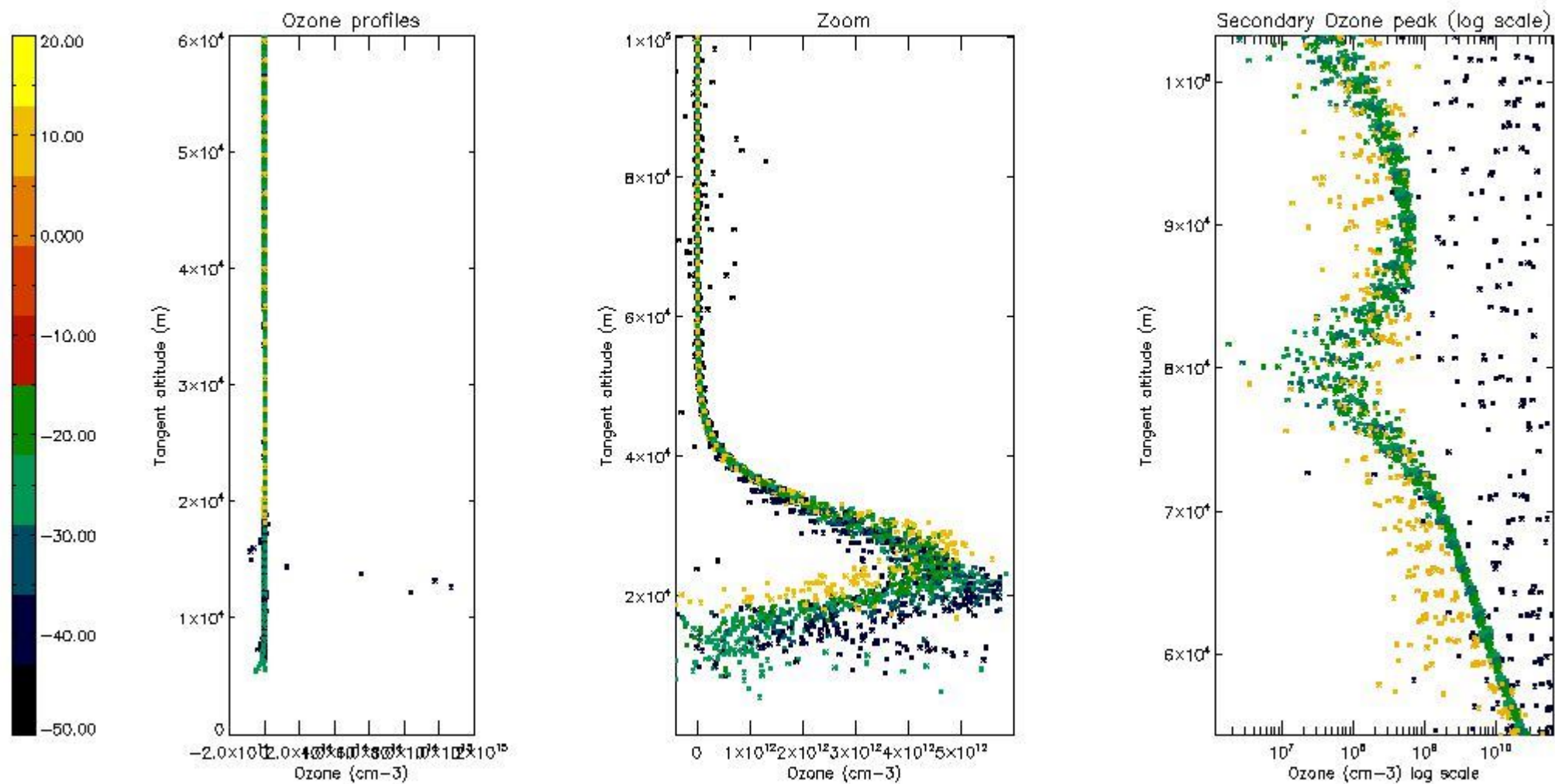
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	31
STD < 20	16

STD < 10	12
STD < 5	5

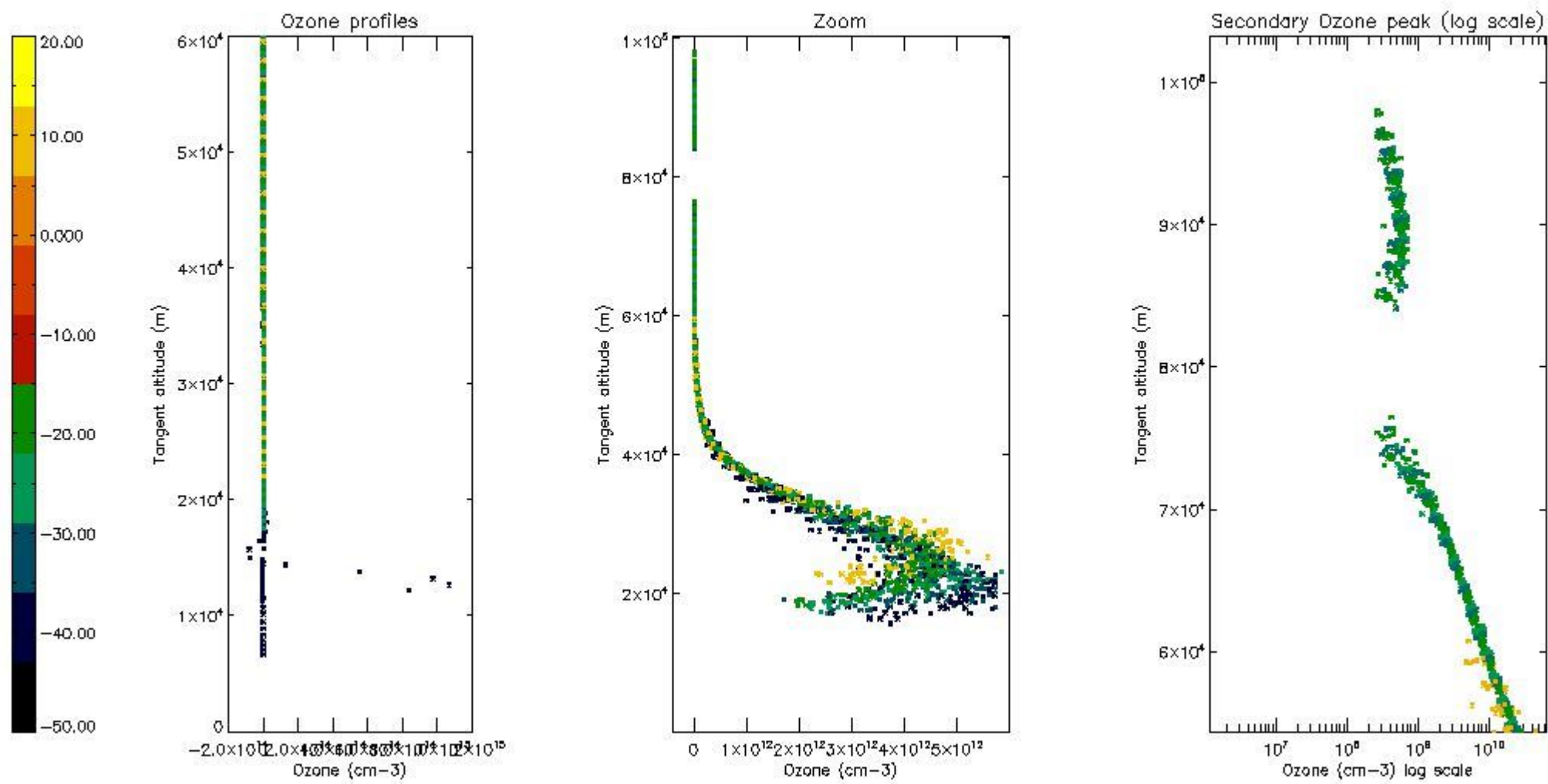
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



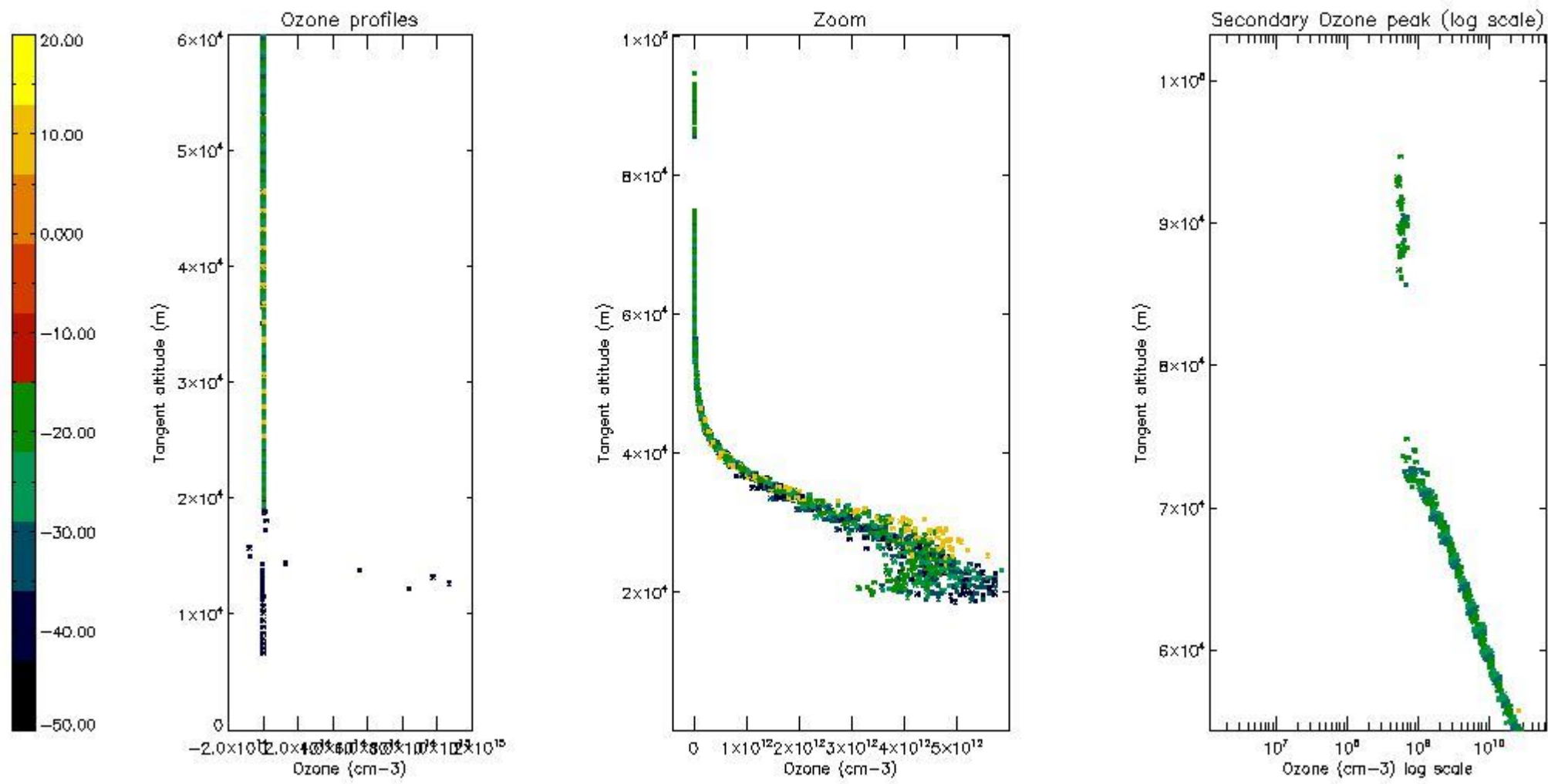
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



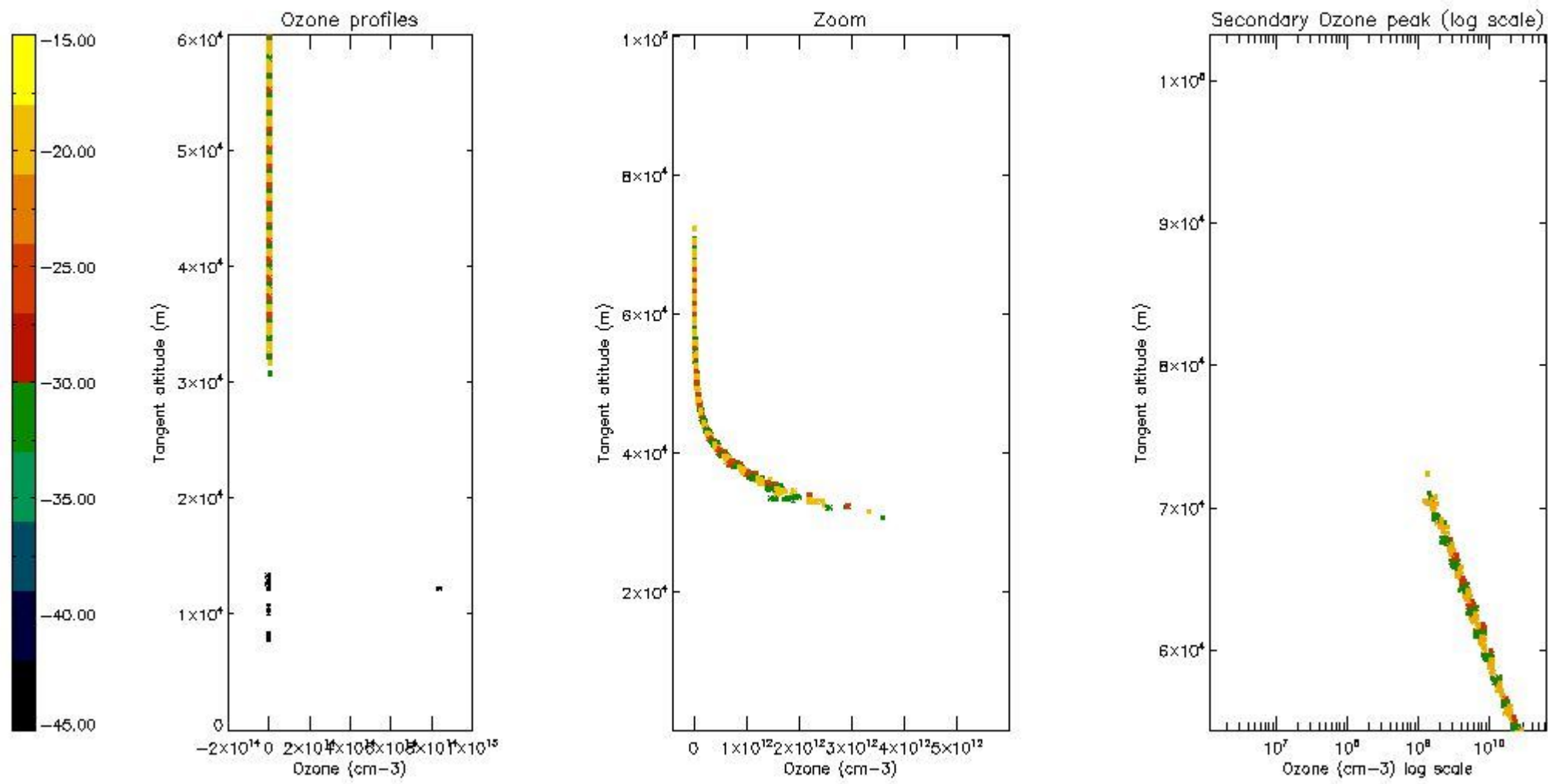
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



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

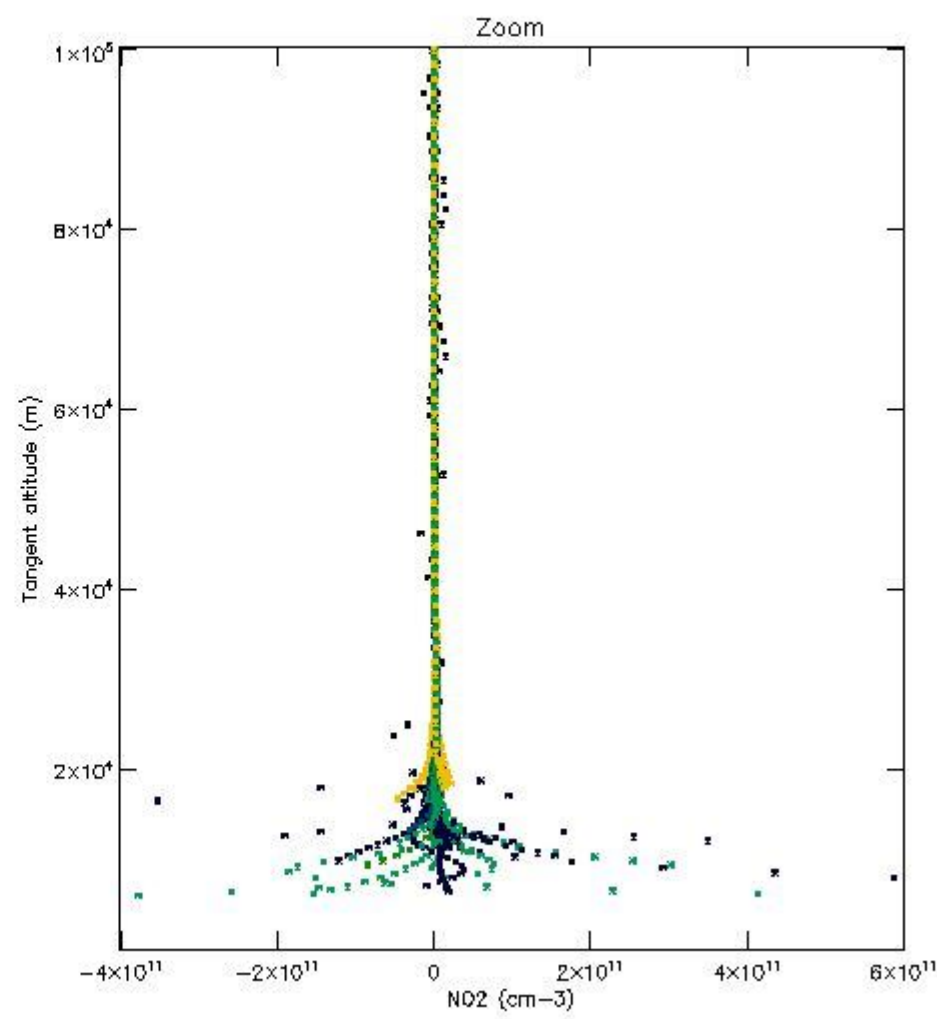
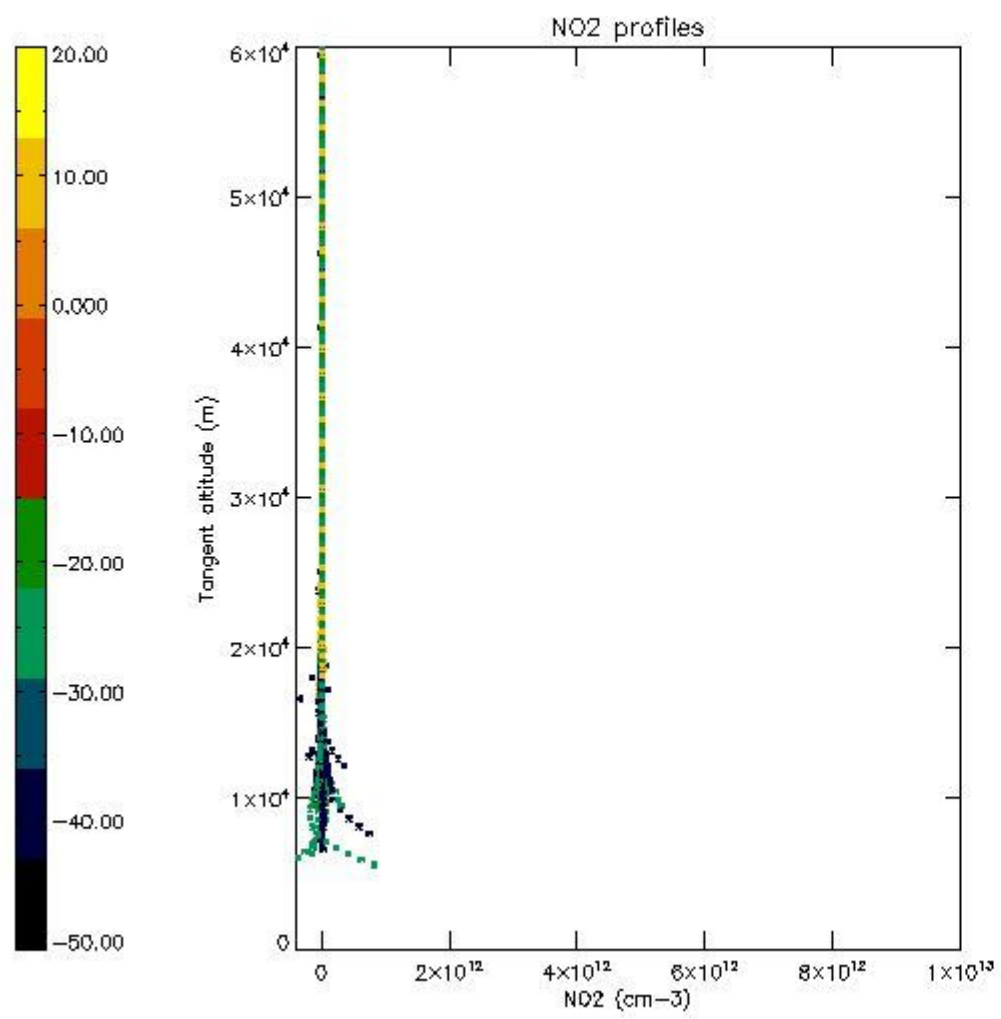
The colorbar represents the latitude.



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

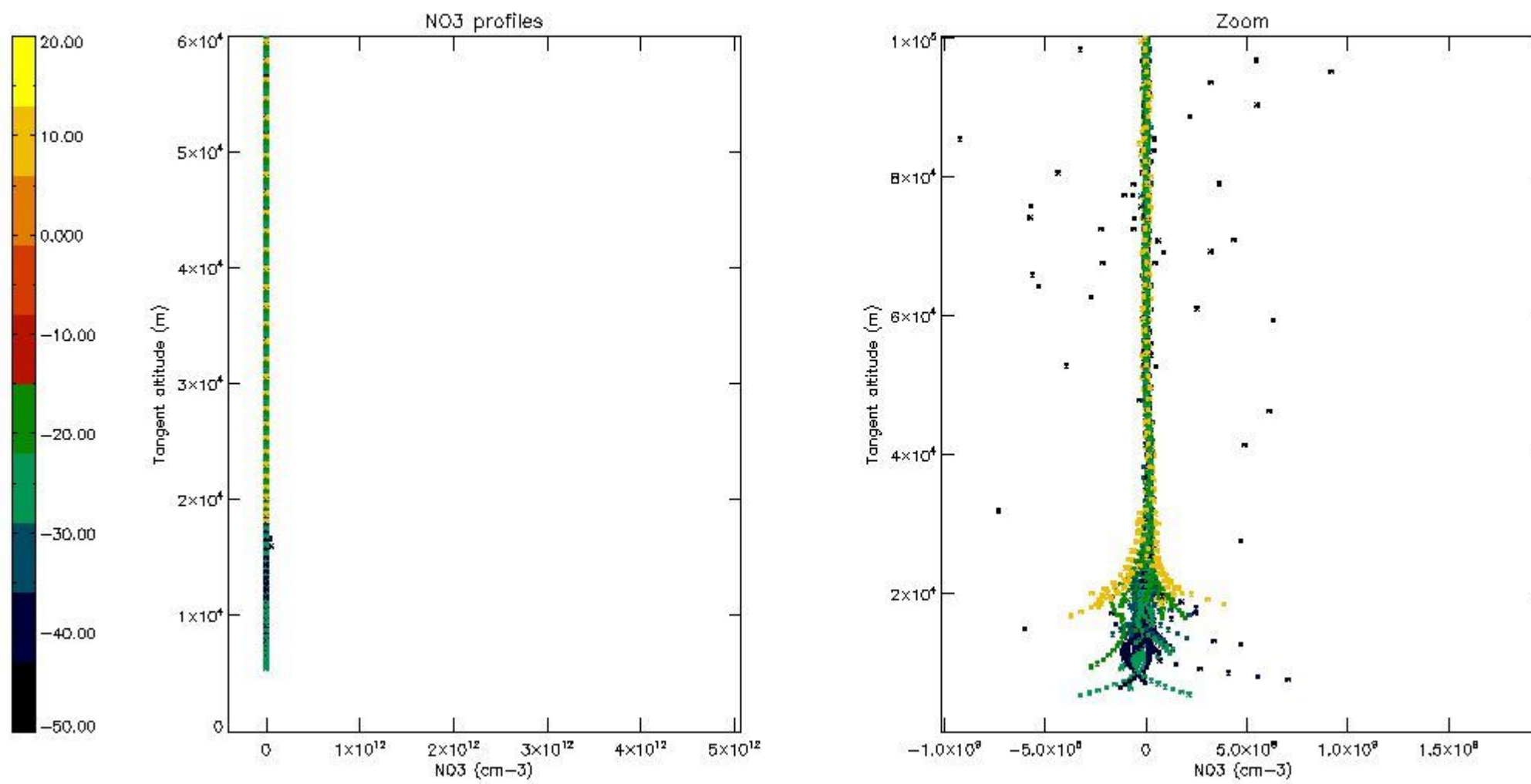
The colorbar represents the latitude.





