

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3456 - L2 Version 3  
Chandra X-Ray Center

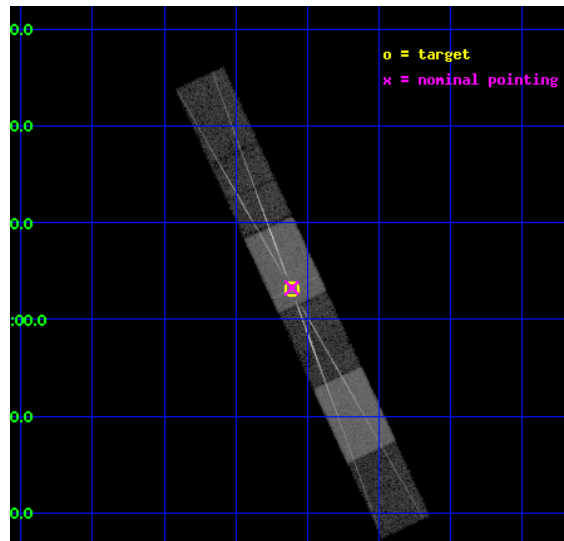
L2 Processing Date : Oct 9 2012

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# 1 Front

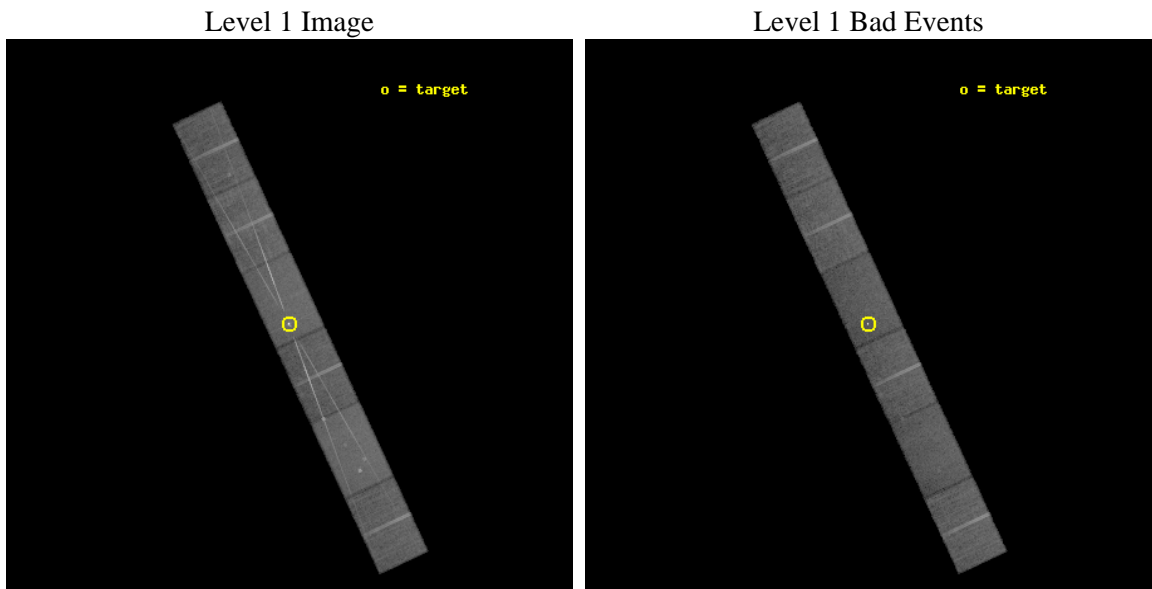
seq_num	790074	Sequence number
obs_id	3456	Observation id
title	MEASURING THE QE MAP FOR HETG/ACIS-S OBSERVATION AT DIFFERENT SIM_Z OFFSETS	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	3C273	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.277917	Observer's specified target RA [deg]
dec_targ	2.052389	Observer's specified target Dec [deg]
ra_nom	187.27702491949	Nominal RA [deg]
dec_nom	2.0544079784868	Nominal Dec [deg]
roll_nom	244.99344410211	Nominal Roll [deg]
revision	3	Processing version of data
ontime	25006.486150026	Sum of GTIs [s]
livetime	24527.155454851	Livetime [s]
ontime4	25006.52719003	Sum of GTIs [s]
ontime5	25006.445110023	Sum of GTIs [s]
ontime6	25006.40407002	Sum of GTIs [s]
ontime7	25006.486150026	Sum of GTIs [s]
ontime8	25006.363030016	Sum of GTIs [s]
ontime9	25006.321990043	Sum of GTIs [s]
l2events	242312	Number of level 2 events



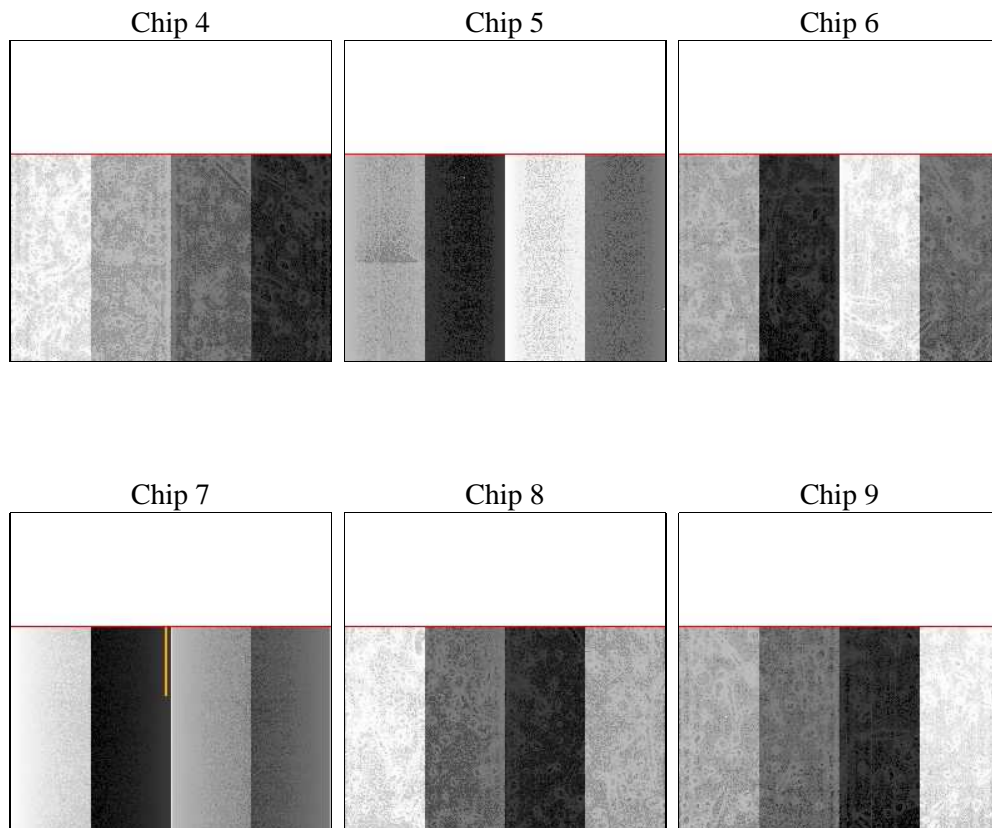
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25006.486150026	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	25006.52719003	Sum of GTIs [s]
date	2012-10-09T02:28:52	Date and time of file creation	ontime5	25006.445110023	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	25006.40407002	Sum of GTIs [s]
			ontime7	25006.486150026	Sum of GTIs [s]
			ontime8	25006.363030016	Sum of GTIs [s]
			ontime9	25006.321990043	Sum of GTIs [s]
			l1events	852304	Number of level 1 events

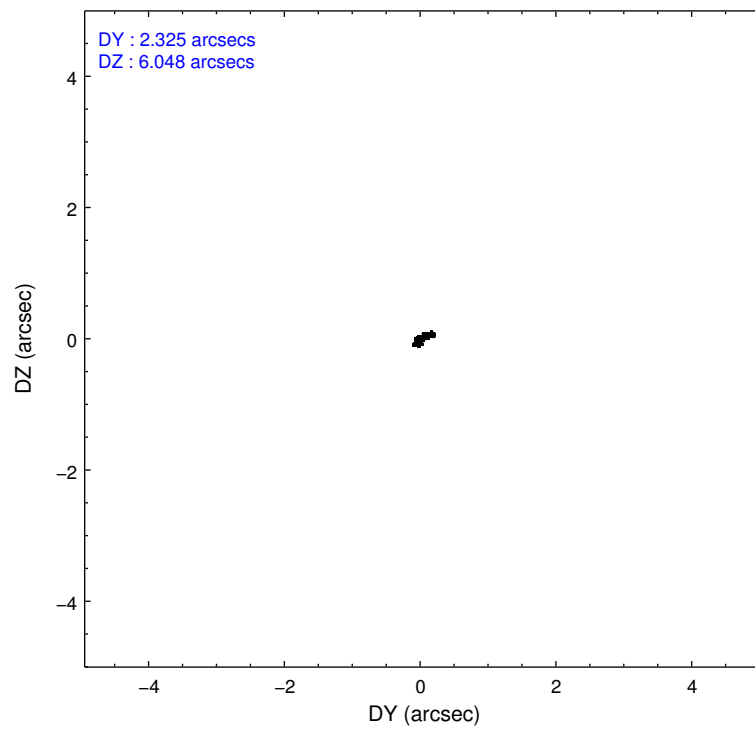
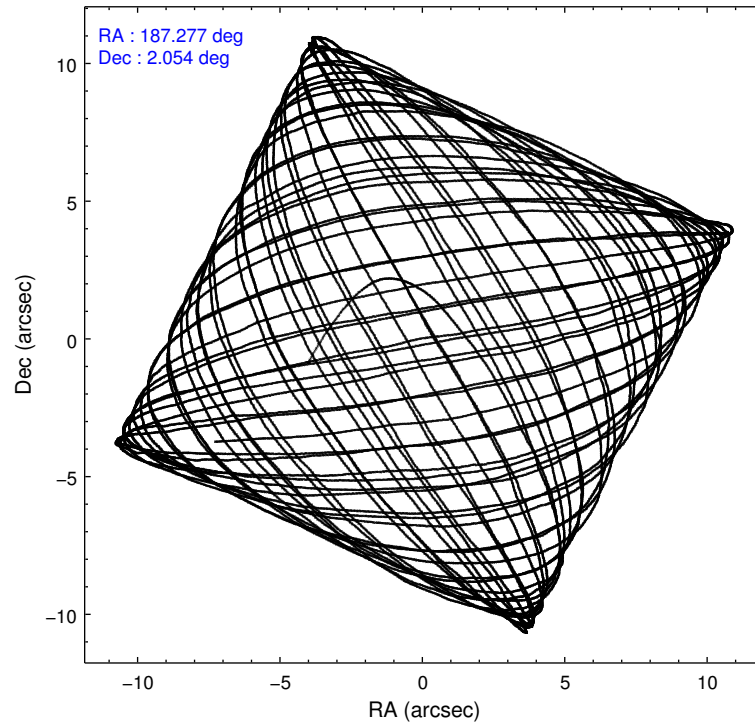
### 2.1.4 Events

