

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5399 - L2 Version 002  
Chandra X-Ray Center

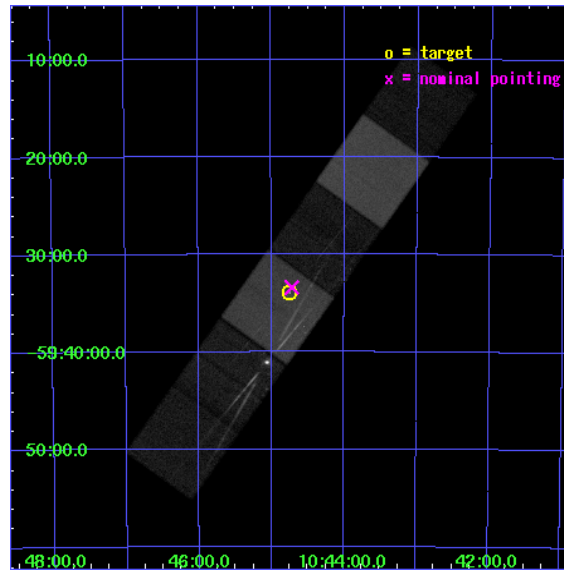
L2 Processing Date : Apr 2 2006

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# 1 Front

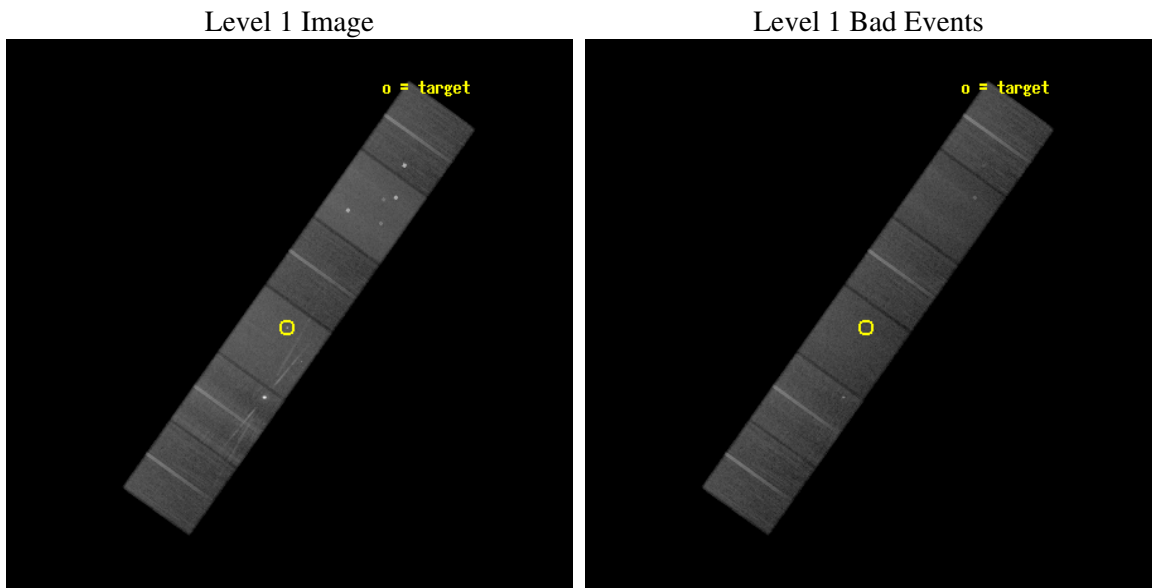
seq_num	200334
obs_id	5399
title	A Chandra HETGS Survey of O-Stars
observer	Dr. Wayne Waldron
object	HD93250
dtcycle	0
cycle	P
ra_targ	161.1875
dec_targ	-59.565194
ra_nom	161.17928034839
dec_nom	-59.556435289824
roll_nom	125.44924237833
revision	2
ontime	40179.199850321
livetime	39670.426628806
ontime4	40175.958889991
ontime5	40179.199850321
ontime6	40179.199850321
ontime7	40179.199850321
ontime8	40179.199850321
ontime9	40179.199850321
l2events	566543



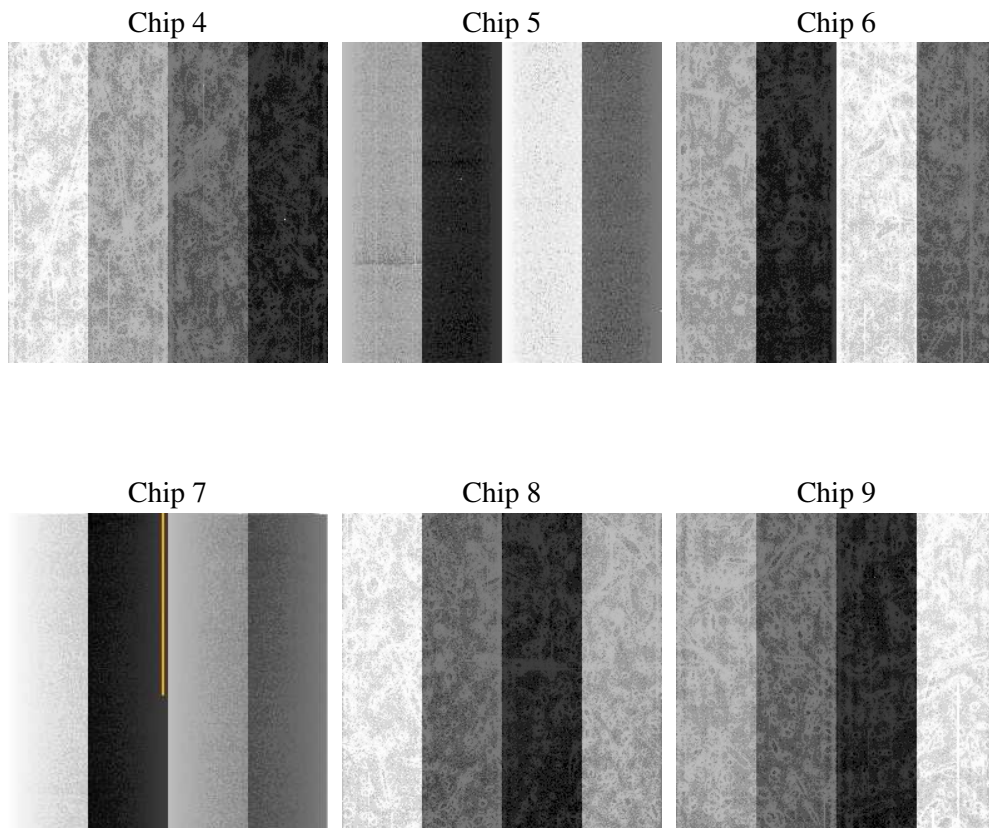
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-04-02T15:24:48
revision	2

sched_exp_time	40000.000000
ontime	40340.752779186
ontime4	40337.511818856
ontime5	40340.752779186
ontime6	40340.752779186
ontime7	40340.752779186
ontime8	40340.752779186
ontime9	40340.752779186
l1events	2394067

### 2.1.4 Events

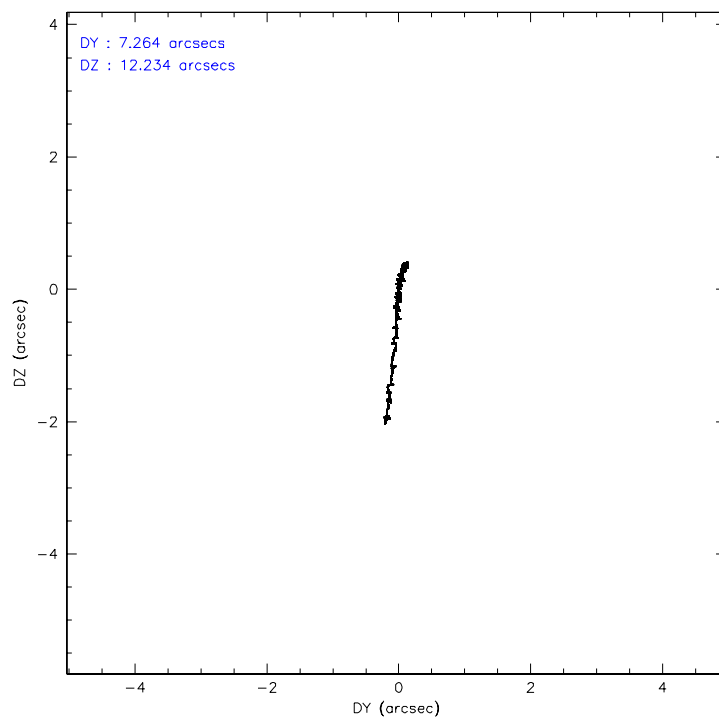
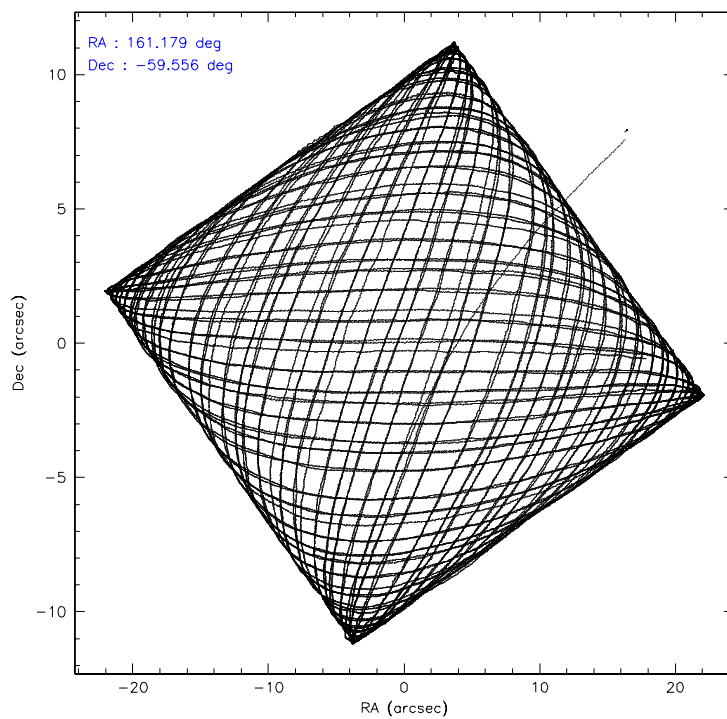
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	359014	489235	323078	452496	445946	324298
rejected events	308857	268900	279362	267712	317639	279168
rejected %	86%	54%	86%	59%	71%	86%

