

# GOMOS Daily Report 16-DEC-2011

## Level 0 and Level 1 products

### SUMMARY

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

#### [2. Summary of products arrived in PCF \(Product Control Facility\)](#)

[2.1 Level 0: products arrived in PCF during current month \(see template here\)](#)

[2.2 Level 0: plot of mission plan versus production during reporting period](#)

[2.3 Level 0: summary of missing occultations with respect to the plan](#)

[2.4 Level 1: products arrived in PCF during reporting period](#)

#### [3. Plot of Spectrometers and Photometers temperatures](#)

#### [4. Dark Charge monitoring](#)

[4.1 Products that did not use the Dark Sky Area observation for DC computation](#)

[4.2 Plot of Dark Charge](#)

#### [5. Demodulation correction and quality product information monitoring](#)

[5.1 Percentage of products with some flags set](#)

[5.2 Plot of quality information per product \(time dependant\)](#)

[5.3 Plot of quality information per product \(world map\)](#)

#### [6. Star tangent altitude lost](#)

[6.1 Statistics on star tangent altitude lost](#)

[6.2 Plot of star tangent altitude lost: DARK products](#)

[6.3 Plot of star tangent altitude lost: BRIGHT products](#)

[6.3 Plot of star tangent altitude lost: TWILIGHT products](#)

#### [7. Star Acquisition and Tracking Unit \(SATU\)](#)

[7.1 SATU plots \(dark limb\): 'X' and 'Y' axis](#)

[7.2 SATU Noise Equivalent Angle statistics](#)

[7.2.1 SATU NEA Statistics \(table\)](#)

[7.2.2 Daily SATU NEA STD \(dark limb\) - trend since 1st April 2006](#)

[8. Auxiliary Data Files used for the production reported in section 2.4](#)

## [Level 2 products](#)

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This report presents the daily analysis on parameters extracted from GOMOS level 1b data (GOM\_TRA\_1P). It is intended to monitor some important parameters that will impact the quality of the level 2 products as the Spectrometers and Photometers CCD Temperatures and Dark Charge, SATU noise equivalent angle... A list of level 0 products (and content) that have arrived during the actual month to the PCF is also given.

Item	Value
Time of report generation	22DEC2011 07:00:37
Data source version	GOMOS/6.01
Start time of products	16DEC2011 11:54:40
Stop time of products	16DEC2011 15:07:35
Store outputs in DB	Yes
Nb of level 1b prods	15
Nb of prods with errors	0

## 2. Summary of products arrived in PCF (Product Control Facility)

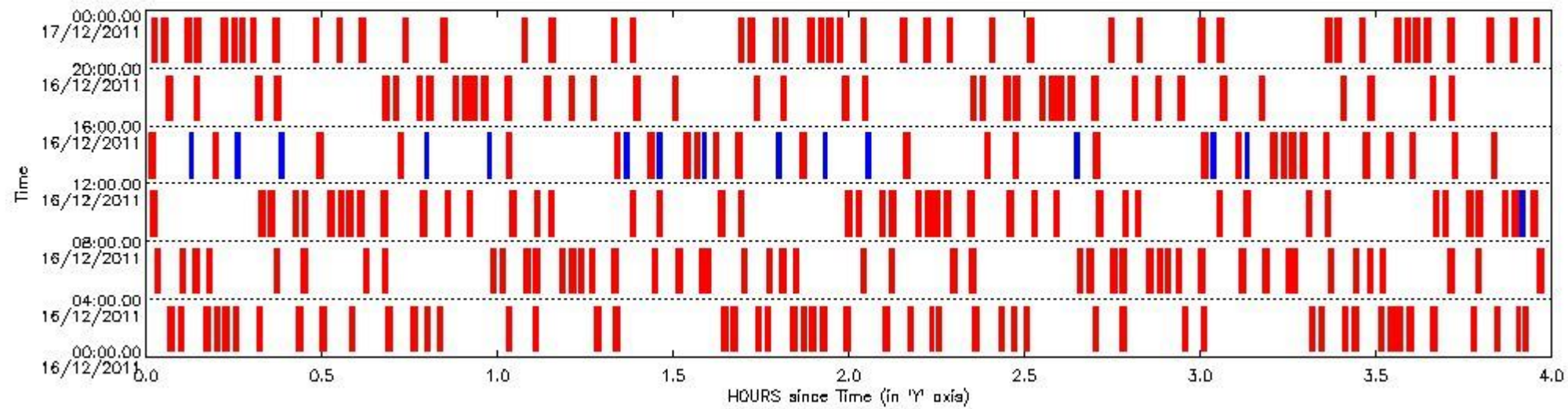
### 2.1 Level 0 products arrived in PCF (see template [here](#))

### 2.2 Plot of mission plan versus Level 0 production arrived in PCF during reporting period

Red segments are missing products.

Blue segments are available products.

Green segments are calibration measurements (not available products to users).



### 2.3 Summary of missing occultations (red segments in previous plot)

UTC start time	Star name	Star ID	Orbit
16-DEC-2011 00:03:45	GamCen	64	51236
16-DEC-2011 00:05:23	DelCen	99	51236
16-DEC-2011 00:09:52	TheCar	124	51236
16-DEC-2011 00:11:36	UpsCar	159	51236
16-DEC-2011 00:12:59	lotCar	71	51236
16-DEC-2011 00:14:52	EpsCar	41	51236
16-DEC-2011 00:18:48	DSA1055	0	51236
16-DEC-2011 00:25:40	AlpCol	108	51236
16-DEC-2011 00:29:45	9BetLep	139	51236
16-DEC-2011 00:34:35	67BetEri	128	51236
16-DEC-2011 00:40:55	87AlpTau	13	51236
16-DEC-2011 00:45:16	44ZetPer	150	51236
16-DEC-2011 00:47:32	45EpsPer	149	51236
16-DEC-2011 00:49:44	39DelPer	175	51236
16-DEC-2011 01:01:23	1AlpUMi	49	51236

16-DEC-2011 01:06:04	7BetUMi	60	51236
16-DEC-2011 01:16:37	27GamBoo	180	51236
16-DEC-2011 01:19:51		83	51236
16-DEC-2011 01:38:17	5TheCen	54	51237
16-DEC-2011 01:39:54	lotCen	123	51237
16-DEC-2011 01:44:00	GamCen	64	51237
16-DEC-2011 01:45:38	DelCen	99	51237
16-DEC-2011 01:50:07	TheCar	124	51237
16-DEC-2011 01:51:51	UpsCar	159	51237
16-DEC-2011 01:53:14	lotCar	71	51237
16-DEC-2011 01:55:07	EpsCar	41	51237
16-DEC-2011 01:59:03	DSA1055	0	51237
16-DEC-2011 02:05:54	AlpCol	108	51237
16-DEC-2011 02:09:59	9BetLep	139	51237
16-DEC-2011 02:13:52	19BetOri	7	51237
16-DEC-2011 02:14:49	67BetEri	128	51237
16-DEC-2011 02:21:09	87AlpTau	13	51237
16-DEC-2011 02:25:30	44ZetPer	150	51237
16-DEC-2011 02:27:46	45EpsPer	149	51237
16-DEC-2011 02:29:58	39DelPer	175	51237
16-DEC-2011 02:41:37	1AlpUMi	49	51237
16-DEC-2011 02:46:18	7BetUMi	60	51237
16-DEC-2011 02:56:51	27GamBoo	180	51237
16-DEC-2011 03:00:05		83	51237
16-DEC-2011 03:18:31	5TheCen	54	51238
16-DEC-2011 03:20:08	lotCen	123	51238
16-DEC-2011 03:24:14	GamCen	64	51238
16-DEC-2011 03:25:53	DelCen	99	51238
16-DEC-2011 03:30:21	TheCar	124	51238
16-DEC-2011 03:32:05	UpsCar	159	51238
16-DEC-2011 03:33:28	lotCar	71	51238
16-DEC-2011 03:35:21	EpsCar	41	51238
16-DEC-2011 03:39:17	DSA1055	0	51238
16-DEC-2011 03:46:08	AlpCol	108	51238
16-DEC-2011 03:50:13	9BetLep	139	51238
16-DEC-2011 03:54:06	19BetOri	7	51238
16-DEC-2011 03:55:03	67BetEri	128	51238
16-DEC-2011 04:01:23	87AlpTau	13	51238
16-DEC-2011 04:05:44	44ZetPer	150	51238
16-DEC-2011 04:08:00	45EpsPer	149	51238
16-DEC-2011 04:10:12	39DelPer	175	51238
16-DEC-2011 04:21:51	1AlpUMi	49	51238
16-DEC-2011 04:26:32	7BetUMi	60	51238
16-DEC-2011 04:37:05	27GamBoo	180	51238
16-DEC-2011 04:40:19		83	51238
16-DEC-2011 04:58:46	5TheCen	54	51239
16-DEC-2011 05:00:23	lotCen	123	51239
16-DEC-2011 05:04:29	GamCen	64	51239
16-DEC-2011 05:06:07	DelCen	99	51239
16-DEC-2011 05:10:36	TheCar	124	51239
16-DEC-2011 05:12:20	UpsCar	159	51239
16-DEC-2011 05:13:43	lotCar	71	51239
16-DEC-2011 05:15:36	EpsCar	41	51239
16-DEC-2011 05:19:32	DSA1055	0	51239
16-DEC-2011 05:26:23	AlpCol	108	51239
16-DEC-2011 05:30:27	9BetLep	139	51239
16-DEC-2011 05:34:20	19BetOri	7	51239
16-DEC-2011 05:35:17	67BetEri	128	51239
16-DEC-2011 05:41:37	87AlpTau	13	51239

16-DEC-2011 05:45:58	44ZetPer	150	51239
16-DEC-2011 05:48:14	45EpsPer	149	51239
16-DEC-2011 05:50:26	39DelPer	175	51239
16-DEC-2011 06:02:05	1AlpUMi	49	51239
16-DEC-2011 06:06:46	7BetUMi	60	51239
16-DEC-2011 06:17:19	27GamBoo	180	51239
16-DEC-2011 06:20:33		83	51239
16-DEC-2011 06:39:00	5TheCen	54	51240
16-DEC-2011 06:40:37	lotCen	123	51240
16-DEC-2011 06:44:43	GamCen	64	51240
16-DEC-2011 06:46:22	DelCen	99	51240
16-DEC-2011 06:50:50	TheCar	124	51240
16-DEC-2011 06:52:34	UpsCar	159	51240
16-DEC-2011 06:53:57	lotCar	71	51240
16-DEC-2011 06:55:50	EpsCar	41	51240
16-DEC-2011 06:59:46	DSA1055	0	51240
16-DEC-2011 07:06:37	AlpCol	108	51240
16-DEC-2011 07:10:41	9BetLep	139	51240
16-DEC-2011 07:14:34	19BetOri	7	51240
16-DEC-2011 07:15:31	67BetEri	128	51240
16-DEC-2011 07:21:51	87AlpTau	13	51240
16-DEC-2011 07:26:12	44ZetPer	150	51240
16-DEC-2011 07:28:28	45EpsPer	149	51240
16-DEC-2011 07:30:40	39DelPer	175	51240
16-DEC-2011 07:42:19	1AlpUMi	49	51240
16-DEC-2011 07:47:00	7BetUMi	60	51240
16-DEC-2011 07:57:33	27GamBoo	180	51240
16-DEC-2011 08:00:47		83	51240
16-DEC-2011 08:19:15	5TheCen	54	51241
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16-DEC-2011 08:24:58	GamCen	64	51241
16-DEC-2011 08:26:37	DelCen	99	51241
16-DEC-2011 08:31:04	TheCar	124	51241
16-DEC-2011 08:32:49	UpsCar	159	51241
16-DEC-2011 08:34:12	lotCar	71	51241
16-DEC-2011 08:36:05	EpsCar	41	51241
16-DEC-2011 08:40:01	DSA1055	0	51241
16-DEC-2011 08:46:51	AlpCol	108	51241
16-DEC-2011 08:50:55	9BetLep	139	51241
16-DEC-2011 08:54:48	19BetOri	7	51241
16-DEC-2011 09:02:05	87AlpTau	13	51241
16-DEC-2011 09:06:26	44ZetPer	150	51241
16-DEC-2011 09:08:42	45EpsPer	149	51241
16-DEC-2011 09:22:33	1AlpUMi	49	51241
16-DEC-2011 09:27:14	7BetUMi	60	51241
16-DEC-2011 09:37:47	27GamBoo	180	51241
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16-DEC-2011 09:59:29	5TheCen	54	51242
16-DEC-2011 10:01:07	lotCen	123	51242
16-DEC-2011 10:05:12	GamCen	64	51242
16-DEC-2011 10:06:51	DelCen	99	51242
16-DEC-2011 10:11:19	TheCar	124	51242
16-DEC-2011 10:13:03	UpsCar	159	51242
16-DEC-2011 10:14:26	lotCar	71	51242
16-DEC-2011 10:16:19	EpsCar	41	51242
16-DEC-2011 10:20:15	DSA1055	0	51242
16-DEC-2011 10:27:05	AlpCol	108	51242
16-DEC-2011 10:31:09	9BetLep	139	51242
16-DEC-2011 10:35:02	19BetOri	7	51242

