

# GOMOS Level 2 Daily Report

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This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	29APR2013 11:15:57
Data source version	GOMOS/6.01
Start time of products	28-05-2010 (28MAY2010 00:00:00)
Stop time of products	29-05-2010 (29MAY2010 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	304
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__2PRFIN20100528_000614_000000492089_00446_43085_1918.N1	28-MAY-2010 00:06:14	Dark	48.500	63	Bet Gru	2.1500	2800.0	97	43085	No
2	GOM_NL__2PRFIN20100528_000801_000000452089_00446_43085_1919.N1	28-MAY-2010 00:08:01	Dark	45.000	31	Alp Gru	1.7340	15200.	90	43085	No
3	GOM_NL__2PRFIN20100528_001313_000000432089_00446_43085_1920.N1	28-MAY-2010 00:13:13	Dark	42.500	45	Alp Pav	1.9400	26000.	85	43085	No
4	GOM_NL__2PRFIN20100528_001943_000000462089_00446_43085_1921.N1	28-MAY-2010 00:19:43	Straylight	45.500	141	Bet Ara	2.8400	4600.0	91	43085	No
5	GOM_NL__2PRFIN20100528_002235_000000472089_00446_43085_1922.N1	28-MAY-2010 00:22:35	Straylight	46.500	40	The Sco	1.8590	7100.0	93	43085	No
6	GOM_NL__2PRFIN20100528_002425_000000492089_00446_43085_1923.N1	28-MAY-2010 00:24:25	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	43085	No
7	GOM_NL__2PRFIN20100528_002618_000000492089_00446_43085_1924.N1	28-MAY-2010 00:26:18	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43085	No
8	GOM_NL__2PRFIN20100528_002825_000000432089_00446_43085_1925.N1	28-MAY-2010 00:28:25	Twilight	43.000	136	23Tau Sco	2.8220	30000.	86	43085	No
9	GOM_NL__2PRFIN20100528_003034_000000422089_00446_43085_1926.N1	28-MAY-2010 00:30:34	Bright	41.500	80	7Del Sco	2.3160	30000.	83	43085	No
10	GOM_NL__2PRFIN20100528_003212_000000492089_00446_43085_1927.N1	28-MAY-2010 00:32:12	Bright	49.000	86	35Eta Oph	2.4300	10200.	98	43085	No
11	GOM_NL__2PRFIN20100528_003408_000000452089_00446_43085_1928.N1	28-MAY-2010 00:34:08	Bright	45.000	98	13Zet Oph	2.5710	30000.	90	43085	No
12	GOM_NL__2PRFIN20100528_003623_000000422089_00446_43085_1929.N1	28-MAY-2010 00:36:23	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	43085	No
13	GOM_NL__2PRFIN20100528_003925_000000392089_00446_43085_1930.N1	28-MAY-2010 00:39:25	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	43085	No
14	GOM_NL__2PRFIN20100528_004526_000000372089_00446_43085_1931.N1	28-MAY-2010 00:45:26	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	43085	No
15	GOM_NL__2PRFIN20100528_004829_000000452089_00446_43085_1932.N1	28-MAY-2010 00:48:29	Bright	44.500	133	40Zet Her	2.8070	6000.0	89	43085	No
16	GOM_NL__2PRFIN20100528_005611_000000392089_00446_43085_1933.N1	28-MAY-2010 00:56:11	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	43085	No
17	GOM_NL__2PRFIN20100528_010651_000000482089_00446_43085_1934.N1	28-MAY-2010 01:06:51	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	43085	No
18	GOM_NL__2PRFIN20100528_011120_000000402089_00446_43085_1935.N1	28-MAY-2010 01:11:20	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	43085	No
19	GOM_NL__2PRFIN20100528_011854_000000422089_00446_43085_1936.N1	28-MAY-2010 01:18:54	Bright	42.000	53	43Bet And	2.0480	3300.0	84	43085	No
20	GOM_NL__2PRFIN20100528_012131_000000502089_00446_43085_1937.N1	28-MAY-2010 01:21:31	Twilight	49.500	58	21Alp And	2.0730	11000.	99	43085	No
21	GOM_NL__2PRFIN20100528_012612_000000482089_00446_43085_1938.N1	28-MAY-2010 01:26:12	Dark	47.500	140	88Gam Peg	2.8340	26000.	95	43085	No
22	GOM_NL__2PRFIN20100528_013505_000000452089_00446_43085_1939.N1	28-MAY-2010 01:35:05	Dark	44.500	52	16Bet Cet	2.0370	4500.0	89	43085	No
23	GOM_NL__2PRFIN20100528_014651_000000512089_00447_43086_1926.N1	28-MAY-2010 01:46:51	Dark	51.000	63	Bet Gru	2.1500	2800.0	102	43086	No
24	GOM_NL__2PRFIN20100528_014838_000000452089_00447_43086_1927.N1	28-MAY-2010 01:48:38	Dark	44.500	31	Alp Gru	1.7340	15200.	89	43086	No
25	GOM_NL__2PRFIN20100528_015350_000000442089_00447_43086_1928.N1	28-MAY-2010 01:53:50	Straylight	43.500	45	Alp Pav	1.9400	26000.	87	43086	No
26	GOM_NL__2PRFIN20100528_020019_000000422089_00447_43086_1929.N1	28-MAY-2010 02:00:19	Straylight	42.000	141	Bet Ara	2.8400	4600.0	84	43086	No
27	GOM_NL__2PRFIN20100528_020311_000000472089_00447_43086_1930.N1	28-MAY-2010 02:03:11	Straylight	46.500	40	The Sco	1.8590	7100.0	93	43086	No
28	GOM_NL__2PRFIN20100528_020501_000000512089_00447_43086_1931.N1	28-MAY-2010 02:05:01	Twilight	50.500	25	35Lam Sco	1.6200	28000.	101	43086	No
29	GOM_NL__2PRFIN20100528_020655_000000502089_00447_43086_1932.N1	28-MAY-2010 02:06:55	Twilight	49.500	75	26Eps Sco	2.2910	4250.0	99	43086	No
30	GOM_NL__2PRFIN20100528_020901_000000432089_00447_43086_1933.N1	28-MAY-2010 02:09:01	Twilight	42.500	136	23Tau Sco	2.8220	30000.	85	43086	No
31	GOM_NL__2PRFIN20100528_021444_000000452089_00447_43086_1934.N1	28-MAY-2010 02:14:44	Bright	44.500	98	13Zet Oph	2.5710	30000.	89	43086	No
32	GOM_NL__2PRFIN20100528_021659_000000422089_00447_43086_1935.N1	28-MAY-2010 02:16:59	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	43086	No
33	GOM_NL__2PRFIN20100528_022001_000000392089_00447_43086_1936.N1	28-MAY-2010 02:20:01	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	43086	No
34	GOM_NL__2PRFIN20100528_022601_000000392089_00447_43086_1937.N1	28-MAY-2010 02:26:01	Bright	39.000	67	5Alp CrB	2.2210	11000.	78	43086	No
35	GOM_NL__2PRFIN20100528_022904_000000672089_00447_43086_1938.N1	28-MAY-2010 02:29:04	Bright	67.000	133	40Zet Her	2.8070	6000.0	134	43086	No
36	GOM_NL__2PRFIN20100528_023646_000000402089_00447_43086_1939.N1	28-MAY-2010 02:36:46	Bright	40.000	119	14Eta Dra	2.7270	4700.0	80	43086	No
37	GOM_NL__2PRFIN20100528_024726_000000482089_00447_43086_1940.N1	28-MAY-2010 02:47:26	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	43086	No
38	GOM_NL__2PRFIN20100528_025157_000000502089_00447_43086_1941.N1	28-MAY-2010 02:51:57	Bright	50.000	76	27Gam Cas	2.3000	30000.	100	43086	No
39	GOM_NL__2PRFIN20100528_025931_000000412089_00447_43086_1942.N1	28-MAY-2010 02:59:31	Bright	41.000	53	43Bet And	2.0480	3300.0	82	43086	No
40	GOM_NL__2PRFIN20100528_030207_000000512089_00447_43086_1943.N1	28-MAY-2010 03:02:07	Twilight	50.500	58	21Alp And	2.0730	11000.	101	43086	No
41	GOM_NL__2PRFIN20100528_030648_000000492089_00447_43086_1944.N1	28-MAY-2010 03:06:48	Dark	49.000	140	88Gam Peg	2.8340	26000.	98	43086	No
42	GOM_NL__2PRFIN20100528_031542_000000462089_00447_43086_1945.N1	28-MAY-2010 03:15:42	Dark	45.500	52	16Bet Cet	2.0370	4500.0	91	43086	No







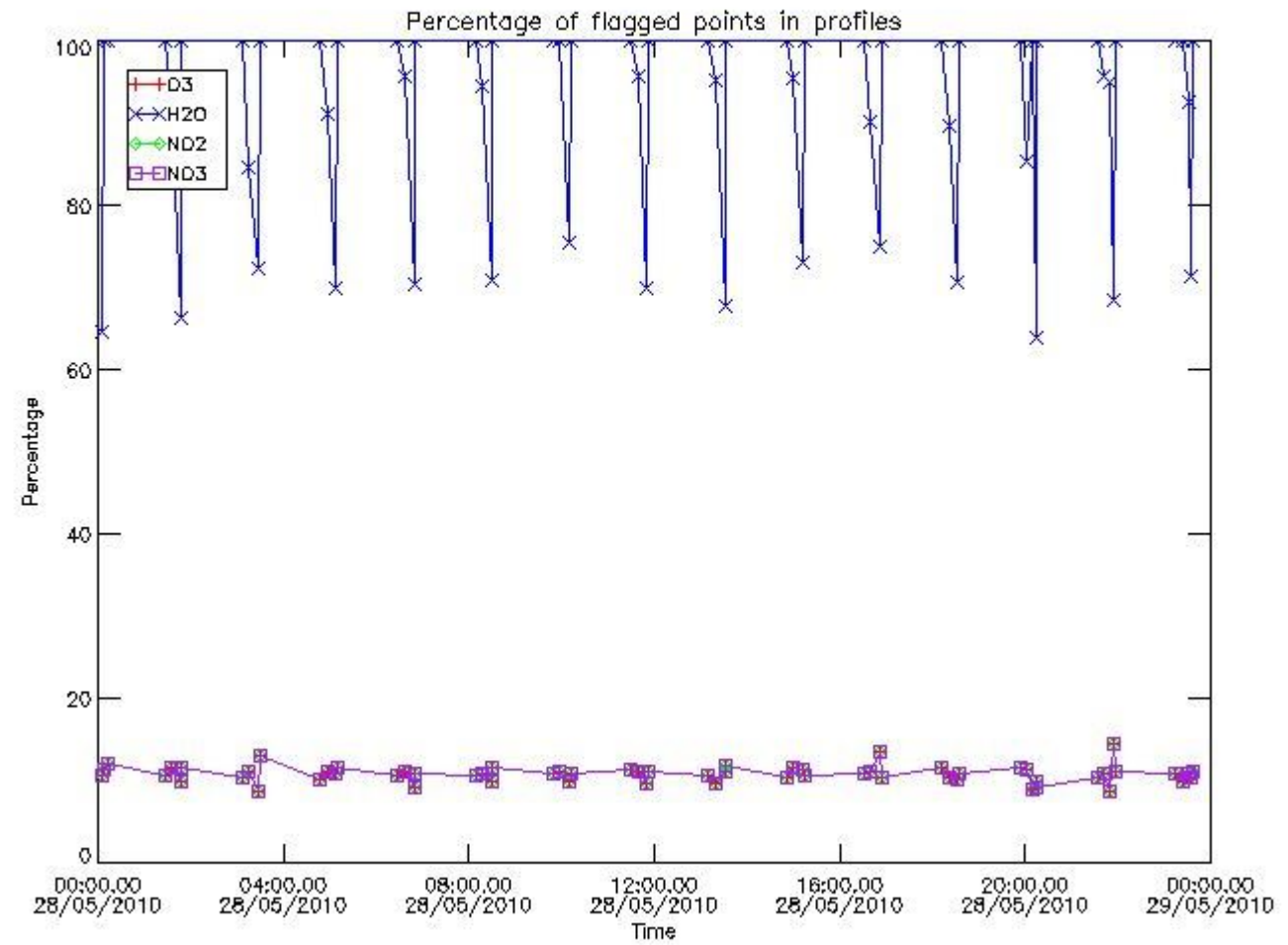


279	GOM_NL__2PRFIN20100528_221410_000000492089_00459_43098_2056.N1	28-MAY-2010 22:14:10	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43098	No
280	GOM_NL__2PRFIN20100528_221615_000000452089_00459_43098_2057.N1	28-MAY-2010 22:16:15	Twilight	45.000	136	23Tau Sco	2.8220	30000.	90	43098	No
281	GOM_NL__2PRFIN20100528_221824_000000412089_00459_43098_2058.N1	28-MAY-2010 22:18:24	Bright	40.500	80	7Del Sco	2.3160	30000.	81	43098	No
282	GOM_NL__2PRFIN20100528_222001_000000482089_00459_43098_2059.N1	28-MAY-2010 22:20:01	Bright	48.000	86	35Eta Oph	2.4300	10200.	96	43098	No
283	GOM_NL__2PRFIN20100528_222155_000000442089_00459_43098_2060.N1	28-MAY-2010 22:21:55	Bright	43.500	98	13Zet Oph	2.5710	30000.	87	43098	No
284	GOM_NL__2PRFIN20100528_222409_000000432089_00459_43098_2061.N1	28-MAY-2010 22:24:09	Bright	43.000	120	1Del Oph	2.7340	3200.0	86	43098	No
285	GOM_NL__2PRFIN20100528_222712_000000382089_00459_43098_2062.N1	28-MAY-2010 22:27:12	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	43098	No
286	GOM_NL__2PRFIN20100528_223310_000000392089_00459_43098_2063.N1	28-MAY-2010 22:33:10	Bright	39.000	67	5Alp CrB	2.2210	11000.	78	43098	No
287	GOM_NL__2PRFIN20100528_223608_000000442089_00459_43098_2064.N1	28-MAY-2010 22:36:08	Bright	44.000	133	40Zet Her	2.8070	6000.0	88	43098	No
288	GOM_NL__2PRFIN20100528_224354_000000422089_00459_43098_2065.N1	28-MAY-2010 22:43:54	Bright	41.500	119	14Eta Dra	2.7270	4700.0	83	43098	No
289	GOM_NL__2PRFIN20100528_225430_000000482089_00459_43098_2066.N1	28-MAY-2010 22:54:30	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	43098	No
290	GOM_NL__2PRFIN20100528_225907_000000492089_00459_43098_2067.N1	28-MAY-2010 22:59:07	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	43098	No
291	GOM_NL__2PRFIN20100528_230644_000000442089_00459_43098_2068.N1	28-MAY-2010 23:06:44	Bright	44.000	53	43Bet And	2.0480	3300.0	88	43098	No
292	GOM_NL__2PRFIN20100528_230921_000000522089_00459_43098_2069.N1	28-MAY-2010 23:09:21	Twilight	51.500	58	21Alp And	2.0730	11000.	103	43098	No
293	GOM_NL__2PRFIN20100528_231405_000000472089_00459_43098_2070.N1	28-MAY-2010 23:14:05	Dark	47.000	140	88Gam Peg	2.8340	26000.	94	43098	No
294	GOM_NL__2PRFIN20100528_232259_000000522089_00459_43098_2071.N1	28-MAY-2010 23:22:59	Dark	52.000	52	16Bet Cet	2.0370	4500.0	104	43098	No
295	GOM_NL__2PRFIN20100528_233112_000000622089_00459_43098_2072.N1	28-MAY-2010 23:31:12	Dark	61.500	18	24Alp PsA	1.1660	9700.0	123	43098	No
296	GOM_NL__2PRFIN20100528_233449_000000602089_00460_43099_2086.N1	28-MAY-2010 23:34:49	Dark	59.500	63	Bet Gru	2.1500	2800.0	119	43099	No
297	GOM_NL__2PRFIN20100528_233637_000000462089_00460_43099_2087.N1	28-MAY-2010 23:36:37	Dark	46.000	31	Alp Gru	1.7340	15200.	92	43099	No
298	GOM_NL__2PRFIN20100528_234146_000000432089_00460_43099_2088.N1	28-MAY-2010 23:41:46	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	43099	No
299	GOM_NL__2PRFIN20100528_234925_000000422089_00460_43099_2089.N1	28-MAY-2010 23:49:25	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	43099	No
300	GOM_NL__2PRFIN20100528_235105_000000462089_00460_43099_2090.N1	28-MAY-2010 23:51:05	Straylight	46.000	40	The Sco	1.8590	7100.0	92	43099	No
301	GOM_NL__2PRFIN20100528_235254_000000482089_00460_43099_2091.N1	28-MAY-2010 23:52:54	Twilight	48.000	25	35Lam Sco	1.6200	28000.	96	43099	No
302	GOM_NL__2PRFIN20100528_235446_000000492089_00460_43099_2092.N1	28-MAY-2010 23:54:46	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43099	No
303	GOM_NL__2PRFIN20100528_235651_000000482089_00460_43099_2093.N1	28-MAY-2010 23:56:51	Twilight	48.000	136	23Tau Sco	2.8220	30000.	96	43099	No
304	GOM_NL__2PRFIN20100528_235900_000000452089_00460_43099_2094.N1	28-MAY-2010 23:59:00	Bright	45.000	80	7Del Sco	2.3160	30000.	90	43099	No

### 3. Quality information per product

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

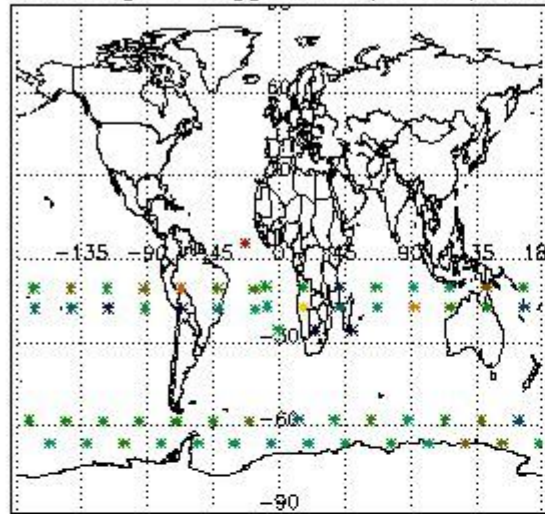
#### 3.1 Plot quality information per product (time dependant)



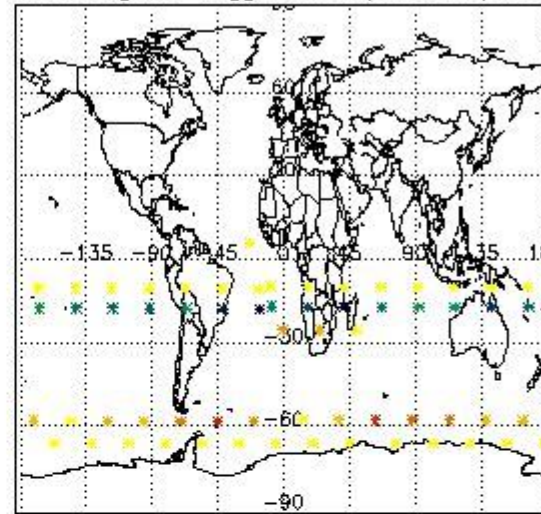
3.2 Plot quality information per product (world map)



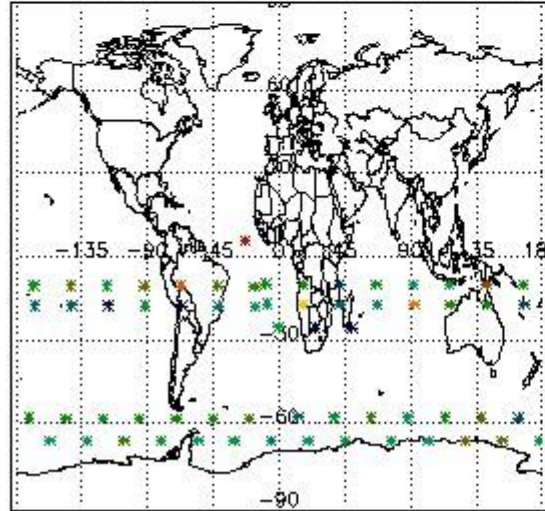
Percentage of flagged data per O3 profile



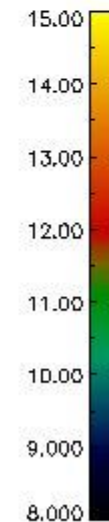
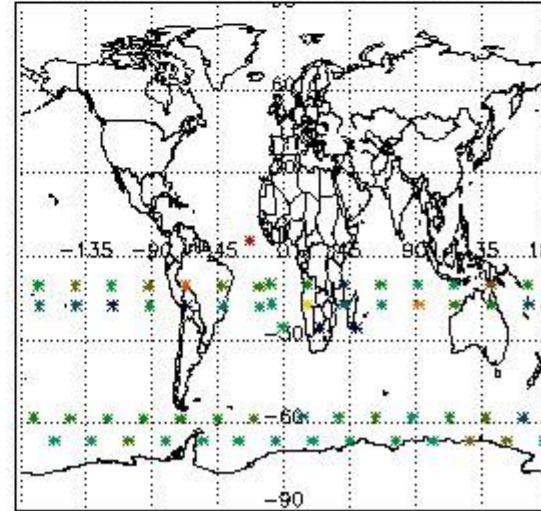
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

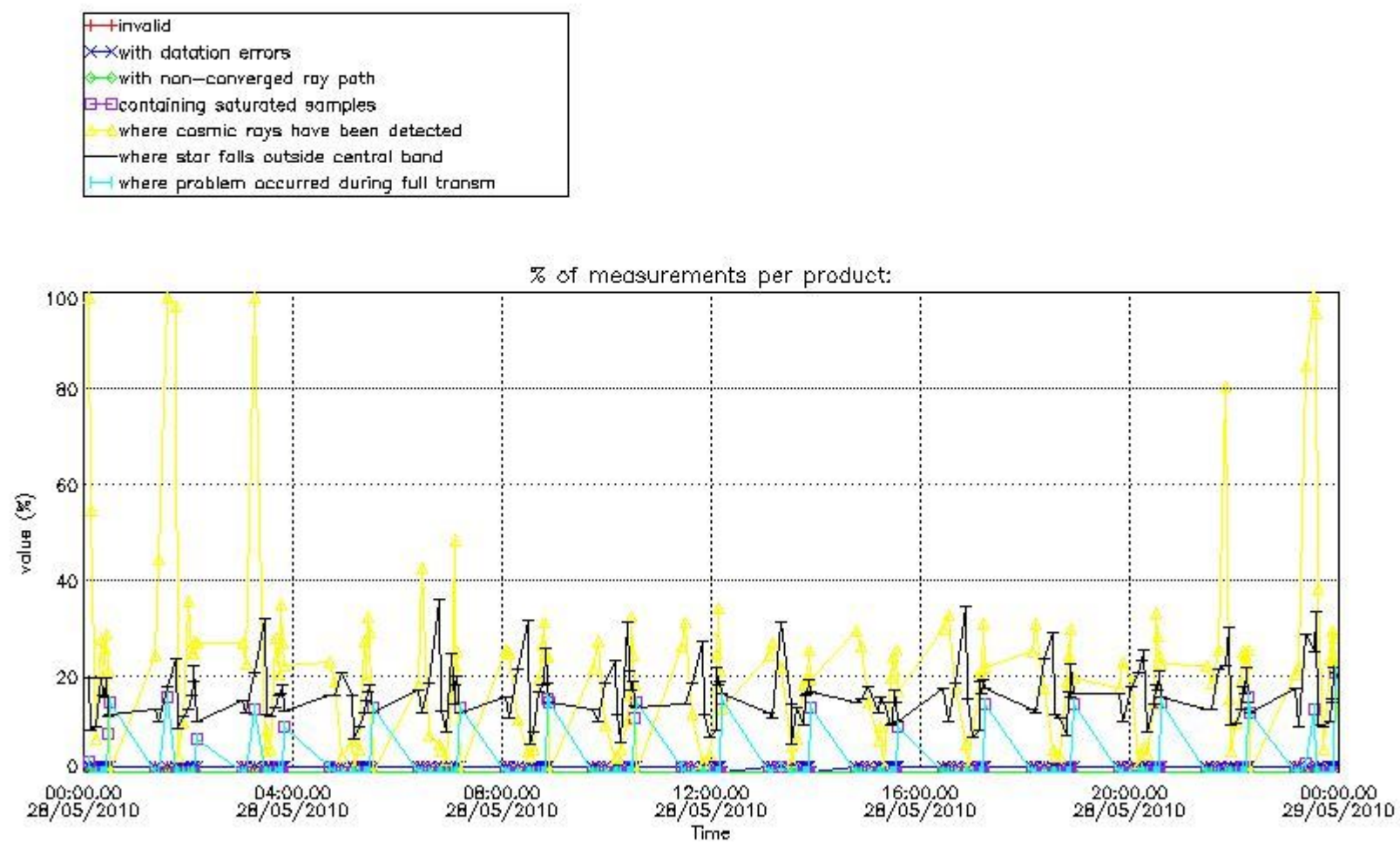


#### 4. Level 1 quality information per product

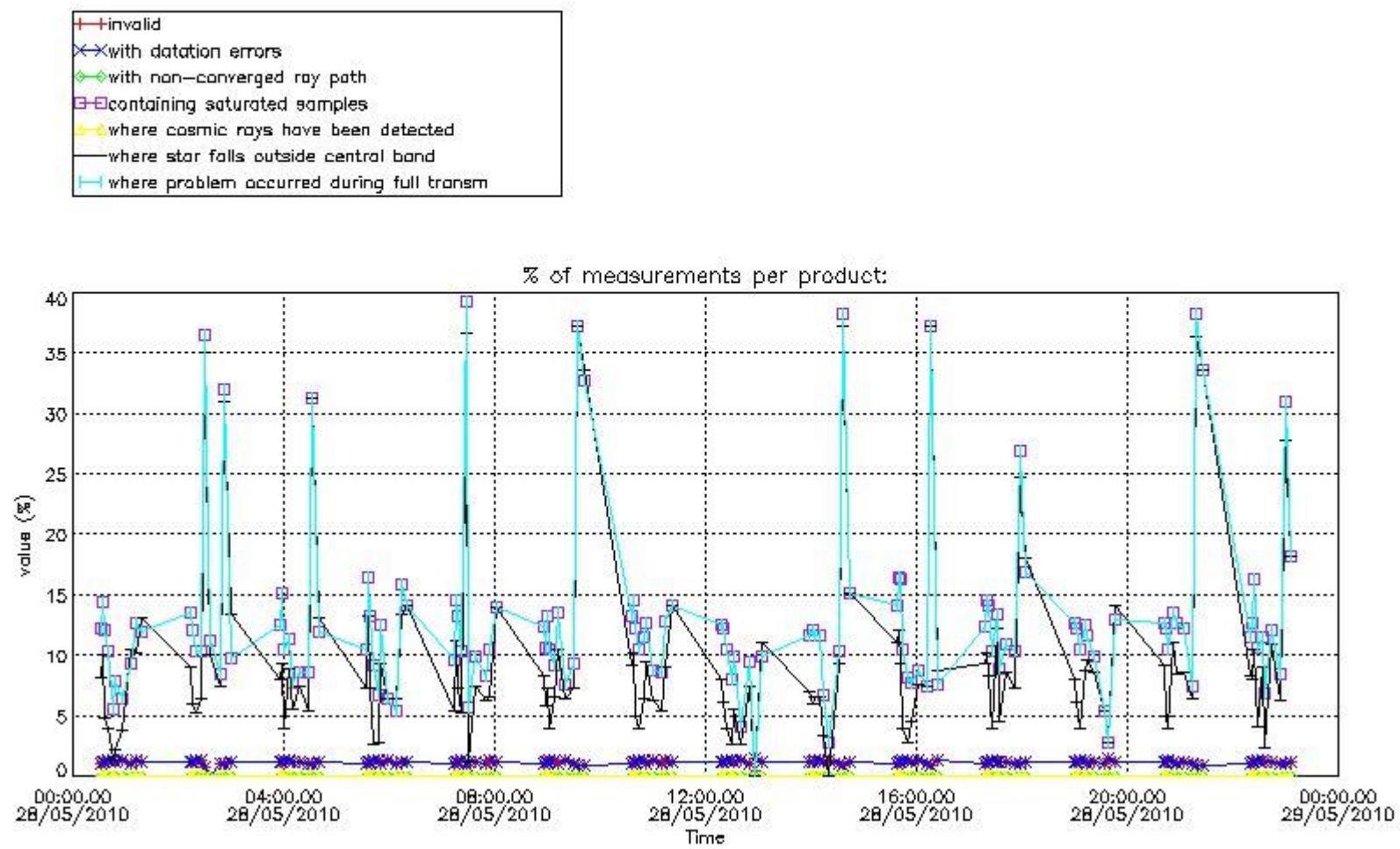
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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



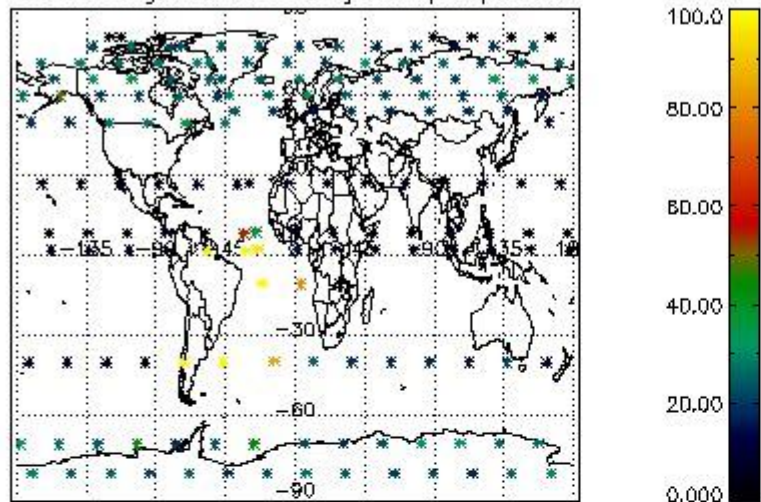
4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



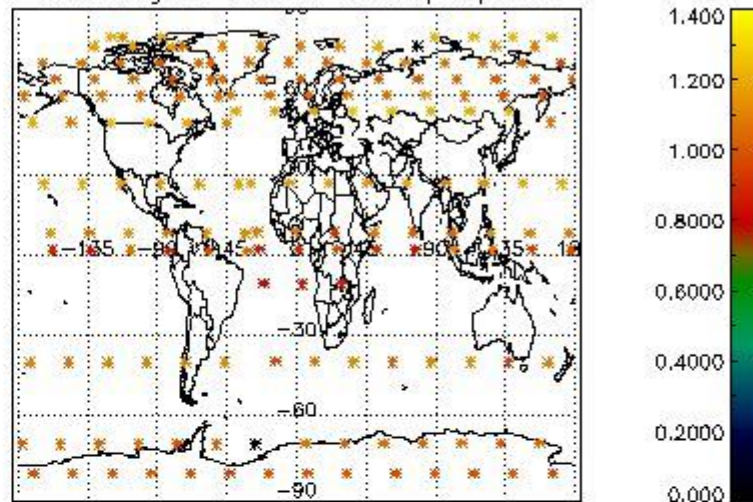
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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

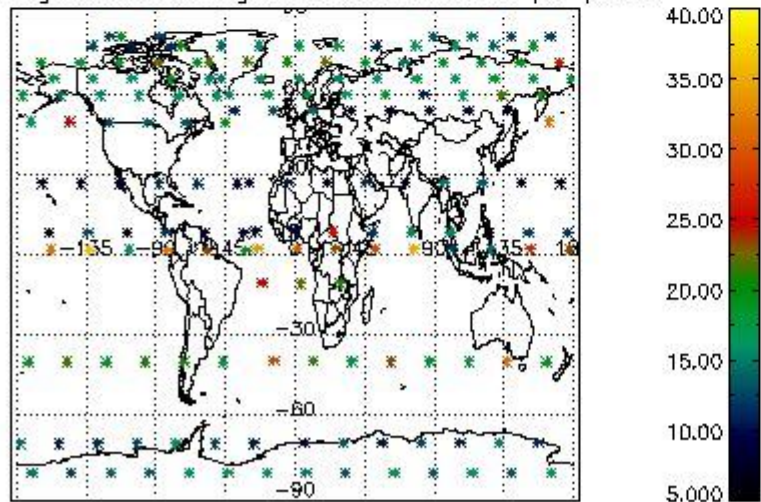
Percentage of cosmic ray hits per profile