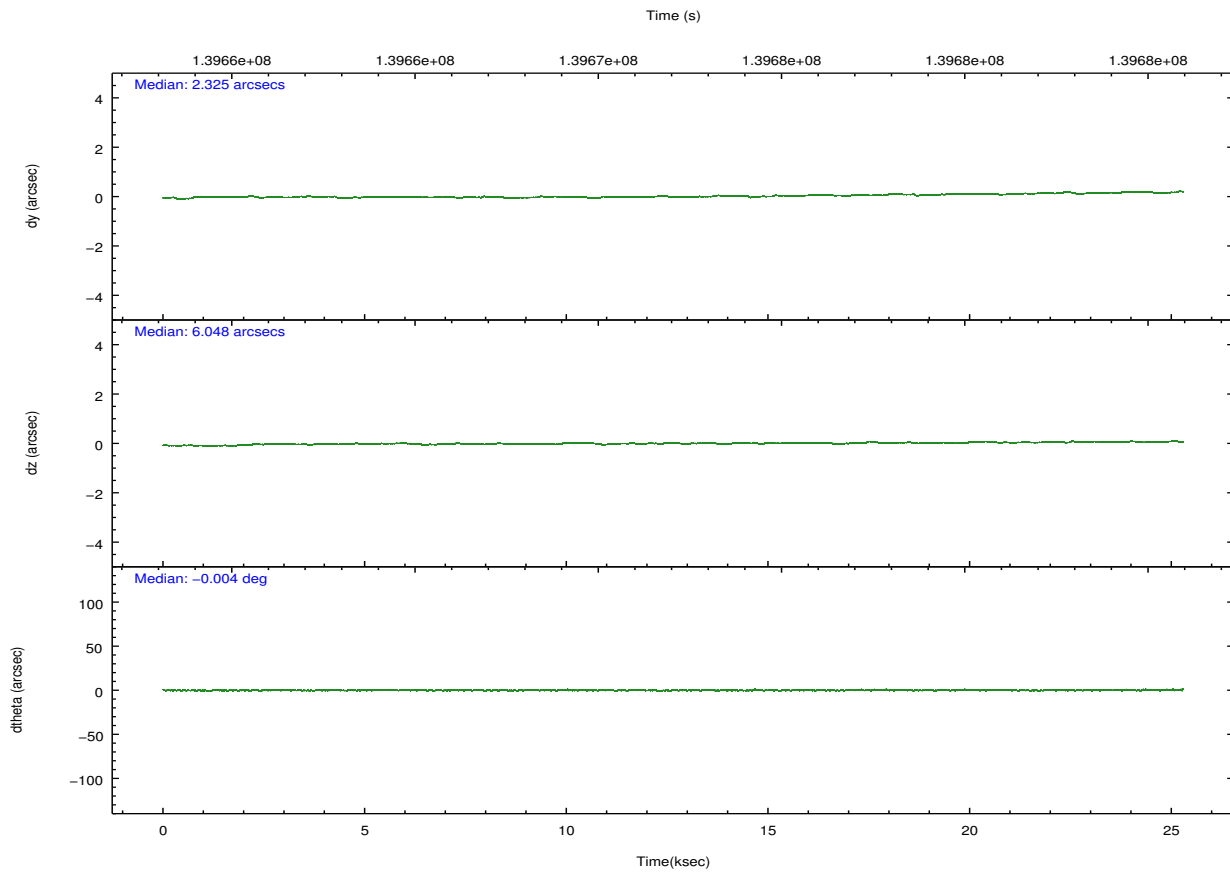
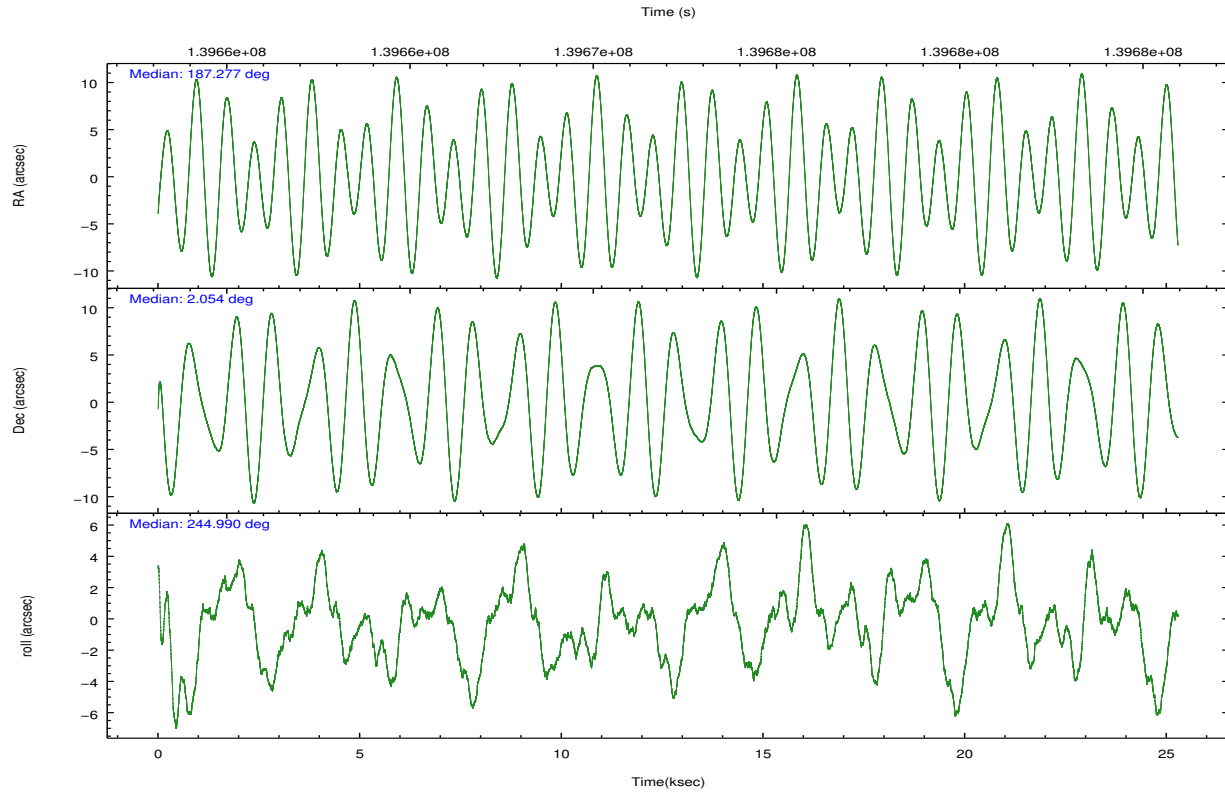
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	122101	160902	135510	175279	149138	109374	grade 0 events	6750	11098	24002	11478	18704	7567
rejected events	106954	82056	98388	87608	109651	93531		5%	6%	17%	6%	12%	6%
rejected %	87%	50%	72%	49%	73%	85%	grade 1 events	53	304	115	408	98	44
								0%	0%	0%	0%	0%	0%
							grade 2 events	3415	22134	5390	18404	7017	2808
								2%	13%	3%	10%	4%	2%
							grade 3 events	1399	4707	2248	8530	3401	1494
								1%	2%	1%	4%	2%	1%
							grade 4 events	1366	4399	2209	8463	3152	1446
								1%	2%	1%	4%	2%	1%
							grade 5 events	3888	12266	4527	14248	5769	4571
								3%	7%	3%	8%	3%	4%
							grade 6 events	2218	36510	3276	40807	7246	2528
								1%	22%	2%	23%	4%	2%
							grade 7 events	103012	69484	93743	72941	103751	88916
								84%	43%	69%	41%	69%	81%

## 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	187.274294	187.2770249194925	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	2.081533	2.054407978486781	Subarray start row	1	1
[deg] Pointing Roll	244.836914	244.9934441021071	Subarray row count	660	660
[s] Window start time (MET)	139276864.184000	139276864.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	141782464.184000	141782464.184000	[s] Primary exposure time	0.000000	2.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-184.532523	-184.5306286120915			
[mm] SIM translation stage offset	-5.6	-5.601893970916279			
[s] Observation start time (MET)	139659681.184000	139658656.11849			
Observation start date	2002-06-05T10:20:17	2002-06-05T10:04:16			
[s] Observation end time (MET)	139684681.184000	139684815.65706			
Observation end date	2002-06-05T17:16:57	2002-06-05T17:20:15			
Read mode	TIMED	TIMED			