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

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	24-SEP-2005 00:00:10
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	24-SEP-2005 00:00:10
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	24-SEP-2005 00:00:10

# GOMOS Level 2 Daily Report

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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.

Item	Value
Time of report generation	18APR2013 11:10:22
Data source version	GOMOS/6.01
Start time of products	24-09-2005 (24SEP2005 00:00:00)
Stop time of products	25-09-2005 (25SEP2005 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	242
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__2PRFIN20050924_000010_00000382041_00059_18650_7019.N1	24-SEP-2005 00:00:10	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	18650	No
2	GOM_NL__2PRFIN20050924_000408_00000362041_00059_18650_7020.N1	24-SEP-2005 00:04:08	Bright	35.500	89	5Alp Cep	2.4510	8000.0	71	18650	No
3	GOM_NL__2PRFIN20050924_001308_00000342041_00059_18650_7021.N1	24-SEP-2005 00:13:08	Bright	33.500	60	7Bet UMi	2.0810	3950.0	67	18650	No
4	GOM_NL__2PRFIN20050924_001917_00000362041_00059_18650_7022.N1	24-SEP-2005 00:19:17	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18650	No
5	GOM_NL__2PRFIN20050924_002045_00000342041_00059_18650_7023.N1	24-SEP-2005 00:20:45	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18650	No
6	GOM_NL__2PRFIN20050924_002355_00000522041_00059_18650_7024.N1	24-SEP-2005 00:23:55	Bright	51.500	174	52Psi UMa	3.0040	4400.0	103	18650	No
7	GOM_NL__2PRFIN20050924_004934_00000472041_00059_18650_7025.N1	24-SEP-2005 00:49:34	Dark	46.500	65	Lam Vel	2.2040	4400.0	93	18650	No
8	GOM_NL__2PRFIN20050924_005252_00000382041_00059_18650_7026.N1	24-SEP-2005 00:52:52	Dark	38.000	46	Del Vel	1.9540	10600.	76	18650	No
9	GOM_NL__2PRFIN20050924_005427_00000442041_00059_18650_7027.N1	24-SEP-2005 00:54:27	Dark	43.500	41	Eps Car	1.8600	4100.0	87	18650	No
10	GOM_NL__2PRFIN20050924_005627_00000382041_00060_18651_7011.N1	24-SEP-2005 00:56:27	Dark	37.500	29	Bet Car	1.6720	10200.	75	18651	No
11	GOM_NL__2PRFIN20050924_010451_00000372041_00060_18651_7012.N1	24-SEP-2005 01:04:51	Dark	36.500	135	Bet Hyi	2.8200	5800.0	73	18651	No
12	GOM_NL__2PRFIN20050924_011018_00000412041_00060_18651_7013.N1	24-SEP-2005 01:10:18	Straylight	40.500	148	Alp Tuc	2.8780	4100.0	81	18651	No
13	GOM_NL__2PRFIN20050924_011405_00000402041_00060_18651_7014.N1	24-SEP-2005 01:14:05	Straylight	39.500	31	Alp Gru	1.7340	15200.	79	18651	No
14	GOM_NL__2PRFIN20050924_011824_00000442041_00060_18651_7015.N1	24-SEP-2005 01:18:24	Straylight	43.500	18	24Alp PsA	1.1660	9700.0	87	18651	No
15	GOM_NL__2PRFIN20050924_012254_00000402041_00060_18651_7016.N1	24-SEP-2005 01:22:54	Twilight	40.000	142	49Del Cap	2.8500	8900.0	80	18651	No
16	GOM_NL__2PRFIN20050924_012703_00000382041_00060_18651_7017.N1	24-SEP-2005 01:27:03	Bright	38.000	162	34Alp Aqr	2.9440	5350.0	76	18651	No
17	GOM_NL__2PRFIN20050924_013008_00000382041_00060_18651_7018.N1	24-SEP-2005 01:30:08	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	18651	No
18	GOM_NL__2PRFIN20050924_014046_00000382041_00060_18651_7019.N1	24-SEP-2005 01:40:46	Bright	37.500	19	50Alp Cyg	1.2460	10500.	75	18651	No
19	GOM_NL__2PRFIN20050924_014444_00000352041_00060_18651_7020.N1	24-SEP-2005 01:44:44	Bright	35.000	89	5Alp Cep	2.4510	8000.0	70	18651	No
20	GOM_NL__2PRFIN20050924_015344_00000362041_00060_18651_7021.N1	24-SEP-2005 01:53:44	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18651	No
21	GOM_NL__2PRFIN20050924_015953_00000372041_00060_18651_7022.N1	24-SEP-2005 01:59:53	Bright	37.000	36	50Alp UMa	1.8000	6300.0	74	18651	No
22	GOM_NL__2PRFIN20050924_020121_00000522041_00060_18651_7023.N1	24-SEP-2005 02:01:21	Bright	52.000	82	48Bet UMa	2.3650	10600.	104	18651	No
23	GOM_NL__2PRFIN20050924_020431_00000522041_00060_18651_7024.N1	24-SEP-2005 02:04:31	Bright	51.500	174	52Psi UMa	3.0040	4400.0	103	18651	No
24	GOM_NL__2PRFIN20050924_023010_00000422041_00060_18651_7025.N1	24-SEP-2005 02:30:10	Dark	42.000	65	Lam Vel	2.2040	4400.0	84	18651	No
25	GOM_NL__2PRFIN20050924_023328_00000412041_00060_18651_7026.N1	24-SEP-2005 02:33:28	Dark	41.000	46	Del Vel	1.9540	10600.	82	18651	No
26	GOM_NL__2PRFIN20050924_023503_00000402041_00060_18651_7027.N1	24-SEP-2005 02:35:03	Dark	40.000	41	Eps Car	1.8600	4100.0	80	18651	No
27	GOM_NL__2PRFIN20050924_023703_00000382041_00061_18652_7031.N1	24-SEP-2005 02:37:03	Dark	37.500	29	Bet Car	1.6720	10200.	75	18652	No
28	GOM_NL__2PRFIN20050924_024527_00000362041_00061_18652_7032.N1	24-SEP-2005 02:45:27	Dark	35.500	135	Bet Hyi	2.8200	5800.0	71	18652	No
29	GOM_NL__2PRFIN20050924_025054_00000392041_00061_18652_7033.N1	24-SEP-2005 02:50:54	Straylight	39.000	148	Alp Tuc	2.8780	4100.0	78	18652	No
30	GOM_NL__2PRFIN20050924_025441_00000392041_00061_18652_7034.N1	24-SEP-2005 02:54:41	Straylight	38.500	31	Alp Gru	1.7340	15200.	77	18652	No
31	GOM_NL__2PRFIN20050924_025900_00000442041_00061_18652_7035.N1	24-SEP-2005 02:59:00	Straylight	44.000	18	24Alp PsA	1.1660	9700.0	88	18652	No
32	GOM_NL__2PRFIN20050924_030330_00000382041_00061_18652_7036.N1	24-SEP-2005 03:03:30	Twilight	38.000	142	49Del Cap	2.8500	8900.0	76	18652	No
33	GOM_NL__2PRFIN20050924_030739_00000382041_00061_18652_7037.N1	24-SEP-2005 03:07:39	Bright	38.000	162	34Alp Aqr	2.9440	5350.0	76	18652	No
34	GOM_NL__2PRFIN20050924_031044_00000392041_00061_18652_7038.N1	24-SEP-2005 03:10:44	Bright	39.000	61	8Eps Peg	2.1000	3900.0	78	18652	No
35	GOM_NL__2PRFIN20050924_032122_00000372041_00061_18652_7039.N1	24-SEP-2005 03:21:22	Bright	36.500	19	50Alp Cyg	1.2460	10500.	73	18652	No
36	GOM_NL__2PRFIN20050924_032520_00000332041_00061_18652_7040.N1	24-SEP-2005 03:25:20	Bright	32.500	89	5Alp Cep	2.4510	8000.0	65	18652	No
37	GOM_NL__2PRFIN20050924_033420_00000332041_00061_18652_7041.N1	24-SEP-2005 03:34:20	Bright	32.500	60	7Bet UMi	2.0810	3950.0	65	18652	No
38	GOM_NL__2PRFIN20050924_034029_00000362041_00061_18652_7042.N1	24-SEP-2005 03:40:29	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	18652	No
39	GOM_NL__2PRFIN20050924_034158_00000522041_00061_18652_7043.N1	24-SEP-2005 03:41:58	Bright	52.000	82	48Bet UMa	2.3650	10600.	104	18652	No
40	GOM_NL__2PRFIN20050924_034507_00000352041_00061_18652_7044.N1	24-SEP-2005 03:45:07	Bright	35.000	174	52Psi UMa	3.0040	4400.0	70	18652	No
41	GOM_NL__2PRFIN20050924_041046_00000472041_00061_18652_7045.N1	24-SEP-2005 04:10:46	Dark	47.000	65	Lam Vel	2.2040	4400.0	94	18652	No
42	GOM_NL__2PRFIN20050924_041405_00000412041_00061_18652_7046.N1	24-SEP-2005 04:14:05	Dark	41.000	46	Del Vel	1.9540	10600.	82	18652	No







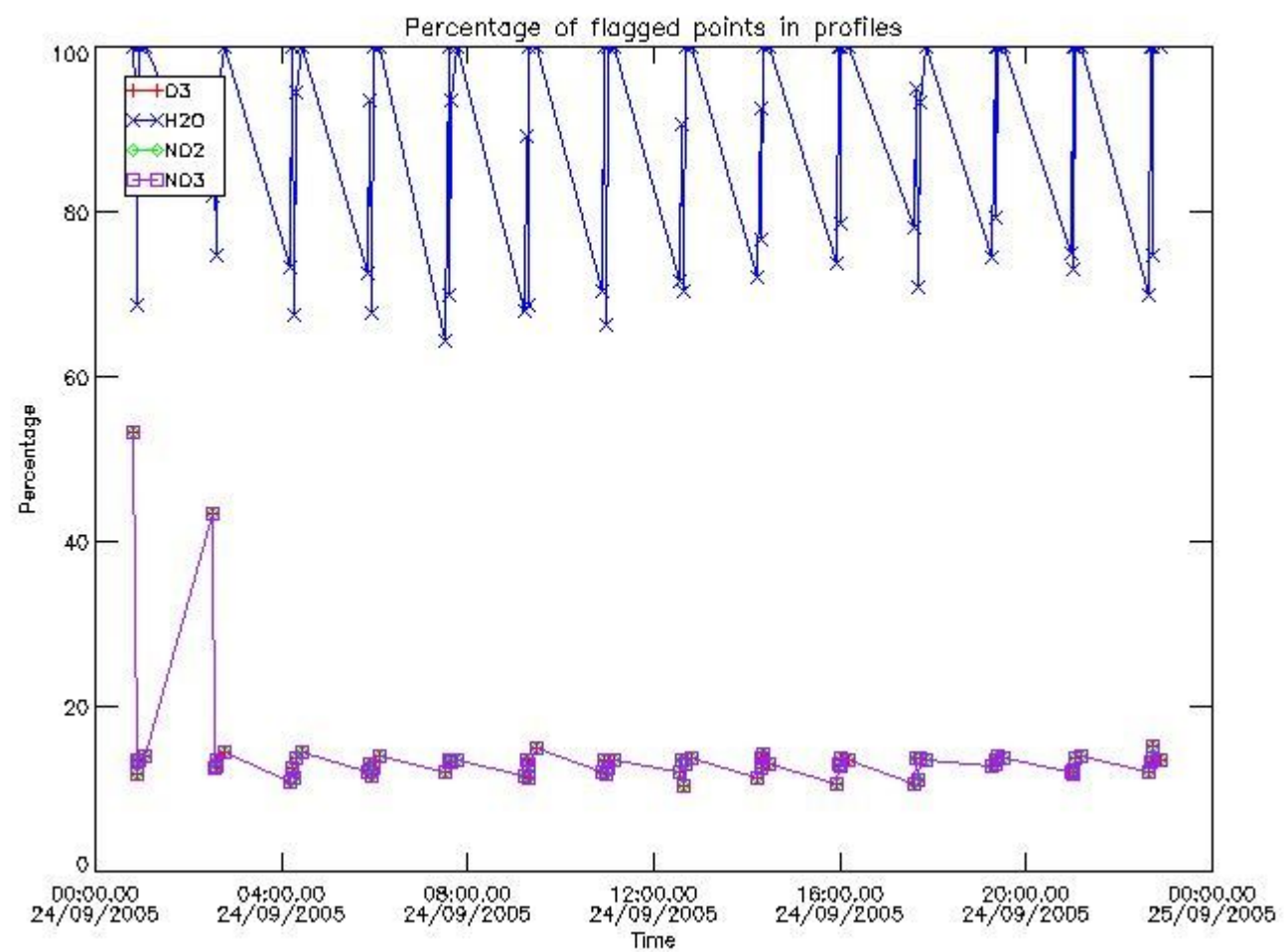
220	GOM_NL__2PRFIN20050924_214802_000000372041_00072_18663_7057.N1	24-SEP-2005 21:48:02	Bright	37.000	19	50Alp Cyg	1.2460	10500.	74	18663	No
221	GOM_NL__2PRFIN20050924_215157_000000362041_00072_18663_7058.N1	24-SEP-2005 21:51:57	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18663	No
222	GOM_NL__2PRFIN20050924_220059_000000362041_00072_18663_7059.N1	24-SEP-2005 22:00:59	Bright	36.000	60	7Bet UMi	2.0810	3950.0	72	18663	No
223	GOM_NL__2PRFIN20050924_220706_000000492041_00072_18663_7060.N1	24-SEP-2005 22:07:06	Bright	48.500	36	50Alp UMa	1.8000	6300.0	97	18663	No
224	GOM_NL__2PRFIN20050924_220835_000000362041_00072_18663_7061.N1	24-SEP-2005 22:08:35	Bright	35.500	82	48Bet UMa	2.3650	10600.	71	18663	No
225	GOM_NL__2PRFIN20050924_221144_000000332041_00072_18663_7062.N1	24-SEP-2005 22:11:44	Bright	33.000	174	52Psi UMa	3.0040	4400.0	66	18663	No
226	GOM_NL__2PRFIN20050924_222743_000000512041_00072_18663_7063.N1	24-SEP-2005 22:27:43	Twilight	50.500	48	30Alp Hya	1.9770	4100.0	101	18663	No
227	GOM_NL__2PRFIN20050924_223725_000000422041_00072_18663_7064.N1	24-SEP-2005 22:37:25	Dark	42.000	65	Lam Vel	2.2040	4400.0	84	18663	No
228	GOM_NL__2PRFIN20050924_224043_000000392041_00072_18663_7065.N1	24-SEP-2005 22:40:43	Dark	38.500	46	Del Vel	1.9540	10600.	77	18663	No
229	GOM_NL__2PRFIN20050924_224218_000000402041_00072_18663_7066.N1	24-SEP-2005 22:42:18	Dark	40.000	41	Eps Car	1.8600	4100.0	80	18663	No
230	GOM_NL__2PRFIN20050924_224415_000000372041_00073_18664_7050.N1	24-SEP-2005 22:44:15	Dark	37.000	29	Bet Car	1.6720	10200.	74	18664	No
231	GOM_NL__2PRFIN20050924_225240_000000382041_00073_18664_7051.N1	24-SEP-2005 22:52:40	Dark	38.000	135	Bet Hyi	2.8200	5800.0	76	18664	No
232	GOM_NL__2PRFIN20050924_230153_000000382041_00073_18664_7052.N1	24-SEP-2005 23:01:53	Straylight	38.000	31	Alp Gru	1.7340	15200.	76	18664	No
233	GOM_NL__2PRFIN20050924_230613_000000402041_00073_18664_7053.N1	24-SEP-2005 23:06:13	Straylight	40.000	18	24Alp PsA	1.1660	9700.0	80	18664	No
234	GOM_NL__2PRFIN20050924_231044_000000402041_00073_18664_7054.N1	24-SEP-2005 23:10:44	Twilight_and_stray	40.000	142	49Del Cap	2.8500	8900.0	80	18664	No
235	GOM_NL__2PRFIN20050924_231453_000000372041_00073_18664_7055.N1	24-SEP-2005 23:14:53	Bright	37.000	162	34Alp Aqr	2.9440	5350.0	74	18664	No
236	GOM_NL__2PRFIN20050924_231758_000000382041_00073_18664_7056.N1	24-SEP-2005 23:17:58	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	18664	No
237	GOM_NL__2PRFIN20050924_232838_000000382041_00073_18664_7057.N1	24-SEP-2005 23:28:38	Bright	38.000	19	50Alp Cyg	1.2460	10500.	76	18664	No
238	GOM_NL__2PRFIN20050924_233233_000000362041_00073_18664_7058.N1	24-SEP-2005 23:32:33	Bright	36.000	89	5Alp Cep	2.4510	8000.0	72	18664	No
239	GOM_NL__2PRFIN20050924_234135_000000352041_00073_18664_7059.N1	24-SEP-2005 23:41:35	Bright	34.500	60	7Bet UMi	2.0810	3950.0	69	18664	No
240	GOM_NL__2PRFIN20050924_234742_000000362041_00073_18664_7060.N1	24-SEP-2005 23:47:42	Bright	35.500	36	50Alp UMa	1.8000	6300.0	71	18664	No
241	GOM_NL__2PRFIN20050924_234911_000000342041_00073_18664_7061.N1	24-SEP-2005 23:49:11	Bright	33.500	82	48Bet UMa	2.3650	10600.	67	18664	No
242	GOM_NL__2PRFIN20050924_235220_000000342041_00073_18664_7062.N1	24-SEP-2005 23:52:20	Bright	34.000	174	52Psi UMa	3.0040	4400.0	68	18664	No

### 3. Quality information per product

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

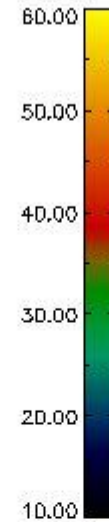
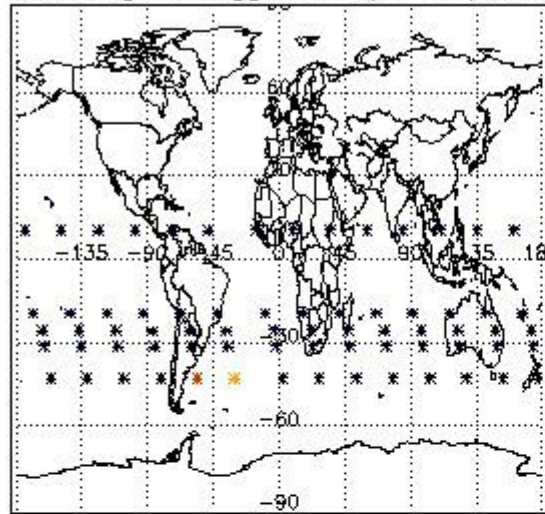
#### 3.1 Plot quality information per product (time dependant)



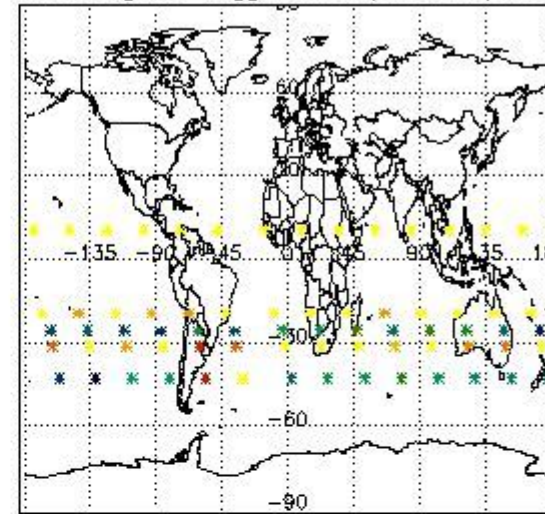


*3.2 Plot quality information per product (world map)*

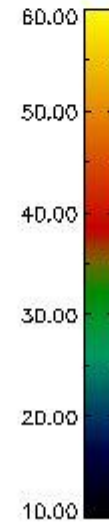
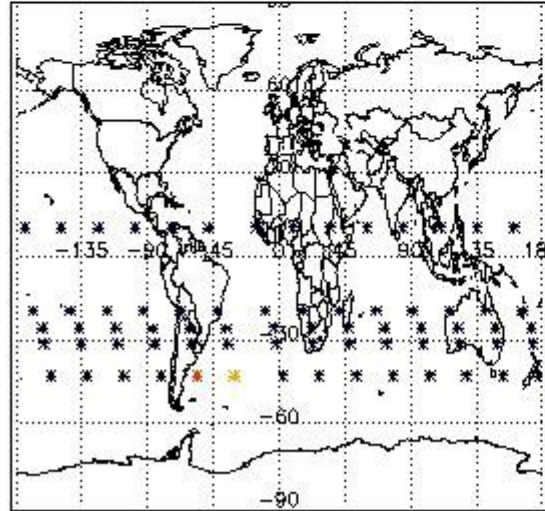
Percentage of flagged data per O3 profile



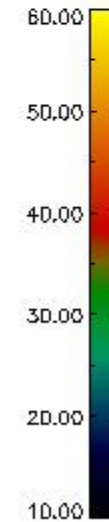
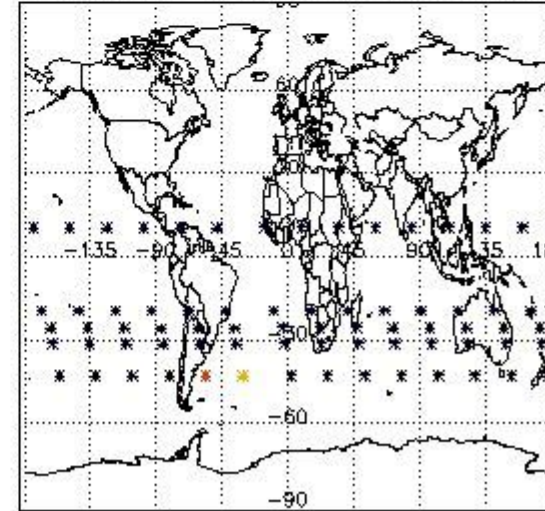
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

