

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 14194 - L2 Version 2  
Chandra X-Ray Center

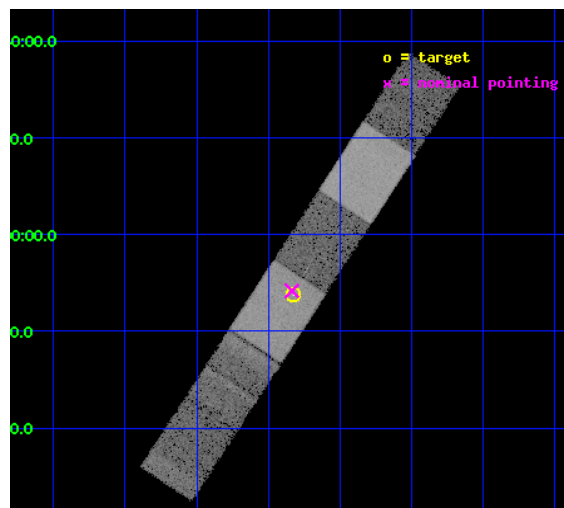
L2 Processing Date : Feb 19 2012

## 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

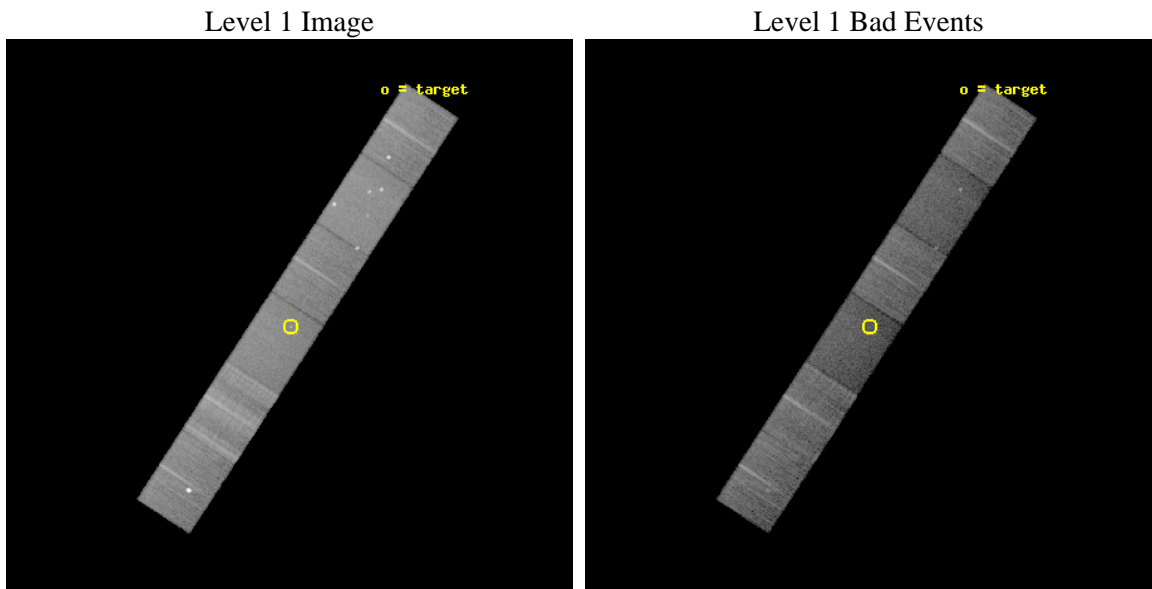
seq_num	702514	Sequence number
obs_id	14194	Observation id
title	X-raying the circumnuclear matter in the Broad Line Radio Galaxy 3C445	Proposal title
observer	Prof. Claude Canizares	Principal investigator
object	3C445	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	335.95625	Observer's specified target RA [deg]
dec_targ	-2.103611	Observer's specified target Dec [deg]
ra_nom	335.95885004586	Nominal RA [deg]
dec_nom	-2.0969709350667	Nominal Dec [deg]
roll_nom	123.15671786773	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14410.0	Sum of GTIs [s]
livetime	14177.266001322	Livetime [s]
ontime4	14410.0	Sum of GTIs [s]
ontime5	14410.0	Sum of GTIs [s]
ontime6	14410.0	Sum of GTIs [s]
ontime7	14410.0	Sum of GTIs [s]
ontime8	14410.0	Sum of GTIs [s]
ontime9	14410.0	Sum of GTIs [s]
l2events	149312	Number of level 2 events



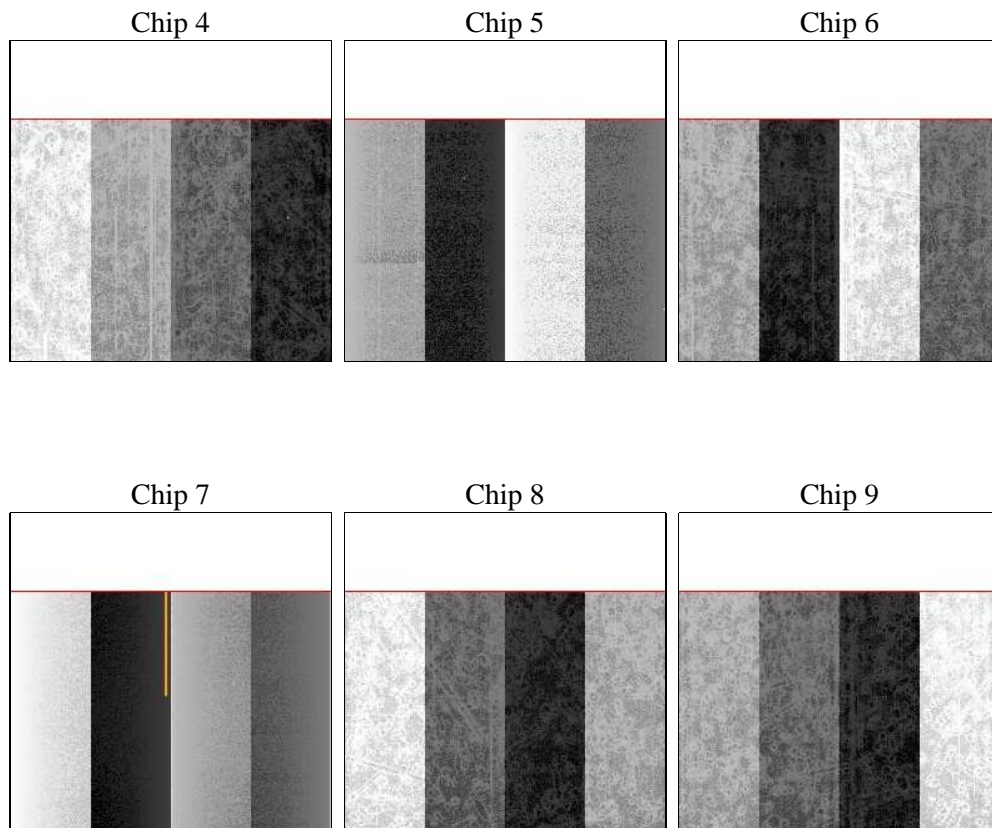
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14372.798000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14410.0	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime4	14410.0	Sum of GTIs [s]
date	2012-02-19T10:56:00	Date and time of file creation	ontime5	14410.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14410.0	Sum of GTIs [s]
			ontime7	14410.0	Sum of GTIs [s]
			ontime8	14410.0	Sum of GTIs [s]
			ontime9	14410.0	Sum of GTIs [s]
			l1events	668587	Number of level 1 events

### 2.1.4 Events

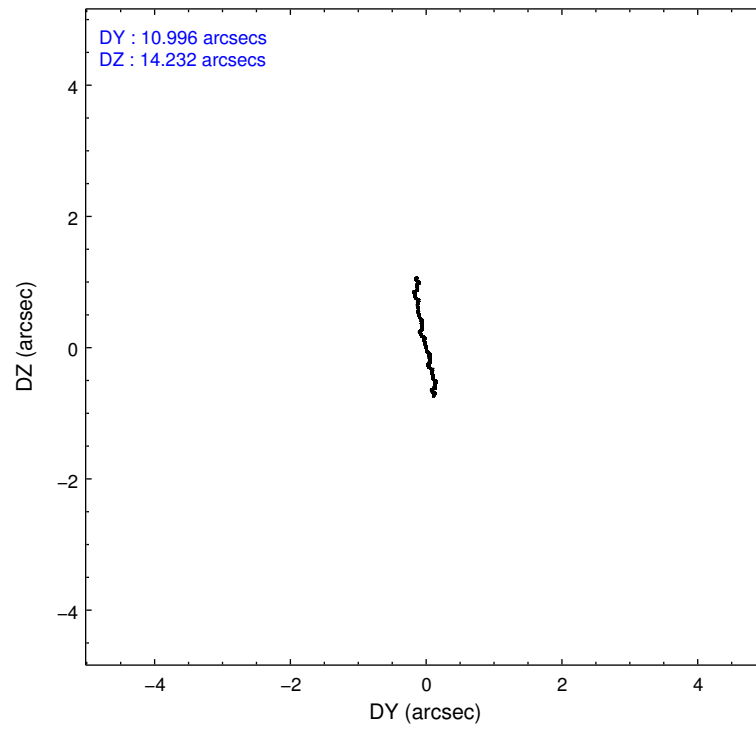
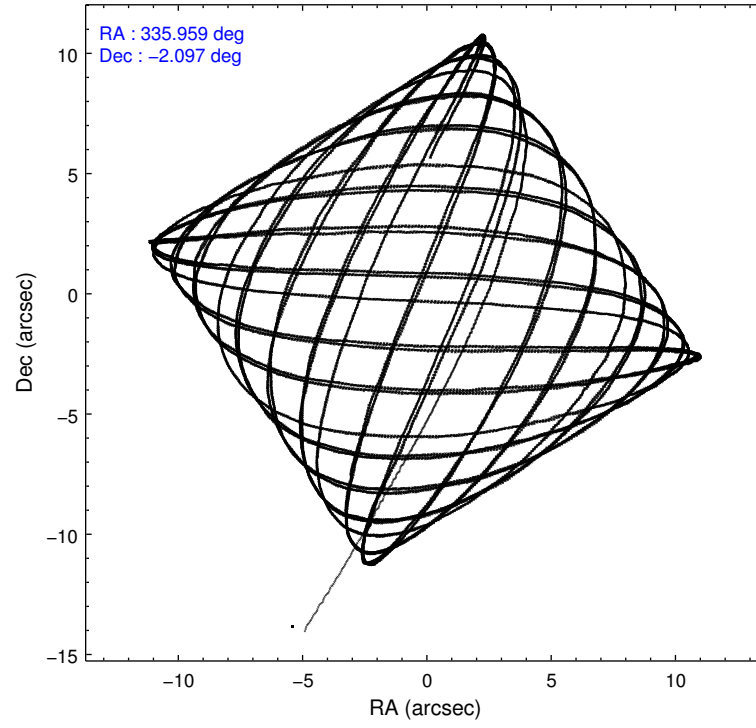
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	108345	126525	94103	98242	138934	102438	grade 0 events	8331	11195	4779	5012	17245	15838
rejected events	92593	58047	82314	49174	86045	79470		7%	8%	5%	5%	12%	15%
rejected %	85%	45%	87%	50%	61%	77%	grade 1 events	103	491	49	148	132	153
								0%	0%	0%	0%	0%	0%
							grade 2 events	3114	19950	2543	10634	10575	2493
								2%	15%	2%	10%	7%	2%
							grade 3 events	1213	3791	1113	4527	6813	1237
								1%	2%	1%	4%	4%	1%
							grade 4 events	1208	3142	1163	4596	6115	1179
								1%	2%	1%	4%	4%	1%
							grade 5 events	3164	9551	3160	9491	5121	3651
								2%	7%	3%	9%	3%	3%
							grade 6 events	1889	30431	2196	24306	12173	2231
								1%	24%	2%	24%	8%	2%
							grade 7 events	89323	47974	79100	39528	80760	75656
								82%	37%	84%	40%	58%	73%