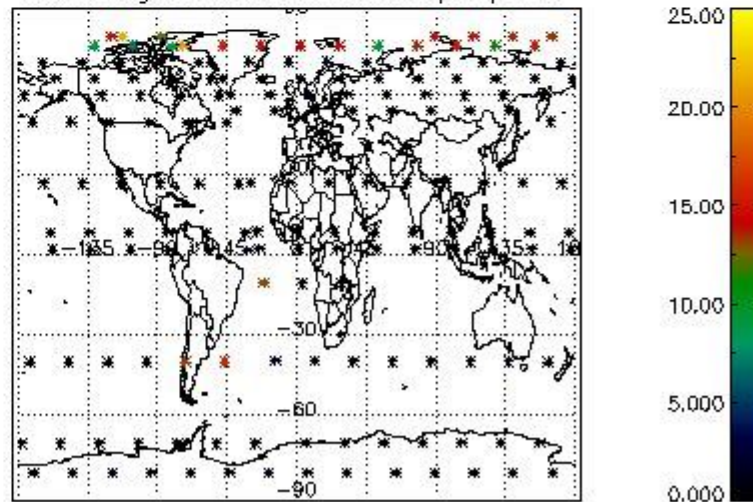
Percentage of datation errors per profile



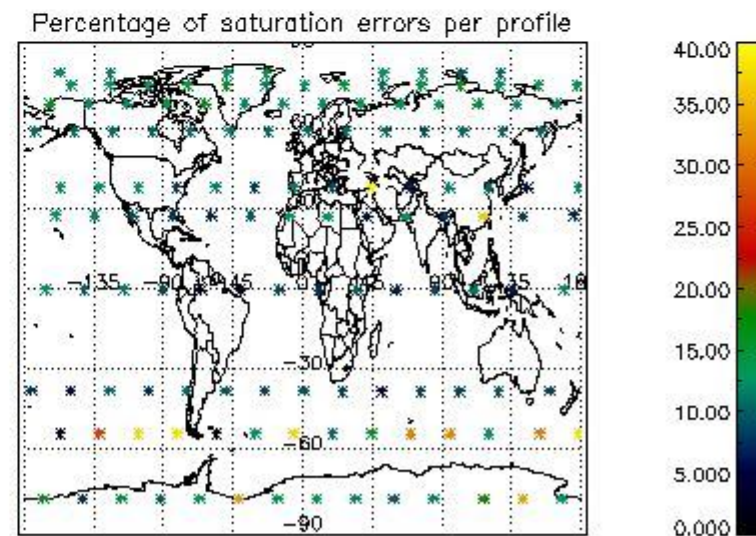
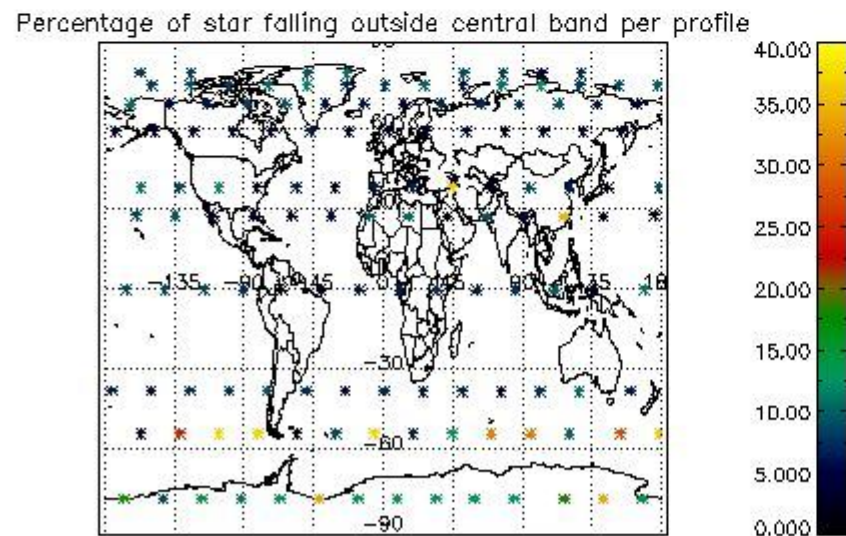
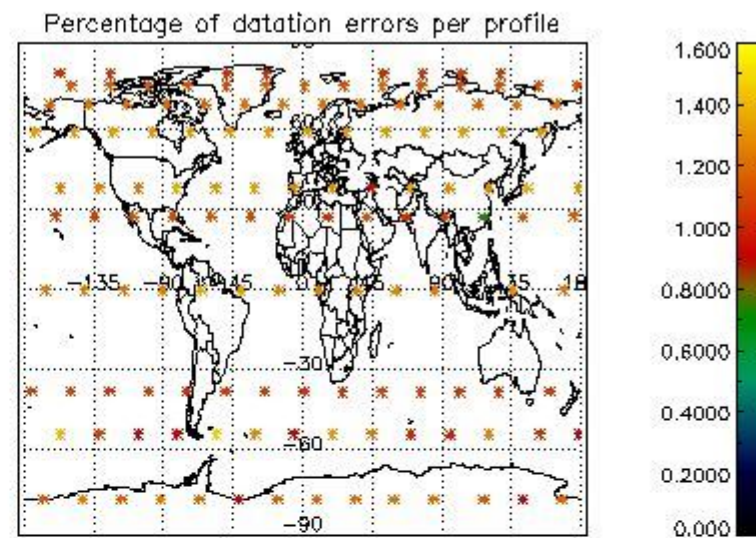
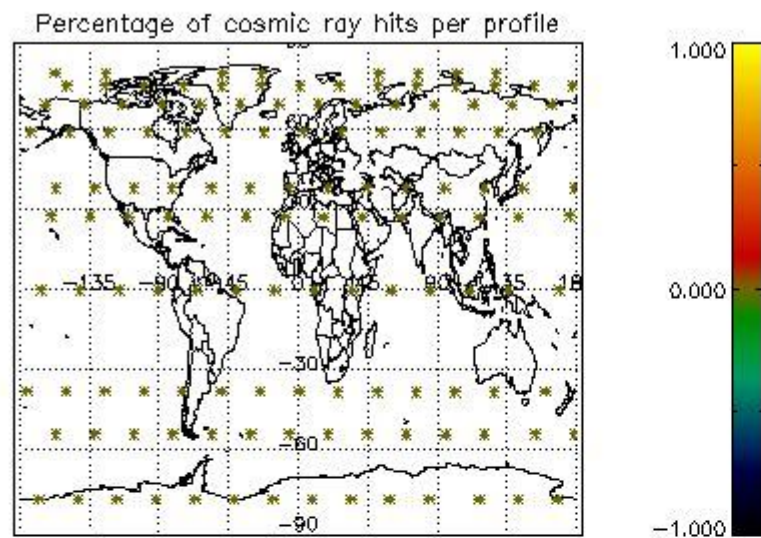
Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



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



## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

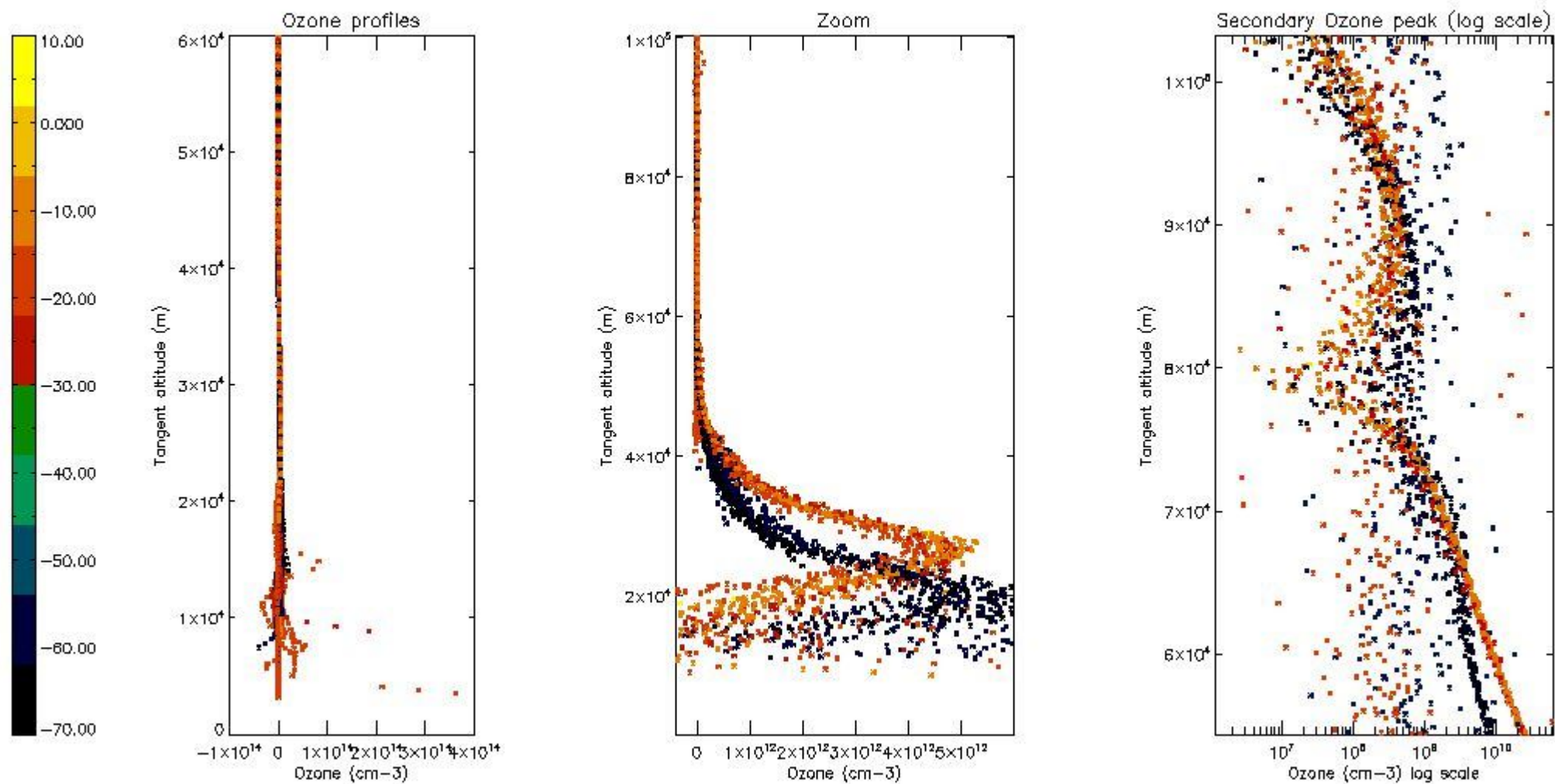
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	23
STD < 20	11

STD < 10	7
STD < 5	5

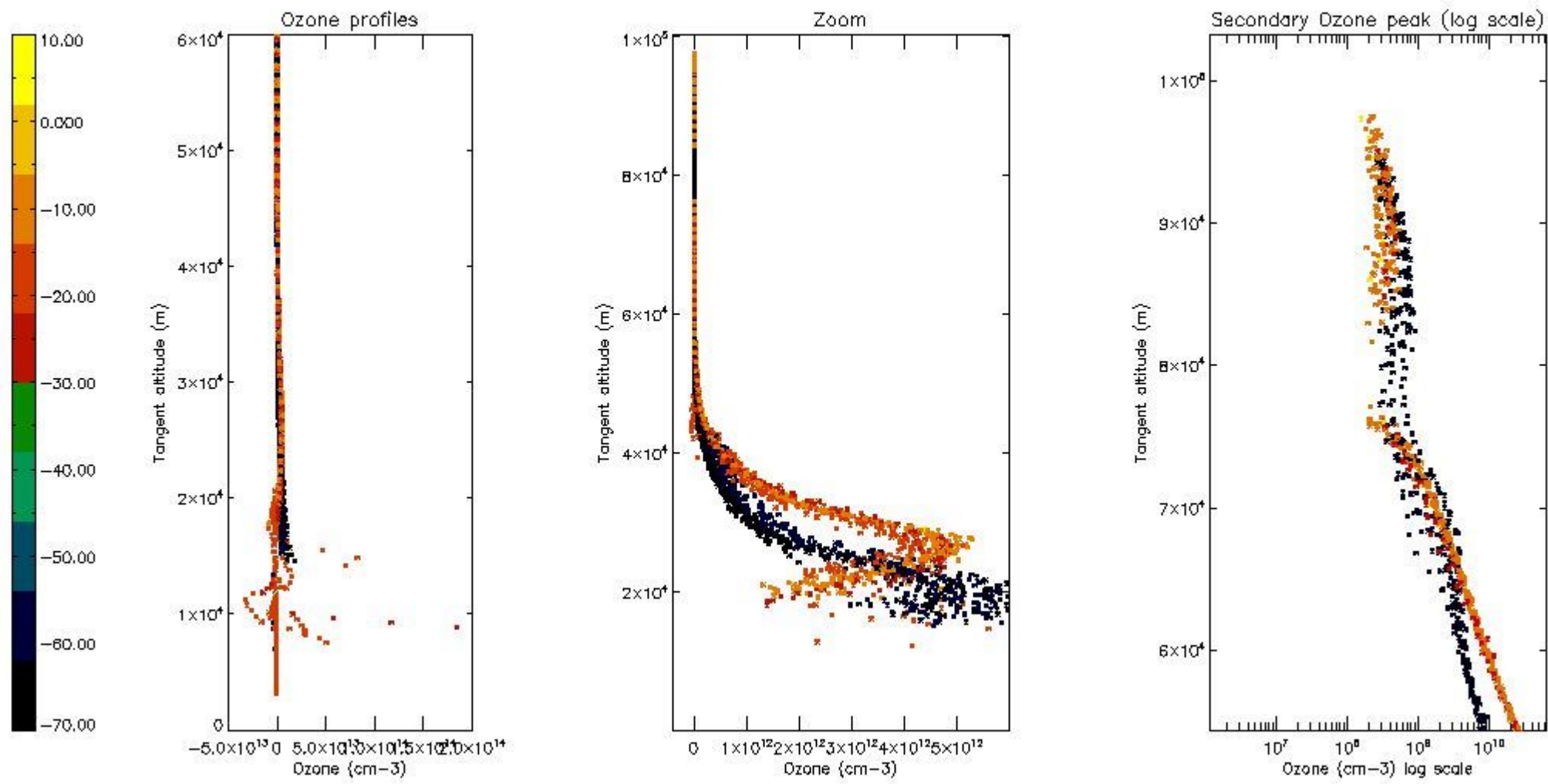
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



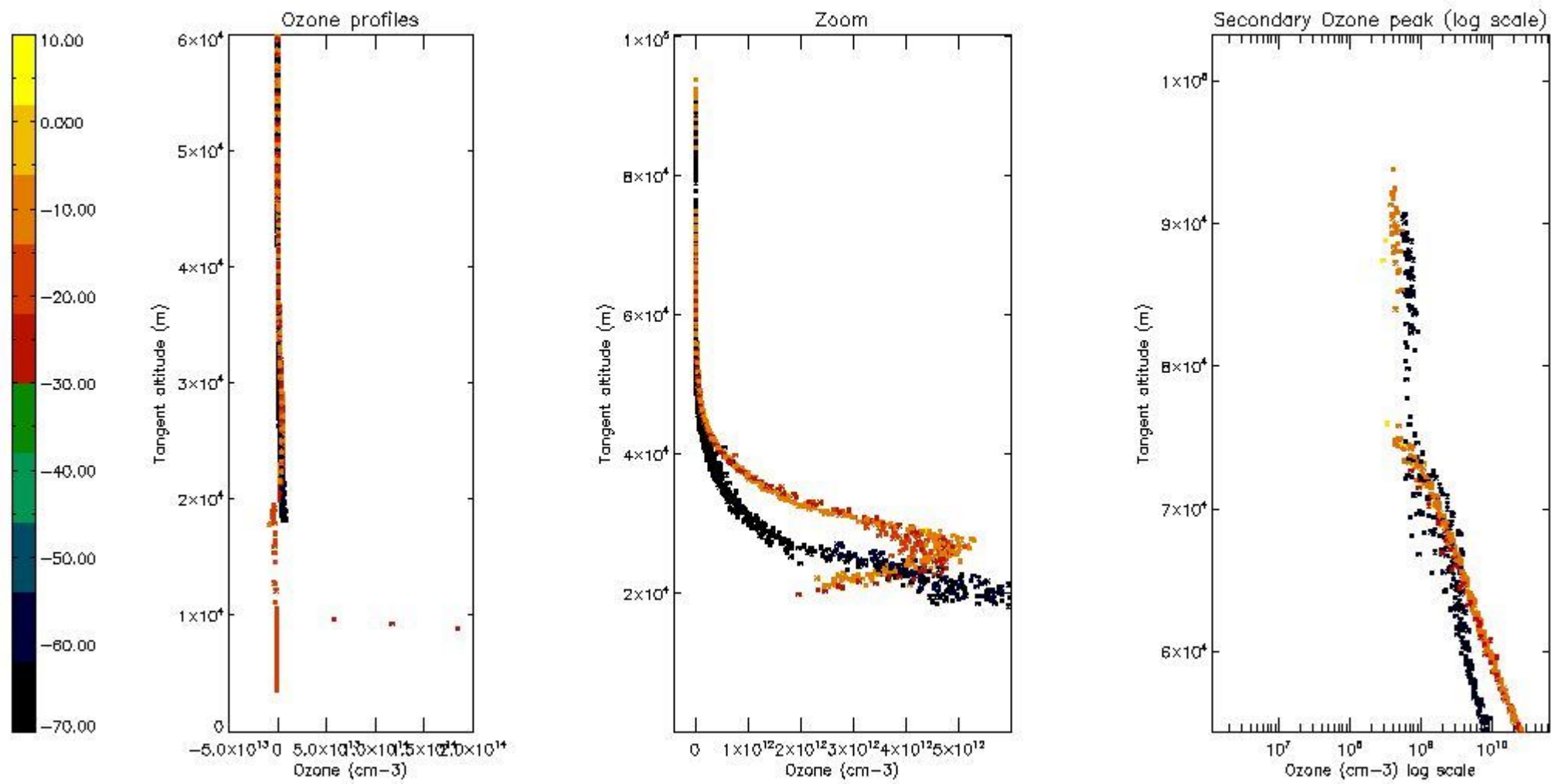
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



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

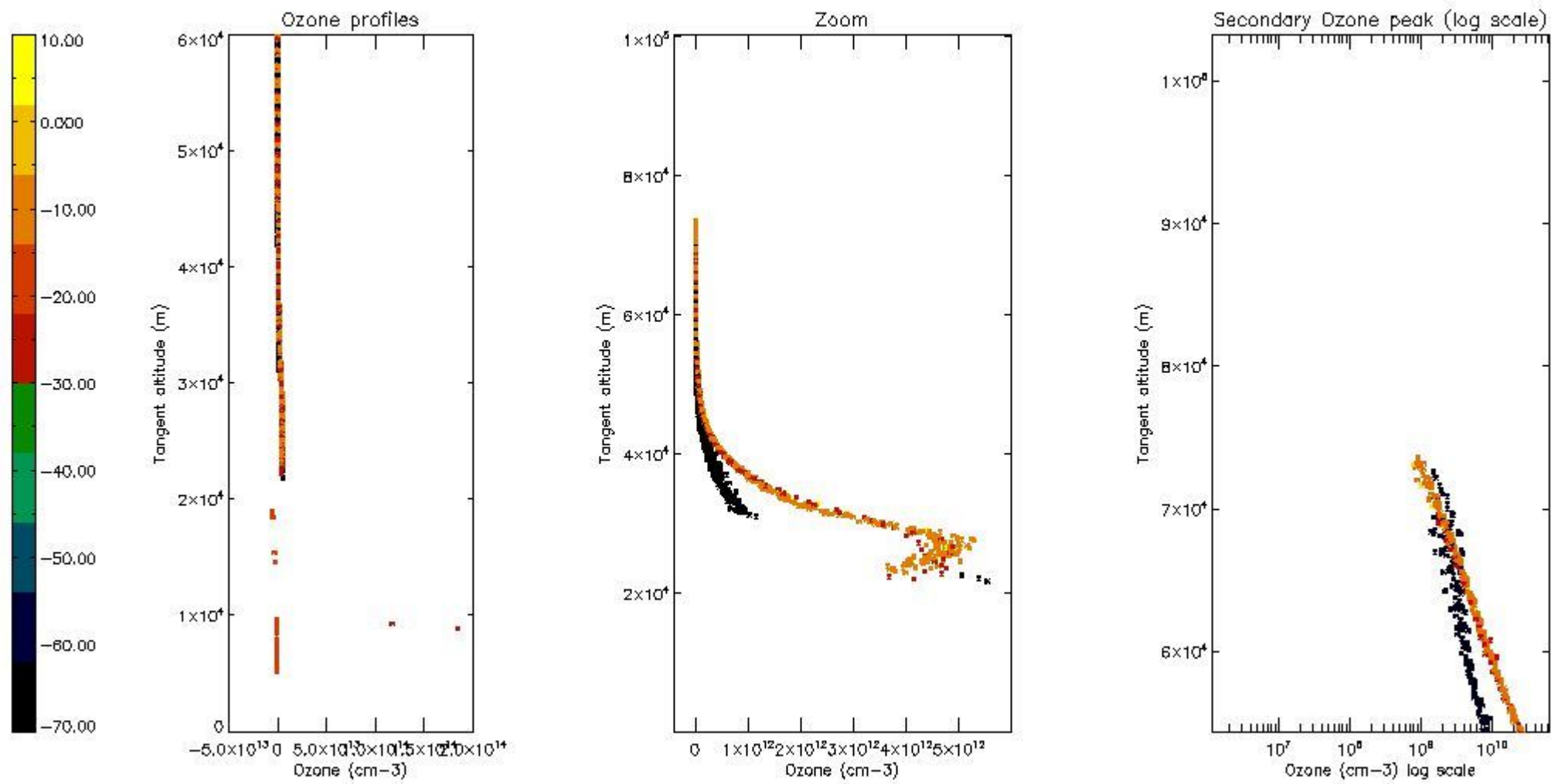
The colorbar represents the latitude.



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

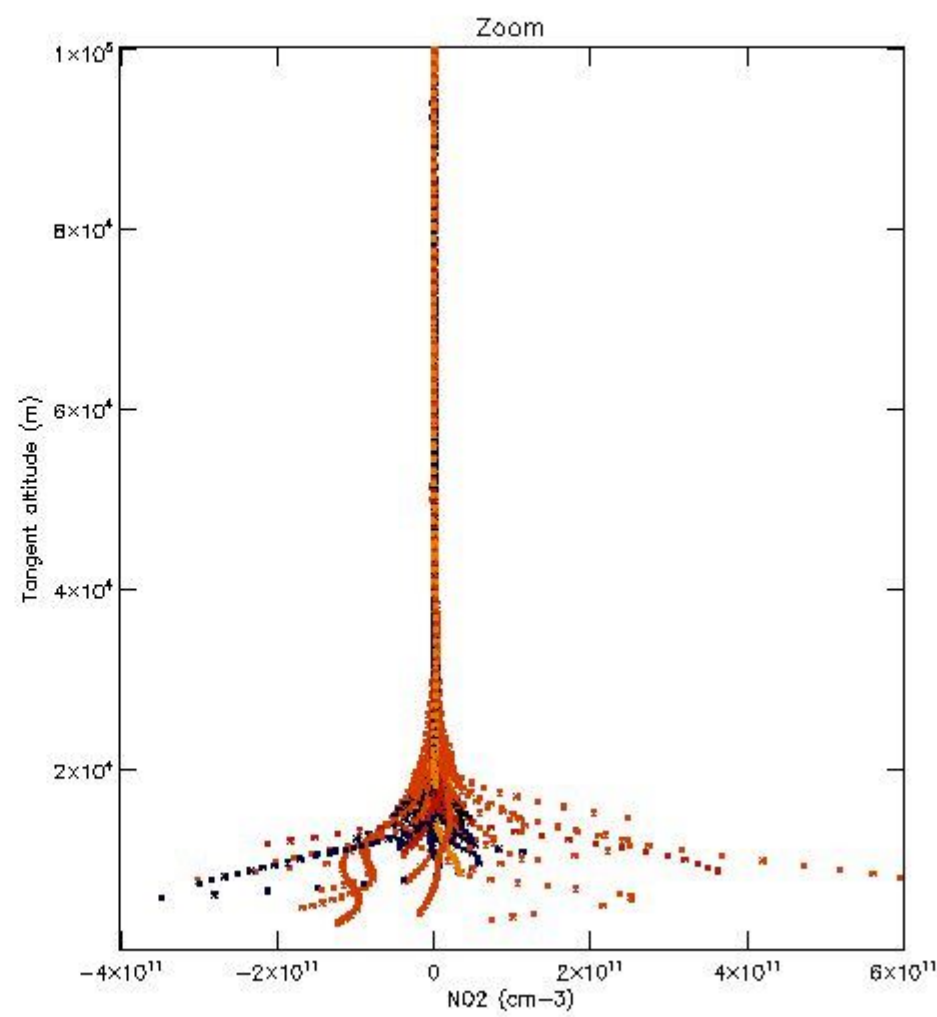
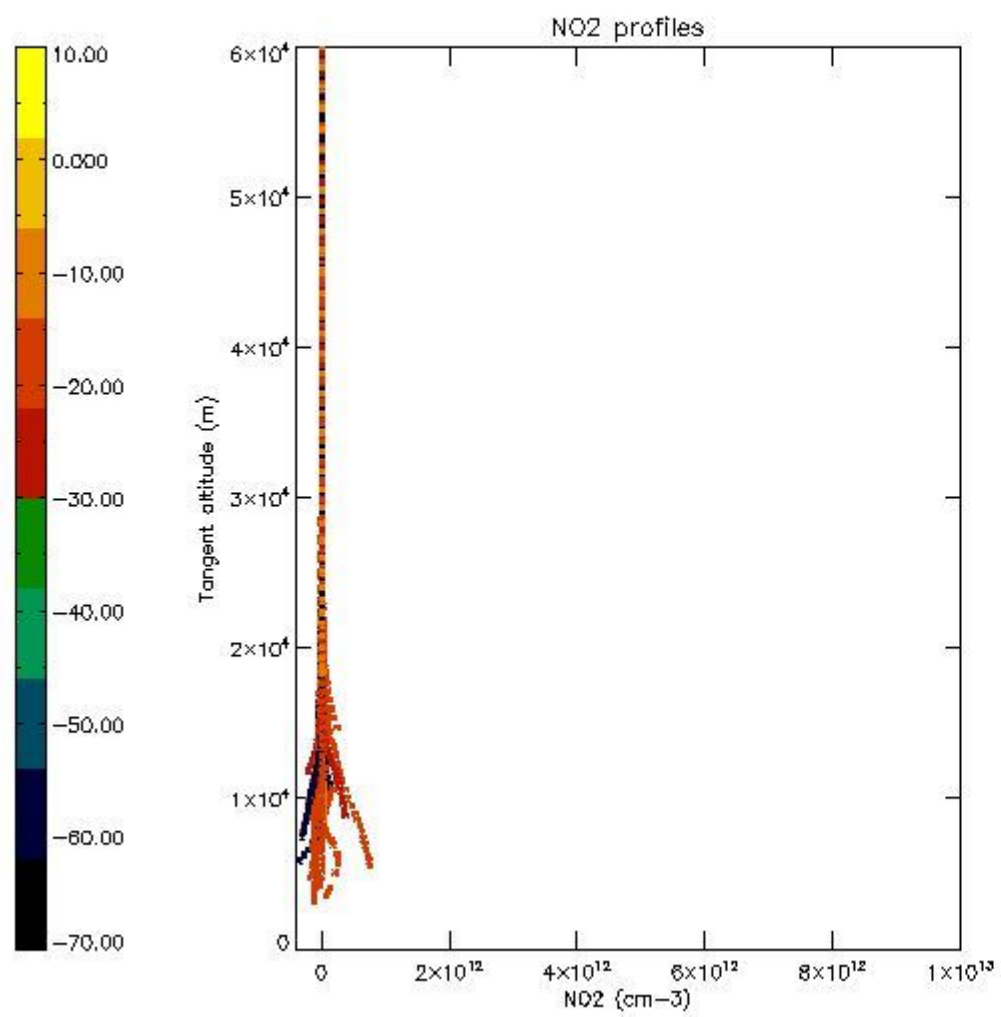
The colorbar represents the latitude.





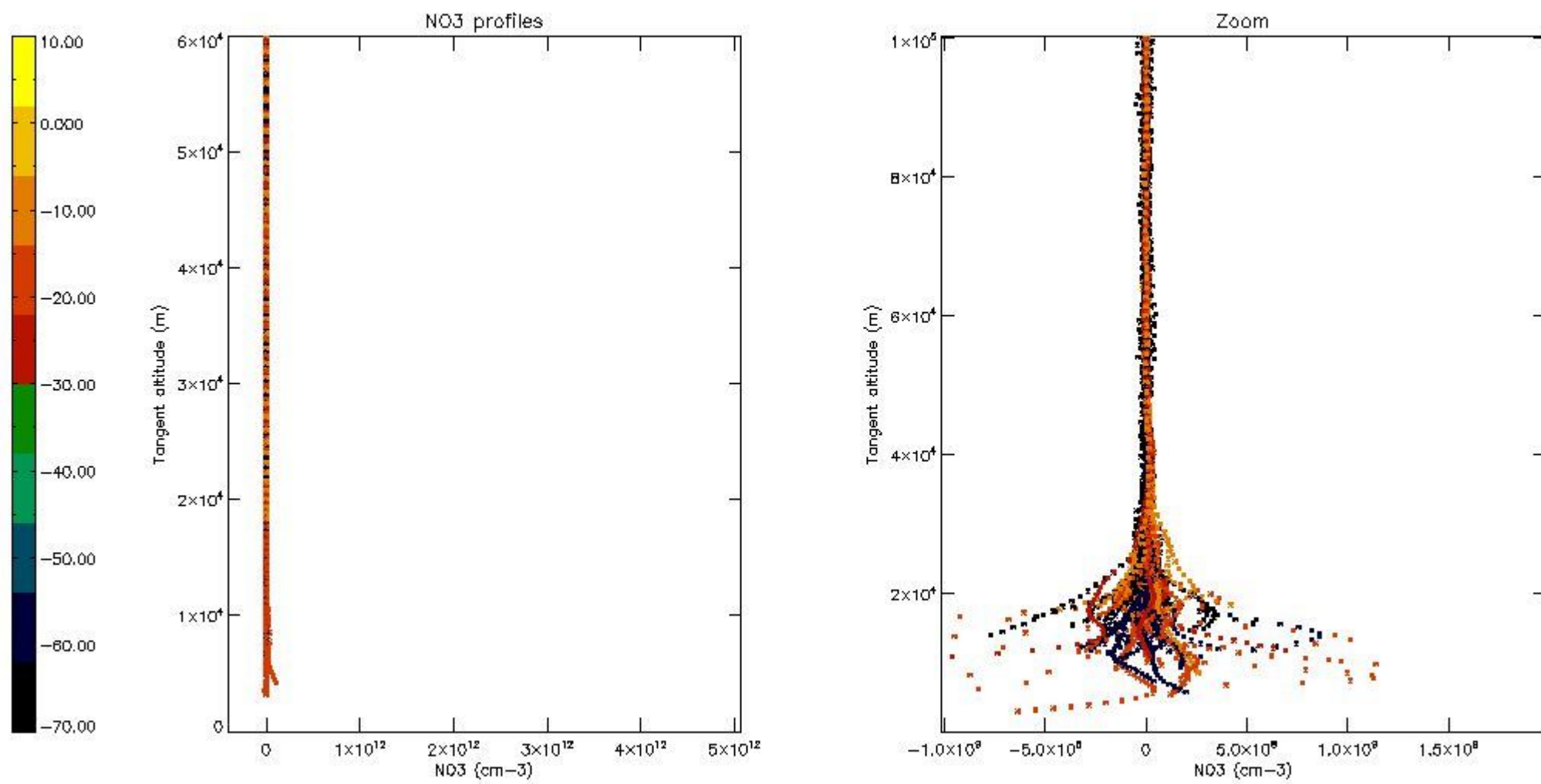
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



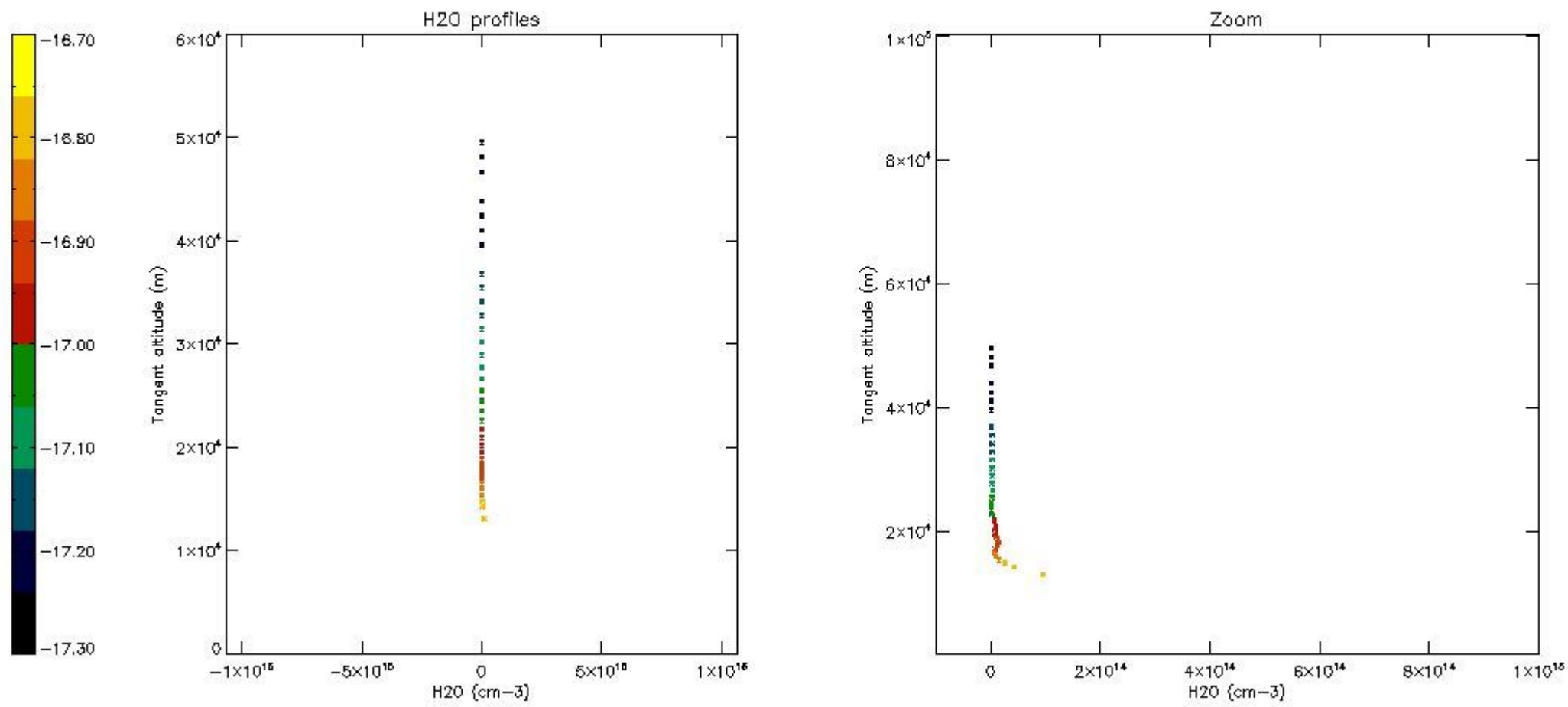
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



5.8 Plot H<sub>2</sub>O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)

The colorbar represents the latitude.



