

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 7364 - L2 Version 4  
Chandra X-Ray Center

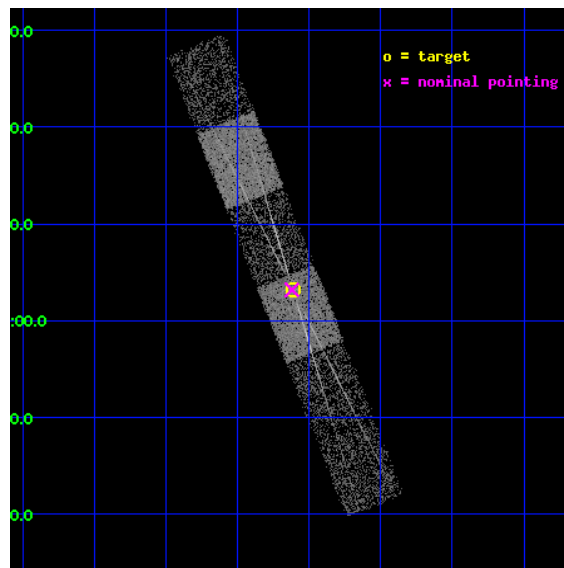
L2 Processing Date : Apr 18 2012

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# 1 Front

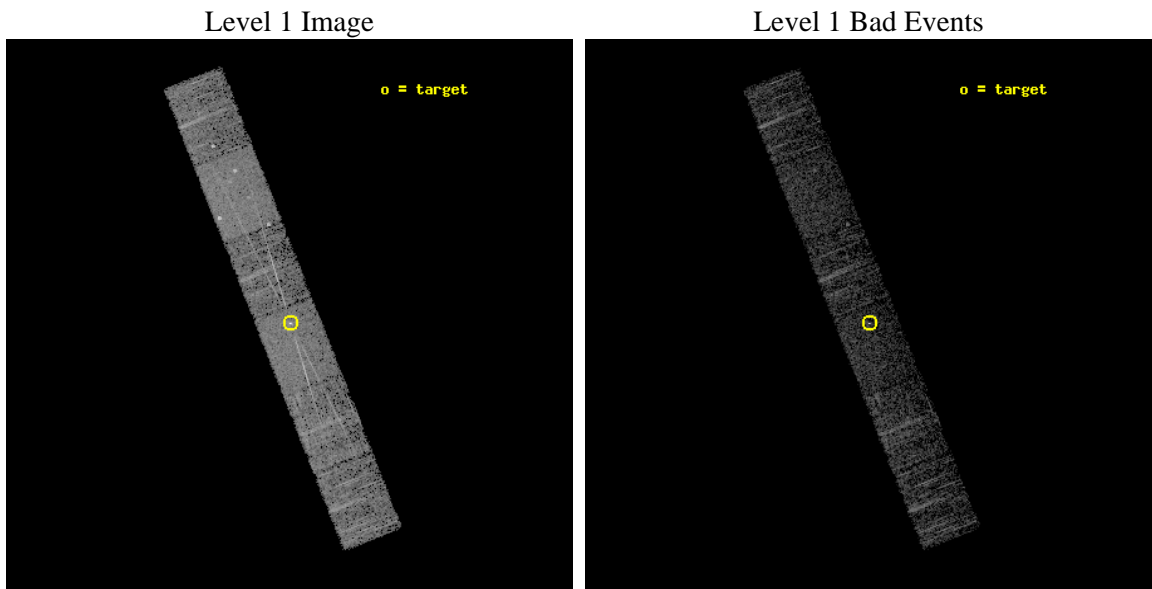
seq_num	701350	Sequence number
obs_id	7364	Observation id
title	Coordinated Spitzer/Chandra Observations of Gamma Ray Blazars	Prop
observer	Dr. Ann Wehrle	Principal investigator
object	3C273	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.277917	Observer's specified target RA [deg]
dec_targ	2.052361	Observer's specified target Dec [deg]
ra_nom	187.28001558255	Nominal RA [deg]
dec_nom	2.0531735155371	Nominal Dec [deg]
roll_nom	68.408767839642	Nominal Roll [deg]
revision	4	Processing version of data
ontime	2042.3381946087	Sum of GTIs [s]
livetime	2009.3526613204	Livetime [s]
ontime4	2042.379234612	Sum of GTIs [s]
ontime5	2042.2971546054	Sum of GTIs [s]
ontime6	2042.2561146021	Sum of GTIs [s]
ontime7	2042.3381946087	Sum of GTIs [s]
ontime8	2042.2150745988	Sum of GTIs [s]
ontime9	2042.1740345955	Sum of GTIs [s]
l2events	30619	Number of level 2 events



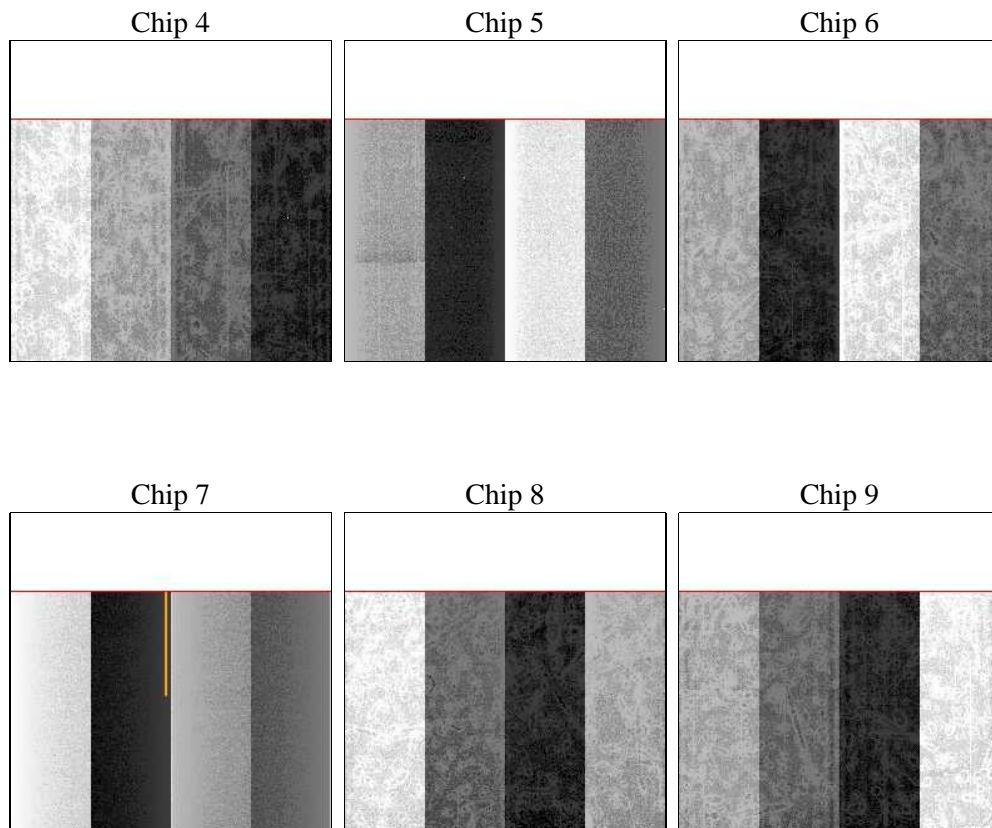
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	2042.3381946087	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime4	2042.379234612	Sum of GTIs [s]
date	2012-04-18T12:14:51	Date and time of file creation	ontime5	2042.2971546054	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	2042.2561146021	Sum of GTIs [s]
			ontime7	2042.3381946087	Sum of GTIs [s]
			ontime8	2042.2150745988	Sum of GTIs [s]
			ontime9	2042.1740345955	Sum of GTIs [s]
			l1events	112207	Number of level 1 events

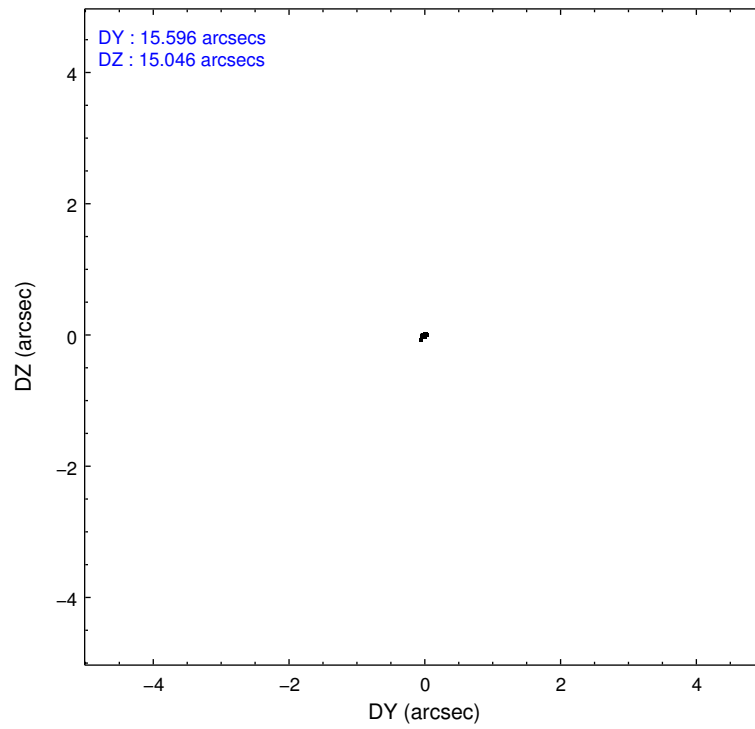
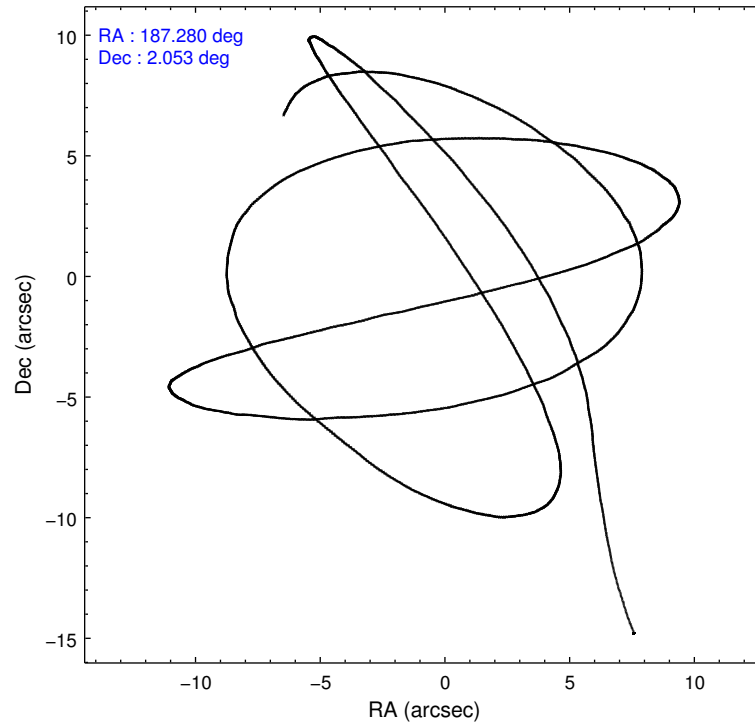
### 2.1.4 Events

