

GOMOS Level 2 Daily Report

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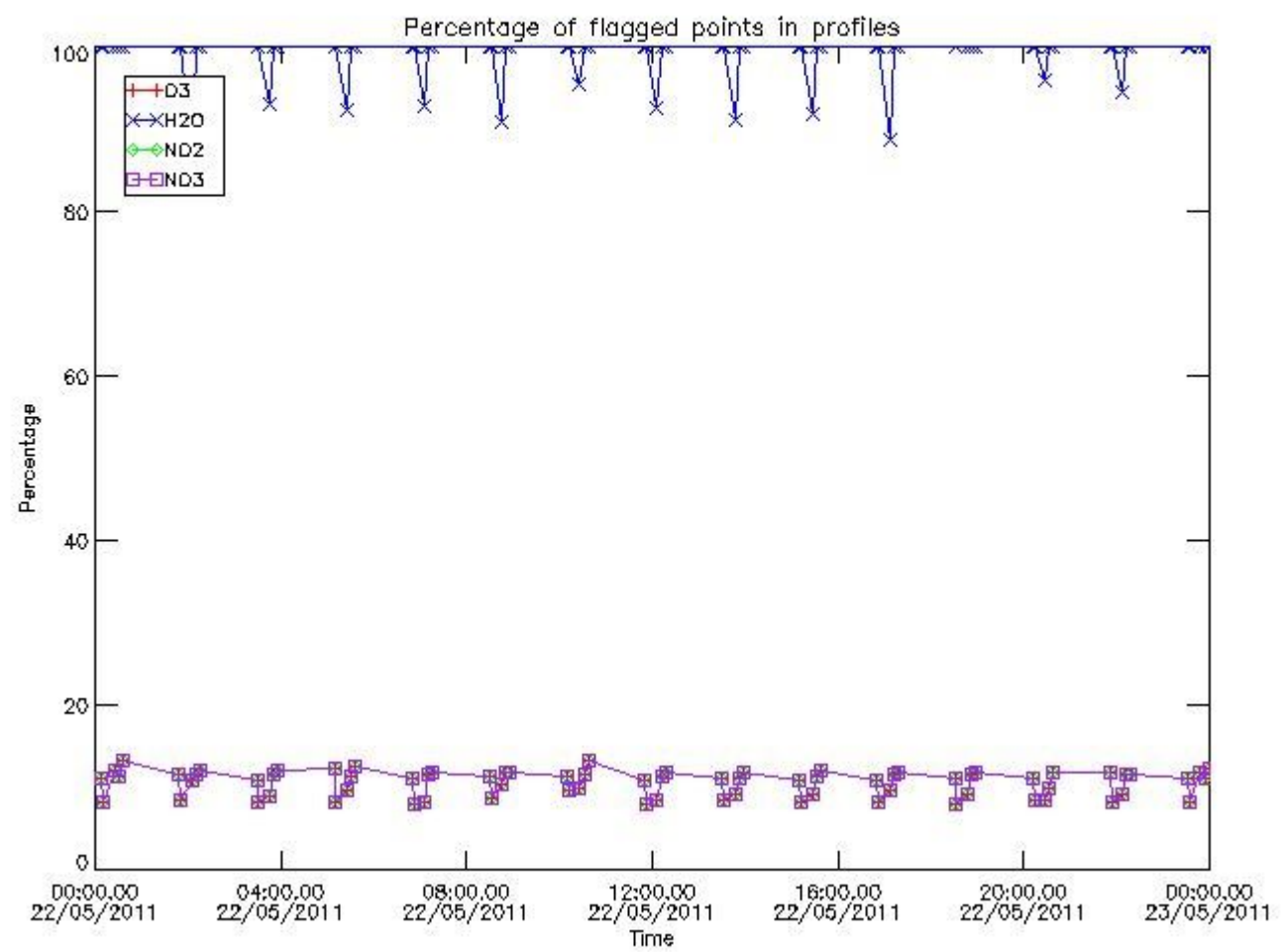
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| | | | | | | | | | | | |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|-----|-------|----|
| 279 | GOM_NL__2PRFIN20110522_210220_000000443102_00388_48247_2011.N1 | 22-MAY-2011 21:02:20 | Bright | 44.000 | 120 | 1Del Oph | 2.7340 | 3200.0 | 88 | 48247 | No |
| 280 | GOM_NL__2PRFIN20110522_210524_000000403102_00388_48247_2012.N1 | 22-MAY-2011 21:05:24 | Bright | 40.000 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 80 | 48247 | No |
| 281 | GOM_NL__2PRFIN20110522_211131_000000413102_00388_48247_2013.N1 | 22-MAY-2011 21:11:31 | Bright | 40.500 | 67 | 5Alp CrB | 2.2210 | 11000. | 81 | 48247 | No |
| 282 | GOM_NL__2PRFIN20110522_211500_000000723102_00388_48247_2014.N1 | 22-MAY-2011 21:15:00 | Bright | 72.000 | 133 | 40Zet Her | 2.8070 | 6000.0 | 144 | 48247 | No |
| 283 | GOM_NL__2PRFIN20110522_212221_000000423102_00388_48247_2015.N1 | 22-MAY-2011 21:22:21 | Bright | 41.500 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 83 | 48247 | No |
| 284 | GOM_NL__2PRFIN20110522_212353_000000533102_00388_48247_2016.N1 | 22-MAY-2011 21:23:53 | Bright | 52.500 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 105 | 48247 | No |
| 285 | GOM_NL__2PRFIN20110522_213308_000000463102_00388_48247_2017.N1 | 22-MAY-2011 21:33:08 | Bright | 46.000 | 89 | 5Alp Cep | 2.4510 | 8000.0 | 92 | 48247 | No |
| 286 | GOM_NL__2PRFIN20110522_213724_000000573102_00388_48247_2018.N1 | 22-MAY-2011 21:37:24 | Bright | 57.000 | 74 | 11Bet Cas | 2.2680 | 6600.0 | 114 | 48247 | No |
| 287 | GOM_NL__2PRFIN20110522_214702_000000483102_00388_48247_2019.N1 | 22-MAY-2011 21:47:02 | Twilight | 48.000 | 58 | 21Alp And | 2.0730 | 11000. | 96 | 48247 | No |
| 288 | GOM_NL__2PRFIN20110522_215128_000000443102_00388_48247_2020.N1 | 22-MAY-2011 21:51:28 | Dark | 43.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 87 | 48247 | No |
| 289 | GOM_NL__2PRFIN20110522_215336_000000623102_00388_48247_2021.N1 | 22-MAY-2011 21:53:36 | Dark | 61.500 | 90 | 54Alp Peg | 2.4870 | 11000. | 123 | 48247 | No |
| 290 | GOM_NL__2PRFIN20110522_220742_000000553102_00388_48247_2022.N1 | 22-MAY-2011 22:07:42 | Dark | 55.000 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 110 | 48247 | No |
| 291 | GOM_NL__2PRFIN20110522_221321_000000443102_00389_48248_2014.N1 | 22-MAY-2011 22:13:21 | Dark | 44.000 | 31 | Alp Gru | 1.7340 | 15200. | 88 | 48248 | No |
| 292 | GOM_NL__2PRFIN20110522_221843_000000443102_00389_48248_2015.N1 | 22-MAY-2011 22:18:43 | Dark | 44.000 | 45 | Alp Pav | 1.9400 | 26000. | 88 | 48248 | No |
| 293 | GOM_NL__2PRFIN20110522_222637_000000413102_00389_48248_2016.N1 | 22-MAY-2011 22:26:37 | Straylight | 40.500 | 147 | Alp Ara | 2.8770 | 26000. | 81 | 48248 | No |
| 294 | GOM_NL__2PRFIN20110522_222814_000000573102_00389_48248_2017.N1 | 22-MAY-2011 22:28:14 | Straylight | 56.500 | 40 | The Sco | 1.8590 | 7100.0 | 113 | 48248 | No |
| 295 | GOM_NL__2PRFIN20110522_223004_000000533102_00389_48248_2018.N1 | 22-MAY-2011 22:30:04 | Straylight | 53.000 | 25 | 35Lam Sco | 1.6200 | 28000. | 106 | 48248 | No |
| 296 | GOM_NL__2PRFIN20110522_223206_000000483102_00389_48248_2019.N1 | 22-MAY-2011 22:32:06 | Twilight | 47.500 | 75 | 26Eps Sco | 2.2910 | 4250.0 | 95 | 48248 | No |
| 297 | GOM_NL__2PRFIN20110522_223457_000000613102_00389_48248_2020.N1 | 22-MAY-2011 22:34:57 | Bright | 61.000 | 16 | 21Alp Sco | 1.0200 | 3000.0 | 122 | 48248 | No |
| 298 | GOM_NL__2PRFIN20110522_223631_000000453102_00389_48248_2021.N1 | 22-MAY-2011 22:36:31 | Bright | 45.000 | 80 | 7Del Sco | 2.3160 | 30000. | 90 | 48248 | No |
| 299 | GOM_NL__2PRFIN20110522_223814_000000523102_00389_48248_2022.N1 | 22-MAY-2011 22:38:14 | Bright | 51.500 | 86 | 35Eta Oph | 2.4300 | 10200. | 103 | 48248 | No |
| 300 | GOM_NL__2PRFIN20110522_224015_000000453102_00389_48248_2023.N1 | 22-MAY-2011 22:40:15 | Bright | 45.000 | 98 | 13Zet Oph | 2.5710 | 30000. | 90 | 48248 | No |
| 301 | GOM_NL__2PRFIN20110522_224234_000000453102_00389_48248_2024.N1 | 22-MAY-2011 22:42:34 | Bright | 44.500 | 120 | 1Del Oph | 2.7340 | 3200.0 | 89 | 48248 | No |
| 302 | GOM_NL__2PRFIN20110522_224538_000000413102_00389_48248_2025.N1 | 22-MAY-2011 22:45:38 | Bright | 40.500 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 81 | 48248 | No |
| 303 | GOM_NL__2PRFIN20110522_225145_000000403102_00389_48248_2026.N1 | 22-MAY-2011 22:51:45 | Bright | 39.500 | 67 | 5Alp CrB | 2.2210 | 11000. | 79 | 48248 | No |
| 304 | GOM_NL__2PRFIN20110522_225513_000000503102_00389_48248_2027.N1 | 22-MAY-2011 22:55:13 | Bright | 49.500 | 133 | 40Zet Her | 2.8070 | 6000.0 | 99 | 48248 | No |
| 305 | GOM_NL__2PRFIN20110522_230235_000000593102_00389_48248_2028.N1 | 22-MAY-2011 23:02:35 | Bright | 59.000 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 118 | 48248 | No |
| 306 | GOM_NL__2PRFIN20110522_230406_000000533102_00389_48248_2029.N1 | 22-MAY-2011 23:04:06 | Bright | 53.000 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 106 | 48248 | No |
| 307 | GOM_NL__2PRFIN20110522_231322_000000473102_00389_48248_2030.N1 | 22-MAY-2011 23:13:22 | Bright | 46.500 | 89 | 5Alp Cep | 2.4510 | 8000.0 | 93 | 48248 | No |
| 308 | GOM_NL__2PRFIN20110522_231738_000000403102_00389_48248_2031.N1 | 22-MAY-2011 23:17:38 | Bright | 39.500 | 74 | 11Bet Cas | 2.2680 | 6600.0 | 79 | 48248 | No |
| 309 | GOM_NL__2PRFIN20110522_232716_000000483102_00389_48248_2032.N1 | 22-MAY-2011 23:27:16 | Twilight | 48.000 | 58 | 21Alp And | 2.0730 | 11000. | 96 | 48248 | No |
| 310 | GOM_NL__2PRFIN20110522_233142_000000463102_00389_48248_2033.N1 | 22-MAY-2011 23:31:42 | Dark | 45.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 91 | 48248 | No |
| 311 | GOM_NL__2PRFIN20110522_233351_000000633102_00389_48248_2034.N1 | 22-MAY-2011 23:33:51 | Dark | 62.500 | 90 | 54Alp Peg | 2.4870 | 11000. | 125 | 48248 | No |
| 312 | GOM_NL__2PRFIN20110522_234757_000000483102_00389_48248_2035.N1 | 22-MAY-2011 23:47:57 | Dark | 47.500 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 95 | 48248 | No |
| 313 | GOM_NL__2PRFIN20110522_235336_000000463102_00390_48249_2073.N1 | 22-MAY-2011 23:53:36 | Dark | 45.500 | 31 | Alp Gru | 1.7340 | 15200. | 91 | 48249 | No |
| 314 | GOM_NL__2PRFIN20110522_235857_000000423102_00390_48249_2074.N1 | 22-MAY-2011 23:58:57 | Dark | 41.500 | 45 | Alp Pav | 1.9400 | 26000. | 83 | 48249 | No |

3. Quality information per product

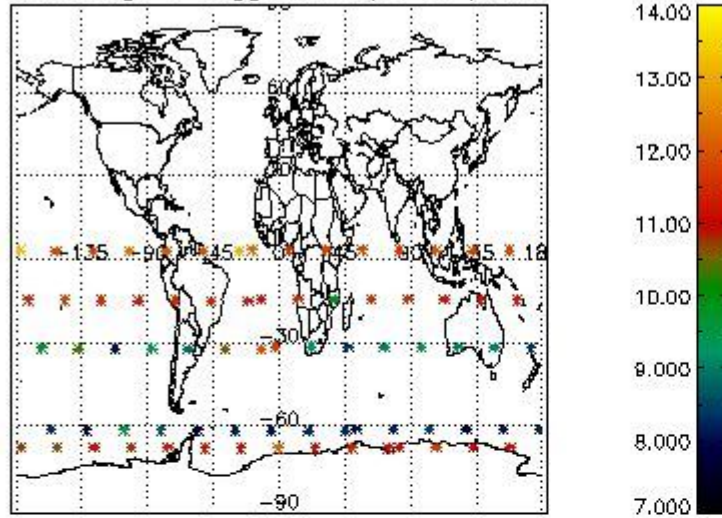
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

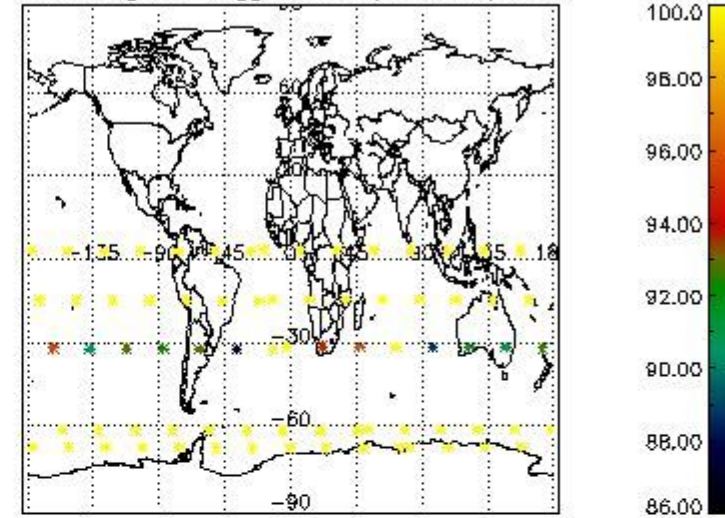


3.2 Plot quality information per product (world map)

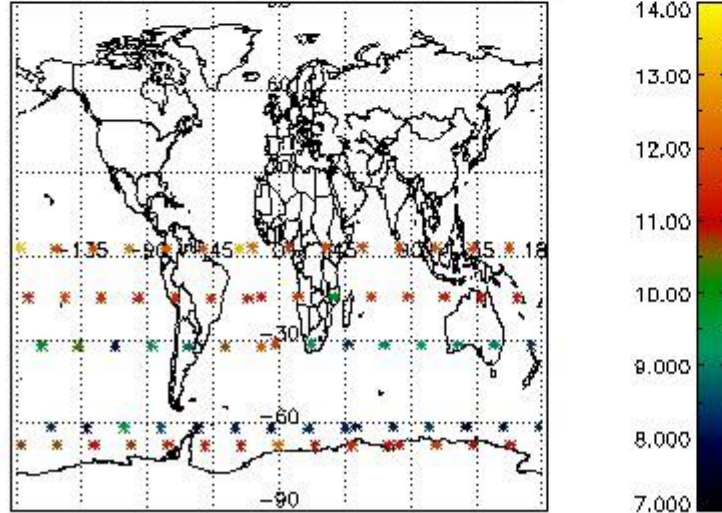
Percentage of flagged data per O3 profile



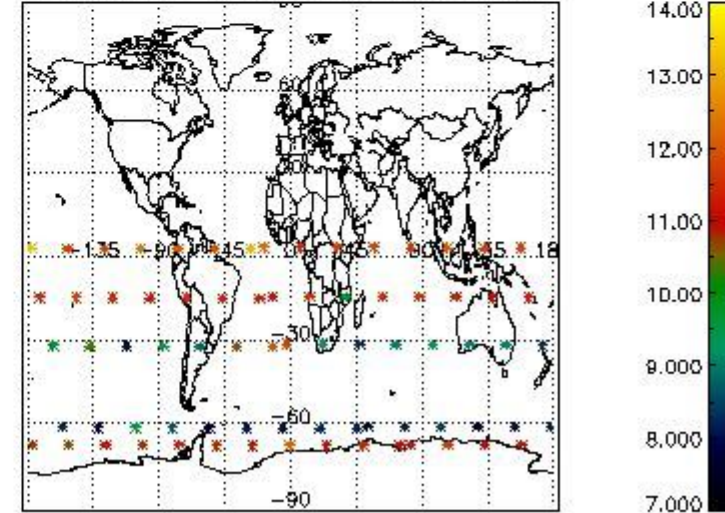
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

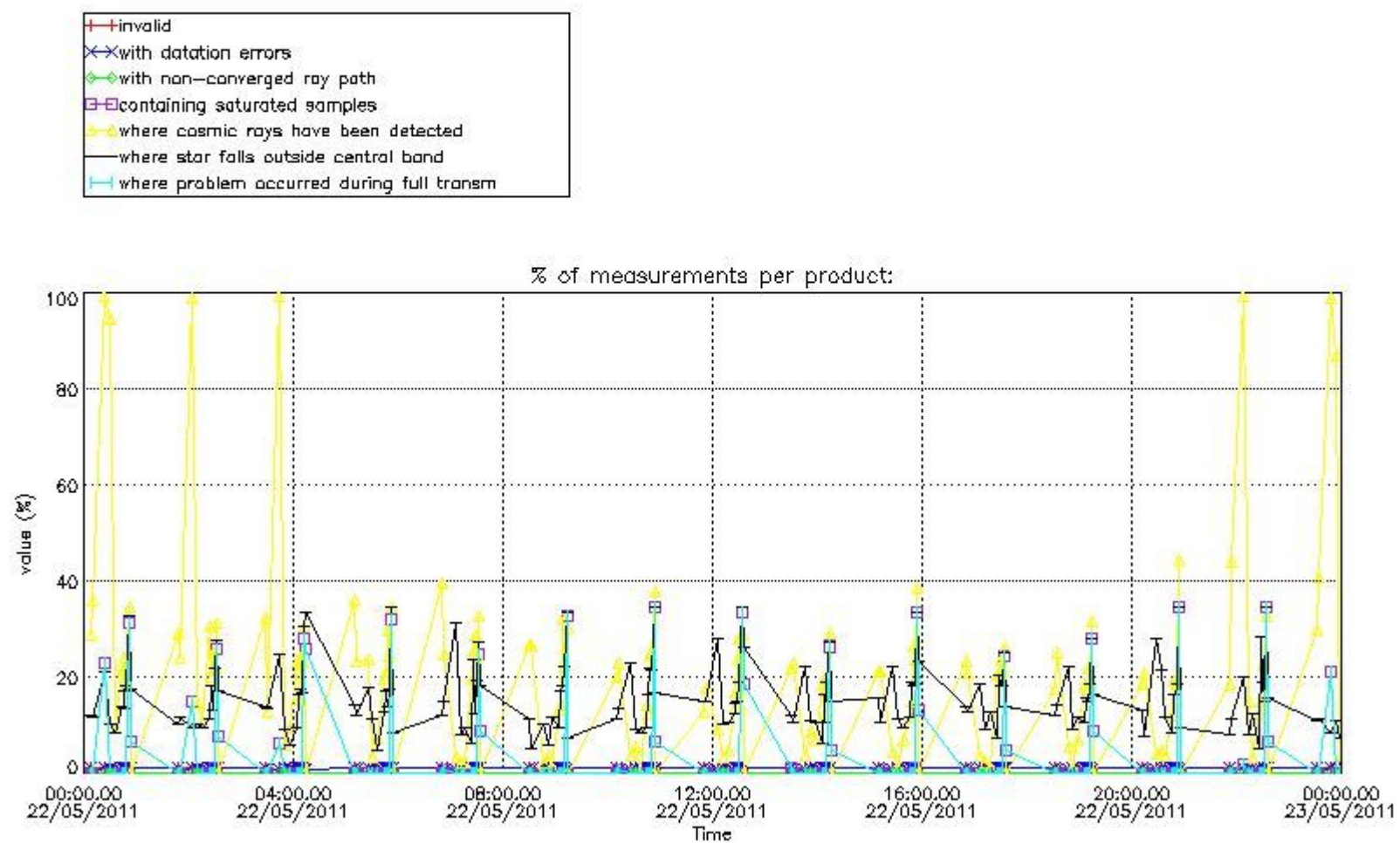


4. Level 1 quality information per product

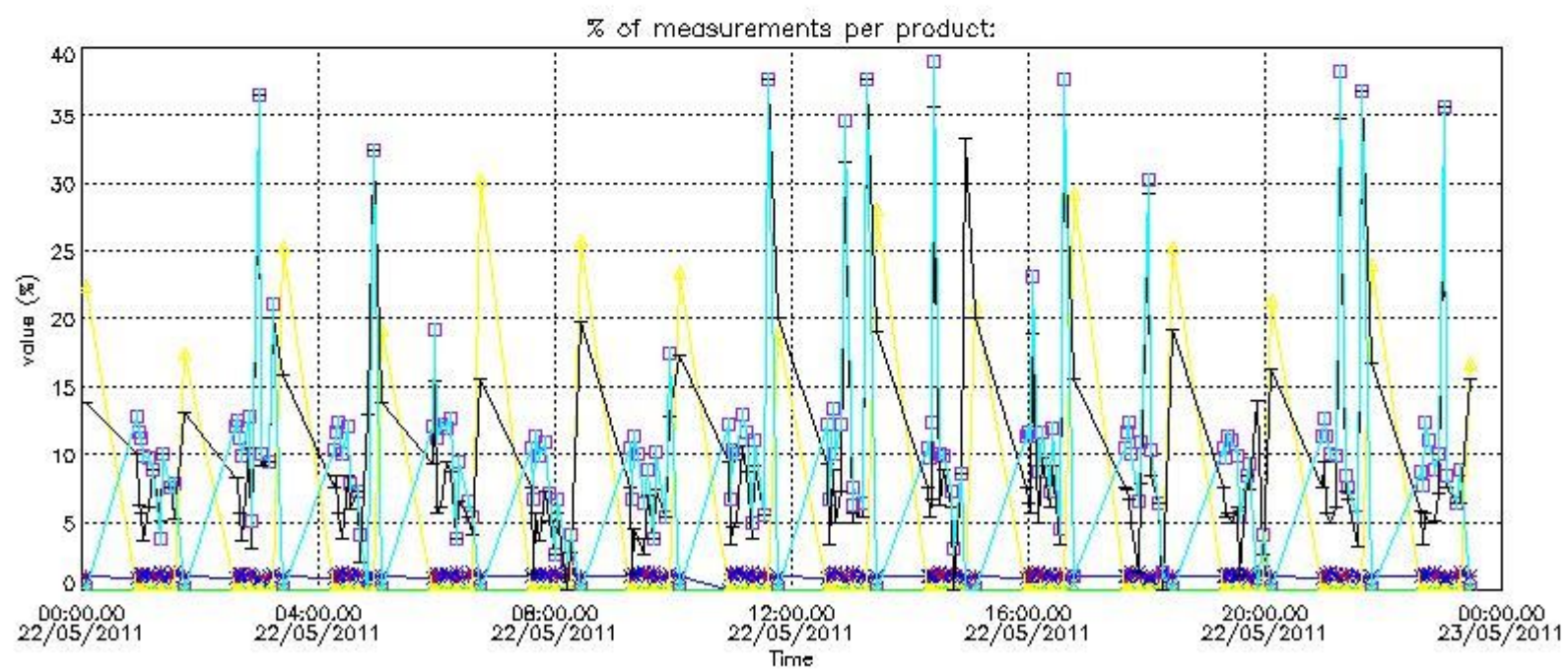
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

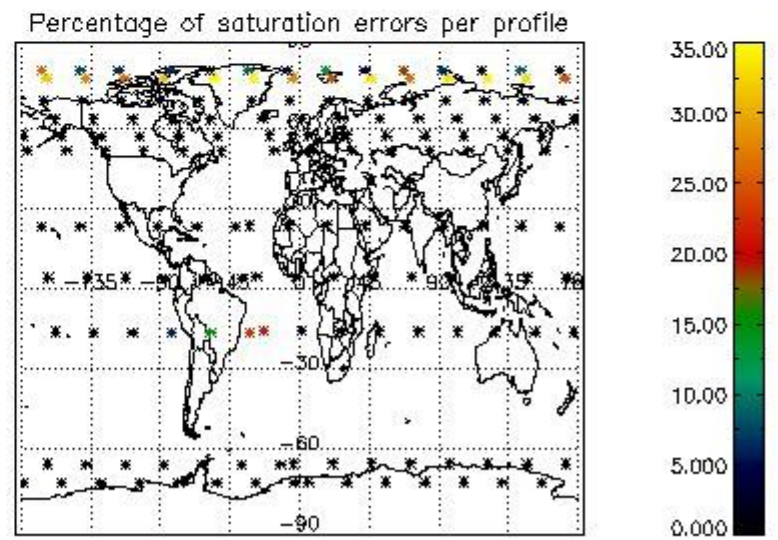
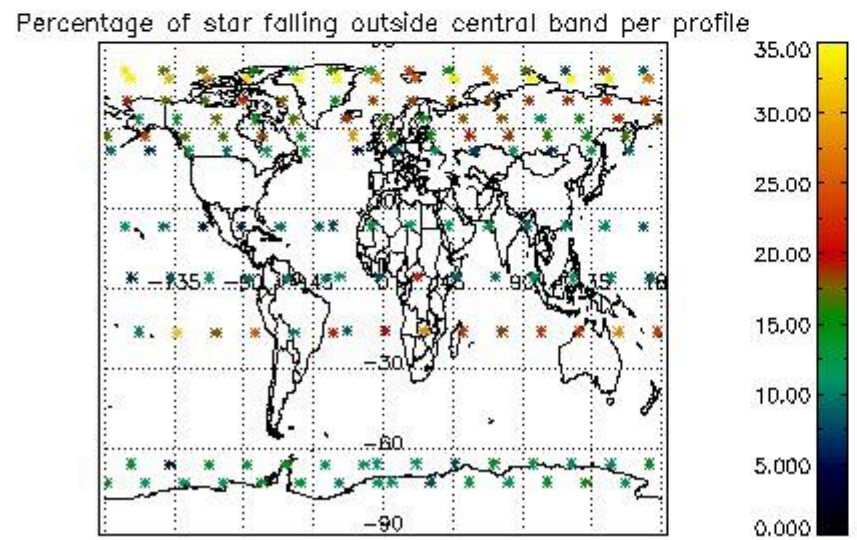
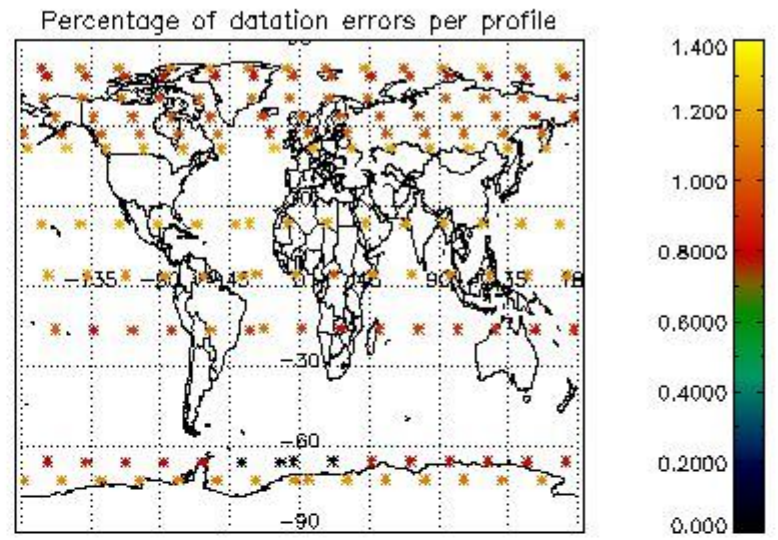
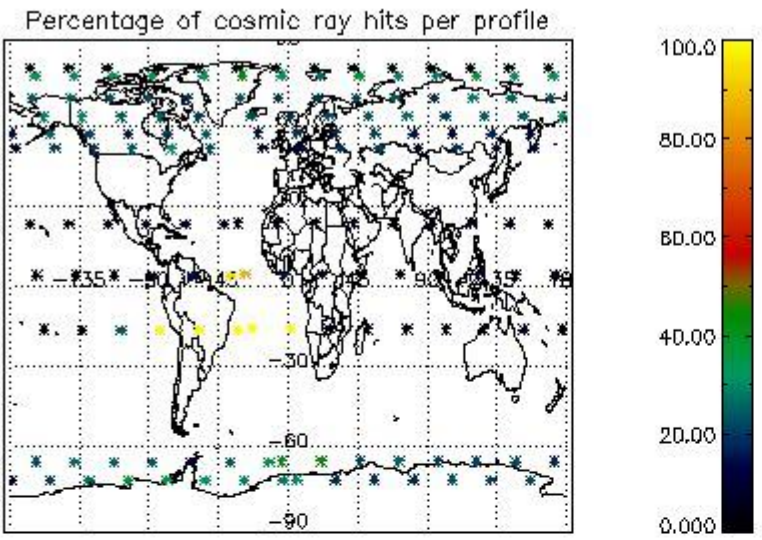


