

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 3176 - L2 Version 002  
Chandra X-Ray Center

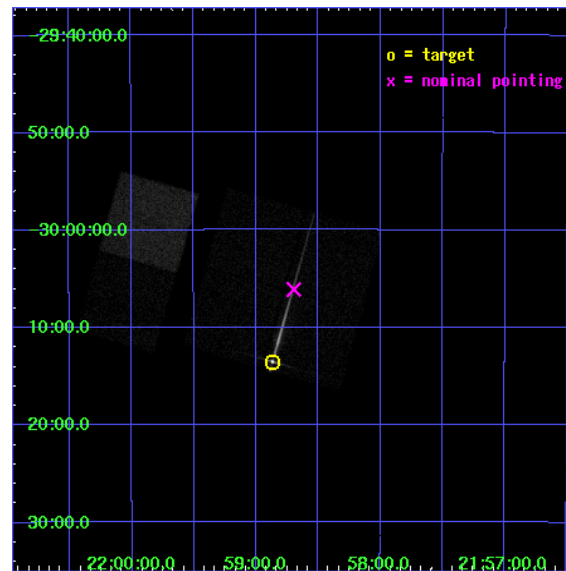
L2 Processing Date : Feb 28 2007

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# 1 Front

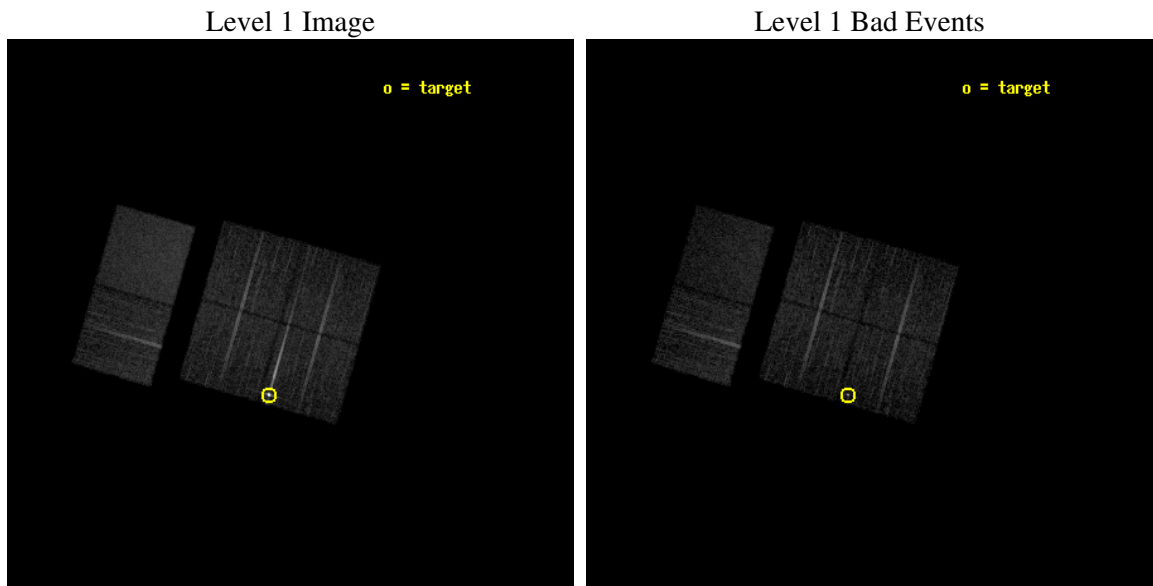
seq_num	790070
obs_id	3176
title	AO3 LETG/ACIS-I CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.67401693879
dec_nom	-30.101863042204
roll_nom	285.98550822395
revision	4
ontime	7932.800007388
livetime	7832.3501171357
ontime0	7932.800007388
ontime1	7932.800007388
ontime2	7932.800007388
ontime3	7932.800007388
ontime6	7932.800007388
ontime7	7932.800007388
l2events	77725



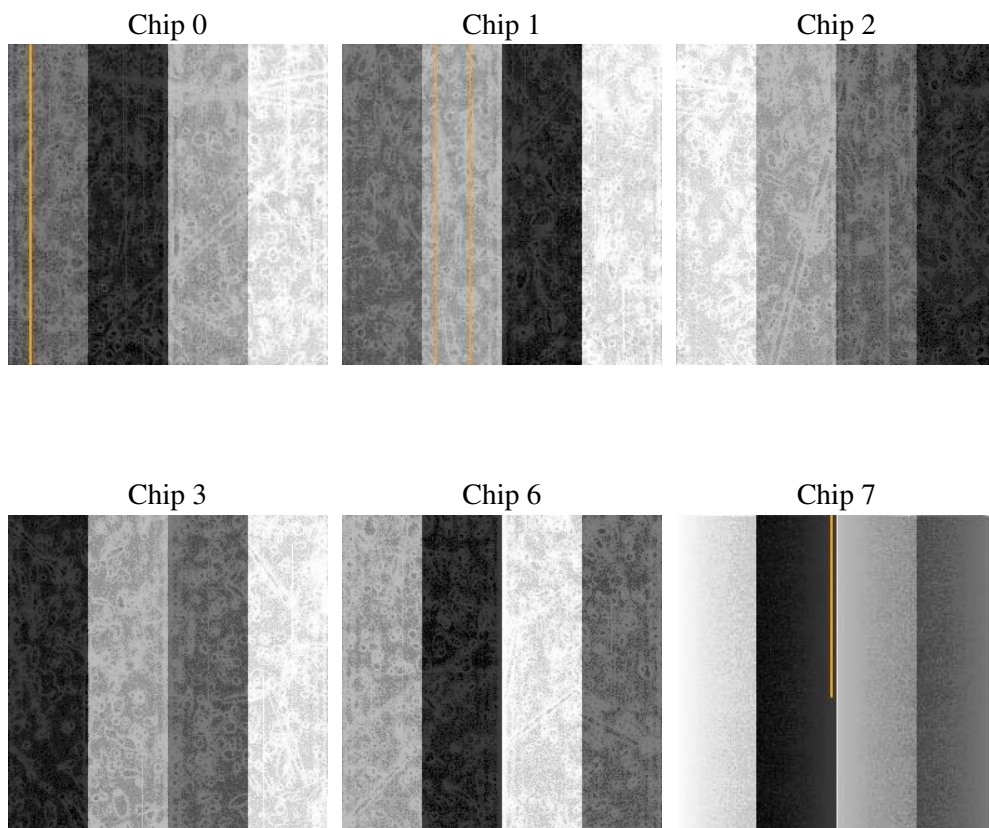
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.10
caldbver	3.3.0
date	2007-01-20T11:58:58
revision	2

sched_exp_time	8000.000000
ontime	7932.800007388
ontime0	7932.800007388
ontime1	7932.800007388
ontime2	7932.800007388
ontime3	7932.800007388
ontime6	7932.800007388
ontime7	7932.800007388
llevents	349386