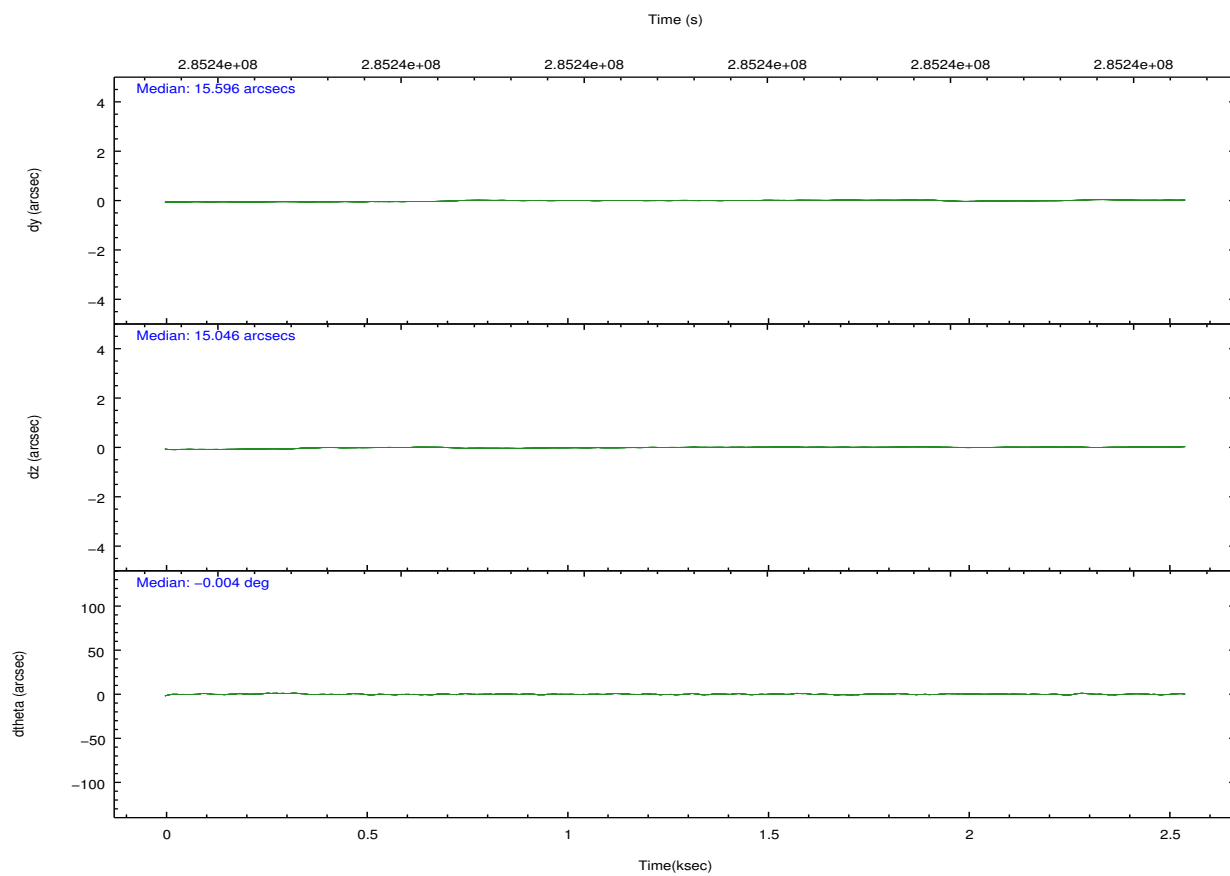
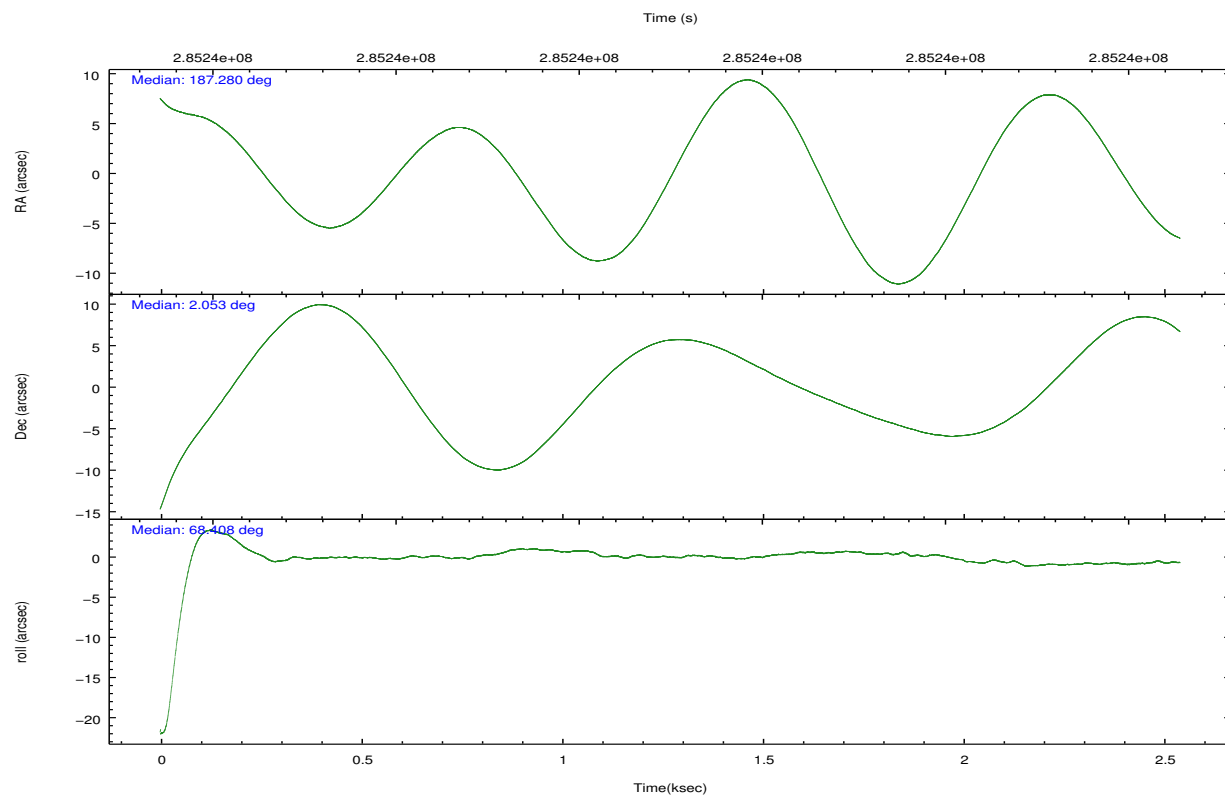
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	15517	23798	16219	22317	18848	15508	grade 0 events	1396	2265	2555	1306	2009	895
rejected events	13072	11747	12086	11446	14009	13479		8%	9%	15%	5%	10%	5%
rejected %	84%	49%	74%	51%	74%	86%	grade 1 events	17	110	18	34	14	6
								0%	0%	0%	0%	0%	0%
							grade 2 events	391	3420	614	2377	997	380
								2%	14%	3%	10%	5%	2%
							grade 3 events	186	486	270	1059	383	201
								1%	2%	1%	4%	2%	1%
							grade 4 events	174	489	264	1000	392	183
								1%	2%	1%	4%	2%	1%
							grade 5 events	614	1609	689	1854	903	725
								3%	6%	4%	8%	4%	4%
							grade 6 events	300	5399	434	5143	1061	371
								1%	22%	2%	23%	5%	2%
							grade 7 events	12439	10020	11375	9544	13089	12747
								80%	42%	70%	42%	69%	82%

## 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	187.284276	187.2800155825518	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	2.026018	2.053173515537102	Subarray start row	1	1
[deg] Pointing Roll	68.252111	68.40876783964239	Subarray row count	774	774
[s] Window start time (MET)	285065045.184000	285065045.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	288386765.184000	288386765.184000	[s] Primary exposure time	0.000000	2.5
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	285238522.184000	285237384.11386			
Observation start date	2007-01-15T08:54:17	2007-01-15T08:36:24			
[s] Observation end time (MET)	285240522.184000	285241231.45155			
Observation end date	2007-01-15T09:27:37	2007-01-15T09:40:31			
Read mode	TIMED	TIMED			