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

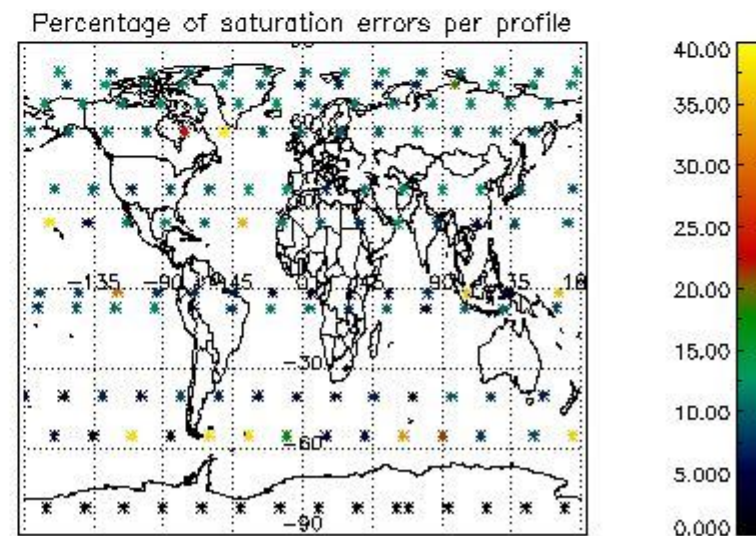
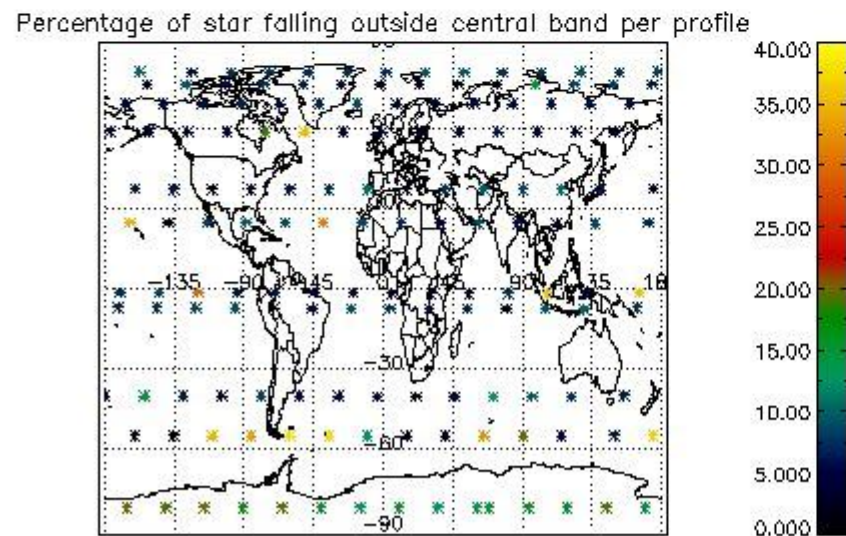
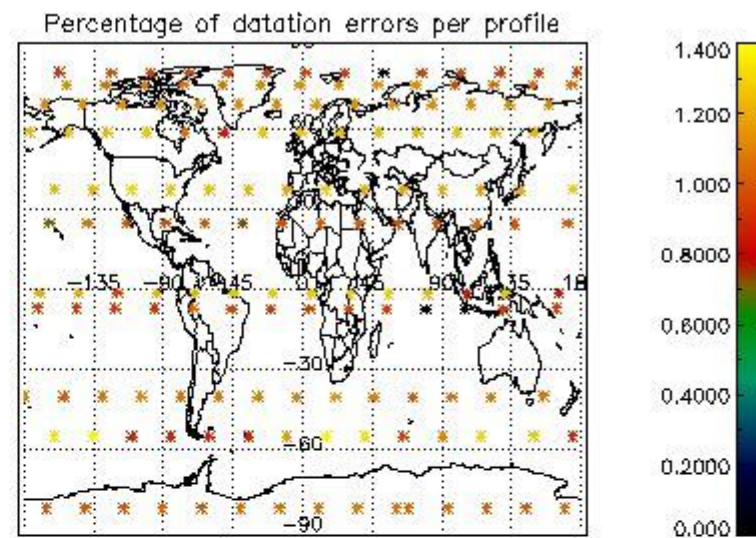
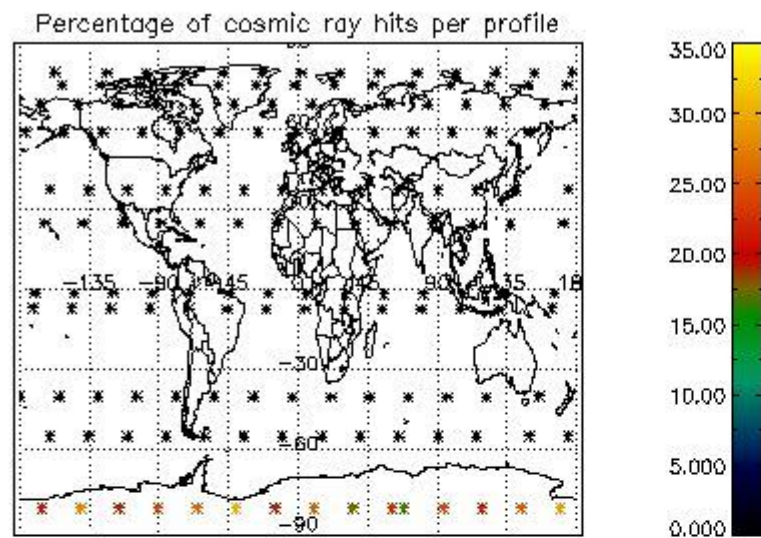


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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

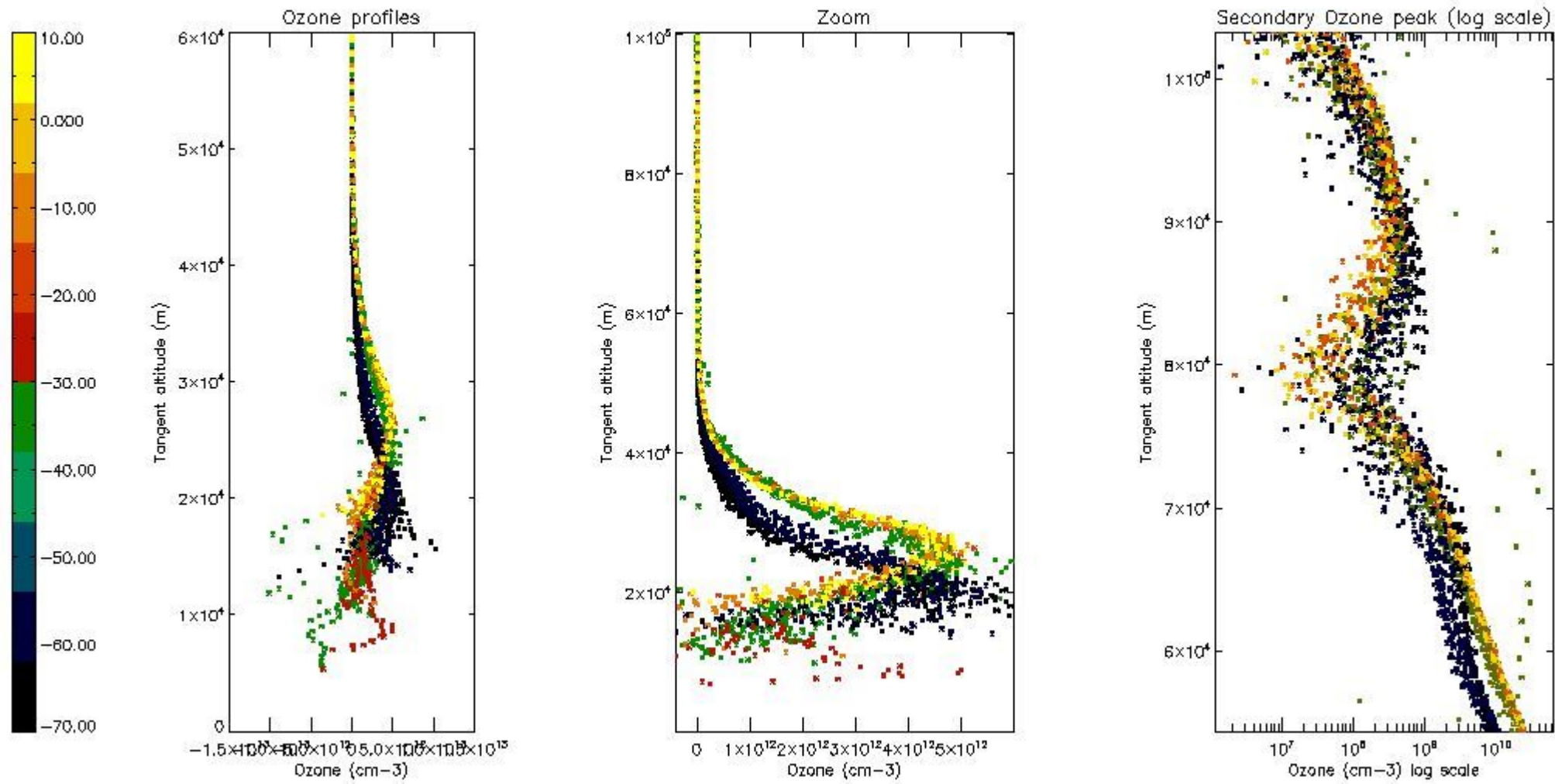
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 25 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 12 |
| STD < 5 | 8 |

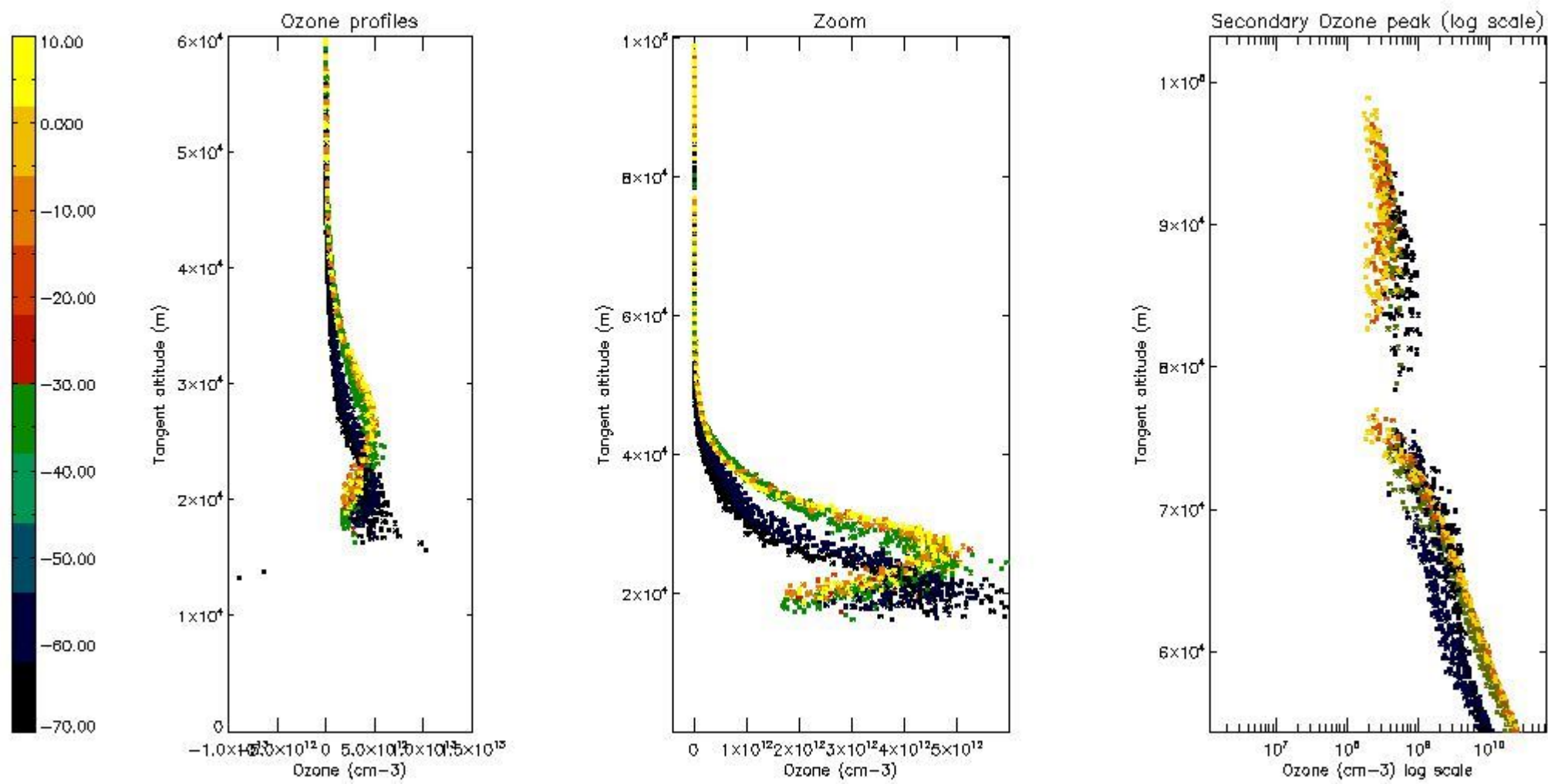
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



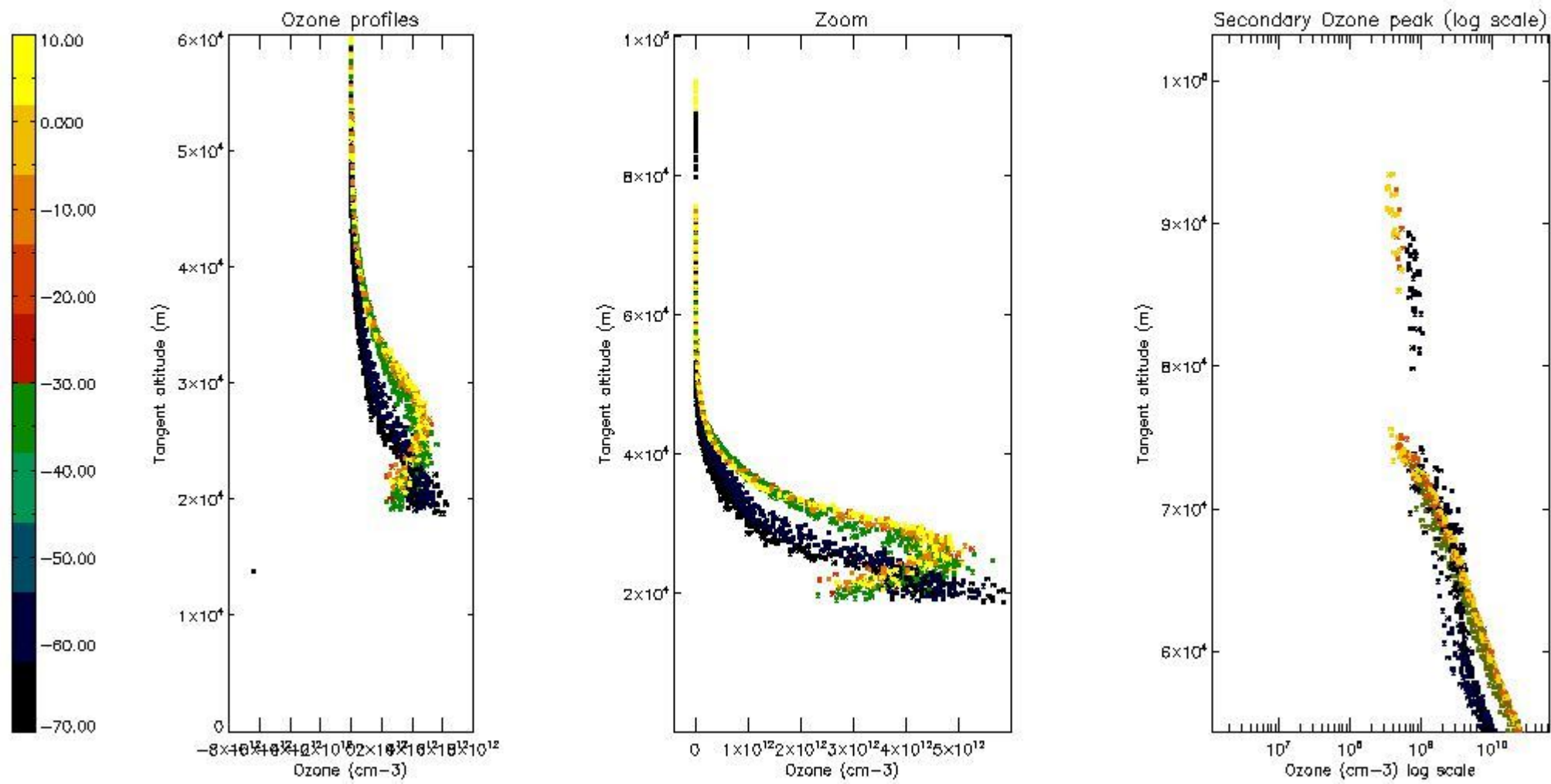
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



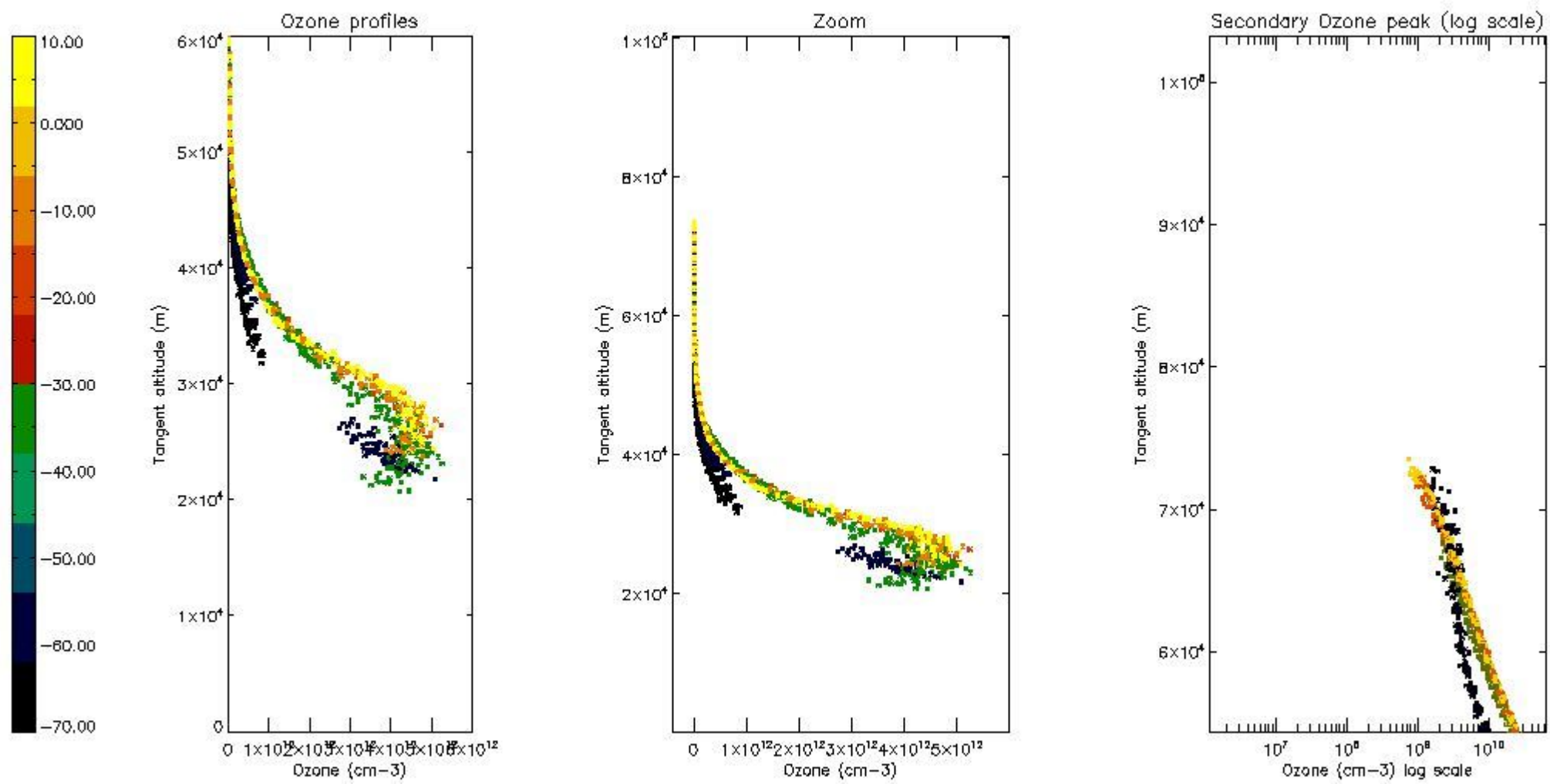
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



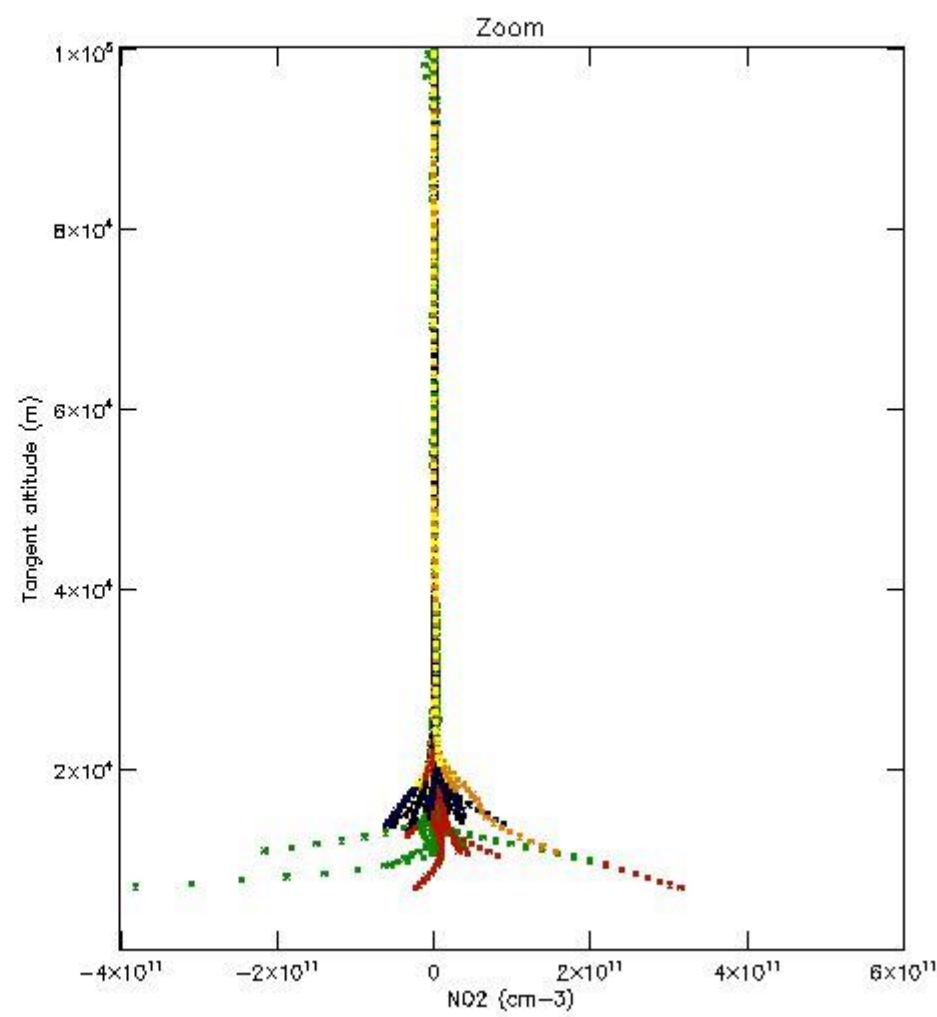
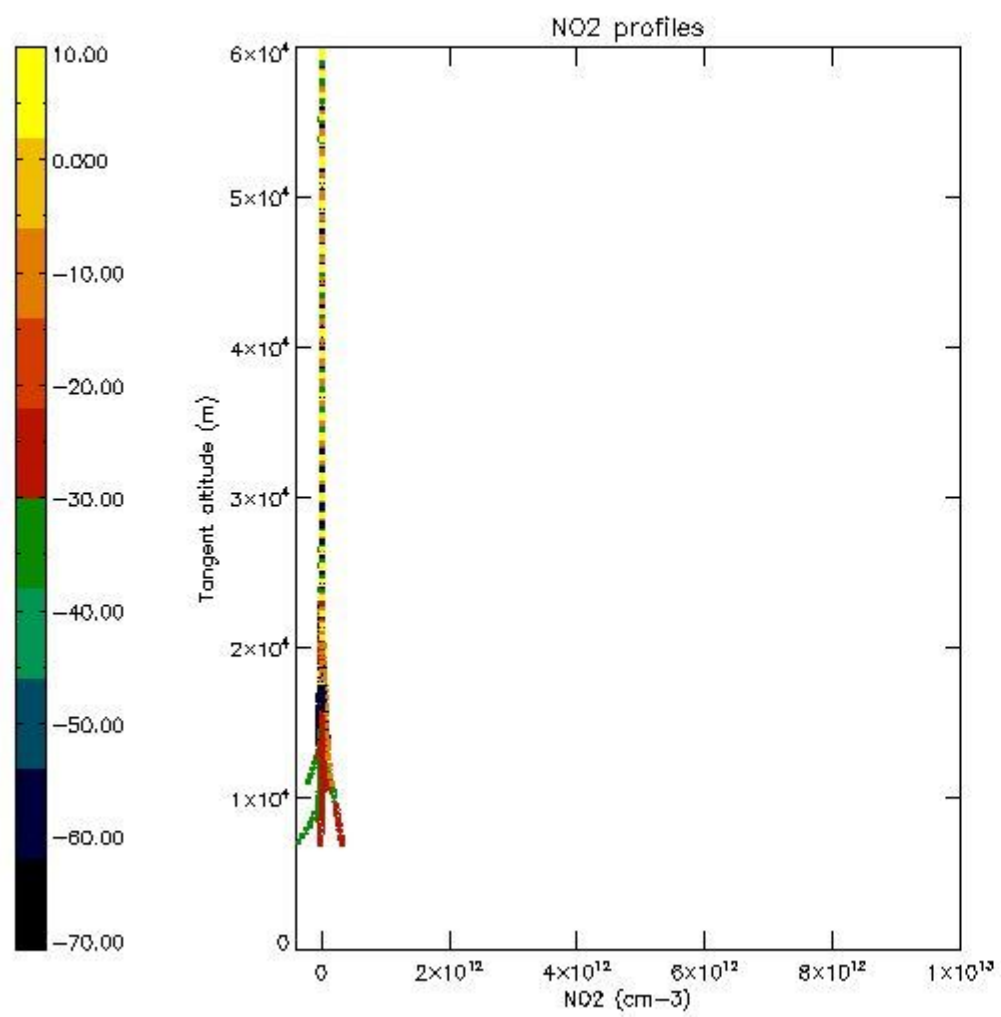
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



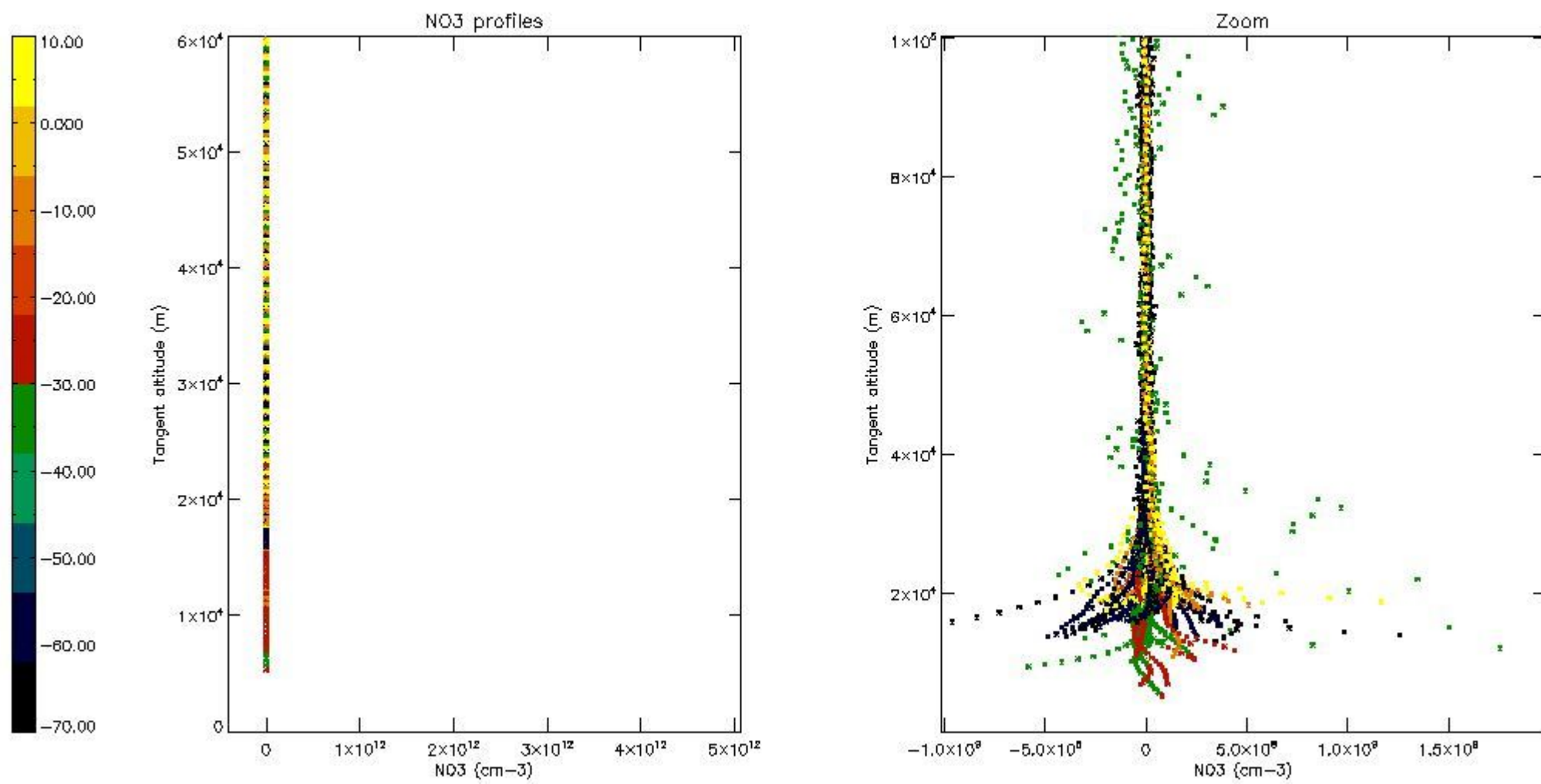
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



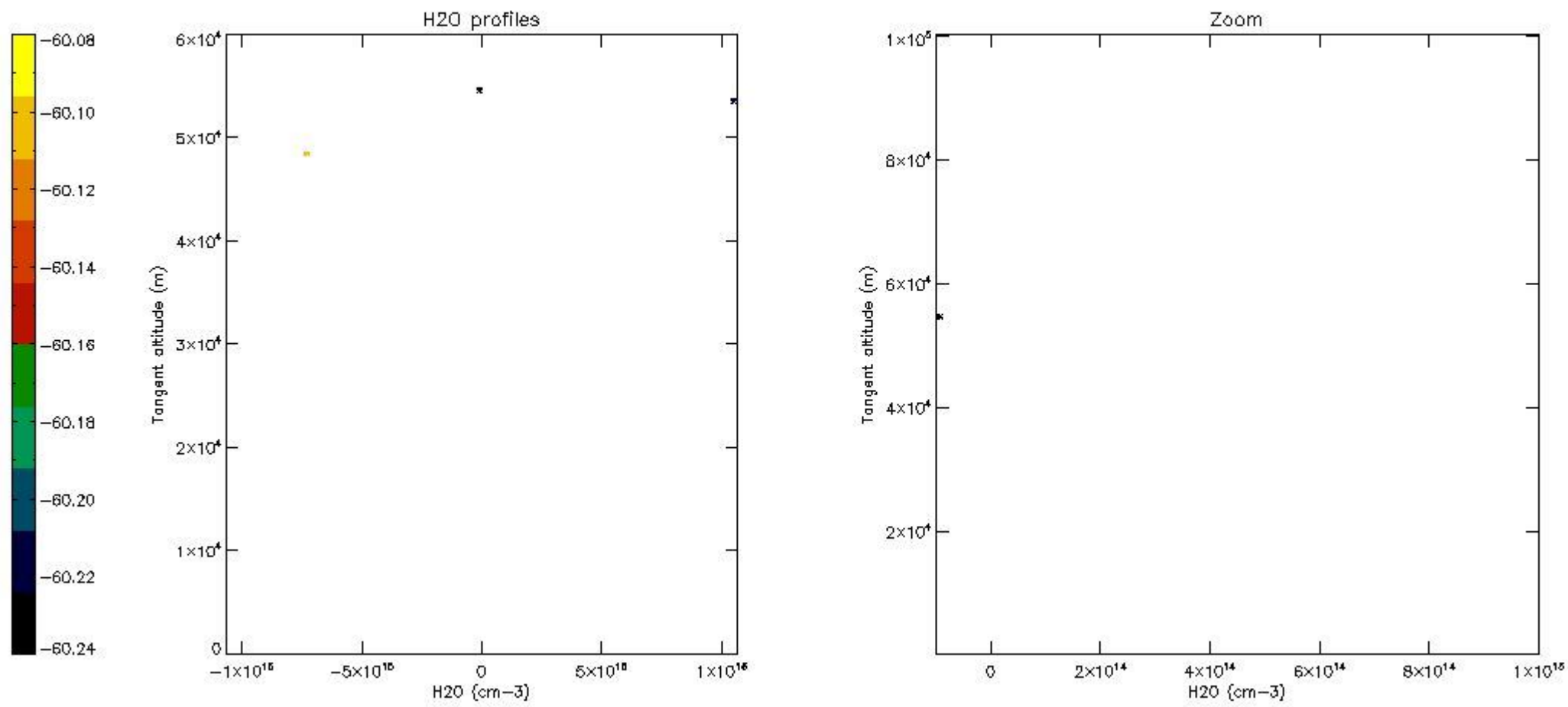
5.7 Plot NO3 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

The colorbar represents the latitude.



