GOMOS Level 2 Daily Report

SUMMARY

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1. General info

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 17:33:01
Data source version	GOMOS/6.01
Start time of products	01-09-2011 (01SEP2011 00:00:00)
Stop time of products	02-09-2011 (02SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	26
Nb of prods with errors	0

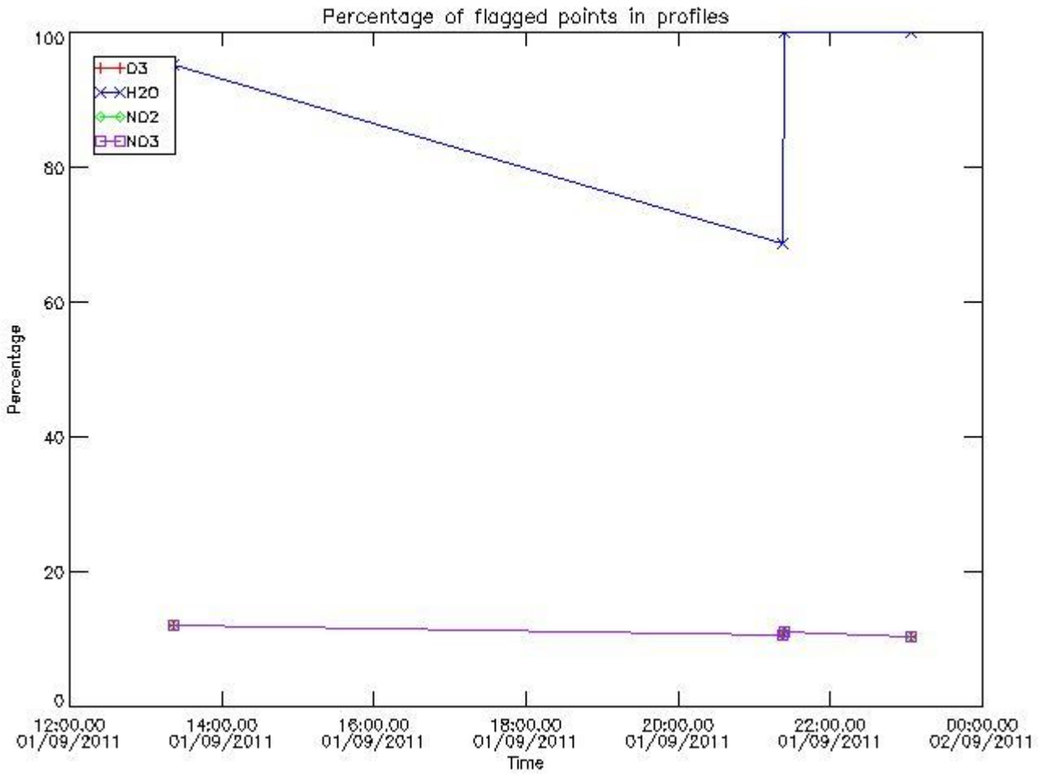
2. Summary of processed GOM_NL__2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20110901_010959_000000523106_00117_49700_8969.N1	01-SEP-2011 01:09:59	Twi_and_stray	51.500	44	24Gam Gem	1.9280	11000.	103	49700	No
2	GOM_NL__2PRFIN20110901_014641_000000473106_00118_49701_8979.N1	01-SEP-2011 01:46:41	Straylight	46.500	84	Alp Phe	2.3970	4500.0	93	49701	No
3	GOM_NL__2PRFIN20110901_020502_000000383106_00118_49701_8980.N1	01-SEP-2011 02:05:02	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49701	No
4	GOM_NL__2PRFIN20110901_024535_000000373106_00118_49701_8981.N1	01-SEP-2011 02:45:35	Bright	36.500	17	78Bet Gem	1.1610	4500.0	73	49701	No
5	GOM_NL__2PRFIN20110901_032656_000000473106_00119_49702_8988.N1	01-SEP-2011 03:26:56	Straylight	47.000	84	Alp Phe	2.3970	4500.0	94	49702	No
6	GOM_NL__2PRFIN20110901_034516_000000393106_00119_49702_8989.N1	01-SEP-2011 03:45:16	Bright	38.500	61	8Eps Peg	2.1000	3900.0	77	49702	No
7	GOM_NL__2PRFIN20110901_132227_000000433106_00125_49708_9320.N1	01-SEP-2011 13:22:27	Dark	42.500	9	Alp Eri	0.45300	24000.	85	49708	No
8	GOM_NL__2PRFIN20110901_132823_000000493106_00125_49708_9321.N1	01-SEP-2011 13:28:23	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	49708	No
9	GOM_NL__2PRFIN20110901_150838_000000473106_00126_49709_9346.N1	01-SEP-2011 15:08:38	Straylight	47.000	84	Alp Phe	2.3970	4500.0	94	49709	No
10	GOM_NL__2PRFIN20110901_151437_000000483106_00126_49709_9347.N1	01-SEP-2011 15:14:37	Straylight	48.000	18	24Alp PsA	1.1660	9700.0	96	49709	No
11	GOM_NL__2PRFIN20110901_152355_000000413106_00126_49709_9348.N1	01-SEP-2011 15:23:55	Bright	40.500	162	34Alp Aqr	2.9440	5350.0	81	49709	No
12	GOM_NL__2PRFIN20110901_152653_000000403106_00126_49709_9349.N1	01-SEP-2011 15:26:53	Bright	39.500	61	8Eps Peg	2.1000	3900.0	79	49709	No
13	GOM_NL__2PRFIN20110901_164852_000000483106_00127_49710_9373.N1	01-SEP-2011 16:48:52	Straylight	47.500	84	Alp Phe	2.3970	4500.0	95	49710	No
14	GOM_NL__2PRFIN20110901_170409_000000403106_00127_49710_9374.N1	01-SEP-2011 17:04:09	Bright	39.500	162	34Alp Aqr	2.9440	5350.0	79	49710	No
15	GOM_NL__2PRFIN20110901_170708_000000383106_00127_49710_9375.N1	01-SEP-2011 17:07:08	Bright	37.500	61	8Eps Peg	2.1000	3900.0	75	49710	No
16	GOM_NL__2PRFIN20110901_182907_000000513106_00128_49711_9405.N1	01-SEP-2011 18:29:07	Straylight	51.000	84	Alp Phe	2.3970	4500.0	102	49711	No
17	GOM_NL__2PRFIN20110901_184423_000000403106_00128_49711_9406.N1	01-SEP-2011 18:44:23	Bright	40.000	162	34Alp Aqr	2.9440	5350.0	80	49711	No
18	GOM_NL__2PRFIN20110901_184722_000000383106_00128_49711_9407.N1	01-SEP-2011 18:47:22	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49711	No
19	GOM_NL__2PRFIN20110901_201520_000000473106_00129_49712_9430.N1	01-SEP-2011 20:15:20	Straylight	46.500	18	24Alp PsA	1.1660	9700.0	93	49712	No
20	GOM_NL__2PRFIN20110901_212239_000000533106_00129_49712_9431.N1	01-SEP-2011 21:22:39	Dark	53.000	1	9Alp CMa	-1.4400	11000.	106	49712	No
21	GOM_NL__2PRFIN20110901_212358_000000463106_00129_49712_9432.N1	01-SEP-2011 21:23:58	Dark	46.000	47	2Bet CMa	1.9760	28000.	92	49712	No
22	GOM_NL__2PRFIN20110901_214936_000000493106_00130_49713_9460.N1	01-SEP-2011 21:49:36	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	49713	No
23	GOM_NL__2PRFIN20110901_215534_000000523106_00130_49713_9461.N1	01-SEP-2011 21:55:34	Straylight	51.500	18	24Alp PsA	1.1660	9700.0	103	49713	No
24	GOM_NL__2PRFIN20110901_220451_000000403106_00130_49713_9462.N1	01-SEP-2011 22:04:51	Bright	40.000	162	34Alp Aqr	2.9440	5350.0	80	49713	No
25	GOM_NL__2PRFIN20110901_230413_000000493106_00130_49713_9463.N1	01-SEP-2011 23:04:13	Dark	49.000	47	2Bet CMa	1.9760	28000.	98	49713	No
26	GOM_NL__2PRFIN20110901_234803_000000383106_00131_49714_9471.N1	01-SEP-2011 23:48:03	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49714	No

3. Quality information per product

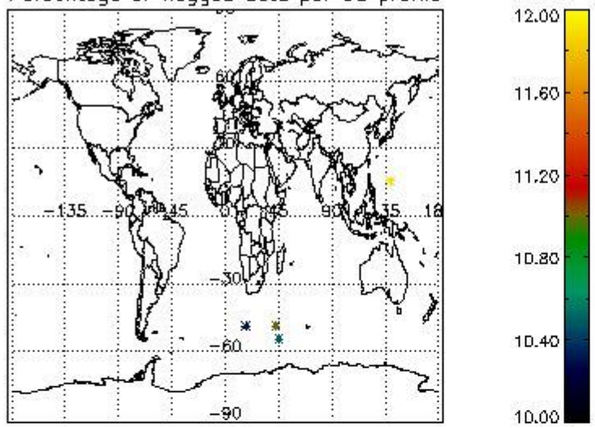
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

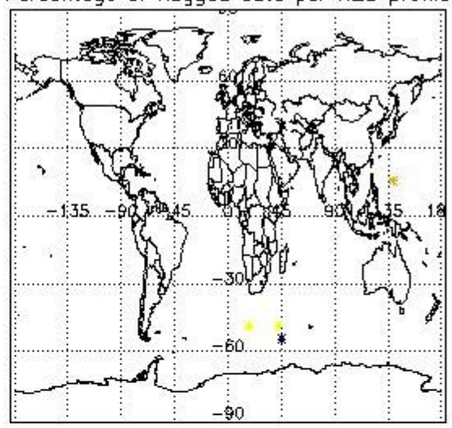


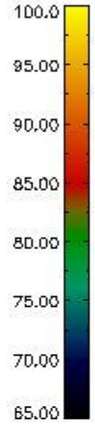
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

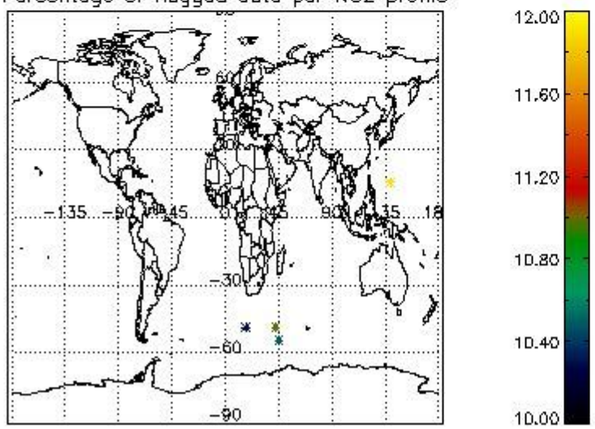


Percentage of flagged data per H2O profile

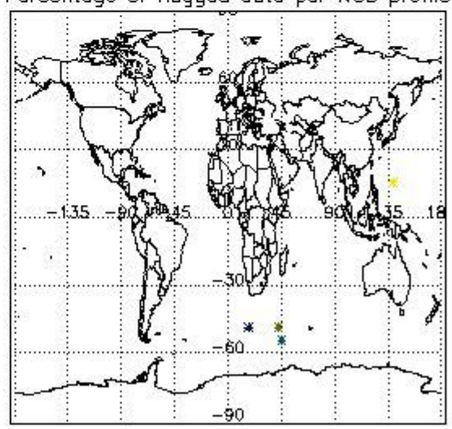


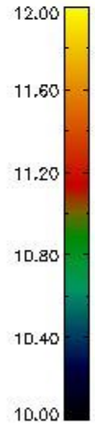


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



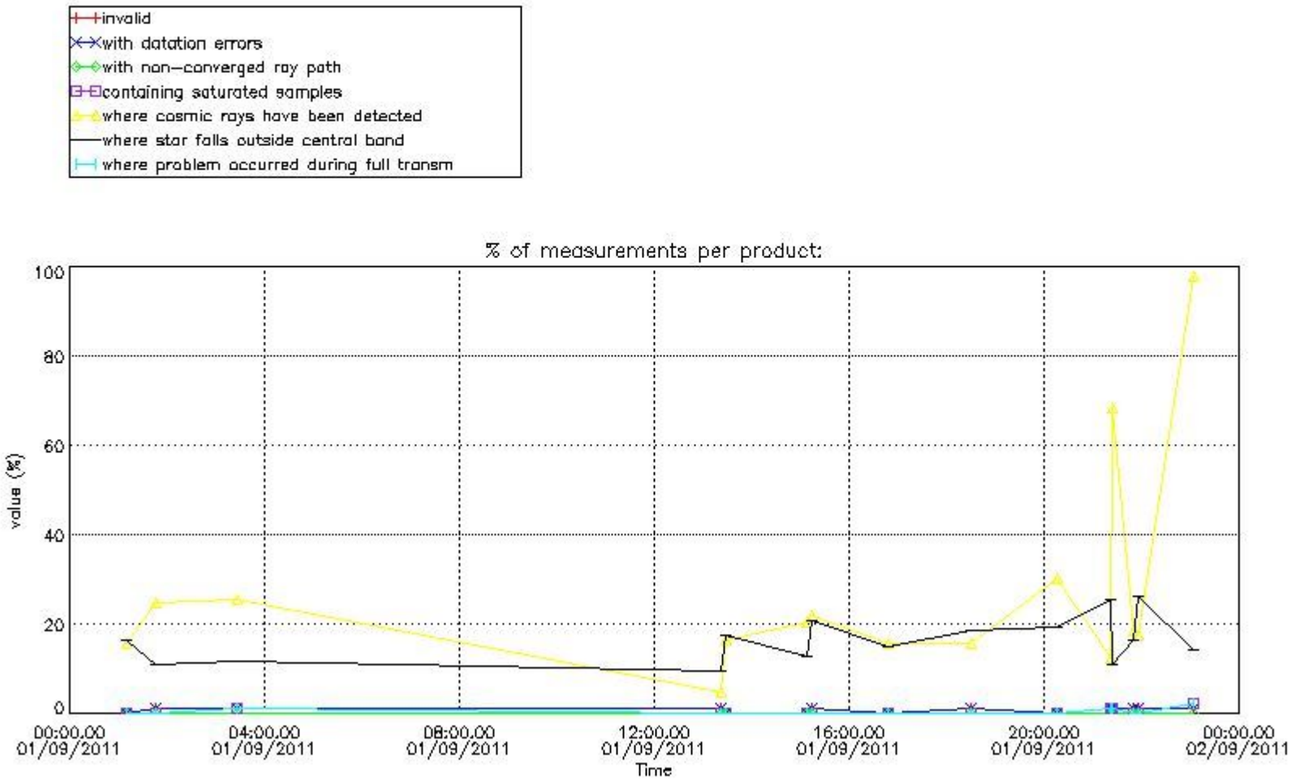


4. Level 1 quality information per product

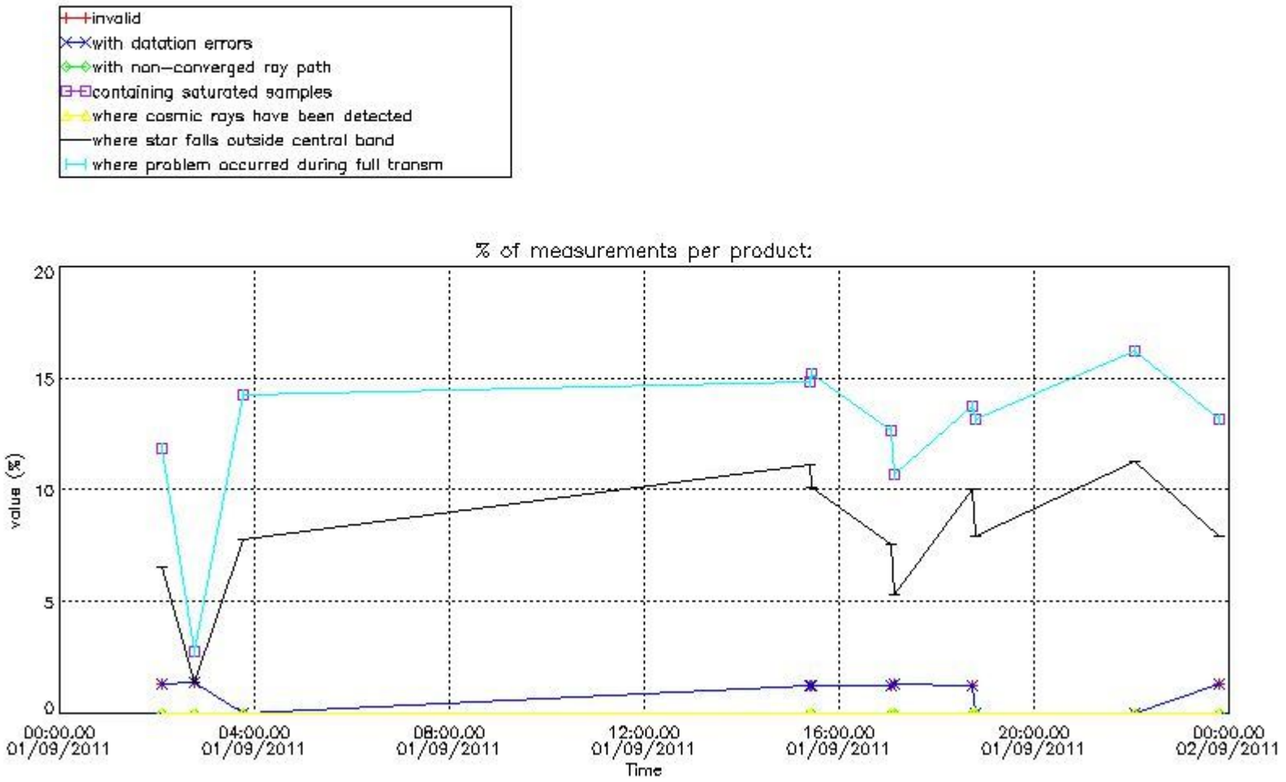
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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

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

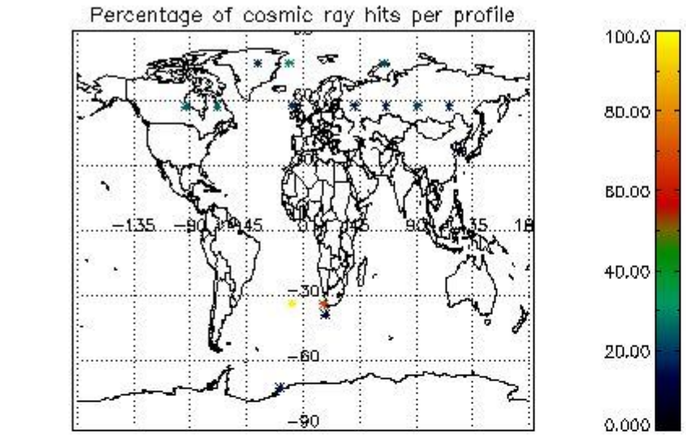


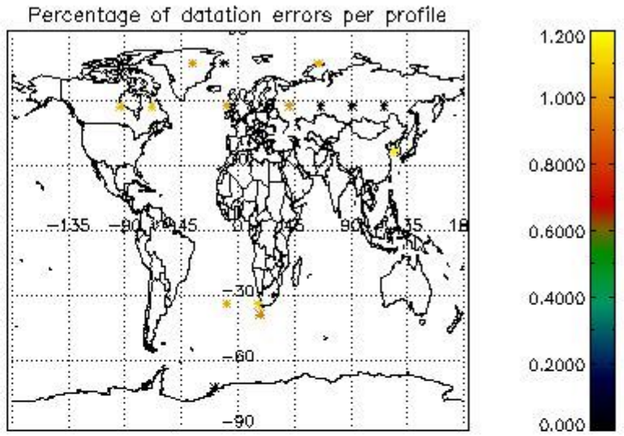
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

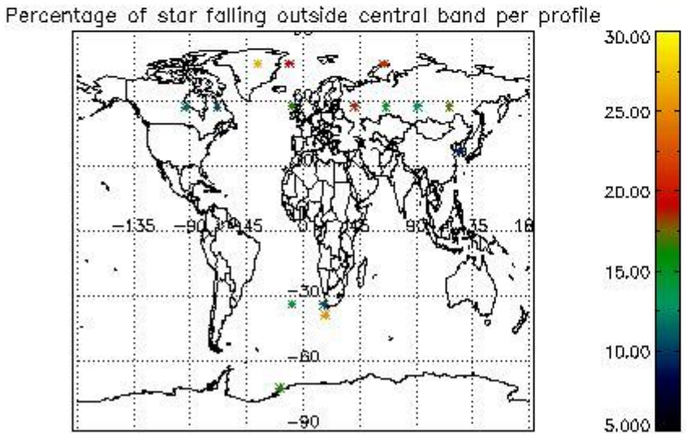


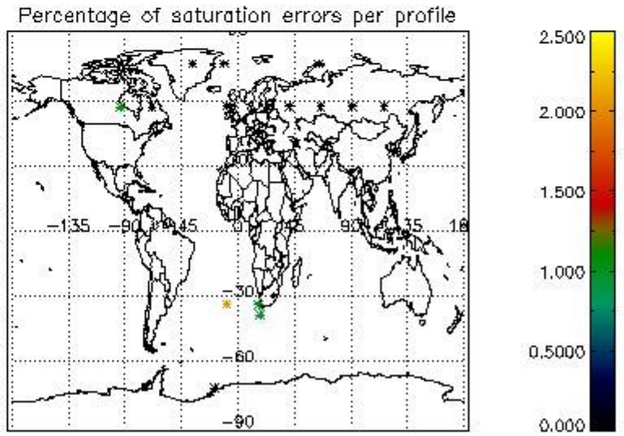
4.2 Plot quality information per product comming from level 1b processing (world map)

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

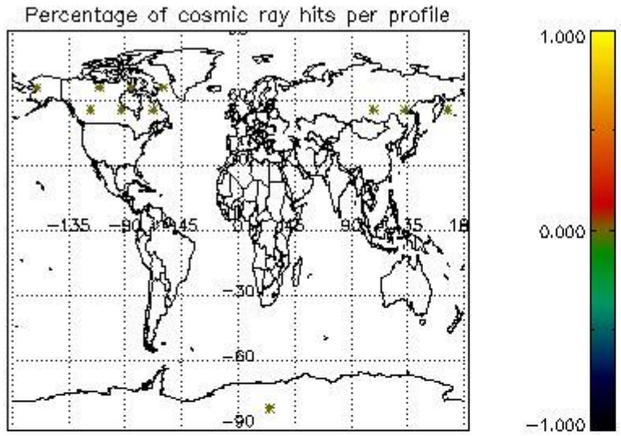


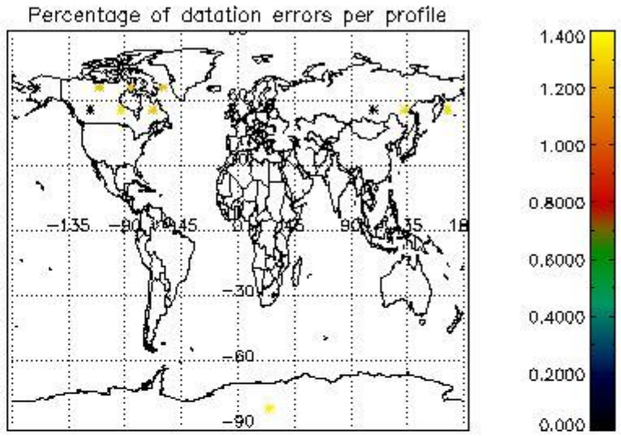


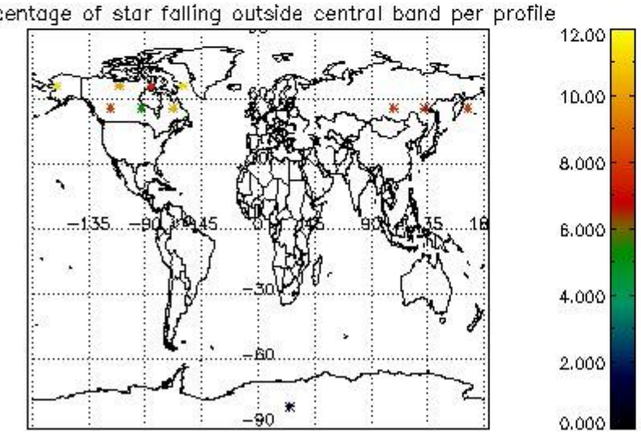


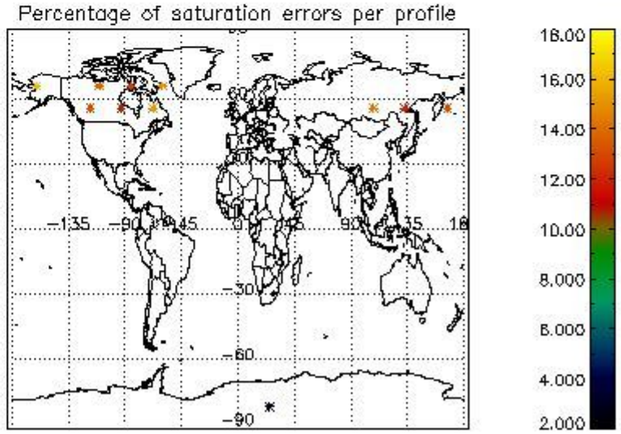


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

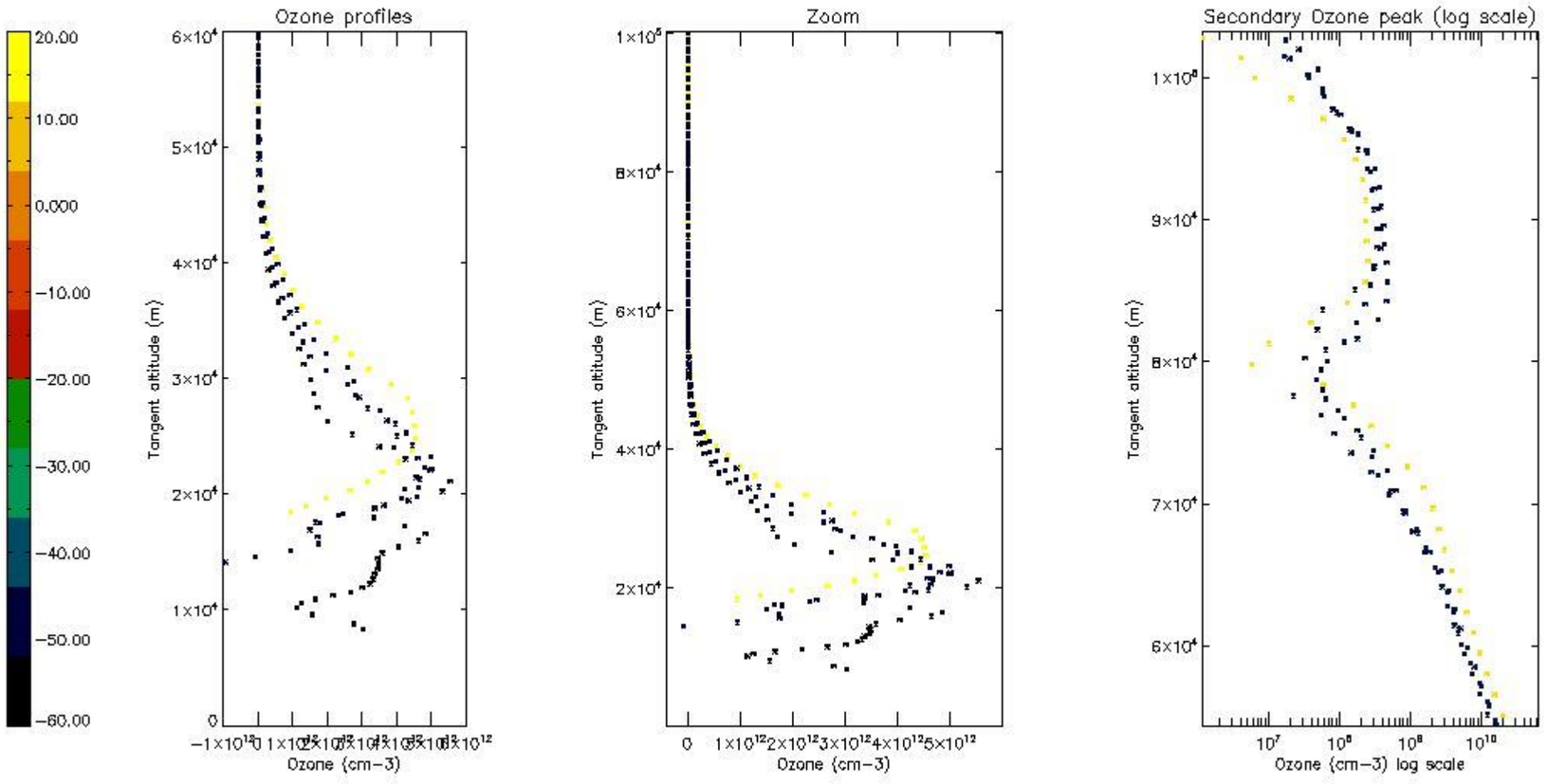
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	17
STD < 20	12

