GOMOS Level 2 Daily Report

SUMMARY

---

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	29APR2013 10:58:23
Data source version	GOMOS/6.01
Start time of products	20-05-2010 (20MAY2010 00:00:00)
Stop time of products	21-05-2010 (21MAY2010 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	15
Nb of prods with errors	0

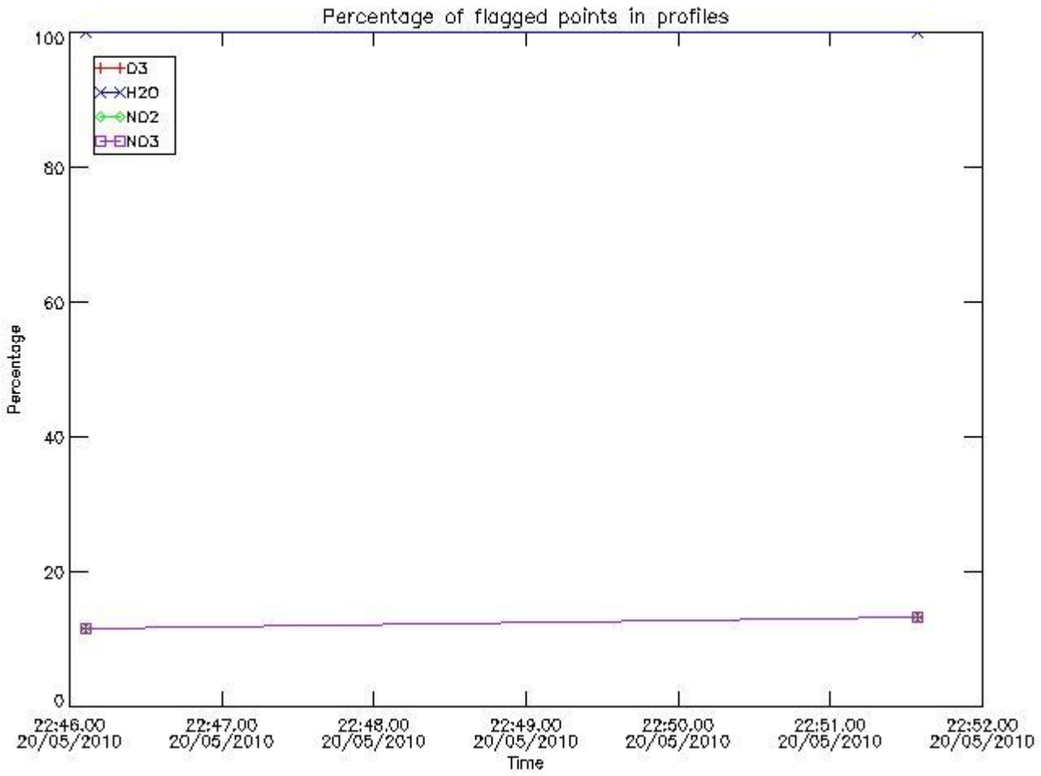
2. Summary of processed GOM_NL__2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20100520_224606_000000452089_00345_42984_0761.N1	20-MAY-2010 22:46:06	Dark	44.500	31	Alp Gru	1.7340	15200.	89	42984	No
2	GOM_NL__2PRFIN20100520_225134_000000422089_00345_42984_0762.N1	20-MAY-2010 22:51:34	Dark	42.000	45	Alp Pav	1.9400	26000.	84	42984	No
3	GOM_NL__2PRFIN20100520_225830_000000512089_00345_42984_0763.N1	20-MAY-2010 22:58:30	Straylight	51.000	141	Bet Ara	2.8400	4600.0	102	42984	No
4	GOM_NL__2PRFIN20100520_230113_000000492089_00345_42984_0764.N1	20-MAY-2010 23:01:13	Straylight	48.500	40	The Sco	1.8590	7100.0	97	42984	No
5	GOM_NL__2PRFIN20100520_230304_000000512089_00345_42984_0765.N1	20-MAY-2010 23:03:04	Straylight	51.000	25	35Lam Sco	1.6200	28000.	102	42984	No
6	GOM_NL__2PRFIN20100520_230513_000000492089_00345_42984_0766.N1	20-MAY-2010 23:05:13	Twi_and_stray	49.000	75	26Eps Sco	2.2910	4250.0	98	42984	No
7	GOM_NL__2PRFIN20100520_230809_000000542089_00345_42984_0767.N1	20-MAY-2010 23:08:09	Twi_and_stray	53.500	16	21Alp Sco	1.0200	3000.0	107	42984	No
8	GOM_NL__2PRFIN20100520_231037_000000432089_00345_42984_0768.N1	20-MAY-2010 23:10:37	Bright	42.500	97	8Bet1Sco	2.5610	30000.	85	42984	No
9	GOM_NL__2PRFIN20100520_231410_000000382089_00345_42984_0769.N1	20-MAY-2010 23:14:10	Bright	38.000	104	27Bet Lib	2.6140	13100.	76	42984	No
10	GOM_NL__2PRFIN20100520_232452_000000362089_00345_42984_0770.N1	20-MAY-2010 23:24:52	Bright	36.000	83		2.3780	11000.	72	42984	No
11	GOM_NL__2PRFIN20100520_232801_000000372089_00345_42984_0771.N1	20-MAY-2010 23:28:01	Bright	37.000	180	27Gam Boo	3.0400	8000.0	74	42984	No
12	GOM_NL__2PRFIN20100520_233620_000000412089_00345_42984_0772.N1	20-MAY-2010 23:36:20	Bright	40.500	119	14Eta Dra	2.7270	4700.0	81	42984	No
13	GOM_NL__2PRFIN20100520_233815_000000392089_00345_42984_0773.N1	20-MAY-2010 23:38:15	Bright	39.000	60	7Bet UMi	2.0810	3950.0	78	42984	No
14	GOM_NL__2PRFIN20100520_235057_000000532089_00345_42984_0774.N1	20-MAY-2010 23:50:57	Bright	53.000	76	27Gam Cas	2.3000	30000.	106	42984	No
15	GOM_NL__2PRFIN20100520_235209_000000392089_00345_42984_0775.N1	20-MAY-2010 23:52:09	Bright	38.500	68	18Alp Cas	2.2250	4500.0	77	42984	No

3. Quality information per product

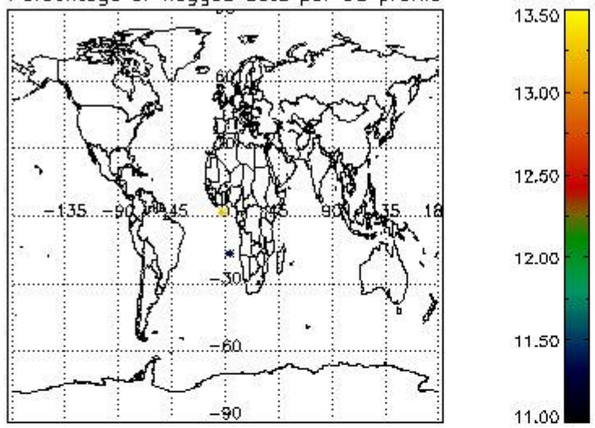
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

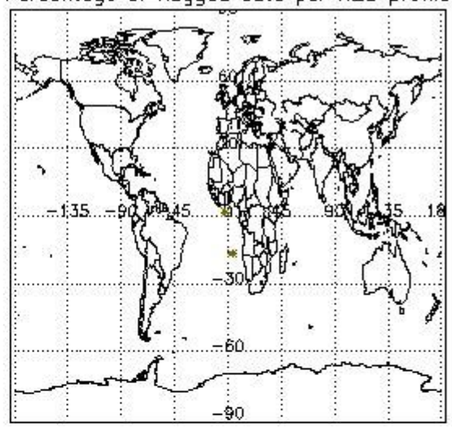


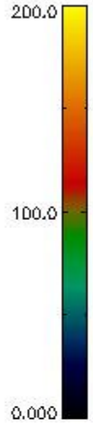
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

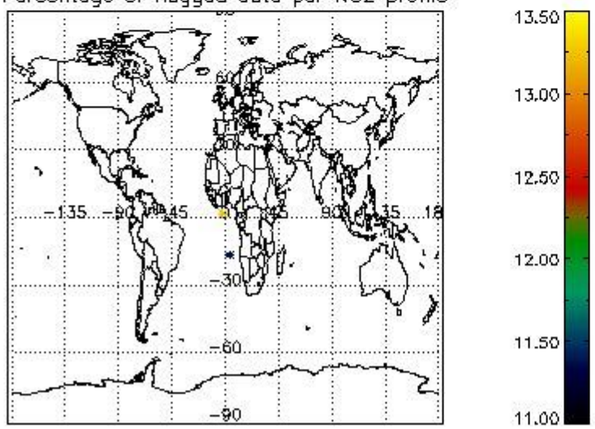


Percentage of flagged data per H2O profile

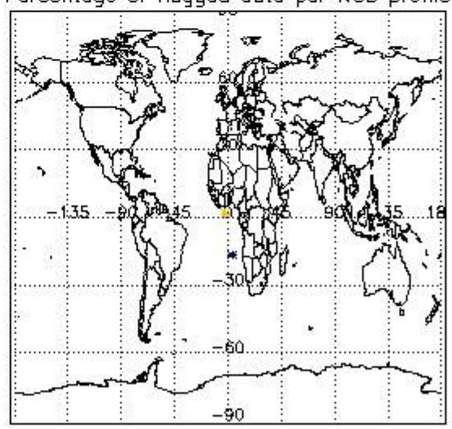


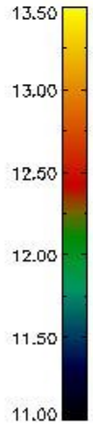


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



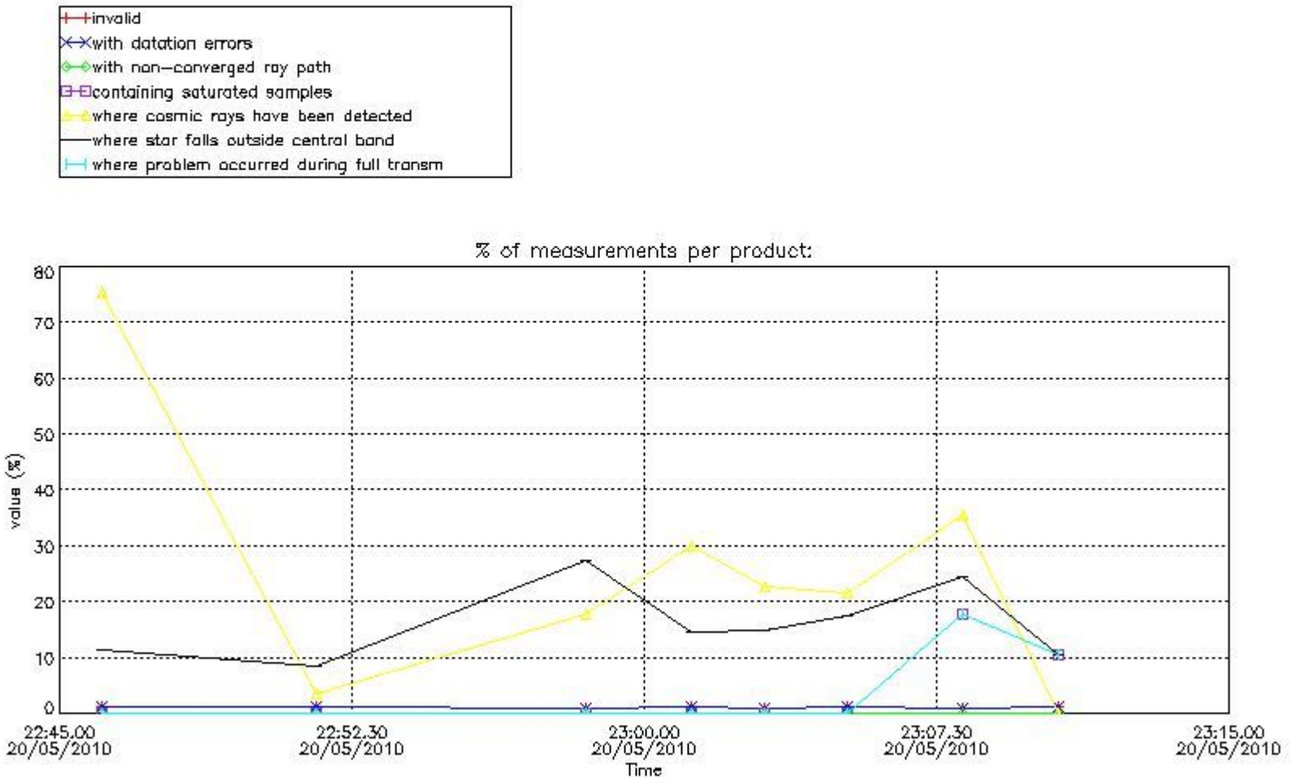


4. Level 1 quality information per product

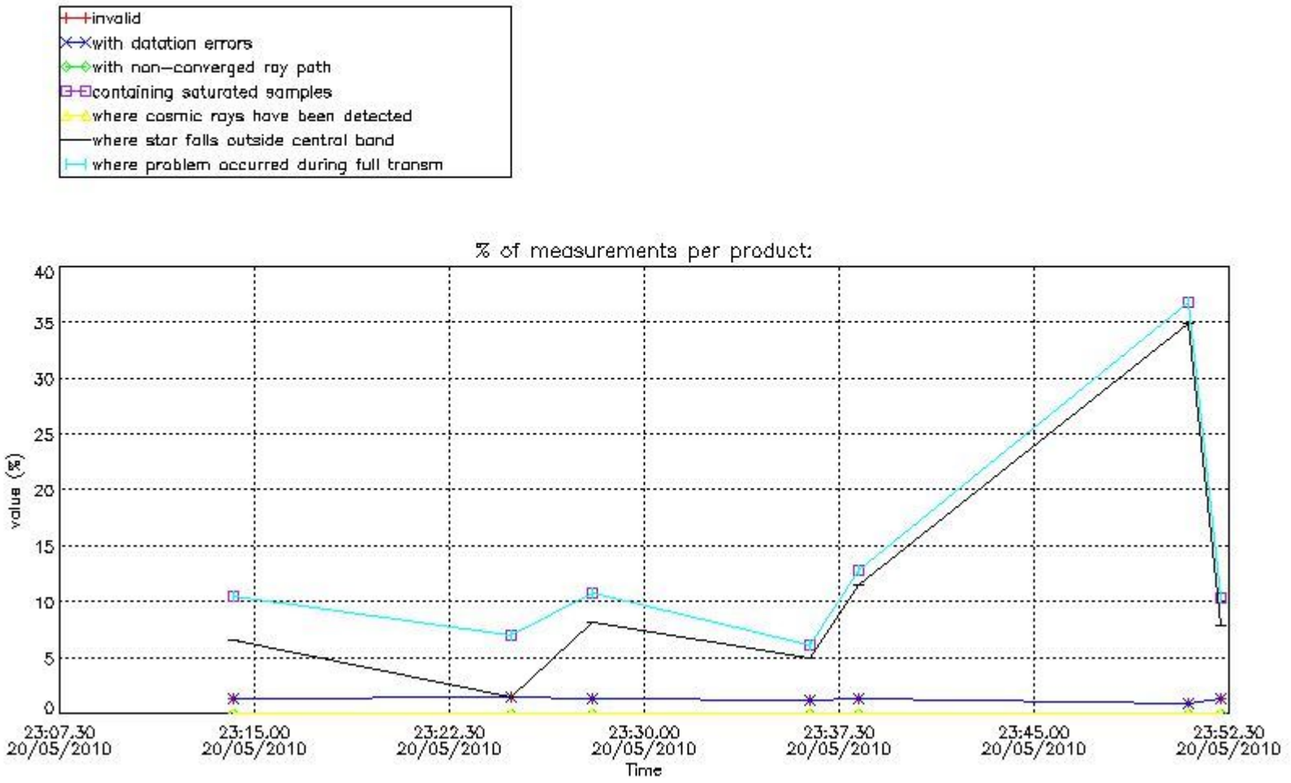
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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

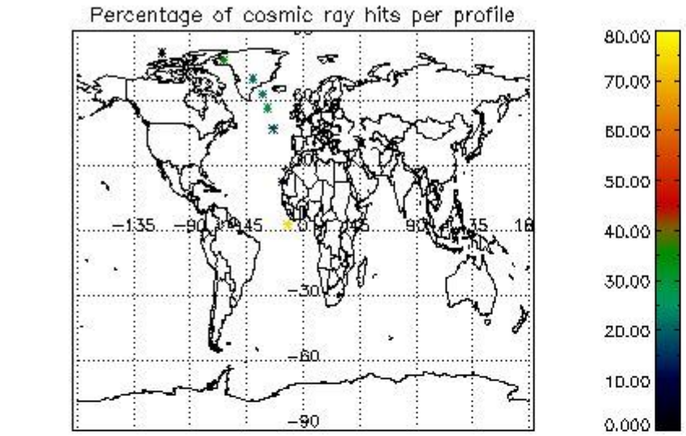


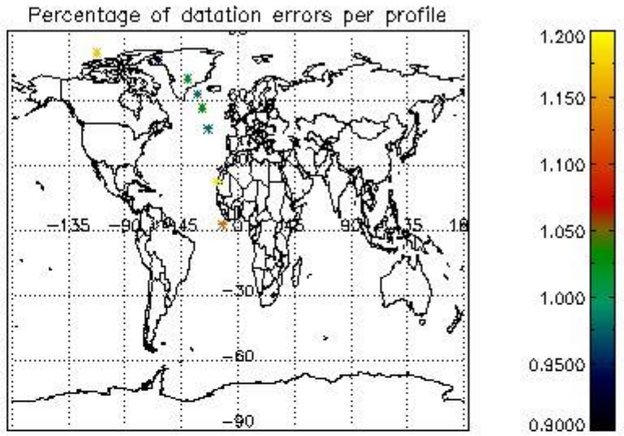
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

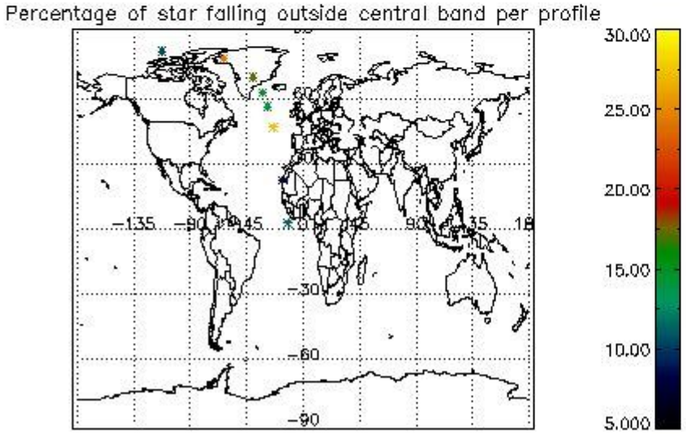


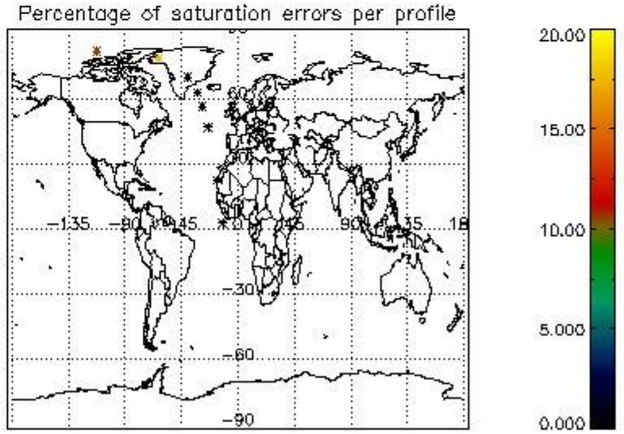
4.2 Plot quality information per product comming from level 1b processing (world map)

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

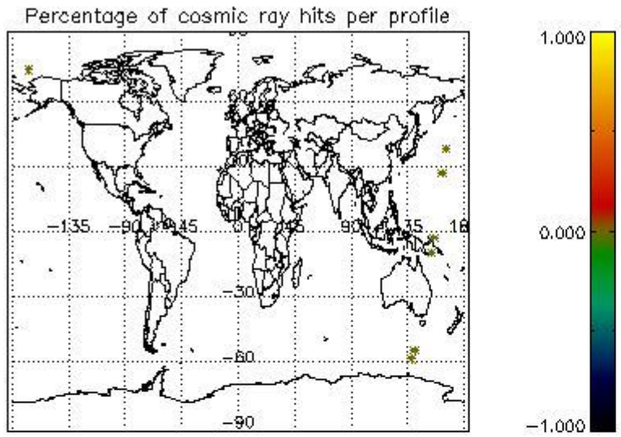


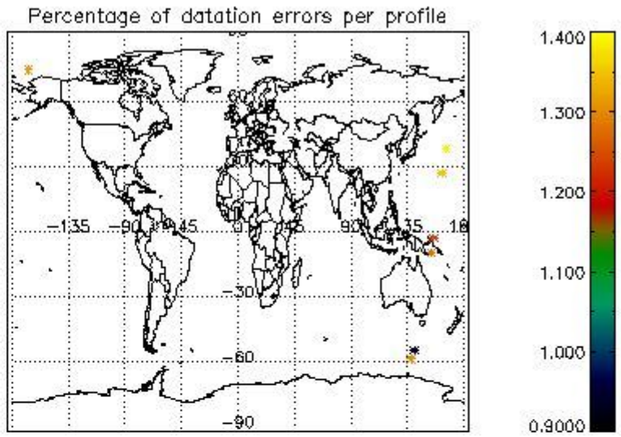


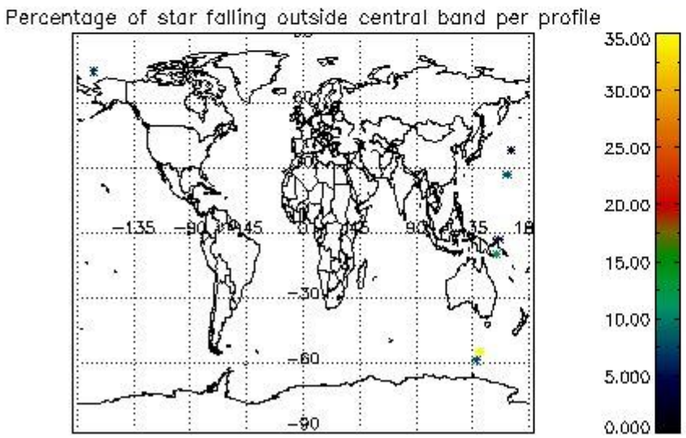


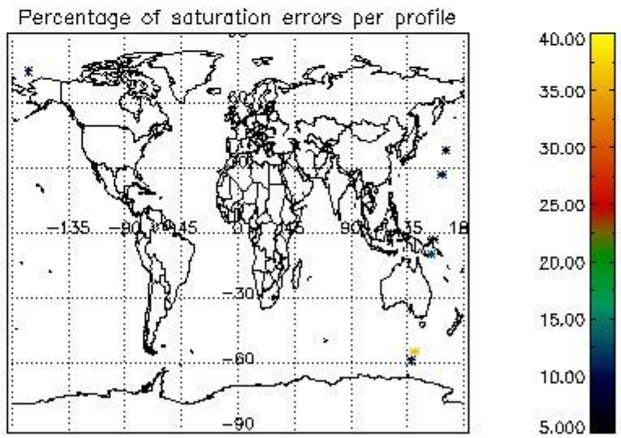


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

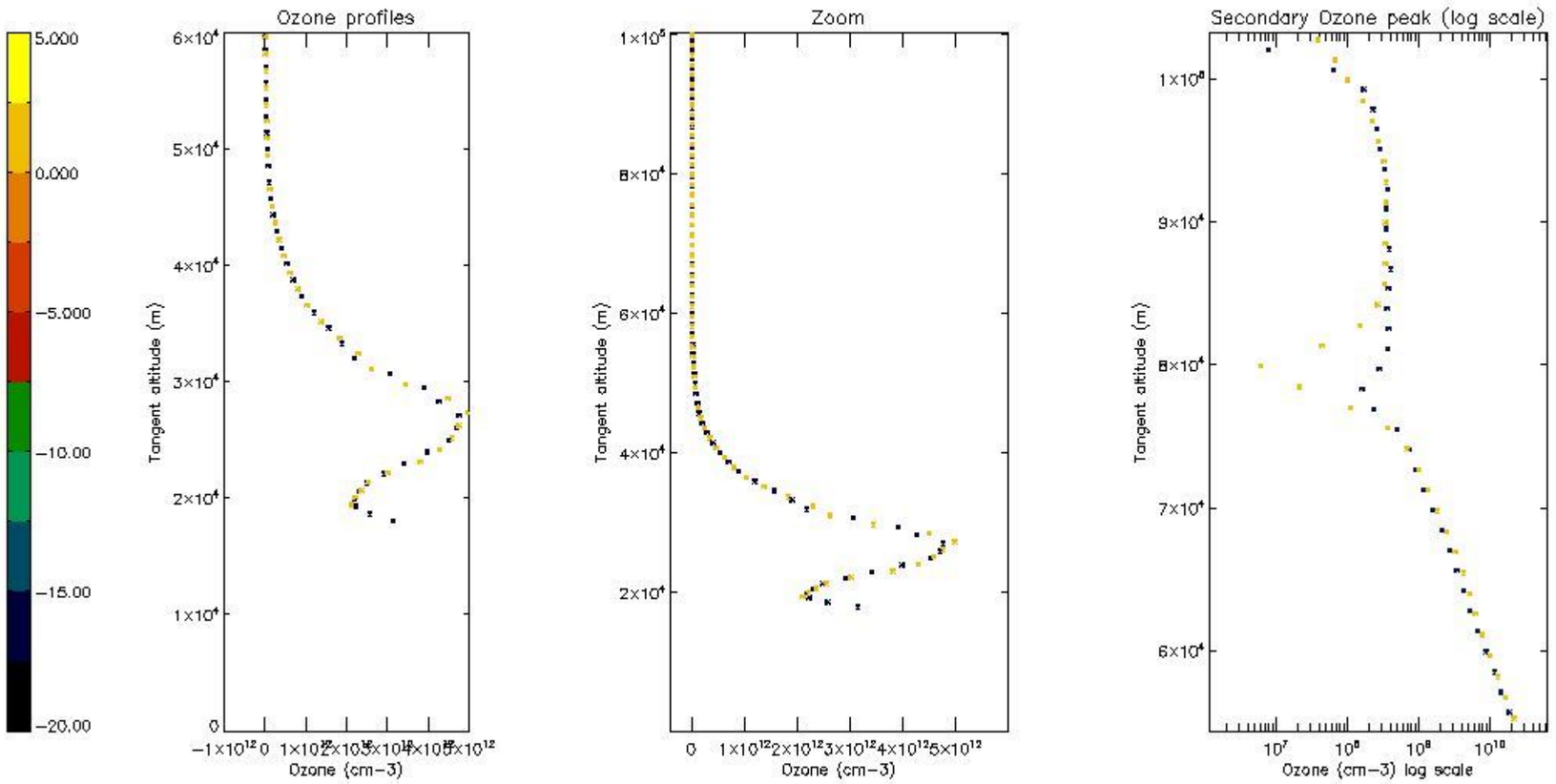
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	13
STD < 20	10

STD < 10	8
STD < 5	6

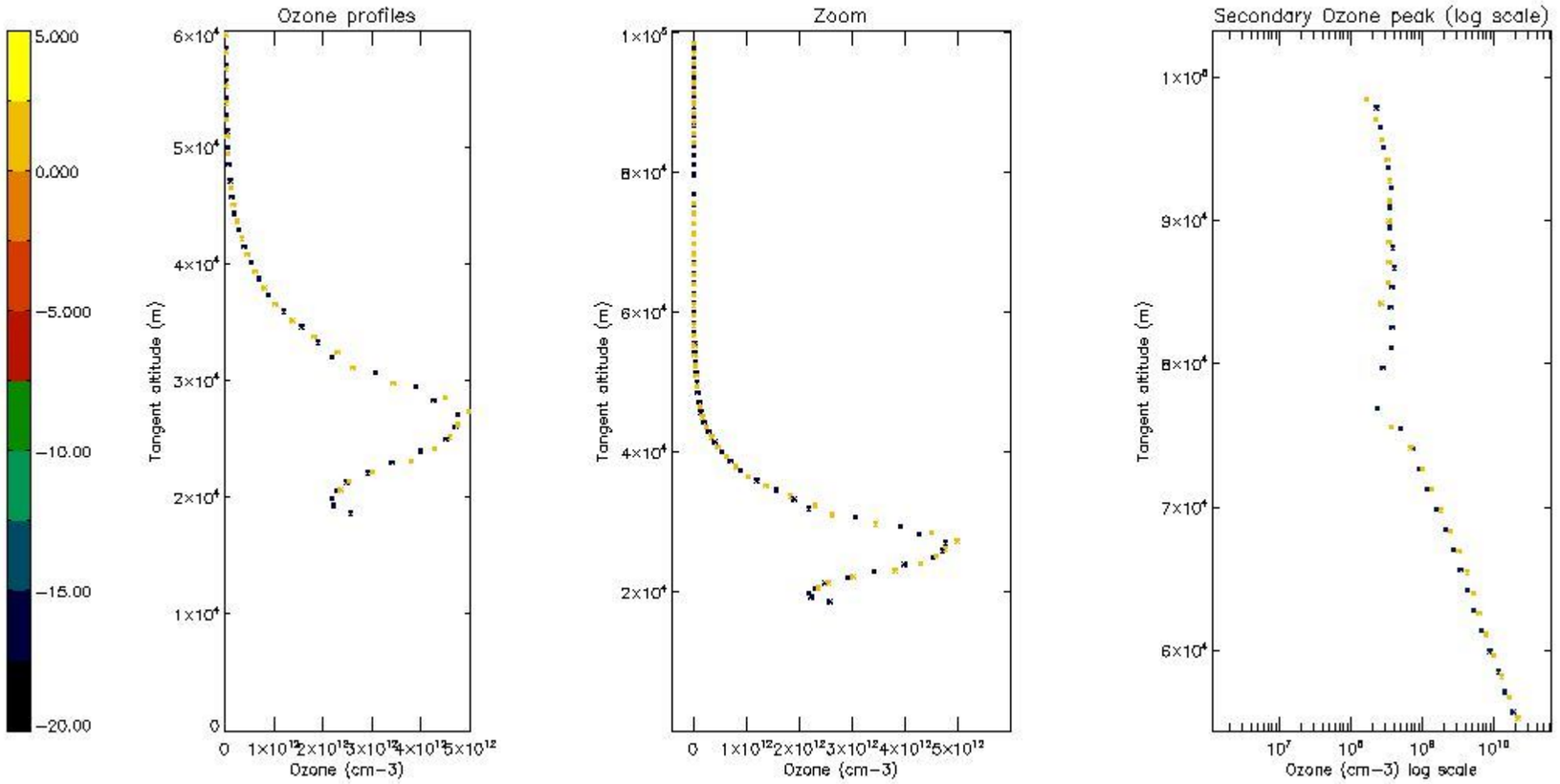
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



