

# 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 | 26APR2013 10:40:52              |
| Data source version       | GOMOS/6.01                      |
| Start time of products    | 08-07-2009 (08JUL2009 00:00:00) |
| Stop time of products     | 09-07-2009 (09JUL2009 00:00:00) |
| Store outputs in DB       | Yes                             |
| Nb of level 2 prods       | 171                             |
| 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__2PRFIN20090708_000012_000000502080_00317_38447_8815.N1 | 08-JUL-2009 00:00:12 | Straylight | 50.000   | 31      | Alp Gru   | 1.7340   | 15200.    | 100     | 38447 | No          |
| 2  | GOM_NL__2PRFIN20090708_000318_000000562080_00317_38447_8816.N1 | 08-JUL-2009 00:03:18 | Straylight | 56.000   | 172     | Gam Gru   | 3.0030   | 13100.    | 112     | 38447 | No          |
| 3  | GOM_NL__2PRFIN20090708_002510_000000422080_00317_38447_8817.N1 | 08-JUL-2009 00:25:10 | Bright     | 41.500   | 168     | 17Zet Aql | 2.9860   | 11000.    | 83      | 38447 | No          |
| 4  | GOM_NL__2PRFIN20090708_003607_000000452080_00317_38447_8818.N1 | 08-JUL-2009 00:36:07 | Bright     | 44.500   | 144     | 18Del Cyg | 2.8600   | 11000.    | 89      | 38447 | No          |
| 5  | GOM_NL__2PRFIN20090708_004320_000000432080_00317_38447_8819.N1 | 08-JUL-2009 00:43:20 | Bright     | 42.500   | 89      | 5Alp Cep  | 2.4510   | 8000.0    | 85      | 38447 | No          |
| 6  | GOM_NL__2PRFIN20090708_005051_000000482080_00317_38447_8820.N1 | 08-JUL-2009 00:50:51 | Bright     | 47.500   | 74      | 11Bet Cas | 2.2680   | 6600.0    | 95      | 38447 | No          |
| 7  | GOM_NL__2PRFIN20090708_005247_000000392080_00317_38447_8821.N1 | 08-JUL-2009 00:52:47 | Bright     | 39.000   | 110     | 37Del Cas | 2.6780   | 8900.0    | 78      | 38447 | No          |
| 8  | GOM_NL__2PRFIN20090708_005940_000000432080_00317_38447_8822.N1 | 08-JUL-2009 00:59:40 | Bright     | 42.500   | 73      | 57Gam1And | 2.2600   | 13100.    | 85      | 38447 | No          |
| 9  | GOM_NL__2PRFIN20090708_010234_000000432080_00317_38447_8823.N1 | 08-JUL-2009 01:02:34 | Twilight   | 43.000   | 173     | 4Bet Tri  | 3.0040   | 8900.0    | 86      | 38447 | No          |
| 10 | GOM_NL__2PRFIN20090708_010721_000000302080_00317_38447_8824.N1 | 08-JUL-2009 01:07:21 | Dark       | 30.000   | 50      | 13Alp Ari | 2.0070   | 4250.0    | 60      | 38447 | No          |
| 11 | GOM_NL__2PRFIN20090708_011229_000000392080_00317_38447_8825.N1 | 08-JUL-2009 01:12:29 | Dark       | 39.000   | 94      | 92Alp Cet | 2.5260   | 3100.0    | 78      | 38447 | No          |
| 12 | GOM_NL__2PRFIN20090708_013244_000000522080_00318_38448_8829.N1 | 08-JUL-2009 01:32:44 | Dark       | 51.500   | 84      | Alp Phe   | 2.3970   | 4500.0    | 103     | 38448 | No          |
| 13 | GOM_NL__2PRFIN20090708_013901_000000652080_00318_38448_8830.N1 | 08-JUL-2009 01:39:01 | Straylight | 64.500   | 63      | Bet Gru   | 2.1500   | 2800.0    | 129     | 38448 | No          |
| 14 | GOM_NL__2PRFIN20090708_014049_000000512080_00318_38448_8831.N1 | 08-JUL-2009 01:40:49 | Straylight | 50.500   | 31      | Alp Gru   | 1.7340   | 15200.    | 101     | 38448 | No          |
| 15 | GOM_NL__2PRFIN20090708_014355_000000572080_00318_38448_8832.N1 | 08-JUL-2009 01:43:55 | Straylight | 56.500   | 172     | Gam Gru   | 3.0030   | 13100.    | 113     | 38448 | No          |
| 16 | GOM_NL__2PRFIN20090708_020546_000000442080_00318_38448_8833.N1 | 08-JUL-2009 02:05:46 | Bright     | 44.000   | 168     | 17Zet Aql | 2.9860   | 11000.    | 88      | 38448 | No          |
| 17 | GOM_NL__2PRFIN20090708_021642_000000422080_00318_38448_8834.N1 | 08-JUL-2009 02:16:42 | Bright     | 42.000   | 144     | 18Del Cyg | 2.8600   | 11000.    | 84      | 38448 | No          |
| 18 | GOM_NL__2PRFIN20090708_022356_000000472080_00318_38448_8835.N1 | 08-JUL-2009 02:23:56 | Bright     | 46.500   | 89      | 5Alp Cep  | 2.4510   | 8000.0    | 93      | 38448 | No          |
| 19 | GOM_NL__2PRFIN20090708_023126_000000452080_00318_38448_8836.N1 | 08-JUL-2009 02:31:26 | Bright     | 45.000   | 74      | 11Bet Cas | 2.2680   | 6600.0    | 90      | 38448 | No          |
| 20 | GOM_NL__2PRFIN20090708_023322_000000402080_00318_38448_8837.N1 | 08-JUL-2009 02:33:22 | Bright     | 39.500   | 110     | 37Del Cas | 2.6780   | 8900.0    | 79      | 38448 | No          |
| 21 | GOM_NL__2PRFIN20090708_024056_000000342080_00318_38448_8838.N1 | 08-JUL-2009 02:40:56 | Bright     | 34.000   | 79      | 26Bet Per | 2.3100   | 13100.    | 68      | 38448 | No          |
| 22 | GOM_NL__2PRFIN20090708_024310_000000452080_00318_38448_8839.N1 | 08-JUL-2009 02:43:10 | Twilight   | 44.500   | 173     | 4Bet Tri  | 3.0040   | 8900.0    | 89      | 38448 | No          |
| 23 | GOM_NL__2PRFIN20090708_025306_000000412080_00318_38448_8840.N1 | 08-JUL-2009 02:53:06 | Dark       | 40.500   | 94      | 92Alp Cet | 2.5260   | 3100.0    | 81      | 38448 | No          |
| 24 | GOM_NL__2PRFIN20090708_031321_000000532080_00319_38449_8845.N1 | 08-JUL-2009 03:13:21 | Dark       | 52.500   | 84      | Alp Phe   | 2.3970   | 4500.0    | 105     | 38449 | No          |
| 25 | GOM_NL__2PRFIN20090708_031938_000000572080_00319_38449_8846.N1 | 08-JUL-2009 03:19:38 | Straylight | 56.500   | 63      | Bet Gru   | 2.1500   | 2800.0    | 113     | 38449 | No          |
| 26 | GOM_NL__2PRFIN20090708_032126_000000552080_00319_38449_8847.N1 | 08-JUL-2009 03:21:26 | Straylight | 55.000   | 31      | Alp Gru   | 1.7340   | 15200.    | 110     | 38449 | No          |
| 27 | GOM_NL__2PRFIN20090708_032432_000000562080_00319_38449_8848.N1 | 08-JUL-2009 03:24:32 | Straylight | 55.500   | 172     | Gam Gru   | 3.0030   | 13100.    | 111     | 38449 | No          |
| 28 | GOM_NL__2PRFIN20090708_034622_000000452080_00319_38449_8849.N1 | 08-JUL-2009 03:46:22 | Bright     | 45.000   | 168     | 17Zet Aql | 2.9860   | 11000.    | 90      | 38449 | No          |
| 29 | GOM_NL__2PRFIN20090708_035718_000000452080_00319_38449_8850.N1 | 08-JUL-2009 03:57:18 | Bright     | 44.500   | 144     | 18Del Cyg | 2.8600   | 11000.    | 89      | 38449 | No          |
| 30 | GOM_NL__2PRFIN20090708_040431_000000422080_00319_38449_8851.N1 | 08-JUL-2009 04:04:31 | Bright     | 41.500   | 89      | 5Alp Cep  | 2.4510   | 8000.0    | 83      | 38449 | No          |
| 31 | GOM_NL__2PRFIN20090708_041202_000000722080_00319_38449_8852.N1 | 08-JUL-2009 04:12:02 | Bright     | 72.000   | 74      | 11Bet Cas | 2.2680   | 6600.0    | 144     | 38449 | No          |
| 32 | GOM_NL__2PRFIN20090708_041358_000000402080_00319_38449_8853.N1 | 08-JUL-2009 04:13:58 | Bright     | 39.500   | 110     | 37Del Cas | 2.6780   | 8900.0    | 79      | 38449 | No          |
| 33 | GOM_NL__2PRFIN20090708_042132_000000352080_00319_38449_8854.N1 | 08-JUL-2009 04:21:32 | Bright     | 34.500   | 79      | 26Bet Per | 2.3100   | 13100.    | 69      | 38449 | No          |
| 34 | GOM_NL__2PRFIN20090708_042346_000000442080_00319_38449_8855.N1 | 08-JUL-2009 04:23:46 | Twilight   | 43.500   | 173     | 4Bet Tri  | 3.0040   | 8900.0    | 87      | 38449 | No          |
| 35 | GOM_NL__2PRFIN20090708_043342_000000402080_00319_38449_8856.N1 | 08-JUL-2009 04:33:42 | Dark       | 40.000   | 94      | 92Alp Cet | 2.5260   | 3100.0    | 80      | 38449 | No          |
| 36 | GOM_NL__2PRFIN20090708_045358_000000632080_00320_38450_8869.N1 | 08-JUL-2009 04:53:58 | Dark       | 62.500   | 84      | Alp Phe   | 2.3970   | 4500.0    | 125     | 38450 | No          |
| 37 | GOM_NL__2PRFIN20090708_050015_000000632080_00320_38450_8870.N1 | 08-JUL-2009 05:00:15 | Straylight | 62.500   | 63      | Bet Gru   | 2.1500   | 2800.0    | 125     | 38450 | No          |
| 38 | GOM_NL__2PRFIN20090708_050202_000000522080_00320_38450_8871.N1 | 08-JUL-2009 05:02:02 | Straylight | 51.500   | 31      | Alp Gru   | 1.7340   | 15200.    | 103     | 38450 | No          |
| 39 | GOM_NL__2PRFIN20090708_050509_000000562080_00320_38450_8872.N1 | 08-JUL-2009 05:05:09 | Straylight | 55.500   | 172     | Gam Gru   | 3.0030   | 13100.    | 111     | 38450 | No          |
| 40 | GOM_NL__2PRFIN20090708_052657_000000442080_00320_38450_8873.N1 | 08-JUL-2009 05:26:57 | Bright     | 44.000   | 168     | 17Zet Aql | 2.9860   | 11000.    | 88      | 38450 | No          |
| 41 | GOM_NL__2PRFIN20090708_053753_000000452080_00320_38450_8874.N1 | 08-JUL-2009 05:37:53 | Bright     | 45.000   | 144     | 18Del Cyg | 2.8600   | 11000.    | 90      | 38450 | No          |
| 42 | GOM_NL__2PRFIN20090708_054506_000000442080_00320_38450_8875.N1 | 08-JUL-2009 05:45:06 | Bright     | 44.000   | 89      | 5Alp Cep  | 2.4510   | 8000.0    | 88      | 38450 | No          |



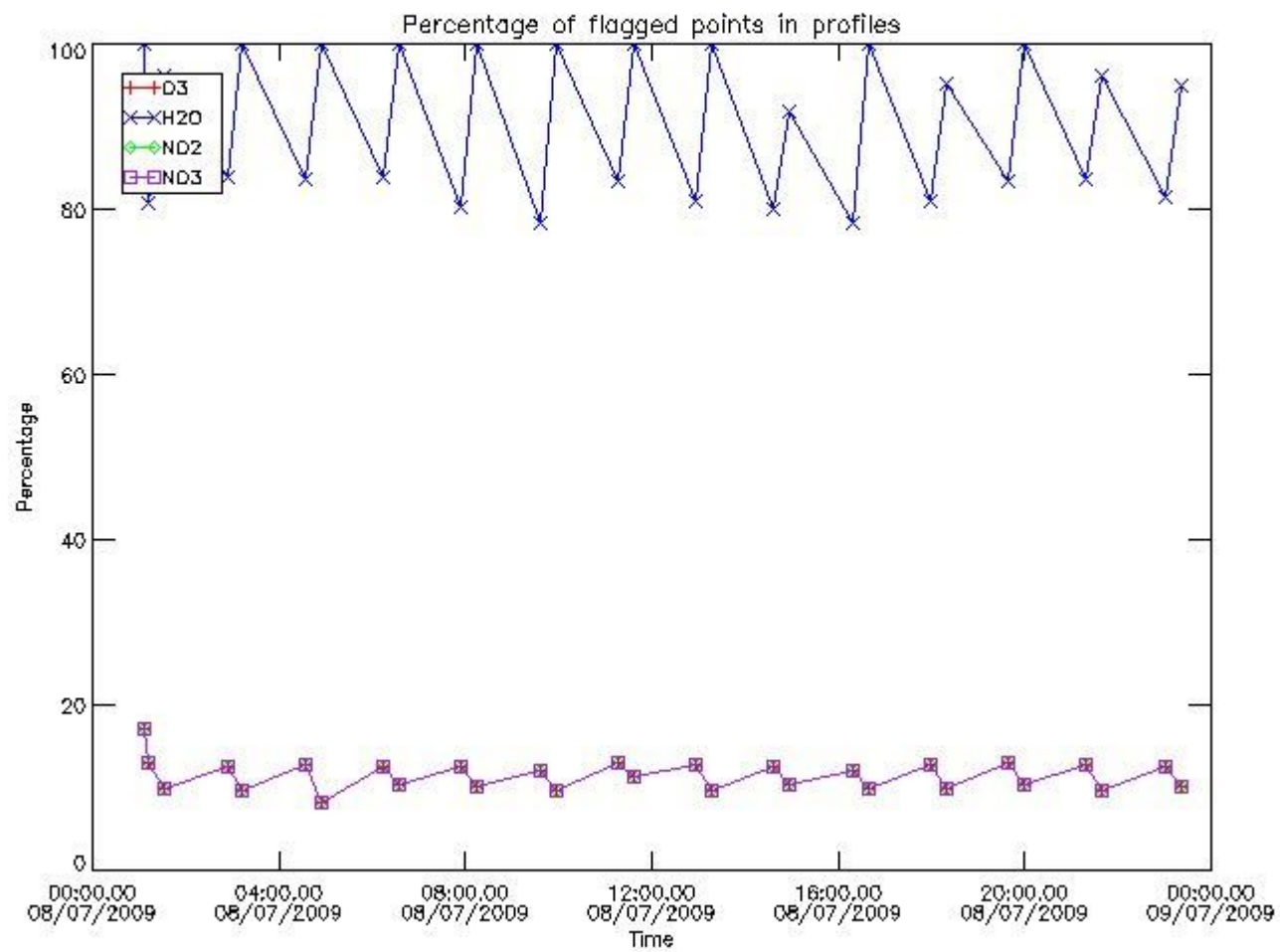


|     |  |                      |            |        |     |           |        |        |     |       |    |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|-----|-------|----|
| 161 | GOM_NL__2PRFIN20090708_223059_000000482080_00330_38460_9056.N1 | 08-JUL-2009 22:30:59 | Bright     | 47.500 | 89  | 5Alp Cep  | 2.4510 | 8000.0 | 95  | 38460 | No |
| 162 | GOM_NL__2PRFIN20090708_223830_000000462080_00330_38460_9057.N1 | 08-JUL-2009 22:38:30 | Bright     | 46.000 | 74  | 11Bet Cas | 2.2680 | 6600.0 | 92  | 38460 | No |
| 163 | GOM_NL__2PRFIN20090708_224029_000000402080_00330_38460_9058.N1 | 08-JUL-2009 22:40:29 | Bright     | 40.000 | 110 | 37Del Cas | 2.6780 | 8900.0 | 80  | 38460 | No |
| 164 | GOM_NL__2PRFIN20090708_224807_000000352080_00330_38460_9059.N1 | 08-JUL-2009 22:48:07 | Bright     | 35.000 | 79  | 26Bet Per | 2.3100 | 13100. | 70  | 38460 | No |
| 165 | GOM_NL__2PRFIN20090708_225022_000000452080_00330_38460_9060.N1 | 08-JUL-2009 22:50:22 | Twilight   | 45.000 | 173 | 4Bet Tri  | 3.0040 | 8900.0 | 90  | 38460 | No |
| 166 | GOM_NL__2PRFIN20090708_230023_000000412080_00330_38460_9061.N1 | 08-JUL-2009 23:00:23 | Dark       | 40.500 | 94  | 92Alp Cet | 2.5260 | 3100.0 | 81  | 38460 | No |
| 167 | GOM_NL__2PRFIN20090708_232046_000000512080_00331_38461_9061.N1 | 08-JUL-2009 23:20:46 | Dark       | 50.500 | 84  | Alp Phe   | 2.3970 | 4500.0 | 101 | 38461 | No |
| 168 | GOM_NL__2PRFIN20090708_232700_000000562080_00331_38461_9062.N1 | 08-JUL-2009 23:27:00 | Straylight | 55.500 | 63  | Bet Gru   | 2.1500 | 2800.0 | 111 | 38461 | No |
| 169 | GOM_NL__2PRFIN20090708_232846_000000572080_00331_38461_9063.N1 | 08-JUL-2009 23:28:46 | Straylight | 56.500 | 31  | Alp Gru   | 1.7340 | 15200. | 113 | 38461 | No |
| 170 | GOM_NL__2PRFIN20090708_233154_000000552080_00331_38461_9064.N1 | 08-JUL-2009 23:31:54 | Straylight | 54.500 | 172 | Gam Gru   | 3.0030 | 13100. | 109 | 38461 | No |
| 171 | GOM_NL__2PRFIN20090708_235329_000000432080_00331_38461_9065.N1 | 08-JUL-2009 23:53:29 | Bright     | 42.500 | 168 | 17Zet Aql | 2.9860 | 11000. | 85  | 38461 | No |

### 3. Quality information per product

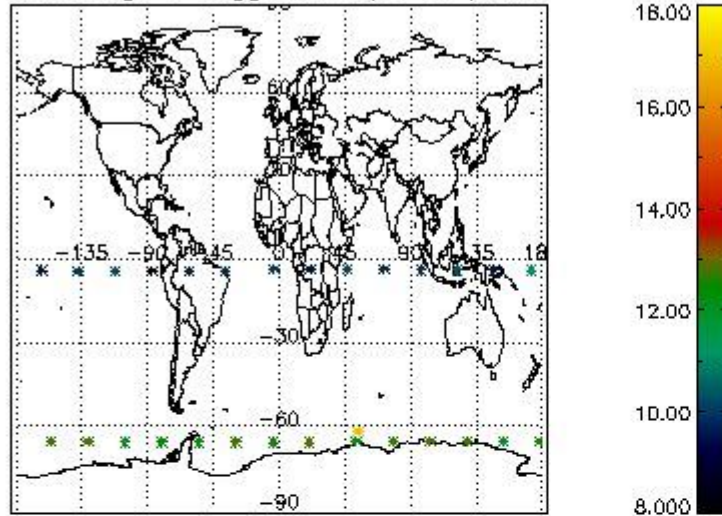
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

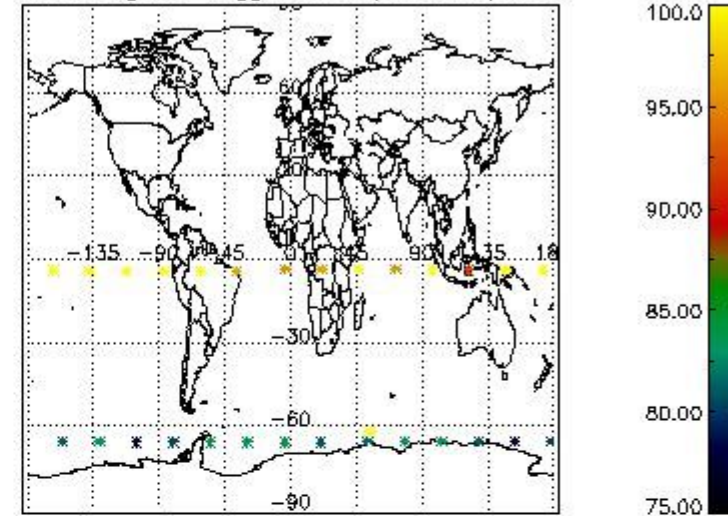


#### 3.2 Plot quality information per product (world map)

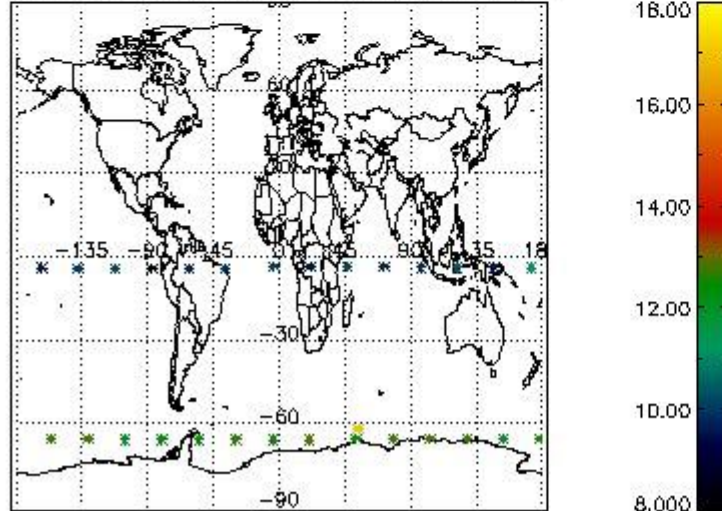
Percentage of flagged data per O3 profile



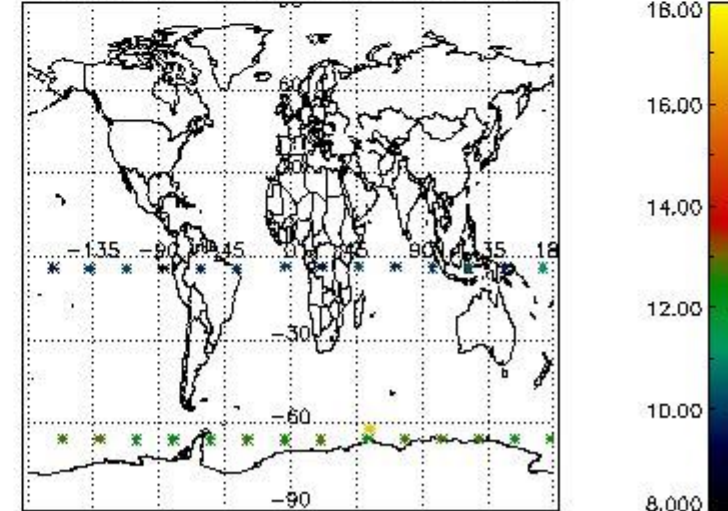
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

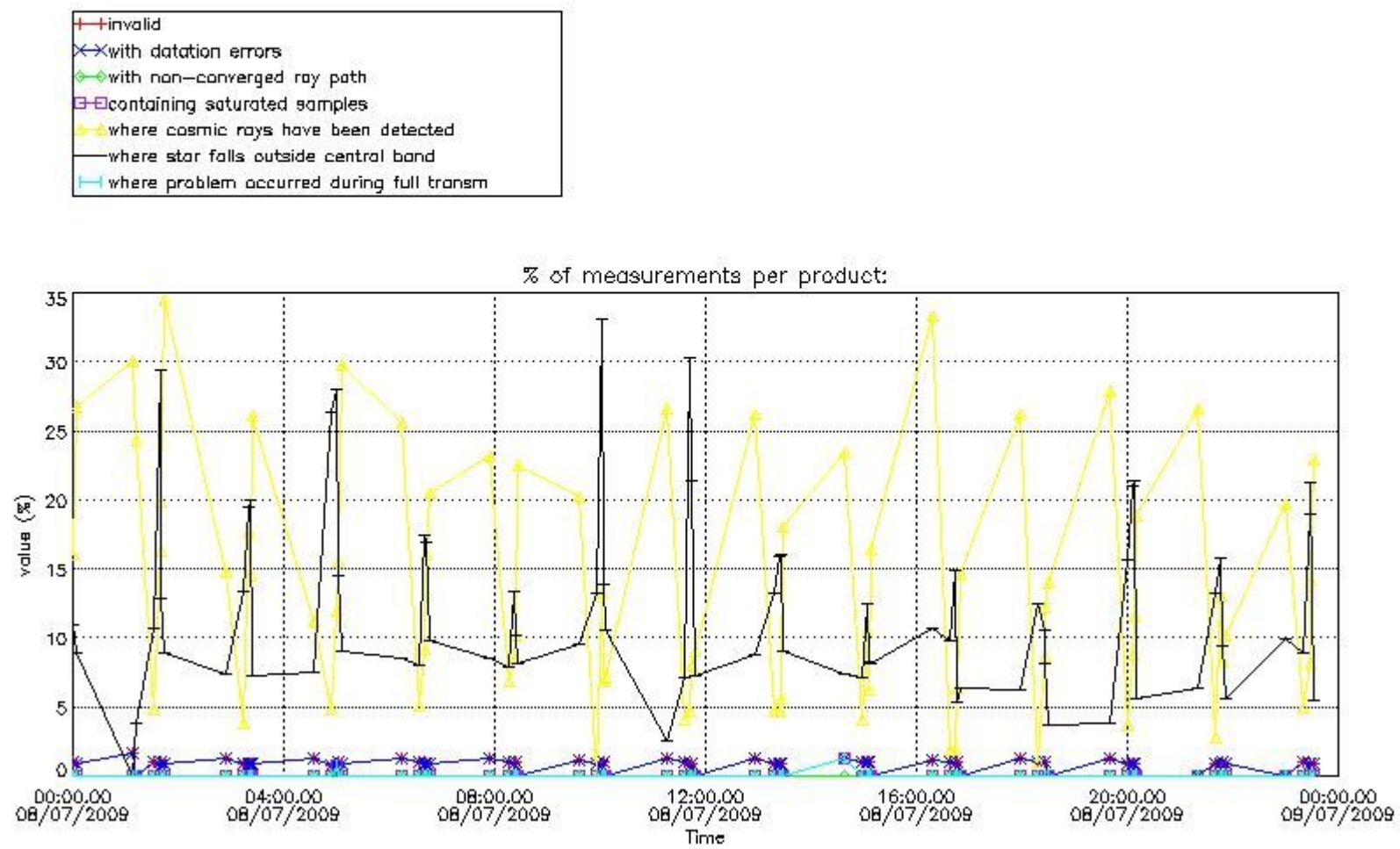


#### 4. Level 1 quality information per product

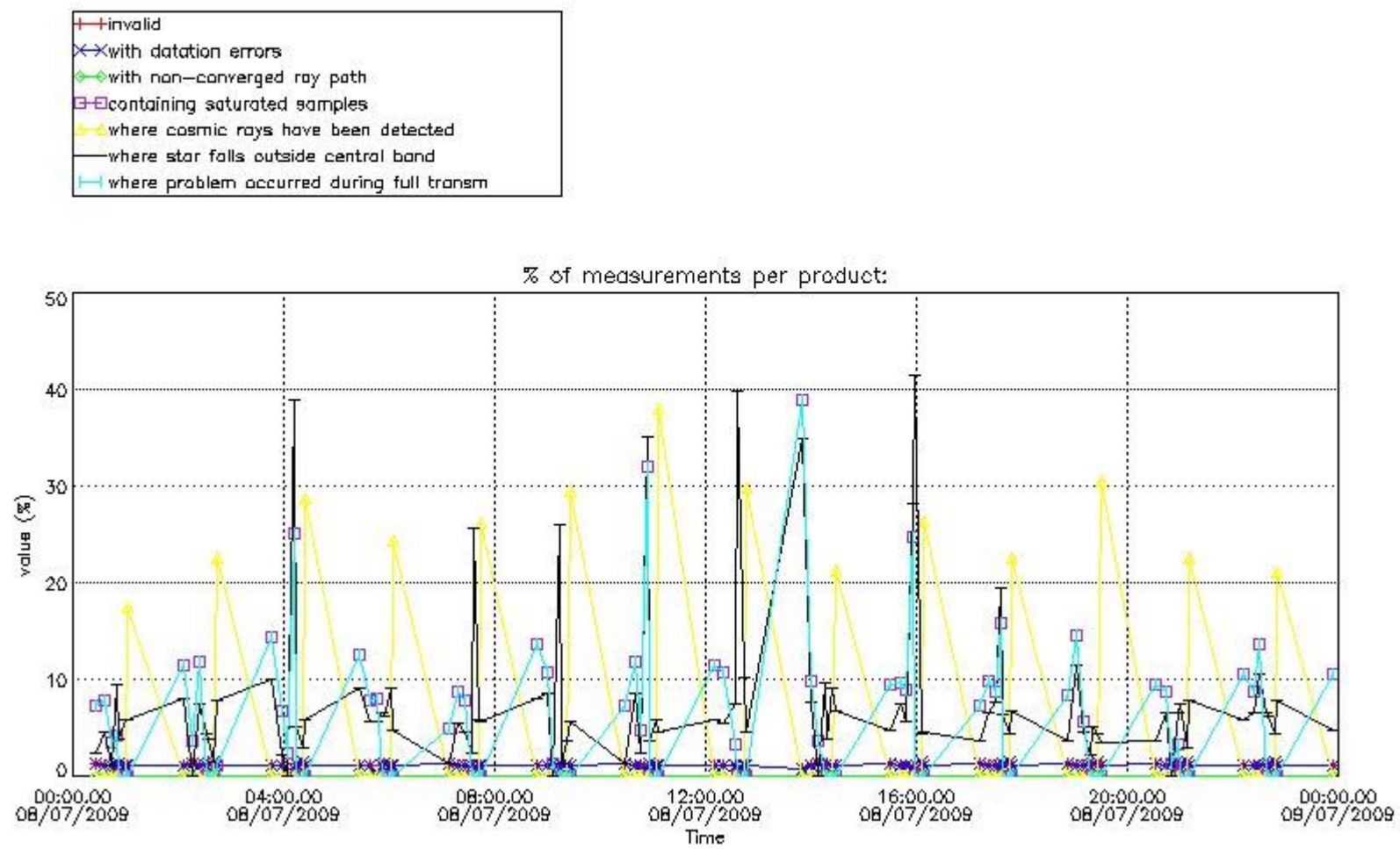
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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



