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	23APR2013 17:39:04
Data source version	GOMOS/6.01
Start time of products	06-04-2006 (06APR2006 00:00:00)
Stop time of products	07-04-2006 (07APR2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	11
Nb of prods with errors	0

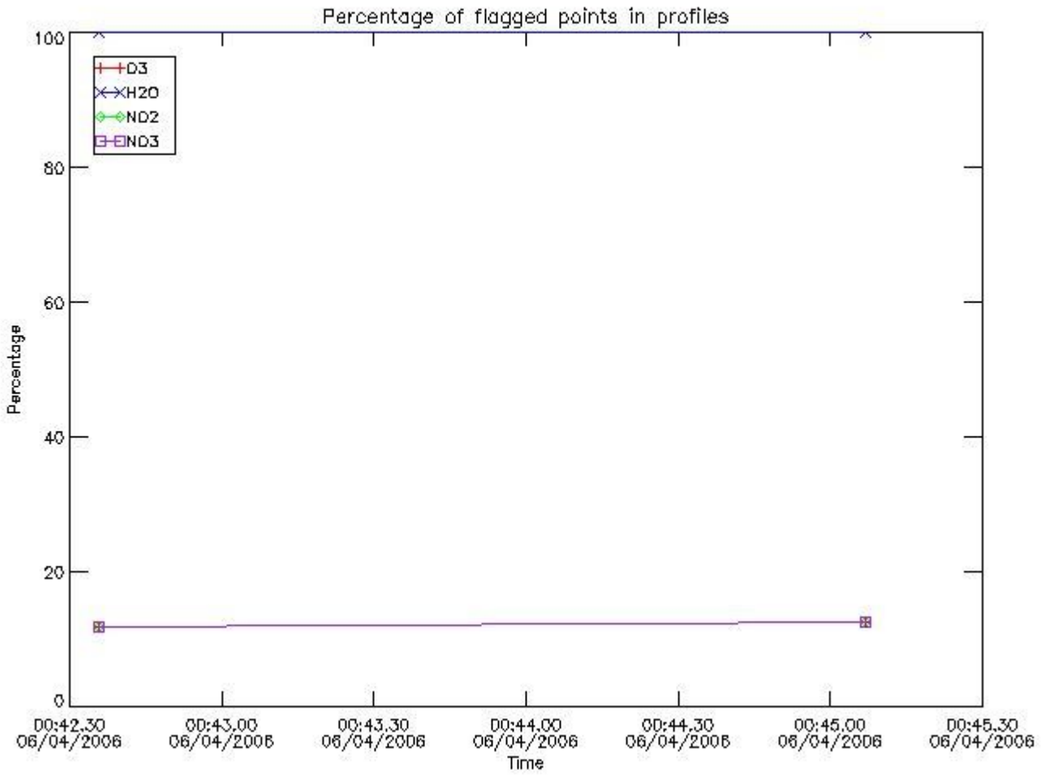
2. Summary of processed GOM_NL__2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20060406_000129_000000362046_00331_21427_8871.N1	06-APR-2006 00:01:29	Bright	35.500	174	52Psi UMa	3.0040	4400.0	71	21427	No
2	GOM_NL__2PRFIN20060406_000420_000000362046_00331_21427_8872.N1	06-APR-2006 00:04:20	Bright	35.500	87	64Gam UMa	2.4330	11000.	71	21427	No
3	GOM_NL__2PRFIN20060406_000620_000000362046_00331_21427_8873.N1	06-APR-2006 00:06:20	Bright	36.000	36	50Alp UMa	1.8000	6300.0	72	21427	No
4	GOM_NL__2PRFIN20060406_001221_000000402046_00331_21427_8874.N1	06-APR-2006 00:12:21	Bright	39.500	60	7Bet UMi	2.0810	3950.0	79	21427	No
5	GOM_NL__2PRFIN20060406_001426_000000352046_00331_21427_8875.N1	06-APR-2006 00:14:26	Bright	35.000	49	1Alp UMi	1.9900	6300.0	70	21427	No
6	GOM_NL__2PRFIN20060406_002202_000000382046_00331_21427_8876.N1	06-APR-2006 00:22:02	Bright	37.500	89	5Alp Cep	2.4510	8000.0	75	21427	No
7	GOM_NL__2PRFIN20060406_002715_000000332046_00331_21427_8877.N1	06-APR-2006 00:27:15	Bright	33.000	19	50Alp Cyg	1.2460	10500.	66	21427	No
8	GOM_NL__2PRFIN20060406_003752_000000482046_00331_21427_8878.N1	06-APR-2006 00:37:52	Twi_and_stray	48.000	61	8Eps Peg	2.1000	3900.0	96	21427	No
9	GOM_NL__2PRFIN20060406_004021_000000432046_00331_21427_8879.N1	06-APR-2006 00:40:21	Twilight	42.500	162	34Alp Aqr	2.9440	5350.0	85	21427	No
10	GOM_NL__2PRFIN20060406_004235_000000432046_00331_21427_8880.N1	06-APR-2006 00:42:35	Dark	43.000	154	22Bet Aqr	2.8990	5700.0	86	21427	No
11	GOM_NL__2PRFIN20060406_004506_000000412046_00331_21427_8881.N1	06-APR-2006 00:45:06	Dark	40.500	142	49Del Cap	2.8500	8900.0	81	21427	No

3. Quality information per product

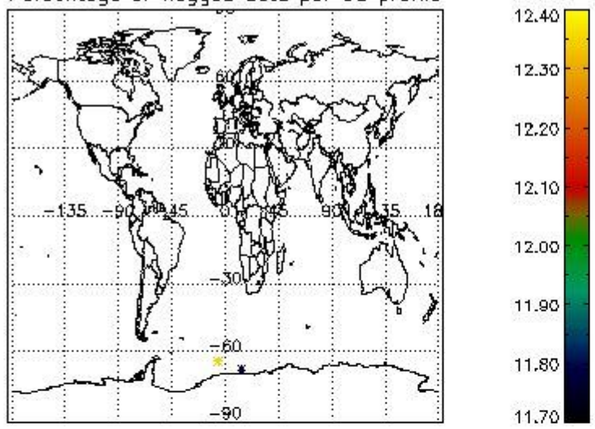
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

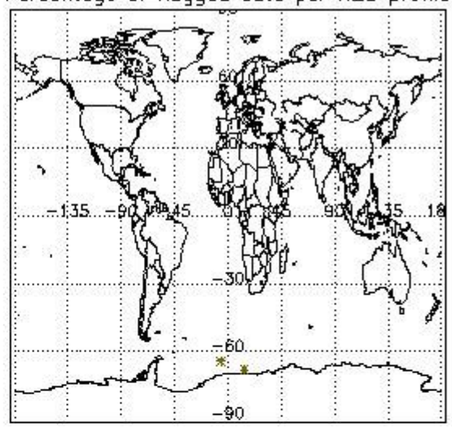


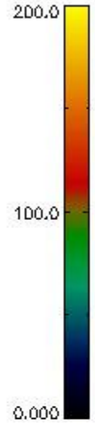
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

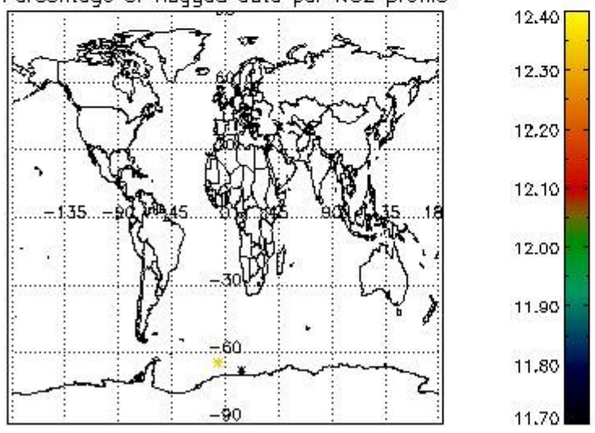


Percentage of flagged data per H2O profile

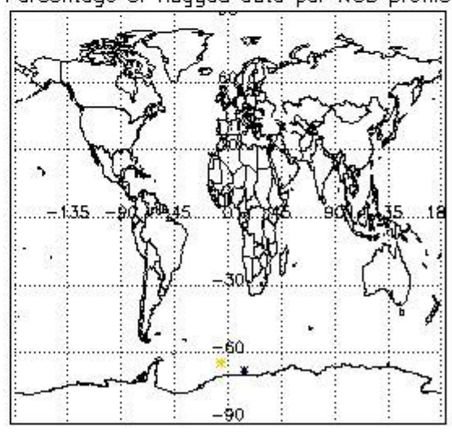


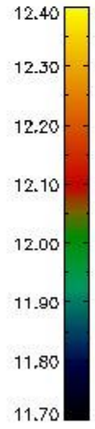


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



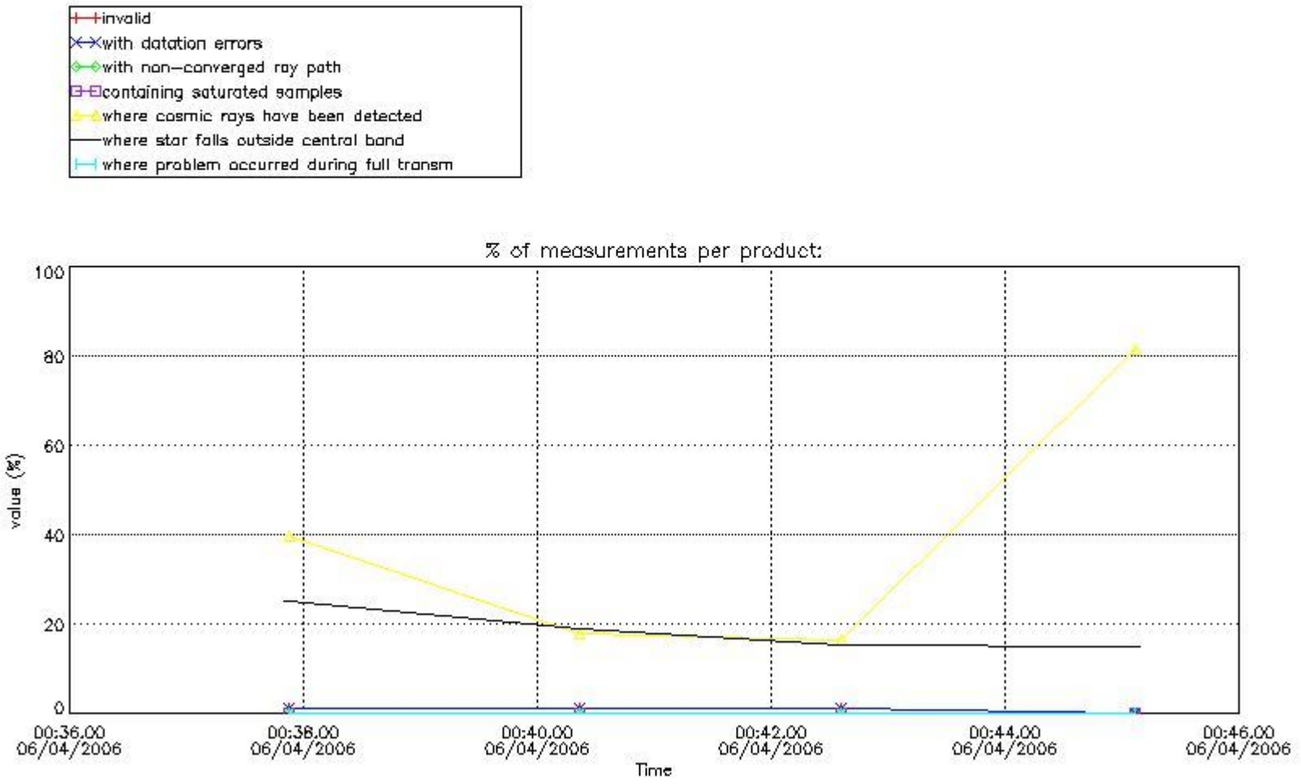


4. Level 1 quality information per product

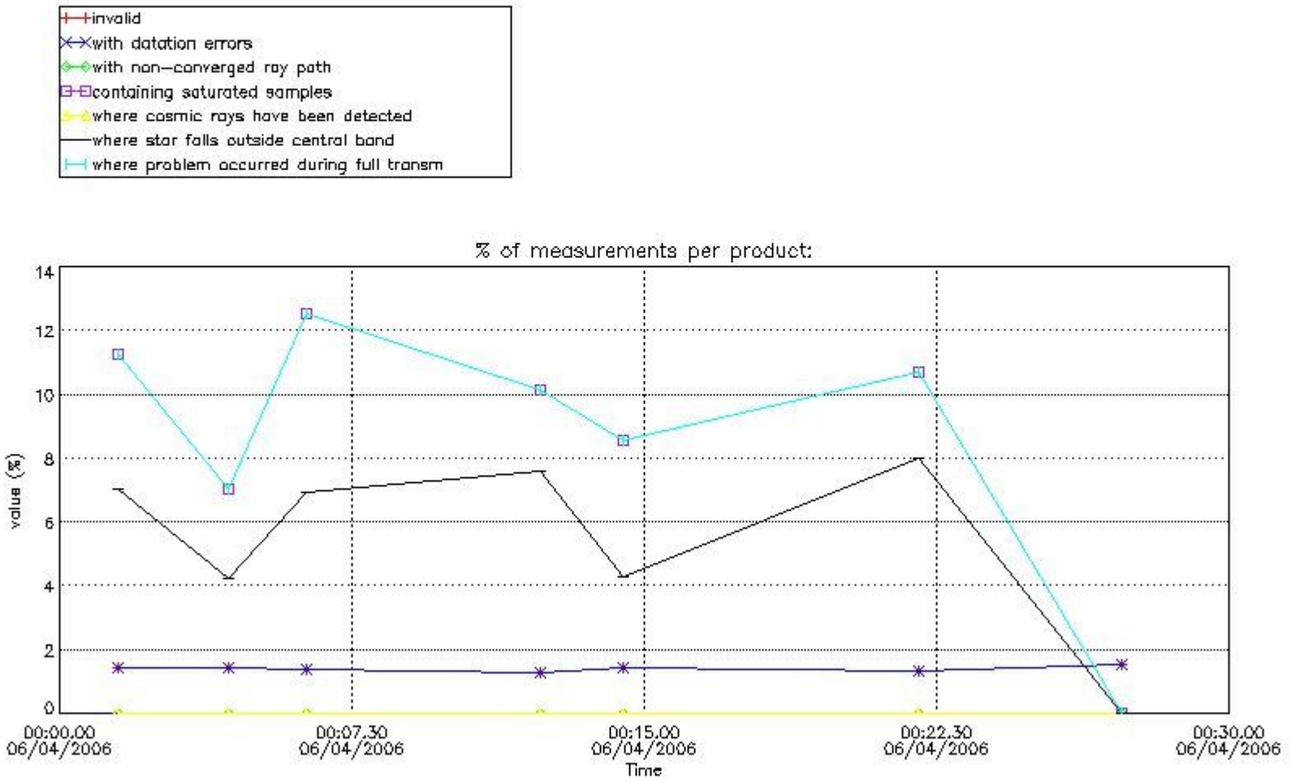
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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

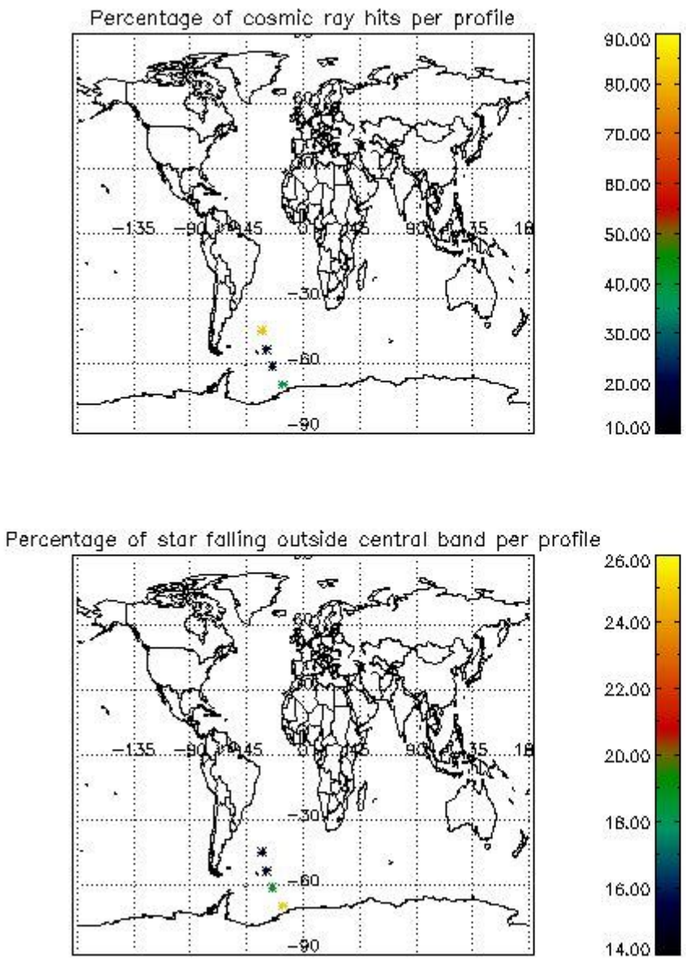


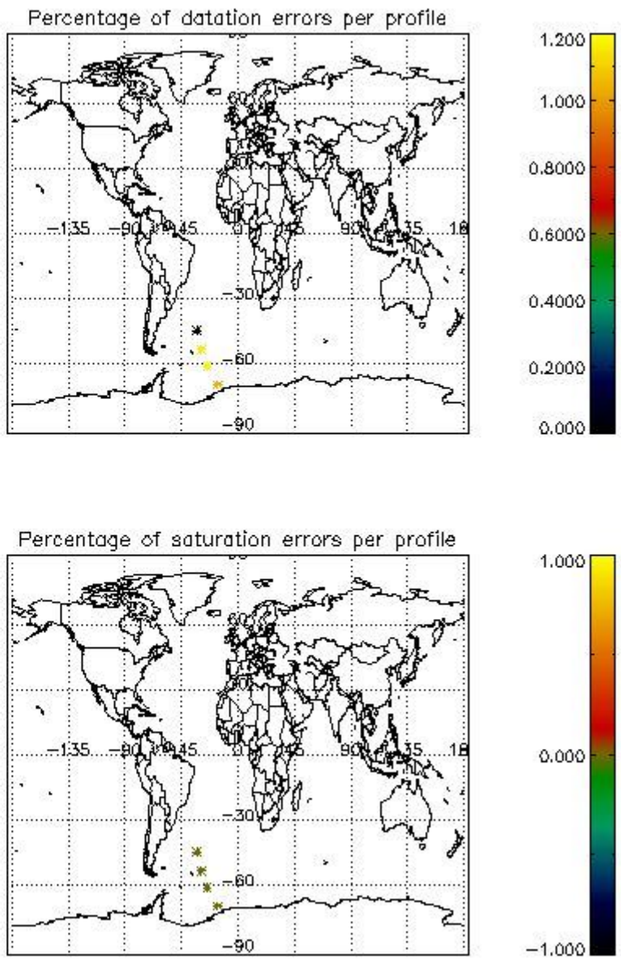
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes



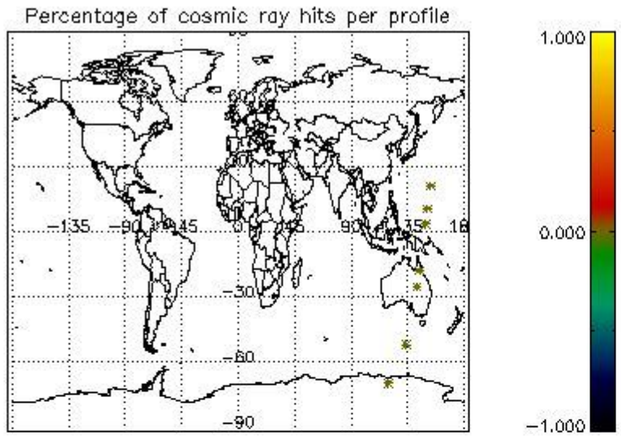
4.2 Plot quality information per product comming from level 1b processing (world map)

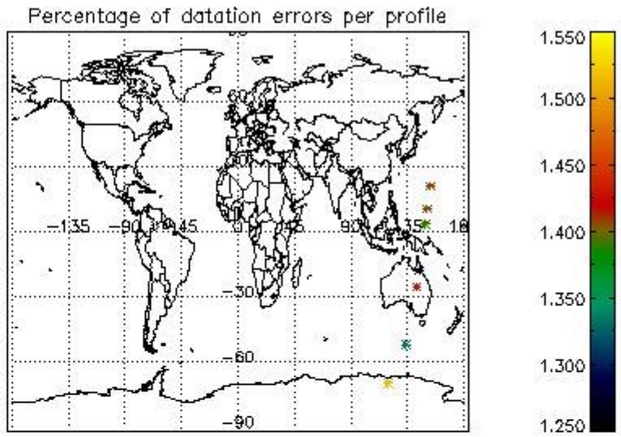
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

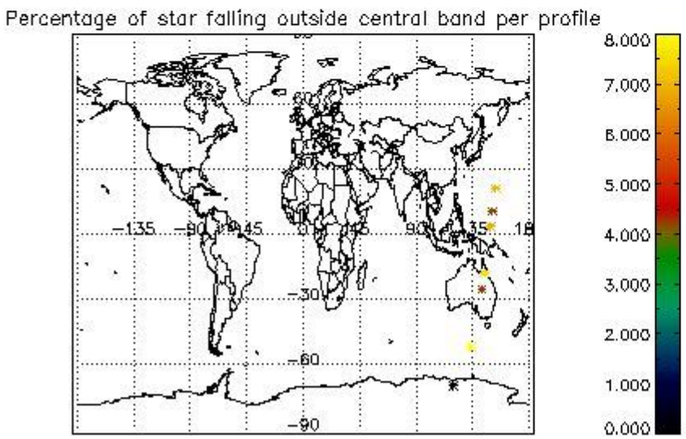


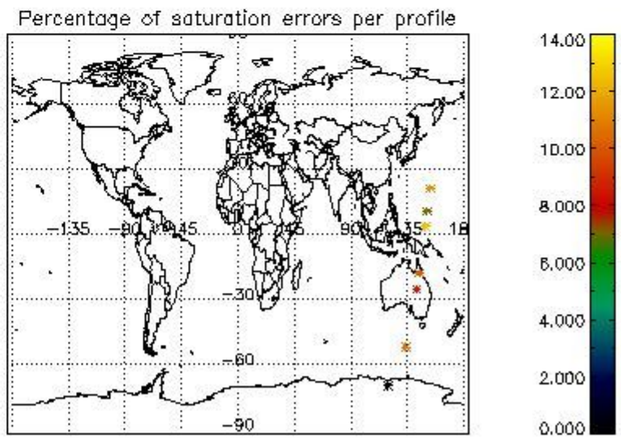


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

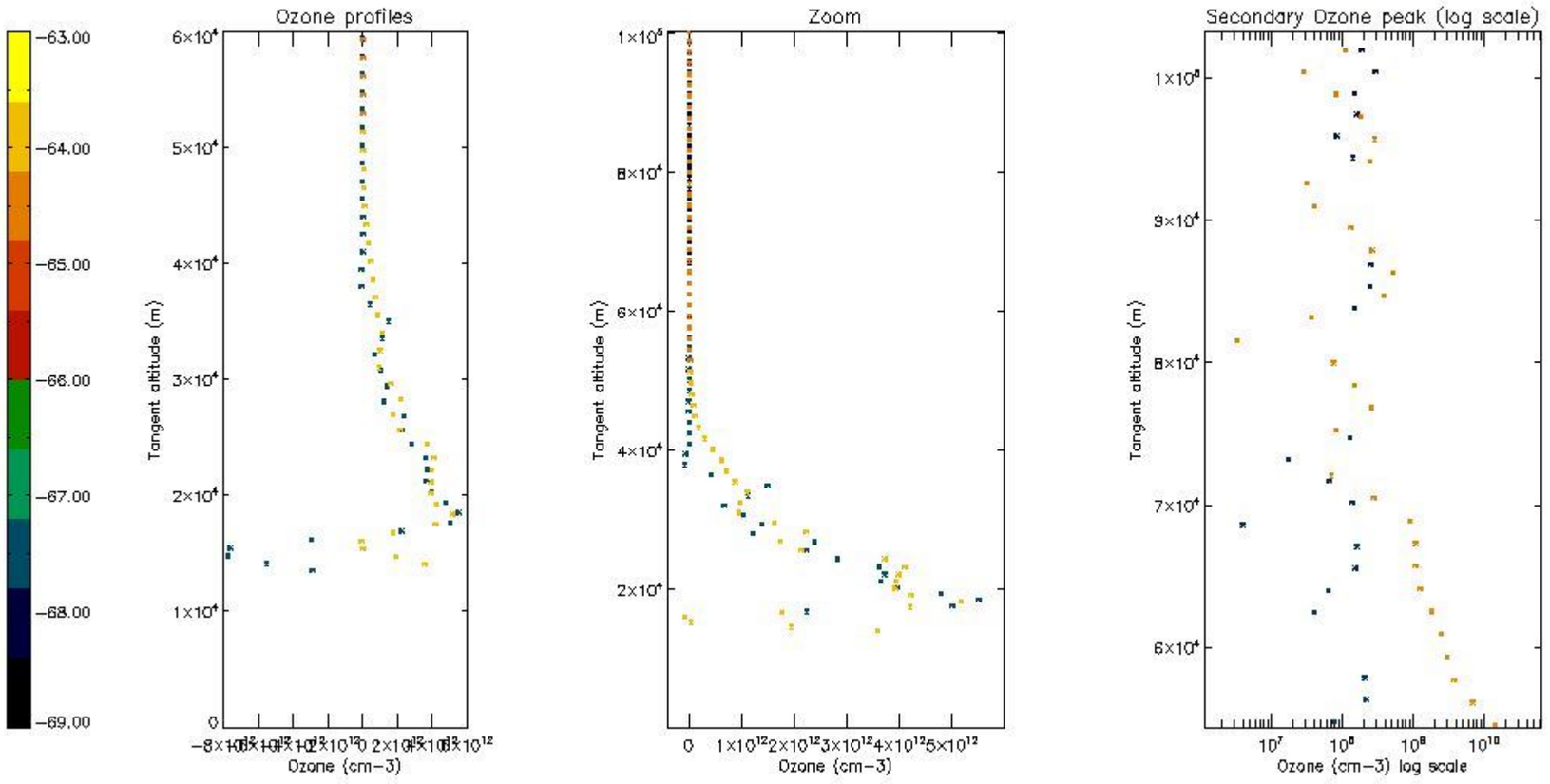
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	21.000
STD < 20	7.0000

