

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 1101 - L2 Version 3

Chandra X-Ray Center

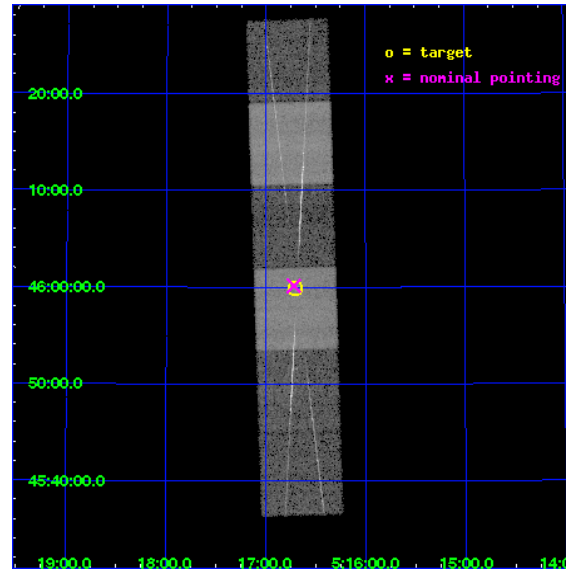
L2 Processing Date : Dec 17 2009

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

seq_num	280051	Sequence number
obs_id	1101	Observation id
title	&#160	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	CAPELLA	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.17625	Observer's specified target RA
dec_targ	45.997889	Observer's specified target Dec
ra_nom	79.17963201649	Nominal RA
dec_nom	46.002594380489	Nominal Dec
roll_nom	88.18485936616	Nominal Roll
revision	3	Processing version of data
ontime	14757.041441746	Sum of GTIs [s]
livetime	14570.178897387	Livetime [s]
ontime4	14753.718411535	Sum of GTIs [s]
ontime5	14757.000401743	Sum of GTIs [s]
ontime6	14756.836241744	Sum of GTIs [s]
ontime7	14757.041441746	Sum of GTIs [s]
ontime8	14756.918341674	Sum of GTIs [s]
ontime9	14756.877281748	Sum of GTIs [s]
l2events	215808	Number of level 2 events

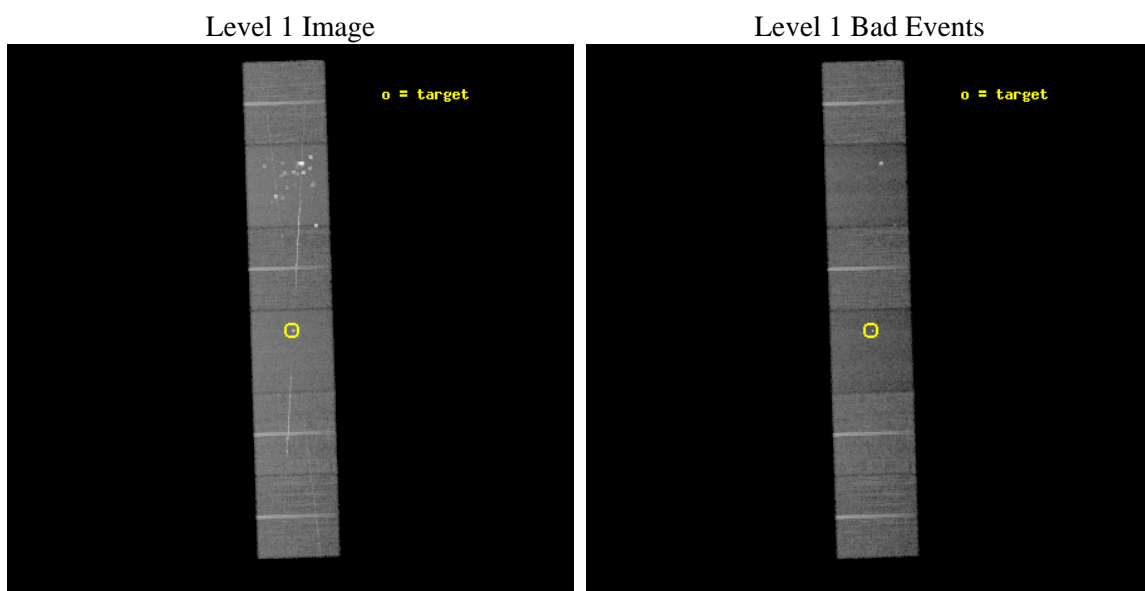




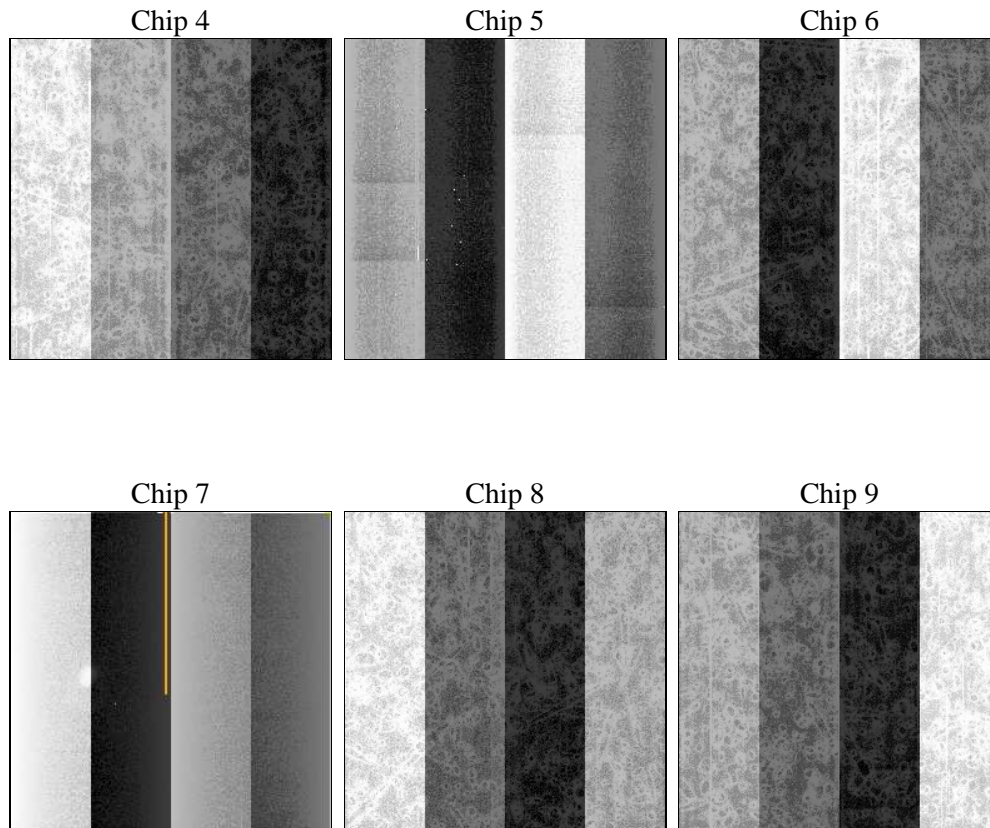
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	14757.041441746	Sum of GTIs [s]
caldsver	4.1.4	&#160	ontime4	14753.718411535	Sum of GTIs [s]
date	2009-12-17T12:22:13	Date and time of file creation	ontime5	14757.000401743	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	14756.836241744	Sum of GTIs [s]
			ontime7	14757.041441746	Sum of GTIs [s]
			ontime8	14756.918341674	Sum of GTIs [s]
			ontime9	14756.877281748	Sum of GTIs [s]
			l1events	1055499	Number of level 1 events

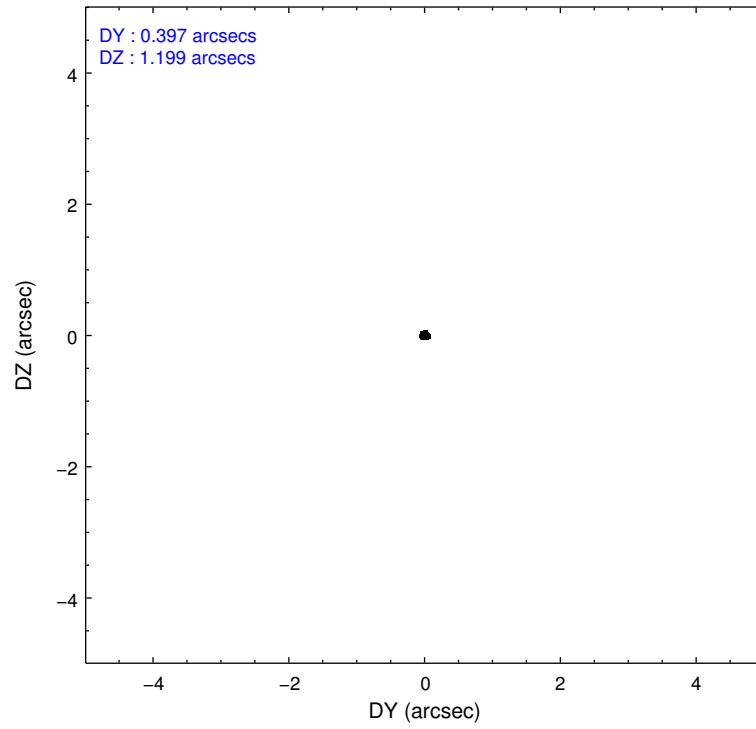
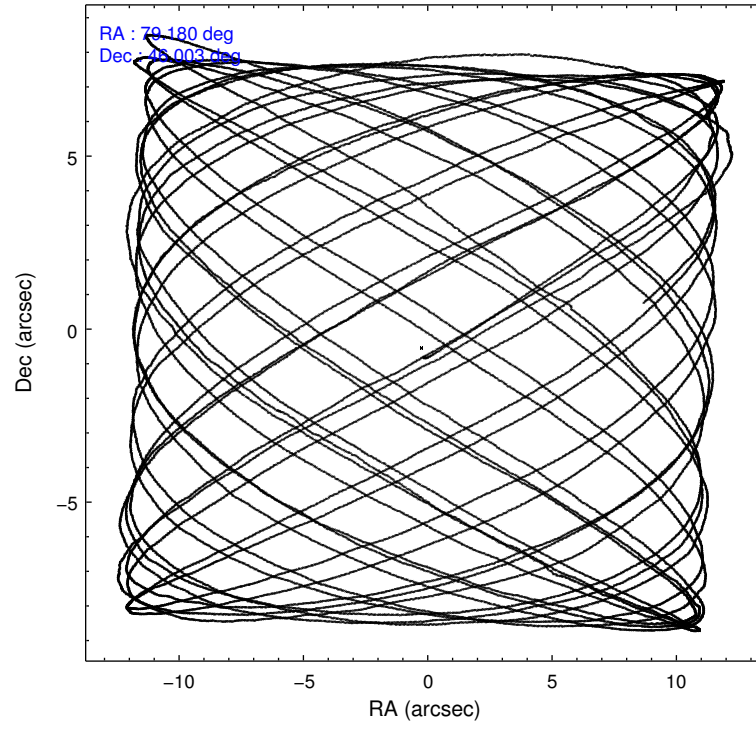
### 2.1.4 Events