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

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

| Type | Auxiliary Filename | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |

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 | 24APR2013 13:55:22 |
| Data source version | GOMOS/6.01 |
| Start time of products | 22-05-2011 (22MAY2011 00:00:00) |
| Stop time of products | 23-05-2011 (23MAY2011 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 314 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

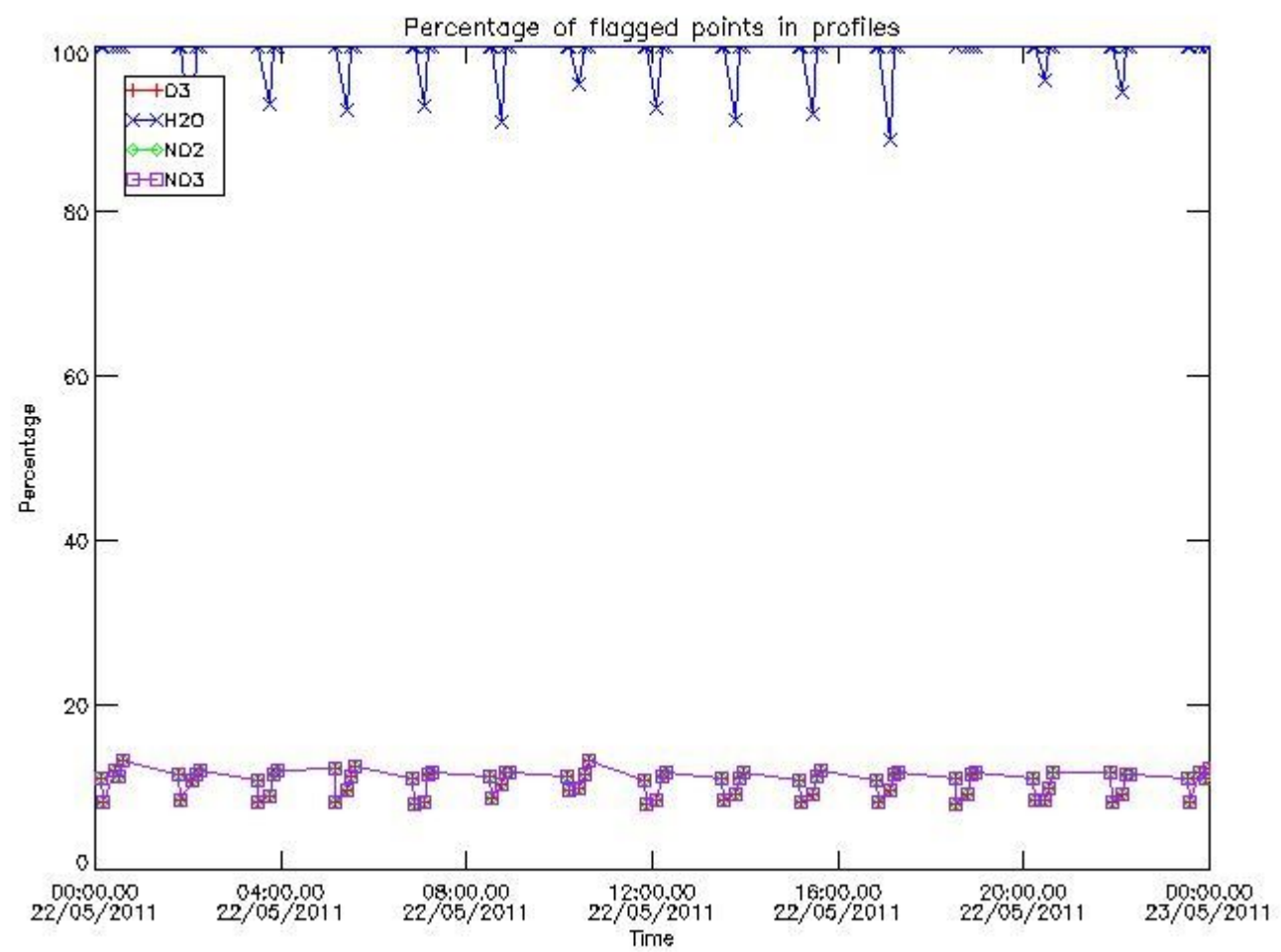
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|---------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20110522_000358_000000473102_00375_48234_1368.N1 | 22-MAY-2011 00:03:58 | Twi_and_stray | 47.000 | 58 | 21Alp And | 2.0730 | 11000. | 94 | 48234 | No |
| 2 | GOM_NL__2PRFIN20110522_000822_000000463102_00375_48234_1369.N1 | 22-MAY-2011 00:08:22 | Dark | 45.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 91 | 48234 | No |
| 3 | GOM_NL__2PRFIN20110522_001025_000000613102_00375_48234_1370.N1 | 22-MAY-2011 00:10:25 | Dark | 61.000 | 90 | 54Alp Peg | 2.4870 | 11000. | 122 | 48234 | No |
| 4 | GOM_NL__2PRFIN20110522_002428_000000553102_00375_48234_1371.N1 | 22-MAY-2011 00:24:28 | Dark | 55.000 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 110 | 48234 | No |
| 5 | GOM_NL__2PRFIN20110522_003008_000000453102_00376_48235_1407.N1 | 22-MAY-2011 00:30:08 | Dark | 45.000 | 31 | Alp Gru | 1.7340 | 15200. | 90 | 48235 | No |
| 6 | GOM_NL__2PRFIN20110522_003531_000000433102_00376_48235_1408.N1 | 22-MAY-2011 00:35:31 | Dark | 42.500 | 45 | Alp Pav | 1.9400 | 26000. | 85 | 48235 | No |
| 7 | GOM_NL__2PRFIN20110522_004328_000000443102_00376_48235_1409.N1 | 22-MAY-2011 00:43:28 | Straylight | 44.000 | 147 | Alp Ara | 2.8770 | 26000. | 88 | 48235 | No |
| 8 | GOM_NL__2PRFIN20110522_004505_000000483102_00376_48235_1410.N1 | 22-MAY-2011 00:45:05 | Straylight | 48.000 | 40 | The Sco | 1.8590 | 7100.0 | 96 | 48235 | No |
| 9 | GOM_NL__2PRFIN20110522_004655_000000533102_00376_48235_1411.N1 | 22-MAY-2011 00:46:55 | Straylight | 52.500 | 25 | 35Lam Sco | 1.6200 | 28000. | 105 | 48235 | No |
| 10 | GOM_NL__2PRFIN20110522_004859_000000503102_00376_48235_1412.N1 | 22-MAY-2011 00:48:59 | Twi_and_stray | 50.000 | 75 | 26Eps Sco | 2.2910 | 4250.0 | 100 | 48235 | No |
| 11 | GOM_NL__2PRFIN20110522_005151_000000613102_00376_48235_1413.N1 | 22-MAY-2011 00:51:51 | Twi_and_stray | 61.000 | 16 | 21Alp Sco | 1.0200 | 3000.0 | 122 | 48235 | No |
| 12 | GOM_NL__2PRFIN20110522_005327_000000463102_00376_48235_1414.N1 | 22-MAY-2011 00:53:27 | Bright | 46.000 | 80 | 7Del Sco | 2.3160 | 30000. | 92 | 48235 | No |
| 13 | GOM_NL__2PRFIN20110522_005511_000000553102_00376_48235_1415.N1 | 22-MAY-2011 00:55:11 | Bright | 54.500 | 86 | 35Eta Oph | 2.4300 | 10200. | 109 | 48235 | No |
| 14 | GOM_NL__2PRFIN20110522_005713_000000483102_00376_48235_1416.N1 | 22-MAY-2011 00:57:13 | Bright | 47.500 | 98 | 13Zet Oph | 2.5710 | 30000. | 95 | 48235 | No |
| 15 | GOM_NL__2PRFIN20110522_005933_000000453102_00376_48235_1417.N1 | 22-MAY-2011 00:59:33 | Bright | 44.500 | 120 | 1Del Oph | 2.7340 | 3200.0 | 89 | 48235 | No |
| 16 | GOM_NL__2PRFIN20110522_010238_000000413102_00376_48235_1418.N1 | 22-MAY-2011 01:02:38 | Bright | 40.500 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 81 | 48235 | No |
| 17 | GOM_NL__2PRFIN20110522_010846_000000413102_00376_48235_1419.N1 | 22-MAY-2011 01:08:46 | Bright | 41.000 | 67 | 5Alp CrB | 2.2210 | 11000. | 82 | 48235 | No |
| 18 | GOM_NL__2PRFIN20110522_011221_000000513102_00376_48235_1420.N1 | 22-MAY-2011 01:12:21 | Bright | 51.000 | 133 | 40Zet Her | 2.8070 | 6000.0 | 102 | 48235 | No |
| 19 | GOM_NL__2PRFIN20110522_011938_000000403102_00376_48235_1421.N1 | 22-MAY-2011 01:19:38 | Bright | 39.500 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 79 | 48235 | No |
| 20 | GOM_NL__2PRFIN20110522_012117_000000553102_00376_48235_1422.N1 | 22-MAY-2011 01:21:17 | Bright | 54.500 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 109 | 48235 | No |
| 21 | GOM_NL__2PRFIN20110522_013026_000000473102_00376_48235_1423.N1 | 22-MAY-2011 01:30:26 | Bright | 46.500 | 89 | 5Alp Cep | 2.4510 | 8000.0 | 93 | 48235 | No |
| 22 | GOM_NL__2PRFIN20110522_013437_000000393102_00376_48235_1424.N1 | 22-MAY-2011 01:34:37 | Bright | 38.500 | 74 | 11Bet Cas | 2.2680 | 6600.0 | 77 | 48235 | No |
| 23 | GOM_NL__2PRFIN20110522_014412_000000463102_00376_48235_1425.N1 | 22-MAY-2011 01:44:12 | Twi_and_stray | 46.000 | 58 | 21Alp And | 2.0730 | 11000. | 92 | 48235 | No |
| 24 | GOM_NL__2PRFIN20110522_014836_000000453102_00376_48235_1426.N1 | 22-MAY-2011 01:48:36 | Dark | 44.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 89 | 48235 | No |
| 25 | GOM_NL__2PRFIN20110522_015040_000000613102_00376_48235_1427.N1 | 22-MAY-2011 01:50:40 | Dark | 60.500 | 90 | 54Alp Peg | 2.4870 | 11000. | 121 | 48235 | No |
| 26 | GOM_NL__2PRFIN20110522_020443_000000483102_00376_48235_1428.N1 | 22-MAY-2011 02:04:43 | Dark | 47.500 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 95 | 48235 | No |
| 27 | GOM_NL__2PRFIN20110522_021023_000000453102_00377_48236_1439.N1 | 22-MAY-2011 02:10:23 | Dark | 44.500 | 31 | Alp Gru | 1.7340 | 15200. | 89 | 48236 | No |
| 28 | GOM_NL__2PRFIN20110522_021546_000000433102_00377_48236_1440.N1 | 22-MAY-2011 02:15:46 | Dark | 42.500 | 45 | Alp Pav | 1.9400 | 26000. | 85 | 48236 | No |
| 29 | GOM_NL__2PRFIN20110522_022343_000000443102_00377_48236_1441.N1 | 22-MAY-2011 02:23:43 | Straylight | 44.000 | 147 | Alp Ara | 2.8770 | 26000. | 88 | 48236 | No |
| 30 | GOM_NL__2PRFIN20110522_022519_000000503102_00377_48236_1442.N1 | 22-MAY-2011 02:25:19 | Straylight | 50.000 | 40 | The Sco | 1.8590 | 7100.0 | 100 | 48236 | No |
| 31 | GOM_NL__2PRFIN20110522_022709_000000503102_00377_48236_1443.N1 | 22-MAY-2011 02:27:09 | Straylight | 50.000 | 25 | 35Lam Sco | 1.6200 | 28000. | 100 | 48236 | No |
| 32 | GOM_NL__2PRFIN20110522_022913_000000533102_00377_48236_1444.N1 | 22-MAY-2011 02:29:13 | Twi_and_stray | 52.500 | 75 | 26Eps Sco | 2.2910 | 4250.0 | 105 | 48236 | No |
| 33 | GOM_NL__2PRFIN20110522_023206_000000563102_00377_48236_1445.N1 | 22-MAY-2011 02:32:06 | Twi_and_stray | 56.000 | 16 | 21Alp Sco | 1.0200 | 3000.0 | 112 | 48236 | No |
| 34 | GOM_NL__2PRFIN20110522_023341_000000473102_00377_48236_1446.N1 | 22-MAY-2011 02:33:41 | Bright | 46.500 | 80 | 7Del Sco | 2.3160 | 30000. | 93 | 48236 | No |
| 35 | GOM_NL__2PRFIN20110522_023525_000000543102_00377_48236_1447.N1 | 22-MAY-2011 02:35:25 | Bright | 54.000 | 86 | 35Eta Oph | 2.4300 | 10200. | 108 | 48236 | No |
| 36 | GOM_NL__2PRFIN20110522_023727_000000483102_00377_48236_1448.N1 | 22-MAY-2011 02:37:27 | Bright | 48.000 | 98 | 13Zet Oph | 2.5710 | 30000. | 96 | 48236 | No |
| 37 | GOM_NL__2PRFIN20110522_023947_000000453102_00377_48236_1449.N1 | 22-MAY-2011 02:39:47 | Bright | 44.500 | 120 | 1Del Oph | 2.7340 | 3200.0 | 89 | 48236 | No |
| 38 | GOM_NL__2PRFIN20110522_024252_000000413102_00377_48236_1450.N1 | 22-MAY-2011 02:42:52 | Bright | 40.500 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 81 | 48236 | No |
| 39 | GOM_NL__2PRFIN20110522_024900_000000433102_00377_48236_1451.N1 | 22-MAY-2011 02:49:00 | Bright | 43.000 | 67 | 5Alp CrB | 2.2210 | 11000. | 86 | 48236 | No |
| 40 | GOM_NL__2PRFIN20110522_025235_000000493102_00377_48236_1452.N1 | 22-MAY-2011 02:52:35 | Bright | 49.000 | 133 | 40Zet Her | 2.8070 | 6000.0 | 98 | 48236 | No |
| 41 | GOM_NL__2PRFIN20110522_025951_000000593102_00377_48236_1453.N1 | 22-MAY-2011 02:59:51 | Bright | 59.000 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 118 | 48236 | No |
| 42 | GOM_NL__2PRFIN20110522_030129_000000553102_00377_48236_1454.N1 | 22-MAY-2011 03:01:29 | Bright | 54.500 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 109 | 48236 | No |

| | | | | | | | | | | | |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|-----|-------|----|
| 279 | GOM_NL__2PRFIN20110522_210220_000000443102_00388_48247_2011.N1 | 22-MAY-2011 21:02:20 | Bright | 44.000 | 120 | 1Del Oph | 2.7340 | 3200.0 | 88 | 48247 | No |
| 280 | GOM_NL__2PRFIN20110522_210524_000000403102_00388_48247_2012.N1 | 22-MAY-2011 21:05:24 | Bright | 40.000 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 80 | 48247 | No |
| 281 | GOM_NL__2PRFIN20110522_211131_000000413102_00388_48247_2013.N1 | 22-MAY-2011 21:11:31 | Bright | 40.500 | 67 | 5Alp CrB | 2.2210 | 11000. | 81 | 48247 | No |
| 282 | GOM_NL__2PRFIN20110522_211500_000000723102_00388_48247_2014.N1 | 22-MAY-2011 21:15:00 | Bright | 72.000 | 133 | 40Zet Her | 2.8070 | 6000.0 | 144 | 48247 | No |
| 283 | GOM_NL__2PRFIN20110522_212221_000000423102_00388_48247_2015.N1 | 22-MAY-2011 21:22:21 | Bright | 41.500 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 83 | 48247 | No |
| 284 | GOM_NL__2PRFIN20110522_212353_000000533102_00388_48247_2016.N1 | 22-MAY-2011 21:23:53 | Bright | 52.500 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 105 | 48247 | No |
| 285 | GOM_NL__2PRFIN20110522_213308_000000463102_00388_48247_2017.N1 | 22-MAY-2011 21:33:08 | Bright | 46.000 | 89 | 5Alp Cep | 2.4510 | 8000.0 | 92 | 48247 | No |
| 286 | GOM_NL__2PRFIN20110522_213724_000000573102_00388_48247_2018.N1 | 22-MAY-2011 21:37:24 | Bright | 57.000 | 74 | 11Bet Cas | 2.2680 | 6600.0 | 114 | 48247 | No |
| 287 | GOM_NL__2PRFIN20110522_214702_000000483102_00388_48247_2019.N1 | 22-MAY-2011 21:47:02 | Twilight | 48.000 | 58 | 21Alp And | 2.0730 | 11000. | 96 | 48247 | No |
| 288 | GOM_NL__2PRFIN20110522_215128_000000443102_00388_48247_2020.N1 | 22-MAY-2011 21:51:28 | Dark | 43.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 87 | 48247 | No |
| 289 | GOM_NL__2PRFIN20110522_215336_000000623102_00388_48247_2021.N1 | 22-MAY-2011 21:53:36 | Dark | 61.500 | 90 | 54Alp Peg | 2.4870 | 11000. | 123 | 48247 | No |
| 290 | GOM_NL__2PRFIN20110522_220742_000000553102_00388_48247_2022.N1 | 22-MAY-2011 22:07:42 | Dark | 55.000 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 110 | 48247 | No |
| 291 | GOM_NL__2PRFIN20110522_221321_000000443102_00389_48248_2014.N1 | 22-MAY-2011 22:13:21 | Dark | 44.000 | 31 | Alp Gru | 1.7340 | 15200. | 88 | 48248 | No |
| 292 | GOM_NL__2PRFIN20110522_221843_000000443102_00389_48248_2015.N1 | 22-MAY-2011 22:18:43 | Dark | 44.000 | 45 | Alp Pav | 1.9400 | 26000. | 88 | 48248 | No |
| 293 | GOM_NL__2PRFIN20110522_222637_000000413102_00389_48248_2016.N1 | 22-MAY-2011 22:26:37 | Straylight | 40.500 | 147 | Alp Ara | 2.8770 | 26000. | 81 | 48248 | No |
| 294 | GOM_NL__2PRFIN20110522_222814_000000573102_00389_48248_2017.N1 | 22-MAY-2011 22:28:14 | Straylight | 56.500 | 40 | The Sco | 1.8590 | 7100.0 | 113 | 48248 | No |
| 295 | GOM_NL__2PRFIN20110522_223004_000000533102_00389_48248_2018.N1 | 22-MAY-2011 22:30:04 | Straylight | 53.000 | 25 | 35Lam Sco | 1.6200 | 28000. | 106 | 48248 | No |
| 296 | GOM_NL__2PRFIN20110522_223206_000000483102_00389_48248_2019.N1 | 22-MAY-2011 22:32:06 | Twilight | 47.500 | 75 | 26Eps Sco | 2.2910 | 4250.0 | 95 | 48248 | No |
| 297 | GOM_NL__2PRFIN20110522_223457_000000613102_00389_48248_2020.N1 | 22-MAY-2011 22:34:57 | Bright | 61.000 | 16 | 21Alp Sco | 1.0200 | 3000.0 | 122 | 48248 | No |
| 298 | GOM_NL__2PRFIN20110522_223631_000000453102_00389_48248_2021.N1 | 22-MAY-2011 22:36:31 | Bright | 45.000 | 80 | 7Del Sco | 2.3160 | 30000. | 90 | 48248 | No |
| 299 | GOM_NL__2PRFIN20110522_223814_000000523102_00389_48248_2022.N1 | 22-MAY-2011 22:38:14 | Bright | 51.500 | 86 | 35Eta Oph | 2.4300 | 10200. | 103 | 48248 | No |
| 300 | GOM_NL__2PRFIN20110522_224015_000000453102_00389_48248_2023.N1 | 22-MAY-2011 22:40:15 | Bright | 45.000 | 98 | 13Zet Oph | 2.5710 | 30000. | 90 | 48248 | No |
| 301 | GOM_NL__2PRFIN20110522_224234_000000453102_00389_48248_2024.N1 | 22-MAY-2011 22:42:34 | Bright | 44.500 | 120 | 1Del Oph | 2.7340 | 3200.0 | 89 | 48248 | No |
| 302 | GOM_NL__2PRFIN20110522_224538_000000413102_00389_48248_2025.N1 | 22-MAY-2011 22:45:38 | Bright | 40.500 | 102 | 24Alp Ser | 2.6000 | 4250.0 | 81 | 48248 | No |
| 303 | GOM_NL__2PRFIN20110522_225145_000000403102_00389_48248_2026.N1 | 22-MAY-2011 22:51:45 | Bright | 39.500 | 67 | 5Alp CrB | 2.2210 | 11000. | 79 | 48248 | No |
| 304 | GOM_NL__2PRFIN20110522_225513_000000503102_00389_48248_2027.N1 | 22-MAY-2011 22:55:13 | Bright | 49.500 | 133 | 40Zet Her | 2.8070 | 6000.0 | 99 | 48248 | No |
| 305 | GOM_NL__2PRFIN20110522_230235_000000593102_00389_48248_2028.N1 | 22-MAY-2011 23:02:35 | Bright | 59.000 | 119 | 14Eta Dra | 2.7270 | 4700.0 | 118 | 48248 | No |
| 306 | GOM_NL__2PRFIN20110522_230406_000000533102_00389_48248_2029.N1 | 22-MAY-2011 23:04:06 | Bright | 53.000 | 69 | 33Gam Dra | 2.2310 | 3800.0 | 106 | 48248 | No |
| 307 | GOM_NL__2PRFIN20110522_231322_000000473102_00389_48248_2030.N1 | 22-MAY-2011 23:13:22 | Bright | 46.500 | 89 | 5Alp Cep | 2.4510 | 8000.0 | 93 | 48248 | No |
| 308 | GOM_NL__2PRFIN20110522_231738_000000403102_00389_48248_2031.N1 | 22-MAY-2011 23:17:38 | Bright | 39.500 | 74 | 11Bet Cas | 2.2680 | 6600.0 | 79 | 48248 | No |
| 309 | GOM_NL__2PRFIN20110522_232716_000000483102_00389_48248_2032.N1 | 22-MAY-2011 23:27:16 | Twilight | 48.000 | 58 | 21Alp And | 2.0730 | 11000. | 96 | 48248 | No |
| 310 | GOM_NL__2PRFIN20110522_233142_000000463102_00389_48248_2033.N1 | 22-MAY-2011 23:31:42 | Dark | 45.500 | 140 | 88Gam Peg | 2.8340 | 26000. | 91 | 48248 | No |
| 311 | GOM_NL__2PRFIN20110522_233351_000000633102_00389_48248_2034.N1 | 22-MAY-2011 23:33:51 | Dark | 62.500 | 90 | 54Alp Peg | 2.4870 | 11000. | 125 | 48248 | No |
| 312 | GOM_NL__2PRFIN20110522_234757_000000483102_00389_48248_2035.N1 | 22-MAY-2011 23:47:57 | Dark | 47.500 | 18 | 24Alp PsA | 1.1660 | 9700.0 | 95 | 48248 | No |
| 313 | GOM_NL__2PRFIN20110522_235336_000000463102_00390_48249_2073.N1 | 22-MAY-2011 23:53:36 | Dark | 45.500 | 31 | Alp Gru | 1.7340 | 15200. | 91 | 48249 | No |
| 314 | GOM_NL__2PRFIN20110522_235857_000000423102_00390_48249_2074.N1 | 22-MAY-2011 23:58:57 | Dark | 41.500 | 45 | Alp Pav | 1.9400 | 26000. | 83 | 48249 | No |

3. Quality information per product

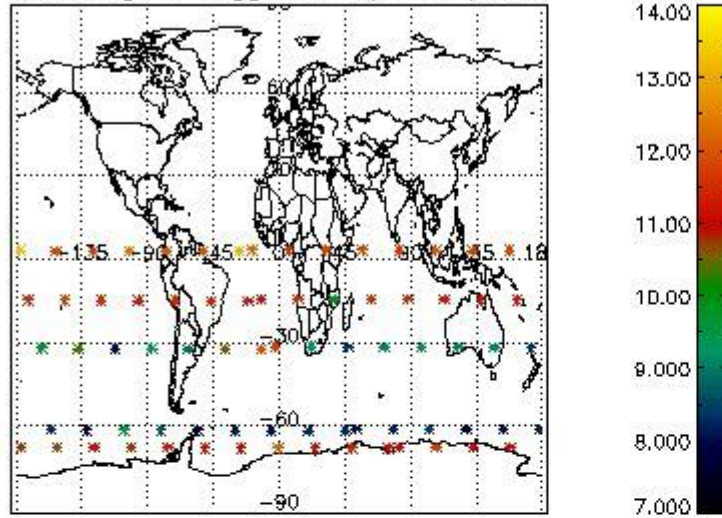
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

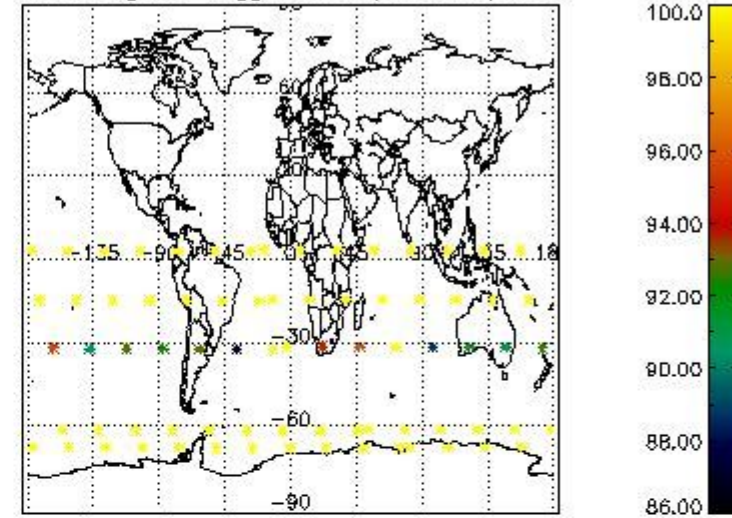


3.2 Plot quality information per product (world map)

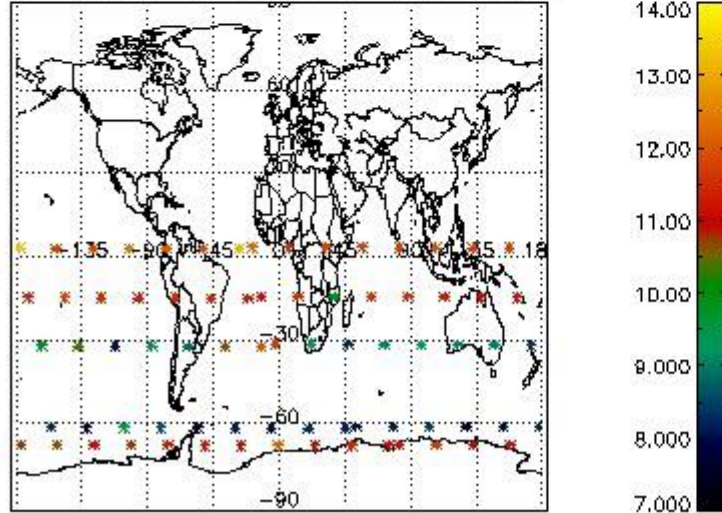
Percentage of flagged data per O3 profile



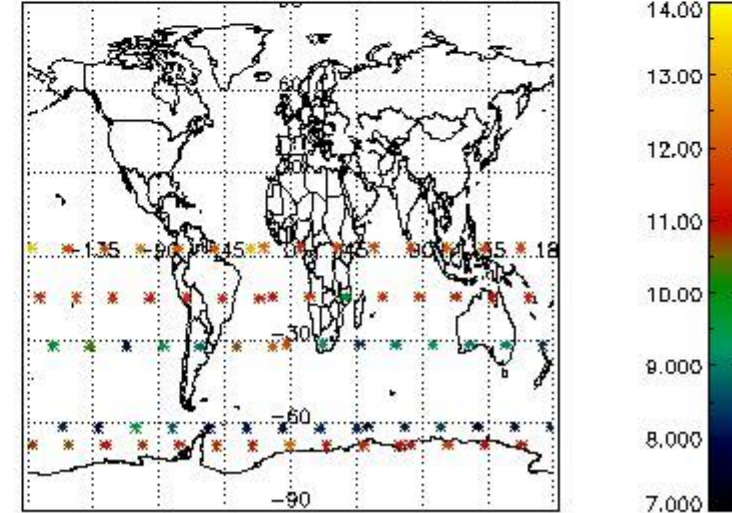
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