STD < 10	3.0000
STD < 5	NaN

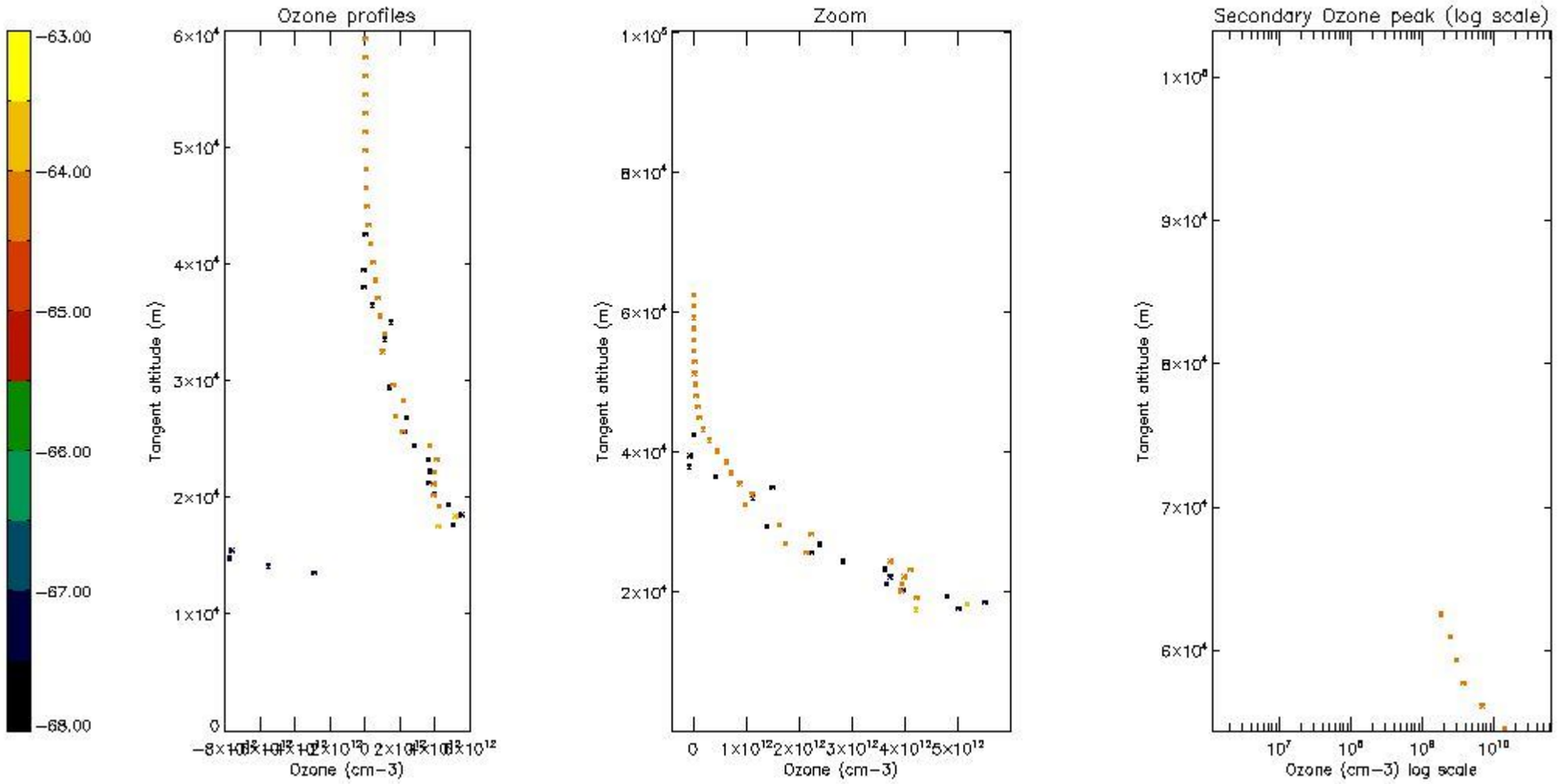
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



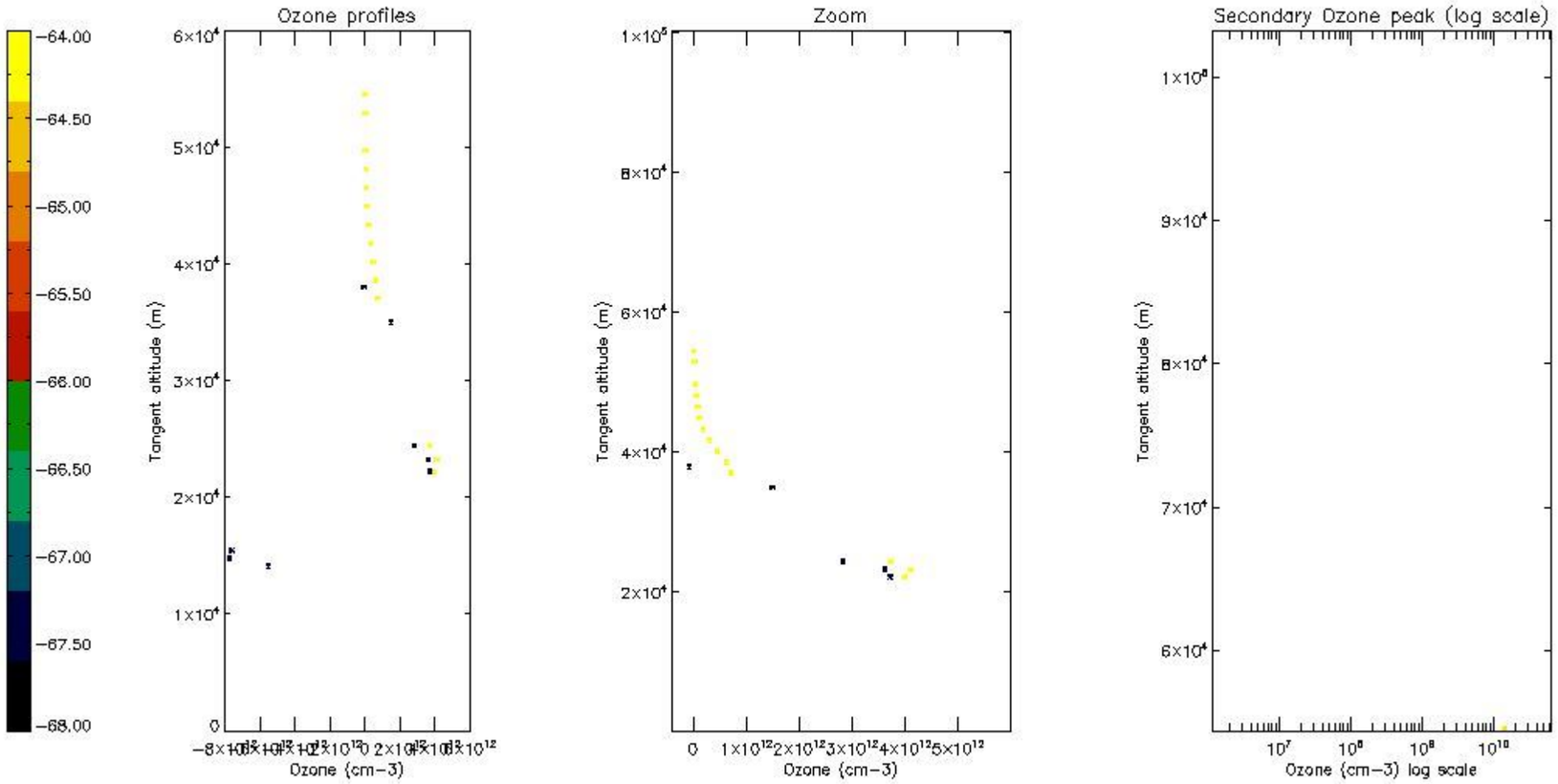
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

The colorbar represents the latitude.

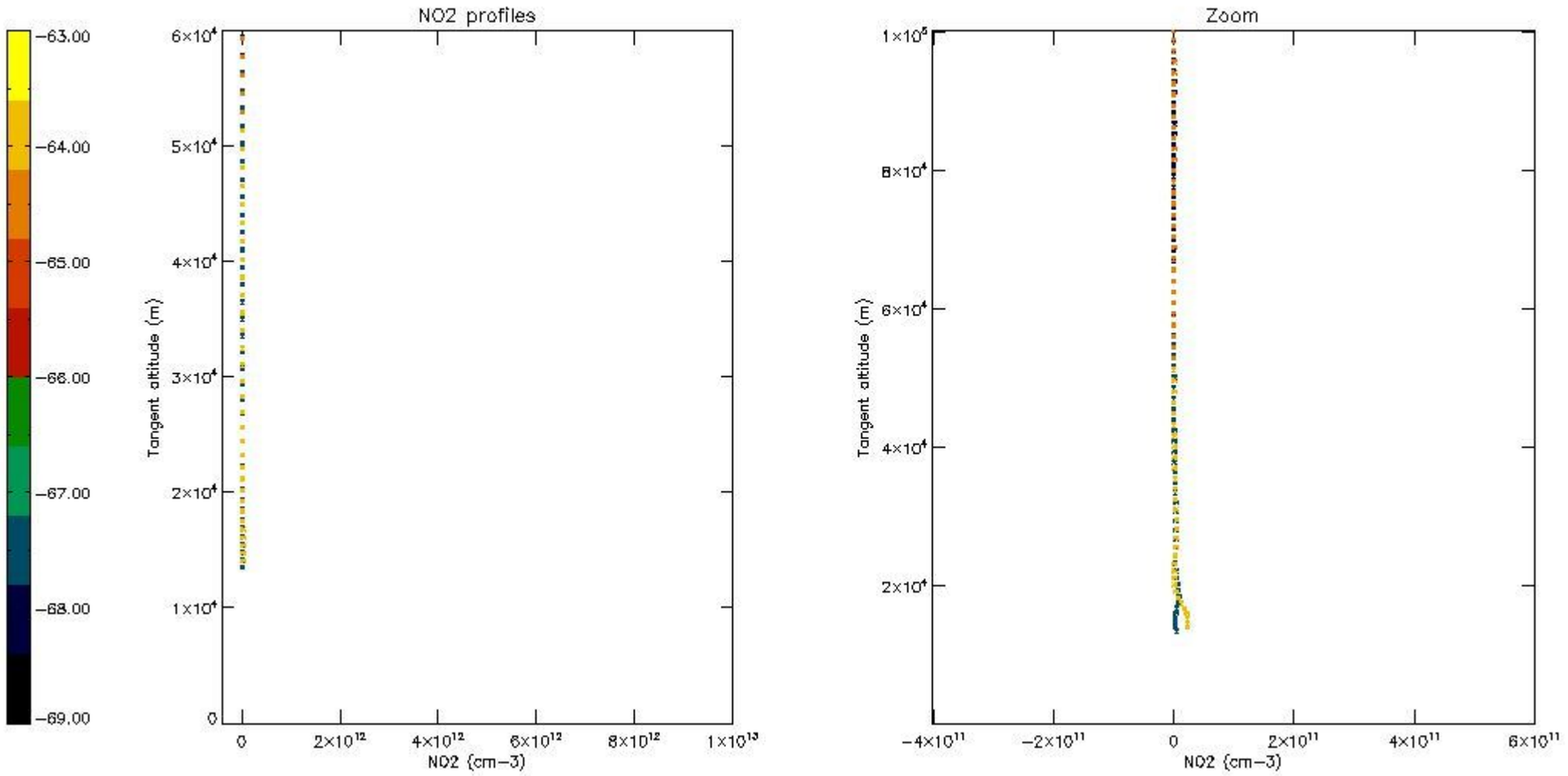


5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.

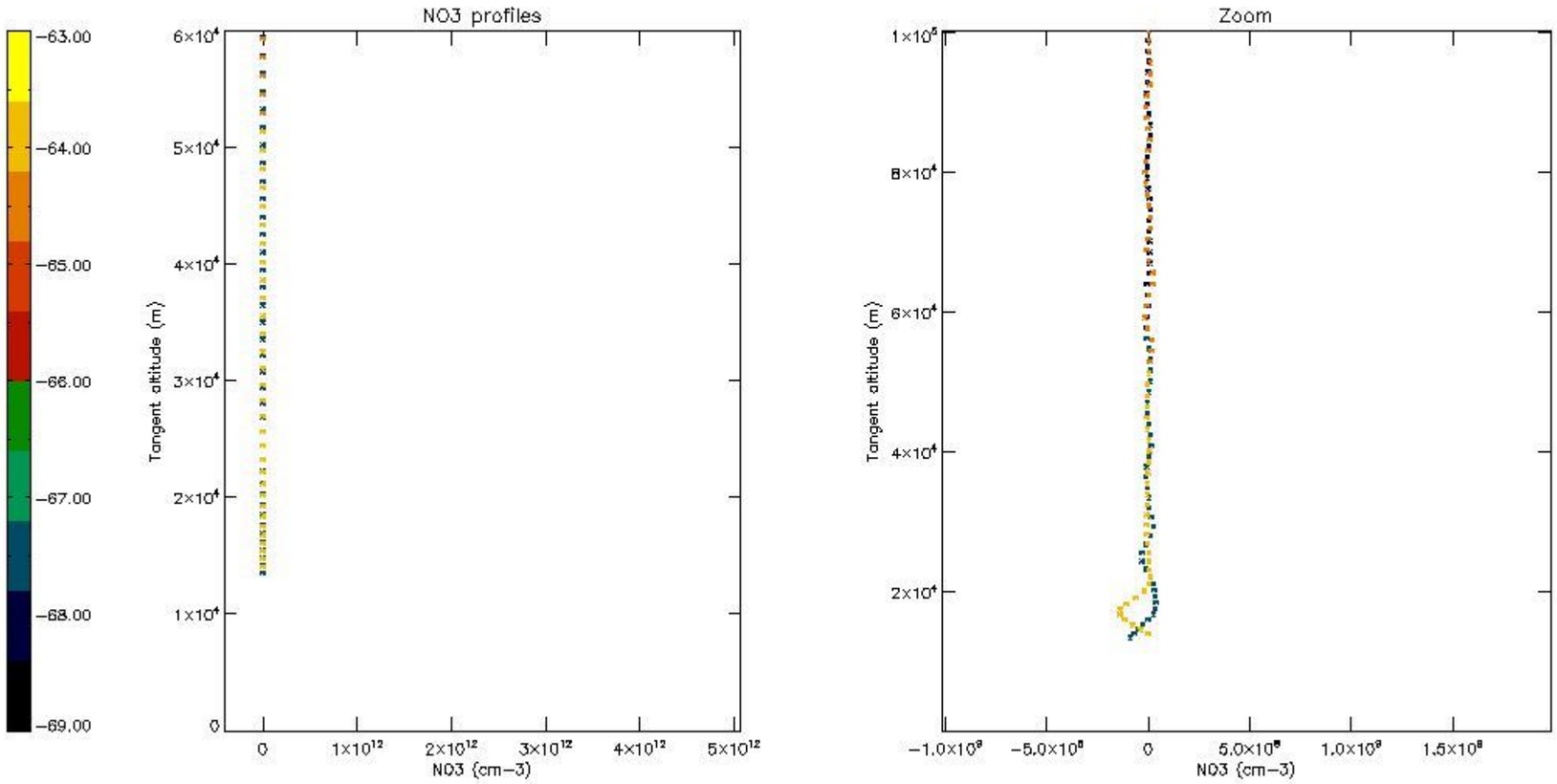
5.6 Plot NO2 profiles for all STD (dark without errors)

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	06-APR-2006 00:01:29
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	06-APR-2006 00:01:29
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	06-APR-2006 00:01:29

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.

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Time of report generation	23APR2013 17:39:04
Data source version	GOMOS/6.01
Start time of products	06-04-2006 (06APR2006 00:00:00)
Stop time of products	07-04-2006 (07APR2006 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	11
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
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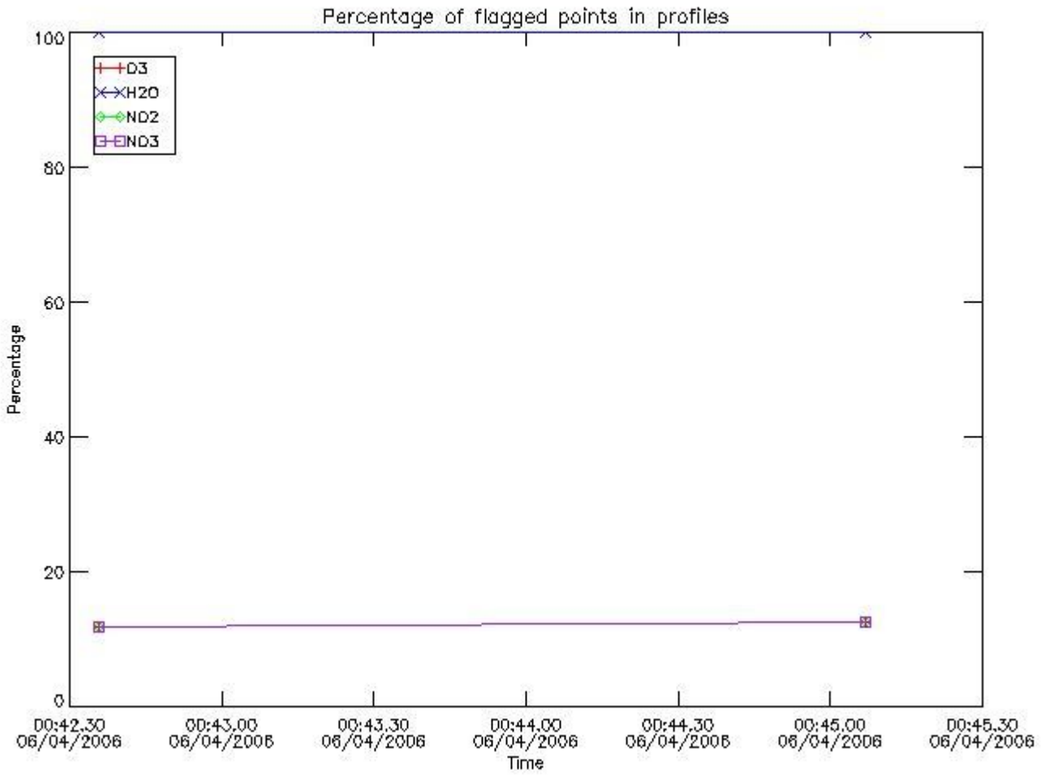
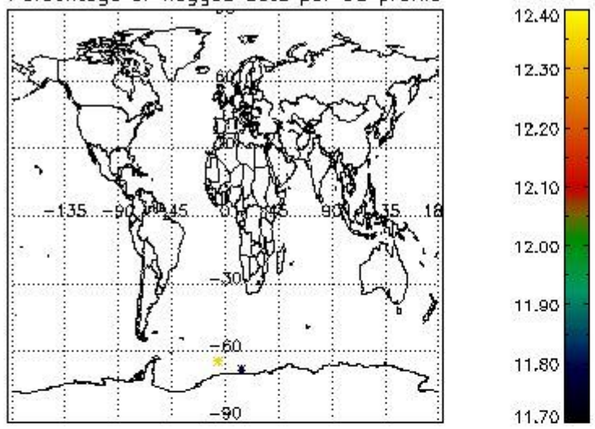
3.1 Plot quality information per product (time dependant)

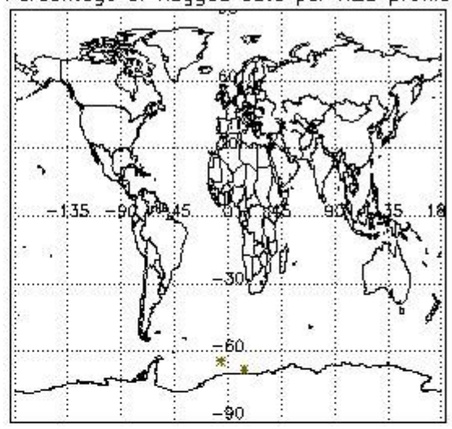


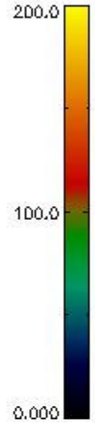
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

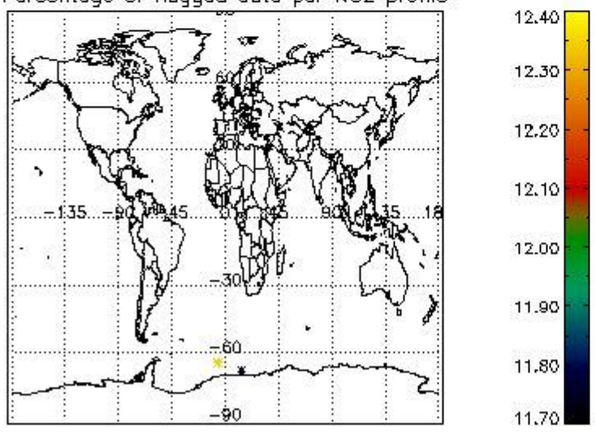


Percentage of flagged data per H2O profile

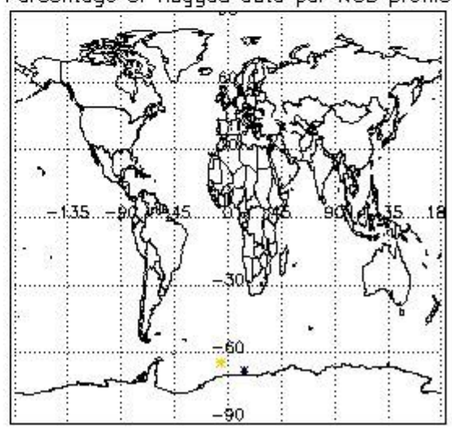


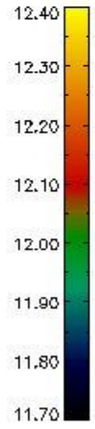


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



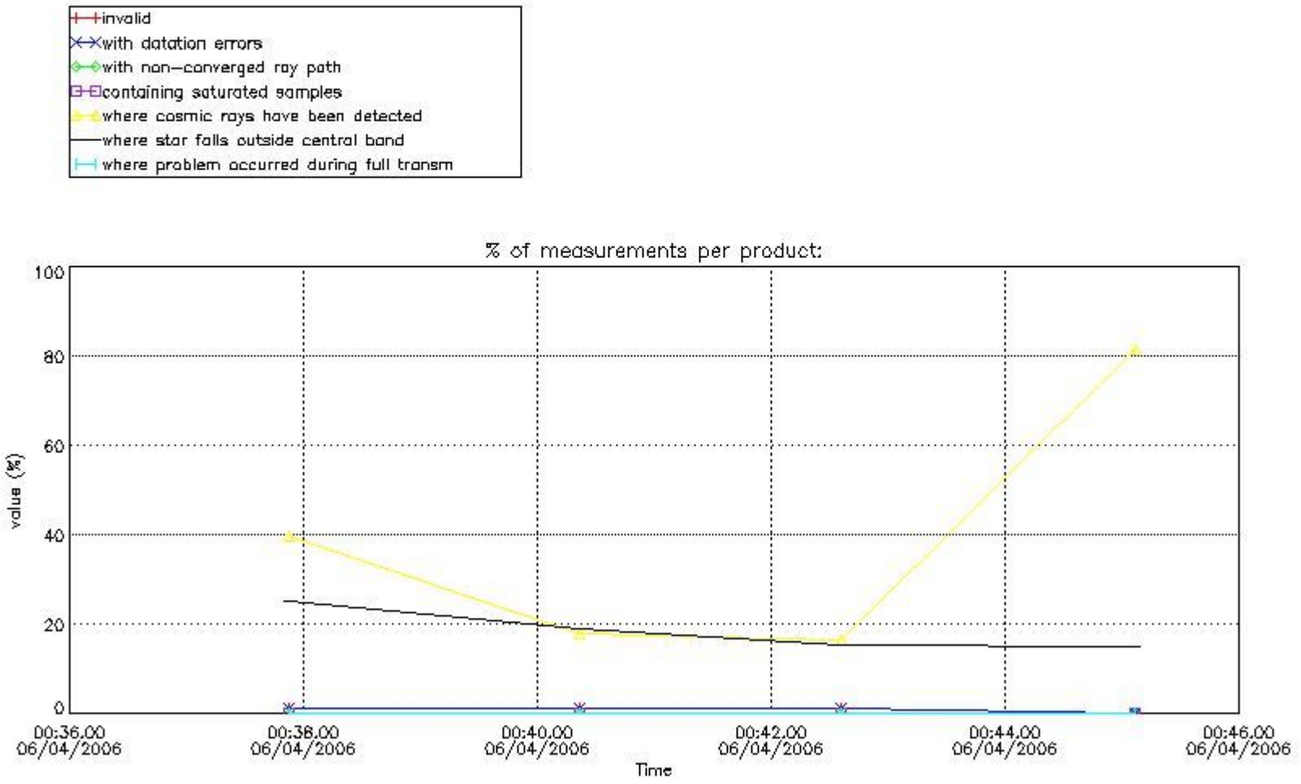


4. Level 1 quality information per product

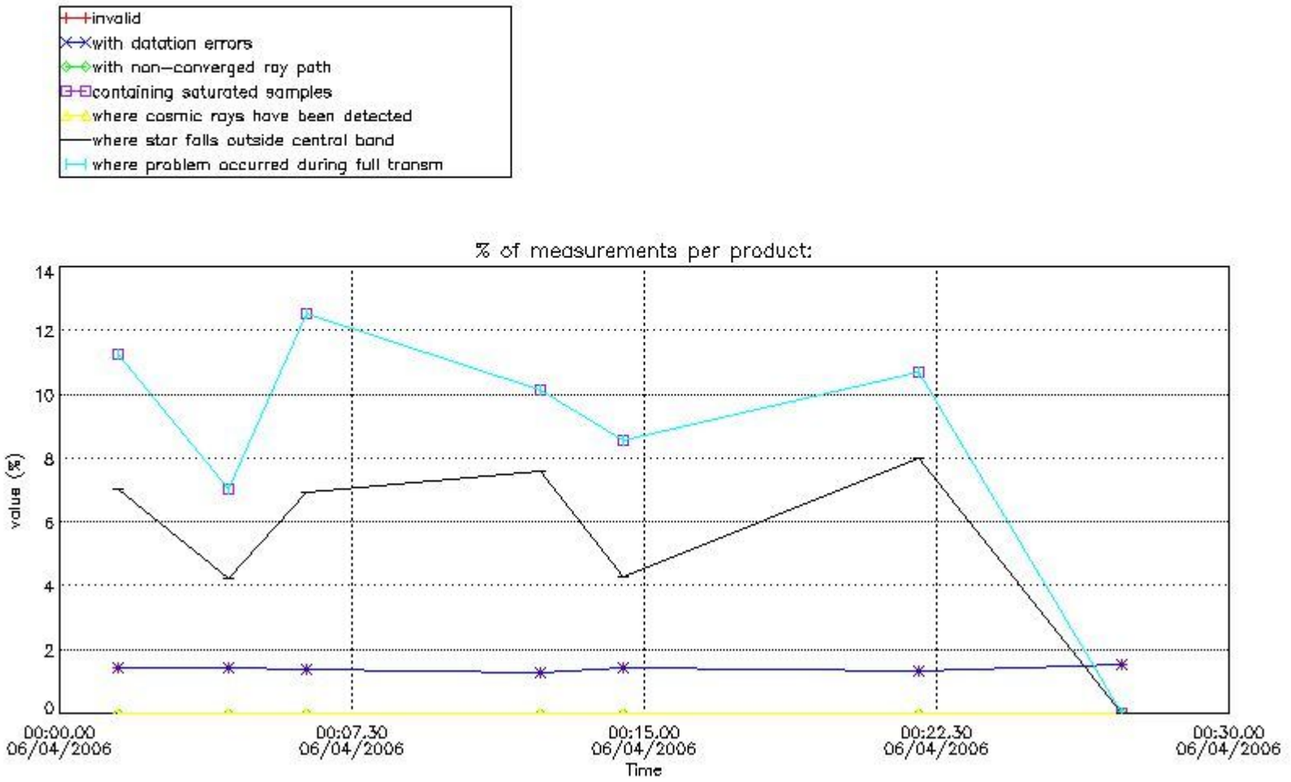
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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