## 2.3 Aspect





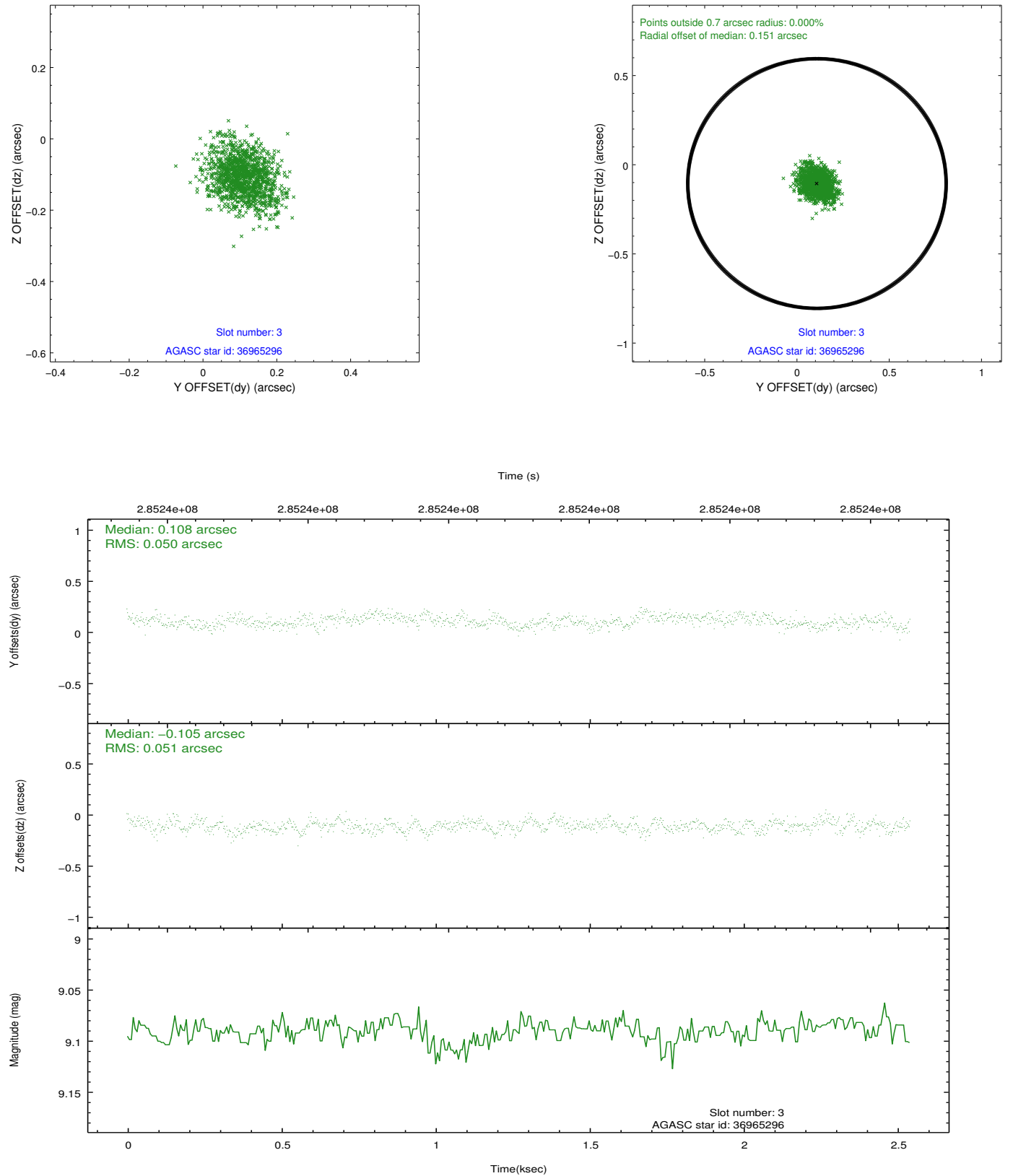
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	620	0.077	-0.013	0.006	0.011	0.000000	0.000000	927.71	-1794.22
1	FID	ACIS-S-5	7.23	621	-0.165	0.050	0.005	0.009	0.000000	0.000000	-1820.08	100.73
2	FID	ACIS-S-6	7.37	620	0.067	-0.025	0.007	0.011	0.000000	0.000000	390.55	747.44
3	GUIDE	36965296	9.09	1239	0.108	-0.105	0.075	0.125	186.926292	1.837429	-1108.18	945.39
4	GUIDE	36965816	9.26	1240	0.031	-0.051	0.074	0.118	186.823353	1.771455	-1466.96	1202.15
5	GUIDE	37356352	7.70	1238	-0.581	0.001	0.048	0.076	187.433784	2.618460	2177.89	292.31
6	GUIDE	36963280	9.62	1240	0.231	-0.065	0.117	0.188	186.985307	1.456816	-2300.39	241.01
7	GUIDE	36965896	9.73	1237	0.209	0.220	0.105	0.164	187.153754	1.617178	-1543.29	-108.25

