

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 3661 - L2 Version 002  
Chandra X-Ray Center

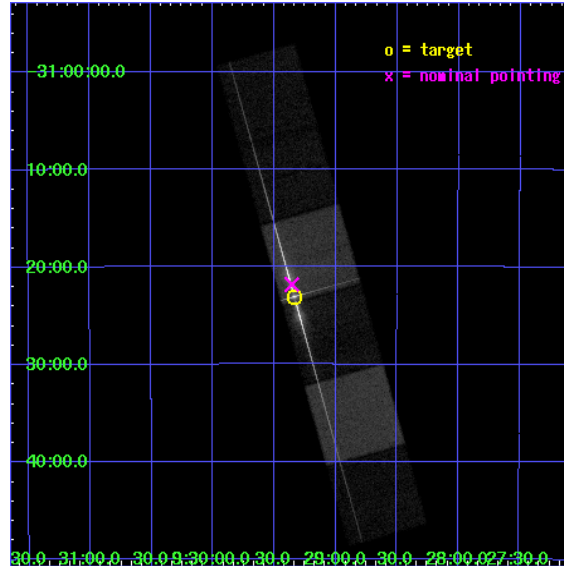
L2 Processing Date : Oct 16 2006

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# 1 Front

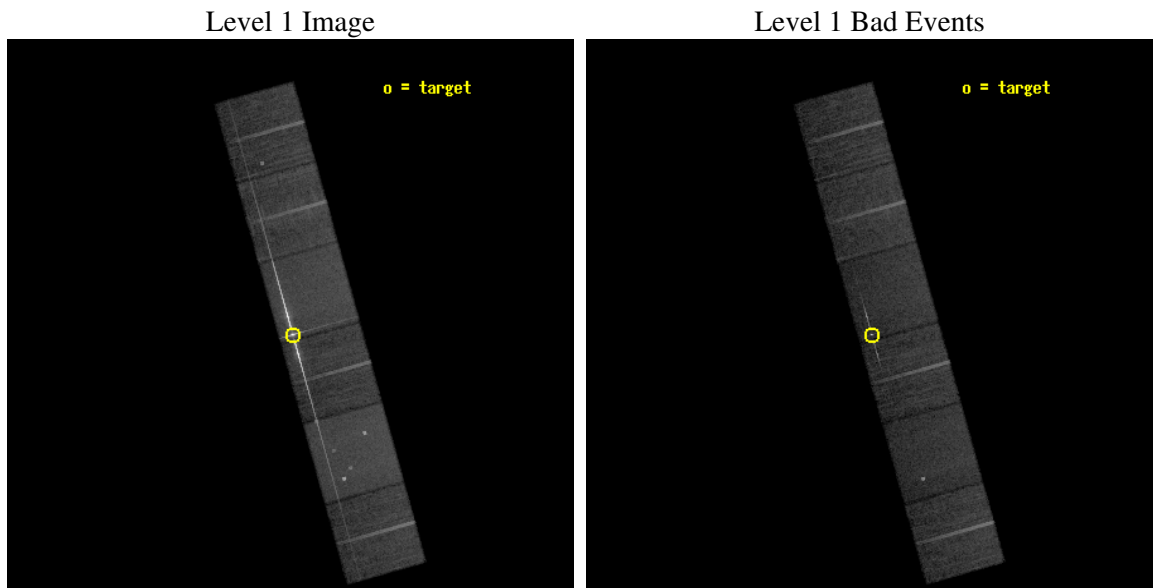
seq_num	400265
obs_id	3661
title	SPECTROSCOPY OF THE HIGH-LATITUDE ACCRETING MILLISECOND PULSAR XTE J0929-314
observer	Prof. Deepto Chakrabarty
object	XTE J0929-314
dtcycle	0
cycle	P
ra_targ	142.334167
dec_targ	-31.384083
ra_nom	142.33897407477
dec_nom	-31.363473607658
roll_nom	254.34375983825
revision	3
ontime	17958.3999331
livetime	17730.999859897
ontime4	17958.3999331
ontime5	17958.3999331
ontime6	17958.3999331
ontime7	17958.3999331
ontime8	17958.3999331
ontime9	17958.3999331
l2events	364287



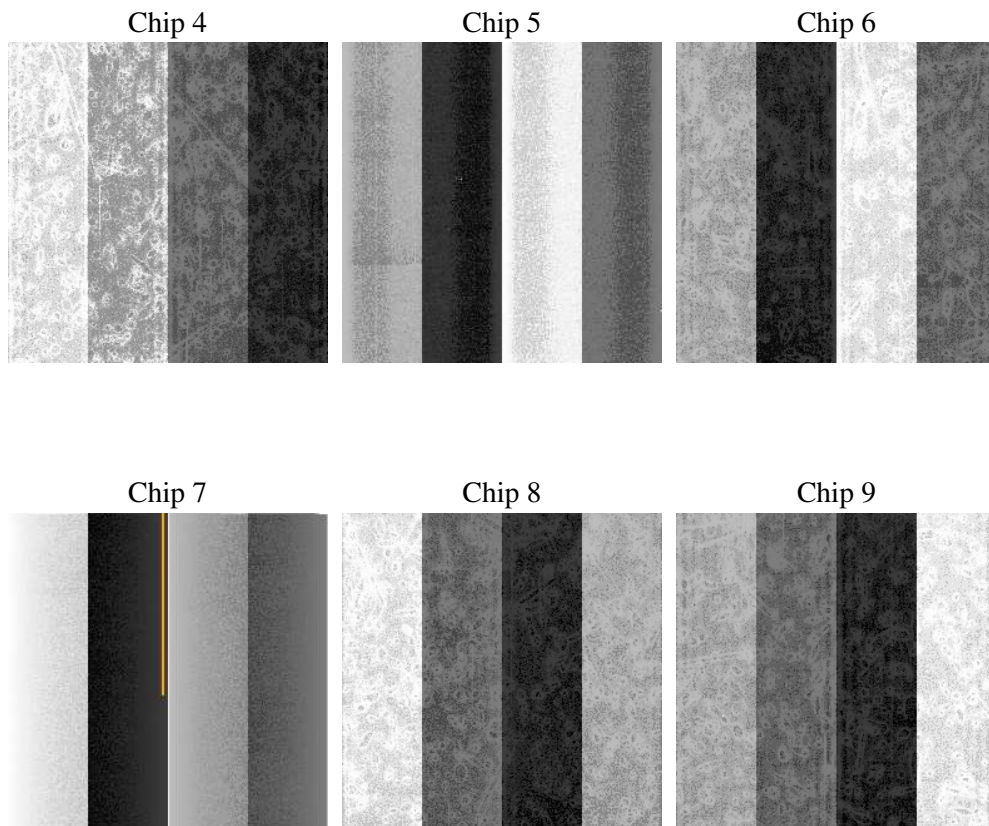
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.3
date	2006-09-16T13:23:30
revision	2

sched_exp_time	18000.000000
ontime	17964.864902914
ontime4	17964.864883035
ontime5	17964.864902914
ontime6	17964.864902914
ontime7	17964.864902914
ontime8	17964.864902914
ontime9	17964.864902914
l1events	1012798