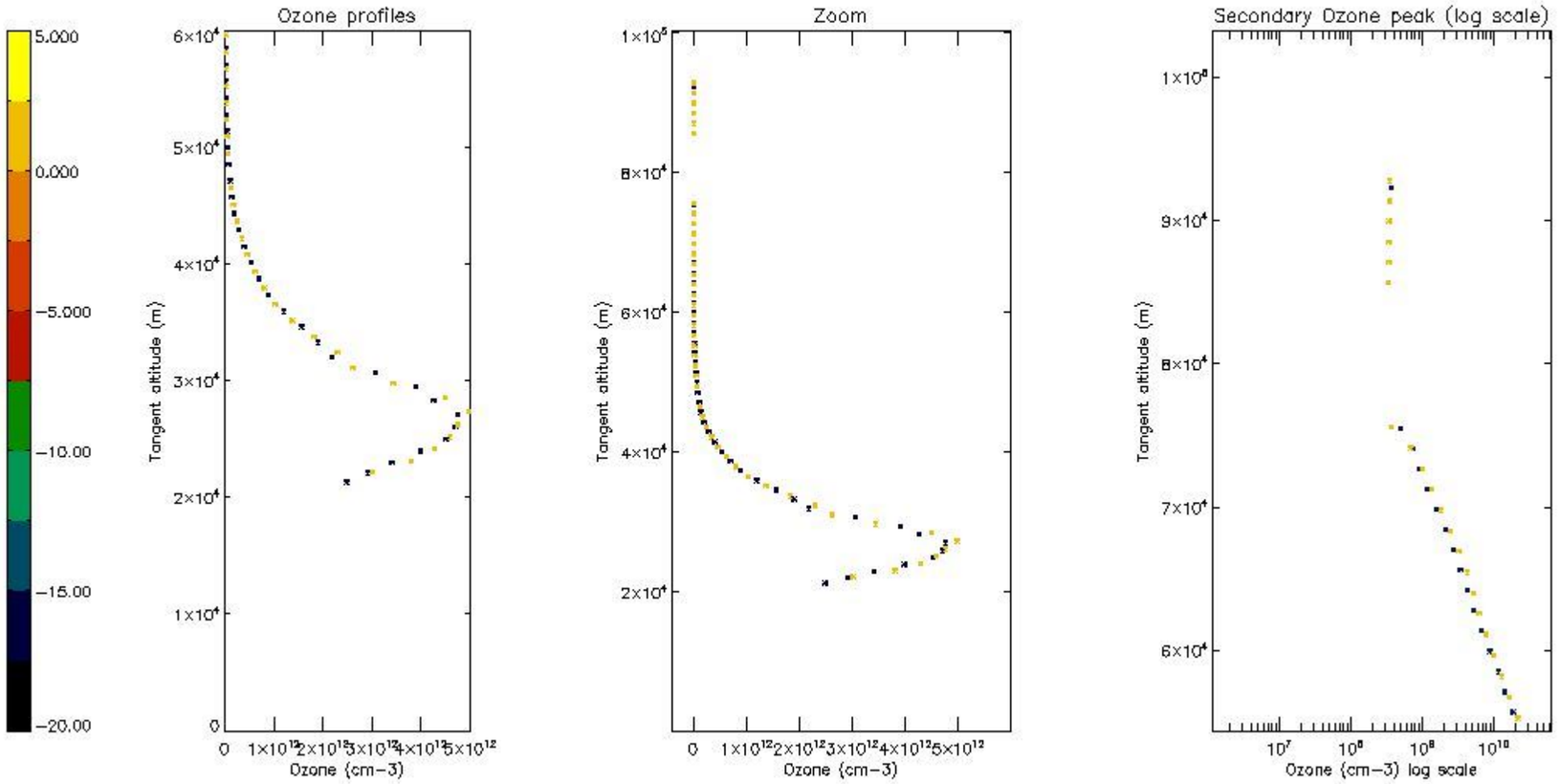
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



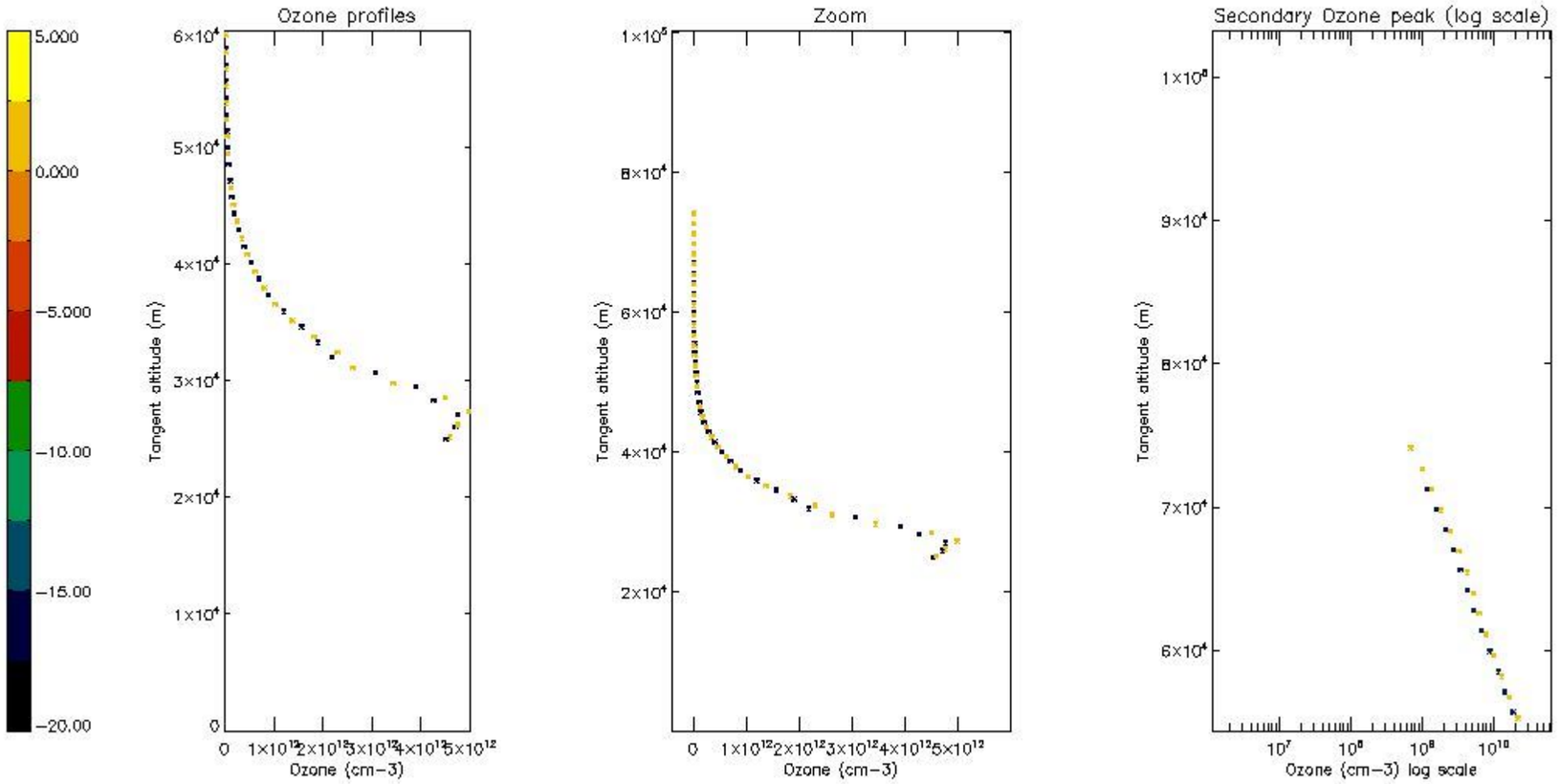
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



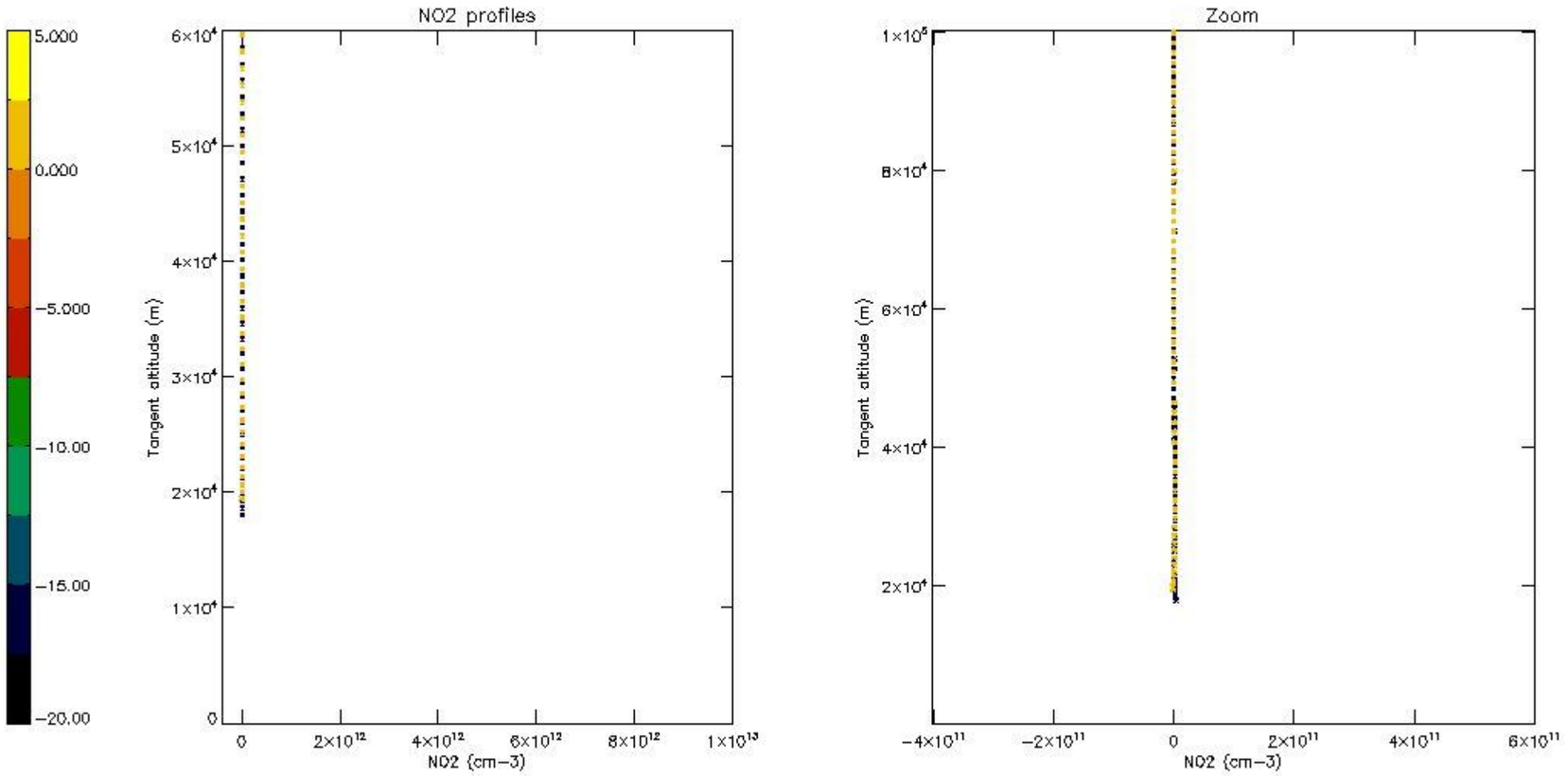
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



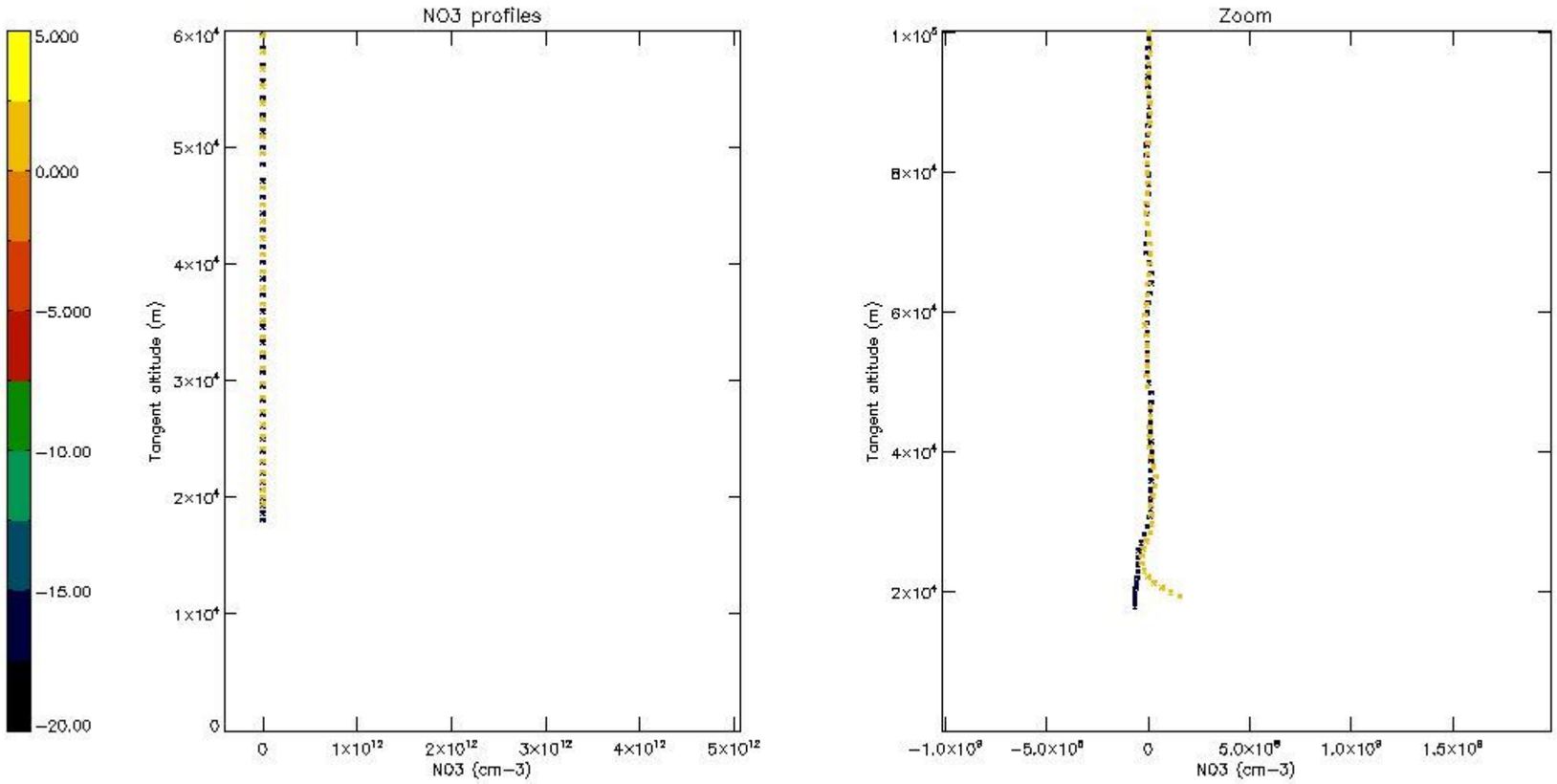
5.6 Plot NO2 profiles for all STD (dark without errors)

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	20-MAY-2010 22:46:06
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	20-MAY-2010 22:46:06
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	20-MAY-2010 22:46:06

GOMOS Level 2 Daily Report

SUMMARY

---

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	29APR2013 10:58:23
Data source version	GOMOS/6.01
Start time of products	20-05-2010 (20MAY2010 00:00:00)
Stop time of products	21-05-2010 (21MAY2010 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	15
Nb of prods with errors	0

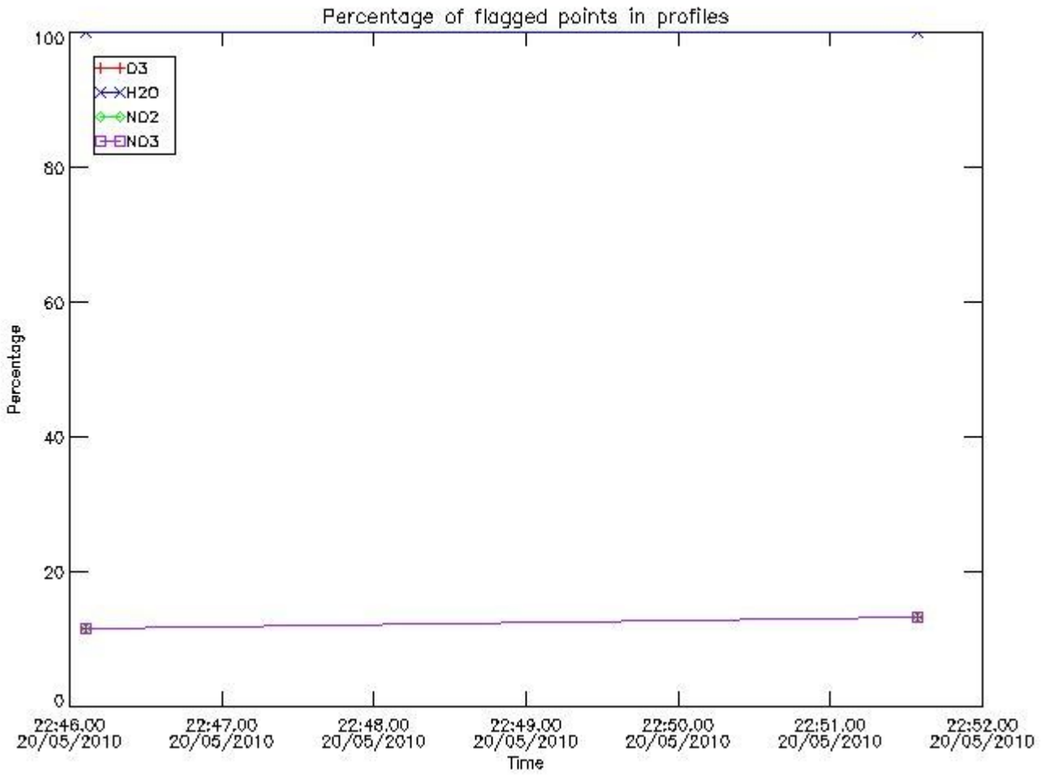
2. Summary of processed GOM_NL__2P products.

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_NL__2PRFIN20100520_224606_000000452089_00345_42984_0761.N1	20-MAY-2010 22:46:06	Dark	44.500	31	Alp Gru	1.7340	15200.	89	42984	No
2	GOM_NL__2PRFIN20100520_225134_000000422089_00345_42984_0762.N1	20-MAY-2010 22:51:34	Dark	42.000	45	Alp Pav	1.9400	26000.	84	42984	No
3	GOM_NL__2PRFIN20100520_225830_000000512089_00345_42984_0763.N1	20-MAY-2010 22:58:30	Straylight	51.000	141	Bet Ara	2.8400	4600.0	102	42984	No
4	GOM_NL__2PRFIN20100520_230113_000000492089_00345_42984_0764.N1	20-MAY-2010 23:01:13	Straylight	48.500	40	The Sco	1.8590	7100.0	97	42984	No
5	GOM_NL__2PRFIN20100520_230304_000000512089_00345_42984_0765.N1	20-MAY-2010 23:03:04	Straylight	51.000	25	35Lam Sco	1.6200	28000.	102	42984	No
6	GOM_NL__2PRFIN20100520_230513_000000492089_00345_42984_0766.N1	20-MAY-2010 23:05:13	Twi_and_stray	49.000	75	26Eps Sco	2.2910	4250.0	98	42984	No
7	GOM_NL__2PRFIN20100520_230809_000000542089_00345_42984_0767.N1	20-MAY-2010 23:08:09	Twi_and_stray	53.500	16	21Alp Sco	1.0200	3000.0	107	42984	No
8	GOM_NL__2PRFIN20100520_231037_000000432089_00345_42984_0768.N1	20-MAY-2010 23:10:37	Bright	42.500	97	8Bet1Sco	2.5610	30000.	85	42984	No
9	GOM_NL__2PRFIN20100520_231410_000000382089_00345_42984_0769.N1	20-MAY-2010 23:14:10	Bright	38.000	104	27Bet Lib	2.6140	13100.	76	42984	No
10	GOM_NL__2PRFIN20100520_232452_000000362089_00345_42984_0770.N1	20-MAY-2010 23:24:52	Bright	36.000	83		2.3780	11000.	72	42984	No
11	GOM_NL__2PRFIN20100520_232801_000000372089_00345_42984_0771.N1	20-MAY-2010 23:28:01	Bright	37.000	180	27Gam Boo	3.0400	8000.0	74	42984	No
12	GOM_NL__2PRFIN20100520_233620_000000412089_00345_42984_0772.N1	20-MAY-2010 23:36:20	Bright	40.500	119	14Eta Dra	2.7270	4700.0	81	42984	No
13	GOM_NL__2PRFIN20100520_233815_000000392089_00345_42984_0773.N1	20-MAY-2010 23:38:15	Bright	39.000	60	7Bet UMi	2.0810	3950.0	78	42984	No
14	GOM_NL__2PRFIN20100520_235057_000000532089_00345_42984_0774.N1	20-MAY-2010 23:50:57	Bright	53.000	76	27Gam Cas	2.3000	30000.	106	42984	No
15	GOM_NL__2PRFIN20100520_235209_000000392089_00345_42984_0775.N1	20-MAY-2010 23:52:09	Bright	38.500	68	18Alp Cas	2.2250	4500.0	77	42984	No

3. Quality information per product

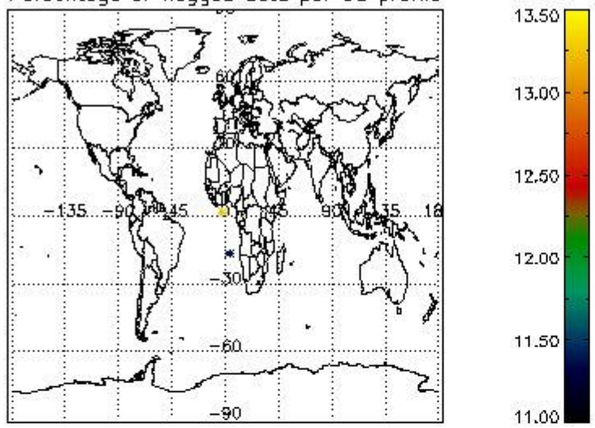
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

3.1 Plot quality information per product (time dependant)

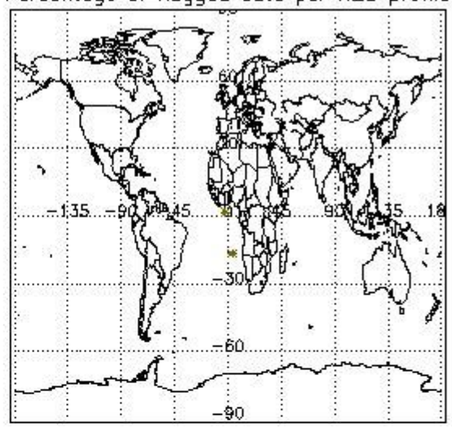


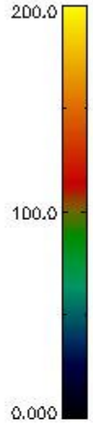
3.2 Plot quality information per product (world map)

Percentage of flagged data per O3 profile

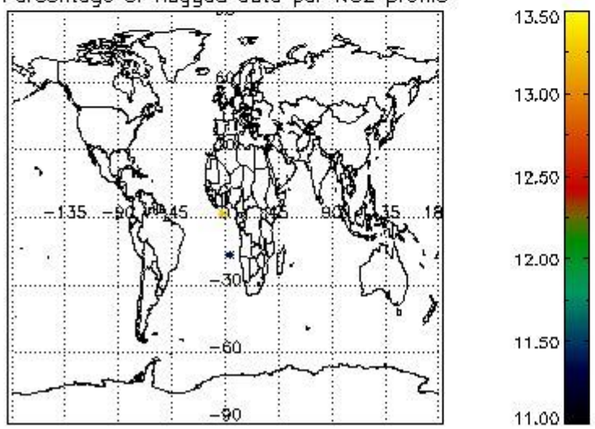


Percentage of flagged data per H2O profile

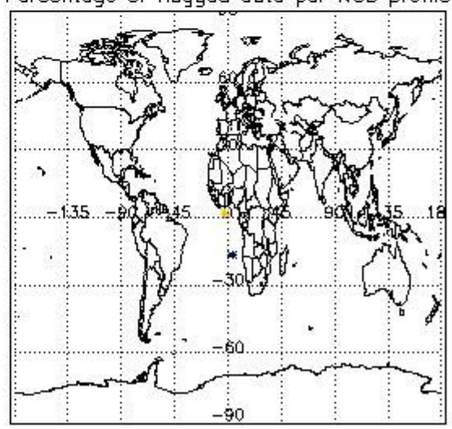


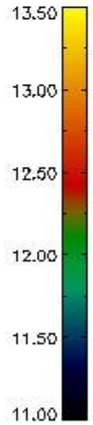


Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile



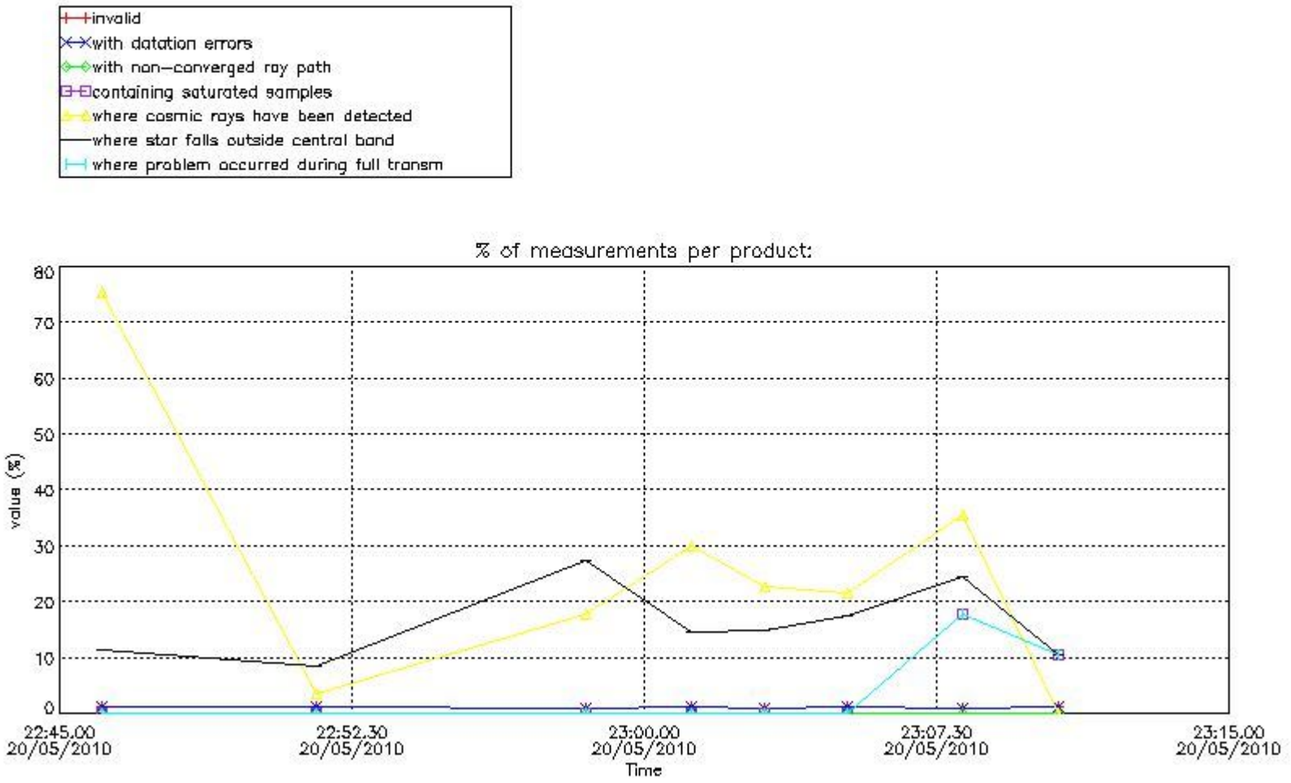


4. Level 1 quality information per product

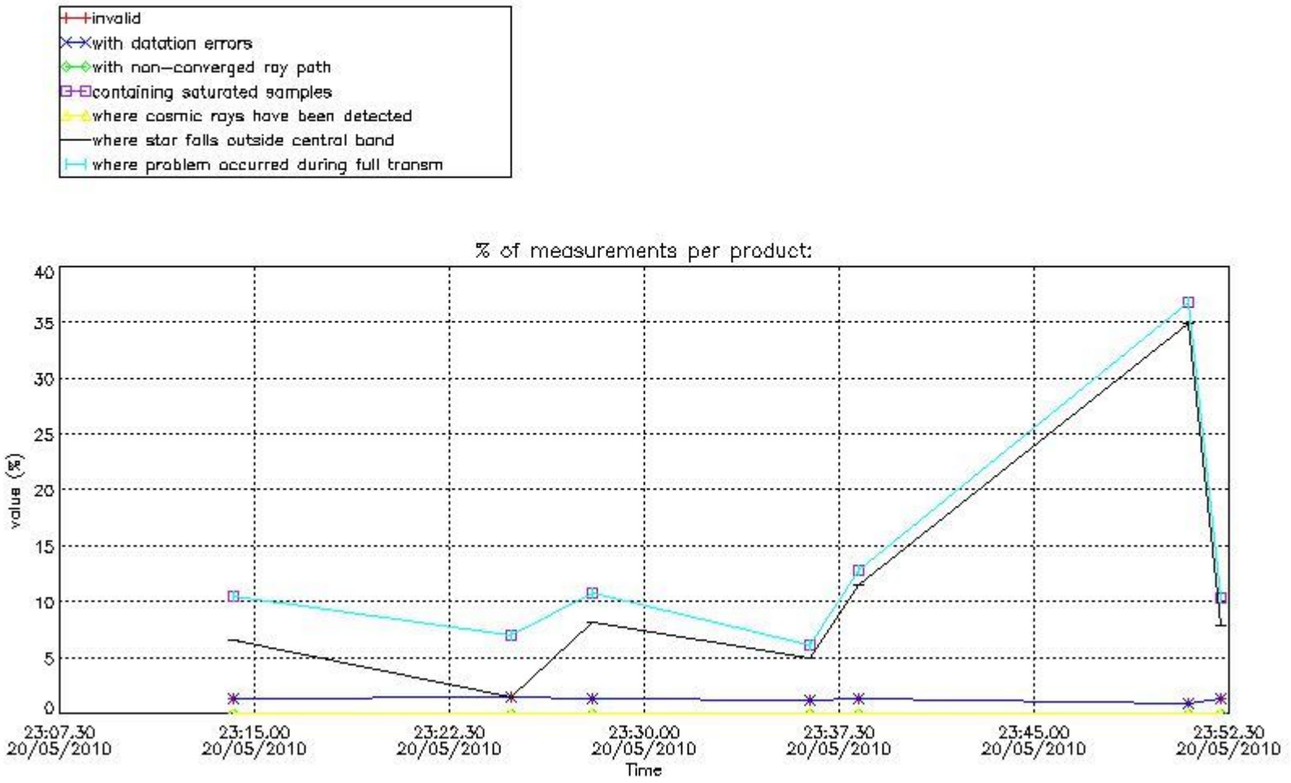
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processsing. Products without errors (error flag in the MPH set to "0") are used.