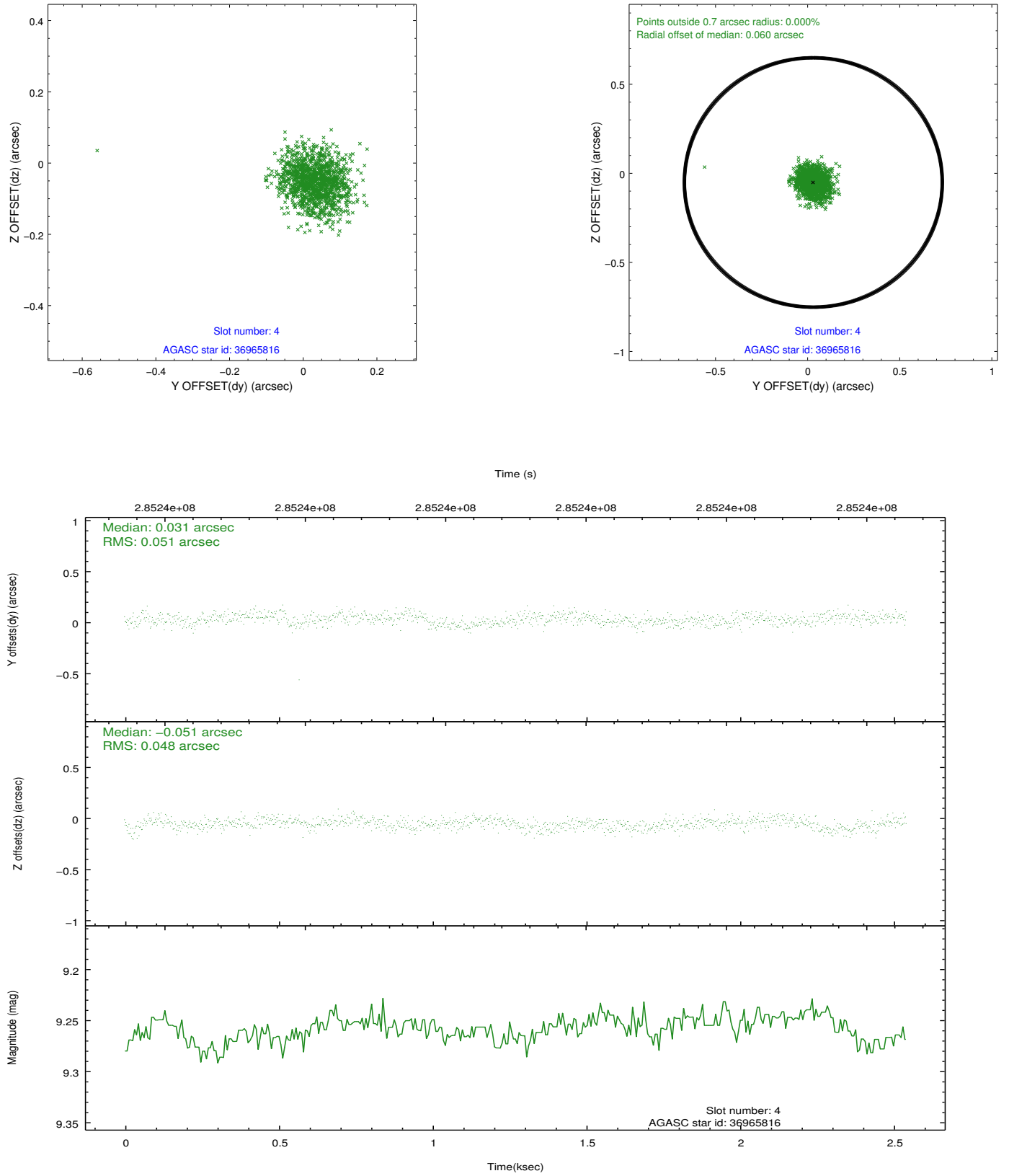


## 2.4 Star Slots

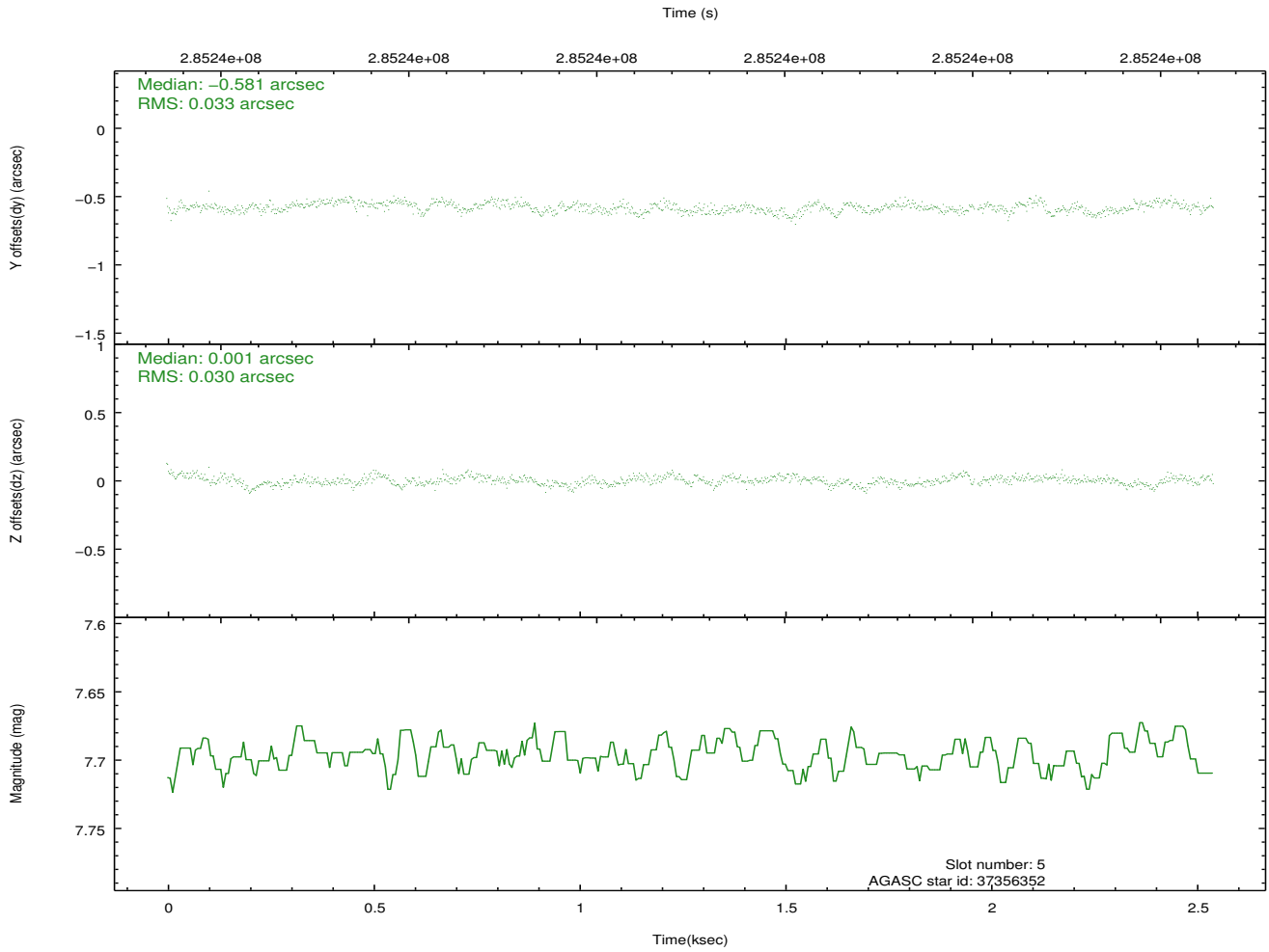
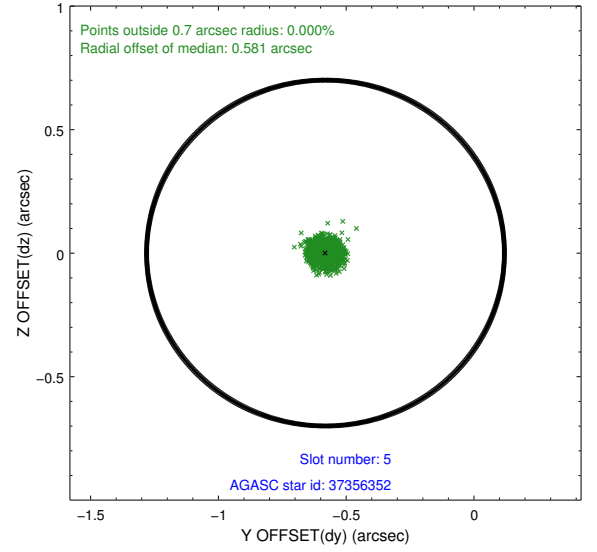
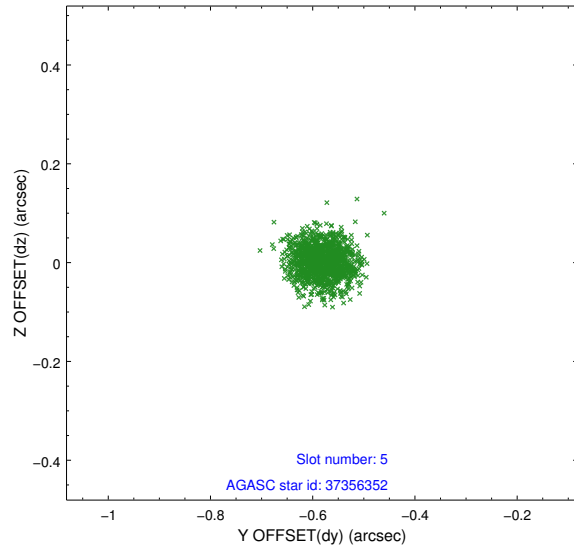
### 2.4.1 Slot 3



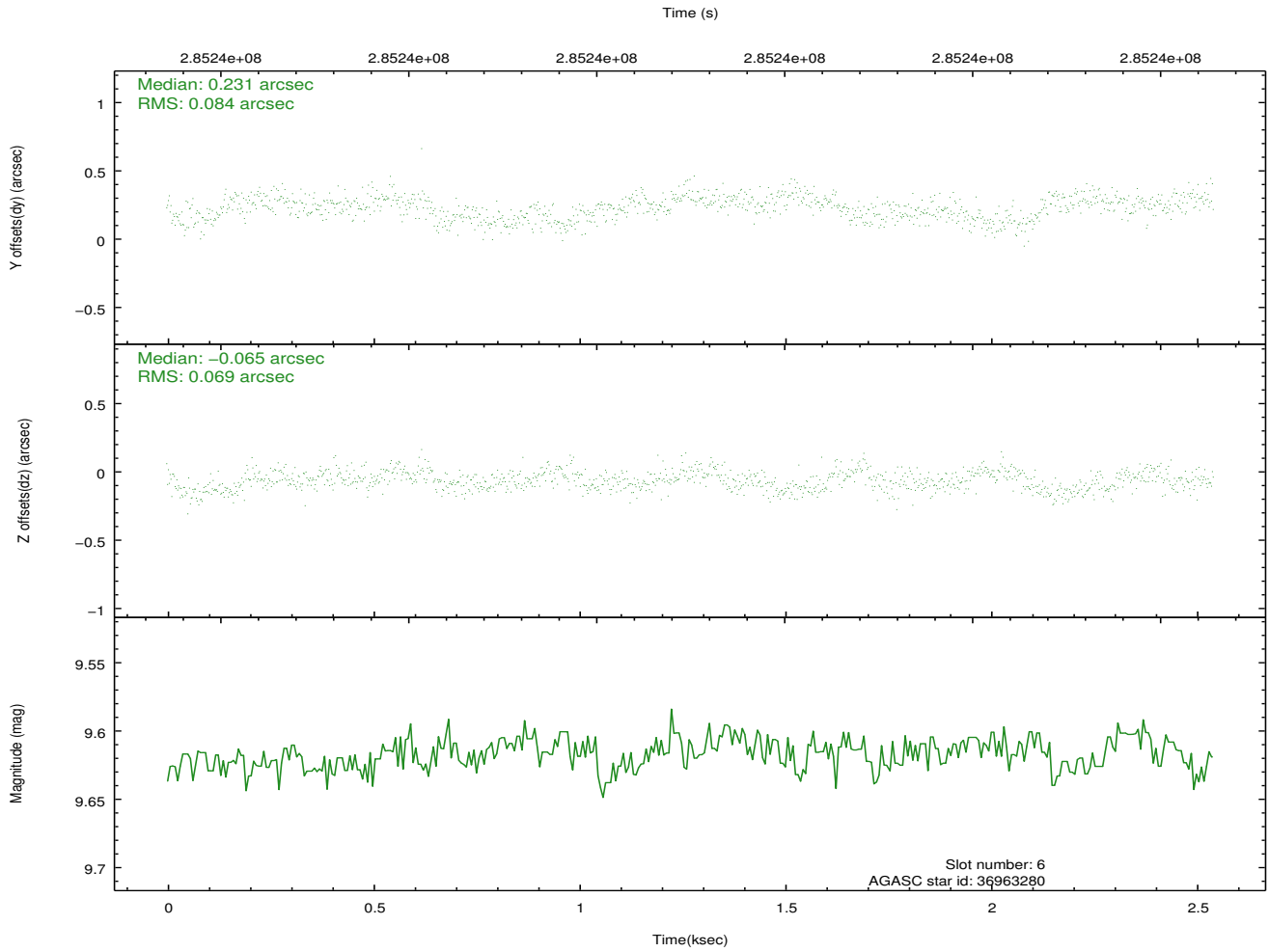
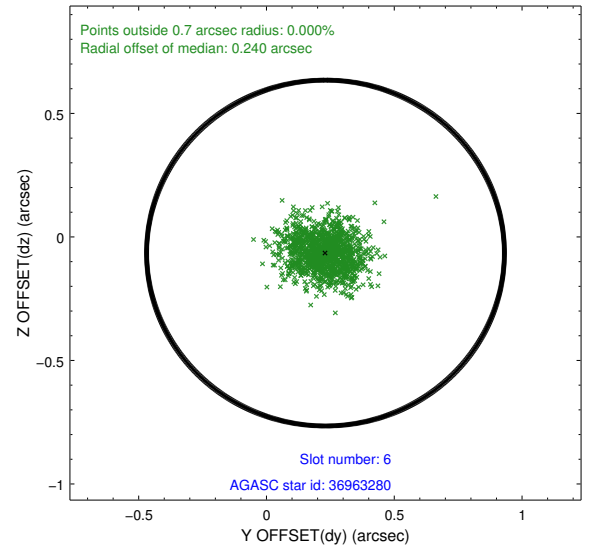
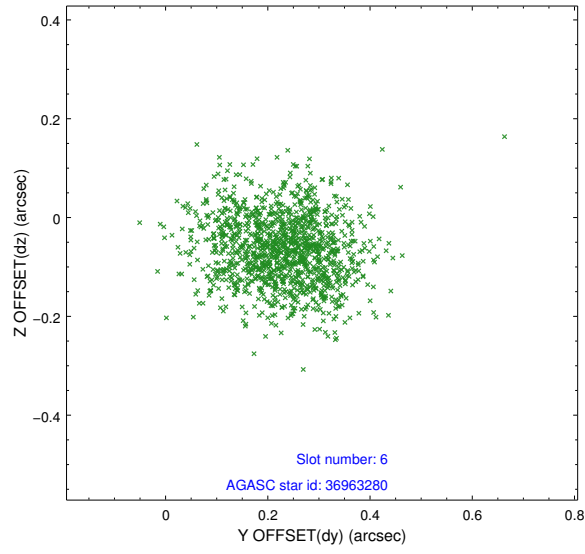
## 2.4.2 Slot 4



