

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2305 - L2 Version 4  
Chandra X-Ray Center

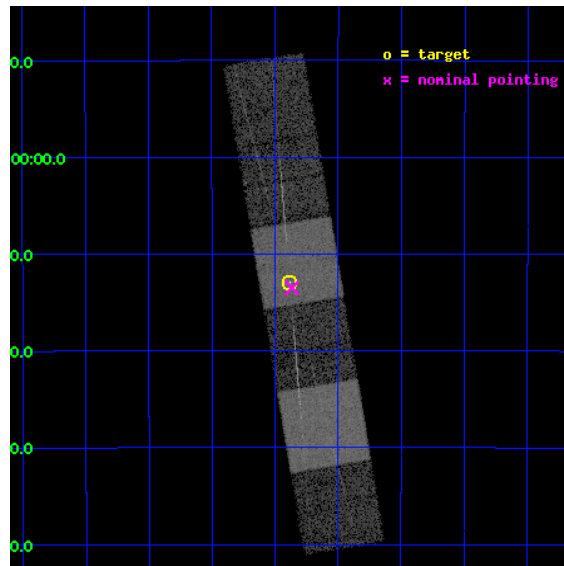
L2 Processing Date : Sep 1 2012

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# 1 Front

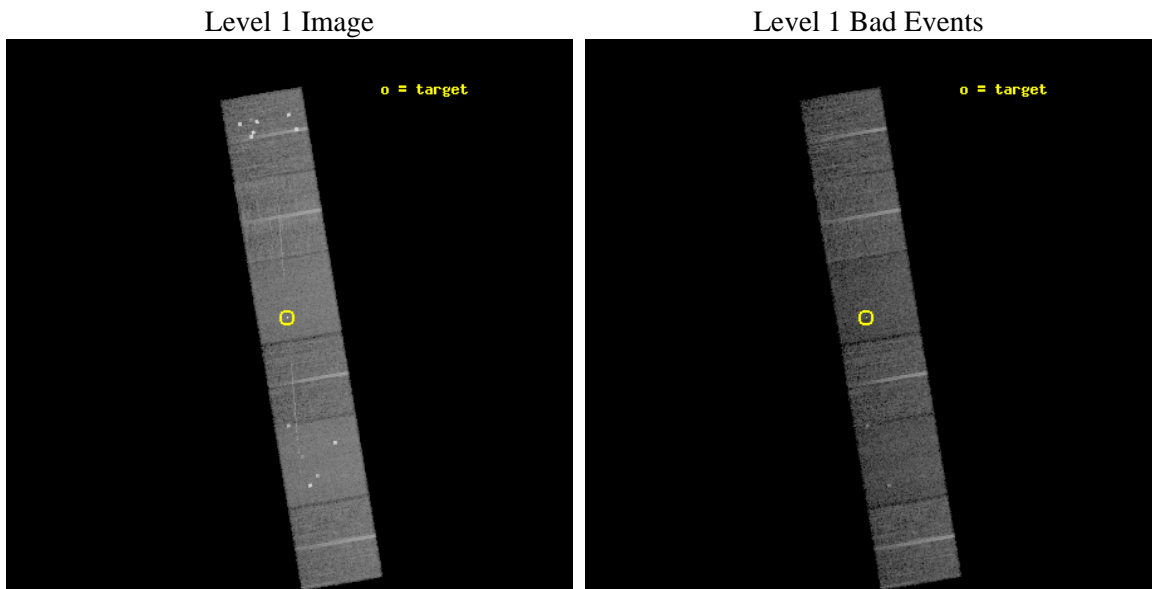
seq_num	200063	Sequence number
obs_id	2305	Observation id
title	ARE B STAR X-RAY SOURCES WIND-CORONAL HYBRIDS?	Proposal title
observer	Prof. David Cohen	Principal investigator
object	TAU SCO	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	248.970417	Observer's specified target RA [deg]
dec_targ	-28.215694	Observer's specified target Dec [deg]
ra_nom	248.96658123854	Nominal RA [deg]
dec_nom	-28.225015750574	Nominal Dec [deg]
roll_nom	260.45079277658	Nominal Roll [deg]
revision	4	Processing version of data
ontime	13119.959061965	Sum of GTIs [s]
livetime	12953.826240432	Livetime [s]
ontime4	13123.200012207	Sum of GTIs [s]
ontime5	13116.718101725	Sum of GTIs [s]
ontime6	13123.200012207	Sum of GTIs [s]
ontime7	13119.959061965	Sum of GTIs [s]
ontime8	13116.718091726	Sum of GTIs [s]
ontime9	13123.200012207	Sum of GTIs [s]
l2events	113807	Number of level 2 events



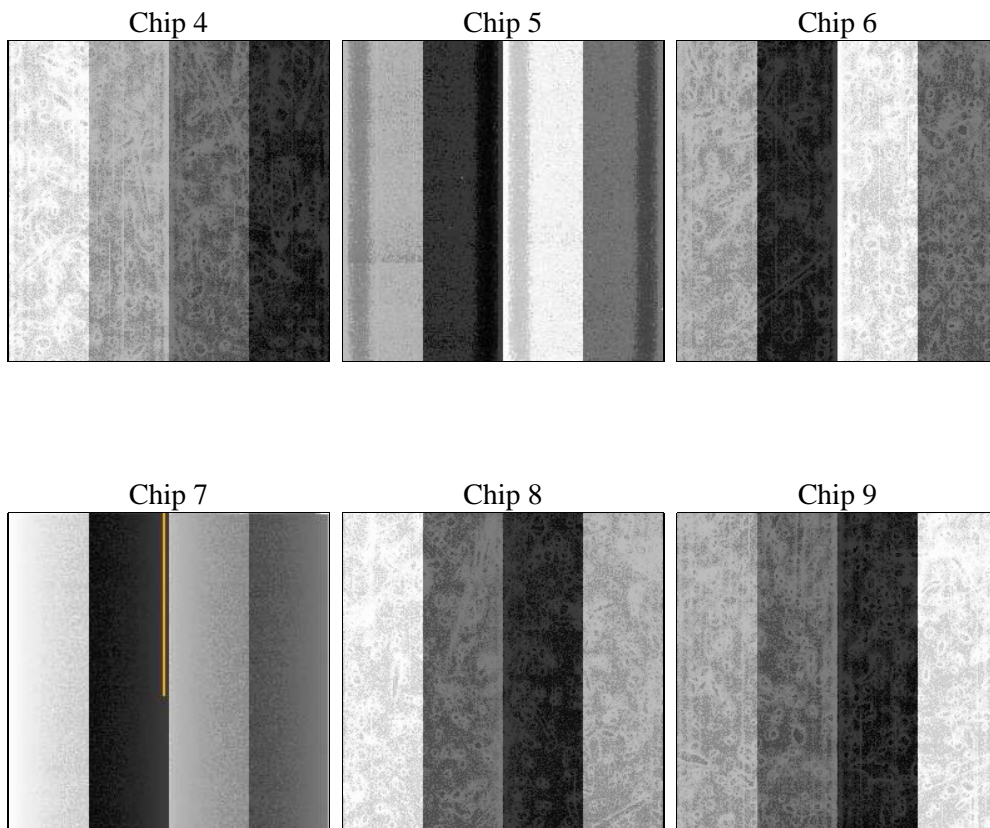
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	13364.441000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	13119.959061965	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime4	13123.200012207	Sum of GTIs [s]
date	2012-09-01T17:51:36	Date and time of file creation	ontime5	13116.718101725	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	13123.200012207	Sum of GTIs [s]
			ontime7	13119.959061965	Sum of GTIs [s]
			ontime8	13116.718091726	Sum of GTIs [s]
			ontime9	13123.200012207	Sum of GTIs [s]
			l1events	535157	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	78535	104836	71575	90019	94169	96023	grade 0 events	3853	9943	4689	4200	7858	19601
rejected events	69623	51726	61885	50859	72229	63354		4%	9%	6%	4%	8%	20%
rejected %	88%	49%	86%	56%	76%	65%	grade 1 events	36	515	45	158	81	92
								0%	0%	0%	0%	0%	0%
							grade 2 events	2051	15526	1743	7956	4173	9606
								2%	14%	2%	8%	4%	10%
							grade 3 events	761	2216	860	3689	2634	854
								0%	2%	1%	4%	2%	0%
							grade 4 events	765	2142	821	3667	2328	877
								0%	2%	1%	4%	2%	0%
							grade 5 events	2459	7498	2799	8594	3657	2963
								3%	7%	3%	9%	3%	3%
							grade 6 events	1489	23311	1577	19663	4956	1749
								1%	22%	2%	21%	5%	1%
							grade 7 events	67121	43685	59041	42092	68482	60281
								85%	41%	82%	46%	72%	62%