STD < 10	11
STD < 5	9

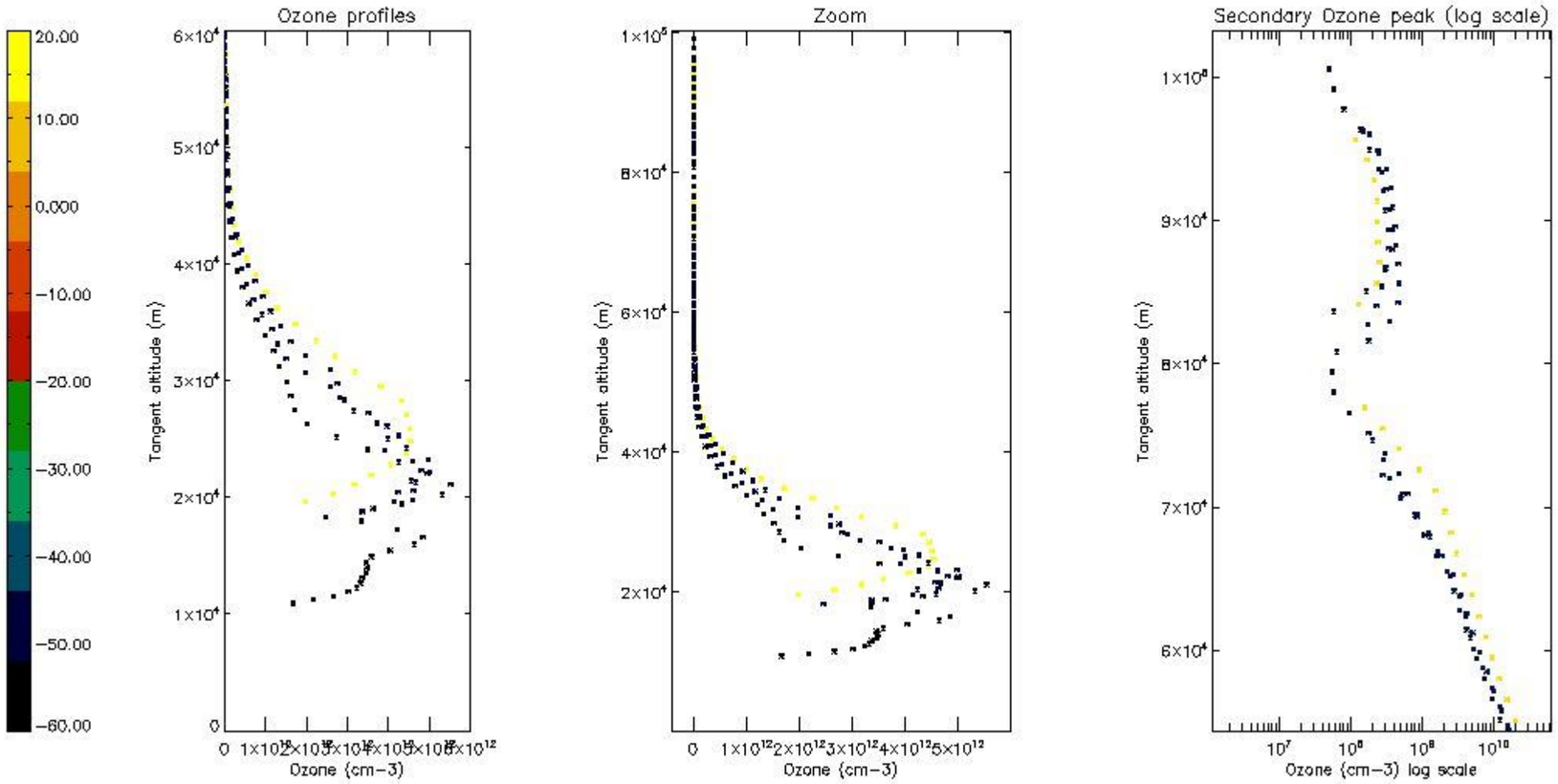
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



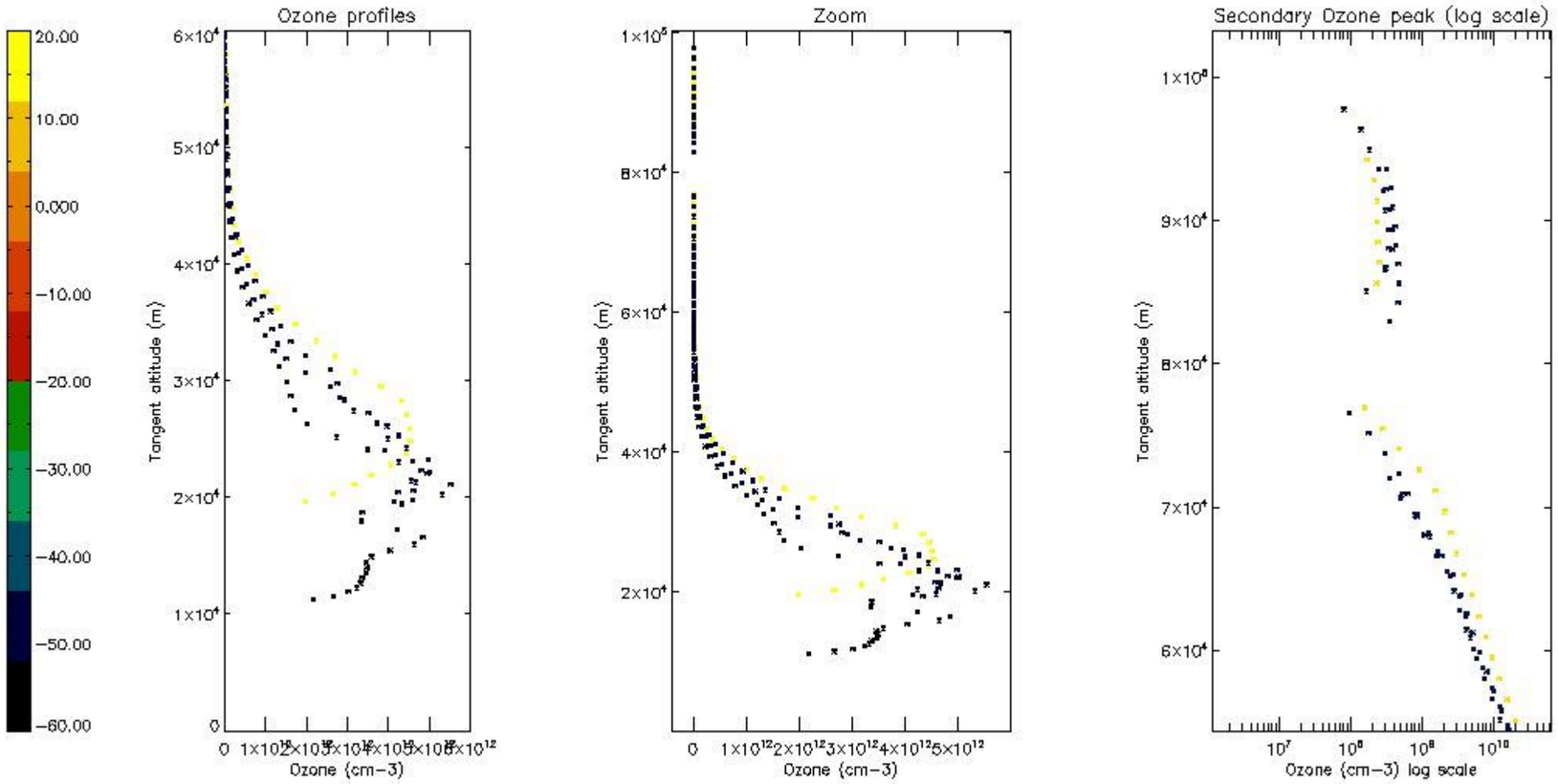
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



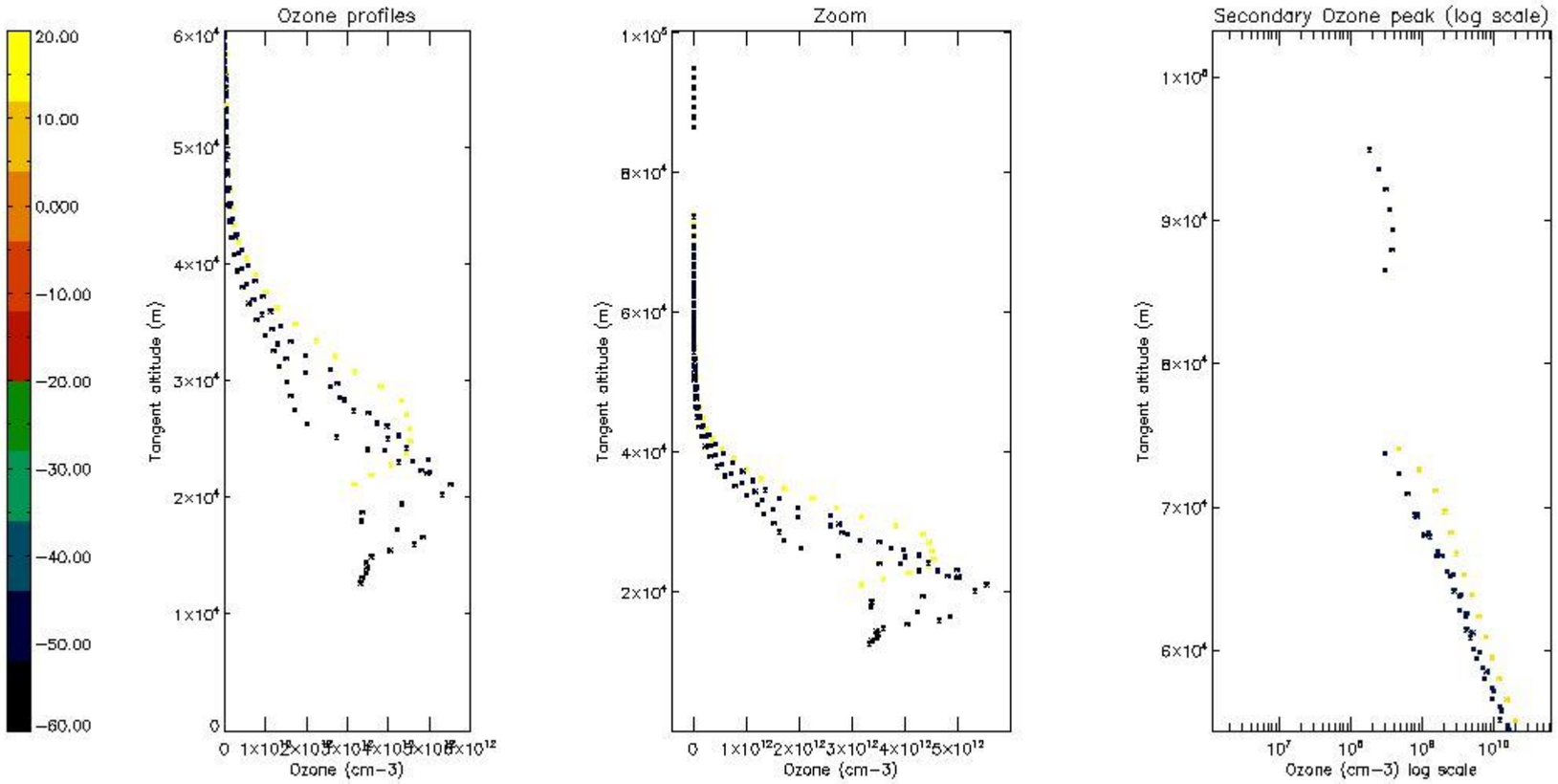
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



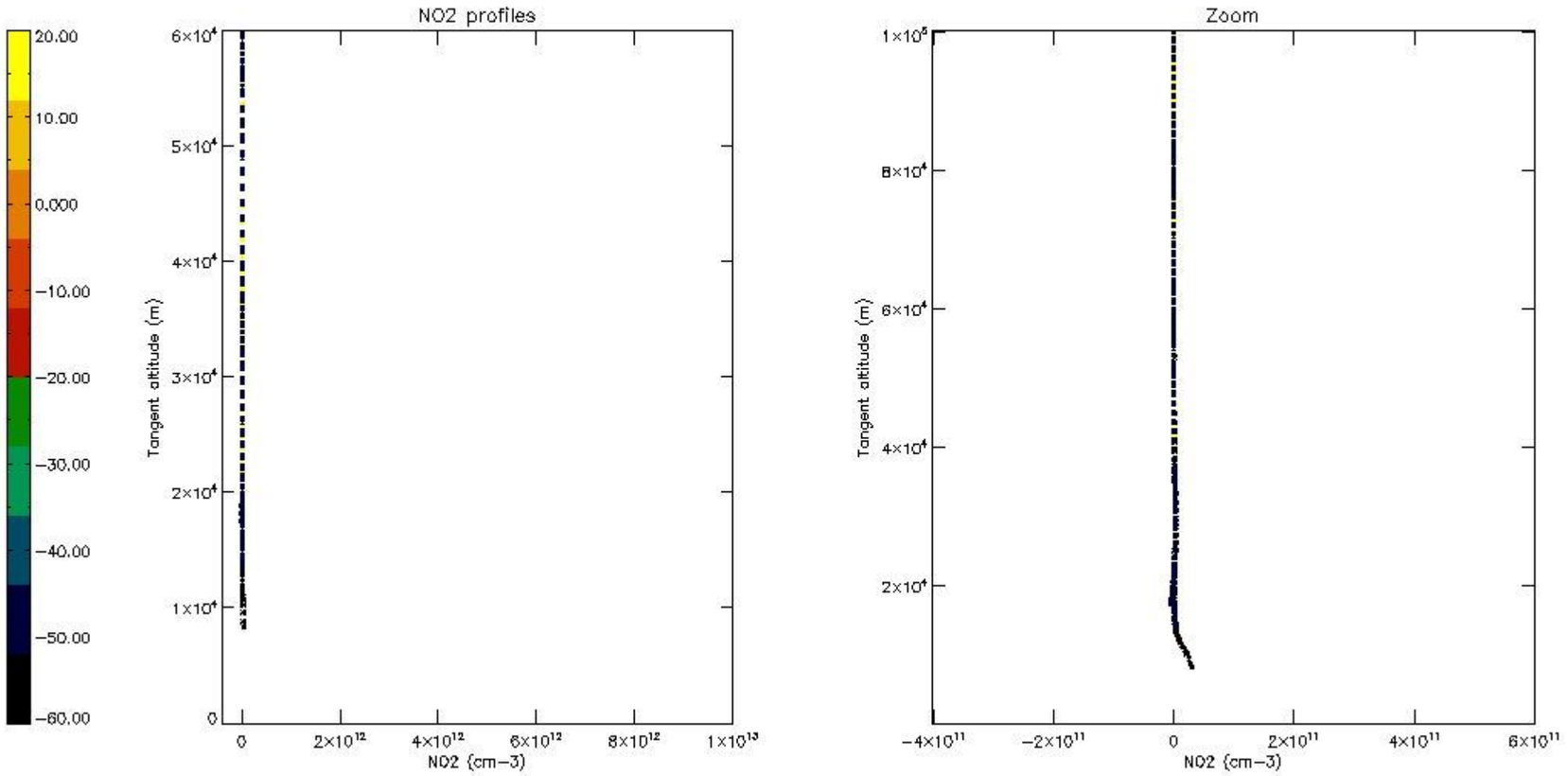
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



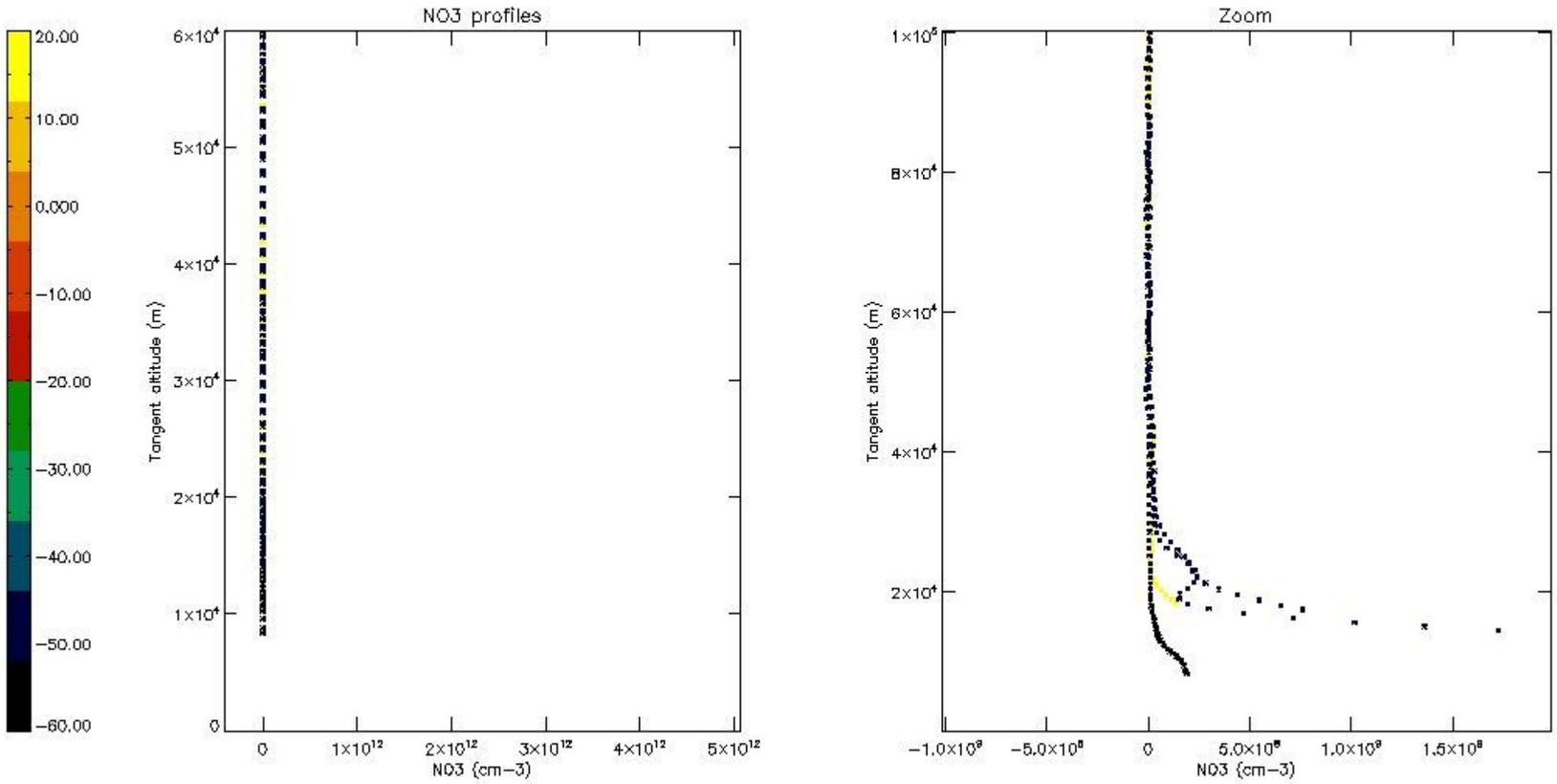
5.6 Plot NO2 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	01-SEP-2011 01:09:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	01-SEP-2011 01:09:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	01-SEP-2011 01:09:59

GOMOS Level 2 Daily Report

SUMMARY

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1. General info

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 17:33:01
Data source version	GOMOS/6.01
Start time of products	01-09-2011 (01SEP2011 00:00:00)
Stop time of products	02-09-2011 (02SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	26
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__2PRFIN20110901_010959_000000523106_00117_49700_8969.N1	01-SEP-2011 01:09:59	Twi_and_stray	51.500	44	24Gam Gem	1.9280	11000.	103	49700	No
2	GOM_NL__2PRFIN20110901_014641_000000473106_00118_49701_8979.N1	01-SEP-2011 01:46:41	Straylight	46.500	84	Alp Phe	2.3970	4500.0	93	49701	No
3	GOM_NL__2PRFIN20110901_020502_000000383106_00118_49701_8980.N1	01-SEP-2011 02:05:02	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49701	No
4	GOM_NL__2PRFIN20110901_024535_000000373106_00118_49701_8981.N1	01-SEP-2011 02:45:35	Bright	36.500	17	78Bet Gem	1.1610	4500.0	73	49701	No
5	GOM_NL__2PRFIN20110901_032656_000000473106_00119_49702_8988.N1	01-SEP-2011 03:26:56	Straylight	47.000	84	Alp Phe	2.3970	4500.0	94	49702	No
6	GOM_NL__2PRFIN20110901_034516_000000393106_00119_49702_8989.N1	01-SEP-2011 03:45:16	Bright	38.500	61	8Eps Peg	2.1000	3900.0	77	49702	No
7	GOM_NL__2PRFIN20110901_132227_000000433106_00125_49708_9320.N1	01-SEP-2011 13:22:27	Dark	42.500	9	Alp Eri	0.45300	24000.	85	49708	No
8	GOM_NL__2PRFIN20110901_132823_000000493106_00125_49708_9321.N1	01-SEP-2011 13:28:23	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	49708	No
9	GOM_NL__2PRFIN20110901_150838_000000473106_00126_49709_9346.N1	01-SEP-2011 15:08:38	Straylight	47.000	84	Alp Phe	2.3970	4500.0	94	49709	No
10	GOM_NL__2PRFIN20110901_151437_000000483106_00126_49709_9347.N1	01-SEP-2011 15:14:37	Straylight	48.000	18	24Alp PsA	1.1660	9700.0	96	49709	No
11	GOM_NL__2PRFIN20110901_152355_000000413106_00126_49709_9348.N1	01-SEP-2011 15:23:55	Bright	40.500	162	34Alp Aqr	2.9440	5350.0	81	49709	No
12	GOM_NL__2PRFIN20110901_152653_000000403106_00126_49709_9349.N1	01-SEP-2011 15:26:53	Bright	39.500	61	8Eps Peg	2.1000	3900.0	79	49709	No
13	GOM_NL__2PRFIN20110901_164852_000000483106_00127_49710_9373.N1	01-SEP-2011 16:48:52	Straylight	47.500	84	Alp Phe	2.3970	4500.0	95	49710	No
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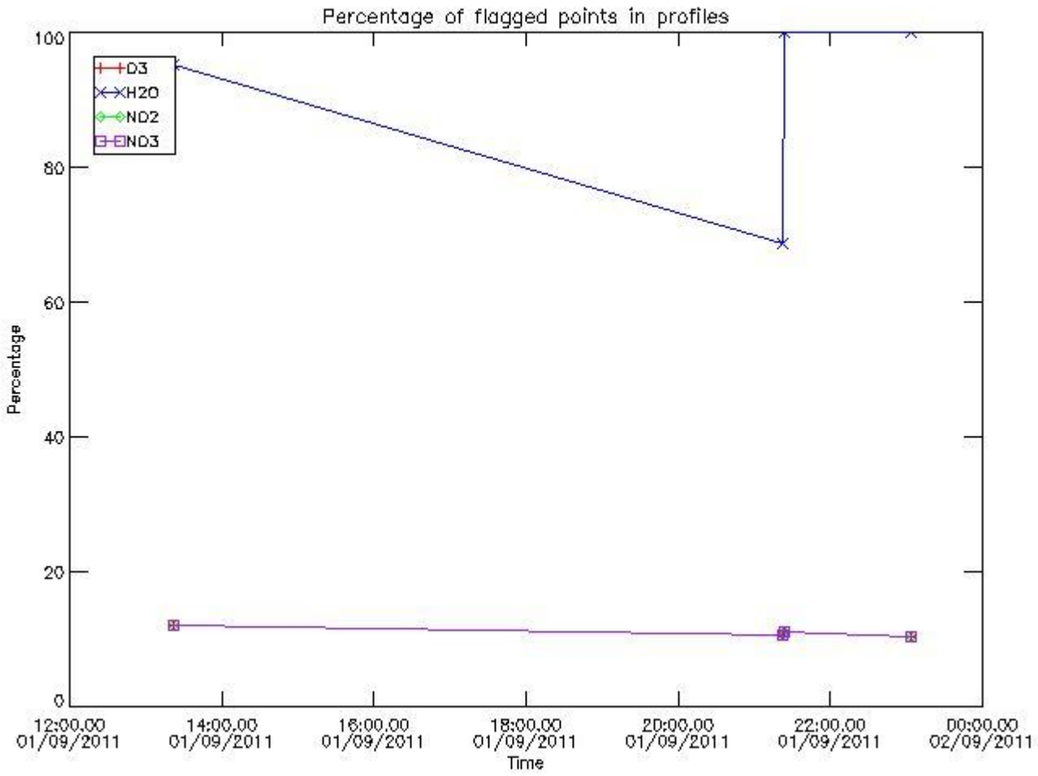
16	GOM_NL__2PRFIN20110901_182907_000000513106_00128_49711_9405.N1	01-SEP-2011 18:29:07	Straylight	51.000	84	Alp Phe	2.3970	4500.0	102	49711	No
17	GOM_NL__2PRFIN20110901_184423_000000403106_00128_49711_9406.N1	01-SEP-2011 18:44:23	Bright	40.000	162	34Alp Aqr	2.9440	5350.0	80	49711	No
18	GOM_NL__2PRFIN20110901_184722_000000383106_00128_49711_9407.N1	01-SEP-2011 18:47:22	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49711	No
19	GOM_NL__2PRFIN20110901_201520_000000473106_00129_49712_9430.N1	01-SEP-2011 20:15:20	Straylight	46.500	18	24Alp PsA	1.1660	9700.0	93	49712	No
20	GOM_NL__2PRFIN20110901_212239_000000533106_00129_49712_9431.N1	01-SEP-2011 21:22:39	Dark	53.000	1	9Alp CMa	-1.4400	11000.	106	49712	No
21	GOM_NL__2PRFIN20110901_212358_000000463106_00129_49712_9432.N1	01-SEP-2011 21:23:58	Dark	46.000	47	2Bet CMa	1.9760	28000.	92	49712	No
22	GOM_NL__2PRFIN20110901_214936_000000493106_00130_49713_9460.N1	01-SEP-2011 21:49:36	Straylight	49.000	84	Alp Phe	2.3970	4500.0	98	49713	No
23	GOM_NL__2PRFIN20110901_215534_000000523106_00130_49713_9461.N1	01-SEP-2011 21:55:34	Straylight	51.500	18	24Alp PsA	1.1660	9700.0	103	49713	No
24	GOM_NL__2PRFIN20110901_220451_000000403106_00130_49713_9462.N1	01-SEP-2011 22:04:51	Bright	40.000	162	34Alp Aqr	2.9440	5350.0	80	49713	No
25	GOM_NL__2PRFIN20110901_230413_000000493106_00130_49713_9463.N1	01-SEP-2011 23:04:13	Dark	49.000	47	2Bet CMa	1.9760	28000.	98	49713	No
26	GOM_NL__2PRFIN20110901_234803_000000383106_00131_49714_9471.N1	01-SEP-2011 23:48:03	Bright	38.000	61	8Eps Peg	2.1000	3900.0	76	49714	No

3. Quality information per product

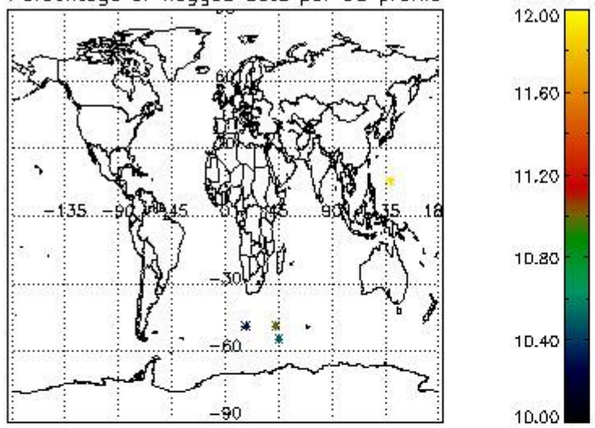
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

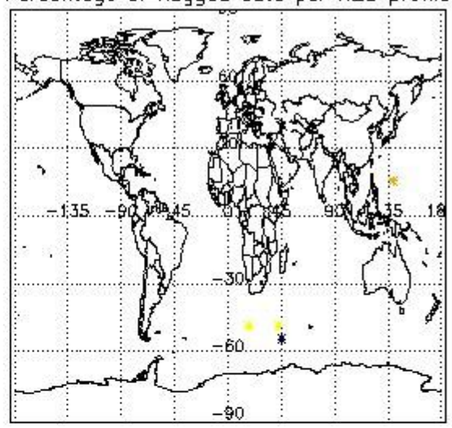


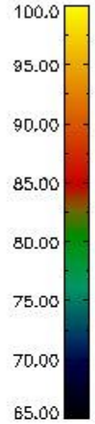
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