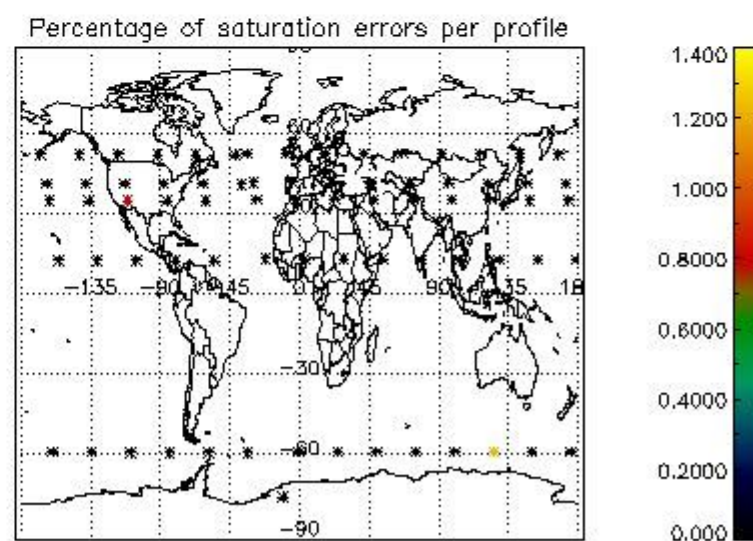
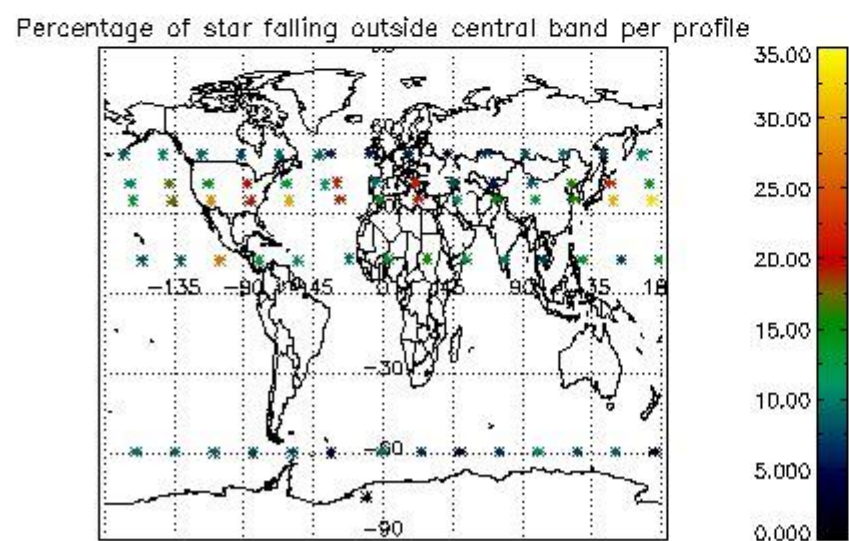
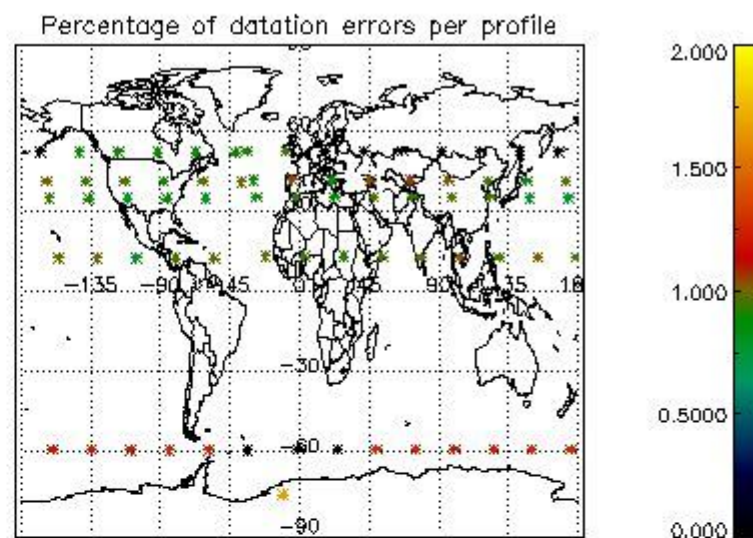
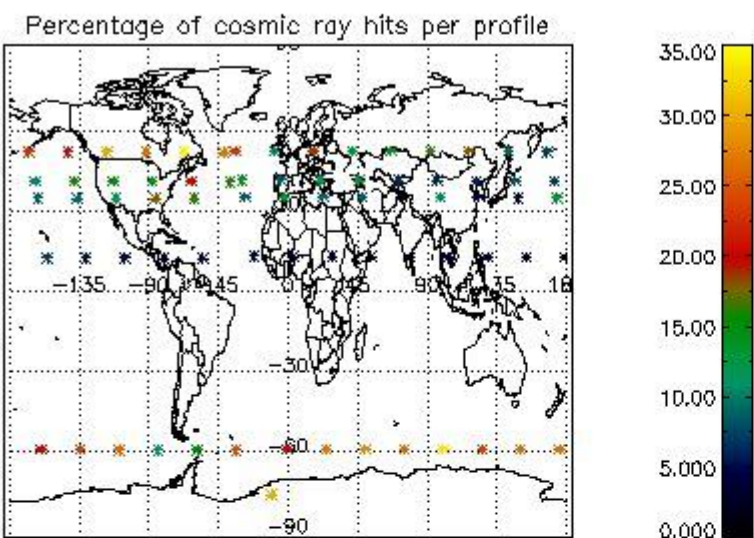
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



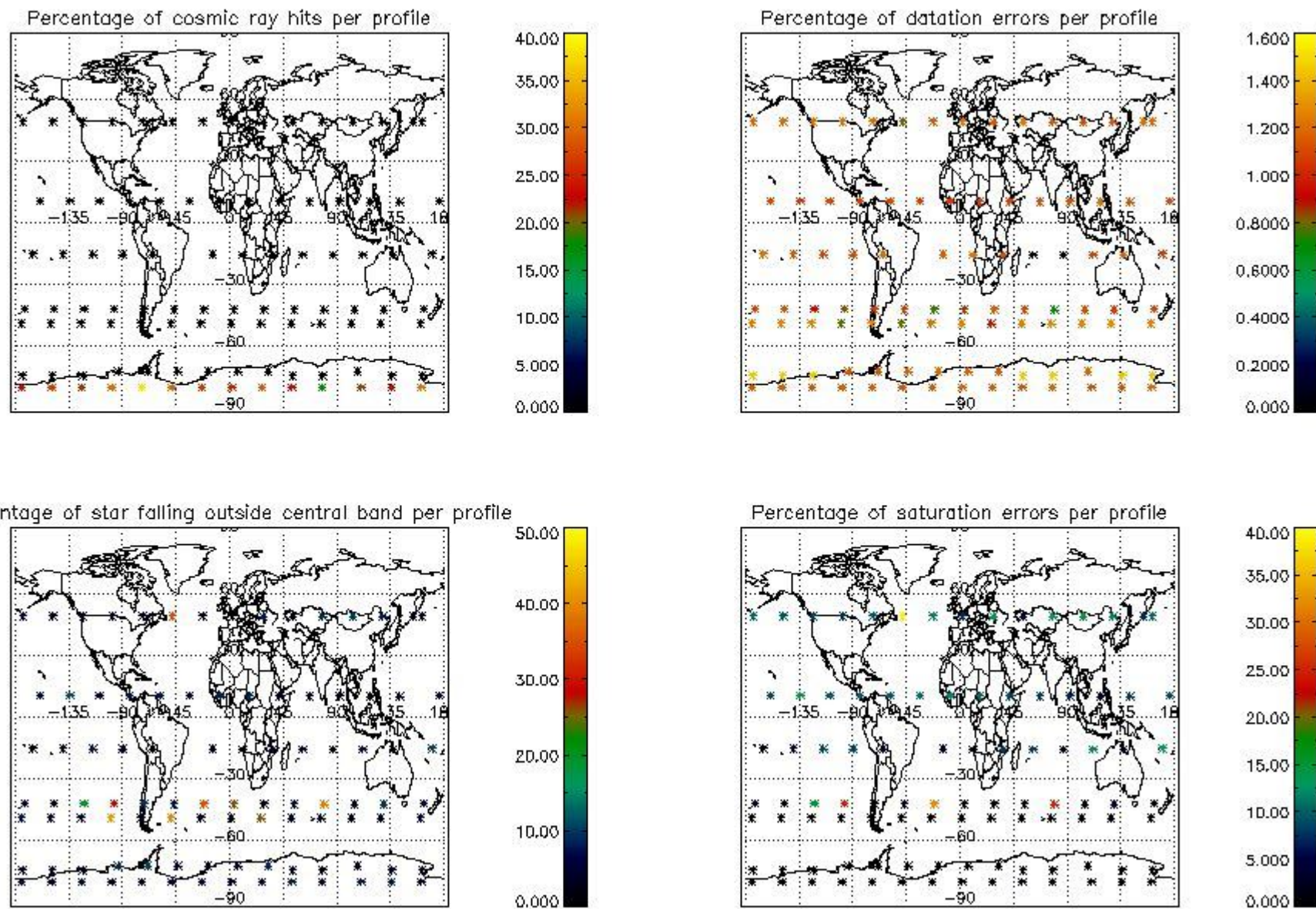
#### 4.2 Plot quality information per product coming from level 1b processing (world map)

##### 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

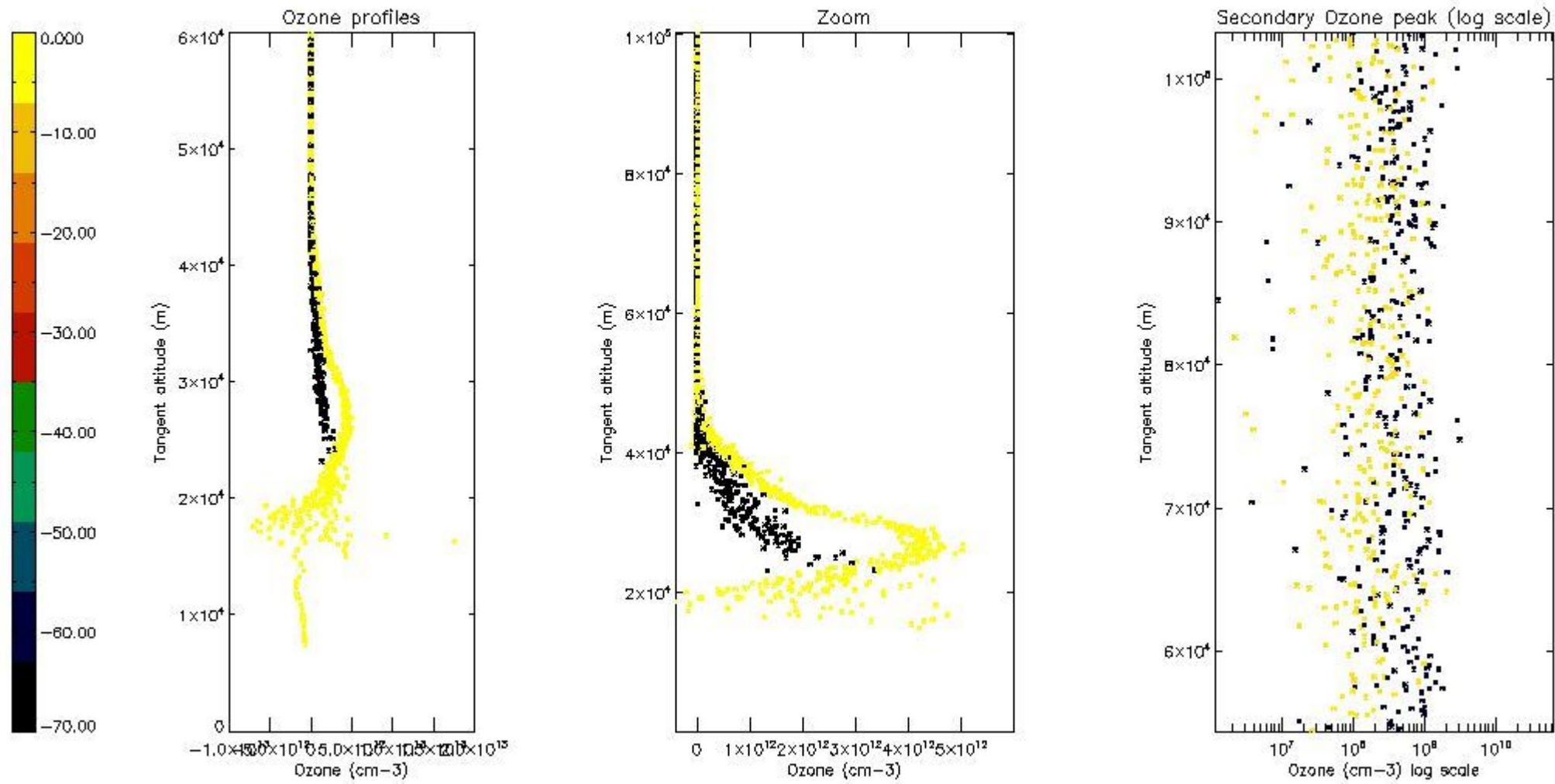
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD  | 17                    |
| STD < 20 | 3                     |

|          |   |
|----------|---|
| STD < 10 | 2 |
| STD < 5  | 0 |

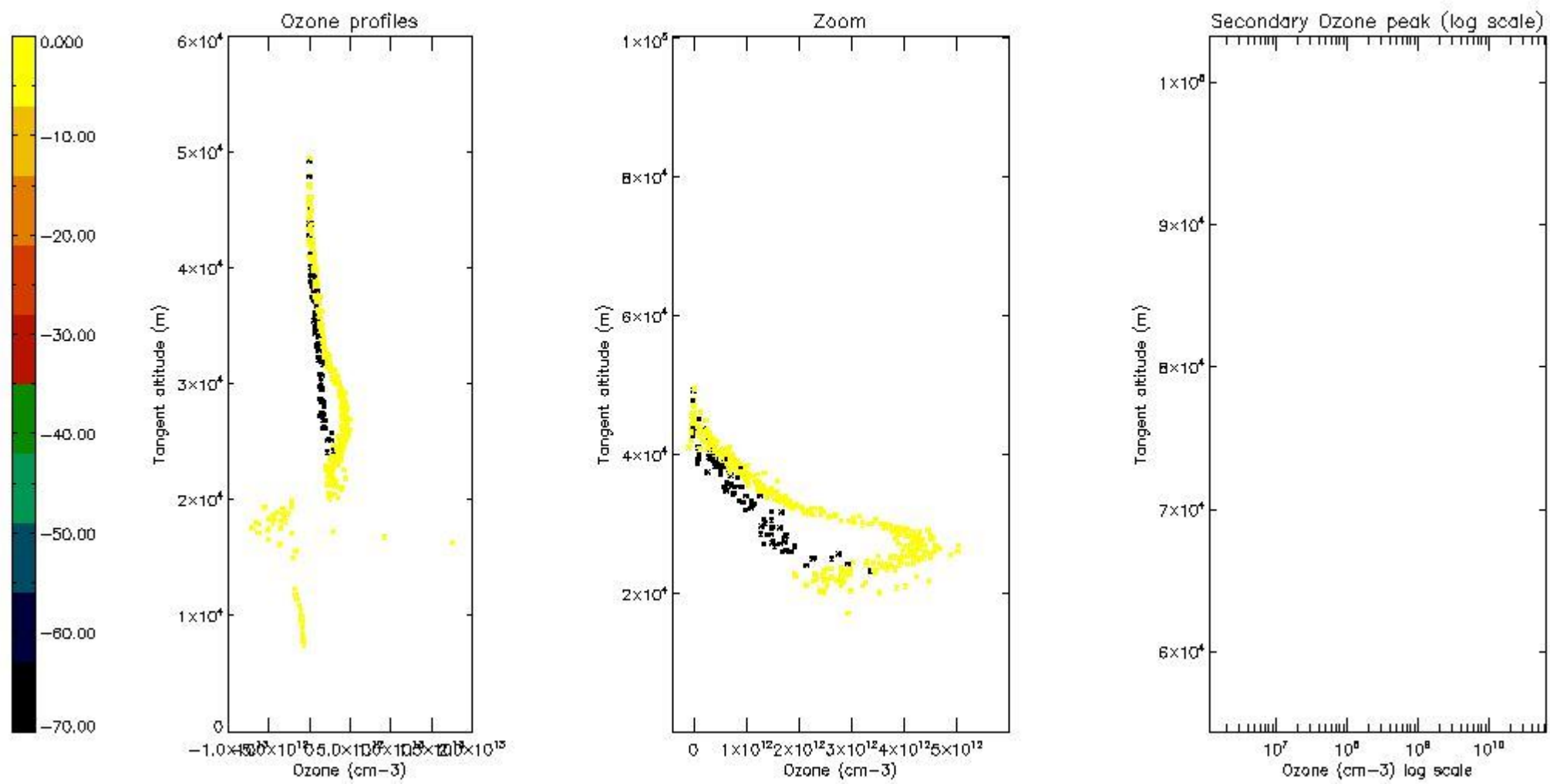
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



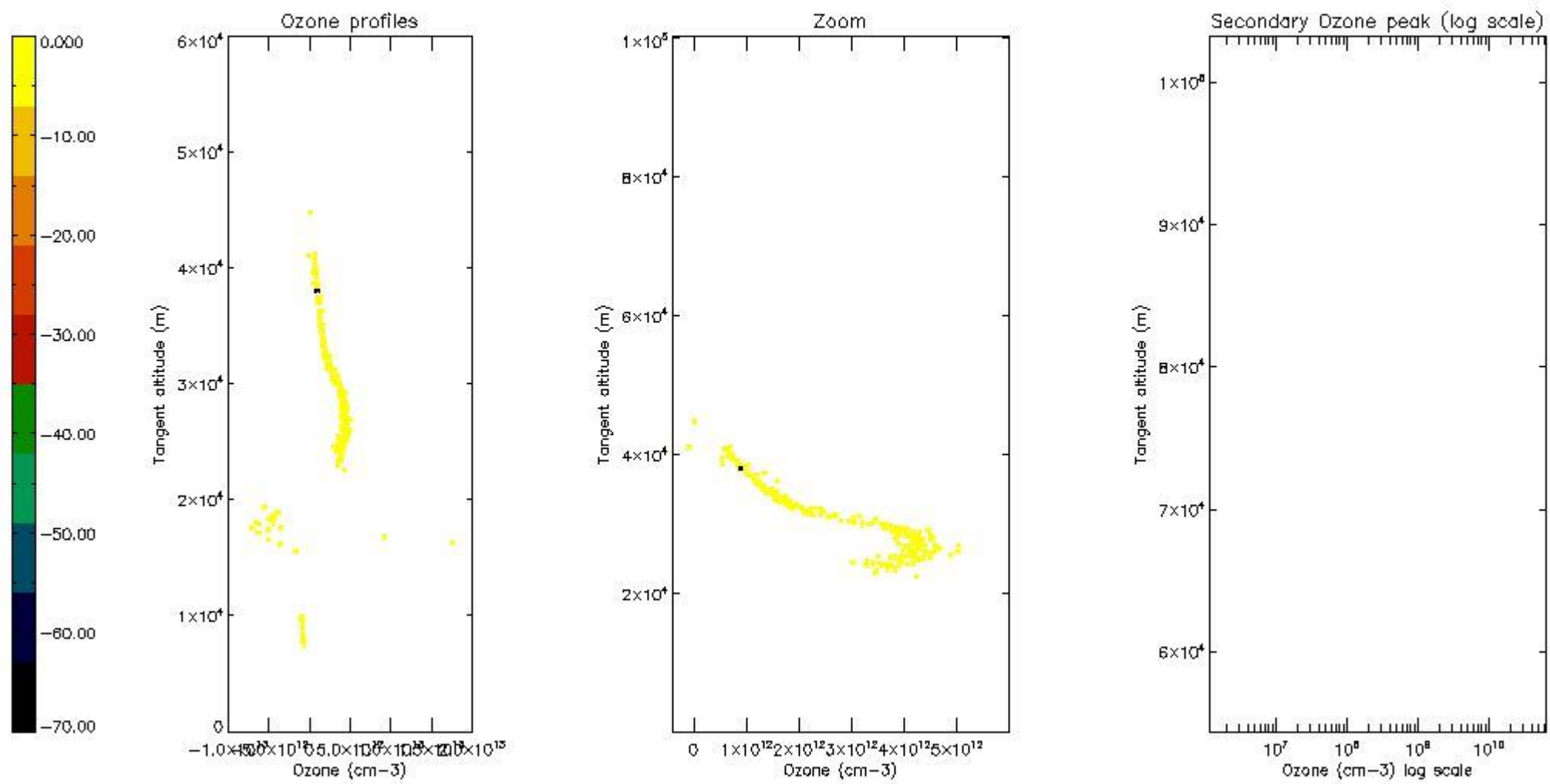
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



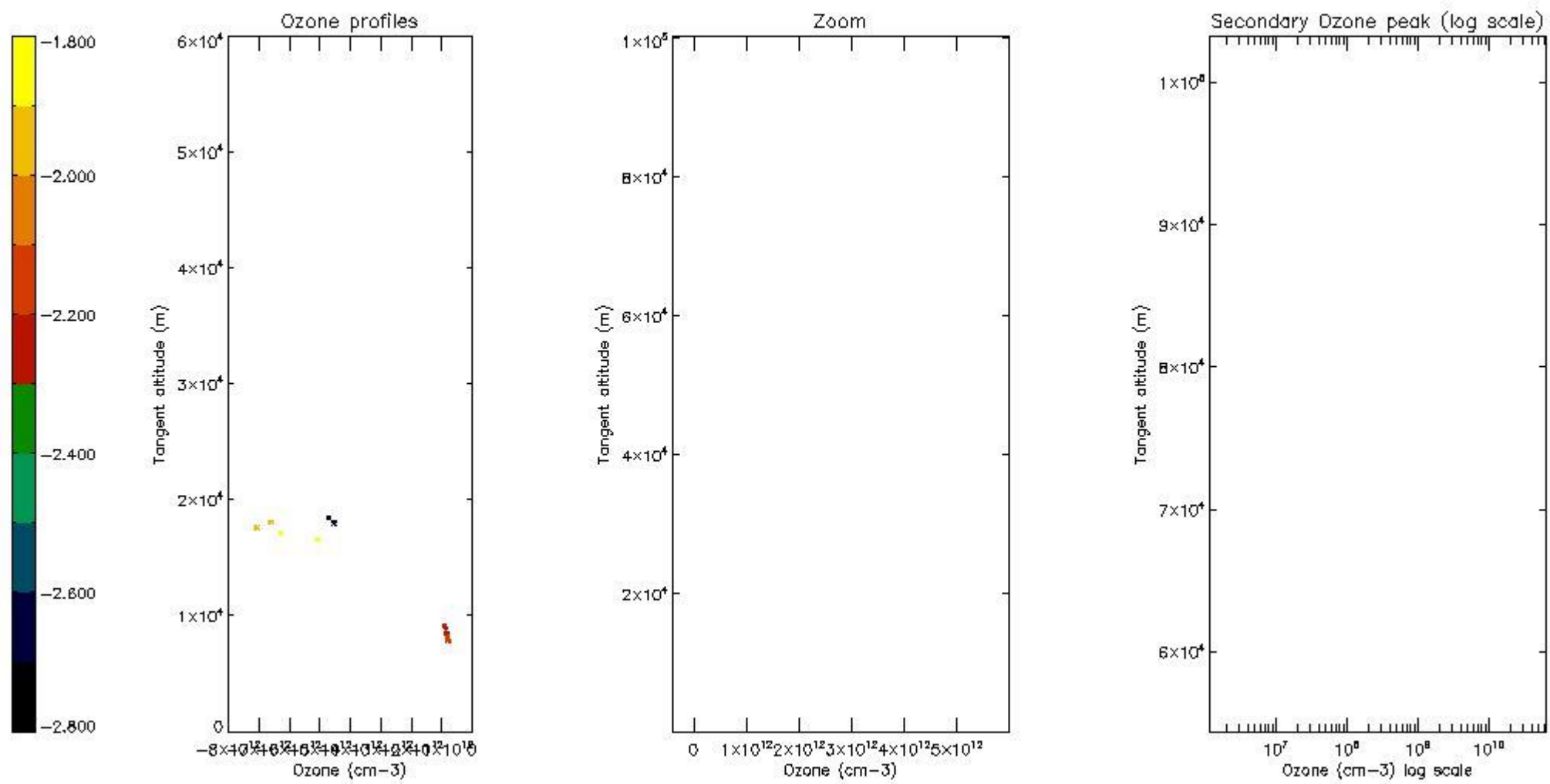
5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)

The colorbar represents the latitude.