### 2.1.4 Events

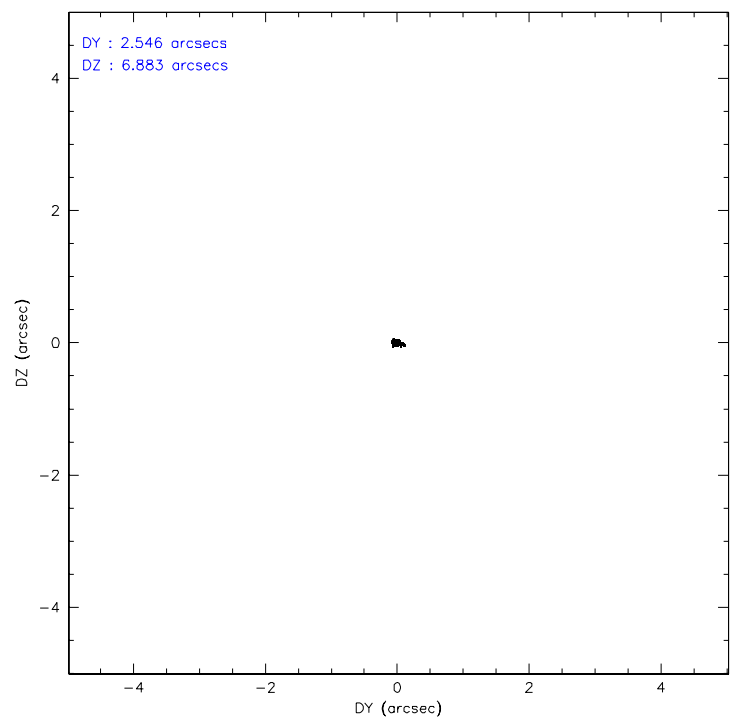
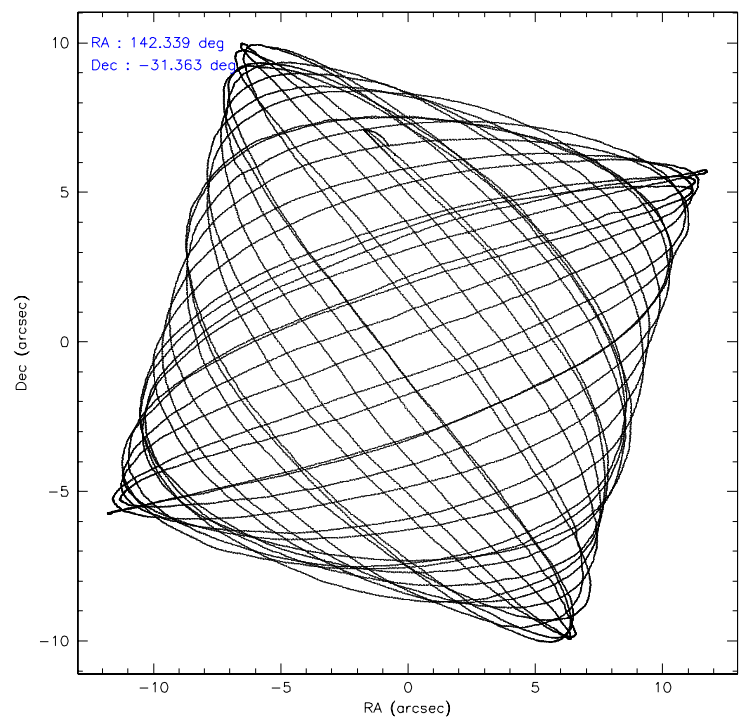
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	124609	171302	189450	266998	146098	114341
rejected events	109533	92155	102255	97976	112428	98461
rejected %	87%	53%	53%	36%	76%	86%

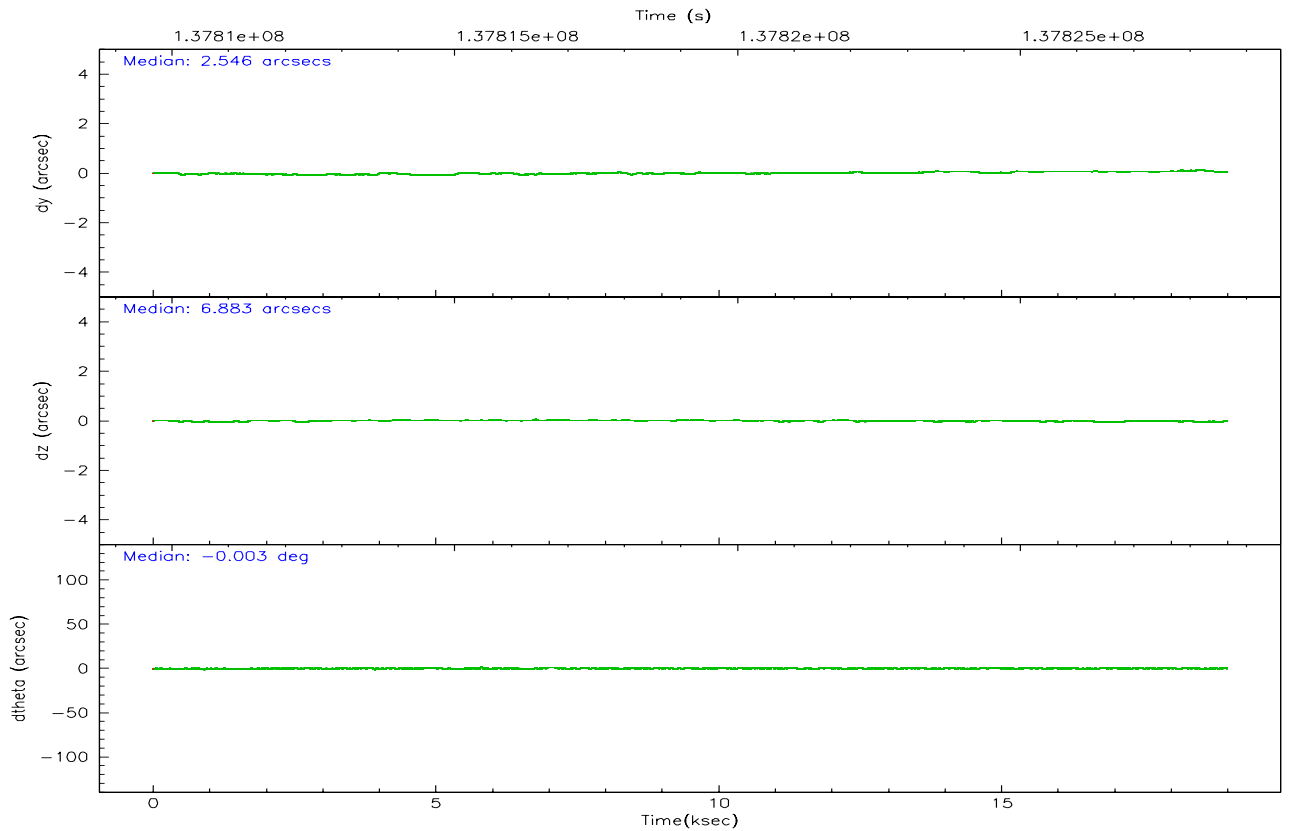
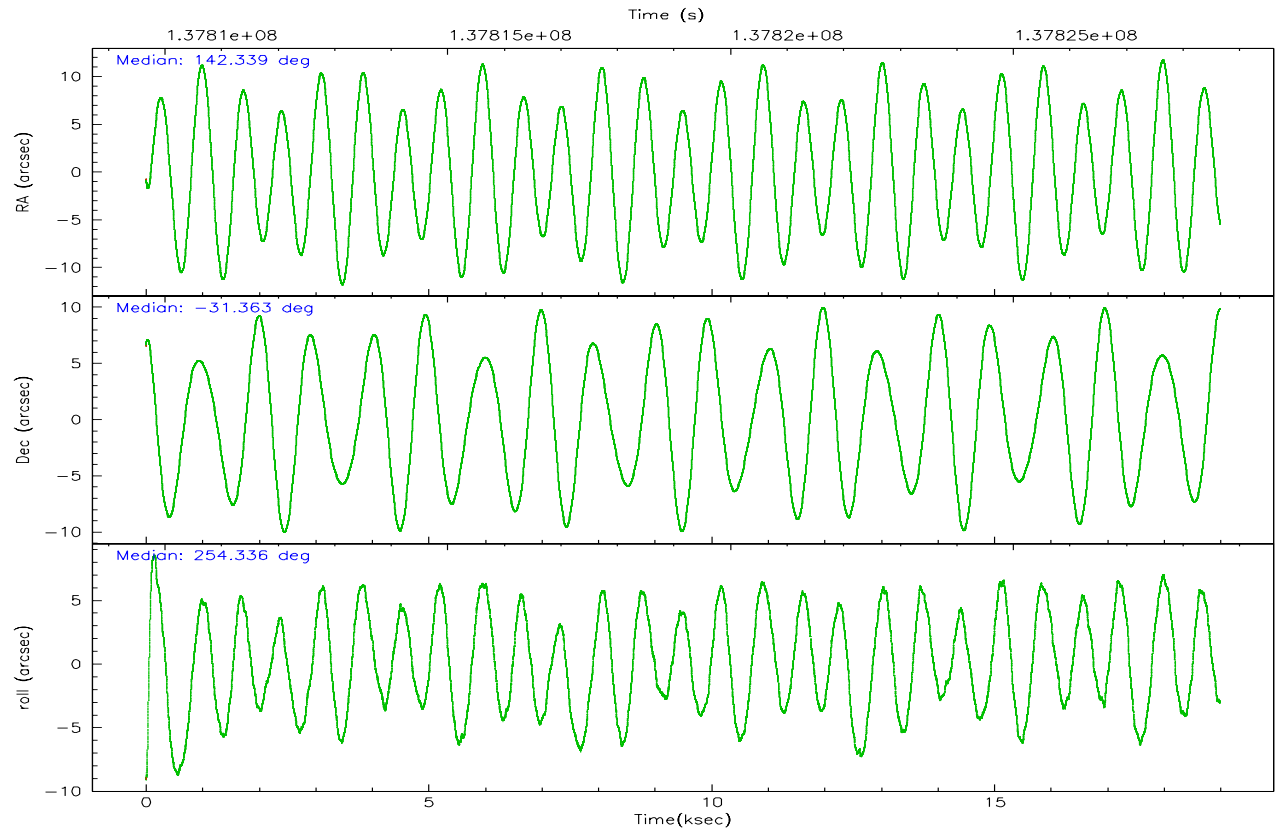
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6723	9627	63511	28090	13036	7626
	5%	5%	33%	10%	8%	6%
grade 1 events	59	151	829	491	92	54
	0%	0%	0%	0%	0%	0%
grade 2 events	3517	23476	10943	43511	6747	2946
	2%	13%	5%	16%	4%	2%
grade 3 events	1298	2977	4052	15533	3294	1350
	1%	1%	2%	5%	2%	1%
grade 4 events	1218	2007	3977	15367	2988	1338
	0%	1%	2%	5%	2%	1%
grade 5 events	4203	8934	5390	11764	6123	5007
	3%	5%	2%	4%	4%	4%
grade 6 events	2326	41085	4754	66583	7611	2624
	1%	23%	2%	24%	5%	2%
grade 7 events	105265	83045	95994	85659	106207	93396
	84%	48%	50%	32%	72%	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	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	142.330668	142.3389740747705	Subarray requested	NONE	NONE
Pointing Dec	-31.337157	-31.36347360765766	Alternating exposures requested	N	N
Pointing Roll	254.182815	254.3437598382464	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-182.132523	-182.1344861297048			
SIM translation stage offset (mm)	-8	-7.998036453302973			
Observation start time	137810651.184000	137809287.49301			
Observation start date	2002-05-15T00:43:07	2002-05-15T00:21:27			
Observation end time	137828651.184000	137829329.31883			
Observation end date	2002-05-15T05:43:07	2002-05-15T05:55:29			
Read mode	TIMED	TIMED			