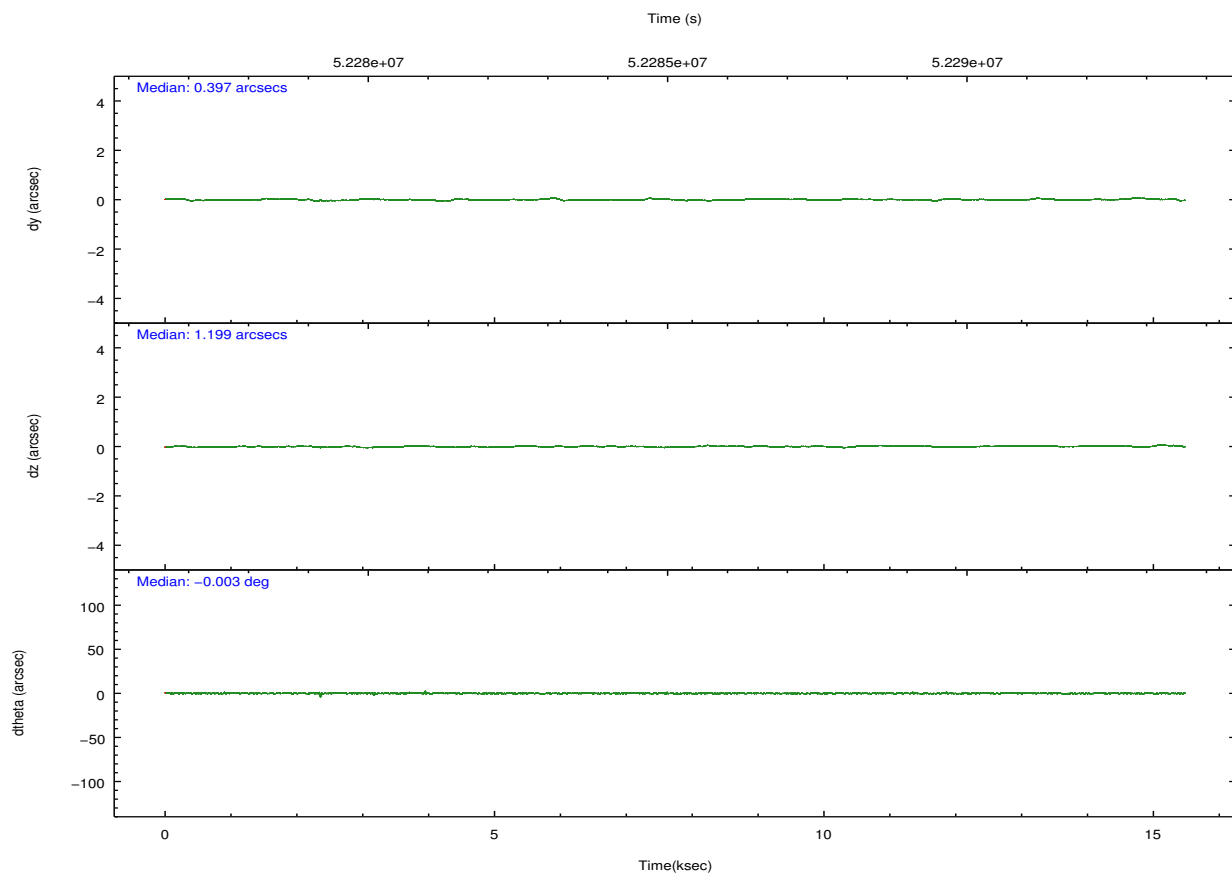
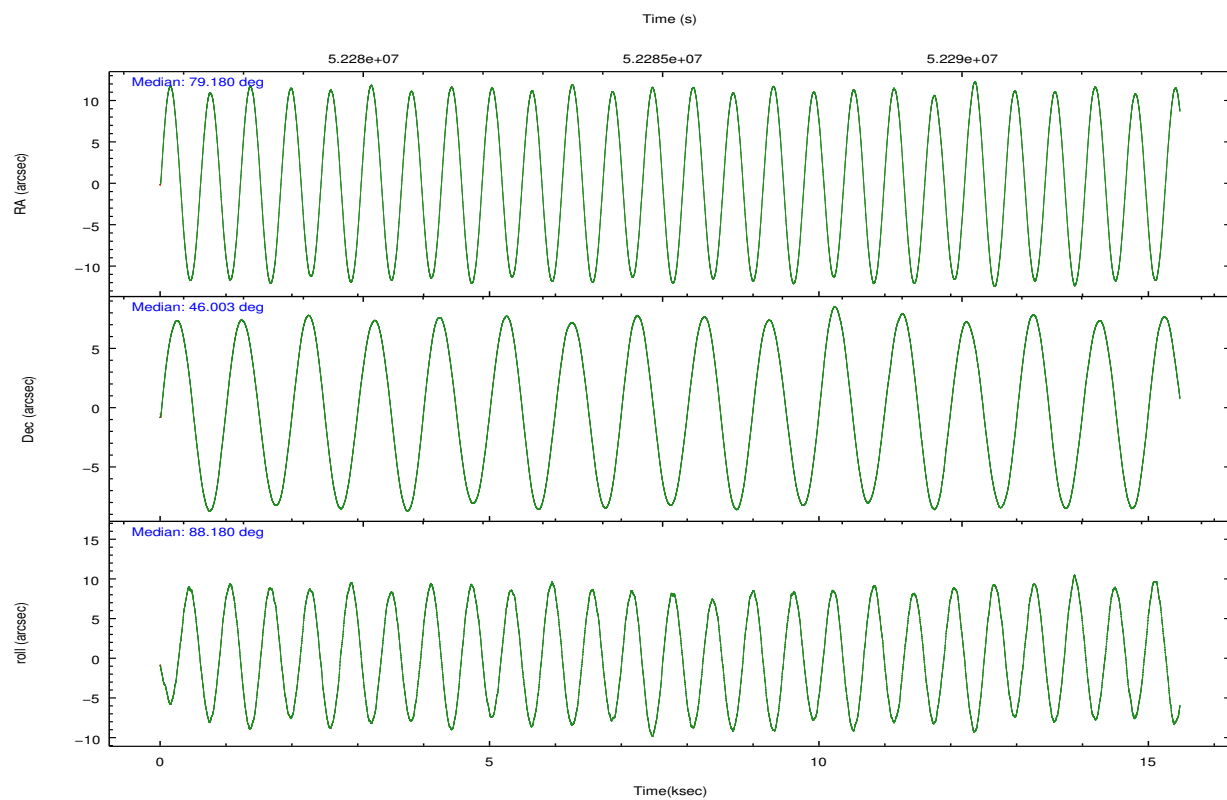
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	164715	231680	156363	162889	192154	147698	grade 0 events	5786	43927	10907	5210	16879	6144
rejected events	149350	100134	134382	96035	154313	131462		3%	18%	6%	3%	8%	4%
rejected %	90%	43%	85%	58%	80%	89%	grade 1 events	59	980	80	186	154	61
								0%	0%	0%	0%	0%	0%
							grade 2 events	4571	26429	4976	10943	9172	4462
								2%	11%	3%	6%	4%	3%
							grade 3 events	1143	7062	1353	6736	2549	1222
								0%	3%	0%	4%	1%	0%
							grade 4 events	1135	6731	1307	5529	2421	1219
								0%	2%	0%	3%	1%	0%
							grade 5 events	2998	8584	3534	10885	4888	3912
								1%	3%	2%	6%	2%	2%
							grade 6 events	2737	47447	3443	38469	6850	3194
								1%	20%	2%	23%	3%	2%
							grade 7 events	146286	90520	130763	84931	149241	127484
								88%	39%	83%	52%	77%	86%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	79.197823	79.17963201649013	Subarray requested	NONE	NONE
Pointing Dec	45.978036	46.00259438048877	Alternating exposures requested	N	N
Pointing Roll	88.015145	88.18485936615966	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.484267	-0.5408574722601351			
SIM defocus (mm)	0.2	0.1434099890397611			
SIM translation stage pos (mm)	-190.132523	-190.1425803651734			
SIM translation stage offset (mm)	0	0.01005778216563158			
Observation start time	52277864.184000	52277197.203201			
Observation start date	1999-08-29T01:36:40	1999-08-29T01:26:37			
Observation end time	52292864.184000	52292997.578769			
Observation end date	1999-08-29T05:46:40	1999-08-29T05:49:57			
Read mode	TIMED	TIMED			