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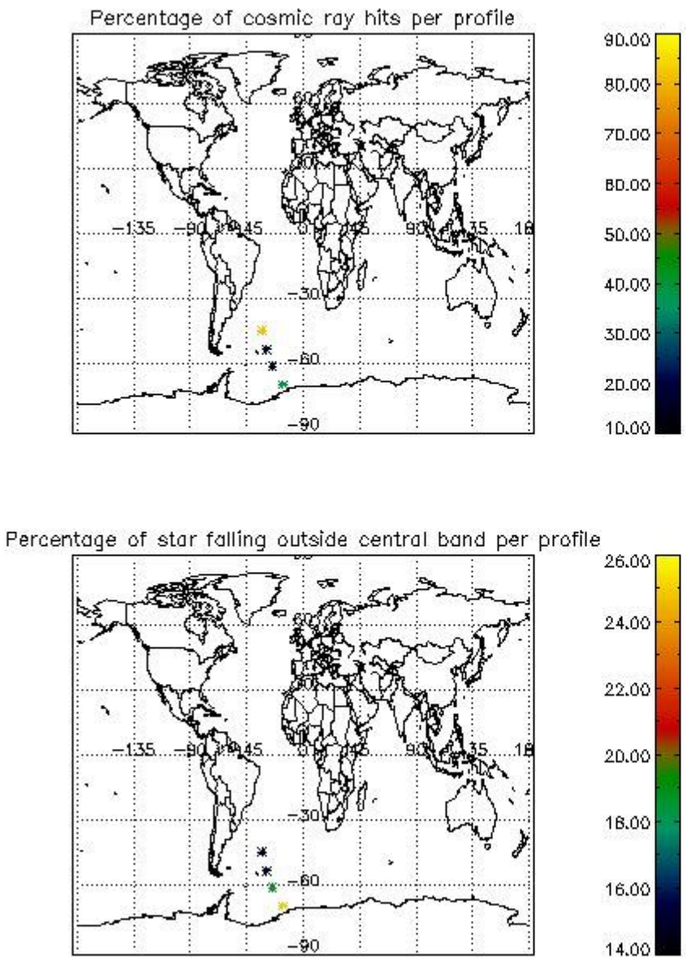
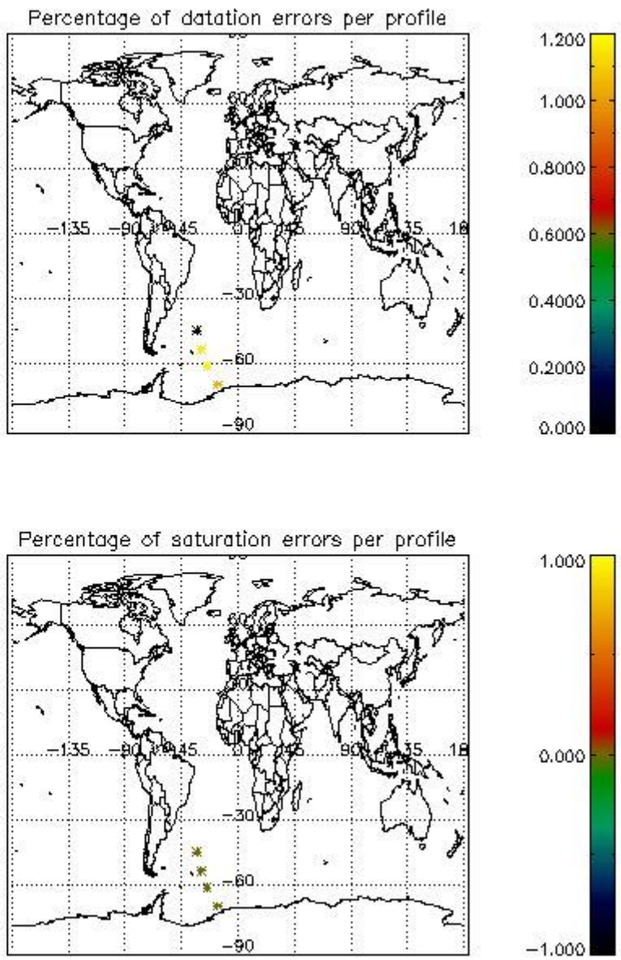
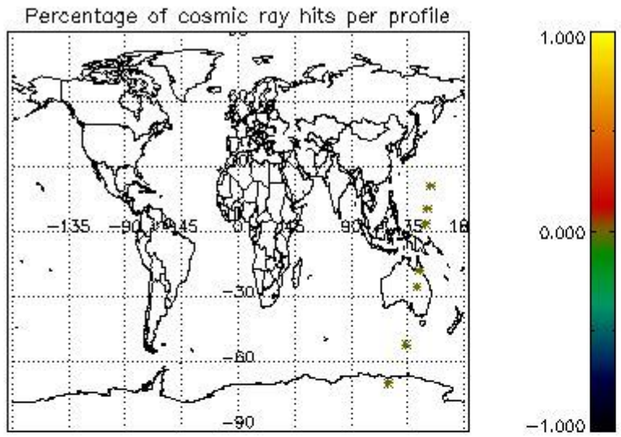
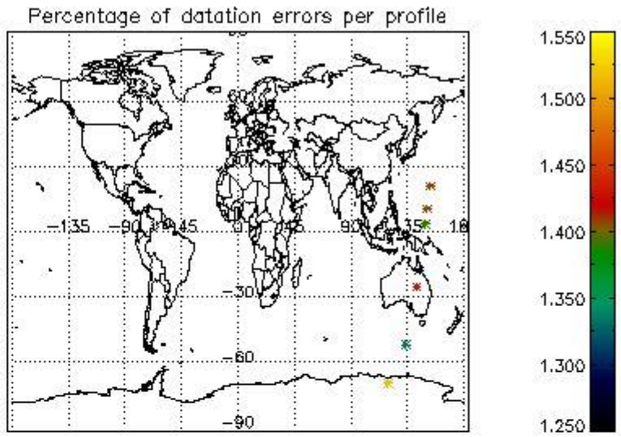
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes

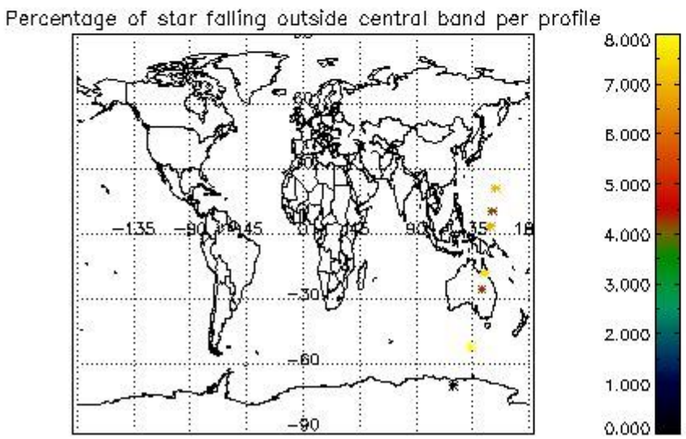


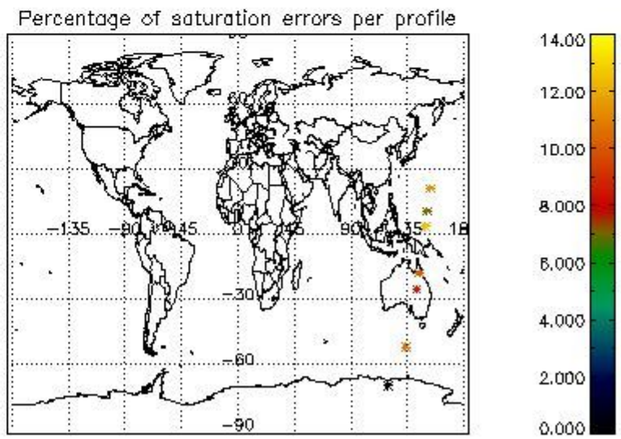


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

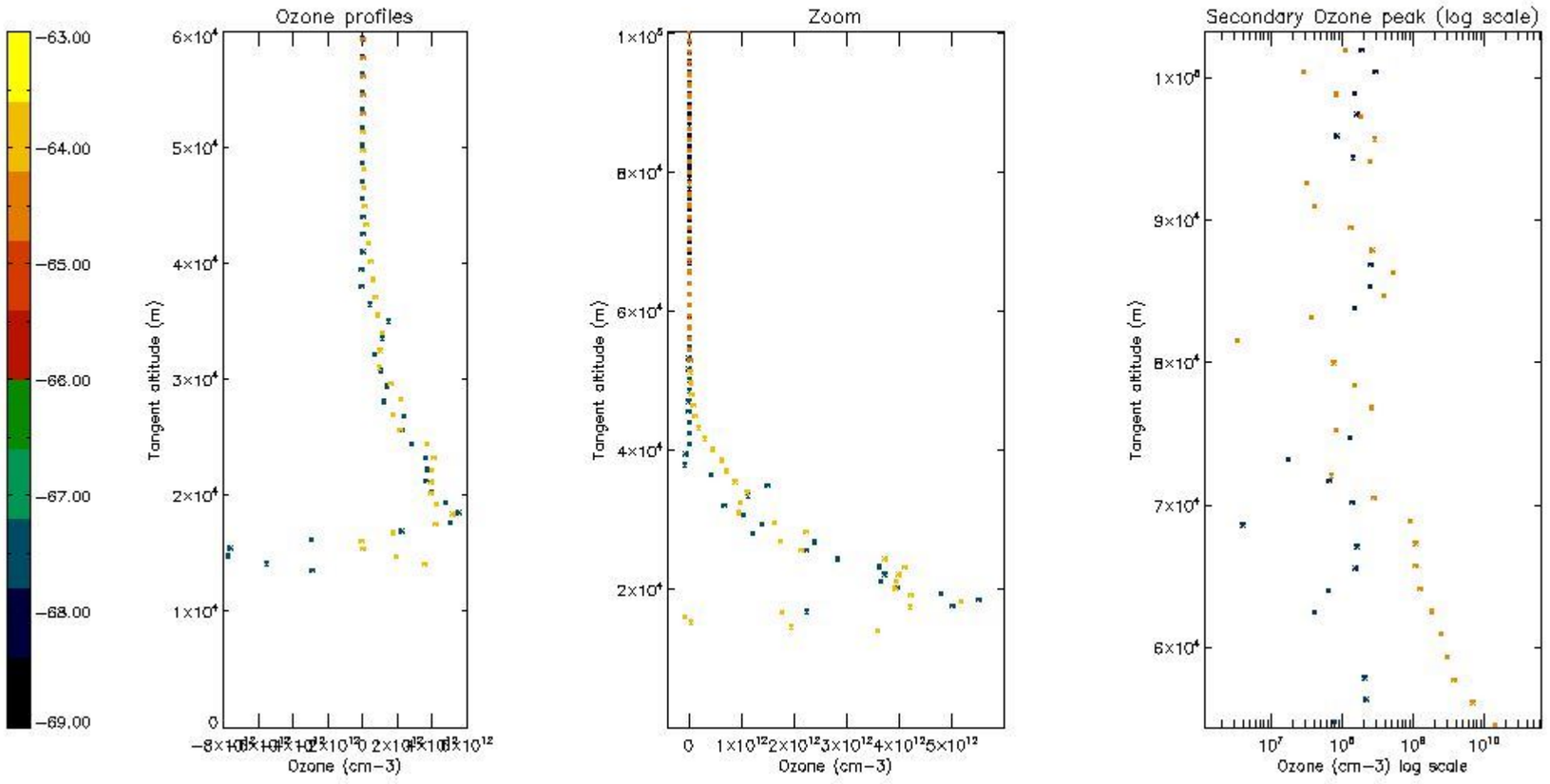
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	21.000
STD < 20	7.0000

STD < 10	3.0000
STD < 5	NaN

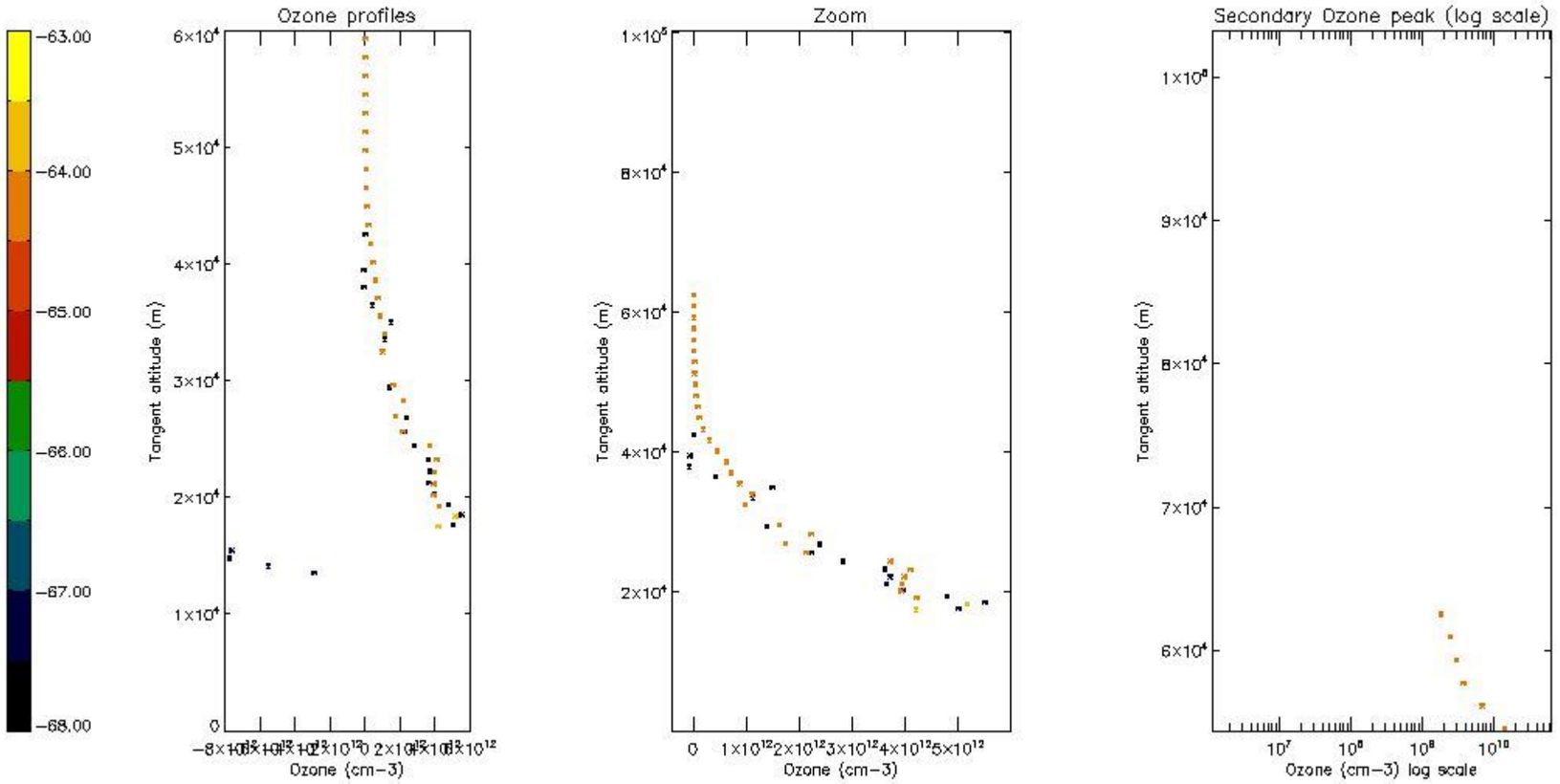
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



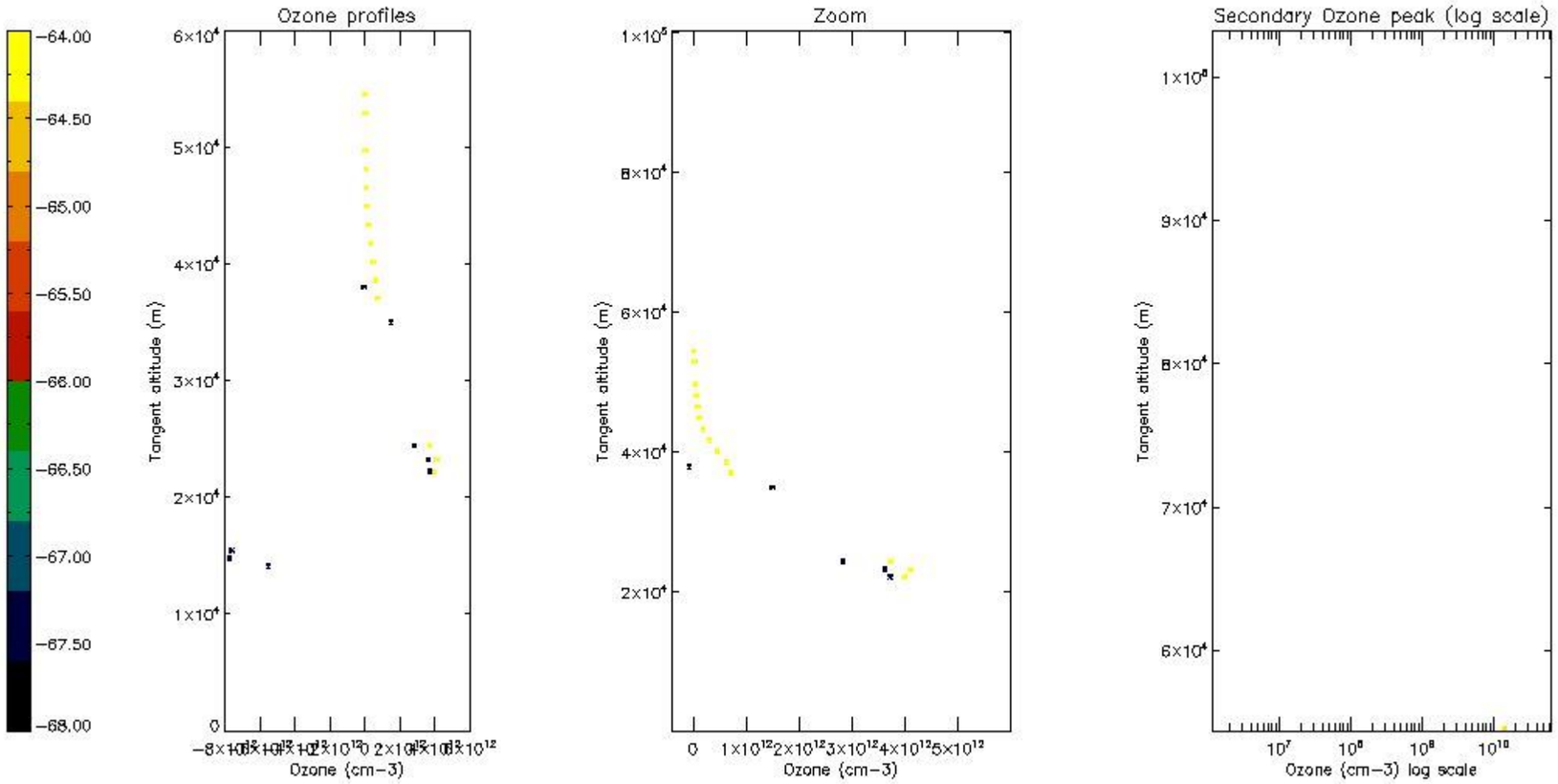
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

The colorbar represents the latitude.

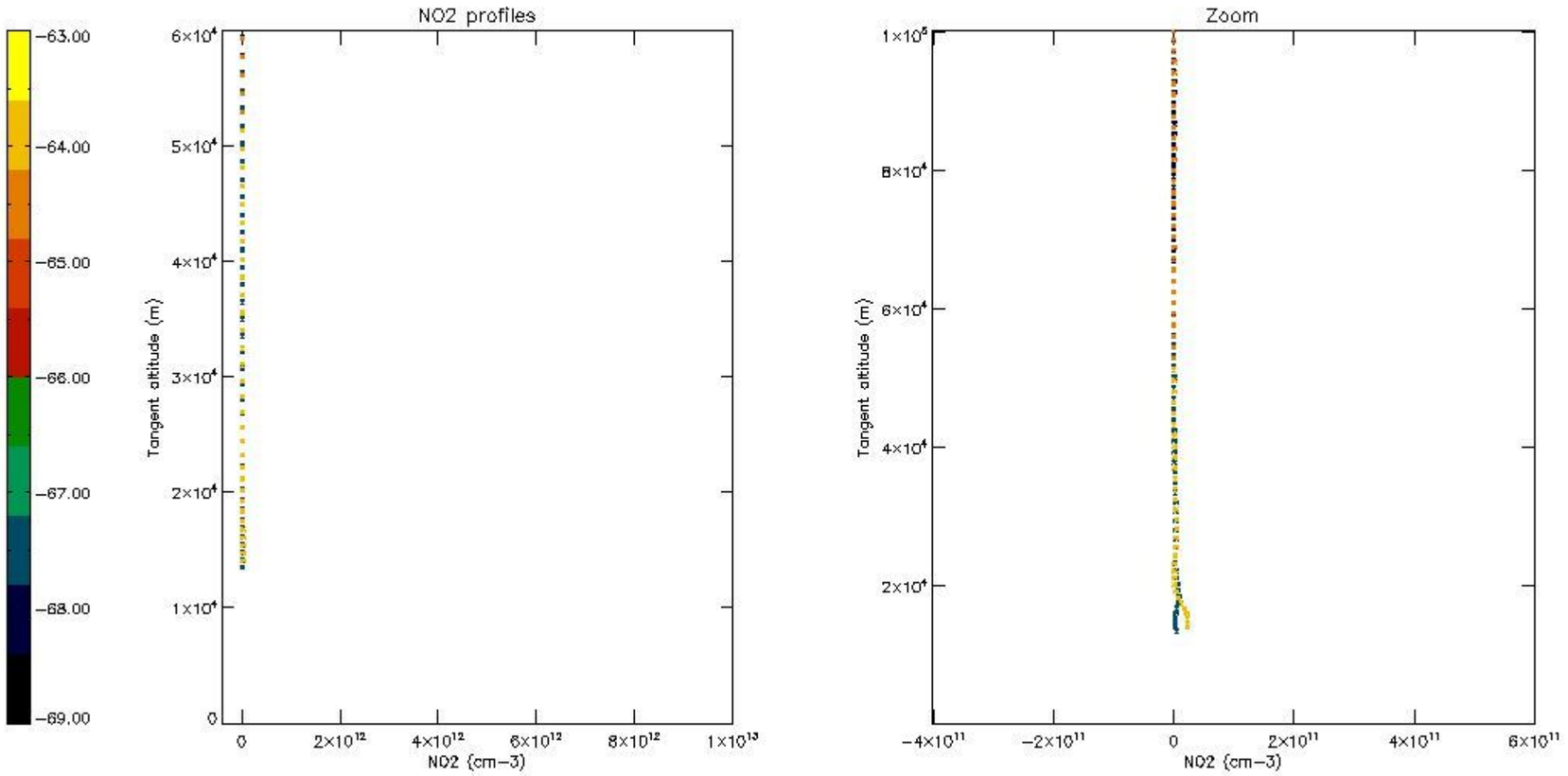


5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.