16-DEC-2011 10:42:19	87AlpTau	13	51242
16-DEC-2011 10:46:50	44ZetPer	150	51242
16-DEC-2011 10:48:56	45EpsPer	149	51242
16-DEC-2011 11:02:47	1AlpUMi	49	51242
16-DEC-2011 11:07:28	7BetUMi	60	51242
16-DEC-2011 11:18:01	27GamBoo	180	51242
16-DEC-2011 11:21:15		83	51242
16-DEC-2011 11:39:43	5TheCen	54	51243
16-DEC-2011 11:41:21	lotCen	123	51243
16-DEC-2011 11:45:27	GamCen	64	51243
16-DEC-2011 11:47:06	DelCen	99	51243
16-DEC-2011 11:51:33	TheCar	124	51243
16-DEC-2011 11:53:17	UpsCar	159	51243
16-DEC-2011 11:56:33	EpsCar	41	51243
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16-DEC-2011 12:11:23	9BetLep	139	51243
16-DEC-2011 12:29:10	45EpsPer	149	51243
16-DEC-2011 12:43:01	1AlpUMi	49	51243
16-DEC-2011 13:01:30		83	51243
16-DEC-2011 13:19:58	5TheCen	54	51244
16-DEC-2011 13:25:42	GamCen	64	51244
16-DEC-2011 13:31:48	TheCar	124	51244
16-DEC-2011 13:33:32	UpsCar	159	51244
16-DEC-2011 13:36:48	EpsCar	41	51244
16-DEC-2011 13:40:44	DSA1055	0	51244
16-DEC-2011 13:51:37	9BetLep	139	51244
16-DEC-2011 14:09:24	45EpsPer	149	51244
16-DEC-2011 14:23:15	1AlpUMi	49	51244
16-DEC-2011 14:27:56	7BetUMi	60	51244
16-DEC-2011 14:41:44		83	51244
16-DEC-2011 15:00:12	5TheCen	54	51245
16-DEC-2011 15:05:56	GamCen	64	51245
16-DEC-2011 15:12:02	TheCar	124	51245
16-DEC-2011 15:13:46	UpsCar	159	51245
16-DEC-2011 15:15:10	lotCar	71	51245
16-DEC-2011 15:17:02	EpsCar	41	51245
16-DEC-2011 15:20:58	DSA1055	0	51245
16-DEC-2011 15:27:48	AlpCol	108	51245
16-DEC-2011 15:31:52	9BetLep	139	51245
16-DEC-2011 15:35:44	19BetOri	7	51245
16-DEC-2011 15:43:00	87AlpTau	13	51245
16-DEC-2011 15:49:38	45EpsPer	149	51245
16-DEC-2011 16:03:29	1AlpUMi	49	51245
16-DEC-2011 16:08:10	7BetUMi	60	51245
16-DEC-2011 16:18:43	27GamBoo	180	51245
16-DEC-2011 16:21:58		83	51245
16-DEC-2011 16:40:27	5TheCen	54	51246
16-DEC-2011 16:42:05	lotCen	123	51246
16-DEC-2011 16:46:11	GamCen	64	51246
16-DEC-2011 16:47:50	DelCen	99	51246
16-DEC-2011 16:52:17	TheCar	124	51246
16-DEC-2011 16:54:01	UpsCar	159	51246
16-DEC-2011 16:55:24	lotCar	71	51246
16-DEC-2011 16:57:17	EpsCar	41	51246
16-DEC-2011 17:01:13	DSA1055	0	51246
16-DEC-2011 17:08:02	AlpCol	108	51246
16-DEC-2011 17:12:06	9BetLep	139	51246
16-DEC-2011 17:15:58	19BetOri	7	51246
16-DEC-2011 17:23:14	87AlpTau	13	51246

16-DEC-2011 17:29:52	45EpsPer	149	51246
16-DEC-2011 17:43:43	1AlpUMi	49	51246
16-DEC-2011 17:48:24	7BetUMi	60	51246
16-DEC-2011 17:58:57	27GamBoo	180	51246
16-DEC-2011 18:02:12		83	51246
16-DEC-2011 18:20:41	5TheCen	54	51247
16-DEC-2011 18:22:20	lotCen	123	51247
16-DEC-2011 18:26:25	GamCen	64	51247
16-DEC-2011 18:28:05	DelCen	99	51247
16-DEC-2011 18:32:31	TheCar	124	51247
16-DEC-2011 18:34:15	UpsCar	159	51247
16-DEC-2011 18:35:39	lotCar	71	51247
16-DEC-2011 18:37:31	EpsCar	41	51247
16-DEC-2011 18:41:27	DSA1055	0	51247
16-DEC-2011 18:48:16	AlpCol	108	51247
16-DEC-2011 18:52:20	9BetLep	139	51247
16-DEC-2011 18:56:12	19BetOri	7	51247
16-DEC-2011 19:03:28	87AlpTau	13	51247
16-DEC-2011 19:10:06	45EpsPer	149	51247
16-DEC-2011 19:23:57	1AlpUMi	49	51247
16-DEC-2011 19:28:37	7BetUMi	60	51247
16-DEC-2011 19:39:11	27GamBoo	180	51247
16-DEC-2011 19:42:26		83	51247
16-DEC-2011 20:00:55	5TheCen	54	51248
16-DEC-2011 20:02:34	lotCen	123	51248
16-DEC-2011 20:06:40	GamCen	64	51248
16-DEC-2011 20:08:19	DelCen	99	51248
16-DEC-2011 20:12:46	TheCar	124	51248
16-DEC-2011 20:14:30	UpsCar	159	51248
16-DEC-2011 20:15:54	lotCar	71	51248
16-DEC-2011 20:17:46	EpsCar	41	51248
16-DEC-2011 20:21:42	DSA1055	0	51248
16-DEC-2011 20:28:30	AlpCol	108	51248
16-DEC-2011 20:32:34	9BetLep	139	51248
16-DEC-2011 20:36:26	19BetOri	7	51248
16-DEC-2011 20:43:42	87AlpTau	13	51248
16-DEC-2011 20:50:20	45EpsPer	149	51248
16-DEC-2011 21:04:11	1AlpUMi	49	51248
16-DEC-2011 21:08:51	7BetUMi	60	51248
16-DEC-2011 21:19:25	27GamBoo	180	51248
16-DEC-2011 21:22:40		83	51248
16-DEC-2011 21:41:10	5TheCen	54	51249
16-DEC-2011 21:42:49	lotCen	123	51249
16-DEC-2011 21:46:55	GamCen	64	51249
16-DEC-2011 21:48:34	DelCen	99	51249
16-DEC-2011 21:53:00	TheCar	124	51249
16-DEC-2011 21:54:44	UpsCar	159	51249
16-DEC-2011 21:56:08	lotCar	71	51249
16-DEC-2011 21:58:00	EpsCar	41	51249
16-DEC-2011 22:01:56	DSA1055	0	51249
16-DEC-2011 22:08:45	AlpCol	108	51249
16-DEC-2011 22:12:48	9BetLep	139	51249
16-DEC-2011 22:16:40	19BetOri	7	51249
16-DEC-2011 22:23:56	87AlpTau	13	51249
16-DEC-2011 22:30:34	45EpsPer	149	51249
16-DEC-2011 22:44:25	1AlpUMi	49	51249
16-DEC-2011 22:49:05	7BetUMi	60	51249
16-DEC-2011 22:59:39	27GamBoo	180	51249
16-DEC-2011 23:02:54		83	51249

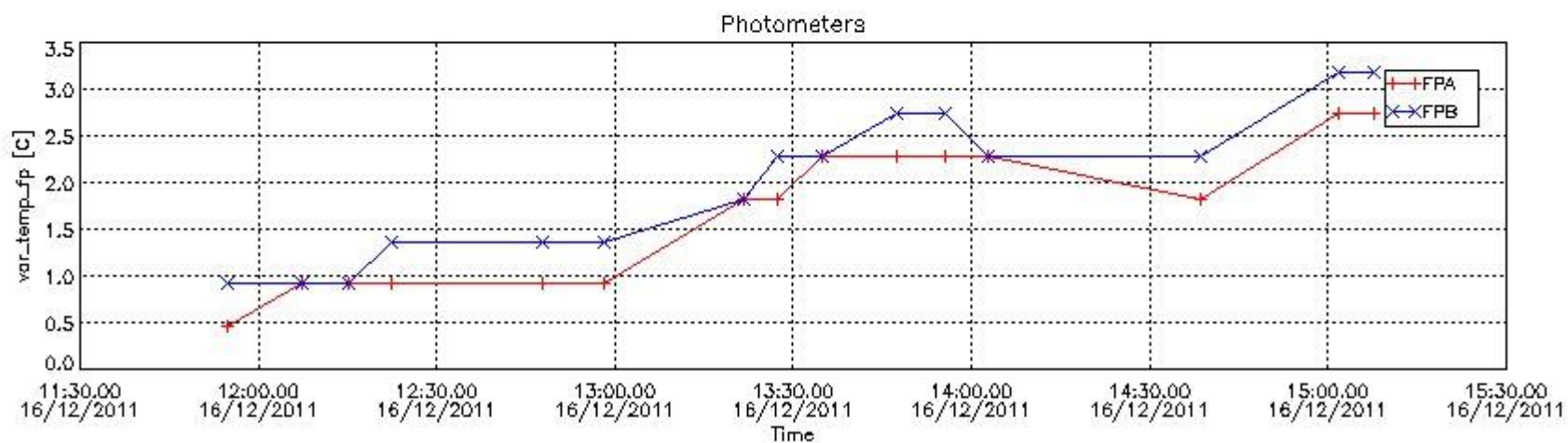
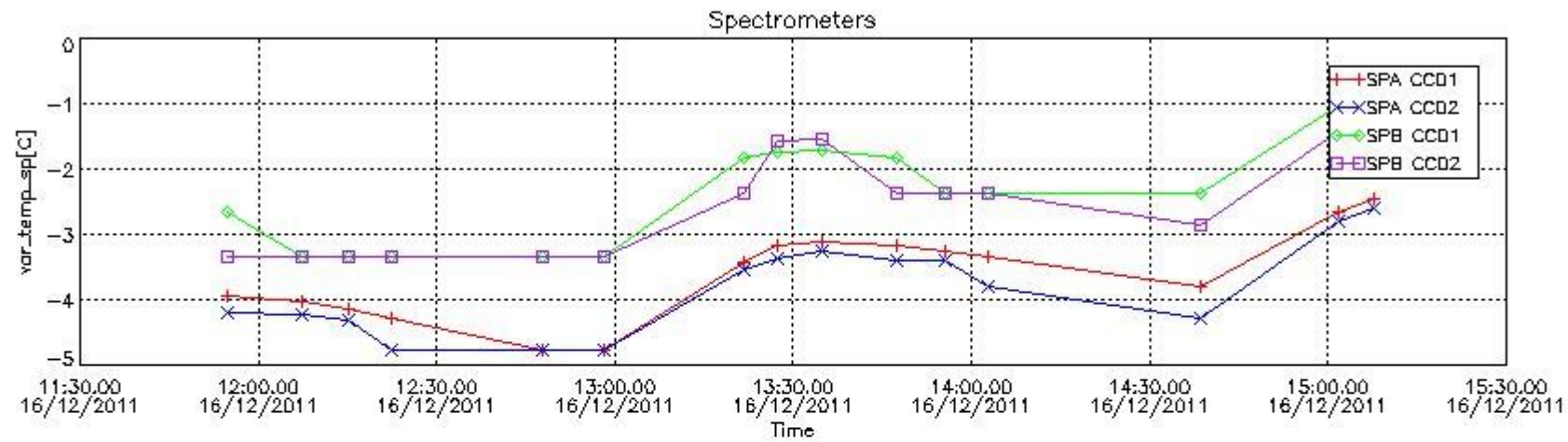