## 2.3 Aspect



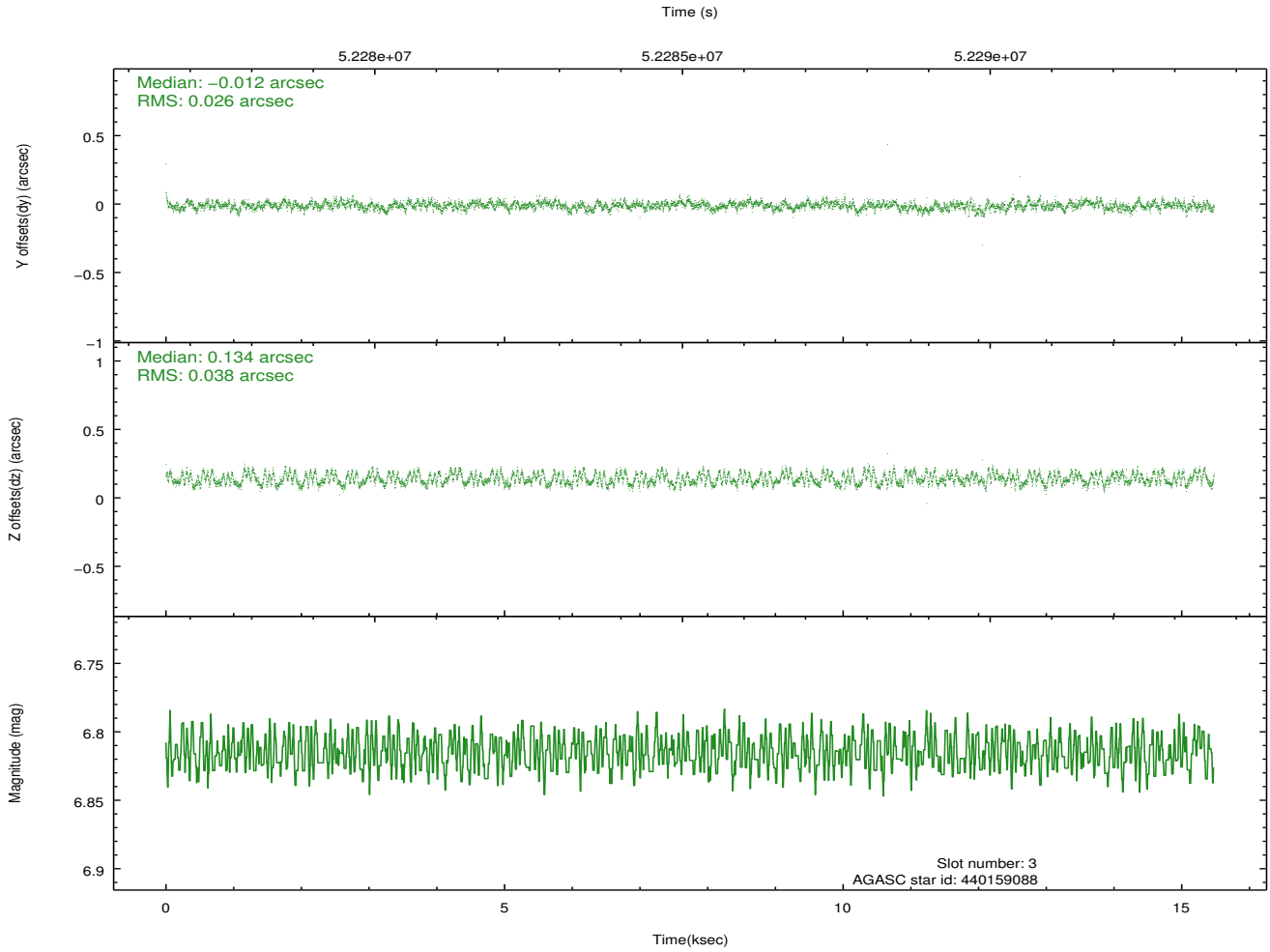
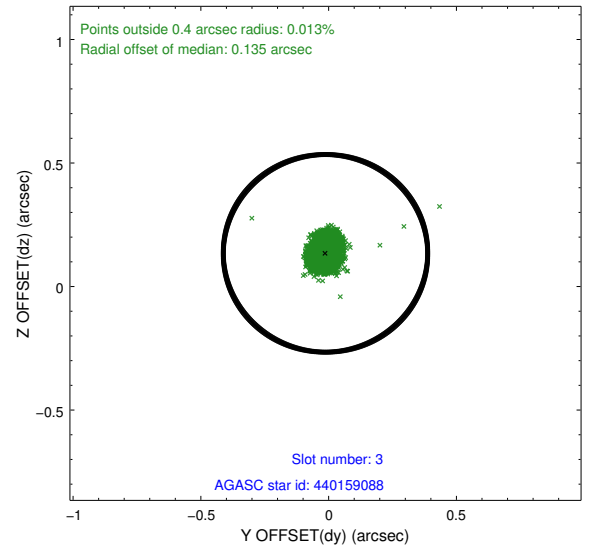
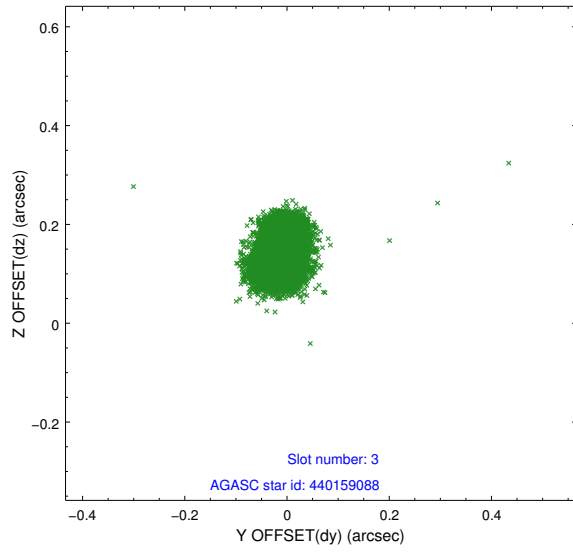


Slot Statistics

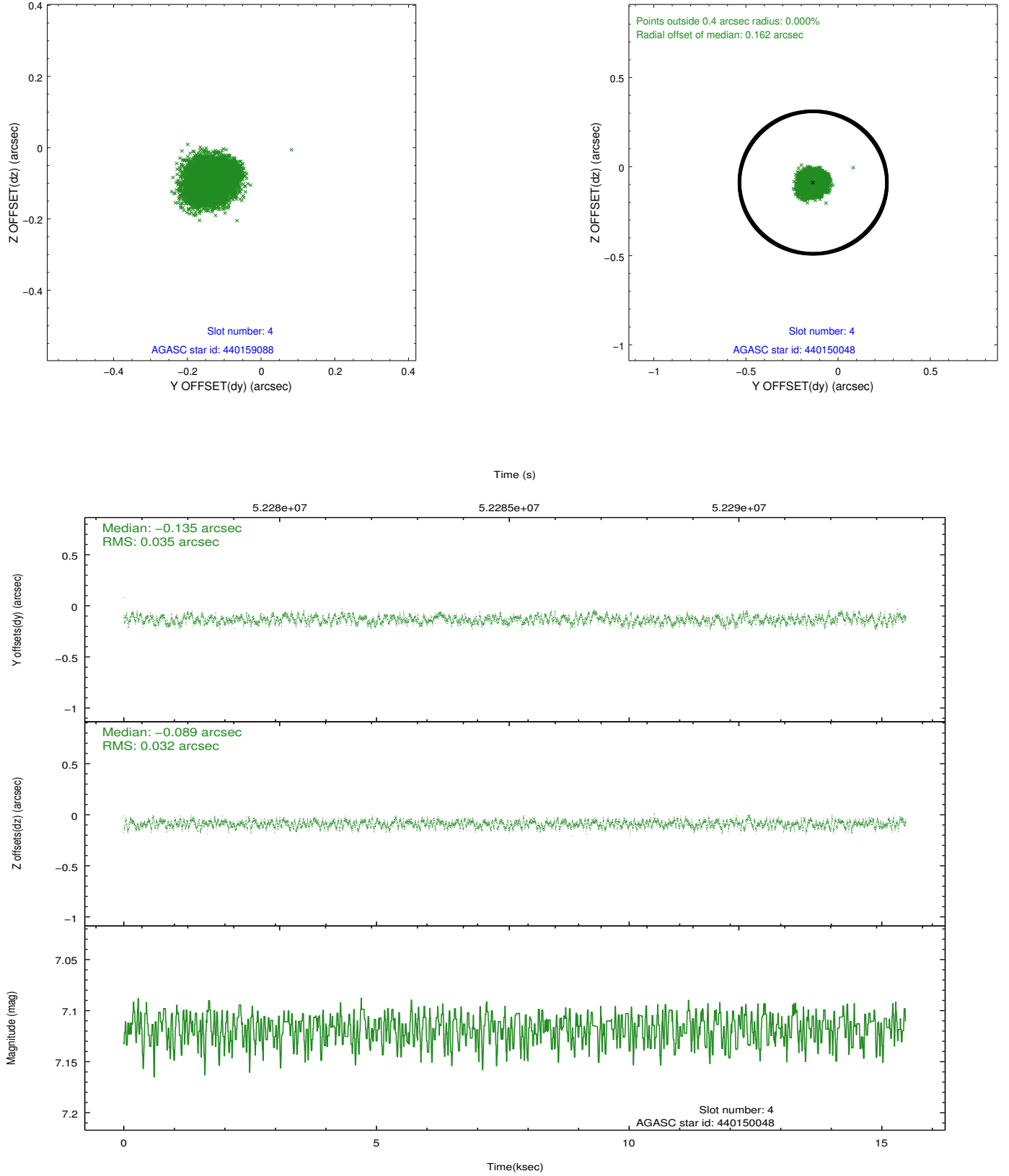
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	7551	-0.016	0.010	0.006	0.011	0.000000	0.000000	-753.03	-1722.15
1	FID	ACIS-S-4	7.22	7550	0.065	0.005	0.006	0.010	0.000000	0.000000	2160.38	186.23
2	FID	ACIS-S-5	7.25	7550	-0.080	-0.007	0.006	0.011	0.000000	0.000000	-1805.83	180.04
3	GUIDE	440159088	6.82	7550	-0.012	0.134	0.050	0.076	79.453034	46.128063	562.00	-617.50
4	GUIDE	440150048	7.12	7551	-0.135	-0.089	0.051	0.078	79.112838	46.416060	1567.78	265.32
5	GUIDE	440149808	8.41	7545	-0.074	-0.015	0.051	0.082	78.873930	46.405955	1512.57	857.05
6	GUIDE	438460832	8.99	7548	0.122	-0.227	0.096	0.149	78.414614	45.554782	-1582.25	1920.44
7	GUIDE	440145944	9.09	7544	0.100	0.197	0.091	0.138	80.083717	45.428844	-1886.88	-2304.68