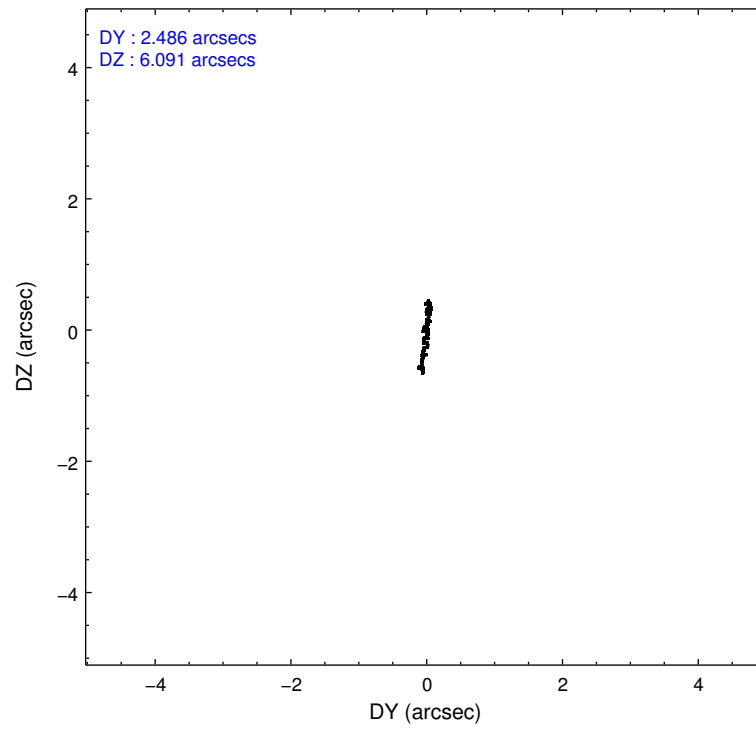
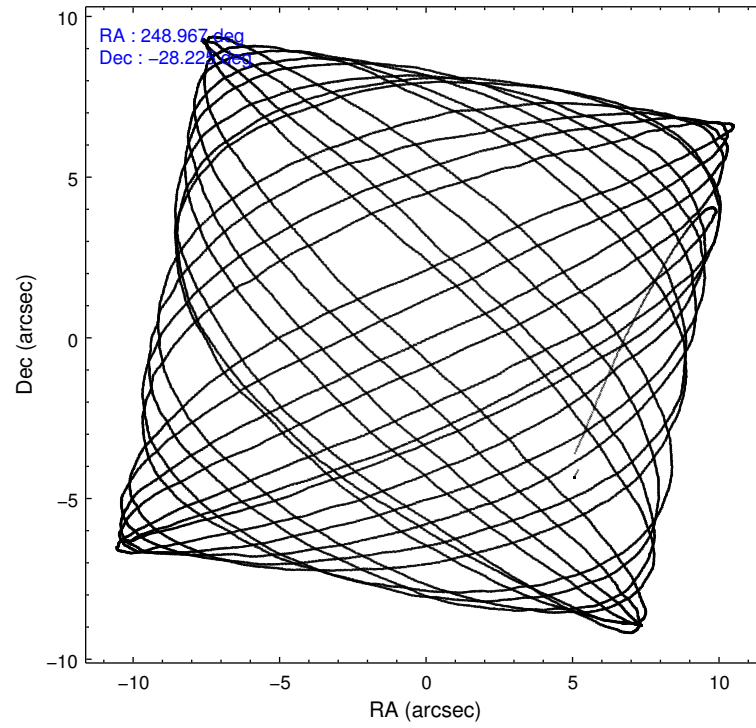


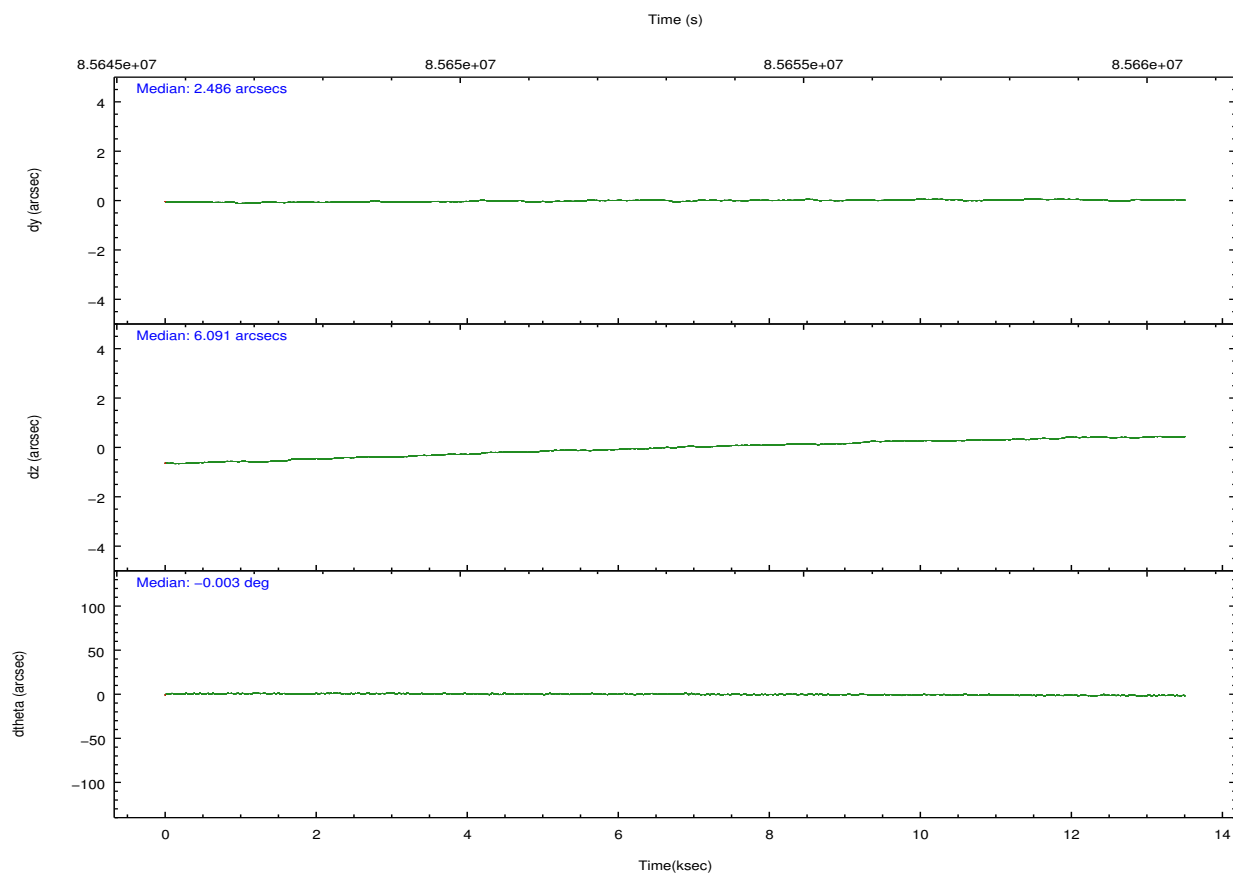
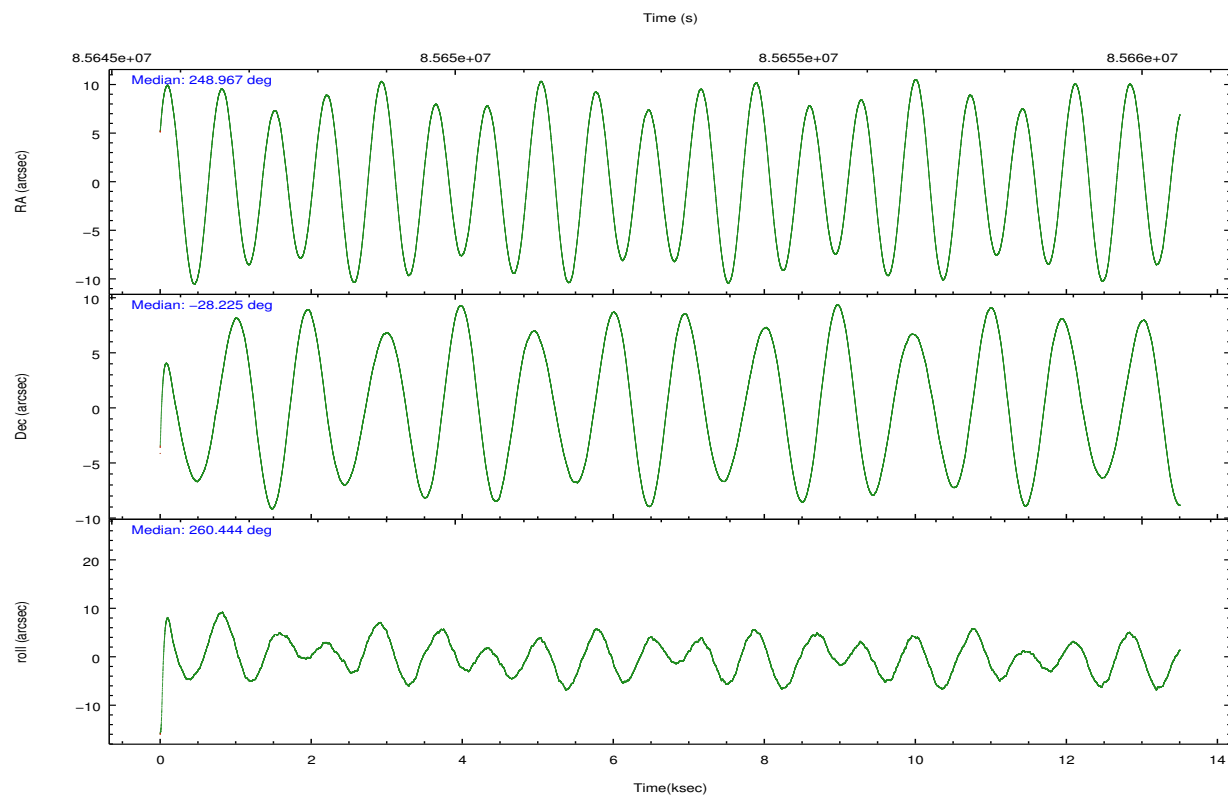
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	248.955541	248.9665812385428
[deg] Pointing Dec	-28.199423	-28.22501575057442
[deg] Pointing Roll	260.288973	260.4507927765795
[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)	85646515.184000	85644581.08261099
Observation start date	2000-09-18T06:40:51	2000-09-18T06:09:41
[s] Observation end time (MET)	85659879.184000	85660193.88319799
Observation end date	2000-09-18T10:23:35	2000-09-18T10:29:53
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