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

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

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	28-MAY-2010 00:06:14
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-MAY-2010 00:06:14
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-MAY-2010 00:06:14

# GOMOS Level 2 Daily Report

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#### [5.8 Plot H2O profiles \(only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors\) for all STD](#)

### [6. Auxiliary Data Files used for the production reported in section 2](#)

This report presents the daily analysis on parameters extracted from GOMOS level 2 data (GOM\_NL\_\_2P). It is intended to monitor some important parameters that will impact the quality of these products. A list of level 2 products (and content) that have arrived during the reporting day to the PCF is also given.

Item	Value
Time of report generation	29APR2013 11:15:57
Data source version	GOMOS/6.01
Start time of products	28-05-2010 (28MAY2010 00:00:00)
Stop time of products	29-05-2010 (29MAY2010 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	304
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__2PRFIN20100528_000614_000000492089_00446_43085_1918.N1	28-MAY-2010 00:06:14	Dark	48.500	63	Bet Gru	2.1500	2800.0	97	43085	No
2	GOM_NL__2PRFIN20100528_000801_000000452089_00446_43085_1919.N1	28-MAY-2010 00:08:01	Dark	45.000	31	Alp Gru	1.7340	15200.	90	43085	No
3	GOM_NL__2PRFIN20100528_001313_000000432089_00446_43085_1920.N1	28-MAY-2010 00:13:13	Dark	42.500	45	Alp Pav	1.9400	26000.	85	43085	No
4	GOM_NL__2PRFIN20100528_001943_000000462089_00446_43085_1921.N1	28-MAY-2010 00:19:43	Straylight	45.500	141	Bet Ara	2.8400	4600.0	91	43085	No
5	GOM_NL__2PRFIN20100528_002235_000000472089_00446_43085_1922.N1	28-MAY-2010 00:22:35	Straylight	46.500	40	The Sco	1.8590	7100.0	93	43085	No
6	GOM_NL__2PRFIN20100528_002425_000000492089_00446_43085_1923.N1	28-MAY-2010 00:24:25	Twilight	48.500	25	35Lam Sco	1.6200	28000.	97	43085	No
7	GOM_NL__2PRFIN20100528_002618_000000492089_00446_43085_1924.N1	28-MAY-2010 00:26:18	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43085	No
8	GOM_NL__2PRFIN20100528_002825_000000432089_00446_43085_1925.N1	28-MAY-2010 00:28:25	Twilight	43.000	136	23Tau Sco	2.8220	30000.	86	43085	No
9	GOM_NL__2PRFIN20100528_003034_000000422089_00446_43085_1926.N1	28-MAY-2010 00:30:34	Bright	41.500	80	7Del Sco	2.3160	30000.	83	43085	No
10	GOM_NL__2PRFIN20100528_003212_000000492089_00446_43085_1927.N1	28-MAY-2010 00:32:12	Bright	49.000	86	35Eta Oph	2.4300	10200.	98	43085	No
11	GOM_NL__2PRFIN20100528_003408_000000452089_00446_43085_1928.N1	28-MAY-2010 00:34:08	Bright	45.000	98	13Zet Oph	2.5710	30000.	90	43085	No
12	GOM_NL__2PRFIN20100528_003623_000000422089_00446_43085_1929.N1	28-MAY-2010 00:36:23	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	43085	No
13	GOM_NL__2PRFIN20100528_003925_000000392089_00446_43085_1930.N1	28-MAY-2010 00:39:25	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	43085	No
14	GOM_NL__2PRFIN20100528_004526_000000372089_00446_43085_1931.N1	28-MAY-2010 00:45:26	Bright	36.500	67	5Alp CrB	2.2210	11000.	73	43085	No
15	GOM_NL__2PRFIN20100528_004829_000000452089_00446_43085_1932.N1	28-MAY-2010 00:48:29	Bright	44.500	133	40Zet Her	2.8070	6000.0	89	43085	No
16	GOM_NL__2PRFIN20100528_005611_000000392089_00446_43085_1933.N1	28-MAY-2010 00:56:11	Bright	39.000	119	14Eta Dra	2.7270	4700.0	78	43085	No
17	GOM_NL__2PRFIN20100528_010651_000000482089_00446_43085_1934.N1	28-MAY-2010 01:06:51	Bright	48.000	89	5Alp Cep	2.4510	8000.0	96	43085	No
18	GOM_NL__2PRFIN20100528_011120_000000402089_00446_43085_1935.N1	28-MAY-2010 01:11:20	Bright	39.500	76	27Gam Cas	2.3000	30000.	79	43085	No
19	GOM_NL__2PRFIN20100528_011854_000000422089_00446_43085_1936.N1	28-MAY-2010 01:18:54	Bright	42.000	53	43Bet And	2.0480	3300.0	84	43085	No
20	GOM_NL__2PRFIN20100528_012131_000000502089_00446_43085_1937.N1	28-MAY-2010 01:21:31	Twilight	49.500	58	21Alp And	2.0730	11000.	99	43085	No
21	GOM_NL__2PRFIN20100528_012612_000000482089_00446_43085_1938.N1	28-MAY-2010 01:26:12	Dark	47.500	140	88Gam Peg	2.8340	26000.	95	43085	No
22	GOM_NL__2PRFIN20100528_013505_000000452089_00446_43085_1939.N1	28-MAY-2010 01:35:05	Dark	44.500	52	16Bet Cet	2.0370	4500.0	89	43085	No
23	GOM_NL__2PRFIN20100528_014651_000000512089_00447_43086_1926.N1	28-MAY-2010 01:46:51	Dark	51.000	63	Bet Gru	2.1500	2800.0	102	43086	No
24	GOM_NL__2PRFIN20100528_014838_000000452089_00447_43086_1927.N1	28-MAY-2010 01:48:38	Dark	44.500	31	Alp Gru	1.7340	15200.	89	43086	No
25	GOM_NL__2PRFIN20100528_015350_000000442089_00447_43086_1928.N1	28-MAY-2010 01:53:50	Straylight	43.500	45	Alp Pav	1.9400	26000.	87	43086	No
26	GOM_NL__2PRFIN20100528_020019_000000422089_00447_43086_1929.N1	28-MAY-2010 02:00:19	Straylight	42.000	141	Bet Ara	2.8400	4600.0	84	43086	No
27	GOM_NL__2PRFIN20100528_020311_000000472089_00447_43086_1930.N1	28-MAY-2010 02:03:11	Straylight	46.500	40	The Sco	1.8590	7100.0	93	43086	No
28	GOM_NL__2PRFIN20100528_020501_000000512089_00447_43086_1931.N1	28-MAY-2010 02:05:01	Twilight	50.500	25	35Lam Sco	1.6200	28000.	101	43086	No
29	GOM_NL__2PRFIN20100528_020655_000000502089_00447_43086_1932.N1	28-MAY-2010 02:06:55	Twilight	49.500	75	26Eps Sco	2.2910	4250.0	99	43086	No
30	GOM_NL__2PRFIN20100528_020901_000000432089_00447_43086_1933.N1	28-MAY-2010 02:09:01	Twilight	42.500	136	23Tau Sco	2.8220	30000.	85	43086	No
31	GOM_NL__2PRFIN20100528_021444_000000452089_00447_43086_1934.N1	28-MAY-2010 02:14:44	Bright	44.500	98	13Zet Oph	2.5710	30000.	89	43086	No
32	GOM_NL__2PRFIN20100528_021659_000000422089_00447_43086_1935.N1	28-MAY-2010 02:16:59	Bright	41.500	120	1Del Oph	2.7340	3200.0	83	43086	No
33	GOM_NL__2PRFIN20100528_022001_000000392089_00447_43086_1936.N1	28-MAY-2010 02:20:01	Bright	38.500	102	24Alp Ser	2.6000	4250.0	77	43086	No
34	GOM_NL__2PRFIN20100528_022601_000000392089_00447_43086_1937.N1	28-MAY-2010 02:26:01	Bright	39.000	67	5Alp CrB	2.2210	11000.	78	43086	No
35	GOM_NL__2PRFIN20100528_022904_000000672089_00447_43086_1938.N1	28-MAY-2010 02:29:04	Bright	67.000	133	40Zet Her	2.8070	6000.0	134	43086	No
36	GOM_NL__2PRFIN20100528_023646_000000402089_00447_43086_1939.N1	28-MAY-2010 02:36:46	Bright	40.000	119	14Eta Dra	2.7270	4700.0	80	43086	No
37	GOM_NL__2PRFIN20100528_024726_000000482089_00447_43086_1940.N1	28-MAY-2010 02:47:26	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	43086	No
38	GOM_NL__2PRFIN20100528_025157_000000502089_00447_43086_1941.N1	28-MAY-2010 02:51:57	Bright	50.000	76	27Gam Cas	2.3000	30000.	100	43086	No
39	GOM_NL__2PRFIN20100528_025931_000000412089_00447_43086_1942.N1	28-MAY-2010 02:59:31	Bright	41.000	53	43Bet And	2.0480	3300.0	82	43086	No
40	GOM_NL__2PRFIN20100528_030207_000000512089_00447_43086_1943.N1	28-MAY-2010 03:02:07	Twilight	50.500	58	21Alp And	2.0730	11000.	101	43086	No
41	GOM_NL__2PRFIN20100528_030648_000000492089_00447_43086_1944.N1	28-MAY-2010 03:06:48	Dark	49.000	140	88Gam Peg	2.8340	26000.	98	43086	No
42	GOM_NL__2PRFIN20100528_031542_000000462089_00447_43086_1945.N1	28-MAY-2010 03:15:42	Dark	45.500	52	16Bet Cet	2.0370	4500.0	91	43086	No









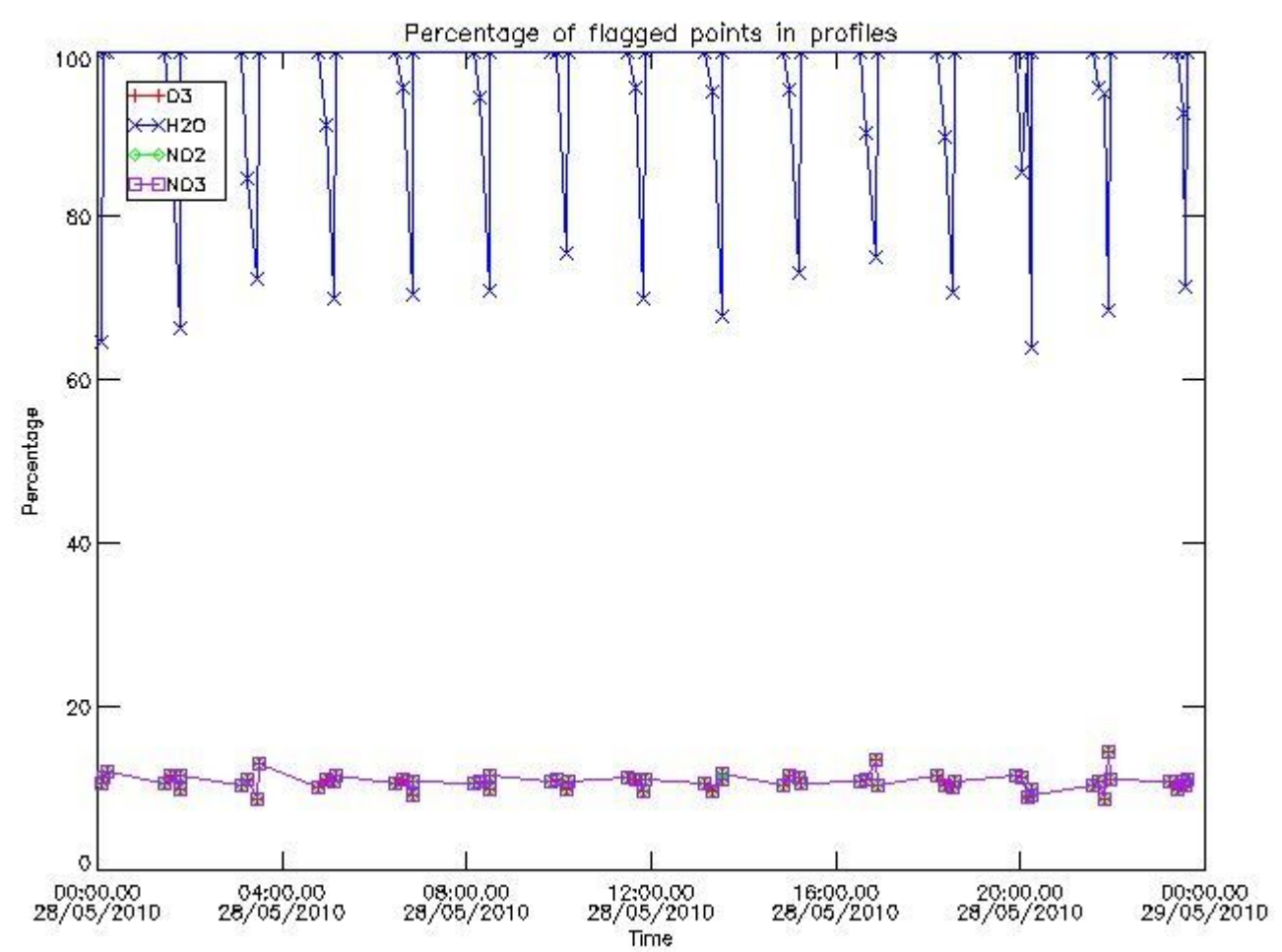


279	GOM_NL__2PRFIN20100528_221410_000000492089_00459_43098_2056.N1	28-MAY-2010 22:14:10	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43098	No
280	GOM_NL__2PRFIN20100528_221615_000000452089_00459_43098_2057.N1	28-MAY-2010 22:16:15	Twilight	45.000	136	23Tau Sco	2.8220	30000.	90	43098	No
281	GOM_NL__2PRFIN20100528_221824_000000412089_00459_43098_2058.N1	28-MAY-2010 22:18:24	Bright	40.500	80	7Del Sco	2.3160	30000.	81	43098	No
282	GOM_NL__2PRFIN20100528_222001_000000482089_00459_43098_2059.N1	28-MAY-2010 22:20:01	Bright	48.000	86	35Eta Oph	2.4300	10200.	96	43098	No
283	GOM_NL__2PRFIN20100528_222155_000000442089_00459_43098_2060.N1	28-MAY-2010 22:21:55	Bright	43.500	98	13Zet Oph	2.5710	30000.	87	43098	No
284	GOM_NL__2PRFIN20100528_222409_000000432089_00459_43098_2061.N1	28-MAY-2010 22:24:09	Bright	43.000	120	1Del Oph	2.7340	3200.0	86	43098	No
285	GOM_NL__2PRFIN20100528_222712_000000382089_00459_43098_2062.N1	28-MAY-2010 22:27:12	Bright	37.500	102	24Alp Ser	2.6000	4250.0	75	43098	No
286	GOM_NL__2PRFIN20100528_223310_000000392089_00459_43098_2063.N1	28-MAY-2010 22:33:10	Bright	39.000	67	5Alp CrB	2.2210	11000.	78	43098	No
287	GOM_NL__2PRFIN20100528_223608_000000442089_00459_43098_2064.N1	28-MAY-2010 22:36:08	Bright	44.000	133	40Zet Her	2.8070	6000.0	88	43098	No
288	GOM_NL__2PRFIN20100528_224354_000000422089_00459_43098_2065.N1	28-MAY-2010 22:43:54	Bright	41.500	119	14Eta Dra	2.7270	4700.0	83	43098	No
289	GOM_NL__2PRFIN20100528_225430_000000482089_00459_43098_2066.N1	28-MAY-2010 22:54:30	Bright	47.500	89	5Alp Cep	2.4510	8000.0	95	43098	No
290	GOM_NL__2PRFIN20100528_225907_000000492089_00459_43098_2067.N1	28-MAY-2010 22:59:07	Bright	48.500	76	27Gam Cas	2.3000	30000.	97	43098	No
291	GOM_NL__2PRFIN20100528_230644_000000442089_00459_43098_2068.N1	28-MAY-2010 23:06:44	Bright	44.000	53	43Bet And	2.0480	3300.0	88	43098	No
292	GOM_NL__2PRFIN20100528_230921_000000522089_00459_43098_2069.N1	28-MAY-2010 23:09:21	Twilight	51.500	58	21Alp And	2.0730	11000.	103	43098	No
293	GOM_NL__2PRFIN20100528_231405_000000472089_00459_43098_2070.N1	28-MAY-2010 23:14:05	Dark	47.000	140	88Gam Peg	2.8340	26000.	94	43098	No
294	GOM_NL__2PRFIN20100528_232259_000000522089_00459_43098_2071.N1	28-MAY-2010 23:22:59	Dark	52.000	52	16Bet Cet	2.0370	4500.0	104	43098	No
295	GOM_NL__2PRFIN20100528_233112_000000622089_00459_43098_2072.N1	28-MAY-2010 23:31:12	Dark	61.500	18	24Alp PsA	1.1660	9700.0	123	43098	No
296	GOM_NL__2PRFIN20100528_233449_000000602089_00460_43099_2086.N1	28-MAY-2010 23:34:49	Dark	59.500	63	Bet Gru	2.1500	2800.0	119	43099	No
297	GOM_NL__2PRFIN20100528_233637_000000462089_00460_43099_2087.N1	28-MAY-2010 23:36:37	Dark	46.000	31	Alp Gru	1.7340	15200.	92	43099	No
298	GOM_NL__2PRFIN20100528_234146_000000432089_00460_43099_2088.N1	28-MAY-2010 23:41:46	Straylight	42.500	45	Alp Pav	1.9400	26000.	85	43099	No
299	GOM_NL__2PRFIN20100528_234925_000000422089_00460_43099_2089.N1	28-MAY-2010 23:49:25	Straylight	42.000	147	Alp Ara	2.8770	26000.	84	43099	No
300	GOM_NL__2PRFIN20100528_235105_000000462089_00460_43099_2090.N1	28-MAY-2010 23:51:05	Straylight	46.000	40	The Sco	1.8590	7100.0	92	43099	No
301	GOM_NL__2PRFIN20100528_235254_000000482089_00460_43099_2091.N1	28-MAY-2010 23:52:54	Twilight	48.000	25	35Lam Sco	1.6200	28000.	96	43099	No
302	GOM_NL__2PRFIN20100528_235446_000000492089_00460_43099_2092.N1	28-MAY-2010 23:54:46	Twilight	48.500	75	26Eps Sco	2.2910	4250.0	97	43099	No
303	GOM_NL__2PRFIN20100528_235651_000000482089_00460_43099_2093.N1	28-MAY-2010 23:56:51	Twilight	48.000	136	23Tau Sco	2.8220	30000.	96	43099	No
304	GOM_NL__2PRFIN20100528_235900_000000452089_00460_43099_2094.N1	28-MAY-2010 23:59:00	Bright	45.000	80	7Del Sco	2.3160	30000.	90	43099	No

### 3. Quality information per product

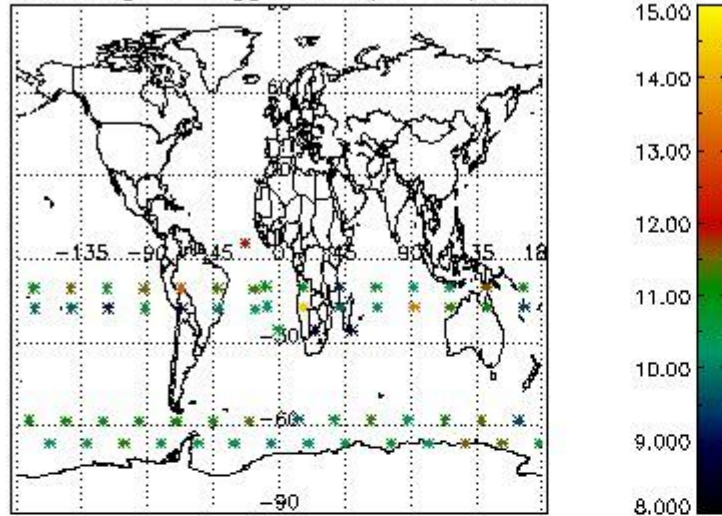
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

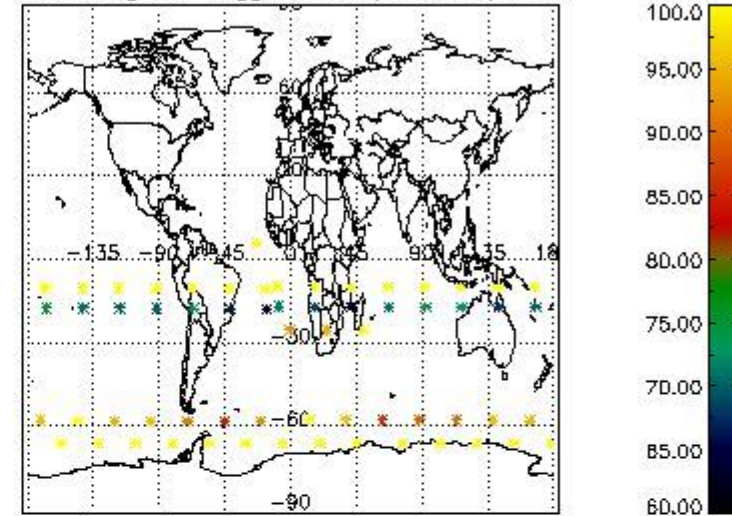


3.2 Plot quality information per product (world map)

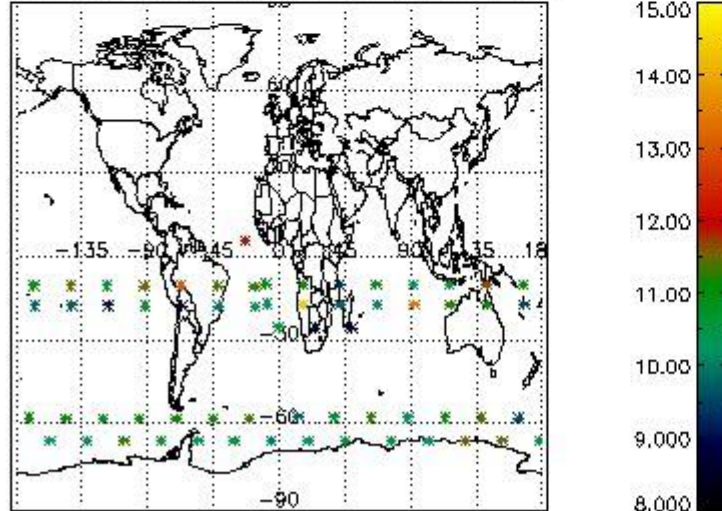
Percentage of flagged data per O3 profile



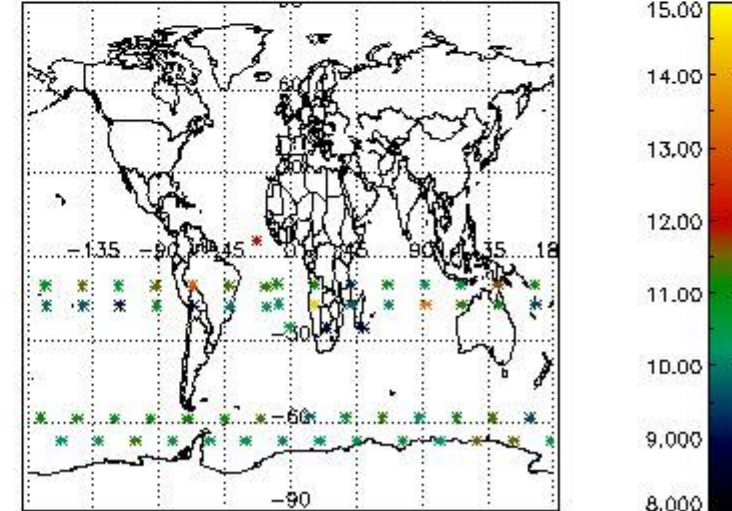
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

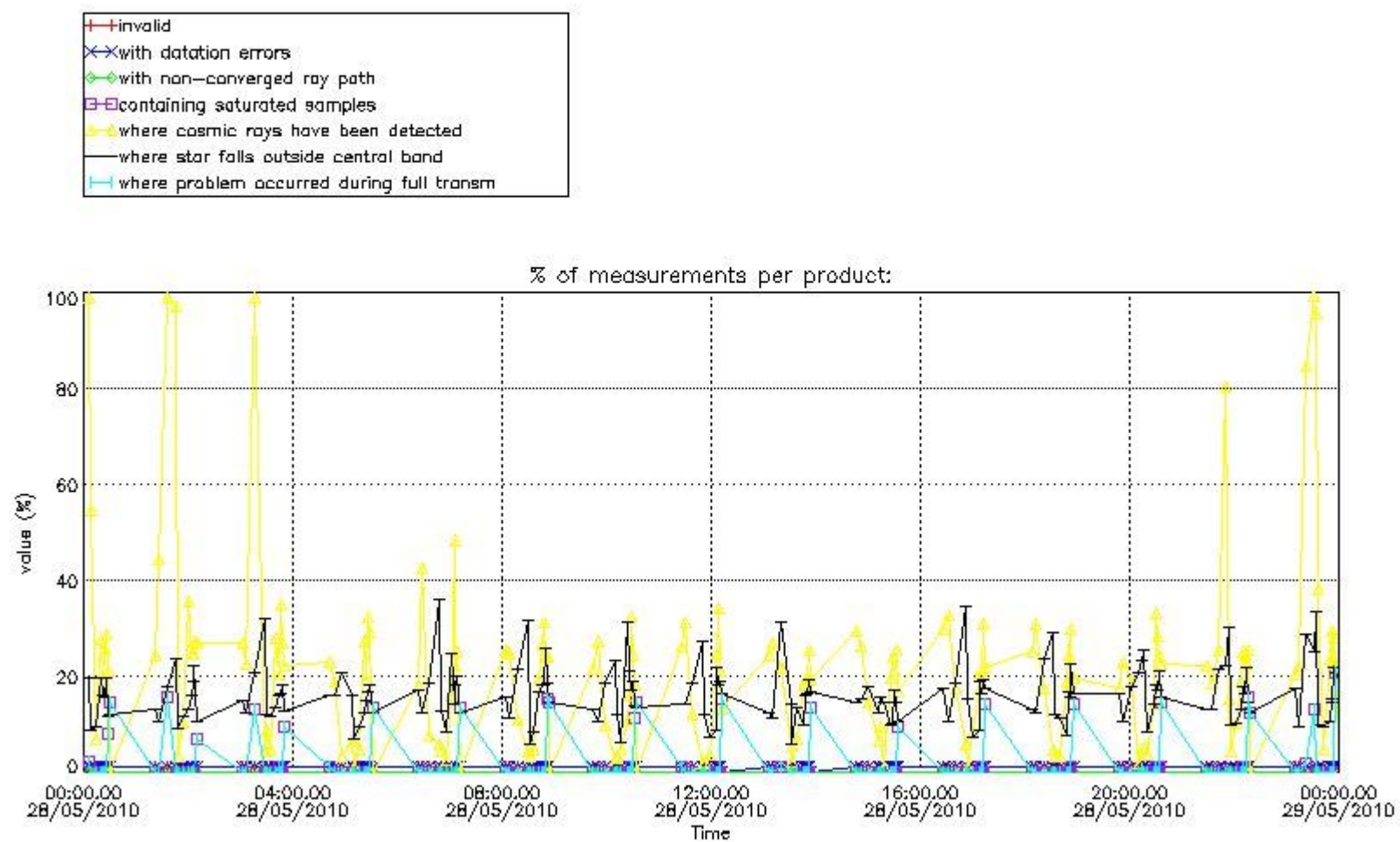


#### 4. Level 1 quality information per product

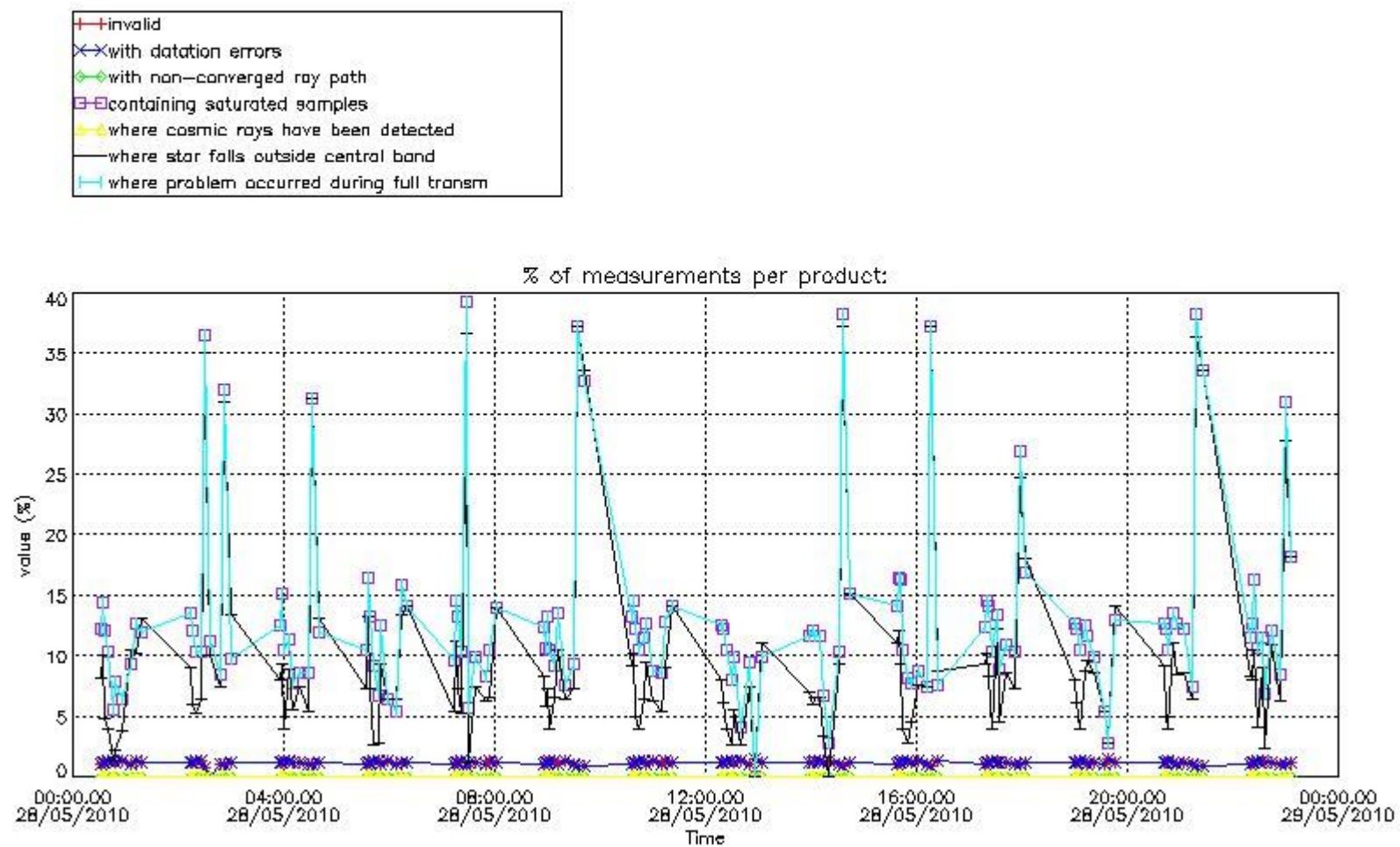
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