## 2.3 Aspect



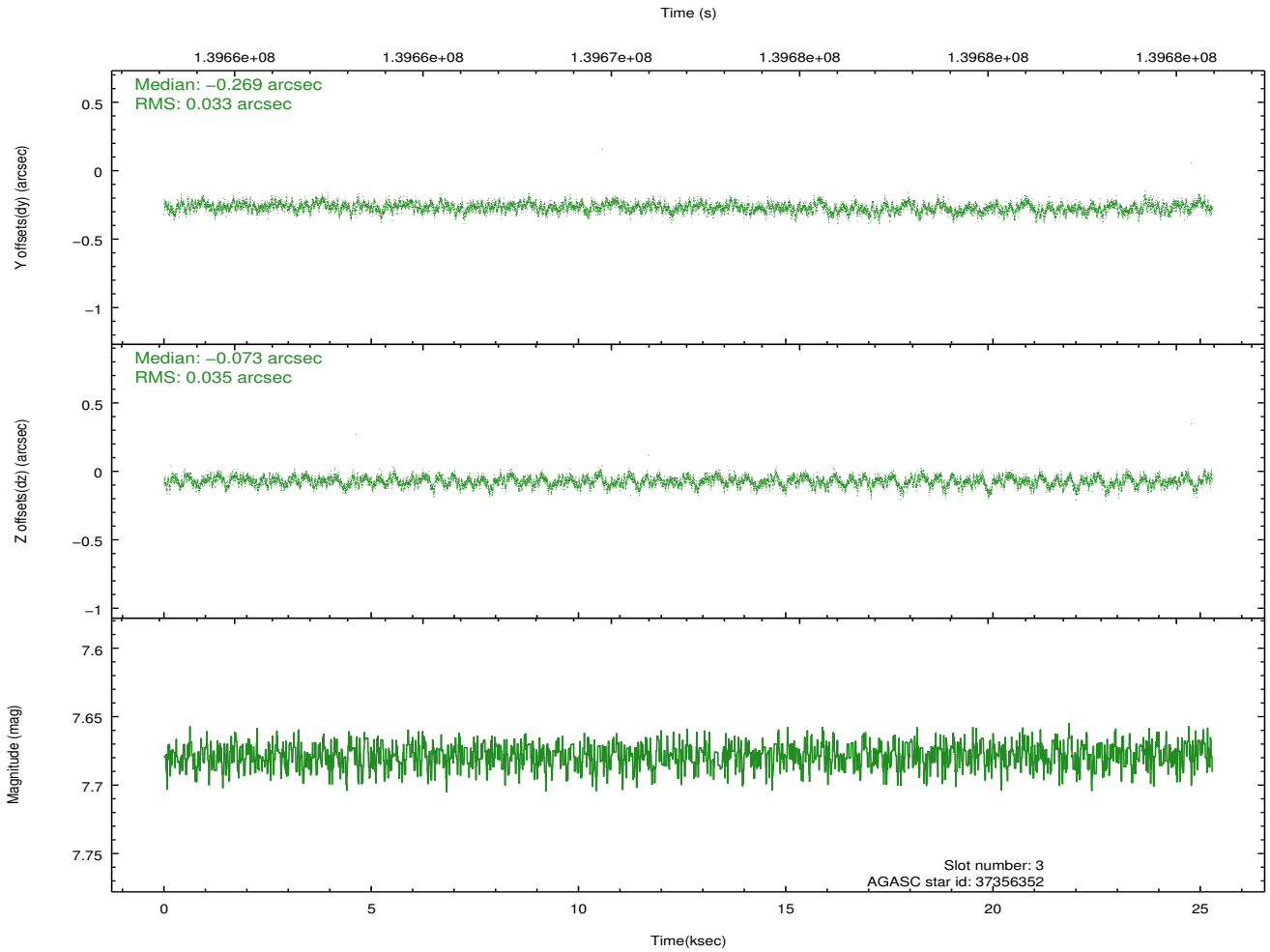
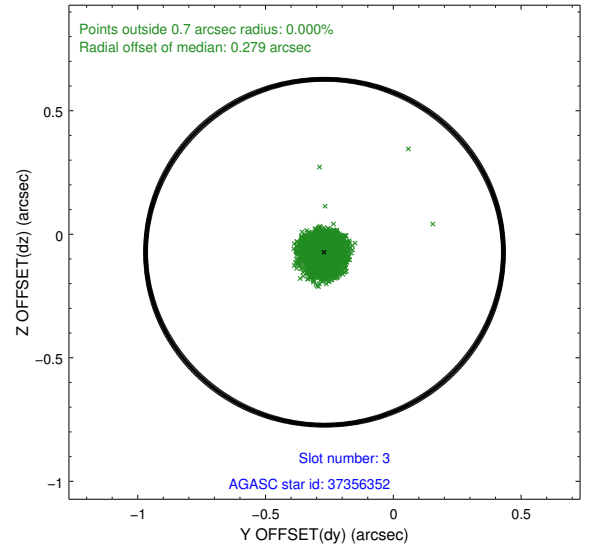
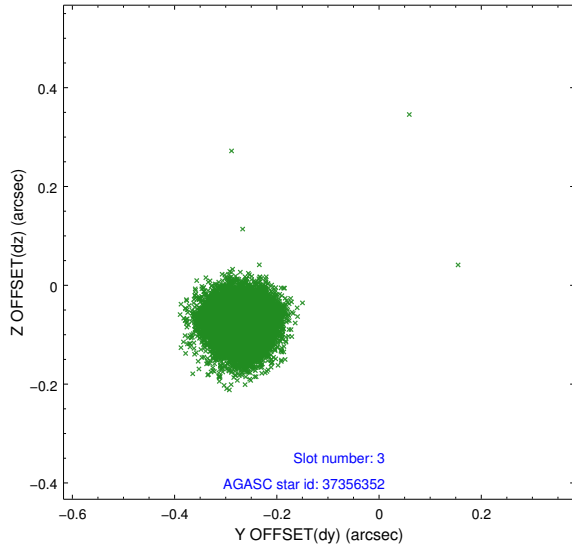


### Slot Statistics

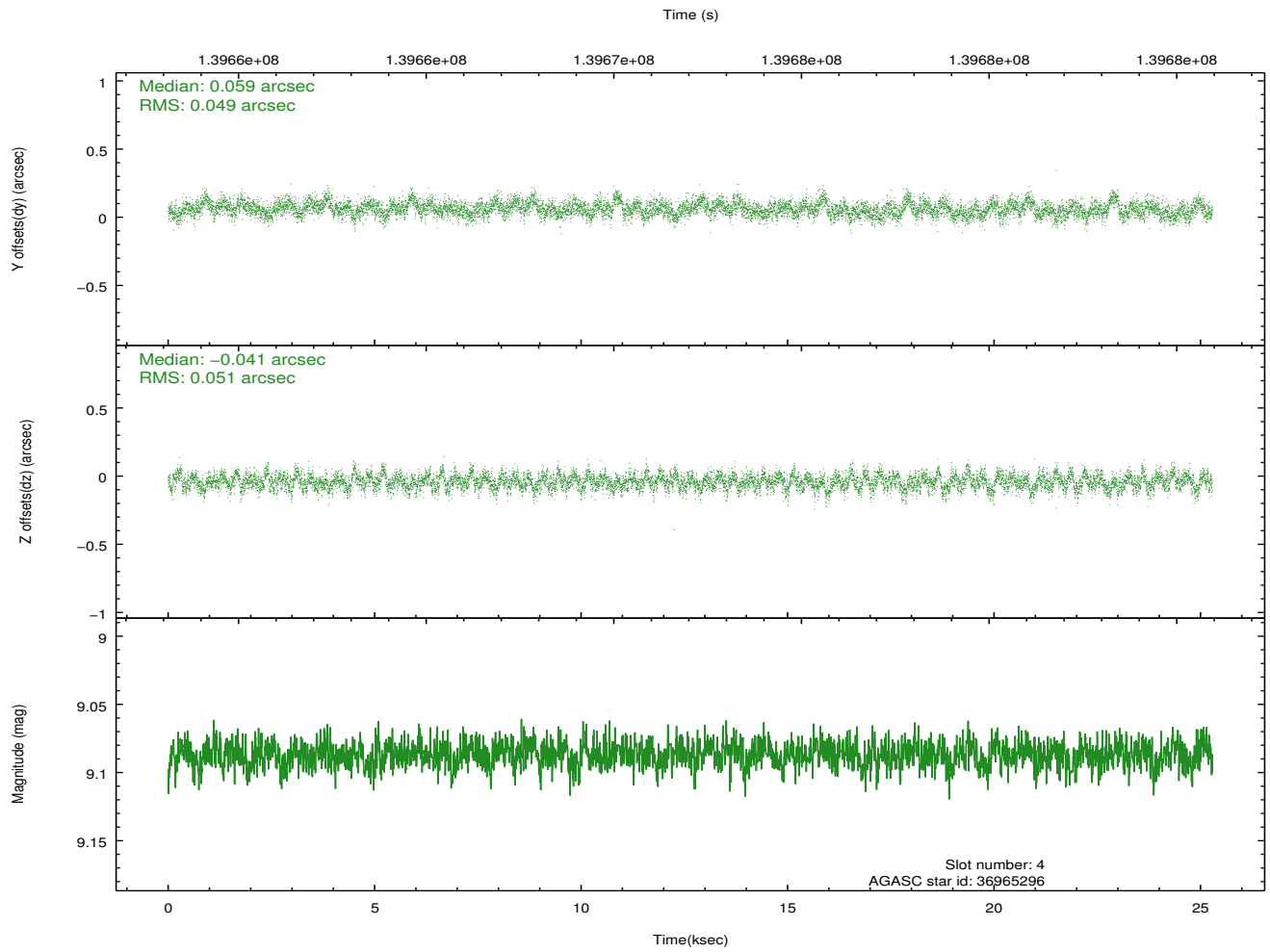
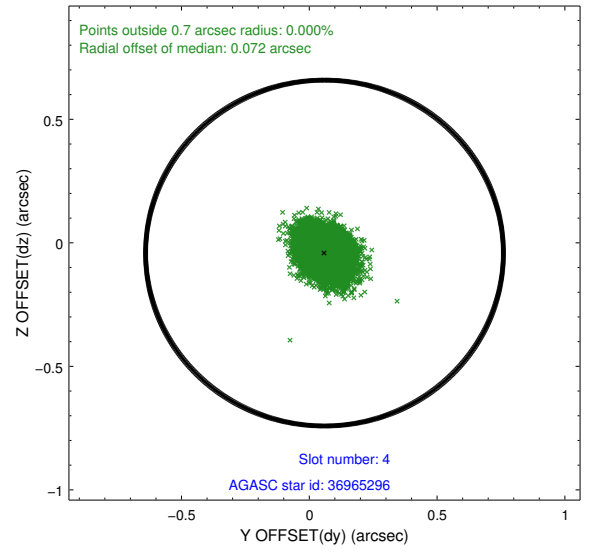
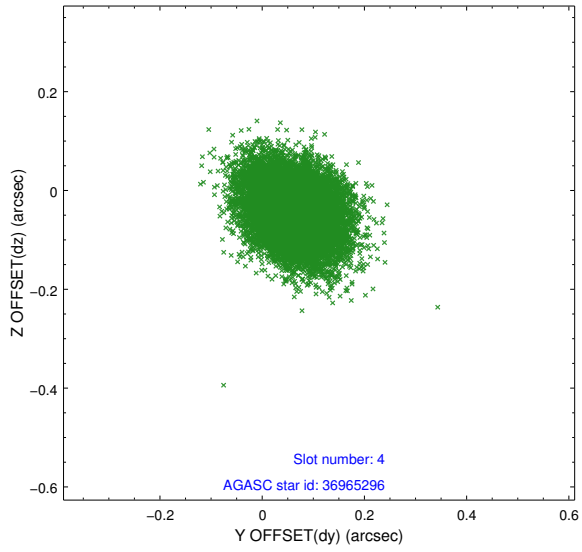
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	6166	-0.050	-0.088	0.007	0.013	0.000000	0.000000	-754.64	-1842.76
1	FID	ACIS-S-4	7.19	6166	0.018	0.048	0.006	0.014	0.000000	0.000000	2158.66	65.71
2	FID	ACIS-S-5	7.23	6167	0.001	0.048	0.007	0.013	0.000000	0.000000	-1807.28	59.52
3	GUIDE	37356352	7.68	12335	-0.269	-0.073	0.051	0.081	187.433784	2.618460	-1994.19	-302.13
4	GUIDE	36965296	9.09	12332	0.059	-0.041	0.075	0.122	186.926292	1.837429	1327.10	-758.98
5	GUIDE	36965816	9.27	12330	0.020	-0.032	0.079	0.134	186.823353	1.771455	1699.75	-993.28
6	GUIDE	37879824	10.48	12319	-0.123	-0.062	0.161	0.256	187.728661	2.497183	-2049.98	843.34
7	GUIDE	37883040	10.02	12317	0.311	0.209	0.137	0.221	187.575516	1.280402	2148.95	2208.84

