

GOMOS Level 2 Daily Report

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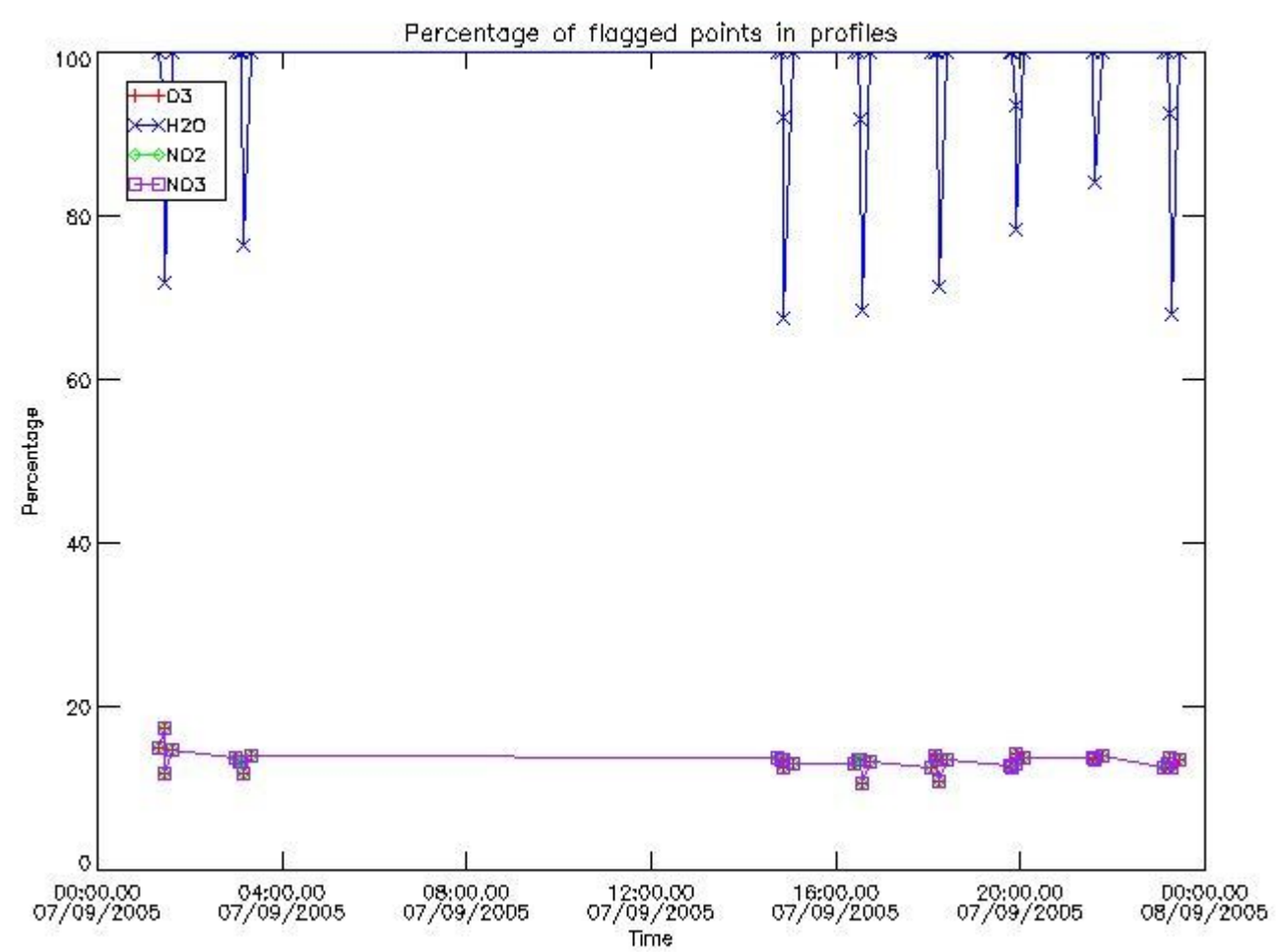
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| | | | | | | | | | | | |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|----|-------|----|
| 102 | GOM_NL__2PRFIN20050907_200514_000000372040_00329_18419_6559.N1 | 07-SEP-2005 20:05:14 | Dark | 37.000 | 135 | Bet Hyi | 2.8200 | 5800.0 | 74 | 18419 | No |
| 103 | GOM_NL__2PRFIN20050907_201049_000000392040_00329_18419_6560.N1 | 07-SEP-2005 20:10:49 | Straylight | 39.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 78 | 18419 | No |
| 104 | GOM_NL__2PRFIN20050907_201431_000000412040_00329_18419_6561.N1 | 07-SEP-2005 20:14:31 | Straylight | 40.500 | 31 | Alp Gru | 1.7340 | 15200. | 81 | 18419 | No |
| 105 | GOM_NL__2PRFIN20050907_201719_000000382040_00329_18419_6562.N1 | 07-SEP-2005 20:17:19 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18419 | No |
| 106 | GOM_NL__2PRFIN20050907_202317_000000432040_00329_18419_6563.N1 | 07-SEP-2005 20:23:17 | Bright | 43.000 | 142 | 49Del Cap | 2.8500 | 8900.0 | 86 | 18419 | No |
| 107 | GOM_NL__2PRFIN20050907_202622_000000382040_00329_18419_6564.N1 | 07-SEP-2005 20:26:22 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18419 | No |
| 108 | GOM_NL__2PRFIN20050907_203742_000000372040_00329_18419_6565.N1 | 07-SEP-2005 20:37:42 | Bright | 37.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 74 | 18419 | No |
| 109 | GOM_NL__2PRFIN20050907_203942_000000362040_00329_18419_6566.N1 | 07-SEP-2005 20:39:42 | Bright | 35.500 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 71 | 18419 | No |
| 110 | GOM_NL__2PRFIN20050907_204137_000000362040_00329_18419_6567.N1 | 07-SEP-2005 20:41:37 | Bright | 35.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 71 | 18419 | No |
| 111 | GOM_NL__2PRFIN20050907_205336_000000382040_00329_18419_6568.N1 | 07-SEP-2005 20:53:36 | Bright | 37.500 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 75 | 18419 | No |
| 112 | GOM_NL__2PRFIN20050907_210009_000000352040_00329_18419_6569.N1 | 07-SEP-2005 21:00:09 | Bright | 35.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 70 | 18419 | No |
| 113 | GOM_NL__2PRFIN20050907_210133_000000342040_00329_18419_6570.N1 | 07-SEP-2005 21:01:33 | Bright | 34.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 68 | 18419 | No |
| 114 | GOM_NL__2PRFIN20050907_213348_000000372040_00329_18419_6571.N1 | 07-SEP-2005 21:33:48 | Dark | 37.000 | 46 | Del Vel | 1.9540 | 10600. | 74 | 18419 | No |
| 115 | GOM_NL__2PRFIN20050907_213515_000000382040_00329_18419_6572.N1 | 07-SEP-2005 21:35:15 | Dark | 38.000 | 41 | Eps Car | 1.8600 | 4100.0 | 76 | 18419 | No |
| 116 | GOM_NL__2PRFIN20050907_214550_000000372040_00330_18420_6559.N1 | 07-SEP-2005 21:45:50 | Dark | 36.500 | 135 | Bet Hyi | 2.8200 | 5800.0 | 73 | 18420 | No |
| 117 | GOM_NL__2PRFIN20050907_215125_000000432040_00330_18420_6560.N1 | 07-SEP-2005 21:51:25 | Straylight | 43.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 86 | 18420 | No |
| 118 | GOM_NL__2PRFIN20050907_215507_000000402040_00330_18420_6561.N1 | 07-SEP-2005 21:55:07 | Straylight | 40.000 | 31 | Alp Gru | 1.7340 | 15200. | 80 | 18420 | No |
| 119 | GOM_NL__2PRFIN20050907_215755_000000382040_00330_18420_6562.N1 | 07-SEP-2005 21:57:55 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18420 | No |
| 120 | GOM_NL__2PRFIN20050907_220353_000000402040_00330_18420_6563.N1 | 07-SEP-2005 22:03:53 | Bright | 40.000 | 142 | 49Del Cap | 2.8500 | 8900.0 | 80 | 18420 | No |
| 121 | GOM_NL__2PRFIN20050907_220658_000000382040_00330_18420_6564.N1 | 07-SEP-2005 22:06:58 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18420 | No |
| 122 | GOM_NL__2PRFIN20050907_221818_000000342040_00330_18420_6565.N1 | 07-SEP-2005 22:18:18 | Bright | 34.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 68 | 18420 | No |
| 123 | GOM_NL__2PRFIN20050907_222018_000000342040_00330_18420_6566.N1 | 07-SEP-2005 22:20:18 | Bright | 34.000 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 68 | 18420 | No |
| 124 | GOM_NL__2PRFIN20050907_222214_000000342040_00330_18420_6567.N1 | 07-SEP-2005 22:22:14 | Bright | 33.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 67 | 18420 | No |
| 125 | GOM_NL__2PRFIN20050907_223412_000000372040_00330_18420_6568.N1 | 07-SEP-2005 22:34:12 | Bright | 36.500 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 73 | 18420 | No |
| 126 | GOM_NL__2PRFIN20050907_224045_000000372040_00330_18420_6569.N1 | 07-SEP-2005 22:40:45 | Bright | 36.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 73 | 18420 | No |
| 127 | GOM_NL__2PRFIN20050907_224209_000000332040_00330_18420_6570.N1 | 07-SEP-2005 22:42:09 | Bright | 33.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 66 | 18420 | No |
| 128 | GOM_NL__2PRFIN20050907_230641_000000412040_00330_18420_6571.N1 | 07-SEP-2005 23:06:41 | Dark | 40.500 | 132 | 15Rho Pup | 2.8030 | 6900.0 | 81 | 18420 | No |
| 129 | GOM_NL__2PRFIN20050907_231056_000000392040_00330_18420_6572.N1 | 07-SEP-2005 23:10:56 | Dark | 39.000 | 70 | Zet Pup | 2.2460 | 39000. | 78 | 18420 | No |
| 130 | GOM_NL__2PRFIN20050907_231424_000000412040_00330_18420_6573.N1 | 07-SEP-2005 23:14:24 | Dark | 41.000 | 46 | Del Vel | 1.9540 | 10600. | 82 | 18420 | No |
| 131 | GOM_NL__2PRFIN20050907_231551_000000412040_00330_18420_6574.N1 | 07-SEP-2005 23:15:51 | Dark | 41.000 | 41 | Eps Car | 1.8600 | 4100.0 | 82 | 18420 | No |
| 132 | GOM_NL__2PRFIN20050907_232626_000000382040_00331_18421_6560.N1 | 07-SEP-2005 23:26:26 | Dark | 37.500 | 135 | Bet Hyi | 2.8200 | 5800.0 | 75 | 18421 | No |
| 133 | GOM_NL__2PRFIN20050907_233201_000000452040_00331_18421_6561.N1 | 07-SEP-2005 23:32:01 | Straylight | 45.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 90 | 18421 | No |
| 134 | GOM_NL__2PRFIN20050907_233543_000000392040_00331_18421_6562.N1 | 07-SEP-2005 23:35:43 | Straylight | 39.000 | 31 | Alp Gru | 1.7340 | 15200. | 78 | 18421 | No |
| 135 | GOM_NL__2PRFIN20050907_233831_000000382040_00331_18421_6563.N1 | 07-SEP-2005 23:38:31 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18421 | No |
| 136 | GOM_NL__2PRFIN20050907_234429_000000442040_00331_18421_6564.N1 | 07-SEP-2005 23:44:29 | Bright | 43.500 | 142 | 49Del Cap | 2.8500 | 8900.0 | 87 | 18421 | No |
| 137 | GOM_NL__2PRFIN20050907_234734_000000382040_00331_18421_6565.N1 | 07-SEP-2005 23:47:34 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18421 | No |
| 138 | GOM_NL__2PRFIN20050907_235854_000000382040_00331_18421_6566.N1 | 07-SEP-2005 23:58:54 | Bright | 37.500 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 75 | 18421 | No |

3. Quality information per product

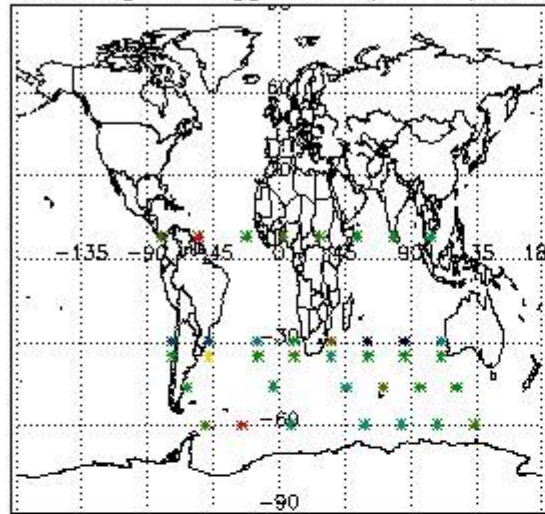
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

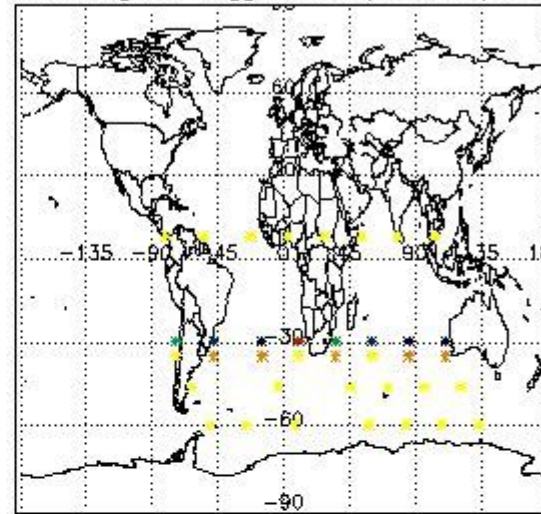


3.2 Plot quality information per product (world map)

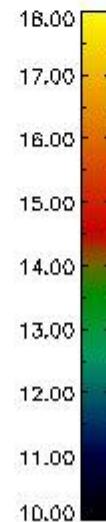
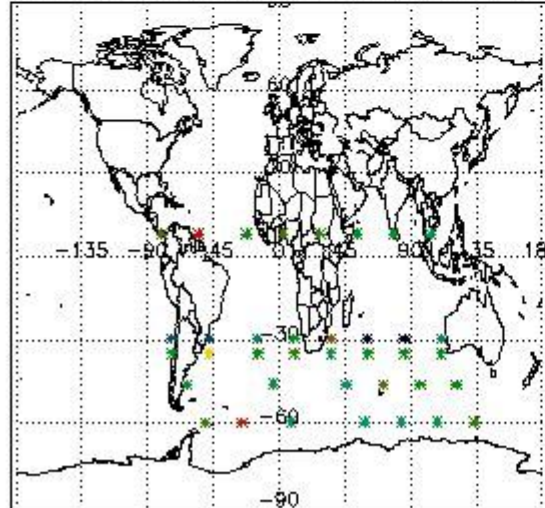
Percentage of flagged data per O3 profile



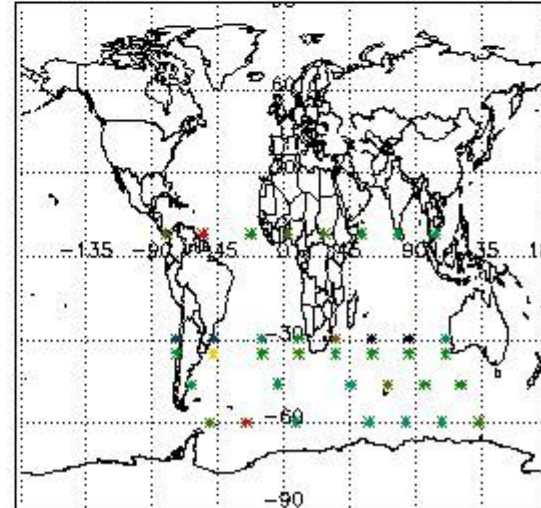
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

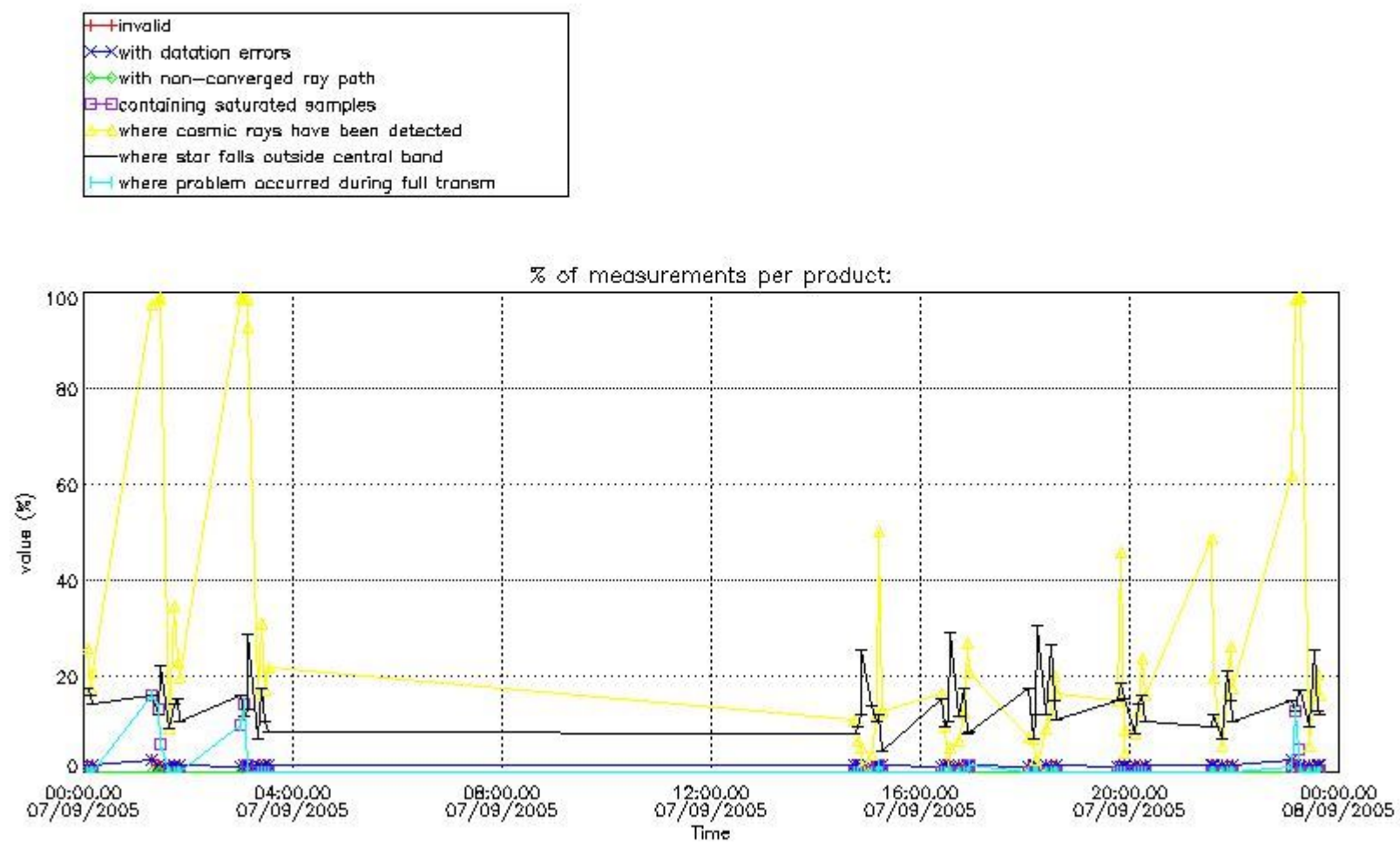


4. Level 1 quality information per product

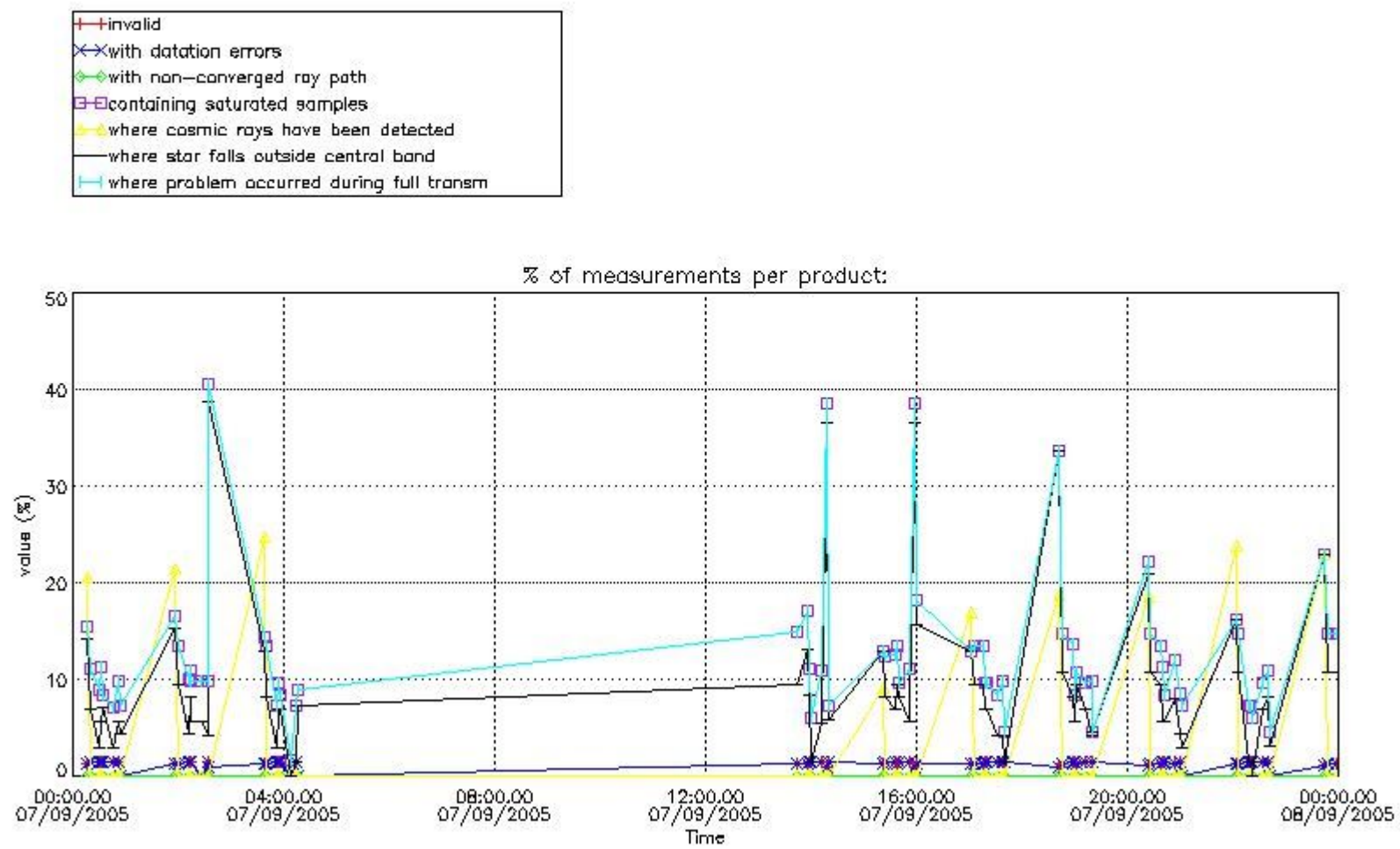
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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



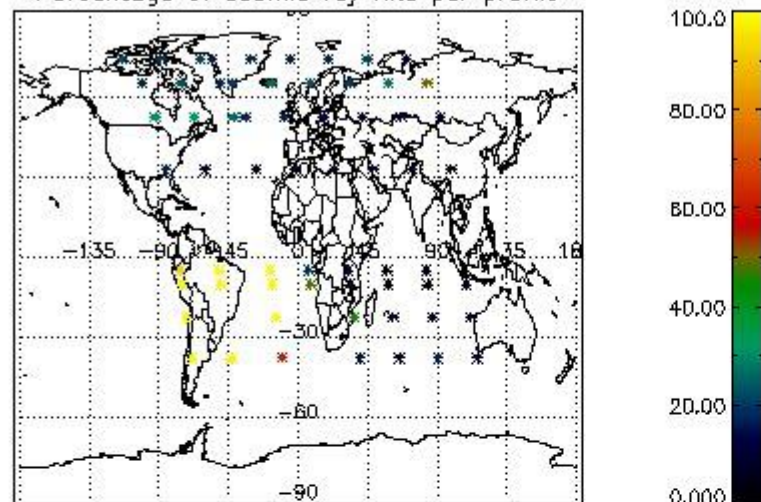
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



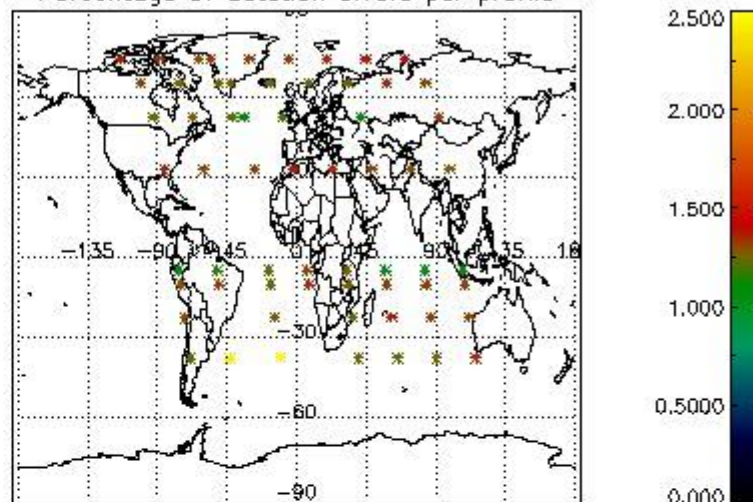
4.2 Plot quality information per product coming from level 1b processing (world map)

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

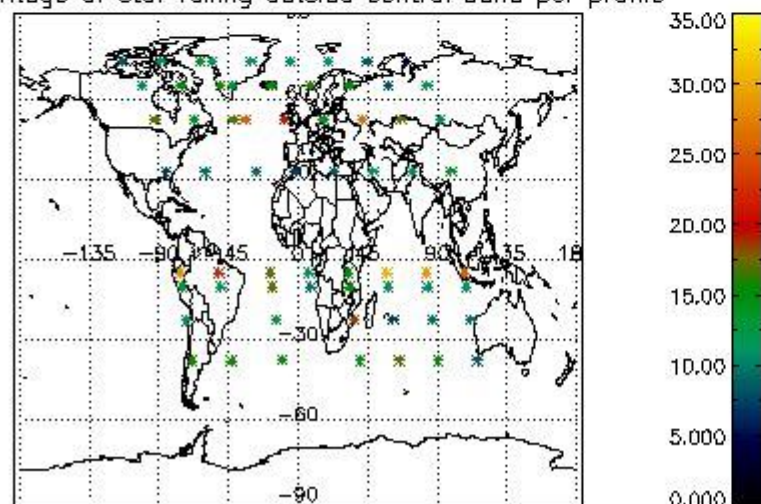
Percentage of cosmic ray hits per profile



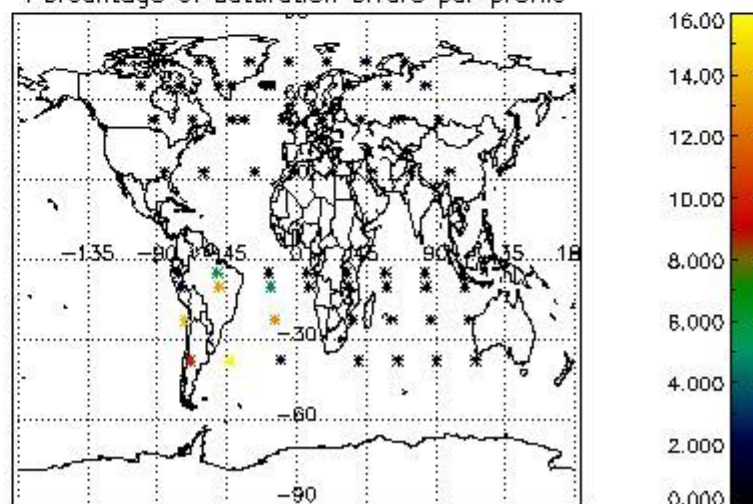
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