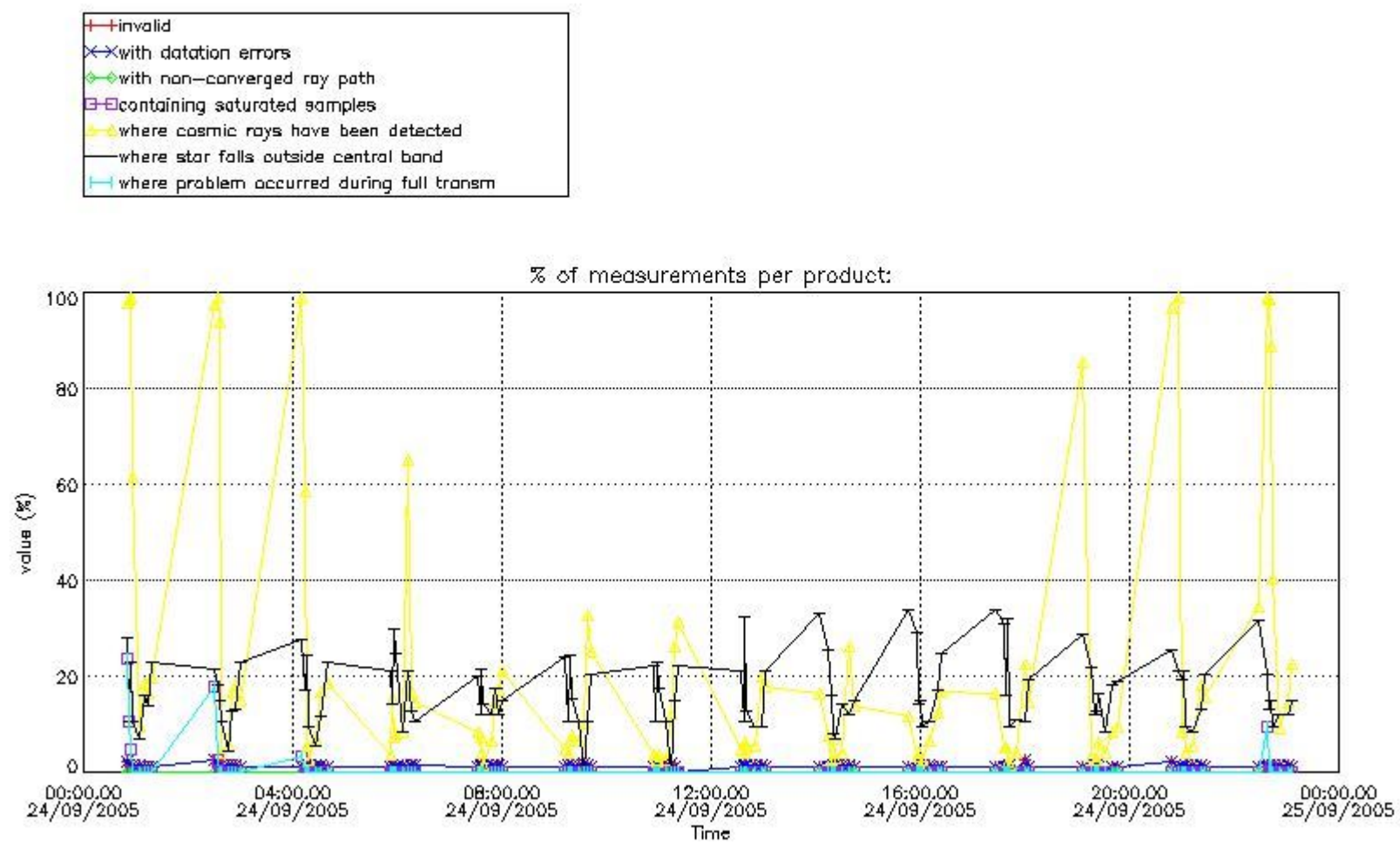


#### 4. Level 1 quality information per product

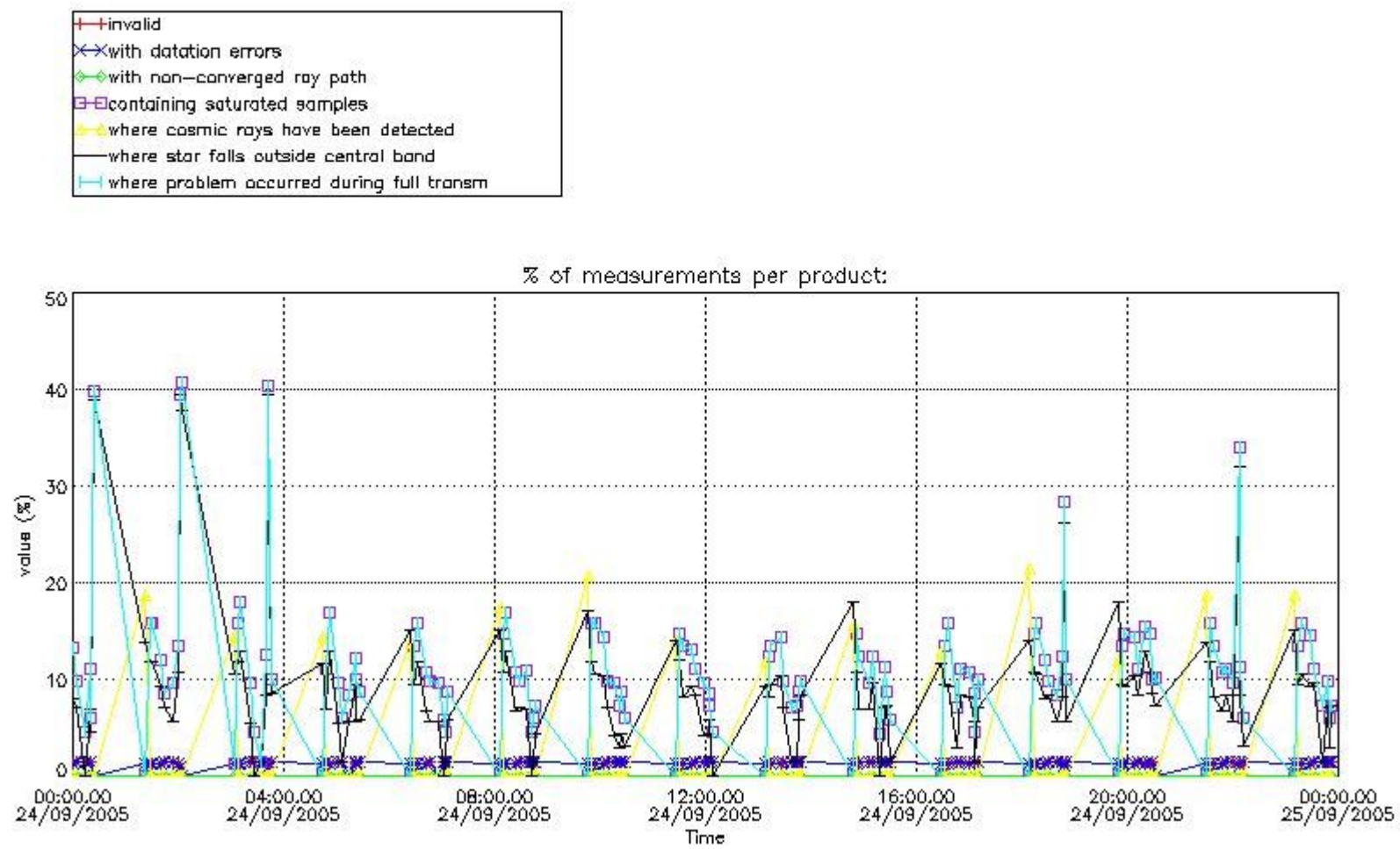
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

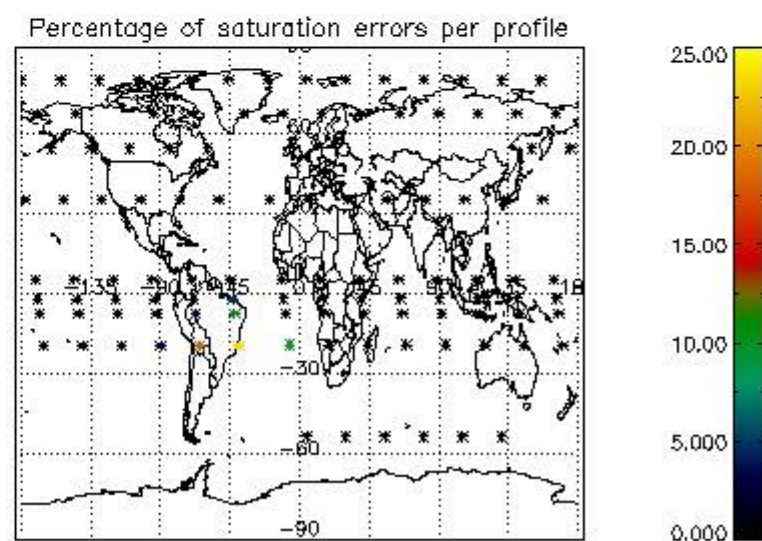
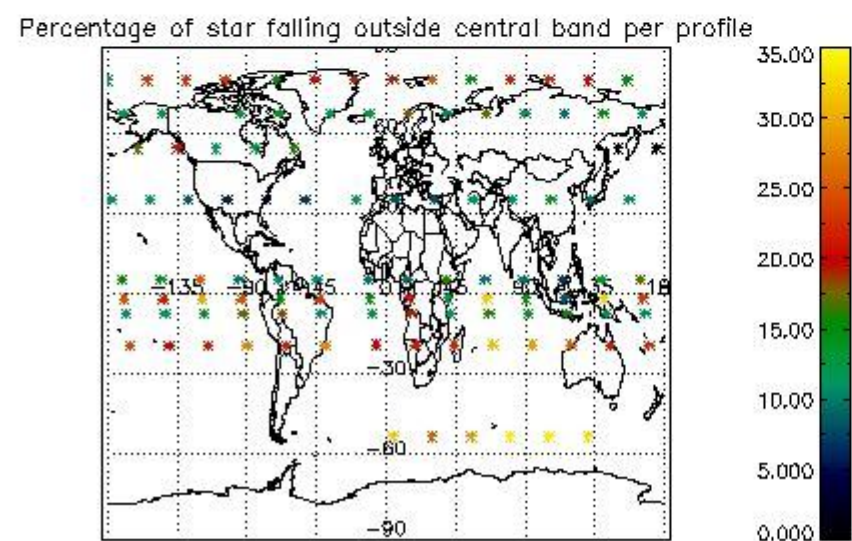
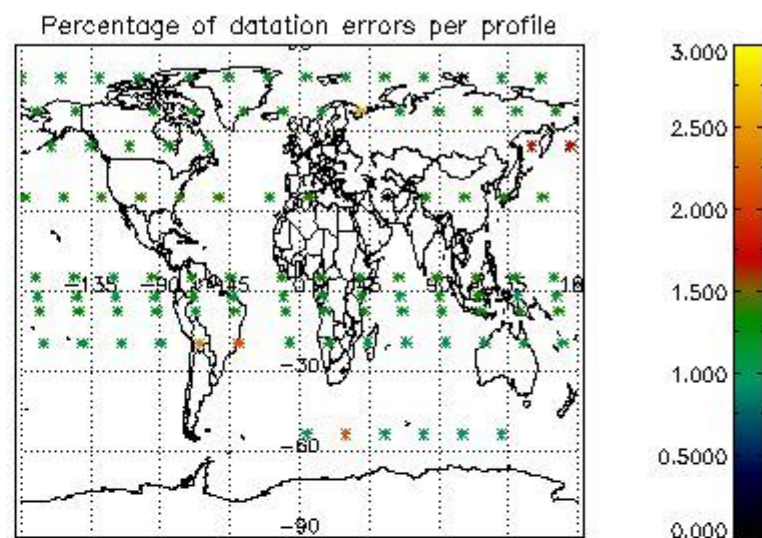
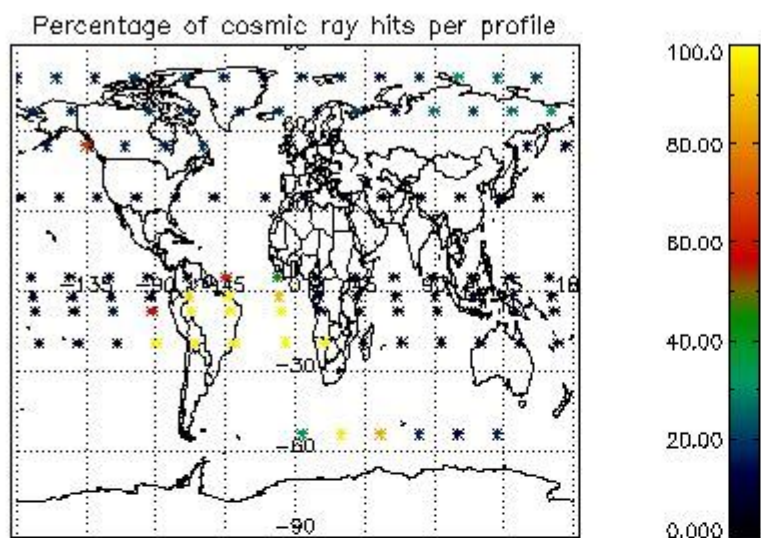


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



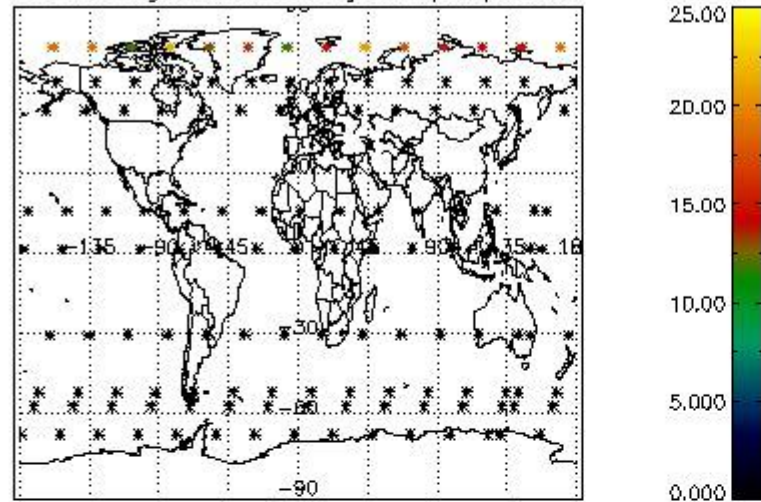
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

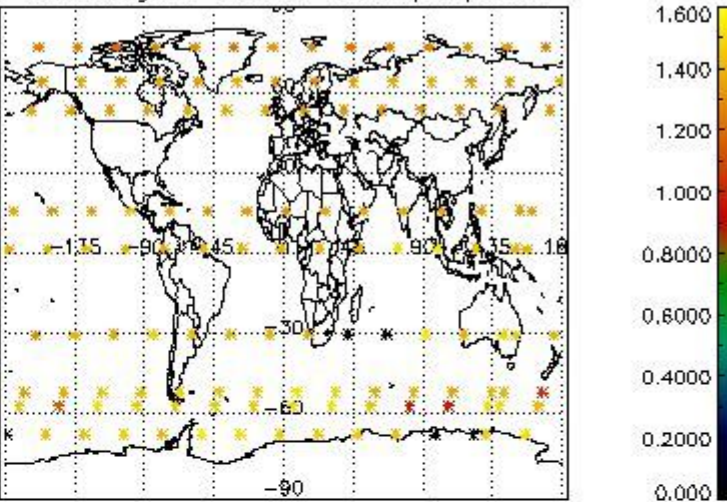


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

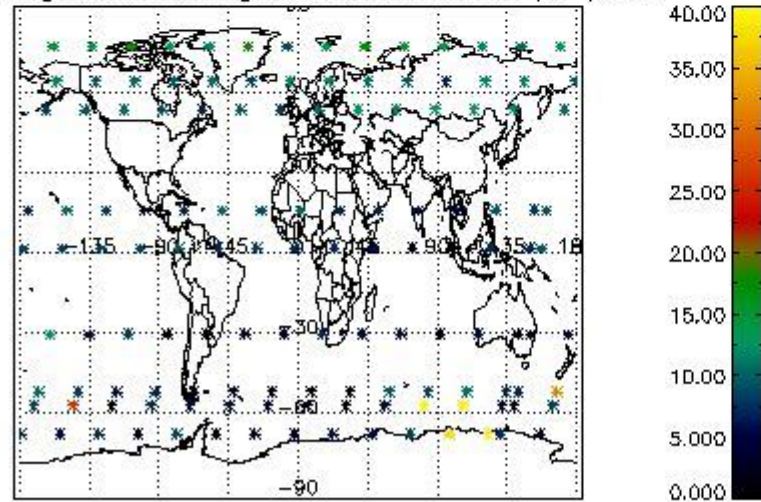
Percentage of cosmic ray hits per profile



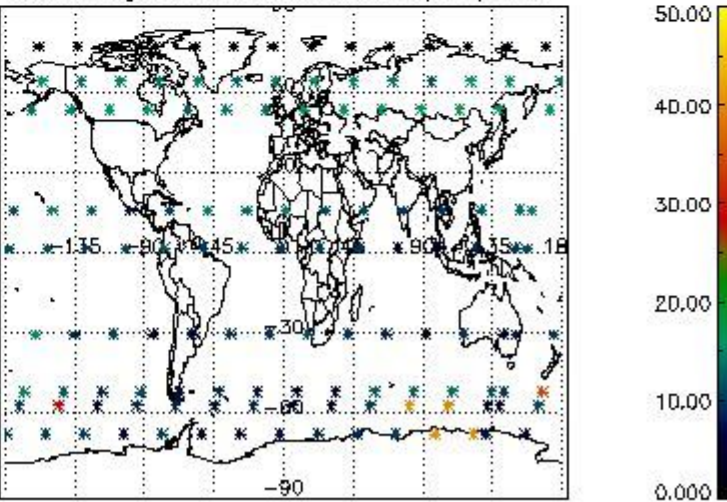
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

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

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

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

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

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

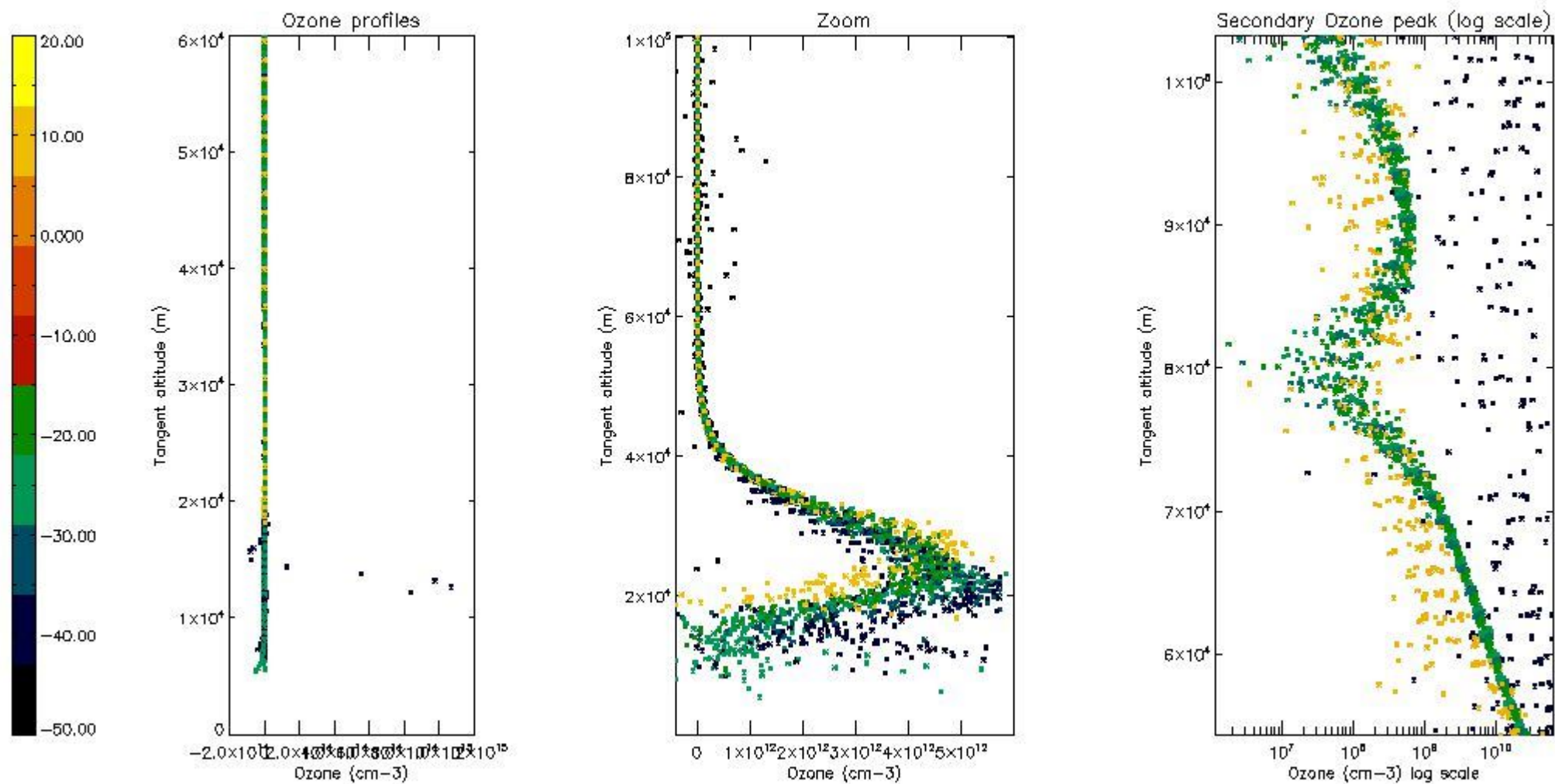
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	31
STD < 20	16

STD < 10	12
STD < 5	5

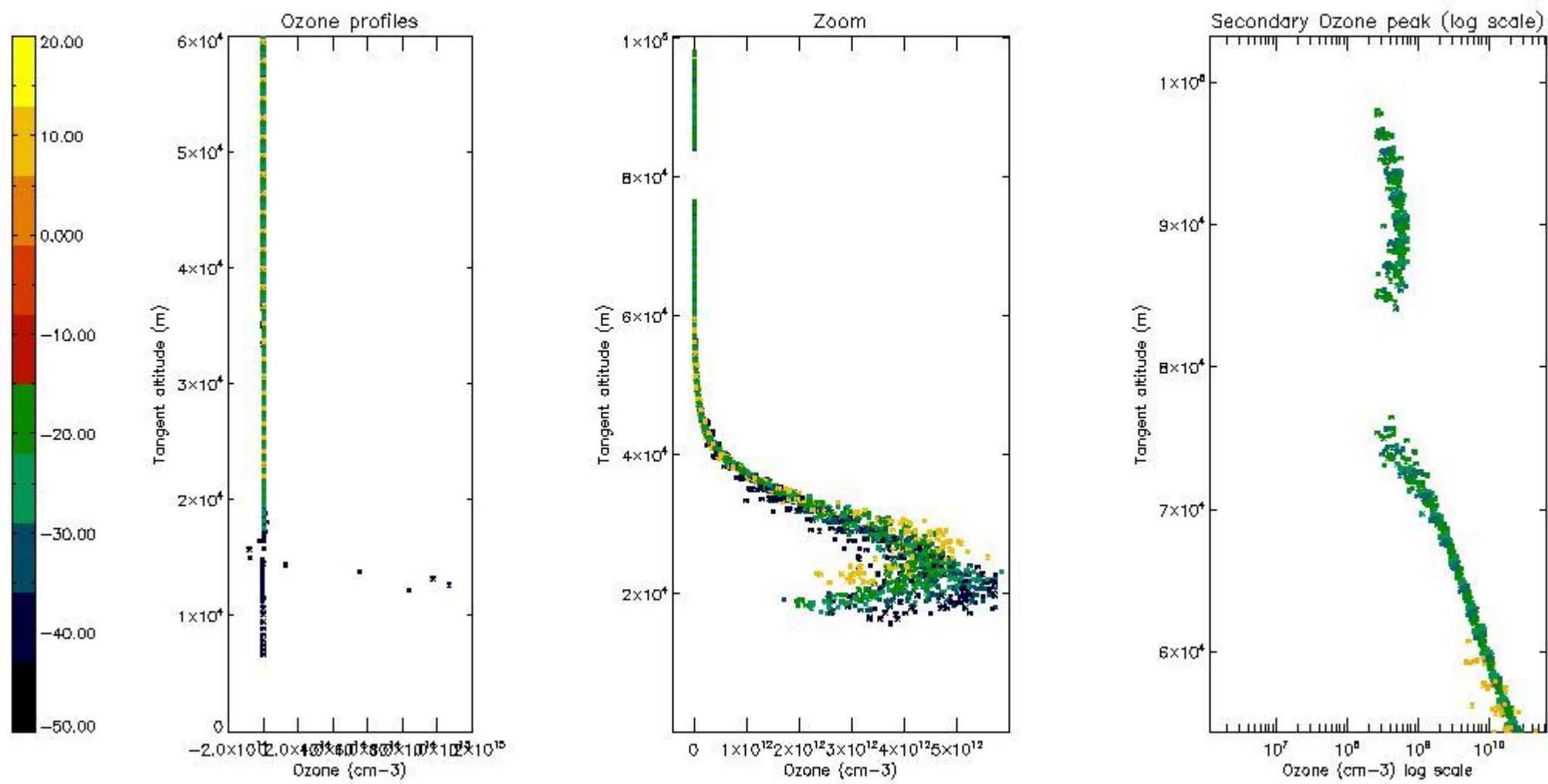
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