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

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

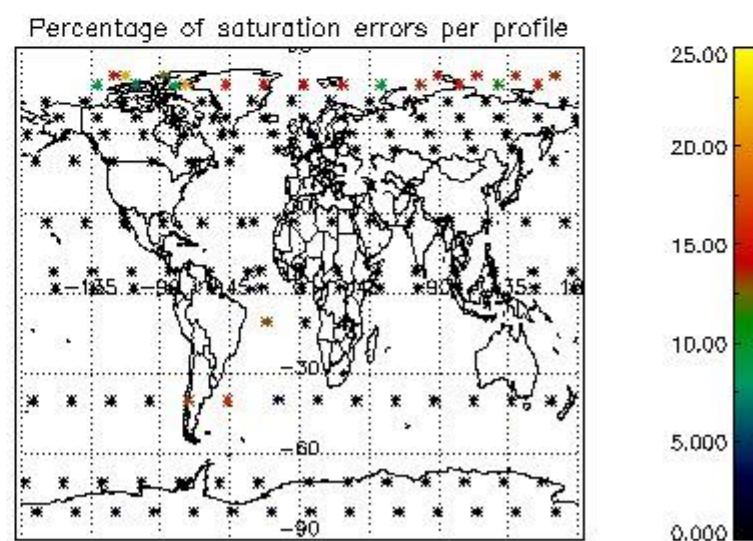
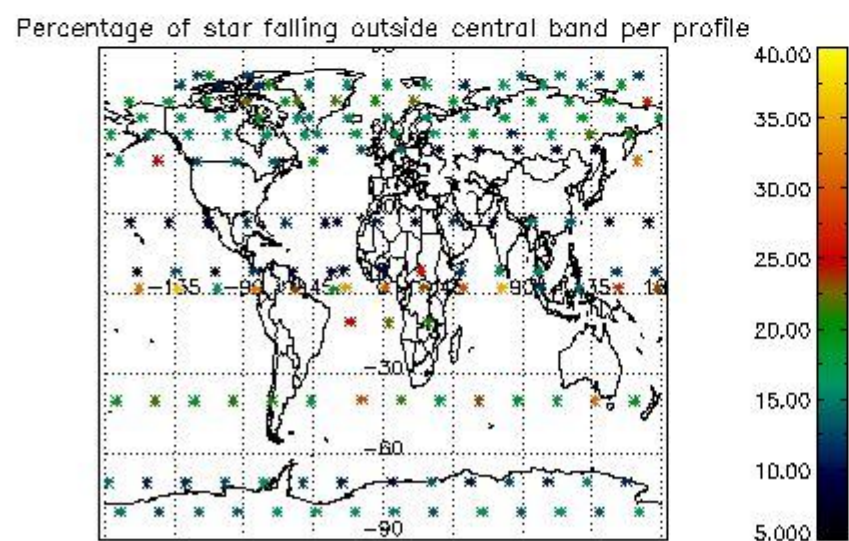
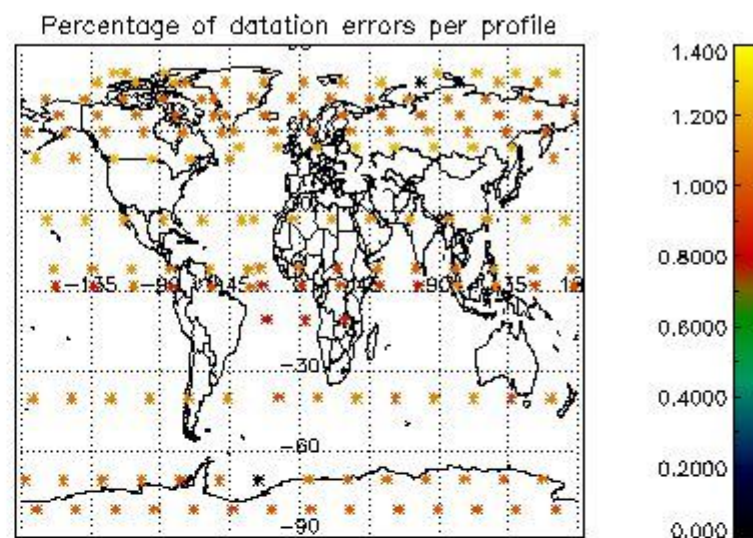
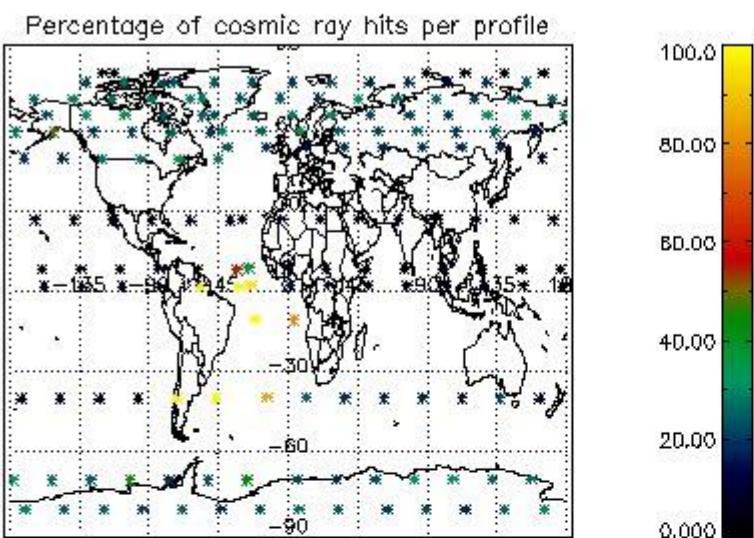


4.1.2 Plot level 1 quality information per product (time dependant): ENVI SAT DESCENDING passes



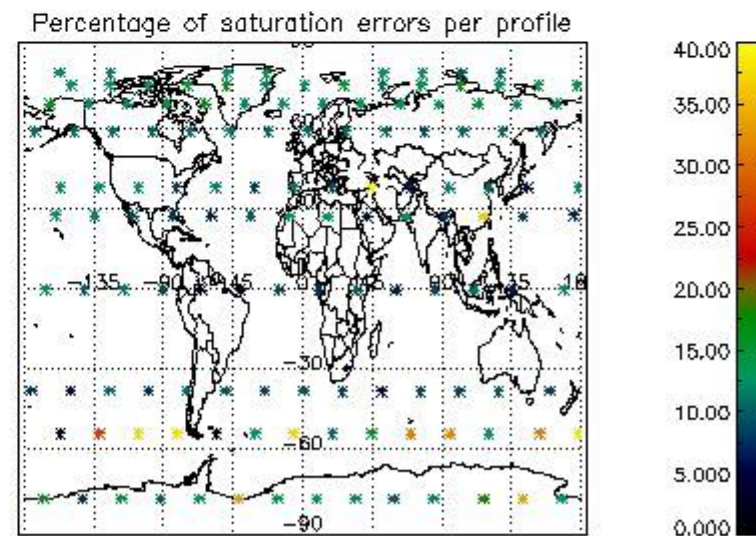
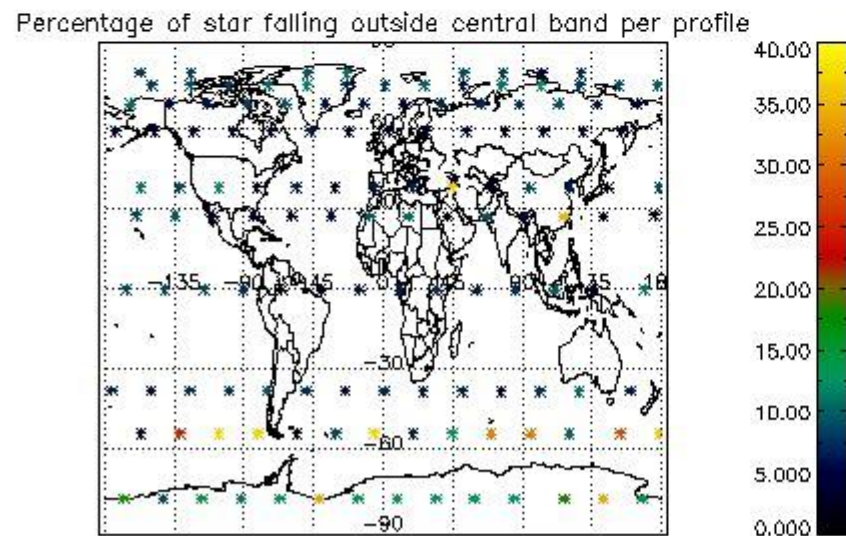
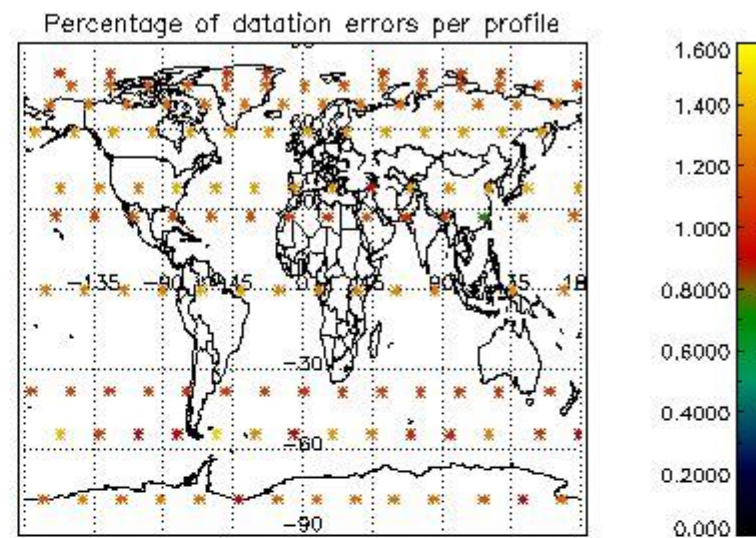
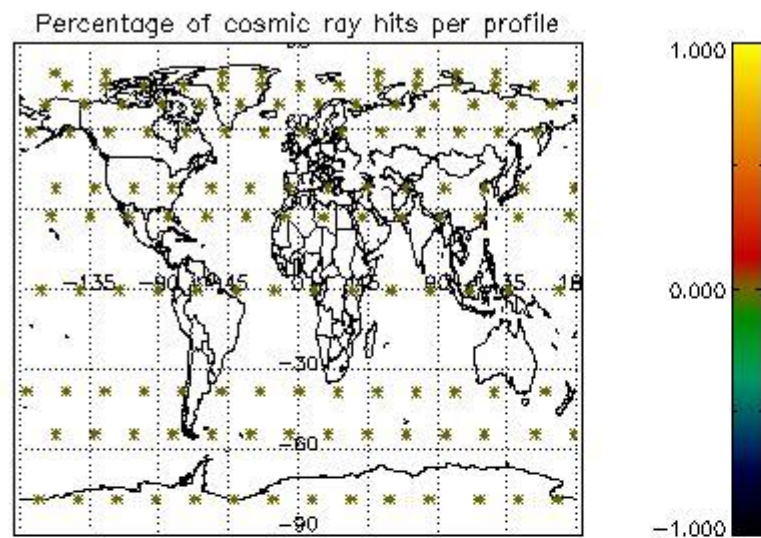
*4.2 Plot quality information per product coming from level 1b processing (world map)*

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



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





## 5. Trace gas profiles

### 5.1 Ozone statistics based on quality of products

The final quality of the products can be "measured" using the STD (Standard Deviation) attached to every point profile. This information is written to the parameter GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/o3\_std of the level 2 products. The table below shows the statistics for given STD ranges.

The statistics are given with respect to the overall valid production:

- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

The 'Criteria' is applied to valid points of dark limb products:

- Products in dark limb illumination condition: GOM\_NL\_\_2P/NL\_SUMMARY\_QUALITY/obs\_ill\_cond=0
- Products without fatal errors: GOM\_NL\_\_2P/MPH/PRODUCT\_ERR=0
- Valid point profile: GOM\_NL\_\_2P/NL\_LOCAL\_SPECIES\_DENSITY/pcd(0)=0

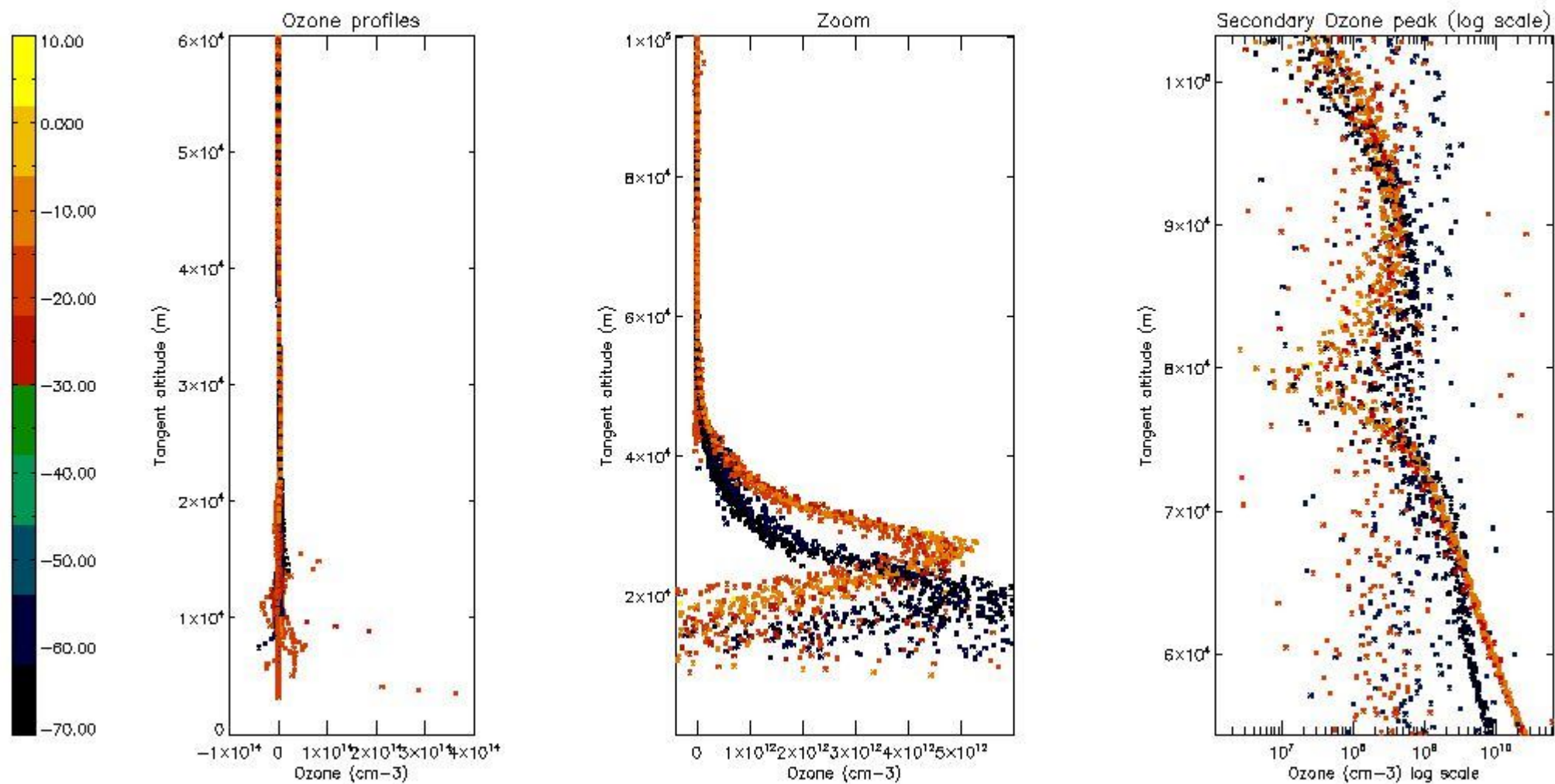
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	23
STD < 20	11

STD < 10	7
STD < 5	5

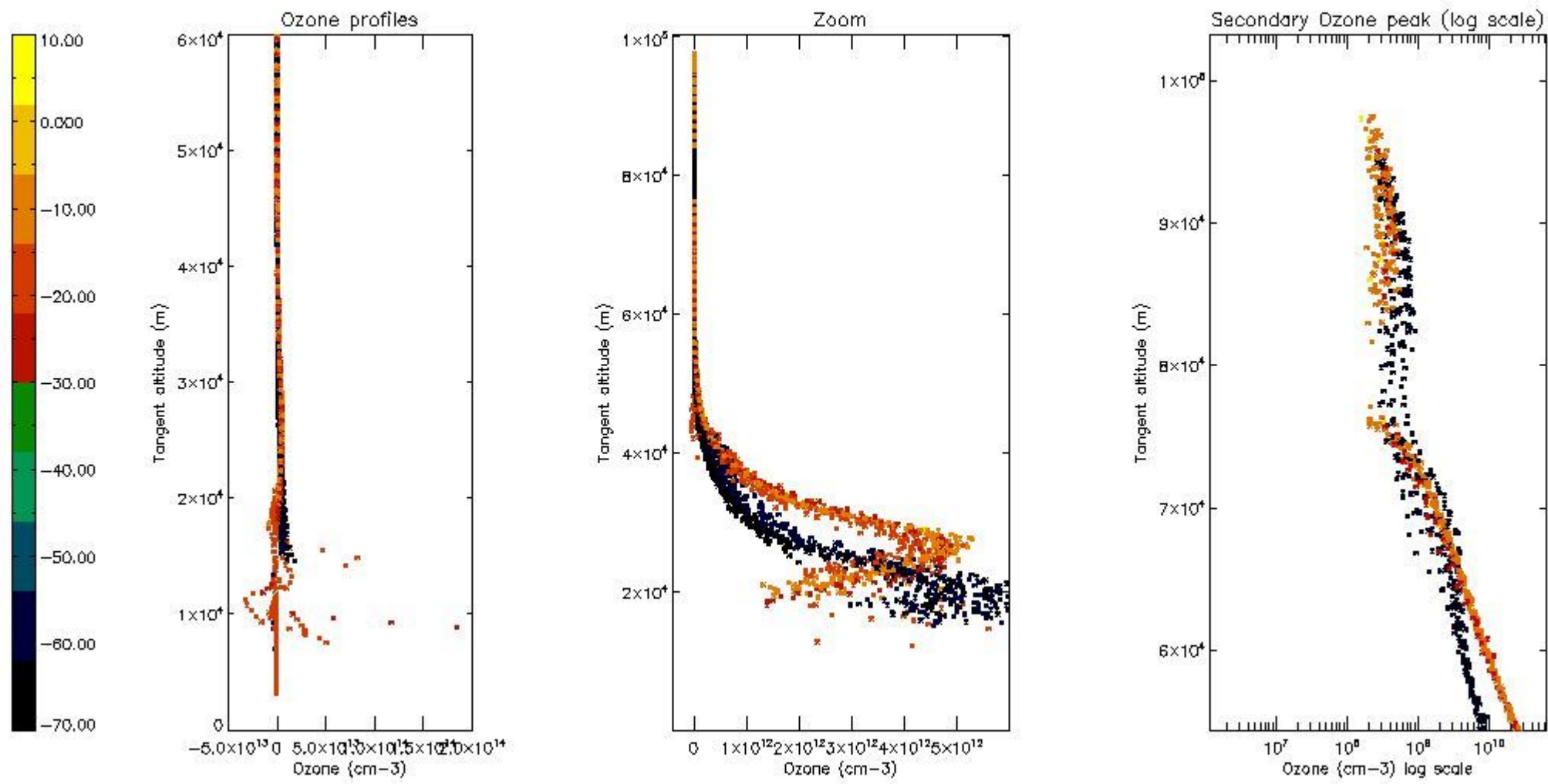
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



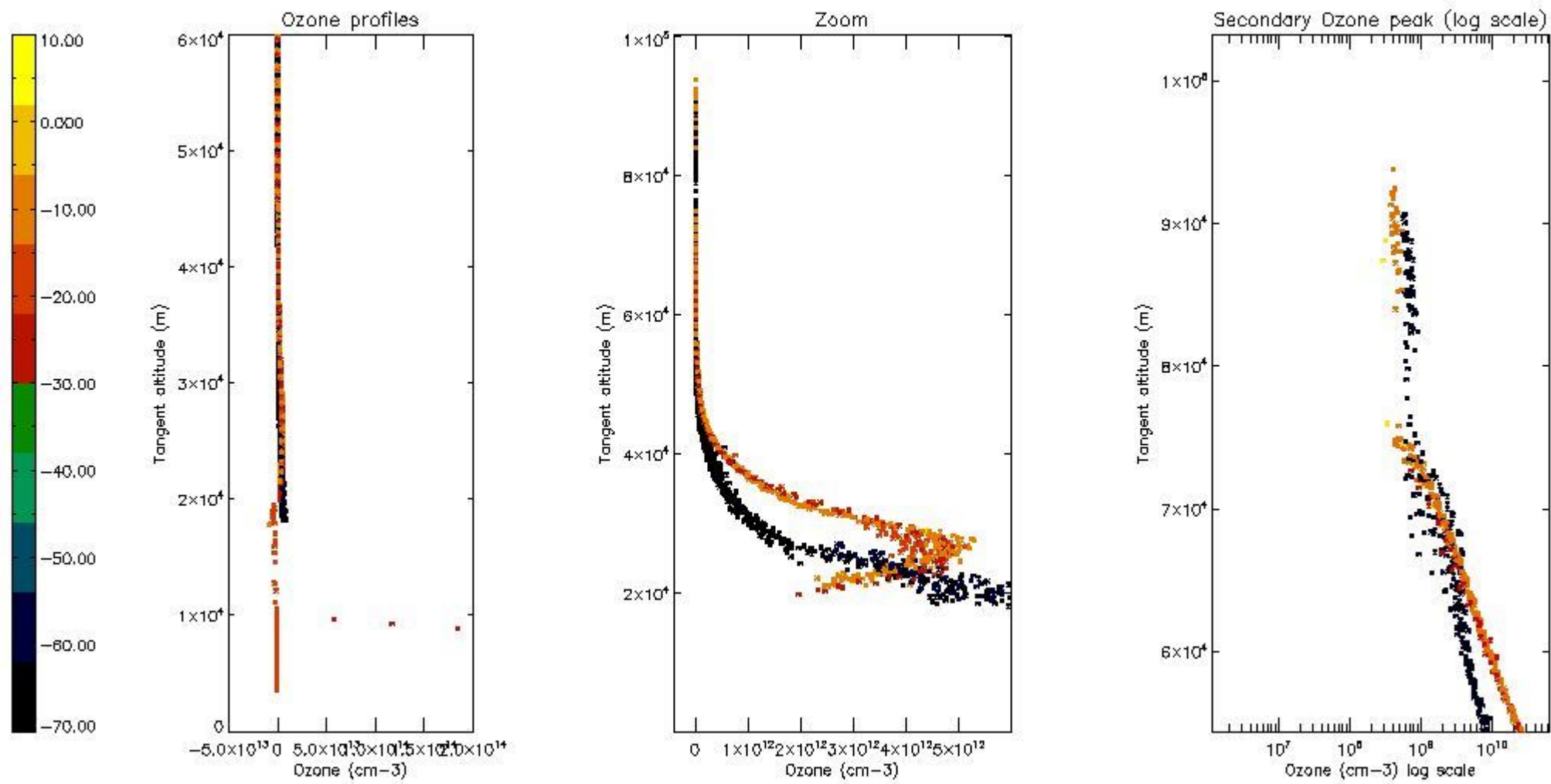
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



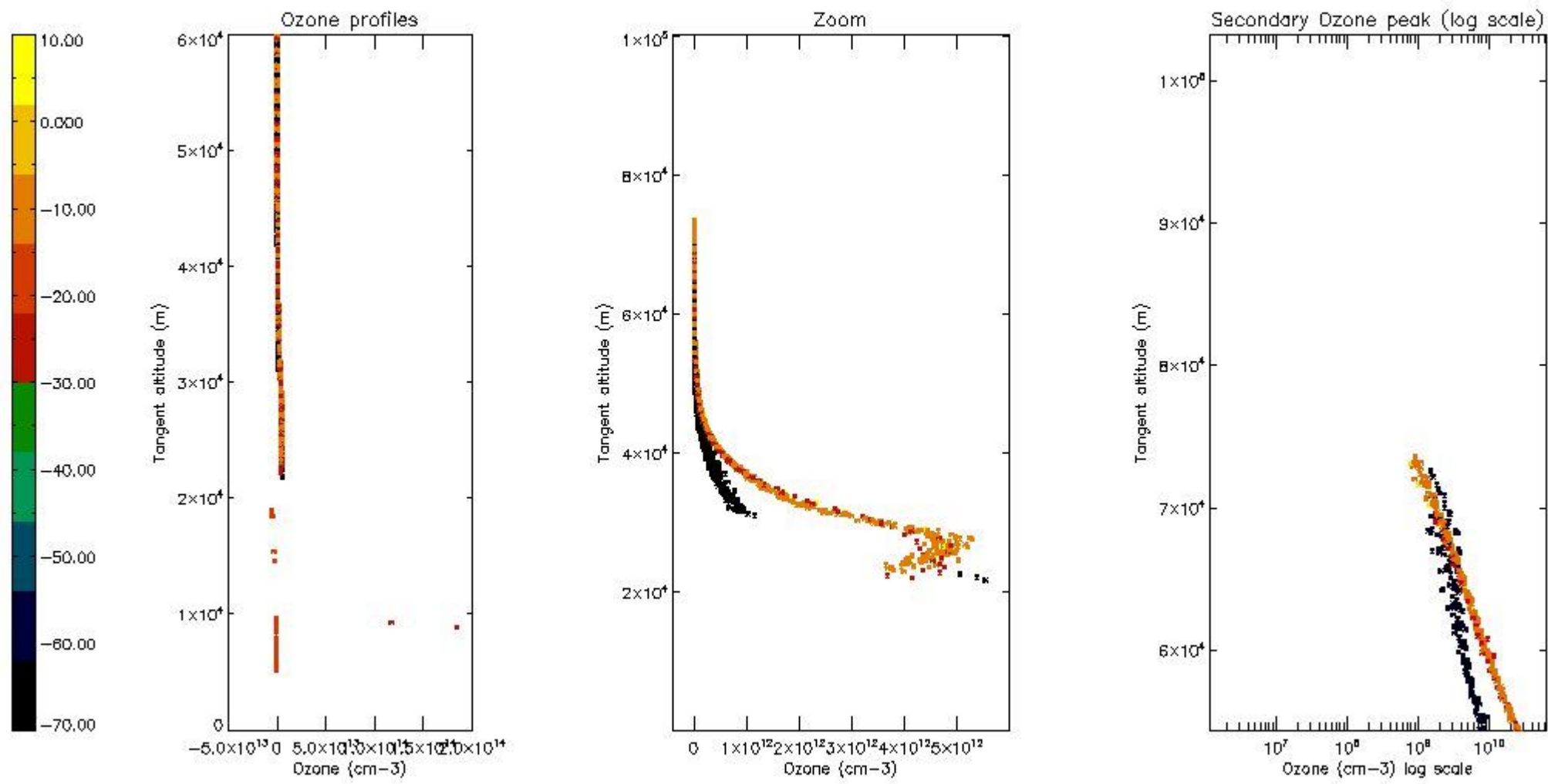
*5.4 Plot ozone profiles where STD < 10% (dark without errors)*

The colorbar represents the latitude.