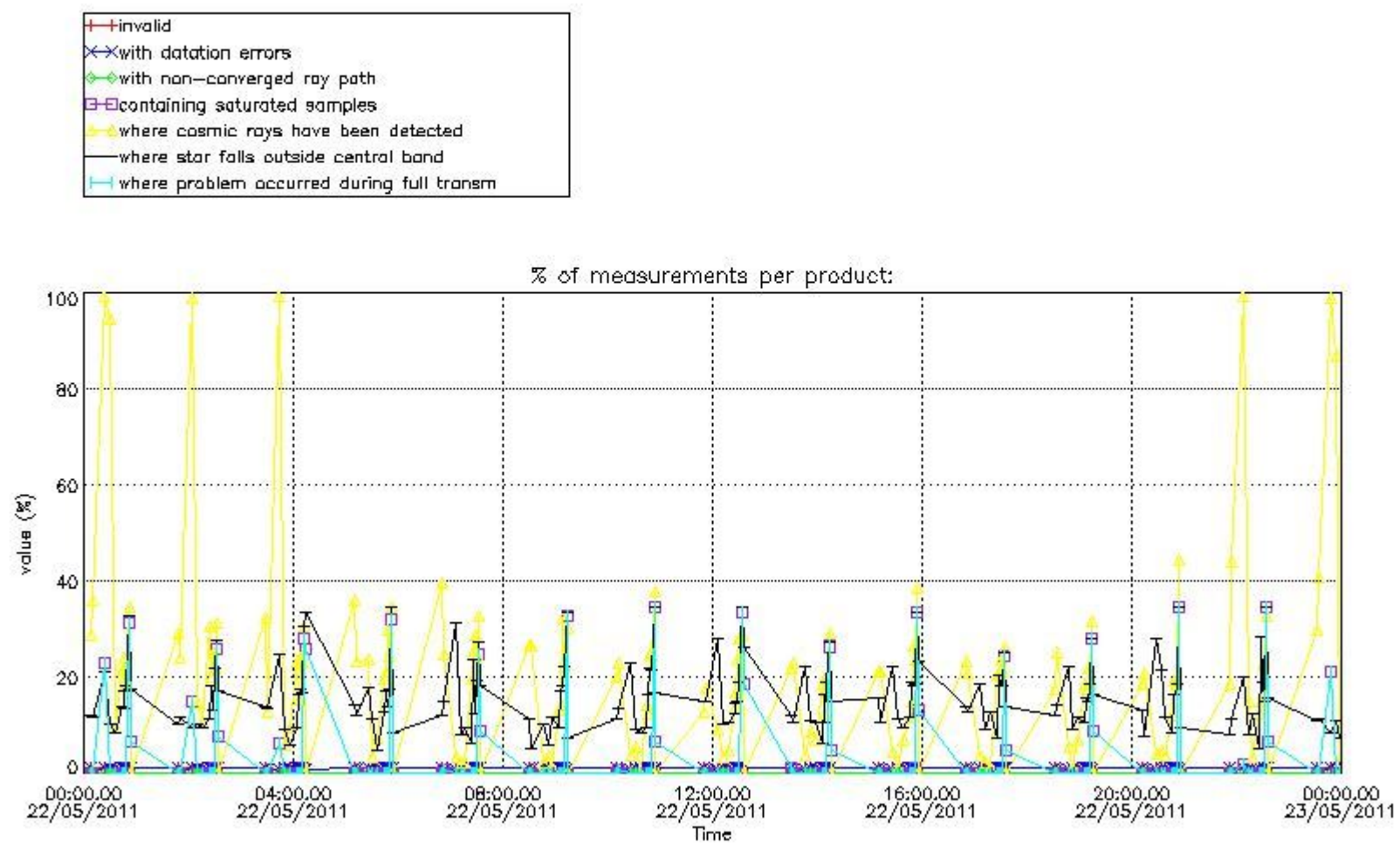


4. Level 1 quality information per product

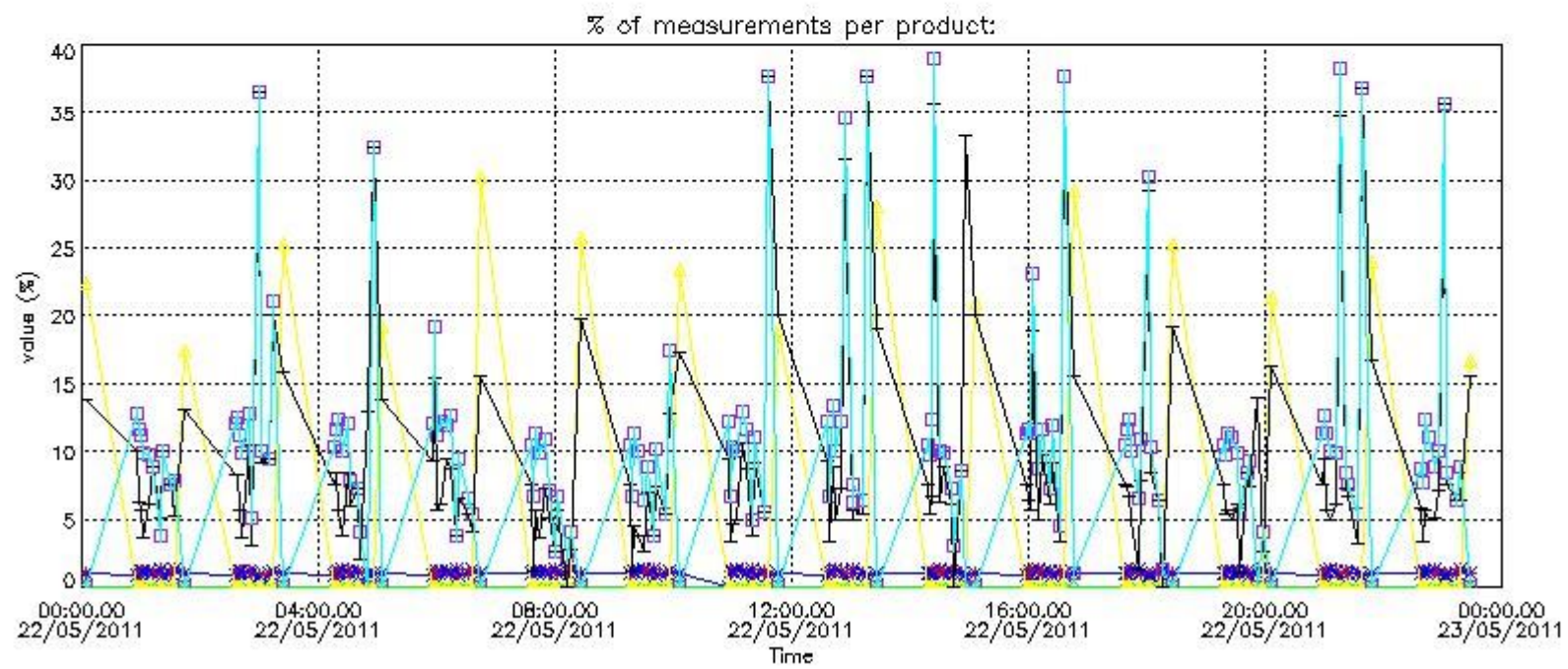
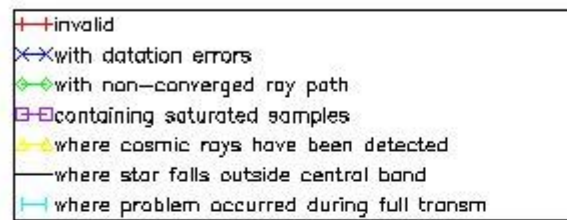
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



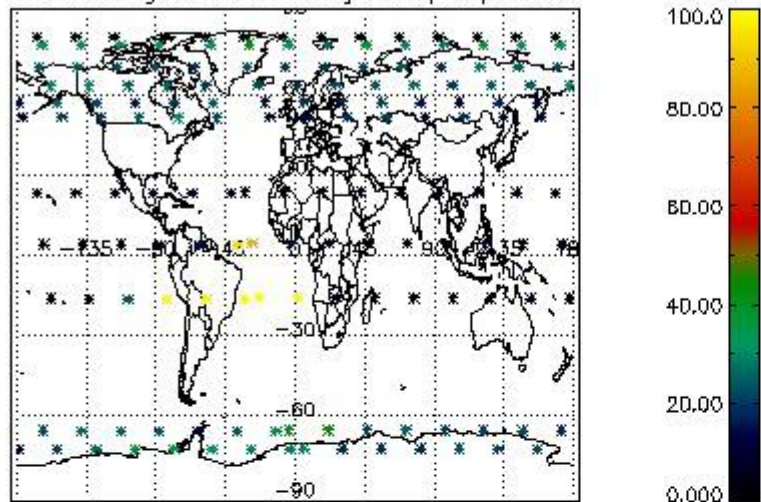
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



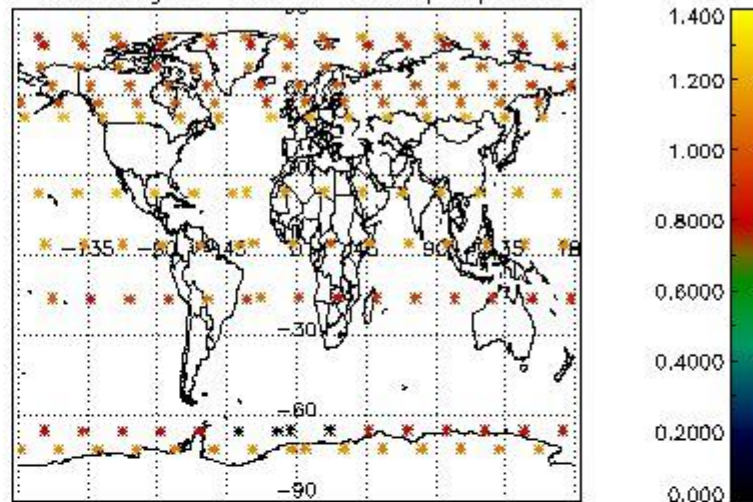
4.2 Plot quality information per product coming from level 1b processing (world map)

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

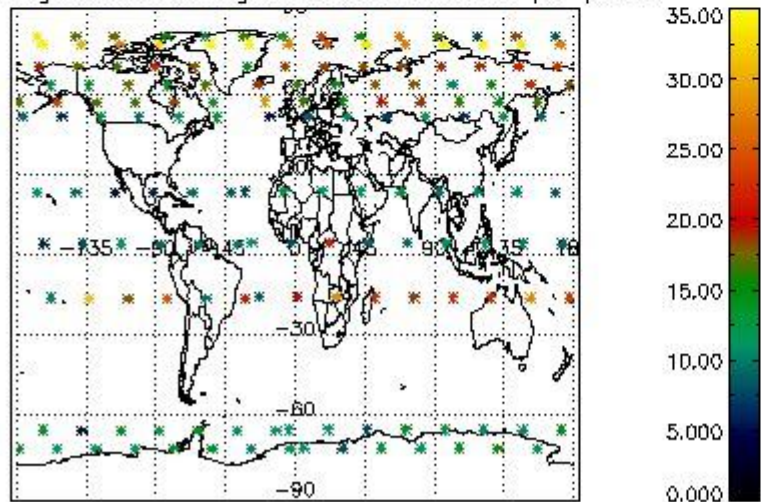
Percentage of cosmic ray hits per profile



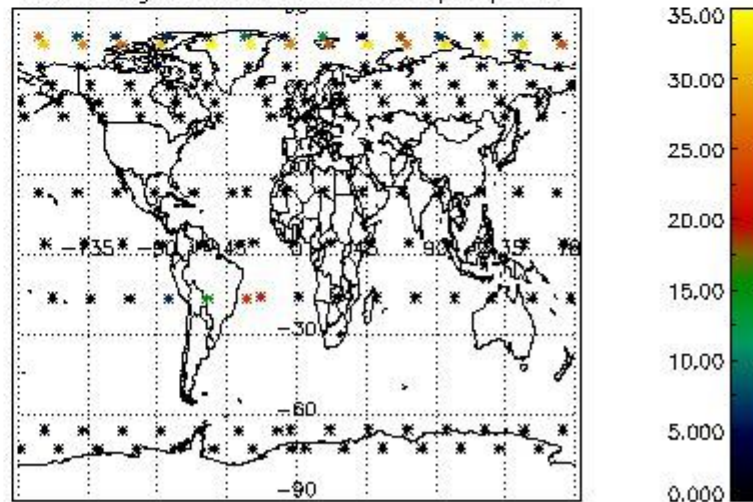
Percentage of datation errors per profile



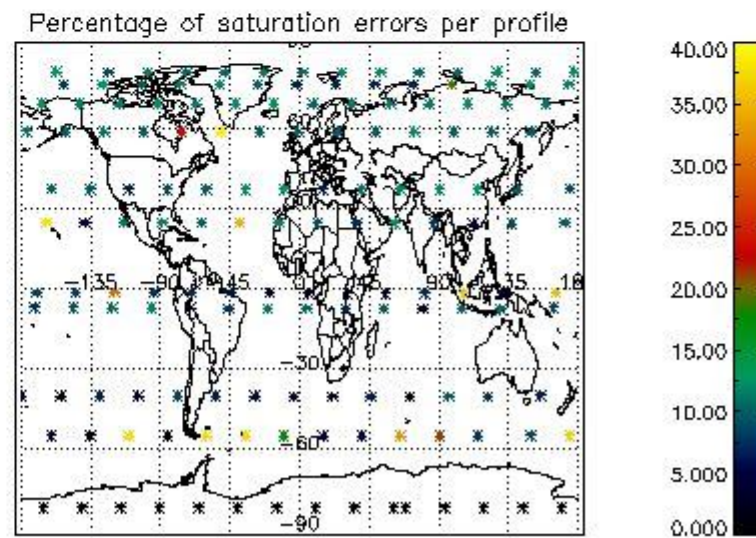
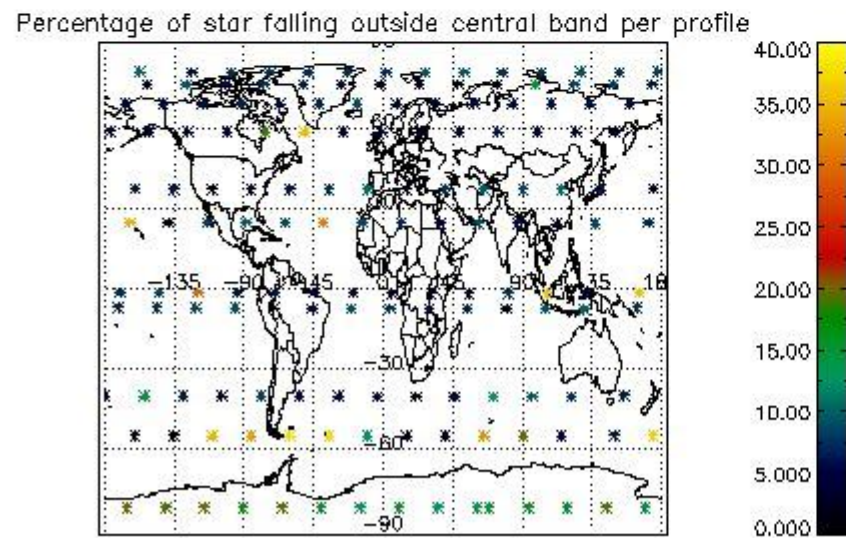
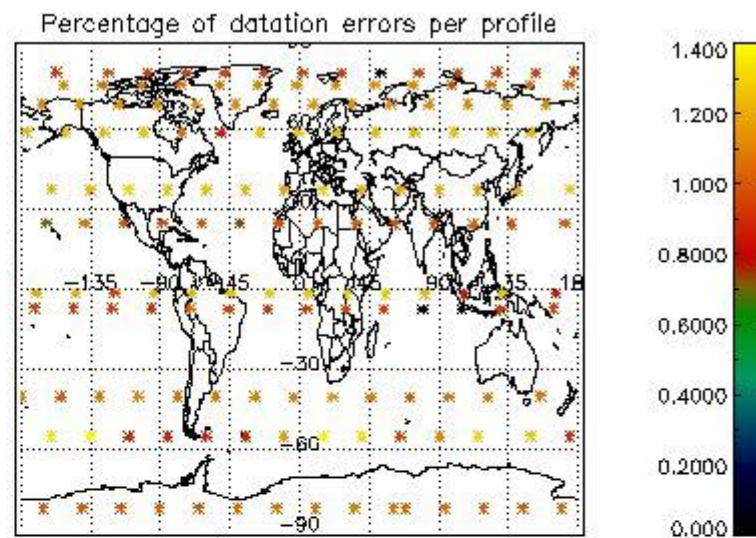
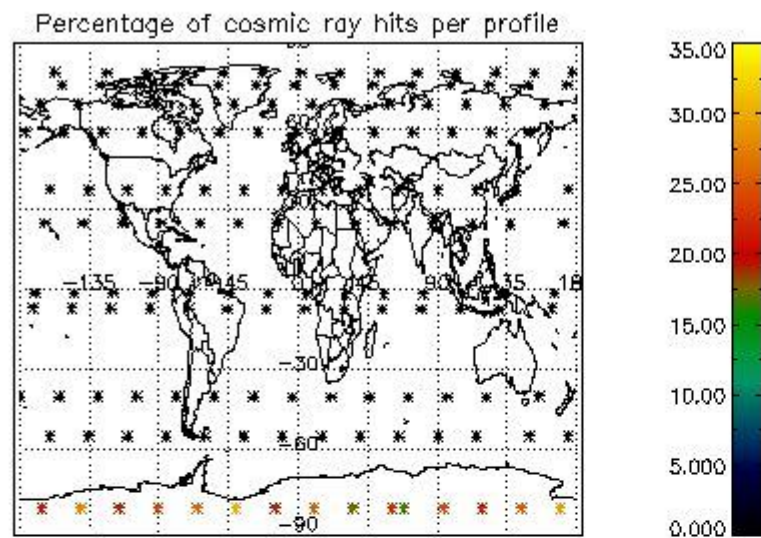
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



5. Trace gas profiles

5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM_NL__2P/NL_LOCAL_SPECIES_DENSITY/o3_std of the level 2 products. The table below shows the statistics for given STD ranges.

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

- Products without fatal errors: GOM_NL__2P/MPH/PRODUCT_ERR=0
- Valid point profile: GOM_NL__2P/NL_LOCAL_SPECIES_DENSITY/pcd(0)=0

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

- Products in dark limb illumination condition: GOM_NL__2P/NL_SUMMARY_QUALITY/obs_ill_cond=0
- Products without fatal errors: GOM_NL__2P/MPH/PRODUCT_ERR=0
- Valid point profile: GOM_NL__2P/NL_LOCAL_SPECIES_DENSITY/pcd(0)=0

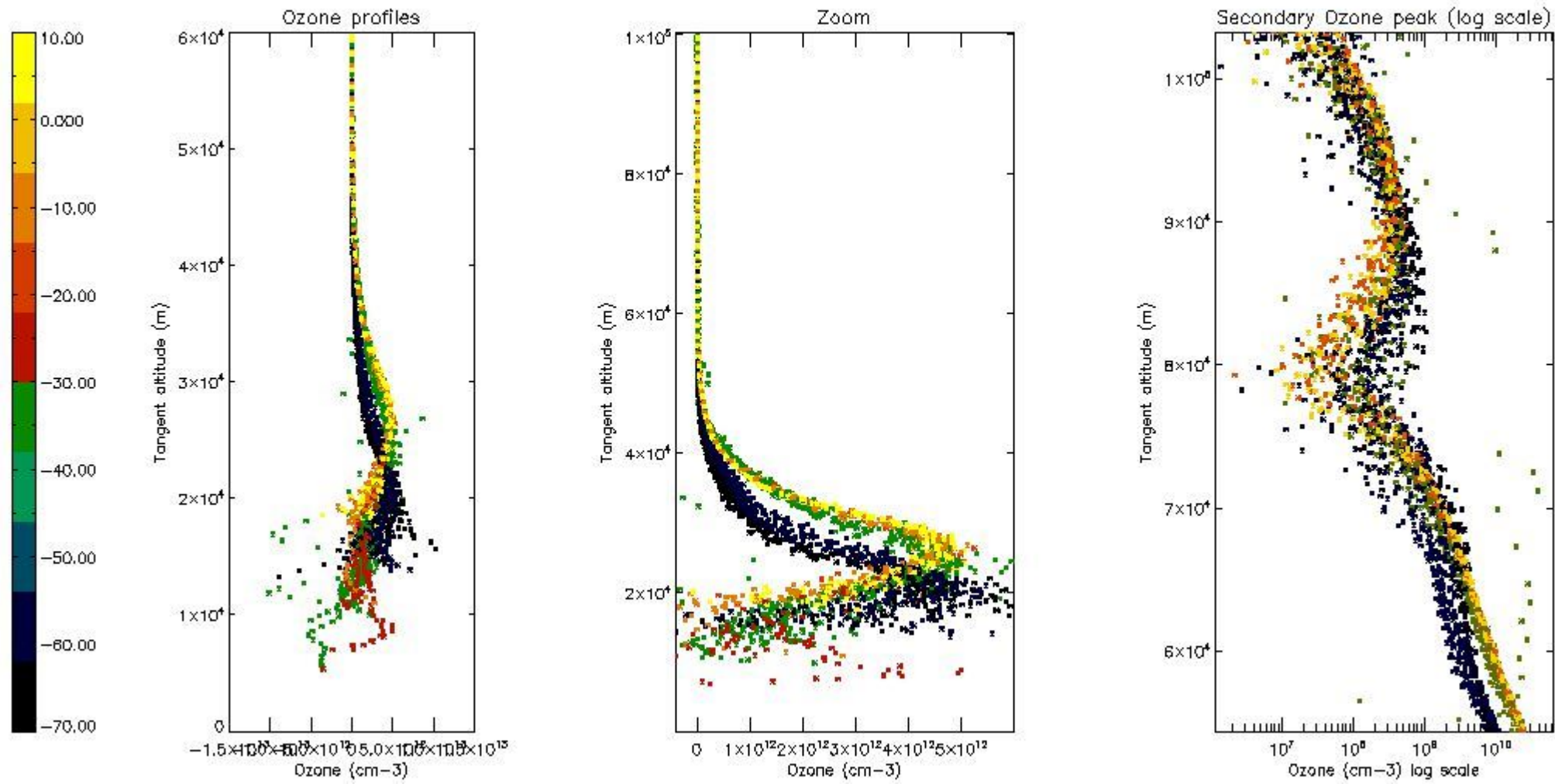
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 25 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 12 |
| STD < 5 | 8 |

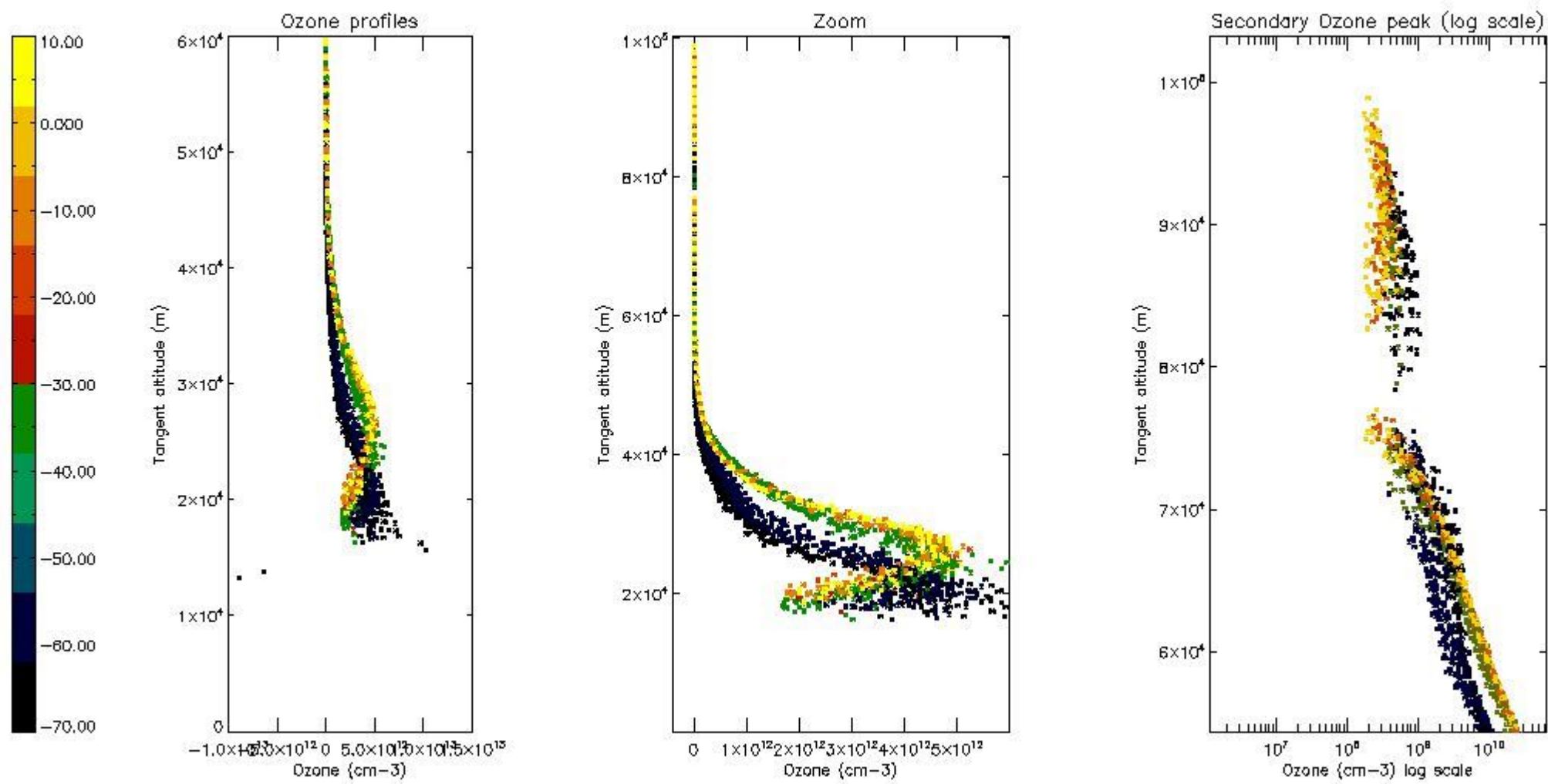
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



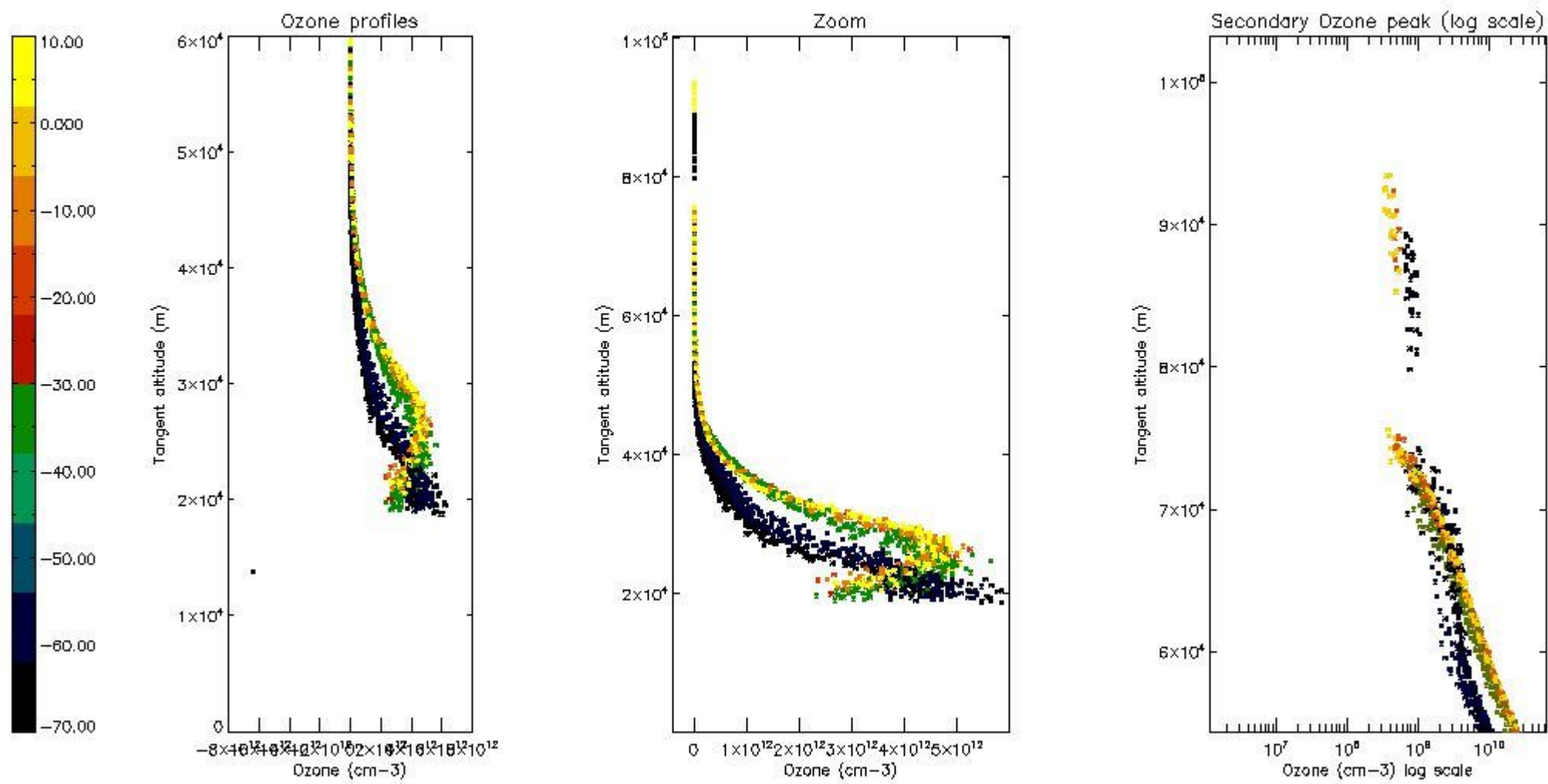
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



