

GOMOS Level 2 Daily Report

SUMMARY

[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 | 25APR2013 23:21:04 |
| Data source version | GOMOS/6.01 |
| Start time of products | 08-12-2008 (08DEC2008 00:00:00) |
| Stop time of products | 09-12-2008 (09DEC2008 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 347 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

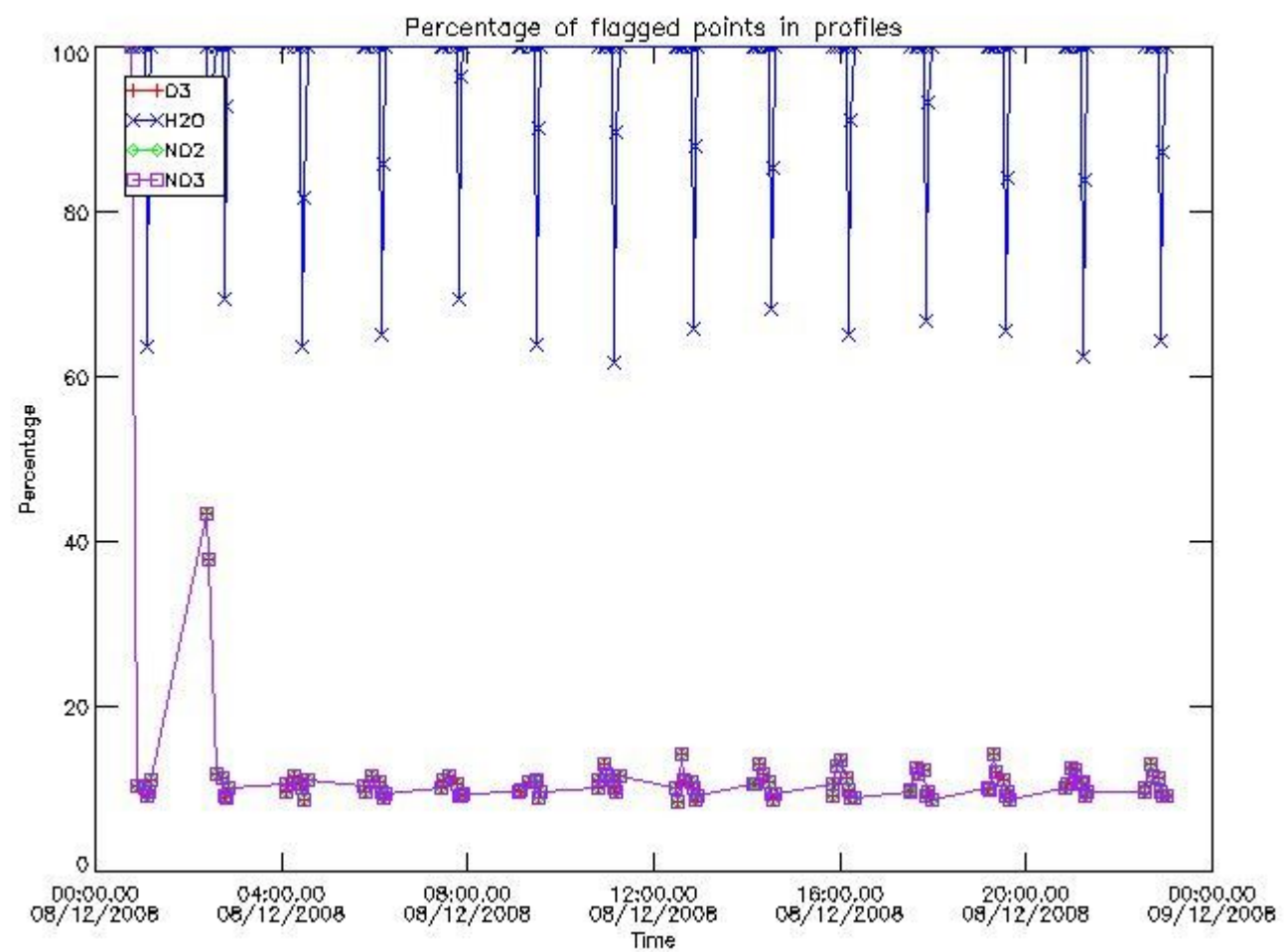
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20081208_001422_000000462074_00288_35412_7895.N1 | 08-DEC-2008 00:14:22 | Bright | 45.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 91 | 35412 | No |
| 2 | GOM_NL__2PRFIN20081208_001554_000000502074_00288_35412_7896.N1 | 08-DEC-2008 00:15:54 | Bright | 50.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 100 | 35412 | No |
| 3 | GOM_NL__2PRFIN20081208_001803_000000412074_00288_35412_7897.N1 | 08-DEC-2008 00:18:03 | Bright | 41.000 | 32 | 77Eps UMa | 1.7630 | 11000. | 82 | 35412 | No |
| 4 | GOM_NL__2PRFIN20081208_002021_000000552074_00288_35412_7898.N1 | 08-DEC-2008 00:20:21 | Bright | 55.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 110 | 35412 | No |
| 5 | GOM_NL__2PRFIN20081208_002353_000000412074_00288_35412_7899.N1 | 08-DEC-2008 00:23:53 | Bright | 41.000 | 152 | 12Alp2CVn | 2.8900 | 11000. | 82 | 35412 | No |
| 6 | GOM_NL__2PRFIN20081208_002939_000000372074_00288_35412_7900.N1 | 08-DEC-2008 00:29:39 | Bright | 36.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 73 | 35412 | No |
| 7 | GOM_NL__2PRFIN20081208_003305_000000642074_00288_35412_7901.N1 | 08-DEC-2008 00:33:05 | Bright | 64.000 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 128 | 35412 | No |
| 8 | GOM_NL__2PRFIN20081208_003750_000000542074_00288_35412_7902.N1 | 08-DEC-2008 00:37:50 | Twilight | 54.000 | 121 | 29Gam Vir | 2.7400 | 7200.0 | 108 | 35412 | No |
| 9 | GOM_NL__2PRFIN20081208_004224_000000432074_00288_35412_7903.N1 | 08-DEC-2008 00:42:24 | Twilight | 42.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 85 | 35412 | No |
| 10 | GOM_NL__2PRFIN20081208_004532_000000522074_00288_35412_7904.N1 | 08-DEC-2008 00:45:32 | Dark | 52.000 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 104 | 35412 | No |
| 11 | GOM_NL__2PRFIN20081208_005449_000000502074_00289_35413_7891.N1 | 08-DEC-2008 00:54:49 | Dark | 49.500 | 113 | Mu Vel | 2.6920 | 5000.0 | 99 | 35413 | No |
| 12 | GOM_NL__2PRFIN20081208_010329_000000502074_00289_35413_7892.N1 | 08-DEC-2008 01:03:29 | Dark | 50.000 | 34 | Gam2Vel | 1.7930 | 23000. | 100 | 35413 | No |
| 13 | GOM_NL__2PRFIN20081208_010614_000000562074_00289_35413_7893.N1 | 08-DEC-2008 01:06:14 | Dark | 55.500 | 2 | Alp Car | -0.73600 | 7000.0 | 111 | 35413 | No |
| 14 | GOM_NL__2PRFIN20081208_010835_000000542074_00289_35413_7894.N1 | 08-DEC-2008 01:08:35 | Dark | 53.500 | 117 | Pi Pup | 2.7060 | 3800.0 | 107 | 35413 | No |
| 15 | GOM_NL__2PRFIN20081208_011207_000000462074_00289_35413_7895.N1 | 08-DEC-2008 01:12:07 | Dark | 46.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 92 | 35413 | No |
| 16 | GOM_NL__2PRFIN20081208_011746_000000472074_00289_35413_7896.N1 | 08-DEC-2008 01:17:46 | Straylight | 46.500 | 101 | 11Alp Lep | 2.5820 | 7000.0 | 93 | 35413 | No |
| 17 | GOM_NL__2PRFIN20081208_012104_000000532074_00289_35413_7897.N1 | 08-DEC-2008 01:21:04 | Straylight | 53.000 | 7 | 19Bet Ori | 0.10000 | 14000. | 106 | 35413 | No |
| 18 | GOM_NL__2PRFIN20081208_012339_000000522074_00289_35413_7898.N1 | 08-DEC-2008 01:23:39 | Straylight | 51.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 103 | 35413 | No |
| 19 | GOM_NL__2PRFIN20081208_012609_000000522074_00289_35413_7899.N1 | 08-DEC-2008 01:26:09 | Twilight | 52.000 | 27 | 24Gam Ori | 1.6360 | 26000. | 104 | 35413 | No |
| 20 | GOM_NL__2PRFIN20081208_012841_000000522074_00289_35413_7900.N1 | 08-DEC-2008 01:28:41 | Bright | 52.000 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 104 | 35413 | No |
| 21 | GOM_NL__2PRFIN20081208_013139_000000402074_00289_35413_7901.N1 | 08-DEC-2008 01:31:39 | Bright | 40.000 | 176 | 23Zet Tau | 3.0200 | 22000. | 80 | 35413 | No |
| 22 | GOM_NL__2PRFIN20081208_013824_000000462074_00289_35413_7902.N1 | 08-DEC-2008 01:38:24 | Bright | 46.000 | 6 | 13Alp Aur | 0.080000 | 3400.0 | 92 | 35413 | No |
| 23 | GOM_NL__2PRFIN20081208_015457_000000472074_00289_35413_7903.N1 | 08-DEC-2008 01:54:57 | Bright | 47.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 94 | 35413 | No |
| 24 | GOM_NL__2PRFIN20081208_015629_000000472074_00289_35413_7904.N1 | 08-DEC-2008 01:56:29 | Bright | 47.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 94 | 35413 | No |
| 25 | GOM_NL__2PRFIN20081208_015839_000000412074_00289_35413_7905.N1 | 08-DEC-2008 01:58:39 | Bright | 40.500 | 32 | 77Eps UMa | 1.7630 | 11000. | 81 | 35413 | No |
| 26 | GOM_NL__2PRFIN20081208_020057_000000392074_00289_35413_7906.N1 | 08-DEC-2008 02:00:57 | Bright | 38.500 | 39 | 85Eta UMa | 1.8540 | 24000. | 77 | 35413 | No |
| 27 | GOM_NL__2PRFIN20081208_020429_000000412074_00289_35413_7907.N1 | 08-DEC-2008 02:04:29 | Bright | 41.000 | 152 | 12Alp2CVn | 2.8900 | 11000. | 82 | 35413 | No |
| 28 | GOM_NL__2PRFIN20081208_021015_000000362074_00289_35413_7908.N1 | 08-DEC-2008 02:10:15 | Bright | 36.000 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 72 | 35413 | No |
| 29 | GOM_NL__2PRFIN20081208_021827_000000512074_00289_35413_7909.N1 | 08-DEC-2008 02:18:27 | Twilight | 50.500 | 121 | 29Gam Vir | 2.7400 | 7200.0 | 101 | 35413 | No |
| 30 | GOM_NL__2PRFIN20081208_022300_000000422074_00289_35413_7910.N1 | 08-DEC-2008 02:23:00 | Twilight | 41.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 83 | 35413 | No |
| 31 | GOM_NL__2PRFIN20081208_022432_000000502074_00289_35413_7911.N1 | 08-DEC-2008 02:24:32 | Dark | 50.000 | 100 | 4Gam Crv | 2.5800 | 13100. | 100 | 35413 | No |
| 32 | GOM_NL__2PRFIN20081208_022609_000000522074_00289_35413_7912.N1 | 08-DEC-2008 02:26:09 | Dark | 52.000 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 104 | 35413 | No |
| 33 | GOM_NL__2PRFIN20081208_023526_000000442074_00290_35414_0450.N1 | 08-DEC-2008 02:35:26 | Dark | 43.500 | 113 | Mu Vel | 2.6920 | 5000.0 | 87 | 35414 | No |
| 34 | GOM_NL__2PRFIN20081208_024406_000000452074_00290_35414_0451.N1 | 08-DEC-2008 02:44:06 | Dark | 45.000 | 34 | Gam2Vel | 1.7930 | 23000. | 90 | 35414 | No |
| 35 | GOM_NL__2PRFIN20081208_024650_000000562074_00290_35414_0452.N1 | 08-DEC-2008 02:46:50 | Dark | 56.000 | 2 | Alp Car | -0.73600 | 7000.0 | 112 | 35414 | No |
| 36 | GOM_NL__2PRFIN20081208_024912_000000572074_00290_35414_0453.N1 | 08-DEC-2008 02:49:12 | Dark | 56.500 | 117 | Pi Pup | 2.7060 | 3800.0 | 113 | 35414 | No |
| 37 | GOM_NL__2PRFIN20081208_025244_000000502074_00290_35414_0454.N1 | 08-DEC-2008 02:52:44 | Dark | 50.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 100 | 35414 | No |
| 38 | GOM_NL__2PRFIN20081208_025822_000000492074_00290_35414_0455.N1 | 08-DEC-2008 02:58:22 | Straylight | 49.000 | 101 | 11Alp Lep | 2.5820 | 7000.0 | 98 | 35414 | No |
| 39 | GOM_NL__2PRFIN20081208_030140_000000522074_00290_35414_0456.N1 | 08-DEC-2008 03:01:40 | Straylight | 51.500 | 7 | 19Bet Ori | 0.10000 | 14000. | 103 | 35414 | No |
| 40 | GOM_NL__2PRFIN20081208_030414_000000552074_00290_35414_0457.N1 | 08-DEC-2008 03:04:14 | Straylight | 54.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 109 | 35414 | No |
| 41 | GOM_NL__2PRFIN20081208_030645_000000522074_00290_35414_0458.N1 | 08-DEC-2008 03:06:45 | Twilight | 51.500 | 27 | 24Gam Ori | 1.6360 | 26000. | 103 | 35414 | No |
| 42 | GOM_NL__2PRFIN20081208_030916_000000572074_00290_35414_0459.N1 | 08-DEC-2008 03:09:16 | Bright | 57.000 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 114 | 35414 | No |

| | | | | | | | | | | | |
|-----|--|----------------------|--------|--------|-----|-----------|----------|--------|-----|-------|----|
| 338 | GOM_NL__2PRFIN20081208_231625_000000562074_00302_35426_0475.N1 | 08-DEC-2008 23:16:25 | Bright | 55.500 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 111 | 35426 | No |
| 339 | GOM_NL__2PRFIN20081208_232037_000000372074_00302_35426_0476.N1 | 08-DEC-2008 23:20:37 | Bright | 36.500 | 150 | 44Zet Per | 2.8900 | 28000. | 73 | 35426 | No |
| 340 | GOM_NL__2PRFIN20081208_232258_000000352074_00302_35426_0477.N1 | 08-DEC-2008 23:22:58 | Bright | 35.000 | 149 | 45Eps Per | 2.8880 | 30000. | 70 | 35426 | No |
| 341 | GOM_NL__2PRFIN20081208_232605_000000442074_00302_35426_0478.N1 | 08-DEC-2008 23:26:05 | Bright | 44.000 | 6 | 13Alp Aur | 0.080000 | 3400.0 | 88 | 35426 | No |
| 342 | GOM_NL__2PRFIN20081208_234238_000000472074_00302_35426_0479.N1 | 08-DEC-2008 23:42:38 | Bright | 46.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 93 | 35426 | No |
| 343 | GOM_NL__2PRFIN20081208_234410_000000482074_00302_35426_0480.N1 | 08-DEC-2008 23:44:10 | Bright | 48.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 96 | 35426 | No |
| 344 | GOM_NL__2PRFIN20081208_234624_000000412074_00302_35426_0481.N1 | 08-DEC-2008 23:46:24 | Bright | 41.000 | 32 | 77Eps UMa | 1.7630 | 11000. | 82 | 35426 | No |
| 345 | GOM_NL__2PRFIN20081208_234844_000000552074_00302_35426_0482.N1 | 08-DEC-2008 23:48:44 | Bright | 55.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 110 | 35426 | No |
| 346 | GOM_NL__2PRFIN20081208_235216_000000422074_00302_35426_0483.N1 | 08-DEC-2008 23:52:16 | Bright | 41.500 | 152 | 12Alp2CVn | 2.8900 | 11000. | 83 | 35426 | No |
| 347 | GOM_NL__2PRFIN20081208_235806_000000382074_00302_35426_0484.N1 | 08-DEC-2008 23:58:06 | Bright | 37.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 75 | 35426 | No |

3. Quality information per product

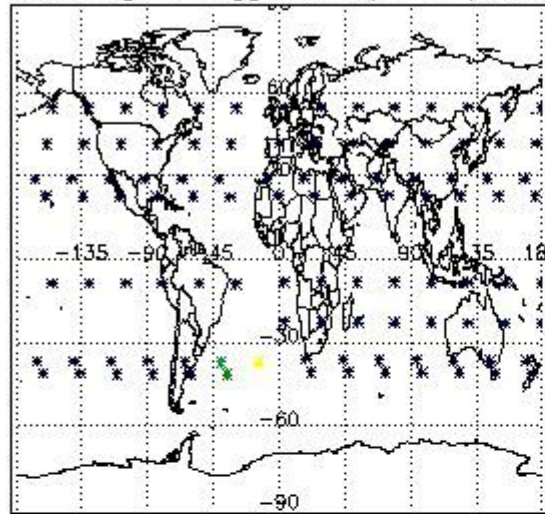
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

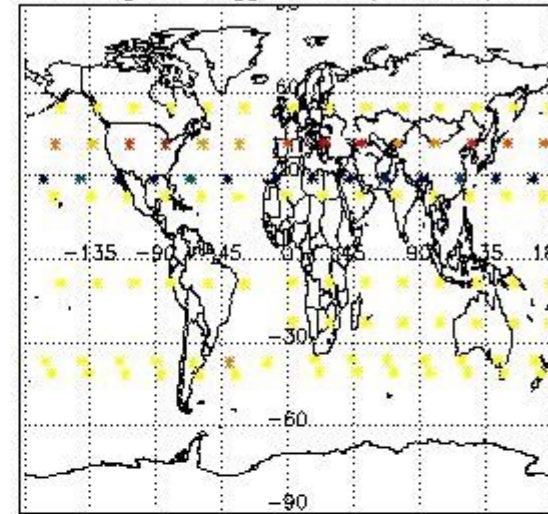


3.2 Plot quality information per product (world map)

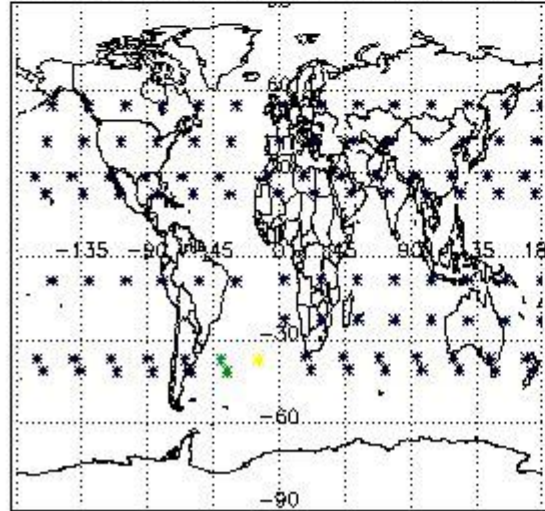
Percentage of flagged data per O3 profile



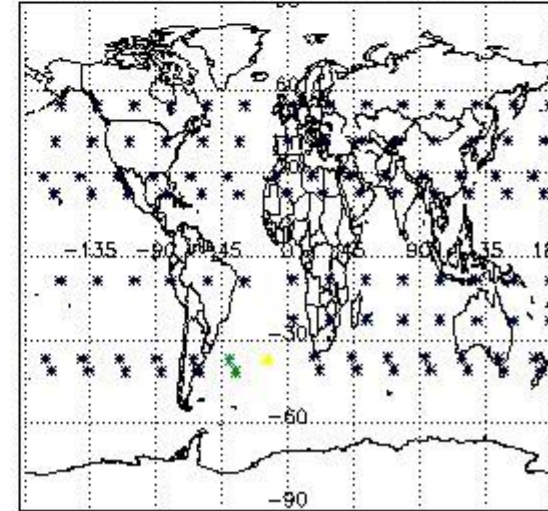
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

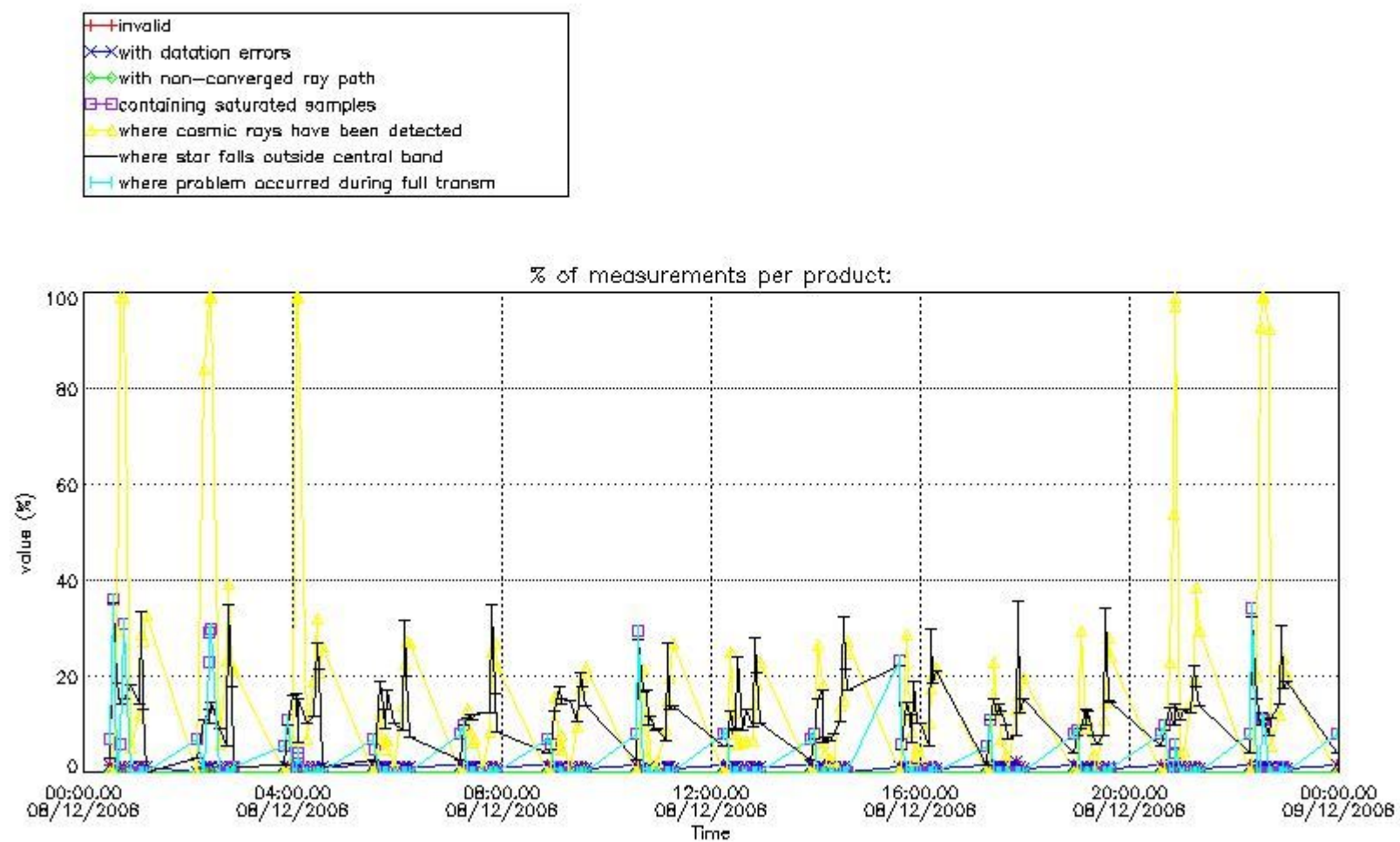


4. Level 1 quality information per product

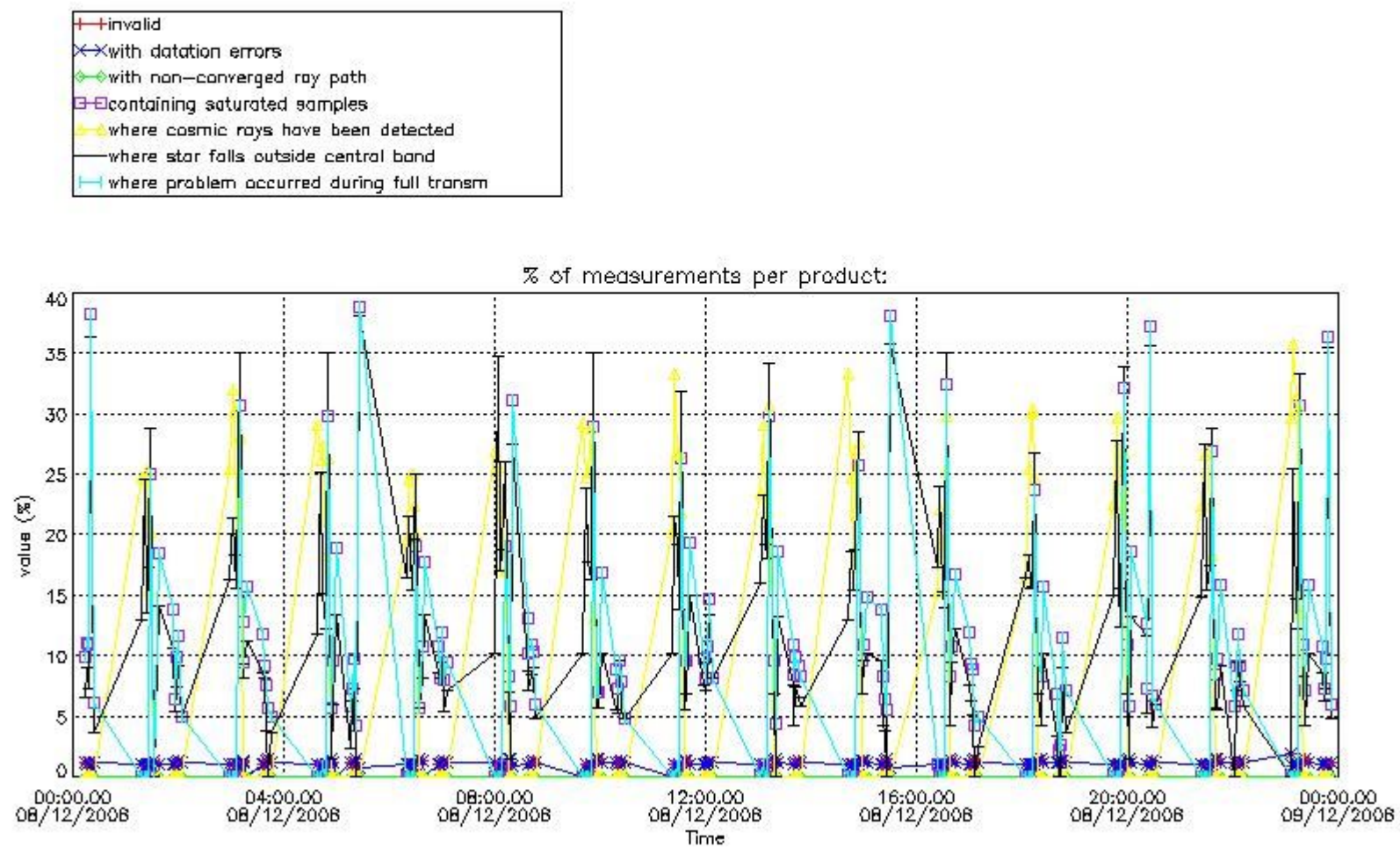
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