### 2.1.4 Events

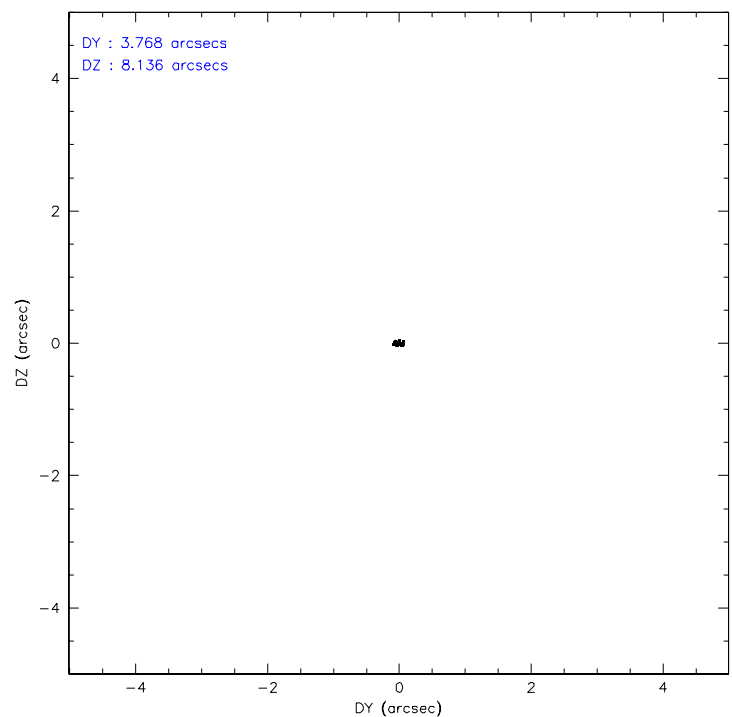
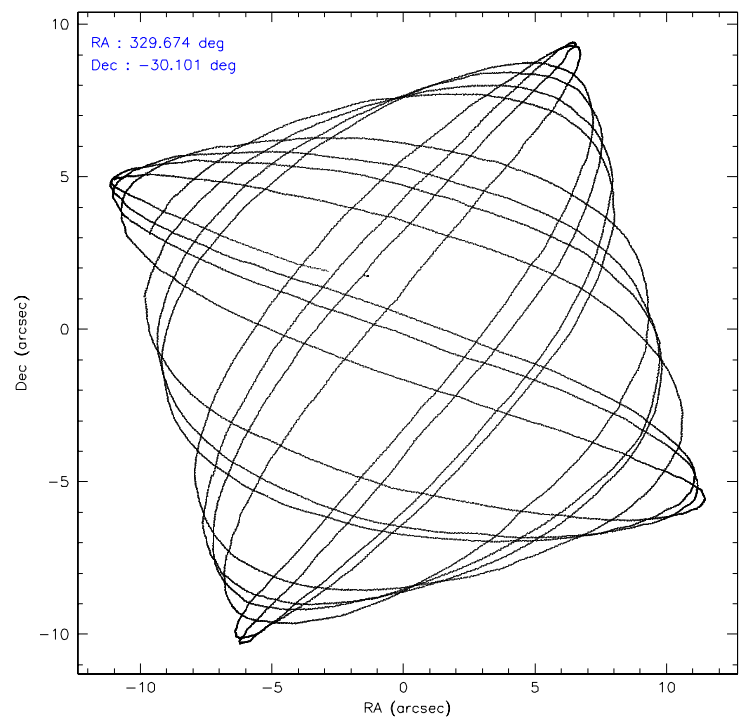
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	76346	49530	50978	51258	54565	66709
rejected events	42421	41814	44828	45475	48703	39359
rejected %	55%	84%	87%	88%	89%	59%

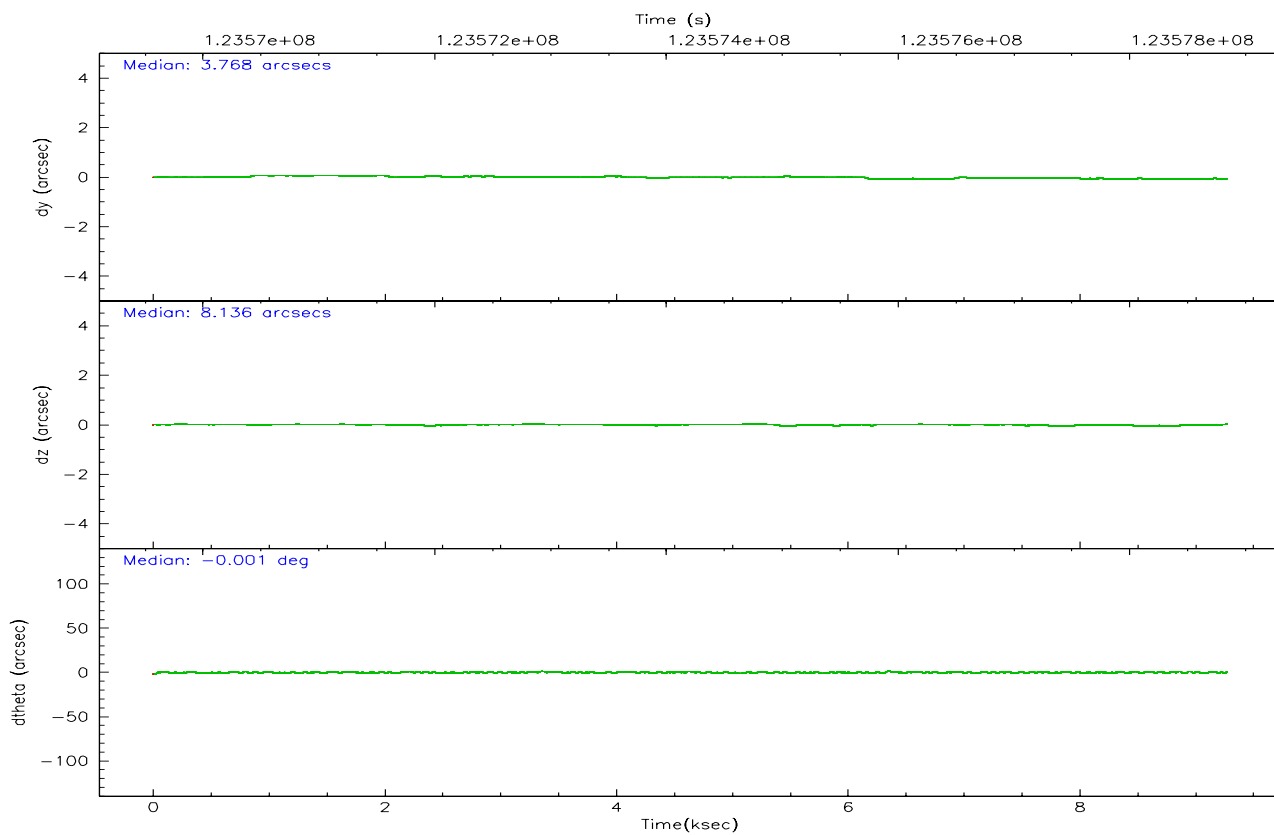
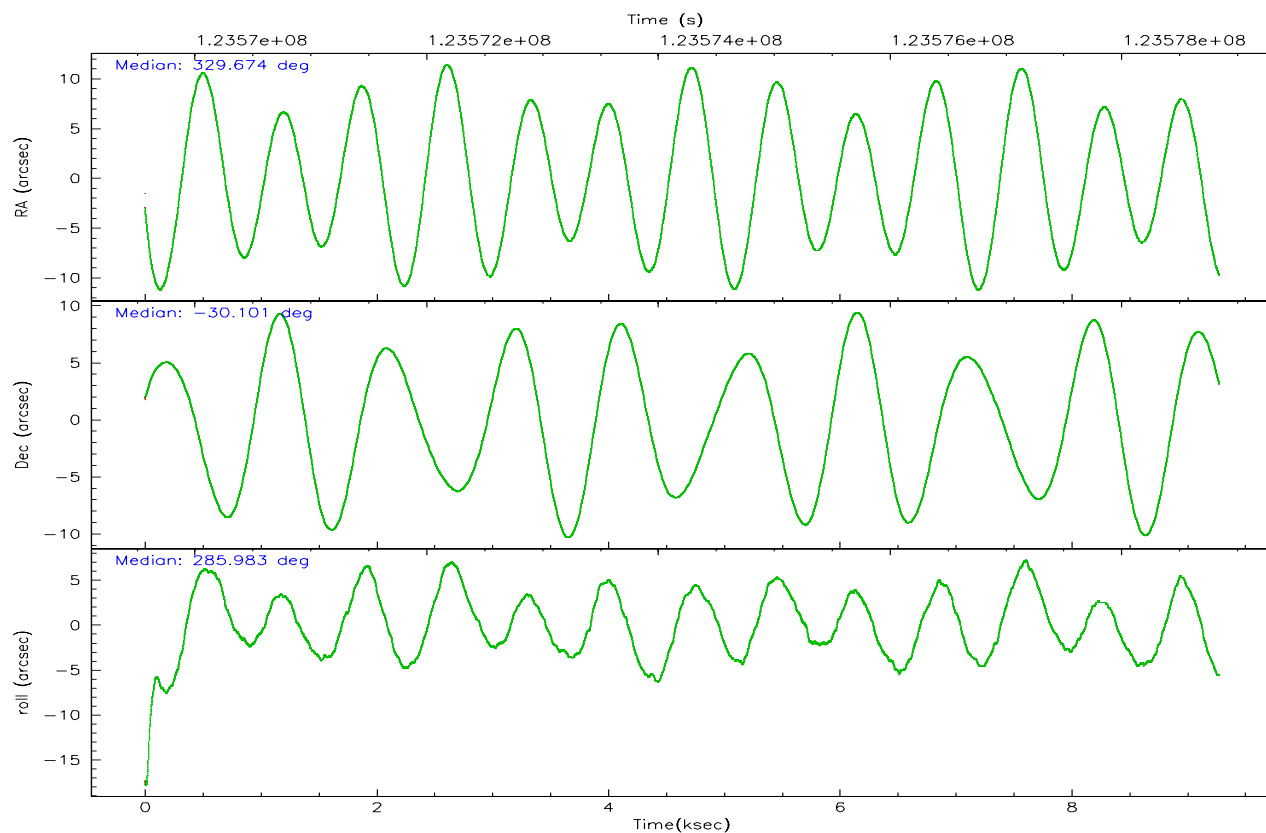
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	25482	3862	2617	2432	2165	2438
	33%	7%	5%	4%	3%	3%
grade 1 events	606	31	24	25	28	69
	0%	0%	0%	0%	0%	0%
grade 2 events	4020	1410	1393	1222	1258	5366
	5%	2%	2%	2%	2%	8%
grade 3 events	1418	619	564	498	616	2438
	1%	1%	1%	0%	1%	3%
grade 4 events	1389	649	556	571	579	2521
	1%	1%	1%	1%	1%	3%
grade 5 events	2050	1989	1804	2019	2313	6436
	2%	4%	3%	3%	4%	9%
grade 6 events	1633	1178	1023	1063	1246	14598
	2%	2%	2%	2%	2%	21%
grade 7 events	39748	39792	42997	43428	46360	32843
	52%	80%	84%	84%	84%	49%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	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
Pointing RA	329.651210	329.6740169387891	Subarray requested	NONE	NONE
Pointing Dec	-30.082907	-30.10186304220372	Alternating exposures requested	N	N
Pointing Roll	285.765407	285.9855082239465	Primary exposure time	0.000000	3.2
Window start time	120960064.184000	120960064.184000			
Window stop time	126144064.184000	126144064.184000			
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-238.277263	-238.2741181829365			
SIM translation stage offset (mm)	4.6848	4.681665180006831			
Observation start time	123570840.184000	123569062.3677			
Observation start date	2001-12-01T05:12:56	2001-12-01T04:44:22			
Observation end time	123578840.184000	123578973.6056			
Observation end date	2001-12-01T07:26:16	2001-12-01T07:29:33			
Read mode	TIMED	TIMED			