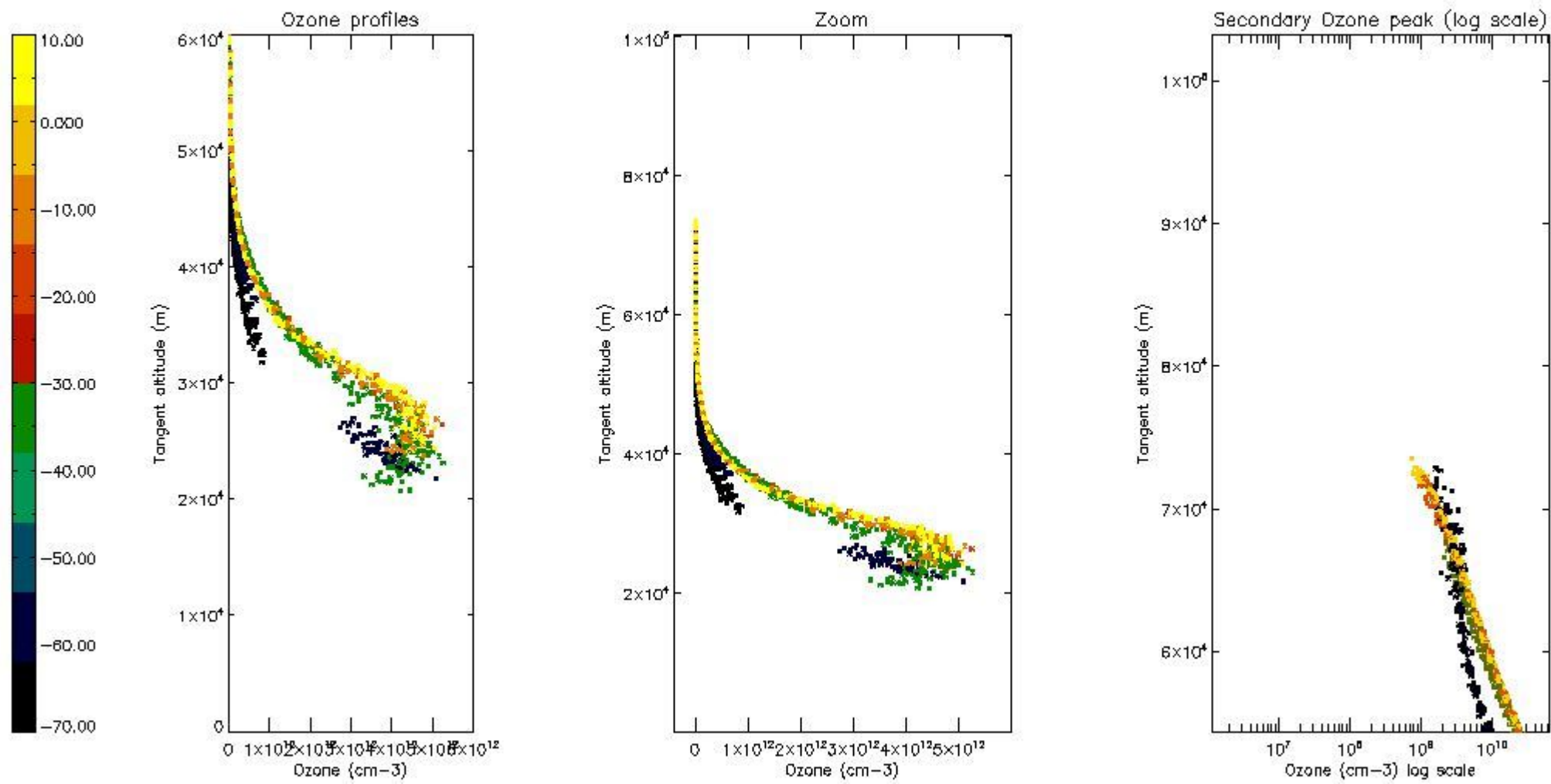
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



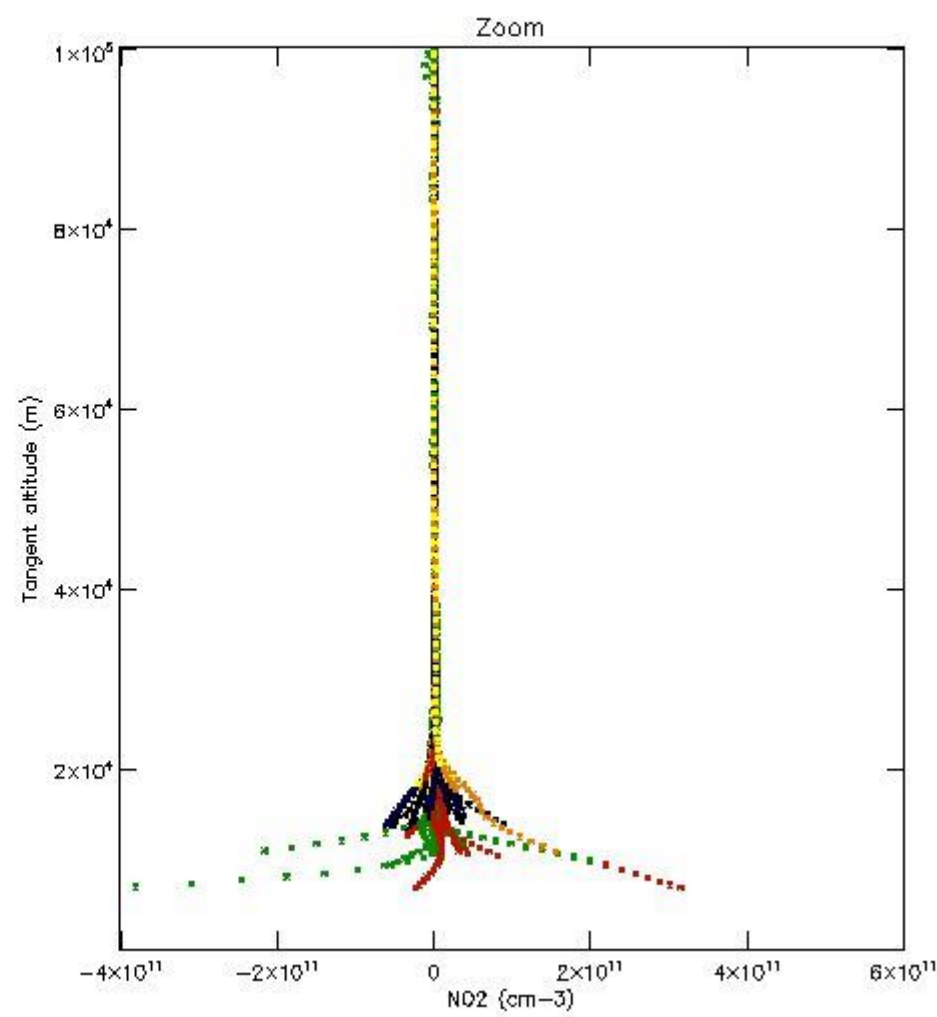
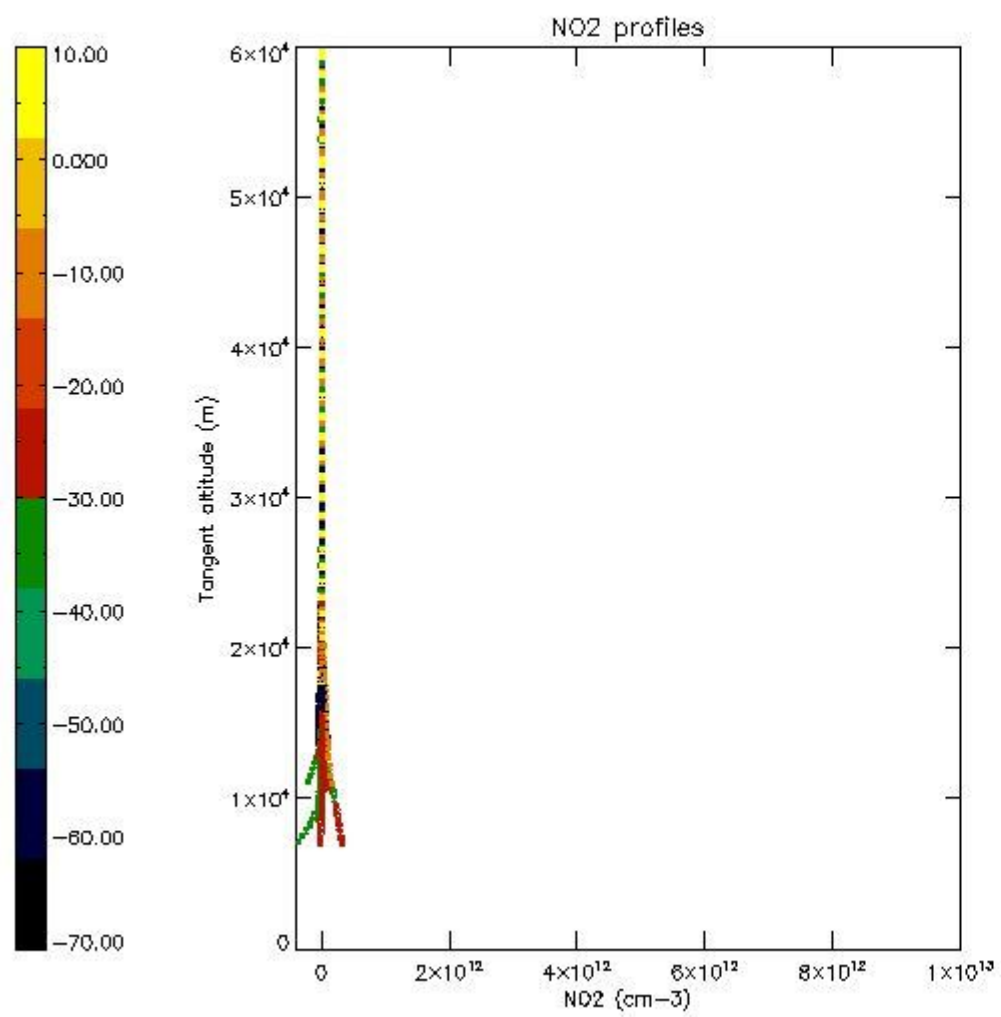
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



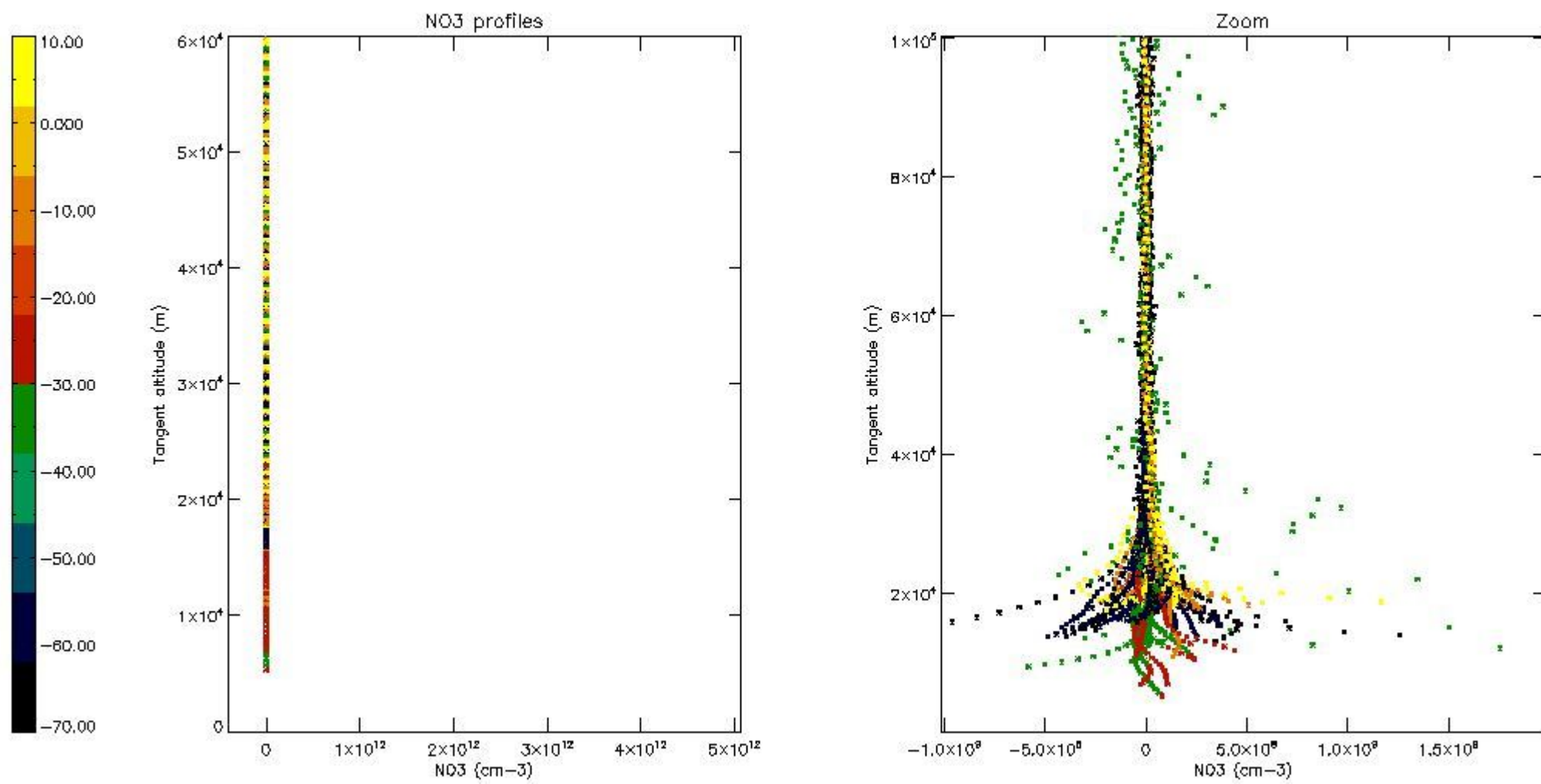
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



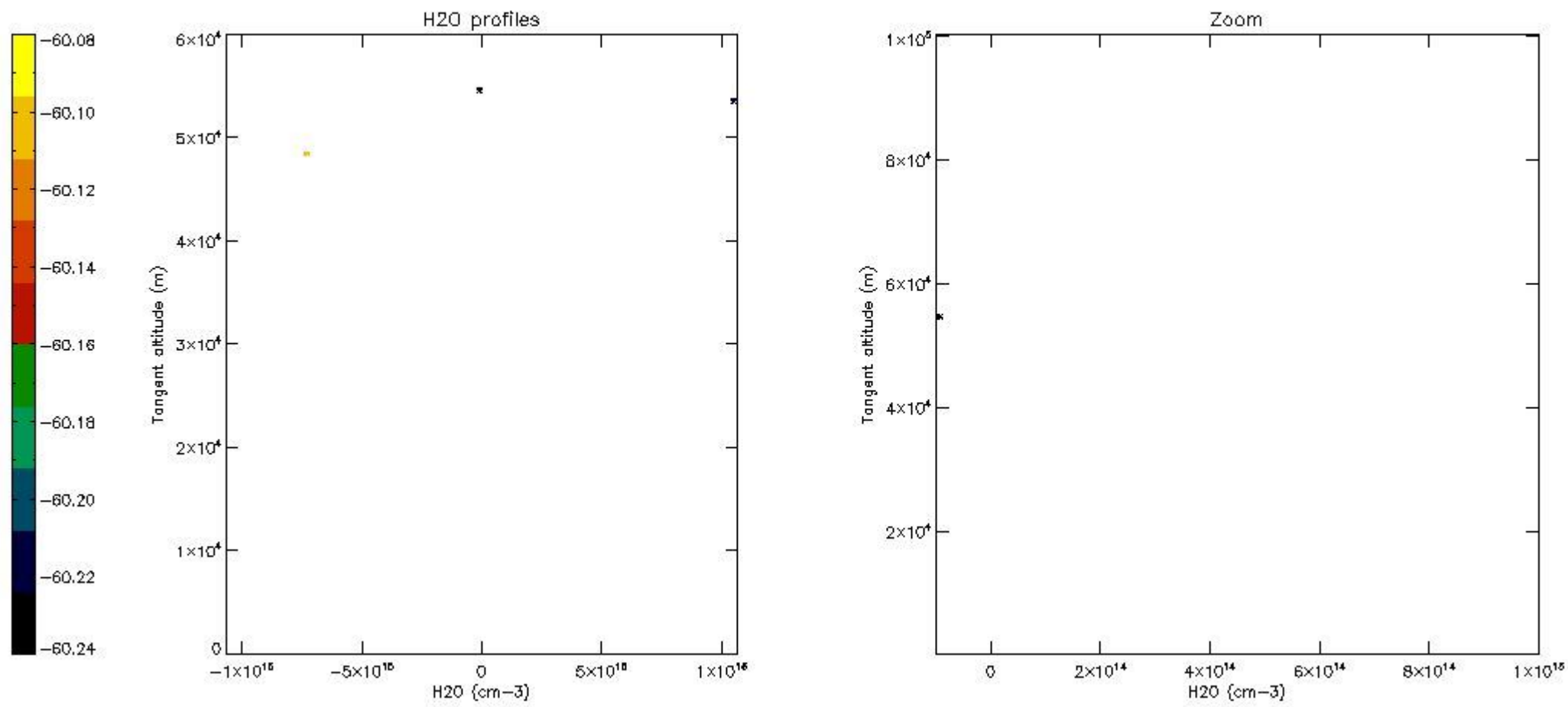
5.7 Plot NO3 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

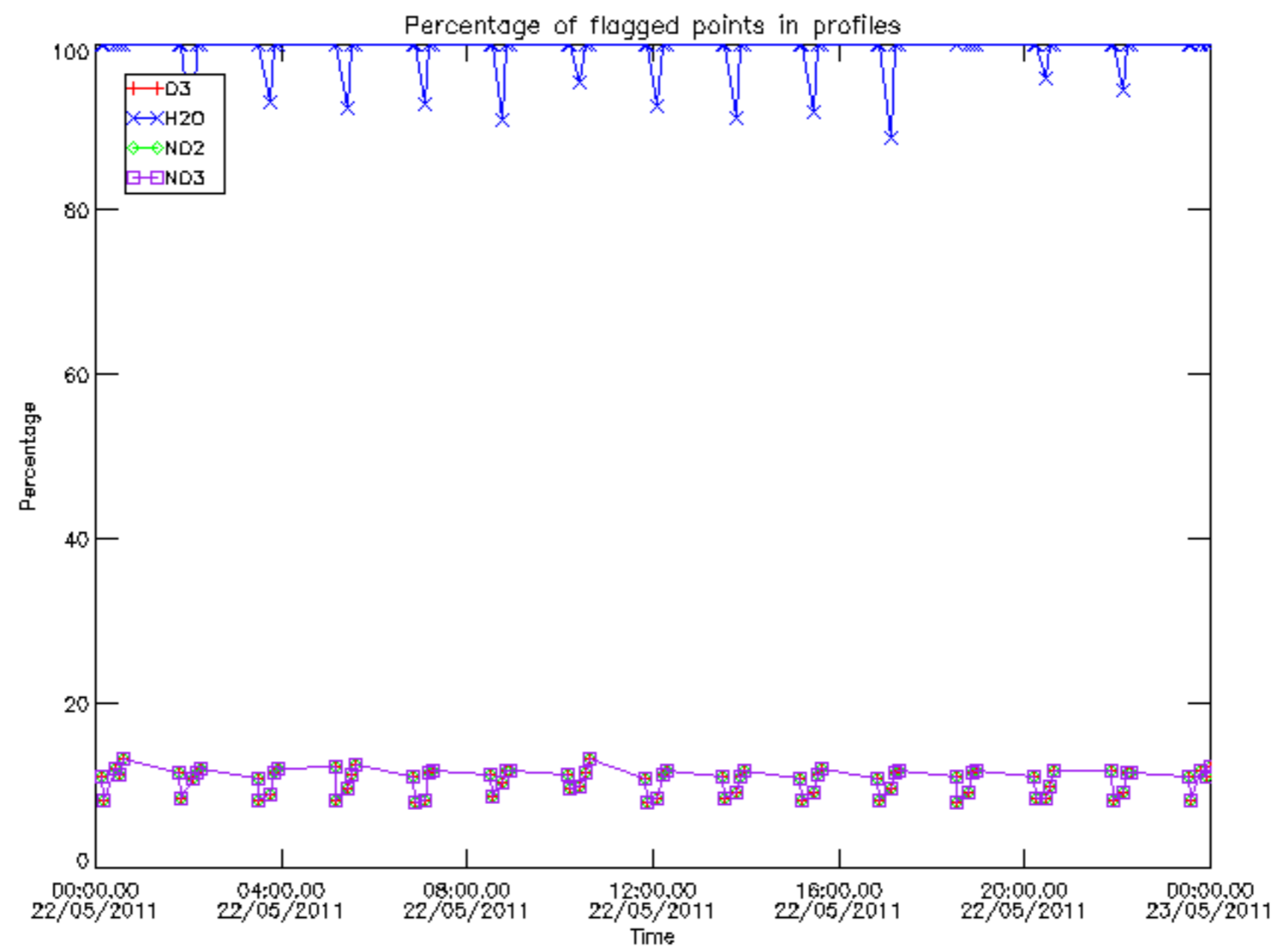
The colorbar represents the latitude.



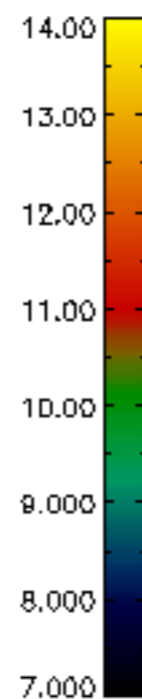
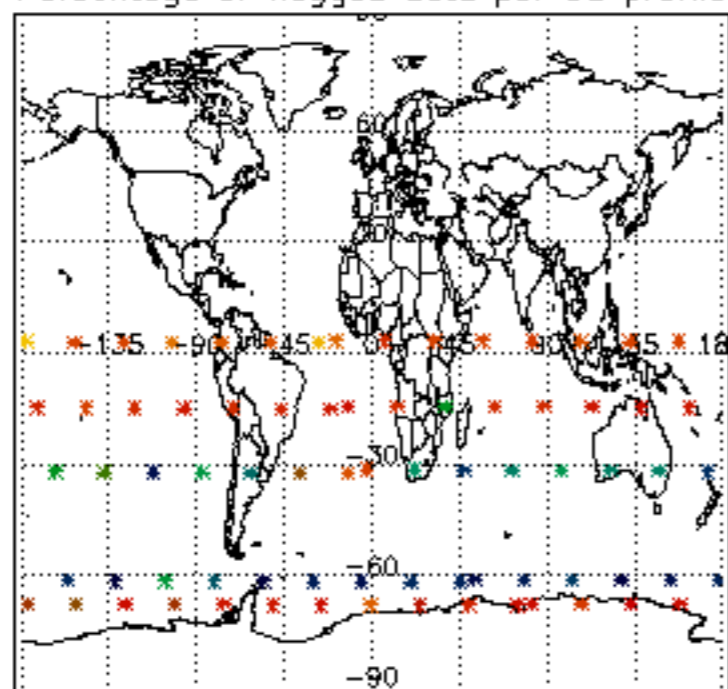
6. Auxiliary Data Files used for the production reported in section 2

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

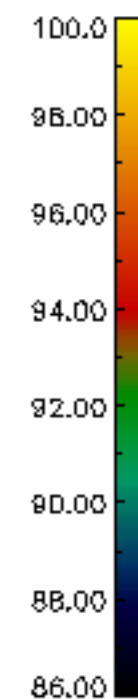
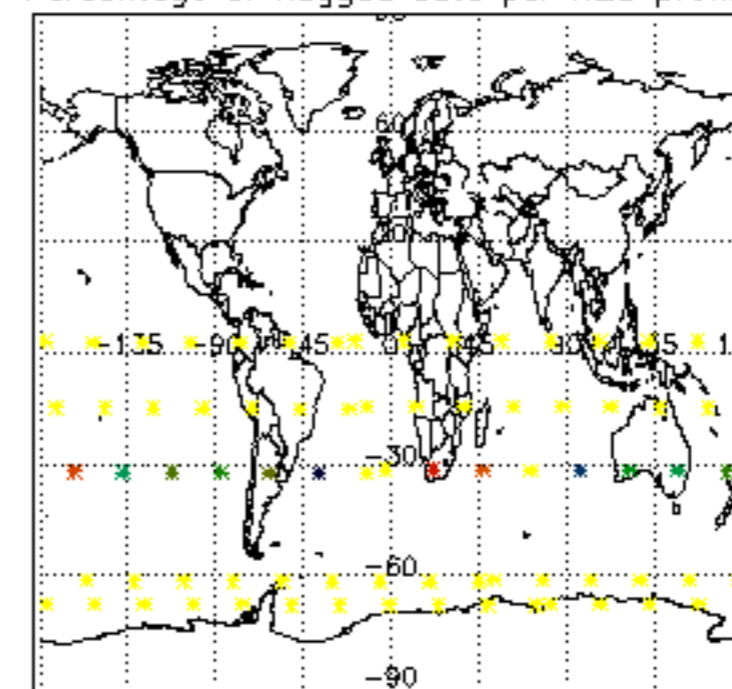
| Type | Auxiliary Filename | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 22-MAY-2011 00:03:58 |



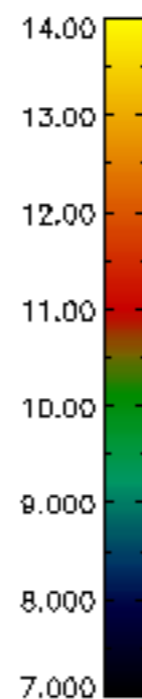
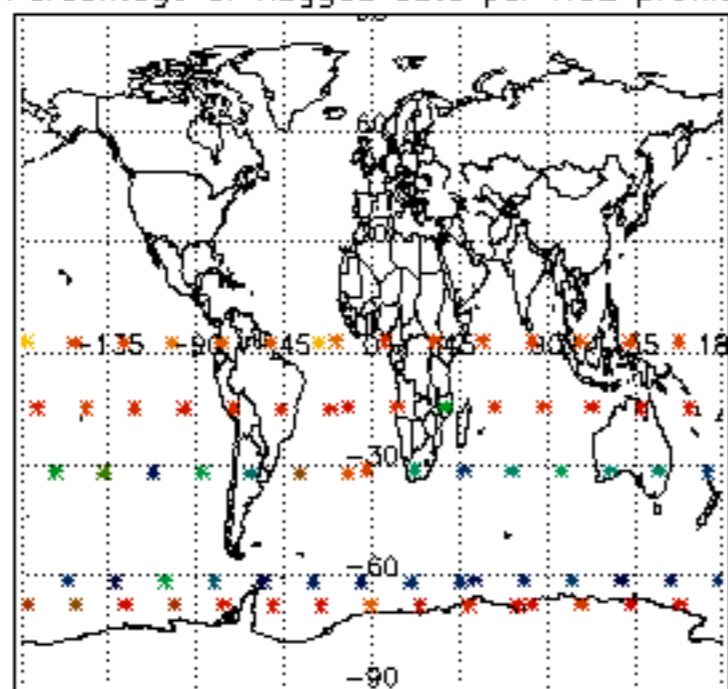
Percentage of flagged data per D3 profile



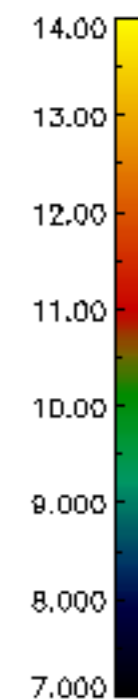
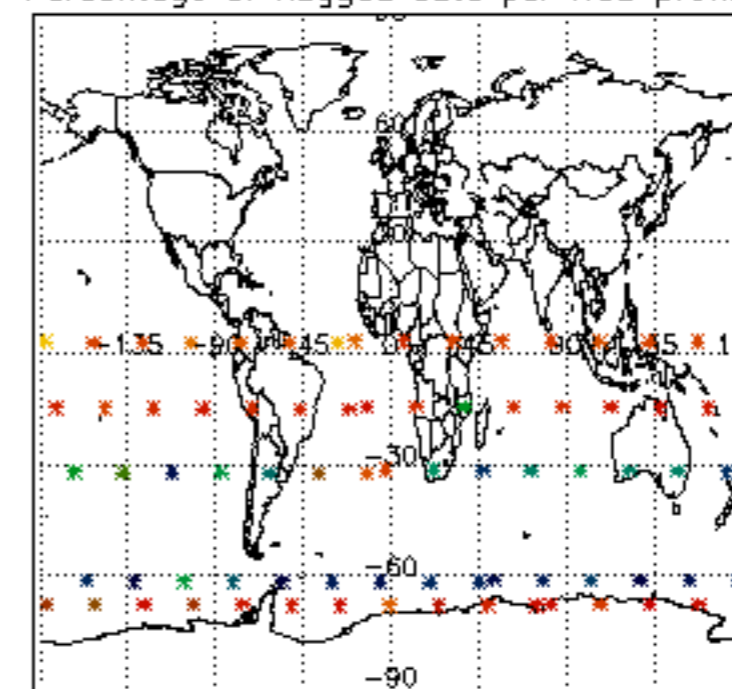
Percentage of flagged data per H2O profile