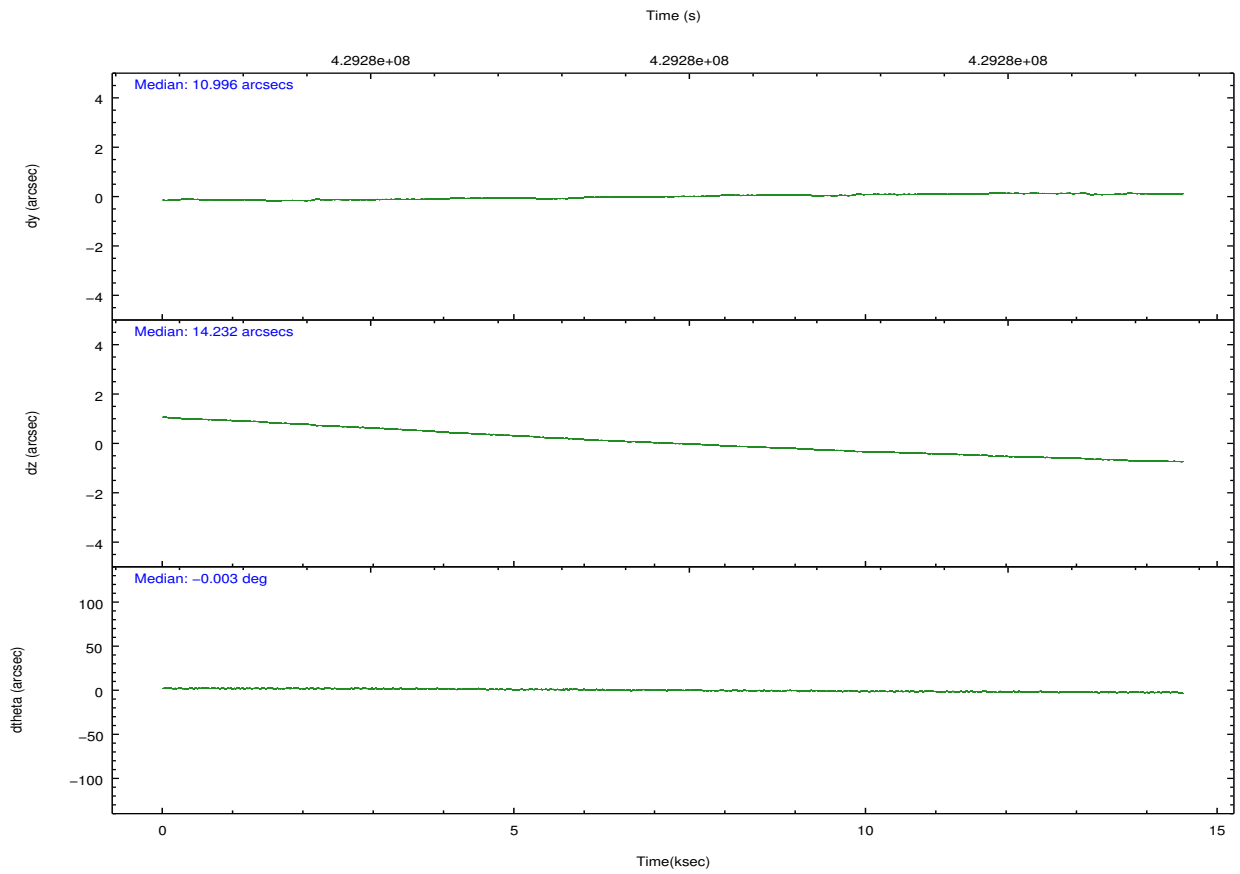
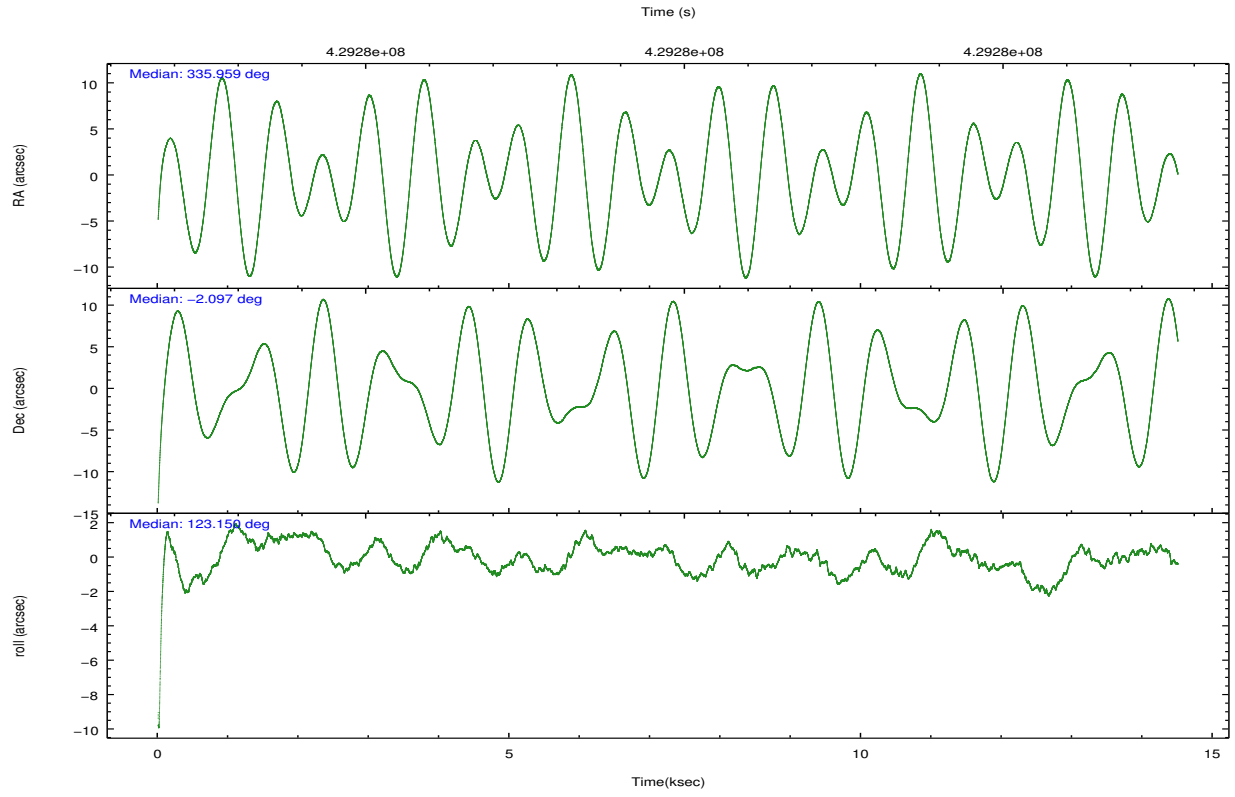


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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
[deg] Pointing RA	335.983427	335.9588500458618	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-2.109024	-2.09697093506669	Subarray start row	1	1
[deg] Pointing Roll	123.000995	123.1567178677329	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	429272621.184000	429271497.17674			
Observation start date	2011-08-09T10:22:35	2011-08-09T10:04:57			
[s] Observation end time (MET)	429286994.184000	429287218.62756			
Observation end date	2011-08-09T14:22:08	2011-08-09T14:26:58			
Read mode	TIMED	TIMED			