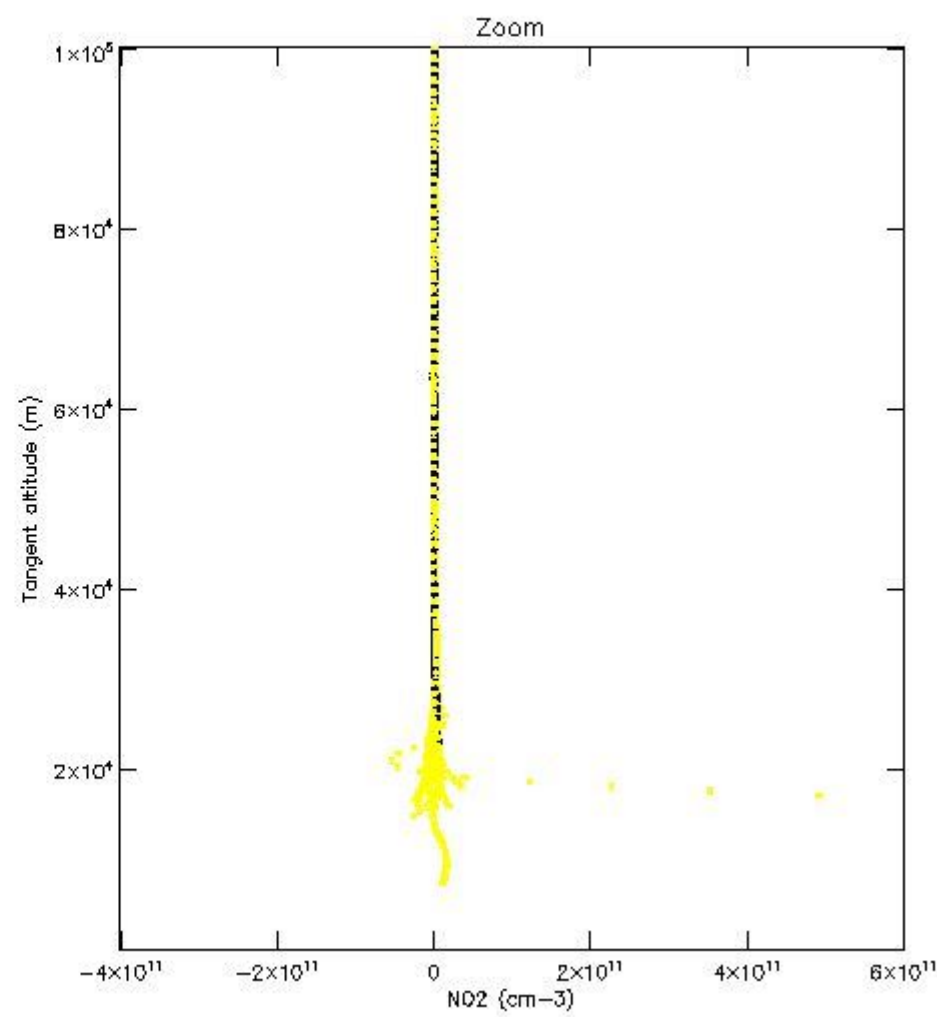
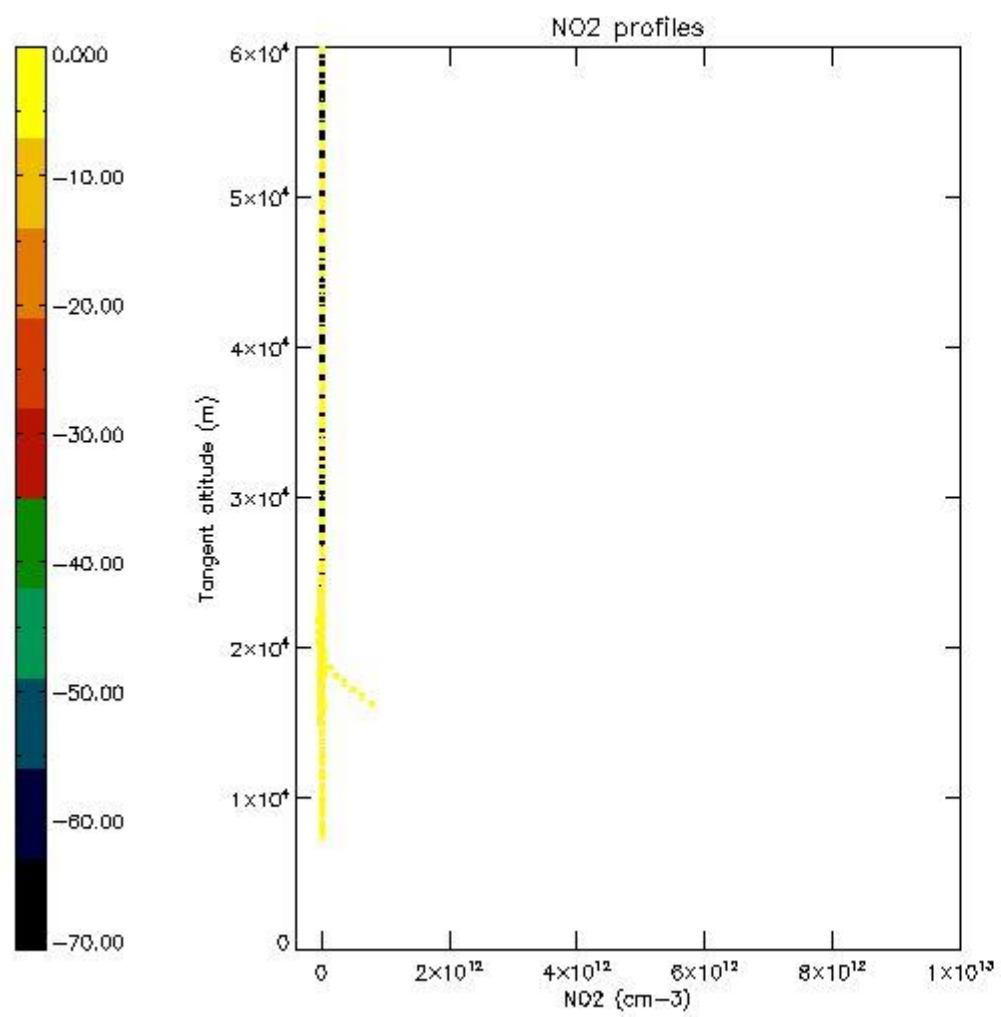
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



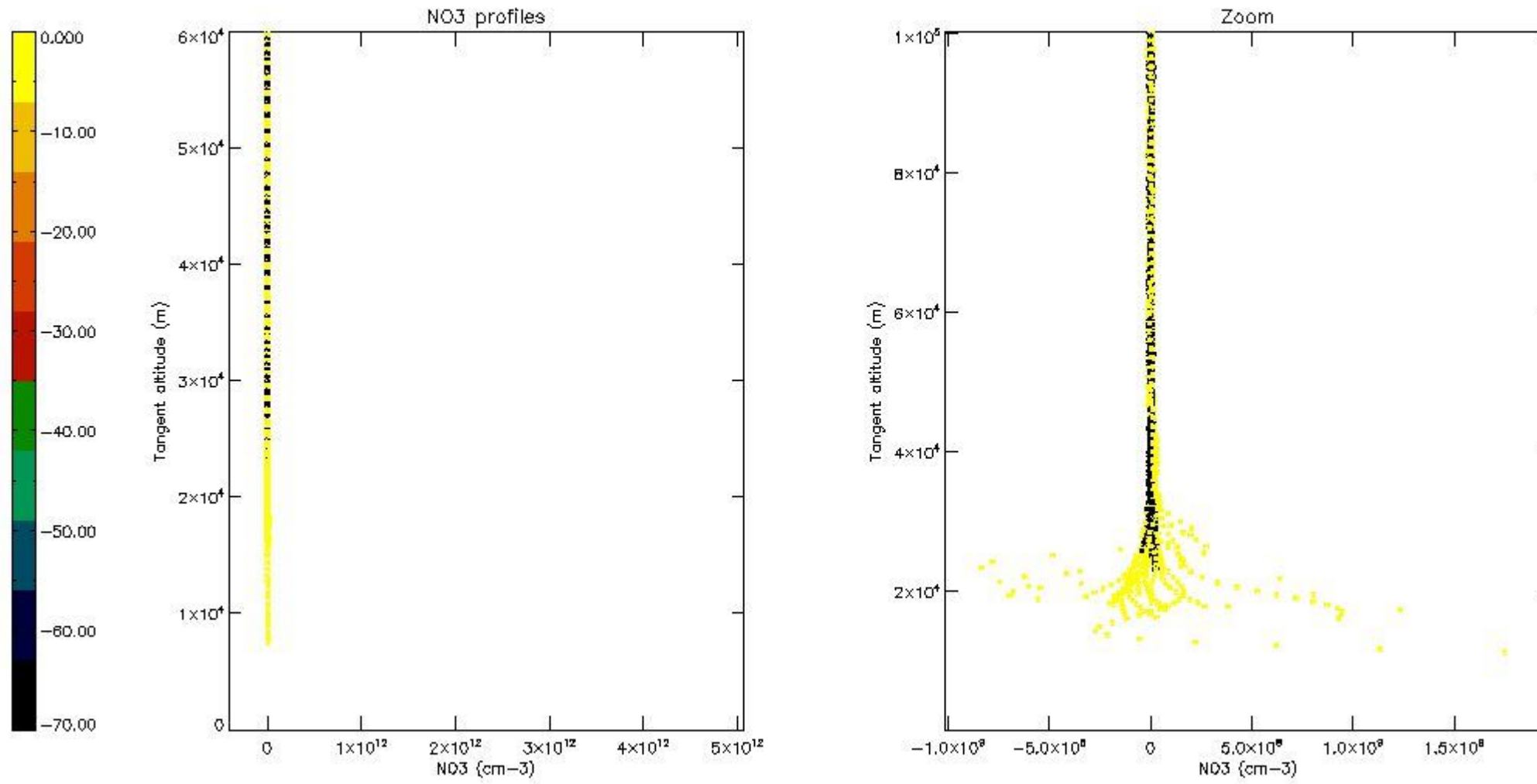
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.



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

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

| Type                      | Auxiliary Filename  | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |
| LEVEL-2_PROC_CONFIG       | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |
| CROSS_SECTIONS_FILE       | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |



# GOMOS Level 2 Daily Report

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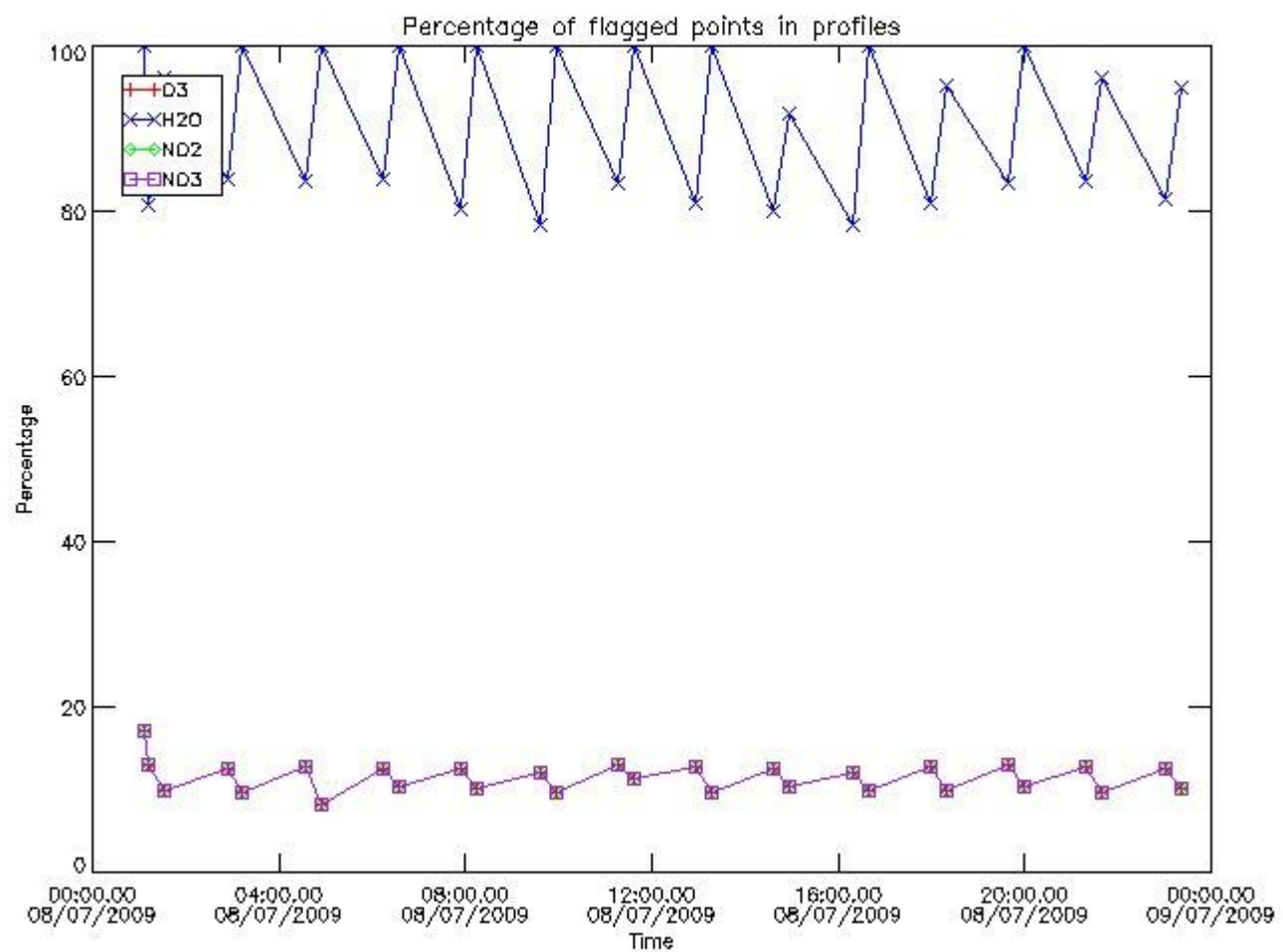


|     |  |                      |            |        |     |           |        |        |     |       |    |
|-----|--|----------------------|------------|--------|-----|-----------|--------|--------|-----|-------|----|
| 161 | GOM_NL__2PRFIN20090708_223059_000000482080_00330_38460_9056.N1 | 08-JUL-2009 22:30:59 | Bright     | 47.500 | 89  | 5Alp Cep  | 2.4510 | 8000.0 | 95  | 38460 | No |
| 162 | GOM_NL__2PRFIN20090708_223830_000000462080_00330_38460_9057.N1 | 08-JUL-2009 22:38:30 | Bright     | 46.000 | 74  | 11Bet Cas | 2.2680 | 6600.0 | 92  | 38460 | No |
| 163 | GOM_NL__2PRFIN20090708_224029_000000402080_00330_38460_9058.N1 | 08-JUL-2009 22:40:29 | Bright     | 40.000 | 110 | 37Del Cas | 2.6780 | 8900.0 | 80  | 38460 | No |
| 164 | GOM_NL__2PRFIN20090708_224807_000000352080_00330_38460_9059.N1 | 08-JUL-2009 22:48:07 | Bright     | 35.000 | 79  | 26Bet Per | 2.3100 | 13100. | 70  | 38460 | No |
| 165 | GOM_NL__2PRFIN20090708_225022_000000452080_00330_38460_9060.N1 | 08-JUL-2009 22:50:22 | Twilight   | 45.000 | 173 | 4Bet Tri  | 3.0040 | 8900.0 | 90  | 38460 | No |
| 166 | GOM_NL__2PRFIN20090708_230023_000000412080_00330_38460_9061.N1 | 08-JUL-2009 23:00:23 | Dark       | 40.500 | 94  | 92Alp Cet | 2.5260 | 3100.0 | 81  | 38460 | No |
| 167 | GOM_NL__2PRFIN20090708_232046_000000512080_00331_38461_9061.N1 | 08-JUL-2009 23:20:46 | Dark       | 50.500 | 84  | Alp Phe   | 2.3970 | 4500.0 | 101 | 38461 | No |
| 168 | GOM_NL__2PRFIN20090708_232700_000000562080_00331_38461_9062.N1 | 08-JUL-2009 23:27:00 | Straylight | 55.500 | 63  | Bet Gru   | 2.1500 | 2800.0 | 111 | 38461 | No |
| 169 | GOM_NL__2PRFIN20090708_232846_000000572080_00331_38461_9063.N1 | 08-JUL-2009 23:28:46 | Straylight | 56.500 | 31  | Alp Gru   | 1.7340 | 15200. | 113 | 38461 | No |
| 170 | GOM_NL__2PRFIN20090708_233154_000000552080_00331_38461_9064.N1 | 08-JUL-2009 23:31:54 | Straylight | 54.500 | 172 | Gam Gru   | 3.0030 | 13100. | 109 | 38461 | No |
| 171 | GOM_NL__2PRFIN20090708_235329_000000432080_00331_38461_9065.N1 | 08-JUL-2009 23:53:29 | Bright     | 42.500 | 168 | 17Zet Aql | 2.9860 | 11000. | 85  | 38461 | No |

### 3. Quality information per product

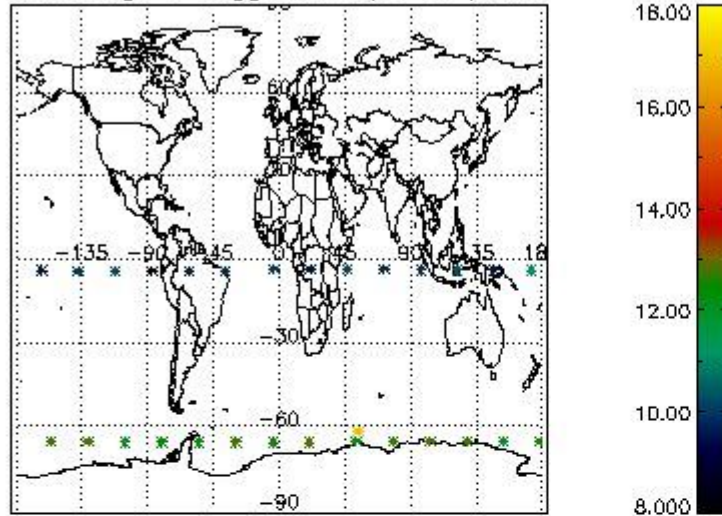
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

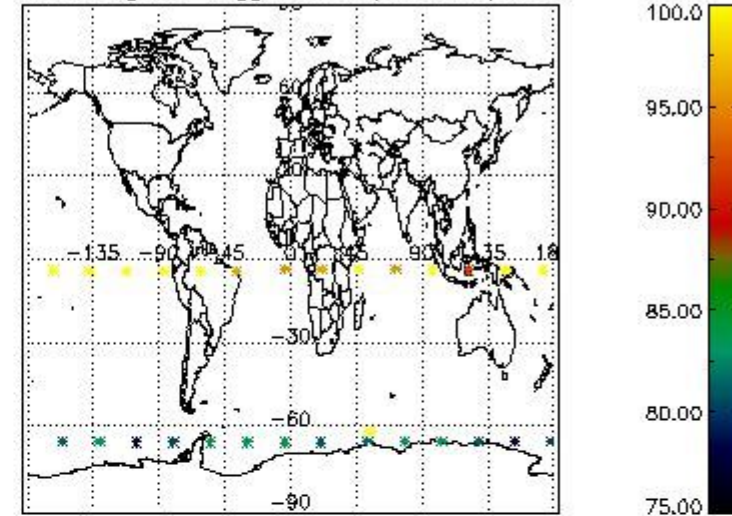


#### 3.2 Plot quality information per product (world map)

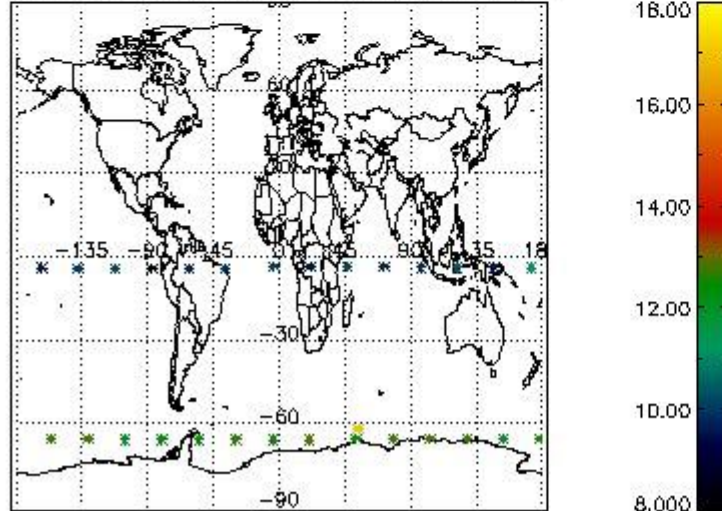
Percentage of flagged data per O3 profile



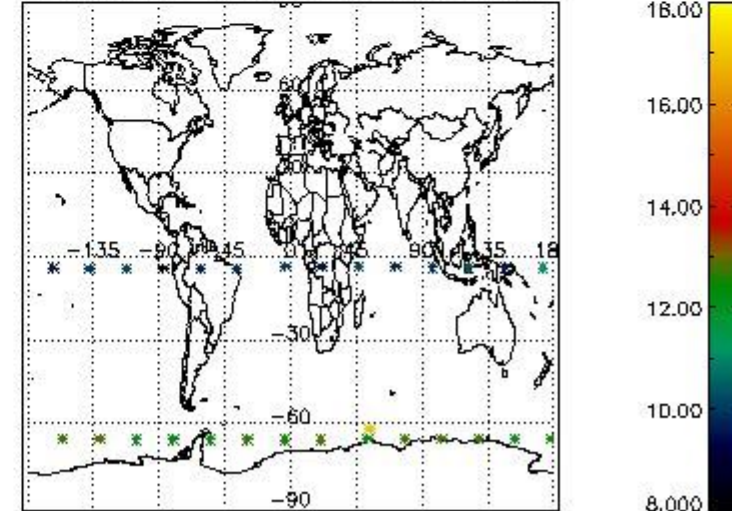
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

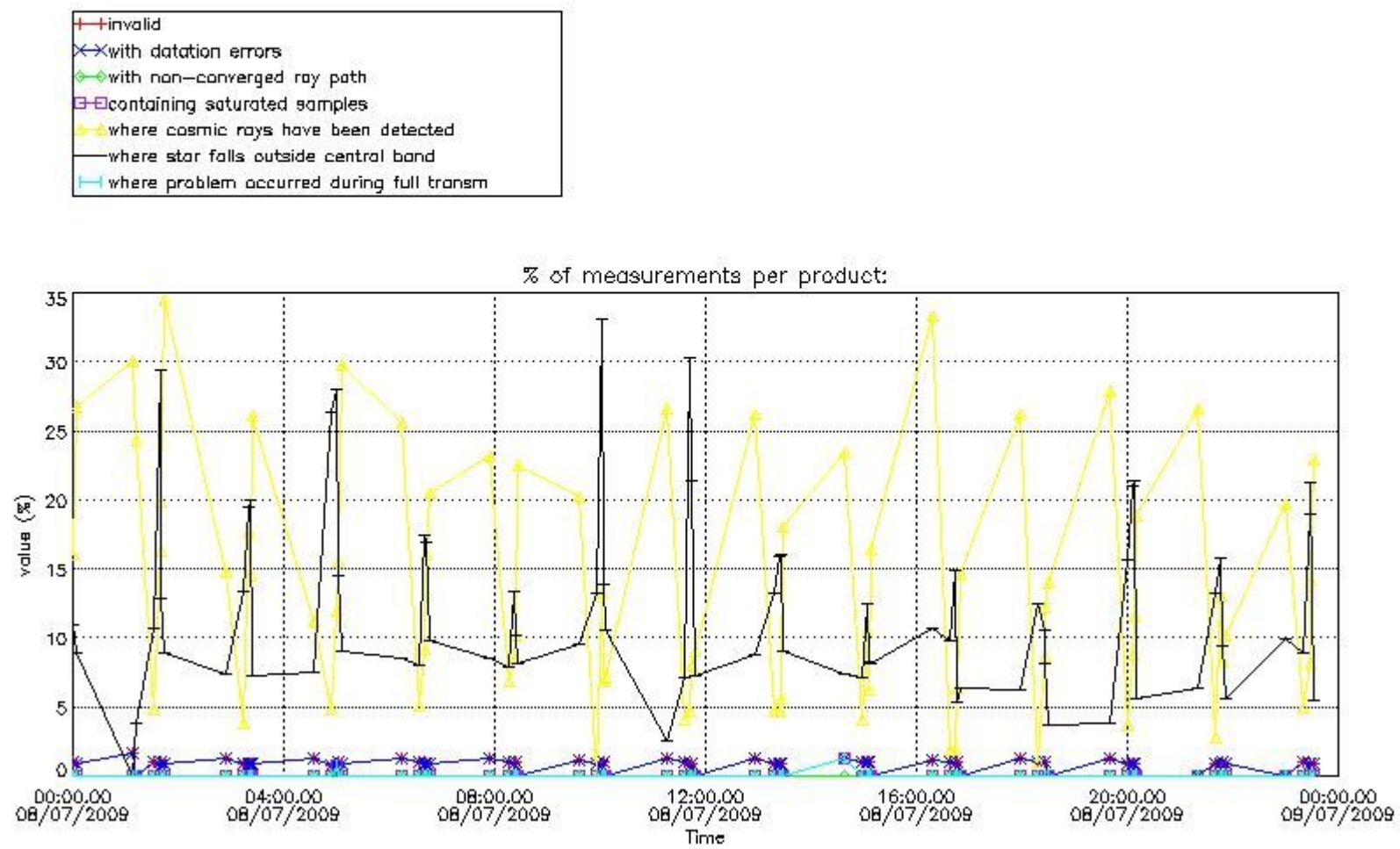


#### 4. Level 1 quality information per product

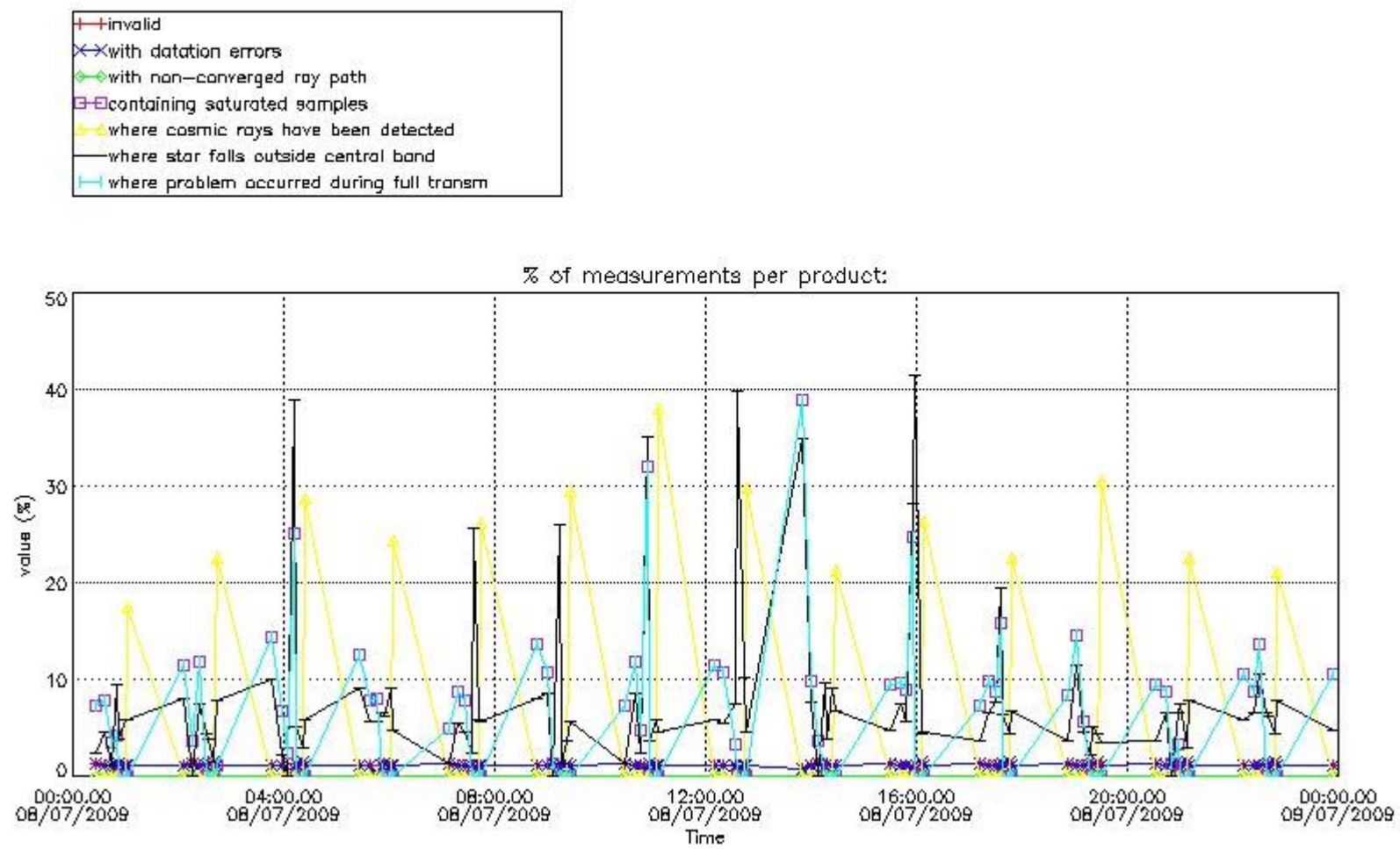
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