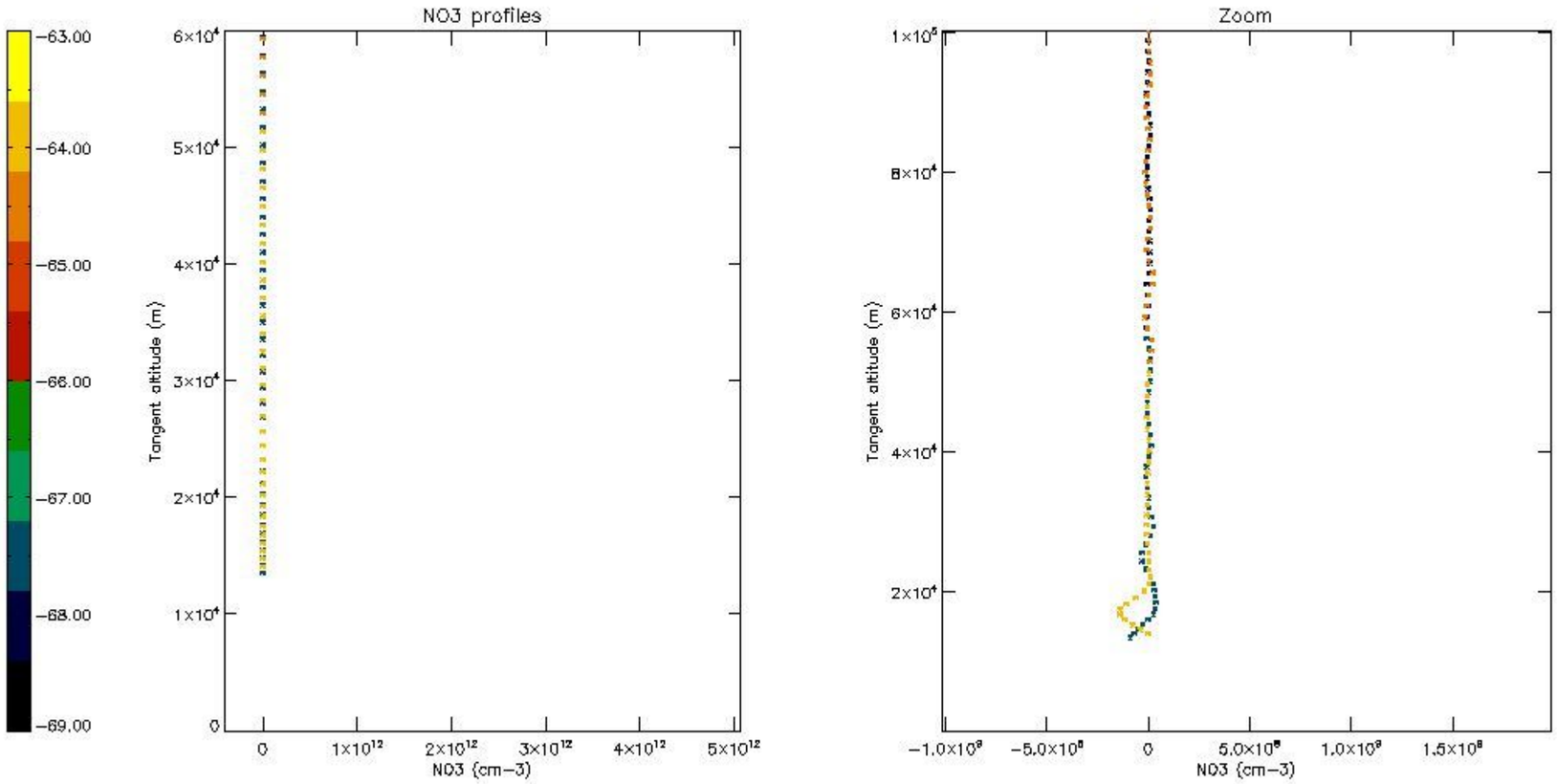
5.6 Plot NO2 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

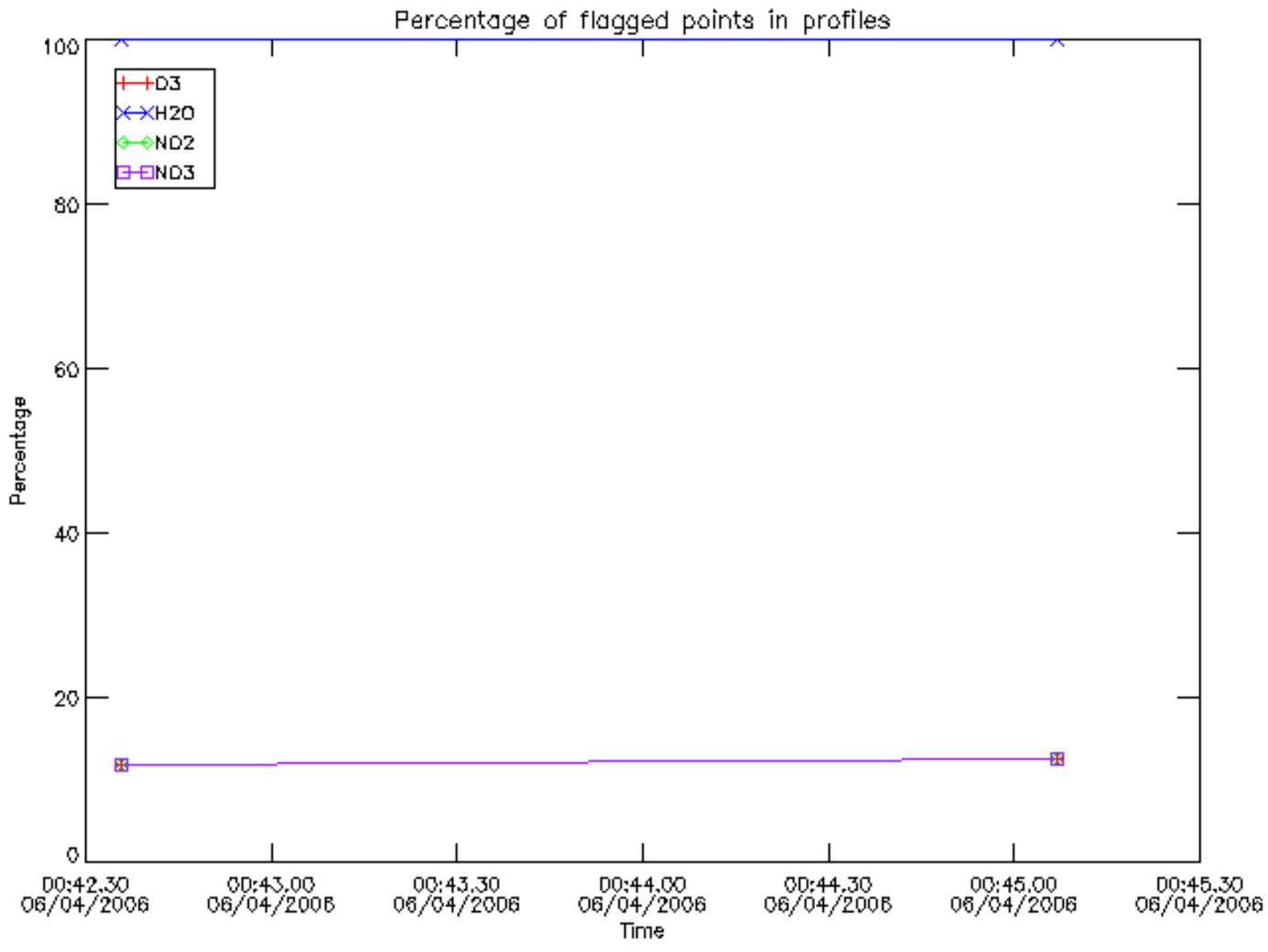
The colorbar represents the latitude.



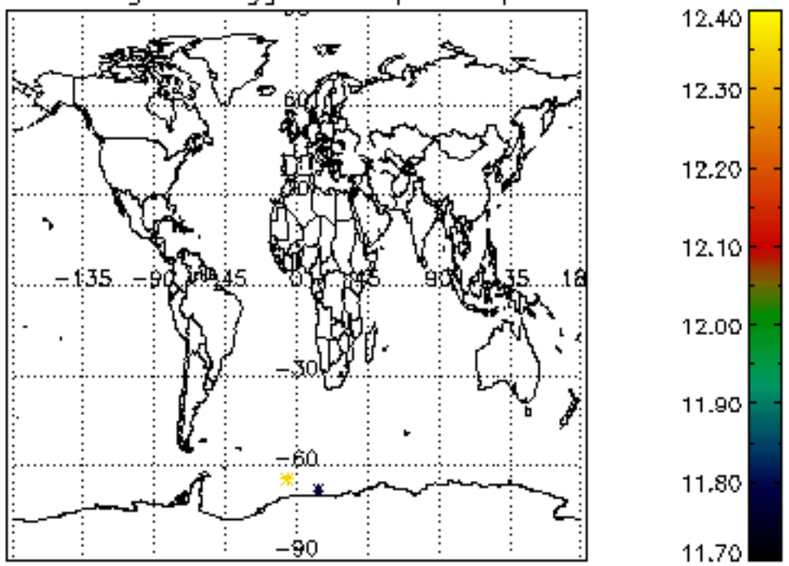
6. Auxiliary Data Files used for the production reported in section 2

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.

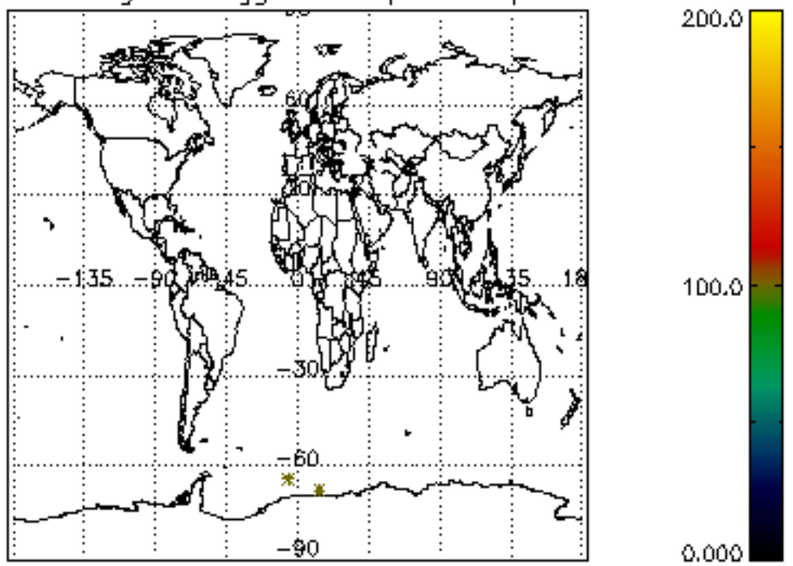
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	06-APR-2006 00:01:29
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	06-APR-2006 00:01:29
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	06-APR-2006 00:01:29


Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
00:42.30
06/04/2006
00:43.00
06/04/2006
00:43.30
06/04/2006
00:44.00
06/04/2006
00:44.30
06/04/2006
00:45.00
06/04/2006
00:45.30
06/04/2006
Time

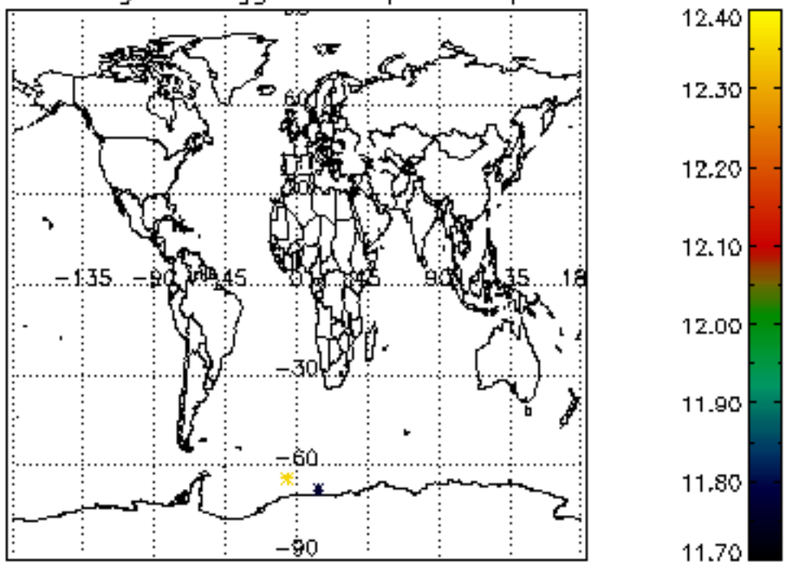
Percentage of flagged data per O3 profile



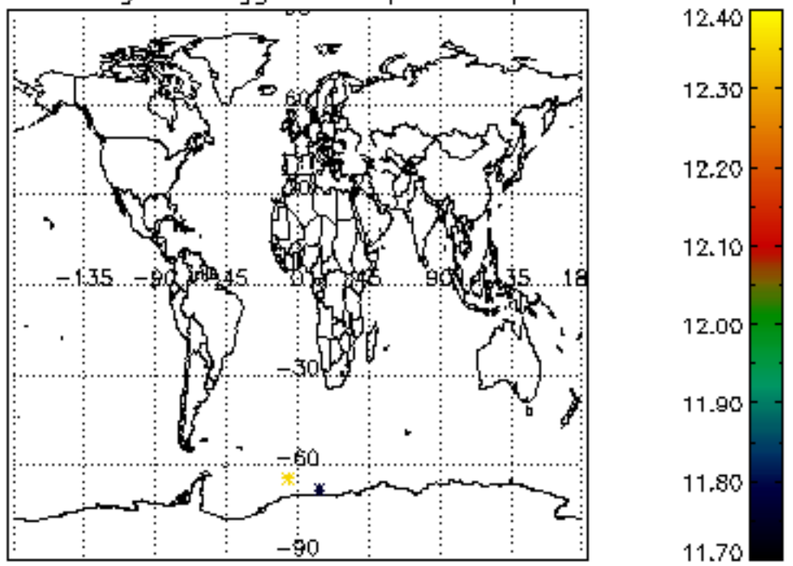
Percentage of flagged data per H2O profile

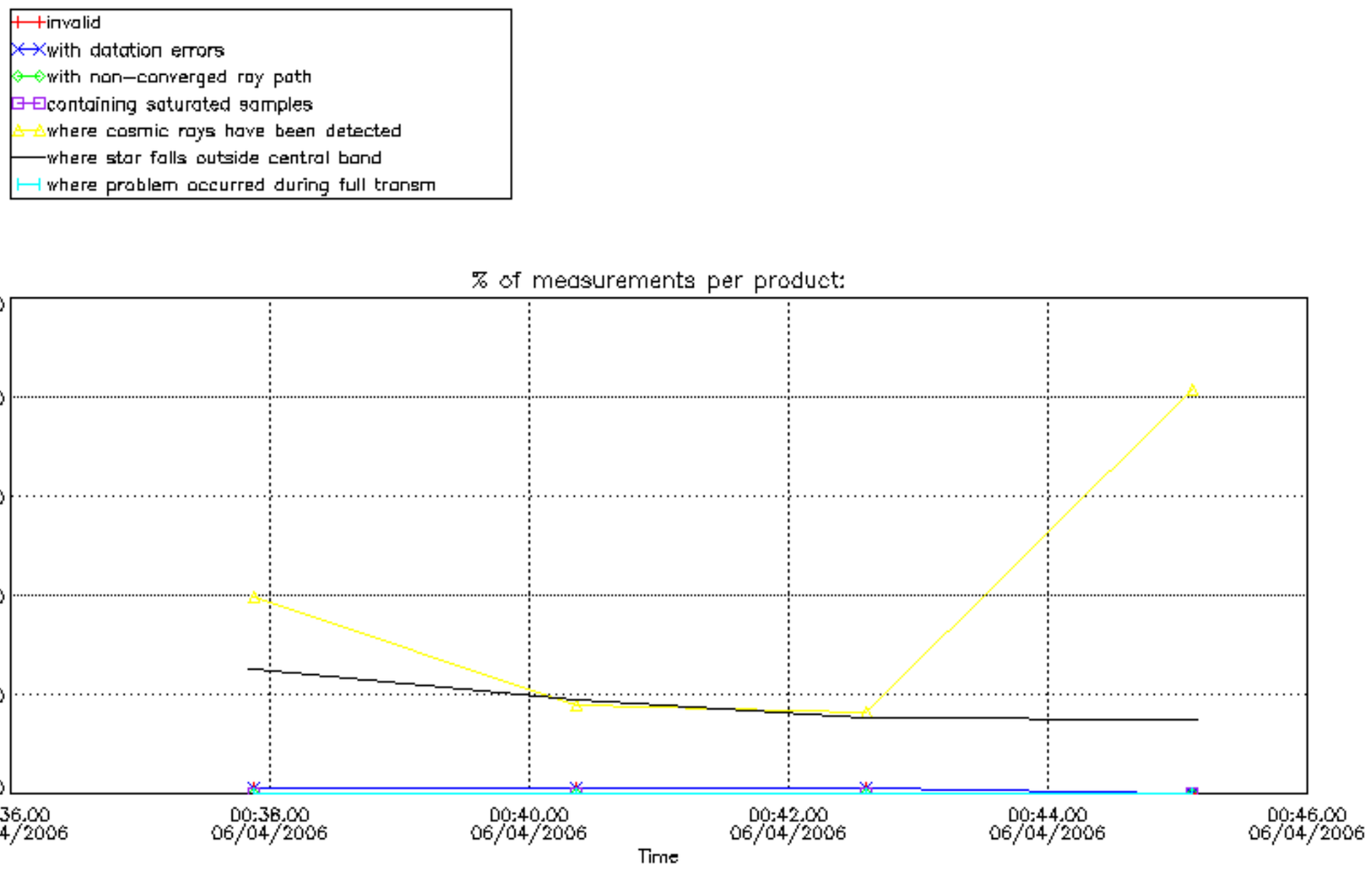


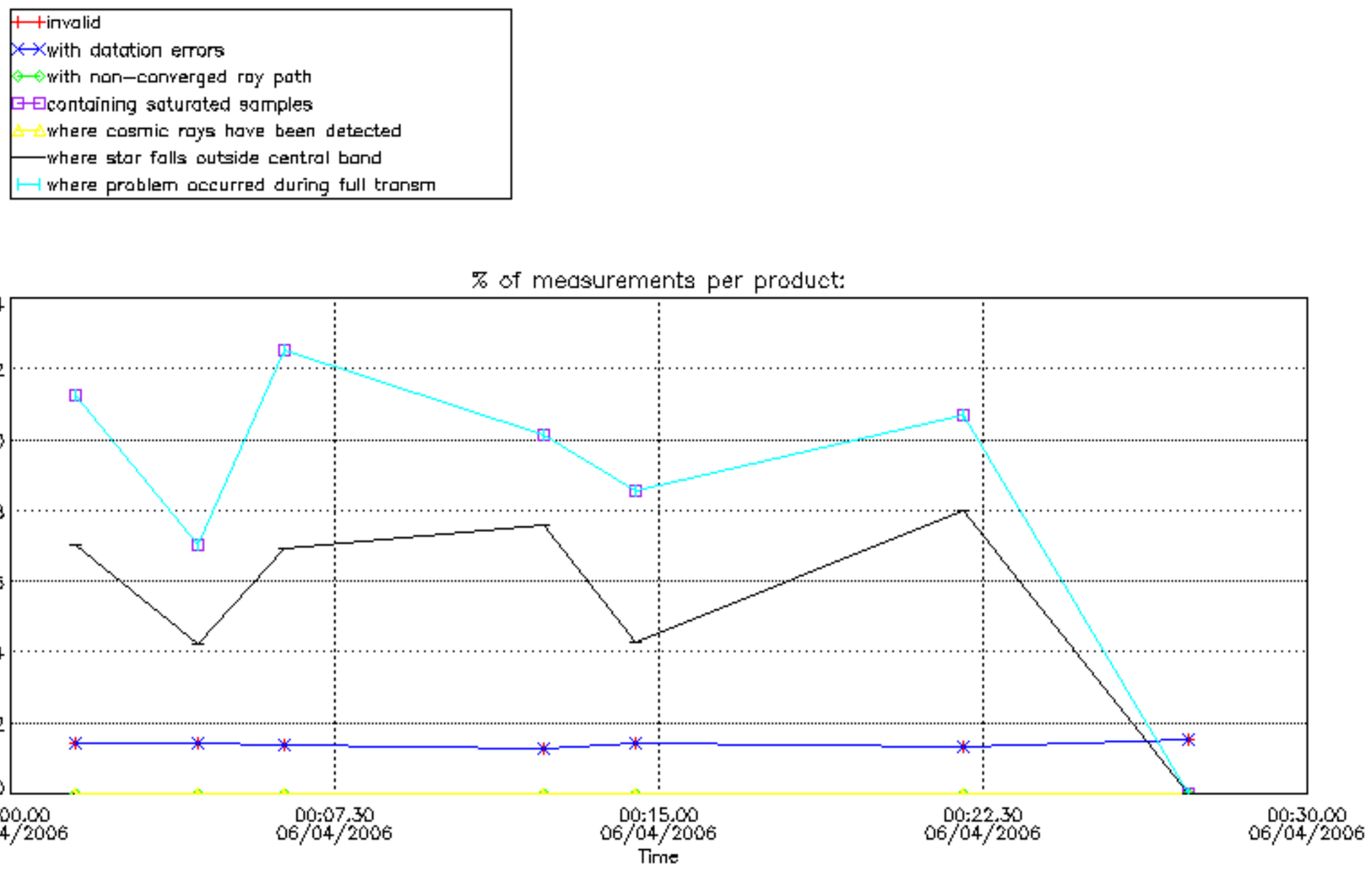
Percentage of flagged data per NO2 profile



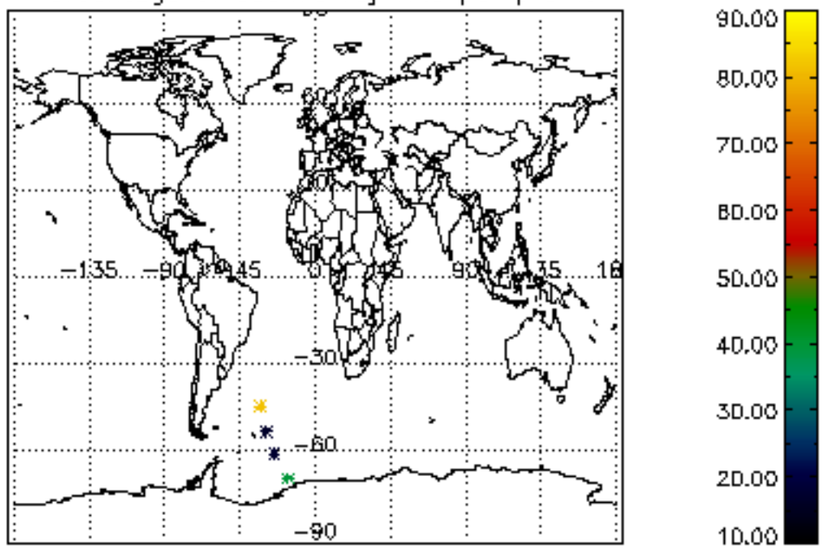
Percentage of flagged data per NO3 profile



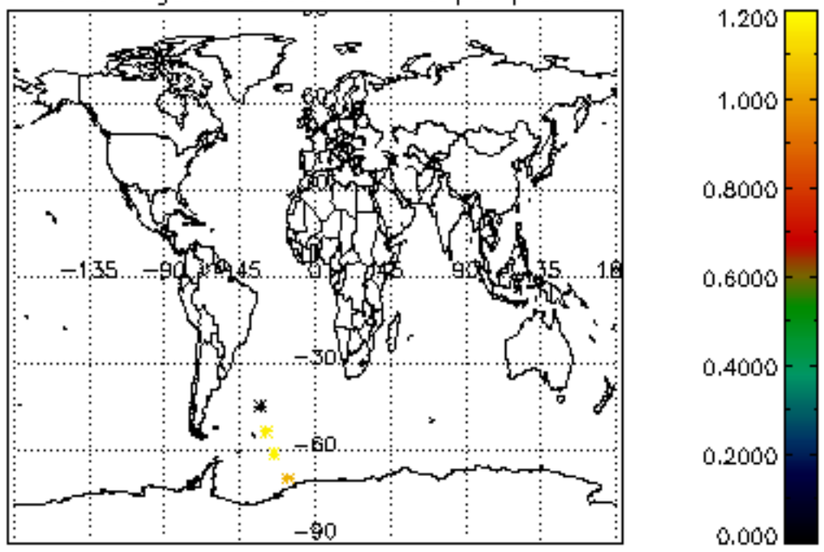

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
100
80
60
40
20
0
value (%)
00:36.00
06/04/2006
00:38.00
06/04/2006
00:40.00
06/04/2006
00:42.00
06/04/2006
00:44.00
06/04/2006
00:46.00
06/04/2006
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:
14
12
10
8
6
4
2
0
value (%)
00:00.00
06/04/2006
00:07.30
06/04/2006
00:15.00
06/04/2006
00:22.30
06/04/2006
00:30.00
06/04/2006
Time

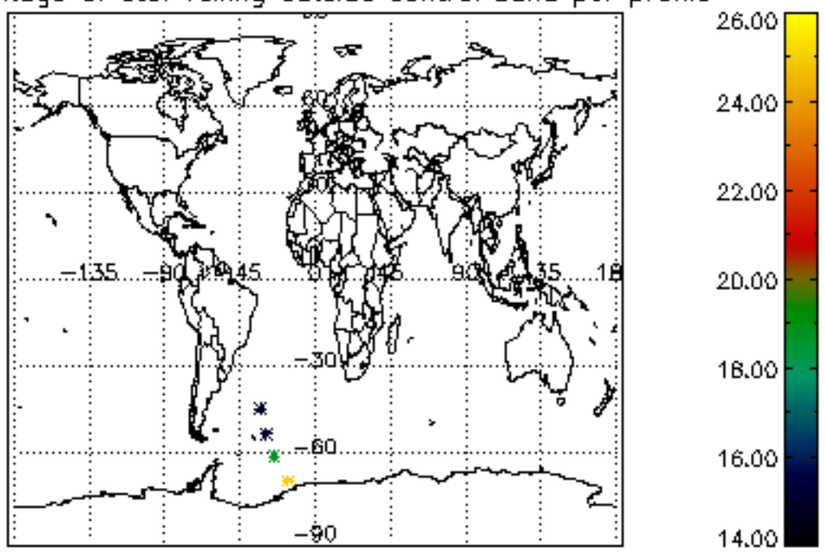
Percentage of cosmic ray hits per profile



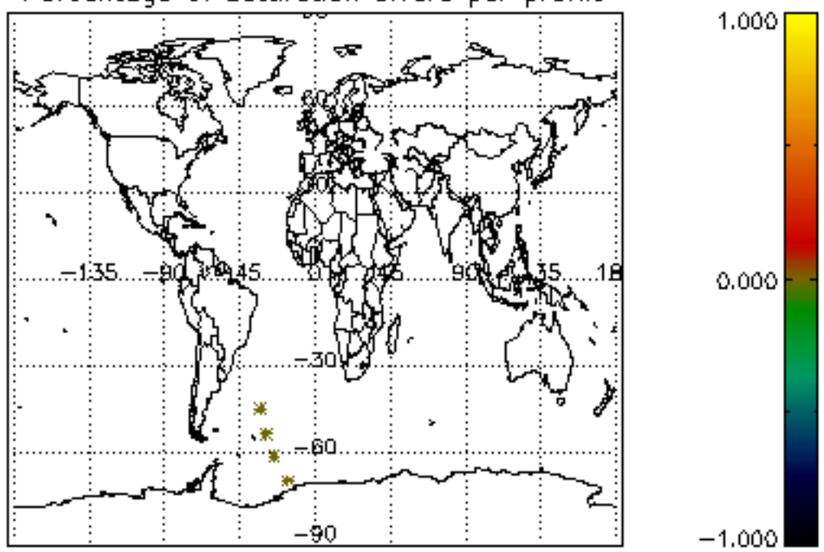
Percentage of datation errors per profile