## 2.3 Aspect





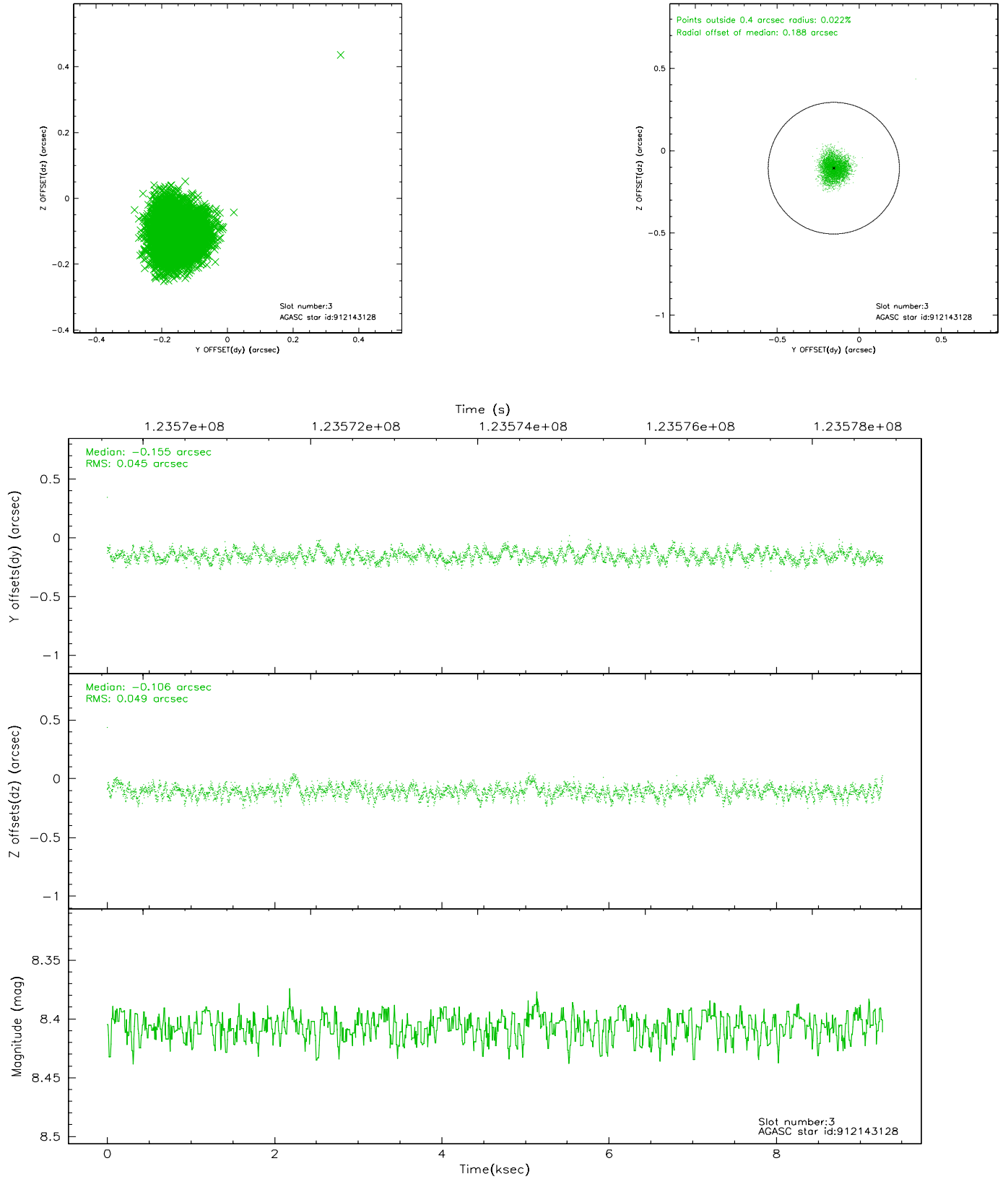
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.25	2262	-0.074	0.103	0.006	0.010	0.000000	0.000000	936.01	-735.19
1	FID	ACIS-I-5	7.24	2261	-0.009	0.000	0.005	0.010	0.000000	0.000000	-1811.68	1161.98
2	FID	ACIS-I-6	7.25	2262	-0.008	-0.033	0.006	0.010	0.000000	0.000000	401.03	1807.08
3	GUIDE	912143128	8.41	4523	-0.155	-0.106	0.072	0.110	328.924992	-29.706140	-1913.55	-1818.21
4	GUIDE	981468016	9.02	4523	0.028	-0.039	0.106	0.165	328.842457	-30.034984	-840.98	-2380.93
5	GUIDE	912275088	9.05	4522	-0.003	0.012	0.078	0.127	329.619228	-29.738698	-1218.28	240.71
6	GUIDE	981478152	9.41	4518	0.057	0.142	0.091	0.148	329.415589	-30.057192	-286.40	-680.59
7	GUIDE	981468128	9.35	4520	0.070	-0.004	0.083	0.133	329.756350	-30.158334	352.03	241.85