## 2.3 Aspect



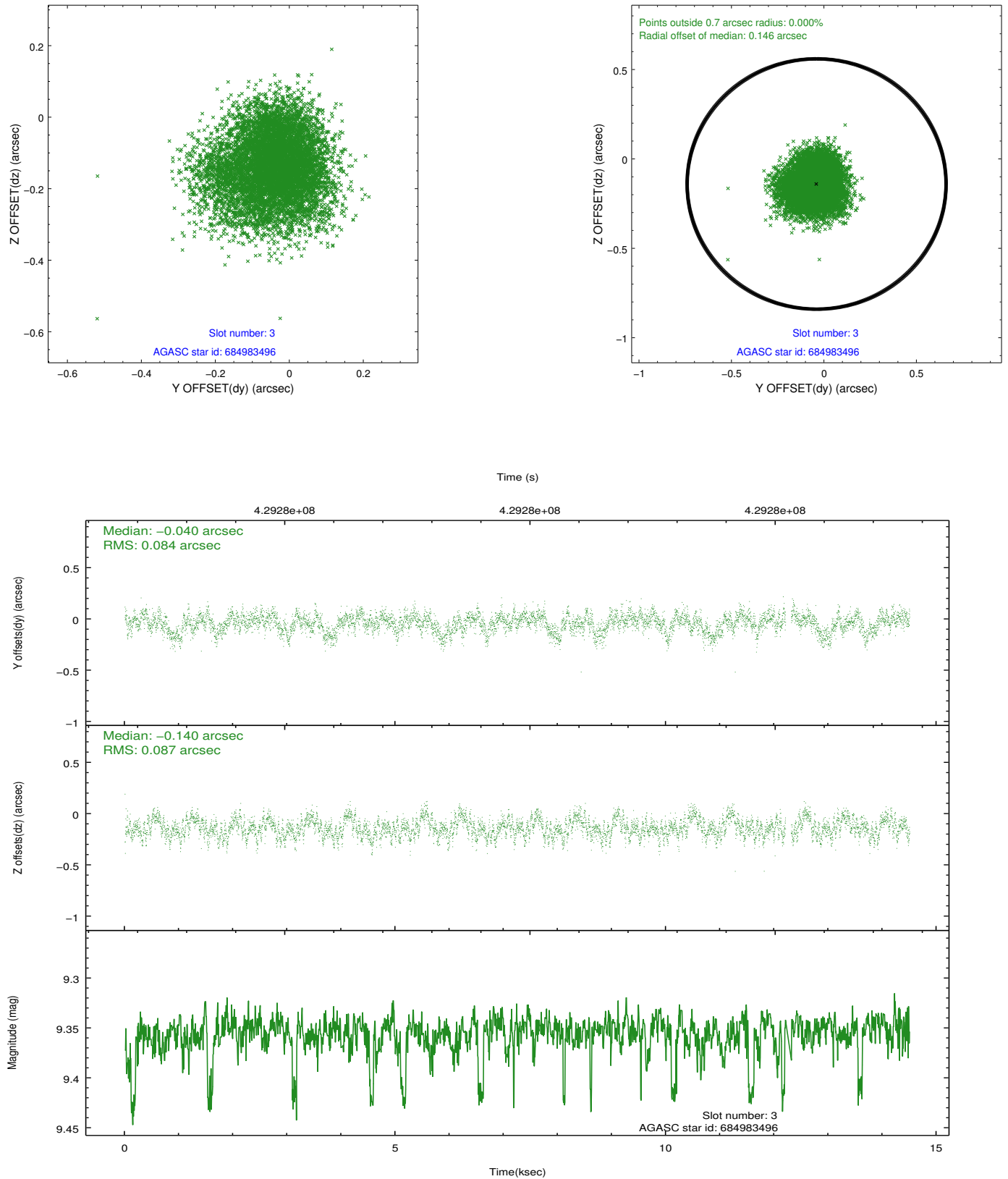


### Slot Statistics

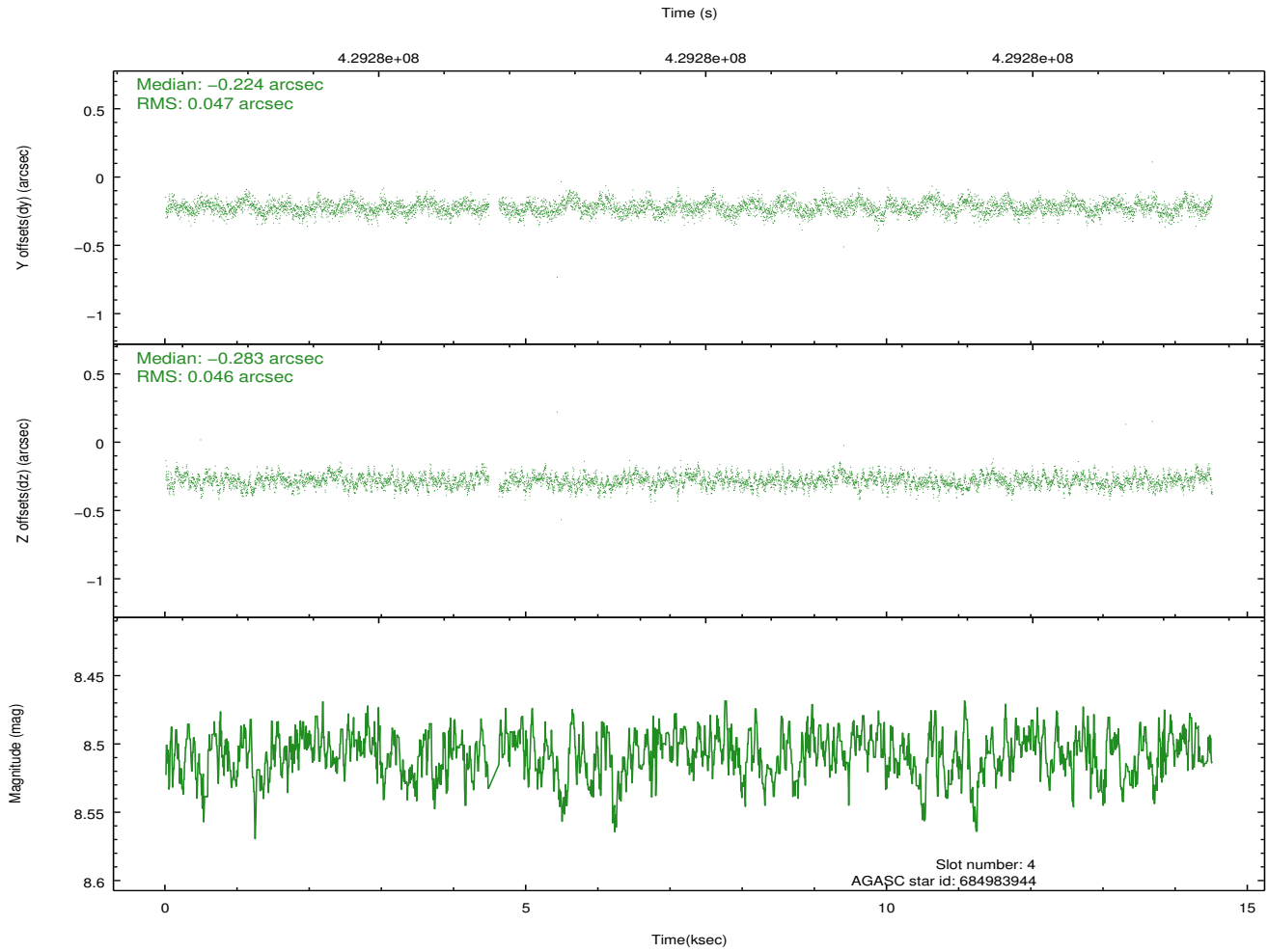
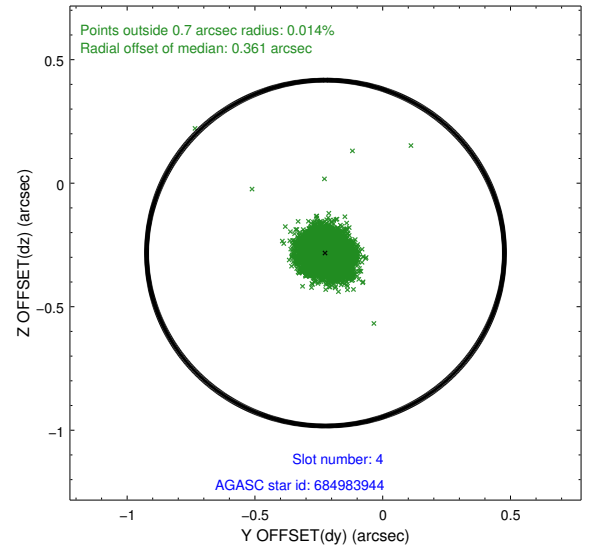
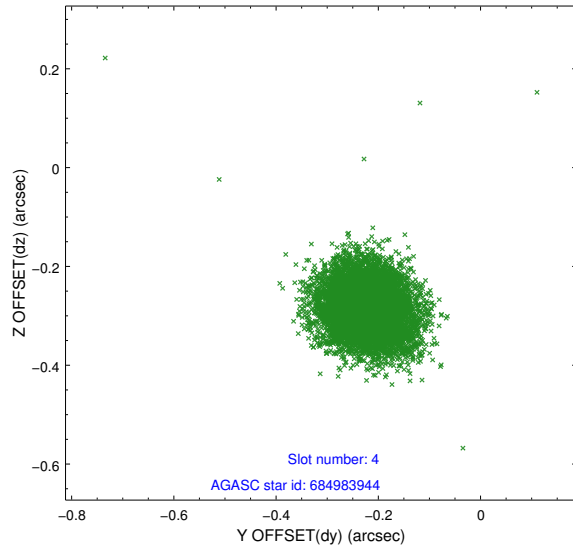
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	3536	-0.109	-0.073	0.020	0.033	0.000000	0.000000	-763.79	-1797.80
1	FID	ACIS-S-4	6.96	3537	0.227	0.072	0.006	0.012	0.000000	0.000000	2149.72	110.42
2	FID	ACIS-S-5	7.01	3537	-0.150	0.009	0.019	0.031	0.000000	0.000000	-1816.23	104.47
3	GUIDE	684983496	9.36	6985	-0.040	-0.140	0.131	0.204	335.372511	-2.110127	1192.65	1845.76
4	GUIDE	684983944	8.51	7006	-0.224	-0.283	0.069	0.113	335.506030	-2.277752	425.50	1771.43
5	GUIDE	684990016	8.80	7073	0.072	0.112	0.081	0.138	336.074884	-1.446788	1821.17	-1574.23
6	GUIDE	685377368	8.03	7072	0.149	-0.030	0.074	0.120	335.969878	-2.757725	-1932.20	1312.07
7	GUIDE	684984136	8.37	7072	0.049	0.336	0.084	0.134	336.777802	-2.080623	-1471.53	-2452.38