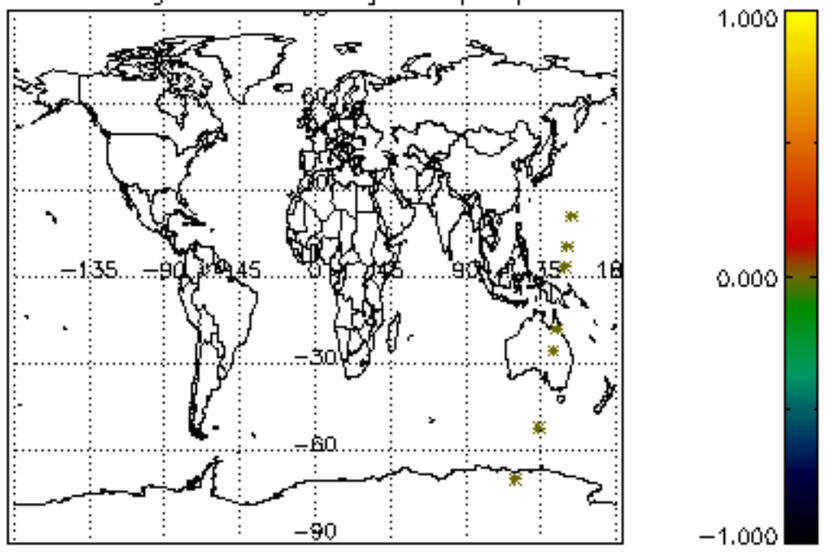
Percentage of star falling outside central band per profile



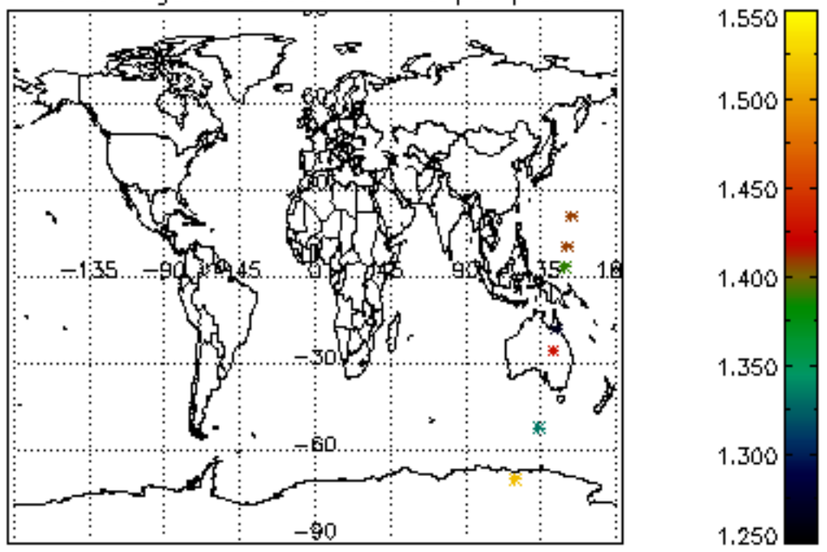
Percentage of saturation errors per profile



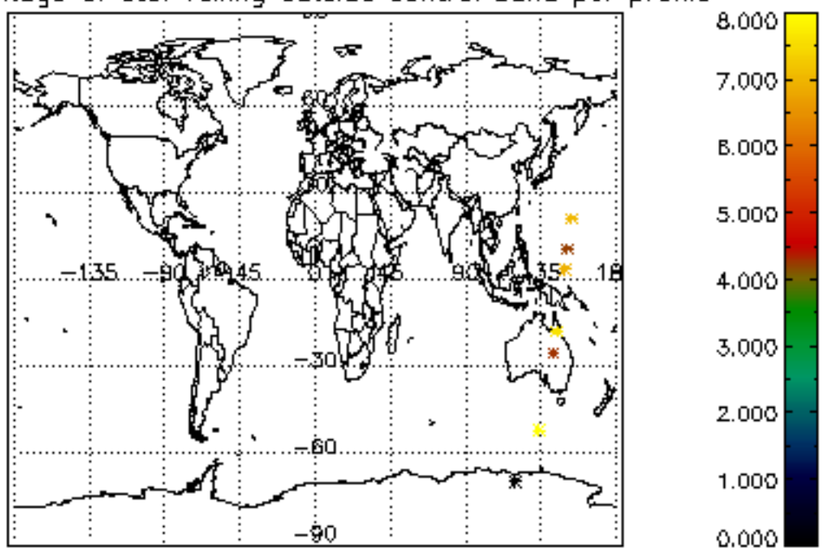
Percentage of cosmic ray hits per profile



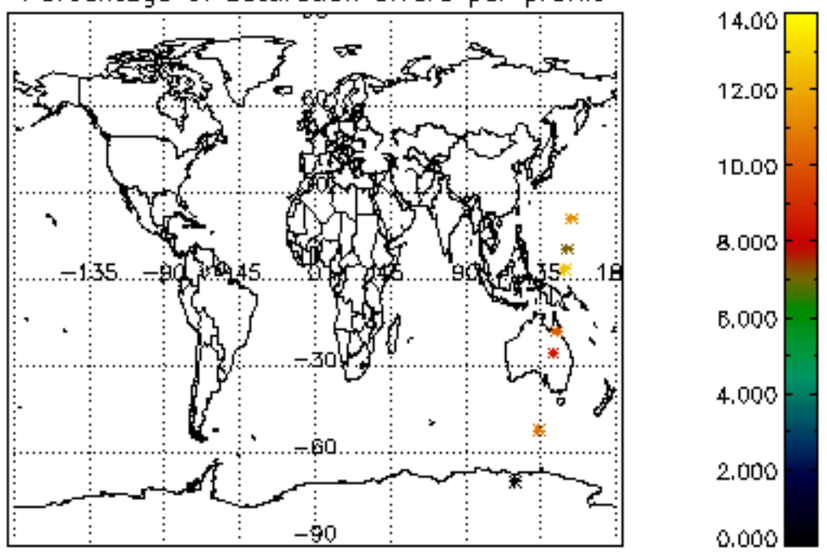
Percentage of datation errors per profile

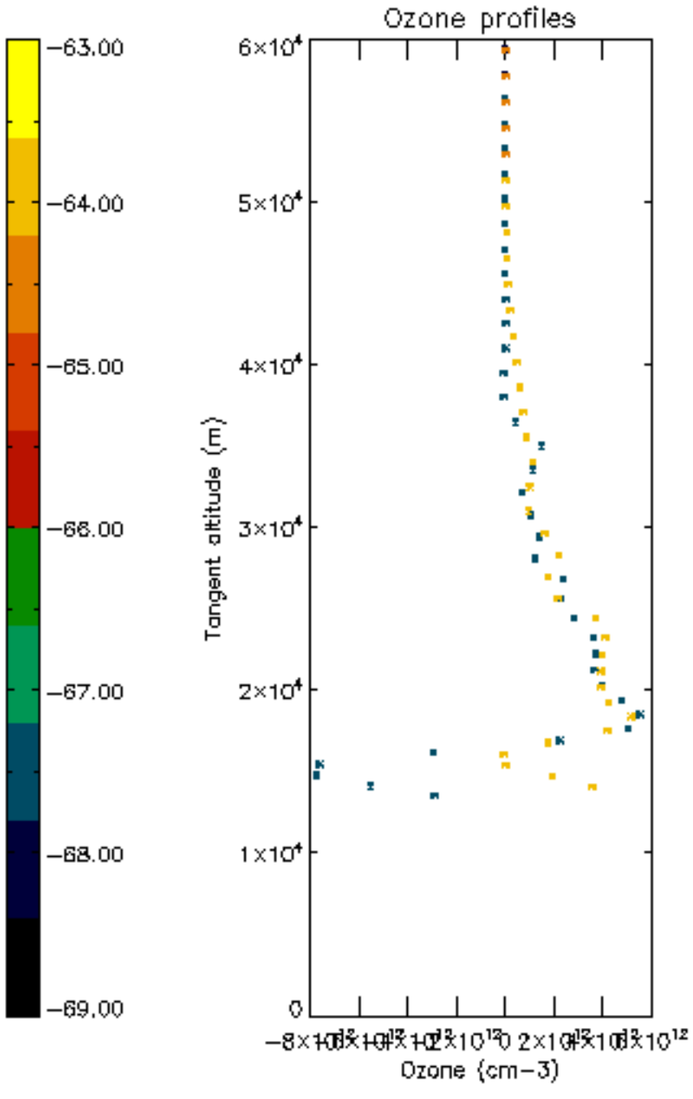


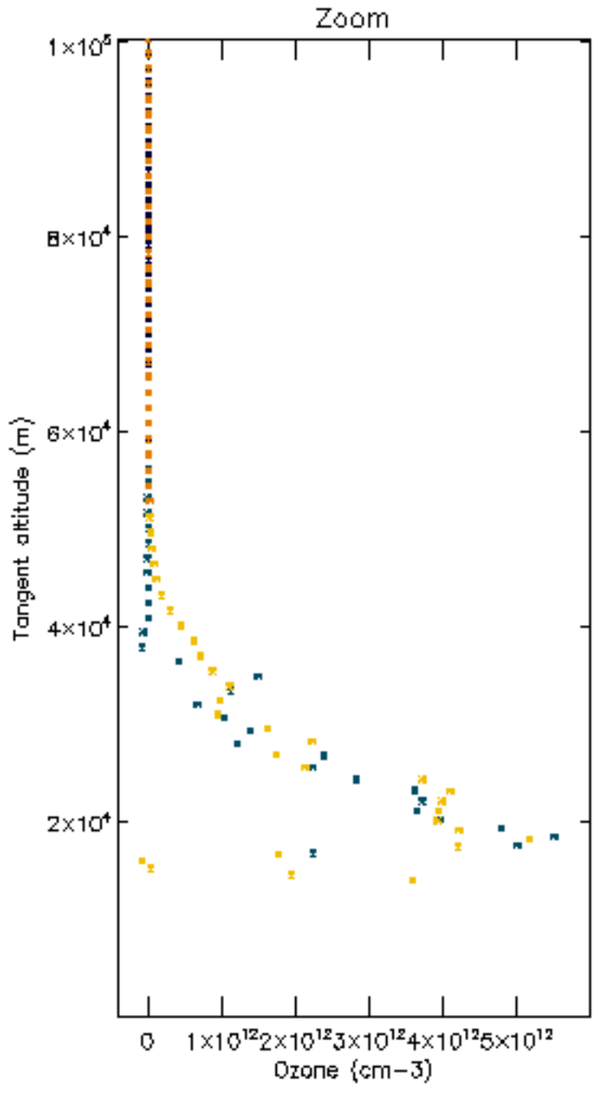
Percentage of star falling outside central band per profile

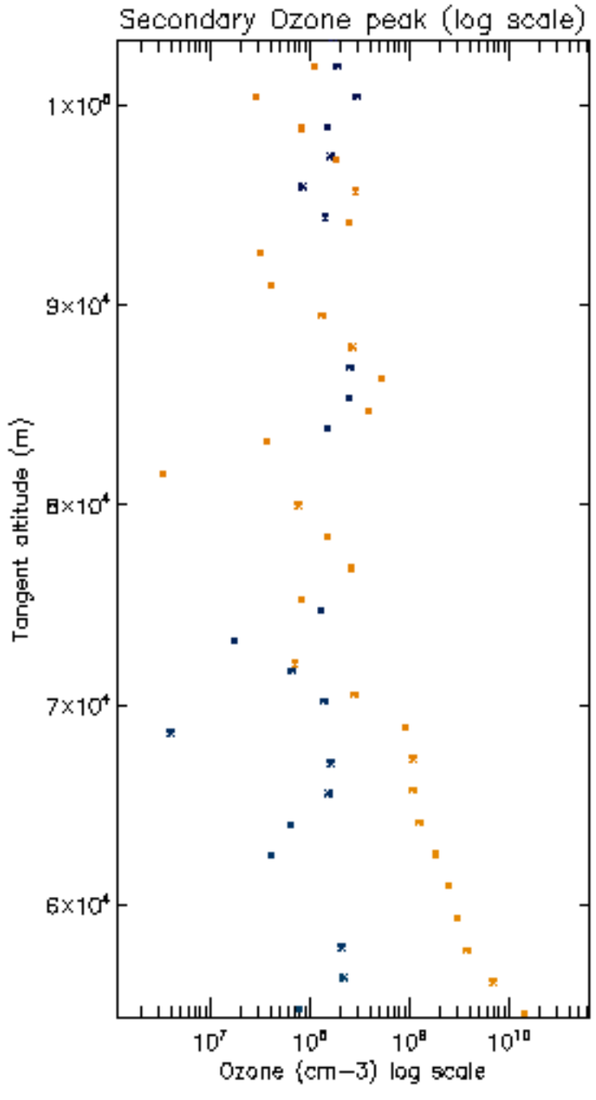


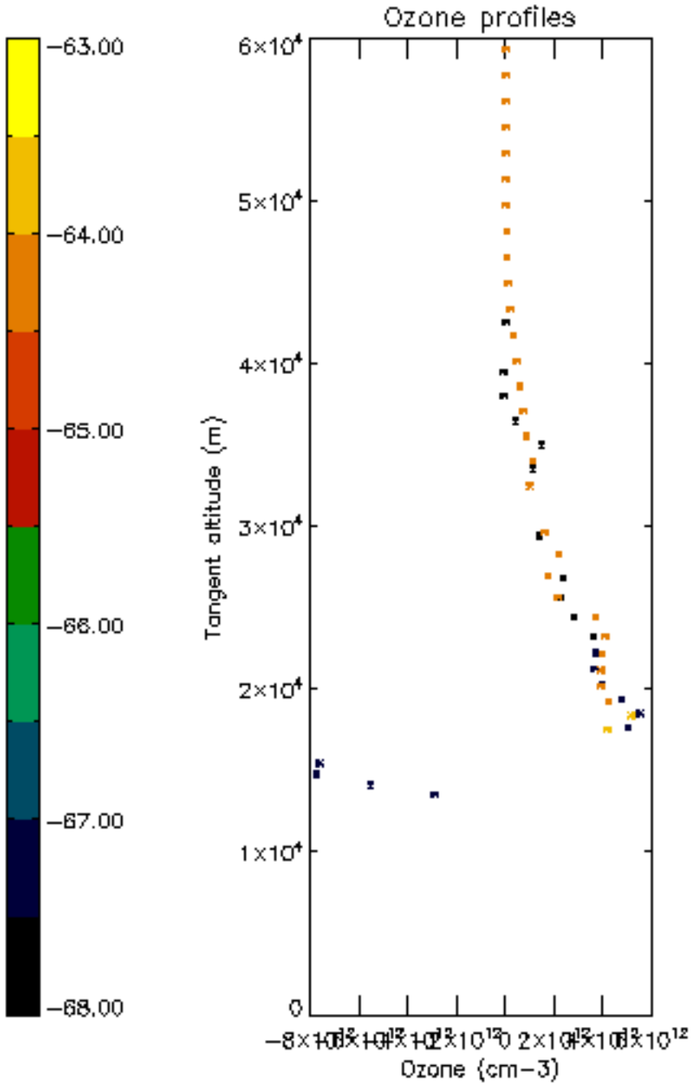
Percentage of saturation errors per profile




−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
Ozone (cm−3)

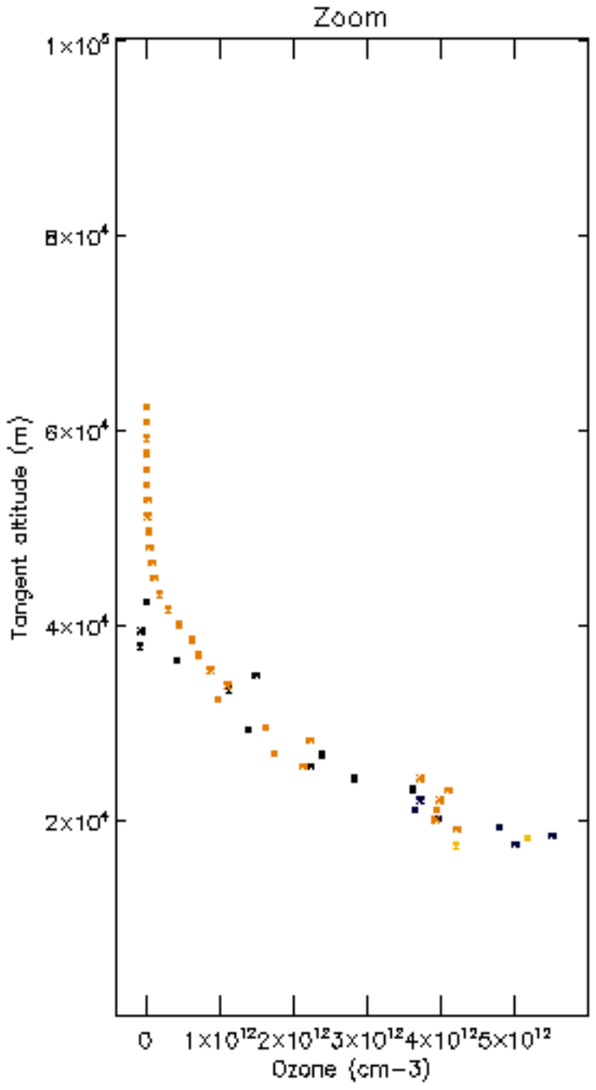

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
Ozone (cm−3)


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

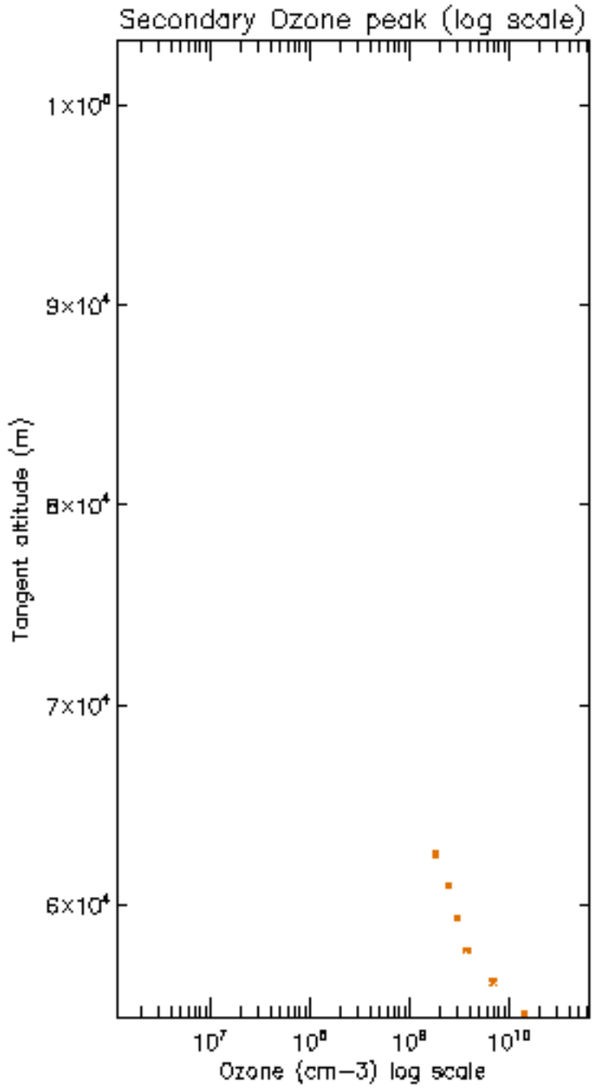


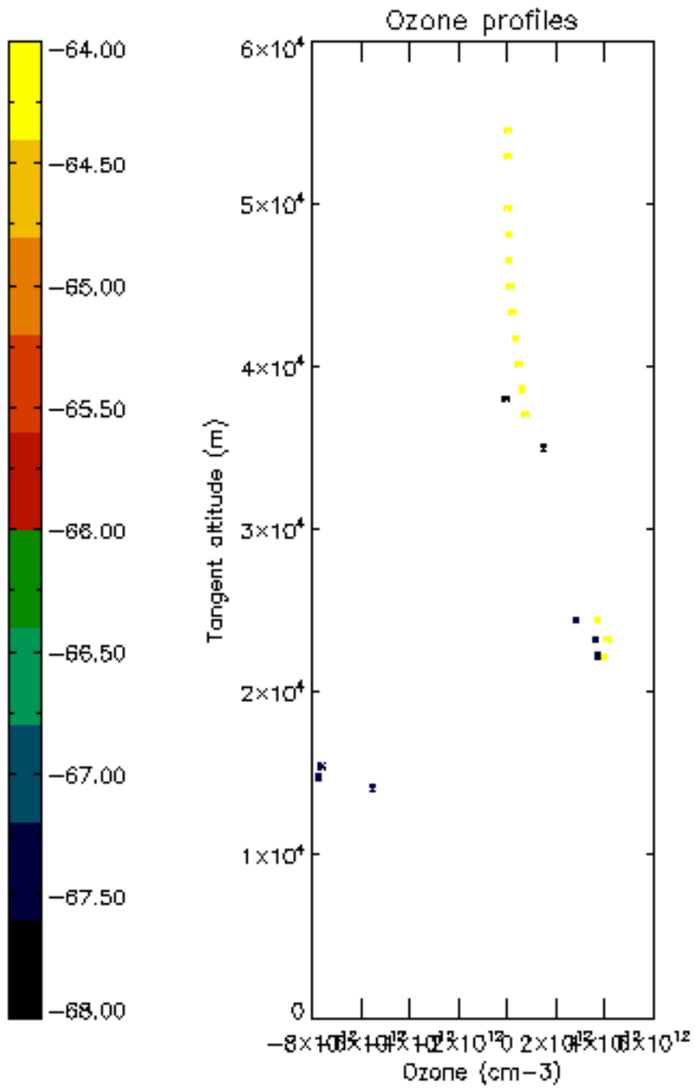
Ozone profiles

Zoom



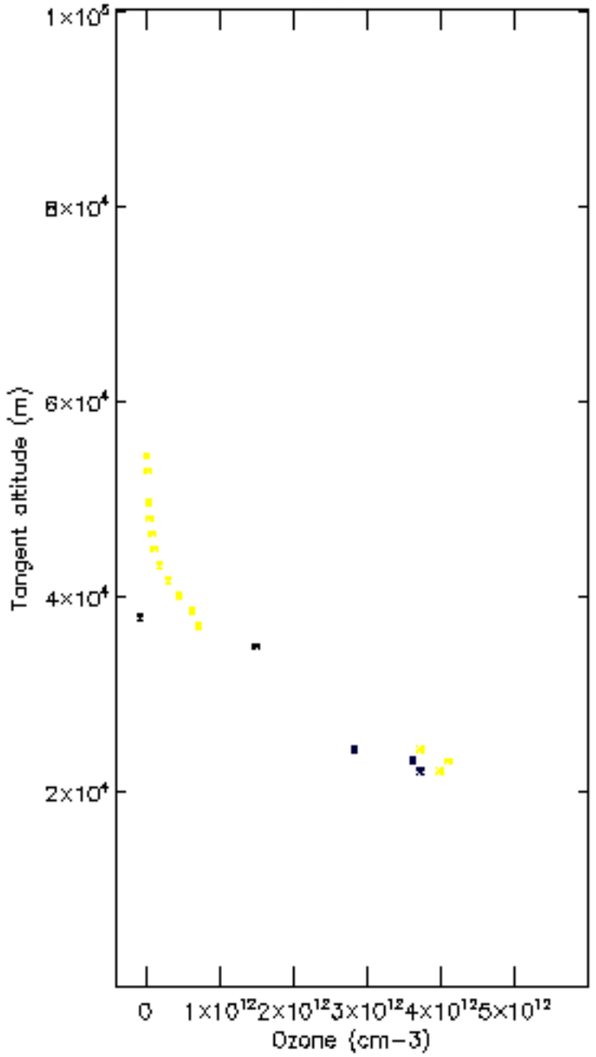
Secondary Ozone peak (log scale)



