

GOMOS Level 2 Daily Report

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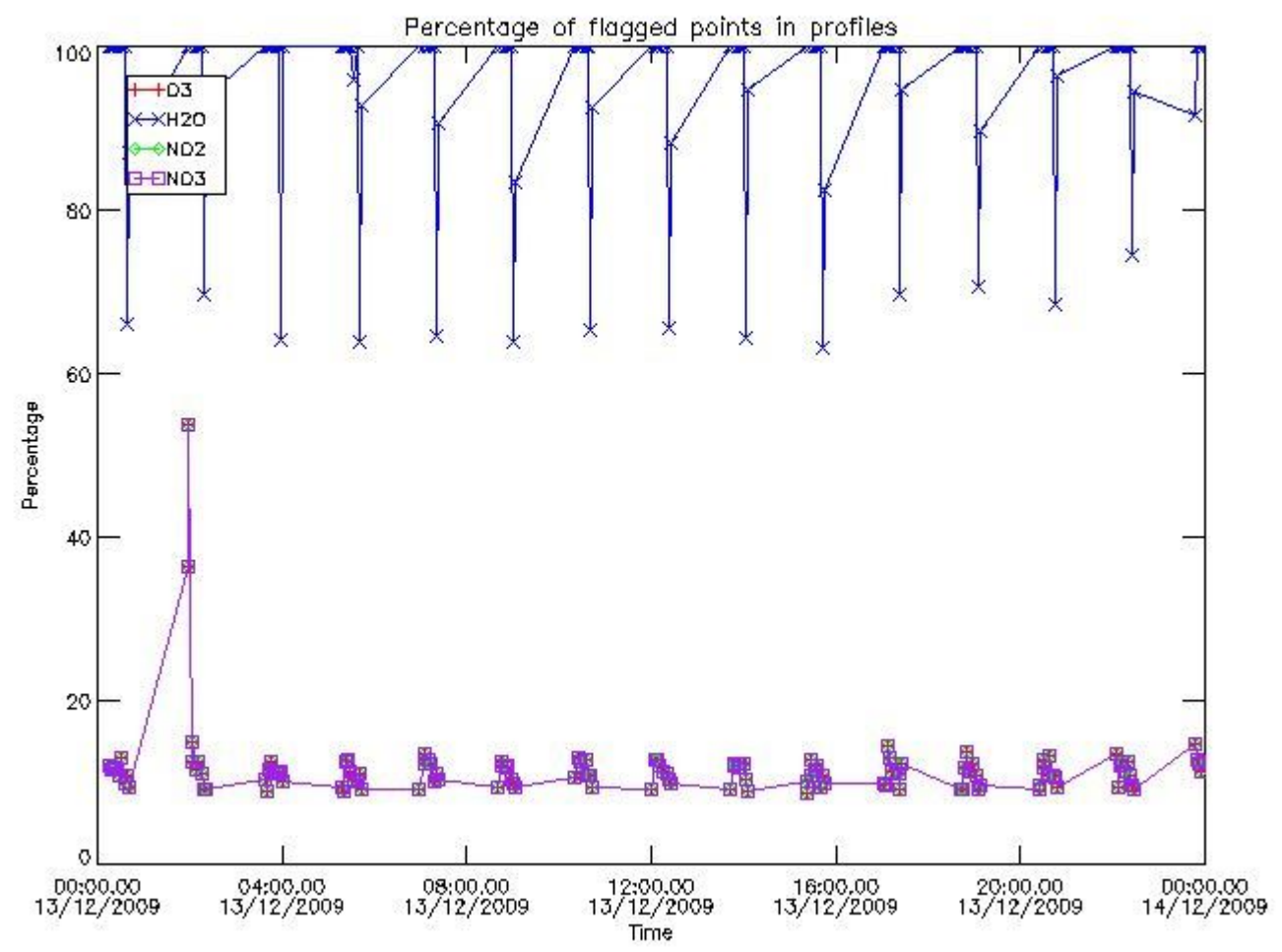
This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM_NL__2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

| Item | Value |
|---------------------------|---------------------------------|
| Time of report generation | 30APR2013 09:11:21 |
| Data source version | GOMOS/6.01 |
| Start time of products | 13-12-2009 (13DEC2009 00:00:00) |
| Stop time of products | 14-12-2009 (14DEC2009 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 389 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

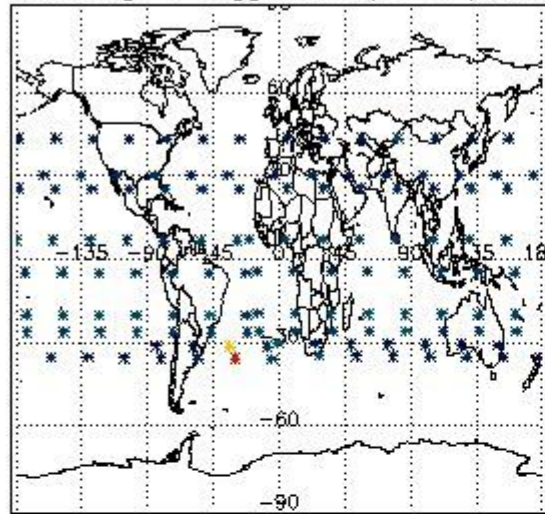
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20091213_000106_000000392085_00073_40708_6309.N1 | 13-DEC-2009 00:01:06 | Bright | 38.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 77 | 40708 | No |
| 2 | GOM_NL__2PRFIN20091213_000450_000000702085_00073_40708_6310.N1 | 13-DEC-2009 00:04:50 | Bright | 70.000 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 140 | 40708 | No |
| 3 | GOM_NL__2PRFIN20091213_001045_000000492085_00073_40708_6311.N1 | 13-DEC-2009 00:10:45 | Twilight | 48.500 | 15 | 67Alp Vir | 0.97600 | 28000. | 97 | 40708 | No |
| 4 | GOM_NL__2PRFIN20091213_001620_000000552085_00073_40708_6312.N1 | 13-DEC-2009 00:16:20 | Dark | 55.000 | 100 | 4Gam Crv | 2.5800 | 13100. | 110 | 40708 | No |
| 5 | GOM_NL__2PRFIN20091213_001756_000000582085_00073_40708_6313.N1 | 13-DEC-2009 00:17:56 | Dark | 57.500 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 115 | 40708 | No |
| 6 | GOM_NL__2PRFIN20091213_002139_000000432085_00073_40708_6314.N1 | 13-DEC-2009 00:21:39 | Dark | 43.000 | 64 | Gam Cen | 2.2000 | 10600. | 86 | 40708 | No |
| 7 | GOM_NL__2PRFIN20091213_002314_000000442085_00074_40709_6297.N1 | 13-DEC-2009 00:23:14 | Dark | 43.500 | 99 | Del Cen | 2.5750 | 26000. | 87 | 40709 | No |
| 8 | GOM_NL__2PRFIN20091213_002656_000000472085_00074_40709_6298.N1 | 13-DEC-2009 00:26:56 | Dark | 47.000 | 113 | Mu Vel | 2.6920 | 5000.0 | 94 | 40709 | No |
| 9 | GOM_NL__2PRFIN20091213_003054_000000402085_00074_40709_6299.N1 | 13-DEC-2009 00:30:54 | Dark | 39.500 | 71 | Iot Car | 2.2460 | 7700.0 | 79 | 40709 | No |
| 10 | GOM_NL__2PRFIN20091213_003530_000000522085_00074_40709_6300.N1 | 13-DEC-2009 00:35:30 | Dark | 52.000 | 34 | Gam2Vel | 1.7930 | 23000. | 104 | 40709 | No |
| 11 | GOM_NL__2PRFIN20091213_003751_000000522085_00074_40709_6301.N1 | 13-DEC-2009 00:37:51 | Dark | 52.000 | 2 | Alp Car | -0.73600 | 7000.0 | 104 | 40709 | No |
| 12 | GOM_NL__2PRFIN20091213_004027_000000542085_00074_40709_6302.N1 | 13-DEC-2009 00:40:27 | Dark | 54.000 | 117 | Pi Pup | 2.7060 | 3800.0 | 108 | 40709 | No |
| 13 | GOM_NL__2PRFIN20091213_004349_000000532085_00074_40709_6303.N1 | 13-DEC-2009 00:43:49 | Straylight | 53.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 106 | 40709 | No |
| 14 | GOM_NL__2PRFIN20091213_004835_000000532085_00074_40709_6304.N1 | 13-DEC-2009 00:48:35 | Straylight | 52.500 | 47 | 2Bet CMa | 1.9760 | 28000. | 105 | 40709 | No |
| 15 | GOM_NL__2PRFIN20091213_005213_000000472085_00074_40709_6305.N1 | 13-DEC-2009 00:52:13 | Straylight | 47.000 | 7 | 19Bet Ori | 0.10000 | 14000. | 94 | 40709 | No |
| 16 | GOM_NL__2PRFIN20091213_005434_000000522085_00074_40709_6306.N1 | 13-DEC-2009 00:54:34 | Straylight | 51.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 103 | 40709 | No |
| 17 | GOM_NL__2PRFIN20091213_005659_000000502085_00074_40709_6307.N1 | 13-DEC-2009 00:56:59 | Twilight | 50.000 | 27 | 24Gam Ori | 1.6360 | 26000. | 100 | 40709 | No |
| 18 | GOM_NL__2PRFIN20091213_005938_000000492085_00074_40709_6308.N1 | 13-DEC-2009 00:59:38 | Twilight | 48.500 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 97 | 40709 | No |
| 19 | GOM_NL__2PRFIN20091213_010208_000000462085_00074_40709_6309.N1 | 13-DEC-2009 01:02:08 | Bright | 45.500 | 176 | 23Zet Tau | 3.0200 | 22000. | 91 | 40709 | No |
| 20 | GOM_NL__2PRFIN20091213_010410_000000452085_00074_40709_6310.N1 | 13-DEC-2009 01:04:10 | Bright | 45.000 | 28 | 12Bet Tau | 1.6500 | 15200. | 90 | 40709 | No |
| 21 | GOM_NL__2PRFIN20091213_010614_000000362085_00074_40709_6311.N1 | 13-DEC-2009 01:06:14 | Bright | 35.500 | 149 | 45Eps Per | 2.8880 | 30000. | 71 | 40709 | No |
| 22 | GOM_NL__2PRFIN20091213_010757_000000482085_00074_40709_6312.N1 | 13-DEC-2009 01:07:57 | Bright | 47.500 | 107 | 37The Aur | 2.6490 | 11000. | 95 | 40709 | No |
| 23 | GOM_NL__2PRFIN20091213_011005_000000442085_00074_40709_6313.N1 | 13-DEC-2009 01:10:05 | Bright | 43.500 | 42 | 34Bet Aur | 1.9000 | 10200. | 87 | 40709 | No |
| 24 | GOM_NL__2PRFIN20091213_012535_000000492085_00074_40709_6314.N1 | 13-DEC-2009 01:25:35 | Bright | 49.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 98 | 40709 | No |
| 25 | GOM_NL__2PRFIN20091213_012935_000000412085_00074_40709_6315.N1 | 13-DEC-2009 01:29:35 | Bright | 40.500 | 32 | 77Eps UMa | 1.7630 | 11000. | 81 | 40709 | No |
| 26 | GOM_NL__2PRFIN20091213_013204_000000572085_00074_40709_6316.N1 | 13-DEC-2009 01:32:04 | Bright | 57.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 114 | 40709 | No |
| 27 | GOM_NL__2PRFIN20091213_013518_000000372085_00074_40709_6317.N1 | 13-DEC-2009 01:35:18 | Bright | 37.000 | 180 | 27Gam Boo | 3.0400 | 8000.0 | 74 | 40709 | No |
| 28 | GOM_NL__2PRFIN20091213_014142_000000472085_00074_40709_6318.N1 | 13-DEC-2009 01:41:42 | Bright | 46.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 93 | 40709 | No |
| 29 | GOM_NL__2PRFIN20091213_014526_000000702085_00074_40709_6319.N1 | 13-DEC-2009 01:45:26 | Bright | 69.500 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 139 | 40709 | No |
| 30 | GOM_NL__2PRFIN20091213_015122_000000502085_00074_40709_6320.N1 | 13-DEC-2009 01:51:22 | Twilight | 49.500 | 15 | 67Alp Vir | 0.97600 | 28000. | 99 | 40709 | No |
| 31 | GOM_NL__2PRFIN20091213_015451_000000472085_00074_40709_6321.N1 | 13-DEC-2009 01:54:51 | Twilight | 46.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 93 | 40709 | No |
| 32 | GOM_NL__2PRFIN20091213_015657_000000522085_00074_40709_6322.N1 | 13-DEC-2009 01:56:57 | Dark | 51.500 | 100 | 4Gam Crv | 2.5800 | 13100. | 103 | 40709 | No |
| 33 | GOM_NL__2PRFIN20091213_015833_000000572085_00074_40709_6323.N1 | 13-DEC-2009 01:58:33 | Dark | 56.500 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 113 | 40709 | No |
| 34 | GOM_NL__2PRFIN20091213_020215_000000412085_00074_40709_6324.N1 | 13-DEC-2009 02:02:15 | Dark | 41.000 | 64 | Gam Cen | 2.2000 | 10600. | 82 | 40709 | No |
| 35 | GOM_NL__2PRFIN20091213_020350_000000412085_00075_40710_6306.N1 | 13-DEC-2009 02:03:50 | Dark | 41.000 | 99 | Del Cen | 2.5750 | 26000. | 82 | 40710 | No |
| 36 | GOM_NL__2PRFIN20091213_020732_000000442085_00075_40710_6307.N1 | 13-DEC-2009 02:07:32 | Dark | 44.000 | 113 | Mu Vel | 2.6920 | 5000.0 | 88 | 40710 | No |
| 37 | GOM_NL__2PRFIN20091213_021131_000000412085_00075_40710_6308.N1 | 13-DEC-2009 02:11:31 | Dark | 40.500 | 71 | Iot Car | 2.2460 | 7700.0 | 81 | 40710 | No |
| 38 | GOM_NL__2PRFIN20091213_021606_000000462085_00075_40710_6309.N1 | 13-DEC-2009 02:16:06 | Dark | 46.000 | 34 | Gam2Vel | 1.7930 | 23000. | 92 | 40710 | No |
| 39 | GOM_NL__2PRFIN20091213_021828_000000552085_00075_40710_6310.N1 | 13-DEC-2009 02:18:28 | Dark | 55.000 | 2 | Alp Car | -0.73600 | 7000.0 | 110 | 40710 | No |
| 40 | GOM_NL__2PRFIN20091213_022104_000000562085_00075_40710_6311.N1 | 13-DEC-2009 02:21:04 | Dark | 56.000 | 117 | Pi Pup | 2.7060 | 3800.0 | 112 | 40710 | No |
| 41 | GOM_NL__2PRFIN20091213_022425_000000572085_00075_40710_6312.N1 | 13-DEC-2009 02:24:25 | Straylight | 56.500 | 23 | 21Eps CMa | 1.5020 | 26000. | 113 | 40710 | No |
| 42 | GOM_NL__2PRFIN20091213_022911_000000522085_00075_40710_6313.N1 | 13-DEC-2009 02:29:11 | Straylight | 51.500 | 47 | 2Bet CMa | 1.9760 | 28000. | 103 | 40710 | No |

3.1 Plot quality information per product (time dependant)

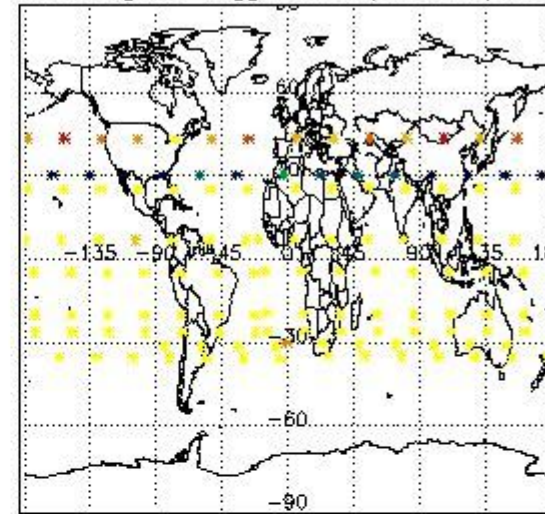


3.2 Plot quality information per product (world map)

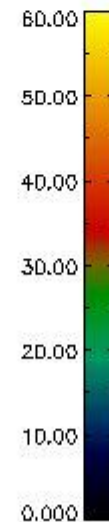
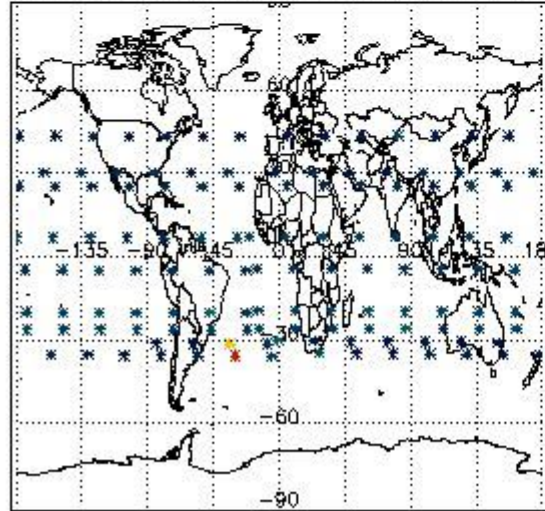
Percentage of flagged data per O3 profile



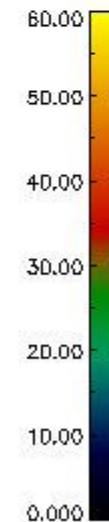
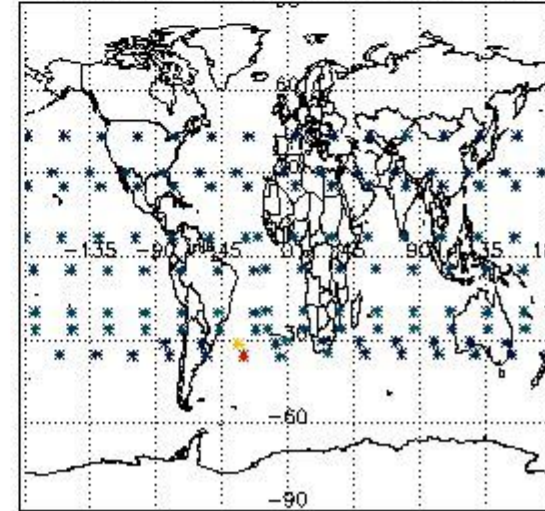
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

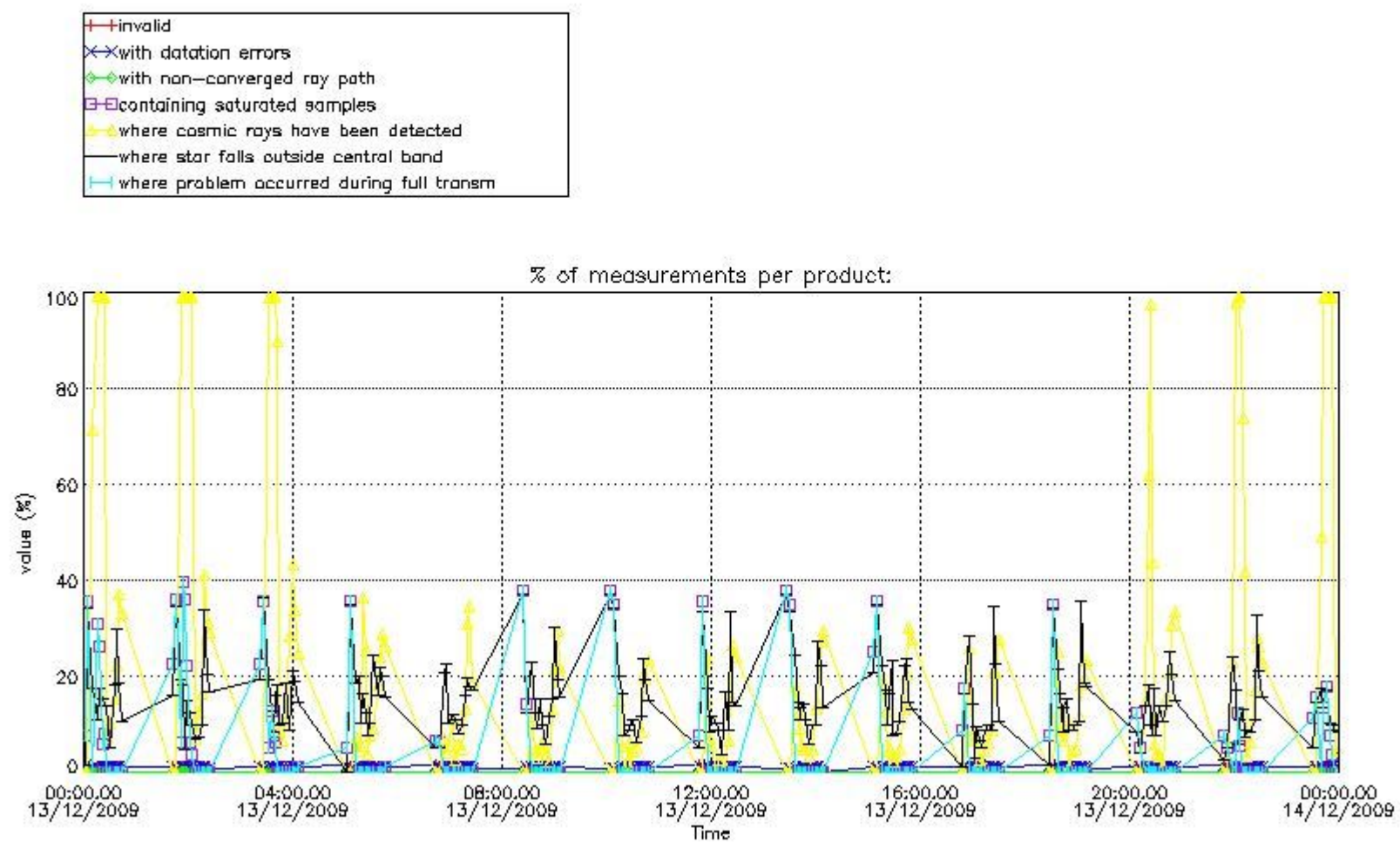


4. Level 1 quality information per product

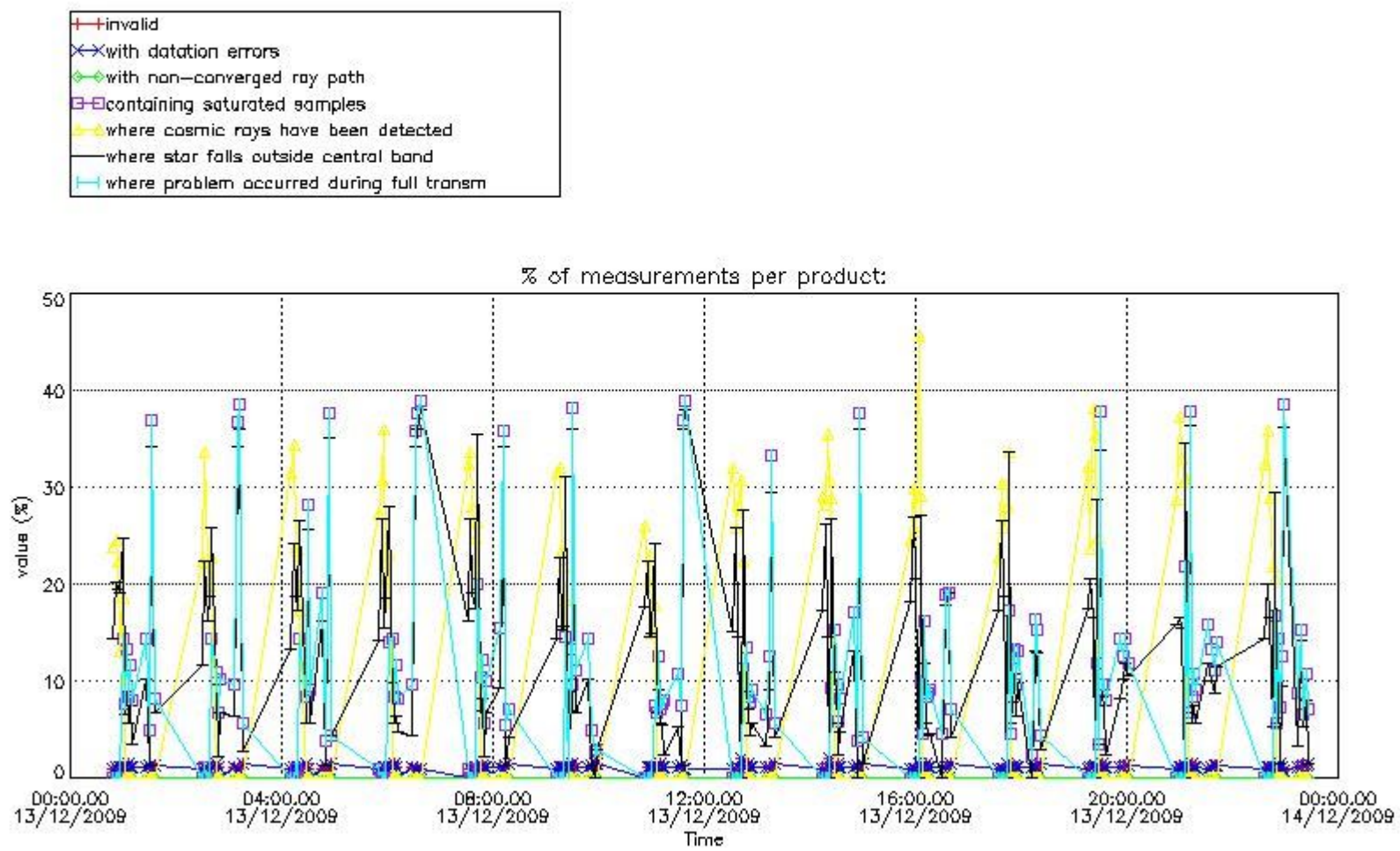
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

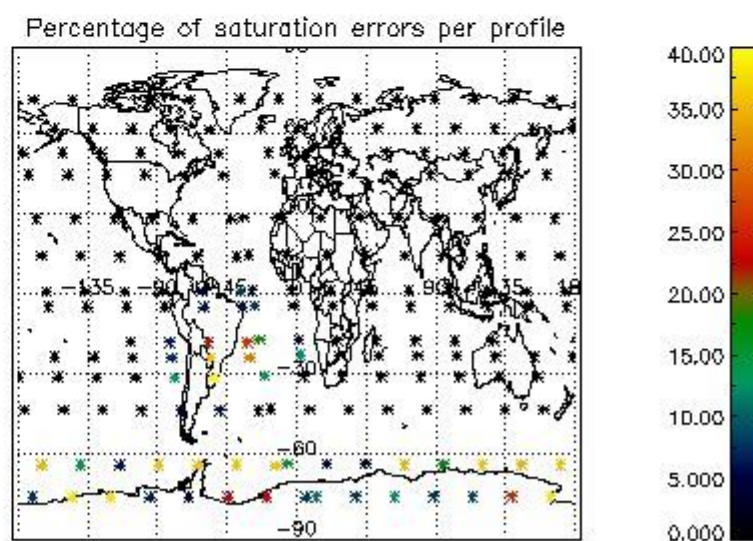
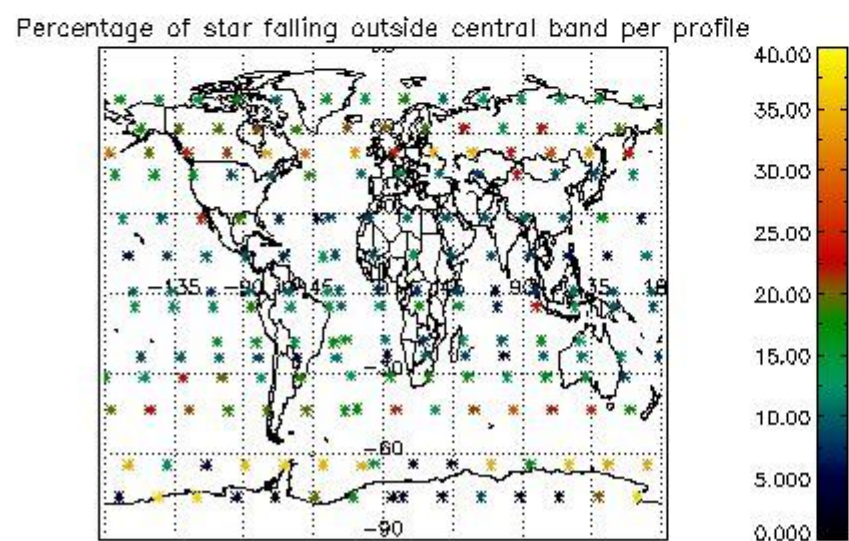
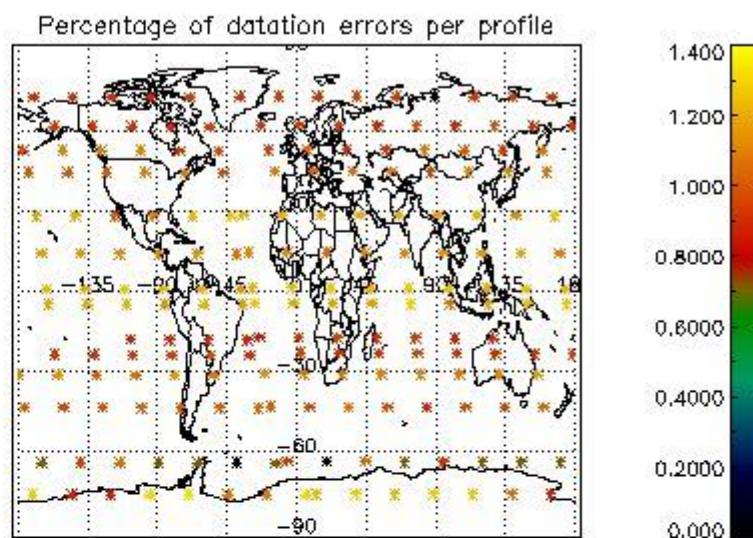
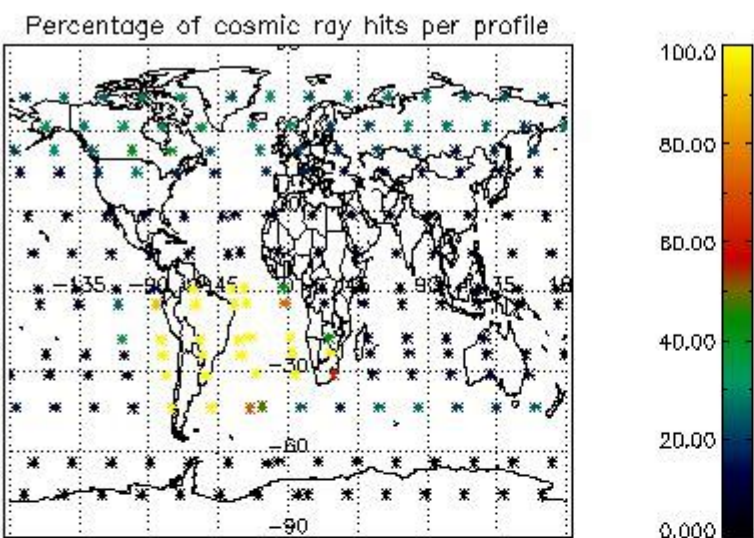