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

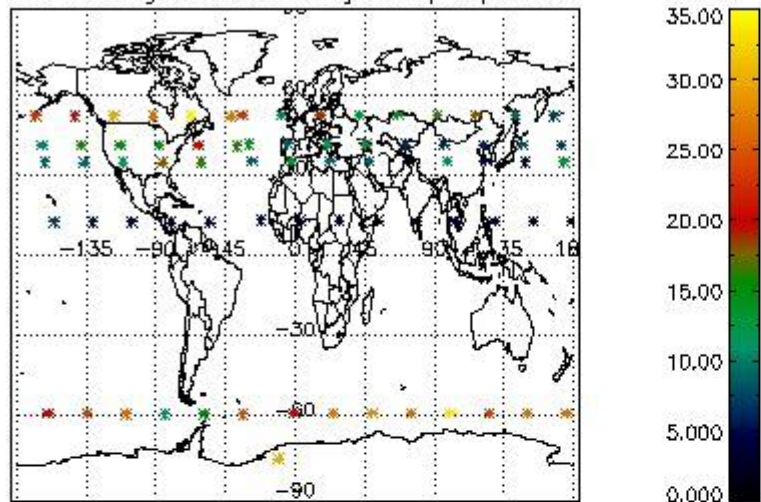


#### 4.2 Plot quality information per product coming from level 1b processing (world map)

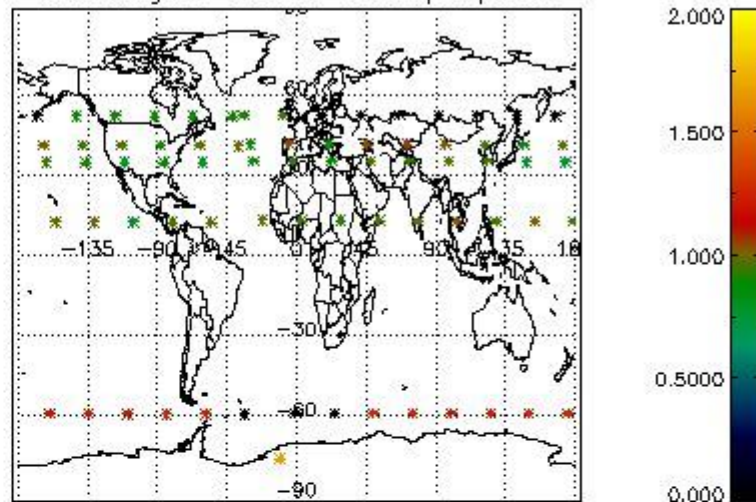
##### 4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



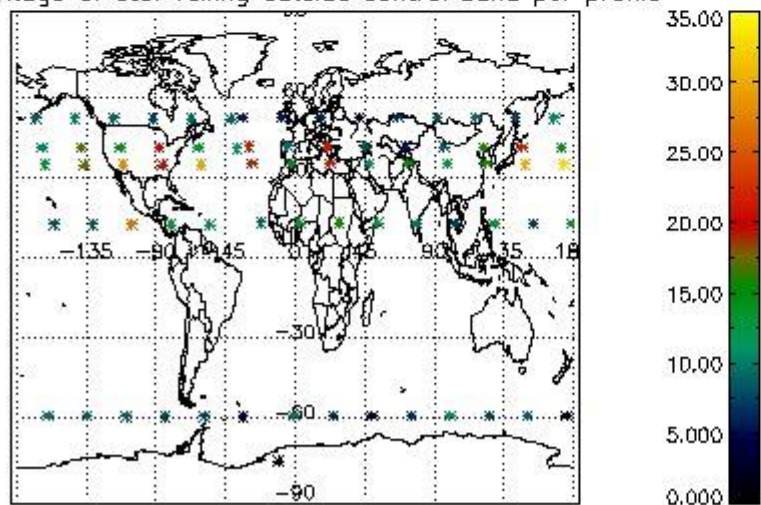
Percentage of cosmic ray hits per profile



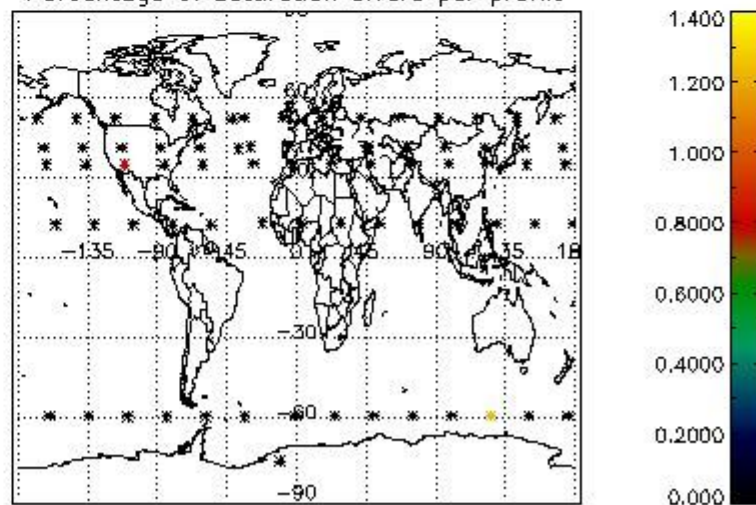
Percentage of datation errors per profile



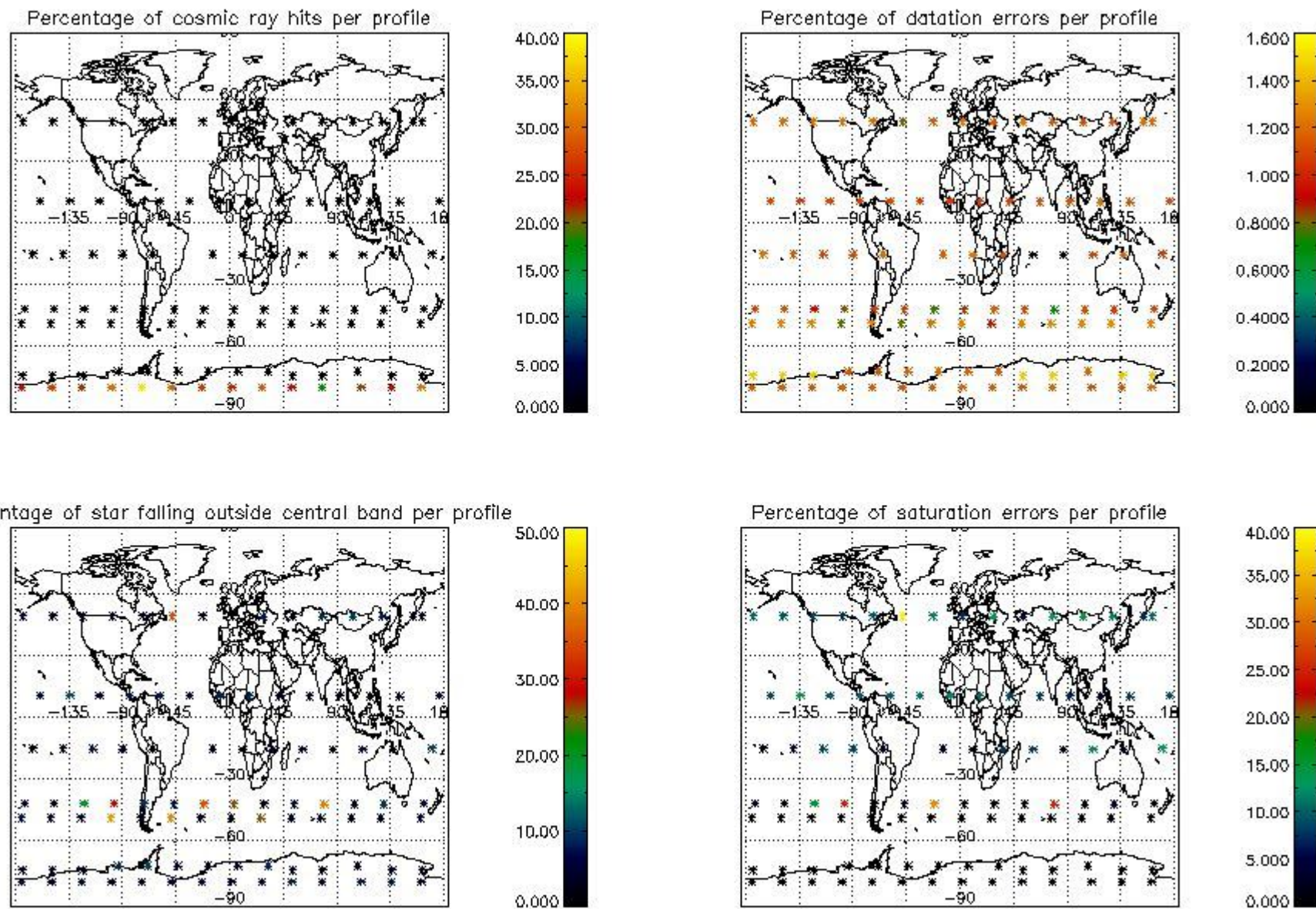
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 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

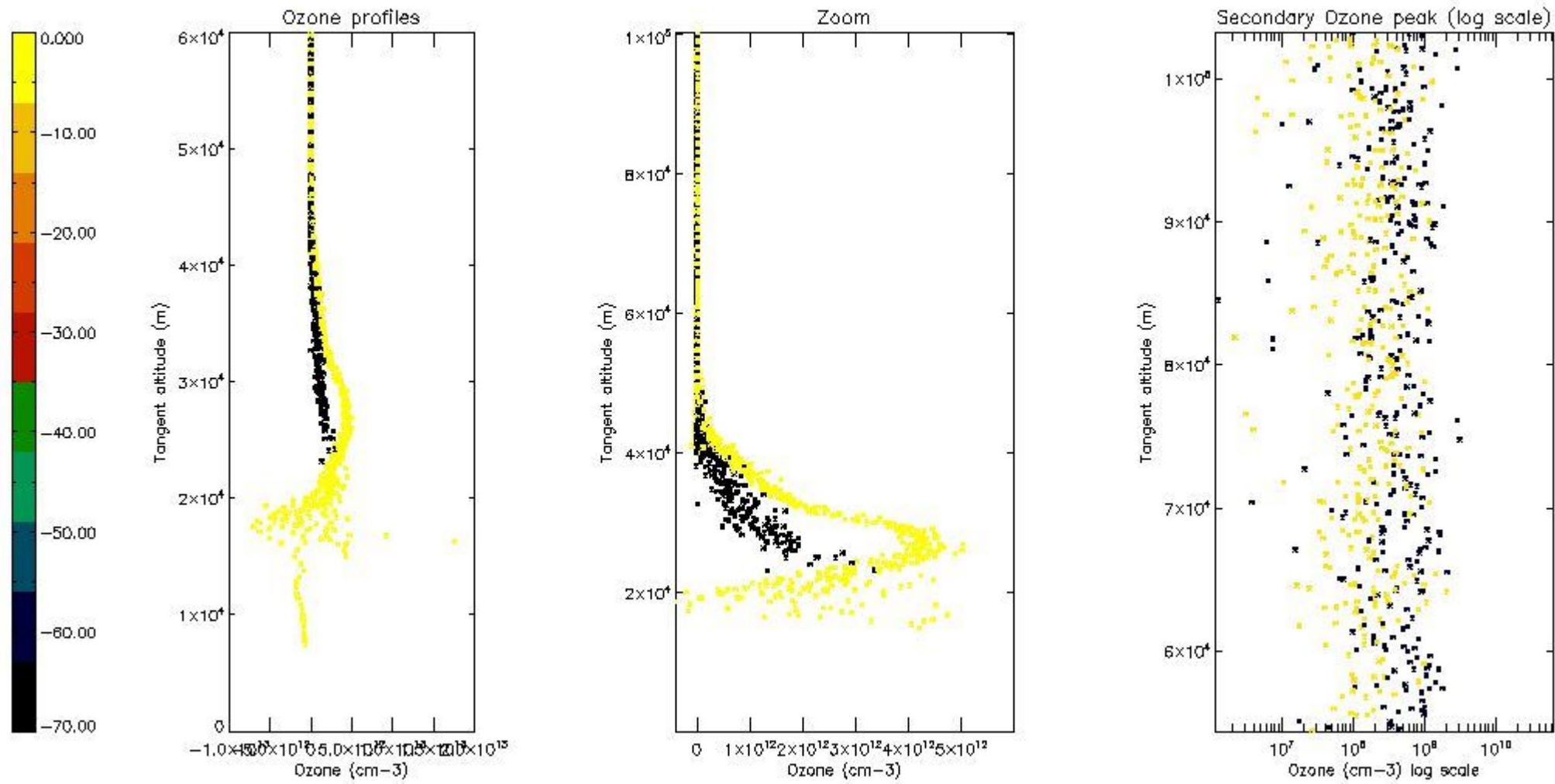
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

| Criteria | % of total production |
|----------|-----------------------|
| All STD  | 17                    |
| STD < 20 | 3                     |

|          |   |
|----------|---|
| STD < 10 | 2 |
| STD < 5  | 0 |

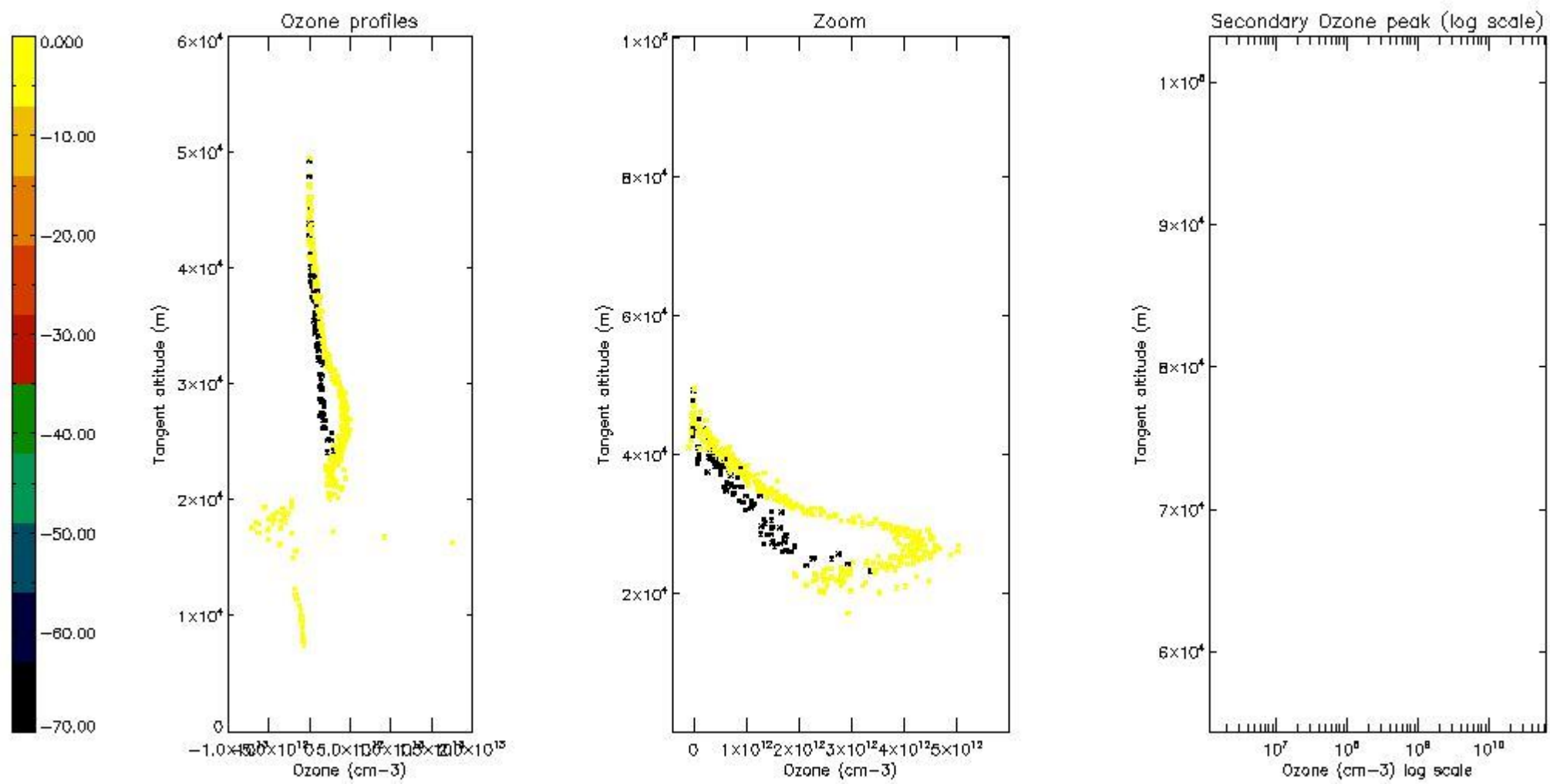
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



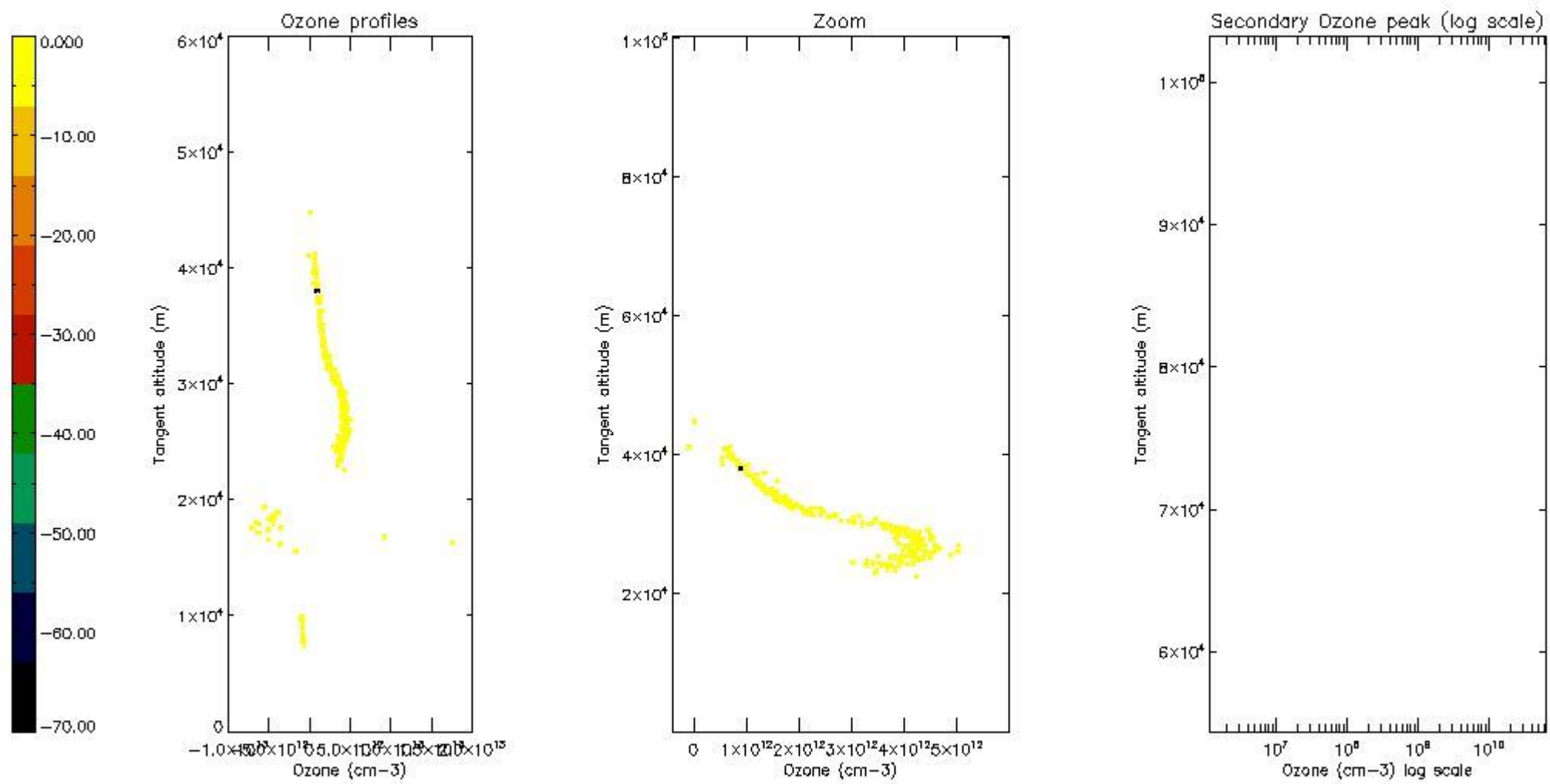
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



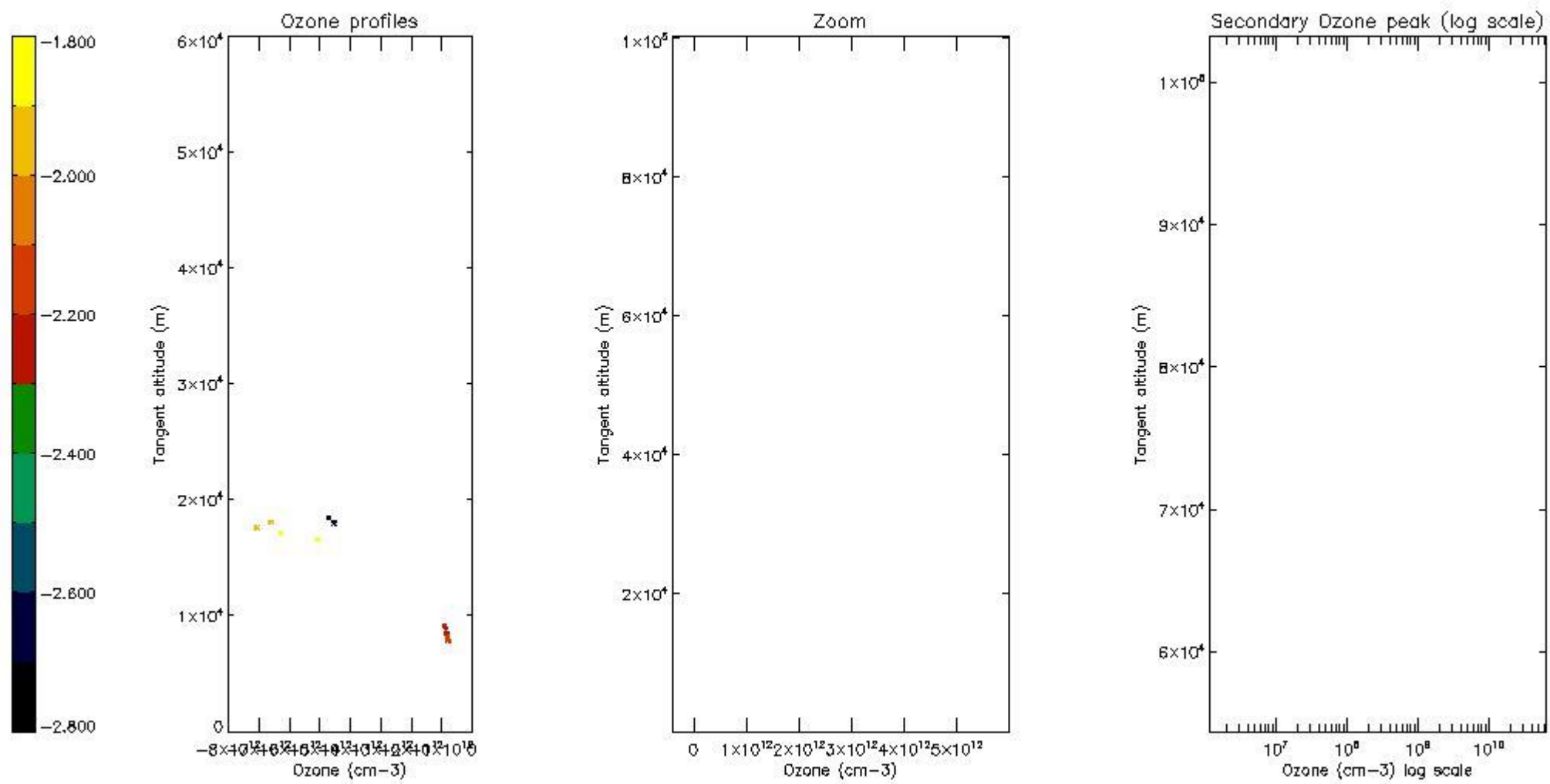
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