## 2.3 Aspect





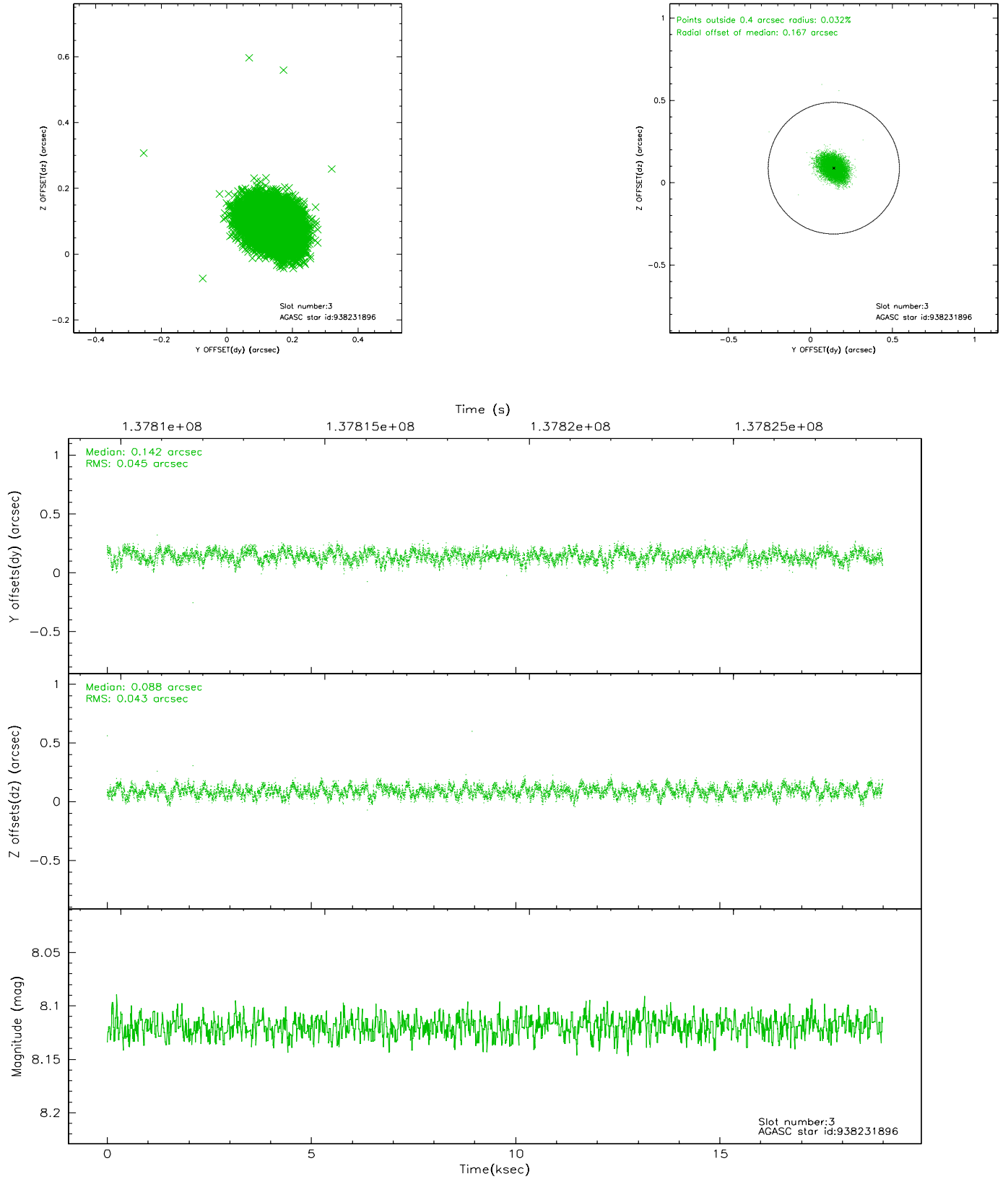
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	4632	-0.020	-0.094	0.007	0.011	0.000000	0.000000	-754.65	-1892.89
1	FID	ACIS-S-4	7.18	4630	-0.008	0.035	0.006	0.010	0.000000	0.000000	2158.57	15.42
2	FID	ACIS-S-5	7.23	4629	-0.002	0.067	0.007	0.012	0.000000	0.000000	-1807.18	9.41
3	GUIDE	938231896	8.12	9258	0.142	0.088	0.067	0.105	142.617033	-32.103400	2416.15	1593.54
4	GUIDE	937562880	8.26	9262	-0.035	-0.138	0.068	0.122	141.495546	-31.369017	819.73	-2434.73
5	GUIDE	937696560	8.55	9260	-0.134	-0.147	0.057	0.091	143.127288	-31.389604	-477.72	2409.82
6	GUIDE	937563104	8.87	9260	-0.107	0.012	0.071	0.117	141.734781	-30.979662	-732.34	-2117.81
7	GUIDE	938231176	9.53	9252	0.130	0.185	0.110	0.181	142.829575	-31.948206	1704.02	2068.10