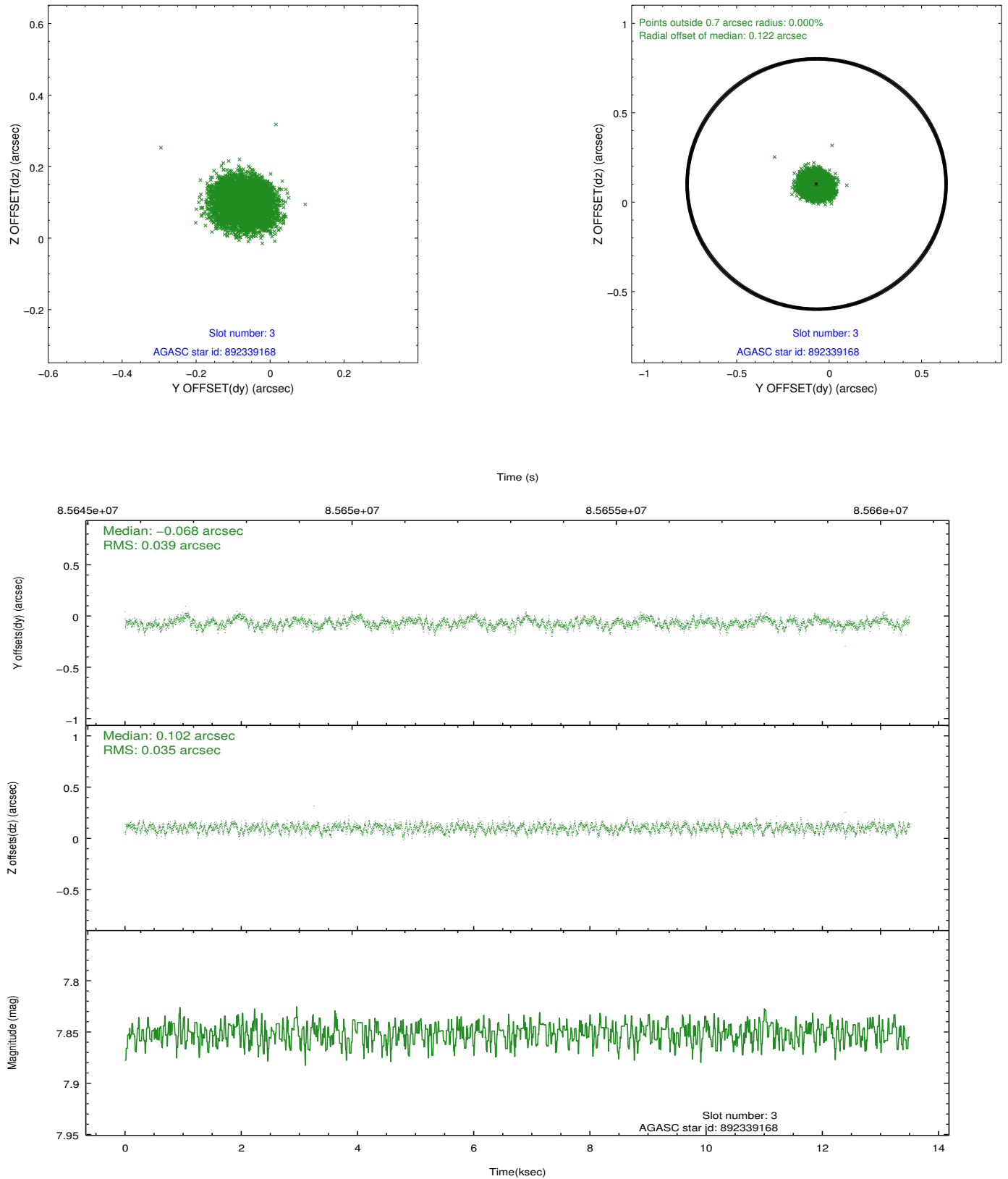


### Slot Statistics

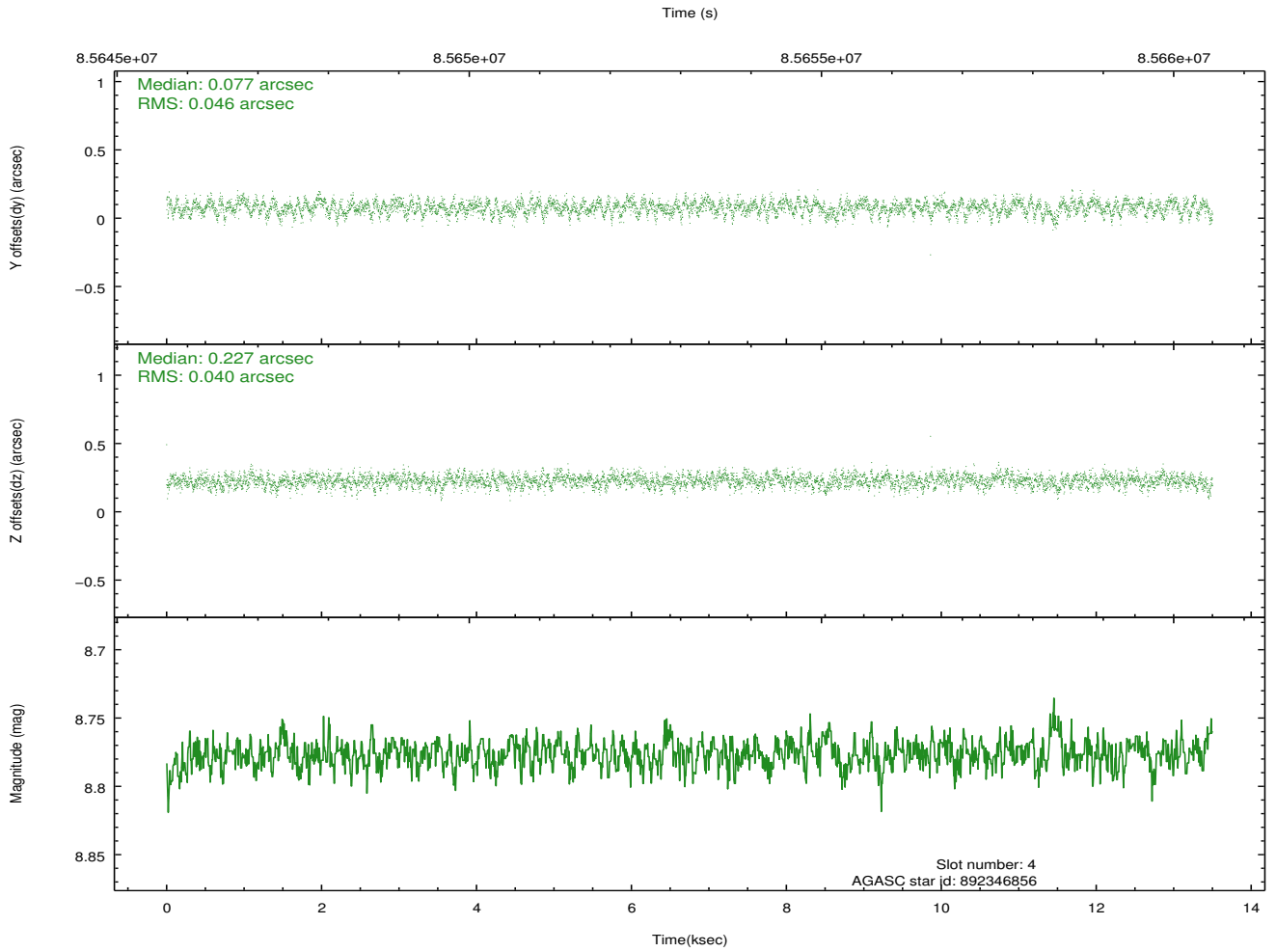
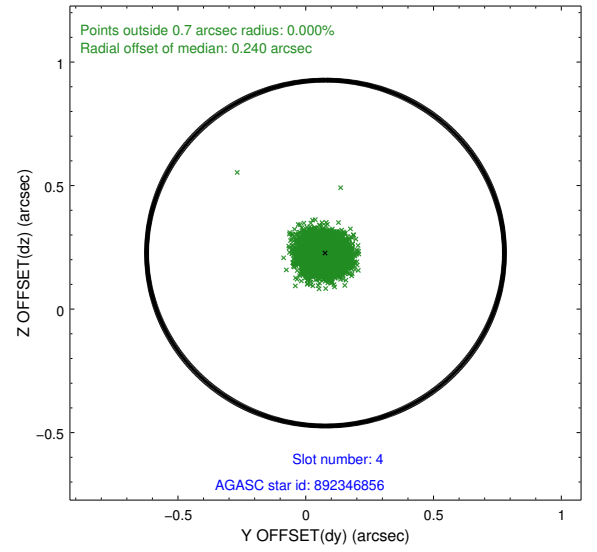
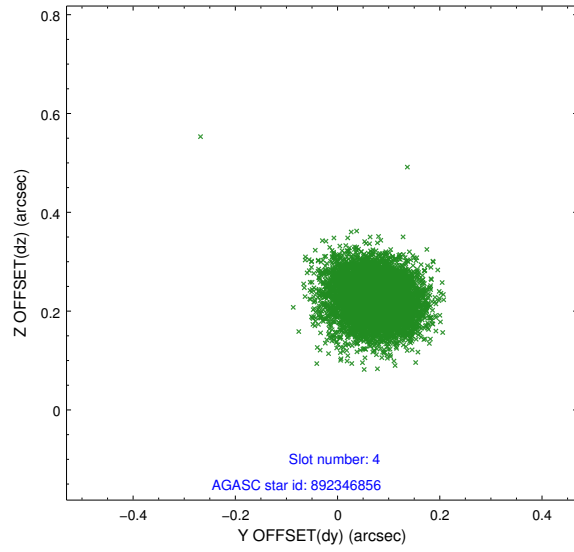
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	3293	-0.027	-0.063	0.008	0.013	0.000000	0.000000	-754.95	-1789.38
1	FID	ACIS-S-4	7.19	3291	-0.007	0.030	0.007	0.012	0.000000	0.000000	2158.22	118.77
2	FID	ACIS-S-5	7.23	3294	0.003	0.041	0.007	0.011	0.000000	0.000000	-1807.28	112.91
3	GUIDE	892339168	7.85	6585	-0.068	0.102	0.056	0.090	249.539917	-28.204510	-289.13	1831.07
4	GUIDE	892346856	8.78	6569	0.077	0.227	0.065	0.105	249.406645	-28.615766	1240.83	1658.90
5	GUIDE	891683192	7.90	6585	-0.059	-0.138	0.065	0.104	248.306807	-28.115350	56.38	-2080.56
6	GUIDE	892209072	8.85	6586	0.181	-0.097	0.061	0.099	249.010790	-28.359027	538.45	268.87
7	GUIDE	891696968	8.14	6586	-0.128	-0.093	0.050	0.079	248.659799	-27.735271	-1485.40	-1211.00