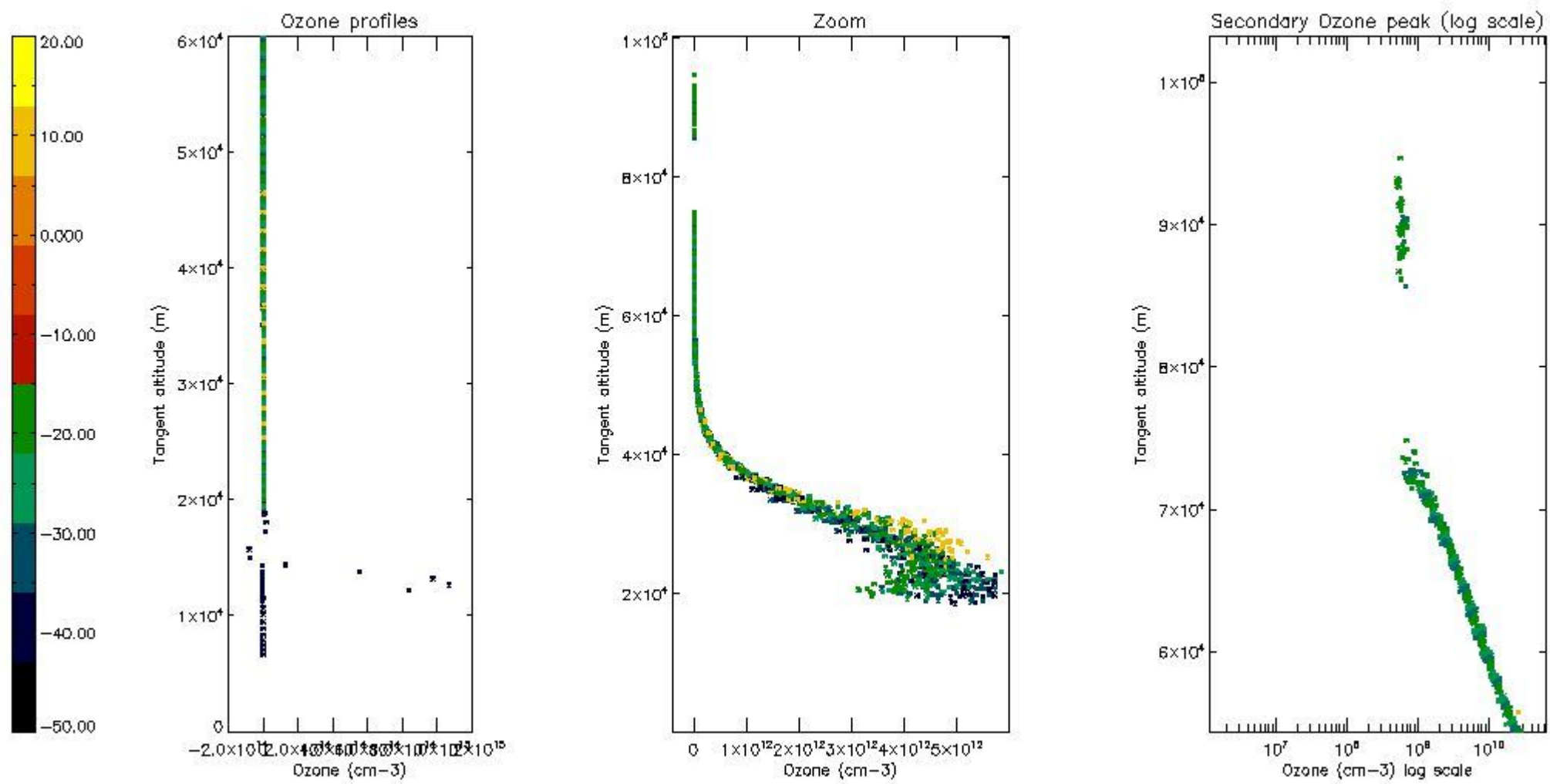
The colorbar represents the latitude.



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

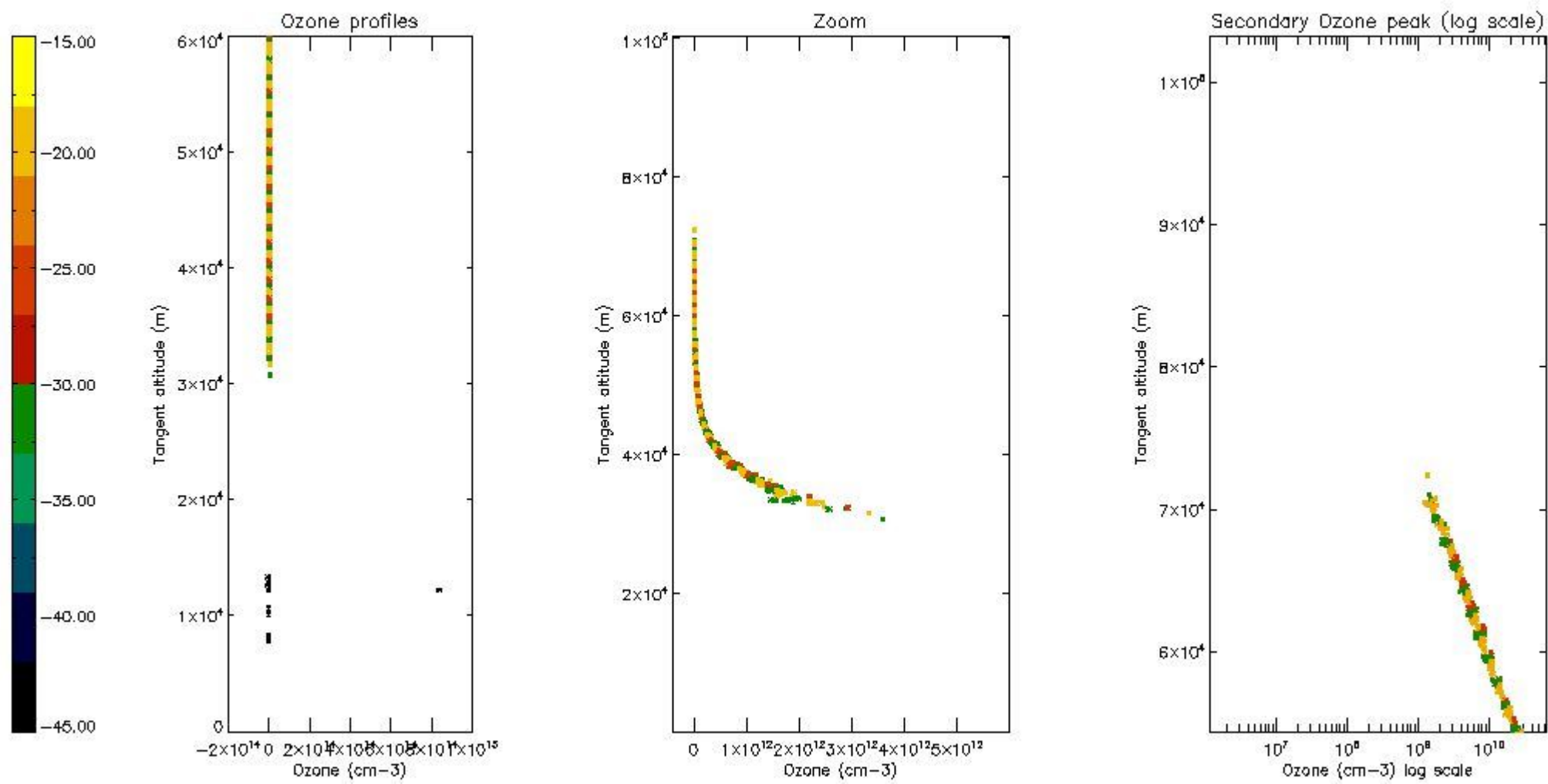
The colorbar represents the latitude.





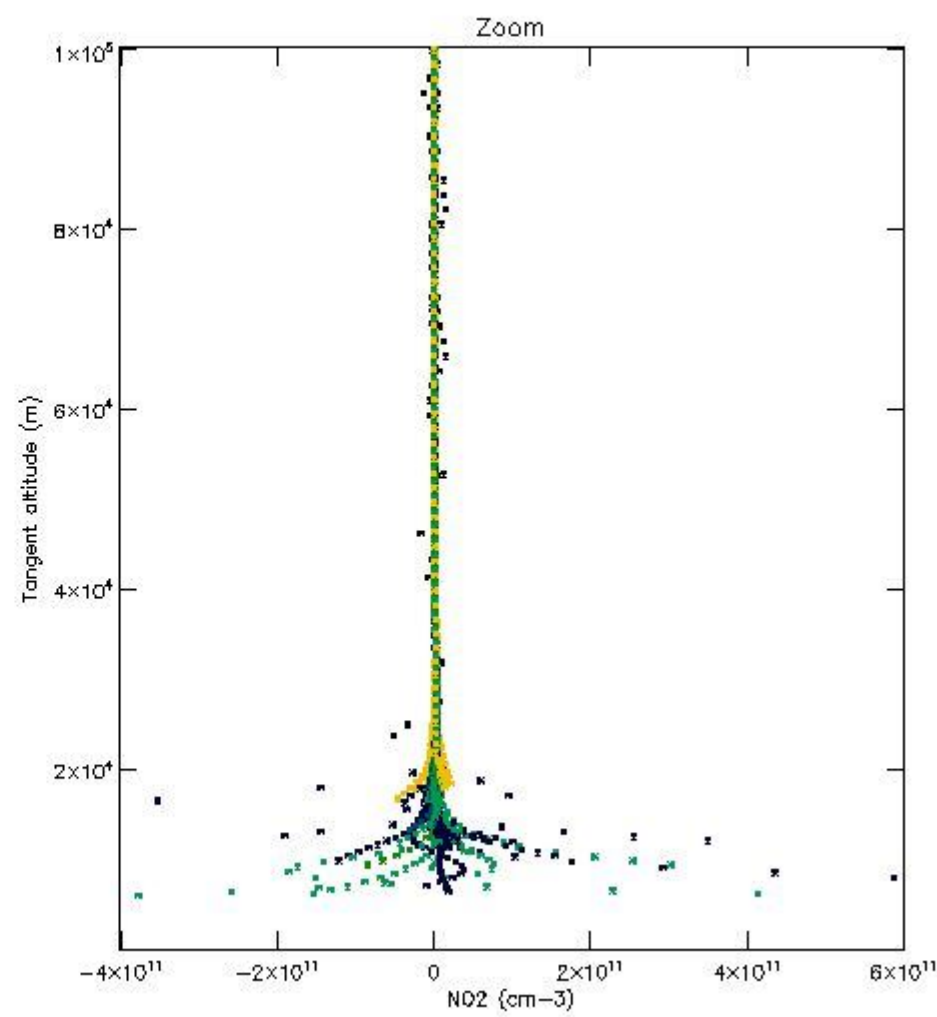
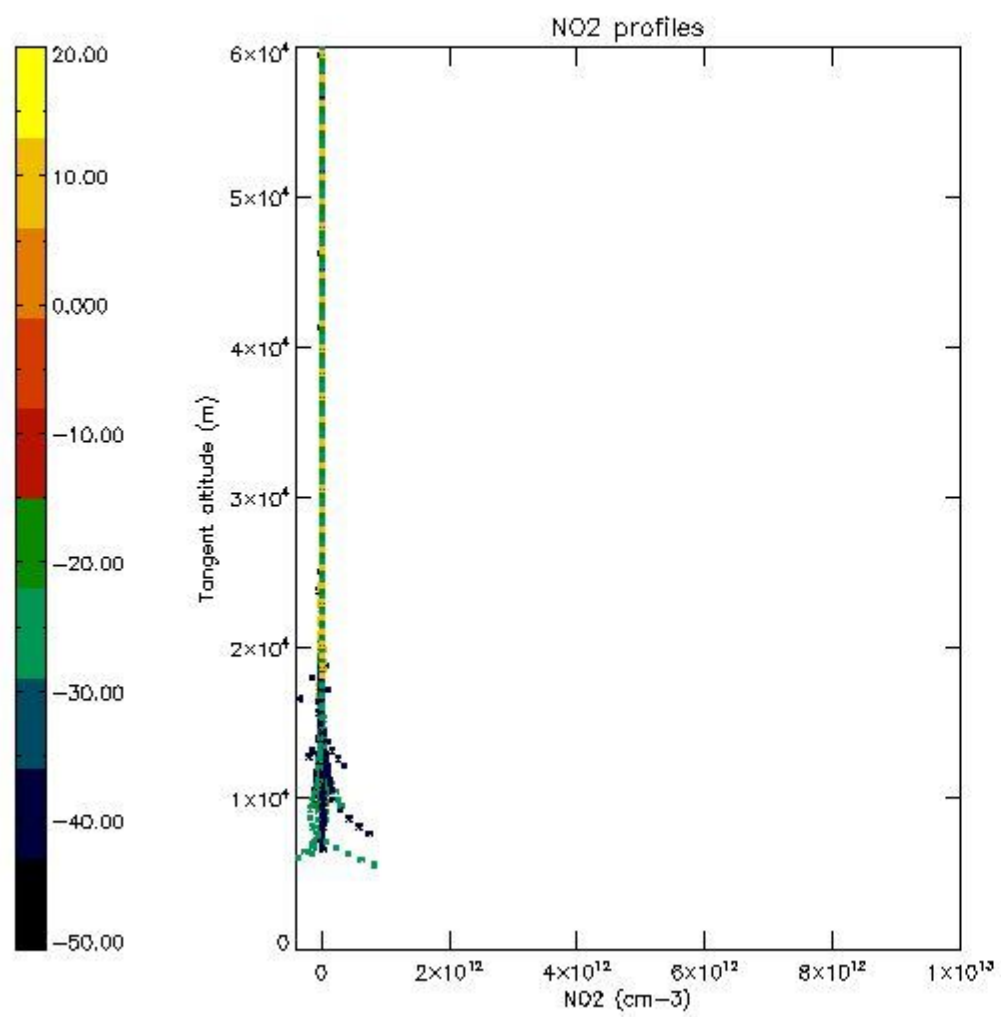
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



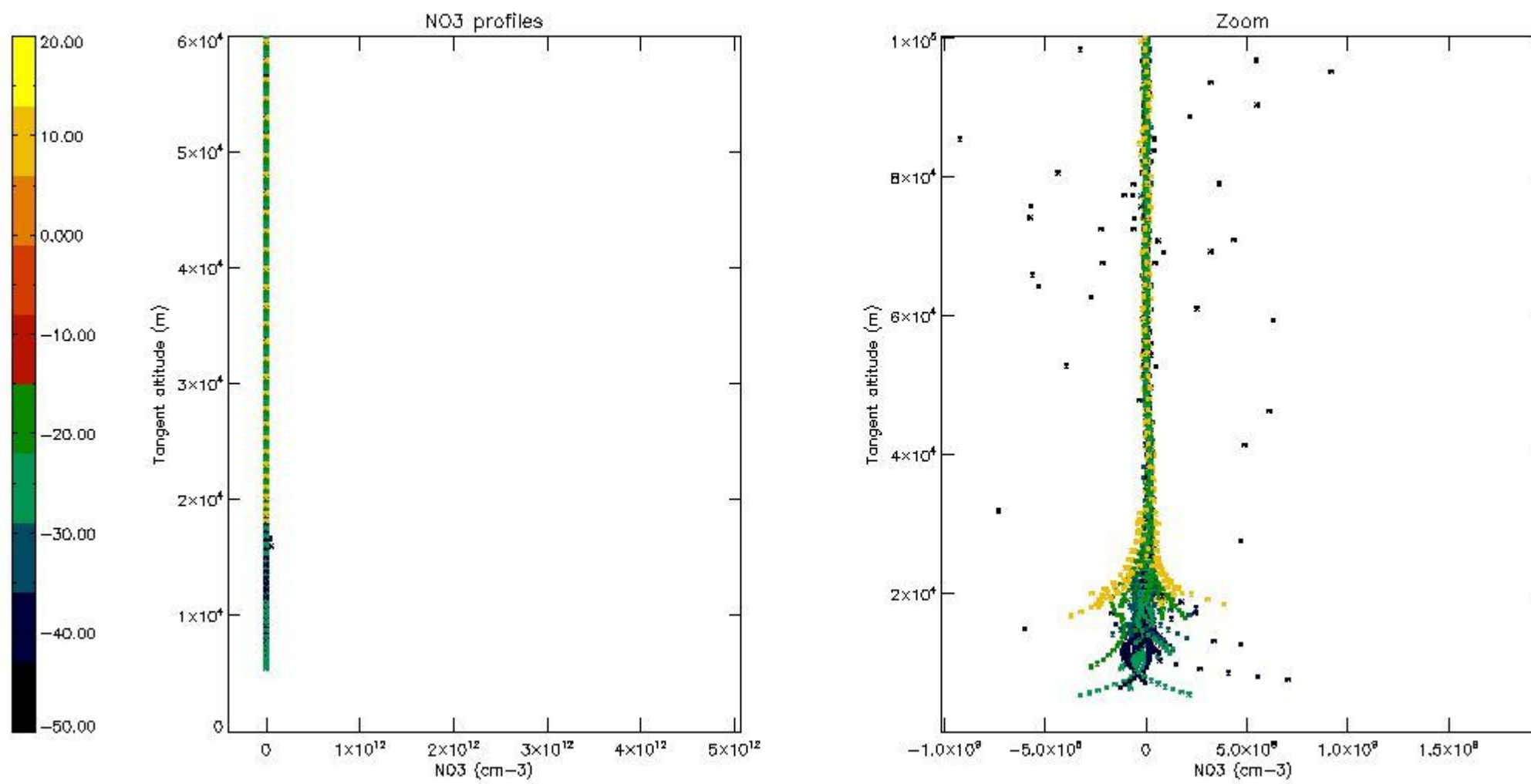
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

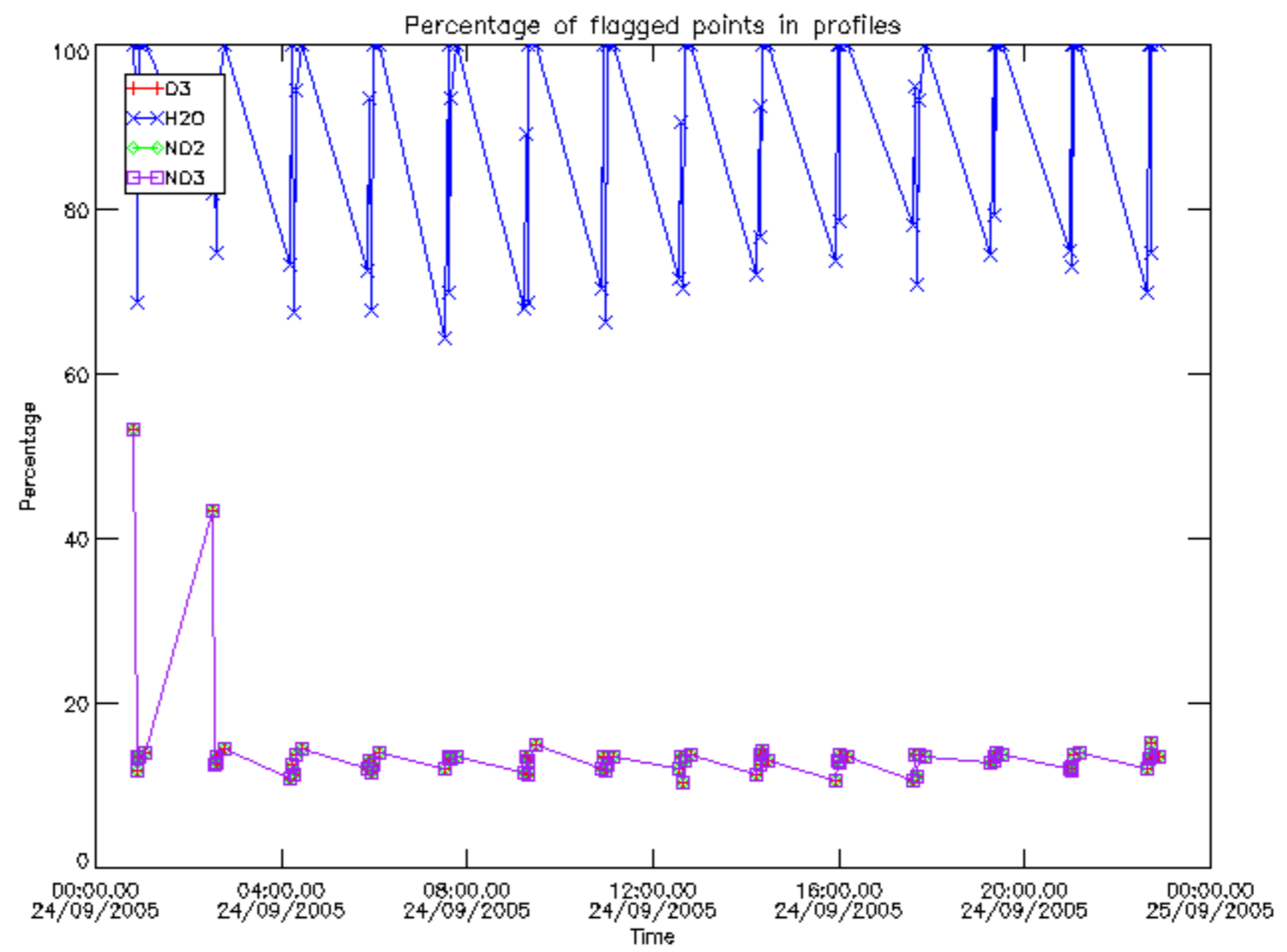
The colorbar represents the latitude.