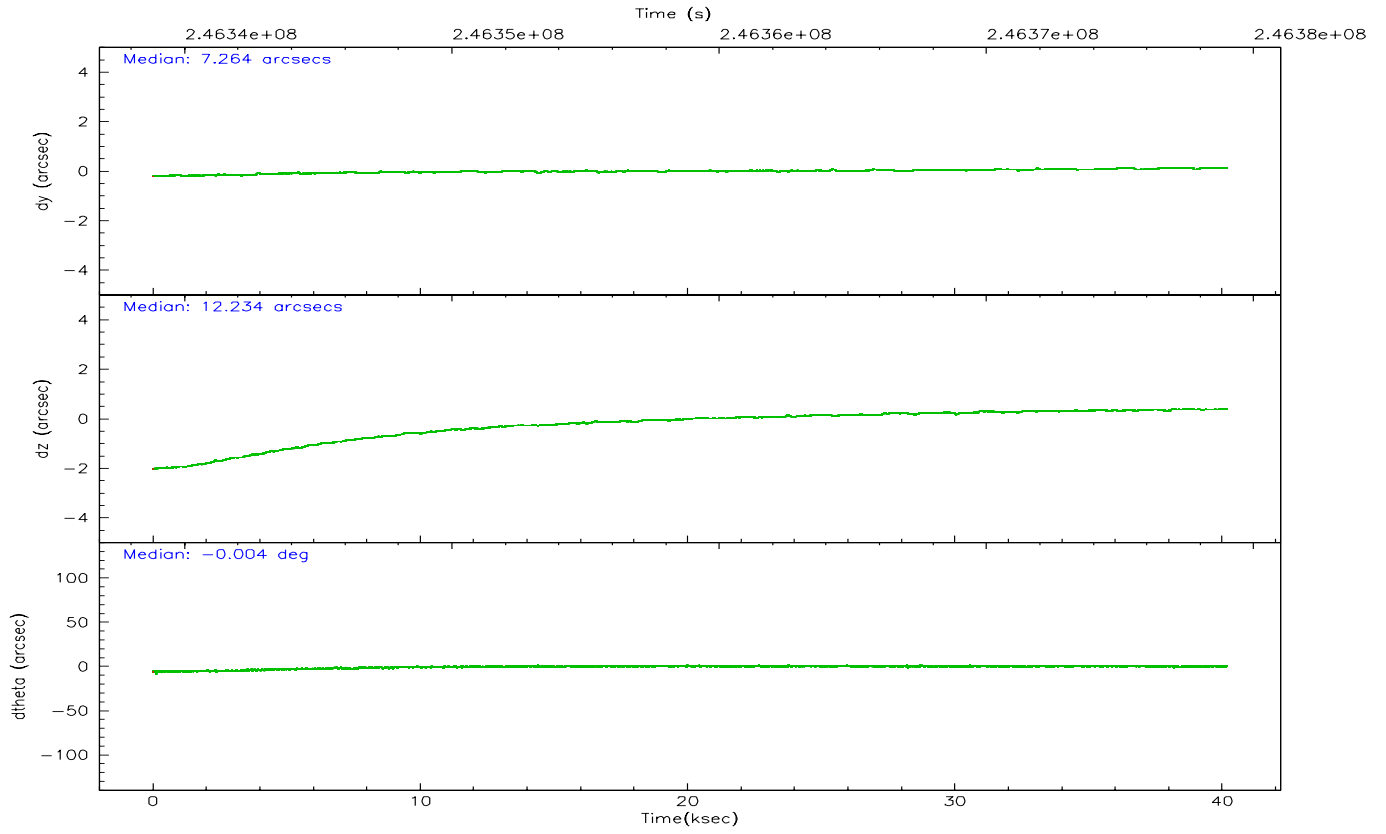
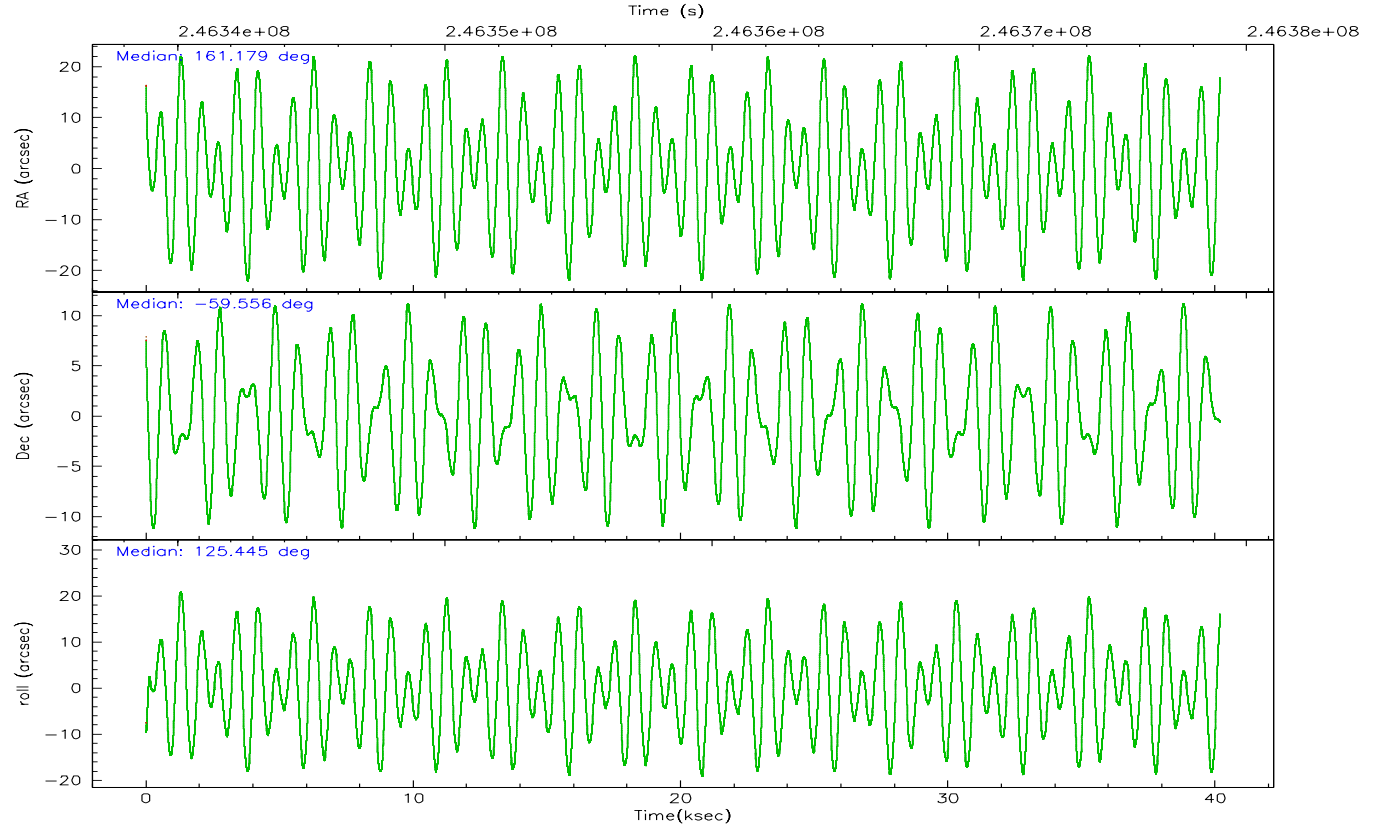
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	28134	24456	19651	13348	55775	21410
	7%	4%	6%	2%	12%	6%
grade 1 events	413	1158	180	280	512	243
	0%	0%	0%	0%	0%	0%
grade 2 events	8256	66676	8825	46844	25078	8277
	2%	13%	2%	10%	5%	2%
grade 3 events	4102	4632	3767	10329	11212	4070
	1%	0%	1%	2%	2%	1%
grade 4 events	3808	4465	3768	10267	10445	3869
	1%	0%	1%	2%	2%	1%
grade 5 events	14210	22641	14878	28252	19828	15608
	3%	4%	4%	6%	4%	4%
grade 6 events	6048	121024	7888	104751	26211	7705
	1%	24%	2%	23%	5%	2%
grade 7 events	294043	244183	264121	238425	296885	263116
	81%	49%	81%	52%	66%	81%