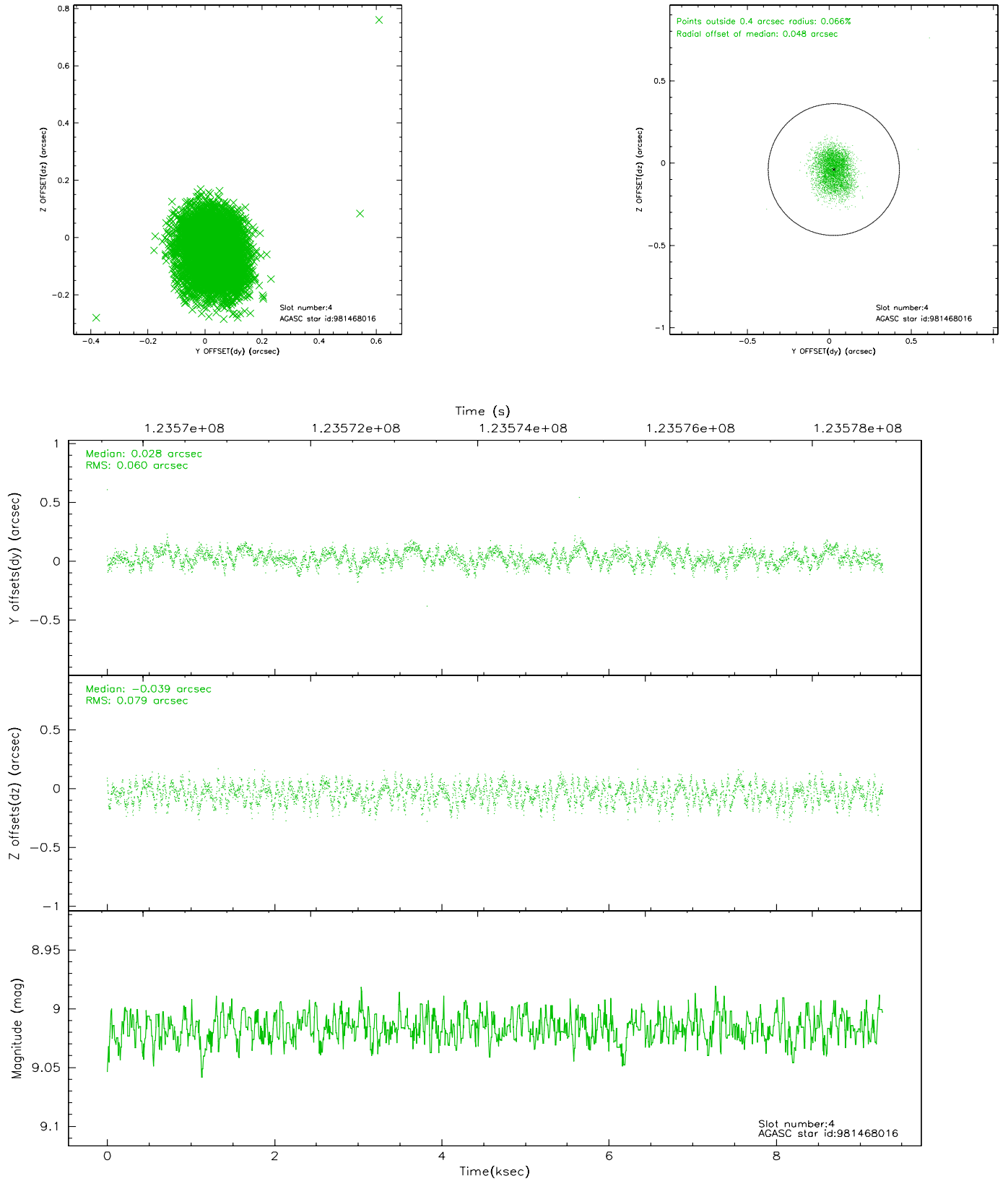


## 2.4 Star Slots

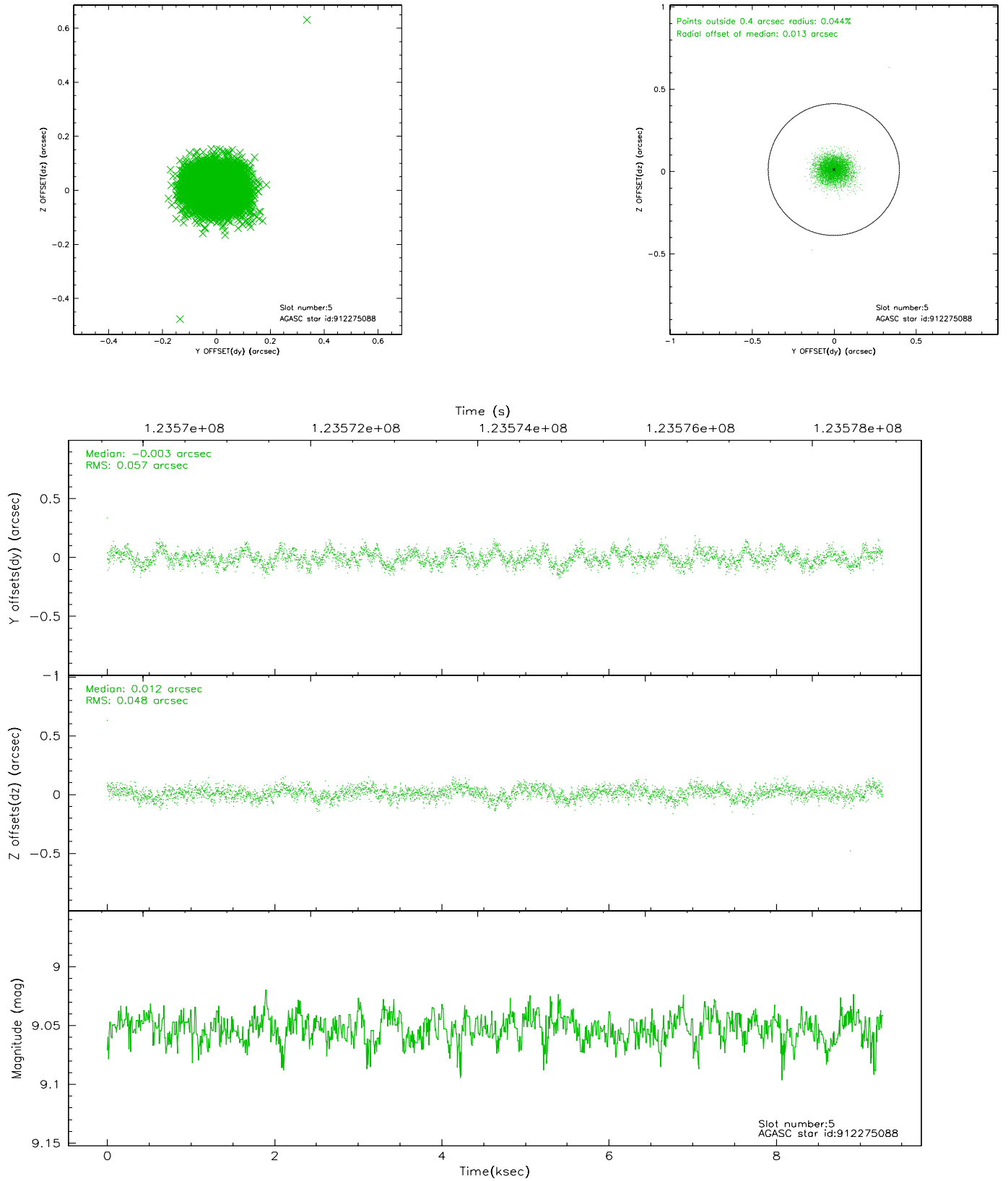
### 2.4.1 Slot 3