16-DEC-2011 23:21:24	5TheCen	54	51250
16-DEC-2011 23:23:03	lotCen	123	51250
16-DEC-2011 23:27:09	GamCen	64	51250
16-DEC-2011 23:33:15	TheCar	124	51250
16-DEC-2011 23:34:59	UpsCar	159	51250
16-DEC-2011 23:36:23	lotCar	71	51250
16-DEC-2011 23:38:15	EpsCar	41	51250
16-DEC-2011 23:42:11	DSA1055	0	51250
16-DEC-2011 23:48:59	AlpCol	108	51250
16-DEC-2011 23:53:02	9BetLep	139	51250
16-DEC-2011 23:56:54	19BetOri	7	51250

#### 2.4 Summary of processed GOM\_TRA\_1P products

Nr	Filename	UTC Start time	Limb	Duration	Star Id	Star Name	Star Mag	Star Temp	Nb Meas	Orbit	Prod. error
1	GOM_TRA_1PNPDK20111216_115440_000000443109_00354_51230_0798.N1	16-DEC-2011 11:54:40	Dark	43.500	71	lot Car	2.2460	7700.0	87	51230	No
2	GOM_TRA_1PNPDK20111216_120719_000000413109_00354_51230_0799.N1	16-DEC-2011 12:07:19	Straylight	41.000	108	Alp Col	2.6520	15200.	82	51230	No
3	GOM_TRA_1PNPDK20111216_121516_000000463109_00354_51230_0821.N1	16-DEC-2011 12:15:16	Straylight	46.000	7	19Bet Ori	0.10000	14000.	92	51230	No
4	GOM_TRA_1PNPDK20111216_122232_000000543109_00354_51230_0822.N1	16-DEC-2011 12:22:32	Twilight_stray	54.000	13	87Alp Tau	0.86700	3800.0	108	51230	No
5	GOM_TRA_1PNPDK20111216_124741_000000343109_00354_51230_0823.N1	16-DEC-2011 12:47:41	Bright	33.500	60	7Bet UMi	2.0810	3950.0	67	51230	No
6	GOM_TRA_1PNPDK20111216_125815_000000363109_00354_51230_0824.N1	16-DEC-2011 12:58:15	Bright	36.000	180	27Gam Boo	3.0400	8000.0	72	51230	No
7	GOM_TRA_1PNPDK20111216_132135_000000433109_00354_51230_0825.N1	16-DEC-2011 13:21:35	Dark	43.000	123	lot Cen	2.7500	10200.	86	51230	No
8	GOM_TRA_1PNPDK20111216_132720_000000423109_00355_51231_0826.N1	16-DEC-2011 13:27:20	Dark	42.000	99	Del Cen	2.5750	26000.	84	51231	No
9	GOM_TRA_1PNPDK20111216_133455_000000423109_00355_51231_0827.N1	16-DEC-2011 13:34:55	Dark	42.000	71	lot Car	2.2460	7700.0	84	51231	No
10	GOM_TRA_1PNPDK20111216_134733_000000433109_00355_51231_0828.N1	16-DEC-2011 13:47:33	Straylight	43.000	108	Alp Col	2.6520	15200.	86	51231	No
11	GOM_TRA_1PNPDK20111216_135530_000000473109_00355_51231_0860.N1	16-DEC-2011 13:55:30	Straylight	47.000	7	19Bet Ori	0.10000	14000.	94	51231	No
12	GOM_TRA_1PNPDK20111216_140246_000000483109_00355_51231_0861.N1	16-DEC-2011 14:02:46	Twilight_stray	47.500	13	87Alp Tau	0.86700	3800.0	95	51231	No
13	GOM_TRA_1PNPDK20111216_143829_000000563109_00355_51231_0862.N1	16-DEC-2011 14:38:29	Bright	56.000	180	27Gam Boo	3.0400	8000.0	112	51231	No
14	GOM_TRA_1PNPDK20111216_150150_000000403109_00355_51231_0863.N1	16-DEC-2011 15:01:50	Dark	40.000	123	lot Cen	2.7500	10200.	80	51231	No
15	GOM_TRA_1PNPDK20111216_150735_000000423109_00356_51232_0864.N1	16-DEC-2011 15:07:35	Dark	42.000	99	Del Cen	2.5750	26000.	84	51232	No

#### 3. Plot of GOMOS spectrometers and photometers temperatures from level 1b data



#### 4. Overview of dark signal processing per product

The Dark Charge (DC) is a temperature-dependant signal added to the useful measurements and it is therefore subtracted from them during the processing. There are two phenomena that produce a continuous increase of the DC: the "hot pixels" (a pixel is "hot" when its DC exceeds by a significant amount its value measured on ground at the same temperature) and the "Random Telegraphic Signal" (abrupt change positive or negative of the CCD pixel signal, random in time, affecting only the DC part of the signal and not the photon generated signal).

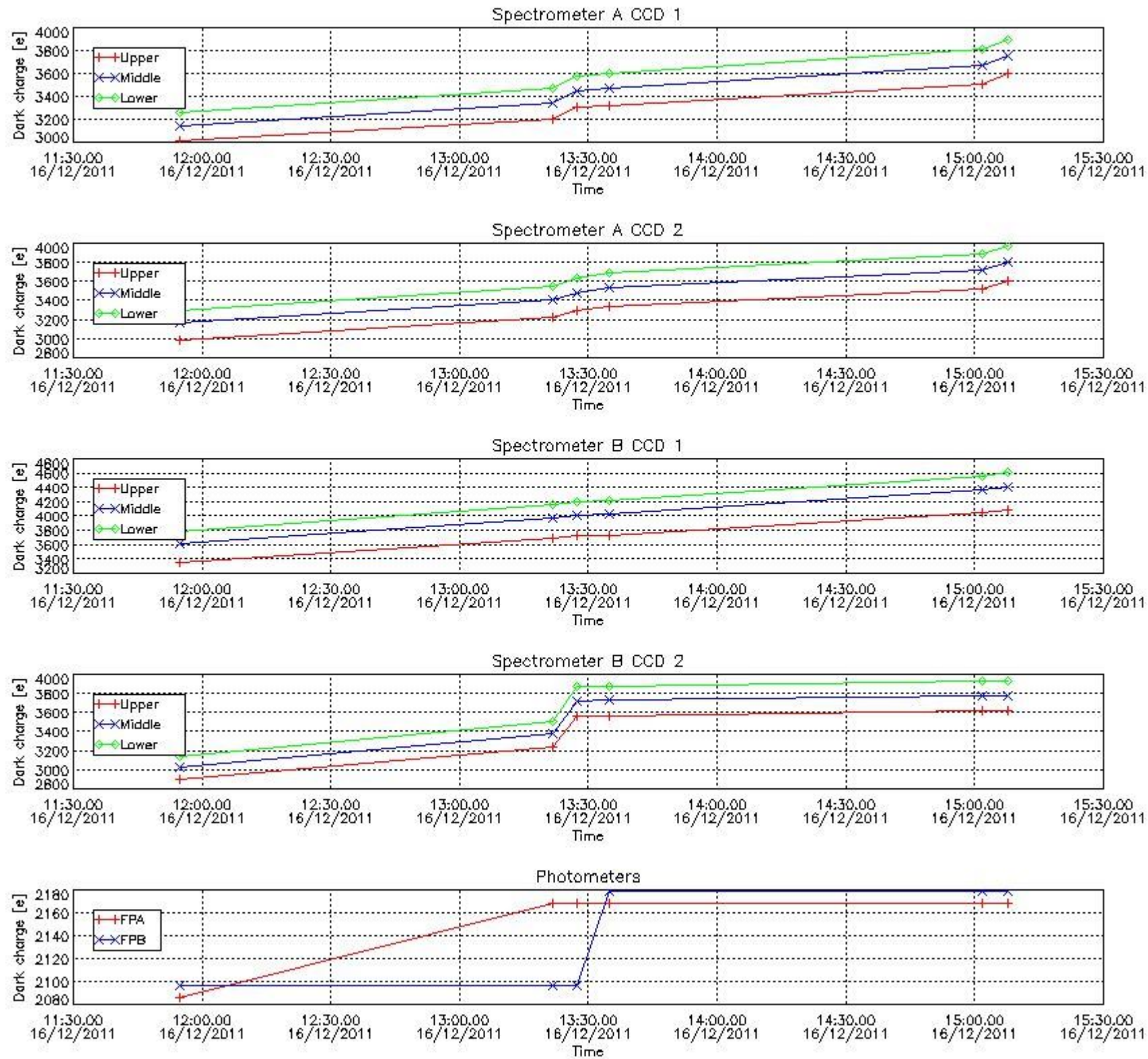
In this section a list of products that did not use the Dark Sky Area (DSA) observation for the DC computation is given. It is also provided the mean DC plot per product for dark limb products with no error flag set.