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes

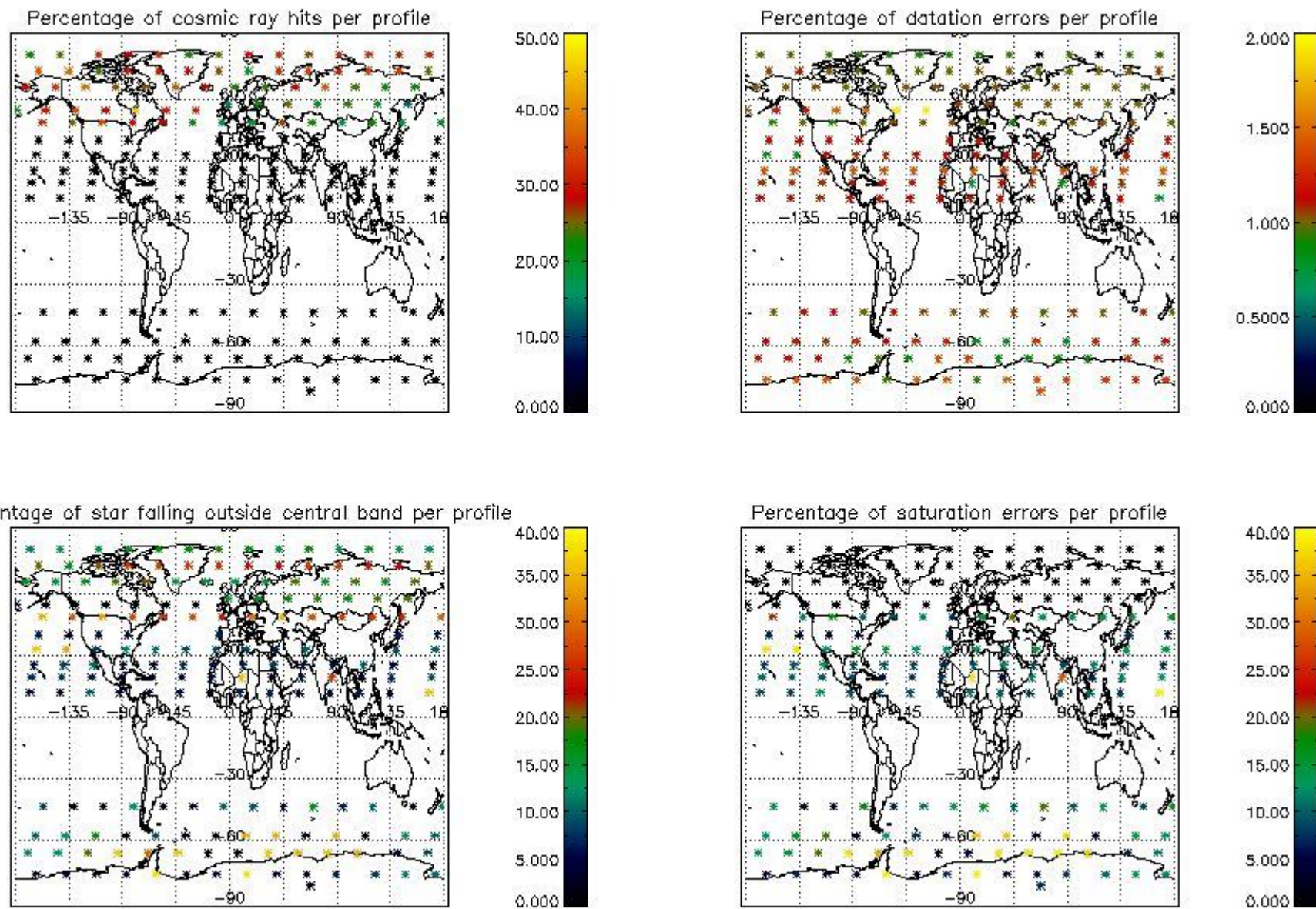


4.2 Plot quality information per product coming from level 1b processing (world map)

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

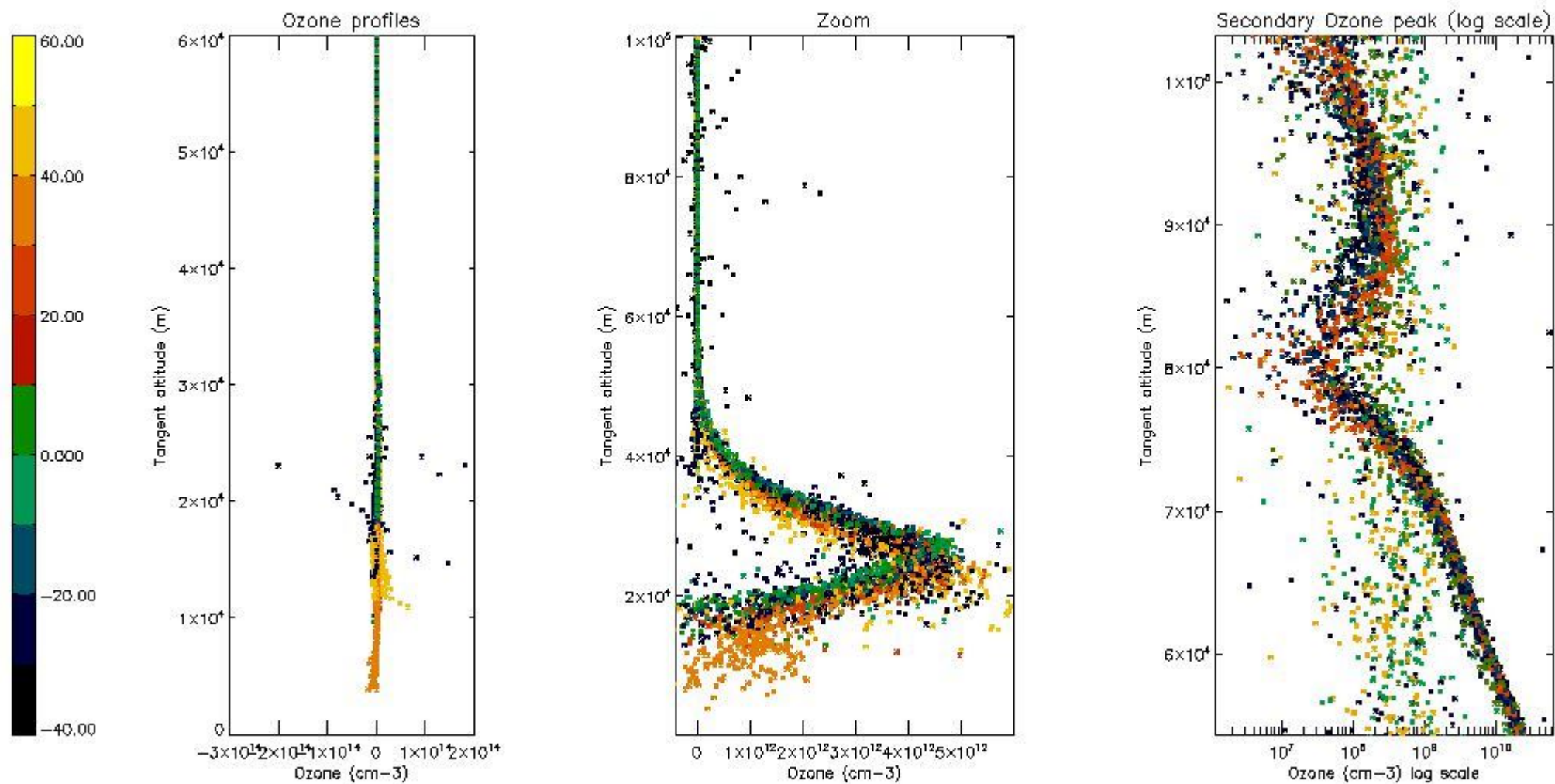
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 33 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 11 |
| STD < 5 | 7 |

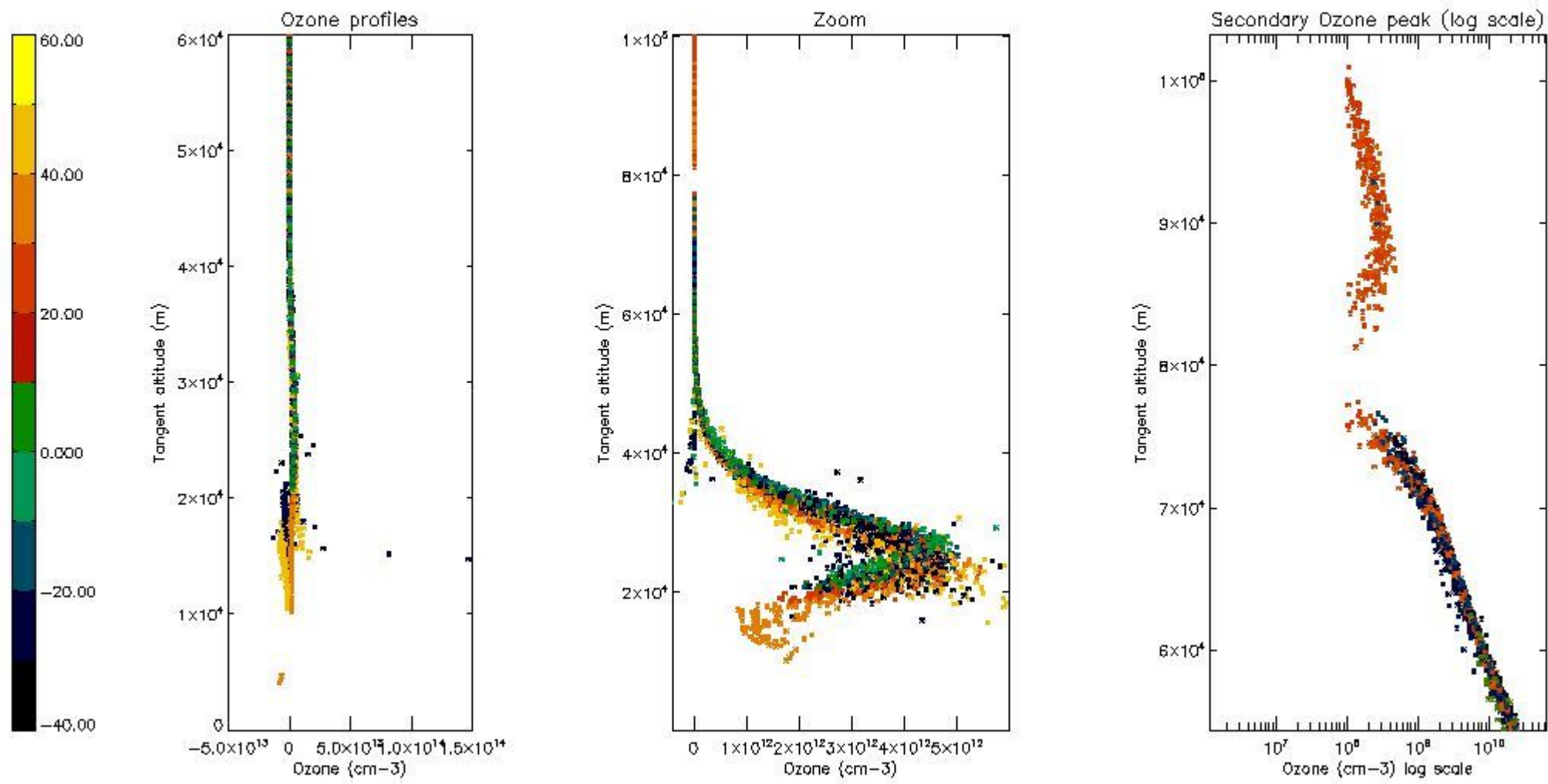
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



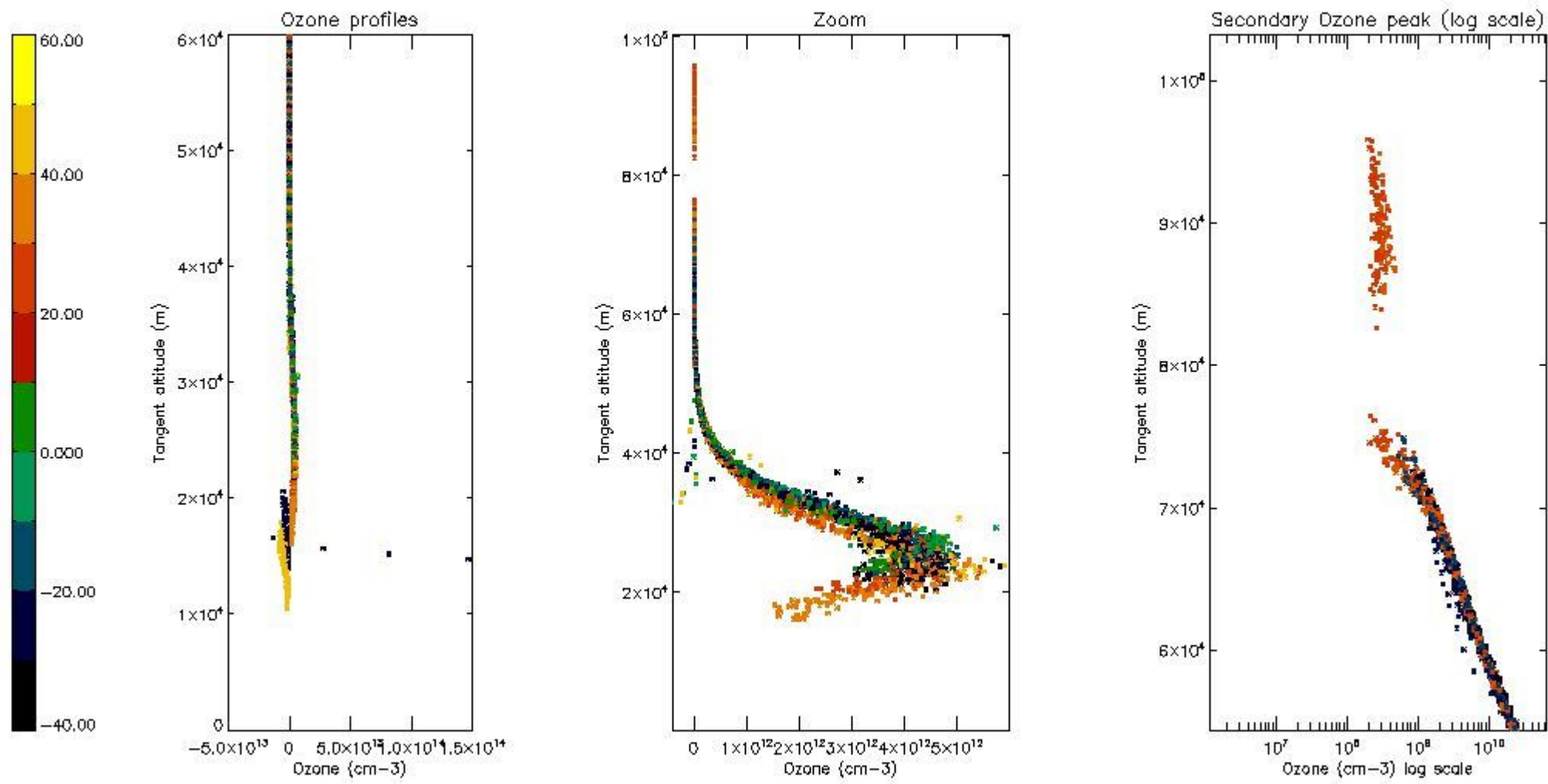
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



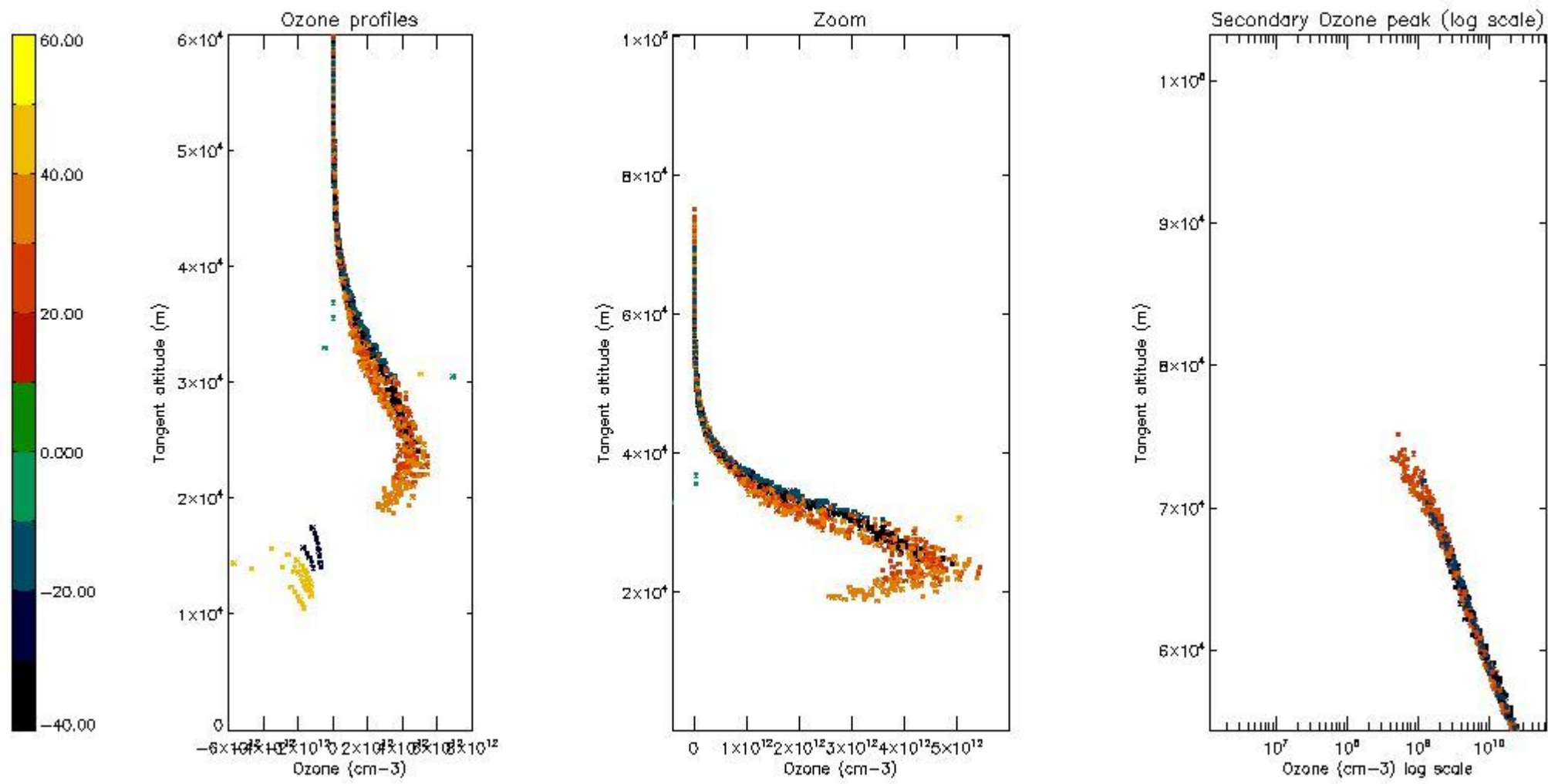
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



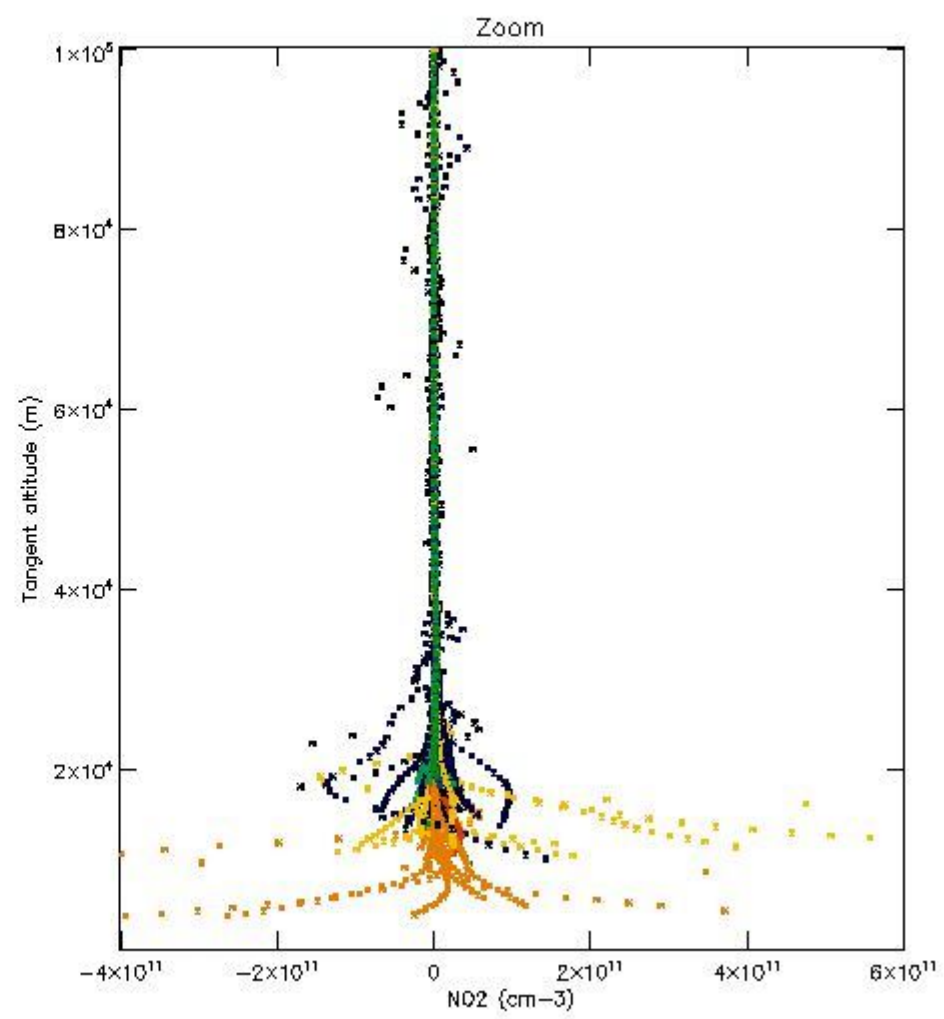
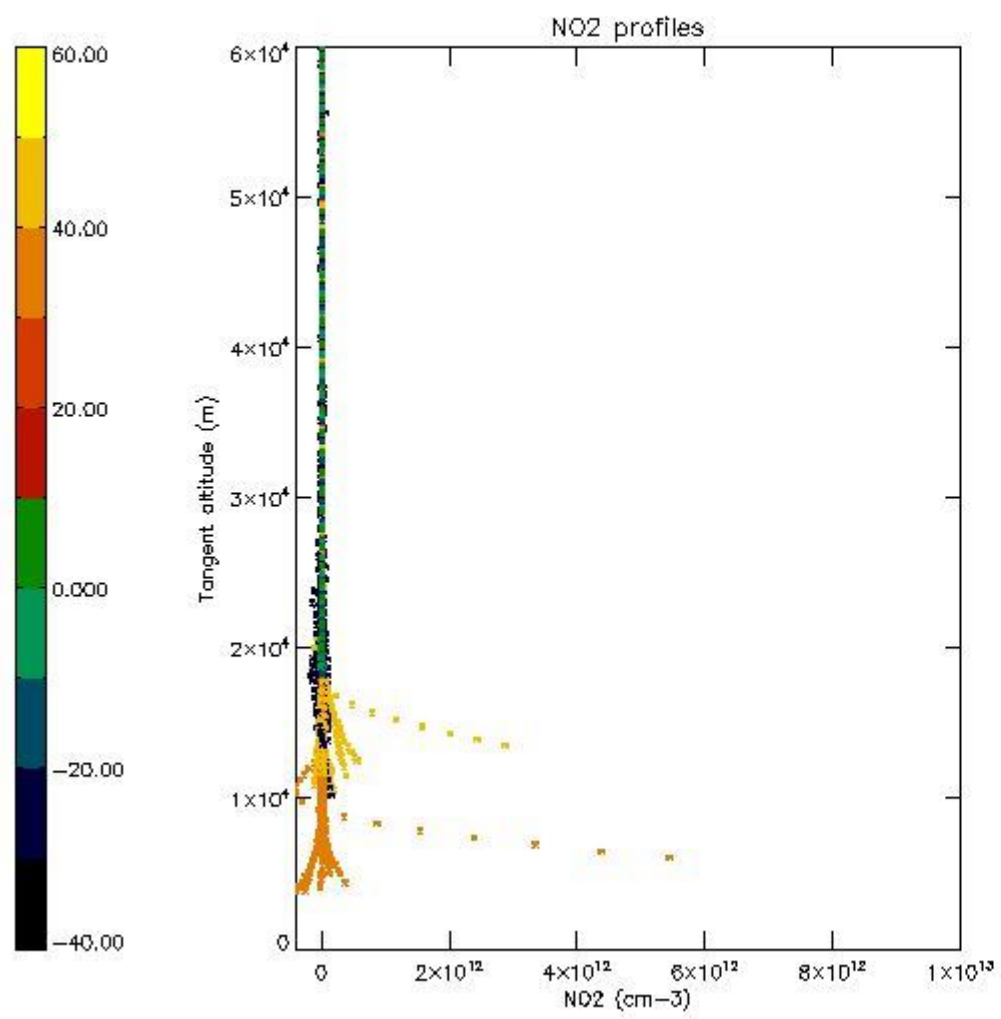
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



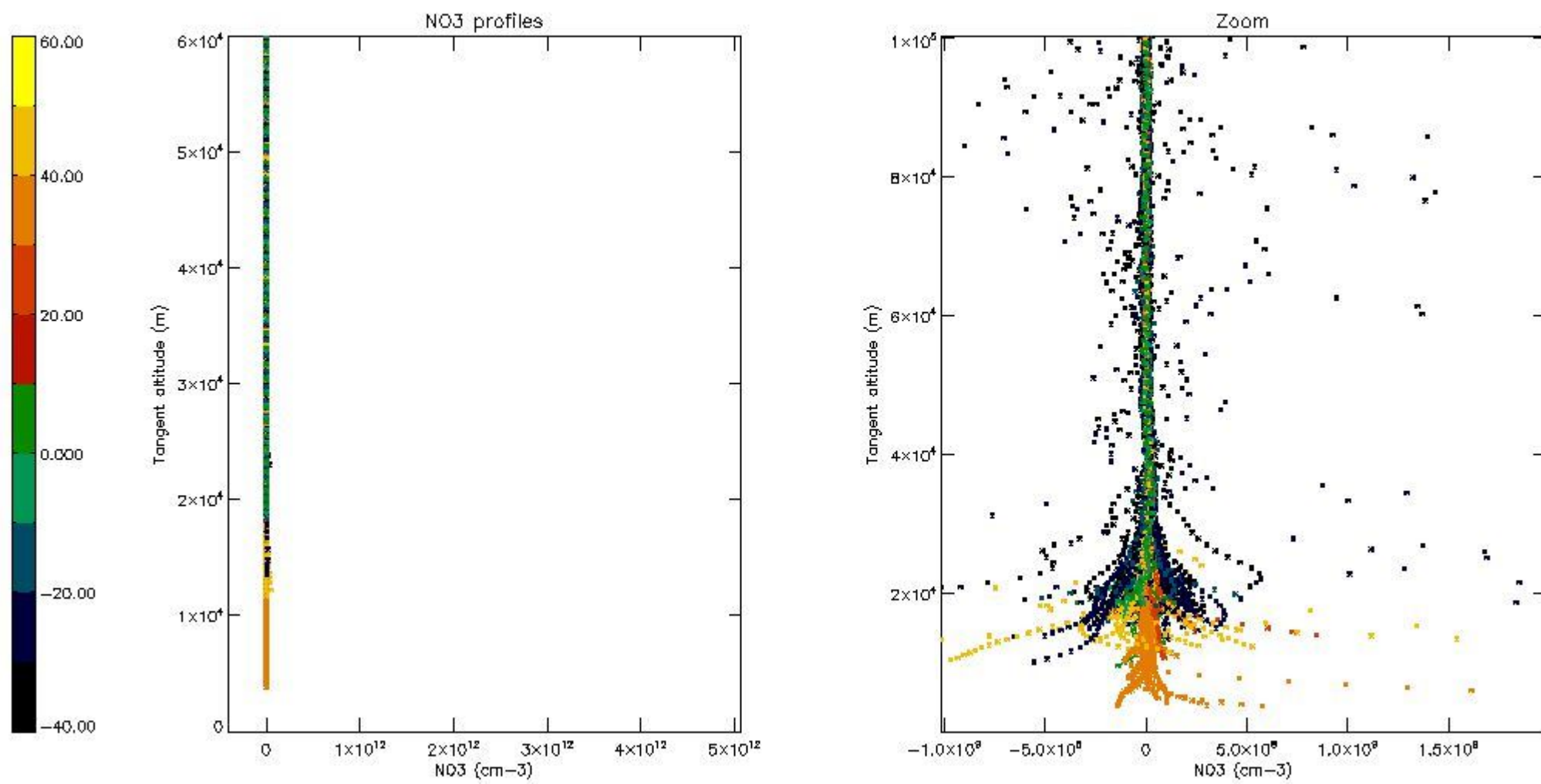
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