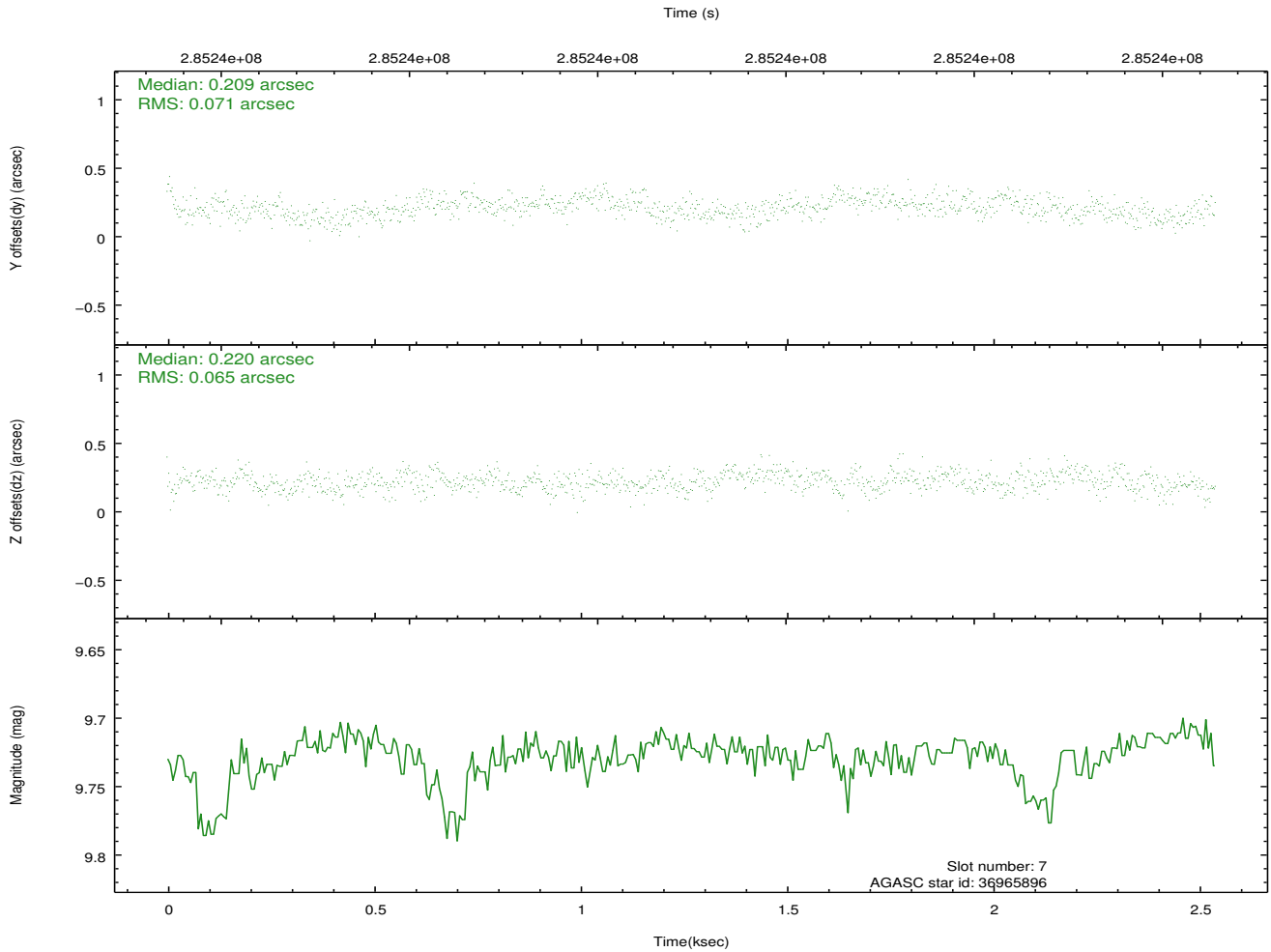
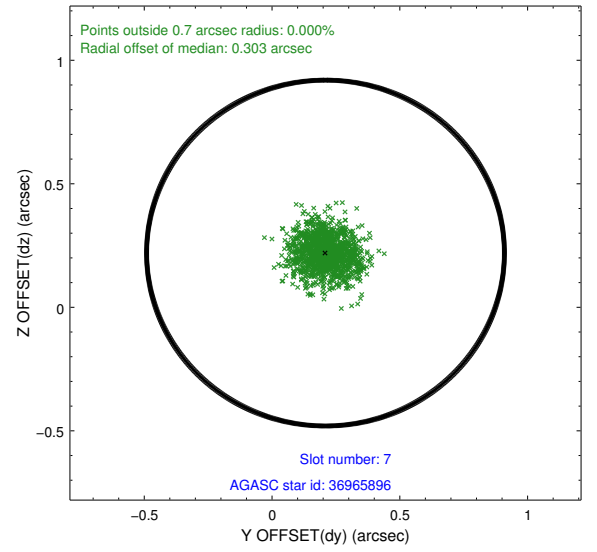
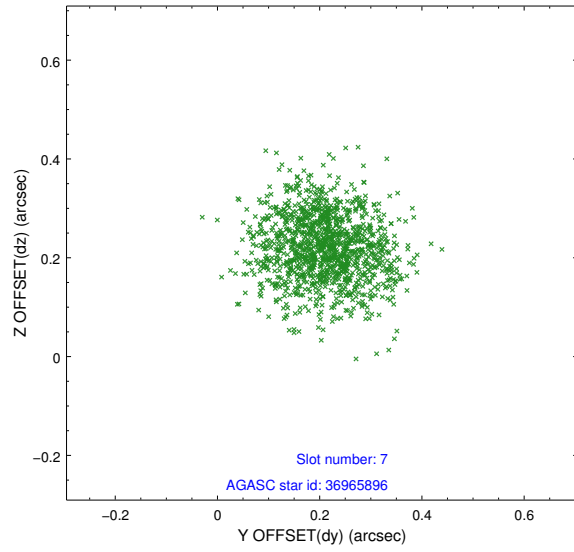
### 2.4.3 Slot 5