##### 4.1 These products did not use the DSA observation for DC computation:

Product name	DC information
GOM_TRA_1PNPDK20111216_115440_000000443109_00354_51230_0798.N1	DC map used
GOM_TRA_1PNPDK20111216_120719_000000413109_00354_51230_0799.N1	DC map used
GOM_TRA_1PNPDK20111216_121516_000000463109_00354_51230_0821.N1	DC map used
GOM_TRA_1PNPDK20111216_122232_000000543109_00354_51230_0822.N1	DC map used
GOM_TRA_1PNPDK20111216_124741_000000343109_00354_51230_0823.N1	DC map used
GOM_TRA_1PNPDK20111216_125815_000000363109_00354_51230_0824.N1	DC map used
GOM_TRA_1PNPDK20111216_132135_000000433109_00354_51230_0825.N1	DC map used
GOM_TRA_1PNPDK20111216_132720_000000423109_00355_51231_0826.N1	DC map used
GOM_TRA_1PNPDK20111216_133455_000000423109_00355_51231_0827.N1	DC map used
GOM_TRA_1PNPDK20111216_134733_000000433109_00355_51231_0828.N1	DC map used
GOM_TRA_1PNPDK20111216_135530_000000473109_00355_51231_0860.N1	DC map used
GOM_TRA_1PNPDK20111216_140246_000000483109_00355_51231_0861.N1	DC map used
GOM_TRA_1PNPDK20111216_143829_000000563109_00355_51231_0862.N1	DC map used
GOM_TRA_1PNPDK20111216_150150_000000403109_00355_51231_0863.N1	DC map used



#### 4.2 Plot of mean dark charges per product: only products in DARK limb conditions without errors are used



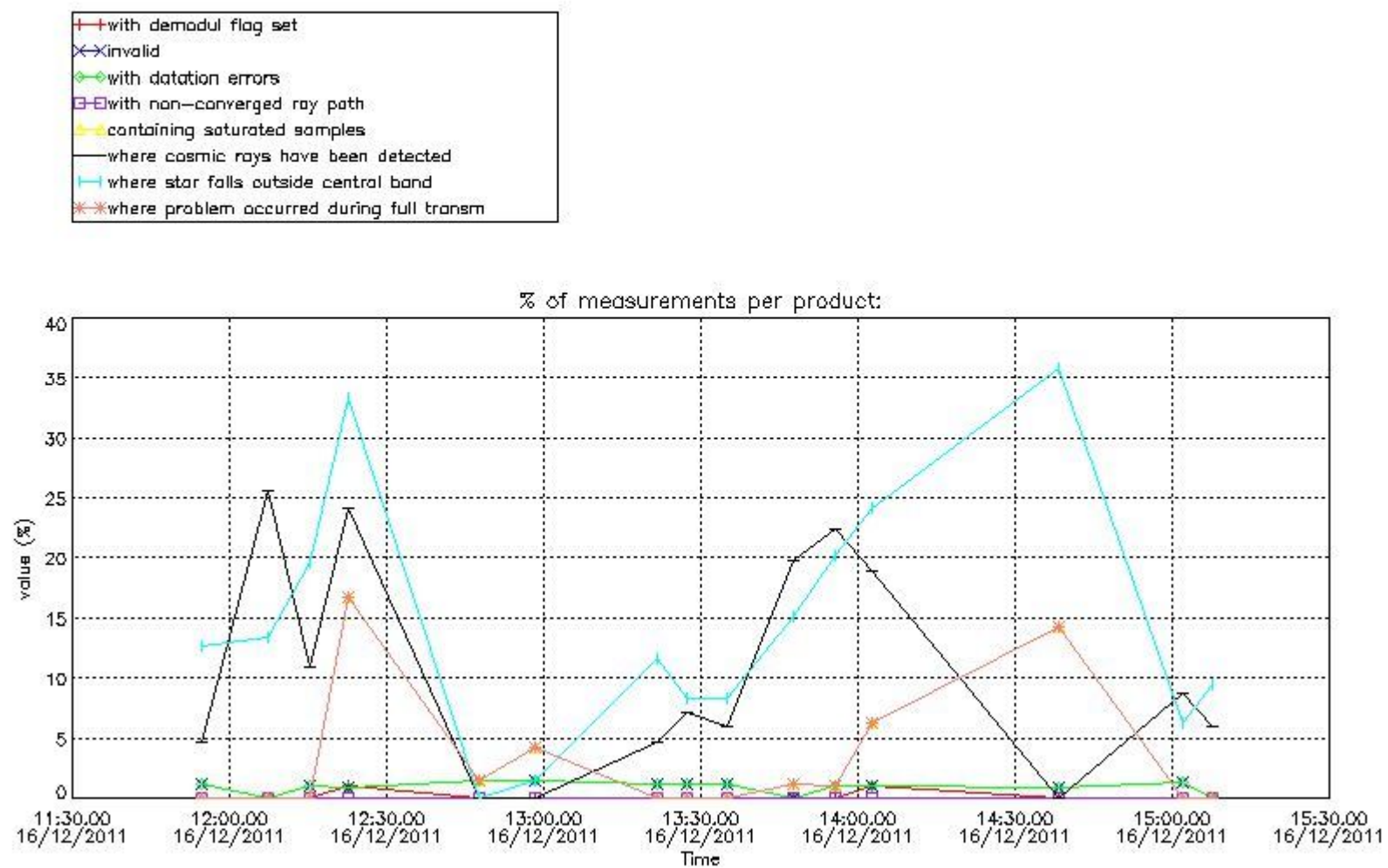
#### 5. Demodulation flag and quality information monitoring

In this section it is presented the modulation information extracted from the pcd (product confidence data) at measurement level and information extracted from the Quality Summary dataset. Only products without errors (error flag in the MPH set to "0") are used.

5.1 Percentage of products during reporting period with:

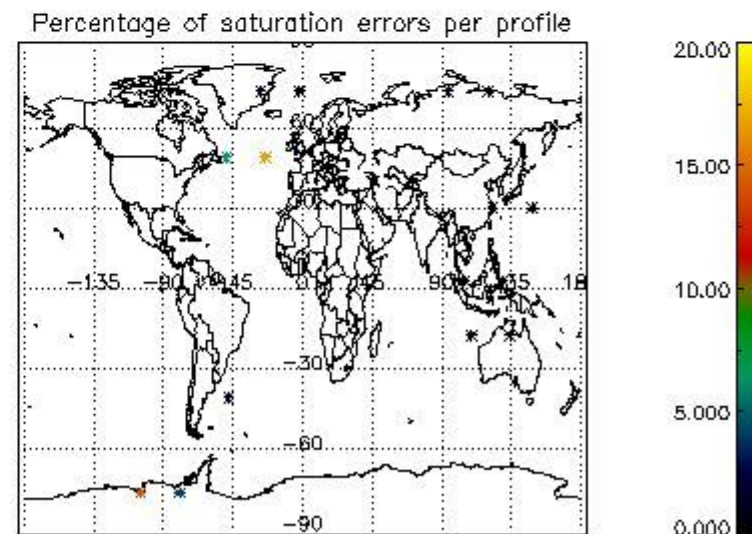
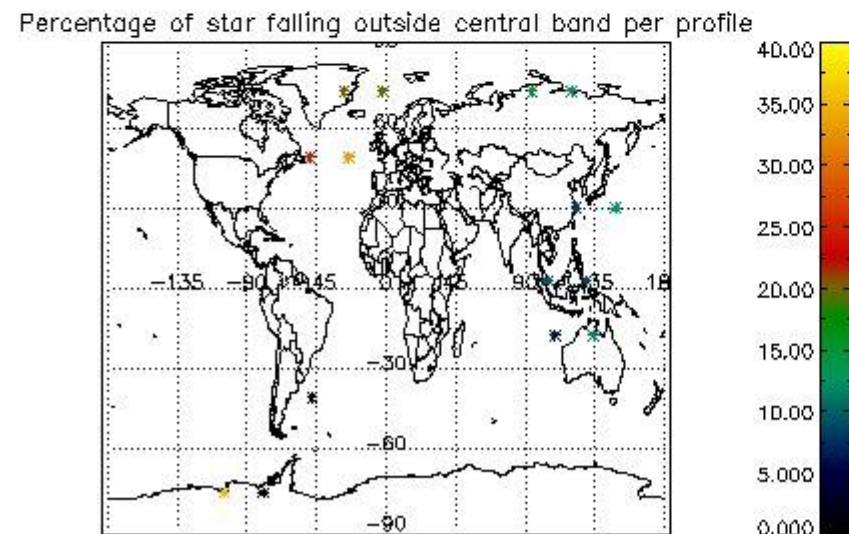
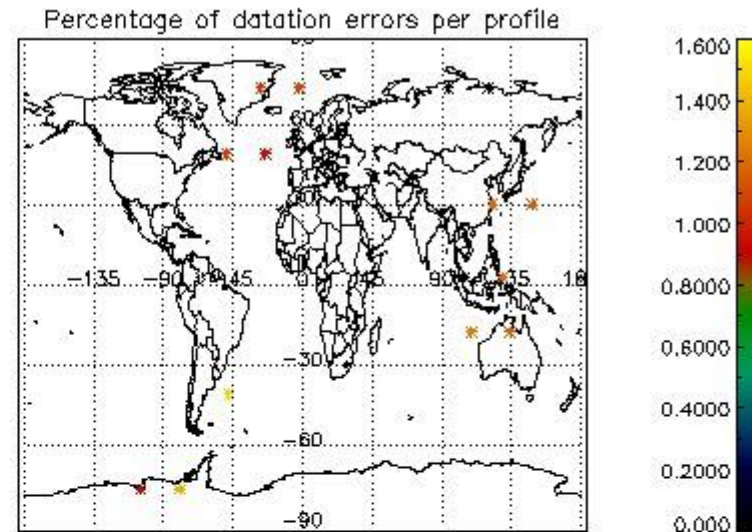
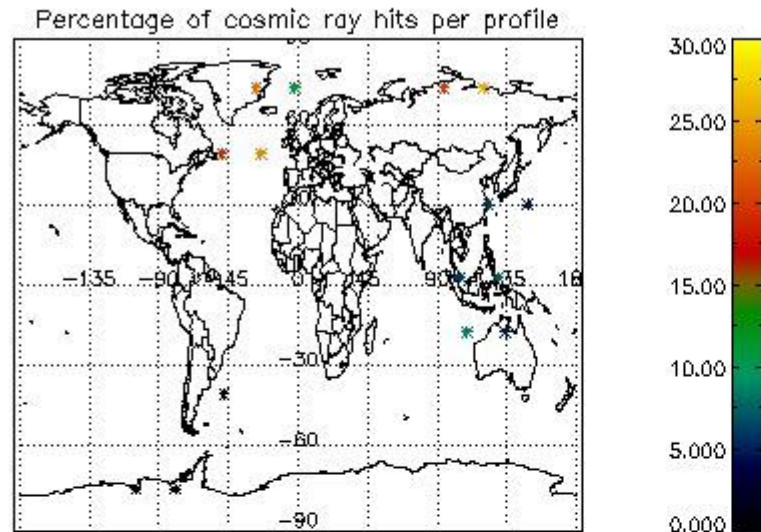
At least one measurement with demodulation flag set:	46.6667 %
Reference spectrum computed from DB:	0.00000 %
Reference spectrum with small number of measurements:	0.00000 %
SATU data not used:	20.0000 %