## 2.4 Star Slots

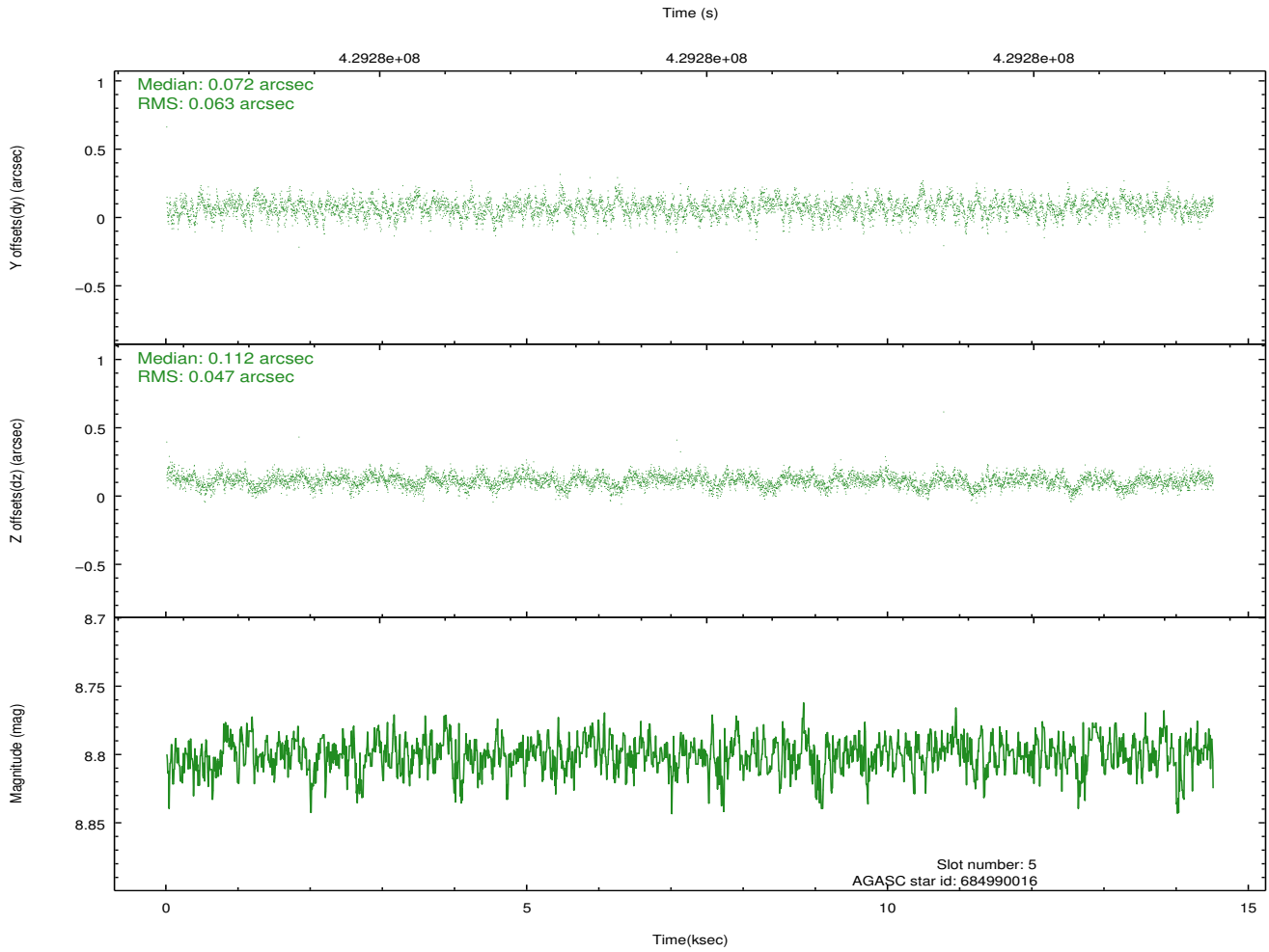
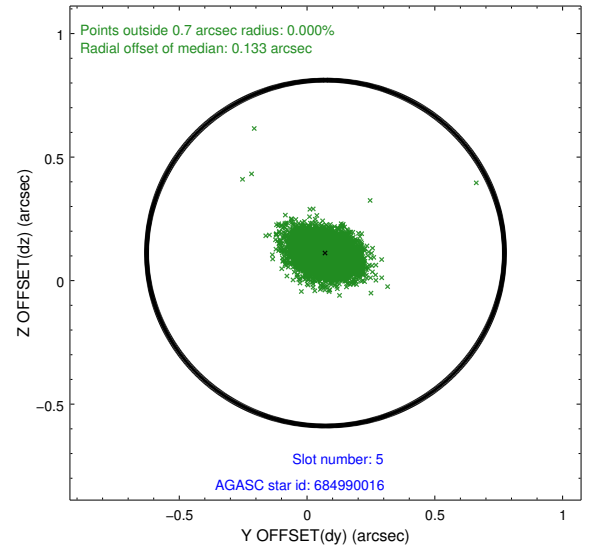
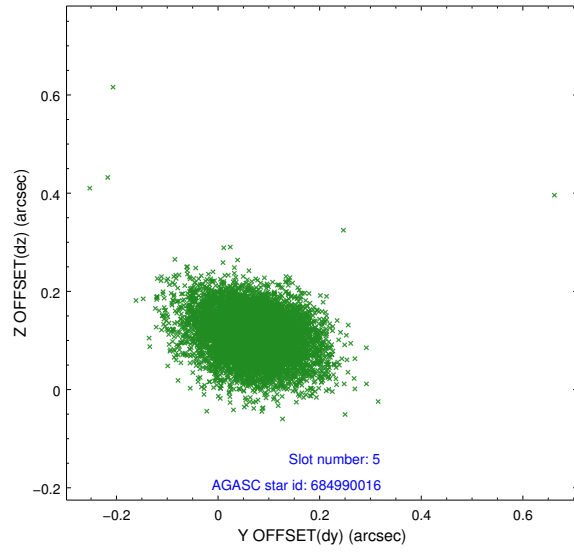
### 2.4.1 Slot 3



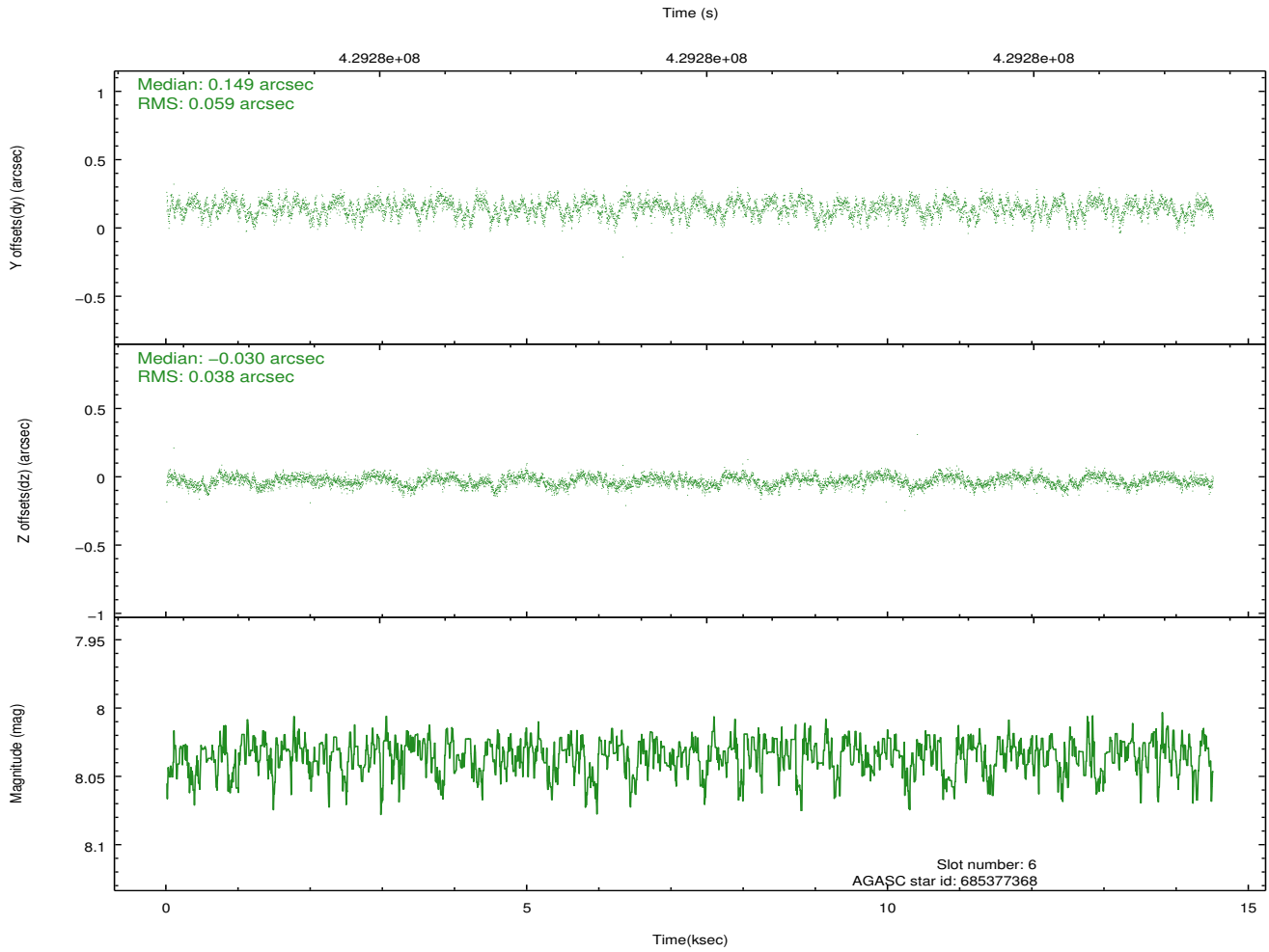
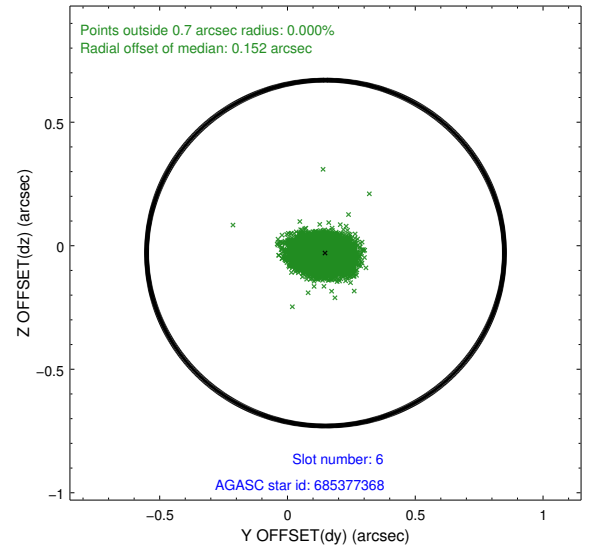
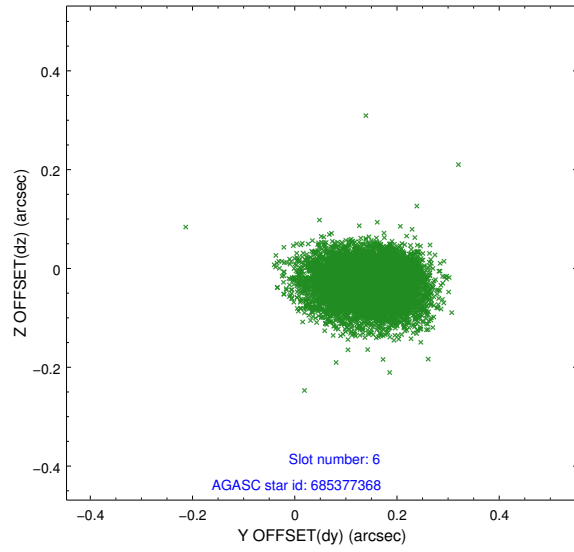
## 2.4.2 Slot 4