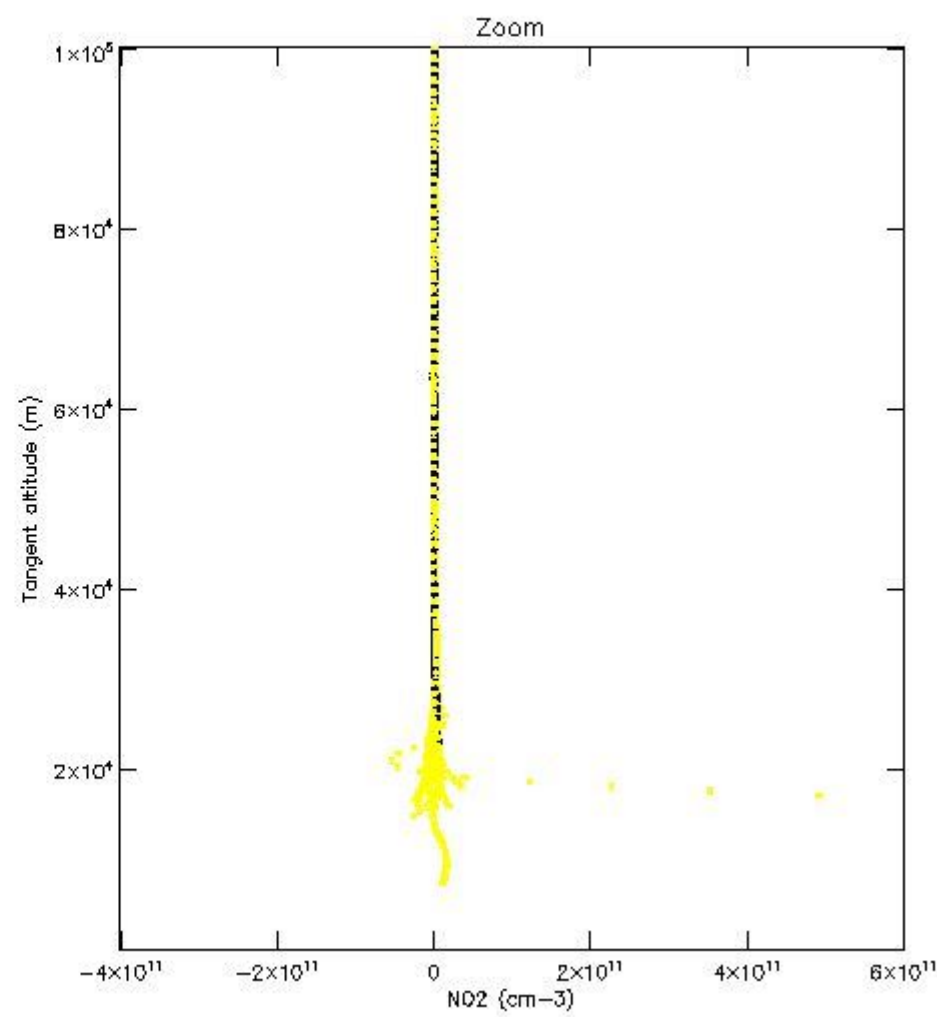
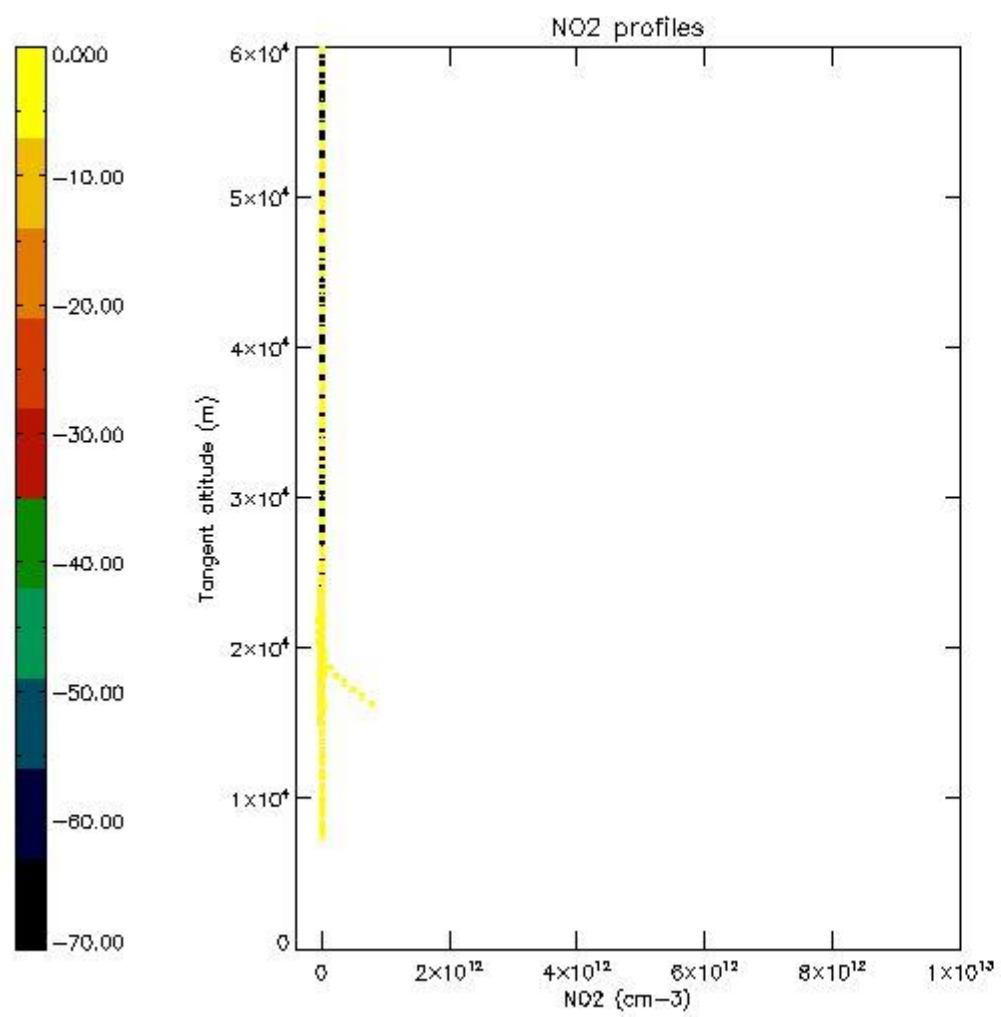
*5.5 Plot ozone profiles where  $STD < 5\%$  (dark without errors)*

The colorbar represents the latitude.



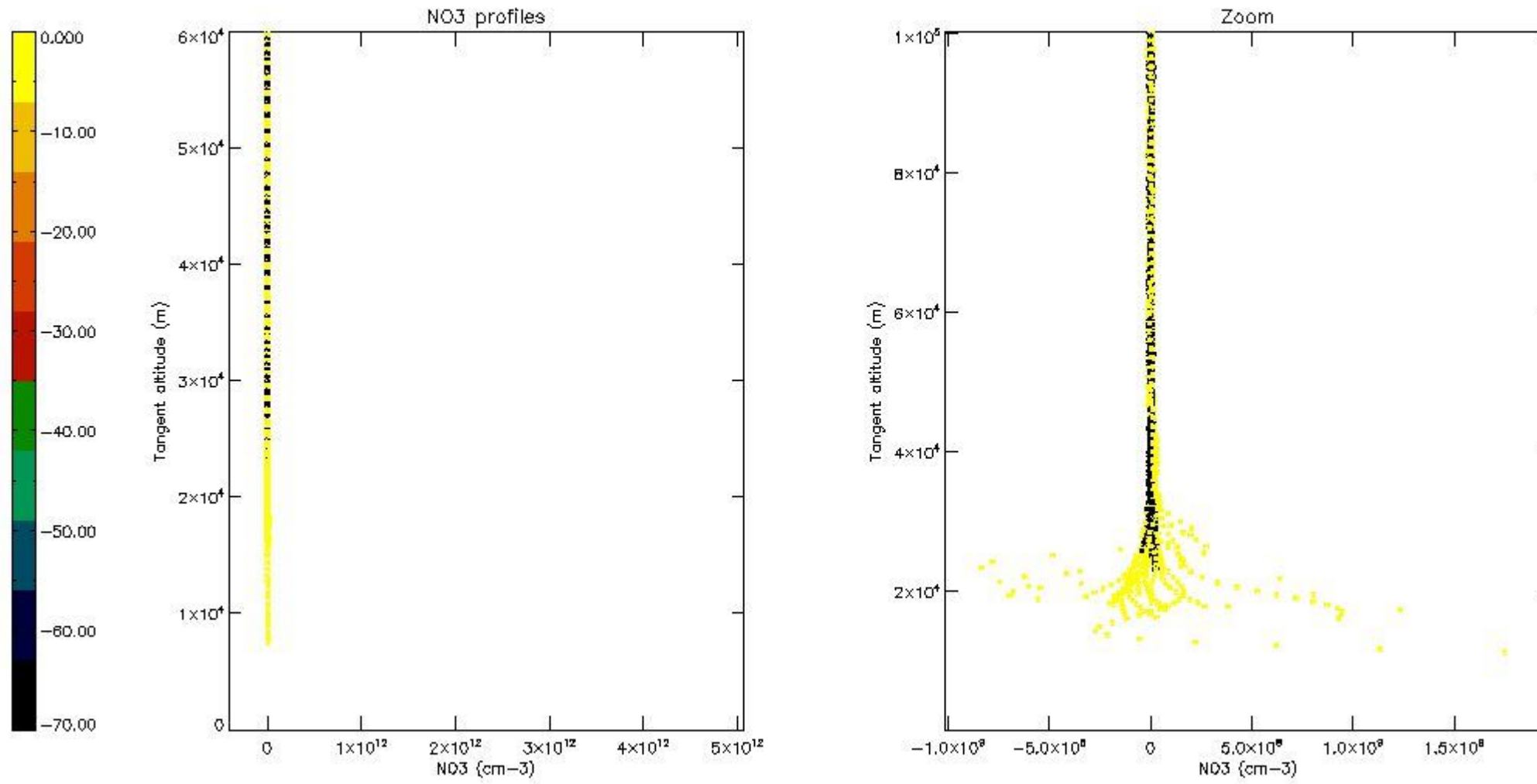
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.

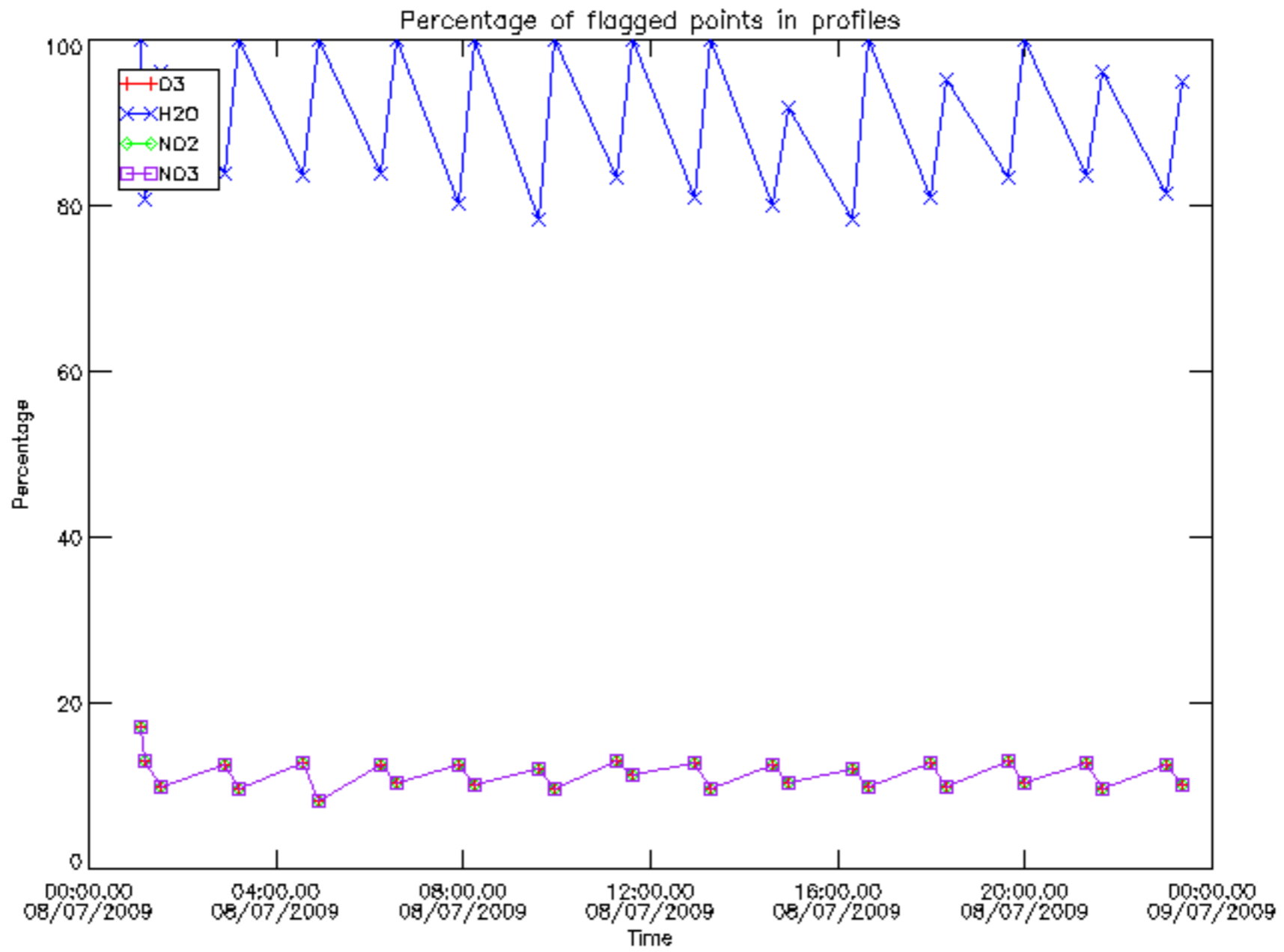


## 6. Auxiliary Data Files used for the production reported in section 2

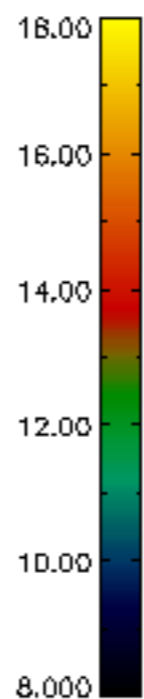
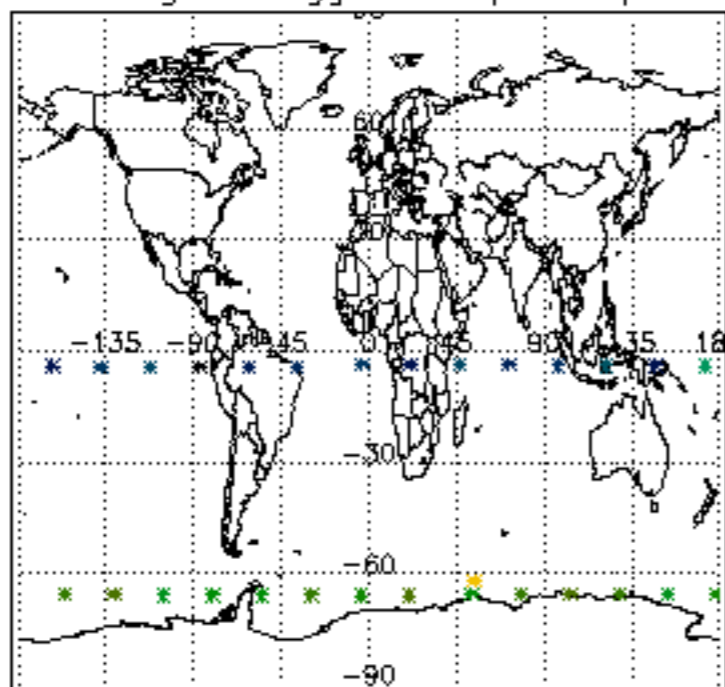
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

| Type                      | Auxiliary Filename  | Used since product | Used since product date |
|---------------------------|---|--------------------|-------------------------|
| INST_PHYS_CHARACTERISTICS | GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |
| LEVEL-2_PROC_CONFIG       | GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |
| CROSS_SECTIONS_FILE       | GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000 | 1                  | 08-JUL-2009 00:00:12    |

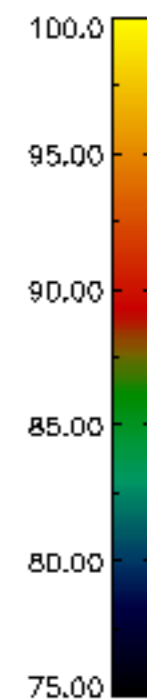
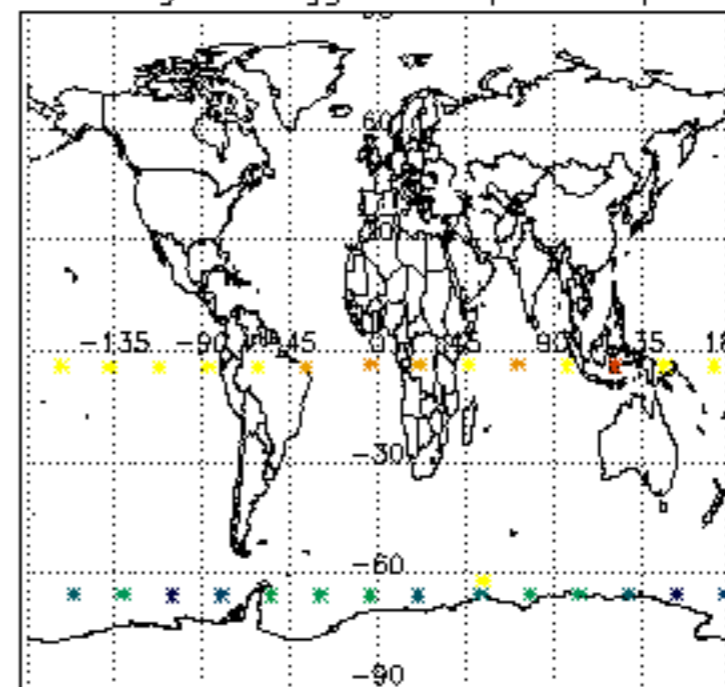




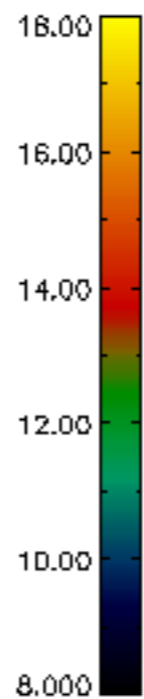
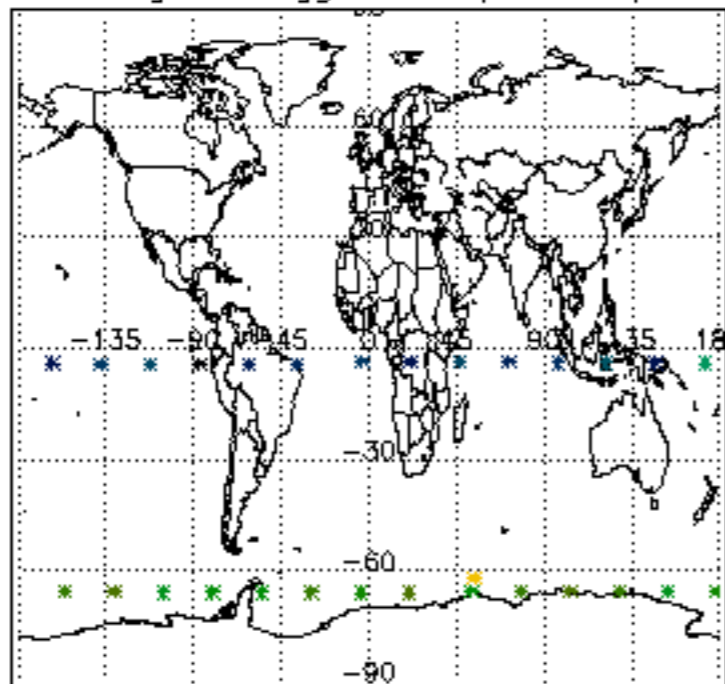
Percentage of flagged data per D3 profile



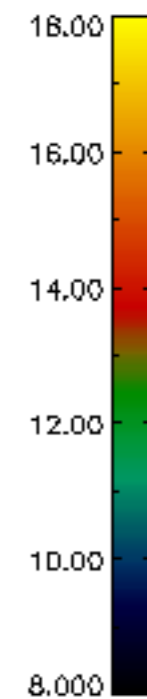
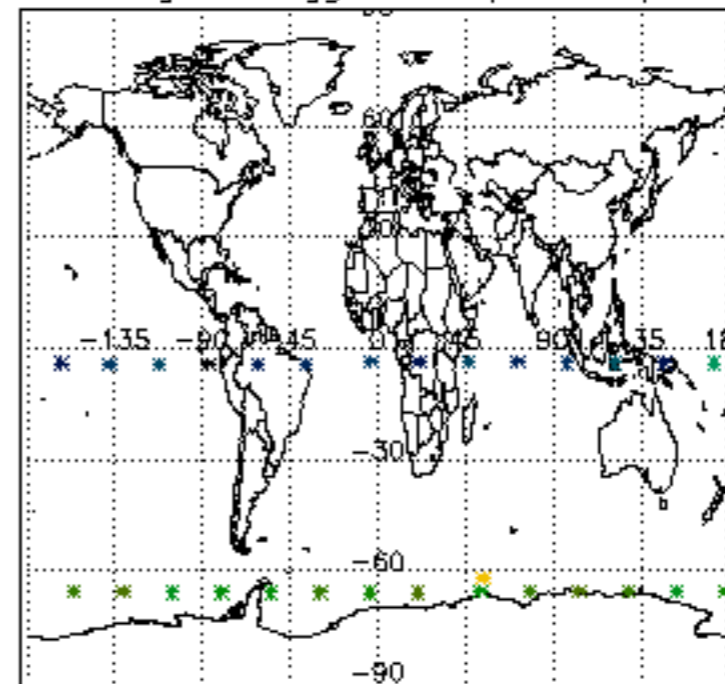
Percentage of flagged data per H2O profile

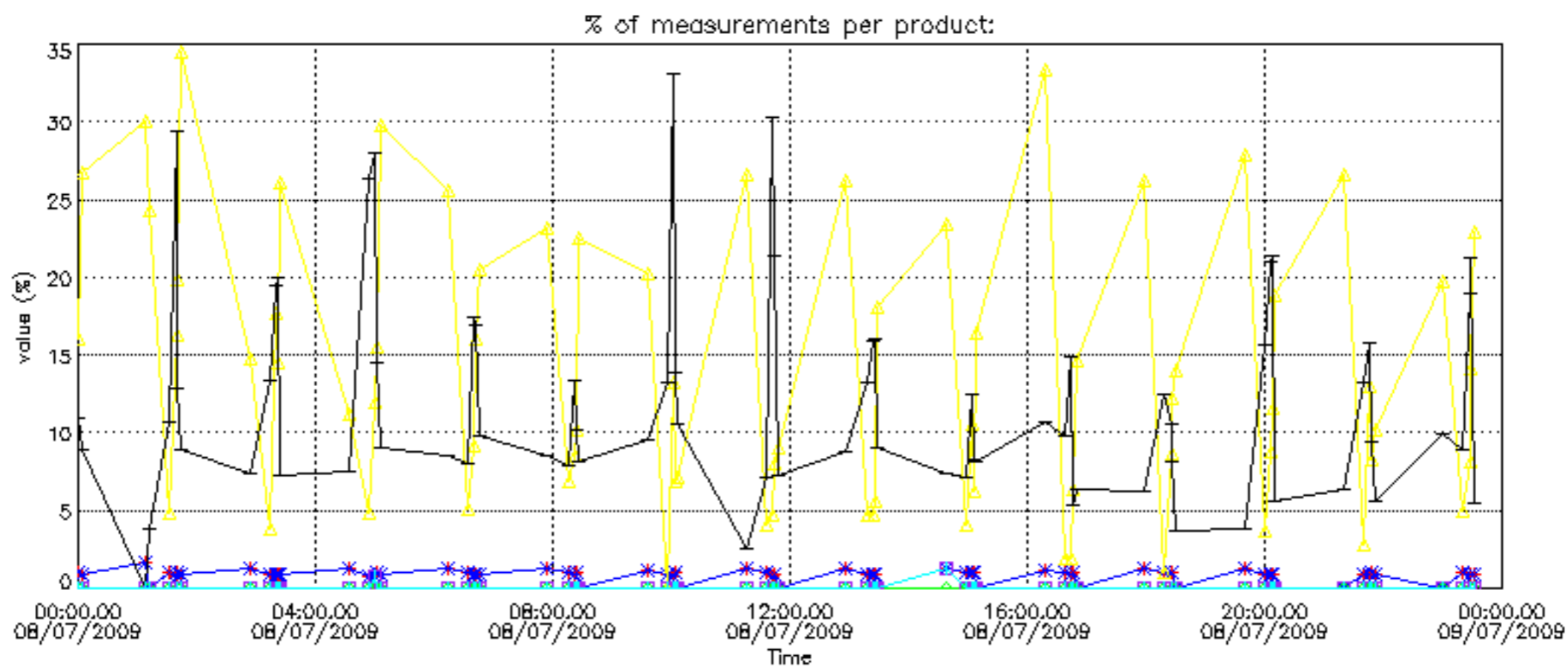


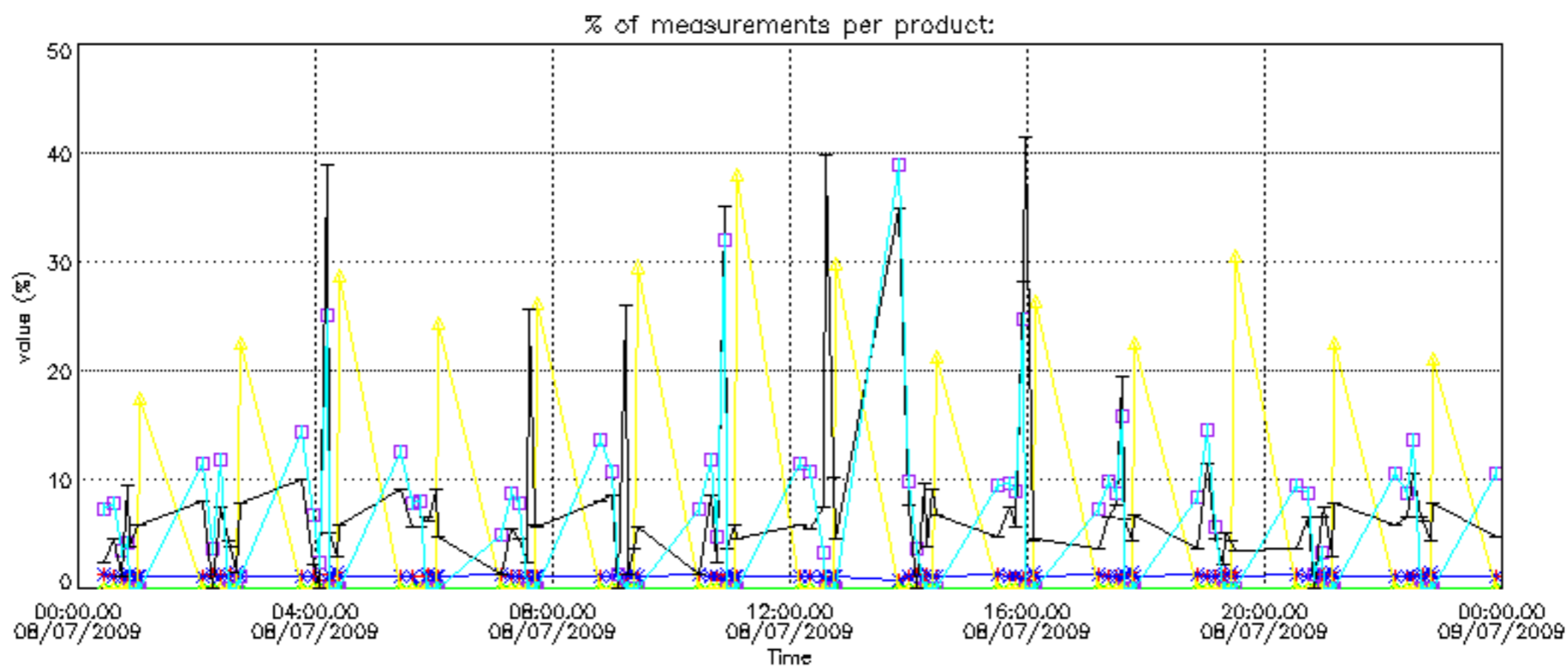
Percentage of flagged data per NO2 profile