5.2 Plot quality information per product (time dependant)



5.3 Plot quality information per product (world map)





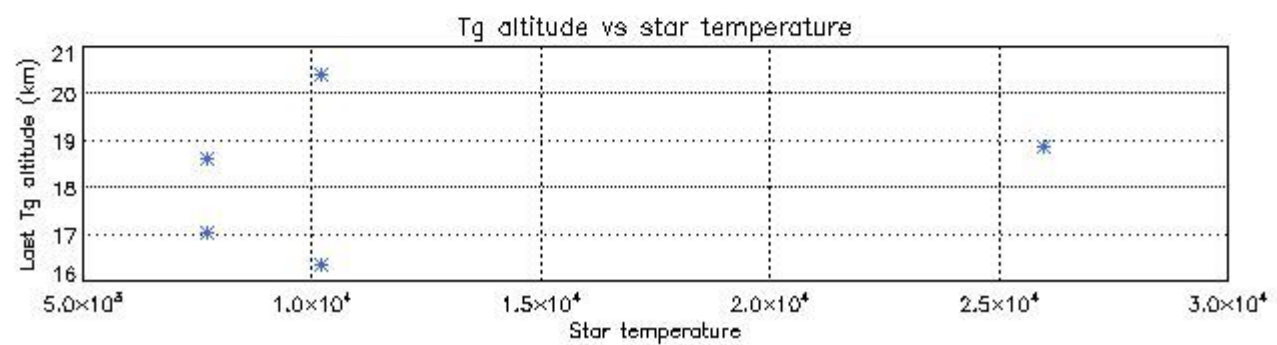
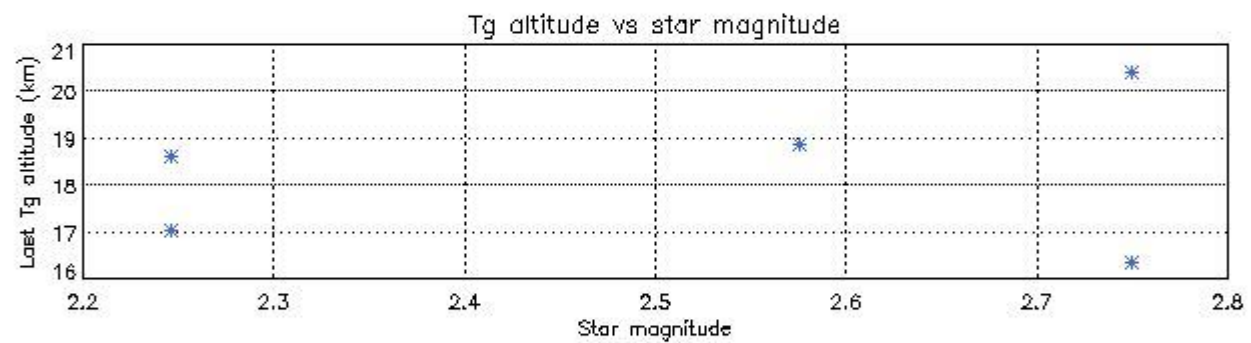
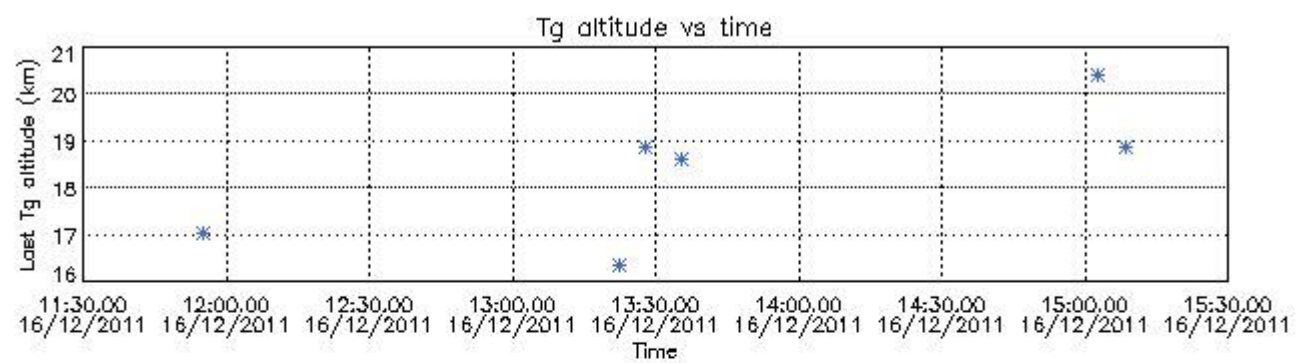
## 6. Statistics and plot of tangent altitude of the last measurement (DARK & BRIGHT products without errors)

### 6.1 Statistics on tangent altitude lost:

Statistics	DARK	BRIGHT	TWILIGHT
Mean:	18.353	19.622	NaN
St. deviation:	1.4627	13.498	NaN
Maximum:	20.419	28.714	NaN
Minimum:	16.325	4.1132	NaN
Number of data:	6.0000	3.0000	NaN

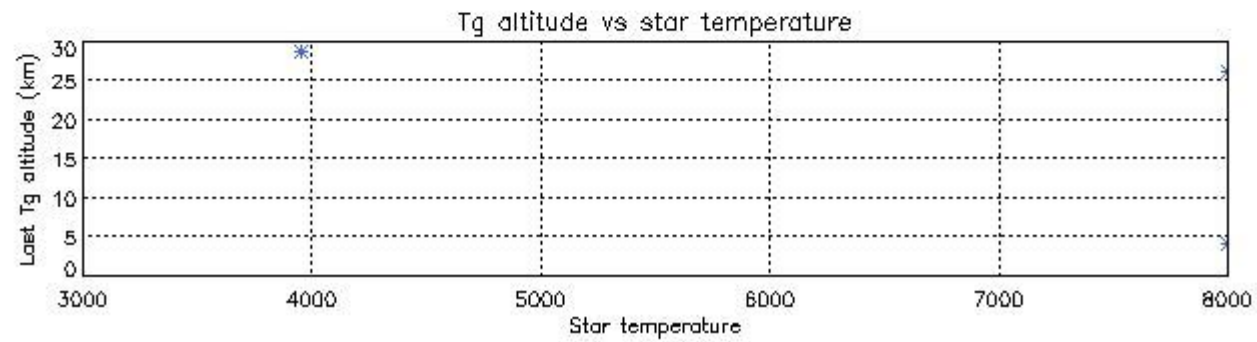
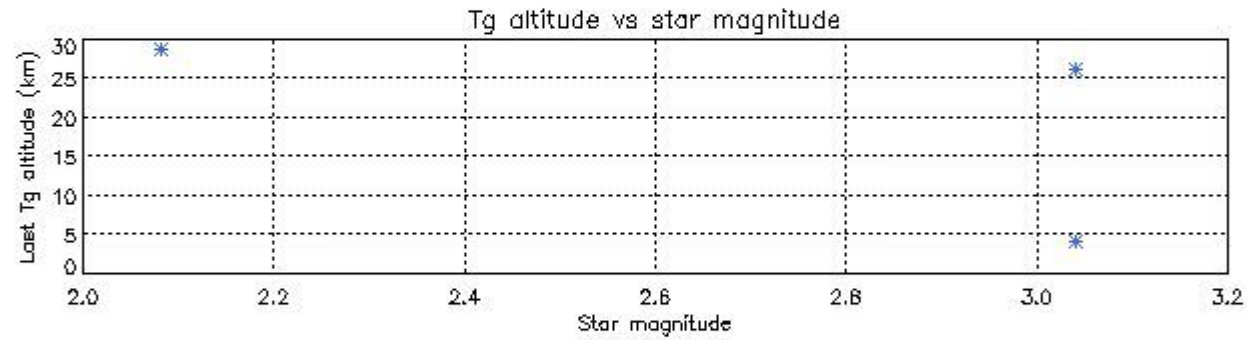
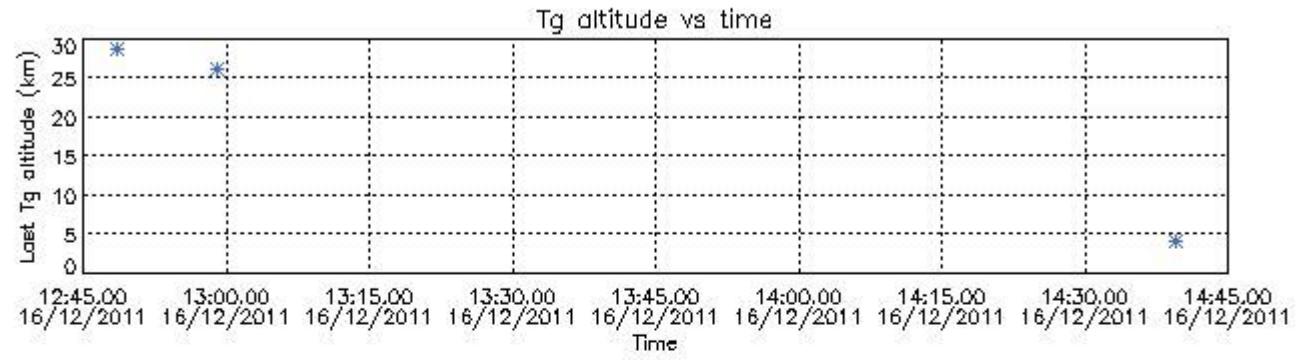
### 6.2 Plot for DARK limb products

Tangent altitude at which the star is lost



6.3 Plot for BRIGHT limb products

## Tangent altitude at which the star is lost

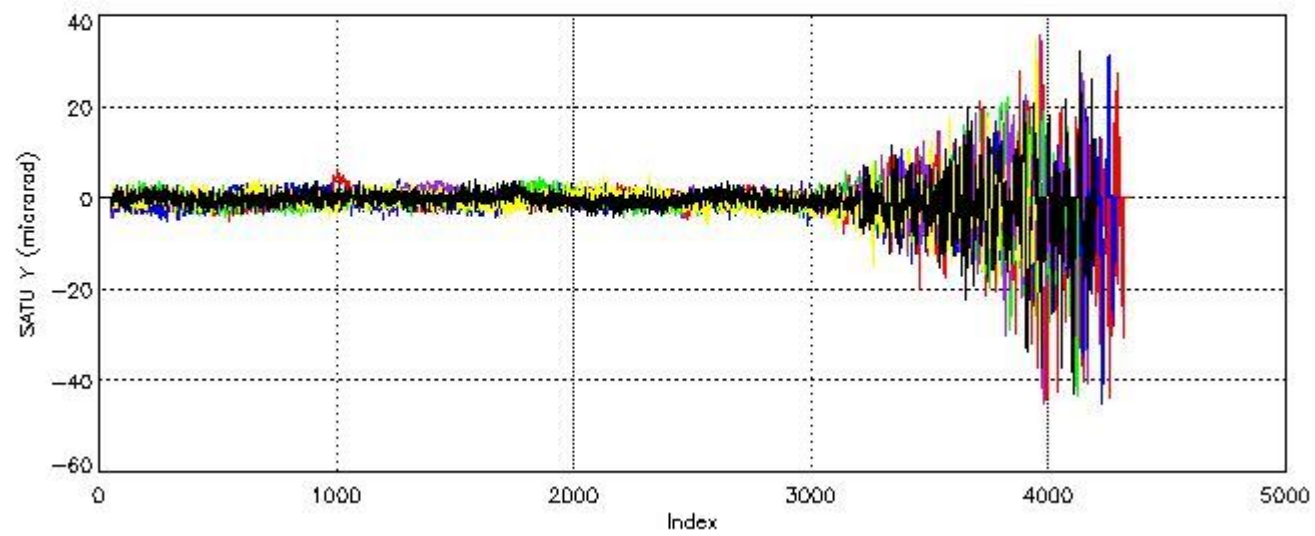
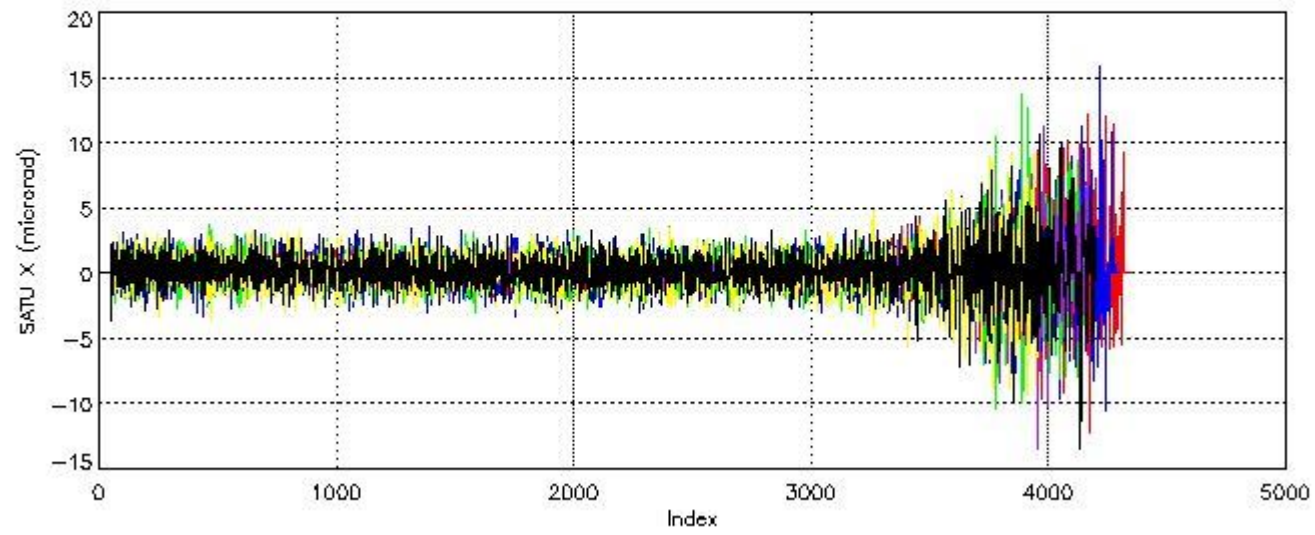