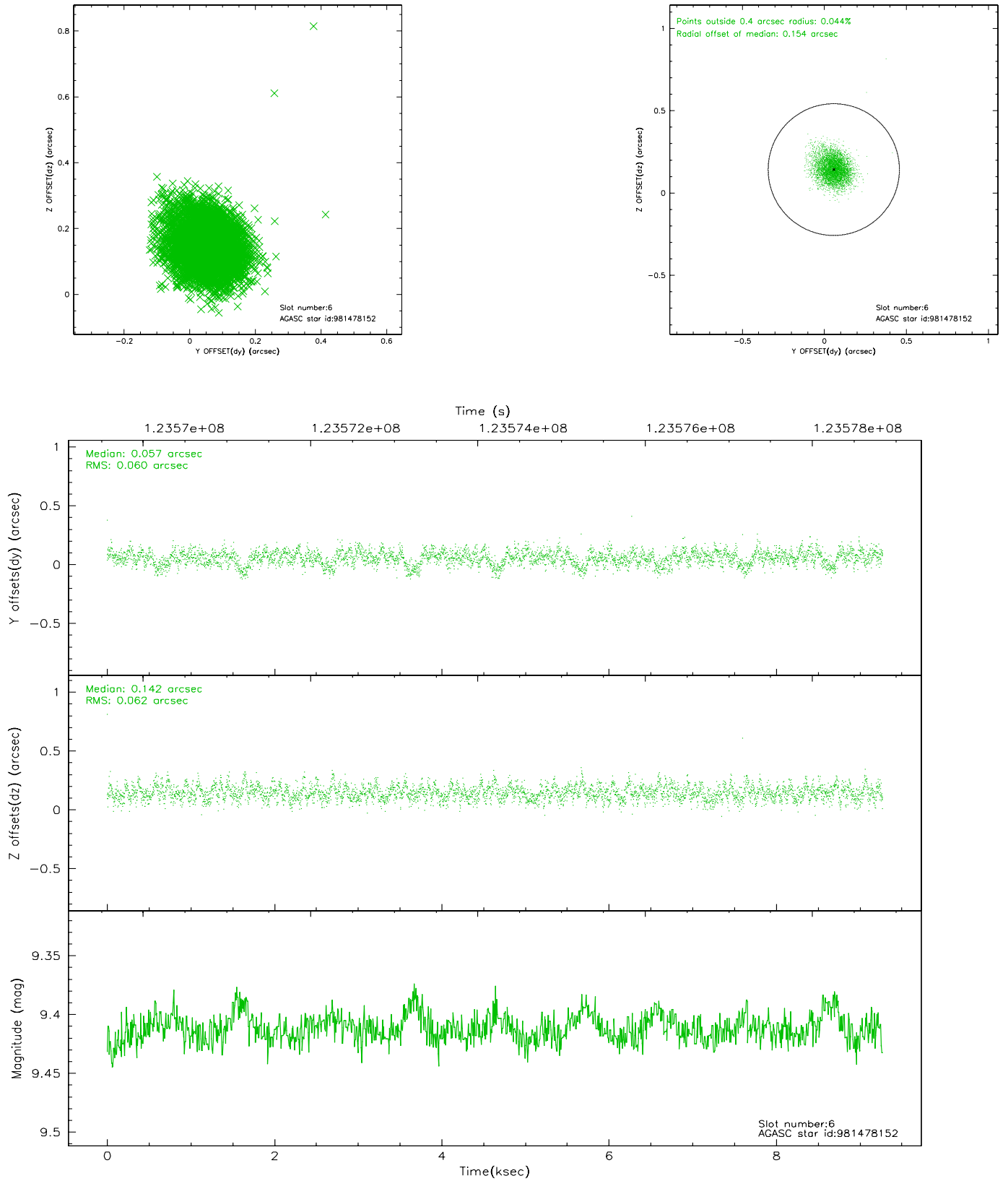
## 2.4.2 Slot 4



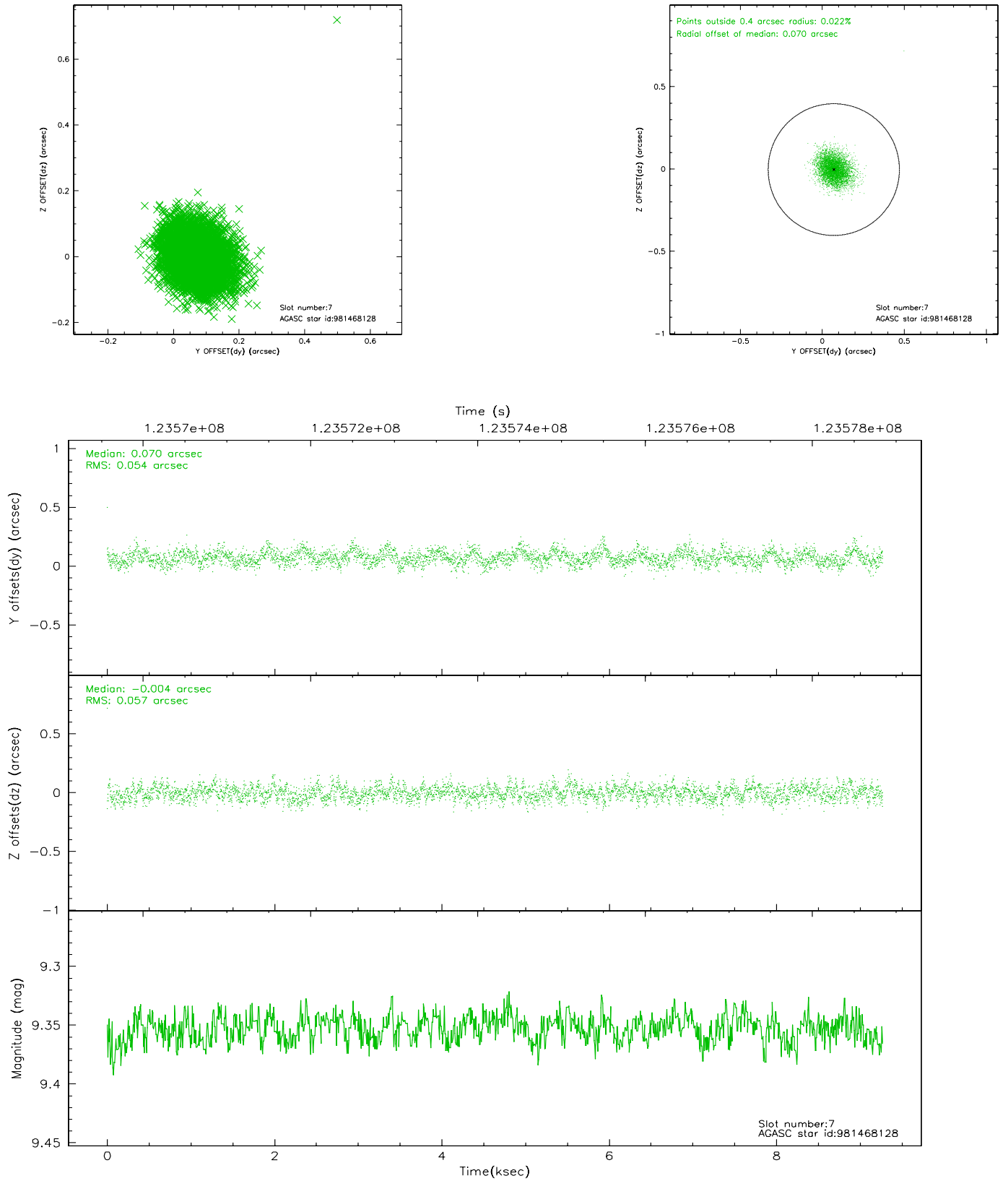
### 2.4.3 Slot 5



## 2.4.4 Slot 