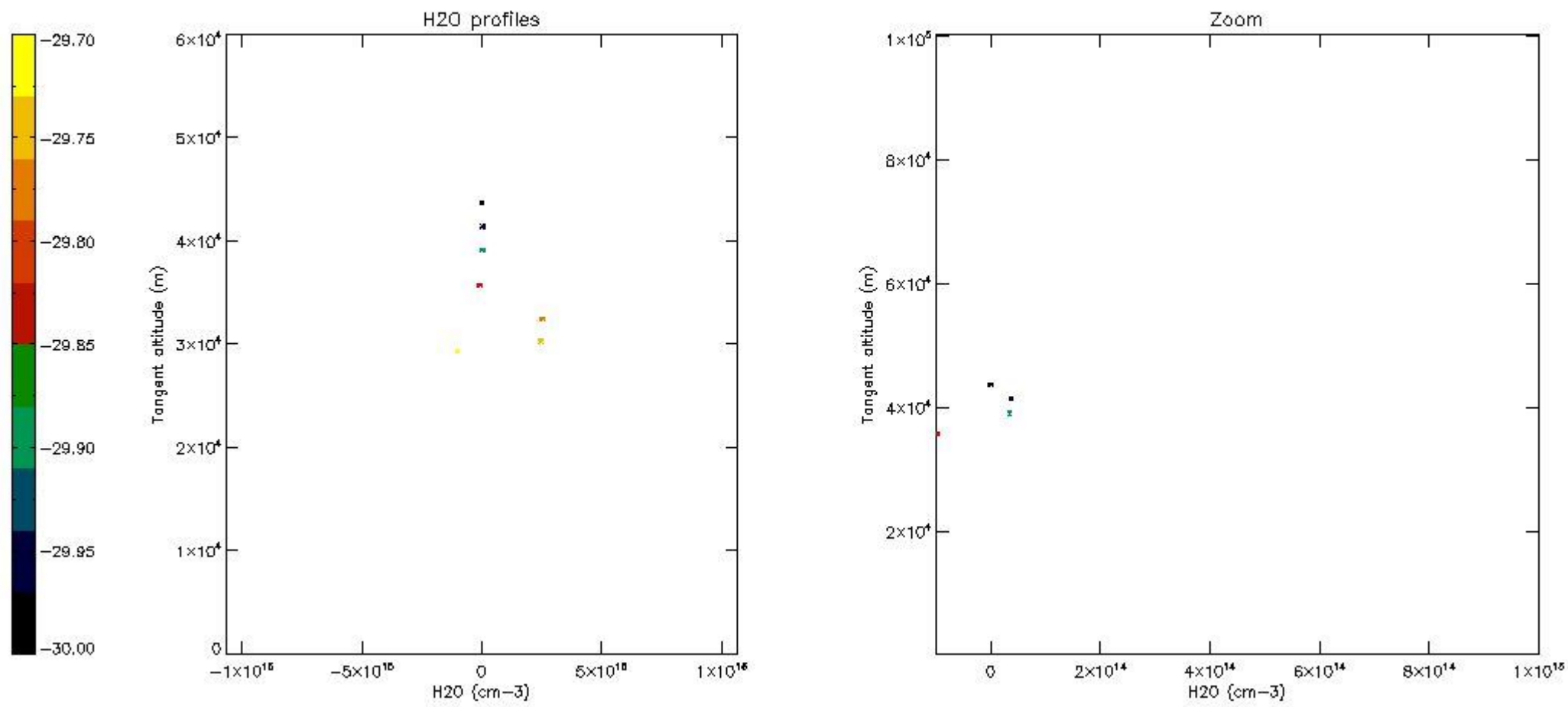
5.7 Plot NO3 profiles for all STD (dark without errors)

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 | 13-DEC-2009 00:01:06 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 13-DEC-2009 00:01:06 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 13-DEC-2009 00:01:06 |

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[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](#)

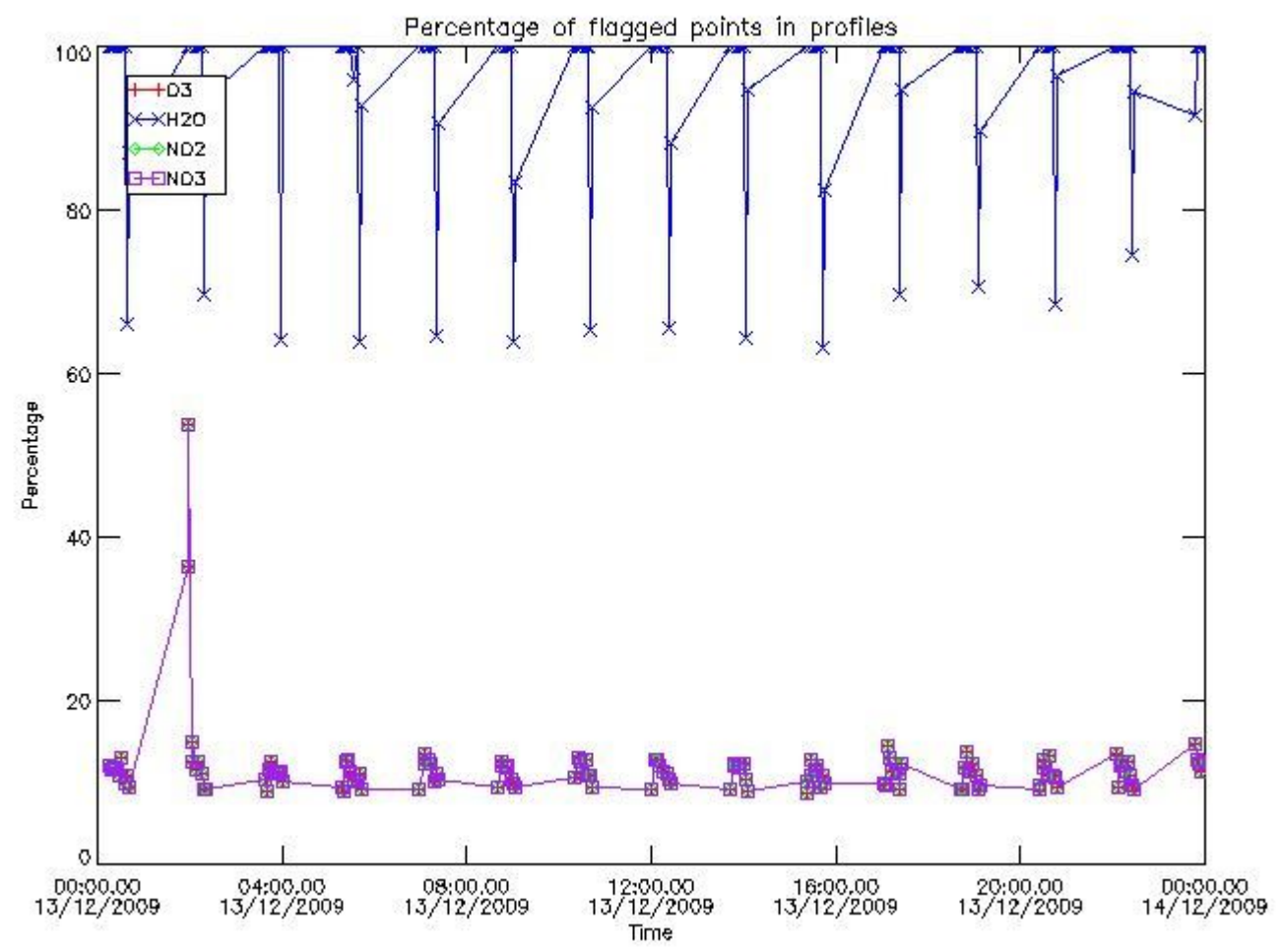
This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM_NL__2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

| Item | Value |
|---------------------------|---------------------------------|
| Time of report generation | 30APR2013 09:11:21 |
| Data source version | GOMOS/6.01 |
| Start time of products | 13-12-2009 (13DEC2009 00:00:00) |
| Stop time of products | 14-12-2009 (14DEC2009 00:00:00) |
| Store outputs in DB | Yes |
| Nb of level 2 prods | 389 |
| Nb of prods with errors | 0 |

2. Summary of processed GOM_NL__2P products.

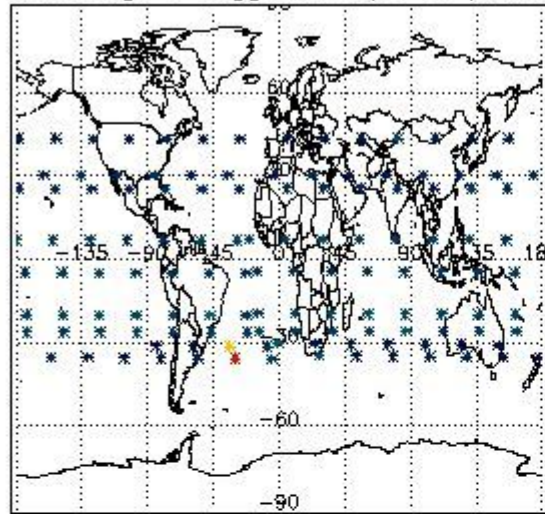
| Nr | Filename | UTC Start time | Limb | Duration | Star Id | Star Name | Star Mag | Star Temp | Nb Meas | Orbit | Prod. error |
|----|--|----------------------|------------|----------|---------|-----------|----------|-----------|---------|-------|-------------|
| 1 | GOM_NL__2PRFIN20091213_000106_000000392085_00073_40708_6309.N1 | 13-DEC-2009 00:01:06 | Bright | 38.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 77 | 40708 | No |
| 2 | GOM_NL__2PRFIN20091213_000450_000000702085_00073_40708_6310.N1 | 13-DEC-2009 00:04:50 | Bright | 70.000 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 140 | 40708 | No |
| 3 | GOM_NL__2PRFIN20091213_001045_000000492085_00073_40708_6311.N1 | 13-DEC-2009 00:10:45 | Twilight | 48.500 | 15 | 67Alp Vir | 0.97600 | 28000. | 97 | 40708 | No |
| 4 | GOM_NL__2PRFIN20091213_001620_000000552085_00073_40708_6312.N1 | 13-DEC-2009 00:16:20 | Dark | 55.000 | 100 | 4Gam Crv | 2.5800 | 13100. | 110 | 40708 | No |
| 5 | GOM_NL__2PRFIN20091213_001756_000000582085_00073_40708_6313.N1 | 13-DEC-2009 00:17:56 | Dark | 57.500 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 115 | 40708 | No |
| 6 | GOM_NL__2PRFIN20091213_002139_000000432085_00073_40708_6314.N1 | 13-DEC-2009 00:21:39 | Dark | 43.000 | 64 | Gam Cen | 2.2000 | 10600. | 86 | 40708 | No |
| 7 | GOM_NL__2PRFIN20091213_002314_000000442085_00074_40709_6297.N1 | 13-DEC-2009 00:23:14 | Dark | 43.500 | 99 | Del Cen | 2.5750 | 26000. | 87 | 40709 | No |
| 8 | GOM_NL__2PRFIN20091213_002656_000000472085_00074_40709_6298.N1 | 13-DEC-2009 00:26:56 | Dark | 47.000 | 113 | Mu Vel | 2.6920 | 5000.0 | 94 | 40709 | No |
| 9 | GOM_NL__2PRFIN20091213_003054_000000402085_00074_40709_6299.N1 | 13-DEC-2009 00:30:54 | Dark | 39.500 | 71 | Iot Car | 2.2460 | 7700.0 | 79 | 40709 | No |
| 10 | GOM_NL__2PRFIN20091213_003530_000000522085_00074_40709_6300.N1 | 13-DEC-2009 00:35:30 | Dark | 52.000 | 34 | Gam2Vel | 1.7930 | 23000. | 104 | 40709 | No |
| 11 | GOM_NL__2PRFIN20091213_003751_000000522085_00074_40709_6301.N1 | 13-DEC-2009 00:37:51 | Dark | 52.000 | 2 | Alp Car | -0.73600 | 7000.0 | 104 | 40709 | No |
| 12 | GOM_NL__2PRFIN20091213_004027_000000542085_00074_40709_6302.N1 | 13-DEC-2009 00:40:27 | Dark | 54.000 | 117 | Pi Pup | 2.7060 | 3800.0 | 108 | 40709 | No |
| 13 | GOM_NL__2PRFIN20091213_004349_000000532085_00074_40709_6303.N1 | 13-DEC-2009 00:43:49 | Straylight | 53.000 | 23 | 21Eps CMa | 1.5020 | 26000. | 106 | 40709 | No |
| 14 | GOM_NL__2PRFIN20091213_004835_000000532085_00074_40709_6304.N1 | 13-DEC-2009 00:48:35 | Straylight | 52.500 | 47 | 2Bet CMa | 1.9760 | 28000. | 105 | 40709 | No |
| 15 | GOM_NL__2PRFIN20091213_005213_000000472085_00074_40709_6305.N1 | 13-DEC-2009 00:52:13 | Straylight | 47.000 | 7 | 19Bet Ori | 0.10000 | 14000. | 94 | 40709 | No |
| 16 | GOM_NL__2PRFIN20091213_005434_000000522085_00074_40709_6306.N1 | 13-DEC-2009 00:54:34 | Straylight | 51.500 | 30 | 46Eps Ori | 1.6940 | 30000. | 103 | 40709 | No |
| 17 | GOM_NL__2PRFIN20091213_005659_000000502085_00074_40709_6307.N1 | 13-DEC-2009 00:56:59 | Twilight | 50.000 | 27 | 24Gam Ori | 1.6360 | 26000. | 100 | 40709 | No |
| 18 | GOM_NL__2PRFIN20091213_005938_000000492085_00074_40709_6308.N1 | 13-DEC-2009 00:59:38 | Twilight | 48.500 | 13 | 87Alp Tau | 0.86700 | 3800.0 | 97 | 40709 | No |
| 19 | GOM_NL__2PRFIN20091213_010208_000000462085_00074_40709_6309.N1 | 13-DEC-2009 01:02:08 | Bright | 45.500 | 176 | 23Zet Tau | 3.0200 | 22000. | 91 | 40709 | No |
| 20 | GOM_NL__2PRFIN20091213_010410_000000452085_00074_40709_6310.N1 | 13-DEC-2009 01:04:10 | Bright | 45.000 | 28 | 12Bet Tau | 1.6500 | 15200. | 90 | 40709 | No |
| 21 | GOM_NL__2PRFIN20091213_010614_000000362085_00074_40709_6311.N1 | 13-DEC-2009 01:06:14 | Bright | 35.500 | 149 | 45Eps Per | 2.8880 | 30000. | 71 | 40709 | No |
| 22 | GOM_NL__2PRFIN20091213_010757_000000482085_00074_40709_6312.N1 | 13-DEC-2009 01:07:57 | Bright | 47.500 | 107 | 37The Aur | 2.6490 | 11000. | 95 | 40709 | No |
| 23 | GOM_NL__2PRFIN20091213_011005_000000442085_00074_40709_6313.N1 | 13-DEC-2009 01:10:05 | Bright | 43.500 | 42 | 34Bet Aur | 1.9000 | 10200. | 87 | 40709 | No |
| 24 | GOM_NL__2PRFIN20091213_012535_000000492085_00074_40709_6314.N1 | 13-DEC-2009 01:25:35 | Bright | 49.000 | 36 | 50Alp UMa | 1.8000 | 6300.0 | 98 | 40709 | No |
| 25 | GOM_NL__2PRFIN20091213_012935_000000412085_00074_40709_6315.N1 | 13-DEC-2009 01:29:35 | Bright | 40.500 | 32 | 77Eps UMa | 1.7630 | 11000. | 81 | 40709 | No |
| 26 | GOM_NL__2PRFIN20091213_013204_000000572085_00074_40709_6316.N1 | 13-DEC-2009 01:32:04 | Bright | 57.000 | 39 | 85Eta UMa | 1.8540 | 24000. | 114 | 40709 | No |
| 27 | GOM_NL__2PRFIN20091213_013518_000000372085_00074_40709_6317.N1 | 13-DEC-2009 01:35:18 | Bright | 37.000 | 180 | 27Gam Boo | 3.0400 | 8000.0 | 74 | 40709 | No |
| 28 | GOM_NL__2PRFIN20091213_014142_000000472085_00074_40709_6318.N1 | 13-DEC-2009 01:41:42 | Bright | 46.500 | 111 | 8Eta Boo | 2.6800 | 6000.0 | 93 | 40709 | No |
| 29 | GOM_NL__2PRFIN20091213_014526_000000702085_00074_40709_6319.N1 | 13-DEC-2009 01:45:26 | Bright | 69.500 | 138 | 47Eps Vir | 2.8280 | 4700.0 | 139 | 40709 | No |
| 30 | GOM_NL__2PRFIN20091213_015122_000000502085_00074_40709_6320.N1 | 13-DEC-2009 01:51:22 | Twilight | 49.500 | 15 | 67Alp Vir | 0.97600 | 28000. | 99 | 40709 | No |
| 31 | GOM_NL__2PRFIN20091213_015451_000000472085_00074_40709_6321.N1 | 13-DEC-2009 01:54:51 | Twilight | 46.500 | 169 | 46Gam Hya | 2.9910 | 4700.0 | 93 | 40709 | No |
| 32 | GOM_NL__2PRFIN20091213_015657_000000522085_00074_40709_6322.N1 | 13-DEC-2009 01:56:57 | Dark | 51.500 | 100 | 4Gam Crv | 2.5800 | 13100. | 103 | 40709 | No |
| 33 | GOM_NL__2PRFIN20091213_015833_000000572085_00074_40709_6323.N1 | 13-DEC-2009 01:58:33 | Dark | 56.500 | 171 | 2Eps Crv | 3.0010 | 4250.0 | 113 | 40709 | No |
| 34 | GOM_NL__2PRFIN20091213_020215_000000412085_00074_40709_6324.N1 | 13-DEC-2009 02:02:15 | Dark | 41.000 | 64 | Gam Cen | 2.2000 | 10600. | 82 | 40709 | No |
| 35 | GOM_NL__2PRFIN20091213_020350_000000412085_00075_40710_6306.N1 | 13-DEC-2009 02:03:50 | Dark | 41.000 | 99 | Del Cen | 2.5750 | 26000. | 82 | 40710 | No |
| 36 | GOM_NL__2PRFIN20091213_020732_000000442085_00075_40710_6307.N1 | 13-DEC-2009 02:07:32 | Dark | 44.000 | 113 | Mu Vel | 2.6920 | 5000.0 | 88 | 40710 | No |
| 37 | GOM_NL__2PRFIN20091213_021131_000000412085_00075_40710_6308.N1 | 13-DEC-2009 02:11:31 | Dark | 40.500 | 71 | Iot Car | 2.2460 | 7700.0 | 81 | 40710 | No |
| 38 | GOM_NL__2PRFIN20091213_021606_000000462085_00075_40710_6309.N1 | 13-DEC-2009 02:16:06 | Dark | 46.000 | 34 | Gam2Vel | 1.7930 | 23000. | 92 | 40710 | No |
| 39 | GOM_NL__2PRFIN20091213_021828_000000552085_00075_40710_6310.N1 | 13-DEC-2009 02:18:28 | Dark | 55.000 | 2 | Alp Car | -0.73600 | 7000.0 | 110 | 40710 | No |
| 40 | GOM_NL__2PRFIN20091213_022104_000000562085_00075_40710_6311.N1 | 13-DEC-2009 02:21:04 | Dark | 56.000 | 117 | Pi Pup | 2.7060 | 3800.0 | 112 | 40710 | No |
| 41 | GOM_NL__2PRFIN20091213_022425_000000572085_00075_40710_6312.N1 | 13-DEC-2009 02:24:25 | Straylight | 56.500 | 23 | 21Eps CMa | 1.5020 | 26000. | 113 | 40710 | No |
| 42 | GOM_NL__2PRFIN20091213_022911_000000522085_00075_40710_6313.N1 | 13-DEC-2009 02:29:11 | Straylight | 51.500 | 47 | 2Bet CMa | 1.9760 | 28000. | 103 | 40710 | No |

3.1 Plot quality information per product (time dependant)

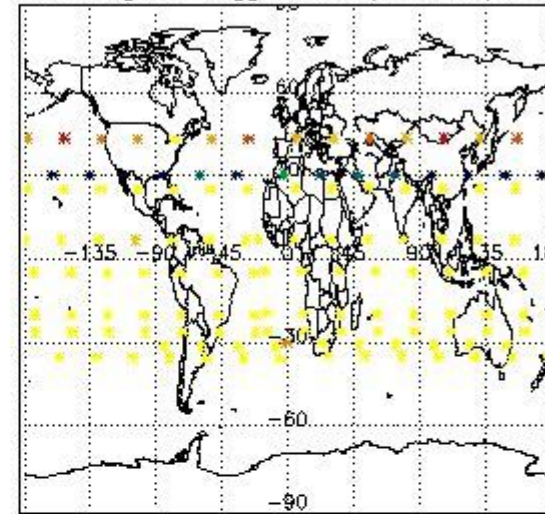


3.2 Plot quality information per product (world map)

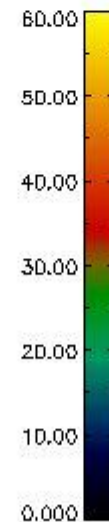
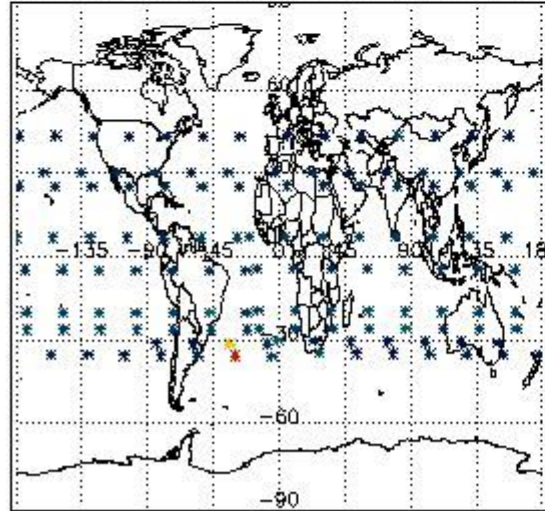
Percentage of flagged data per O3 profile



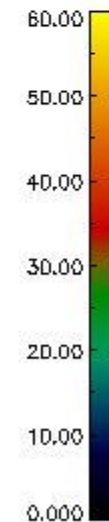
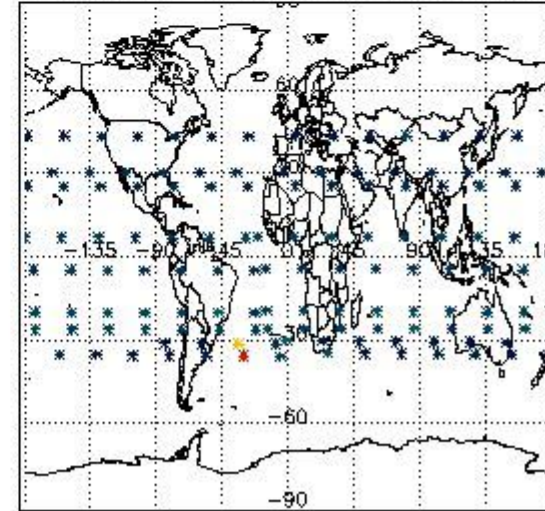
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

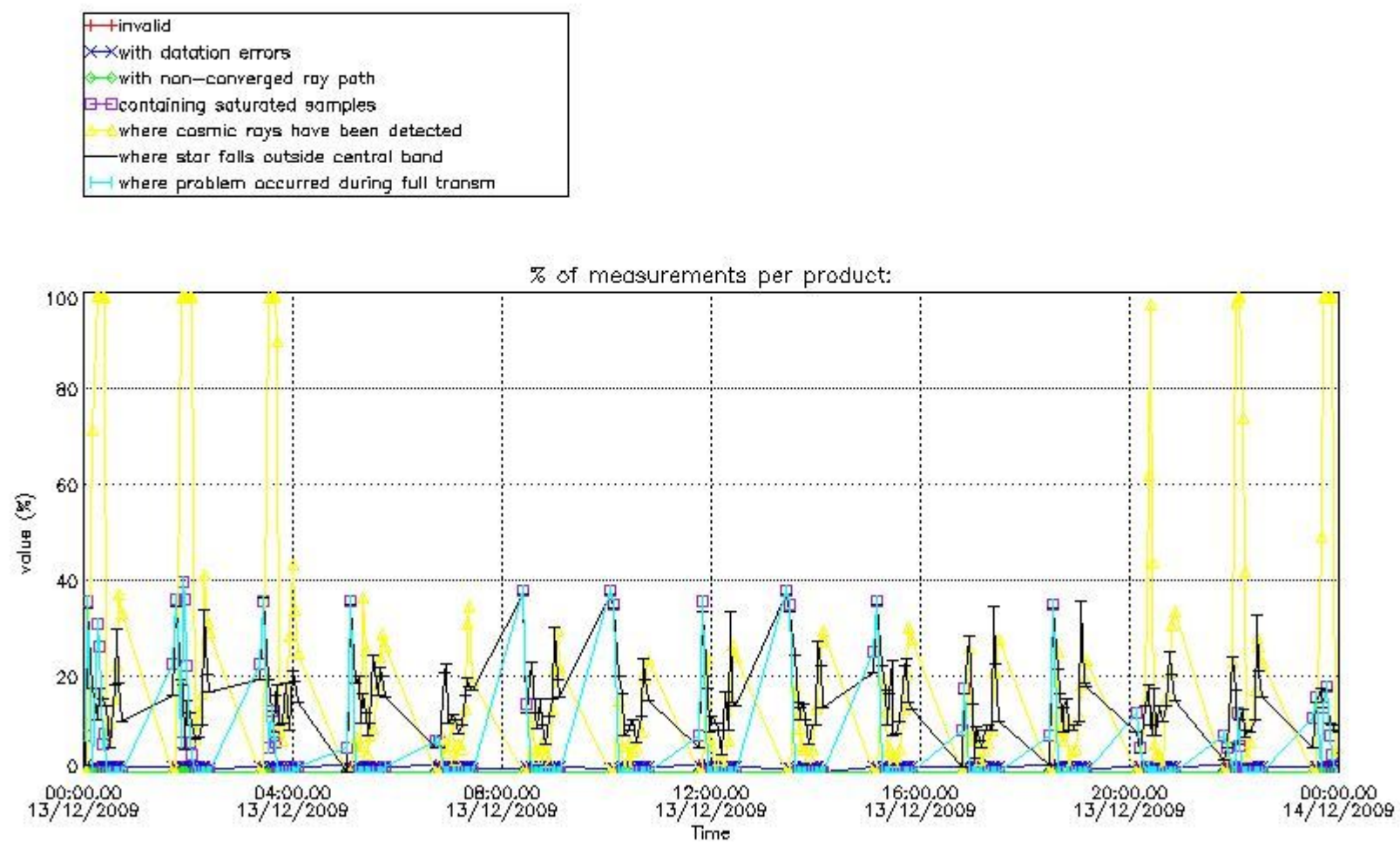


4. Level 1 quality information per product

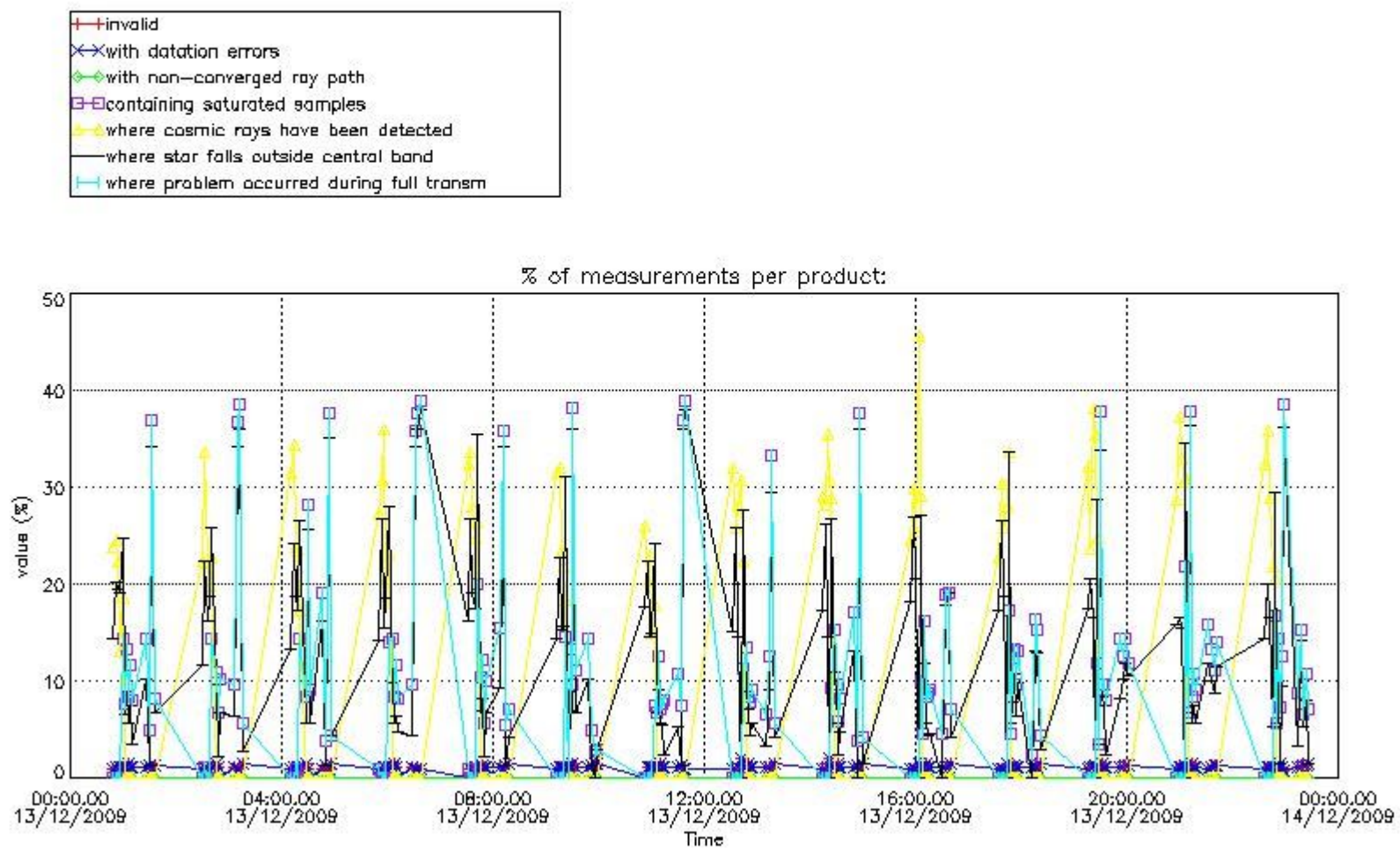
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

