

# 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	24APR2013 17:42:31
Data source version	GOMOS/6.01
Start time of products	15-09-2011 (15SEP2011 00:00:00)
Stop time of products	16-09-2011 (16SEP2011 00:00:00)
Store outputs in DB	Yes
Nb of level 2 prods	147
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__2PRFIN20110915_001319_000000403106_00318_49901_5410.N1	15-SEP-2011 00:13:19	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49901	No
2	GOM_NL__2PRFIN20110915_001710_000000403106_00318_49901_5411.N1	15-SEP-2011 00:17:10	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	49901	No
3	GOM_NL__2PRFIN20110915_002723_000000383106_00318_49901_5412.N1	15-SEP-2011 00:27:23	Bright	38.000	74	11Bet Cas	2.2680	6600.0	76	49901	No
4	GOM_NL__2PRFIN20110915_002910_000000433106_00318_49901_5413.N1	15-SEP-2011 00:29:10	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49901	No
5	GOM_NL__2PRFIN20110915_005132_000000633106_00318_49901_5414.N1	15-SEP-2011 00:51:32	Bright	63.000	24	66Alp Gem	1.5800	10200.	126	49901	No
6	GOM_NL__2PRFIN20110915_010012_000000593106_00318_49901_5415.N1	15-SEP-2011 01:00:12	Twilight	58.500	8	10Alp CMi	0.40000	6500.0	117	49901	No
7	GOM_NL__2PRFIN20110915_010917_000000593106_00318_49901_5416.N1	15-SEP-2011 01:09:17	Dark	59.000	1	9Alp CMa	-1.4400	11000.	118	49901	No
8	GOM_NL__2PRFIN20110915_011111_000000473106_00318_49901_5417.N1	15-SEP-2011 01:11:11	Dark	47.000	47	2Bet CMa	1.9760	28000.	94	49901	No
9	GOM_NL__2PRFIN20110915_012923_000000543106_00319_49902_5457.N1	15-SEP-2011 01:29:23	Dark	53.500	9	Alp Eri	0.45300	24000.	107	49902	No
10	GOM_NL__2PRFIN20110915_013506_000000463106_00319_49902_5458.N1	15-SEP-2011 01:35:06	Straylight	45.500	84	Alp Phe	2.3970	4500.0	91	49902	No
11	GOM_NL__2PRFIN20110915_014243_000000263106_00319_49902_5459.N1	15-SEP-2011 01:42:43	Twilight_and_stray	26.000	52	16Bet Cet	2.0370	4500.0	52	49902	No
12	GOM_NL__2PRFIN20110915_015333_000000403106_00319_49902_5460.N1	15-SEP-2011 01:53:33	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49902	No
13	GOM_NL__2PRFIN20110915_015724_000000393106_00319_49902_5461.N1	15-SEP-2011 01:57:24	Bright	38.500	93	53Bet Peg	2.5200	3100.0	77	49902	No
14	GOM_NL__2PRFIN20110915_015926_000000263106_00319_49902_5462.N1	15-SEP-2011 01:59:26	Twilight_and_stray	26.000	58	21Alp And	2.0730	11000.	52	49902	No
15	GOM_NL__2PRFIN20110915_020736_000000413106_00319_49902_5463.N1	15-SEP-2011 02:07:36	Bright	40.500	74	11Bet Cas	2.2680	6600.0	81	49902	No
16	GOM_NL__2PRFIN20110915_020923_000000393106_00319_49902_5464.N1	15-SEP-2011 02:09:23	Bright	38.500	76	27Gam Cas	2.3000	30000.	77	49902	No
17	GOM_NL__2PRFIN20110915_023146_000000633106_00319_49902_5465.N1	15-SEP-2011 02:31:46	Bright	63.000	24	66Alp Gem	1.5800	10200.	126	49902	No
18	GOM_NL__2PRFIN20110915_024026_000000513106_00319_49902_5466.N1	15-SEP-2011 02:40:26	Twilight	51.000	8	10Alp CMi	0.40000	6500.0	102	49902	No
19	GOM_NL__2PRFIN20110915_025126_000000403106_00319_49902_5467.N1	15-SEP-2011 02:51:26	Dark	40.000	47	2Bet CMa	1.9760	28000.	80	49902	No
20	GOM_NL__2PRFIN20110915_030938_000000443106_00320_49903_5471.N1	15-SEP-2011 03:09:38	Dark	43.500	9	Alp Eri	0.45300	24000.	87	49903	No
21	GOM_NL__2PRFIN20110915_031520_000000533106_00320_49903_5472.N1	15-SEP-2011 03:15:20	Straylight	52.500	84	Alp Phe	2.3970	4500.0	105	49903	No
22	GOM_NL__2PRFIN20110915_032257_000000263106_00320_49903_5473.N1	15-SEP-2011 03:22:57	Twilight_and_stray	26.000	52	16Bet Cet	2.0370	4500.0	52	49903	No
23	GOM_NL__2PRFIN20110915_033347_000000393106_00320_49903_5474.N1	15-SEP-2011 03:33:47	Bright	39.000	90	54Alp Peg	2.4870	11000.	78	49903	No
24	GOM_NL__2PRFIN20110915_033738_000000583106_00320_49903_5475.N1	15-SEP-2011 03:37:38	Bright	58.000	93	53Bet Peg	2.5200	3100.0	116	49903	No
25	GOM_NL__2PRFIN20110915_033940_000000263106_00320_49903_5476.N1	15-SEP-2011 03:39:40	Twilight_and_stray	26.000	58	21Alp And	2.0730	11000.	52	49903	No
26	GOM_NL__2PRFIN20110915_034750_000000383106_00320_49903_5477.N1	15-SEP-2011 03:47:50	Bright	38.000	74	11Bet Cas	2.2680	6600.0	76	49903	No
27	GOM_NL__2PRFIN20110915_034937_000000433106_00320_49903_5478.N1	15-SEP-2011 03:49:37	Bright	42.500	76	27Gam Cas	2.3000	30000.	85	49903	No
28	GOM_NL__2PRFIN20110915_041200_000000463106_00320_49903_5479.N1	15-SEP-2011 04:12:00	Bright	45.500	24	66Alp Gem	1.5800	10200.	91	49903	No
29	GOM_NL__2PRFIN20110915_042041_000000523106_00320_49903_5480.N1	15-SEP-2011 04:20:41	Twilight	52.000	8	10Alp CMi	0.40000	6500.0	104	49903	No
30	GOM_NL__2PRFIN20110915_042947_000000613106_00320_49903_5481.N1	15-SEP-2011 04:29:47	Dark	60.500	1	9Alp CMa	-1.4400	11000.	121	49903	No
31	GOM_NL__2PRFIN20110915_043141_000000403106_00320_49903_5482.N1	15-SEP-2011 04:31:41	Dark	40.000	47	2Bet CMa	1.9760	28000.	80	49903	No
32	GOM_NL__2PRFIN20110915_044952_000000513106_00321_49904_5489.N1	15-SEP-2011 04:49:52	Dark	50.500	9	Alp Eri	0.45300	24000.	101	49904	No
33	GOM_NL__2PRFIN20110915_045535_000000423106_00321_49904_5490.N1	15-SEP-2011 04:55:35	Straylight	41.500	84	Alp Phe	2.3970	4500.0	83	49904	No
34	GOM_NL__2PRFIN20110915_050311_000000313106_00321_49904_5491.N1	15-SEP-2011 05:03:11	Twilight_and_stray	31.000	52	16Bet Cet	2.0370	4500.0	62	49904	No
35	GOM_NL__2PRFIN20110915_051400_000000413106_00321_49904_5492.N1	15-SEP-2011 05:14:00	Bright	40.500	90	54Alp Peg	2.4870	11000.	81	49904	No
36	GOM_NL__2PRFIN20110915_051751_000000423106_00321_49904_5493.N1	15-SEP-2011 05:17:51	Bright	42.000	93	53Bet Peg	2.5200	3100.0	84	49904	No
37	GOM_NL__2PRFIN20110915_051953_000000333106_00321_49904_5494.N1	15-SEP-2011 05:19:53	Twilight_and_stray	33.000	58	21Alp And	2.0730	11000.	66	49904	No
38	GOM_NL__2PRFIN20110915_052804_000000423106_00321_49904_5495.N1	15-SEP-2011 05:28:04	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49904	No
39	GOM_NL__2PRFIN20110915_052950_000000433106_00321_49904_5496.N1	15-SEP-2011 05:29:50	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49904	No
40	GOM_NL__2PRFIN20110915_055214_000000513106_00321_49904_5497.N1	15-SEP-2011 05:52:14	Bright	50.500	24	66Alp Gem	1.5800	10200.	101	49904	No
41	GOM_NL__2PRFIN20110915_060055_000000513106_00321_49904_5498.N1	15-SEP-2011 06:00:55	Twilight	50.500	8	10Alp CMi	0.40000	6500.0	101	49904	No
42	GOM_NL__2PRFIN20110915_061002_000000593106_00321_49904_5499.N1	15-SEP-2011 06:10:02	Dark	59.000	1	9Alp CMa	-1.4400	11000.	118	49904	No

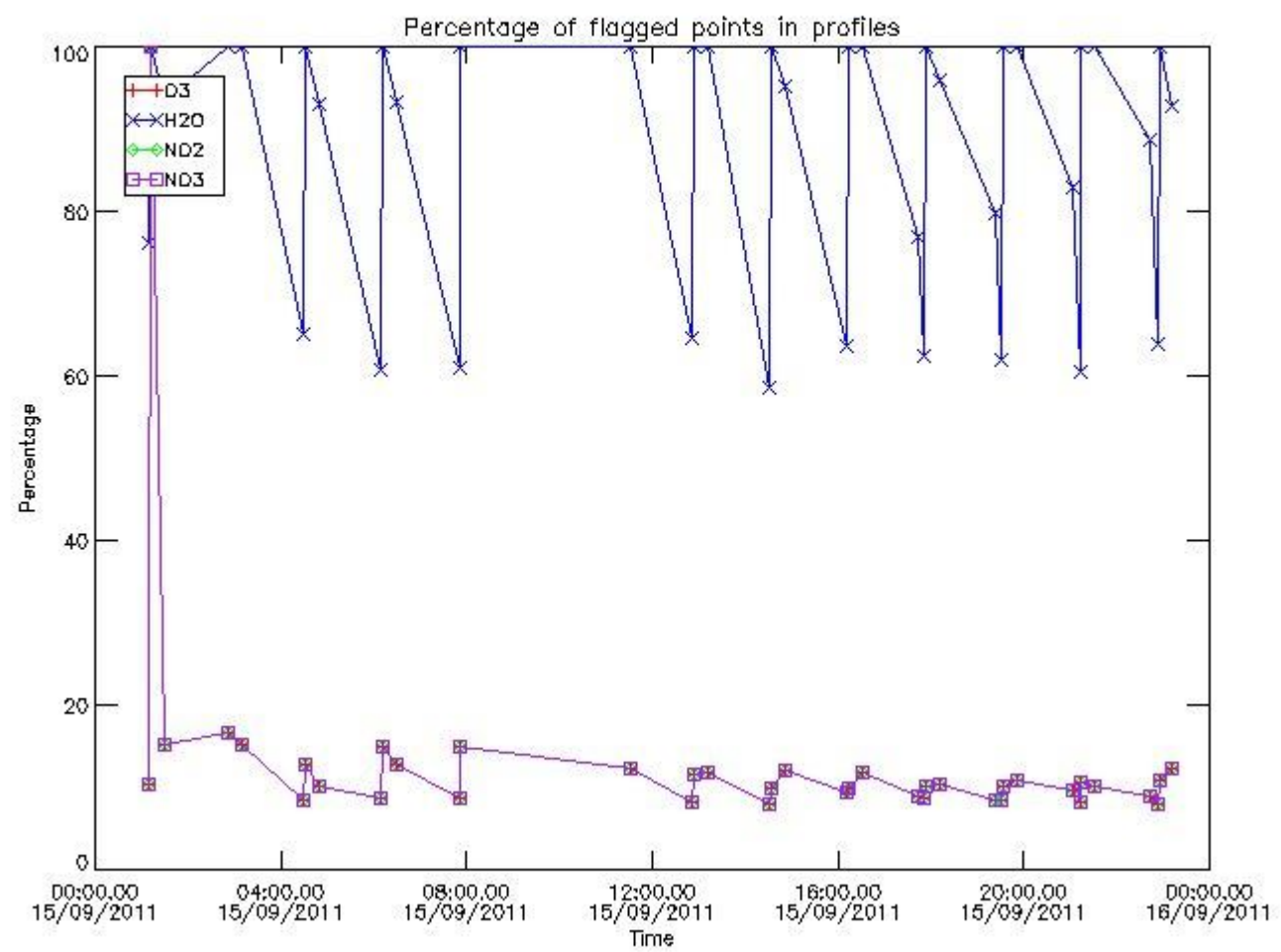


102	GOM_NL__2PRFIN20110915_175147_000000593106_00328_49911_5724.N1	15-SEP-2011 17:51:47	Dark	59.000	1	9Alp CMa	-1.4400	11000.	118	49911	No
103	GOM_NL__2PRFIN20110915_175358_000000513106_00328_49911_5725.N1	15-SEP-2011 17:53:58	Dark	50.500	23	21Eps CMa	1.5020	26000.	101	49911	No
104	GOM_NL__2PRFIN20110915_181148_000000503106_00329_49912_5726.N1	15-SEP-2011 18:11:48	Dark	49.500	9	Alp Eri	0.45300	24000.	99	49912	No
105	GOM_NL__2PRFIN20110915_181730_000000453106_00329_49912_5727.N1	15-SEP-2011 18:17:30	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	49912	No
106	GOM_NL__2PRFIN20110915_182504_000000543106_00329_49912_5728.N1	15-SEP-2011 18:25:04	Tw_i_and_stray	54.000	52	16Bet Cet	2.0370	4500.0	108	49912	No
107	GOM_NL__2PRFIN20110915_183551_000000403106_00329_49912_5729.N1	15-SEP-2011 18:35:51	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49912	No
108	GOM_NL__2PRFIN20110915_183941_000000423106_00329_49912_5730.N1	15-SEP-2011 18:39:41	Bright	42.000	93	53Bet Peg	2.5200	3100.0	84	49912	No
109	GOM_NL__2PRFIN20110915_184140_000000473106_00329_49912_5731.N1	15-SEP-2011 18:41:40	Bright	47.000	58	21Alp And	2.0730	11000.	94	49912	No
110	GOM_NL__2PRFIN20110915_184952_000000423106_00329_49912_5732.N1	15-SEP-2011 18:49:52	Bright	41.500	74	11Bet Cas	2.2680	6600.0	83	49912	No
111	GOM_NL__2PRFIN20110915_185137_000000443106_00329_49912_5733.N1	15-SEP-2011 18:51:37	Bright	43.500	76	27Gam Cas	2.3000	30000.	87	49912	No
112	GOM_NL__2PRFIN20110915_191407_000000453106_00329_49912_5734.N1	15-SEP-2011 19:14:07	Bright	44.500	24	66Alp Gem	1.5800	10200.	89	49912	No
113	GOM_NL__2PRFIN20110915_192251_000000603106_00329_49912_5735.N1	15-SEP-2011 19:22:51	Dark	60.000	8	10Alp CMi	0.40000	6500.0	120	49912	No
114	GOM_NL__2PRFIN20110915_193202_000000613106_00329_49912_5736.N1	15-SEP-2011 19:32:02	Dark	61.000	1	9Alp CMa	-1.4400	11000.	122	49912	No
115	GOM_NL__2PRFIN20110915_193413_000000513106_00329_49912_5737.N1	15-SEP-2011 19:34:13	Dark	50.500	23	21Eps CMa	1.5020	26000.	101	49912	No
116	GOM_NL__2PRFIN20110915_195203_000000523106_00330_49913_5760.N1	15-SEP-2011 19:52:03	Dark	51.500	9	Alp Eri	0.45300	24000.	103	49913	No
117	GOM_NL__2PRFIN20110915_195744_000000473106_00330_49913_5761.N1	15-SEP-2011 19:57:44	Straylight	46.500	84	Alp Phe	2.3970	4500.0	93	49913	No
118	GOM_NL__2PRFIN20110915_200518_000000543106_00330_49913_5762.N1	15-SEP-2011 20:05:18	Tw_i_and_stray	54.000	52	16Bet Cet	2.0370	4500.0	108	49913	No
119	GOM_NL__2PRFIN20110915_201605_000000403106_00330_49913_5763.N1	15-SEP-2011 20:16:05	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49913	No
120	GOM_NL__2PRFIN20110915_201955_000000403106_00330_49913_5764.N1	15-SEP-2011 20:19:55	Bright	39.500	93	53Bet Peg	2.5200	3100.0	79	49913	No
121	GOM_NL__2PRFIN20110915_202153_000000483106_00330_49913_5765.N1	15-SEP-2011 20:21:53	Bright	47.500	58	21Alp And	2.0730	11000.	95	49913	No
122	GOM_NL__2PRFIN20110915_203005_000000603106_00330_49913_5766.N1	15-SEP-2011 20:30:05	Bright	60.000	74	11Bet Cas	2.2680	6600.0	120	49913	No
123	GOM_NL__2PRFIN20110915_203151_000000633106_00330_49913_5767.N1	15-SEP-2011 20:31:51	Bright	63.000	76	27Gam Cas	2.3000	30000.	126	49913	No
124	GOM_NL__2PRFIN20110915_205421_000000453106_00330_49913_5768.N1	15-SEP-2011 20:54:21	Bright	45.000	24	66Alp Gem	1.5800	10200.	90	49913	No
125	GOM_NL__2PRFIN20110915_210306_000000533106_00330_49913_5769.N1	15-SEP-2011 21:03:06	Dark	53.000	8	10Alp CMi	0.40000	6500.0	106	49913	No
126	GOM_NL__2PRFIN20110915_211217_000000633106_00330_49913_5770.N1	15-SEP-2011 21:12:17	Dark	62.500	1	9Alp CMa	-1.4400	11000.	125	49913	No
127	GOM_NL__2PRFIN20110915_211428_000000493106_00330_49913_5771.N1	15-SEP-2011 21:14:28	Dark	48.500	23	21Eps CMa	1.5020	26000.	97	49913	No
128	GOM_NL__2PRFIN20110915_213217_000000503106_00331_49914_5778.N1	15-SEP-2011 21:32:17	Dark	50.000	9	Alp Eri	0.45300	24000.	100	49914	No
129	GOM_NL__2PRFIN20110915_213758_000000533106_00331_49914_5779.N1	15-SEP-2011 21:37:58	Straylight	52.500	84	Alp Phe	2.3970	4500.0	105	49914	No
130	GOM_NL__2PRFIN20110915_214532_000000553106_00331_49914_5780.N1	15-SEP-2011 21:45:32	Tw_i_and_stray	55.000	52	16Bet Cet	2.0370	4500.0	110	49914	No
131	GOM_NL__2PRFIN20110915_215618_000000403106_00331_49914_5781.N1	15-SEP-2011 21:56:18	Bright	39.500	90	54Alp Peg	2.4870	11000.	79	49914	No
132	GOM_NL__2PRFIN20110915_220009_000000423106_00331_49914_5782.N1	15-SEP-2011 22:00:09	Bright	41.500	93	53Bet Peg	2.5200	3100.0	83	49914	No
133	GOM_NL__2PRFIN20110915_220206_000000483106_00331_49914_5783.N1	15-SEP-2011 22:02:06	Bright	47.500	58	21Alp And	2.0730	11000.	95	49914	No
134	GOM_NL__2PRFIN20110915_221019_000000413106_00331_49914_5784.N1	15-SEP-2011 22:10:19	Bright	41.000	74	11Bet Cas	2.2680	6600.0	82	49914	No
135	GOM_NL__2PRFIN20110915_221204_000000613106_00331_49914_5785.N1	15-SEP-2011 22:12:04	Bright	61.000	76	27Gam Cas	2.3000	30000.	122	49914	No
136	GOM_NL__2PRFIN20110915_223435_000000523106_00331_49914_5786.N1	15-SEP-2011 22:34:35	Bright	51.500	24	66Alp Gem	1.5800	10200.	103	49914	No
137	GOM_NL__2PRFIN20110915_224320_000000623106_00331_49914_5787.N1	15-SEP-2011 22:43:20	Dark	61.500	8	10Alp CMi	0.40000	6500.0	123	49914	No
138	GOM_NL__2PRFIN20110915_225232_000000713106_00331_49914_5788.N1	15-SEP-2011 22:52:32	Dark	71.000	1	9Alp CMa	-1.4400	11000.	142	49914	No
139	GOM_NL__2PRFIN20110915_225442_000000523106_00331_49914_5789.N1	15-SEP-2011 22:54:42	Dark	51.500	23	21Eps CMa	1.5020	26000.	103	49914	No
140	GOM_NL__2PRFIN20110915_231231_000000423106_00332_49915_5796.N1	15-SEP-2011 23:12:31	Dark	41.500	9	Alp Eri	0.45300	24000.	83	49915	No
141	GOM_NL__2PRFIN20110915_231813_000000453106_00332_49915_5797.N1	15-SEP-2011 23:18:13	Straylight	44.500	84	Alp Phe	2.3970	4500.0	89	49915	No
142	GOM_NL__2PRFIN20110915_232546_000000593106_00332_49915_5798.N1	15-SEP-2011 23:25:46	Tw_i_and_stray	59.000	52	16Bet Cet	2.0370	4500.0	118	49915	No
143	GOM_NL__2PRFIN20110915_233632_000000403106_00332_49915_5799.N1	15-SEP-2011 23:36:32	Bright	40.000	90	54Alp Peg	2.4870	11000.	80	49915	No
144	GOM_NL__2PRFIN20110915_234022_000000403106_00332_49915_5800.N1	15-SEP-2011 23:40:22	Bright	40.000	93	53Bet Peg	2.5200	3100.0	80	49915	No
145	GOM_NL__2PRFIN20110915_234219_000000463106_00332_49915_5801.N1	15-SEP-2011 23:42:19	Bright	45.500	58	21Alp And	2.0730	11000.	91	49915	No
146	GOM_NL__2PRFIN20110915_235032_000000413106_00332_49915_5802.N1	15-SEP-2011 23:50:32	Bright	40.500	74	11Bet Cas	2.2680	6600.0	81	49915	No
147	GOM_NL__2PRFIN20110915_235218_000000433106_00332_49915_5803.N1	15-SEP-2011 23:52:18	Bright	43.000	76	27Gam Cas	2.3000	30000.	86	49915	No

### 3. Quality information per product

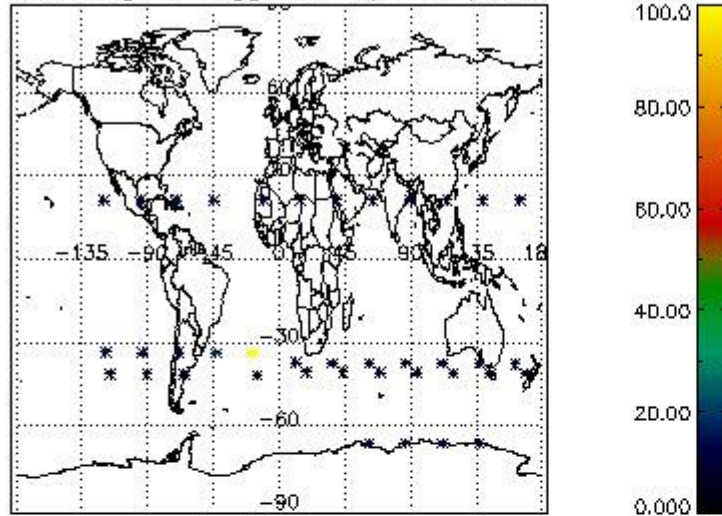
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products. Only products in dark limb conditions and without errors (error flag in the MPH set to "0") are used.

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

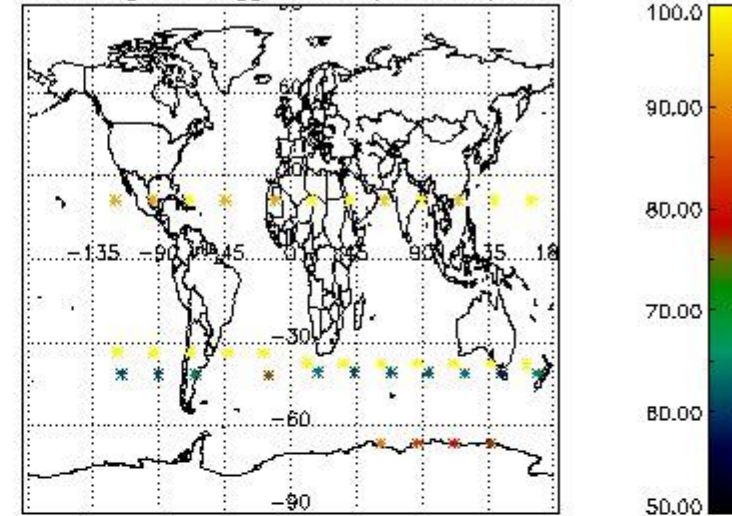


3.2 Plot quality information per product (world map)

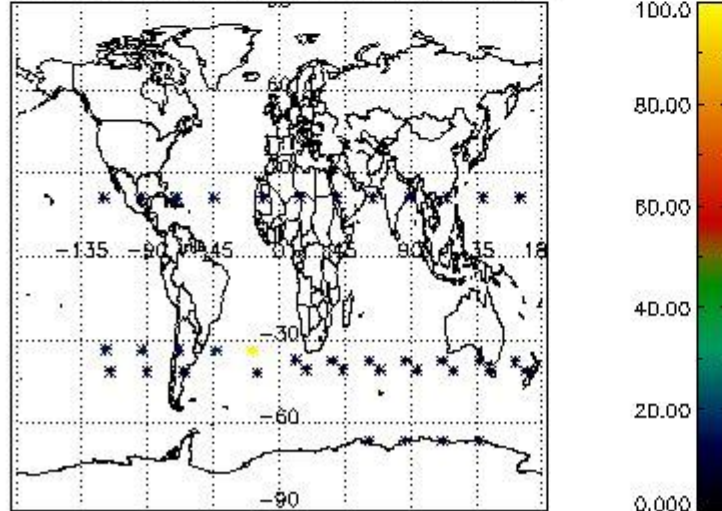
Percentage of flagged data per O3 profile



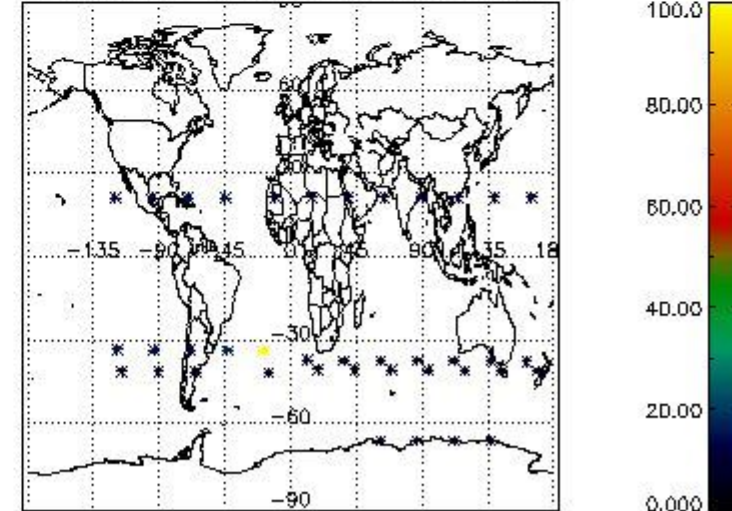
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