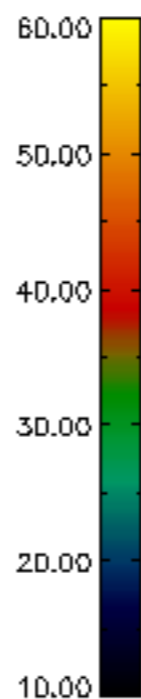
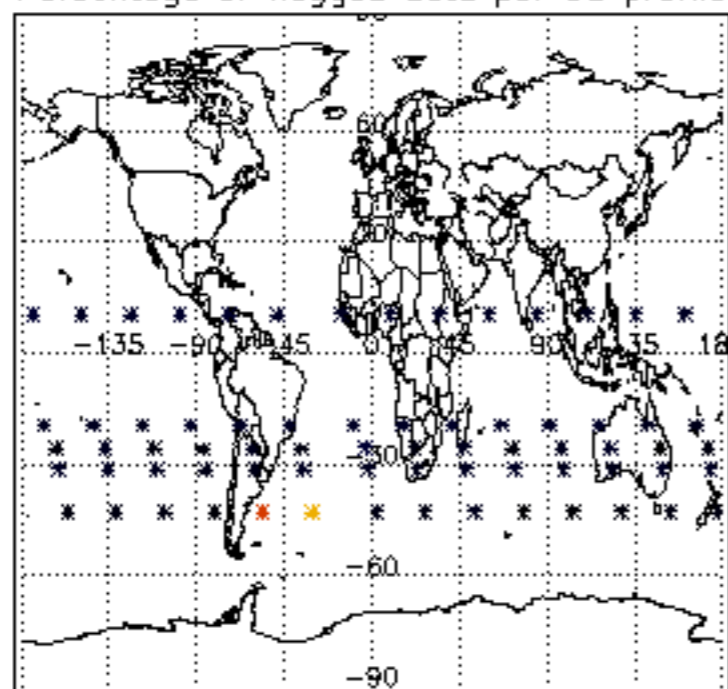
## 6. Auxiliary Data Files used for the production reported in section 2

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

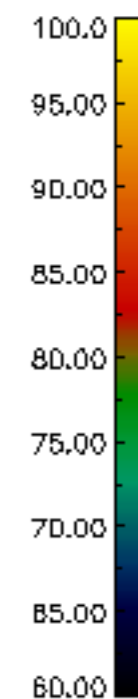
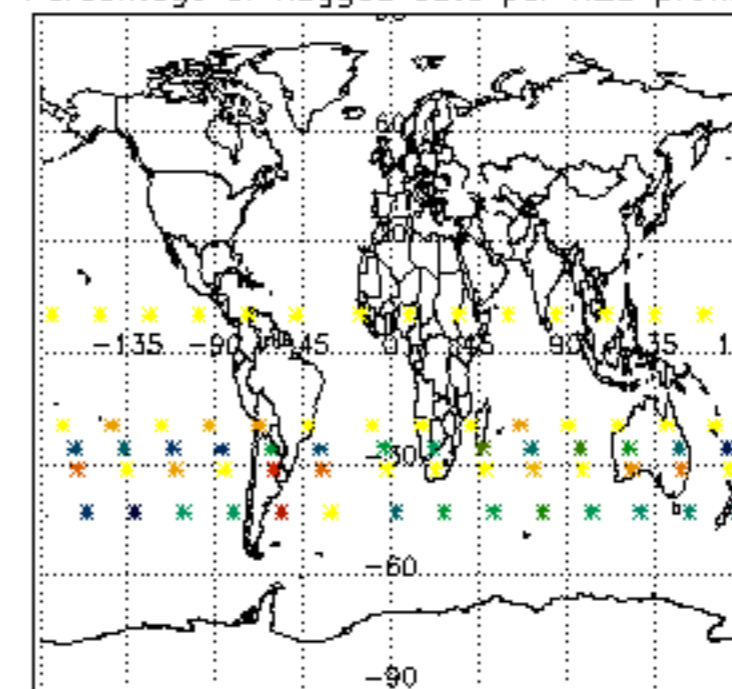
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	24-SEP-2005 00:00:10
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	24-SEP-2005 00:00:10
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	24-SEP-2005 00:00:10



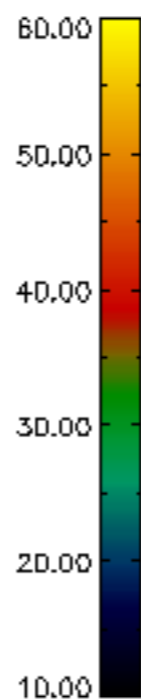
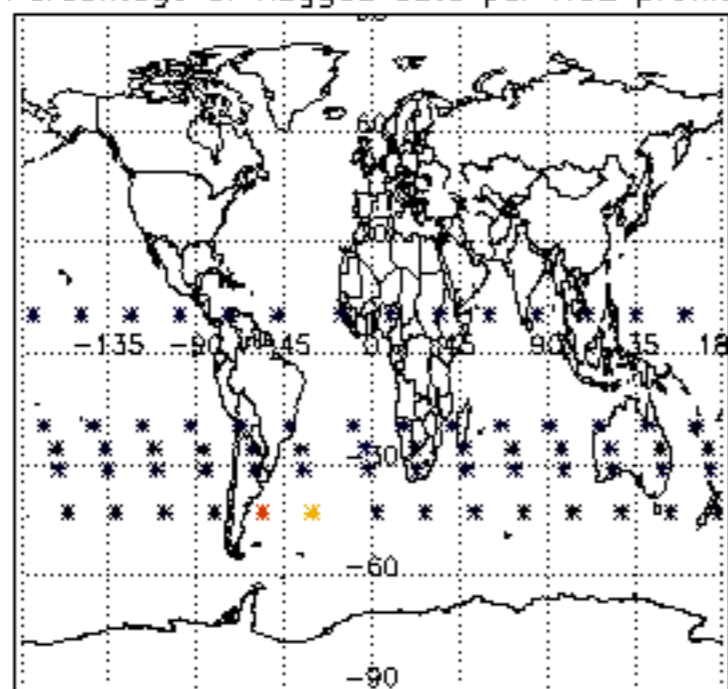
Percentage of flagged data per D3 profile



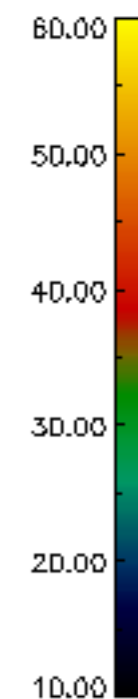
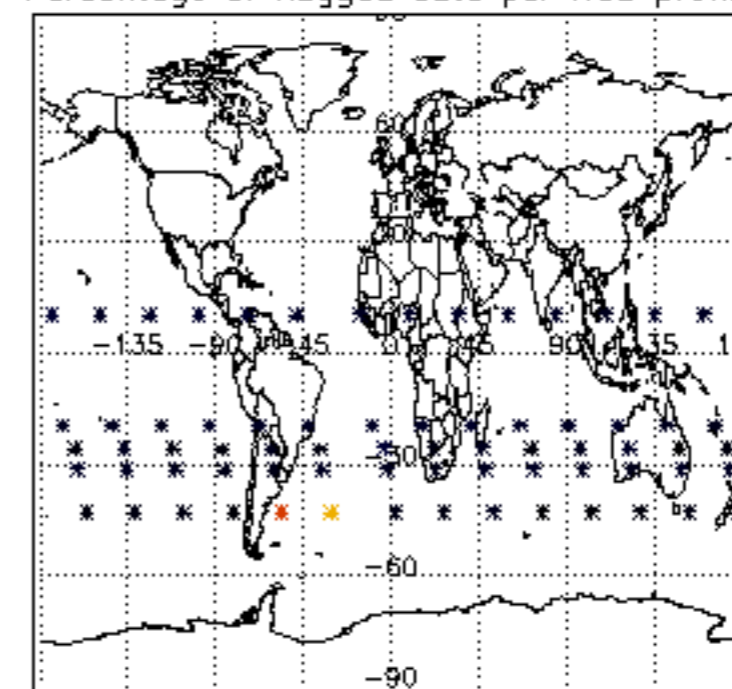
Percentage of flagged data per H2O profile

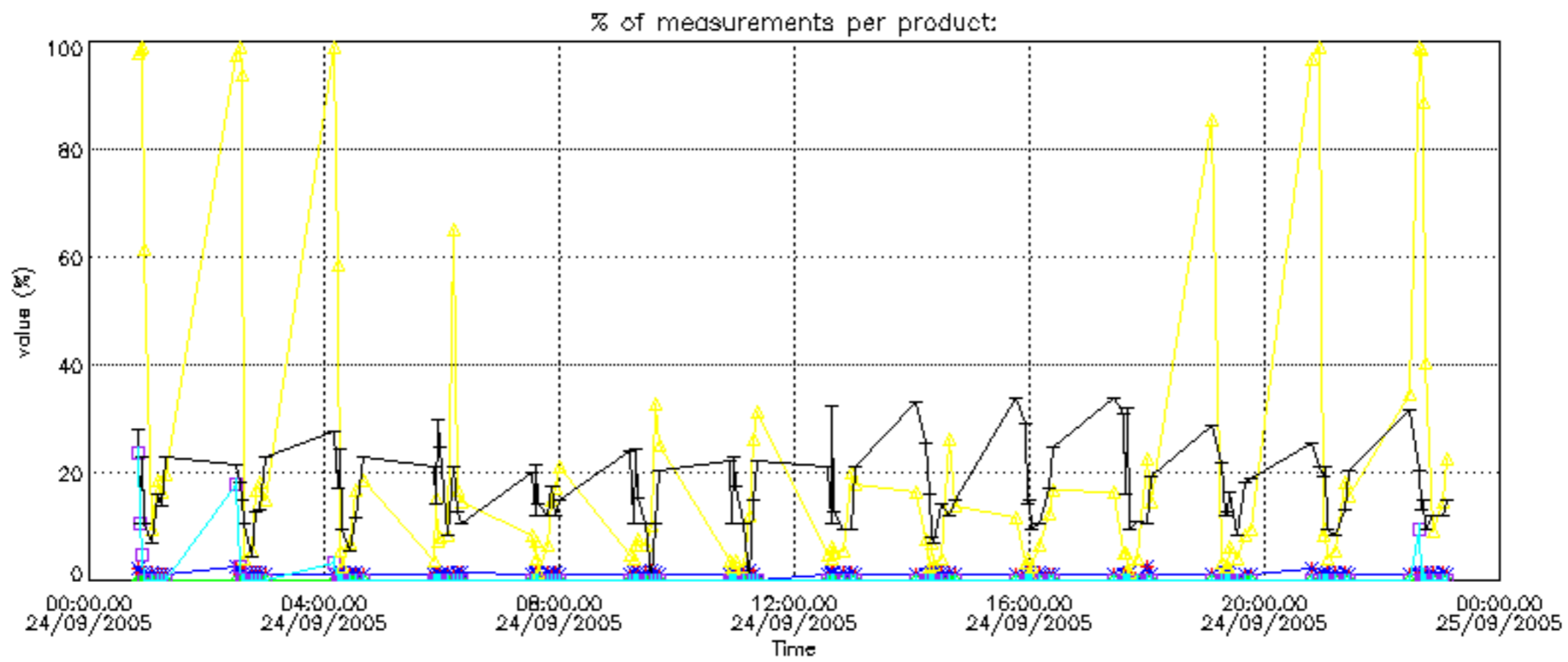


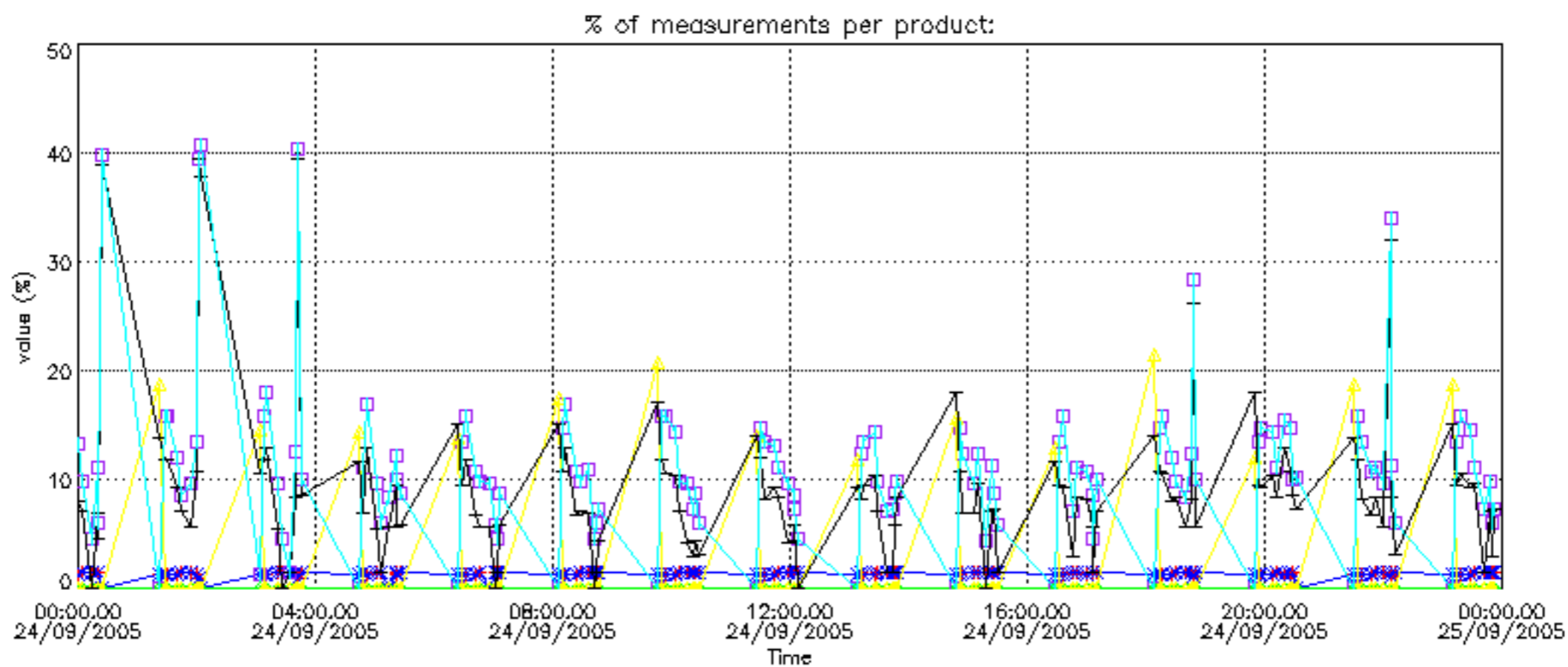
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

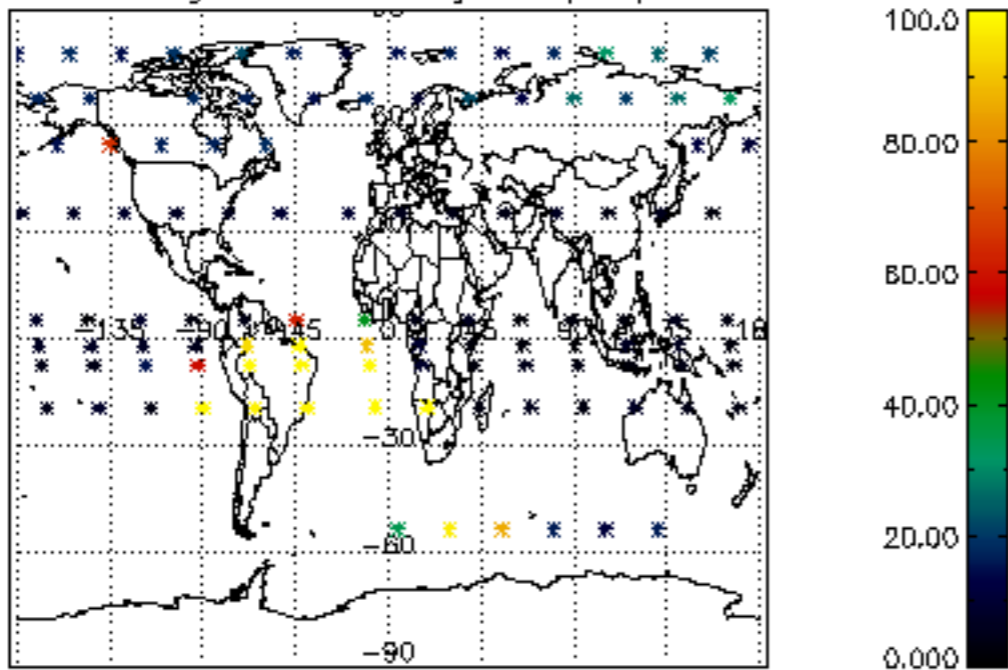




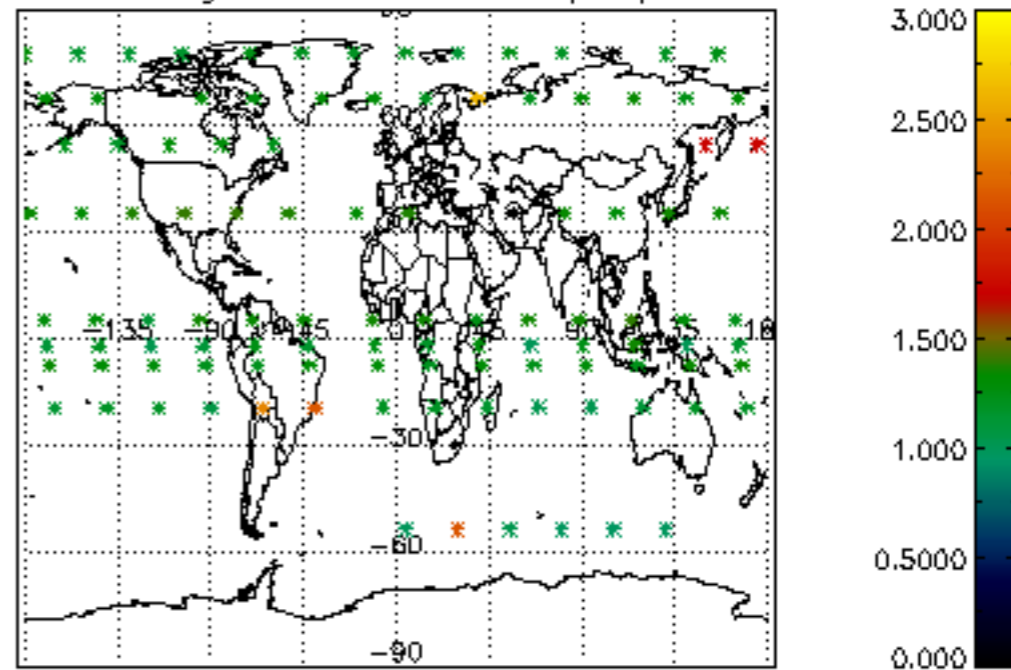




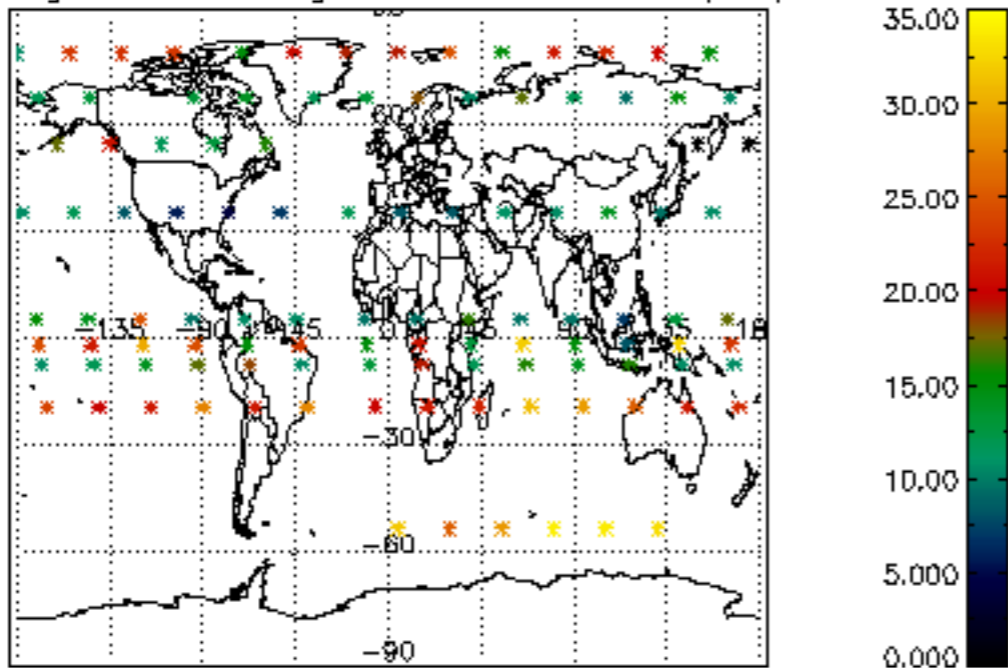
Percentage of cosmic ray hits per profile



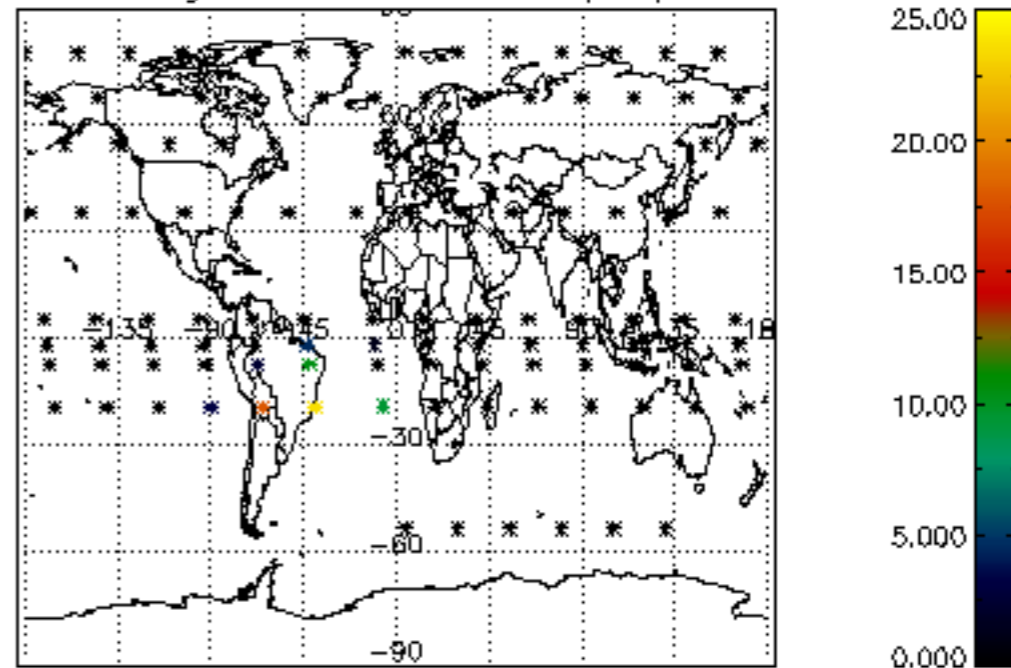
Percentage of datation errors per profile



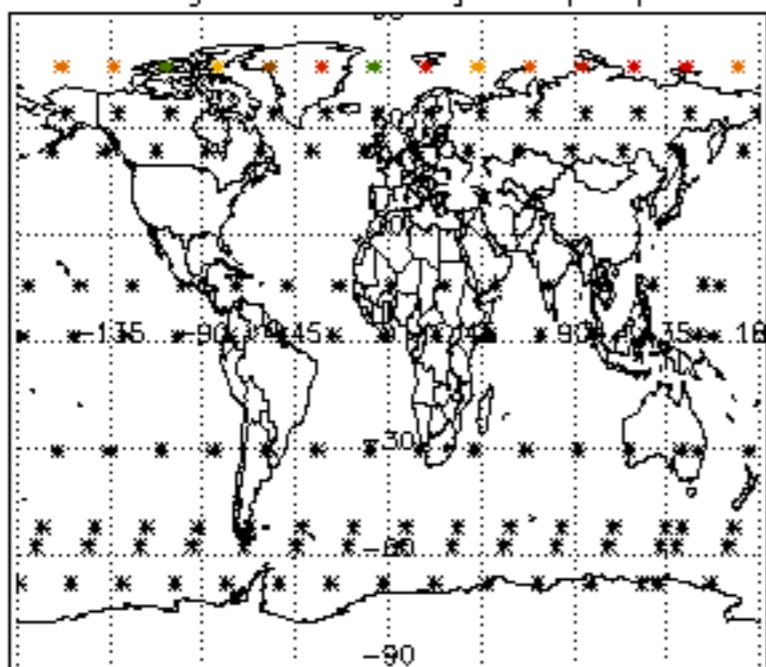
Percentage of star falling outside central band per profile



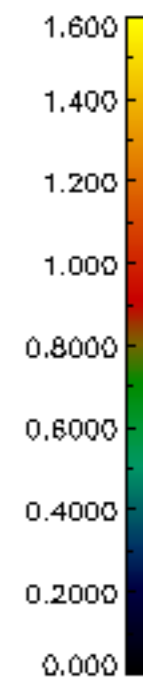
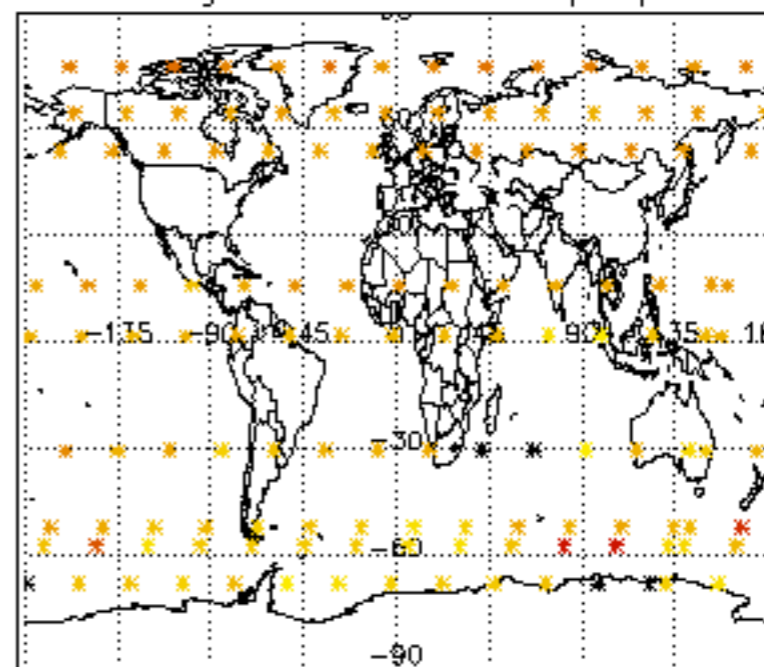
Percentage of saturation errors per profile