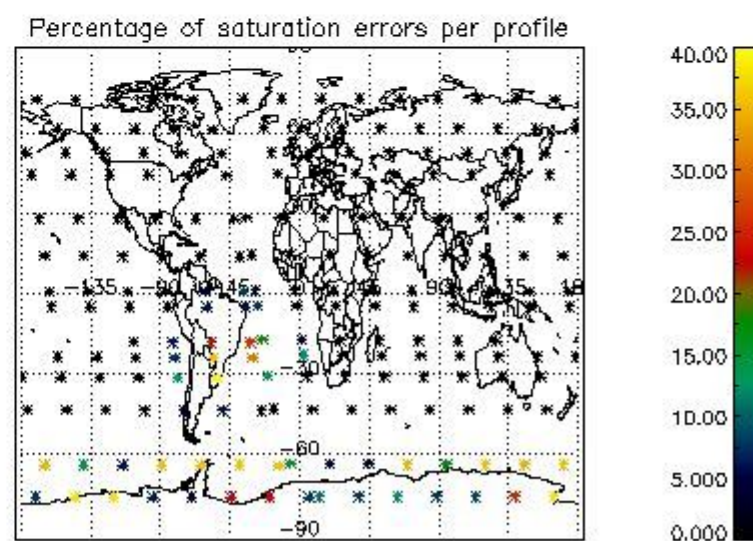
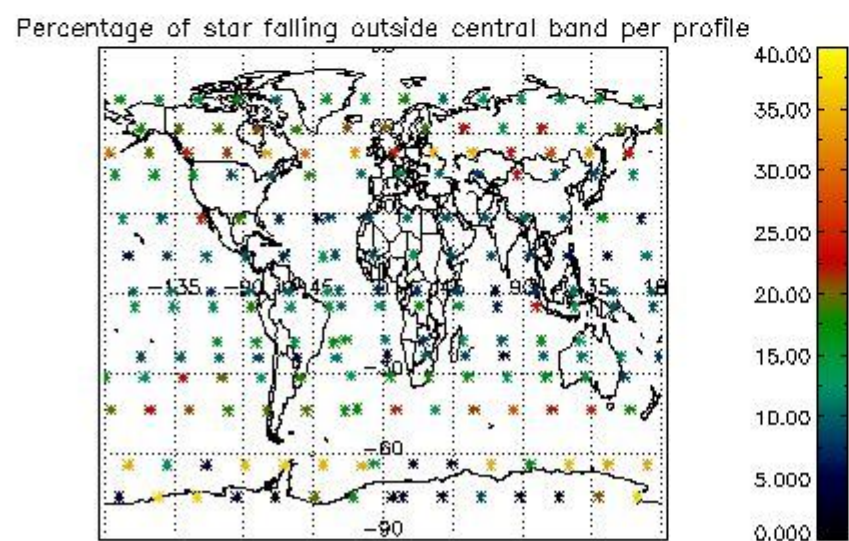
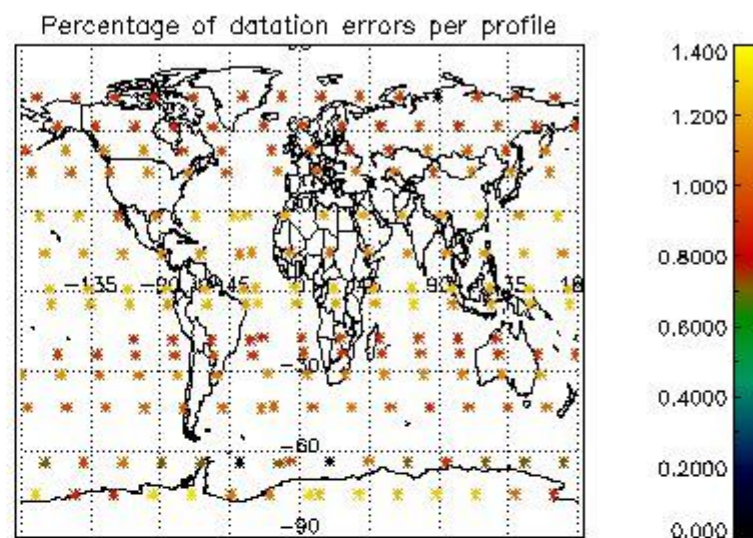
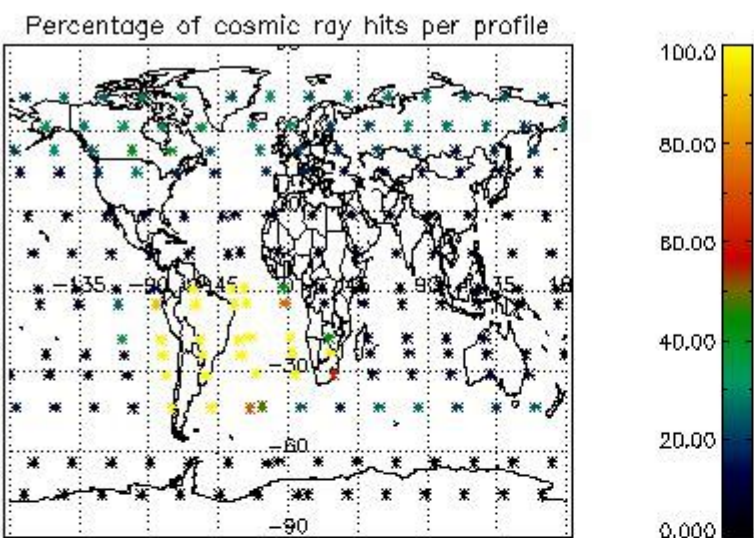


4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

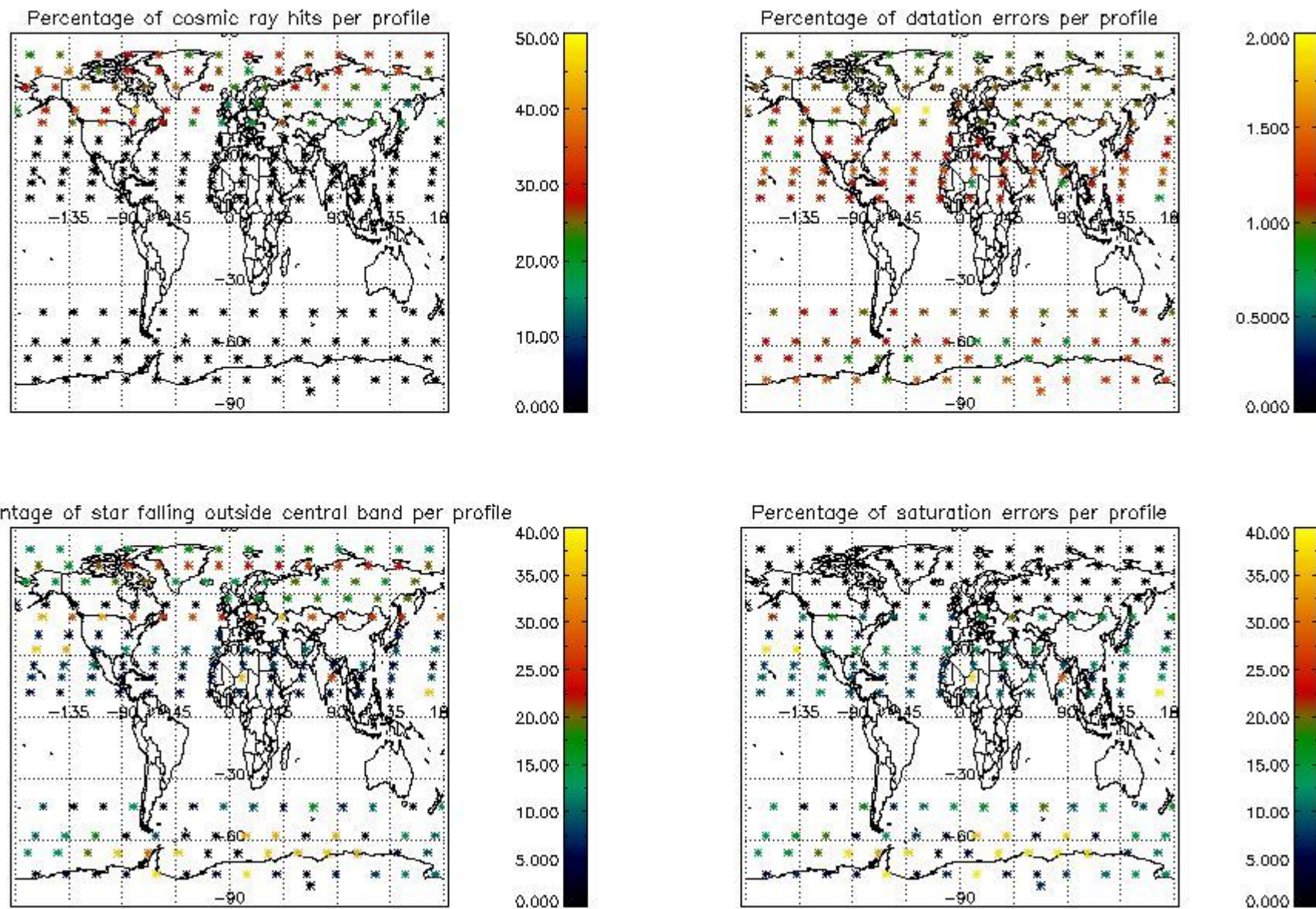


4.2 Plot quality information per product coming from level 1b processing (world map)

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



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

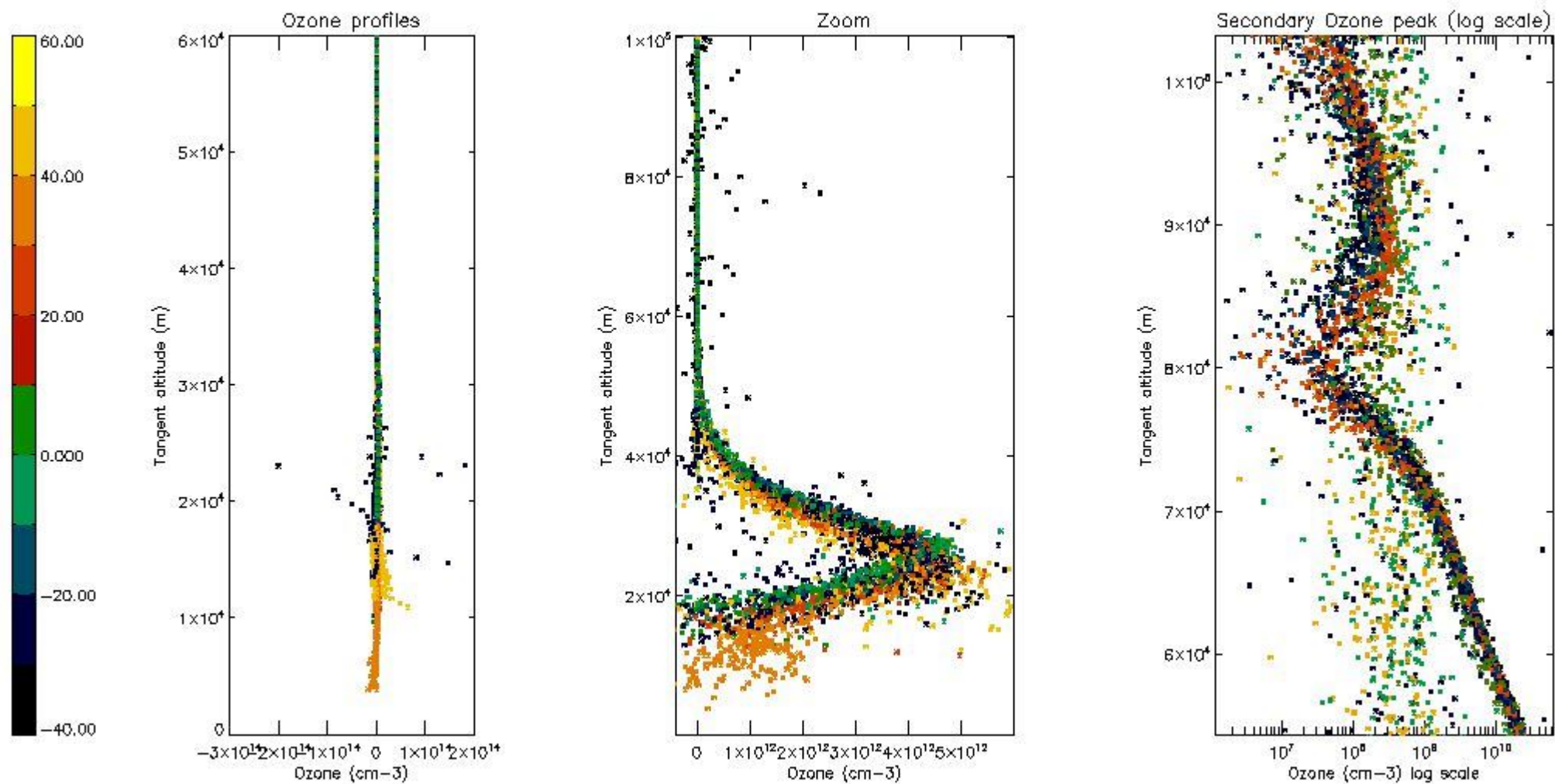
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD | 33 |
| STD < 20 | 15 |

| | |
|----------|----|
| STD < 10 | 11 |
| STD < 5 | 7 |

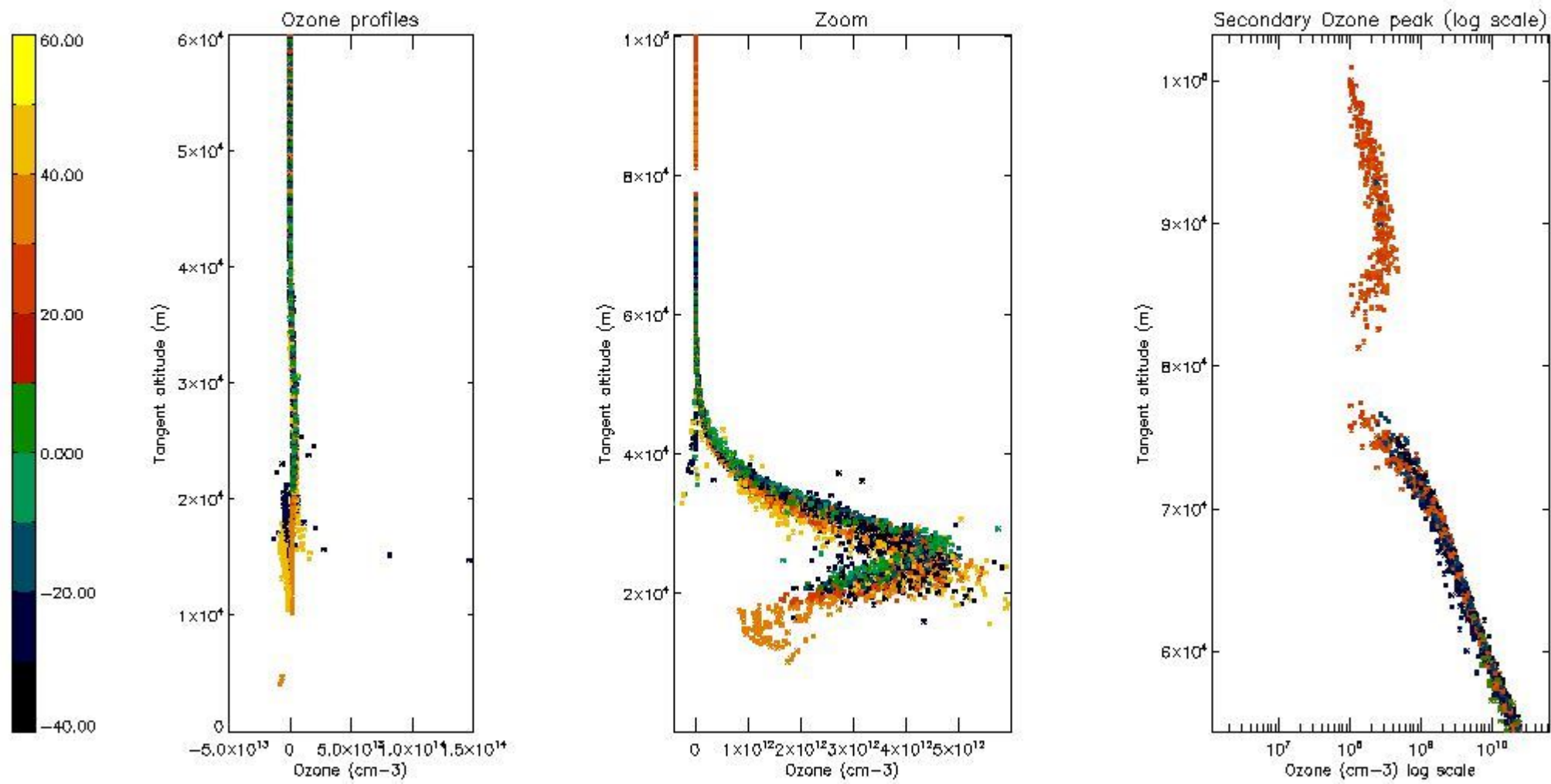
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



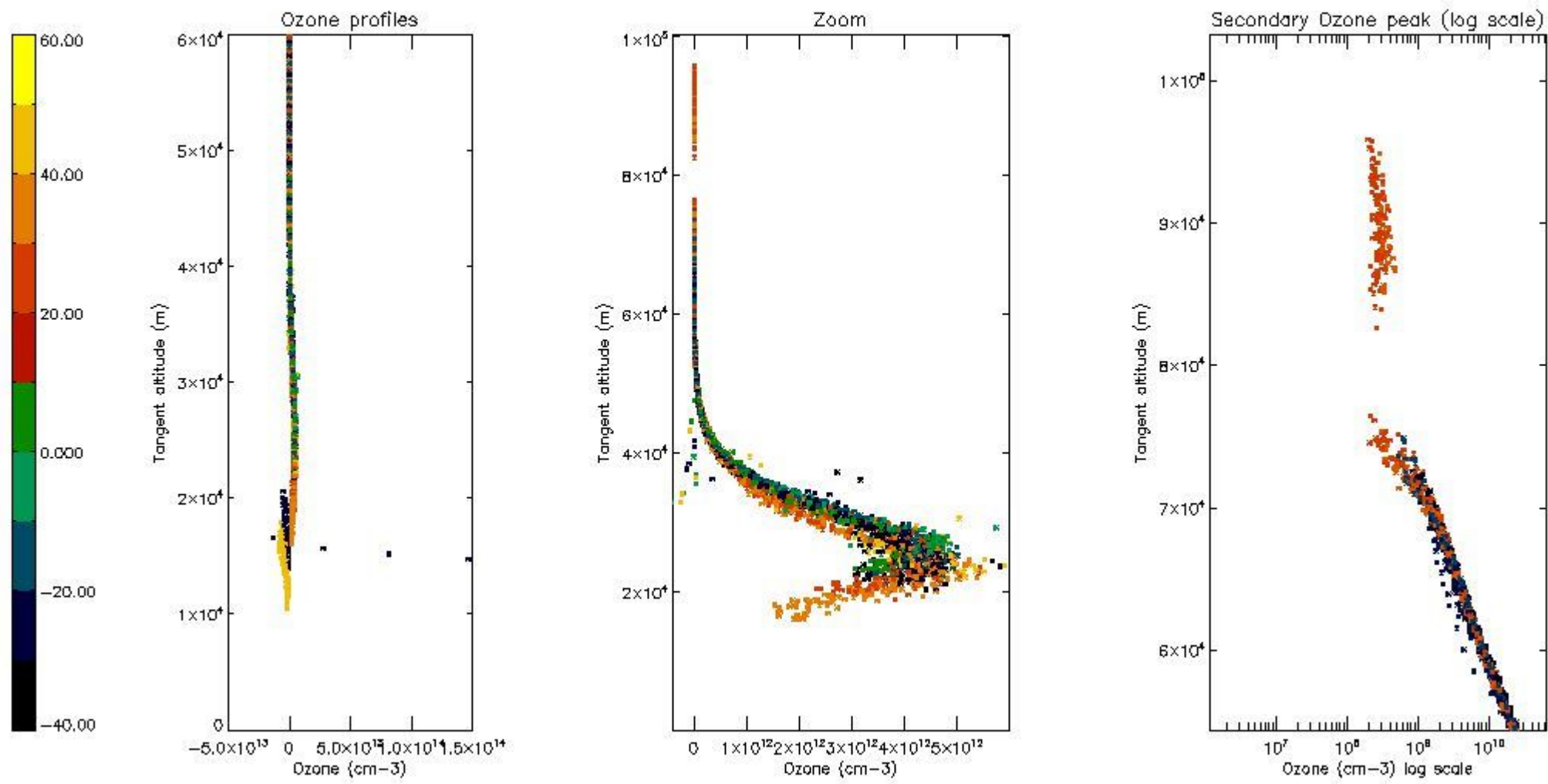
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



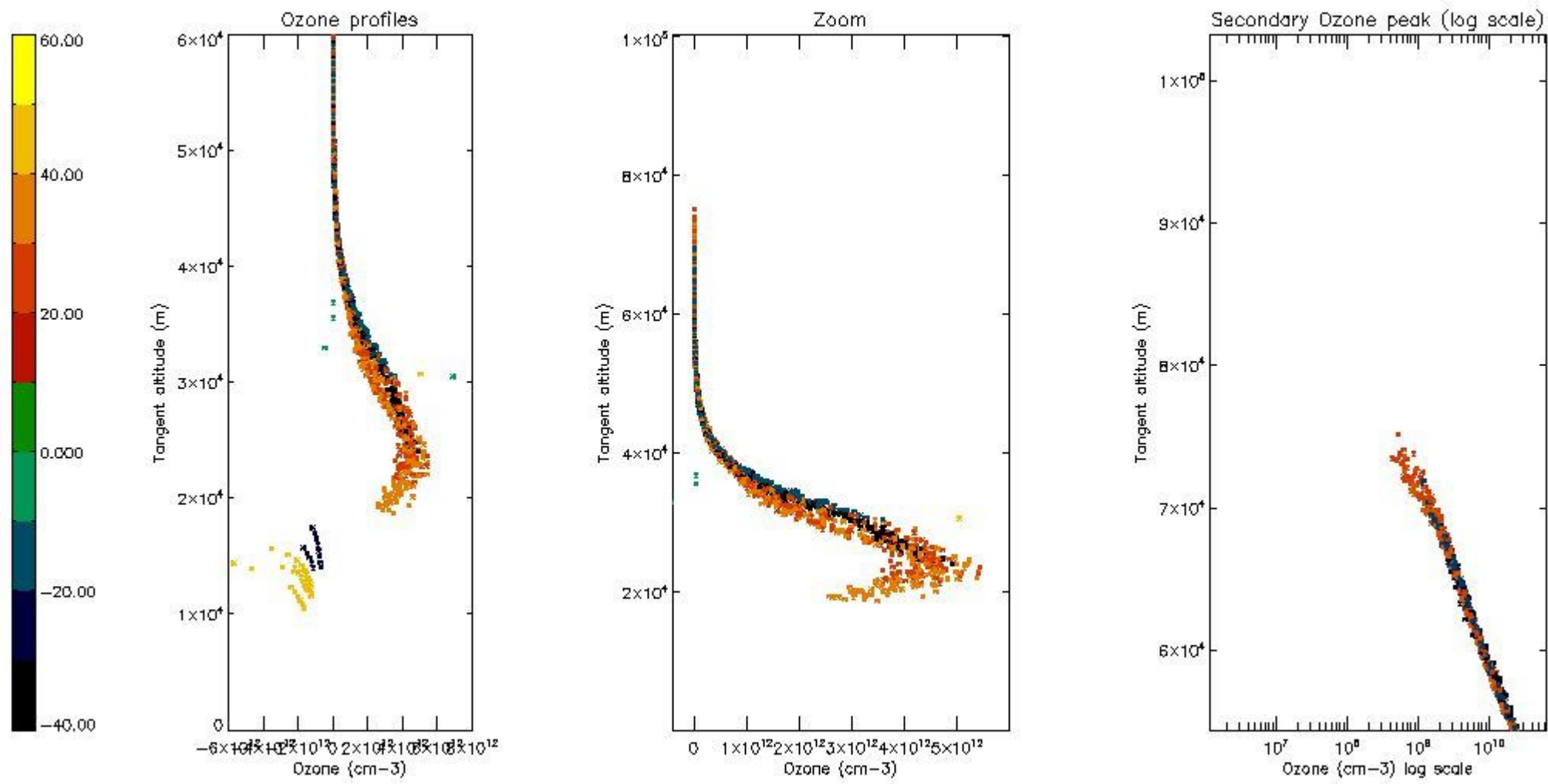
5.4 Plot ozone profiles where $STD < 10\%$ (dark without errors)

The colorbar represents the latitude.