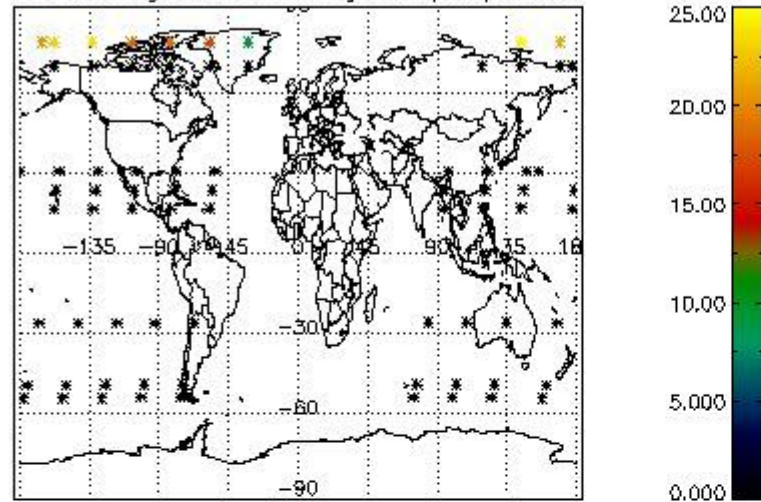


Percentage of saturation errors per profile

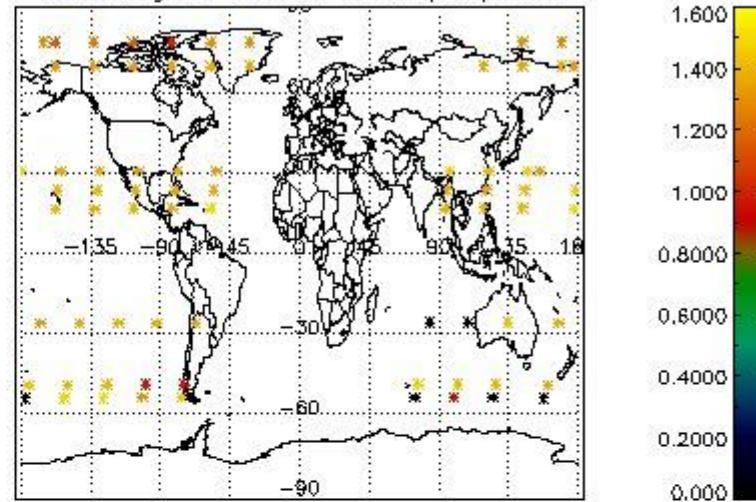


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

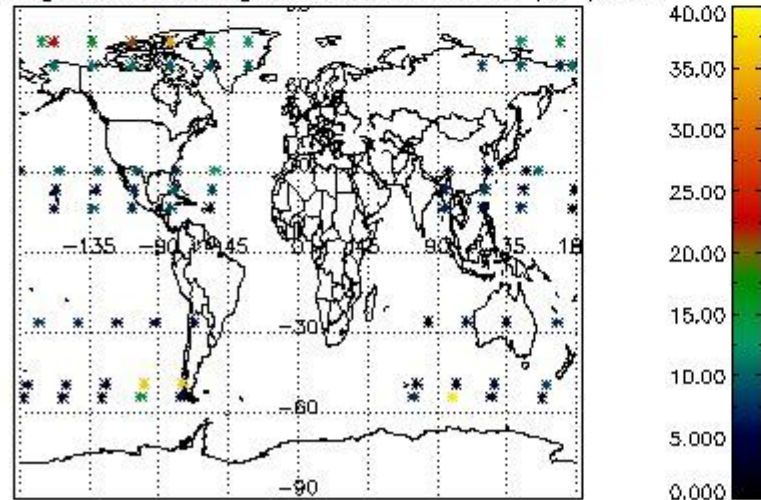
Percentage of cosmic ray hits per profile



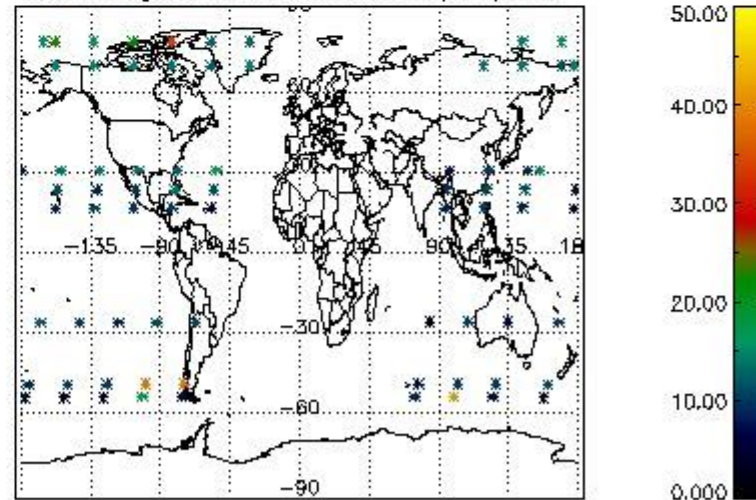
Percentage of datation errors per profile



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

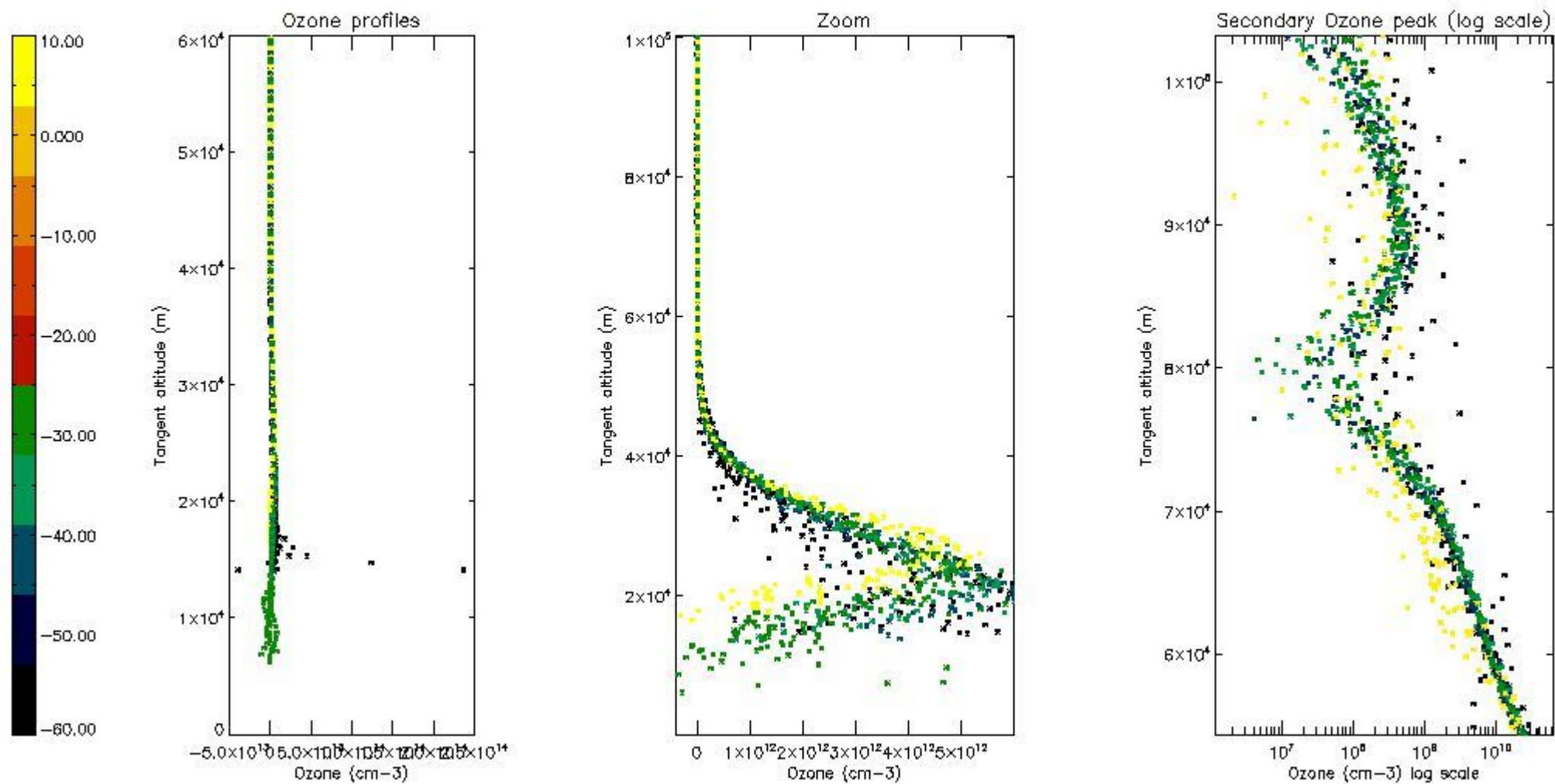
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 29 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 11 |
| STD < 5 | 5 |

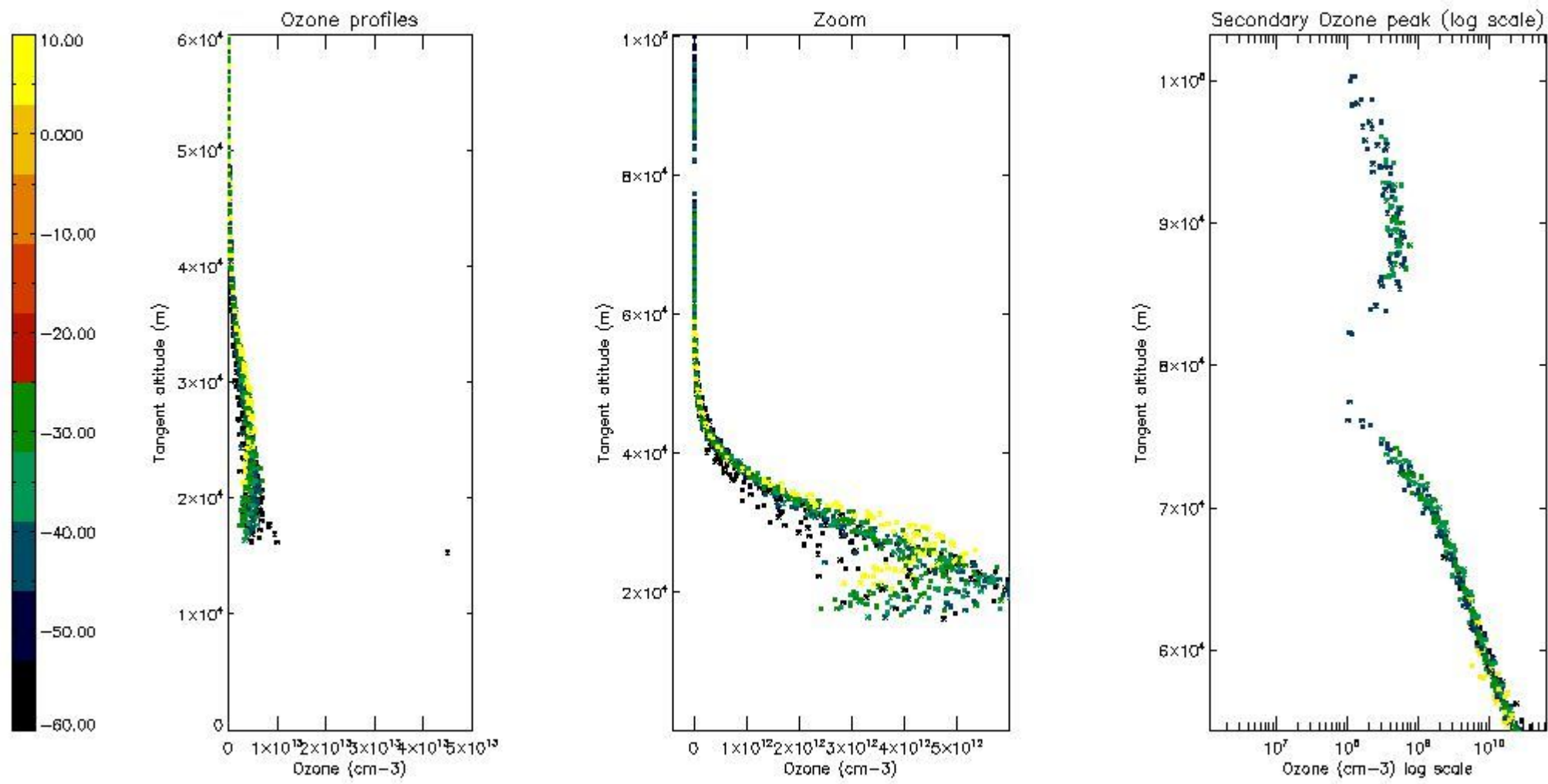
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



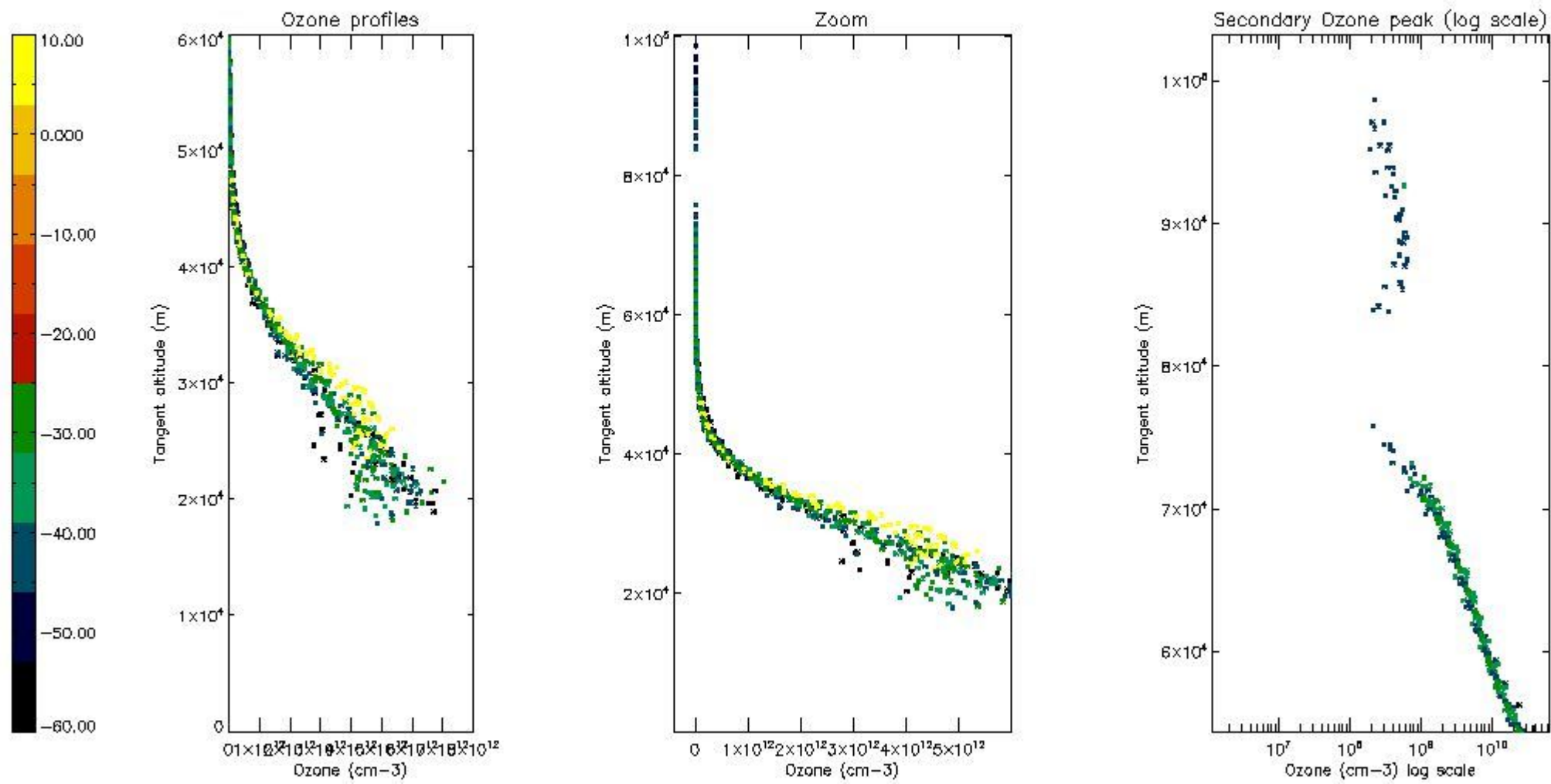
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



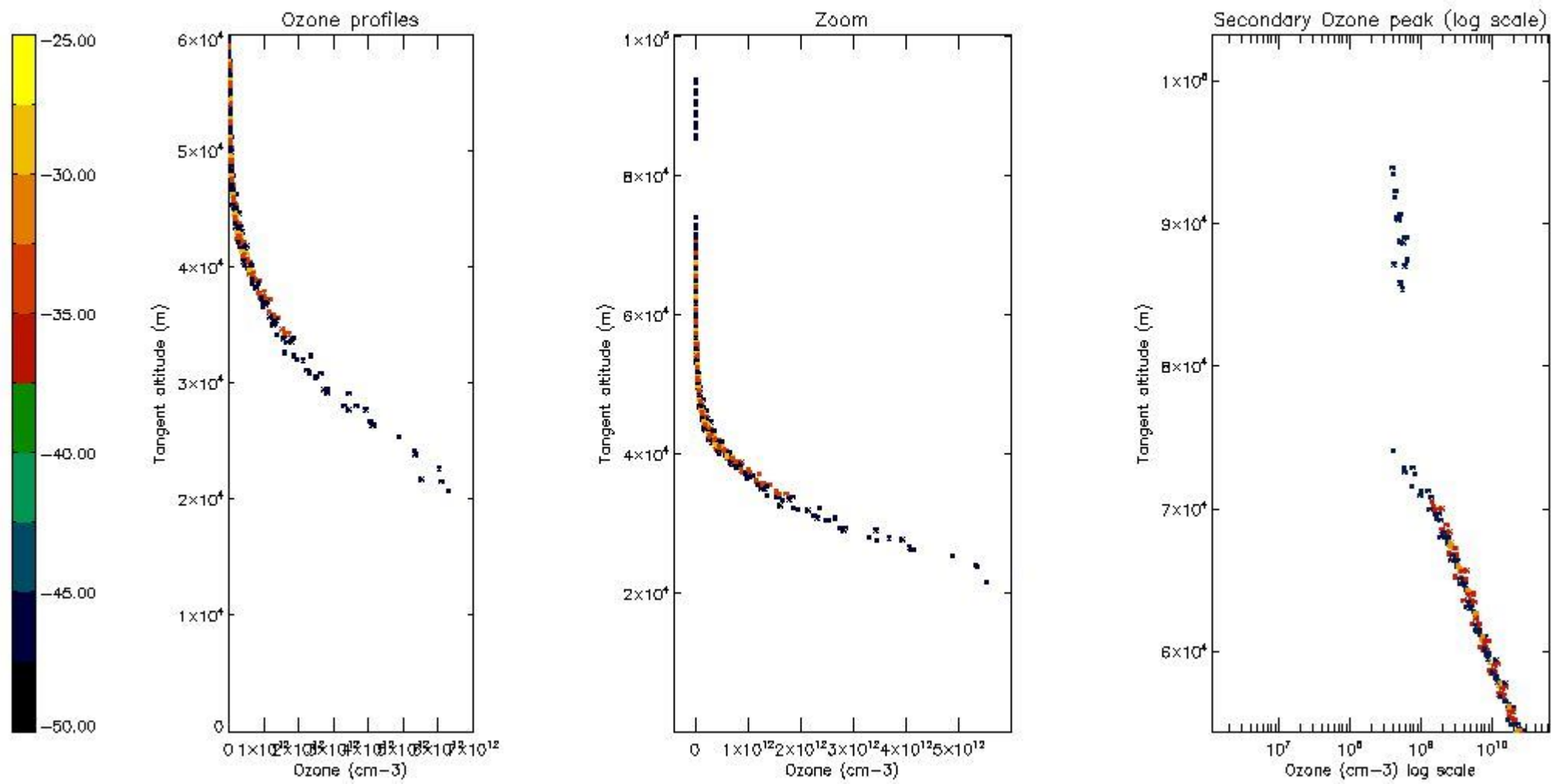
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



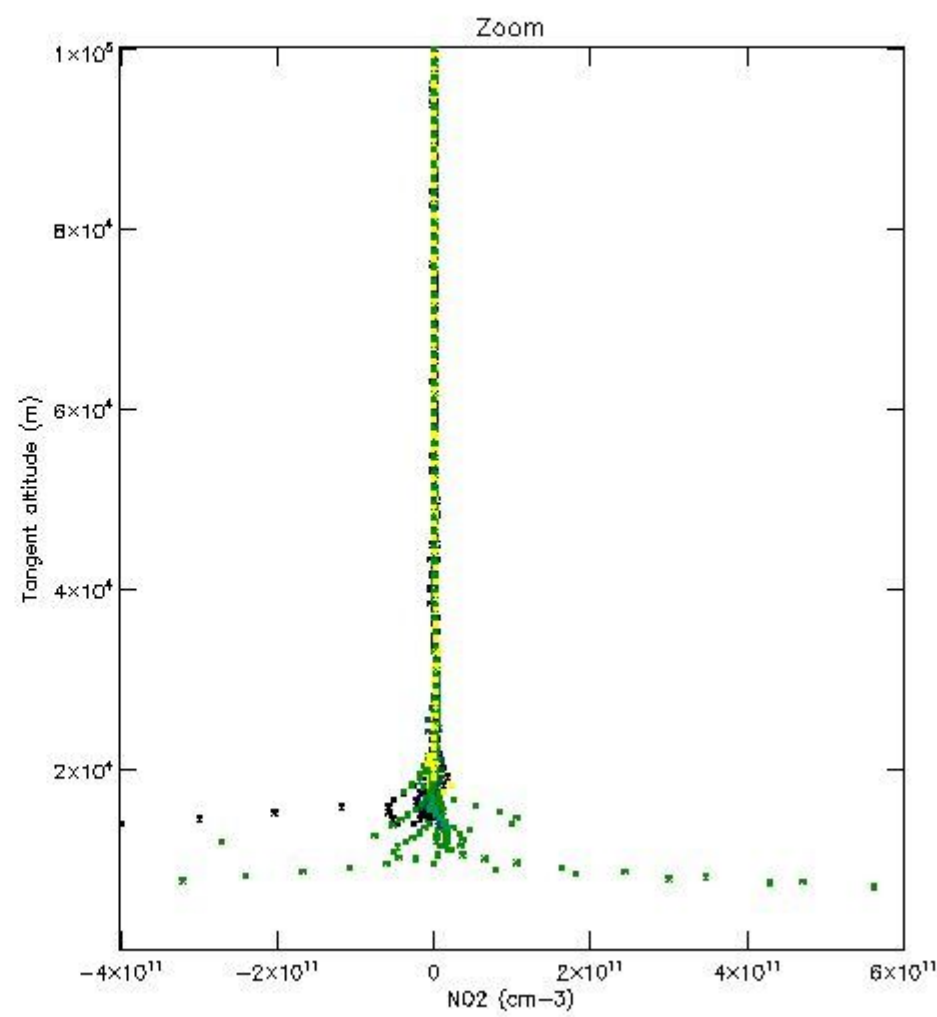
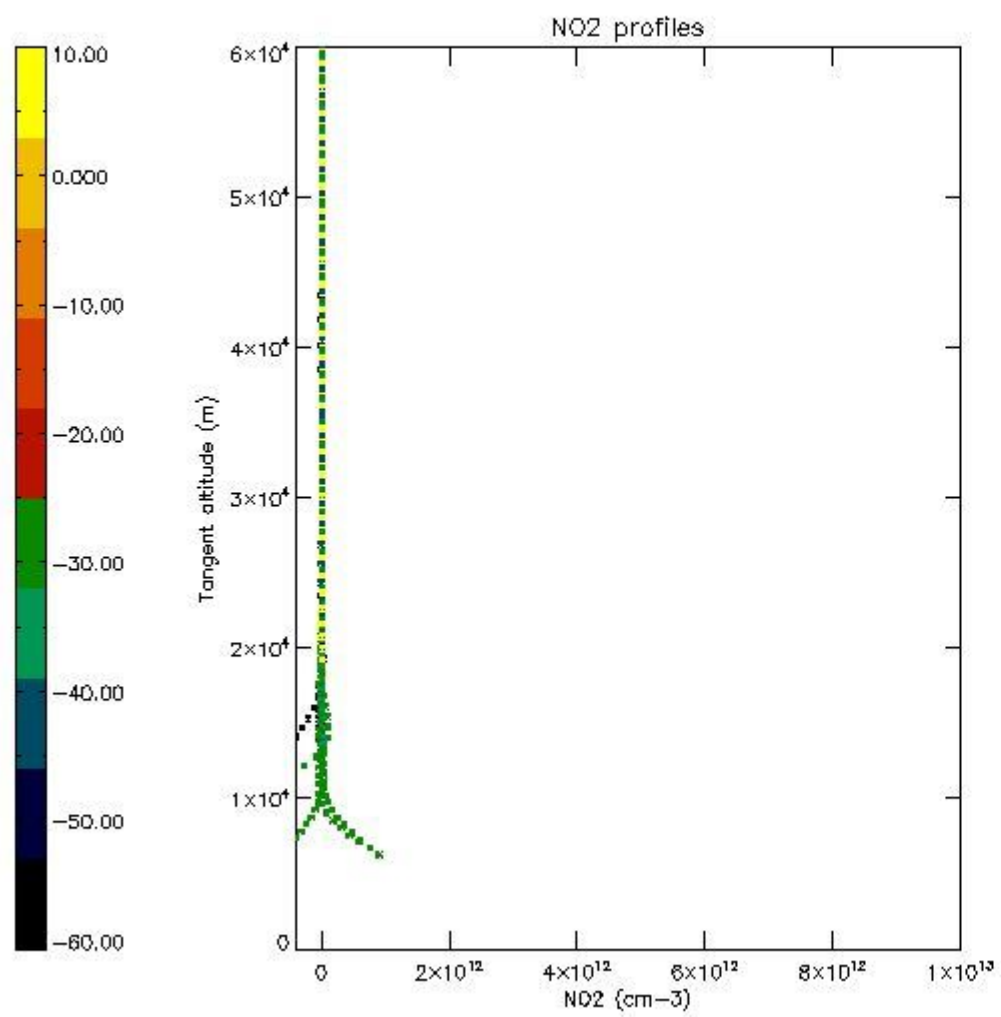
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



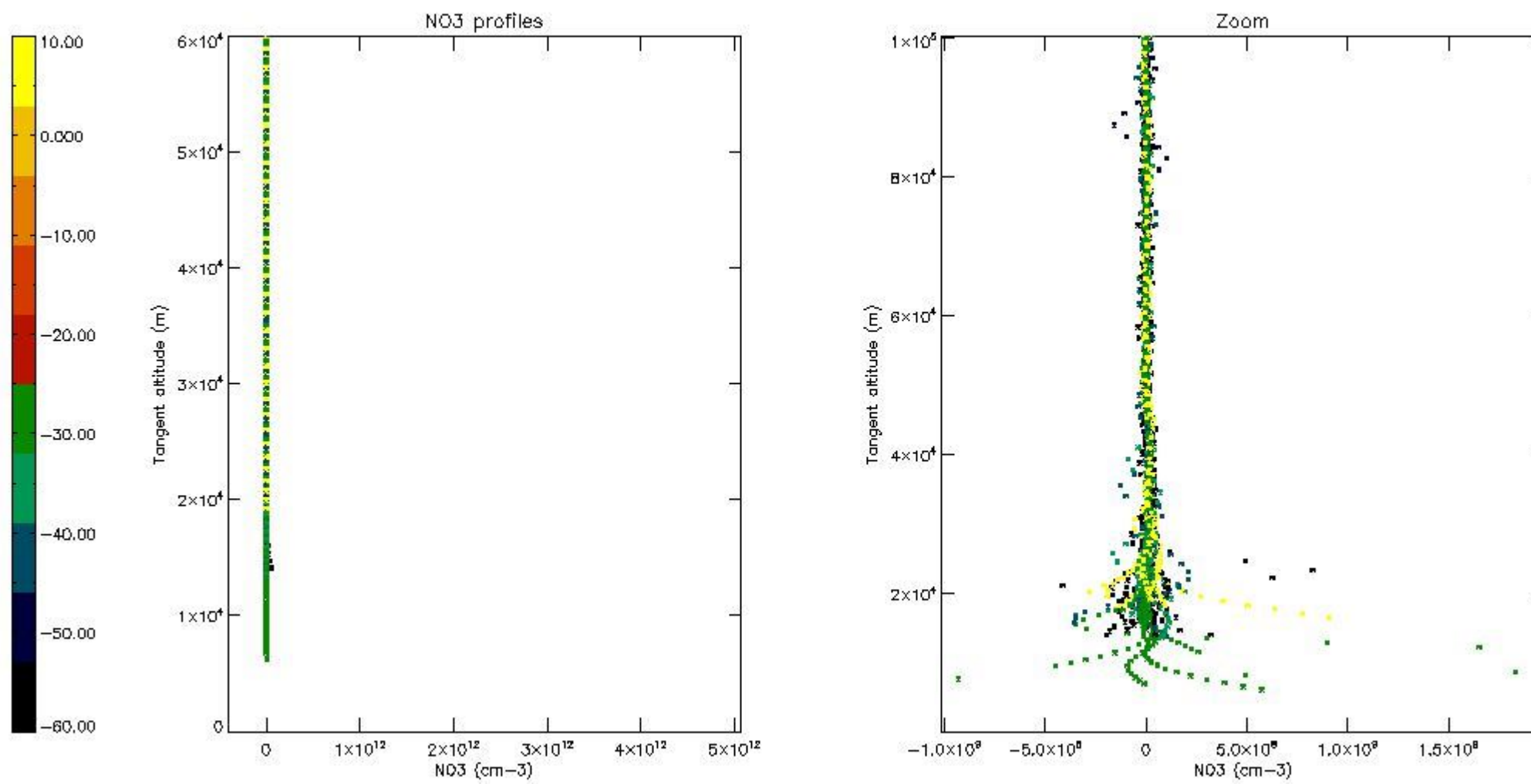
5.6 Plot NO₂ profiles for all STD (dark without errors)

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 | 07-SEP-2005 00:03:36 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 07-SEP-2005 00:03:36 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 07-SEP-2005 00:03:36 |

GOMOS Level 2 Daily Report

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[1. General Info](#)

[2. Summary of processed GOM_NL_2P products](#)

[3. Level 2 Quality information per product](#)

[3.1 Plot of level 2 quality information per product \(time dependant\)](#)