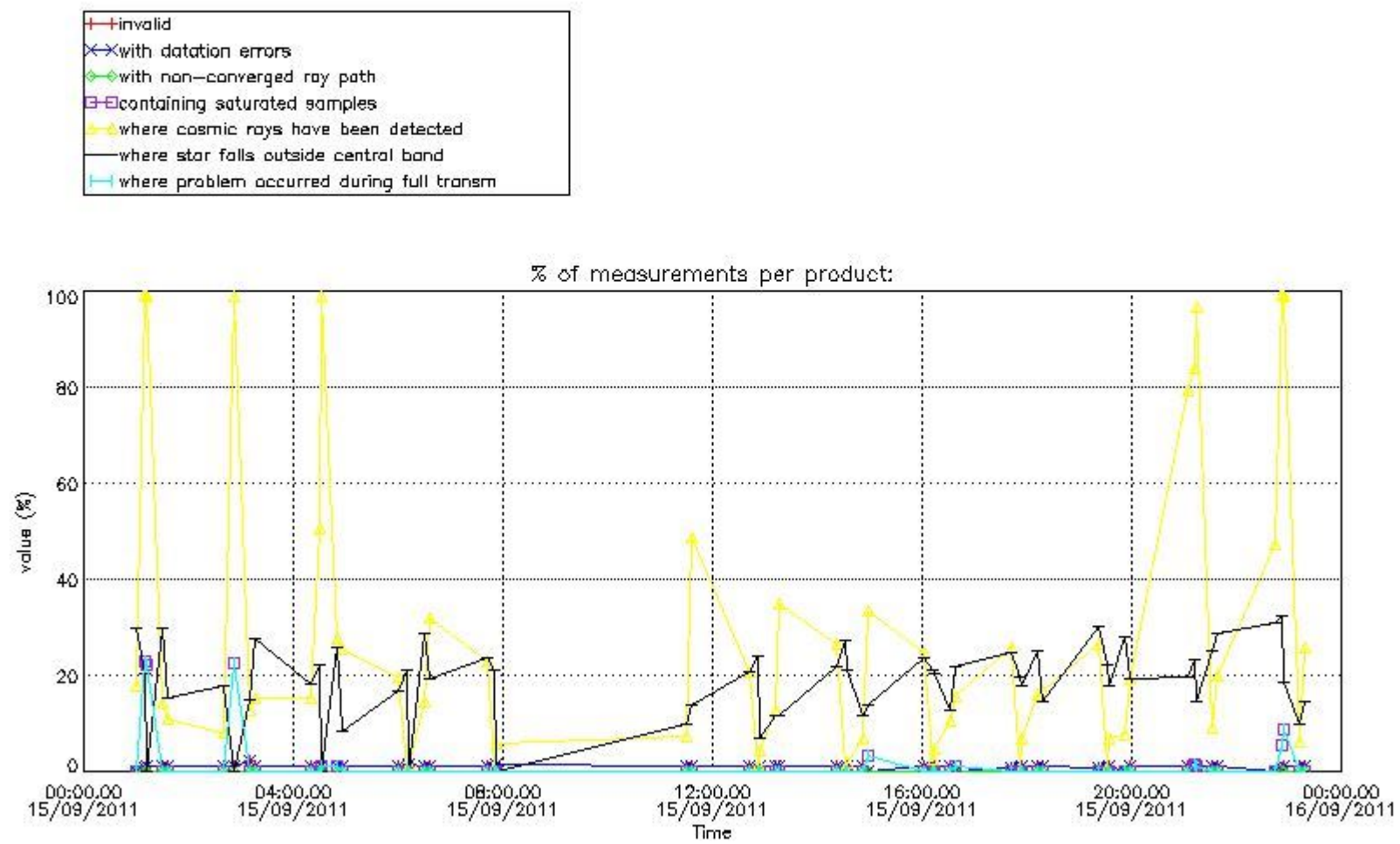


#### 4. Level 1 quality information per product

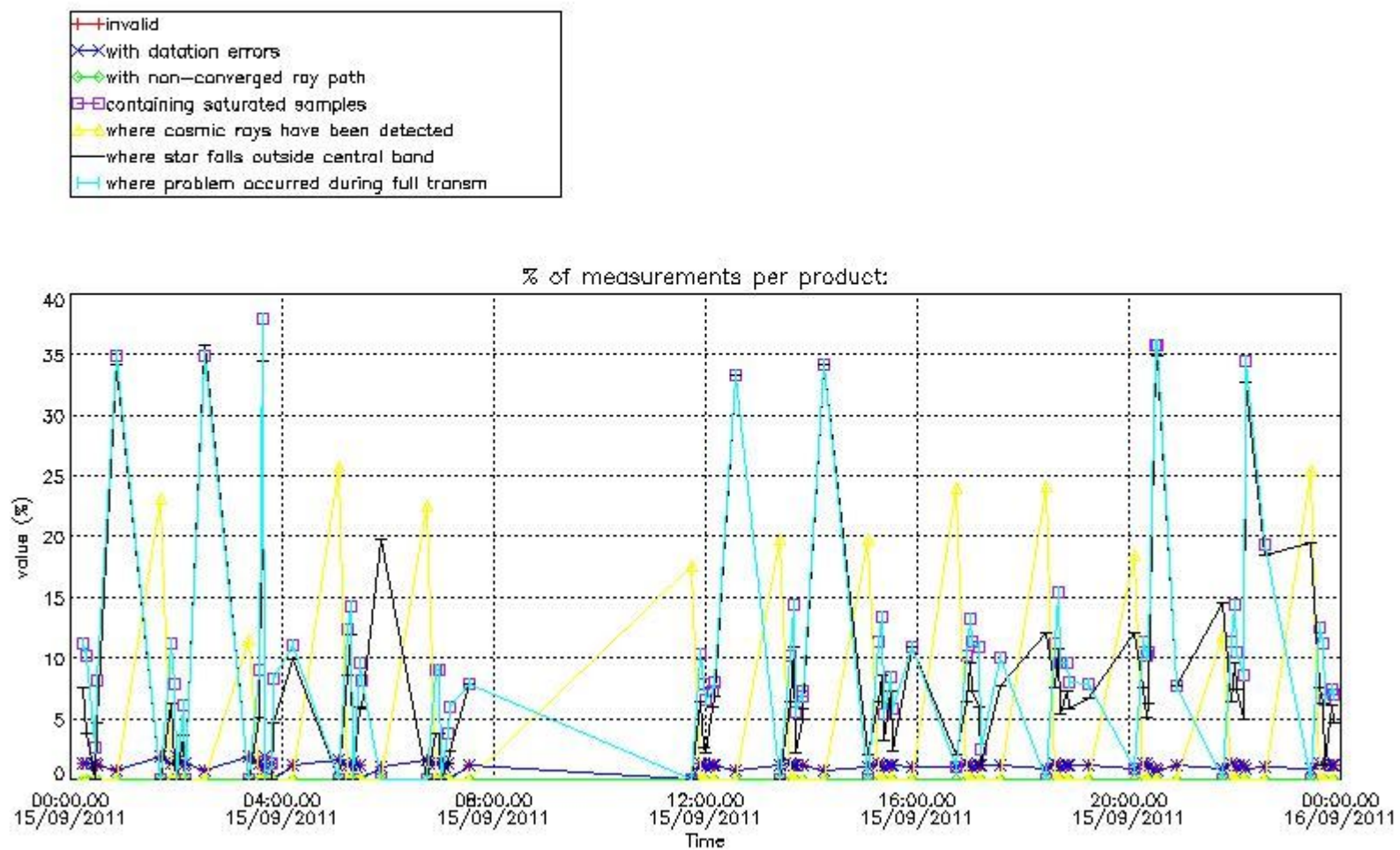
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

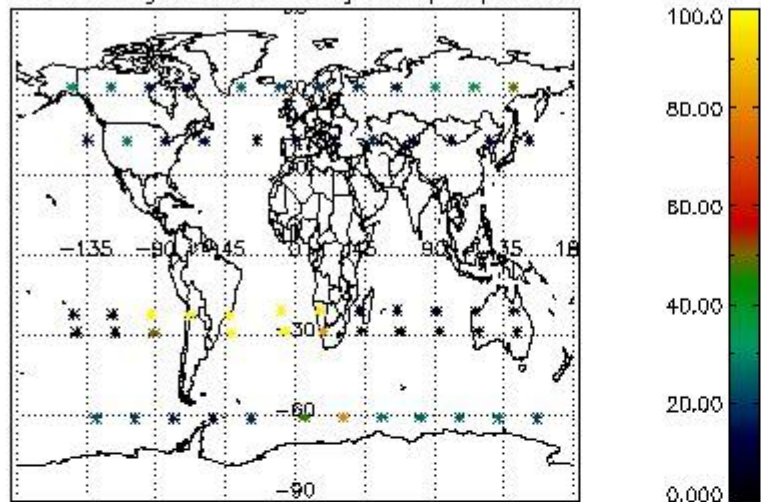


4.2 Plot quality information per product coming from level 1b processing (world map)

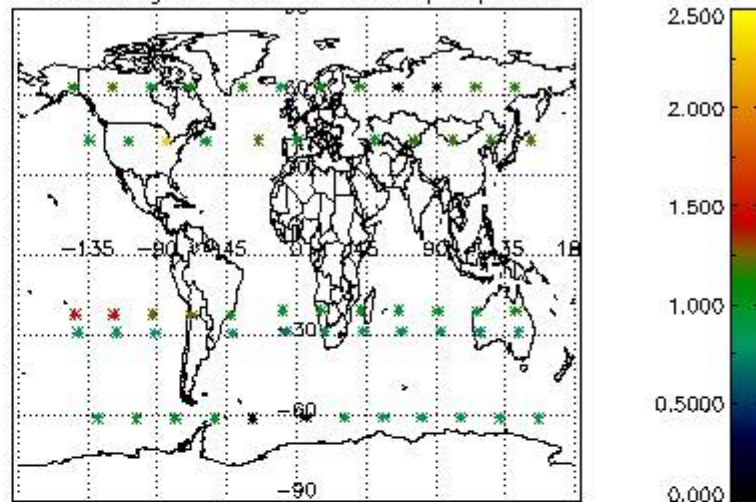
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



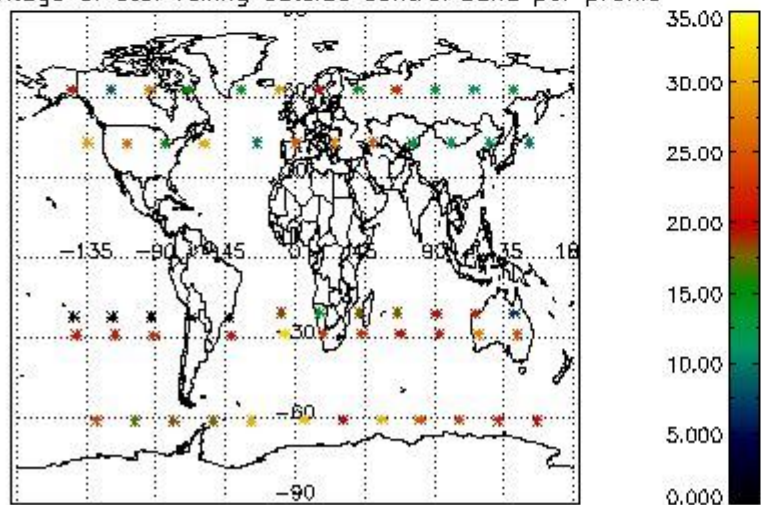
Percentage of cosmic ray hits per profile



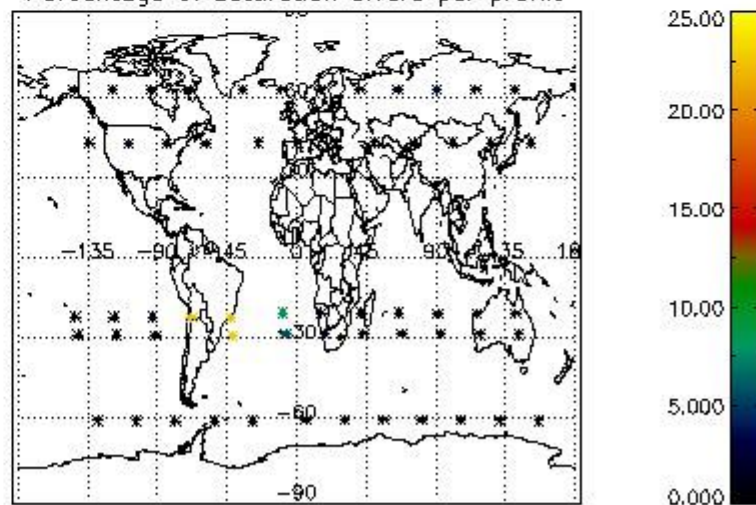
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

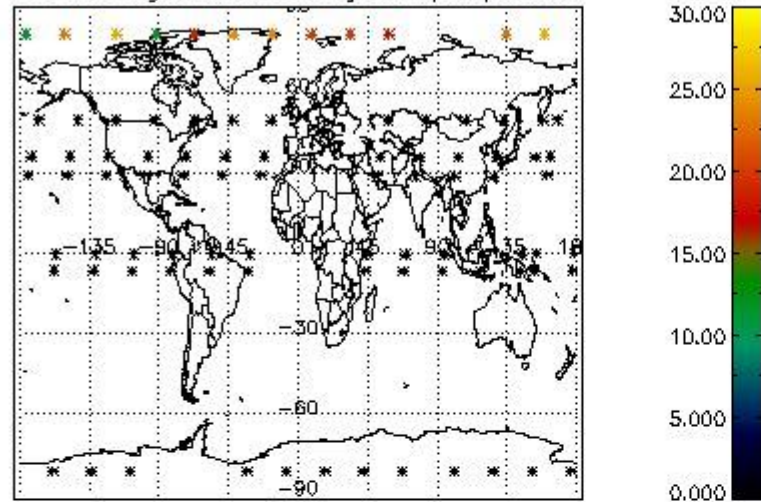


Percentage of saturation errors per profile

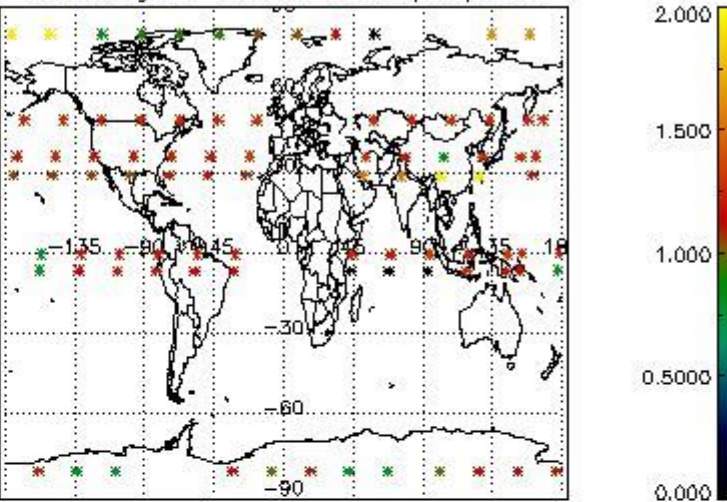


4.2.2 Plot level 1 quality information per product (world map): ENVISAT DESCENDING passes

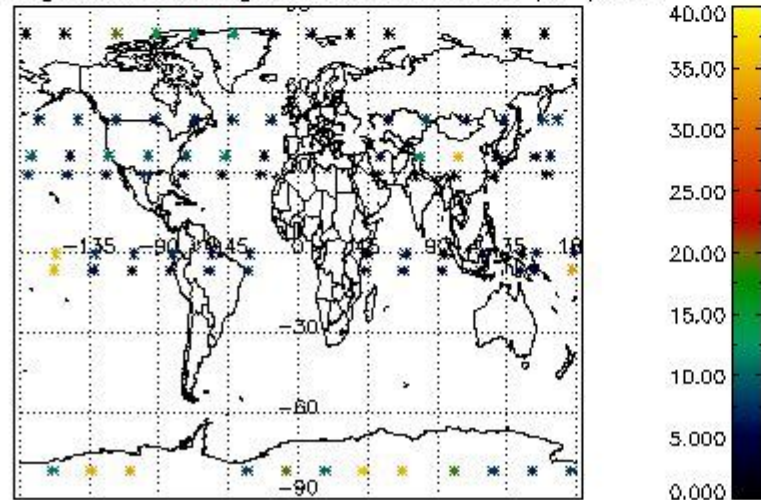
Percentage of cosmic ray hits per profile



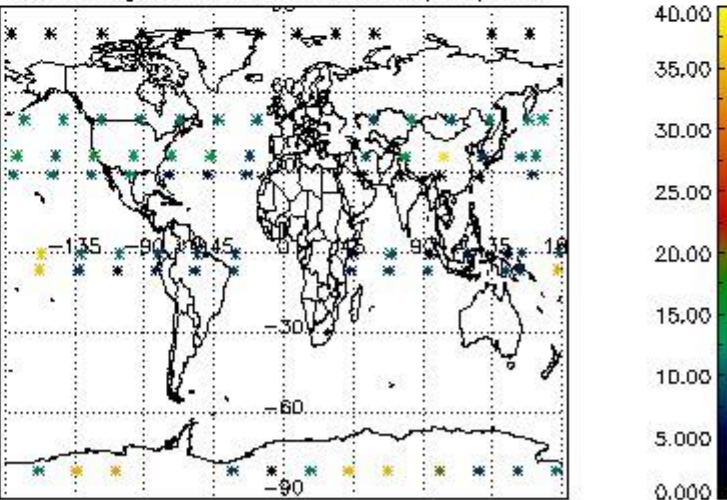
Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile



## 5. 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

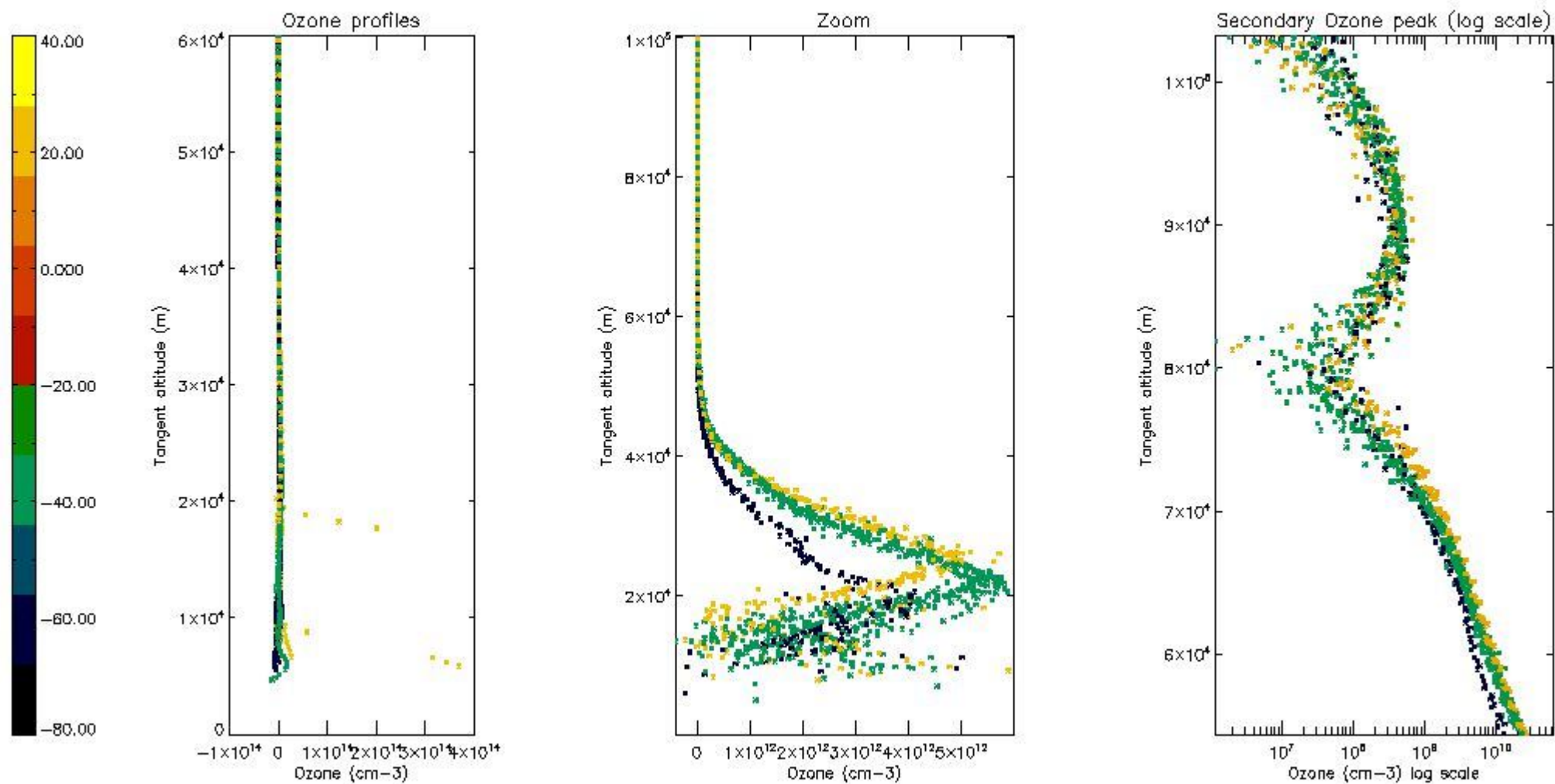
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	20

STD < 10	18
STD < 5	15

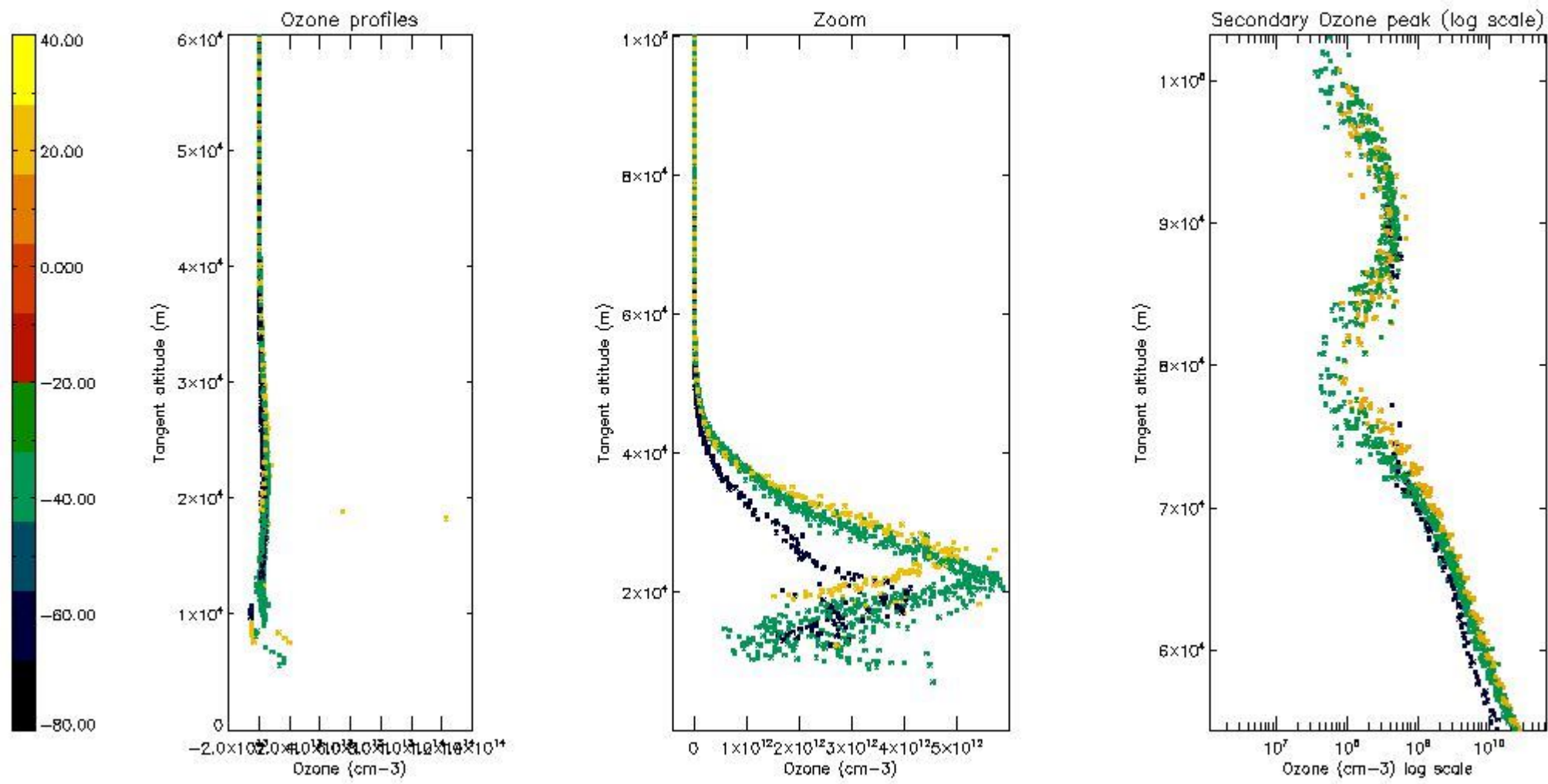
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



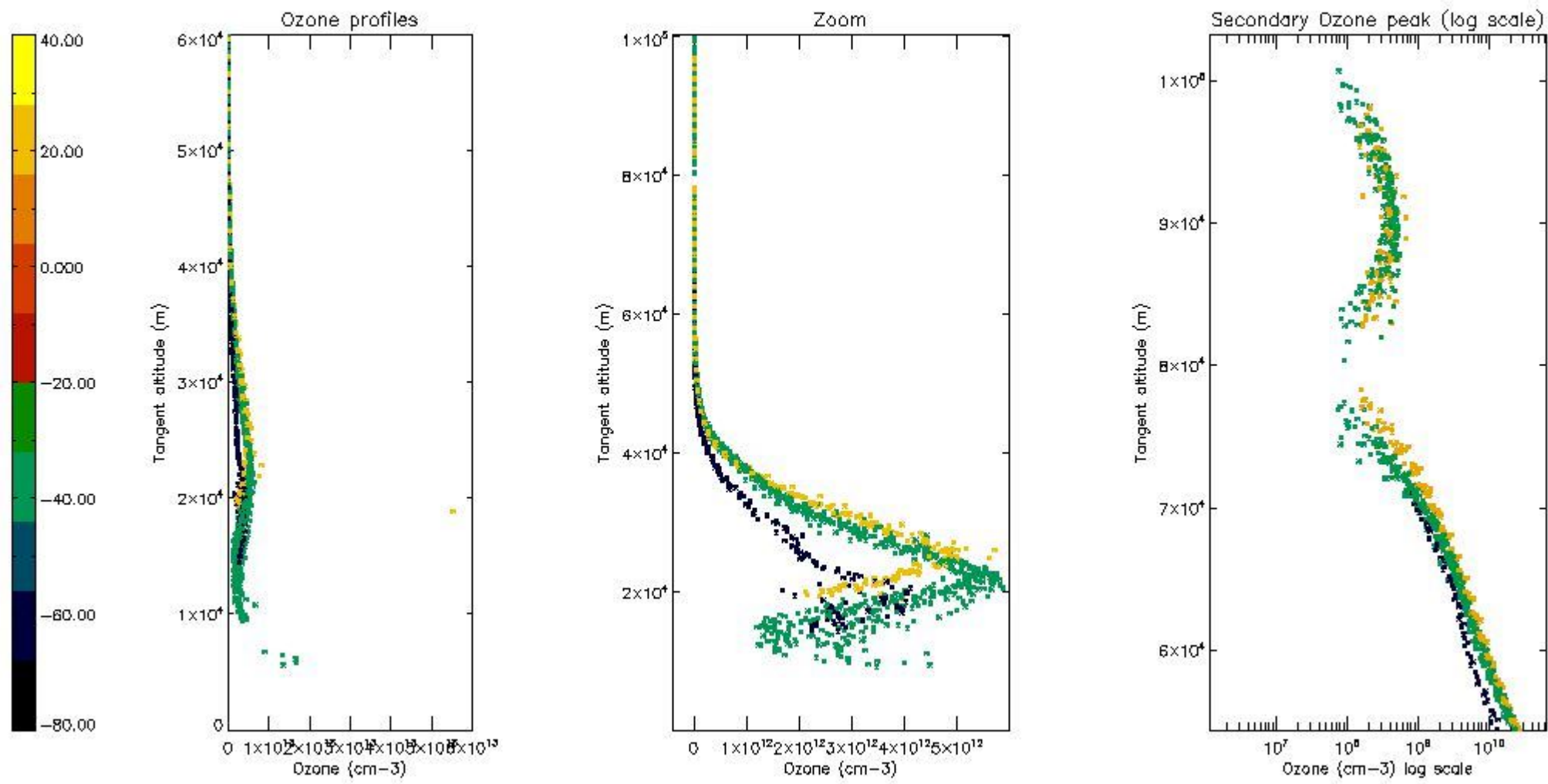
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