## 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	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	NONE	NONE
Pointing RA	161.228454	161.179280348391	Alternating exposures requested	N	N
Pointing Dec	-59.567385	-59.55643528982355	Primary exposure time	0.000000	3.2
Pointing Roll	125.335021	125.4492423783301			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	246339006.184000	246337799.99556			
Observation start date	2005-10-22T03:29:02	2005-10-22T03:09:59			
Observation end time	246379006.184000	246380718.28503			
Observation end date	2005-10-22T14:35:42	2005-10-22T15:05:18			
Read mode	TIMED	TIMED			

## 2.3 Aspect





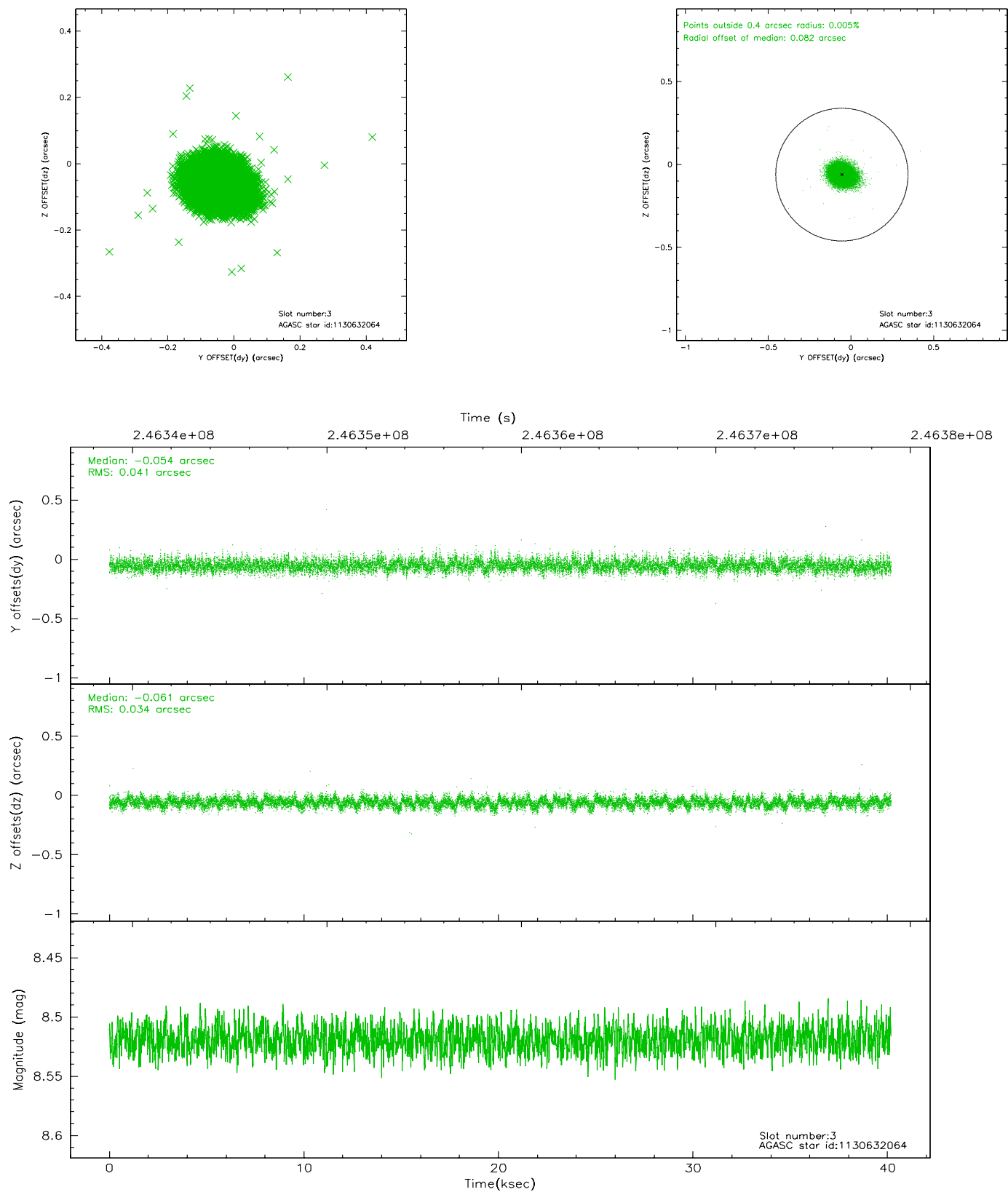
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	9801	0.056	-0.061	0.018	0.042	0.000000	0.000000	936.03	-1728.98
1	FID	ACIS-S-5	7.23	9800	-0.045	0.049	0.011	0.036	0.000000	0.000000	-1813.01	168.72
2	FID	ACIS-S-6	7.35	9800	-0.032	0.027	0.026	0.041	0.000000	0.000000	401.55	812.64
3	GUIDE	1130632064	8.52	19597	-0.054	-0.061	0.056	0.093	160.452382	-59.130948	2104.05	265.75
4	GUIDE	1130632200	7.55	19597	0.128	0.067	0.051	0.085	161.433843	-59.407820	250.95	-638.66
5	GUIDE	1130642000	7.94	19593	-0.039	0.063	0.060	0.095	162.836255	-59.743891	-2233.51	-1991.13
6	GUIDE	1130643264	6.65	19600	-0.035	0.020	0.059	0.096	160.322990	-59.676912	620.87	1577.14
7	GUIDE	1174012960	7.16	19594	-0.001	-0.087	0.085	0.126	160.855674	-60.332270	-1863.73	2135.55