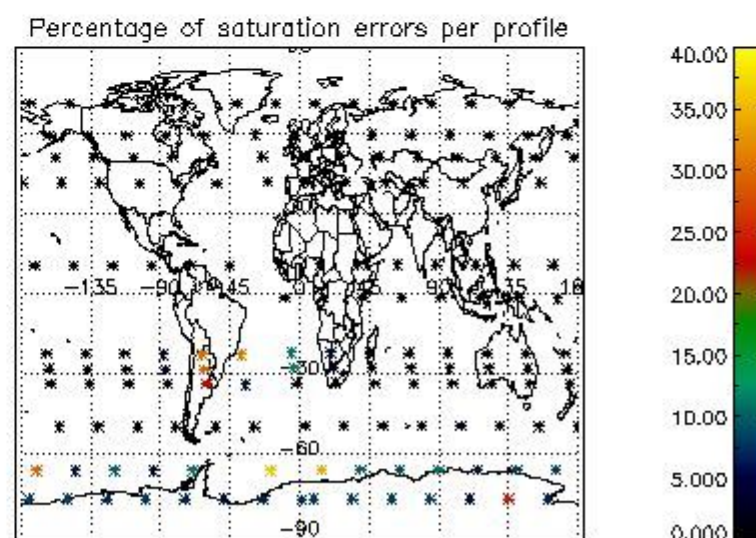
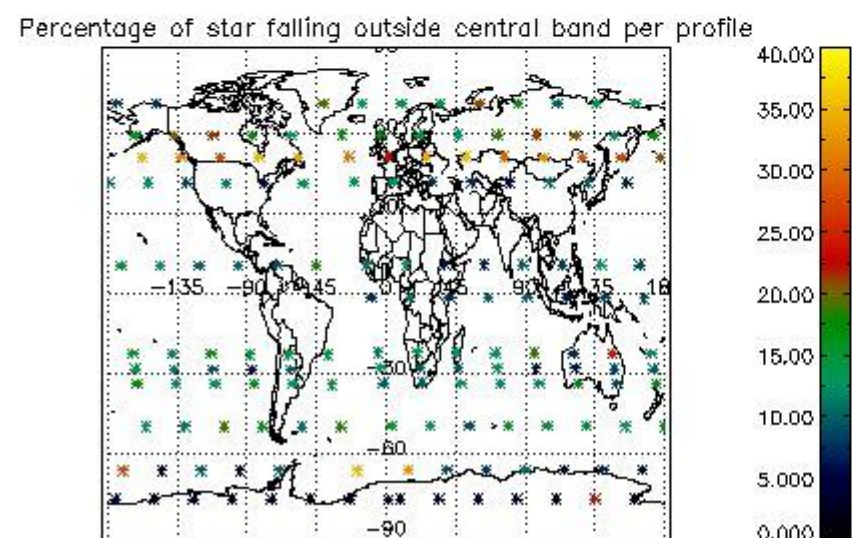
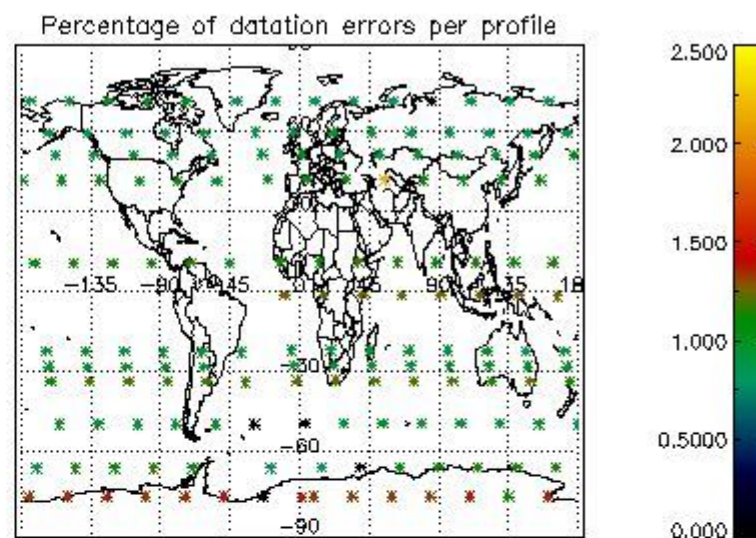
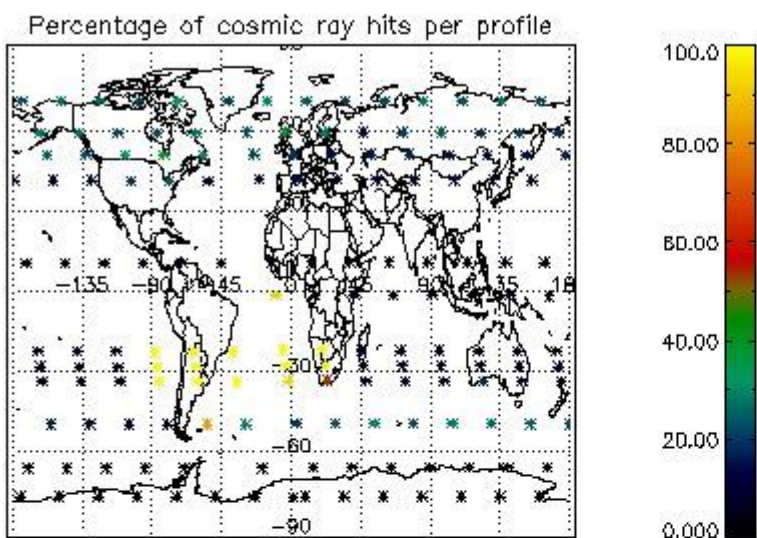


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



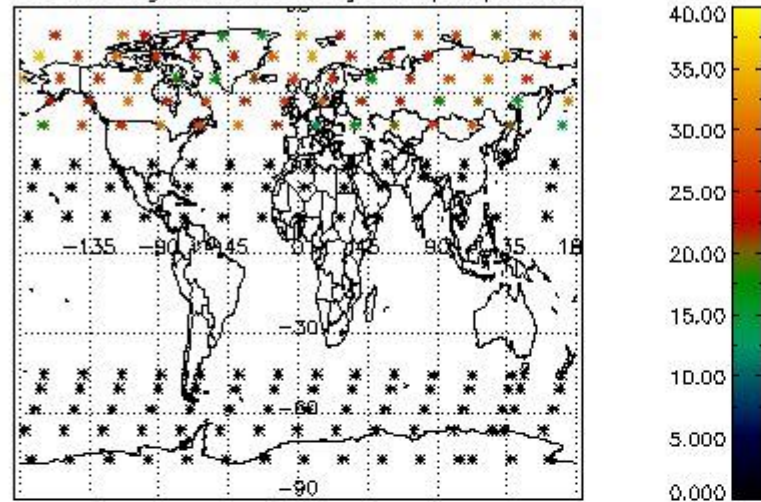
4.2 Plot quality information per product coming from level 1b processing (world map)

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

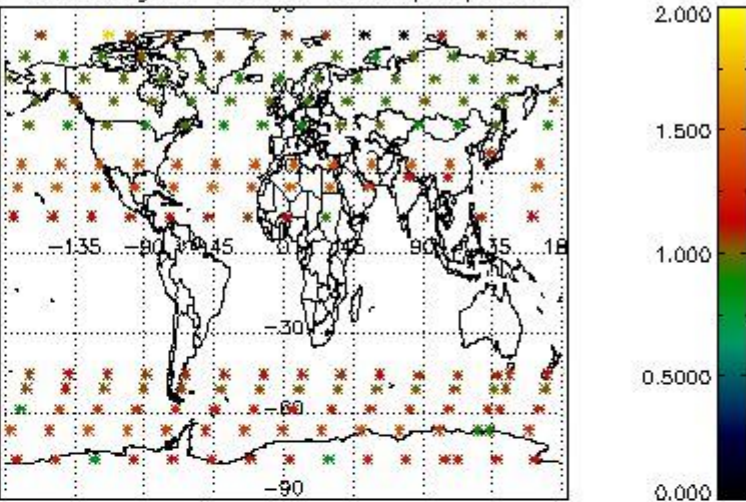


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

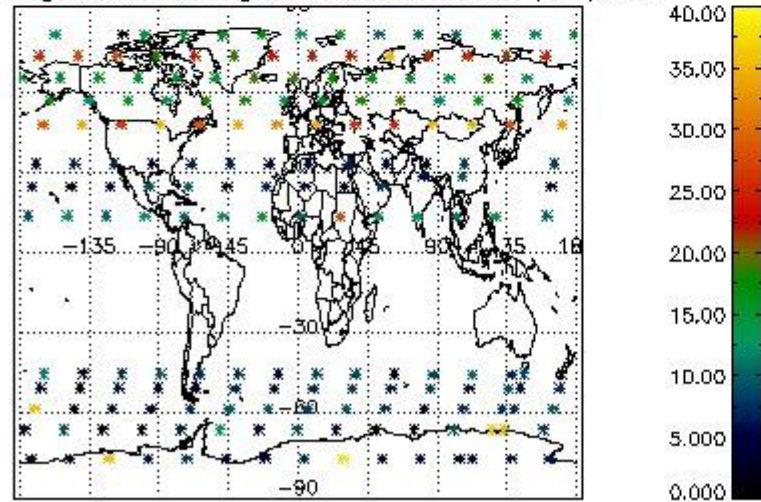
Percentage of cosmic ray hits per profile



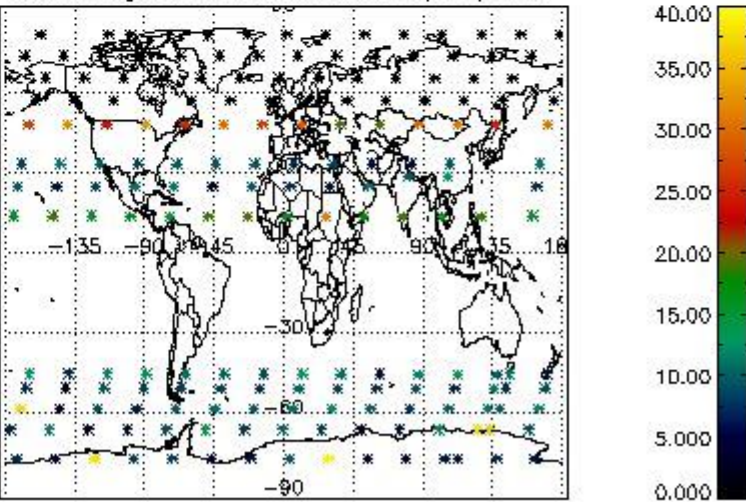
Percentage of datation errors per profile



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

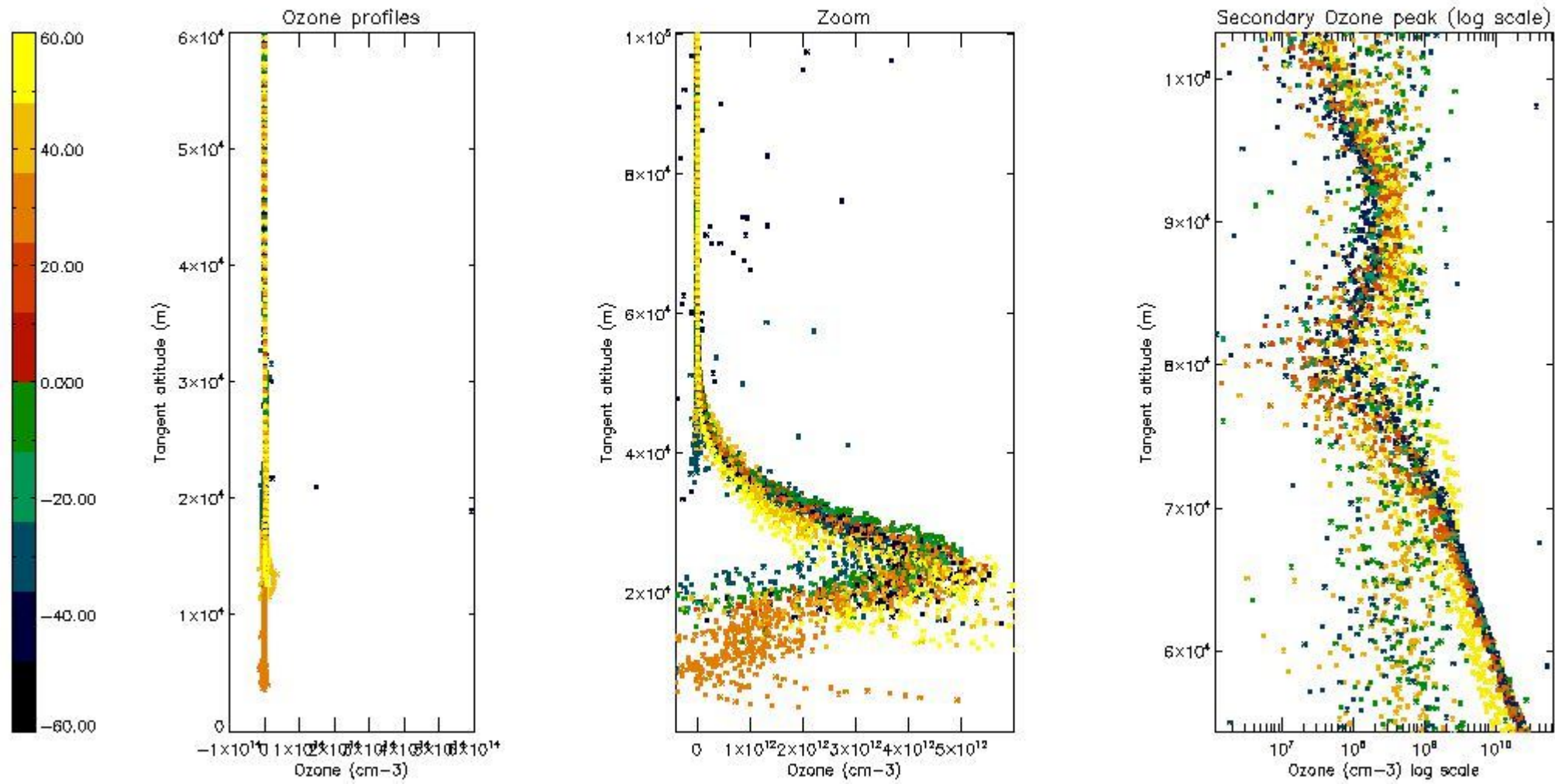
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 33 |
| STD < 20 | 16 |

| | |
|----------|----|
| STD < 10 | 13 |
| STD < 5 | 10 |

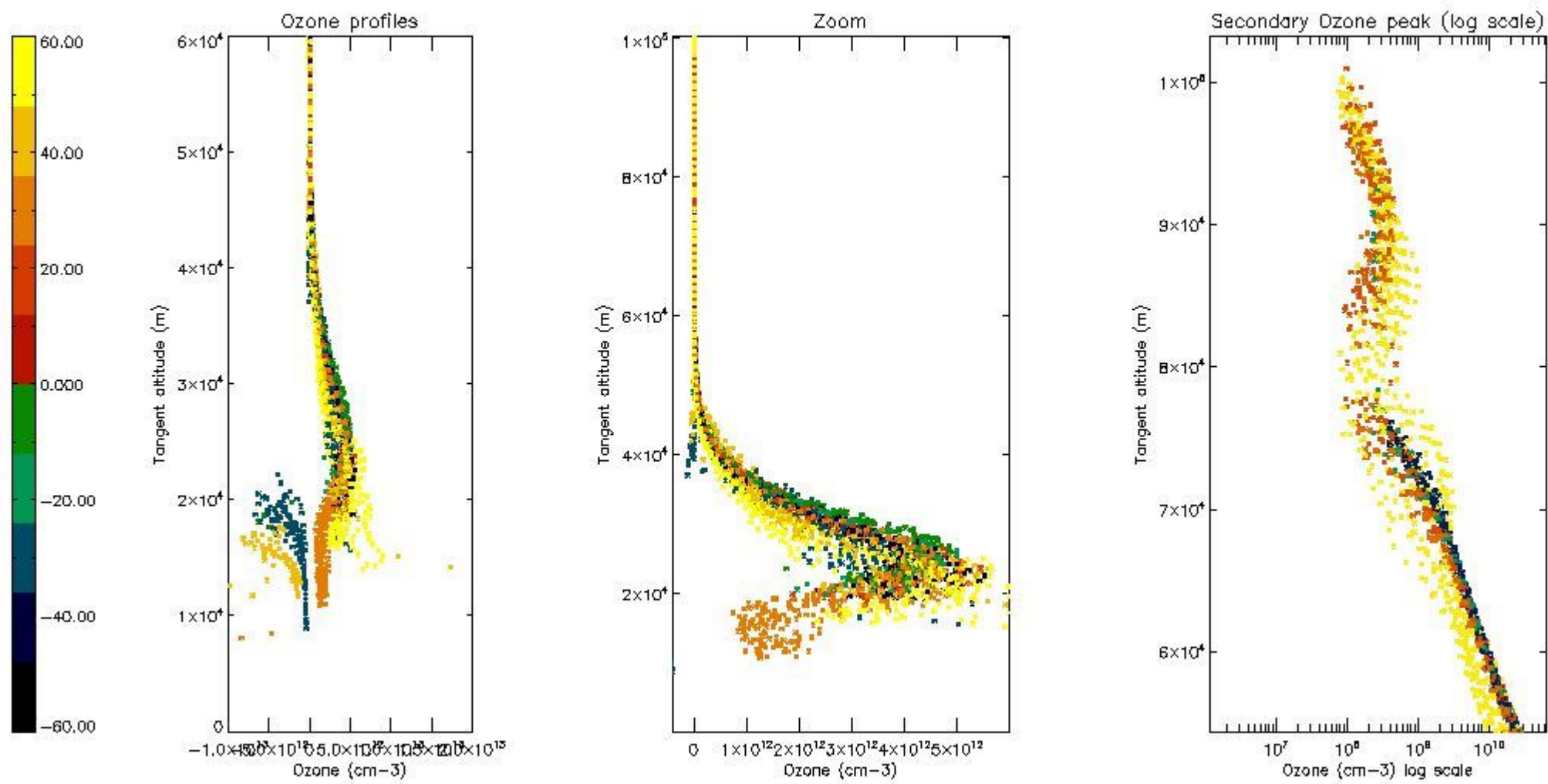
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



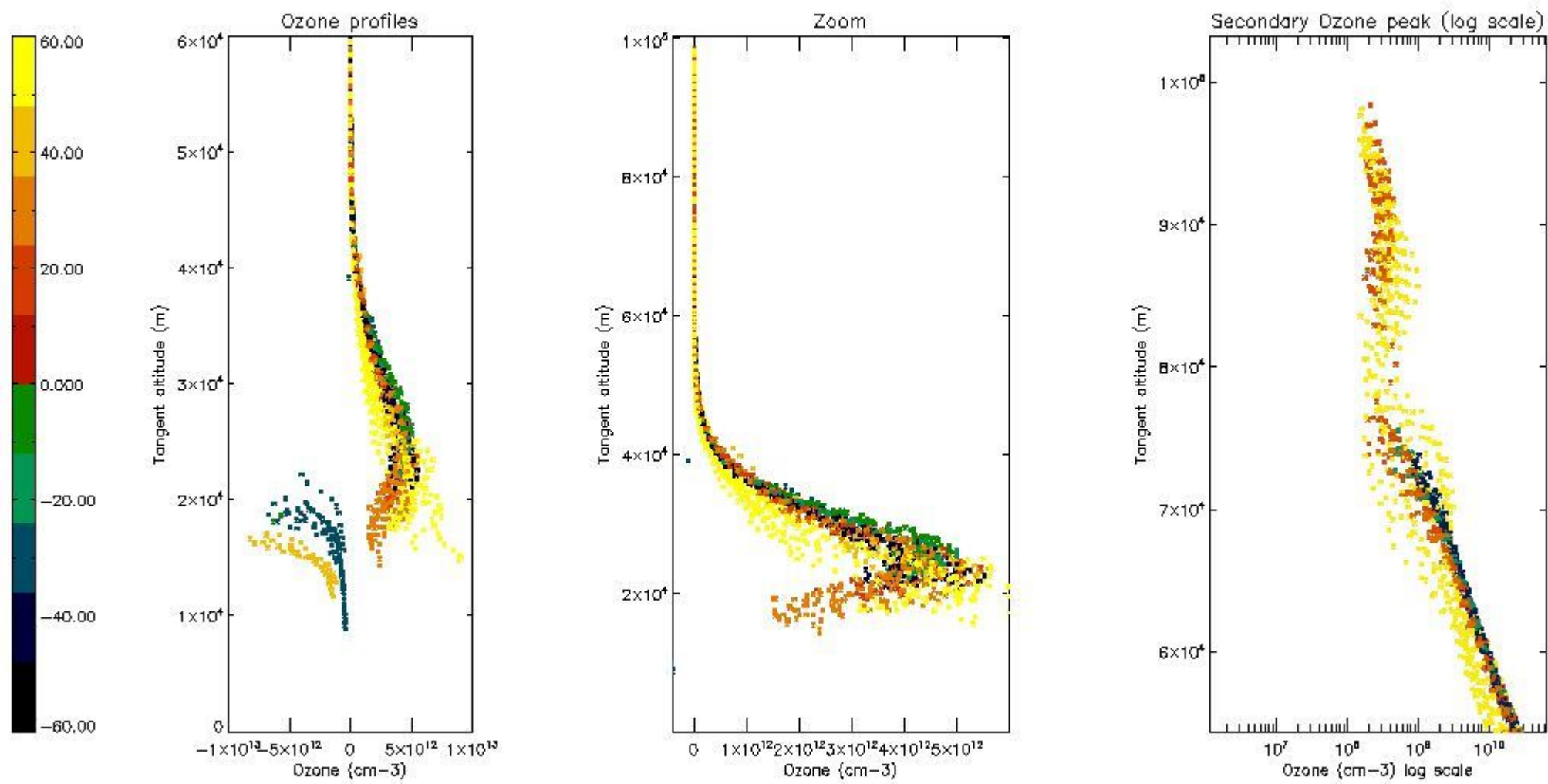
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



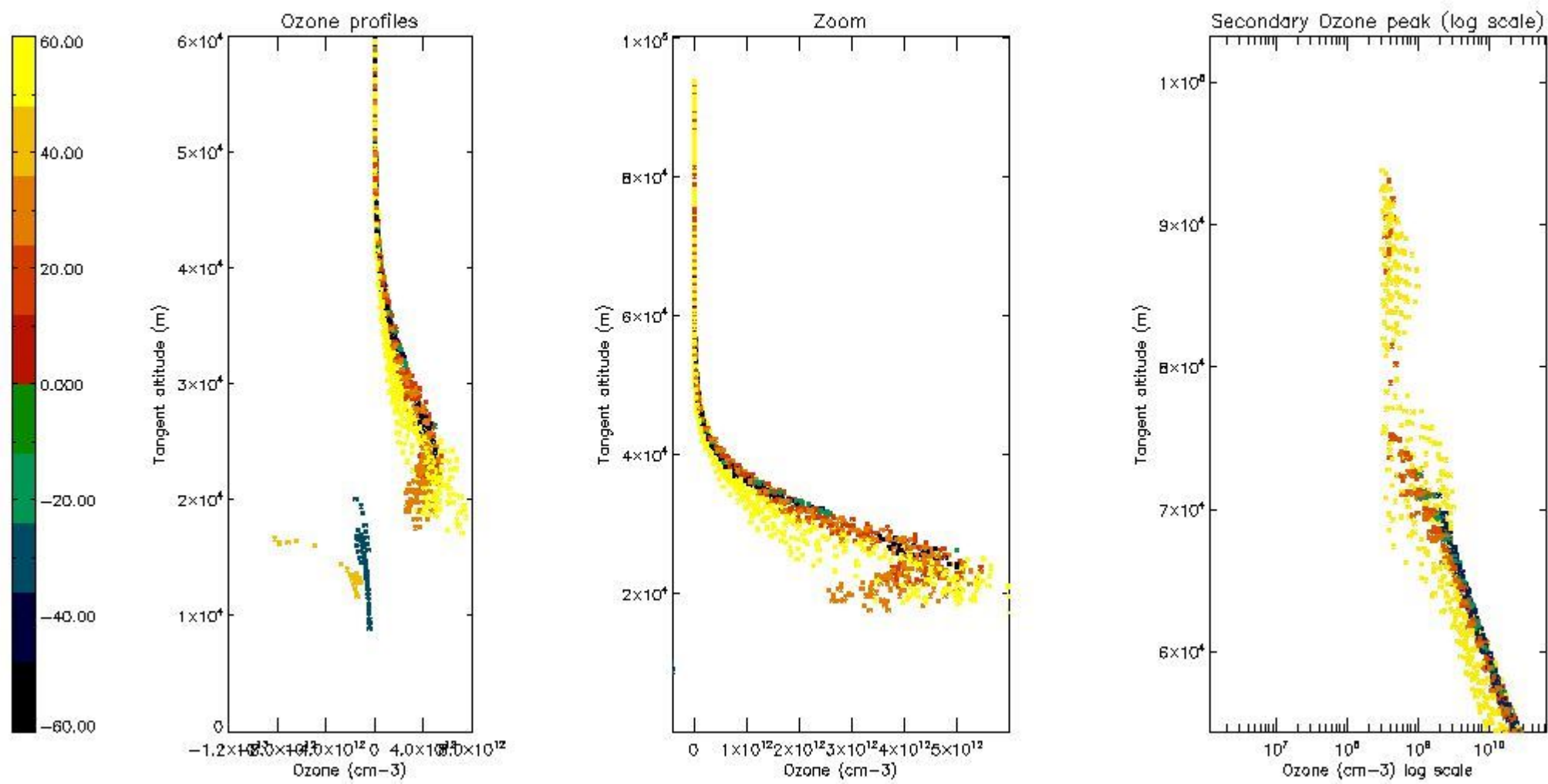
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



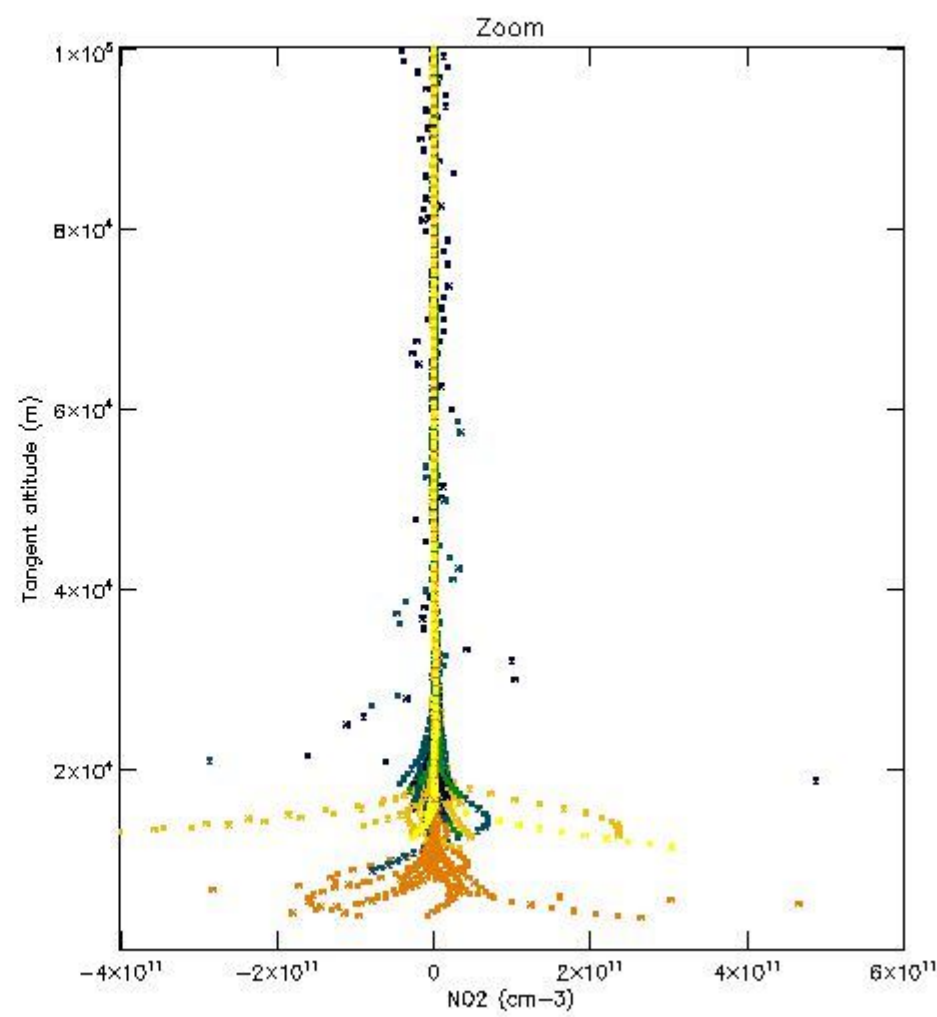
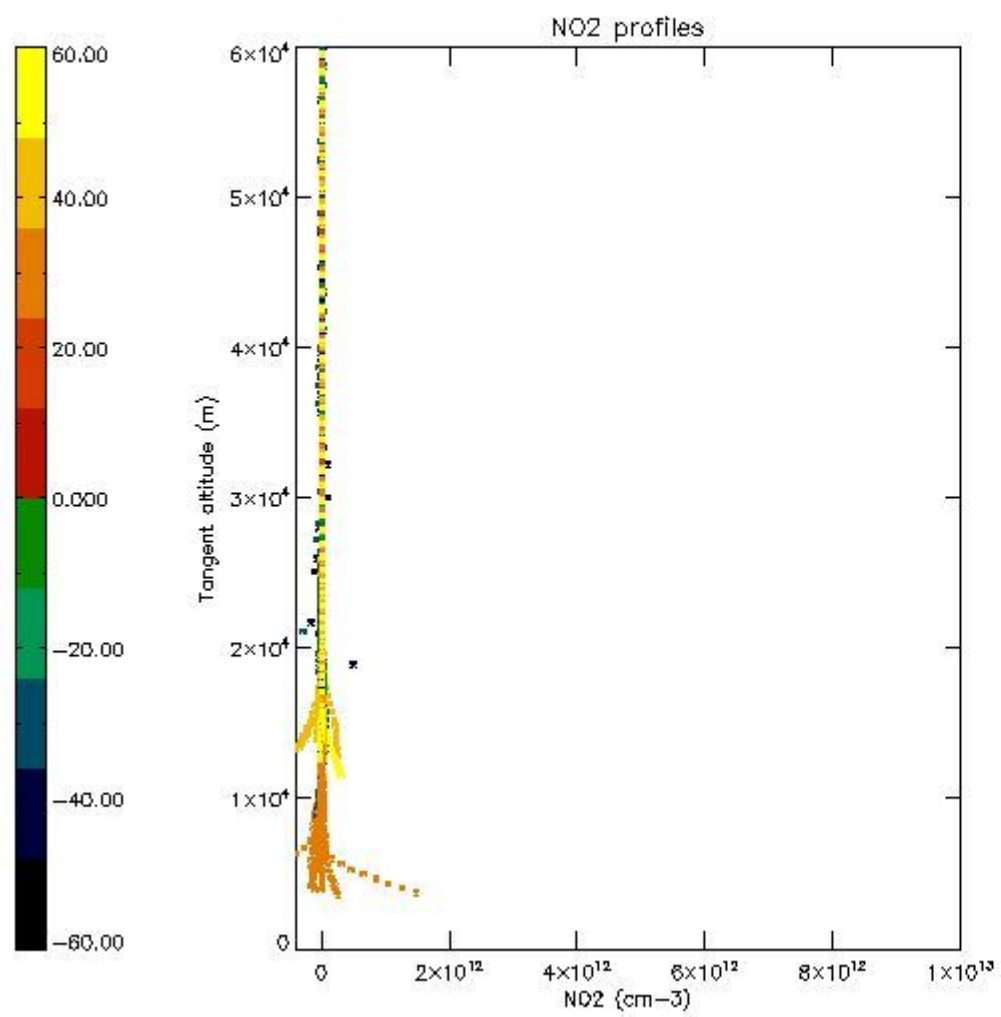
5.5 Plot ozone profiles where $STD < 5\%$ (dark without errors)

The colorbar represents the latitude.