## 2.4 Star Slots

### 2.4.1 Slot 3

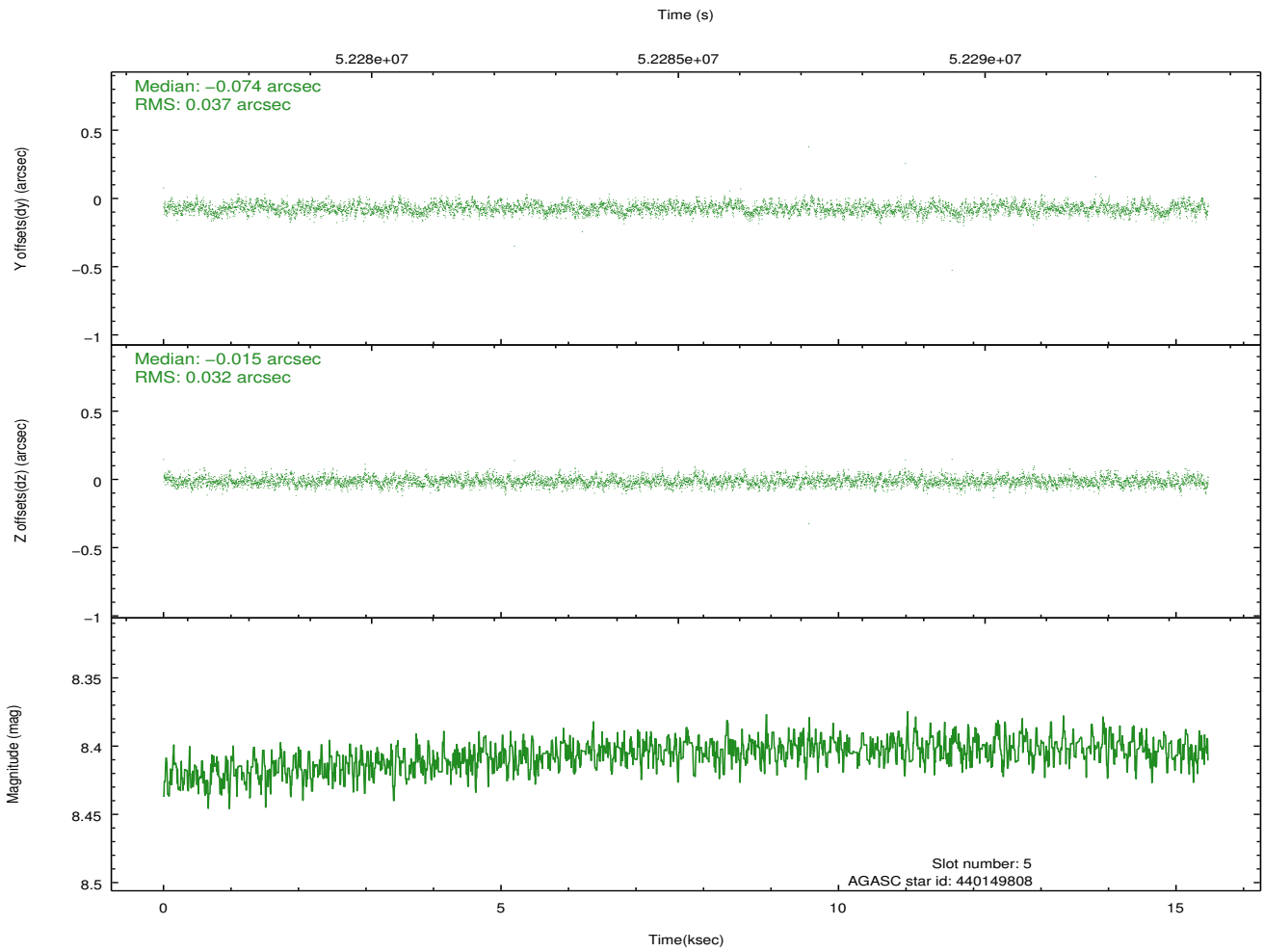
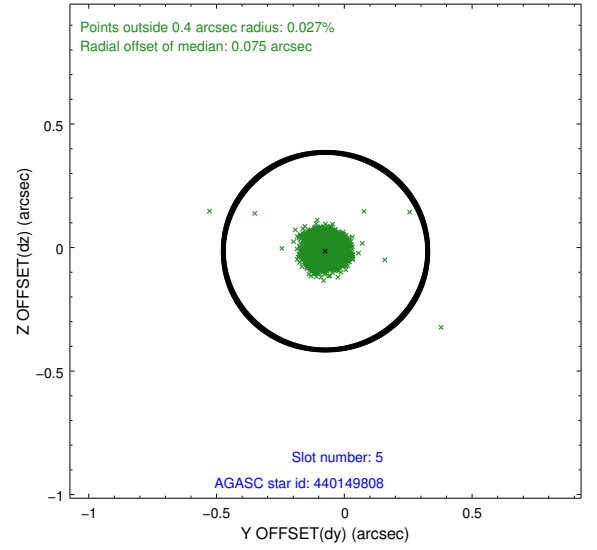
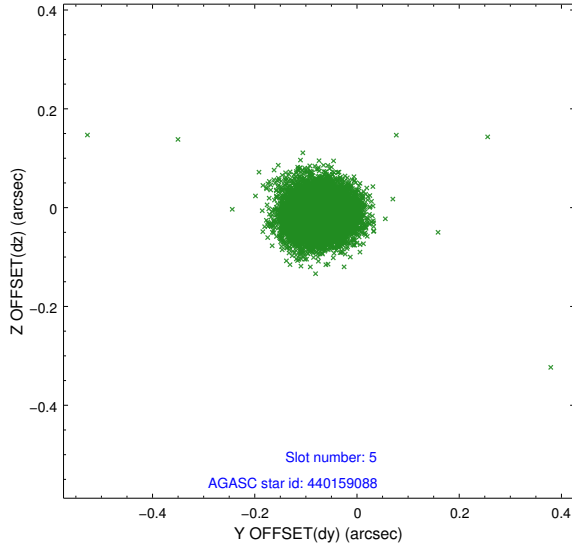


## 2.4.2 Slot 4

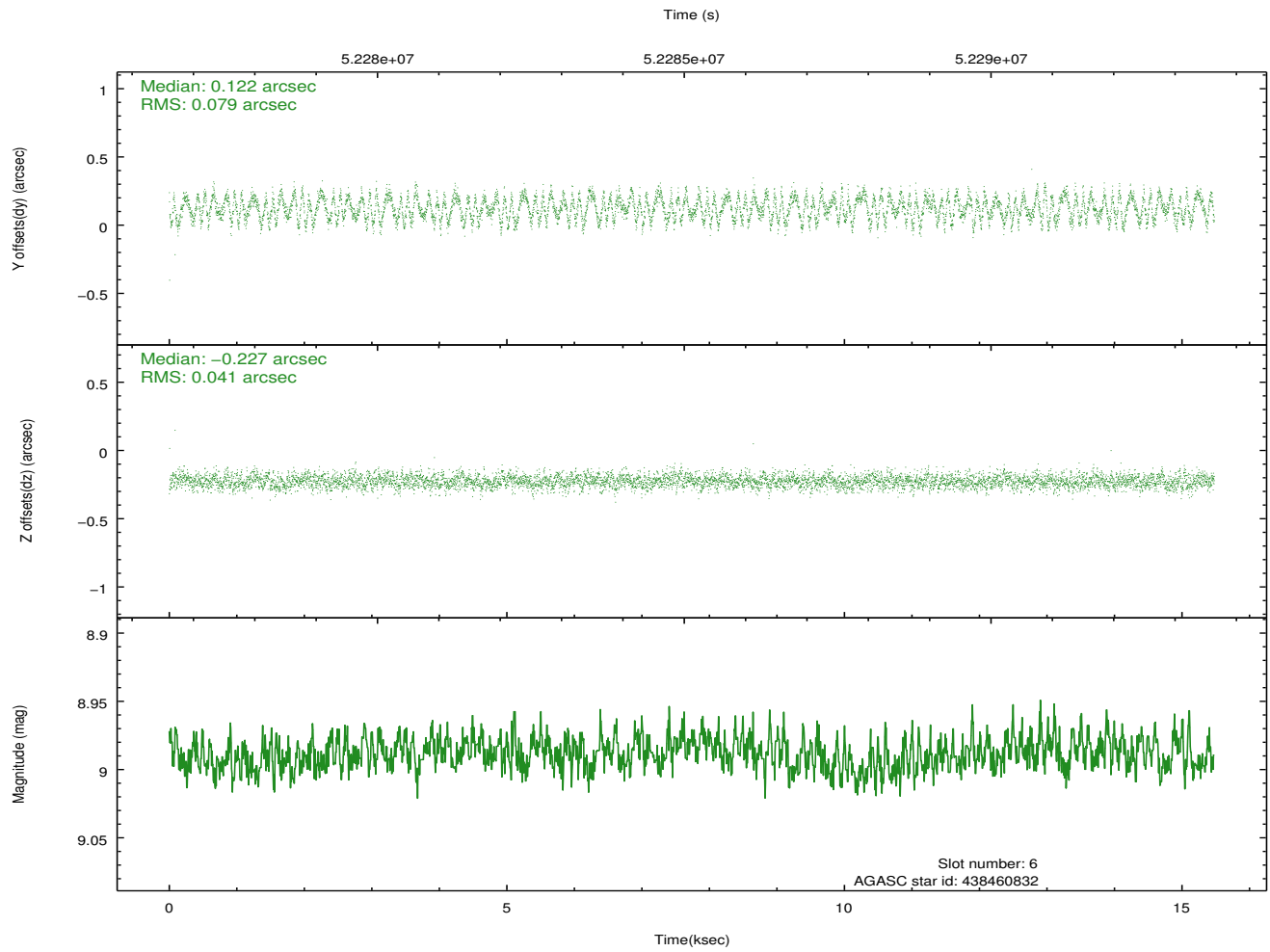
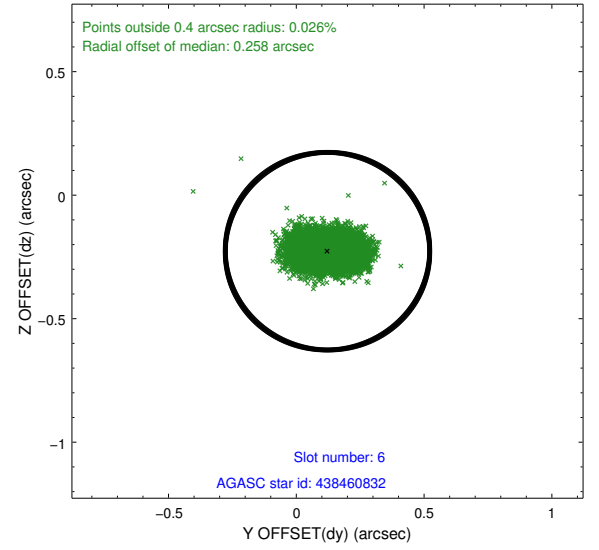
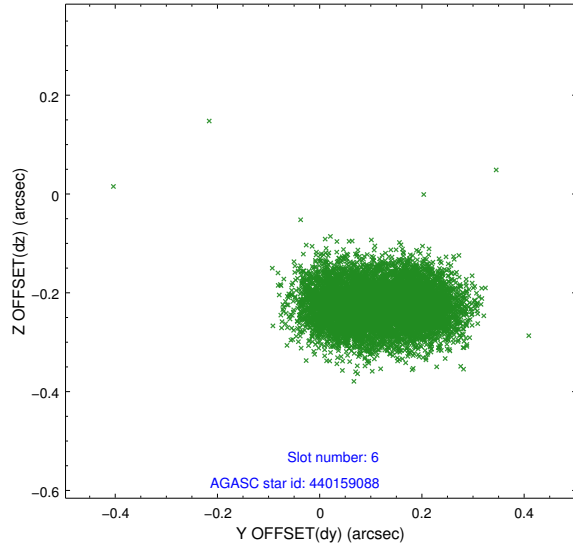