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

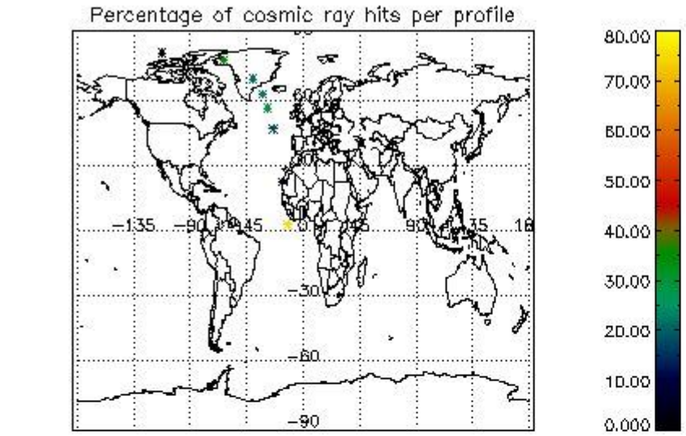


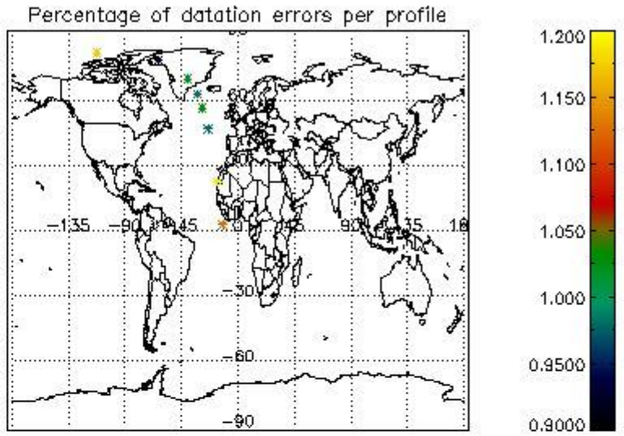
4.1.2 Plot level 1 quality information per product (time dependant): ENVISAT DESCENDING passes

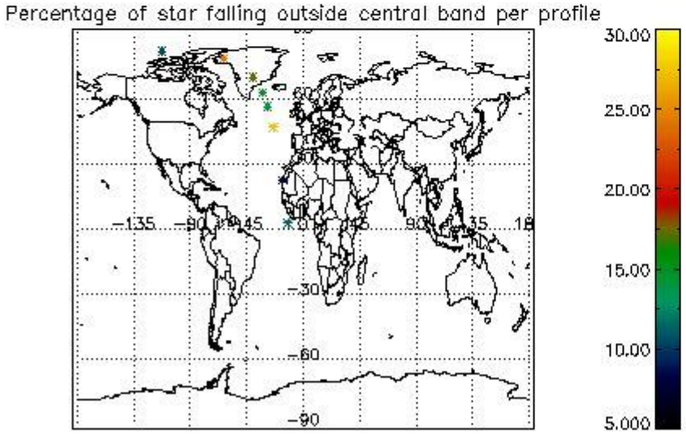


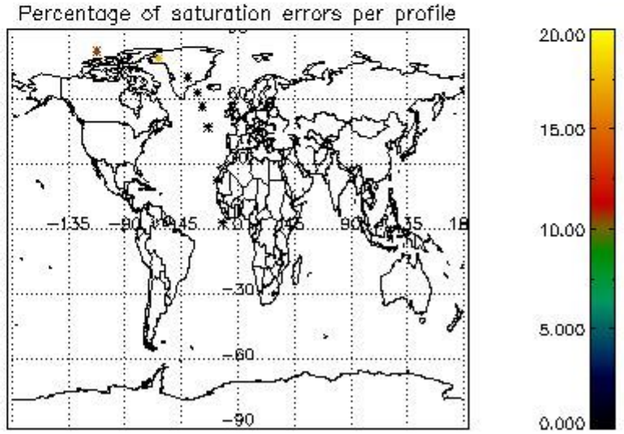
4.2 Plot quality information per product comming from level 1b processing (world map)

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

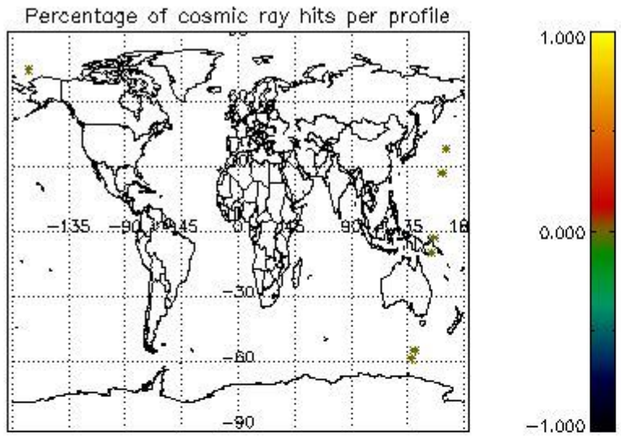


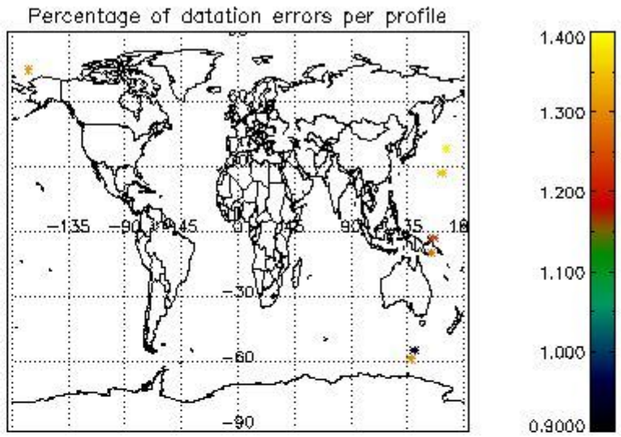


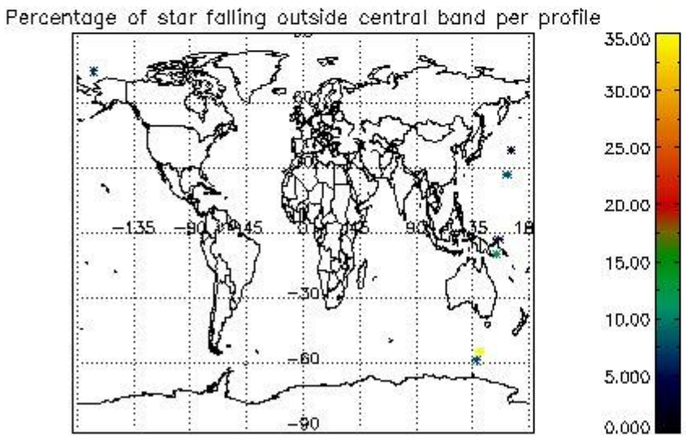


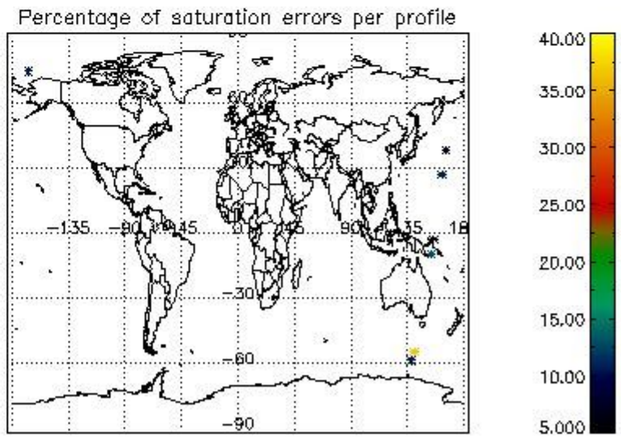


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes









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

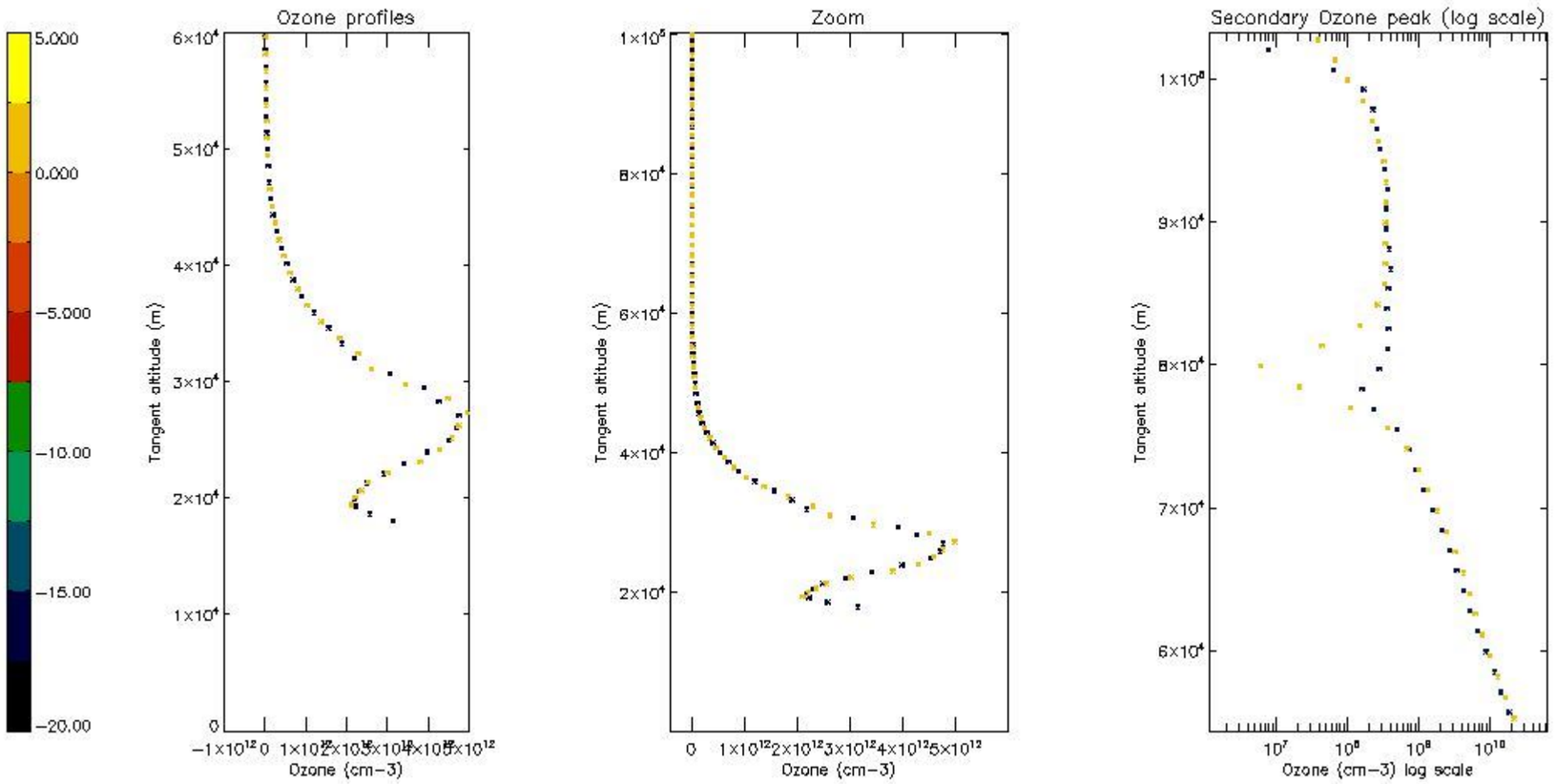
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	13
STD < 20	10

STD < 10	8
STD < 5	6

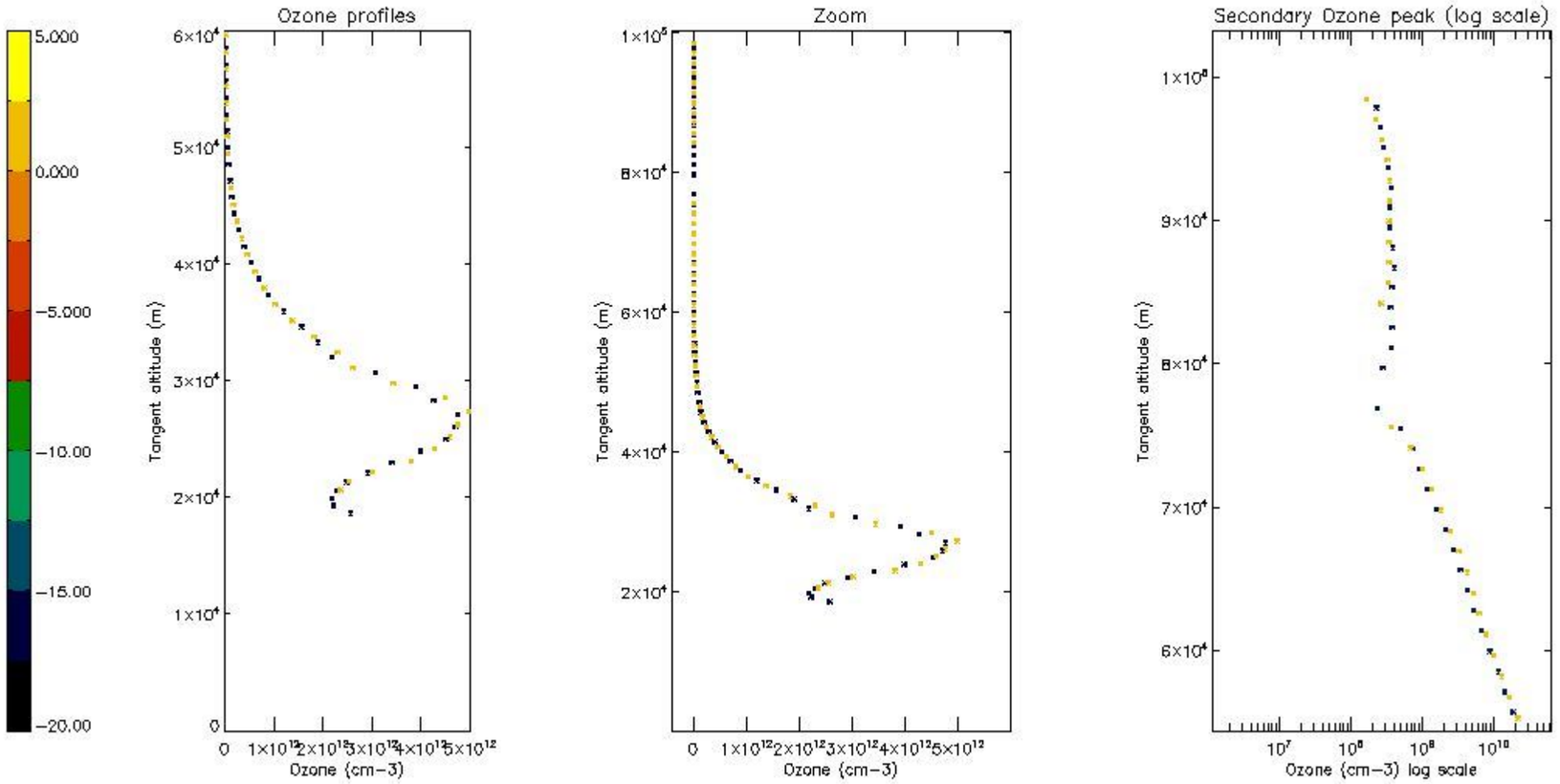
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



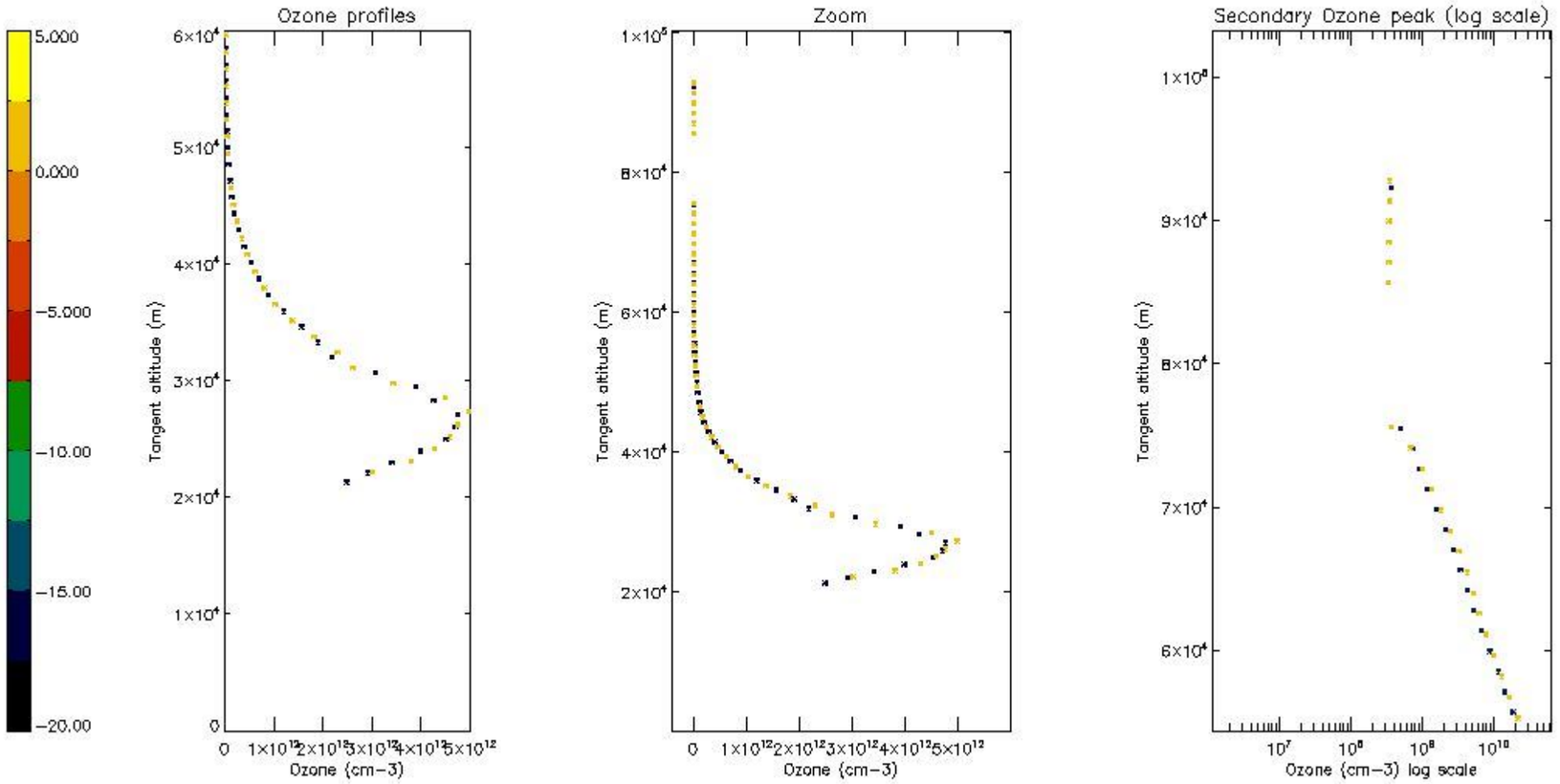
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



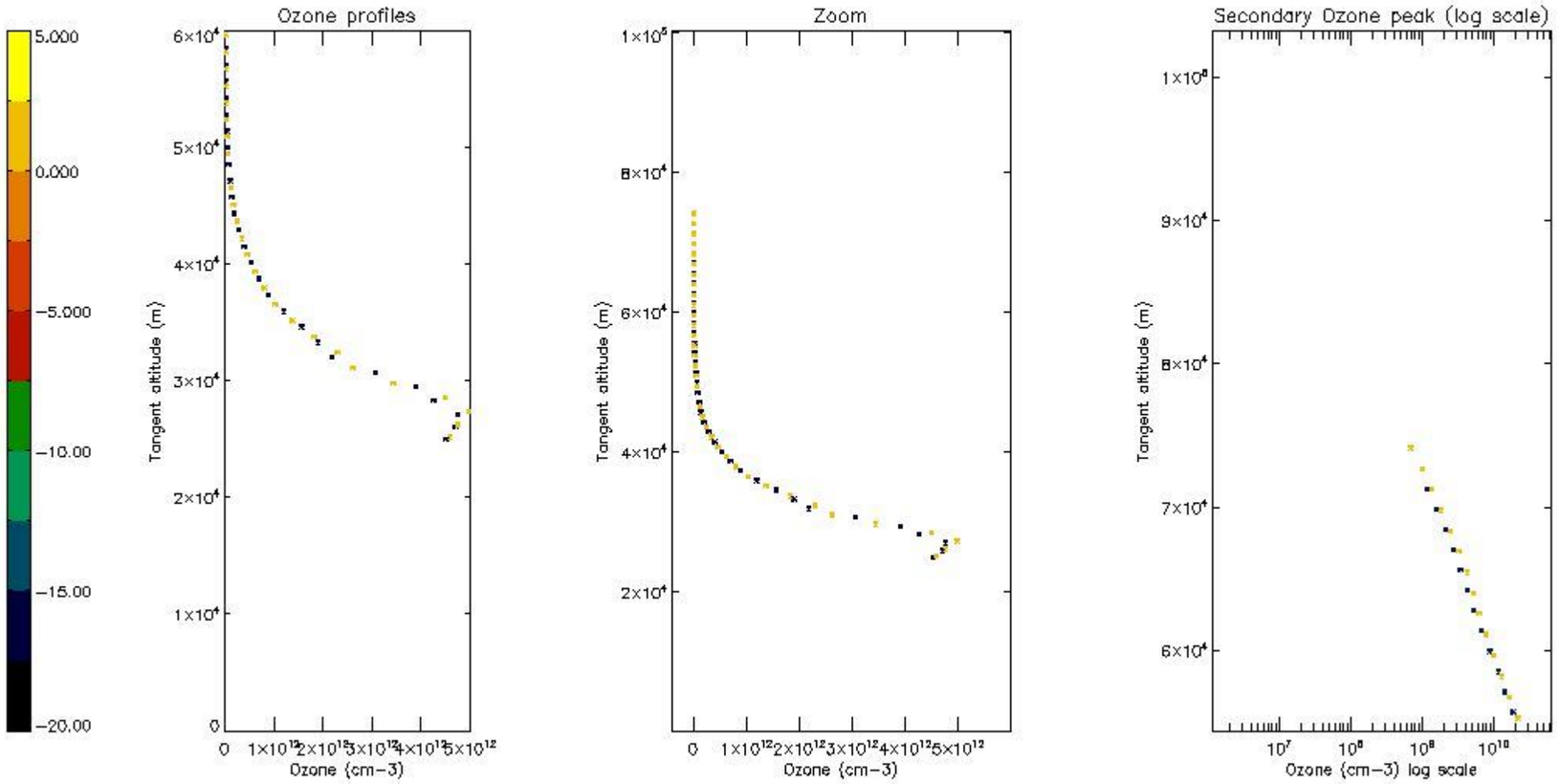
5.4 Plot ozone profiles where STD < 10% (dark without errors)

The colorbar represents the latitude.



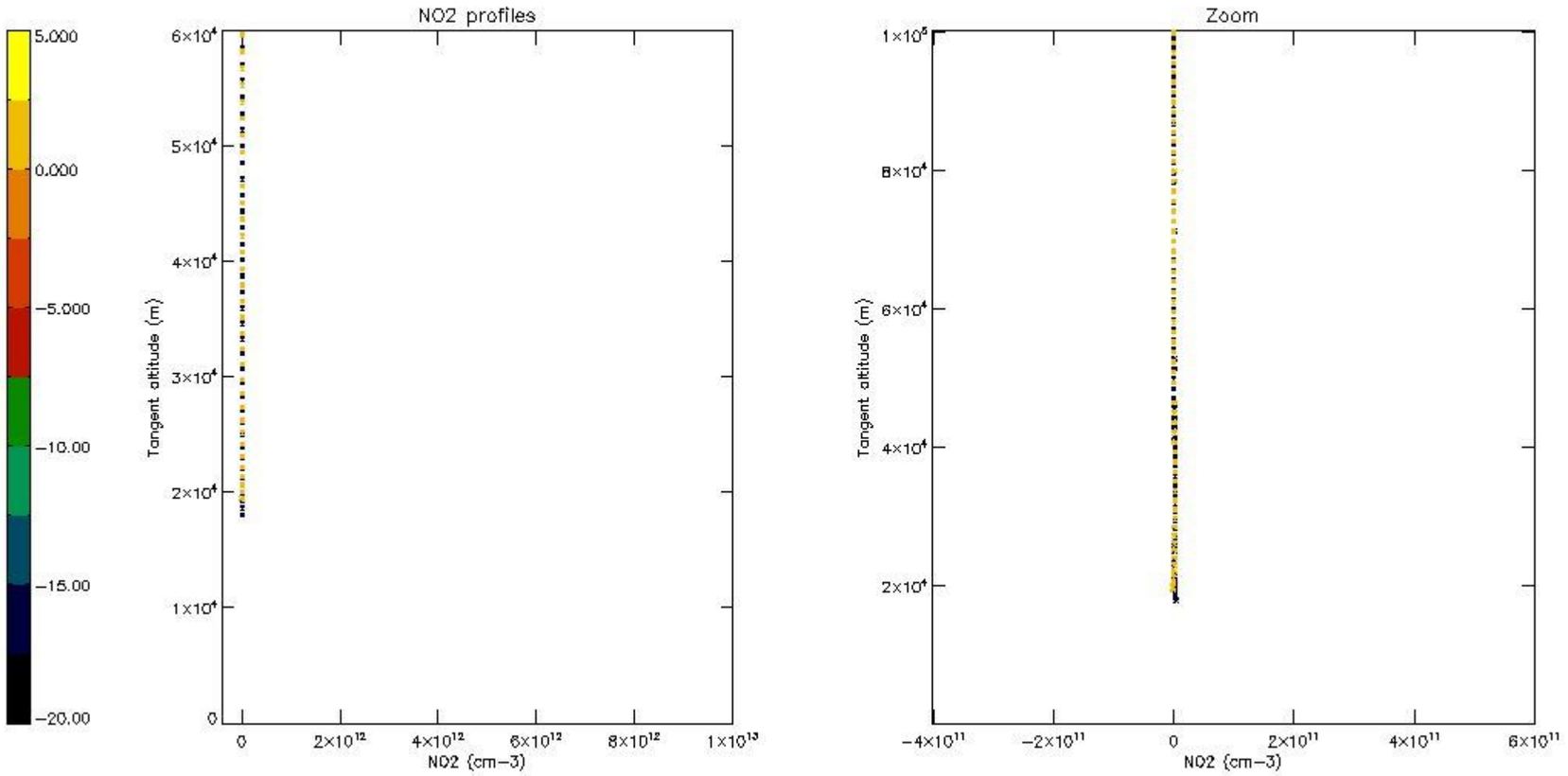
5.5 Plot ozone profiles where STD < 5% (dark without errors)

The colorbar represents the latitude.