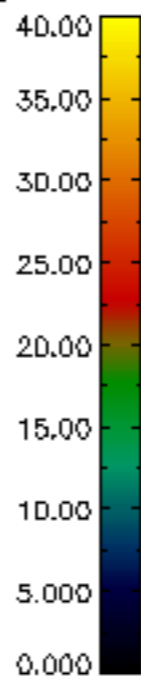
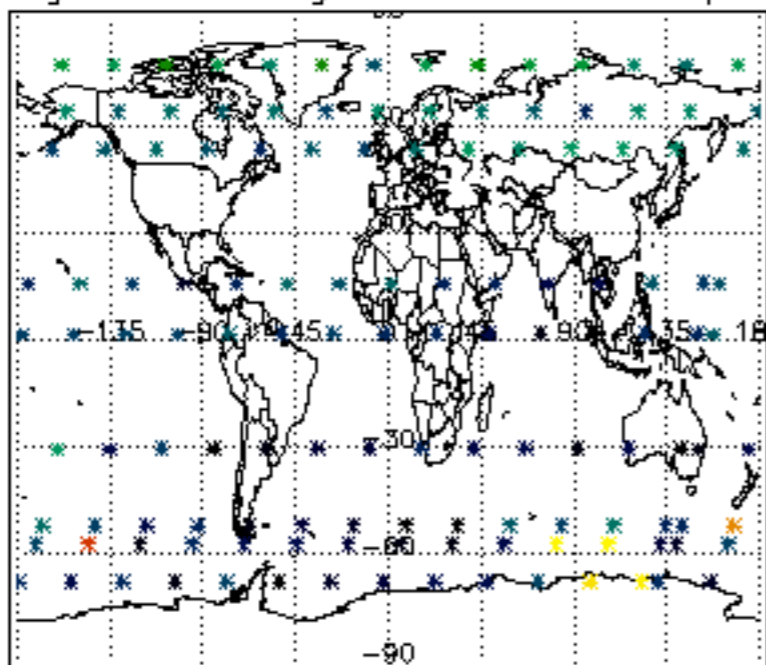
Percentage of cosmic ray hits per profile



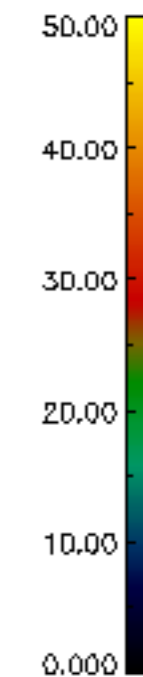
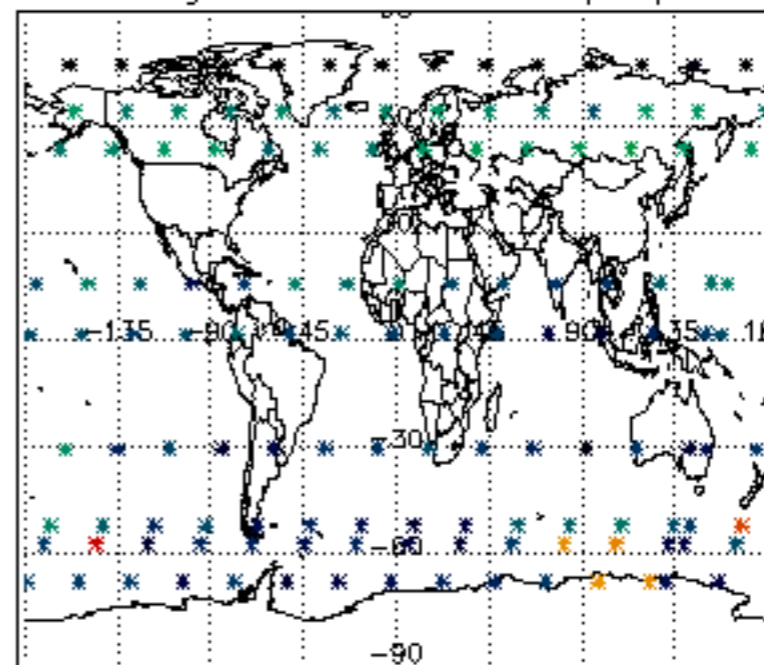
Percentage of datation errors per profile

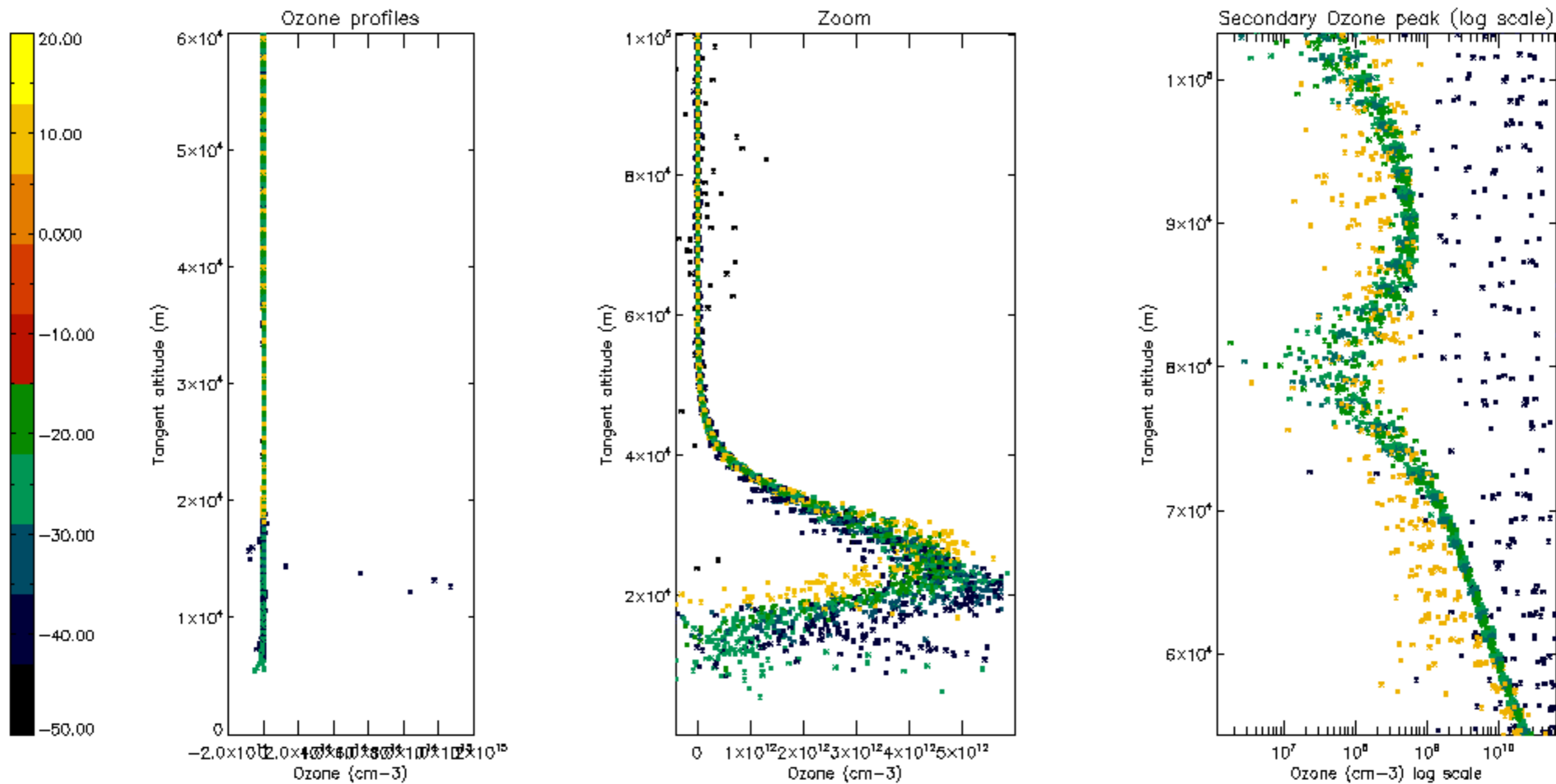


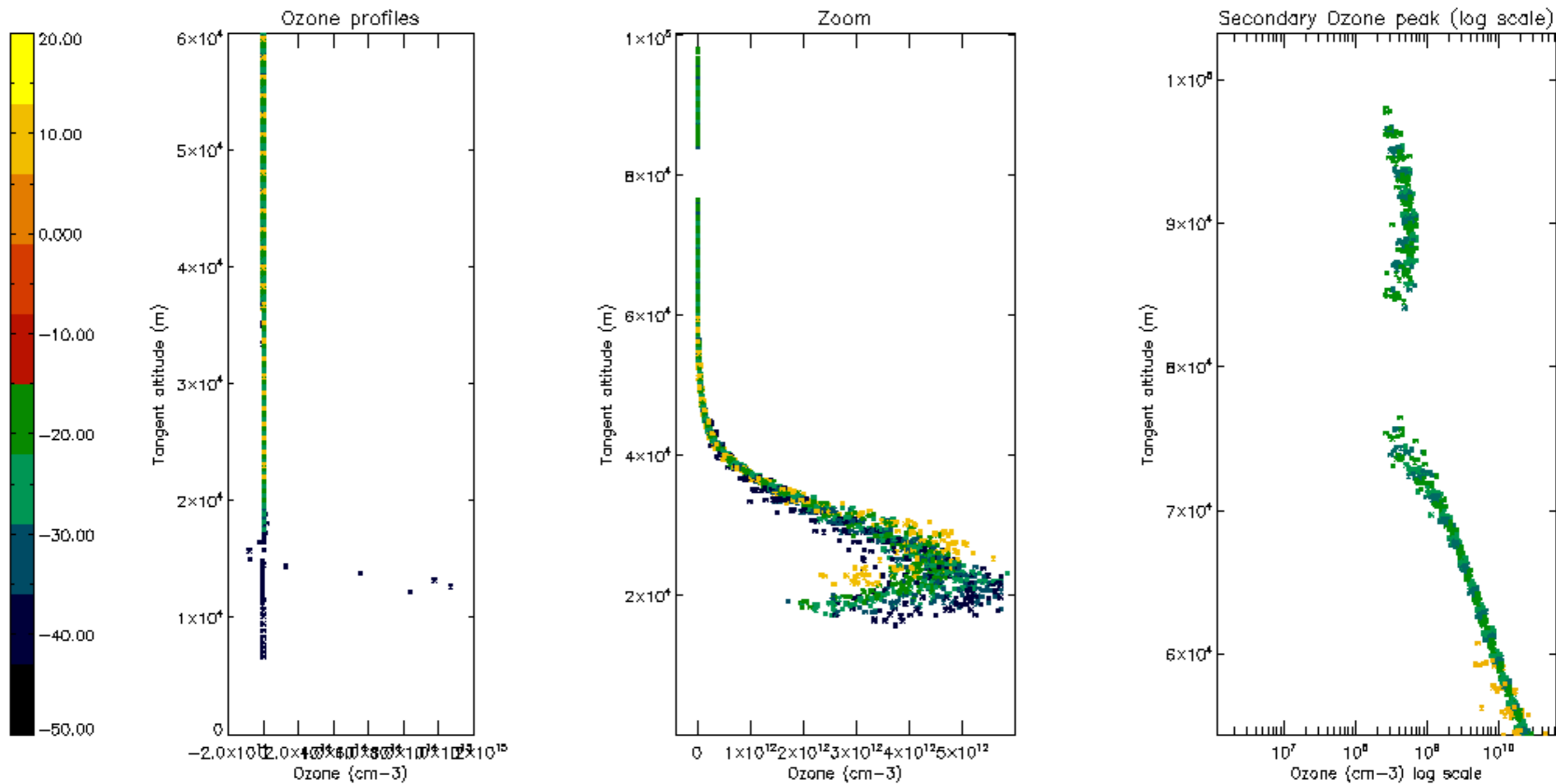
Percentage of star falling outside central band per profile

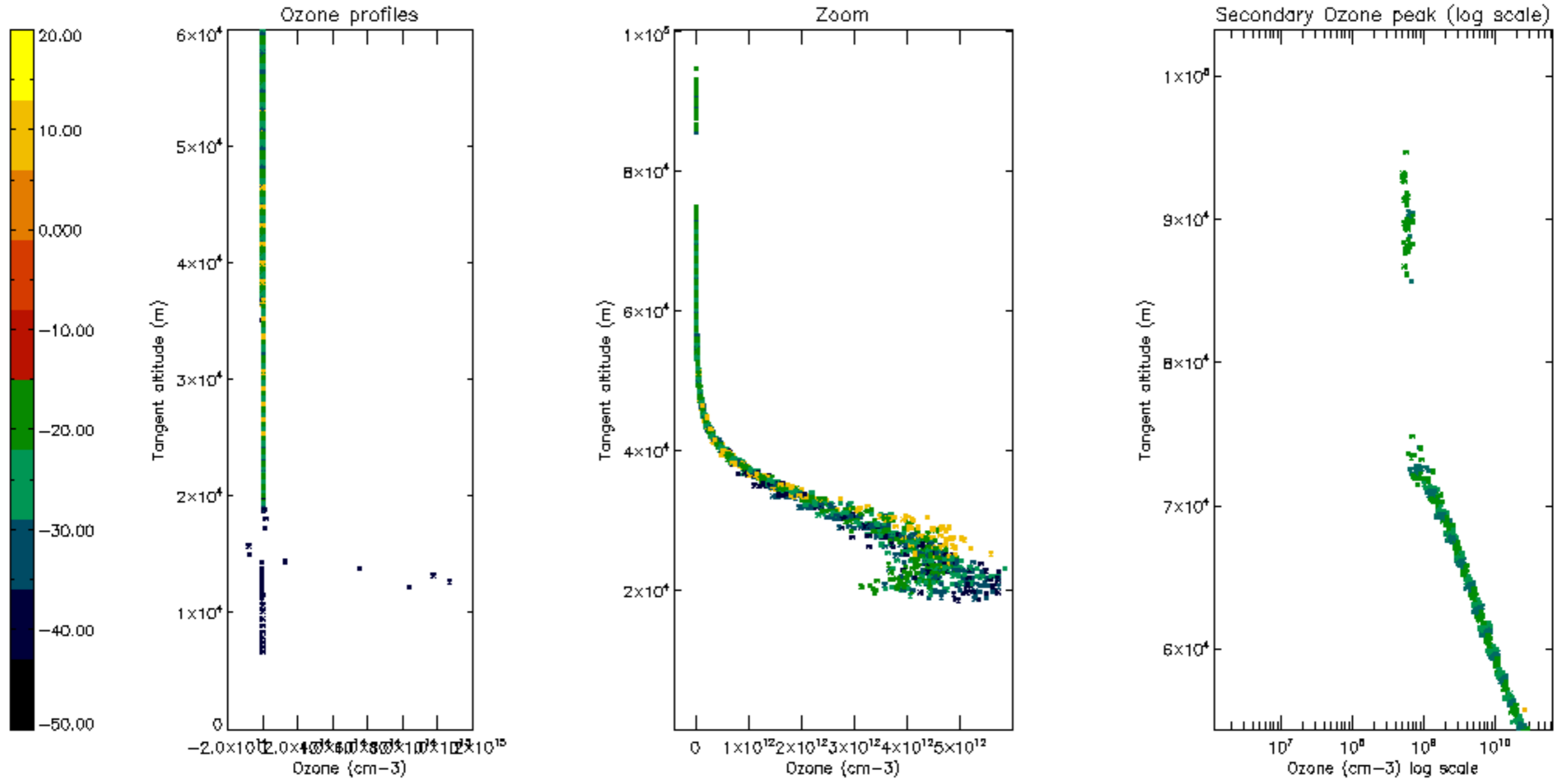


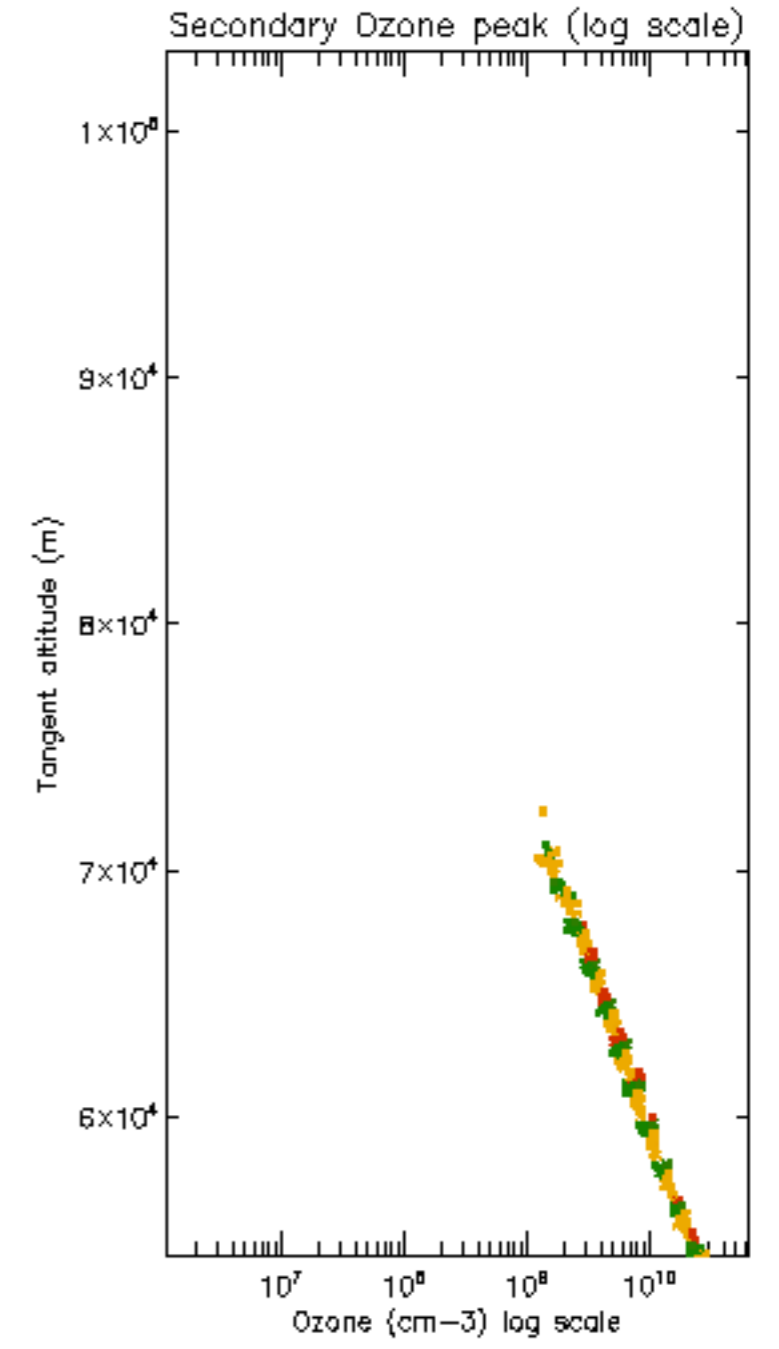
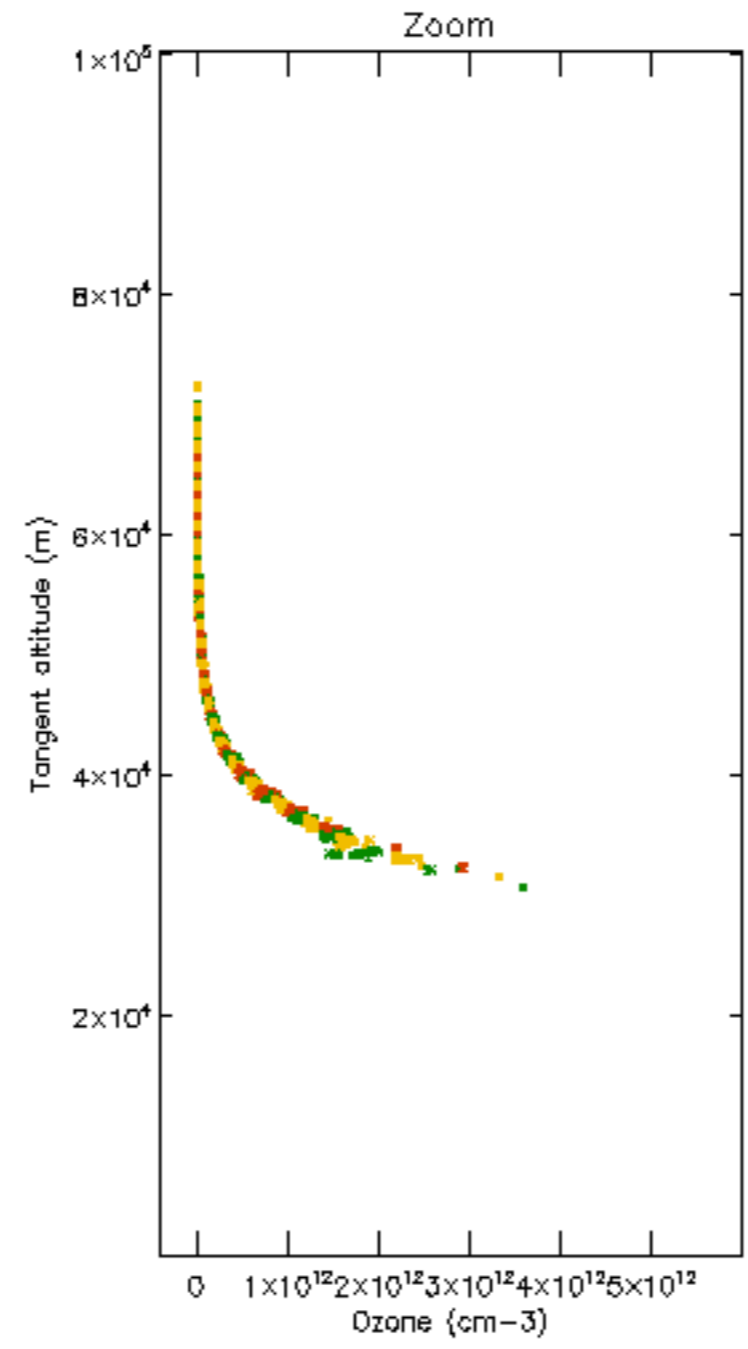
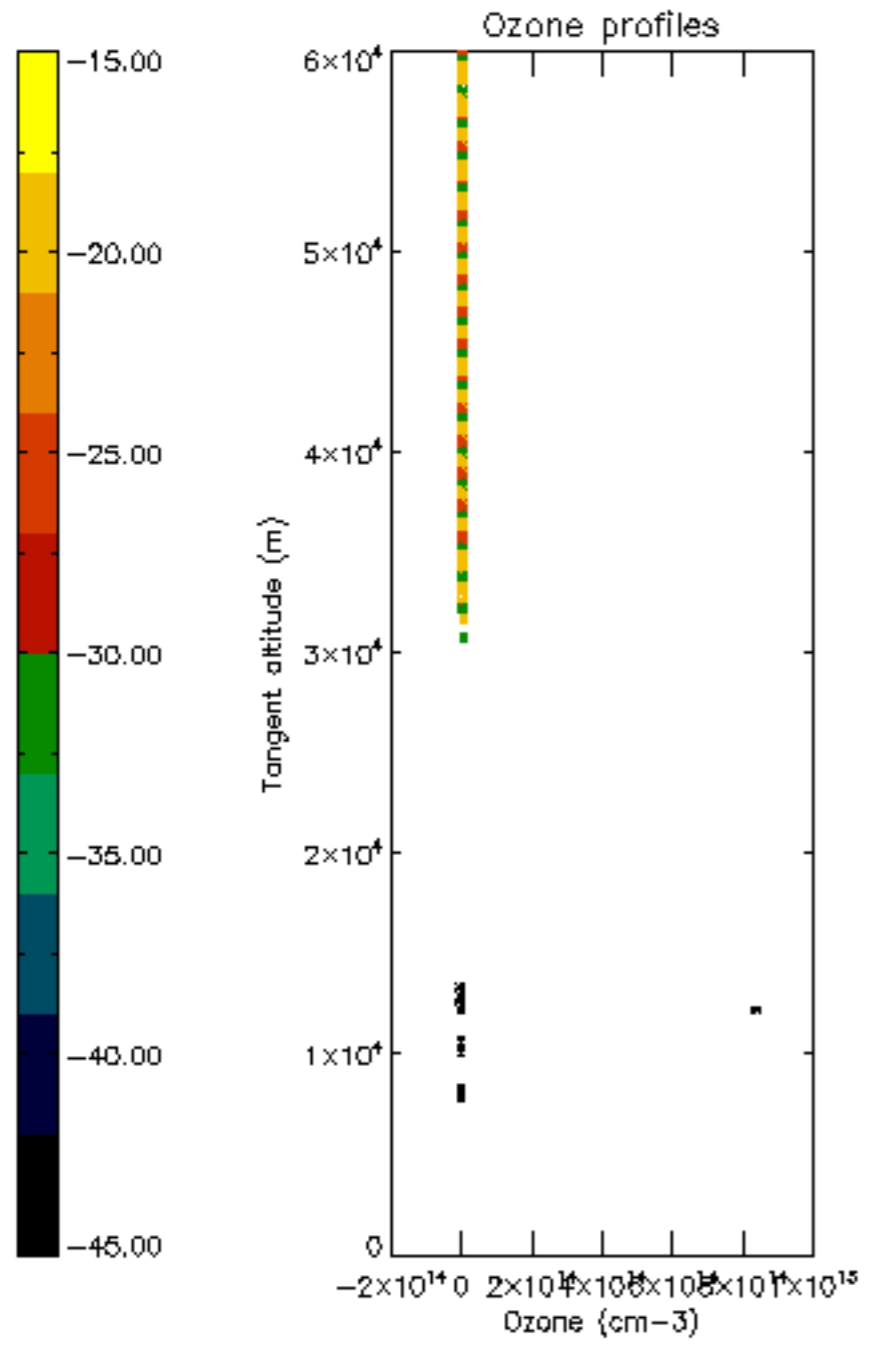
Percentage of saturation errors per profile