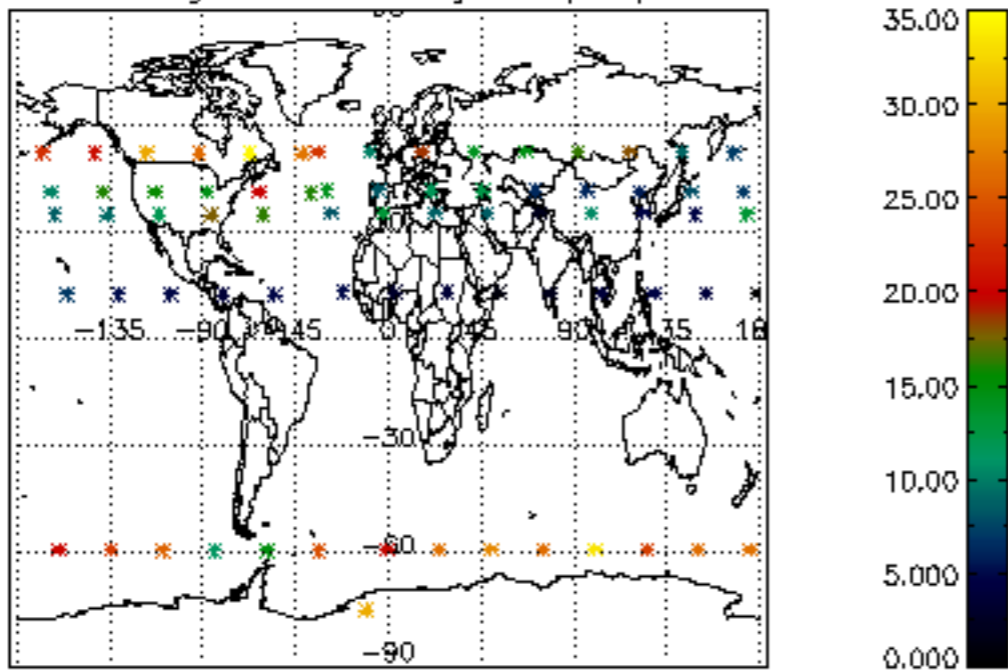
Percentage of flagged data per NO3 profile



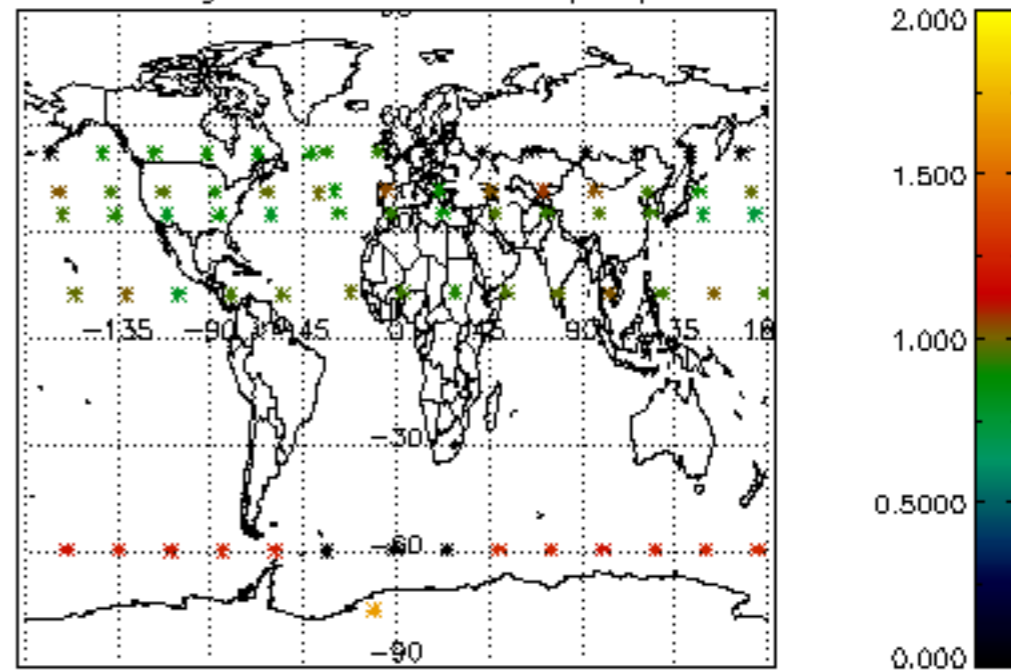




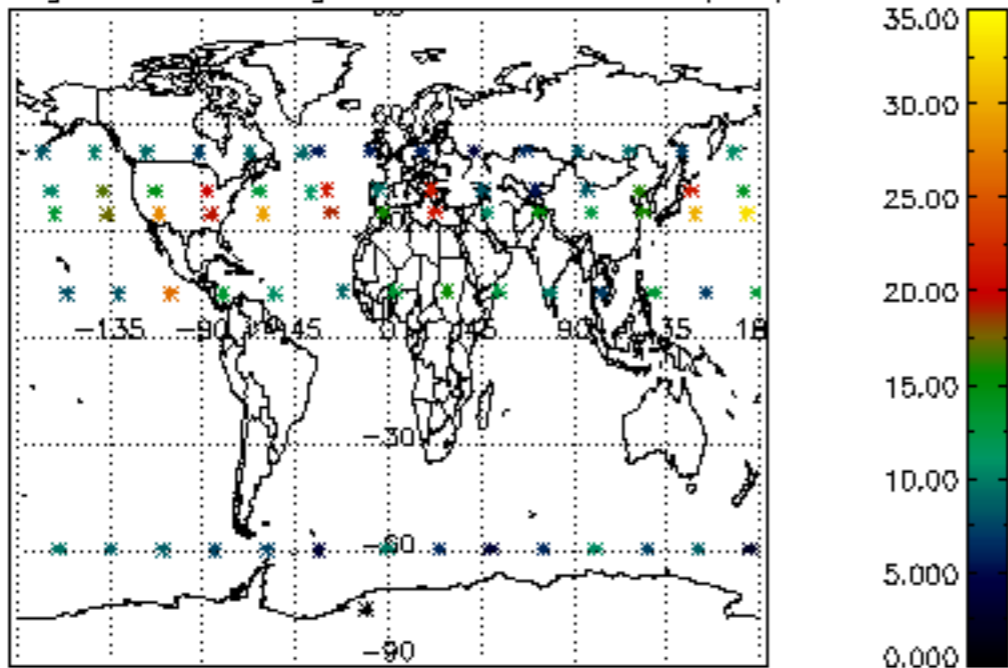
Percentage of cosmic ray hits per profile



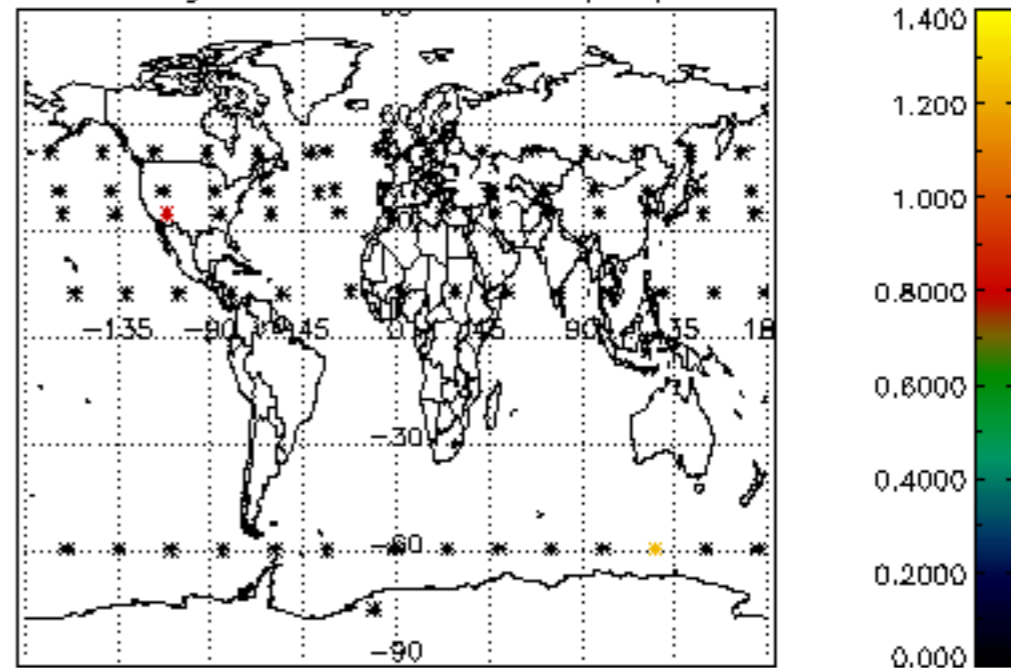
Percentage of datation errors per profile



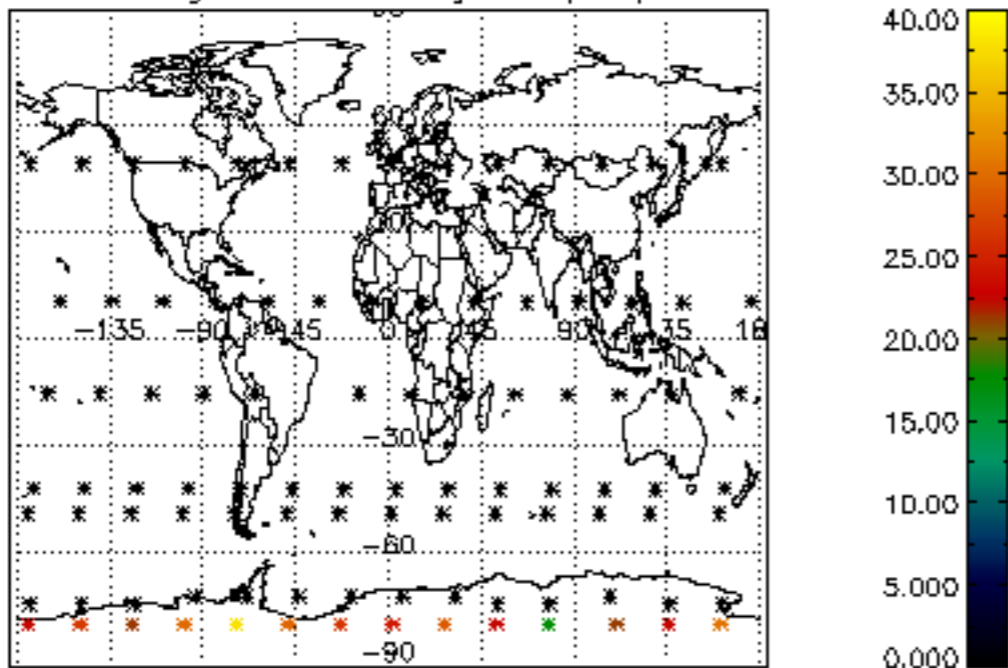
Percentage of star falling outside central band per profile



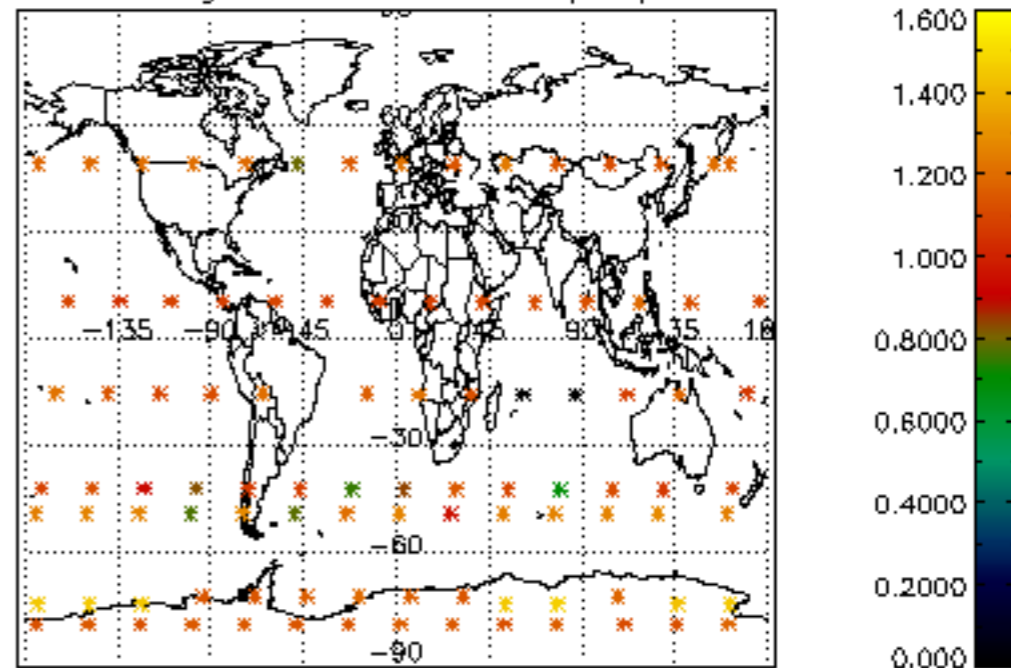
Percentage of saturation errors per profile



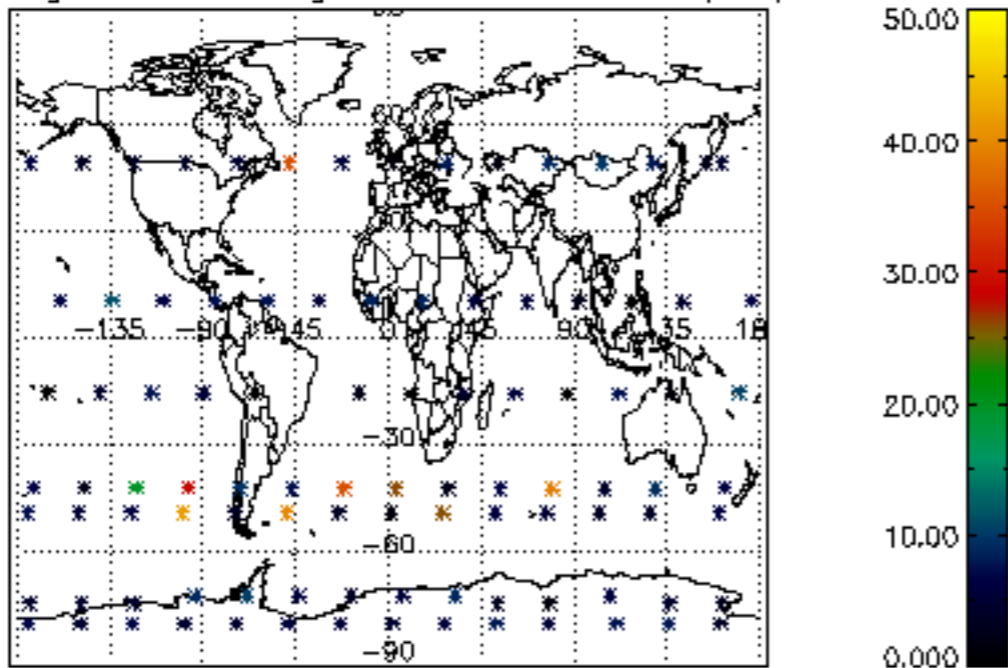
Percentage of cosmic ray hits per profile



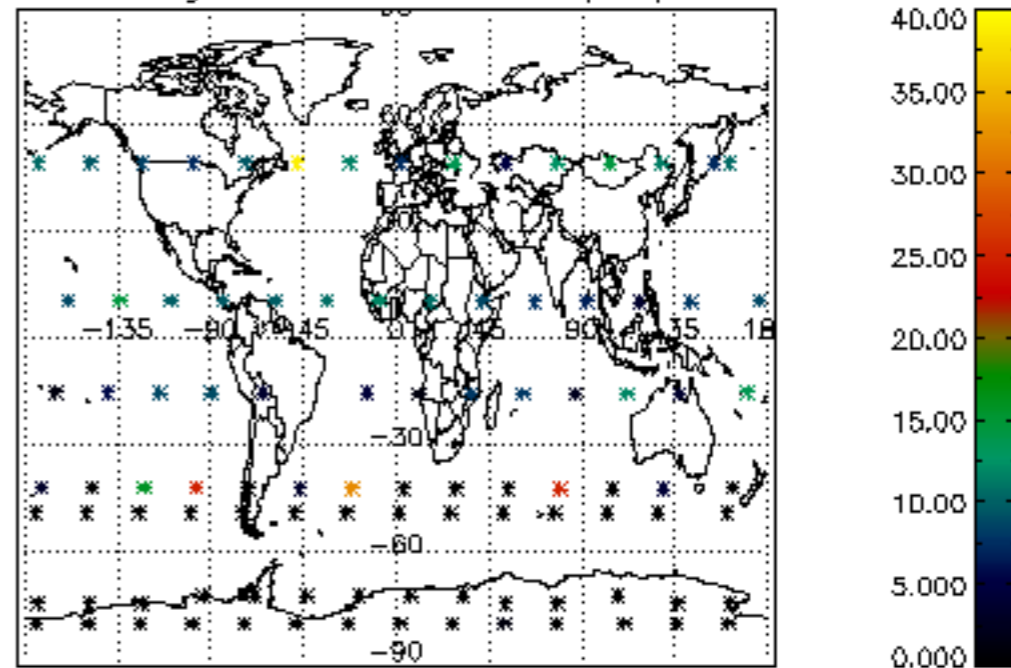
Percentage of datation errors per profile

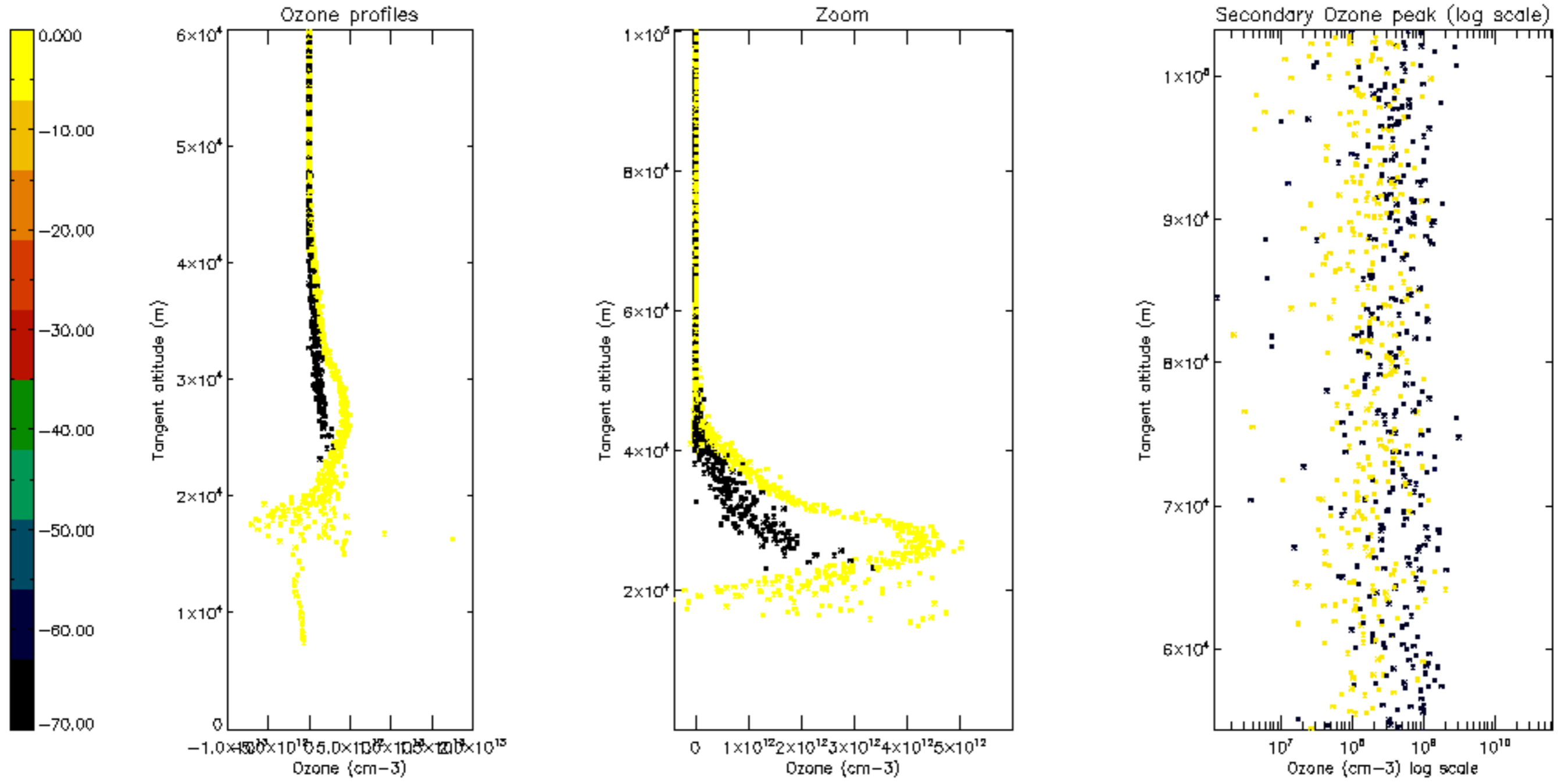


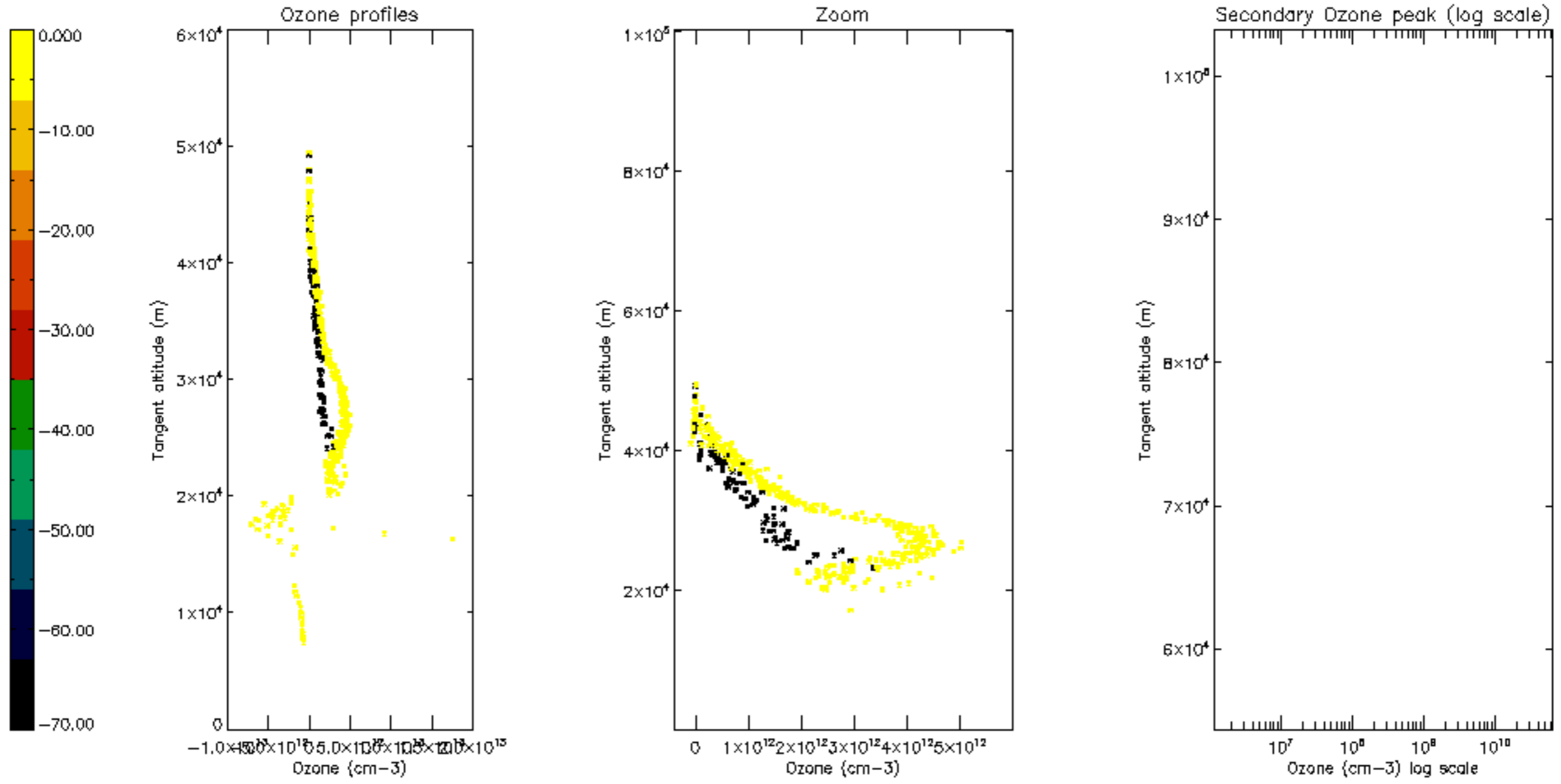
Percentage of star falling outside central band per profile