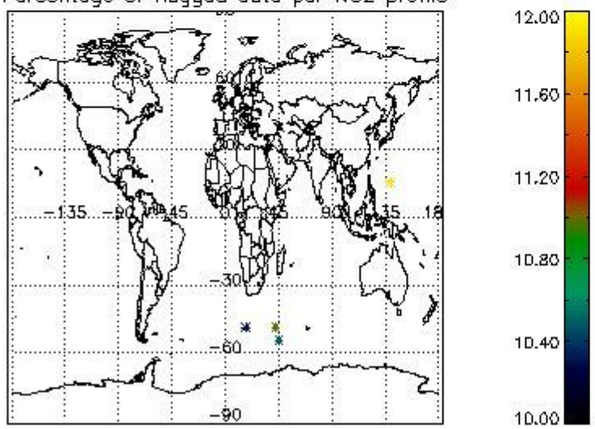


Percentage of flagged data per H2O profile

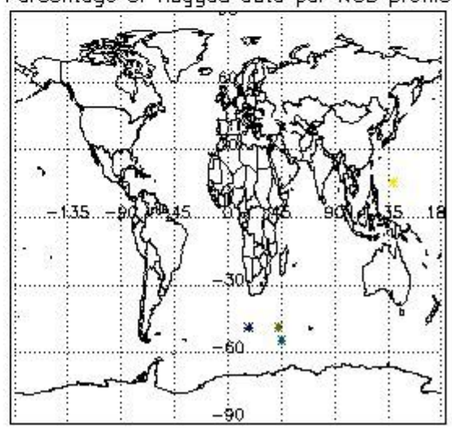


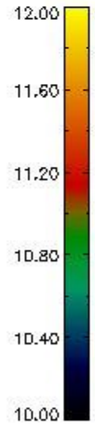


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



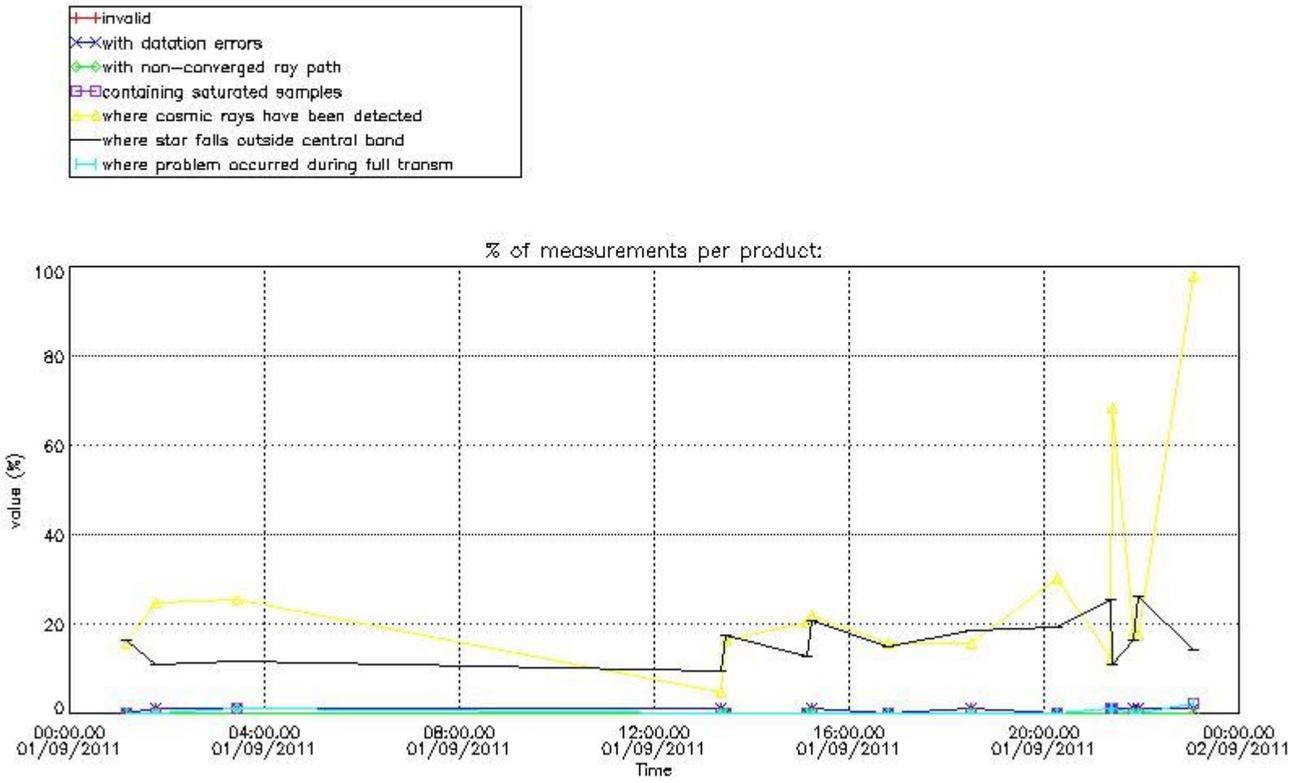


4. Level 1 quality information per product

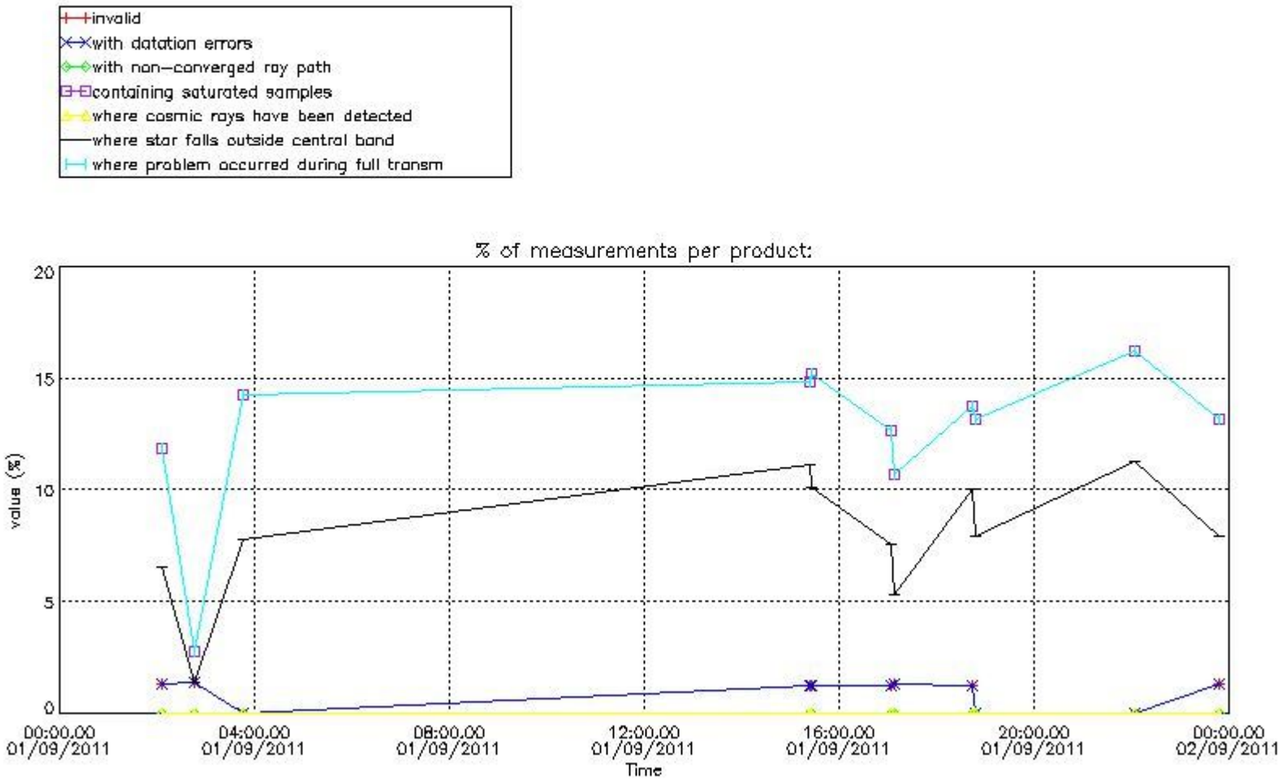
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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

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

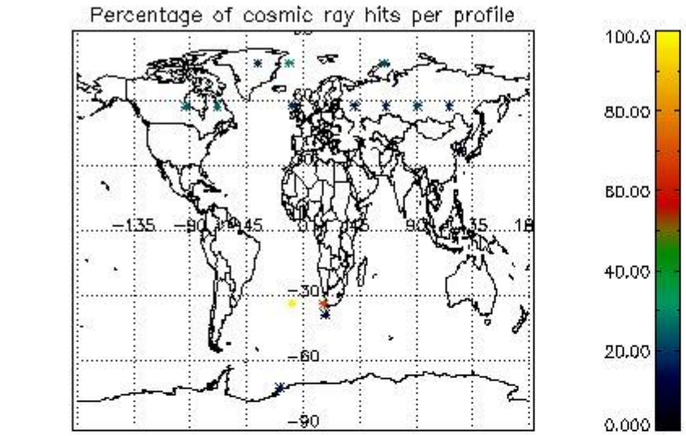


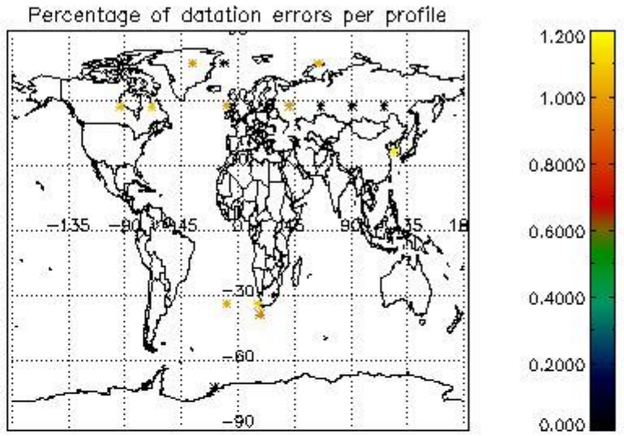
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

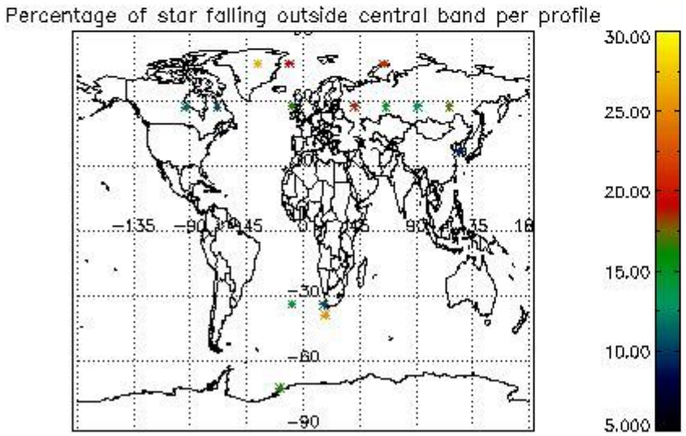


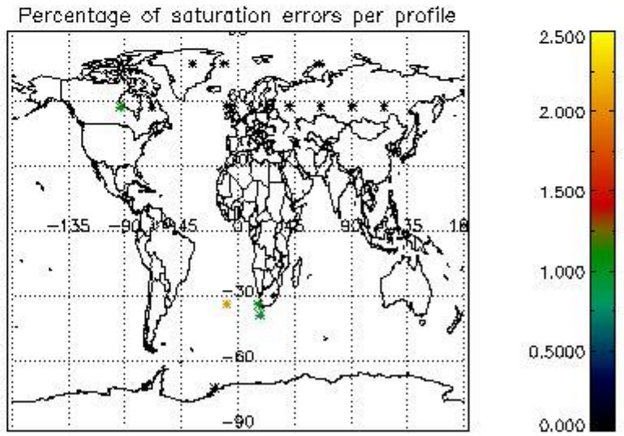
4.2 Plot quality information per product comming from level 1b processing (world map)

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

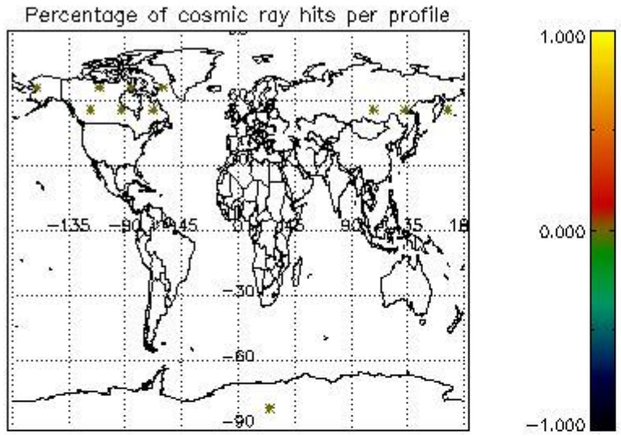


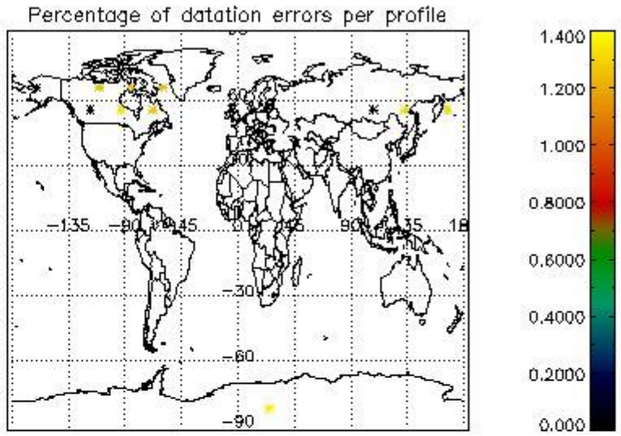


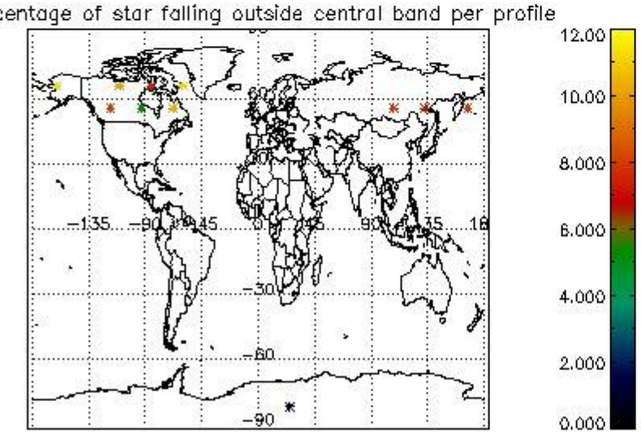


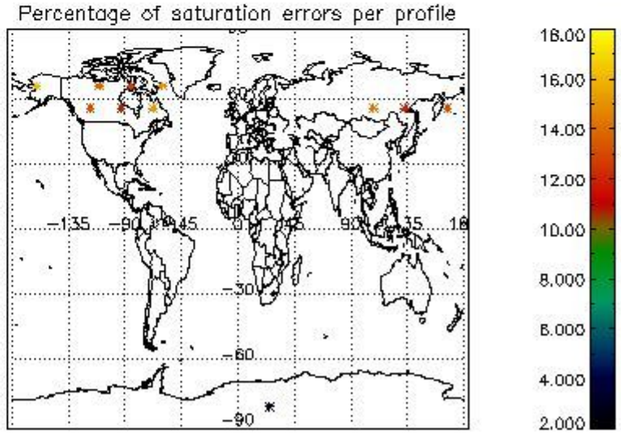


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

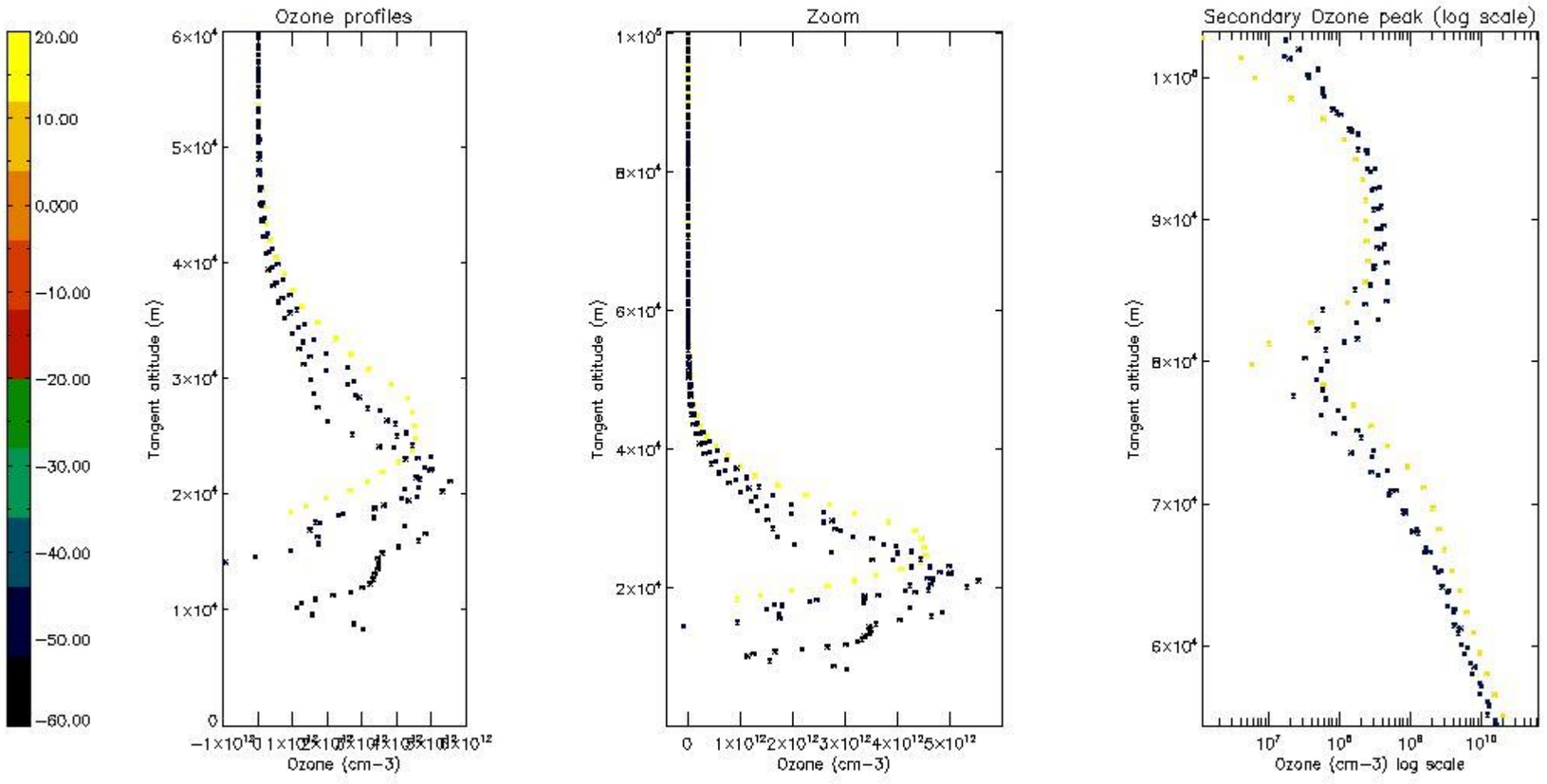
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	17
STD < 20	12

STD < 10	11
STD < 5	9

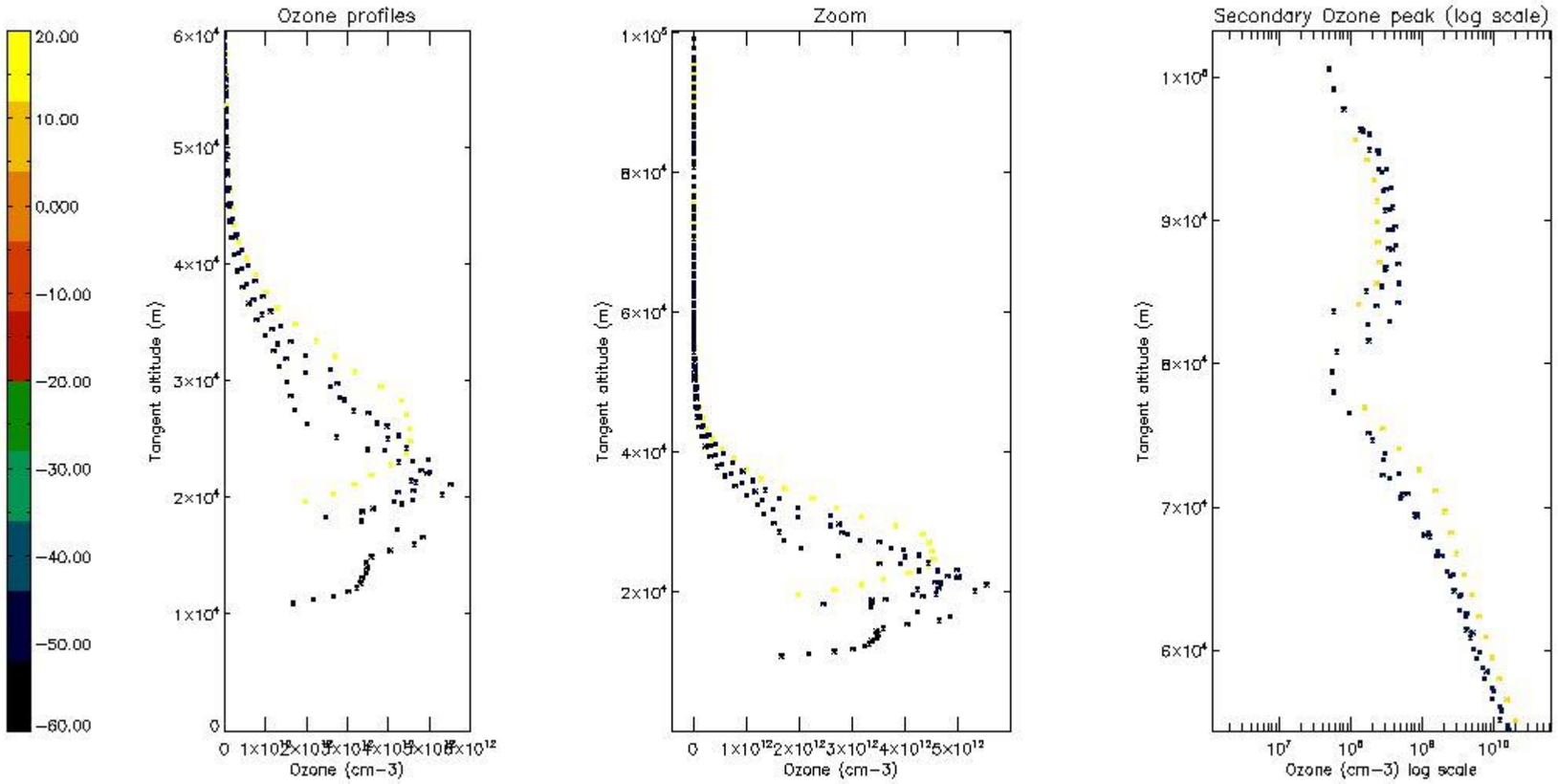
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



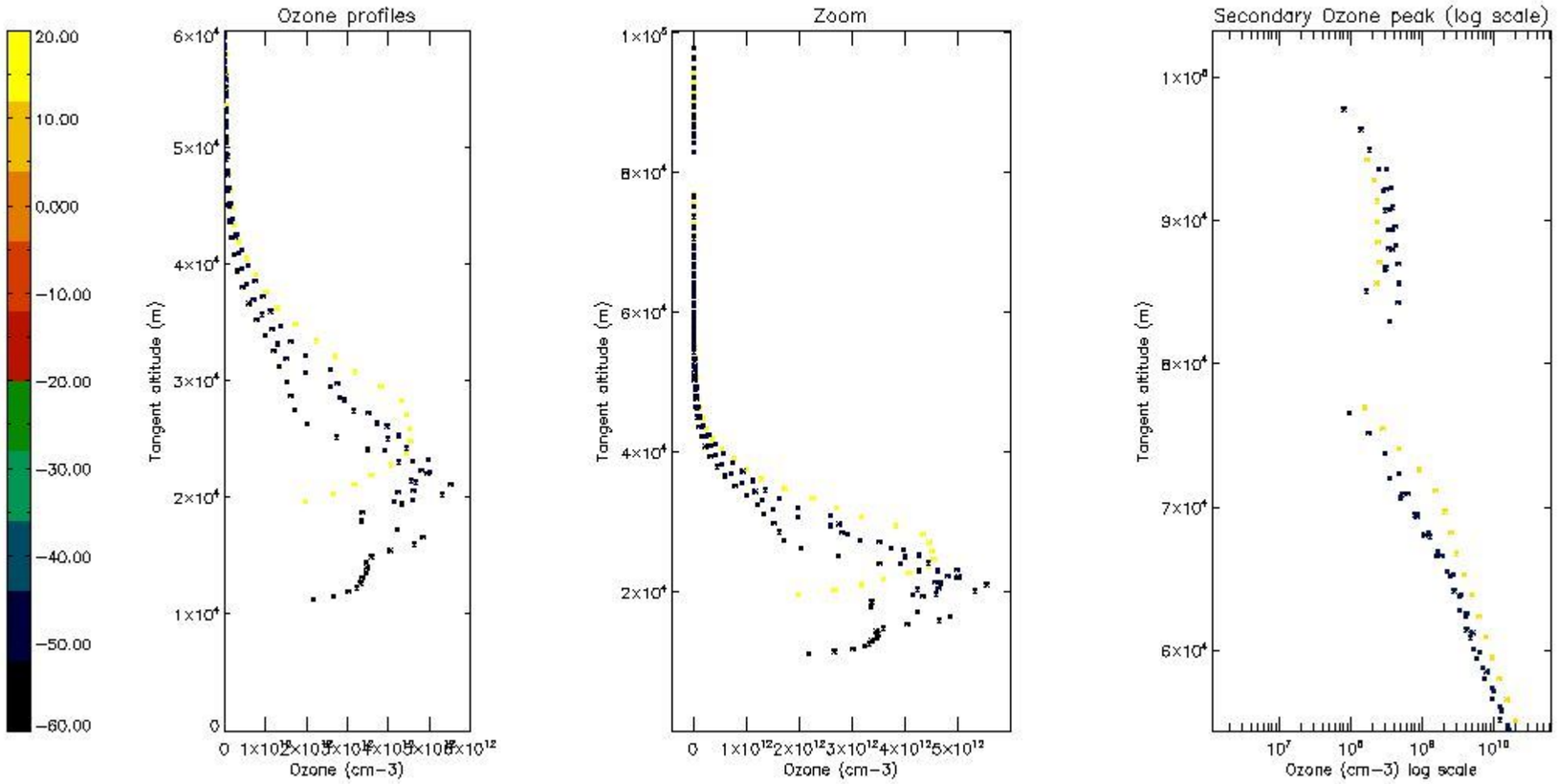
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



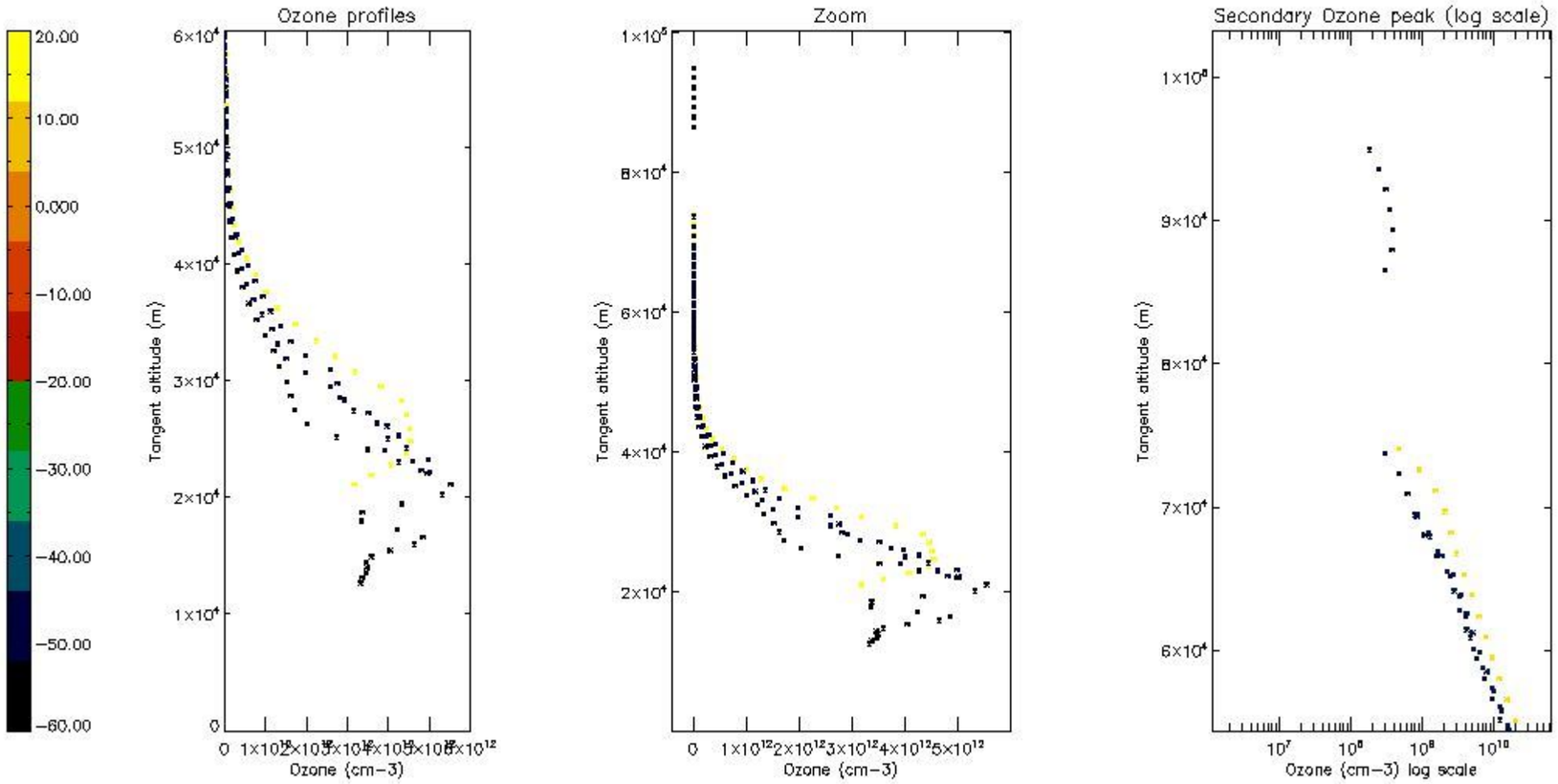
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



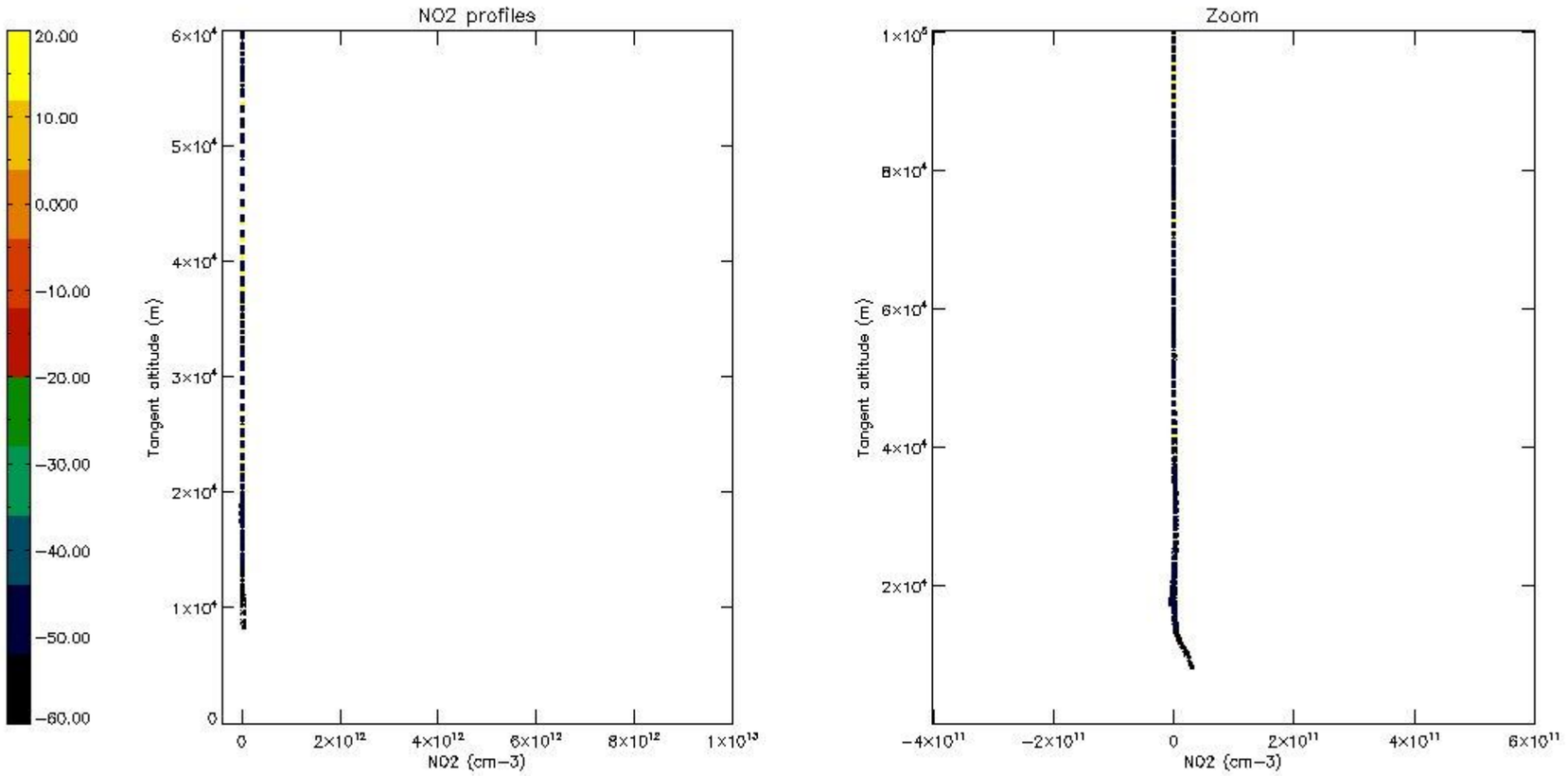
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