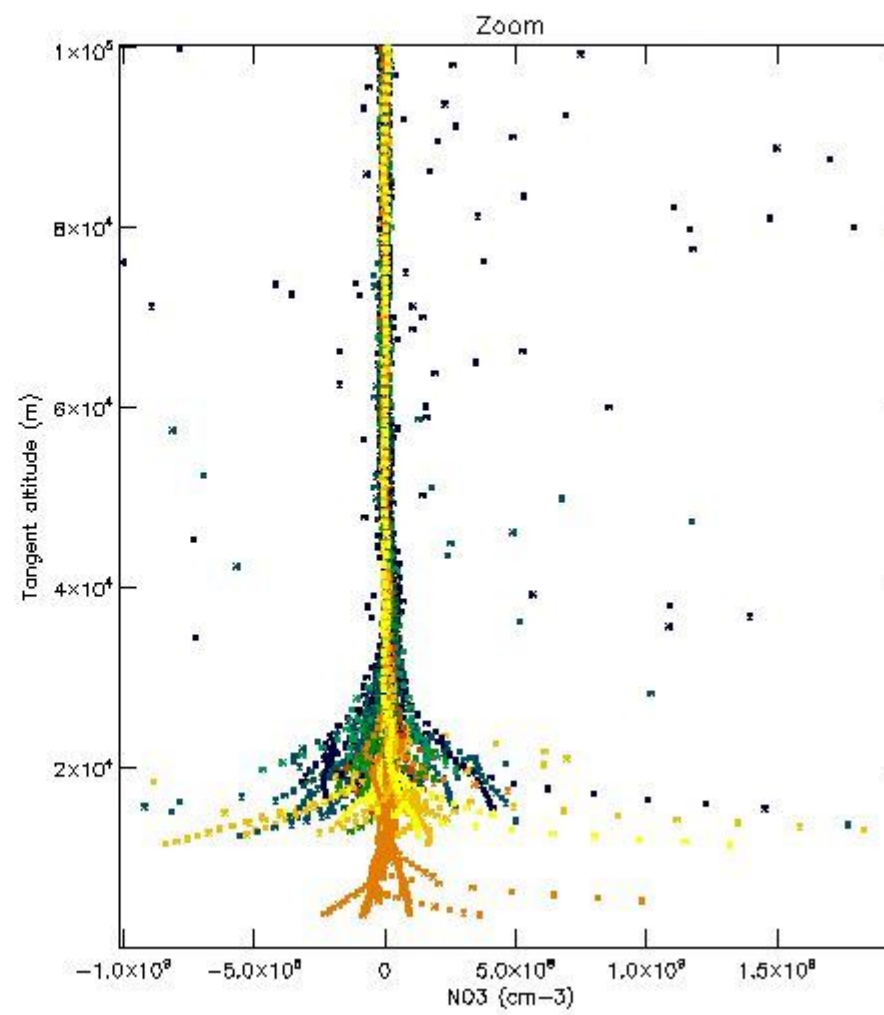
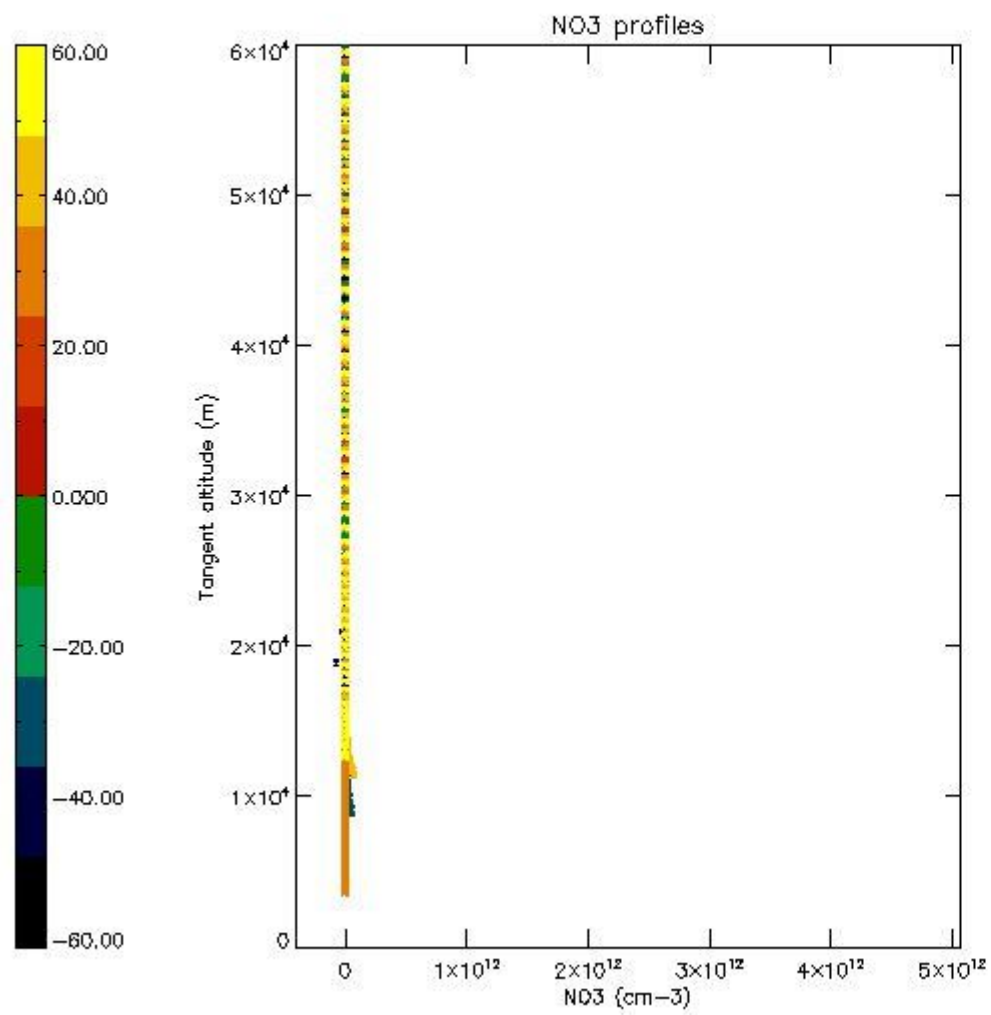
5.6 Plot NO₂ profiles for all STD (dark without errors)

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 | 08-DEC-2008 00:14:22 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 08-DEC-2008 00:14:22 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 08-DEC-2008 00:14:22 |

GOMOS Level 2 Daily Report

SUMMARY

[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 | 25APR2013 23:21:04 |
| Data source version | GOMOS/6.01 |
| Start time of products | 08-12-2008 (08DEC2008 00:00:00) |
| Stop time of products | 09-12-2008 (09DEC2008 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 347 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

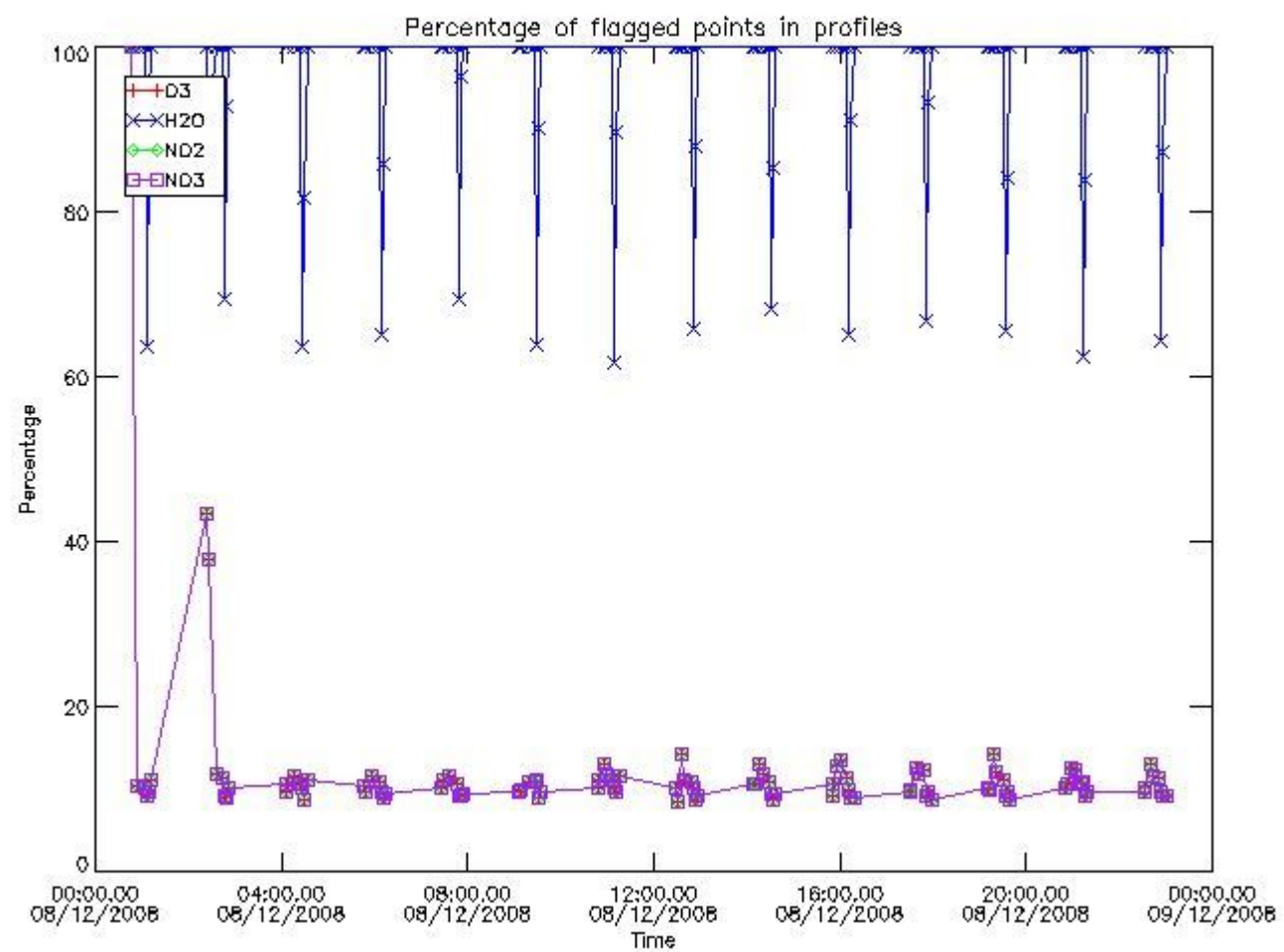
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20081208_001422_000000462074_00288_35412_7895.N1 | 08-DEC-2008 00:14:22 | Bright | 45.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 91 | 35412 | No |
| 2 | GOM_NL__2PRFIN20081208_001554_000000502074_00288_35412_7896.N1 | 08-DEC-2008 00:15:54 | Bright | 50.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 100 | 35412 | No |
| 3 | GOM_NL__2PRFIN20081208_001803_000000412074_00288_35412_7897.N1 | 08-DEC-2008 00:18:03 | Bright | 41.000 | 32 | 77Eps UMa | 1.7630 | 11000. | 82 | 35412 | No |
| 4 | GOM_NL__2PRFIN20081208_002021_000000552074_00288_35412_7898.N1 | 08-DEC-2008 00:20:21 | Bright | 55.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 110 | 35412 | No |
| 5 | GOM_NL__2PRFIN20081208_002353_000000412074_00288_35412_7899.N1 | 08-DEC-2008 00:23:53 | Bright | 41.000 | 152 | 12Alp2CVn | 2.8900 | 11000. | 82 | 35412 | No |
| 6 | GOM_NL__2PRFIN20081208_002939_000000372074_00288_35412_7900.N1 | 08-DEC-2008 00:29:39 | Bright | 36.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 73 | 35412 | No |
| 7 | GOM_NL__2PRFIN20081208_003305_000000642074_00288_35412_7901.N1 | 08-DEC-2008 00:33:05 | Bright | 64.000 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 128 | 35412 | No |
| 8 | GOM_NL__2PRFIN20081208_003750_000000542074_00288_35412_7902.N1 | 08-DEC-2008 00:37:50 | Twilight | 54.000 | 121 | 29Gam Vir | 2.7400 | 7200.0 | 108 | 35412 | No |
| 9 | GOM_NL__2PRFIN20081208_004224_000000432074_00288_35412_7903.N1 | 08-DEC-2008 00:42:24 | Twilight | 42.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 85 | 35412 | No |
| 10 | GOM_NL__2PRFIN20081208_004532_000000522074_00288_35412_7904.N1 | 08-DEC-2008 00:45:32 | Dark | 52.000 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 104 | 35412 | No |
| 11 | GOM_NL__2PRFIN20081208_005449_000000502074_00289_35413_7891.N1 | 08-DEC-2008 00:54:49 | Dark | 49.500 | 113 | Mu Vel | 2.6920 | 5000.0 | 99 | 35413 | No |
| 12 | GOM_NL__2PRFIN20081208_010329_000000502074_00289_35413_7892.N1 | 08-DEC-2008 01:03:29 | Dark | 50.000 | 34 | Gam2Vel | 1.7930 | 23000. | 100 | 35413 | No |
| 13 | GOM_NL__2PRFIN20081208_010614_000000562074_00289_35413_7893.N1 | 08-DEC-2008 01:06:14 | Dark | 55.500 | 2 | Alp Car | -0.73600 | 7000.0 | 111 | 35413 | No |
| 14 | GOM_NL__2PRFIN20081208_010835_000000542074_00289_35413_7894.N1 | 08-DEC-2008 01:08:35 | Dark | 53.500 | 117 | Pi Pup | 2.7060 | 3800.0 | 107 | 35413 | No |
| 15 | GOM_NL__2PRFIN20081208_011207_000000462074_00289_35413_7895.N1 | 08-DEC-2008 01:12:07 | Dark | 46.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 92 | 35413 | No |
| 16 | GOM_NL__2PRFIN20081208_011746_000000472074_00289_35413_7896.N1 | 08-DEC-2008 01:17:46 | Straylight | 46.500 | 101 | 11Alp Lep | 2.5820 | 7000.0 | 93 | 35413 | No |
| 17 | GOM_NL__2PRFIN20081208_012104_000000532074_00289_35413_7897.N1 | 08-DEC-2008 01:21:04 | Straylight | 53.000 | 7 | 19Bet Ori | 0.10000 | 14000. | 106 | 35413 | No |
| 18 | GOM_NL__2PRFIN20081208_012339_000000522074_00289_35413_7898.N1 | 08-DEC-2008 01:23:39 | Straylight | 51.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 103 | 35413 | No |
| 19 | GOM_NL__2PRFIN20081208_012609_000000522074_00289_35413_7899.N1 | 08-DEC-2008 01:26:09 | Twilight | 52.000 | 27 | 24Gam Ori | 1.6360 | 26000. | 104 | 35413 | No |
| 20 | GOM_NL__2PRFIN20081208_012841_000000522074_00289_35413_7900.N1 | 08-DEC-2008 01:28:41 | Bright | 52.000 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 104 | 35413 | No |
| 21 | GOM_NL__2PRFIN20081208_013139_000000402074_00289_35413_7901.N1 | 08-DEC-2008 01:31:39 | Bright | 40.000 | 176 | 23Zet Tau | 3.0200 | 22000. | 80 | 35413 | No |
| 22 | GOM_NL__2PRFIN20081208_013824_000000462074_00289_35413_7902.N1 | 08-DEC-2008 01:38:24 | Bright | 46.000 | 6 | 13Alp Aur | 0.080000 | 3400.0 | 92 | 35413 | No |
| 23 | GOM_NL__2PRFIN20081208_015457_000000472074_00289_35413_7903.N1 | 08-DEC-2008 01:54:57 | Bright | 47.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 94 | 35413 | No |
| 24 | GOM_NL__2PRFIN20081208_015629_000000472074_00289_35413_7904.N1 | 08-DEC-2008 01:56:29 | Bright | 47.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 94 | 35413 | No |
| 25 | GOM_NL__2PRFIN20081208_015839_000000412074_00289_35413_7905.N1 | 08-DEC-2008 01:58:39 | Bright | 40.500 | 32 | 77Eps UMa | 1.7630 | 11000. | 81 | 35413 | No |
| 26 | GOM_NL__2PRFIN20081208_020057_000000392074_00289_35413_7906.N1 | 08-DEC-2008 02:00:57 | Bright | 38.500 | 39 | 85Eta UMa | 1.8540 | 24000. | 77 | 35413 | No |
| 27 | GOM_NL__2PRFIN20081208_020429_000000412074_00289_35413_7907.N1 | 08-DEC-2008 02:04:29 | Bright | 41.000 | 152 | 12Alp2CVn | 2.8900 | 11000. | 82 | 35413 | No |
| 28 | GOM_NL__2PRFIN20081208_021015_000000362074_00289_35413_7908.N1 | 08-DEC-2008 02:10:15 | Bright | 36.000 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 72 | 35413 | No |
| 29 | GOM_NL__2PRFIN20081208_021827_000000512074_00289_35413_7909.N1 | 08-DEC-2008 02:18:27 | Twilight | 50.500 | 121 | 29Gam Vir | 2.7400 | 7200.0 | 101 | 35413 | No |
| 30 | GOM_NL__2PRFIN20081208_022300_000000422074_00289_35413_7910.N1 | 08-DEC-2008 02:23:00 | Twilight | 41.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 83 | 35413 | No |
| 31 | GOM_NL__2PRFIN20081208_022432_000000502074_00289_35413_7911.N1 | 08-DEC-2008 02:24:32 | Dark | 50.000 | 100 | 4Gam Crv | 2.5800 | 13100. | 100 | 35413 | No |
| 32 | GOM_NL__2PRFIN20081208_022609_000000522074_00289_35413_7912.N1 | 08-DEC-2008 02:26:09 | Dark | 52.000 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 104 | 35413 | No |
| 33 | GOM_NL__2PRFIN20081208_023526_000000442074_00290_35414_0450.N1 | 08-DEC-2008 02:35:26 | Dark | 43.500 | 113 | Mu Vel | 2.6920 | 5000.0 | 87 | 35414 | No |
| 34 | GOM_NL__2PRFIN20081208_024406_000000452074_00290_35414_0451.N1 | 08-DEC-2008 02:44:06 | Dark | 45.000 | 34 | Gam2Vel | 1.7930 | 23000. | 90 | 35414 | No |
| 35 | GOM_NL__2PRFIN20081208_024650_000000562074_00290_35414_0452.N1 | 08-DEC-2008 02:46:50 | Dark | 56.000 | 2 | Alp Car | -0.73600 | 7000.0 | 112 | 35414 | No |
| 36 | GOM_NL__2PRFIN20081208_024912_000000572074_00290_35414_0453.N1 | 08-DEC-2008 02:49:12 | Dark | 56.500 | 117 | Pi Pup | 2.7060 | 3800.0 | 113 | 35414 | No |
| 37 | GOM_NL__2PRFIN20081208_025244_000000502074_00290_35414_0454.N1 | 08-DEC-2008 02:52:44 | Dark | 50.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 100 | 35414 | No |
| 38 | GOM_NL__2PRFIN20081208_025822_000000492074_00290_35414_0455.N1 | 08-DEC-2008 02:58:22 | Straylight | 49.000 | 101 | 11Alp Lep | 2.5820 | 7000.0 | 98 | 35414 | No |
| 39 | GOM_NL__2PRFIN20081208_030140_000000522074_00290_35414_0456.N1 | 08-DEC-2008 03:01:40 | Straylight | 51.500 | 7 | 19Bet Ori | 0.10000 | 14000. | 103 | 35414 | No |
| 40 | GOM_NL__2PRFIN20081208_030414_000000552074_00290_35414_0457.N1 | 08-DEC-2008 03:04:14 | Straylight | 54.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 109 | 35414 | No |
| 41 | GOM_NL__2PRFIN20081208_030645_000000522074_00290_35414_0458.N1 | 08-DEC-2008 03:06:45 | Twilight | 51.500 | 27 | 24Gam Ori | 1.6360 | 26000. | 103 | 35414 | No |
| 42 | GOM_NL__2PRFIN20081208_030916_000000572074_00290_35414_0459.N1 | 08-DEC-2008 03:09:16 | Bright | 57.000 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 114 | 35414 | No |

| | | | | | | | | | | | |
|-----|--|----------------------|--------|--------|-----|-----------|----------|--------|-----|-------|----|
| 338 | GOM_NL__2PRFIN20081208_231625_000000562074_00302_35426_0475.N1 | 08-DEC-2008 23:16:25 | Bright | 55.500 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 111 | 35426 | No |
| 339 | GOM_NL__2PRFIN20081208_232037_000000372074_00302_35426_0476.N1 | 08-DEC-2008 23:20:37 | Bright | 36.500 | 150 | 44Zet Per | 2.8900 | 28000. | 73 | 35426 | No |
| 340 | GOM_NL__2PRFIN20081208_232258_000000352074_00302_35426_0477.N1 | 08-DEC-2008 23:22:58 | Bright | 35.000 | 149 | 45Eps Per | 2.8880 | 30000. | 70 | 35426 | No |
| 341 | GOM_NL__2PRFIN20081208_232605_000000442074_00302_35426_0478.N1 | 08-DEC-2008 23:26:05 | Bright | 44.000 | 6 | 13Alp Aur | 0.080000 | 3400.0 | 88 | 35426 | No |
| 342 | GOM_NL__2PRFIN20081208_234238_000000472074_00302_35426_0479.N1 | 08-DEC-2008 23:42:38 | Bright | 46.500 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 93 | 35426 | No |
| 343 | GOM_NL__2PRFIN20081208_234410_000000482074_00302_35426_0480.N1 | 08-DEC-2008 23:44:10 | Bright | 48.000 | 82 | 48Bet UMa | 2.3650 | 10600. | 96 | 35426 | No |
| 344 | GOM_NL__2PRFIN20081208_234624_000000412074_00302_35426_0481.N1 | 08-DEC-2008 23:46:24 | Bright | 41.000 | 32 | 77Eps UMa | 1.7630 | 11000. | 82 | 35426 | No |
| 345 | GOM_NL__2PRFIN20081208_234844_000000552074_00302_35426_0482.N1 | 08-DEC-2008 23:48:44 | Bright | 55.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 110 | 35426 | No |
| 346 | GOM_NL__2PRFIN20081208_235216_000000422074_00302_35426_0483.N1 | 08-DEC-2008 23:52:16 | Bright | 41.500 | 152 | 12Alp2CVn | 2.8900 | 11000. | 83 | 35426 | No |
| 347 | GOM_NL__2PRFIN20081208_235806_000000382074_00302_35426_0484.N1 | 08-DEC-2008 23:58:06 | Bright | 37.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 75 | 35426 | No |

3. Quality information per product

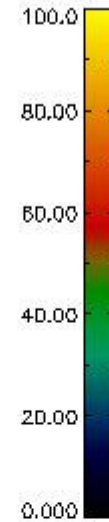
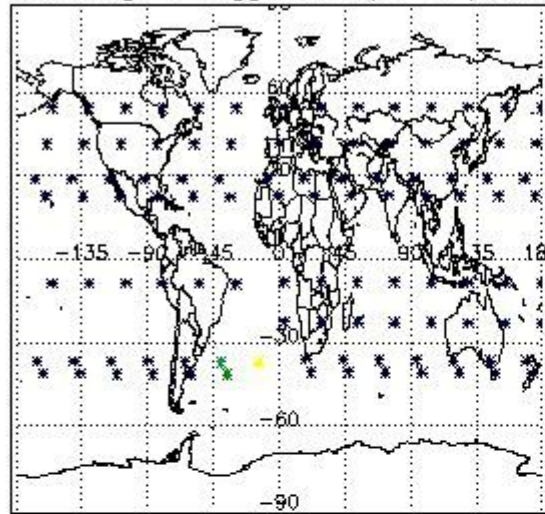
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

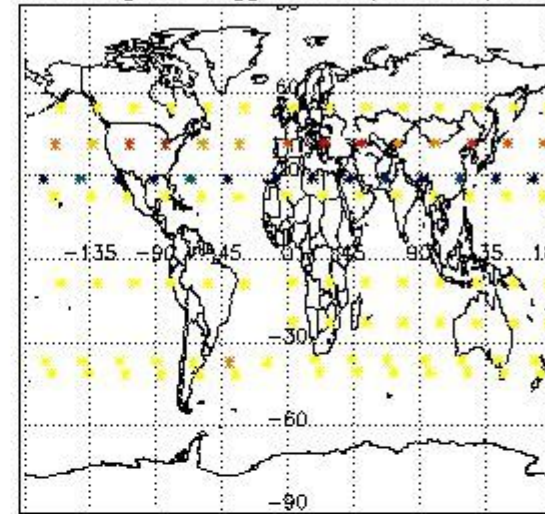


3.2 Plot quality information per product (world map)

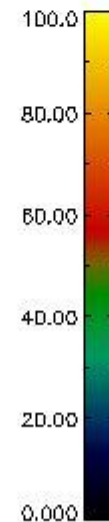
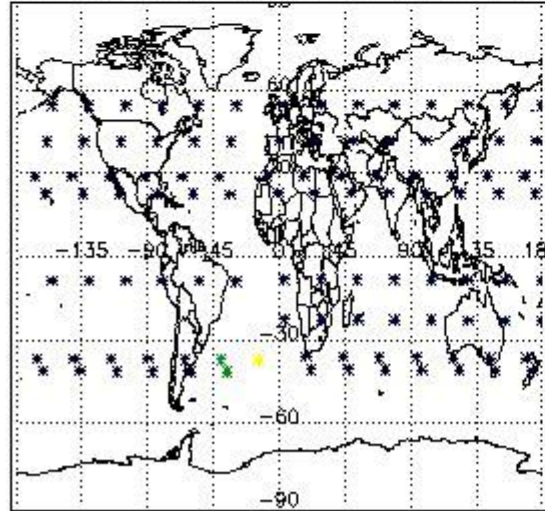
Percentage of flagged data per O3 profile



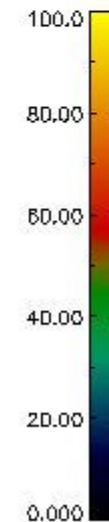
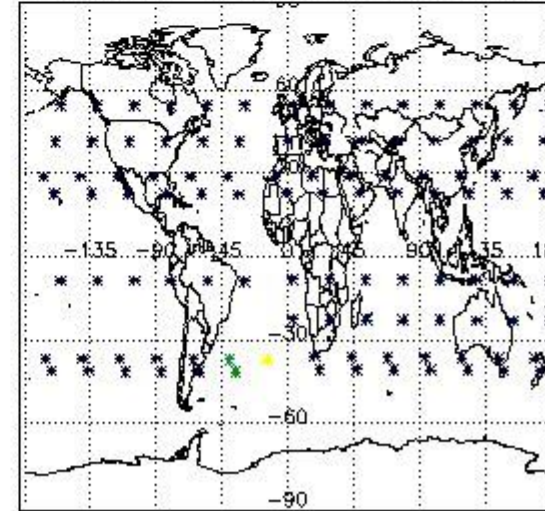
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