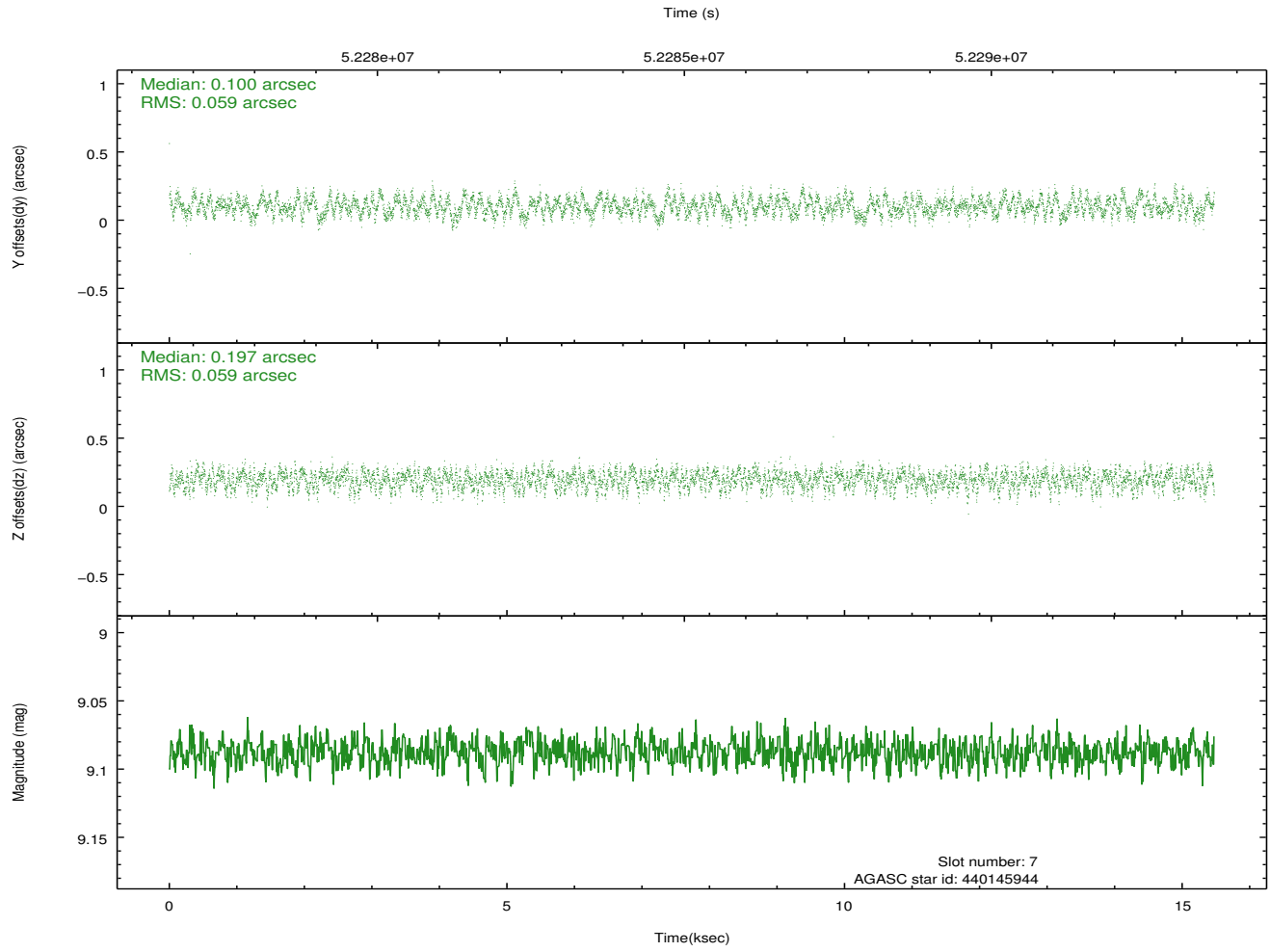
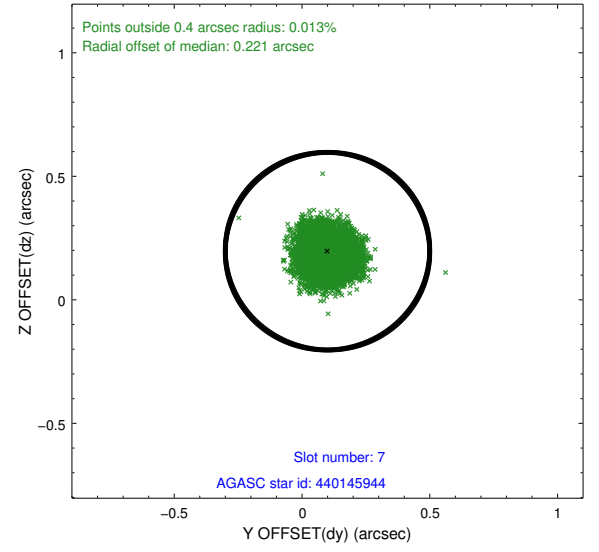
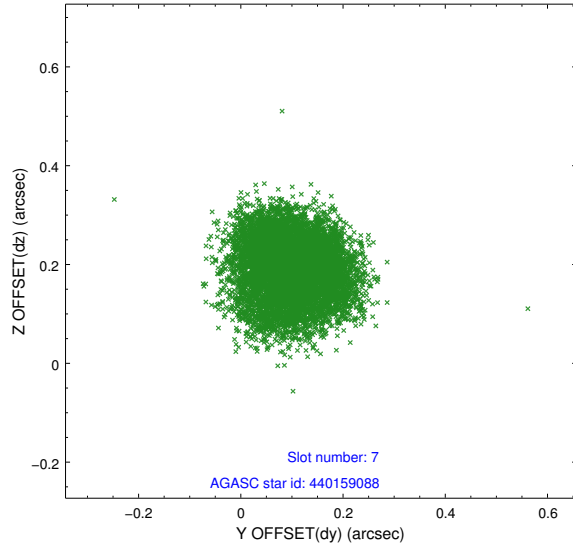
### 2.4.3 Slot 5