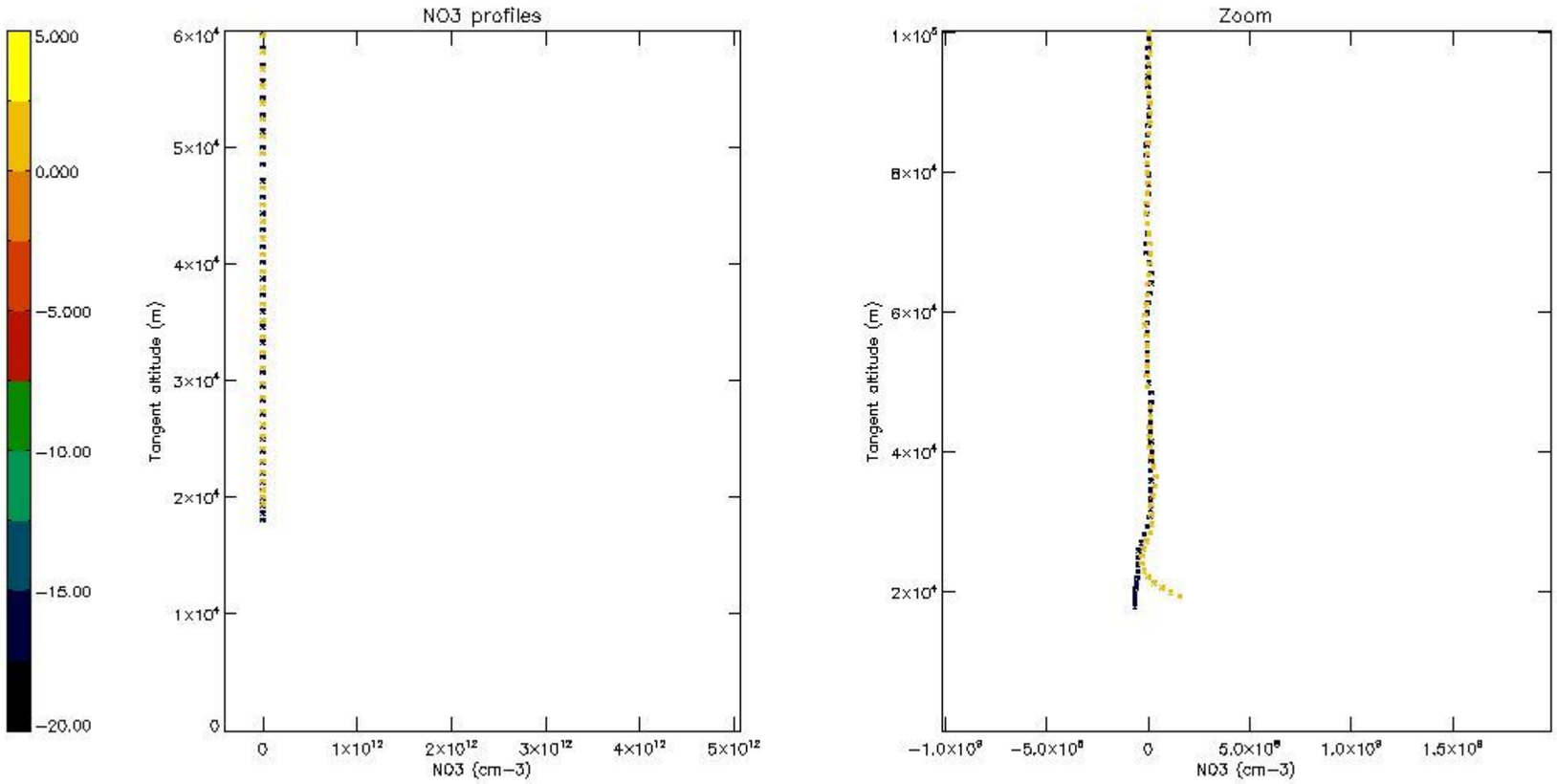
5.6 Plot NO2 profiles for all STD (dark without errors)

The colorbar represents the latitude.



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

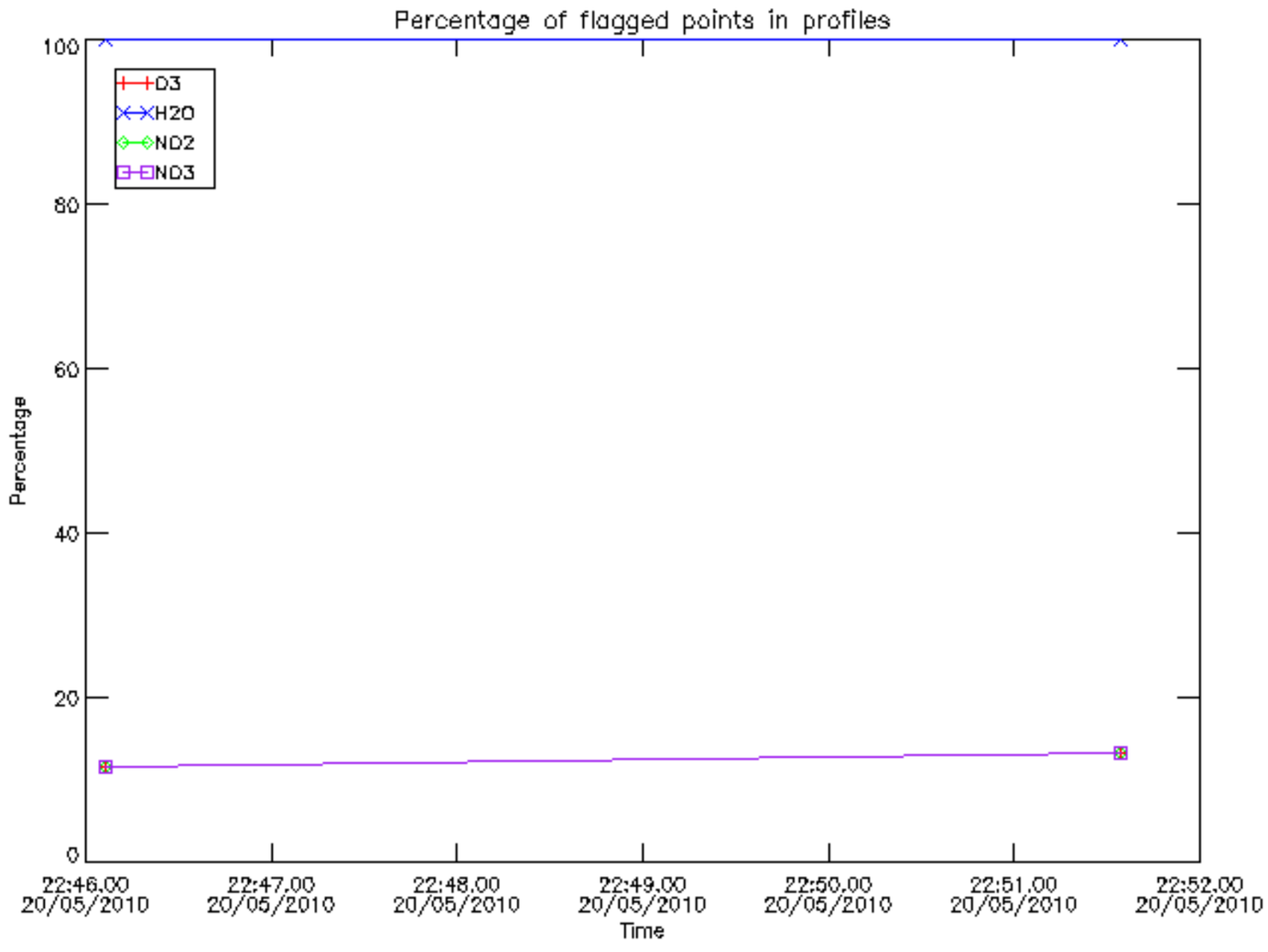
The colorbar represents the latitude.



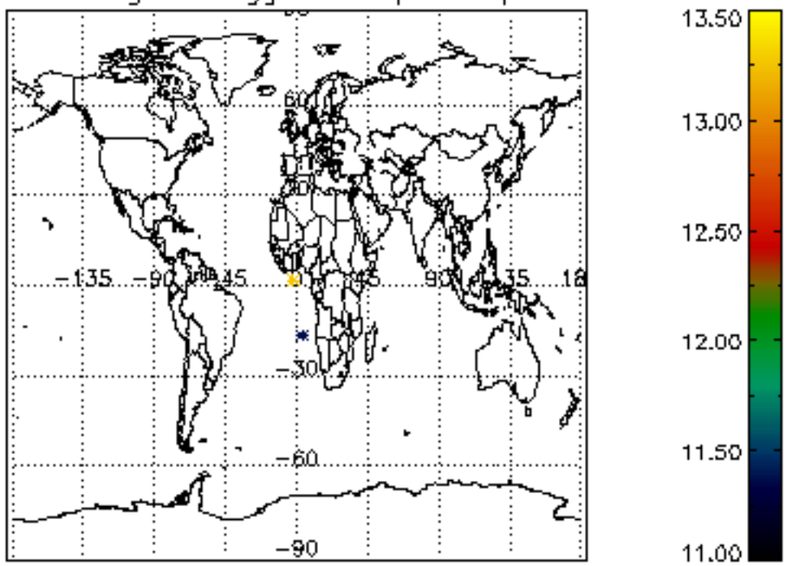
6. Auxiliary Data Files used for the production reported in section 2

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.

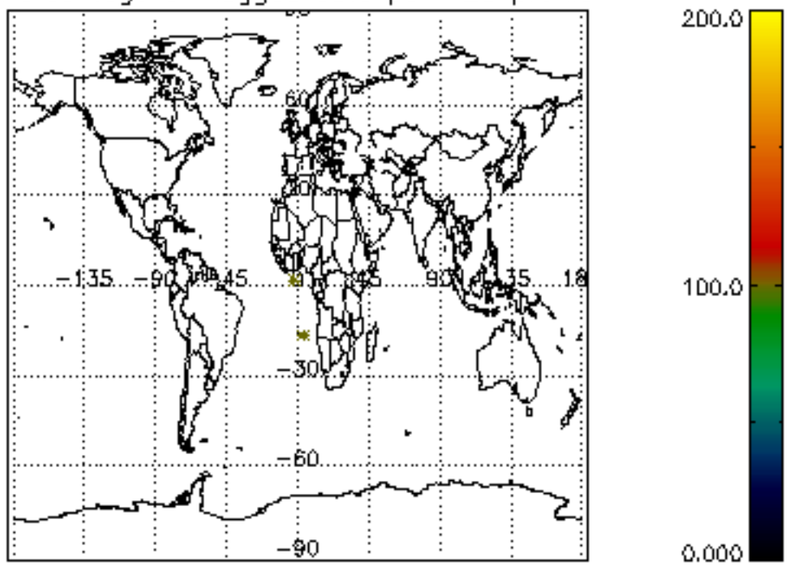
Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	20-MAY-2010 22:46:06
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	20-MAY-2010 22:46:06
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	20-MAY-2010 22:46:06


Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
22:46.00
20/05/2010
22:47.00
20/05/2010
22:48.00
20/05/2010
22:49.00
20/05/2010
22:50.00
20/05/2010
22:51.00
20/05/2010
22:52.00
20/05/2010
Time

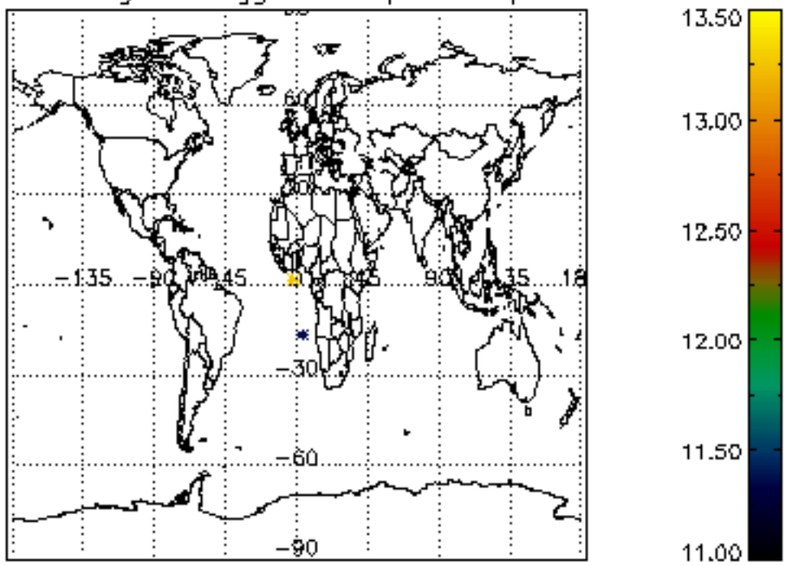
Percentage of flagged data per O3 profile



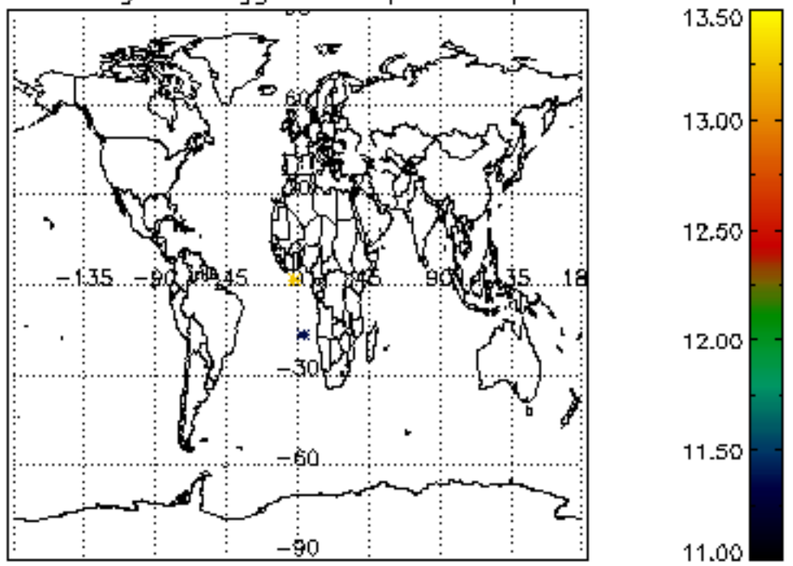
Percentage of flagged data per H2O profile

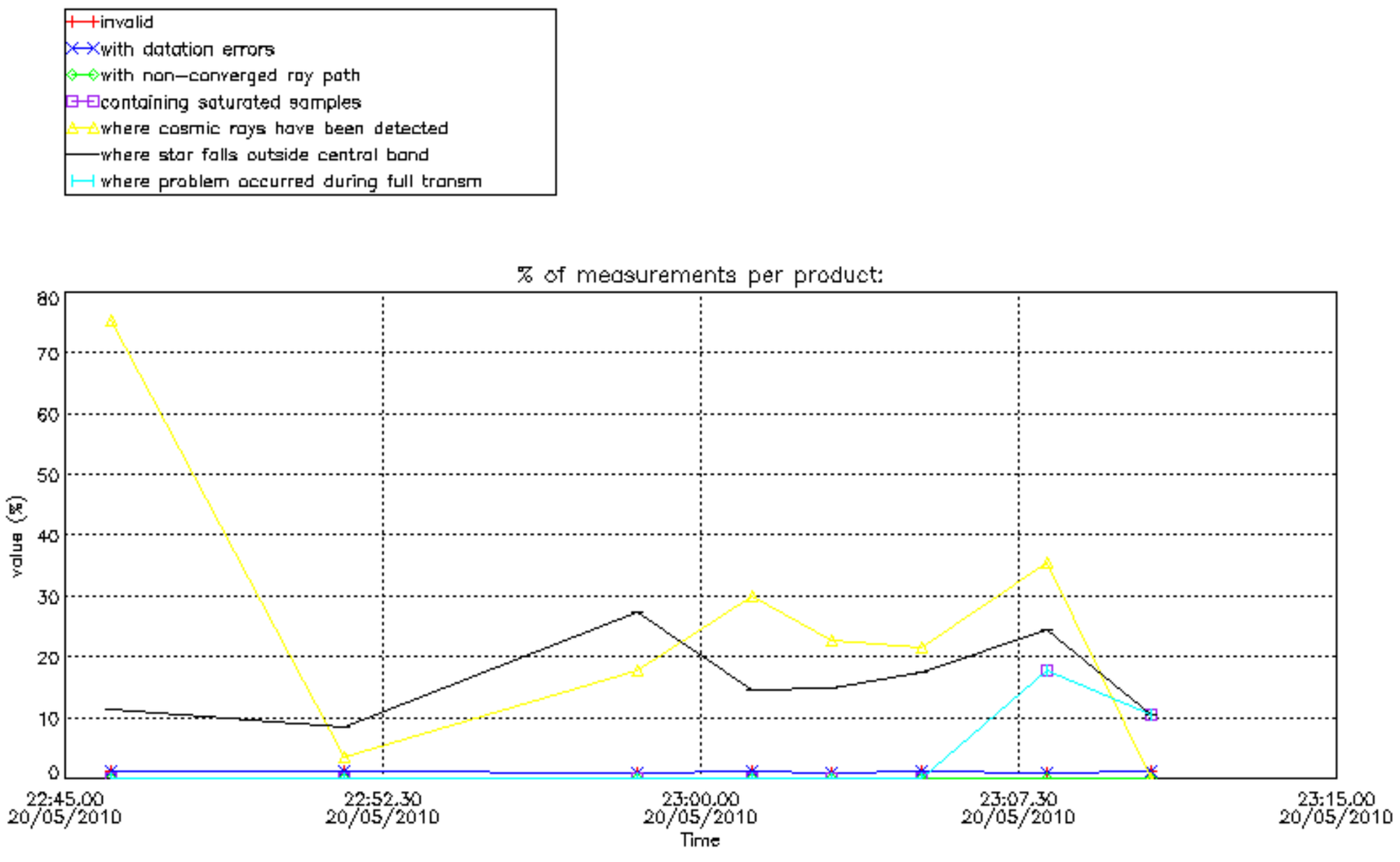


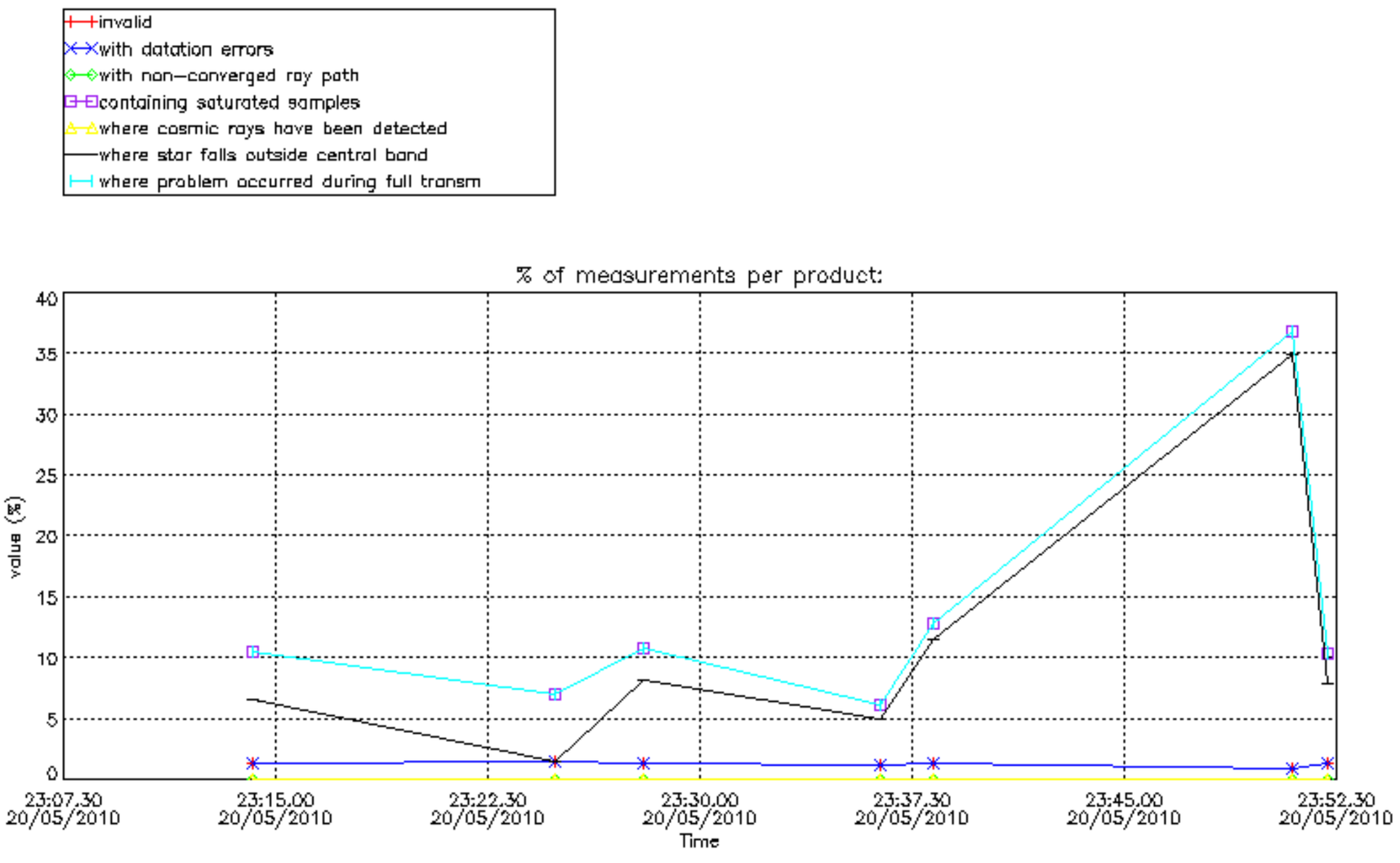
Percentage of flagged data per NO2 profile



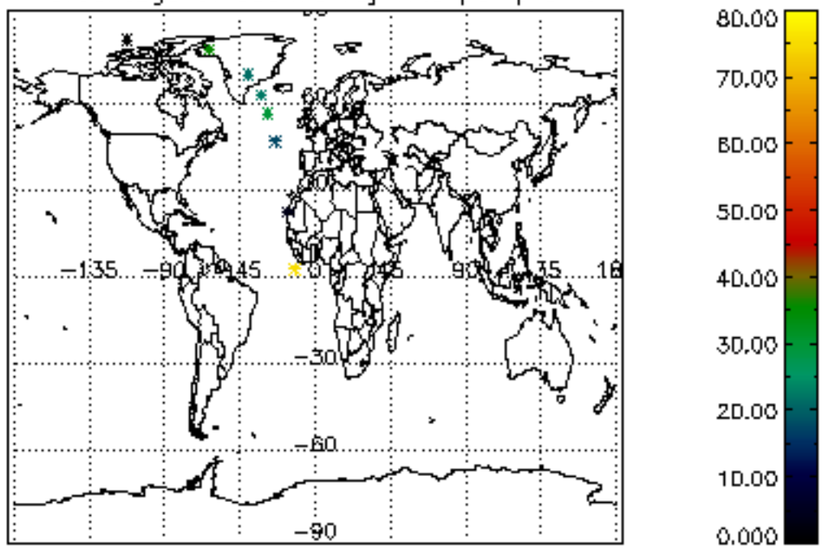
Percentage of flagged data per NO3 profile



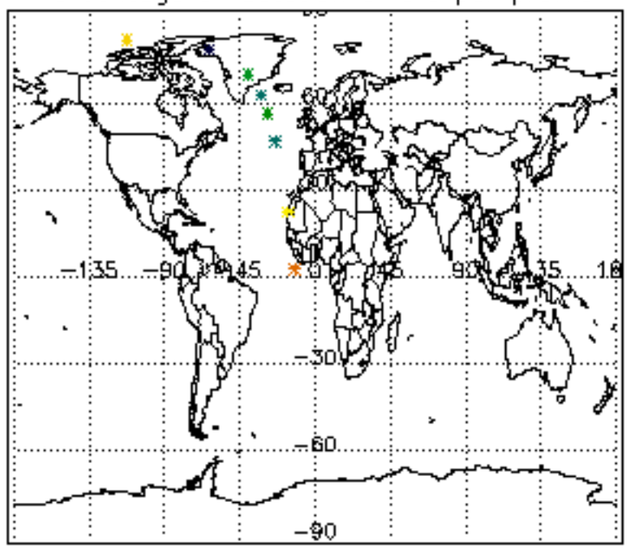

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
80
70
60
50
40
30
20
10
0
value (%)
22:45.00
20/05/2010
22:52.30
20/05/2010
23:00.00
20/05/2010
23:07.30
20/05/2010
23:15.00
20/05/2010
Time

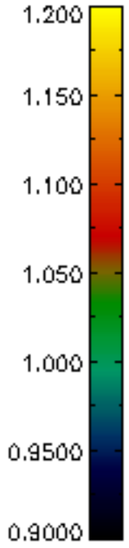

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
40
35
30
25
20
15
10
5
0
value (%)
23:07.30
20/05/2010
23:15.00
20/05/2010
23:22.30
20/05/2010
23:30.00
20/05/2010
23:37.30
20/05/2010
23:45.00
20/05/2010
23:52.30
20/05/2010
Time

Percentage of cosmic ray hits per profile

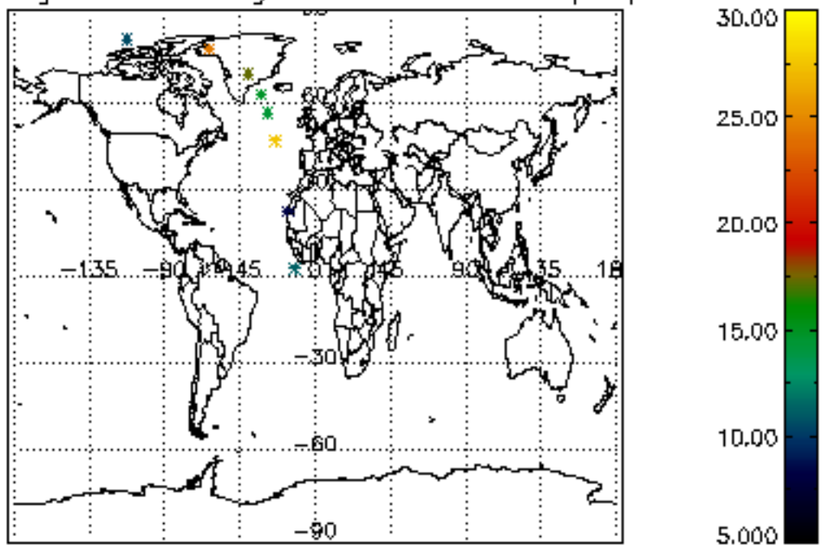


Percentage of datation errors per profile

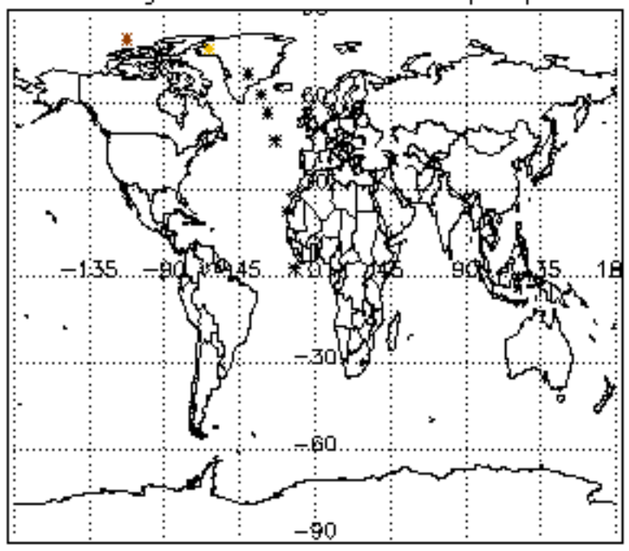


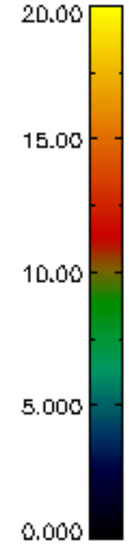


Percentage of star falling outside central band per profile

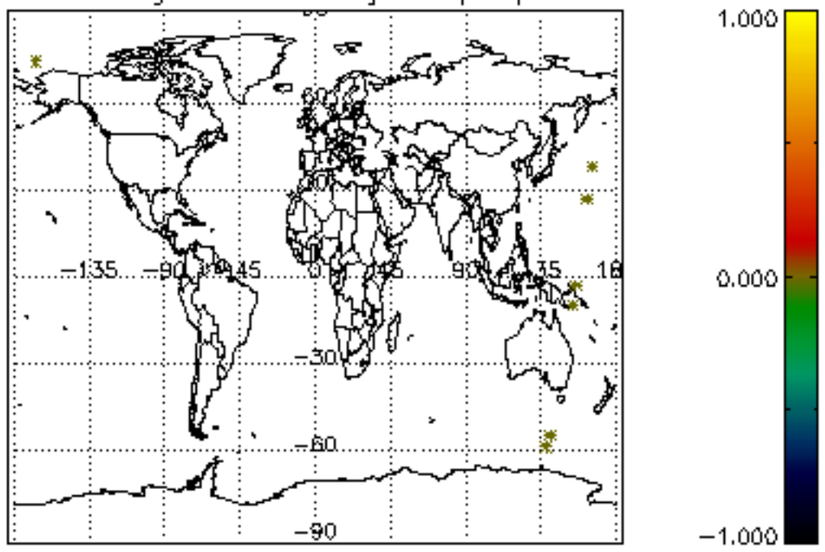


Percentage of saturation errors per profile

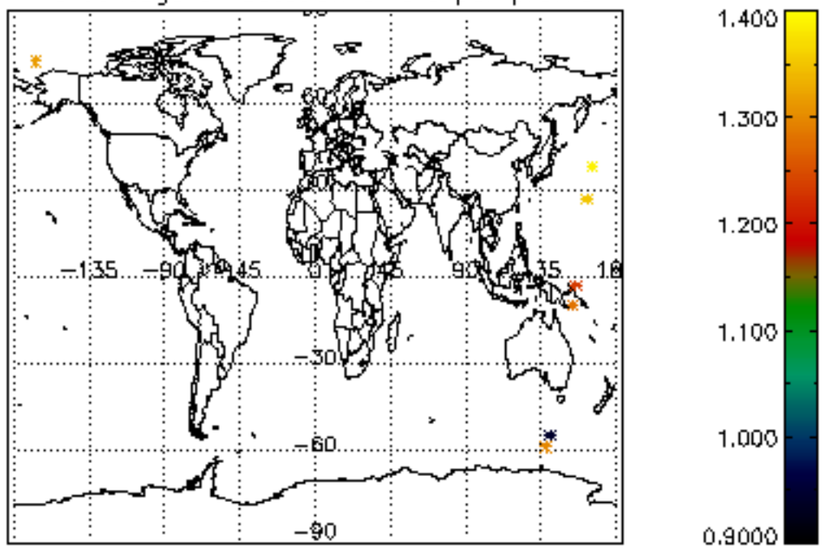




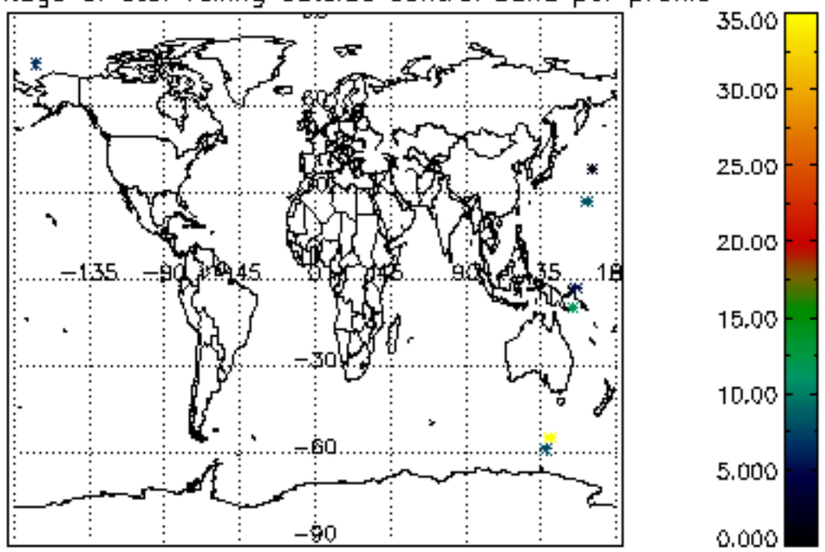
Percentage of cosmic ray hits per profile