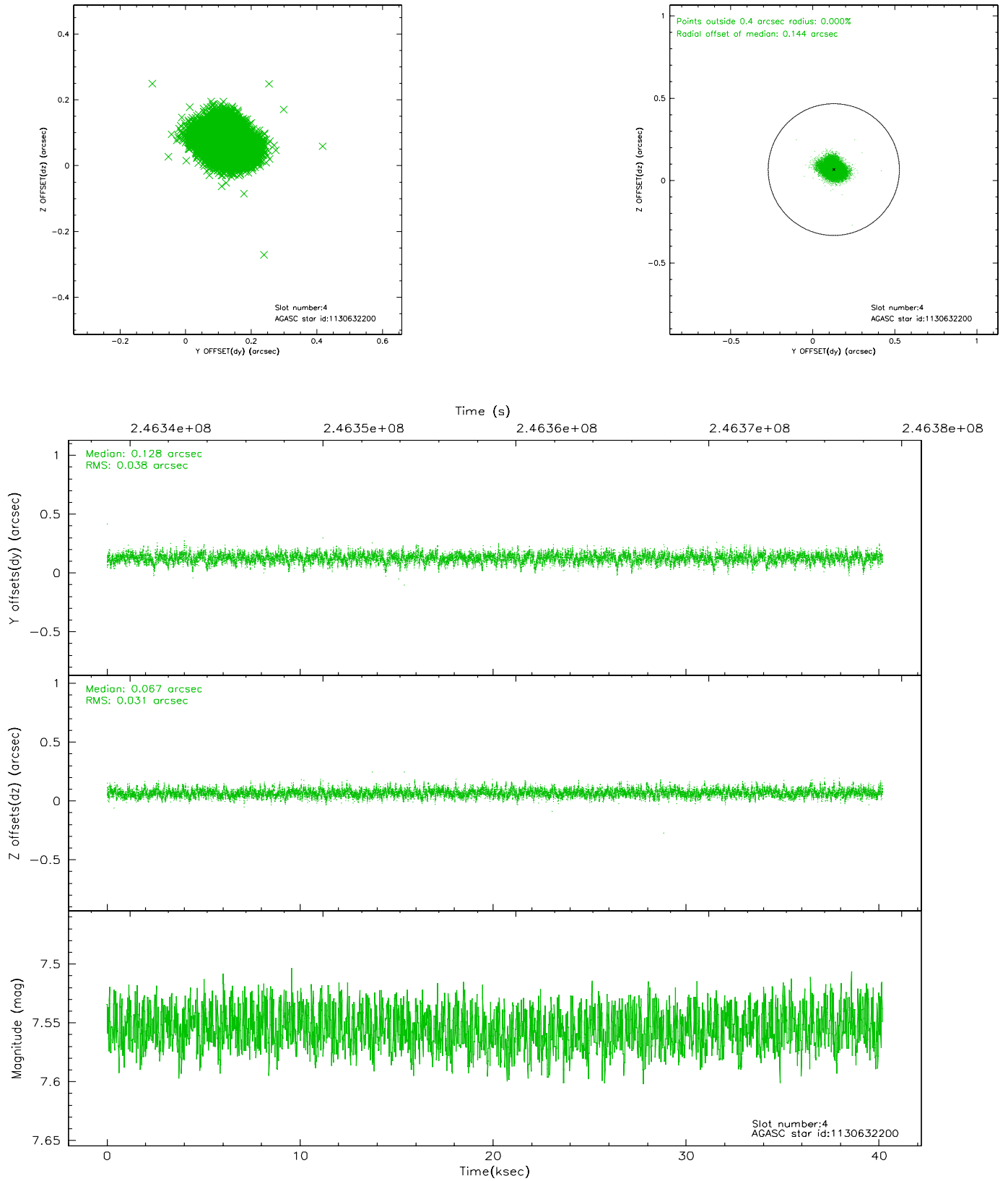


## 2.4 Star Slots

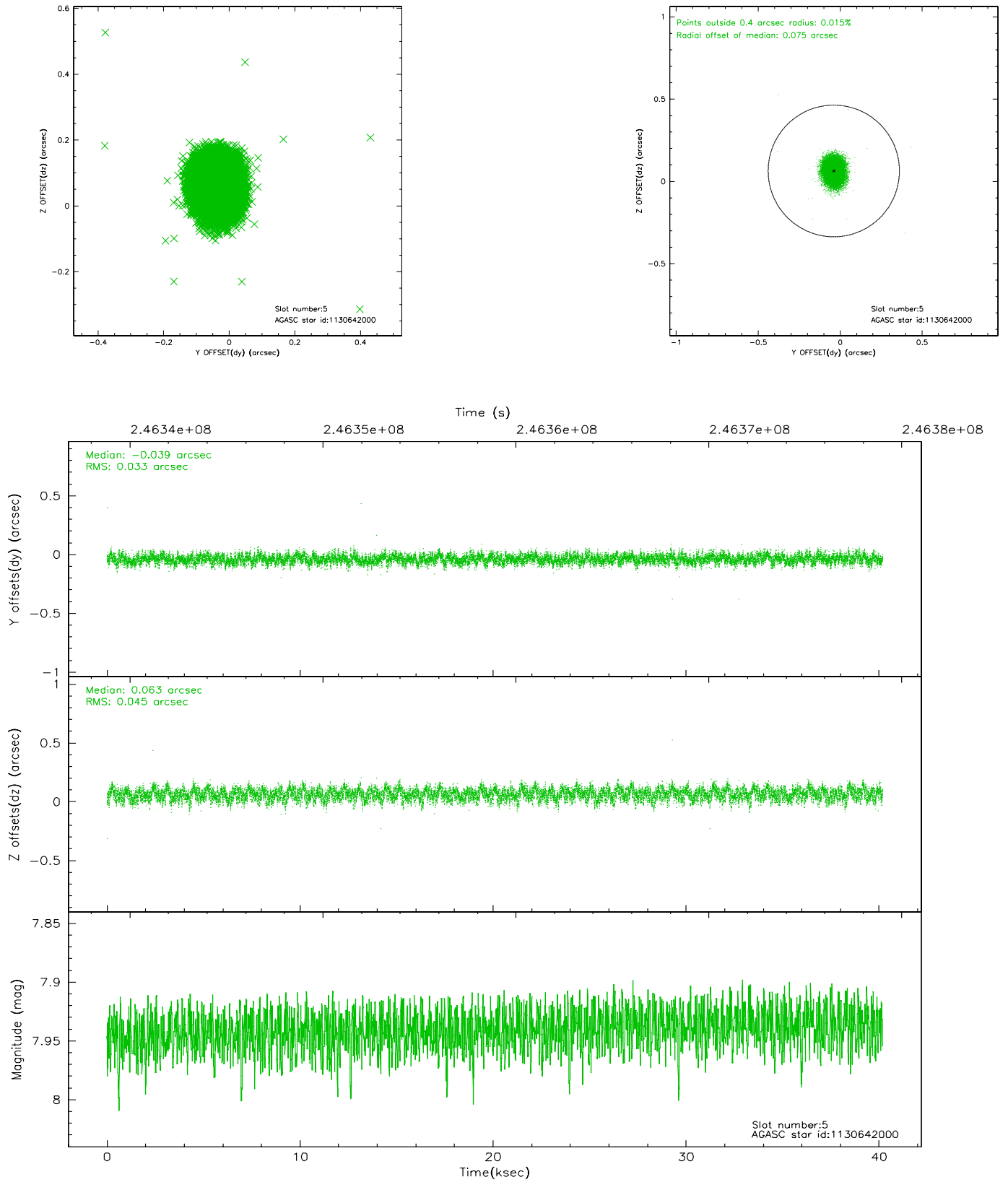
### 2.4.1 Slot 3



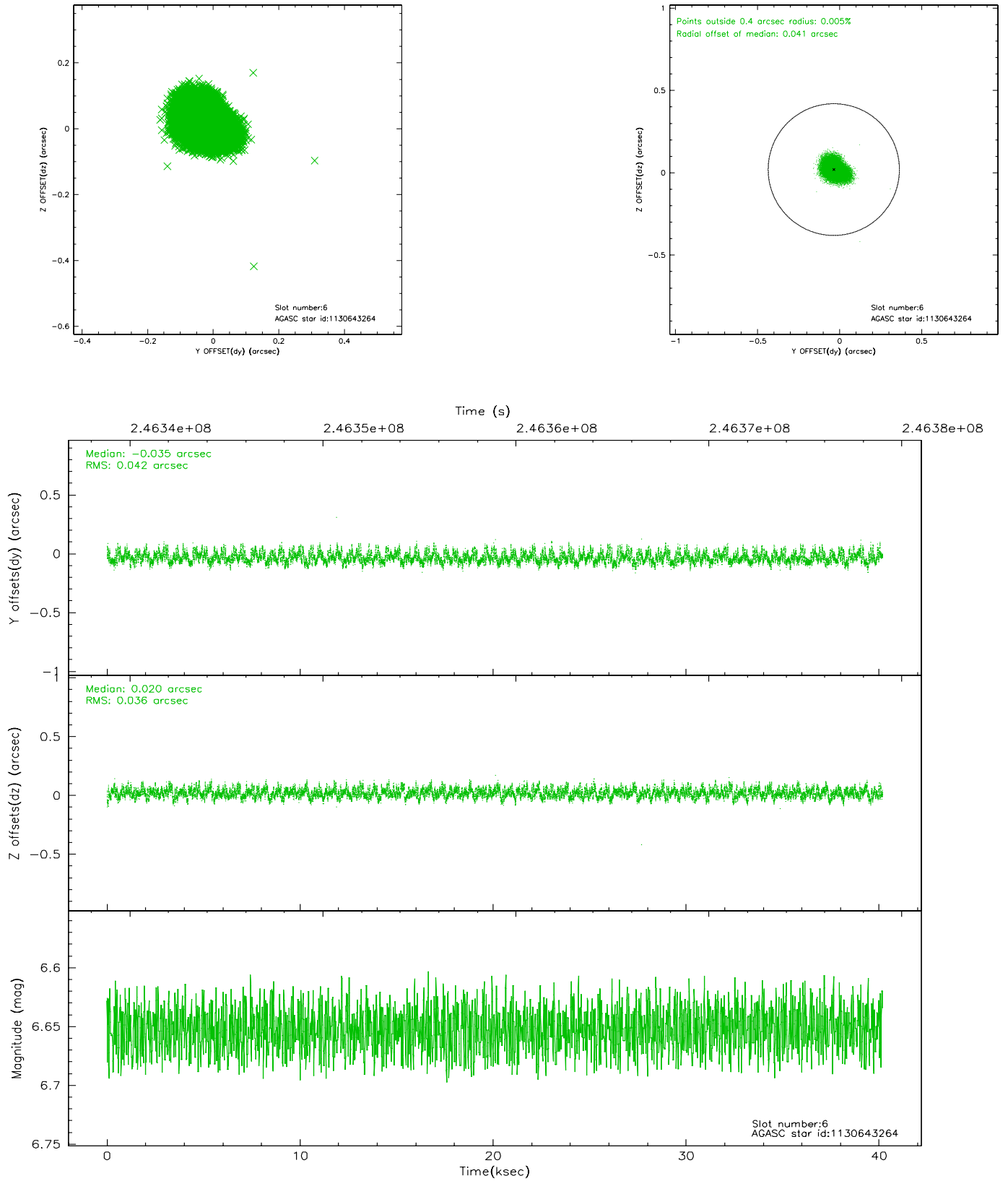