[3.2 Plot of level 2 quality information per product \(world map\)](#)

[4. Level 1 Quality information per product \(stored on level 2 products\)](#)

[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](#)

[5.2 Plot ozone profiles for all STD \(dark without errors\)](#)

[5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

[5.4. Plot ozone profiles where STD < 10% \(dark without errors\)](#)

[5.5. Plot ozone profiles where STD < 5% \(dark without errors\)](#)

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

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

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

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

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 10:47:58 |
| Data source version | GOMOS/6.01 |
| Start time of products | 07-09-2005 (07SEP2005 00:00:00) |
| Stop time of products | 08-09-2005 (08SEP2005 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 138 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

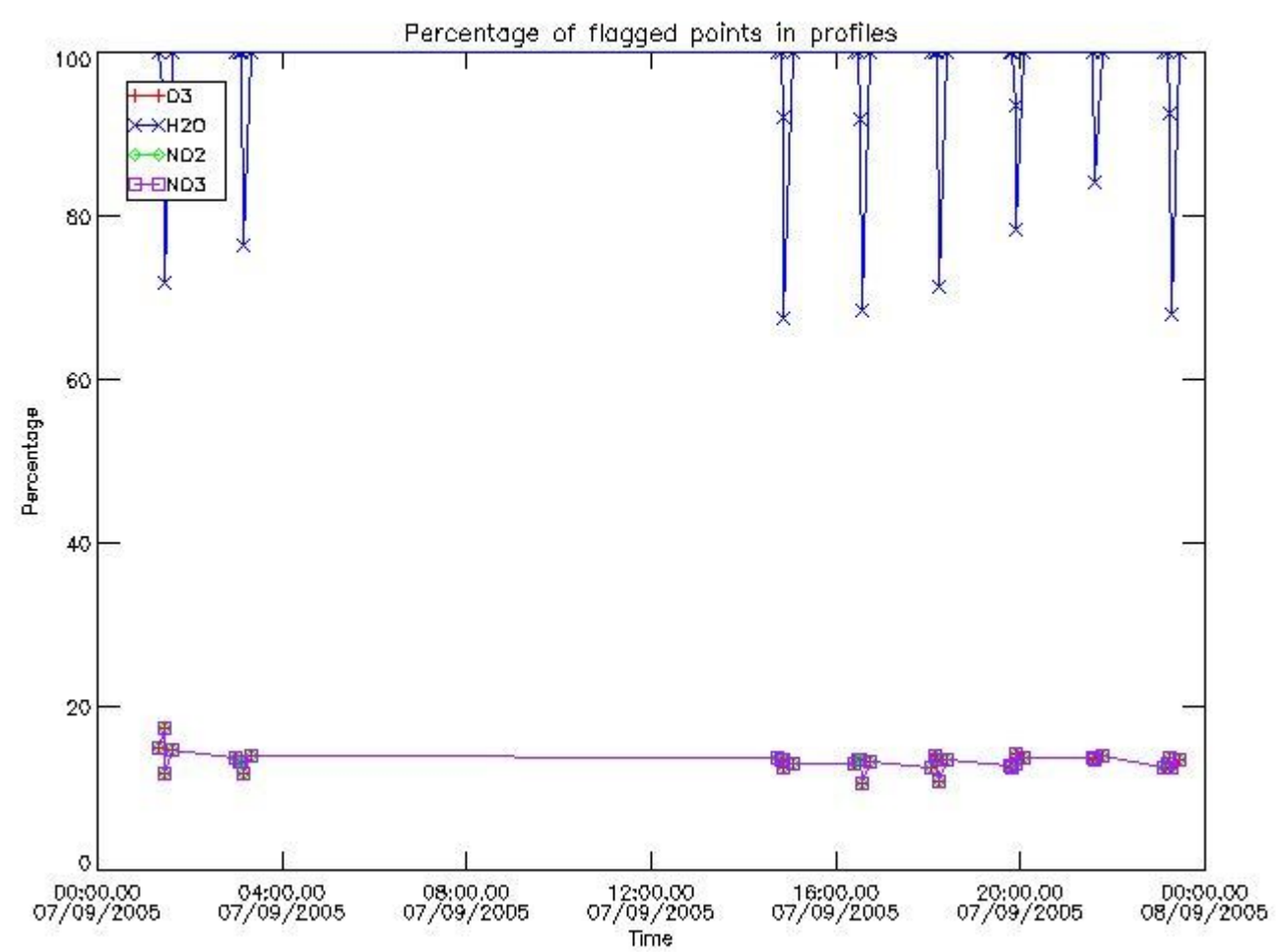
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20050907_000336_000000412040_00317_18407_6540.N1 | 07-SEP-2005 00:03:36 | Straylight | 40.500 | 148 | Alp Tuc | 2.8780 | 4100.0 | 81 | 18407 | No |
| 2 | GOM_NL__2PRFIN20050907_000717_000000412040_00317_18407_6541.N1 | 07-SEP-2005 00:07:17 | Straylight | 40.500 | 31 | Alp Gru | 1.7340 | 15200. | 81 | 18407 | No |
| 3 | GOM_NL__2PRFIN20050907_001005_000000392040_00317_18407_6542.N1 | 07-SEP-2005 00:10:05 | Straylight | 38.500 | 172 | Gam Gru | 3.0030 | 13100. | 77 | 18407 | No |
| 4 | GOM_NL__2PRFIN20050907_001604_000000392040_00317_18407_6543.N1 | 07-SEP-2005 00:16:04 | Bright | 39.000 | 142 | 49Del Cap | 2.8500 | 8900.0 | 78 | 18407 | No |
| 5 | GOM_NL__2PRFIN20050907_001909_000000362040_00317_18407_6544.N1 | 07-SEP-2005 00:19:09 | Bright | 36.000 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 72 | 18407 | No |
| 6 | GOM_NL__2PRFIN20050907_003029_000000342040_00317_18407_6545.N1 | 07-SEP-2005 00:30:29 | Bright | 34.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 68 | 18407 | No |
| 7 | GOM_NL__2PRFIN20050907_003228_000000362040_00317_18407_6546.N1 | 07-SEP-2005 00:32:28 | Bright | 35.500 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 71 | 18407 | No |
| 8 | GOM_NL__2PRFIN20050907_003422_000000362040_00317_18407_6547.N1 | 07-SEP-2005 00:34:22 | Bright | 35.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 71 | 18407 | No |
| 9 | GOM_NL__2PRFIN20050907_004621_000000352040_00317_18407_6548.N1 | 07-SEP-2005 00:46:21 | Bright | 35.000 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 70 | 18407 | No |
| 10 | GOM_NL__2PRFIN20050907_005254_000000362040_00317_18407_6549.N1 | 07-SEP-2005 00:52:54 | Bright | 35.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 71 | 18407 | No |
| 11 | GOM_NL__2PRFIN20050907_005418_000000342040_00317_18407_6550.N1 | 07-SEP-2005 00:54:18 | Bright | 34.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 68 | 18407 | No |
| 12 | GOM_NL__2PRFIN20050907_011850_000000412040_00317_18407_6551.N1 | 07-SEP-2005 01:18:50 | Dark | 41.000 | 132 | 15Rho Pup | 2.8030 | 6900.0 | 82 | 18407 | No |
| 13 | GOM_NL__2PRFIN20050907_012636_000000382040_00317_18407_6552.N1 | 07-SEP-2005 01:26:36 | Dark | 38.000 | 46 | Del Vel | 1.9540 | 10600. | 76 | 18407 | No |
| 14 | GOM_NL__2PRFIN20050907_012803_000000432040_00317_18407_6553.N1 | 07-SEP-2005 01:28:03 | Dark | 43.000 | 41 | Eps Car | 1.8600 | 4100.0 | 86 | 18407 | No |
| 15 | GOM_NL__2PRFIN20050907_013837_000000382040_00318_18408_6539.N1 | 07-SEP-2005 01:38:37 | Dark | 38.000 | 135 | Bet Hyi | 2.8200 | 5800.0 | 76 | 18408 | No |
| 16 | GOM_NL__2PRFIN20050907_014412_000000392040_00318_18408_6540.N1 | 07-SEP-2005 01:44:12 | Straylight | 39.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 78 | 18408 | No |
| 17 | GOM_NL__2PRFIN20050907_014753_000000402040_00318_18408_6541.N1 | 07-SEP-2005 01:47:53 | Straylight | 39.500 | 31 | Alp Gru | 1.7340 | 15200. | 79 | 18408 | No |
| 18 | GOM_NL__2PRFIN20050907_015041_000000382040_00318_18408_6542.N1 | 07-SEP-2005 01:50:41 | Straylight | 38.000 | 172 | Gam Gru | 3.0030 | 13100. | 76 | 18408 | No |
| 19 | GOM_NL__2PRFIN20050907_015640_000000402040_00318_18408_6543.N1 | 07-SEP-2005 01:56:40 | Bright | 39.500 | 142 | 49Del Cap | 2.8500 | 8900.0 | 79 | 18408 | No |
| 20 | GOM_NL__2PRFIN20050907_015945_000000372040_00318_18408_6544.N1 | 07-SEP-2005 01:59:45 | Bright | 37.000 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 74 | 18408 | No |
| 21 | GOM_NL__2PRFIN20050907_021105_000000352040_00318_18408_6545.N1 | 07-SEP-2005 02:11:05 | Bright | 35.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 70 | 18408 | No |
| 22 | GOM_NL__2PRFIN20050907_021304_000000372040_00318_18408_6546.N1 | 07-SEP-2005 02:13:04 | Bright | 36.500 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 73 | 18408 | No |
| 23 | GOM_NL__2PRFIN20050907_021458_000000362040_00318_18408_6547.N1 | 07-SEP-2005 02:14:58 | Bright | 35.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 71 | 18408 | No |
| 24 | GOM_NL__2PRFIN20050907_022657_000000362040_00318_18408_6548.N1 | 07-SEP-2005 02:26:57 | Bright | 35.500 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 71 | 18408 | No |
| 25 | GOM_NL__2PRFIN20050907_023331_000000362040_00318_18408_6549.N1 | 07-SEP-2005 02:33:31 | Bright | 35.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 71 | 18408 | No |
| 26 | GOM_NL__2PRFIN20050907_023455_000000532040_00318_18408_6550.N1 | 07-SEP-2005 02:34:55 | Bright | 53.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 106 | 18408 | No |
| 27 | GOM_NL__2PRFIN20050907_025926_000000412040_00318_18408_6551.N1 | 07-SEP-2005 02:59:26 | Dark | 40.500 | 132 | 15Rho Pup | 2.8030 | 6900.0 | 81 | 18408 | No |
| 28 | GOM_NL__2PRFIN20050907_030341_000000392040_00318_18408_6552.N1 | 07-SEP-2005 03:03:41 | Dark | 38.500 | 70 | Zet Pup | 2.2460 | 39000. | 77 | 18408 | No |
| 29 | GOM_NL__2PRFIN20050907_030712_000000392040_00318_18408_6553.N1 | 07-SEP-2005 03:07:12 | Dark | 38.500 | 46 | Del Vel | 1.9540 | 10600. | 77 | 18408 | No |
| 30 | GOM_NL__2PRFIN20050907_030839_000000472040_00318_18408_6554.N1 | 07-SEP-2005 03:08:39 | Dark | 47.000 | 41 | Eps Car | 1.8600 | 4100.0 | 94 | 18408 | No |
| 31 | GOM_NL__2PRFIN20050907_031913_000000372040_00319_18409_6539.N1 | 07-SEP-2005 03:19:13 | Dark | 36.500 | 135 | Bet Hyi | 2.8200 | 5800.0 | 73 | 18409 | No |
| 32 | GOM_NL__2PRFIN20050907_032448_000000412040_00319_18409_6540.N1 | 07-SEP-2005 03:24:48 | Straylight | 40.500 | 148 | Alp Tuc | 2.8780 | 4100.0 | 81 | 18409 | No |
| 33 | GOM_NL__2PRFIN20050907_032829_000000382040_00319_18409_6541.N1 | 07-SEP-2005 03:28:29 | Straylight | 38.000 | 31 | Alp Gru | 1.7340 | 15200. | 76 | 18409 | No |
| 34 | GOM_NL__2PRFIN20050907_033117_000000372040_00319_18409_6542.N1 | 07-SEP-2005 03:31:17 | Straylight | 36.500 | 172 | Gam Gru | 3.0030 | 13100. | 73 | 18409 | No |
| 35 | GOM_NL__2PRFIN20050907_033716_000000392040_00319_18409_6543.N1 | 07-SEP-2005 03:37:16 | Bright | 38.500 | 142 | 49Del Cap | 2.8500 | 8900.0 | 77 | 18409 | No |
| 36 | GOM_NL__2PRFIN20050907_034021_000000372040_00319_18409_6544.N1 | 07-SEP-2005 03:40:21 | Bright | 37.000 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 74 | 18409 | No |
| 37 | GOM_NL__2PRFIN20050907_035141_000000342040_00319_18409_6545.N1 | 07-SEP-2005 03:51:41 | Bright | 34.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 68 | 18409 | No |
| 38 | GOM_NL__2PRFIN20050907_035340_000000362040_00319_18409_6546.N1 | 07-SEP-2005 03:53:40 | Bright | 36.000 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 72 | 18409 | No |
| 39 | GOM_NL__2PRFIN20050907_035534_000000362040_00319_18409_6547.N1 | 07-SEP-2005 03:55:34 | Bright | 36.000 | 144 | 18Del Cyg | 2.8600 | 11000. | 72 | 18409 | No |
| 40 | GOM_NL__2PRFIN20050907_040733_000000322040_00319_18409_6548.N1 | 07-SEP-2005 04:07:33 | Bright | 32.000 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 64 | 18409 | No |
| 41 | GOM_NL__2PRFIN20050907_041407_000000342040_00319_18409_6549.N1 | 07-SEP-2005 04:14:07 | Bright | 34.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 68 | 18409 | No |
| 42 | GOM_NL__2PRFIN20050907_041531_000000342040_00319_18409_6550.N1 | 07-SEP-2005 04:15:31 | Bright | 34.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 68 | 18409 | No |

| | | | | | | | | | | | |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|----|-------|----|
| 102 | GOM_NL__2PRFIN20050907_200514_000000372040_00329_18419_6559.N1 | 07-SEP-2005 20:05:14 | Dark | 37.000 | 135 | Bet Hyi | 2.8200 | 5800.0 | 74 | 18419 | No |
| 103 | GOM_NL__2PRFIN20050907_201049_000000392040_00329_18419_6560.N1 | 07-SEP-2005 20:10:49 | Straylight | 39.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 78 | 18419 | No |
| 104 | GOM_NL__2PRFIN20050907_201431_000000412040_00329_18419_6561.N1 | 07-SEP-2005 20:14:31 | Straylight | 40.500 | 31 | Alp Gru | 1.7340 | 15200. | 81 | 18419 | No |
| 105 | GOM_NL__2PRFIN20050907_201719_000000382040_00329_18419_6562.N1 | 07-SEP-2005 20:17:19 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18419 | No |
| 106 | GOM_NL__2PRFIN20050907_202317_000000432040_00329_18419_6563.N1 | 07-SEP-2005 20:23:17 | Bright | 43.000 | 142 | 49Del Cap | 2.8500 | 8900.0 | 86 | 18419 | No |
| 107 | GOM_NL__2PRFIN20050907_202622_000000382040_00329_18419_6564.N1 | 07-SEP-2005 20:26:22 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18419 | No |
| 108 | GOM_NL__2PRFIN20050907_203742_000000372040_00329_18419_6565.N1 | 07-SEP-2005 20:37:42 | Bright | 37.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 74 | 18419 | No |
| 109 | GOM_NL__2PRFIN20050907_203942_000000362040_00329_18419_6566.N1 | 07-SEP-2005 20:39:42 | Bright | 35.500 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 71 | 18419 | No |
| 110 | GOM_NL__2PRFIN20050907_204137_000000362040_00329_18419_6567.N1 | 07-SEP-2005 20:41:37 | Bright | 35.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 71 | 18419 | No |
| 111 | GOM_NL__2PRFIN20050907_205336_000000382040_00329_18419_6568.N1 | 07-SEP-2005 20:53:36 | Bright | 37.500 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 75 | 18419 | No |
| 112 | GOM_NL__2PRFIN20050907_210009_000000352040_00329_18419_6569.N1 | 07-SEP-2005 21:00:09 | Bright | 35.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 70 | 18419 | No |
| 113 | GOM_NL__2PRFIN20050907_210133_000000342040_00329_18419_6570.N1 | 07-SEP-2005 21:01:33 | Bright | 34.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 68 | 18419 | No |
| 114 | GOM_NL__2PRFIN20050907_213348_000000372040_00329_18419_6571.N1 | 07-SEP-2005 21:33:48 | Dark | 37.000 | 46 | Del Vel | 1.9540 | 10600. | 74 | 18419 | No |
| 115 | GOM_NL__2PRFIN20050907_213515_000000382040_00329_18419_6572.N1 | 07-SEP-2005 21:35:15 | Dark | 38.000 | 41 | Eps Car | 1.8600 | 4100.0 | 76 | 18419 | No |
| 116 | GOM_NL__2PRFIN20050907_214550_000000372040_00330_18420_6559.N1 | 07-SEP-2005 21:45:50 | Dark | 36.500 | 135 | Bet Hyi | 2.8200 | 5800.0 | 73 | 18420 | No |
| 117 | GOM_NL__2PRFIN20050907_215125_000000432040_00330_18420_6560.N1 | 07-SEP-2005 21:51:25 | Straylight | 43.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 86 | 18420 | No |
| 118 | GOM_NL__2PRFIN20050907_215507_000000402040_00330_18420_6561.N1 | 07-SEP-2005 21:55:07 | Straylight | 40.000 | 31 | Alp Gru | 1.7340 | 15200. | 80 | 18420 | No |
| 119 | GOM_NL__2PRFIN20050907_215755_000000382040_00330_18420_6562.N1 | 07-SEP-2005 21:57:55 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18420 | No |
| 120 | GOM_NL__2PRFIN20050907_220353_000000402040_00330_18420_6563.N1 | 07-SEP-2005 22:03:53 | Bright | 40.000 | 142 | 49Del Cap | 2.8500 | 8900.0 | 80 | 18420 | No |
| 121 | GOM_NL__2PRFIN20050907_220658_000000382040_00330_18420_6564.N1 | 07-SEP-2005 22:06:58 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18420 | No |
| 122 | GOM_NL__2PRFIN20050907_221818_000000342040_00330_18420_6565.N1 | 07-SEP-2005 22:18:18 | Bright | 34.000 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 68 | 18420 | No |
| 123 | GOM_NL__2PRFIN20050907_222018_000000342040_00330_18420_6566.N1 | 07-SEP-2005 22:20:18 | Bright | 34.000 | 66 | 37Gam Cyg | 2.2080 | 5900.0 | 68 | 18420 | No |
| 124 | GOM_NL__2PRFIN20050907_222214_000000342040_00330_18420_6567.N1 | 07-SEP-2005 22:22:14 | Bright | 33.500 | 144 | 18Del Cyg | 2.8600 | 11000. | 67 | 18420 | No |
| 125 | GOM_NL__2PRFIN20050907_223412_000000372040_00330_18420_6568.N1 | 07-SEP-2005 22:34:12 | Bright | 36.500 | 60 | 7Bet UMi | 2.0810 | 3950.0 | 73 | 18420 | No |
| 126 | GOM_NL__2PRFIN20050907_224045_000000372040_00330_18420_6569.N1 | 07-SEP-2005 22:40:45 | Bright | 36.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 73 | 18420 | No |
| 127 | GOM_NL__2PRFIN20050907_224209_000000332040_00330_18420_6570.N1 | 07-SEP-2005 22:42:09 | Bright | 33.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 66 | 18420 | No |
| 128 | GOM_NL__2PRFIN20050907_230641_000000412040_00330_18420_6571.N1 | 07-SEP-2005 23:06:41 | Dark | 40.500 | 132 | 15Rho Pup | 2.8030 | 6900.0 | 81 | 18420 | No |
| 129 | GOM_NL__2PRFIN20050907_231056_000000392040_00330_18420_6572.N1 | 07-SEP-2005 23:10:56 | Dark | 39.000 | 70 | Zet Pup | 2.2460 | 39000. | 78 | 18420 | No |
| 130 | GOM_NL__2PRFIN20050907_231424_000000412040_00330_18420_6573.N1 | 07-SEP-2005 23:14:24 | Dark | 41.000 | 46 | Del Vel | 1.9540 | 10600. | 82 | 18420 | No |
| 131 | GOM_NL__2PRFIN20050907_231551_000000412040_00330_18420_6574.N1 | 07-SEP-2005 23:15:51 | Dark | 41.000 | 41 | Eps Car | 1.8600 | 4100.0 | 82 | 18420 | No |
| 132 | GOM_NL__2PRFIN20050907_232626_000000382040_00331_18421_6560.N1 | 07-SEP-2005 23:26:26 | Dark | 37.500 | 135 | Bet Hyi | 2.8200 | 5800.0 | 75 | 18421 | No |
| 133 | GOM_NL__2PRFIN20050907_233201_000000452040_00331_18421_6561.N1 | 07-SEP-2005 23:32:01 | Straylight | 45.000 | 148 | Alp Tuc | 2.8780 | 4100.0 | 90 | 18421 | No |
| 134 | GOM_NL__2PRFIN20050907_233543_000000392040_00331_18421_6562.N1 | 07-SEP-2005 23:35:43 | Straylight | 39.000 | 31 | Alp Gru | 1.7340 | 15200. | 78 | 18421 | No |
| 135 | GOM_NL__2PRFIN20050907_233831_000000382040_00331_18421_6563.N1 | 07-SEP-2005 23:38:31 | Straylight | 37.500 | 172 | Gam Gru | 3.0030 | 13100. | 75 | 18421 | No |
| 136 | GOM_NL__2PRFIN20050907_234429_000000442040_00331_18421_6564.N1 | 07-SEP-2005 23:44:29 | Bright | 43.500 | 142 | 49Del Cap | 2.8500 | 8900.0 | 87 | 18421 | No |
| 137 | GOM_NL__2PRFIN20050907_234734_000000382040_00331_18421_6565.N1 | 07-SEP-2005 23:47:34 | Bright | 37.500 | 154 | 22Bet Aqr | 2.8990 | 5700.0 | 75 | 18421 | No |
| 138 | GOM_NL__2PRFIN20050907_235854_000000382040_00331_18421_6566.N1 | 07-SEP-2005 23:58:54 | Bright | 37.500 | 92 | 53Eps Cyg | 2.5000 | 4500.0 | 75 | 18421 | No |

3. Quality information per product

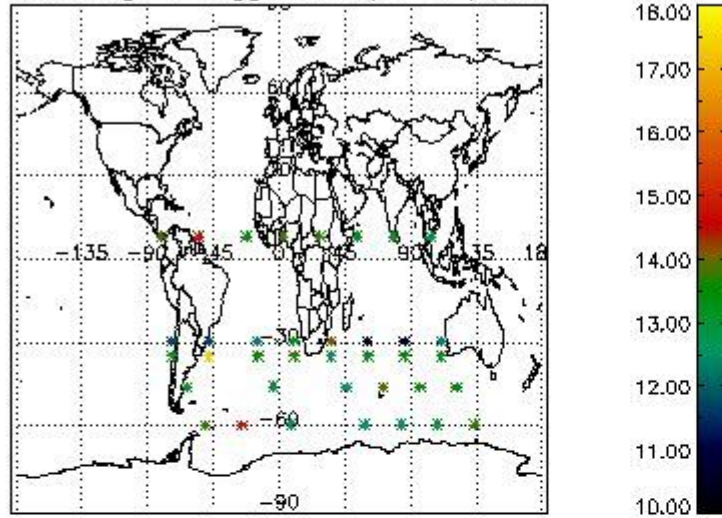
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

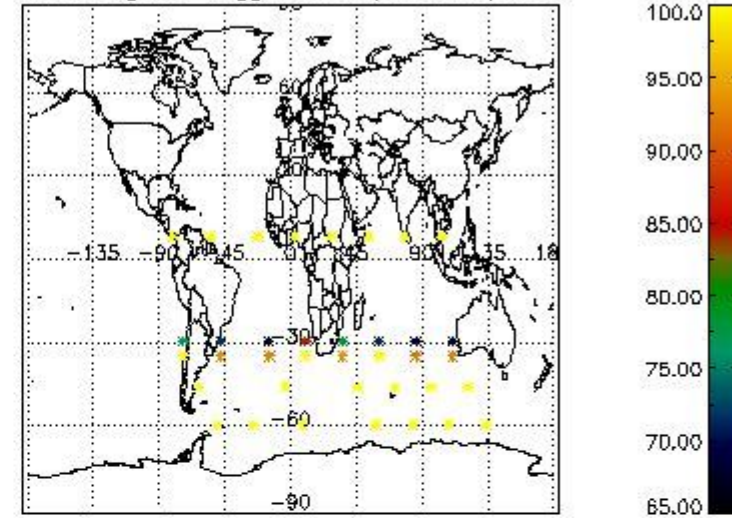


3.2 Plot quality information per product (world map)

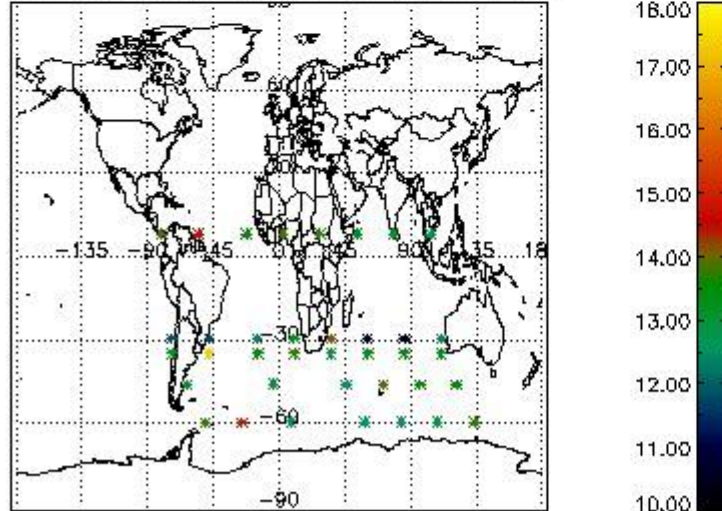
Percentage of flagged data per O3 profile



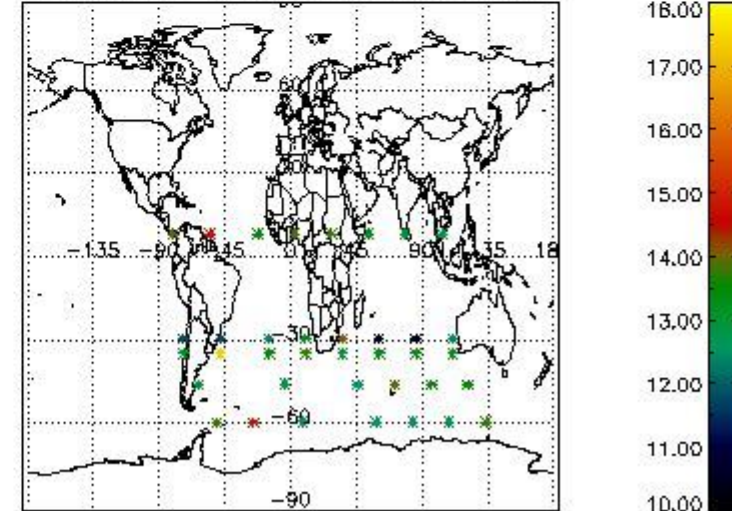
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