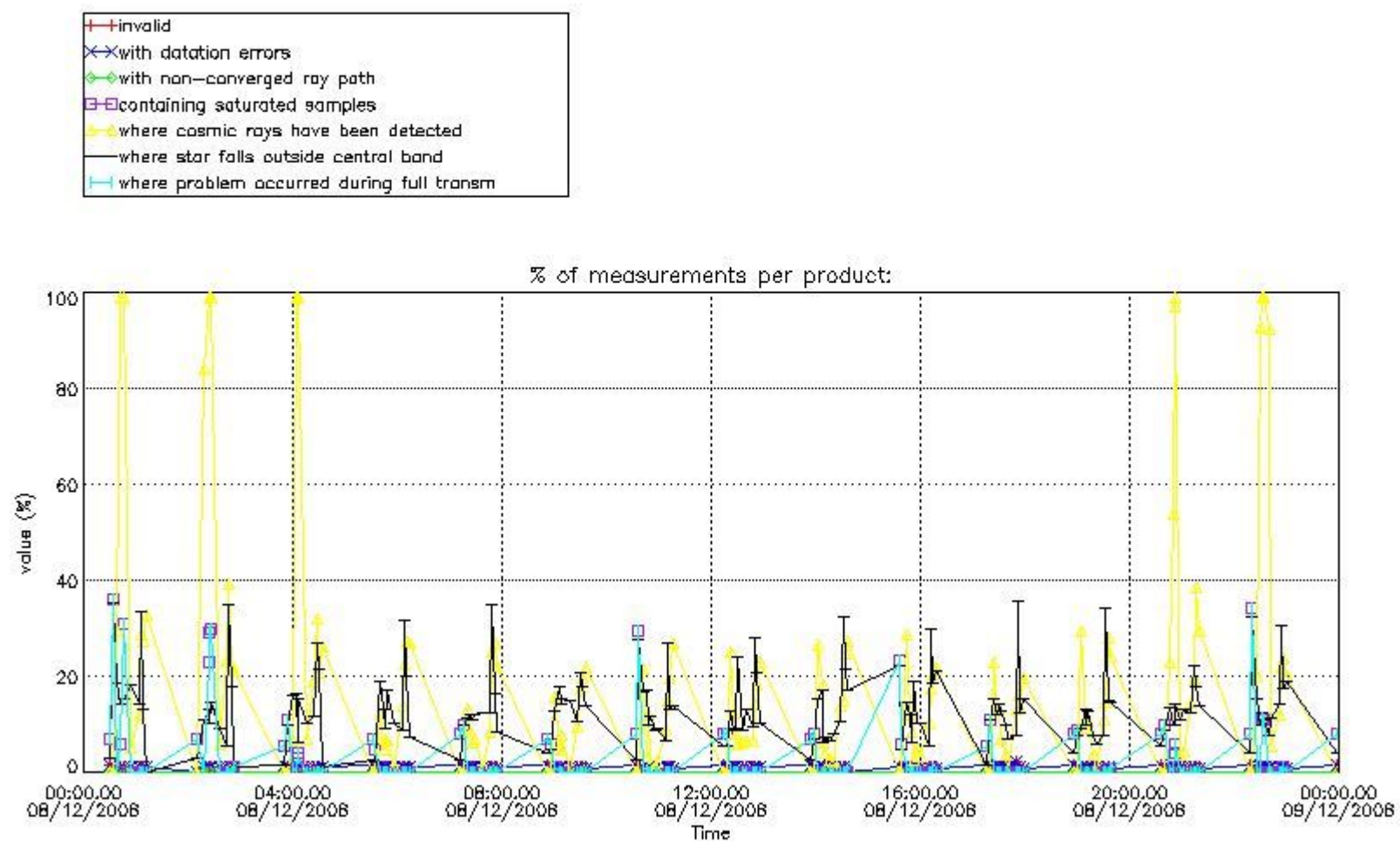


4. Level 1 quality information per product

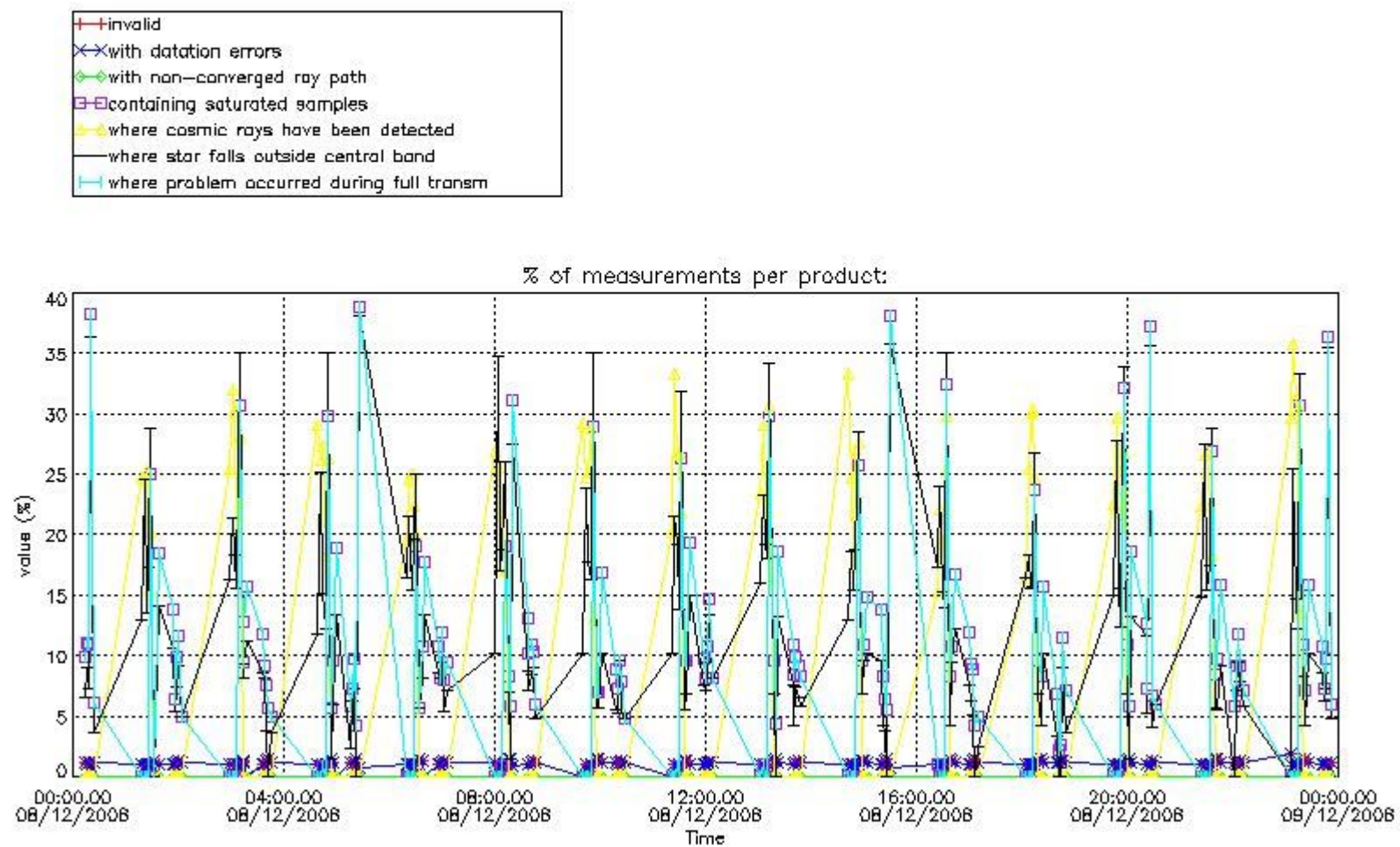
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

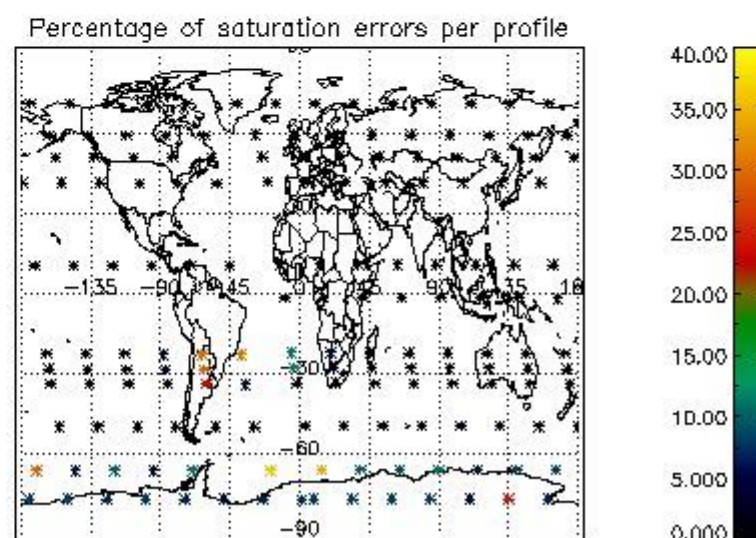
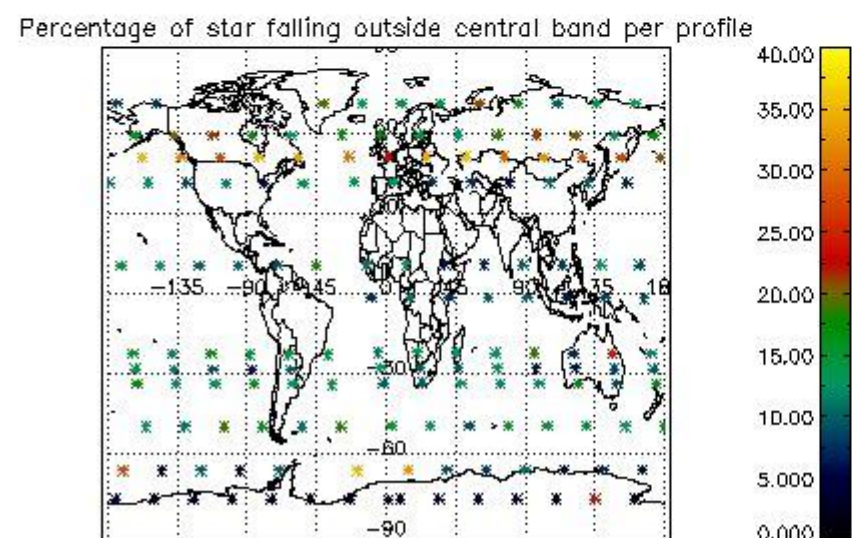
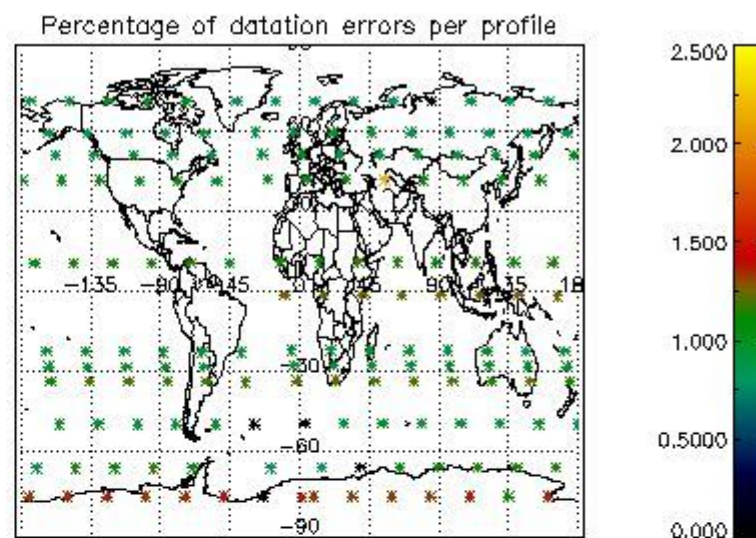
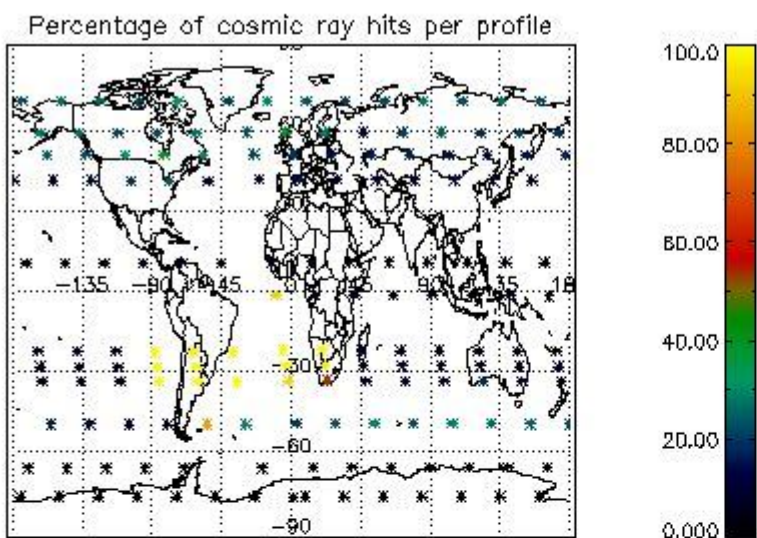


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



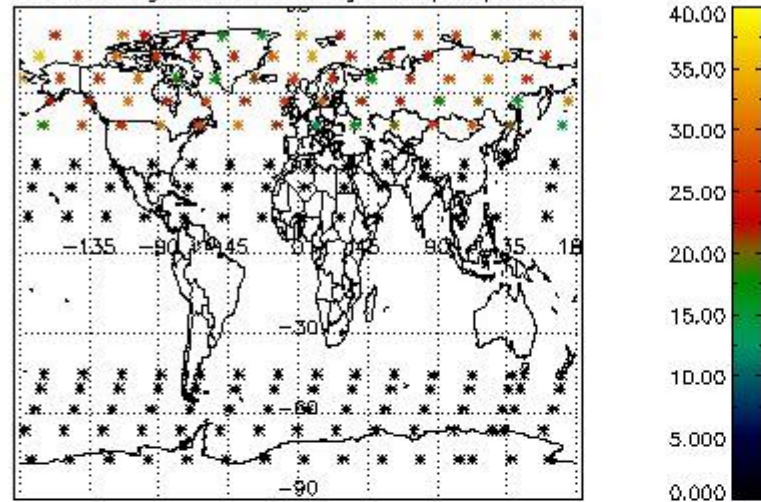
4.2 Plot quality information per product coming from level 1b processing (world map)

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

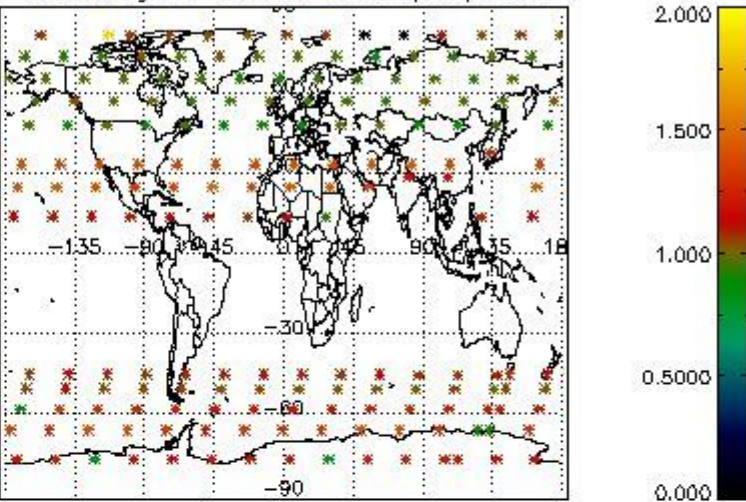


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

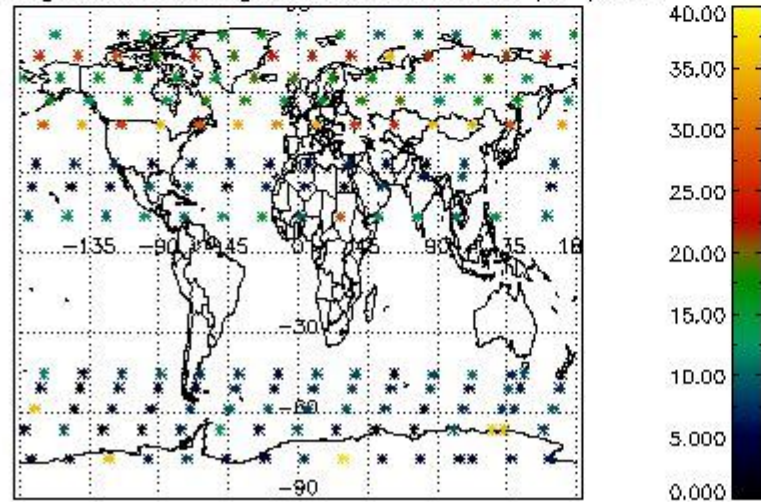
Percentage of cosmic ray hits per profile



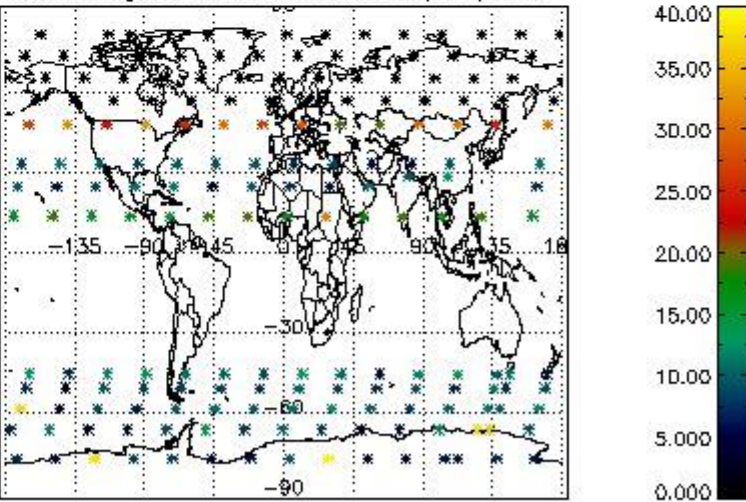
Percentage of datation errors per profile



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

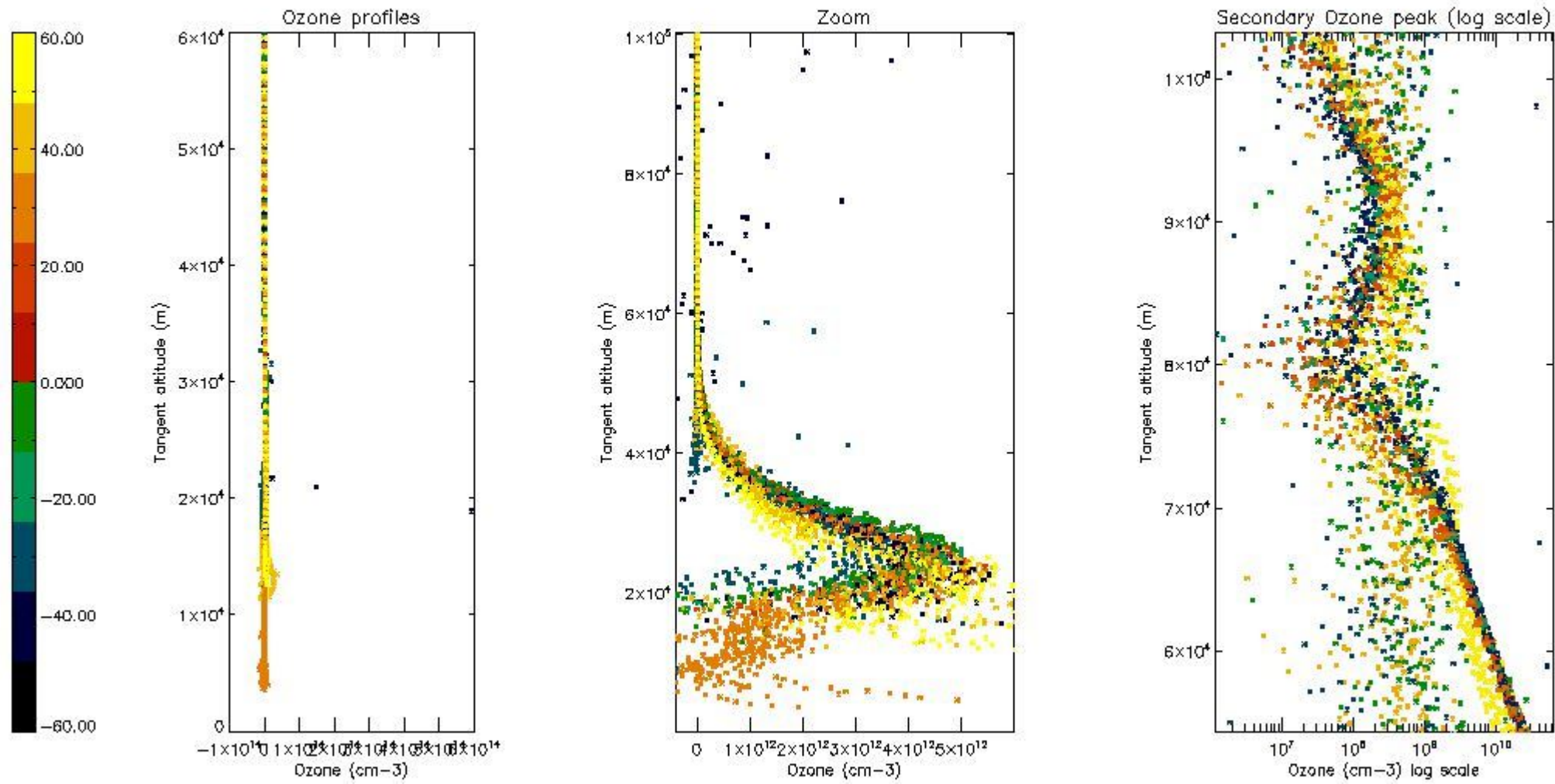
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 33 |
| STD < 20 | 16 |

| | |
|----------|----|
| STD < 10 | 13 |
| STD < 5 | 10 |

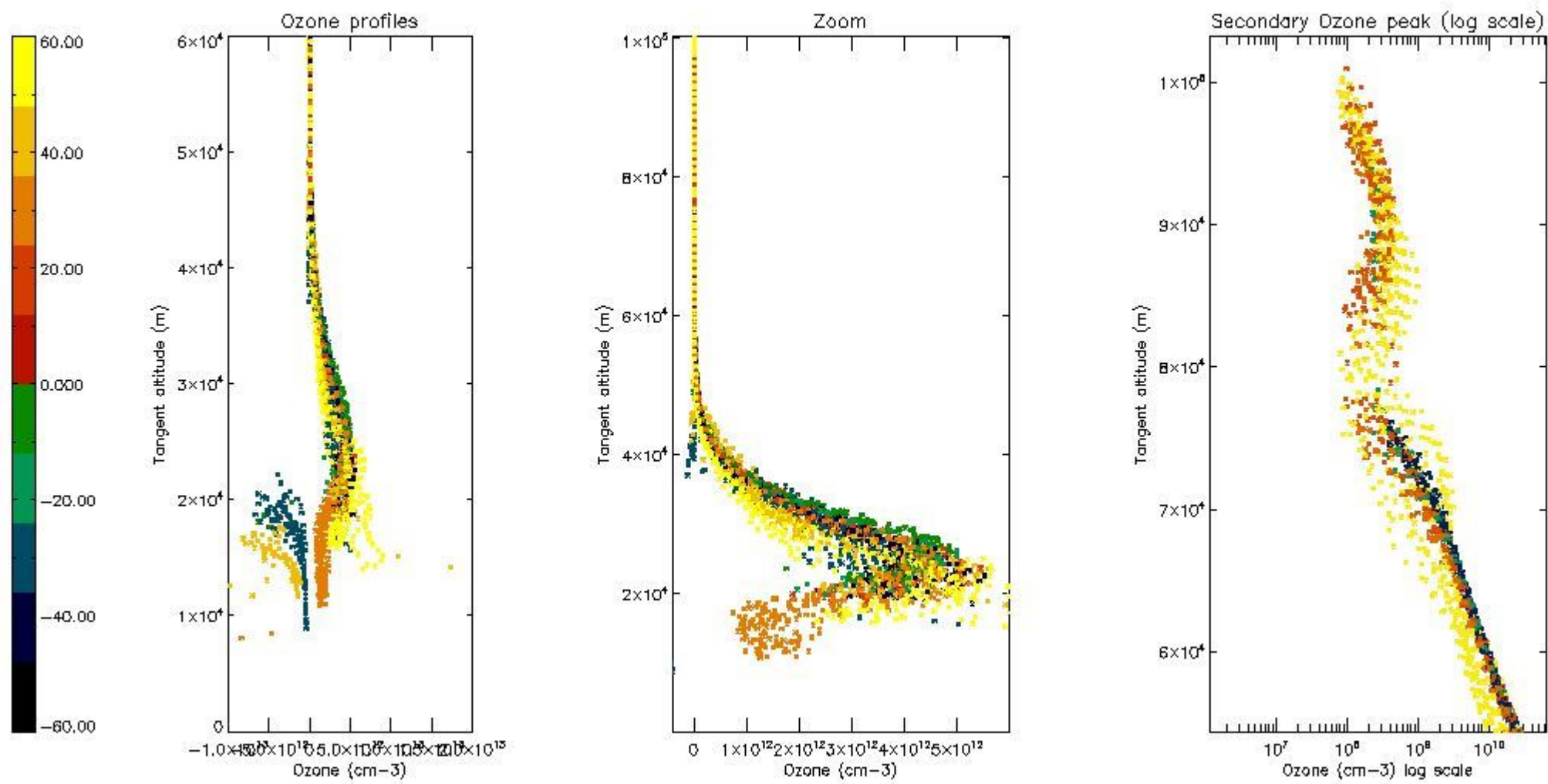
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



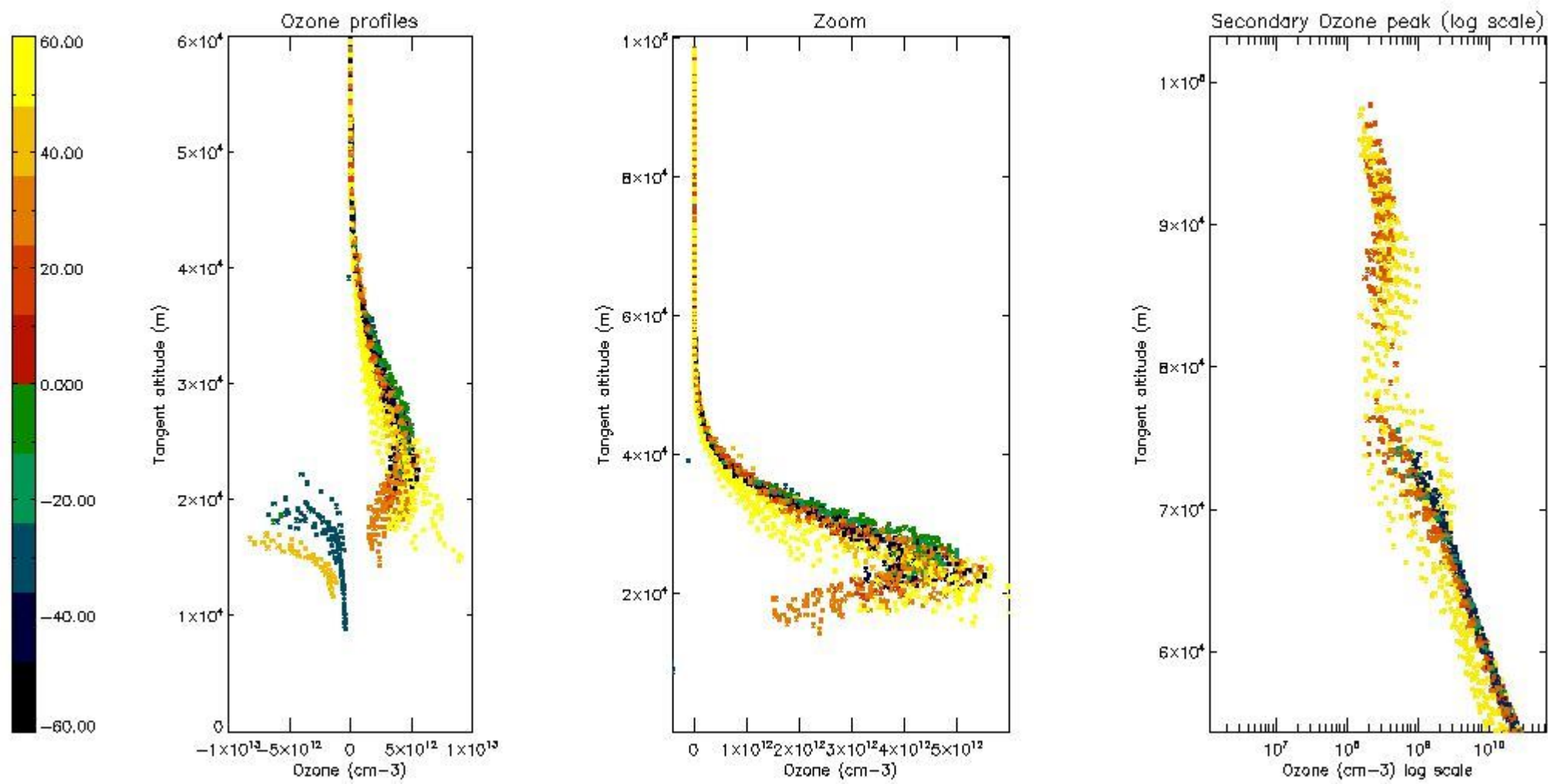
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



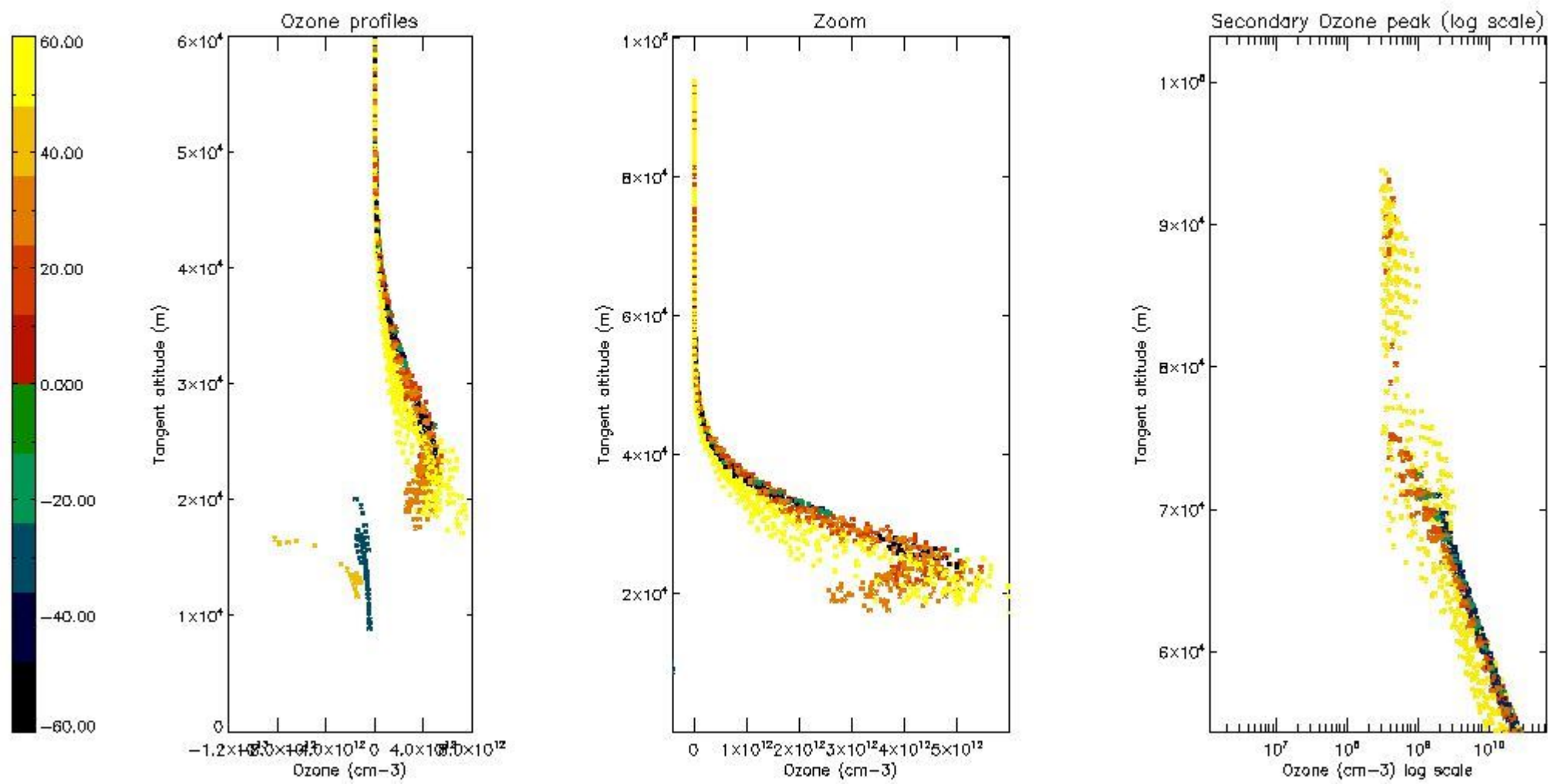
5.4 Plot ozone profiles where $STD < 10\%$ (dark without errors)

The colorbar represents the latitude.