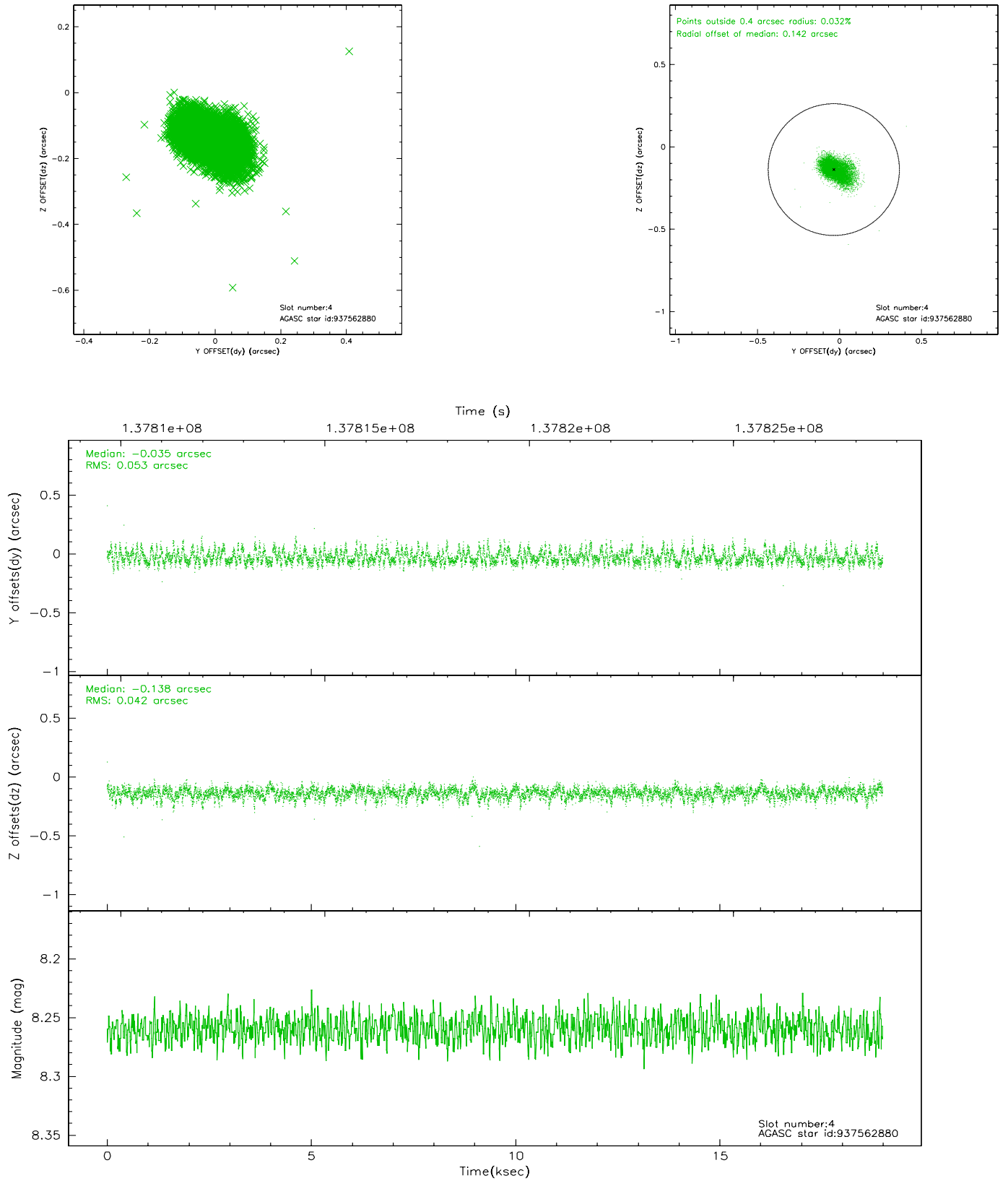


## 2.4 Star Slots

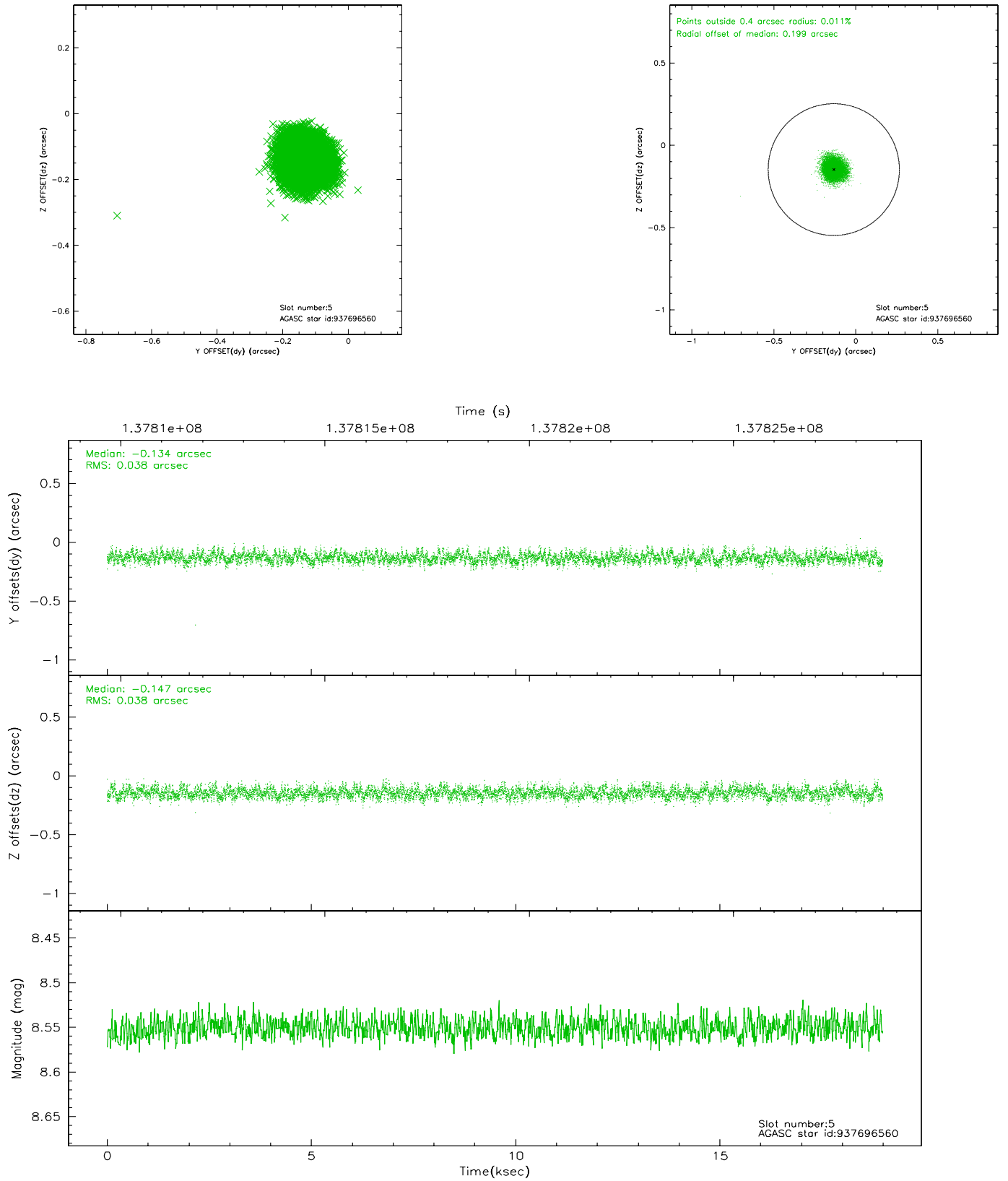
### 2.4.1 Slot 3



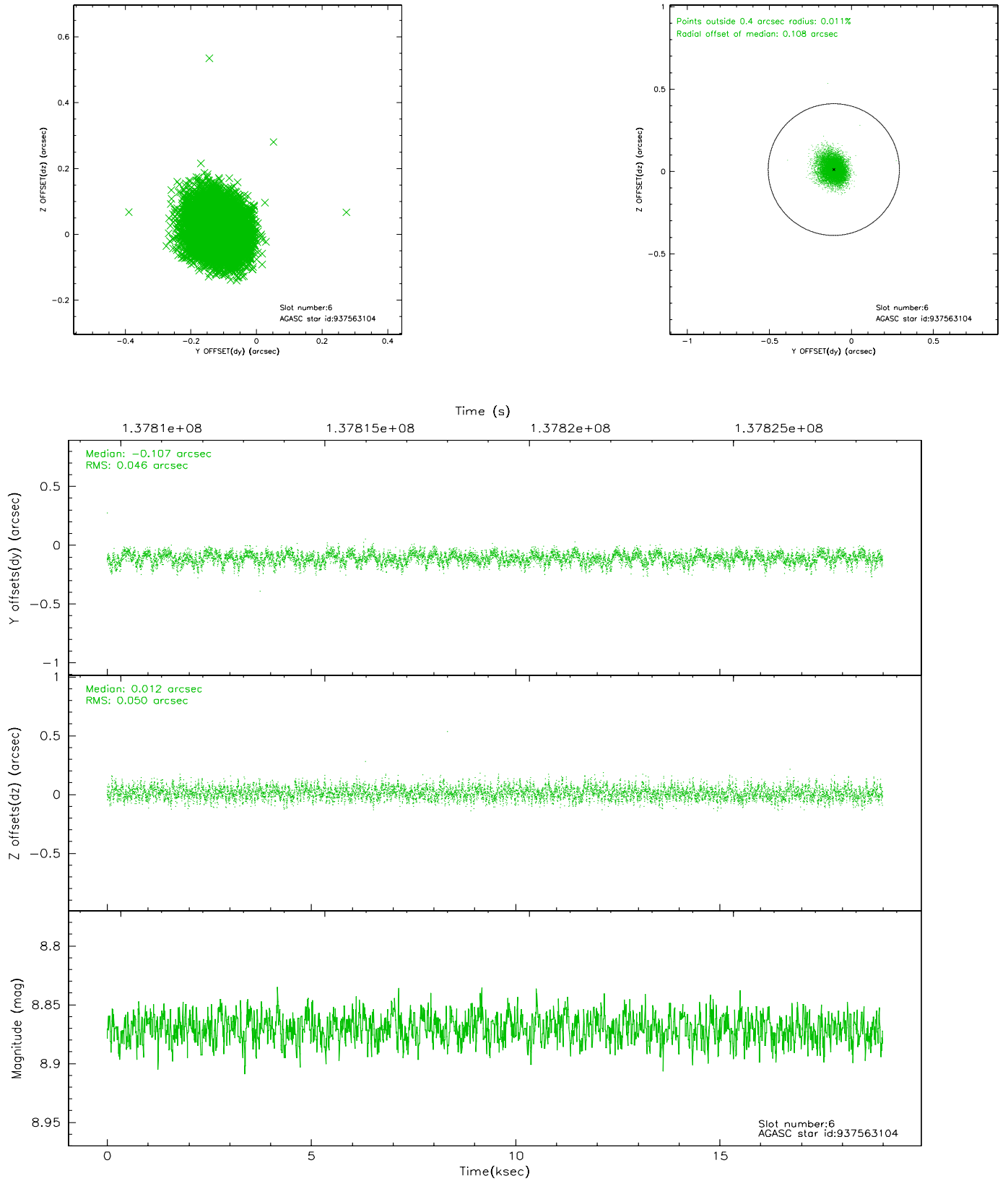