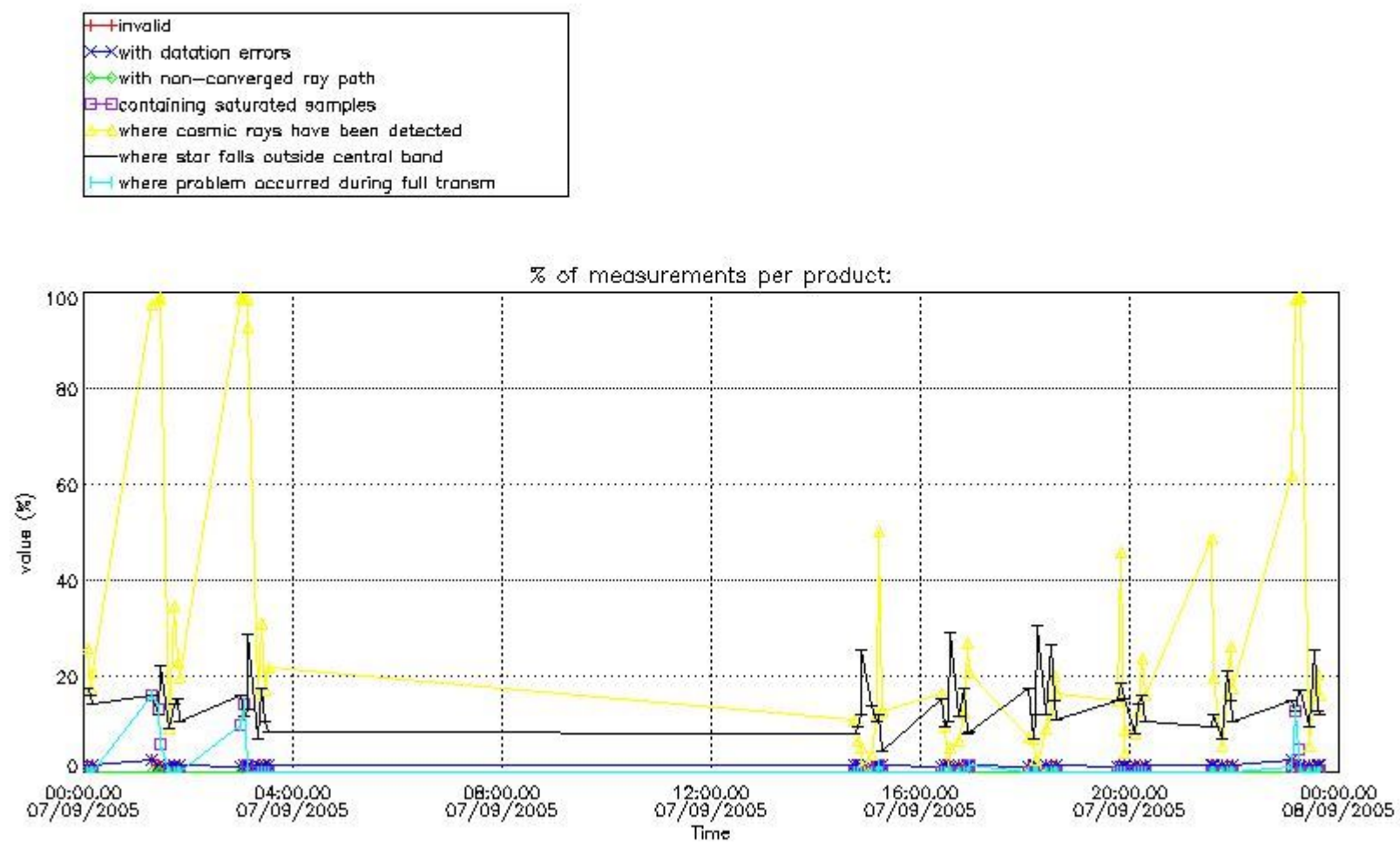


4. Level 1 quality information per product

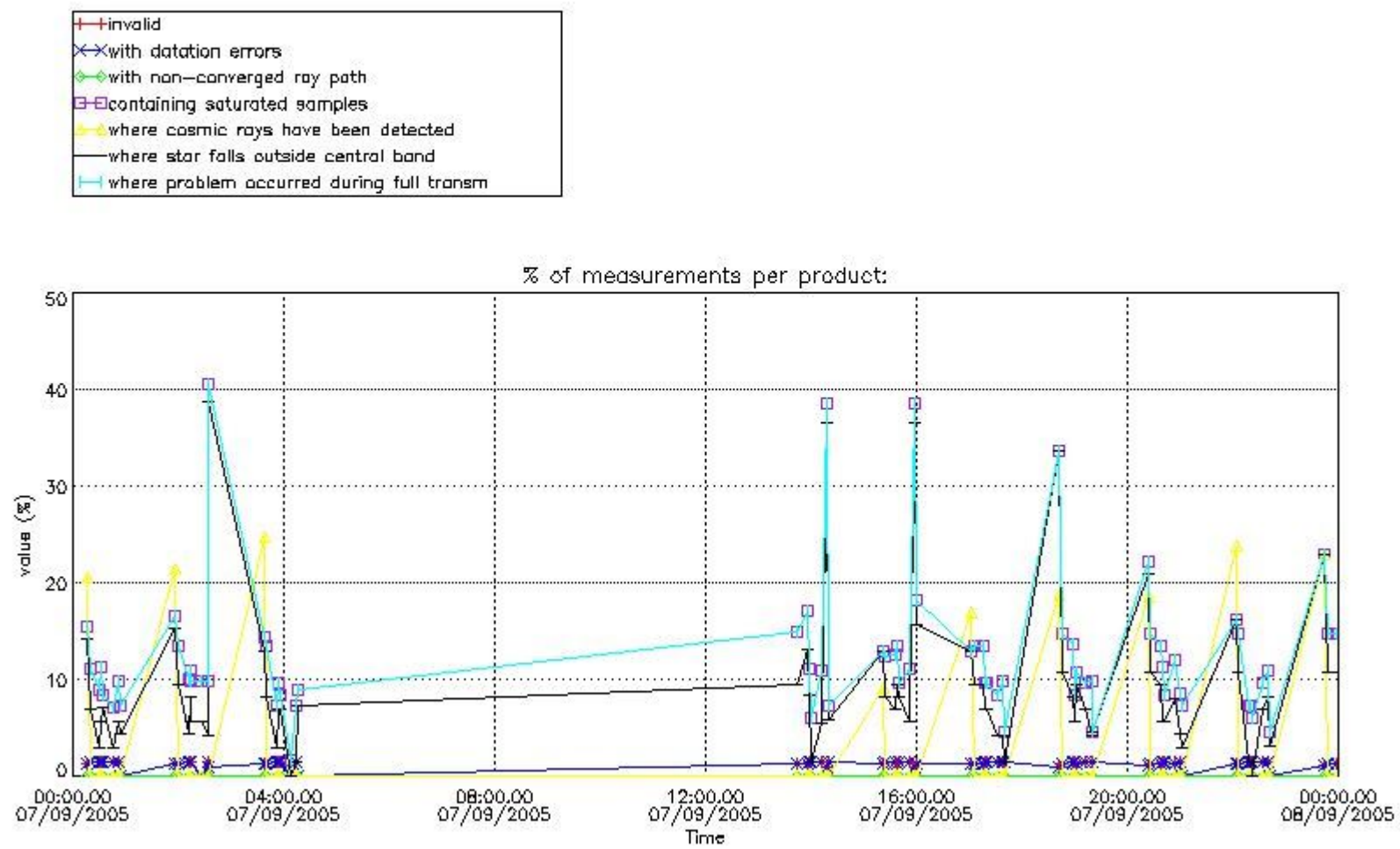
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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



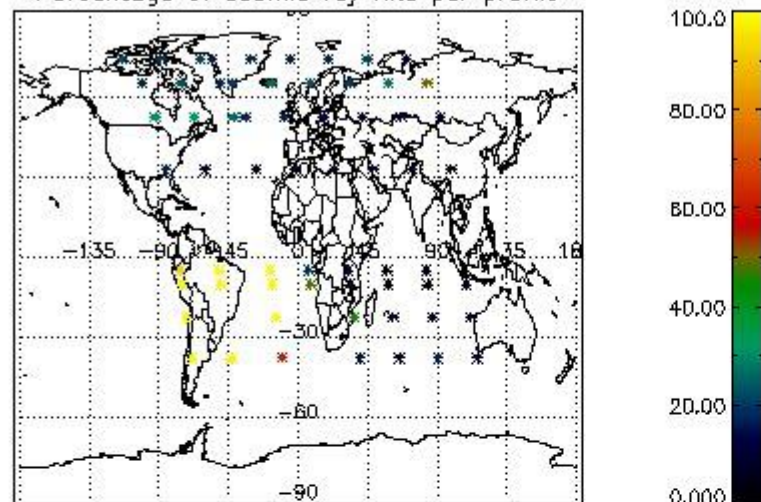
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



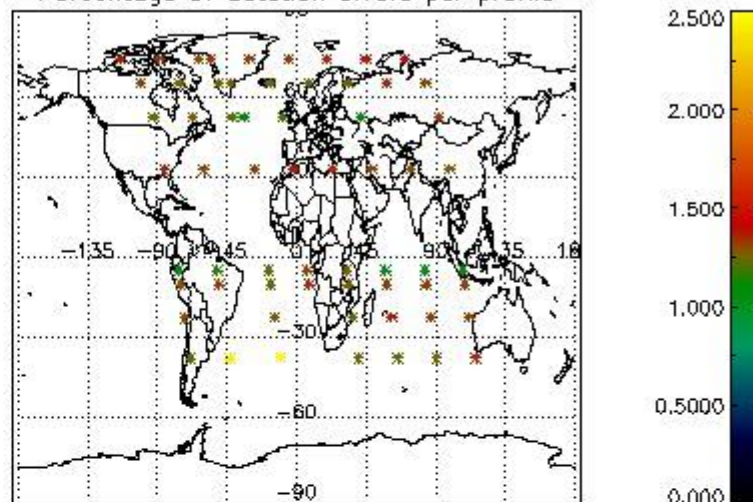
4.2 Plot quality information per product coming from level 1b processing (world map)

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

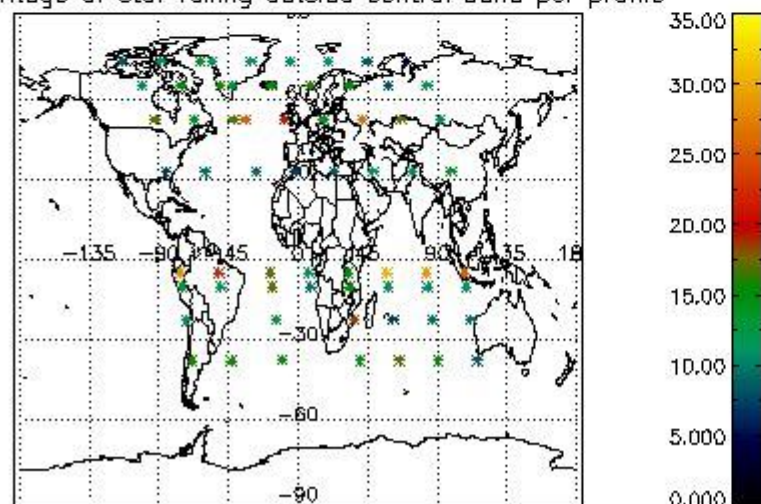
Percentage of cosmic ray hits per profile



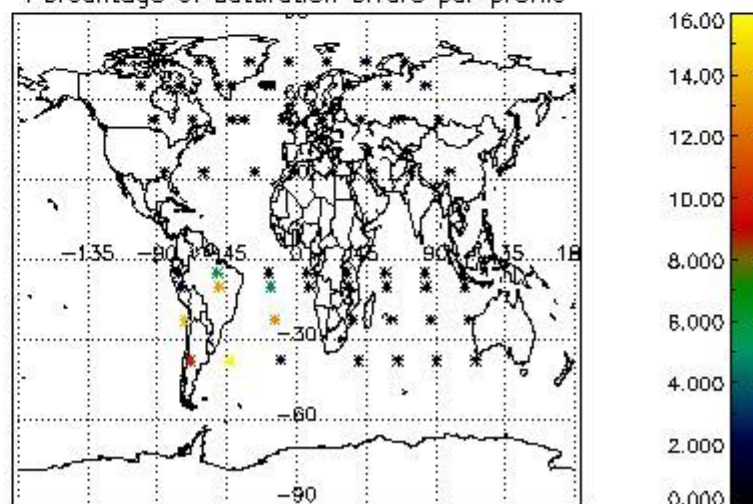
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

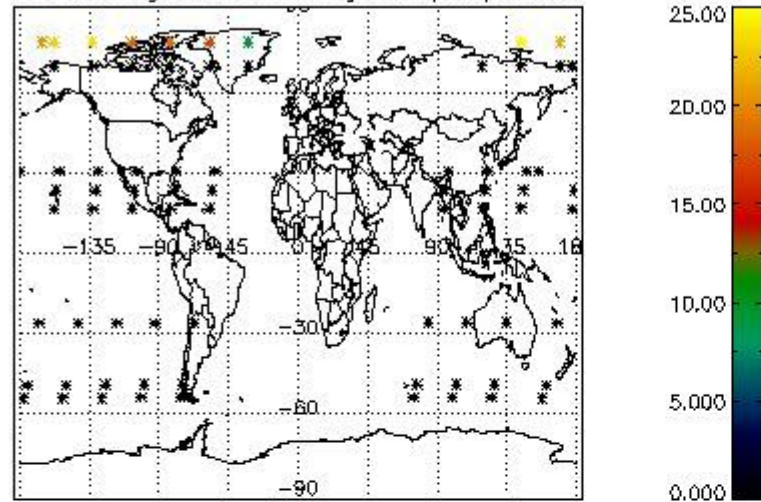


Percentage of saturation errors per profile

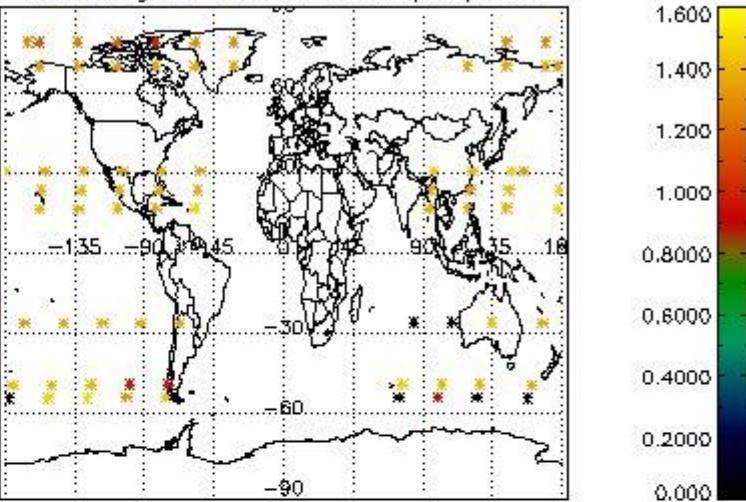


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

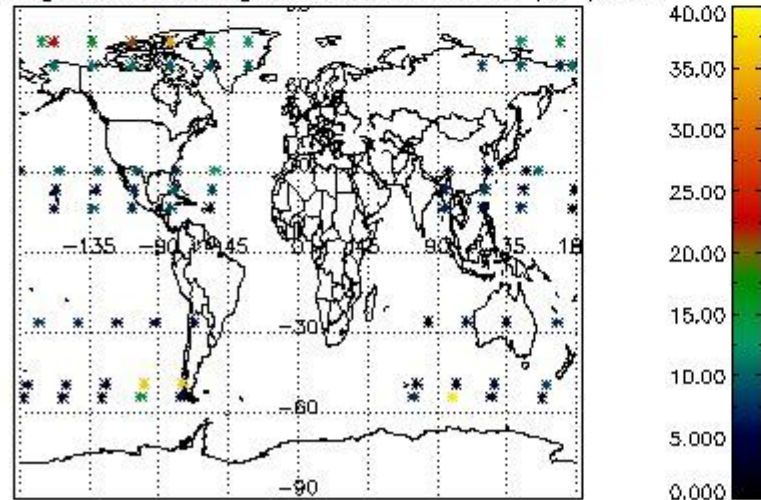
Percentage of cosmic ray hits per profile



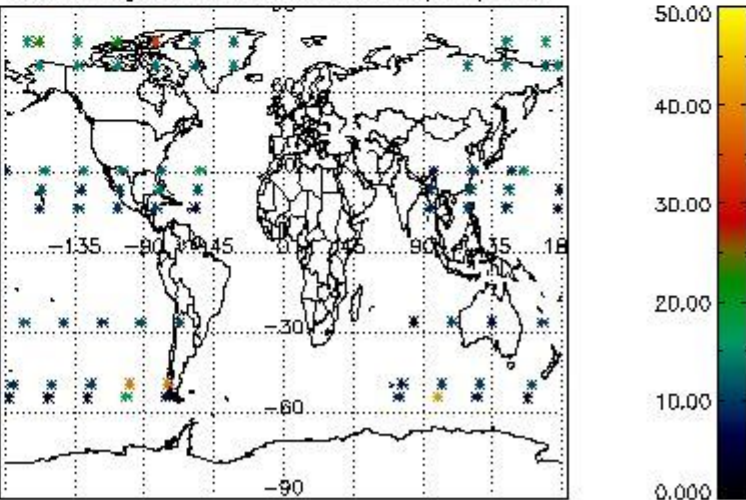
Percentage of datation errors per profile



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

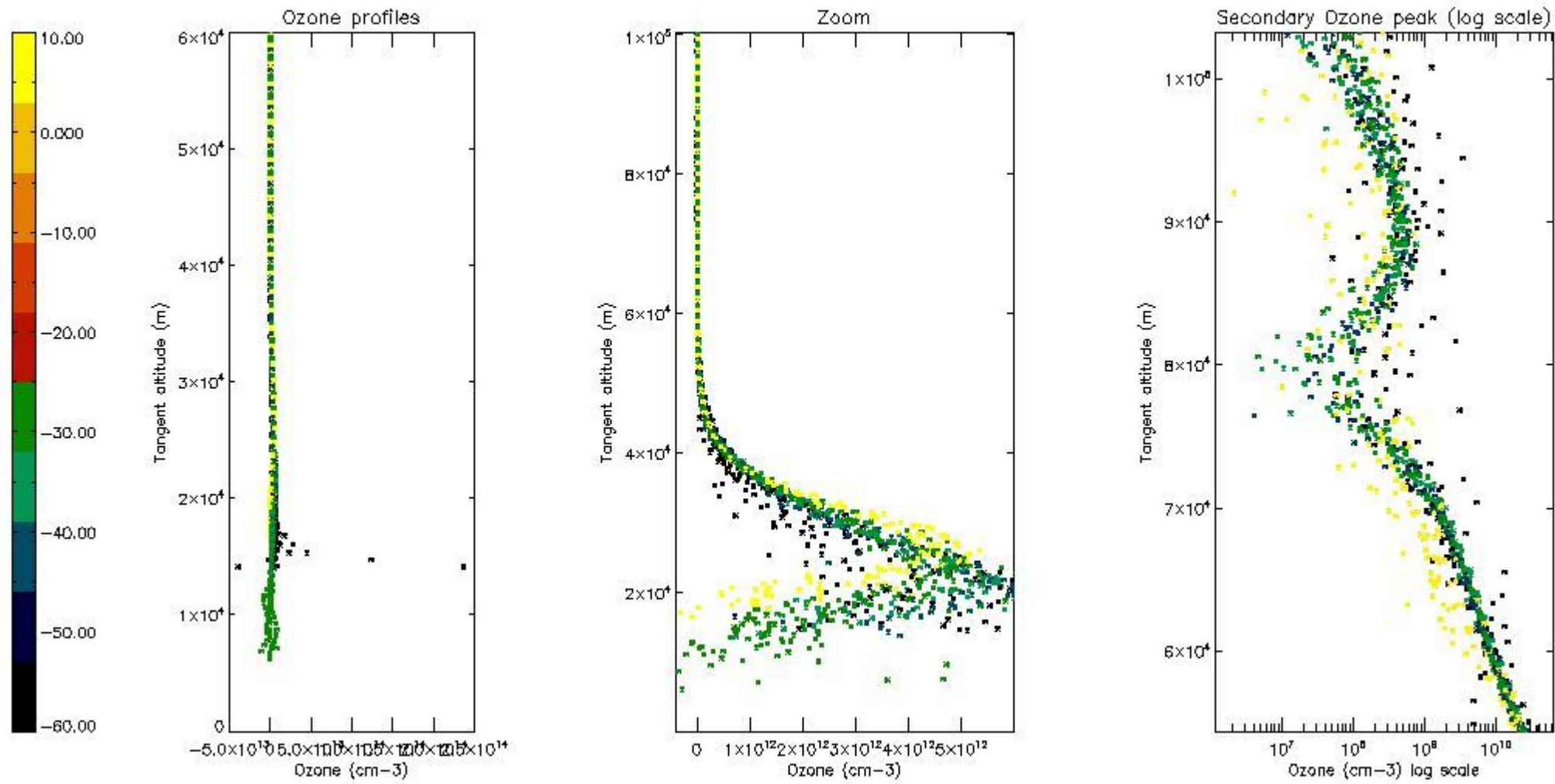
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 29 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 11 |
| STD < 5 | 5 |

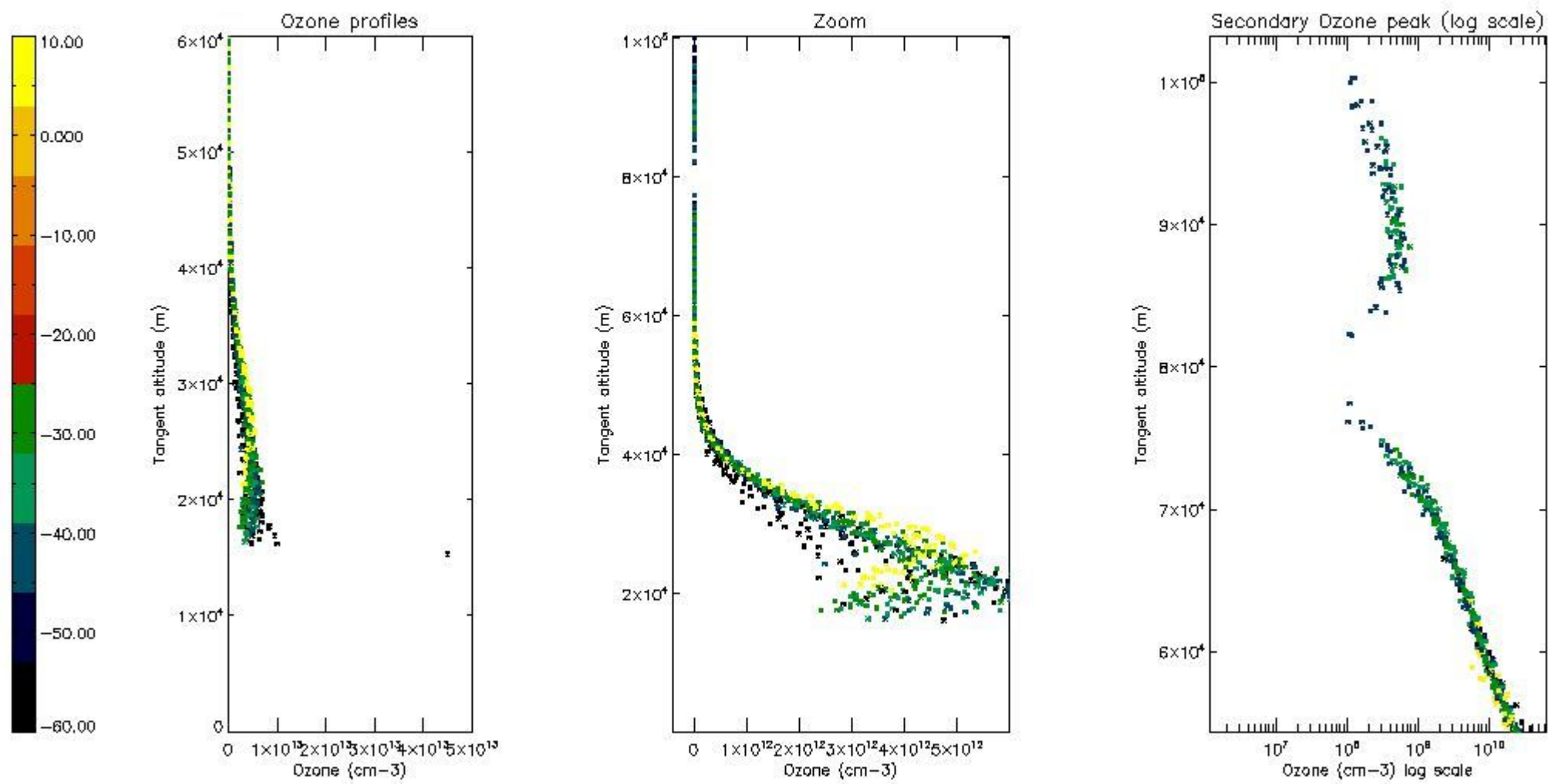
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



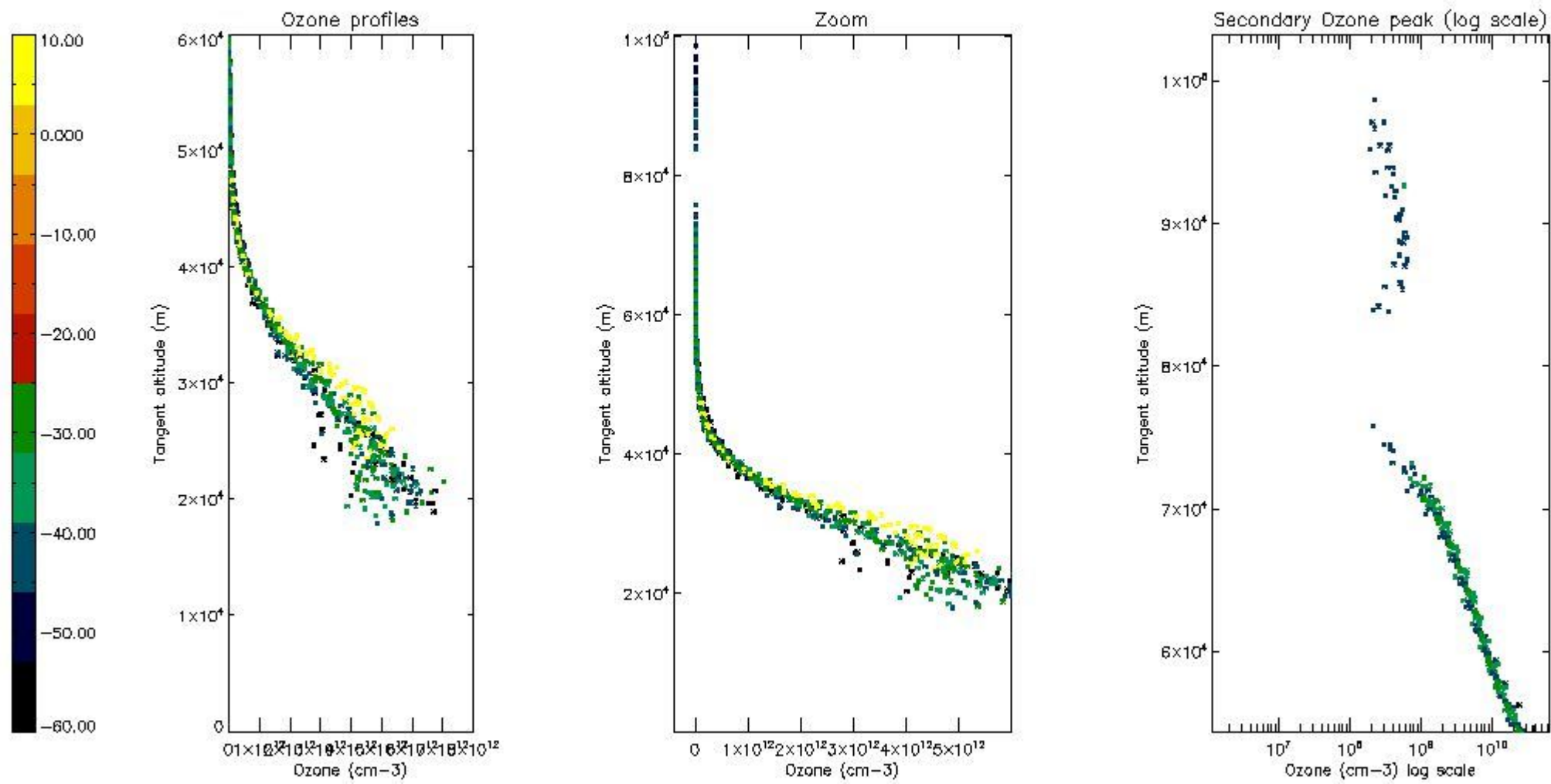
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



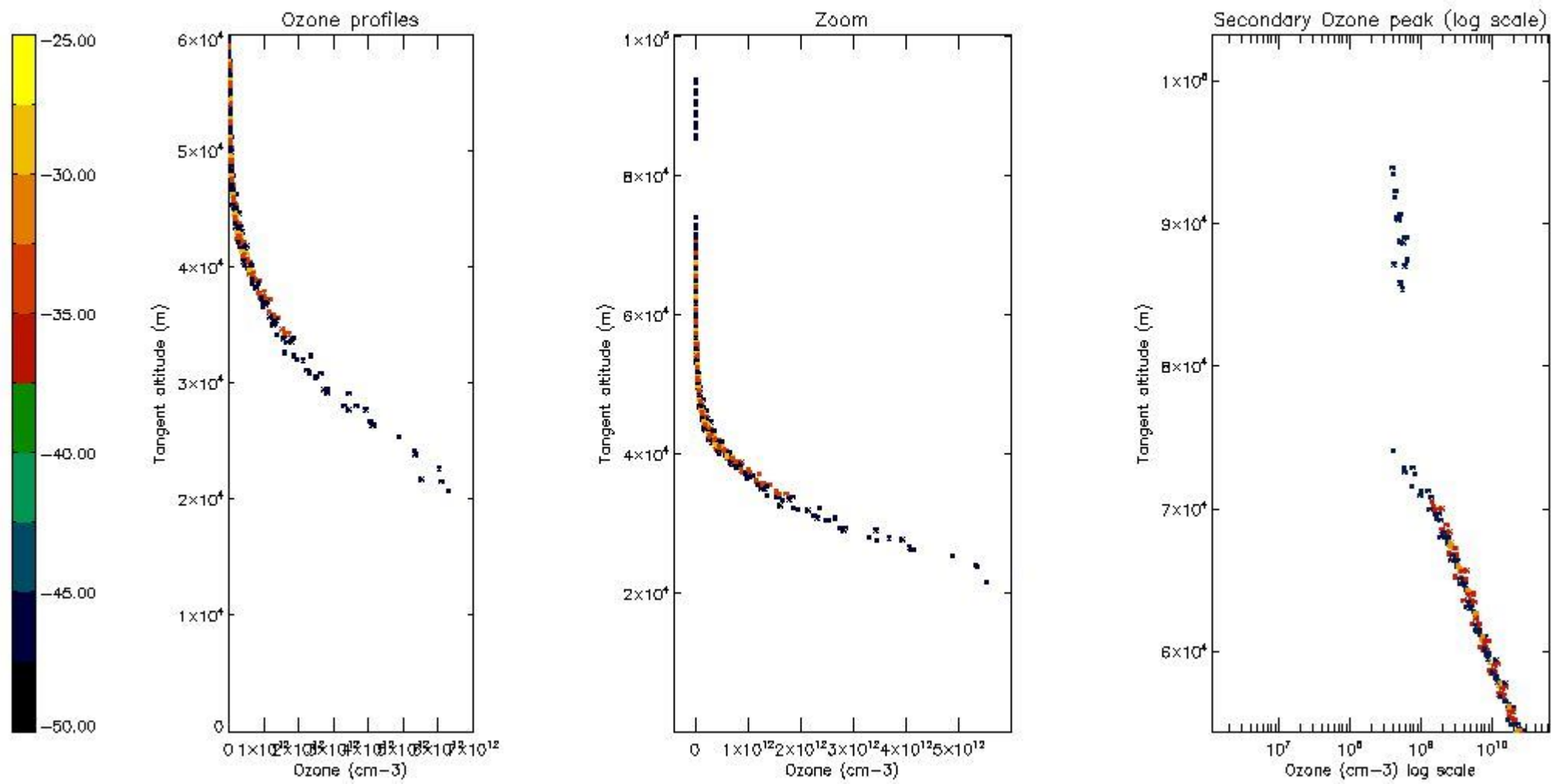
5.4 Plot ozone profiles where $STD < 10\%$ (dark without errors)

The colorbar represents the latitude.