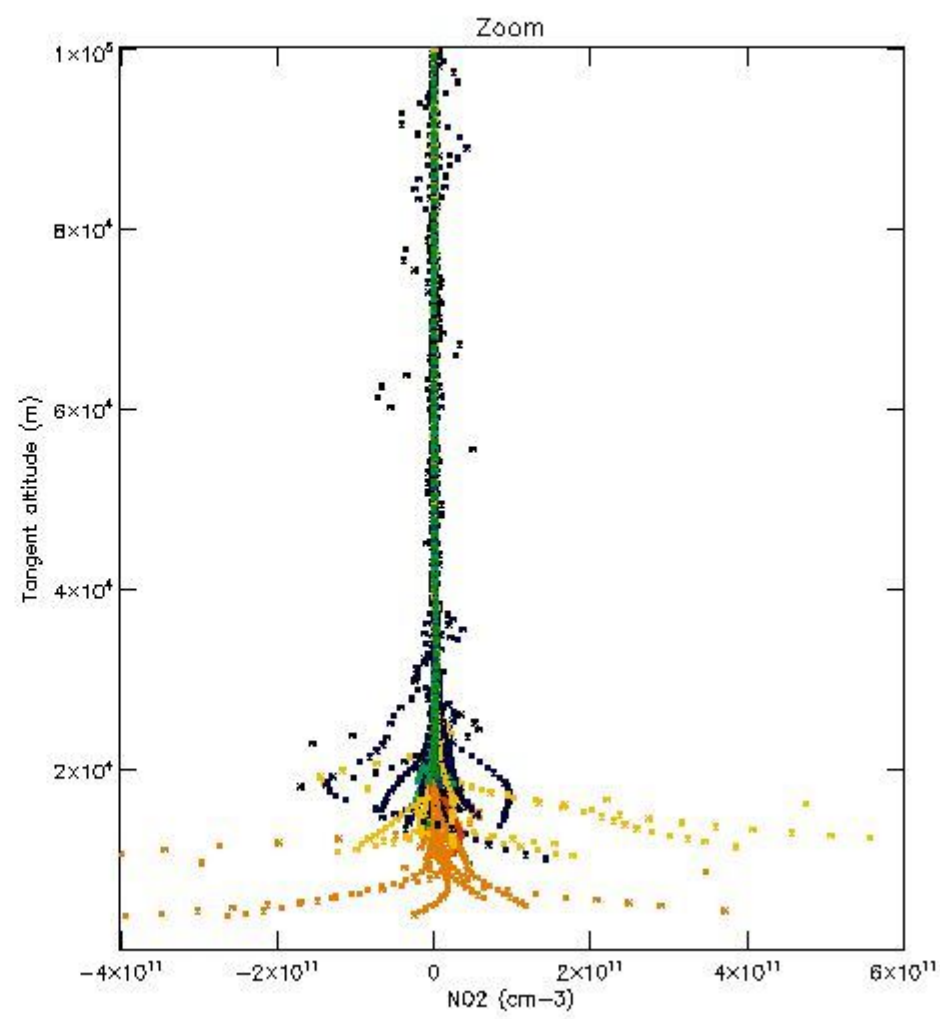
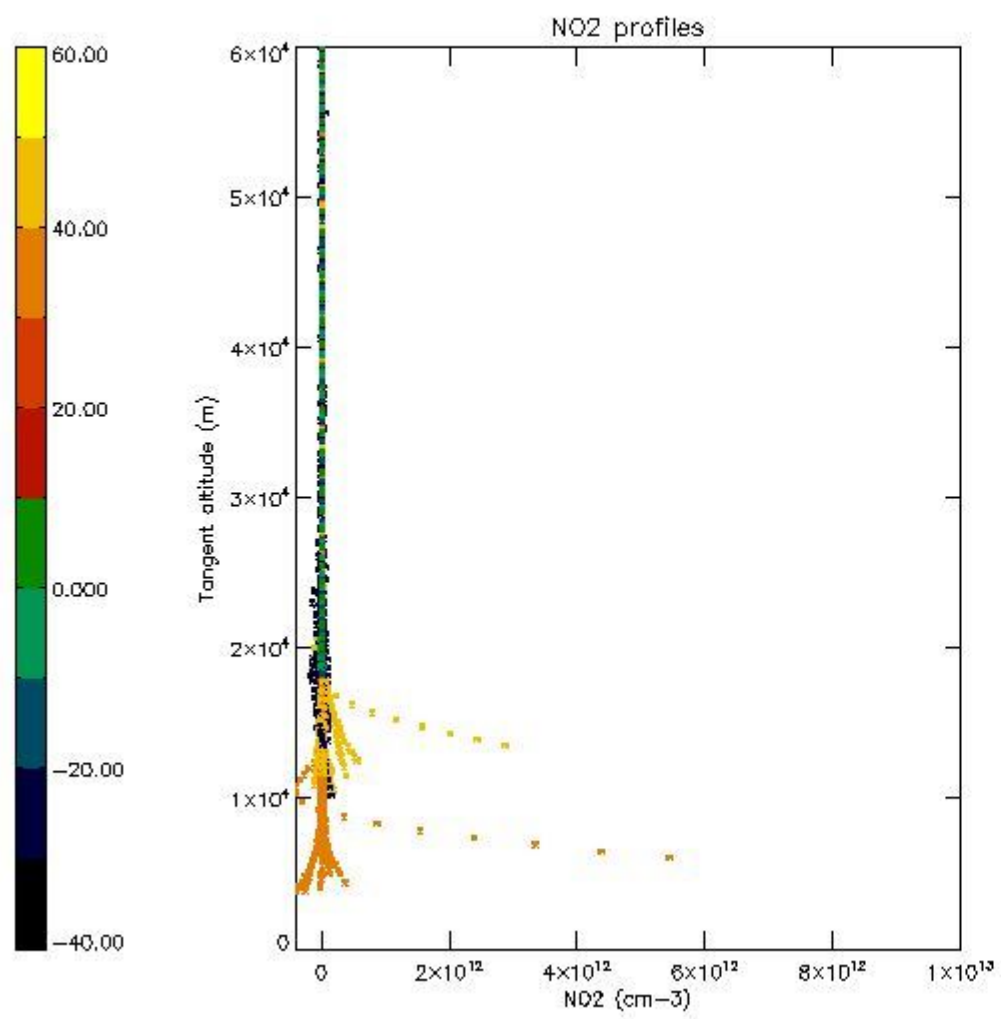
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



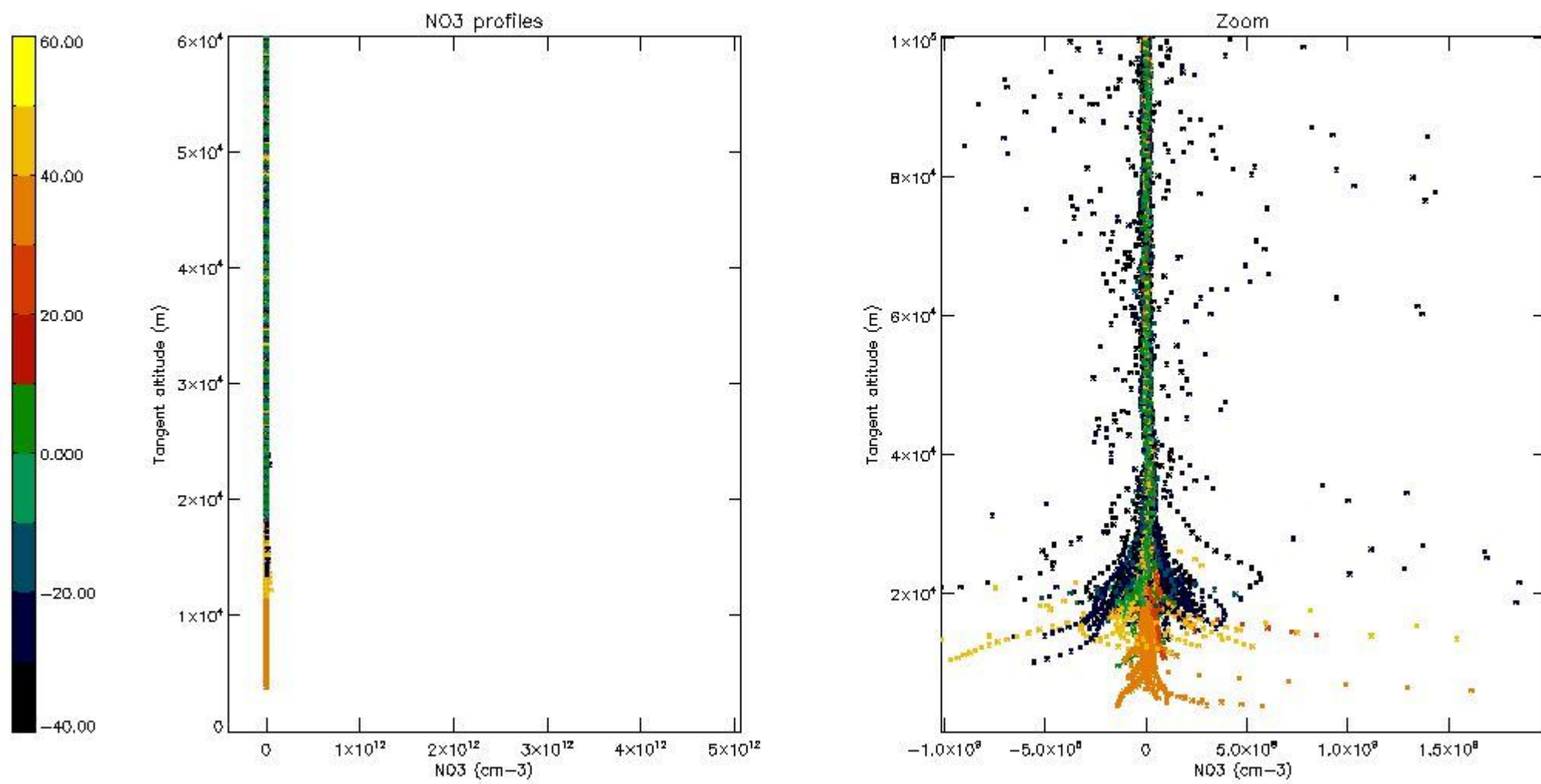
5.6 Plot NO₂ profiles for all STD (dark without errors)

The colorbar represents the latitude.



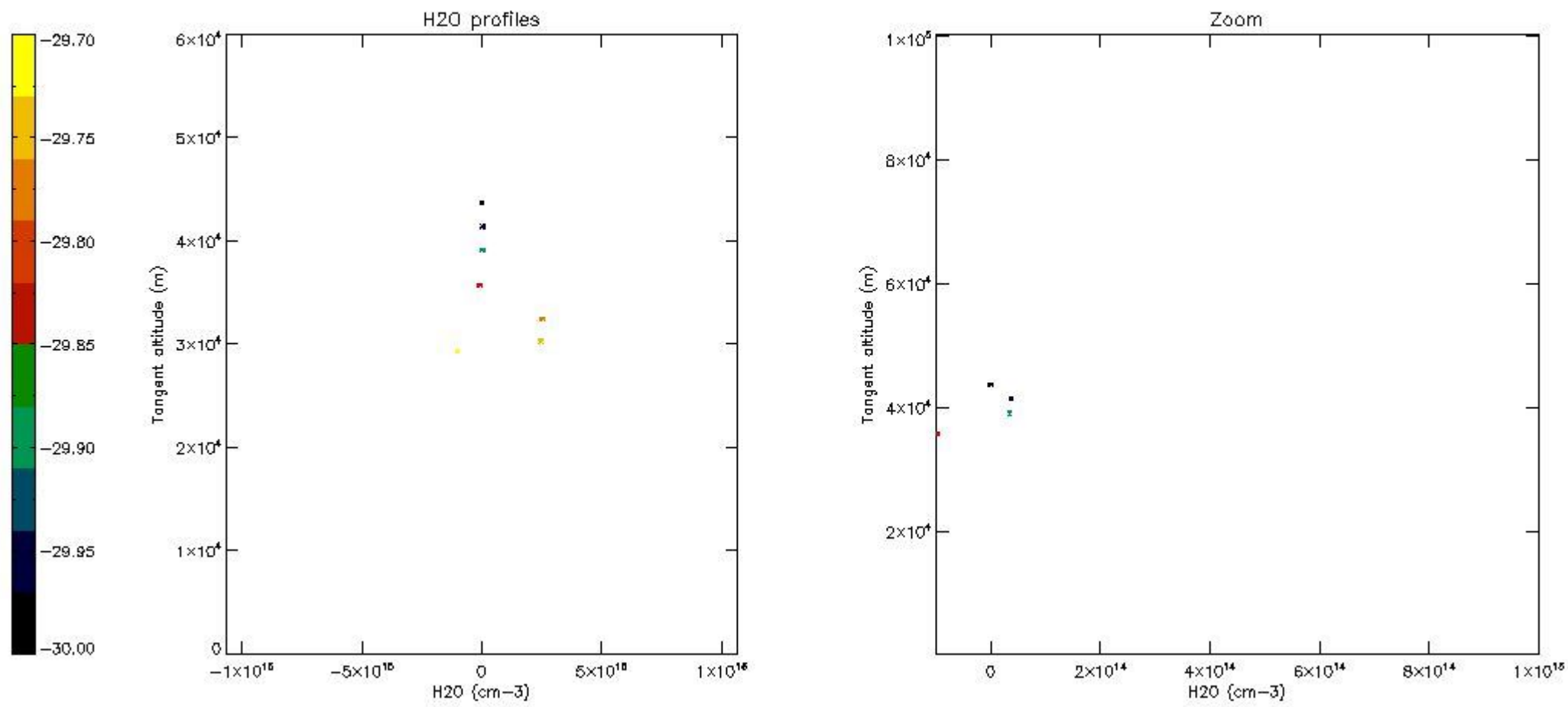
5.7 Plot NO3 profiles for all STD (dark without errors)

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)

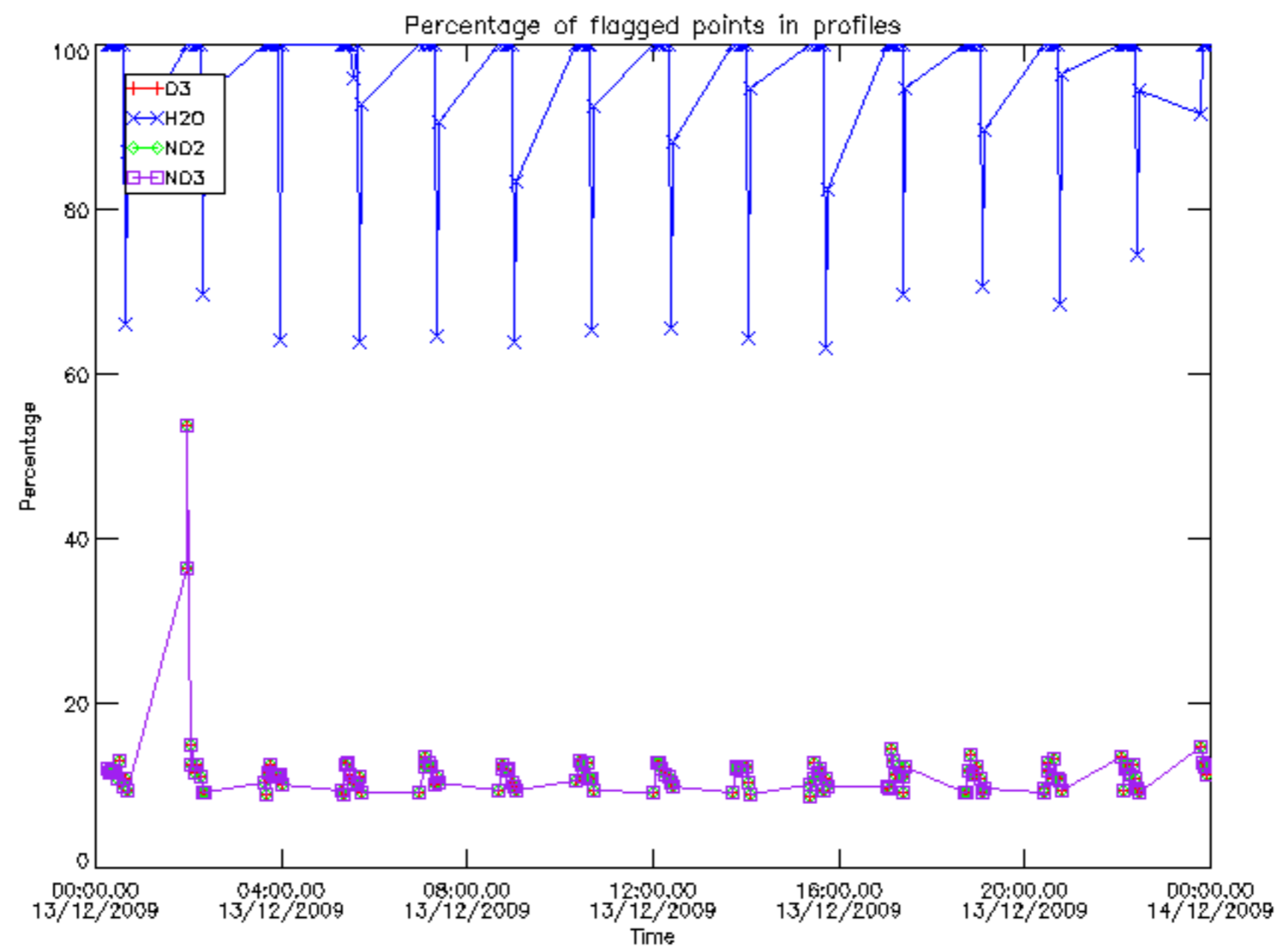
The colorbar represents the latitude.



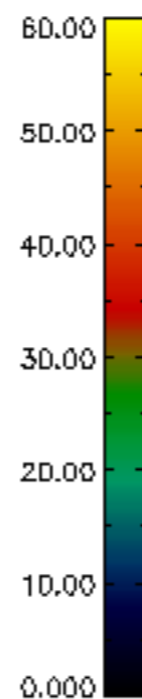
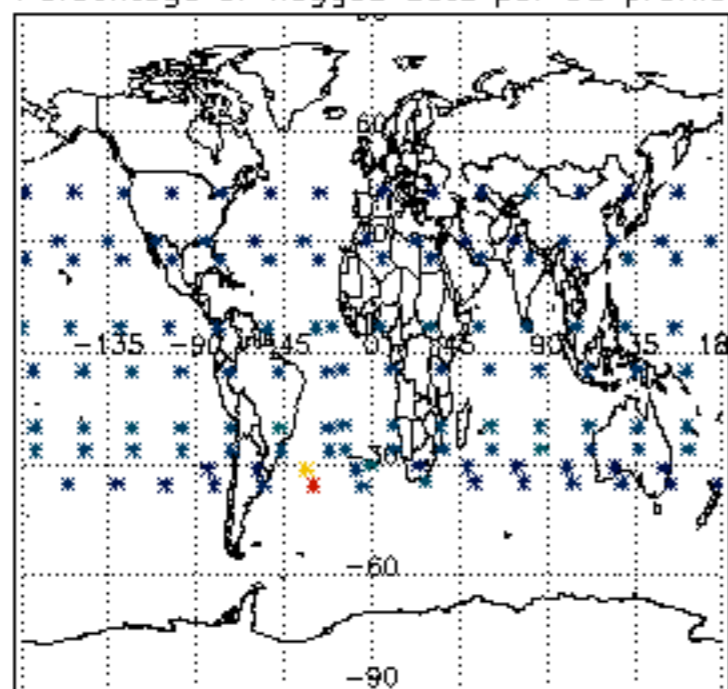
6. Auxiliary Data Files used for the production reported in section 2

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.

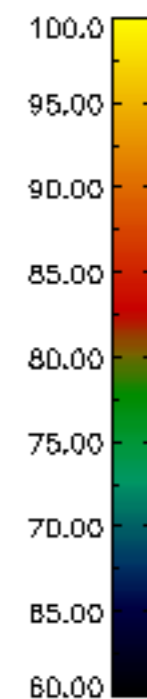
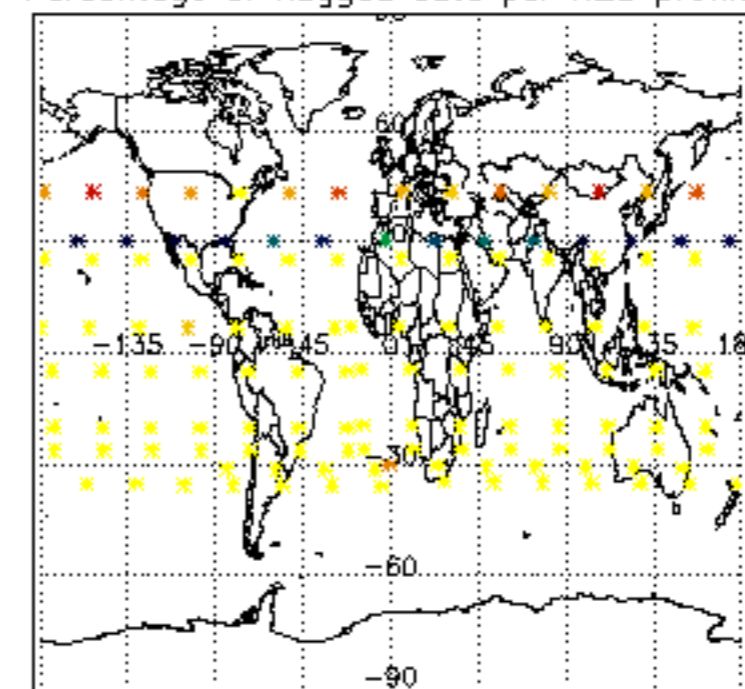
| Type | Auxiliary Filename | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1 | 13-DEC-2009 00:01:06 |
| LEVEL-2_PROC_CONFIG | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1 | 13-DEC-2009 00:01:06 |
| CROSS_SECTIONS_FILE | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1 | 13-DEC-2009 00:01:06 |



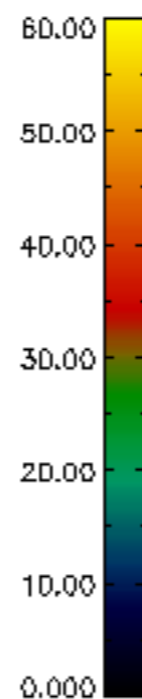
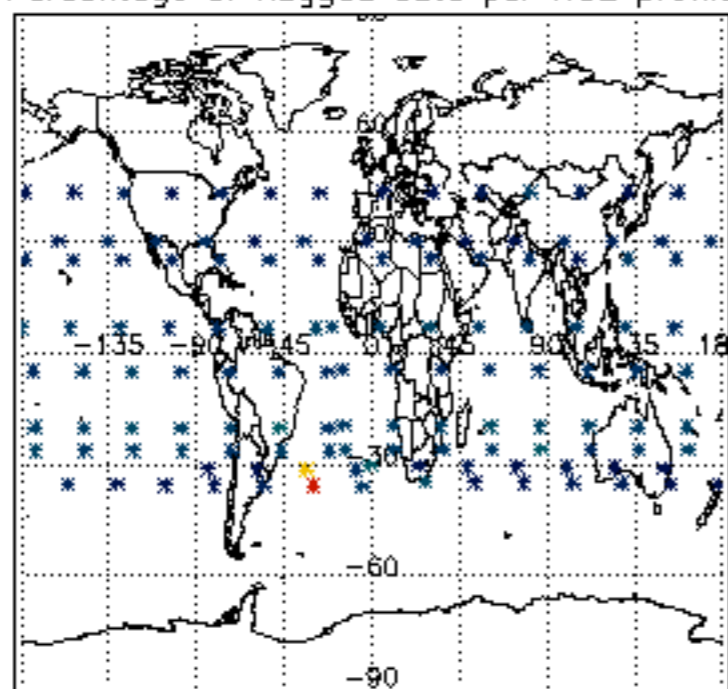
Percentage of flagged data per D3 profile



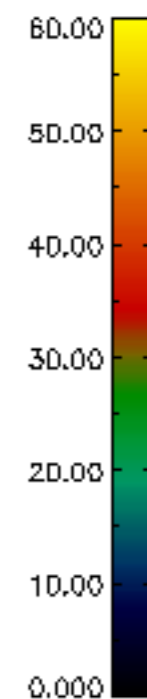
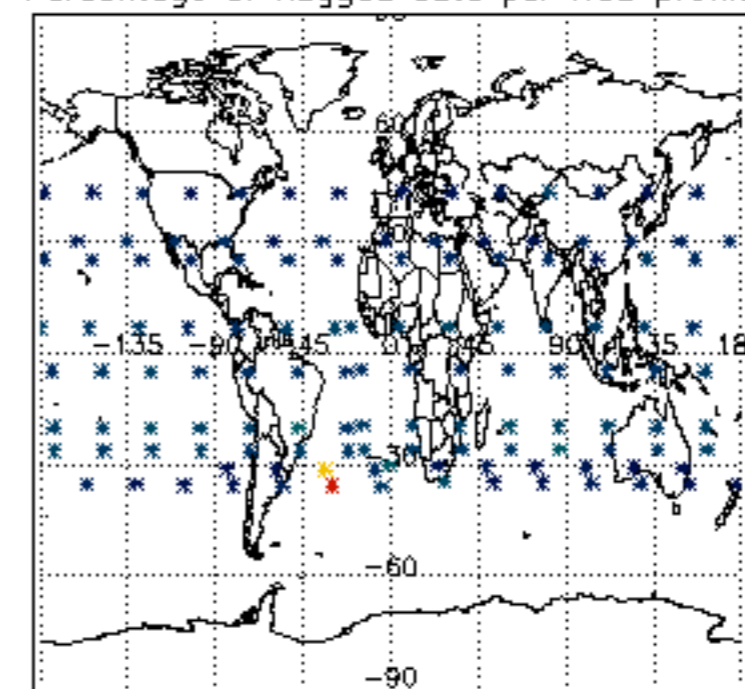
Percentage of flagged data per H2O profile

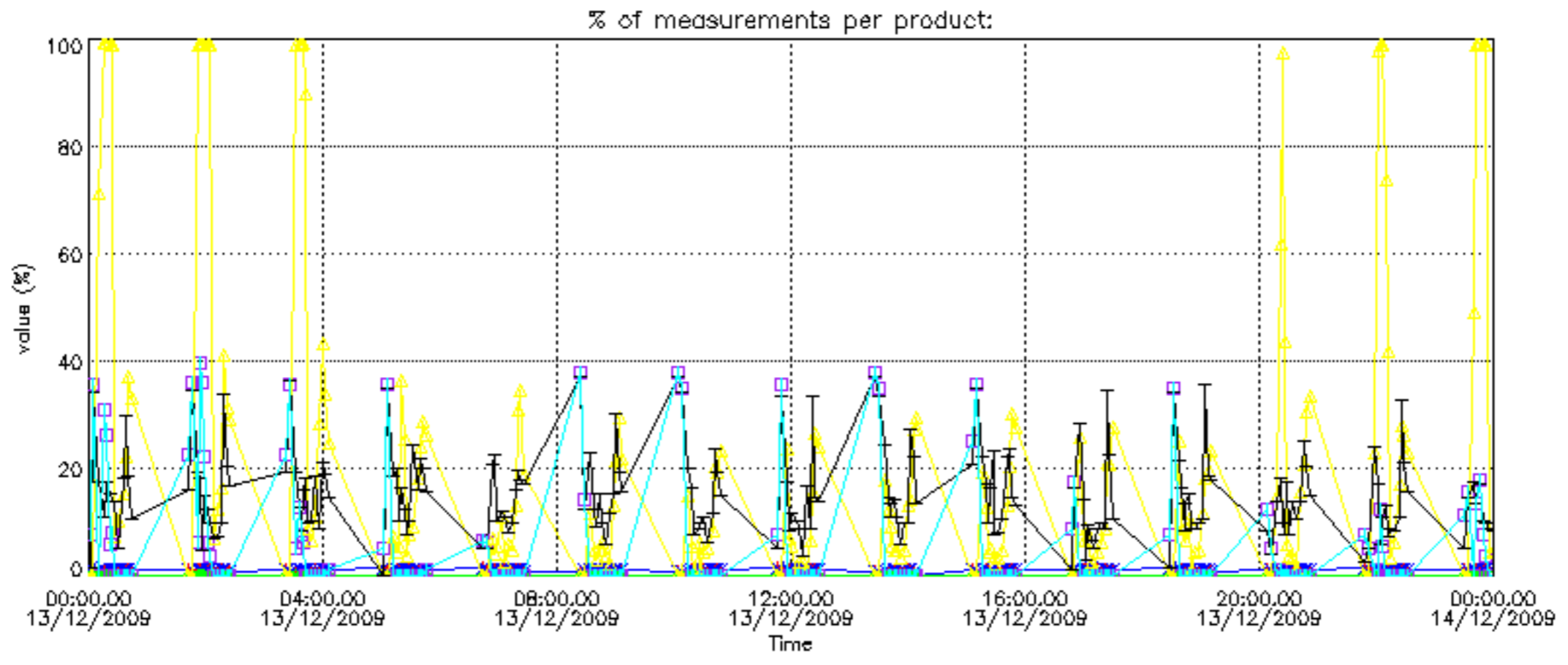


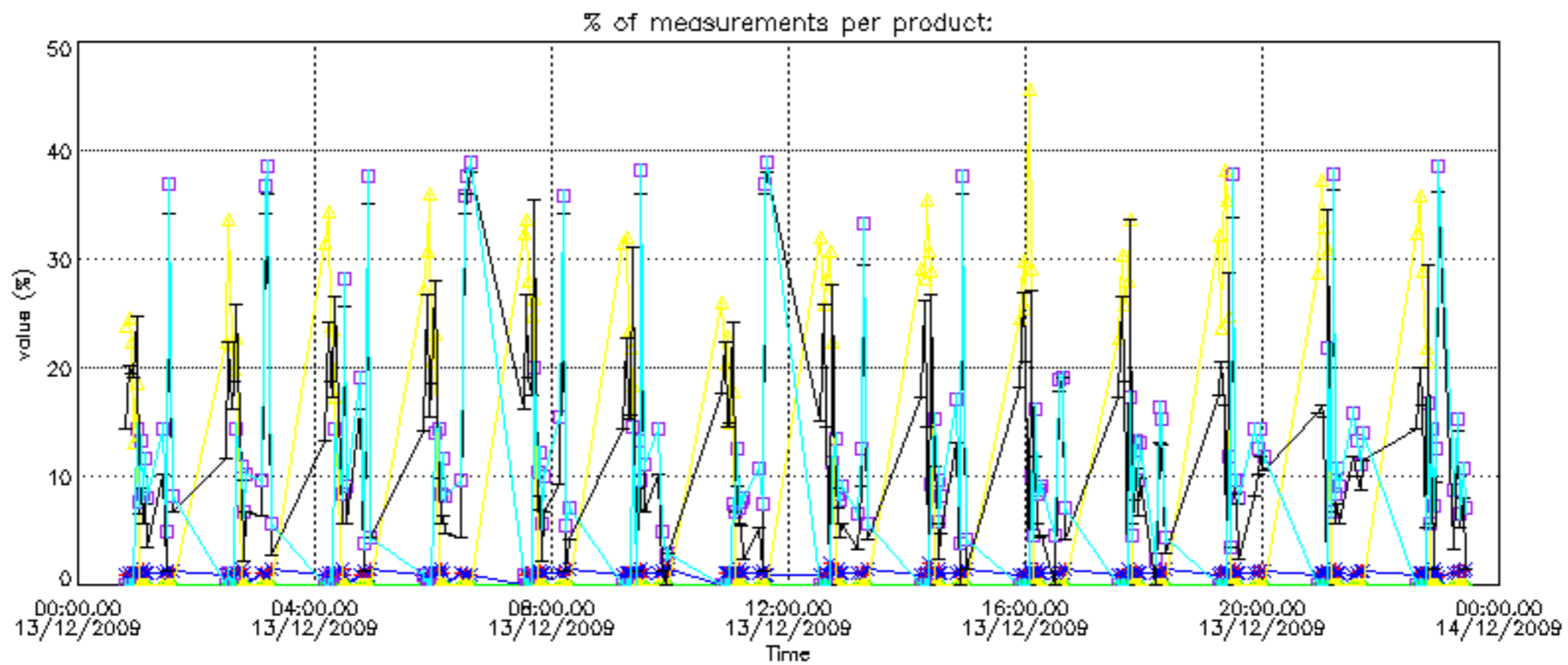
Percentage of flagged data per NO2 profile