## 2.4.4 Slot 6

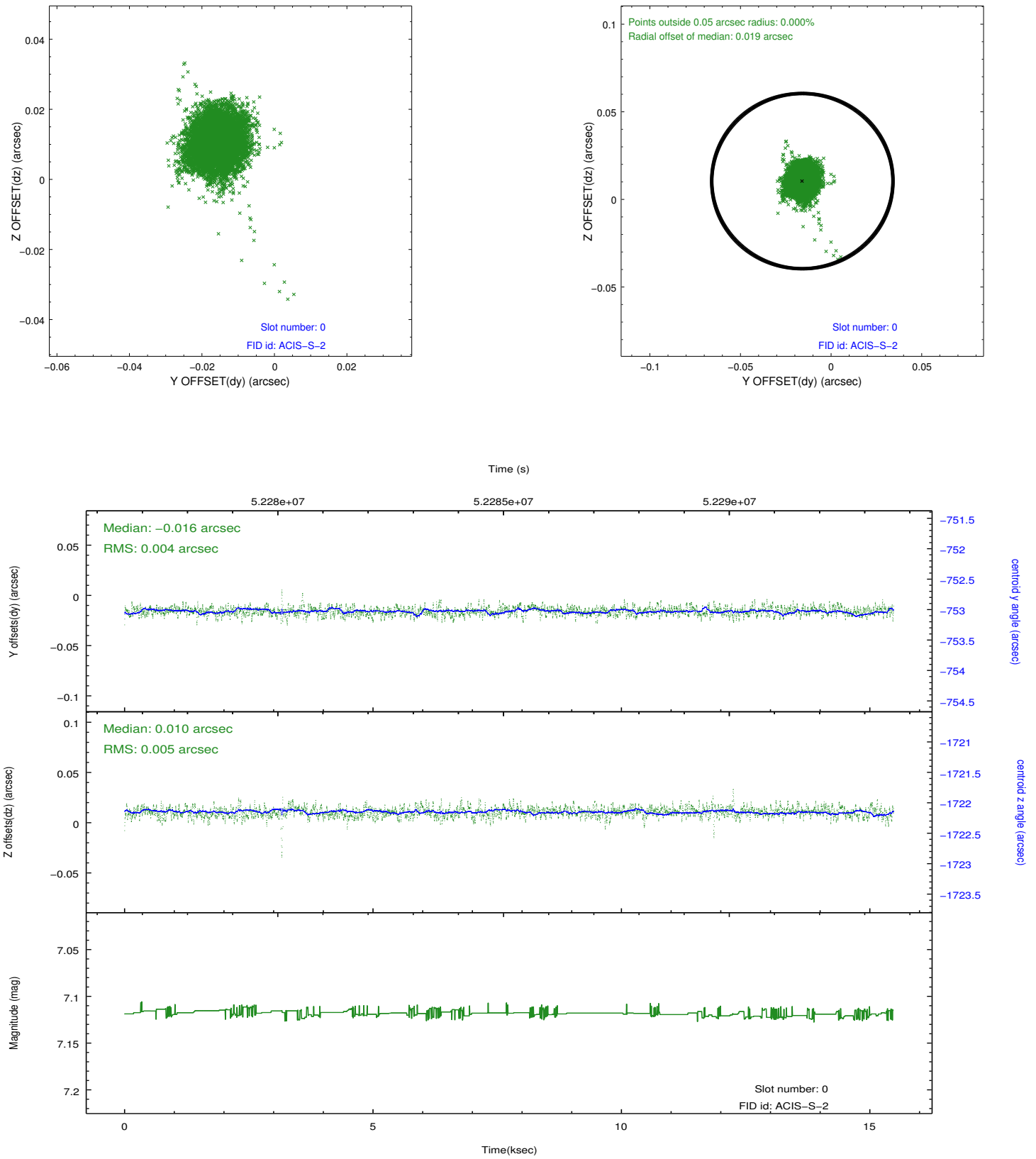


## 2.4.5 Slot 7

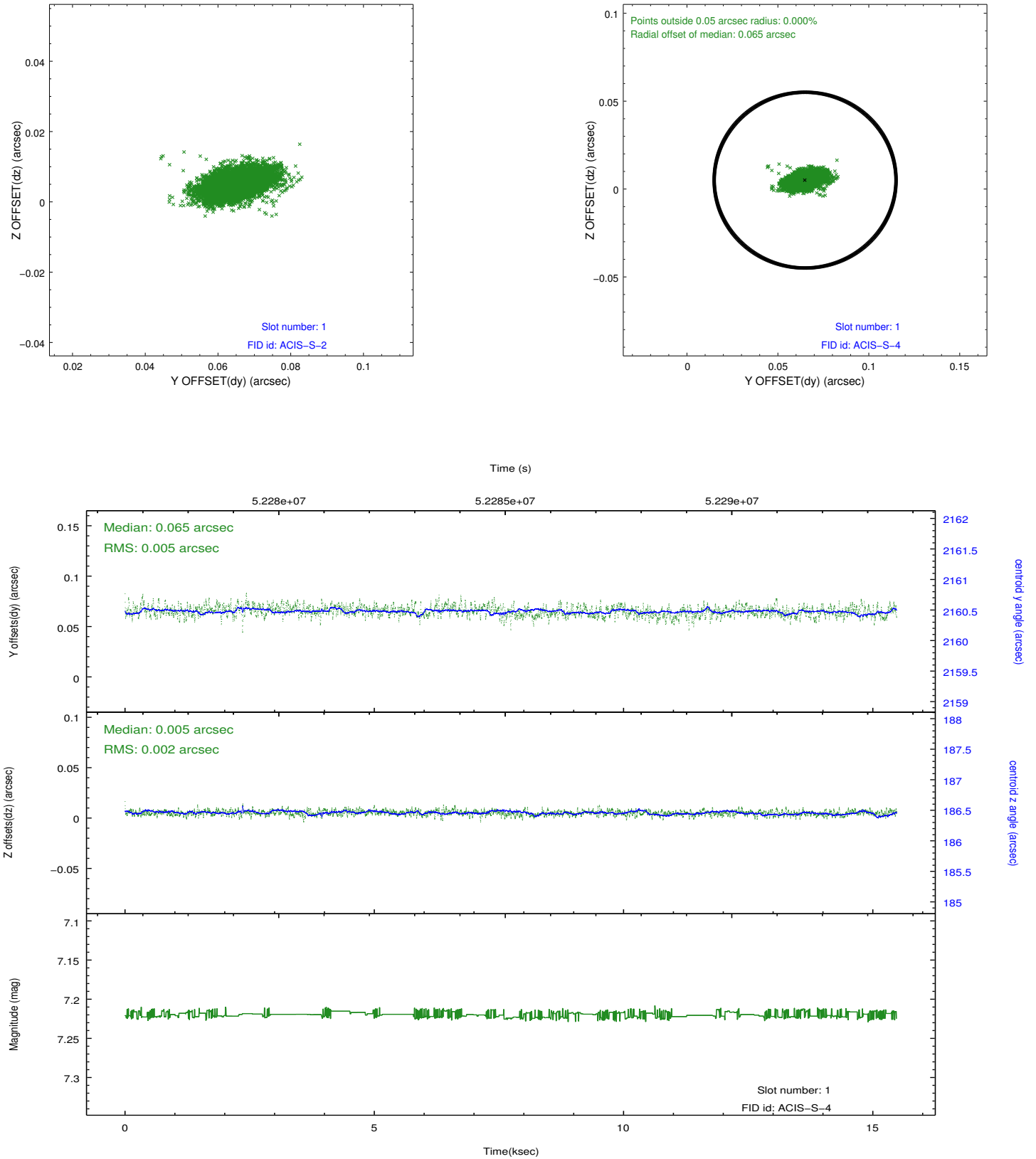


## 2.5 FID Slots

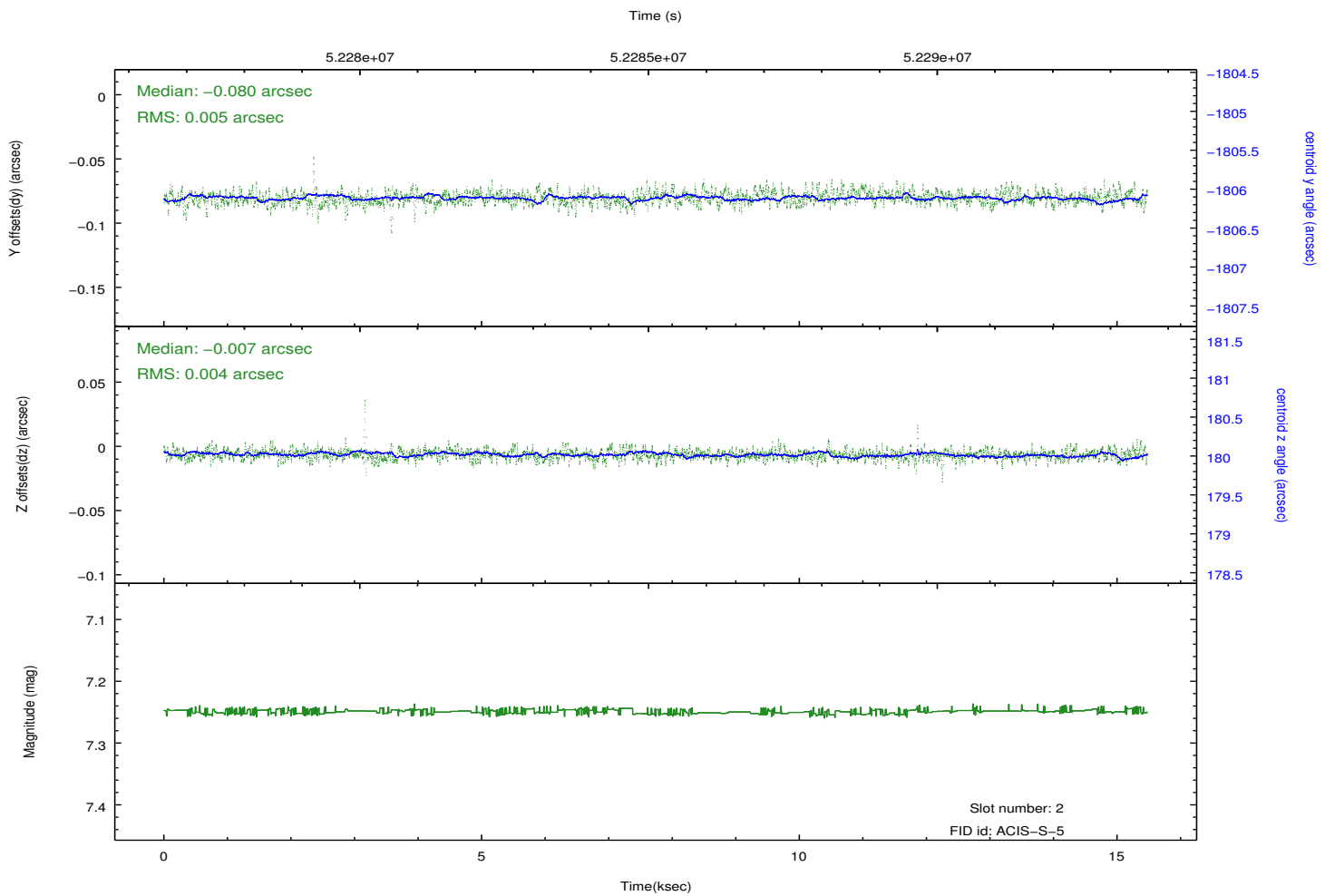
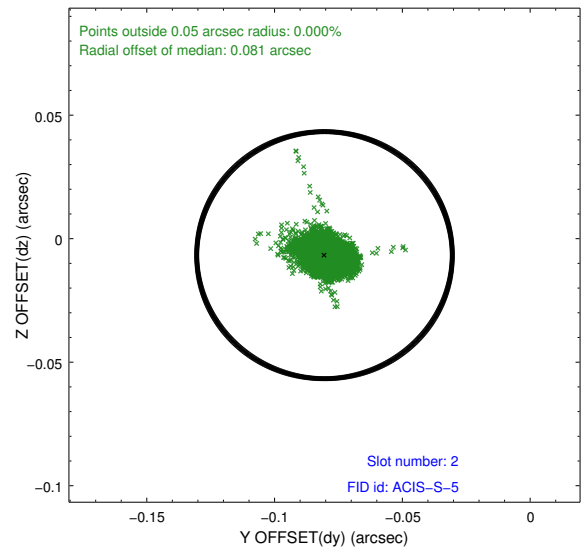
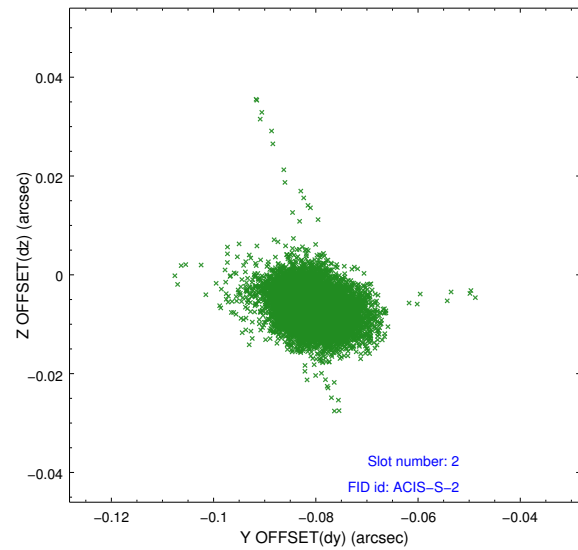
### 2.5.1 Slot 0