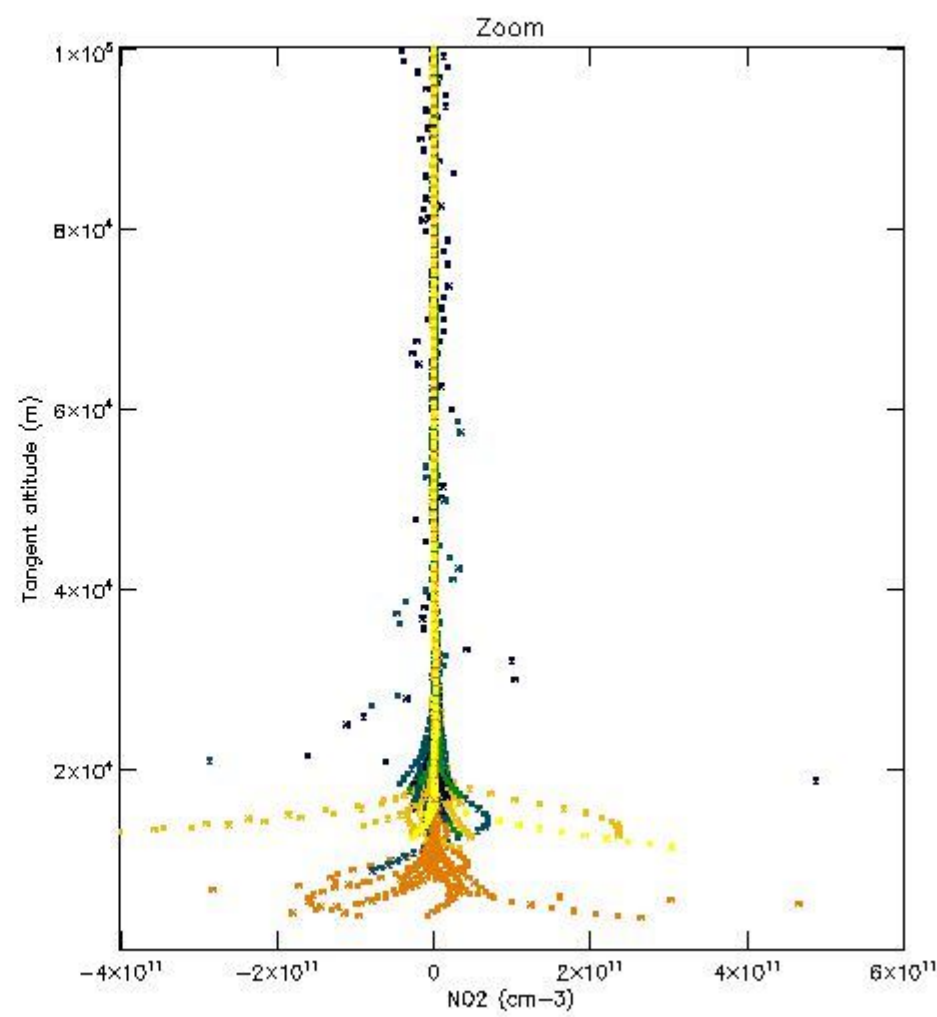
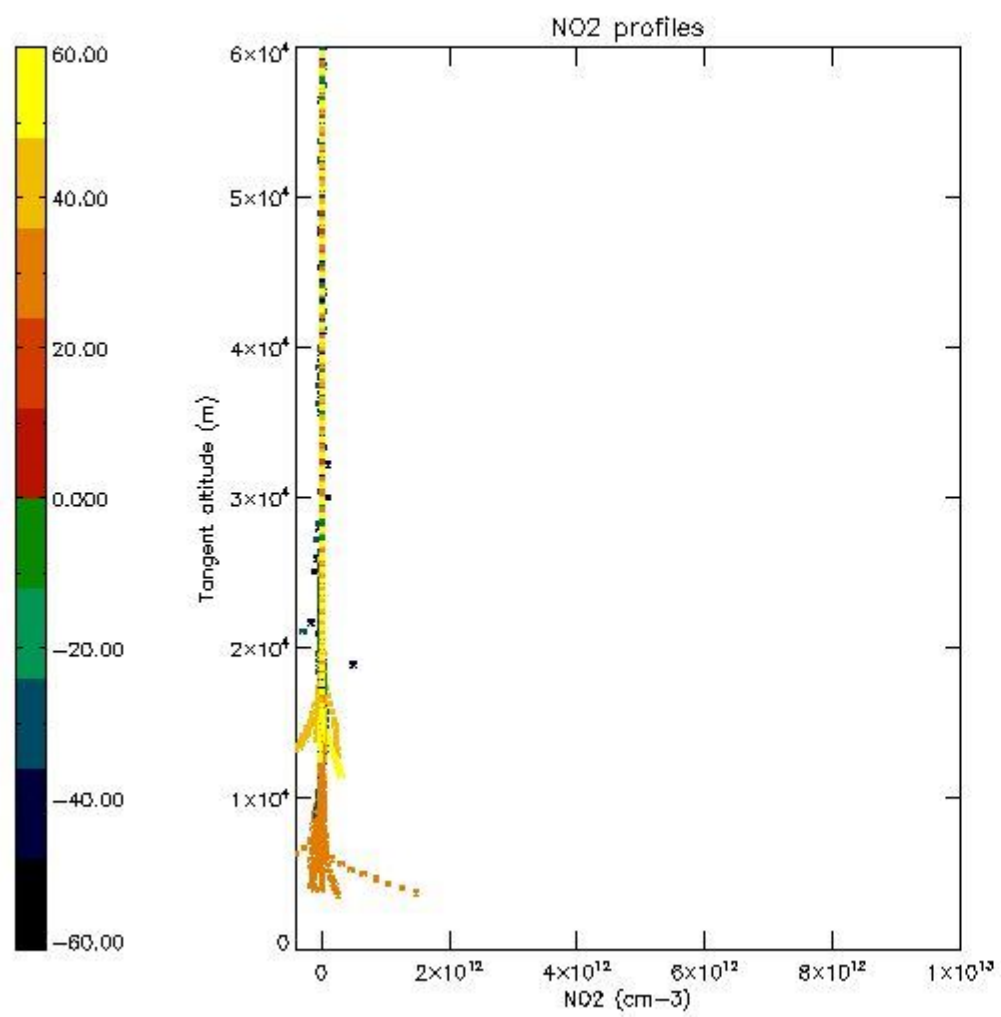
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



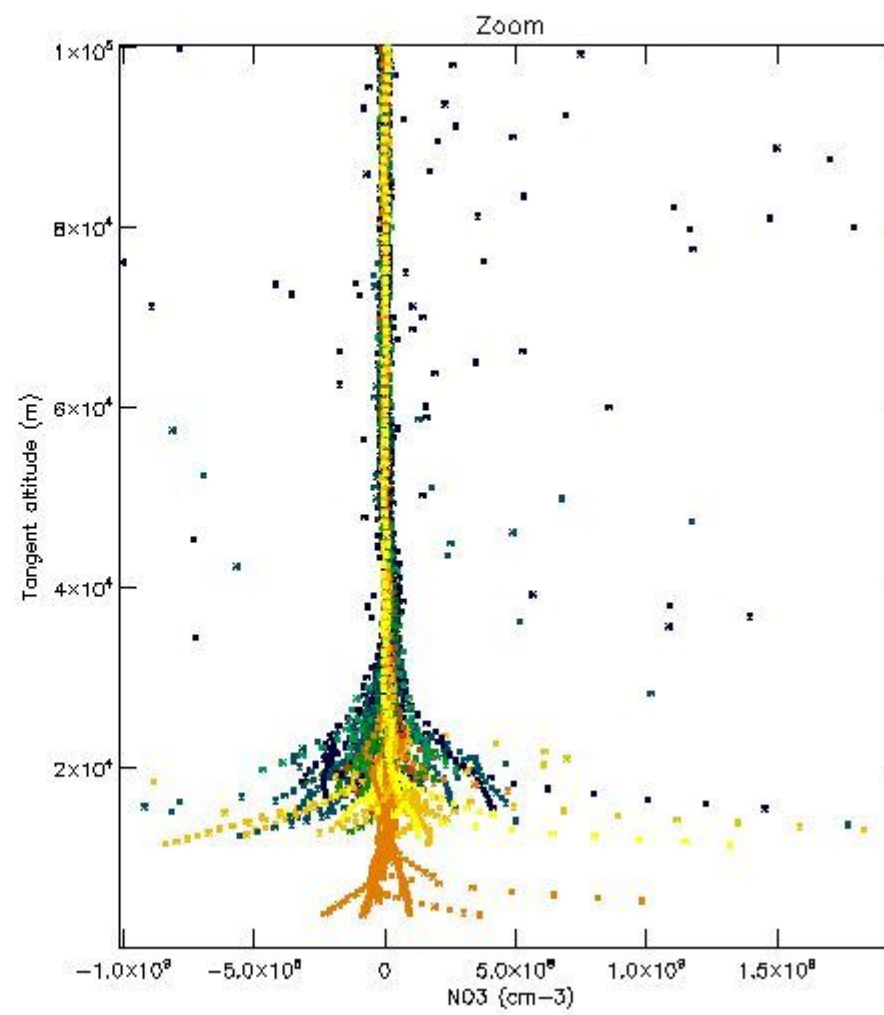
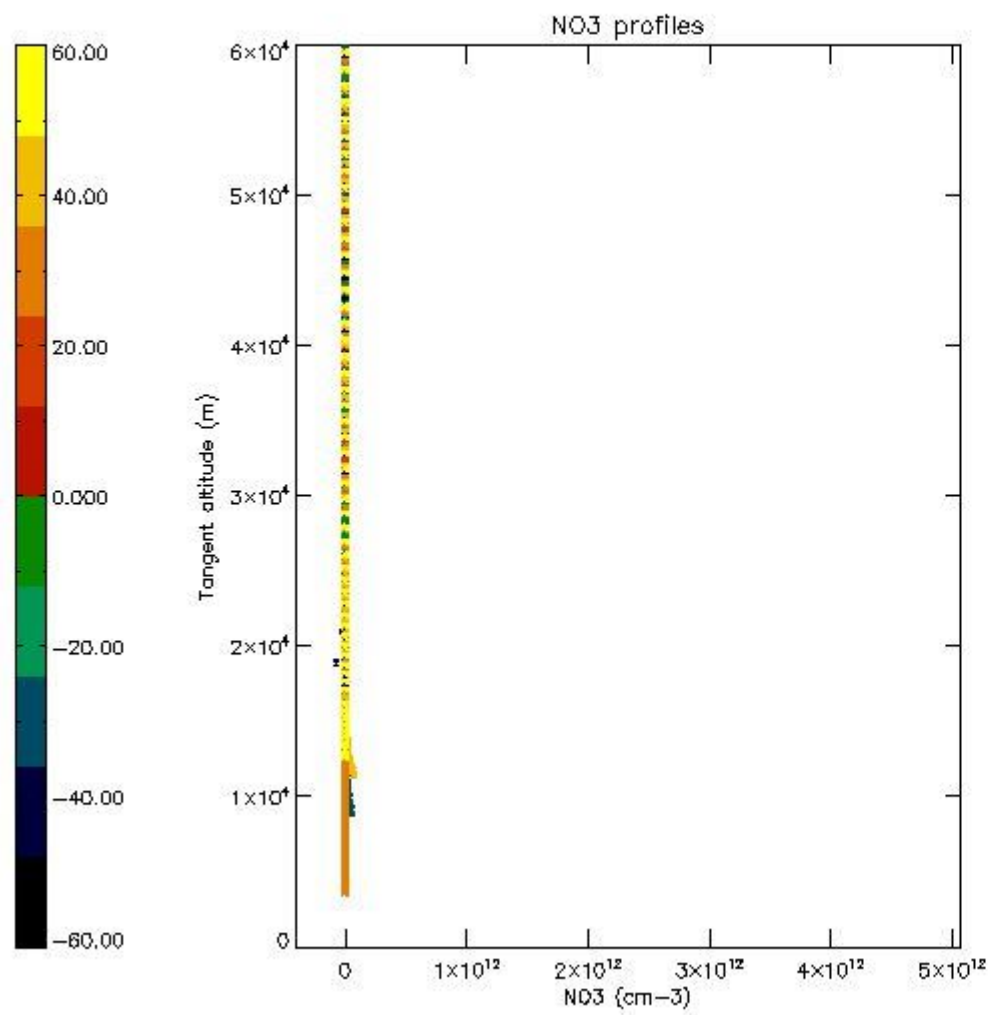
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

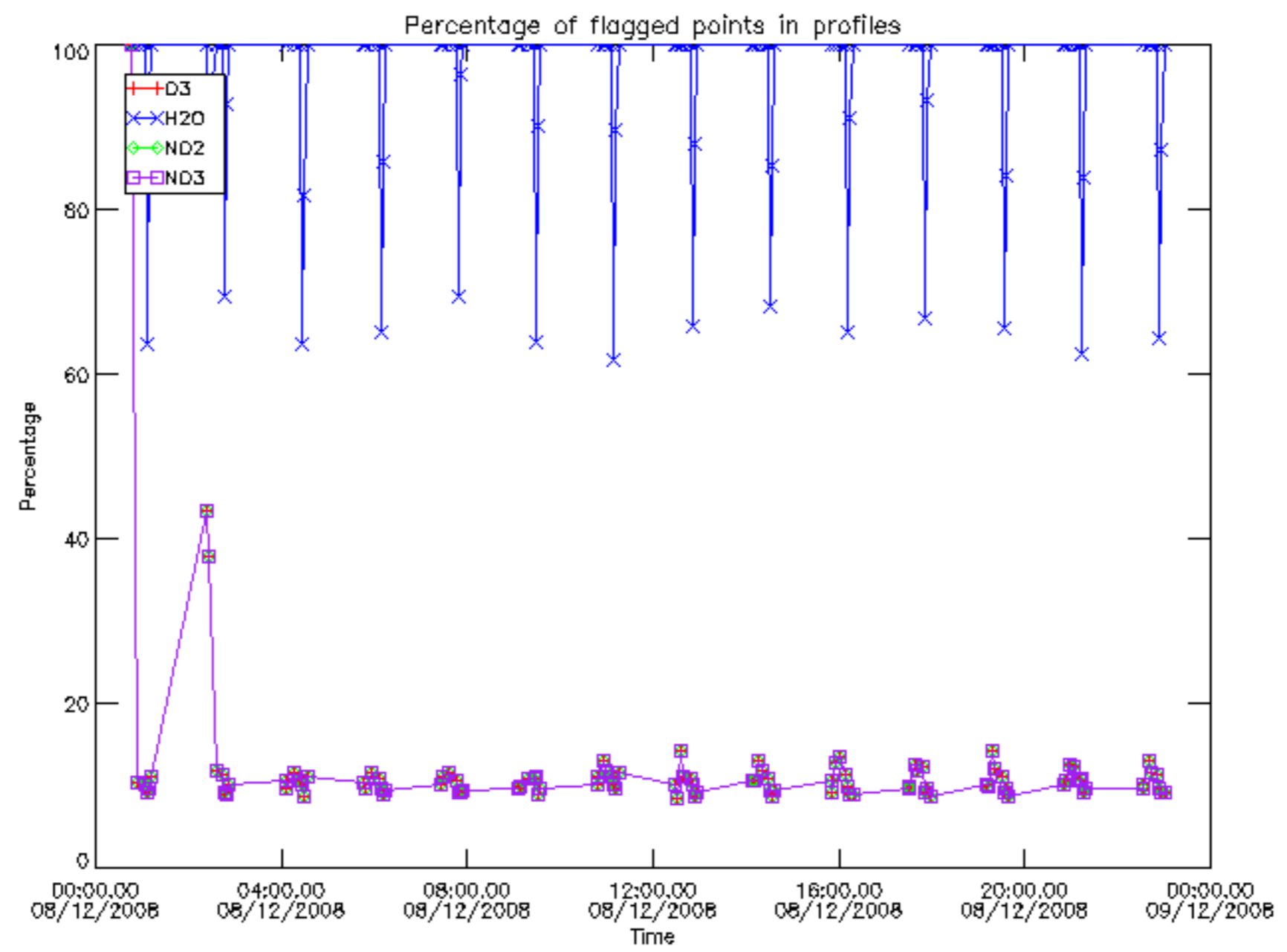
The colorbar represents the latitude.



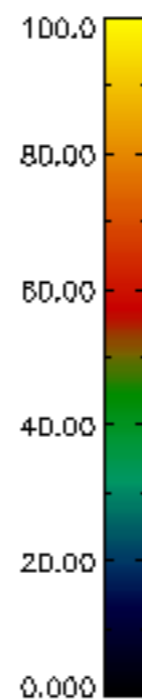
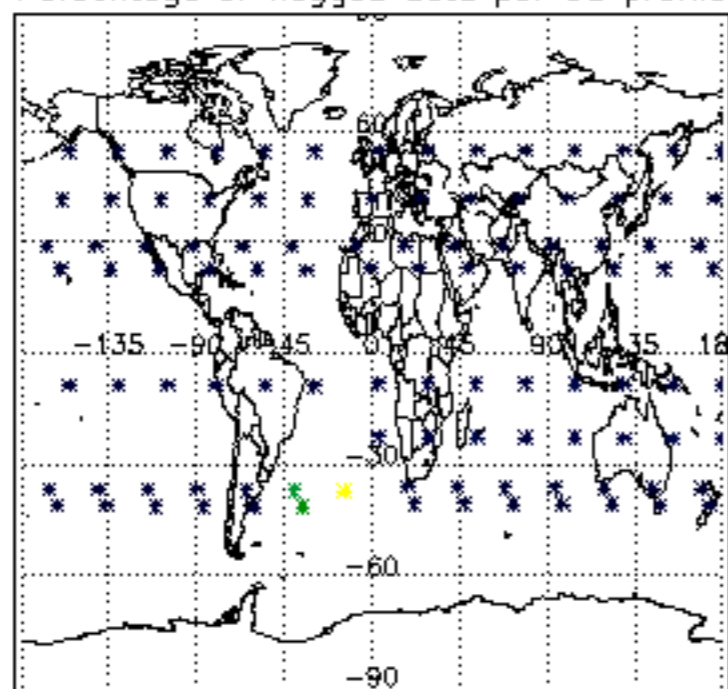
6. Auxiliary Data Files used for the production reported in section 2

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.

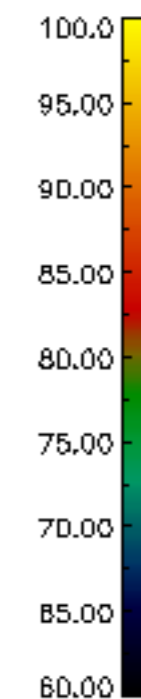
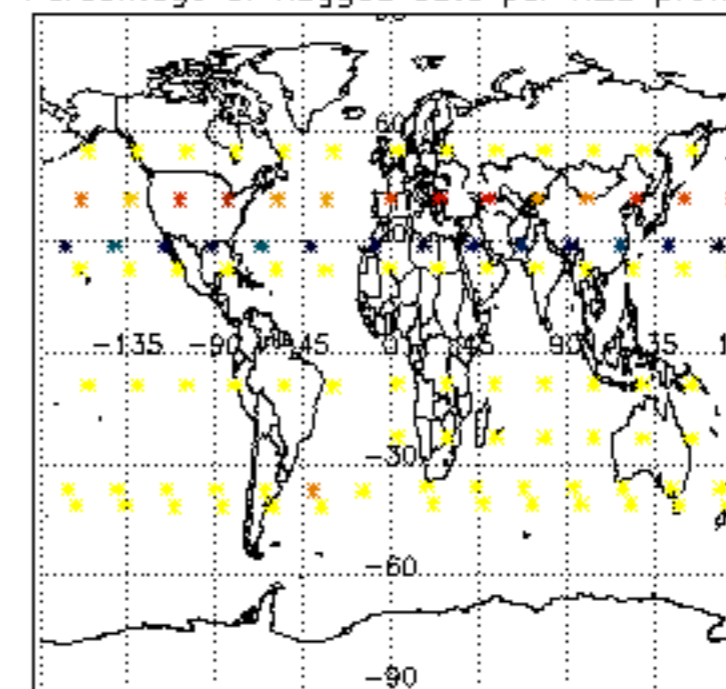
| Type | Auxiliary Filename | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1 | 08-DEC-2008 00:14:22 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 08-DEC-2008 00:14:22 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 08-DEC-2008 00:14:22 |



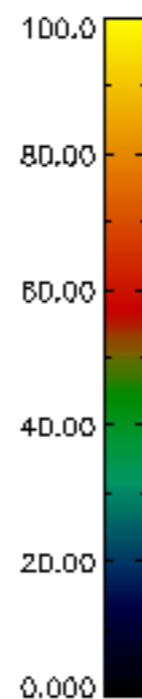
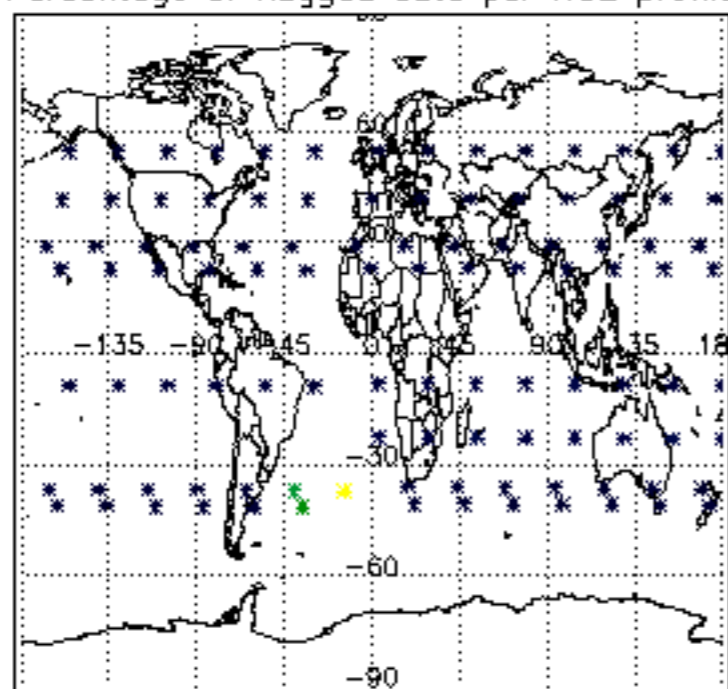
Percentage of flagged data per D3 profile



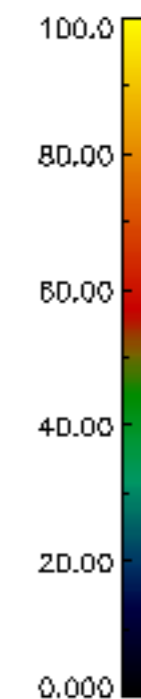
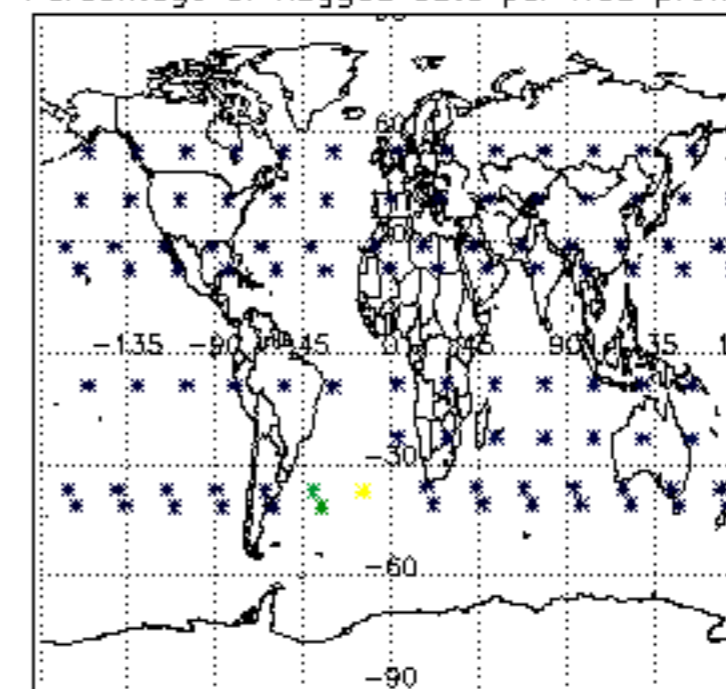
Percentage of flagged data per H2O profile

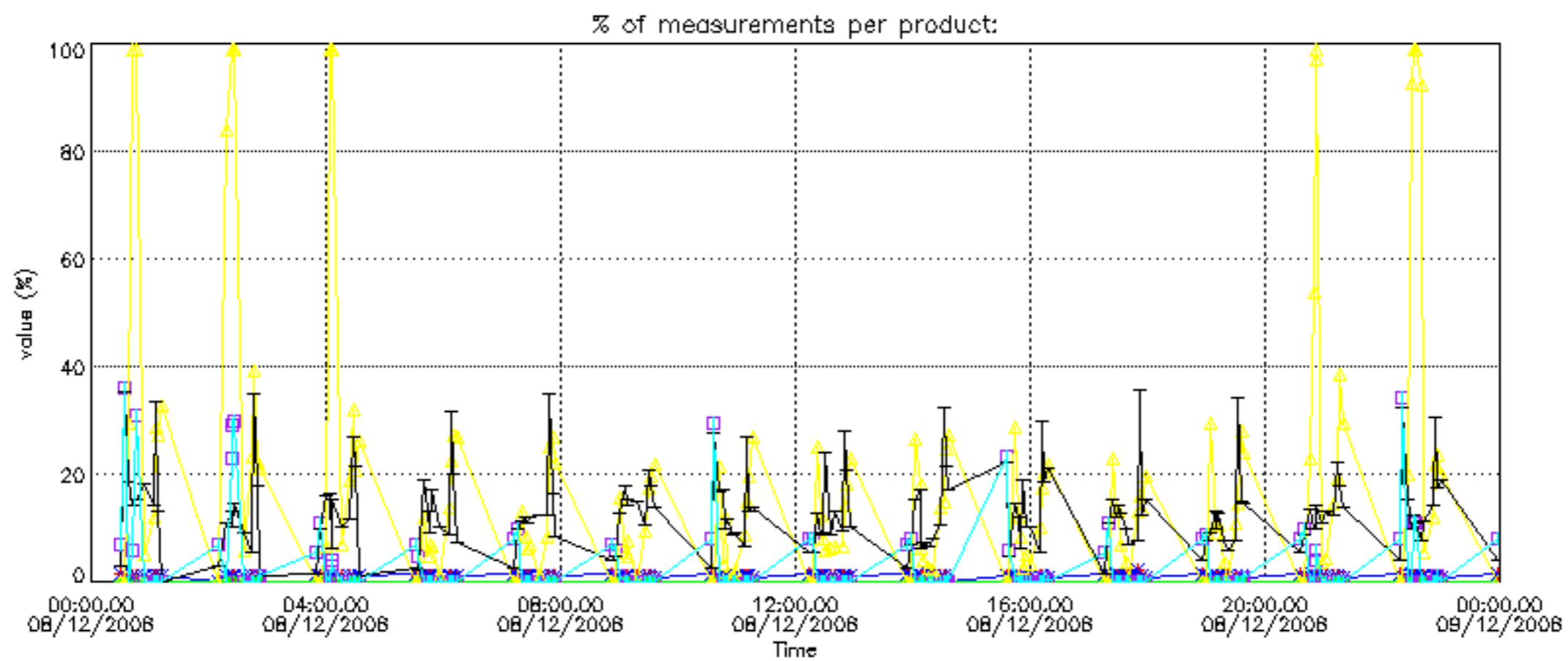


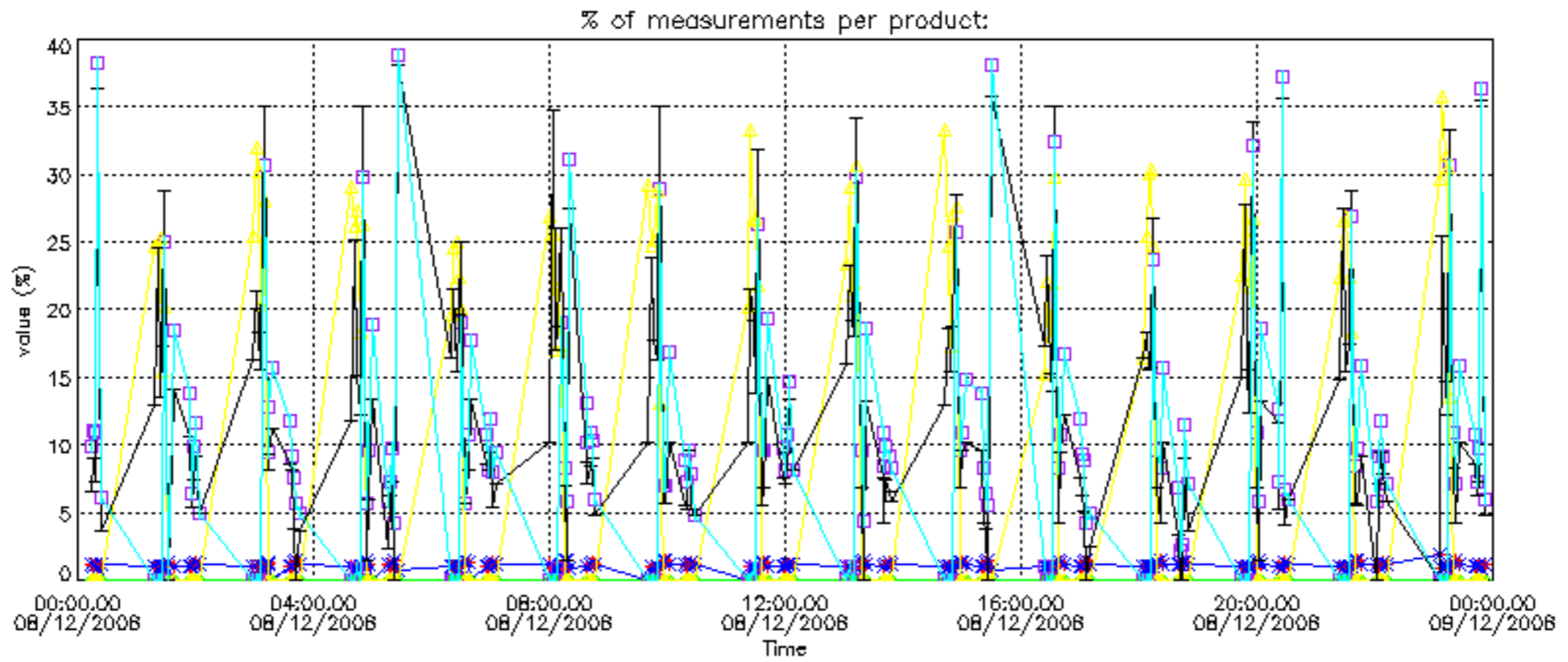
Percentage of flagged data per NO2 profile