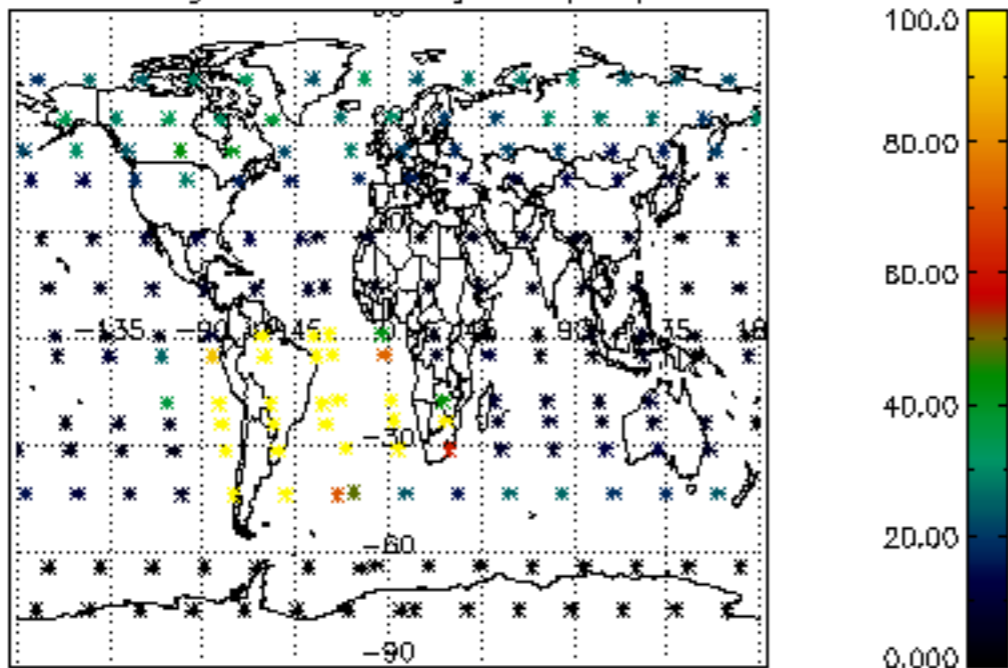
Percentage of flagged data per NO3 profile



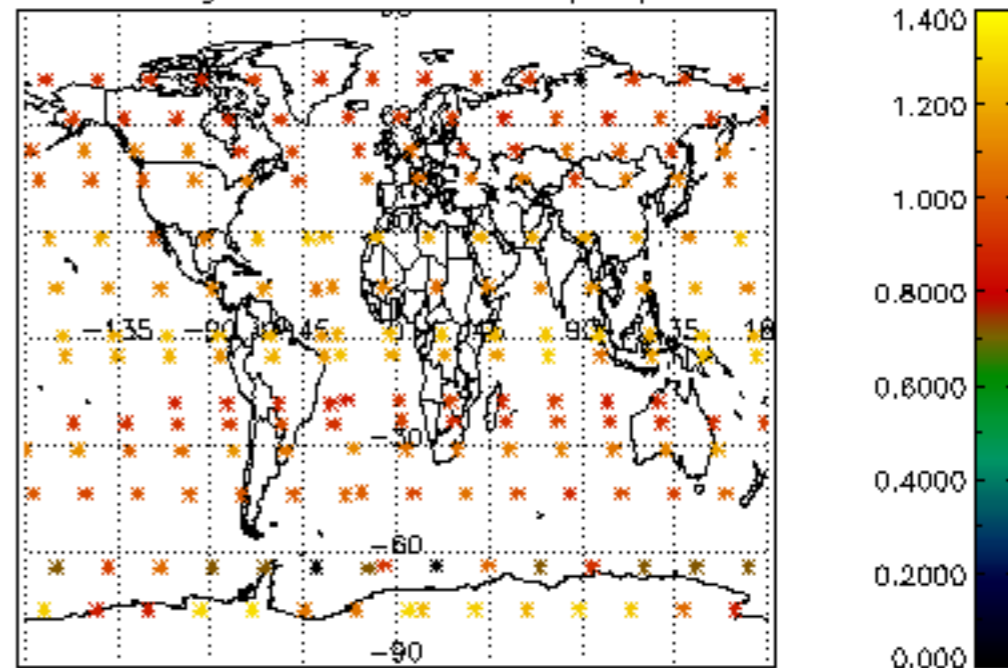




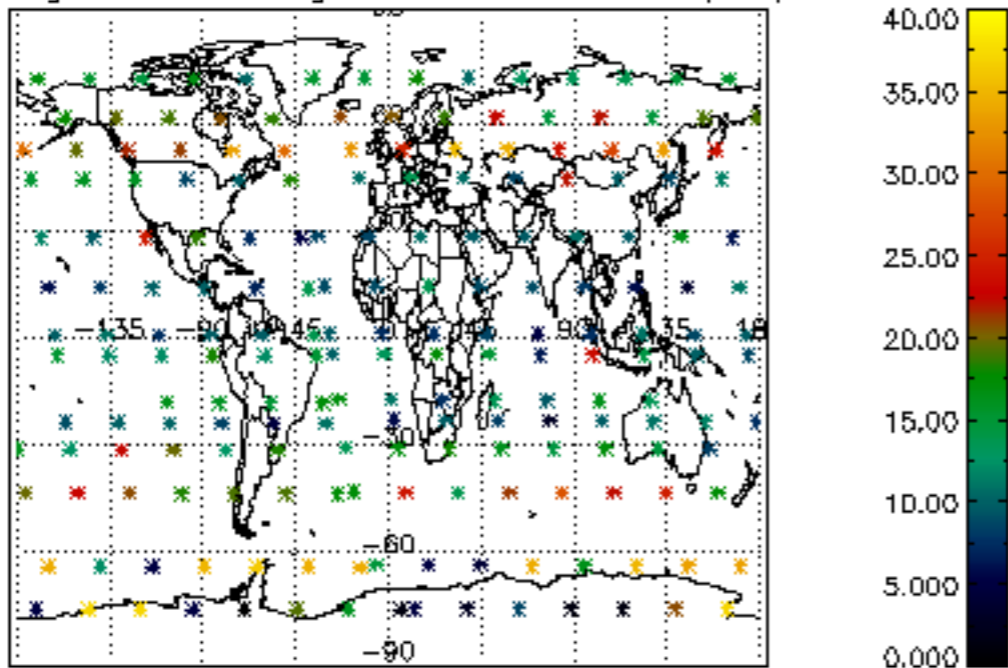
Percentage of cosmic ray hits per profile



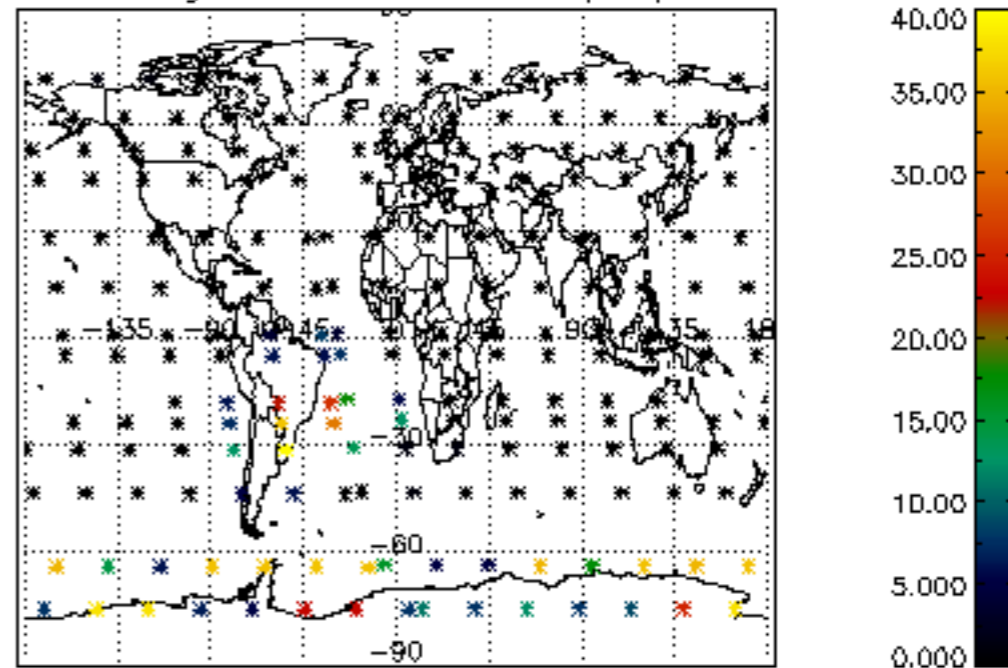
Percentage of datation errors per profile



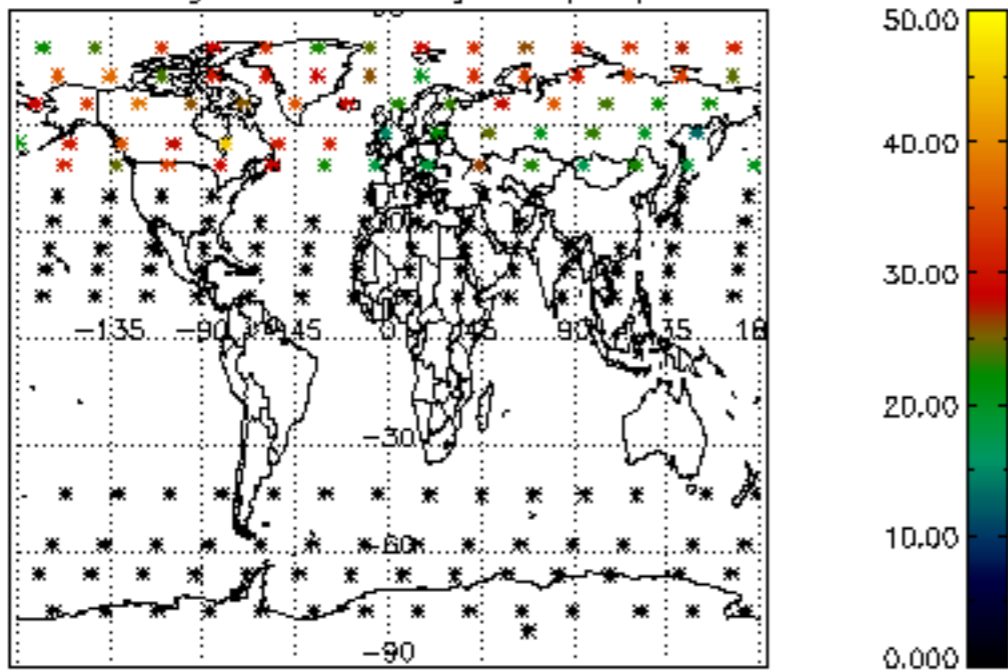
Percentage of star falling outside central band per profile



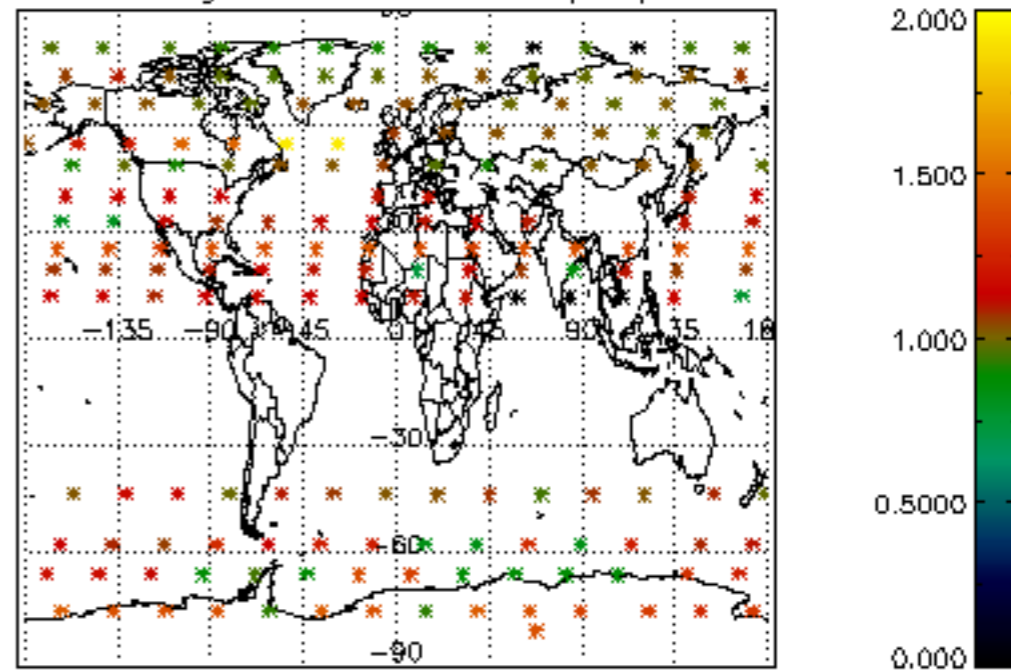
Percentage of saturation errors per profile



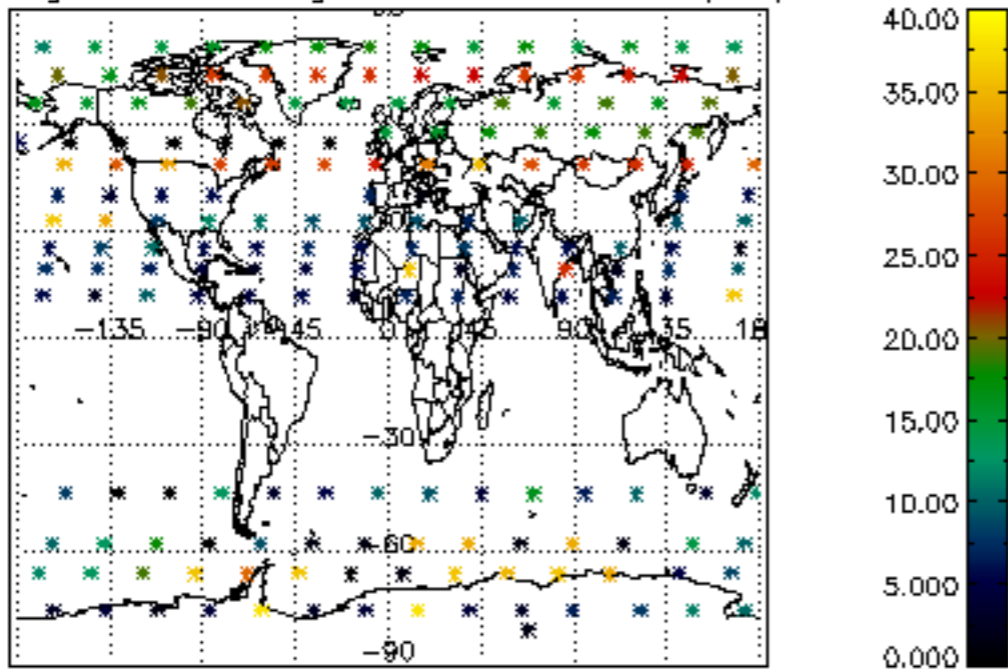
Percentage of cosmic ray hits per profile



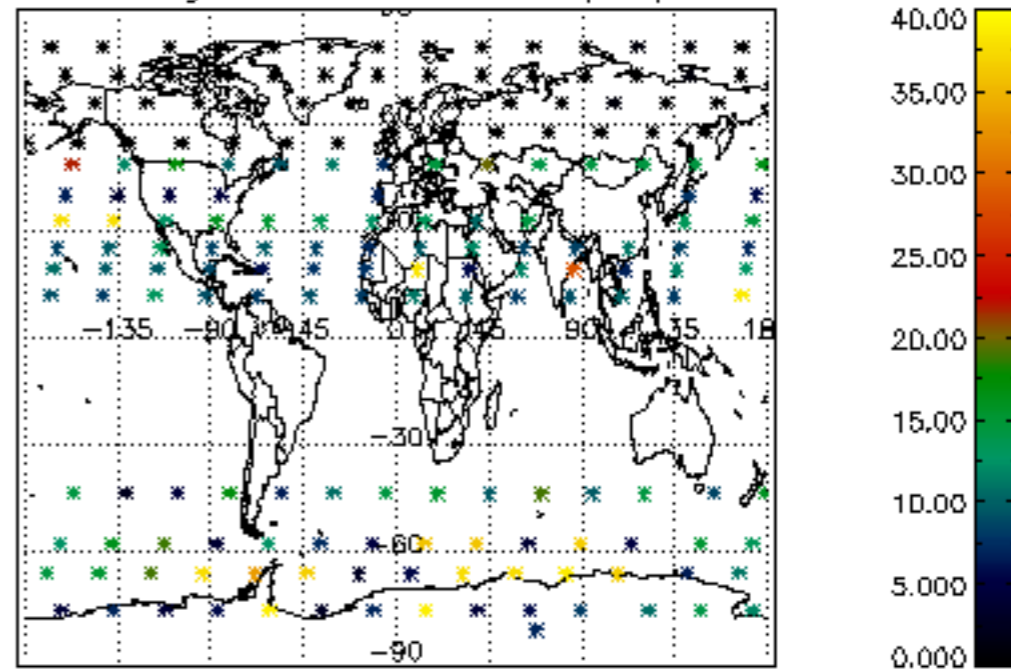
Percentage of datation errors per profile

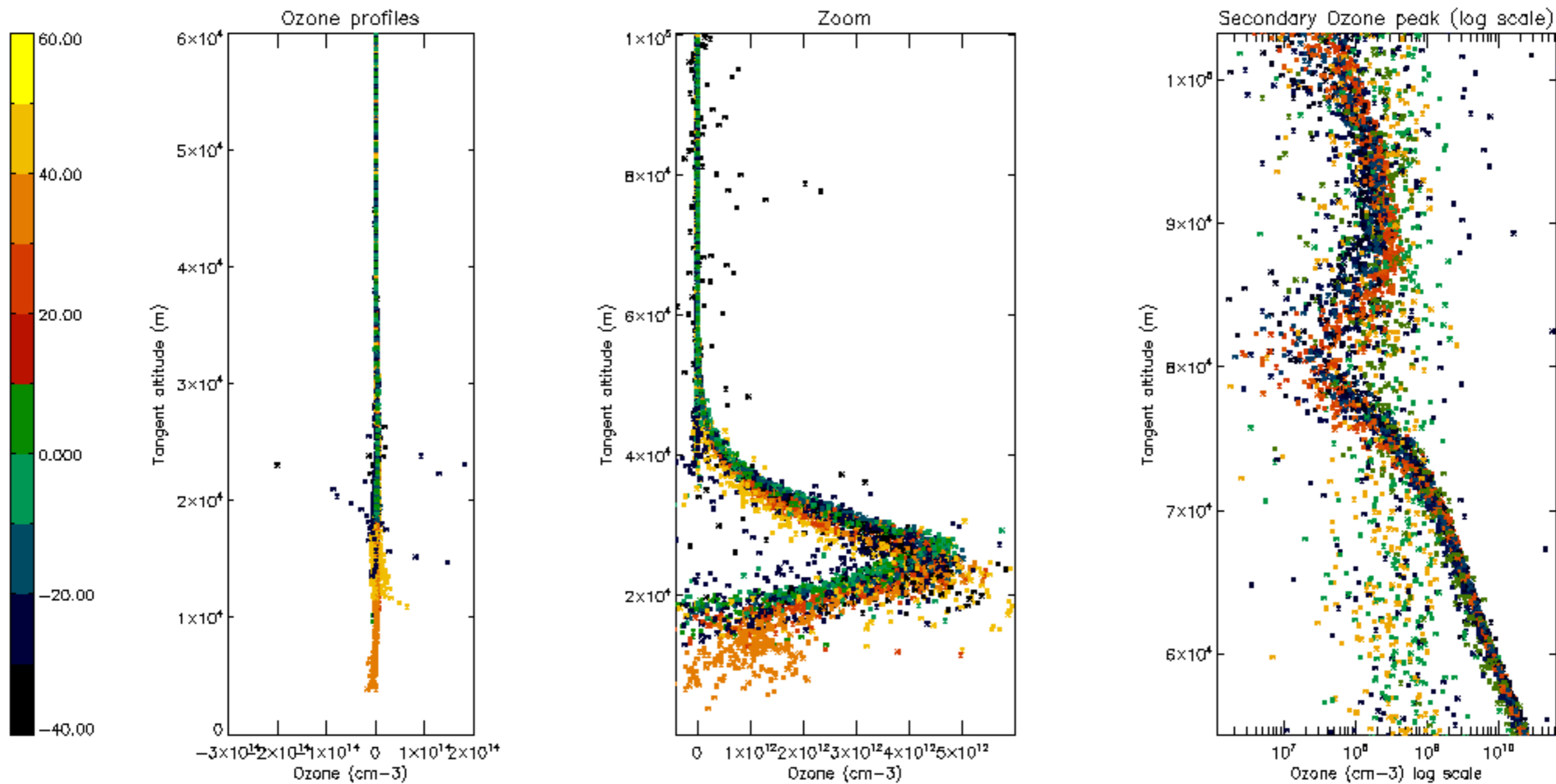


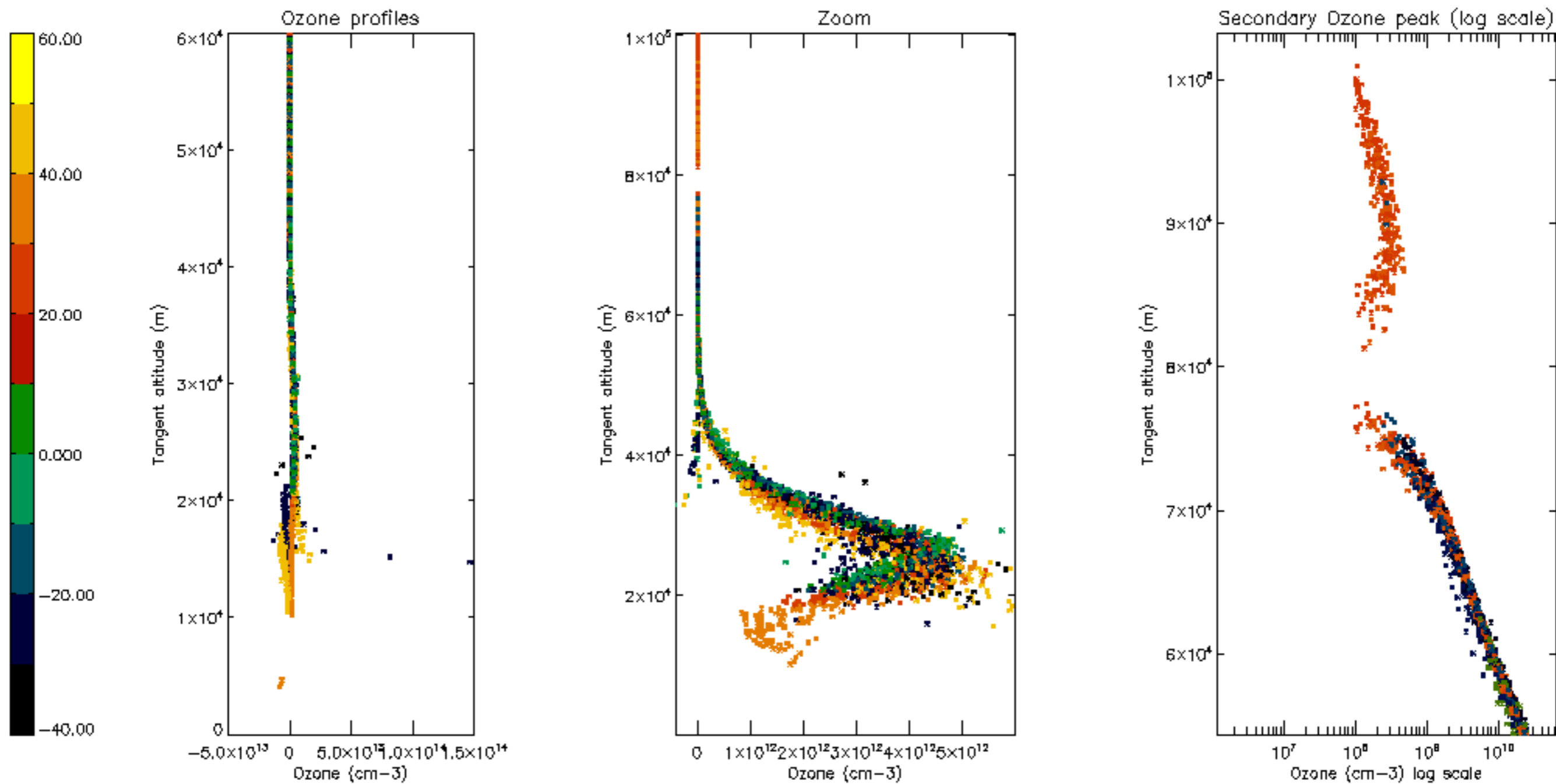
Percentage of star falling outside central band per profile

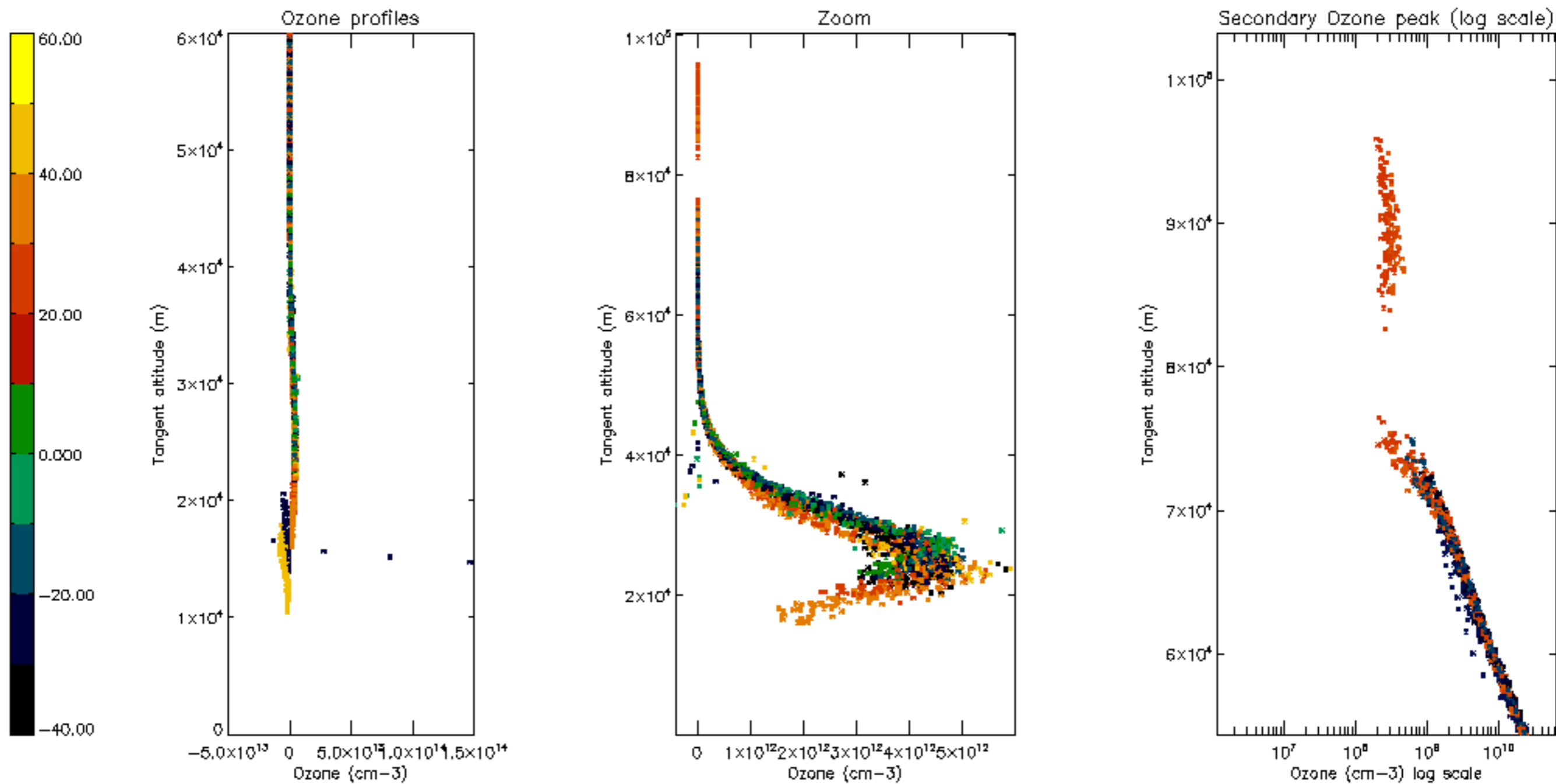


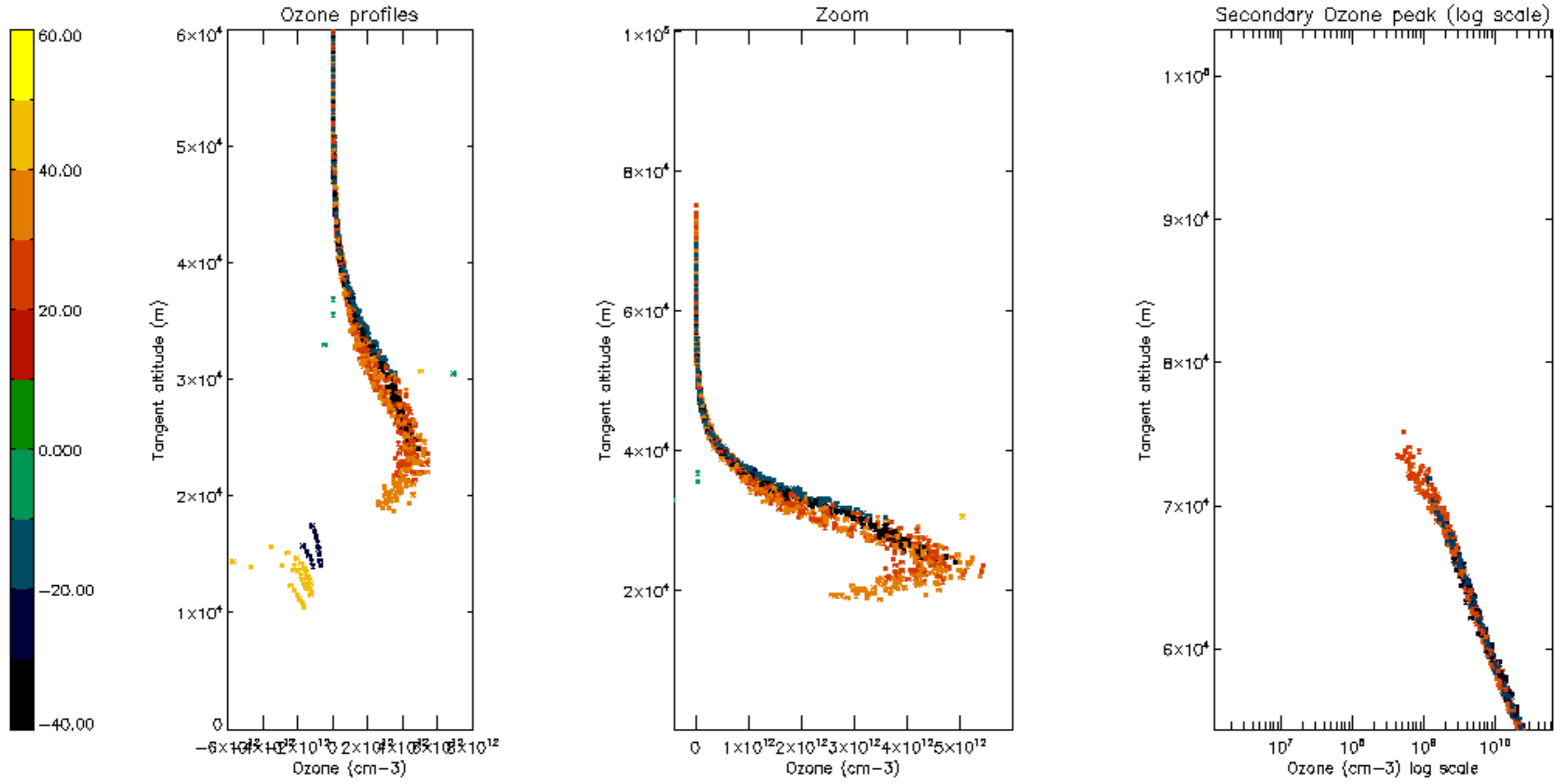
Percentage of saturation errors per profile