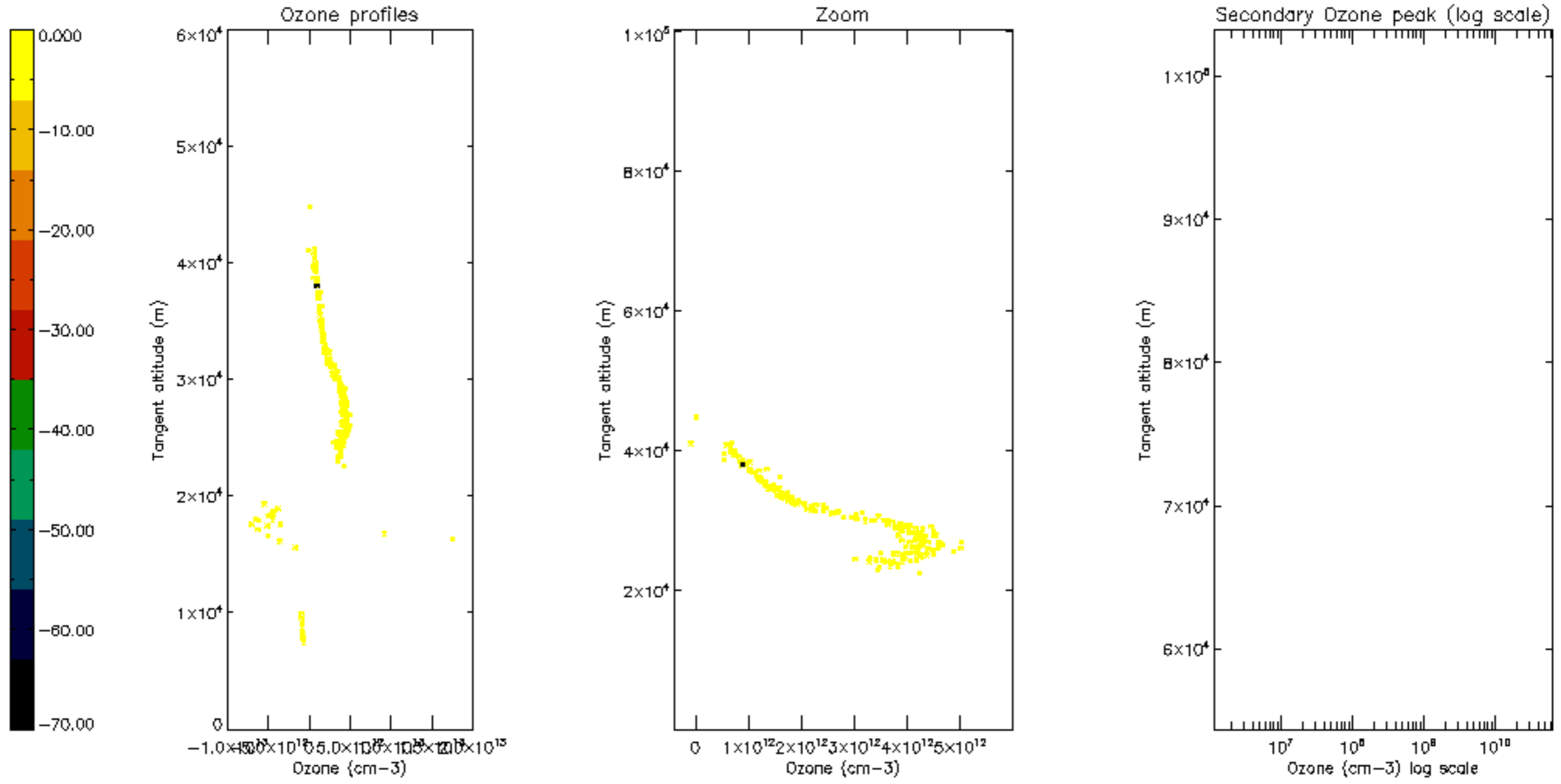
Percentage of saturation errors per profile

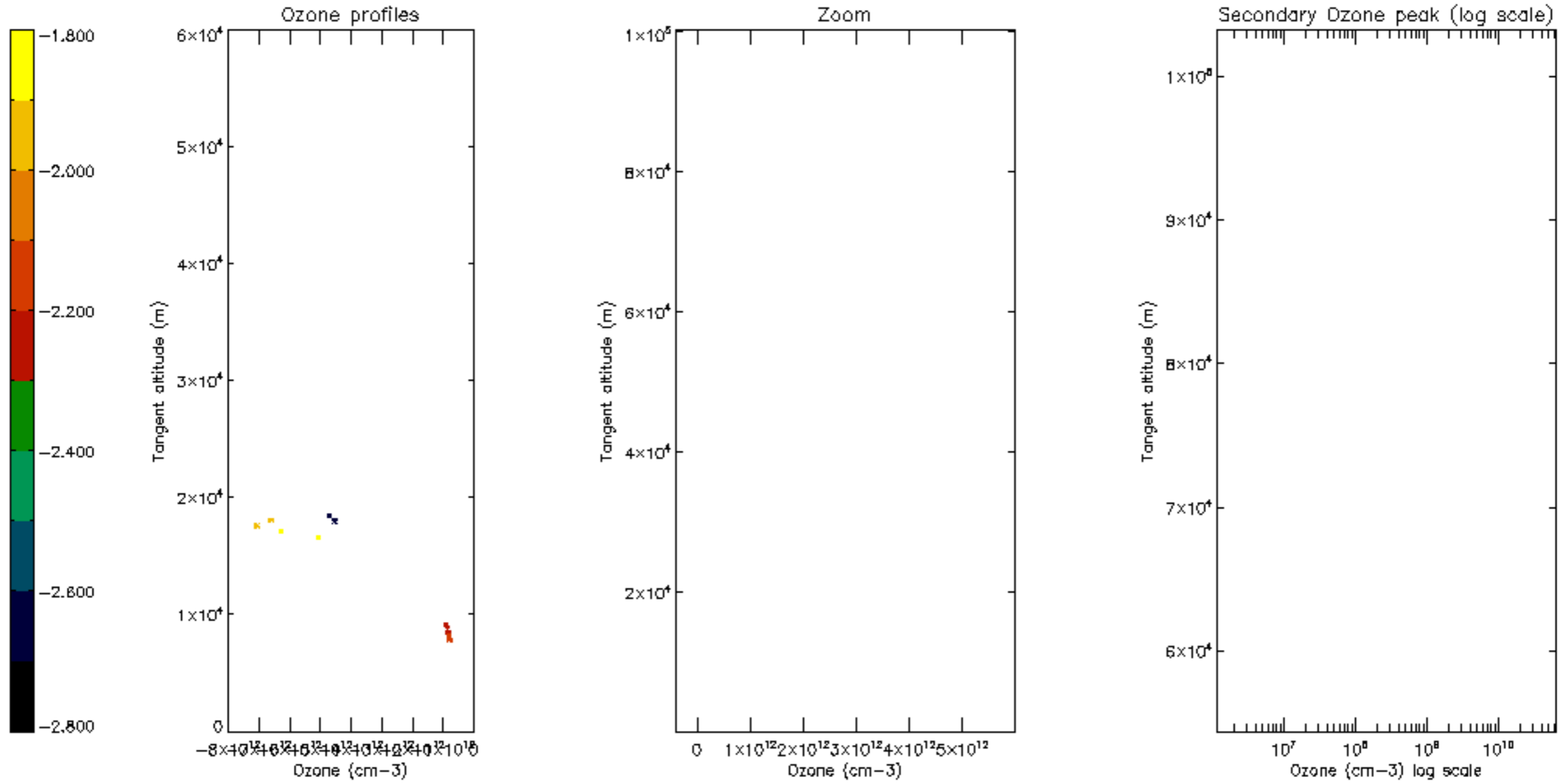


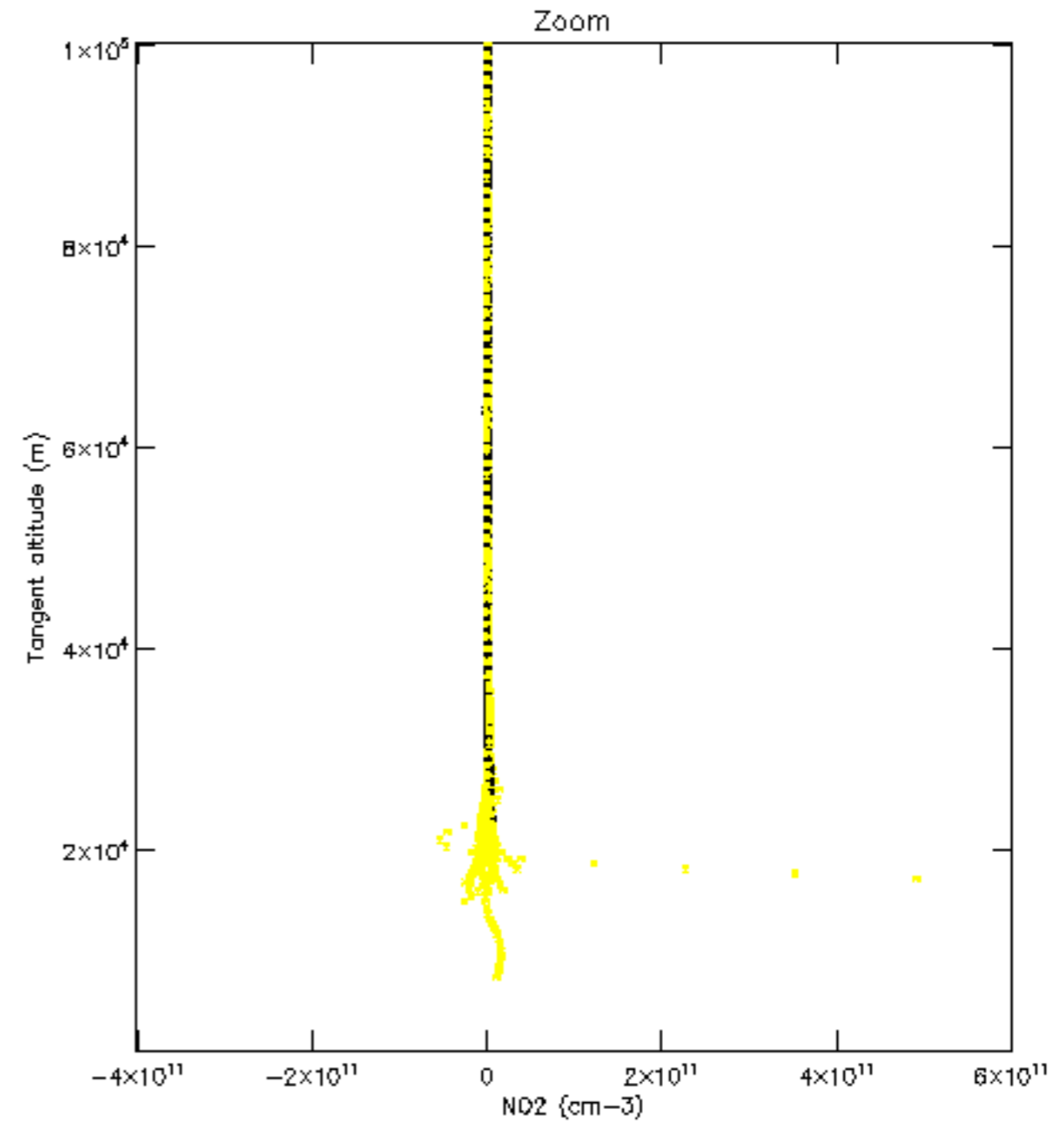
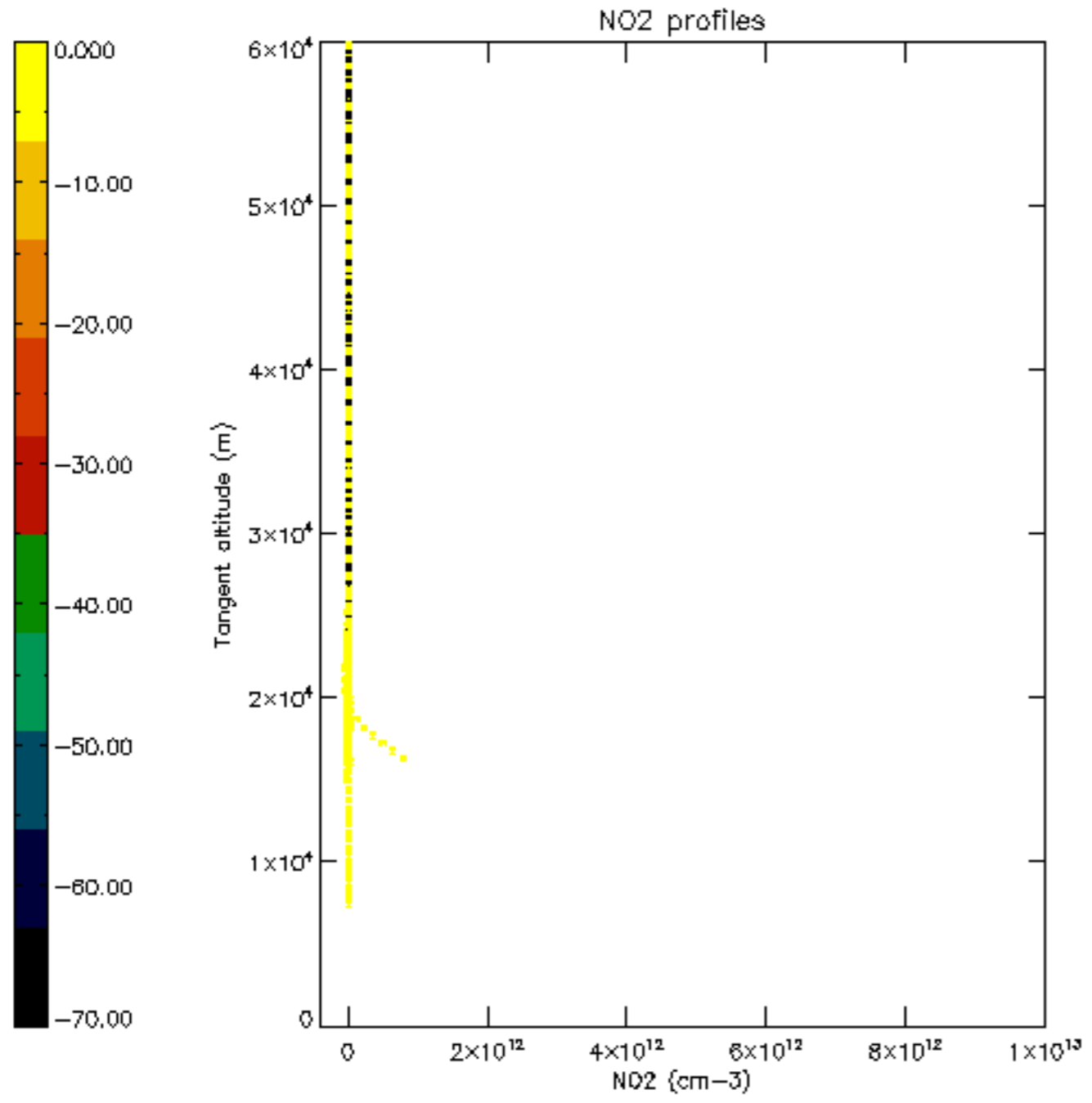


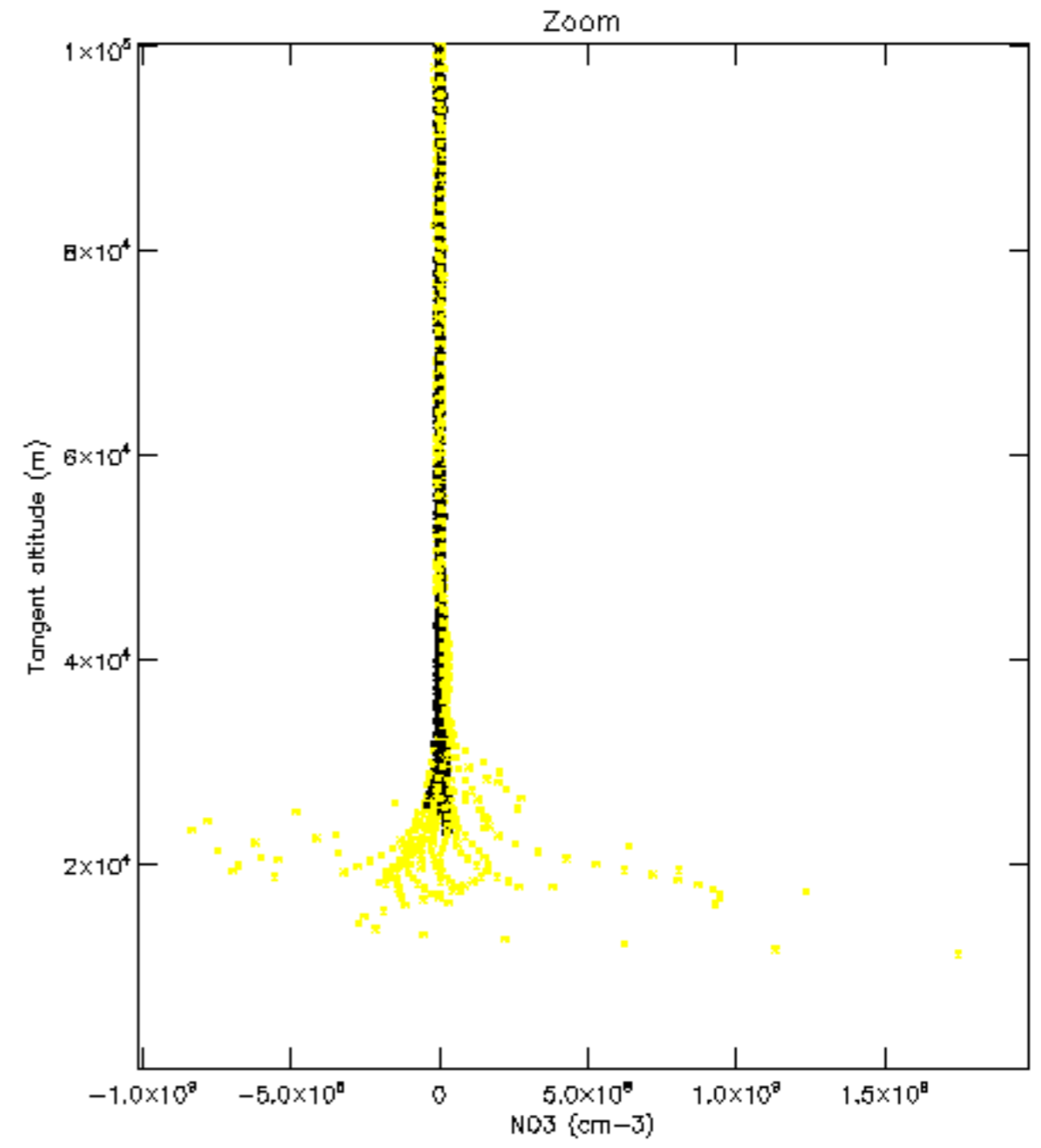
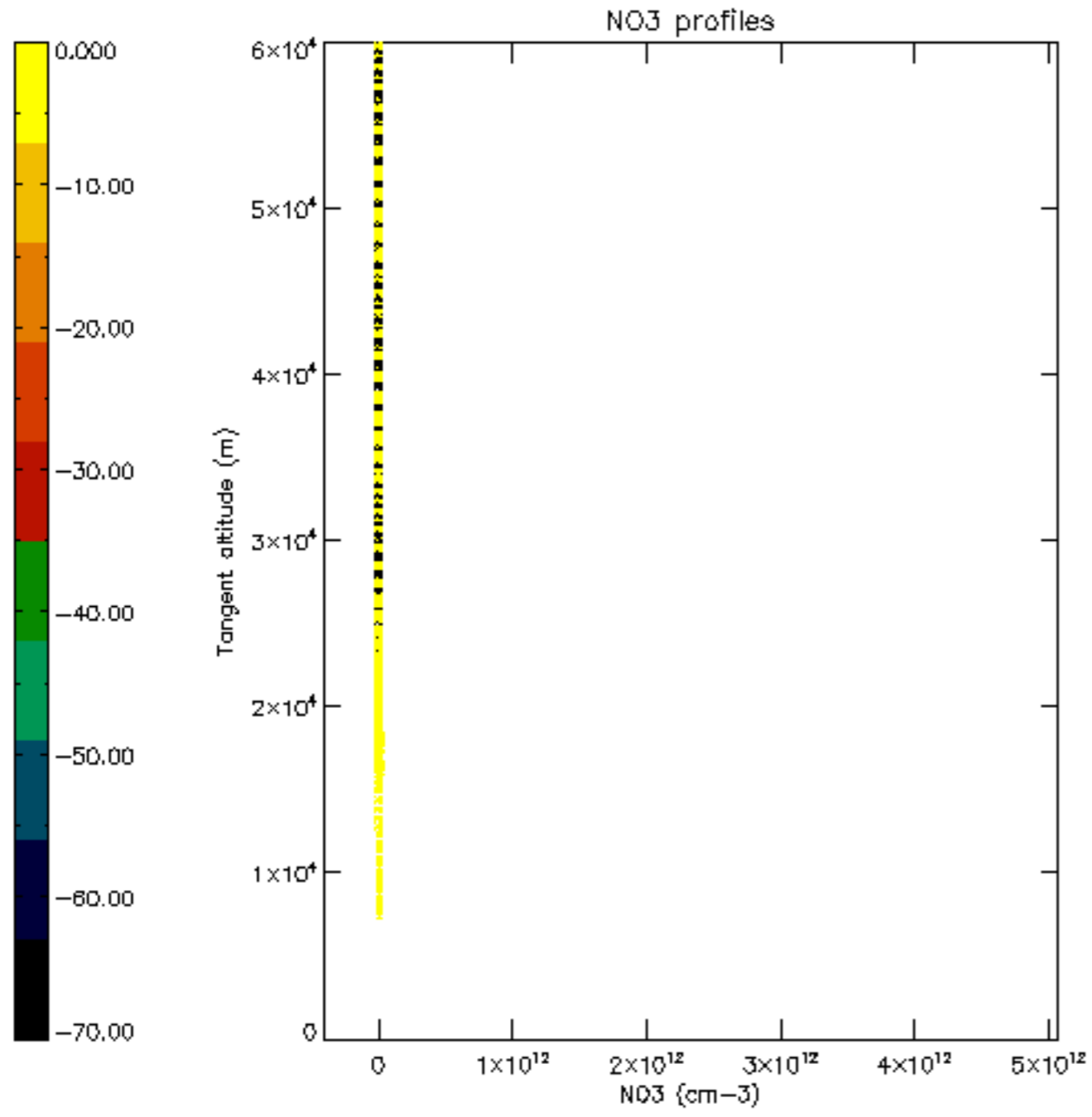


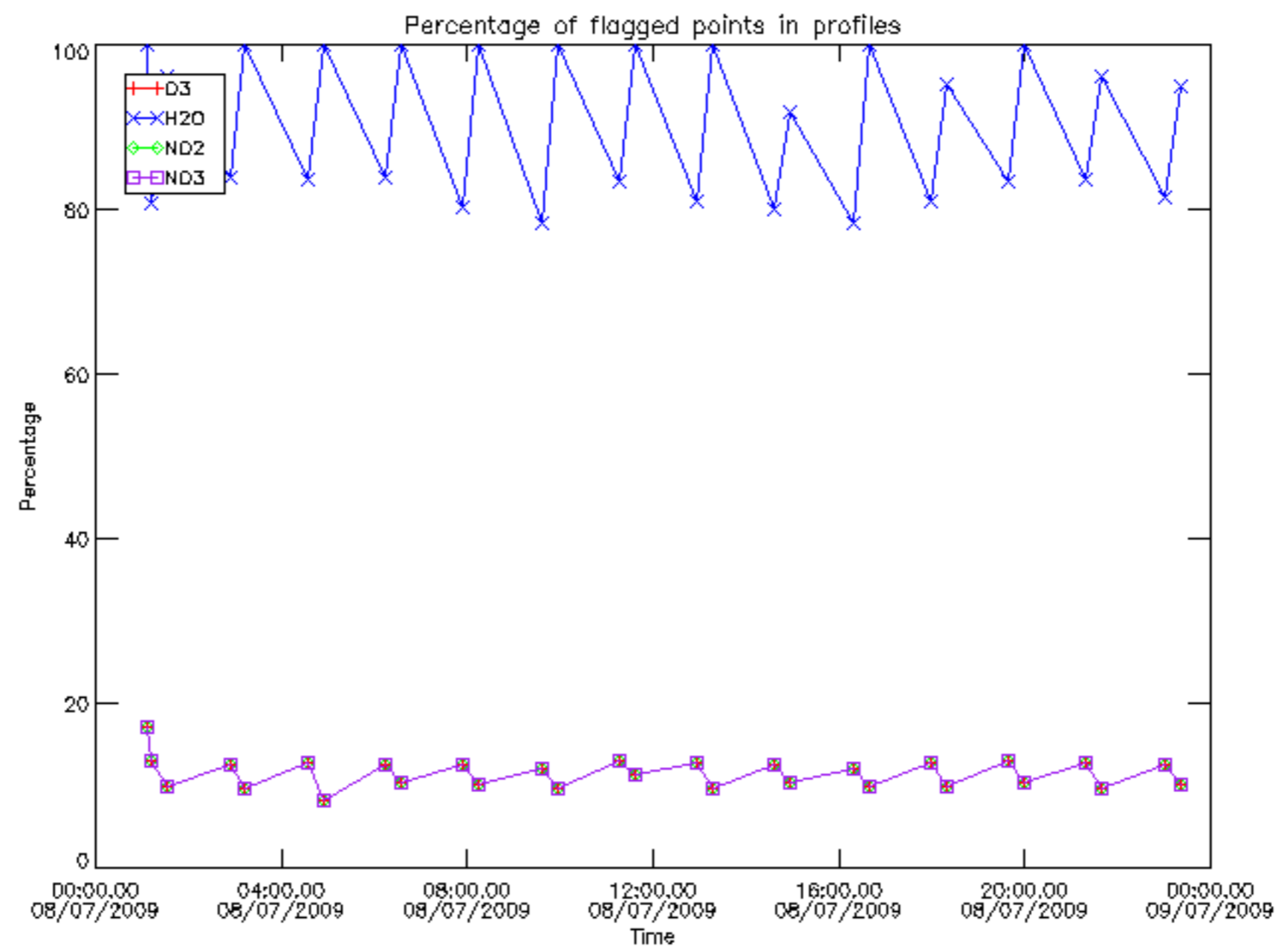




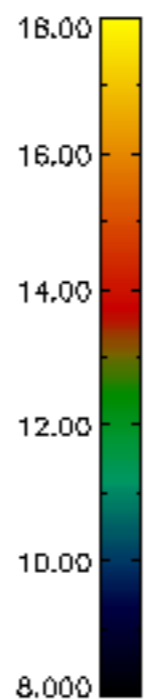
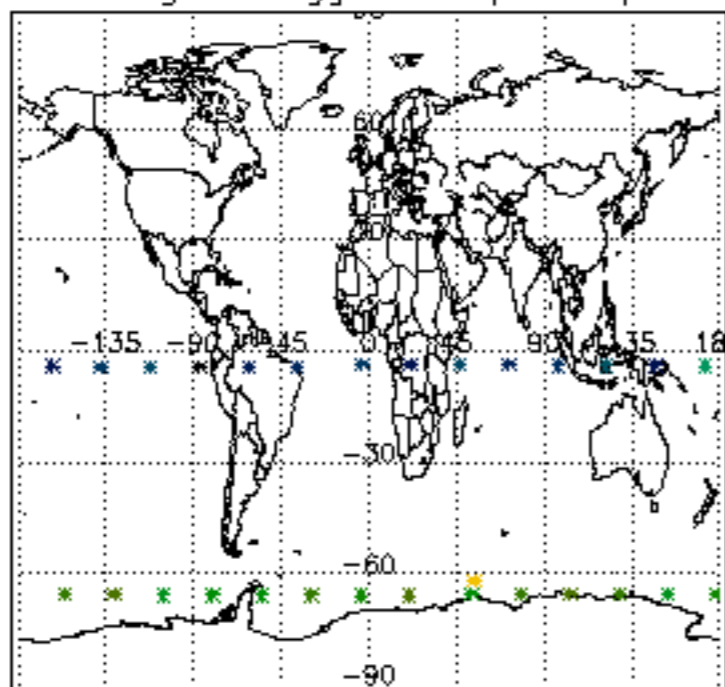