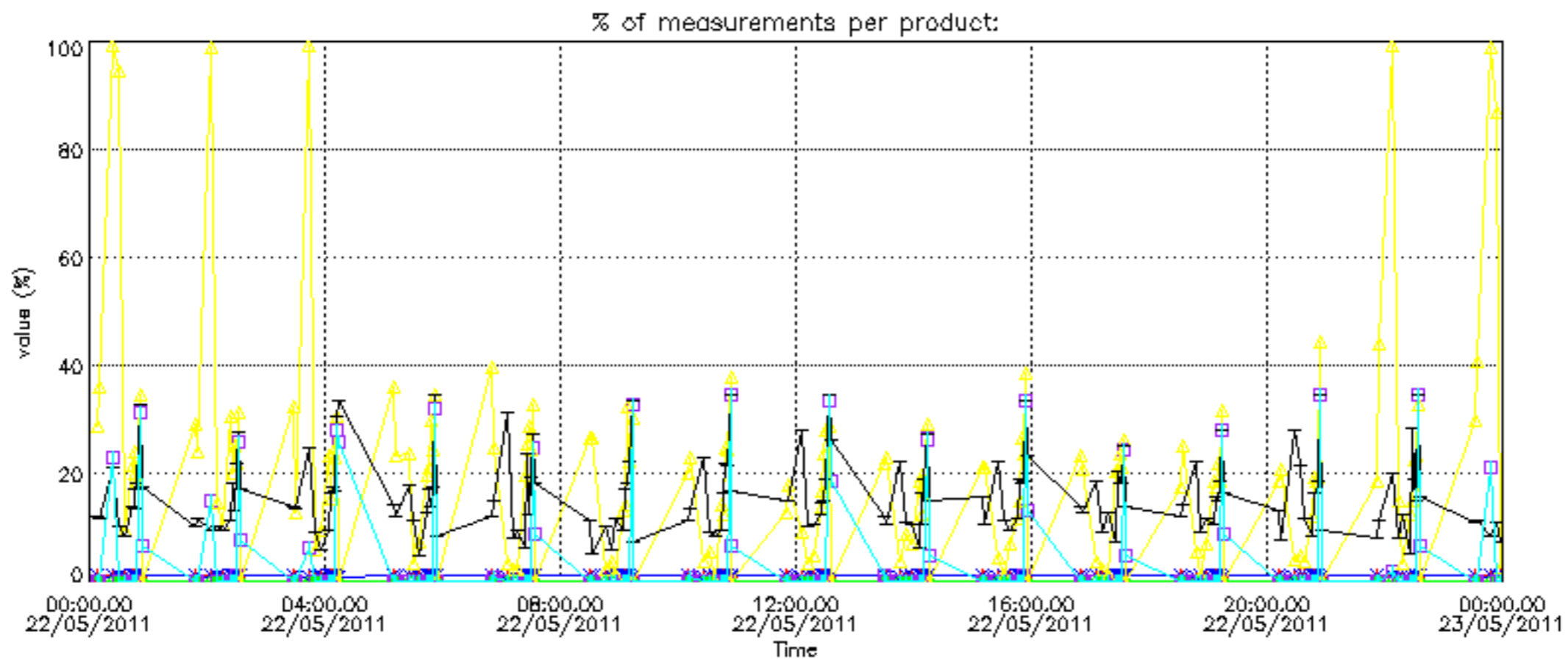


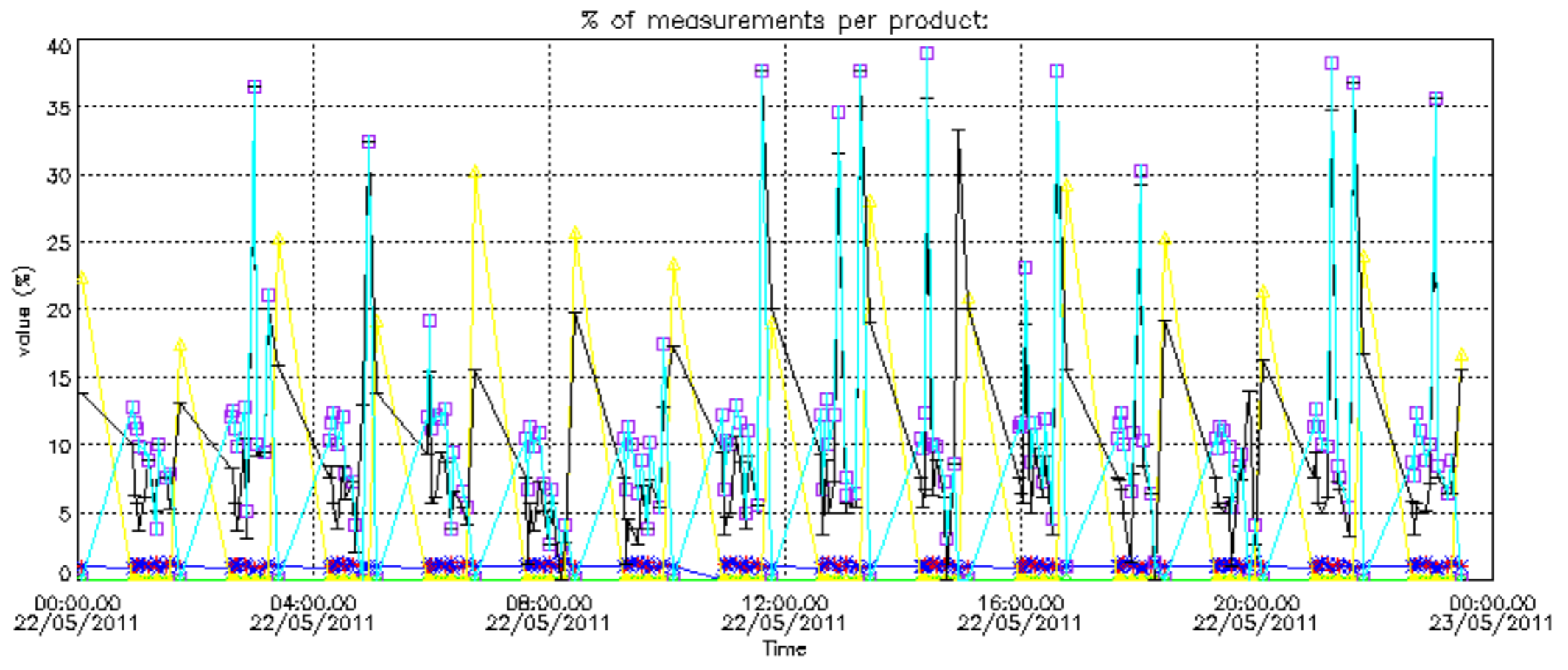
Percentage of flagged data per NO2 profile



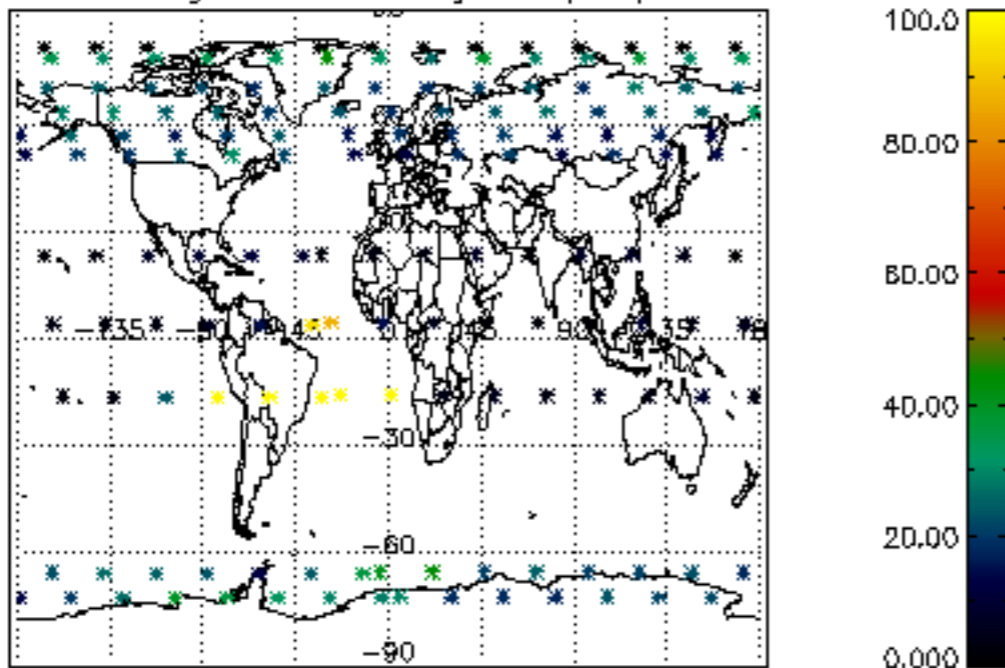
Percentage of flagged data per NO3 profile



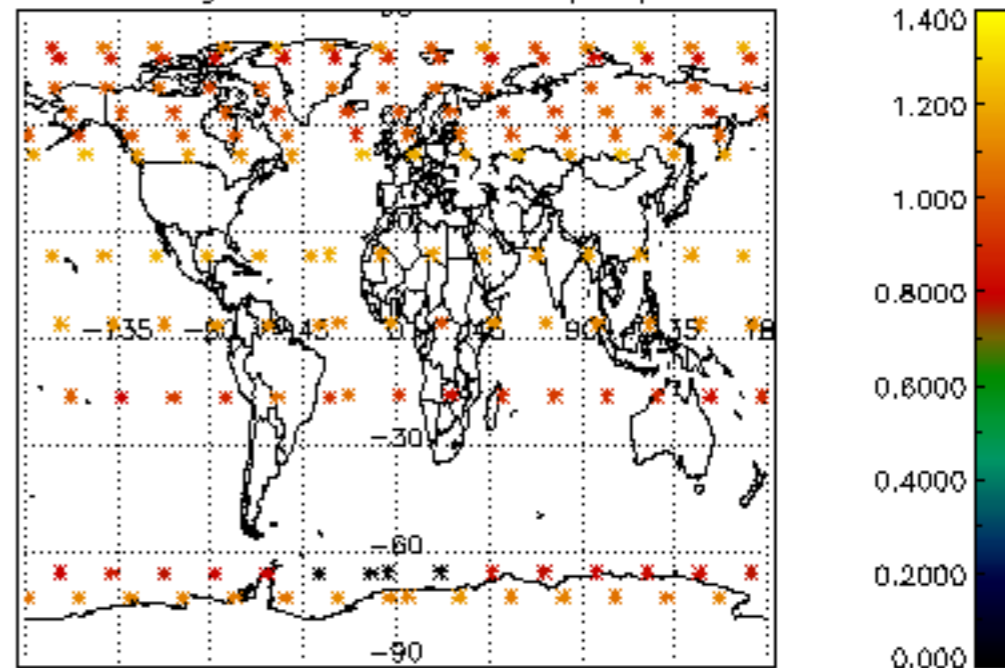




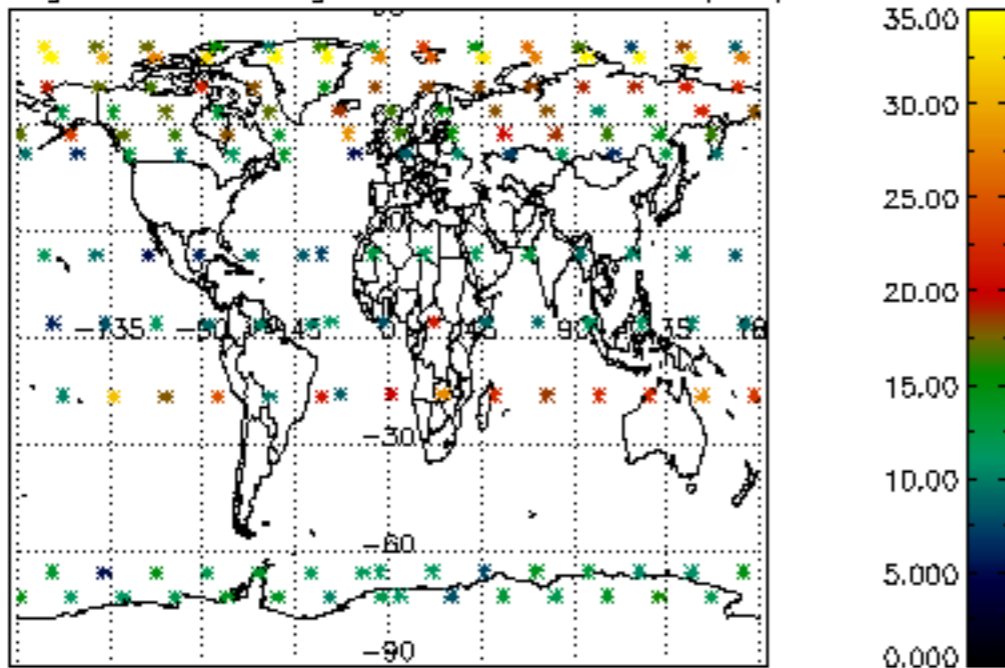
Percentage of cosmic ray hits per profile



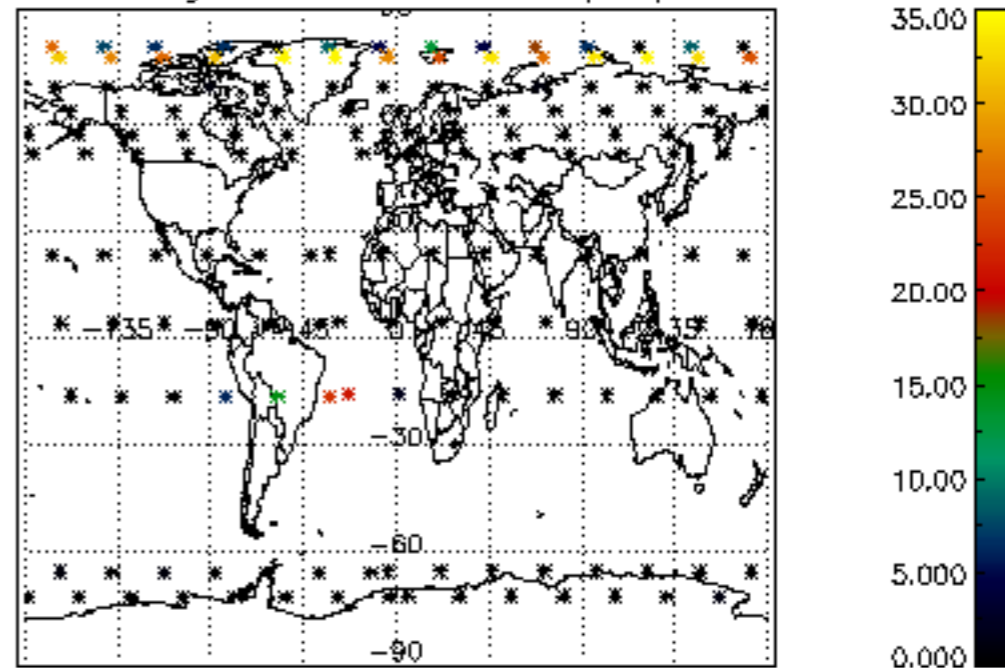
Percentage of datation errors per profile



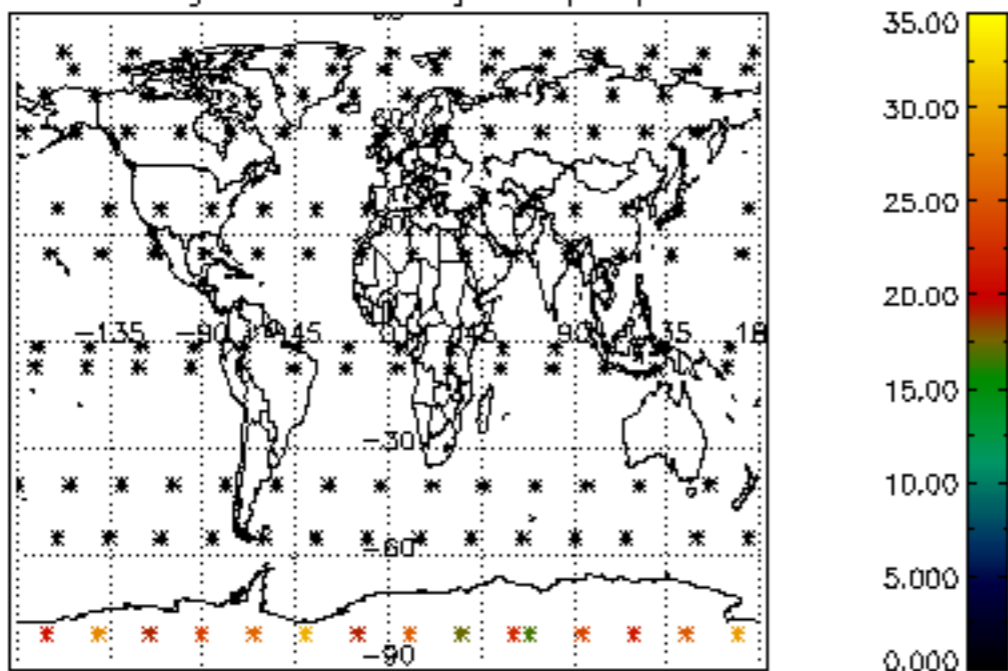
Percentage of star falling outside central band per profile



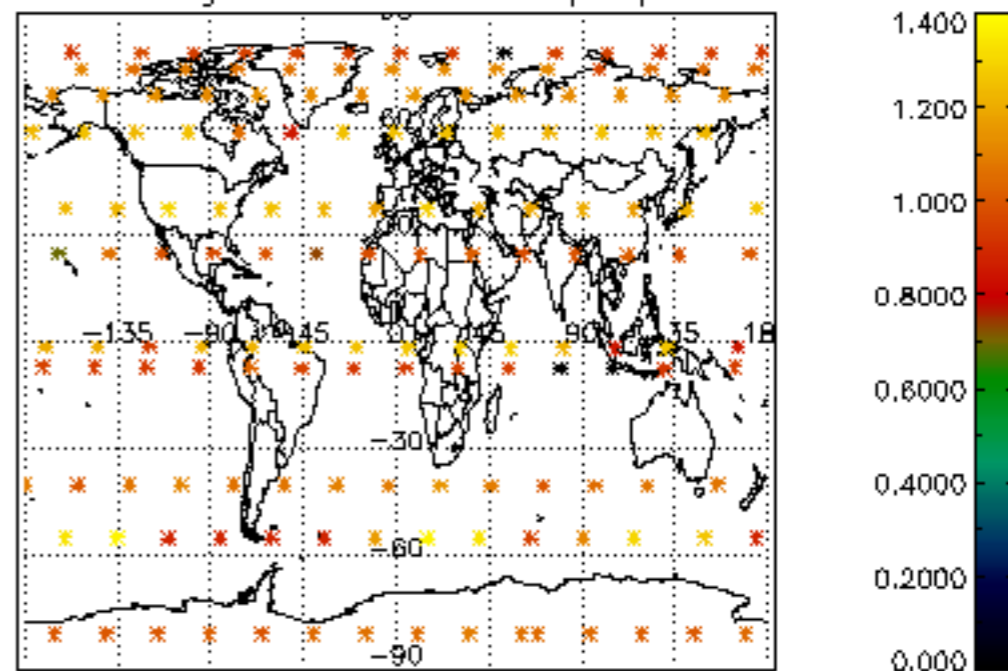
Percentage of saturation errors per profile



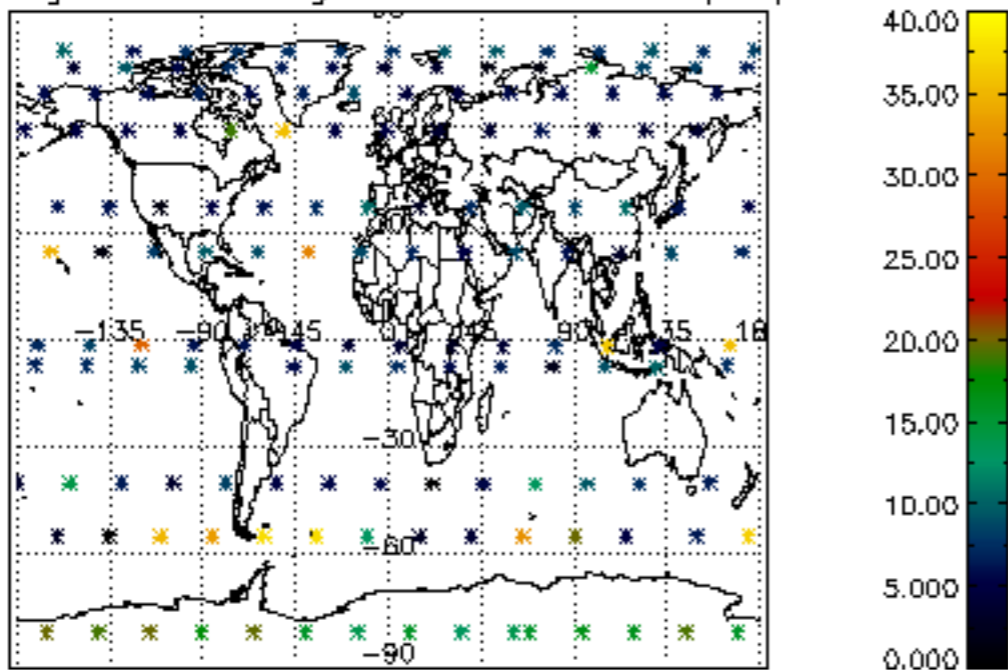
Percentage of cosmic ray hits per profile



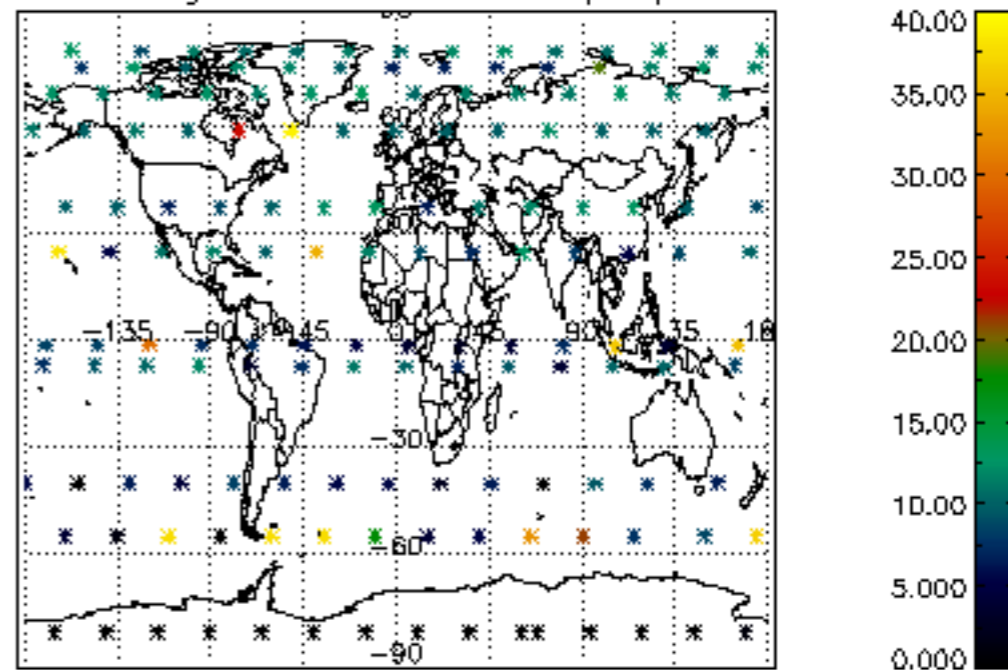
Percentage of datation errors per profile

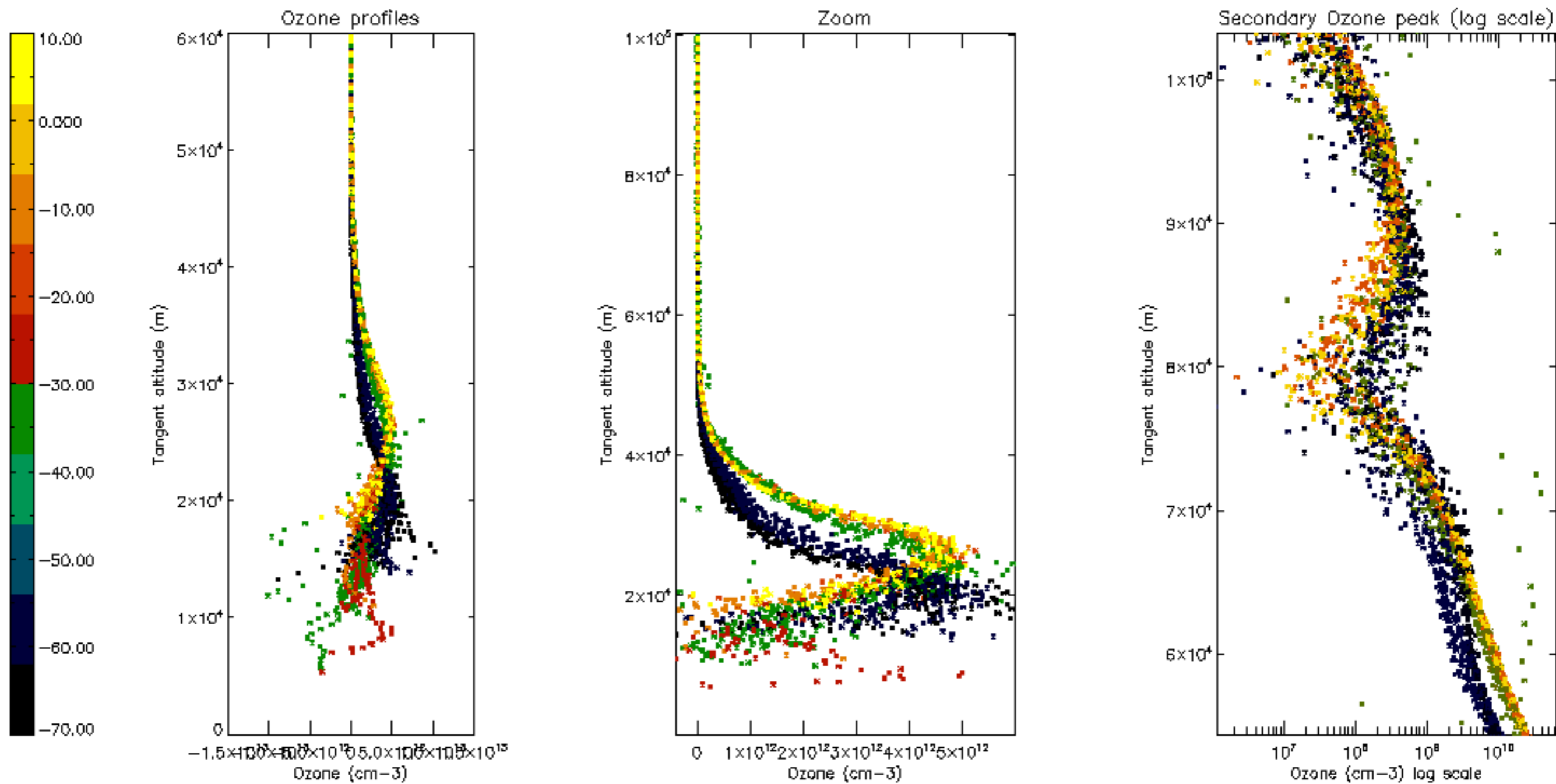


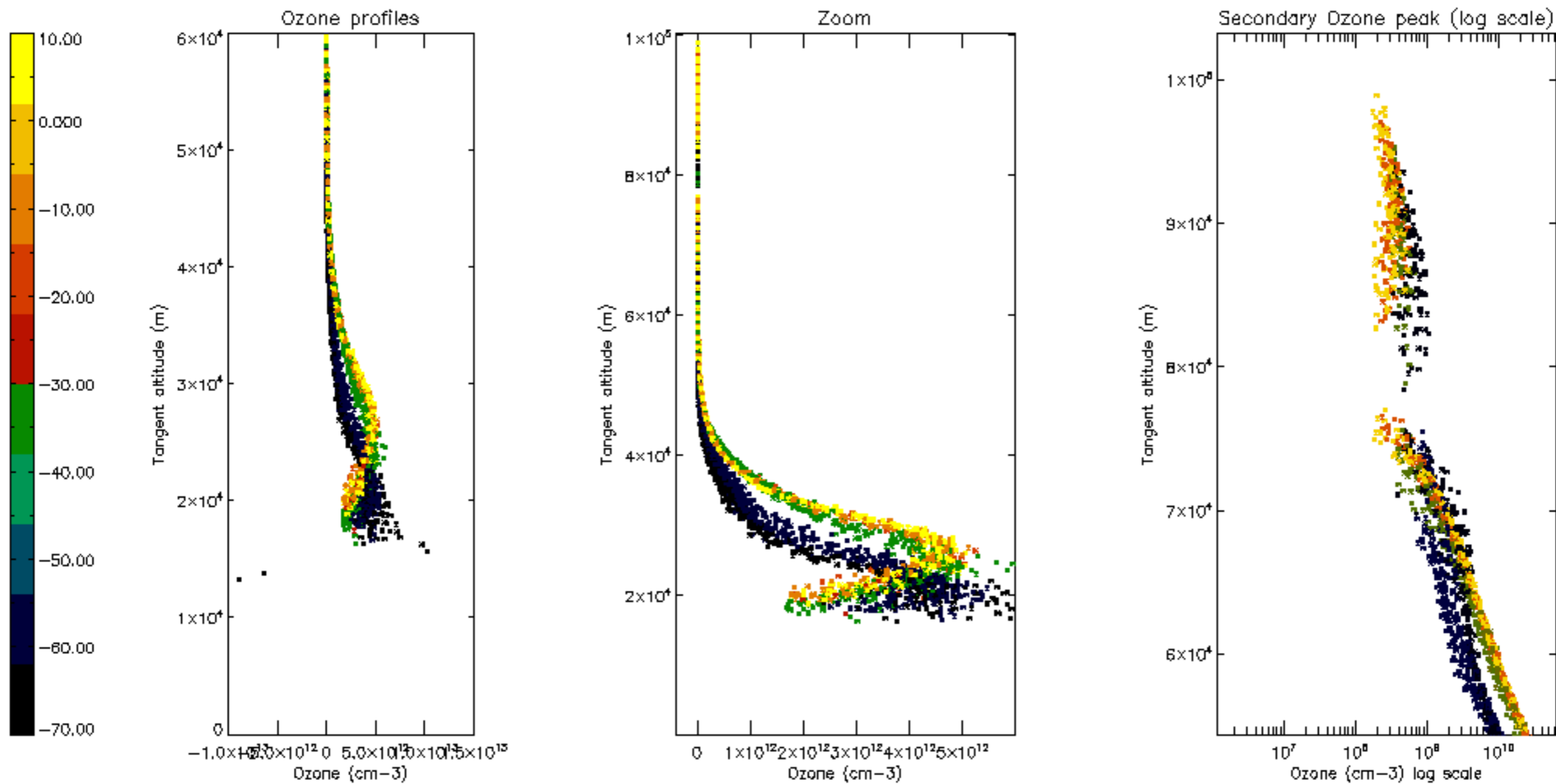
Percentage of star falling outside central band per profile