## 7. Star Acquisition and Tracking Unit (SATU)

The Star Acquisition and Tracking Unit (SATU) analyses the position of the tracked star beam collected by the GOMOS telescope and deflected by the optical beam dispatcher. The main function of the SATU is to detect a star, provide its image position to the science data electronics and to help the pointing function to keep the star image at a fixed position. In tracking mode the SATU data is recorded with a frequency of 100 Hz.

### 7.1 SATU 'X' and 'Y' axis plots (dark limb)

SATU CCD 'X' and 'Y' axis plots are provided in order to detect any abnormal behaviour of the tracking system. For every occultation (color) the plot should remain stable (with some noise) until we are deep in the atmosphere where big fluctuations are registered due to the refractive effects.



## 7.2 Statistics on SATU Noise Equivalent Angle (NEA) for DARK (D) and BRIGHT (B) products above 105 kms

The Star Acquisition and Tracking Unit (it is the CCD that tracks the star while it is occulted) Noise Equivalent Angle consists of the statistical angular variation of the SATU data above the atmosphere.

Statistics (in microradians) above 105 km are computed for every occultation, giving four values per occultation: one in the 'X' direction and one in the 'Y' direction for dark and bright limbs. A mean value per day in every direction and limb is calculated and monitored in order to assess instrument performance in terms of star pointing.

### 7.2.1 SATU NEA Statistics (table)

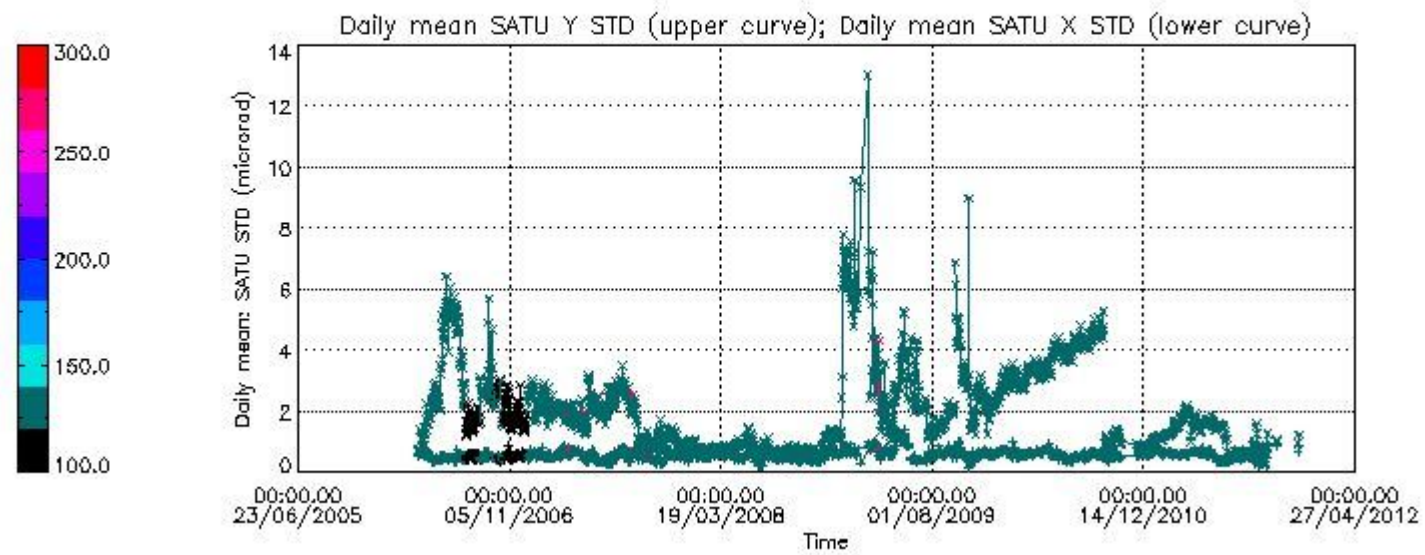
### 7.2.2 Trend of daily SATU NEA St. deviation since 1st April 2006 (dark limb) and of daily SATU NEA 90th percentile since May 2011

The long term trend of the SATU 'X' and 'Y' standard deviations should be constant during the whole mission.



The colorbar represents the start tangent altitude (km) of the occultations.

Upper curve: STD of SATU Y axis  
 Lower curve: STD of SATU X axis

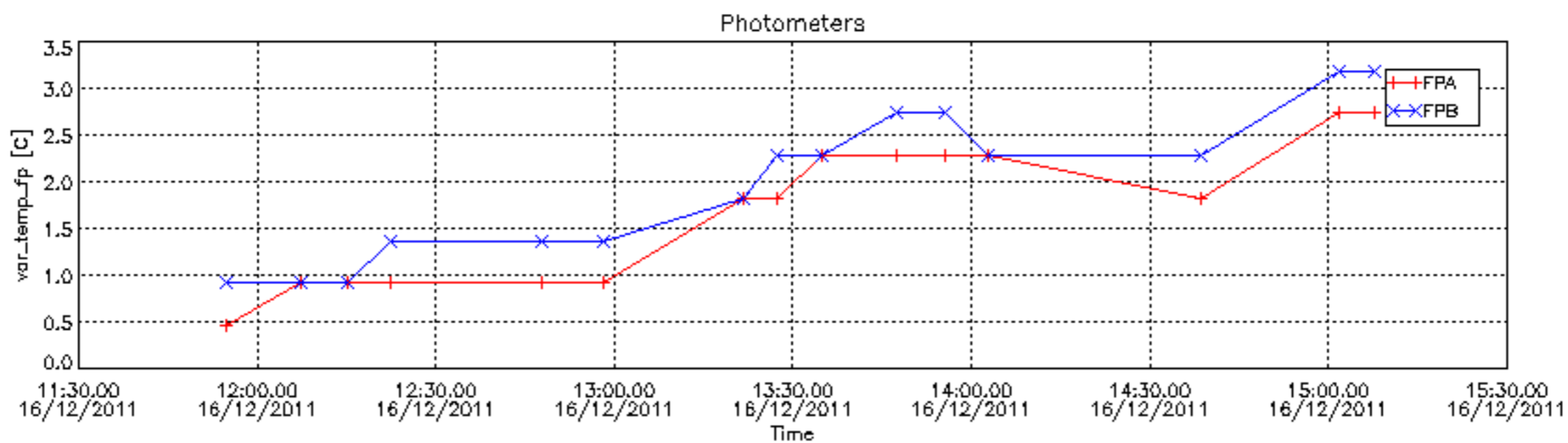
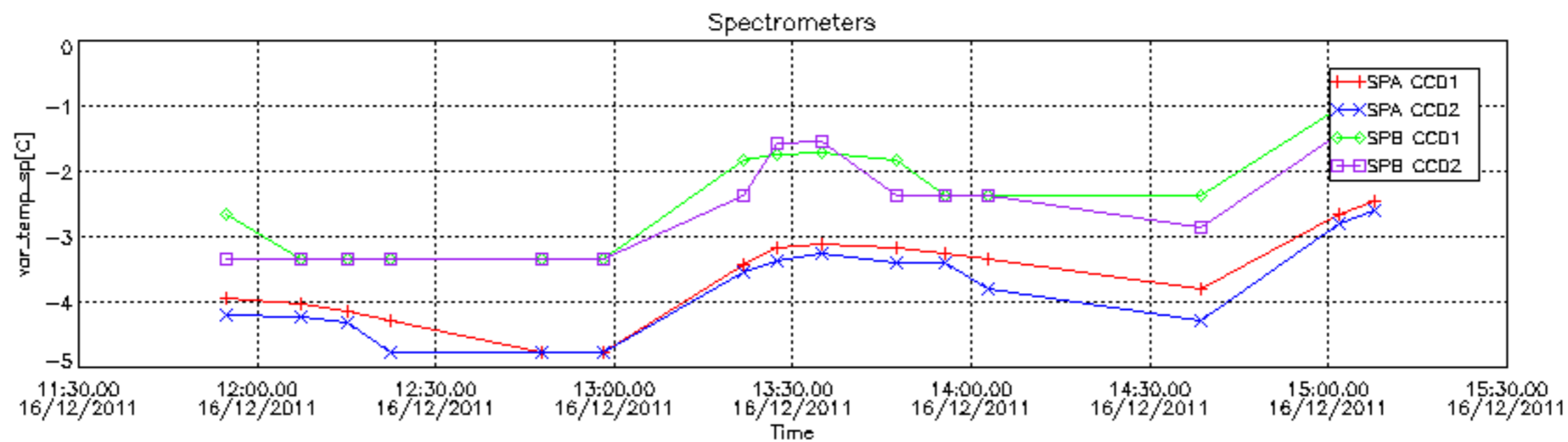