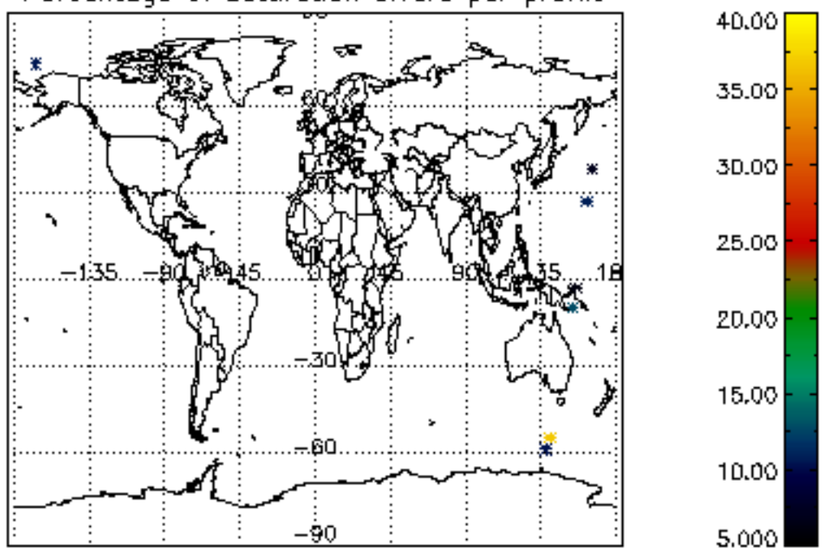
Percentage of datation errors per profile

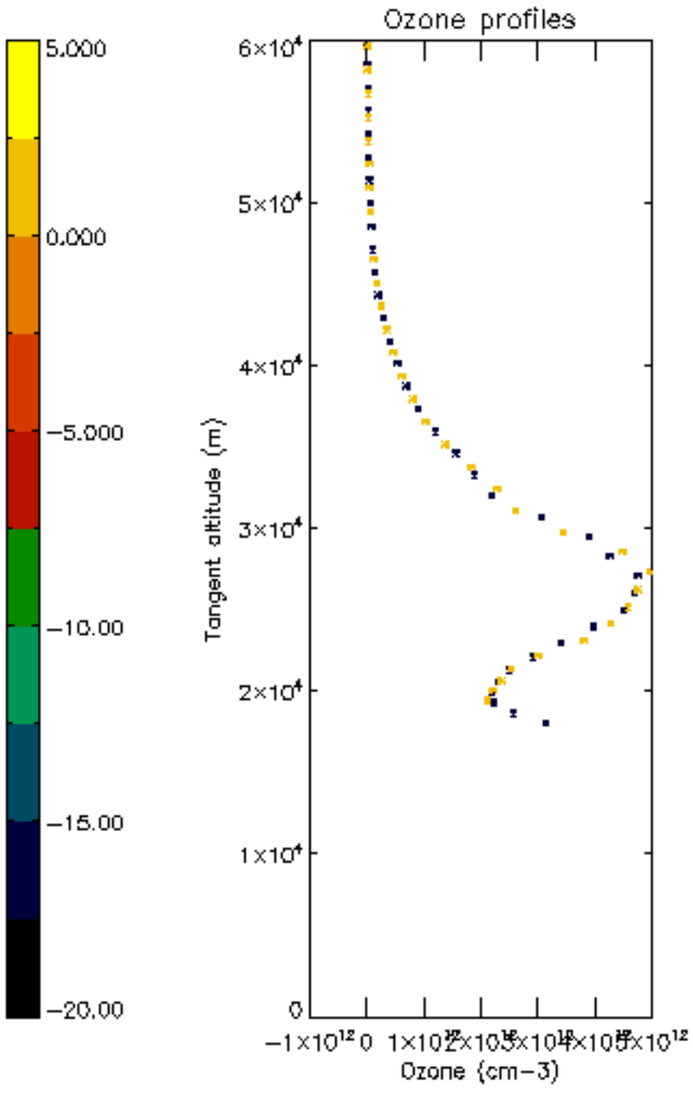


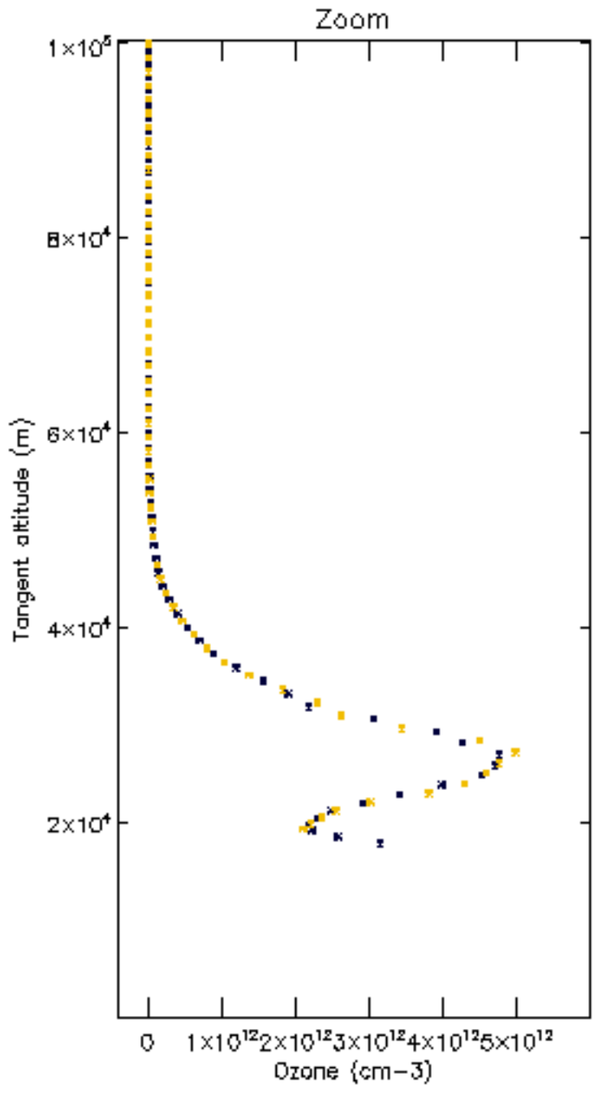
Percentage of star falling outside central band per profile

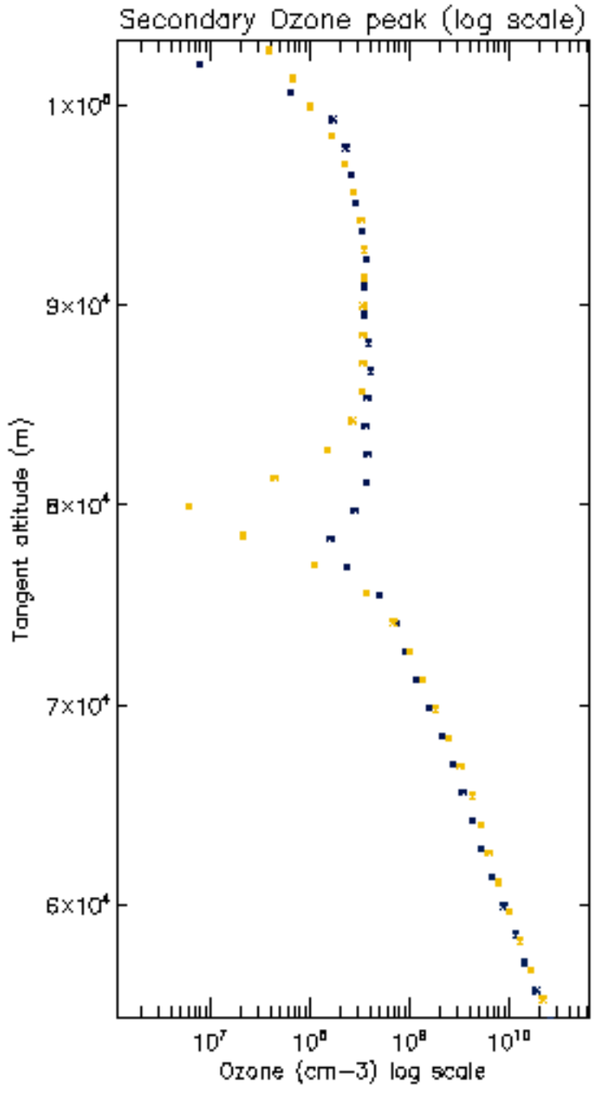


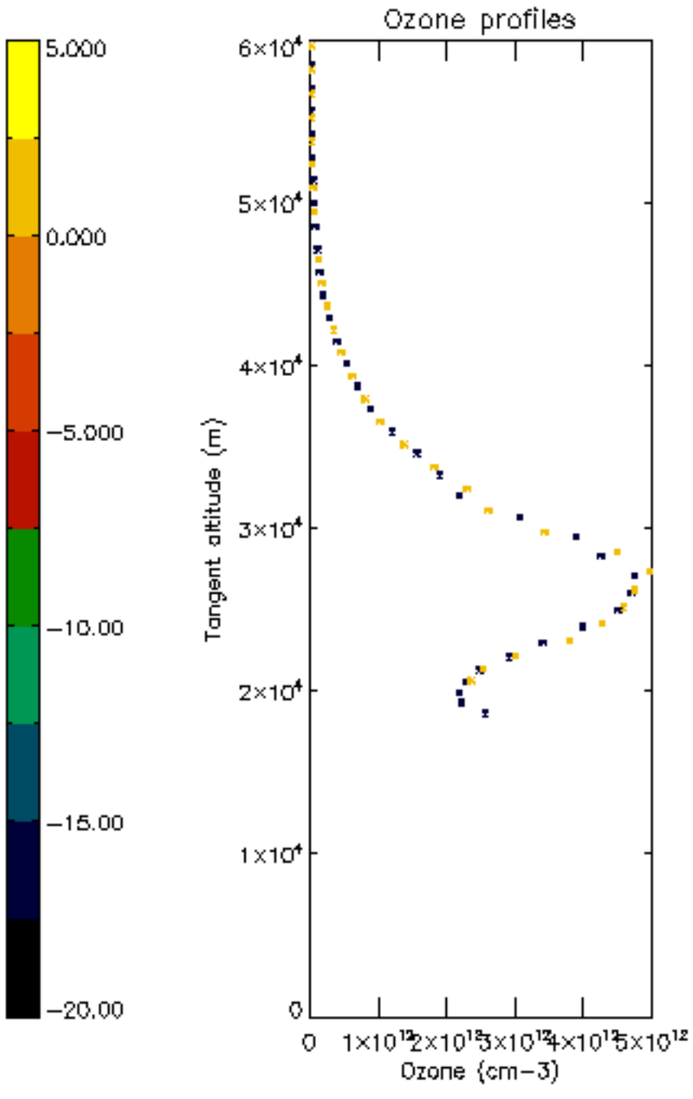
Percentage of saturation errors per profile




5.000
0.000
−5.000
−10.00
−15.00
−20.00
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
−1×10¹² 0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

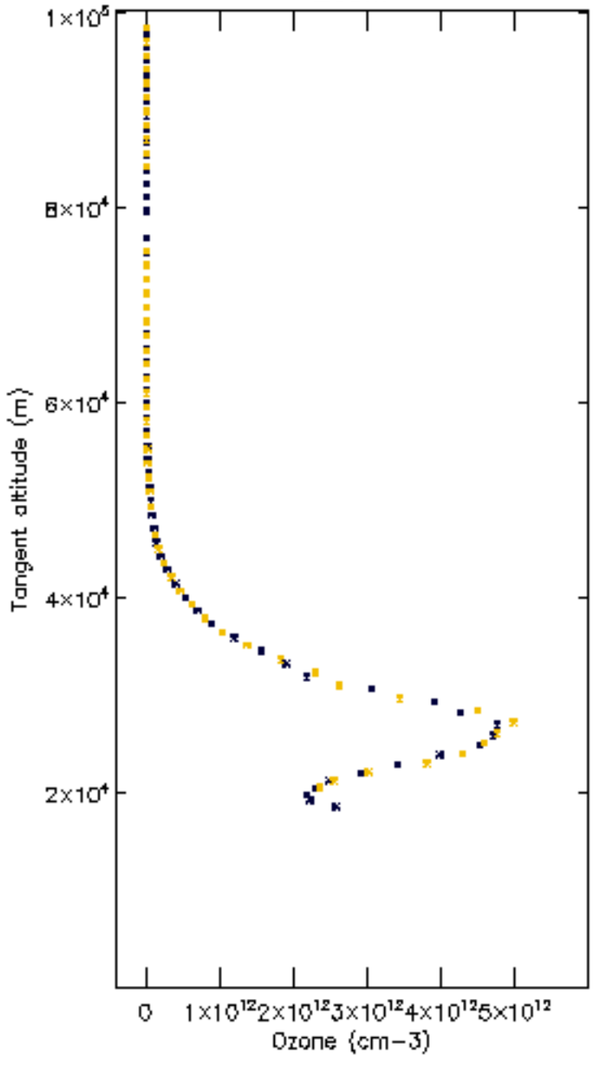

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)


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

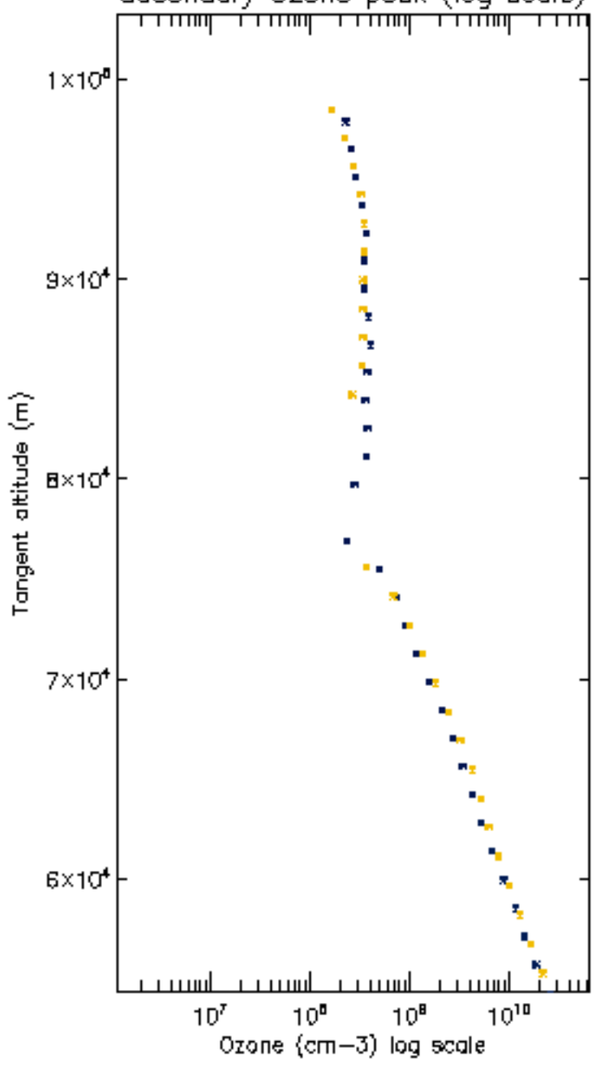


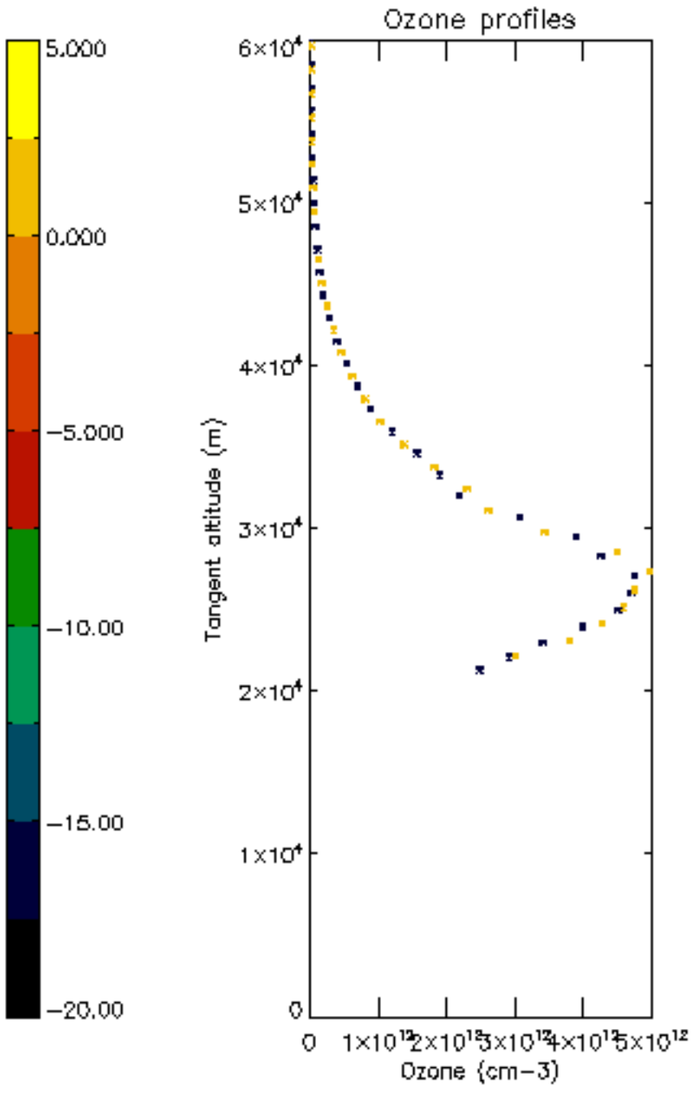
Ozone profiles

Zoom



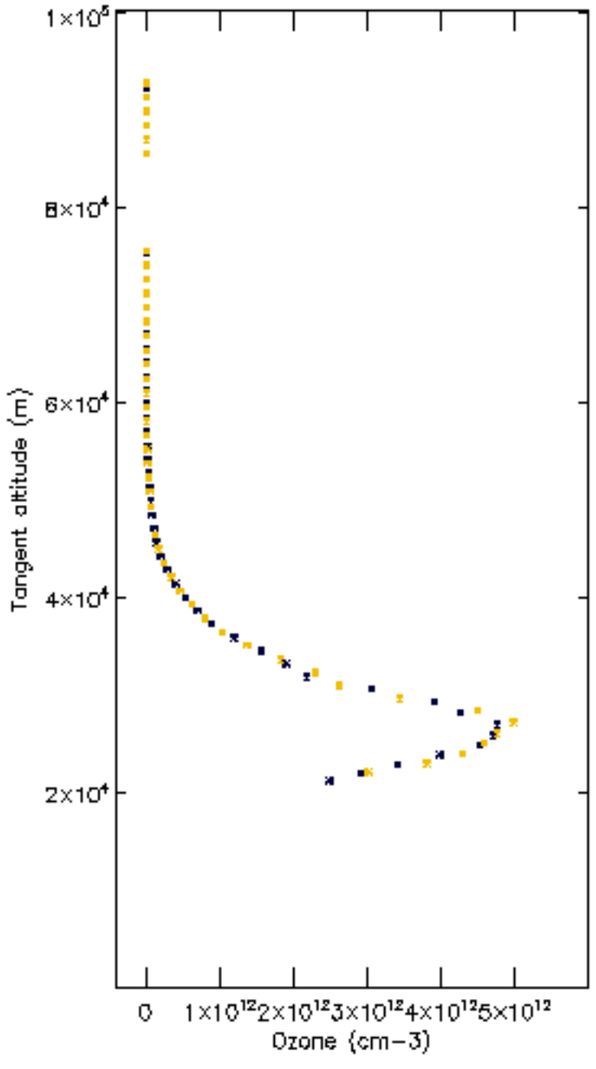
Secondary Ozone peak (log scale)



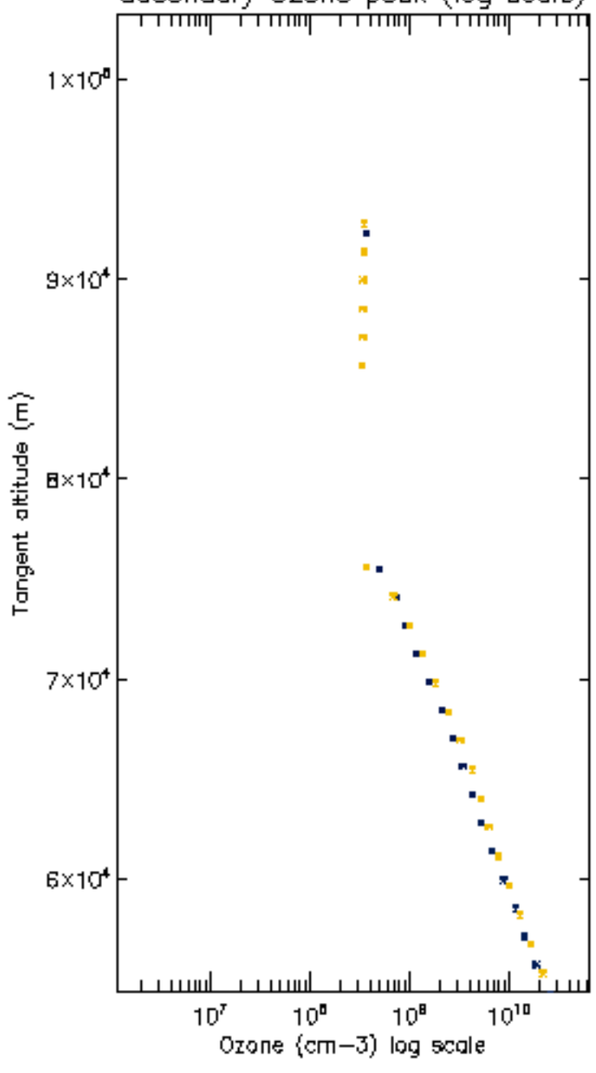


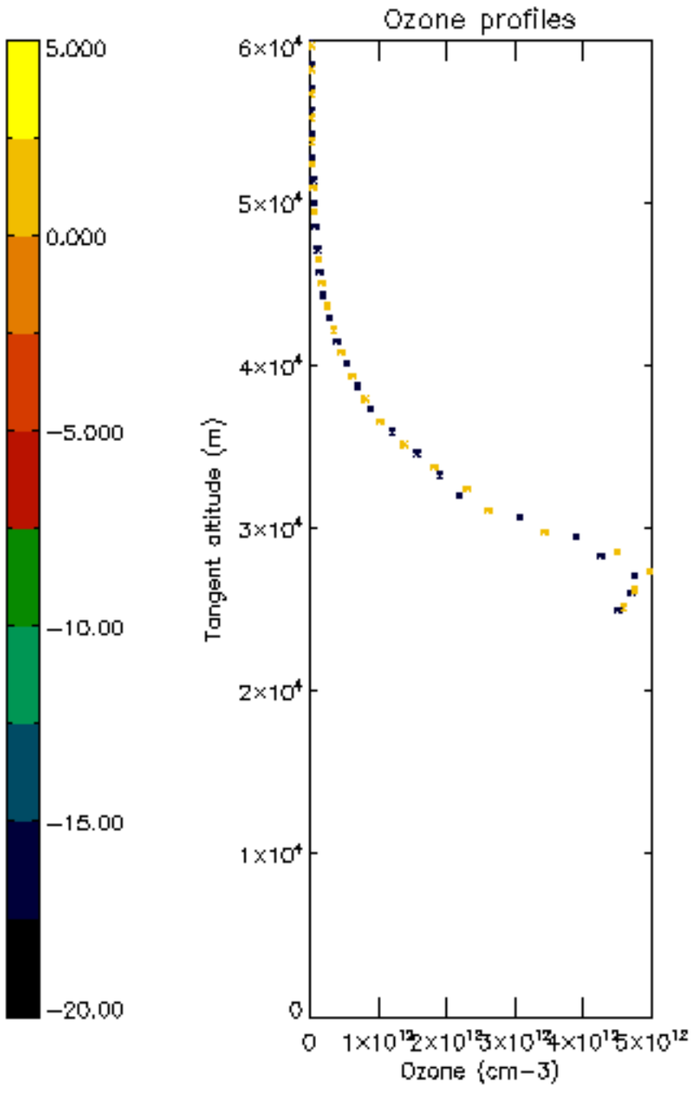
Ozone profiles

Zoom



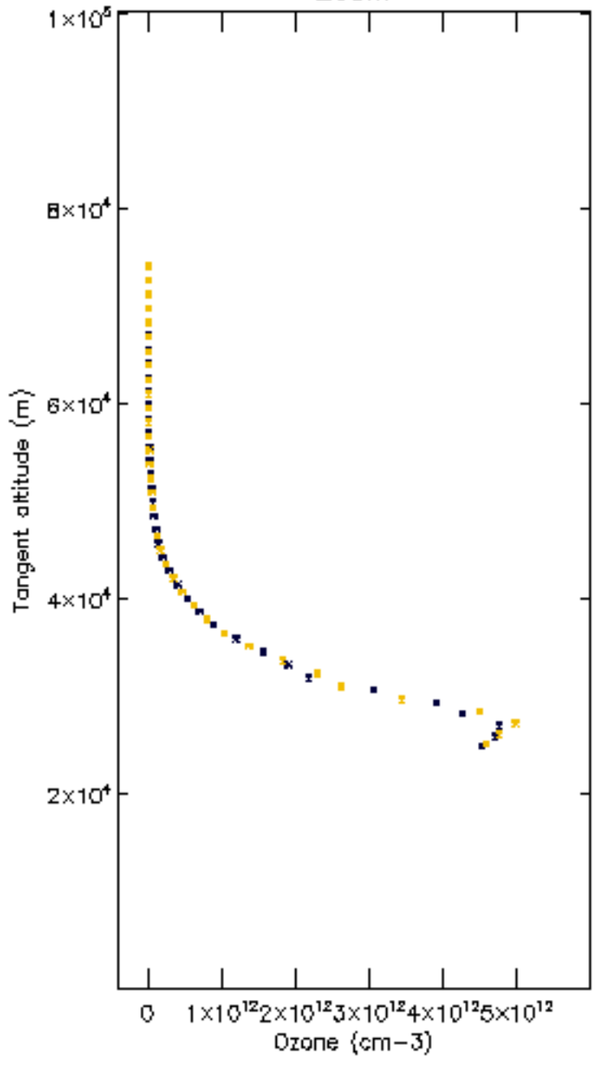
Secondary Ozone peak (log scale)