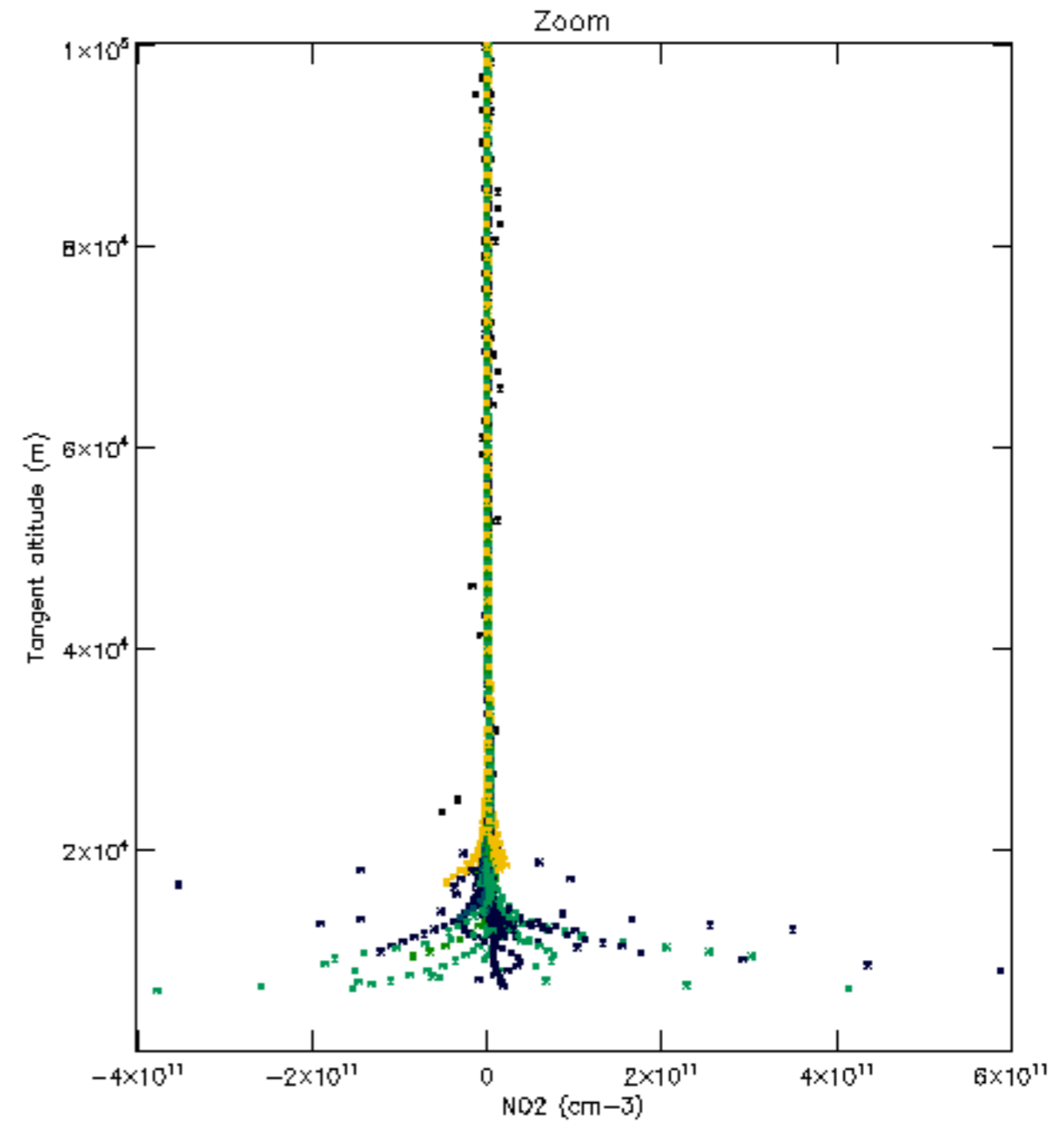
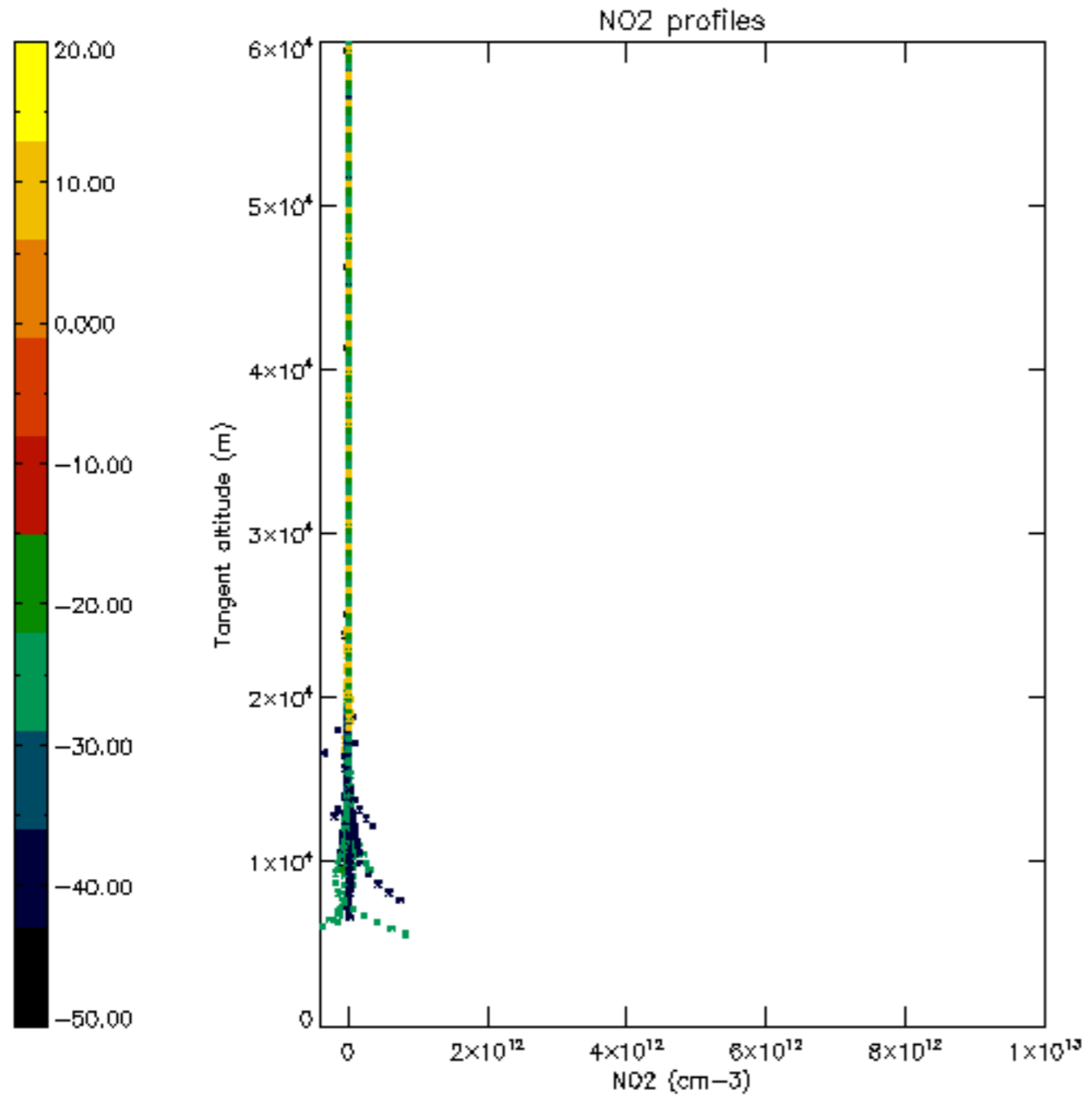


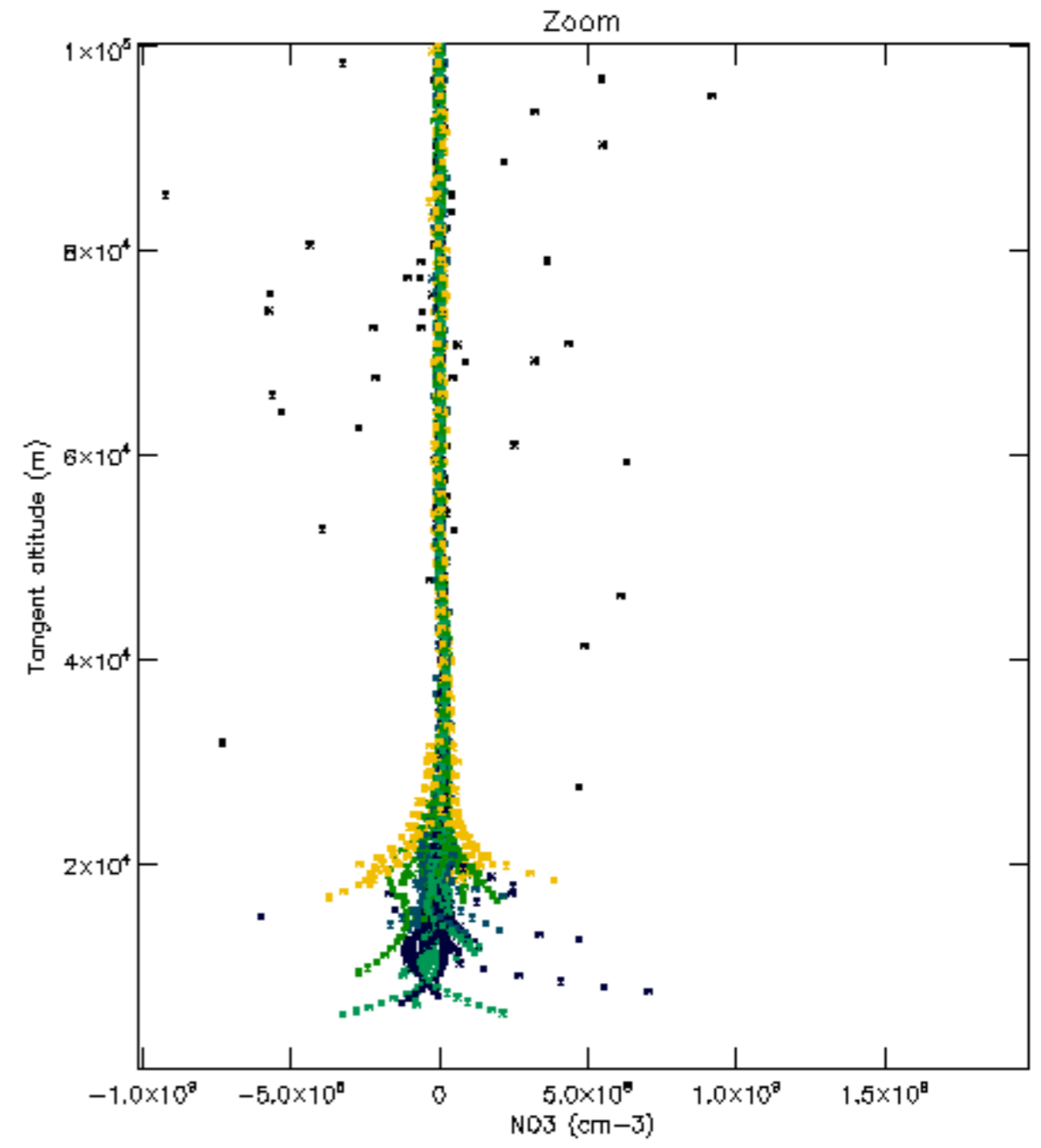
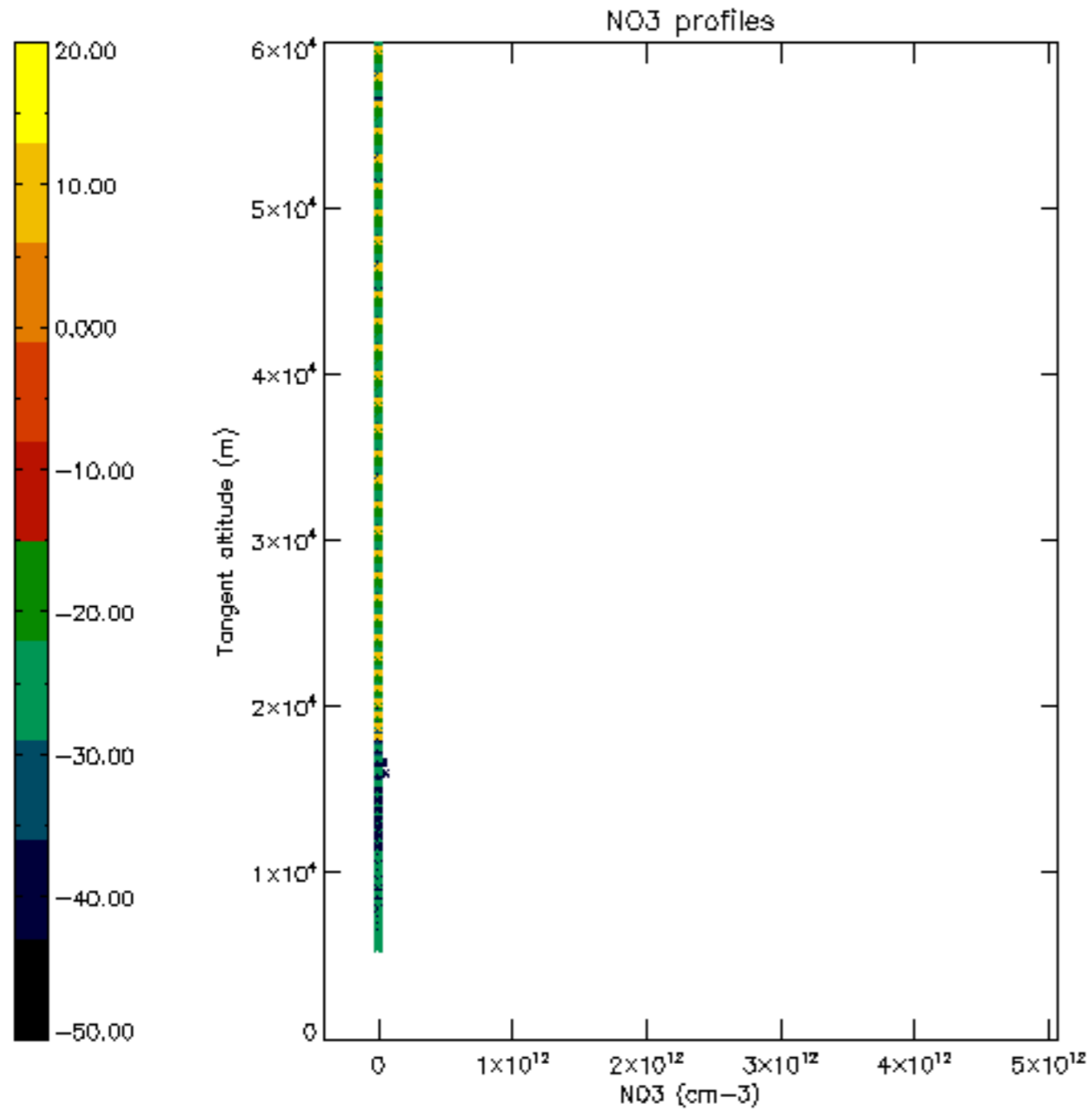




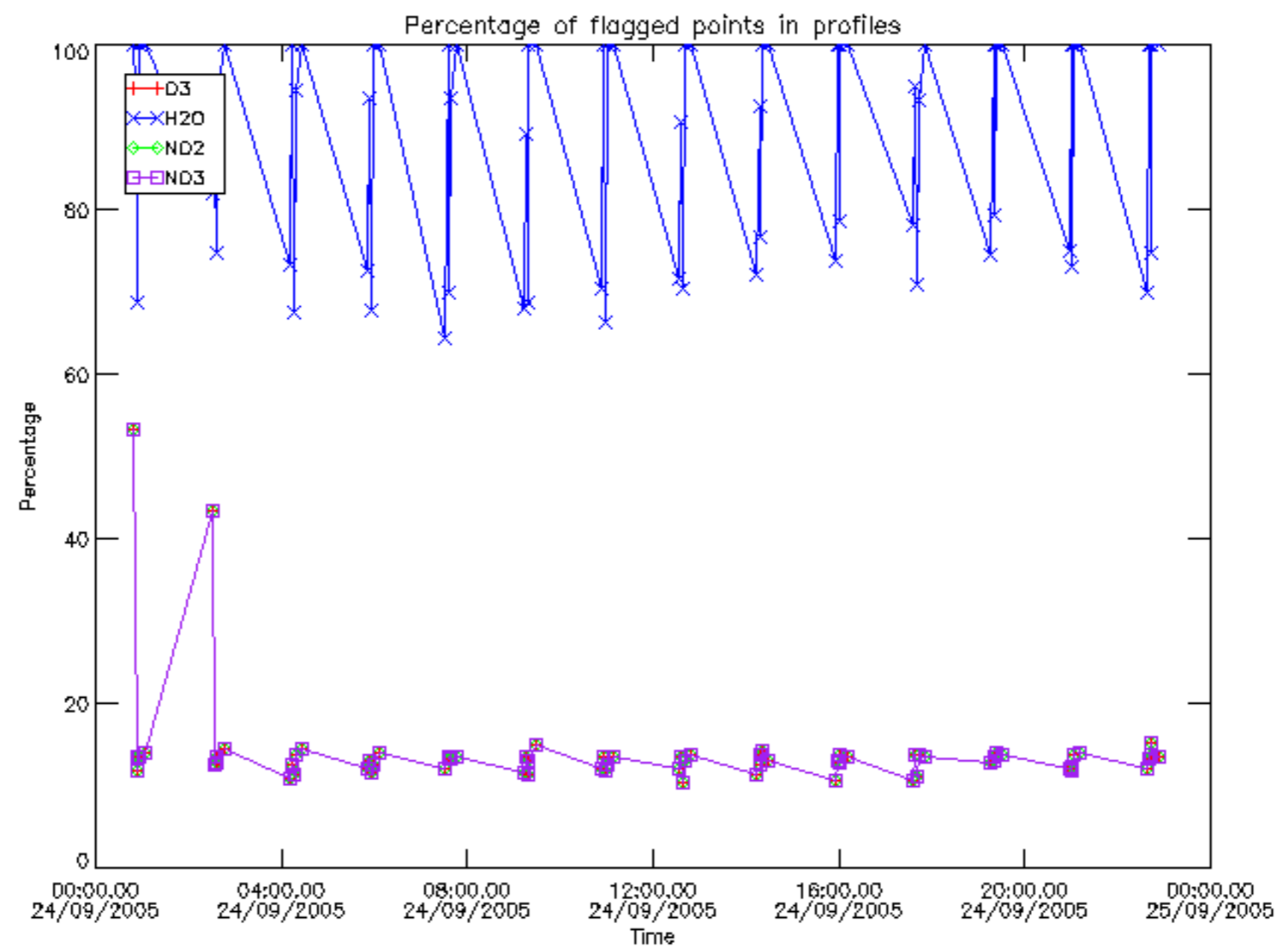




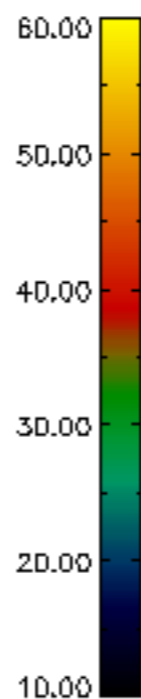
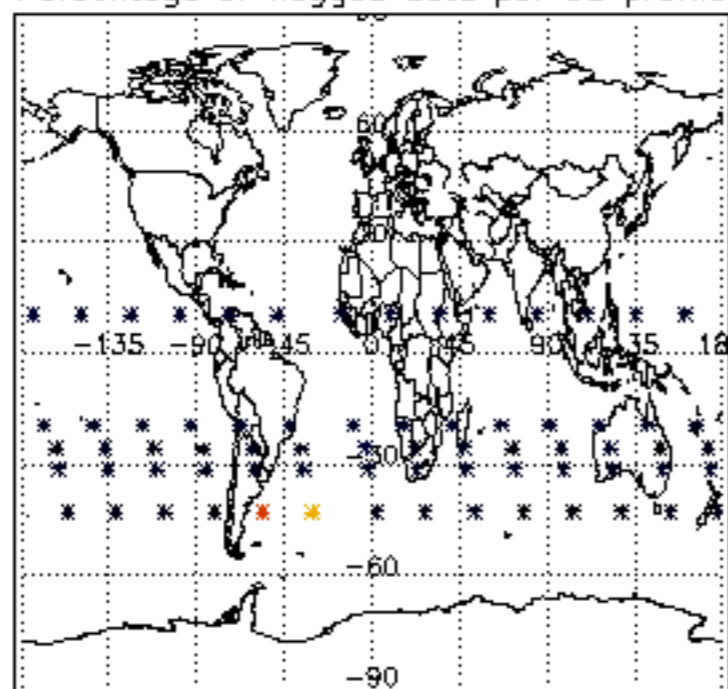




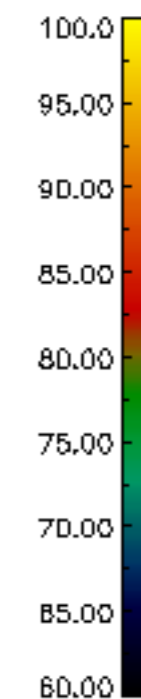
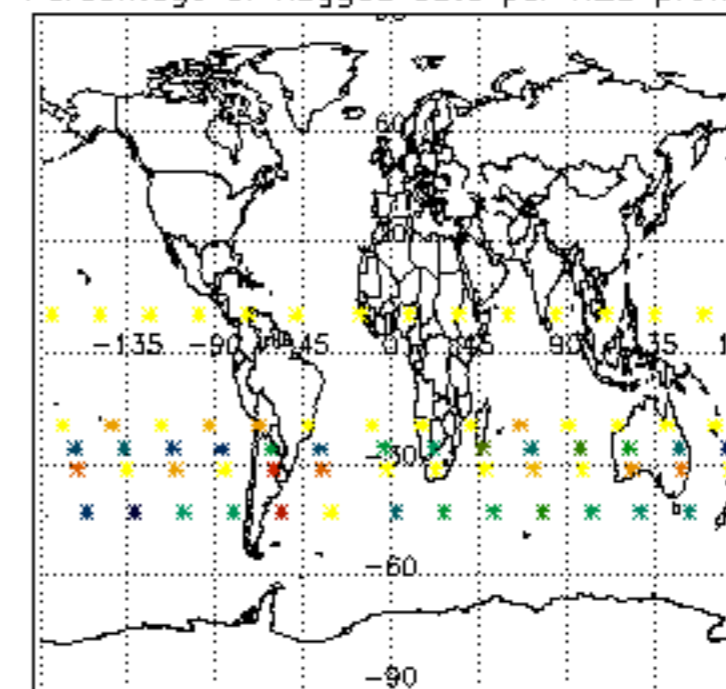