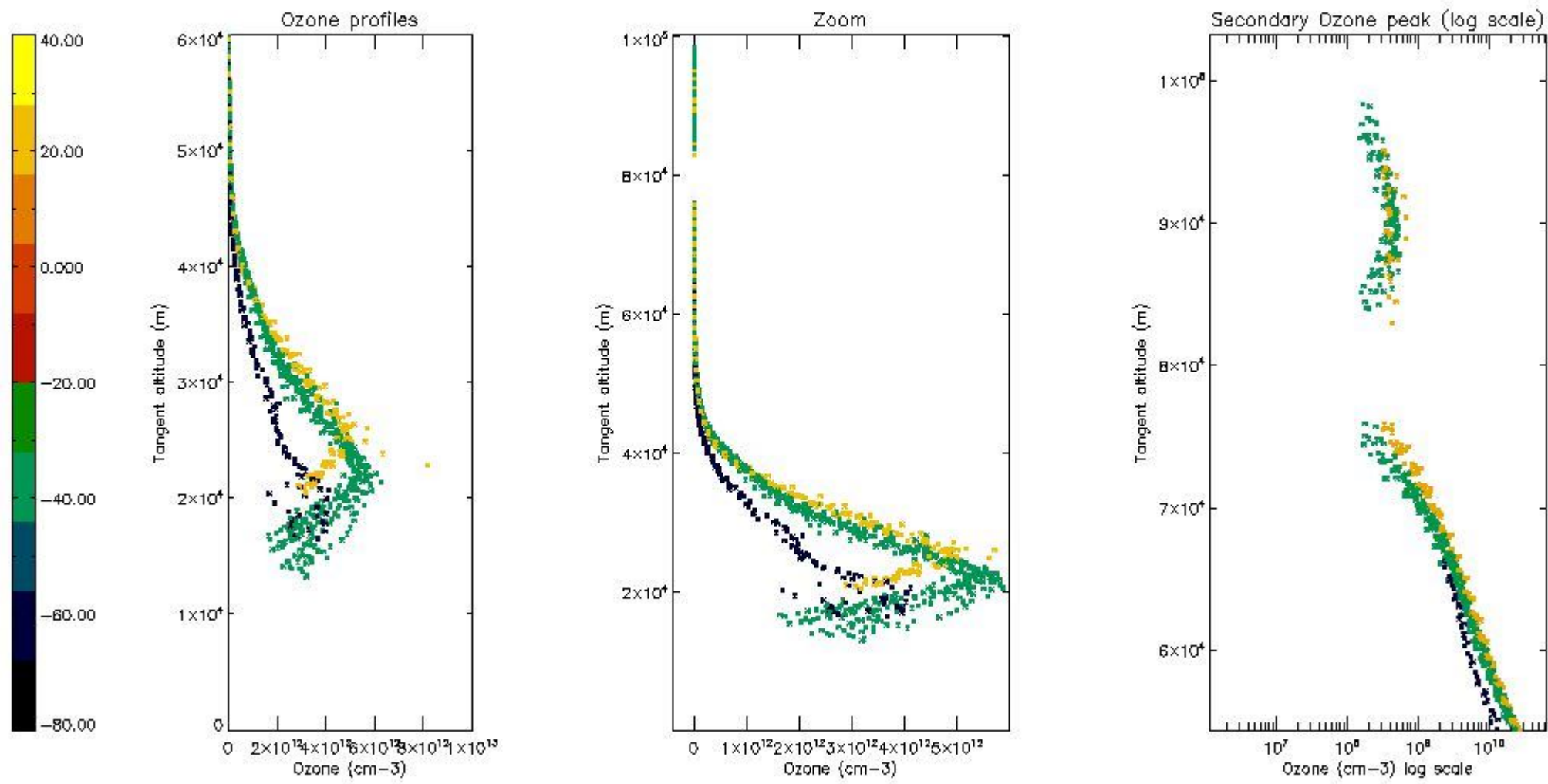
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



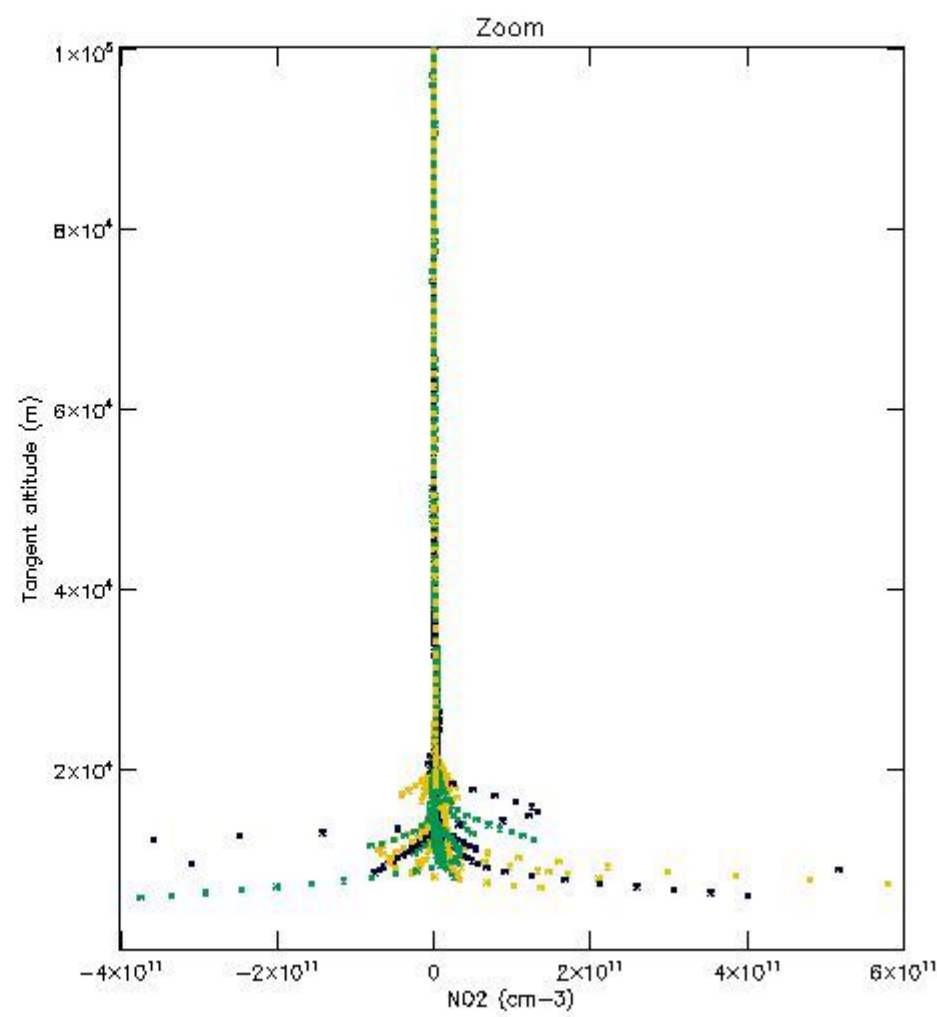
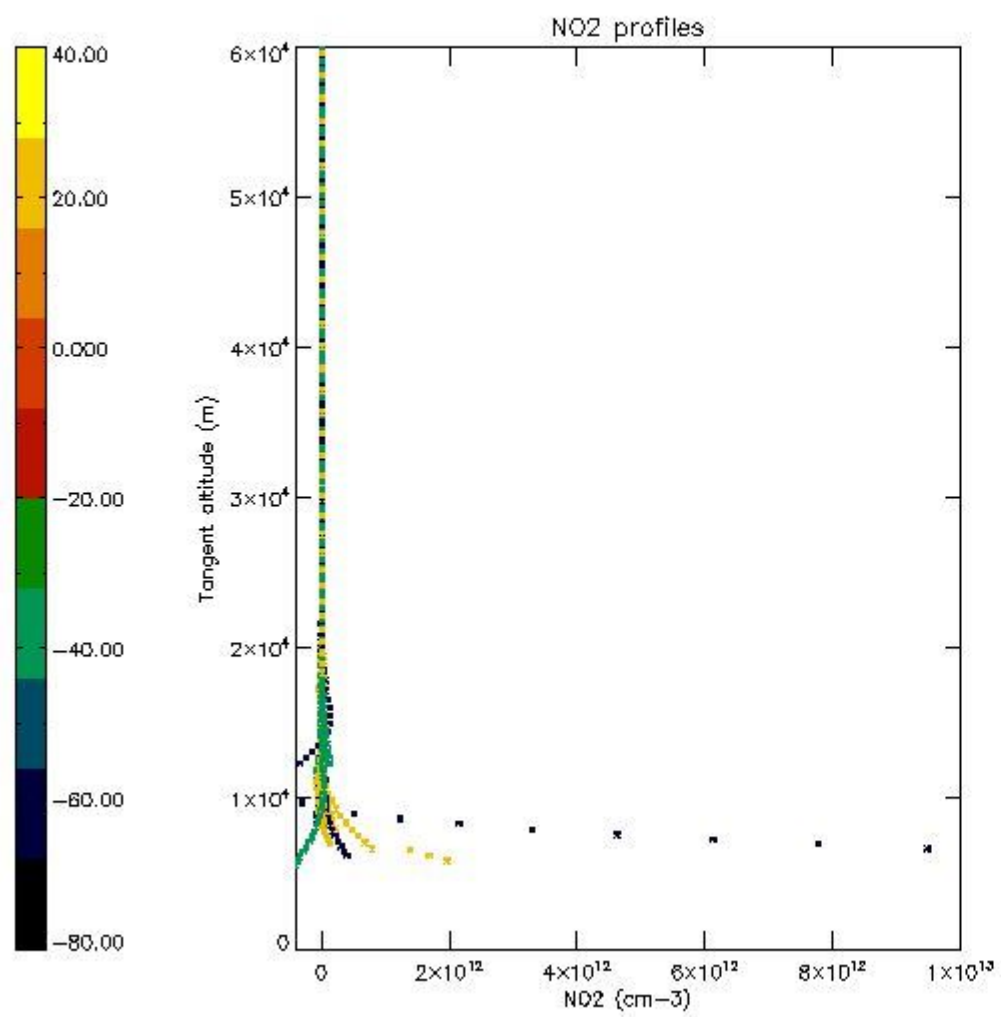
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



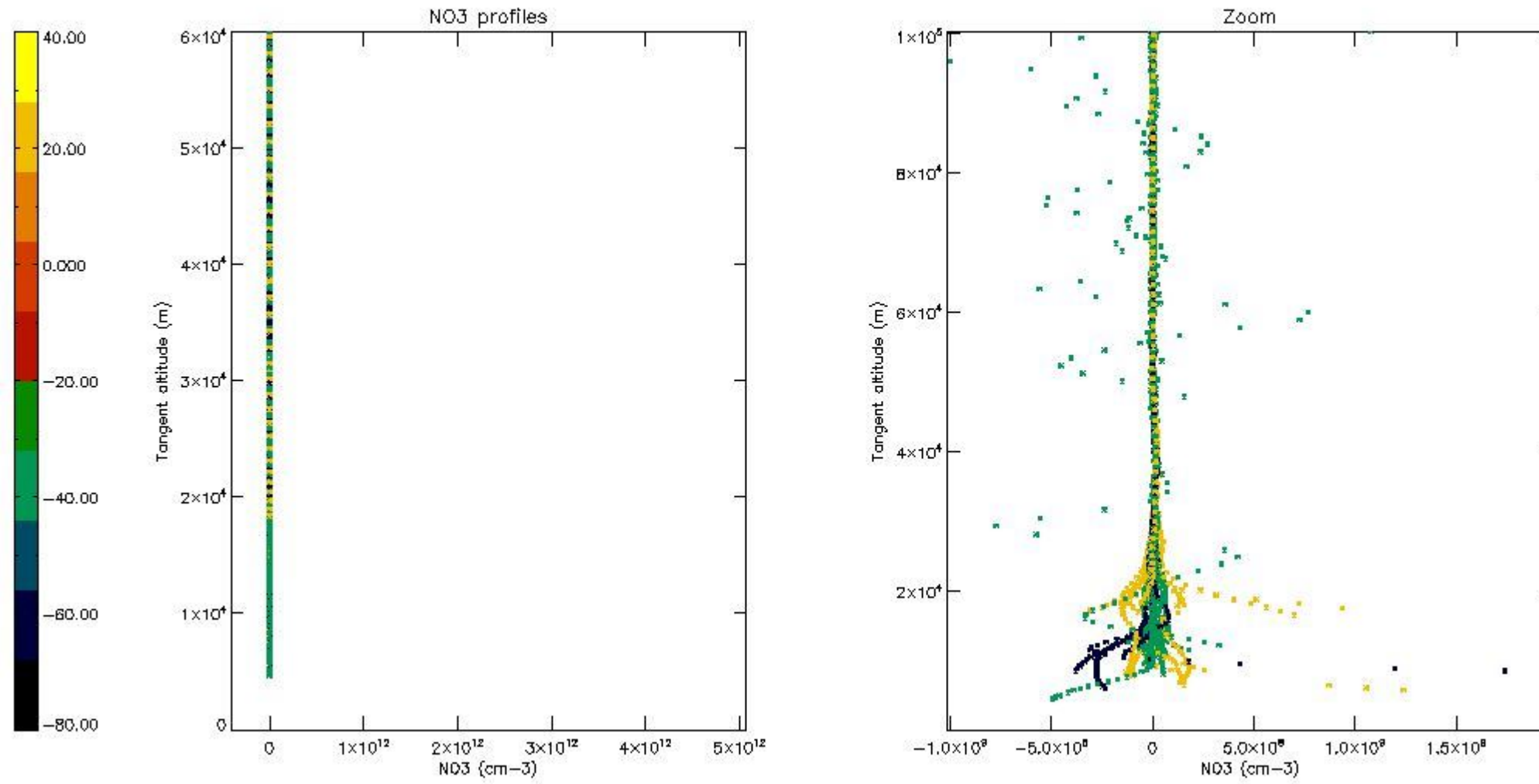
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



*5.7 Plot NO<sub>3</sub> 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	15-SEP-2011 00:13:19
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-SEP-2011 00:13:19
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-SEP-2011 00:13:19



# GOMOS Level 2 Daily Report

## SUMMARY

### [1. General Info](#)

### [2. Summary of processed GOM\\_NL\\_2P products](#)

### [3. Level 2 Quality information per product](#)

#### [3.1 Plot of level 2 quality information per product \(time dependant\)](#)

#### [3.2 Plot of level 2 quality information per product \(world map\)](#)

### [4. Level 1 Quality information per product \(stored on level 2 products\)](#)

#### [4.1 Plot of level 1 quality information per product \(time dependant\)](#)

##### [4.1.1 Plot of level 1 quality information per product \(time dependant\): ASCENDING](#)

##### [4.1.2 Plot of level 1 quality information per product \(time dependant\): DESCENDING](#)

#### [4.2 Plot of level 1 quality information per product \(world map\)](#)

##### [4.2.1 Plot of level 1 quality information per product \(world map\): ASCENDING](#)

##### [4.2.2 Plot of level 1 quality information per product \(world map\): DESCENDING](#)

### [5. Ozone profiles based on quality statistics and other trace gas profiles](#)

#### [5.1 Ozone statistics based on quality of products](#)

#### [5.2 Plot ozone profiles for all STD \(dark without errors\)](#)

#### [5.3 Plot ozone profiles where STD < 20% \(dark without errors\)](#)

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#### [5.5. Plot ozone profiles where STD < 5% \(dark without errors\)](#)

#### [5.6 Plot NO2 profiles for all STD \(dark without errors\)](#)

#### [5.7 Plot NO3 profiles for all STD \(dark without errors\)](#)

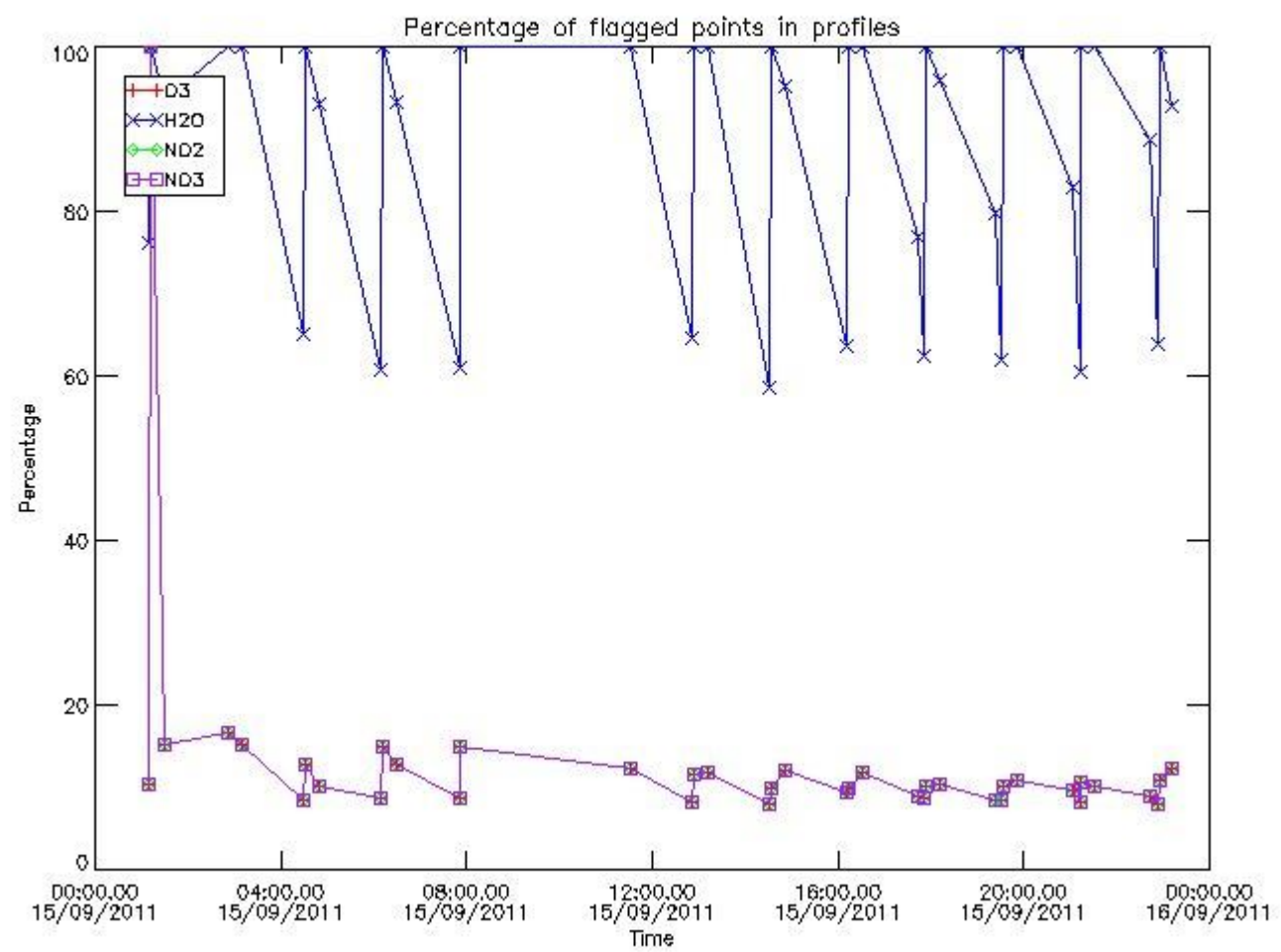
#### [5.8 Plot H2O profiles \(only for occultations of stars 1,2,3,4,13,14,16,26,63 dark without errors\) for all STD](#)

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



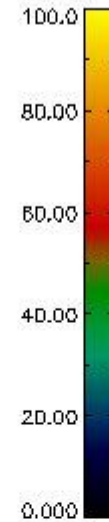
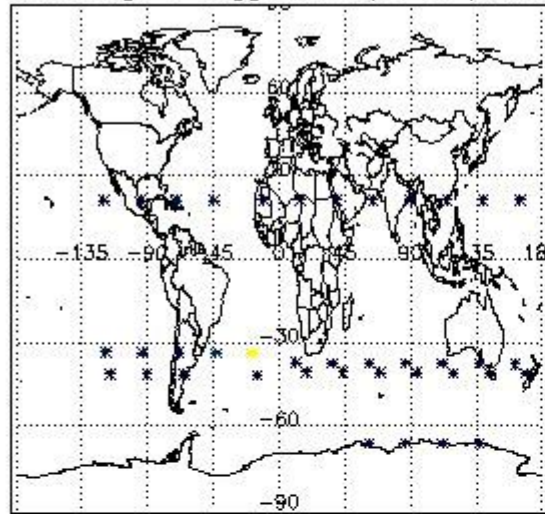




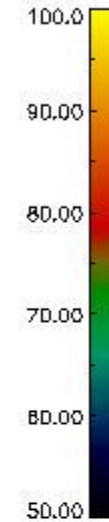
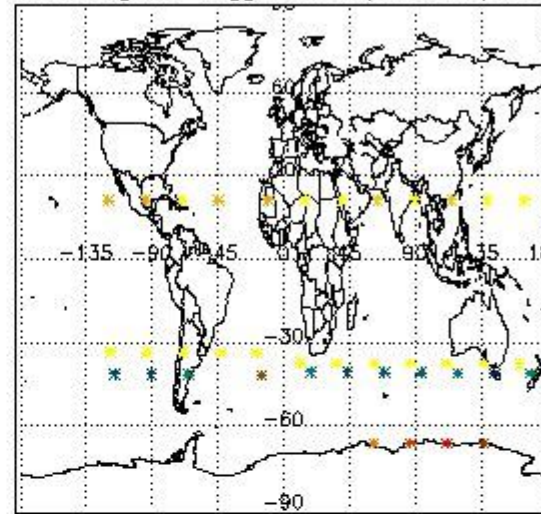


3.2 Plot quality information per product (world map)

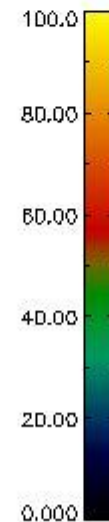
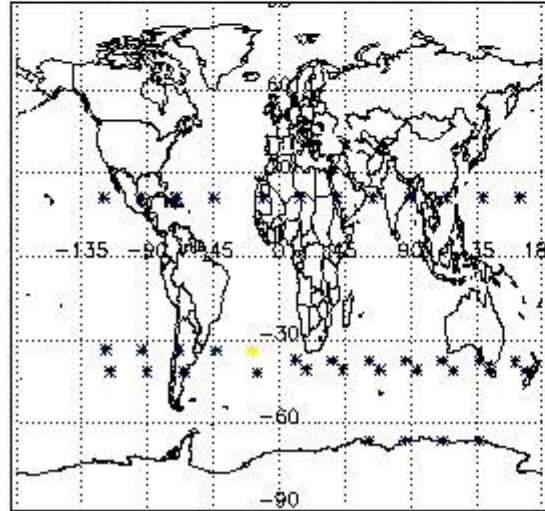
Percentage of flagged data per O3 profile



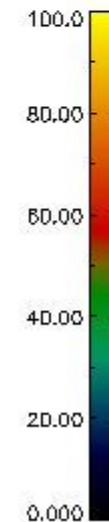
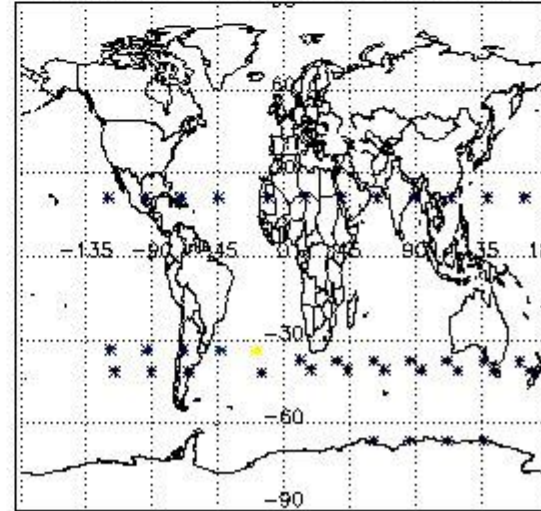
Percentage of flagged data per H2O profile



Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

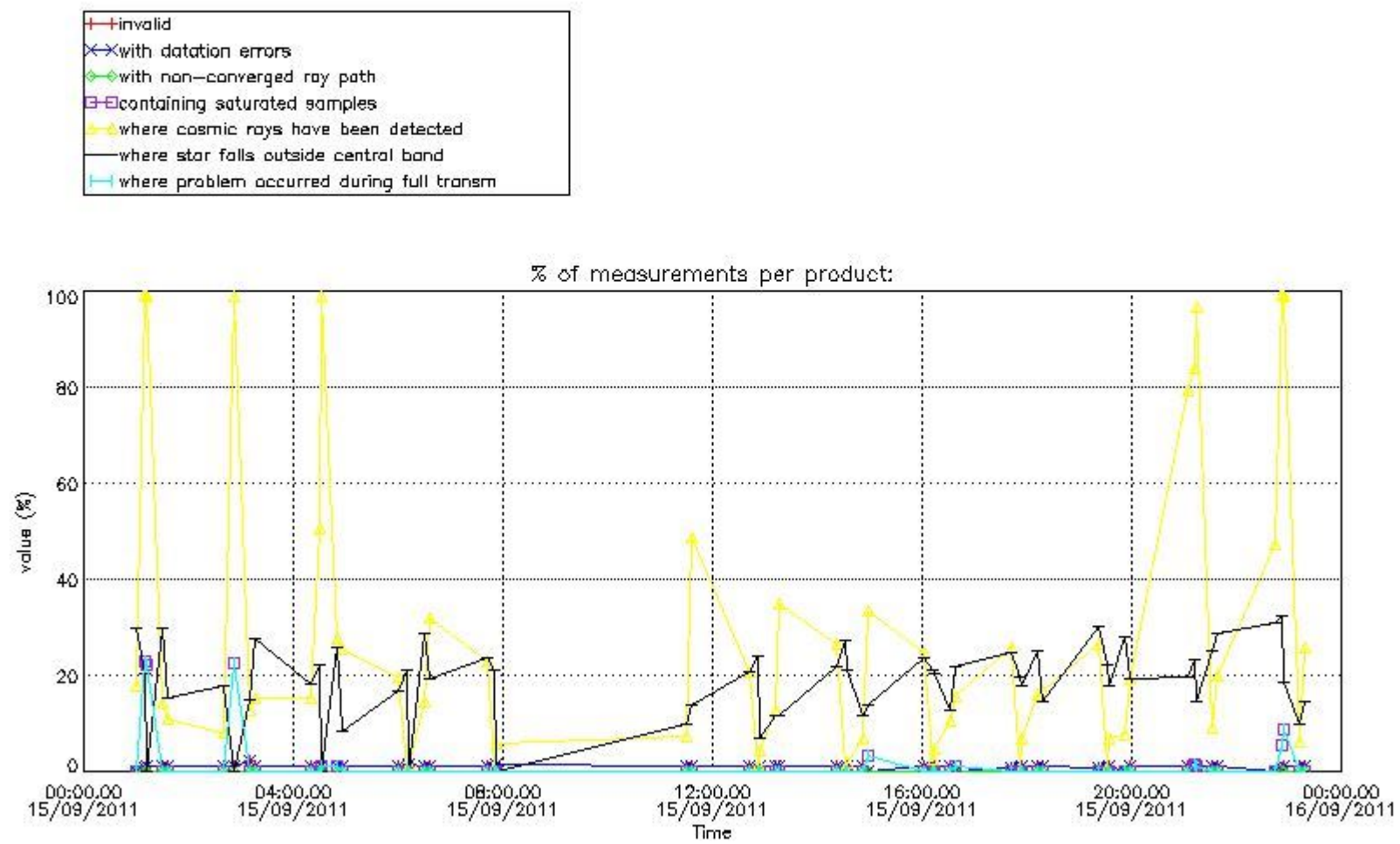


#### 4. Level 1 quality information per product

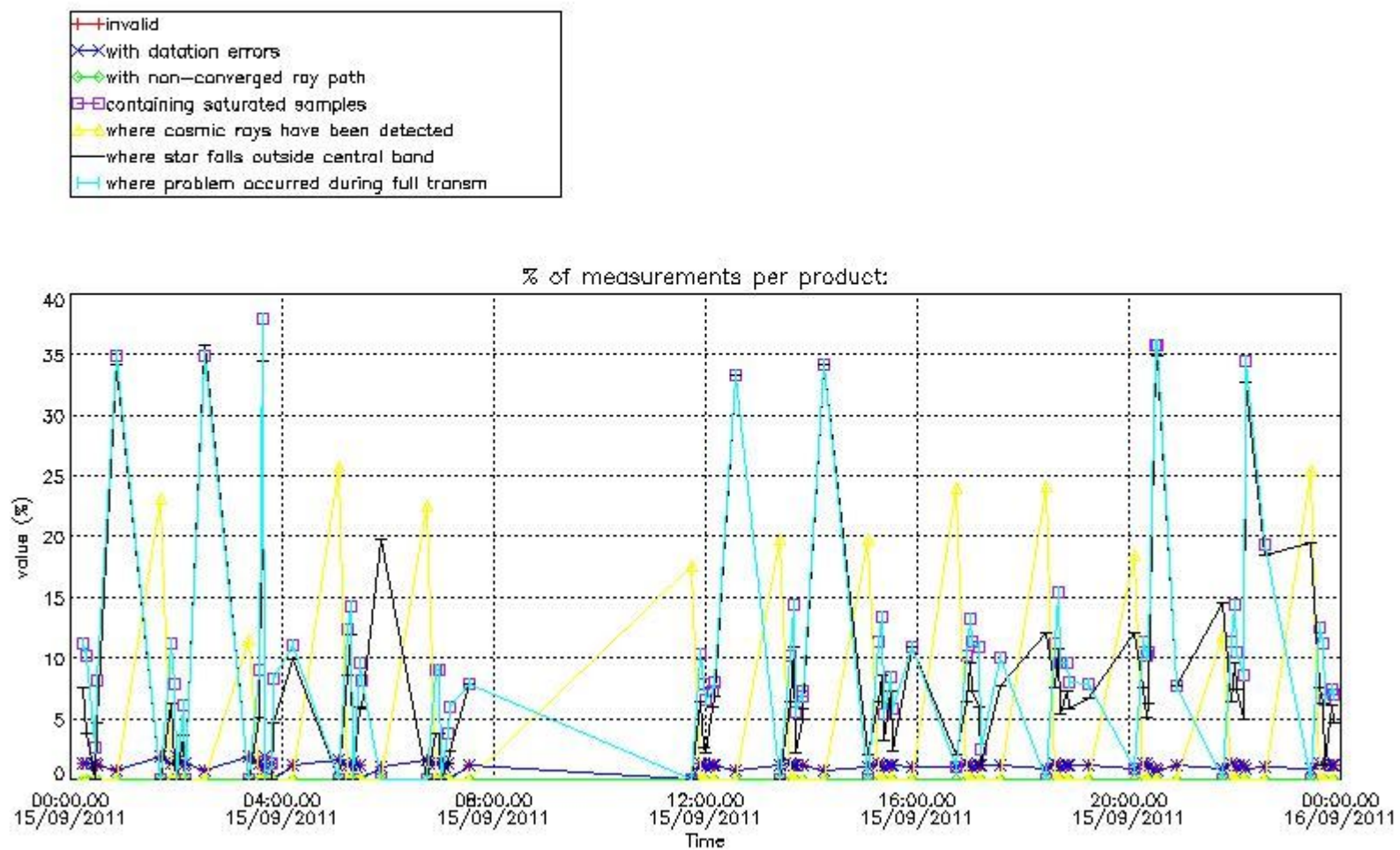
In this section it is plotted some information contained in the Quality Summary data set of the level 2 products that comes from the level 1b processing. Products without errors (error flag in the MPH set to "0") are used.