## 2.4.2 Slot 4



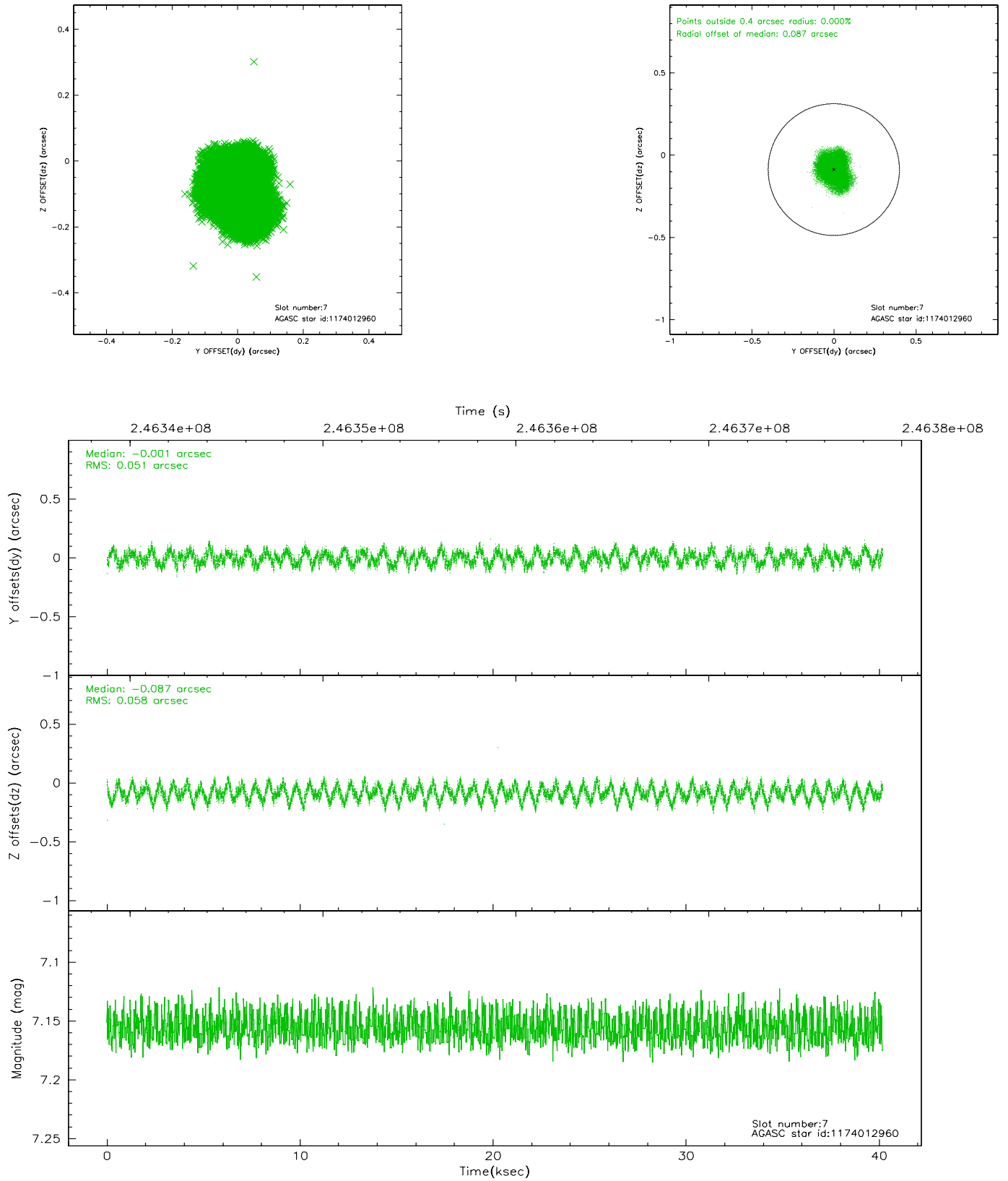
### 2.4.3 Slot 5



## 2.4.4 Slot 6

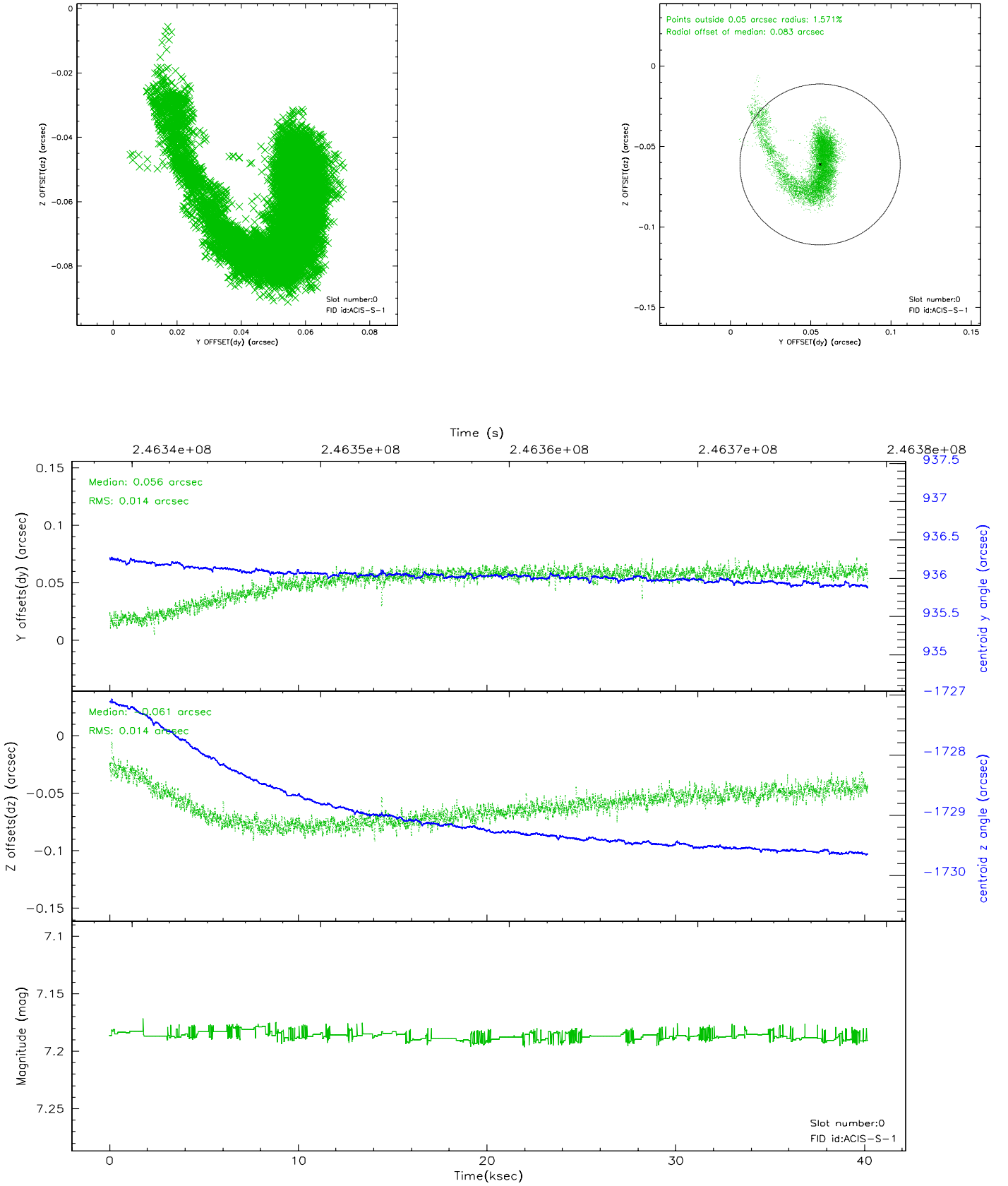