## 2.4.2 Slot 4



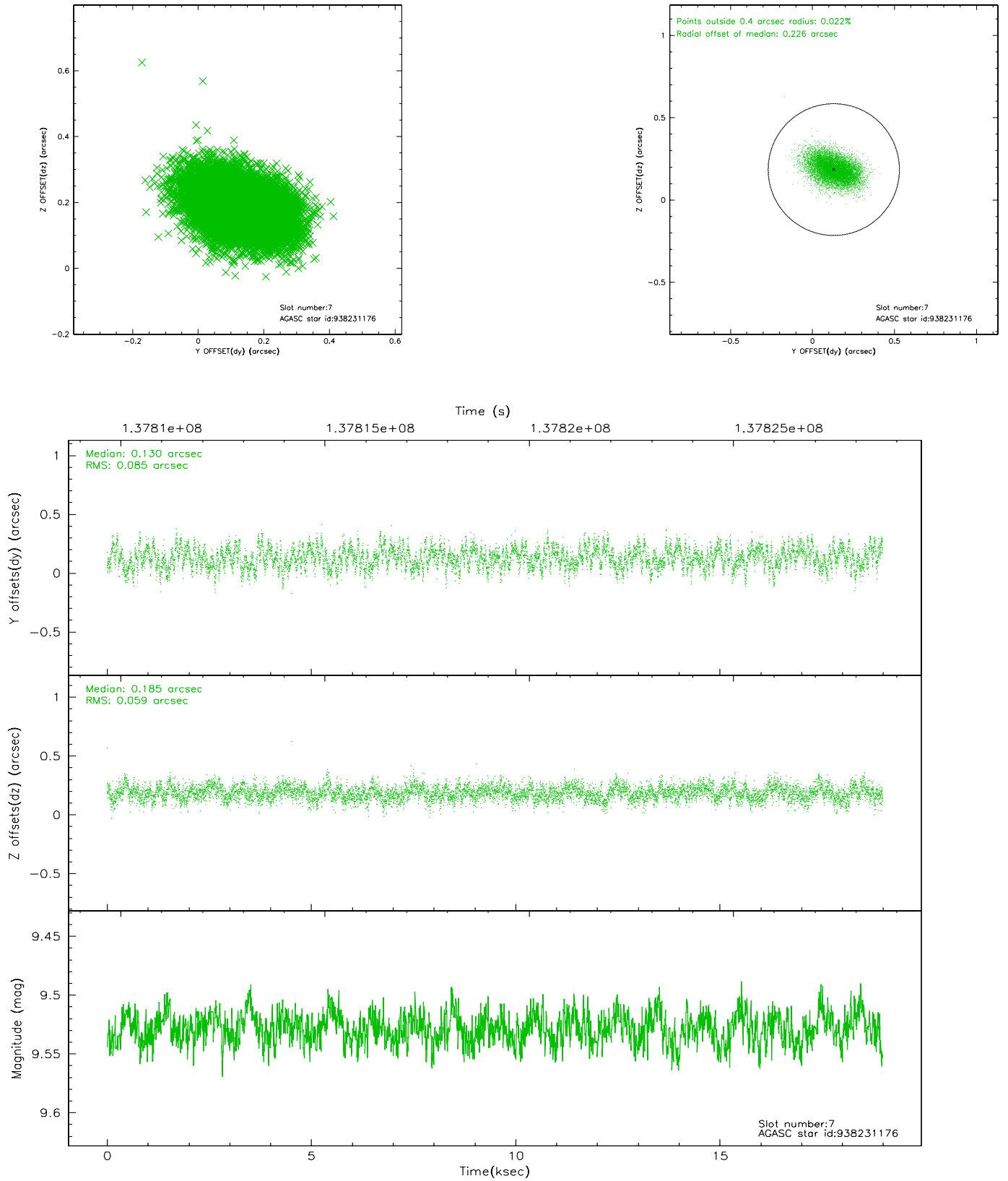
### 2.4.3 Slot 5



## 2.4.4 Slot 6

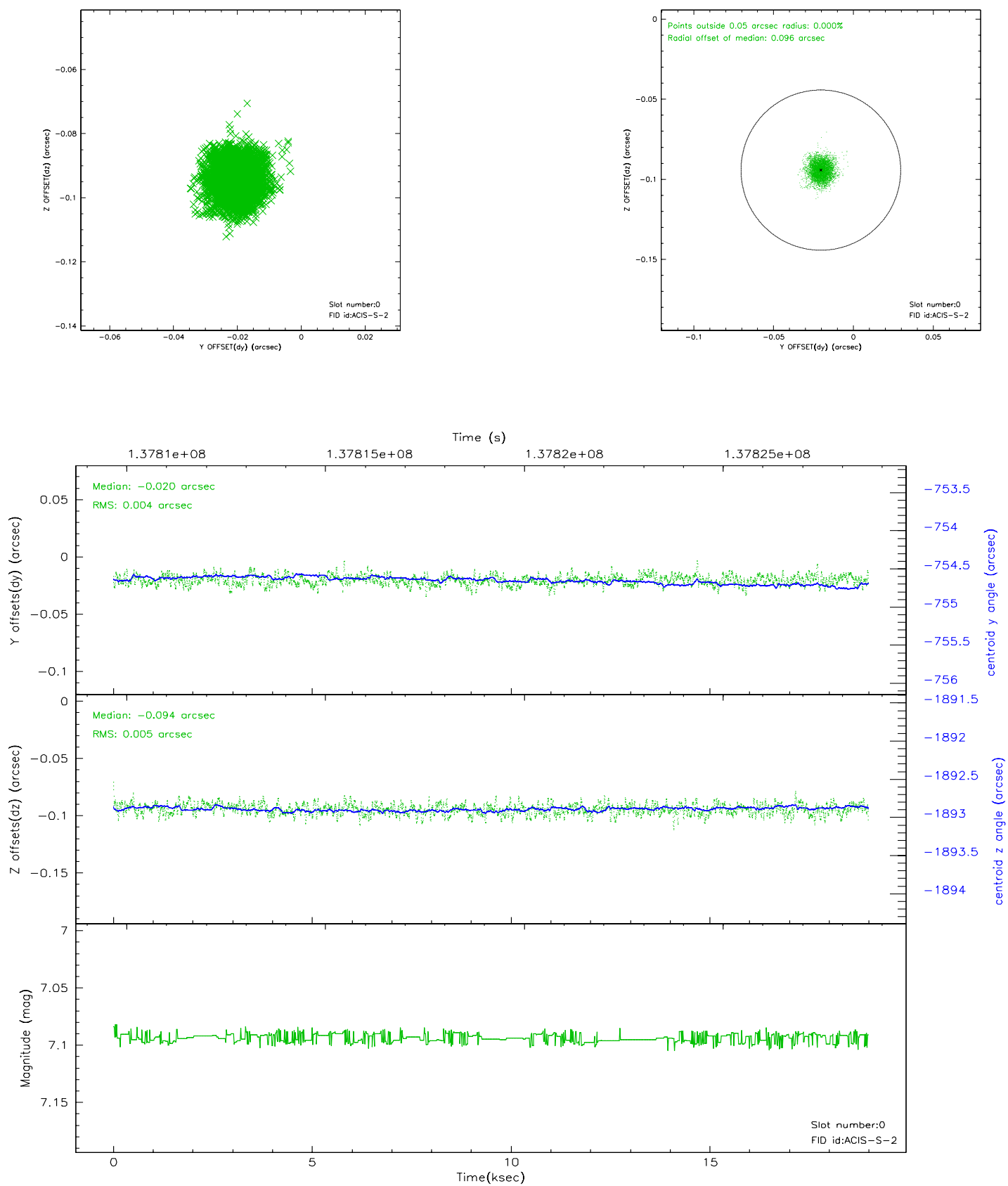