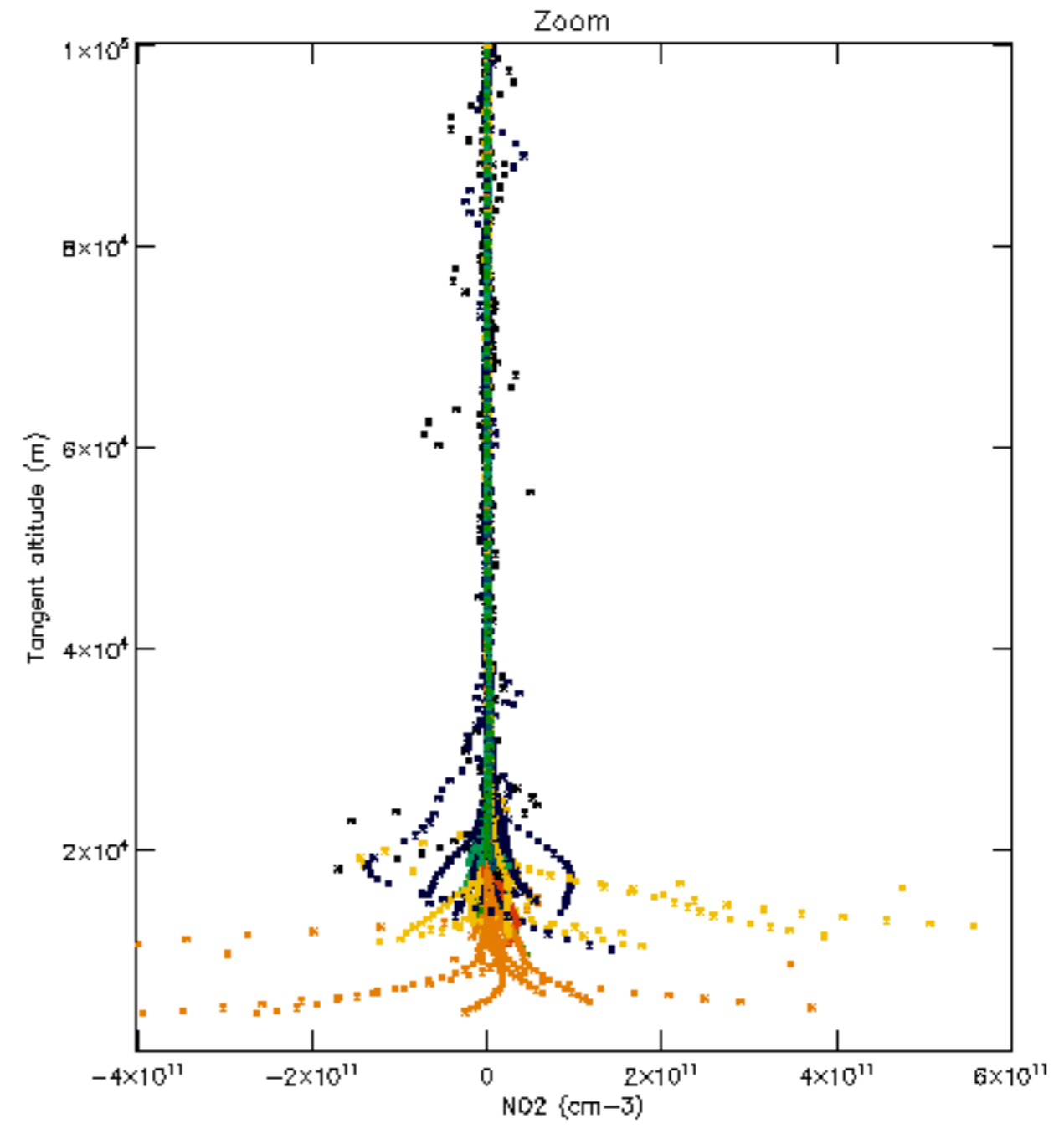
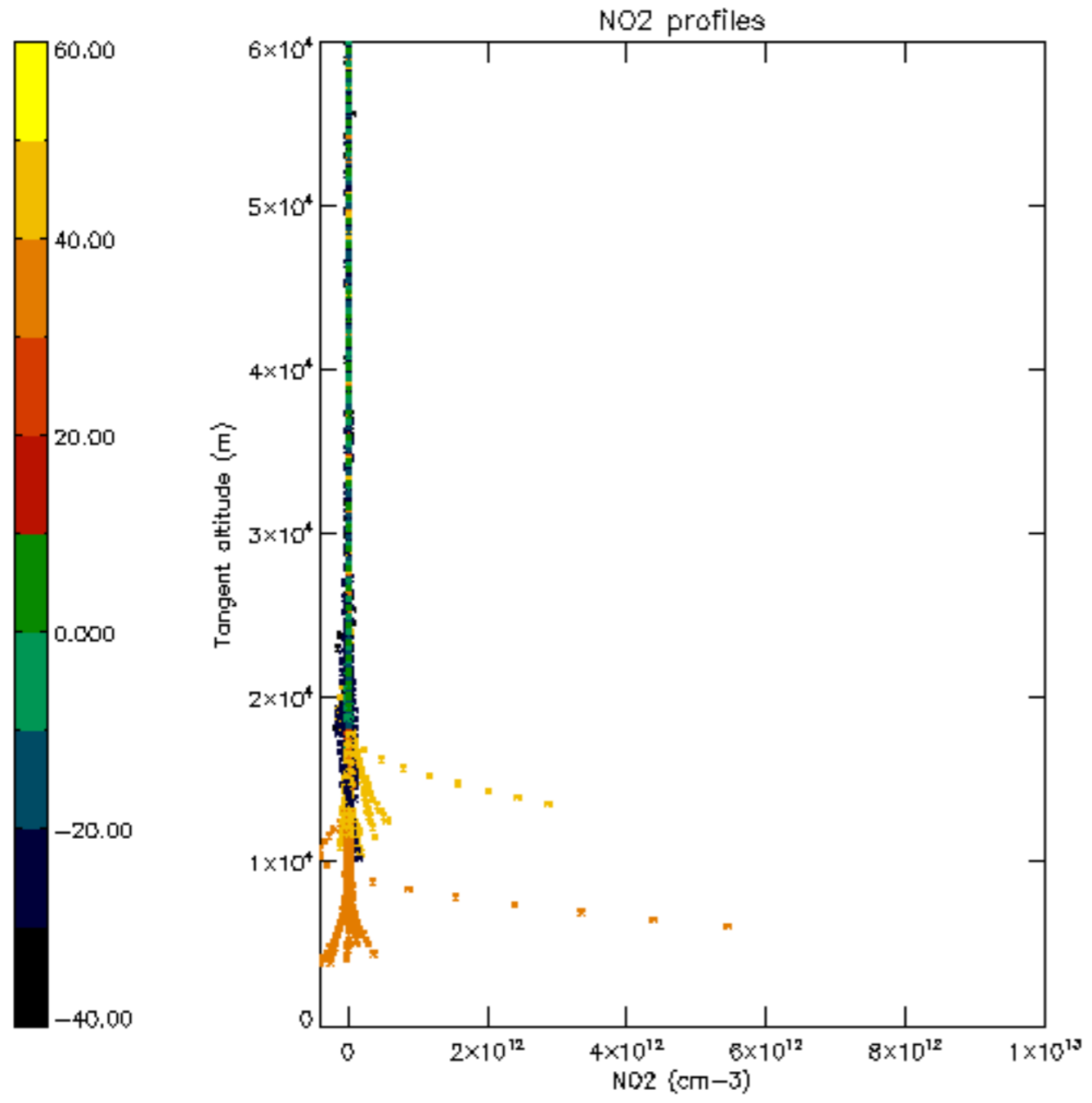


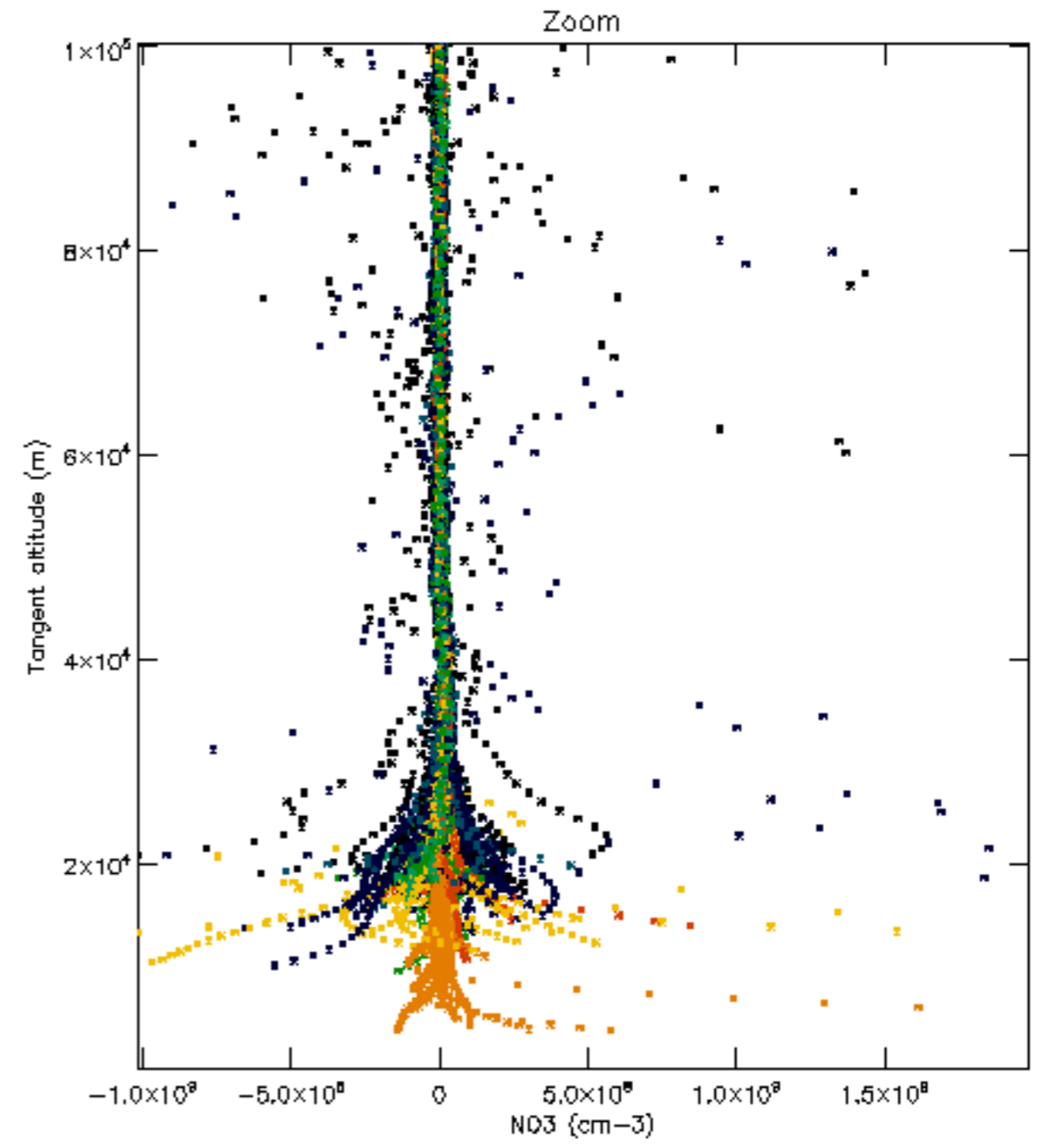
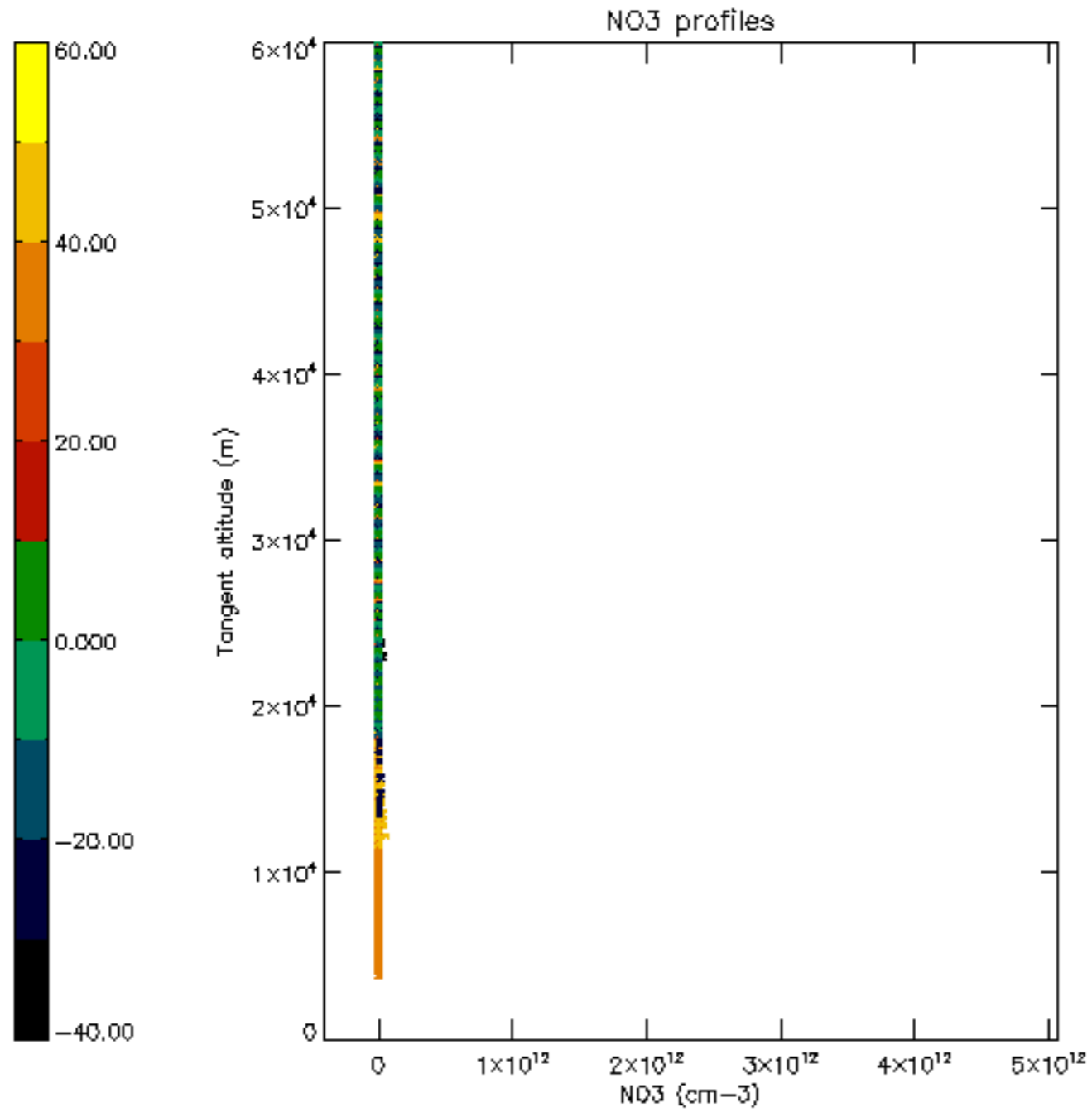


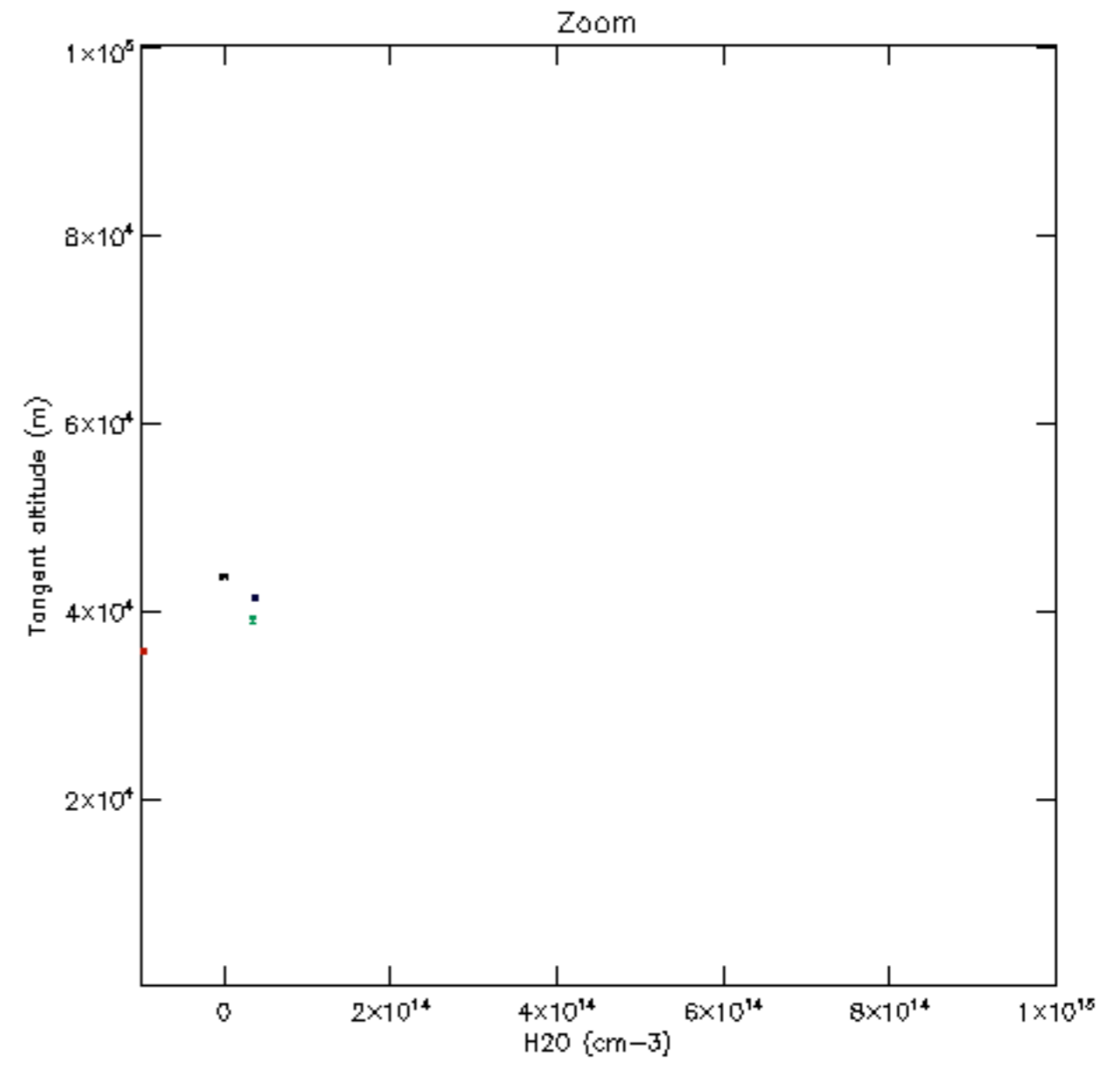
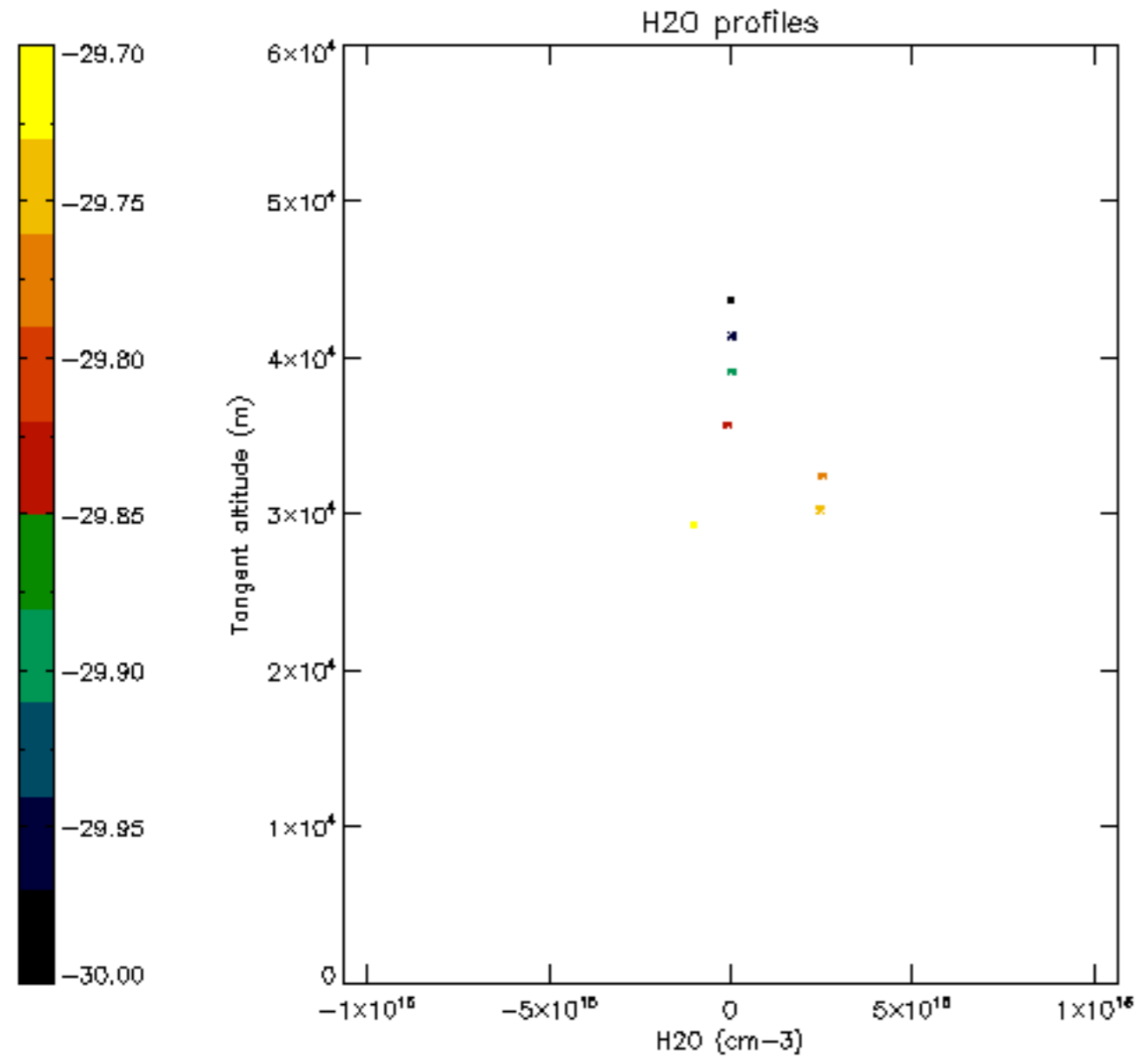


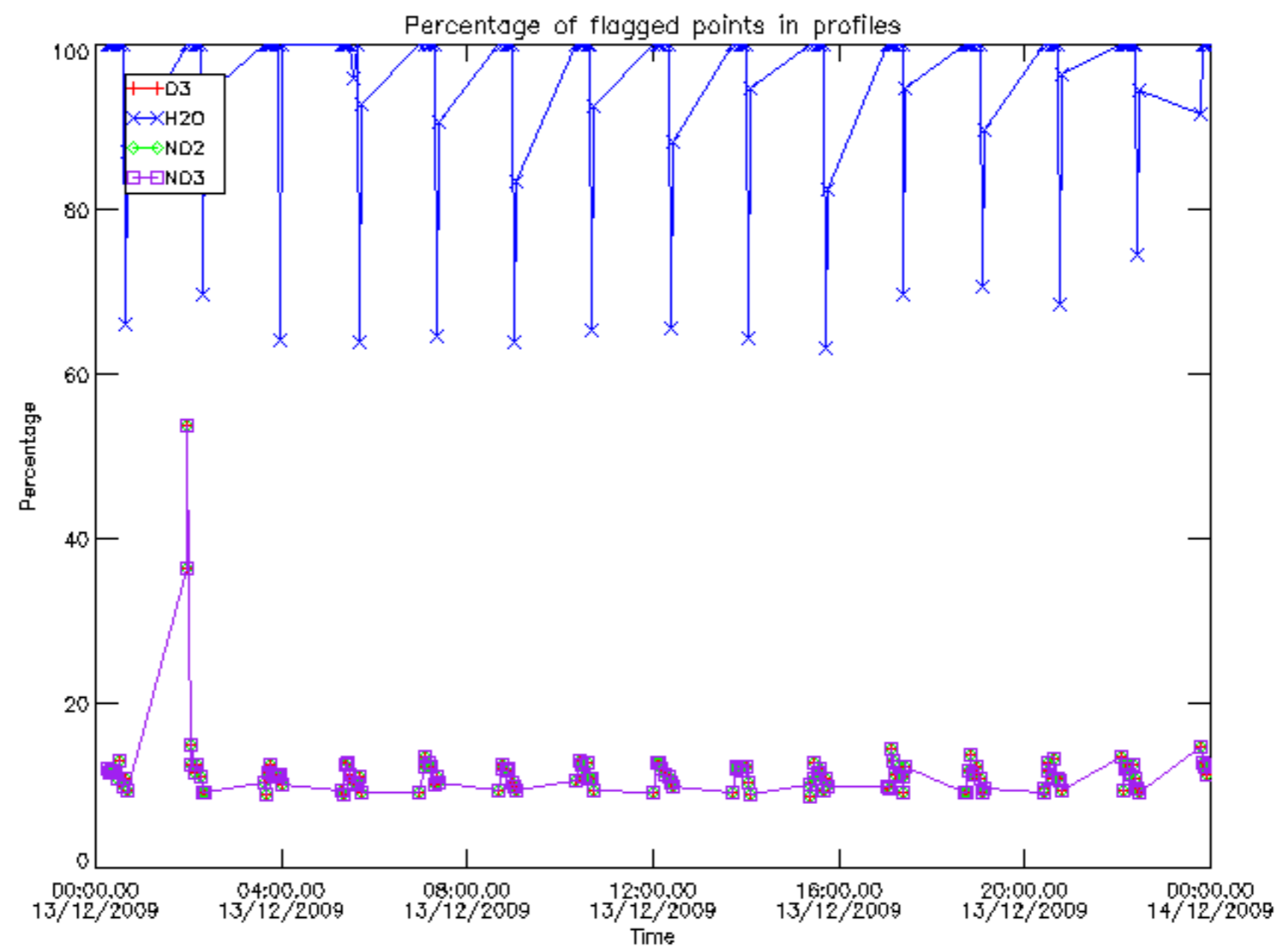




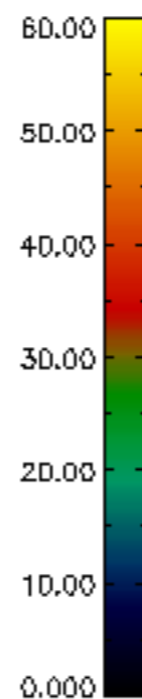
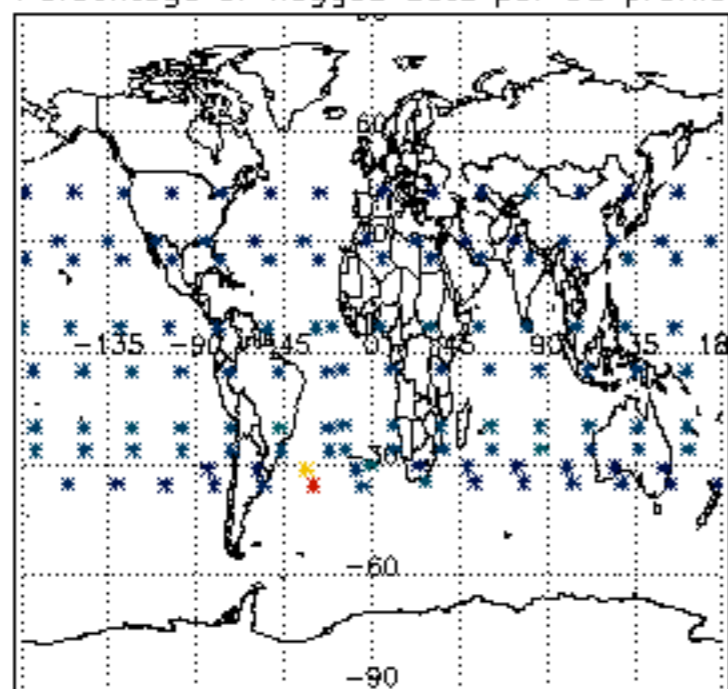