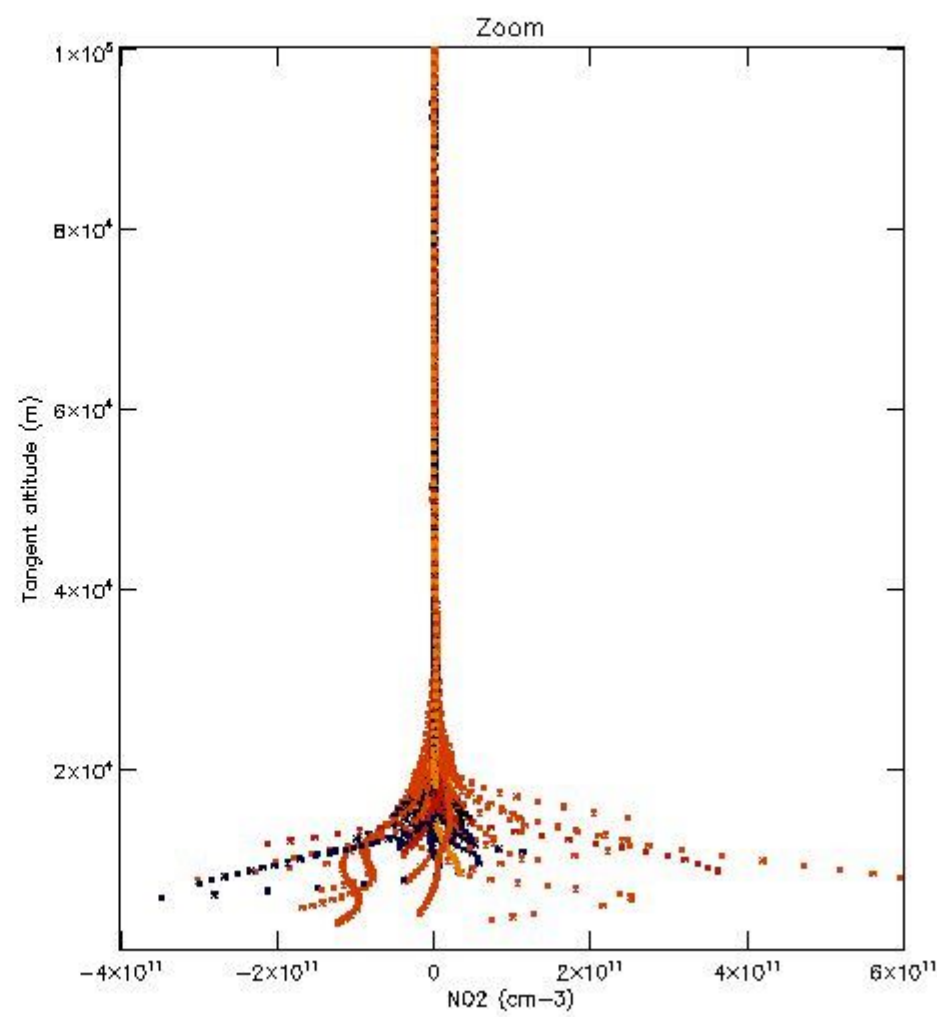
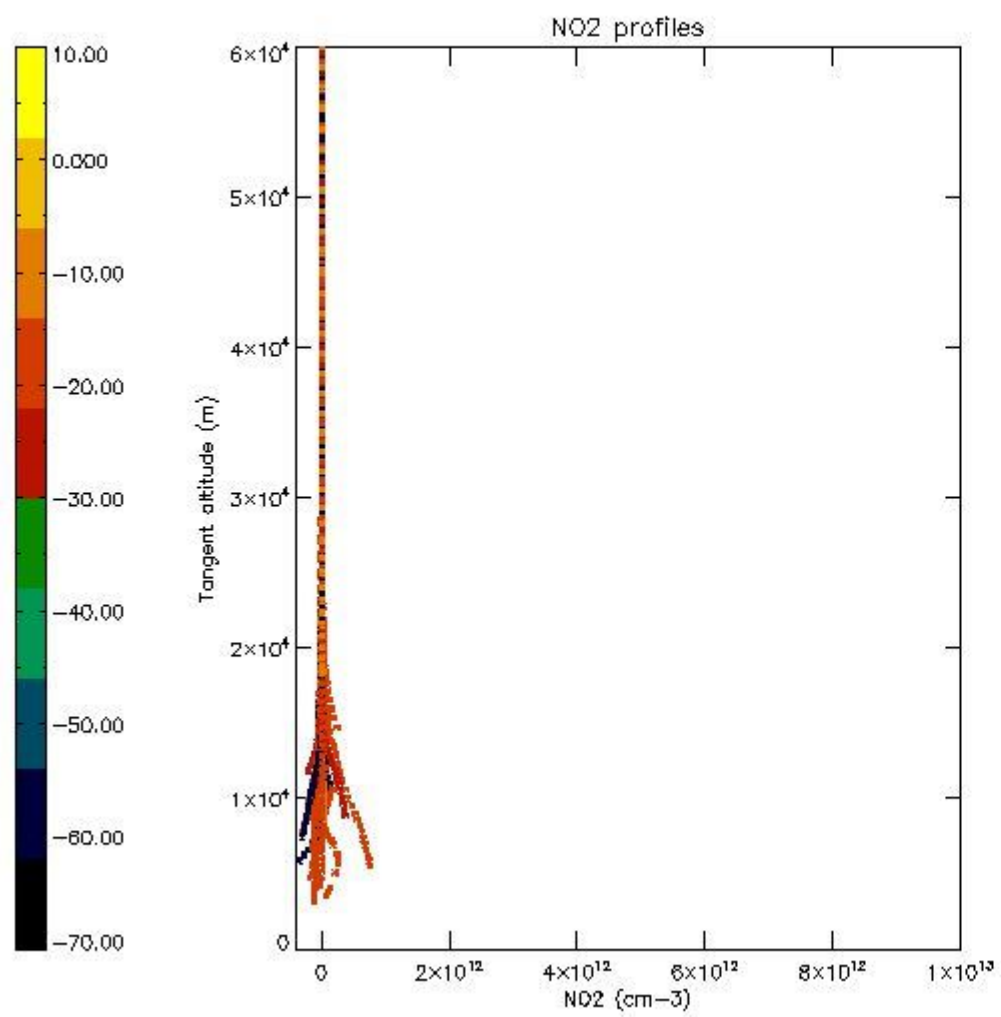
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



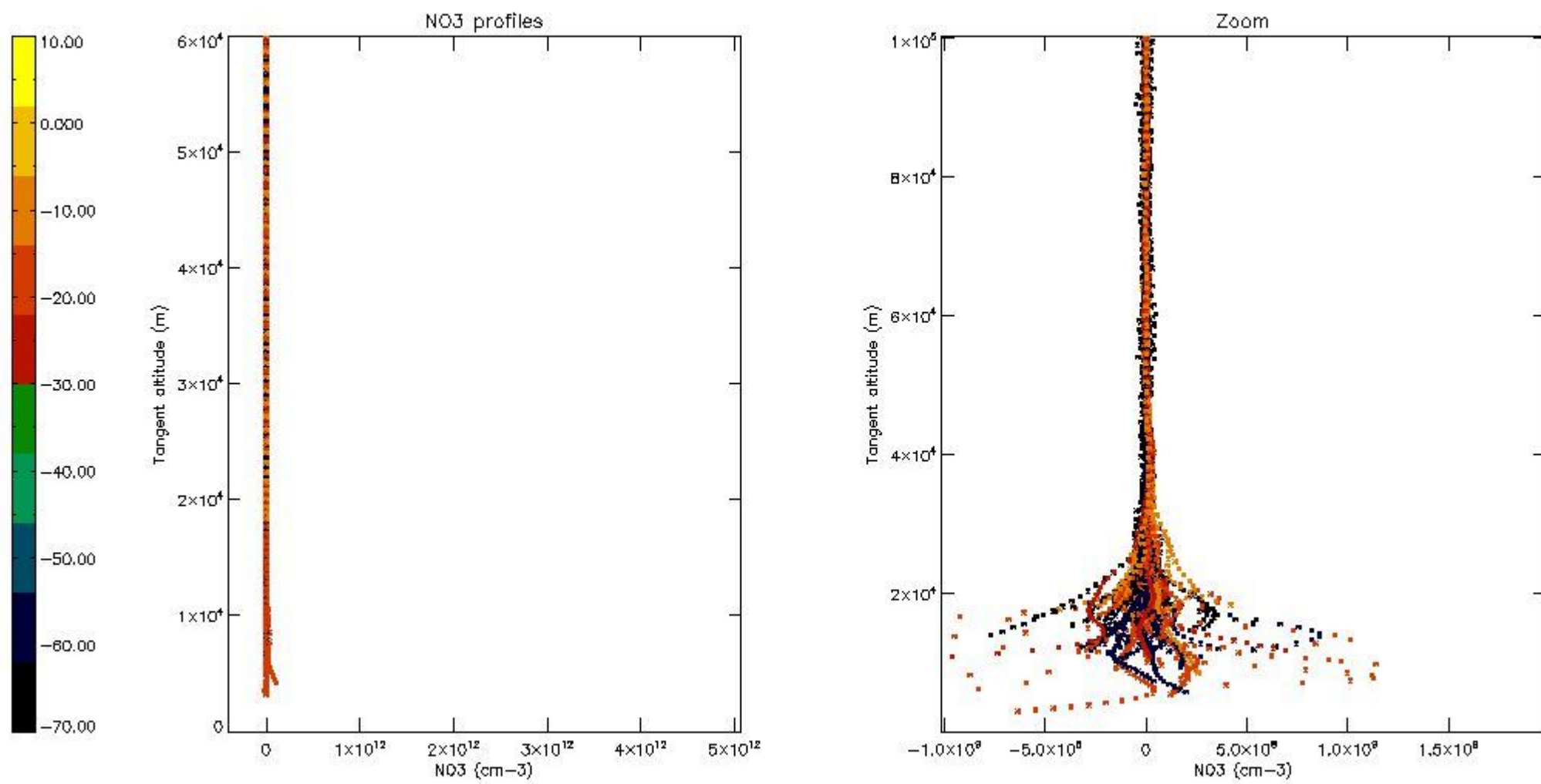
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



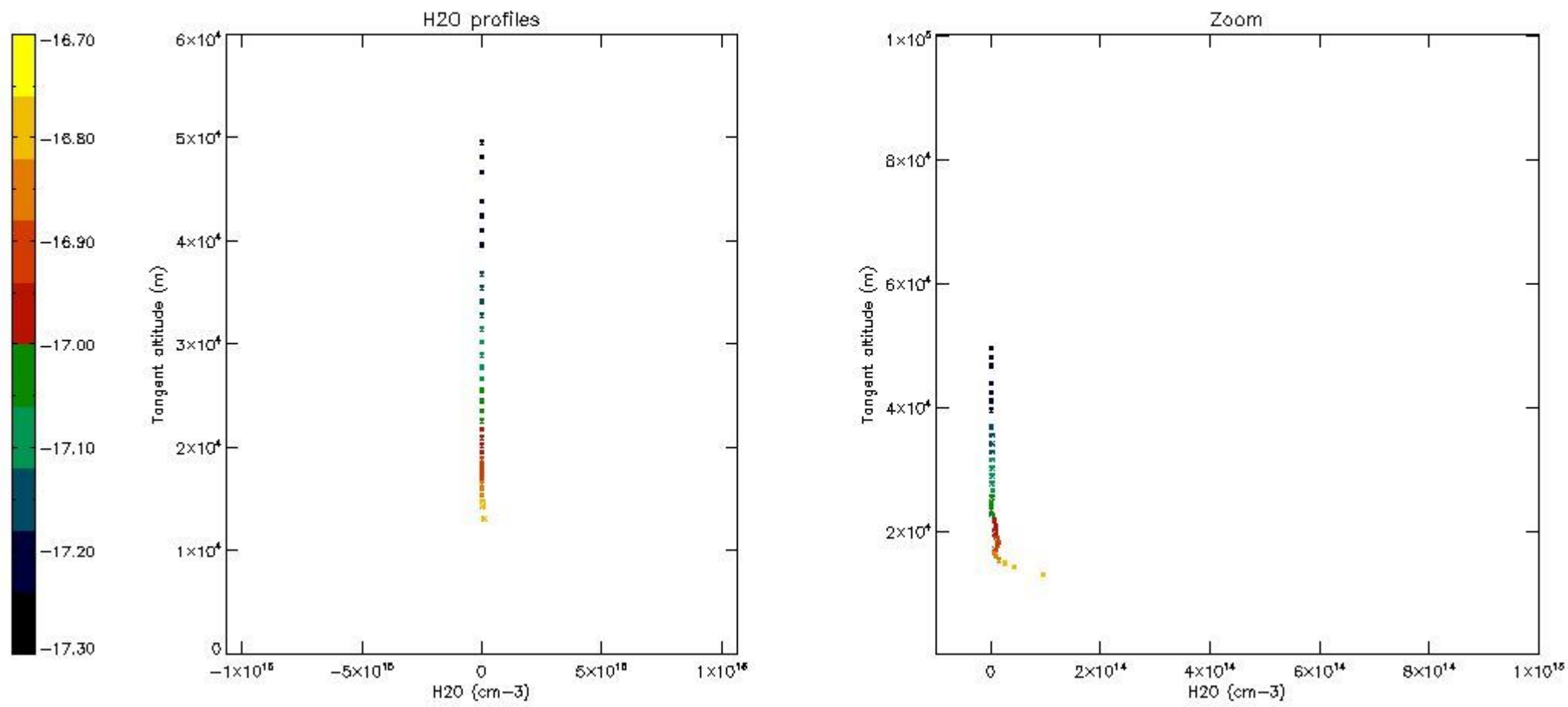
*5.7 Plot NO3 profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*5.8 Plot H2O profiles for all STD (only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors)*

The colorbar represents the latitude.

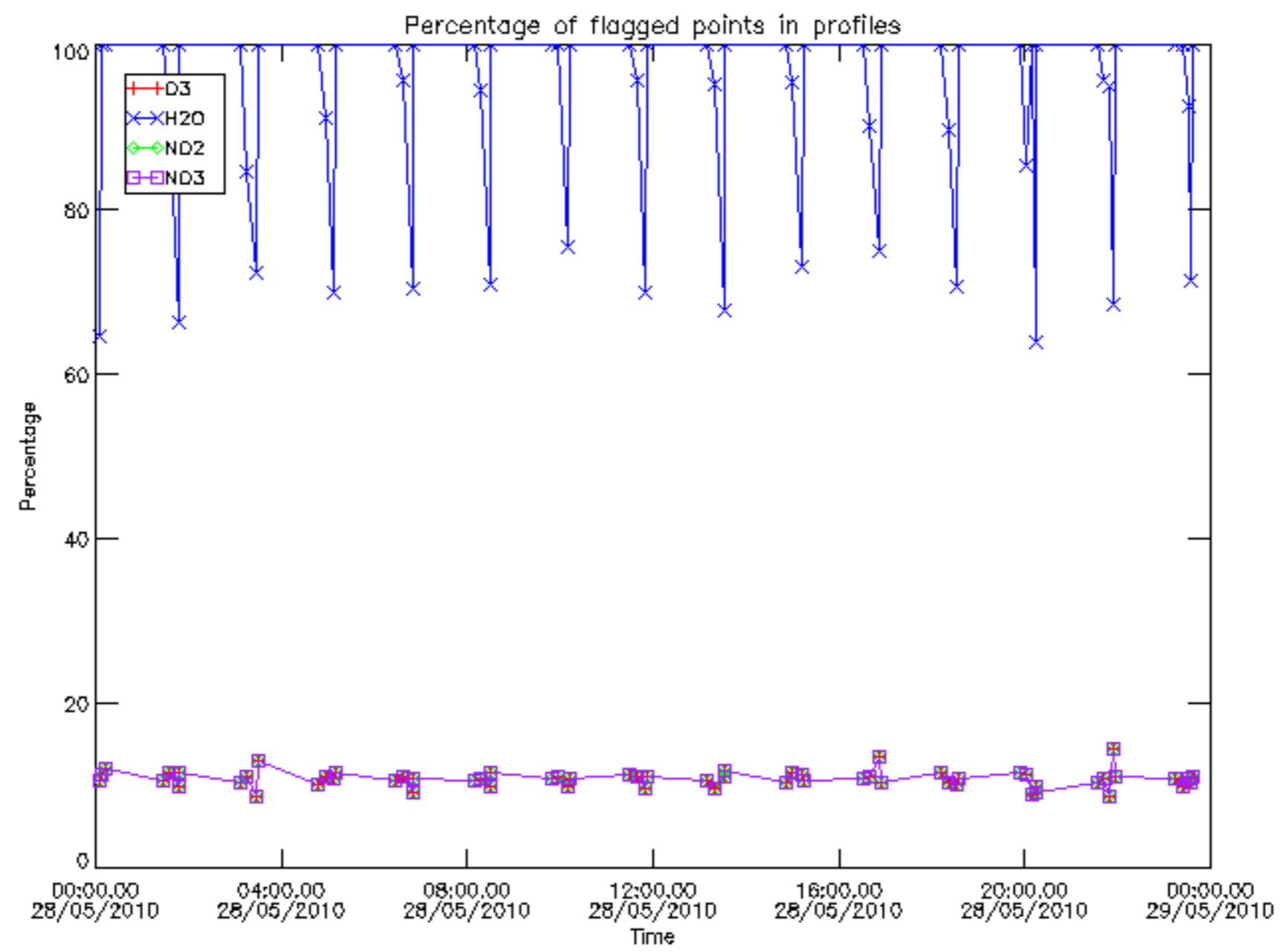


## 6. Auxiliary Data Files used for the production reported in section 2

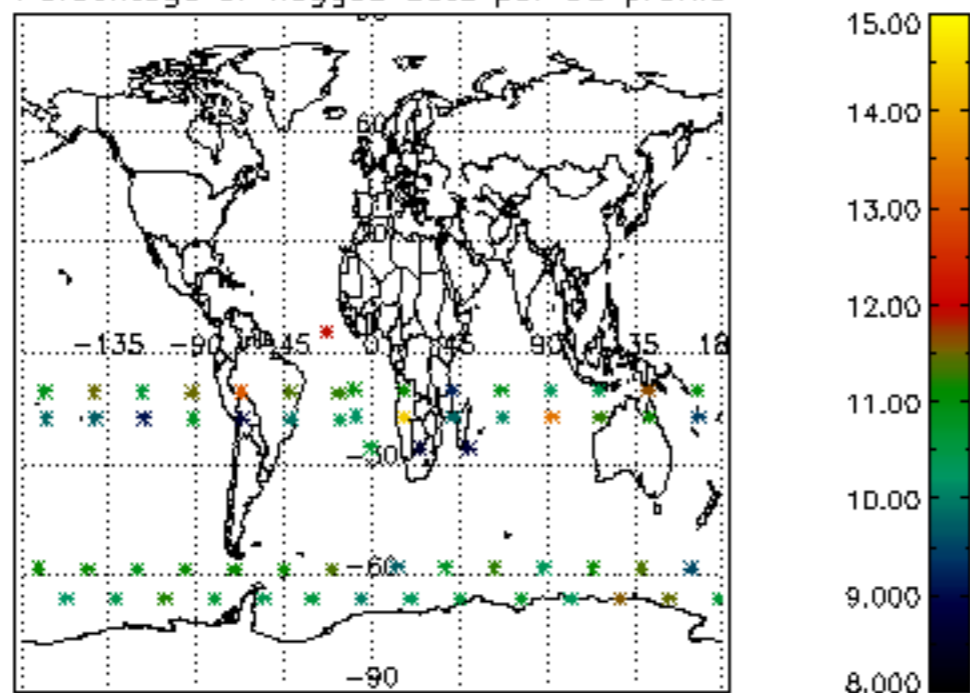
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	28-MAY-2010 00:06:14
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	28-MAY-2010 00:06:14
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	28-MAY-2010 00:06:14

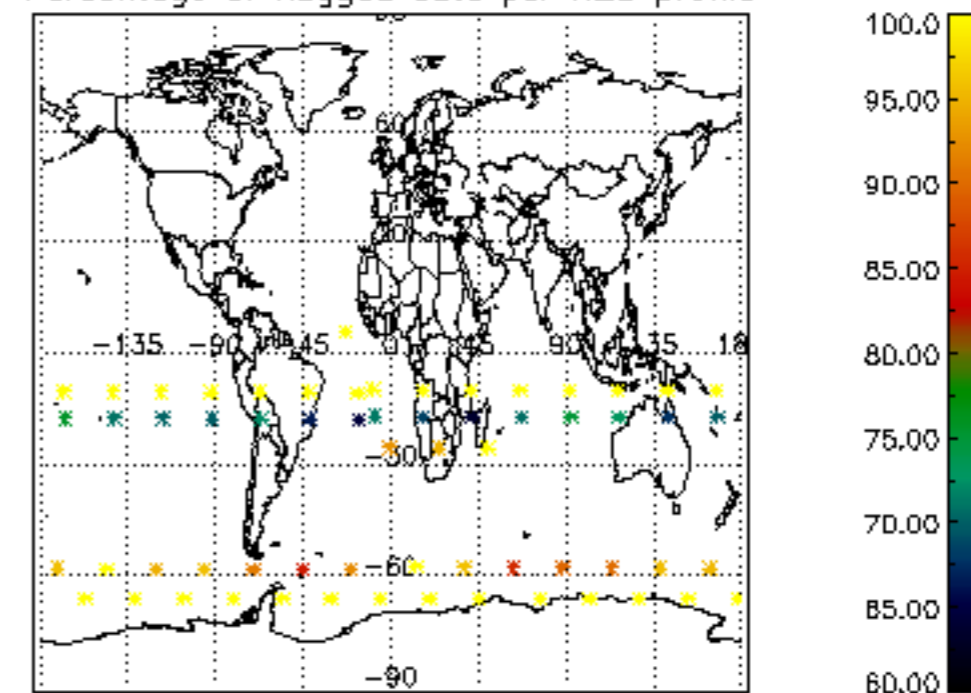




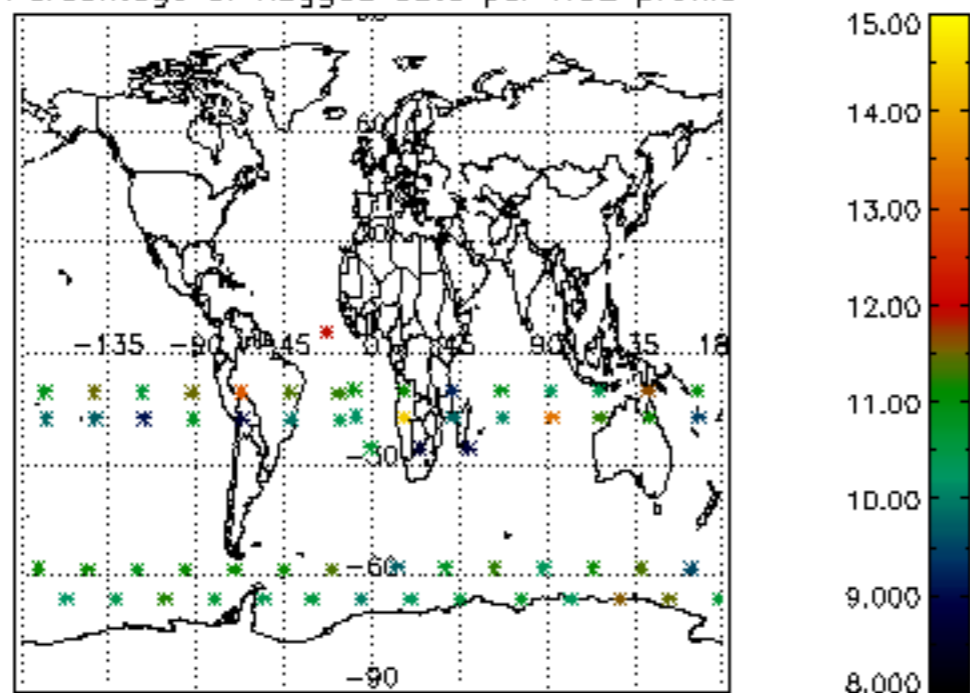
Percentage of flagged data per D3 profile



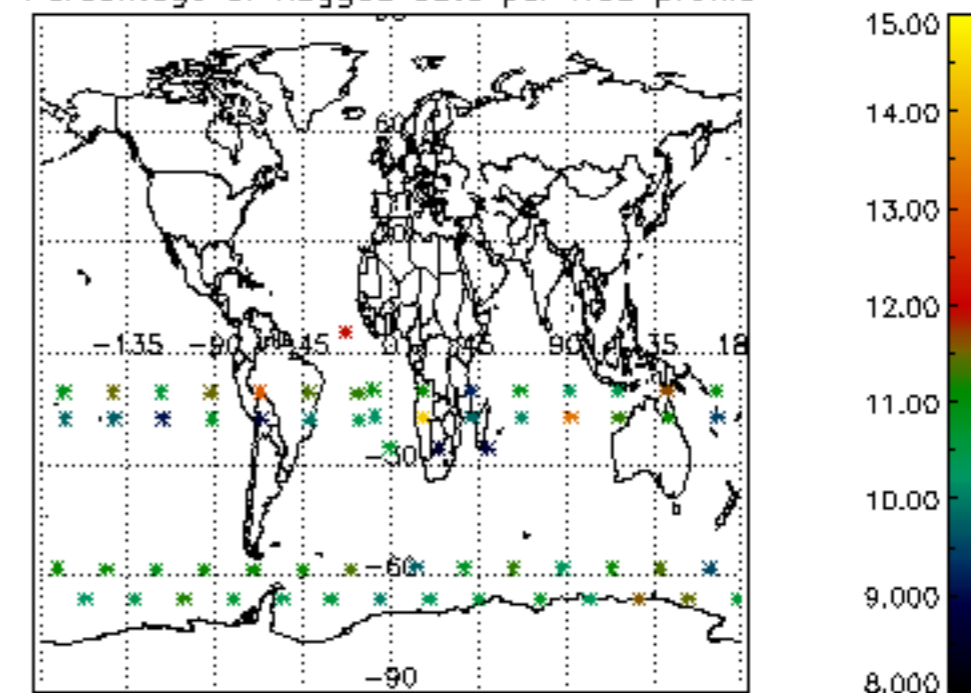
Percentage of flagged data per H2O profile

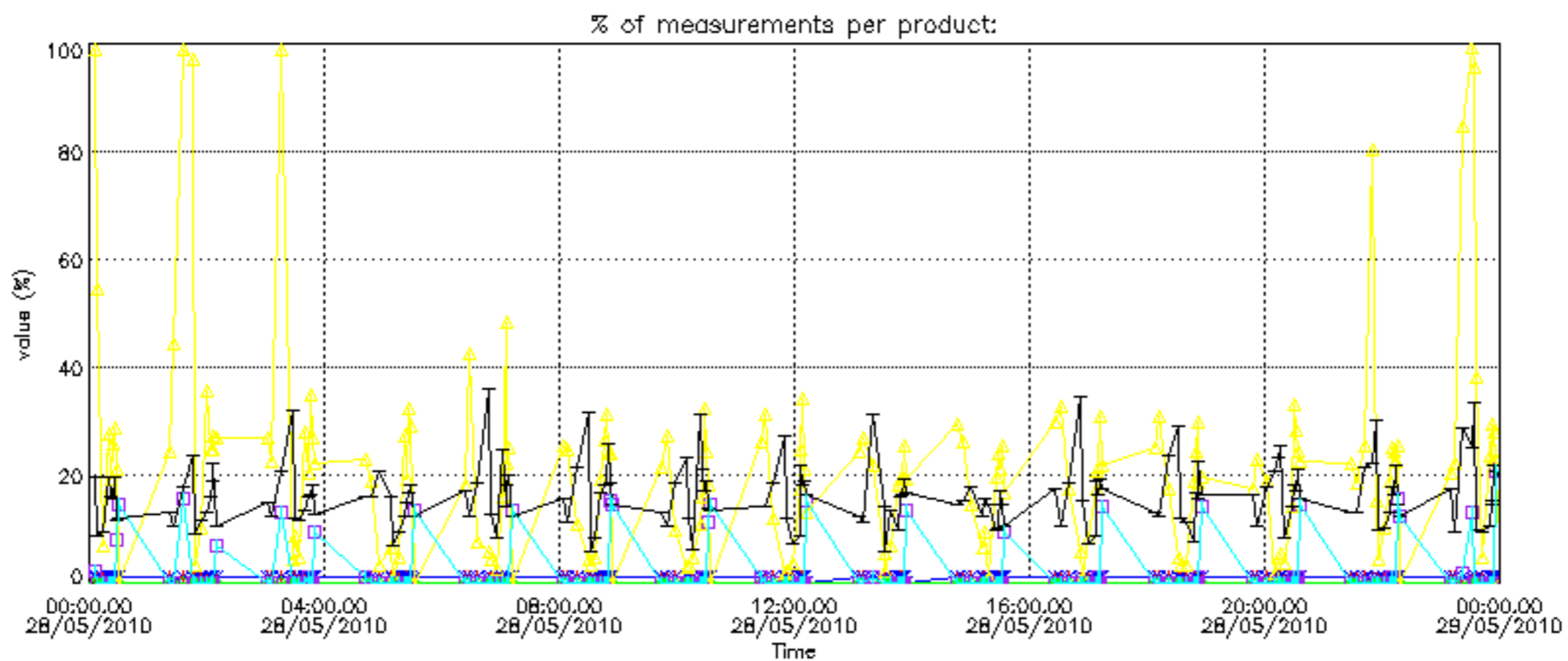


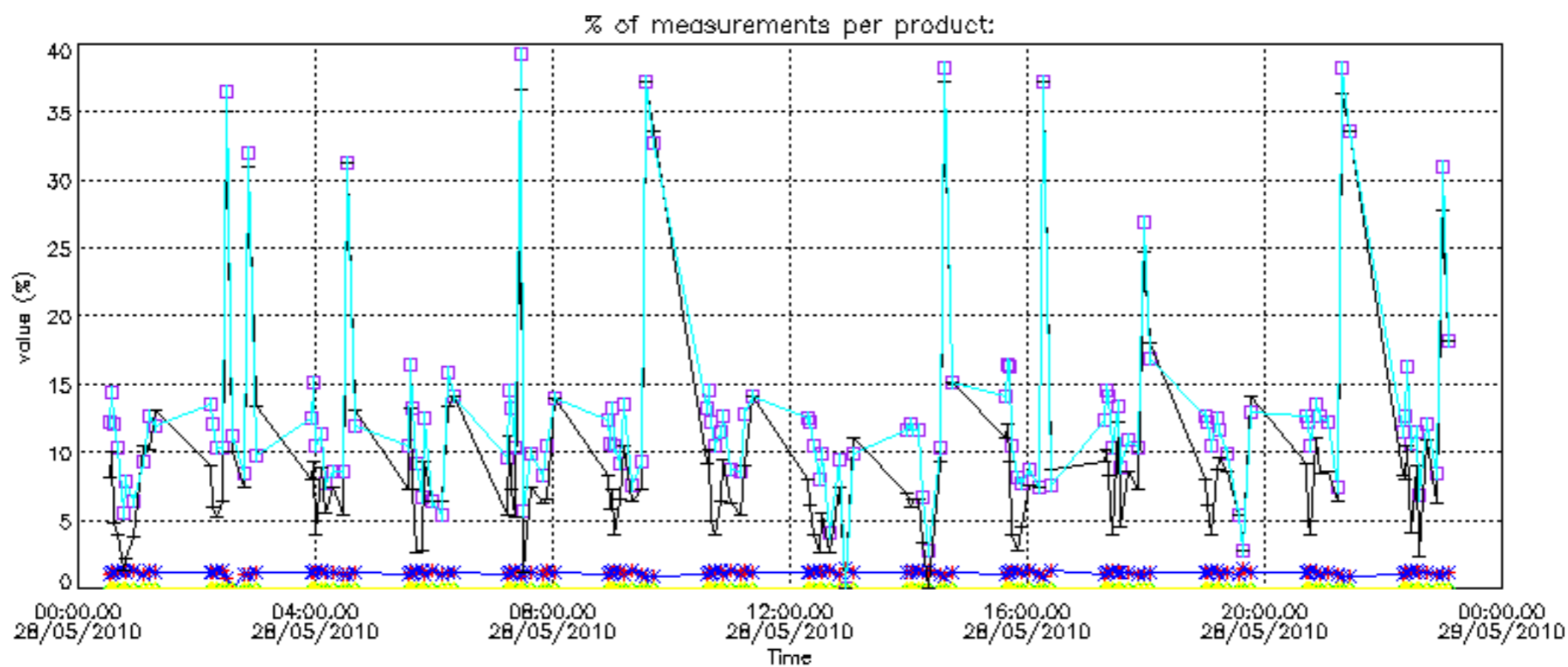
Percentage of flagged data per NO2 profile



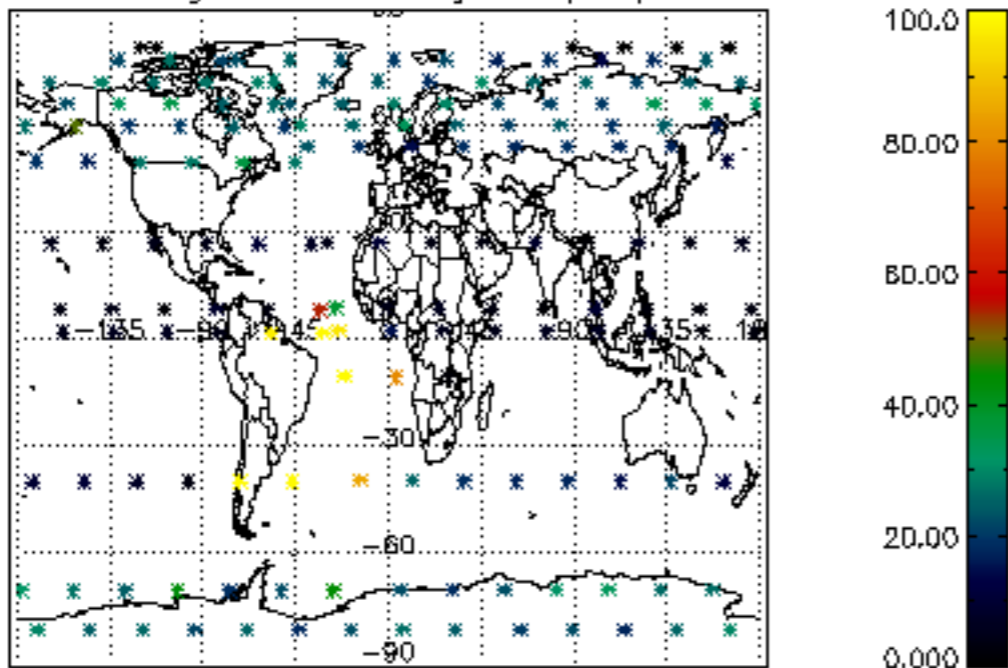
Percentage of flagged data per NO3 profile