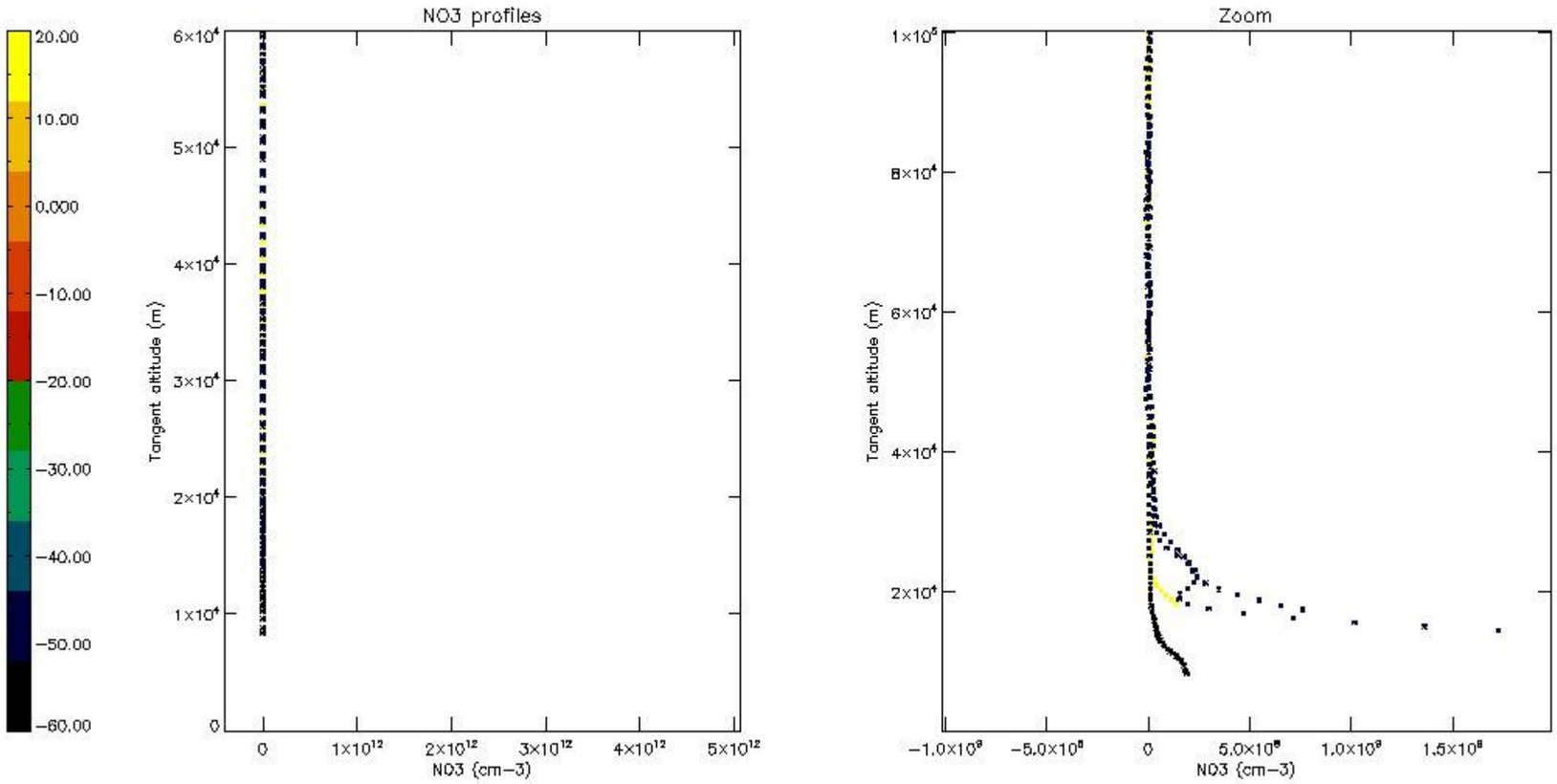
5.6 Plot NO2 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

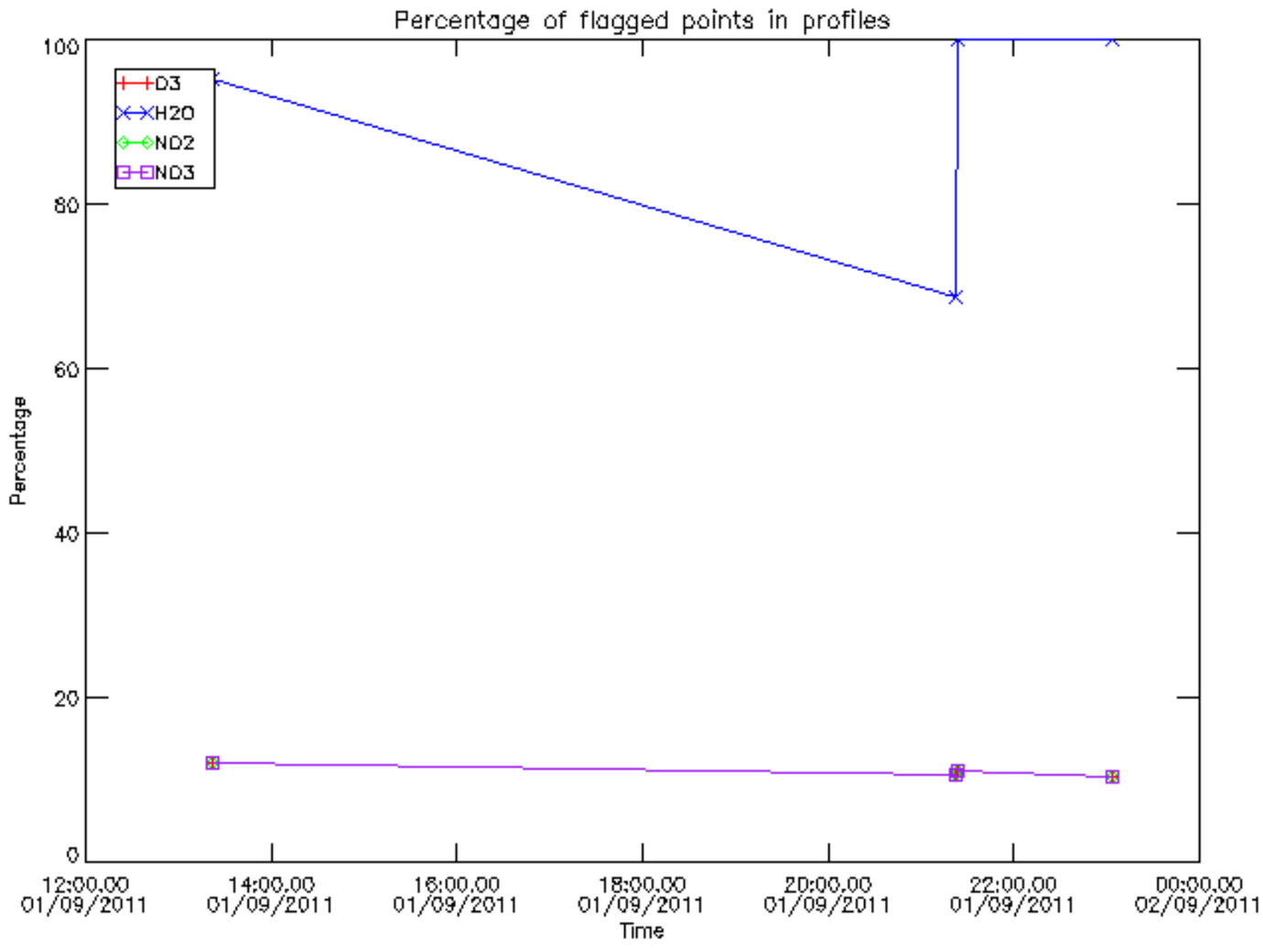
The colorbar represents the latitude.



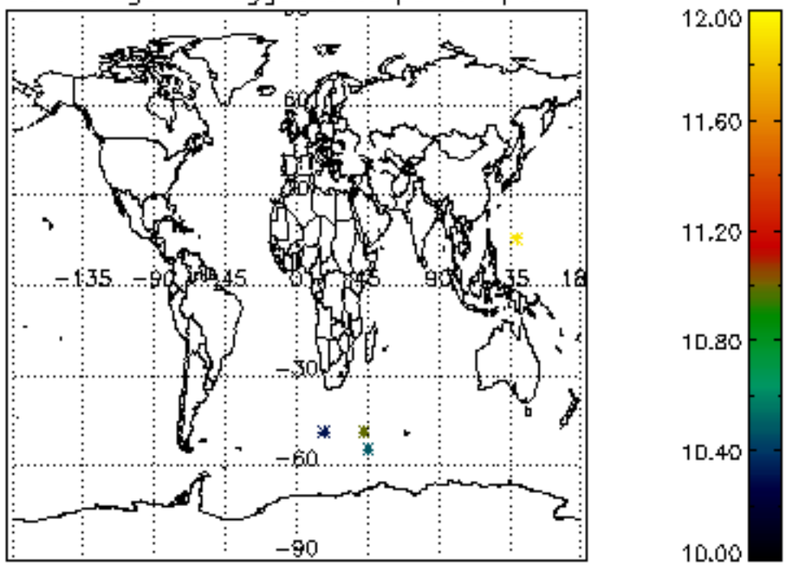
6. Auxiliary Data Files used for the production reported in section 2

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

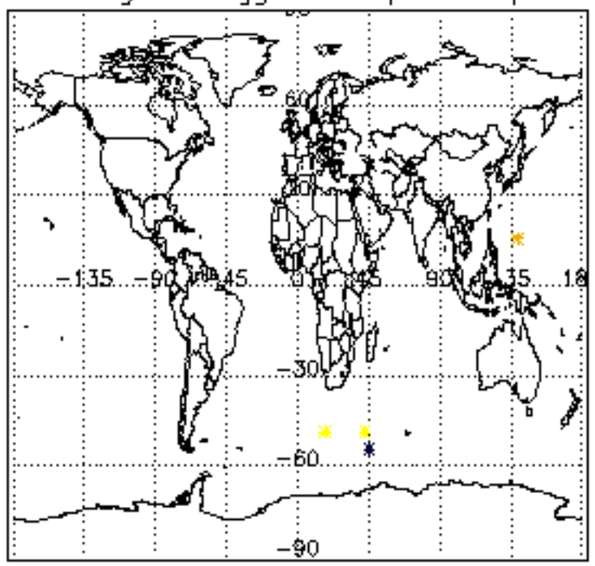
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	01-SEP-2011 01:09:59
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	01-SEP-2011 01:09:59
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	01-SEP-2011 01:09:59

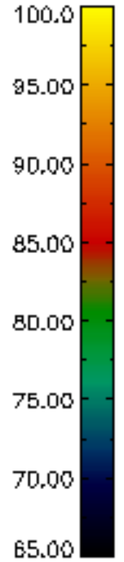

Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
12:00.00
01/09/2011
14:00.00
01/09/2011
16:00.00
01/09/2011
18:00.00
01/09/2011
20:00.00
01/09/2011
22:00.00
01/09/2011
00:00.00
02/09/2011
Time

Percentage of flagged data per O3 profile

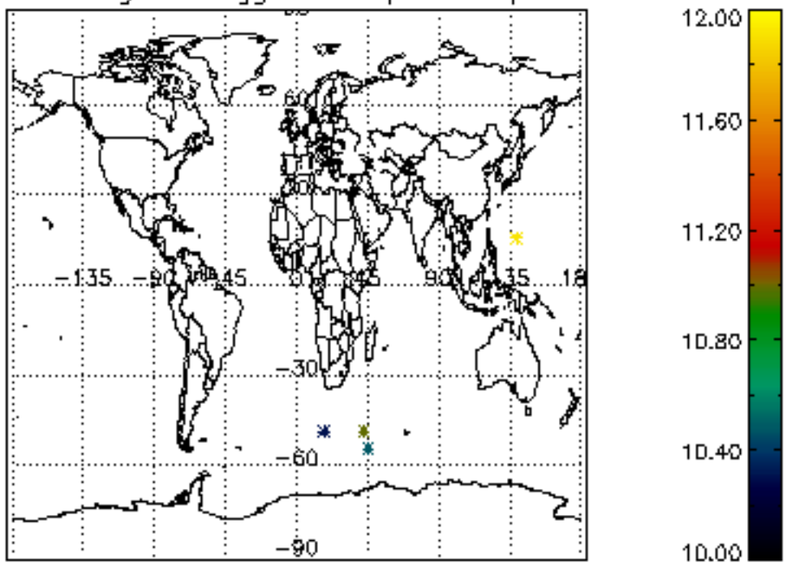


Percentage of flagged data per H2O profile

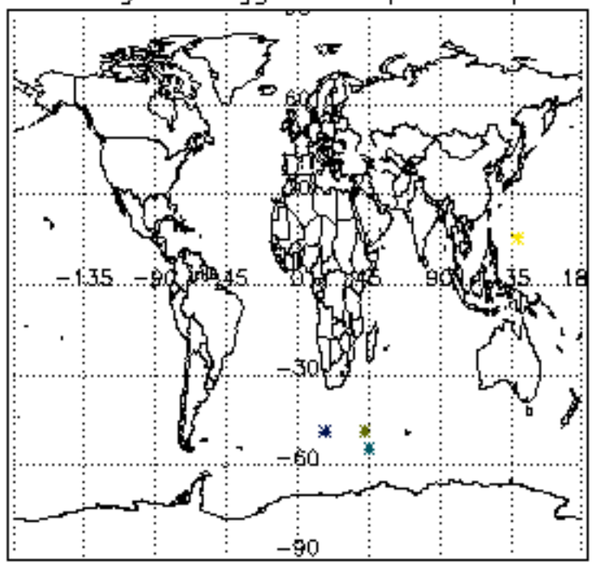


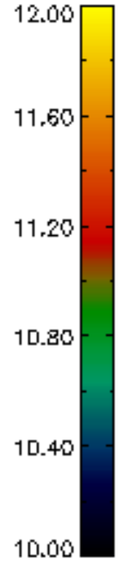


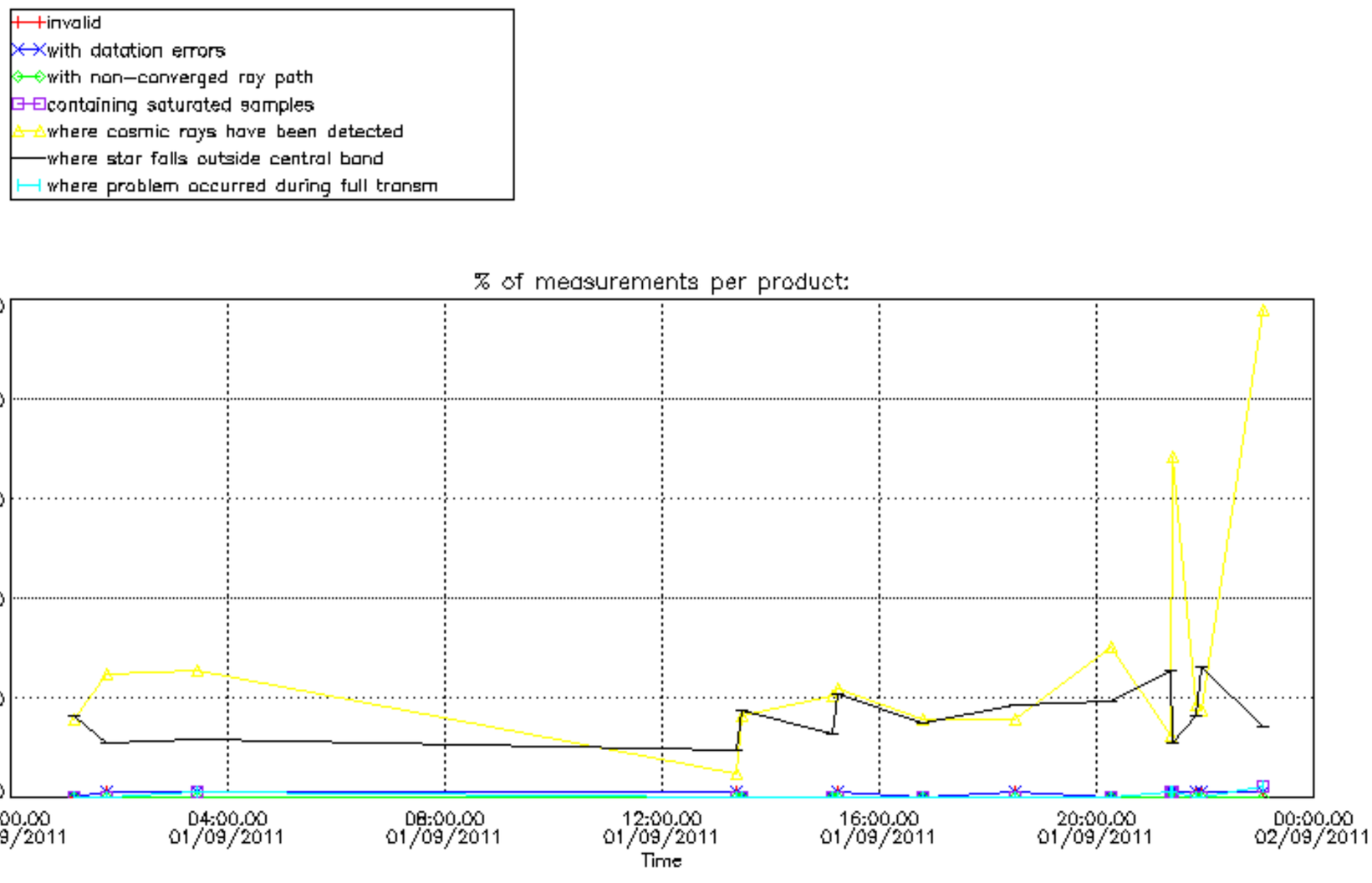
Percentage of flagged data per NO2 profile

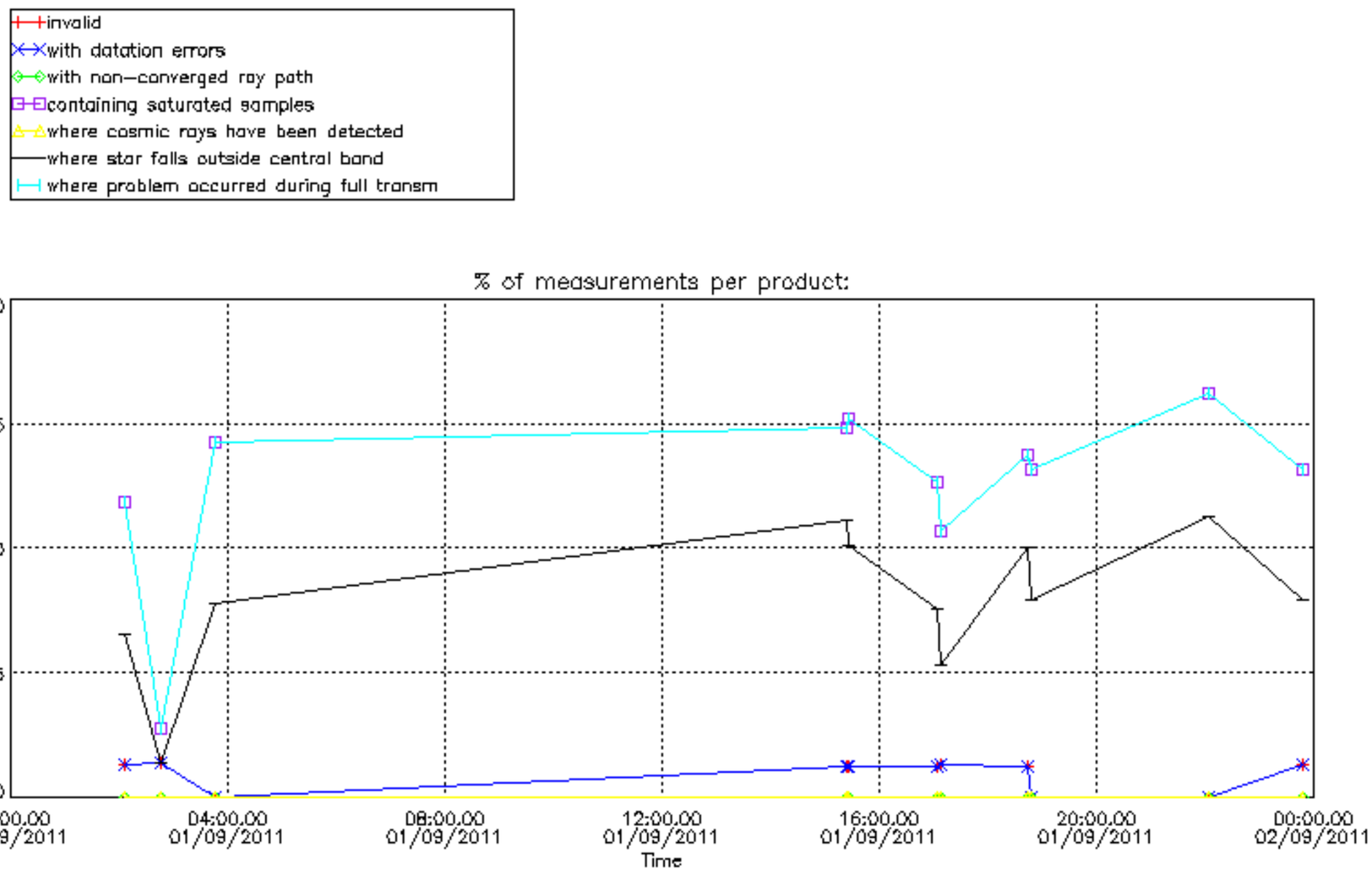


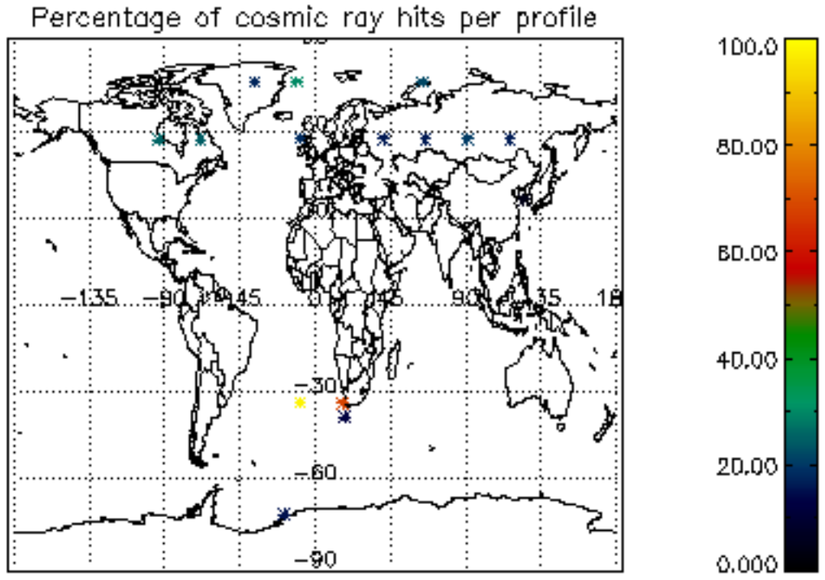
Percentage of flagged data per NO3 profile

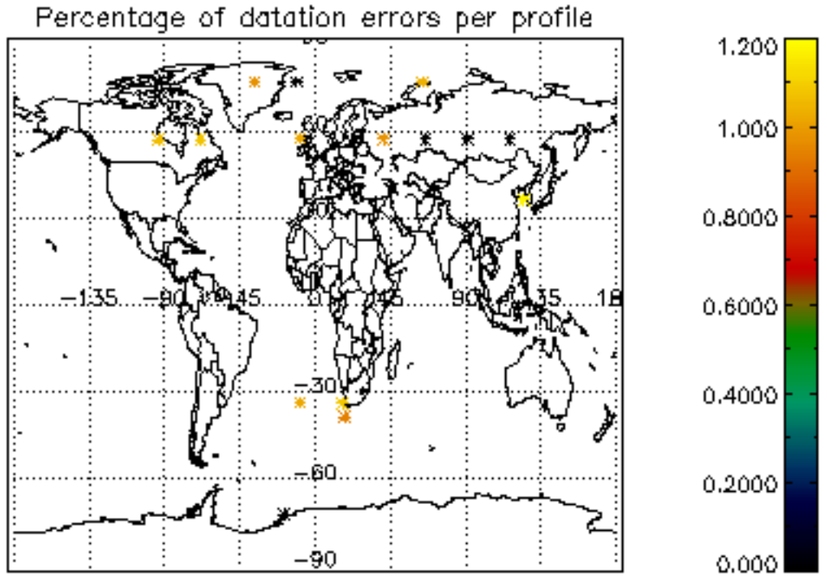


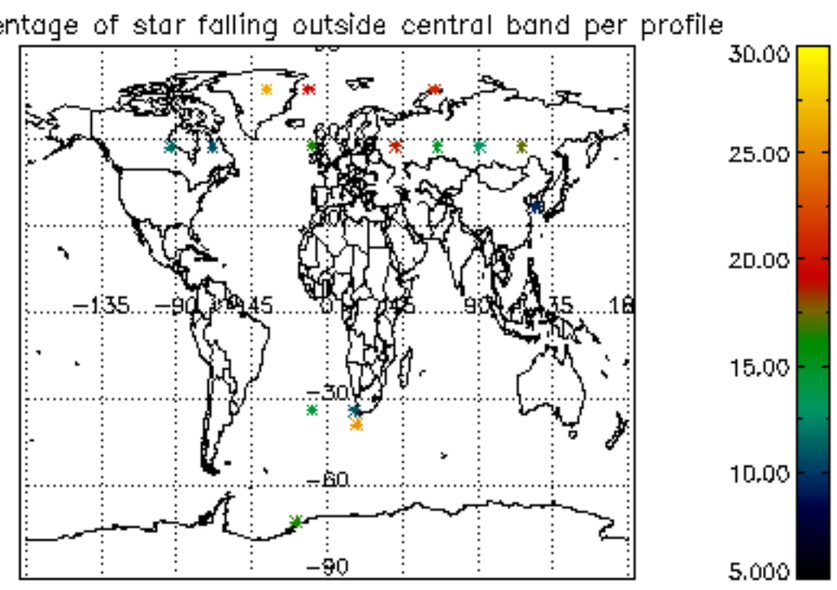


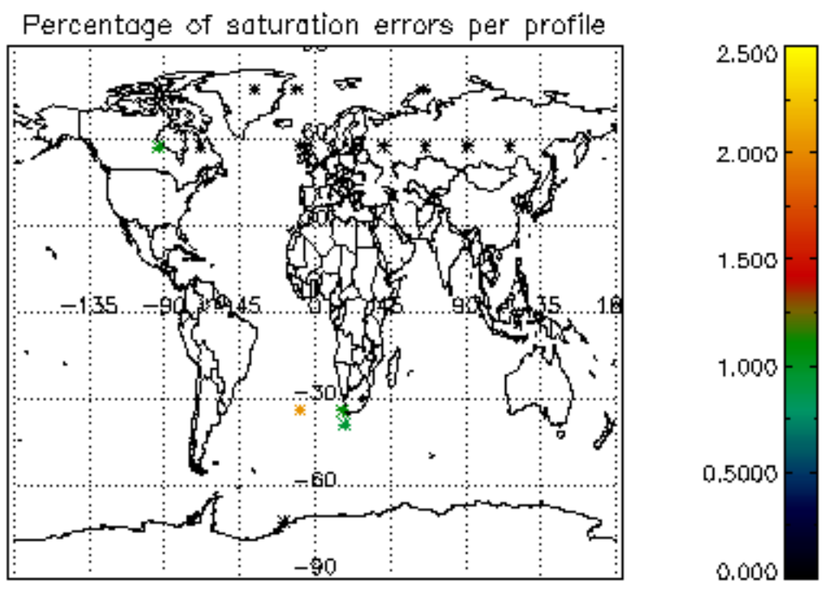

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
100
80
60
40
20
0
value (%)
00:00.00
01/09/2011
04:00.00
01/09/2011
08:00.00
01/09/2011
12:00.00
01/09/2011
16:00.00
01/09/2011
20:00.00
01/09/2011
00:00.00
02/09/2011
Time

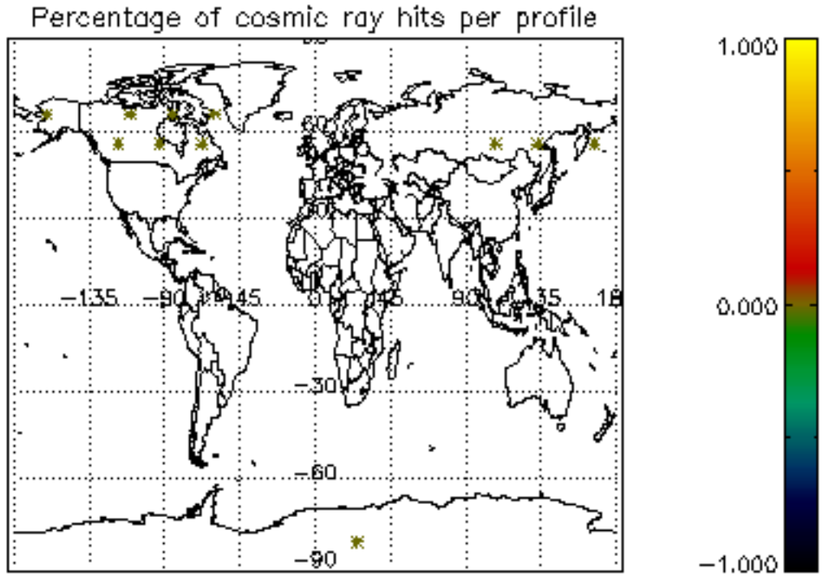

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
20
15
10
5
0
value (%)
00:00.00
01/09/2011
04:00.00
01/09/2011
08:00.00
01/09/2011
12:00.00
01/09/2011
16:00.00
01/09/2011
20:00.00
01/09/2011
00:00.00
02/09/2011
Time