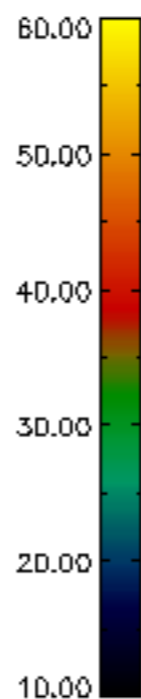
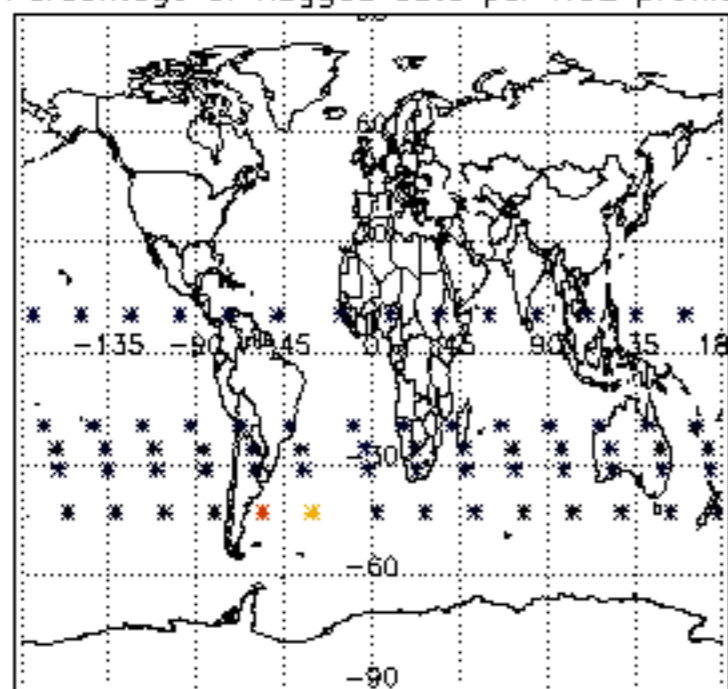
Percentage of flagged data per D3 profile



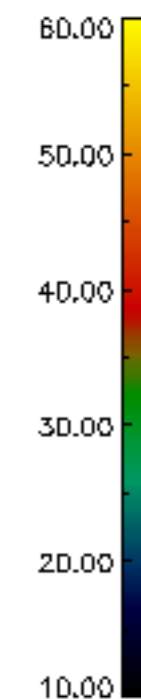
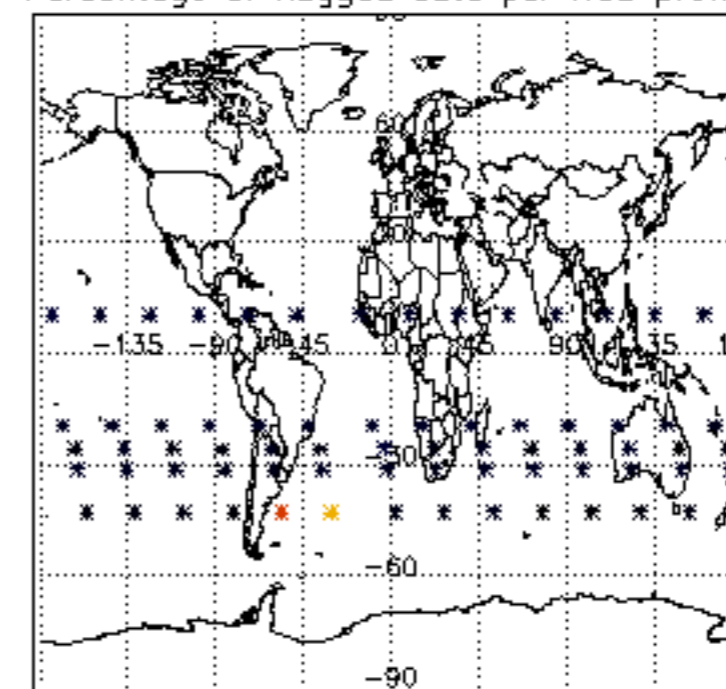
Percentage of flagged data per H2O profile

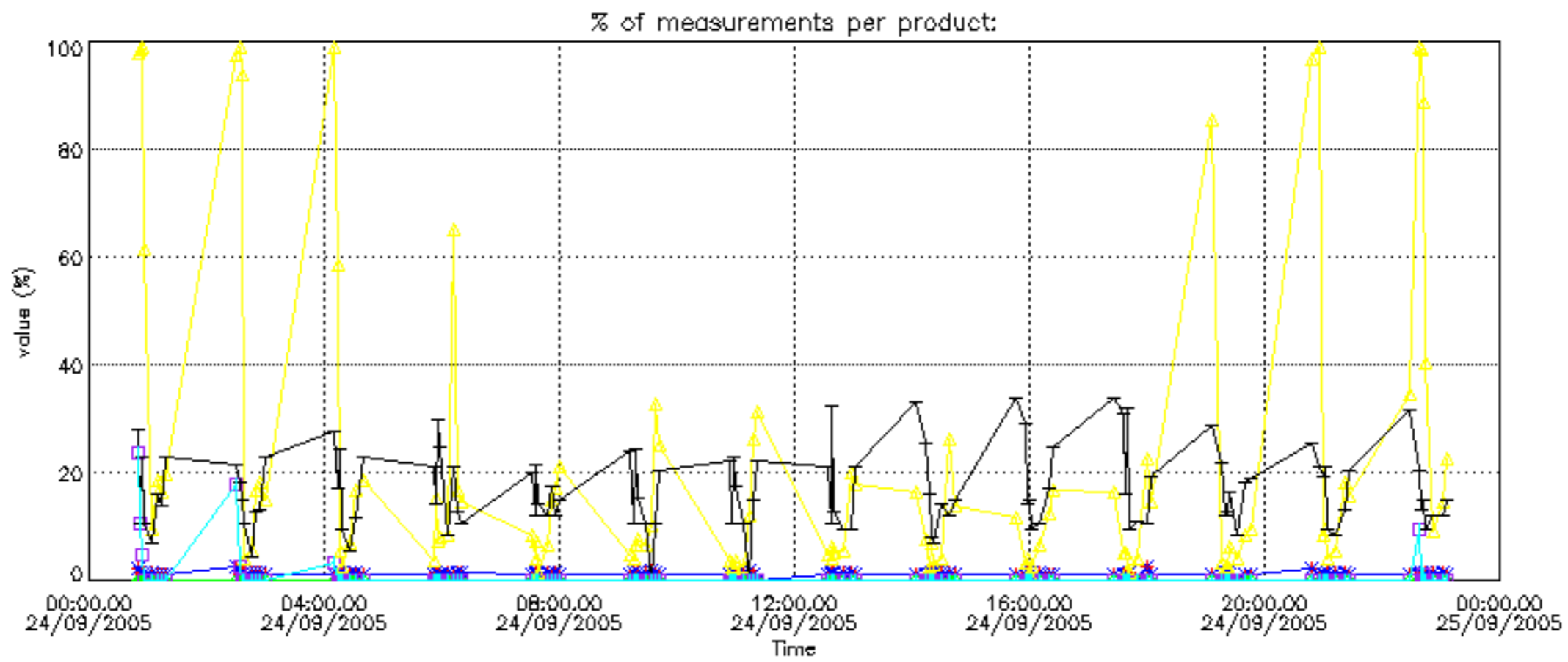


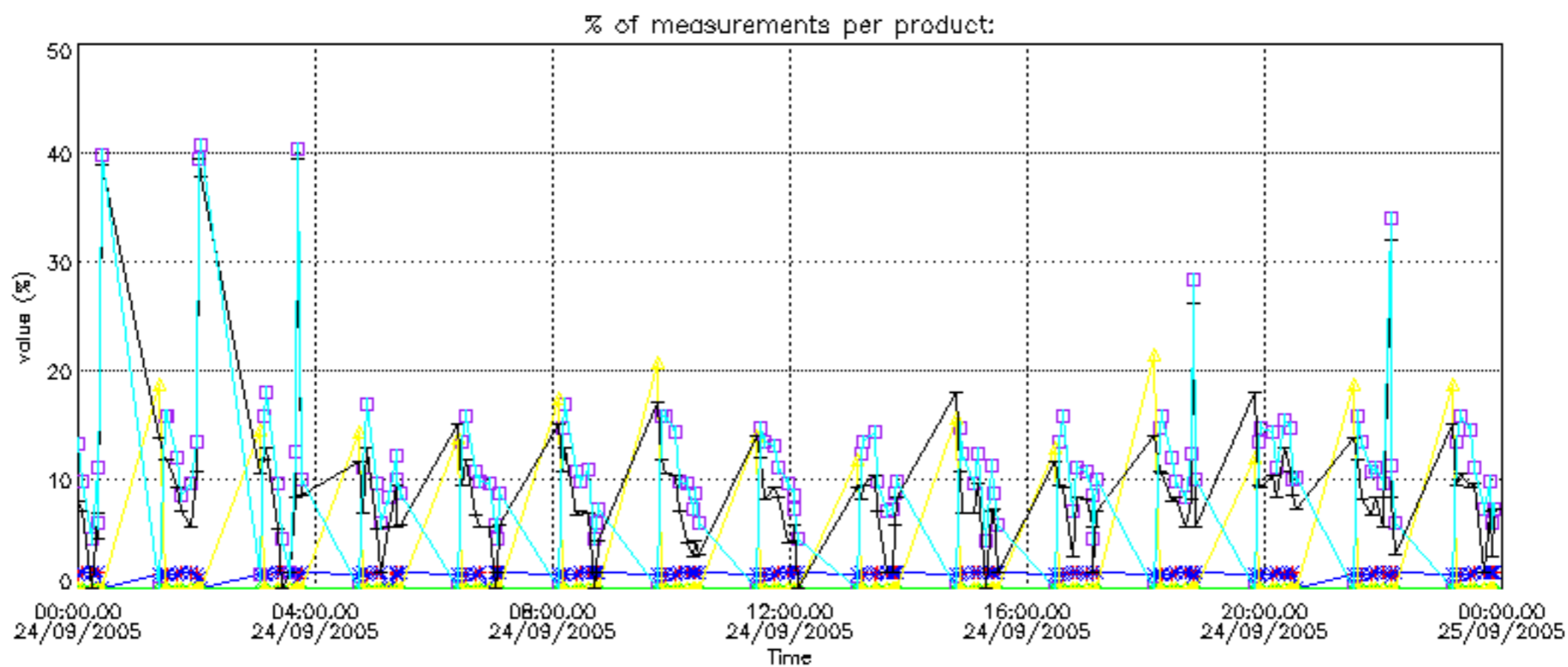
Percentage of flagged data per NO2 profile



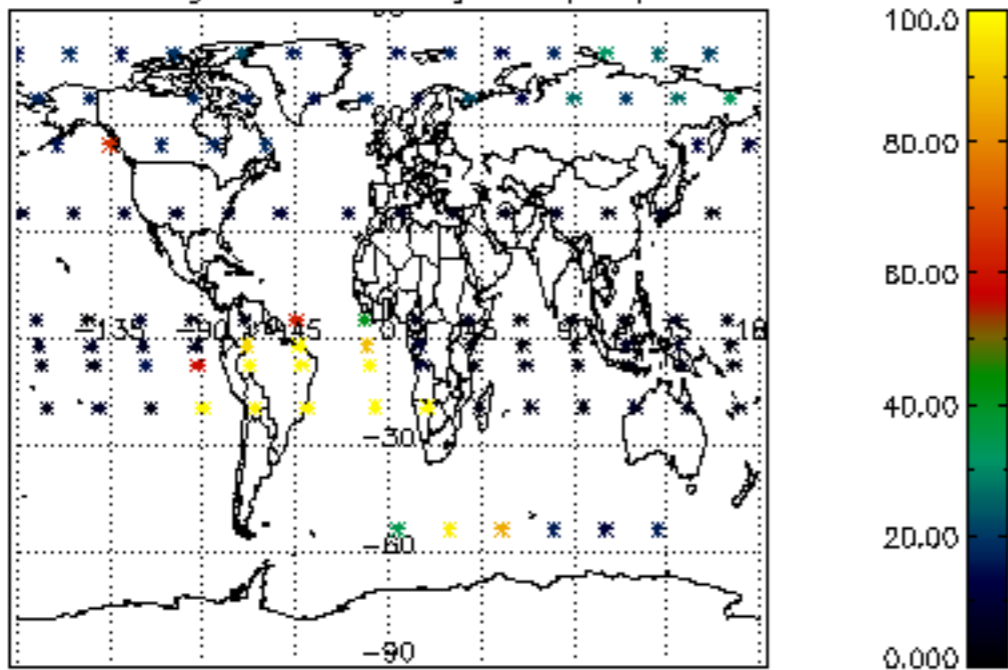
Percentage of flagged data per NO3 profile



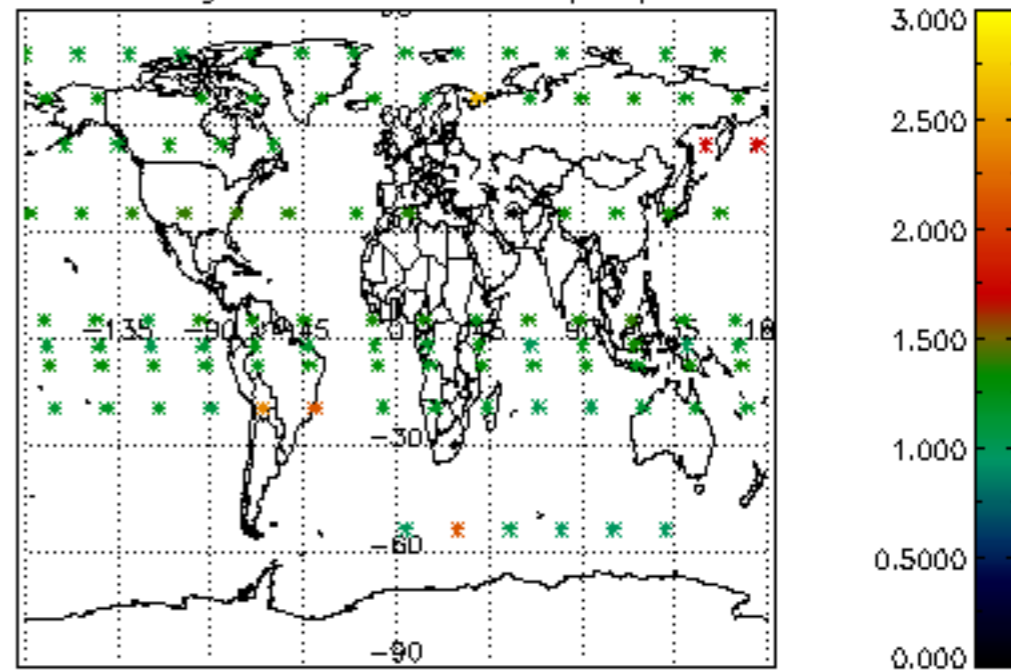




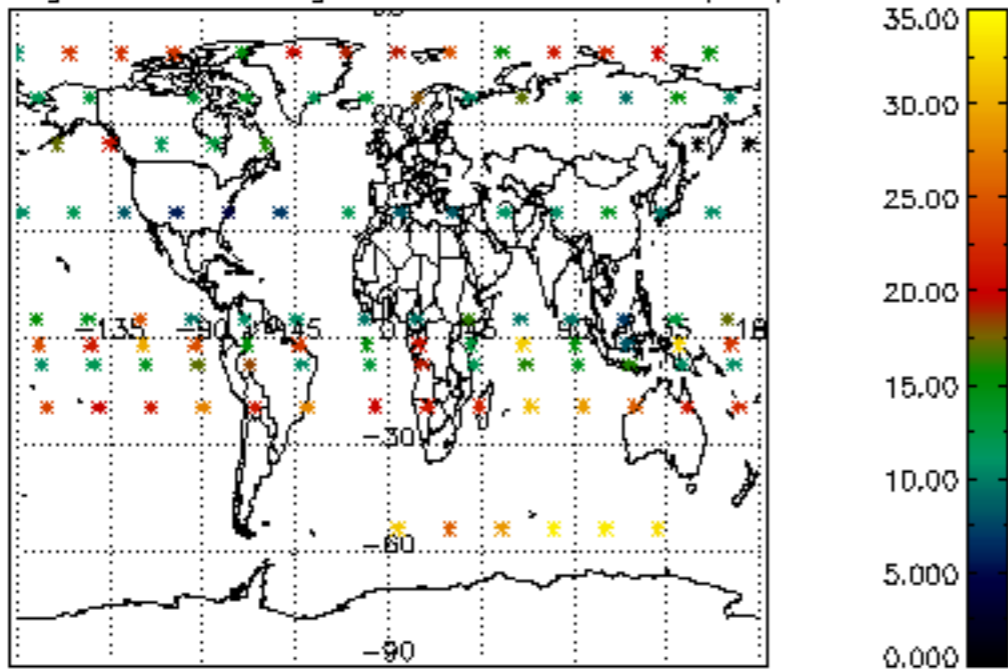
Percentage of cosmic ray hits per profile



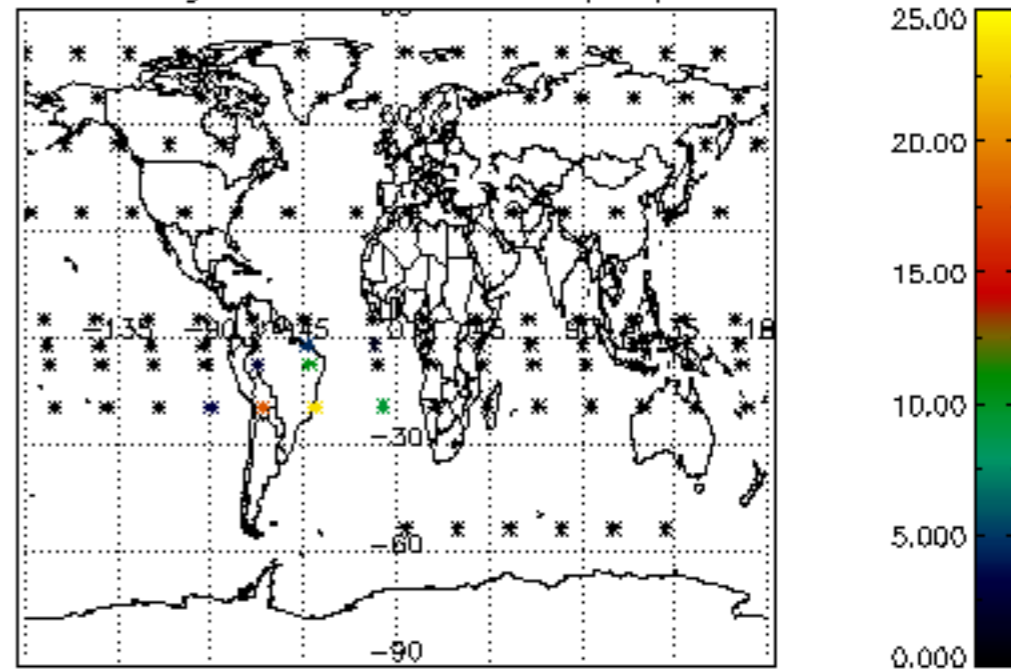
Percentage of datation errors per profile



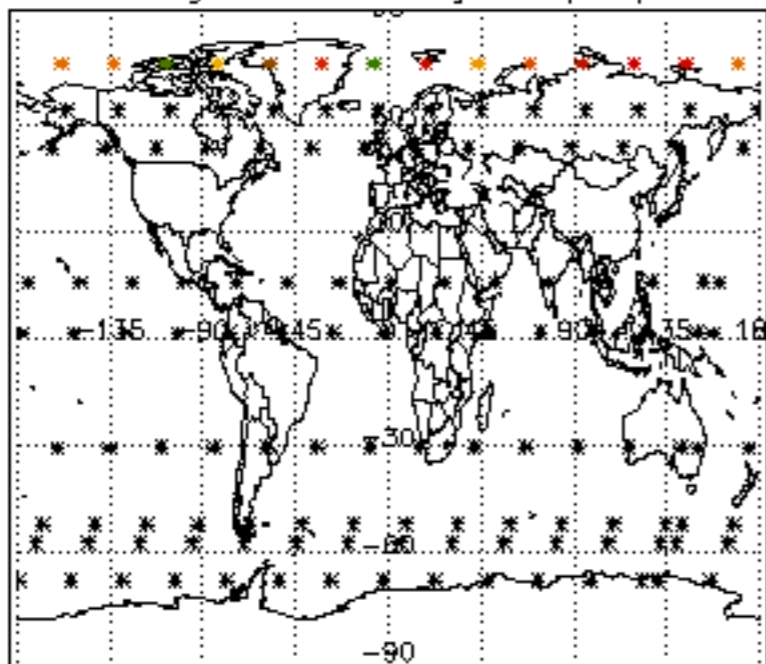
Percentage of star falling outside central band per profile



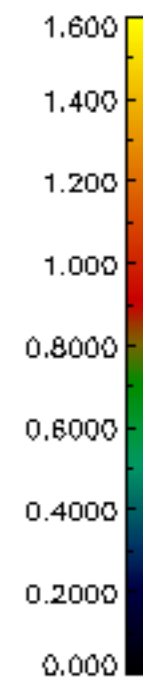
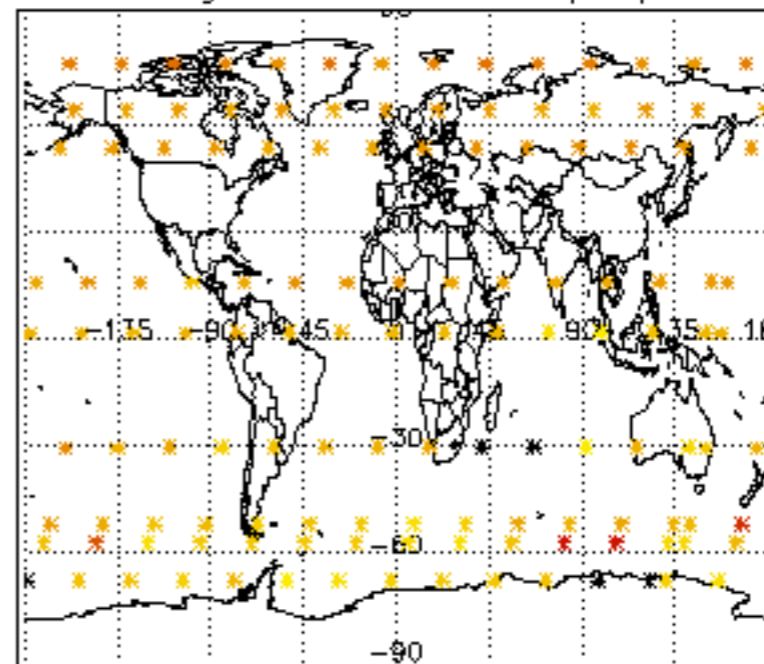
Percentage of saturation errors per profile



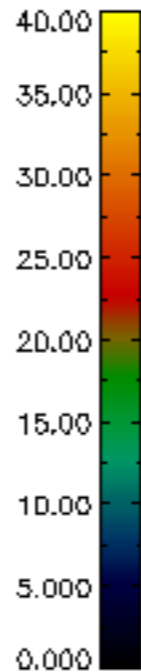
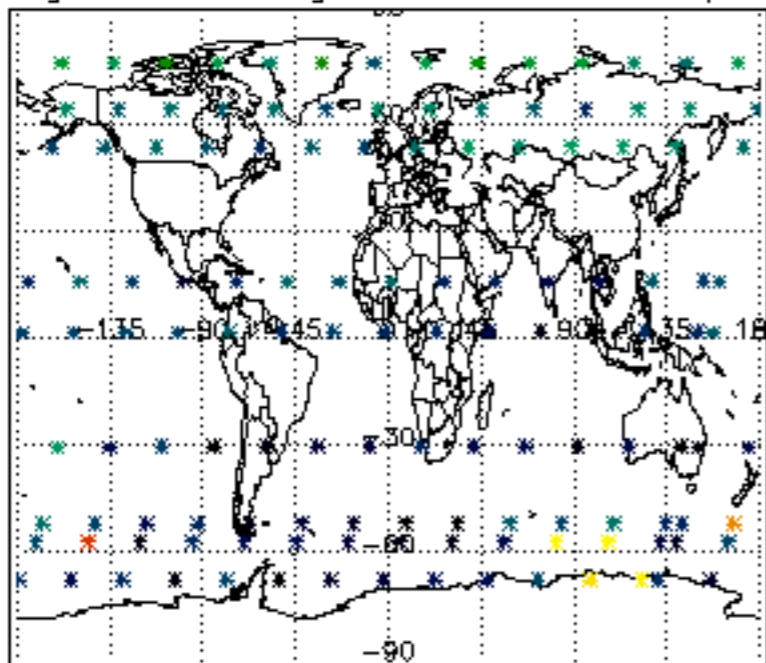
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