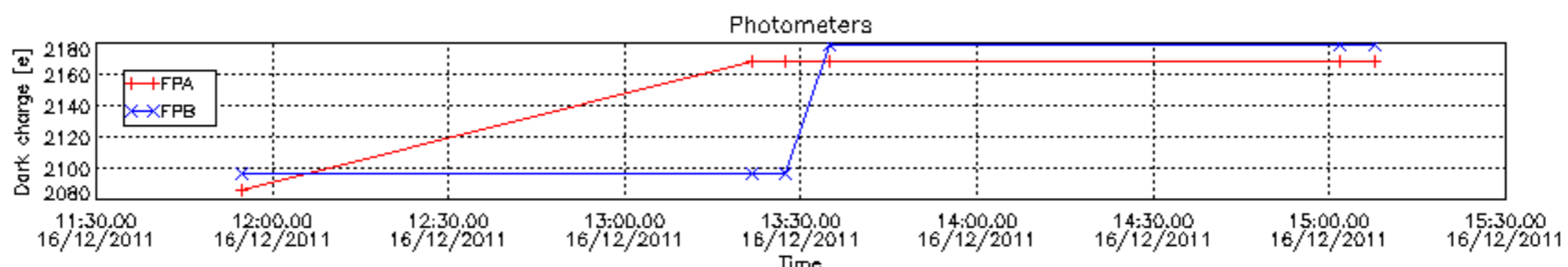
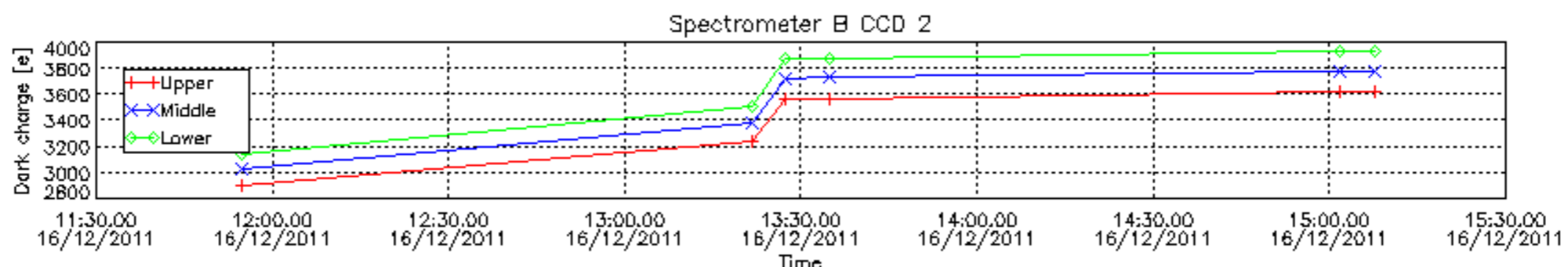
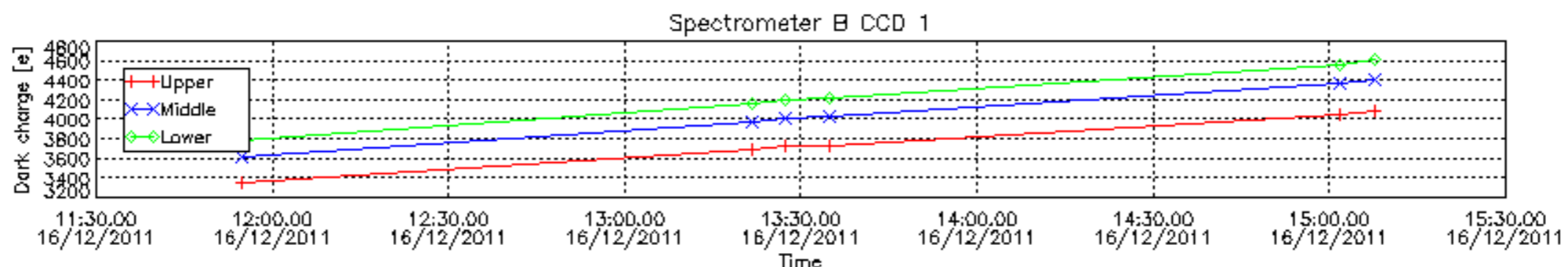
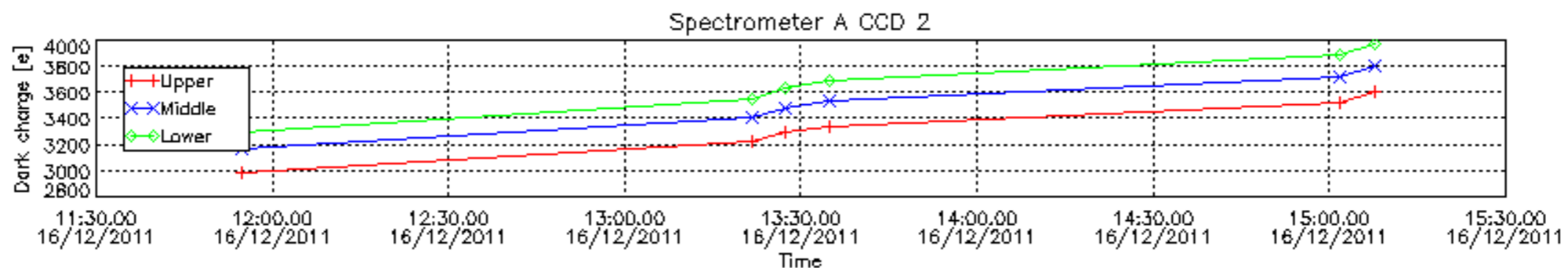
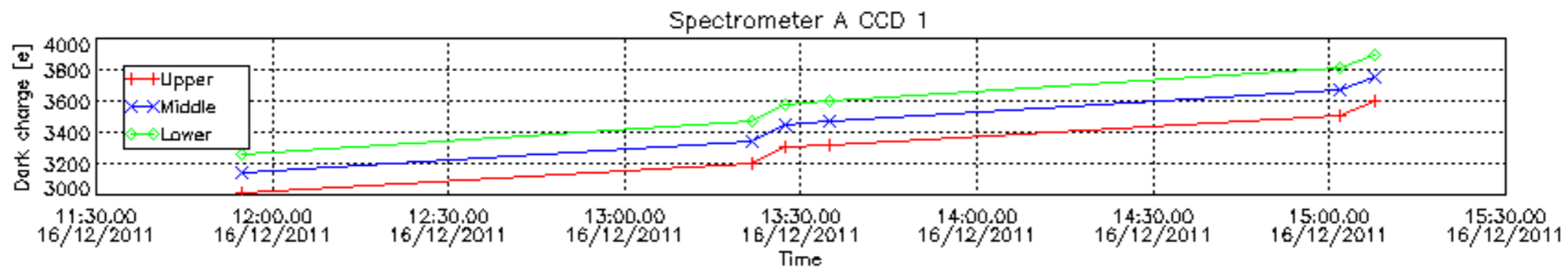
## 8. Auxiliary Data Files used for the production reported in section 2.4

The number reported in the third column indicates since which file (see list in section 2.4) 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_AXVIEC20111213_163131_20111215_000000_20500101_000000	1	16-DEC-2011 11:54:40
CALIBRATION_DATABASE	GOM_CAL_AXVIEC20111021_144853_20111020_000000_20500101_000000	1	16-DEC-2011 11:54:40
LEVEL-1B_PROC_CONFIG	GOM_PR1_AXVIEC20110513_081743_20020301_000000_20500101_000000	1	16-DEC-2011 11:54:40
STAR_CATALOGUE	GOM_CAT_AXVIEC20020121_161009_20020101_000000_20200101_000000	1	16-DEC-2011 11:54:40
STELLAR_SPECTRA_DATABANK	GOM_STS_AXVIEC20091111_151504_20020101_160000_20500101_000000	1	16-DEC-2011 11:54:40
ECMWF_FILE	AUX_ECF_AXNECM20111216_062115_20111216_090000_20111216_210000	1	16-DEC-2011 11:54:40
OPTIONAL_ECMWF_FILE	MISSING	1	16-DEC-2011 11:54:40
ORBIT_DATA_FILE	AUX_FPO_AXVPDS20111216_113118_20111215_190357_20111225_211737	1	16-DEC-2011 11:54:40