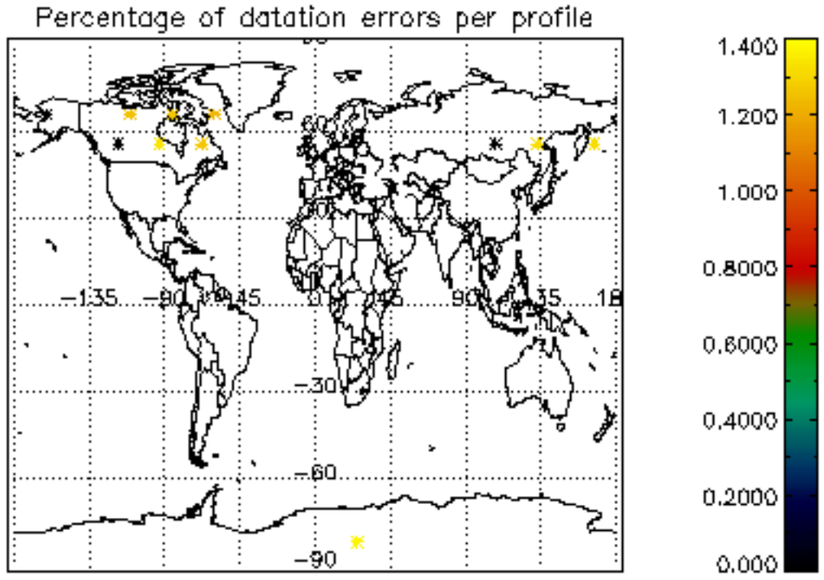

Percentage of cosmic ray hits per profile
100.0
80.00
60.00
40.00
20.00
0.000
−135
−90
−30
−60
−90

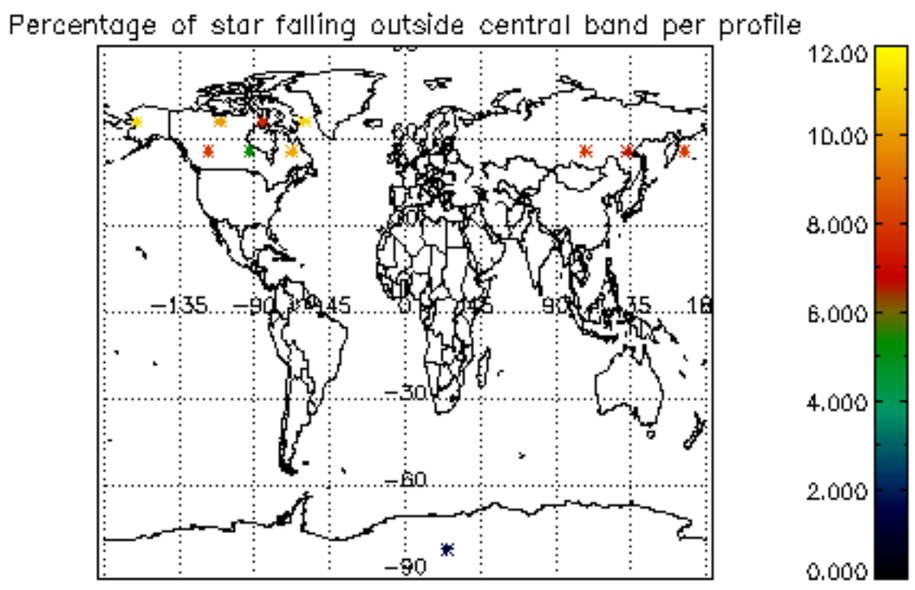

Percentage of datation errors per profile
1.200
1.000
0.8000
0.6000
0.4000
0.2000
0.000
−135
−90
−30
−60
−90

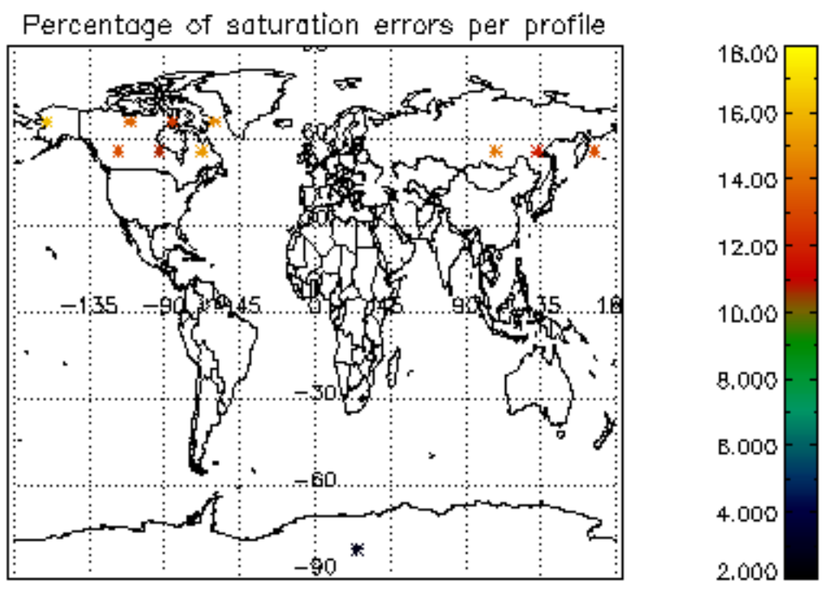

Percentage of star falling outside central band per profile
30.00
25.00
20.00
15.00
10.00
5.000
−135
−90
−30
−60
−90

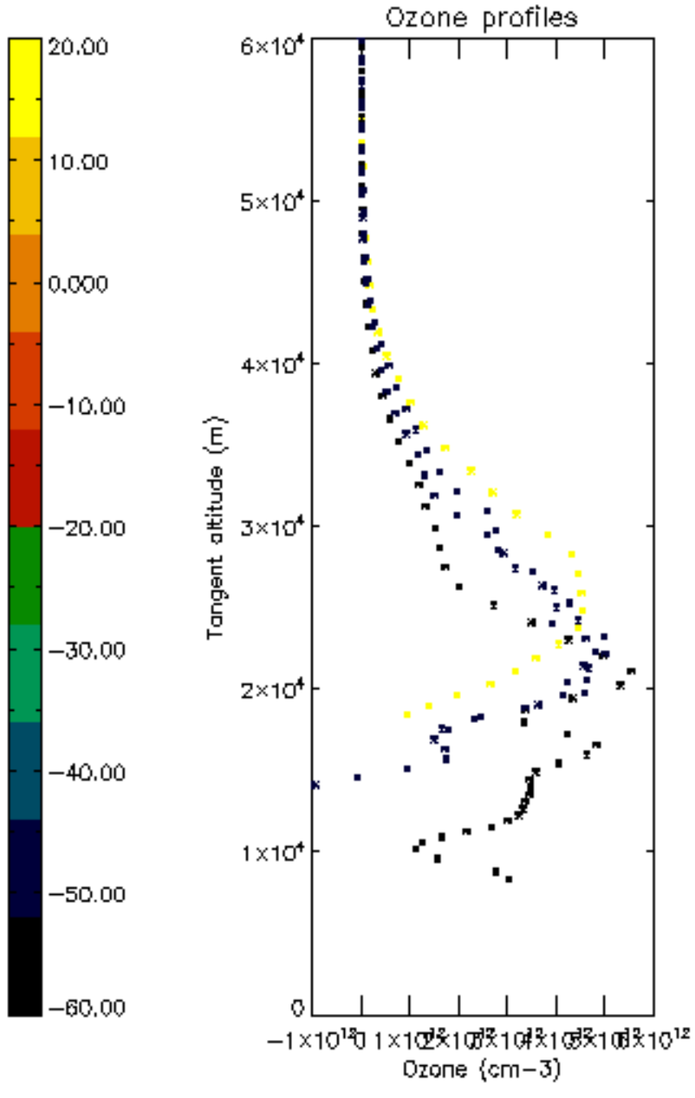

Percentage of saturation errors per profile
2.500
2.000
1.500
1.000
0.5000
0.000
−135
−90
−30
−60
−90


Percentage of cosmic ray hits per profile
1.000
0.000
−1.000
−135
−90
−30
−60
−90

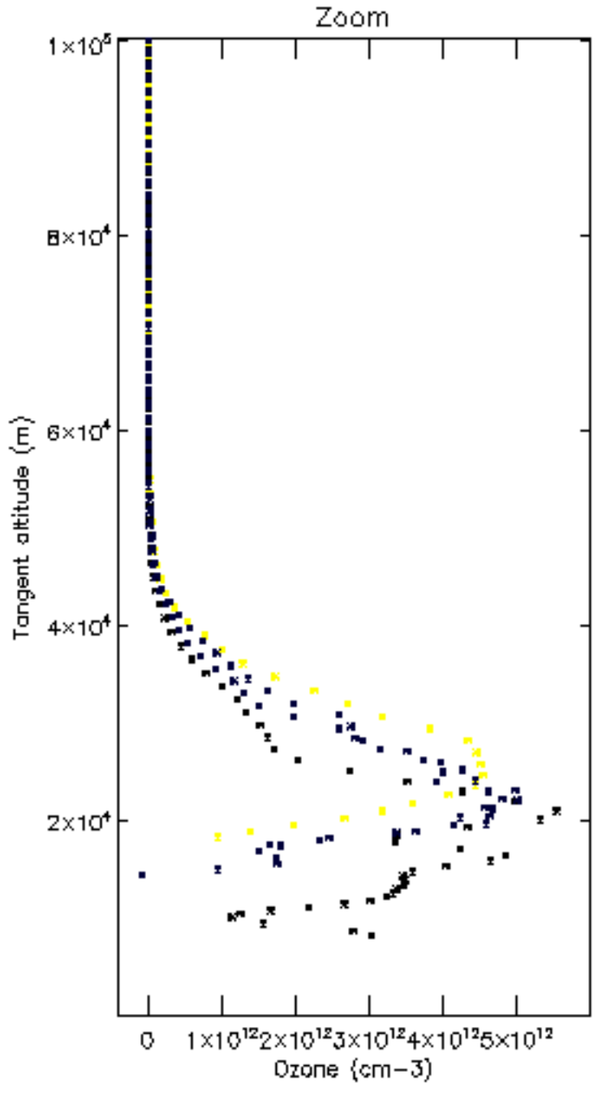

Percentage of datation errors per profile
1.400
1.200
1.000
0.8000
0.6000
0.4000
0.2000
0.000
−135
−90
−30
−60
−90

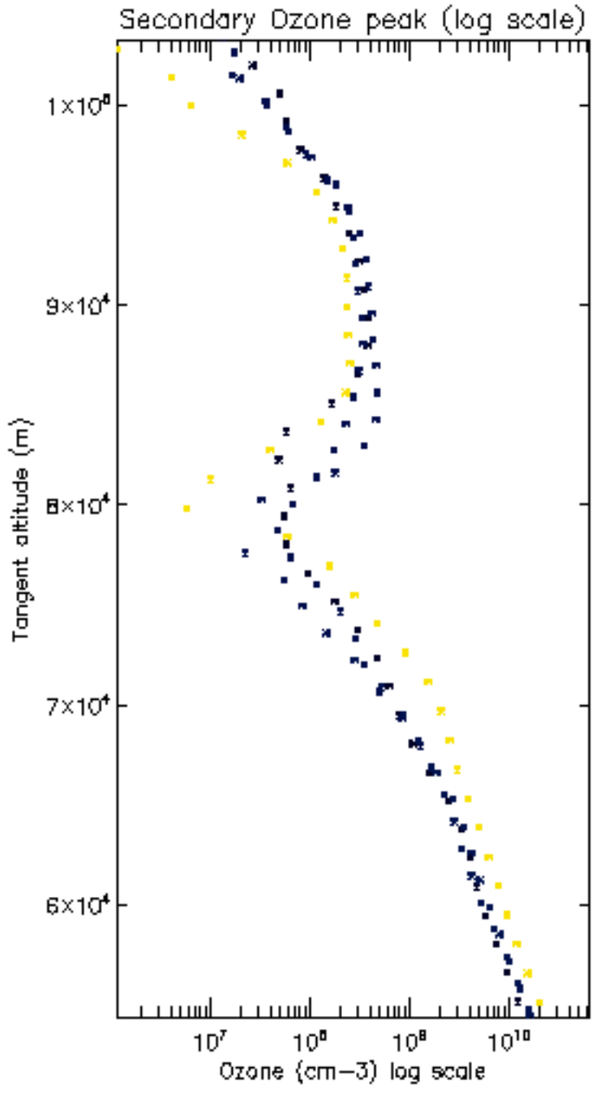

Percentage of star falling outside central band per profile
12.00
10.00
8.000
6.000
4.000
2.000
0.000
−135
−90
−30
−60
−90

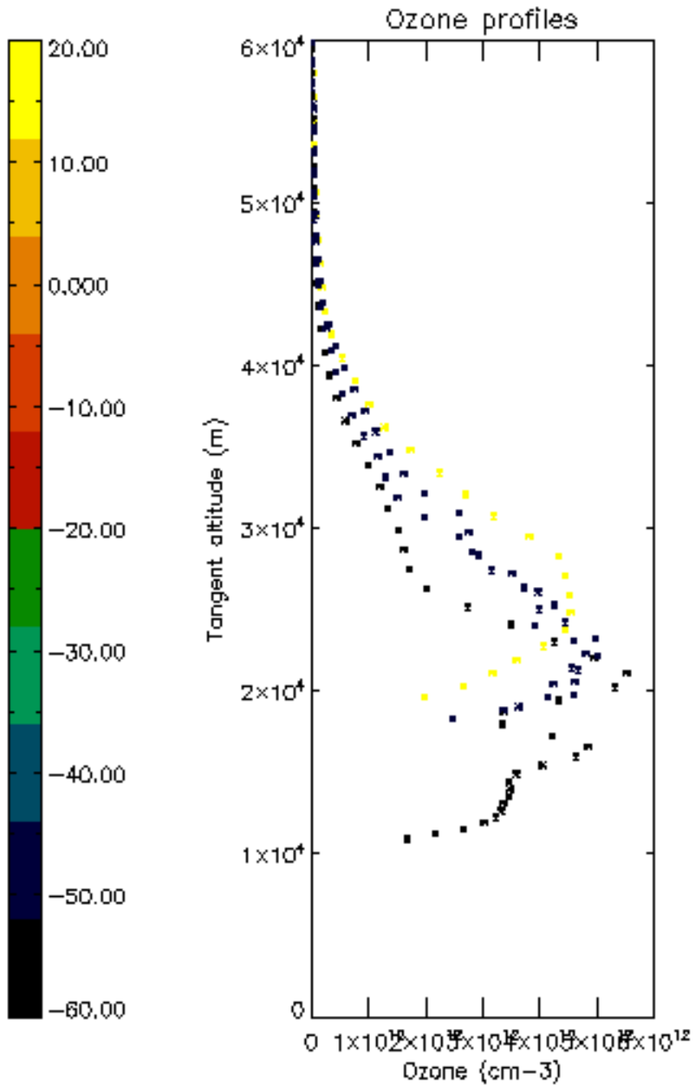

Percentage of saturation errors per profile
18.00
16.00
14.00
12.00
10.00
8.000
6.000
4.000
2.000
−135
−90
−30
−60
−90


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

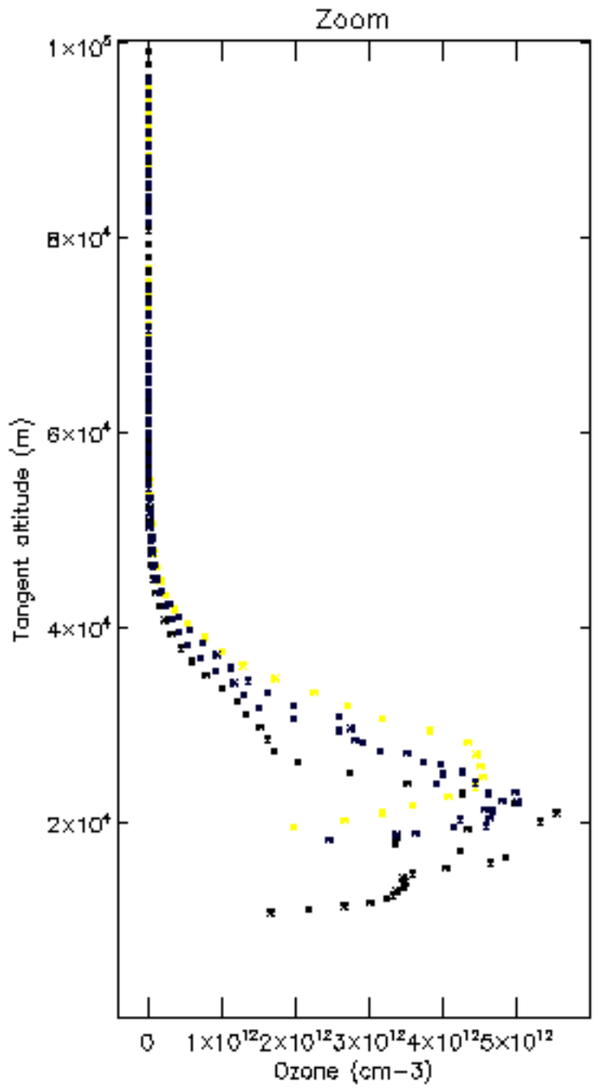
Ozone profiles
Tangent altitude (m)
Ozone (cm−3)

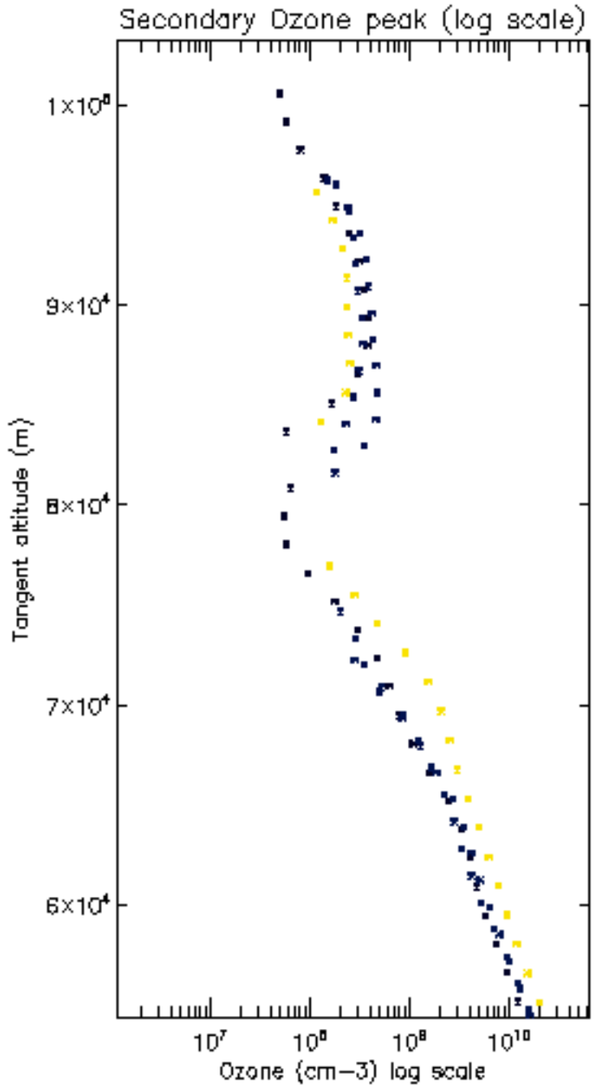

Zoom
Tangent altitude (m)
Ozone (cm−3)

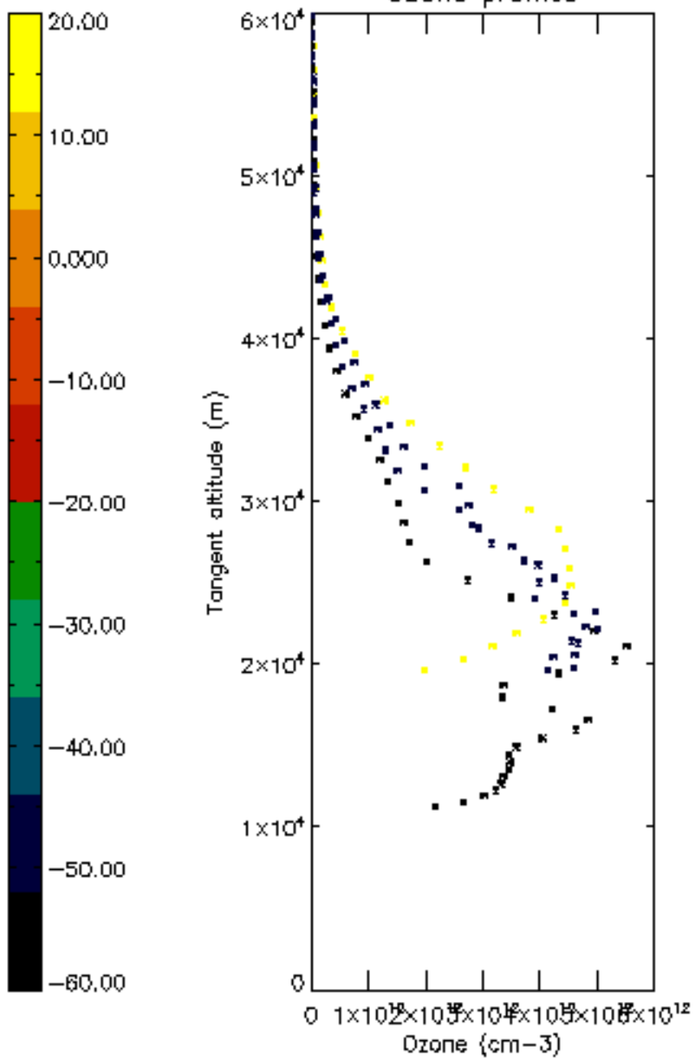

Secondary Ozone peak (log scale)
Tangent altitude (m)
Ozone (cm−3) log scale


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

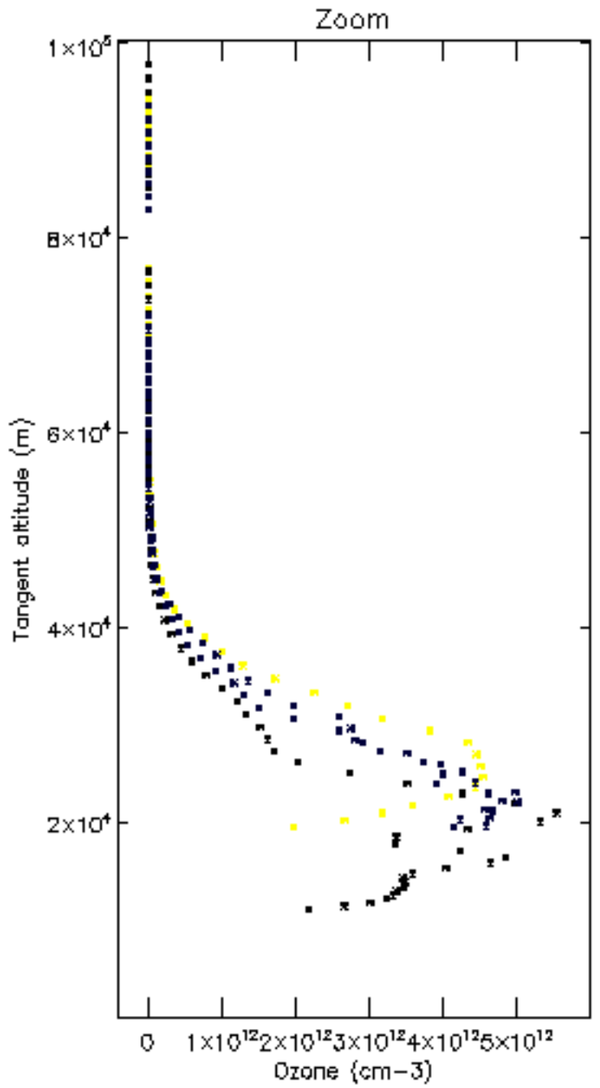
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹² 6×10¹²
Ozone (cm−3)

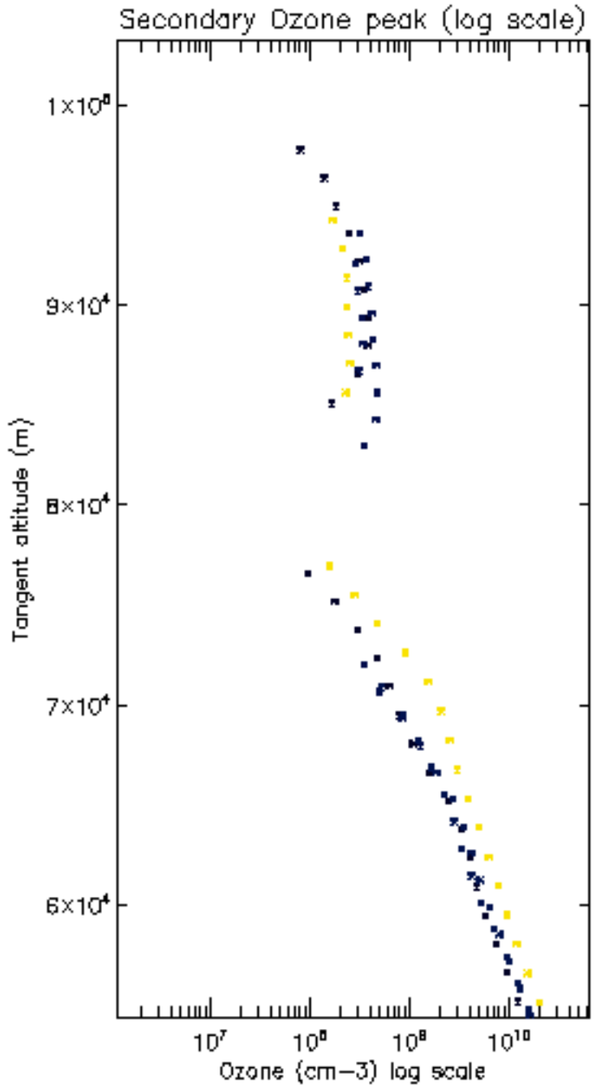

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

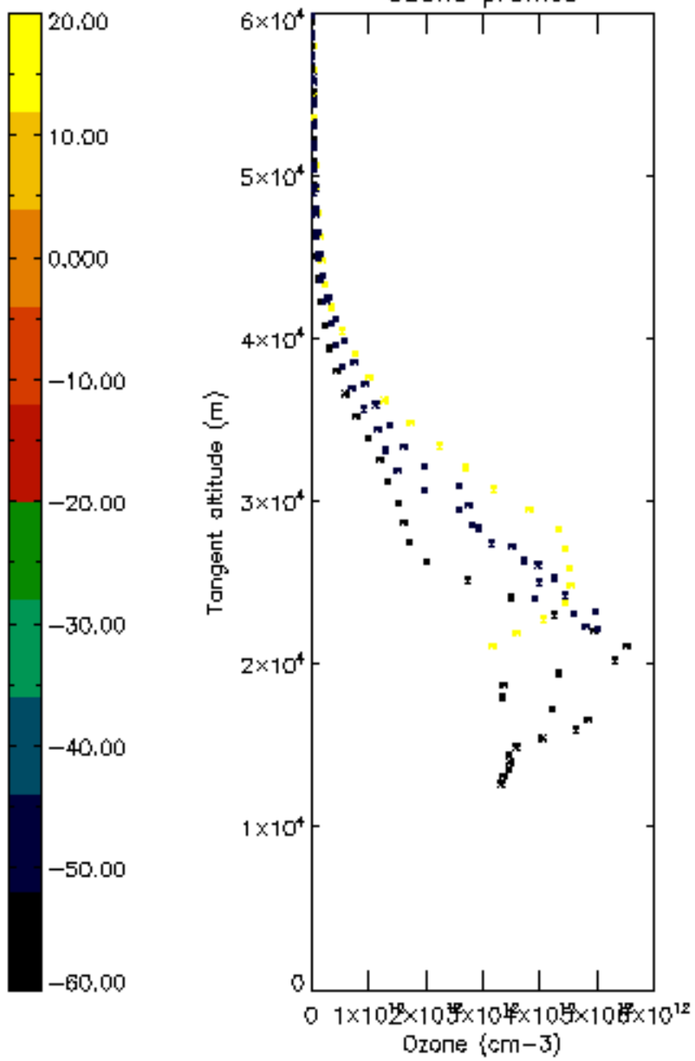

Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷ 10⁸ 10⁹ 10¹⁰
Ozone (cm−3) log scale


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

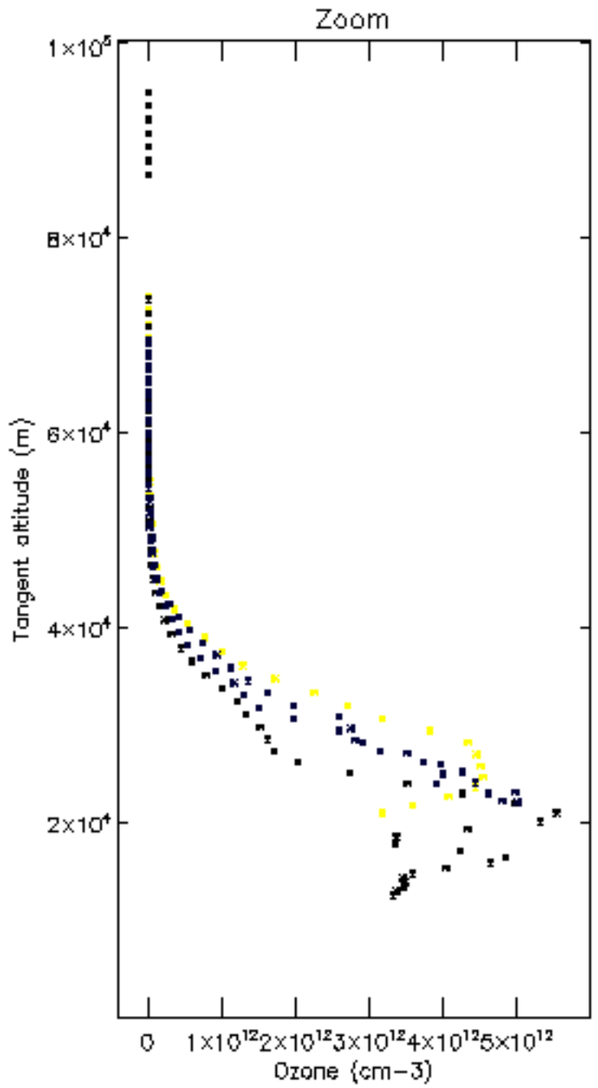
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹² 6×10¹²
Ozone (cm−3)