##### 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

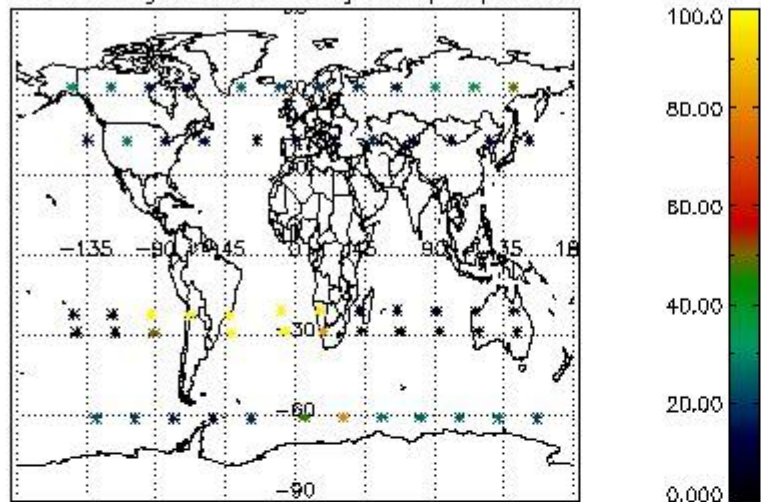


4.2 Plot quality information per product coming from level 1b processing (world map)

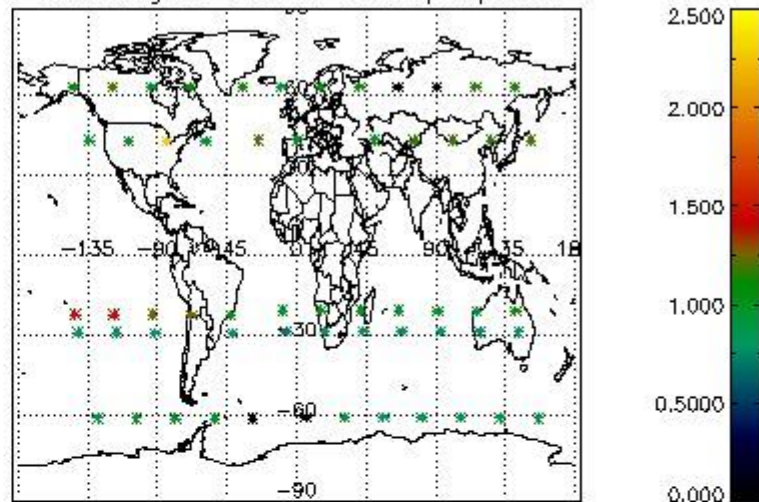
4.2.1 Plot level 1 quality information per product (world map): ENVISAT ASCENDING passes



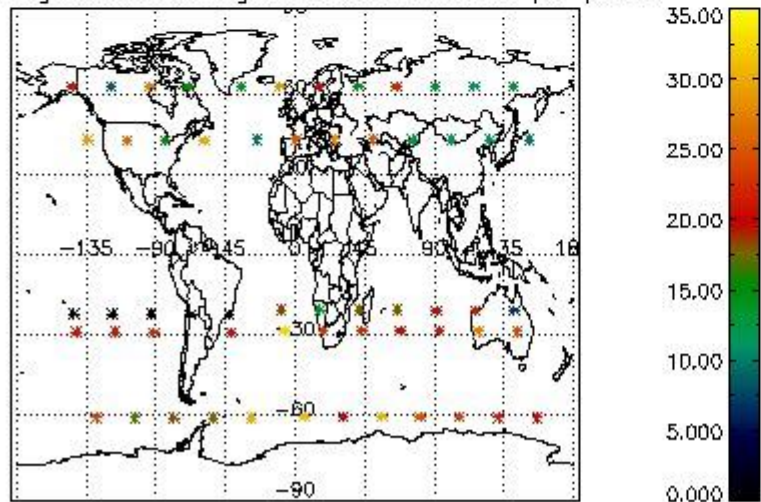
Percentage of cosmic ray hits per profile



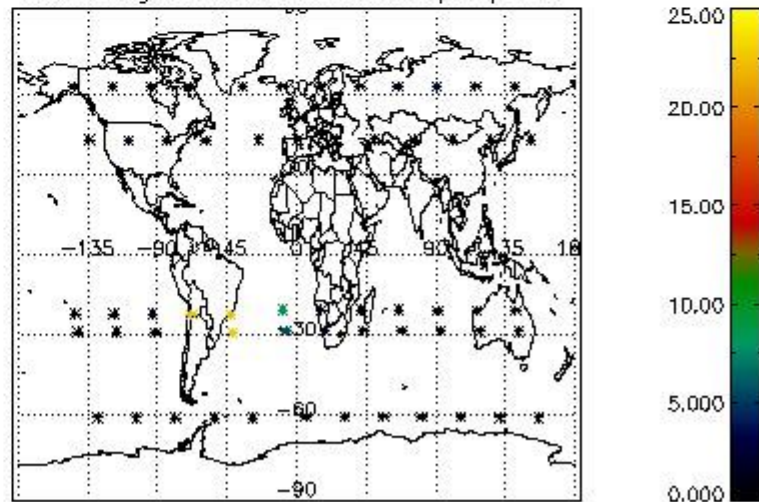
Percentage of datation errors per profile



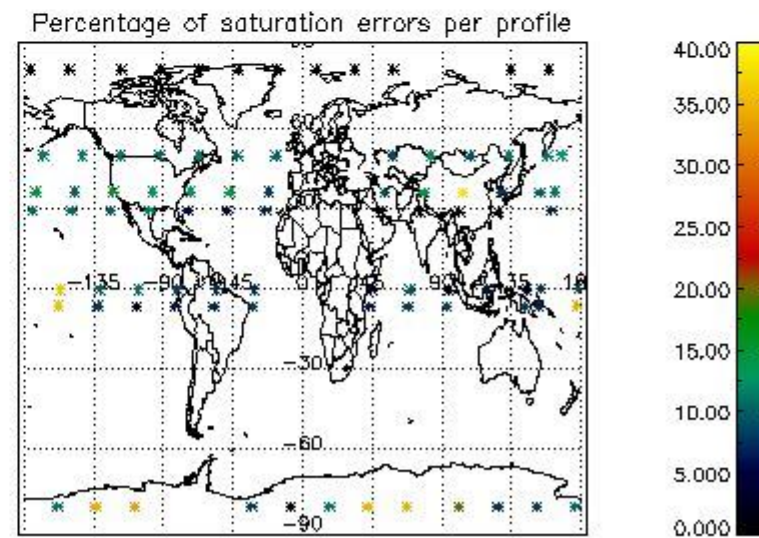
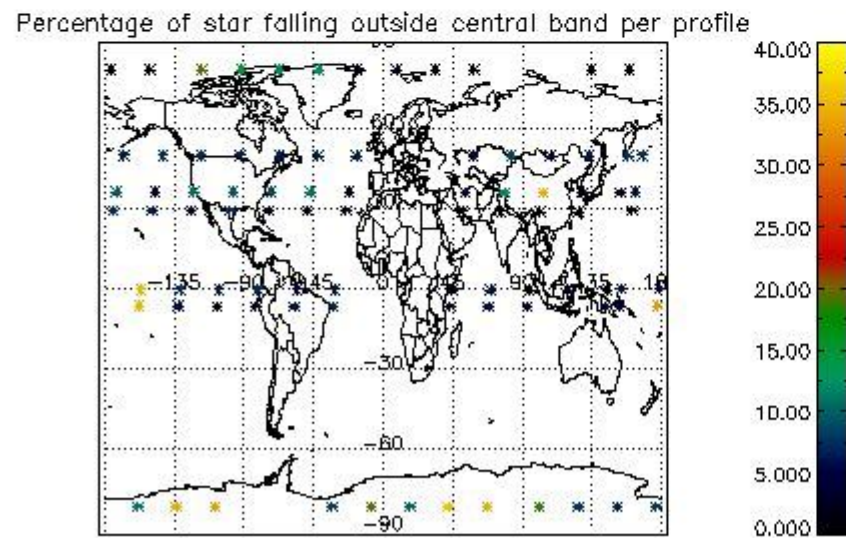
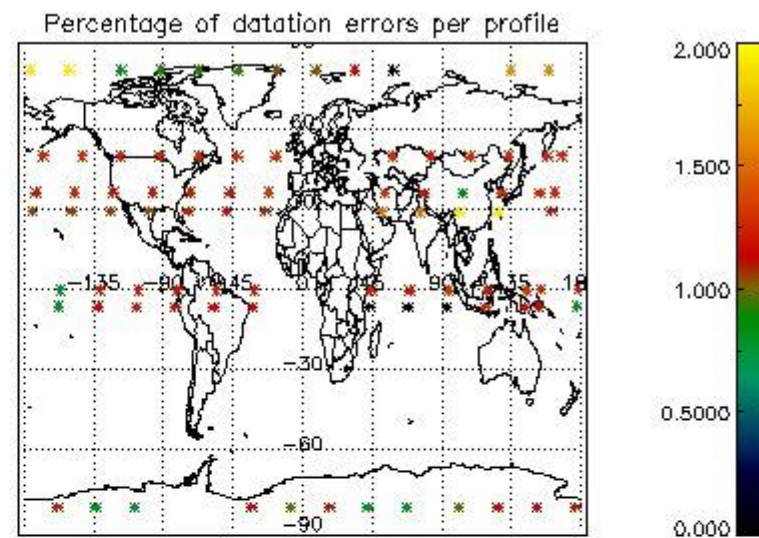
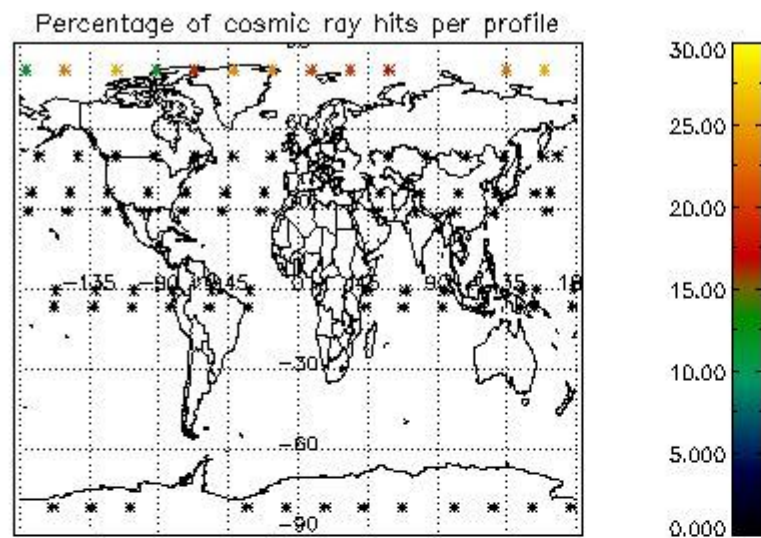
Percentage of star falling outside central band per profile



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

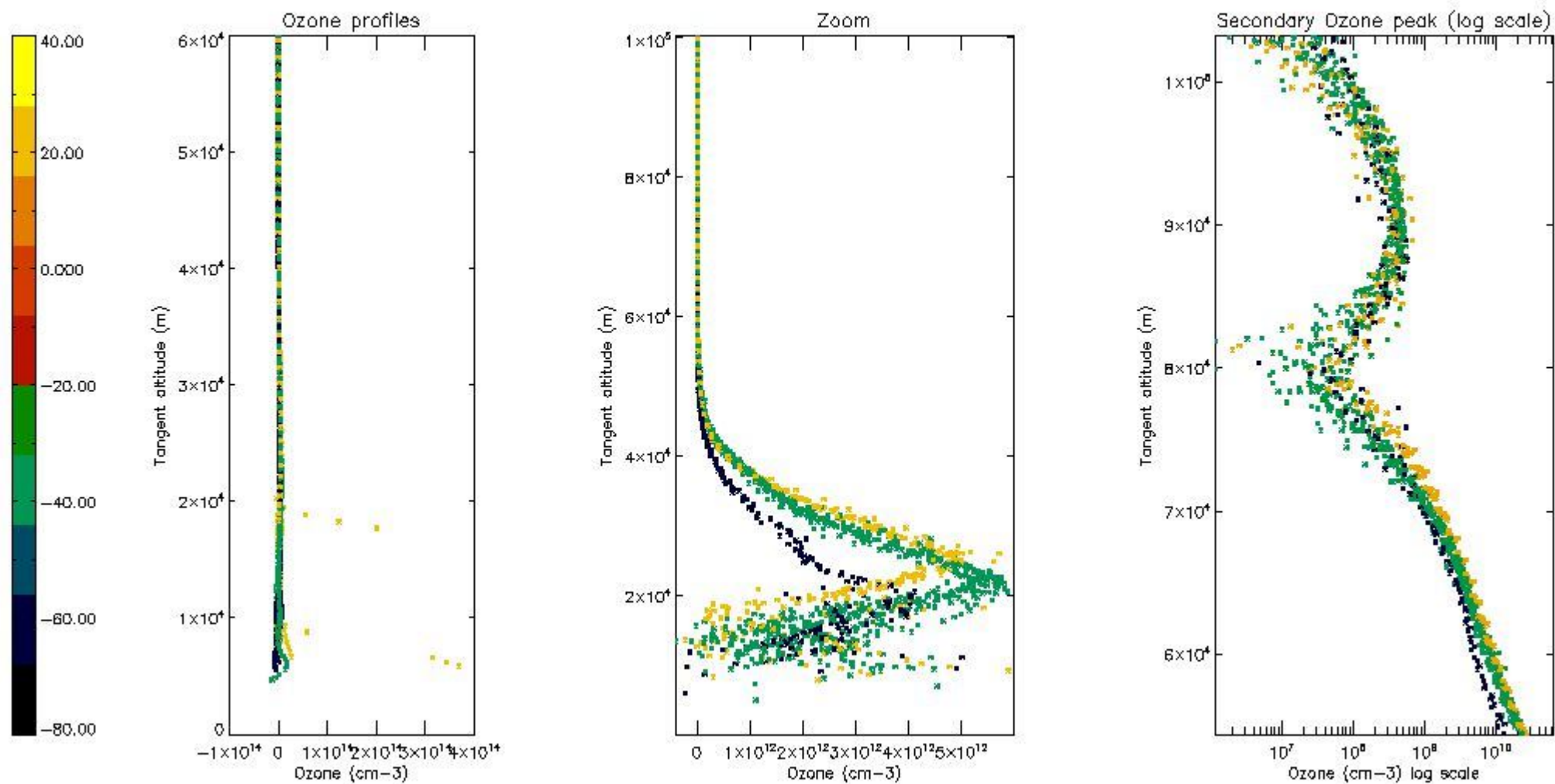
So, the table below shows the percentage of dark limb and valid observations for each criteria with respect to the overall valid daily observations.

Criteria	% of total production
All STD	30
STD < 20	20

STD < 10	18
STD < 5	15

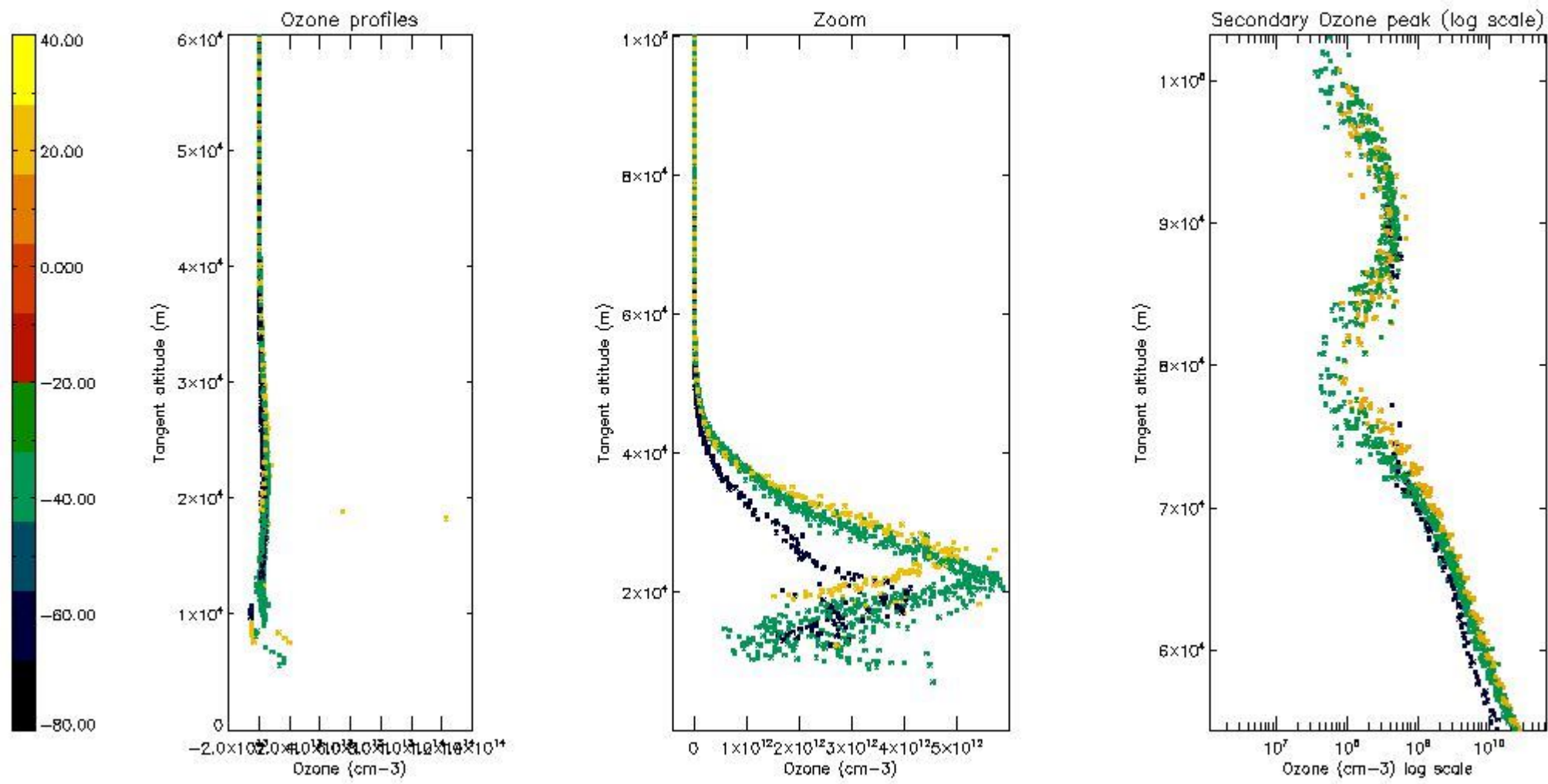
5.2 Plot ozone profiles for all STD (dark without errors)

The colorbar represents the latitude.



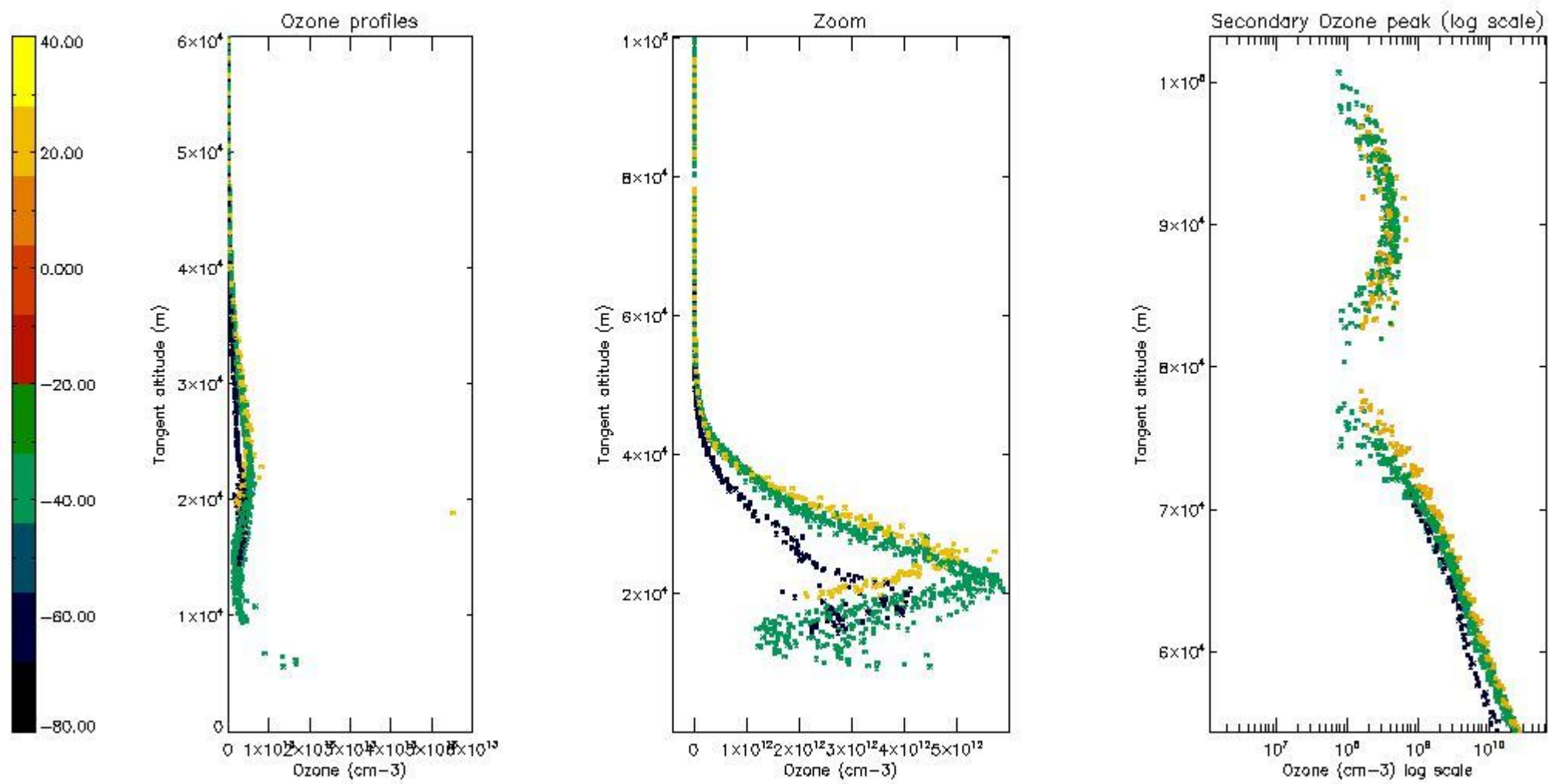
5.3 Plot ozone profiles where STD < 20% (dark without errors)

The colorbar represents the latitude.



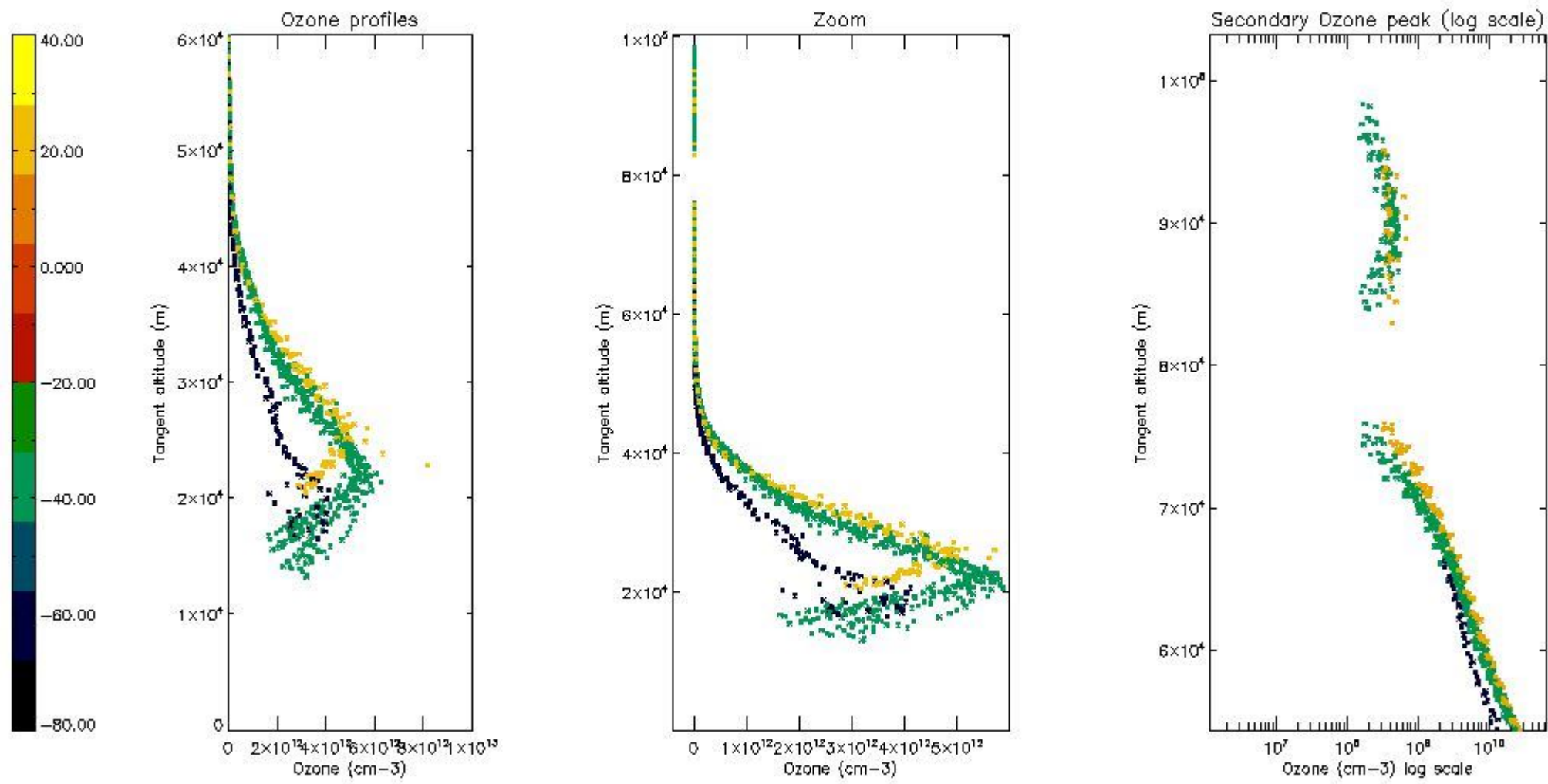
*5.4 Plot ozone profiles where  $STD < 10\%$  (dark without errors)*

The colorbar represents the latitude.