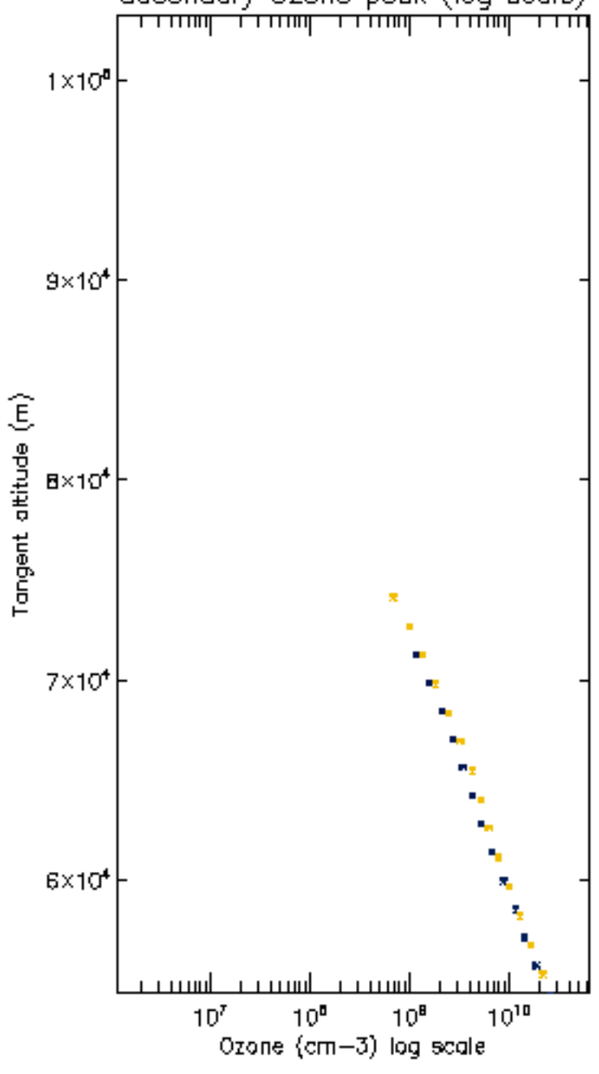


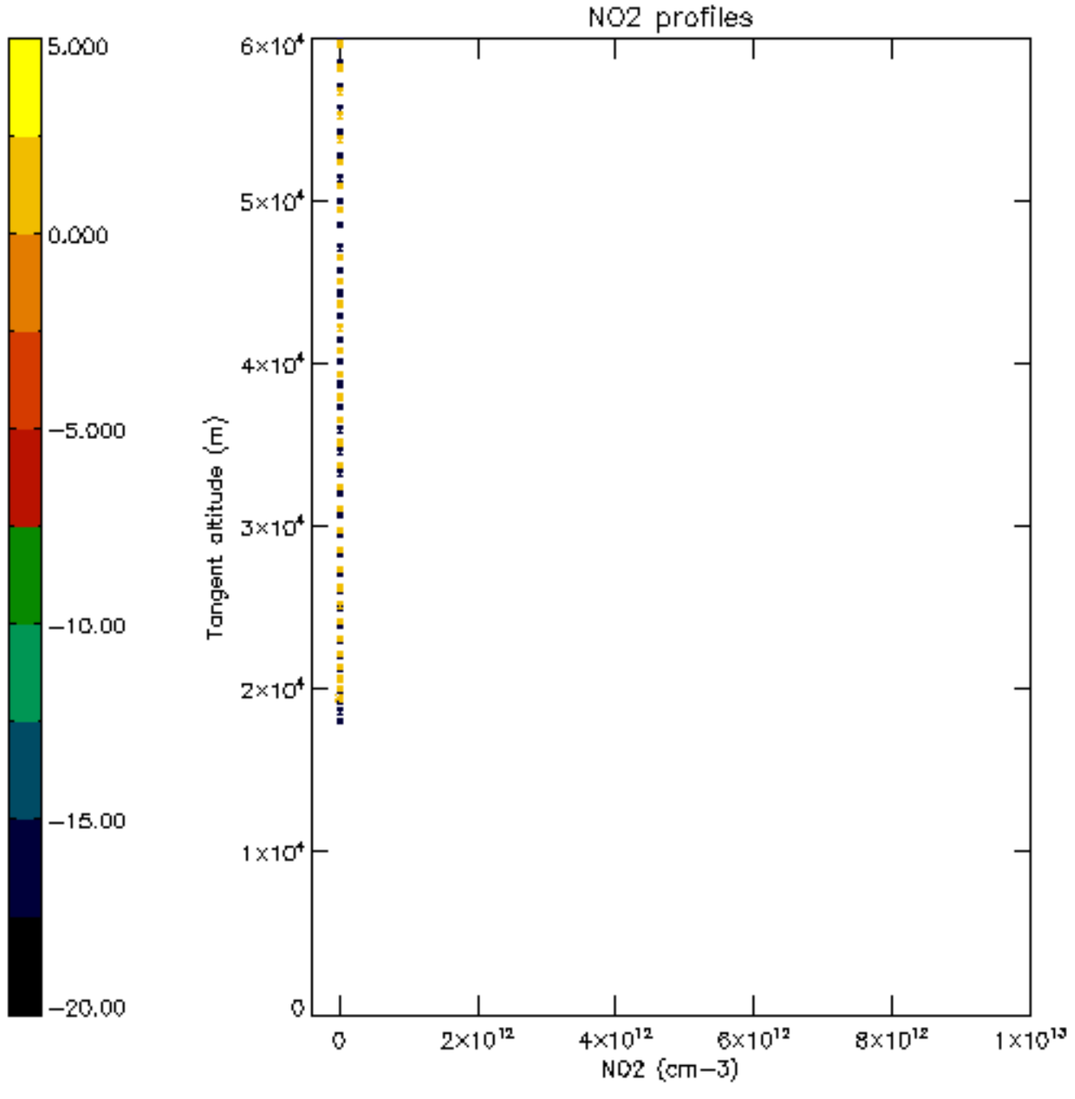
Ozone profiles

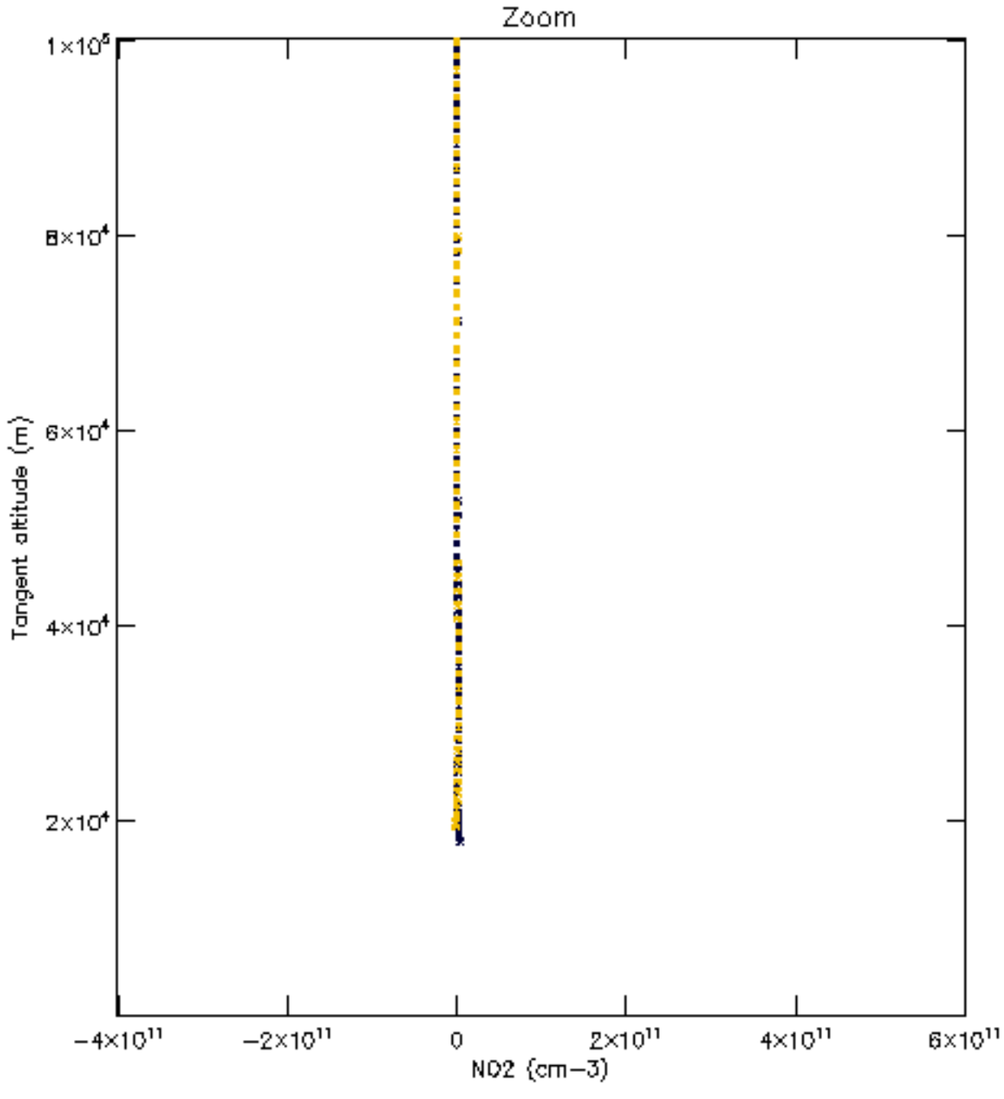
Zoom

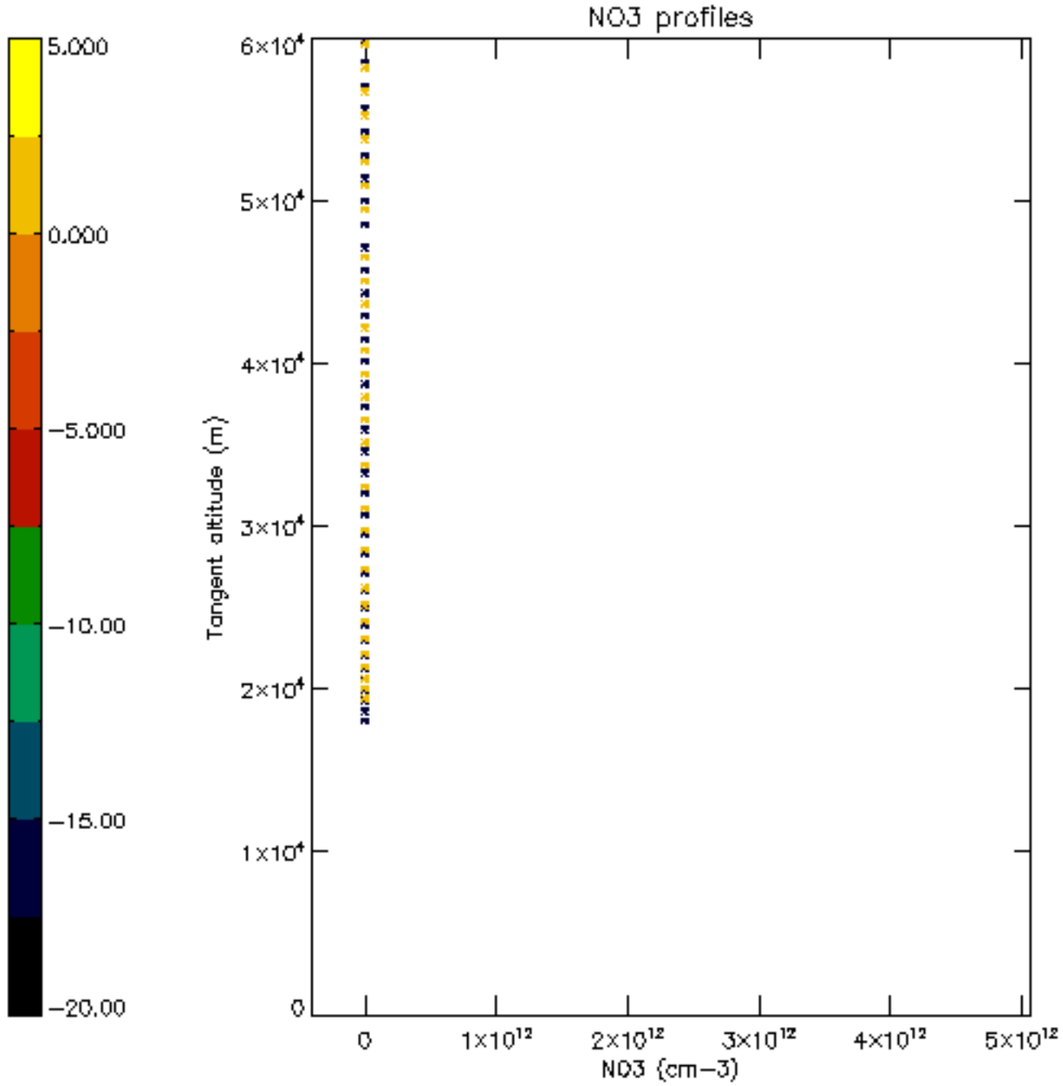


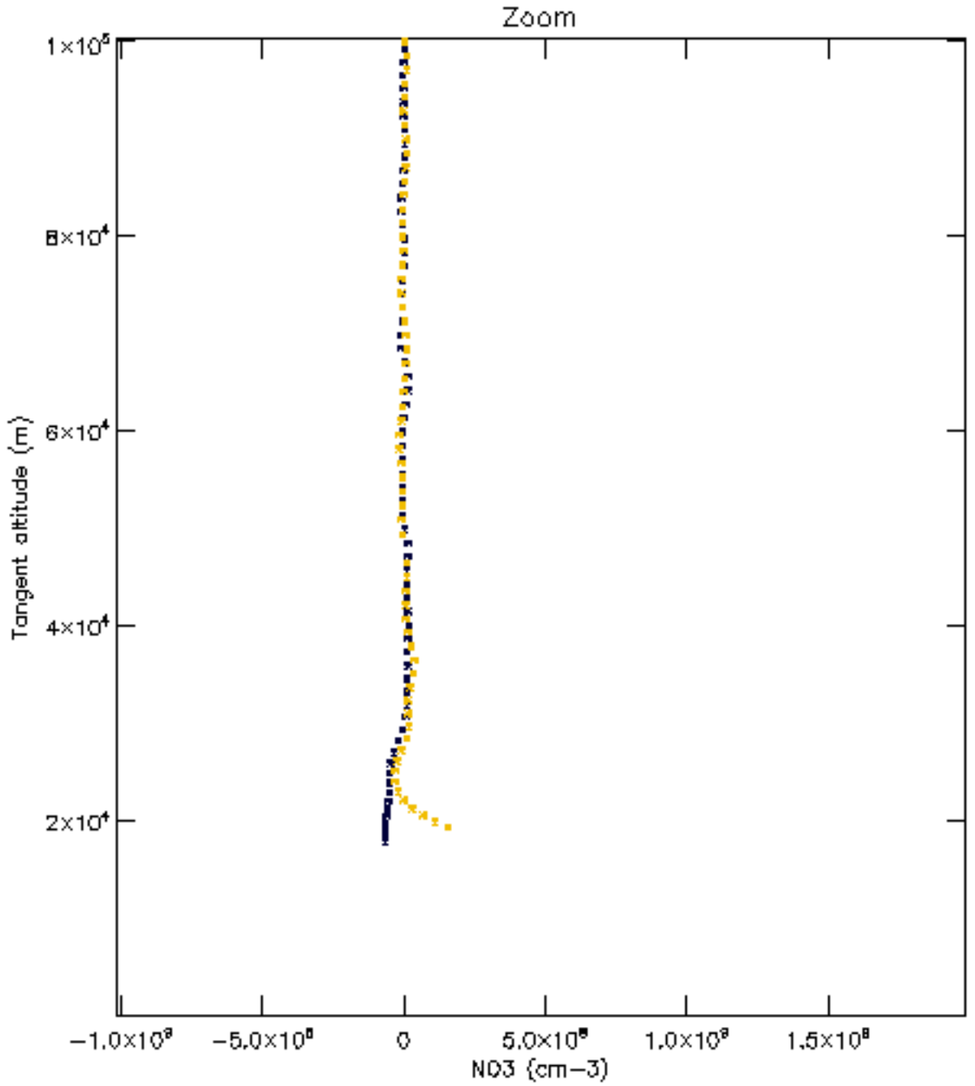
Secondary Ozone peak (log scale)

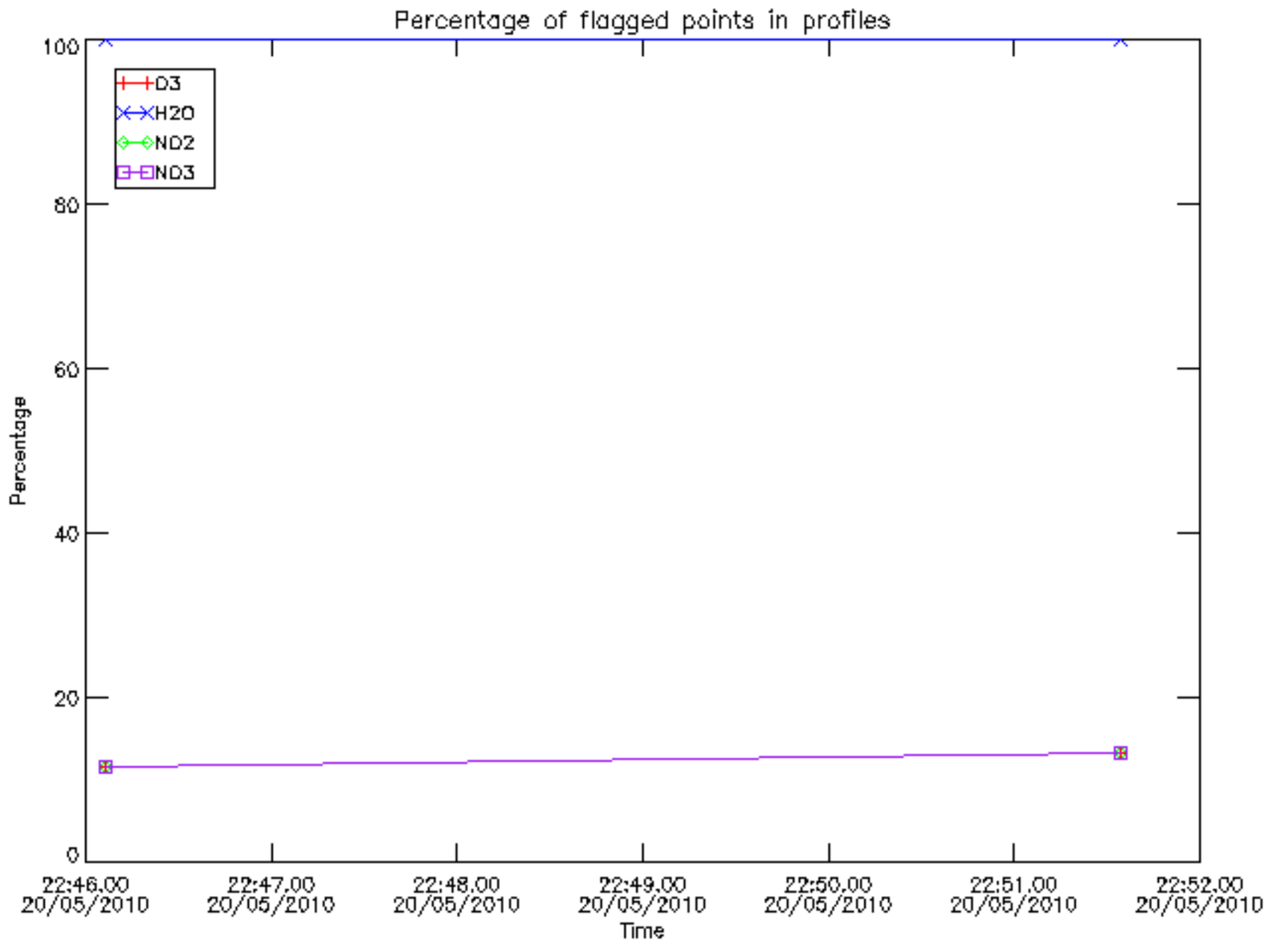



NO2 profiles
5.000
0.000
−5.000
−10.00
−15.00
−20.00
Tangent altitude (m)
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
0
2×10¹²
4×10¹²
6×10¹²
8×10¹²
1×10¹³
NO2 (cm−3)

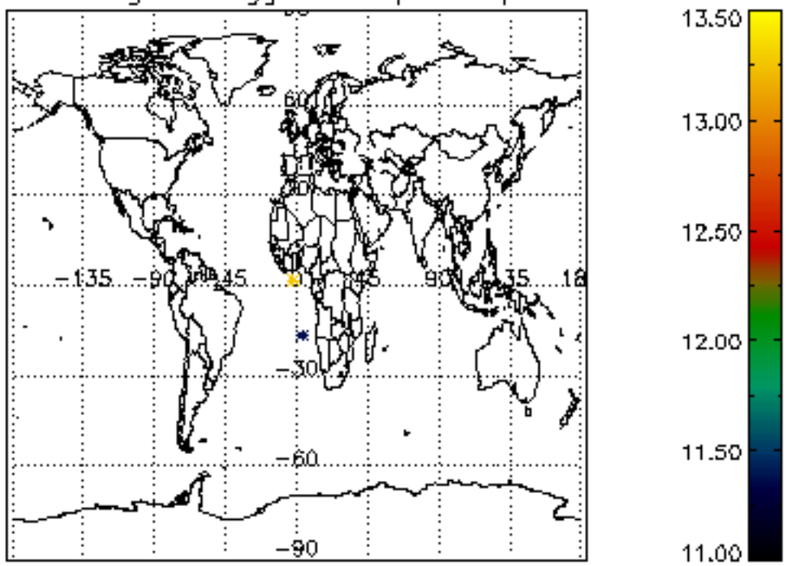

Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−4×10¹¹
−2×10¹¹
0
2×10¹¹
4×10¹¹
6×10¹¹
NO2 (cm−3)


NO3 profiles
5.000
0.000
−5.000
−10.00
−15.00
−20.00
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)

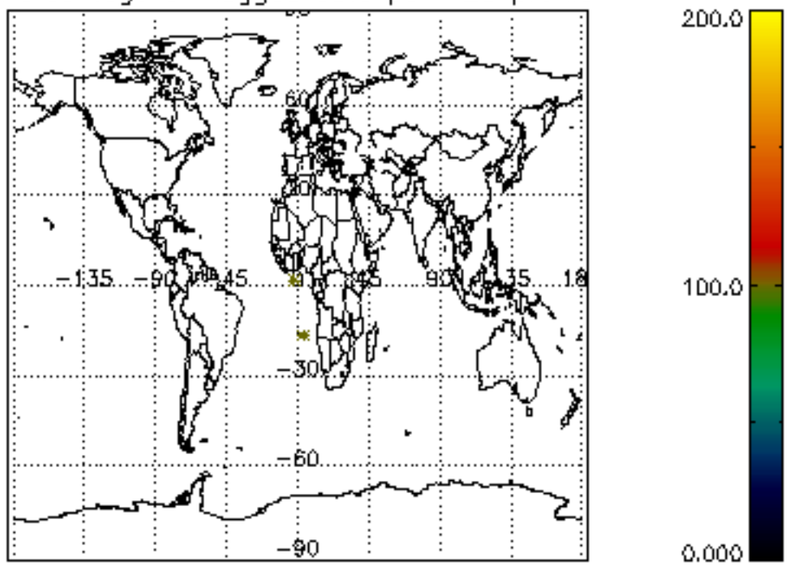

Zoom
Tangent altitude (m)
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
−1.0×10⁹
−5.0×10⁸
0
5.0×10⁸
1.0×10⁹
1.5×10⁹
NO3 (cm−3)


Percentage of flagged points in profiles
O3
H2O
NO2
NO3
100
80
60
40
20
0
Percentage
22:46.00
20/05/2010
22:47.00
20/05/2010
22:48.00
20/05/2010
22:49.00
20/05/2010
22:50.00
20/05/2010
22:51.00
20/05/2010
22:52.00
20/05/2010
Time

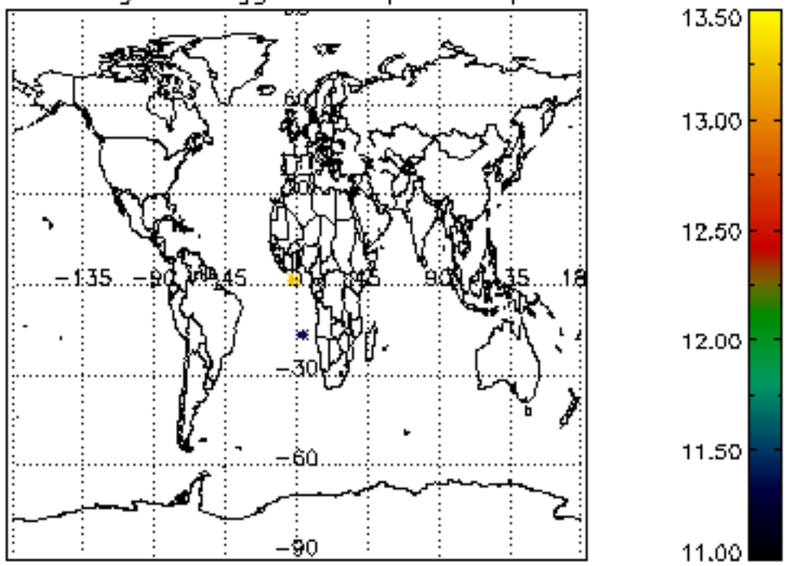
Percentage of flagged data per O3 profile



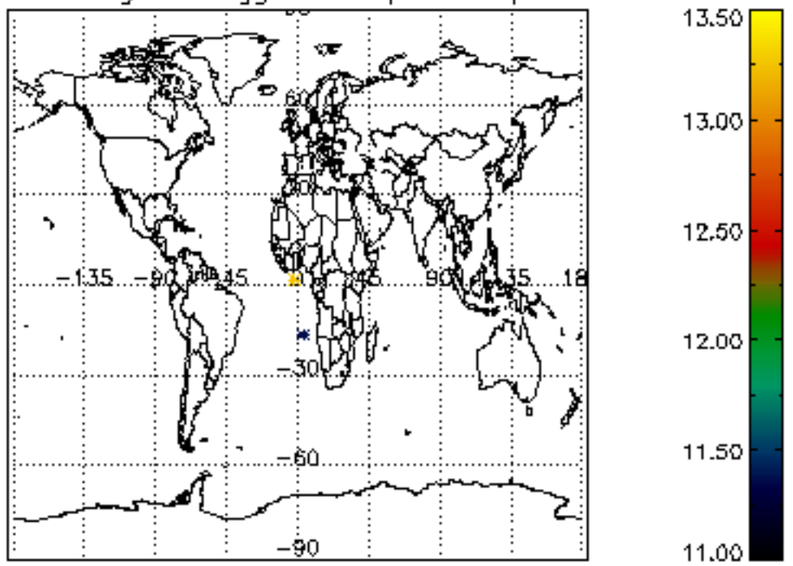
Percentage of flagged data per H2O profile