### 2.4.3 Slot 5

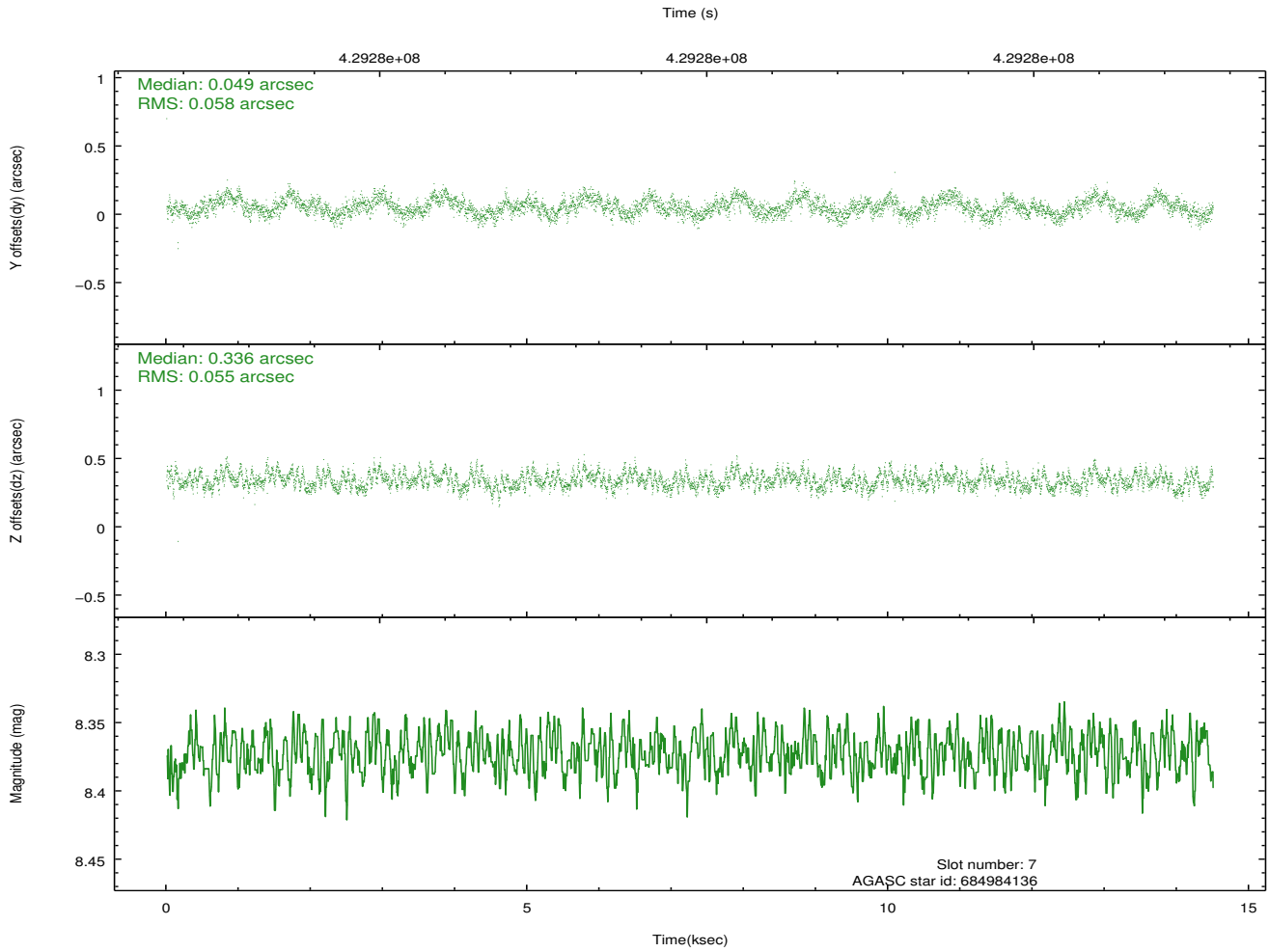
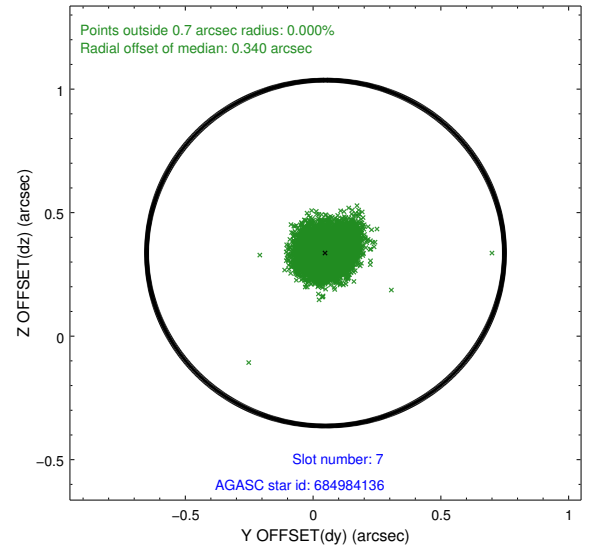
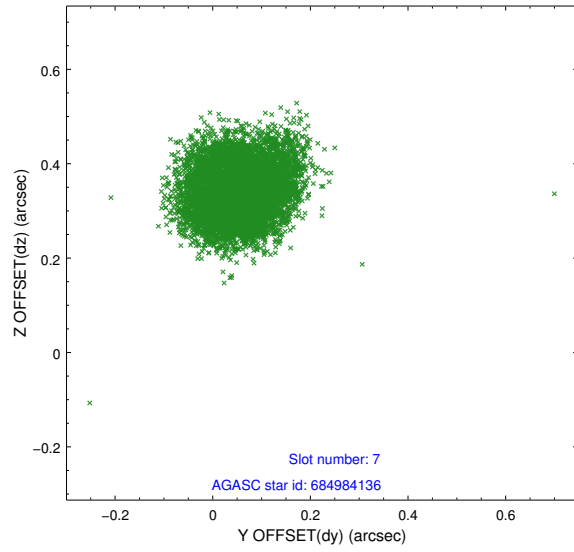