## 2.4 Star Slots

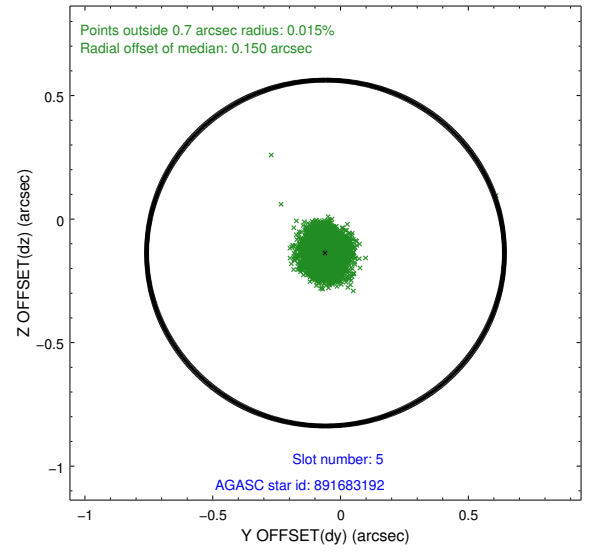
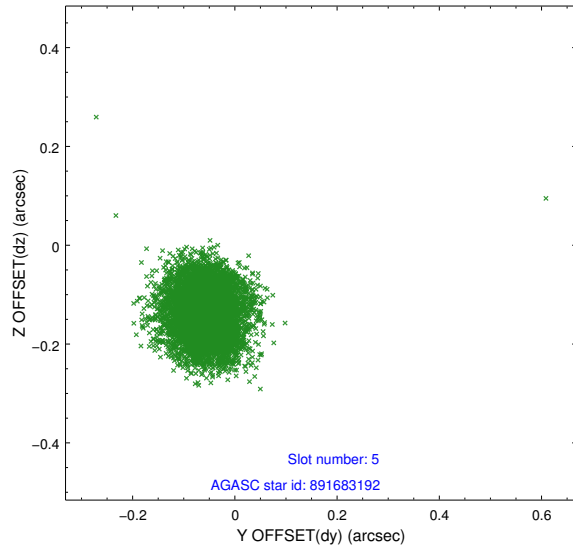
### 2.4.1 Slot 3



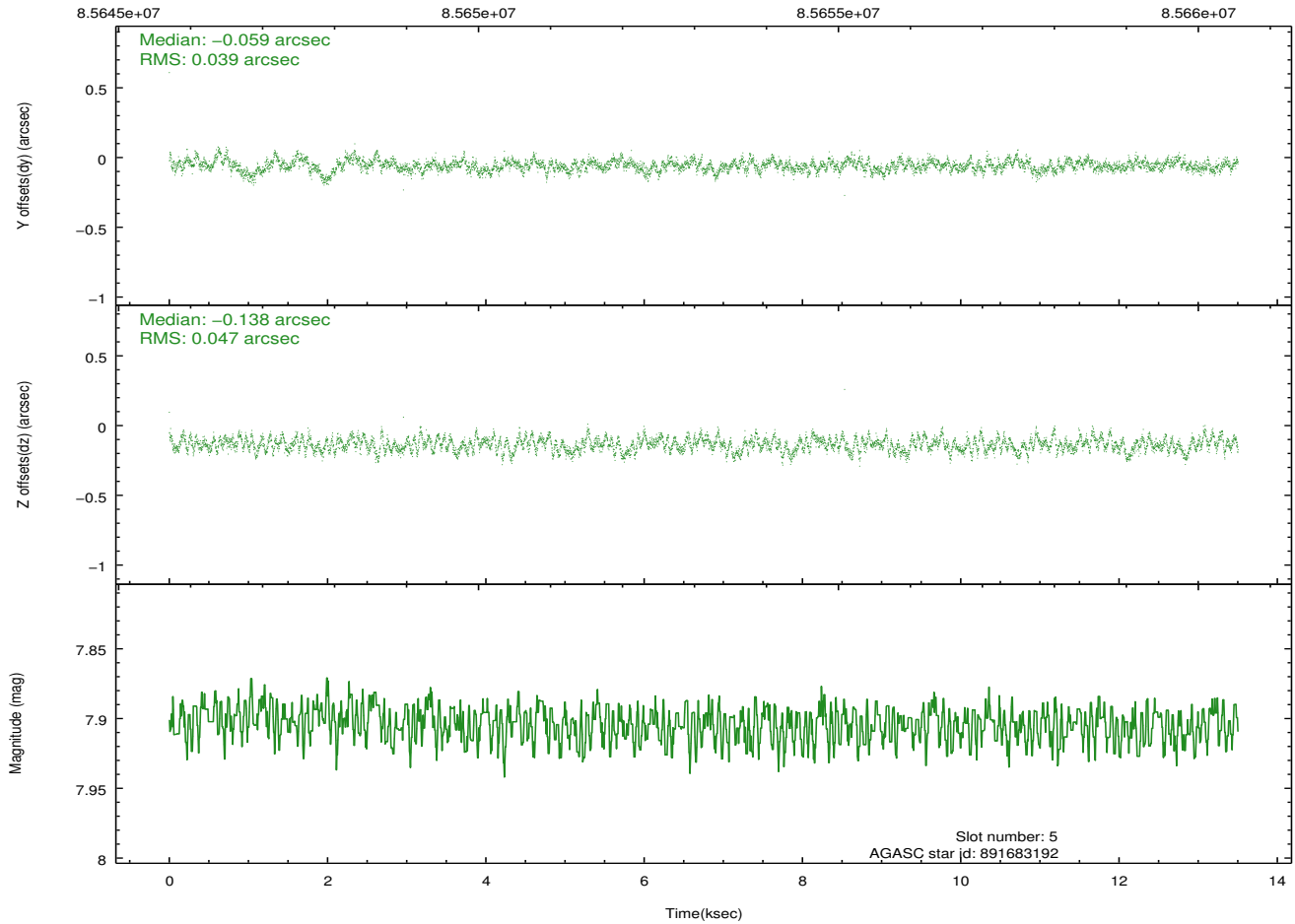
## 2.4.2 Slot 4



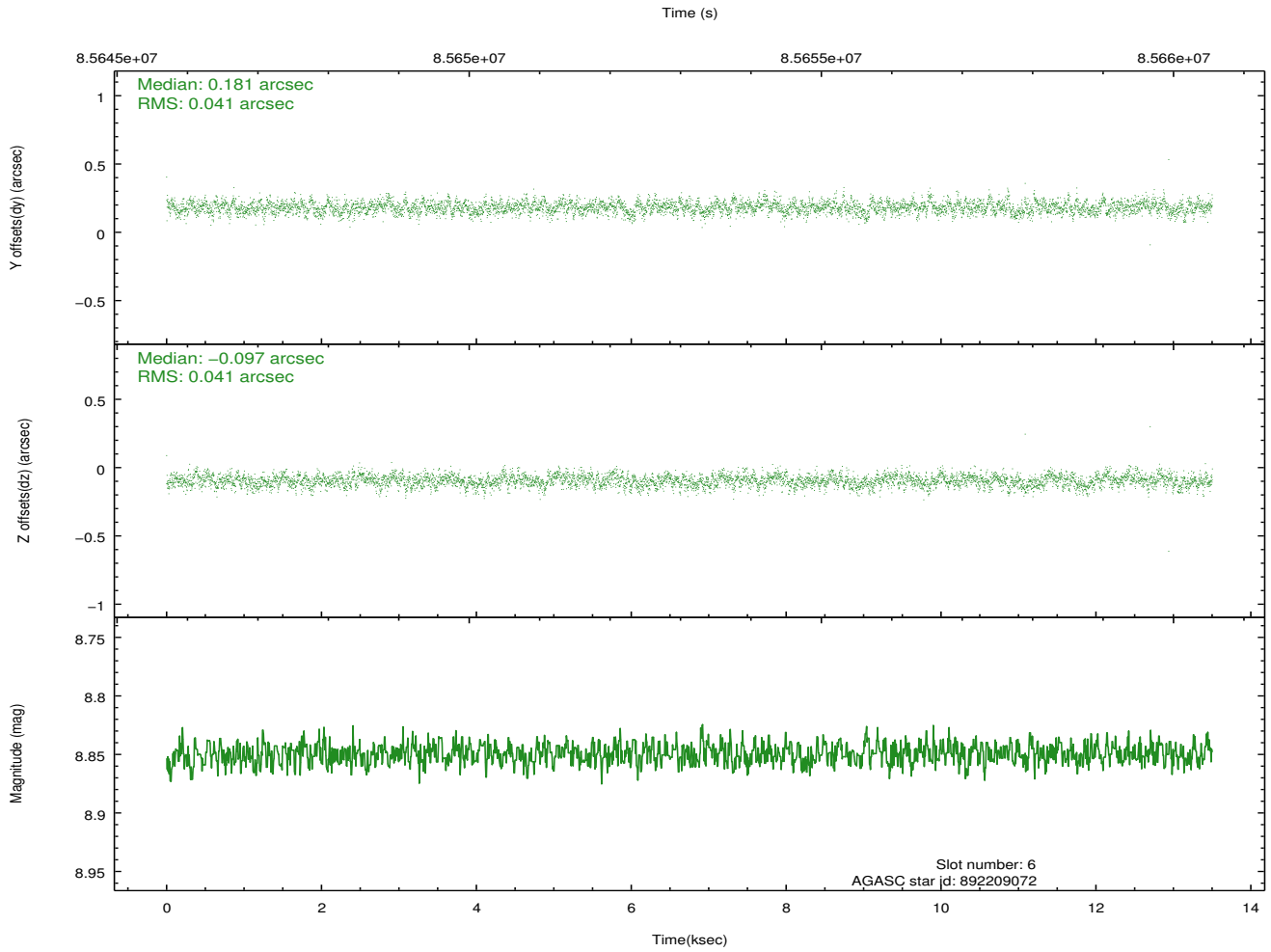
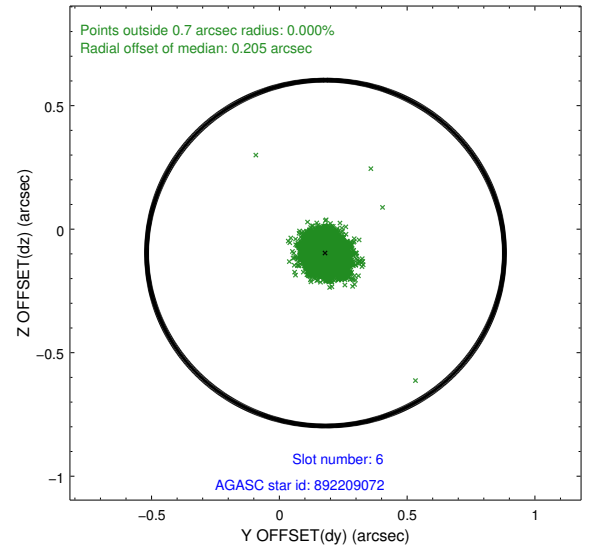
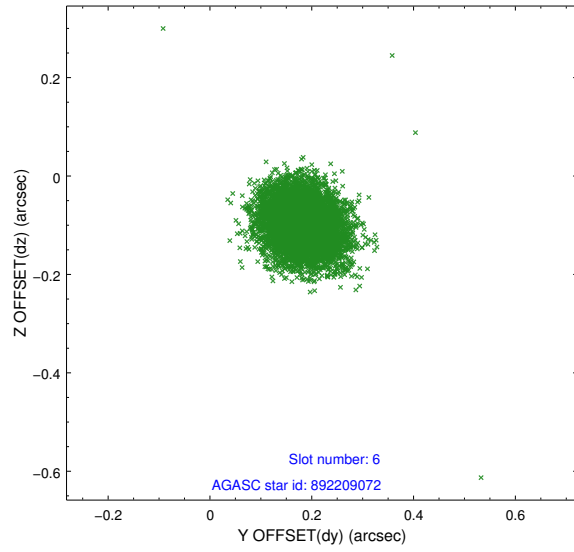
### 2.4.3 Slot 5