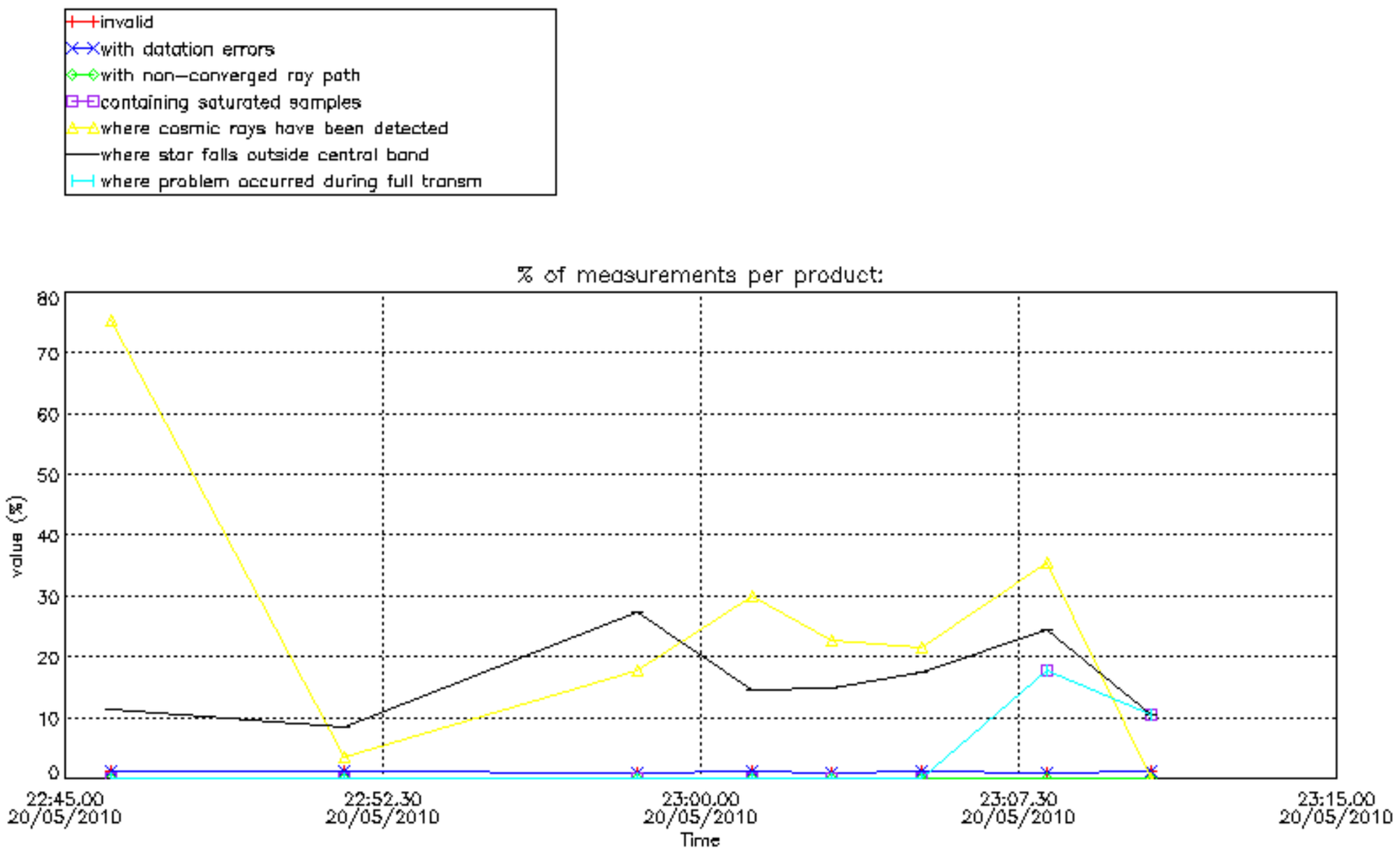


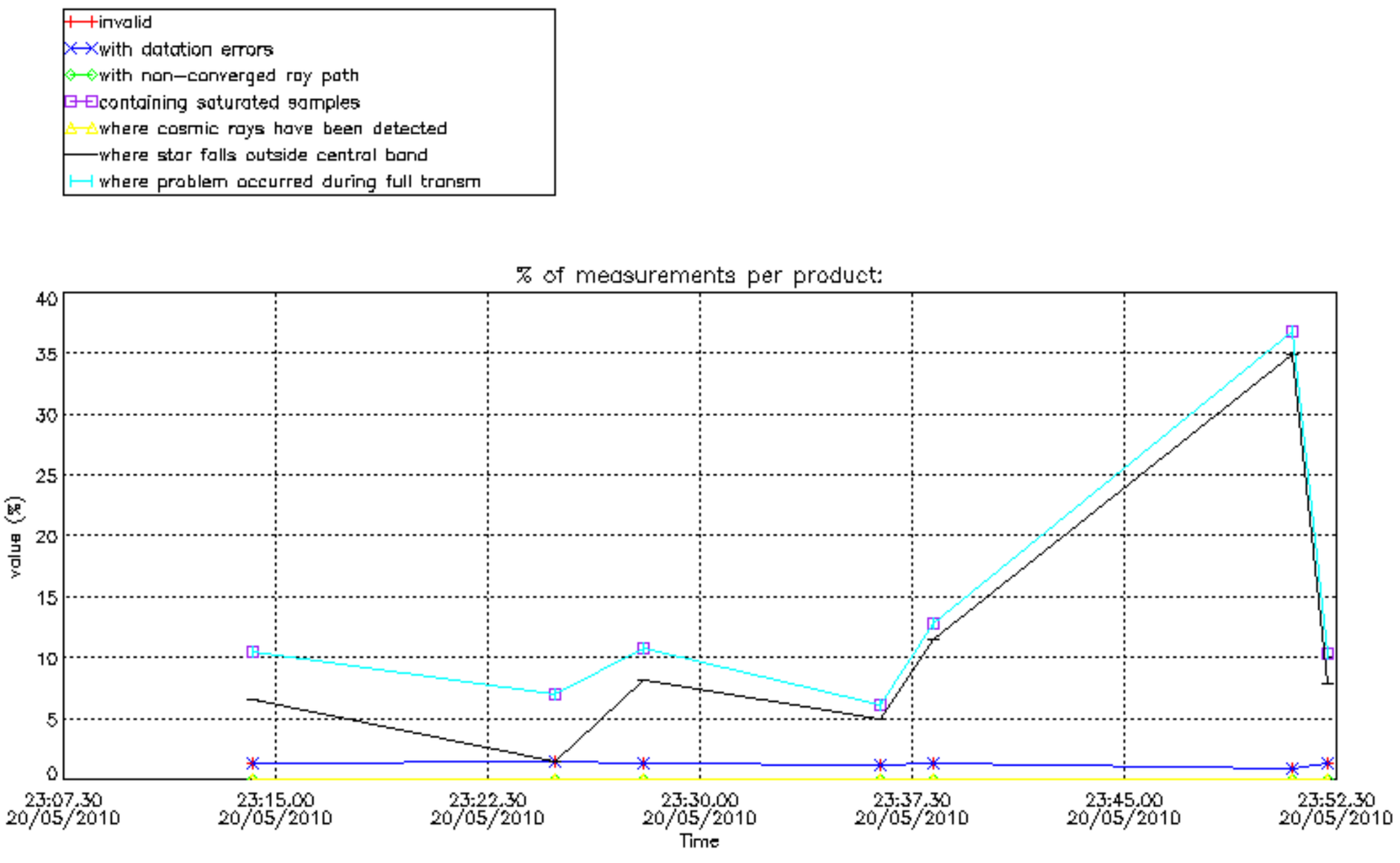
Percentage of flagged data per NO2 profile



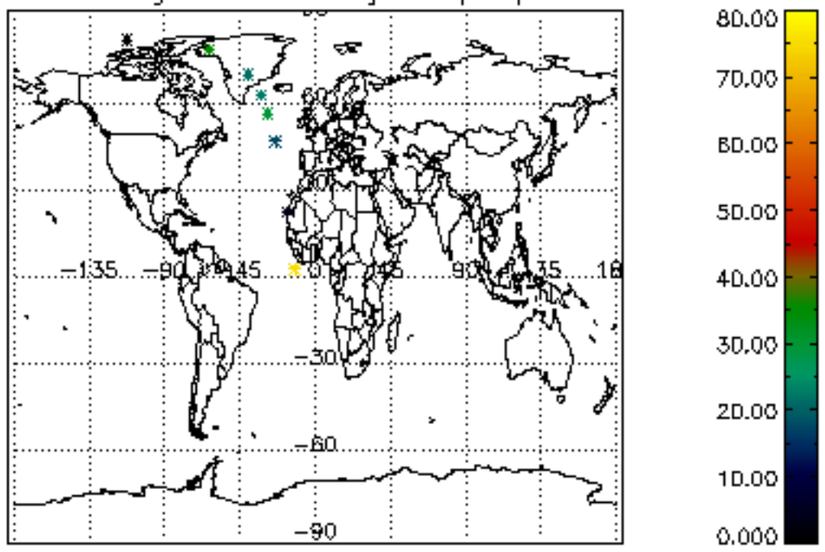
Percentage of flagged data per NO3 profile



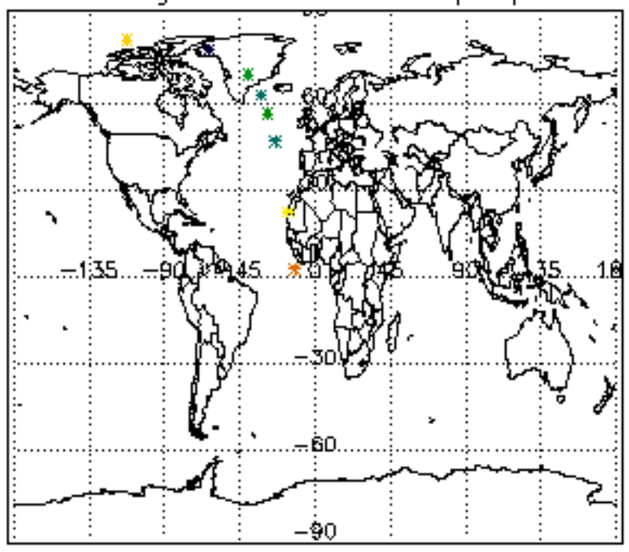

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
80
70
60
50
40
30
20
10
0
value (%)
22:45.00
20/05/2010
22:52.30
20/05/2010
23:00.00
20/05/2010
23:07.30
20/05/2010
23:15.00
20/05/2010
Time

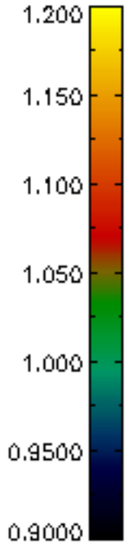

invalid
with datation errors
with non-converged ray path
containing saturated samples
where cosmic rays have been detected
where star falls outside central band
where problem occurred during full transm
% of measurements per product:
40
35
30
25
20
15
10
5
0
value (%)
23:07.30
20/05/2010
23:15.00
20/05/2010
23:22.30
20/05/2010
23:30.00
20/05/2010
23:37.30
20/05/2010
23:45.00
20/05/2010
23:52.30
20/05/2010
Time

Percentage of cosmic ray hits per profile

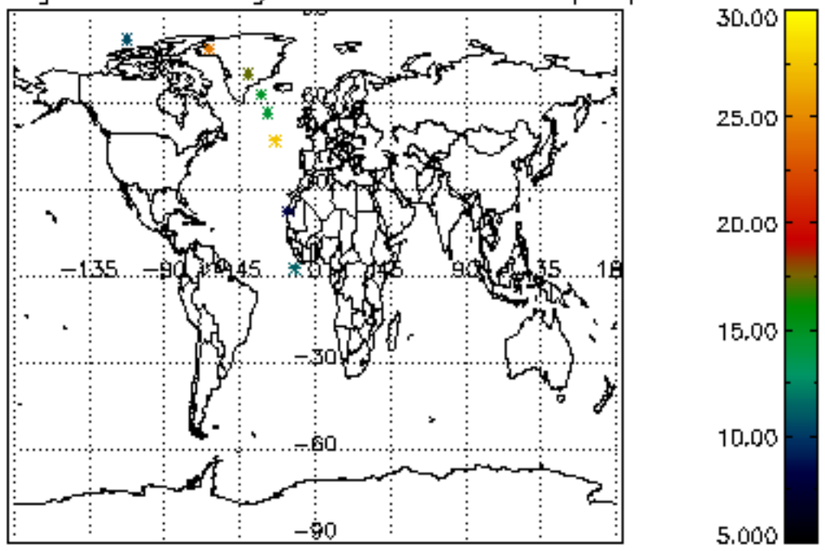


Percentage of datation errors per profile

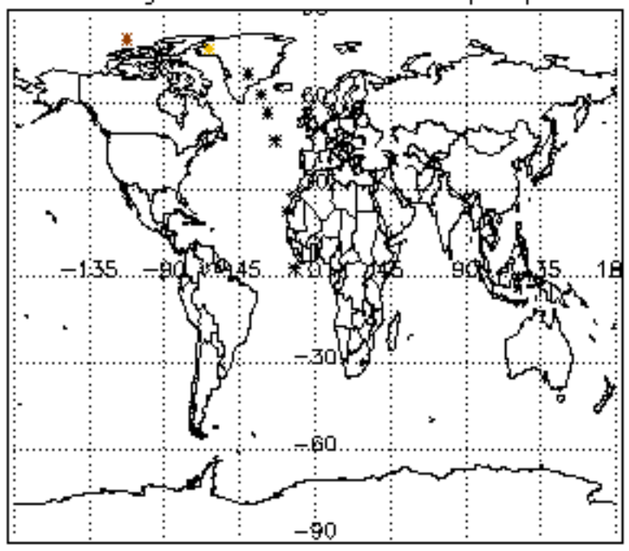


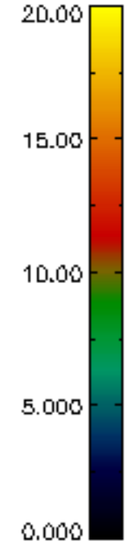


Percentage of star falling outside central band per profile

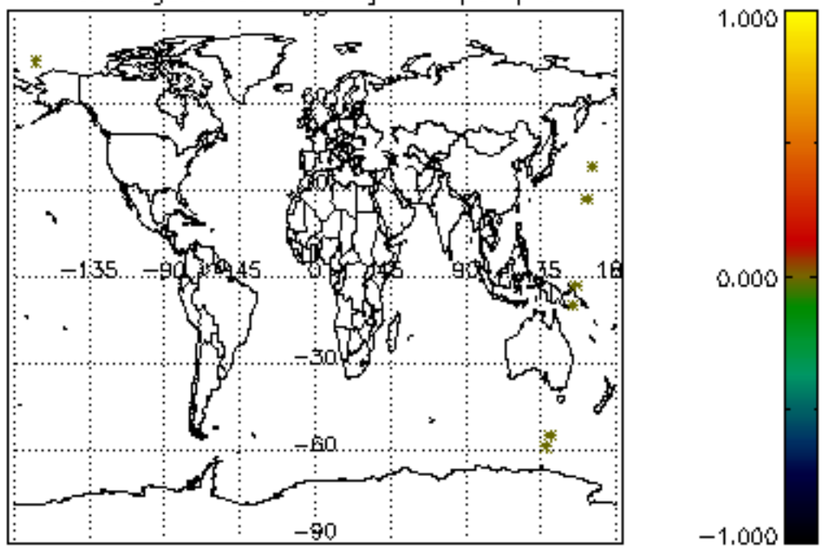


Percentage of saturation errors per profile

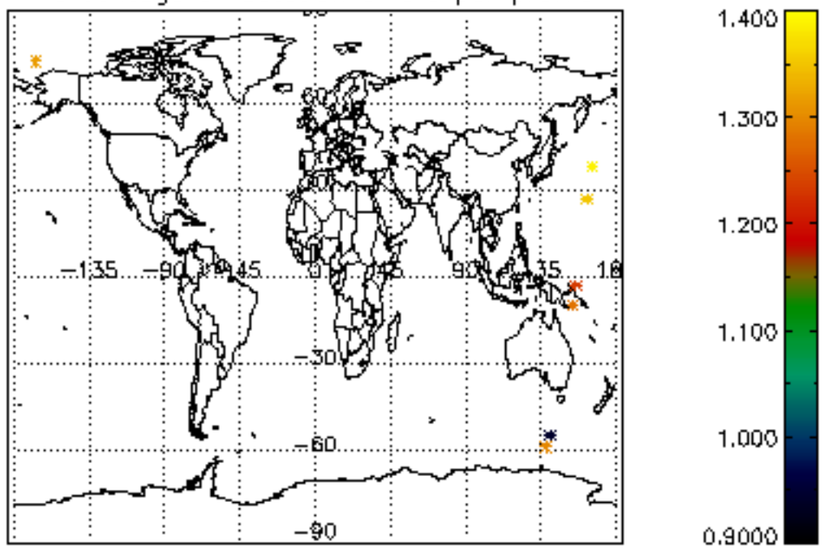




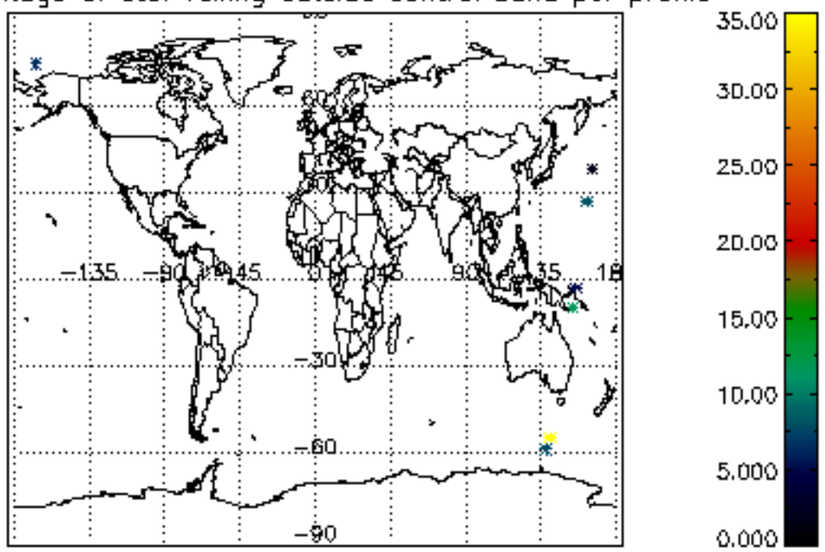
Percentage of cosmic ray hits per profile



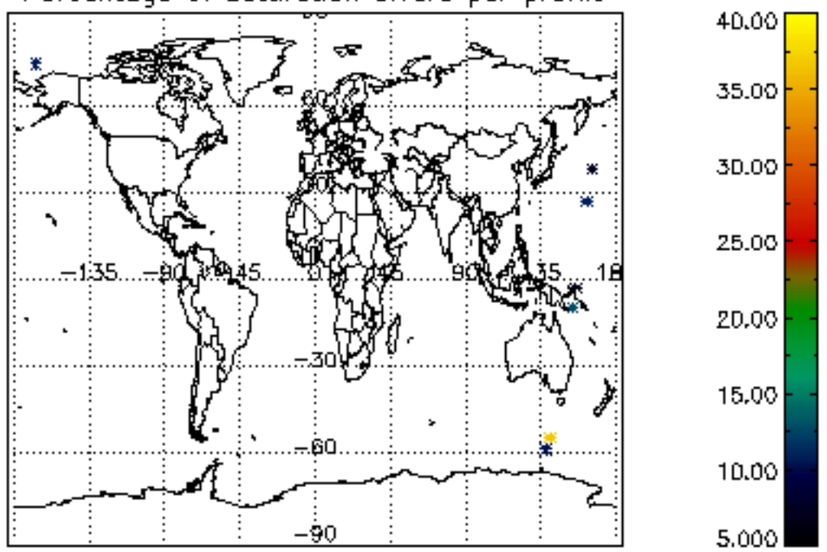
Percentage of datation errors per profile

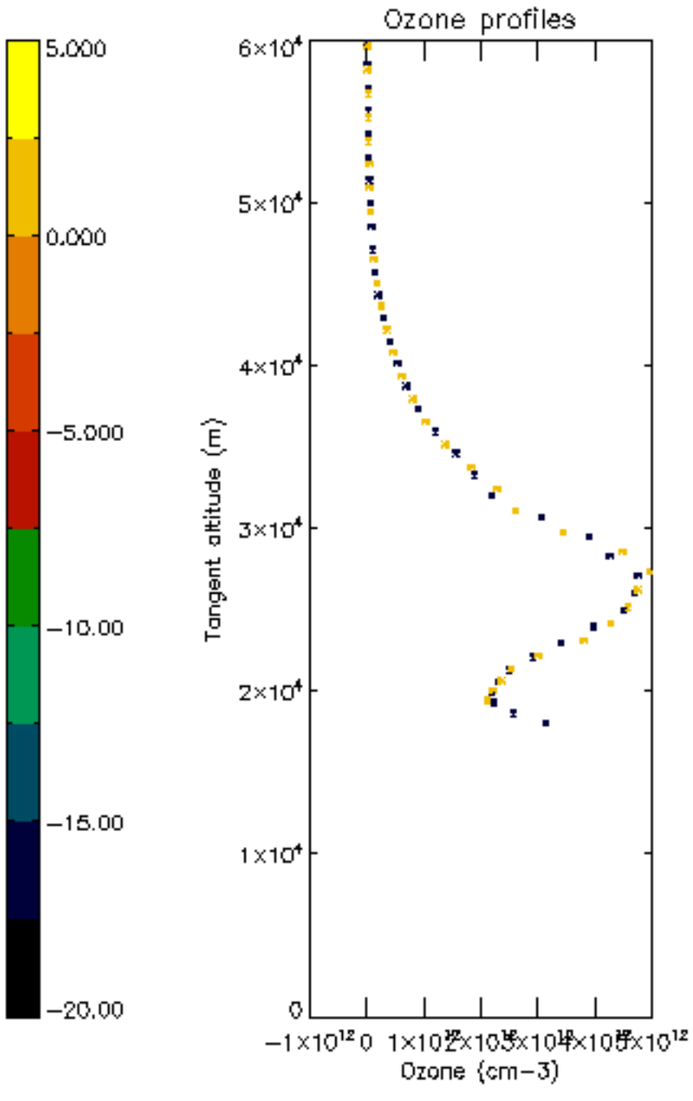


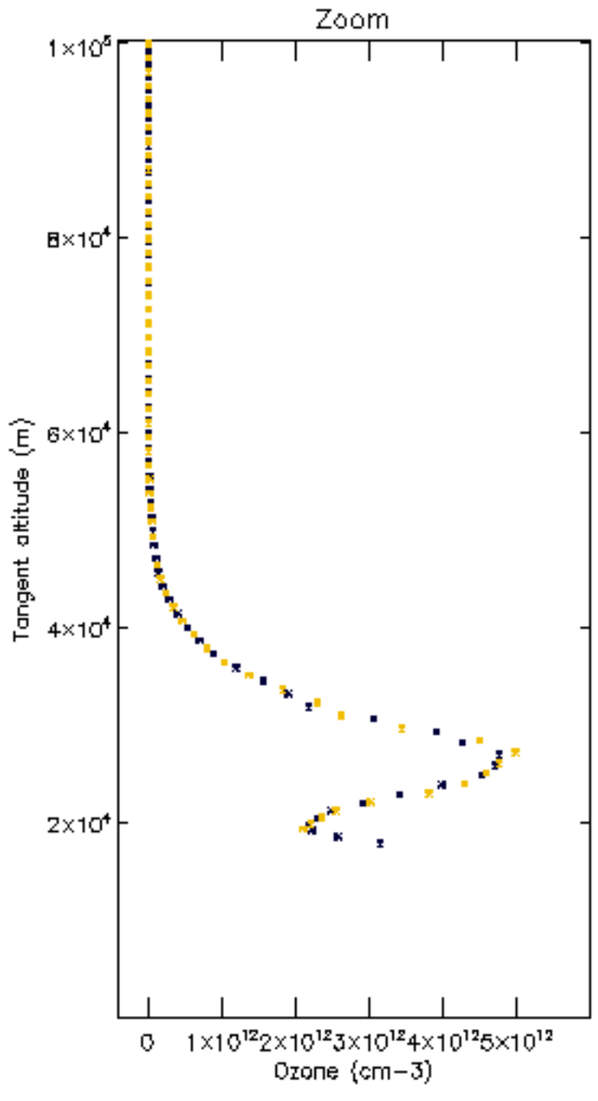
Percentage of star falling outside central band per profile

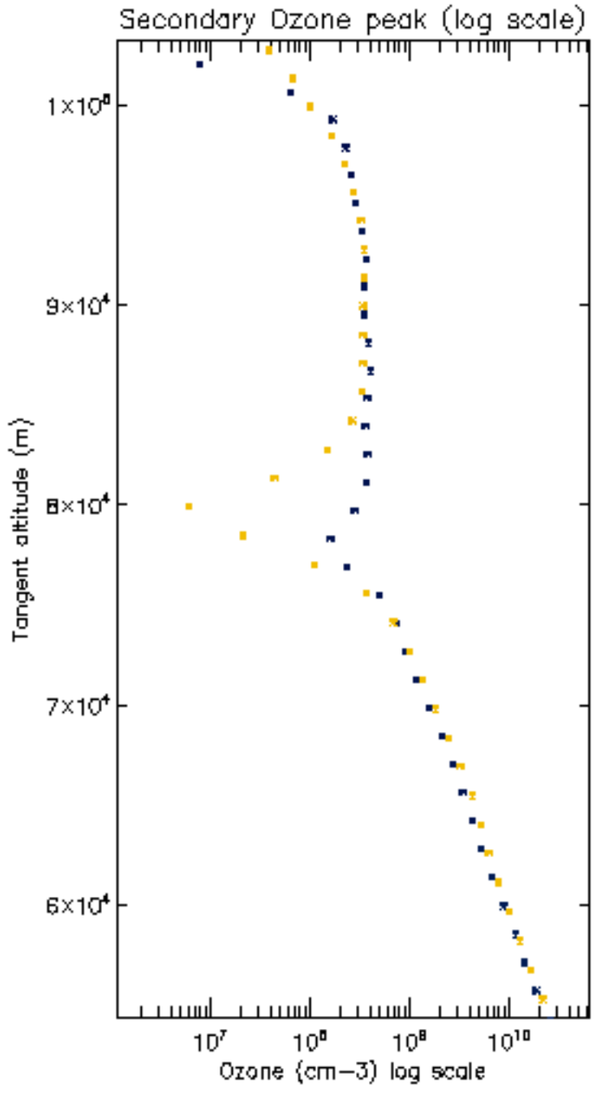


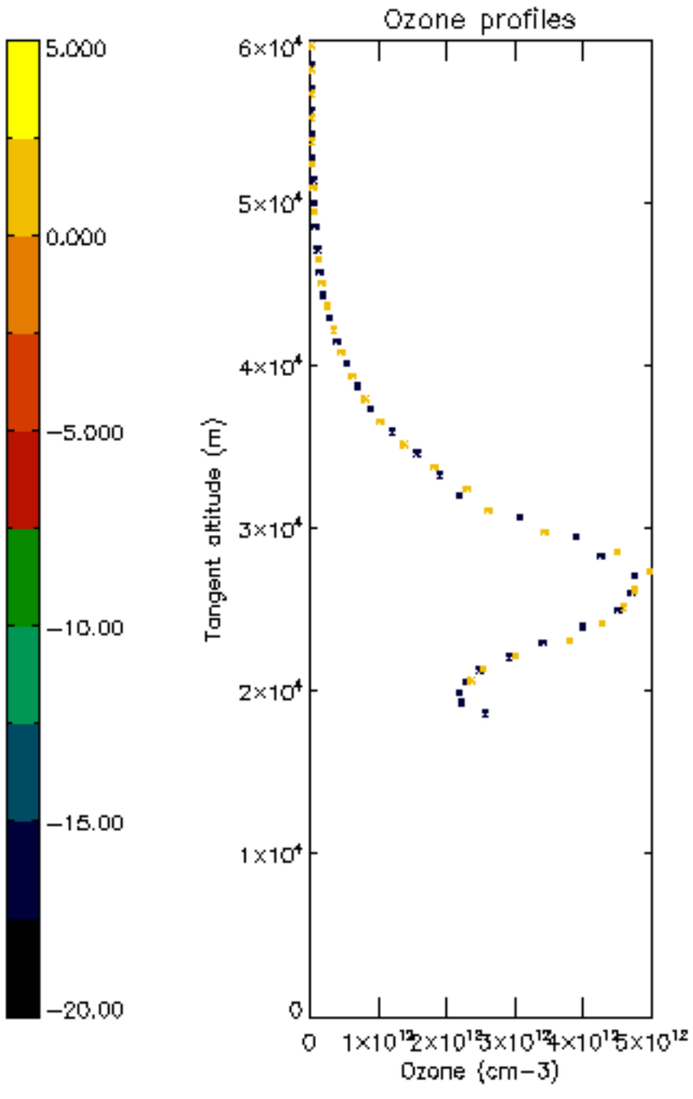
Percentage of saturation errors per profile




5.000
0.000
−5.000
−10.00
−15.00
−20.00
Ozone profiles
6×10⁴
5×10⁴
4×10⁴
3×10⁴
2×10⁴
1×10⁴
0
Tangent altitude (m)
−1×10¹² 0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)

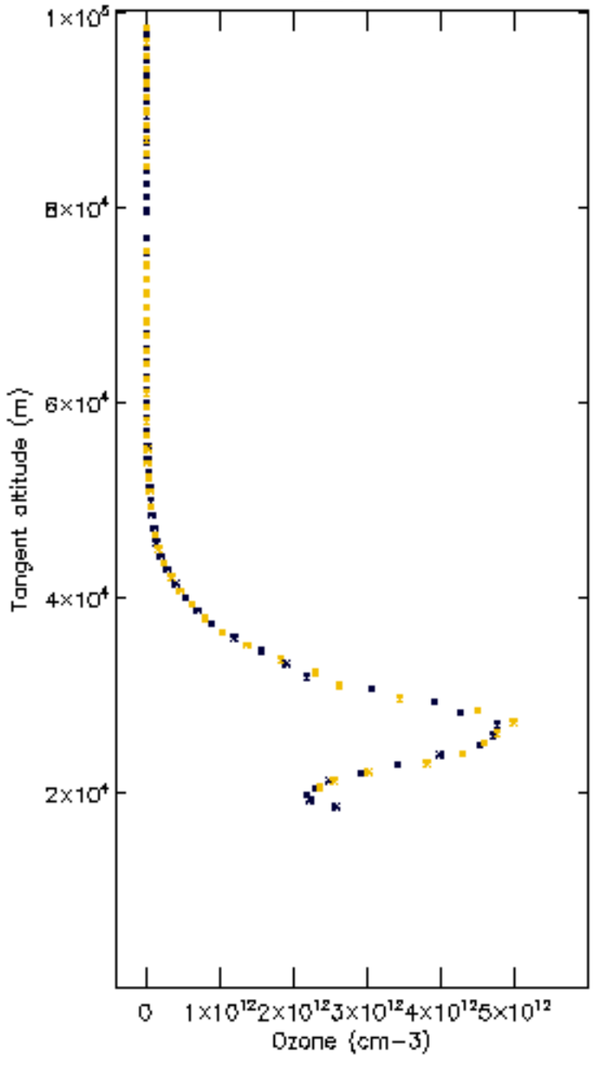

Zoom
1×10⁵
8×10⁴
6×10⁴
4×10⁴
2×10⁴
Tangent altitude (m)
0 1×10¹² 2×10¹² 3×10¹² 4×10¹² 5×10¹²
Ozone (cm−3)