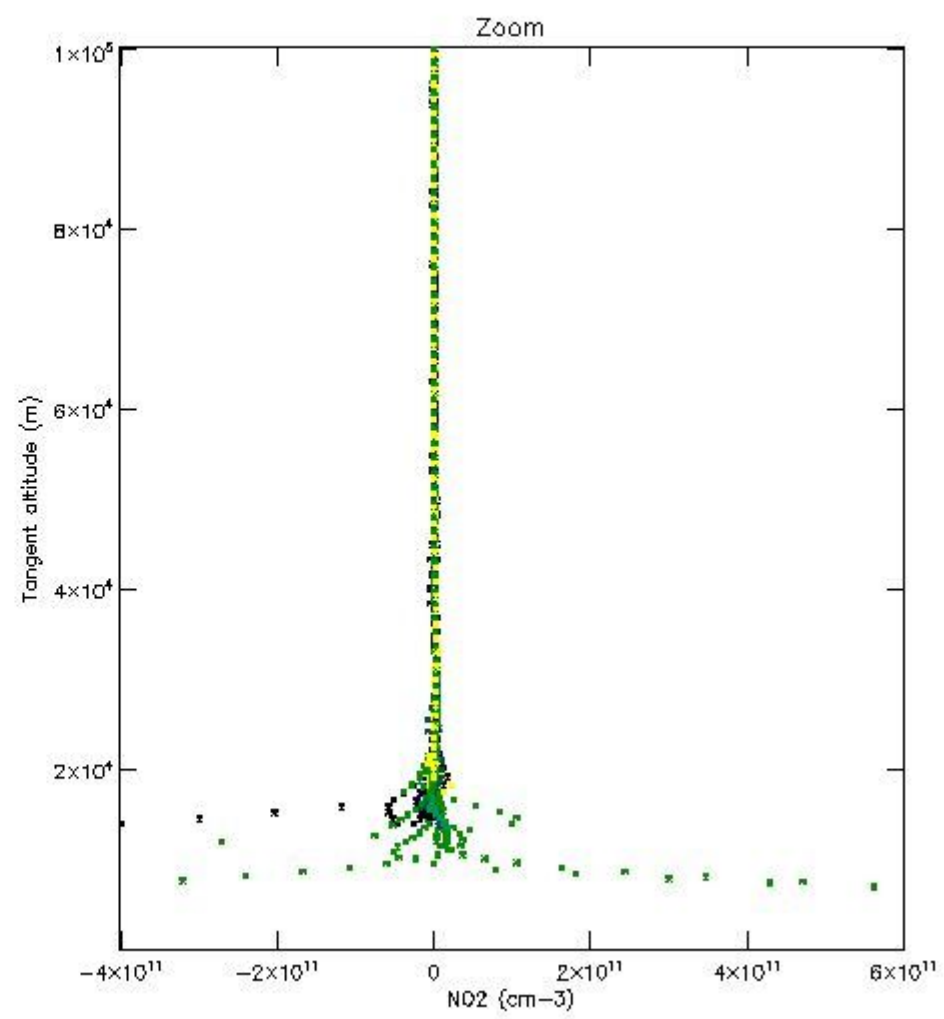
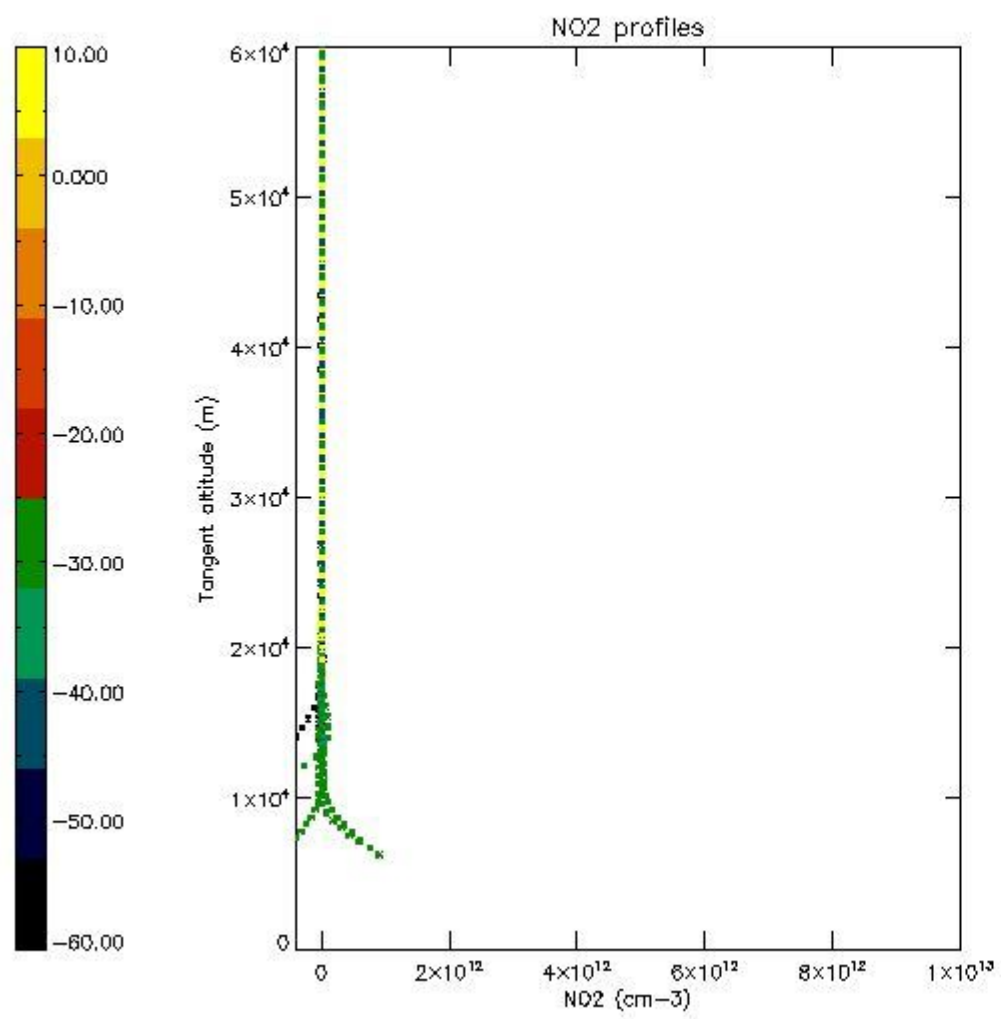
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



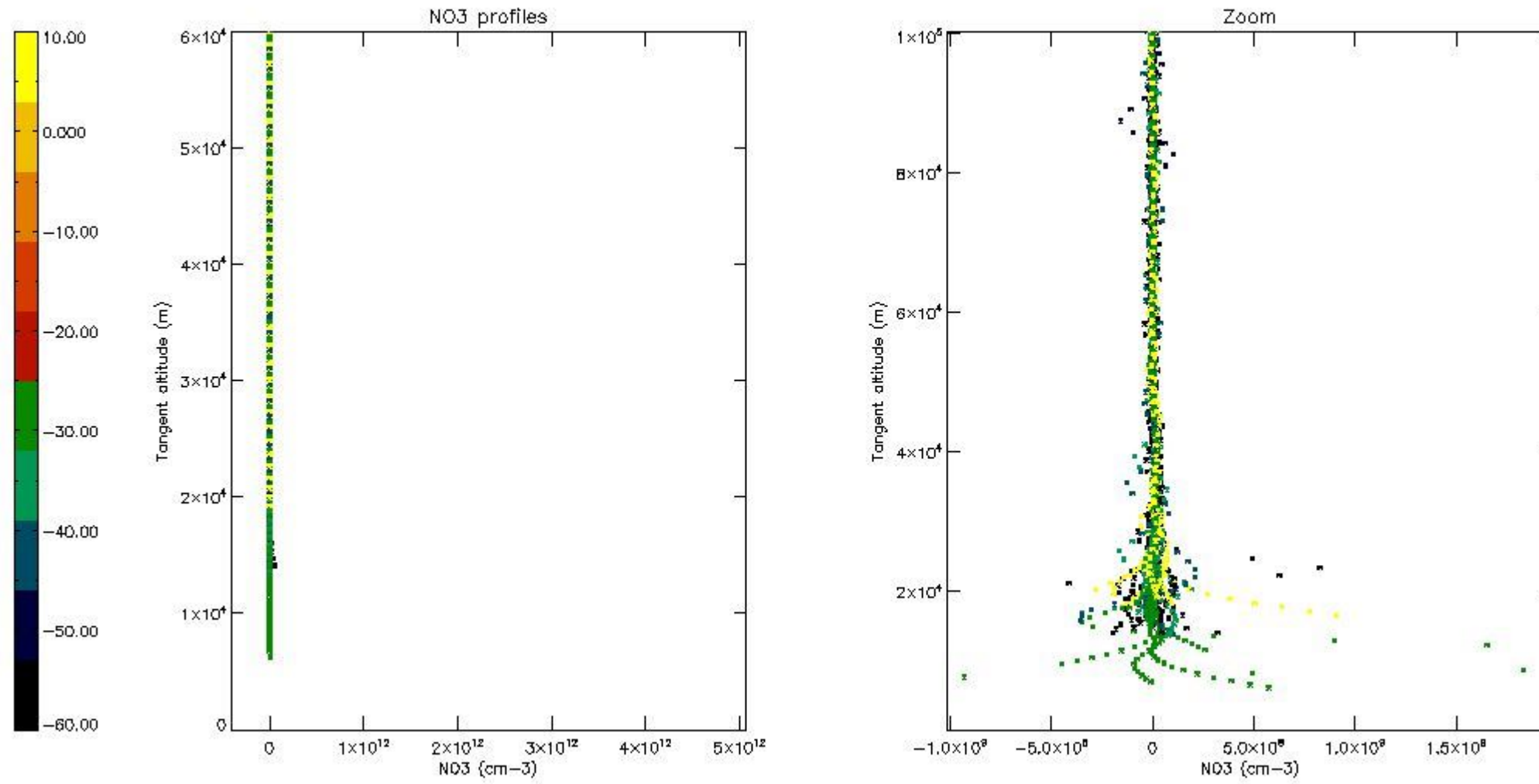
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

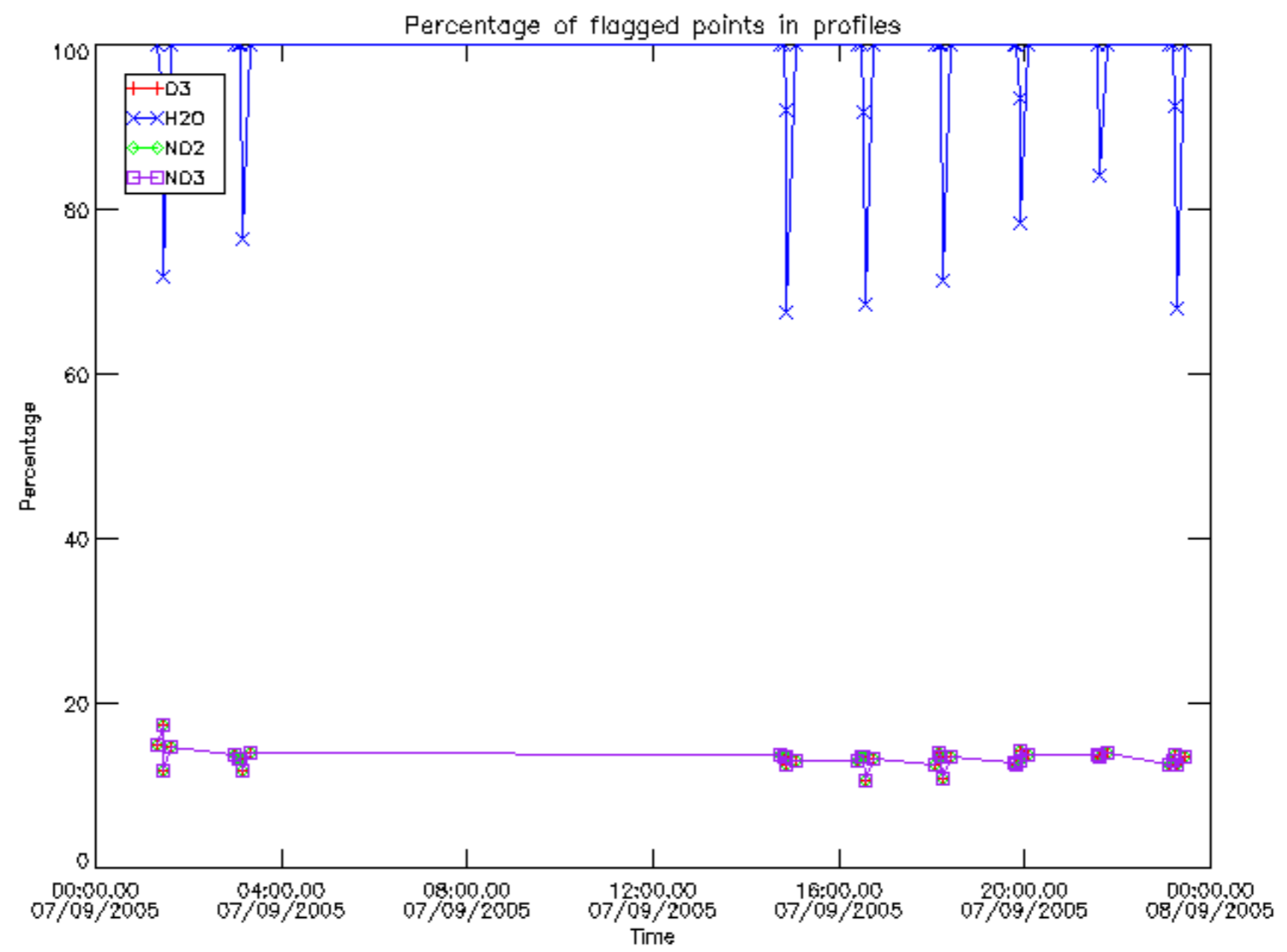
The colorbar represents the latitude.



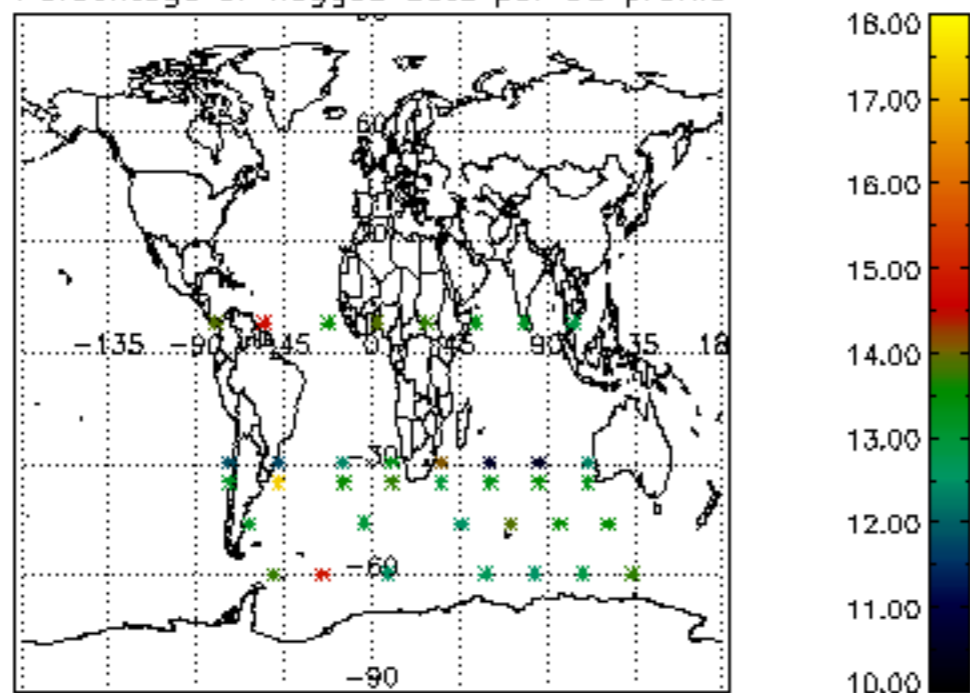
6. Auxiliary Data Files used for the production reported in section 2

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.

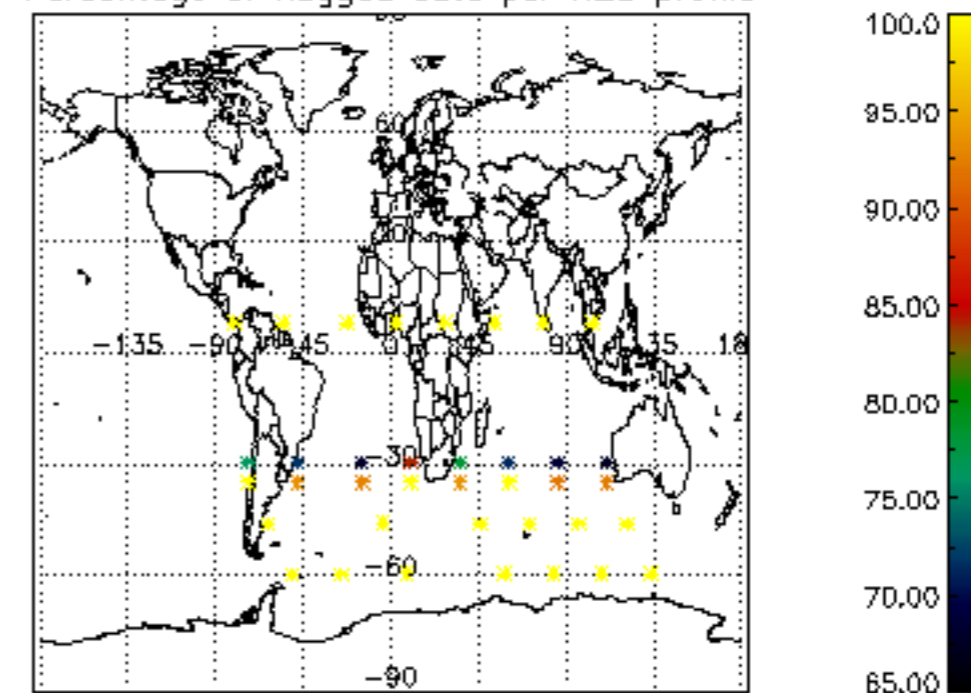
| Type | Auxiliary Filename | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1 | 07-SEP-2005 00:03:36 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 07-SEP-2005 00:03:36 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 07-SEP-2005 00:03:36 |



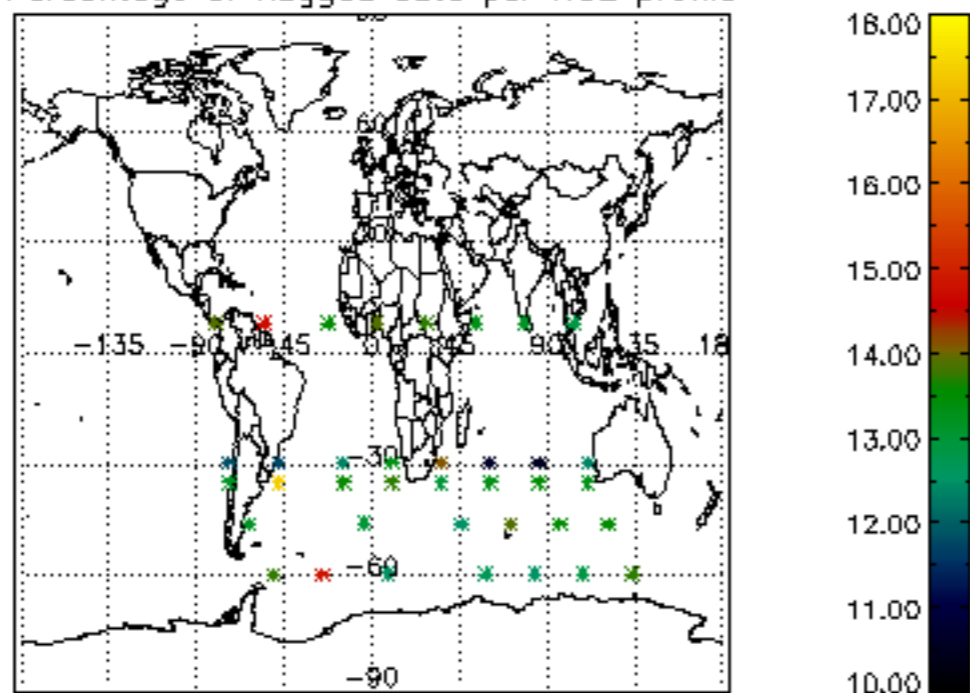
Percentage of flagged data per D3 profile



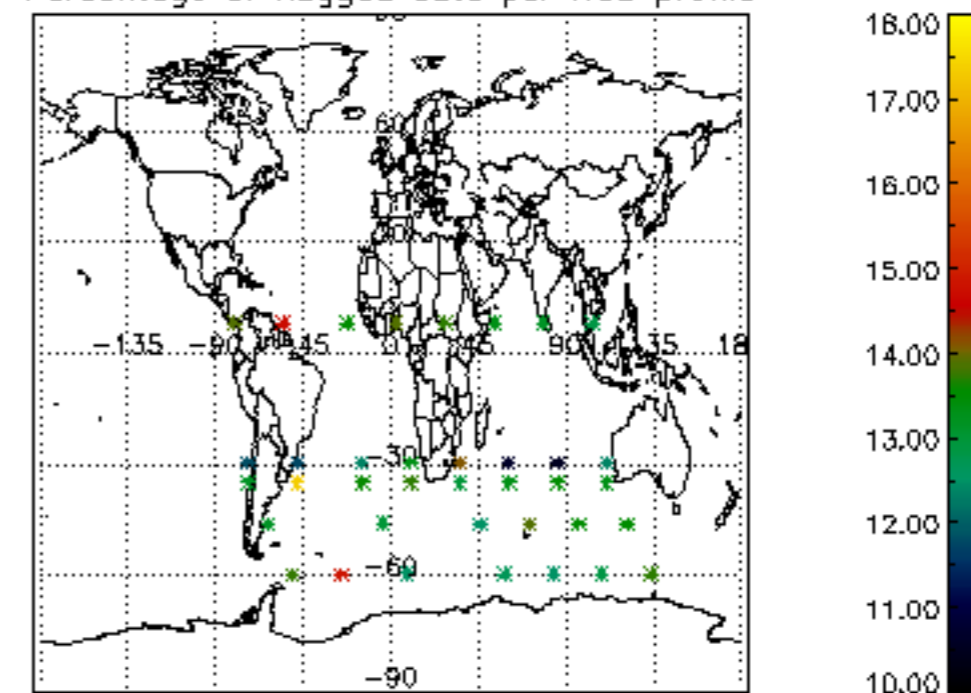
Percentage of flagged data per H2O profile

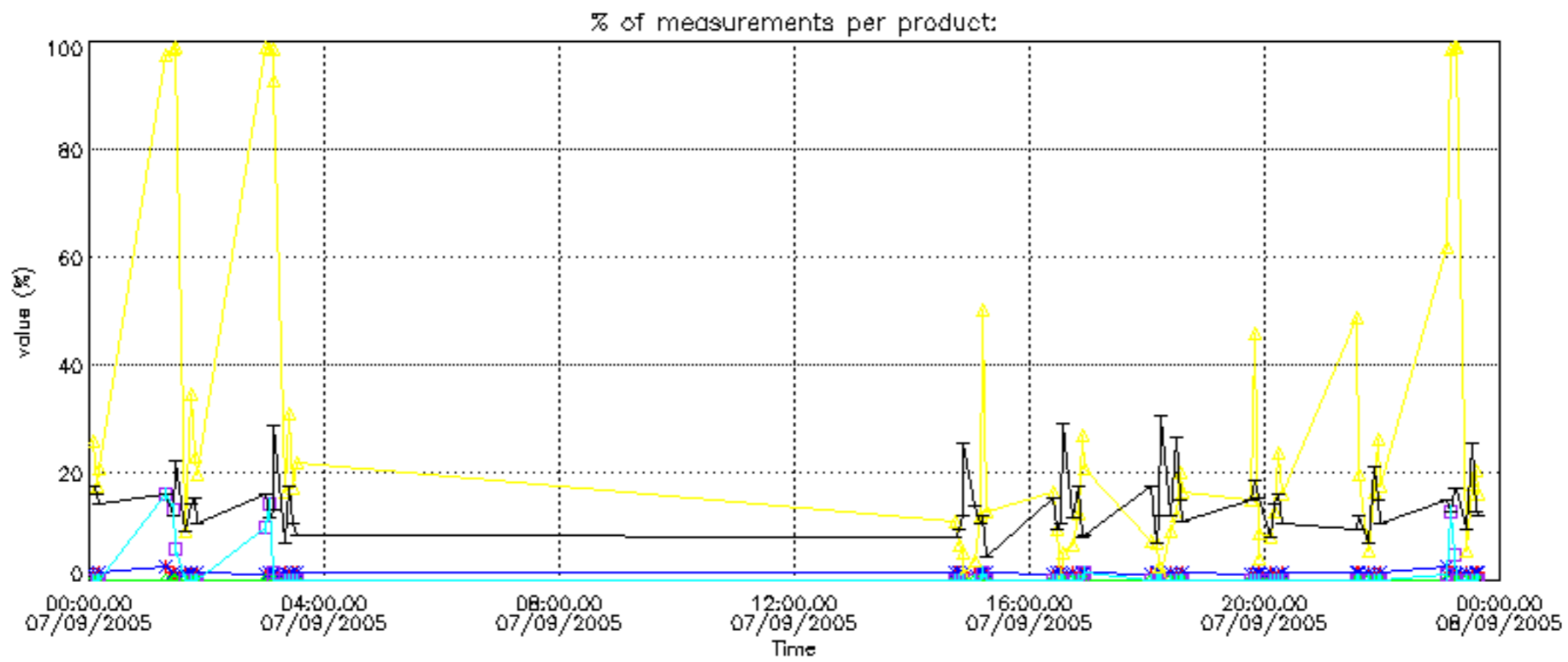


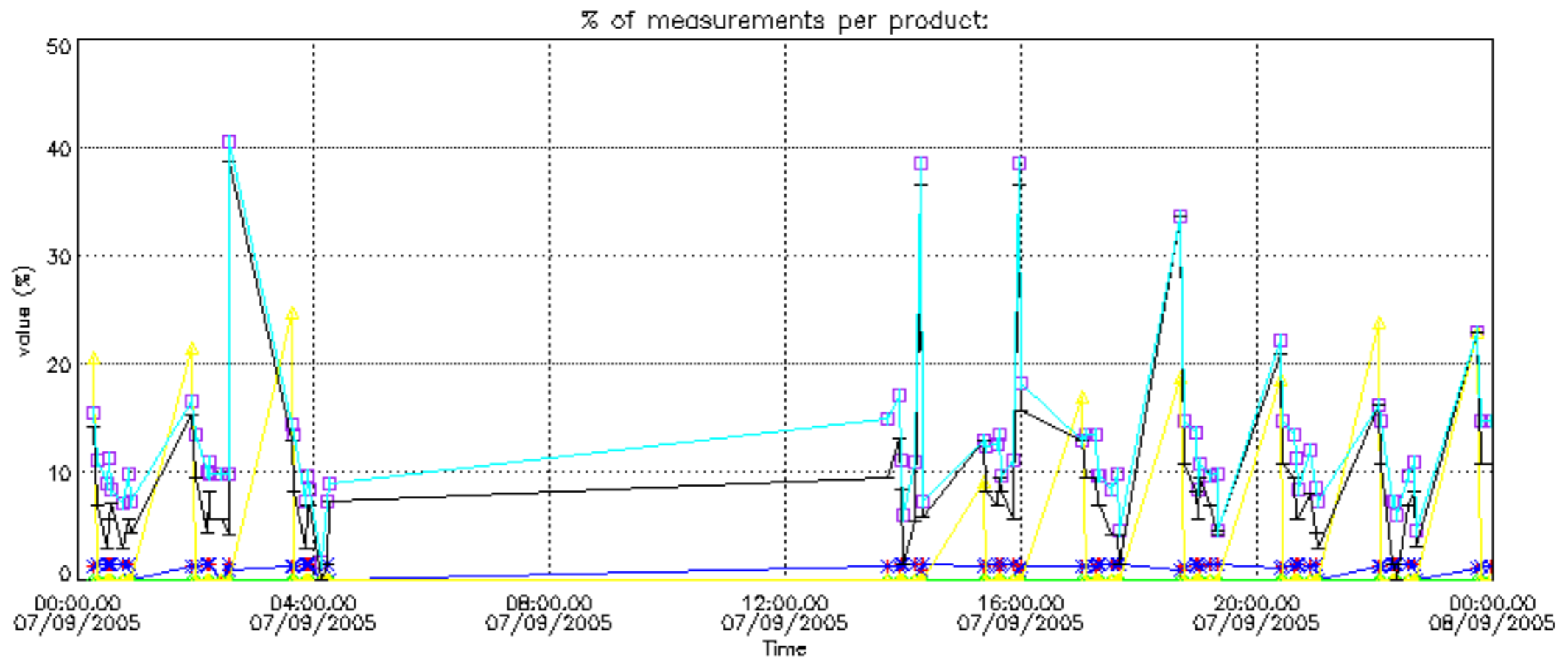
Percentage of flagged data per NO2 profile