## 2.4 Star Slots

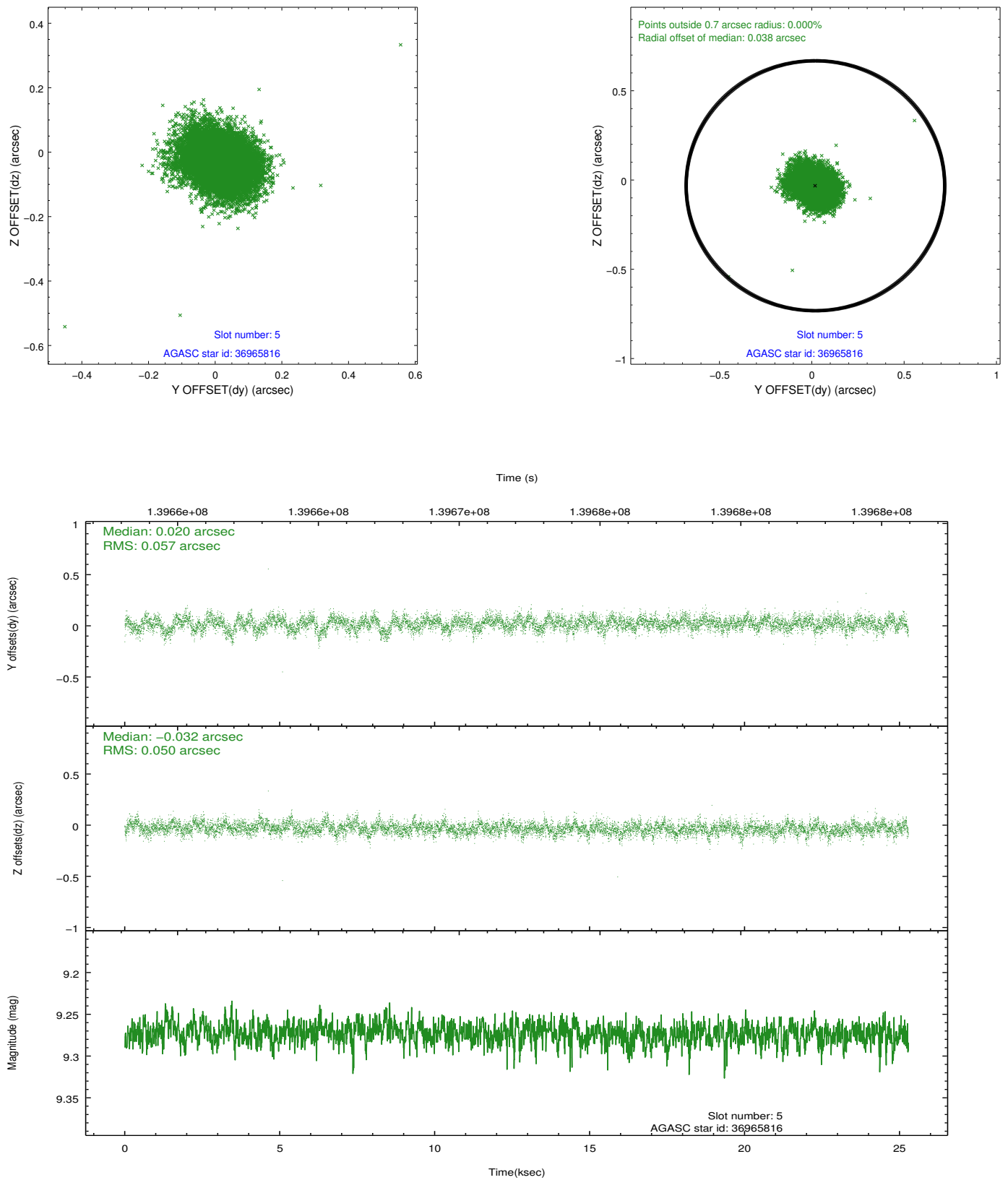
### 2.4.1 Slot 3



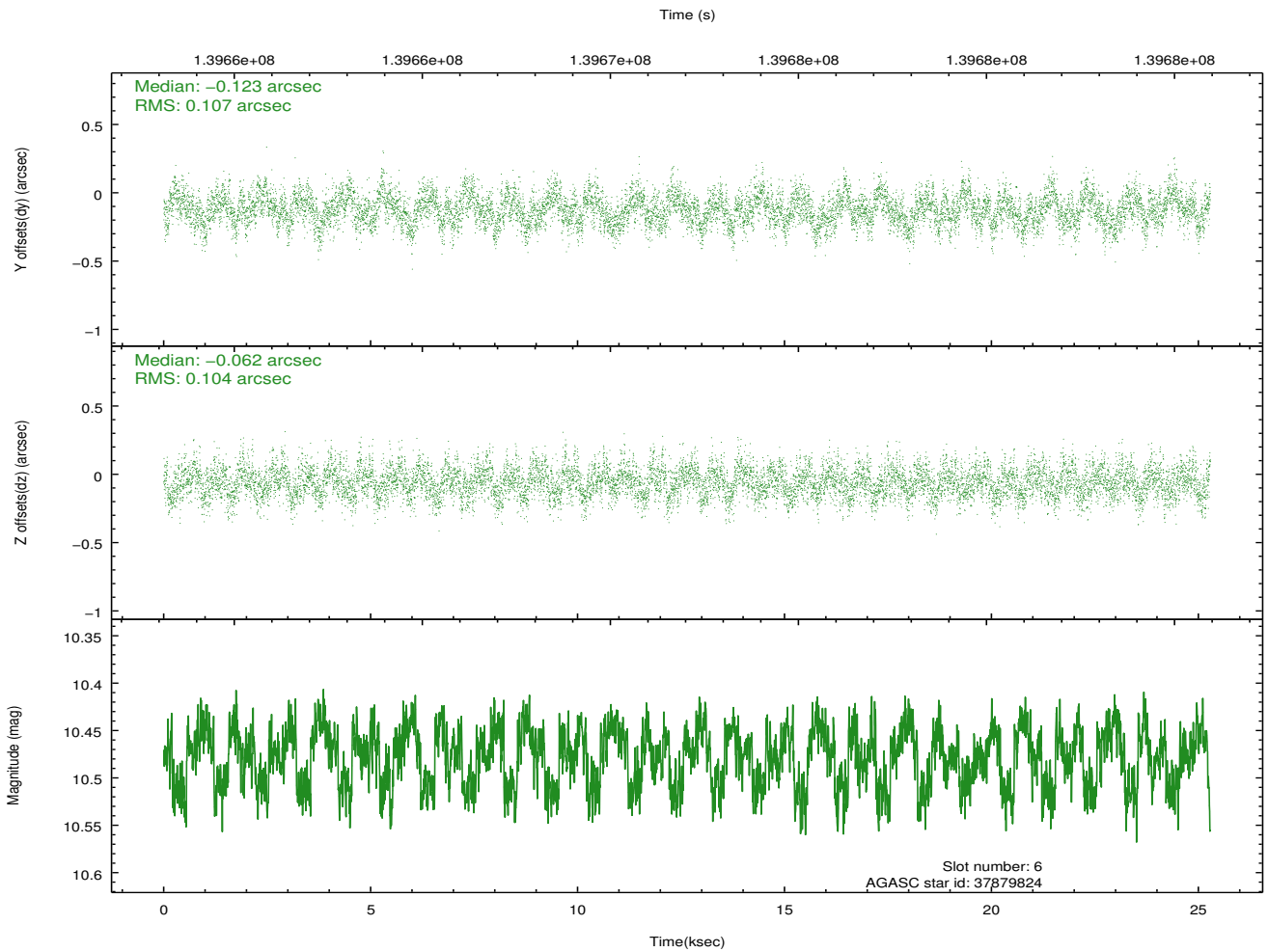
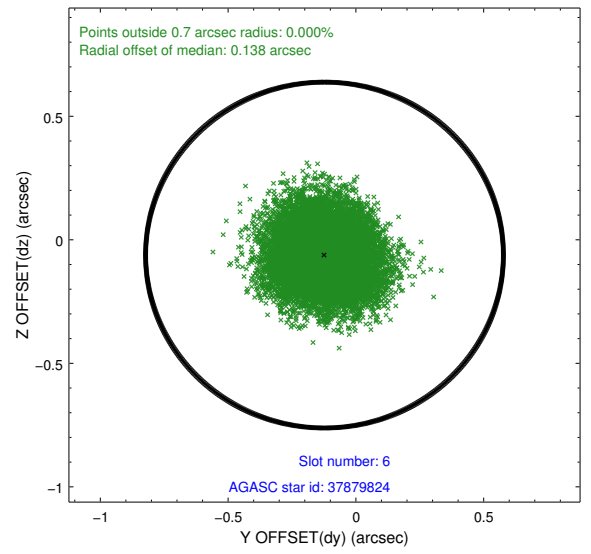
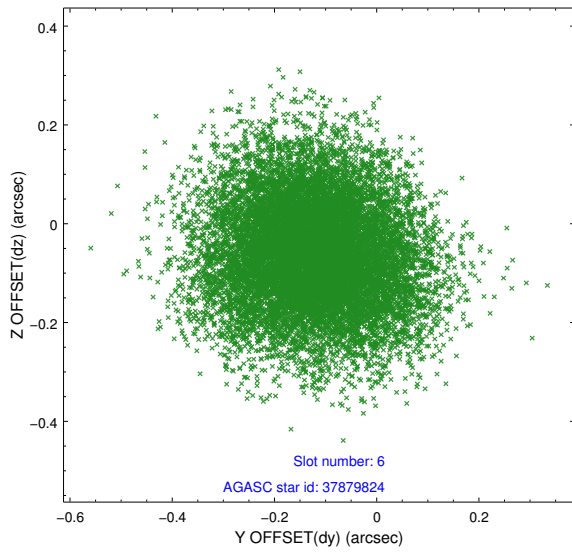
### 2.4.2 Slot 4