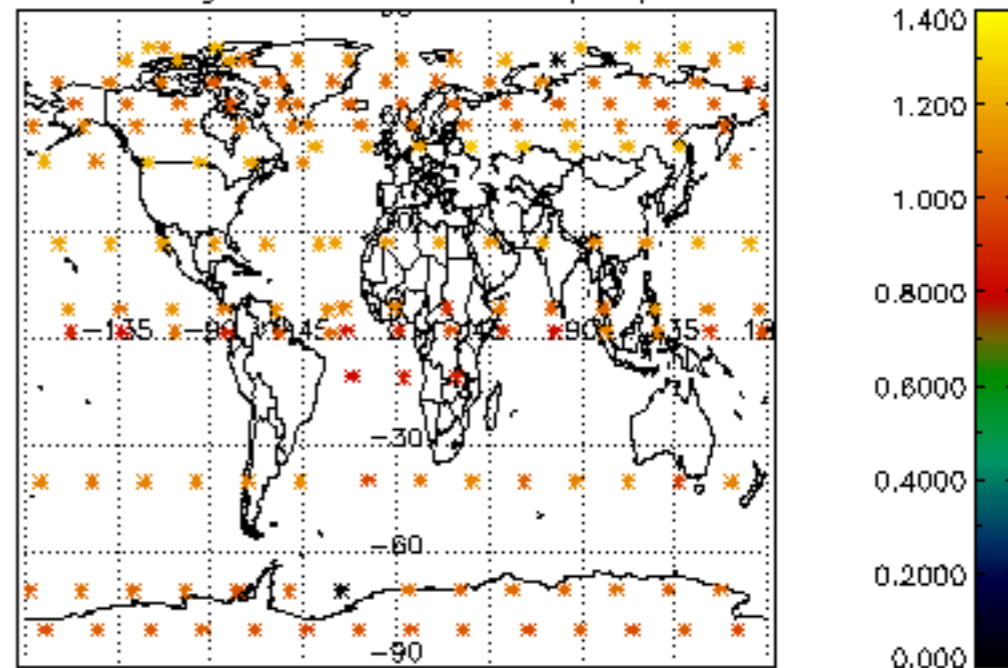




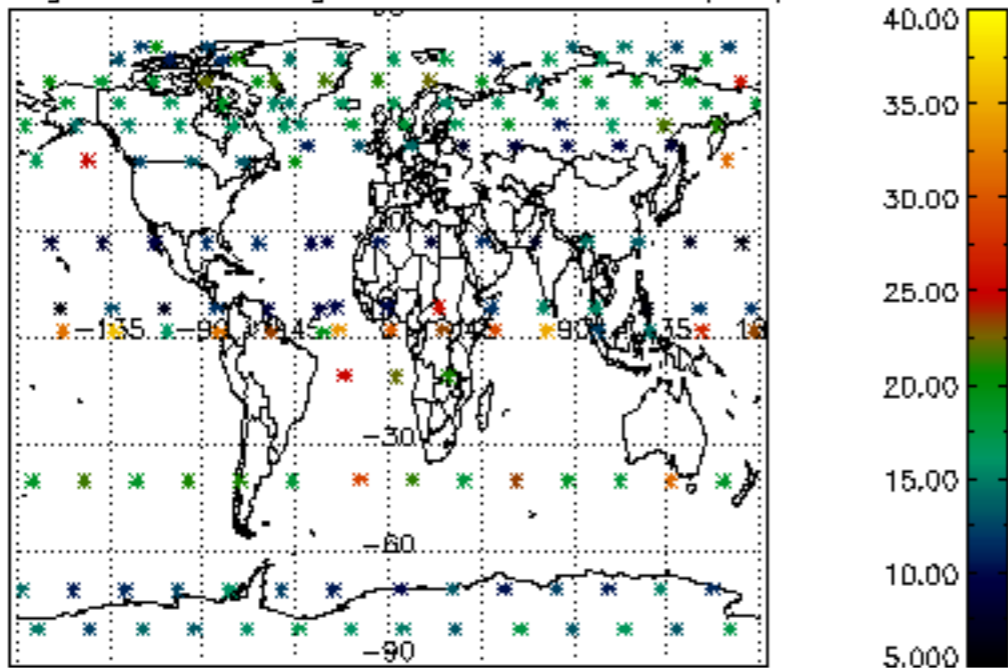
Percentage of cosmic ray hits per profile



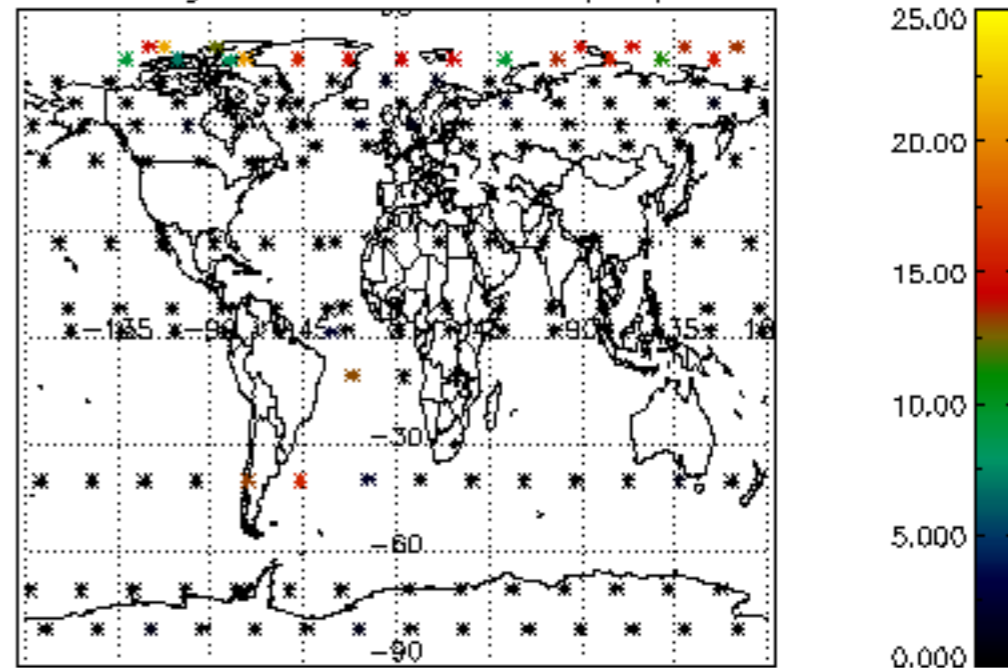
Percentage of datation errors per profile



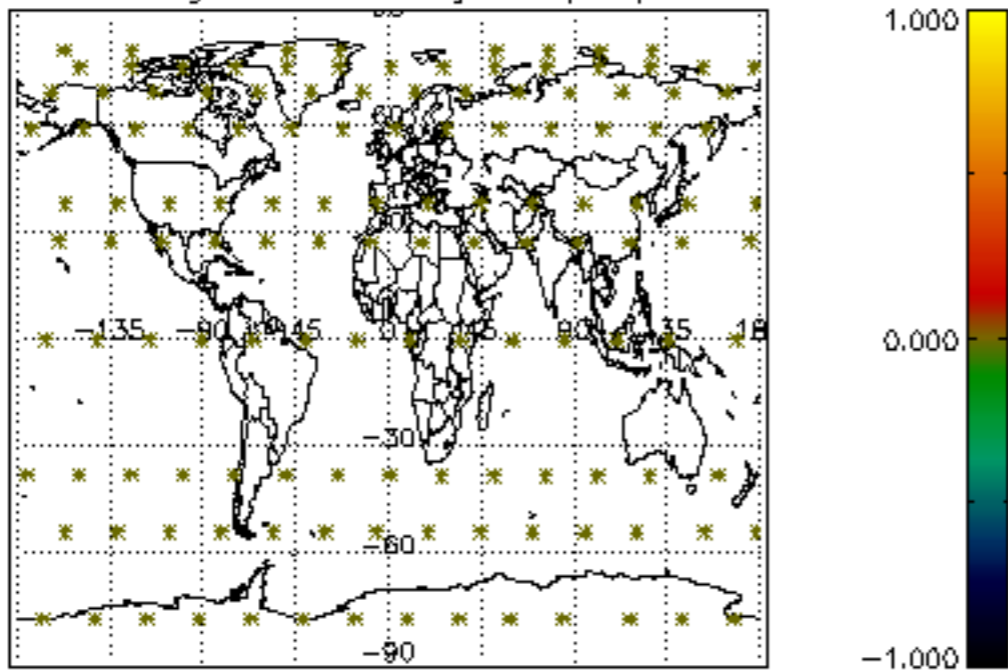
Percentage of star falling outside central band per profile



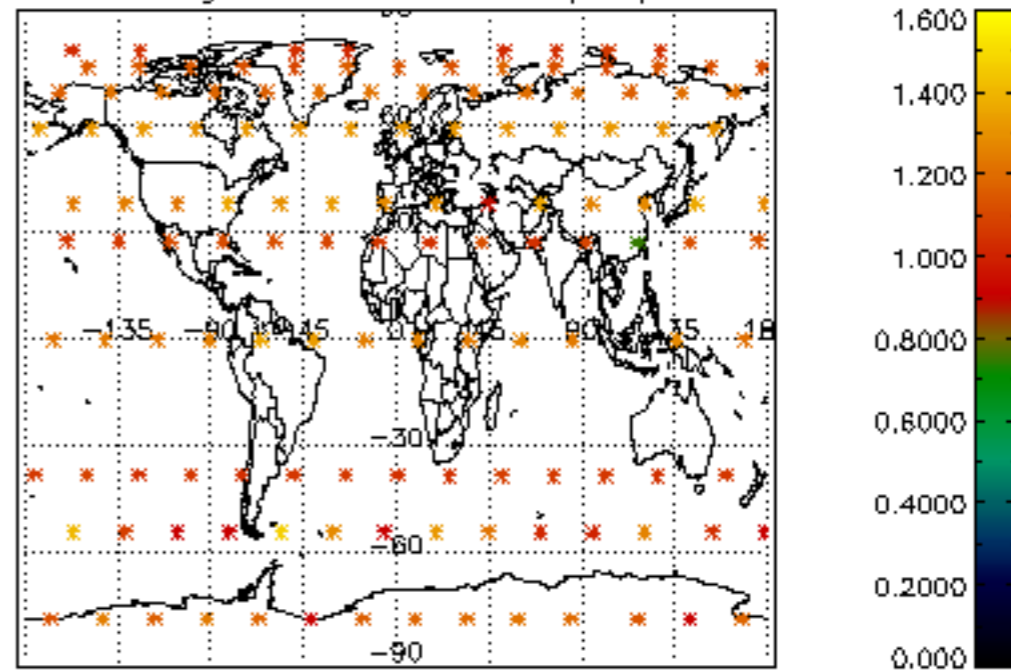
Percentage of saturation errors per profile



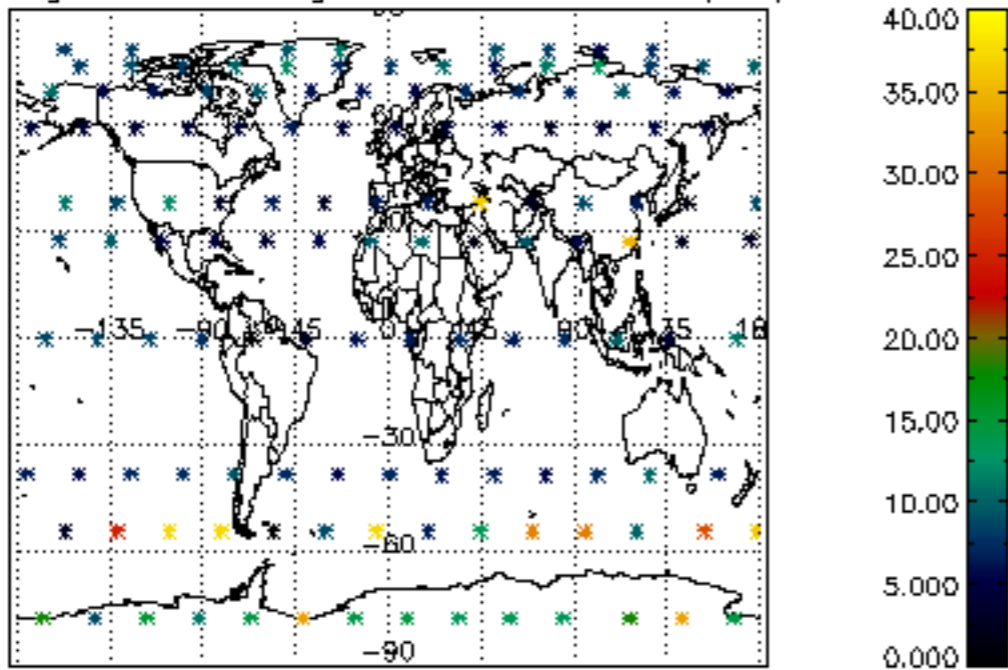
Percentage of cosmic ray hits per profile



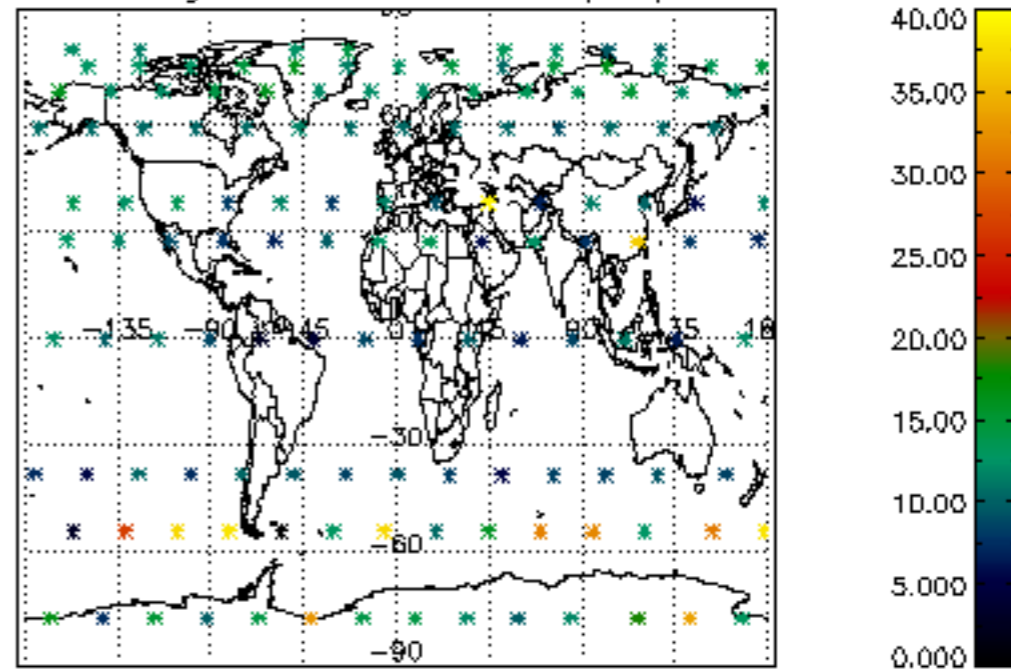
Percentage of datation errors per profile

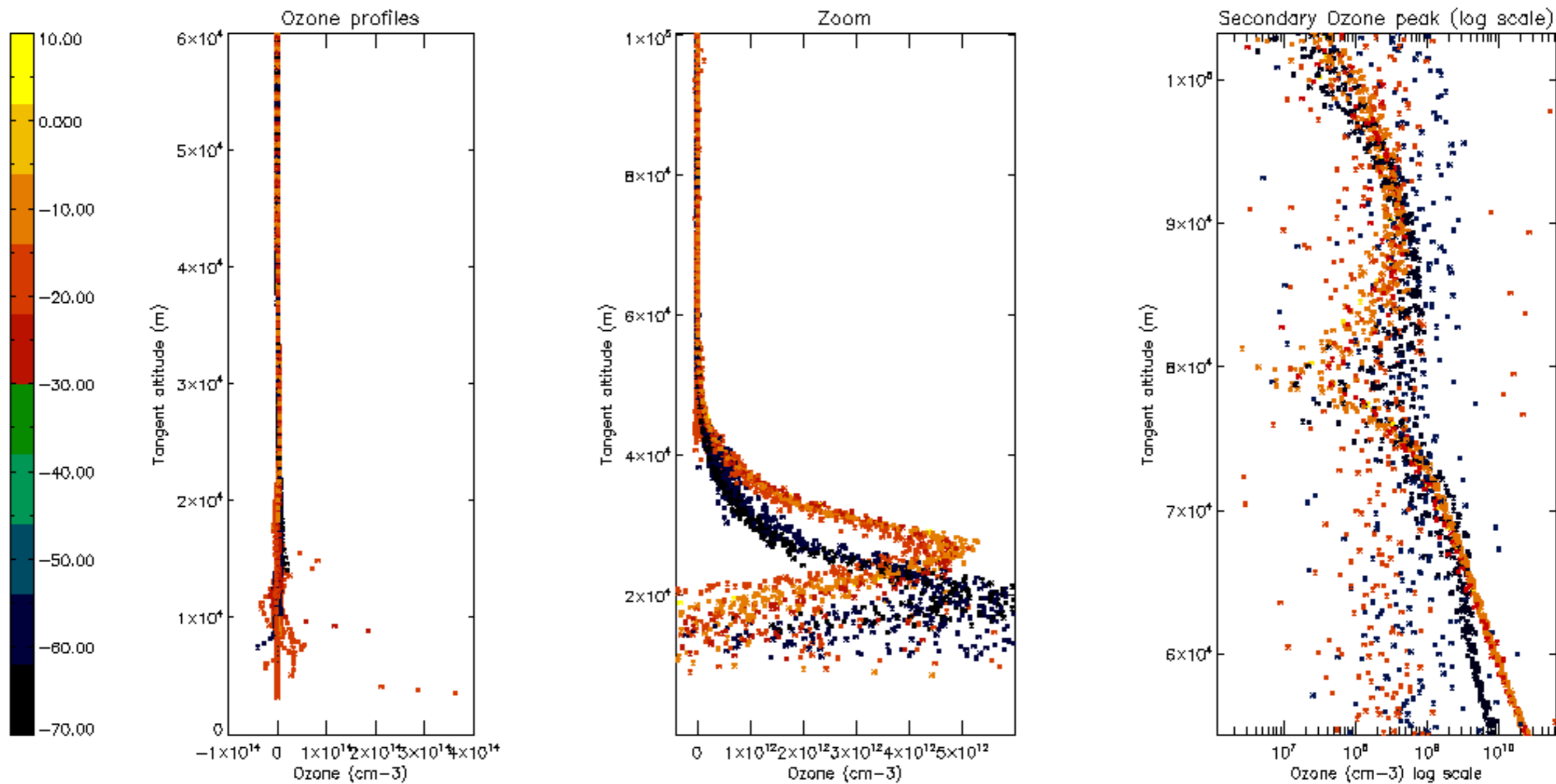


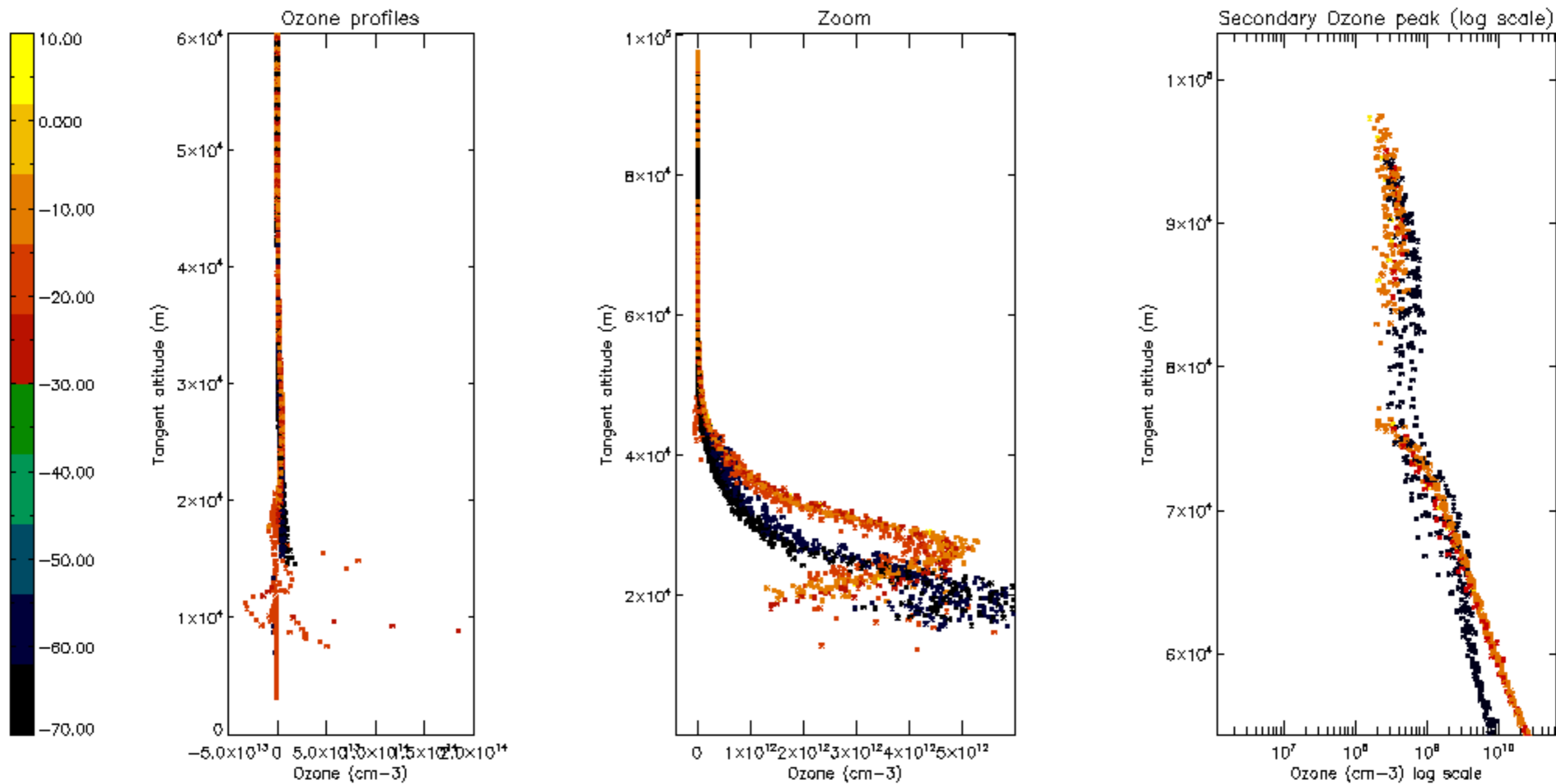
Percentage of star falling outside central band per profile



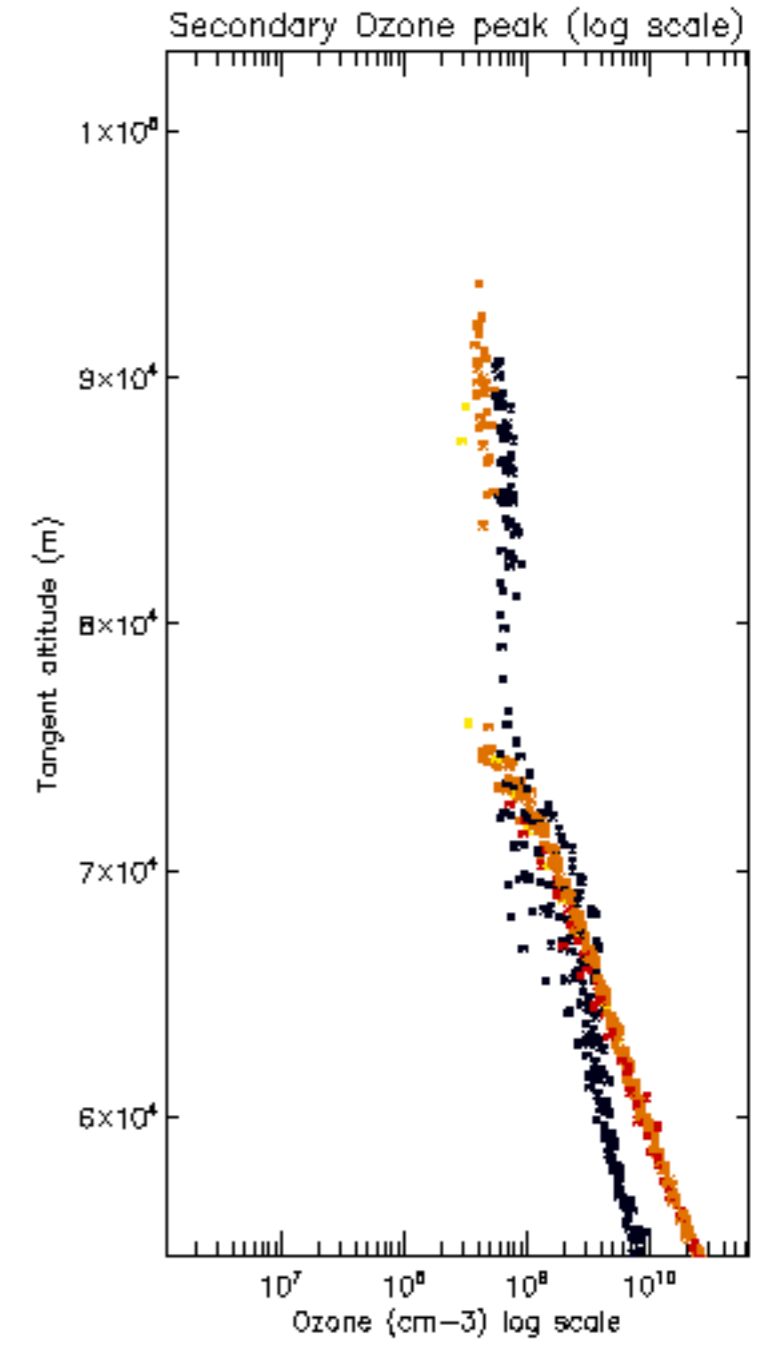
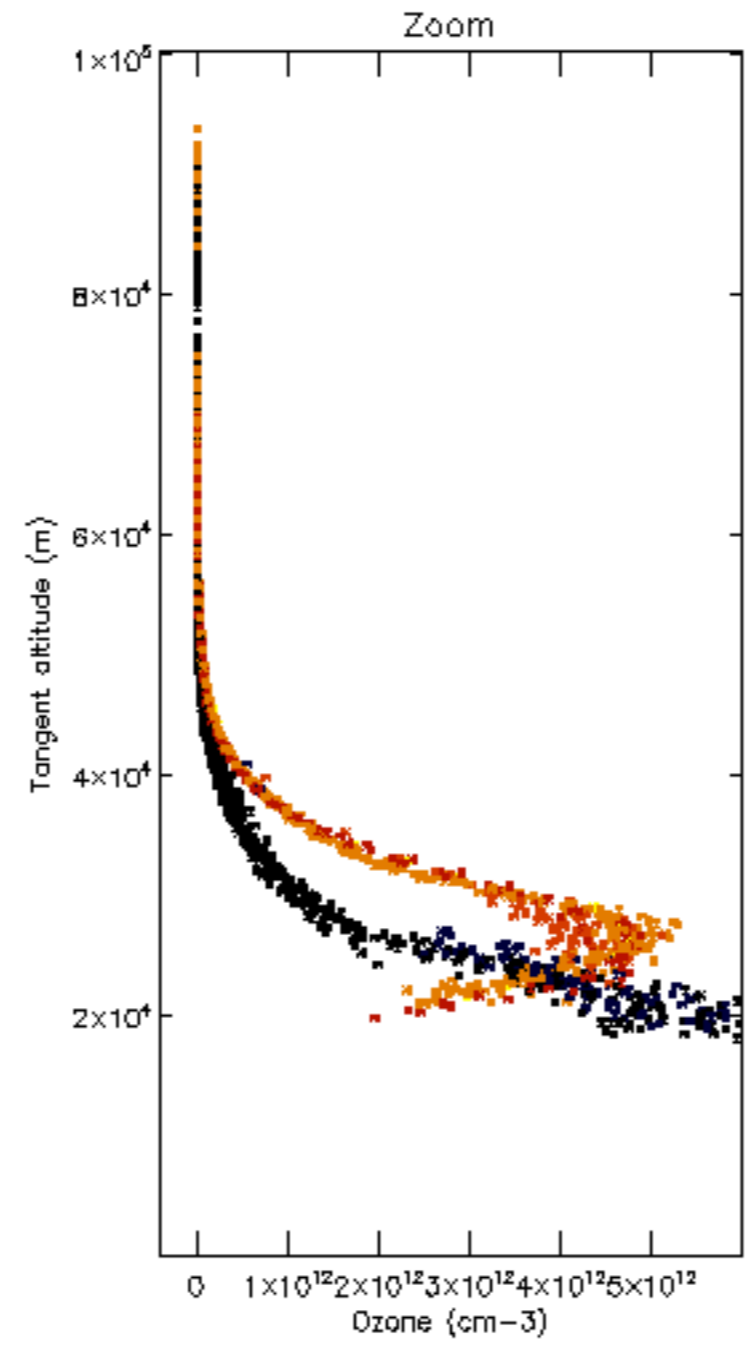
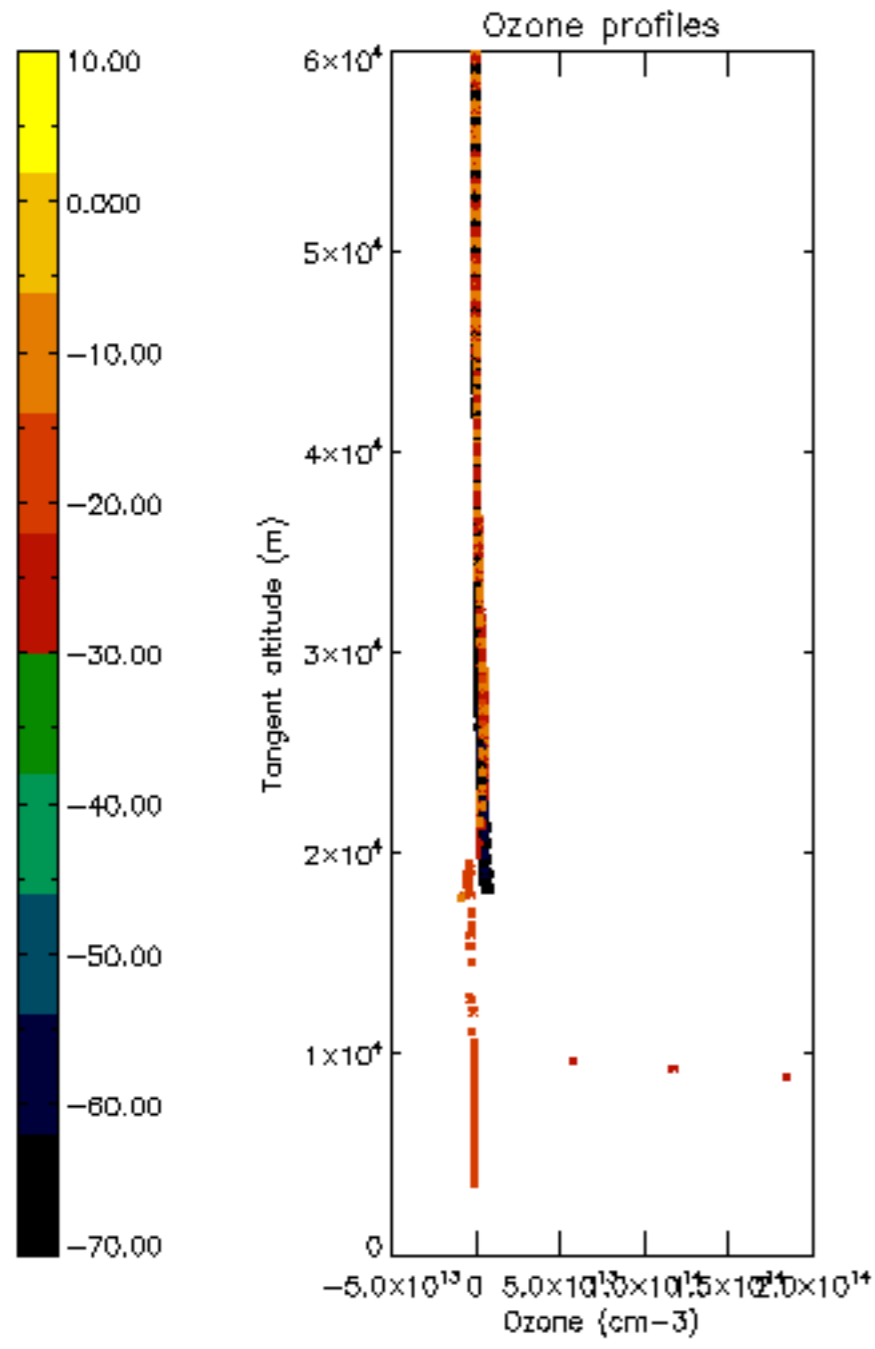
Percentage of saturation errors per profile