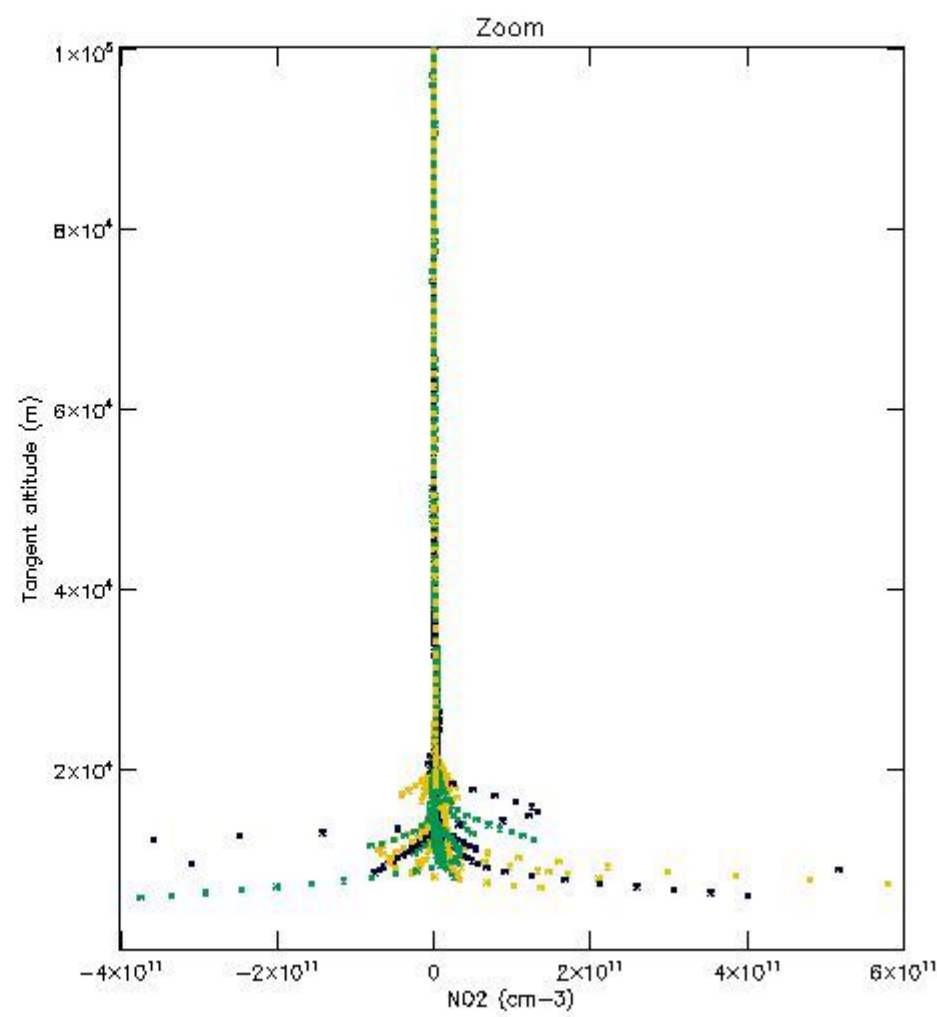
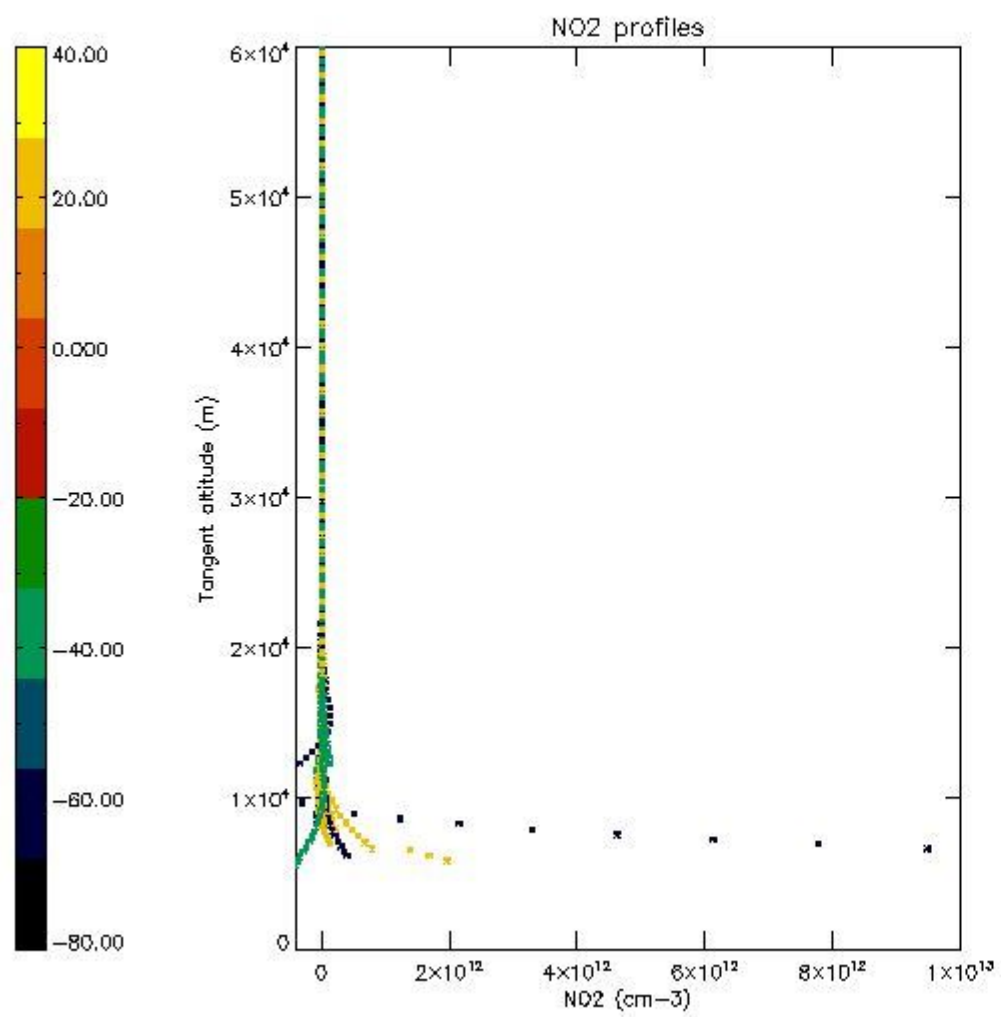
*5.5 Plot ozone profiles where STD < 5% (dark without errors)*

The colorbar represents the latitude.



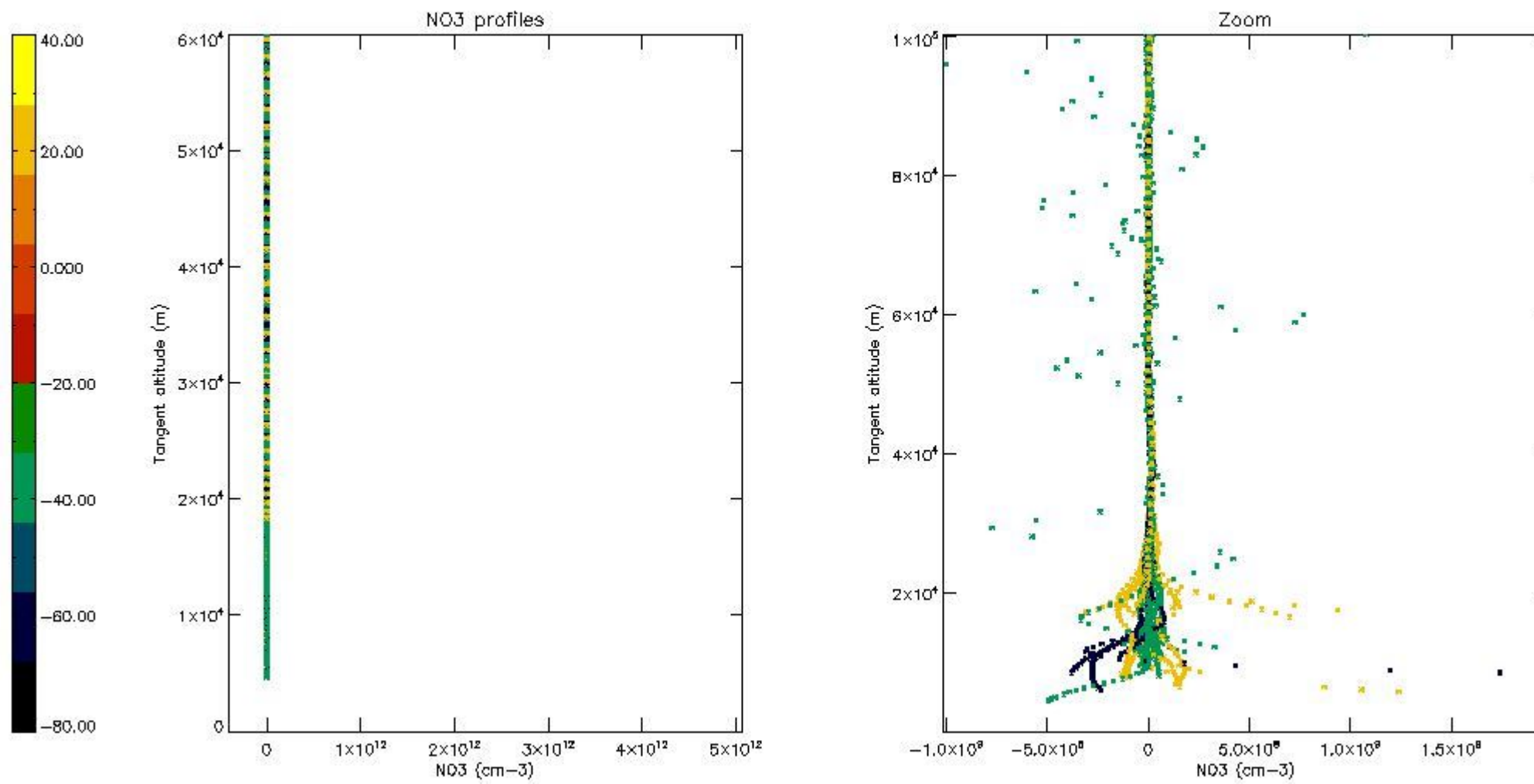
*5.6 Plot NO<sub>2</sub> profiles for all STD (dark without errors)*

The colorbar represents the latitude.



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

The colorbar represents the latitude.

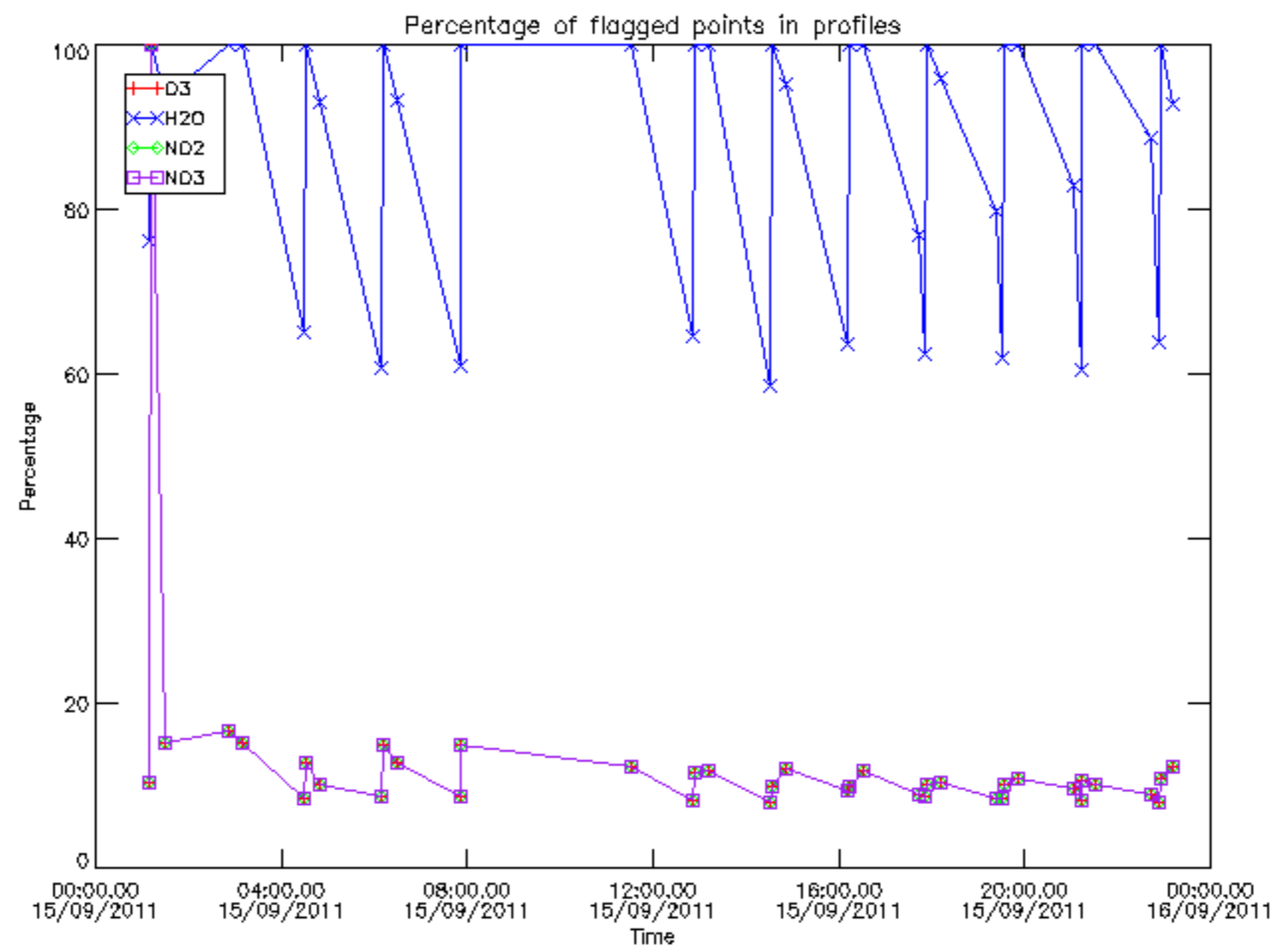


## 6. Auxiliary Data Files used for the production reported in section 2

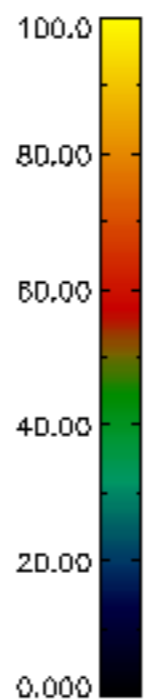
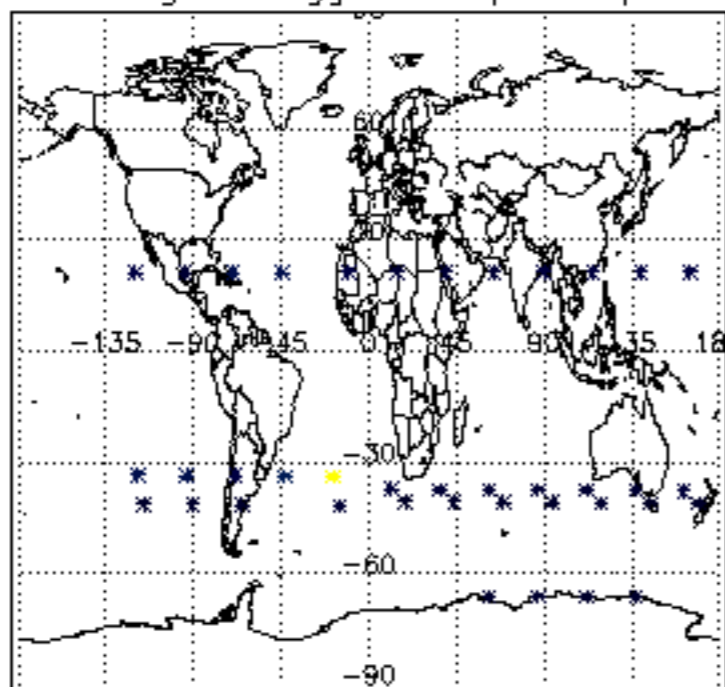
The number reported in the third column indicates since which file (see list in section 2) the corresponding auxiliary file has been used. The fourth column is the date of those product files.

Type	Auxiliary Filename	Used since product	Used since product date
INST_PHYS_CHARACTERISTICS	GOM_INS_AXVIEC20091111_143220_20030716_120000_20500101_000000	1	15-SEP-2011 00:13:19
LEVEL-2_PROC_CONFIG	GOM_PR2_AXVIEC20091111_152718_20020301_000000_20500101_000000	1	15-SEP-2011 00:13:19
CROSS_SECTIONS_FILE	GOM_CRS_AXVIEC20091111_154832_20020301_000000_20500101_000000	1	15-SEP-2011 00:13:19

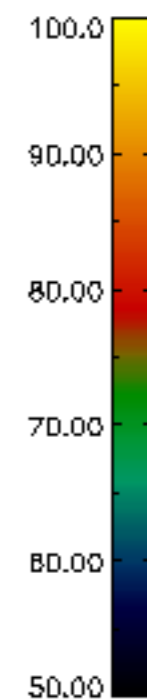
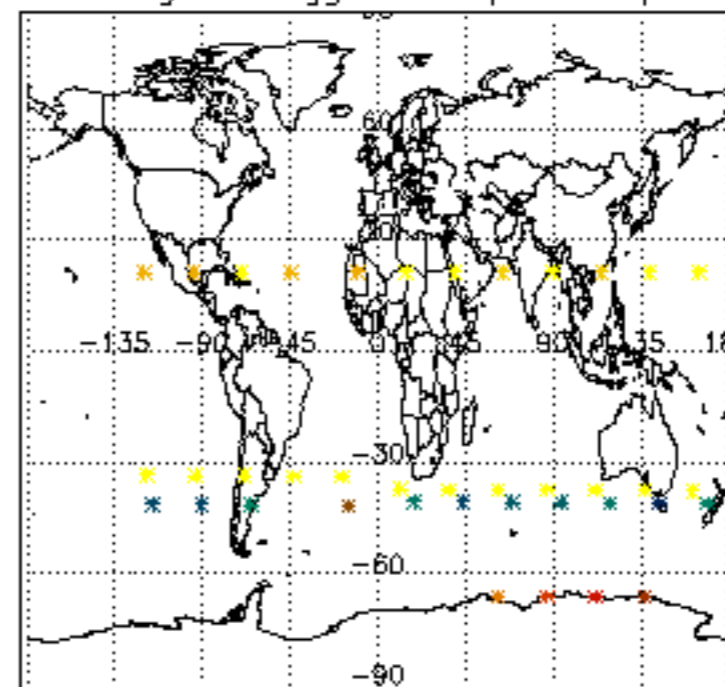




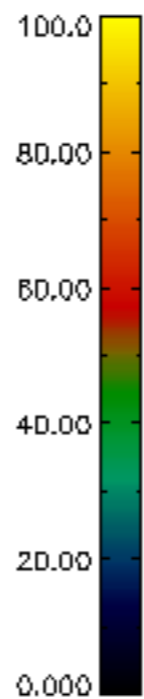
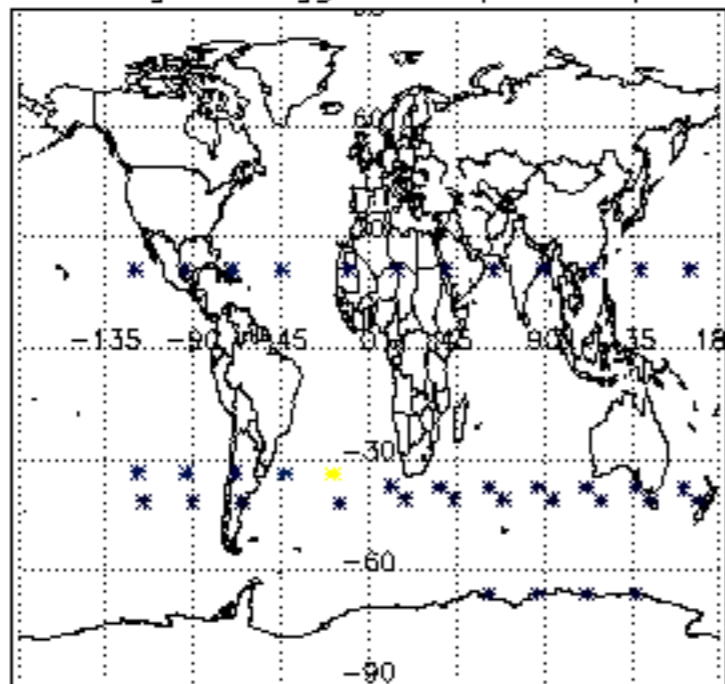
Percentage of flagged data per D3 profile



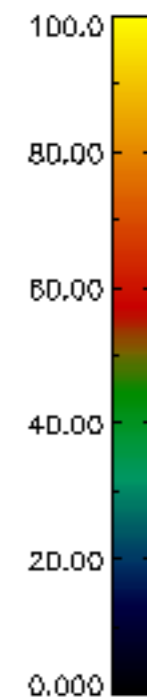
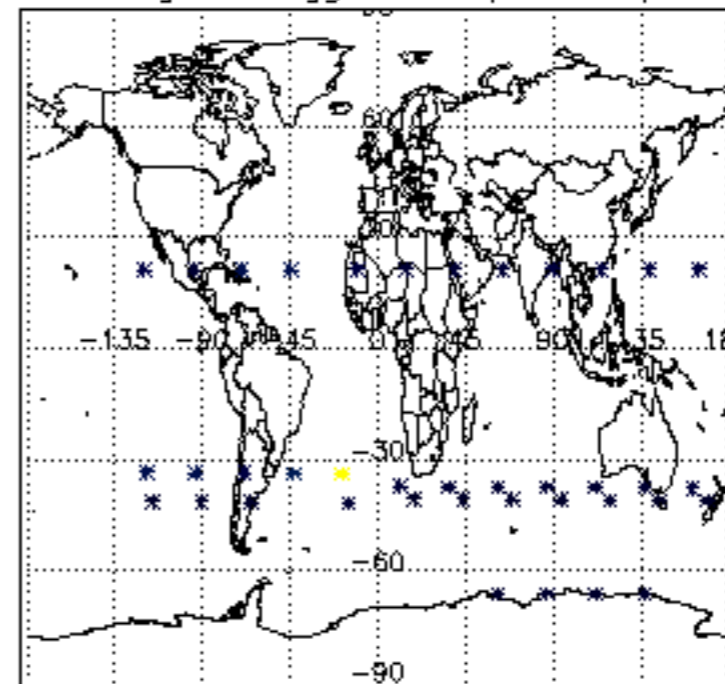
Percentage of flagged data per H2O profile

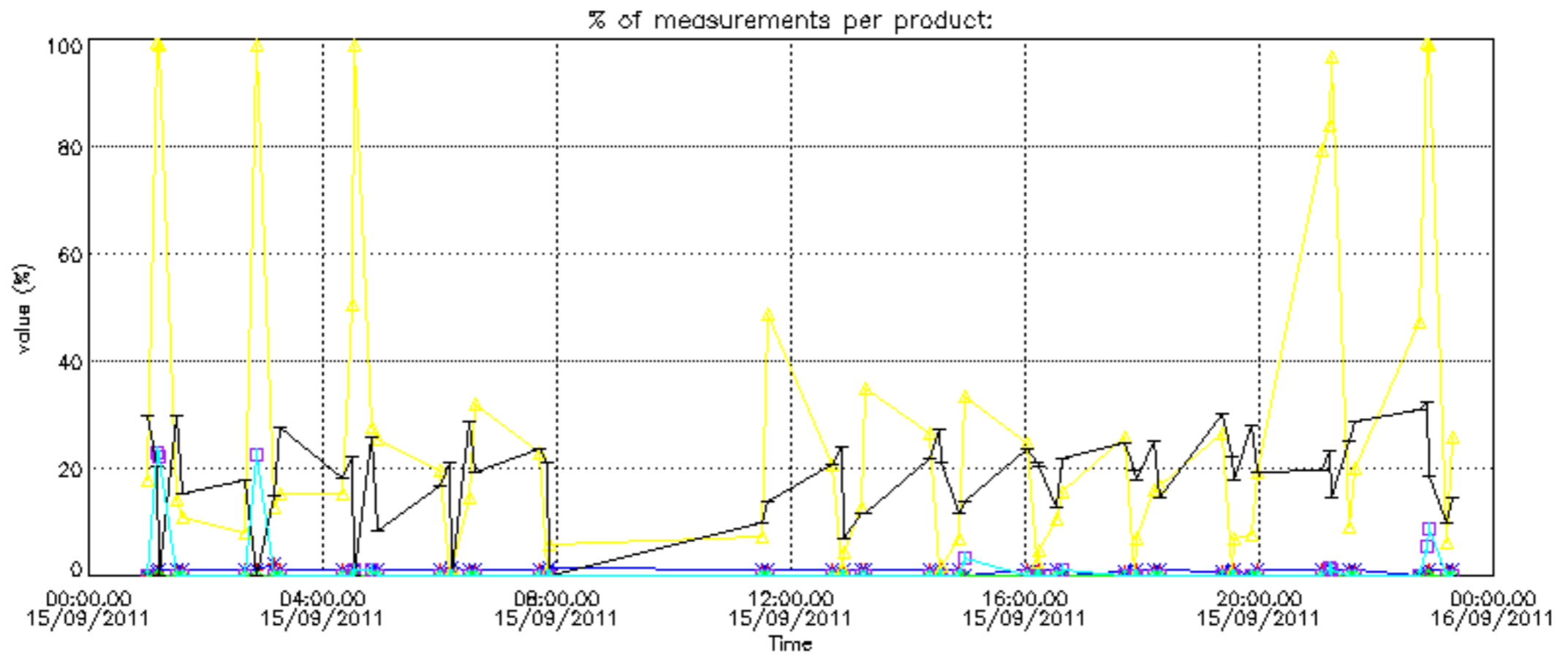


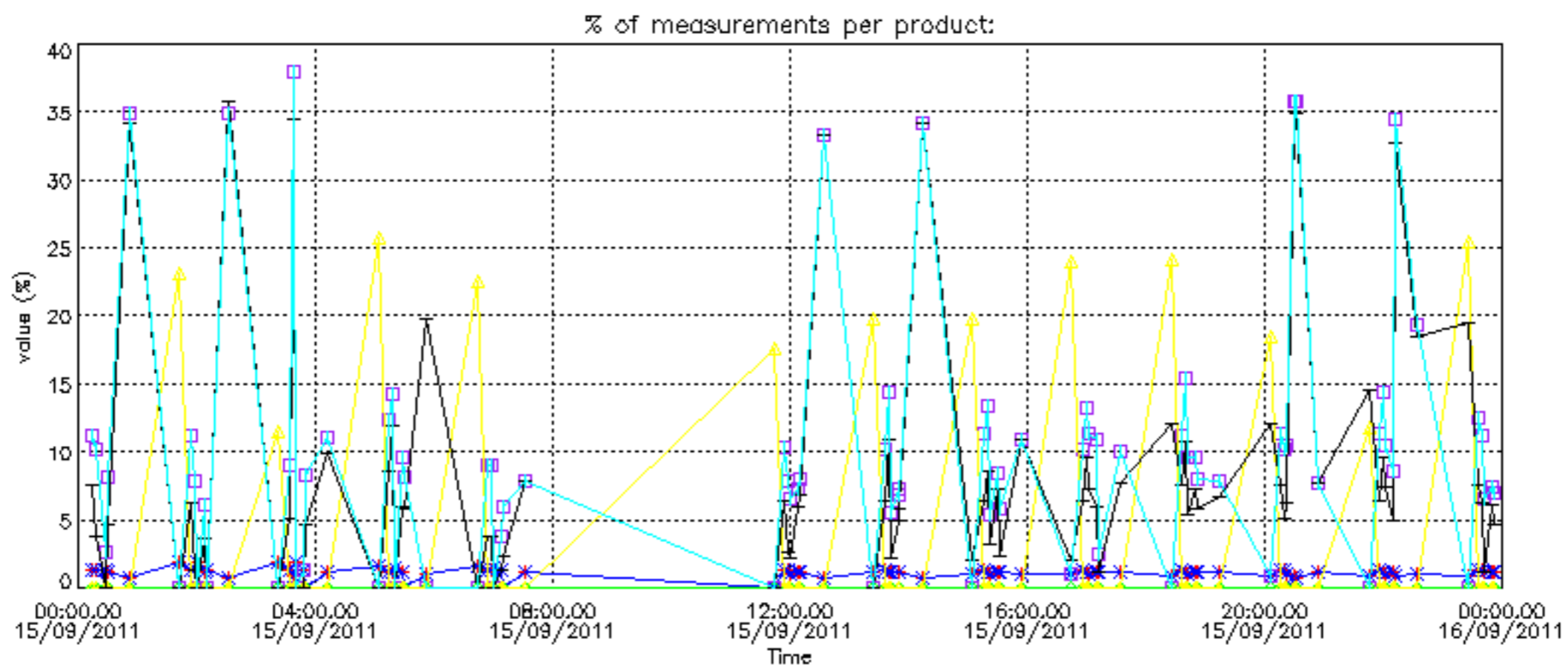
Percentage of flagged data per NO2 profile