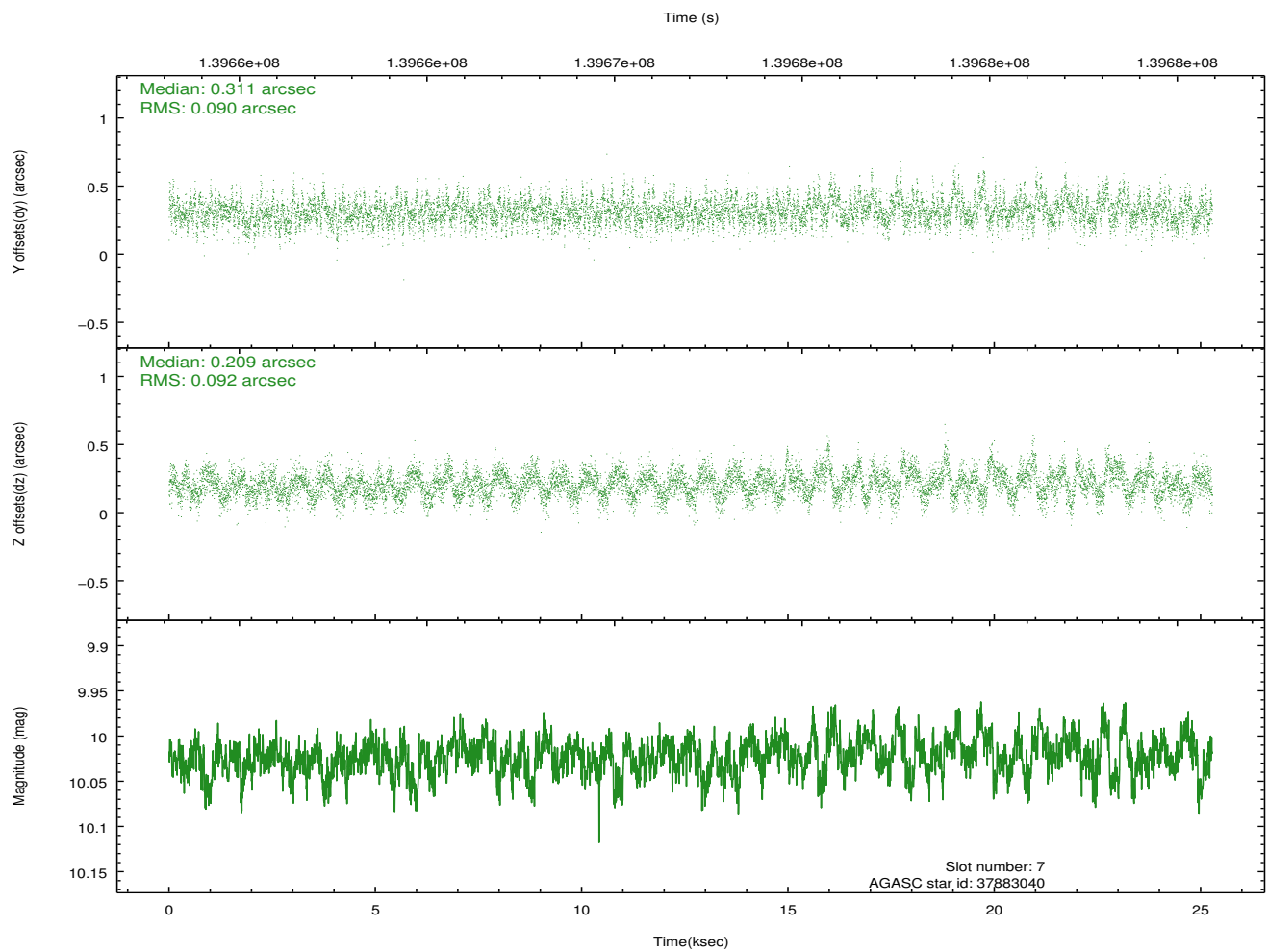
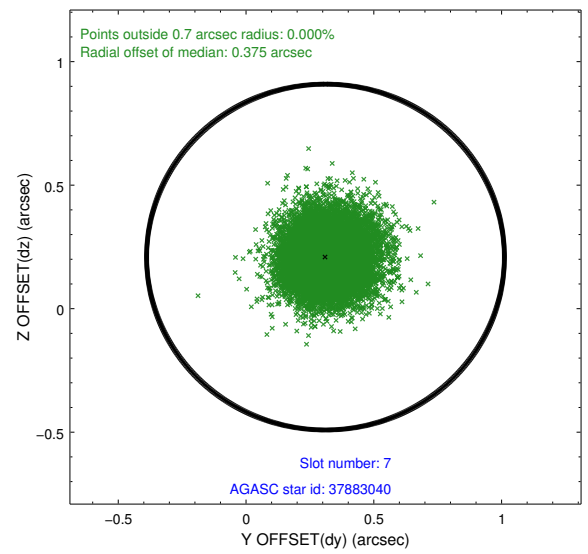
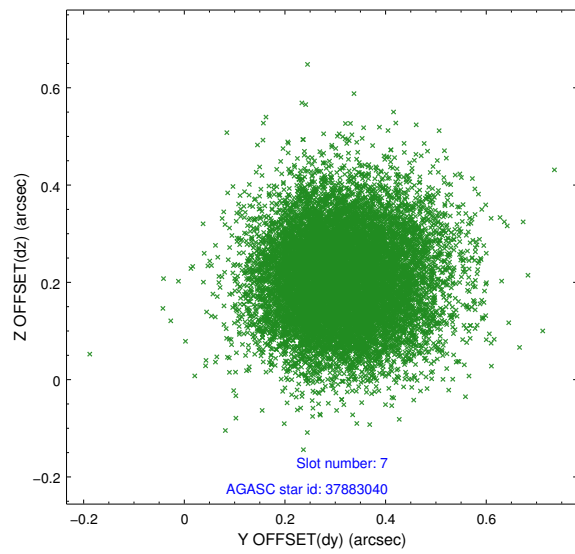
### 2.4.3 Slot 5



### 2.4.4 Slot 6

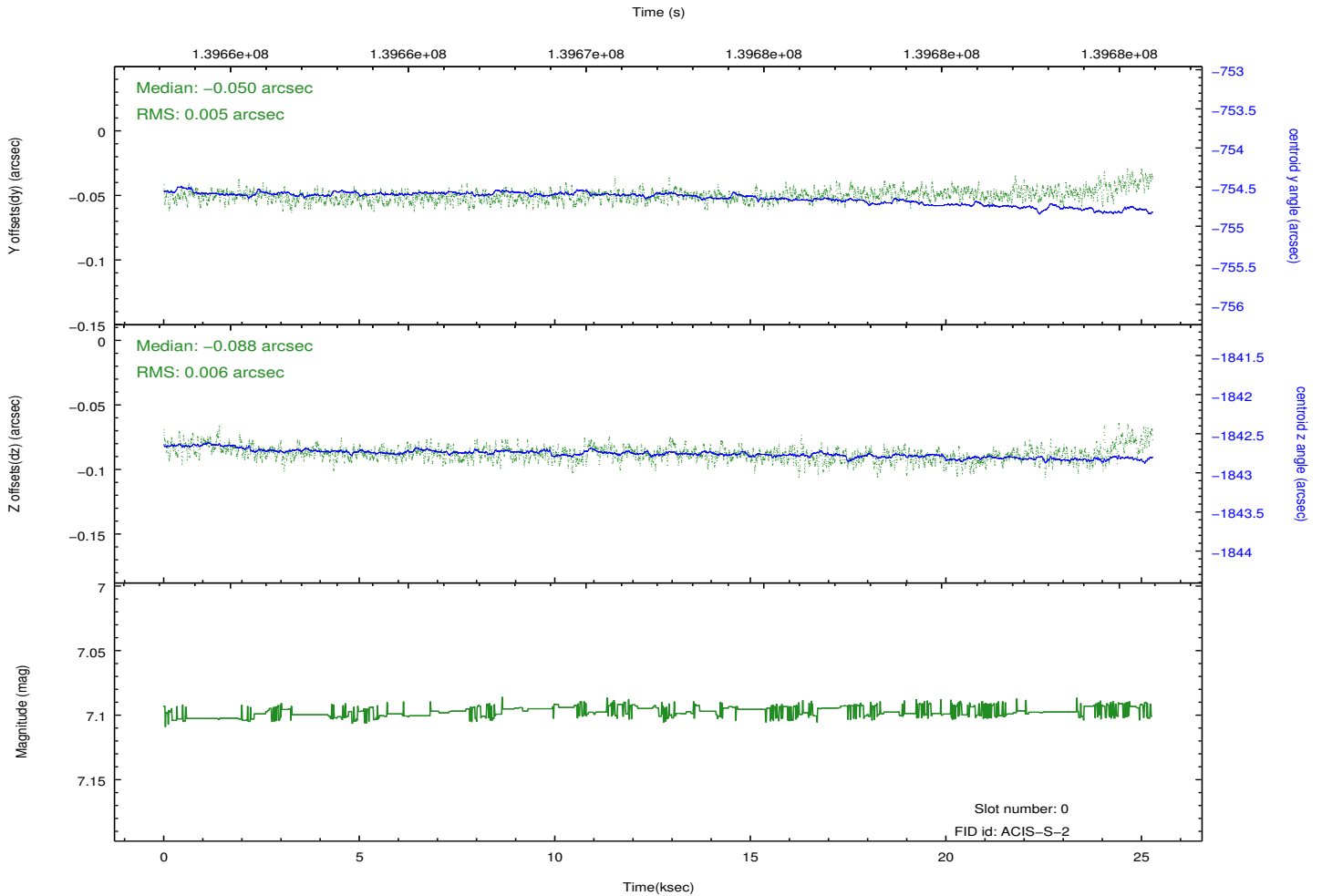
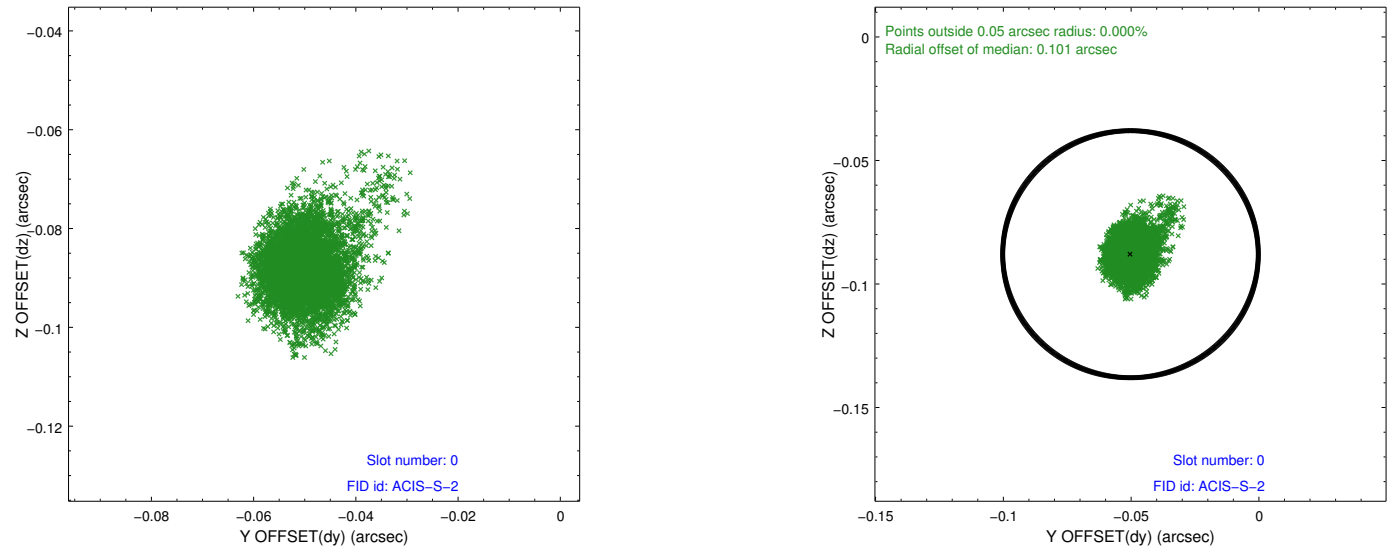