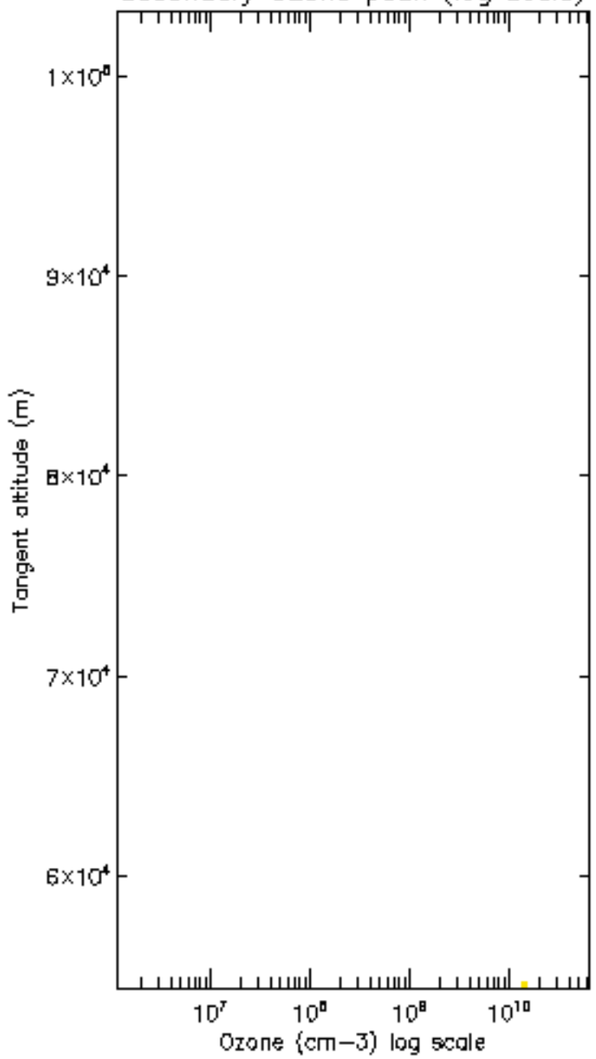


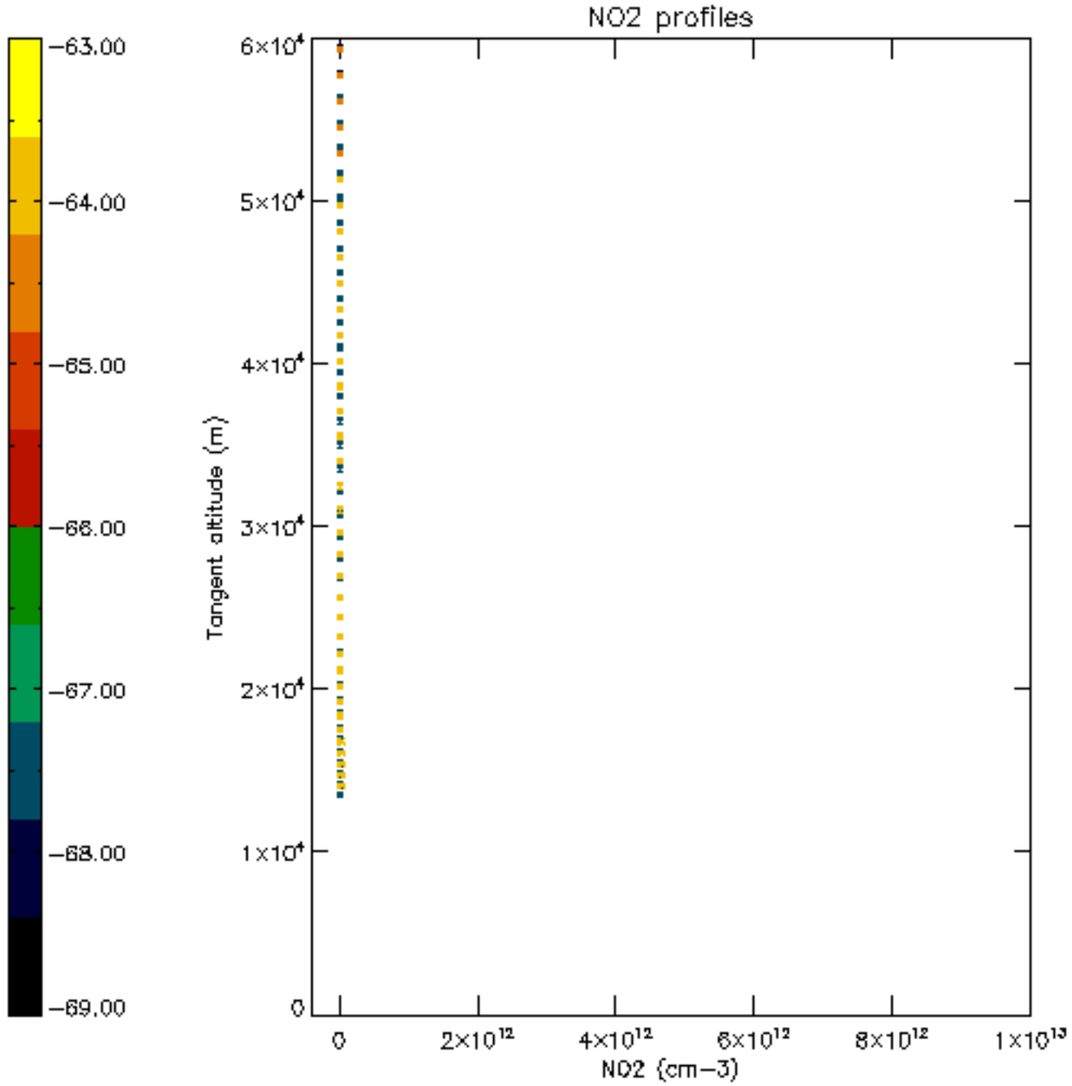
Ozone profiles

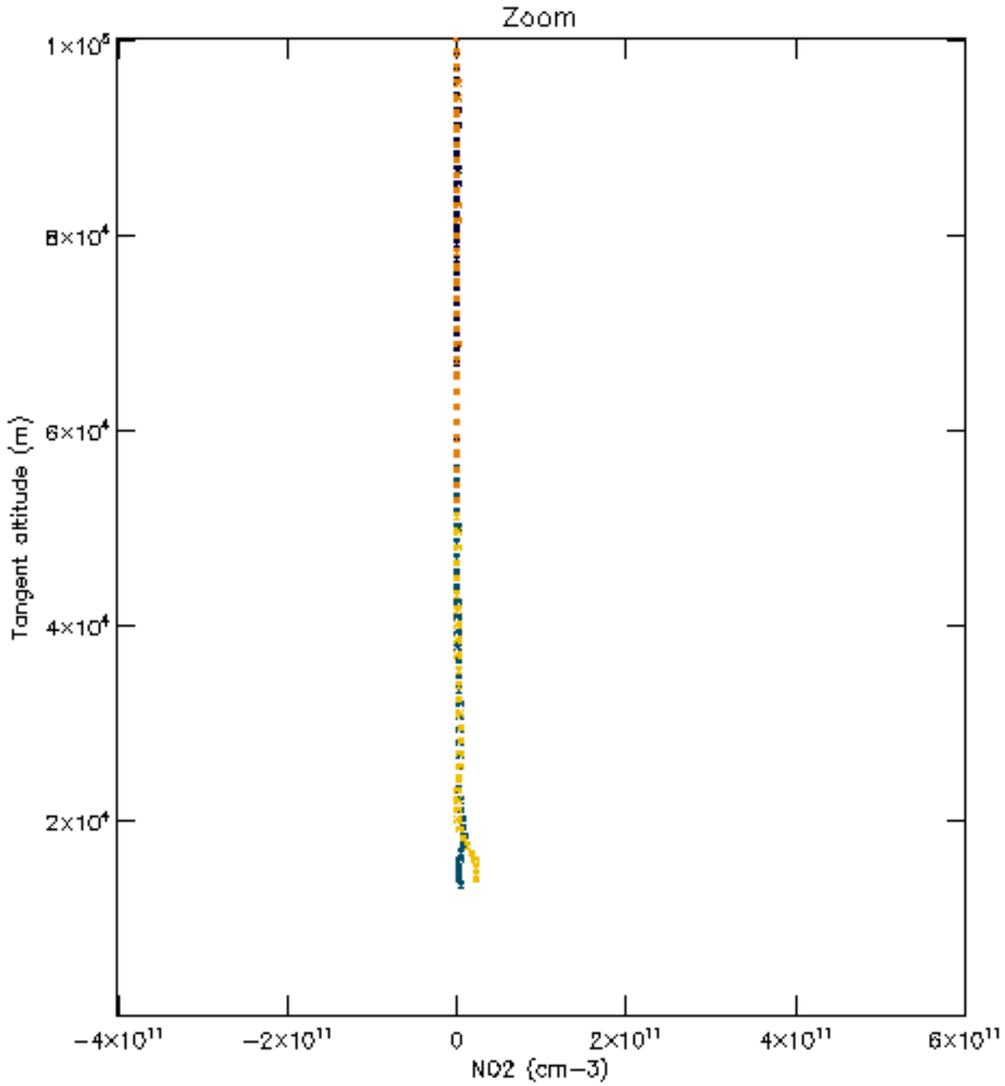
Zoom

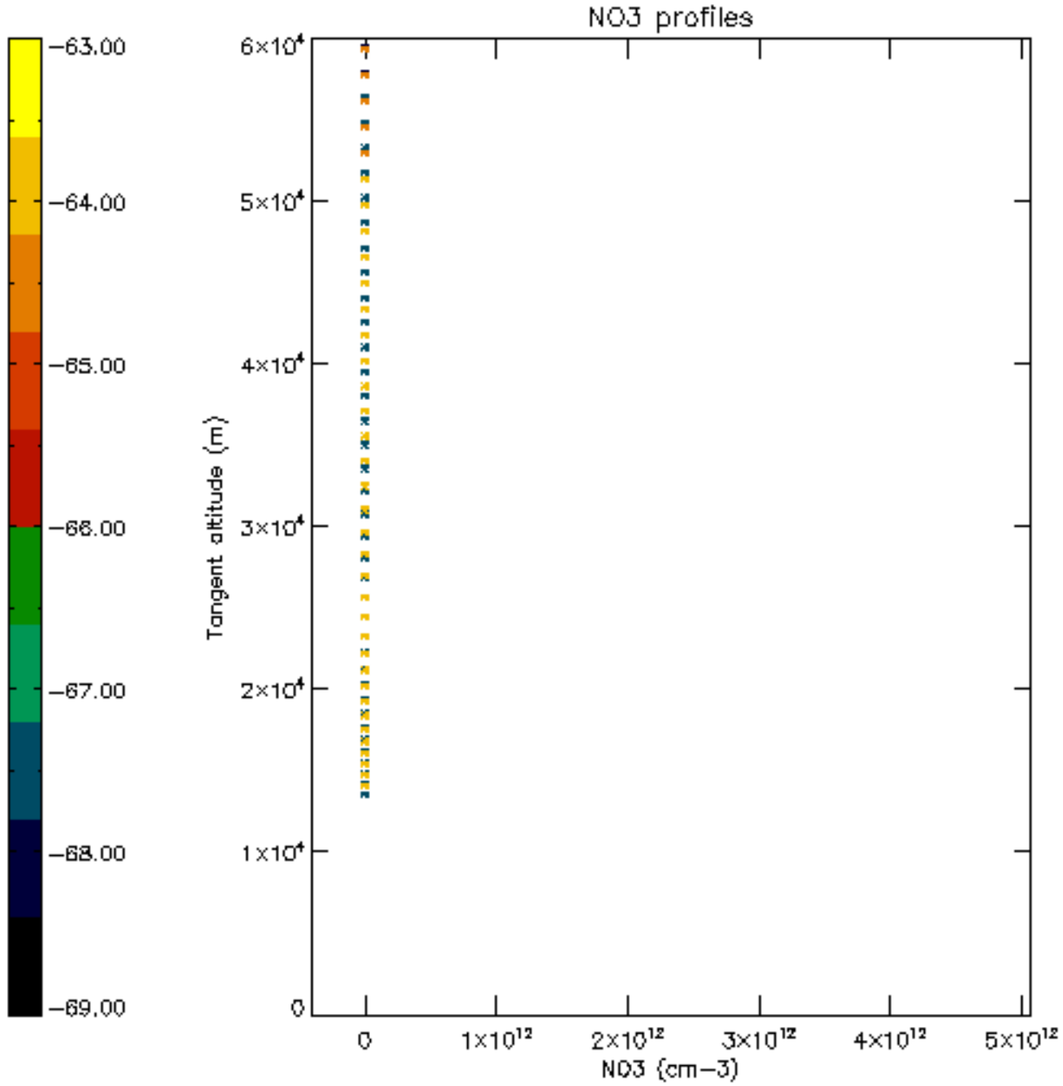


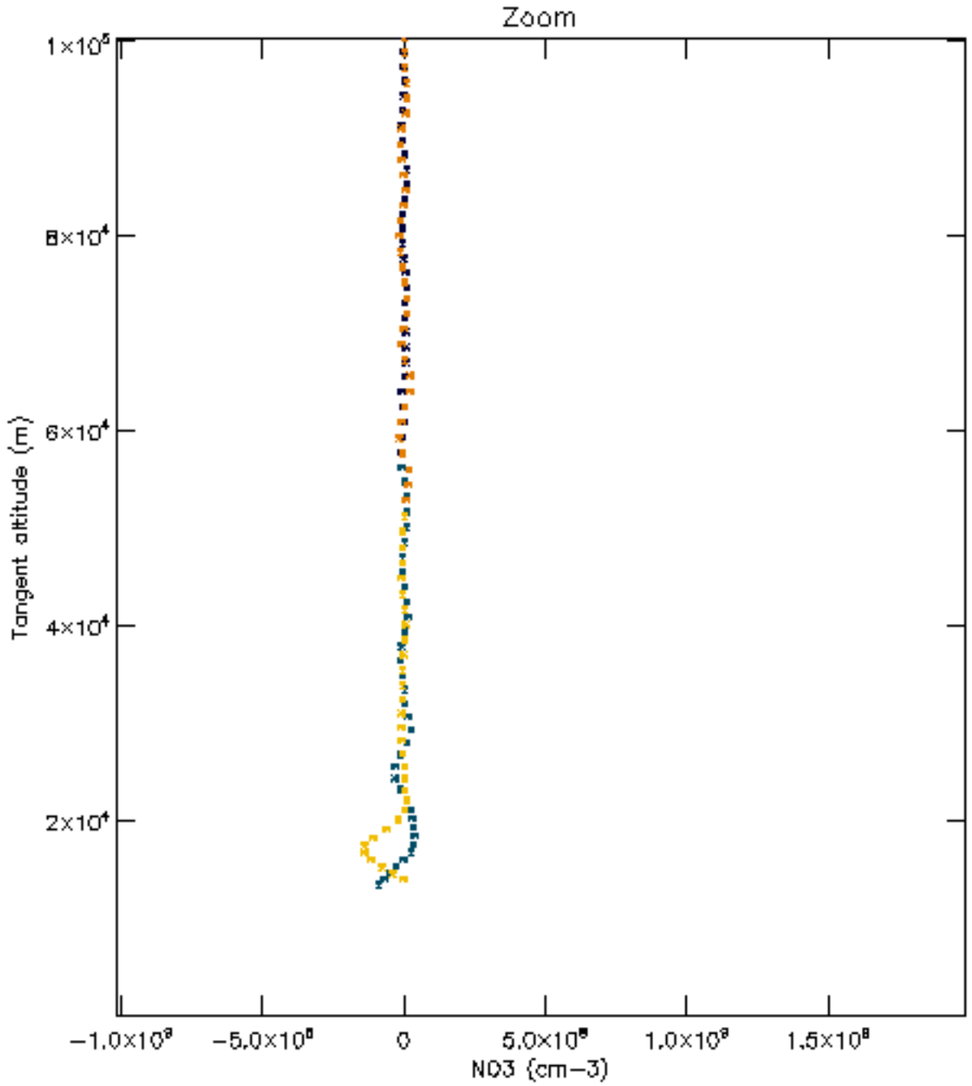
Secondary Ozone peak (log scale)

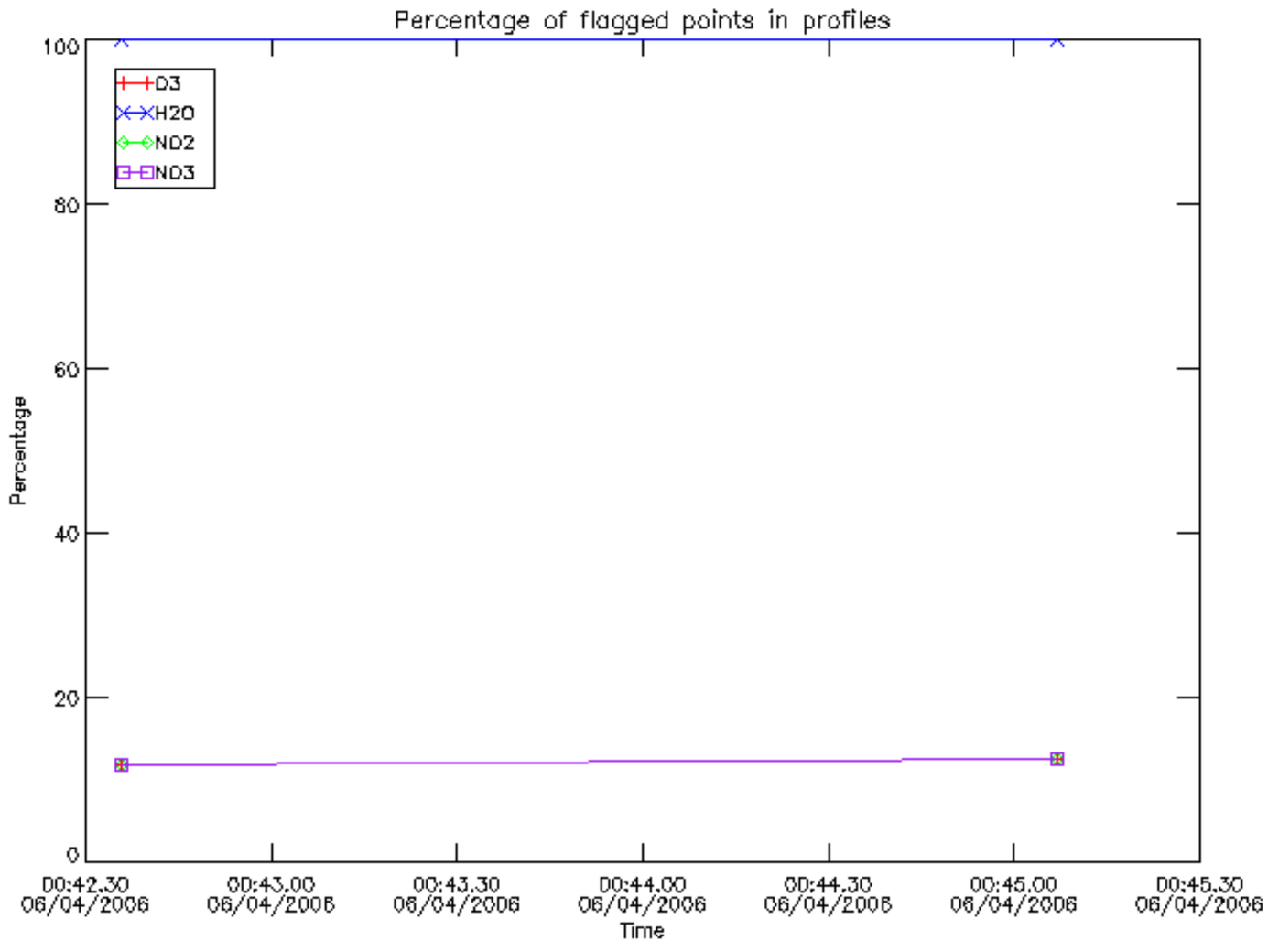



NO2 profiles
−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
2×10¹²
4×10¹²
6×10¹²
8×10¹²
1×10¹³
NO2 (cm−3)

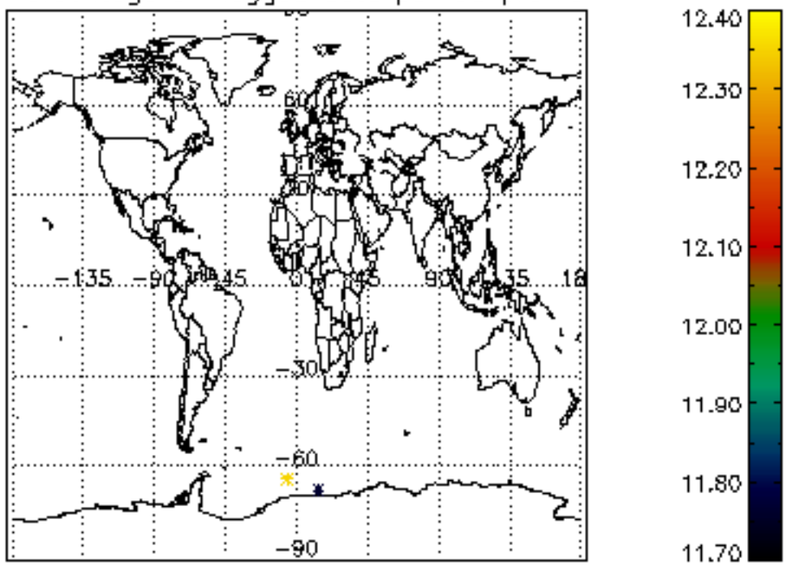

Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−4×10¹¹
−2×10¹¹
0
2×10¹¹
4×10¹¹
6×10¹¹
NO2 (cm−3)


NO3 profiles
−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
NO3 (cm−3)

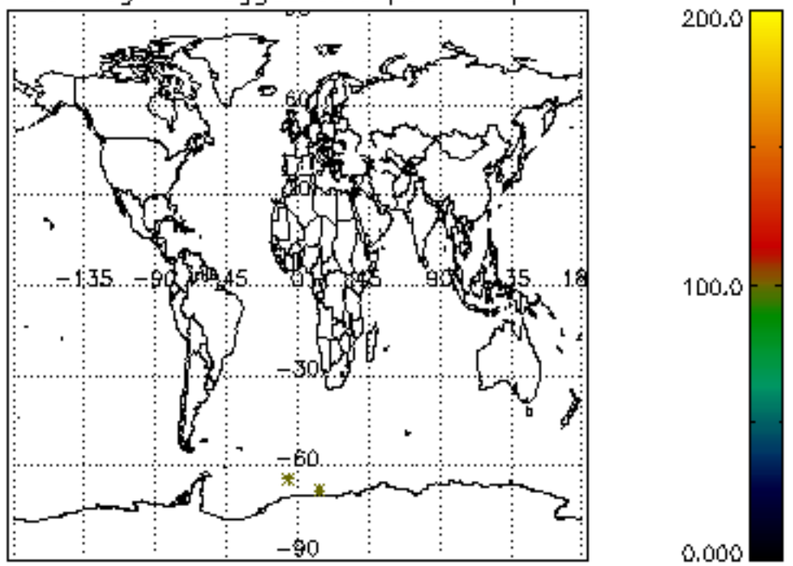

Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−1.0×10⁹
−5.0×10⁸
0
5.0×10⁸
1.0×10⁹
1.5×10⁹
NO3 (cm−3)


Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
00:42.30
06/04/2006
00:43.00
06/04/2006
00:43.30
06/04/2006
00:44.00
06/04/2006
00:44.30
06/04/2006
00:45.00
06/04/2006
00:45.30
06/04/2006
Time

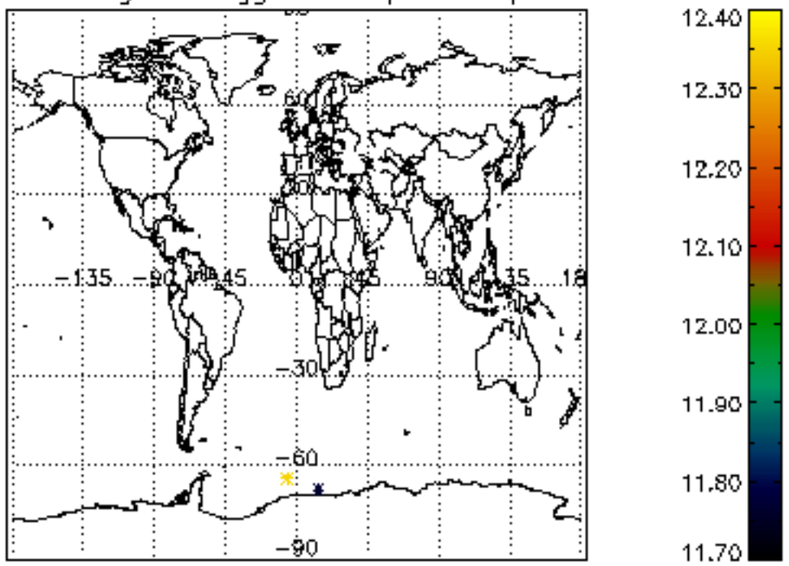
Percentage of flagged data per O3 profile



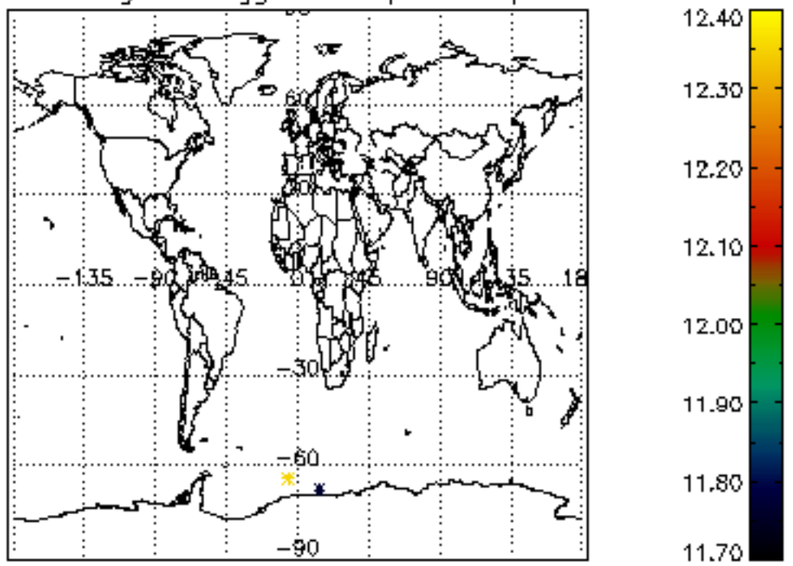
Percentage of flagged data per H2O profile