## 2.4.4 Slot 6

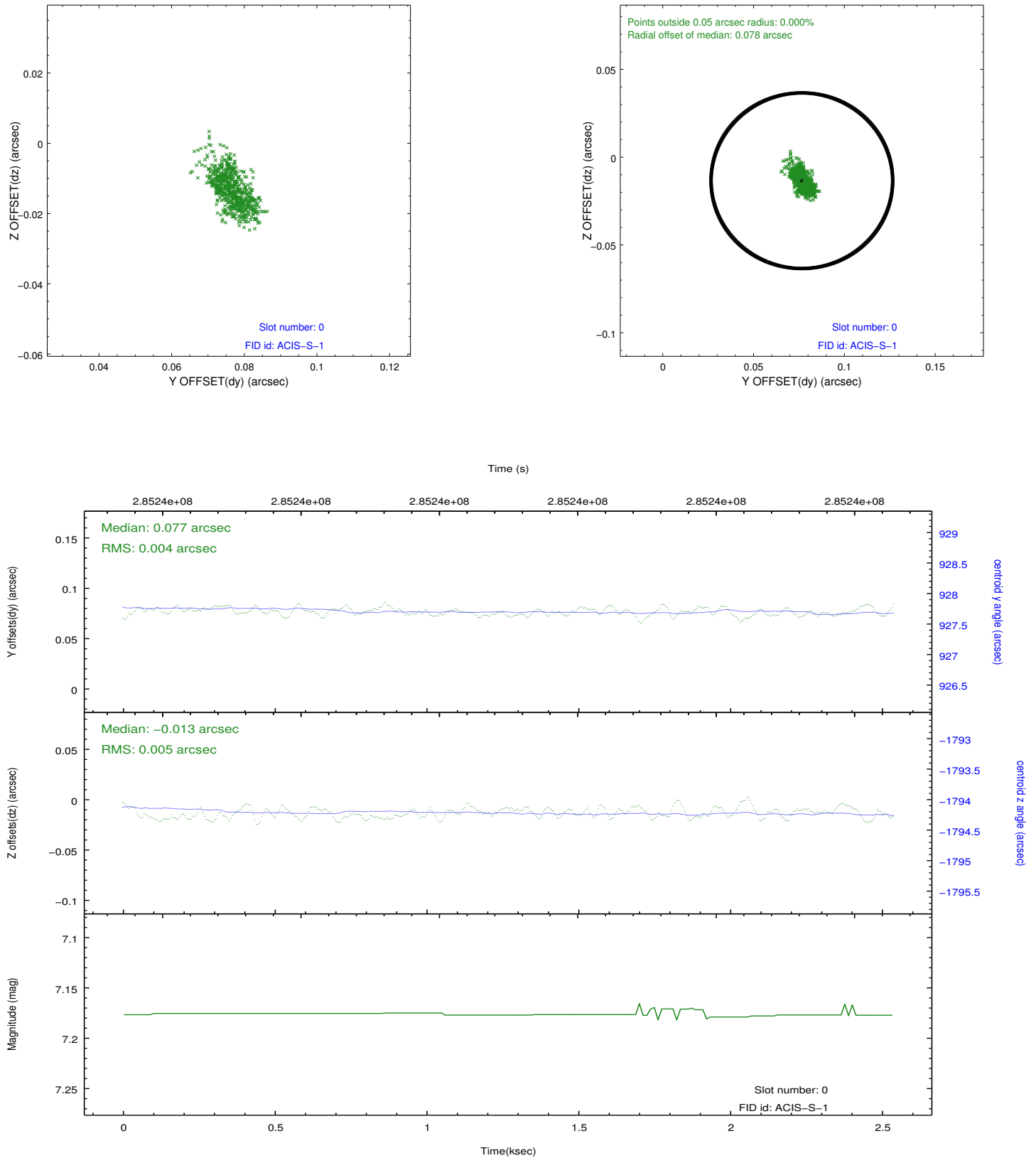


## 2.4.5 Slot 7

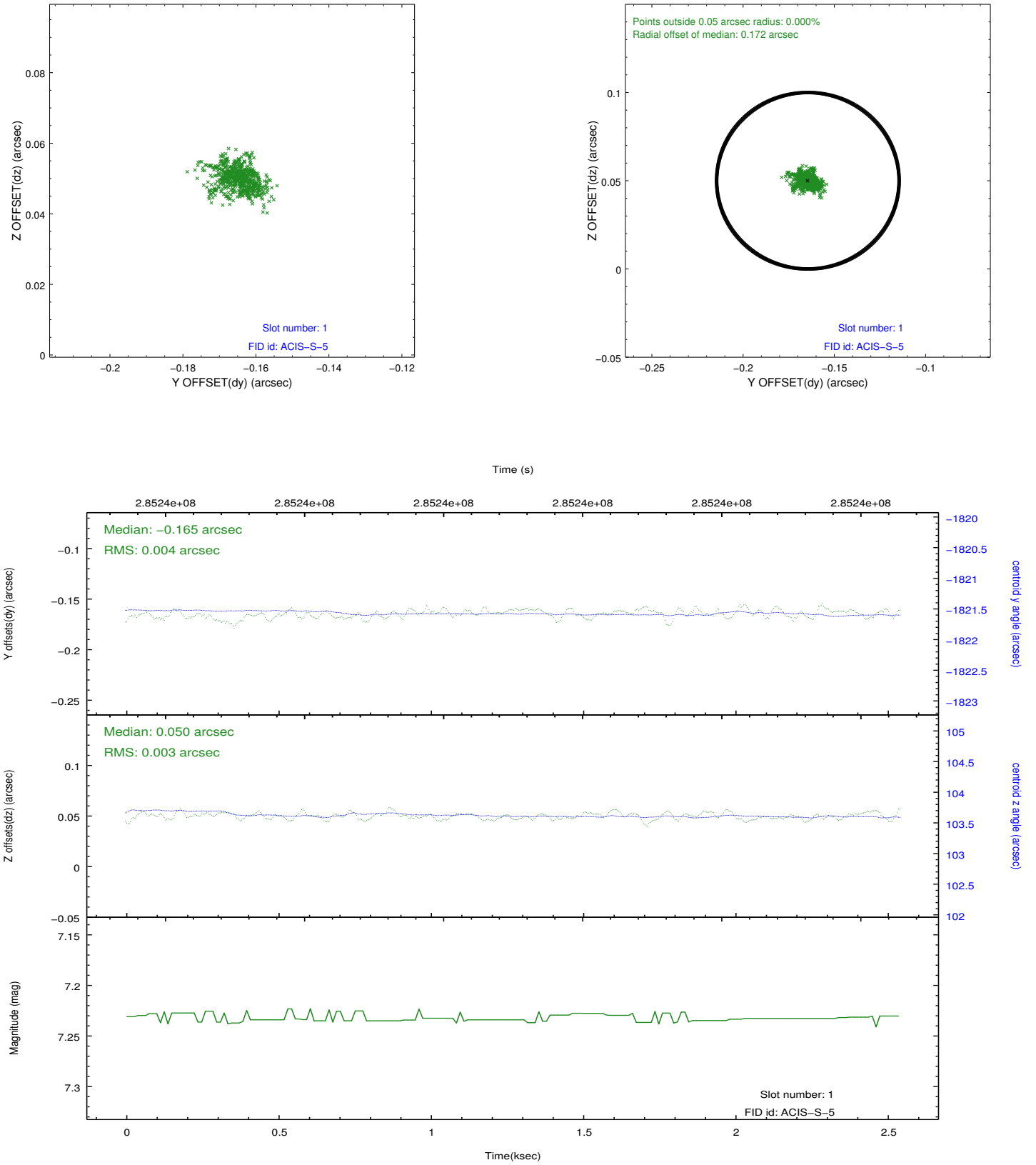


## 2.5 FID Slots

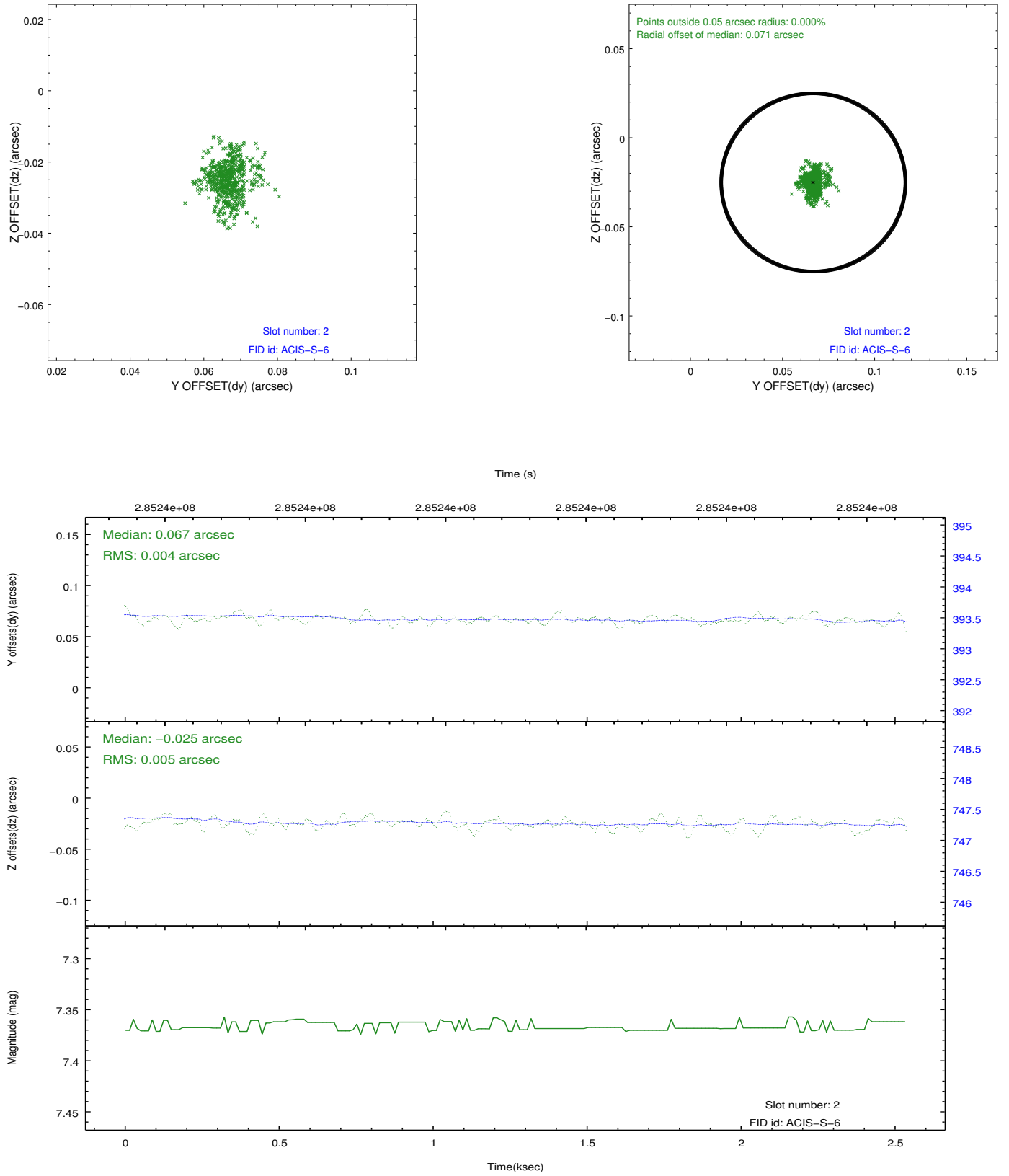
### 2.5.1 Slot 0



## 2.5.2 Slot 1



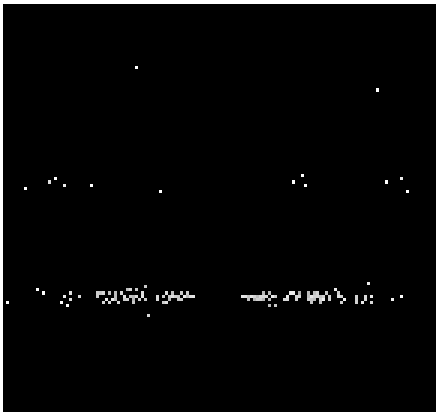
### 2.5.3 Slot 2



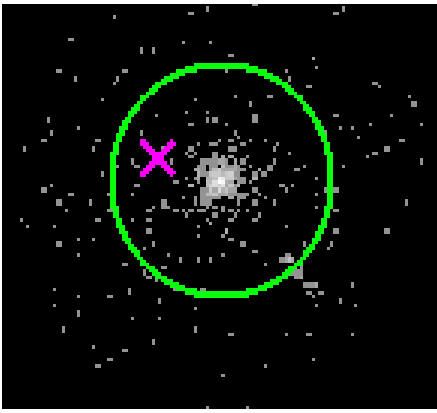


# 3 Gratings

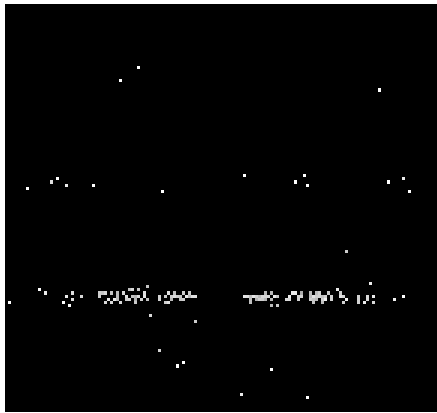