## 2.5.2 Slot 1

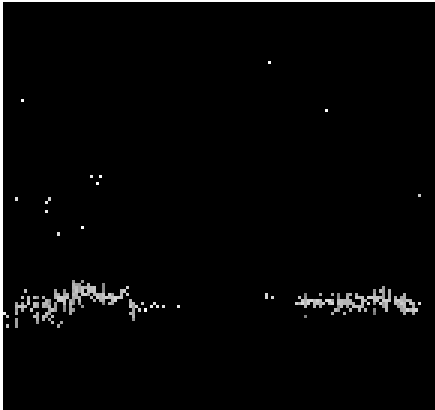


### 2.5.3 Slot 2

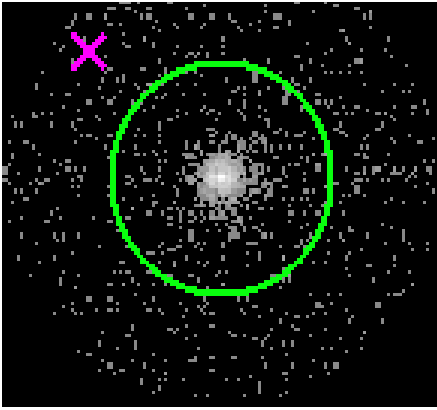


# 3 Gratings

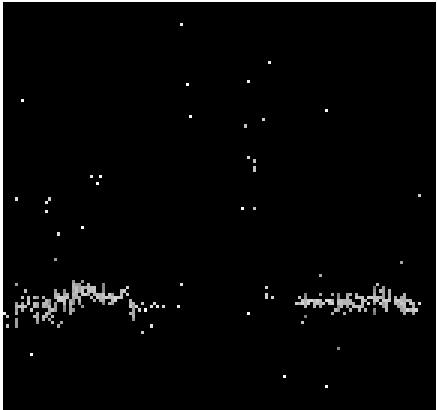
## 3.1 HEG Arm



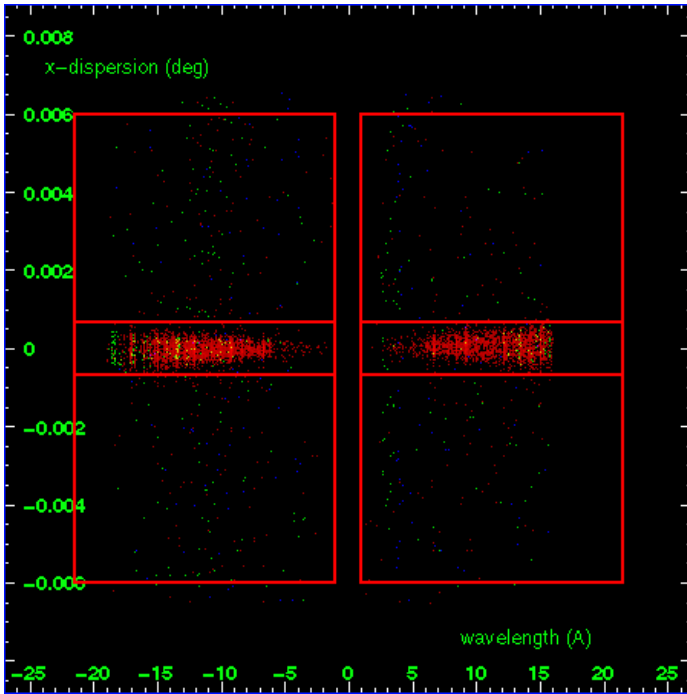
HEG Order Sort 123



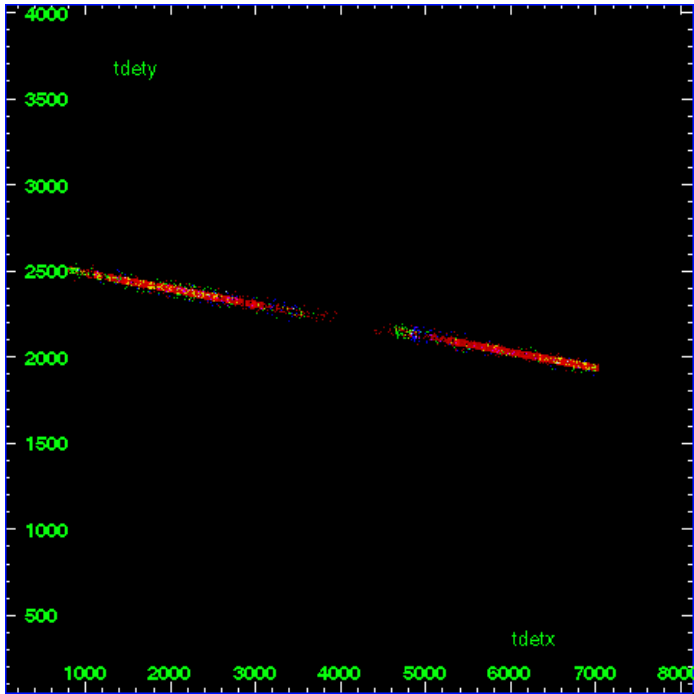
HEG Zero Order



HEG Order Sort ALL

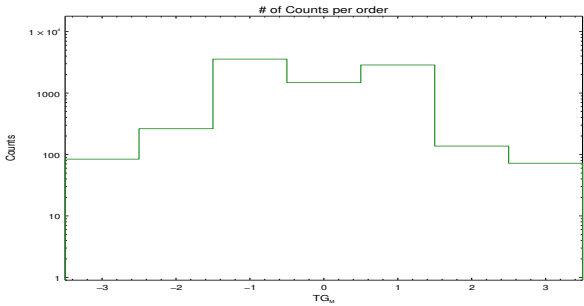


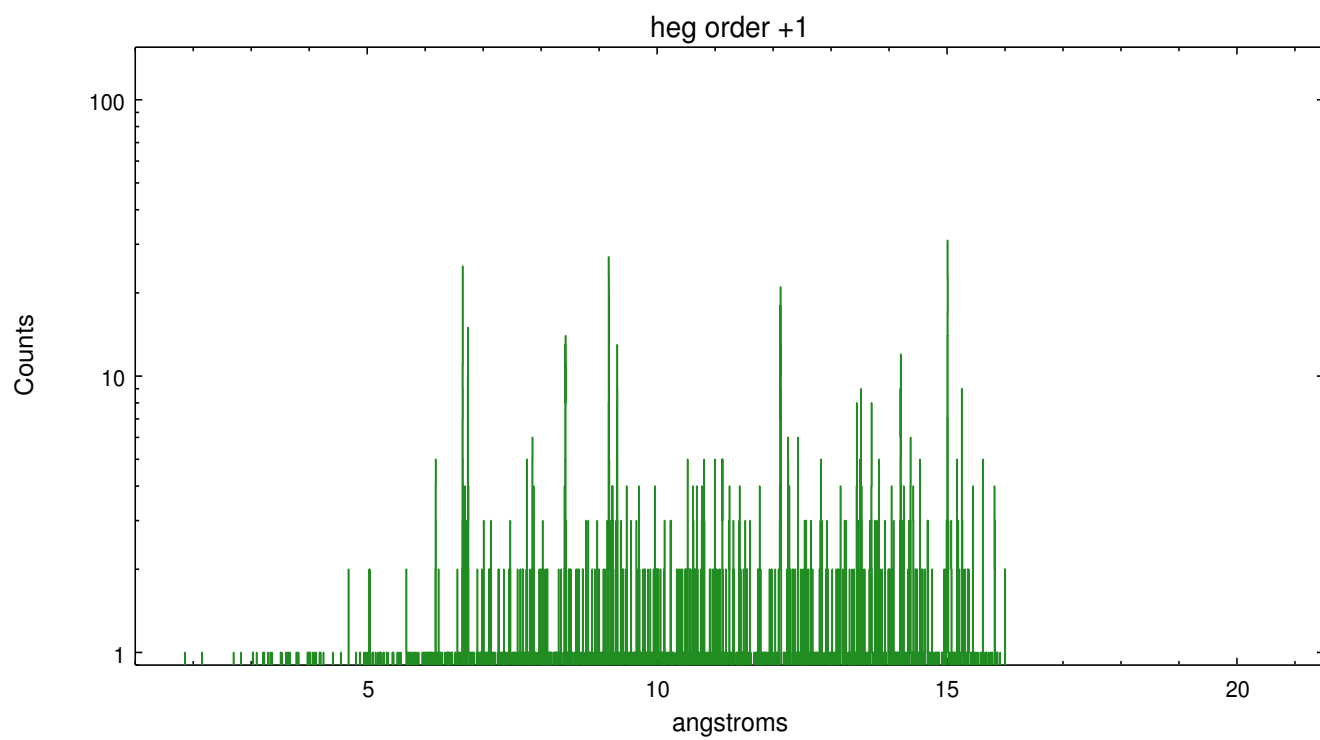
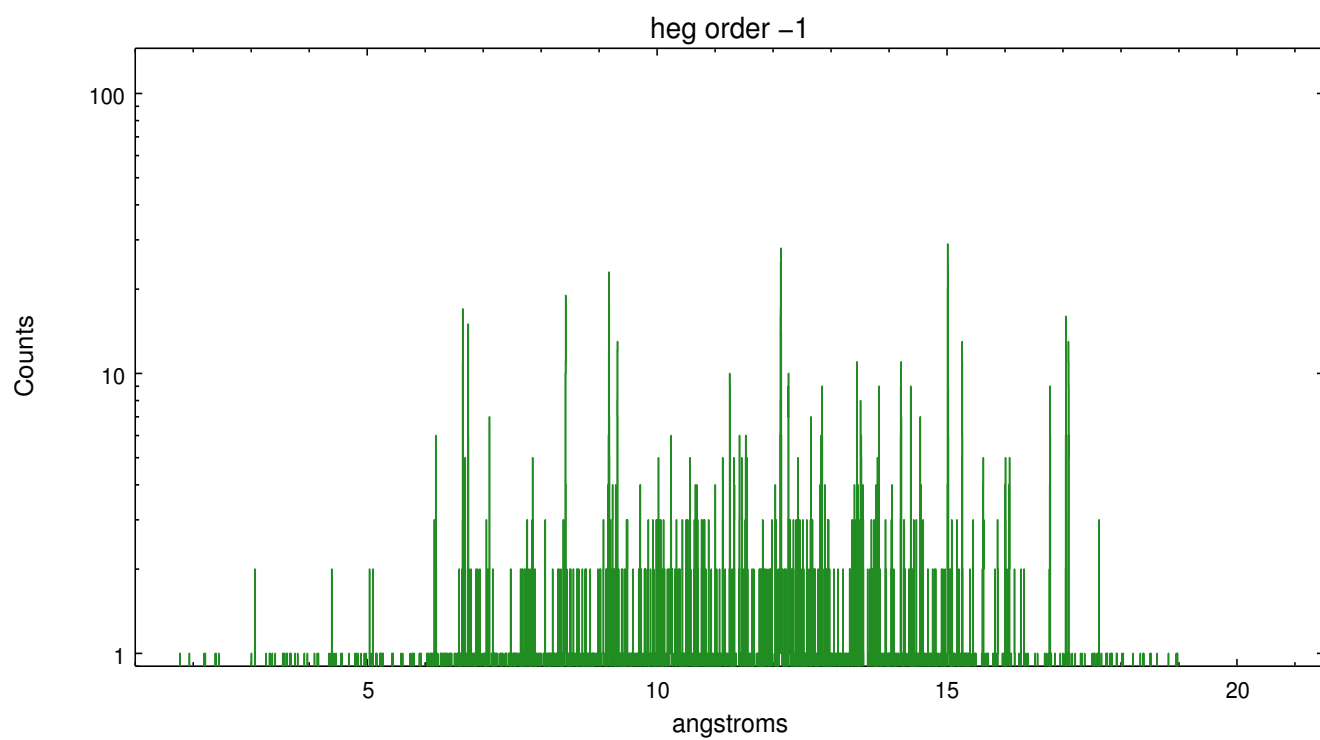
Spot Image HEG



Full Detector HEG

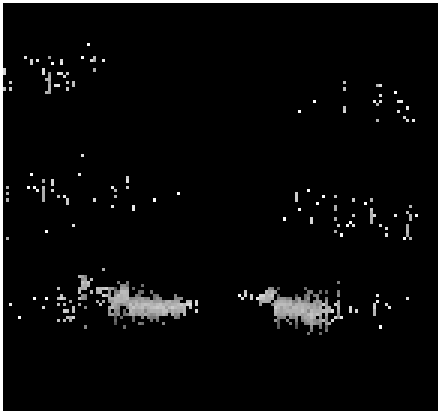
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	84	263	3571	1478	2865	137	72