Time (s)

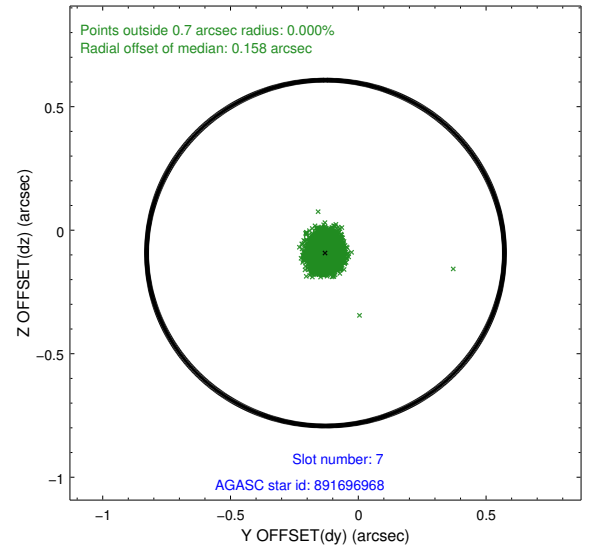
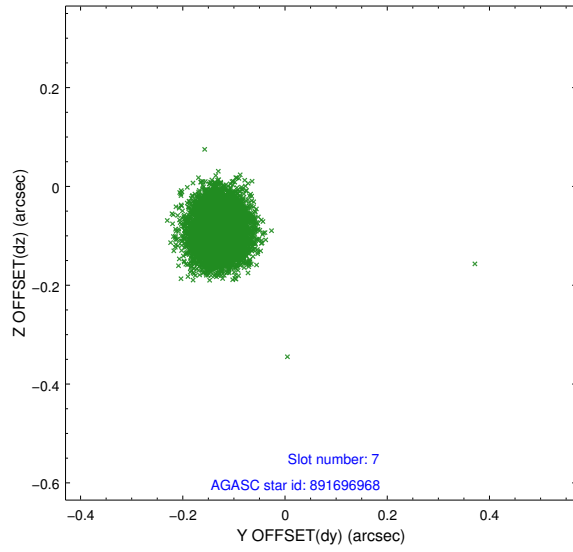


## 2.4.4 Slot 6

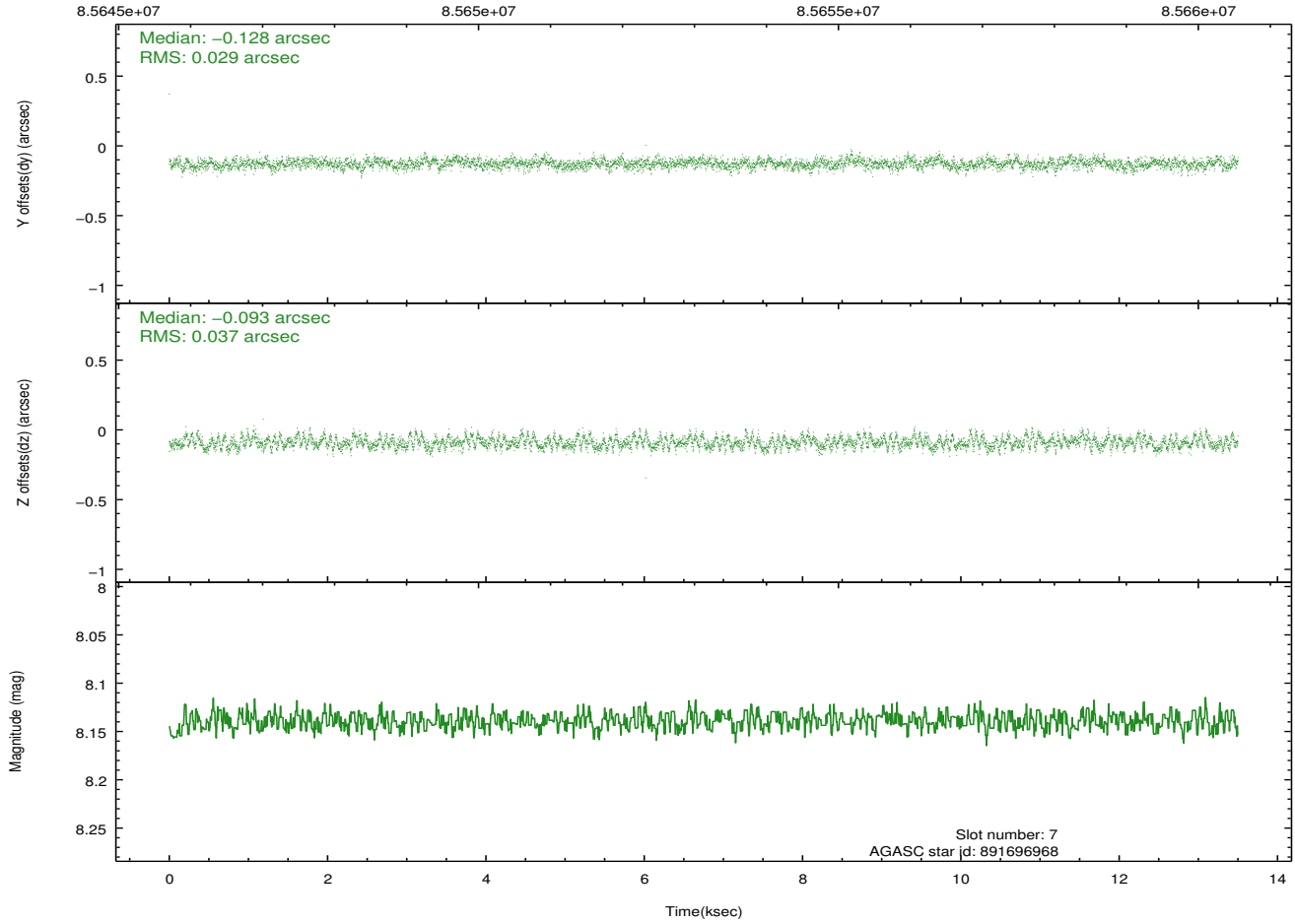




## 2.4.5 Slot 7

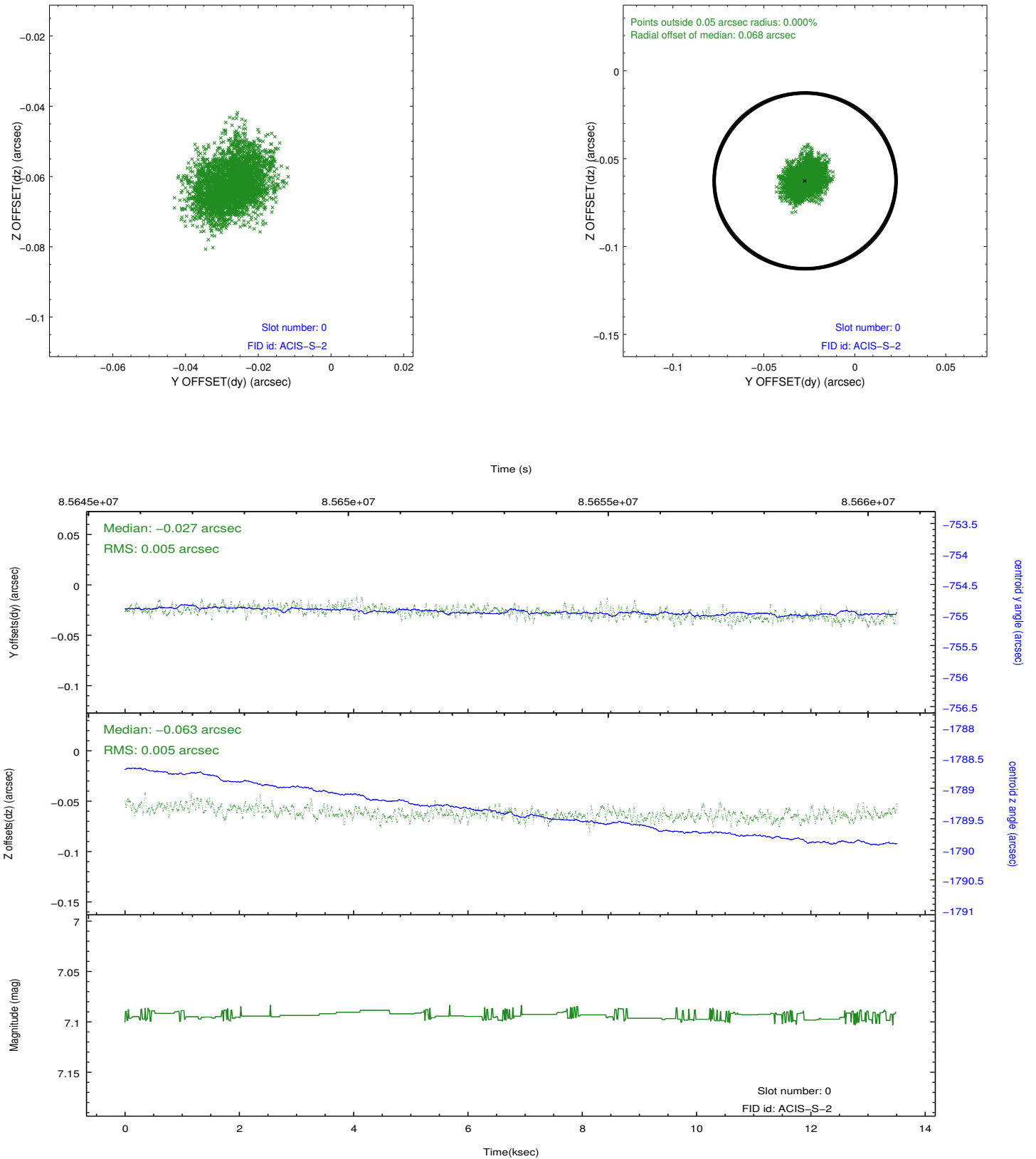


Time (s)