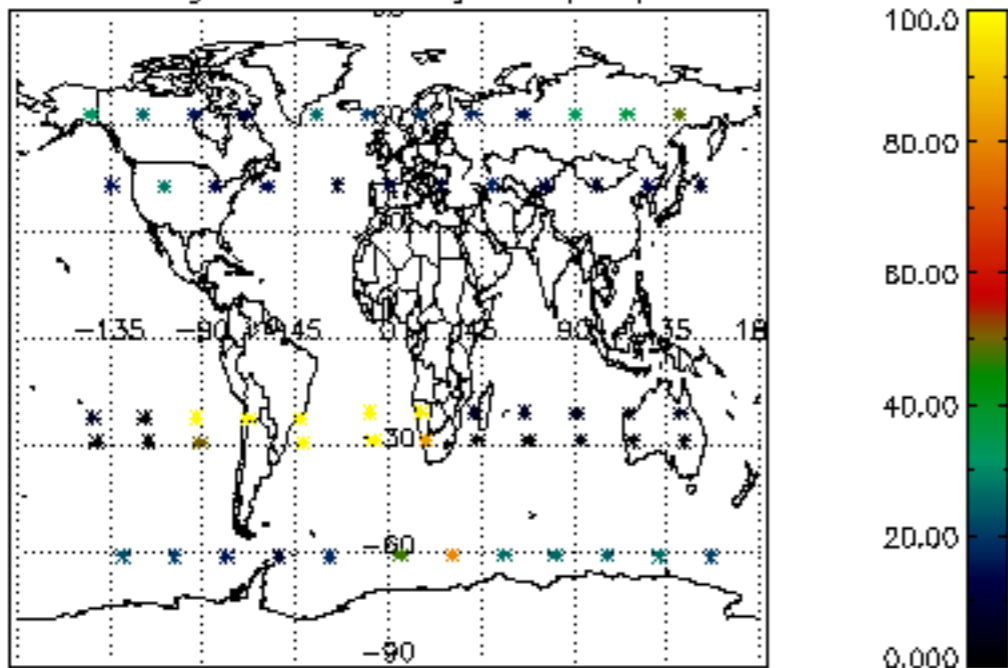
Percentage of flagged data per NO3 profile



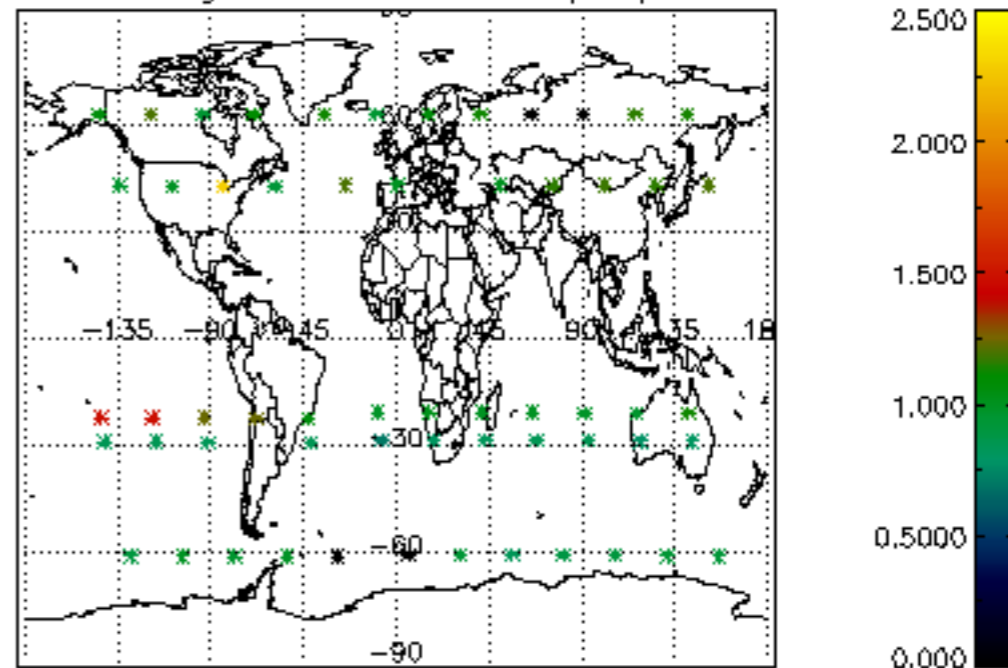




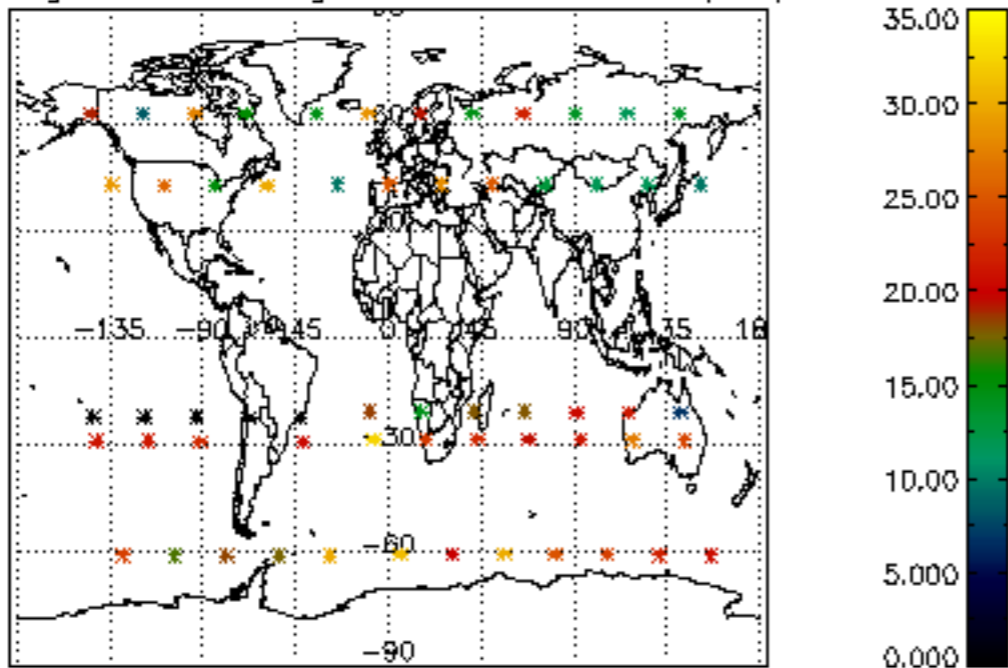
Percentage of cosmic ray hits per profile



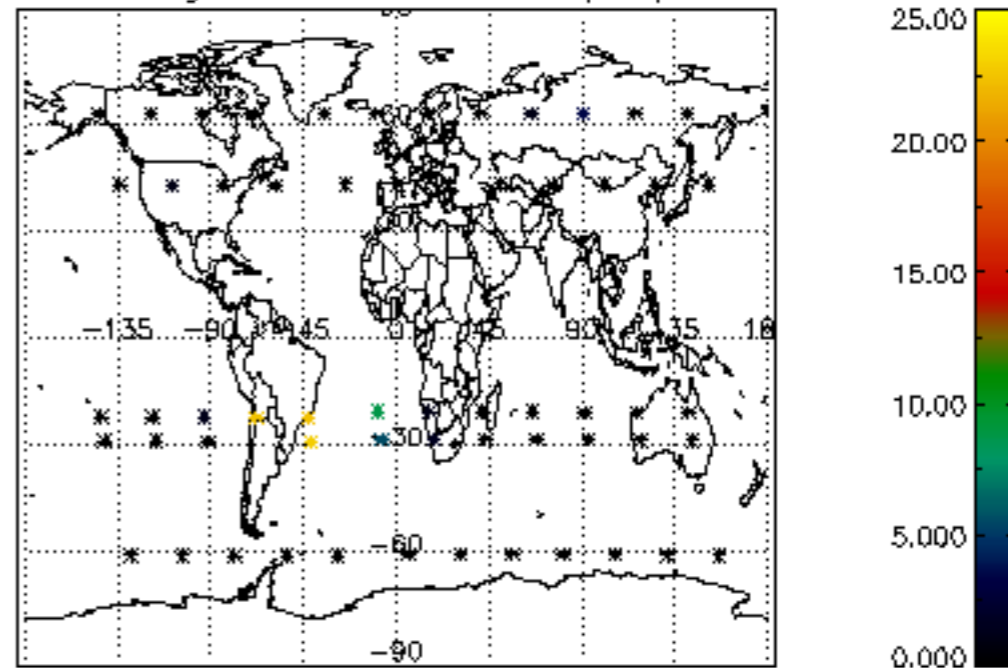
Percentage of datation errors per profile



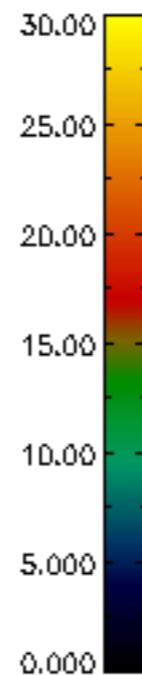
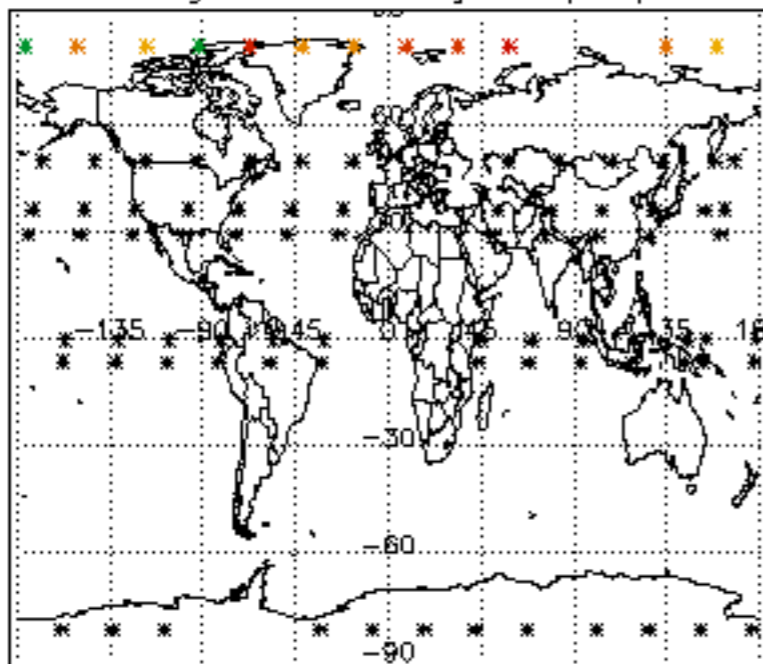
Percentage of star falling outside central band per profile



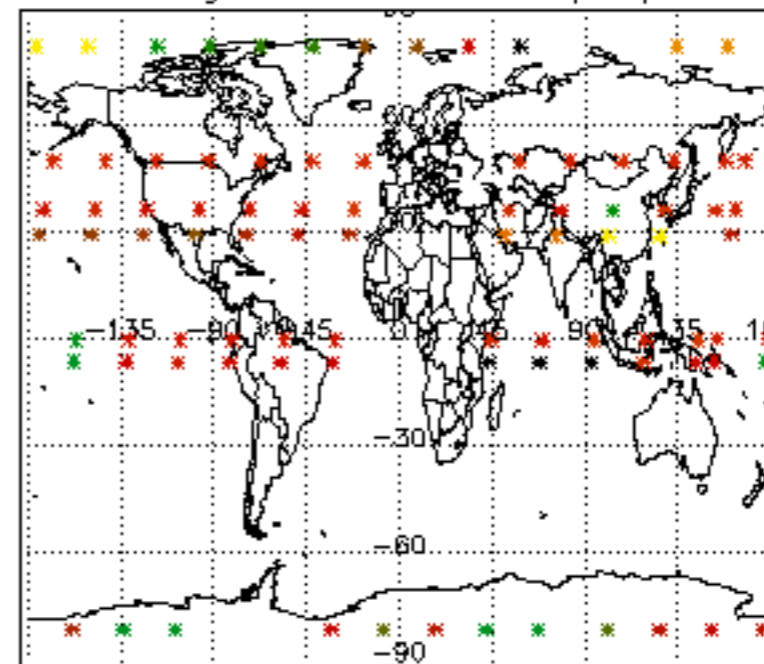
Percentage of saturation errors per profile



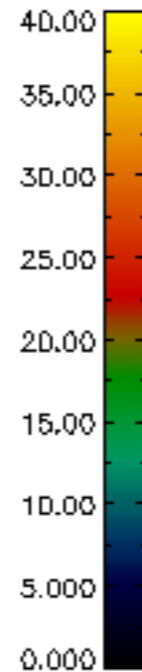
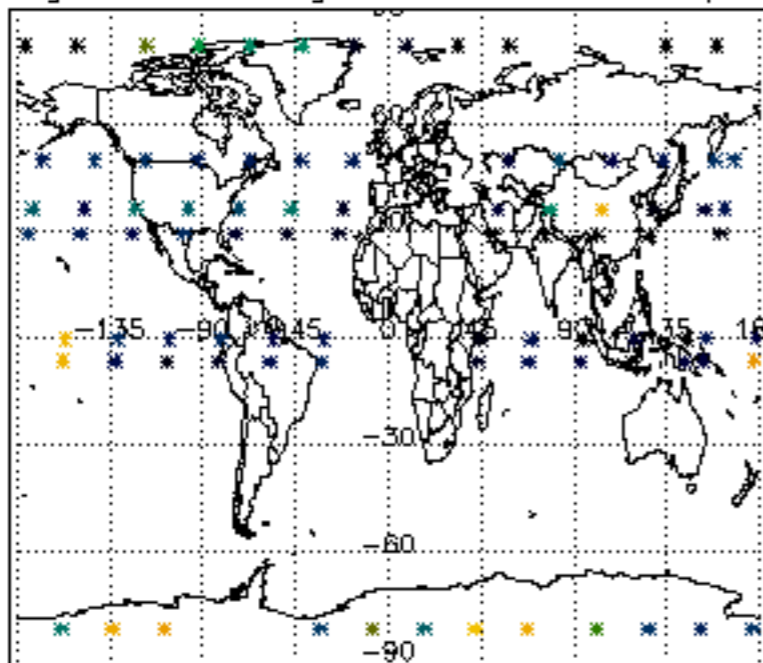
Percentage of cosmic ray hits per profile



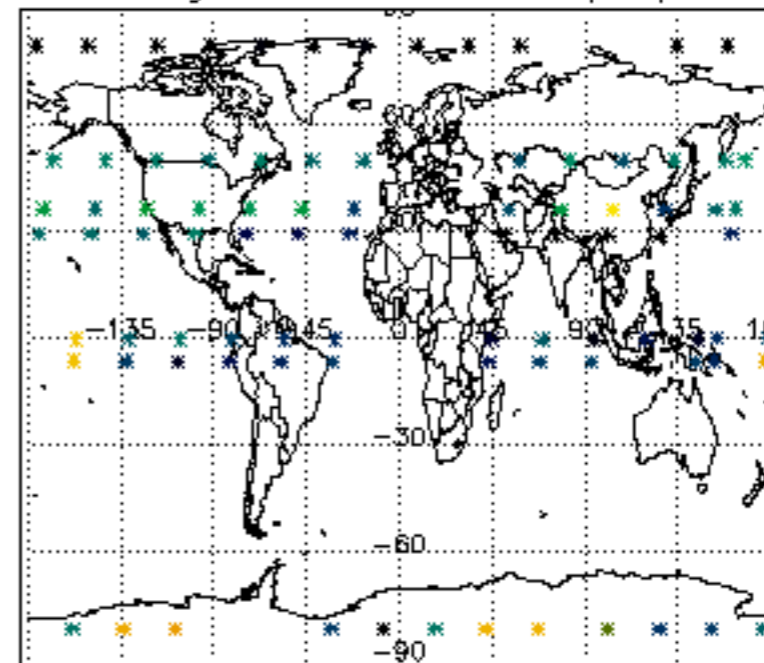
Percentage of datation errors per profile

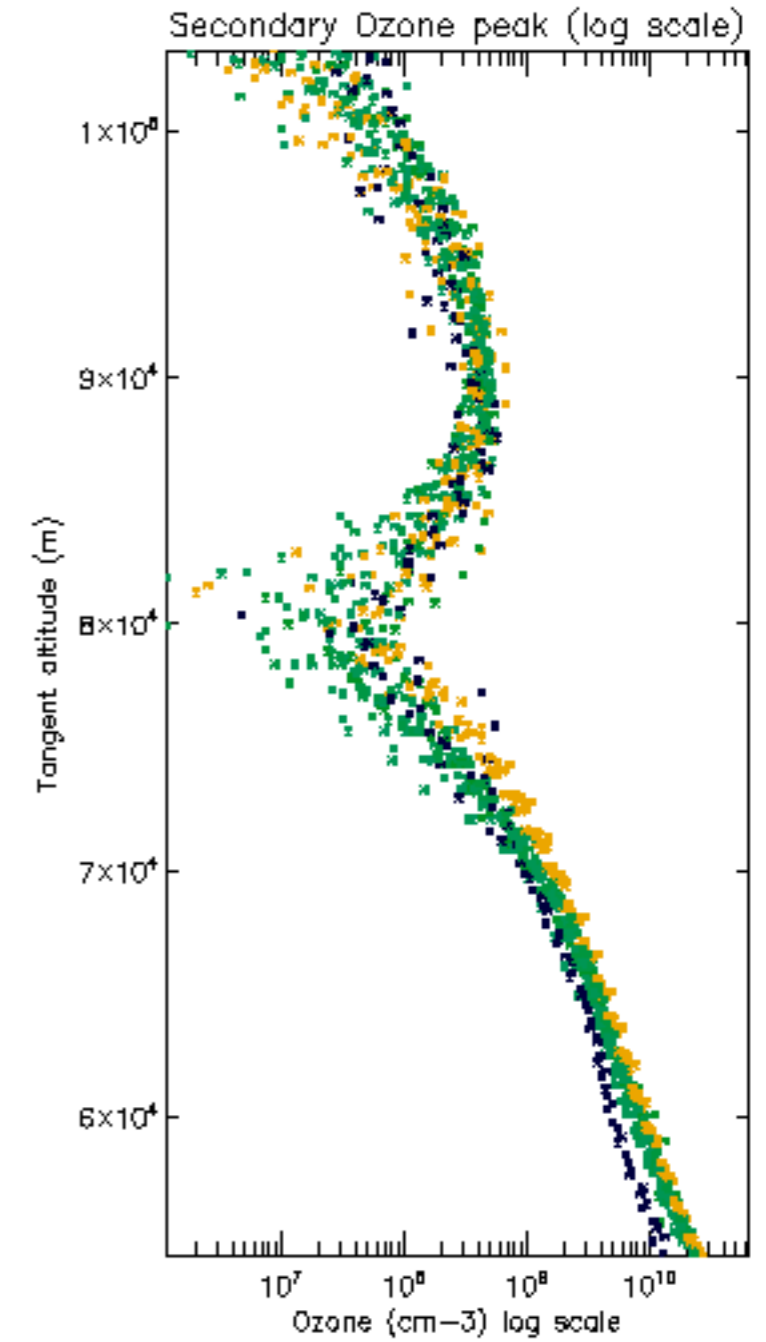
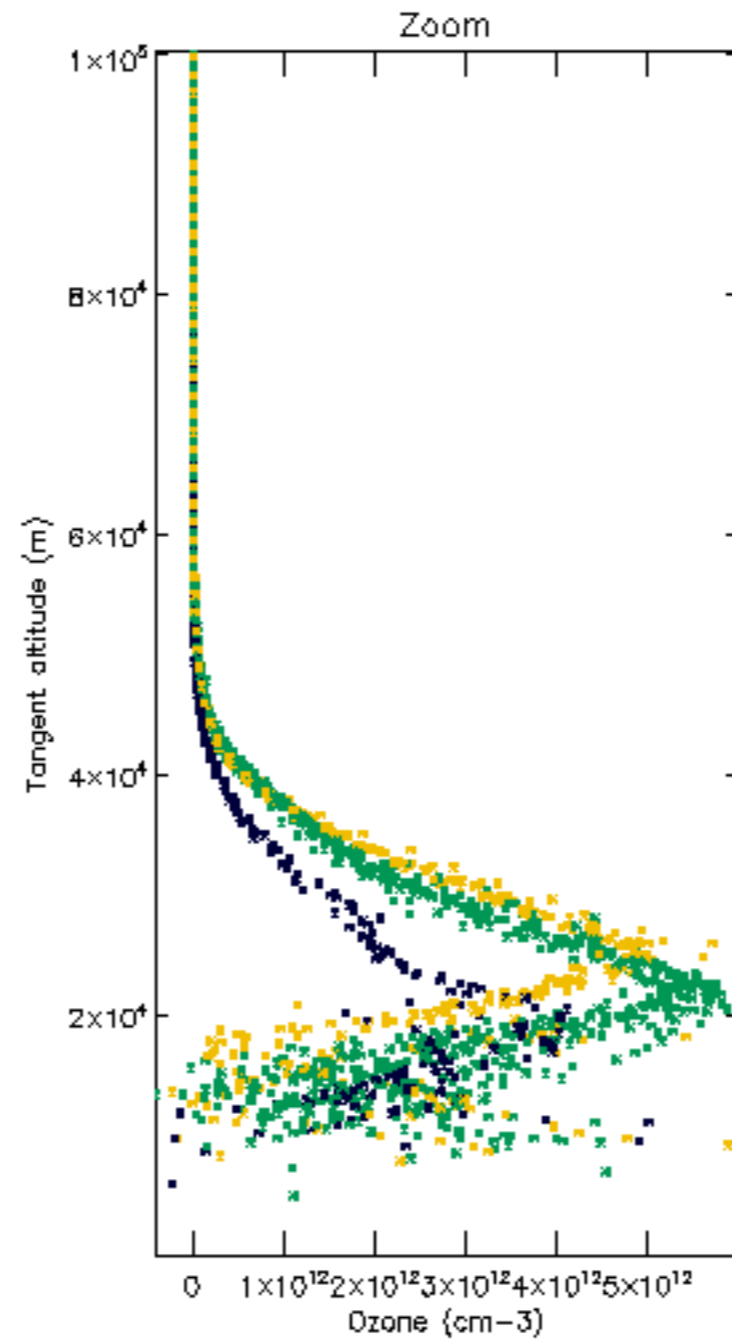
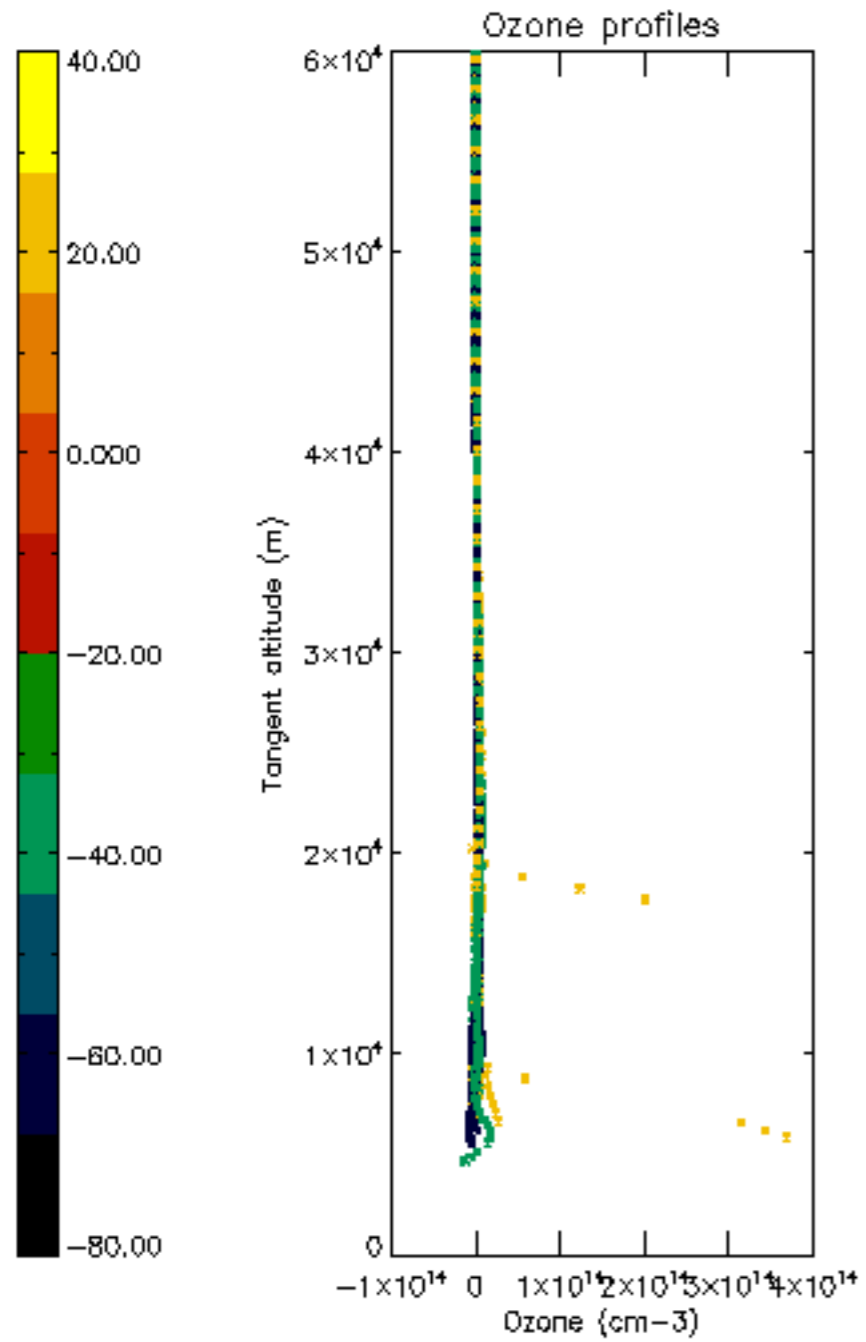


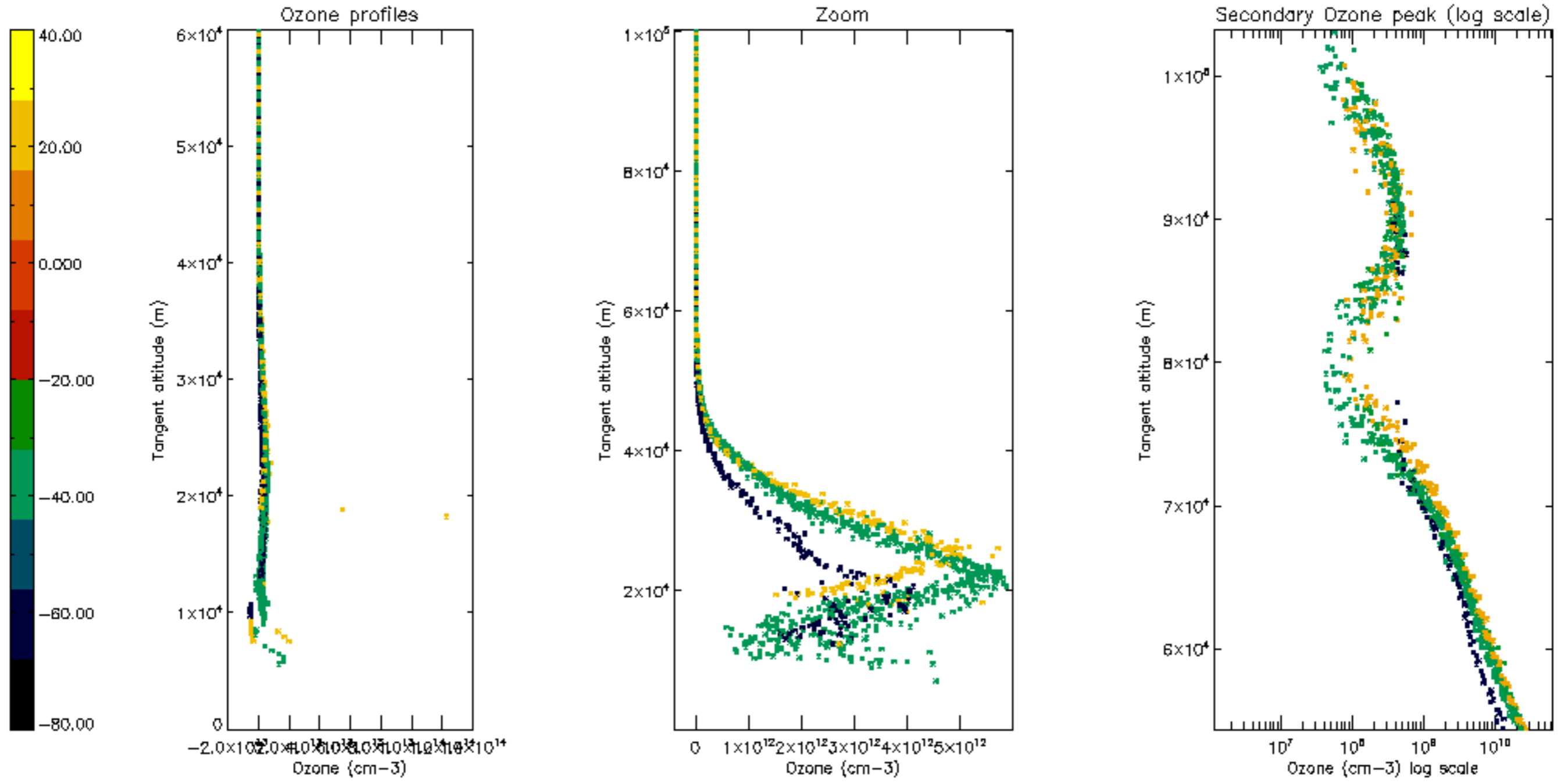
Percentage of star falling outside central band per profile