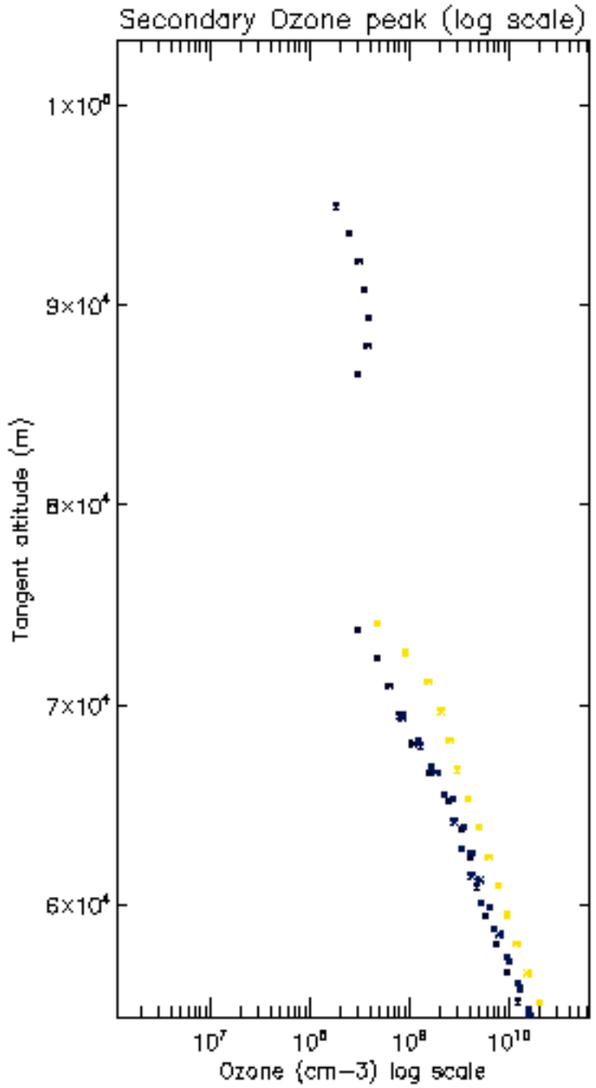

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

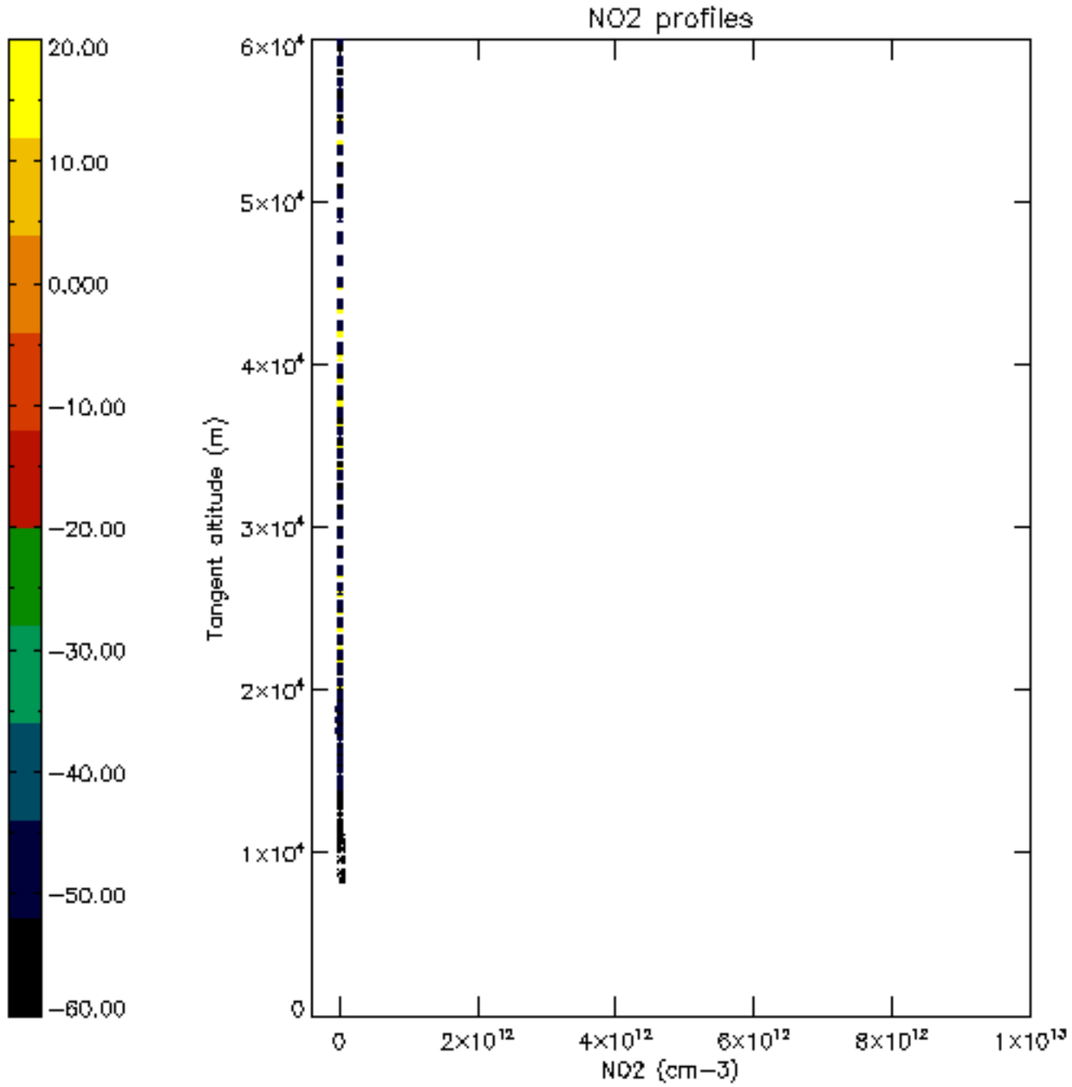

Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷ 10⁸ 10⁹ 10¹⁰
Ozone (cm−3) log scale

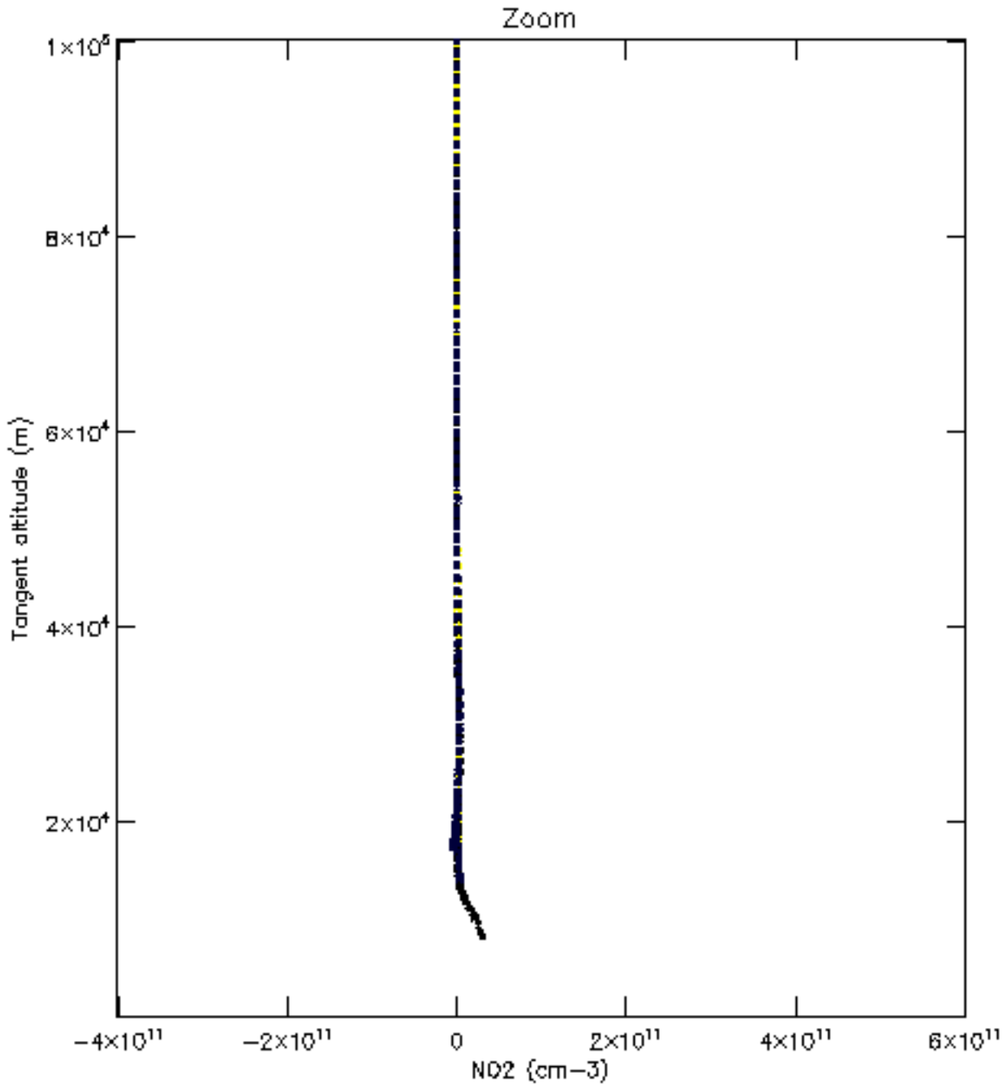

20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

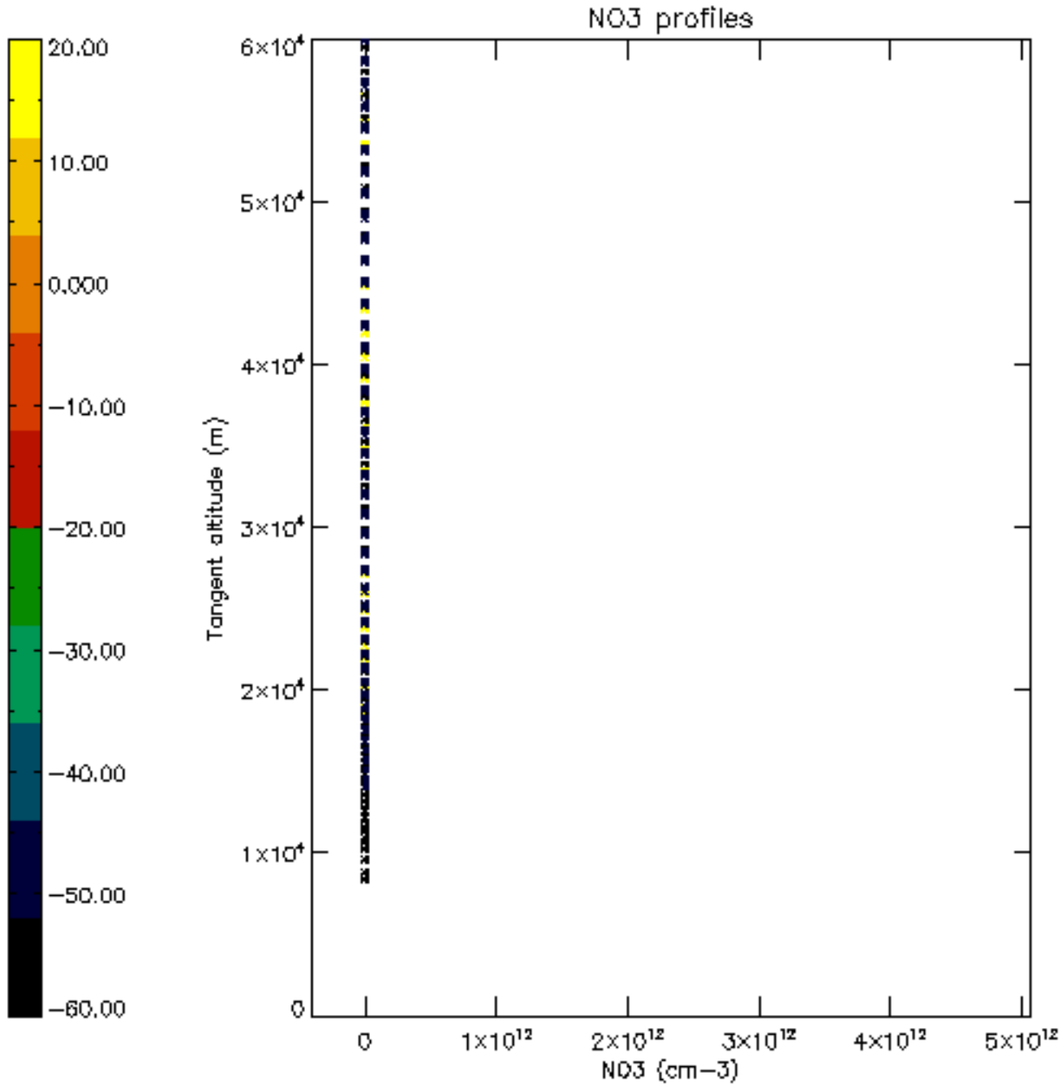
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0
Ozone (cm−3)

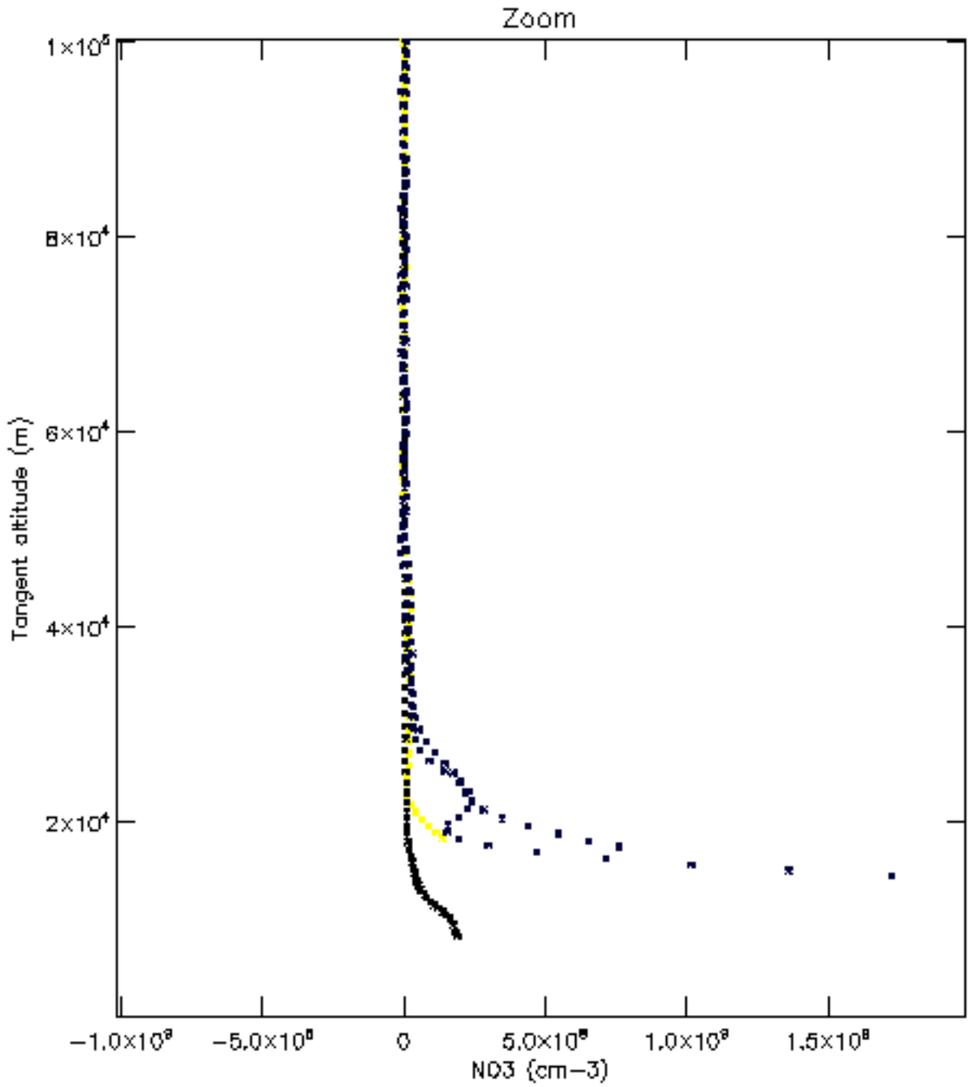

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
Ozone (cm−3)

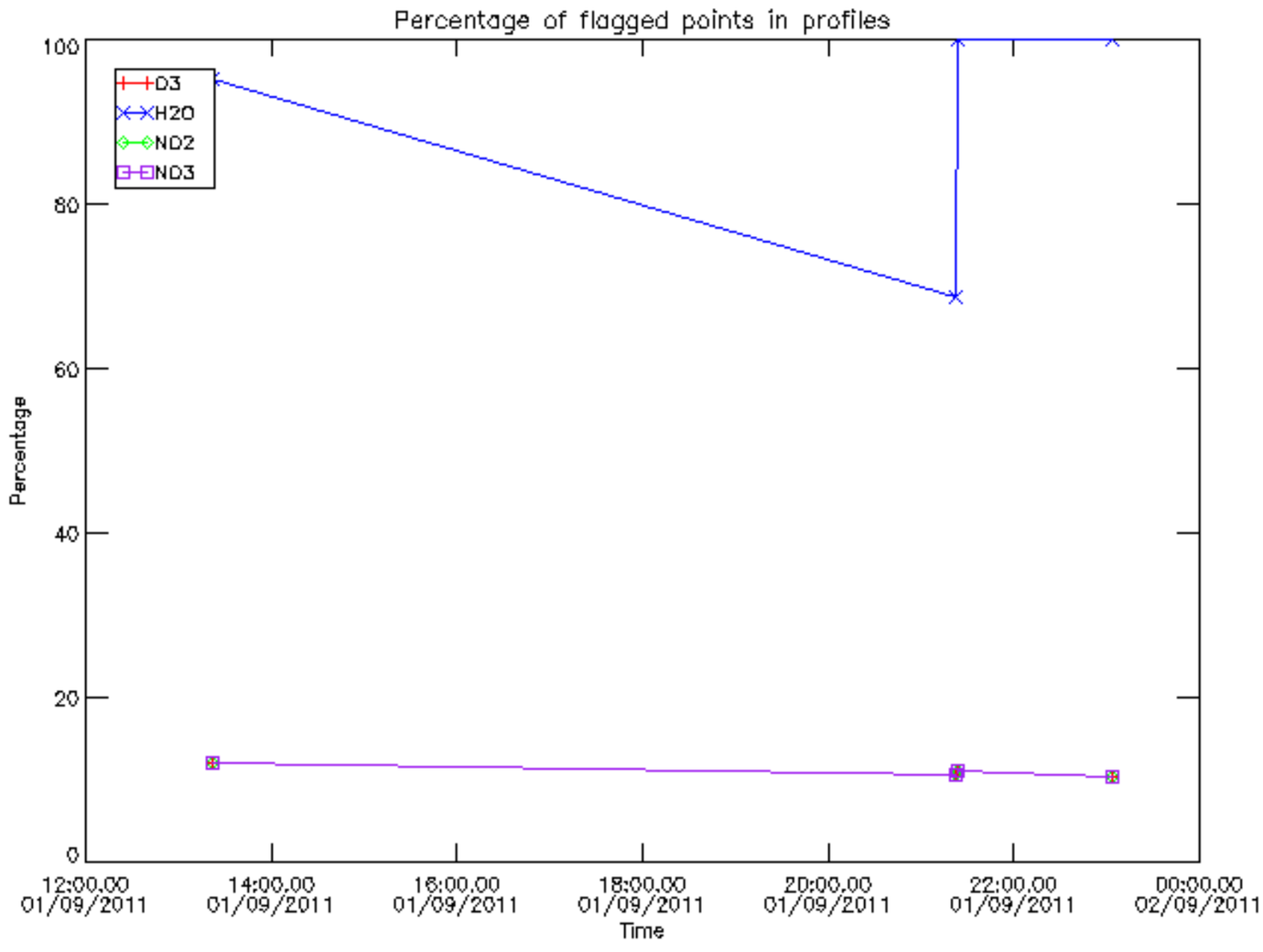

Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷
10⁸
10⁹
10¹⁰
Ozone (cm−3) log scale


NO2 profiles
20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
2×10¹²
4×10¹²
6×10¹²
8×10¹²
1×10¹³
NO2 (cm−3)

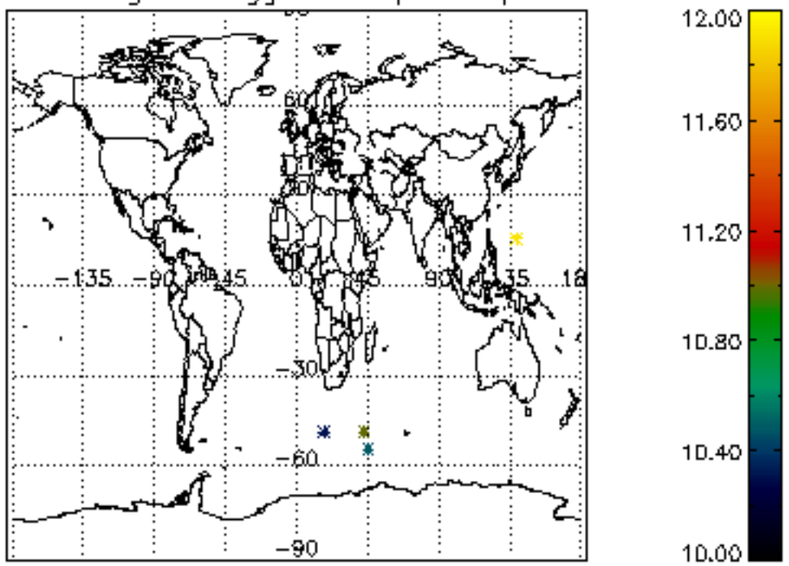

Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−4×10¹¹
−2×10¹¹
0
2×10¹¹
4×10¹¹
6×10¹¹
NO2 (cm−3)


NO3 profiles
20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
NO3 (cm−3)

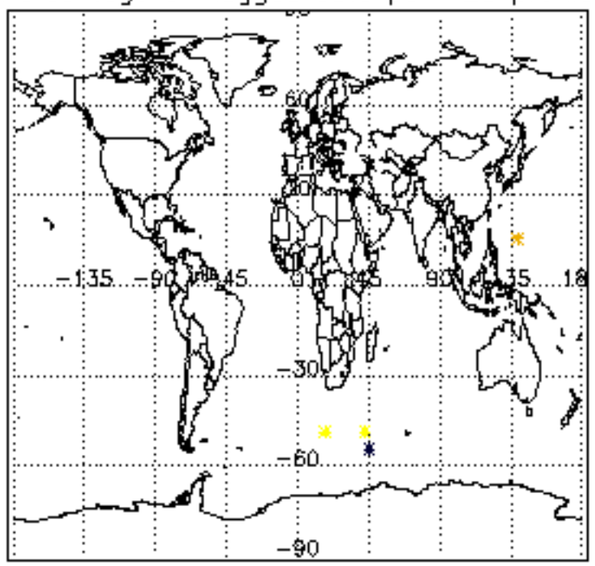

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
−1.0×10⁹
−5.0×10⁸
0
5.0×10⁸
1.0×10⁹
1.5×10⁹
NO3 (cm−3)

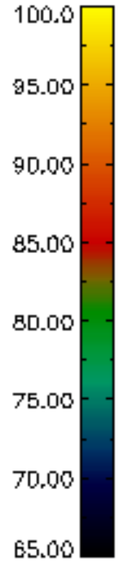

Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
12:00.00
01/09/2011
14:00.00
01/09/2011
16:00.00
01/09/2011
18:00.00
01/09/2011
20:00.00
01/09/2011
22:00.00
01/09/2011
00:00.00
02/09/2011
Time

Percentage of flagged data per O3 profile

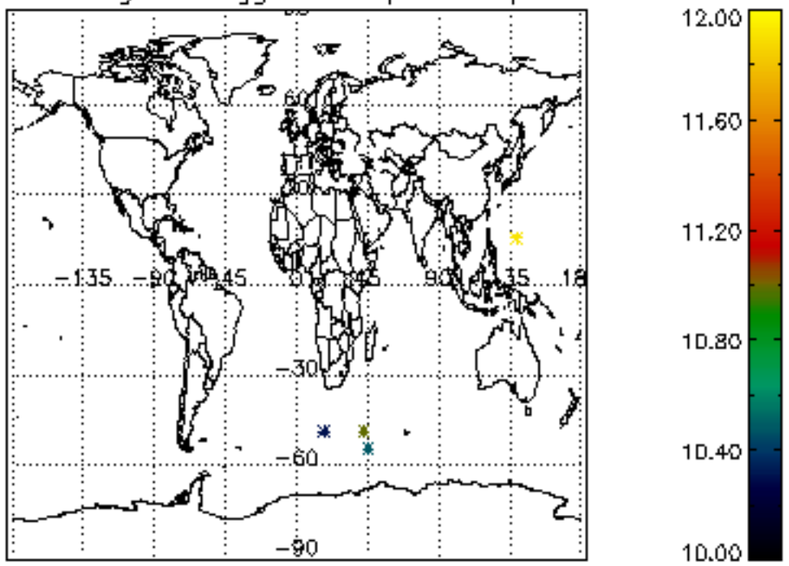


Percentage of flagged data per H2O profile

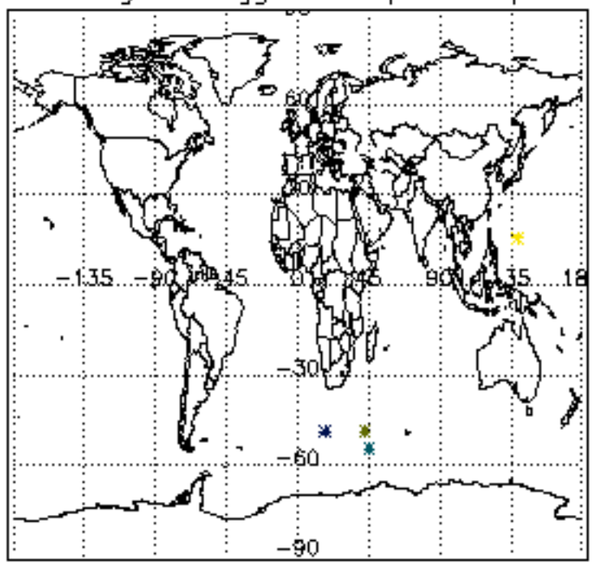


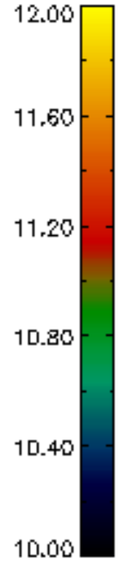


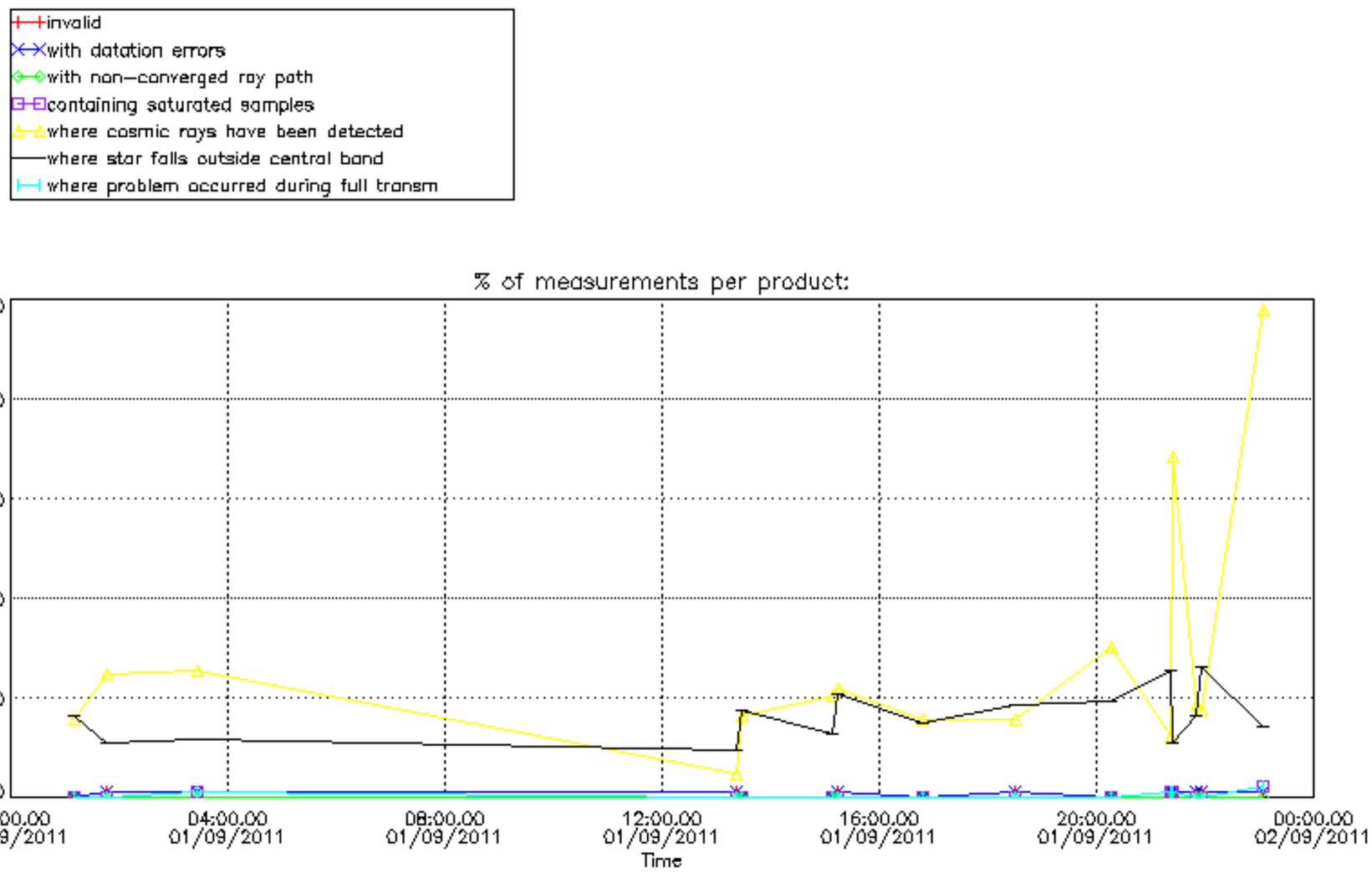
Percentage of flagged data per NO2 profile