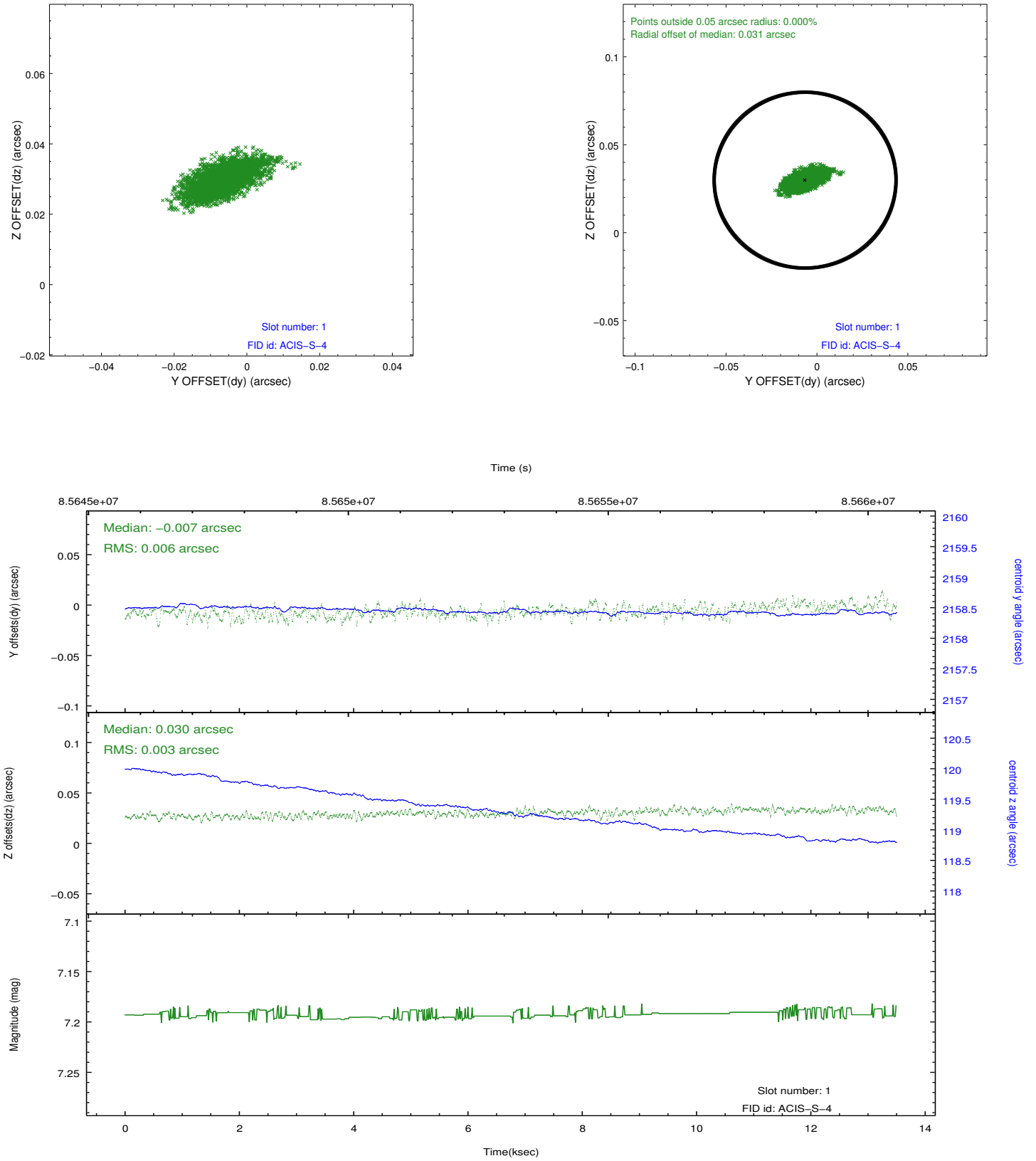


## 2.5 FID Slots

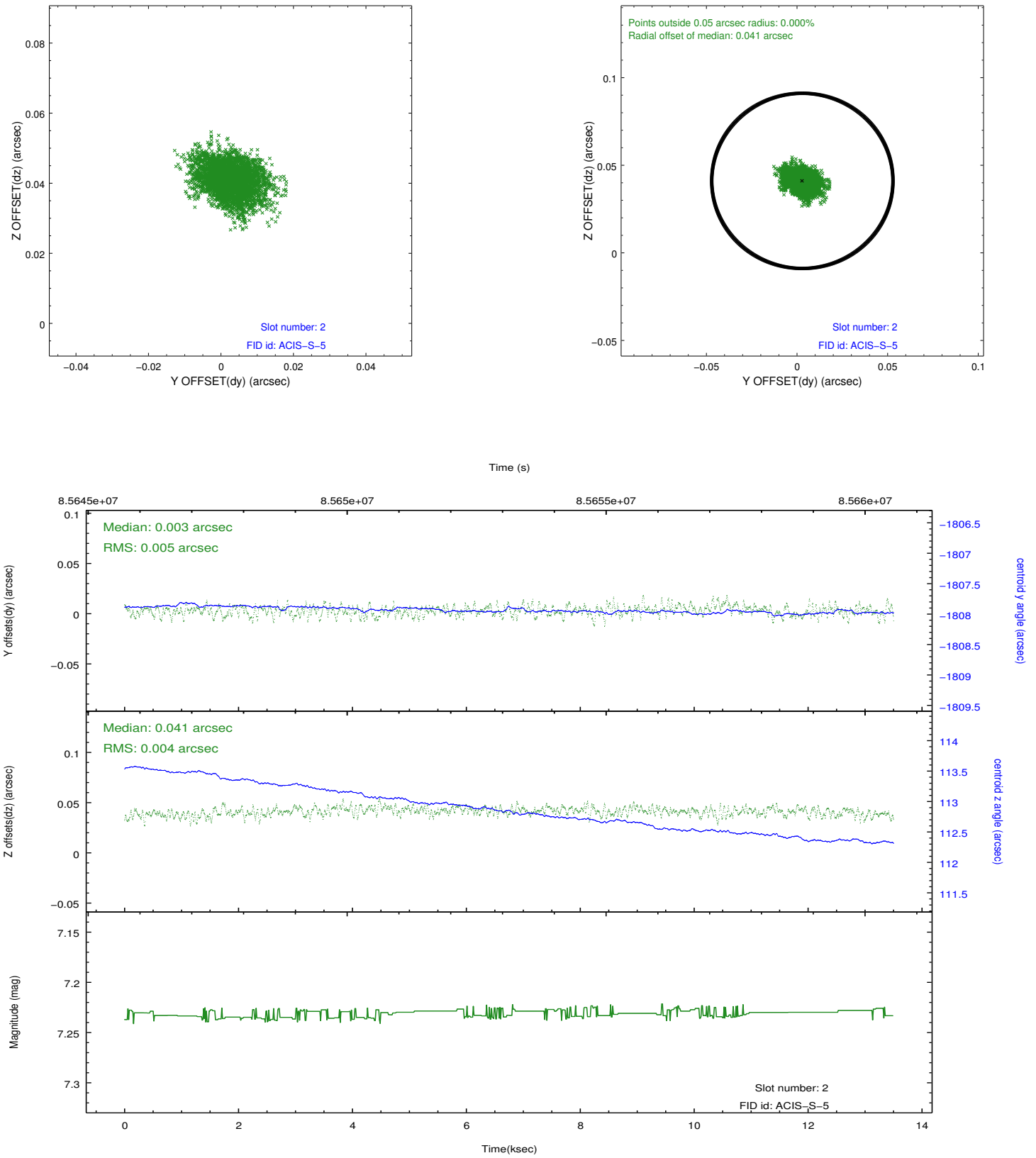
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