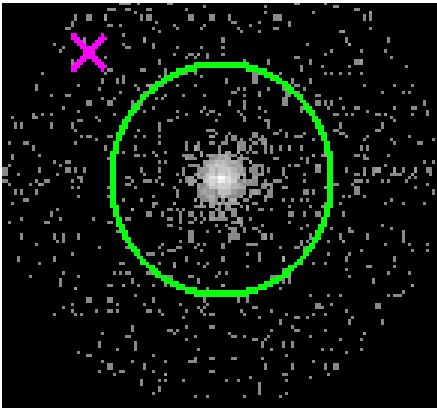




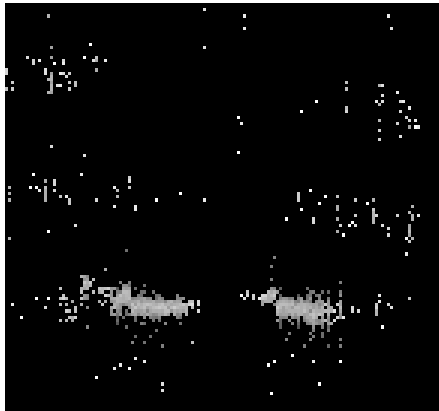
3.2 MEG Arm



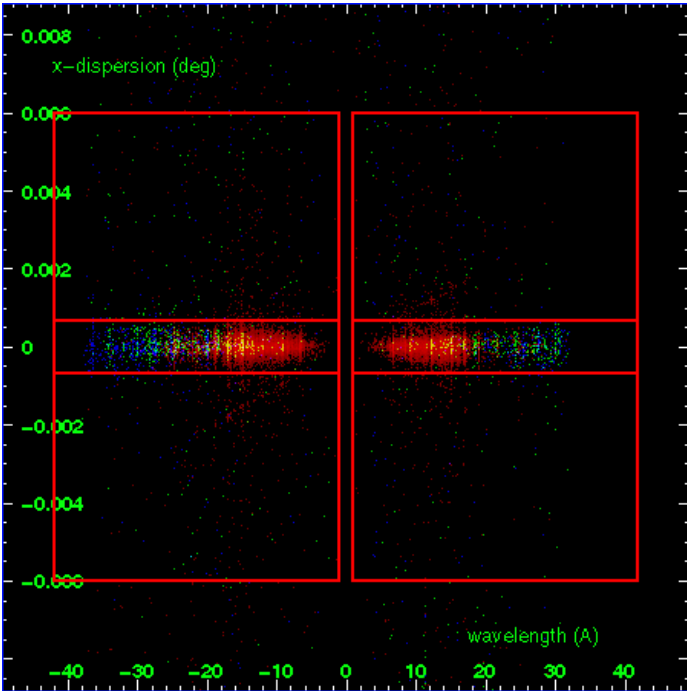
MEG Order Sort 123



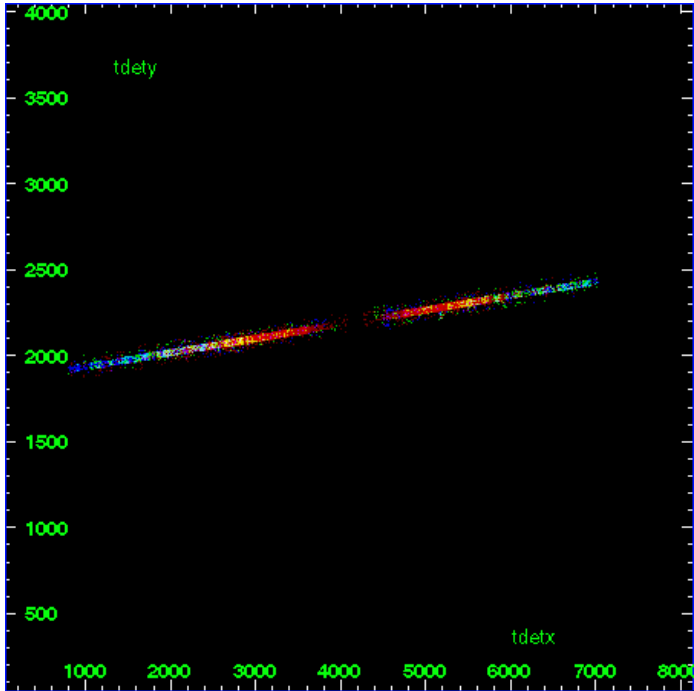
MEG Zero Order



MEG Order Sort ALL

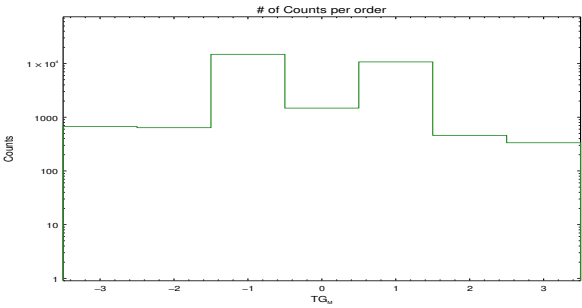


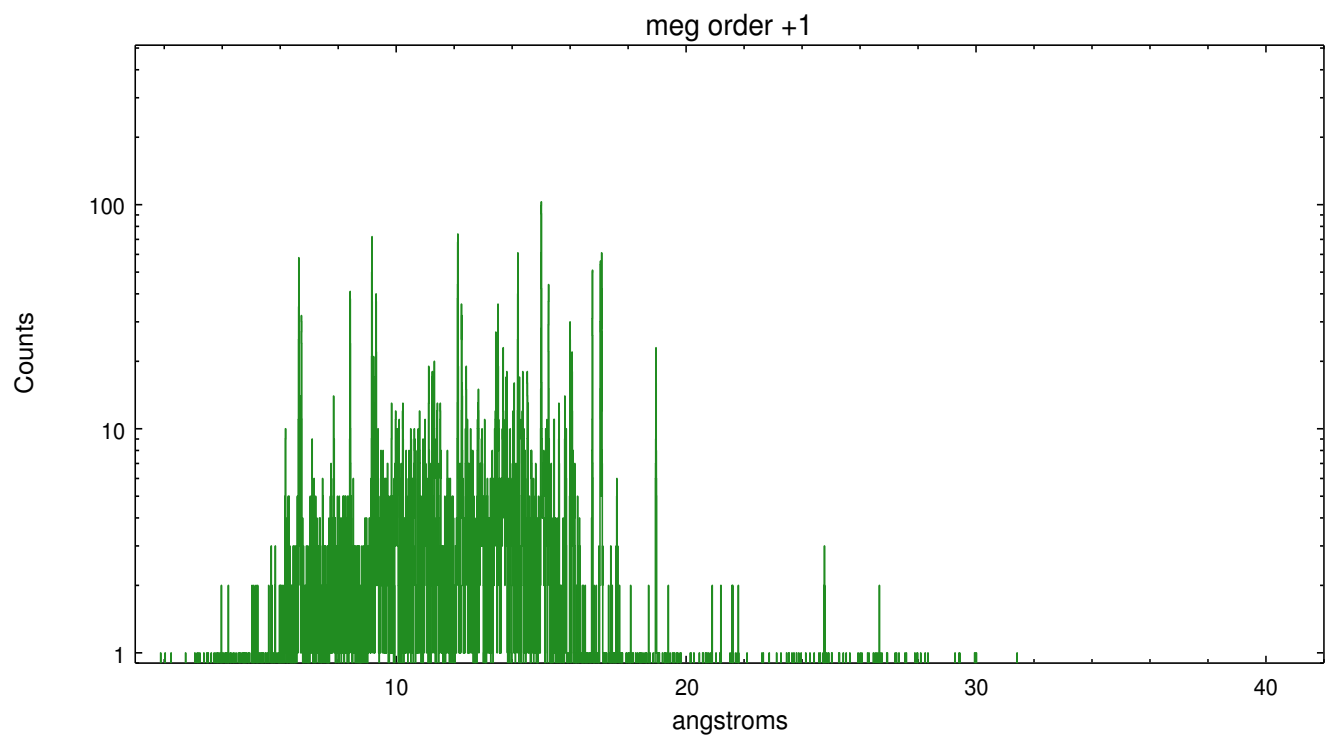
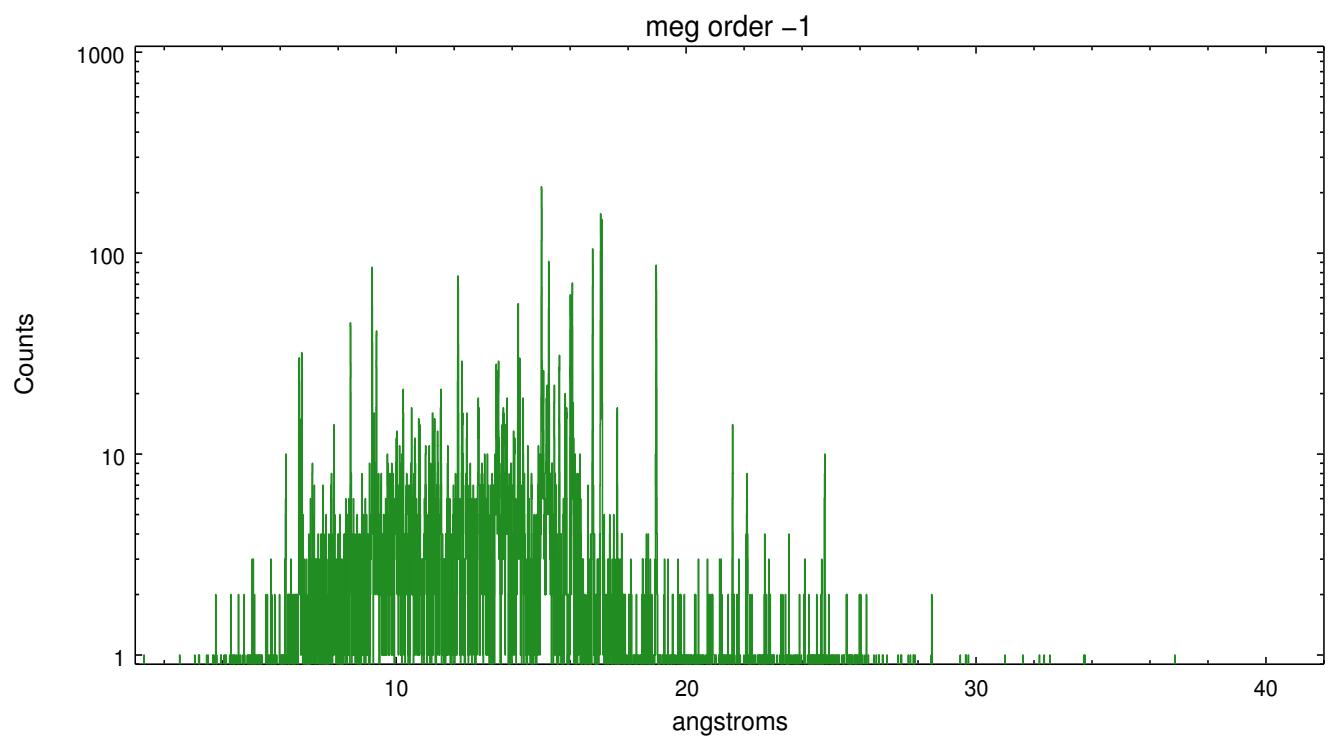
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	669	639	14822	1478	10722	459	335





## A Summary

### A.1 Status

V&V Scientist	Mike Nowak
V&V Date (YYYY-MM-DD)	2010.03.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.752

### A.2 Comments