## 3.1 HEG Arm



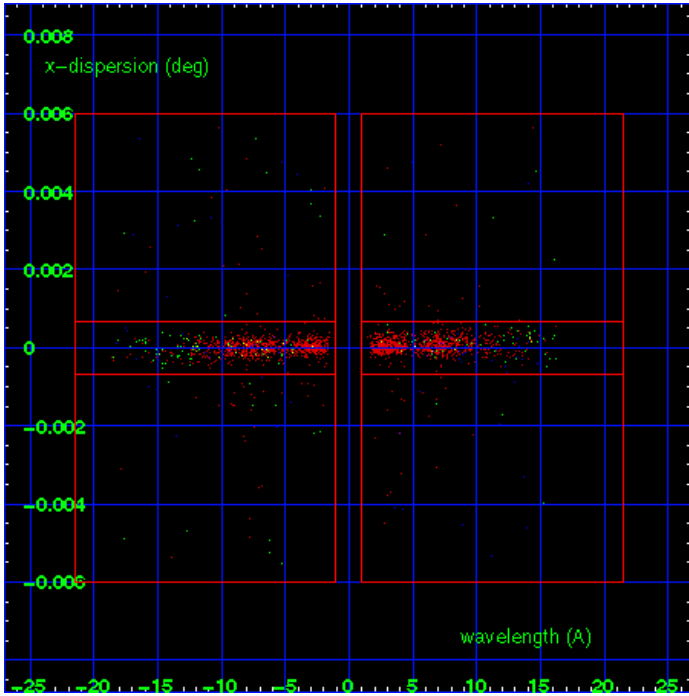
HEG Order Sort 123



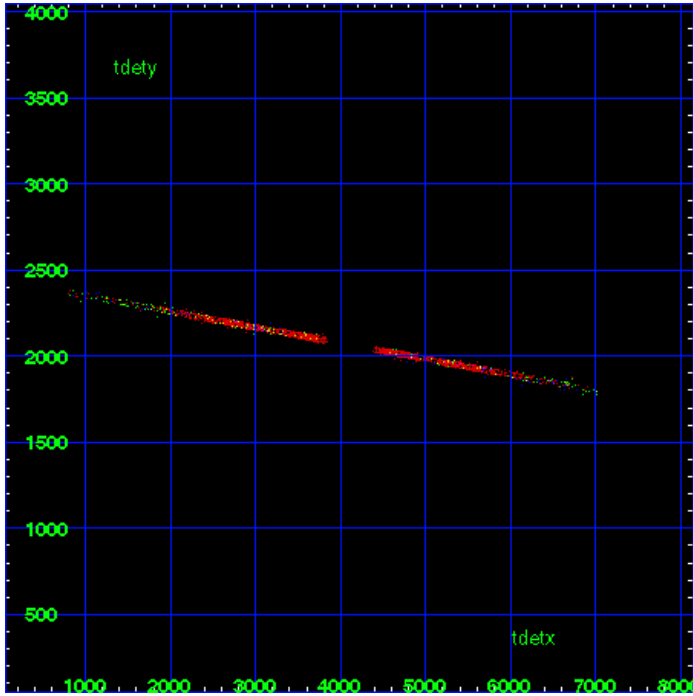
HEG Zero Order



HEG Order Sort ALL

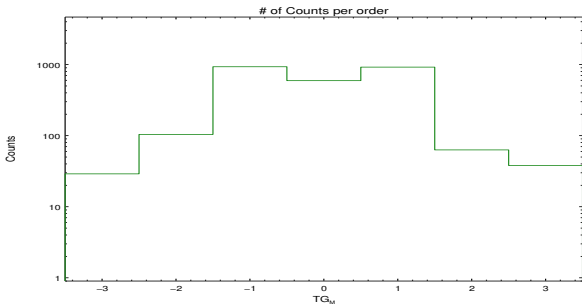


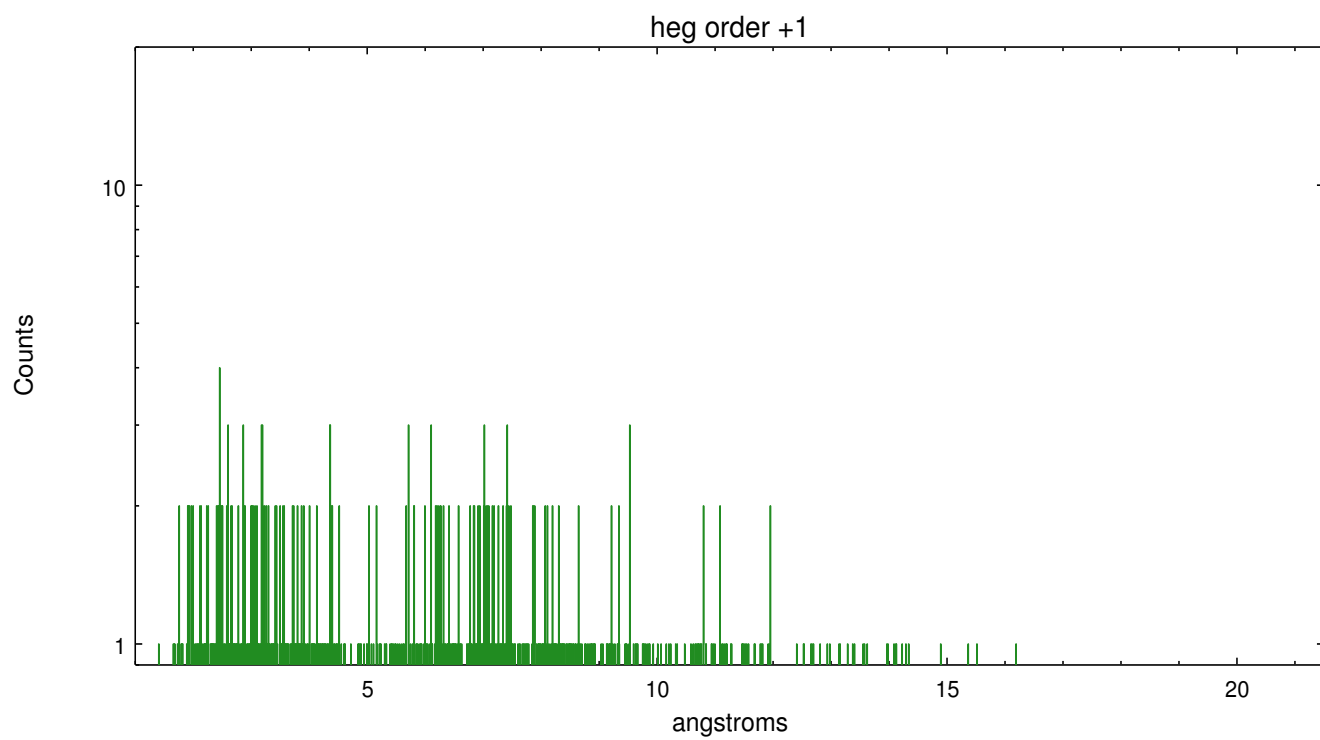
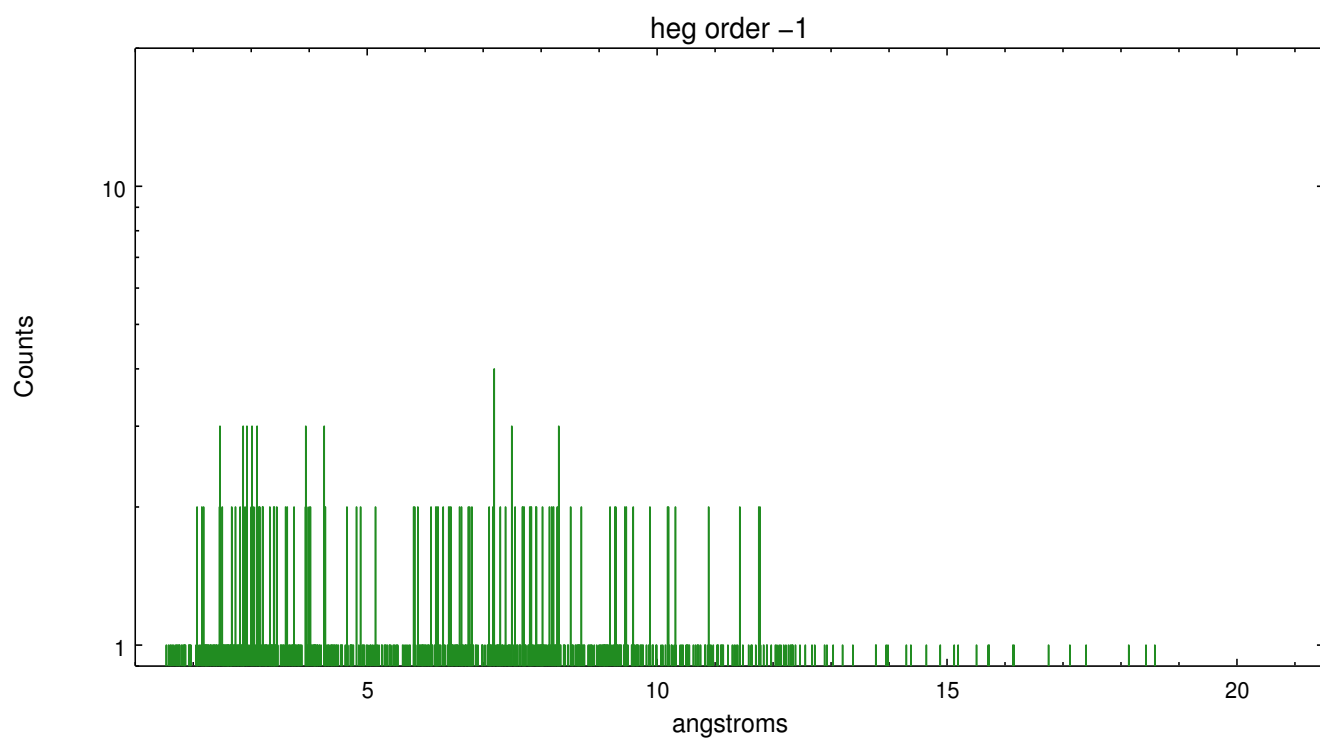
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	29	104	932	594	920	63	38