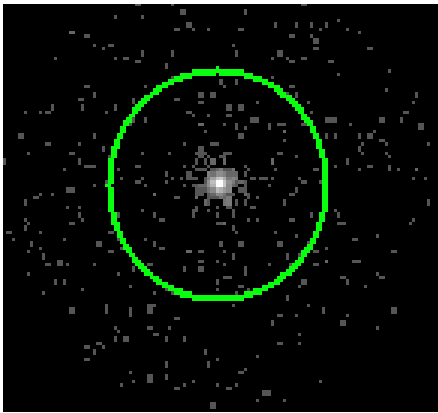


# 3 Gratings

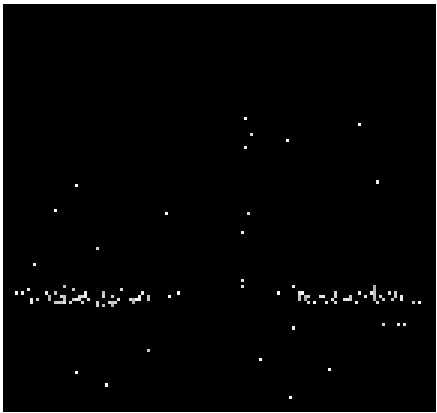
## 3.1 HEG Arm



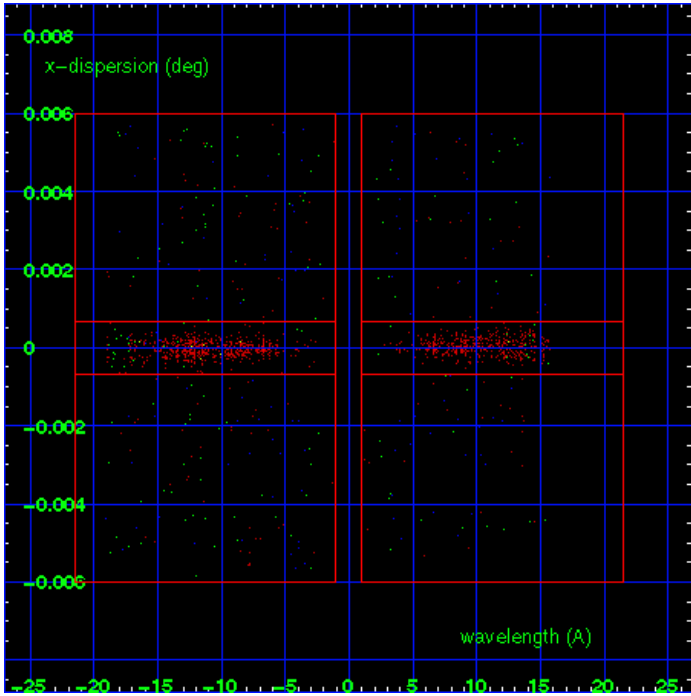
HEG Order Sort 123



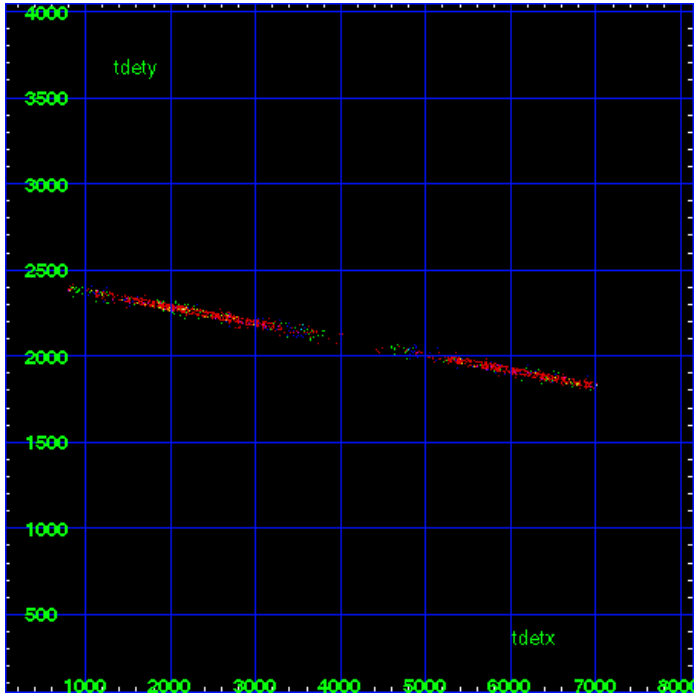
HEG Zero Order



HEG Order Sort ALL

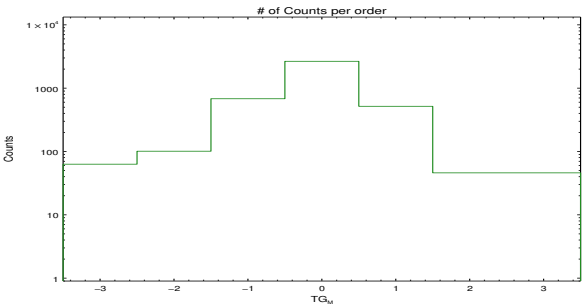


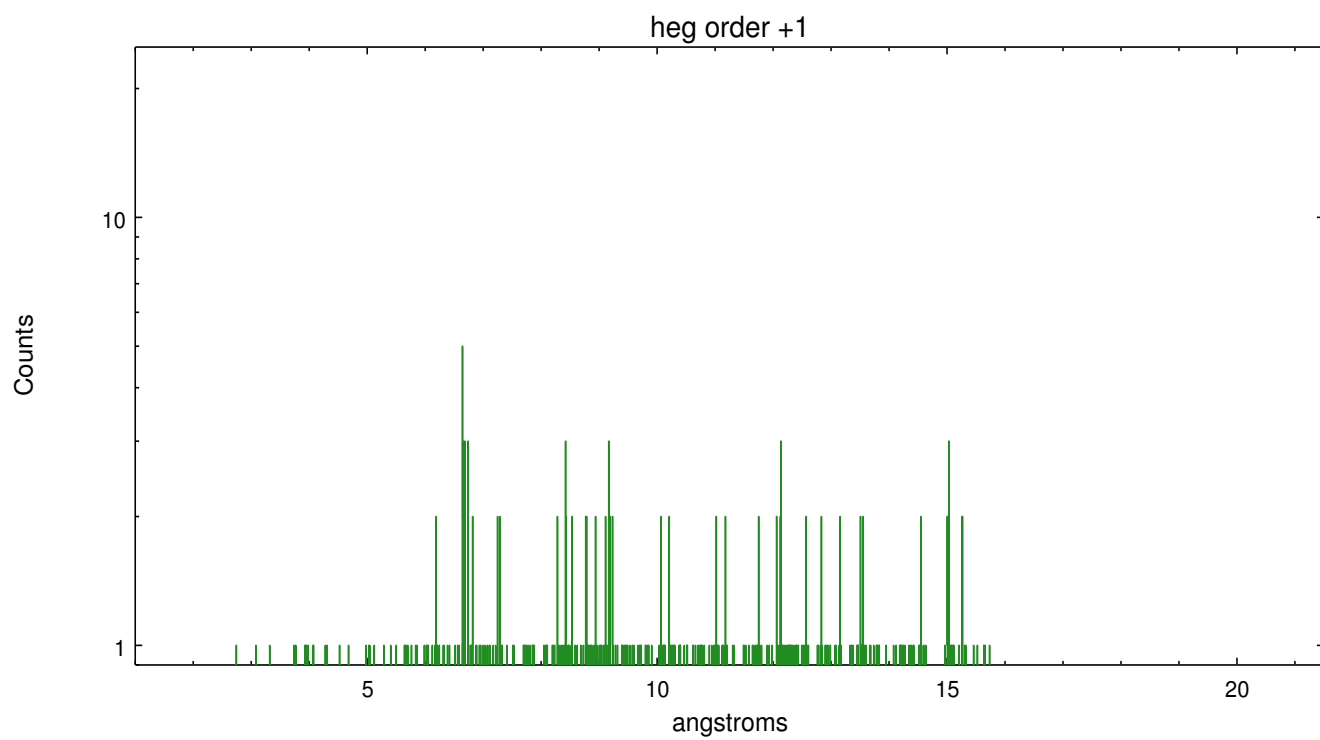
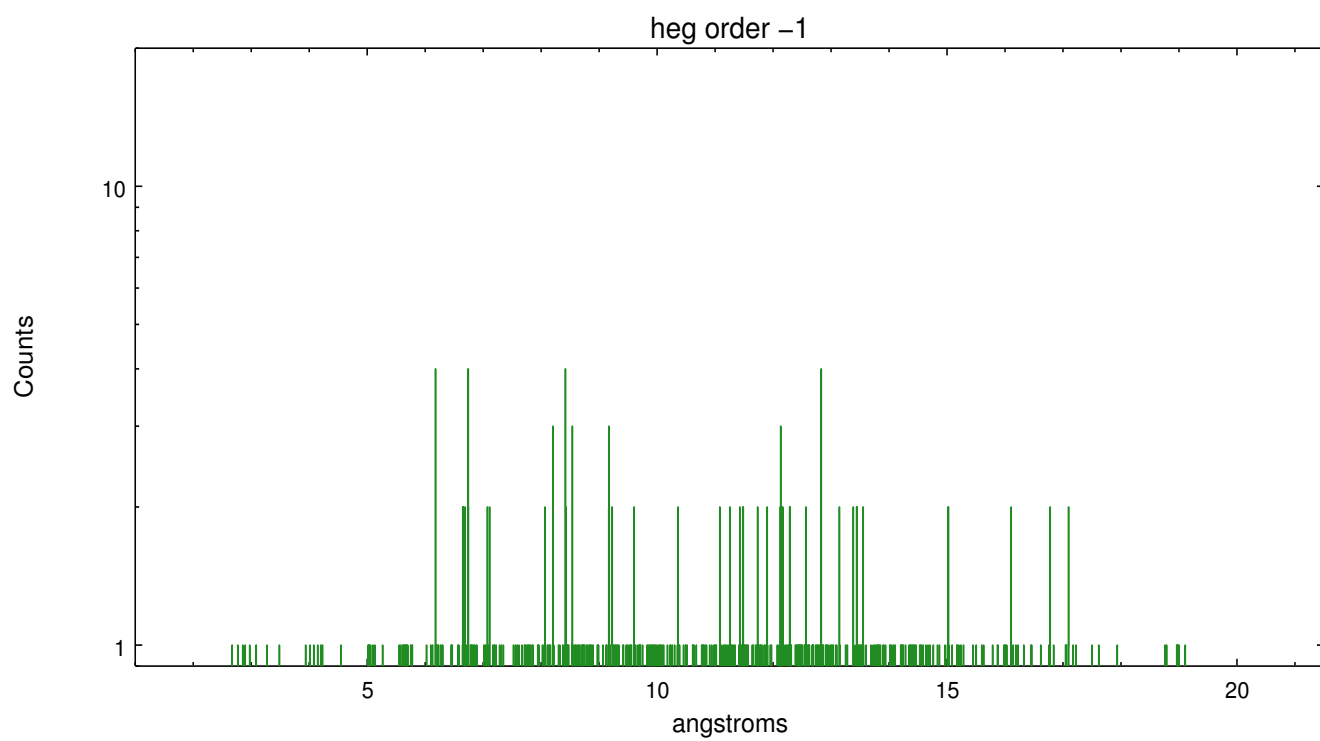
Spot Image HEG



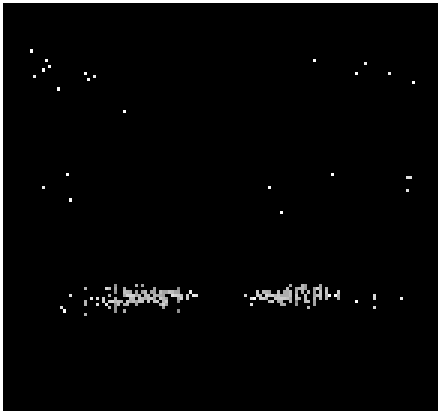
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	63	101	681	2655	517	46	46