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

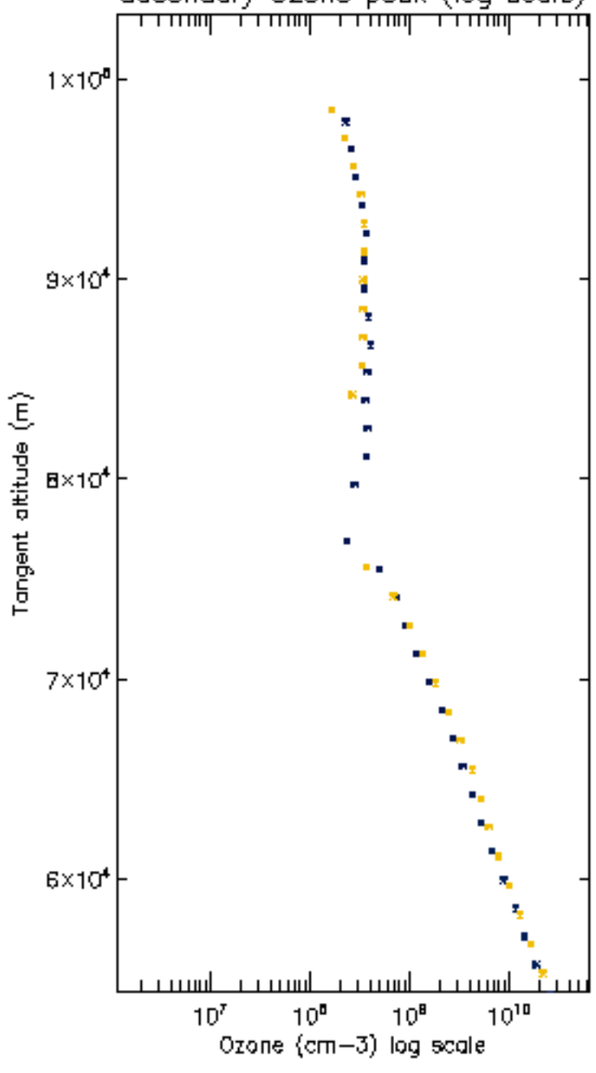


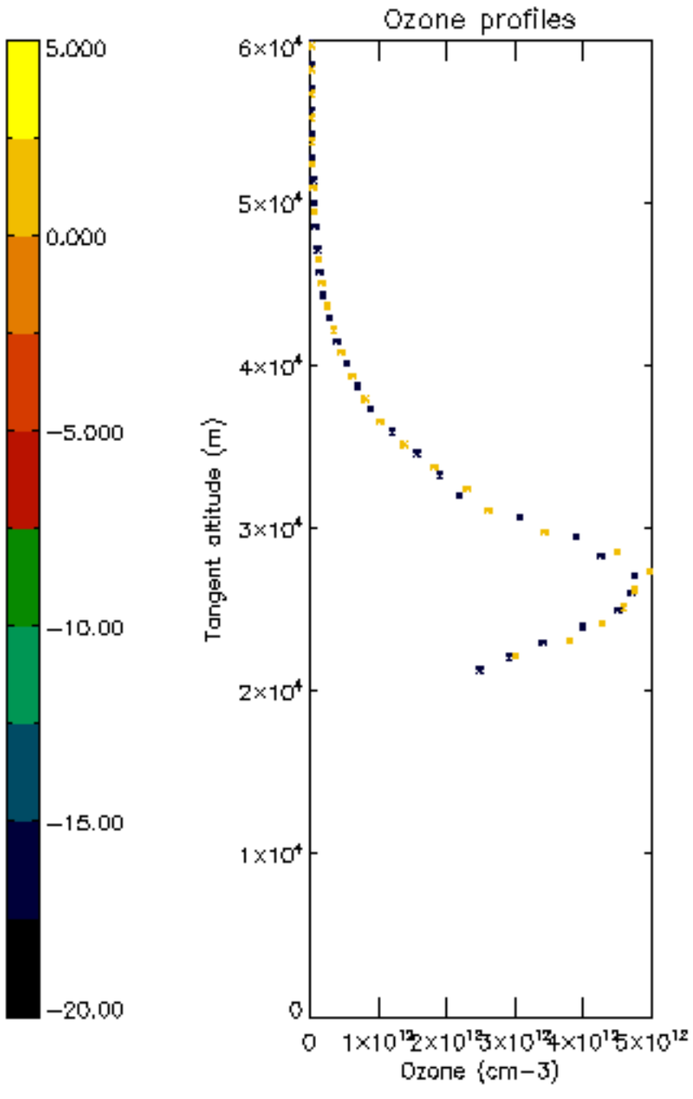
Ozone profiles

Zoom



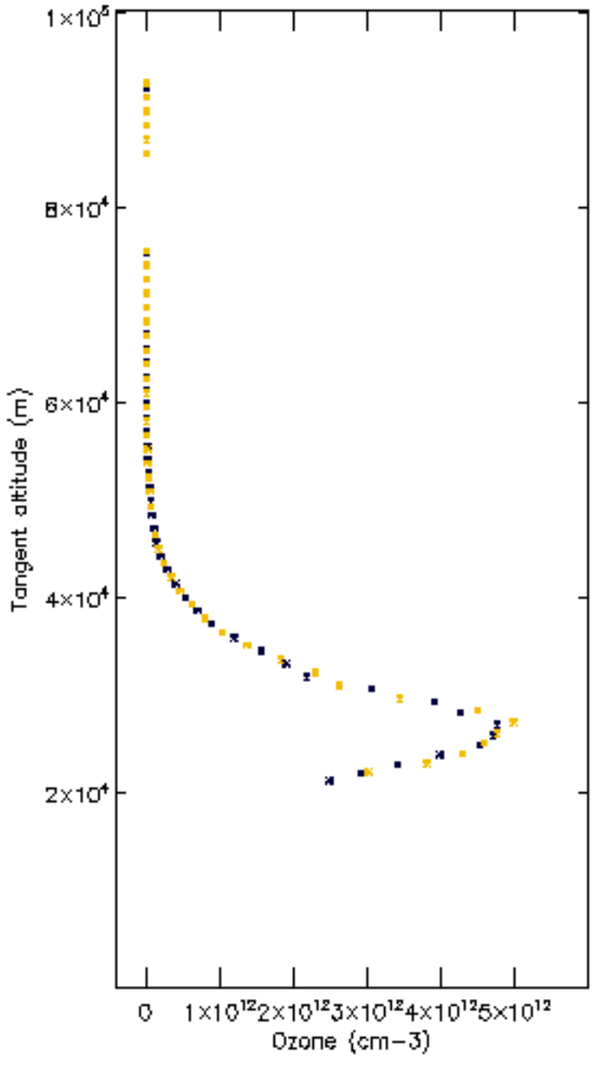
Secondary Ozone peak (log scale)



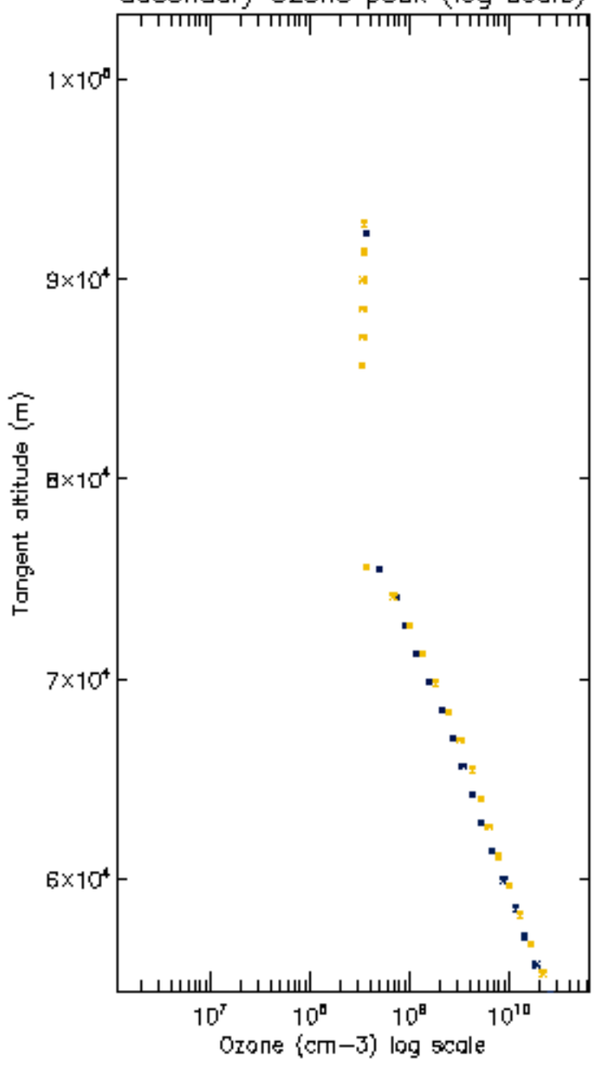


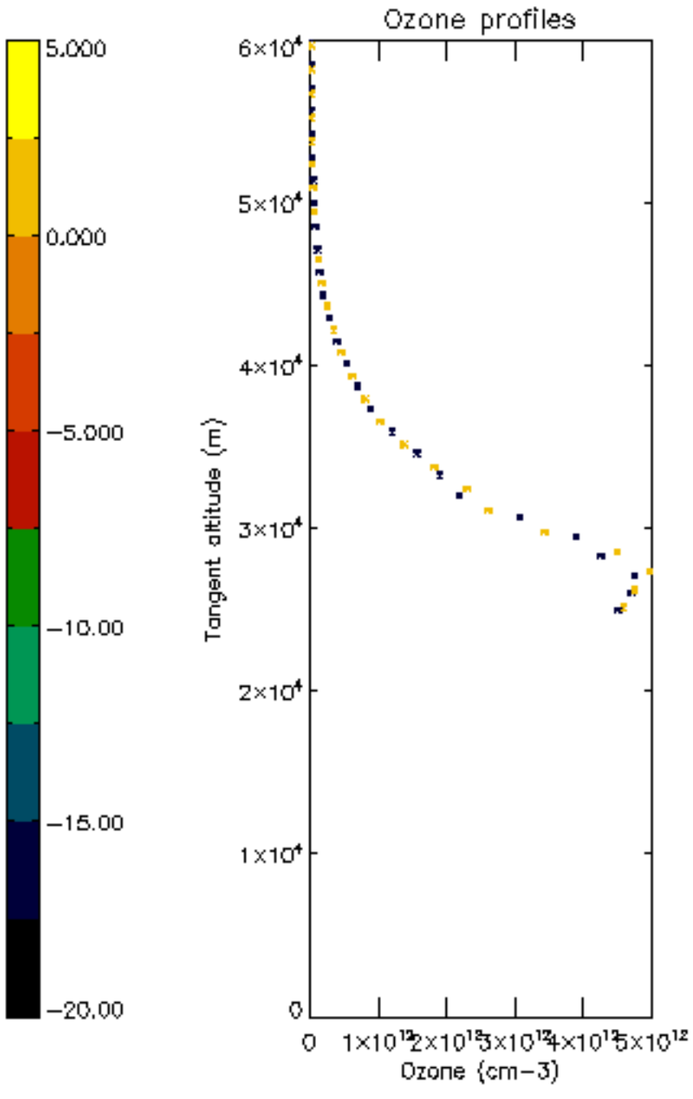
Ozone profiles

Zoom



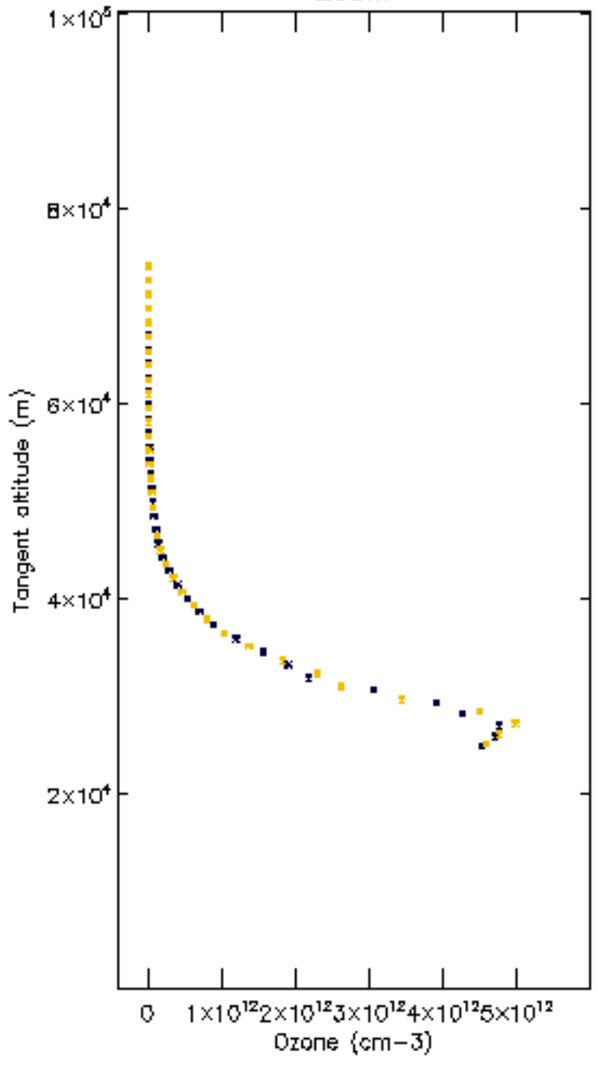
Secondary Ozone peak (log scale)



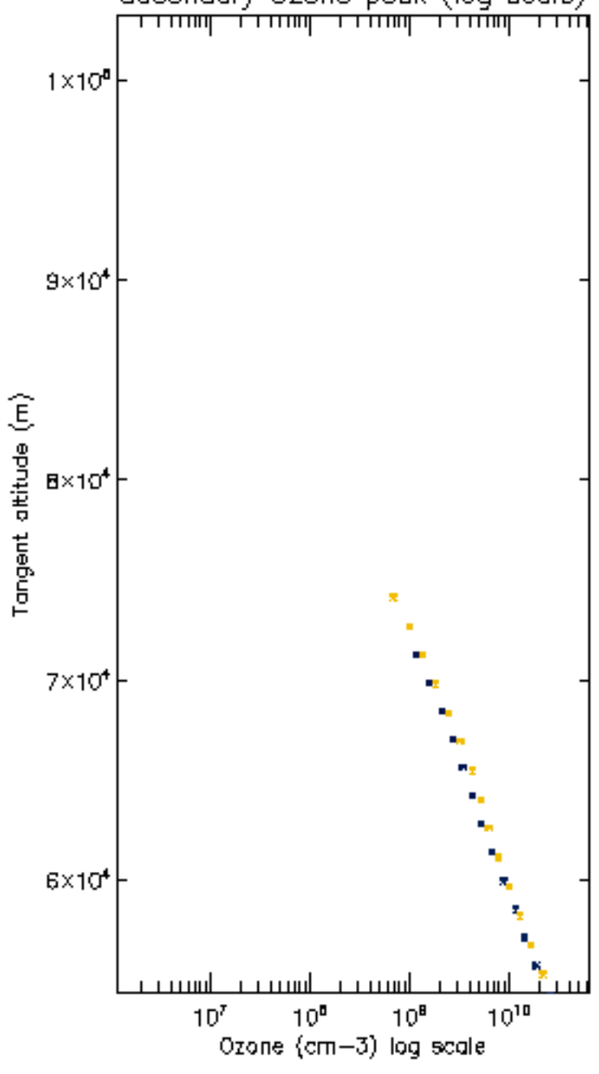


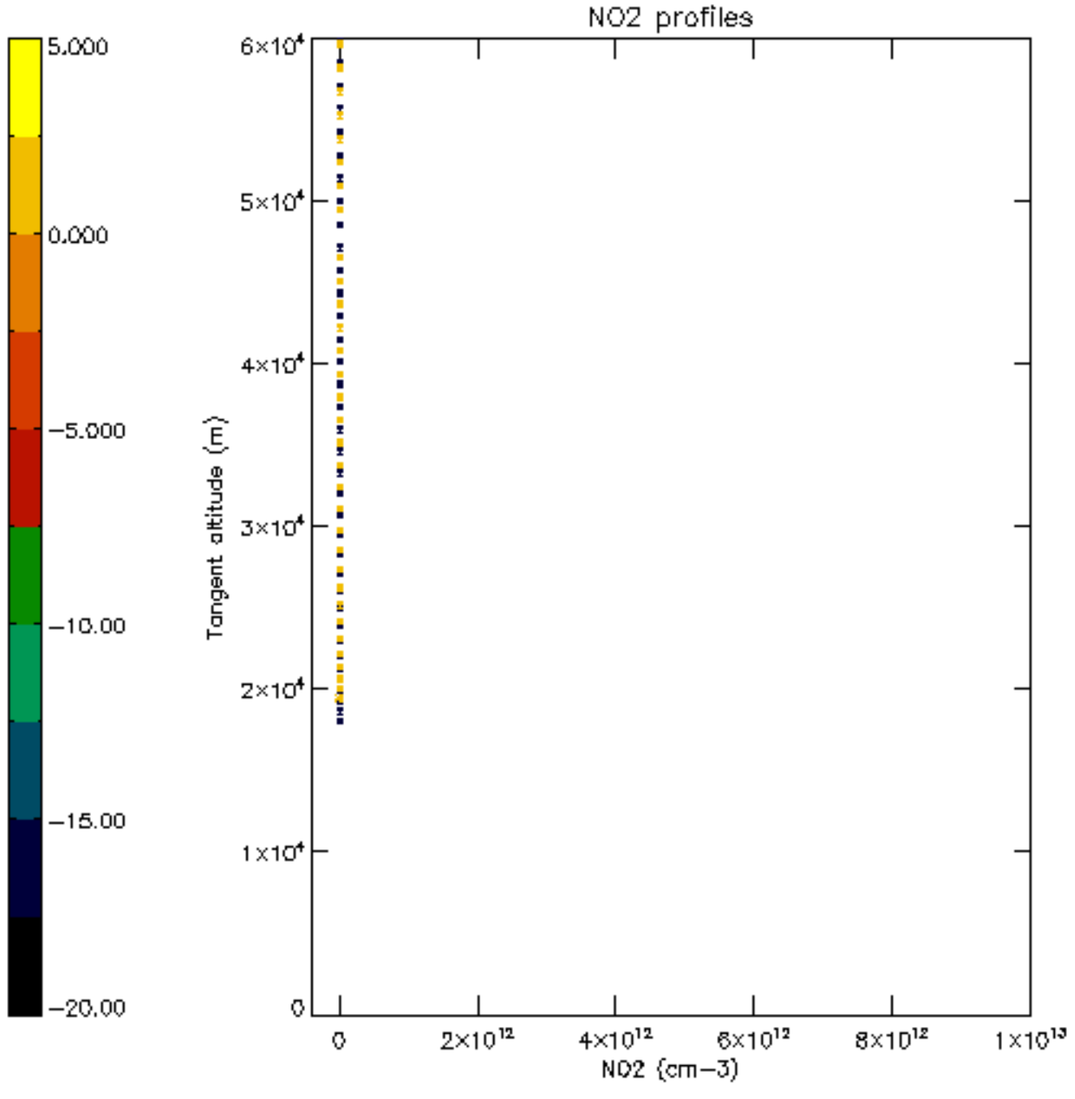
Ozone profiles

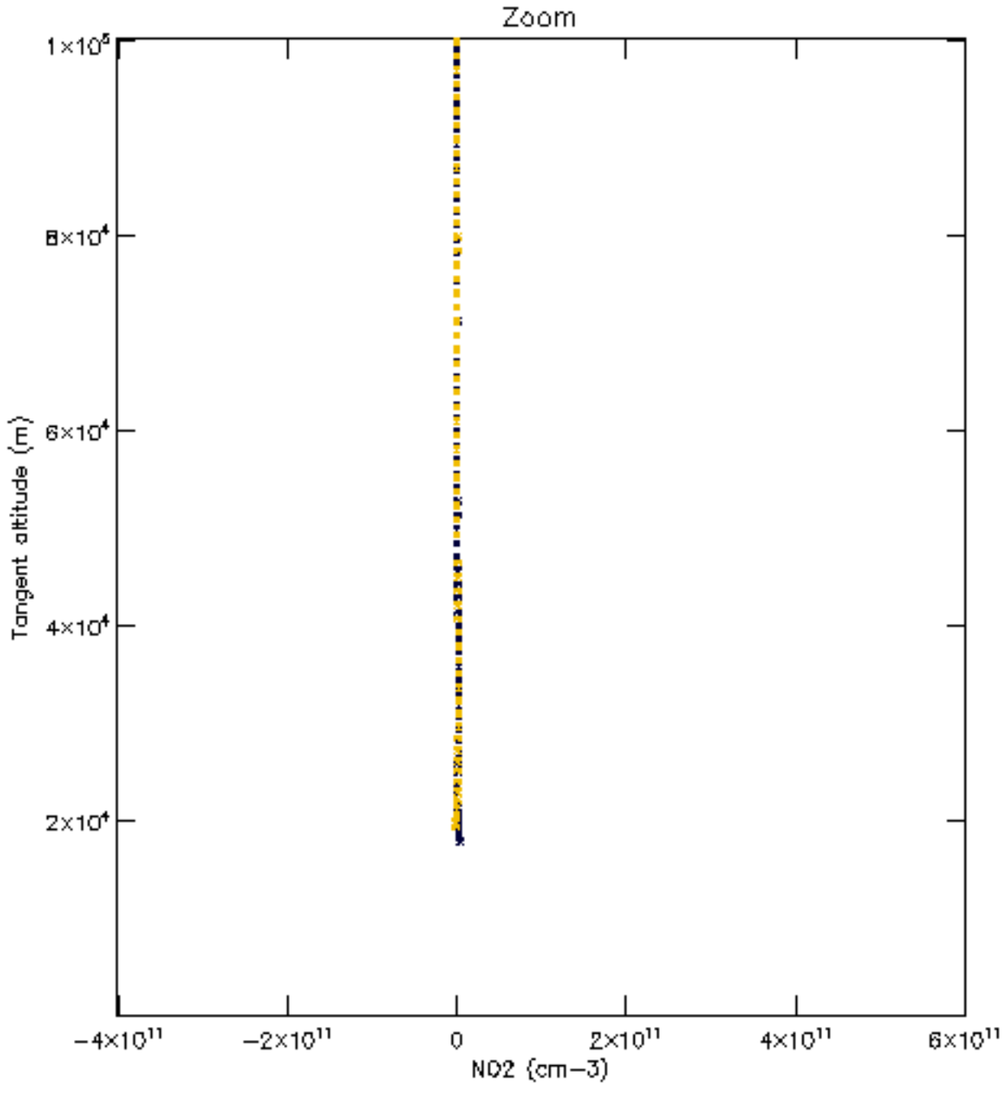
Zoom

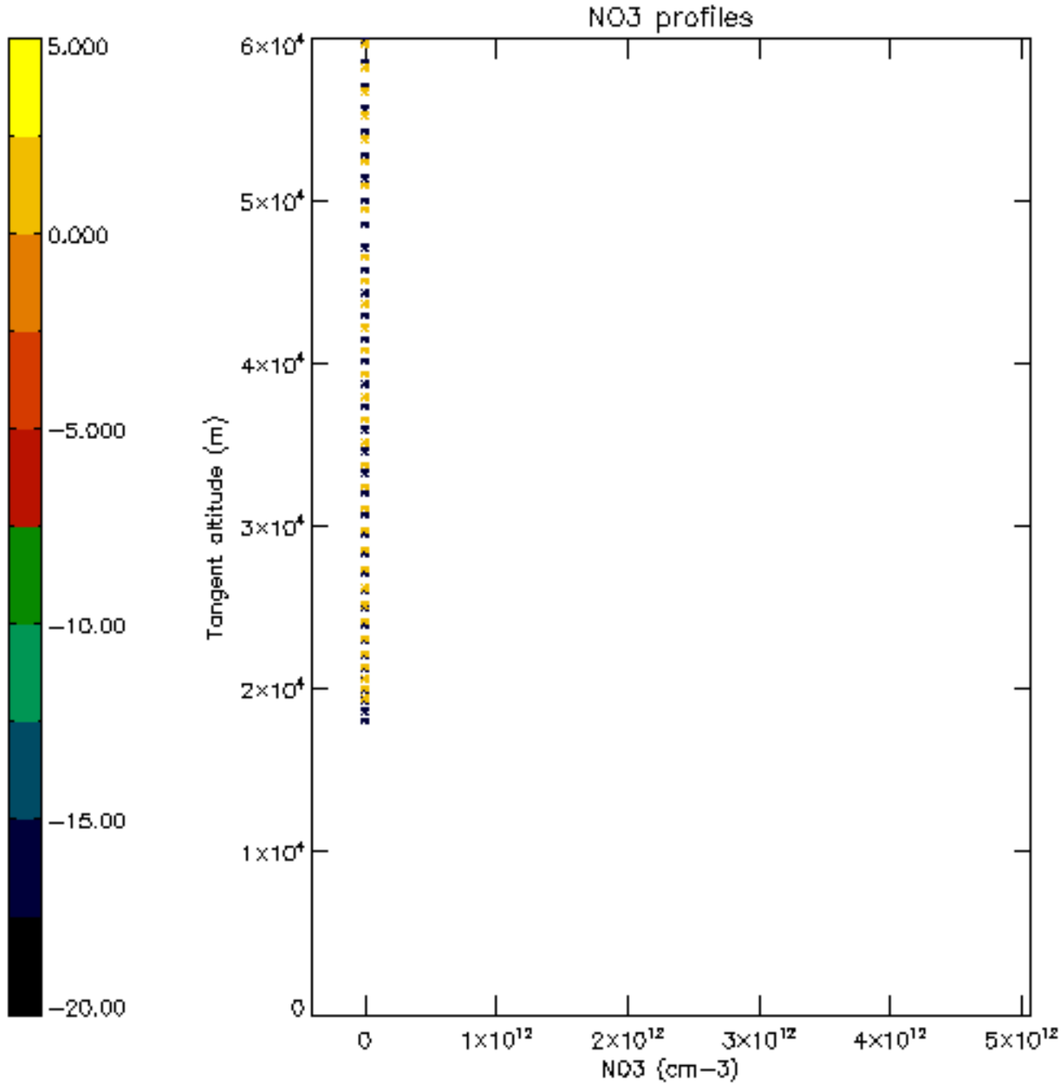


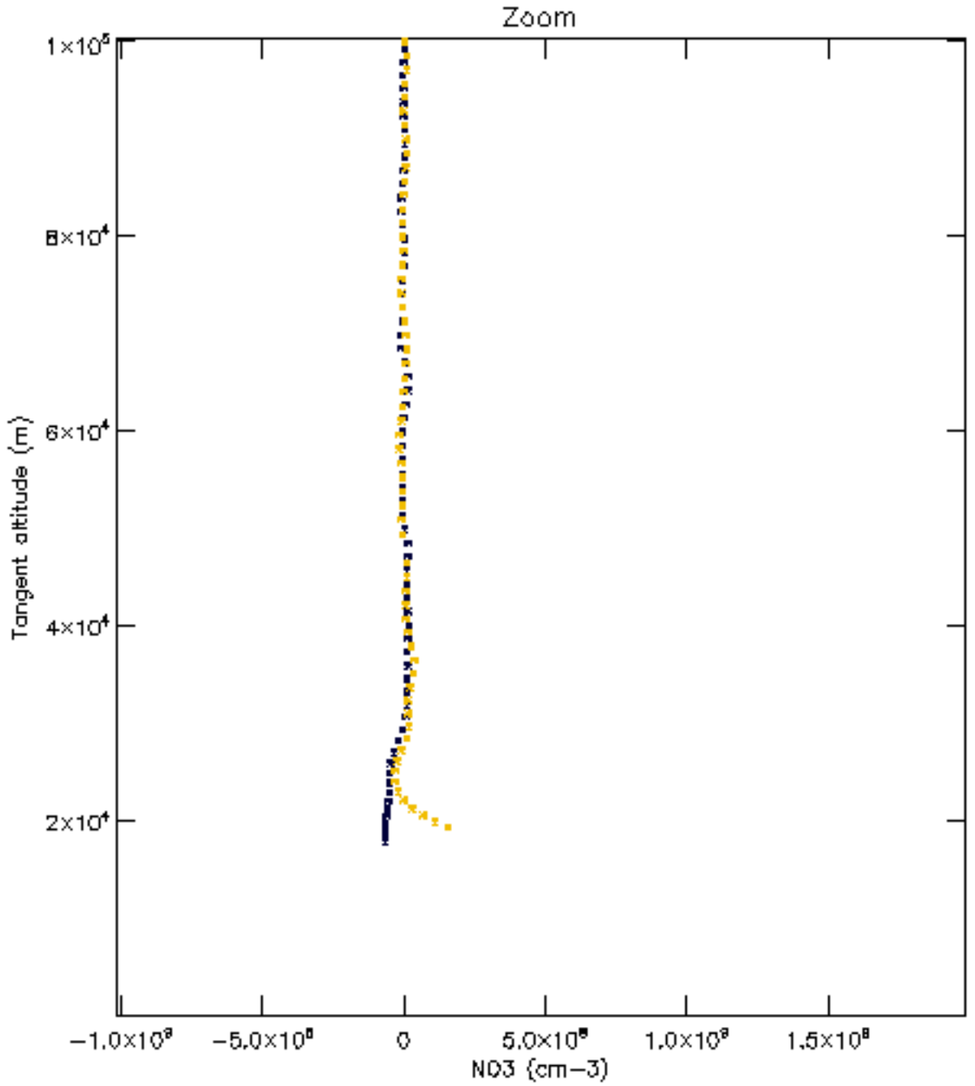
Secondary Ozone peak (log scale)




NO2 profiles
5.000
0.000
−5.000
−10.00
−15.00
−20.00
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
5.000
0.000
−5.000
−10.00
−15.00
−20.00
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)