## 2.4.5 Slot 7

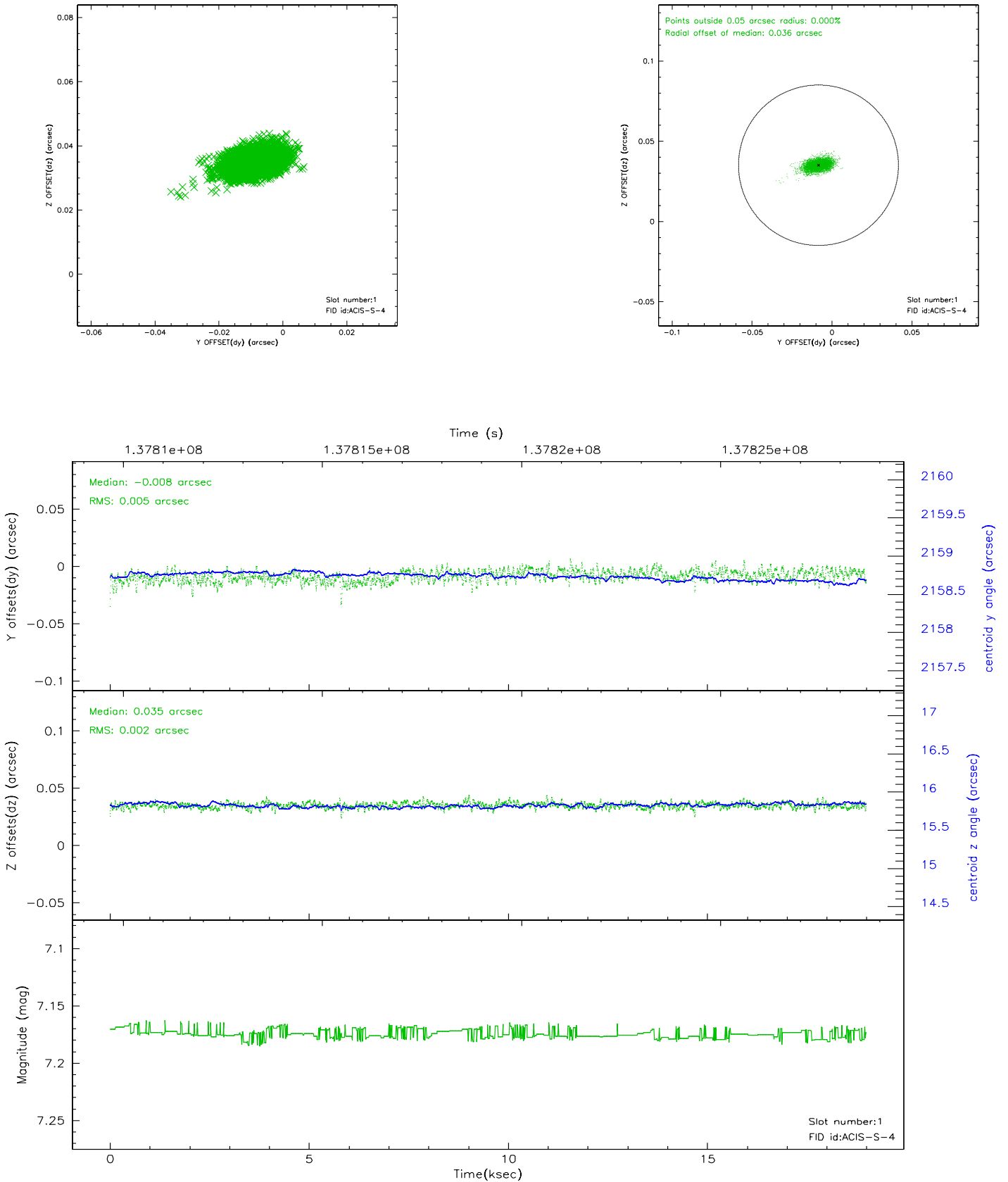


## 2.5 FID Slots

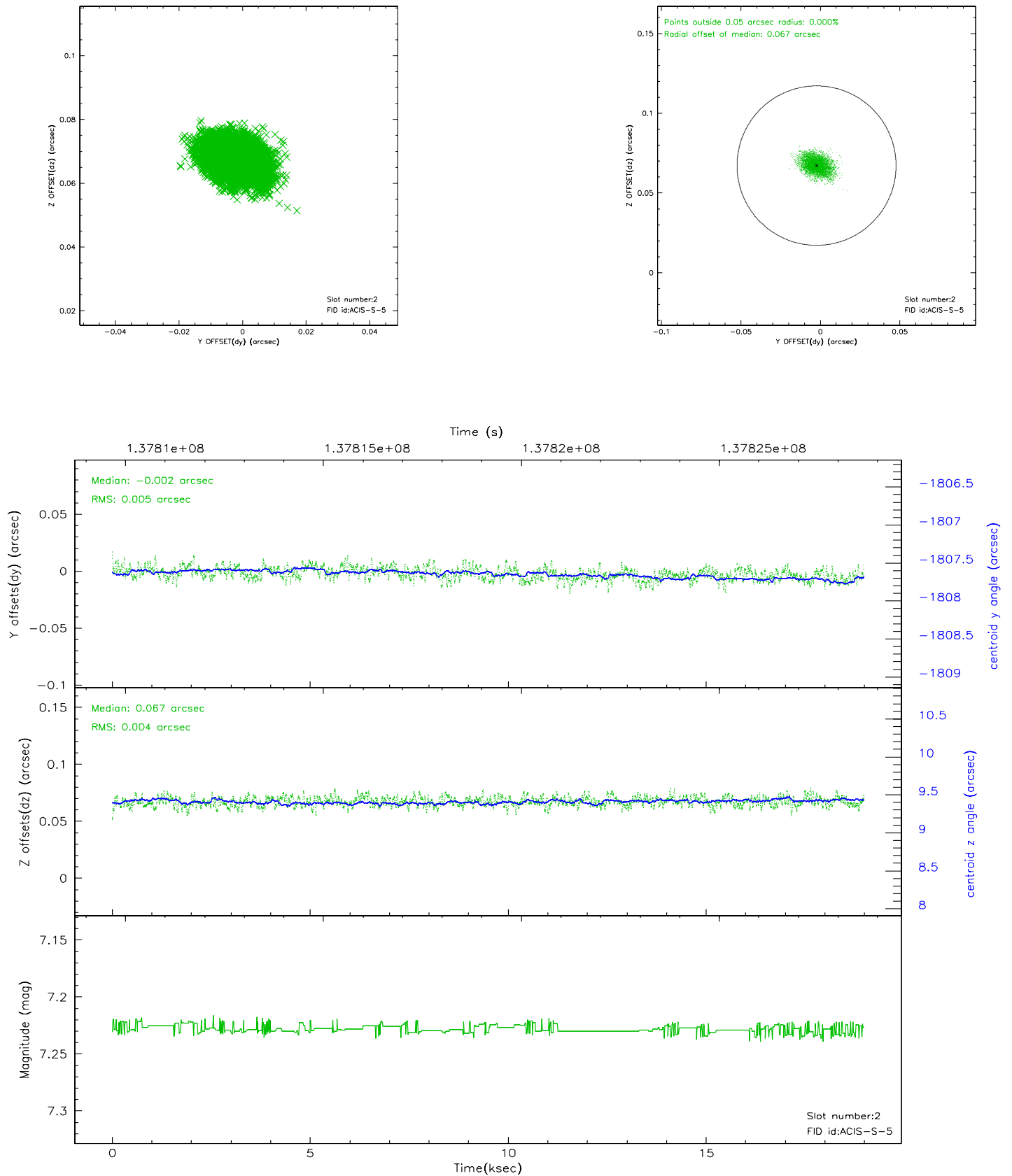
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