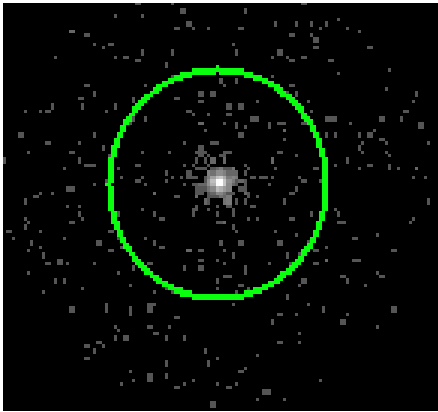




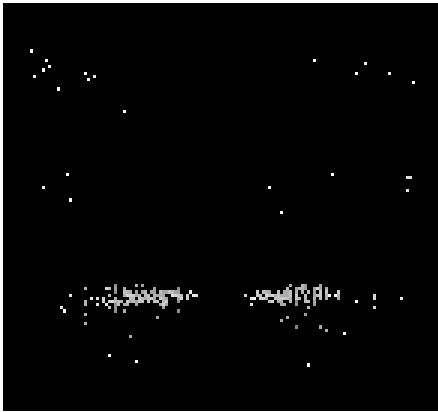
3.2 MEG Arm



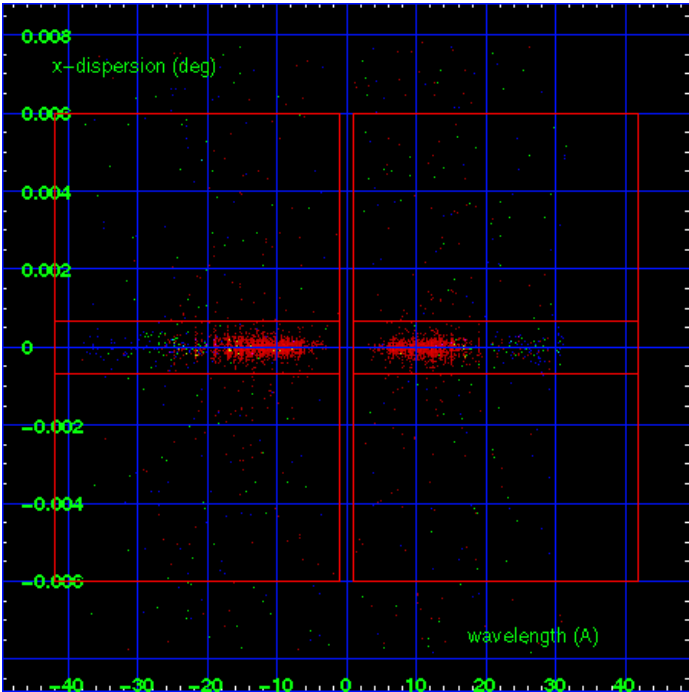
MEG Order Sort 123



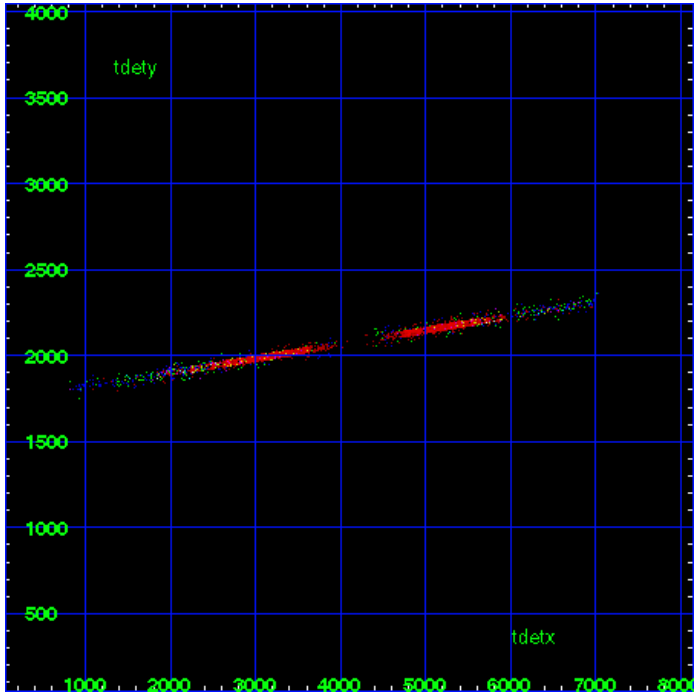
MEG Zero Order



MEG Order Sort ALL

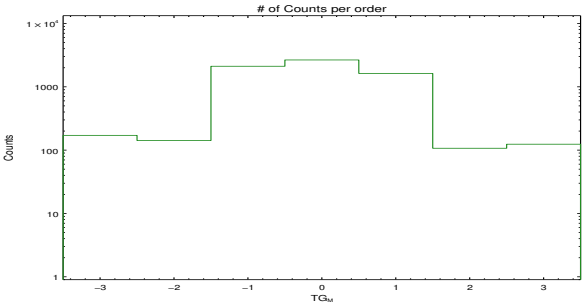


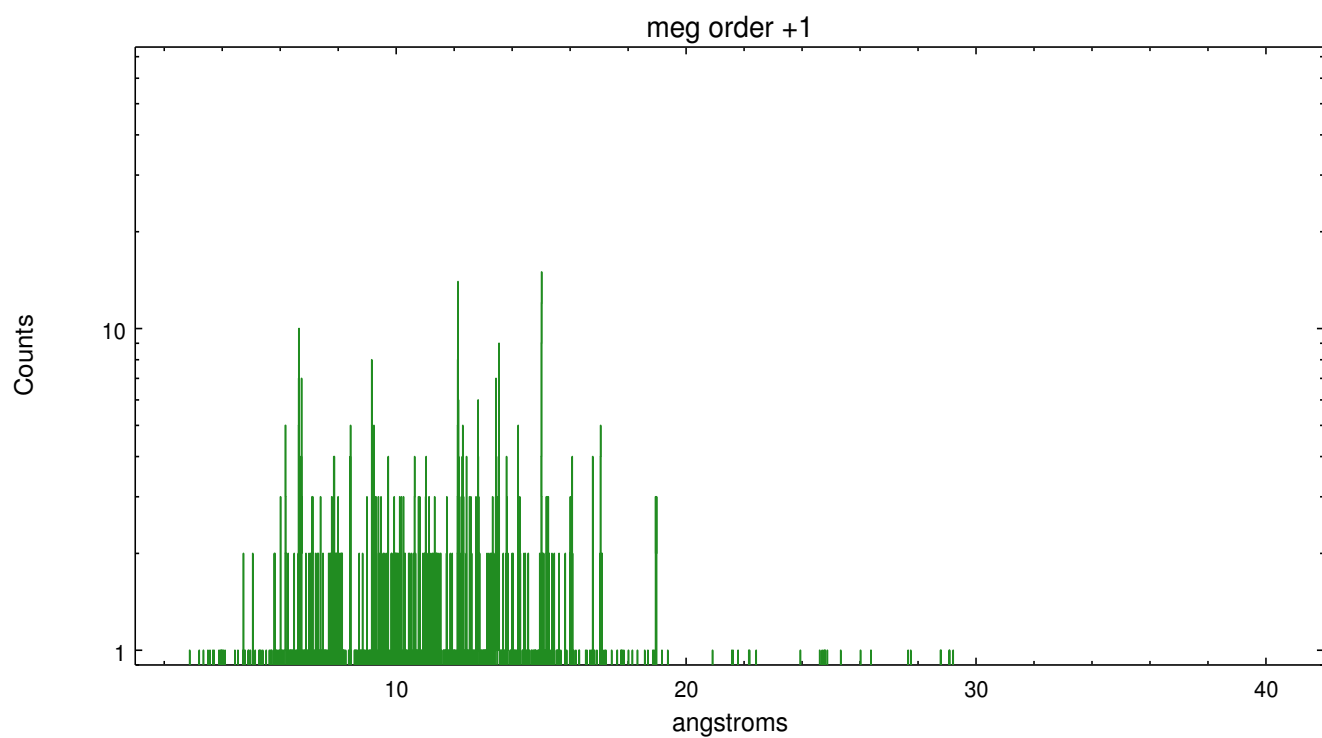
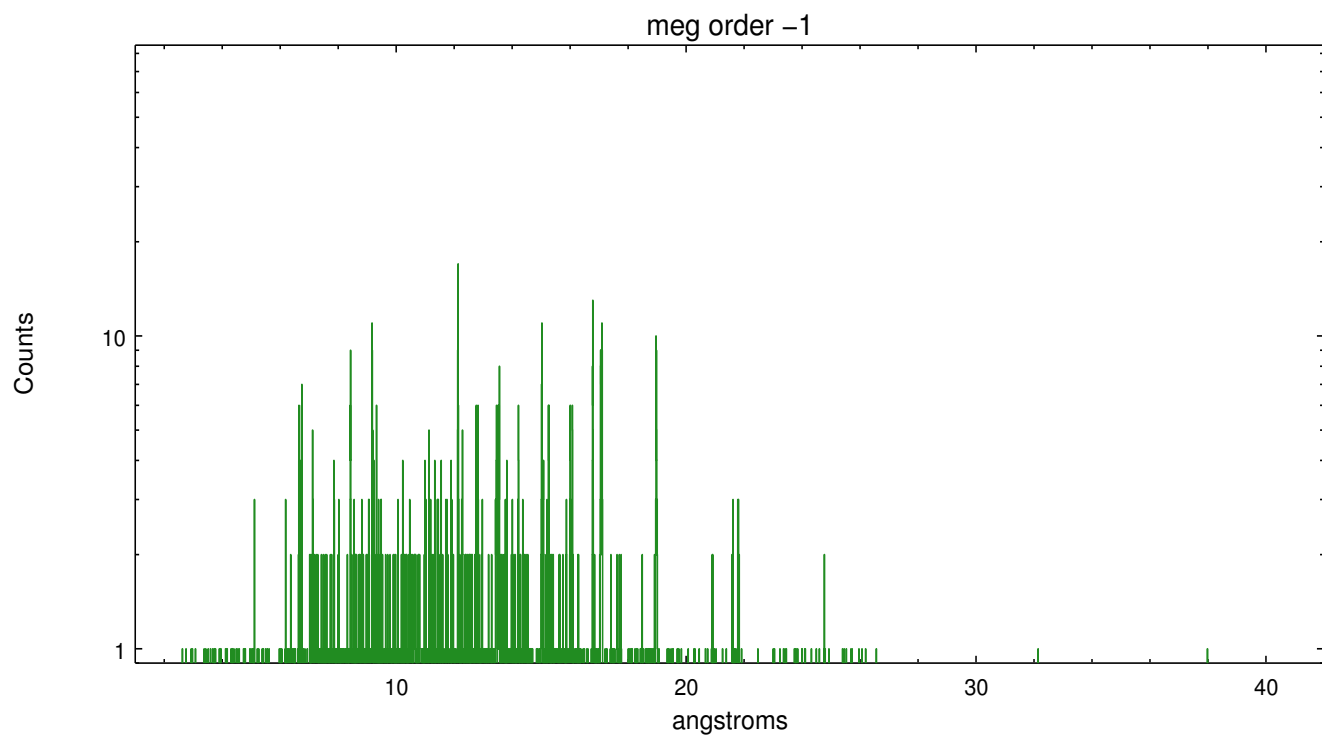
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	171	142	2110	2655	1628	107	124







## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.123

### A.2 Comments