## 2.4.5 Slot 7

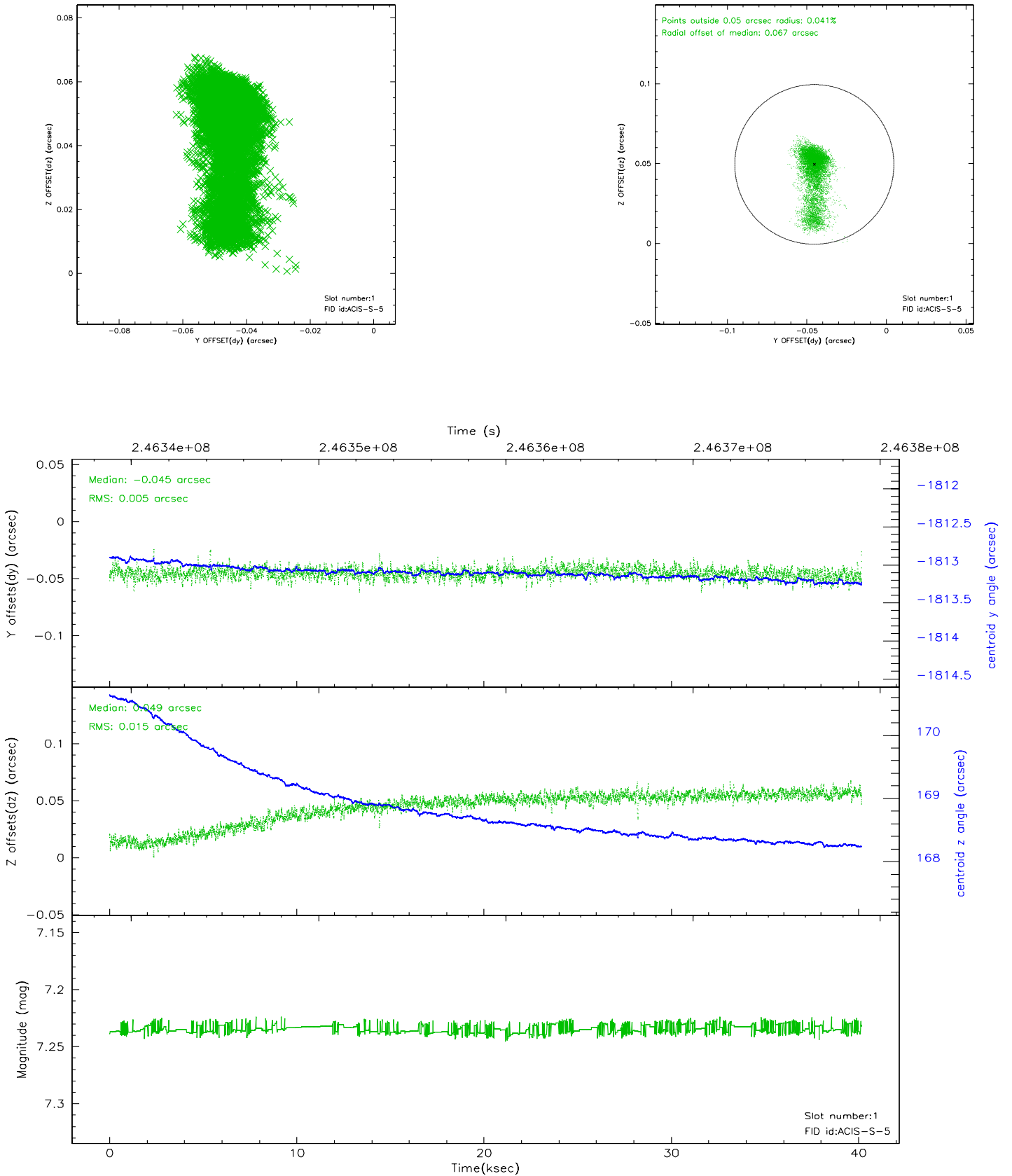


## 2.5 FID Slots

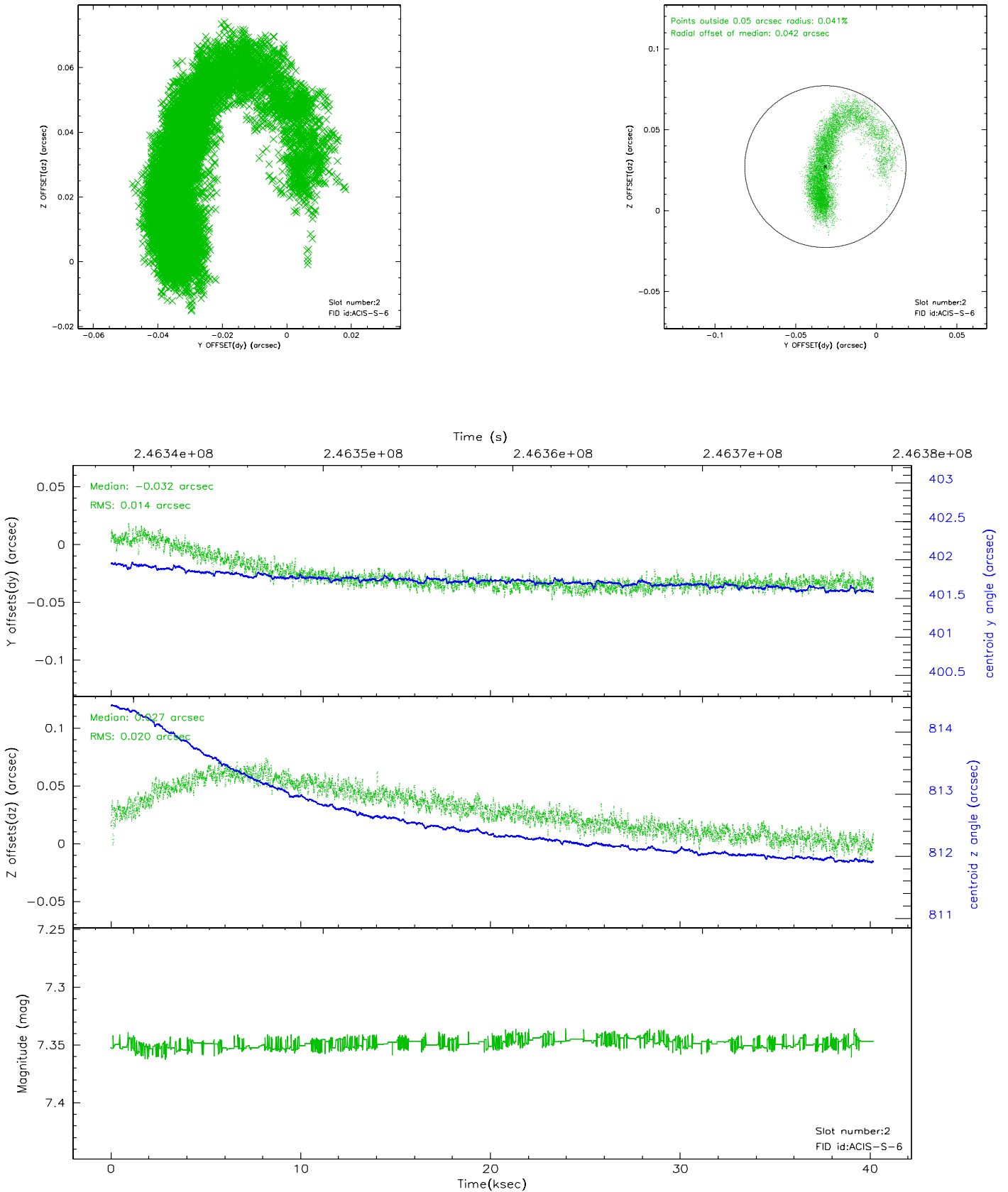
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