6

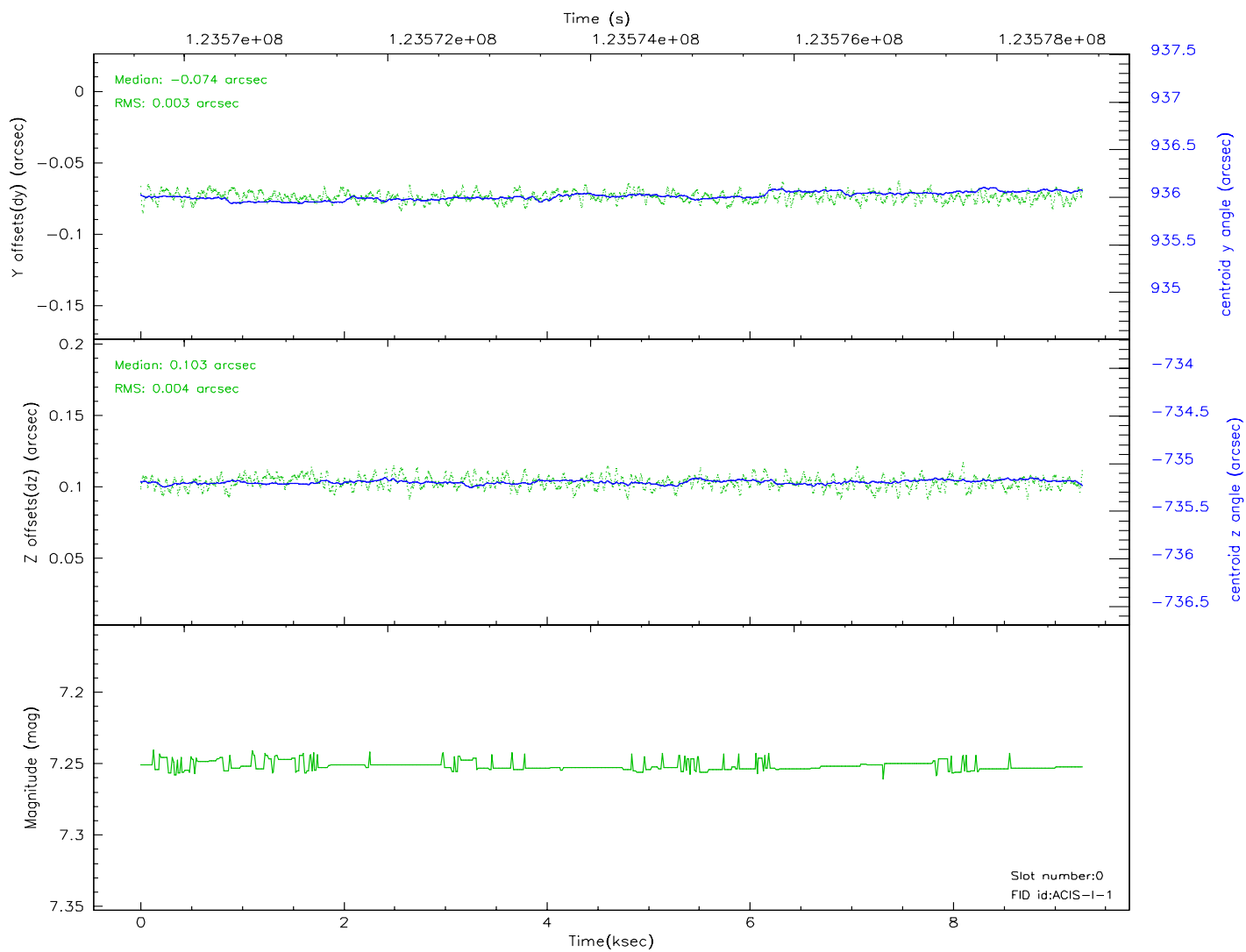
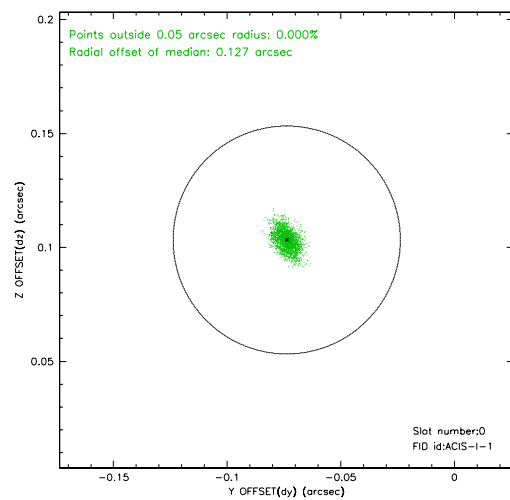
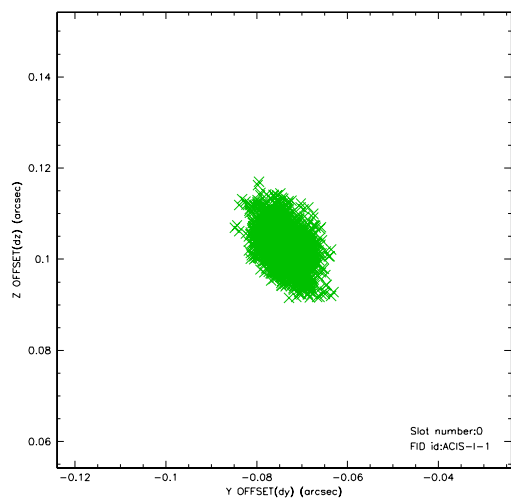