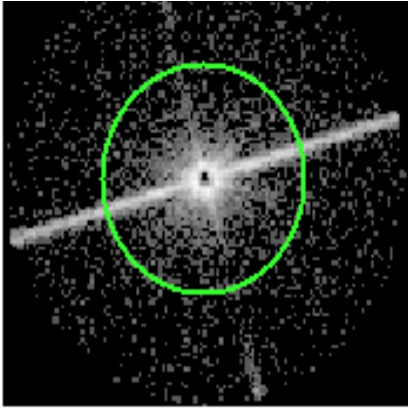


# 3 Gratings

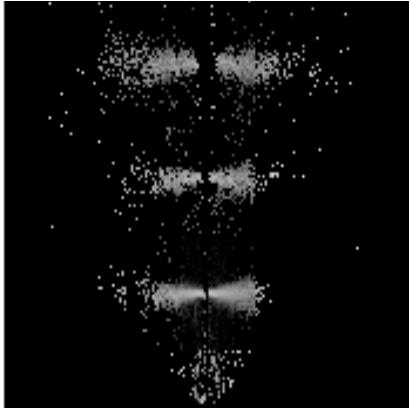
## 3.1 LETG Arm



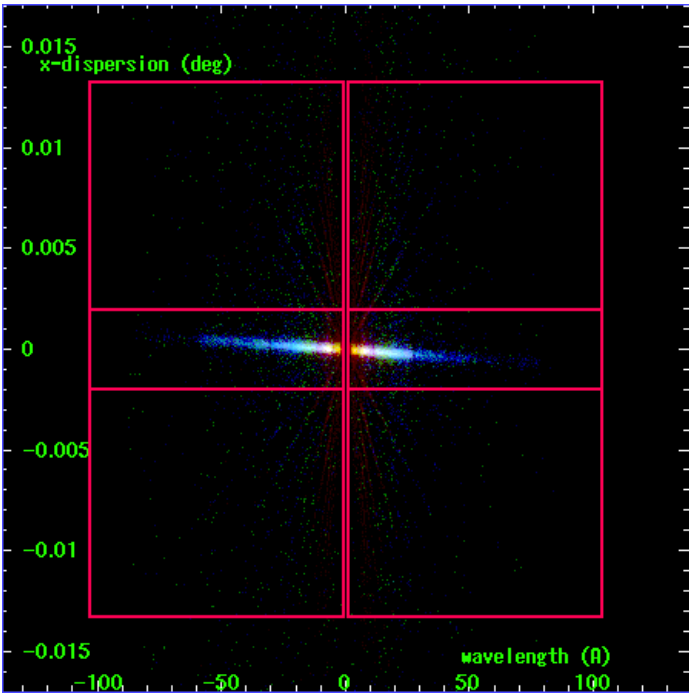
LETG Order Sort 123



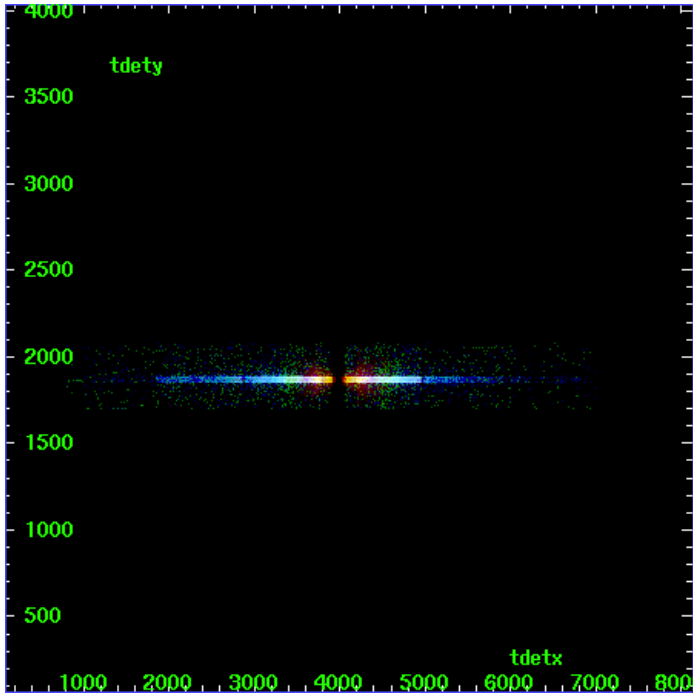
LETG Zero Order



LETG Order Sort ALL

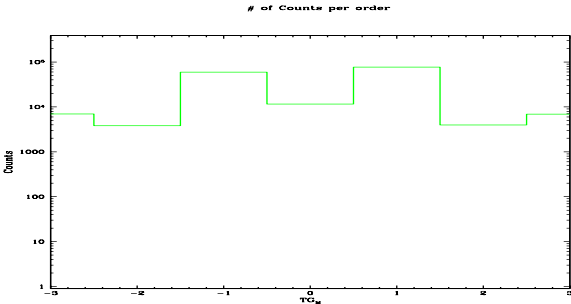


Spot Image LETG

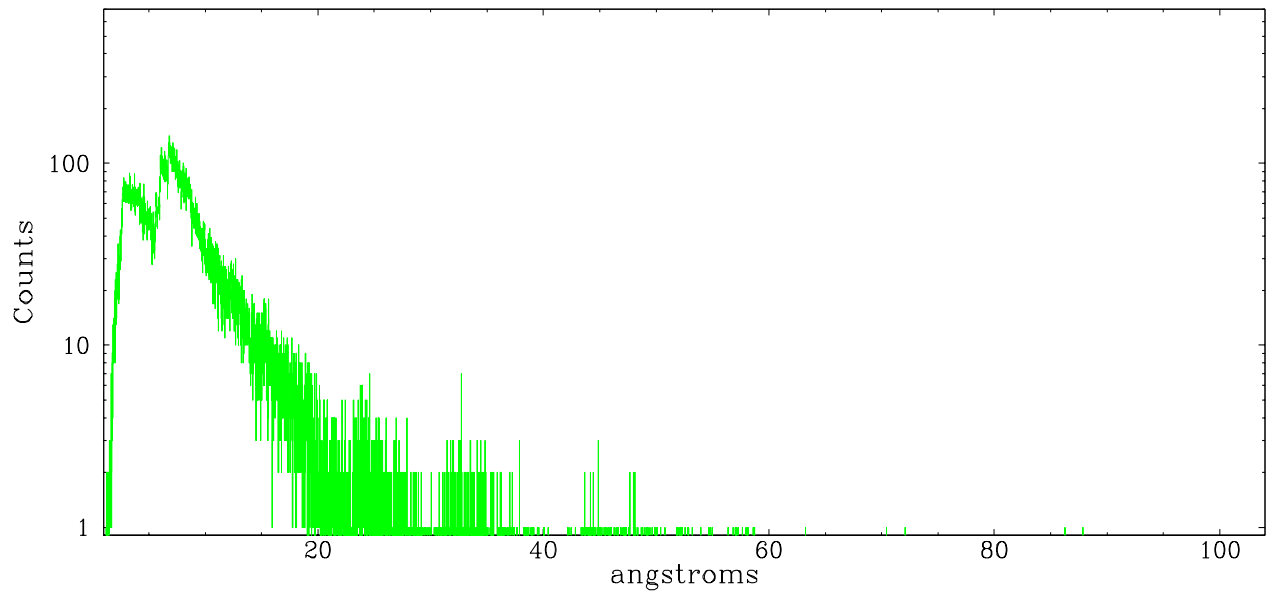


Full Detector LETG

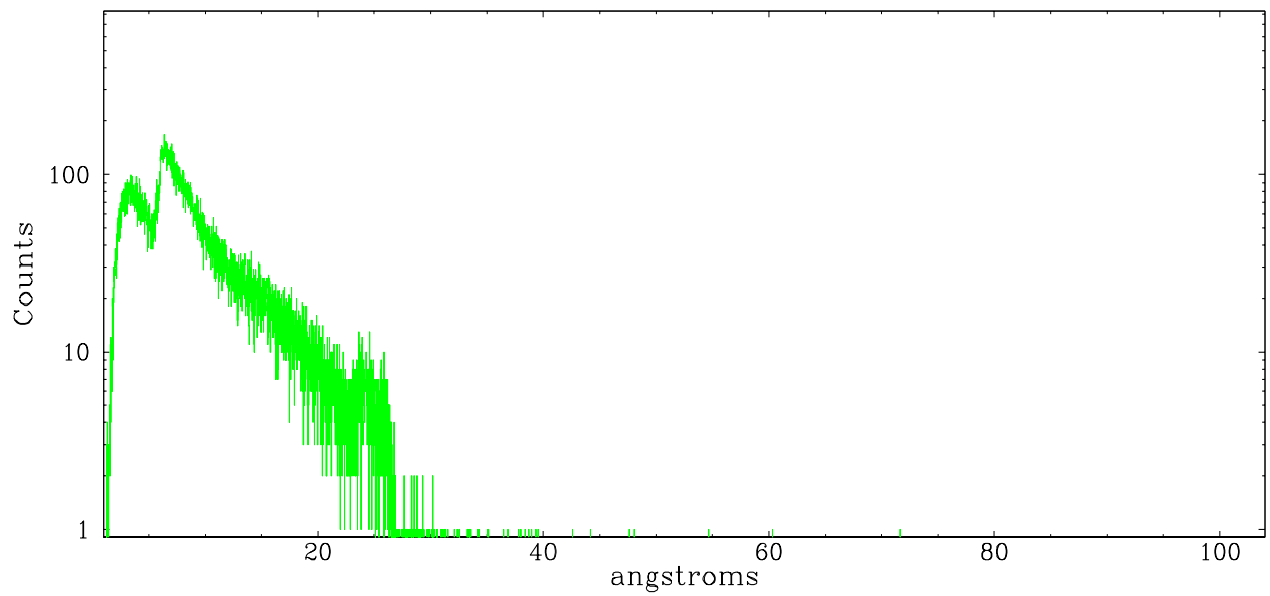
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	6950	3807	59280	11540	77163	3961	6886



leg order  $-1$



leg order  $+1$



# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.11.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.961

## A.2 Comments

Intersection of streak and LEG spectrum gives  $x_0=4126.93$ ;  $y_0=3944.18$   
tgdetect found 4127.29, 3944.74 The data were processed using the  
manually determined centroid.

A spectrum is visible in the bad-events image. This is likely due to  
pileup causing grade migration into bad grade events.