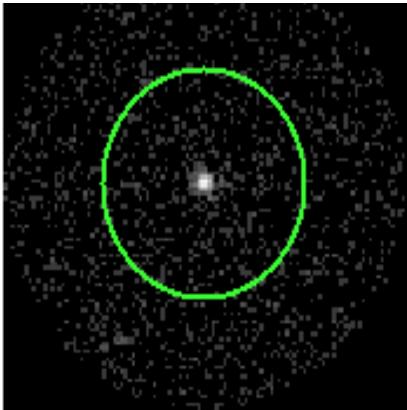


# 3 Gratings

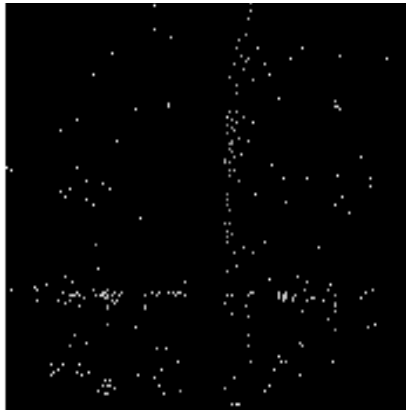
## 3.1 HEG Arm



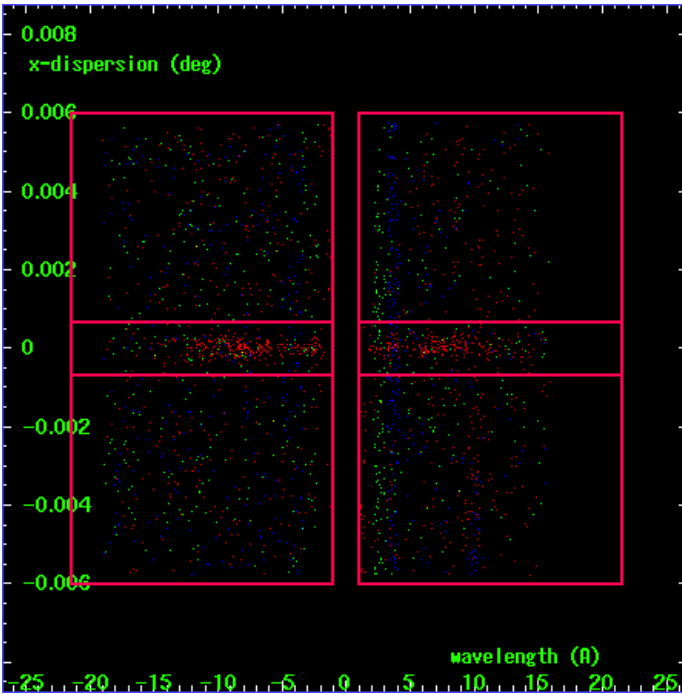
HEG Order Sort 123



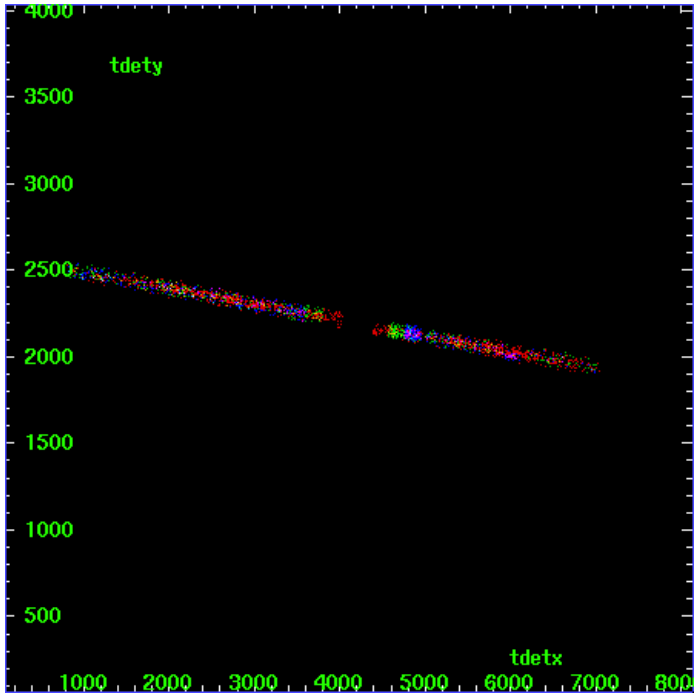
HEG Zero Order



HEG Order Sort ALL

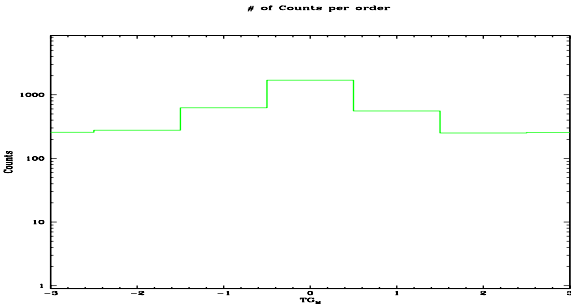


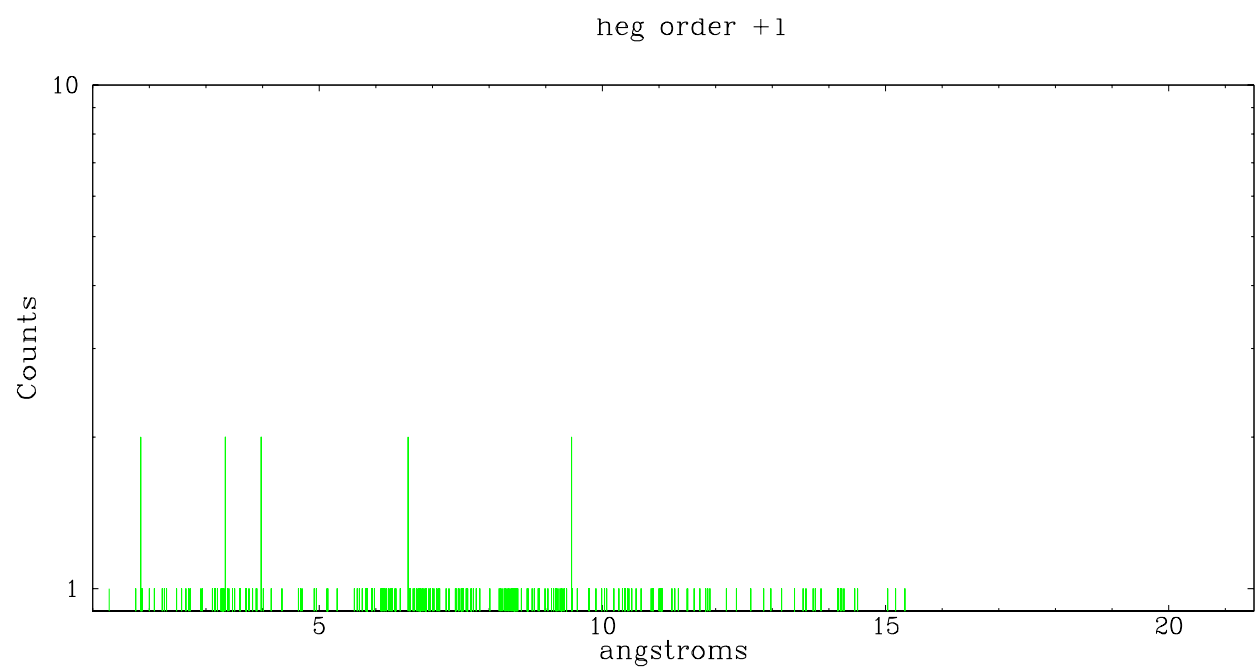
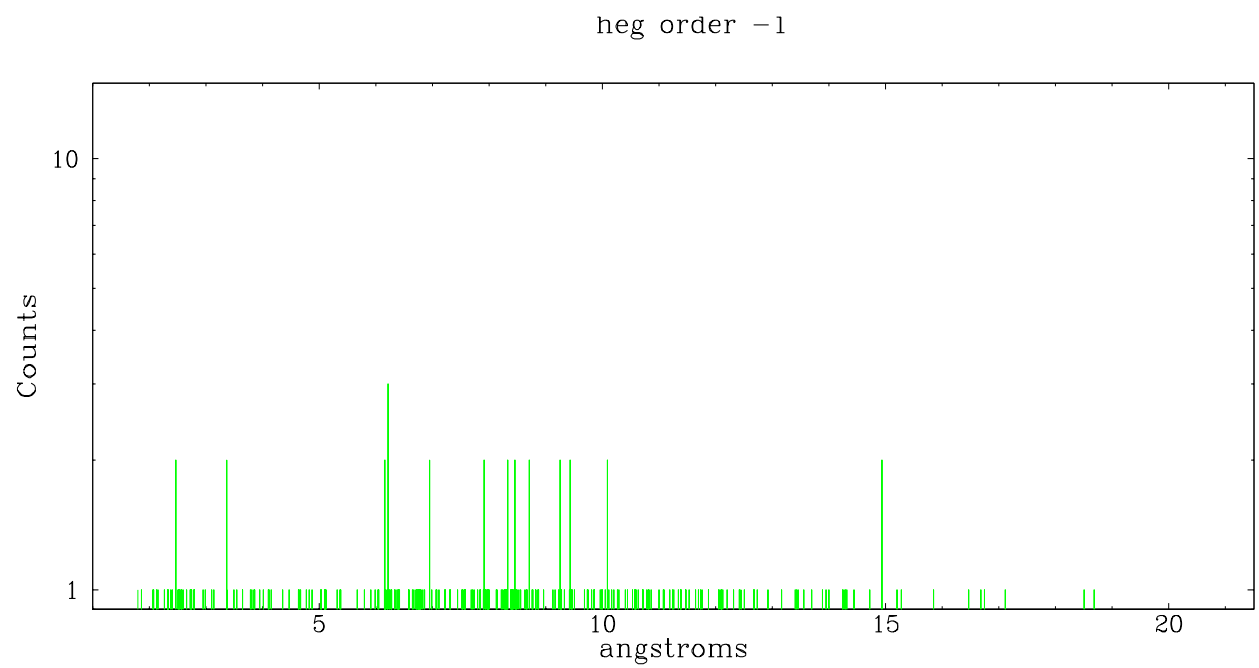
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	257	278	626	1698	555	250	254