## 2.4.4 Slot 6



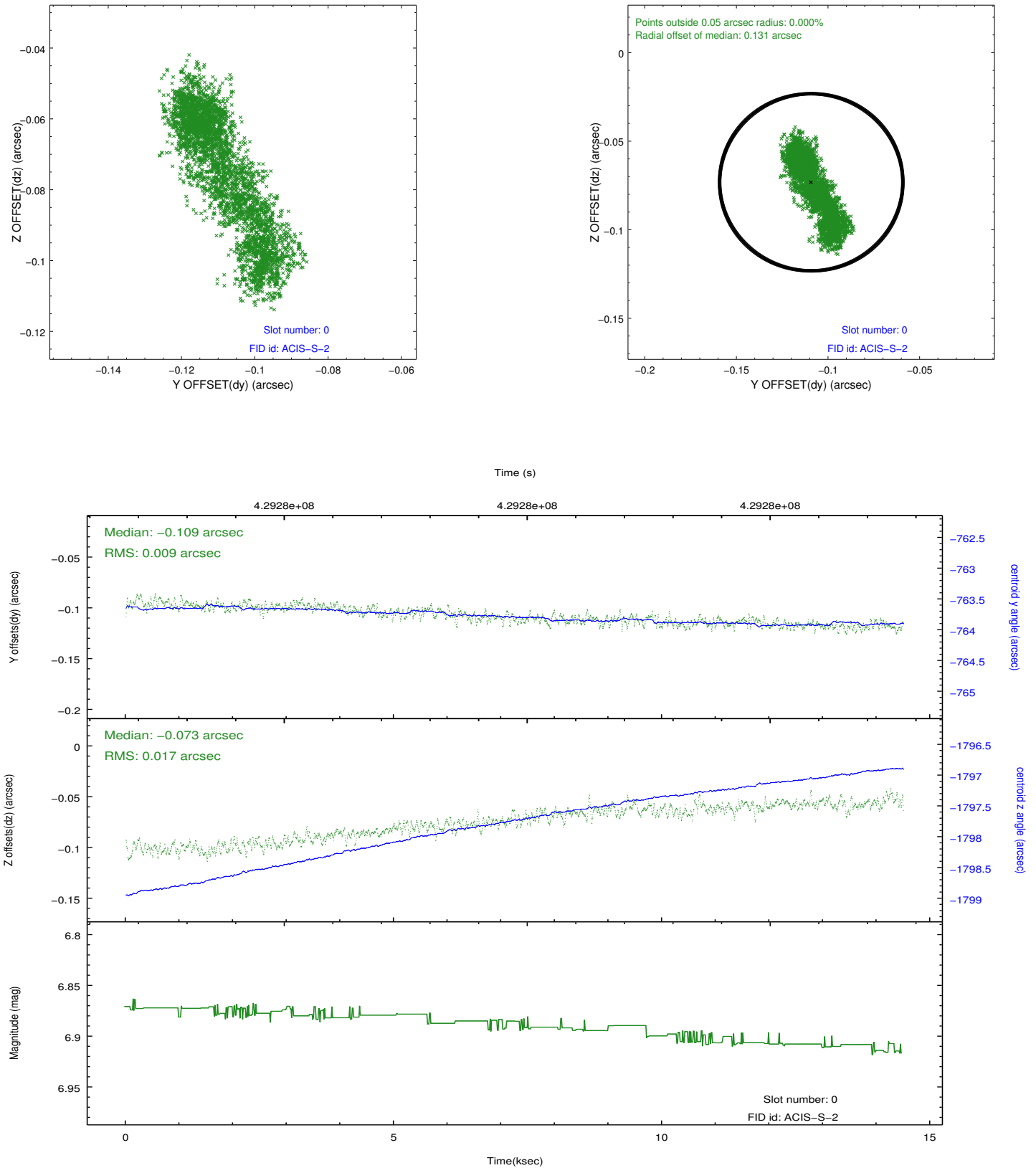


## 2.4.5 Slot 7

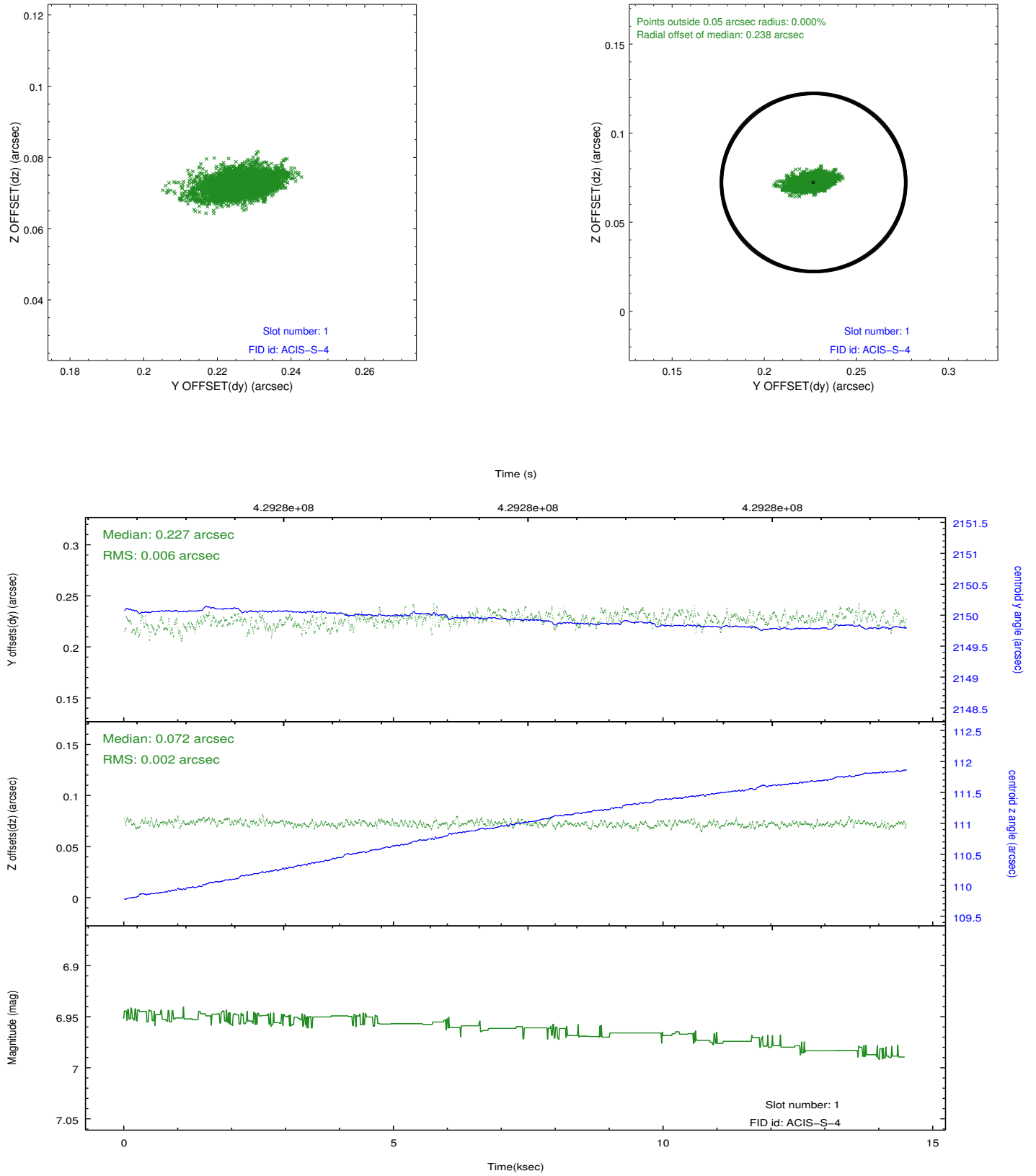


## 2.5 FID Slots

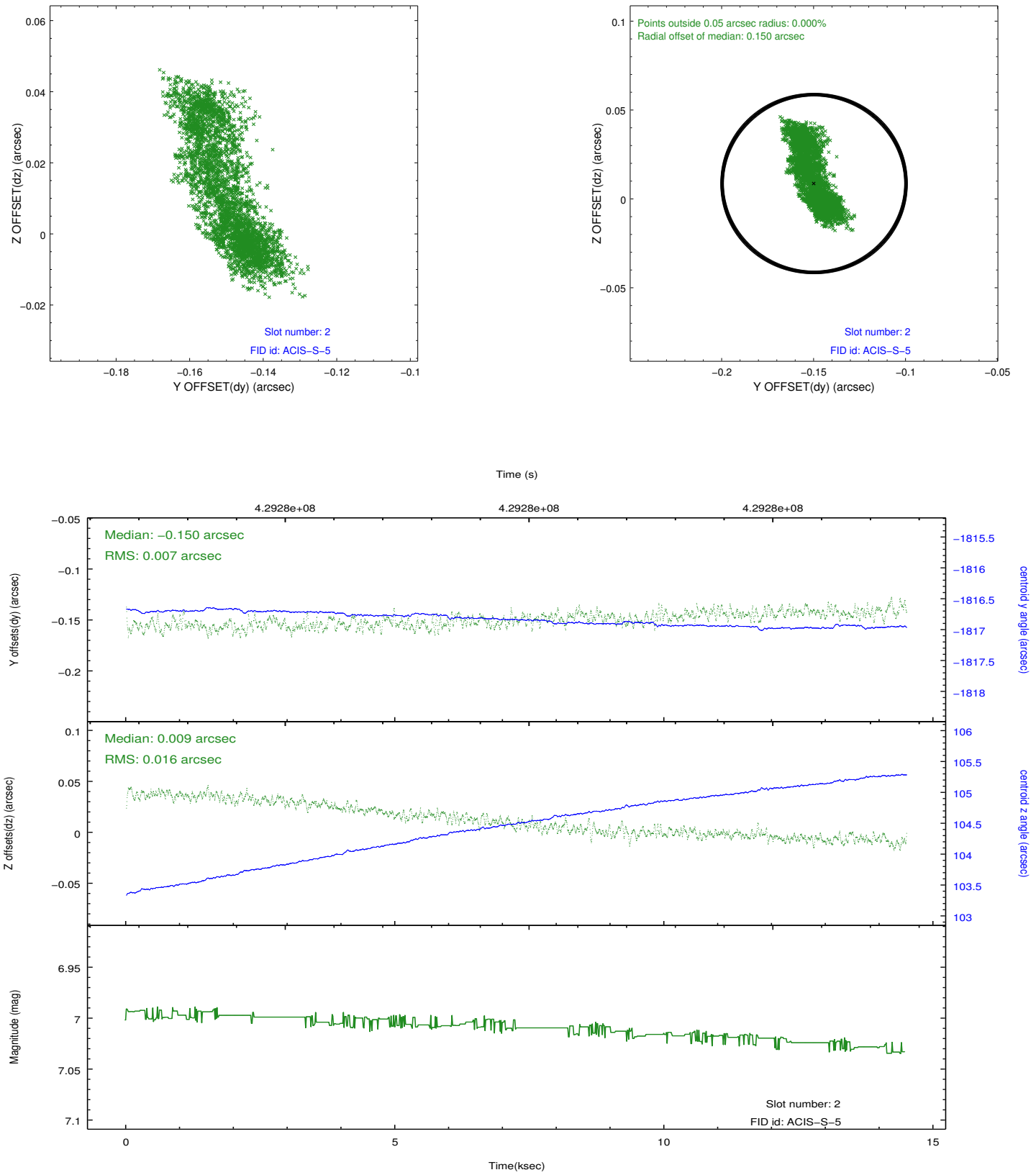
### 2.5.1 Slot 0



## 2.5.2 Slot 1

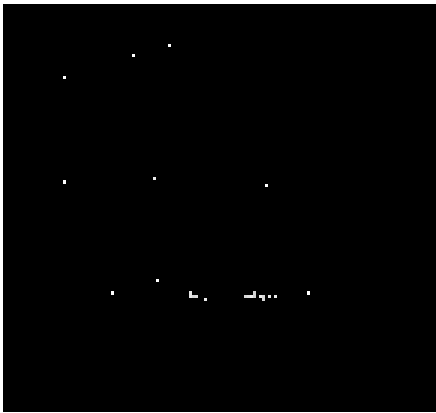


### 2.5.3 Slot 2

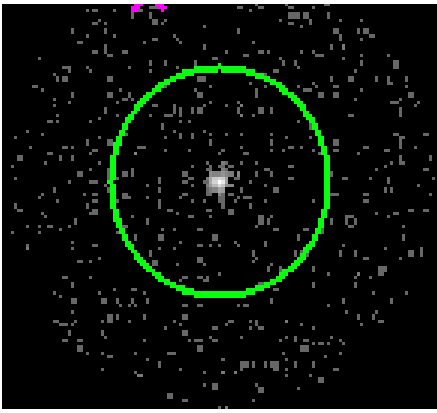


# 3 Gratings

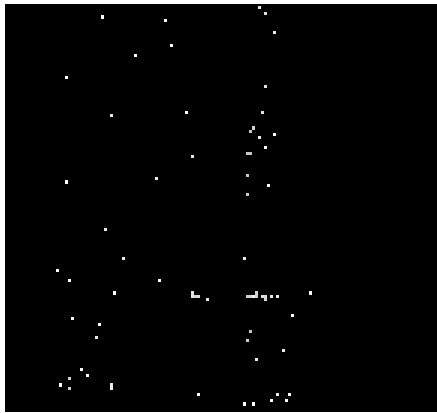