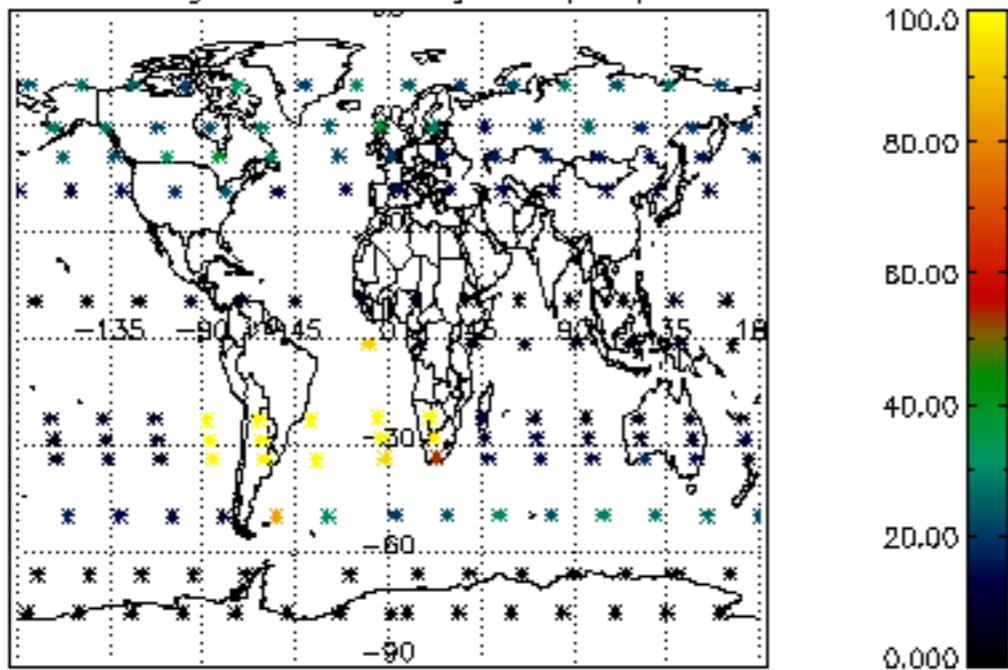
Percentage of flagged data per NO3 profile



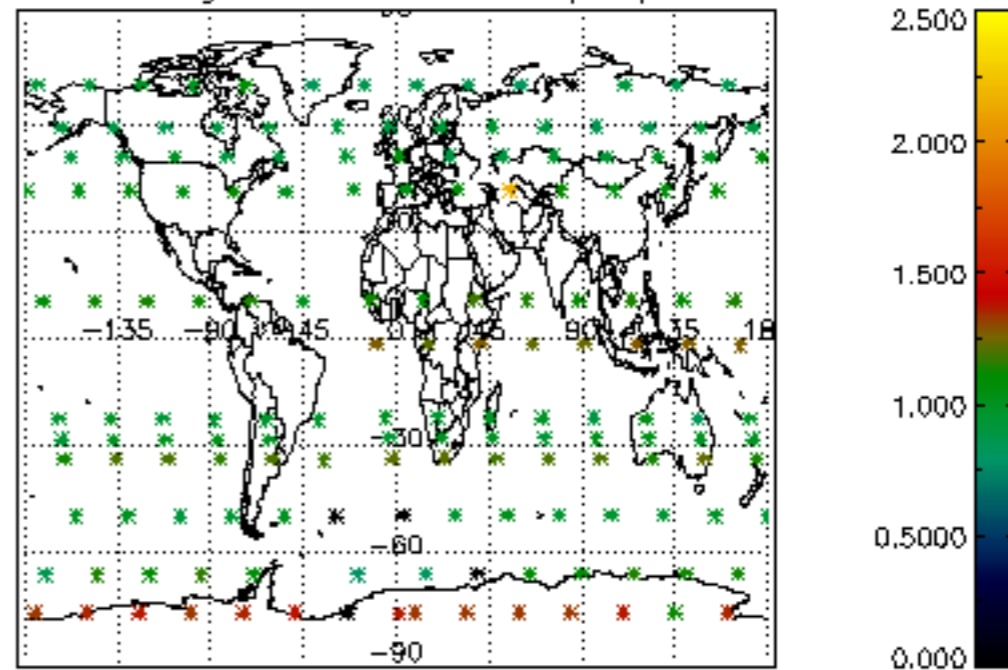




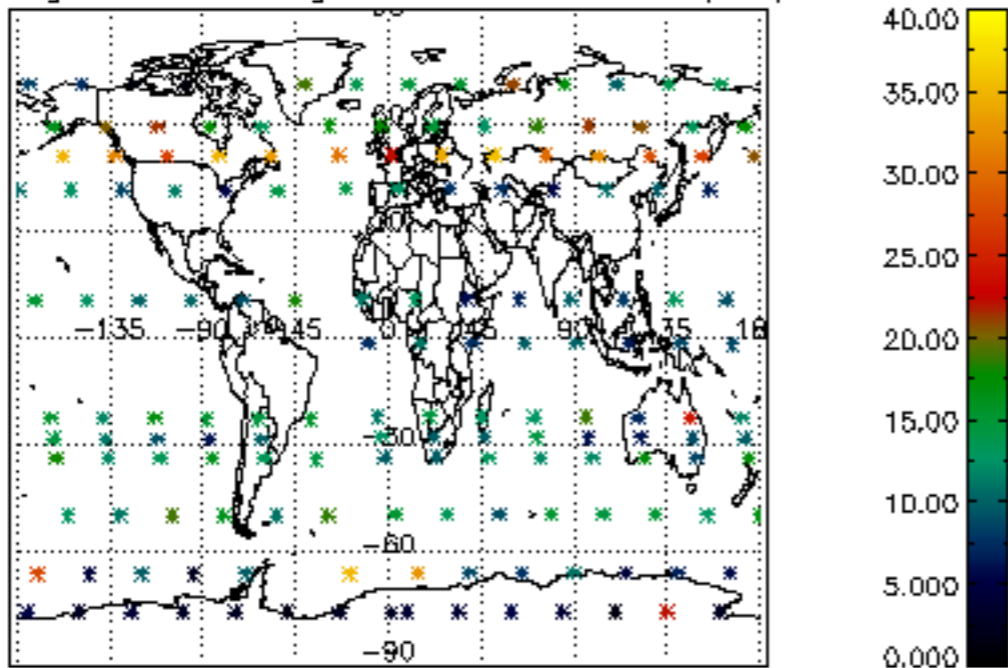
Percentage of cosmic ray hits per profile



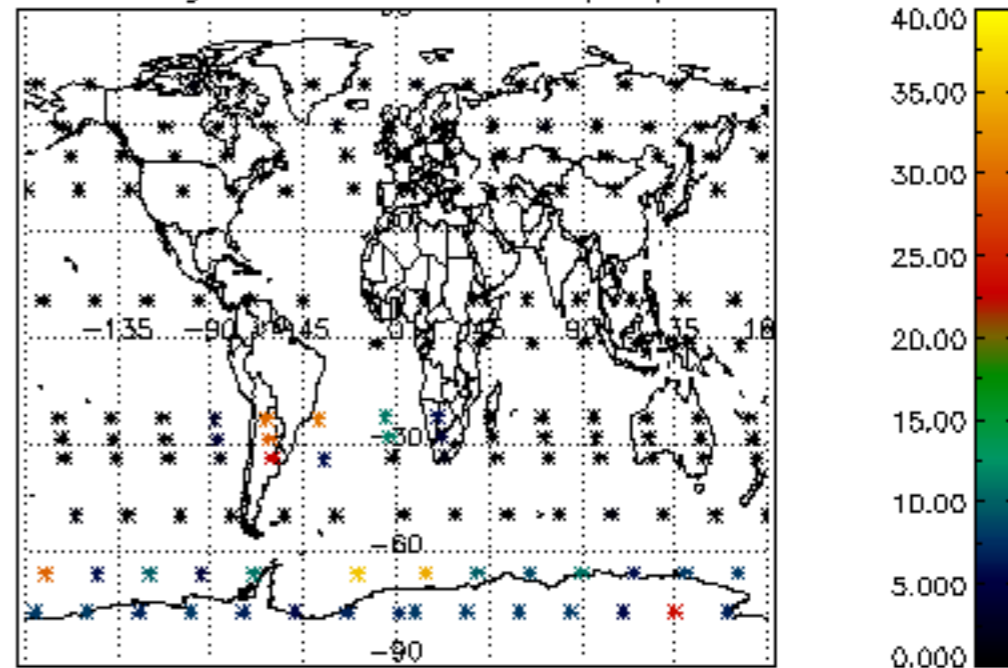
Percentage of datation errors per profile



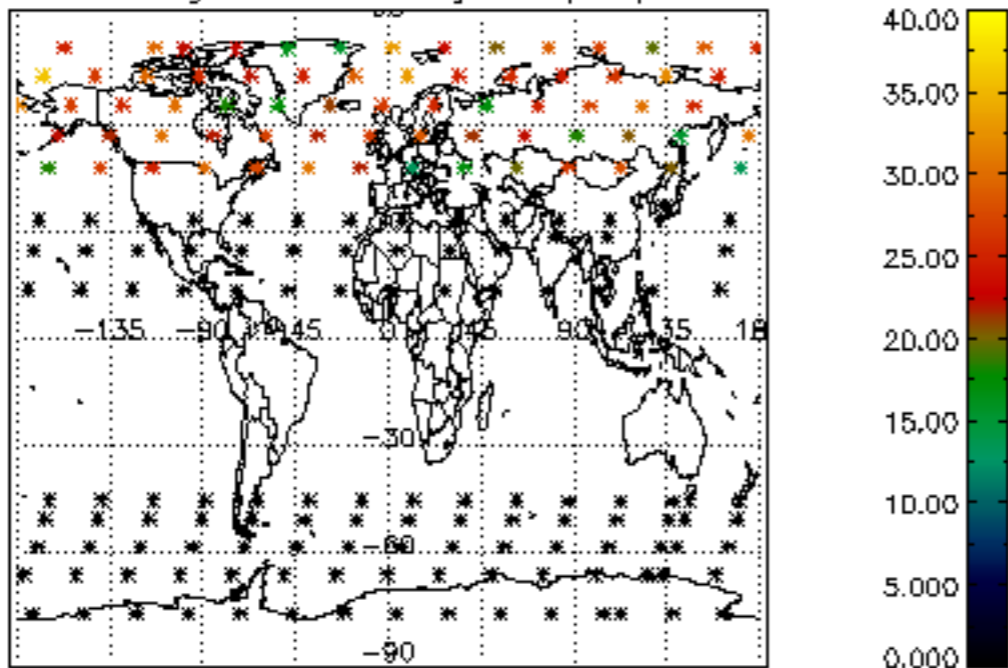
Percentage of star falling outside central band per profile



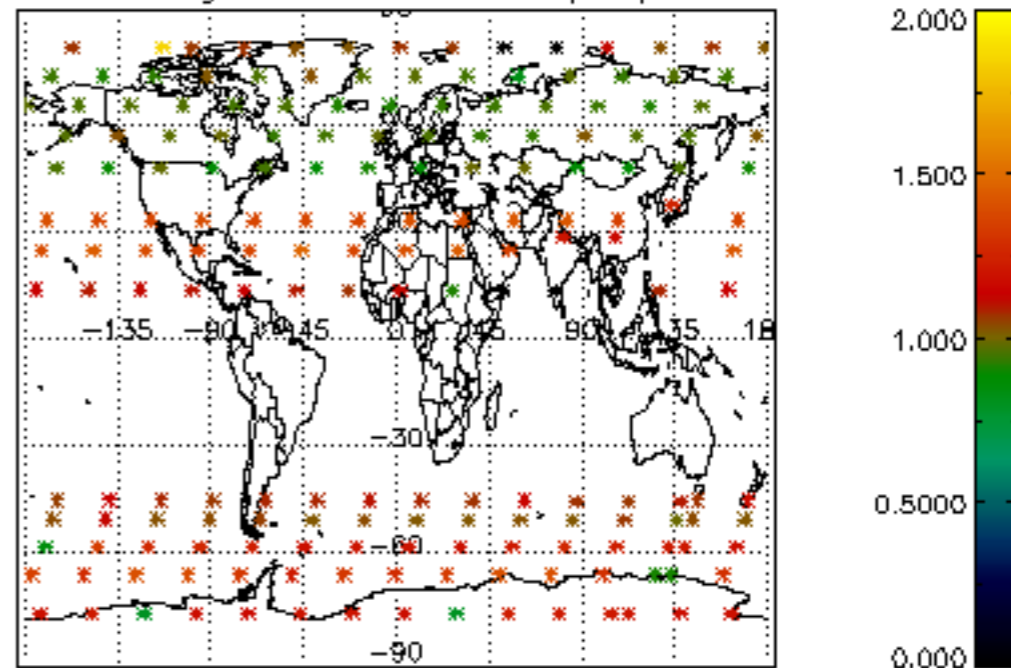
Percentage of saturation errors per profile



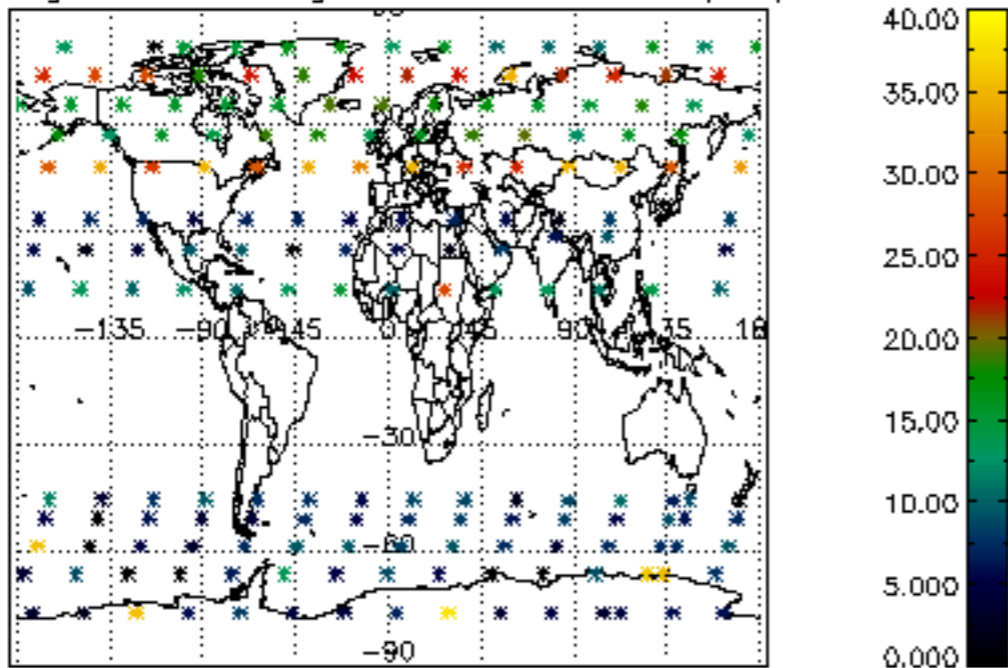
Percentage of cosmic ray hits per profile



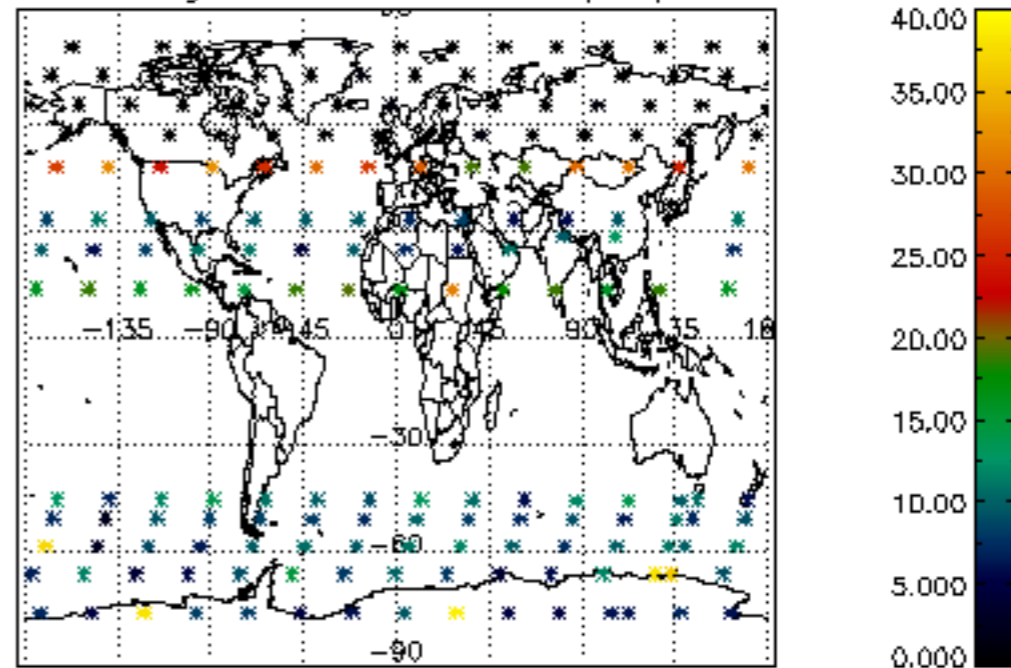
Percentage of datation errors per profile

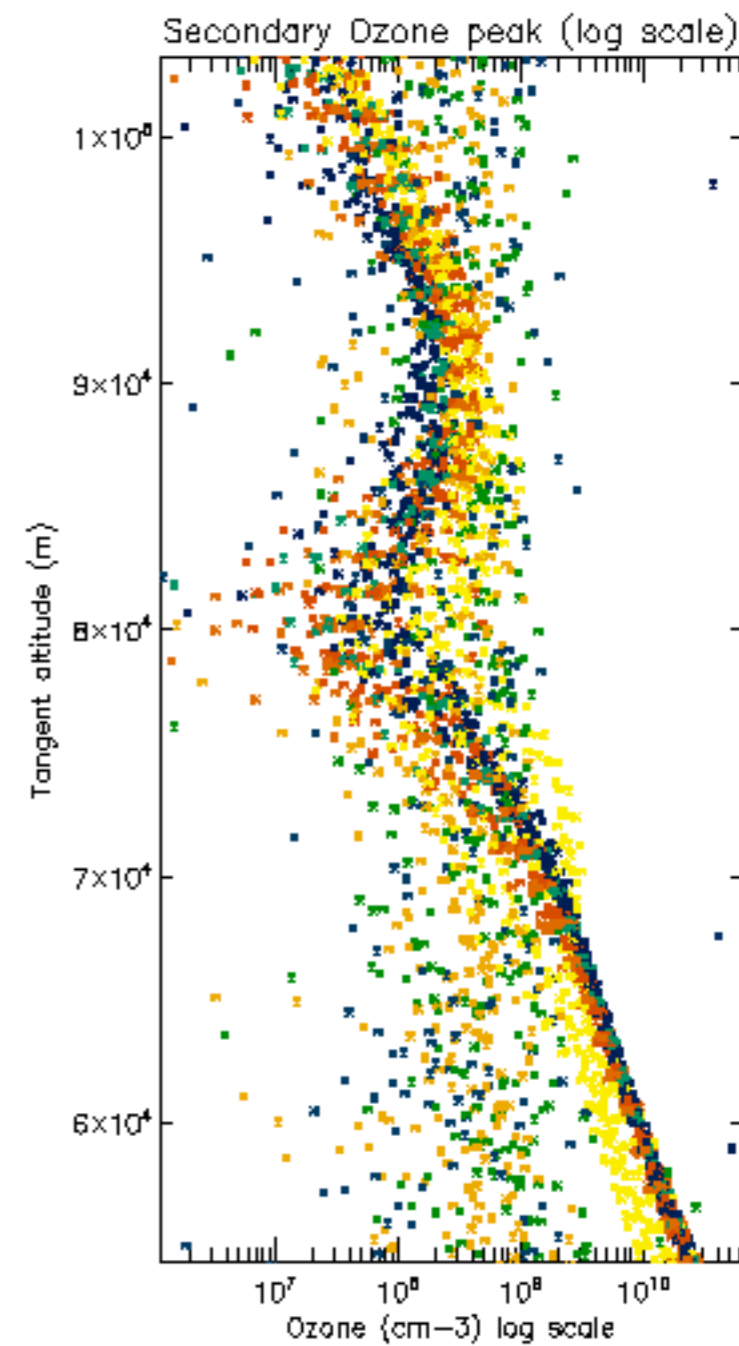
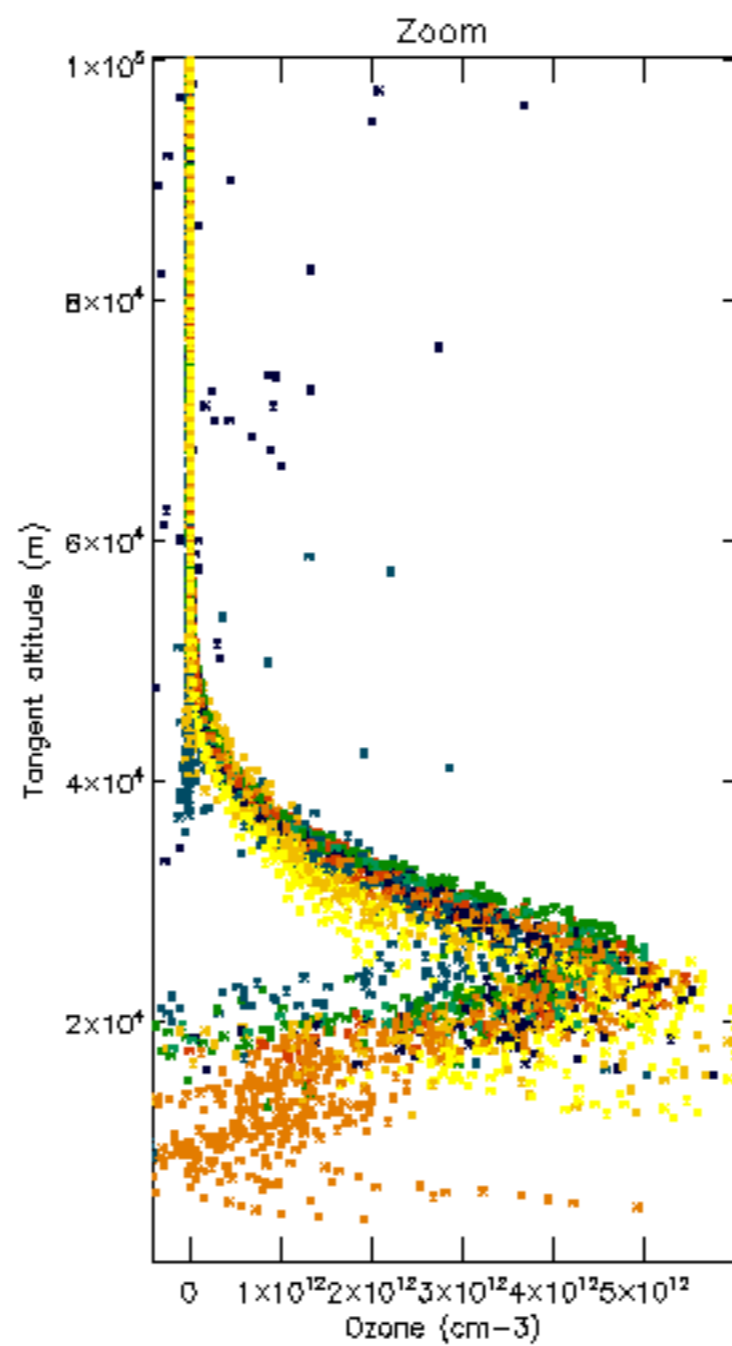
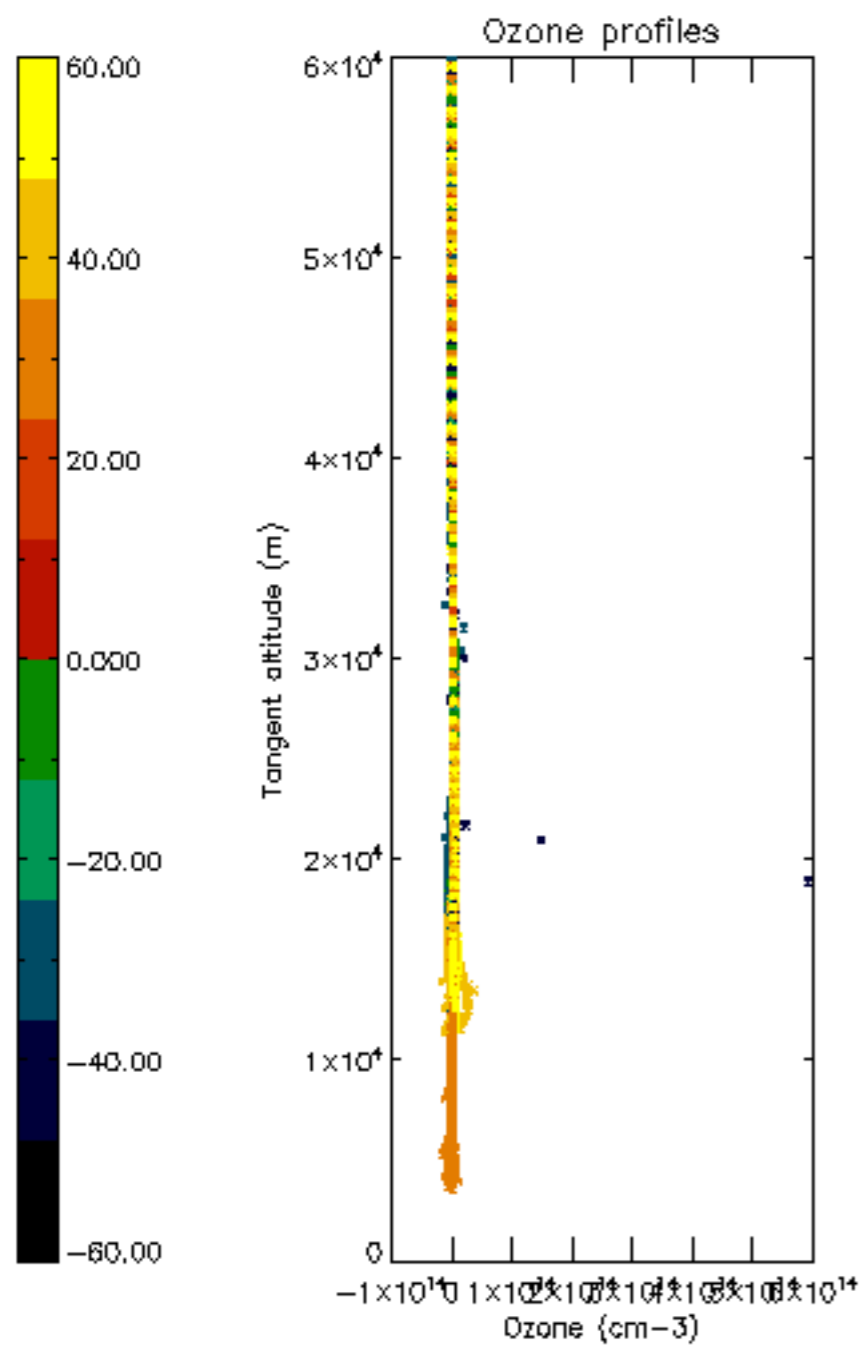