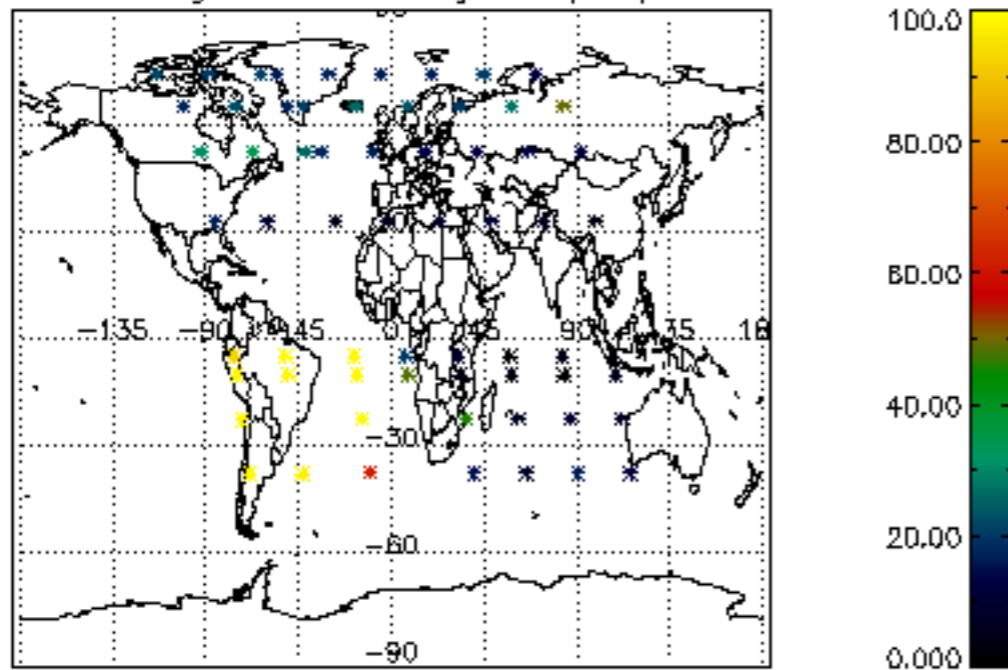
Percentage of flagged data per NO3 profile



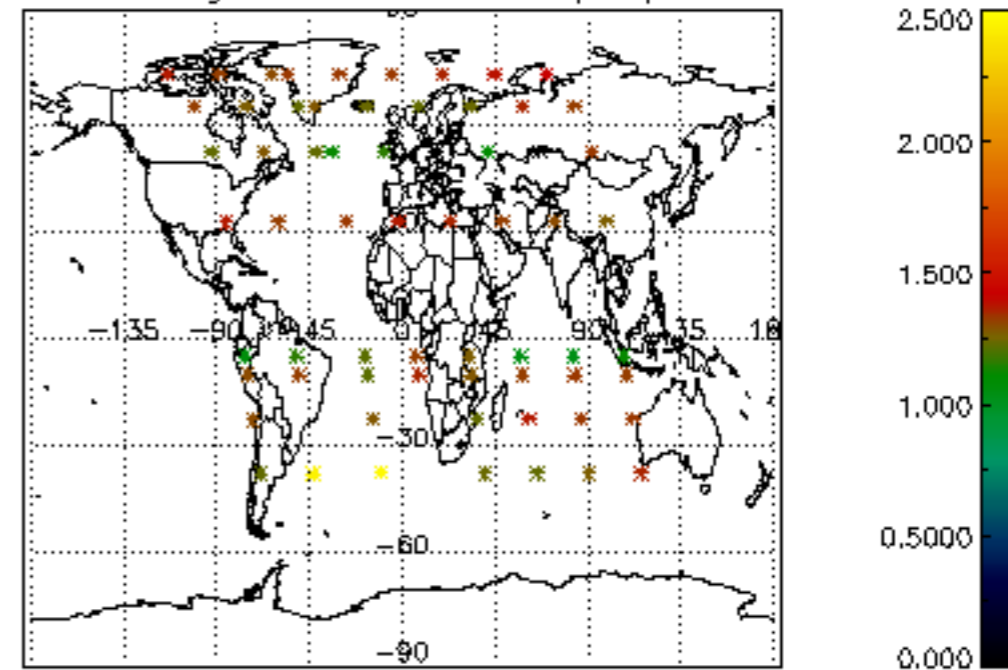




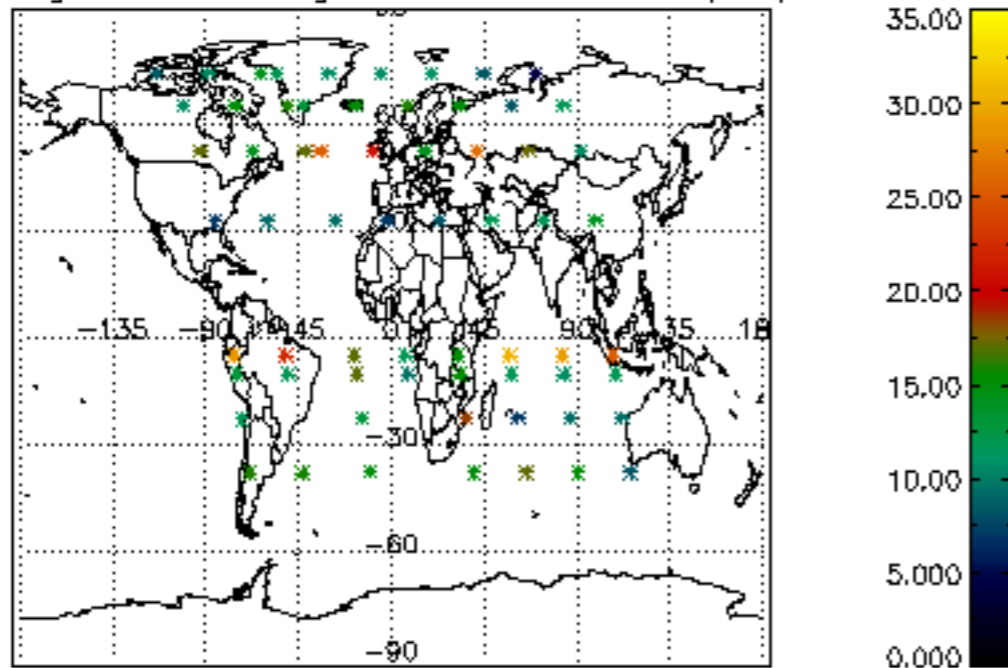
Percentage of cosmic ray hits per profile



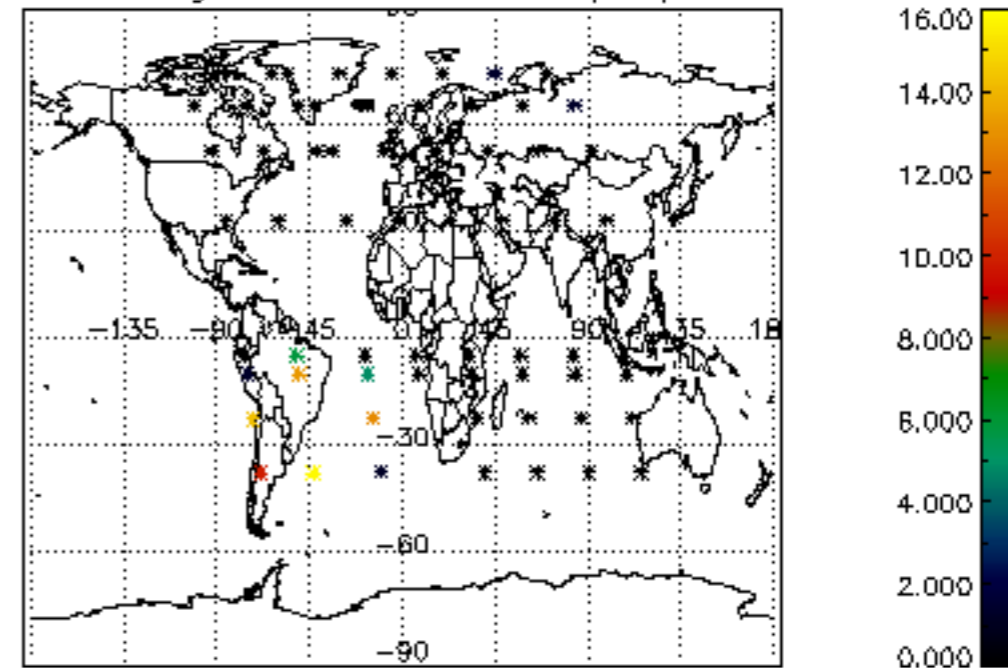
Percentage of datation errors per profile



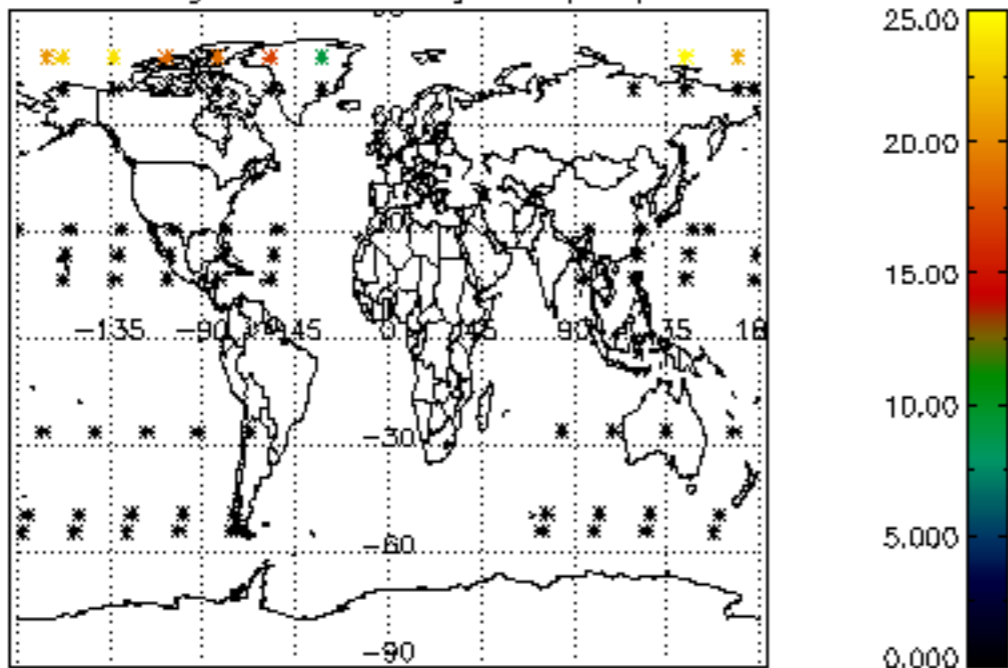
Percentage of star falling outside central band per profile



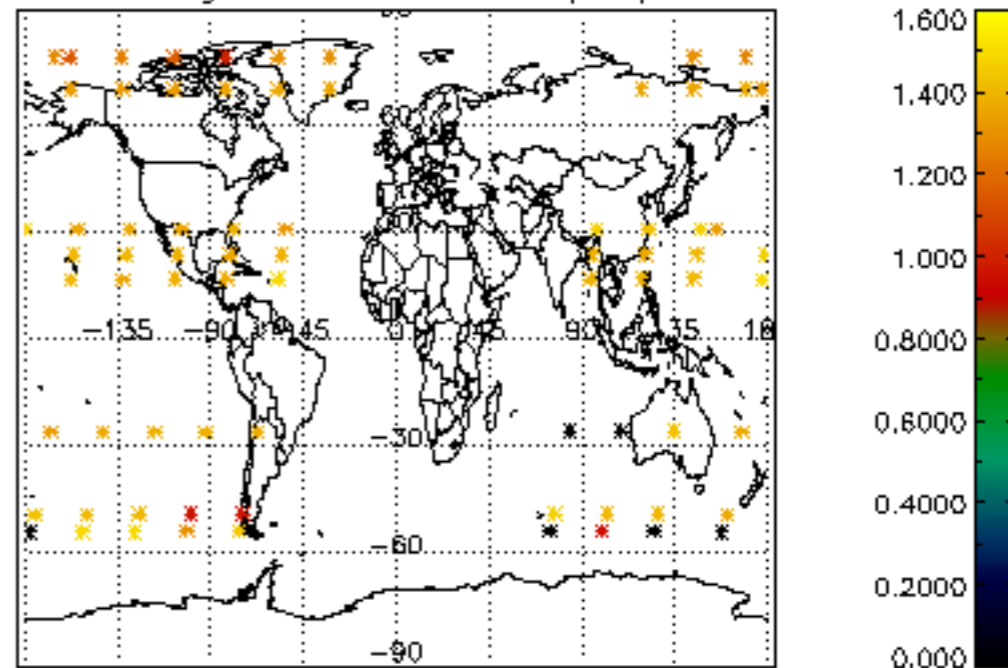
Percentage of saturation errors per profile



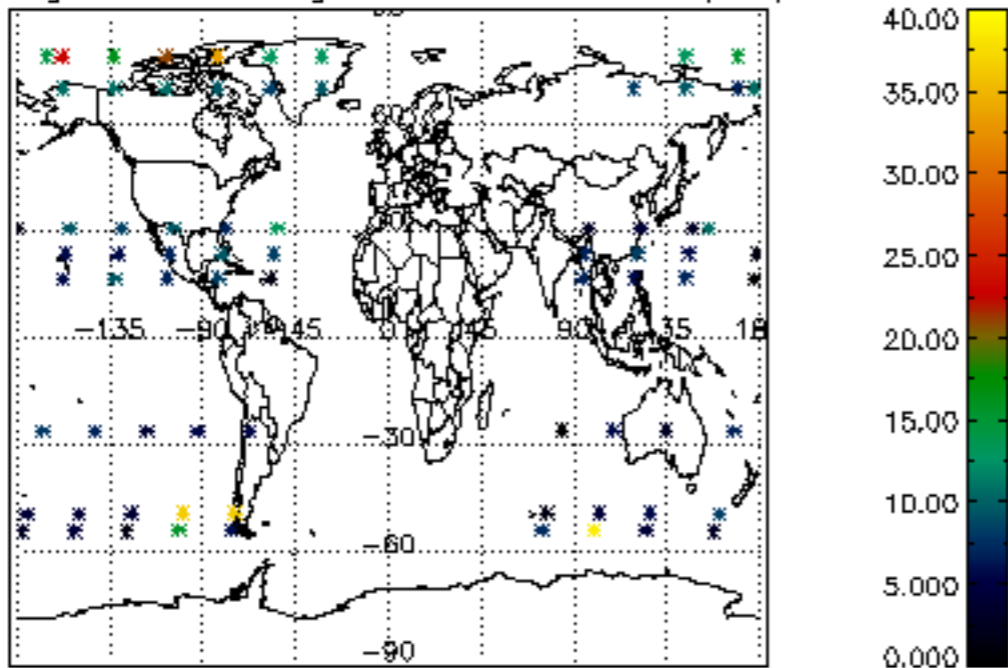
Percentage of cosmic ray hits per profile



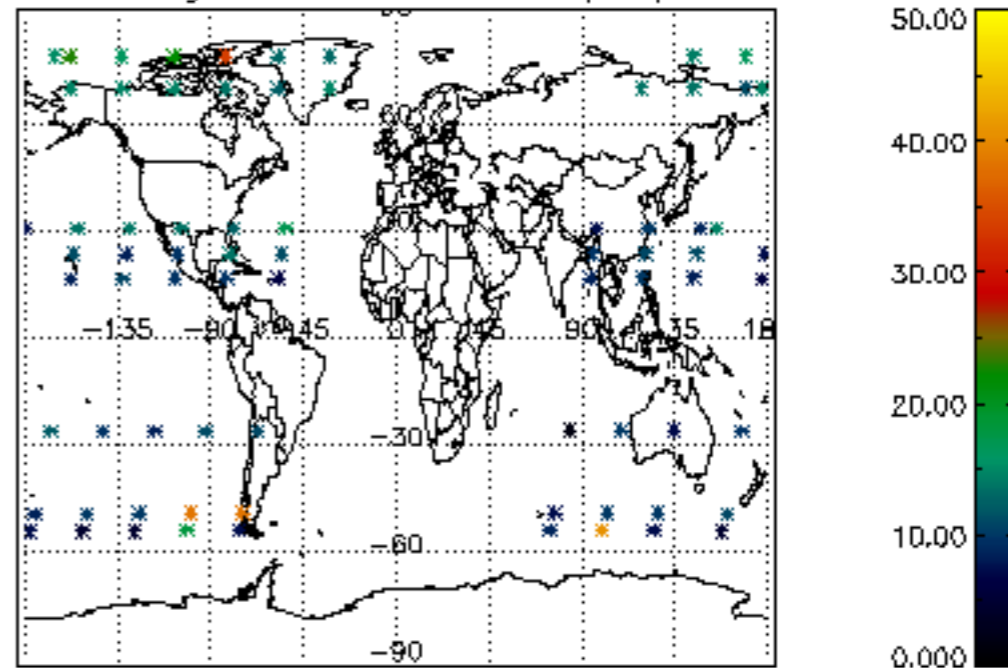
Percentage of datation errors per profile

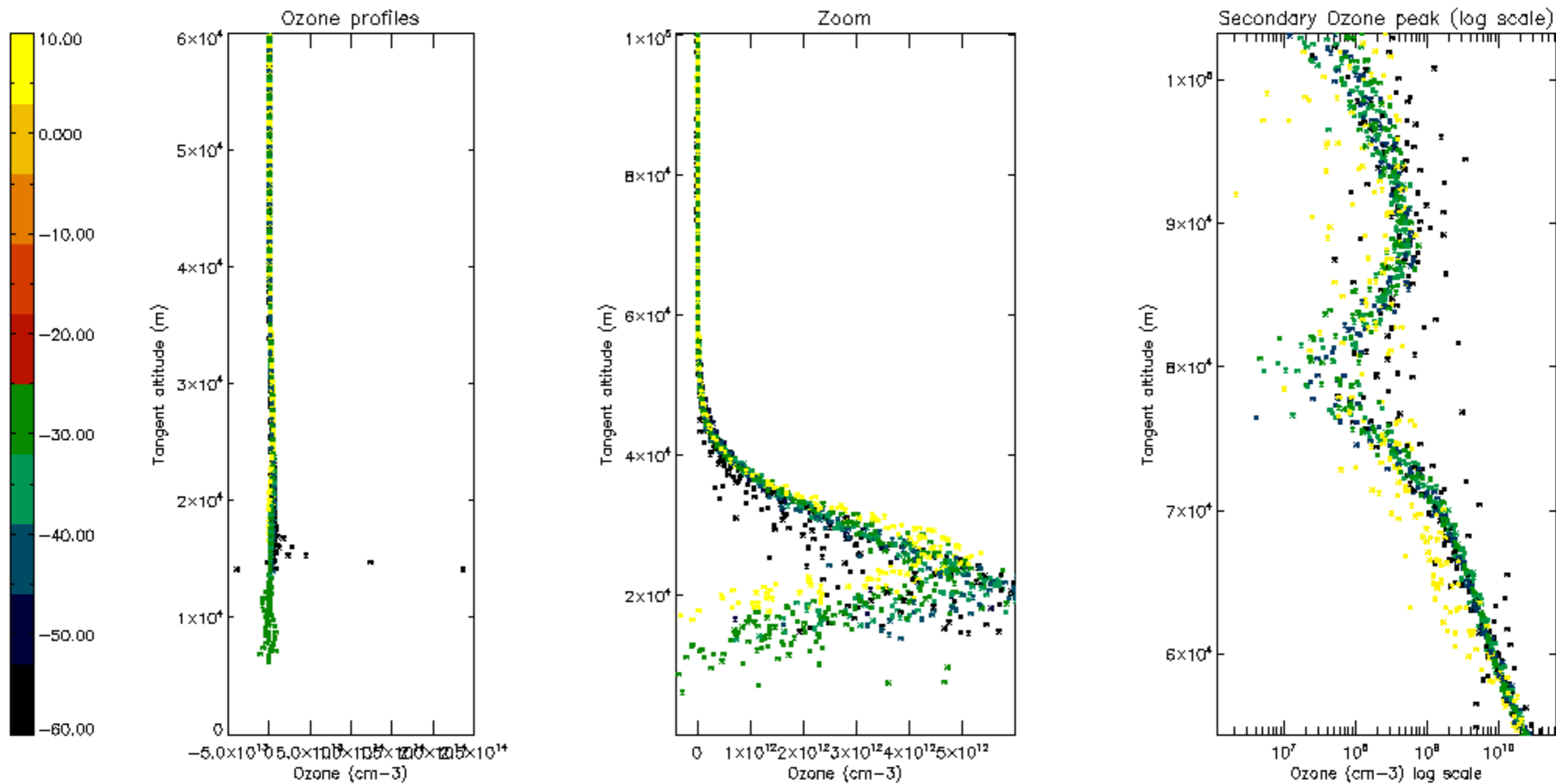


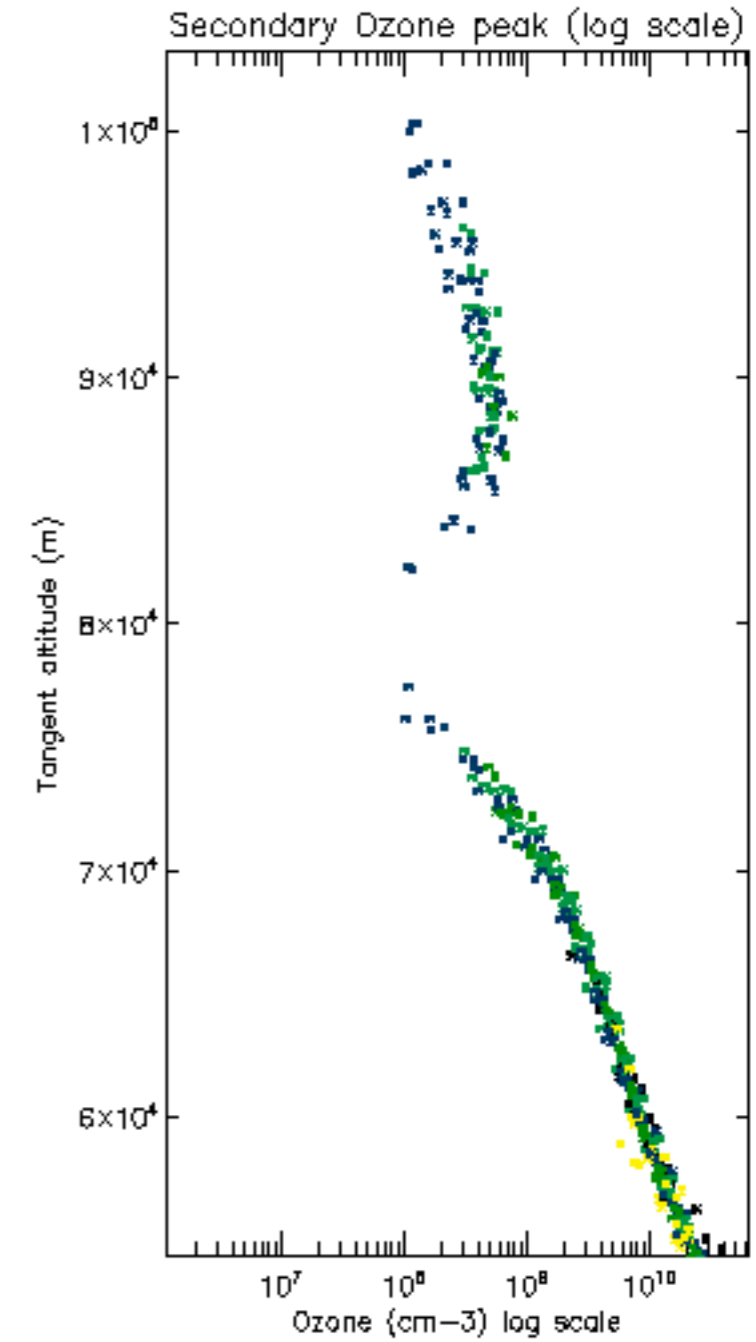
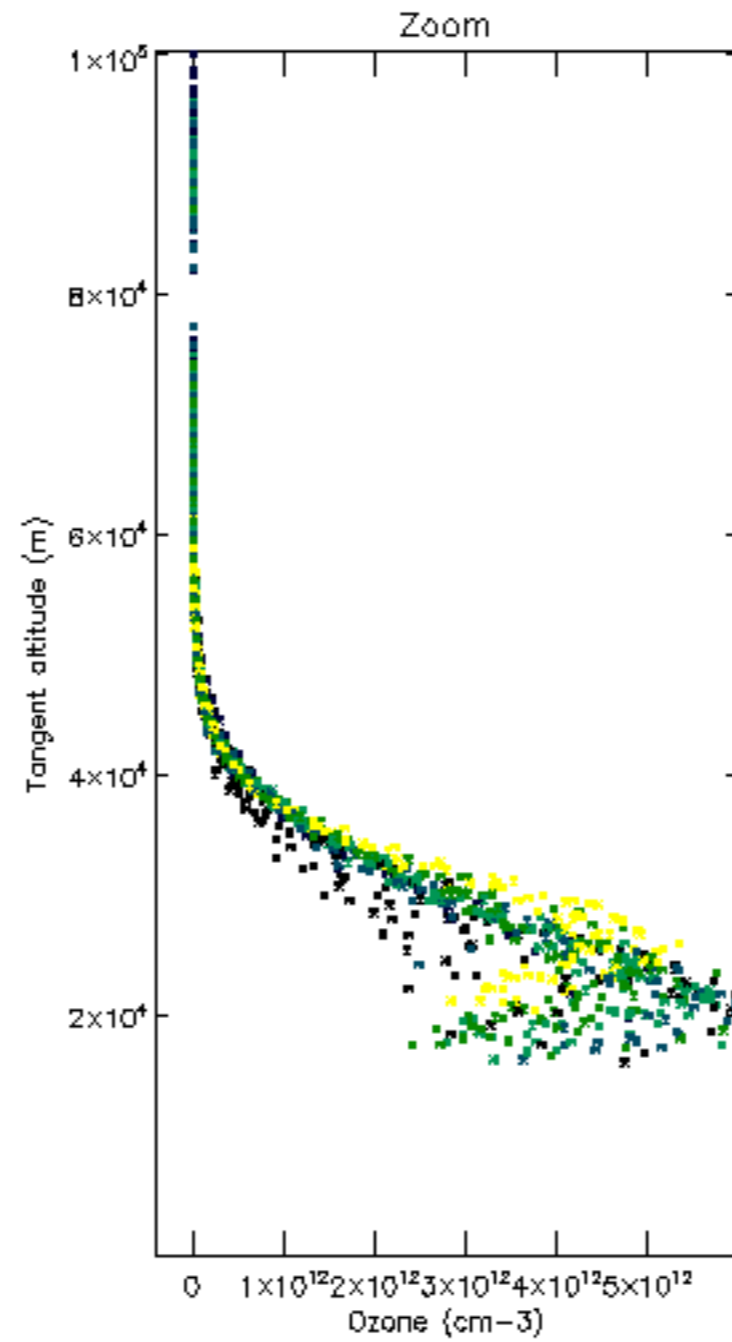
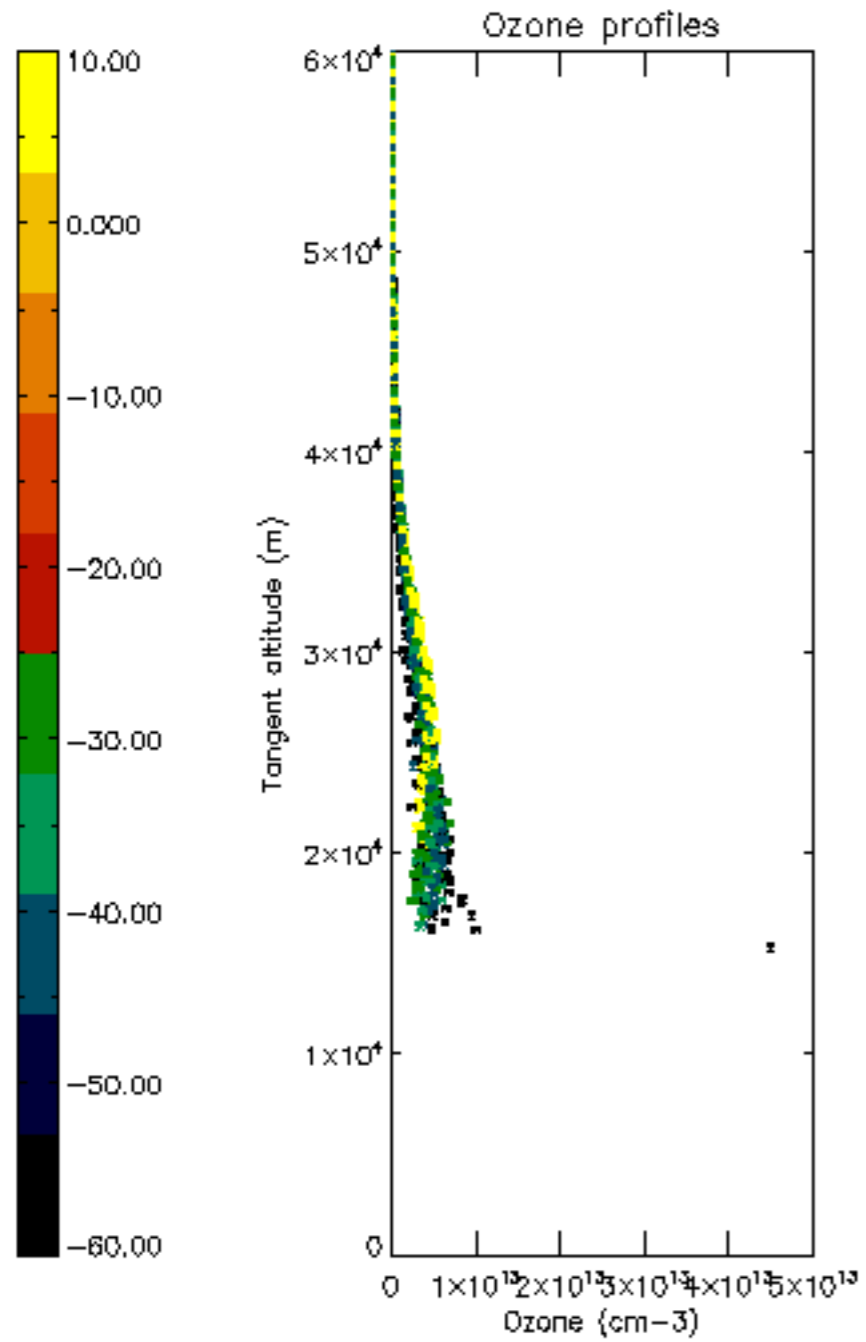
Percentage of star falling outside central band per profile