## 3.1 HEG Arm



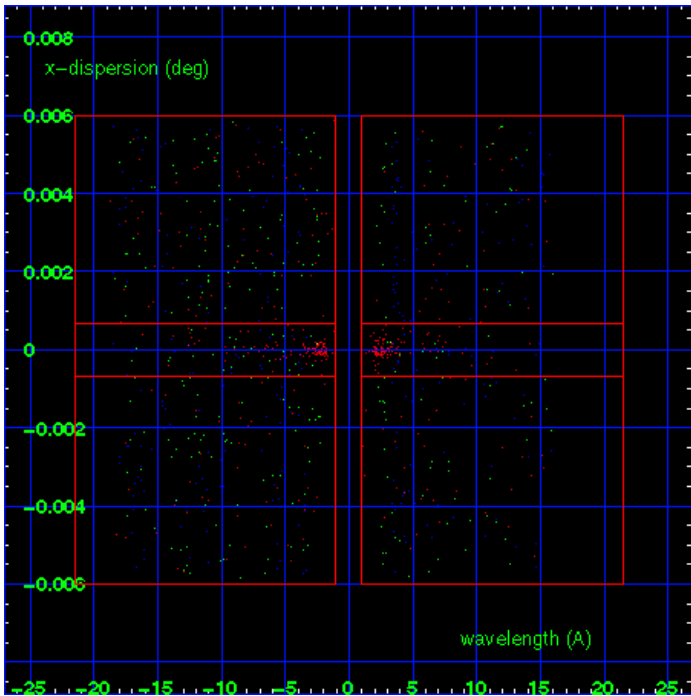
HEG Order Sort 123



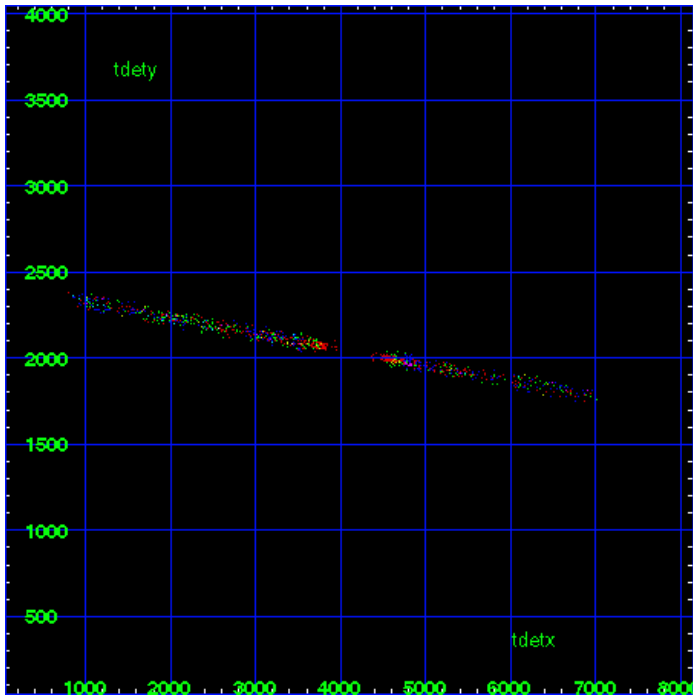
HEG Zero Order



HEG Order Sort ALL

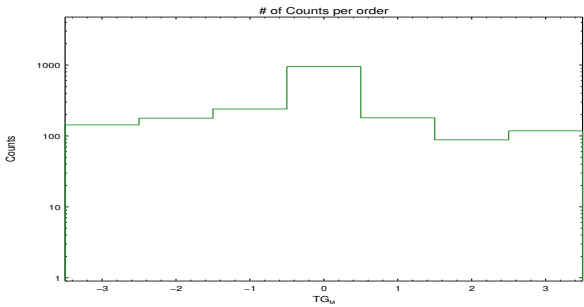


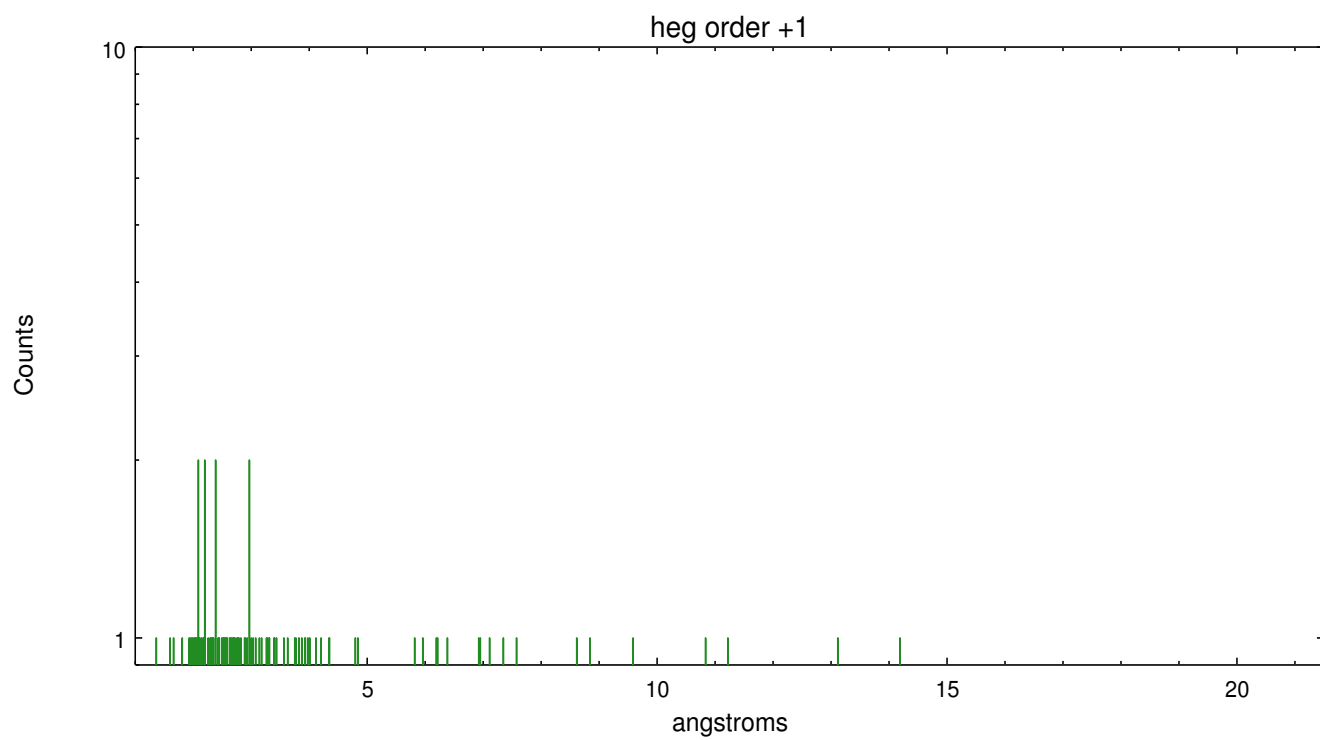
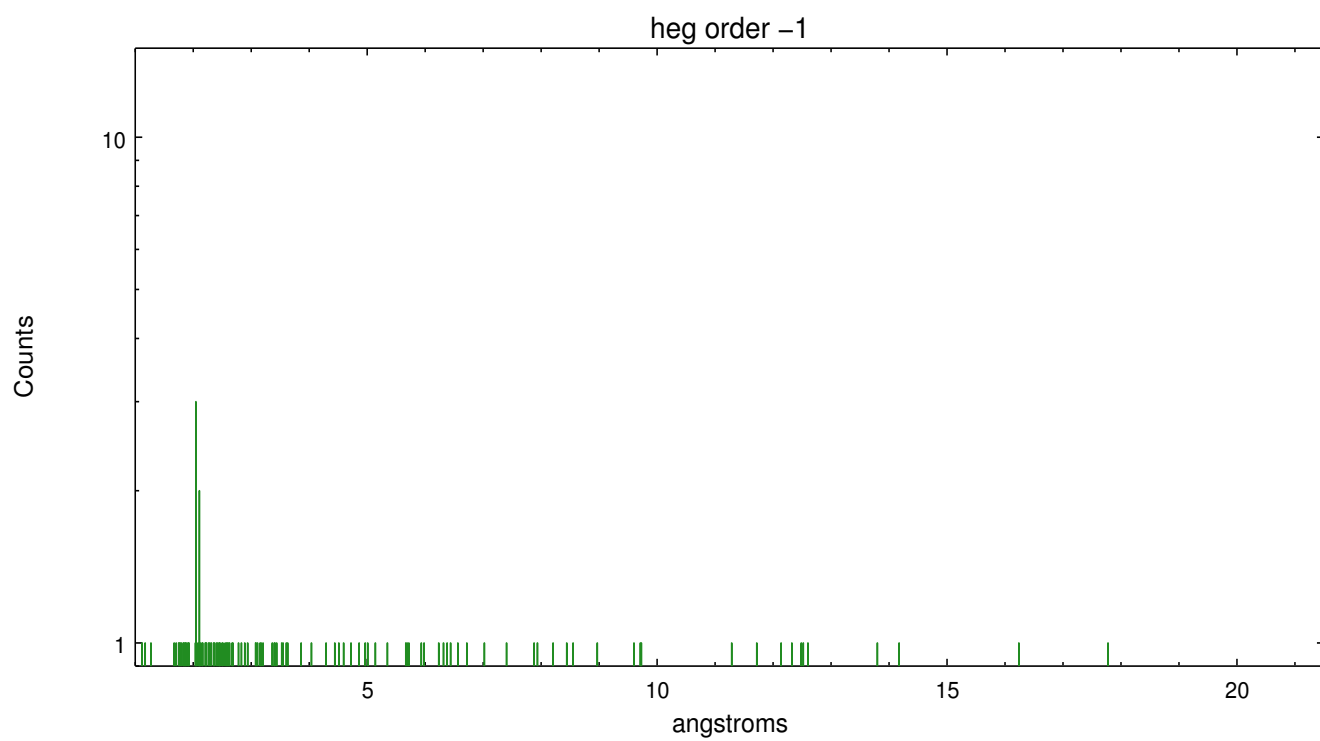
Spot Image HEG



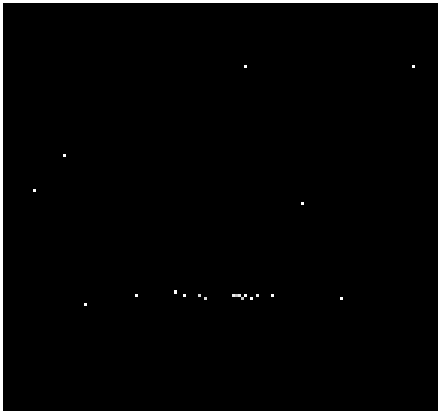
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	143	178	240	949	180	88	118