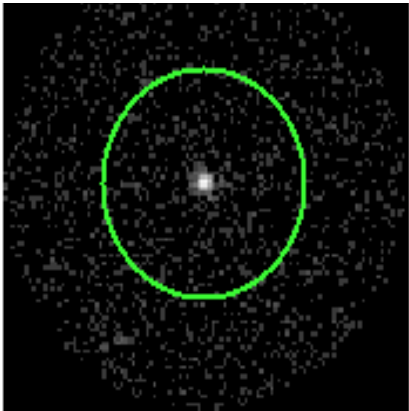




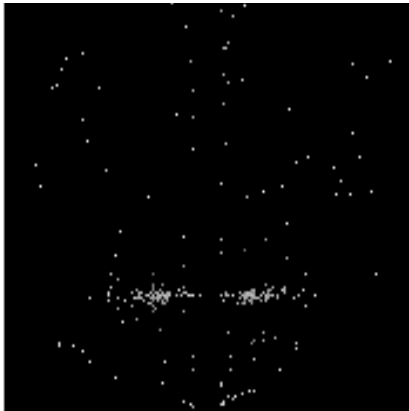
3.2 MEG Arm



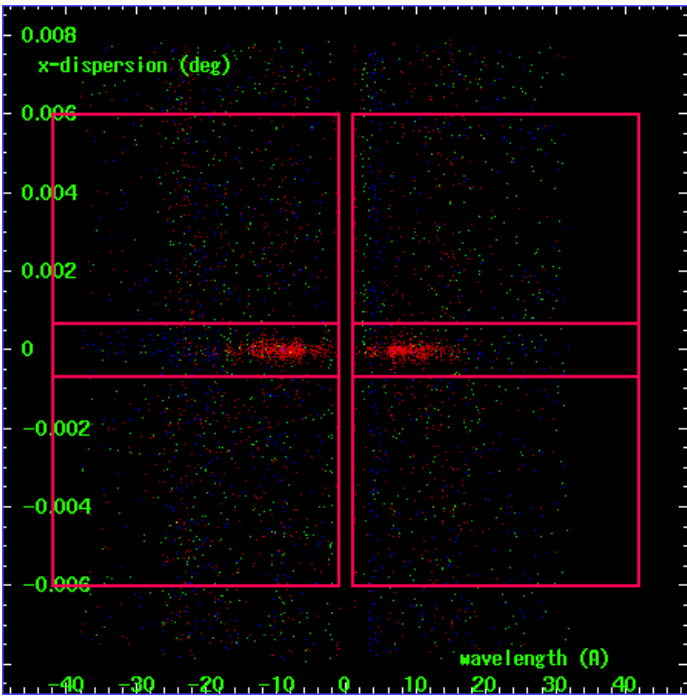
MEG Order Sort 123



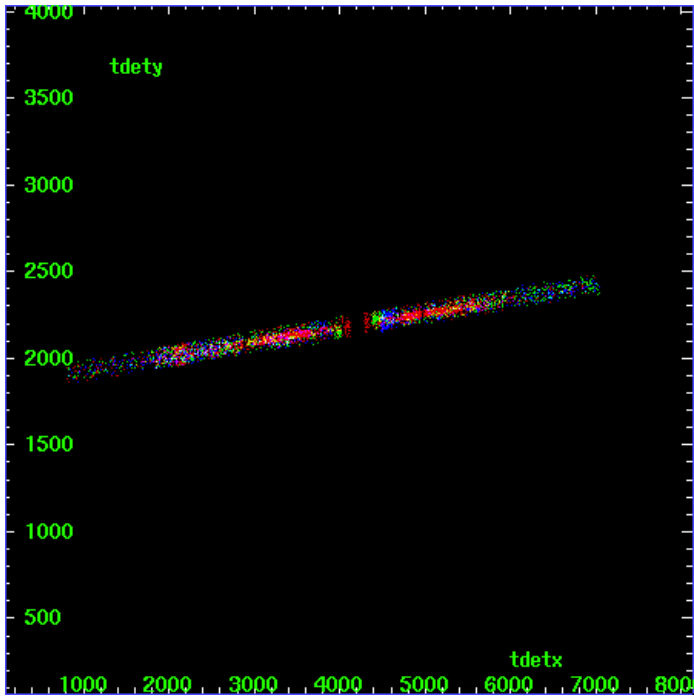
MEG Zero Order



MEG Order Sort ALL

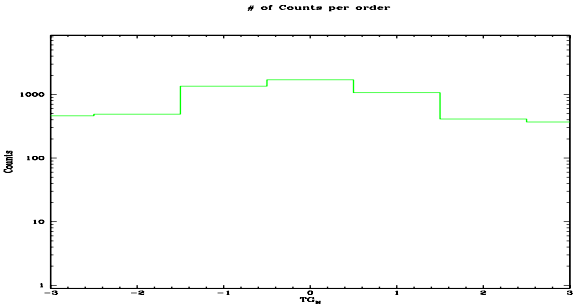


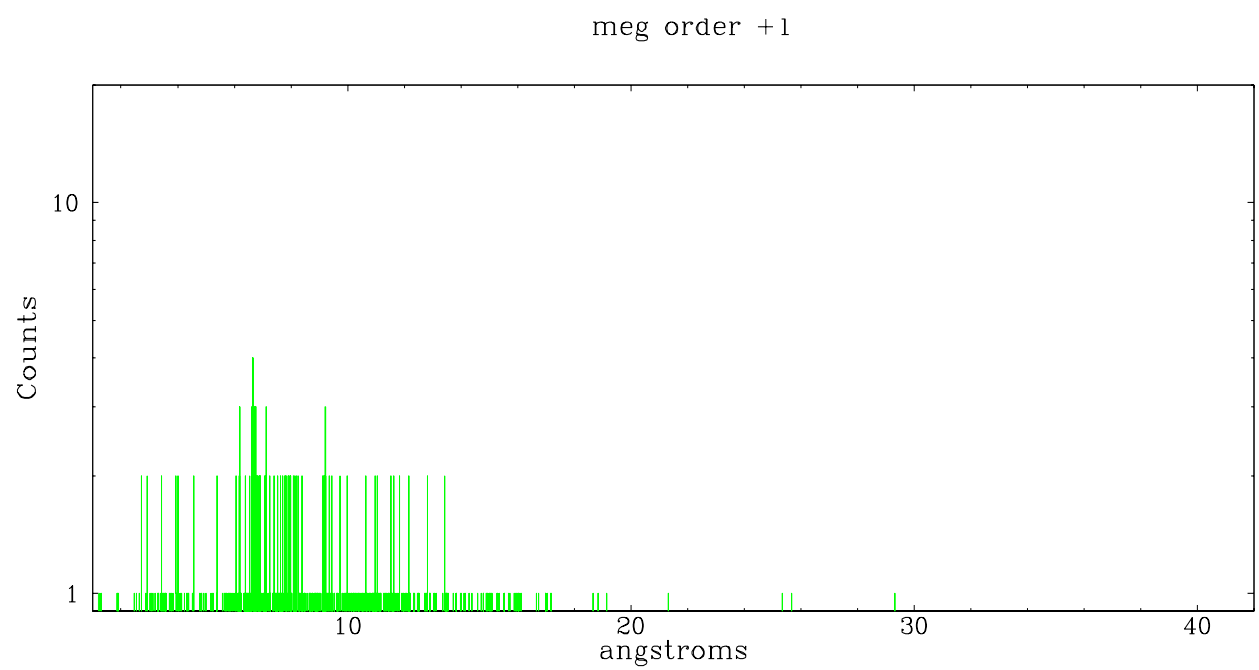
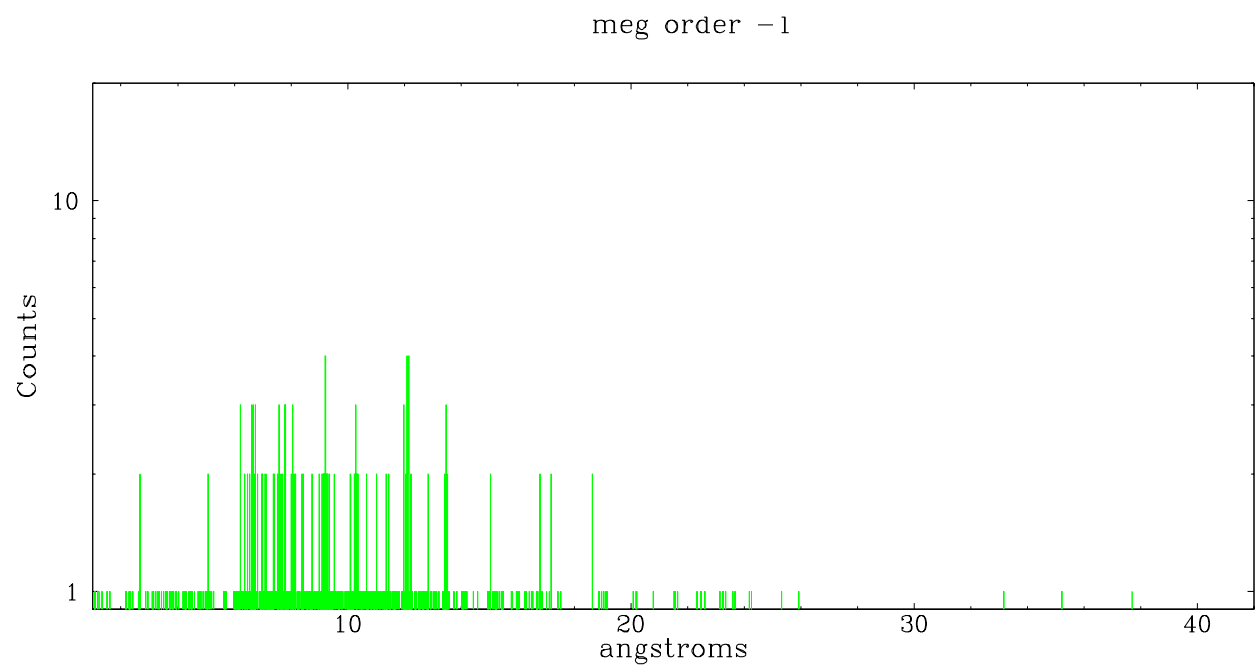
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	459	490	1351	1698	1061	412	368





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.04.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.17919

### A.2 Comments