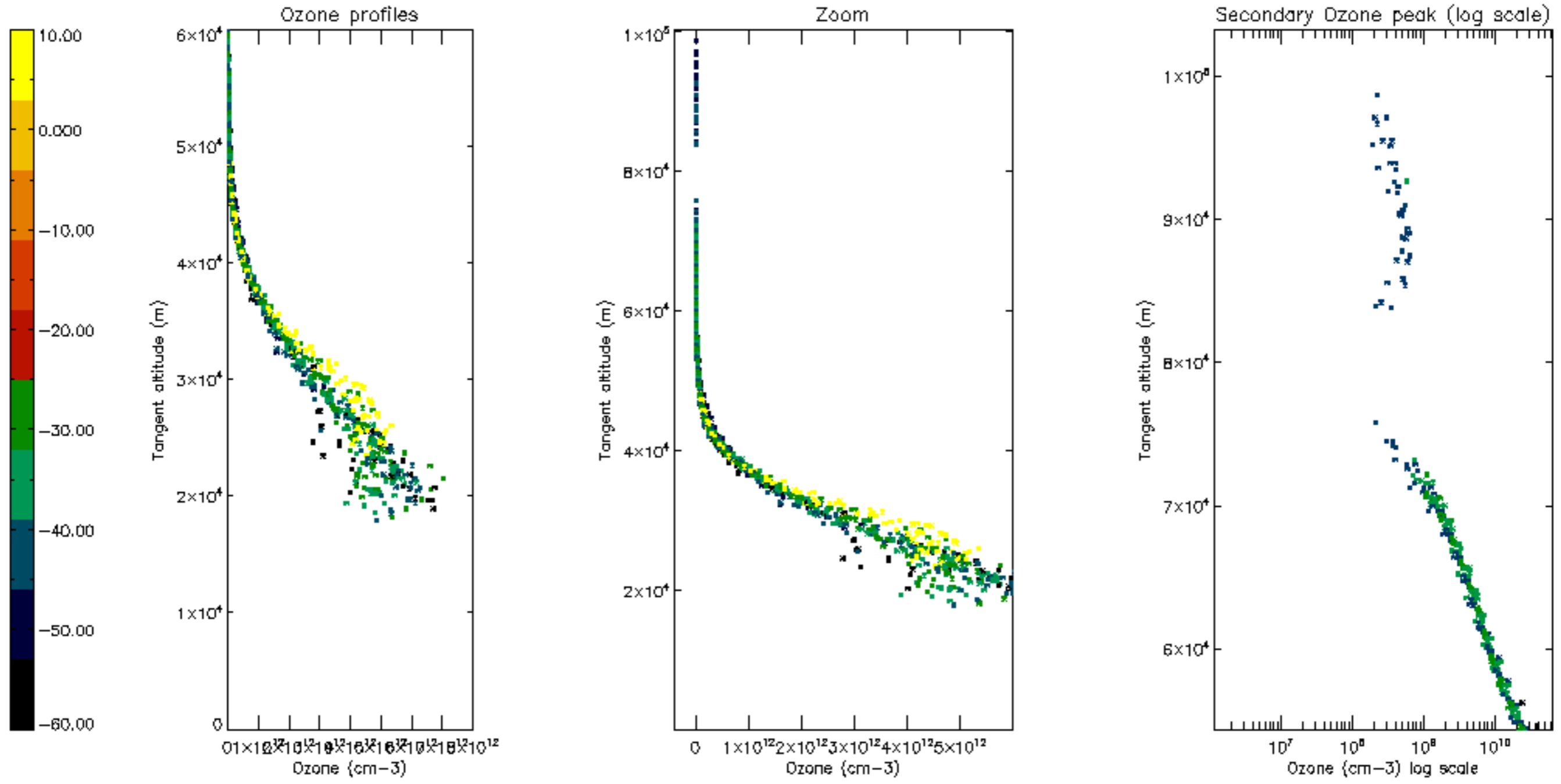


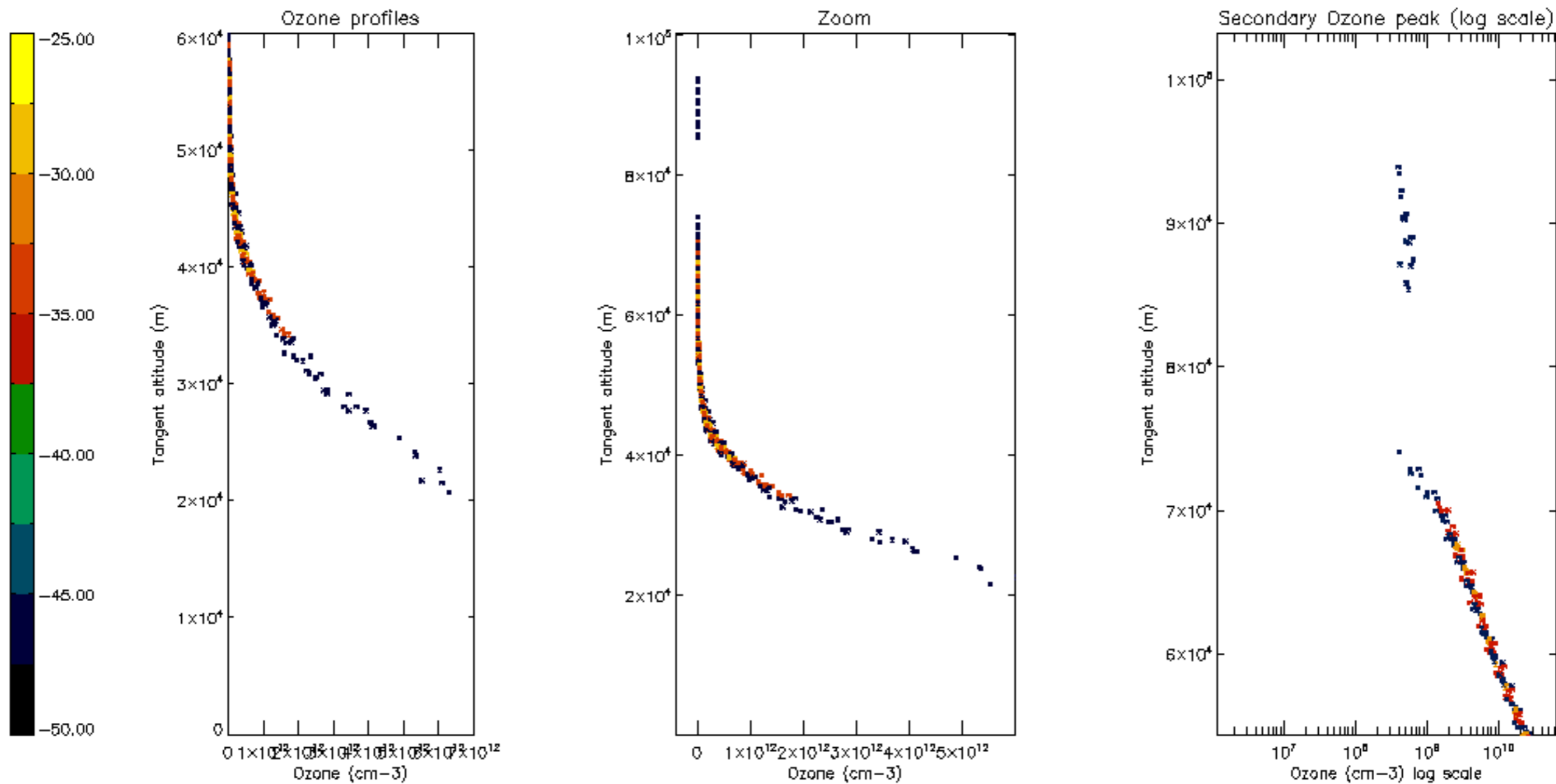
Percentage of saturation errors per profile

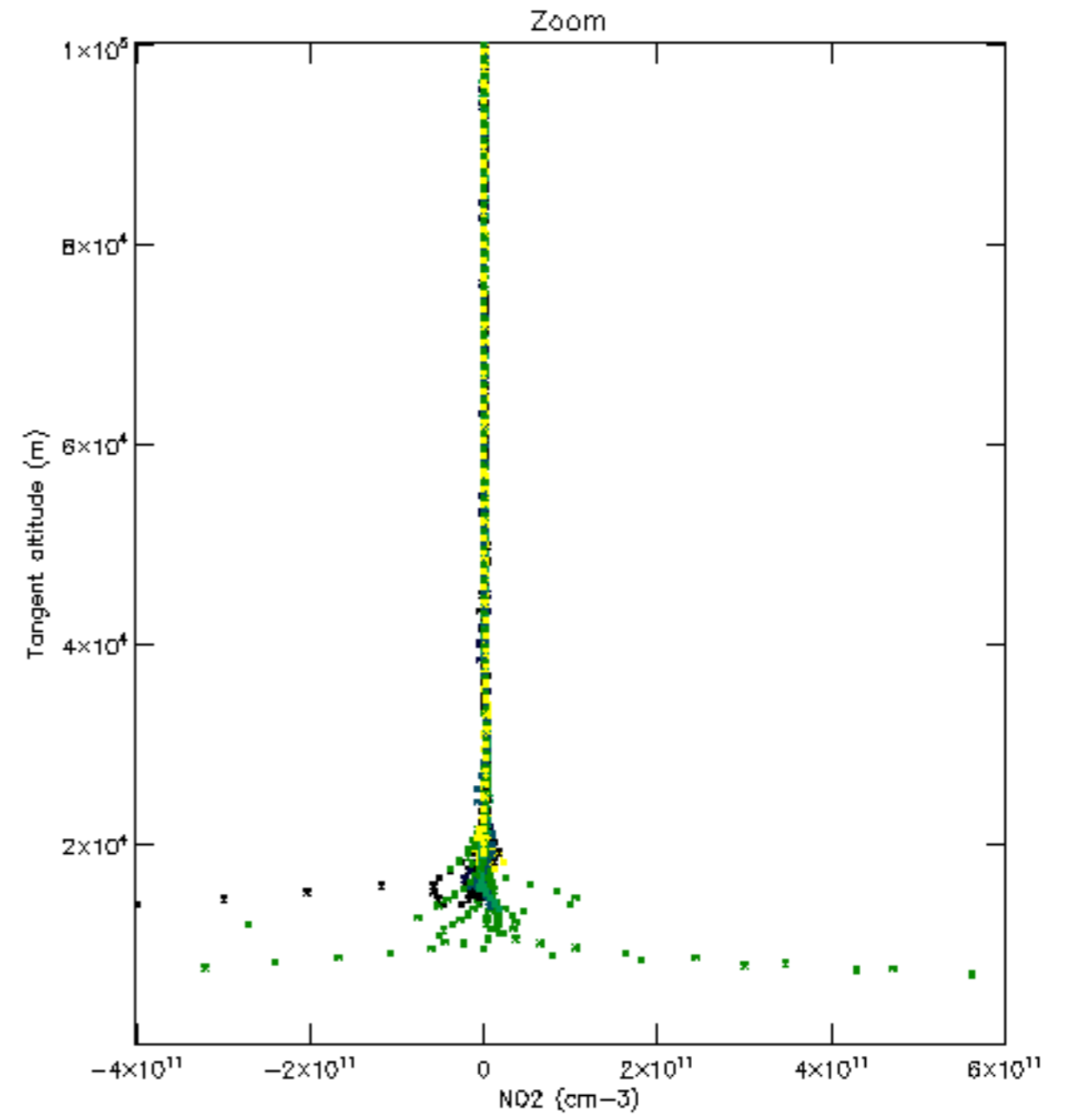
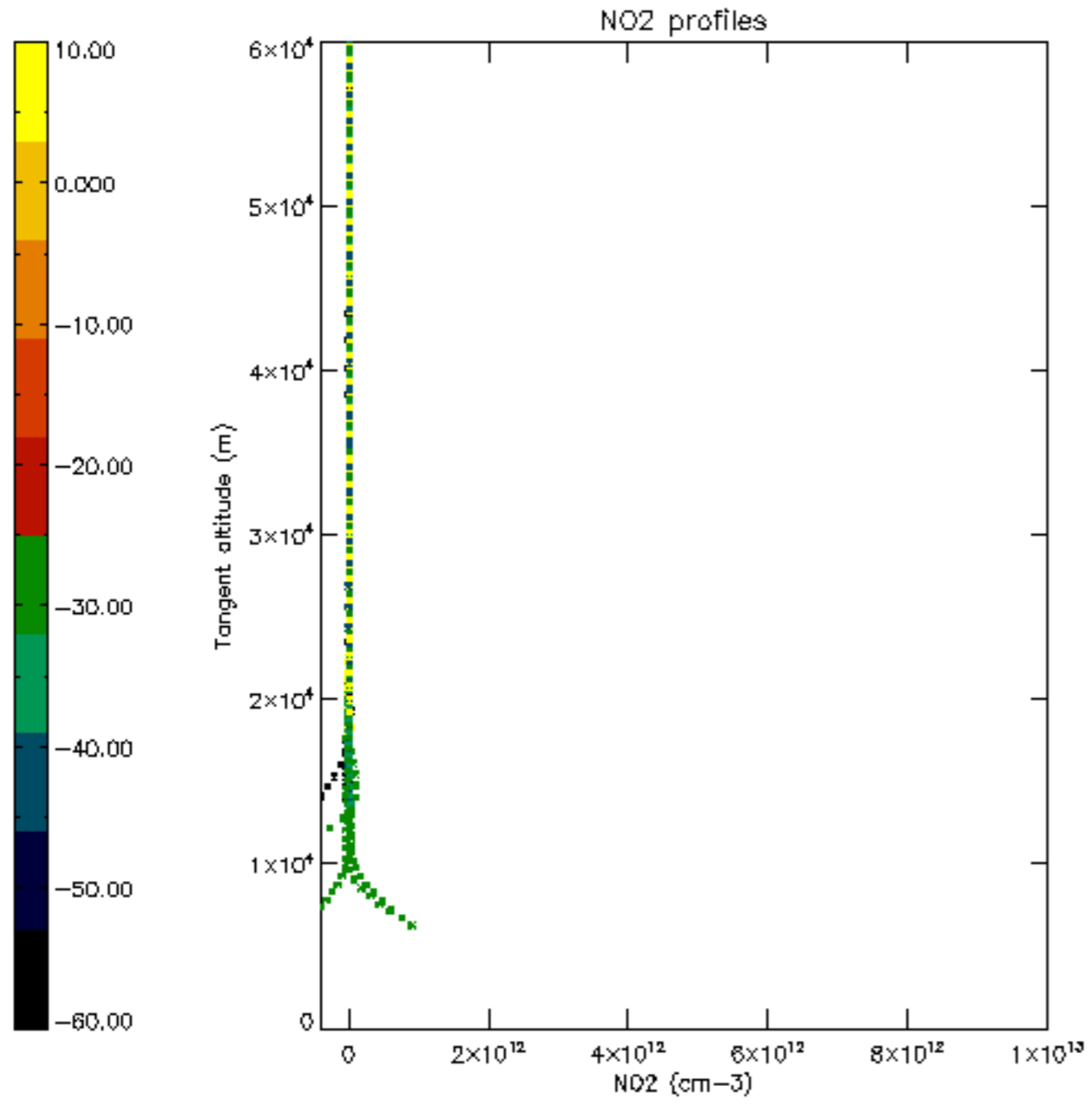


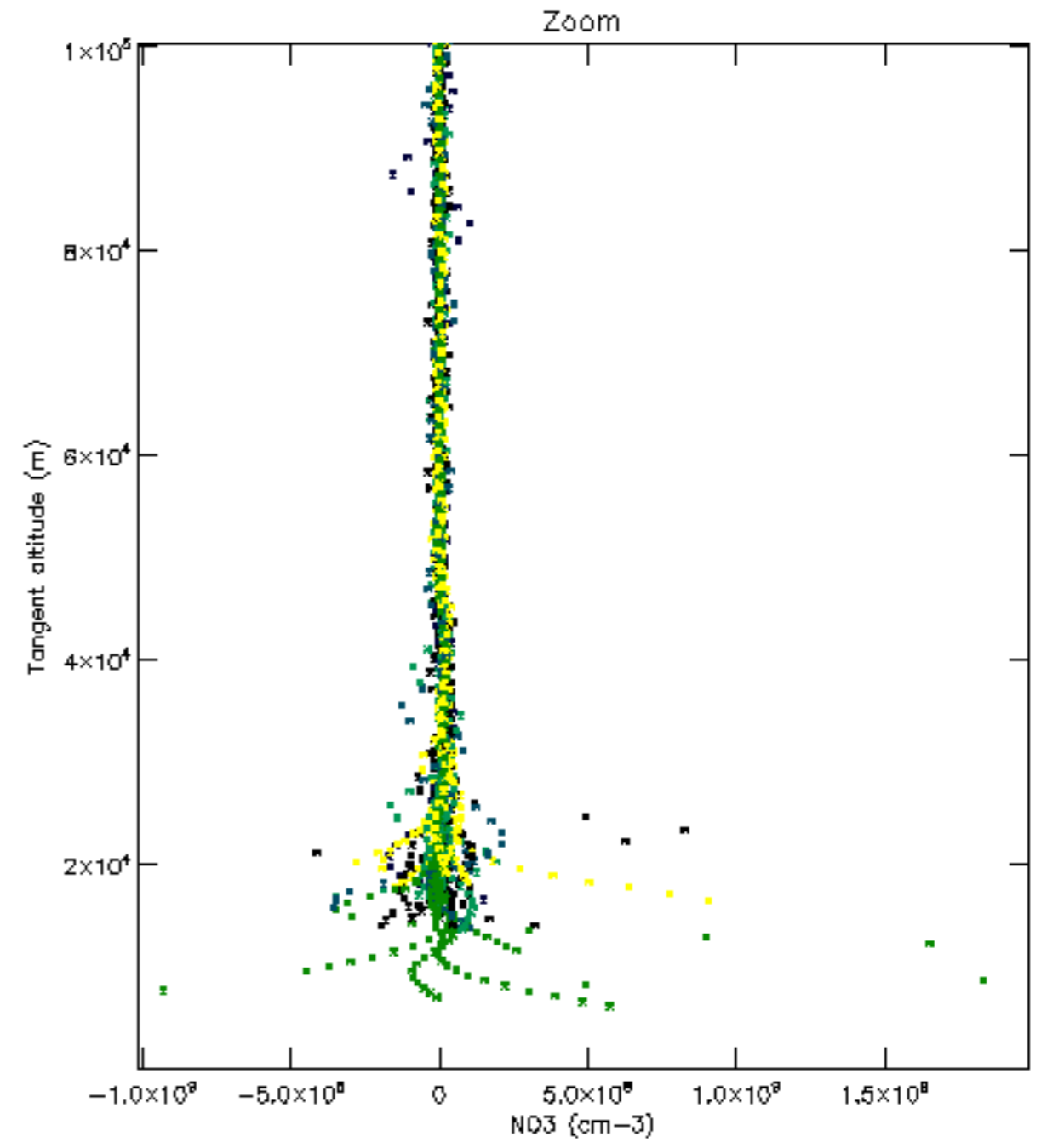
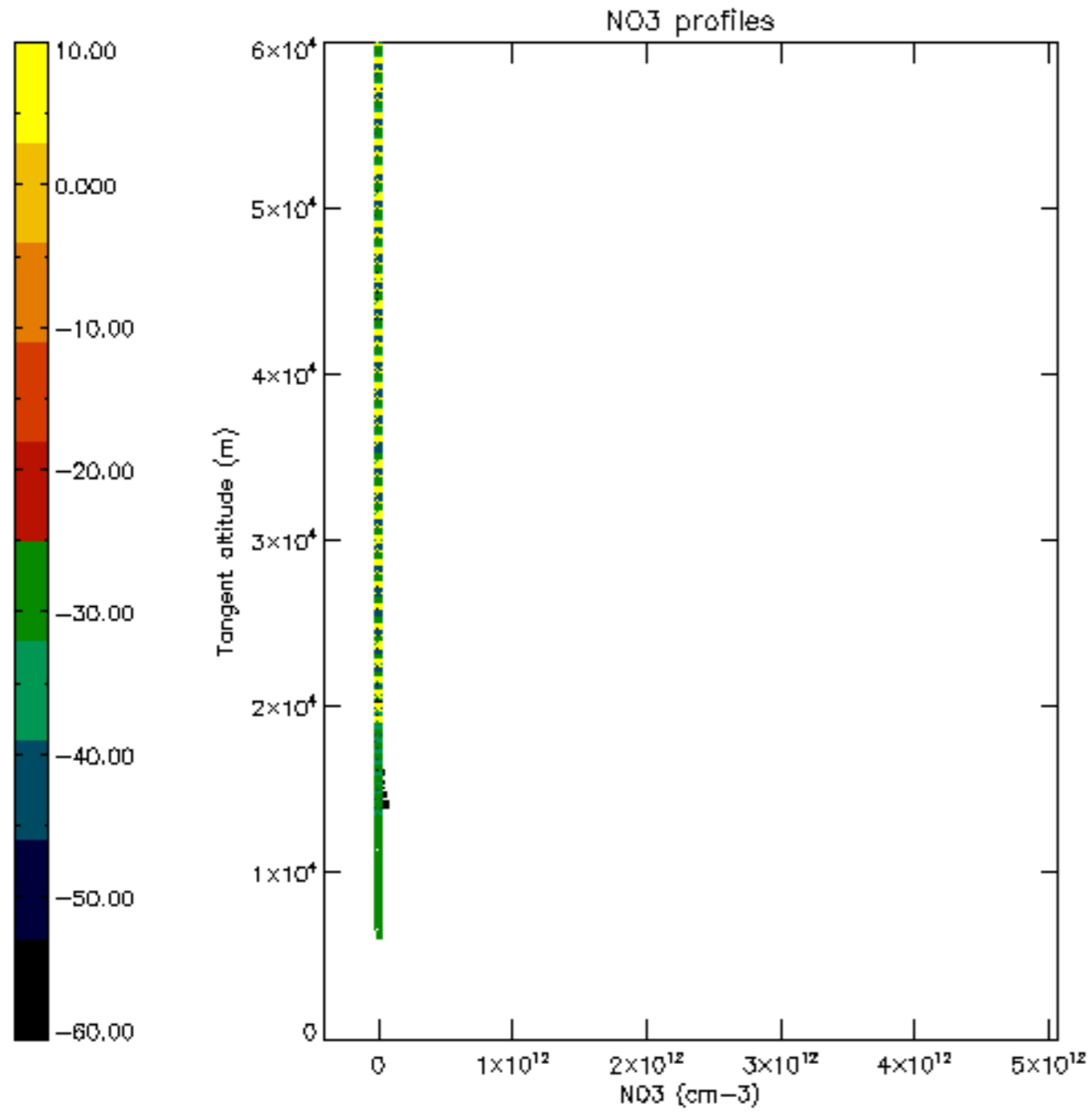