## 2.4.5 Slot 7

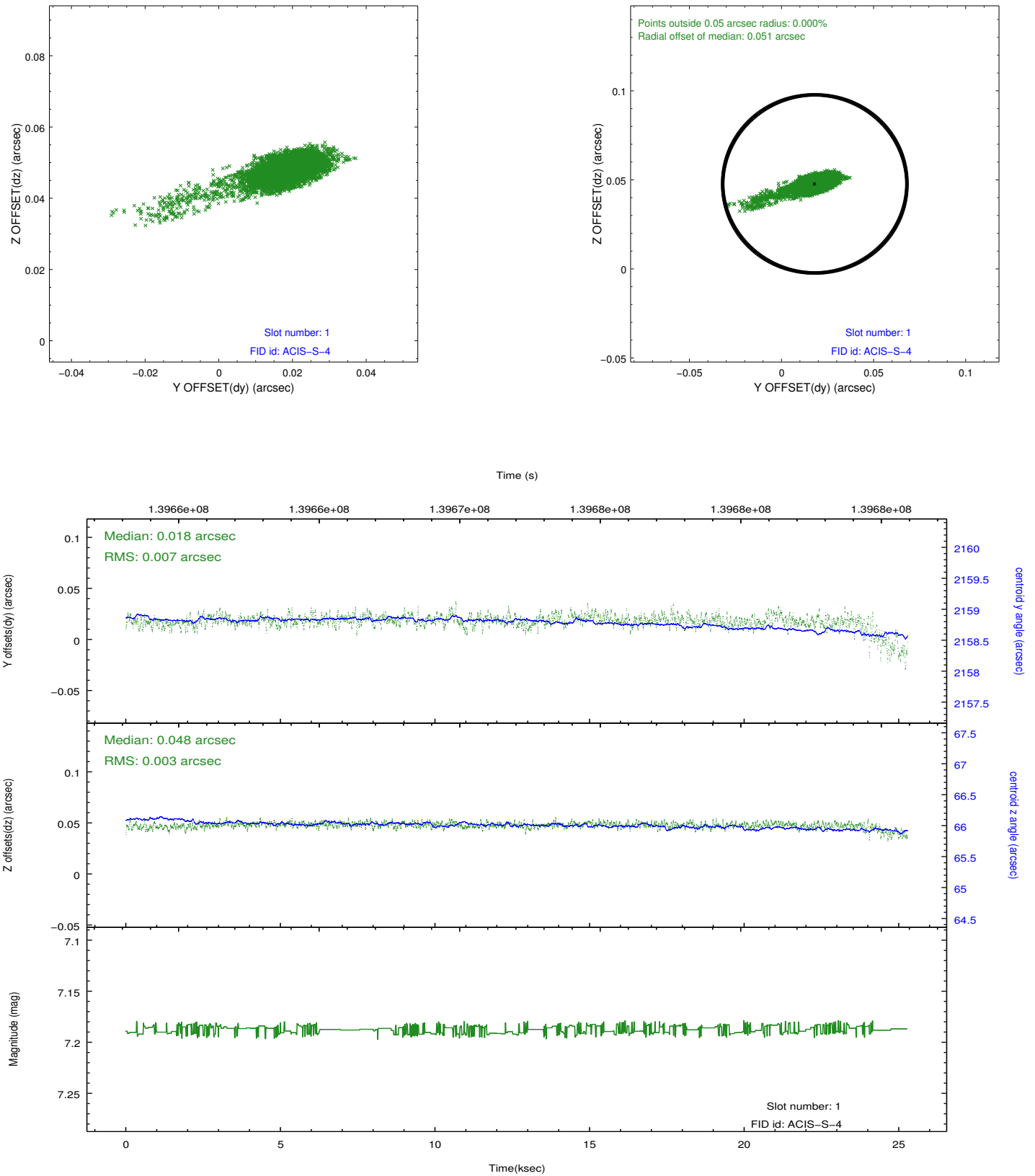


## 2.5 FID Slots

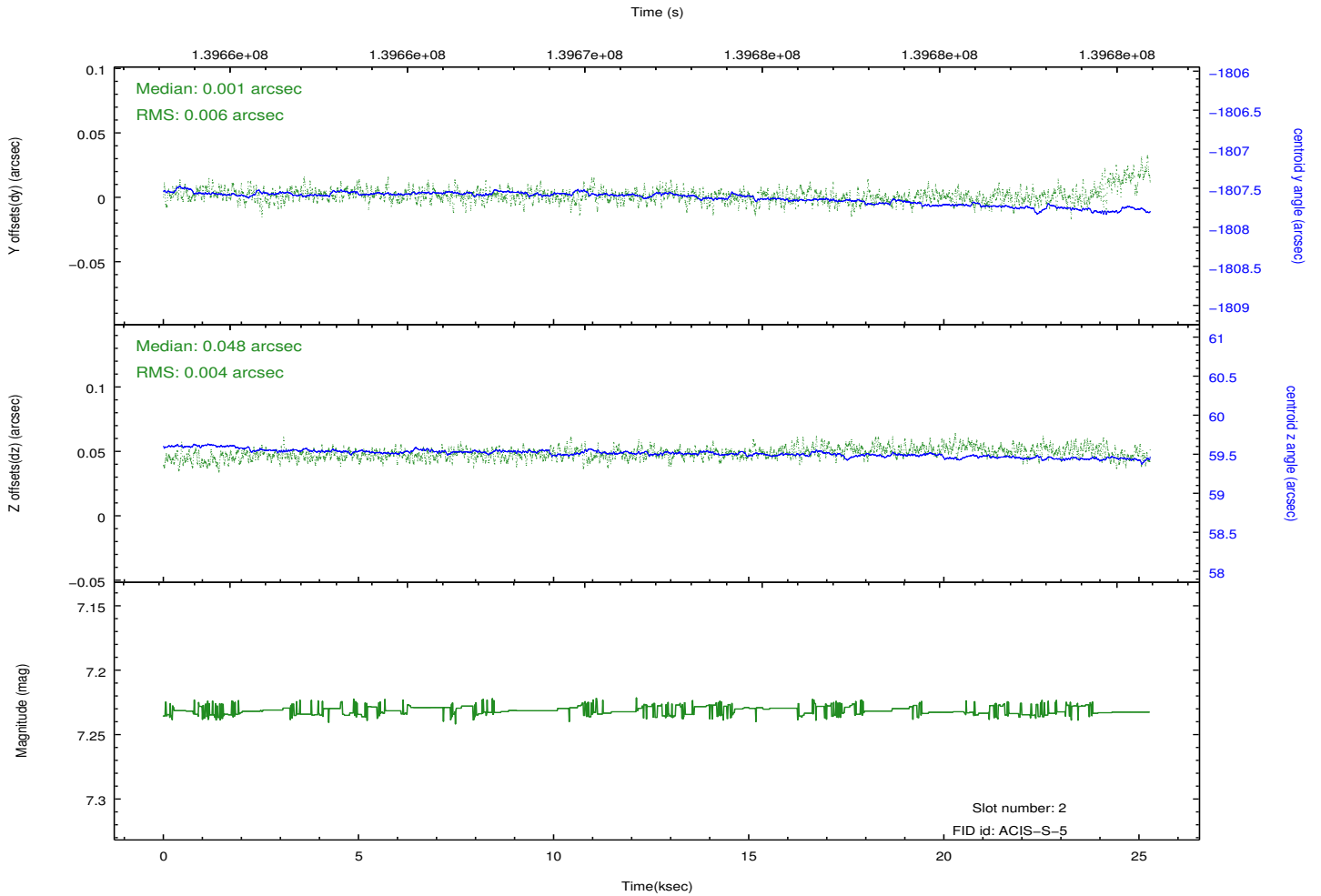
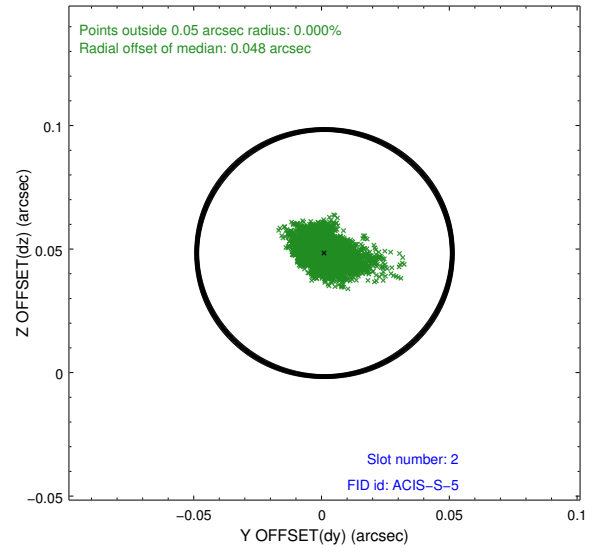
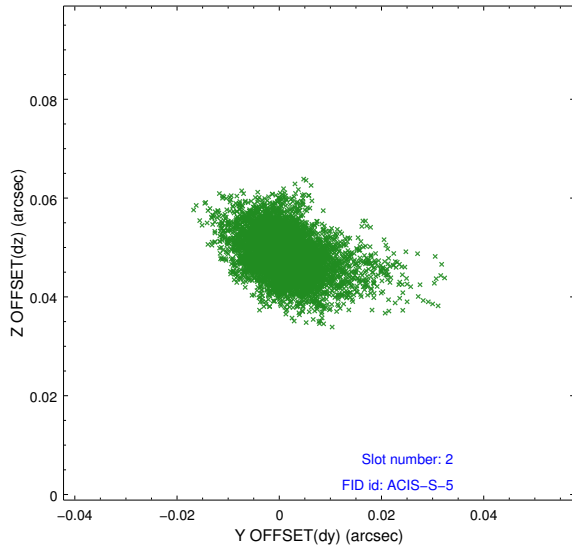
### 2.5.1 Slot 0