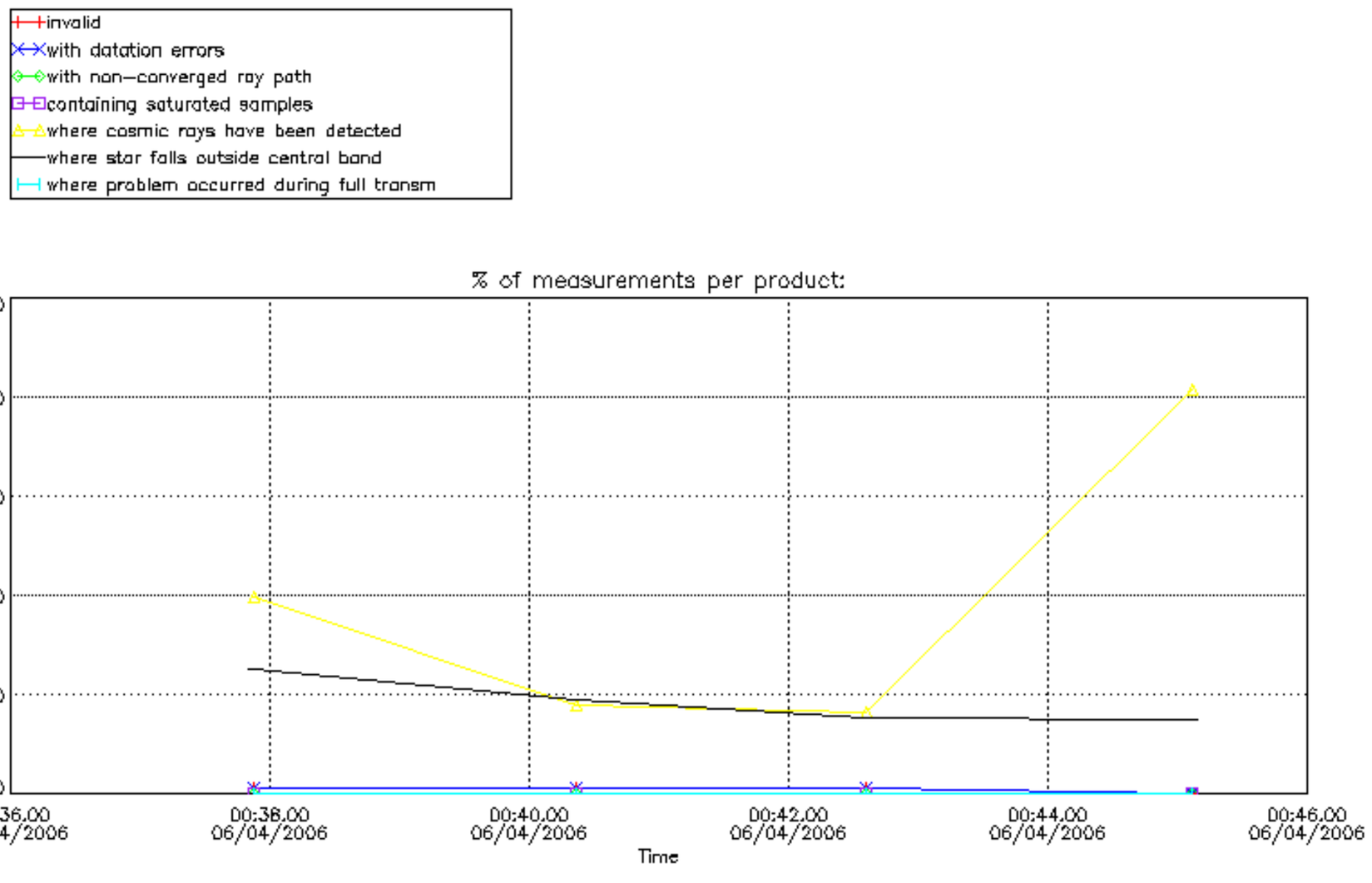


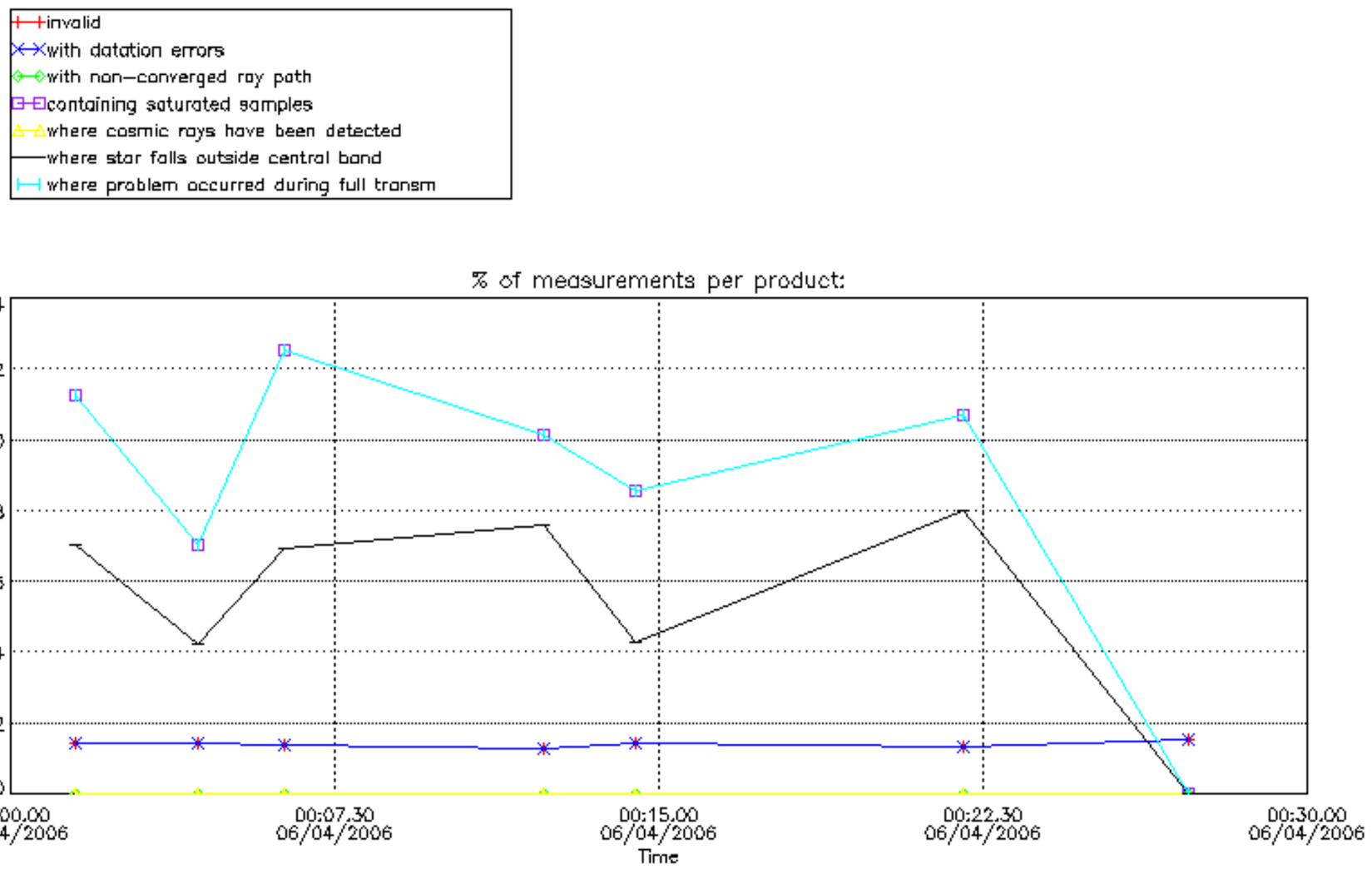
Percentage of flagged data per NO2 profile



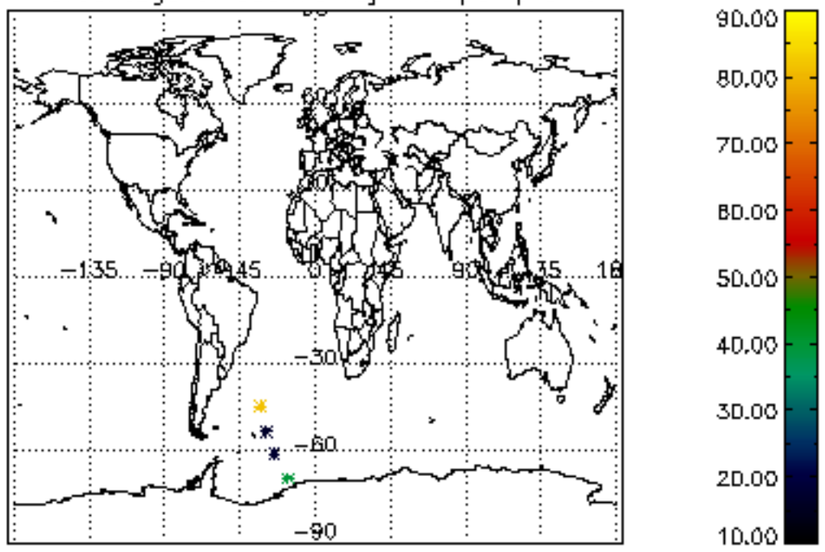
Percentage of flagged data per NO3 profile



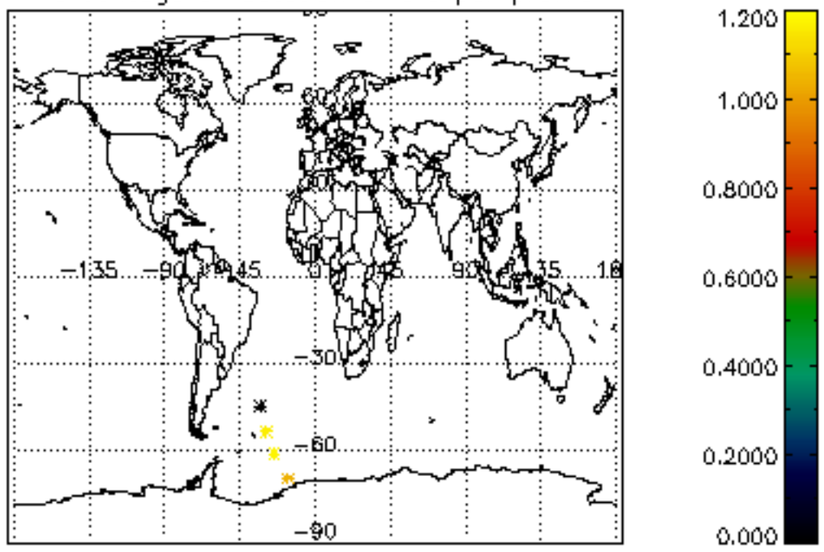

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
100
80
60
40
20
0
value (%)
00:36.00
06/04/2006
00:38.00
06/04/2006
00:40.00
06/04/2006
00:42.00
06/04/2006
00:44.00
06/04/2006
00:46.00
06/04/2006
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:
14
12
10
8
6
4
2
0
value (%)
00:00.00
06/04/2006
00:07.30
06/04/2006
00:15.00
06/04/2006
00:22.30
06/04/2006
00:30.00
06/04/2006
Time

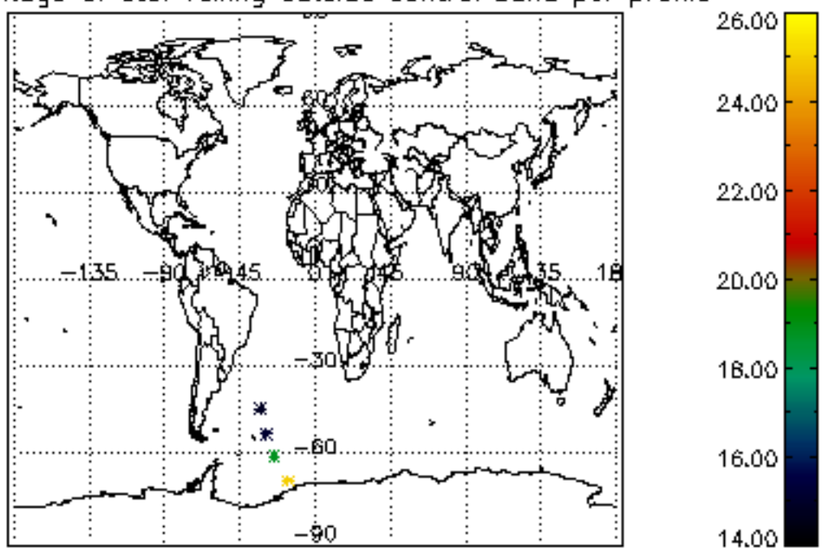
Percentage of cosmic ray hits per profile



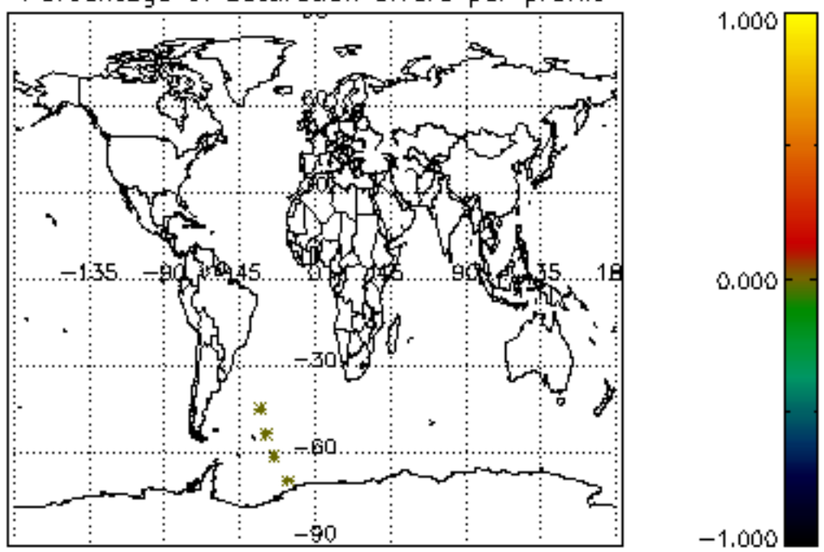
Percentage of datation errors per profile



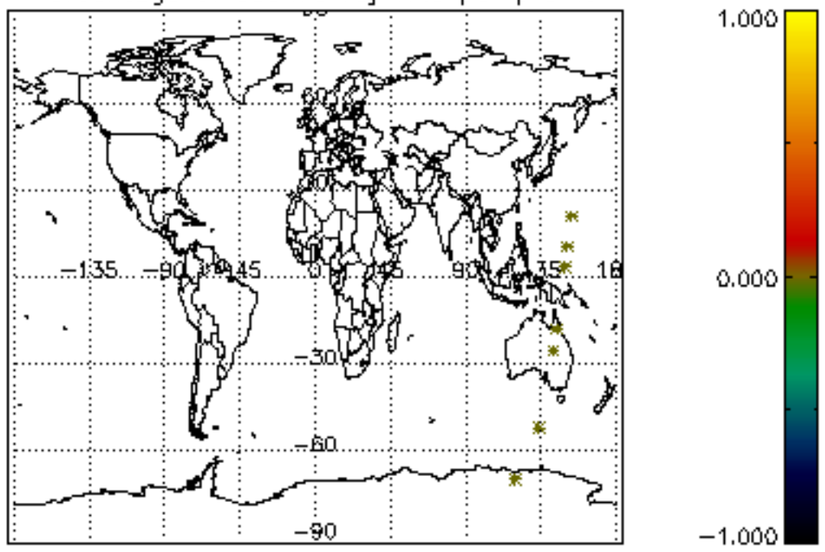
Percentage of star falling outside central band per profile



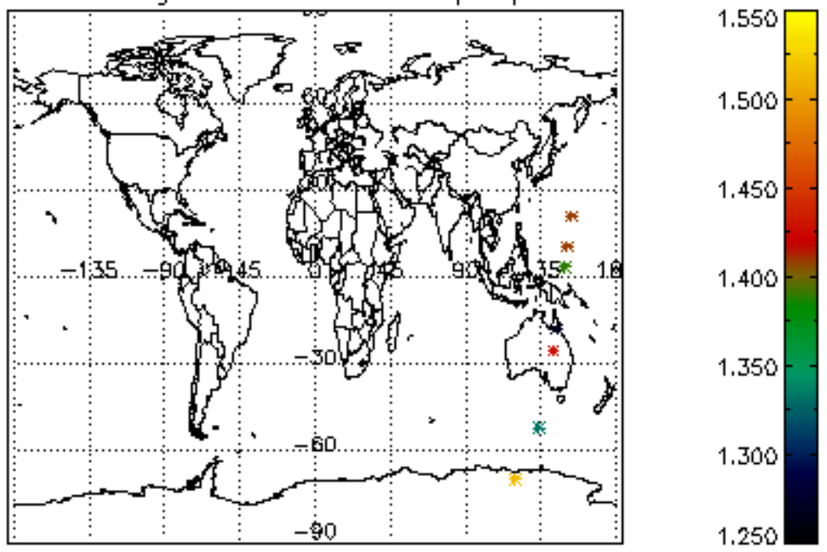
Percentage of saturation errors per profile



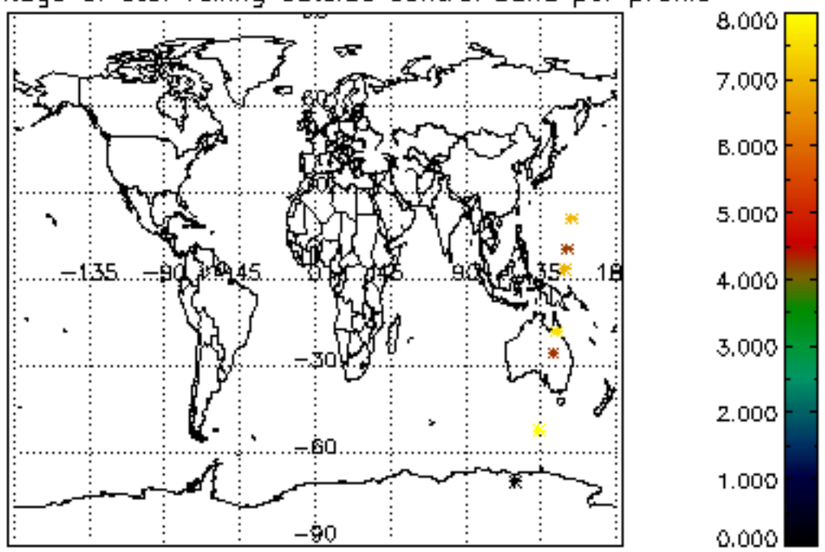
Percentage of cosmic ray hits per profile



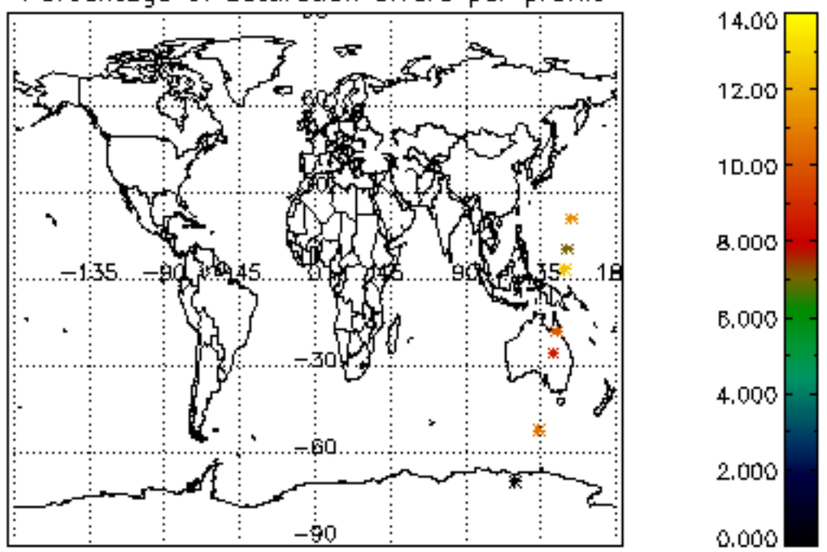
Percentage of datation errors per profile

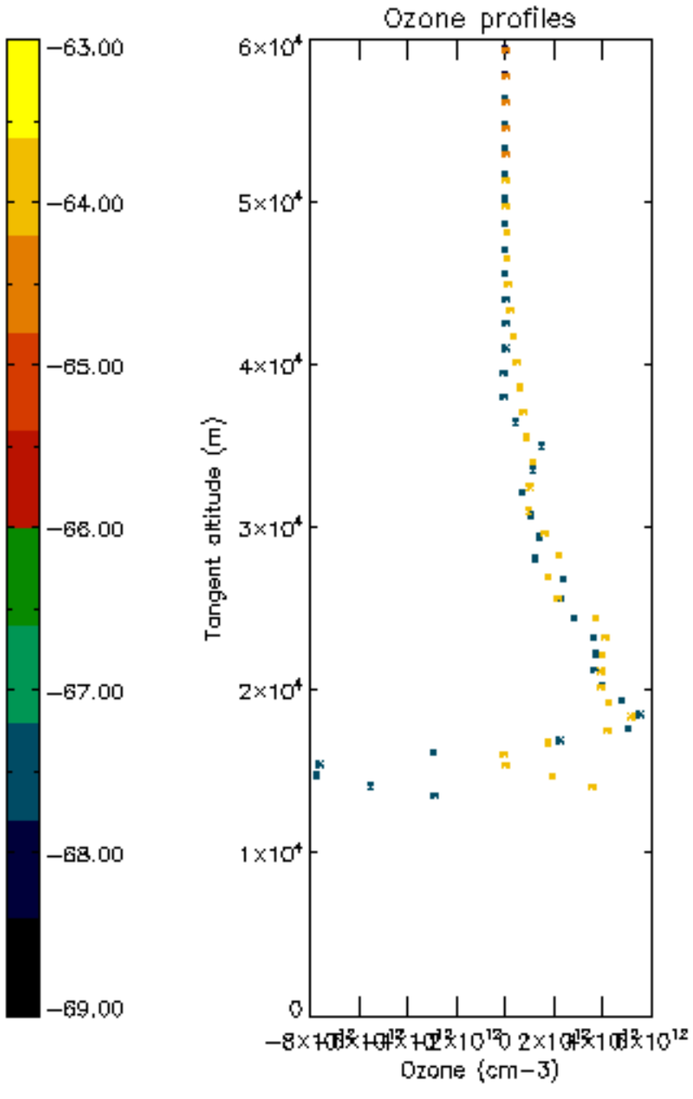


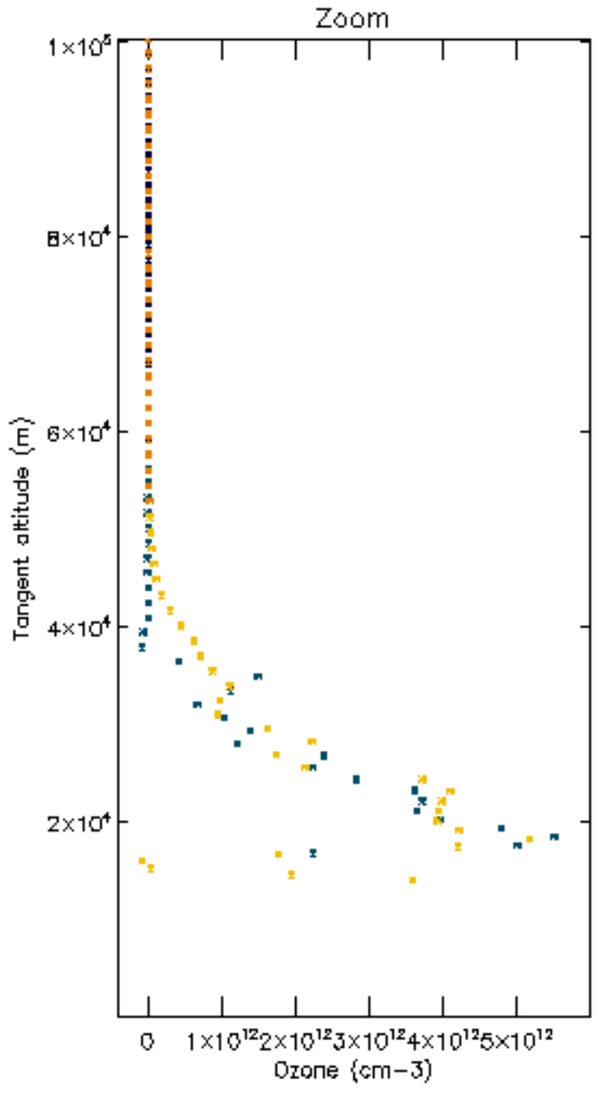
Percentage of star falling outside central band per profile

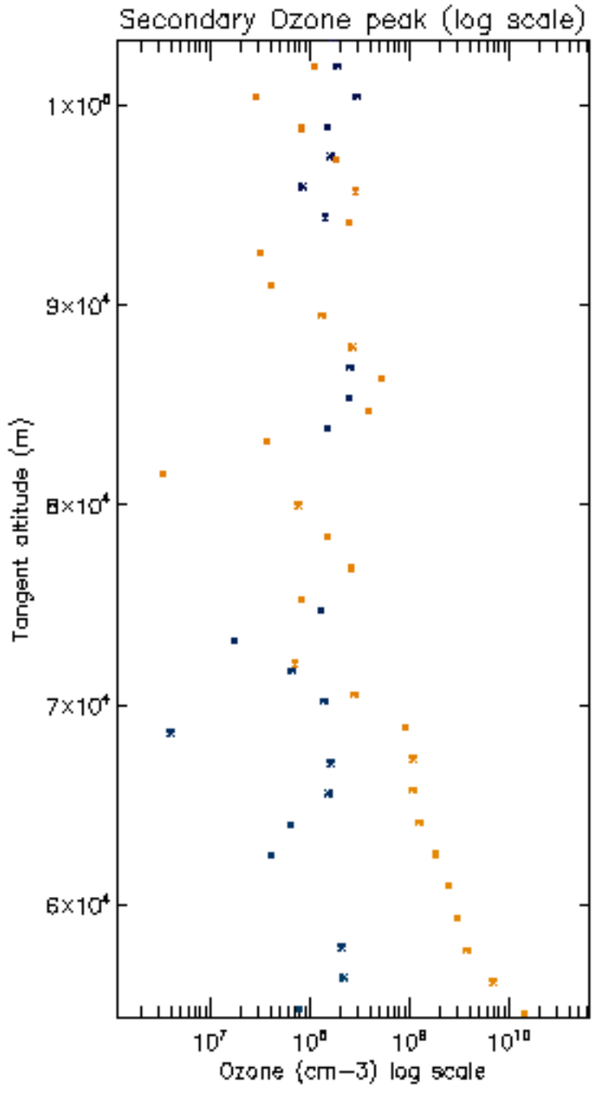


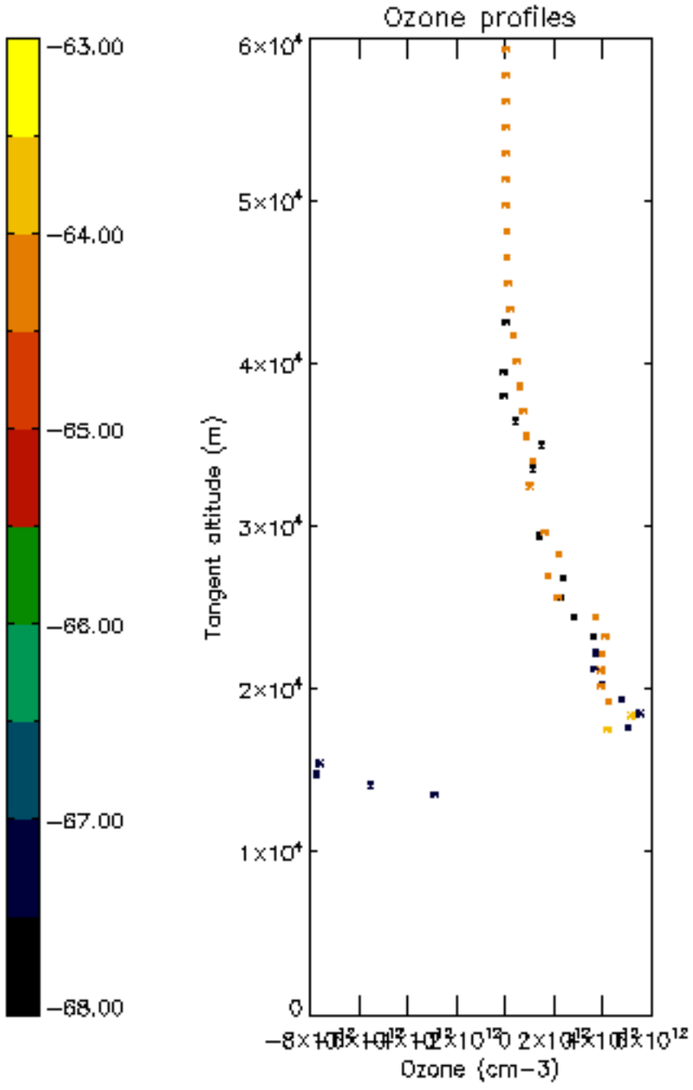
Percentage of saturation errors per profile