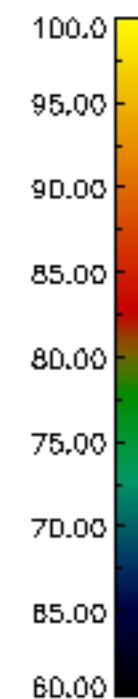
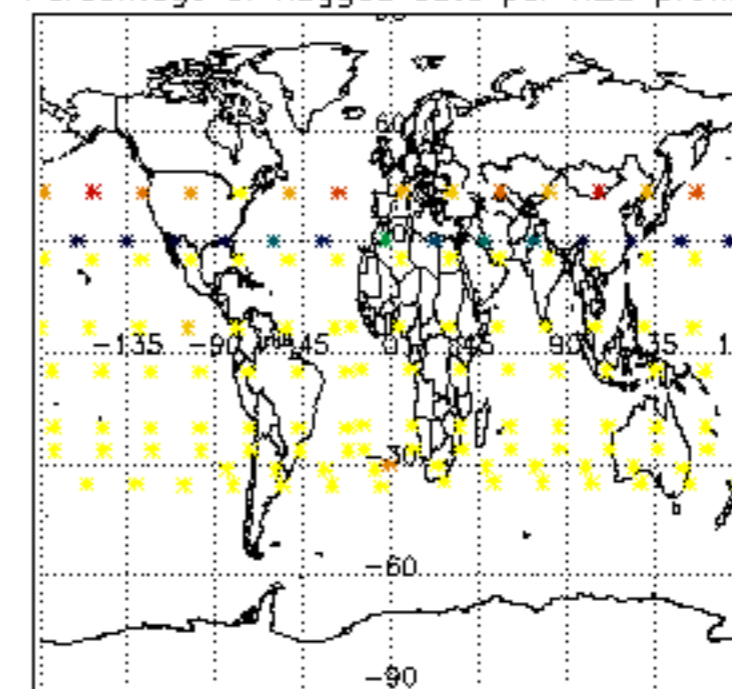




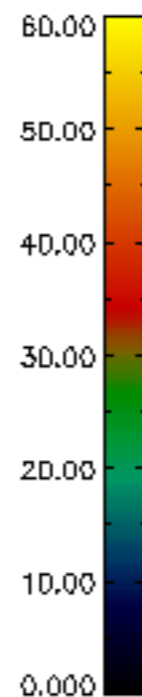
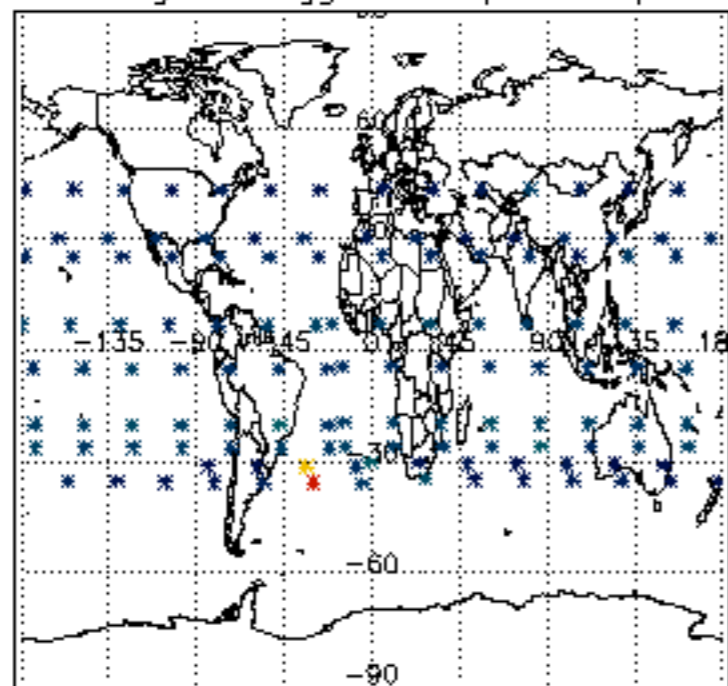
Percentage of flagged data per D3 profile



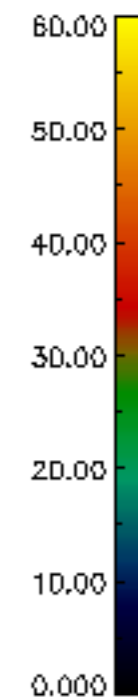
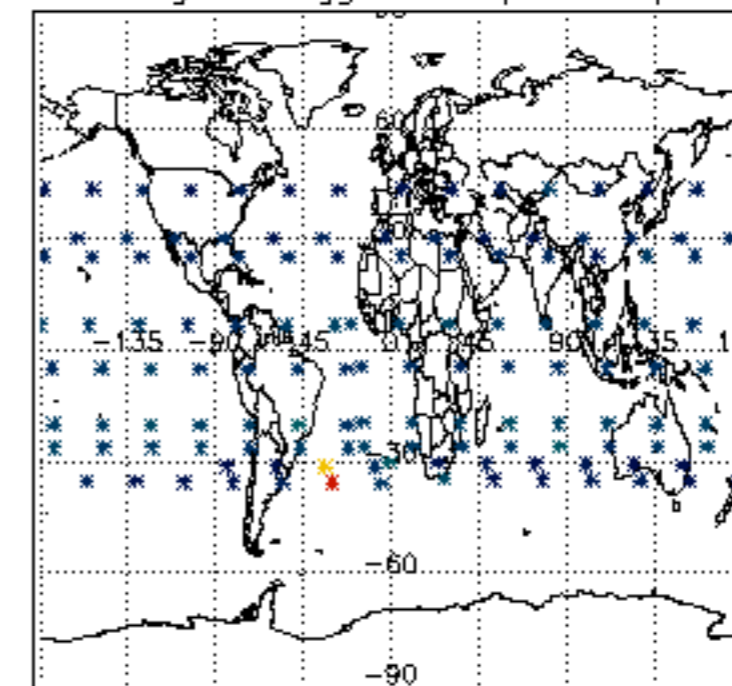
Percentage of flagged data per H2O profile

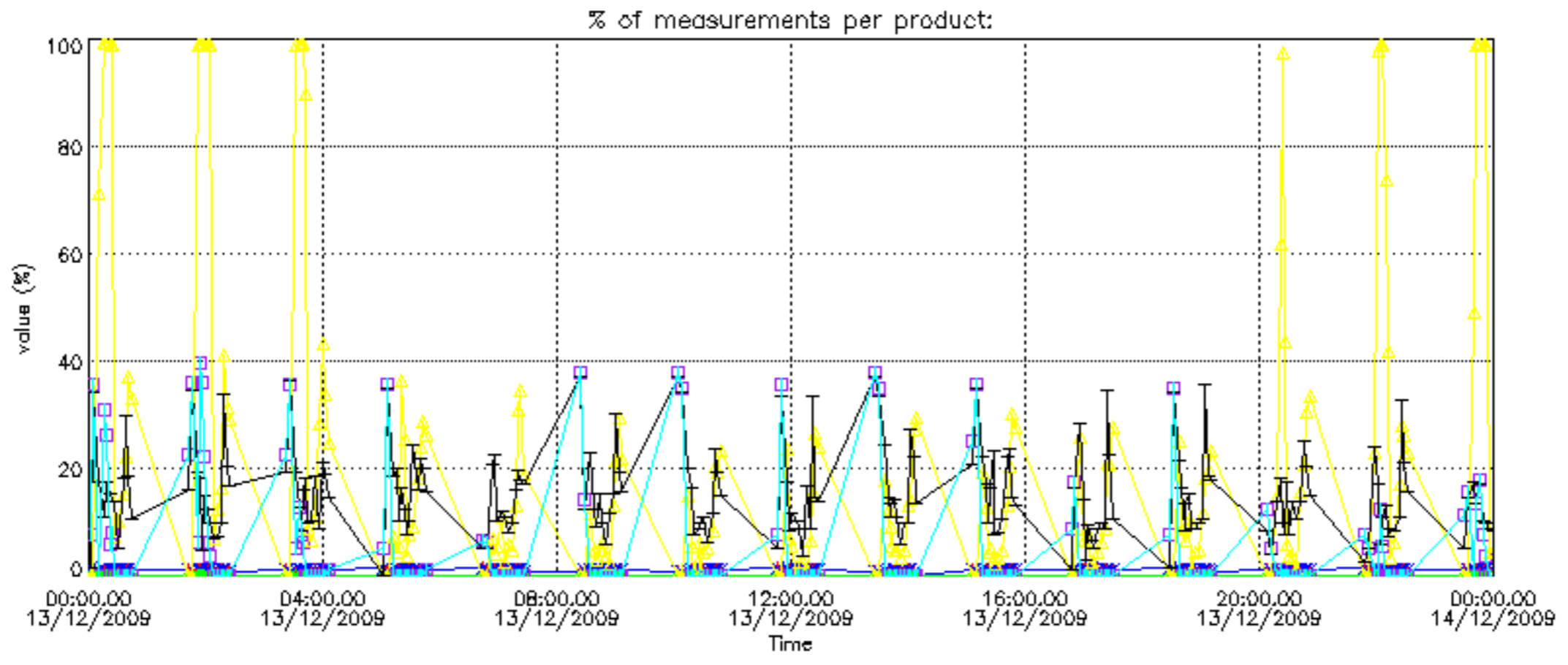


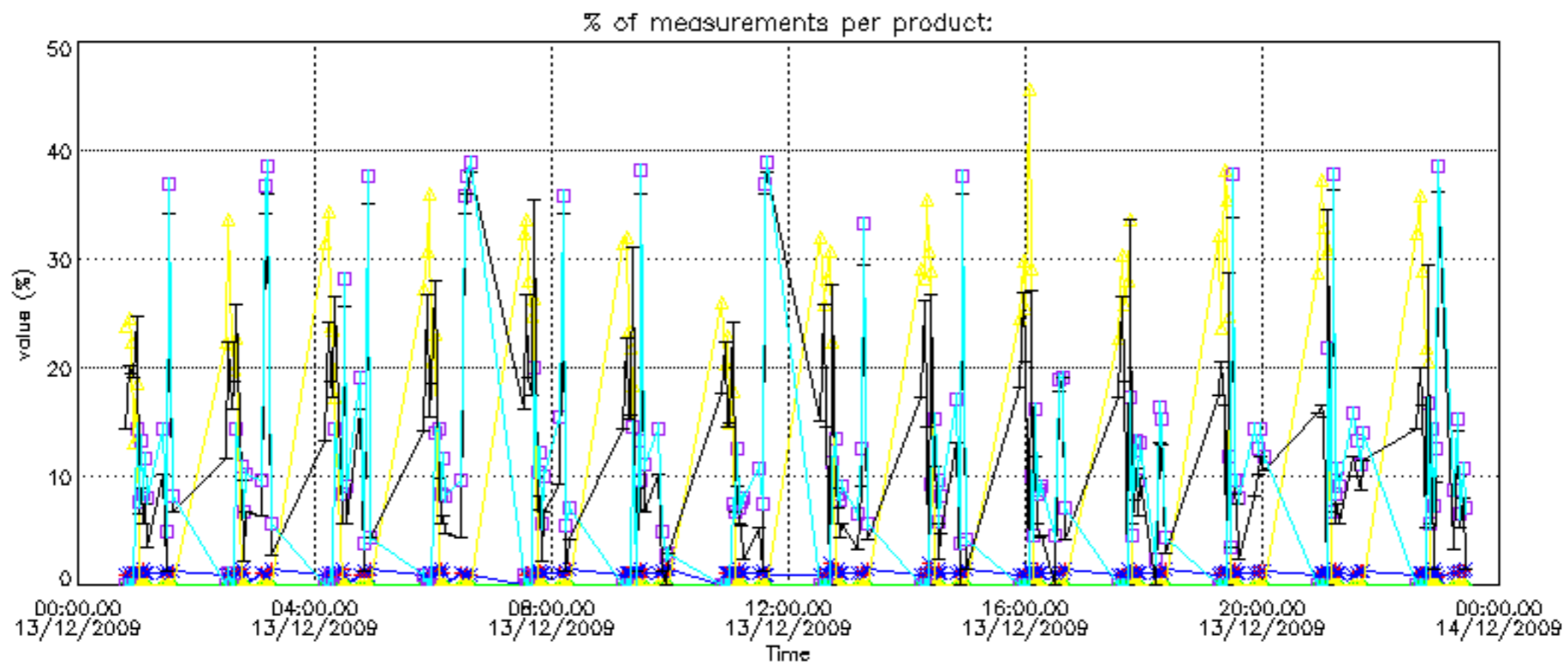
Percentage of flagged data per NO2 profile



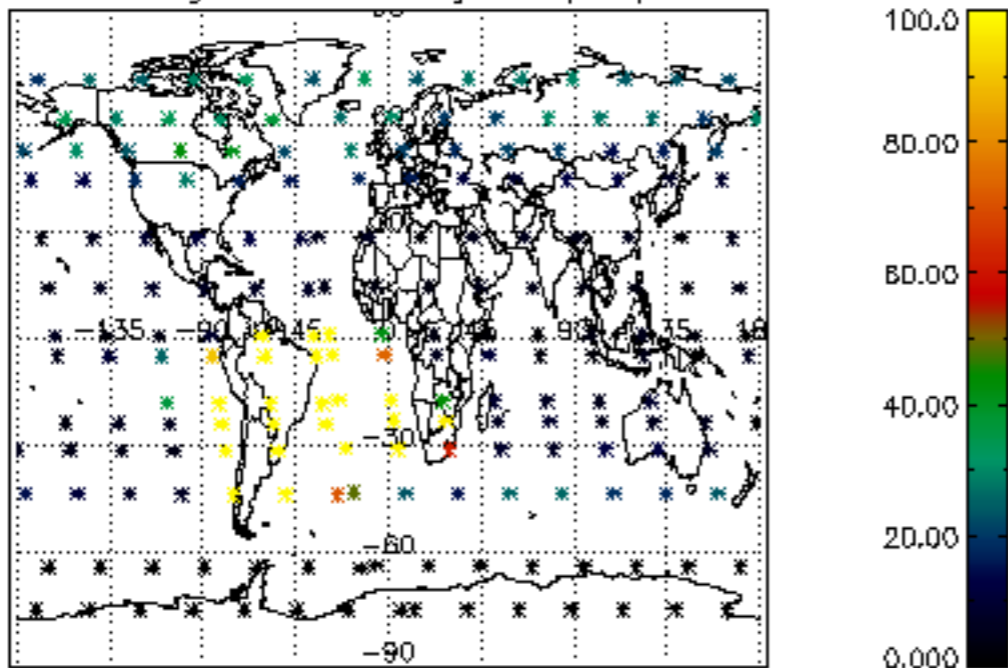
Percentage of flagged data per NO3 profile



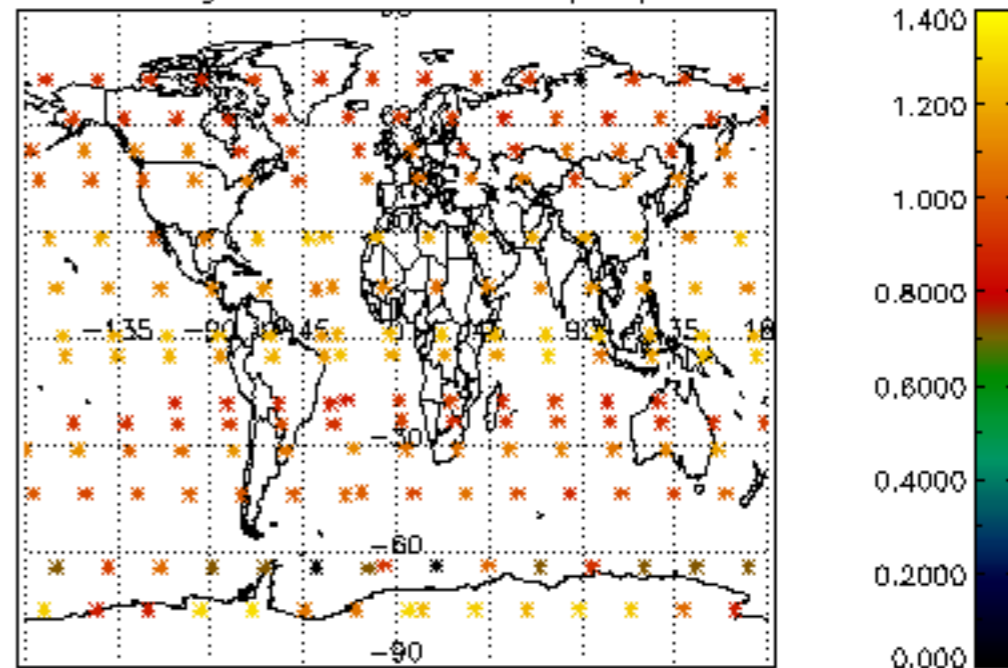




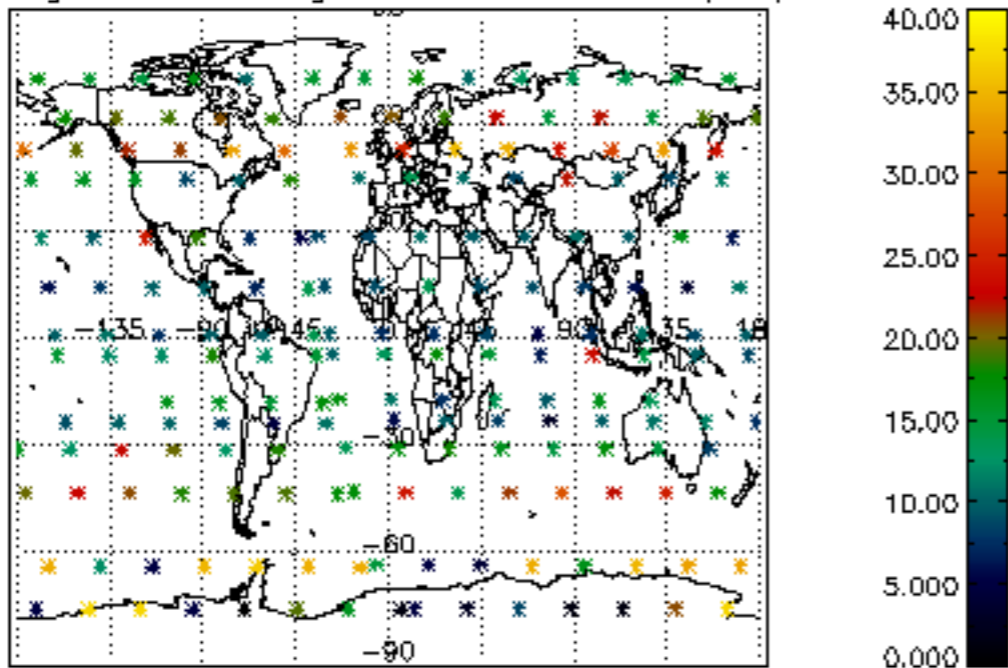
Percentage of cosmic ray hits per profile



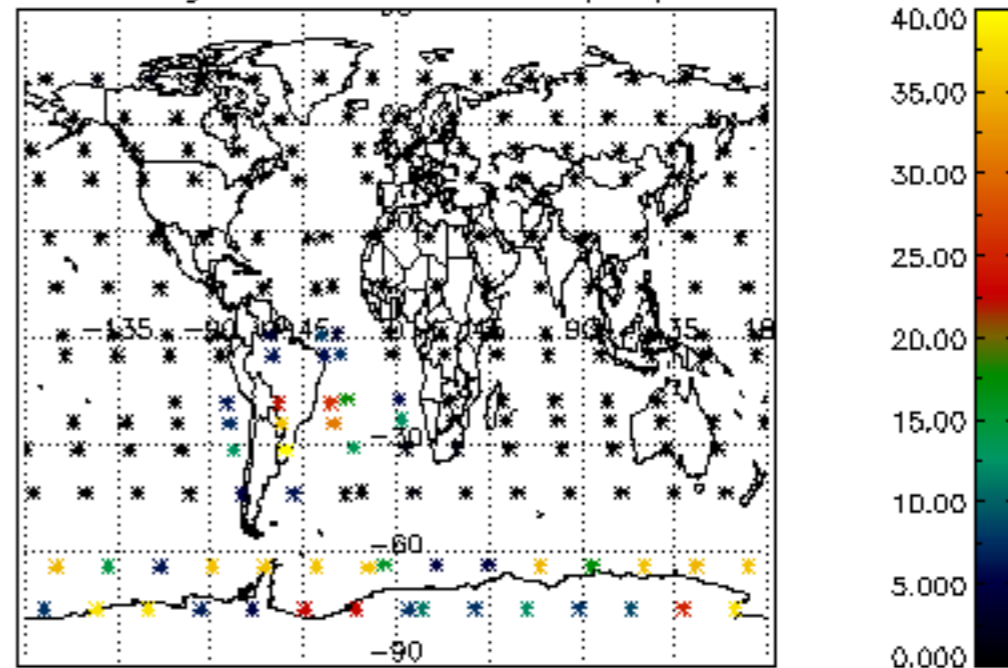
Percentage of datation errors per profile



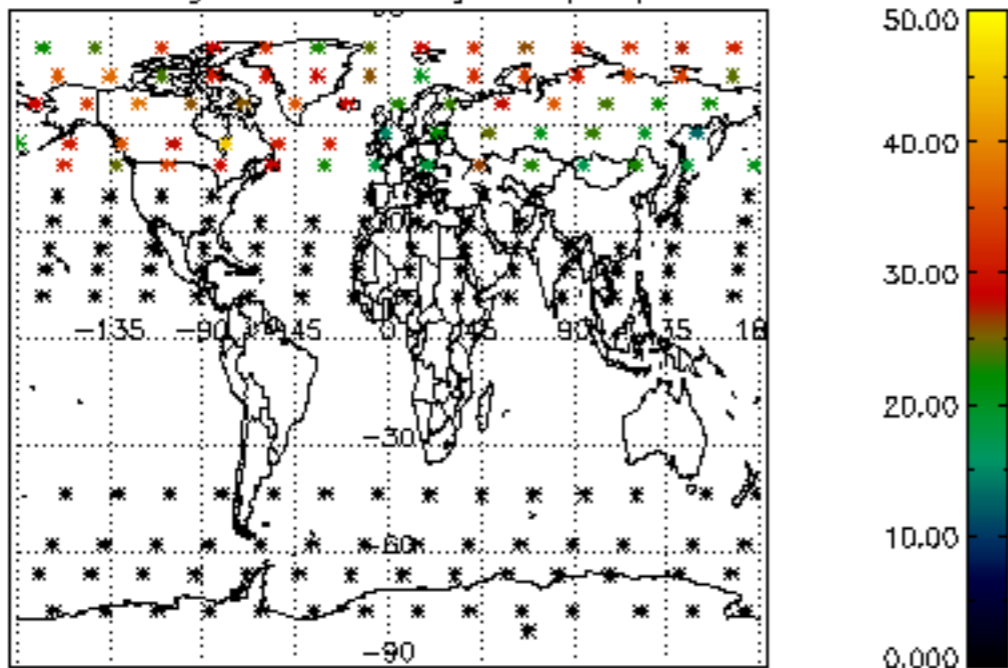
Percentage of star falling outside central band per profile



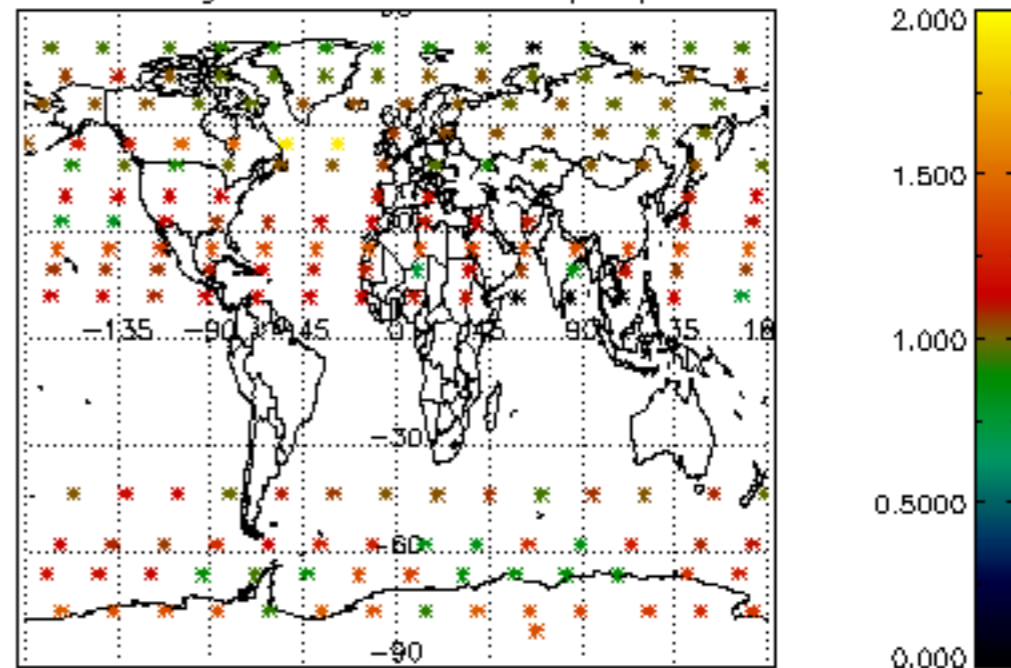
Percentage of saturation errors per profile



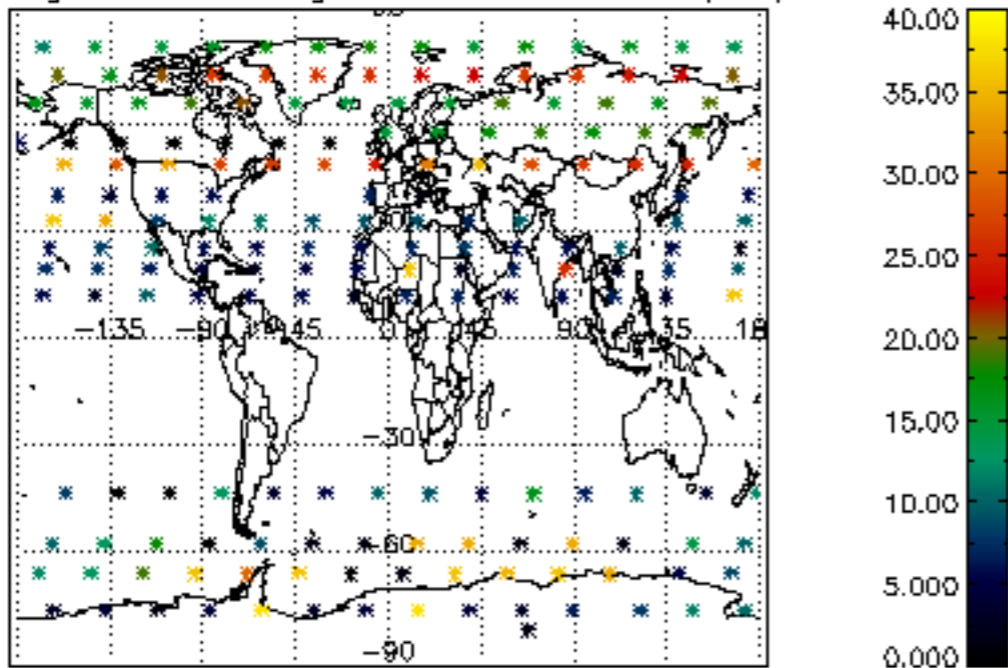
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