## 2.5.2 Slot 1

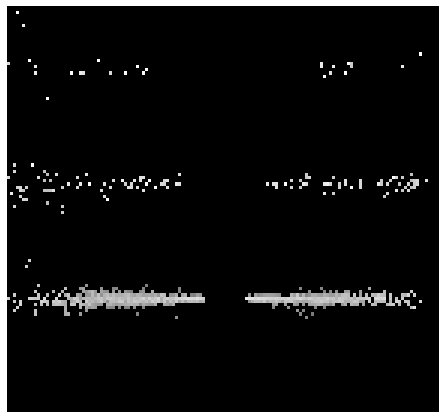


### 2.5.3 Slot 2

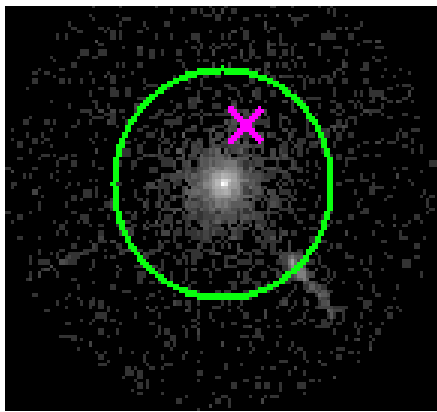


### 3 Gratings

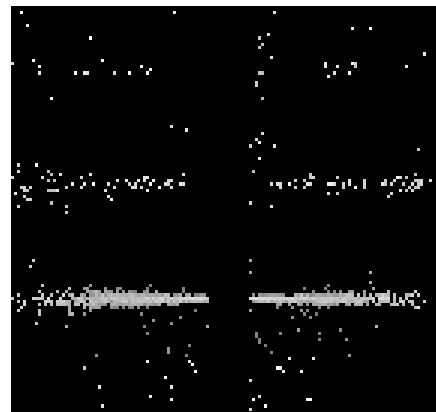
#### 3.1 HEG Arm



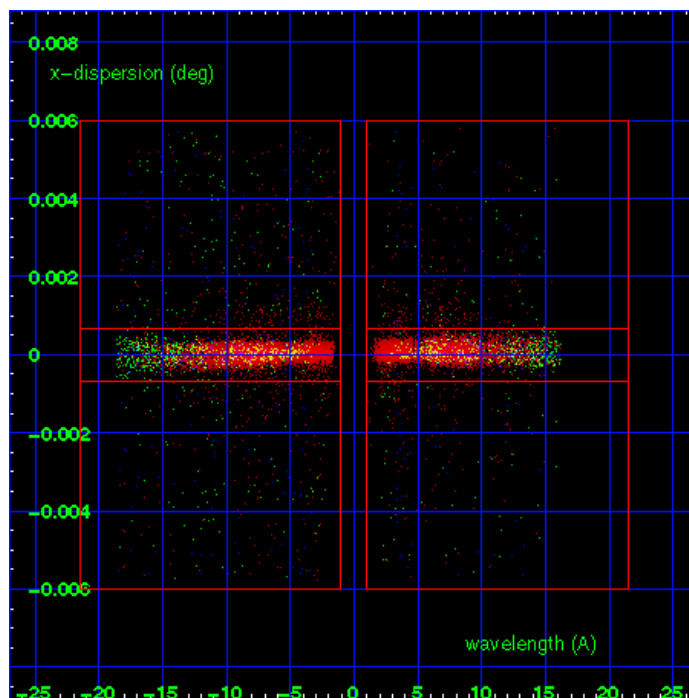
HEG Order Sort 123



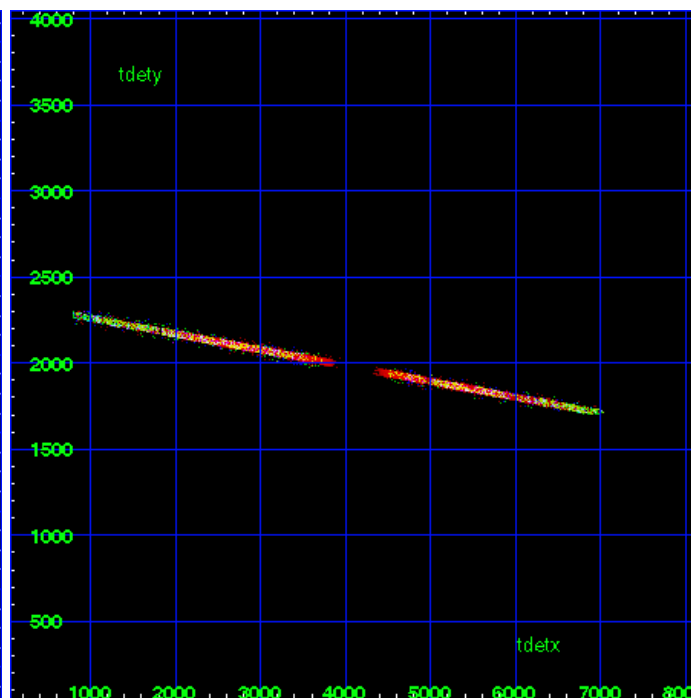
HEG Zero Order



HEG Order Sort ALL

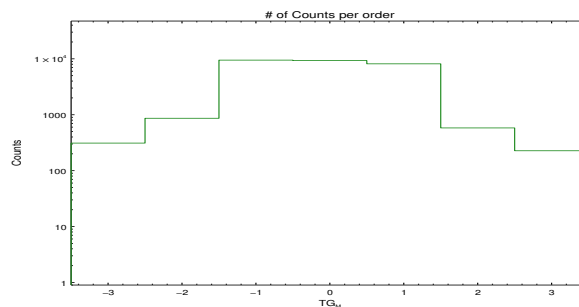


Spot Image HEG

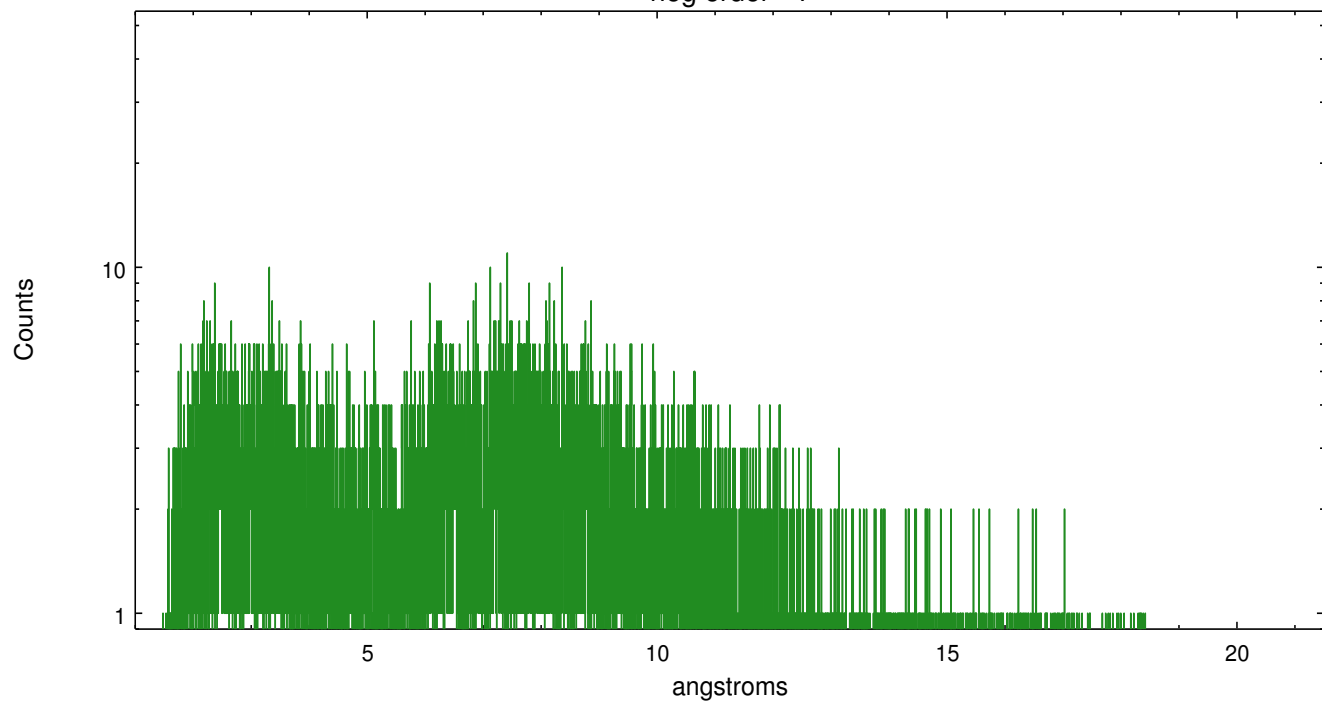


Full Detector HEG

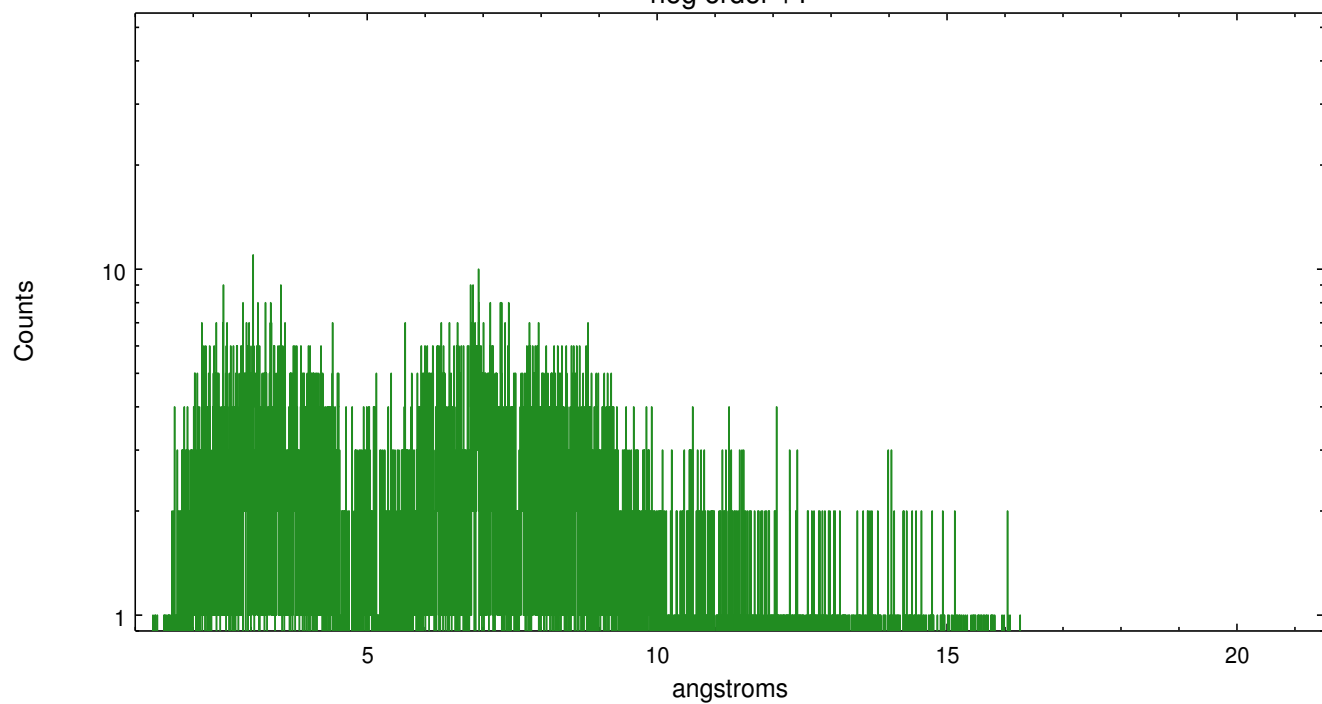
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	311	864	9474	9312	8139	581	227