−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
Ozone (cm−3)

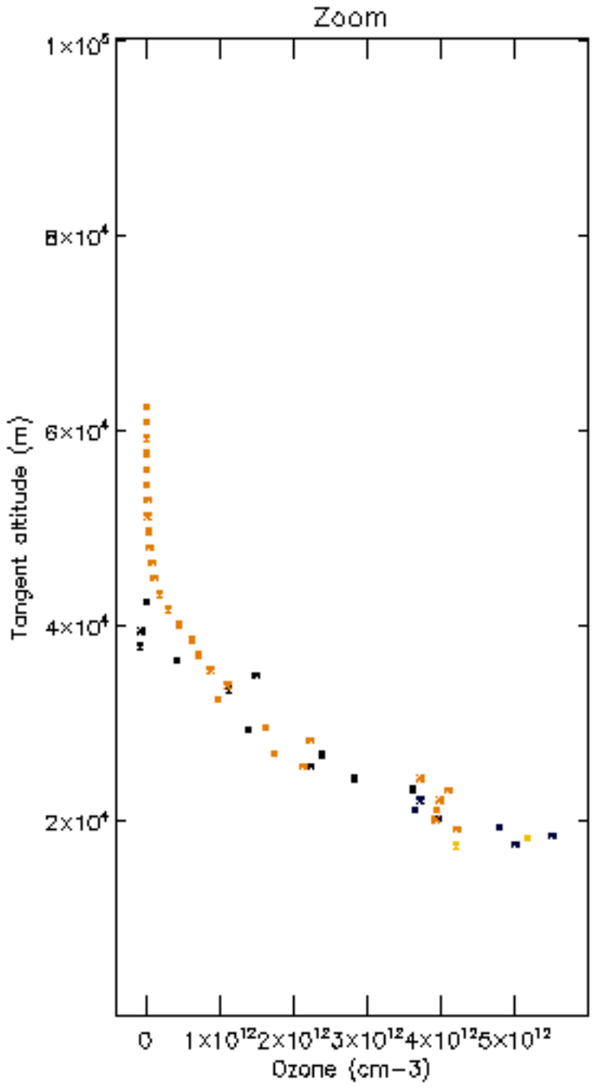

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
Ozone (cm−3)


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

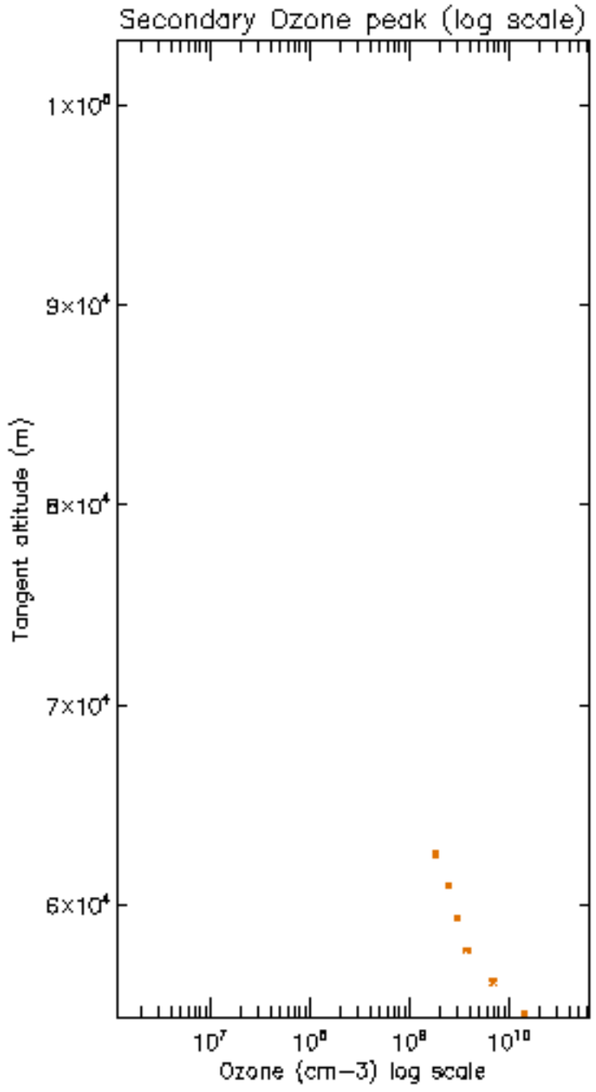


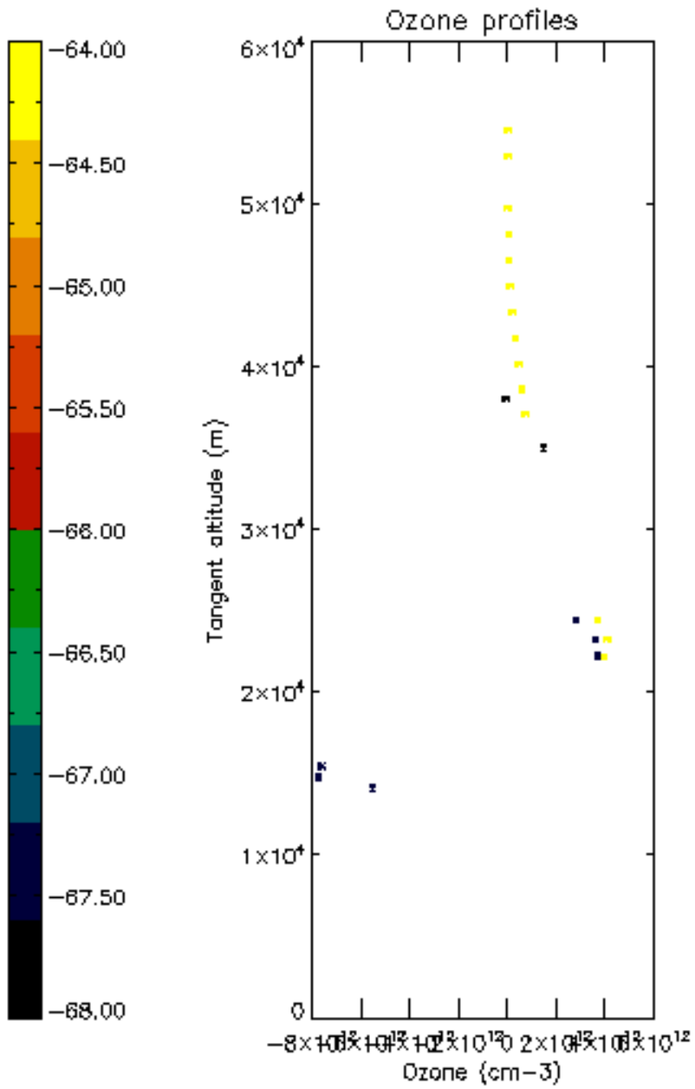
Ozone profiles

Zoom



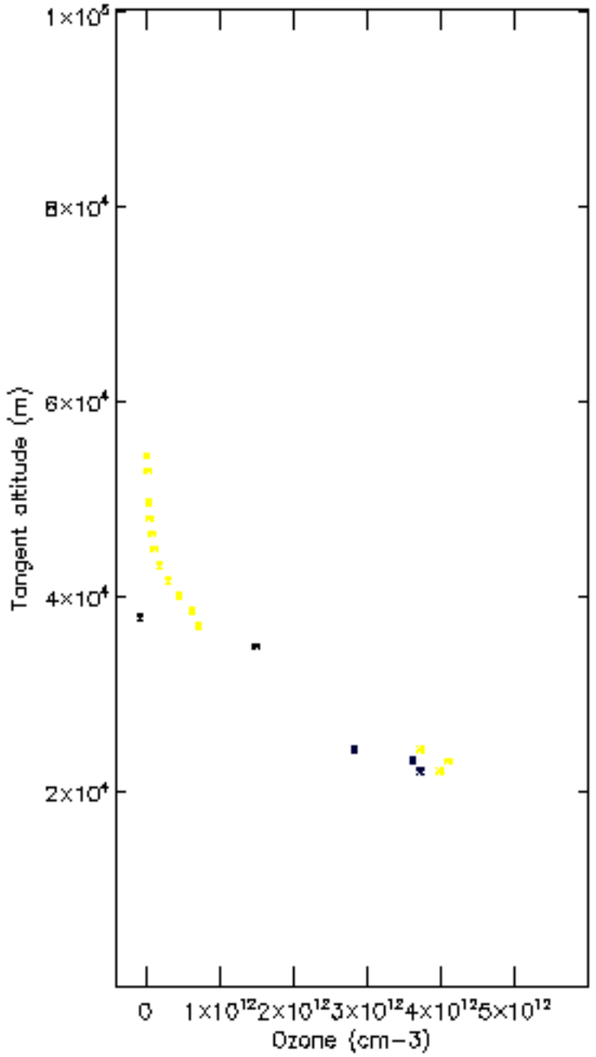
Secondary Ozone peak (log scale)



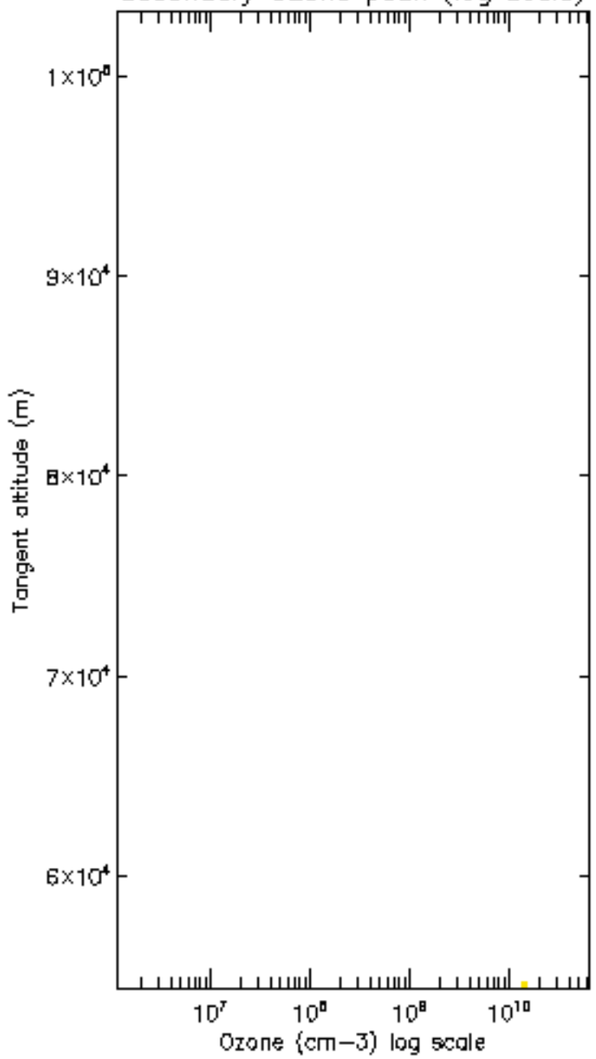


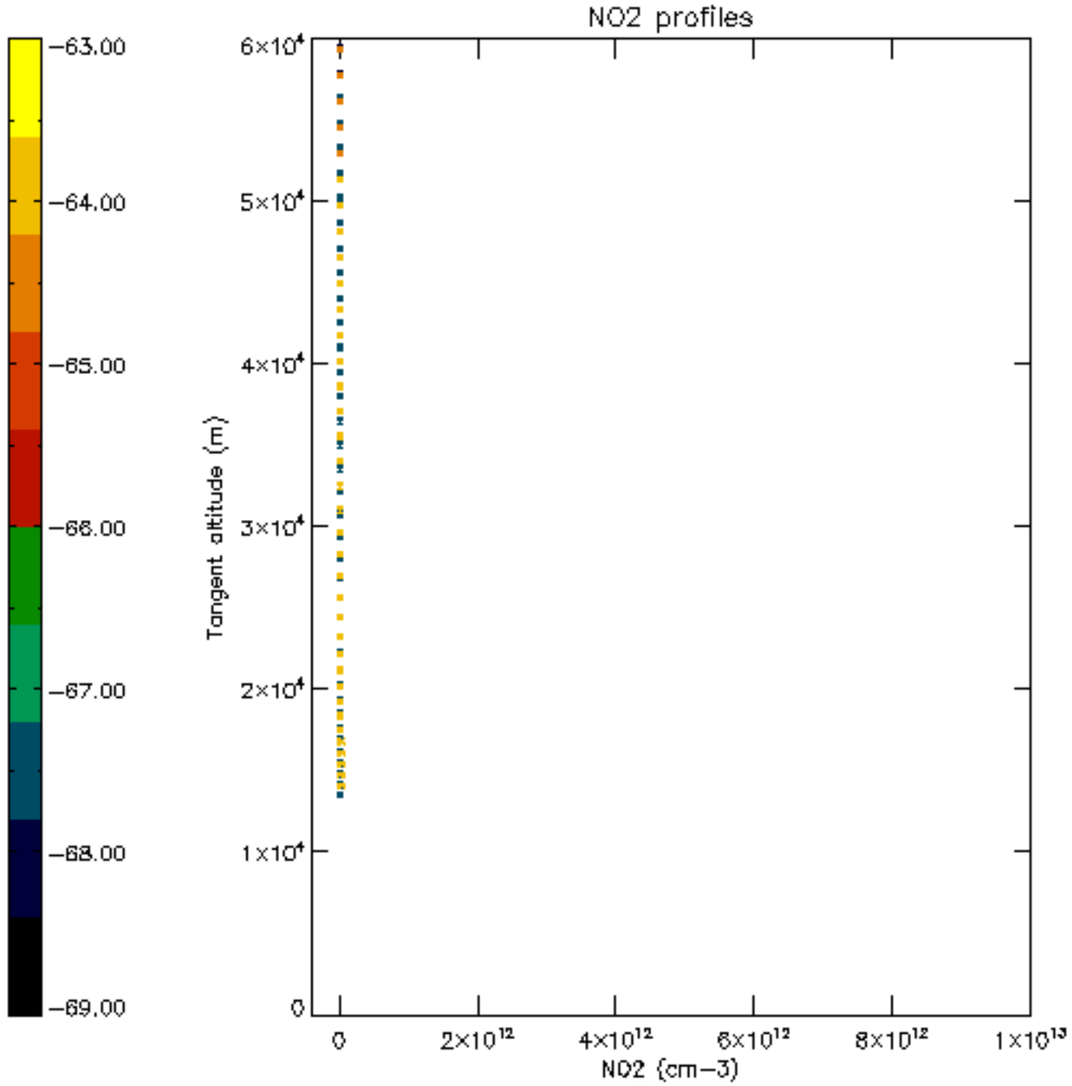
Ozone profiles

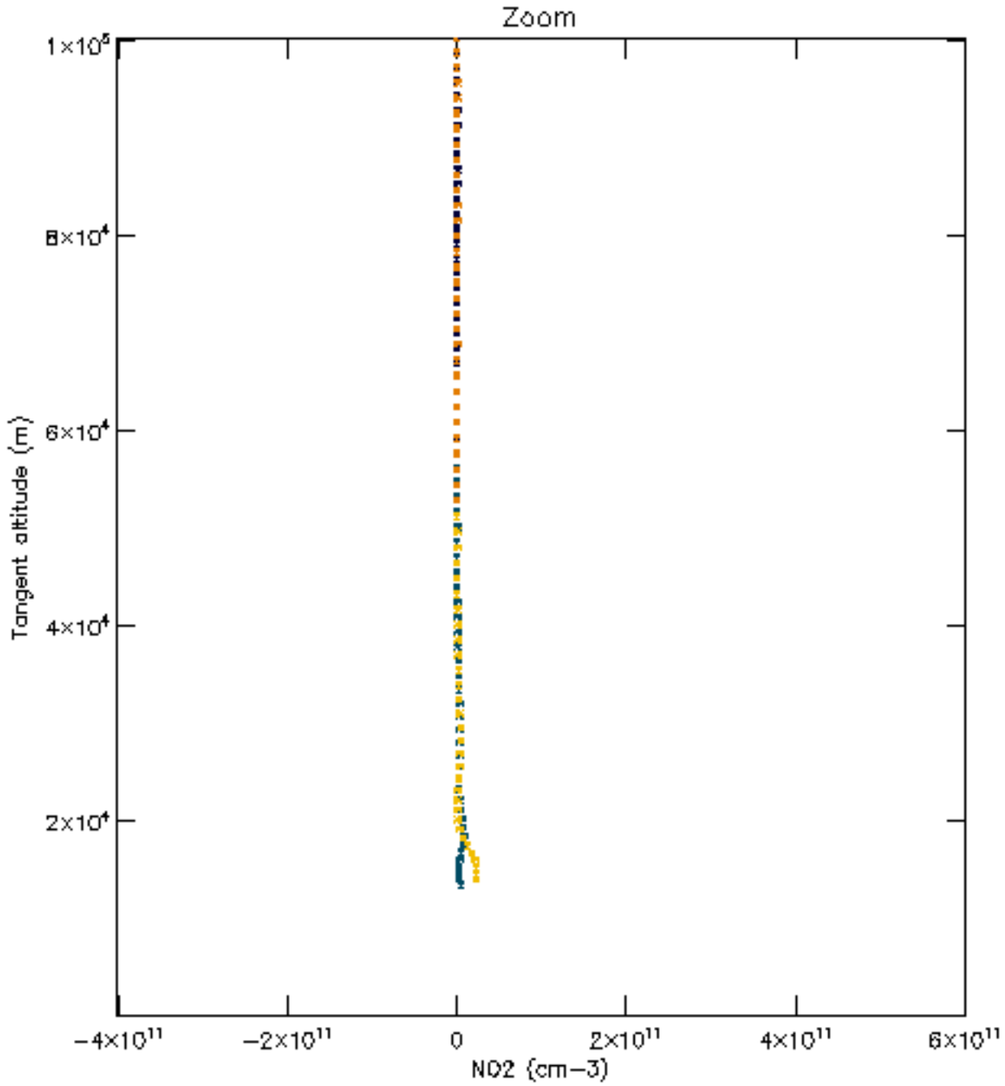
Zoom

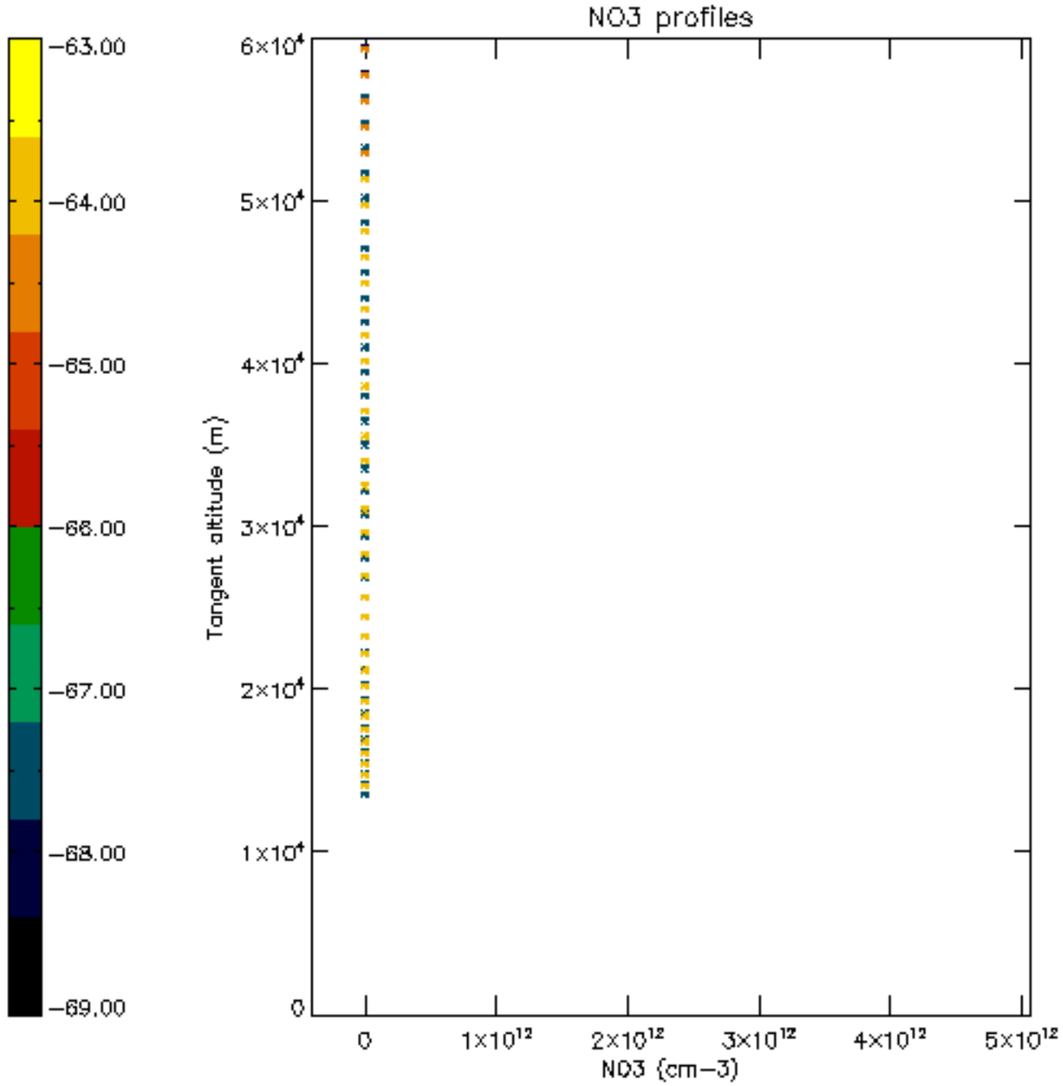


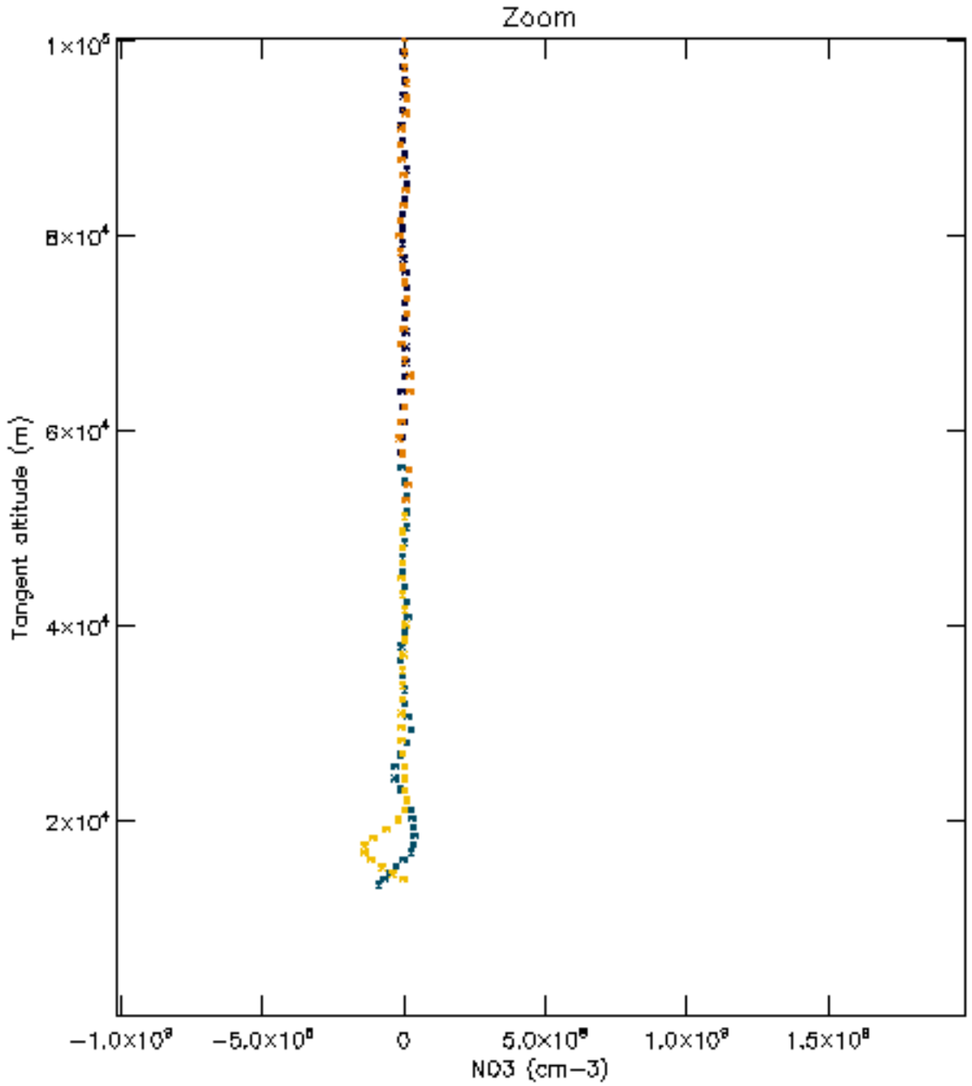
Secondary Ozone peak (log scale)




NO2 profiles
−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
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
−63.00
−64.00
−65.00
−66.00
−67.00
−68.00
−69.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
1×10¹²
2×10¹²
3×10¹²
4×10¹²
5×10¹²
NO3 (cm−3)


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