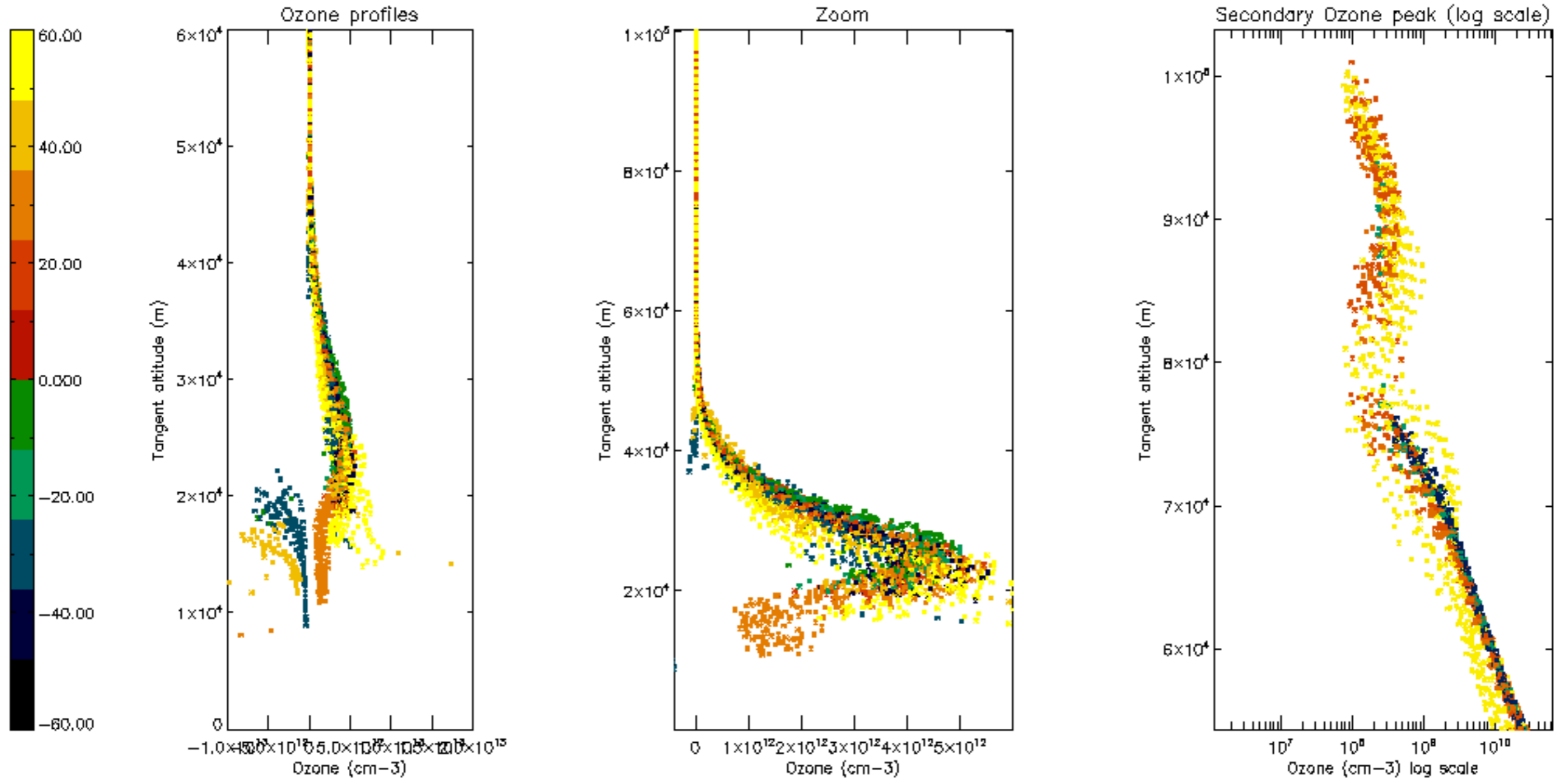
Percentage of star falling outside central band per profile

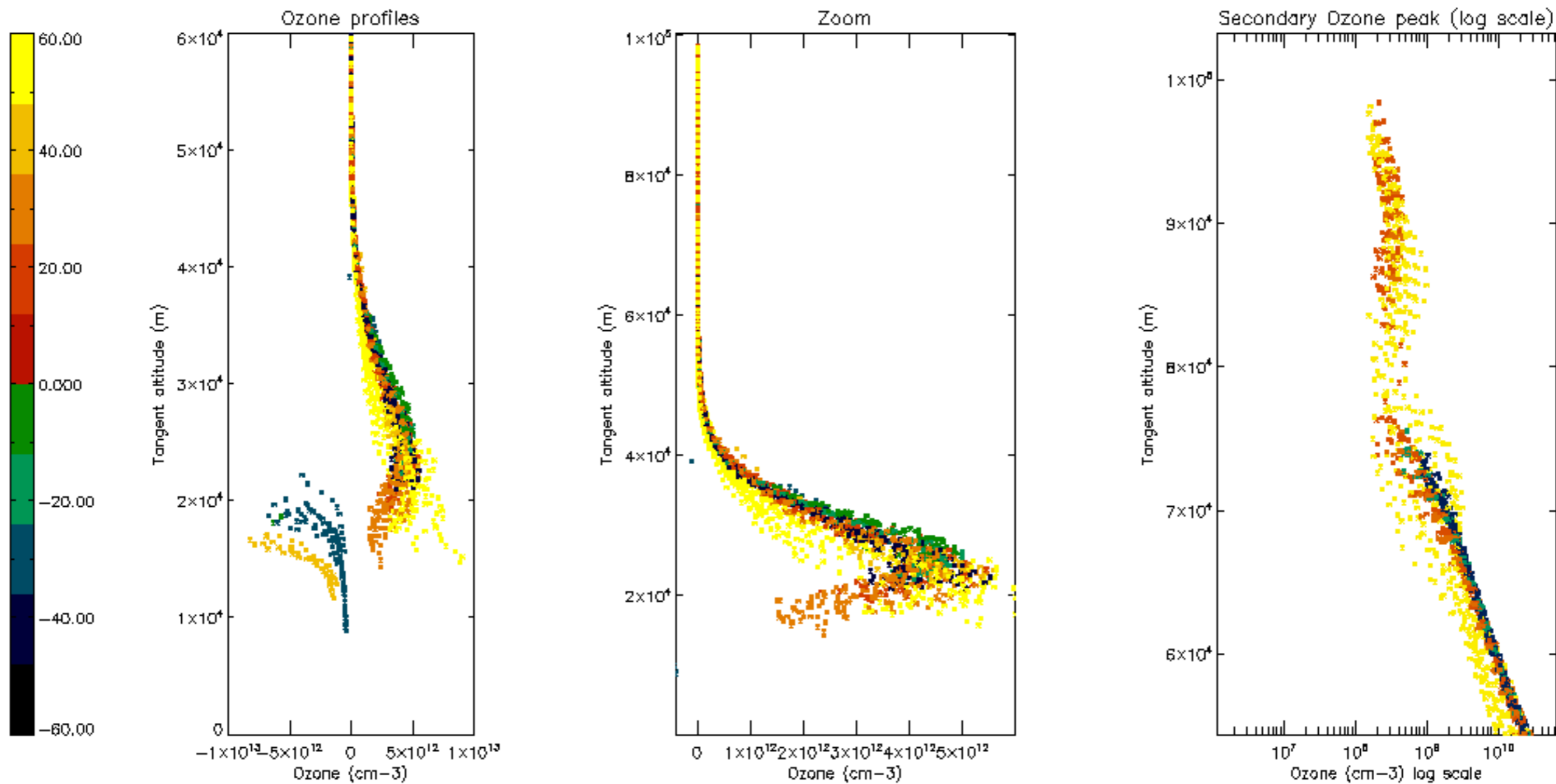


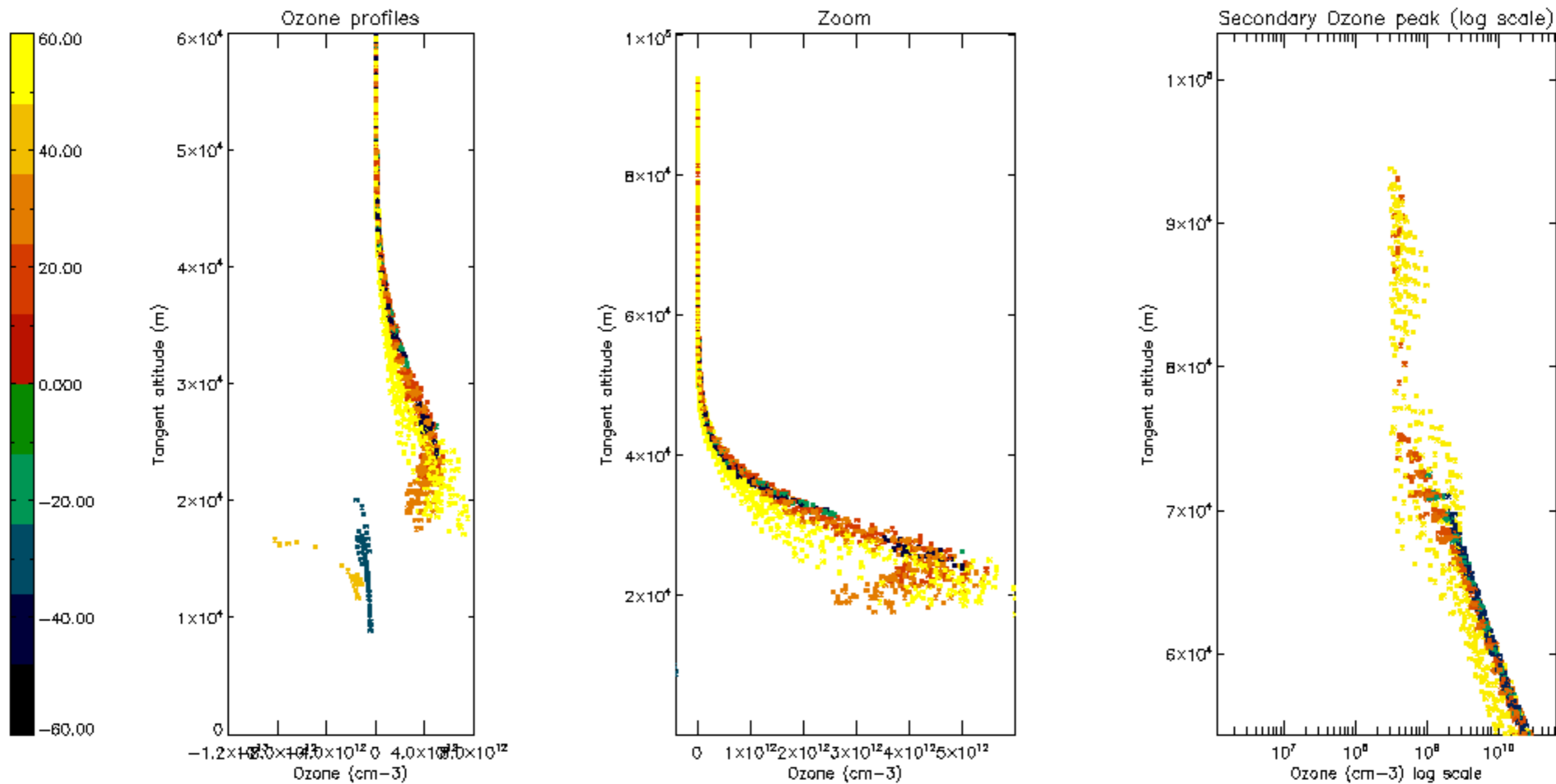
Percentage of saturation errors per profile

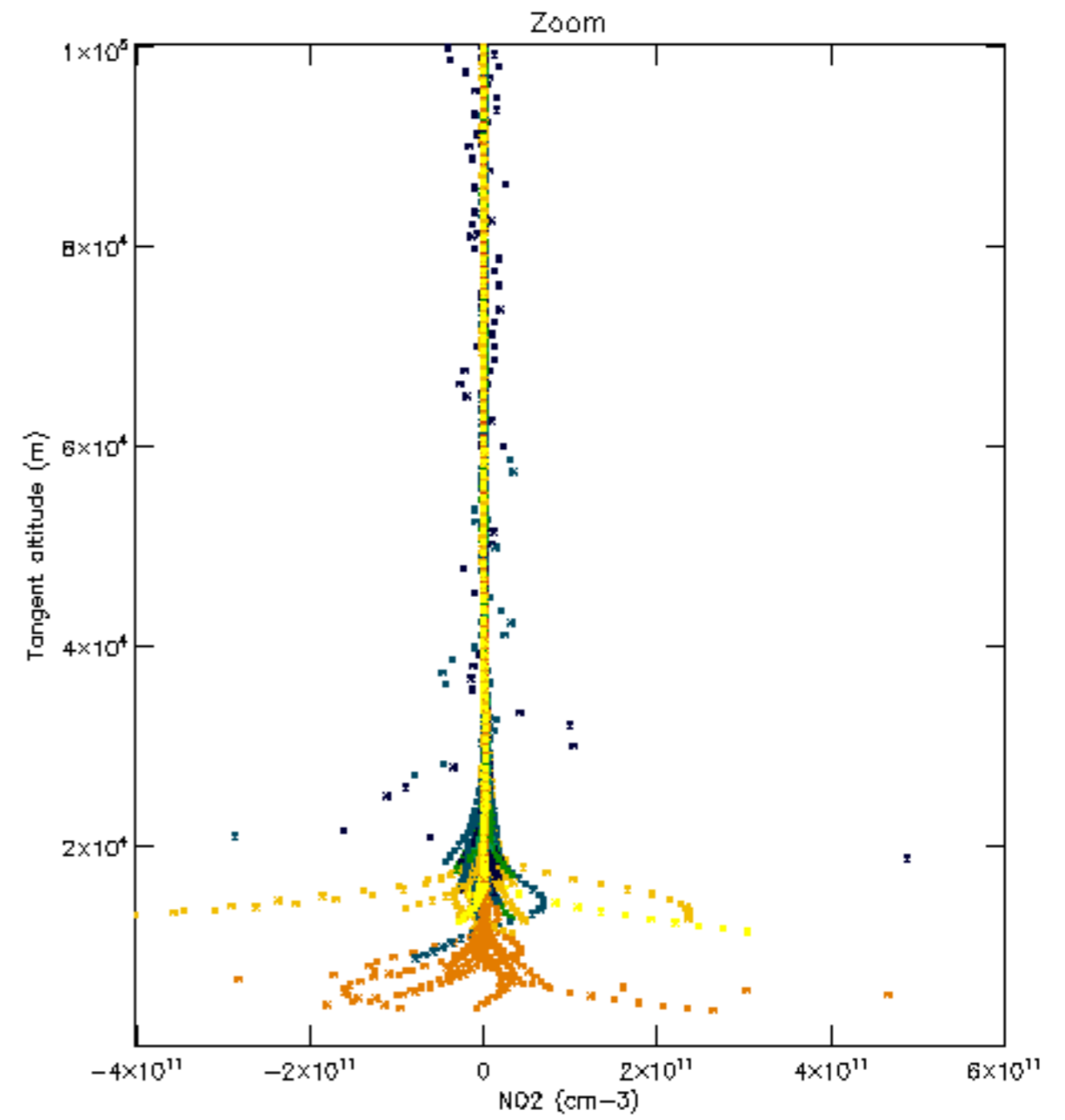
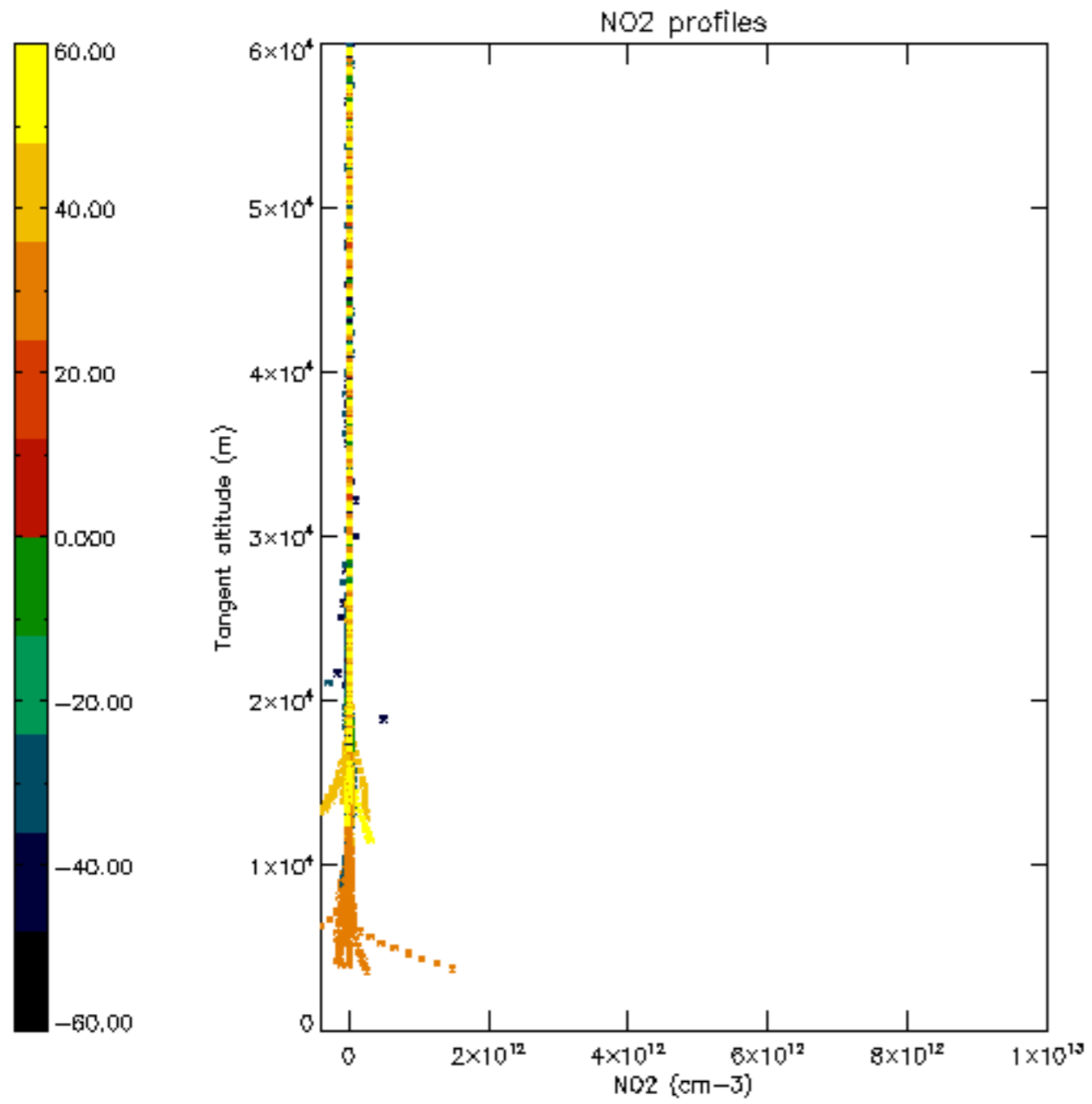


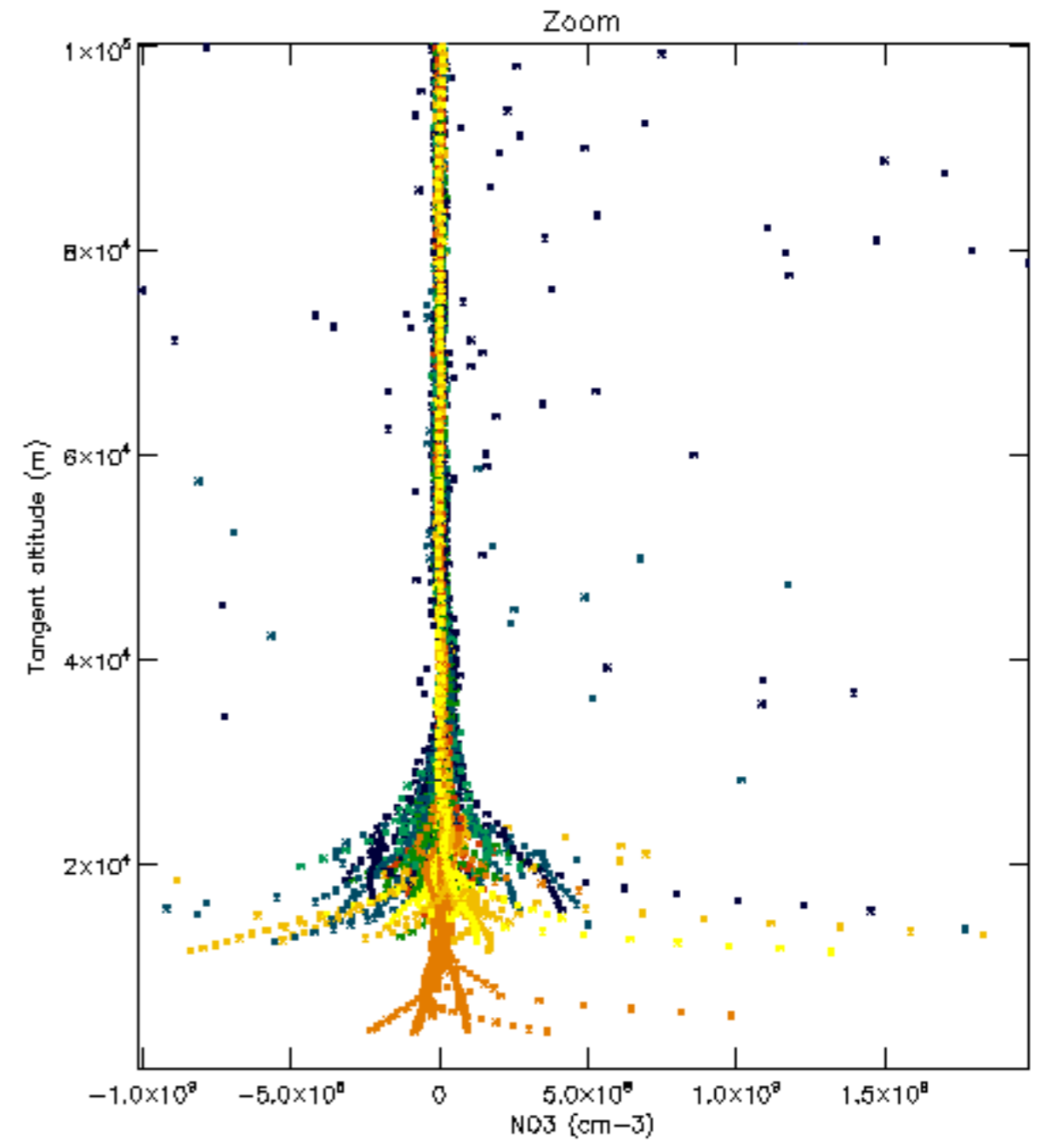
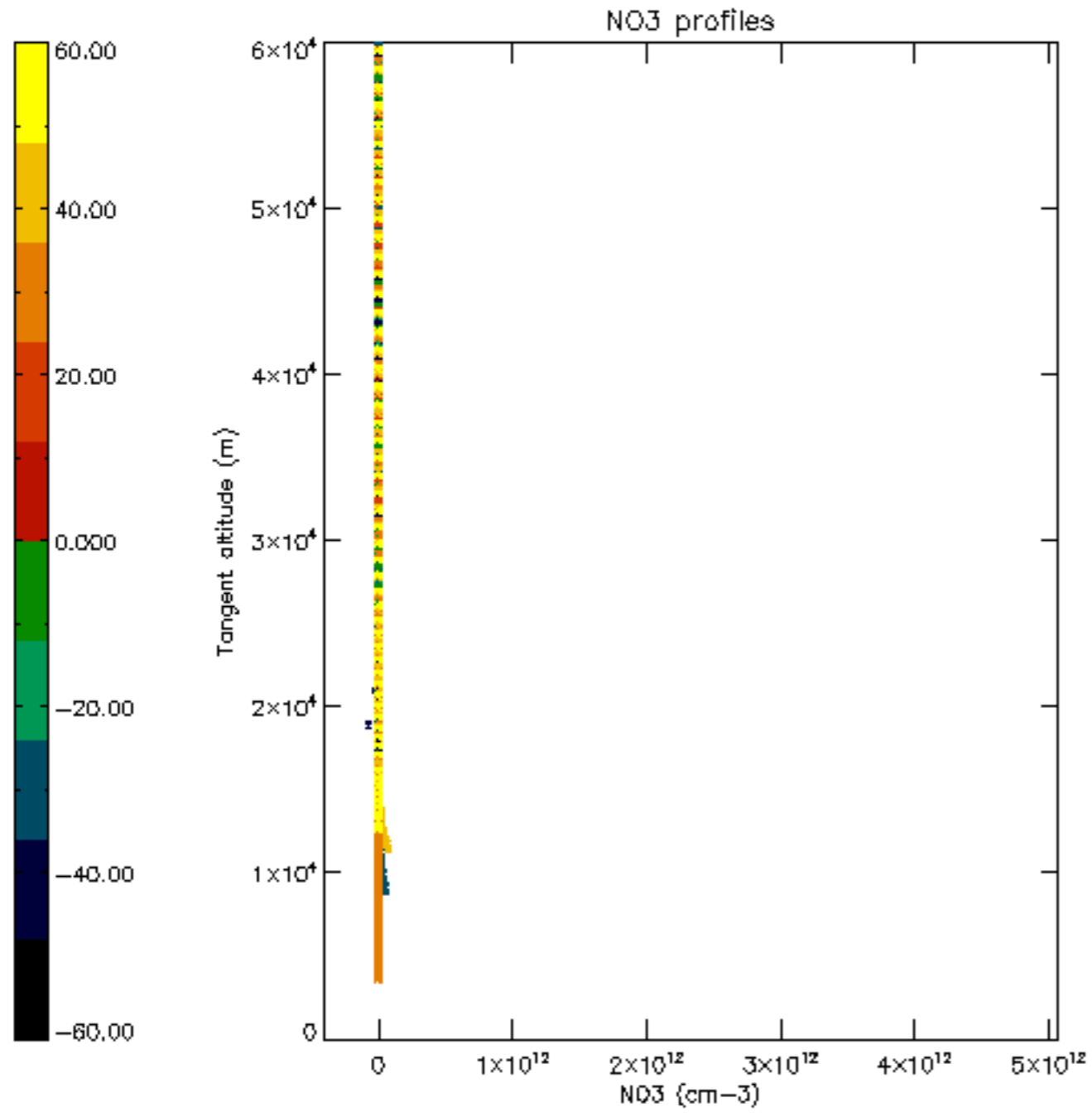


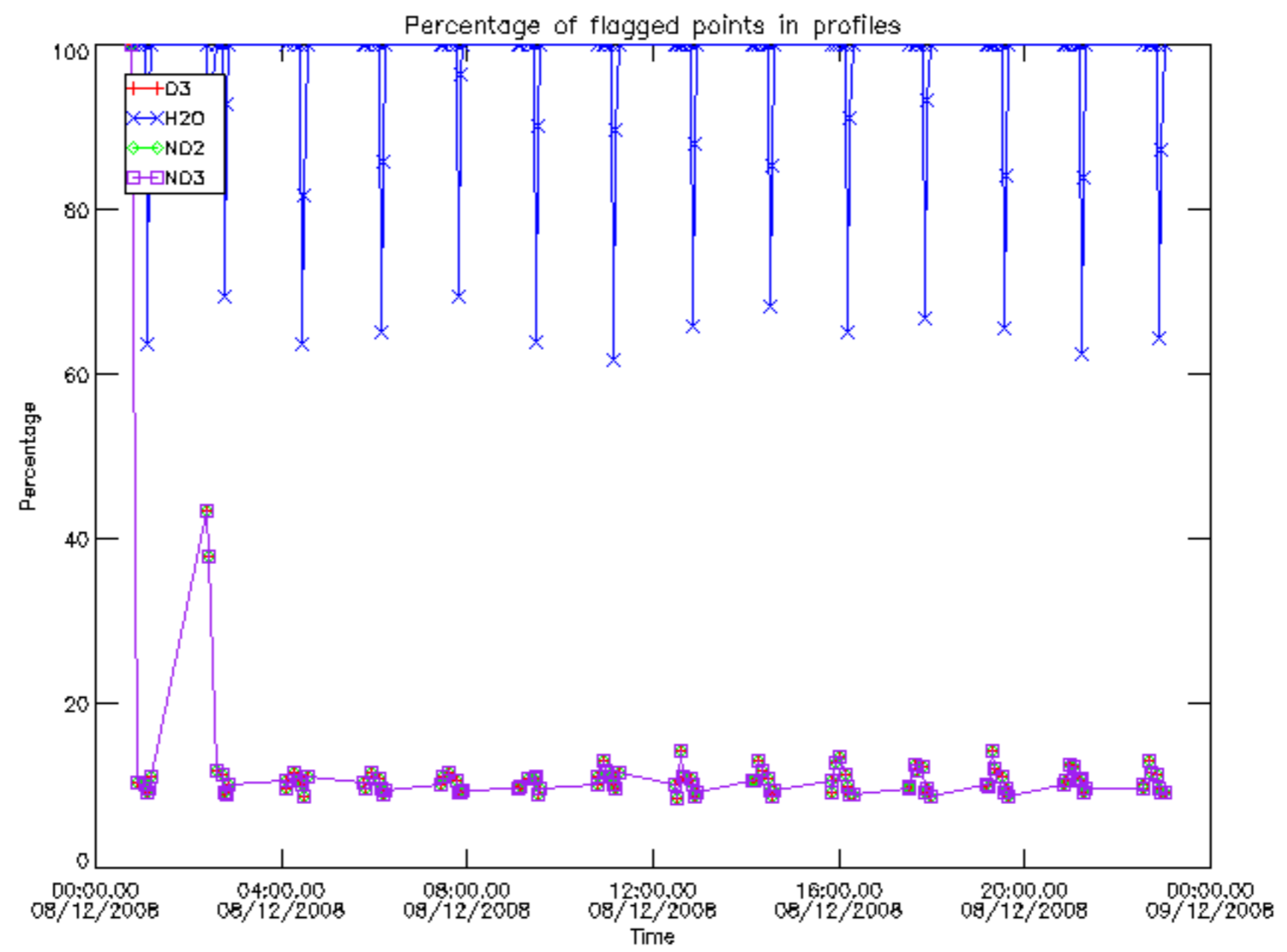




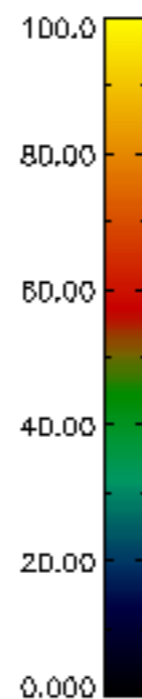
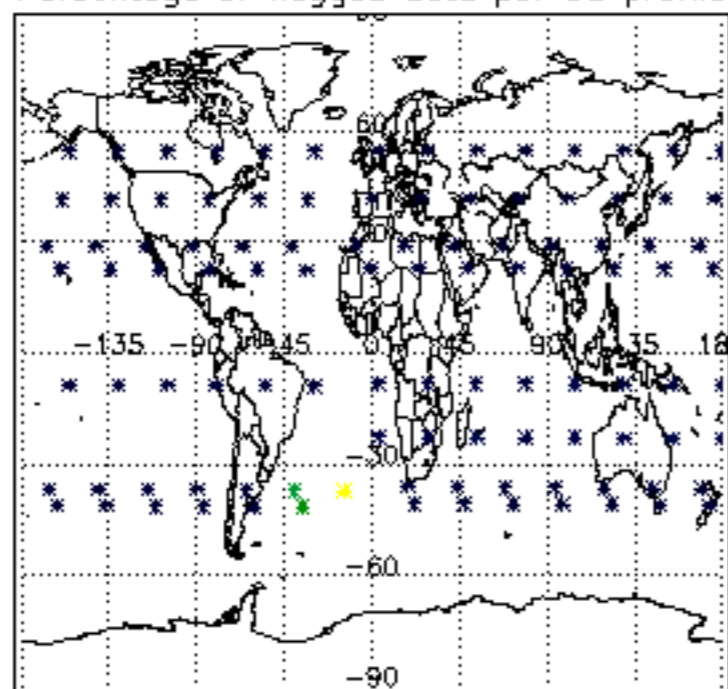