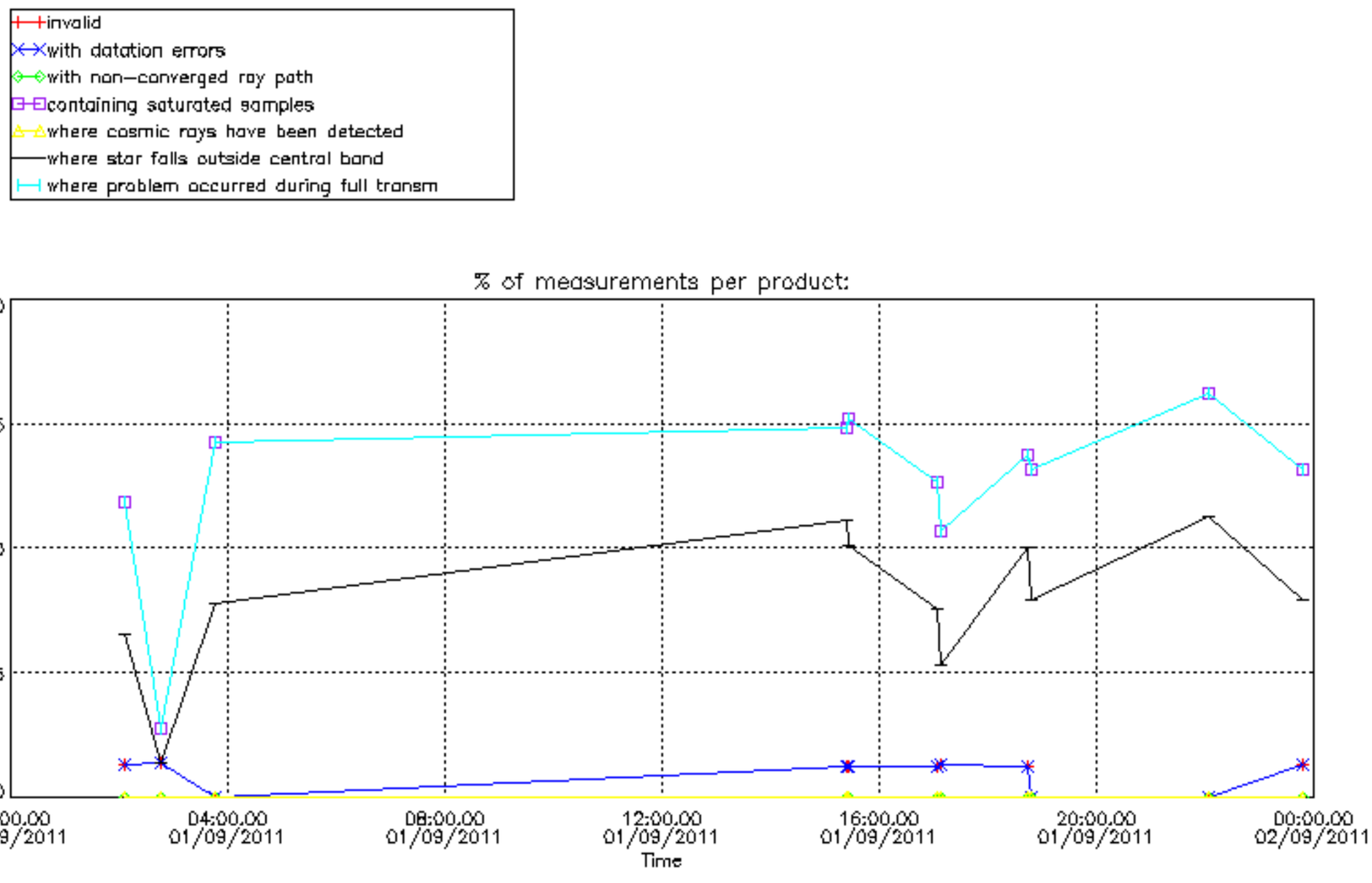


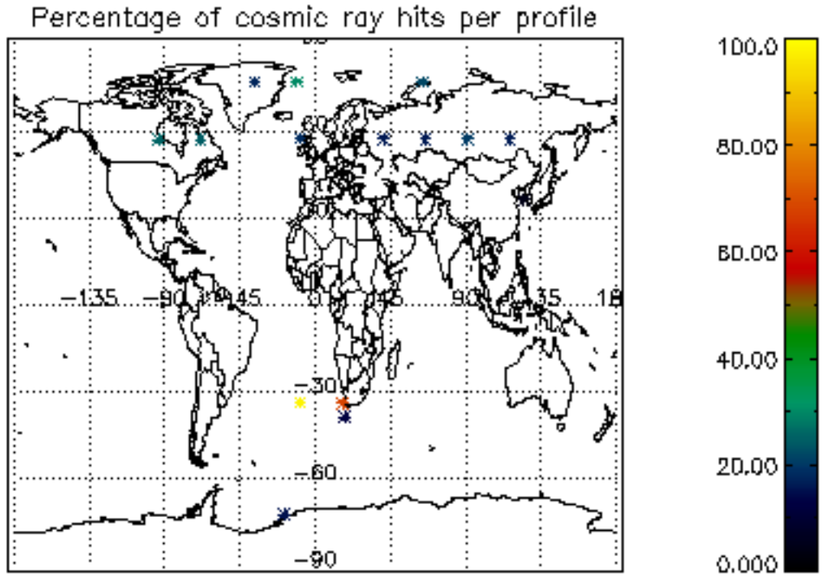
Percentage of flagged data per NO3 profile

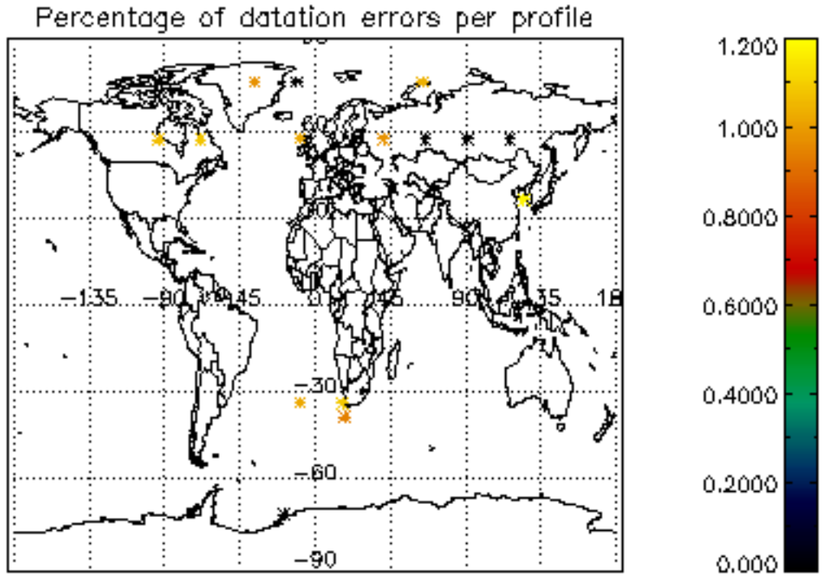


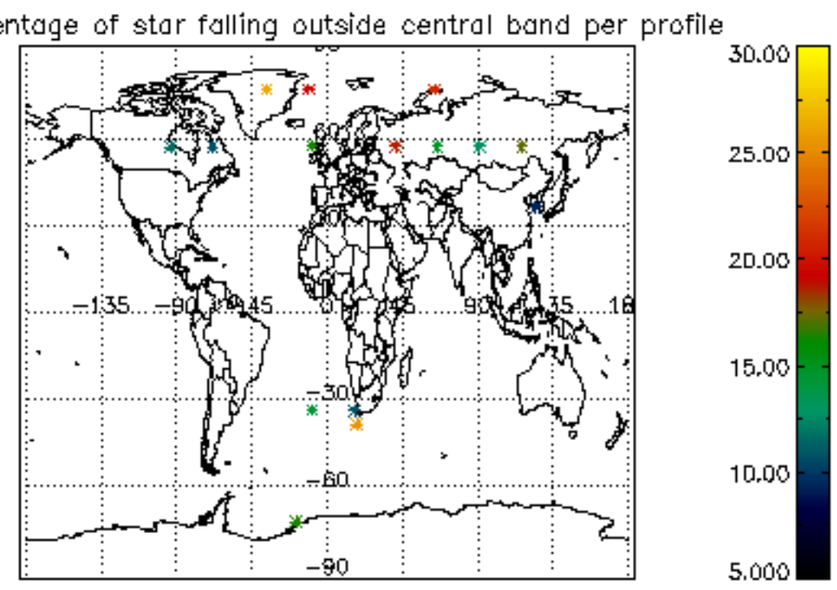


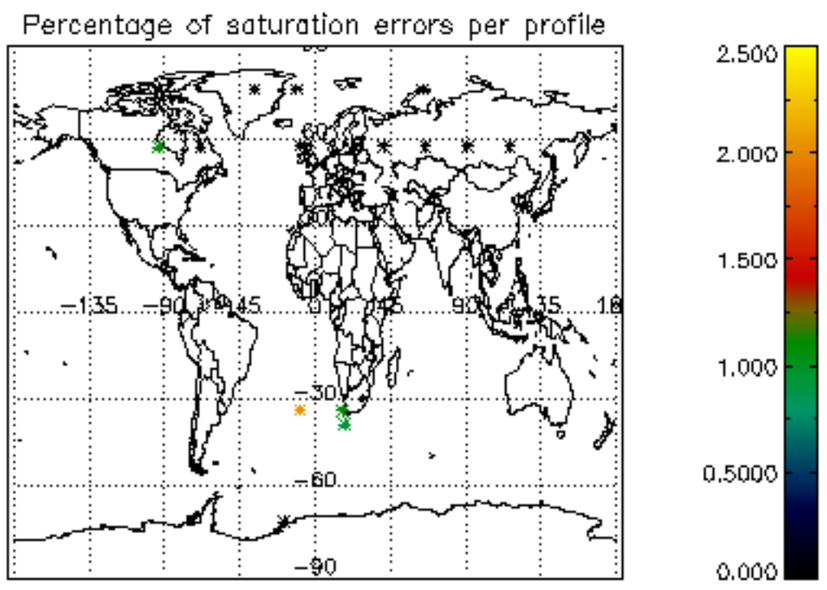

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
100
80
60
40
20
0
value (%)
00:00.00
01/09/2011
04:00.00
01/09/2011
08:00.00
01/09/2011
12:00.00
01/09/2011
16:00.00
01/09/2011
20:00.00
01/09/2011
00:00.00
02/09/2011
Time

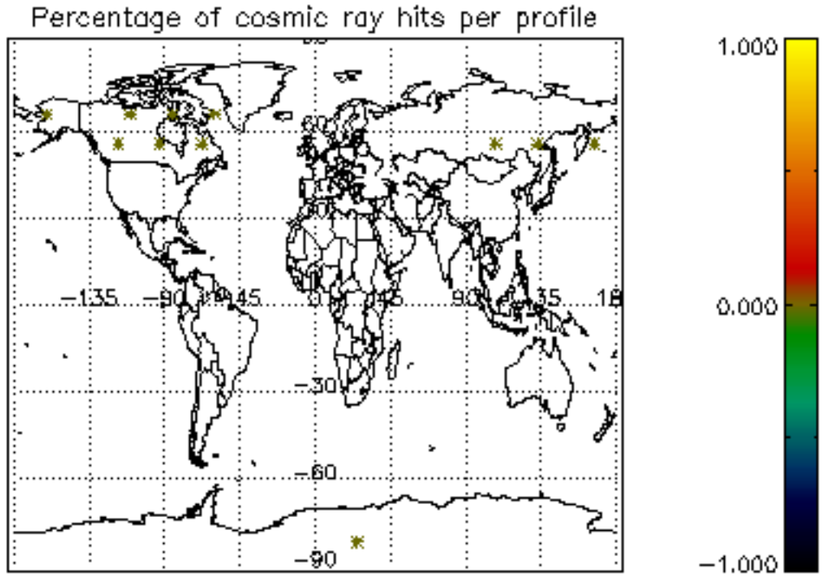

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
20
15
10
5
0
value (%)
00:00.00
01/09/2011
04:00.00
01/09/2011
08:00.00
01/09/2011
12:00.00
01/09/2011
16:00.00
01/09/2011
20:00.00
01/09/2011
00:00.00
02/09/2011
Time

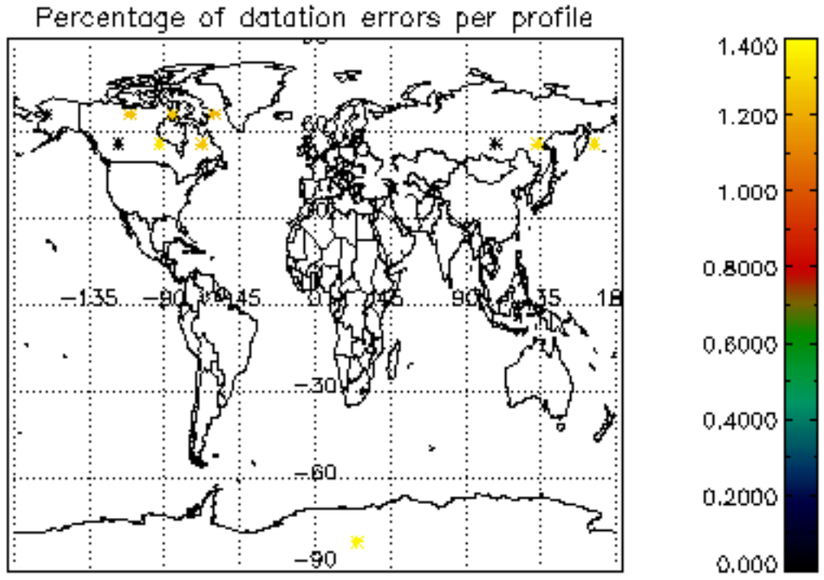

Percentage of cosmic ray hits per profile
100.0
80.00
60.00
40.00
20.00
0.000
−135
−90
−30
−60
−90

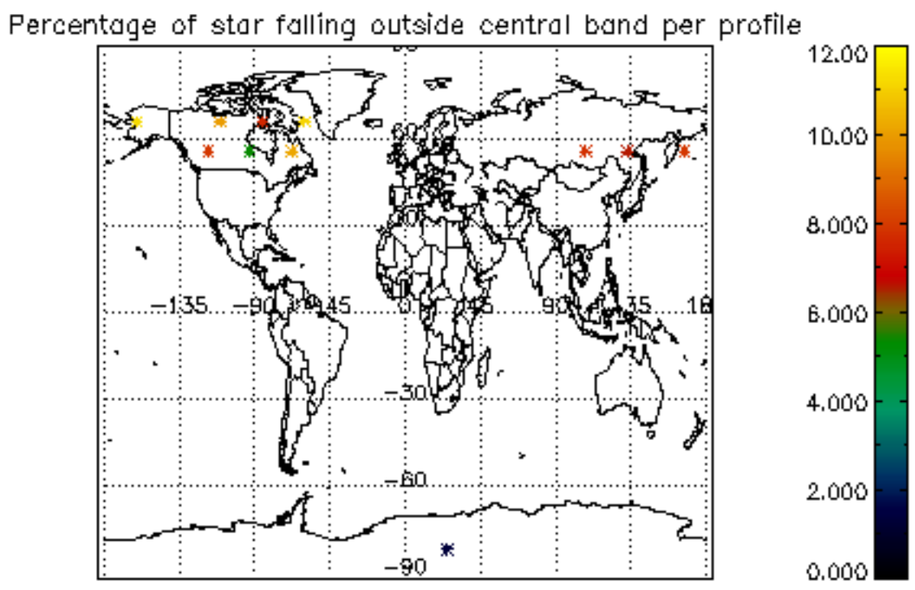

Percentage of datation errors per profile
1.200
1.000
0.8000
0.6000
0.4000
0.2000
0.000
−135
−90
−30
−60
−90

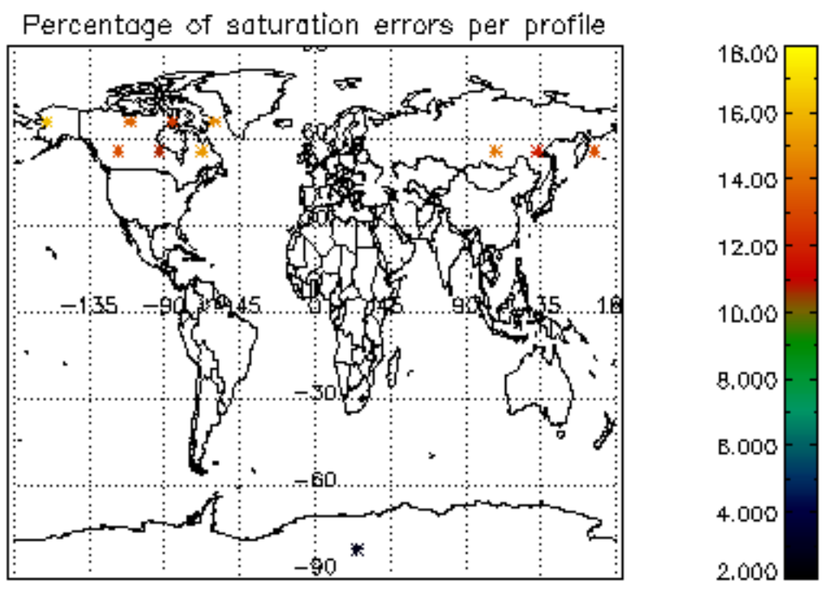

Percentage of star falling outside central band per profile
30.00
25.00
20.00
15.00
10.00
5.000
−135
−90
−30
−60
−90

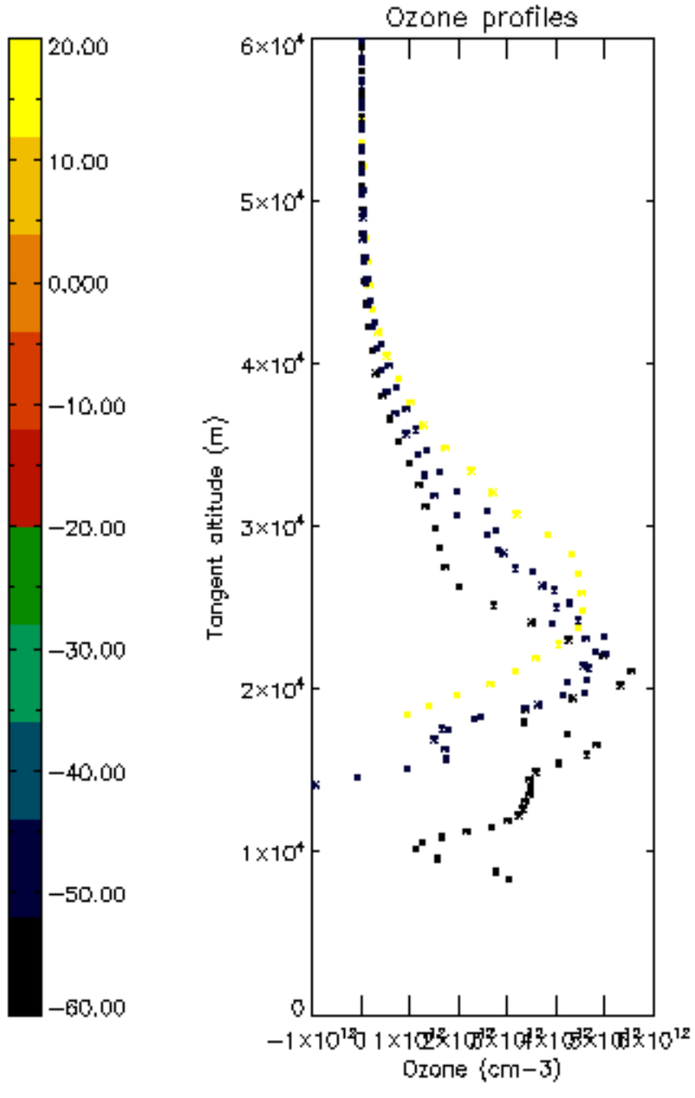

Percentage of saturation errors per profile
2.500
2.000
1.500
1.000
0.5000
0.000
−135
−90
−30
−60
−90


Percentage of cosmic ray hits per profile
1.000
0.000
−1.000
−135
−90
−30
−60
−90

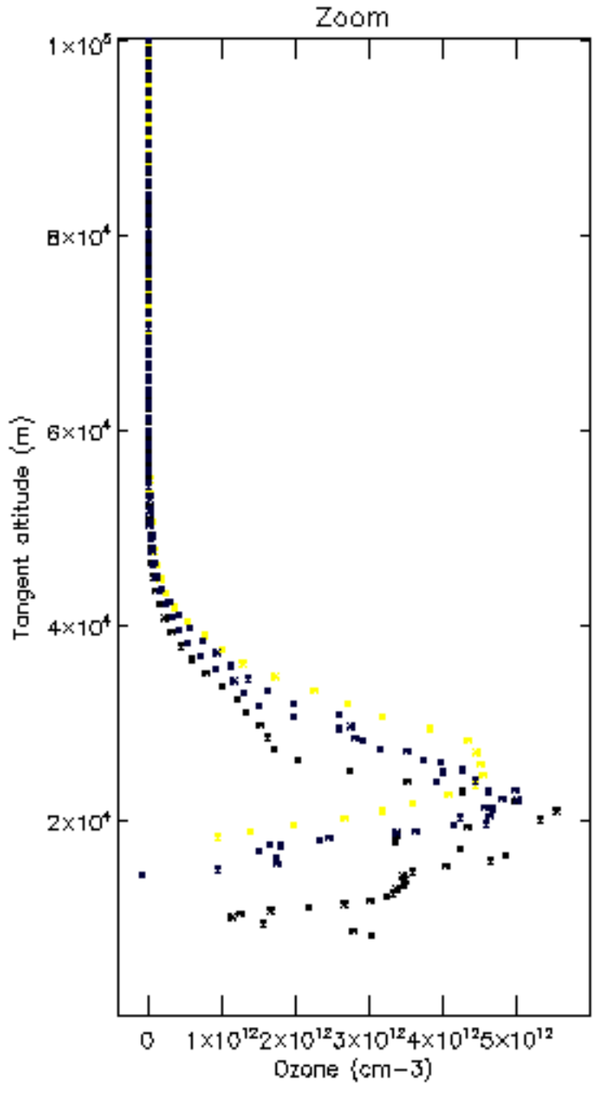

Percentage of datation errors per profile
1.400
1.200
1.000
0.8000
0.6000
0.4000
0.2000
0.000
−135
−90
−30
−60
−90

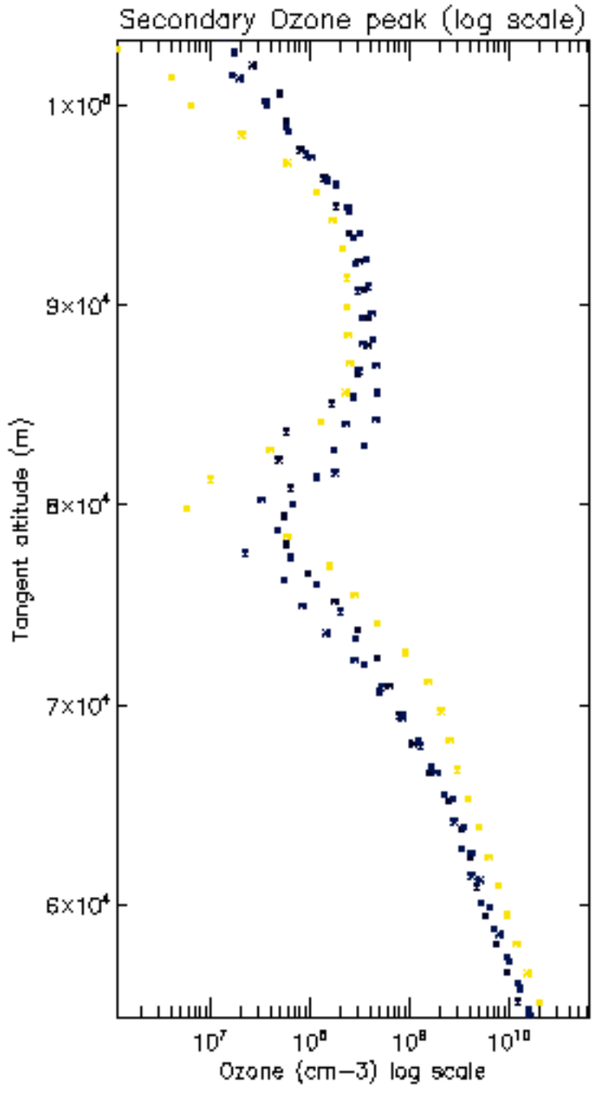

Percentage of star falling outside central band per profile
12.00
10.00
8.000
6.000
4.000
2.000
0.000
−135
−90
−30
−60
−90

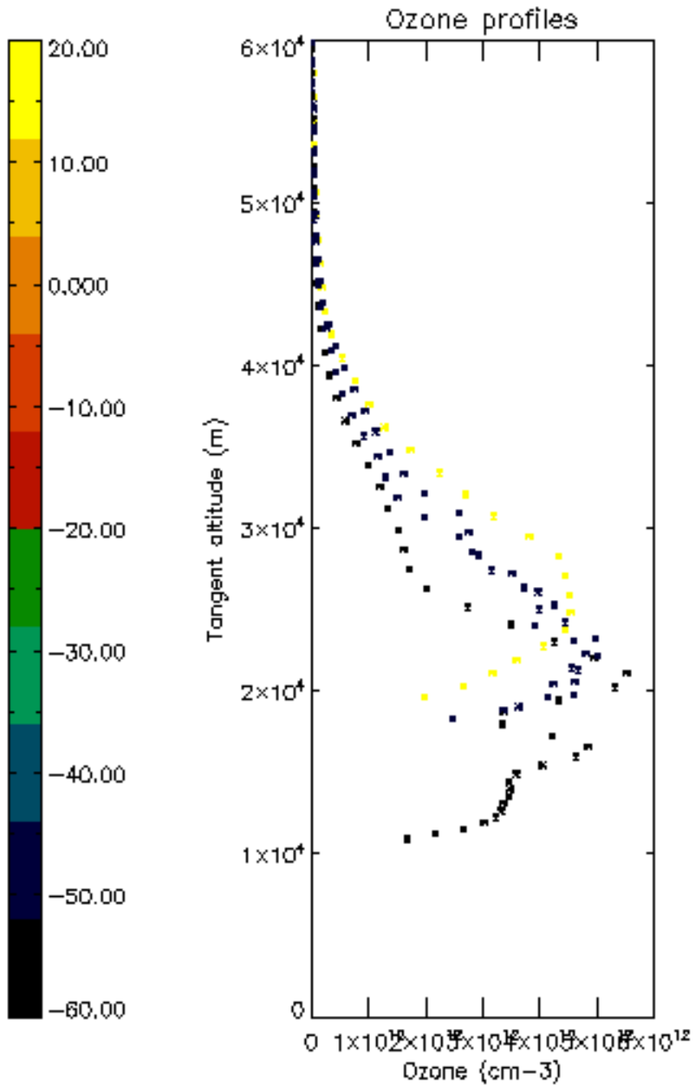

Percentage of saturation errors per profile
18.00
16.00
14.00
12.00
10.00
8.000
6.000
4.000
2.000
−135
−90
−30
−60
−90


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

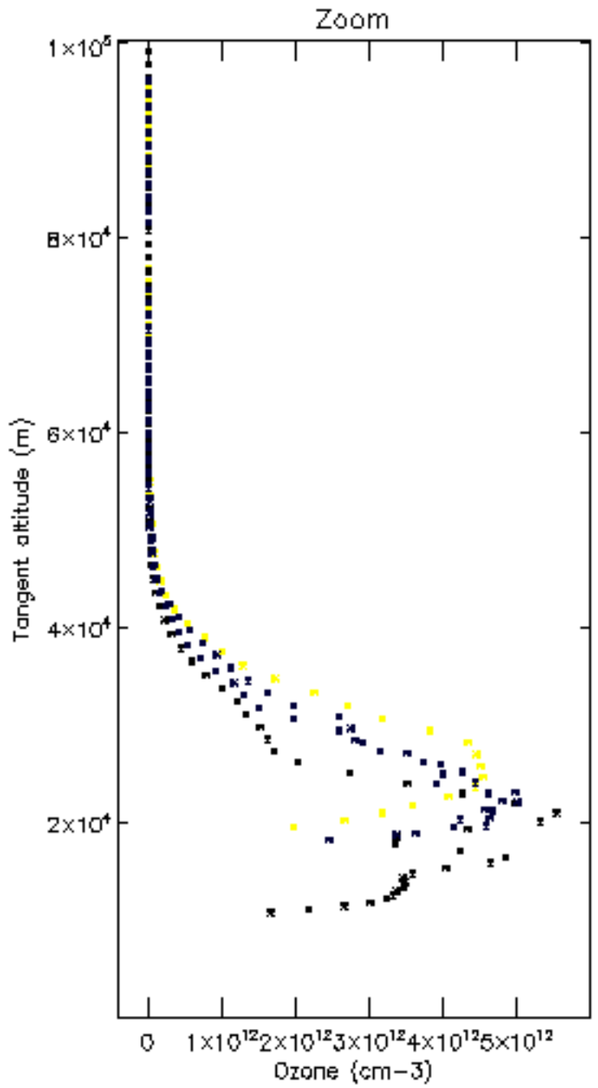
Ozone profiles
Tangent altitude (m)
Ozone (cm−3)