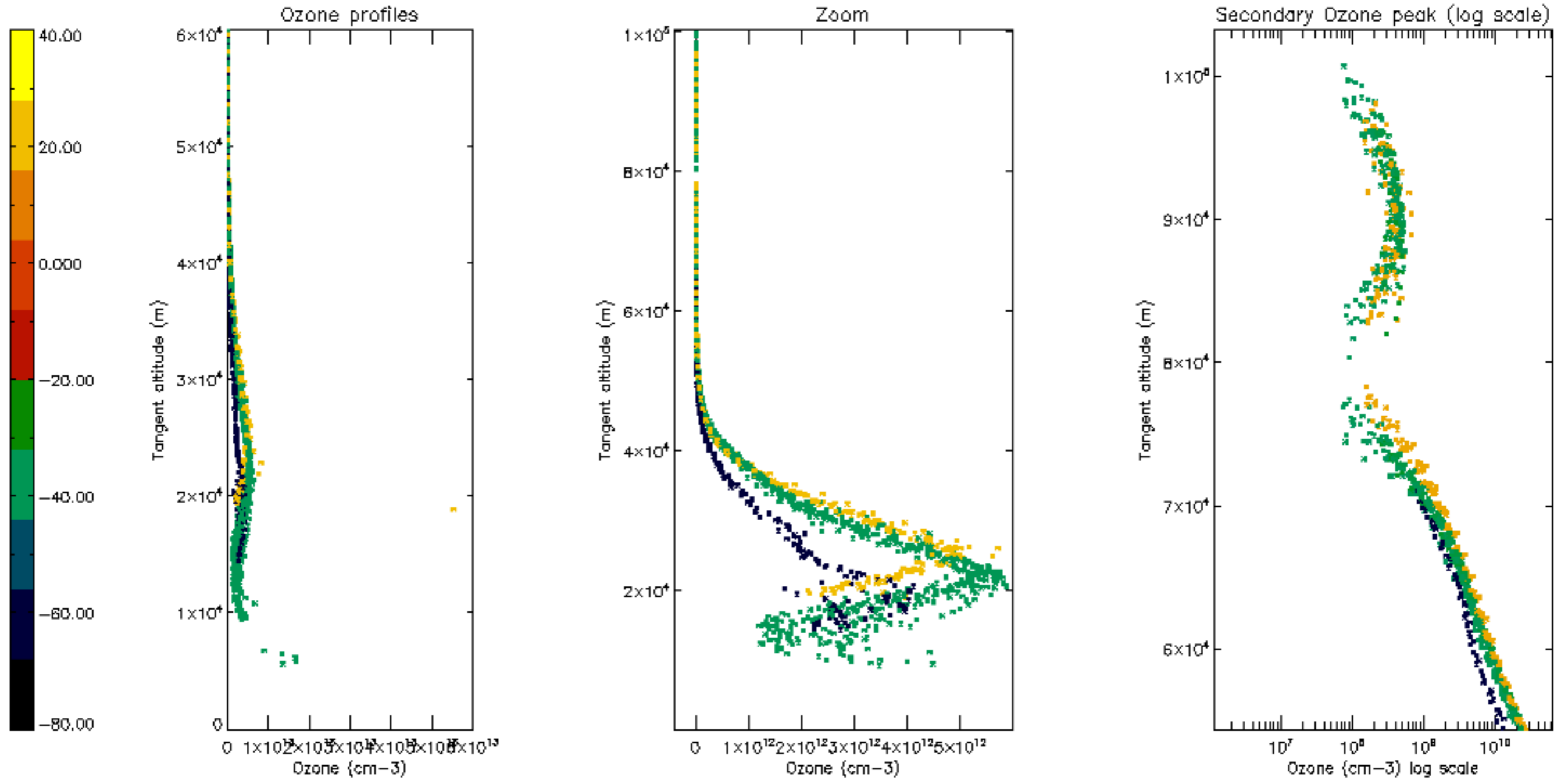
Percentage of saturation errors per profile

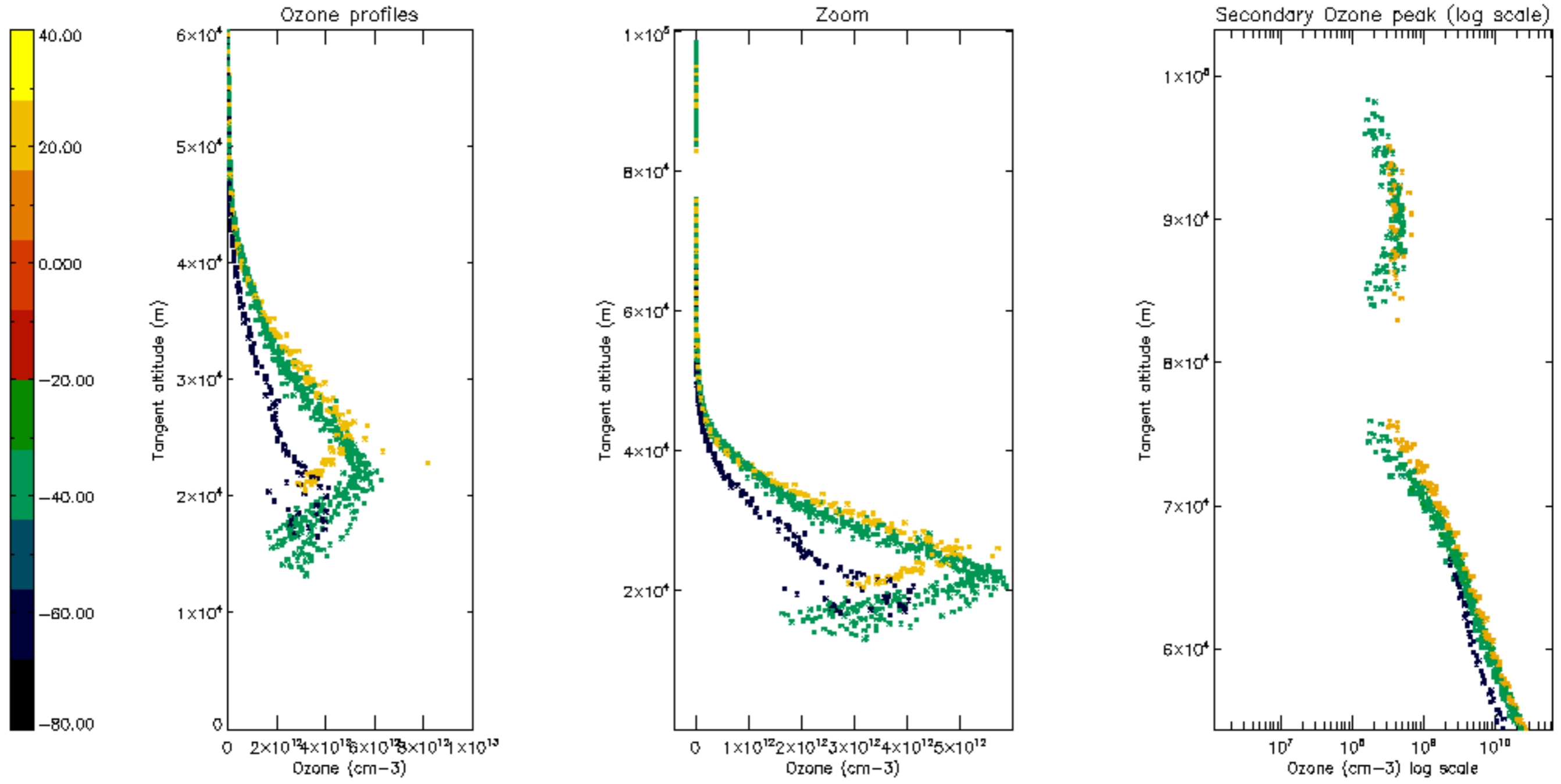


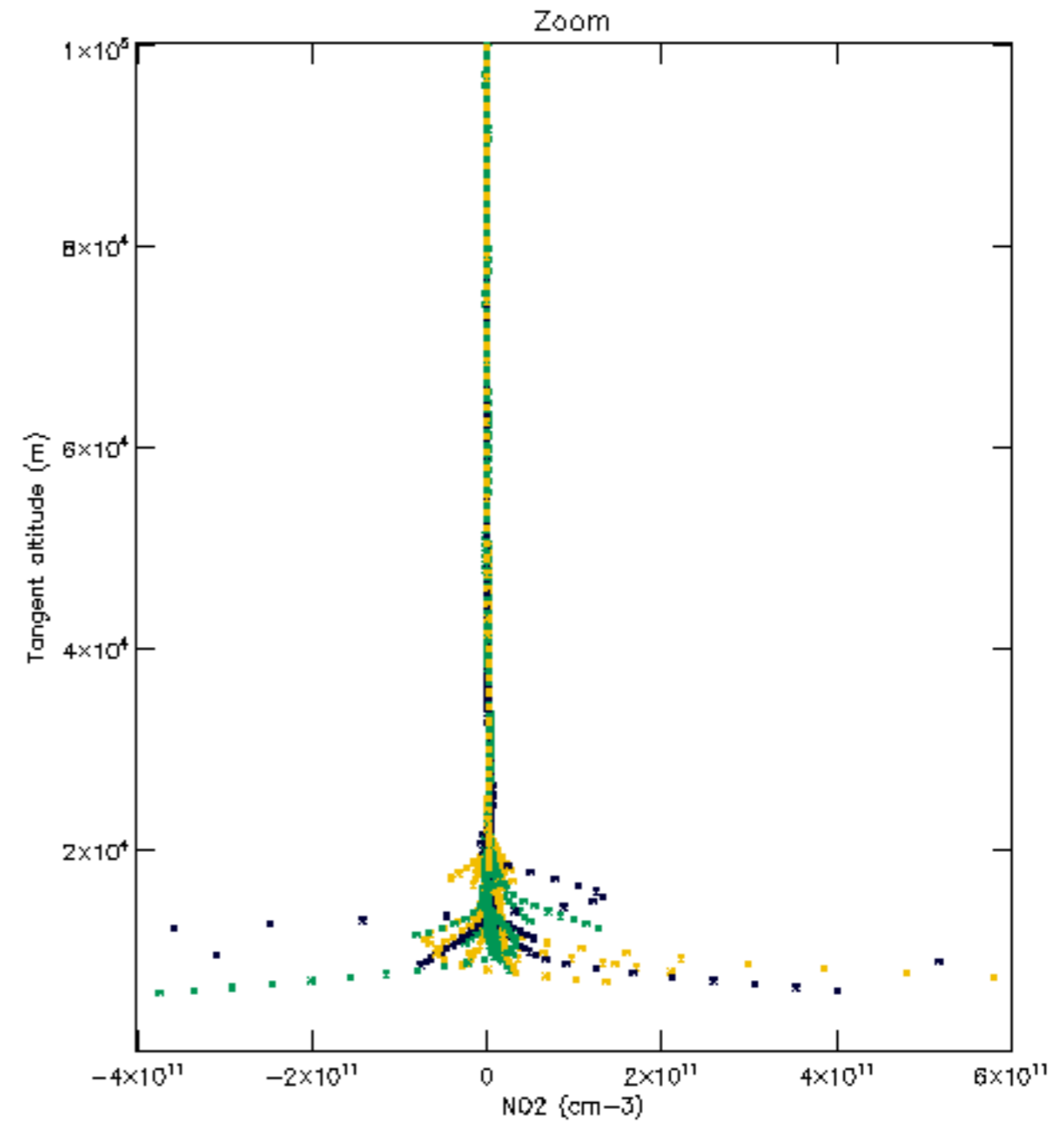
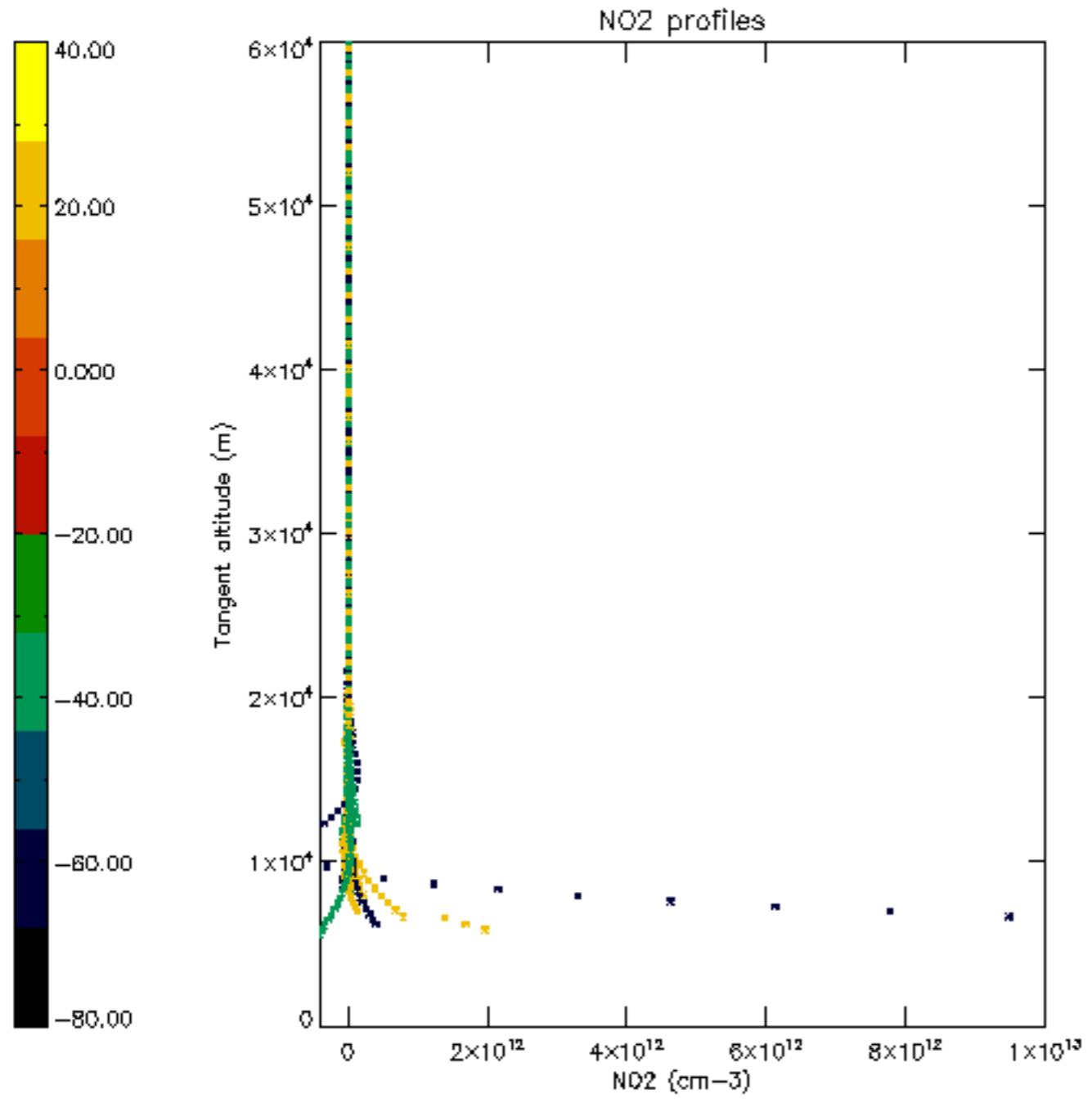


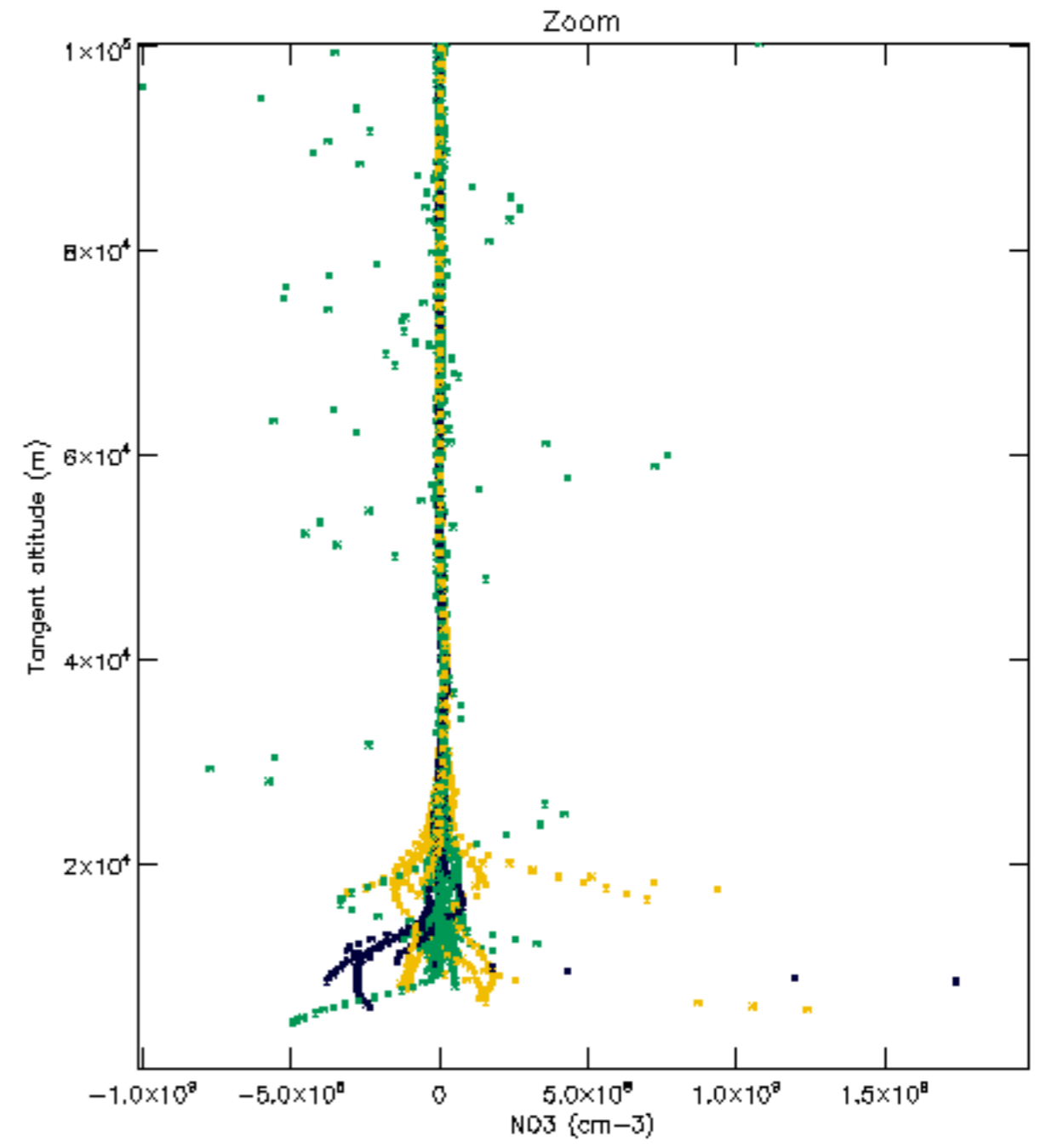
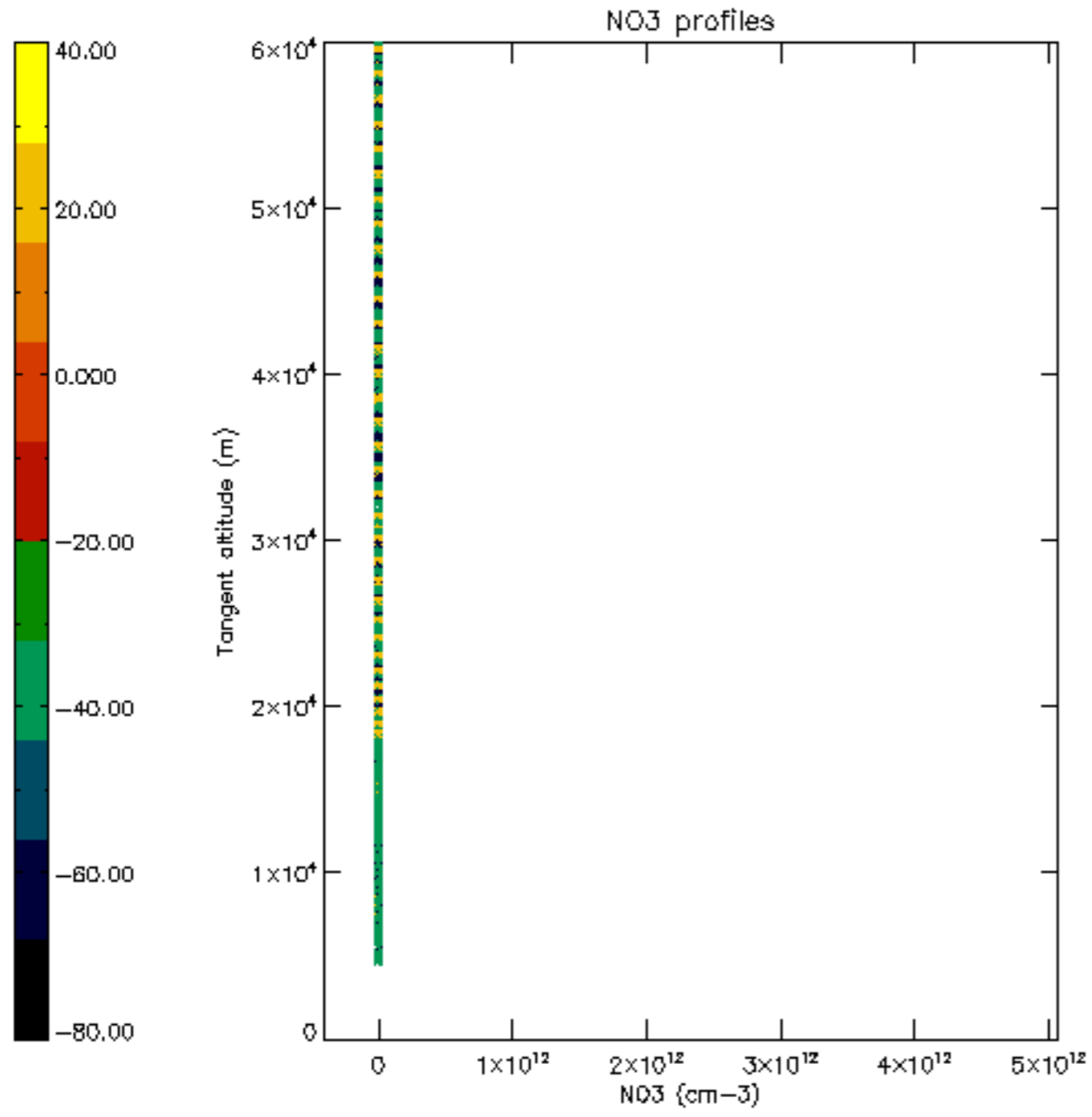


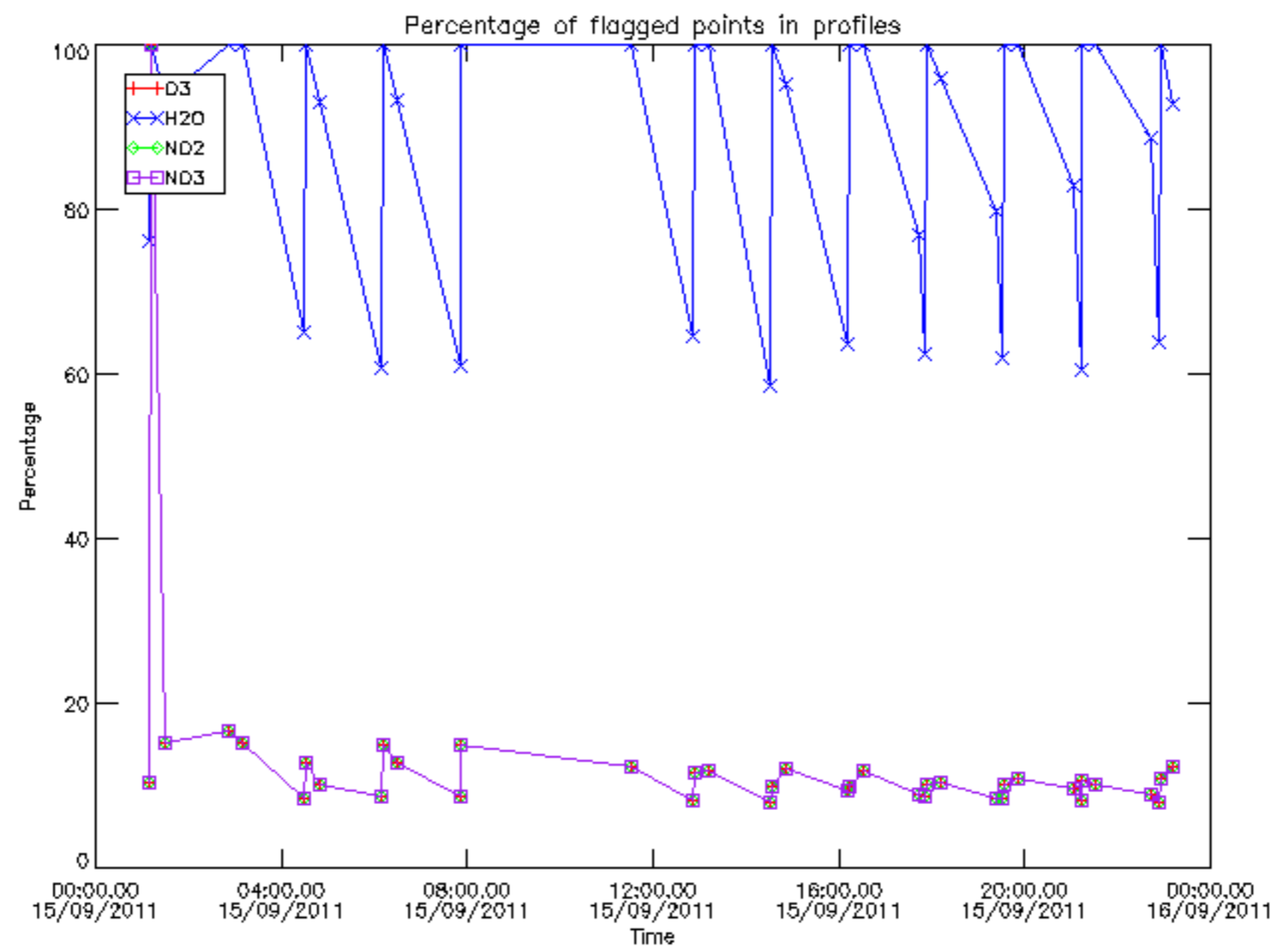




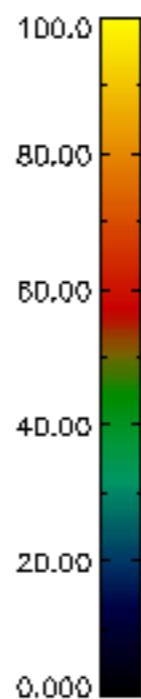
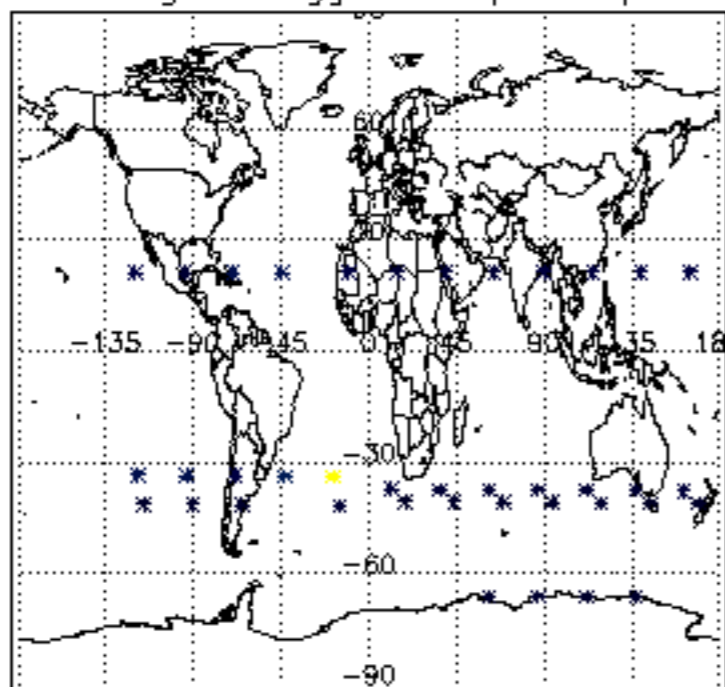