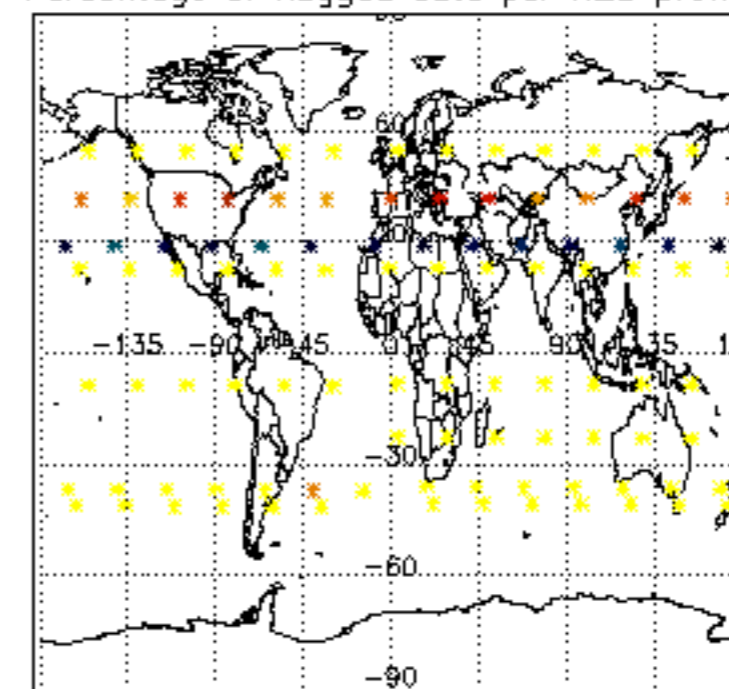




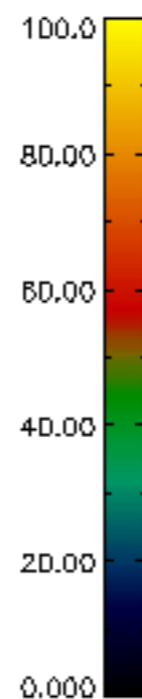
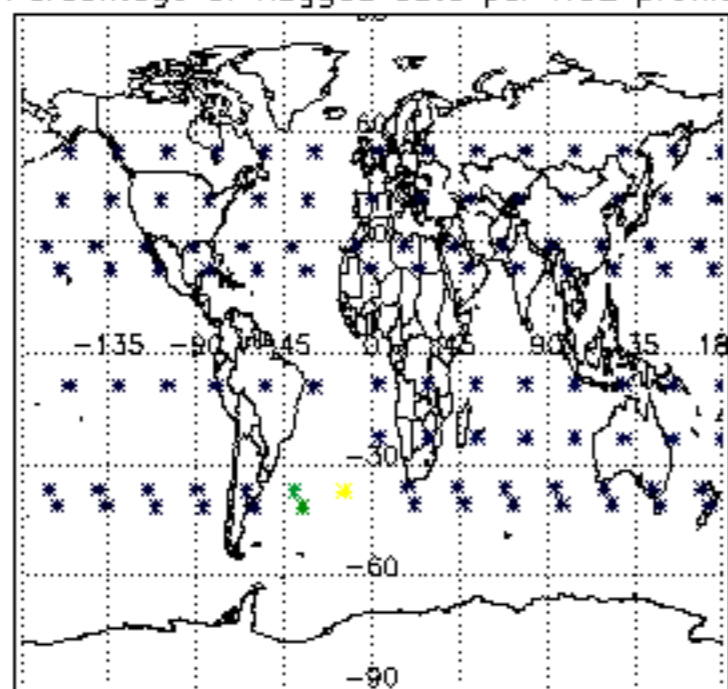
Percentage of flagged data per D3 profile



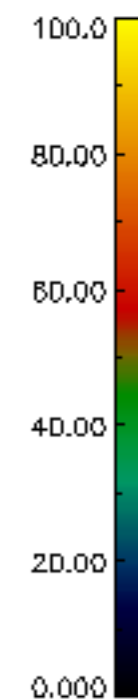
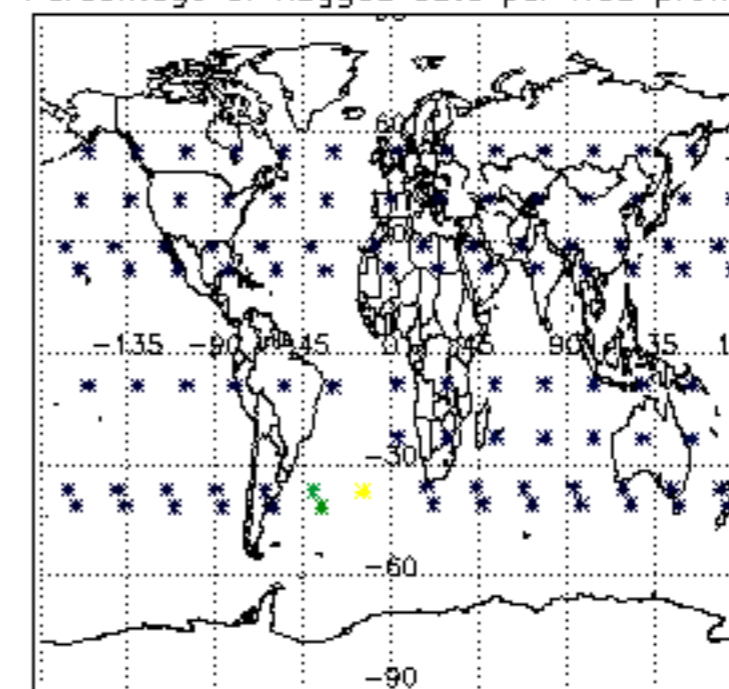
Percentage of flagged data per H2O profile

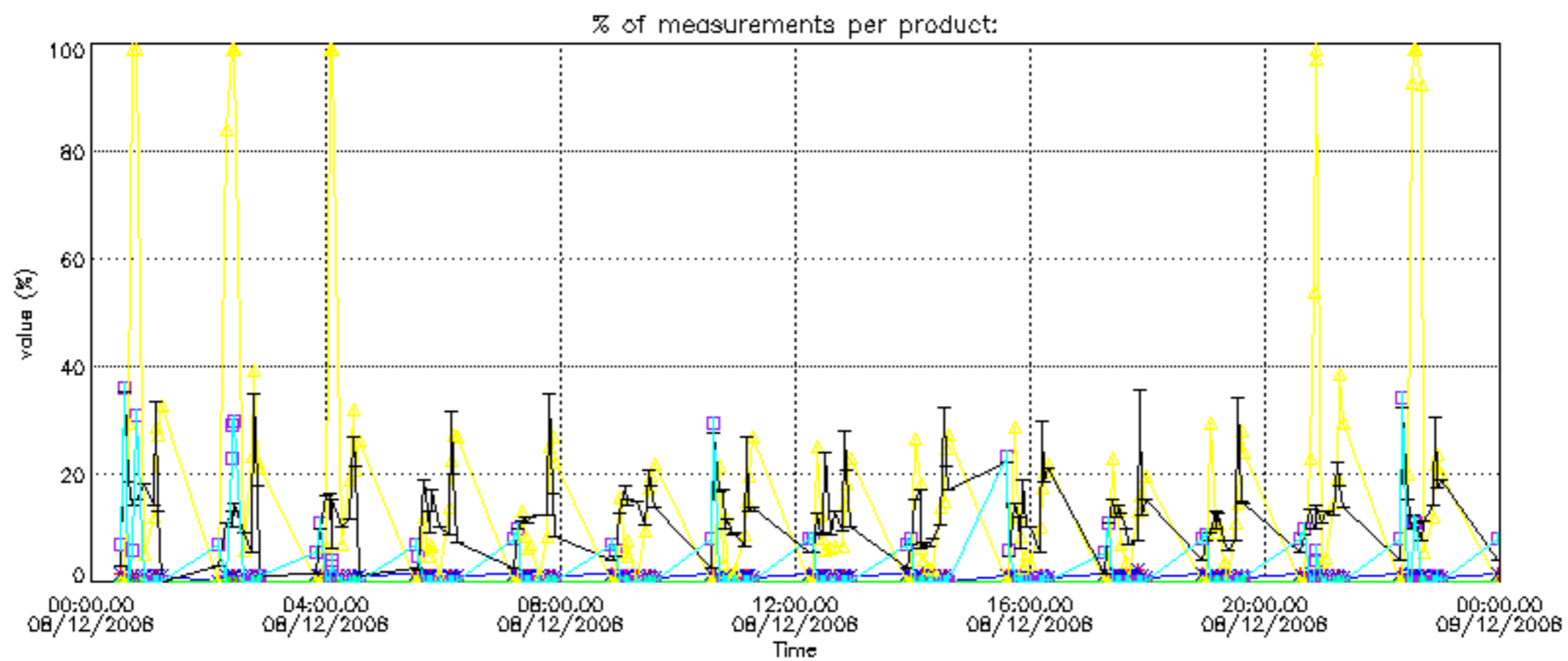
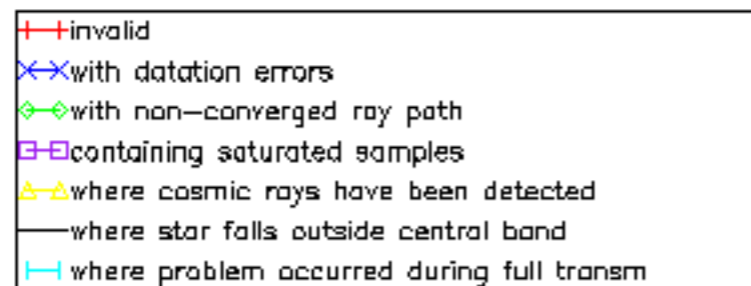


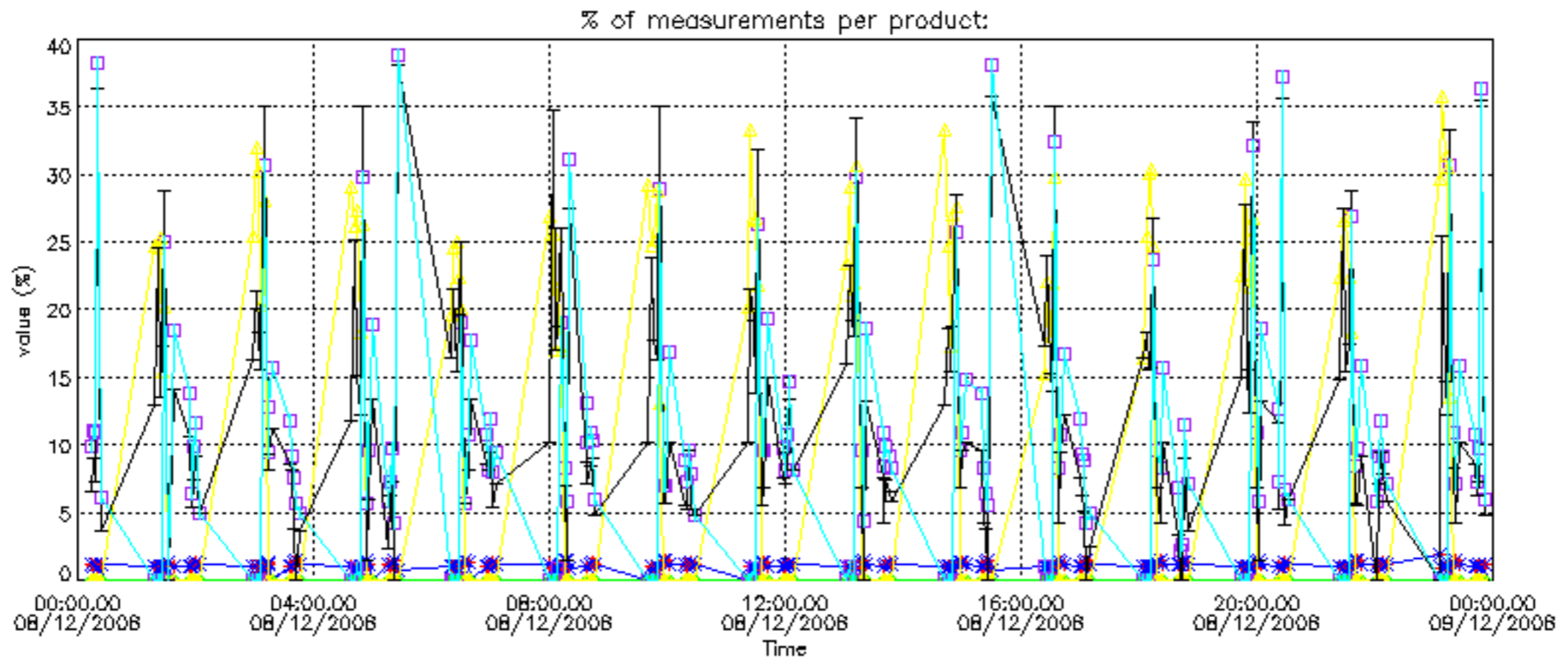
Percentage of flagged data per NO2 profile



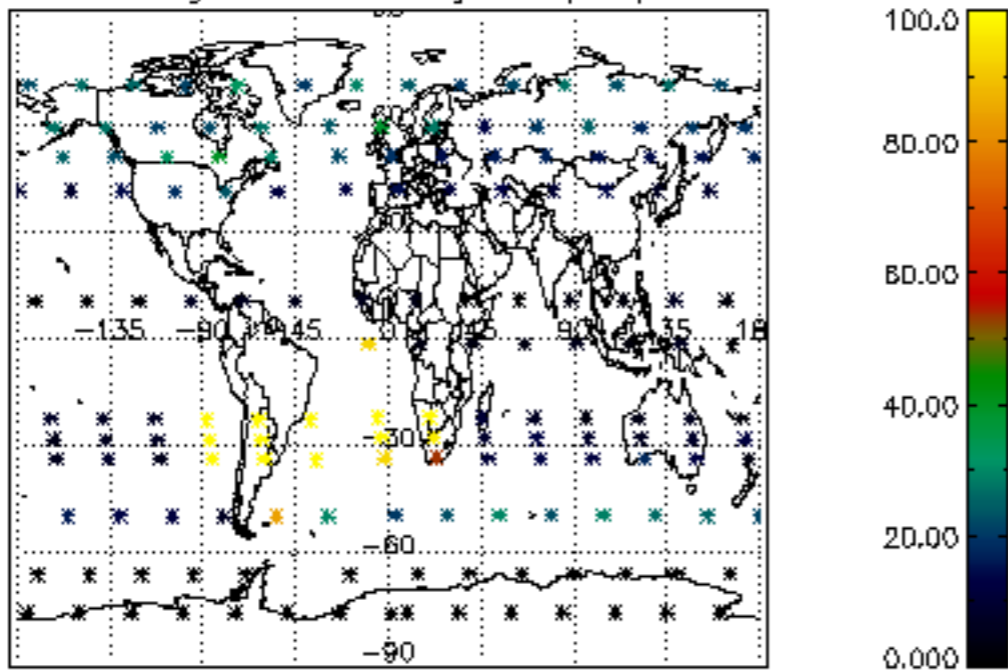
Percentage of flagged data per NO3 profile



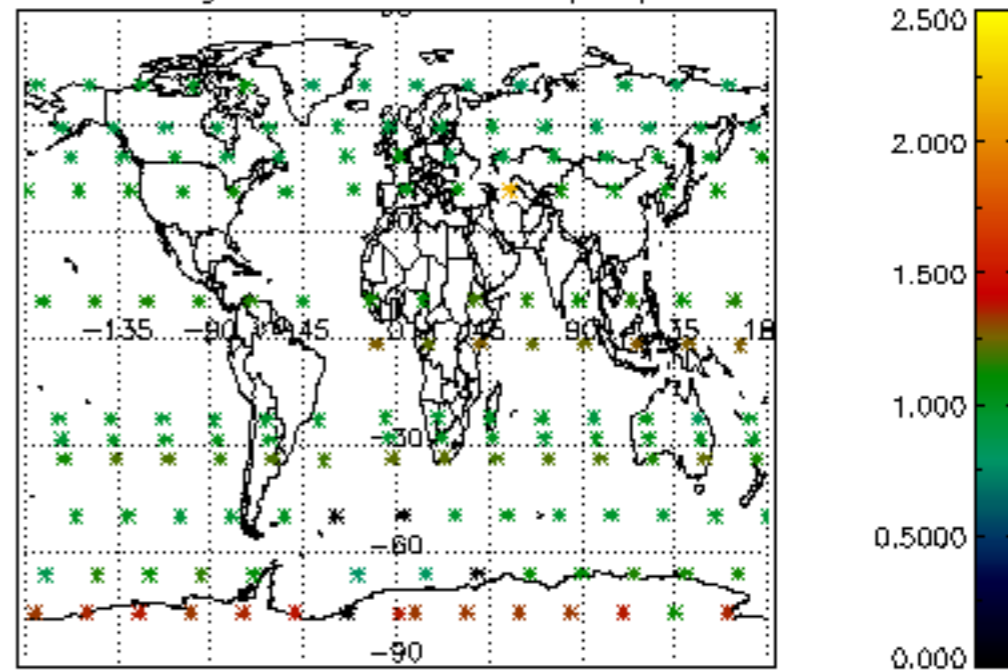




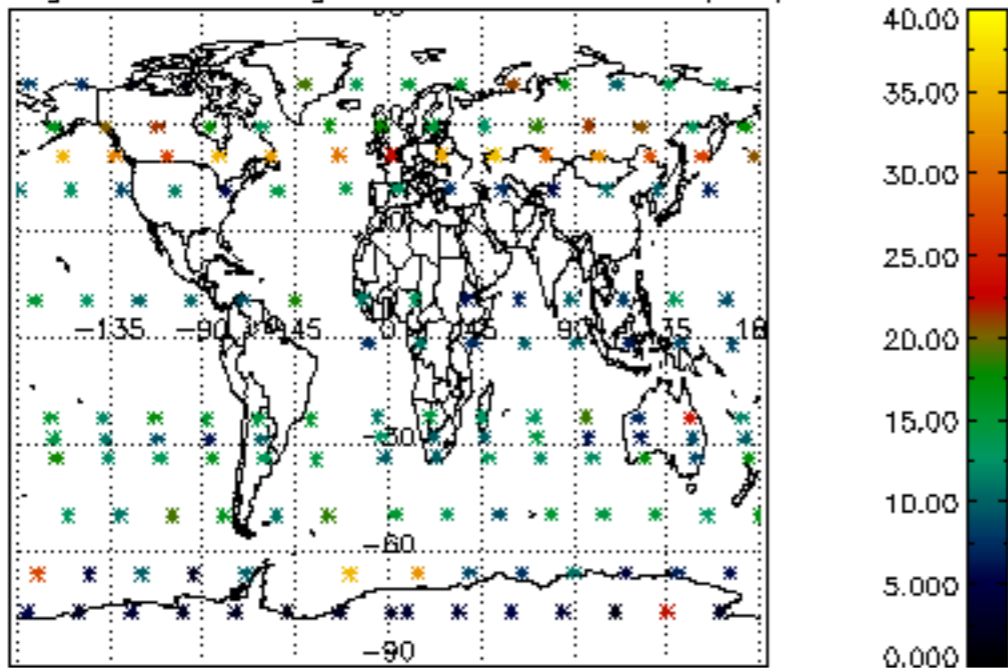
Percentage of cosmic ray hits per profile



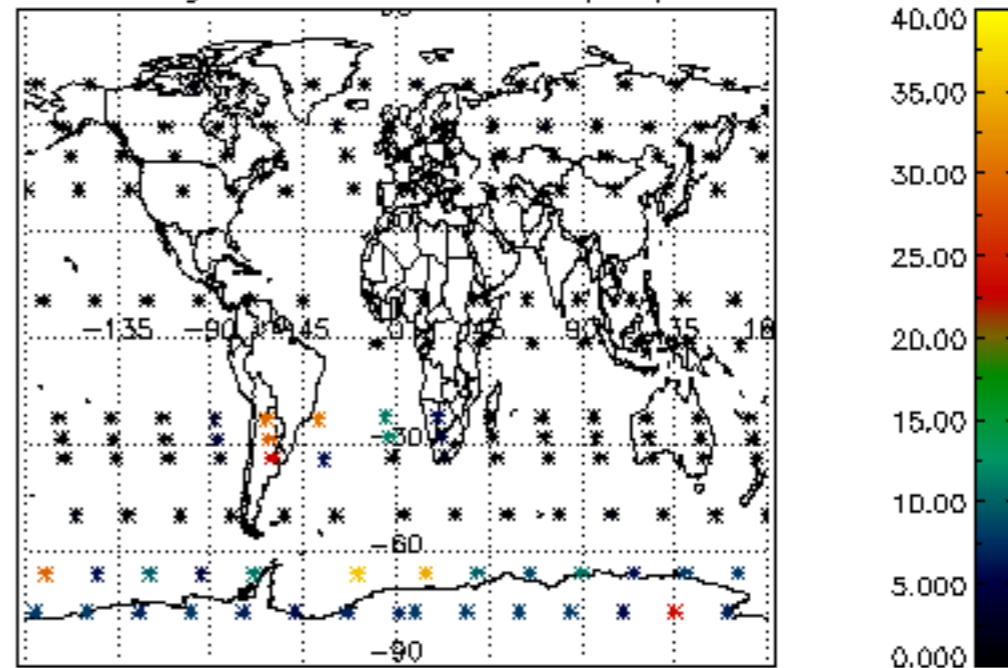
Percentage of datation errors per profile



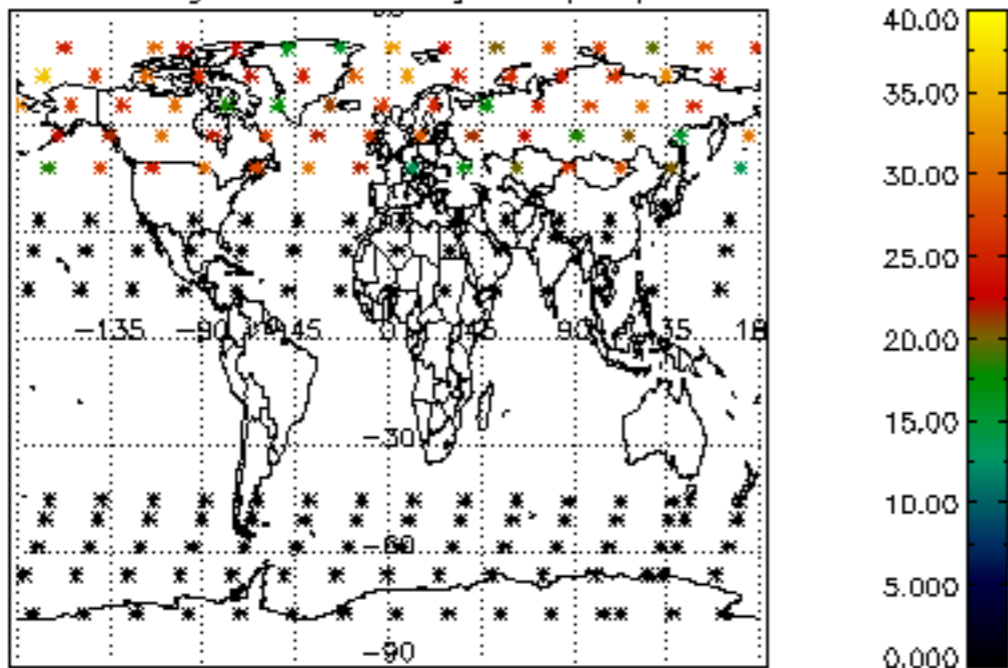
Percentage of star falling outside central band per profile



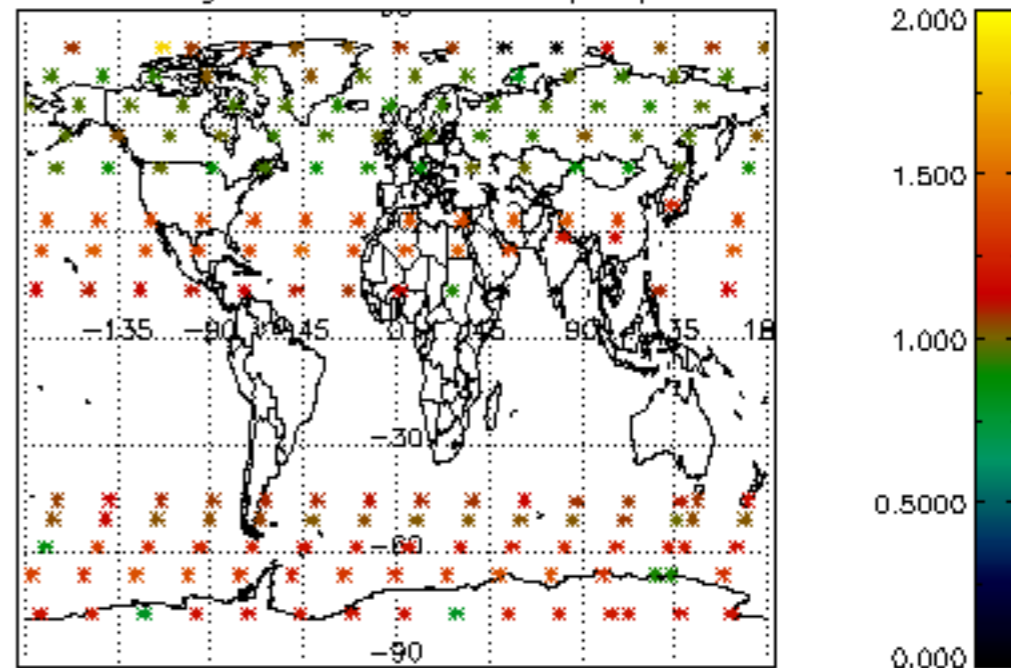
Percentage of saturation errors per profile



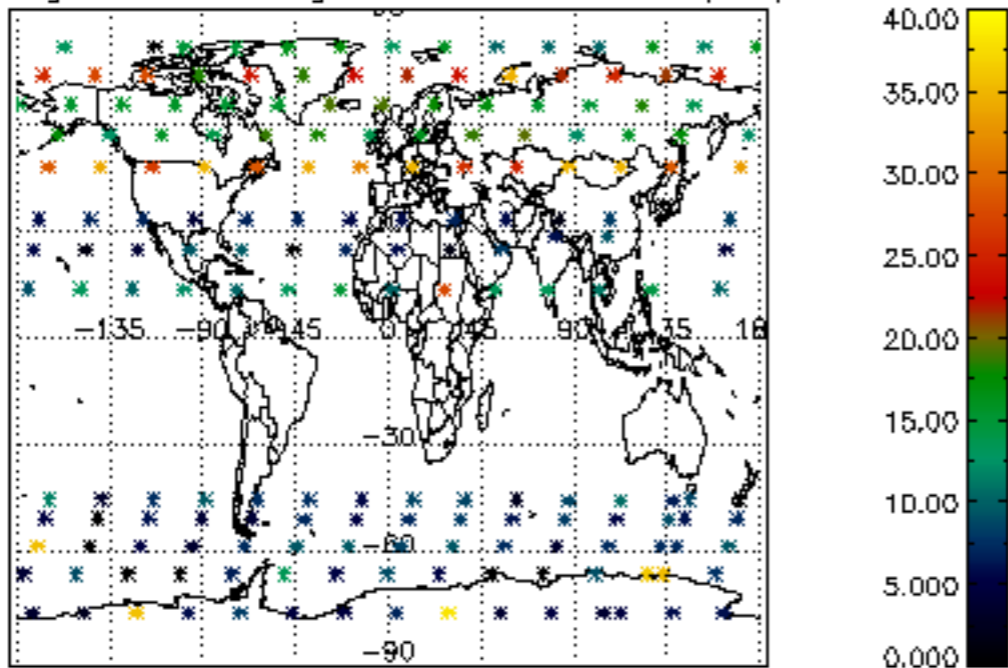
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