## 2.4.5 Slot 7

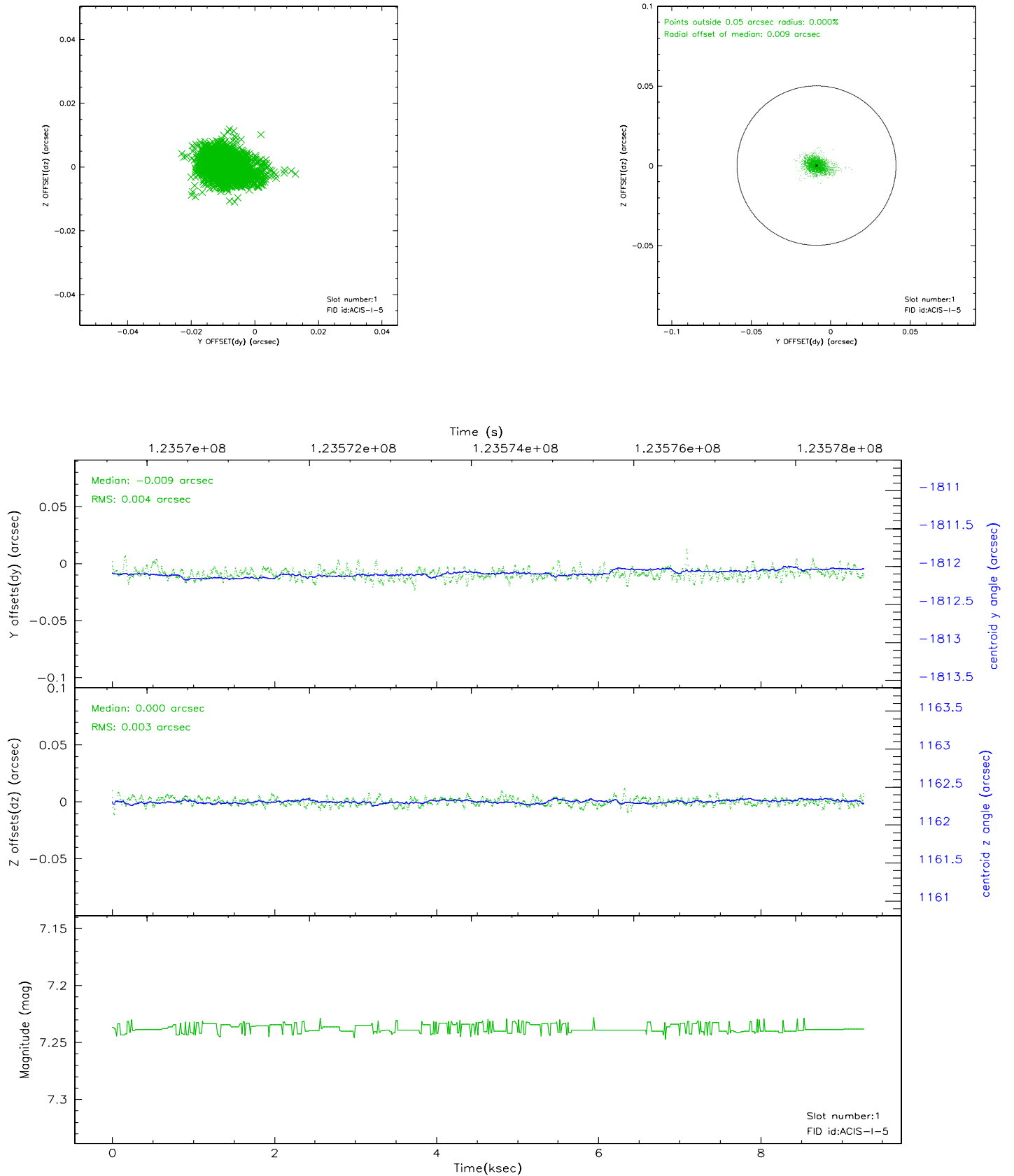


## 2.5 FID Slots

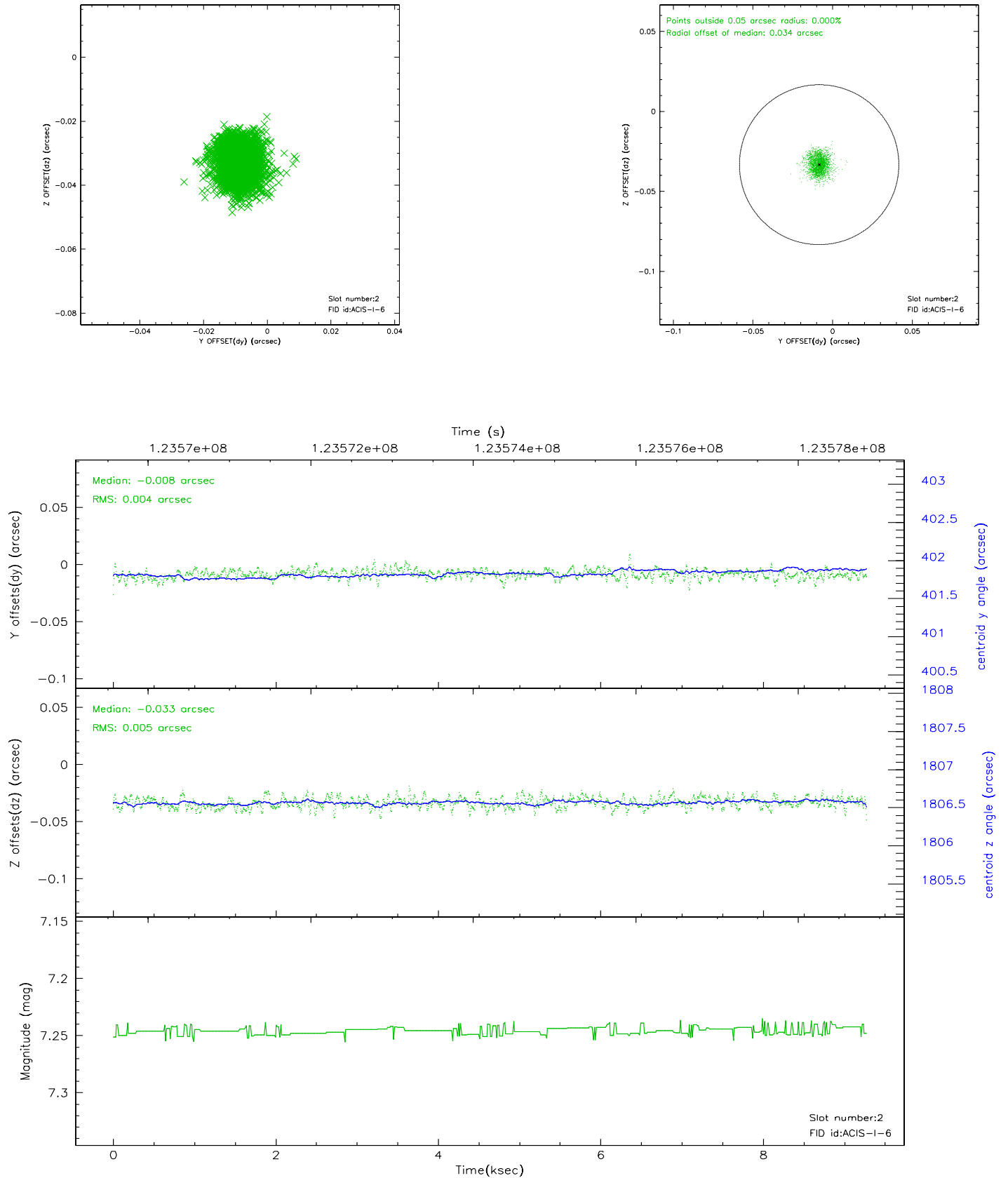
### 2.5.1 Slot 0



## 2.5.2 Slot 1



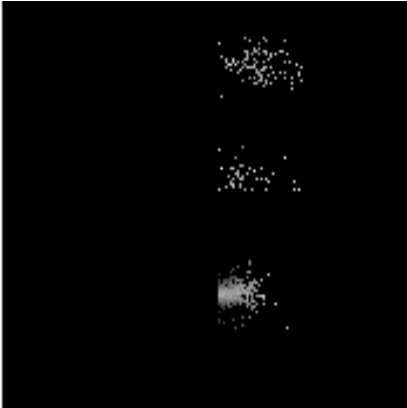
### 2.5.3 Slot 2



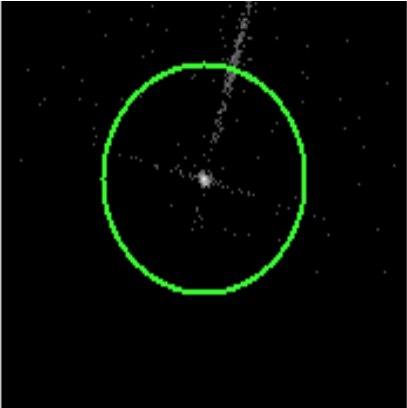


# 3 Gratings

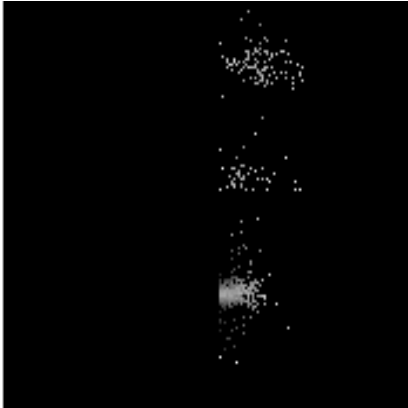
## 3.1 LETG Arm



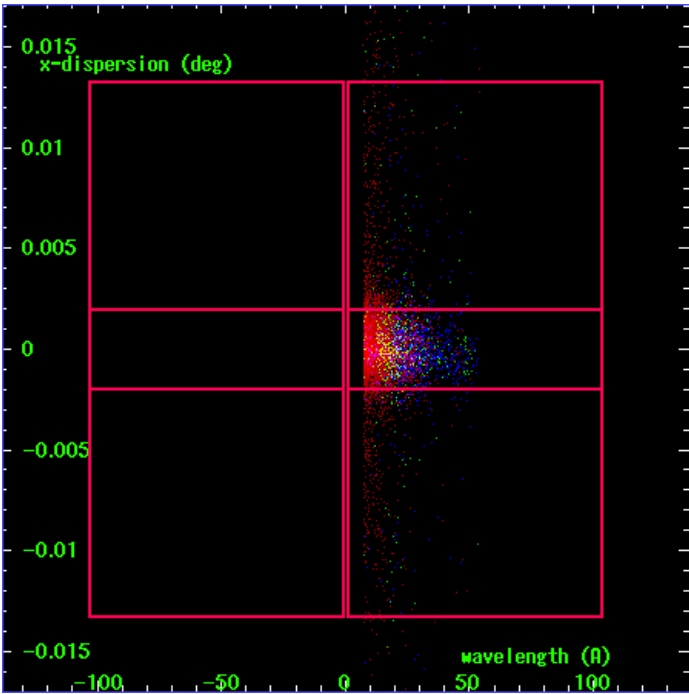
LETG Order Sort 123



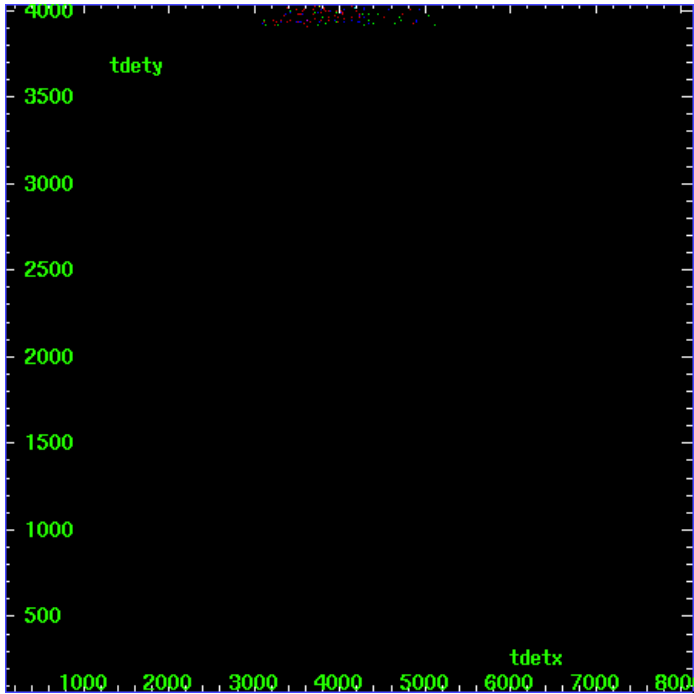
LETG Zero Order



LETG Order Sort ALL