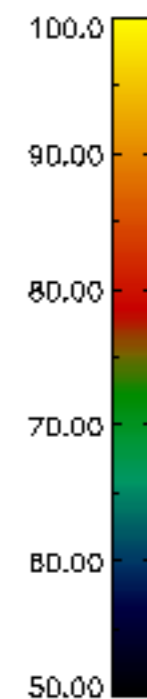
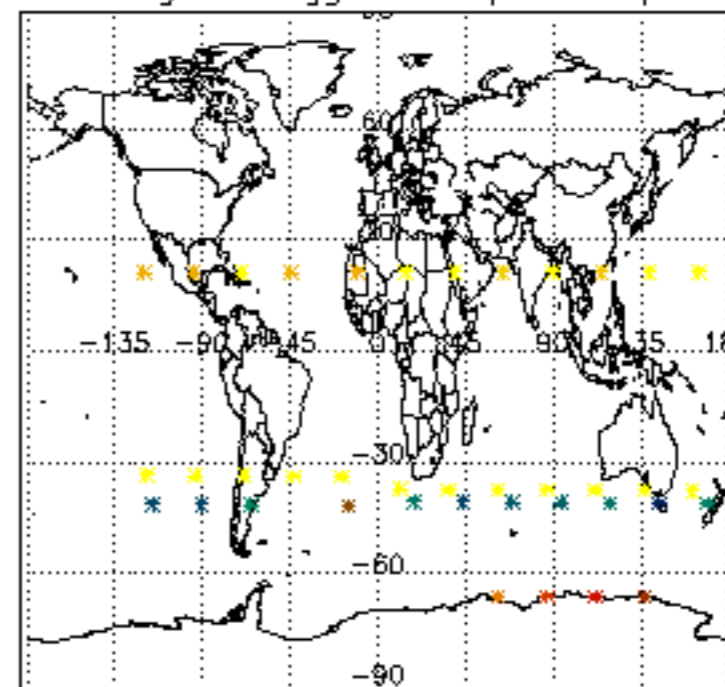




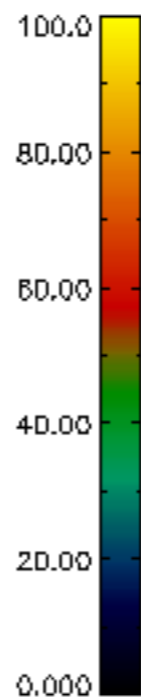
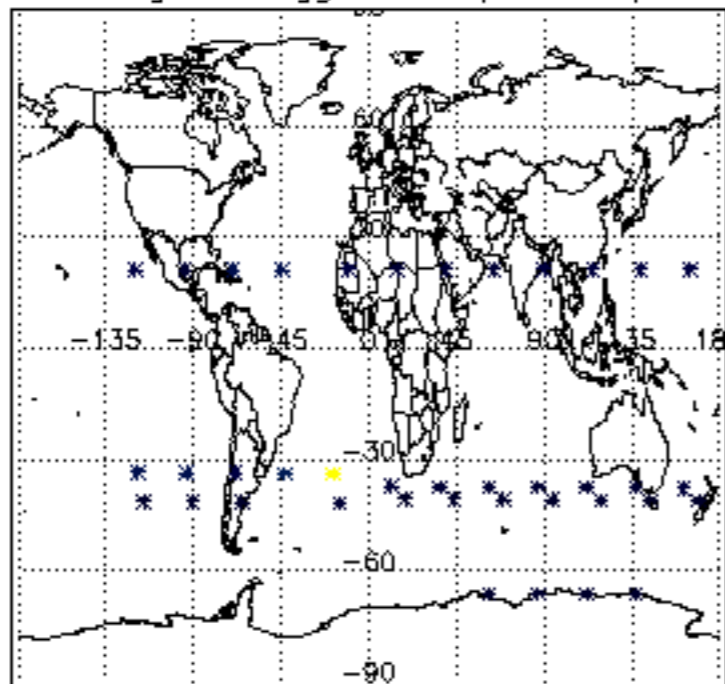
Percentage of flagged data per D3 profile



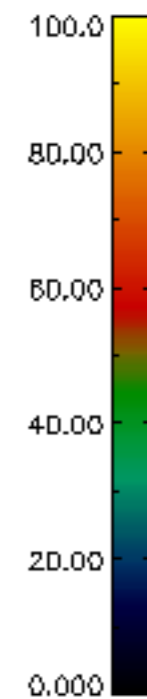
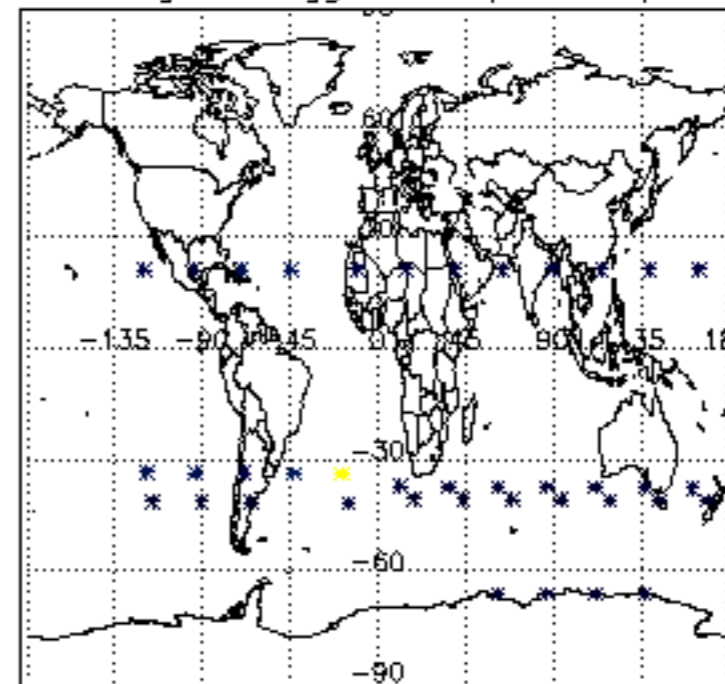
Percentage of flagged data per H2O profile

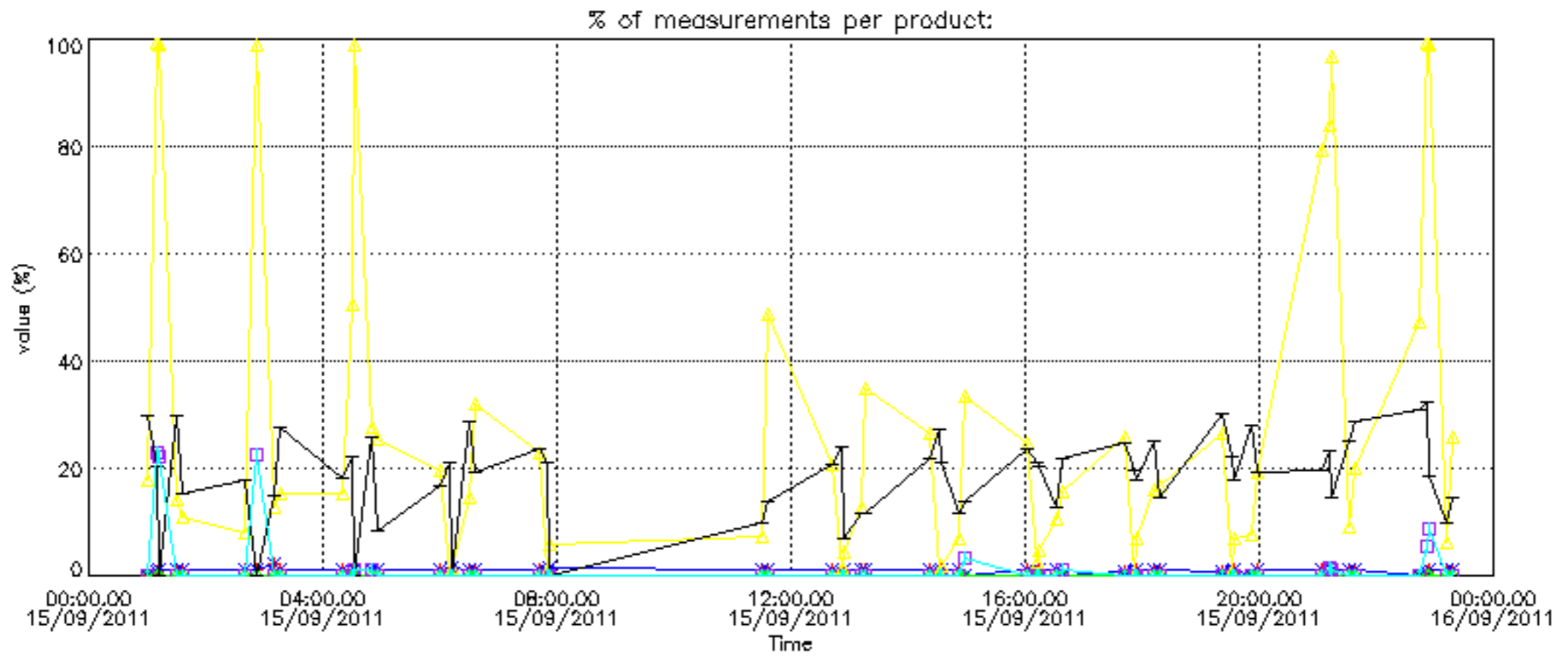


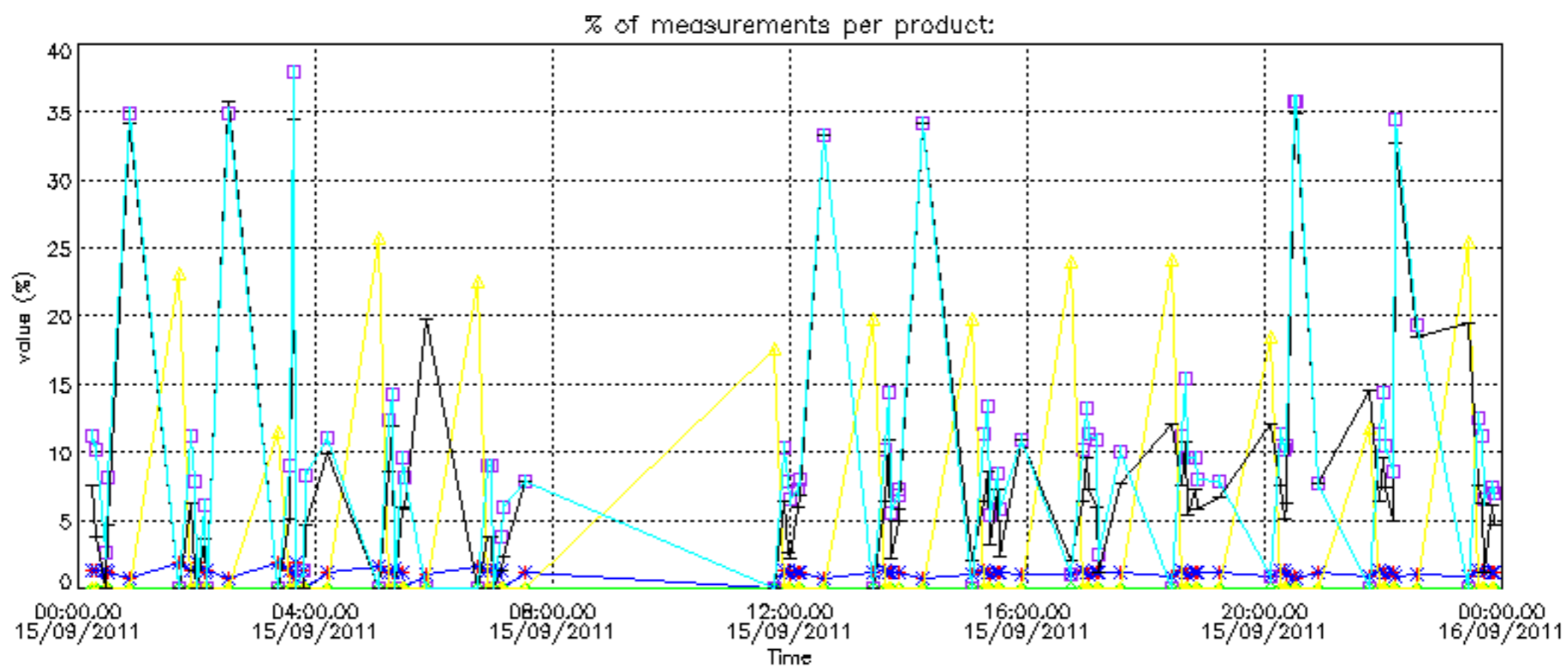
Percentage of flagged data per NO2 profile



Percentage of flagged data per NO3 profile

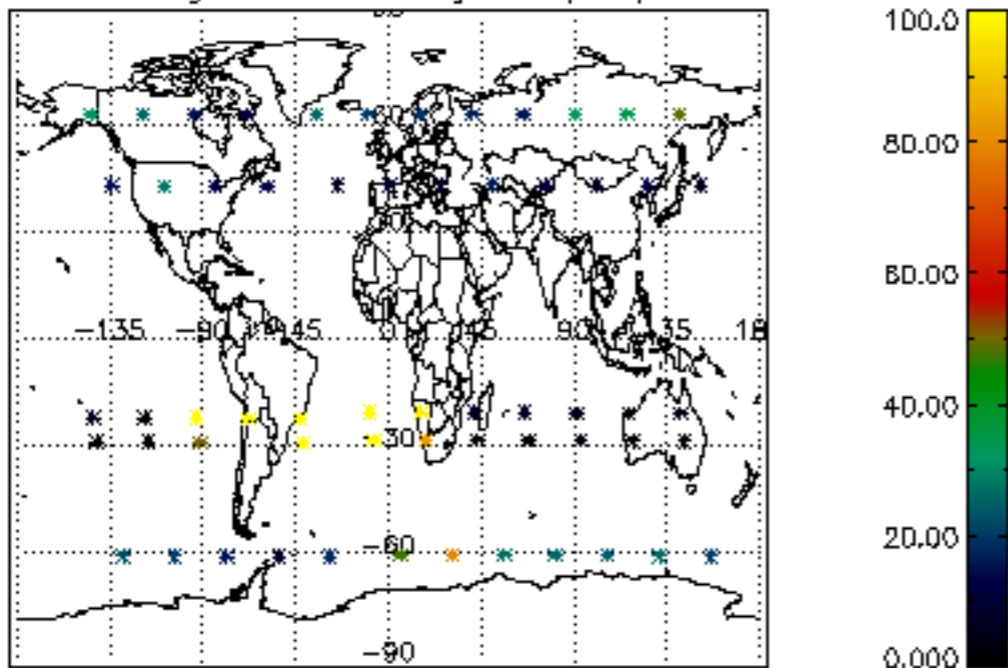




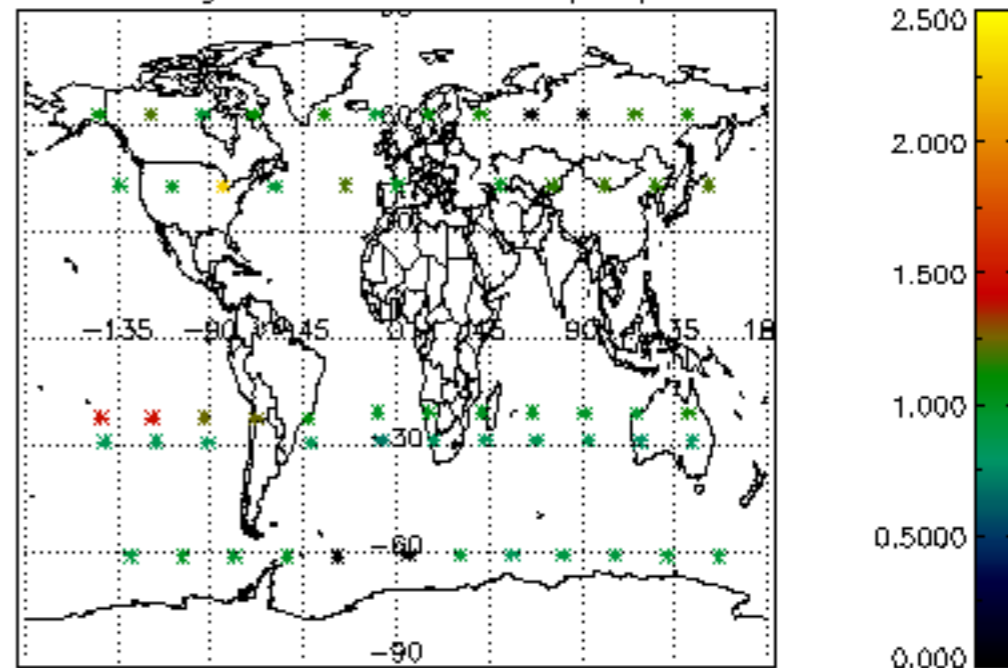




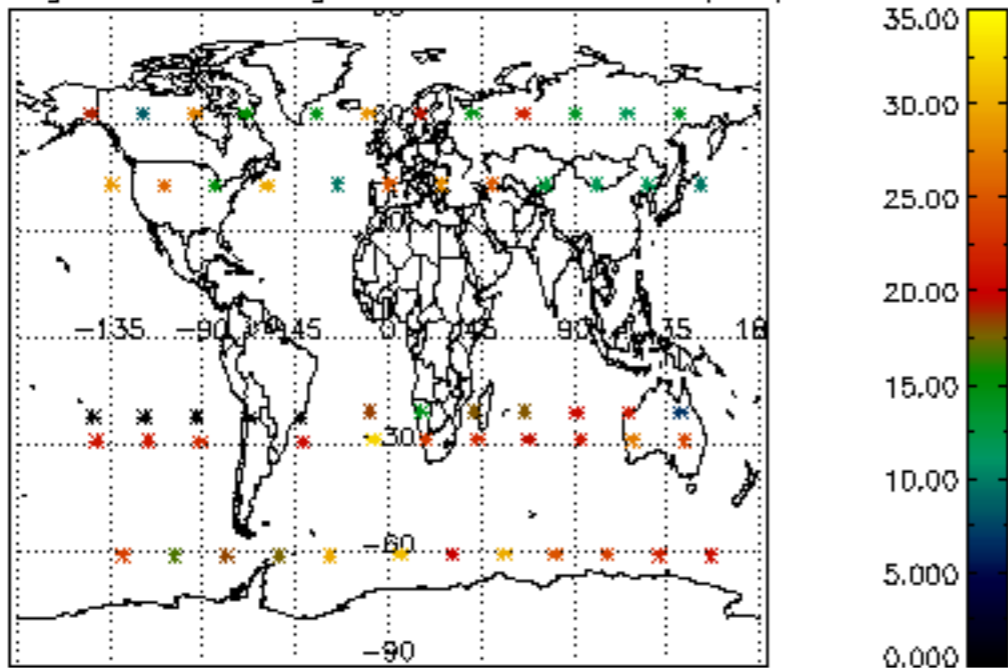
Percentage of cosmic ray hits per profile



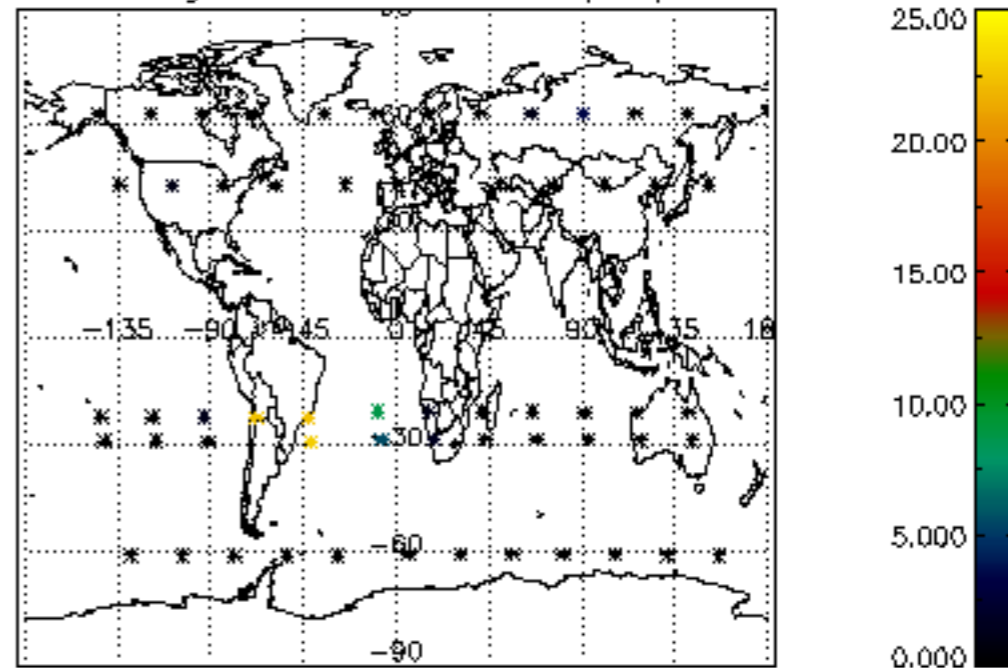
Percentage of datation errors per profile



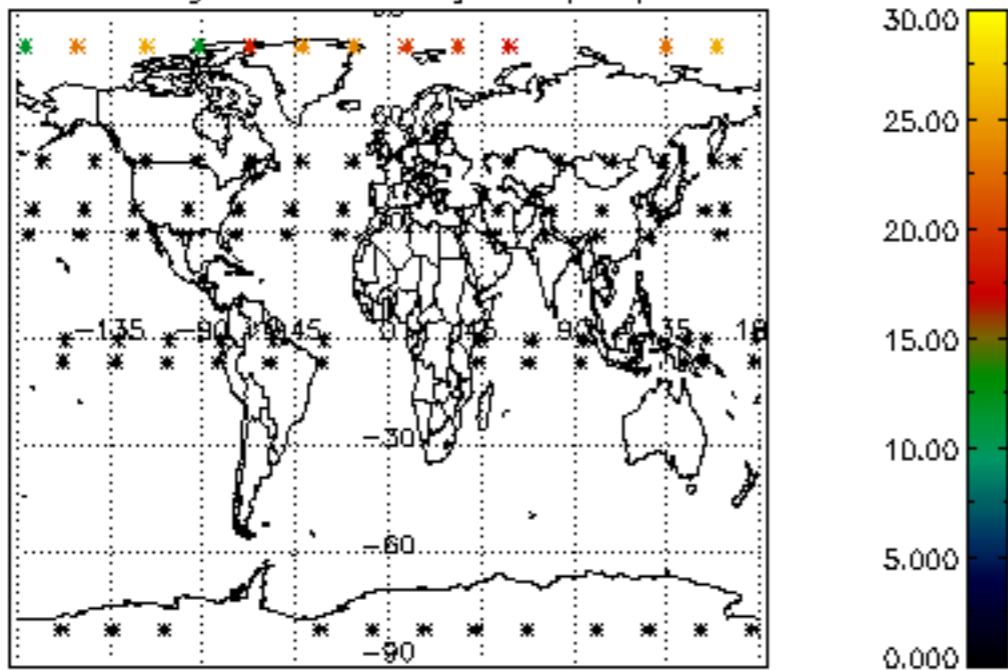
Percentage of star falling outside central band per profile



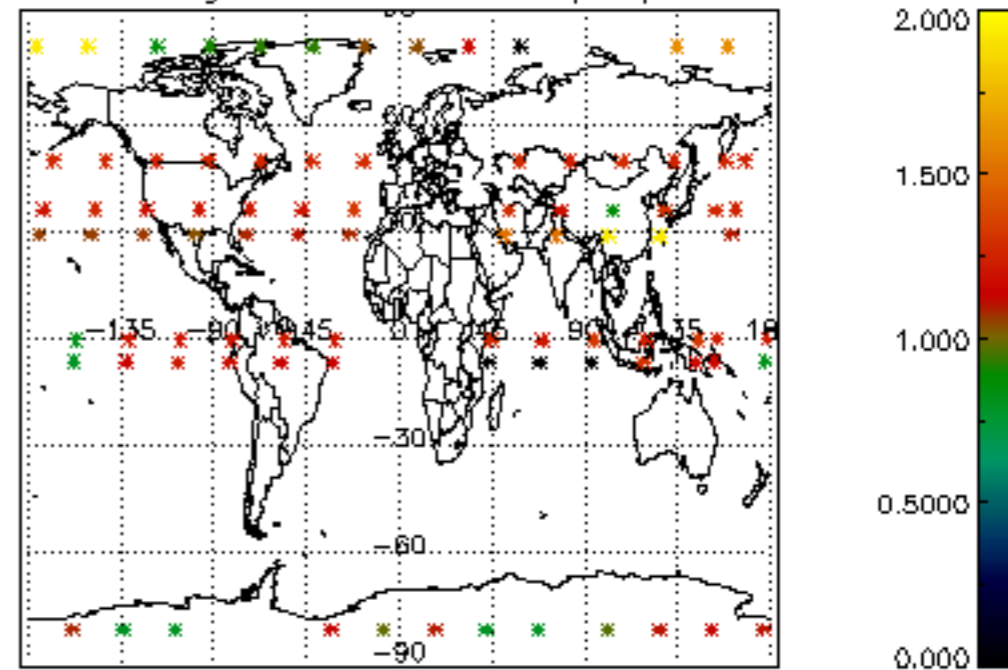
Percentage of saturation errors per profile



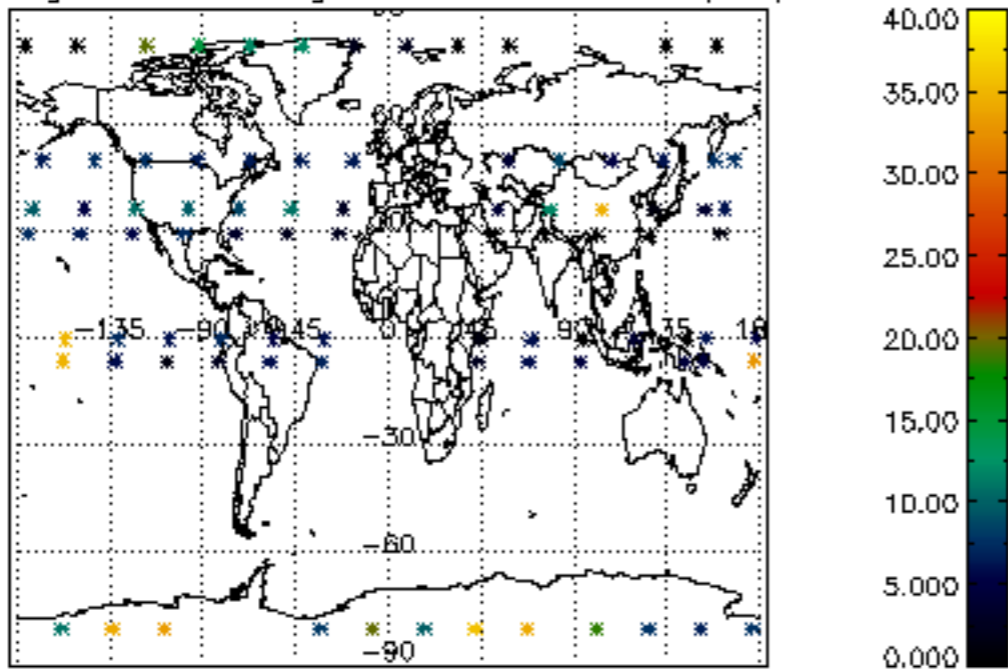
Percentage of cosmic ray hits per profile



Percentage of datation errors per profile



Percentage of star falling outside central band per profile



Percentage of saturation errors per profile