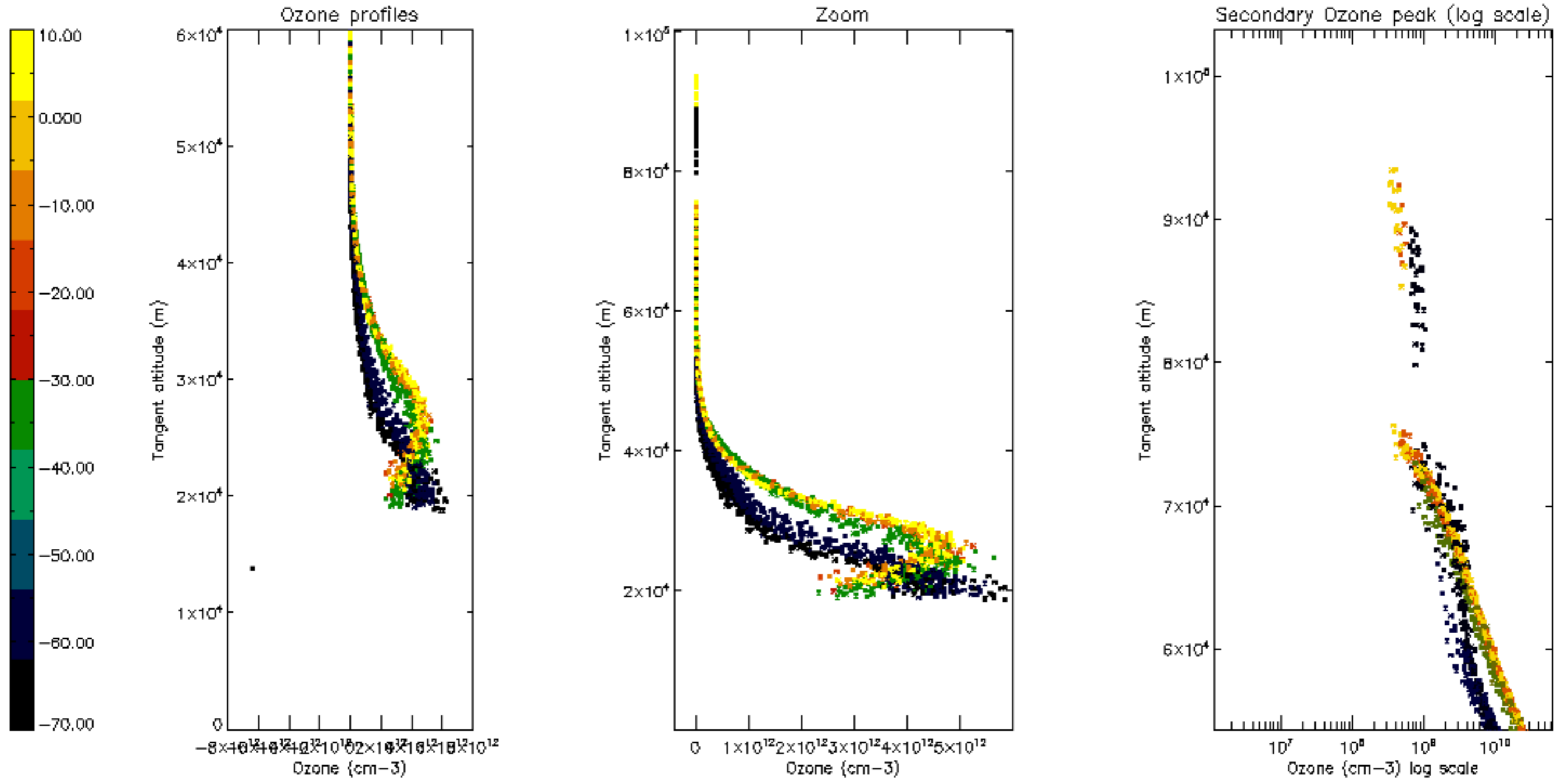


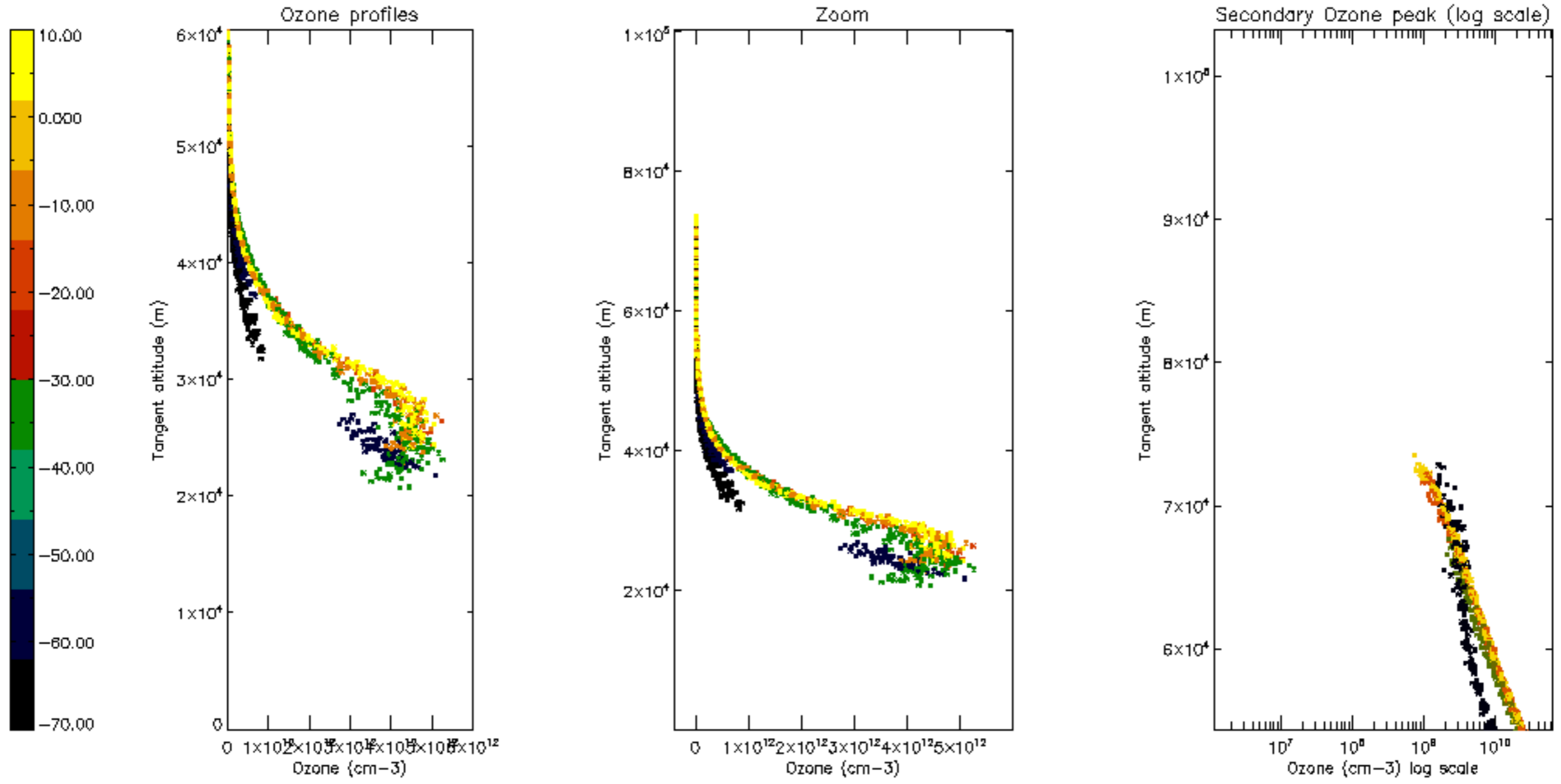
Percentage of saturation errors per profile

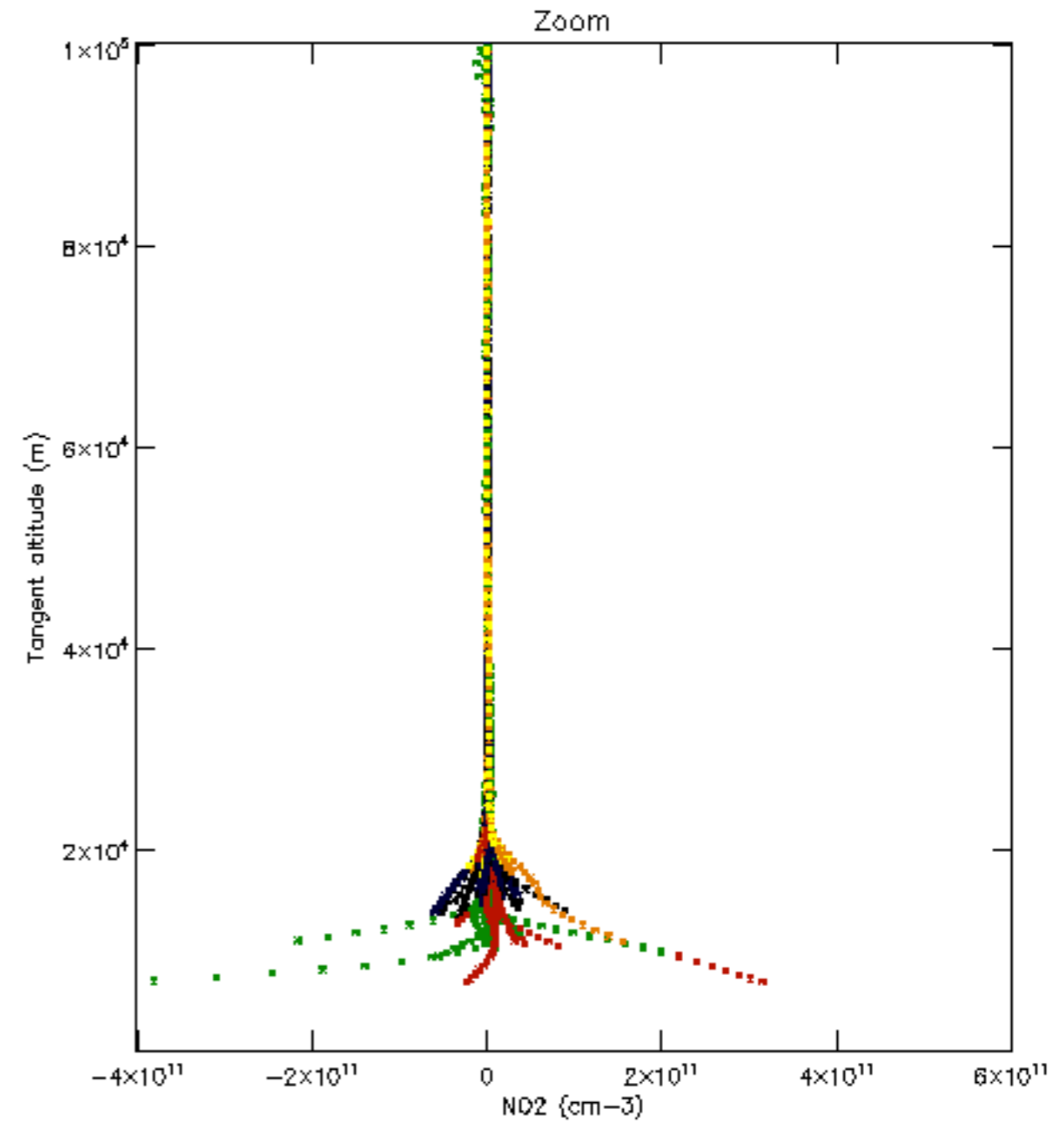
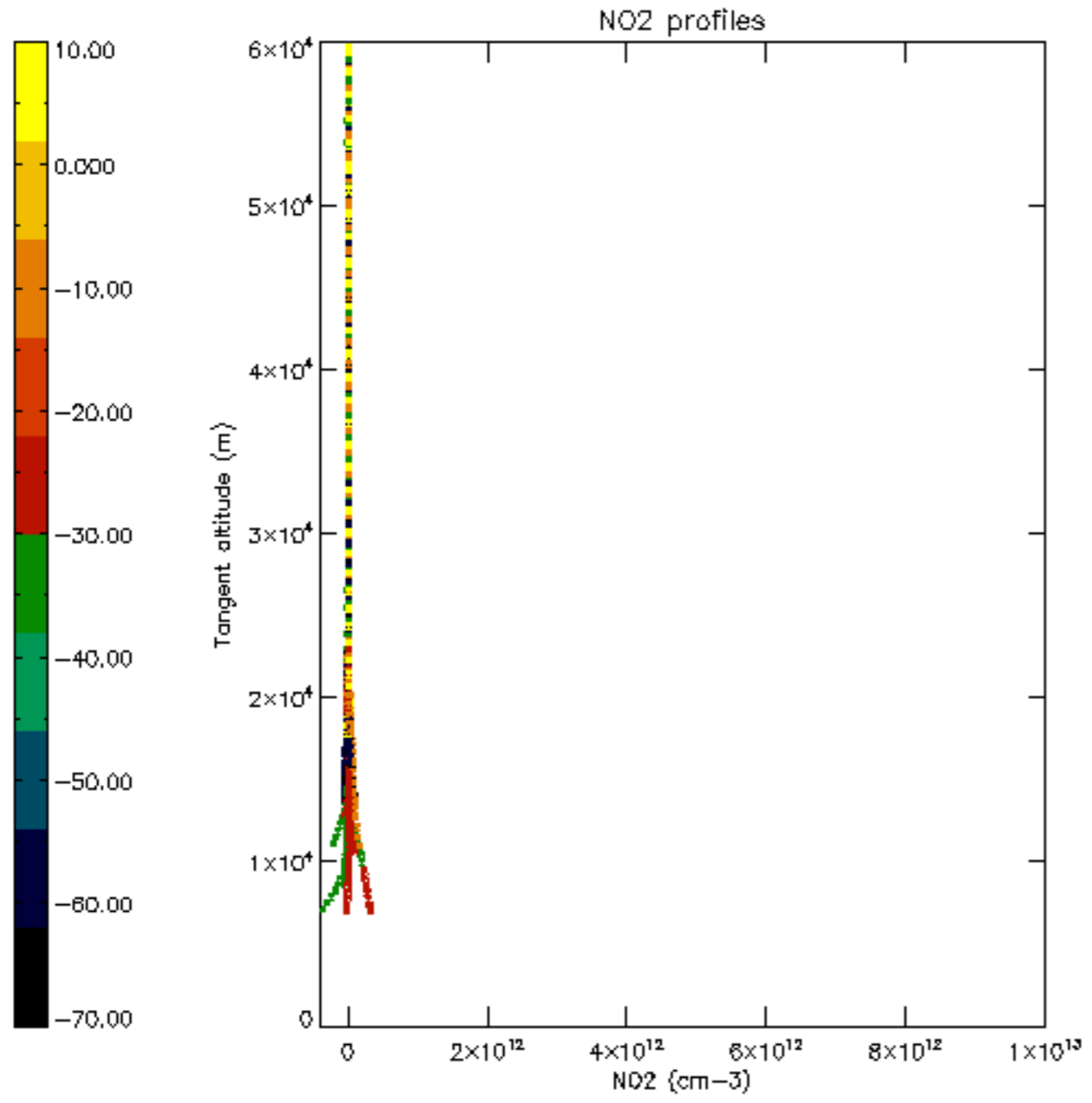


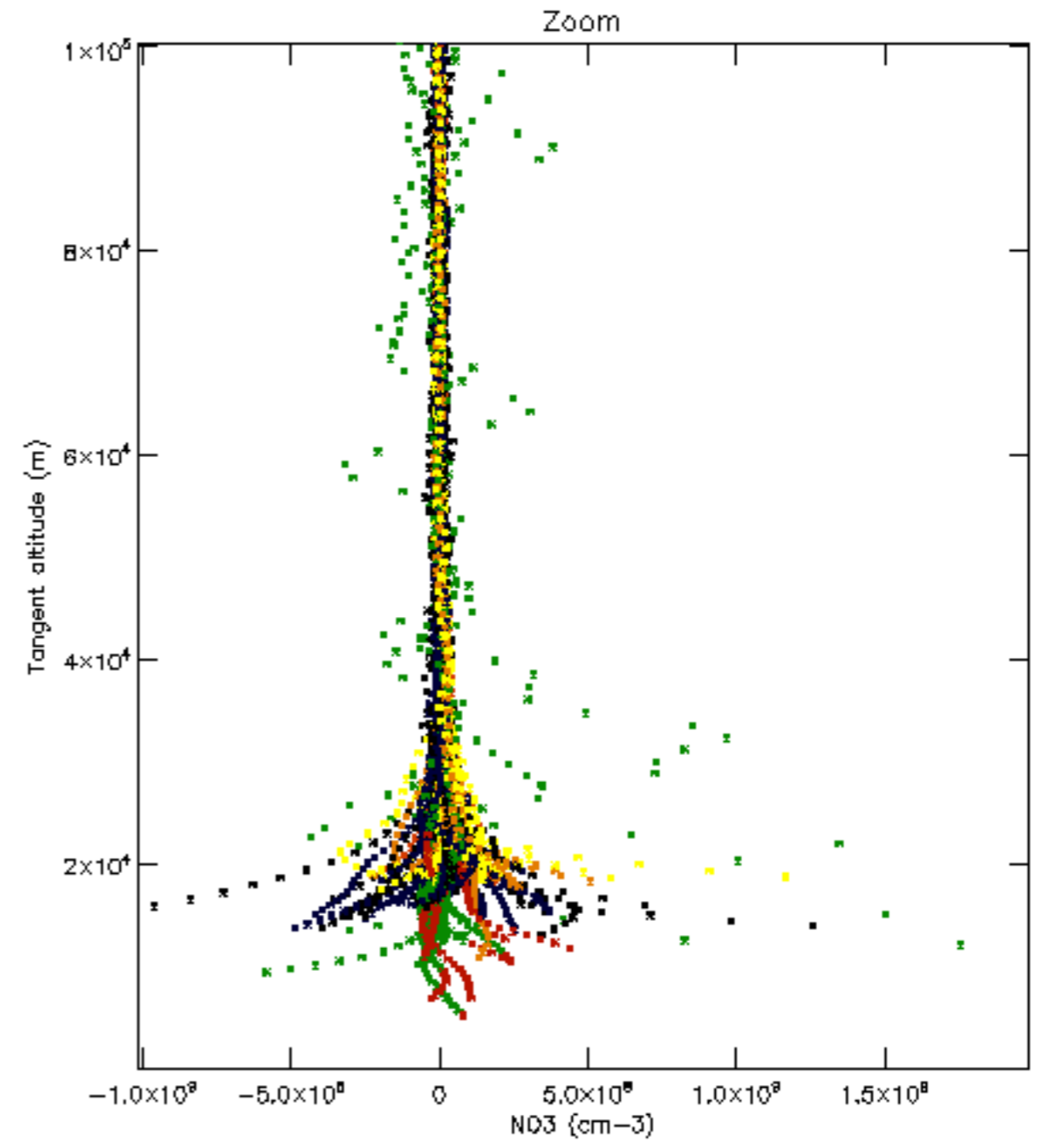
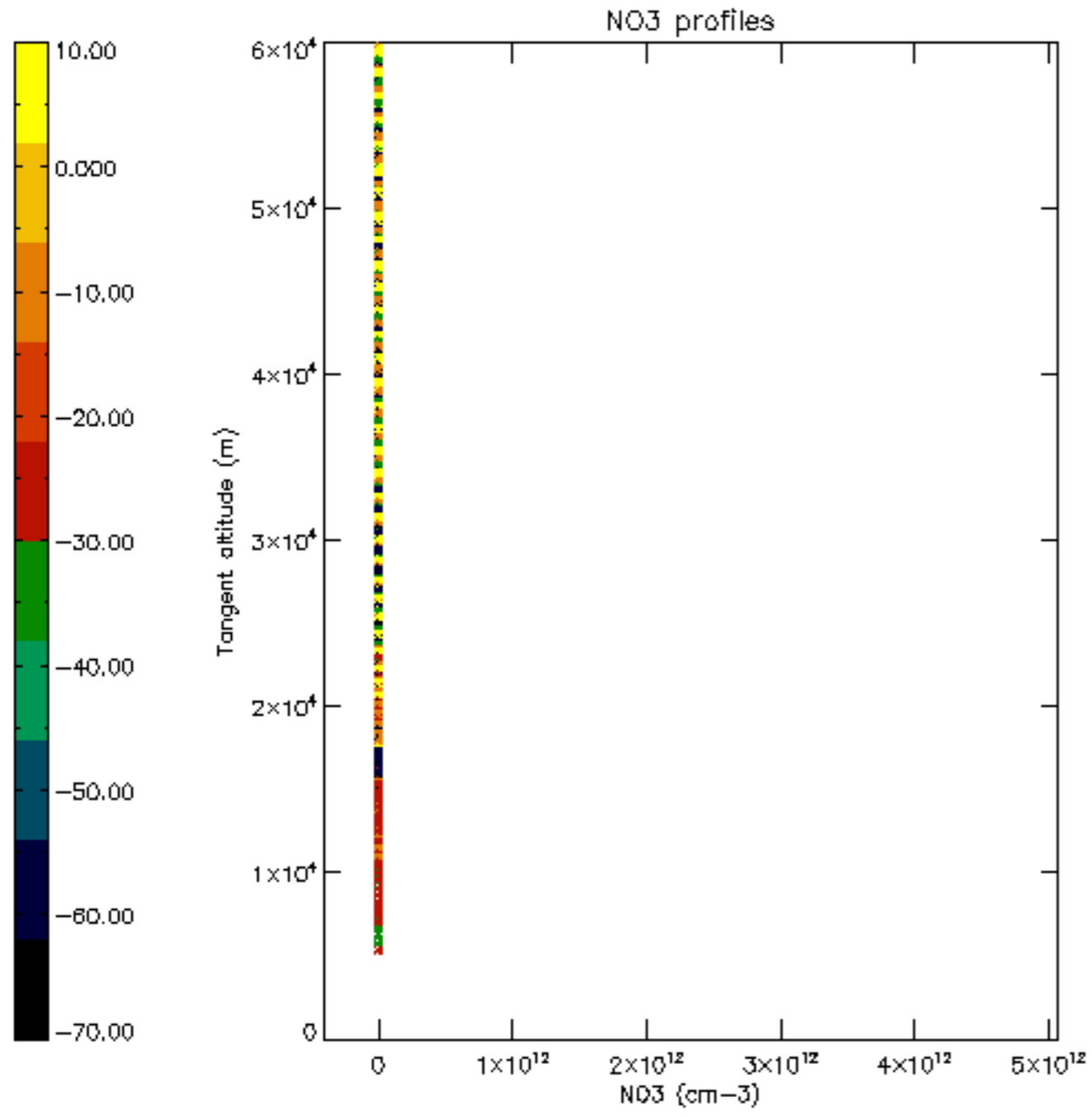


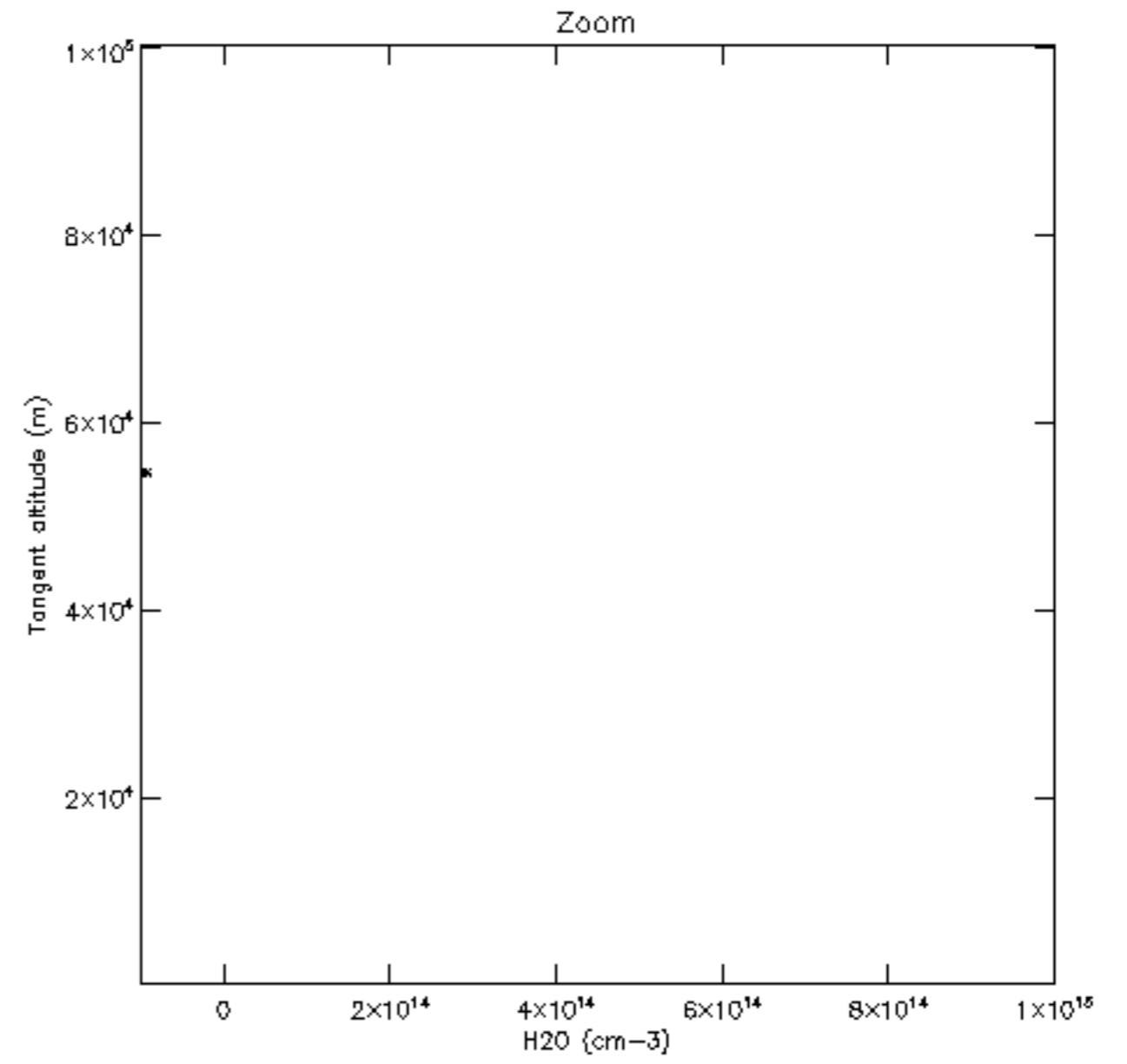
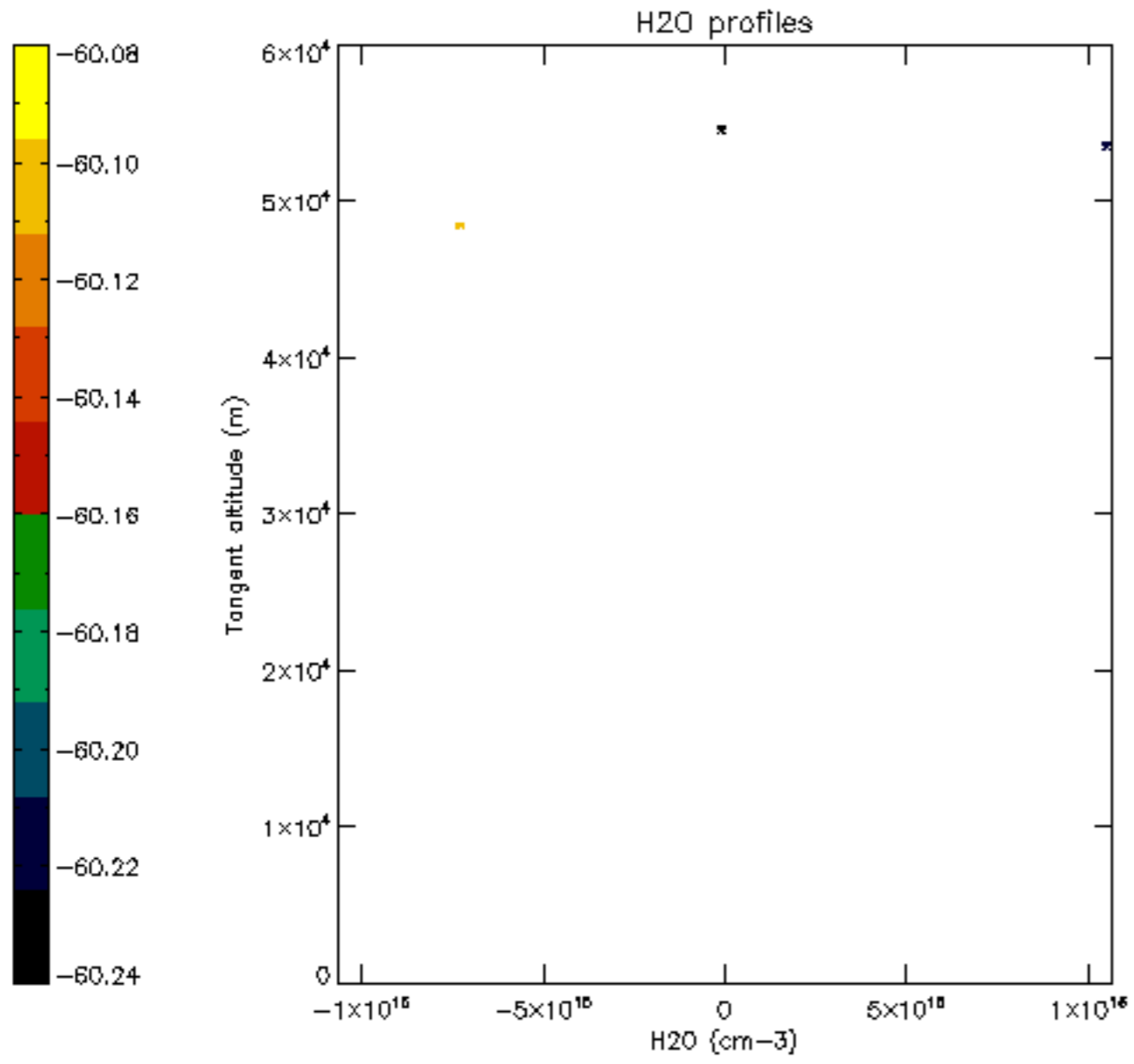