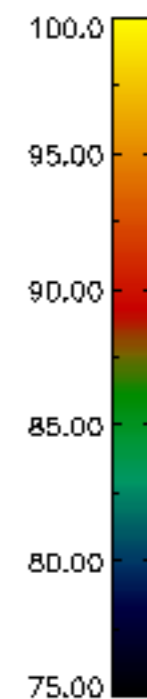
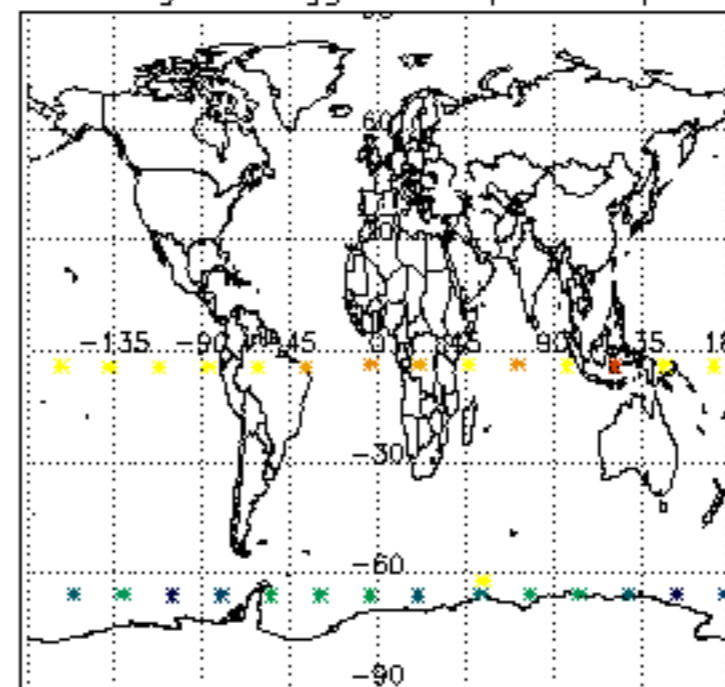




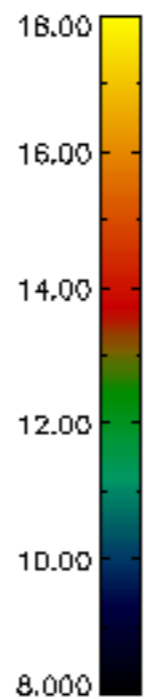
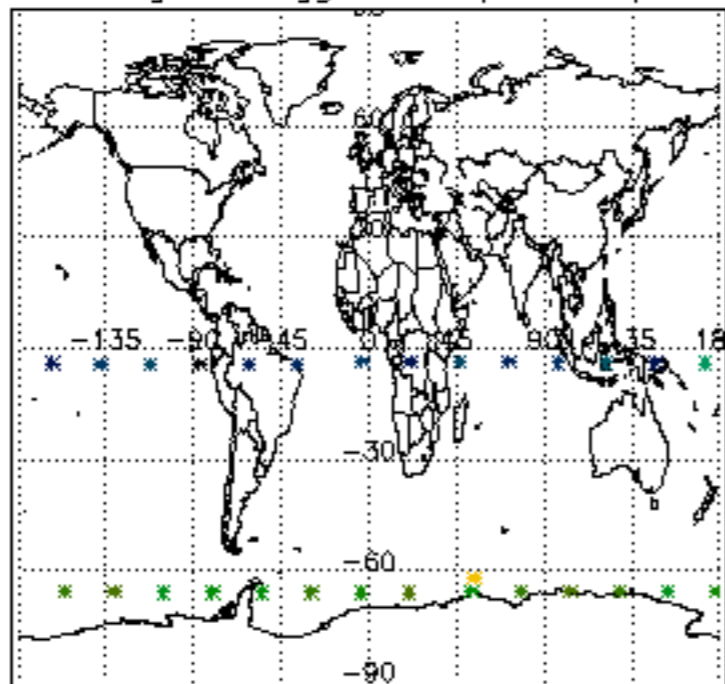
Percentage of flagged data per D3 profile



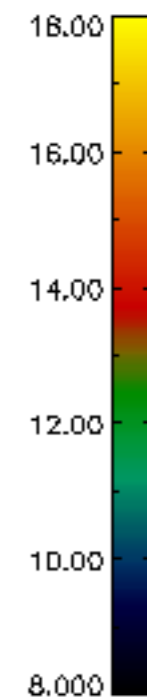
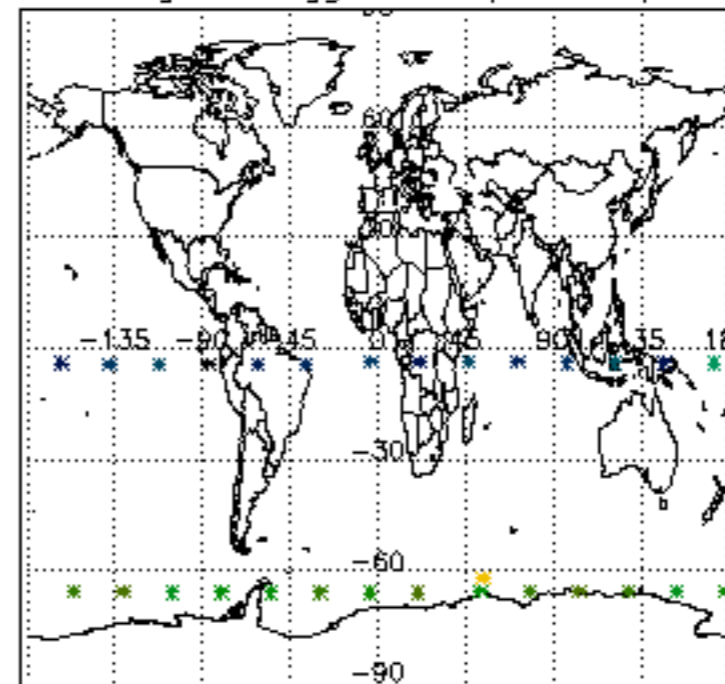
Percentage of flagged data per H2O profile

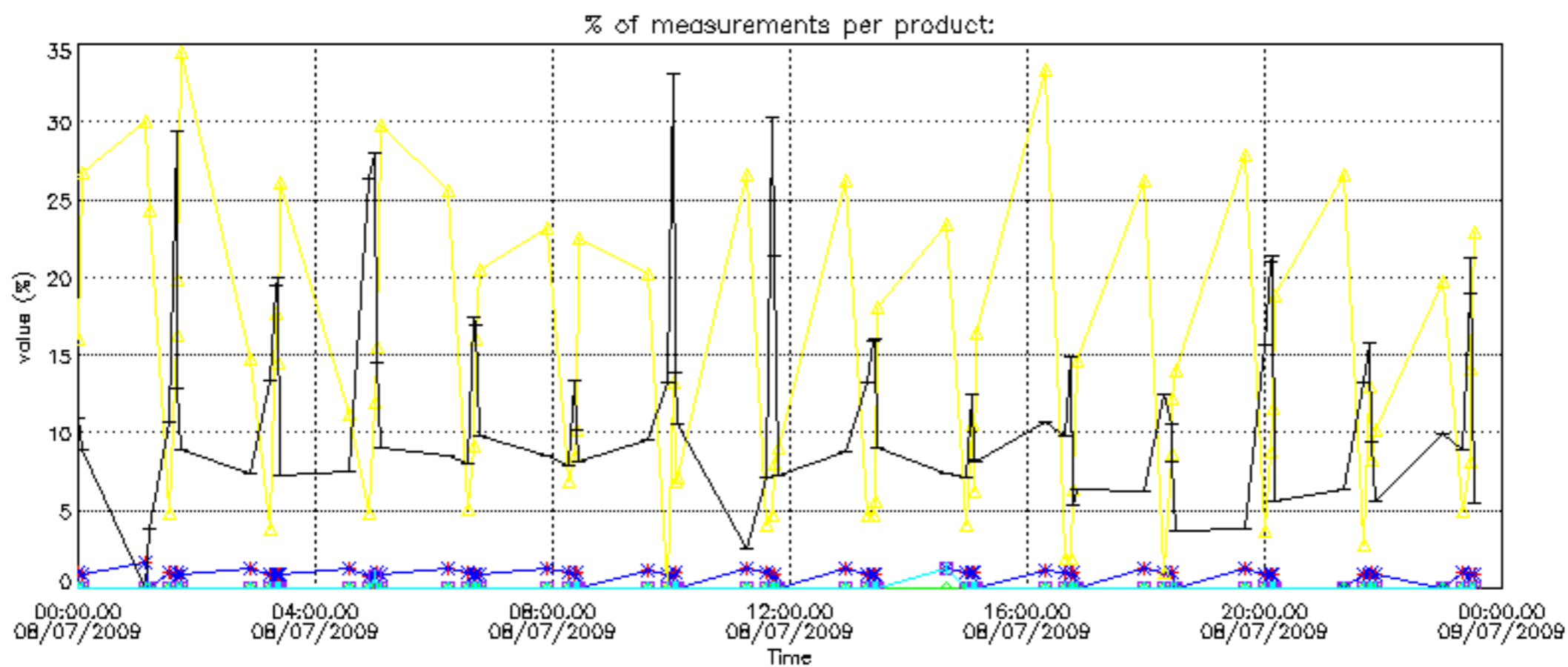


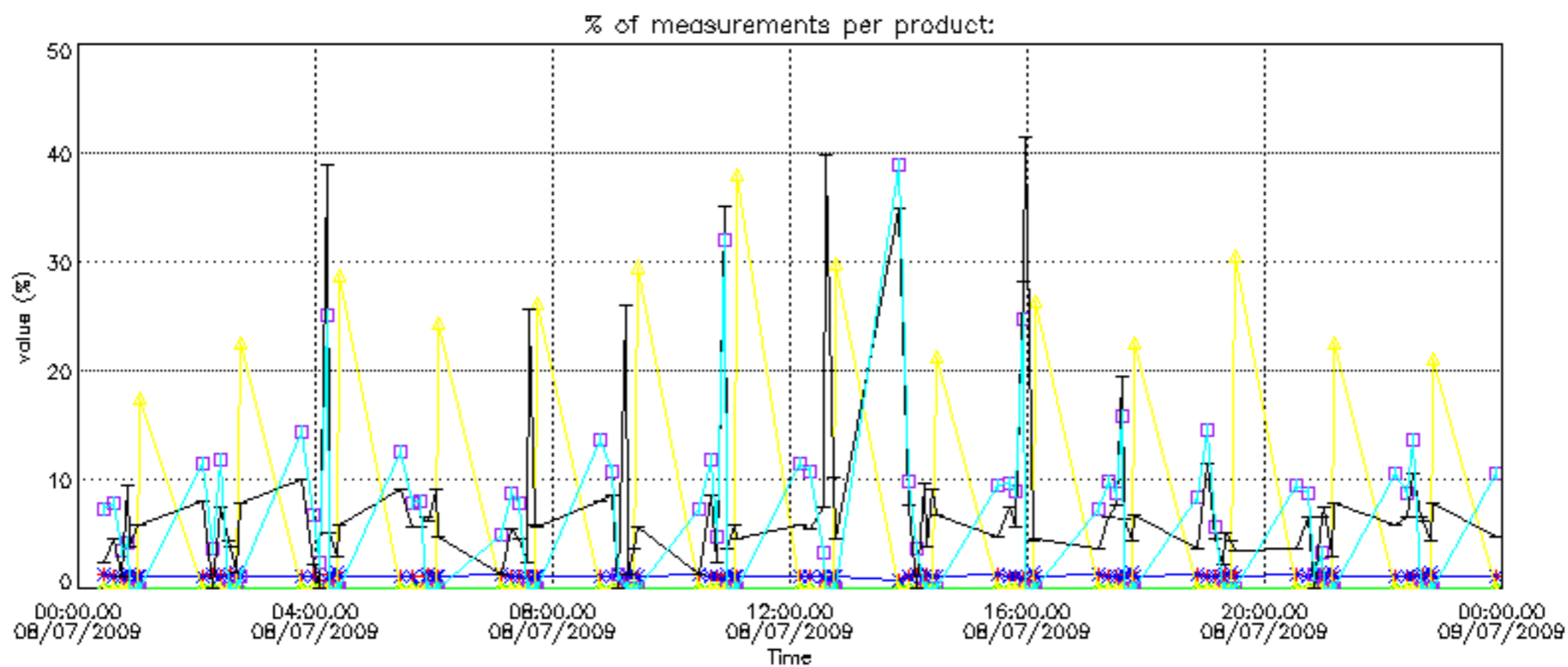
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

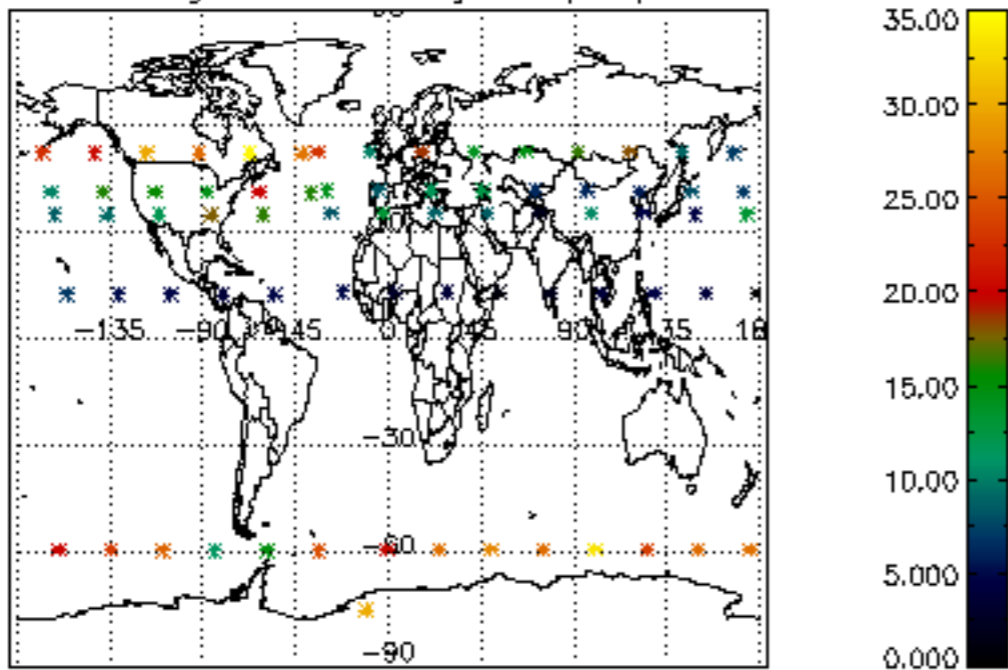




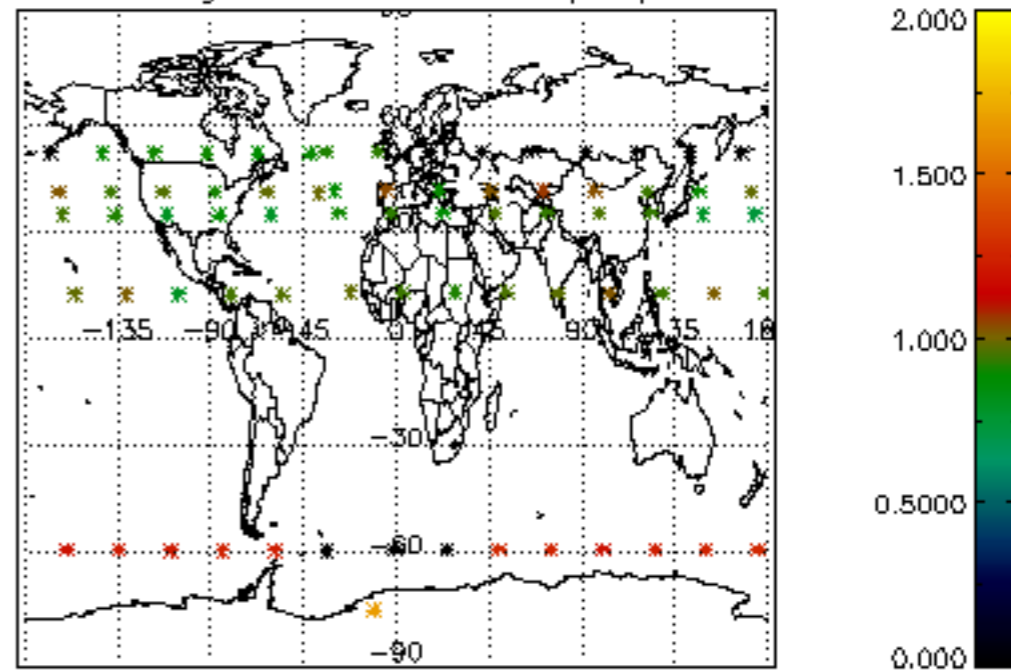




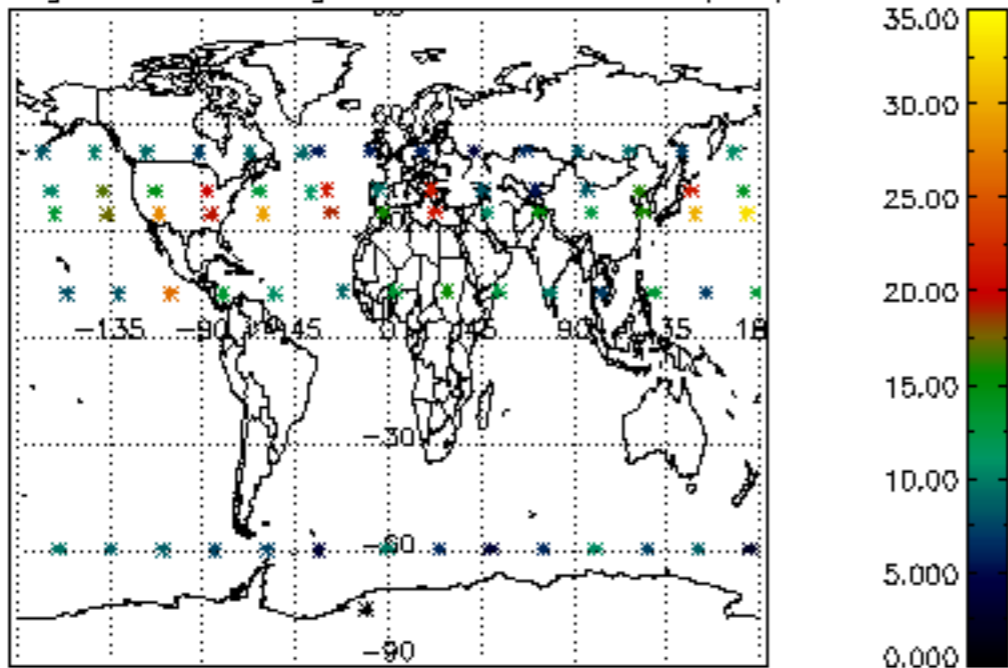
Percentage of cosmic ray hits per profile



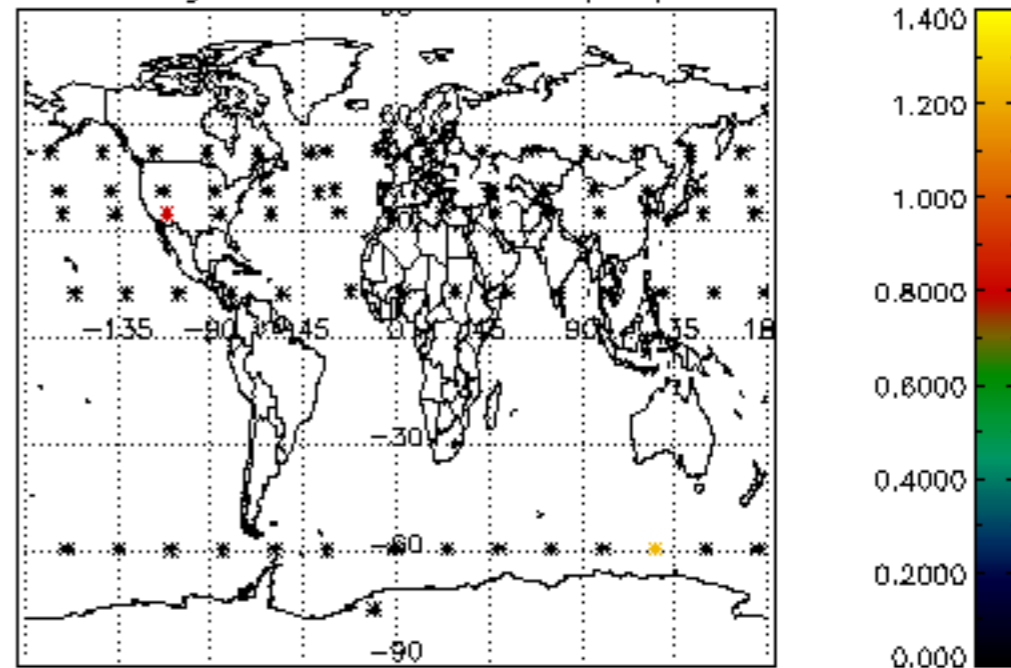
Percentage of datation errors per profile



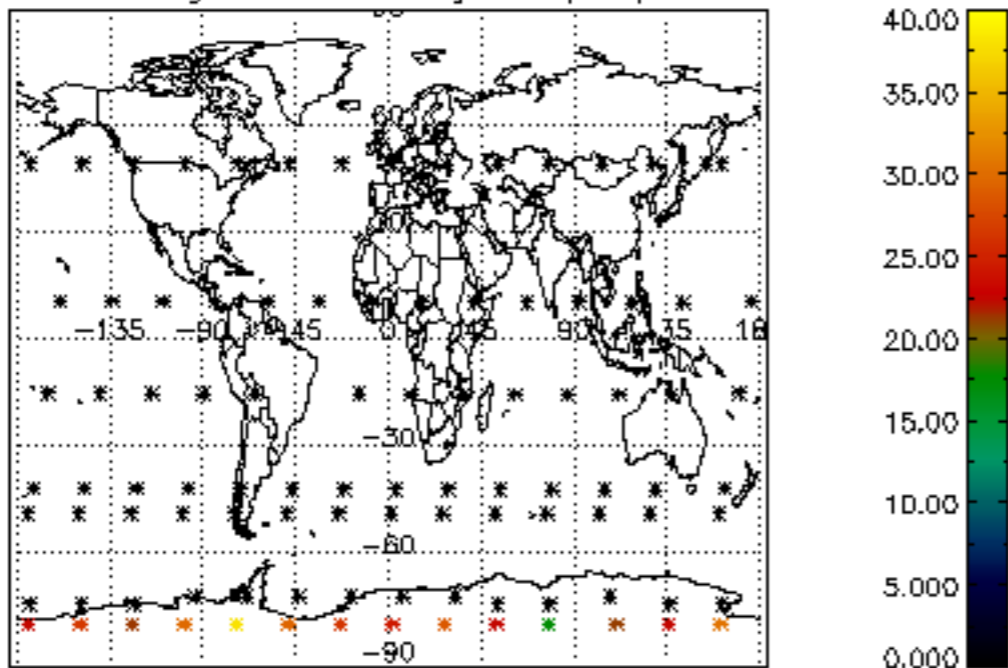
Percentage of star falling outside central band per profile



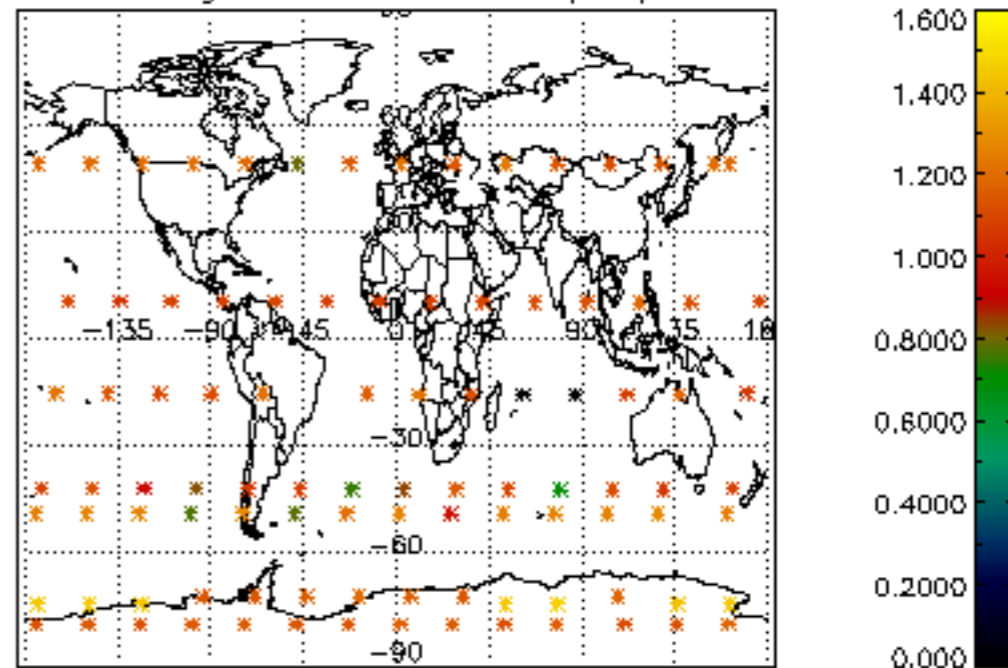
Percentage of saturation errors per profile



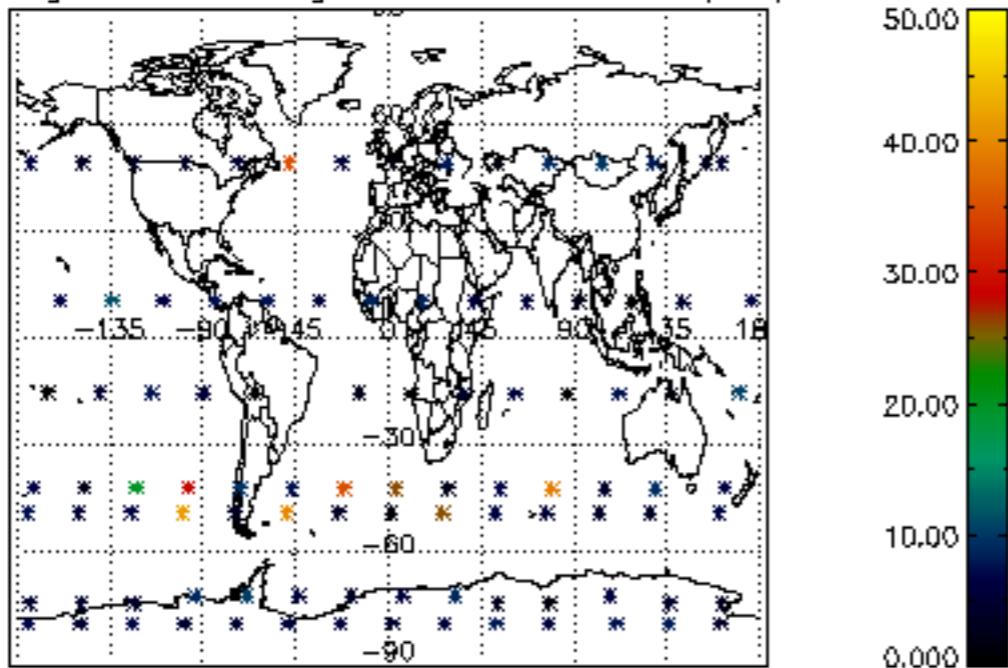
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