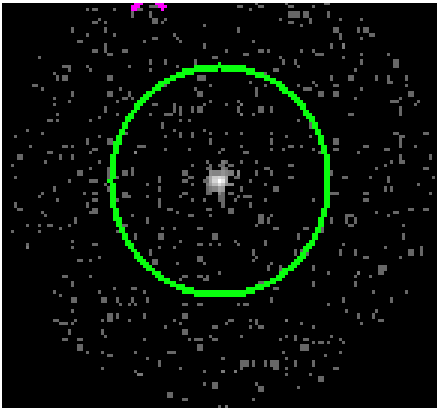




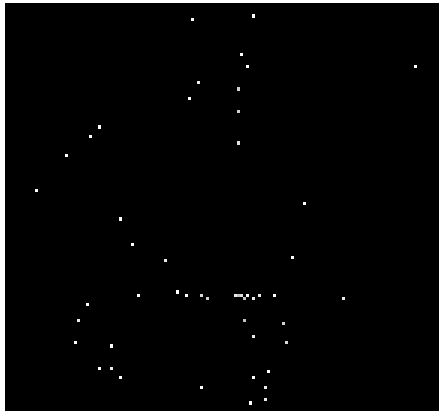
3.2 MEG Arm



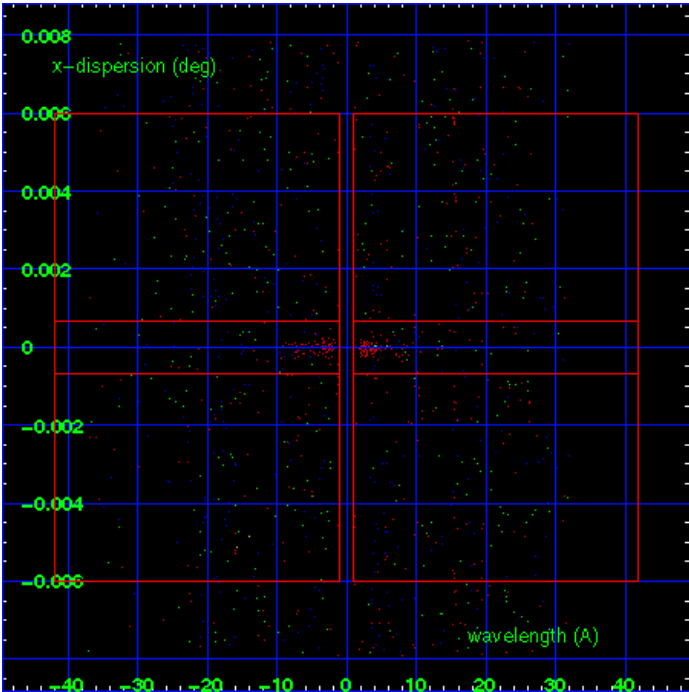
MEG Order Sort 123



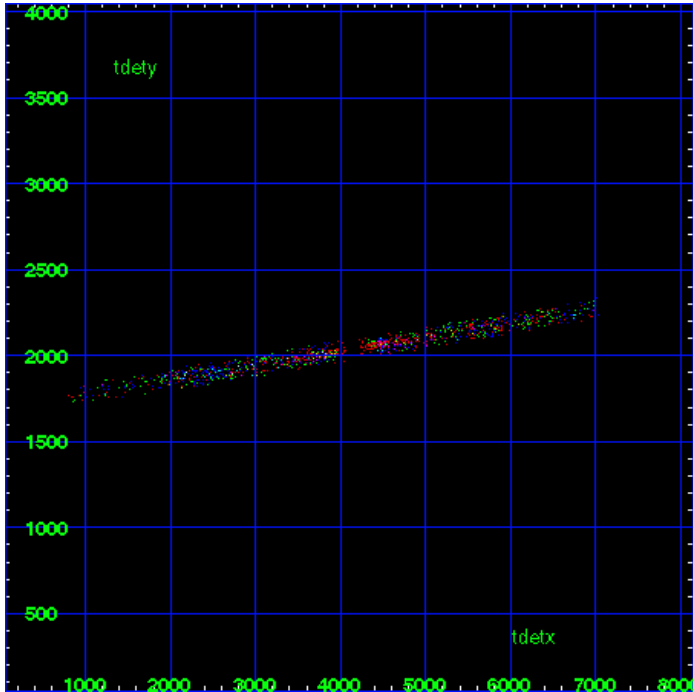
MEG Zero Order



MEG Order Sort ALL

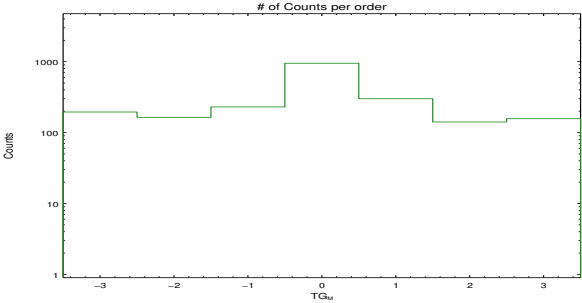


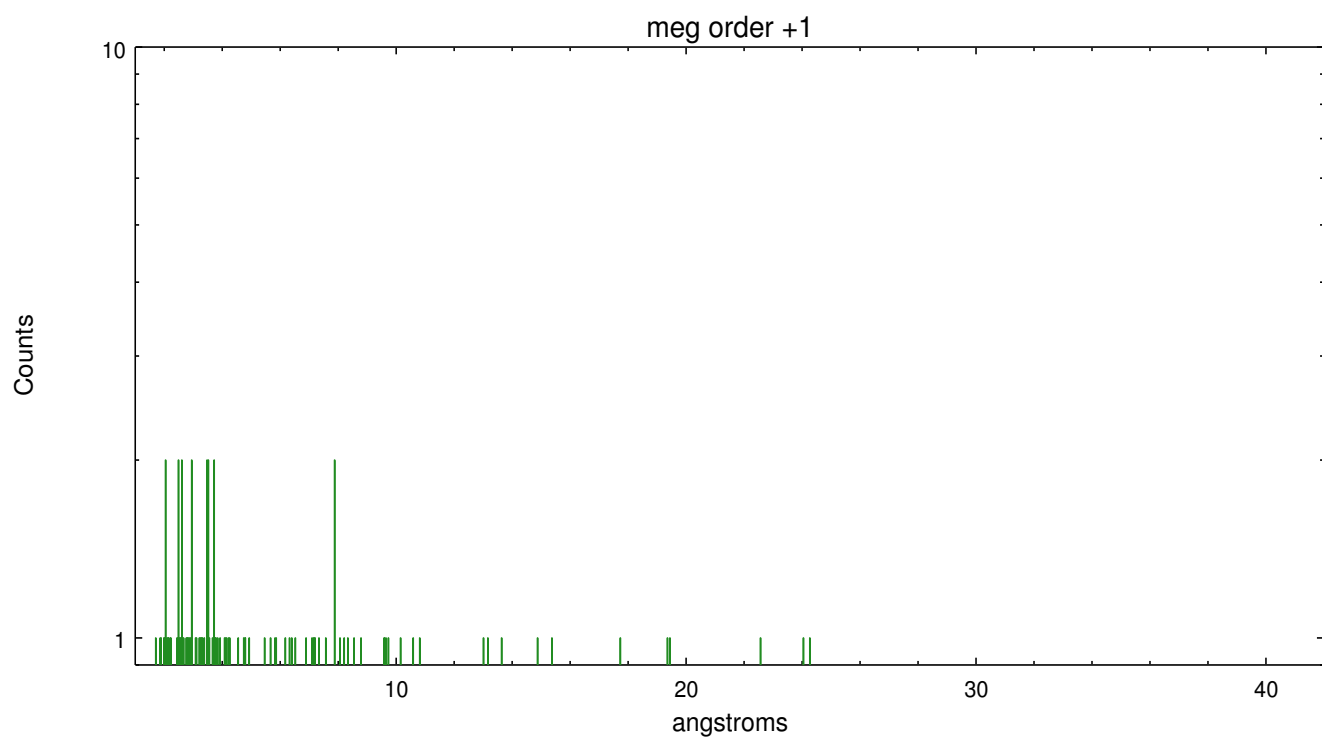
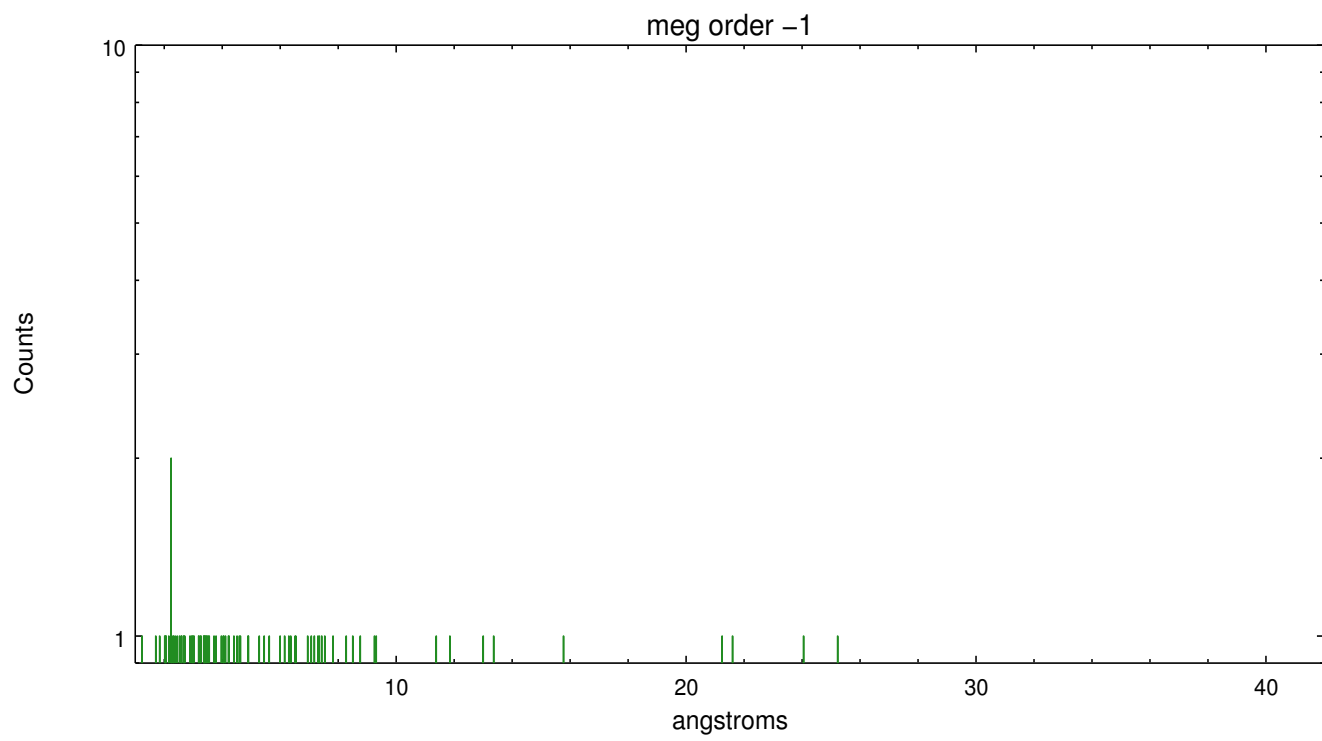
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	195	164	230	949	300	141	157







## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.41

### A.2 Comments