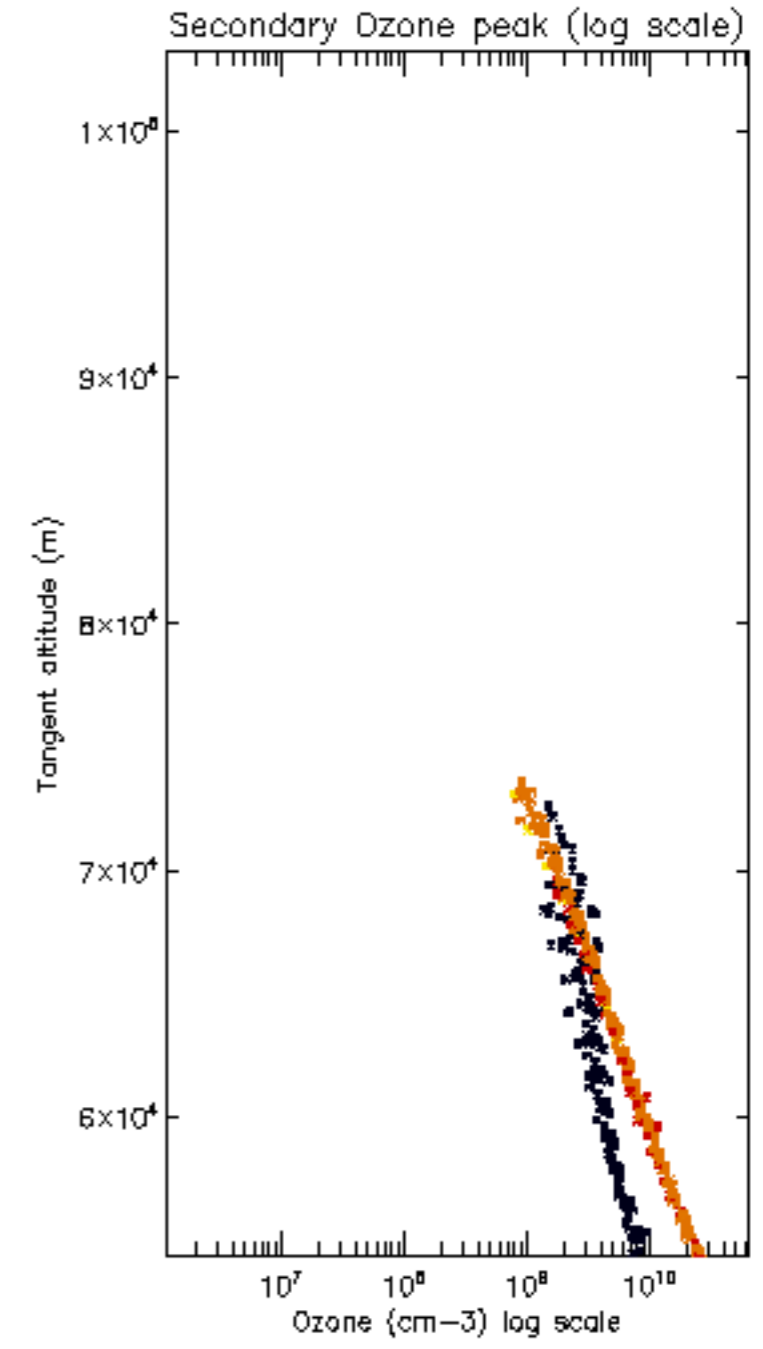
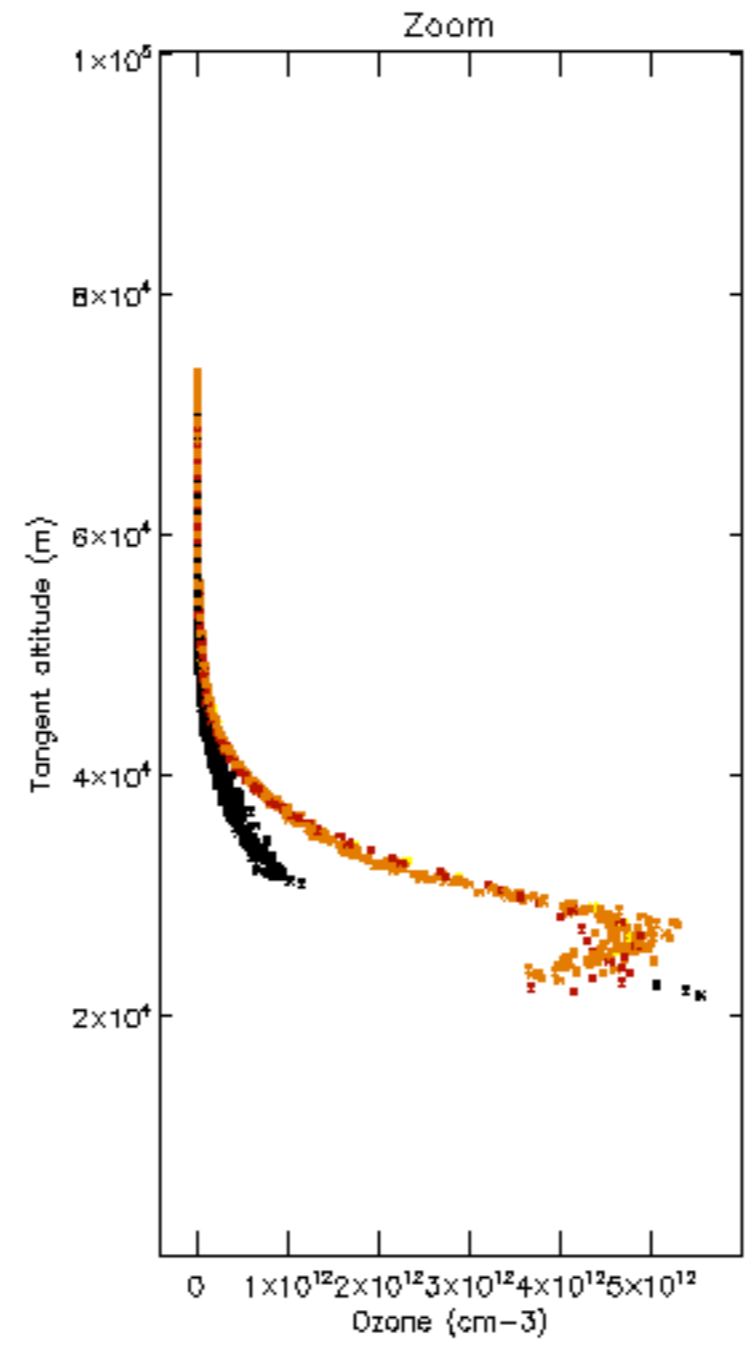
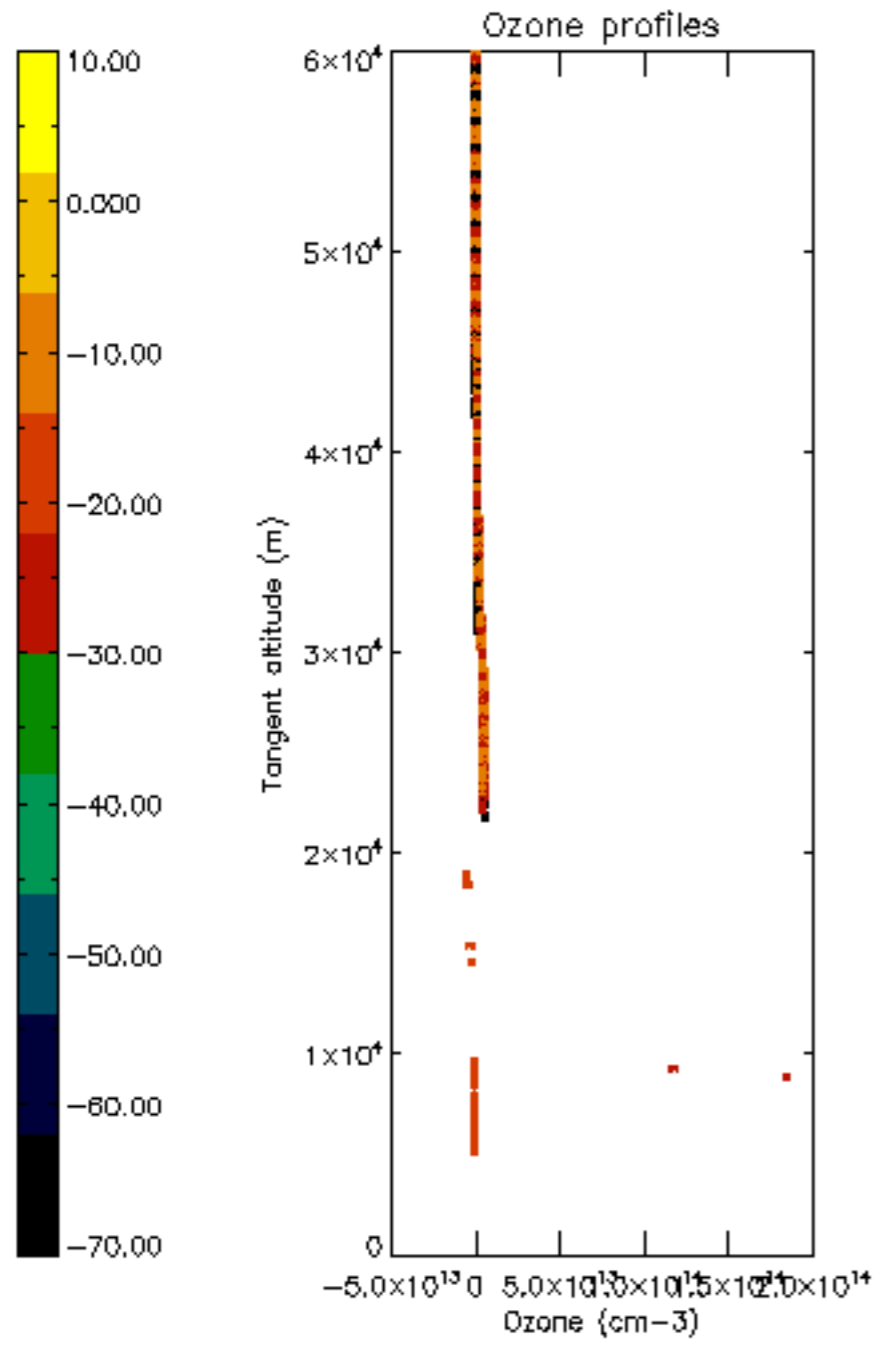


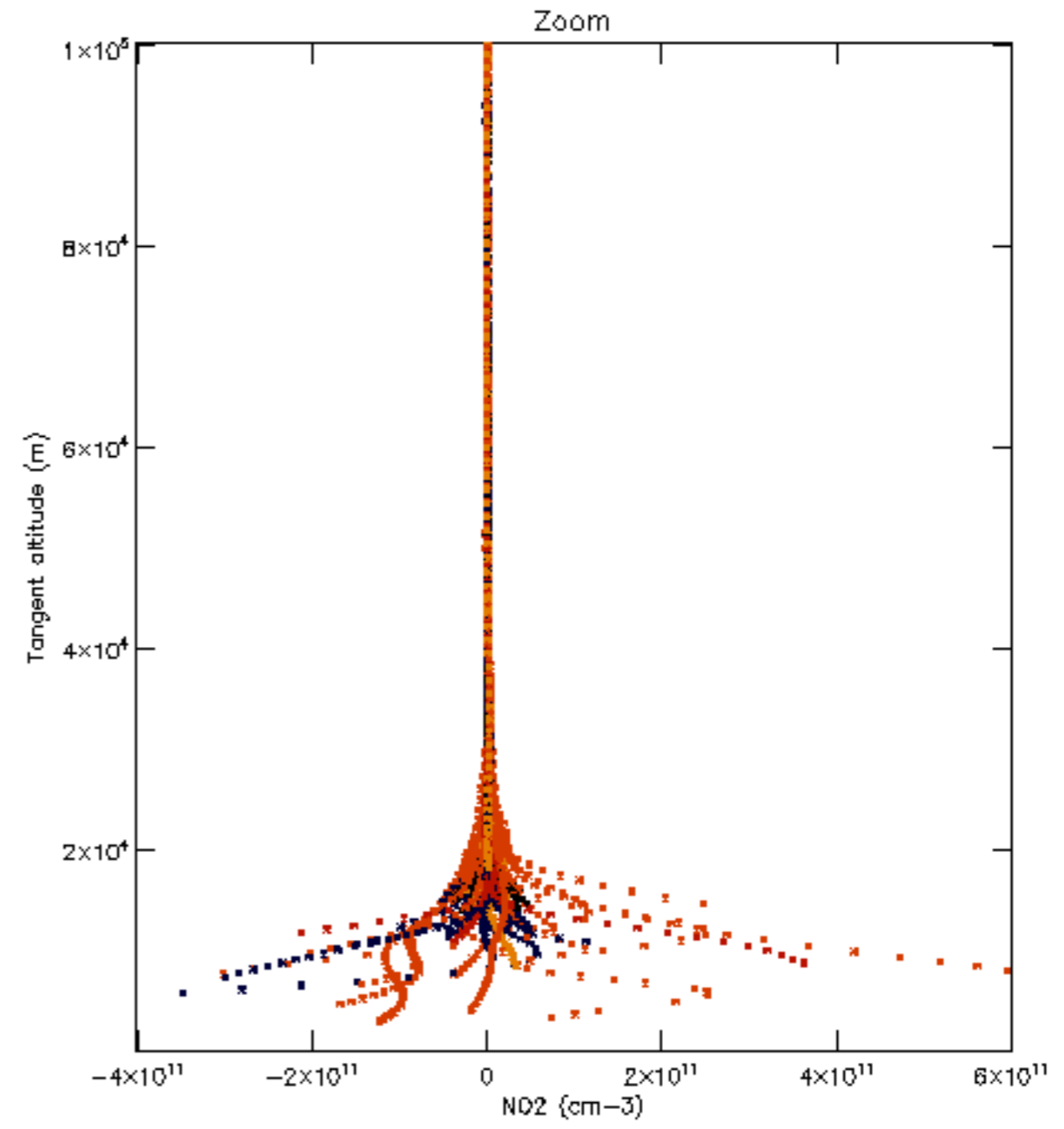
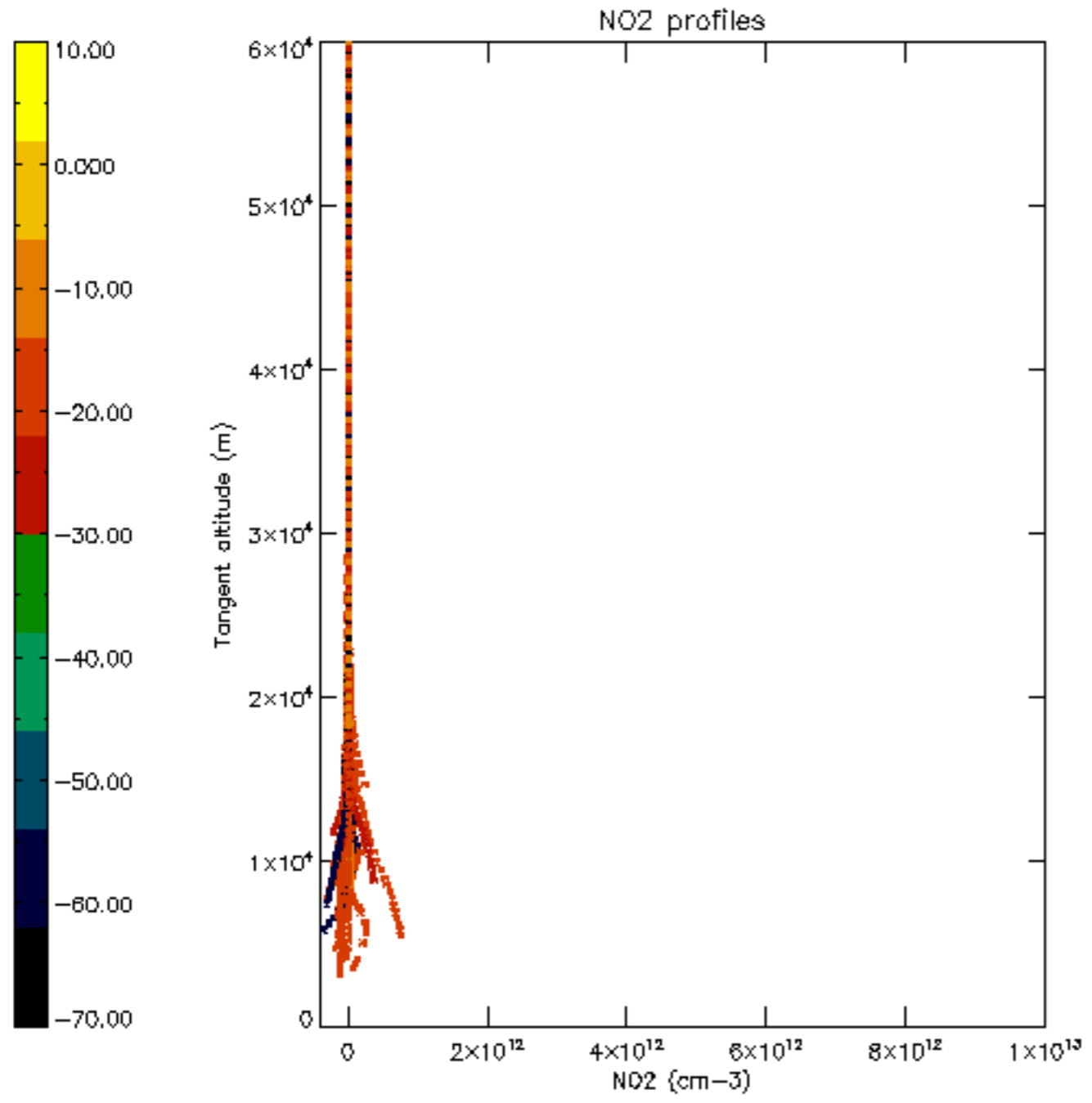


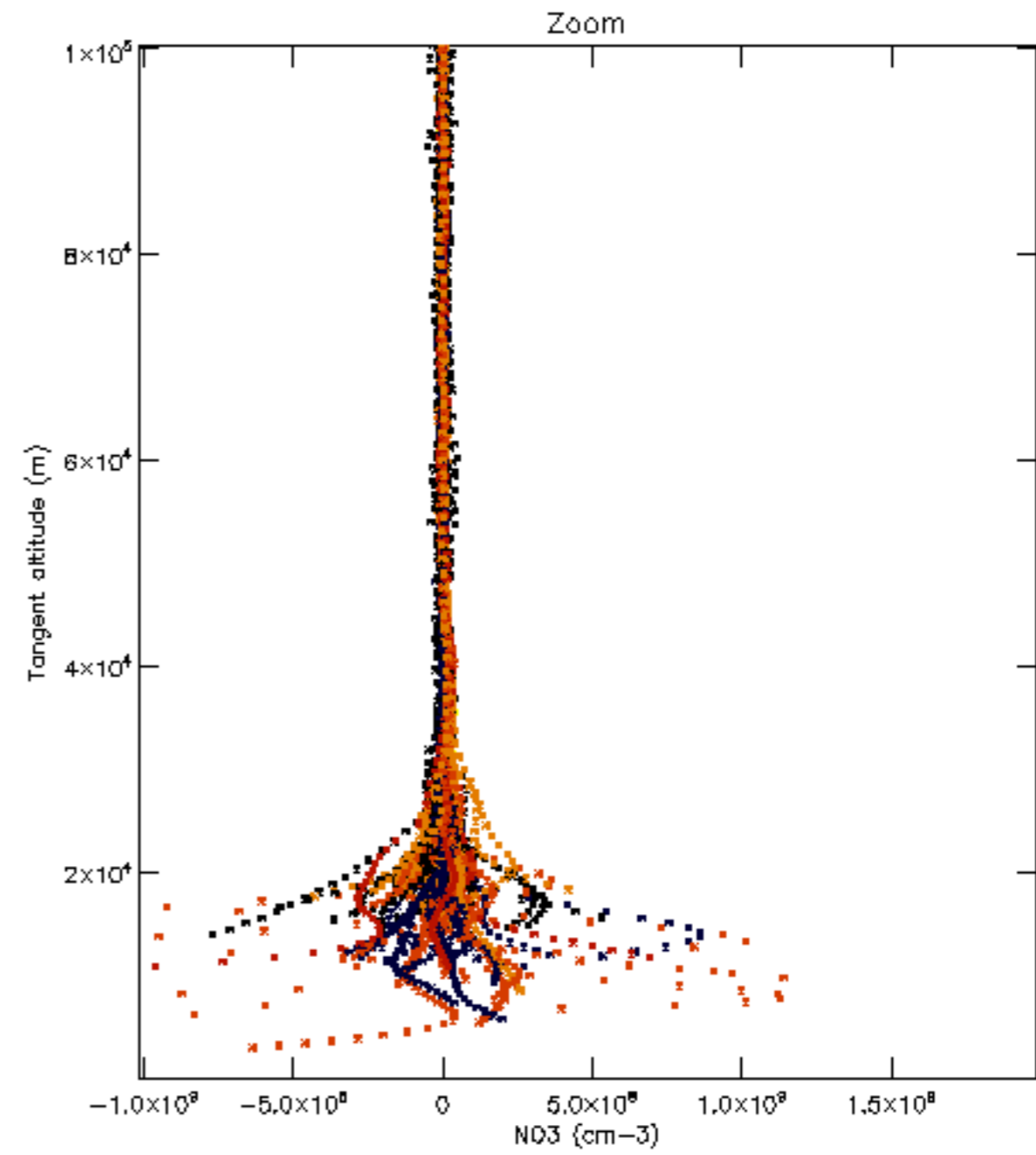
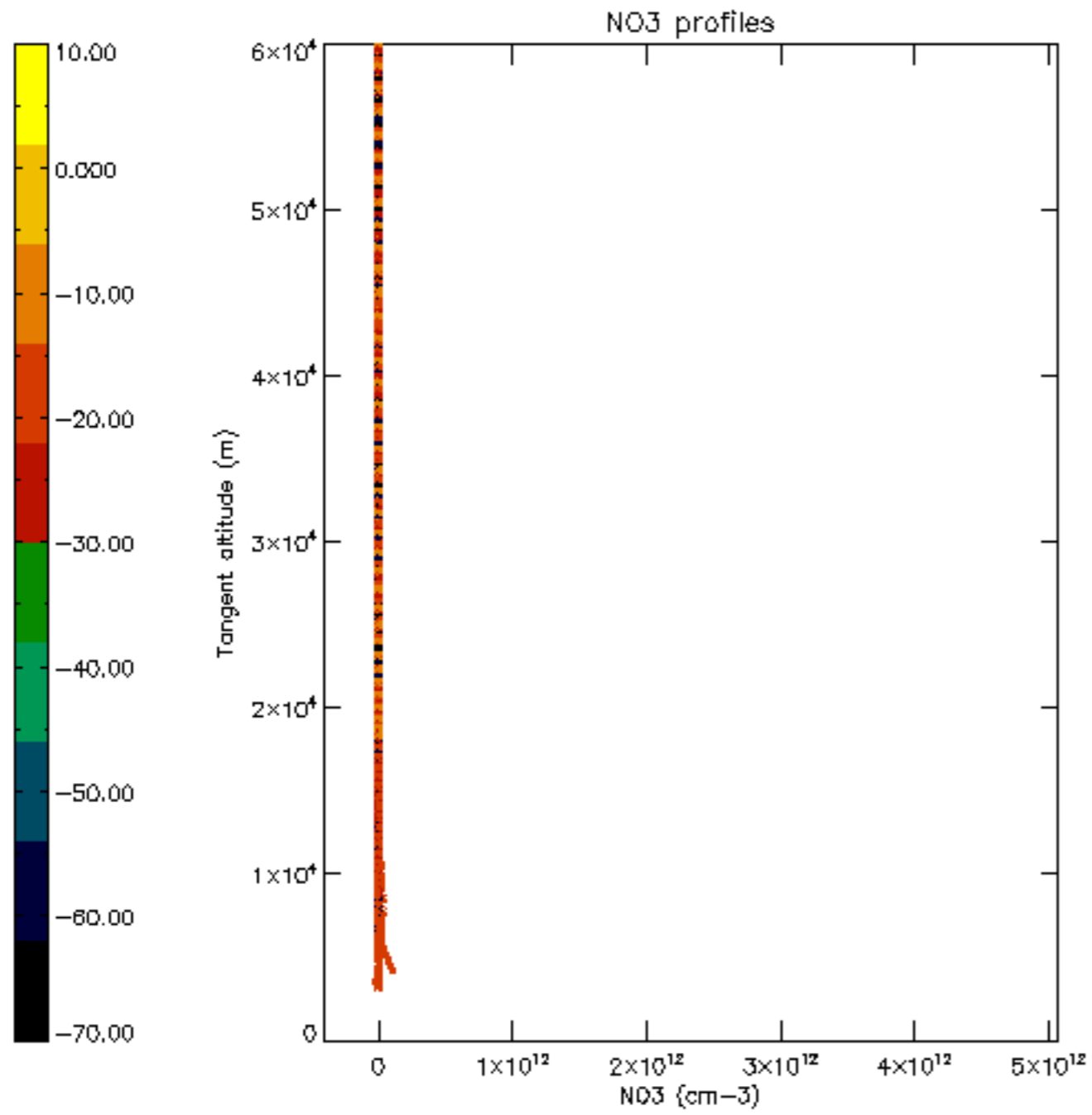


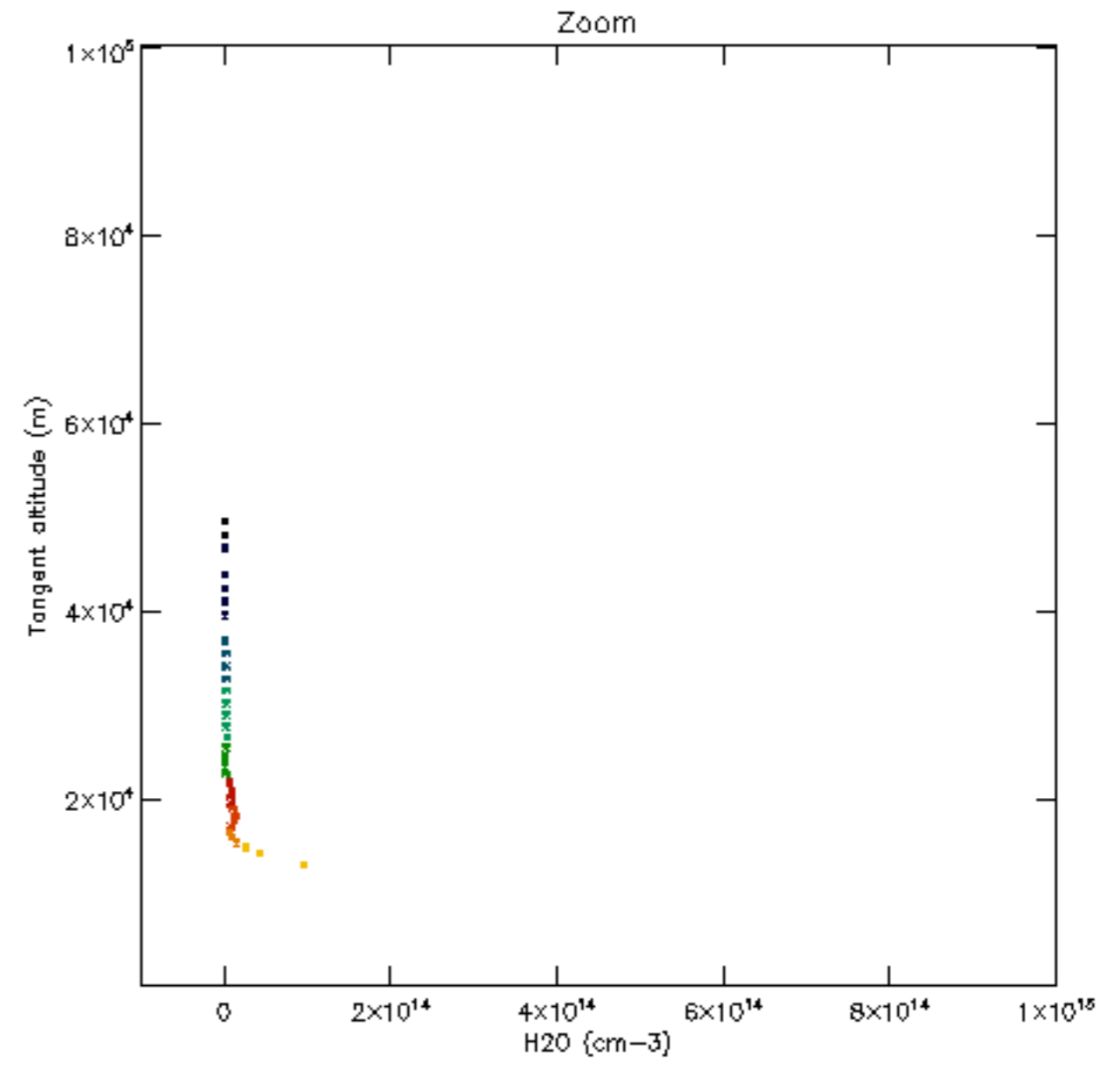
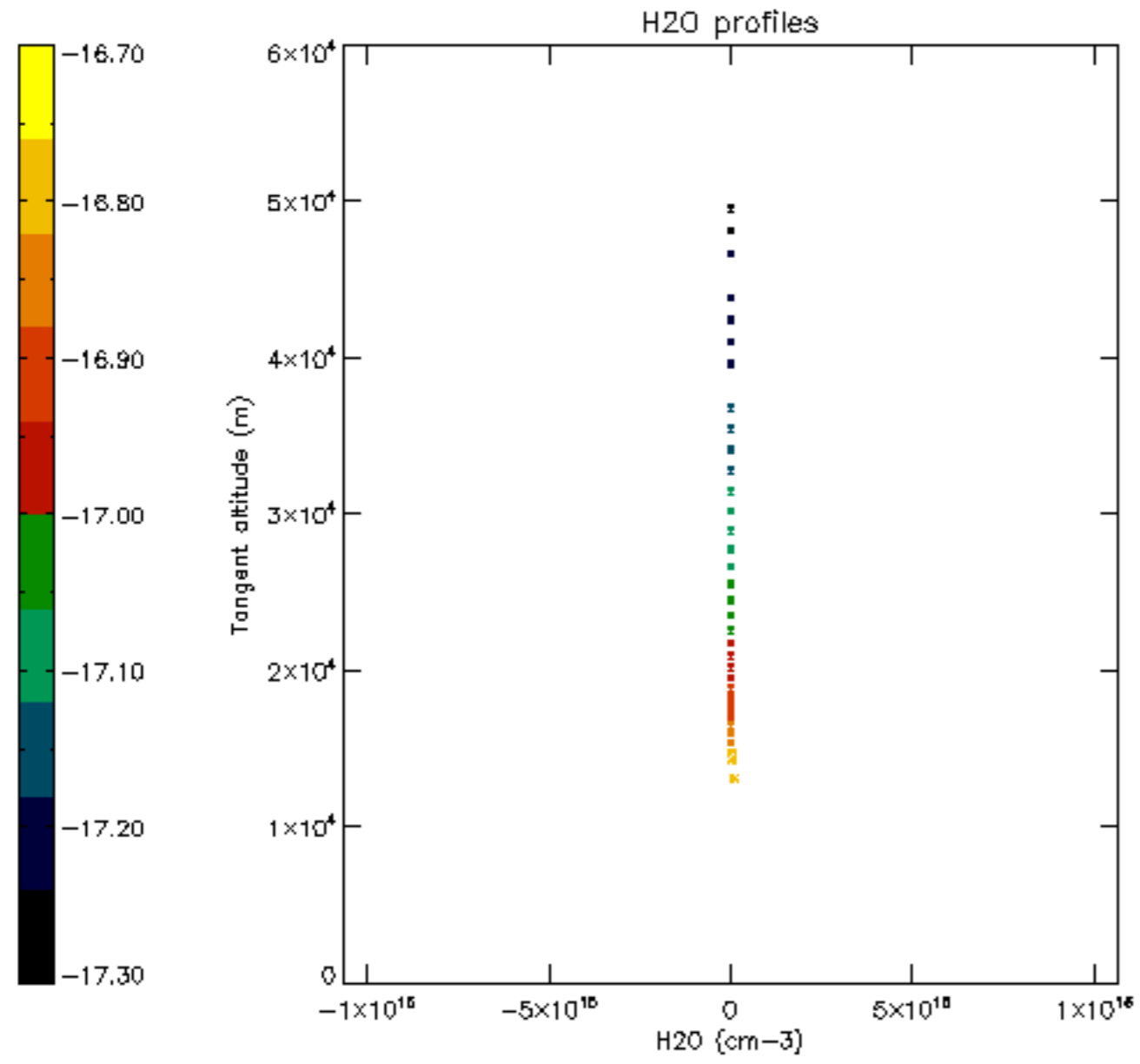