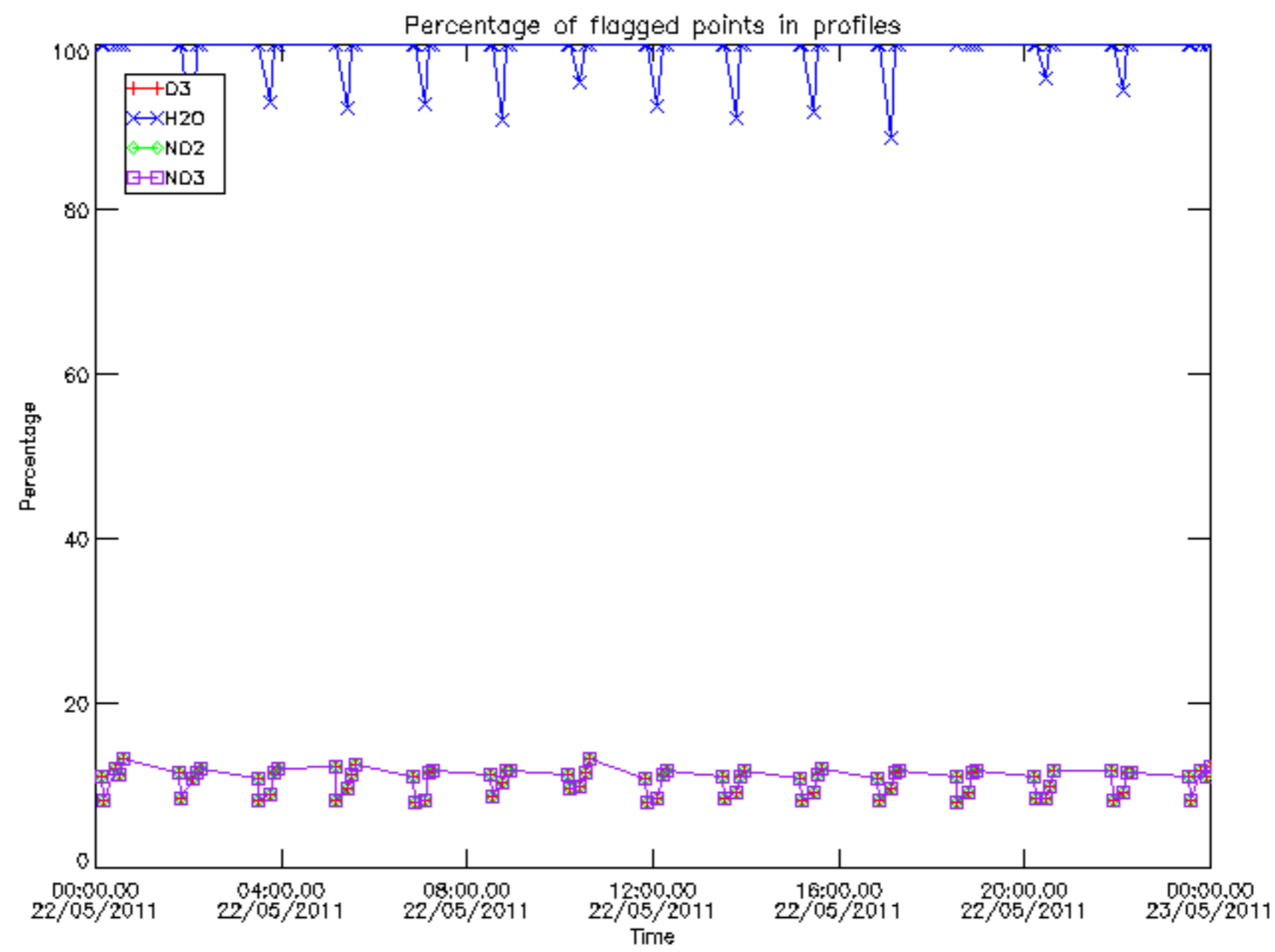




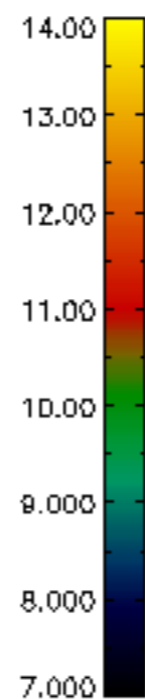
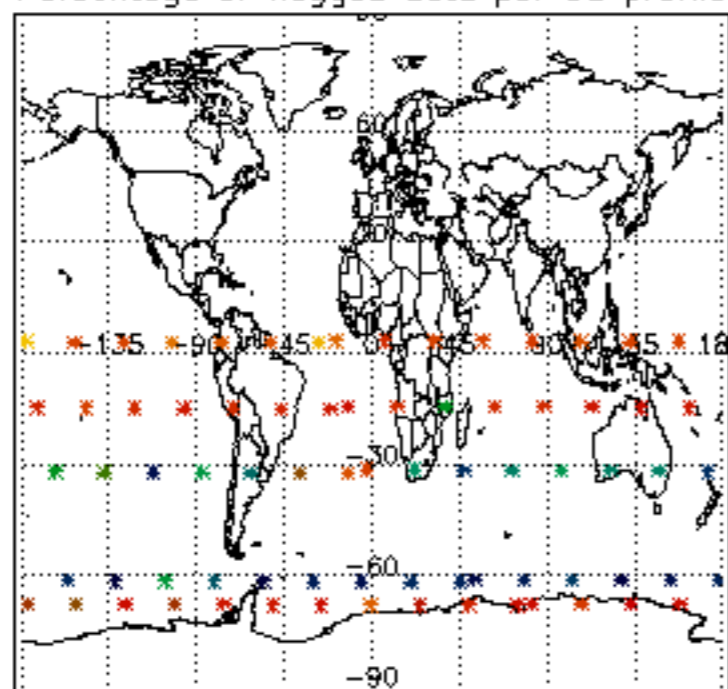




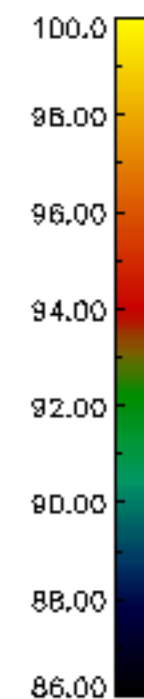
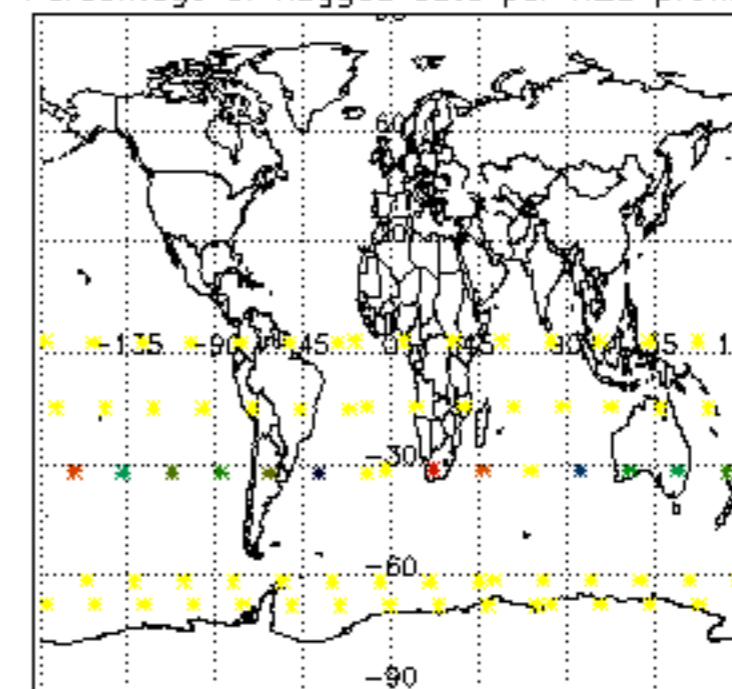




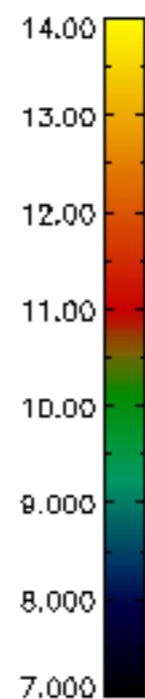
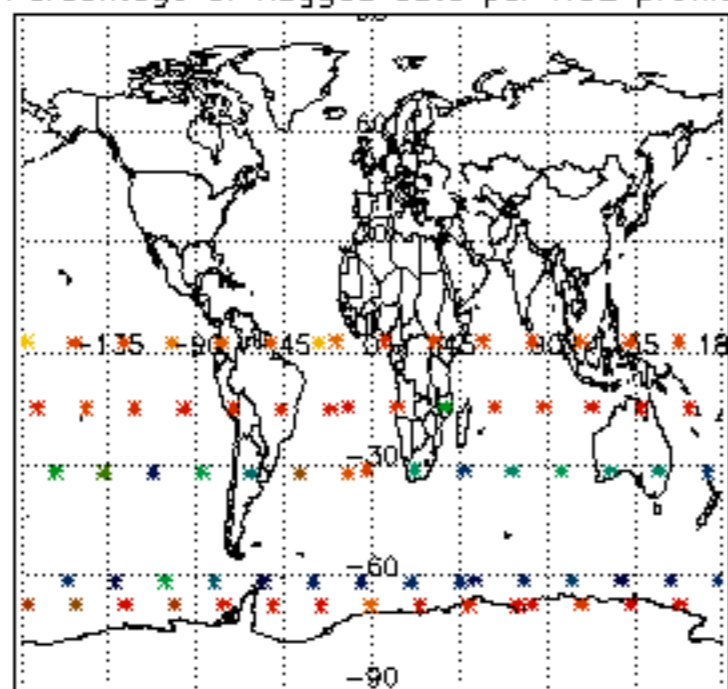
Percentage of flagged data per D3 profile



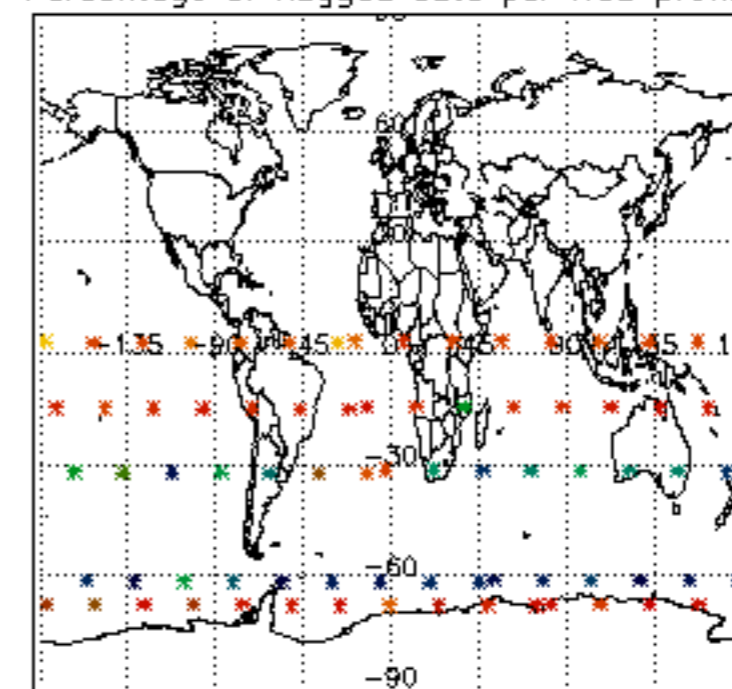
Percentage of flagged data per H2O profile

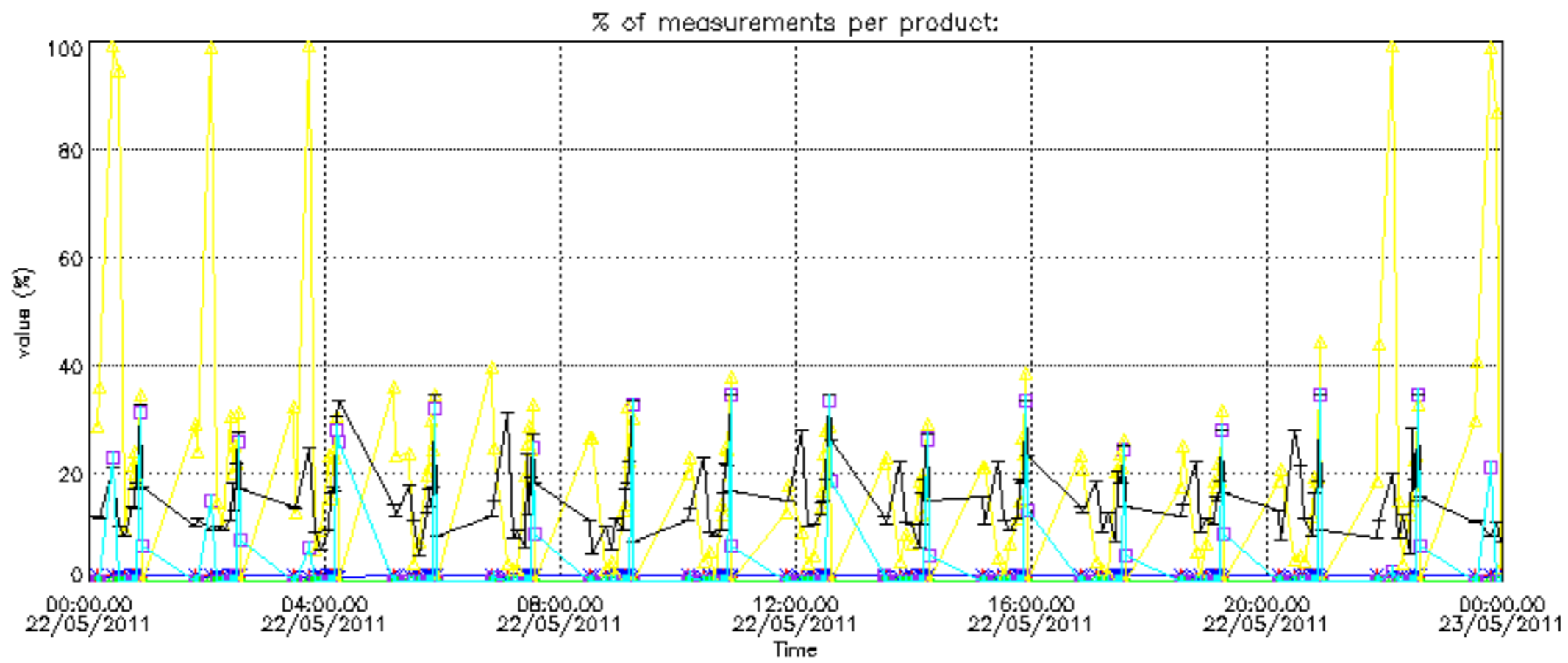


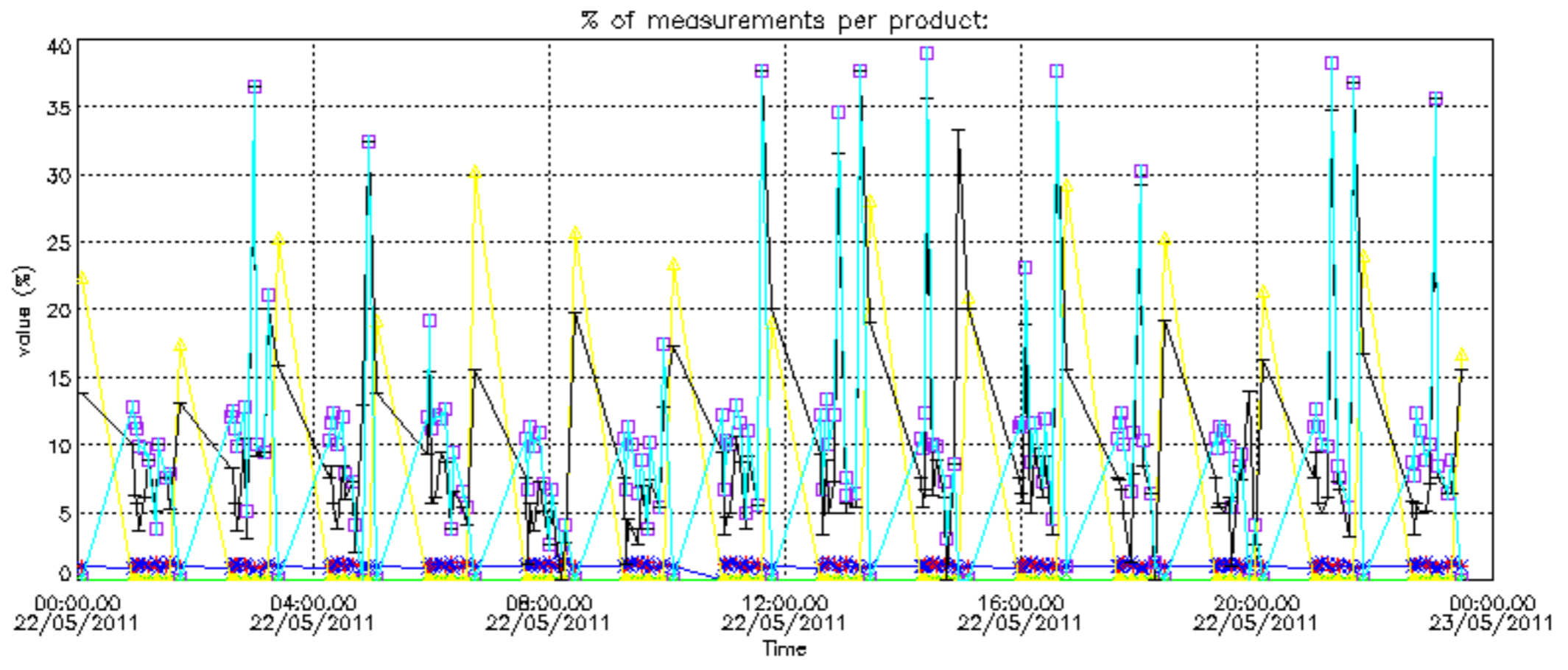
Percentage of flagged data per NO2 profile



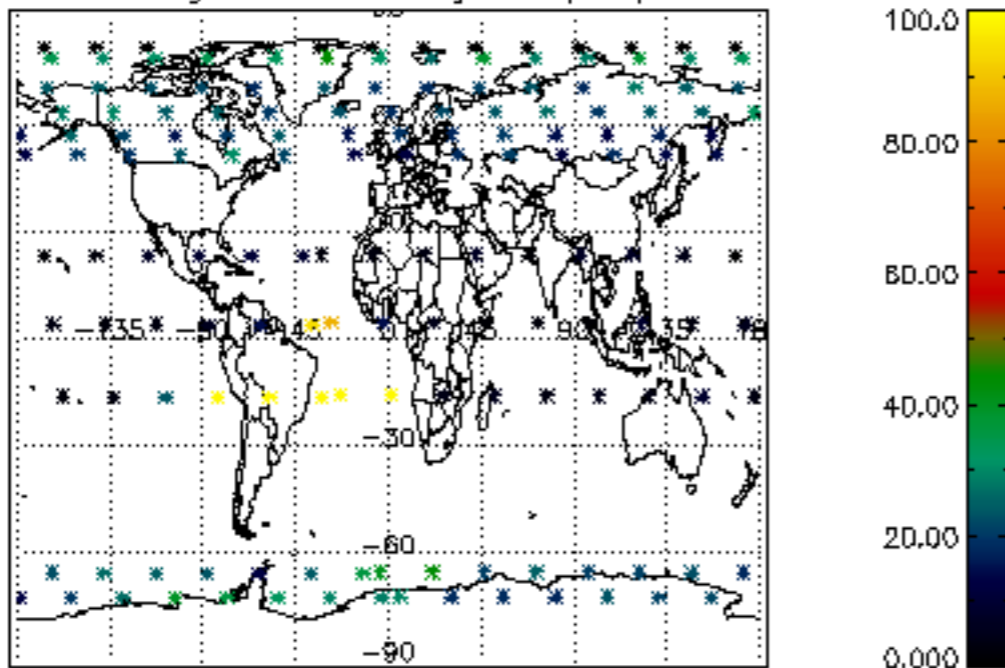
Percentage of flagged data per NO3 profile



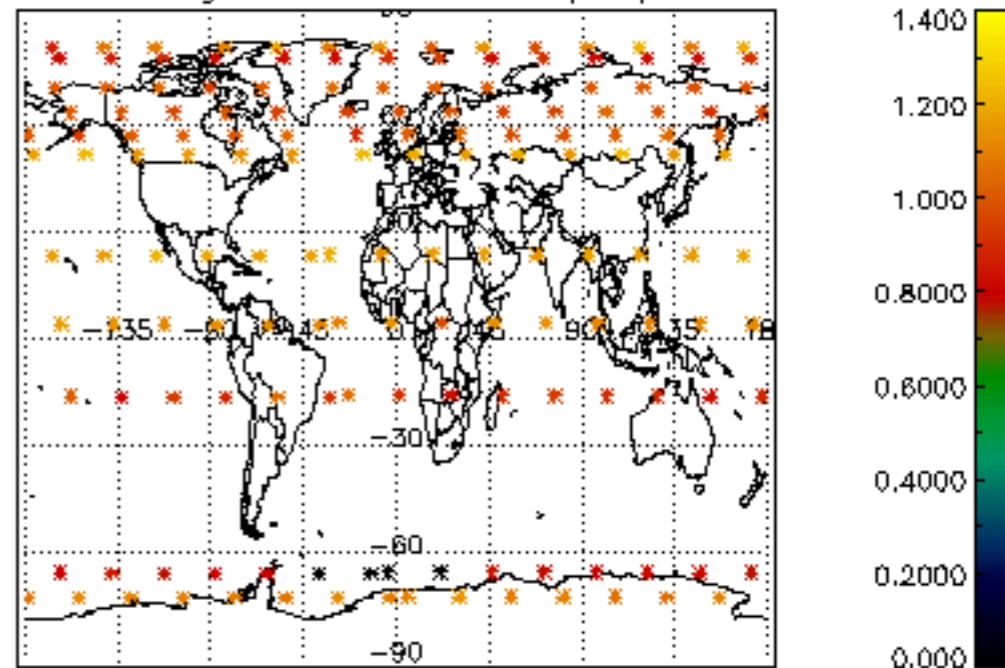




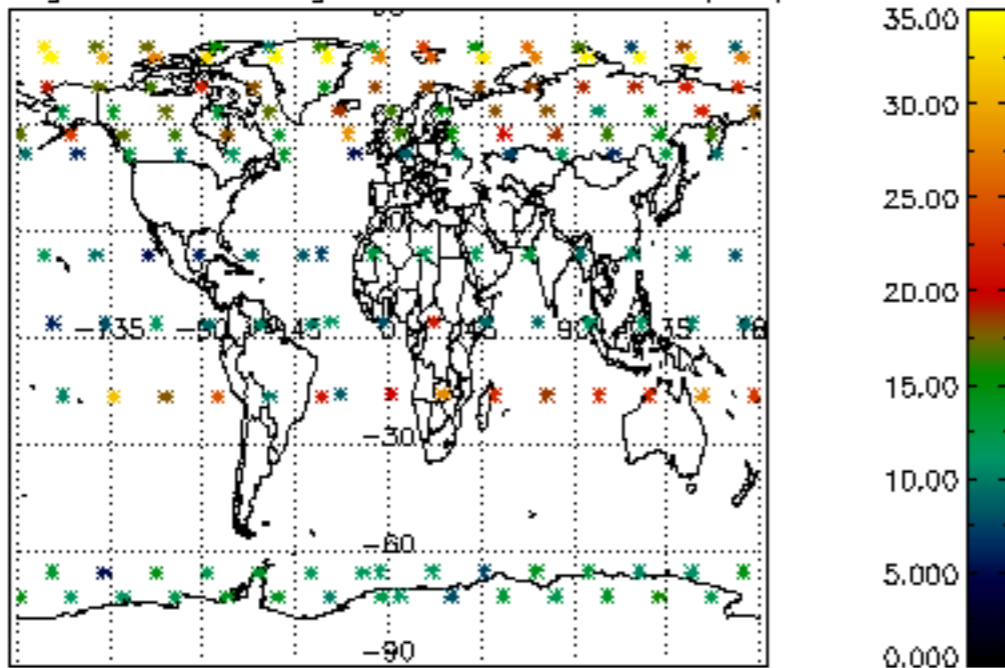
Percentage of cosmic ray hits per profile



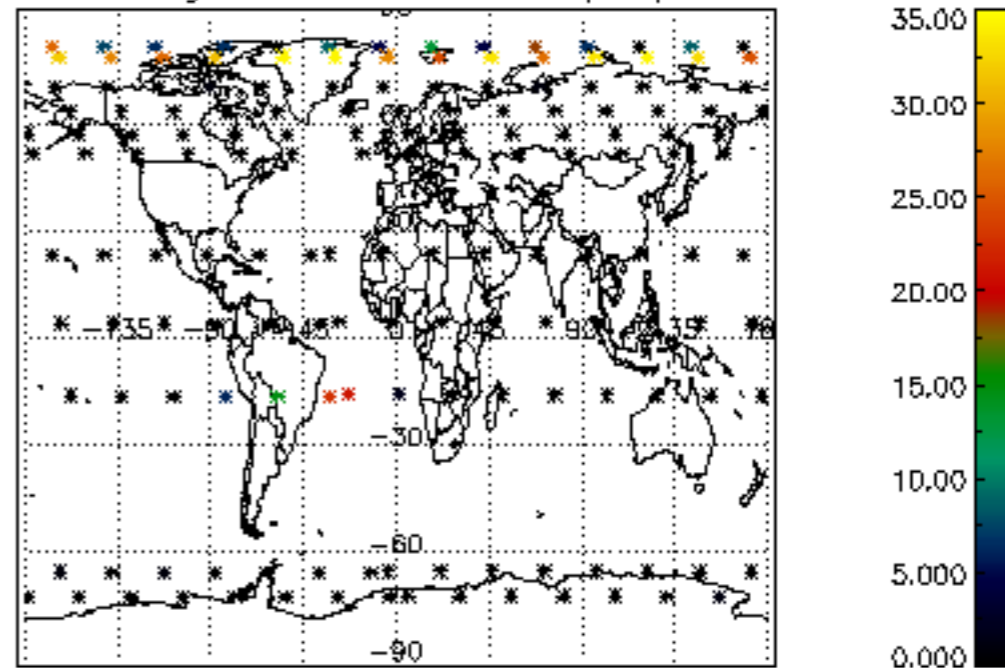
Percentage of datation errors per profile



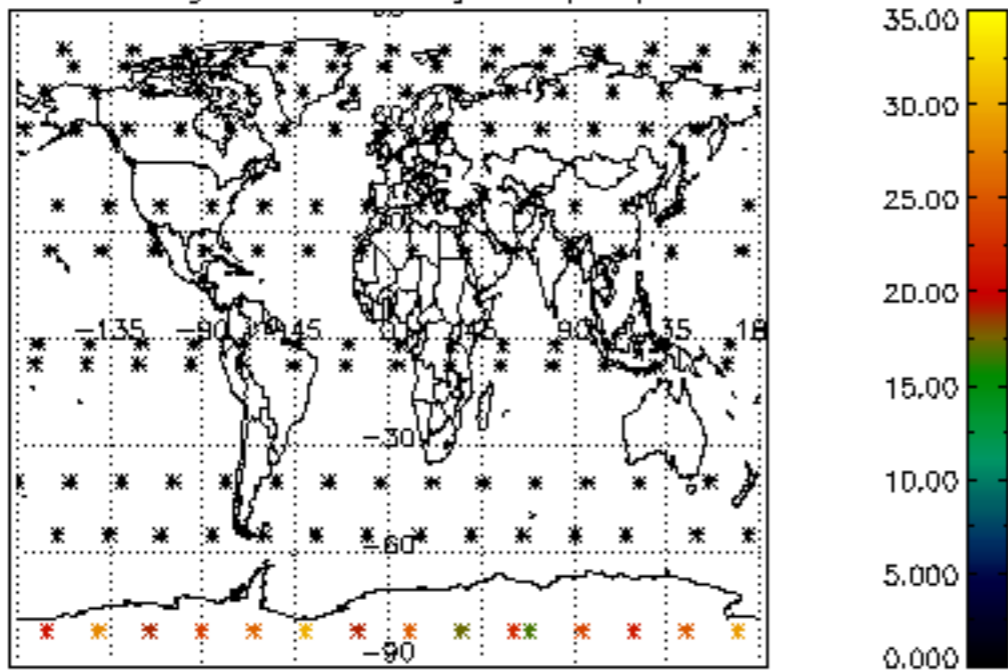
Percentage of star falling outside central band per profile



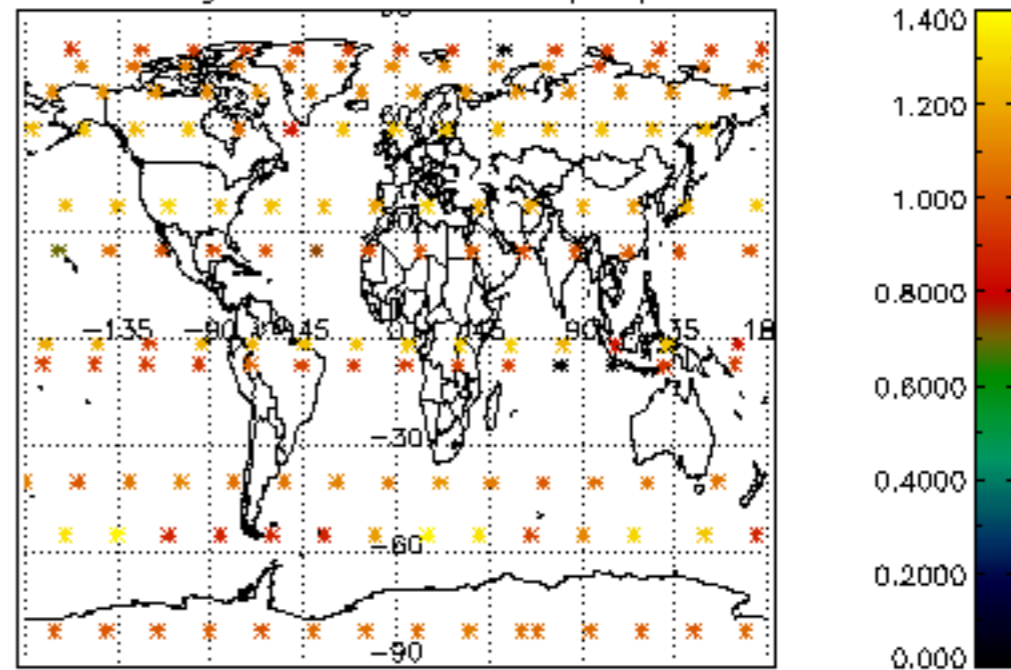
Percentage of saturation errors per profile



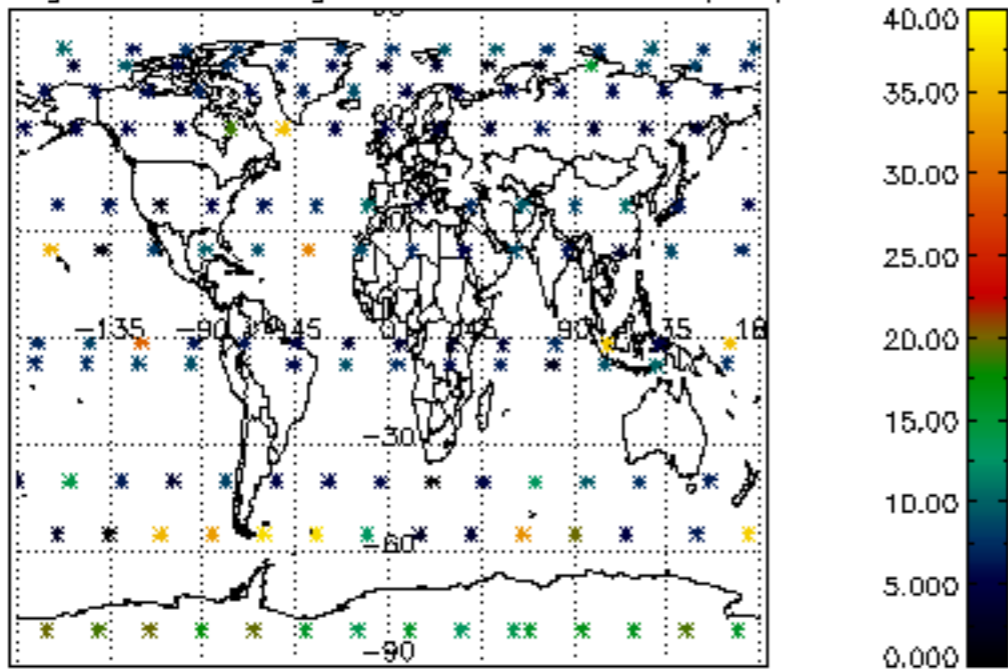
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