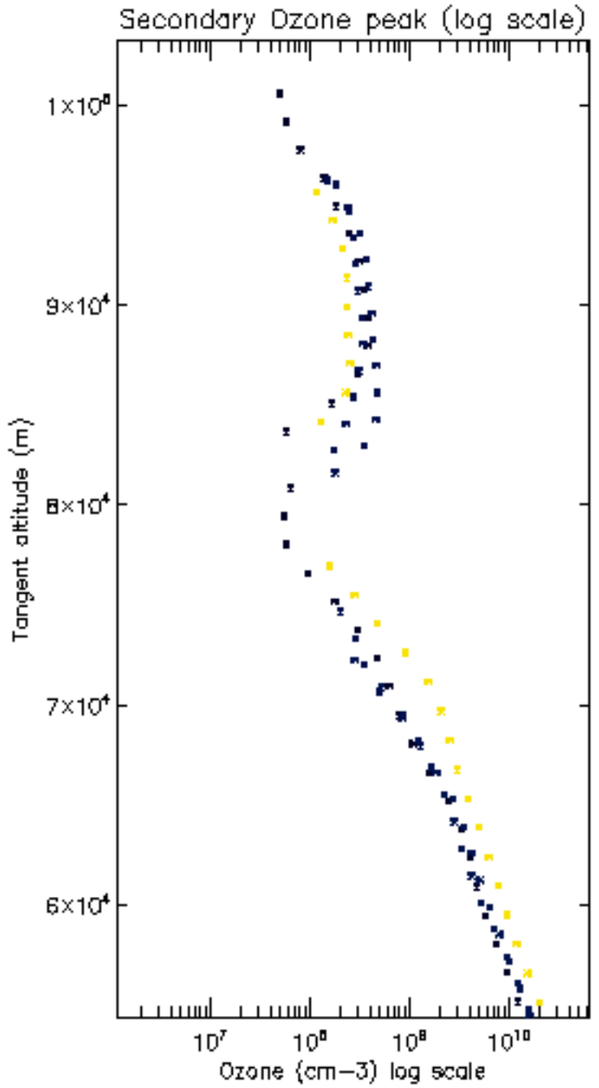

Zoom
Tangent altitude (m)
Ozone (cm−3)

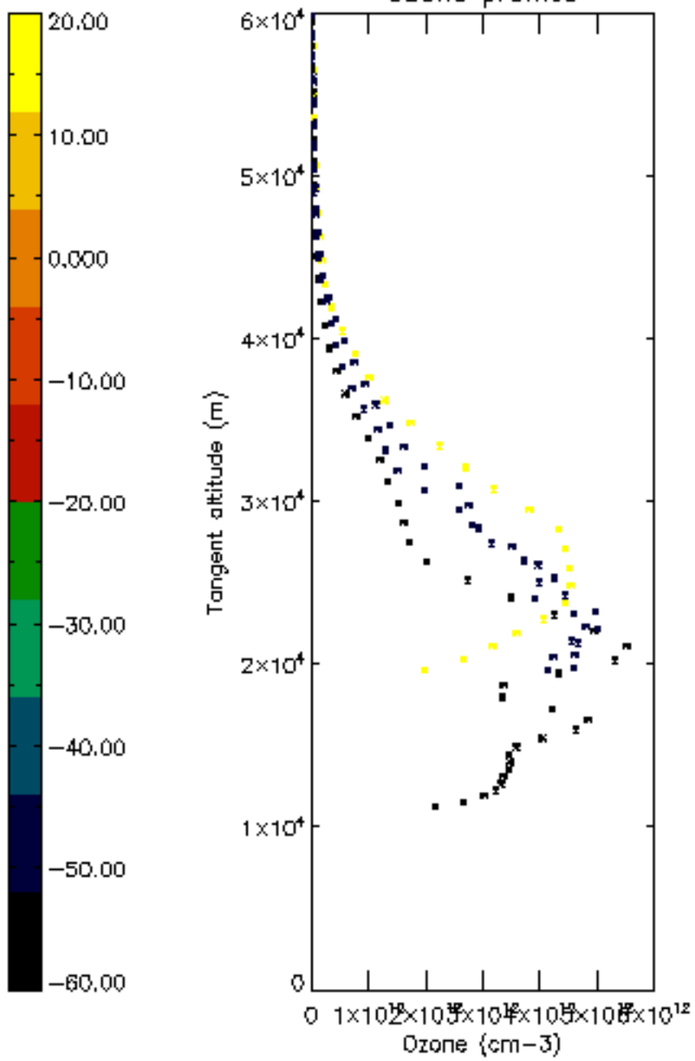

Secondary Ozone peak (log scale)
Tangent altitude (m)
Ozone (cm−3) log scale


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

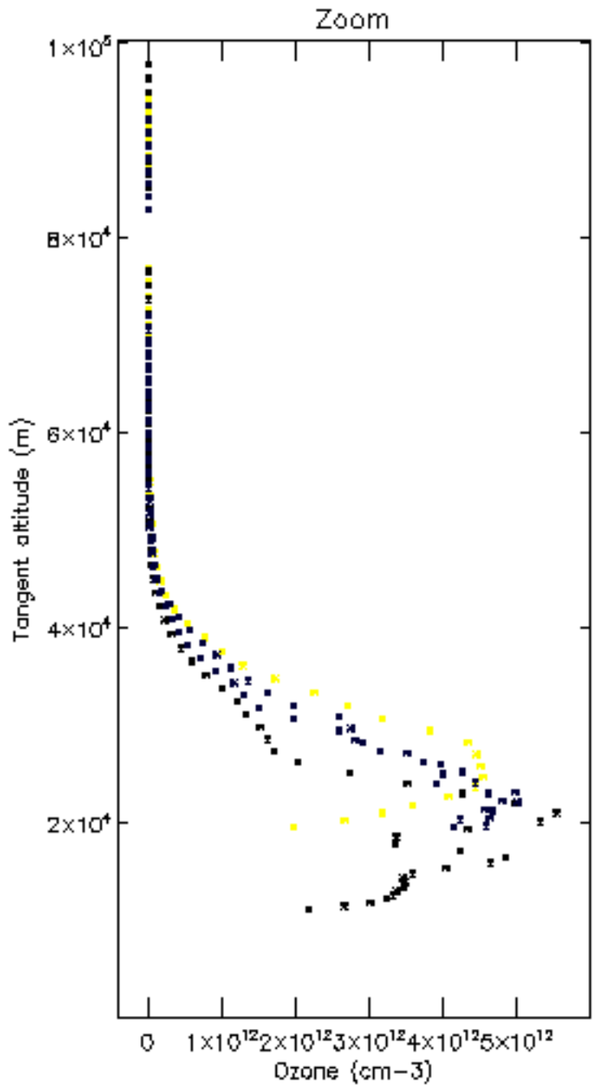
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹² 6×10¹²
Ozone (cm−3)

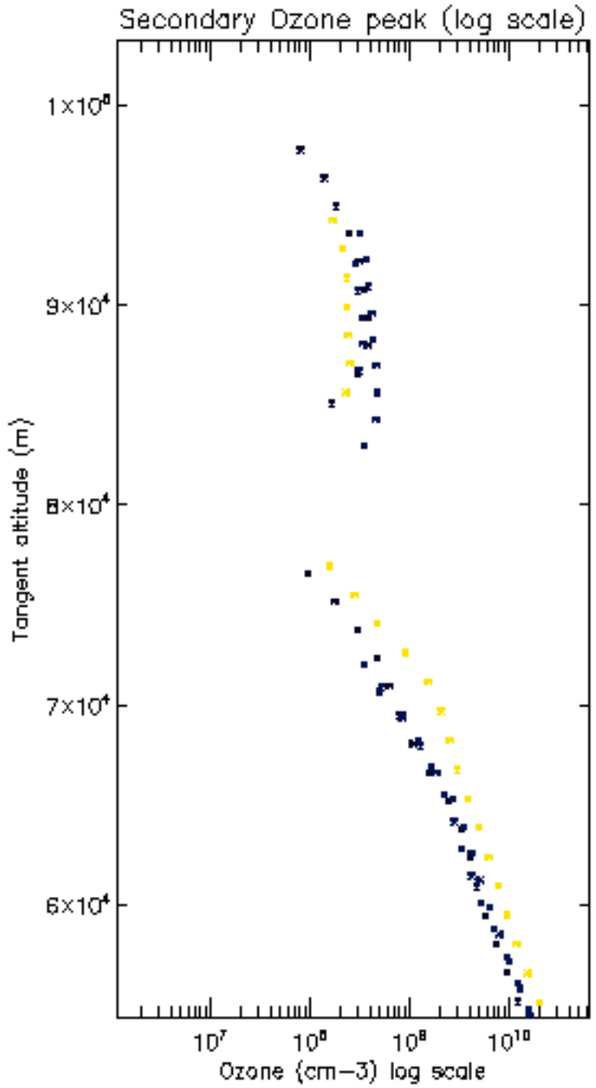

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

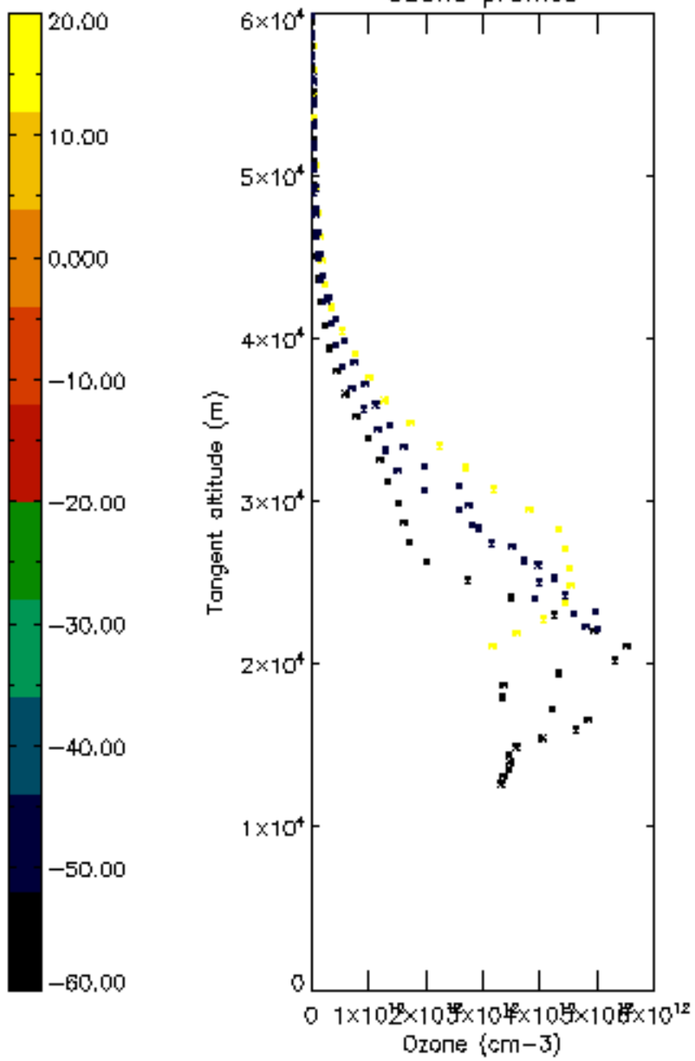

Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷ 10⁸ 10⁹ 10¹⁰
Ozone (cm−3) log scale


20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

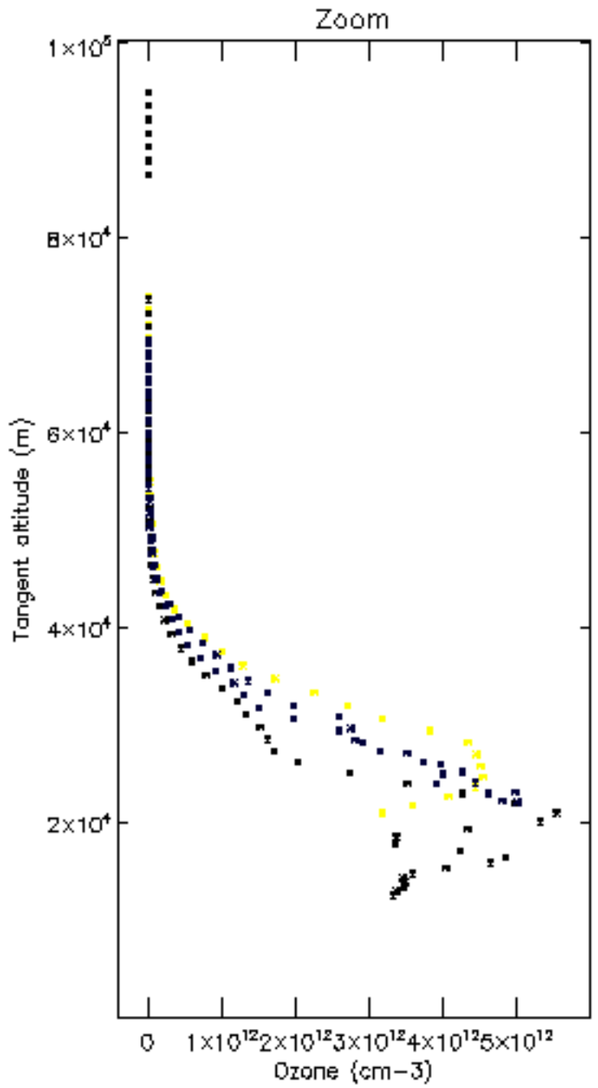
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹² 6×10¹²
Ozone (cm−3)

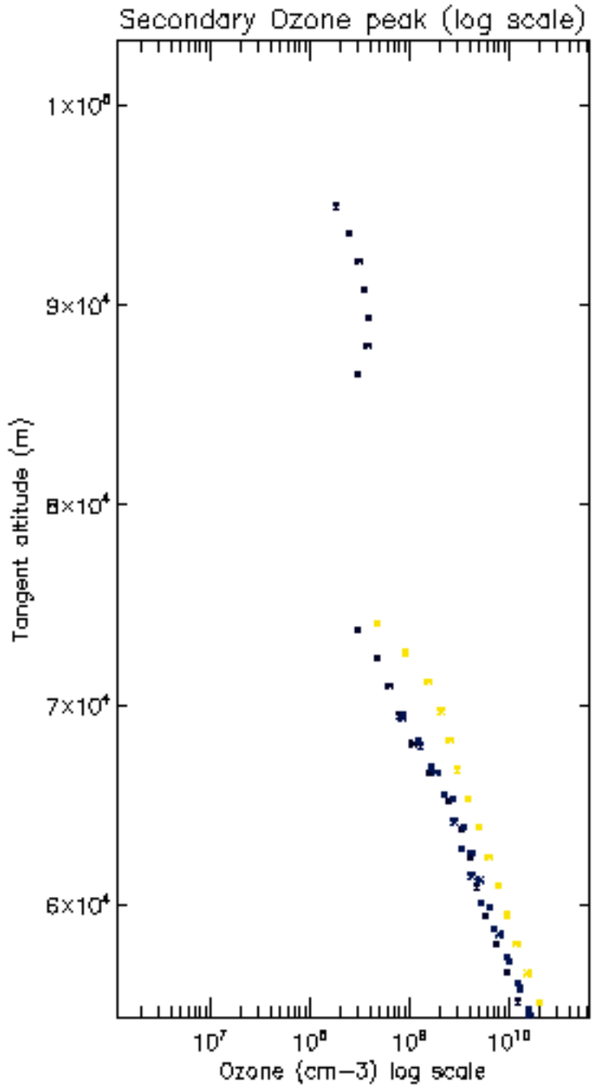

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

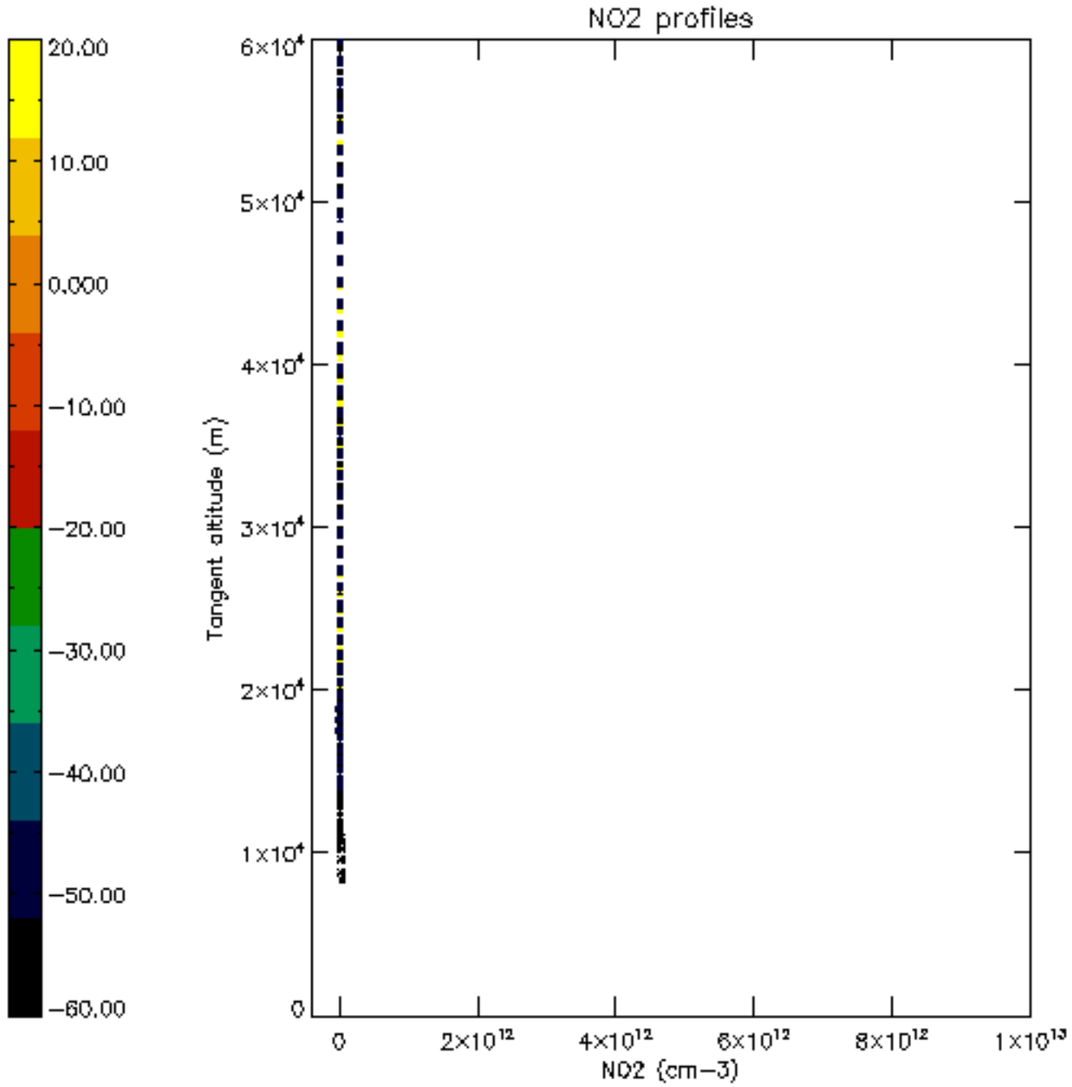

Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷ 10⁸ 10⁹ 10¹⁰
Ozone (cm−3) log scale

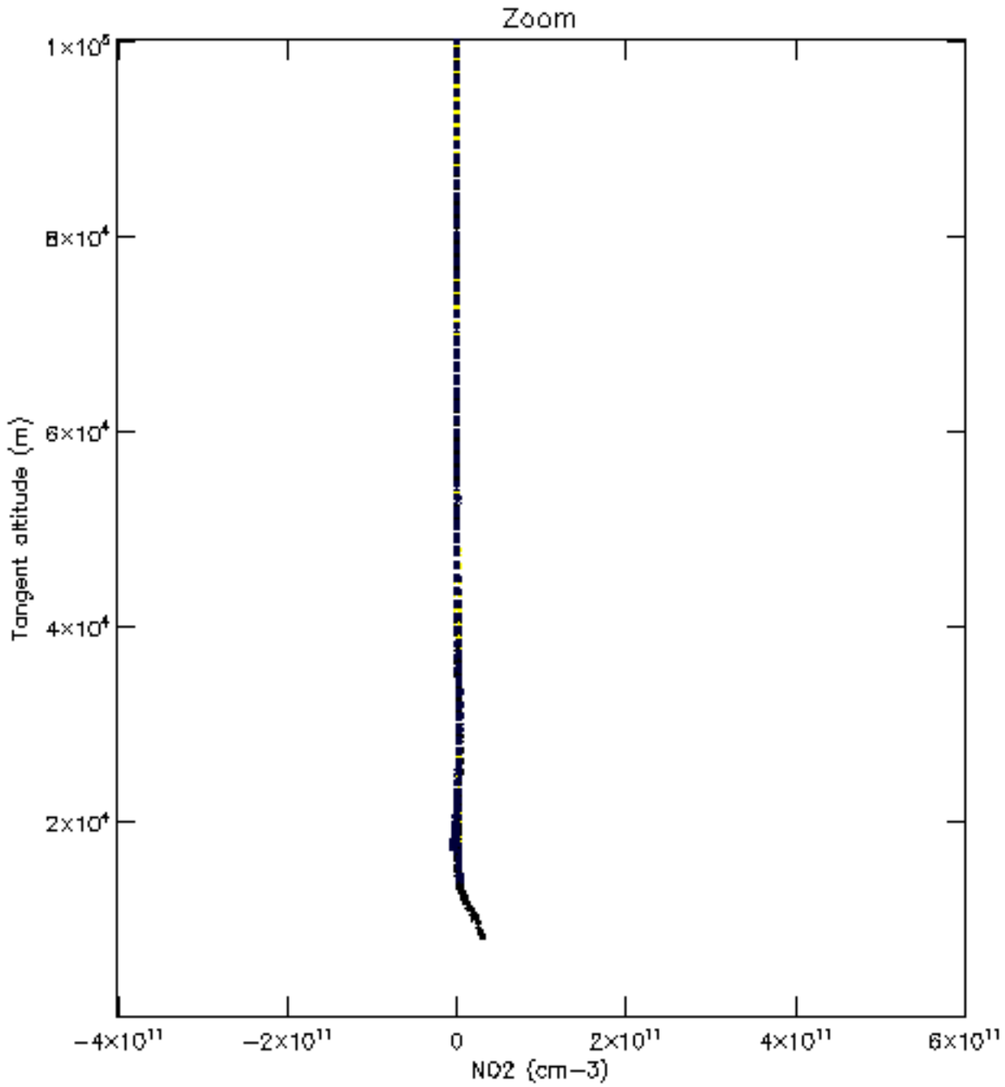

20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00

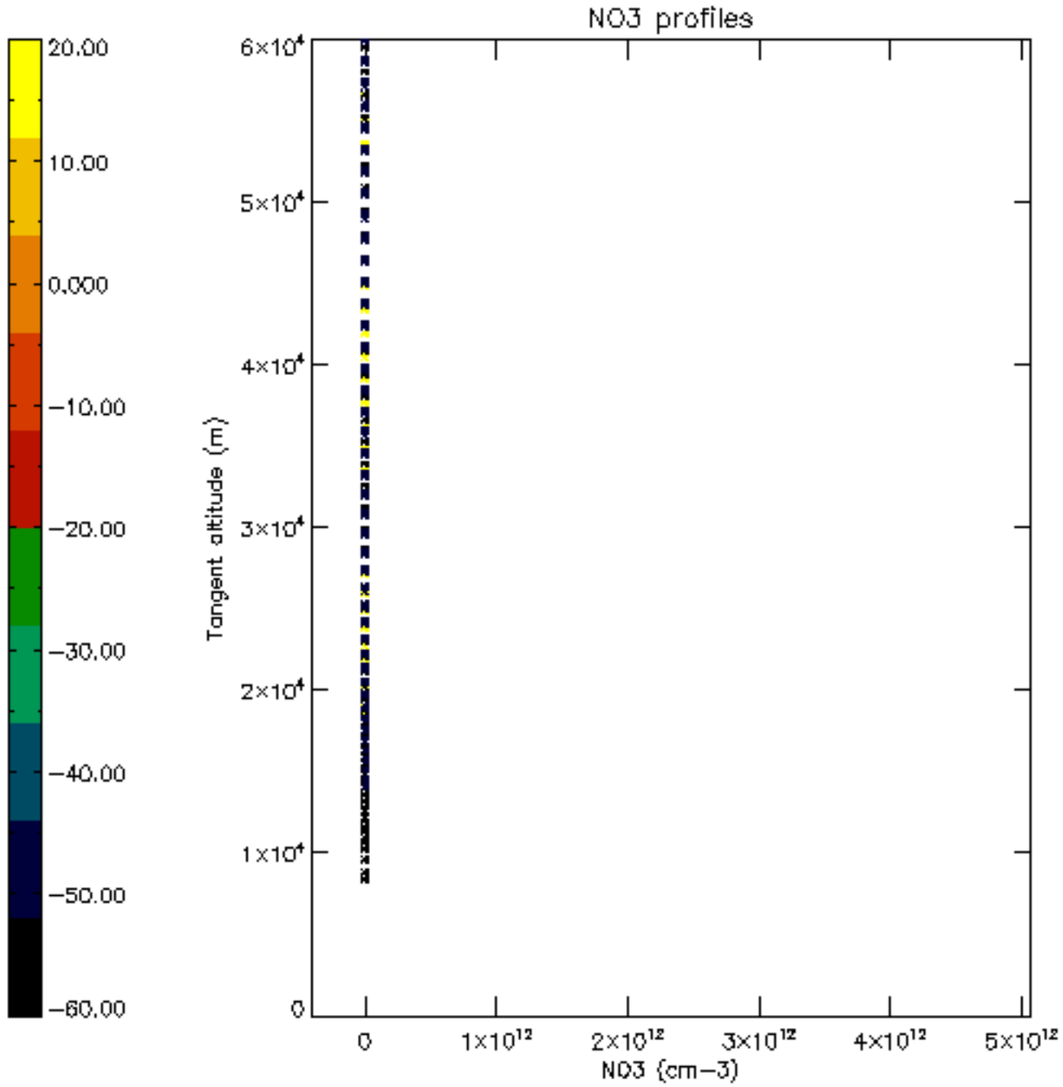
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0
Ozone (cm−3)

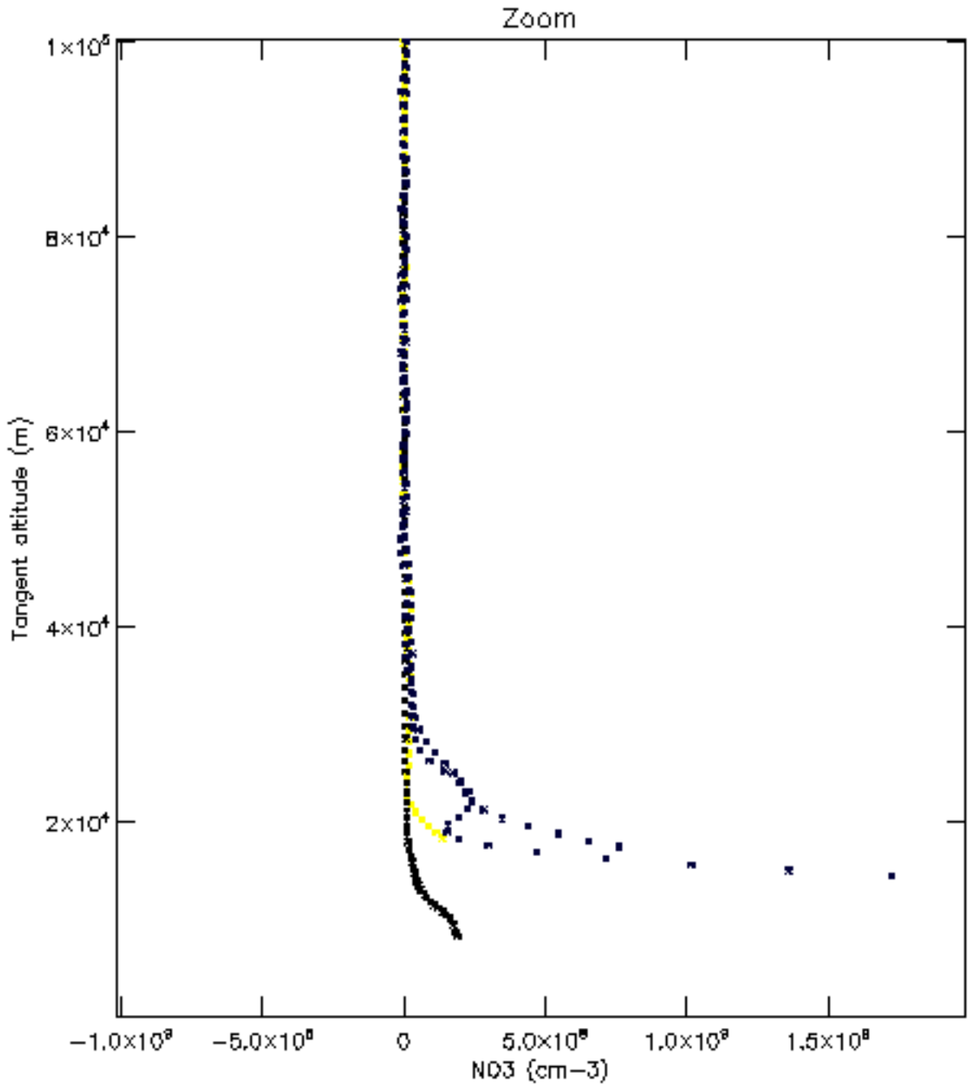

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
Ozone (cm−3)


Secondary Ozone peak (log scale)
1×10⁵
9×10⁴
8×10⁴
7×10⁴
6×10⁴
Tangent altitude (m)
10⁷
10⁸
10⁹
10¹⁰
Ozone (cm−3) log scale


NO2 profiles
20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
2×10¹²
4×10¹²
6×10¹²
8×10¹²
1×10¹³
NO2 (cm−3)


Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−4×10¹¹
−2×10¹¹
0
2×10¹¹
4×10¹¹
6×10¹¹
NO2 (cm−3)


NO3 profiles
20.00
10.00
0.000
−10.00
−20.00
−30.00
−40.00
−50.00
−60.00
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
NO3 (cm−3)


Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
−1.0×10⁹
−5.0×10⁸
0
5.0×10⁸
1.0×10⁹
1.5×10⁹
NO3 (cm−3)