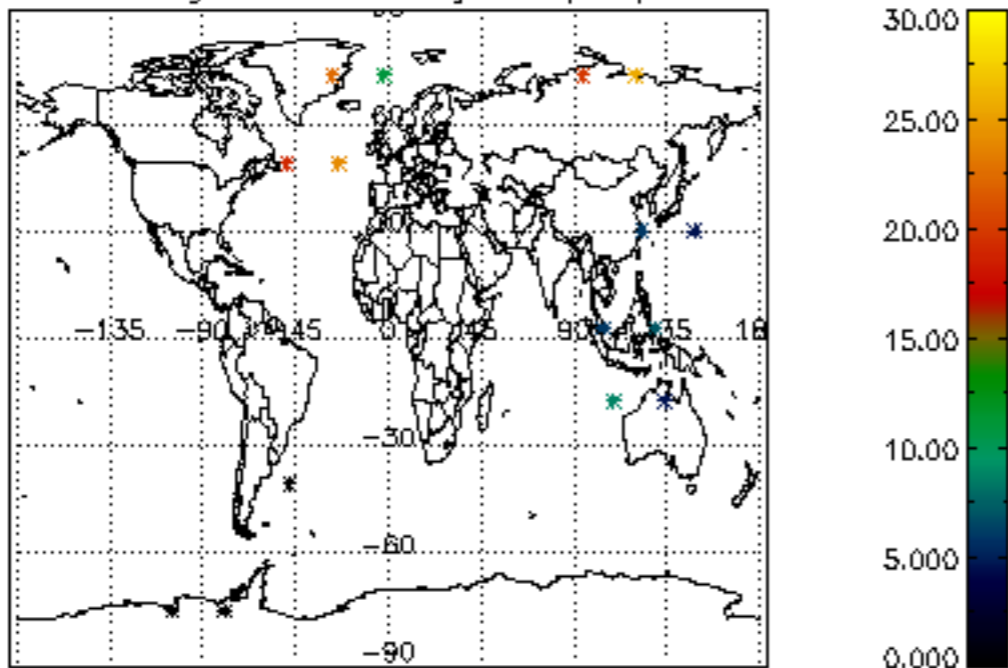




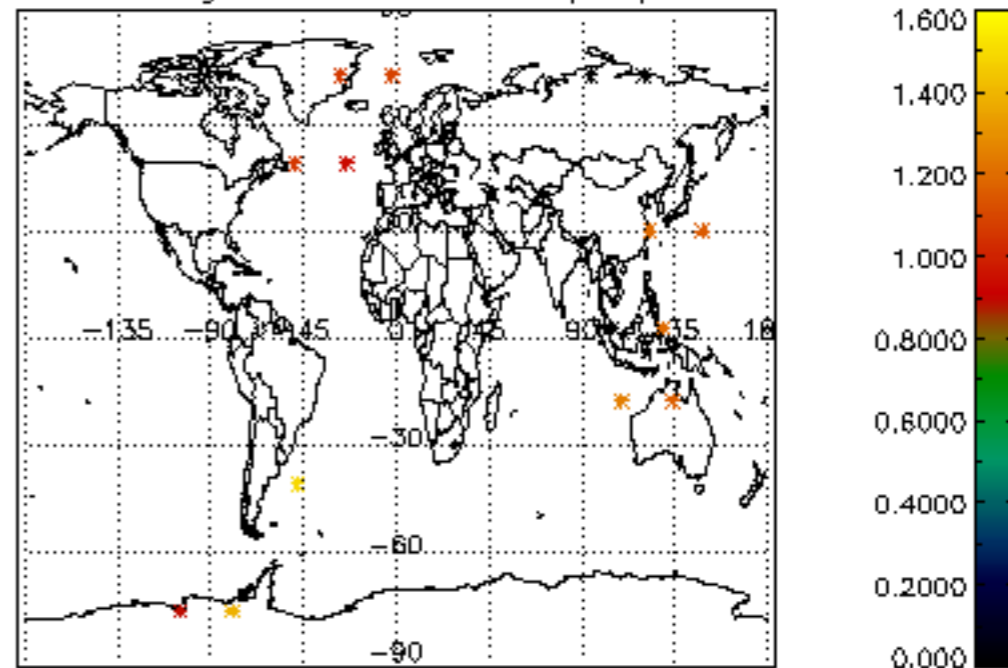




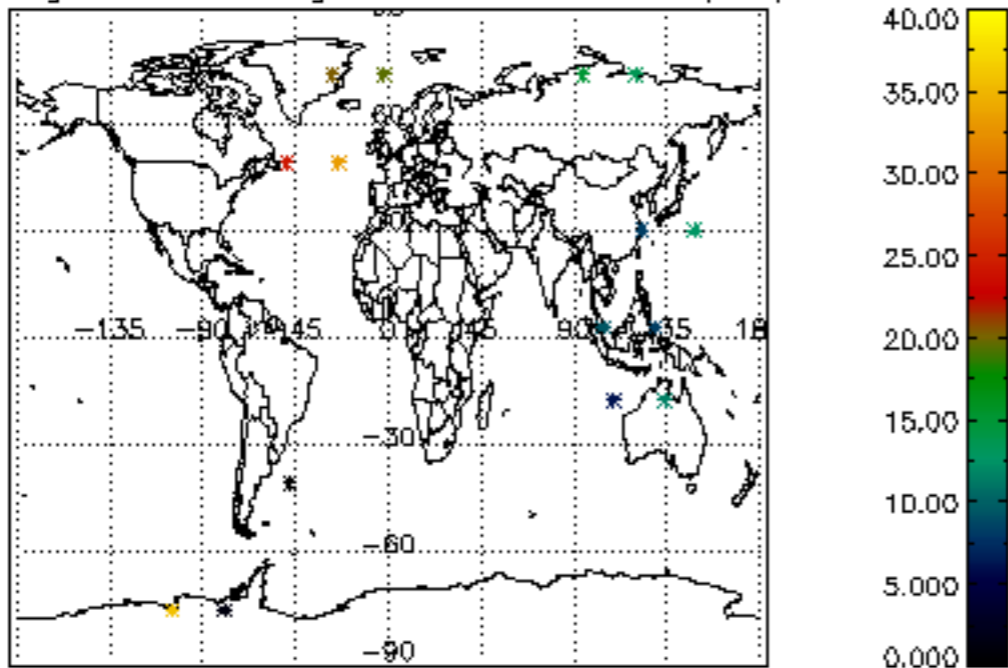
Percentage of cosmic ray hits per profile



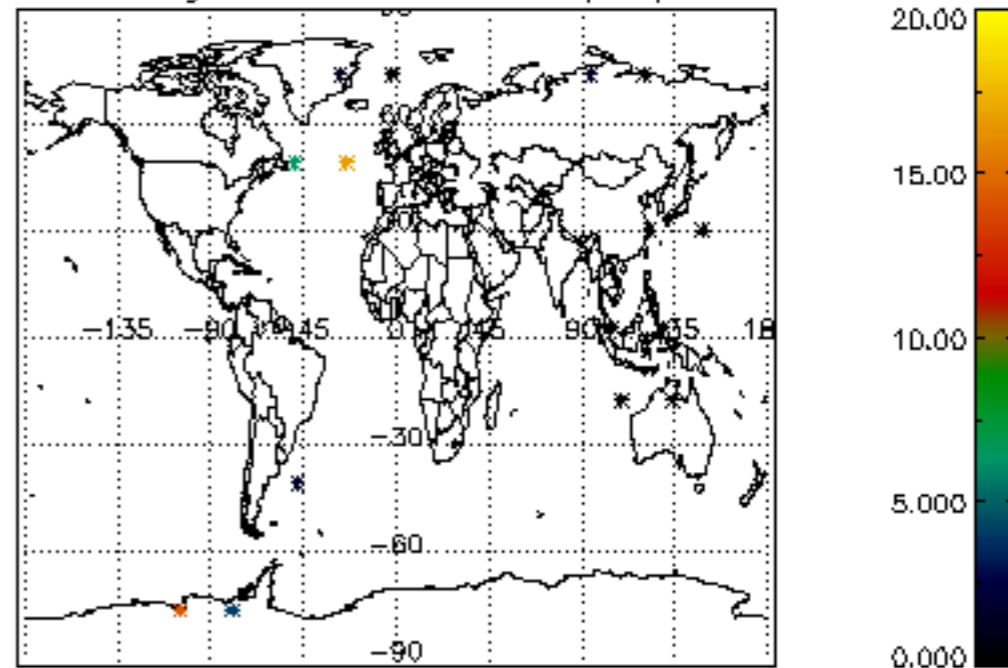
Percentage of datation errors per profile



Percentage of star falling outside central band per profile

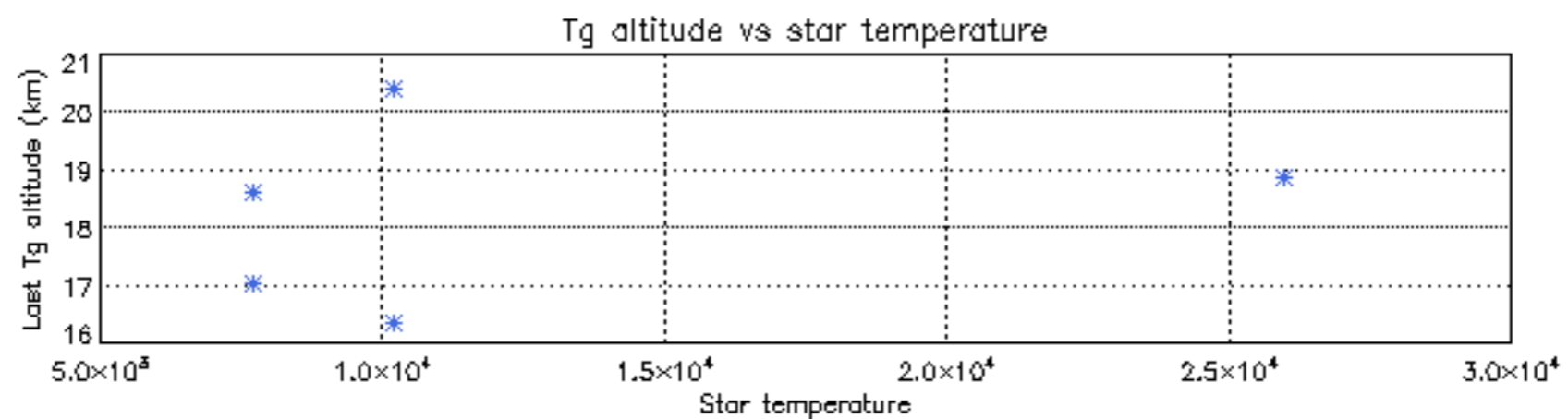
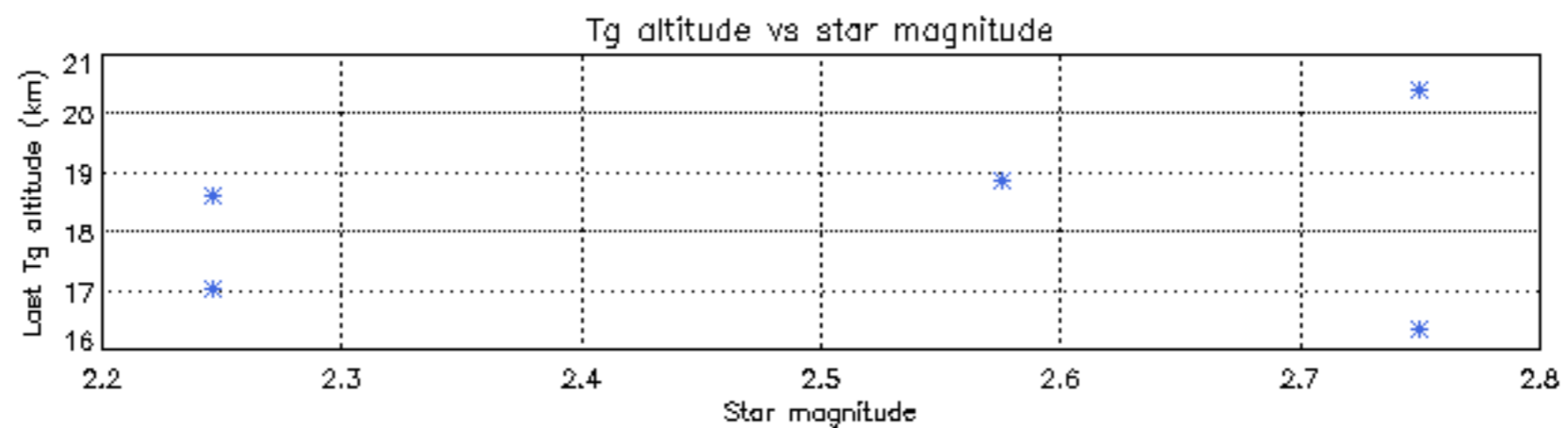
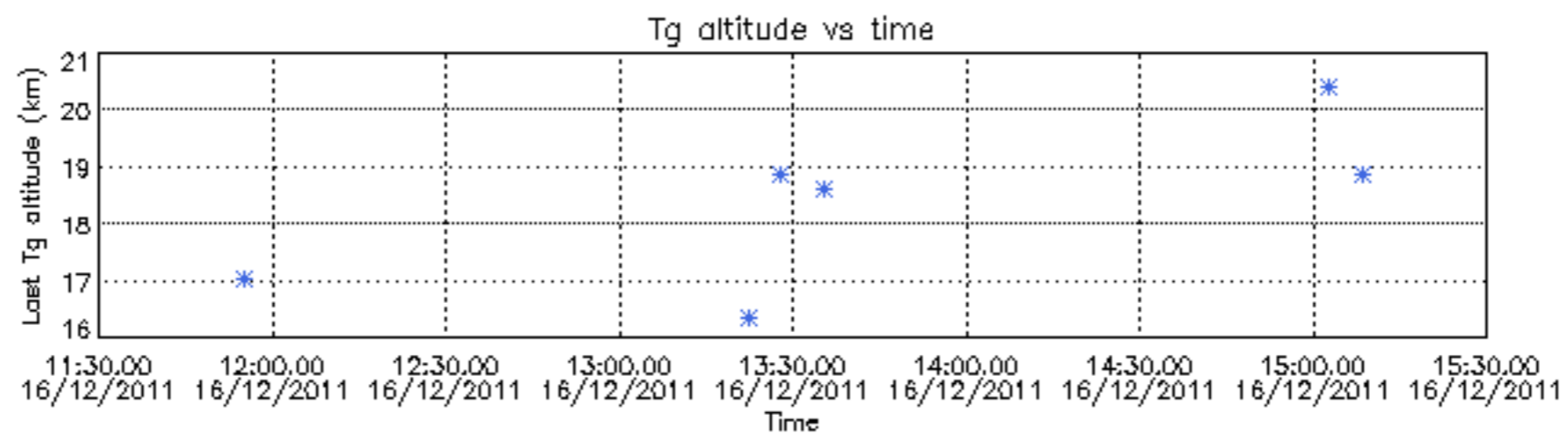


Percentage of saturation errors per profile





Tangent altitude at which the star is lost



Tangent altitude at which the star is lost