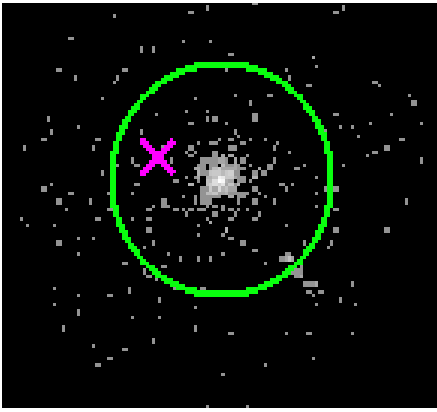




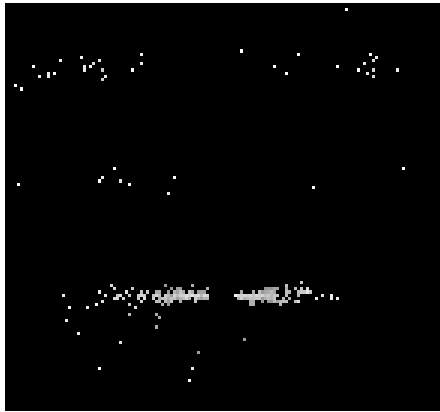
3.2 MEG Arm



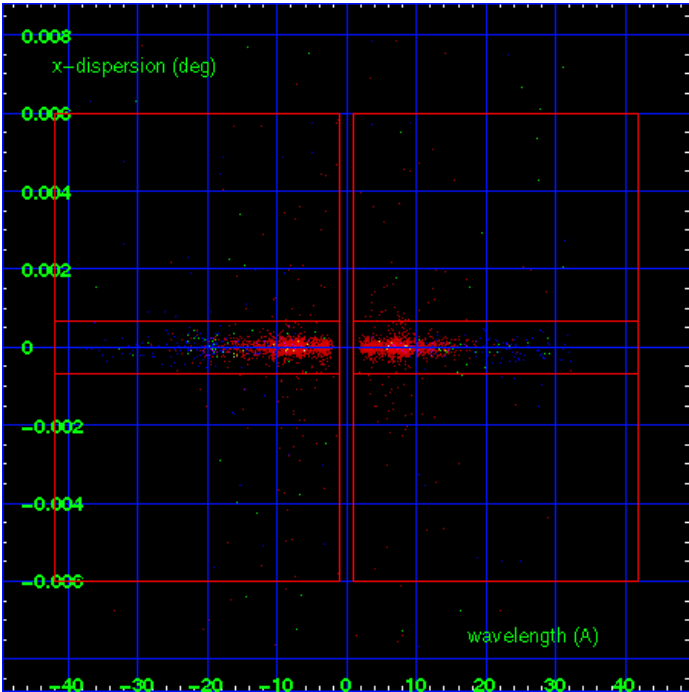
MEG Order Sort 123



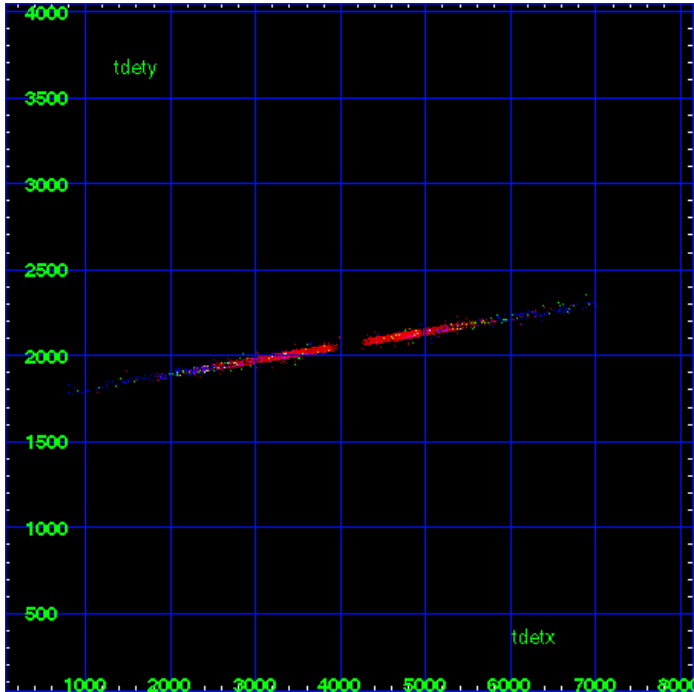
MEG Zero Order



MEG Order Sort ALL

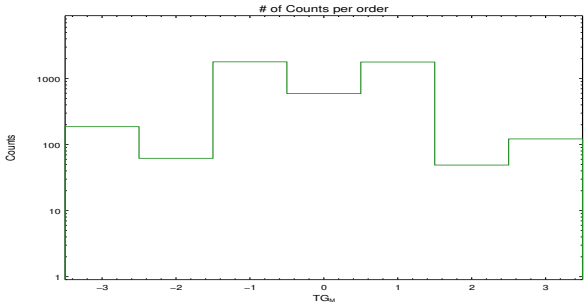


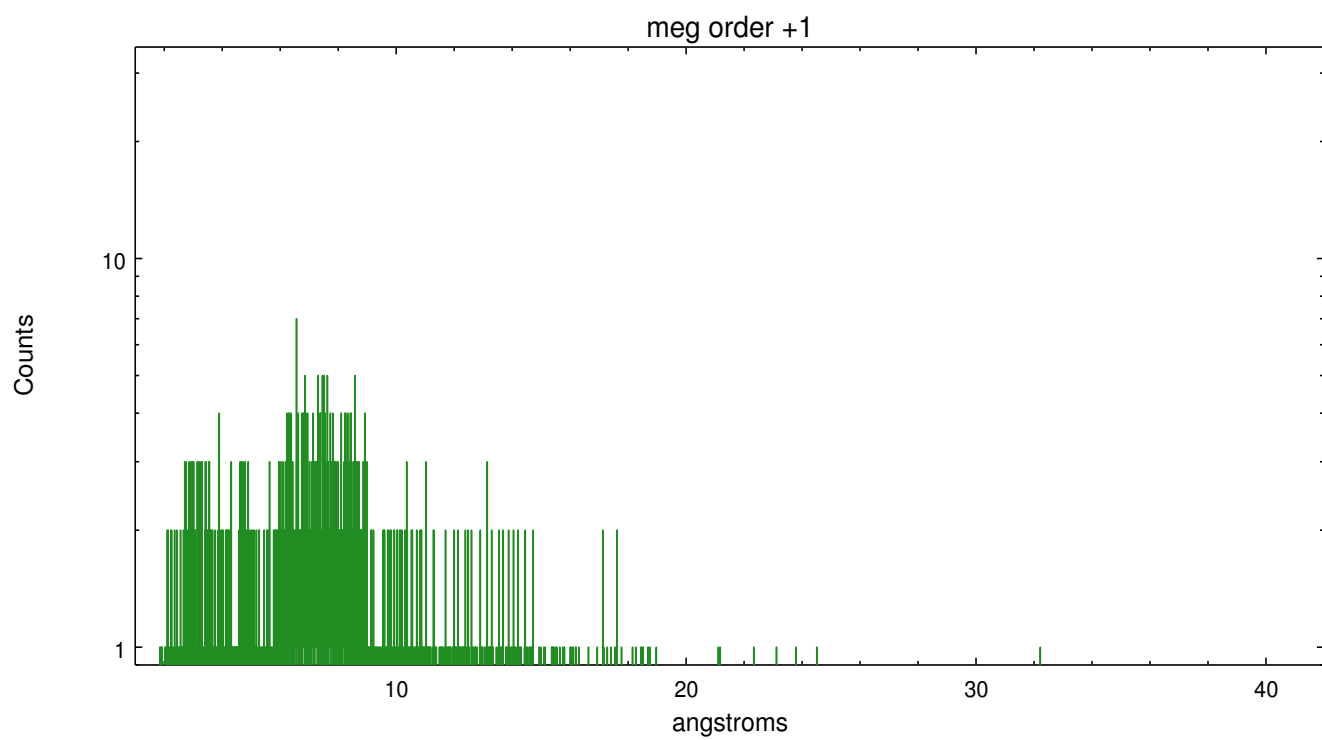
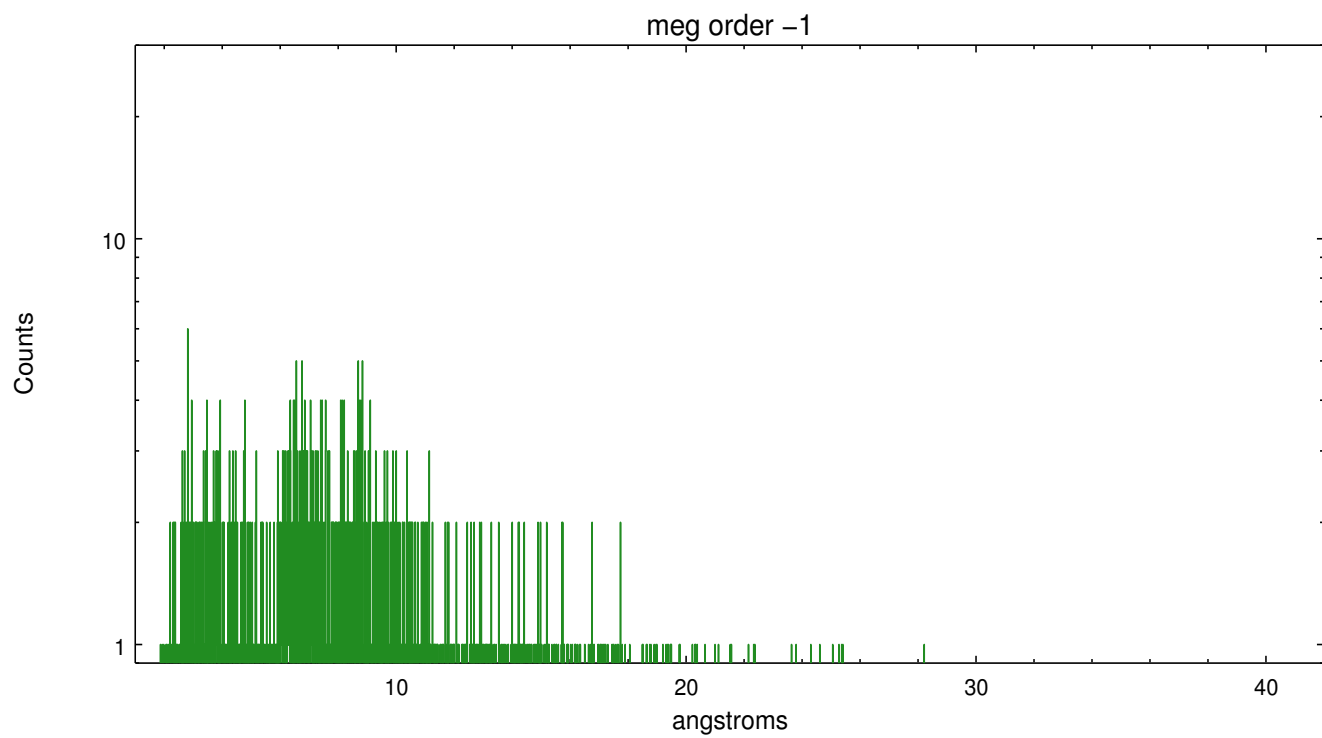
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	187	62	1793	594	1781	49	122





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.0425

### A.2 Comments