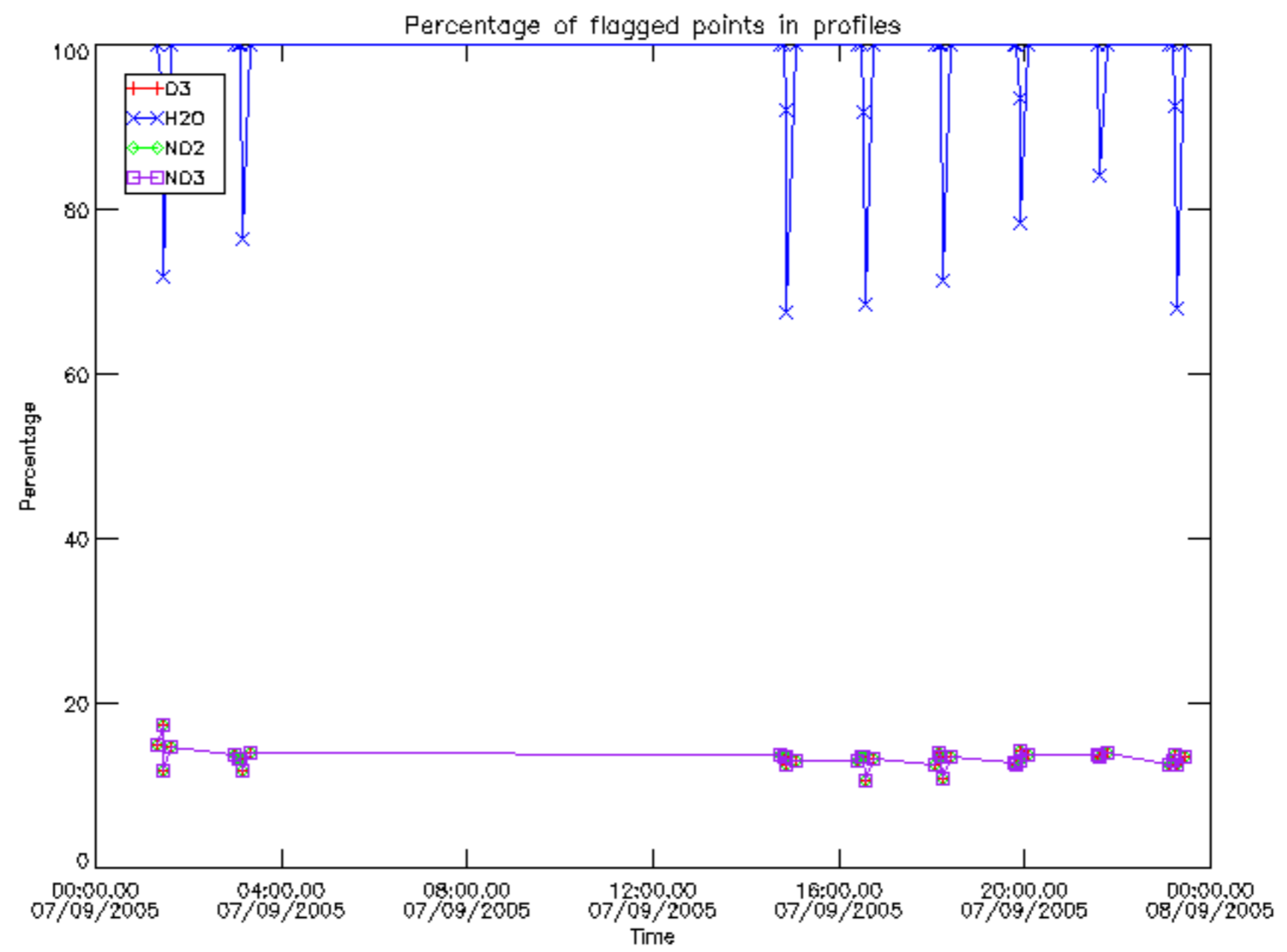




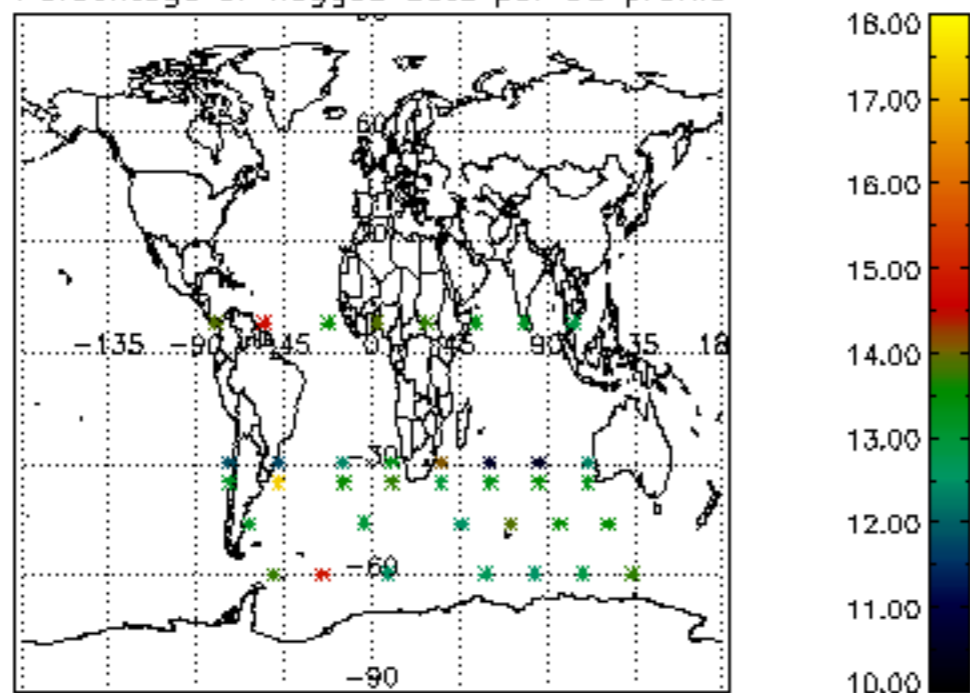




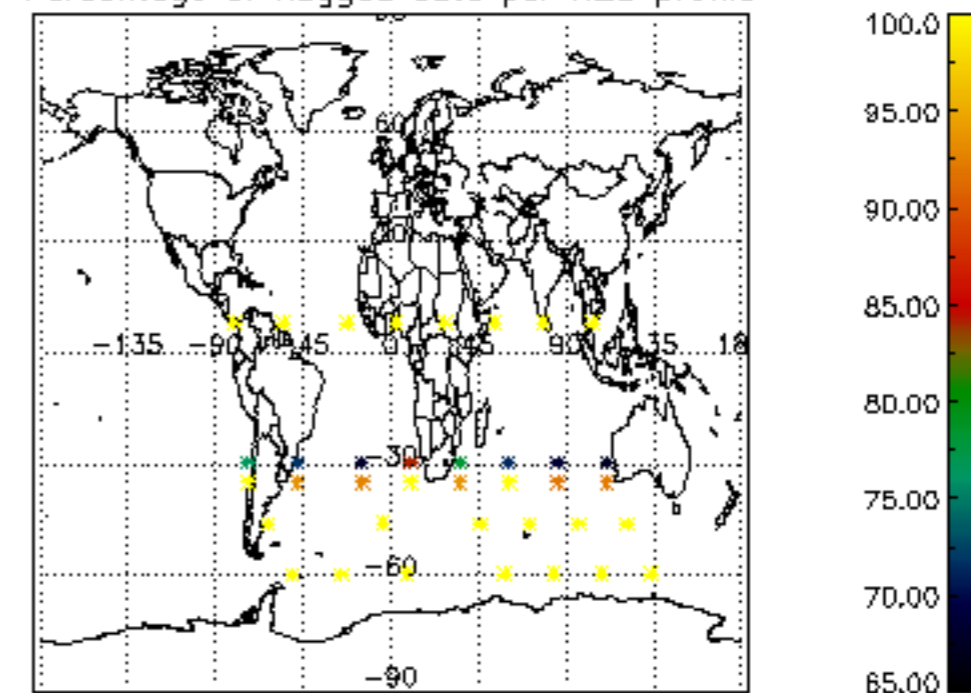




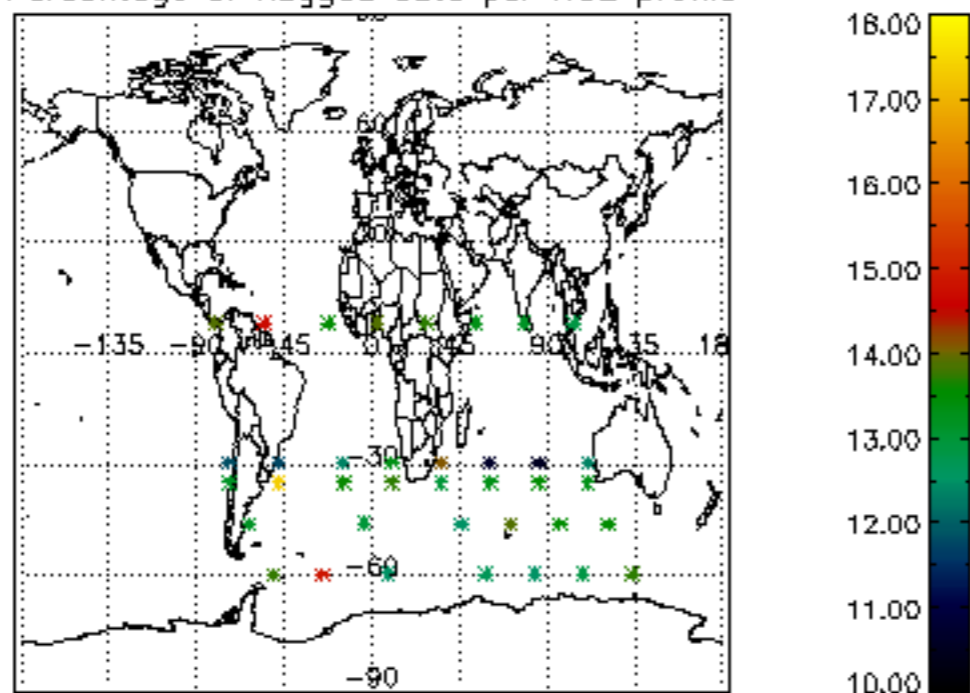
Percentage of flagged data per D3 profile



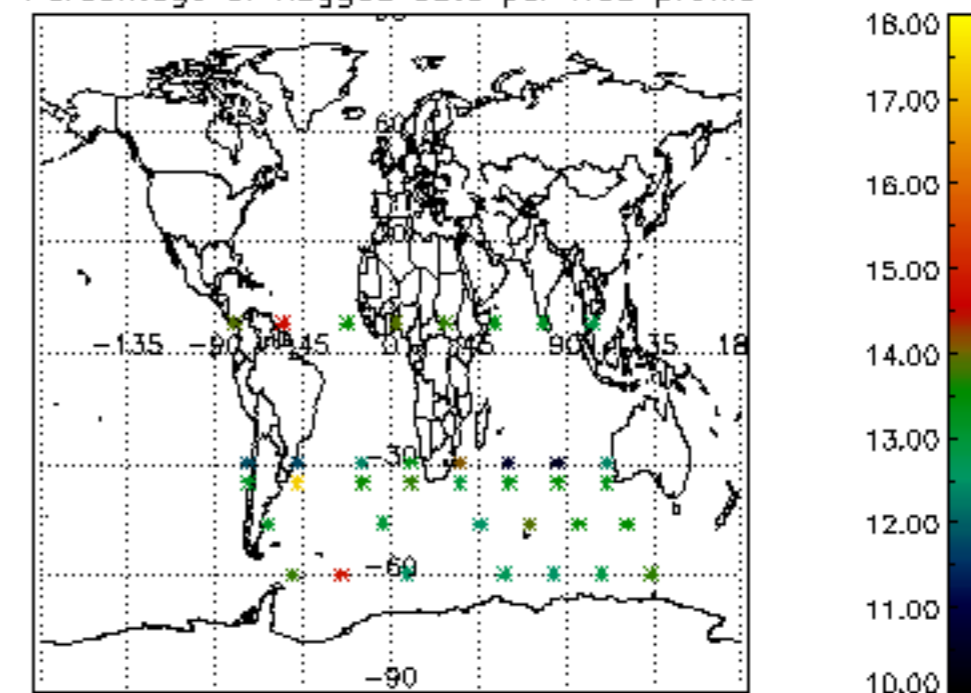
Percentage of flagged data per H2O profile

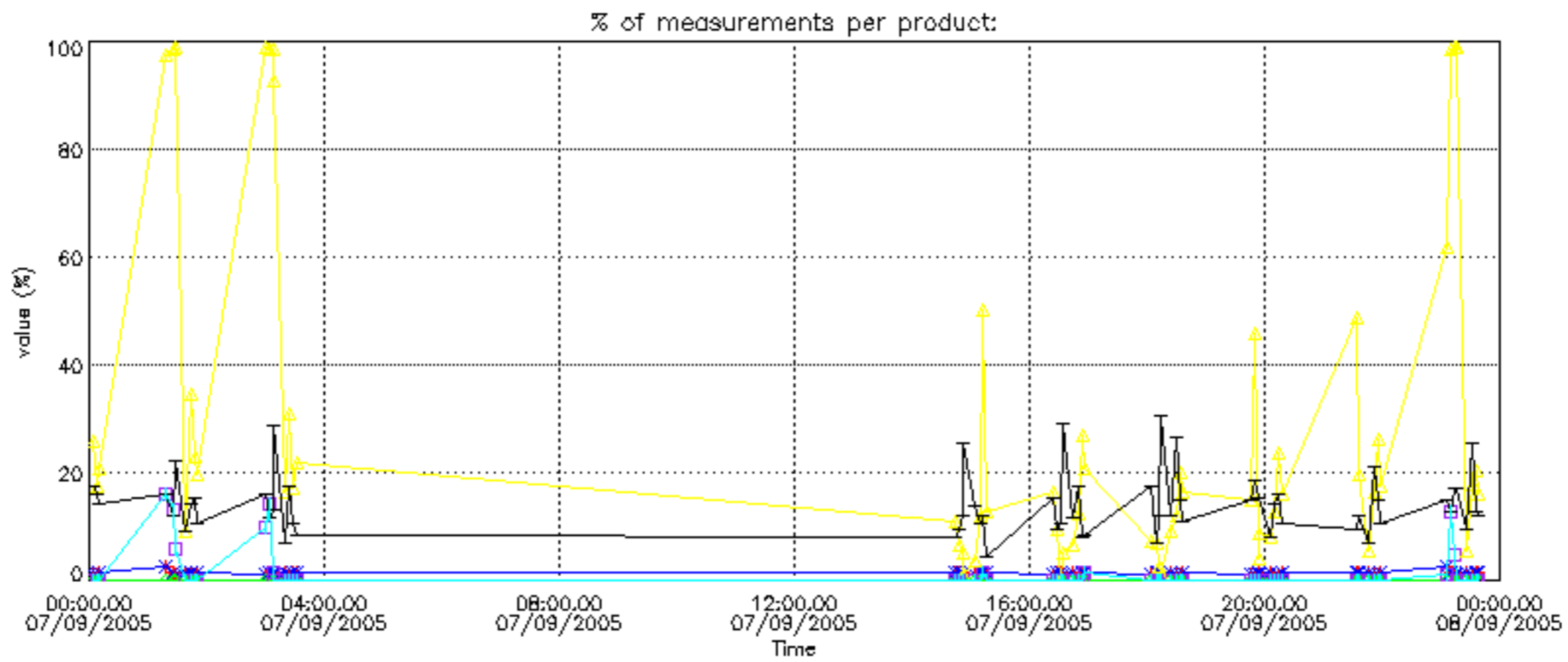


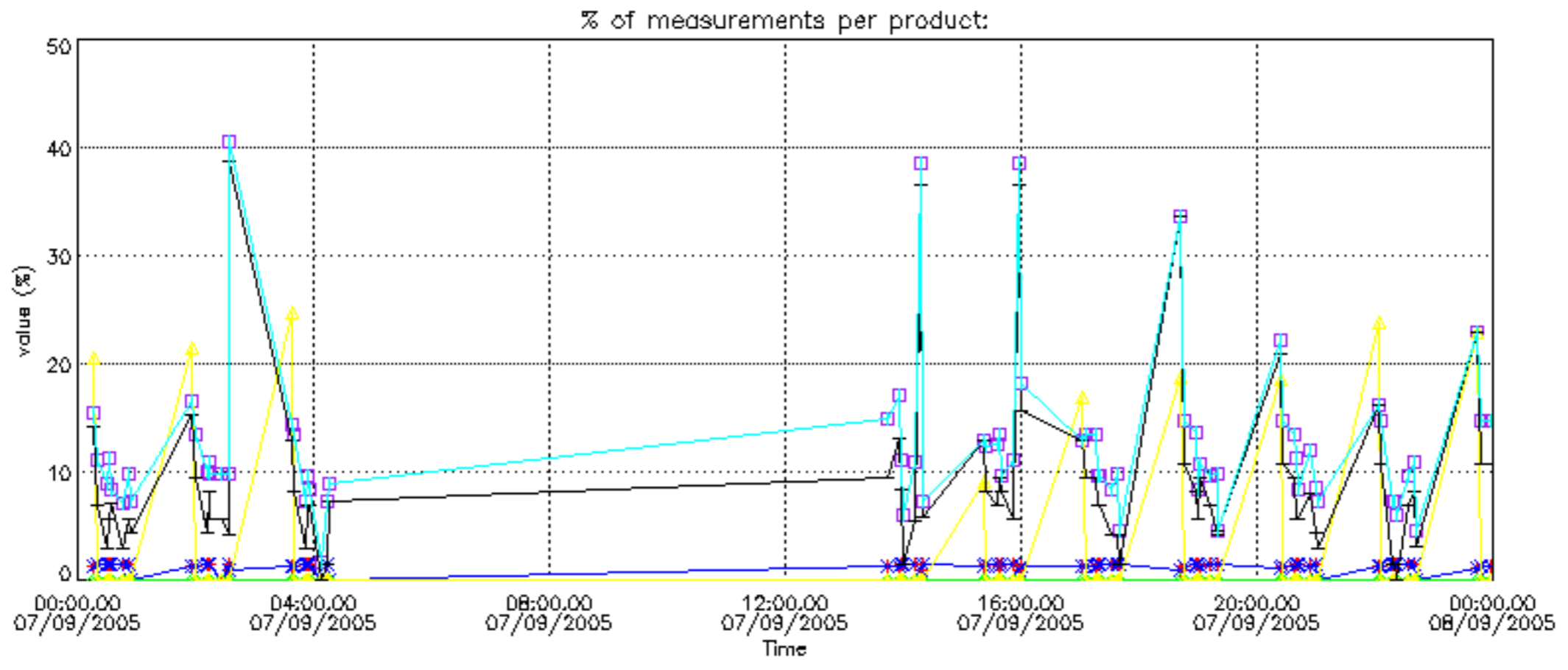
Percentage of flagged data per NO2 profile



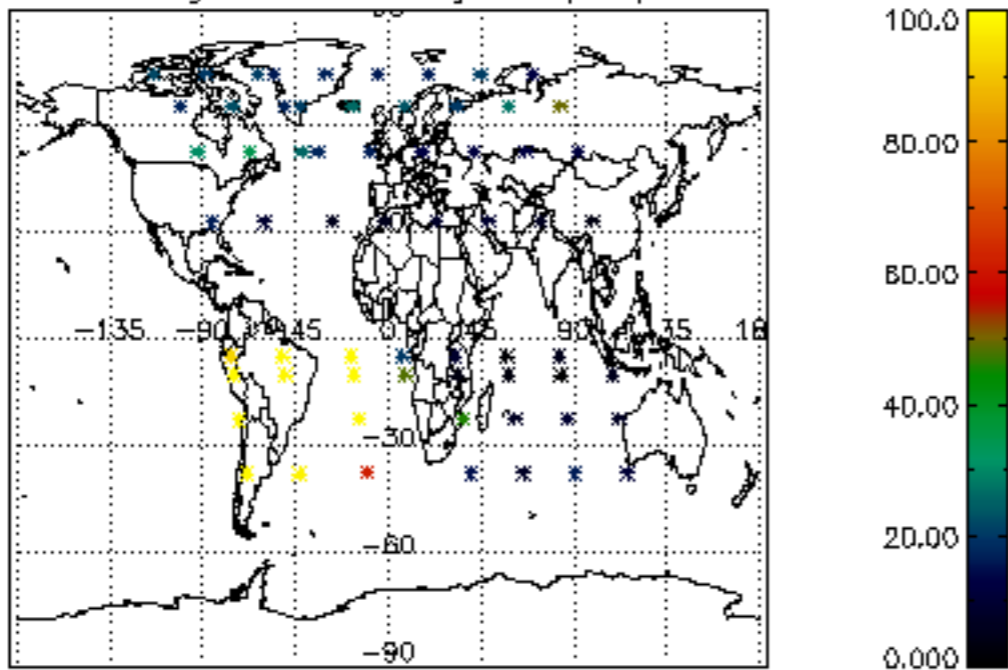
Percentage of flagged data per NO3 profile



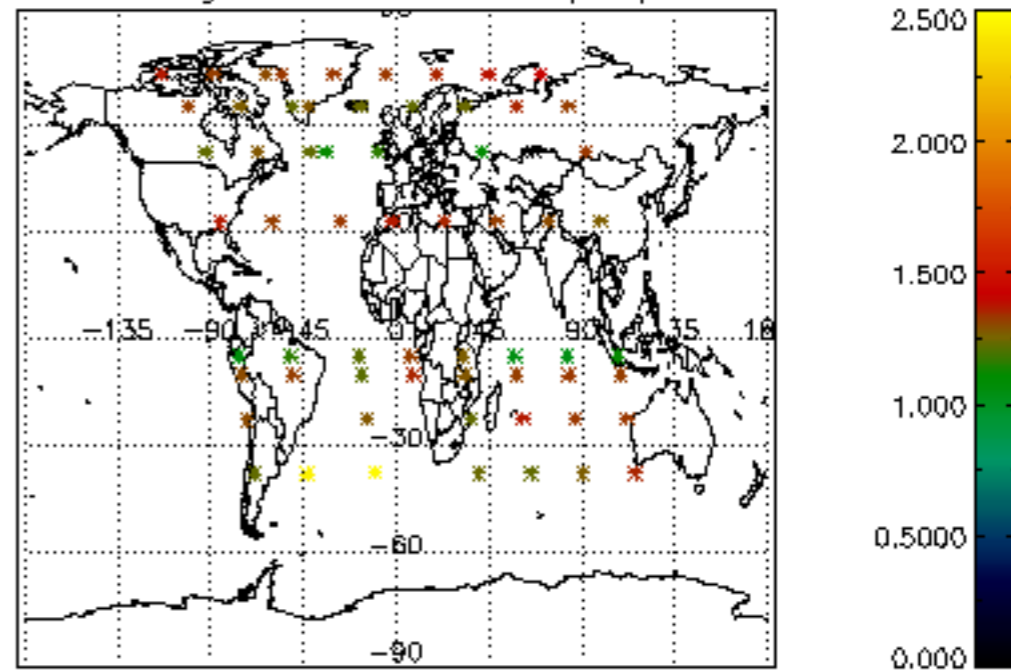




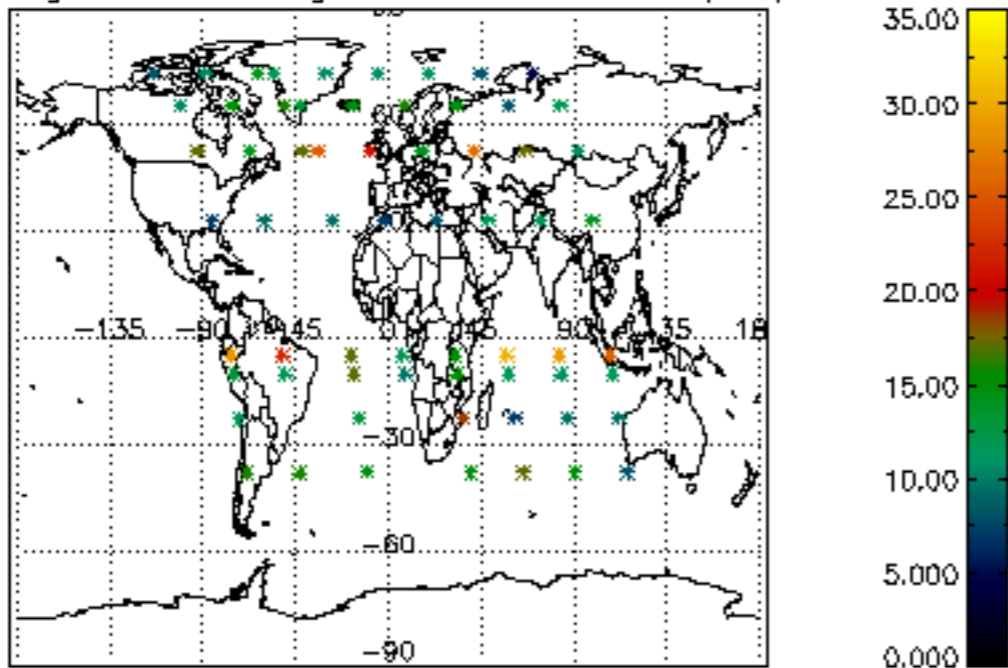
Percentage of cosmic ray hits per profile



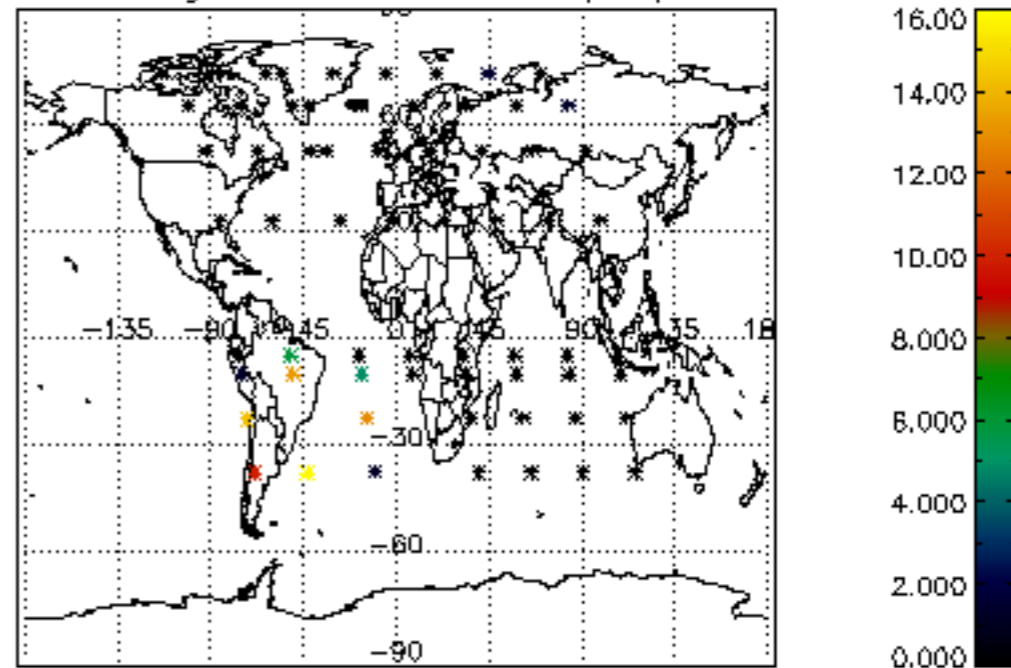
Percentage of datation errors per profile



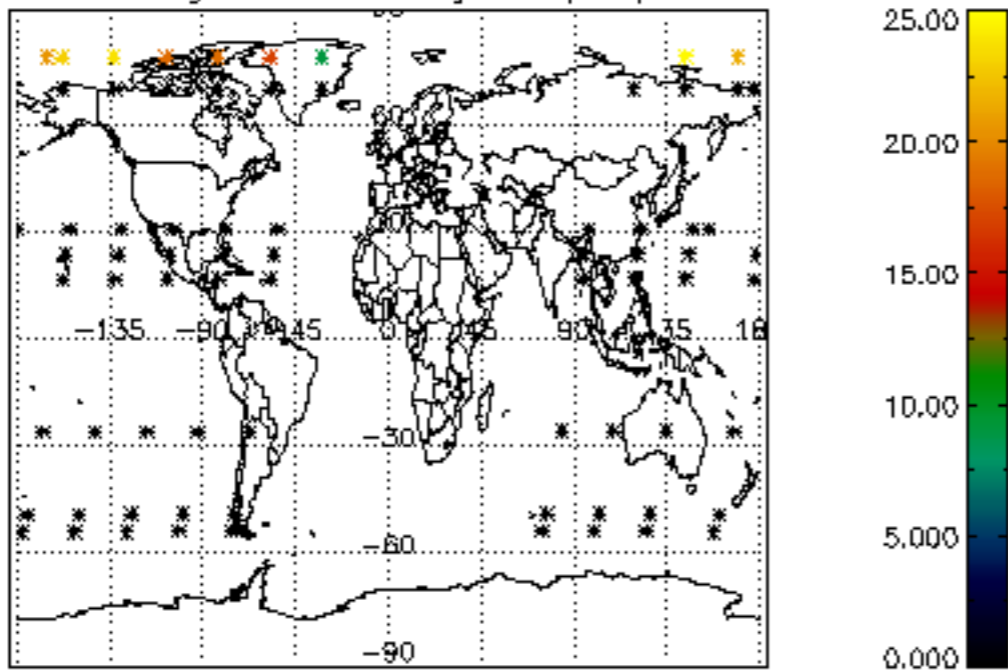
Percentage of star falling outside central band per profile



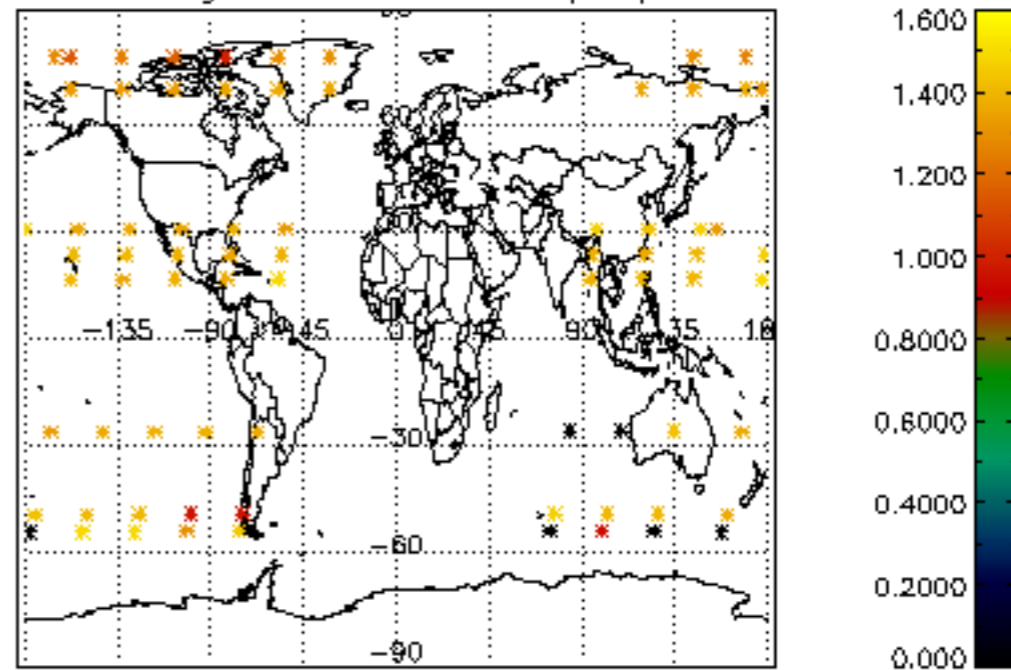
Percentage of saturation errors per profile



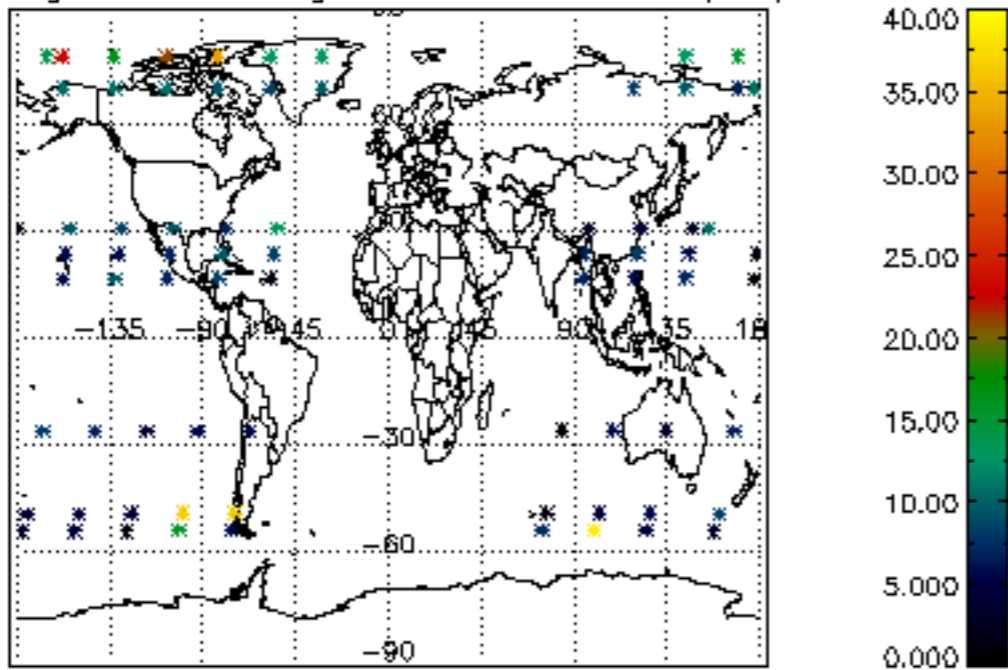
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