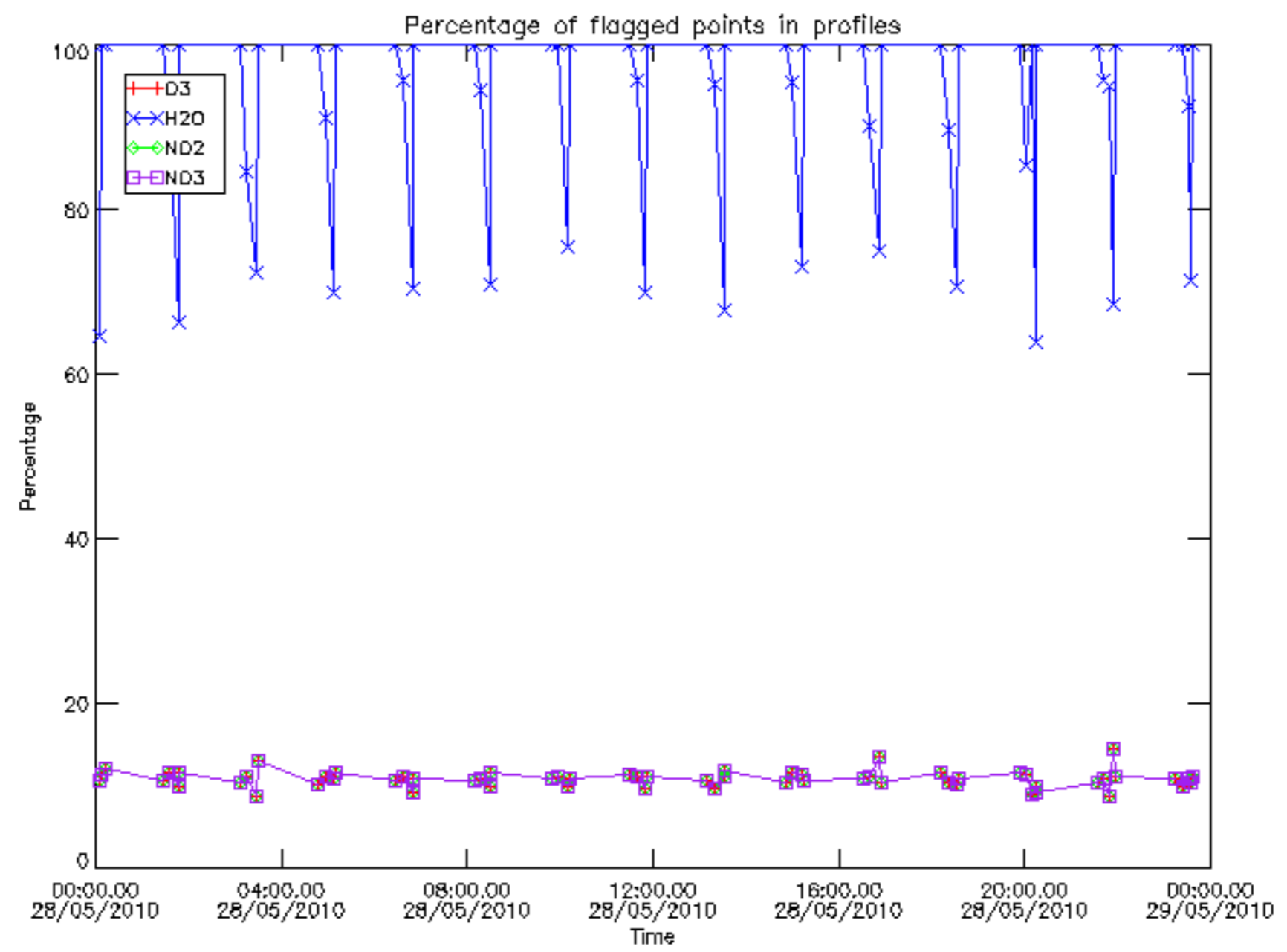




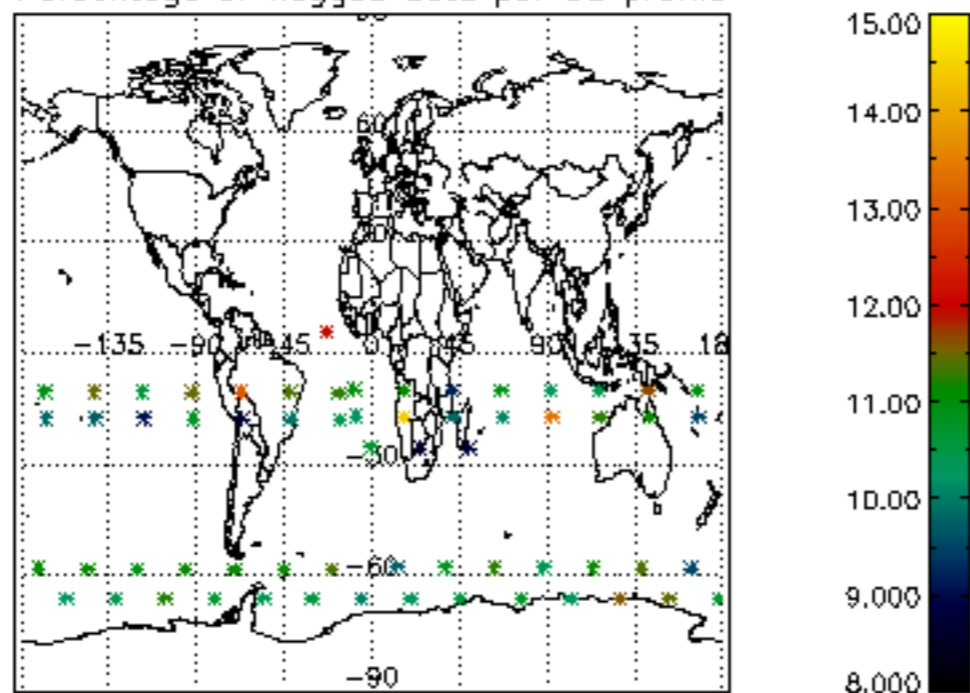




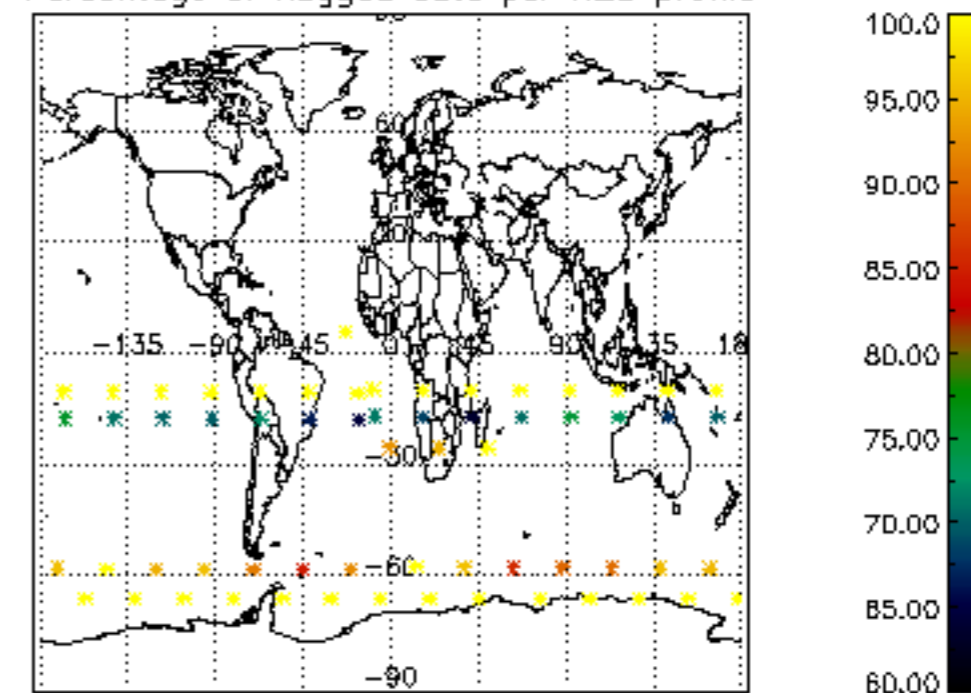




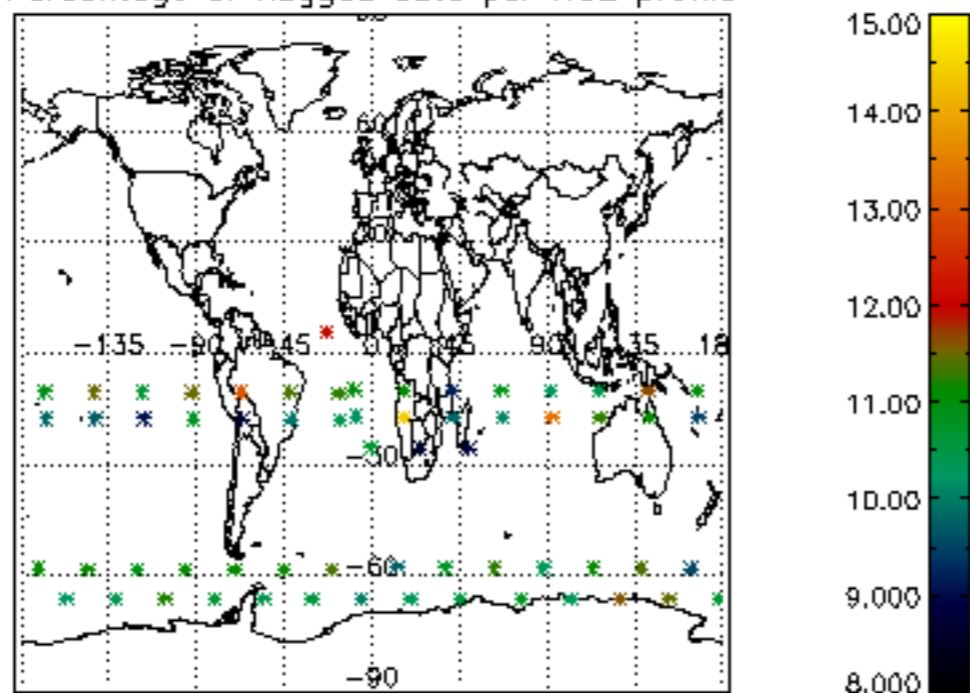
Percentage of flagged data per D3 profile



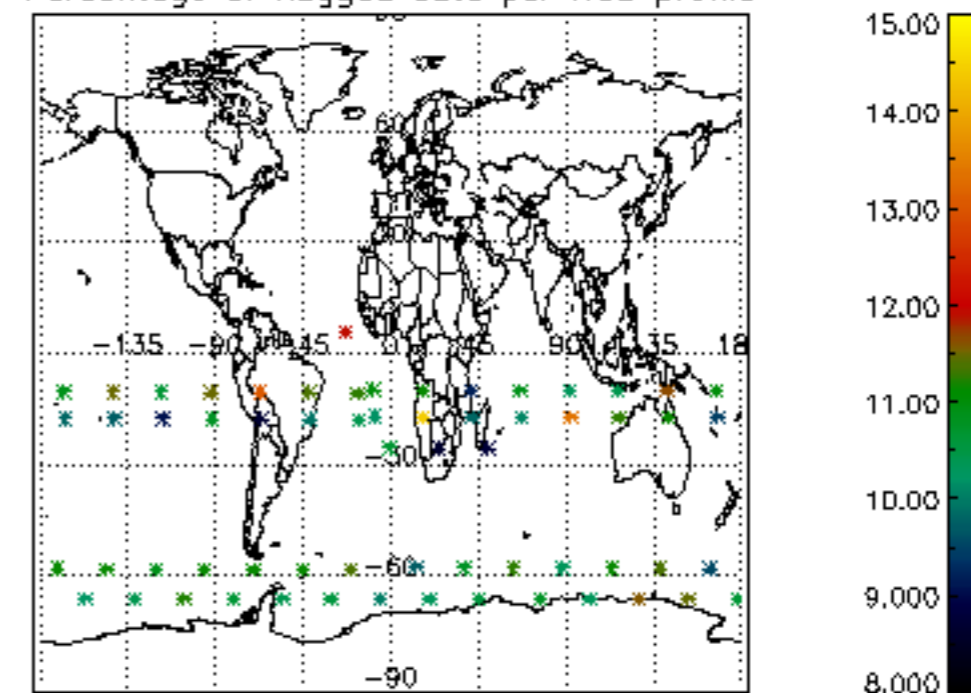
Percentage of flagged data per H2O profile

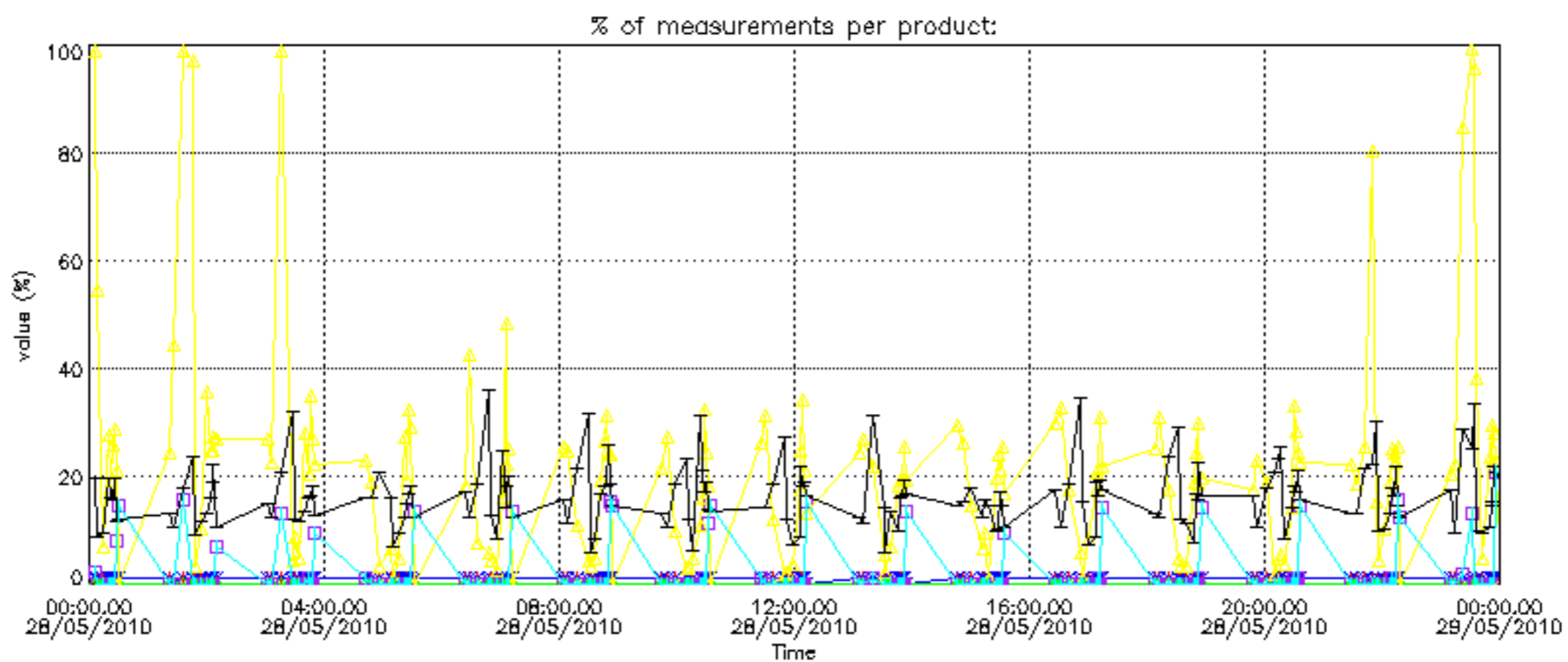


Percentage of flagged data per NO2 profile

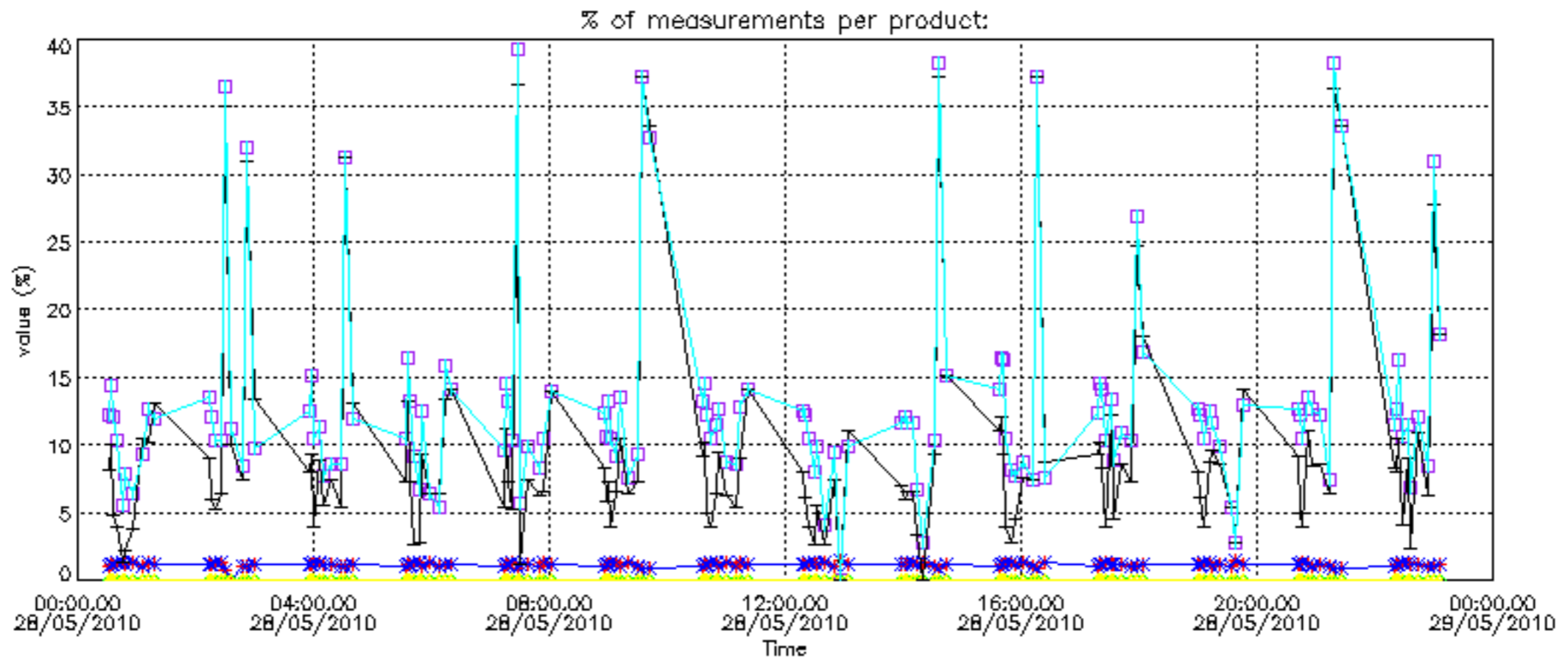


Percentage of flagged data per NO3 profile

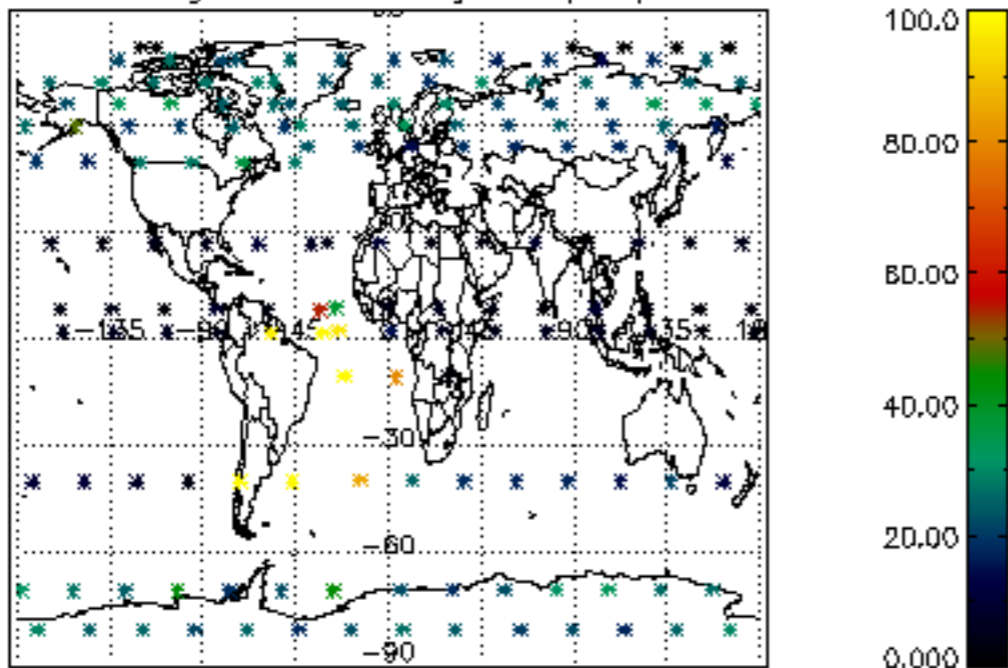




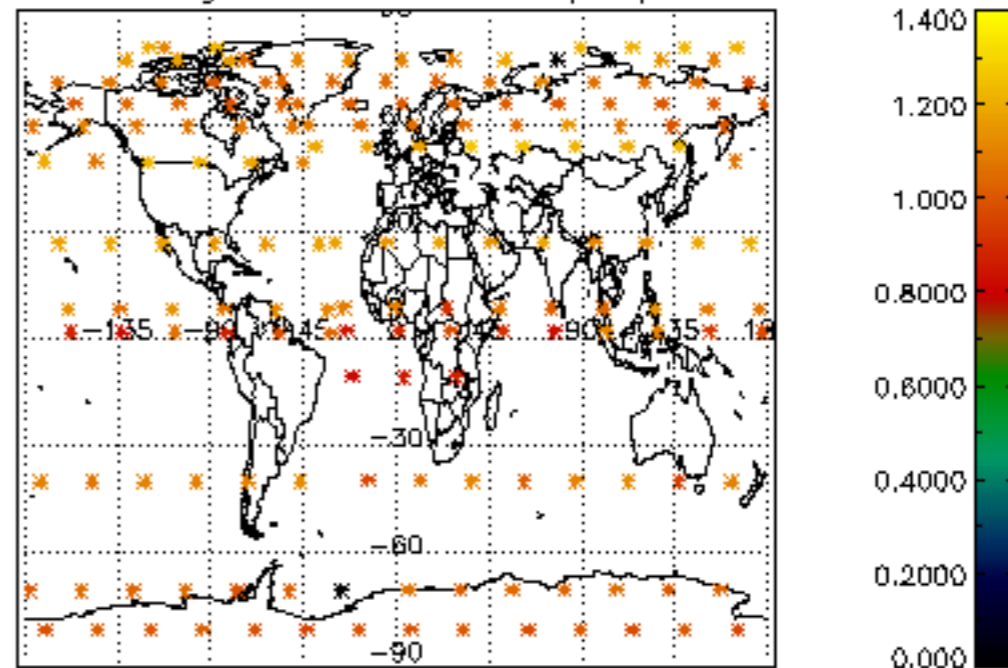




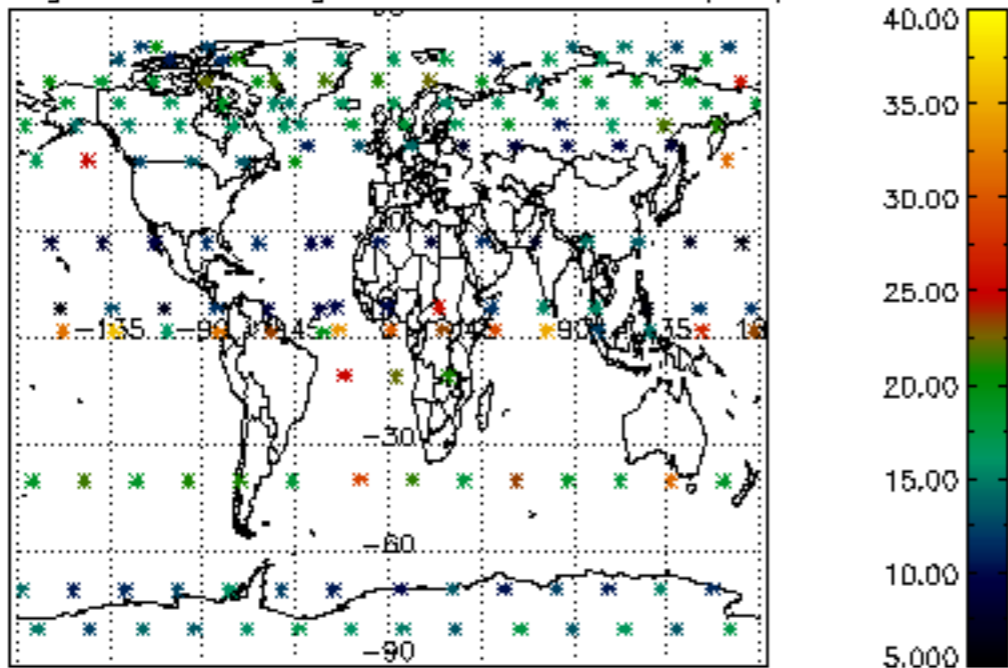
Percentage of cosmic ray hits per profile



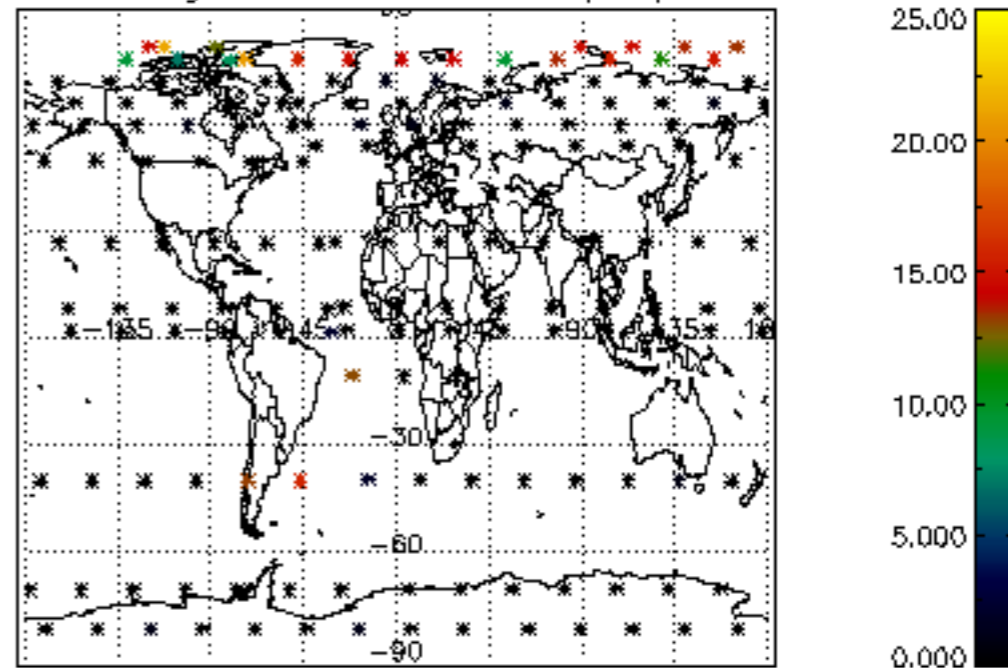
Percentage of datation errors per profile



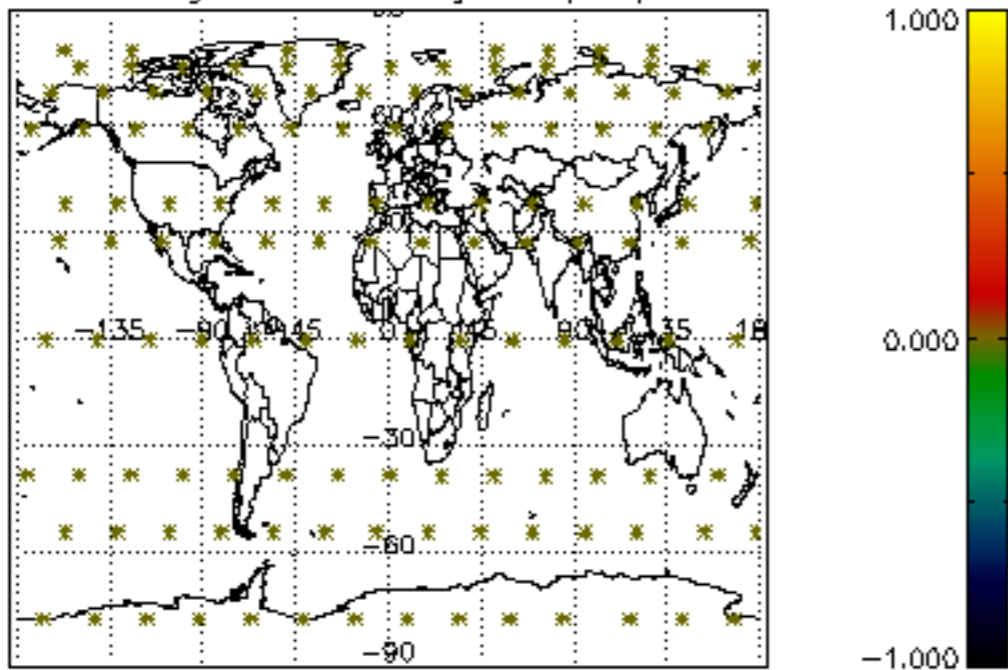
Percentage of star falling outside central band per profile



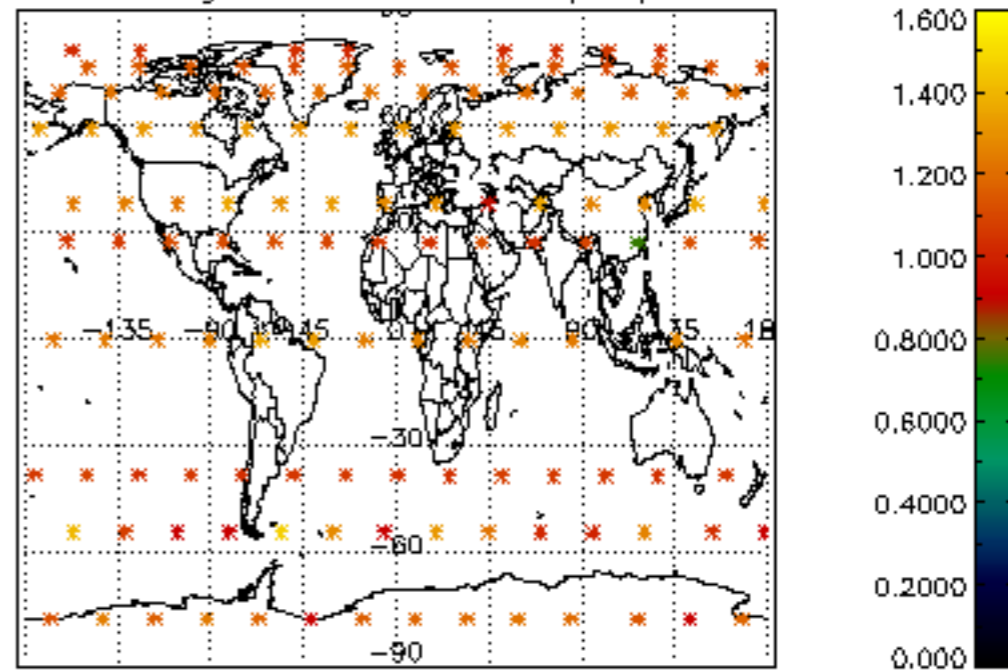
Percentage of saturation errors per profile



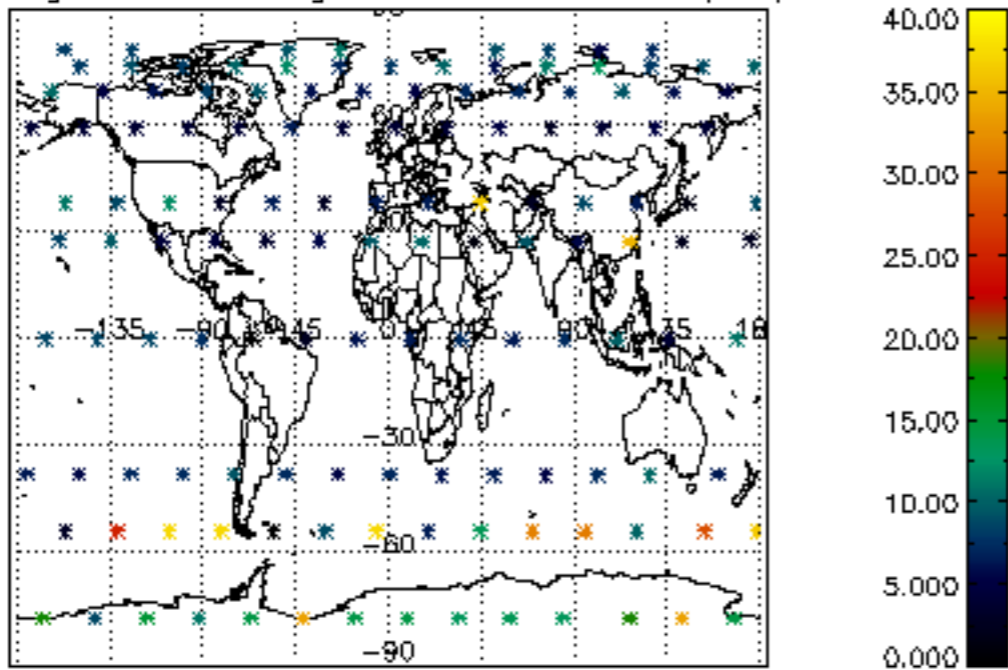
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