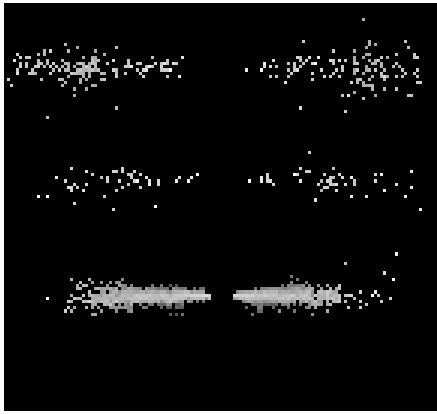
heg order -1



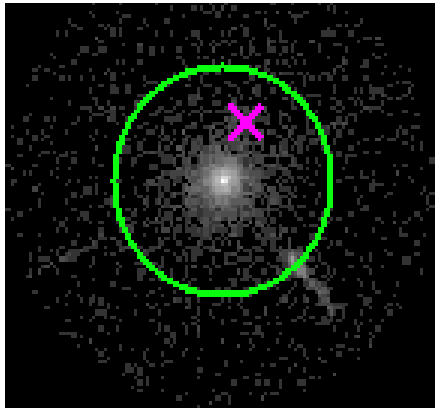
heg order +1



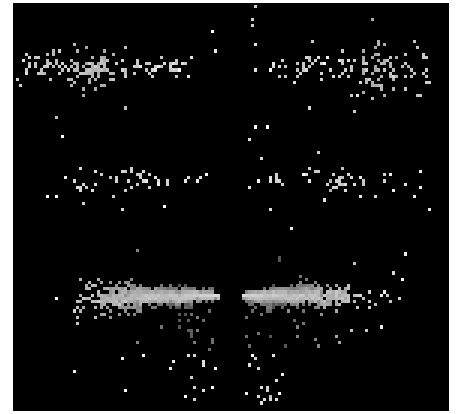
### 3.2 MEG Arm



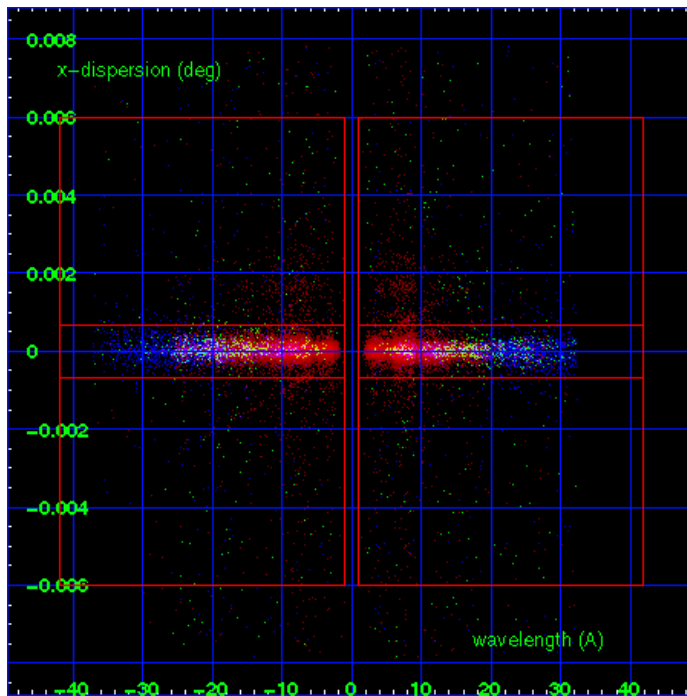
MEG Order Sort 123



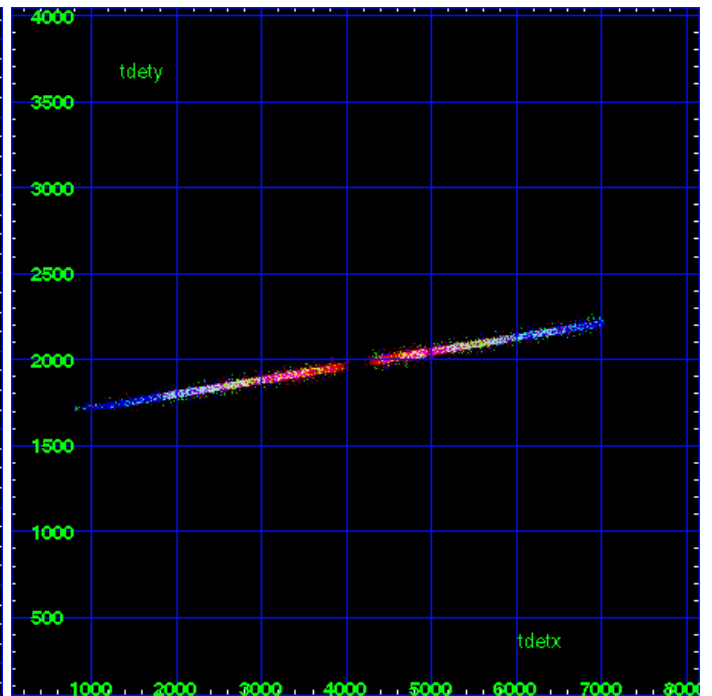
MEG Zero Order



MEG Order Sort ALL

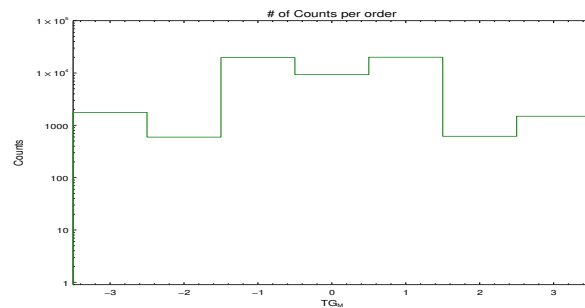


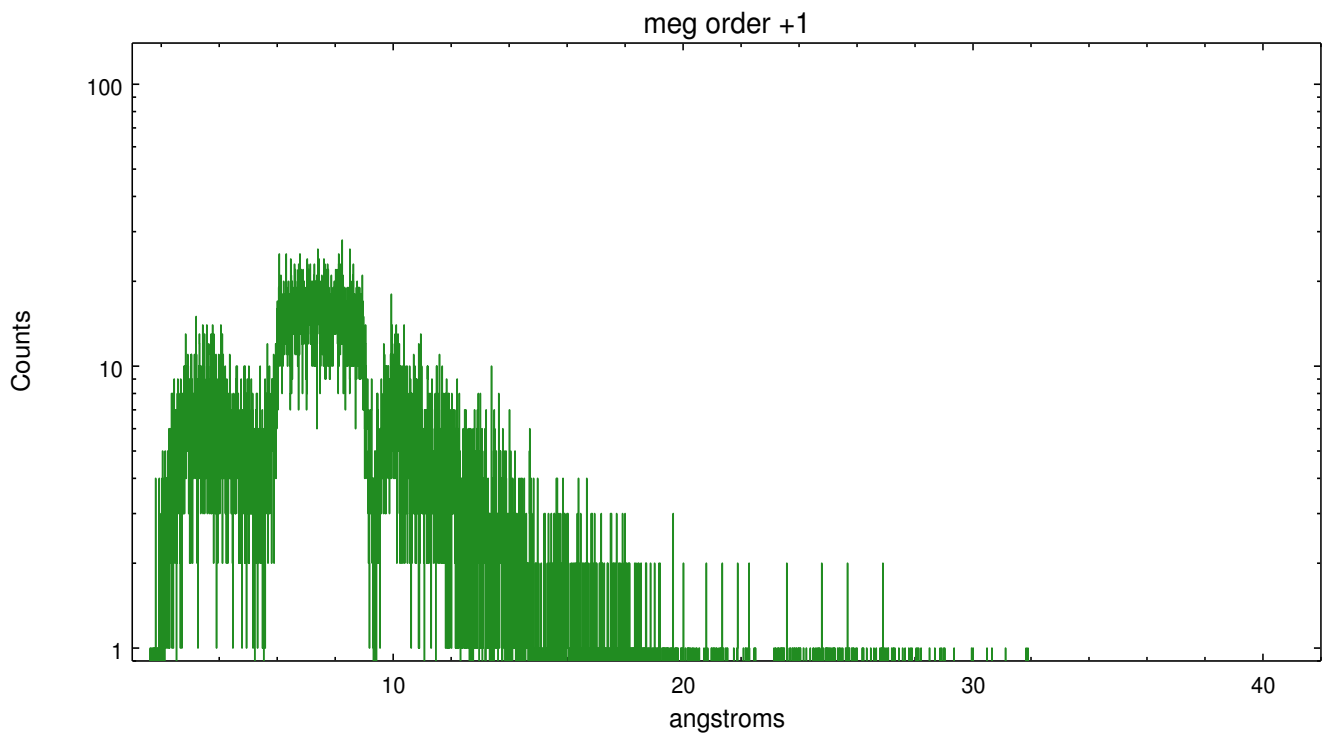
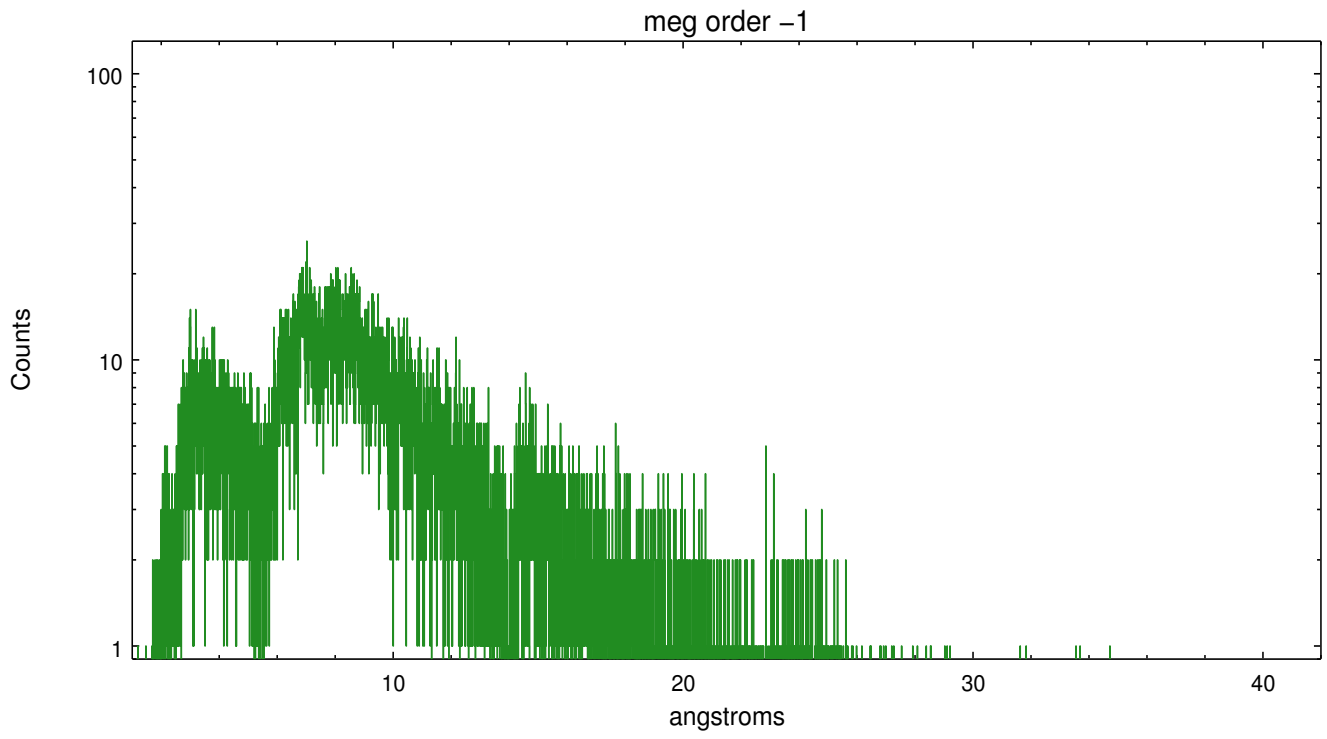
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1763	595	19725	9312	20013	617	1491





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.004

## A.2 Comments