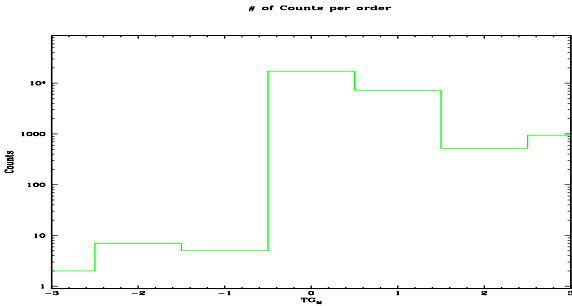


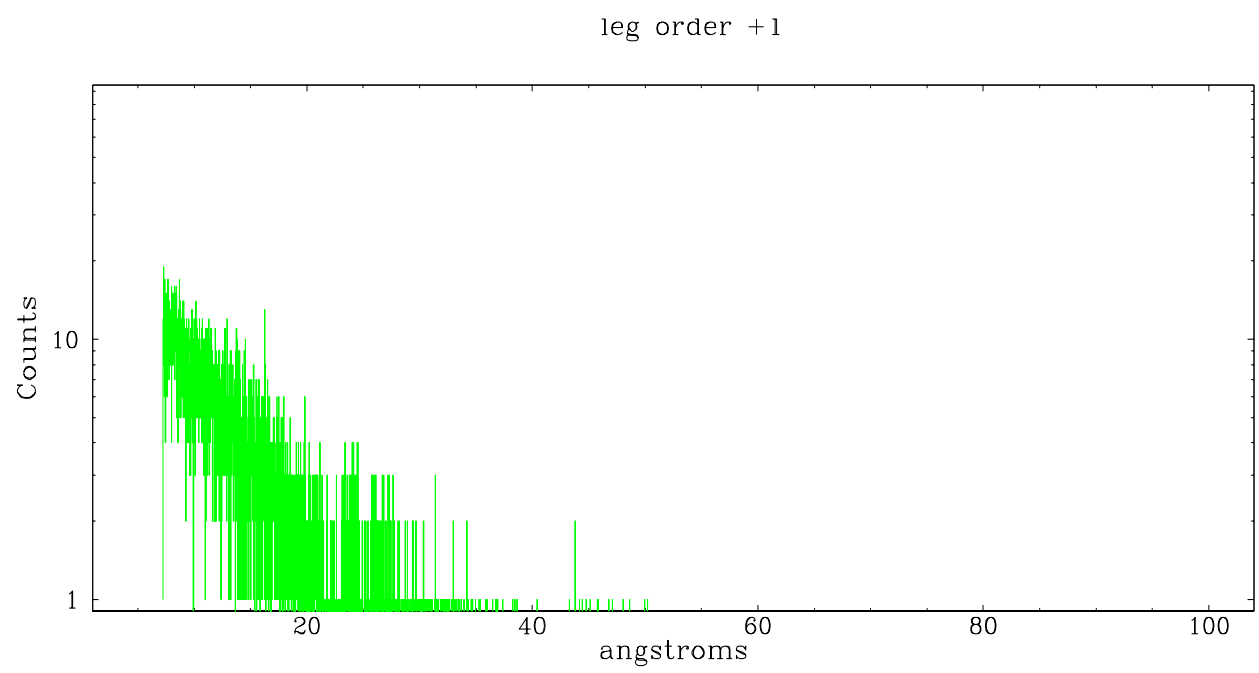
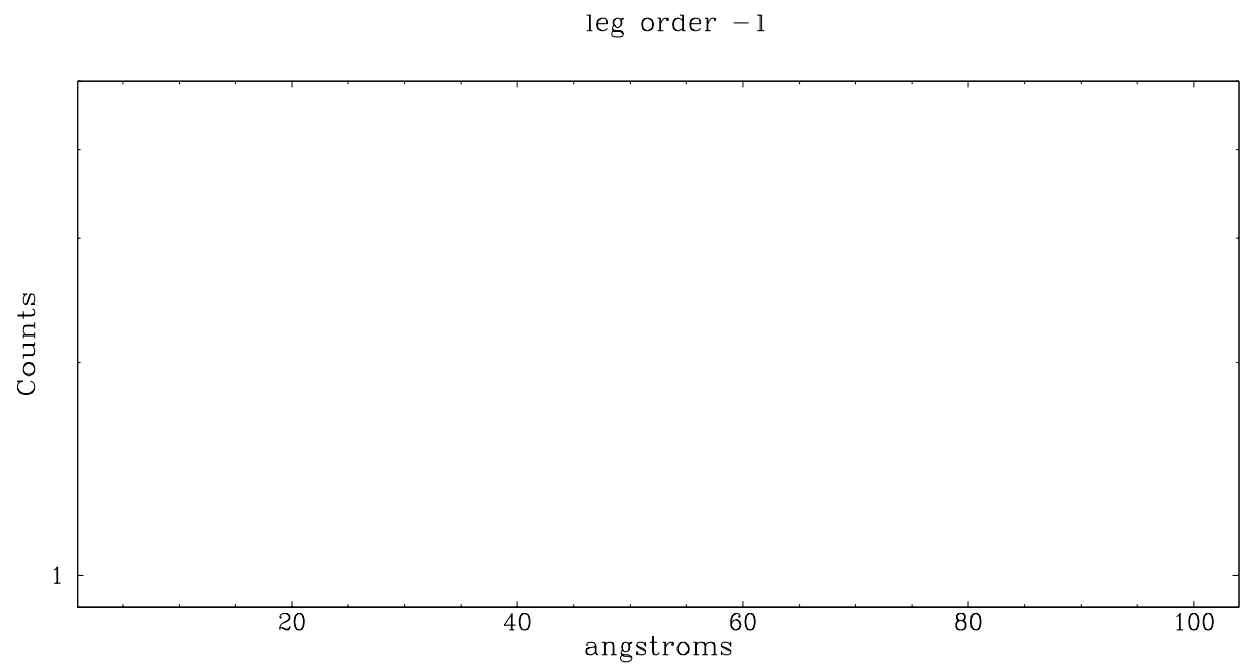
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2	7	5	17288	7253	523	944





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2007.03.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.932

## A.2 Comments

Non-standard grating/detector combination. `tg_resolve_events` run with `osip=NONE` since there is no order-sorting table for ACIS-I.